

**NEW CAR ASSESSMENT PROGRAM
FRONTAL BARRIER IMPACT TEST**

**NISSAN MOTOR CO., LTD
2008 NISSAN 350Z
2-DOOR CONVERTIBLE**

NHTSA NUMBER: M85216

**PREPARED BY:
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DECEMBER 1, 2007

FINAL REPORT

**PREPARED FOR:
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16. Abstract A 35 mph (56.3 km/h) frontal barrier impact was conducted on a 2008 Nissan 350Z 2-Door Convertible at Karco Engineering, LLC on December 1, 2007. This test was conducted to obtain data indicant of FMVSS 208, 212, 219 (partial), 301, and footwell intrusion performance. The impact velocity is 55.75 km/h. The ambient temperature at the barrier face at the time of impact is 9.4 degrees Celcius. The vehicle's maximum post-test static crush is 275 mm to the right of the vehicle's centerline. The test vehicle is equipped with a 3-point continuous belt system and second generation supplemental airbags in both front outboard seating positions. With respect to FMVSS 208 "Occupant Crash Protection", the occupant injury criteria summary is as follows:					
Measurement Description		Units	Threshold	Driver ATD	Passenger ATD
Head Injury Criteria (HIC)		N/A	1000	457.4	511.6
Max. Chest Accel. (3 msec Clip)		G's	60	44.3	51.5
Left Femur Force		Newtons	10008	-2638.2	-1440.7
Right Femur Force		Newtons	10008	-3590.1	-876.8
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SECTION 1

PURPOSE AND SUMMARY OF TEST M85216

1.1 PURPOSE

This 35 mph (56.3 km/h) frontal barrier impact test is part of the New Car Assessment Program (NCAP) sponsored by the National Highway Traffic Safety Administration (NHTSA) under Contract No. DTNH22-06-D-00027. The purpose of this test was to obtain vehicle crashworthiness and occupant restraint system performance data for an impact speed in excess of the current 30 mph (48.3 km/h) requirements.

The 35 mph (56.3 km/h) frontal barrier impact test was conducted in accordance with the Office of Crashworthiness Standards (OCS) New Car Assessment Program (NCAP) Laboratory Indicant Test Procedure, dated July 2005. Data was obtained indicant of FMVSS 208 "Occupant Crash Protection", FMVSS 212, "Windshield Retention", FMVSS 219, "Windshield Zone Intrusion (Partial)", and FMVSS 301 "Fuel System Integrity", performance. Procedures for receiving, inspection, testing and reporting of test results are described in the test procedures and are not repeated in this report.

1.2 SUMMARY

A load cell barrier consisting of 36 load cells was impacted by a 2008 Nissan 350Z 2-Door Convertible at a velocity of 55.75 km/h. The test was performed at Karco Engineering, LLC on December 1, 2007.

Three (3) real-time and fourteen (14) high-speed cameras were used to document the frontal barrier impact event. Camera locations and other pertinent camera information can be found in Data Sheet number 14 (page number 24) of this report.

Two Part 572E, 50th percentile male anthropomorphic test devices (ATDs), were placed in the driver and right-front passenger seating positions according to dummy placement instructions specified in the Laboratory Indicant Test Procedure.

Both ATDs were fully instrumented with head (primary and redundant), chest (primary and redundant) and pelvis triaxial accelerometers, chest displacement potentiometers, six-axis upper neck transducers, right/left femur load cells, and lower leg instrumentation. Seat belt load cells were placed on the driver's and passenger's lap and shoulder belts to measure dummy torso and pelvic section loading. Shoulder belt spool-off was measured for the driver and passenger dummies. The driver (position 1) ATD (Serial No. 034) and the right-front passenger (position 2) ATD (Serial No. 035) were calibrated prior to this test.

One hundred and thirty-two (132) channels of data were recorded using a TDAS data acquisition system. Appendix A contains Pre and Post-Test Photographs, Appendix B contains the Dummy Response data traces, Appendix C contains the Dummy Calibration data, and Appendix D contains the Child Restraint System Report.

There was 100 percent windshield retention and there was no intrusion into the protected zone of the windshield during the impact event. There was no stoddard solvent leakage after the event or during any phase of the static rollover.

The maximum static crush of the vehicle was 275 mm at DPD 5 to the right of the vehicle's centerline and both the driver and the passenger side doors remained closed and latched during the impact event, and were operable after the impact.

The driver's visible contact points were as follows: The driver ATD's head and chest contacted the airbag. The head also contacted the headrest. Both the left and right knees contacted the knee bolster.

The passenger's visible contact points were as follows: The passenger ATD's head contacted the airbag and headrest. The chest also contacted the airbag. Both knees contacted the knee bolster.

Occupant injury data is contained in table below.

OCCUPANT DATA SUMMARY					
ATD Position	HIC	3 msec Clip (g)	Chest Defl. (mm)	Left Femur (N)	Right Femur (N)
Driver	457.4	44.3	-22.8	-2638.2	-3590.1
Passenger	511.6	51.5	-25.7	-1440.7	-876.8

Additional data plots for this test are available in the research and development section of the NHTSA website. The website can be found at: www.NHTSA.Dot.Gov

SECTION 2

OCCUPANT AND VEHICLE INFORMATION/DATA SHEETS

Test Vehicle: 2008 Nissan 350Z 2-Door Convertible

NHTSA No.: M85216

Test Program: NHTSA 35mph NCAP

Test Date: 12/01/07

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	miles/hr	km/hr	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
CRASH TEST SUMMARY

Test Vehicle: 2008 Nissan 350Z 2-Door Convertible
Test Program: NHTSA 35mph NCAP

NHTSA No.: M85216
Test Date: 12/01/07

PRIMARY IMPACT DATA

Measured Parameter	Units	Value
Velocity at Impact	km/h	55.75
Test Weight	kg	1855
Impact Angle	degrees	0
Average Rebound	mm	727
Maximum Static Crush	mm	275

DOOR OPENING AND SEAT TRACK INFORMATION

Description	Driver	Passenger
Front Door opening	Remained closed and latched, opened w/o tools	Remained closed and latched, opened w/o tools
Rear Door Opening	Remained closed and latched, opened w/o tools	Remained closed and latched, opened w/o tools
Seat Track Shift (mm)	None	None
Seat Back Failure	No	No

TEST DUMMY INFORMATION

Description	Driver	Passenger
Dummy Type/ Serial No.	50% Male Hybrid III No. 034	50% Male Hybrid III No. 035
Head Contact	Airbag, Headrest	Airbag, Headrest
Chest Contact	Airbag	Airbag
Abdomen Contact	None	None
Left Knee Contact	Bolster	Bolster
Right Knee Contact	Bolster	Bolster

MOVIE COVERAGE

Cameras	Standard	Additional
High Speed	14	0
Real Time	1	2
Total	15	2

DATA CHANNELS

Driver ATD Sensors	40
Passenger ATD Sensors	40
Belt Assessment Sensors	8
Vehicle Structure Accelerometers	8
Rigid Barrier Load Cells	36
Total	132

DATA SHEET NO. 2

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2008 Nissan 350Z 2-Door Convertible

NHTSA No.: M85216

Test Program: NHTSA 35mph NCAP

Test Date: 12/01/07

TEST VEHICLE INFORMATION AND OPTIONS

NHTSA No.	M85216	Anti-Lock Brakes	Yes
Make	Nissan	All Wheel Drive	No
Model	350Z	Power Steering	Yes
Body Style	2-Door Convertible	Driver Front Airbag	Yes
Vin No.	JN1BZ36A28M850512	Driver Side Airbag	Yes
Color	Silver	Driver Head Airbag	No
Delivery Date	11/19/2007	Driver Curtain Airbag	No
Odometer (Miles)	109.0	Pass. Airbag	Yes
Dealer	Valley Hi Nissan	Pass. Side Airbag	Yes
Transmission	5-Speed Automatic	Pass. Head Airbag	No
Final Drive	Rear	Pass. Curtain Airbag	No
Type/No. Cyl.	V6	Pre-Tensioners	Yes
Engine Disp. (L)	3.5	Load Limiters	Yes
Engine Placement	Longitudinal	Bucket Seats	Yes
Roof Rack	No	Air. Cond.	Yes
Sunroof/T-Top	No	AM/FM CD	Yes
Tinted Glass	No	Tilt Steering	Yes
Traction Control	Yes	Automatic Door Locks	No
Power Brakes	Yes	Power Windows	Yes
Front Disc	Yes	Power Seats	Yes
Rear Disc	Yes	Other	N/A

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

N/A

DATA FROM MANUFACTURER

Manufactured By	Nissan Motor Co., Ltd	GVWR (kg)	941
Date of Manufacture	Sep-07	GAWR Front (kg)	945
		GAWR Rear (kg)	1875

VEHICLE SEATING AND CAPACITY WEIGHT INFORMATION

Measured Parameter	Front	Rear	Third	Total
Type of Seats	Bucket			
Number of Occupants	2			2
Capacity Weight (VCW) (kg)				204
Cargo Weight (RCLW) (kg)				68

DATA SHEET NO. 2...(CONTINUED)

GENERAL TEST AND VEHICLE PARAMETER DATA

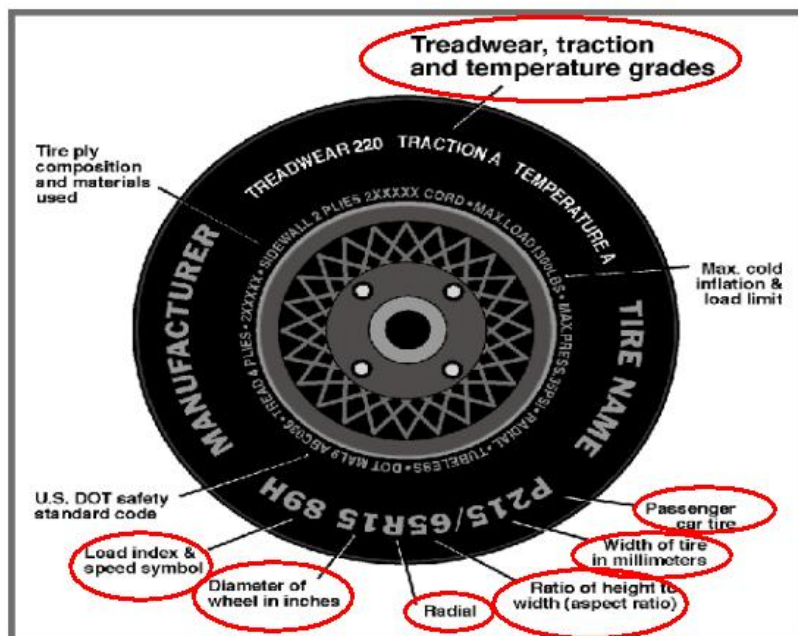
Test Vehicle: 2008 Nissan 350Z 2-Door Convertible

NHTSA No.: M85216

Test Program: NHTSA 35mph NCAP

Test Date: 12/01/07

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)	357	357
Cold Pressure (kpa)	240	240
Recommended Tire Size	225/45R18	245/45R18
Tire Size on Vehicle	225/45R18	245/45R18
Tire Manufacturer	Bridgestone	Bridgestone
Treadwear	140	140
Traction	A	A
Temperature Grades	A	A
Tire Plies Sidewall	3 Rayon	3 Rayon
Tire Plies Body	2 Steel, 2 Rayon, 2 Nylon	2 Steel, 2 Rayon, 2 Nylon
Load Index/Speed Symbol	91W	91W
Tire Material	Steel, Rayon, Nylon	Steel, Rayon, Nylon
DOT Safety Code Right	EJK7 JDC 3507	EJ1K JMF 3607
DOT Safety Code Left	EJK7 JDC 3507	EJ1K JMF 3607

DATA SHEET NO. 2...(CONTINUED)

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2008 Nissan 350Z 2-Door Convertible

NHTSA No.: M85216

Test Program: NHTSA 35mph NCAP

Test Date: 12/01/07

TEST VEHICLE WEIGHTS

	Units	As Delivered Weights (UVW)			As Tested Weights (ATW)		
		Front Axle	Rear Axle	Total	Front Axle	Rear Axle	Total
Left	kg	431	370	801	480	465	945
Right	kg	448	391	839	461	449	910
Ratio	%	53.6%	46.4%	100.0%	50.7%	49.3%	100.0%
Totals	kg	879	761	1640	941	914	1855

TARGET TEST WEIGHT CALCULATION

Measured Parameter	Units	Value
Total Delivered Weight (UVW)	kg	1640
Weight of 2 P572 ATD's	kg	152
Rated Cargo/Luggage Wt. (RCLW)	kg	68
Calculated Vehicle Target Wt. (TVTW)	kg	1860

TEST VEHICLE ATTITUDE AND CG

	Units	LF	RF	LR	RR	CG (aft of front axle)
As Delivered	mm	674	674	707	709	1232
As Tested	mm	670	664	691	695	1308

Vehicle Wheel Base (mm) 2655

Weight of Ballast Secured in cargo area (kg) 0

Weight of Items Removed (kg) 72

Vehicle Components Removed Trunk lid, tail lights, rear window, rear bumper,

* Ballast weight does not include cameras, instrumentation and brake abort system.

FUEL SYSTEM DATA

Fuel System Capacity From Owners Manual (L) 75.70

Actual Test Volume with entire fuel System Filled (L) 70.40

Test Fluid Type: Stoddard Solvent

Kinematic Viscosity: as per ASTM Standard D484-71 Red

Is Vehicle Fuel Pump Electric or Mechanical? Electric

If electric, does pump operate with ignition switch "On" & engine "OFF" Yes

Fuel System Particulars: Electric fuel pump. Activated when electrical system is activated.

Fuel pump will run during the operation of the engine.

DATA SHEET NO. 3**POST-TEST IMPACT DATA**Test Vehicle: 2008 Nissan 350Z 2-Door ConvertibleNHTSA No.: M85216Test Program: NHTSA 35mph NCAPTest Date: 12/01/07**SPEED TRAP DATA**

Measured Parameter	Units	Requirement	Value
Trap No.1 Velocity (Primary)	km/h	55.51 to 57.12	55.75
Trap No.2 Velocity (Redun.)	km/h	55.51 to 57.12	55.71

VEHICLE STATIC CRUSH

Measured Parameter	Units	Pre-Test	Post-Test	Difference
Left Side	mm	4120	3895	-225
Center	mm	4295	4045	-250
Right Side	mm	4120	3855	-265

VEHICLE REBOUND FROM BARRIER

Measured Parameter	Units	Value
Left Side	mm	765
Center	mm	637
Right Side	mm	780
Average	mm	727

DATA SHEET NO. 4

TEST VEHICLE INFORMATION

Test Vehicle: 2008 Nissan 350Z 2-Door Convertible

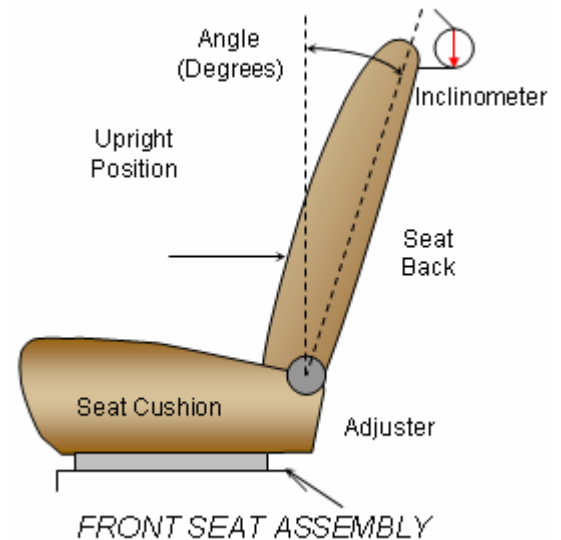
NHTSA No.: M85216

Test Program: NHTSA 35mph NCAP

Test Date: 12/01/07

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 of the seat using a digital inclinometer.



SEAT BACK ANGLES

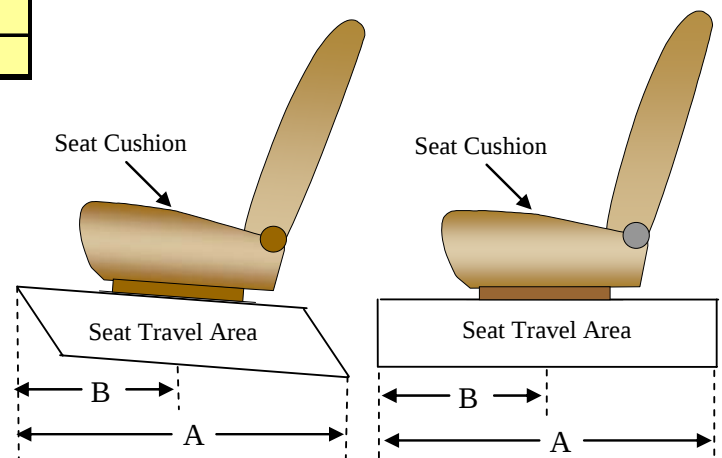
	Deg.
Driver w/seated Dummy	10.0 @ Headrest
Passenger w/seated Dummy	10.0 @ Headrest

SEAT FORE/AFT POSITIONS

The total seat travel was measured from forward most position to rearmost position, irrespective of vertical seat height in those positions. The seat was set at the longitudinal mid position. There were vertical adjustments on the seats that were equipped with the vehicle. They were placed at the lowermost position.

SEAT FORE/AFT POSITIONING

	Total Fore/Aft Travel	Placed in Position
Driver Seat	239 mm	119 mm
Passenger Seat	226 mm	113 mm



SEAT BELT UPPER ANCHORAGE

Position number one (1), the uppermost position.

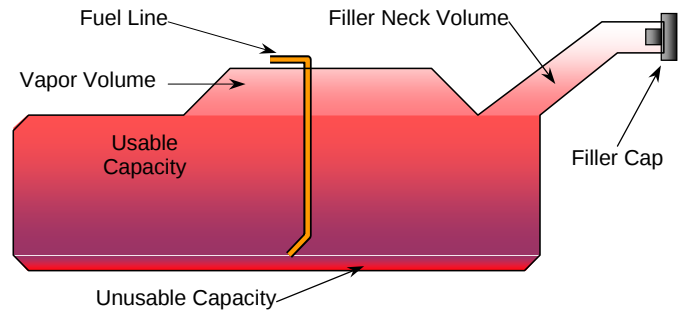
SEAT BELT UPPER ANCHORAGE

	Total # of Positions	Placed in Position #
Driver Seat	1	1
Passenger Seat	1	1

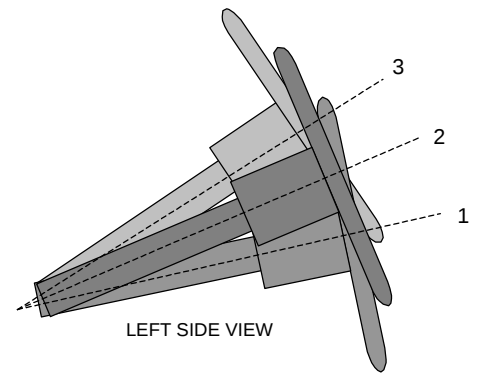
DATA SHEET NO. 4...(CONTINUED)**TEST VEHICLE INFORMATION**Test Vehicle: 2008 Nissan 350Z 2-Door ConvertibleNHTSA No.: M85216Test Program: NHTSA 35mph NCAPTest Date: 12/01/07**FUEL TANK CAPACITY**

	Liters
Usable Capacity of "Standard Tank"	75.70
Usable Capacity of "Optional" Tank	
Usable Capacity used for FMVSS 301	69.64 to 71.15
Actual Amount of Solvent used	70.40

The test vehicle is equipped with an electric fuel pump. The fuel pump operates for approximately two seconds after the ignition is placed 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.

**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	14.8	
Geometric center position No. 2	17.6	
Uppermost position No. 3	19.8	

DATA SHEET NO. 5

DUMMY POSITIONING IN VEHICLE

Test Vehicle: 2008 Nissan 350Z 2-Door Convertible

NHTSA No.: M85216

Test Program: NHTSA 35mph NCAP

Test Date: 12/01/07

TEST DUMMY POSITION MEASUREMENTS

Code	Measurement Description	Driver		Passenger	
		Length (mm)	Angle (deg)	Length (mm)	Angle (deg)
WA	Windshield Angle		25.0		
SWA	Steering Wheel Angle		73.4		
SCA	Steering Column Angle		17.6		
SA	Seat Back Angle		10.0 @ Headrest		10.0 @ Headrest
HZ	Head to Roof (Z)	211	90.0	161	90.0
HH	Head to Header	339		315	
HW	Head to Windshield	566		489	
HR	Head to Side Header (Y)	253		250	
NR	Nose to Rim	358	10.6		
CD	Chest to Dash	493		495	
CS	Chest to Steering Hub	282			
RA	Rim to Abdomen	186			
KDL	Left Knee to Dash	141	33.3	177	
KDR	Right Knee to Dash	146		162	43.6
PA	Pelvic Angle		24.8		22.9
TA	Tibia Angle		38.0		37.2
KK	Knee to Knee (Y)	300		275	
SK	Striker to Knee	862	5.2	875	6.1
ST	Striker to Head	515	58.6	540	58.1
SH	Striker to H-Point	458	0.0	461	0.0
SHY	Striker to H-Point (Y)	235		248	
HS	Head to Side Window	316		315	
HD	H-Point to Door (Y)	225		205	
AD	Arm to Door (Y)	71		20	

DATA SHEET NO. 5...(CONTINUED)

