

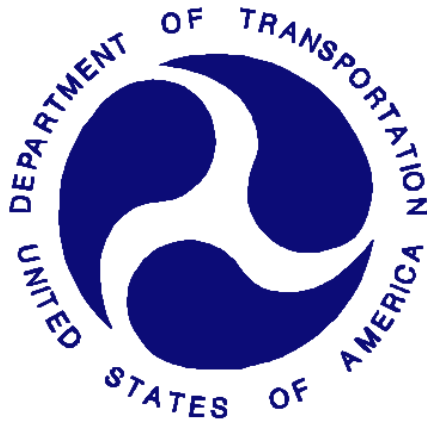
REPORT NUMBER TR-P28003-07-NC

**NEW CAR ASSESMENT PROGRAM
SIDE IMPACT TEST**

**NISSAN MOTOR CO., LTD.
2008 INFINITI G35
4-DOOR SEDAN**

NHTSA NUMBER: M85215

**Prepared By:
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OCTOBER 25, 2007

FINAL REPORT

**PREPARED FOR:
U.S. DEPARTMENT OF TRANSPORTATION
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16. Abstract			
<p>A 55/28 km/h 90 deg. Moving Deformable Barrier Side Impact NCAP Test was conducted on the subject 2008 Infiniti G35 4-Door Sedan in accordance with the specifications of the Office of Crashworthiness Standards Test Procedures for the generation of consumer information on vehicle side crash protection. The test was conducted at KARCO Engineering on October 25, 2007. The impact velocity of the Moving Deformable Barrier was 61.98 km/h and the outside ambient temperature at the struck (driver's) side of the vehicle was 25 deg. C. The target vehicle's maximum post-test static crush was 287, located at level 2. The test vehicle's occupant performance data is as follows:</p>			
Measurement Description	Driver SID/HIII	Pass. SID/HIII	
Left Upper Rib (LUR) G's	32.9	33.0	
Left Lower Rib (LLR) G's	33.3	40.0	
Lower Spine (T ₁₂) G's	32.9	43.1	
Thoracic Trauma Index (TTI) G's	33.0	42.0	
Pelvis (PEV) G's	53.7	39.0	
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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' 2008 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 2008 Infiniti G35 4-Door Sedan manufactured by Nissan Motor Co., 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 2008 Infiniti G35 4-Door Sedan 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 61.98 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 1823 kg and the test weight of the MDB was 1361 kg. The test was conducted at KARCO Engineering, LLC in Adelanto, California, on October 25, 2007.

Two (2) real-time cameras and ten (10) 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 287 mm at level 2, 1500 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 are summarized as follows:

Measurement	Units	Driver	Passenger
Thoracic Trauma Index (TTI)	Gs	33.0	42.0
Peak Pelvis Gs	Gs	53.7	39.0

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. Appendix D contains the Child Restraint System data.

SECTION 3

OCCUPANT AND VEHICLE INFORMATION SHEETS

Test Vehicle: 2008 Infiniti G35 4-Door Sedan

NHTSA No.: M85215

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

Test Date: 10/25/07

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	$=(tf - 32)/1.8$
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: 2008 Infiniti G35 4-Door Sedan

NHTSA No.: M85215

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

Test Date: 10/25/2007

TEST VEHICLE INFORMATION AND OPTIONS

NHTSA No.	M85215
Make	Infiniti
Model	G35
Body Style	4-Door Sedan
VIN No.	JNKBV61E78M200299
Color	Blue
Delivery Date	10/5/2007
Odometer (Miles)	96.0
Dealer	Riverside Infiniti
Transmission	5-Speed Automatic
Final Drive	Rear
Type/No. of Cylinders	V6
Engine Displ. (L)	3.5
Engine Placement	Longitudinal
Roof Rack	No
Sunroof/T-top	No
Tinted Glass	No
Traction Control	Yes
Power Brakes	Yes
Front Disc	Yes
Rear Disc	Yes

Anti-Lock Brakes	Yes
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 Conditioning	Yes
AM/FM CD	Yes
Tilt Steering	Yes
Automatic Door Locks	No
Power Windows	Yes
Power Seats	Yes
Other	n/a

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

n/a

DATA FROM CERTIFICATION TABLE

Manufactured By	Nissan Motor Co., Ltd.
Date of Manufacture	Aug-07

GVWR (kg)	2113
GAWR Front (kg)	1004
GAWR Rear (kg)	1118

VEHICLE SEATING CAPACITY AND WEIGHT INFORMATION

Measured Parameter	Front	Rear	Third	Total
Type of Seats	Bucket	Bench		
Number of Occupants	2	3		5
Capacity Weight (VCW) (kg)				408
Cargo Weight (RCLW) (kg)				68

DATA SHEET NO. 1...(CONTINUED)

GENERAL TEST AND VEHICLE PARAMETER DATA

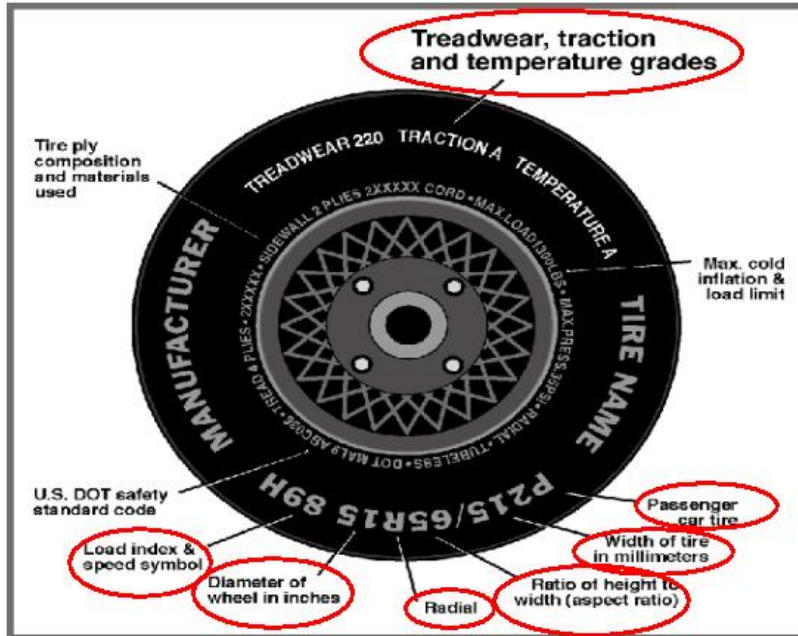
Test Vehicle: 2008 Infiniti G35 4-Door Sedan

NHTSA No.: M85215

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

Test Date: 10/25/07

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)	308	308
Cold Tire Pressure (kPa)	230	230
Recommended Tire Size	P255/55R17	P255/55R17
Tire Size on Vehicle	P255/55R17	P255/55R17
Tire Manufacturer	Goodyear	Goodyear
Treadwear	260	260
Traction	A	A
Temperature Grades	A	A
Tire Plies - Sidewall	2 - Polyester	2 - Polyester
Tire Plies - Body	2 Polyester, 2 Steel, 2 Polyamide	2 Polyester, 2 Steel, 2 Polyamide
Load Index/Speed Symbol	95V	95V
DOT Safety Code Left	U2UP 4VRR 3007	U2UP 4VRR 3007
DOT Safety Code Right	U2UP 4VRR 3007	U2UP 4VRR 3007

DATA SHEET NO. 1...(CONTINUED)

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2008 Infiniti G35 4-Door Sedan

NHTSA No.: M85215

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

Test Date: 10/25/07

TEST VEHICLE WEIGHTS

	Units	As Delivered Weights (UVW)			As Tested Weights (ATW)		
		Front Axle	Rear Axle	Total	Front Axle	Rear Axle	Total
Left	kg	421	367	788	480	474	954
Right	kg	439	375	814	437	432	869
Ratio	%	53.7	46.3	100.0	50.3	49.7	100.0
Total	kg	860	742	1602	917	906	1823

TARGET TEST WEIGHT CALCULATION

Measured Parameter	Units	Value
Total Delivered Weight (UVW)	kg	1602
Weight of 2 P572 ATDs	kg	162
Rated Cargo/Luggage Wt (RCLW)	kg	68
Calculated Vehicle Target Wt (TVTW)	kg	1832

TEST VEHICLE ATTITUDES AND CG

	Units	LF	RF	LR	RR	CG Aft of Front Axle
As Delivered	mm	729	725	720	719	1318
As Tested	mm	720	730	694	703	1415
Fully Loaded	mm	712	725	692	702	

GENERAL TEST VEHICLE DATA

Measurement Description	Units	Value
Test Vehicle Wheel Base	mm	2847
Total Vehicle Length at Left Side	mm	3338
Total Vehicle Length at Centerline	mm	4750
Total Vehicle Length at Right Side	mm	3338
Weight of Ballast in Cargo Area	kg	9.0
Amount of Stoddard Solvent Added	L	70.40

TEST VEHICLE VERTICAL IMPACT LINE DATA

Measurement Description	Units	Value
Test Vehicle Wheel Base	mm	2847
Target Impact Point Aft of Front Axle	mm	484
Actual Impact Point Aft of Front Axle	mm	480

DATA SHEET NO. 1...(CONTINUED)

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2008 Infiniti G35 4-Door Sedan

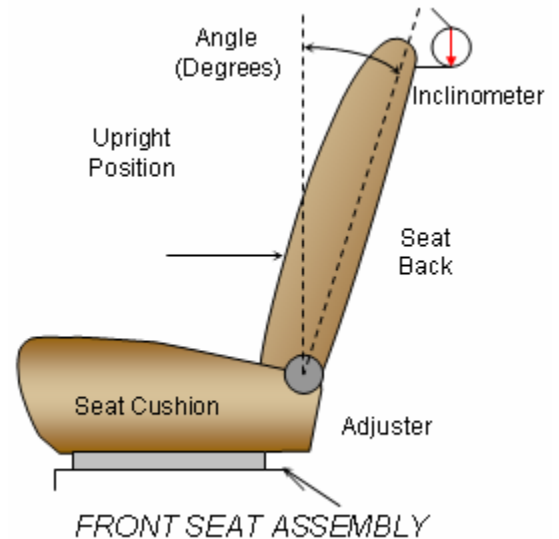
NHTSA No.: M85215

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

Test Date: 10/25/07

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

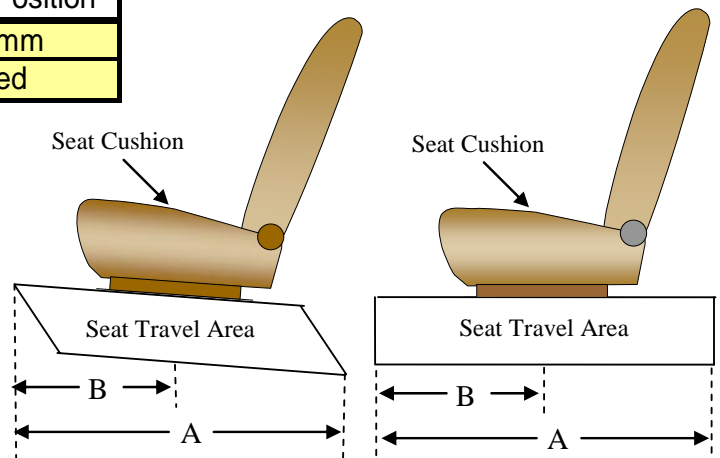
Position	Degrees
Driver w/Seated Dummy	9.3° @ Seat back
Passenger w/Seated Dummy	Fixed

SEAT FORE/AFT POSITIONS

The total seat travel was measured from forward most position to rearmost position. The seat was set at the longitudinal mid position. There were vertical adjustments on the driver seat that was equipped with the vehicle. There were no adjustments on the passenger seat. The driver seat was placed in the lowermost position.

SEAT FORE/AFT POSITIONING

Position	Total Fore/Aft Travel	Placed in Position
Driver Seat	310 mm	155 mm
Passenger Seat	Fixed	Fixed



SEAT BELT ANCHORAGE

Position number one (1) is the uppermost position.

SEAT BELT ANCHORAGE POSITIONING

	Total Number of Positions	Placed in Position
Driver Seat	4	2
Passenger Seat	Fixed	Fixed

DATA SHEET NO. 1...(CONTINUED)

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2008 Infiniti G35 4-Door Sedan

NHTSA No.: M85215

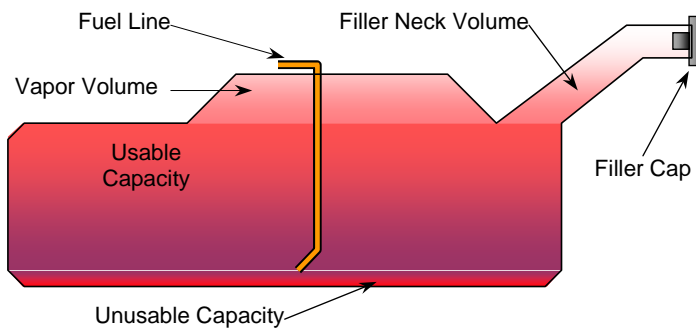
Test Program: 55/28 km/h Side Impact NCAP

Test Date: 10/25/07

FUEL TANK CAPACITY

	Liters
Usable Capacity of Standard Tank	75.70
Usable Capacity of Optional Tank	
Usable Capacity Used for FMVSS 301	69.64 to 71.16
Actual Amount of Solvent Used	70.40

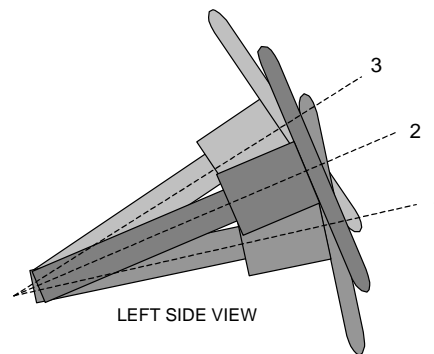
The test vehicle is equipped with an electric fuel pump. The fuel pump will operate for approximately two (2) seconds with the ignition in the "ON" position, after which the fuel pump automatically shuts off. The fuel filler door is located on the Right rear fender. The standard fuel tank occupies the area under the rear seat, and is a saddle tank..



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
Lowermost - Position No. 1	14.2	0
Geometric Center - Position No. 2	17.6	25
Uppermost - Position No. 3	21.4	50

DATA SHEET NO. 2**TEST VEHICLE SUMMARY OF RESULTS**Test Vehicle: 2008 Infiniti G35 4-Door SedanNHTSA No.: M85215Test Program: 55/28 km/h Side Impact NCAPTest Date: 10/25/07**MAXIMUM EXTERIOR CRUSH**

Level	Measured Parameter	Units	Maximum Crush	Above Ground
1	Sill Top	mm	86	243
2	Occupant H-Point	mm	287	523
3	Mid Door	mm	267	621
4	Window Sill	mm	203	887
5	Window Top	mm	36	1374
n/a	Maximum Penetration	mm	287	

INSTRUMENTATION

Driver SID/Hybrid III Accelerometers	20
Passenger SID/Hybrid III Accelerometers	20
Vehicle Structure Accelerometers	21
MDB Accelerometers	5
Total Number 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: 2008 Infiniti G35 4-Door SedanNHTSA No.: M85215Test Program: 55/28 km/h Side Impact NCAPTest Date: 10/25/07**MDB SPECIFICATIONS**

Measurement Description	Length
Overall Width of Frame Carriage	1252
Overall Length Including Honeycomb Face	4115
Wheelbase of Frame Carriage	2590
CG 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	100.0
Total	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	61.98
Trap No. 2 Velocity (Redundant)	km/h	61.1 to 62.7	61.96
MDB to Target CL	deg	88.5 to 91.5	89.5

MAXIMUM STATIC CRUSH OF HONEYCOMB FACE

Vertical Location		Height	From Centerline		Max Crush
Row	Description		Distance	Direction	
A	Center of Bumper	432	800	Left	241
B	Top of Bumper	533	800	Left	232
C	Mid Level	686	800	Left	290
D	Top of Stack	813	800	Right	298

MDB INSTRUMENTATION AND CAMERAS

Accelerometers	5
Contact Switches	1
High Speed Cameras	2

DATA SHEET NO. 4

POST-TEST OBSERVATIONS

Test Vehicle: 2008 Infiniti G35 4-Door Sedan

NHTSA No.: M85215

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

Test Date: 10/25/07

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, Headrest, Headliner	Curtain Airbag, Headliner
Upper Torso Contact	Side Airbag, Door Panel	Door Panel
Lower Torso Contact	Side Airbag	Seat
Left Knee Contact	Door Panel, Right Knee	Door Panel
Right Knee Contact	Left Knee	None

POST-TEST DOOR OPENING AND SEAT TRACK INFORMATION

Description	Front	Rear
Left Side Door Opening	Remained closed and latched, jammed	Remained closed and latched, jammed
Right Side Door Opening	Remained closed and latched, operational	Remained closed and latched, operational
Seat Movement	None	None
Seatback Failure	No	No

POST-TEST STRUCTURAL OBSERVATIONS

Critical Areas of Performance	Observations and Conclusions
Pillar Performance	No separation occurred
Sill Separation	Left rear sill separated
Windshield Damage	None
Window Damage	Both driver and left rear passenger side windows broken
Other Notable Effects	None

SUPPLEMENTAL RESTRAINT SYSTEM INFORMATION

Restraint Type	Left Front (Driver) Occupant Location 1		Left Rear (Passenger) Occupant Location 2	
	Installed	Deployed	Installed	Deployed
Front Airbag	Yes	Yes	No	
Side Airbag	Yes	Yes	No	
Head Airbag	No		No	
Curtain Airbag	Yes	Yes	Yes	Yes
Pre-Tensioners	Yes		No	
Load Limiters	Yes		No	

MDB LEFT EDGE IMPACT DATA

Measured Parameter	Units	Requirement	Value
Horizontal Offset	mm	+/- 50	-4 (Left)
Vertical Offset	mm	+/-20	+5 (Above)

DATA SHEET NO. 5

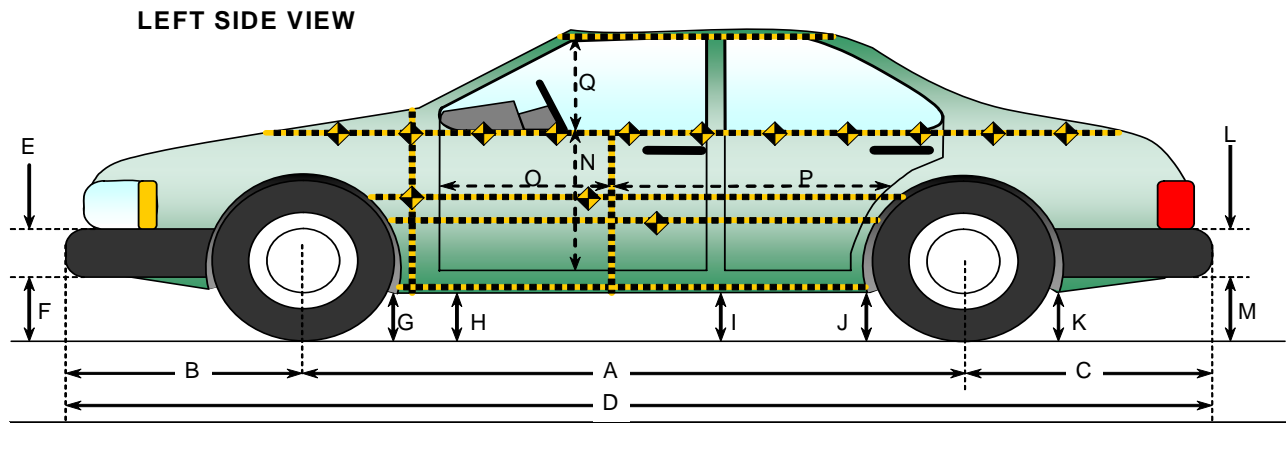
VEHICLE PRE-TEST AND POST-TEST MEASUREMENTS

Test Vehicle: 2008 Infiniti G35 4-Door Sedan

NHTSA No.: M85215

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

Test Date: 10/25/07



VEHICLE PRE AND POST-TEST MEASUREMENT INFORMATION

Code	Measurement Description	Pre-Test	Post-Test	Difference
A	Wheel base	2847	2825	-22
B	Front Surface of Vehicle To Front Axle	817	827	10
C	Rear Surface of Vehicle to Rear Axle	1083	1083	0
D	Length of Vehicle at Centerline	4750	4740	-10
E	Front Bumper Vertical Dimension	400	395	-5
F	Ground Surface to Front Bumper Bottom	178	191	13
G	Ground Surface to Sill aft of Front Wheel	161	162	1
H	Ground Surface to Sill at Front Door Leading Edge	165	190	25
I	Ground Surface to Sill at Front Door Trailing Edge	166	177	11
J1	Ground Surface to Pinch Weld	157	188	31
J2	Ground Surface to Sill	164	209	45
K	Ground Surface to Sill aft of Rear Wheel	181	231	50
L	Rear Bumper Vertical Dimension	390	391	1
M	Ground Surface to Below Rear Bumper	274	322	48
N	Inside Rocker to Window Bottom (Door Height)	685	625	-60
O	Front Door Leading Edge to Impact Centerline	645	648	3
P	Rear Door Trailing Edge to Impact Centerline	1447	1363	-84
Q	Window Vertical Height	410	360	-50
R	Right Side Length	3338	3344	6
S	Left Side Length	3338	3304	-34
T	Vehicle Width at "B" Post	1745	1596	-149

DATA SHEET NO. 6

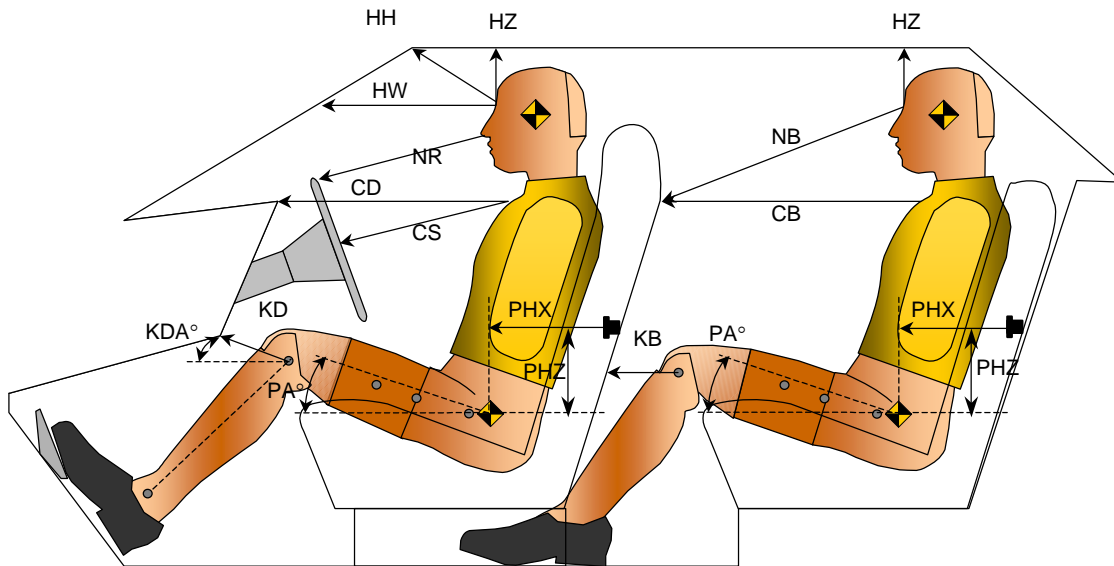
SID/HIII LONGITUDINAL CLEARANCE DIMENSIONS

Test Vehicle: 2008 Infiniti G35 4-Door Sedan

NHTSA No.: M85215

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

Test Date: 10/25/07



LONGITUDINAL CLEARANCE DIMENSION INFORMATION

Driver Code	Passenger Code	Measurement	Driver		Passenger	
			Length (mm)	Angle (°)	Length (mm)	Angle (°)
HH		Head to Header	300	20.5		
HW		Head to Windshield	469	0		
HZ	HZ	Head to Roof	134	90	145	90
NR	NB	Nose to Rim (Seatback)	383	20.2	702	13.6
CD	CB	Chest to Dash (Seatback)	464	5.5	606	0.1
CS		Chest to Steering Hub	301	14.1		
KDL	KBL	Left Knee to Dash (Seatback)	154	36.4	276	21.2
KDR	KBR	Right Knee to Dash (Seatback)	145		280	
PA	PA	Pelvic Angle		23.6		22.8
PHX	PHX	Striker to H-Point (X)	198	0	207	0
PHZ	PHZ	Striker to H-Point (Z)	150	0	320	0

All dimensions shown in millimeters (mm).