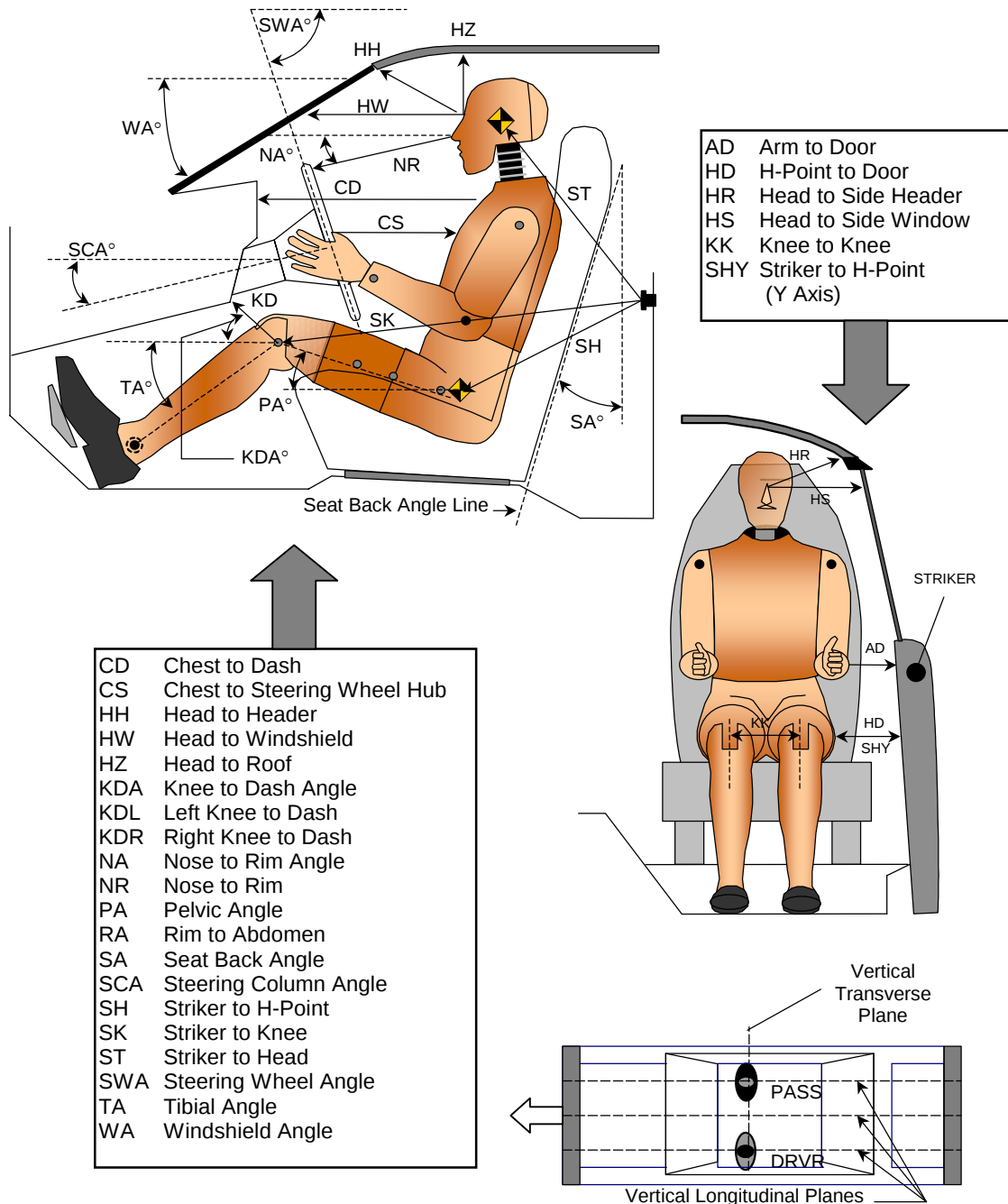
DUMMY POSITIONING IN VEHICLE

Test Vehicle: 2008 Nissan 350Z 2-Door Convertible

NHTSA No.: M85216

Test Program: NHTSA 35mph NCAP

Test Date: 12/01/07



DUMMY MEASUREMENTS FOR FRONT SEAT OCCUPANTS

DATA SHEET NO. 6

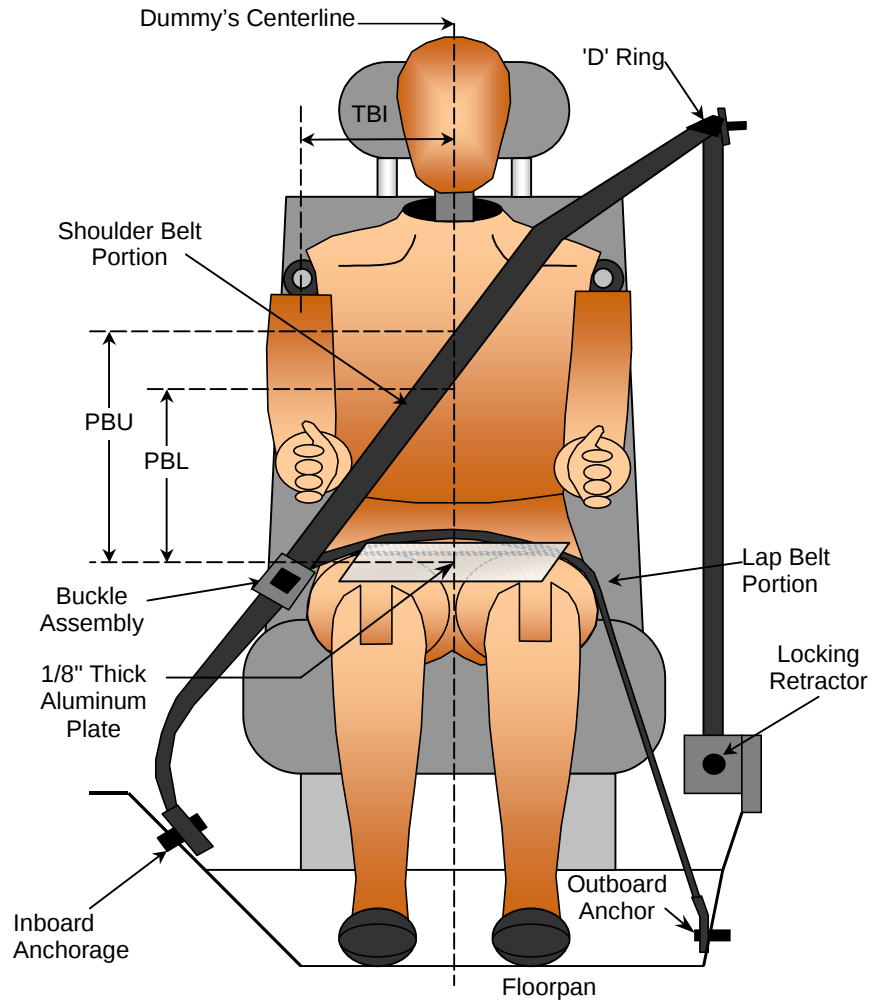
SEAT BELT POSITIONING DATA

Test Vehicle: 2008 Nissan 350Z 2-Door Convertible

NHTSA No.: M85216

Test Program: NHTSA 35mph NCAP

Test Date: 12/01/07



SEAT BELT POSITIONING MEASUREMENTS

Measured Parameter	Units	Driver	Passenger
TBI - Dummy C/L to Lap/Shoulder Belt Intersect	mm	230	230
PBU - Top Surface of reference to belt upper edge	mm	310	305
PBL - Top Surface of reference to belt lower edge	mm	240	245
Lap Belt Tension	Newtons	10	10
Shoulder Belt Tension	N/A	Retractor	Retractor

DATA SHEET NO. 7**VEHICLE ACCELEROMETER LOCATION**Test Vehicle: 2008 Nissan 350Z 2-Door ConvertibleNHTSA No.: M85216Test Program: NHTSA 35mph NCAPTest Date: 12/01/07**VEHICLE ACCELEROMETER PRE-TEST LOCATIONS**

No.	Accelerometer Location	Measurement (mm)		
		X	Y	Z
1	Left Rear X-Member	1945	-665	360
2	Right Rear X-Member	1915	665	360
3	Engine Top	3870	40	700
4	Engine Bottom	3645	110	140
5	Left Brake Caliper	3635	-680	385
6	Right Brake Caliper	3635	680	385
7	Instrument Panel			
8	Left Rear X-Member (Z-Axis)	1945	-665	360
9	Right Rear X-Member (Z-Axis)	1915	665	360

1.) No longer required by NHTSA

DATA SHEET NO. 8**SEAT BELT ASSESSMENT TEST DATA**Test Vehicle: 2008 Nissan 350Z 2-Door ConvertibleNHTSA No.: M85216Test Program: NHTSA 35mph NCAPTest Date: 12/01/07**SEAT BELT POSITIONING MEASUREMENTS**

Measurement Description	Units	Driver	Passenger
Retractor Reel to "D" ring	mm	420	420
Shoulder Belt length as measured on ATD	mm	920	960
Lap Belt length as measured on ATD	mm	855	629
Remainder of belt on reel	mm	780	773
Total belt length for continuous webbing systems	mm	2975	2782

SHOULDER BELT SPOOL-OFF DATA

Measurement Description	Units	Driver	Passenger
As determined mechanically	mm	70	130
As determined electronically	mm	53	137

BELT STRETCH DATA

Measurement Description	Units	Driver	Passenger
Electronically between belt load cell and "D" ring	mm/cm	*	*
Mechanically	mm/cm		

* Not used with shoulder belt pre-tensioner systems

DATA SHEET NO. 9

SUMMARY OF FMVSS 212 DATA

Test Vehicle: 2008 Nissan 350Z 2-Door Convertible

NHTSA No.: M85216

Test Program: NHTSA 35mph NCAP

Test Date: 12/01/07

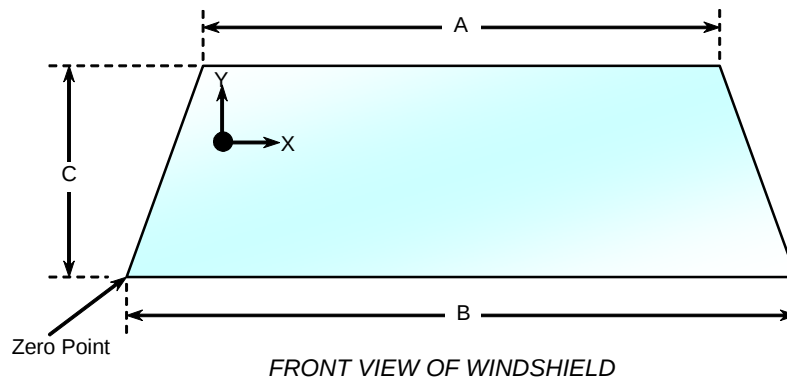
Windshield Mounting Details: Windshield glass is secured to the vehicle frame with a rubber type adhesive, and rubber molding.

The standard requires that the post-test retention measurement be a minimum of 75 percent of the pretest total periphery measurement for vehicles not equipped with occupant passive restraints and 50 percent for each side of the windshield for vehicles that are equipped with occupant passive restraints.

Temperature of windshield molding during test: 20.0 °C

WINDSHIELD PERIPHERY MEASUREMENTS

Measurement	Pre-Test(mm)	Post-Test(mm)	% of Retention
Left Side	2000	2000	100
Right Side	2000	2000	100
Total	4000	4000	100



WINDSHIELD DIMENSIONS

Item	Units	Segment Length	Molding Width
A	mm	1225	20
B	mm	1585	35
C-Left	mm	595	10
C-Right	mm	595	10

DATA SHEET NO. 10

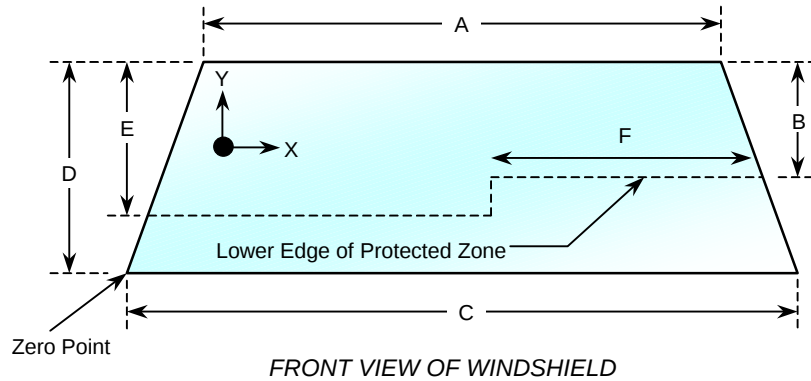
WINDSHIELD ZONE INTRUSION FMVSS 219 DATA (PARTIAL)

Test Vehicle: 2008 Nissan 350Z 2-Door Convertible

NHTSA No.: M85216

Test Program: NHTSA 35mph NCAP

Test Date: 12/01/07



FRONT VIEW OF WINDSHIELD

WINDSHIELD AND PROTECTED ZONE

Item	Units	Value
A	mm	1225
B	mm	390
C	mm	1585
D	mm	595
E	mm	365
F	mm	540

AREA OF PROTECTED ZONE FAILURES

- A. Provide coordinates of the area that the protected zone was penetrated more than 0.25 in. by a vehicle component other than one that is normally in contact with the windshield.

X	Y

- B. Provide coordinates of the area beneath the protected zone that the inner surface of the windshield was penetrated by a vehicle component.

X	Y

DATA SHEET NO. 11

FMVSS 301 FUEL SYSTEM INTEGRITY POST-IMPACT DATA

Test Vehicle: 2008 Nissan 350Z 2-Door Convertible NHTSA No.: M85216
Test Program: NHTSA 35mph NCAP Test Date: 12/01/07

Test Time: 10:37 AM

Temperature: 9.4 ° 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 Location Details: No leakage occurred

DATA SHEET NO. 12

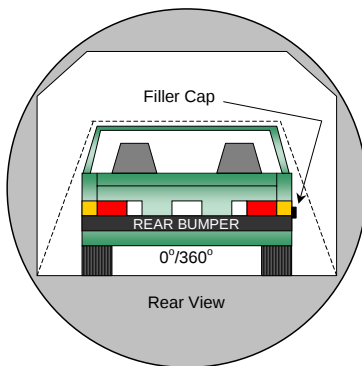
FMVSS 301 STATIC ROLLOVER DATA

Test Vehicle: 2008 Nissan 350Z 2-Door Convertible

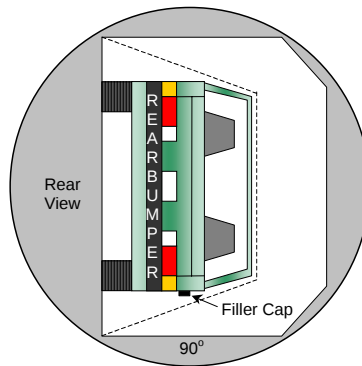
NHTSA No.: M85216

Test Program: NHTSA 35mph NCAP

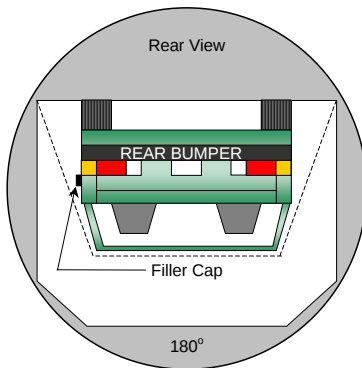
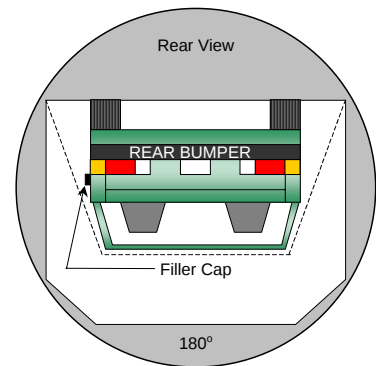
Test Date: 12/01/07



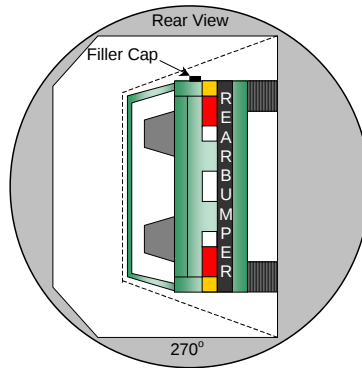
0° to 90°



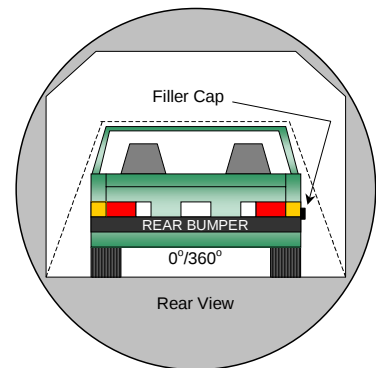
90° to 180°



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. No solvent leakage occurred during rollover.

DATA SHEET NO. 12...(CONTINUED)**FMVSS 301 STATIC ROLLOVER DATA**Test Vehicle: 2008 Nissan 350Z 2-Door ConvertibleNHTSA No.: M85216Test Program: NHTSA 35mph NCAPTest Date: 12/01/07**SOLVENT COLLECTION TIME TABLE IN SECONDS**

Test Phase	Rotation Time	Hold Time	Total Time
0° to 90°	85	303	388
90° to 180°	84	301	385
180° to 270°	77	311	388
270° to 360°	82	308	390

FMVSS 301 SPILLAGE TABLE REQUIREMENT (oz.)

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

ACTUAL TEST VEHICLE SOLVENT SPILLAGE TABLE (oz.)

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

DATA SHEET NO. 13**VEHICLE MEASUREMENTS**Test Vehicle: 2008 Nissan 350Z 2-Door ConvertibleNHTSA No.: M85216Test Program: NHTSA 35mph NCAPTest Date: 12/01/07**VEHICLE MEASUREMENT TABLE**

No.	Measurement Description	Units	Pre-Test	Post-Test	Diff.
1	Total length of vehicle at centerline	mm	4295	4045	-250
2	RSOV to front of engine	mm	3715	3502	-213
3	RSOV to firewall centerline	mm	3133	3065	-68
4	RSOV to leading edge of right door	mm	2685	2693	8
5	RSOV to leading edge of left door	mm	2674	2698	24
6	RSOV to lower leading edge of right door	mm	2795	2800	5
7	RSOV to lower leading edge of left door	mm	2785	2794	9
8	RSOV to upper trailing edge of right door	mm	1471	1477	6
9	RSOV to upper trailing edge of left door	mm	1465	1497	32
10	RSOV to lower trailing edge of right door	mm	1721	1715	-6
11	RSOV to lower trailing edge of left door	mm	1710	1723	13
12	RSOV to bottom of right 'A' pillar	mm	2716	2721	5
13	RSOV to bottom of left 'A' pillar	mm	2708	2710	2
14	RSOV to firewall on right side	mm	3380	3255	-125
15	RSOV to firewall on left side	mm	3374	3220	-154
16	RSOV to steering column	mm	2325	2408	83
17	Center of steering column to left 'A' pillar	mm	400	405	5
18	Center of steering column to headlining	mm	360	290	-70
19	RSOV to right side of front bumper	mm	4120	3855	-265
20	RSOV to left side of front bumper	mm	4120	3895	-225
21	Length of engine block	mm	595	595	0
RD	RSOV to right side of dash panel	mm	2586	2565	-21
CD	RSOV to center of dash panel	mm	2530	2470	-60
LD	RSOV to left side of dash panel	mm	2585	2563	-22

DATA SHEET NO. 13...(CONTINUED)

VEHICLE STRUCTURAL MEASUREMENTS

Test Vehicle: 2008 Nissan 350Z 2-Door Convertible

NHTSA No.: M85216

Test Program: NHTSA 35mph NCAP

Test Date: 12/01/07

VEHICLE STRUCTURAL MEASUREMENT TABLE

No.	Measurement Description	Units	Pre-Test	Post-Test	Diff.
1	Total length	mm	4295	4045	-250
2	Total width	mm	1770	1774	4
3	Bumper top height	mm	571	625	54
4	Bumper bottom height	mm	176	255	79
5	Longitudinal member top height	mm	486	470	-16
6	Longitudinal member bottom height	mm	374	325	-49
7	Distance between longitudinal members	mm	810	800	-10
8	Longitudinal member width	mm	50	45	-5
9	Engine top height	mm	830	850	20
10	Engine bottom height	mm	136	186	50
11	Engine and gear box width	mm	600	600	0
12	Front bumper to engine distance	mm	585	625	40
13	Front shock absorber fixing width	mm	745	740	-5
14	Bonnet leading edge height	mm	645	700	55
15	Front shock absorber fixing width	mm	940	850	-90
16	Front bumper to front axle distance	mm	800	525	-275
17	Front axle to 'A' pillar distance	mm	703	600	-103
18	'A' pillar to 'B' pillar distance	mm	1310	1300	-10
19	'B' pillar to rear axle distance	mm	785	685	-100
20	'B' pillar to 'C' pillar distance	mm	N/A	N/A	N/A
21	Roof sill bottom height	mm	1190	1180	-10
22	Roof sill top height	mm	1255	1290	35
23	Floor sill bottom height	mm	146	131	-15
24	Floor sill top height	mm	330	315	-15

DATA SHEET NO. 13...(CONTINUED)

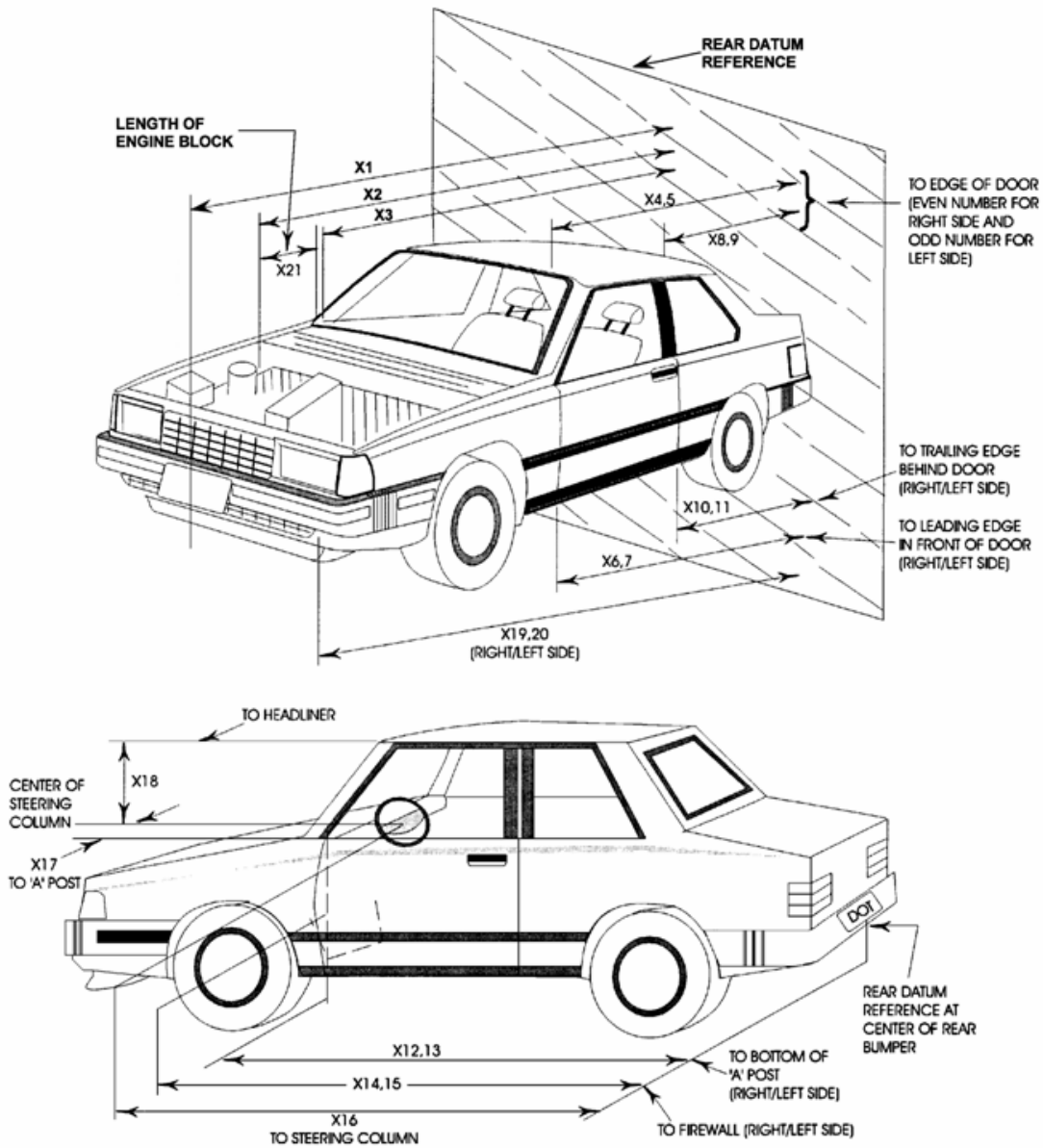
VEHICLE MEASUREMENTS

Test Vehicle: 2008 Nissan 350Z 2-Door Convertible

NHTSA No.: M85216

Test Program: NHTSA 35mph NCAP

Test Date: 12/01/07



DATA SHEET NO. 14

CAMERA LOCATIONS

Test Vehicle: 2008 Nissan 350Z 2-Door Convertible

NHTSA No.: M85216

Test Program: NHTSA 35mph NCAP

Test Date: 12/01/07

VEHICLE CAMERA MEASUREMENT TABLE

No.	Camera View	Location (mm)			Angle (deg.)	Film Plane to Head	Lens (mm)	Speed (fps)
		X	Y	Z				
1	Real Time Camera (Panning)	-11412	-8150	-1484	0			30
2	Overall Left Side	-1511	-6753	-1067	0	7499	20mm	1000
3	Closeup Left Side	-2098	-6197	-1197	0	6988	50mm	1000
4	Driver and Interior View	-6696	-5987	-1071	-17	8126	ZOOM	1000
5	Steering Column (Bottom)	-1972	-8184	-2879	-13	9477	35mm	1000
6	Steering Column (Top)	-1966	-8141	-3258	-13	9610	35mm	1000
7	Overall Right Side	-1609	6729	-1043	0	6783	20mm	1000
8	Closeup Right Side	-1958	6009	-1093	0	6109	50mm	1000
9	Passenger and Interior View	-5136	9516	-2460	-10	10306	ZOOM	1000
10	Right Side View	-1582	7995	-1713	-6	8201	ZOOM	1000
11	Windshield View	-354	0	-5749	-90		24mm	1000
12	Driver Front View	363	-543	-2548	-34		25mm	1000
13	Passenger Front View	381	445	-2548	-34		25mm	1000
14	Pit View of Engine	-756	0	1495	90		12mm	1000
15	Pit View of Fuel Tank	-3398	0	1495	90		8mm	1000
16	Real Time Driver	-1926	-8089	-1704	-1			30
17	Real Time Passenger	-1433	8047	-1704	-1			30
18	Driver Side On-Board	-3221	-356	-1120	-3	799	12	1000
19	Passenger Side On-Board	-3221	356	-1120	-3	731	12	1000

All measurements are made relative to the point of impact.

DATA SHEET NO. 15

PHOTOGRAPHIC REFERENCE TARGET LOCATIONS

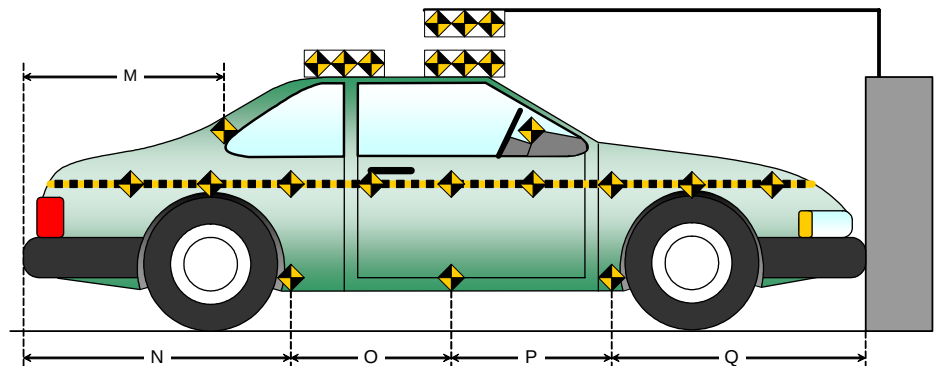
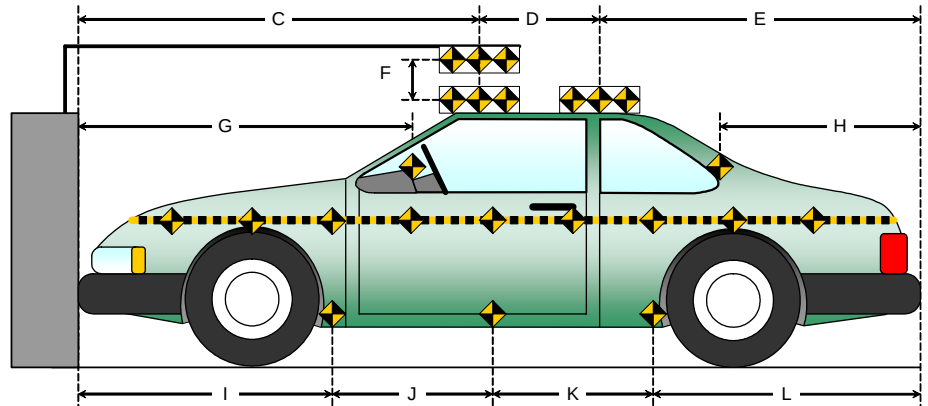
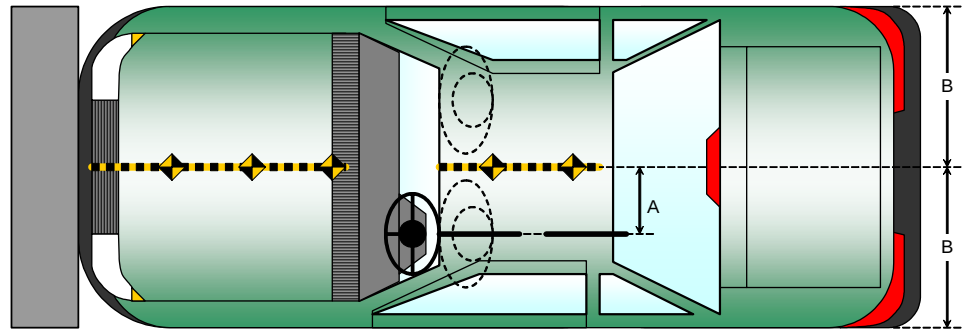
Test Vehicle: 2008 Nissan 350Z 2-Door Convertible

NHTSA No.: M85216

Test Program: NHTSA 35mph NCAP

Test Date: 12/01/07

All Dimensions in (mm)	
Item	Value
A	N/A
B	885
C	N/A
D	N/A
E	N/A
F	N/A
G	1642
H	N/A
I	1253
J	883
K	883
L	1290
M	N/A
N	1290
O	883
P	883
Q	1253



DATA SHEET NO. 16

VEHICLE INTRUSION MEASUREMENTS

Test Vehicle: 2008 Nissan 350Z 2-Door Convertible

NHTSA No.: M85216

Test Program: NHTSA 35mph NCAP

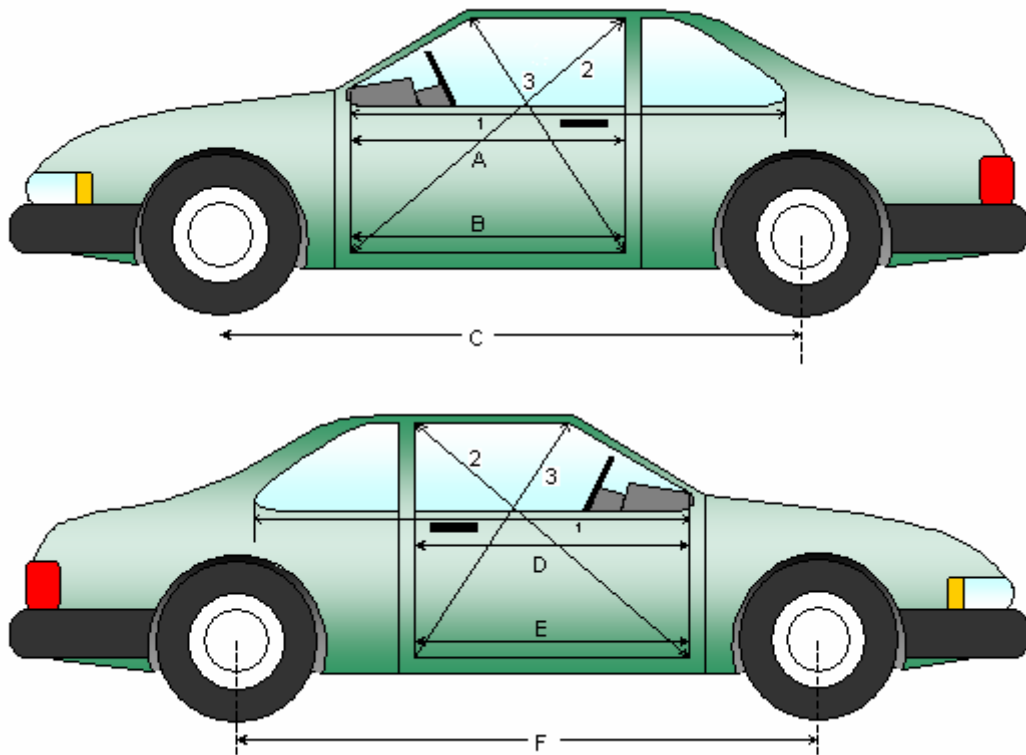
Test Date: 12/01/07

DOOR OPENING WIDTH TABLE

Item	Description	Units	Pre-Test	Post-Test	Diff.
1L	Left Side	mm	1136	1136	0
2L	Left Side (Diagonally)	mm	1296	1280	-16
3L	Left Side (Diagonally)	mm	916	905	-11
1R	Right Side	mm	1070	1041	-29
2R	Right Side (Diagonally)	mm	1296	1290	-6
3R	Right Side (Diagonally)	mm	926	920	-6

WHEELBASE MEASUREMENT TABLE

Item	Description	Units	Pre-Test	Post-Test	Diff.
C	Left Side Wheel Base	mm	2655	2555	-100
F	Right Side Wheel Base	mm	2655	2574	-81



DATA SHEET NO. 16...(CONTINUED)

VEHICLE INTRUSION MEASUREMENTS

Test Vehicle: 2008 Nissan 350Z 2-Door Convertible

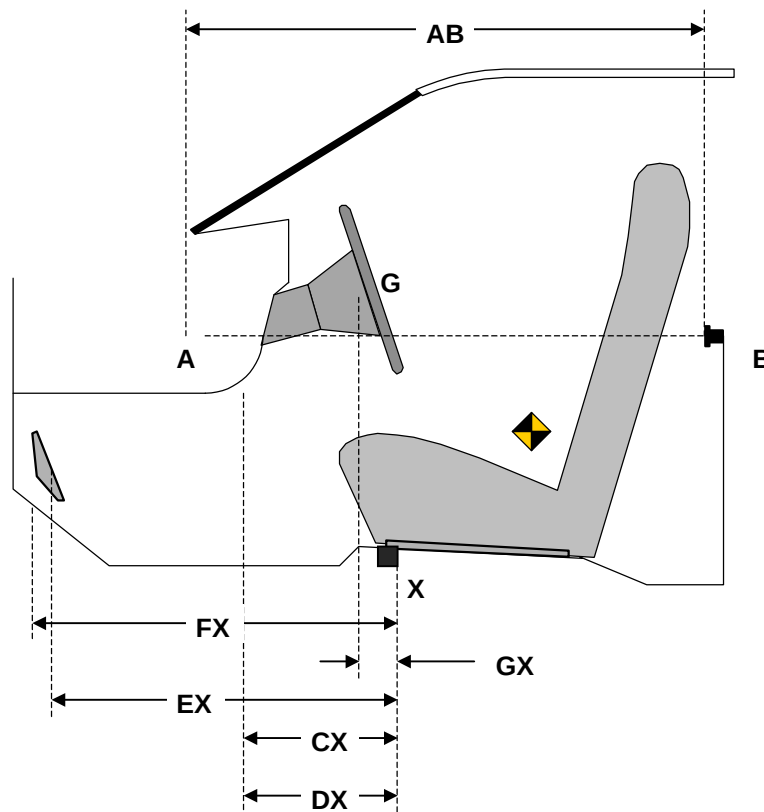
NHTSA No.: M85216

Test Program: NHTSA 35mph NCAP

Test Date: 12/01/07

DRIVER COMPARTMENT INTRUSION TABLE

Item	Description	Units	Pre-Test	Post-Test	Diff.
AB	Door Opening (Inside window jam)	mm	1136	1130	-6
CX	Left Knee Bolster to X	mm	220	175	-45
DX	Right Knee Bolster to X	mm	200	125	-75
EX	Brake Pedal to X	mm	526	465	-61
FX	Foot Rest to X	mm	588	520	-68
GX	Center of Steering Wheel Hub to X	mm	50	30	-20



DATA SHEET NO. 16...(CONTINUED)

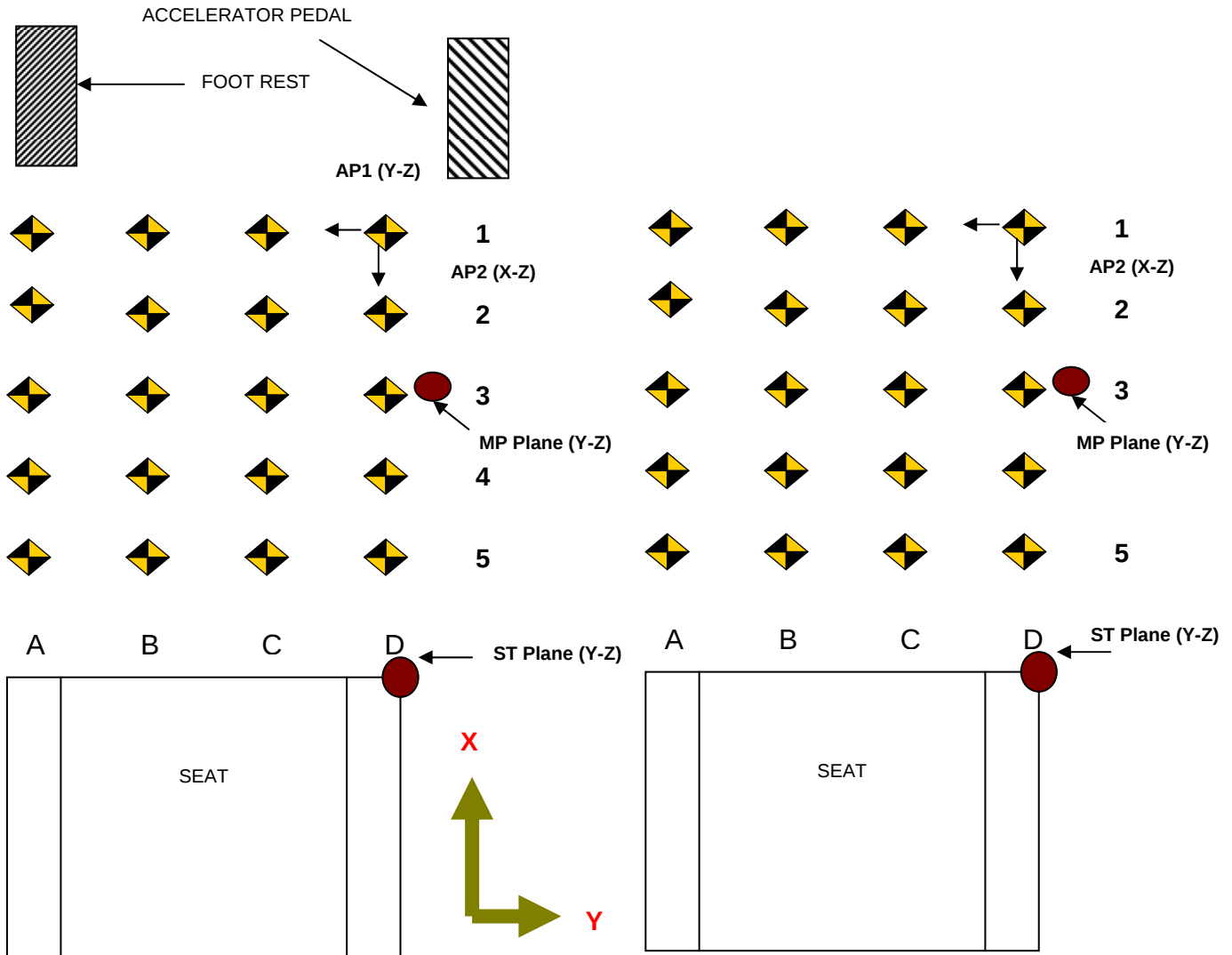
VEHICLE INTRUSION MEASUREMENTS

Test Vehicle: 2008 Nissan 350Z 2-Door Convertible

NHTSA No.: M85216

Test Program: NHTSA 35mph NCAP

Test Date: 12/01/07



AP1: Y-Z Plane passing through D1

AP2: X-Z Plane passing through D1

AP3: X-Y plane passing through D1

MP: Y-Z plane, halfway between the ST plane and AP1 plane

CF Plane: X-Z plane passes through center of footrest.

BP Plane: X-Z plane passes through center of brake pedal

TP Plane: Y-Z plane, intersection of BP Plane and the intersection of the toe pan and floorboard

Column A: intersection of vehicle and CF plane

Column D: Intersection of vehicle and AP2 plane

Row 1: intersection of the vehicle and the AP3 Plane

Row 3: intersection of the vehicle and TP plane

Row 5: intersection of the vehicle and MP plane

Row 2: evenly spaced between row 1 and 3

Row 4: evenly spaced between row 3 and 5

DATA SHEET NO. 16...(CONTINUED)

VEHICLE INTRUSION MEASUREMENTS

Test Vehicle: 2008 Nissan 350Z 2-Door Convertible

NHTSA No.: M85216

Test Program: NHTSA 35mph NCAP

Test Date: 12/01/07

All measurements in mm

DRIVER FLOOR PAN X-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	627	633	641	642	606	586	585	575	-21	-47	-56	-67
2	533	540	548	545	523	513	516	499	-10	-27	-32	-46
3	436	435	439	446	421	404	410	412	-15	-31	-29	-34
4	306	307	314	314	289	283	286	287	-17	-24	-28	-27
5	183	183	188	194	168	157	167	174	-15	-26	-21	-20

DRIVER FLOOR PAN Y-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	-28	78	206	344	5	95	220	346	33	17	14	2
2	-29	84	198	352	-4	99	213	367	25	15	15	15
3	-17	89	204	353	-6	100	211	366	11	11	7	13
4	-12	95	213	355	-2	106	222	355	10	11	9	0
5	-7	101	221	356	2	103	229	357	9	2	8	1

DRIVER FLOOR PAN Z-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	-1	1	-4	-6	-2	-10	-18	-22	-1	-11	-14	-16
2	49	55	53	53	41	64	80	57	-8	9	27	4
3	110	54	53	52	93	68	72	52	-17	14	19	0
4	140	56	54	41	129	69	68	37	-11	13	14	-4
5	142	82	55	44	130	95	52	40	-12	13	-3	-4

DATA SHEET NO. 16...(CONTINUED)

VEHICLE INTRUSION MEASUREMENTS

Test Vehicle: 2008 Nissan 350Z 2-Door Convertible

NHTSA No.: M85216

Test Program: NHTSA 35mph NCAP

Test Date: 12/01/07

All measurements in mm

PASSENGER FLOOR PAN X-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	636	629	635	642	544	569	596	631	-92	-60	-39	-11
2	524	532	539	540	465	487	512	531	-59	-45	-27	-9
3	423	429	435	443	388	389	408	431	-35	-40	-27	-12
4	303	302	301	305	270	270	278	299	-33	-32	-23	-6
5	187	178	177	197	155	148	149	192	-32	-30	-28	-5

PASSENGER FLOOR PAN Y-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	-292	-193	-74	29	-334	-242	-125	-35	-42	-49	-51	-64
2	-296	-198	-79	30	-326	-235	-126	-18	-30	-37	-47	-48
3	-299	-196	-82	34	-318	-214	-109	-5	-19	-18	-27	-39
4	-305	-193	-82	30	-318	-211	-113	2	-13	-18	-31	-28
5	-308	-198	-83	27	-314	-211	-98	4	-6	-13	-15	-23

PASSENGER FLOOR PAN Z-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	2	-4	2	-4	-22	-11	-6	-15	-24	-7	-8	-11
2	58	62	56	53	58	71	48	33	0	9	-8	-20
3	57	59	58	107	44	65	72	82	-13	6	14	-25
4	53	59	58	142	44	74	81	132	-9	15	23	-10
5	32	60	84	143	22	71	103	127	-10	11	19	-16

DATA SHEET NO. 17

FIXED BARRIER LOAD CELL LOCATIONS

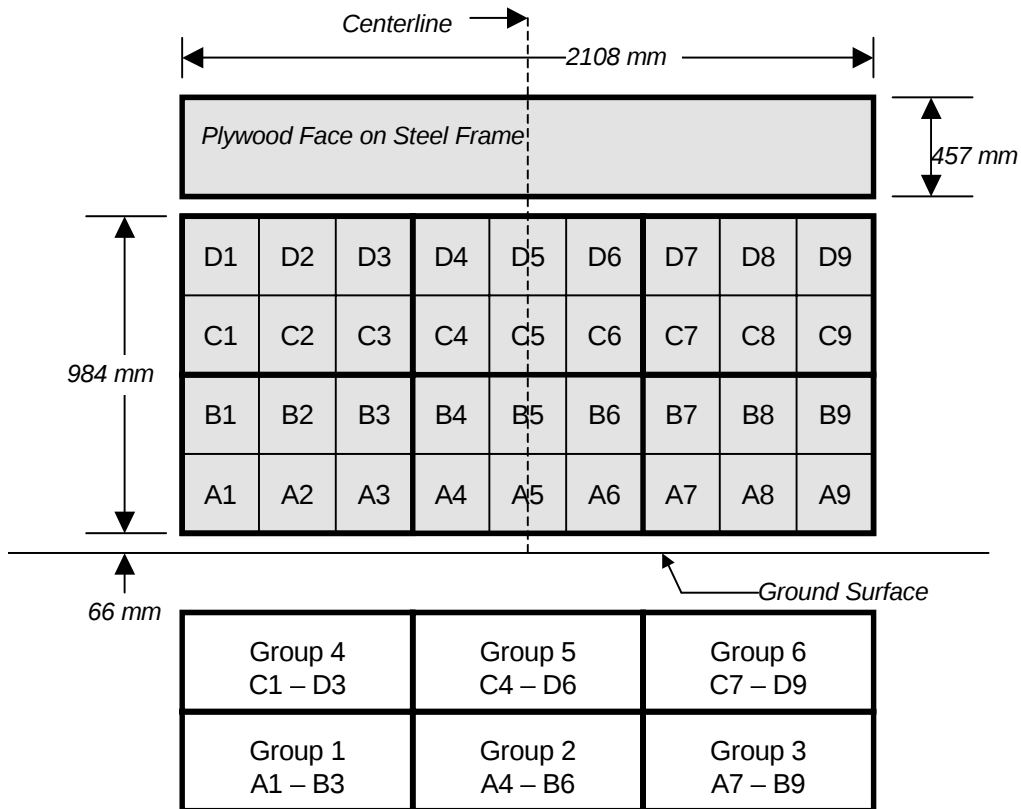
Test Vehicle: 2008 Nissan 350Z 2-Door Convertible

NHTSA No.: M85216

Test Program: NHTSA 35mph NCAP

Test Date: 12/01/07

36 Load Cell Rigid Barrier (NHTSA Standard) Load Cell Locations on Fixed Barrier



6 Groups of 6 Load Cells Each

DATA SHEET NO. 18

ACCIDENT INVESTIGATION DIVISION DATA

Test Vehicle: 2008 Nissan 350Z 2-Door Convertible

NHTSA No.: M85216

Test Program: NHTSA 35mph NCAP

Test Date: 12/01/07

VEHICLE INFORMATION

VIN: JN1BZ36A28M850512

Wheel base (mm): 2655

Vehicle Size Category: 2-Door Convertible

Test Weight (kg): 1855

ACCELEROMETER DATA

Accelerometer Location: Left rear cross member

Cal. Procedure/Interval: 6 months / drop test

Integration Algorithm: NHTSA Standard

Linearity: Good

Impact Velocity (km/h): 55.75

Velocity Change (km/h): 65.9

Time of Separation (msec): 69.7

CRUSH PROFILE

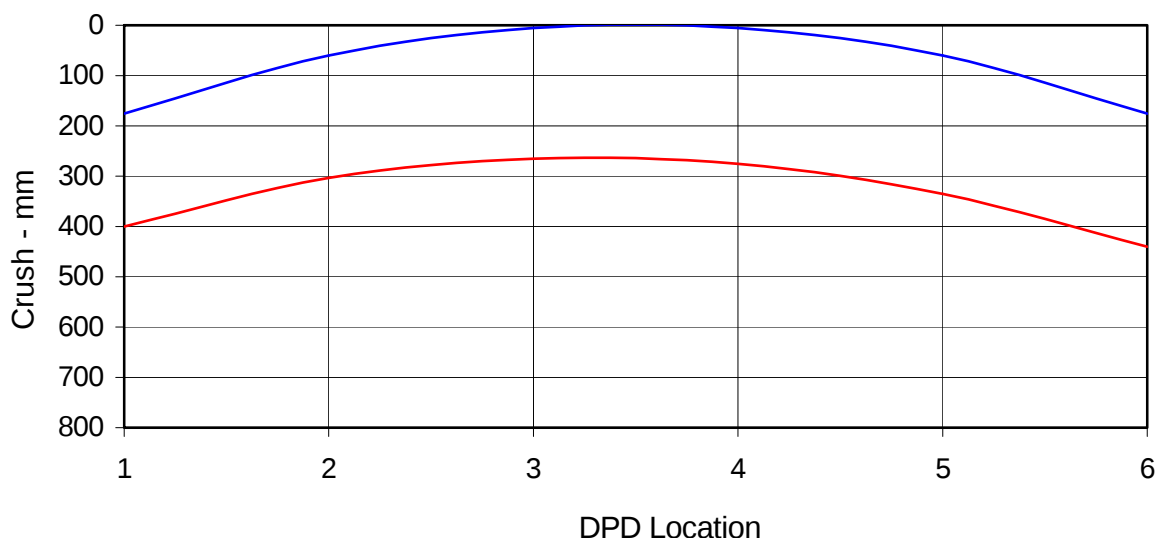
Collision Deformation Classification: 12FDEW6