DATA SHEET NO. 7

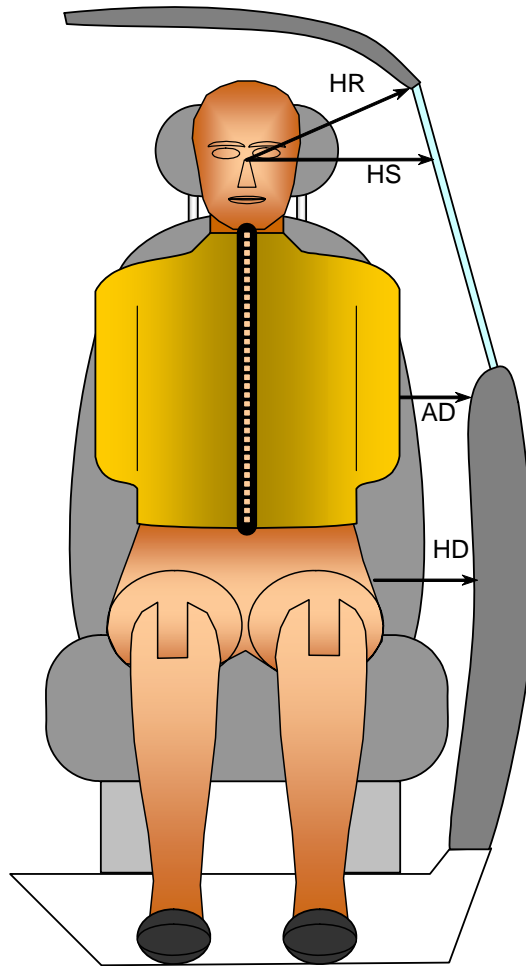
SID/HIII LATERAL CLEARANCE DIMENSIONS

Test Vehicle: 2008 Infiniti G35 4-Door Sedan

NHTSA No.: M85215

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

Test Date: 10/25/07



FRONT VIEW OF DUMMY

LATERAL CLEARANCE DIMENSION INFORMATION

Code	Measurement	Units	Driver	Passenger
HR	Head to Side Header (Y)	mm	233	255
HS	Head to Side Window	mm	268	317
AD	Arm to Door (Y)	mm	86	128
HD	H-Point to Door (Y)	mm	132	190

All dimensions shown in millimeters (mm)

DATA SHEET NO. 8

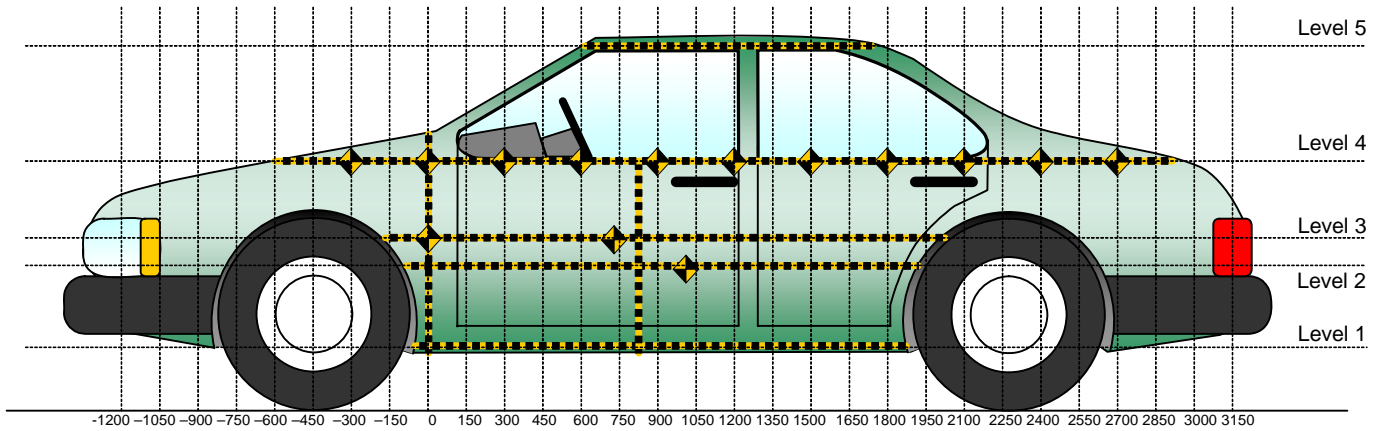
VEHICLE SIDE MEASUREMENTS

Test Vehicle: 2008 Infiniti G35 4-Door Sedan

NHTSA No.: M85215

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

Test Date: 10/25/07



All Measurements Shown in mm

LEFT SIDE VIEW

Measurements are taken with vehicle in the as tested condition.

Measurements taken 900 mm right of impact reference.

All measurements below in mm

Level	Measurement Description	Units	Height Above Ground
1	Sill Top	mm	243
2	Occupant H-Point	mm	523
3	Mid-Door	mm	621
4	Window Sill	mm	887
5	Window Top	mm	1374

All dimensions shown in millimeters (mm).

DATA SHEET NO. 9

VEHICLE EXTERIOR CRUSH PROFILES

Test Vehicle: 2008 Infiniti G35 4-Door Sedan

NHTSA No.: M85215

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

Test Date: 10/25/07

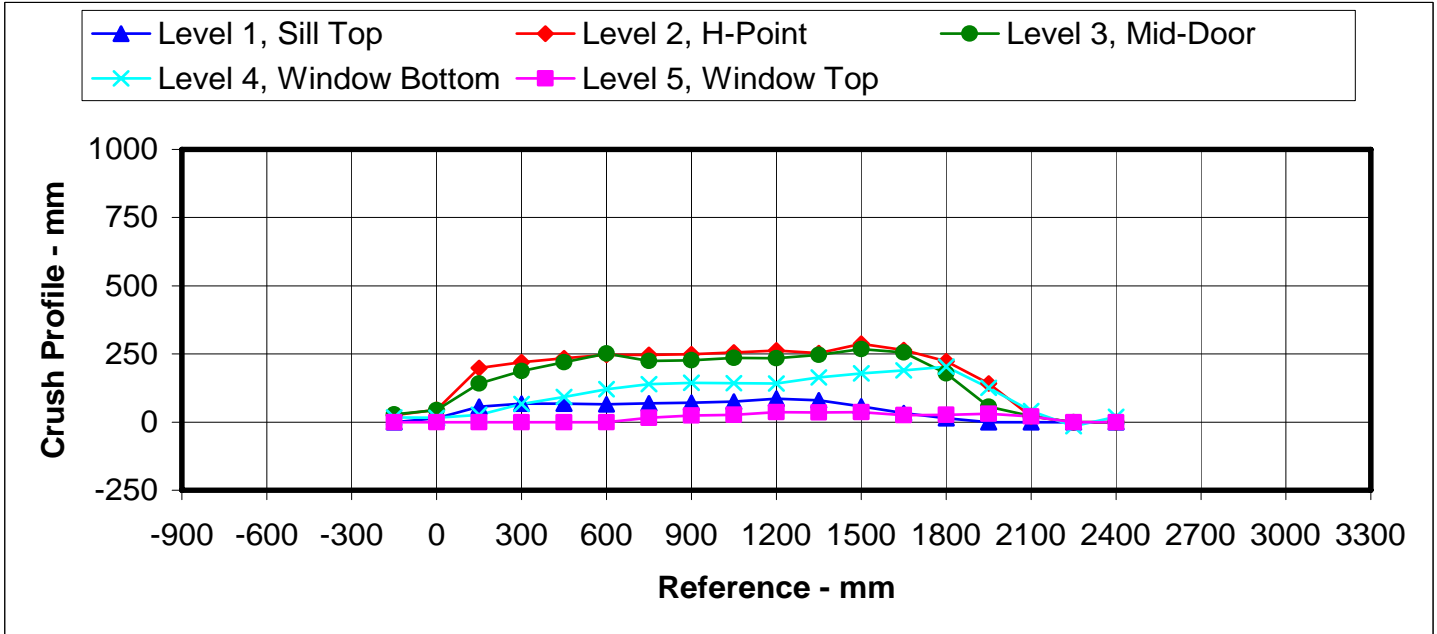
	Pre-Test					Post-Test					Difference				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
-900															
-750															
-600															
-450															
-300															
-150		618	620	706			643	648	723			25	28	17	
0	656	624	627	706		670	669	671	721		14	45	44	15	
150	660	627	630	701		716	825	771	728		56	198	141	27	
300	662	626	630	696		729	845	817	762		67	219	187	66	
450	661	624	626	691		728	858	845	783		67	234	219	92	
600	661	624	626	686		726	870	878	807		65	246	252	121	
750	661	623	622	678	924	730	870	846	817	940	69	247	224	139	16
900	661	623	622	674	924	732	872	849	818	948	71	249	227	144	24
1050	661	623	622	674	924	736	878	858	817	951	75	255	236	143	27
1200	661	623	622	668	926	747	885	856	809	962	86	262	234	141	36
1350	661	623	624	666	933	741	876	871	830	968	80	253	247	164	35
1500	661	623	624	663	933	719	910	891	841	969	58	287	267	178	36
1650	663	626	626	661	936	696	890	881	851	962	33	264	255	190	26
1800	657	626	629	661	943	671	849	808	864	970	14	223	179	203	27
1950	651	625	627	649	946	651	766	683	775	976	0	141	56	126	30
2100		621	619	649	956		641	641	689	977		20	22	40	21
2250				665					650					-15	
2400				671					690					19	
2550															
2700															
2850															
3000															

All dimensions in millimeters (mm)

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

Test Vehicle: 2008 Infiniti G35 4-Door Sedan
 Test Program: 55/28 km/h Side Impact NCAP

NHTSA No.: M85215
 Test Date: 10/25/07



	Units	Level 1	Level 2	Level 3	Level 4	Level 5
Maximum Crush	mm	86	287	267	203	36
Distance From Impact Point	mm	1200	1500	1500	1800	1200

DATA SHEET NO. 10

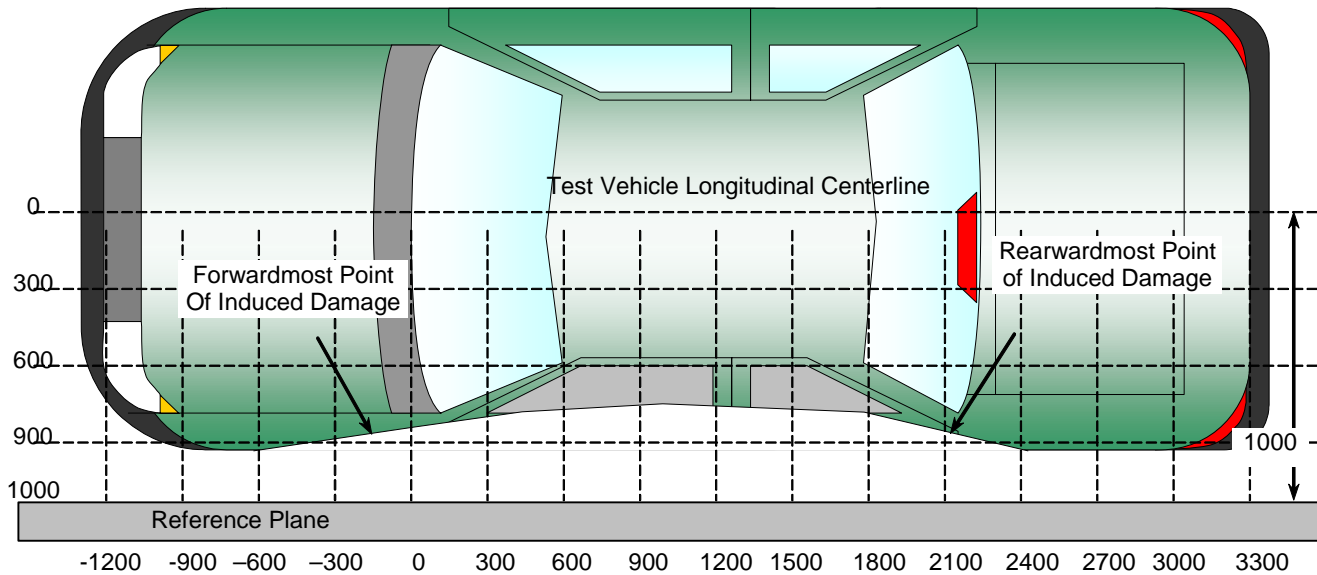
VEHICLE DAMAGE PROFILE DISTANCES

Test Vehicle: 2008 Infiniti G35 4-Door Sedan

NHTSA No.: M85215

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

Test Date: 10/25/07



All Dimensions Shown in millimeters

TOP VIEW

DPD	Distance From Impact Point	Level	Pre-Test (mm)	Post-Test (mm)	Max. Static Crush (mm)
1	2100	4	649	689	40
2	1650	2	626	890	264
3	1200	2	623	885	262
4	750	2	623	870	247
5	300	2	626	845	219
6	-150	3	620	648	28

DATA SHEET NO. 11

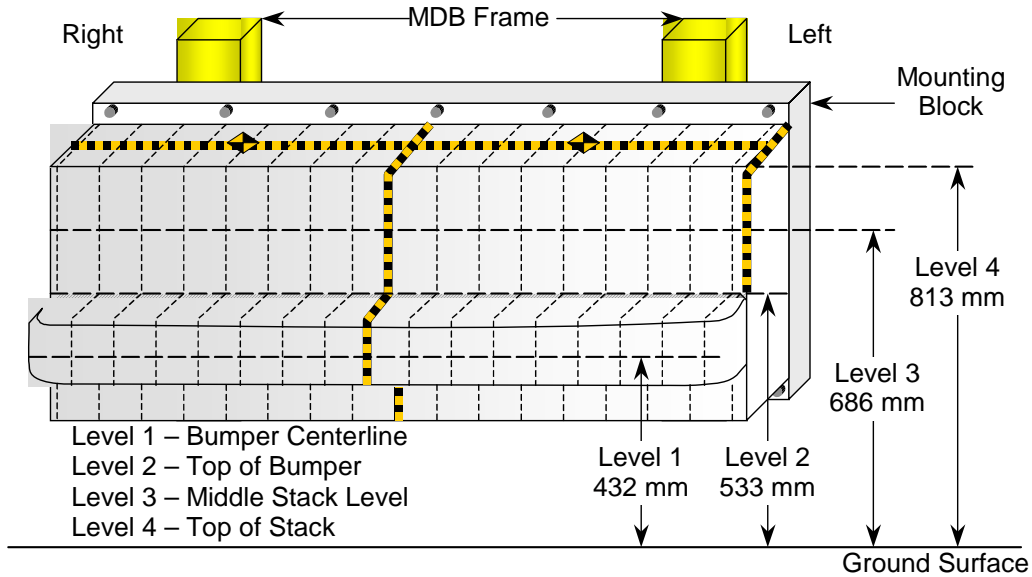
DEFORMABLE BARRIER HONEYCOMBE FACE STATIC CRUSH

Test Vehicle: 2008 Infiniti G35 4-Door Sedan

NHTSA No.: M85215

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

Test Date: 10/25/07



Stack Level	Right of Center								CL	Left of Center							
	800	700	600	500	400	300	200	100		0	100	200	300	400	500	600	700
1	759	734	719	696	677	670	669	666	674	666	668	669	672	676	686	710	718
2	735	729	701	693	693	695	688	682	681	690	706	717	723	729	741	748	750
3	681	660	658	662	688	691	675	656	650	648	648	650	658	675	699	742	808
4	678	666	675	678	710	730	715	700	676	666	663	671	689	715	733	775	816

All dimensions in millimeters (mm)

DATA SHEET NO. 12

VEHICLE ACCELEROMETER LOCATIONS

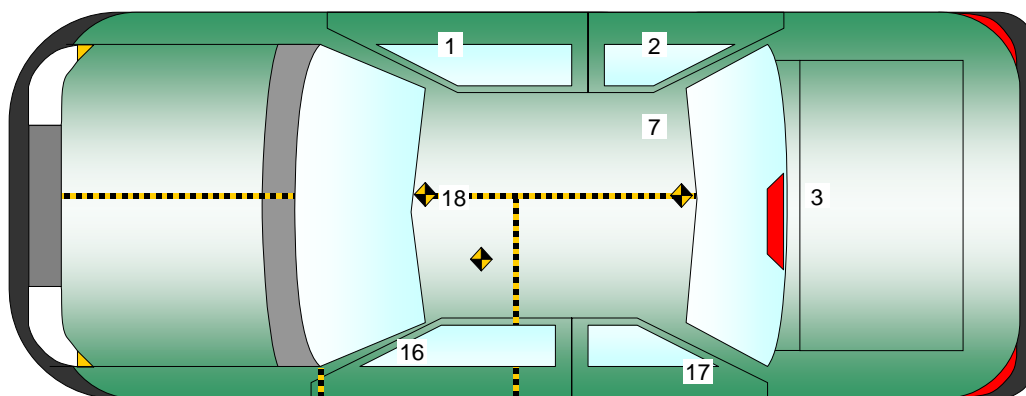
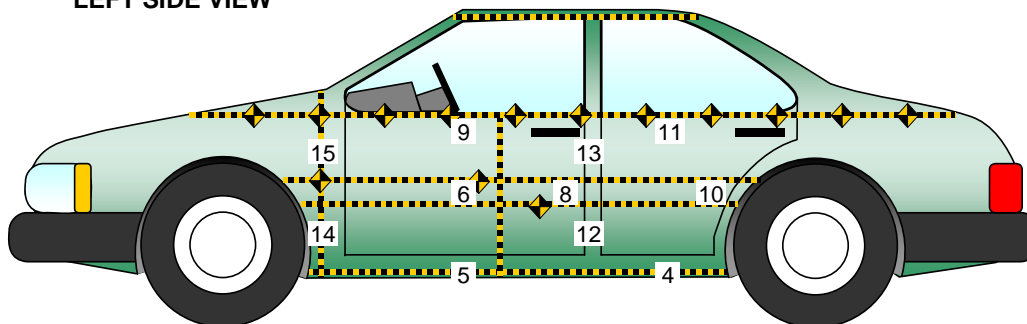
Test Vehicle: 2008 Infiniti G35 4-Door Sedan

NHTSA No.: M85215

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

Test Date: 10/25/07

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 LOCATION AND DATA SUMMARY

Test Vehicle: 2008 Infiniti G35 4-Door Sedan

NHTSA No.: M85215

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

Test Date: 10/25/07

VEHICLE ACCELEROMETER PRE-TEST LOCATIONS

Loc. No	Accelerometer Location	Measurements (mm)		
		X	Y	Z
1	Right Sill at Front Seat	2810	720	345
2	Right Sill at Rear Seat	1970	665	340
3	Rear Floorpan Above Axle	660	-530	440
4	Left Sill at Rear Door	1610	-720	165
5	Left Sill at Front Door			
6	Front Door Centerline			
7	Rt. Rear Occ. Compartment	2135	355	190
8	Front Door Mid-Rear			
9	Front Door Upper Centerline			
10	Rear Door Mid-Rear			
11	Rear Door Upper Centerline			
12	B-Post Lower	2150	-670	700
13	B-Post Middle	2150	-670	800
14	A-Post Lower	3290	800	395
15	A-Post Middle	3290	800	570
16	Front Seat Track	2800	590	370
17	Rear Seat Structure			
18	Vehicle CG	3105	275	200

Reference Planes: X = From rear surface of vehicle, Y = Vehicle Centerline, Z = Ground Plane

1.) Not Installed

DATA SHEET NO. 13

MDB ACCELEROMETER LOCATIONS

Test Vehicle: 2008 Infiniti G35 4-Door Sedan

NHTSA No.: M85215

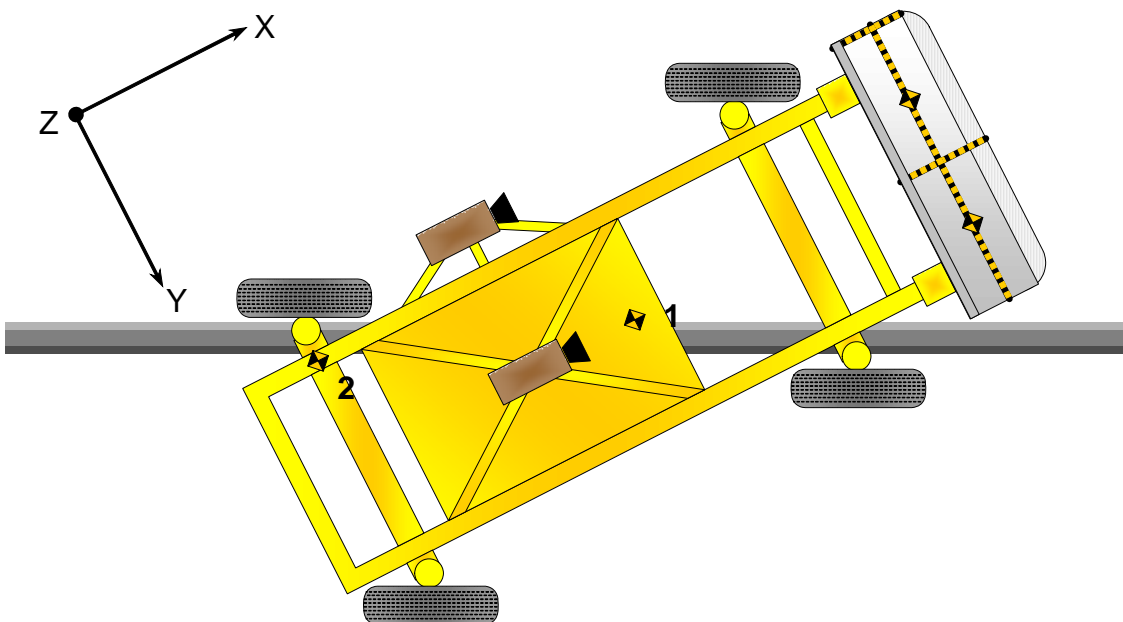
Test Program: 55/28 km/h Side Impact NCAP