Midpoint of Damage: Vehicle Centerline

Damage Region Length (mm): 1280

Impact Mode: Full Frontal

No.	Measurement Description	Units	Pre-Test	Post-Test	Difference
C1	Crush zone 1 at left side	mm	175	400	-225
C2	Crush zone 2 on left side	mm	60	303	-243
C3	Crush zone 3 on left side	mm	5	265	-260
C4	Crush zone 4 on right side	mm	5	275	-270
C5	Crush zone 5 on right side	mm	60	335	-275
C6	Crush zone 6 at right side	mm	175	440	-265



DATA SHEET NO. 19

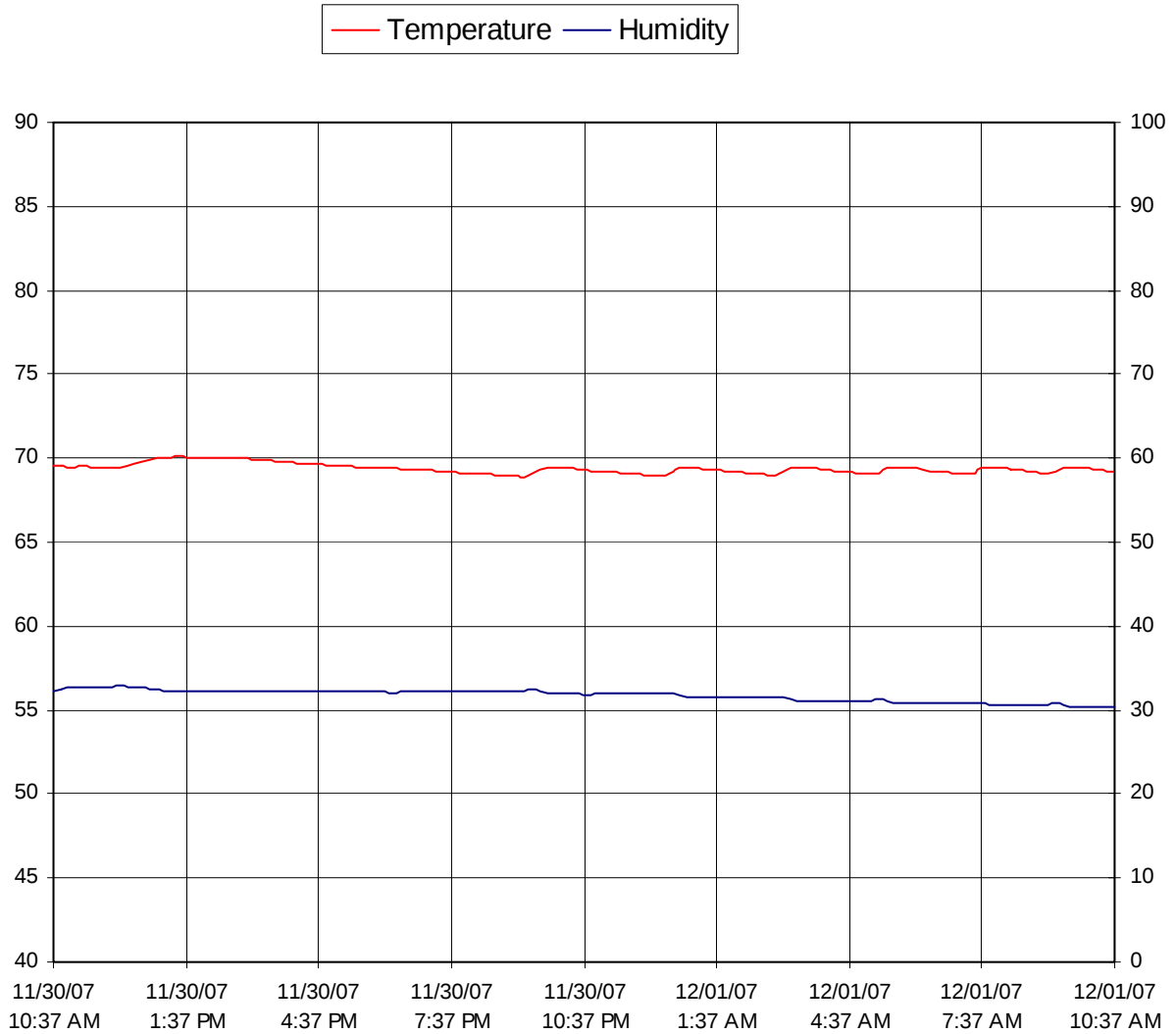
DUMMY/VEHICLE TEMPERATURE STABILIZATION

Test Vehicle: 2008 Nissan 350Z 2-Door Convertible

NHTSA No.: M85216

Test Program: NHTSA 35mph NCAP

Test Date: 12/01/07



APPENDIX A
PHOTOGRAPHS

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A-34	Pre-Test Driver Dummy (Door Open)	A-34
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A-39	Post-Test Driver Side Knee Bolster	A-39
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A-55	Post-Test Passenger Side Floor Pan	A-55
A-56	Post-Test Passenger Dummy Head	A-56
A-57	Post-Test Passenger Dummy Airbag Contact	A-57
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A-60	Vehicle on Rollover Device (180°)	A-60
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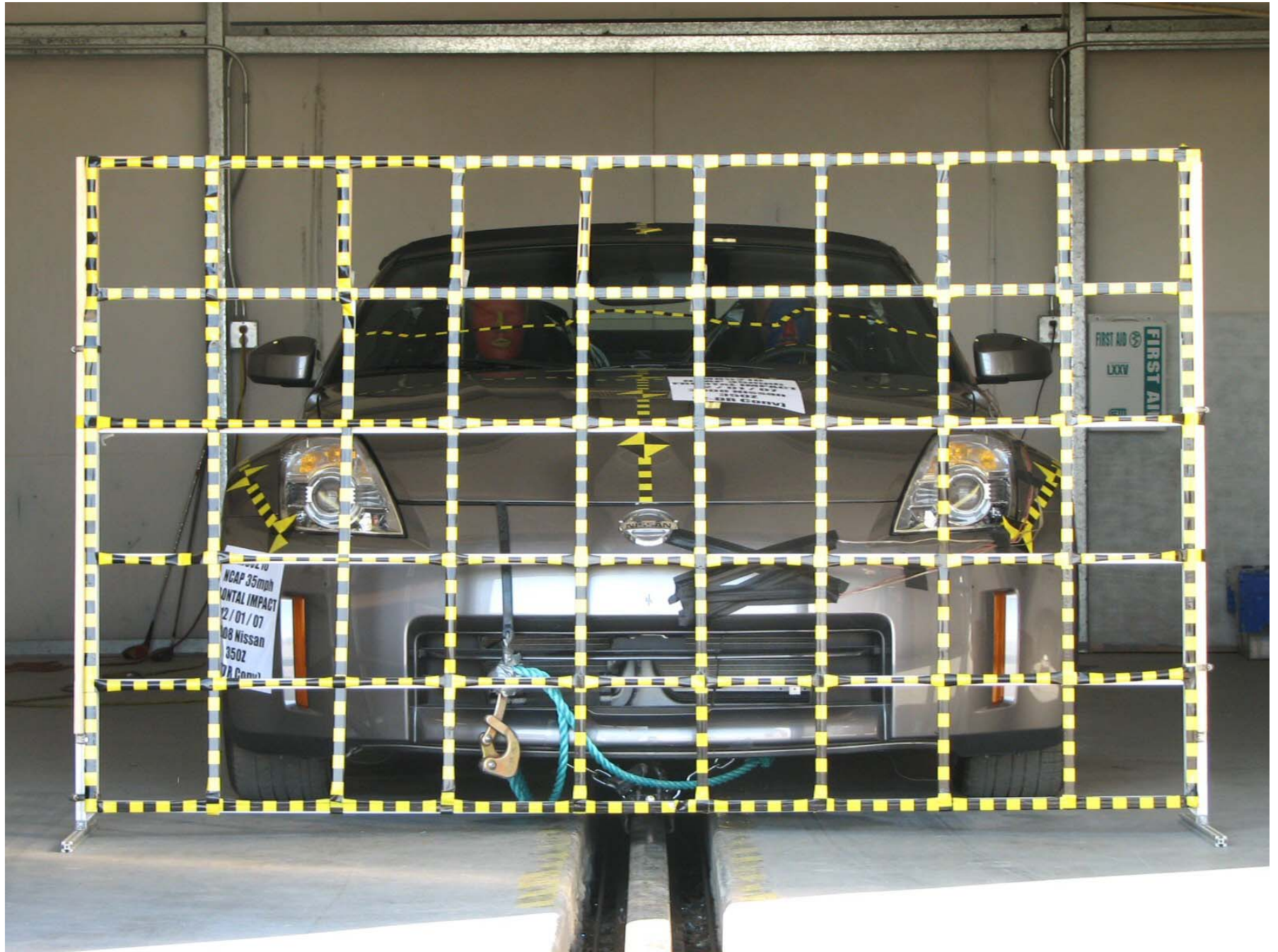


Figure A-1: Load Cell Location

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MANUFACTURED BY NISSAN MOTOR CO., LTD.

DATE: 09/07

GVWR/PNBV: 4133 LBS.

GAWR/PNBE FR: 2074 LBS. RR: 2084 LBS.

THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDERAL
MOTER VEHICLE SAFETY, BUMPER, AND THEFT PREVENTION
STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE
SHOWN ABOVE.

VIN: JN1BZ36A28M850512 PASSENGER CAR

COLOR	TRIM	TRANS	AXLE	ENGINE	
K51	G	RE5R05A	RC33	VQ35(HR)	3498CC



JN1BZ36A28M850512

Figure A-2: Manufacturer's Label



TIRE AND LOADING INFORMATION PNEU ET INFORMATION DE CHARGEMENT

SEATING CAPACITY NOMBRE DE PLACES	TOTAL TOTAL	2	FRONT AVANT	2	REAR ARRIÈRE	0
--------------------------------------	----------------	---	----------------	---	-----------------	---

The combined weight of occupants and cargo should never exceed **204 kg** or **450 lbs.**
Le poids combiné d'occupants et de cargaison ne devrait jamais excéder **204 kg** ou **450 lbs.**

TIRE PNEU	ORIGINAL SIZE TAILLE ORIGINALE	COLD TIRE PRESSURE PRESSION DES PNEUS FROIDS
FRONT AVANT	225/45R18 91W	240kPa , 35PSI
REAR ARRIÈRE	245/45R18 96W	240kPa , 35PSI
SPARE DE SECOURS	T145/80D17	420kPa , 60PSI

SEE OWNER'S MANUAL
FOR ADDITIONAL
INFORMATION.

POUR D'AUTRES DÉ
TAILS, SE REPORTER
AU MANUEL DU
CONDUCTEUR.

4 A

CF40A

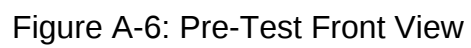
Figure A-3: Tire Placard



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



Figure A-5: Left Rear $\frac{3}{4}$ View, as Received



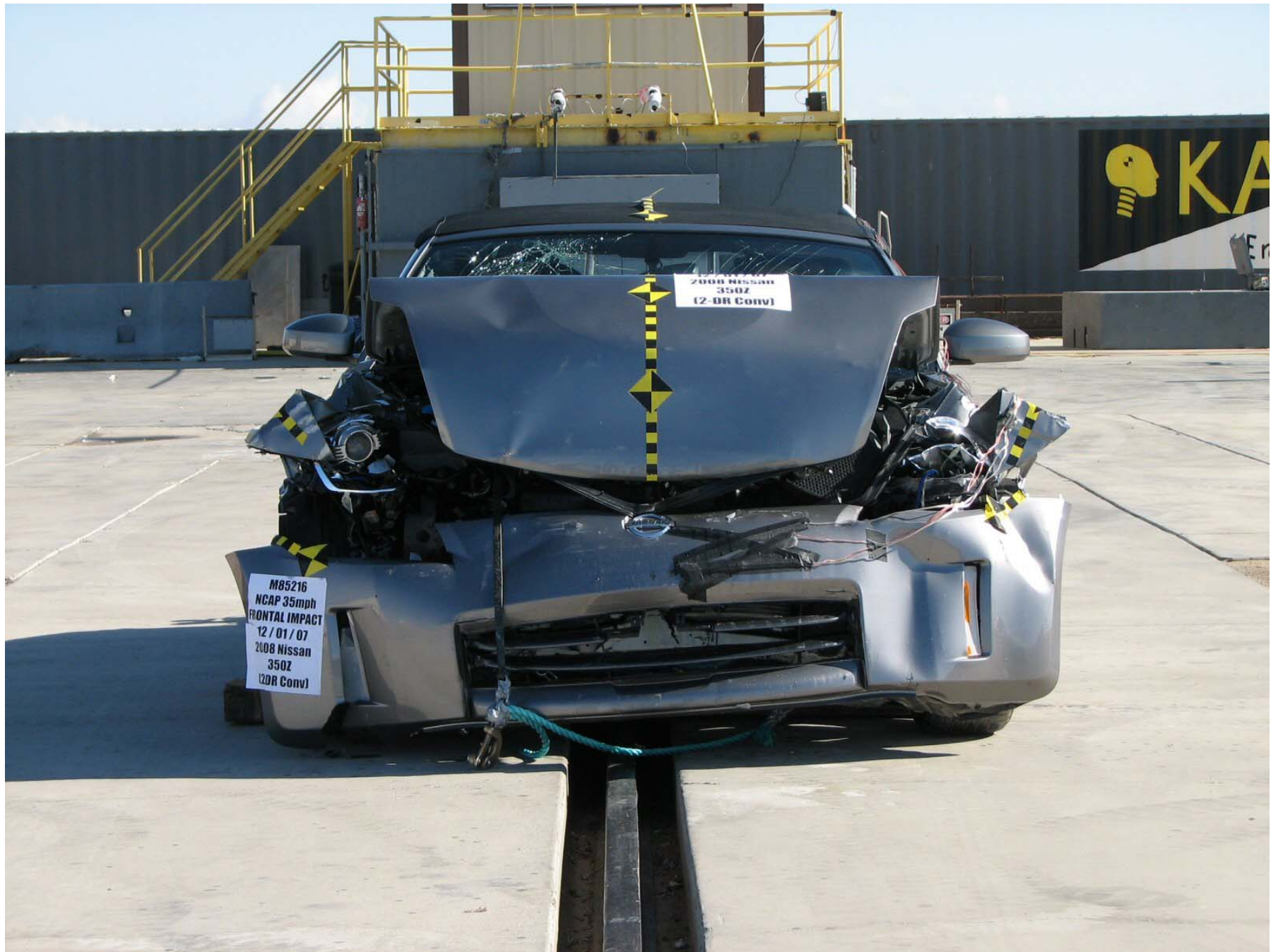


Figure A-7: Post-Test Front View (Vehicle Moved)



Figure A-8: Pre-Test Left Side View



Figure A-9: Post-Test Left Side View



Figure A-10: Pre-Test Right Side View



Figure A-11: Post-Test Right Side View



Figure A-12: Pre-Test Right Front ¾ View



Figure A-13: Post-Test Right Front ¾ View (Vehicle Moved)



Figure A-14: Pre-Test Left Rear $\frac{3}{4}$ View



Figure A-15: Post-Test Left Rear $\frac{3}{4}$ View



Figure A-16: Post-Test Left Side $\frac{3}{4}$ View of Doors After Impact



Figure A-17: Post-Test Right Side $\frac{3}{4}$ View of Doors After Impact



Figure A-18: Pre-Test Windshield



Figure A-19: Post-Test Windshield



Figure A-20: Pre-Test Engine Compartment



Figure A-21: Post-Test Engine Compartment (Vehicle Moved)



Figure A-22: Pre-Test Fuel Cap



Figure A-23: Post-Test Fuel Cap

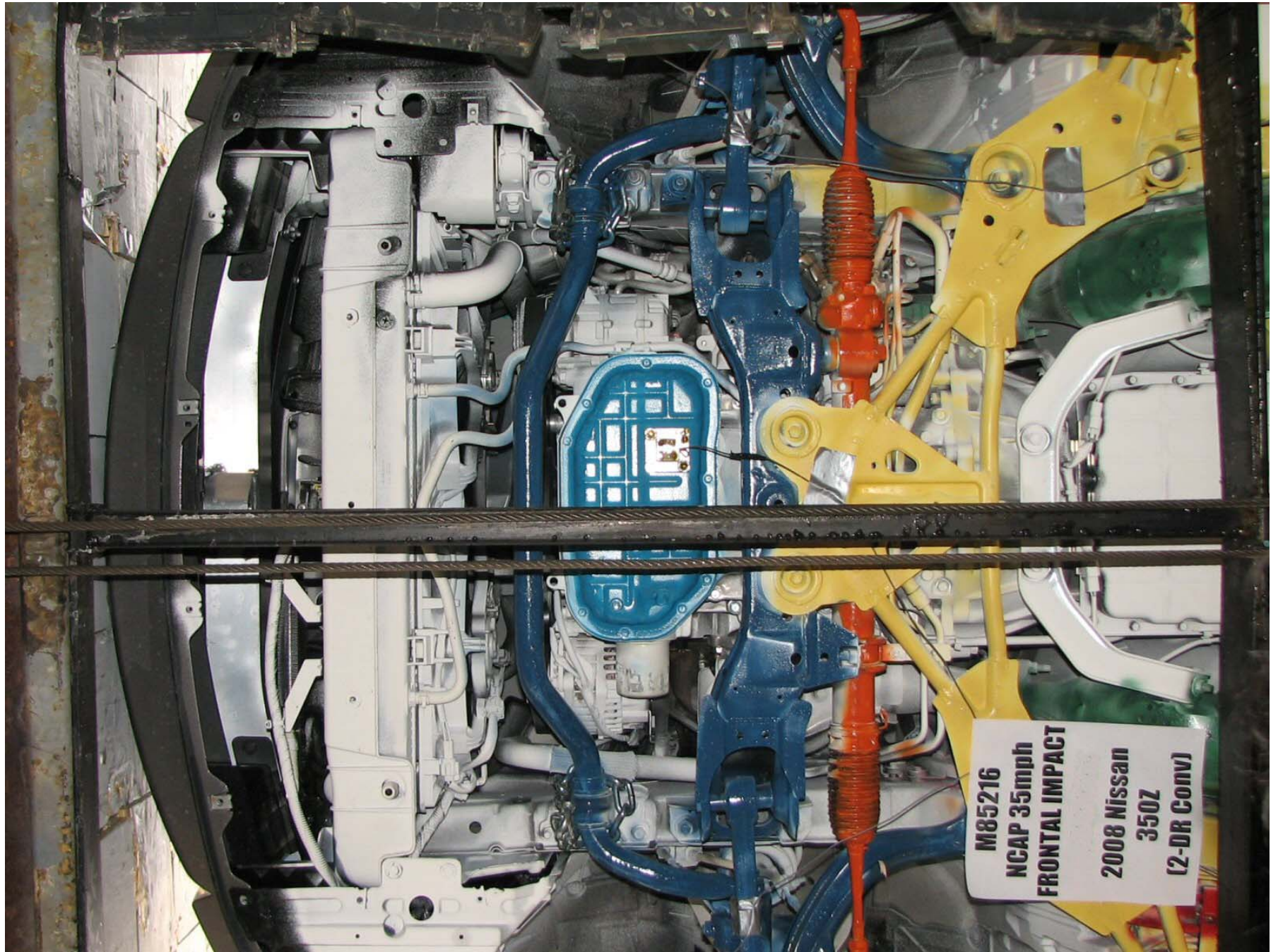


Figure A-24: Pre-Test Front Underbody

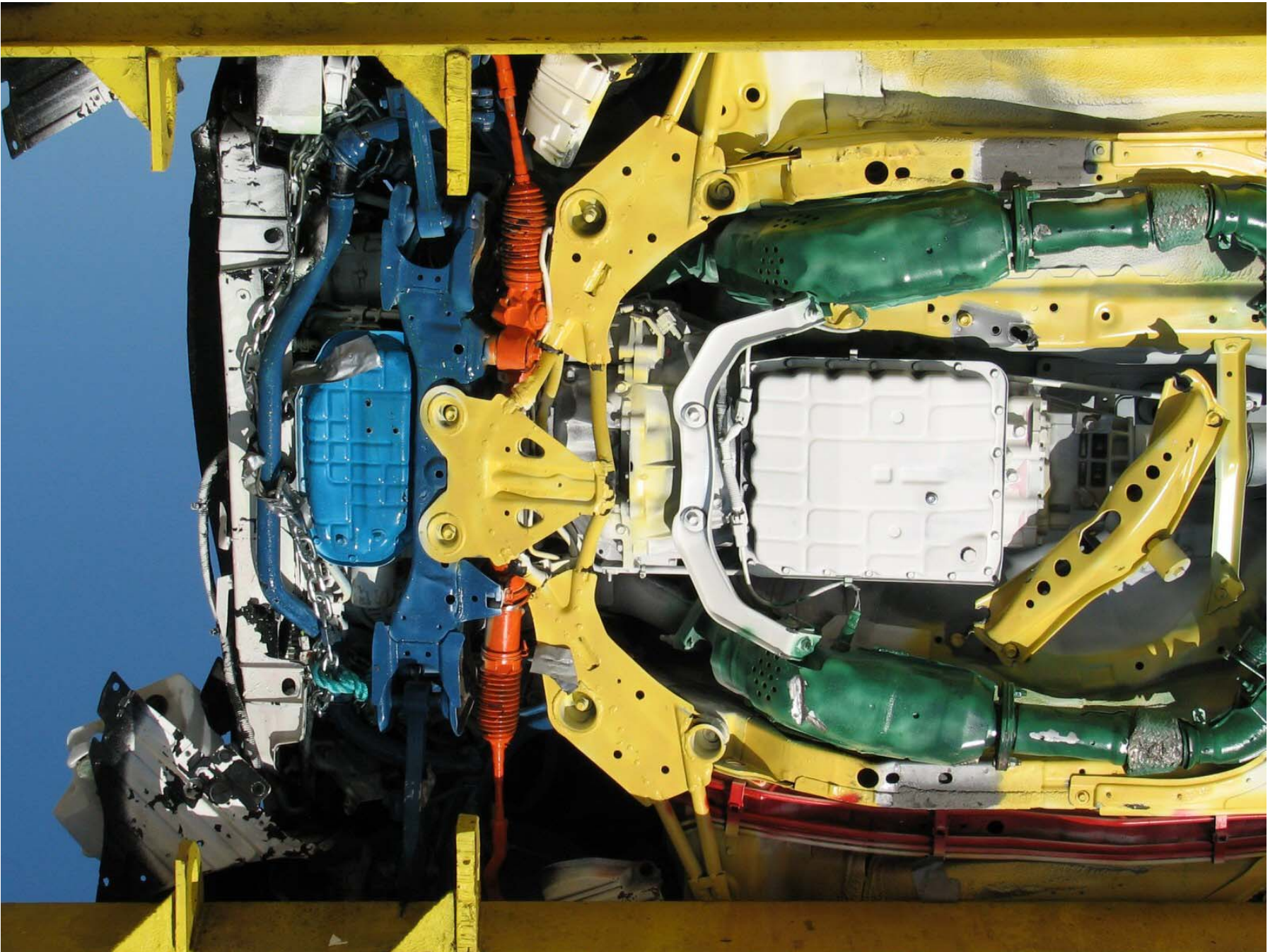


Figure A-25: Post-Test Front Underbody



Figure A-26: Pre-Test Mid Underbody

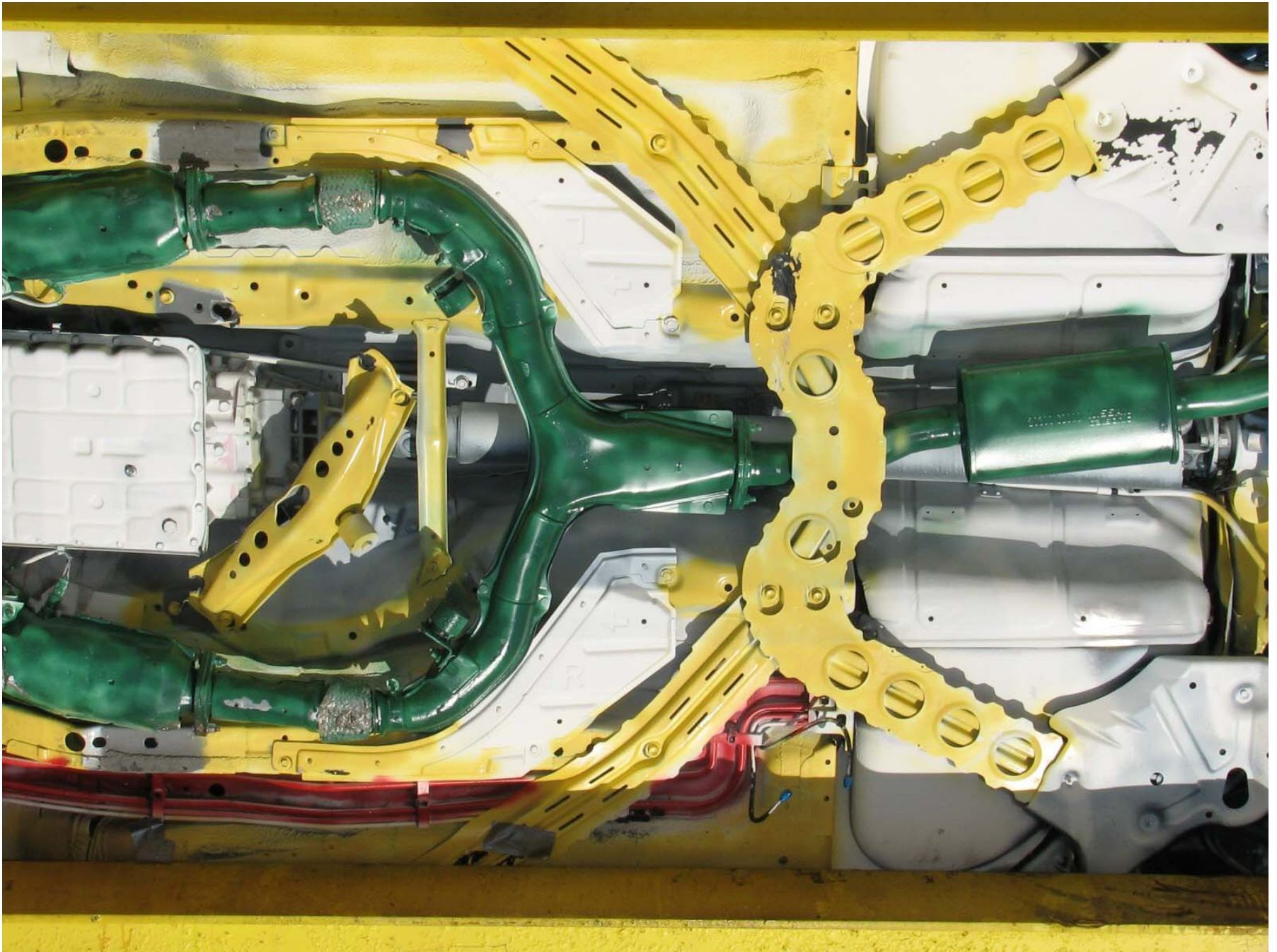


Figure A-27: Post-Test Mid Underbody

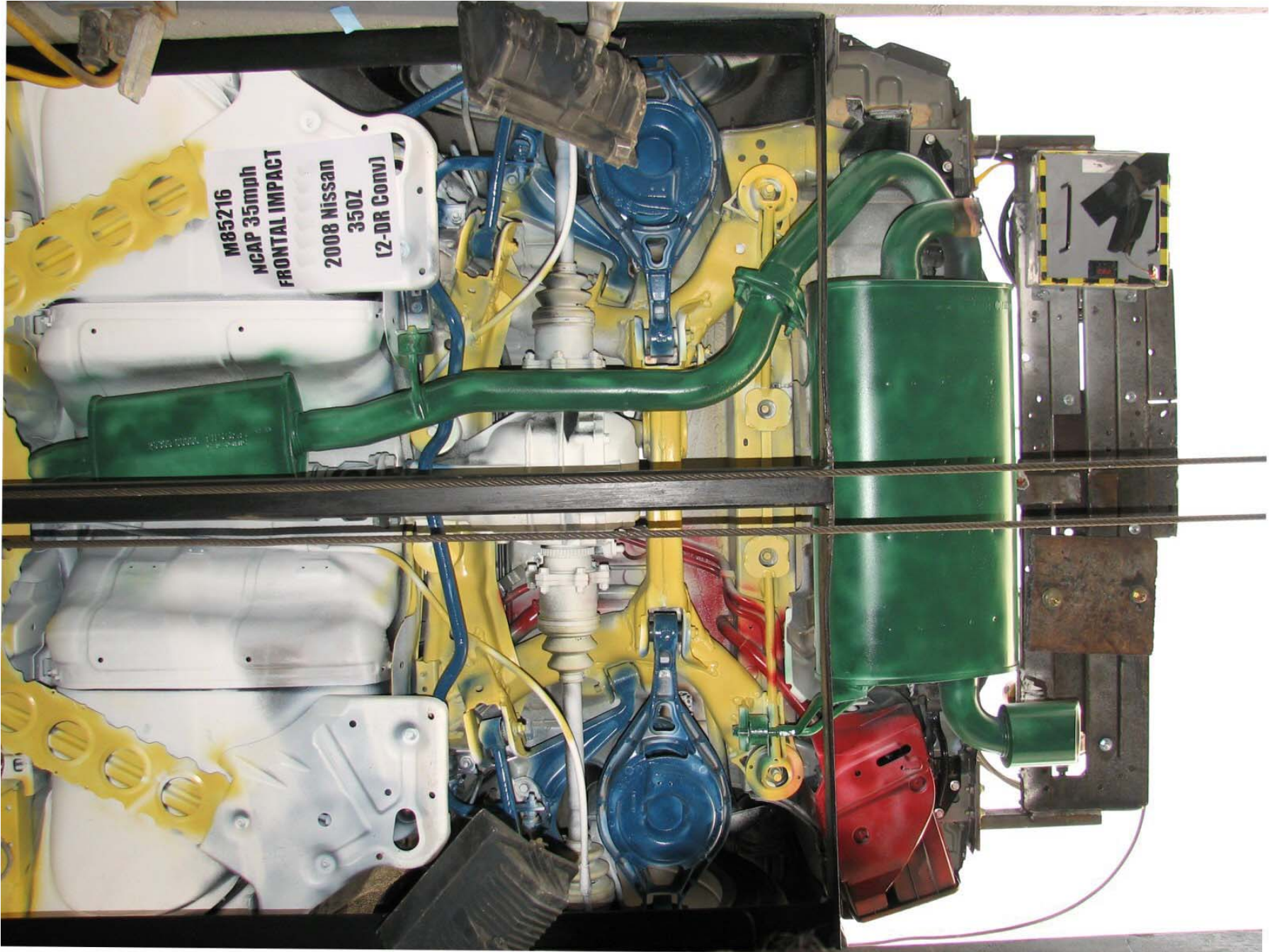


Figure A-28: Pre-Test Rear Underbody



Figure A-29: Post-Test Rear Underbody



Figure A-30: Pre-Test Driver Dummy Front View (Head Position)



Figure A-31: Post-Test Driver Dummy Front View (Head Position)



Figure A-32: Pre-Test Driver Dummy (Through Window)



Figure A-33: Post-Test Driver Dummy (Through Window)



Figure A-34: Pre-Test Driver Dummy (Door Open)



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



Figure A-36: Pre-Test Driver Dummy Feet



Figure A-37: Post-Test Driver Dummy Feet



Figure A-38: Pre-Test Driver Side Knee Bolster



Figure A-39: Post-Test Driver Side Knee Bolster

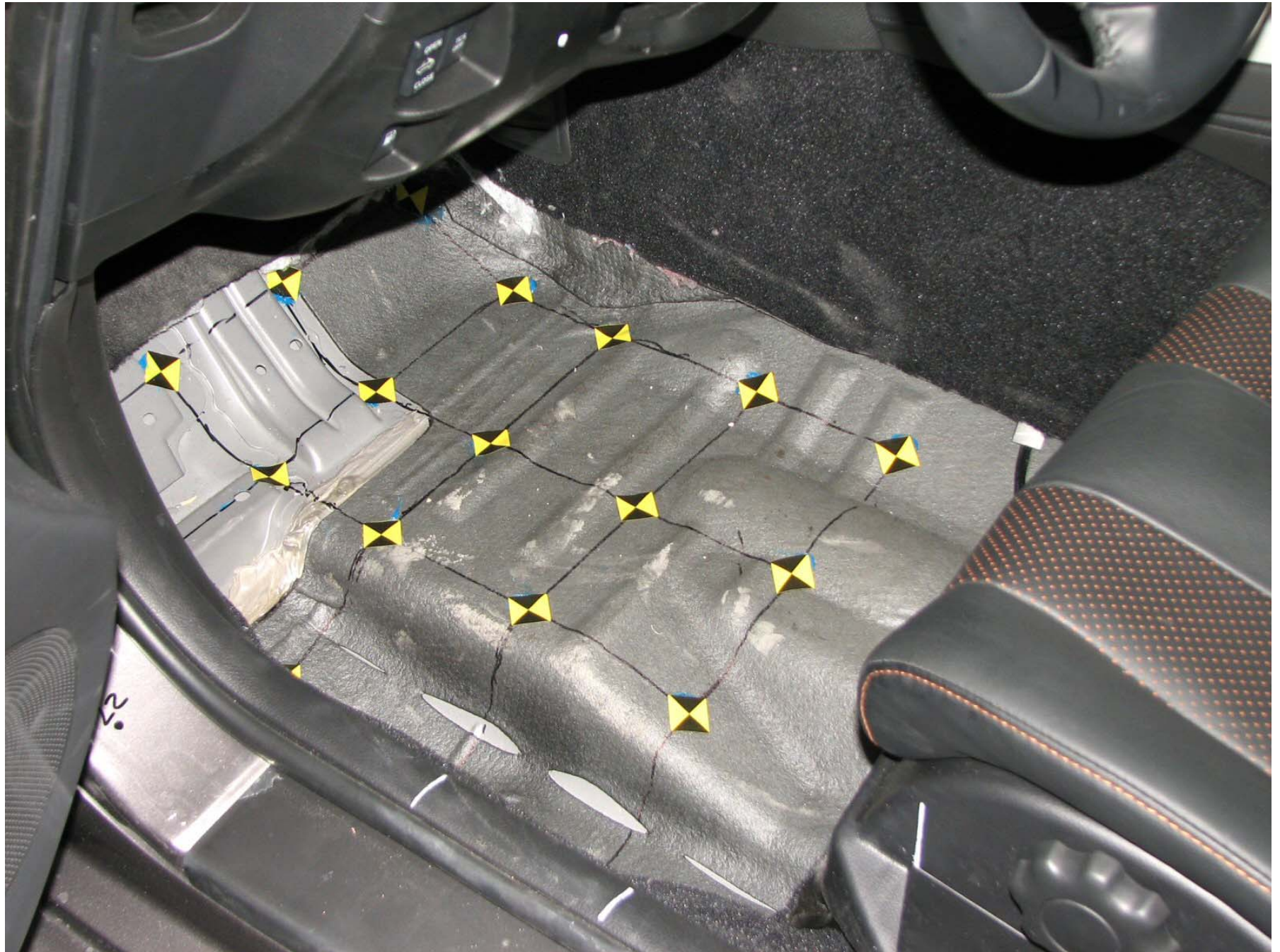


Figure A-40: Pre-Test Driver Side Floor Pan



Figure A-41: Post-Test Driver Side Floor Pan



Figure A-42: Post-Test Driver Dummy Head



Figure A-43: Post-Test Driver Dummy Airbag Contact



Figure A-44: Pre-Test Passenger Dummy Front View (Head Position)



Figure A-45: Post-Test Passenger Dummy Front View (Head Position)



Figure A-46: Pre-Test Passenger Dummy (Through Window)



Figure A-47: Post-Test Passenger Dummy (Through Window)



Figure A-48: Pre-Test Passenger Dummy (Door Open)



Figure A-49: Post-Test Passenger Dummy (Door Open)



Figure A-50: Pre-Test Passenger Dummy Feet



Figure A-51: Post-Test Passenger Dummy Feet



Figure A-52: Pre-Test Passenger Side Glove Box



Figure A-53: Post-Test Passenger Side Glove Box

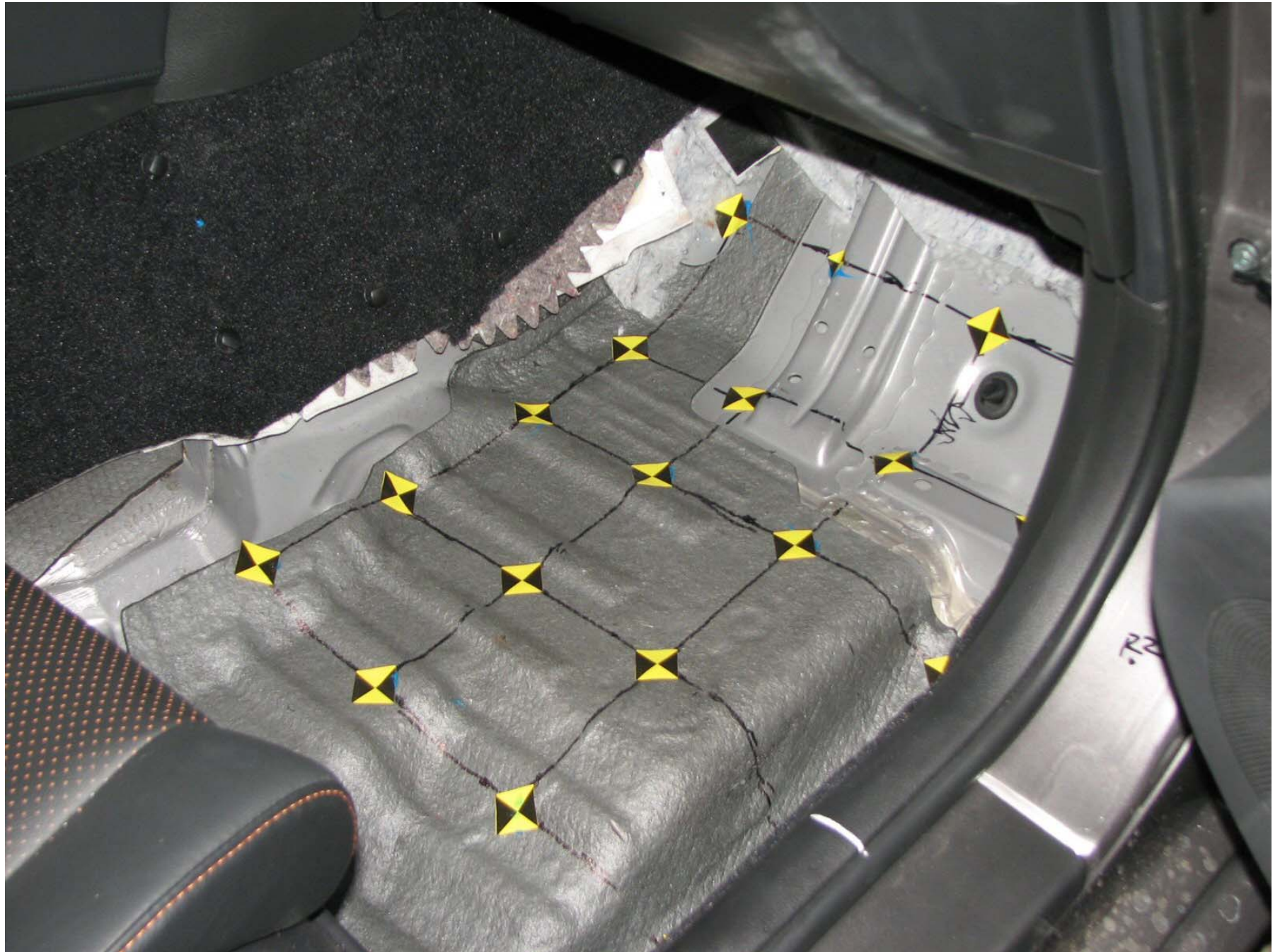


Figure A-54: Pre-Test Passenger Side Floor Pan

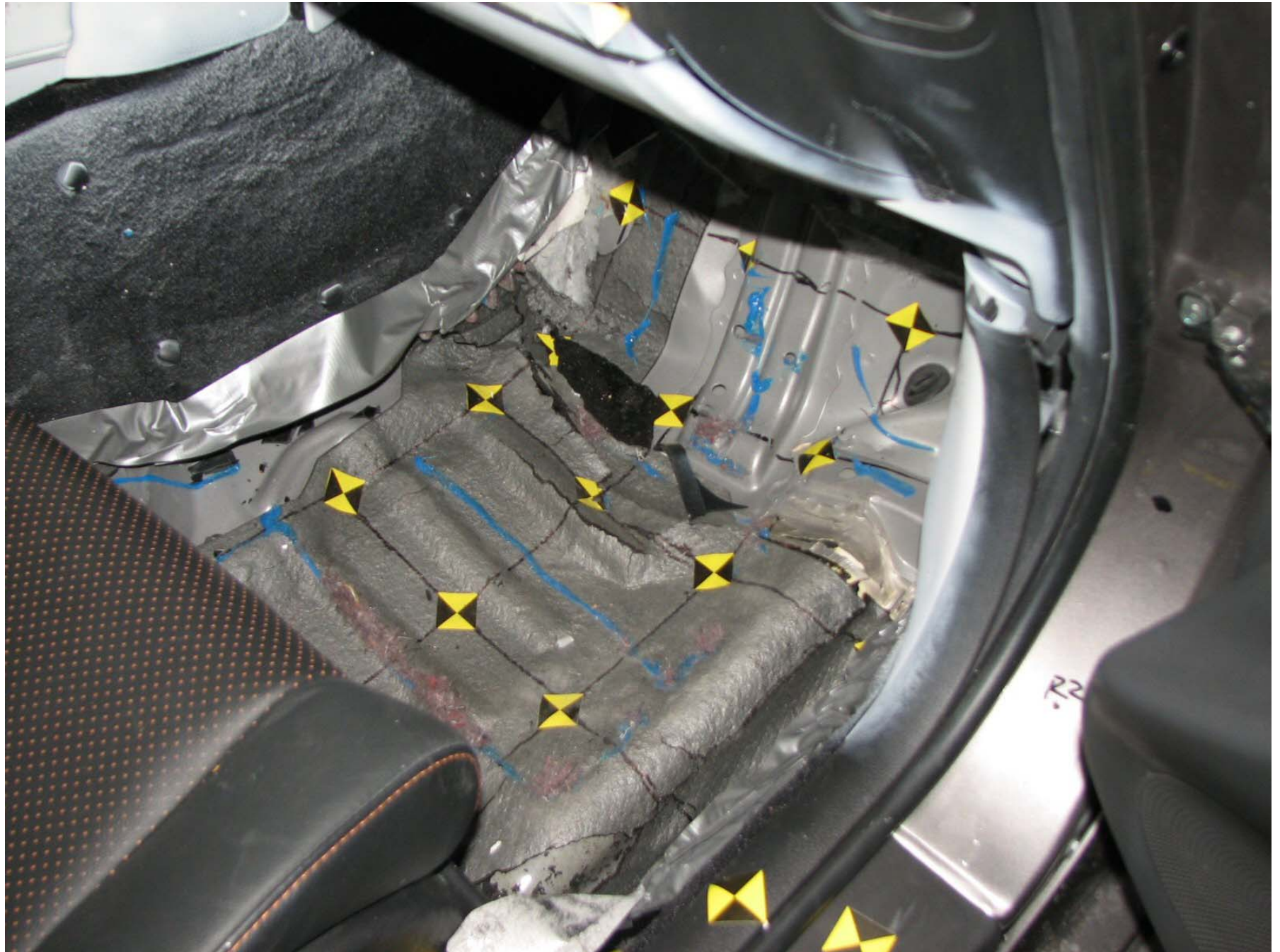


Figure A-55: Post-Test Passenger Side Floor Pan



Figure A-56: Post-Test Passenger Dummy Head

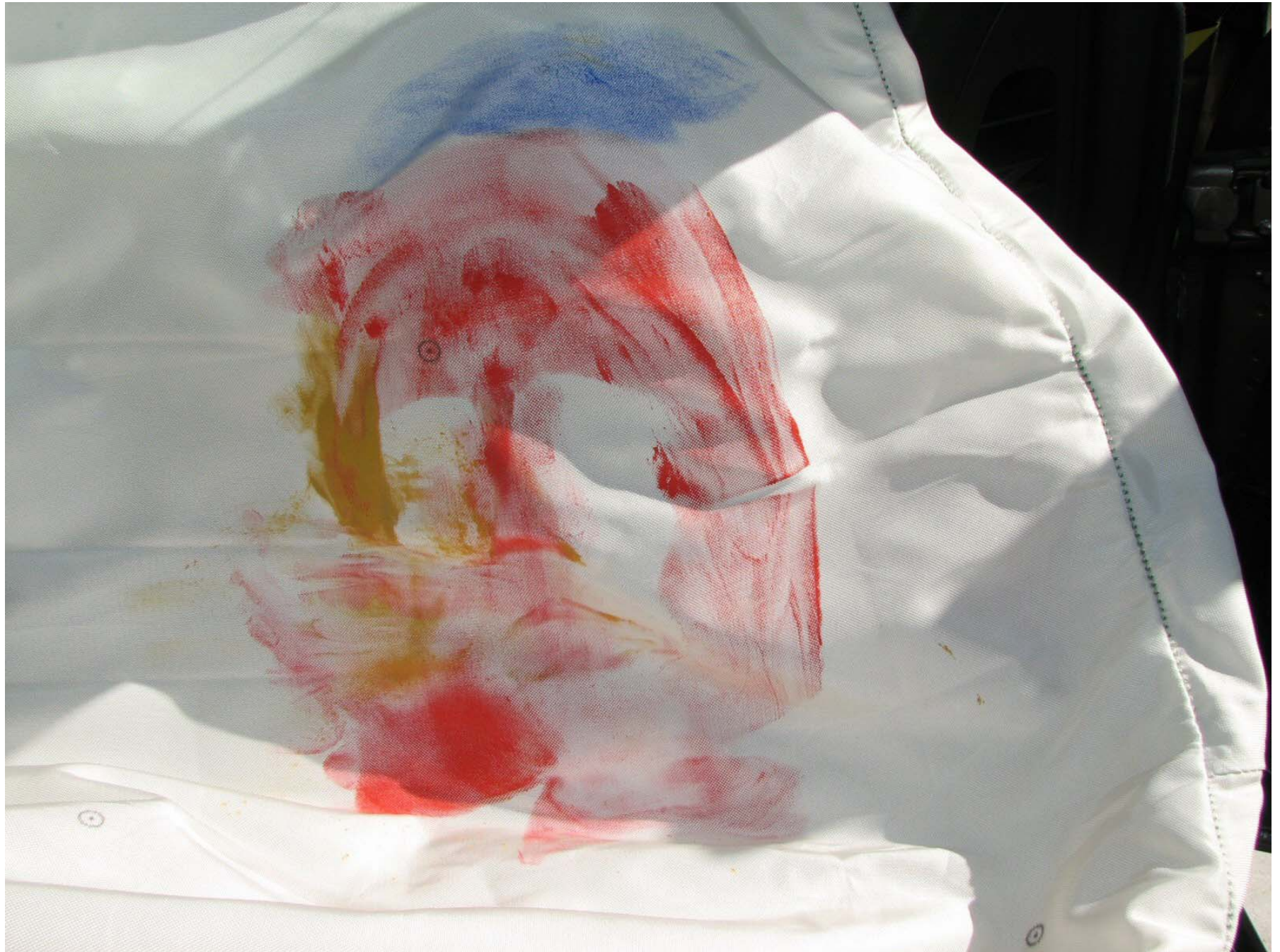


Figure A-57: Post-Test Passenger Dummy Airbag Contact



Figure A-58: Vehicle on Rollover Device (0°)