Test Date: 10/25/07

MDB ACCELEROMETER LOCATIONS

Loc. No	Accelerometer Locations	Measurements		
		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

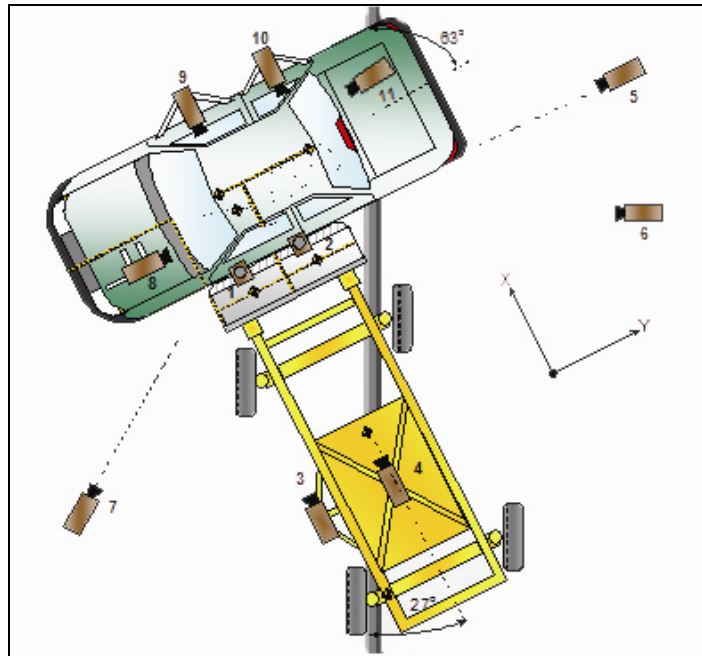
HIGH SPEED CAMERA LOCATIONS AND DATA

Test Vehicle: 2008 Infiniti G35 4-Door Sedan

NHTSA No.: M85215

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

Test Date: 10/25/07



No.	Camera View	Location (mm)			Angle (°)	Lens (mm)	Film Speed
		X	Y	Z			
Doc	Real Time Inrun	-2484	-3958	-1506	0		30
Doc	Real Time Left Front	-2266	3549	-1475	-2		30
1	Overhead Overall	1220	2287	-5486	-90	14	1000
2	Overhead Close Up	609	2287	-5102	-90	Zoom	1000
3	Left Impact Point (MDB)	-2134	0	-1143	-2	12	1000
4	Side Overall (MDB)	-3912	838	-1829	-4	12	1000
5	Rear	-64	20485	-1348	0	105	1000
6	Left Rear (MDB)	-2137	-1302	-339	-4	85	1000
7	Left Front	-2266	-3564	-1475	-2	24	1000
8	Driver Front (O.B.)	528	-572	-1341	-3	35mm	1000
9	Driver Side (O.B.)	1734	734	-957	0	20mm	1000
10	Passenger Side (O.B.)	1738	1817	-1068	0	20mm	1000
11	Passenger CRS (O.B.)	859	2533	-1142	-2	10mm	1000

DNR = Did Not Run

All measurements are made relative to the point of impact

DATA SHEET NO. 15

FMVSS 301 FUEL SYSTEM INTEGRITY POST-IMPACT DATA

Test Vehicle: 2008 Infiniti G35 4-Door Sedan

NHTSA No.: M85215

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

Test Date: 10/25/07

Test Time: 11:10 AM

Temperature: 25.0 deg. C

STODDARD SOLVENT SPILLAGE MEASUREMENTS

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

DATA SHEET NO. 16

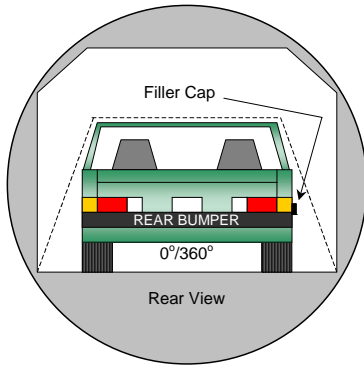
FMVSS 301 STATIC ROLLOVER DATA

Test Vehicle: 2008 Infiniti G35 4-Door Sedan

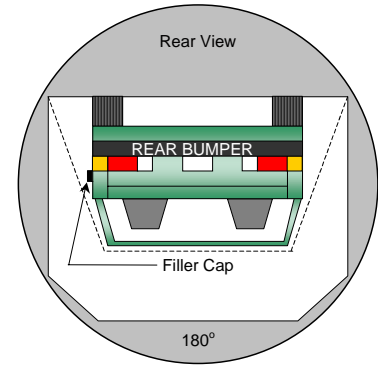
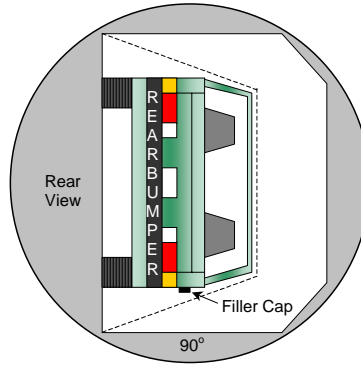
NHTSA No.: M85215

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

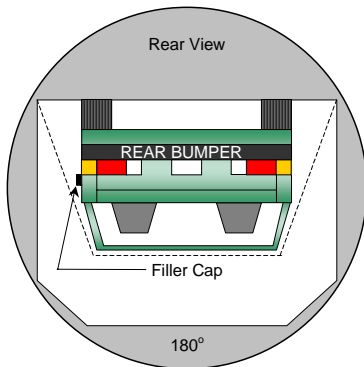
Test Date: 10/25/07



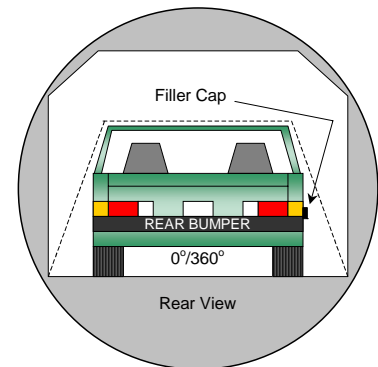
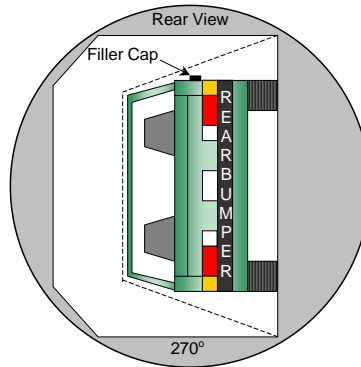
0° to 90°



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**Test Vehicle: 2008 Infiniti G35 4-Door SedanNHTSA No.: M85215Test Program: 55/28 km/h Side Impact NCAPTest Date: 10/25/07**SOLVENT COLLECTION TIME TABLE (SECONDS)**

Test Phase	Rotation Time	Hold Time	Total Time
0° to 90°	82	301	383
90° to 180°	78	306	384
180° to 270°	80	306	386
270° to 360°	78	300	378

FMVSS 301 SPILLAGE REQUIREMENT TABLE (OZ)

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

FMVSS 301 SPILLAGE INFORMATION

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
270° to 360°	0	0	0	0

SOLVENT SPILLAGE LOCATION TABLE

Test Phase	Spillage Location
0° to 90°	n/a
90° to 180°	n/a
180° to 270°	n/a
270° to 360°	n/a

DATA SHEET NO. 17

DUMMY/VEHICLE TEMPERATURE STABILIZATION

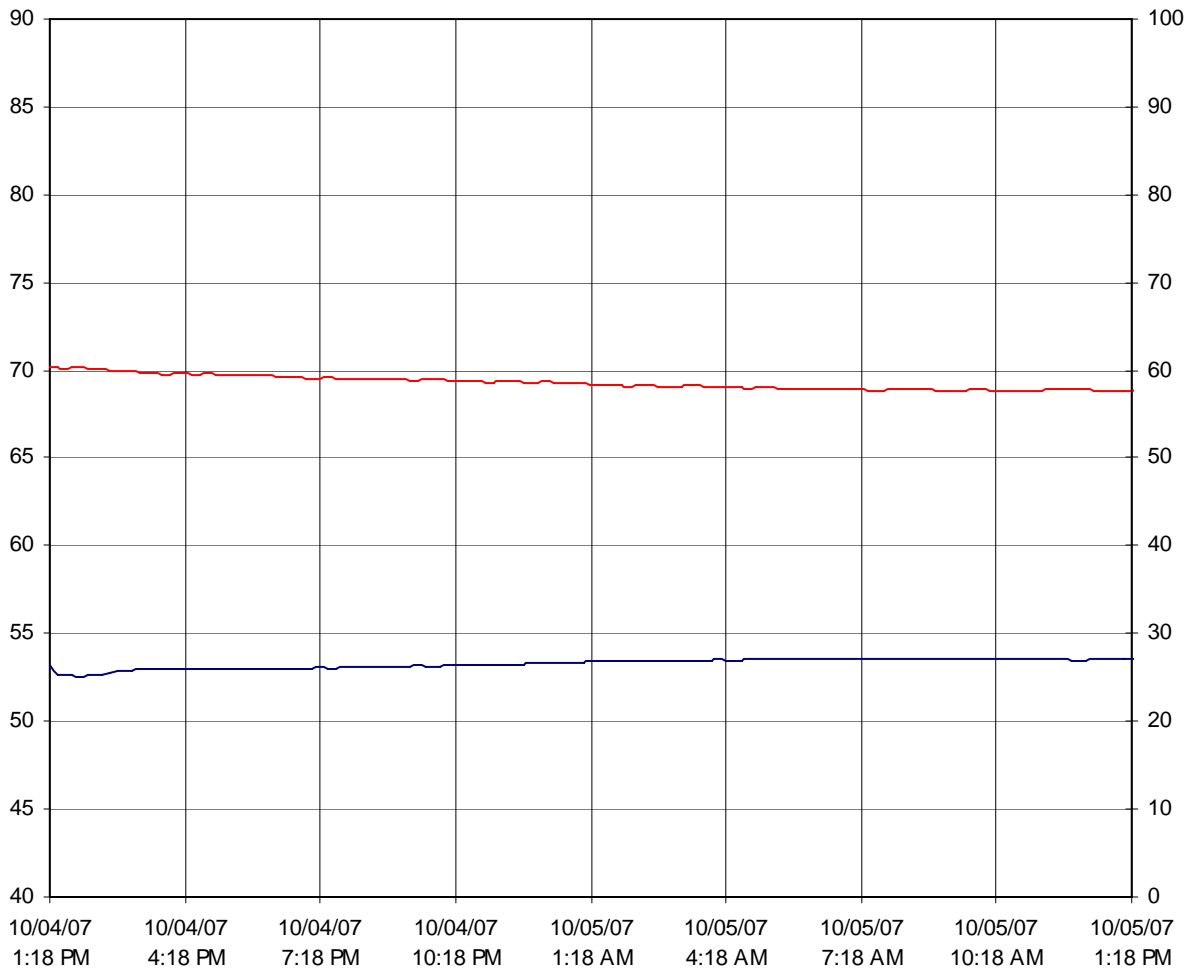
Test Vehicle: 2008 Infiniti G35 4-Door Sedan

NHTSA No.: M85215

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

Test Date: 10/25/07

— Temperature — Humidity



**APPENDIX A
PHOTOGRAPHS**

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



A-2

TR-P28003-07-NC

Figure A-2: Left Rear ¾ View, as Received

MANUFACTURED BY NISSAN MOTOR CO., LTD.

DATE: 08/07

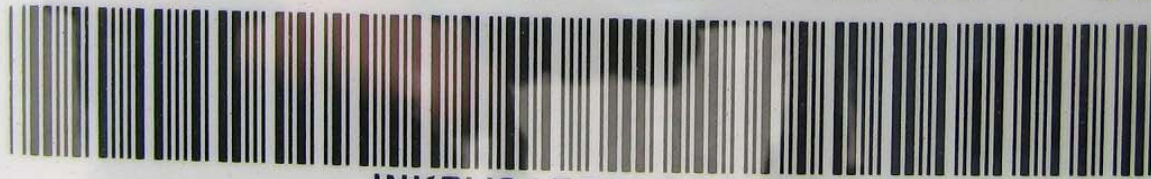
GVWR/PNBV: 4658 LBS.

GAWR/PNBE FR: 2213 LBS. RR: 2465 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.

VIN: JNKBV61E78M200299 PASSENGER CAR

COLOR	TRIM	TRANS	AXLE	ENGINE	
B30	C	RE5R05A	RC36	VQ35(HR)	3498CC



JNKBV61E78M200299

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 **408 kg** or **900 lbs.**
Le poids combiné d'occupants et de cargaison ne devrait jamais excéder **408 kg** ou **900 lbs.**

TIRE PNEU	ORIGINAL SIZE TAILLE ORIGINALE	COLD TIRE PRESSURE PRESSION DES PNEUS FROIDS
FRONT AVANT	P225/55R17 95V	230kPa , 33PSI
REAR ARRIÈRE	P225/55R17 95V	230kPa , 33PSI
SPARE DE SECOURS	T145/80D17	420kPa , 60PSI

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

6 JK600

A-4

TR-P28003-07-NC

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 3/4 View



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



Figure A-9: Pre-Test Left Side View



A-10

TR-P28003-07-NC

Figure A-10: Post-Test Left Side View



A-11

TR-P28003-07-NC

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



A-12

TR-P28003-07-NC

Figure A-12: Post-Test Left Rear ¾ View



Figure A-13: Pre-Test Rear View



Figure A-14: Post-Test Rear View



A-15

TR-P28003-07-NC

Figure A-15: Pre-Test Right Rear ¾ View



Figure A-16: Post-Test Right Rear 3/4 View



Figure A-17: Pre-Test Right Side View



Figure A-18: Post-Test Right Side View



A-19

TR-P28003-07-NC

Figure A-19: Pre-Test Right Front ¾ View



A-20

TR-P28003-07-NC

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

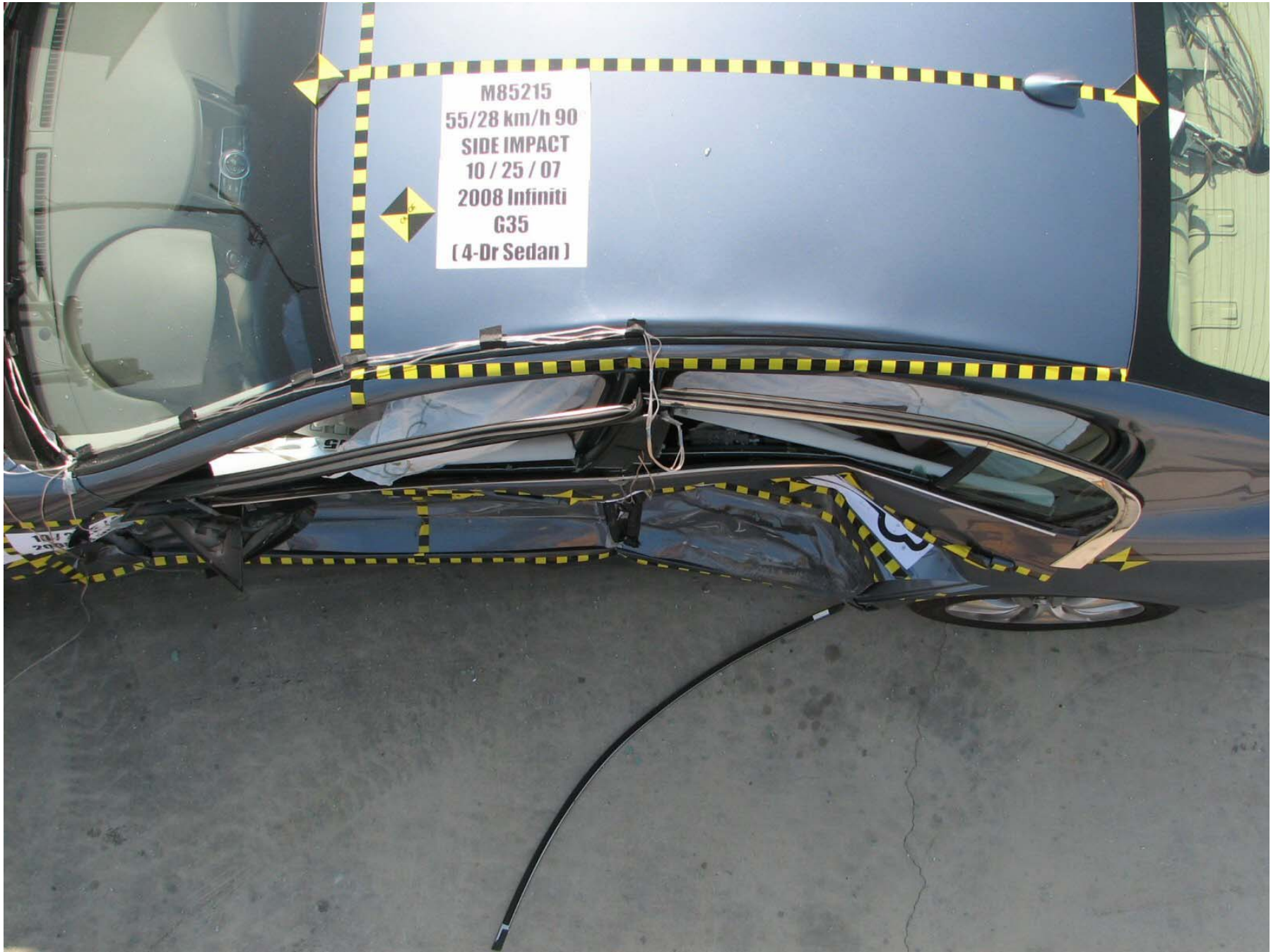


M85215
55/28 km/h 90
SIDE IMPACT
10 / 25 / 07
2008 Infiniti
G35
(4-Dr Sedan)

M85215
55/28 km/h 90
SIDE IMPACT
10 / 25 / 07
2008 Infiniti
G35
(4-Dr Sedan)

safercar.gov

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



M85215
55/28 km/h 90°
SIDE IMPACT
10 / 25 / 07
2008 Infiniti
G35
(4-Dr Sedan)

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 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



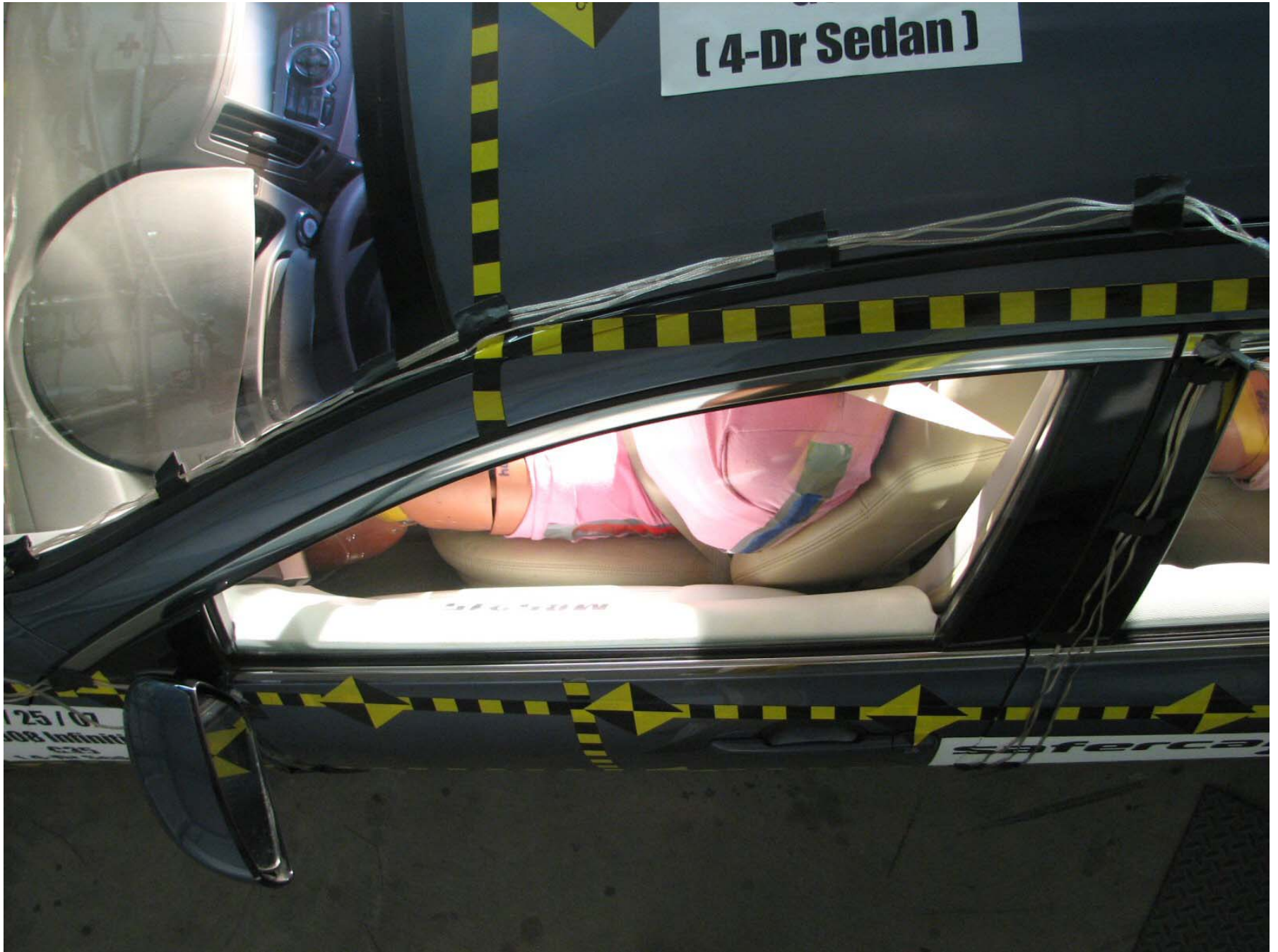
Figure A-35: Pre-Test Driver Dummy (Door Open)



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



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



(4-Dr Sedan)

125 / 07
008 Intimid
635

Saferca

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)