Figure A-59: Vehicle on Rollover Device (90°)



Figure A-60: Vehicle on Rollover Device (180°)

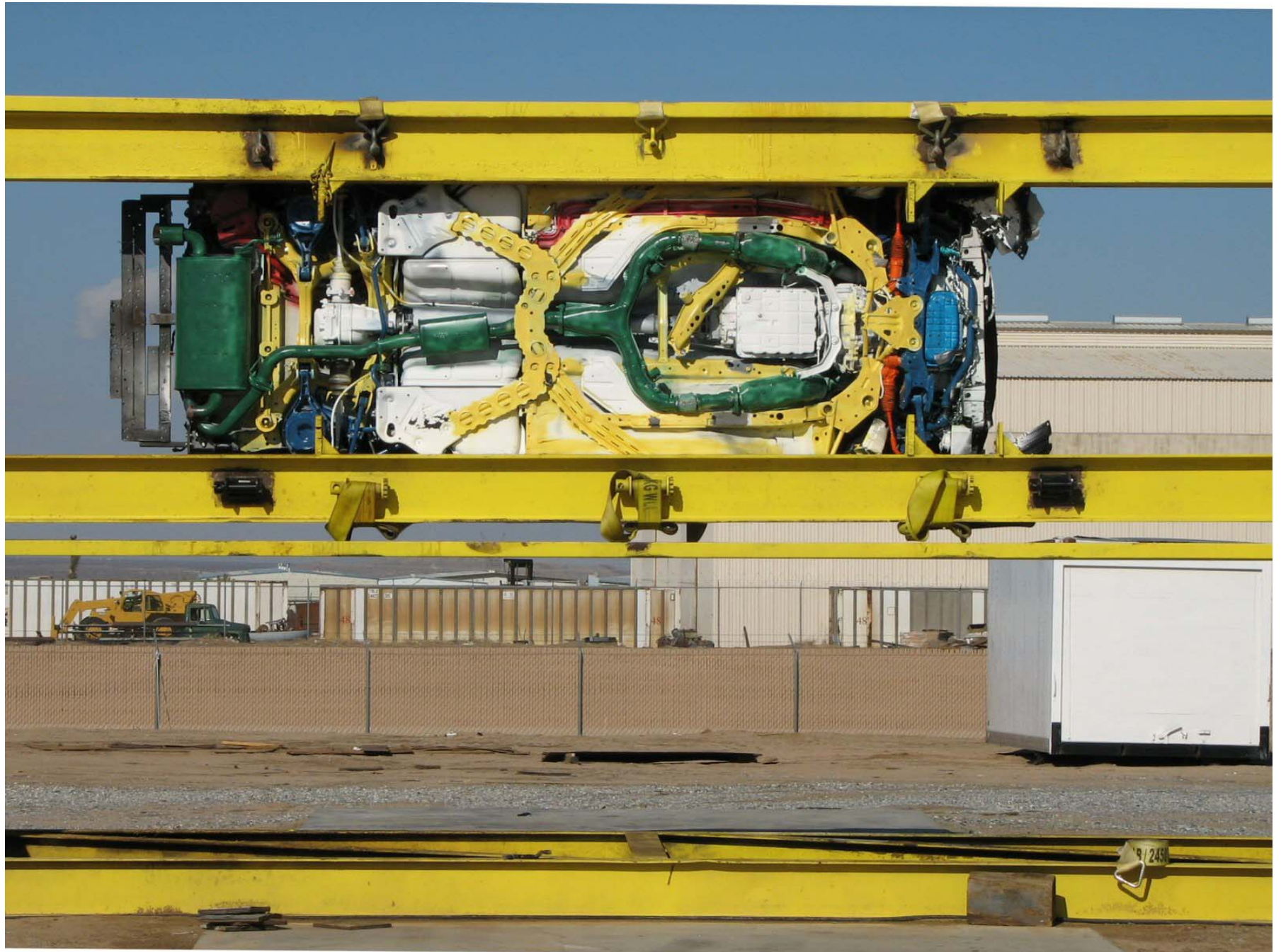


Figure A-61: Vehicle on Rollover Device (270°)



Figure A-62: Vehicle Impact

APPENDIX B
DATA PLOTS

LIST OF DATA PLOTS

Data Plot	Page
B-1	Driver Head Primary X
	Driver Head Primary Y
	Driver Head Primary Z
	Driver Head Resultant Primary
B-2	Driver Chest Primary X
	Driver Chest Primary Y
	Driver Chest Primary Z
	Driver Chest Resultant Primary
B-3	Driver Left Femur Force Z
	Driver Right Femur Force Z
B-4	Passenger Head Primary X
	Passenger Head Primary Y
	Passenger Head Primary Z
	Passenger Head Resultant Primary
B-5	Passenger Chest Primary X
	Passenger Chest Primary Y
	Passenger Chest Primary Z
	Passenger Chest Resultant Primary
B-6	Passenger Left Femur Force Z
	Passenger Right Femur Force Z

LIST OF DATA PLOTS...(CONTINUED)

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.

- Driver Head Primary X Velocity
- Driver Head Primary X Displacement
- Driver Head Redundant X
- Driver Head Redundant Y
- Driver Head Redundant Z
- Driver Head Resultant Redundant
- Driver Head Redundant X Velocity
- Driver Head Redundant X Displacement
- 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 Chest Primary X Velocity
- Driver Chest Primary X Displacement
- Driver Chest Redundant X
- Driver Chest Redundant Y
- Driver Chest Redundant Z
- Driver Chest Resultant Redundant
- Driver Chest Redundant X Velocity
- Driver Chest Redundant X Displacement
- Driver Chest Displacement
- Driver Pelvis X
- Driver Pelvis Y
- Driver Pelvis Z
- Driver Pelvis Resultant
- Driver Pelvis X Velocity
- Driver Pelvis X Displacement
- Driver Left Upper Tibia Moment X
- Driver Left Upper Tibia Moment Y
- Driver Right Upper Tibia Moment X

LIST OF DATA PLOTS...(CONTINUED)

Driver Right Upper Tibia Moment Y
Driver Left Lower Tibia Moment X
Driver Left Lower Tibia Moment Y
Driver Left Lower Tibia Force Z
Driver Right Lower Tibia Moment X
Driver Right Lower Tibia Moment Y
Driver Right Lower Tibia Force Z
Driver Left Foot Aft X
Driver Left Foot Aft Z
Driver Left Foot Fore Z
Driver Right Foot Aft X
Driver Right Foot Aft Z
Driver Right Foot Fore Z
Driver Lap Belt Force
Driver Shoulder Belt Force
Driver Shoulder Belt Pullout
Driver Shoulder Belt Elongation
Passenger Head Primary X Velocity
Passenger Head Primary X Displacement
Passenger Head Redundant X
Passenger Head Redundant Y
Passenger Head Redundant Z
Passenger Head Resultant Redundant
Passenger Head Redundant X Velocity
Passenger Head Redundant X Displacement
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
Passenger Chest Primary X Velocity
Passenger Chest Primary X Displacement
Passenger Chest Redundant X

LIST OF DATA PLOTS...(CONTINUED)

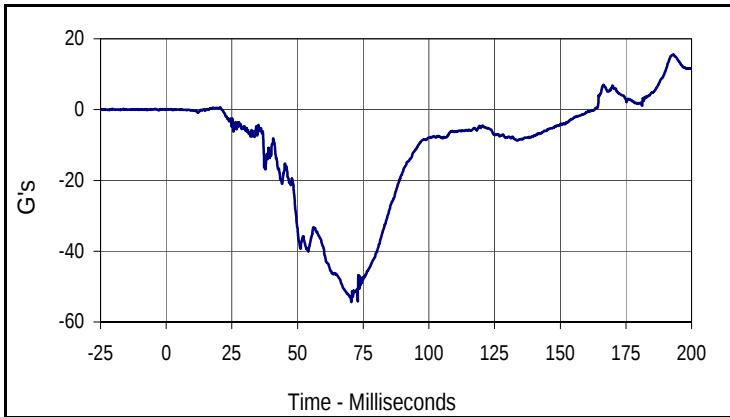
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Passenger Chest Redundant Z
Passenger Chest Resultant Redundant
Passenger Chest Redundant X Velocity
Passenger Chest Redundant X Displacement
Passenger Chest Displacement
Passenger Pelvis X
Passenger Pelvis Y
Passenger Pelvis Z
Passenger Pelvis Resultant
Passenger Pelvis X Velocity
Passenger Pelvis X Displacement
Passenger Left Femur Force
Passenger Right Femur Force
Passenger Left Upper Tibia Moment X
Passenger Left Upper Tibia Moment Y
Passenger Right Upper Tibia Moment X
Passenger Right Upper Tibia Moment Y
Passenger Left Lower Tibia Moment X
Passenger Left Lower Tibia Moment Y
Passenger Left Lower Tibia Force Z
Passenger Right Lower Tibia Moment X
Passenger Right Lower Tibia Moment Y
Passenger Right Lower Tibia Force Z
Passenger Left Foot Aft X
Passenger Left Foot Aft Z
Passenger Left Foot Fore Z
Passenger Right Foot Aft X
Passenger Right Foot Aft Z
Passenger Right Foot Fore Z
Passenger Lap Belt Force
Passenger Shoulder Belt Force
Passenger Shoulder Belt Pullout
Passenger Shoulder Belt Elongation
Vehicle Left Rear X
Vehicle Left Rear X Velocity

LIST OF DATA PLOTS...(CONTINUED)

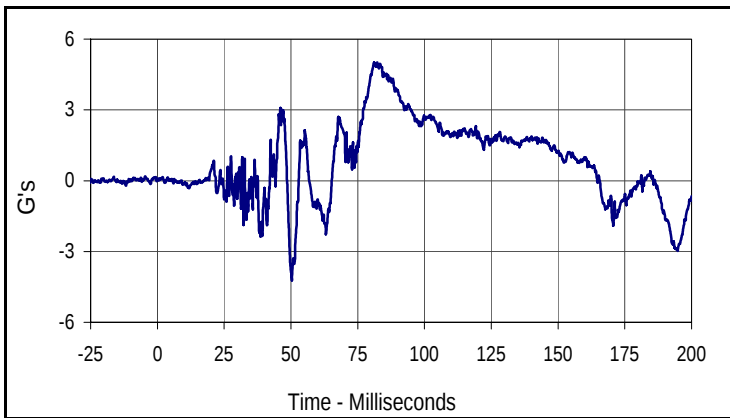
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Vehicle Right Rear X
Vehicle Right Rear X Velocity
Vehicle Right Rear X Displacement
Vehicle Engine Top
Vehicle Engine Top Velocity
Vehicle Engine Top Displacement
Vehicle Engine Bottom
Vehicle Engine Bottom Velocity
Vehicle Engine Bottom Displacement
Vehicle Left Brake Caliper
Vehicle Left Brake Caliper Velocity
Vehicle Left Brake Caliper Displacement
Vehicle Right Brake Caliper
Vehicle Right Brake Caliper Velocity
Vehicle Right Brake Caliper Displacement
Vehicle Instrument Panel
Vehicle Instrument Panel Velocity
Vehicle Instrument Panel Displacement
Vehicle Left Rear Z
Vehicle Left Rear Z Velocity
Vehicle Left Rear Z Displacement
Vehicle Right Rear Z
Vehicle Right Rear Z Velocity
Vehicle Right Rear Z Displacement

Test Vehicle: 2008 Nissan 350Z 2-Door Convertible
 Test Program: NHTSA 35mph NCAP

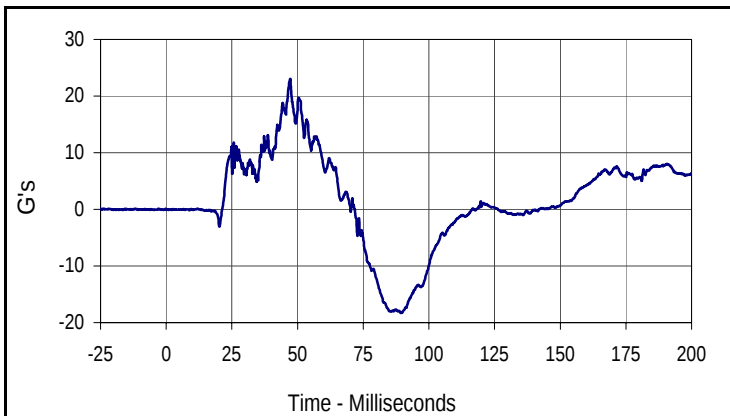
Test Date: 12/1/07
 NHTSA No.: M85216



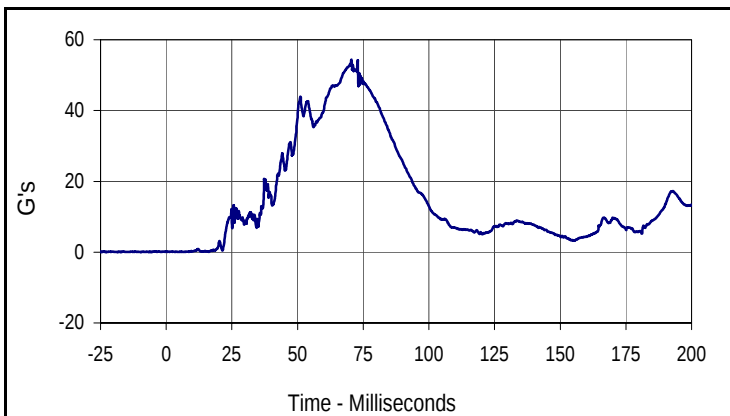
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Driver Head Primary X			
CURNO	Type	SAE Class	Units
001	FIL	1000	G's
Max	Time	Min	Time
15.5	192.9	-54.4	70.5



Curve Description			
Driver Head Primary Y			
CURNO	Type	SAE Class	Units
002	FIL	1000	G's
Max	Time	Min	Time
5.0	82.2	-4.2	50.3



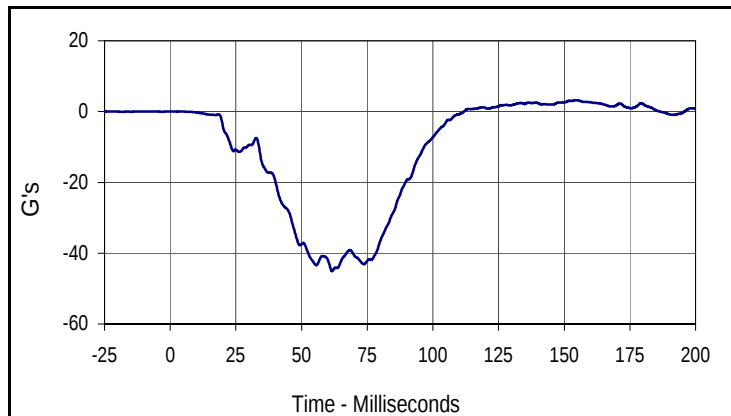
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003	FIL	1000	G's
Max	Time	Min	Time
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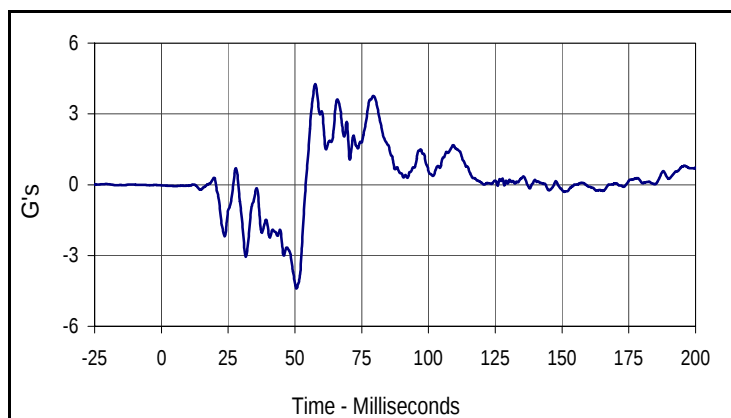
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Driver Head Resultant Primary			
CURNO	Type	SAE Class	Units
001	RES	1000	G's
Max	Time	Min	Time
54.4	70.5	0.0	5.0

Test Vehicle: 2008 Nissan 350Z 2-Door Convertible
 Test Program: NHTSA 35mph NCAP

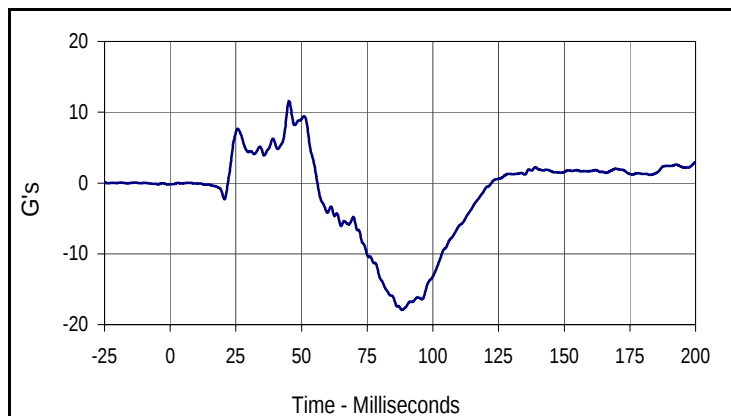
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 NHTSA No.: M85216



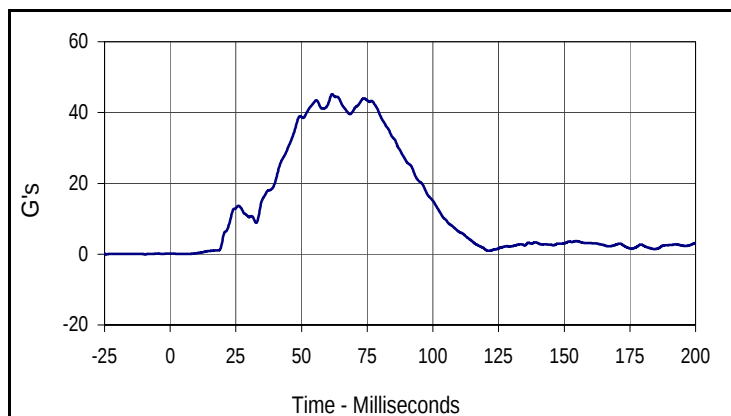
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3.2	154.3	-45.0	61.6



Curve Description			
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CURNO	Type	SAE Class	Units
005	FIL	180	G's
Max	Time	Min	Time
4.3	57.6	-4.4	50.5



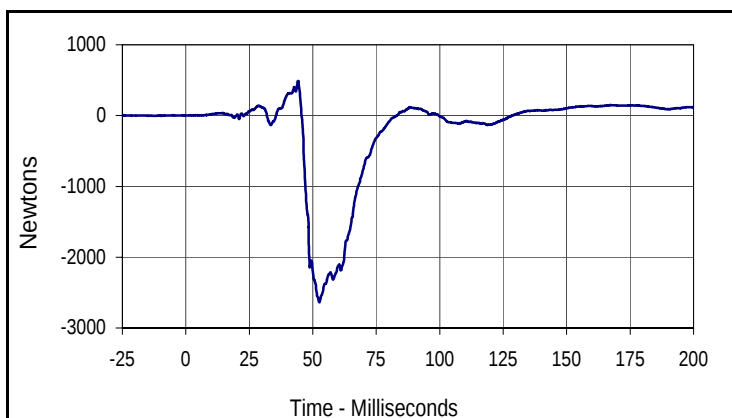
Curve Description			
Driver Chest Primary Z			
CURNO	Type	SAE Class	Units
006	FIL	180	G's
Max	Time	Min	Time
11.6	45.2	-17.9	88.2



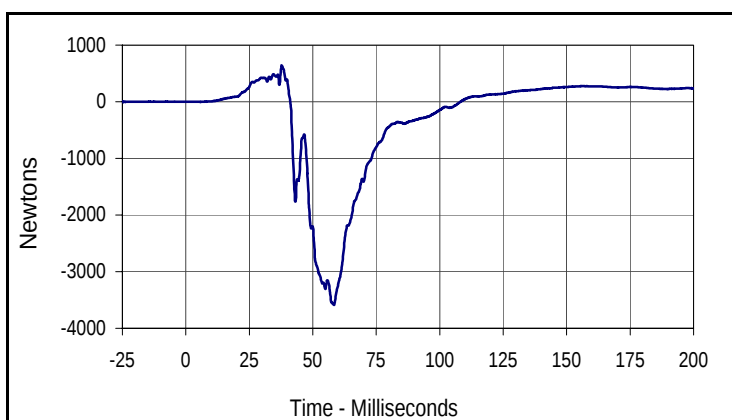
Curve Description			
Driver Chest Resultant Primary			
CURNO	Type	SAE Class	Units
004	RES	180	G's
Max	Time	Min	Time
45.2	61.6	0.1	2.5

Test Vehicle: 2008 Nissan 350Z 2-Door Convertible
 Test Program: NHTSA 35mph NCAP

Test Date: 12/1/07
 NHTSA No.: M85216



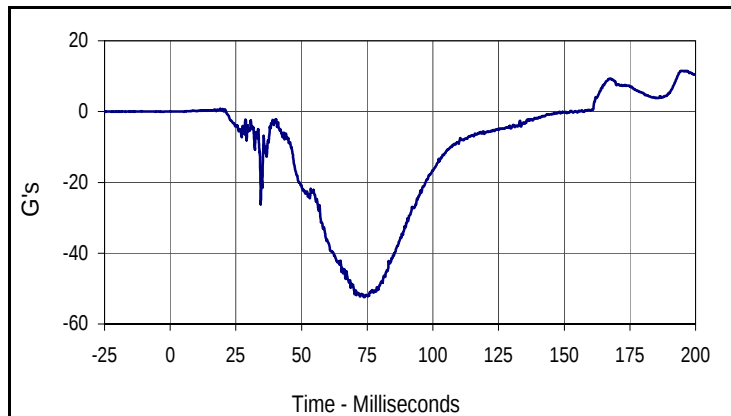
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Max	Time	Min	Time
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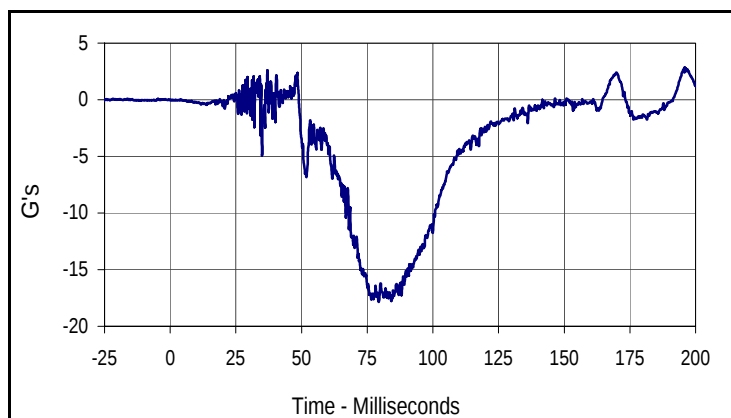
Curve Description			
Driver Right Femur Force Z			
CURNO	Type	SAE Class	Units
008	FIL	600	Newtons
Max	Time	Min	Time
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Test Vehicle: 2008 Nissan 350Z 2-Door Convertible
 Test Program: NHTSA 35mph NCAP

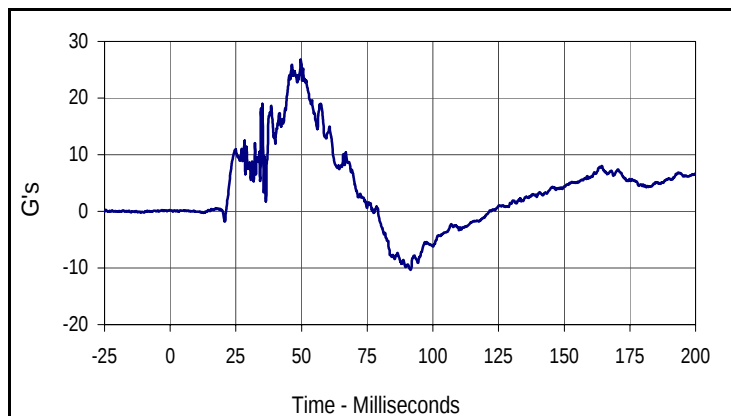
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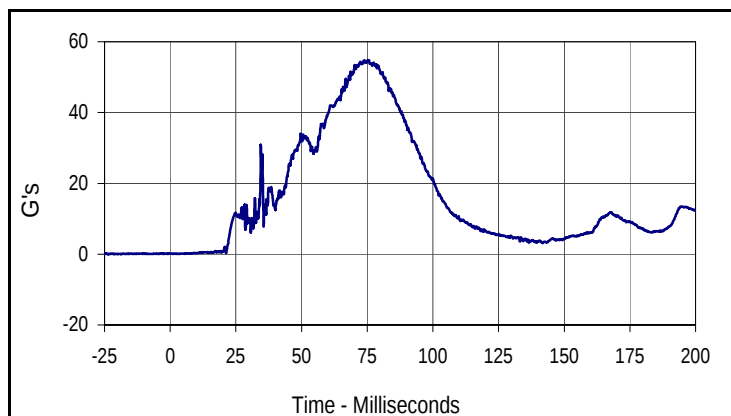
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009	FIL	1000	G's
Max	Time	Min	Time
11.5	195.0	-52.4	73.8



Curve Description			
Passenger Head Primary Y			
CURNO	Type	SAE Class	Units
010	FIL	1000	G's
Max	Time	Min	Time
2.8	195.9	-17.9	79.4



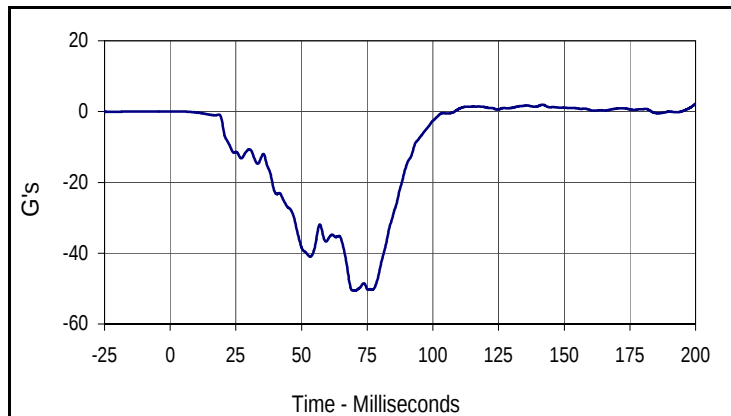
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Max	Time	Min	Time
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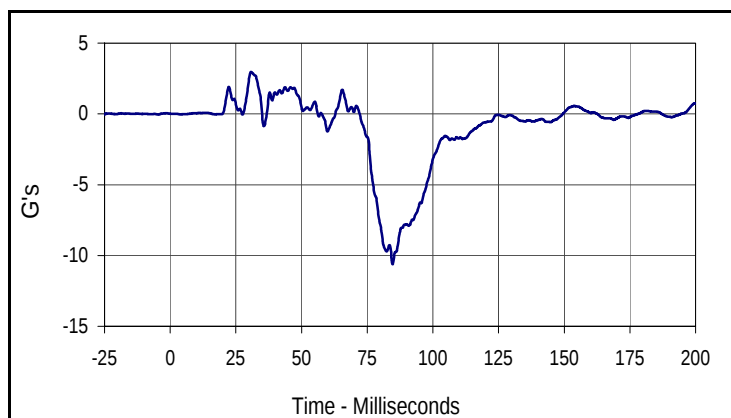
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Passenger Head Resultant Primary			
CURNO	Type	SAE Class	Units
009	RES	1000	G's
Max	Time	Min	Time
54.9	75.2	0.0	3.3

Test Vehicle: 2008 Nissan 350Z 2-Door Convertible
 Test Program: NHTSA 35mph NCAP

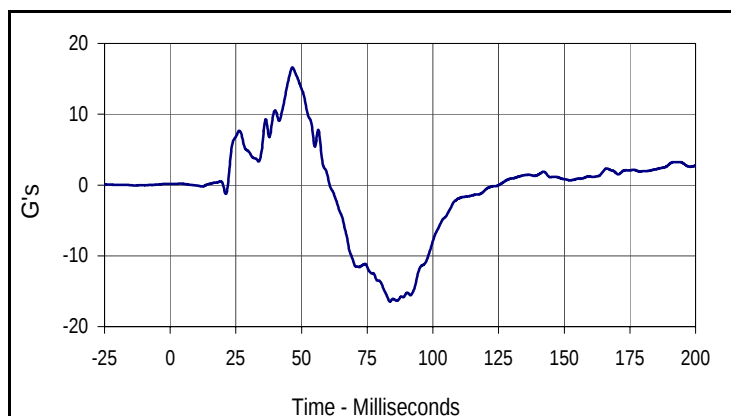
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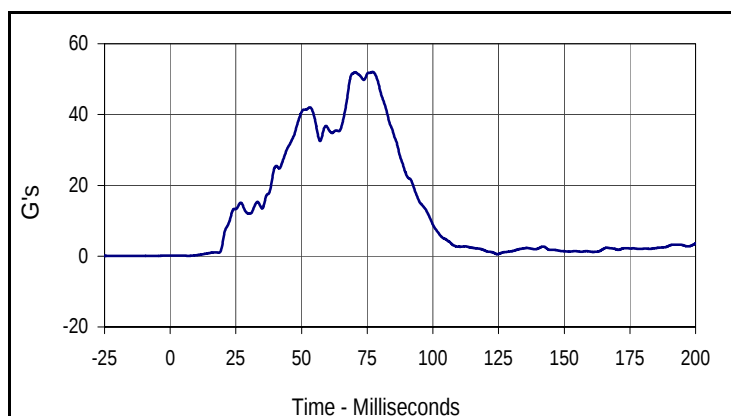
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Passenger Chest Primary X			
CURNO	Type	SAE Class	Units
012	FIL	180	G's
Max	Time	Min	Time
2.2	200.0	-50.6	70.4



Curve Description			
Passenger Chest Primary Y			
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013	FIL	180	G's
Max	Time	Min	Time
3.0	30.8	-10.6	84.6



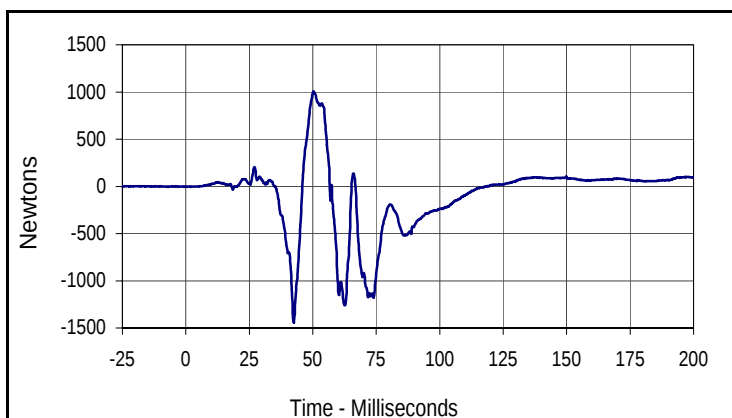
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Max	Time	Min	Time
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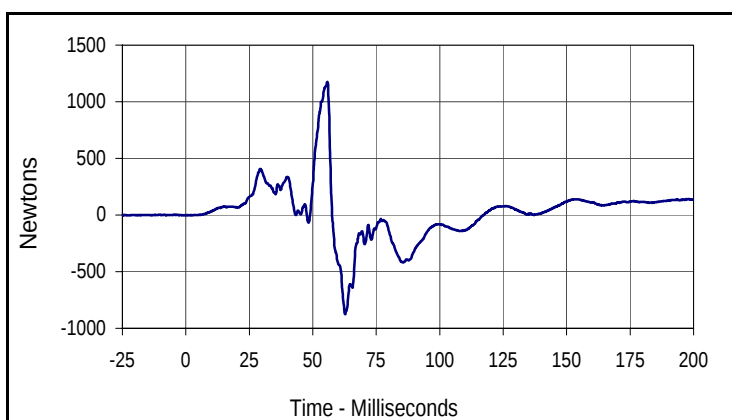
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Passenger Chest Resultant Primary			
CURNO	Type	SAE Class	Units
012	RES	180	G's
Max	Time	Min	Time
52.0	77.0	0.1	7.0

Test Vehicle: 2008 Nissan 350Z 2-Door Convertible
 Test Program: NHTSA 35mph NCAP

Test Date: 12/1/07
 NHTSA No.: M85216



Curve Description			
Passenger Left Femur Force Z			
CURNO	Type	SAE Class	Units
015	FIL	600	Newtons
Max	Time	Min	Time
1007.2	50.3	-1440.7	42.5



Curve Description			
Passenger Right Femur Force Z			
CURNO	Type	SAE Class	Units
016	FIL	600	Newtons
Max	Time	Min	Time
1174.6	55.8	-876.8	62.7

APPENDIX C
DUMMY CALIBRATION DATA

Test Program: Hybrid III 50th Percentile Male Head Drop Test

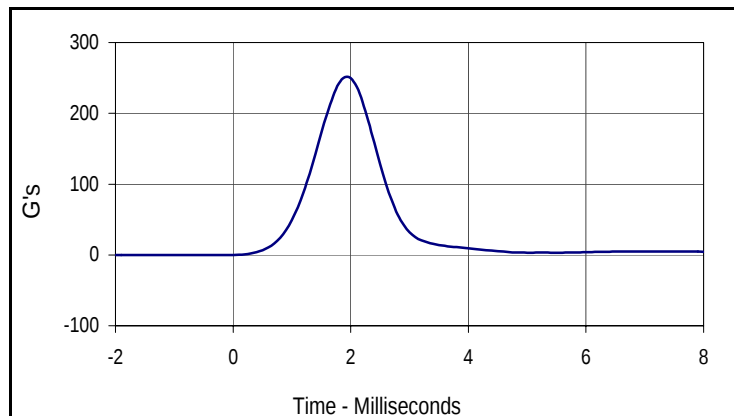
Test Date: 11/29/07

ATD Serial No.: 034

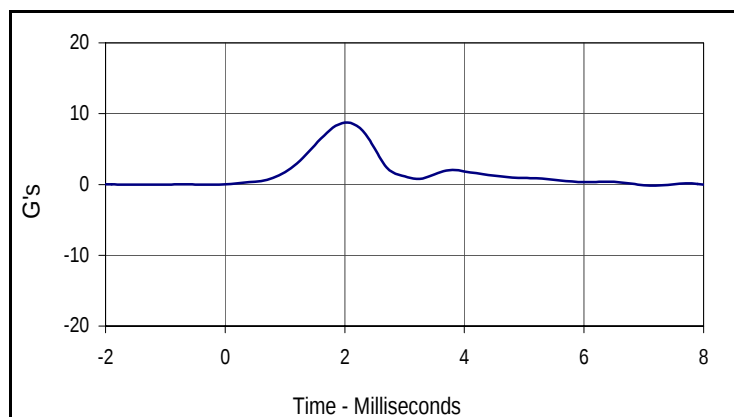
Test I.D.: HD11E



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	225.0 to 275.0	251.0	Pass
Peak Lateral Acceleration	G's	≤15.0	8.7	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
251.0	1.9	0.0	-1.8



Curve Description			
Head Y			
CURNO	Type	SAE Class	Units
002	FIL	1000	G's
Max	Time	Min	Time
8.7	2.0	0.0	-1.2

Test Program: Hybrid III 50th Percentile Male Thorax Impact Test

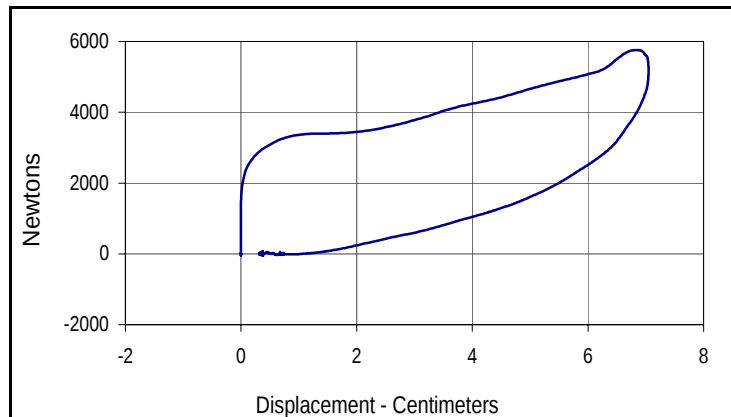
Test Date: 11/29/07

ATD Serial No.: 034

Test I.D.: CH11E



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
Probe Velocity	m/s	6.58 to 6.82	6.62	Pass
Peak Probe Force	Newtons	5159 to 5893	5755	Pass
Peak Sternum Deflection	CM	6.35 to 7.26	7.05	Pass
Internal Hysteresis	%	69 to 85	71.8	Pass
Overall Test Results			Pass	



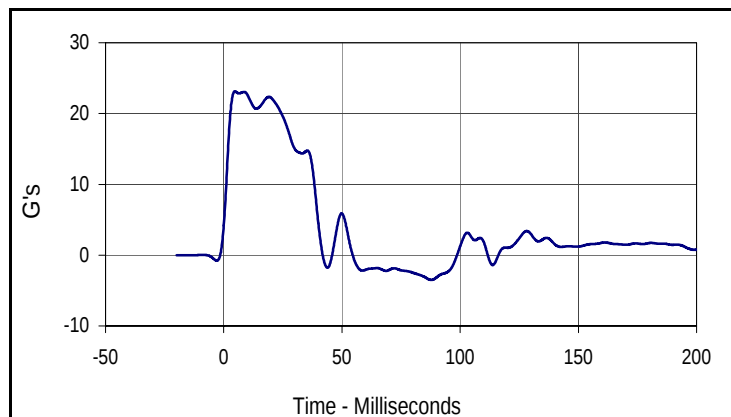
Curve Description			
Probe Force vs. Chest Deflection			
CURNO	Type	SAE Class	Hysteresis
001	FIL	180	71.8
Peak Probe Force		Peak Chest Deflection	
5755		7.05	

Test Program: Hybrid III 50th Percentile Male Neck Flexion Test
 ATD Serial No.: 034

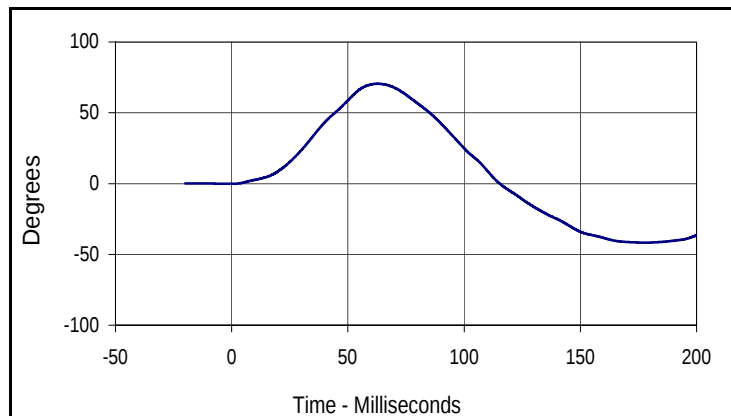
Test Date: 11/29/07
 Test I.D.: NF11E



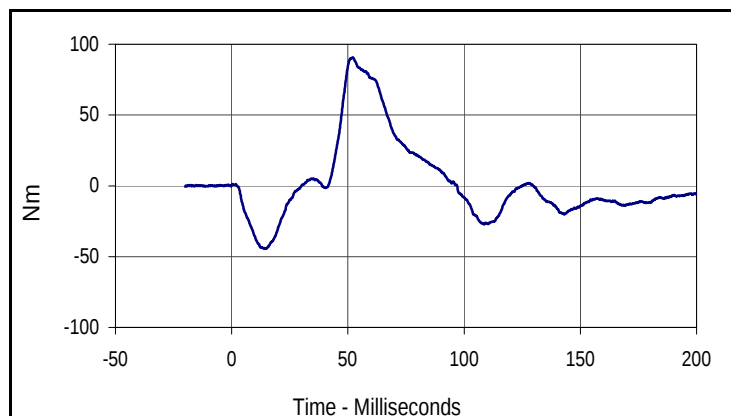
Tested Parameter		Units	Specification	Result	Pass/Fail
Laboratory Temperature		°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity		%	10 to 70	30	Pass
Pendulum Velocity		m/s	6.89 to 7.13	7.05	Pass
Pendulum Deceleration	10 Msec.	G's	22.5 to 27.5	22.6	Pass
	20 Msec.	G's	17.6 to 22.6	22.2	Pass
	30 Msec.	G's	12.5 to 18.5	15.0	Pass
Peak Pendulum Decel. after 30 Msec.		G's	≤ 29.0	15.0	Pass
Deceleration Decay, Time to Cross 5 G's		Msec.	34.0 to 42.0	39.9	Pass
Maximum "D" Plane Rotation	Max	Degrees	64.0 to 78.0	70.5	Pass
	Time	Msec.	57.0 to 64.0	62.7	Pass
"D" Plane Rotation Decay, Time To Zero Crossing		Msec.	113.0 to 128.0	115.4	Pass
Moment About Occ. Condyle	Max	Nm	84.1 to 108.5	90.7	Pass
	Time	Msec.	47.0 to 58.0	52.1	Pass
Positive Moment Decay, Time To Zero Crossing		Msec.	97.0 to 107.0	97.0	Pass
			Overall Test Results		Pass



Curve Description			
Pendulum Deceleration			
CURNO	Type	SAE Class	Units
001	FIL	60	G's
Max	Time	Min	Time
23.1	4.7	-3.5	87.8



Curve Description			
"D" Plane Rotation			
CURNO	Type	SAE Class	Units
003	FIL	60	Degrees
Max	Time	Min	Time
70.5	62.7	-41.6	178.6



Curve Description			
Moment About Occipital Condyle			
CURNO	Type	SAE Class	Units
004	FIL	600	Nm
Max	Time	Min	Time
90.7	52.1	-44.4	14.7

Test Program: Hybrid III 50th Percentile Male Neck Extension Test

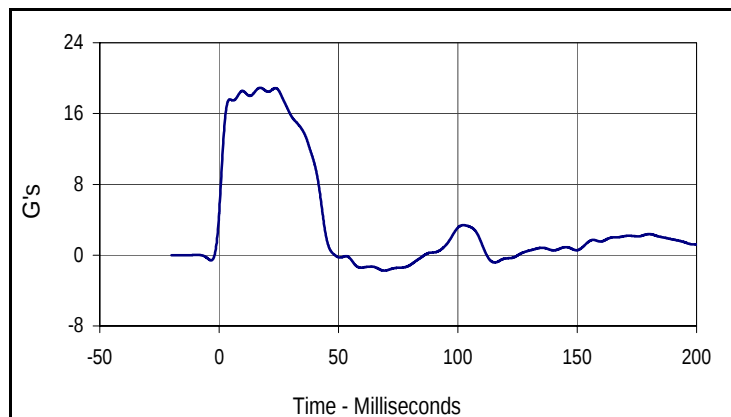
Test Date: 11/29/07

ATD Serial No.: 034

Test I.D.: NE11E



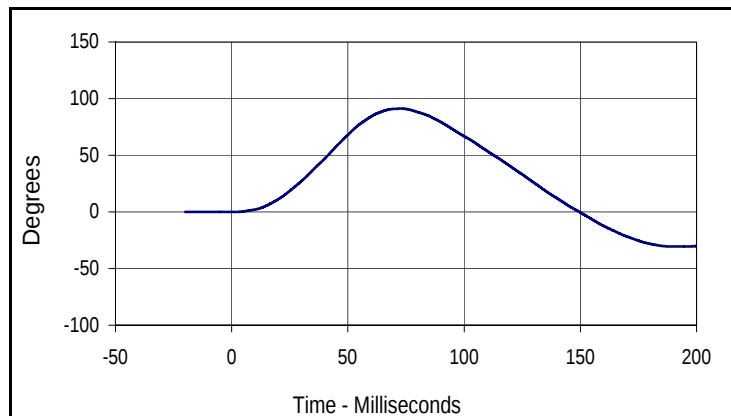
Tested Parameter		Units	Specification	Result	Pass/Fail
Laboratory Temperature		°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity		%	10 to 70	30	Pass
Pendulum Velocity		m/s	5.94 to 6.19	6.16	Pass
Pendulum Deceleration	10 Msec.	G's	17.2 to 21.2	18.5	Pass
	20 Msec.	G's	14.0 to 19.0	18.5	Pass
	30 Msec.	G's	11.0 to 16.0	15.8	Pass
Peak Pendulum Decel. after 30 Msec.		G's	≤ 22.0	15.8	Pass
Deceleration Decay, Time to Cross 5 G's		Msec.	38.0 to 46.0	43.2	Pass
Maximum "D" Plane Rotation	Max	Degrees	81.0 to 106.0	91.1	Pass
	Time	Msec.	72.0 to 82.0	72.7	Pass
"D" Plane Rotation Decay, Time To Zero Crossing		Msec.	147.0 to 174.0	149.6	Pass
Moment About Occ. Condyle	Max	Nm	-52.9 to- 79.9	-74.5	Pass
	Time	Msec.	65.0 to 79.0	74.7	Pass
Positive Moment Decay, Time To Zero Crossing		Msec.	120.0 to 148.0	142.7	Pass
Overall Test Results					Pass



Curve Description

Pendulum Deceleration

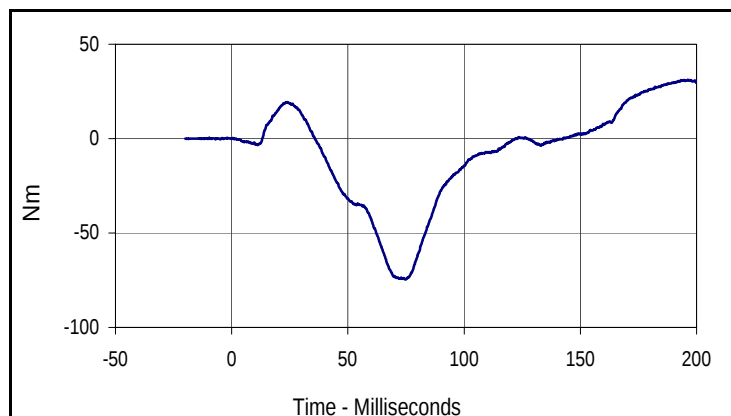
CURNO	Type	SAE Class	Units
001	FIL	60	G's
Max	Time	Min	Time
18.9	17.2	-1.8	69.1



Curve Description

"D" Plane Rotation

CURNO	Type	SAE Class	Units
003	FIL	60	Degrees
Max	Time	Min	Time
91.1	72.7	-30.6	192.0



Curve Description

Moment About Occipital Condyle

CURNO	Type	SAE Class	Units
004	FIL	600	Nm
Max	Time	Min	Time
31.2	196.2	-74.5	74.7

Test Program: Hybrid III 50th Percentile Male Knee Impact Test

Test Date: 11/29/07

ATD Serial No.: 034

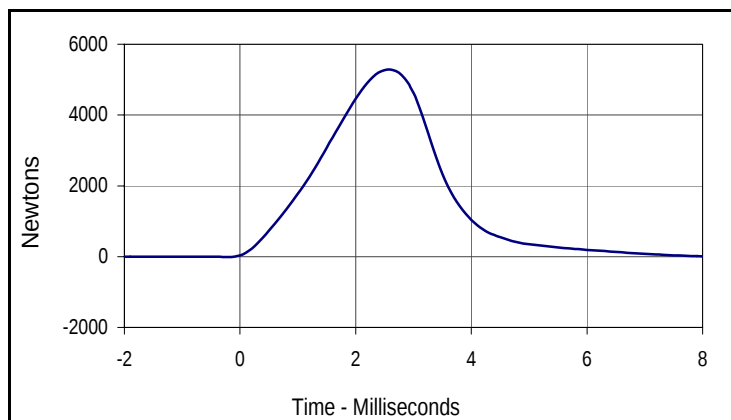
Test I.D.: LK11E , RK11E

**Left Knee**

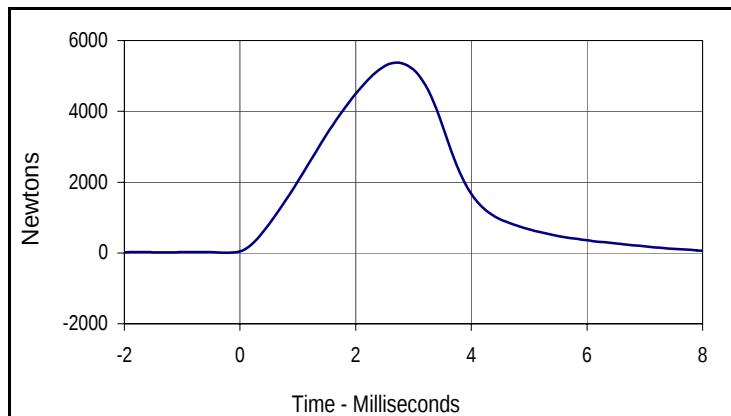
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Pendulum Velocity at T=0	m/sec	2.07 to 2.13	2.07	Pass
Peak Probe Force	Newtons	4715 to 5782	5284	Pass
Overall Test Results				Pass