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

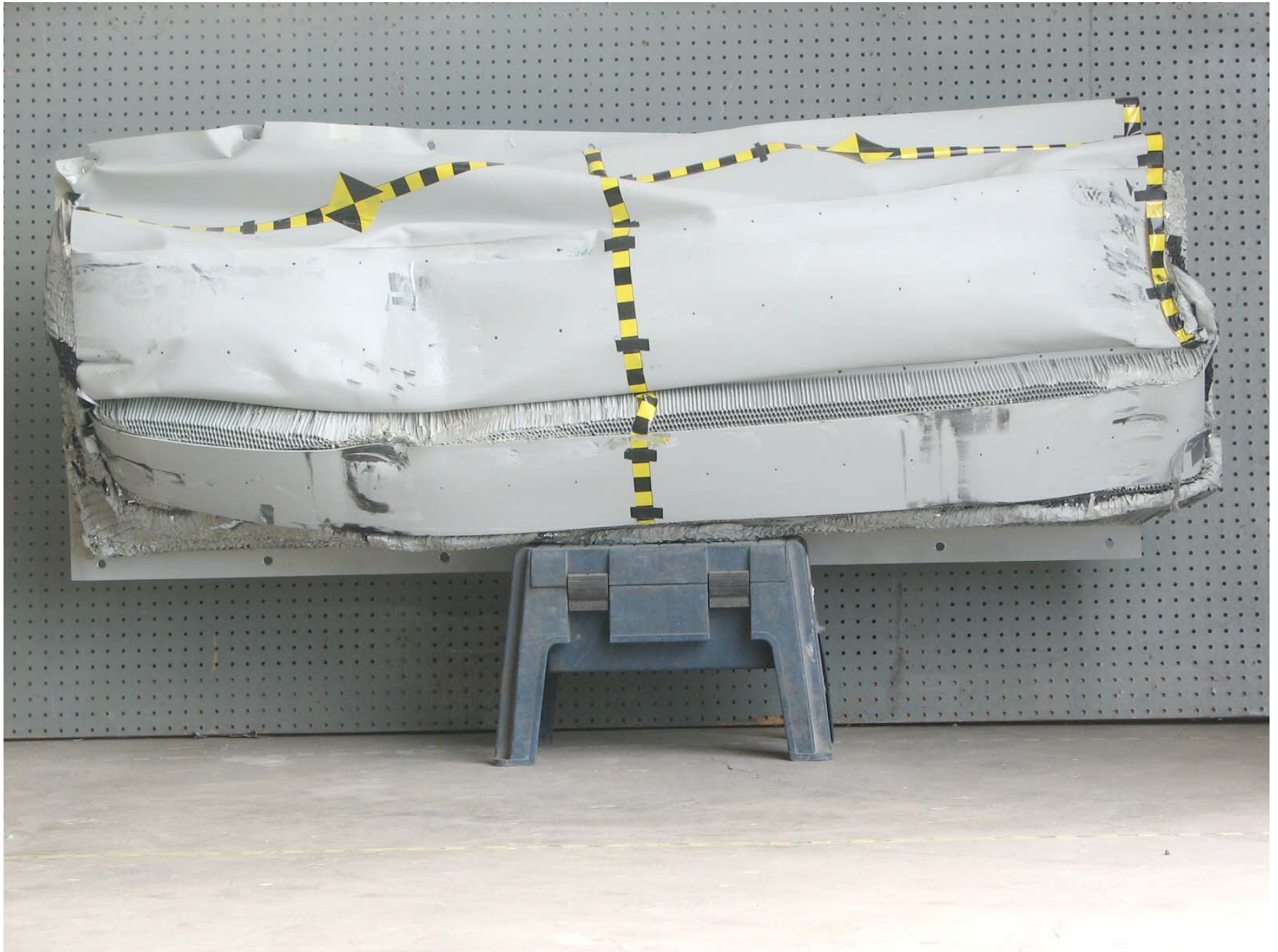


Figure A-54: Post-Test Front View of Deformable Barrier



A-55

TR-P28003-07-NC

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

A-58

TR-P28003-07-NC

A-59

TR-P28003-07-NC



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



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

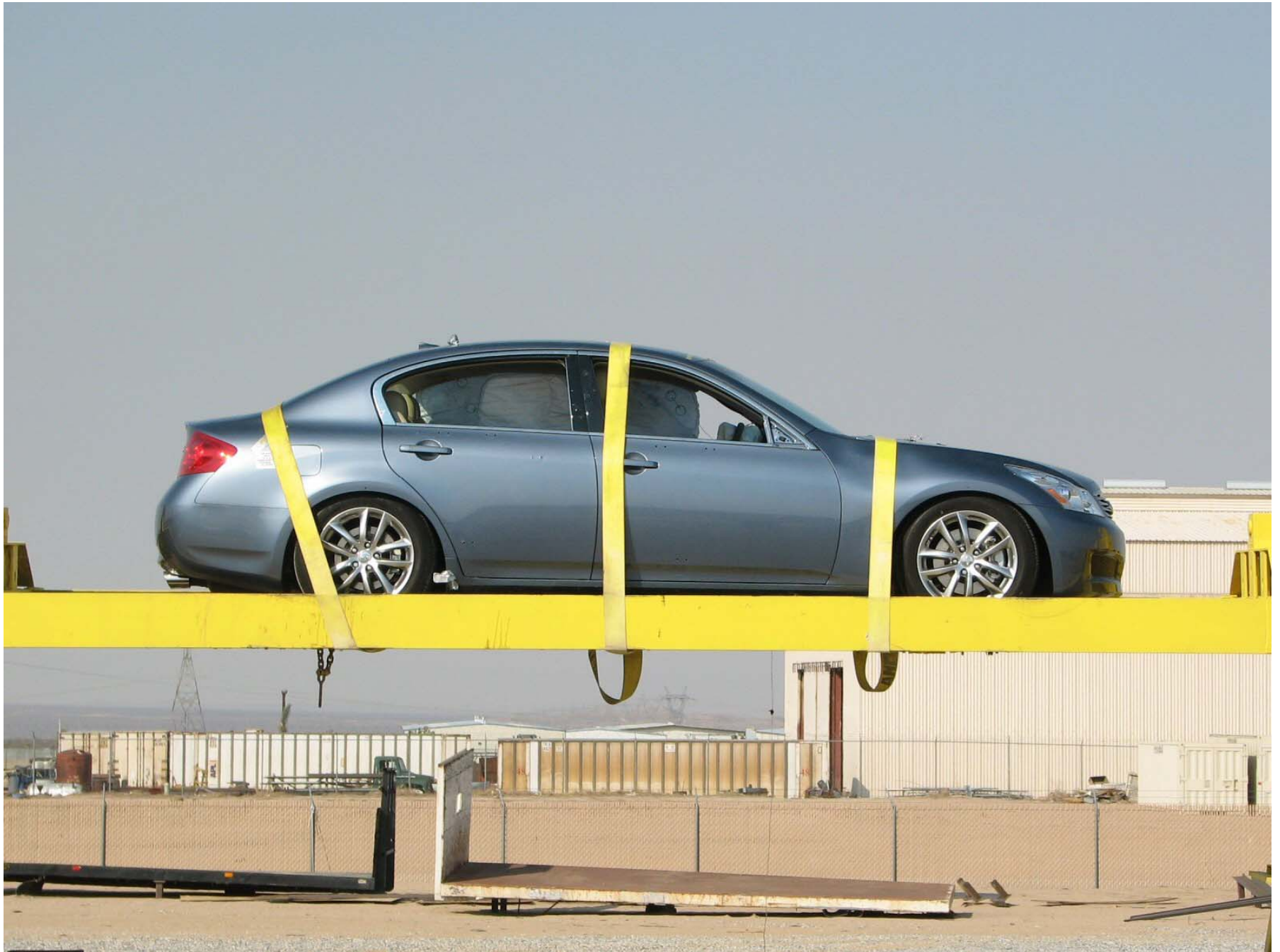


Figure A-61: Vehicle on Rollover Device (0°)



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



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

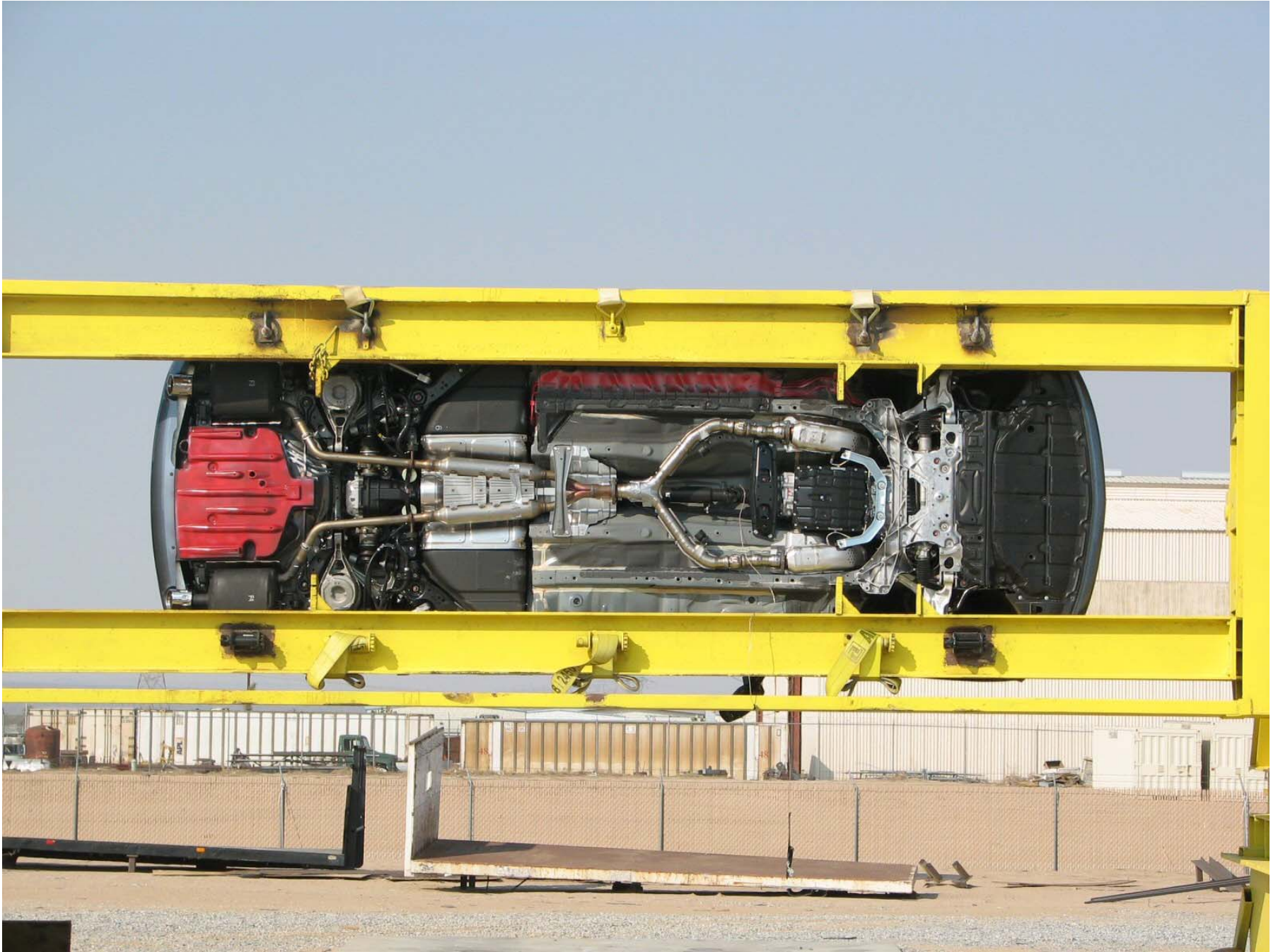


Figure A-64: Vehicle on Rollover Device (270°)



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	B-1
	Driver Lower Rib Primary Y	B-1
	Driver Lower Spine Primary Y	B-1
	Driver Pelvis Primary Y	B-1
B-2	Passenger Upper Rib Primary Y	B-2
	Passenger Lower Rib Primary Y	B-2
	Passenger Lower Spine Primary Y	B-2
	Passenger Pelvis Primary Y	B-2

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)

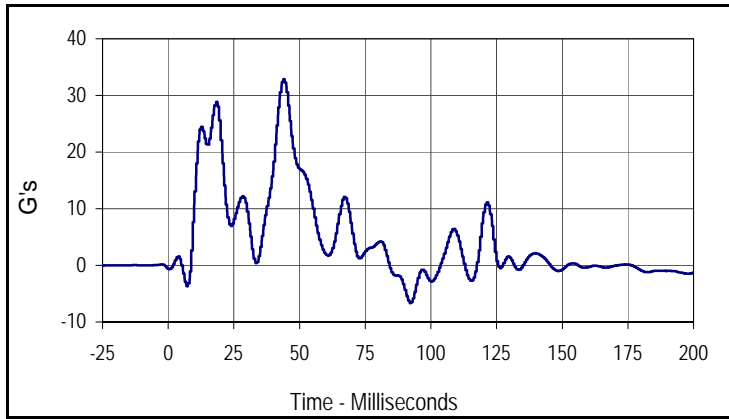
Vehicle Left Sill at Rear Door Y
Vehicle Left Sill at Front Door Y
Vehicle Left Sill at Rear Door Y Velocity
Vehicle Left Sill at Front Door Y Velocity
Vehicle Left Front Door C/L Y
Vehicle Right Rear Occupant Compartment
Vehicle Left Front Door Mid Rear Y
Vehicle Left Front Door Upper CL Y
Vehicle Left 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)

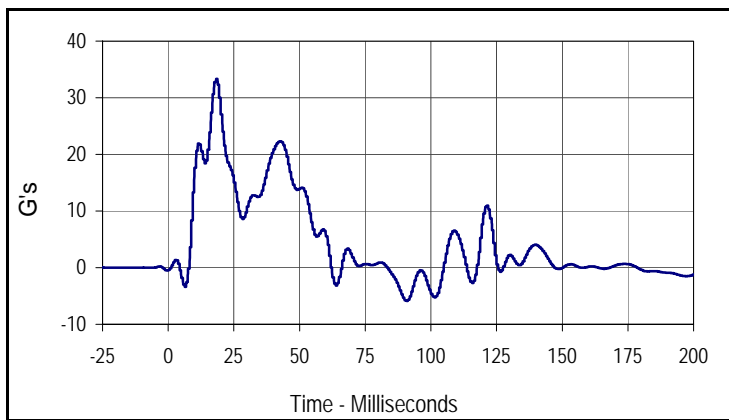
Driver Upper Rib Primary Y
Driver Lower Rib Primary Y
Driver Lower Spine Primary Y
Driver Pelvis Primary Y
Driver Upper Rib Redundant Y
Driver Lower Rib Redundant Y
Driver Lower Spine Redundant Y
Driver Pelvis Redundant Y
Passenger Upper Rib Primary Y
Passenger Lower Rib Primary Y
Passenger Lower Spine 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: 2008 Infiniti G35 4-Door Sedan
 Test Program: 55/28 km/h Side Impact NCAP

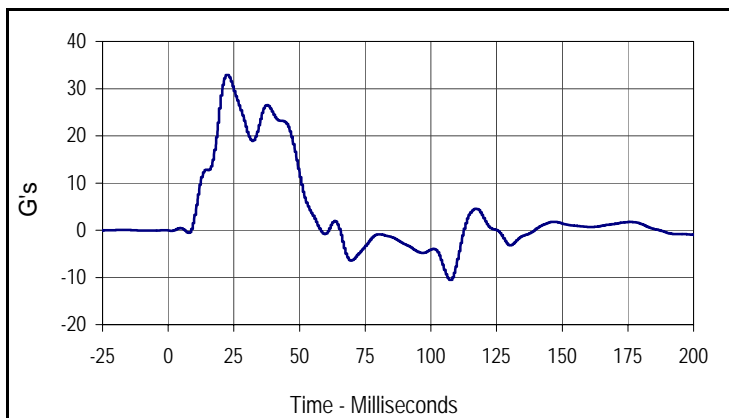
Test Date: 10/25/07
 NHTSA No.: M85215



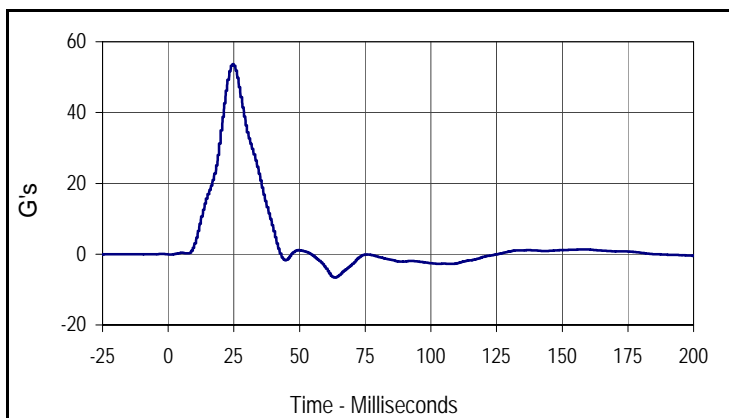
Curve Description			
Driver Upper Rib Y Primary			
CURNO	Type	SAE Class	Units
001	FIR	FIR100	G's
Max	Time	Min	Time
32.9	43.8	-6.7	91.9



Curve Description			
Driver Lower Rib Y Primary			
CURNO	Type	SAE Class	Units
002	FIR	FIR100	G's
Max	Time	Min	Time
33.3	18.2	-5.9	90.7



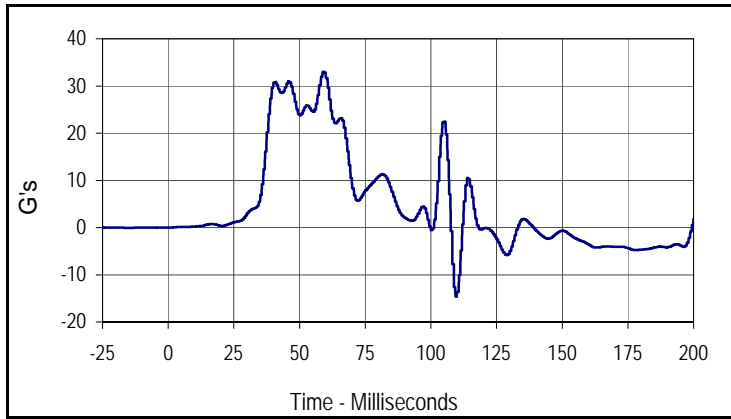
Curve Description			
Driver Lower Spine Y Primary			
CURNO	Type	SAE Class	Units
003	FIR	FIR100	G's
Max	Time	Min	Time
32.9	22.5	-10.5	106.9



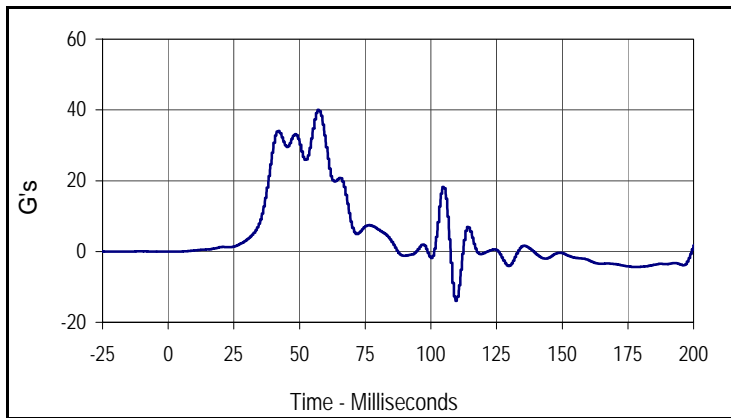
Curve Description			
Driver Pelvis Y Primary			
CURNO	Type	SAE Class	Units
004	FIR	FIR100	G's
Max	Time	Min	Time
53.7	24.4	-6.6	63.2

Test Vehicle: 2008 Infiniti G35 4-Door Sedan
 Test Program: 55/28 km/h Side Impact NCAP

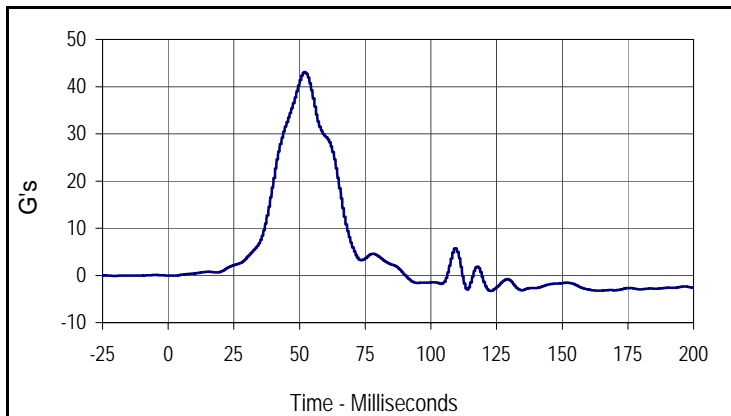
Test Date: 10/25/07
 NHTSA No.: M85215



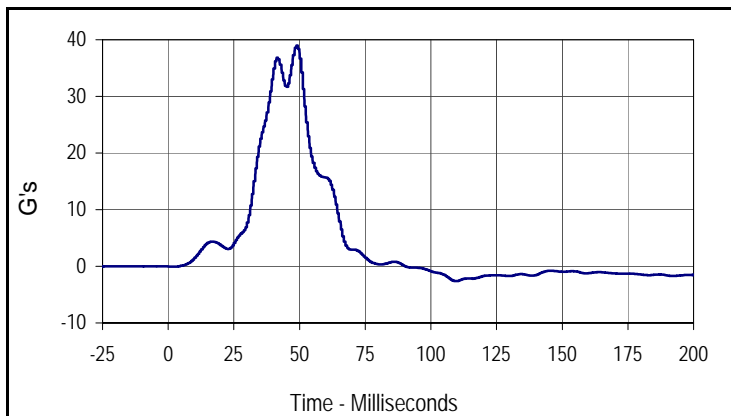
Curve Description			
Passenger Upper Rib Y Primary			
CURNO	Type	SAE Class	Units
005	FIR	FIR100	G's
Max	Time	Min	Time
33.0	58.8	-14.6	109.4



Curve Description			
Passenger Lower Rib Y Primary			
CURNO	Type	SAE Class	Units
006	FIR	FIR100	G's
Max	Time	Min	Time
40.0	56.9	-13.9	109.4



Curve Description			
Passenger Lower Spine Y Primary			
CURNO	Type	SAE Class	Units
007	FIR	FIR100	G's
Max	Time	Min	Time
43.1	51.9	-3.3	122.5



Curve Description			
Passenger Pelvis Primary Y			
CURNO	Type	SAE Class	Units
008	FIR	FIR100	G's
Max	Time	Min	Time
39.0	48.8	-2.6	109.4

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

Test Date: 10/24/07

ATD Serial No.: 274

Test I.D.: N/A



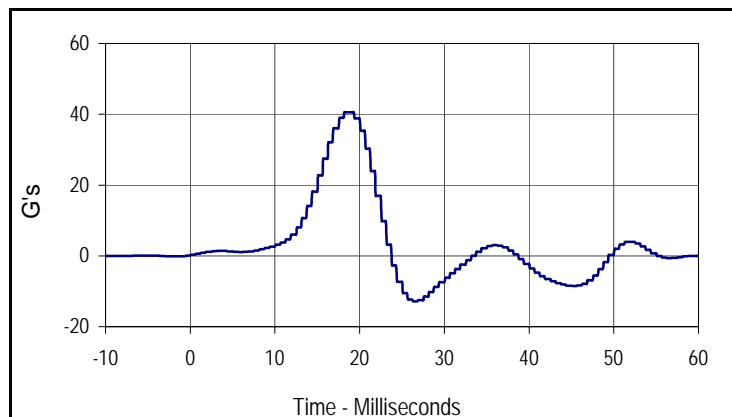
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
SH- Seated Height	mm	889 to 909	897	Pass
HP- Hip Point Height	mm	99 (reference)	99	Pass
RH- Rib Height	mm	502 to 520	510	Pass
KH- Knee Pivot From Back Line	mm	511 to 526	519	Pass
KV- Knee Pivot From Floor	mm	490 to 505	500	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

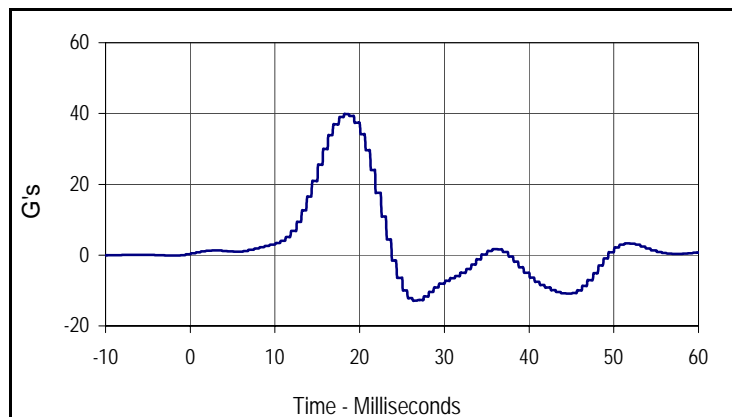
Test Date: 10/24/07
 Test I.D.: TH10Q



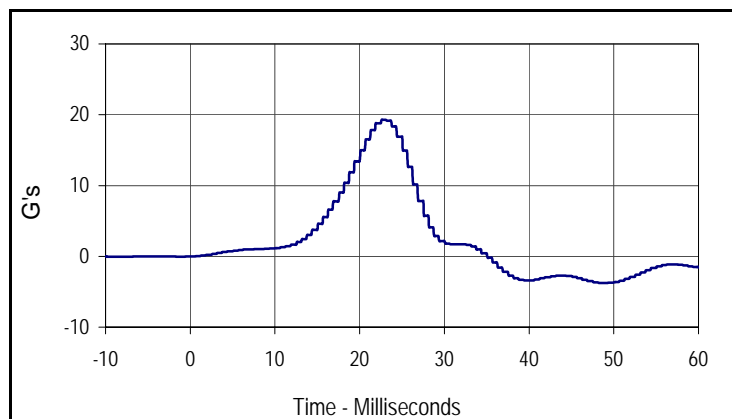
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	4.21 to 4.33	4.29	Pass
Upper Rib Acceleration	G's	37.0 to 46.0	40.6	Pass
Lower Rib Acceleration	G's	37.0 to 46.0	39.8	Pass
Thoracic Spine Acceleration	G's	15.0 to 22.0	19.3	Pass
Overall Test Results			Pass	



Curve Description			
Upper Rib Y Primary			
CURNO	Type	SAE Class	Units
001	FIL	FIR100	G's
Max	Time	Min	Time
40.6	18.2	-12.8	26.3



Curve Description			
Lower Rib Y Primary			
CURNO	Type	SAE Class	Units
002	FIL	FIR100	G's
Max	Time	Min	Time
39.8	18.2	-12.9	26.3



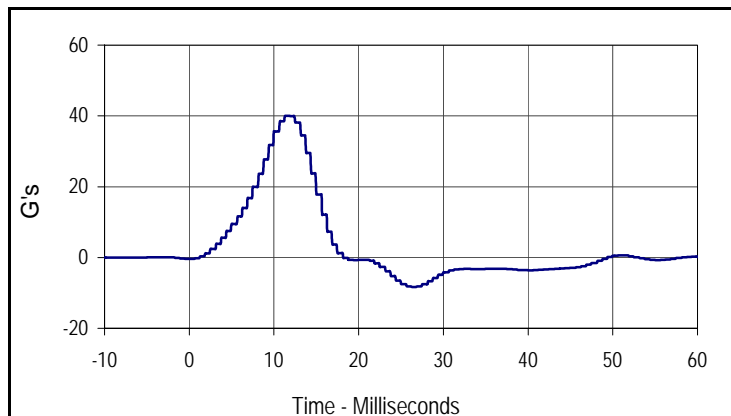
Curve Description			
Lower Spine Y Primary			
CURNO	Type	SAE Class	Units
003	FIL	FIR100	G's
Max	Time	Min	Time
19.3	22.6	-3.8	48.8

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

Test Date: 10/24/07
 Test I.D.: PL10Q



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	4.32	Pass
Peak Pelvis Acceleration	G's	40.0 to 60.0	40.1	Pass
Acceleration Time Above 20 G's	Msec.	3.0 to 7.0	6.70	Pass
Overall Test Results				Pass



Curve Description			
Pelvis Y Primary			
CURNO	Type	SAE Class	Units
001	FIL	FIR100	G's
Max	Time	Min	Time
40.1	11.3	-8.4	26.3

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

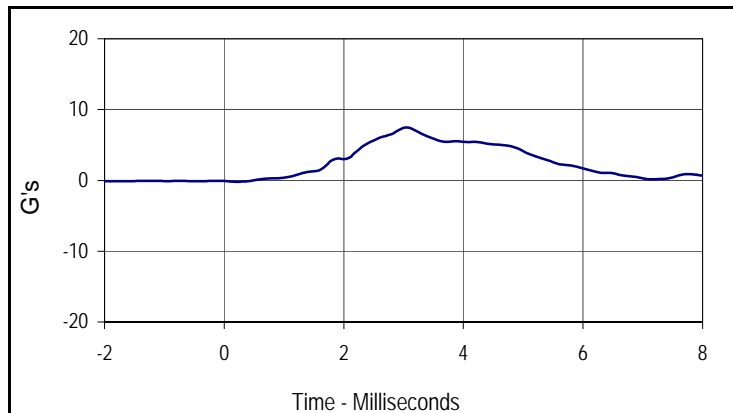
Test Date: 10/24/07
 Test I.D.: HD10Q



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	141.6	Pass
Peak Longitudinal Acceleration	G's	≤15.0	7.4	Pass
Is Acceleration Unimodal?	Yes/No	Yes	Yes	Pass
Oscillations After Main Pulse	%	<15	3.7	Pass
Overall Test Results				Pass



Curve Description			
Head Resultant			
CURNO	Type	SAE Class	Units
001	RES	1000	G's
Max	Time	Min	Time
141.6	2.3	0.1	-0.2



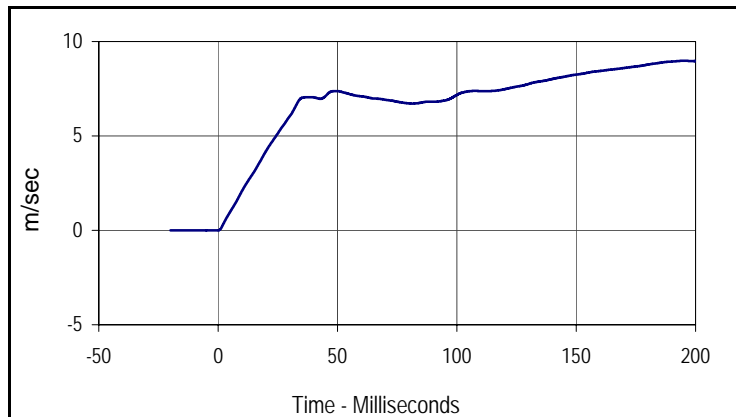
Curve Description			
Head X			
CURNO	Type	SAE Class	Units
002	FIL	1000	G's
Max	Time	Min	Time
7.4	3.0	-0.2	0.2

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

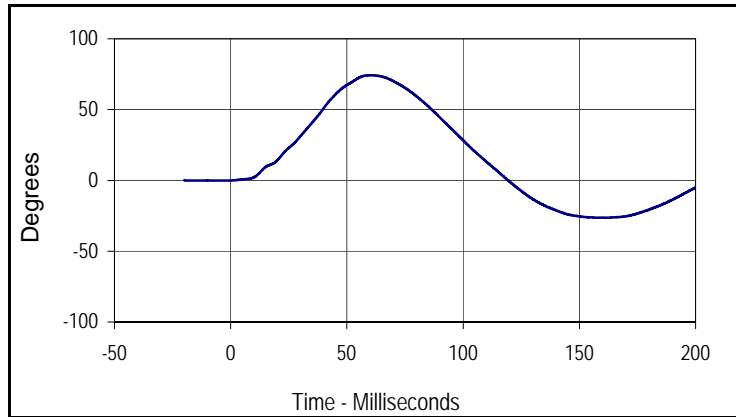
Test Date: 10/24/07
 Test I.D.: NB10Q



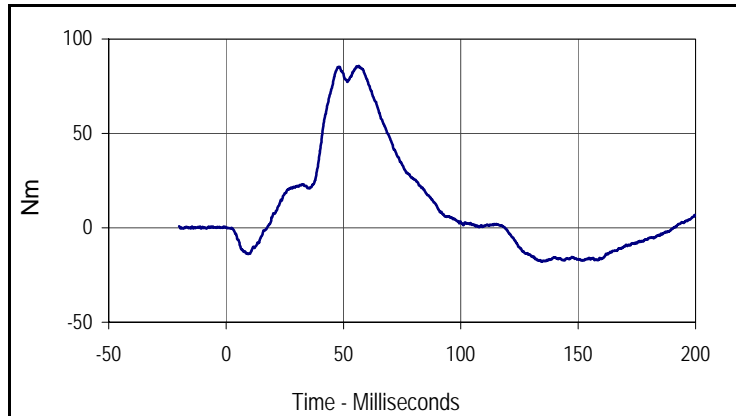
Tested Parameter	Units	Specification	Result	Pass/Fail	
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass	
Laboratory Relative Humidity	%	10 to 70	30	Pass	
Pendulum Velocity	m/sec	6.89 to 7.13	7.09	Pass	
Pendulum Deceleration	10 Msec.	m/sec	1.96 to 2.55	2.09	Pass
	20 Msec.	m/sec	4.12 to 5.10	4.19	Pass
	30 Msec.	m/sec	5.73 to 7.01	6.04	Pass
	40 to 70	m/sec	6.27 to 7.64	7.38	Pass
"D" Plane Rotation	Max	Degrees	66.0 to 82.0	74.2	Pass
Max Rotation Time After Peak Moment	Msec.	2.0 to 16.0	3.7	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	85.8	Pass	
Positive Moment Decay, Time To 0 Nm	Msec.	49.0 to 64.0	62.4	Pass	
Overall Test Results				Pass	



Curve Description			
Pendulum Velocity			
CURNO	Type	SAE Class	Units
001	FIL	180	m/sec
Max	Time	Min	Time
9.0	194.7	0.0	-0.3



Curve Description			
"D" Plane Rotation			
CURNO	Type	SAE Class	Units
003	FIL	60	Degrees
Max	Time	Min	Time
74.2	60.2	-26.3	159.3



Curve Description			
Moment About Occipital Condyle			
CURNO	Type	SAE Class	Units
004	FIL	600	Nm
Max	Time	Min	Time
85.8	56.5	-18.0	134.5

Test Program: SID / HIII External Measurements

Test Date: 10/24/07

ATD Serial No.: 275

Test I.D.: N/A



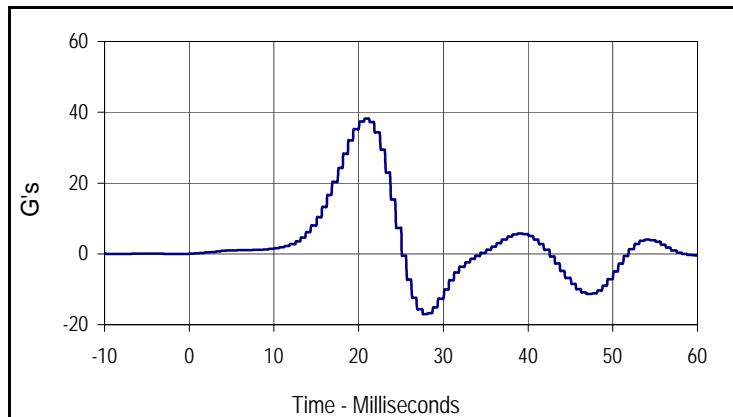
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
SH- Seated Height	mm	889 to 909	897	Pass
HP- Hip Point Height	mm	99 (reference)	99	Pass
RH- Rib Height	mm	502 to 520	518	Pass
KH- Knee Pivot From Back Line	mm	511 to 526	520	Pass
KV- Knee Pivot From Floor	mm	490 to 505	502	Pass
HW- Hip Width	mm	356 to 391	375	Pass
Overall Test Results				Pass

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

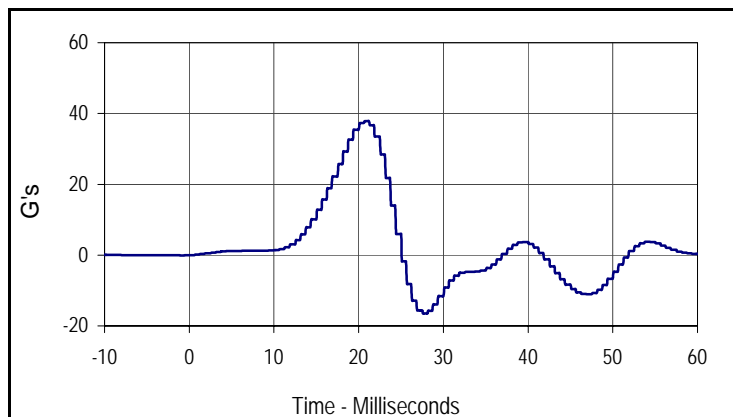
Test Date: 10/24/07
 Test I.D.: TH10P



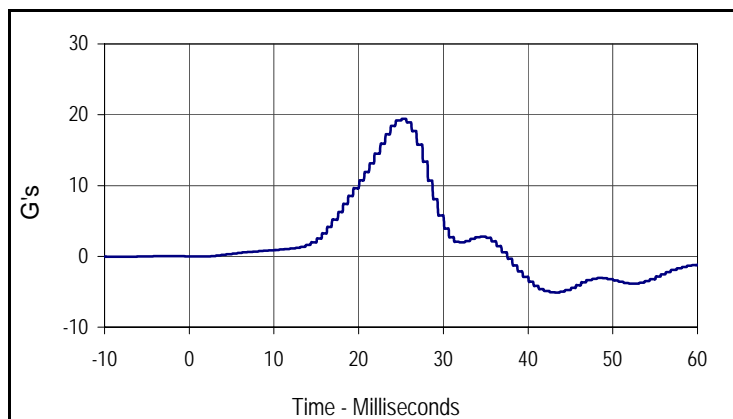
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	4.21 to 4.33	4.30	Pass
Upper Rib Acceleration	G's	37.0 to 46.0	38.2	Pass
Lower Rib Acceleration	G's	37.0 to 46.0	37.9	Pass
Thoracic Spine Acceleration	G's	15.0 to 22.0	19.4	Pass
Overall Test Results			Pass	



Curve Description			
Upper Rib Y Primary			
CURNO	Type	SAE Class	Units
001	FIL	FIR100	G's
Max	Time	Min	Time
38.2	20.7	-17.0	27.6



Curve Description			
Lower Rib Y Primary			
CURNO	Type	SAE Class	Units
002	FIL	FIR100	G's
Max	Time	Min	Time
37.9	20.7	-16.5	27.6



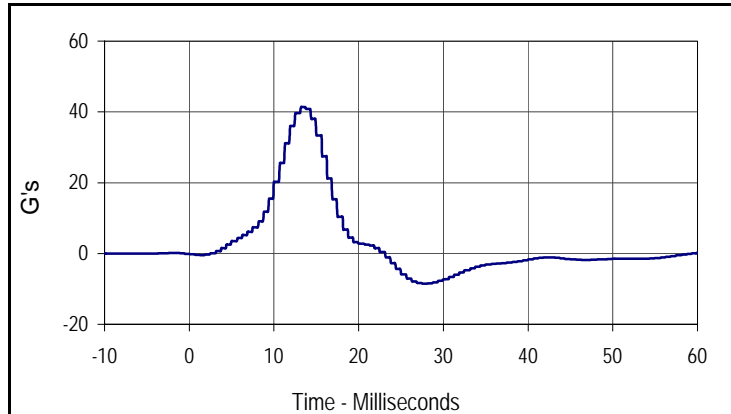
Curve Description			
Lower Spine Y Primary			
CURNO	Type	SAE Class	Units
003	FIL	FIR100	G's
Max	Time	Min	Time
19.4	25.1	-5.1	43.2

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

Test Date: 10/24/07
 Test I.D.: PL10P



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	4.30	Pass
Peak Pelvis Acceleration	G's	40.0 to 60.0	41.4	Pass
Acceleration Time Above 20 G's	Msec.	3.0 to 7.0	4.90	Pass
Overall Test Results				Pass



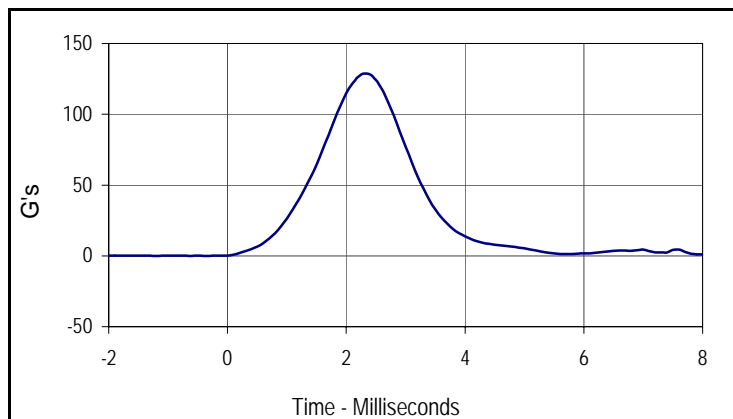
Curve Description			
Pelvis Y Primary			
CURNO	Type	SAE Class	Units
001	FIL	FIR100	G's
Max	Time	Min	Time
41.4	13.2	-8.5	27.5

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

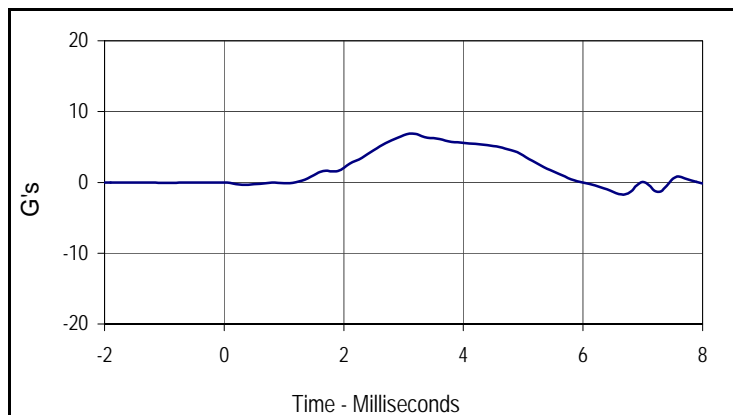
Test Date: 10/24/07
 Test I.D.: HD10P



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	128.7	Pass
Peak Longitudinal Acceleration	G's	≤15.0	6.9	Pass
Is Acceleration Unimodal?	Yes/No	Yes	Yes	Pass
Oscillations After Main Pulse	%	<15	4.1	Pass
Overall Test Results			Pass	



Curve Description			
Head Resultant			
CURNO	Type	SAE Class	Units
001	RES	1000	G's
Max	Time	Min	Time
128.7	2.3	0.0	-0.3



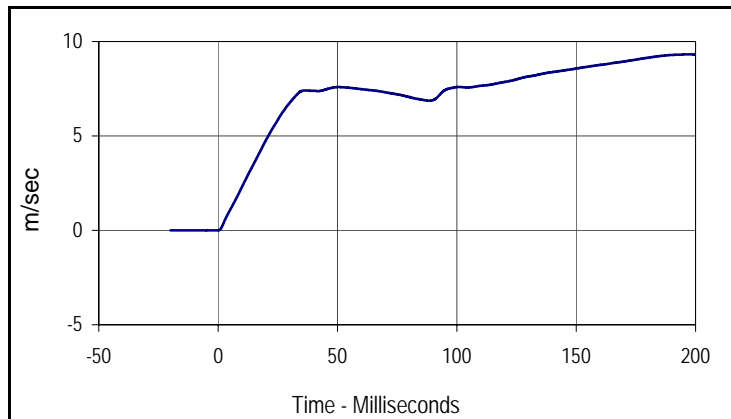
Curve Description			
Head X			
CURNO	Type	SAE Class	Units
002	FIL	1000	G's
Max	Time	Min	Time
6.9	3.1	-0.3	0.3

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

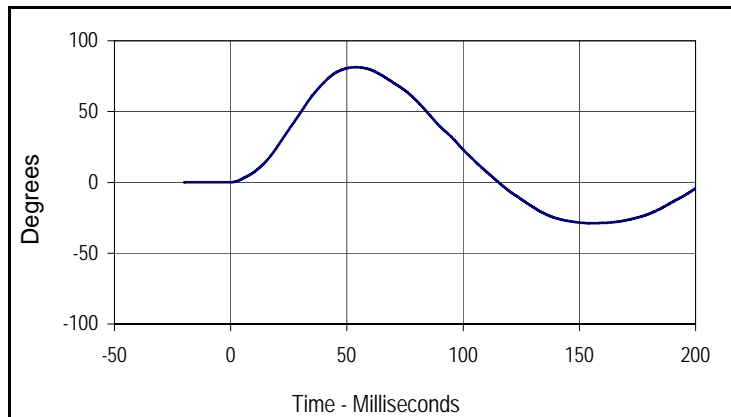
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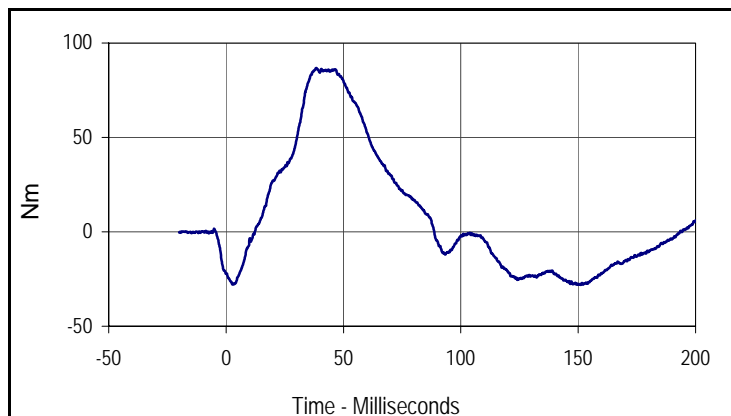
Tested Parameter	Units	Specification	Result	Pass/Fail	
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass	
Laboratory Relative Humidity	%	10 to 70	30	Pass	
Pendulum Velocity	m/sec	6.89 to 7.13	7.05	Pass	
Pendulum Deceleration	10 Msec.	m/sec	1.96 to 2.55	2.31	Pass
	20 Msec.	m/sec	4.12 to 5.10	4.77	Pass
	30 Msec.	m/sec	5.73 to 7.01	6.76	Pass
	40 to 70	m/sec	6.27 to 7.64	7.59	Pass
"D" Plane Rotation	Max	Degrees	66.0 to 82.0	81.4	Pass
Max Rotation Time After Peak Moment	Msec.	2.0 to 16.0	15.5	Pass	
Rotation Time From Peak to Zero Angle	Msec.	58.0 to 67.0	61.5	Pass	
Moment About Occipital Condyle	Nm	73.0 to 88.0	86.8	Pass	
Positive Moment Decay, Time To 0 Nm	Msec.	49.0 to 64.0	50.4	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	196.6	0.0	-0.1



Curve Description			
"D" Plane Rotation			
CURNO	Type	SAE Class	Units
003	FIL	60	Degrees
Max	Time	Min	Time
81.4	53.8	-28.9	155.3



Curve Description			
Moment About Occipital Condyle			
CURNO	Type	SAE Class	Units
004	FIL	600	Nm
Max	Time	Min	Time
86.8	38.3	-28.1	151.0

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

Test Program: SID / HIII External Measurements

Test Date: 10/26/07

ATD Serial No.: 274

Test I.D.: N/A



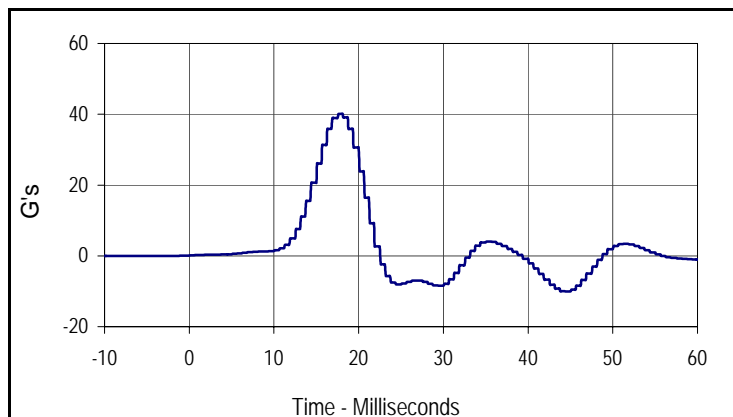
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
SH- Seated Height	mm	889 to 909	894	Pass
HP- Hip Point Height	mm	99 (reference)	99	Pass
RH- Rib Height	mm	502 to 520	516	Pass
KH- Knee Pivot From Back Line	mm	511 to 526	520	Pass
KV- Knee Pivot From Floor	mm	490 to 505	498	Pass
HW- Hip Width	mm	356 to 391	367	Pass
Overall Test Results				Pass

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

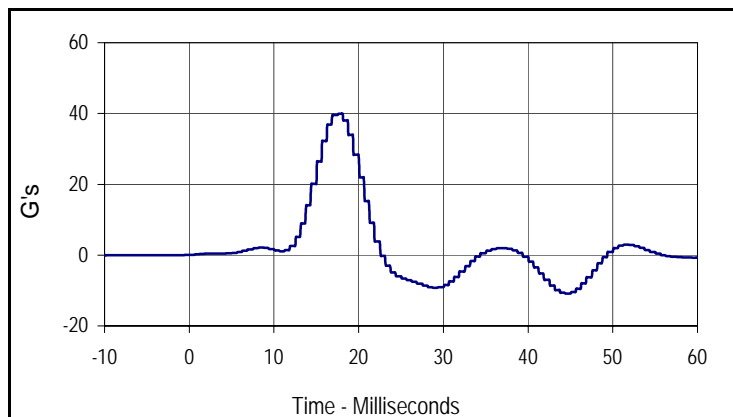
Test Date: 10/26/07
 Test I.D.: TH10V



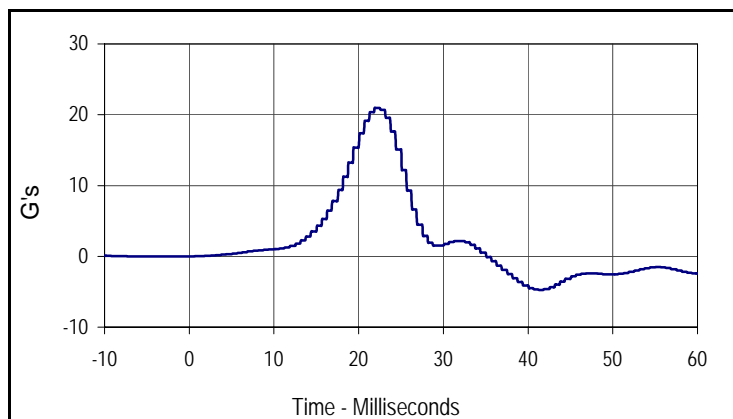
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	4.21 to 4.33	4.33	Pass
Upper Rib Acceleration	G's	37.0 to 46.0	40.1	Pass
Lower Rib Acceleration	G's	37.0 to 46.0	40.0	Pass
Thoracic Spine Acceleration	G's	15.0 to 22.0	21.0	Pass
Overall Test Results				Pass



Curve Description			
Upper Rib Y Primary			
CURNO	Type	SAE Class	Units
001	FIL	FIR100	G's
Max	Time	Min	Time
40.1	17.6	-10.0	44.4



Curve Description			
Lower Rib Y Primary			
CURNO	Type	SAE Class	Units
002	FIL	FIR100	G's
Max	Time	Min	Time
40.0	17.6	-10.8	44.4



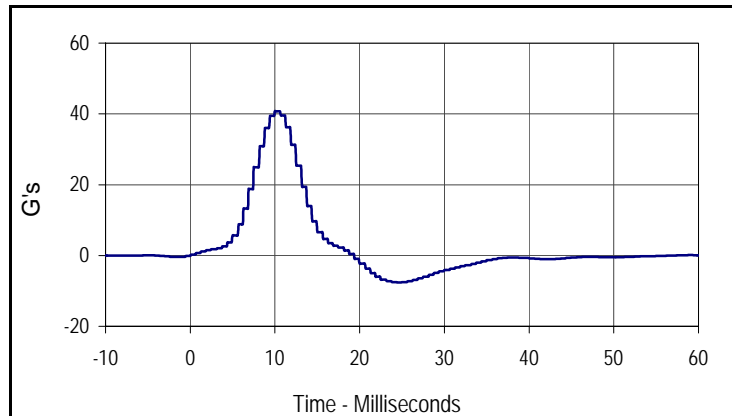
Curve Description			
Lower Spine Y Primary			
CURNO	Type	SAE Class	Units
003	FIL	FIR100	G's
Max	Time	Min	Time
21.0	21.9	-4.7	41.3

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

Test Date: 10/26/07
 Test I.D.: PL10V



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	4.32	Pass
Peak Pelvis Acceleration	G's	40.0 to 60.0	40.7	Pass
Acceleration Time Above 20 G's	Msec.	3.0 to 7.0	4.90	Pass
Overall Test Results				Pass



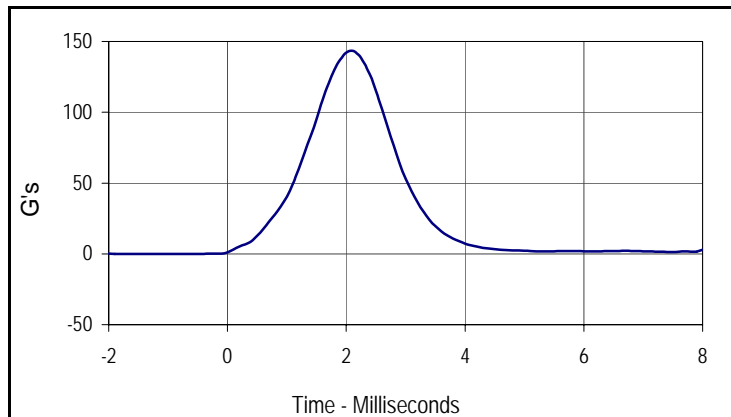
Curve Description			
Pelvis Y Primary			
CURNO	Type	SAE Class	Units
001	FIL	FIR100	G's
Max	Time	Min	Time
40.7	10.0	-7.6	24.4

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

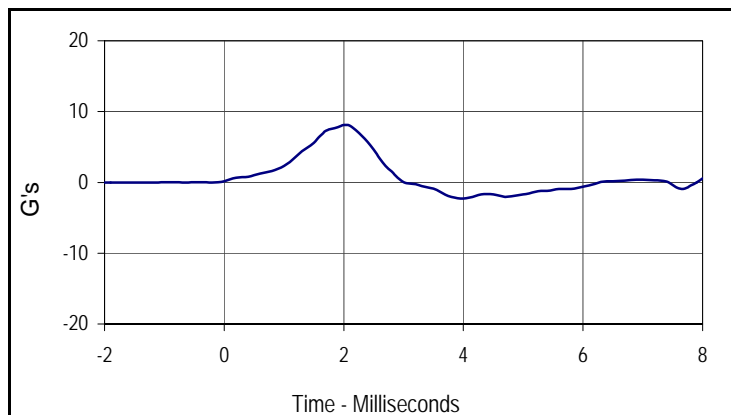
Test Date: 10/26/07
 Test I.D.: HD10V



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	143.5	Pass
Peak Longitudinal Acceleration	G's	≤15.0	8.1	Pass
Is Acceleration Unimodal?	Yes/No	Yes	Yes	Pass
Oscillations After Main Pulse	%	<15	1.5	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	2.1	0.0	-0.8



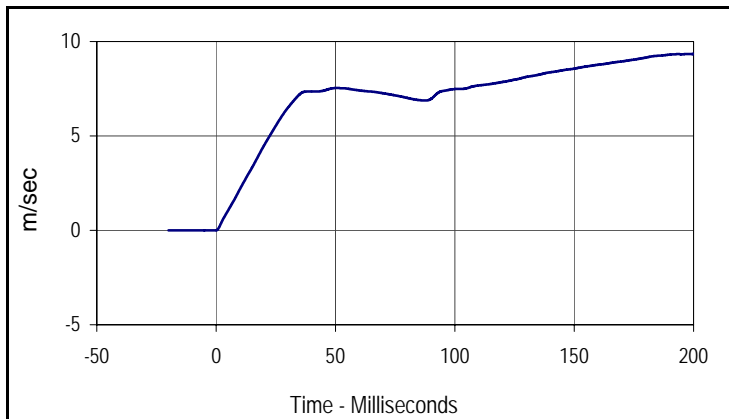
Curve Description			
Head X			
CURNO	Type	SAE Class	Units
002	FIL	1000	G's
Max	Time	Min	Time
8.1	2.0	-2.3	4.0

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

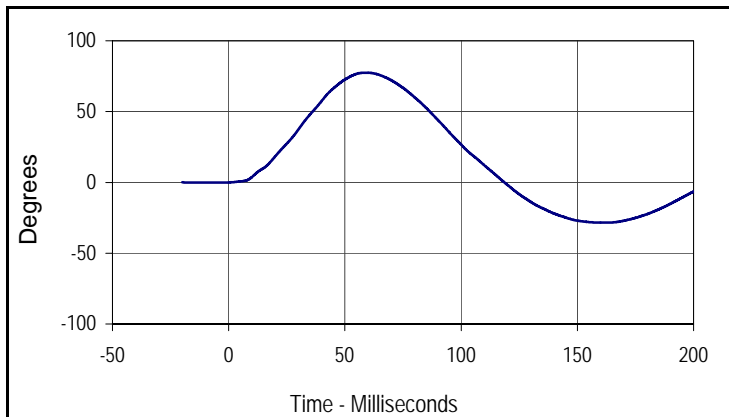
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 Test I.D.: NB10V



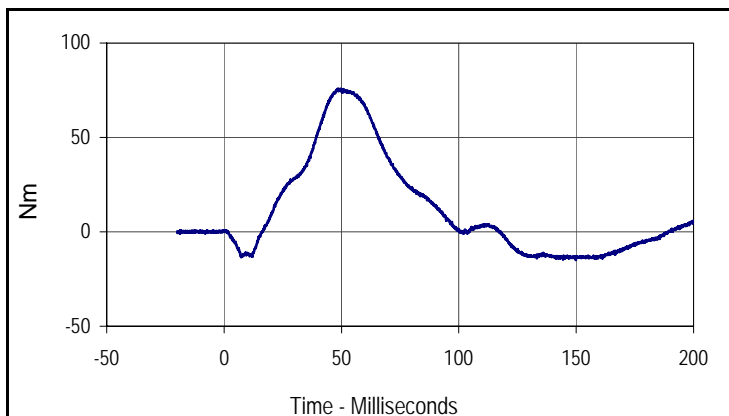
Tested Parameter	Units	Specification	Result	Pass/Fail	
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass	
Laboratory Relative Humidity	%	10 to 70	30	Pass	
Pendulum Velocity	m/sec	6.89 to 7.13	7.05	Pass	
Pendulum Deceleration	10 Msec.	m/sec	1.96 to 2.55	2.20	Pass
	20 Msec.	m/sec	4.12 to 5.10	4.48	Pass
	30 Msec.	m/sec	5.73 to 7.01	6.49	Pass
	40 to 70	m/sec	6.27 to 7.64	7.54	Pass
"D" Plane Rotation	Max	Degrees	66.0 to 82.0	77.5	Pass
Max Rotation Time After Peak Moment	Msec.	2.0 to 16.0	9.4	Pass	
Rotation Time From Peak to Zero Angle	Msec.	58.0 to 67.0	59.4	Pass	
Moment About Occipital Condyle	Nm	73.0 to 88.0	75.8	Pass	
Positive Moment Decay, Time To 0 Nm	Msec.	49.0 to 64.0	50.4	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	198.8	0.0	-0.5



Curve Description			
"D" Plane Rotation			
CURNO	Type	SAE Class	Units
003	FIL	60	Degrees
Max	Time	Min	Time
77.5	59.2	-28.4	161.2



Curve Description			
Moment About Occipital Condyle			
CURNO	Type	SAE Class	Units
004	FIL	60	Nm
Max	Time	Min	Time
75.8	49.8	-14.9	149.8

Test Program: SID / HIII External Measurements

Test Date: 10/26/07

ATD Serial No.: 275

Test I.D.: N/A



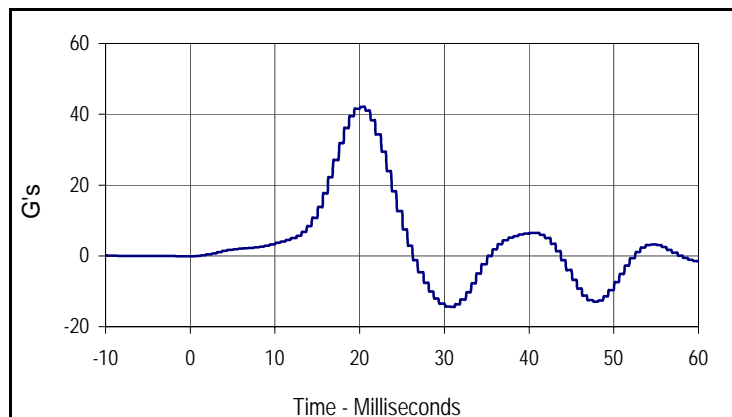
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
SH- Seated Height	mm	889 to 909	900	Pass
HP- Hip Point Height	mm	99 (reference)	99	Pass
RH- Rib Height	mm	502 to 520	516	Pass
KH- Knee Pivot From Back Line	mm	511 to 526	520	Pass
KV- Knee Pivot From Floor	mm	490 to 505	496	Pass
HW- Hip Width	mm	356 to 391	370	Pass
Overall Test Results				Pass

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

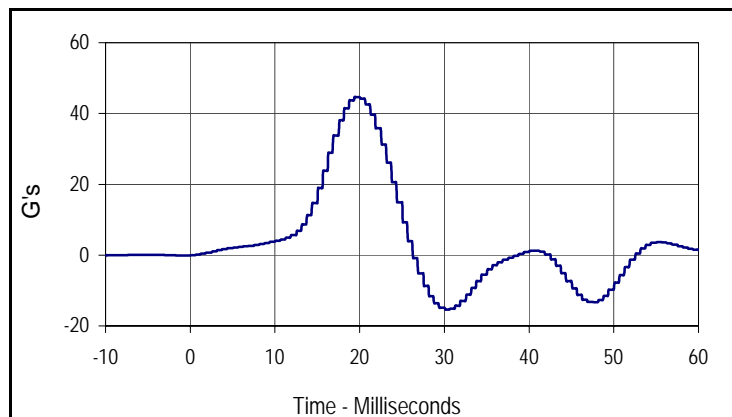
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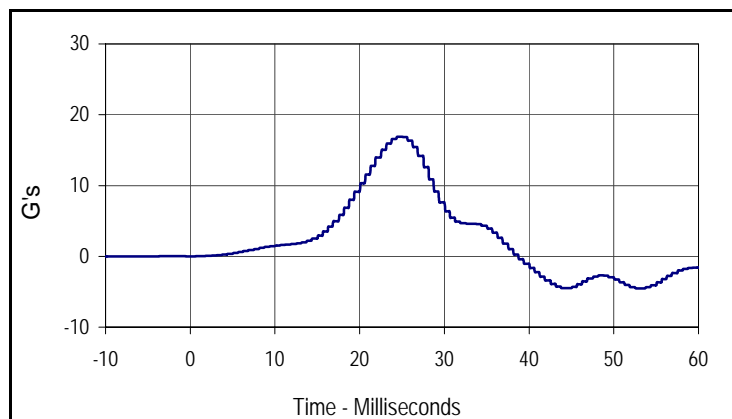
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	4.21 to 4.33	4.32	Pass
Upper Rib Acceleration	G's	37.0 to 46.0	42.1	Pass
Lower Rib Acceleration	G's	37.0 to 46.0	44.6	Pass
Thoracic Spine Acceleration	G's	15.0 to 22.0	16.9	Pass
Overall Test Results				Pass



Curve Description			
Upper Rib Y Primary			
CURNO	Type	SAE Class	Units
001	FIL	FIR100	G's
Max	Time	Min	Time
42.1	20.1	-14.4	30.7



Curve Description			
Lower Spine Y Primary			
CURNO	Type	SAE Class	Units
002	FIL	FIR100	G's
Max	Time	Min	Time
44.6	19.4	-15.4	30.1



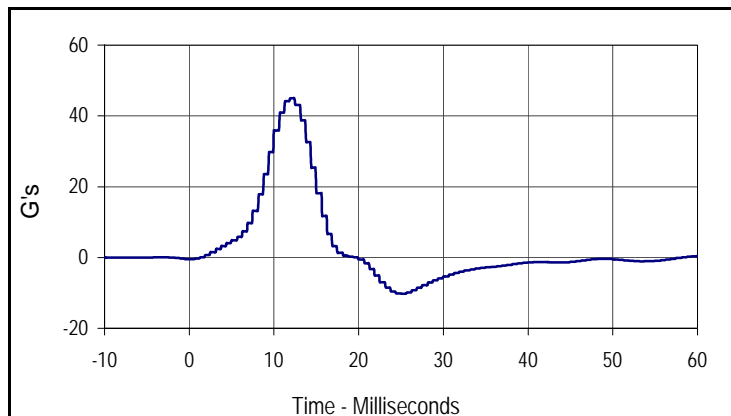
Curve Description			
Lower Rib Y Primary			
CURNO	Type	SAE Class	Units
003	FIL	FIR100	G's
Max	Time	Min	Time
16.9	24.4	-4.5	53.2

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

Test Date: 10/26/07
 Test I.D.: PL10Z



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	4.32	Pass
Peak Pelvis Acceleration	G's	40.0 to 60.0	45.0	Pass
Acceleration Time Above 20 G's	Msec.	3.0 to 7.0	6.10	Pass
Overall Test Results				Pass



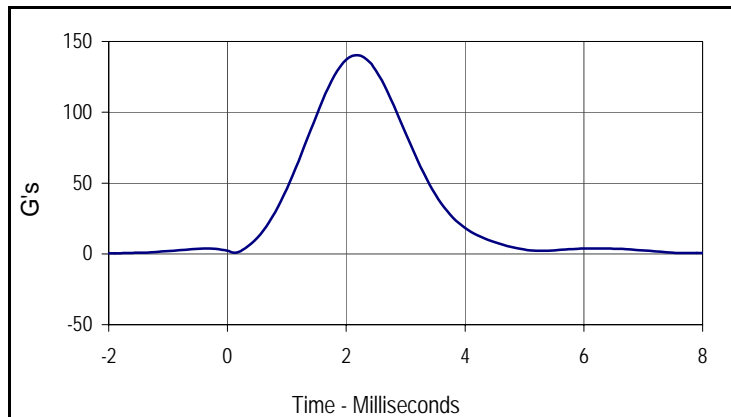
Curve Description			
Pelvis Y Primary			
CURNO	Type	SAE Class	Units
001	FIL	FIR100	G's
Max	Time	Min	Time
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Test Program: SID / HIII Head Drop Lateral Impact Test
 ATD Serial No.: 275

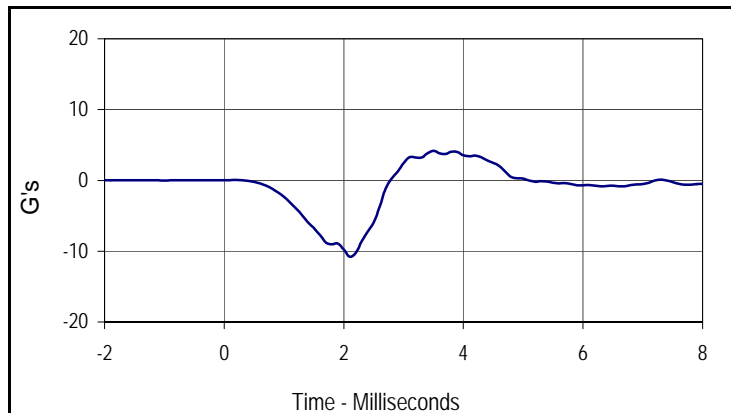
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 Test I.D.: HD10Z



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	140.4	Pass
Peak Longitudinal Acceleration	G's	≤15.0	10.8	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			
CURNO	Type	SAE Class	Units
001	RES	1000	G's
Max	Time	Min	Time
140.4	2.2	0.4	-2.0



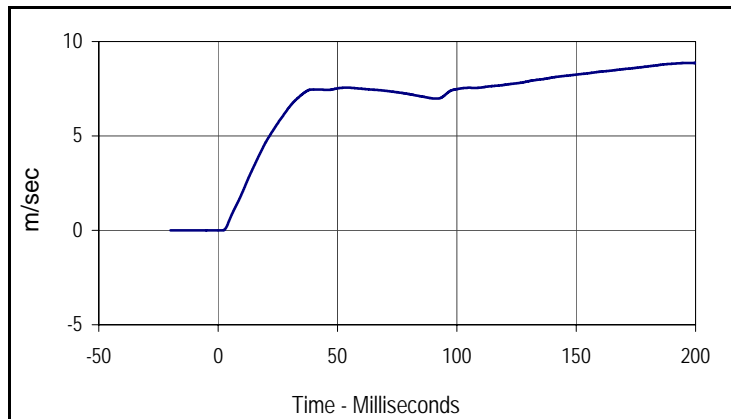
Curve Description			
Head X			
CURNO	Type	SAE Class	Units
002	FIL	1000	G's
Max	Time	Min	Time
4.2	3.5	-10.8	2.1

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

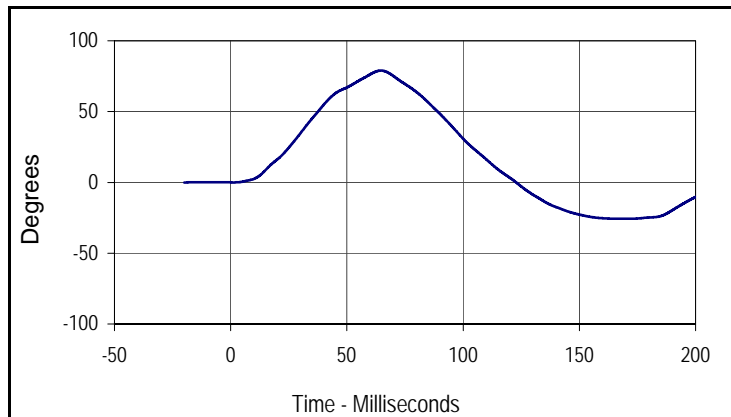
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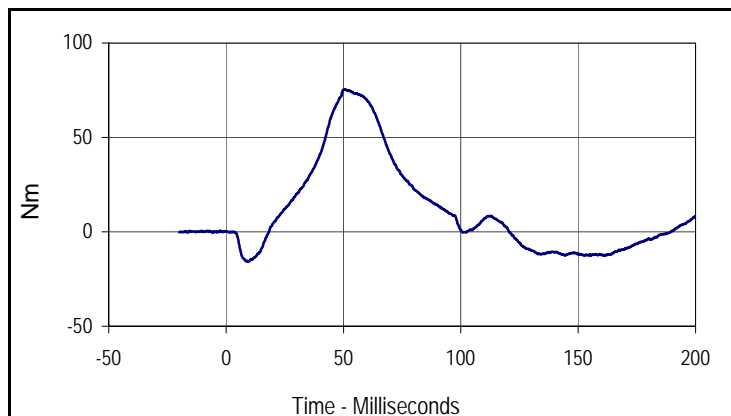
Tested Parameter	Units	Specification	Result	Pass/Fail	
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass	
Laboratory Relative Humidity	%	10 to 70	30	Pass	
Pendulum Velocity	m/sec	6.89 to 7.13	7.09	Pass	
Pendulum Deceleration	10 Msec.	m/sec	1.96 to 2.55	1.97	Pass
	20 Msec.	m/sec	4.12 to 5.10	4.68	Pass
	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	79.0	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	75.6	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
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
79.0	64.6	-25.6	165.7



Curve Description			
Moment About Occipital Condyle			
CURNO	Type	SAE Class	Units
004	FIL	600	Nm
Max	Time	Min	Time
75.6	50.8	-15.8	9.7

APPENDIX D
CHILD RESTRAINT SYSTEM

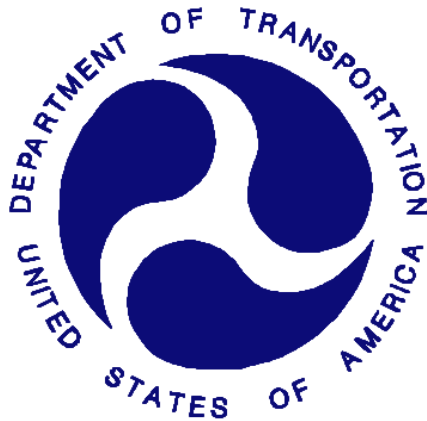
REPORT NUMBER TR-P28003-07-NC

**NEW CAR ASSESMENT PROGRAM
SIDE IMPACT TEST**

**NISSAN MOTOR CO., LTD.
2008 INFINITI G35
4-DOOR SEDAN**

NHTSA NUMBER: M85215

**Prepared By:
KARCO ENGINEERING, LLC
9270 HOLLY ROAD
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OCTOBER 25, 2007

FINAL REPORT

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

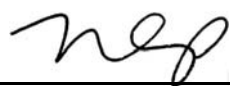
This final test report was prepared for the U.S. Department of Transportation, National Highway Traffic Safety Administration, in response to Contract Number DTNH22-03-D-32005.

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Date: October 25, 2007

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Mr. Frank D. Richardson, Program Manager
KARCO Engineering, LLC

Date: October 25, 2007

FINAL REPORT ACCEPTED BY:

Manager, New Car Assessment Program

Date of Acceptance

COTR, NCAP Frontal Impact Program

Date of Acceptance

Technical Report Documentation Page

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4. Title and Subtitle Final report of a Graco Snugride CRS. NHTSA No. M85215		5. Report Date October 25, 2007	
		6. Performing Organization Code KAR	
7. Authors Mr. Kelsey A. Chiu, Project Engineer, KARCO Mr. Frank Richardson, Program Manager, KARCO		8. Performing Organization Report No. TR-P28003-07	
9. Performing Organization Name and Address Karco Engineering, LLC 9270 Holly Rd. Adelanto, CA, 92301		10. Work Unit No.	
		11. Contract or Grant No. DTNH22-03-D-32005	
12. Sponsoring Agency Name and Address U. S. Department of Transportation National Highway Traffic Safety Administration Rulemaking Office of Crashworthiness Standards Mail Code NVS-111 1200 New Jersey Ave., SE, Room W43-410 Washington, D.C 20590		13. Type of Report and Period Covered Final Test Report	
		14. Sponsoring Agency Code DOT/NHTSA/NRM/OCS	
15. Supplementary Notes			
16. Abstract <p>A side impact test was conducted on the subject CRS Graco Snugride in conjunction with side impact NCAP testing on a 2008 Infiniti G35 4-Door Sedan, and in accordance with the specifications of the Office of Crahworthiness Standards Test Procedure for the determination of CRS crashworthiness. This test was conducted at KARCO Engineering, LLC, on October 25, 2007.</p>			
Measurement Description	Units	Threshold	Right Rear (P3)
Head Injury Criteria (HIC 15)	N/A	390	41.2
3 msec. Chest Clip	G's	50	19.0
17. Key Words New Car Assessment Program (NCAP) Side Impact Moving Deformable Barrier (MDB) Final report of a Graco Snugride CRS		18. Distribution Statement Copies of this report are available from: National Highway Traffic Safety Admin. NHTSA Technical Reference Division 1200 New Jersey Ave., SE, Room W43-410 Washington, DC 20590	
19. Security Classification of this report UNCLASSIFIED	20. Security Classification of this page UNCLASSIFIED	21. No. of Pages 43	22. Price

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TR-P28003-07-NC

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SECTION D-1
PURPOSE AND SUMMARY OF TEST M85215

The purpose of this test is to obtain CRS performance data during a 55/28 km/h 90 deg. Moving Deformable Barrier Side Impact NCAP Test

The Side Impact NCAP test was conducted in accordance with the Office of Crashworthiness Standards (OCS) NCAP Laboratory Test Procedure.

SUMMARY

One 12-month old CRABI (P3) was instrumented with head, chest, and six-axis upper neck load cells. A tri-axial accelerometer was installed on the CRS and the CRS base. Seat belt load cells were placed on the inboard and outboard lower tethers.

The right rear (Serial No. 017) CRABI was calibrated prior to this test. CRABI calibration information is found in Section D-4.

CHILD DUMMY VALUES		
Location	HIC 15 Value	3 msec. Chest Clip
CRABI (P3)	41.2	19

DATA SHEET NO. 1
CRASH TEST SUMMARY

Test Vehicle: 2008 Infiniti G35 4-Door Sedan

NHTSA No.: M85215

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

Test Date: 10/25/07

CHILD RESTRAINT INFORMATION

Description	Position #3 CRS
Manufacturer	Graco
Model Name	Snugride
Model No.	8645THR3
Type	Infant
Forward/Rearward	Rearward

VISIBLE DUMMY CONTACT POINTS

Description	Position #3 CRS
Head Contact	Right Side of CRS
Chest Contact	None
Abdomen Contact	None
Left Knee Contact	None
Right Knee Contact	None
Left Toe Contact	None
Right Toe Contact	Seatback

POST-TEST DOOR OPENINGS

Description	Position #3 CRS
Right Rear Door	Remained closed and latched, operational

CAMERAS

Description	Standard
High Speed	1
Real Time	0
Total	1

DATA CHANNELS

CRABI (P3) Sensors	13
Belt Sensors	2
CRS Sensors	6
Total	21

DATA SHEET NO. 2
VEHICLE PARAMETER DATA

Test Vehicle: 2008 Infiniti G35 4-Door Sedan

NHTSA No.: M85215

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

Test Date: 10/25/07

TEST VEHICLE WEIGHTS

	Units	As Delivered Weights (UVW)			As Tested Weights (ATW)		
		Front Axle	Rear Axle	Total	Front Axle	Rear Axle	Total
Left	kg	421	367	788	480	474	954
Right	kg	439	375	814	437	432	869
Ratio	%	53.7	46.3	100.0	50.3	49.7	100.0
Total	kg	860	742	1602	917	906	1823

TARGET TEST WEIGHT CALCULATION

Measured Parameter	Units	Value
Total Delivered Weight (UVW)	kg	1602
Weight of 2 P572 ATDs	kg	162
Rated Cargo/Luggage Wt (RCLW)	kg	68
Calculated Vehicle Target Wt (TVTW)	kg	1832

DATA SHEET NO. 3

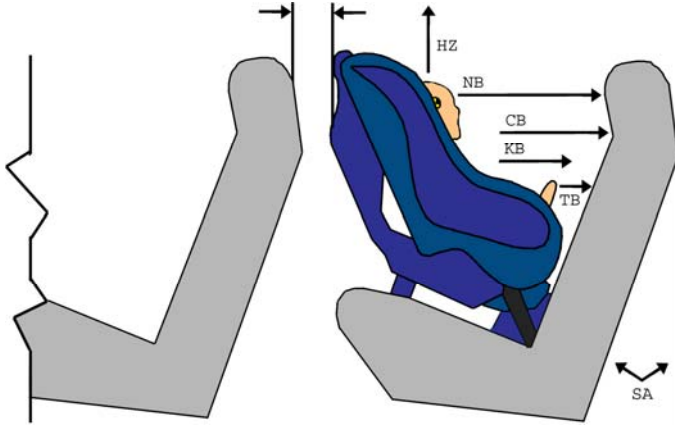
CRABI POSITIONING IN VEHICLE

Test Vehicle: 2008 Infiniti G35 4-Door Sedan

NHTSA No.: M85215

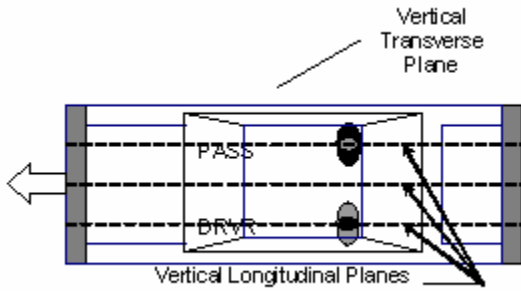
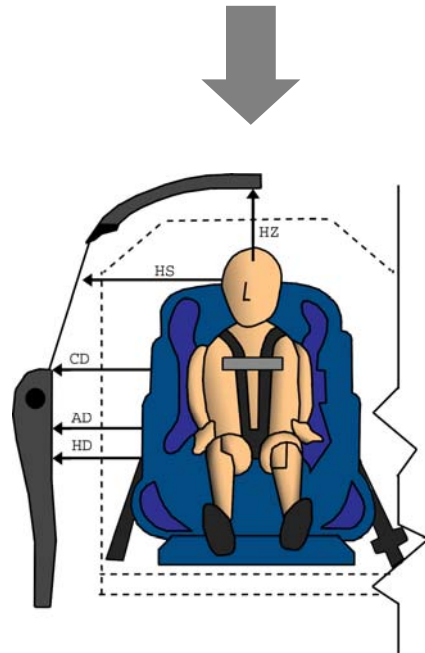
Test Program: 55/28 km/h Side Impact NCAP

Test Date: 10/25/07



- | | |
|----|---------------------|
| AD | Arm to Door |
| CD | Chest to Door |
| HD | H-Point to Door |
| HS | Head to Side Window |
| KK | Knee to Knee |
| TT | Toe to Toe |

- | | |
|----|--------------------|
| CB | Chest to Seat Back |
| HZ | Head to Roof |
| KB | Knee to Seat Back |
| NB | Nose to Seat Back |
| SA | Seat Back Angle |
| TB | Toe to Seat Back |



DUMMY MEASUREMENTS FOR REAR SEAT OCCUPANTS

DATA SHEET NO. 3...(CONTINUED)**CRABI POSITIONING IN VEHICLE**Test Vehicle: 2008 Infiniti G35 4-Door SedanNHTSA No.: M85215Test Program: 55/28 km/h Side Impact NCAPTest Date: 10/25/07**CRABI POSITION MEASUREMENTS**

Code	Measurement	P3 (Passenger's Side)	
		Length (mm)	Angle (°)
SA	Seatback Angle		15.0
HZ	Head to Roof (Z)	415	
CD	Chest to Door	369	
KK	Knee to Knee (Y)	100	
HS	Head to Side Window	392	
HD	H-Point to Door (Y)	262	
AD	Arm to Door	275	
NB	Nose to Seatback	583	
CB	Chest to Seatback	466	
FF	Foot to Foot	60	
KB-Left	Knee to Seatback	190	
KB-Right	Knee to Seatback	194	
TB-Left	Toe to Seatback	30	
TB-Right	Toe to Seatback	35	

DATA SHEET NO. 4

CRS PERFORMANCE DATA

Test Vehicle: 2008 Infiniti G35 4-Door Sedan

NHTSA No.: M85215

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

Test Date: 10/25/07

CRS PERFORMANCE DATA

Location	CRS (P3)	
	Damage	Post-Test
Upper Tether Strap		
Upper Tether Buckle		
Upper Tether Hook		
Veh. Upper Tether Anchor		
Lower Anchor Strap	No	None
Lower Anchor Buckle	No	None
Lower Anchor Hooks	No	None
Veh. Lower CRS Anchors	No	None
5-Point Harness Connections	No	None
Cracks on CRS	No	None
Fabric Tears on CRS	No	None
Vehicle Seat Structure	No	None
Vehicle Seat Fabric Tears	No	None

DATA SHEET NO. 5

CRS ACCELEROMETER LOCATIONS

Test Vehicle: 2008 Infiniti G35 4-Door Sedan NHTSA No.: M85215
Test Program: 55/28 km/h Side Impact NCAP Test Date: 10/25/07

CRS ACCELEROMETER PRE-TEST LOCATIONS

Loc No.	Accelerometer Location	Measurements		
		X	Y	Z
1	CRS	1900	405	860
2	CRS Base	1865	445	730

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

DATA SHEET NO. 6

CRS CAMERA LOCATIONS AND DATA

Test Vehicle: 2008 Infiniti G35 4-Door Sedan

NHTSA No.: M85215

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

Test Date: 10/25/07

CAMERA LOCATIONS

No.	Camera View	Location (mm)			Angle (°)	Film Plane to Head	Lens (mm)	Speed (fps)
		X	Y	Z				
1	Passenger CRS (O.B.)	859	2533	-1142	-2	n/a	10	1000

X = Barrier Face, Y = Monorail, Z = Ground, DNR = Did Not Run, NTM = No Time Marks

SECTION D2
PHOTOGRAPHS

LIST OF PHOTOGRAPHS

Figure		Page
1	Close-up, Position 3 CRS Label	D-1
2	Pre-Test Frontal View of Position 3 CRS	D-2
3	Post-Test Frontal View of Position 3 CRS	D-3
4	Pre-Test Rear View of Position 3 CRS	D-4
5	Post-Test Rear View of Position 3 CRS	D-5
6	Pre-Test Left Side View of Position 3 CRS	D-6
7	Post-Test Left Side View of Position 3 CRS	D-7
8	Pre-Test Right Side View of Position 3 CRS	D-8
9	Post-Test Right Side View of Position 3 CRS	D-9
10	Pre-Test Position 3 Front View (Head and Seat Belt Position)	D-10
11	Post-Test Position 3 Front View (Head and Seat Belt Position)	D-11
12	Pre-Test Position 3 Front View (Seat Belt Position)	D-12
13	Post-Test Position 3 Front View (Seat Belt Position)	D-13
14	Pre-Test Position 3 Right Side View	D-14
15	Post-Test Position 3 Right Side View	D-15
16	Pre-Test Position 3 Left Side View	D-16
17	Post-Test Position 3 Left Side View	D-17
18	Post-Test Position 3 Dummy Legs	D-18

MODEL **8645THR3**

NAME **SNUGRIDE**

Manufactured in 052307 10

GRACO CHILDREN'S PRODUCTS, INC.
EXTON, PA 19341 1-888-224-6549
Made in U.S.A.

PB-25777

D2-1

TR-28003-07-NC

Figure D2-1: Position 3 CRS Label



2008 Infiniti G35
M85215
P-3
GRACO
SNUGRIDE

Figure D2-2: Pre-Test Frontal View of Position 3 CRS



Figure D2-3: Post-Test Frontal View of Position 3 CRS



GRACO CHILD SAFETY PRODUCTS INC.
LAWN, PA 15068
Date of Delivery: _____
Product Code: 22-1-077
Net weight of 15kg (33lb), 11 oz.
Patented 1994
MADE ASSEMBLED IN MEXICO
NE PAS FUMER NI ALLUMER
VOUS ÊTES PRIS
D'ÊTRE FLAMME OU
PRIS DE CIGARETTES
ALLUMÉES.

2008 Infiniti G35
M85215
P-3
GRACO
SNUGRIDE

GRACO

Figure D2-4: Pre-Test Rear View of Position 3 CRS



D2-5

TR-28003-07-NC

Figure D2-5: Post-Test Rear View of Position 3 CRS



Figure D2-6: Pre-Test Left Side View of Position 3 CRS



Figure D2-7: Post-Test Left Side View of Position 3 CRS



Figure D2-8: Pre-Test Right Side View of Position 3 CRS



D2-9

TR-28003-07-NC

Figure D2-9: Post-Test Right Side View of Position 3 CRS



Figure D2-10: Pre-Test Position 3 Front View (Head and Seat Belt Position)



Figure D2-11: Post-Test Position 3 Front View (Head and Seat Belt Position)



Figure D2-12: Pre-Test Position 3 Front View (Seat Belt Position)



Figure D2-13: Post-Test Position 3 Front View (Seat Belt Position)



Figure D2-14: Pre-Test Position 3 Right Side View



Figure D2-15: Post-Test Position 3 Right Side View



Figure D2-16: Pre-Test Position 3 Right Side View (Through Window)



Figure D2-17: Post-Test Position 3 Right Side View (Through Window)



Figure D2-18: Post-Test Position 3 Dummy Legs

SECTION D3

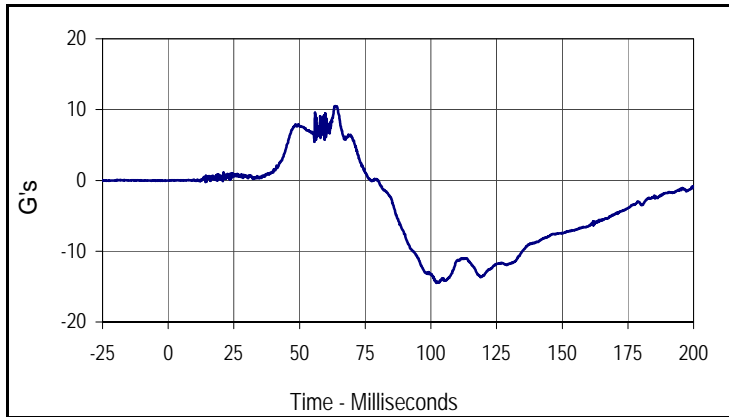
CRABI RESPONSE AND CRS DATA TRACES

LIST OF DATA PLOTS

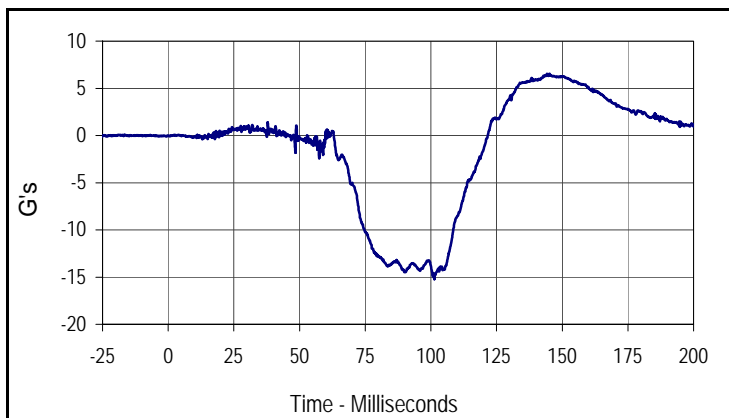
<u>Data Plot</u>		<u>Page</u>
D3-1	Right Rear CRABI Head X	D3-1
	Right Rear CRABI Head Y	D3-1
	Right Rear CRABI Head Z	D3-1
	Right Rear CRABI Head Resultant	D3-1
D3-2	Right Rear CRABI Chest X	D3-2
	Right Rear CRABI Chest Y	D3-2
	Right Rear CRABI Chest Z	D3-2
	Right Rear CRABI Chest Resultant	D3-2

Test Vehicle: 2008 Infiniti G35 4-Door Sedan
 Test Program: 55/28 km/h Side Impact NCAP

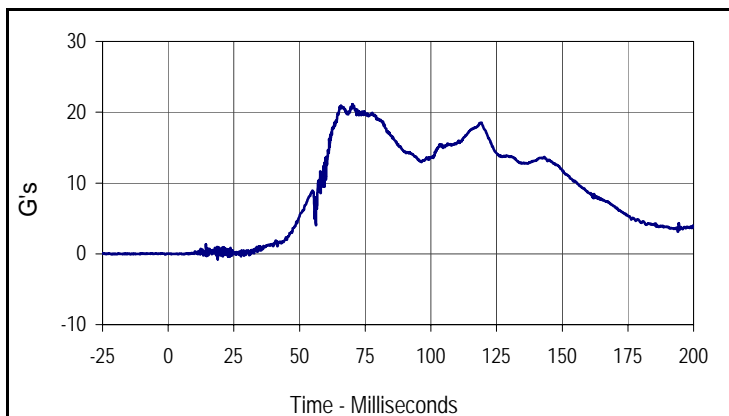
Test Date: 10/25/07
 NHTSA No.: M85215



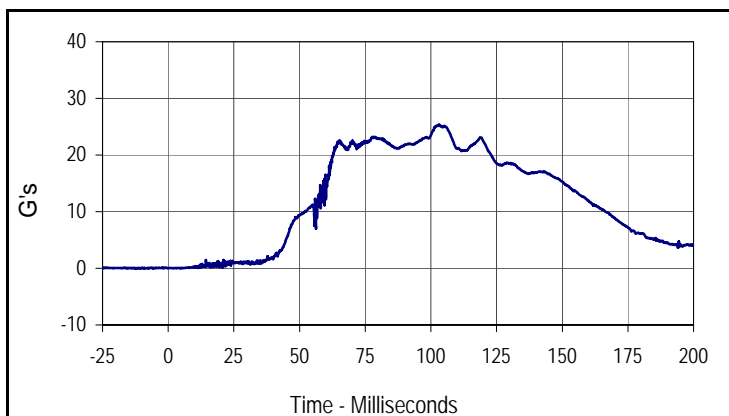
Curve Description			
CRABI Head X (P3)			
CURNO	Type	SAE Class	Units
072	FIL	1000	G's
Max	Time	Min	Time
10.5	63.6	-14.5	102.1



Curve Description			
CRABI Head Y (P3)			
CURNO	Type	SAE Class	Units
073	FIL	1000	G's
Max	Time	Min	Time
6.5	145.2	-15.2	101.3



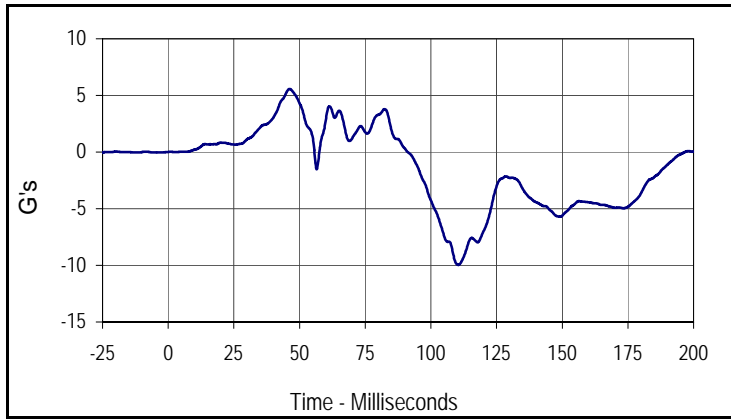
Curve Description			
CRABI Head Z (P3)			
CURNO	Type	SAE Class	Units
074	FIL	1000	G's
Max	Time	Min	Time
21.1	70.1	-0.8	18.9



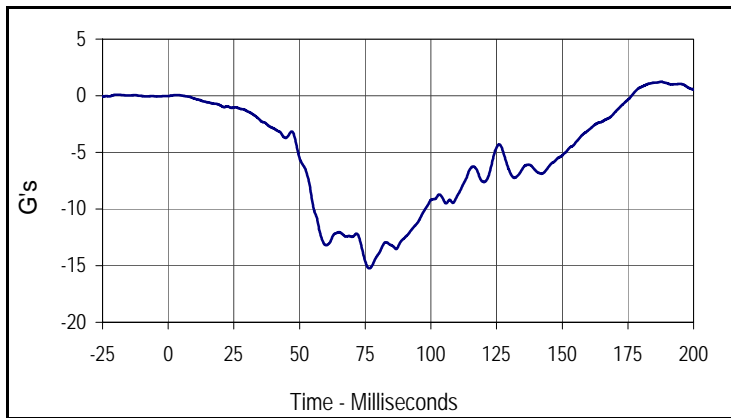
Curve Description			
CRABI Head Resultant (P3)			
CURNO	Type	SAE Class	Units
072	RES	1000	G's
Max	Time	Min	Time
25.4	103.1	0.0	1.8

Test Vehicle: 2008 Infiniti G35 4-Door Sedan
 Test Program: 55/28 km/h Side Impact NCAP

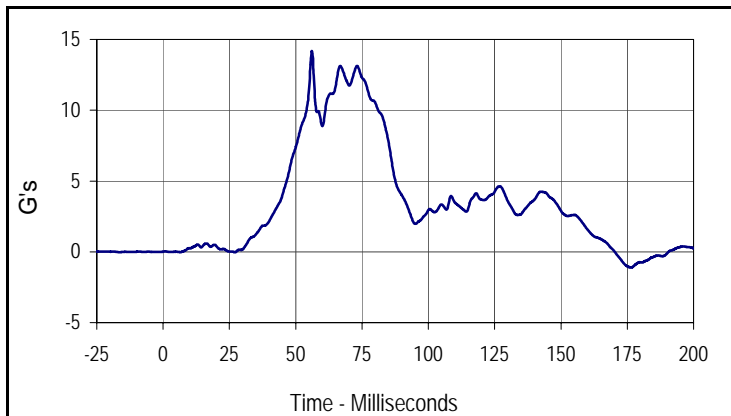
Test Date: 10/25/07
 NHTSA No.: M85215



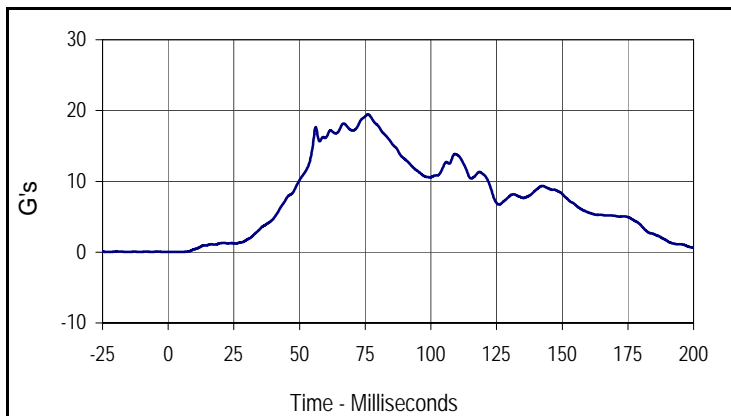
Curve Description			
CRABI Chest X (P3)			
CURNO	Type	SAE Class	Units
082	FIL	180	G's
Max	Time	Min	Time
5.6	46.2	-10.0	110.4



Curve Description			
CRABI Chest Y (P3)			
CURNO	Type	SAE Class	Units
083	FIL	180	G's
Max	Time	Min	Time
1.2	187.6	-15.2	76.5



Curve Description			
CRABI Chest Z (P3)			
CURNO	Type	SAE Class	Units
084	FIL	180	G's
Max	Time	Min	Time
14.2	56.1	-1.1	176.4



Curve Description			
CRABI Chest Resultant (P3)			
CURNO	Type	SAE Class	Units
082	RES	180	G's
Max	Time	Min	Time
19.5	76.1	0.0	5.6

SECTION D4

CRABI CALIBRATION INFORMATION

Test Program: CRABI 12 Month Old Frontal Head Drop Test

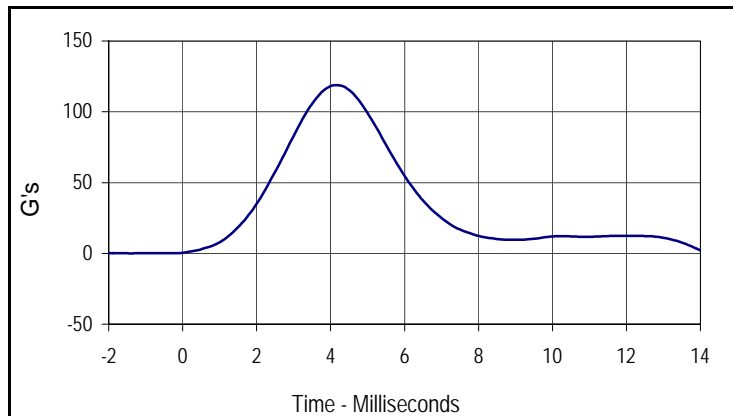
Test Date: 10/24/07

ATD Serial No.: 017

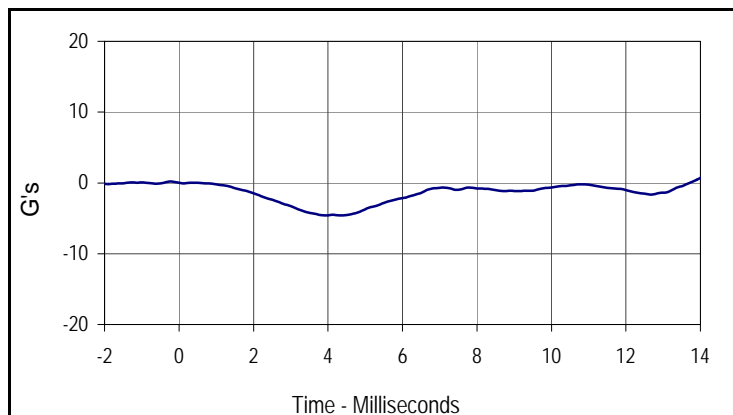
Test I.D.: FHD10U



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	100.0 to 120.0	118.9	Pass
Peak Lateral Acceleration	G's	≤15.0	4.6	Pass
Is Acceleration Unimodal?	Yes/No	Yes	Yes	Pass
Overall Test Results				Pass



Curve Description			
Head Resultant			
CURNO	Type	SAE Class	Units
001	RES	1000	G's
Max	Time	Min	Time
118.9	4.2	0.0	-1.4



Curve Description			
Head Y			
CURNO	Type	SAE Class	Units
002	FIL	1000	G's
Max	Time	Min	Time
0.2	-0.2	-4.6	3.9

Test Program: CRABI 12 Month Old Rear Head Drop Test

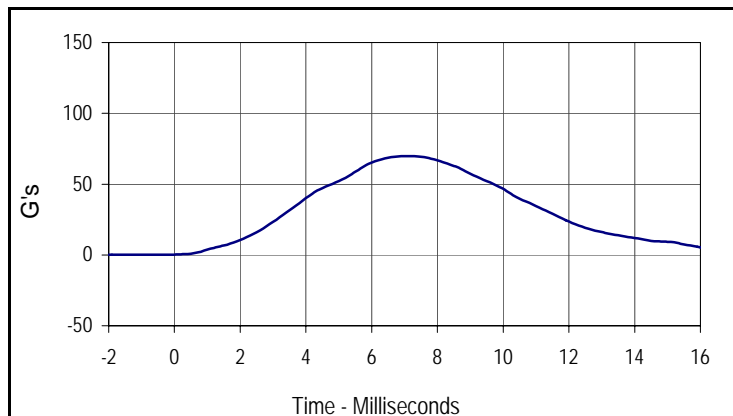
Test Date: 10/24/07

ATD Serial No.: 017

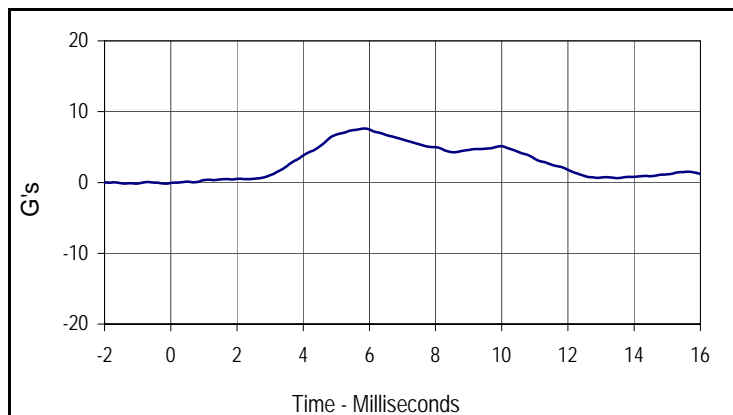
Test I.D.: RHD10U



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	55.0 to 71.0	65.3	Pass
Peak Lateral Acceleration	G's	≤15.0	7.6	Pass
Is Acceleration Unimodal?	Yes/No	Yes	Yes	Pass
Overall Test Results			Pass	



Curve Description			
Head Resultant			
CURNO	Type	SAE Class	Units
001	RES	1000	G's
Max	Time	Min	Time
65.3	6.0	0.1	-0.9



Curve Description			
Head Y			
CURNO	Type	SAE Class	Units
002	FIL	1000	G's
Max	Time	Min	Time
7.6	5.8	-0.2	-1.4

Test Program: CRABI 12 Month Old Thorax Impact Test

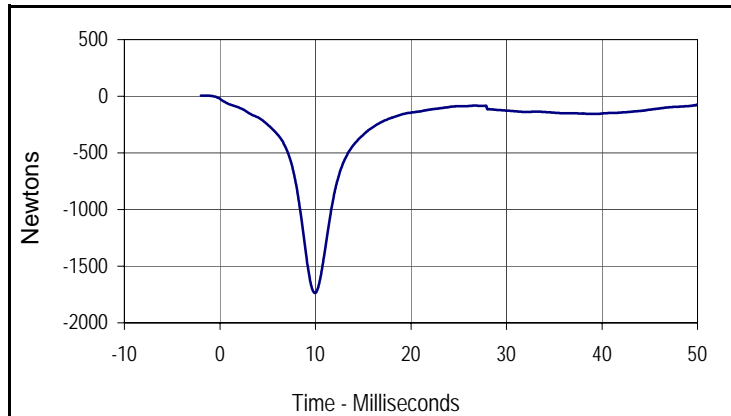
Test Date: 10/25/07

ATD Serial No.: 017

Test I.D.: CH10U



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 at T=0	m/sec	4.90 to 5.10	4.95	Pass
Peak Probe Force	Newtons	-1514 to -1796	-1736	Pass
Overall Test Results				Pass



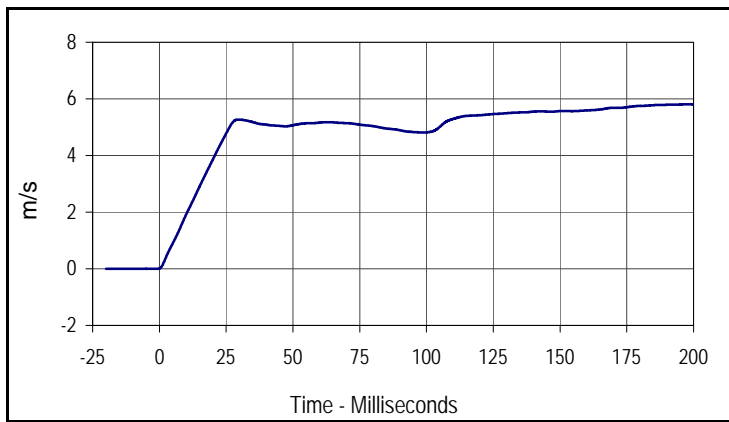
Curve Description			
Probe Force			
CURNO	Type	SAE Class	Units
001	FIL	180	Newtons
Max	Time	Min	Time
6.2	-1.6	-1736.1	10.0

Test Program: CRABI 12 Month Old Neck Flexion Test
 ATD Serial No.: 017

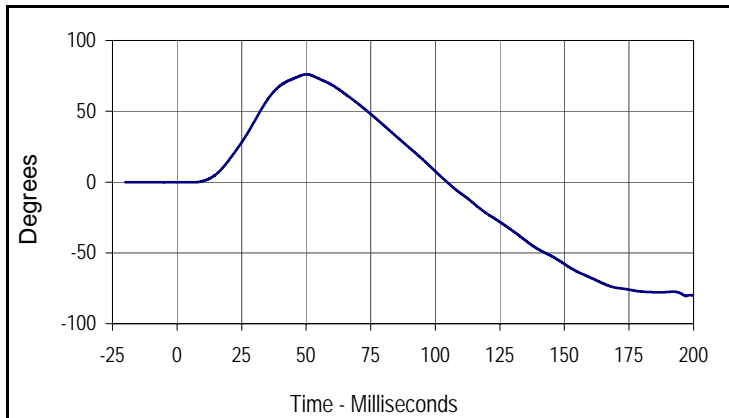
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 Test I.D.: NF10U



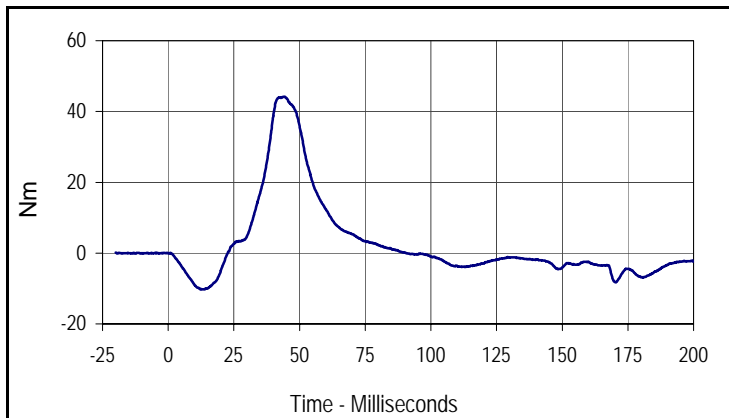
Tested Parameter	Units	Specification	Result	Pass/Fail	
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass	
Laboratory Relative Humidity	%	10 to 70	30	Pass	
Pendulum Velocity	m/s	5.10 to 5.30	5.15	Pass	
Pendulum Deceleration	10 Msec.	m/s	1.6 to 2.3	1.9	Pass
	20 Msec.	m/s	3.4 to 4.2	3.9	Pass
	25 Msec.	m/s	4.3 to 5.2	4.8	Pass
"D" Plane Rotation	Max	Degrees	75.0 to 86.0	76.1	Pass
Peak Moment in Rotation	Max	Nm	36.0 to 45.0	41.3	Pass
Positive Moment Decay, Time To 5 Nm	Msec.	60.0 to 80.0	70.9	Pass	
Overall Test Results				Pass	



Curve Description			
Pendulum Velocity			
CURNO	Type	SAE Class	Units
001	FIL	180	m/s
Max	Time	Min	Time
5.8	199.3	0.0	-0.7



Curve Description			
"D" Plane Rotation			
CURNO	Type	SAE Class	Units
003	FIL	60	Degrees
Max	Time	Min	Time
76.1	50.1	-80.5	197.1



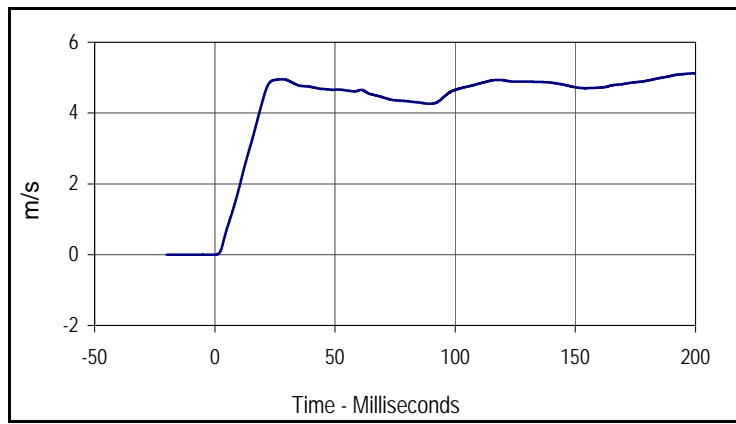
Curve Description			
Upper Neck Force Y			
CURNO	Type	SAE Class	Units
002	FIL	600	Nm
Max	Time	Min	Time
44.2	44.3	-10.3	13.5

Test Program: CRABI 12 Month Old Neck Extension Test
 ATD Serial No.: 017

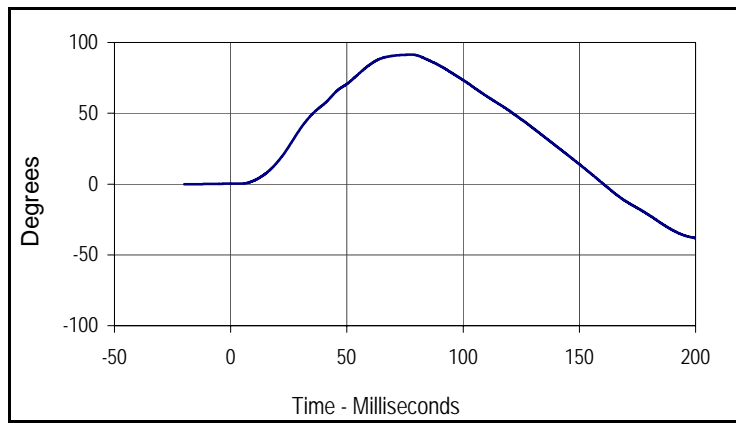
Test Date: 10/24/07
 Test I.D.: NE10U



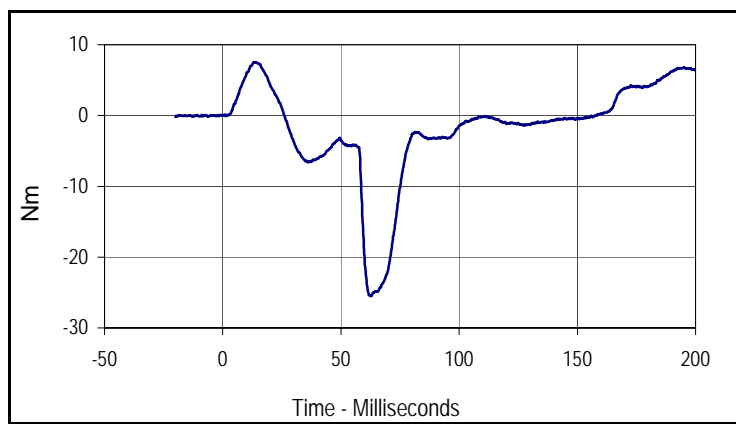
Tested Parameter	Units	Specification	Result	Pass/Fail	
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass	
Laboratory Relative Humidity	%	10 to 70	30	Pass	
Pendulum Velocity	m/s	2.4 to 2.6	2.41	Pass	
Pendulum Deceleration	6 Msec.	m/s	0.8 to 1.2	0.9	Pass
	10 Msec.	m/s	1.5 to 2.1	1.9	Pass
	14 Msec.	m/s	2.2 to 2.9	2.9	Pass
"D" Plane Rotation	Max	Degrees	80.0 to 92.0	91.4	Pass
Peak Moment in Rotation	Max	Nm	-12 to -23	-17.1	Pass
Positive Moment Decay, Time To -5 Nm	Msec.		76.0 to 90.0	77.8	Pass
Overall Test Results				Pass	



Curve Description			
Pendulum Velocity			
CURNO	Type	SAE Class	Units
001	FIL	180	m/s
Max	Time	Min	Time
5.1	200.0	0.0	0.1



Curve Description			
"D" Plane Rotation			
CURNO	Type	SAE Class	Units
003	FIL	60	Degrees
Max	Time	Min	Time
91.4	77.7	-38.1	200.0



Curve Description			
Upper Neck Moment Y			
CURNO	Type	SAE Class	Units
002	FIL	600	Nm
Max	Time	Min	Time
7.5	13.2	-25.5	62.8

Test Program: CRABI 12 Month Old External Dimensions

Test Date: 10/24/07

ATD Serial No.: 017

Test I.D.: N/A



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
A - Total sitting height	mm	456.0 to 471.2	462	Pass
B - Shoulder pivot height	mm	276.6 to 291.8	284	Pass
C - "H" point height	mm	27.9 to 38.1	31	Pass
D - "H" point from backline	mm	40.1 to 50.3	44	Pass
E - Shoulder pivot from back	mm	50.3 to 60.5	52	Pass
F - Thigh clearance	mm	63.0 to 73.2	69	Pass
G - Elbow pivot to fingertip	mm	176.6 to 191.8	189	Pass
I - Shoulder pivot to elbow pivot	mm	99.1 to 114.3	105	Pass
J - Elbow rest height	mm	150.1 to 165.3	157	Pass
K - Buttock to knee length	mm	202.7 to 217.9	210	Pass
L - Popliteal length	mm	138.7 to 153.9	144	Pass
M - Knee pivot height	mm	165.1 to 180.3	173	Pass
N - Buttock popliteal length	mm	144.8 to 160.0	150	Pass
O - Chest depth with jacket	mm	107.5 to 122.7	114	Pass
P - Foot length	mm	92.4 to 102.6	100	Pass
Q- Stature	mm	727.7 to 753.1	N/A	N/A
R - Buttock to knee pivot length	mm	178.5 to 188.7	184	Pass
S - Head Breadth	mm	124.4 to 134.6	130	Pass
T - Head Depth	mm	149.9 to 165.1	150	Pass
U - Hip breadth	mm	158.5 to 173.7	163	Pass
V - Shoulder breadth	mm	200.7 to 215.9	210	Pass
W - Foot breadth	mm	39.1 to 49.3	46	Pass
Y - Chest circumference with jacket	mm	452.4 to 477.8	467	Pass
Z - Waist circumference	mm	447.0 to 472.4	452	Pass
AA - Reference location for dimension Y & O	mm	256.5 to 266.7	263	Pass
BB - Reference Location For dimension Z	mm	106.7 to 116.9	110	Pass
CC - Shoulder Height	mm	299.7 to 314.9	307	Pass
DD - Chin Height	mm	289.6 to 304.8	293	Pass
Overall Test Results				Pass