Right Knee

Pendulum Velocity at T=0	m/sec	2.07 to 2.13	2.10	Pass
Peak Probe Force	Newtons	4715 to 5782	5375	Pass
Overall Test Results				Pass

**Curve Description****Left Knee Probe Force**

CURNO	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Time	Min	Time
5284.0	2.6	-14.2	-0.2

**Curve Description****Right Knee Probe Force**

CURNO	Type	SAE Class	Units
002	FIL	600	Newtons
Max	Time	Min	Time
5374.5	2.7	-2.6	9.8

Test Program: Hybrid III 50th Percentile Male External Measurements

Test Date: 11/29/07

ATD Serial No.: 034

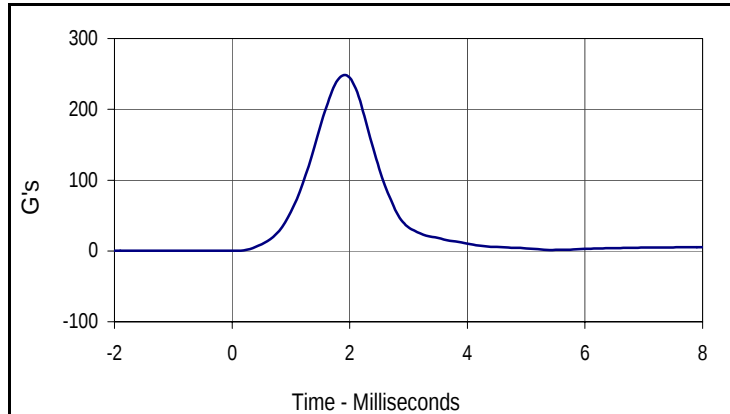
Test I.D.: N/A



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	879 to 889	880	Pass
B - Shoulder pivot height	mm	505 to 521	507	Pass
C - "H" point height	mm	84 to 89	86	Pass
D - "H" point from seat back	mm	135 to 140	138	Pass
E - Shoulder pivot from back	mm	84 to 94	89	Pass
F - Thigh clearance	mm	140 to 155	150	Pass
G - Elbow back to wrist pivot	mm	290 to 305	295	Pass
H - Skull cap to back line	mm	41 to 46	44	Pass
I - Shoulder to elbow length	mm	330 to 345	340	Pass
J - Elbow rest height	mm	190 to 211	210	Pass
K - Buttock to knee length	mm	579 to 604	585	Pass
L - Popliteal length	mm	429 to 455	443	Pass
M - Knee pivot height	mm	485 to 500	487	Pass
N - Buttock popliteal length	mm	452 to 477	461	Pass
O - Chest depth	mm	213 to 229	224	Pass
P - Foot length	mm	251 to 267	260	Pass
V - Shoulder breadth	mm	422 to 437	430	Pass
W - Foot breadth	mm	91 to 107	99	Pass
Y - Chest circumference	mm	970 to 1001	993	Pass
Z - Waist circumference	mm	836 to 866	860	Pass
AA - Location for chest circumference	mm	429 to 434	430	Pass
BB - Location for waist circumference	mm	226 to 231	227	Pass
Overall Test Results				Pass

Test Program: Hybrid III 50th Percentile Male Head Drop TestTest Date: 11/29/07ATD Serial No.: 035Test I.D.: HD11F

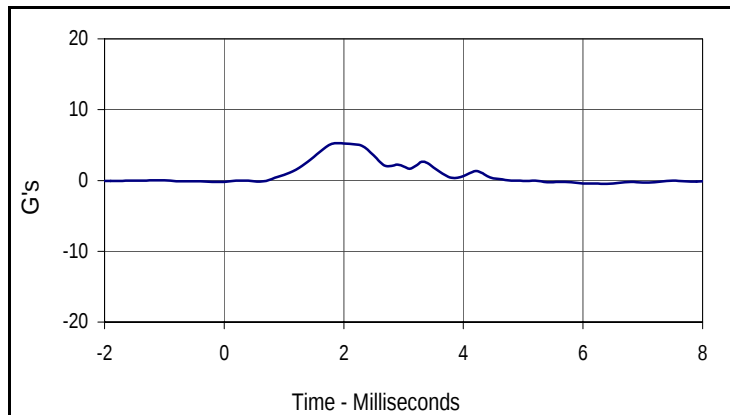
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Peak Resultant Acceleration	G's	225.0 to 275.0	248.7	Pass
Peak Lateral Acceleration	G's	≤15.0	5.3	Pass
Is Acceleration Unimodal?	Yes/No	Yes	Yes	Pass
Overall Test Results				Pass



Curve Description

Head Resultant

CURNO	Type	SAE Class	Units
001	RES	1000	G's
Max	Time	Min	Time
248.7	1.9	0.1	-1.4



Curve Description

Head Y

CURNO	Type	SAE Class	Units
002	FIL	1000	G's
Max	Time	Min	Time
5.3	1.9	-0.4	6.0

Test Program: Hybrid III 50th Percentile Male Thorax Impact Test

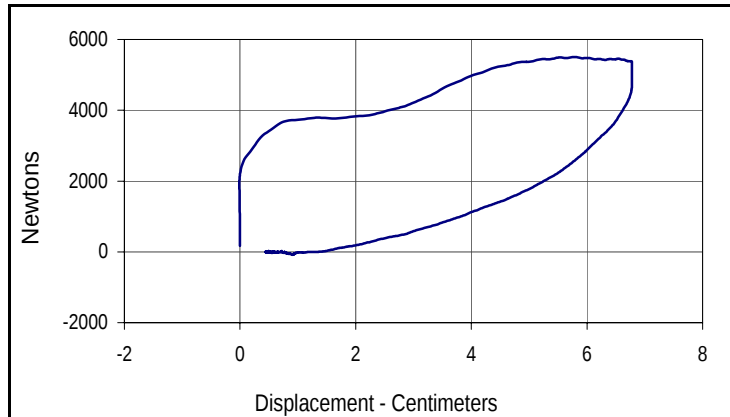
Test Date: 11/29/07

ATD Serial No.: 035

Test I.D.: CH11F



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
Probe Velocity	m/s	6.58 to 6.82	6.64	Pass
Peak Probe Force	Newtons	5159 to 5893	5507	Pass
Peak Sternum Deflection	CM	6.35 to 7.26	6.78	Pass
Internal Hysteresis	%	69 to 85	74.5	Pass
Overall Test Results			Pass	



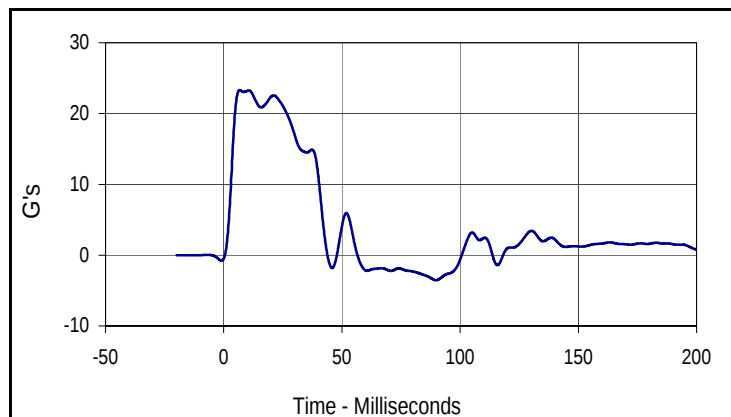
Curve Description			
Probe Force vs. Chest Deflection			
CURNO	Type	SAE Class	Hysteresis
001	FIL	180	74.5
Peak Probe Force		Peak Chest Deflection	
5507		6.78	

Test Program: Hybrid III 50th Percentile Male Neck Flexion Test
 ATD Serial No.: 035

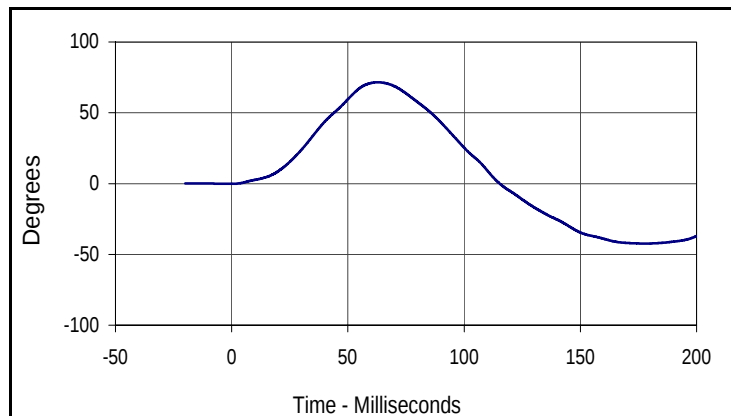
Test Date: 11/29/07
 Test I.D.: NF11F



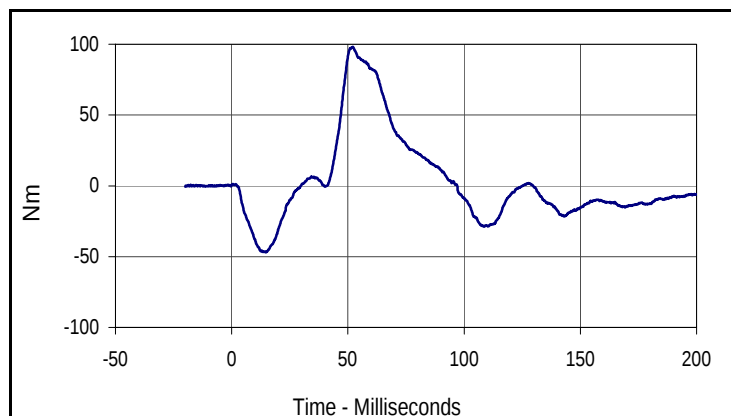
Tested Parameter		Units	Specification	Result	Pass/Fail
Laboratory Temperature		°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity		%	10 to 70	30	Pass
Pendulum Velocity		m/s	6.89 to 7.13	7.07	Pass
Pendulum Deceleration	10 Msec.	G's	22.5 to 27.5	23.2	Pass
	20 Msec.	G's	17.6 to 22.6	22.4	Pass
	30 Msec.	G's	12.5 to 18.5	17.0	Pass
Peak Pendulum Decel. after 30 Msec.		G's	≤ 29.0	17.0	Pass
Deceleration Decay, Time to Cross 5 G's		Msec.	34.0 to 42.0	41.9	Pass
Maximum "D" Plane Rotation	Max	Degrees	64.0 to 78.0	71.6	Pass
	Time	Msec.	57.0 to 64.0	62.8	Pass
"D" Plane Rotation Decay, Time To Zero Crossing		Msec.	113.0 to 128.0	115.3	Pass
Moment About Occ. Condyle	Max	Nm	84.1 to 108.5	98.1	Pass
	Time	Msec.	47.0 to 58.0	52.1	Pass
Positive Moment Decay, Time To Zero Crossing		Msec.	97.0 to 107.0	97.0	Pass
			Overall Test Results		Pass



Curve Description			
Pendulum Deceleration			
CURNO	Type	SAE Class	Units
001	FIL	60	G's
Max	Time	Min	Time
23.3	6.7	-3.5	89.8



Curve Description			
"D" Plane Rotation			
CURNO	Type	SAE Class	Units
003	FIL	60	Degrees
Max	Time	Min	Time
71.6	62.8	-42.3	178.6



Curve Description			
Moment About Occipital Condyle			
CURNO	Type	SAE Class	Units
004	FIL	600	Nm
Max	Time	Min	Time
98.1	52.1	-47.0	14.7

Test Program: Hybrid III 50th Percentile Male Neck Extension Test

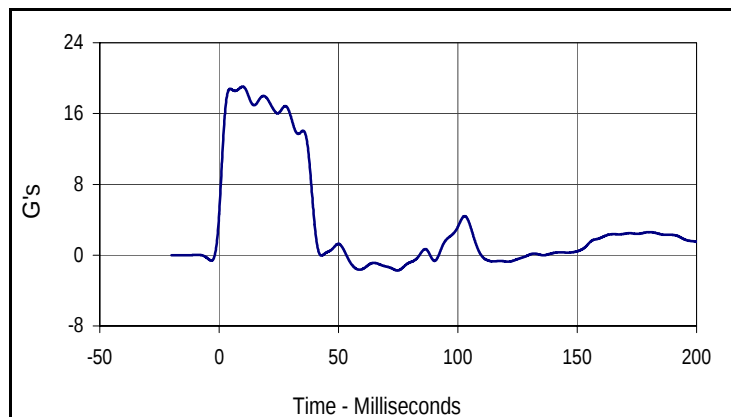
Test Date: 11/29/07

ATD Serial No.: 035

Test I.D.: NE11F



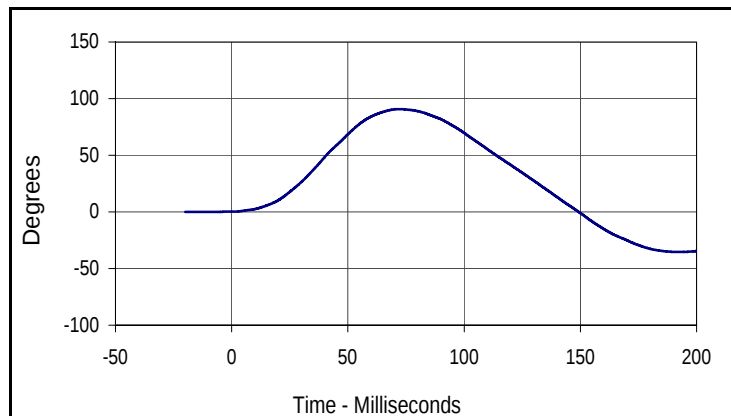
Tested Parameter		Units	Specification	Result	Pass/Fail
Laboratory Temperature		°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity		%	10 to 70	30	Pass
Pendulum Velocity		m/s	5.94 to 6.19	6.01	Pass
Pendulum Deceleration	10 Msec.	G's	17.2 to 21.2	19.0	Pass
	20 Msec.	G's	14.0 to 19.0	17.7	Pass
	30 Msec.	G's	11.0 to 16.0	15.7	Pass
Peak Pendulum Decel. after 30 Msec.		G's	≤ 22.0	15.7	Pass
Deceleration Decay, Time to Cross 5 G's		Msec.	38.0 to 46.0	39.5	Pass
Maximum "D" Plane Rotation	Max	Degrees	81.0 to 106.0	90.7	Pass
	Time	Msec.	72.0 to 82.0	72.0	Pass
"D" Plane Rotation Decay, Time To Zero Crossing		Msec.	147.0 to 174.0	149.3	Pass
Moment About Occ. Condyle	Max	Nm	-52.9 to- 79.9	-74.8	Pass
	Time	Msec.	65.0 to 79.0	65.9	Pass
Positive Moment Decay, Time To Zero Crossing		Msec.	120.0 to 148.0	134.8	Pass
Overall Test Results					Pass



Curve Description

Pendulum Deceleration

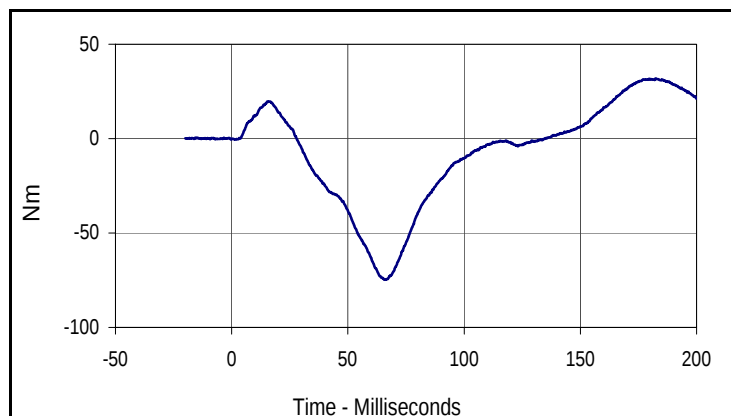
CURNO	Type	SAE Class	Units
001	FIL	60	G's
Max	Time	Min	Time
19.0	9.9	-1.7	74.6



Curve Description

"D" Plane Rotation

CURNO	Type	SAE Class	Units
003	FIL	60	Degrees
Max	Time	Min	Time
90.7	72.0	-35.4	192.3



Curve Description

Moment About Occipital Condyle

CURNO	Type	SAE Class	Units
004	FIL	600	Nm
Max	Time	Min	Time
31.9	182.4	-74.8	65.9

Test Program: Hybrid III 50th Percentile Male Knee Impact Test

Test Date: 11/29/07

ATD Serial No.: 035

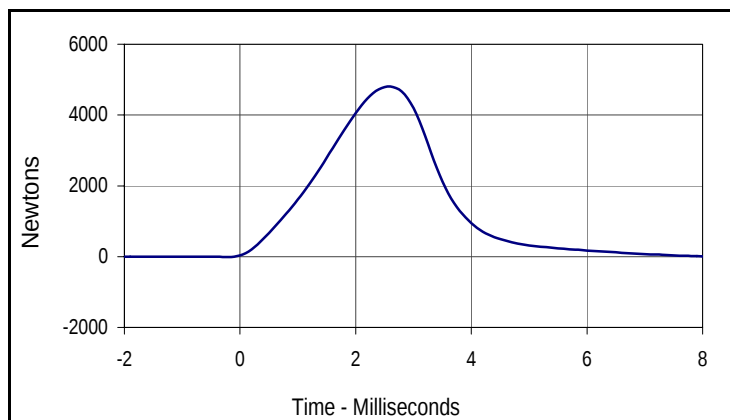
Test I.D.: LK11F , RK11F

**Left Knee**

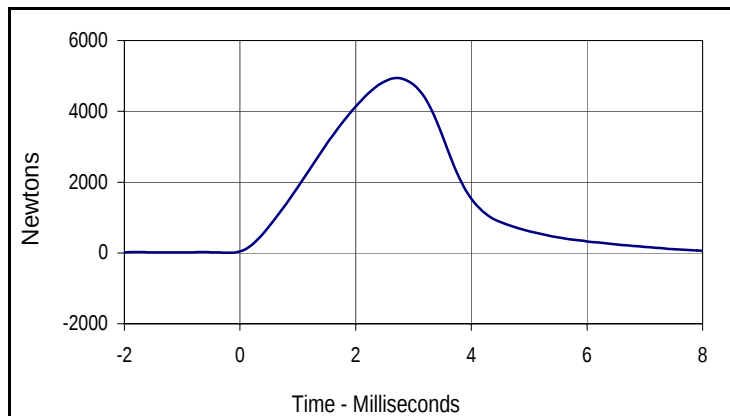
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Pendulum Velocity at T=0	m/sec	2.07 to 2.13	2.12	Pass
Peak Probe Force	Newtons	4715 to 5782	4804	Pass
Overall Test Results				Pass

Right Knee

Pendulum Velocity at T=0	m/sec	2.07 to 2.13	2.12	Pass
Peak Probe Force	Newtons	4715 to 5782	4939	Pass
Overall Test Results				Pass

**Curve Description****Left Knee Probe Force**

CURNO	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Time	Min	Time
4803.5	2.6	-12.8	-0.2

**Curve Description****Right Knee Probe Force**

CURNO	Type	SAE Class	Units
002	FIL	600	Newtons
Max	Time	Min	Time
4938.7	2.7	-2.4	9.7

Test Program: Hybrid III 50th Percentile Male External Measurements

Test Date: 11/29/07

ATD Serial No.: 035

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	879 to 889	883	Pass
B - Shoulder pivot height	mm	505 to 521	510	Pass
C - "H" point height	mm	84 to 89	85	Pass
D - "H" point from seat back	mm	135 to 140	138	Pass
E - Shoulder pivot from back	mm	84 to 94	89	Pass
F - Thigh clearance	mm	140 to 155	150	Pass
G - Elbow back to wrist pivot	mm	290 to 305	296	Pass
H - Skull cap to back line	mm	41 to 46	44	Pass
I - Shoulder to elbow length	mm	330 to 345	336	Pass
J - Elbow rest height	mm	190 to 211	208	Pass
K - Buttock to knee length	mm	579 to 604	590	Pass
L - Popliteal length	mm	429 to 455	439	Pass
M - Knee pivot height	mm	485 to 500	495	Pass
N - Buttock popliteal length	mm	452 to 477	472	Pass
O - Chest depth	mm	213 to 229	219	Pass
P - Foot length	mm	251 to 267	260	Pass
V - Shoulder breadth	mm	422 to 437	424	Pass
W - Foot breadth	mm	91 to 107	102	Pass
Y - Chest circumference	mm	970 to 1001	997	Pass
Z - Waist circumference	mm	836 to 866	862	Pass
AA - Location for chest circumference	mm	429 to 434	430	Pass
BB - Location for waist circumference	mm	226 to 231	229	Pass
Overall Test Results				Pass

Test Program: Dummy Damage Checklist
 ATD Serial No.: 034

Test Date: 11/29/07
 Test I.D.: N/A



GENERAL	DAMAGED	OK
Outer skin on entire dummy		X
Head ballast secure		X
Gashes, rips, general appearance, etc.		X
Neck-Broken or cracks in rubber		X
Check that upper neck bracket is firmly attached to lwr neck bracket		X
Three rubber bumpers in place		X
Spine- Broken or cracks in rubber		X
Check for looseness at the condyle joint		X
Nodding blocks- cracked or out of position		X
Ribs- Check all ribs and rib supports for damage (bent or broken)		X
Check damping material or separation or cracks		X
OTHER		
CHEST DISPLACEMENT ASSEMBLY		
Bent shaft		X
Slider arm riding correctly, in track		X
TRANSDUCER LEADS		
Torn cables		X
ACCELEROMETER MOUNTINGS		
Check for secure mounting		X
KNEES		
Check outer skin, insert and casting (without removing insert)		X
Knee sliders - Wires intact		X
Knee sliders- Rubber returned to "at rest position"		X
LIMBS		
Check for normal movement and adjustment		X
PELVIS		
Inspect for breakage, especially at iliac crest		X

Comments on repair or replacement parts:

Test Program: Dummy Damage Checklist
 ATD Serial No.: 035

Test Date: 11/29/07
 Test I.D.: N/A



GENERAL	DAMAGED	OK
Outer skin on entire dummy		X
Head ballast secure		X
Gashes, rips, general appearance, etc.		X
Neck-Broken or cracks in rubber		X
Check that upper neck bracket is firmly attached to lwr neck bracket		X
Three rubber bumpers in place		X
Spine- Broken or cracks in rubber		X
Check for looseness at the condyle joint		X
Nodding blocks- cracked or out of position		X
Ribs- Check all ribs and rib supports for damage (bent or broken)		X
Check damping material or separation or cracks		X
OTHER		
CHEST DISPLACEMENT ASSEMBLY		
Bent shaft		X
Slider arm riding correctly, in track		X
TRANSDUCER LEADS		
Torn cables		X
ACCELEROMETER MOUNTINGS		
Check for secure mounting		X
KNEES		
Check outer skin, insert and casting (without removing insert)		X
Knee sliders - Wires intact		X
Knee sliders- Rubber returned to "at rest position"		X
LIMBS		
Check for normal movement and adjustment		X
PELVIS		
Inspect for breakage, especially at iliac crest		X

Comments on repair or replacement parts:
