REPORT NUMBER TR-P28001-08-NC

NEW CAR ASSESSMENT PROGRAM
FRONTAL BARRIER IMPACT TEST

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

NHTSA NUMBER: M85214

PREPARED BY:
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OCTOBER 26, 2007

FINAL REPORT

PREPARED FOR:
U.S. DEPARTMENT OF TRANSPORTATION
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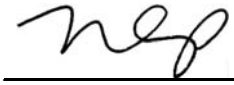
Reviewed by:  Date: October 26, 2007

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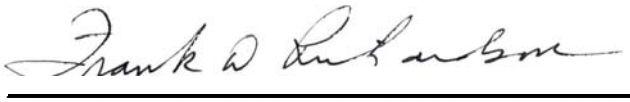
Approved by:  Date: October 26, 2007

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15. Supplementary Notes

16. Abstract

A 35 mph (56.3 km/h) frontal barrier impact was conducted on a 2008 Infiniti G35 4-Door Sedan at Karco Engineering, LLC on October 26, 2007. This test was conducted to obtain data indicant of FMVSS 208, 212, 219 (partial), 301, and footwell intrusion performance. The impact velocity is 55.99 km/h. The ambient temperature at the barrier face at the time of impact is 27.8 degrees Celcius. The vehicle's maximum post-test static crush is 320 mm at 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	362.2	811.9
Max. Chest Accel. (3 msec Clip)	Gs	60	44.1	46.5
Left Femur Force	Newtons	10008	-3941.9	-2713.9
Right Femur Force	Newtons	10008	-1383.8	-852.5

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56.3 km/h NCAP Frontal Barrier Impact Test New Car Assessment Program (NCAP) 2008 Infiniti G35 4-Door Sedan NHTSA No. M85214	Copies of this report available from: NHTSA Technical Reference Division National Highway Traffic Safety Admin. 1200 New Jersey Ave, SE, Room W43-410 Washington, D.C. 20590

19. Security Classification (this report)	20. Security Classification (this page)	21. No. of Pages	22. Price
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SECTION 1

PURPOSE AND SUMMARY OF TEST M85214

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 Infiniti G35 4-Door Sedan at a velocity of 55.99 km/h. The test was performed at Karco Engineering, LLC on October 26, 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 one test 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, and Appendix C contains the Dummy Calibration data.

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 320 mm at the vehicle's centerline. 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. Both knees contacted the knee bolster. The head also contacted the headrest.

The passenger's visible contact points were as follows: The passenger ATD's head contacted the airbag, headrest, headliner, and side header. The chest also contacted the airbag. Both knees contacted the glove box.

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	362.2	44.1	-20.9	-3941.9	-1383.8
Passenger	811.9	46.5	-31.4	-2713.9	-852.5

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

Test Vehicle: 2008 Infiniti G35 4-Door Sedan NHTSA No.: M85214

Test Program: 2007 NHTSA 35mph NCAP Test Date: 10/26/07

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	^oF	^oC	=(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 Infiniti G35 4-Door Sedan NHTSA No.: M85214

Test Program: 2007 NHTSA 35mph NCAP Test Date: 10/26/07

PRIMARY IMPACT DATA

Measured Parameter	Units	Value
Velocity at Impact	km/h	55.99
Test Weight	kg	4016
Impact Angle	degrees	0
Average Rebound	mm	880
Maximum Static Crush	mm	320

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, Headliner, Side Header
Chest Contact	Airbag	Airbag
Abdomen Contact	None	None
Left Knee Contact	Bolster	Glovebox
Right Knee Contact	Bolster	Glovebox

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 Infiniti G35 4-Door Sedan NHTSA No.: M85214

Test Program: 2007 NHTSA 35mph NCAP Test Date: 10/26/07

TEST VEHICLE INFORMATION AND OPTIONS

NHTSA No.	M85214	Anti-Lock Brakes	Yes
Make	Infiniti	All Wheel Drive	No
Model	G35	Power Steering	Yes
Body Style	4-Door Sedan	Driver Front Airbag	Yes
Vin No.	JNKBV61E38M200753	Driver Side Airbag	Yes
Color	Silver	Driver Head Airbag	No
Delivery Date	10/9/2007	Driver Curtain Airbag	Yes
Odometer (Miles)	68.0	Pass. Airbag	Yes
Dealer	Riverside Infiniti	Pass. Side Airbag	Yes
Transmission	5-Speed Automatic	Pass. Head Airbag	No
Final Drive	Rear	Pass. Curtain Airbag	Yes
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)	2113
		GAWR Front (kg)	1004
Date of Manufacture	Aug-07	GAWR Rear (kg)	1118

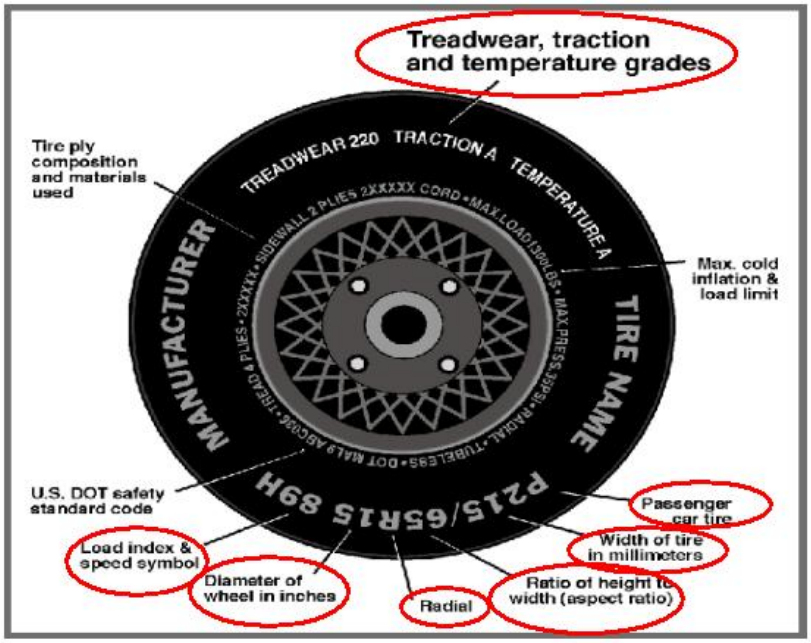
VEHICLE SEATING AND CAPACITY WEIGHT INFORMATION

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

Test Vehicle: 2008 Infiniti G35 4-Door Sedan NHTSA No.: M85214

Test Program: 2007 NHTSA 35mph NCAP Test Date: 10/26/07

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 Pressure (kpa)	230	230
Recommended Tire Size	P225/55R17	P225/55R17
Tire Size on Vehicle	P225/55R17	P225/55R17
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
Tire Material	Polyester, Steel, Polyamide	Polyester, Steel, Polyamide
DOT Safety Code Right	U2UP 4VRR-3107	U2UP 4VRR-3107
DOT Safety Code Left	U2UP 4VRR-3107	U2UP 4VRR-3107

DATA SHEET NO. 2...(CONTINUED)

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2008 Infiniti G35 4-Door Sedan NHTSA No.: M85214

Test Program: 2007 NHTSA 35mph NCAP Test Date: 10/26/07

TEST VEHICLE WEIGHTS

	Units	As Delivered Weights (UVW)			As Tested Weights (ATW)		
		Front Axle	Rear Axle	Total	Front Axle	Rear Axle	Total
Left	kg	435	378	813	457	469	926
Right	kg	429	368	797	443	453	896
Ratio	%	53.7	46.3	100.0	49.4	50.6	100.0
Totals	kg	864	746	1610	900	922	1822

TARGET TEST WEIGHT CALCULATION

Measured Parameter	Units	Value
Total Delivered Weight (UVW)	kg	1610
Weight of 2 P572 ATD's	kg	152
Rated Cargo/Luggage Wt. (RCLW)	kg	68
Calculated Vehicle Target Wt. (TVTW)	kg	1830

TEST VEHICLE ATTITUDE AND CG

	Units	LF	RF	LR	RR	CG (aft of front axle)
As Delivered	mm	715	720	713	715	1195
As Tested	mm	709	711	683	691	1306

Vehicle Wheel Base (mm): 2580

Weight of Ballast Secured in cargo area (kg): 0

Weight of Items Removed (kg): 61

Vehicle Components Removed: Rear bumper, trunk lid, tail lights, door panels, rear window, spare tire, carpeting, tools.

* 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 Infiniti G35 4-Door Sedan NHTSA No.: M85214

Test Program: 2007 NHTSA 35mph NCAP Test Date: 10/26/07

SPEED TRAP DATA

Measured Parameter	Units	Requirement	Value
Trap No.1 Velocity (Primary)	km/h	55.51 to 57.12	55.99
Trap No.2 Velocity (Redun.)	km/h	55.51 to 57.12	55.97

VEHICLE STATIC CRUSH

Measured Parameter	Units	Pre-Test	Post-Test	Difference
Left Side	mm	4578	4346	232
Center	mm	4733	4413	320
Right Side	mm	4578	4369	209

VEHICLE REBOUND FROM BARRIER

Measured Parameter	Units	Value
Left Side	mm	931
Center	mm	820
Right Side	mm	890
Average	mm	880

DATA SHEET NO. 4

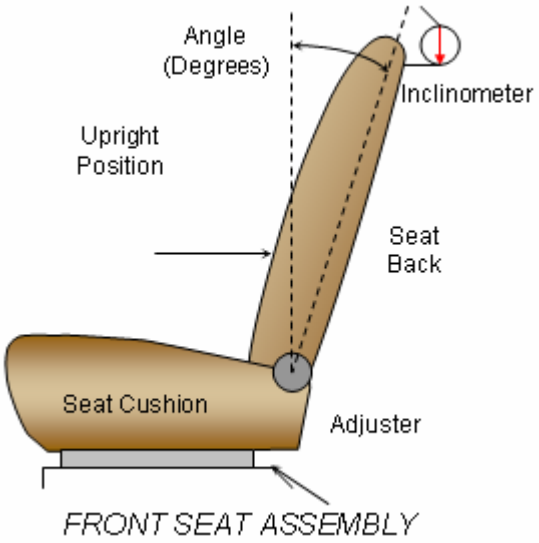
TEST VEHICLE INFORMATION

Test Vehicle: 2008 Infiniti G35 4-Door Sedan NHTSA No.: M85214

Test Program: 2007 NHTSA 35mph NCAP Test Date: 10/26/07

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

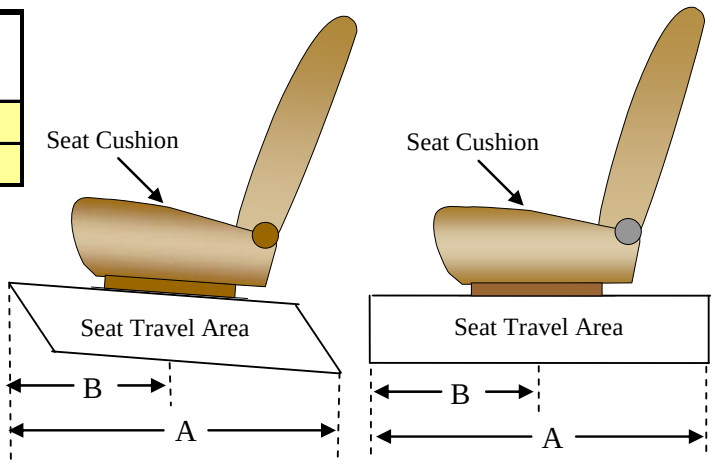
	Deg.
Driver w/seated Dummy	7.0° @ Headrest
Passenger w/seated Dummy	7.3° @ Headrest

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	310 mm	155 mm
Passenger Seat	230 mm	115 mm



SEAT BELT UPPER ANCHORAGE

Position number one (1) is the uppermost position.

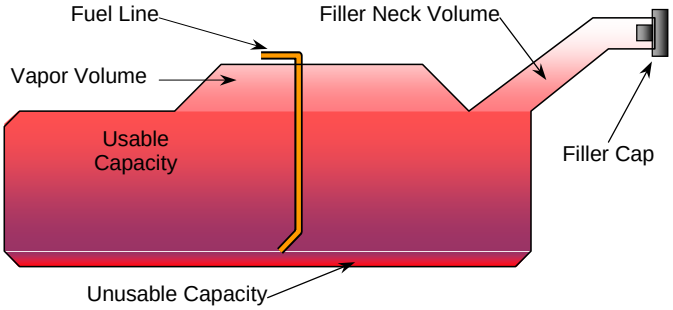
SEAT BELT UPPER ANCHORAGE

	Total # of Positions	Placed in Position #
Driver Seat	4	2
Passenger Seat	4	2

FUEL TANK CAPACITY

	Liters
Usable Capacity of "Standard Tank"	75.70
Usable Capacity of "Optional" Tank	
Usable Capacity used for FMVSS 301	69.94 to 71.16
Actual Amount of Solvent used	70.40

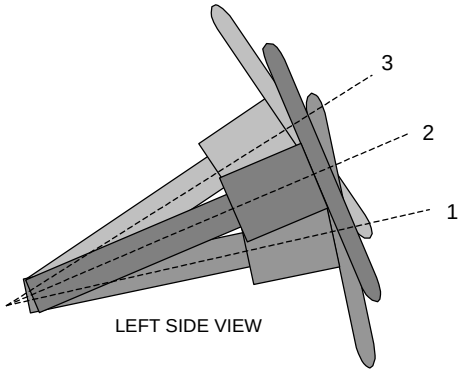
The test vehicle is equipped with an electric fuel pump. The fuel pump operates for approximately two seconds after the ignition is placed in the "ON" position, after which the fuel pump automatically shuts off. The fuel filler door is located on the left rear fender. The standard fuel tank occupies 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 positon No. 1	17.6	0.0
Geometric center position No. 2	19.5	25.0
Uppermost position No. 3	21.4	50.0

DATA SHEET NO. 5

DUMMY POSITIONING IN VEHICLE

Test Vehicle: 2008 Infiniti G35 4-Door Sedan NHTSA No.: M85214

Test Program: 2007 NHTSA 35mph NCAP Test Date: 10/26/07

TEST DUMMY POSITION MEASUREMENTS

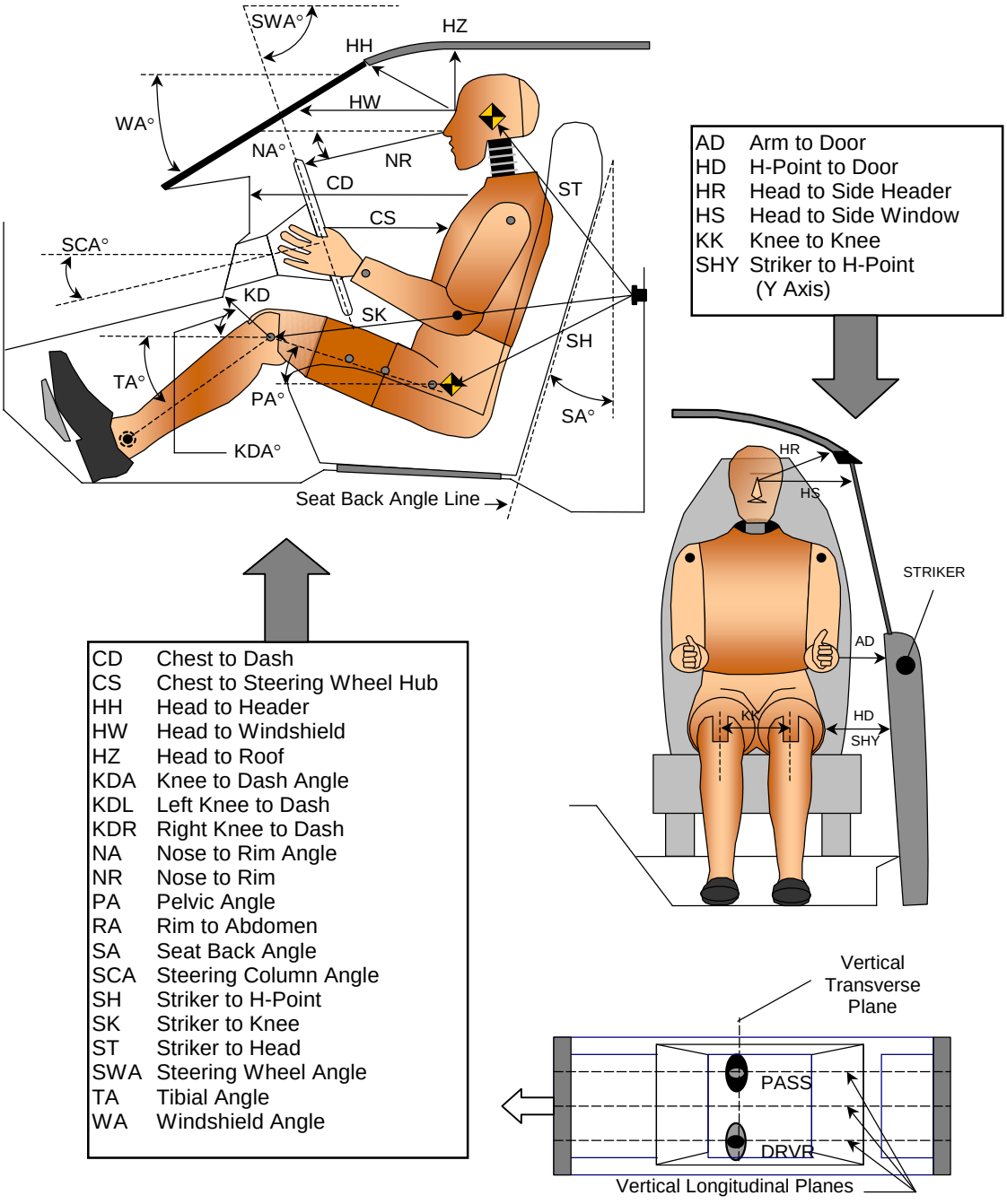
Code	Measurement Description	Driver		Passenger	
		Length (mm)	Angle (deg)	Length (mm)	Angle (deg)
WA	Windshield Angle		26.8		
SWA	Steering Wheel Angle		72.1		
SCA	Steering Column Angle		17.9		
SA	Seat Back Angle		7.0° @ Headrest		7.3° @ Headrest
HZ	Head to Roof (Z)	173	90.0	3	90.0
HH	Head to Header	300		312	
HW	Head to Windshield	562		533	
HR	Head to Side Header (Y)	235		233	
NR	Nose to Rim	359	11.8		
CD	Chest to Dash	480		605	
CS	Chest to Steering Hub	300			
RA	Rim to Abdomen	195			
KDL	Left Knee to Dash	138	40.0	162	
KDR	Right Knee to Dash	133		160	33.6
PA	Pelvic Angle		23.3		22.1
TA	Tibia Angle		40.2		42.9
KK	Knee to Knee (Y)	340		295	
SK	Striker to Knee	630	5.2	645	4.4
ST	Striker to Head	515	82.0	519	79.1
SH	Striker to H-Point	236	0.0	225	0.0
SHY	Striker to H-Point (Y)	210		208	
HS	Head to Side Window	302		291	
HD	H-Point to Door (Y)	121		120	
AD	Arm to Door (Y)	94		93	

DATA SHEET NO. 5…(CONTINUED)

DUMMY POSITIONING IN VEHICLE

Test Vehicle: 2008 Infiniti G35 4-Door Sedan NHTSA No.: M85214

Test Program: 2007 NHTSA 35mph NCAP Test Date: 10/26/07



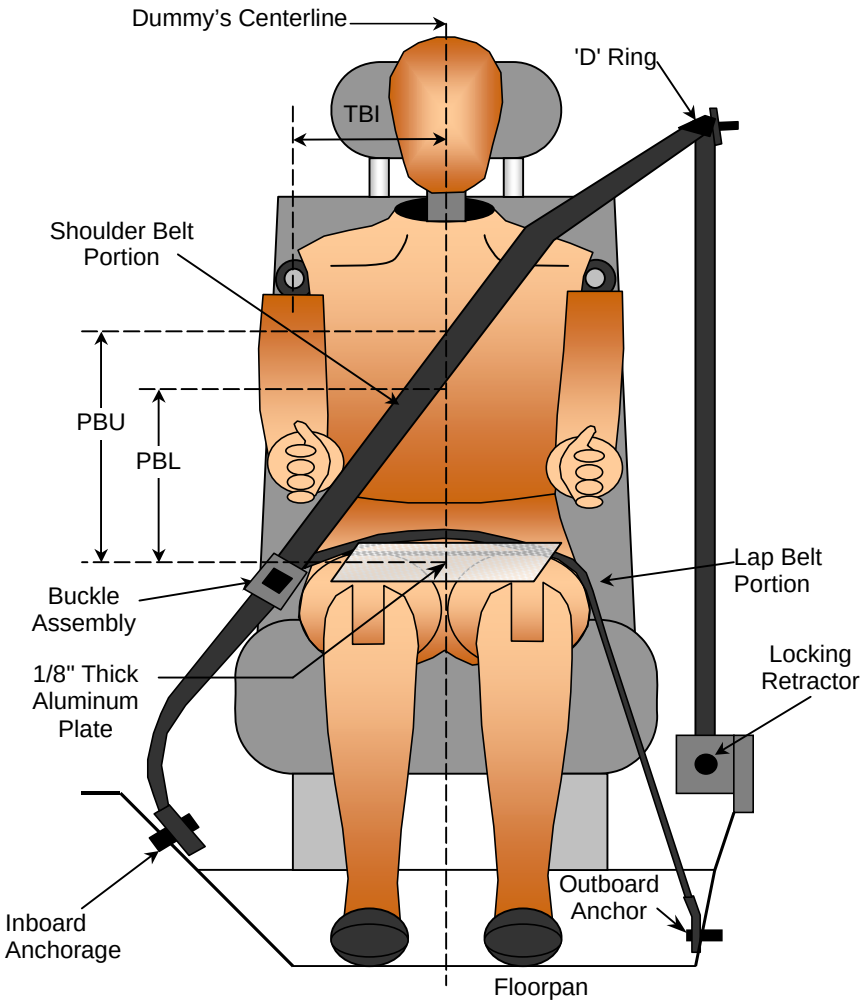
DUMMY MEASUREMENTS FOR FRONT SEAT OCCUPANTS

DATA SHEET NO. 6

SEAT BELT POSITIONING DATA

Test Vehicle: 2008 Infiniti G35 4-Door Sedan NHTSA No.: M85214

Test Program: 2007 NHTSA 35mph NCAP Test Date: 10/26/07



SEAT BELT POSITIONING MEASUREMENTS

Measured Parameter	Units	Driver	Passenger
TBI - Dummy C/L to Lap/Shoulder Belt Intersect	mm	280	215
PBU - Top Surface of reference to belt upper edge	mm	345	270
PBL - Top Surface of reference to belt lower edge	mm	280	345
Lap Belt Tension	Newtons	10	10
Shoulder Belt Tension	N/A	Retractor	Retractor

DATA SHEET NO. 7
VEHICLE ACCELEROMETER LOCATION

Test Vehicle: 2008 Infiniti G35 4-Door Sedan Test Date: 10/26/07

Test Program: 2007 NHTSA 35mph NCAP NHTSA No.: M85214

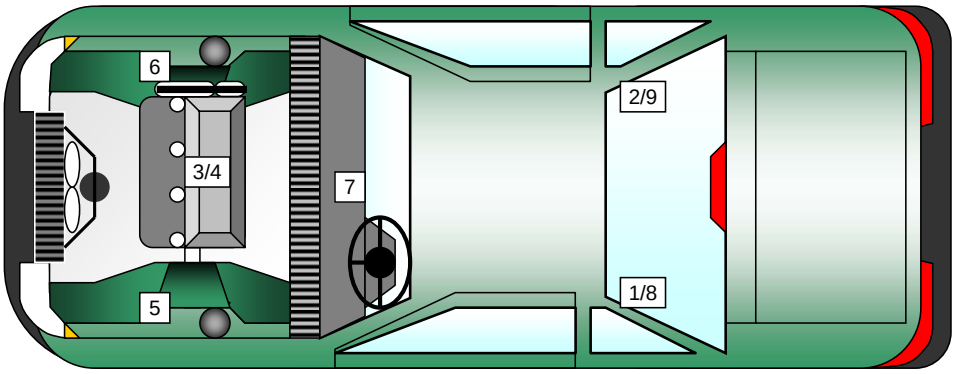
VEHICLE ACCELEROMETER PRE-TEST LOCATIONS

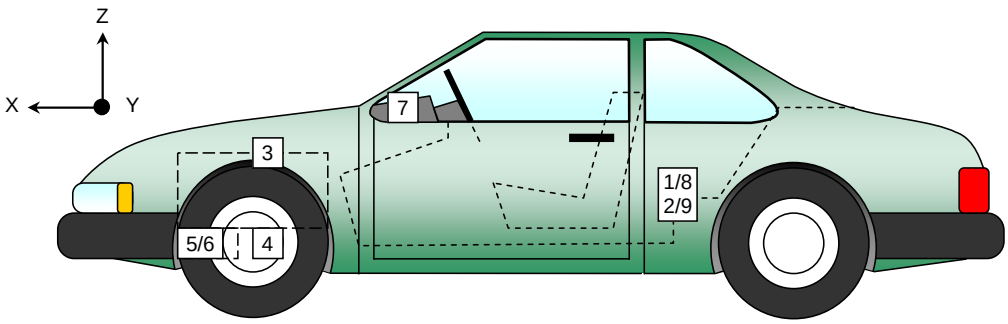
No.	Accelerometer Location	Measurements (mm)			
		X	Y	Z	
1	Left Rear X-Member	1885	-685	355	
2	Right Rear X-Member	1990	685	355	
3	Engine Top				2
4	Engine Bottom	4085	-50	195	
5	Left Brake Caliper	4060	-660	330	
6	Right Brake Caliper	4060	660	330	
7	Instrument Panel				1
8	Left Rear X-Member (Z-Axis)	1885	-685	355	
9	Right Rear X-Member (Z-Axis)	1990	685	355	

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

1.) Instrument Panel no longer used by NHTSA

2.) Not Installed





DATA SHEET NO. 8

SEAT BELT ASSESSMENT TEST DATA

Test Vehicle: 2008 Infiniti G35 4-Door Sedan NHTSA No.: M85214

Test Program: 2007 NHTSA 35mph NCAP Test Date: 10/26/07

SEAT BELT POSITIONING MEASUREMENTS

Measurement Description	Units	Driver	Passenger
Retractor Reel to "D" ring	mm	725	725
Shoulder Belt length as measured on ATD	mm	865	873
Lap Belt length as measured on ATD	mm	856	854
Remainder of belt on reel	mm	760	730
Total belt length for continuous webbing systems	mm	3206	3182

SHOULDER BELT SPOOL-OFF DATA

Measurement Description	Units	Driver	Passenger
As determined mechanically	mm	67	103
As determined electronically	mm	153	225

BELT STRETCH DATA

Measuerment 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 Infiniti G35 4-Door Sedan NHTSA No.: M85214

Test Program: 2007 NHTSA 35mph NCAP Test Date: 10/26/07

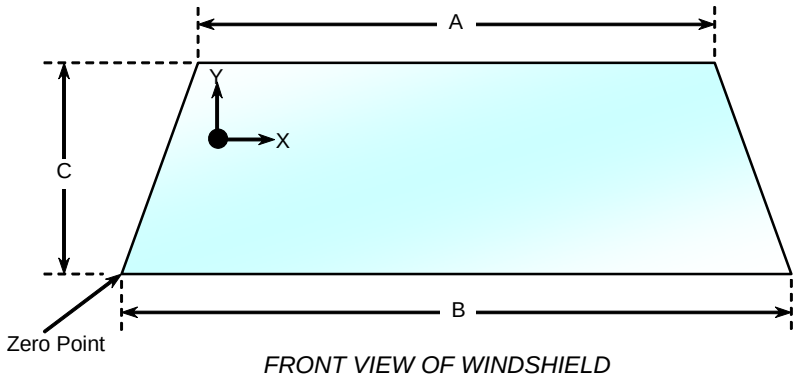
Windshield Mounting Details: Windshield glass is secured to the vehicle frame with a rubber type adhesive, and rubber and plastic molding.

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: 21.1 °C

WINDSHIELD PERIPHERY MEASUREMENTS

Measurement	Pre-Test(mm)	Post-Test(mm)	% of Retention
Left Side	1470	1470	100
Right Side	1470	1470	100
Total	2940	2940	100



FRONT VIEW OF WINDSHIELD

WINDSHIELD DIMENSIONS

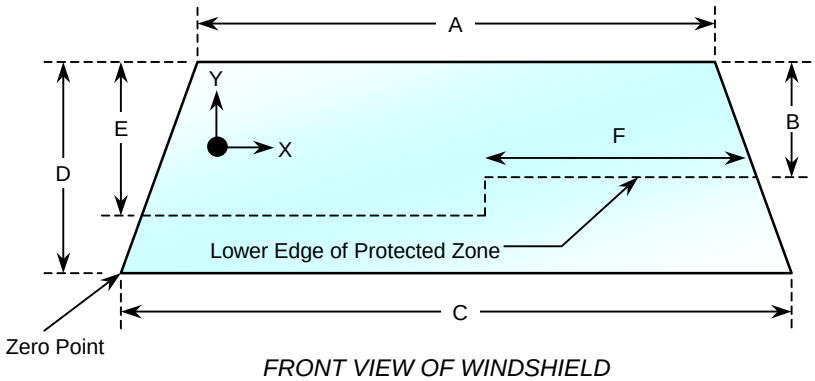
Item	Units	Segment Length	Molding Width
A	mm	1145	5
B	mm	1370	None
C-Left	mm	785	16
C-Right	mm	785	16

DATA SHEET NO. 10

WINDSHIELD ZONE INTRUSION FMVSS 219 DATA (PARTIAL)

Test Vehicle: 2008 Infiniti G35 4-Door Sedan NHTSA No.: M85214

Test Program: 2007 NHTSA 35mph NCAP Test Date: 10/26/07



FRONT VIEW OF WINDSHIELD

WINDSHIELD AND PROTECTED ZONE

Item	Units	Value
A	mm	1145
B	mm	90
C	mm	1370
D	mm	785
E	mm	505
F	mm	500

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 Infiniti G35 4-Door Sedan NHTSA No.: M85214

Test Program: 2007 NHTSA 35mph NCAP Test Date: 10/26/07

Test Time: 12:58 PM Temperature: 27.6° C

STODDARD SOLVENT SPILLAGE MEASUREMENTS

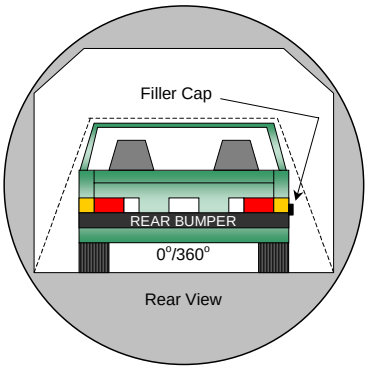
A.	From impact until vehicle motion ceases: (Maximum Allowable = 1 ounce)	0.0	oz.
B.	For the 5 minute period after motion ceases: (Maximum Allowable = 5 ounces)	0.0	oz.
C.	For the following 25 minutes: (Maximum Allowable = 1 oz./minute)	0.0	oz.
D.	Spillage Location Details:	No leakage occurred	

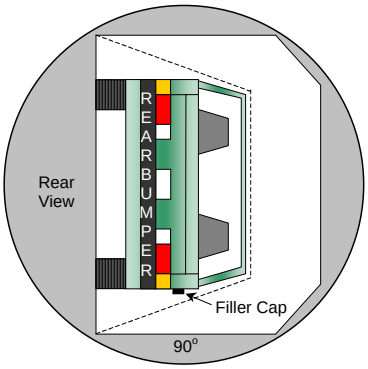
DATA SHEET NO. 12

FMVSS 301 STATIC ROLLOVER DATA

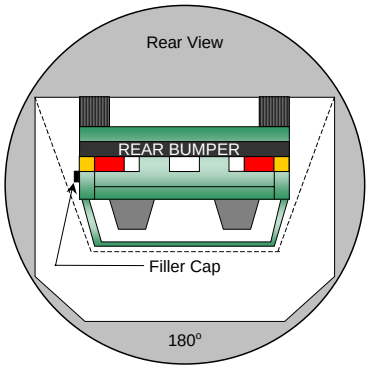
Test Vehicle: 2008 Infiniti G35 4-Door Sedan NHTSA No.: M85214

Test Program: 2007 NHTSA 35mph NCAP Test Date: 10/26/07

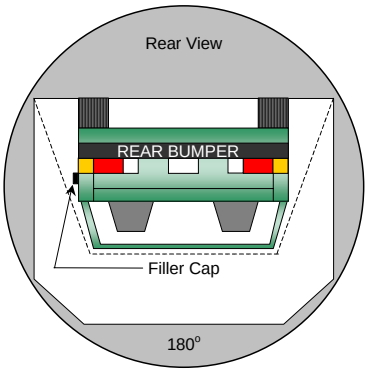




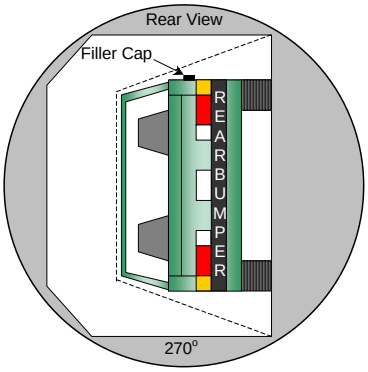
0° to 90°

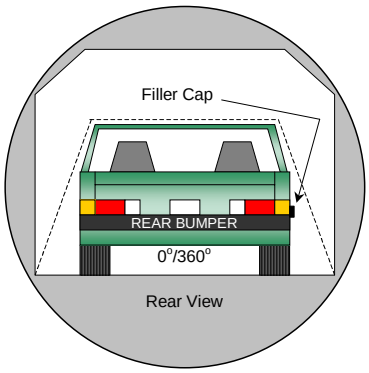


90° to 180°



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 Infiniti G35 4-Door Sedan NHTSA No.: M85214

Test Program: 2007 NHTSA 35mph NCAP Test Date: 10/26/07

SOLVENT COLLECTION TIME TABLE IN SECONDS

Test Phase	Rotation Time	Hold Time	Total Time
0° to 90°	84	308	392
90° to 180°	78	317	395
180° to 270°	84	312	396
270° to 360°	87	302	389

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 Infiniti G35 4-Door Sedan NHTSA No.: M85214

Test Program: 2007 NHTSA 35mph NCAP Test Date: 10/26/07

VEHICLE MEASUREMENT TABLE

No.	Measurement Description	Units	Pre-Test	Post-Test	Diff.
1	Total length of vehicle at centerline	mm	4733	4413	-320
2	RSOV to front of engine	mm	4158	3973	-185
3	RSOV to firewall centerline	mm	3574	3458	-116
4	RSOV to leading edge of right door	mm	3243	3253	10
5	RSOV to leading edge of left door	mm	3240	3245	5
6	RSOV to lower leading edge of right door	mm	3262	3252	-10
7	RSOV to lower leading edge of left door	mm	3255	3247	-8
8	RSOV to upper trailing edge of right door	mm	2157	2162	5
9	RSOV to upper trailing edge of left door	mm	2151	2158	7
10	RSOV to lower trailing edge of right door	mm	2160	2152	-8
11	RSOV to lower trailing edge of left door	mm	2154	2145	-9
12	RSOV to bottom of right 'A' pillar	mm	3210	3210	0
13	RSOV to bottom of left 'A' pillar	mm	3210	3210	0
14	RSOV to firewall on right side	mm	3818	3723	-95
15	RSOV to firewall on left side	mm	3818	3752	-66
16	RSOV to steering column	mm	2830	2835	5
17	Center of steering column to left 'A' pillar	mm	450	430	-20
18	Center of steering column to headlining	mm	380	410	30
19	RSOV to right side of front bumper	mm	4578	4369	-209
20	RSOV to left side of front bumper	mm	4578	4346	-232
21	Length of engine block	mm	560	560	0
RD	RSOV to right side of dash panel	mm	2970	2985	15
CD	RSOV to center of dash panel	mm	2900	2915	15
LD	RSOV to left side of dash panel	mm	2977	2945	-32

DATA SHEET NO. 13…(CONTINUED)

VEHICLE STRUCTURAL MEASUREMENTS

Test Vehicle: 2008 Infiniti G35 4-Door Sedan NHTSA No.: M85214

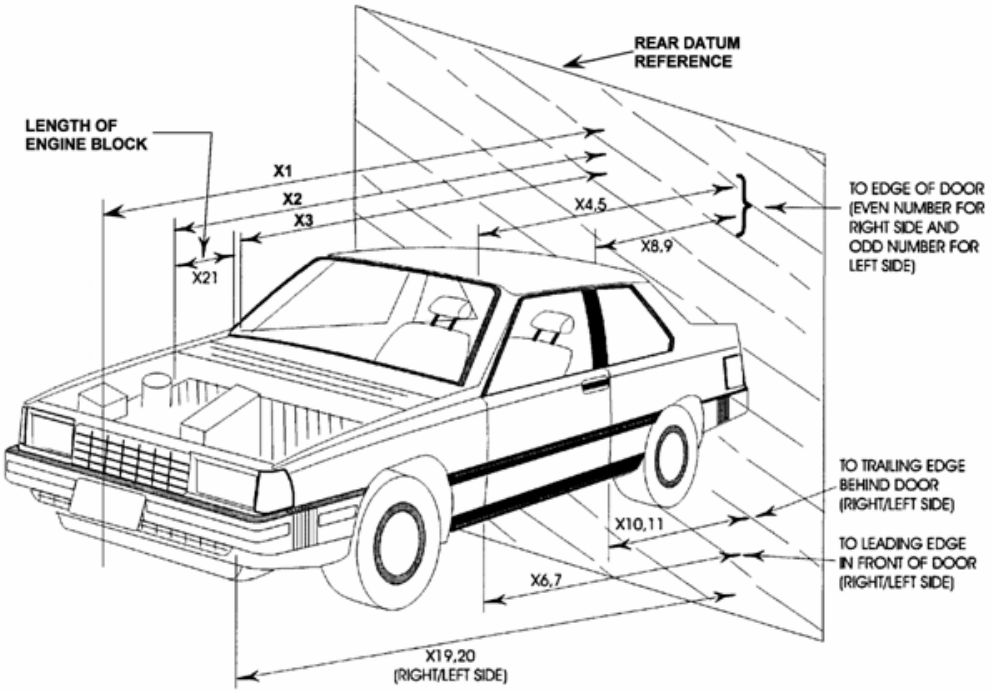
Test Program: 2007 NHTSA 35mph NCAP Test Date: 10/26/07

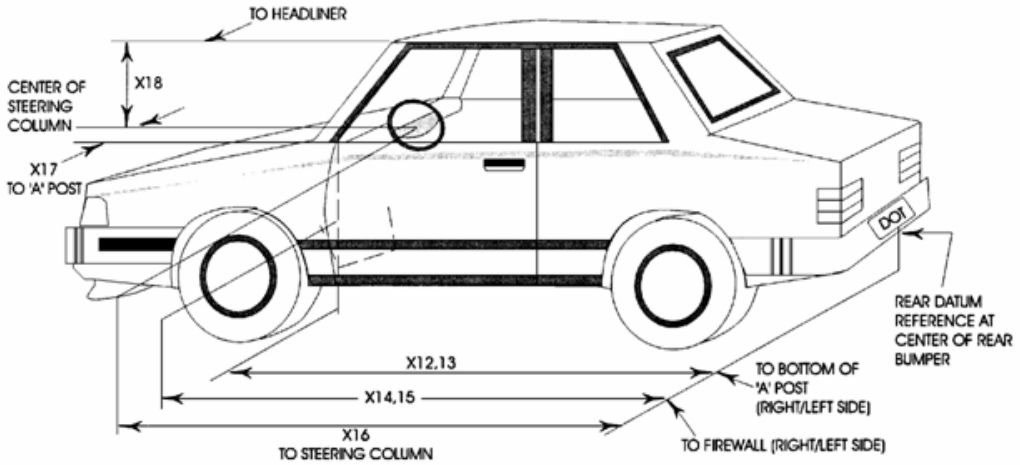
VEHICLE STRUCTURAL MEASUREMENT TABLE

No.	Measurement Description	Units	Pre-Test	Post-Test	Diff.
1	Total length	mm	4733	4413	-320
2	Total width	mm	1750	1741	-9
3	Bumper top height	mm	565	475	-90
4	Bumper bottom height	mm	193	110	-83
5	Longitudinal member top height	mm	503	520	17
6	Longitudinal member bottom height	mm	388	395	7
7	Distance between longitudinal members	mm	775	1004	229
8	Longitudunal member width	mm	55	50	-5
9	Engine top height	mm	725	830	105
10	Engine bottom height	mm	140	105	-35
11	Engine and gear box width	mm	560	560	0
12	Front bumper to engine distance	mm	575	470	-105
13	Front shock absorber fixing width	mm	750	805	55
14	Bonnet leading edge height	mm	765	755	-10
15	Front shock absorber fixing width	mm	850	800	-50
16	Front bumper to front axle distance	mm	810	600	-210
17	Front axle to 'A' pillar distance	mm	598	540	-58
18	'A' pillar to 'B' pillar distance	mm	1143	1135	-8
19	'B' pillar to rear axle distance	mm	1103	1101	-2
20	'B' pillar to 'C' pillar distance	mm	1000	995	-5
21	Roof sill bottom height	mm	1250	1230	-20
22	Roof sill top height	mm	1310	1285	-25
23	Floor sill bottom height	mm	130	100	-30
24	Floor sill top height	mm	395	375	-20

Test Vehicle: 2008 Infiniti G35 4-Door Sedan NHTSA No.: M85214

Test Program: 2007 NHTSA 35mph NCAP Test Date: 10/26/07





DATA SHEET NO. 14

CAMERA LOCATIONS

Test Vehicle: 2008 Infiniti G35 4-Door Sedan NHTSA No.: M85214

Test Program: 2007 NHTSA 35mph NCAP Test Date: 10/26/07

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	-1987	-6487	-1007	0	7201	20mm	1000
3	Closeup Left Side	-1653	-5987	-1071	0	6766	50mm	1000
4	Driver and Interior View	-6696	-10949	-4730	-17	13557	ZOOM	1000
5	Steering Column (Bottom)	-1972	-8184	-2829	-13	9456	35mm	1000
6	Steering Column (Top)	-1966	-8141	-3258	-13	9610	35mm	1000
7	Overall Right Side	-2784	6482	-1467	0	6715	20mm	1000
8	Closeup Right Side	-1487	5968	-1012	0	6075	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		12mm	1000
13	Passenger Front View	381	445	-2548	-34		12mm	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	Driver Side Dummy O.B.	-3015	247	-1322	-2		12mm	1000
17	Passenger Side Dummy O.B.	-3015	-247	-1322	2		12mm	1000
18	Real Time Driver	-1926	-8089	-1704	-1			30
19	Real Time Passenger	-1433	8047	-1704	-1			30

All measurements are relative to the point of impact.

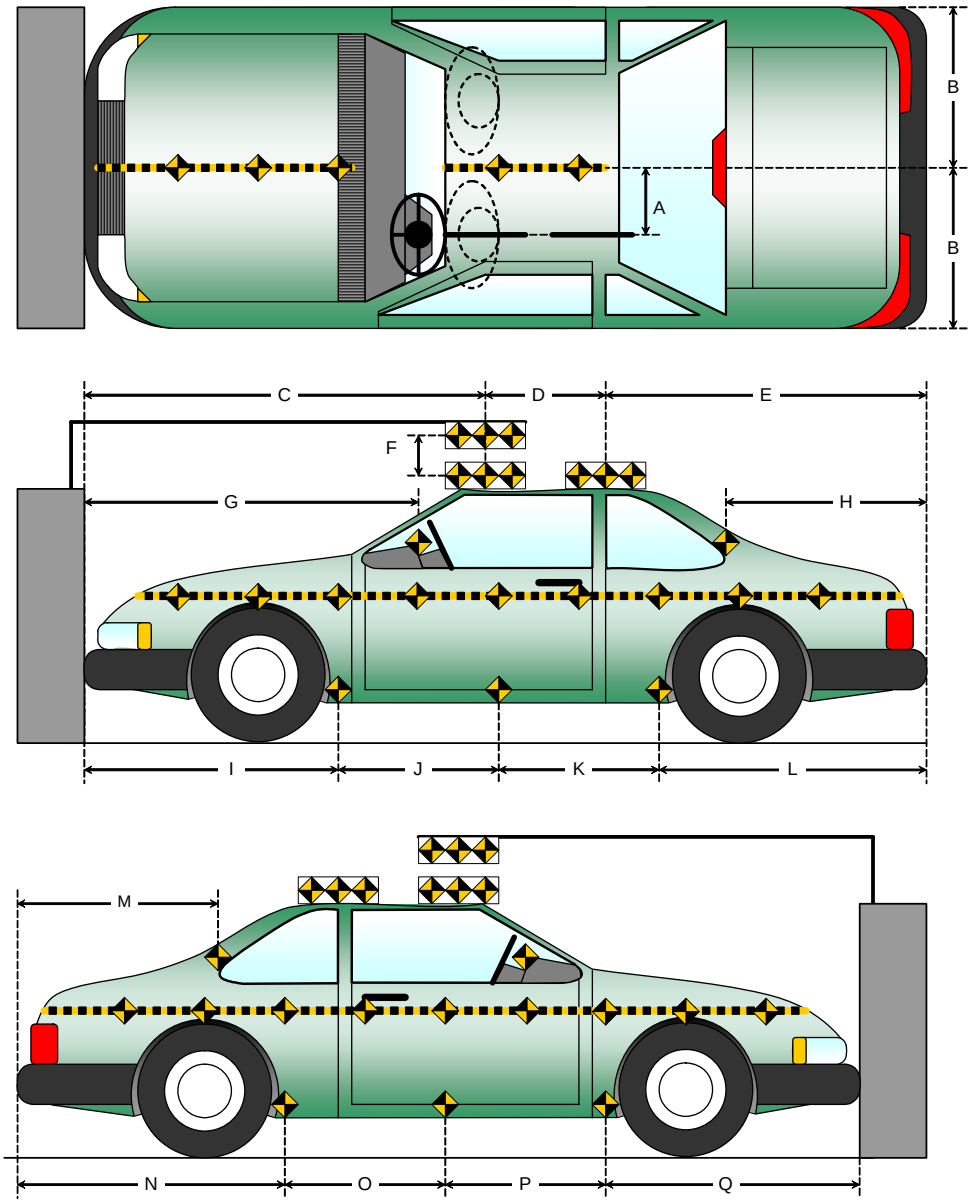
DATA SHEET NO. 15

PHOTOGRAPHIC REFERENCE TARGET LOCATIONS

Test Vehicle: 2008 Infiniti G35 4-Door Sedan NHTSA No.: M85214

Test Program: 2007 NHTSA 35mph NCAP Test Date: 10/26/07

All Dimensions in (mm)	
Item	Value
A	413
B	1750
C	2436
D	615
E	1782
F	150
G	1066
H	1058
I	1260
J	977
K	977
L	1521
M	1058
N	1521
O	977
P	977
Q	1260



DATA SHEET NO. 16

VEHICLE INTRUSION MEASUREMENTS

Test Vehicle: 2008 Infiniti G35 4-Door Sedan NHTSA No.: M85214

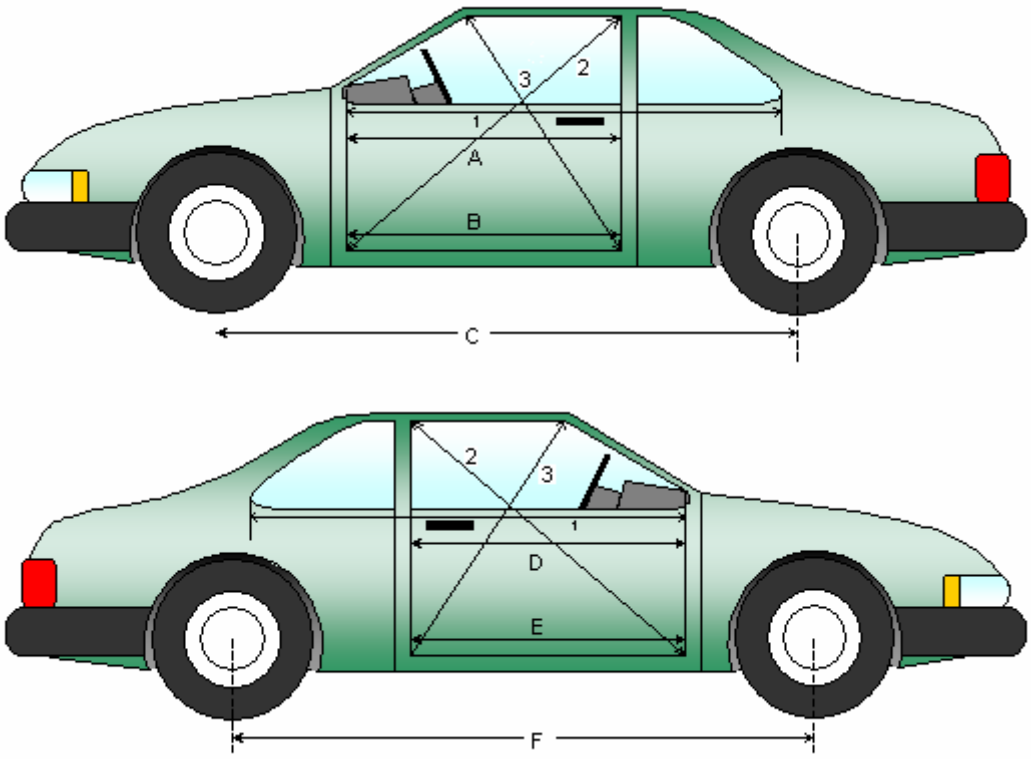
Test Program: 2007 NHTSA 35mph NCAP Test Date: 10/26/07

DOOR OPENING WIDTH TABLE

Item	Description	Units	Pre-Test	Post-Test	Diff.
1L	Left Side	mm	980	990	10
2L	Left Side (Diagonally)	mm	1406	1410	4
3L	Left Side (Diagonally)	mm	889	890	1
1R	Right Side	mm	983	996	13
2R	Right Side (Diagonally)	mm	1404	1415	11
3R	Right Side (Diagonally)	mm	921	921	0

WHEELBASE MEASUREMENT TABLE

Item	Description	Units	Pre-Test	Post-Test	Diff.
C	Left Side Wheel Base	mm	2850	2760	-90
F	Right Side Wheel Base	mm	2850	2740	-110



DATA SHEET NO. 16…(CONTINUED)

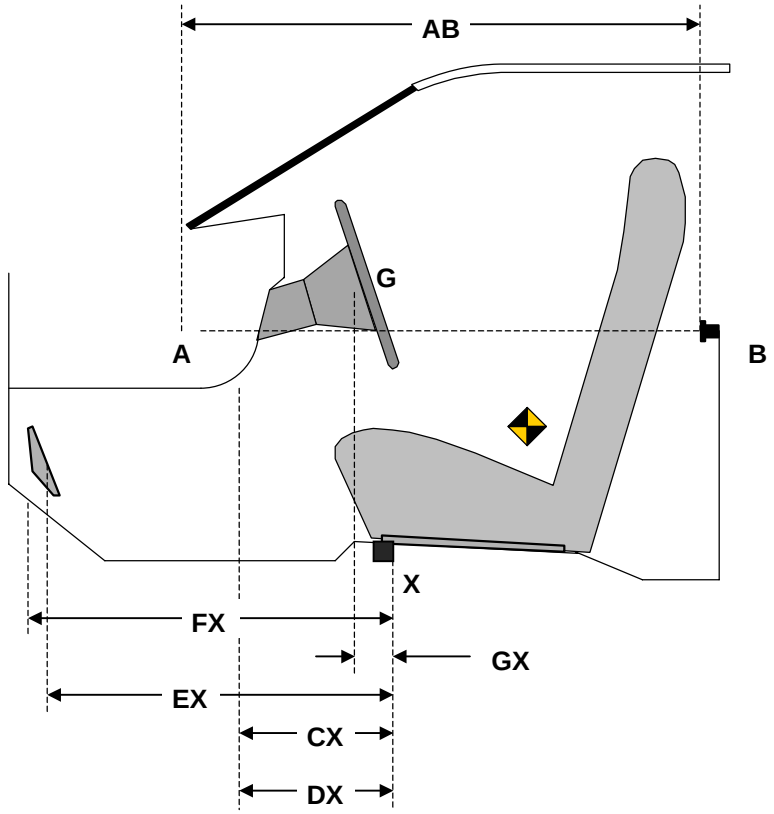
VEHICLE INTRUSION MEASUREMENTS

Test Vehicle: 2008 Infiniti G35 4-Door Sedan NHTSA No.: M85214

Test Program: 2007 NHTSA 35mph NCAP Test Date: 10/26/07

DRIVER COMPARTMENT INTRUSION TABLE

Item	Description	Units	Pre-Test	Post-Test	Diff.
AB	Door Opening (Inside window jam)	mm	980	990	10
CX	Left Knee Bolster to X	mm	205	225	20
DX	Right Knee Bolster to X	mm	210	220	10
EX	Brake Pedal to X	mm	540	555	15
FX	Foot Rest to X	mm	571	575	4
GX	Center of Steering Wheel Hub to X	mm	30	45	15

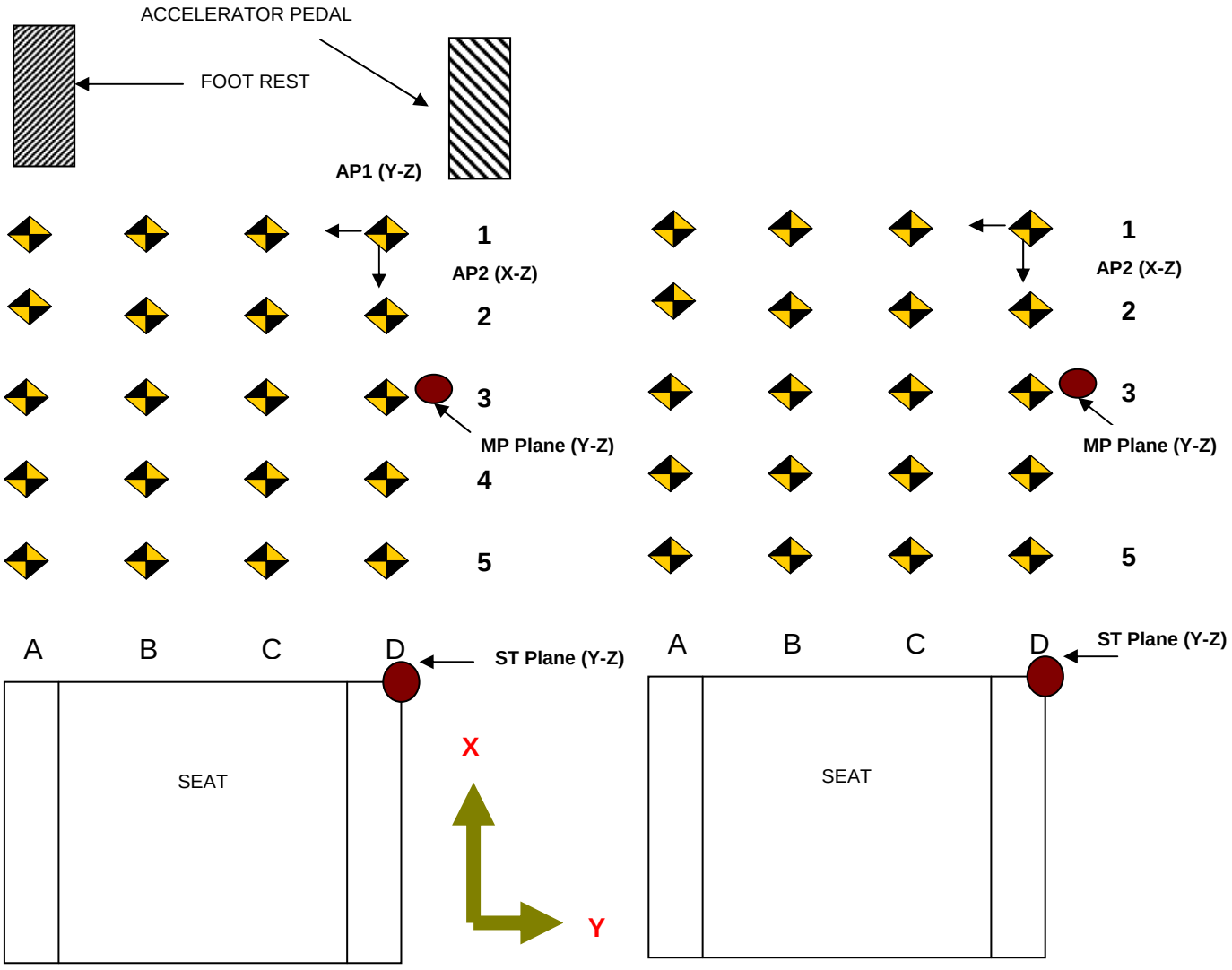


DATA SHEET NO. 16…(CONTINUED)

VEHICLE INTRUSION MEASUREMENTS

Test Vehicle: 2008 Infiniti G35 4-Door Sedan NHTSA No.: M85214

Test Program: 2007 NHTSA 35mph NCAP Test Date: 10/26/07



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 Infiniti G35 4-Door Sedan NHTSA No.: M85214

Test Program: 2007 NHTSA 35mph NCAP Test Date: 10/26/07

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	476	462	450	445	467	449	438	432	-9	-13	-12	-13
2	351	360	358	349	343	347	347	339	-8	-13	-11	-10
3	258	261	258	254	252	249	242	243	-6	-12	-16	-11
4	156	164	155	152	148	245	141	142	-8	81	-14	-10
5	69	70	66	68	63	147	52	84	-6	77	-14	16

DRIVER FLOOR PAN Y-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	-16	106	240	366	63	187	318	442	79	81	78	76
2	-16	104	240	356	62	184	317	436	78	80	77	80
3	-14	103	235	354	63	182	317	436	77	79	82	82
4	-16	103	234	353	60	185	317	438	76	82	83	85
5	-19	101	231	352	66	185	307	422	85	84	76	70

DRIVER FLOOR PAN Z-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	97	53	52	52	178	136	154	163	81	83	102	111
2	115	54	53	50	204	152	154	156	89	98	101	106
3	115	52	56	49	208	153	157	154	93	101	101	105
4	108	52	54	48	205	152	156	151	97	100	102	103
5	52	50	48	46	143	154	146	130	91	104	98	84

DATA SHEET NO. 16…(CONTINUED)

VEHICLE INTRUSION MEASUREMENTS

Test Vehicle: 2008 Infiniti G35 4-Door Sedan NHTSA No.: M85214

Test Program: 2007 NHTSA 35mph NCAP Test Date: 10/26/07

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	548	540	536	533	514	510	511	522	-34	-30	-25	-11
2	449	441	434	426	418	413	409	417	-31	-28	-25	-9
3	350	342	333	321	316	314	309	313	-34	-28	-24	-8
4	257	249	238	229	225	220	214	221	-32	-29	-24	-8
5	164	156	147	136	129	126	121	126	-35	-30	-26	-10

PASSENGER FLOOR PAN Y-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	-274	-175	-47	64	-349	-256	-128	-17	-75	-81	-81	-81
2	-283	-186	-59	54	-356	-259	-133	-28	-73	-73	-74	-82
3	-291	-194	-73	42	-358	-263	-140	-29	-67	-69	-67	-71
4	-296	-205	-83	35	-359	-268	-146	-30	-63	-63	-63	-65
5	-306	-215	-90	25	-363	-274	-149	-28	-57	-59	-59	-53

PASSENGER FLOOR PAN Z-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	61	61	61	76	132	134	122	129	71	73	61	53
2	50	55	55	111	128	126	119	149	78	71	64	38
3	50	53	53	115	125	125	117	164	75	72	64	49
4	46	53	52	114	122	123	115	173	76	70	63	59
5	29	51	53	100	100	115	116	168	71	64	63	68

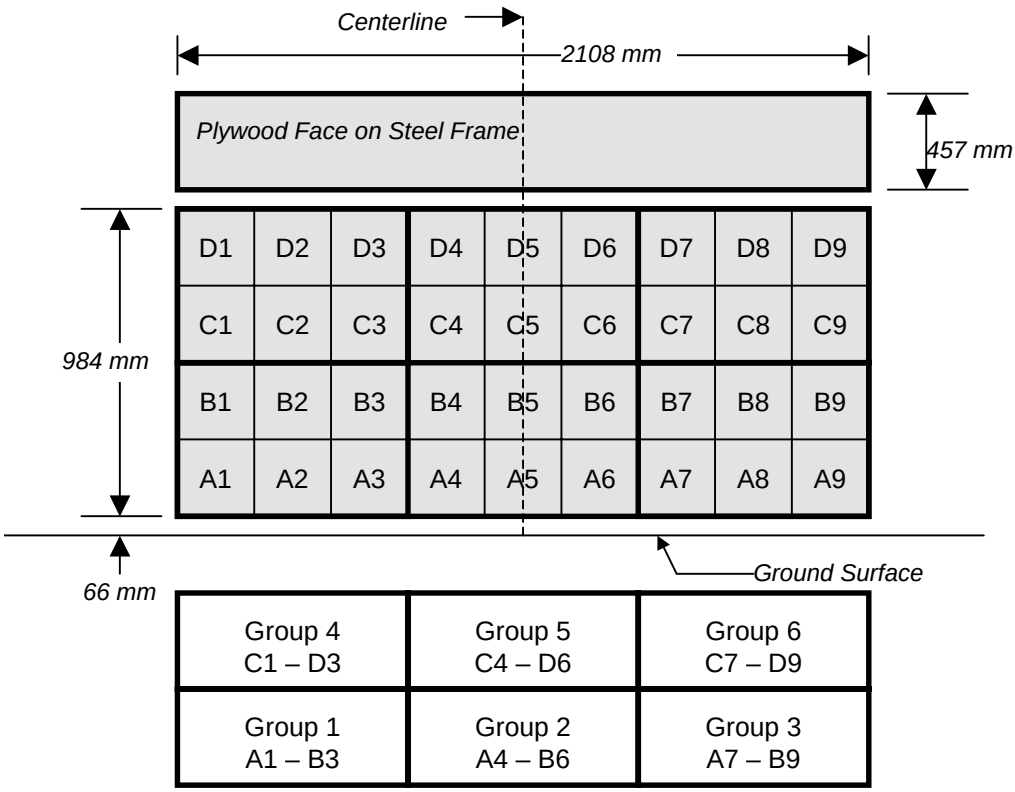
DATA SHEET NO. 17

FIXED BARRIER LOAD CELL LOCATIONS

Test Vehicle: 2008 Infiniti G35 4-Door Sedan NHTSA No.: M85214

Test Program: 2007 NHTSA 35mph NCAP Test Date: 10/26/07

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 Infiniti G35 4-Door Sedan NHTSA No.: M85214

Test Program: 2007 NHTSA 35mph NCAP Test Date: 10/26/07

VEHICLE INFORMATION

VIN: JNKBV61E38M200753 Wheel base (mm): 2850

Vehicle Size Category: 4-Door Sedan Test Weight (kg): 1822

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): 55.99

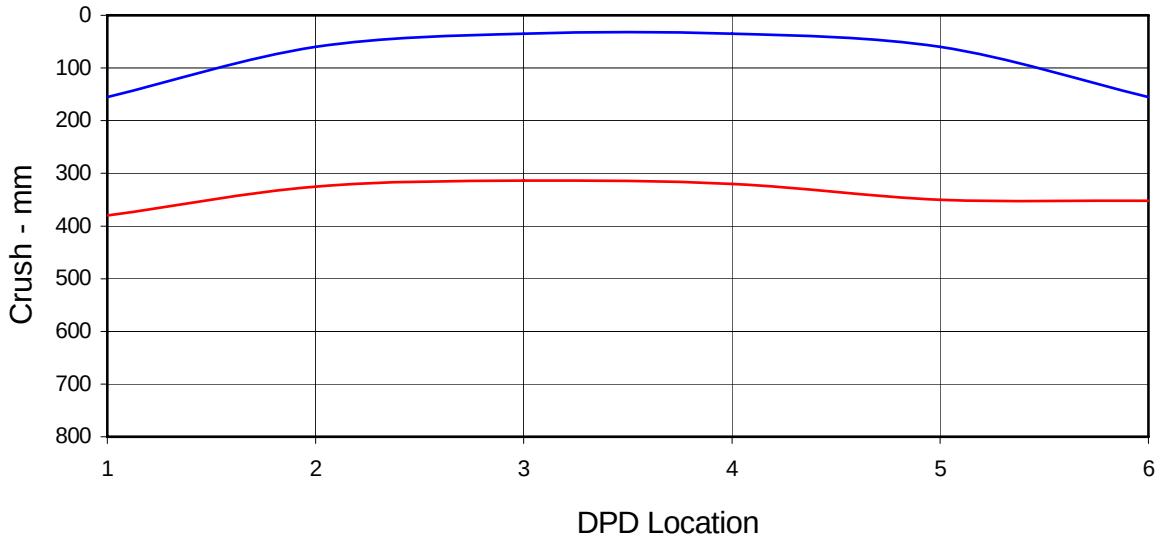
Velocity Change (km/h): 65.9 Time of Separation (msec): 64.7

CRUSH PROFILE

Collision Deformation Classification: 12FDEW6 Midpoint of Damage: Vehicle Centerline

Damage Region Length (mm): 1312 Impact Mode: Full Frontal

No.	Measurement Description	Units	Pre-Test	Post-Test	Difference
C1	Crush zone 1 at left side	mm	155	380	-225
C2	Crush zone 2 on left side	mm	60	325	-265
C3	Crush zone 3 on left side	mm	35	314	-279
C4	Crush zone 4 on right side	mm	35	320	-285
C5	Crush zone 5 on right side	mm	60	350	-290
C6	Crush zone 6 at right side	mm	155	352	-197

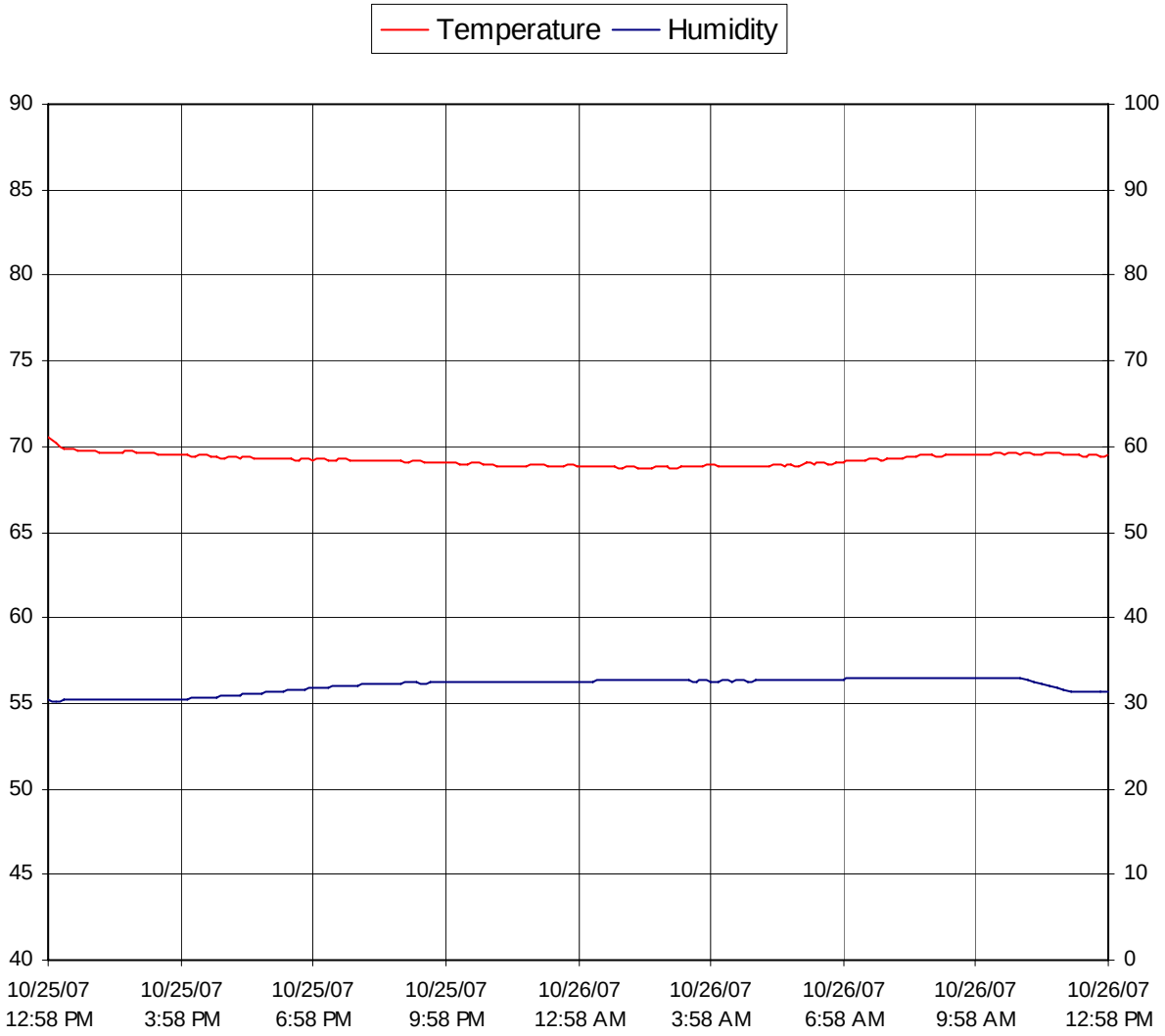


DATA SHEET NO. 19

DUMMY/VEHICLE TEMPERATURE STABILIZATION

Test Vehicle: 2008 Infiniti G35 4-Door Sedan NHTSA No.: M85214

Test Program: 2007 NHTSA 35mph NCAP Test Date: 10/26/07



APPENDIX A
PHOTOGRAPHS

LIST OF PHOTOGRAPHS

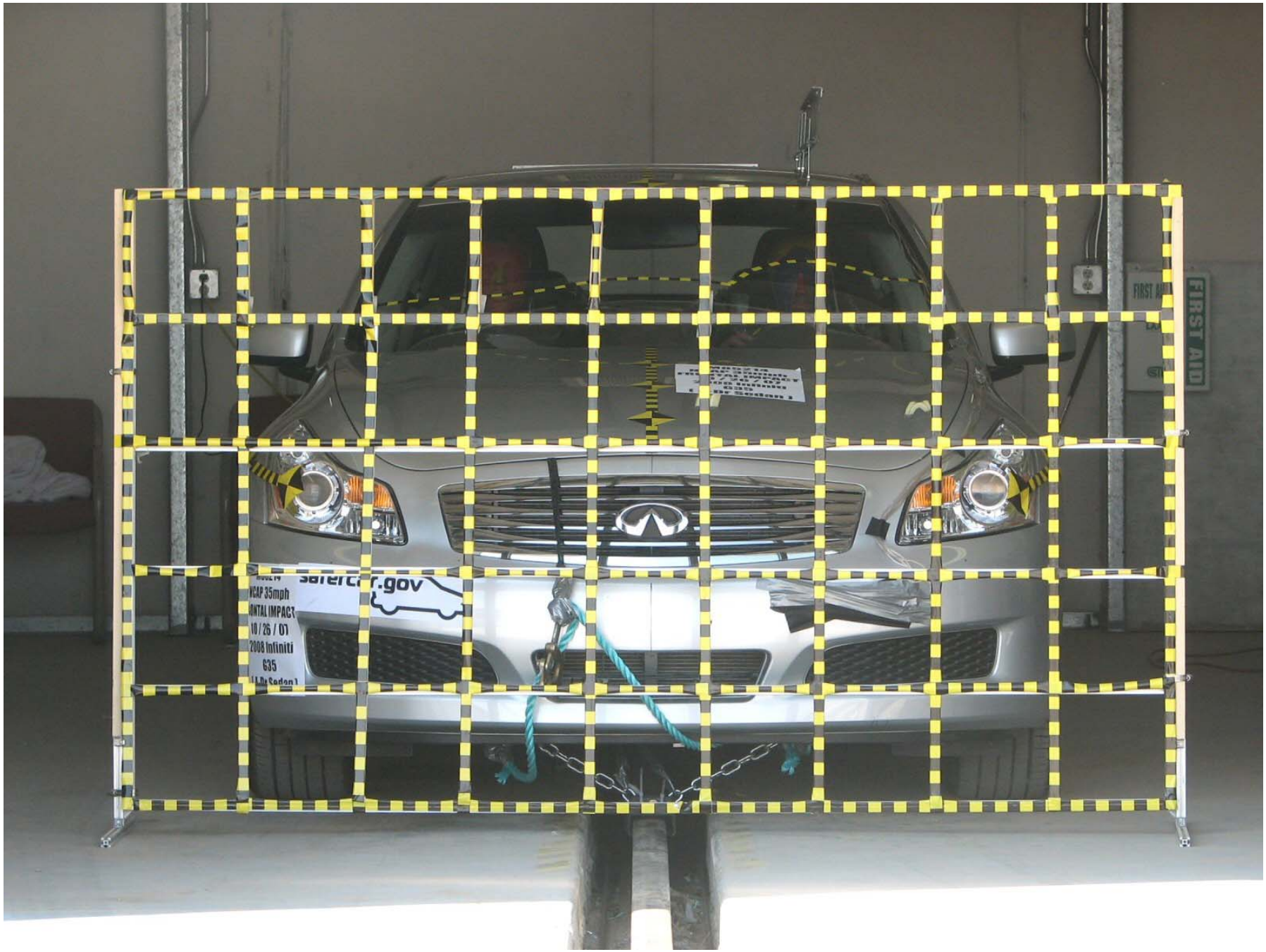


Figure A-1: Load Cell Location

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Figure A-2: Manufacturer's Label

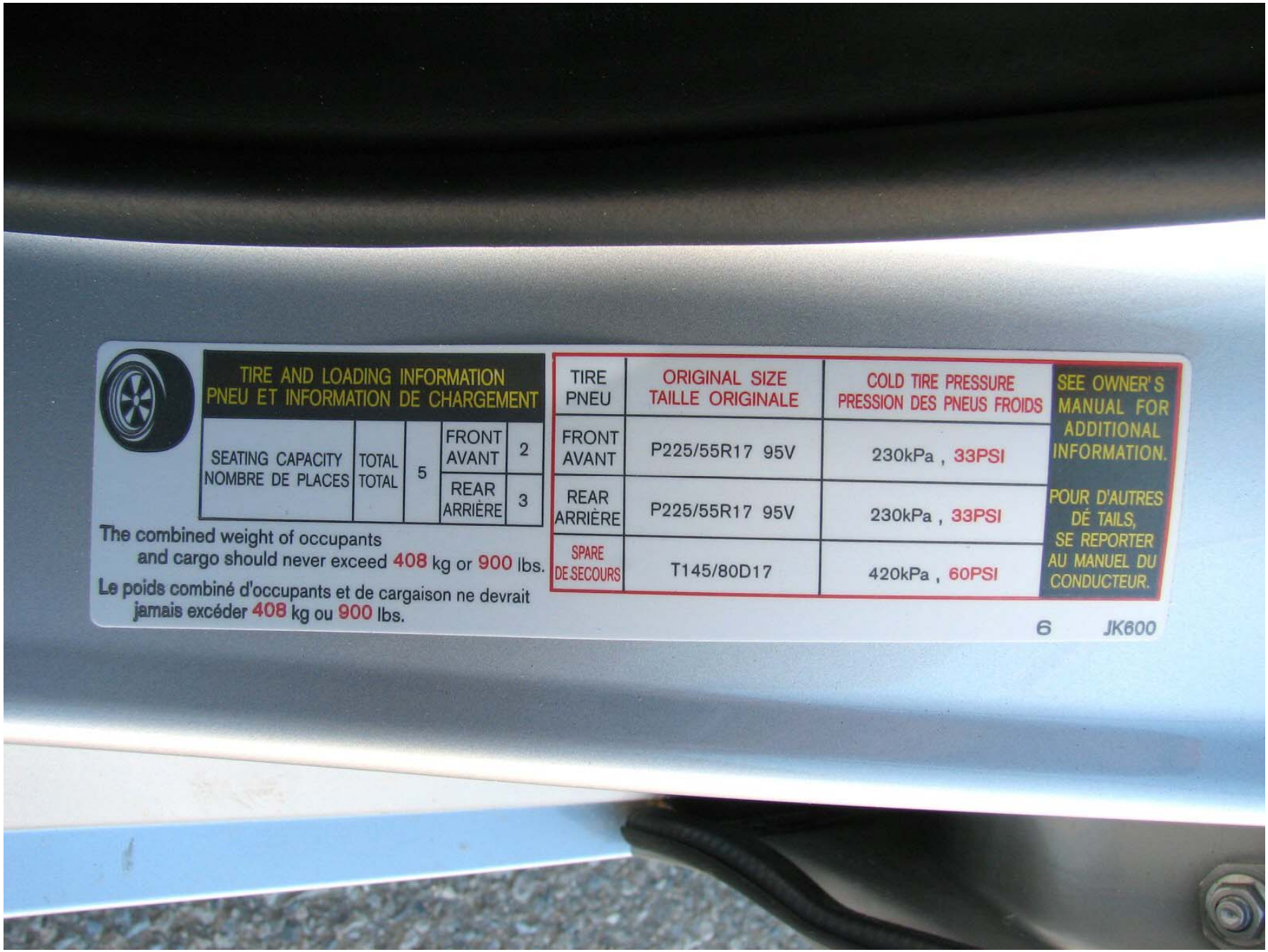


Figure A-3: Tire Placard

Figure A-4: Right Front ¾ View, As Received

Figure A-5: Left Rear ¾ View, as Received

Figure A-6: Pre-Test Front View

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 ¾ View

Figure A-15: Post-Test Left Rear ¾ View

Figure A-16: Post-Test Left Side ¾ View of Doors After Impact

Figure A-17: Post-Test Right Side ¾ View of Doors After Impact

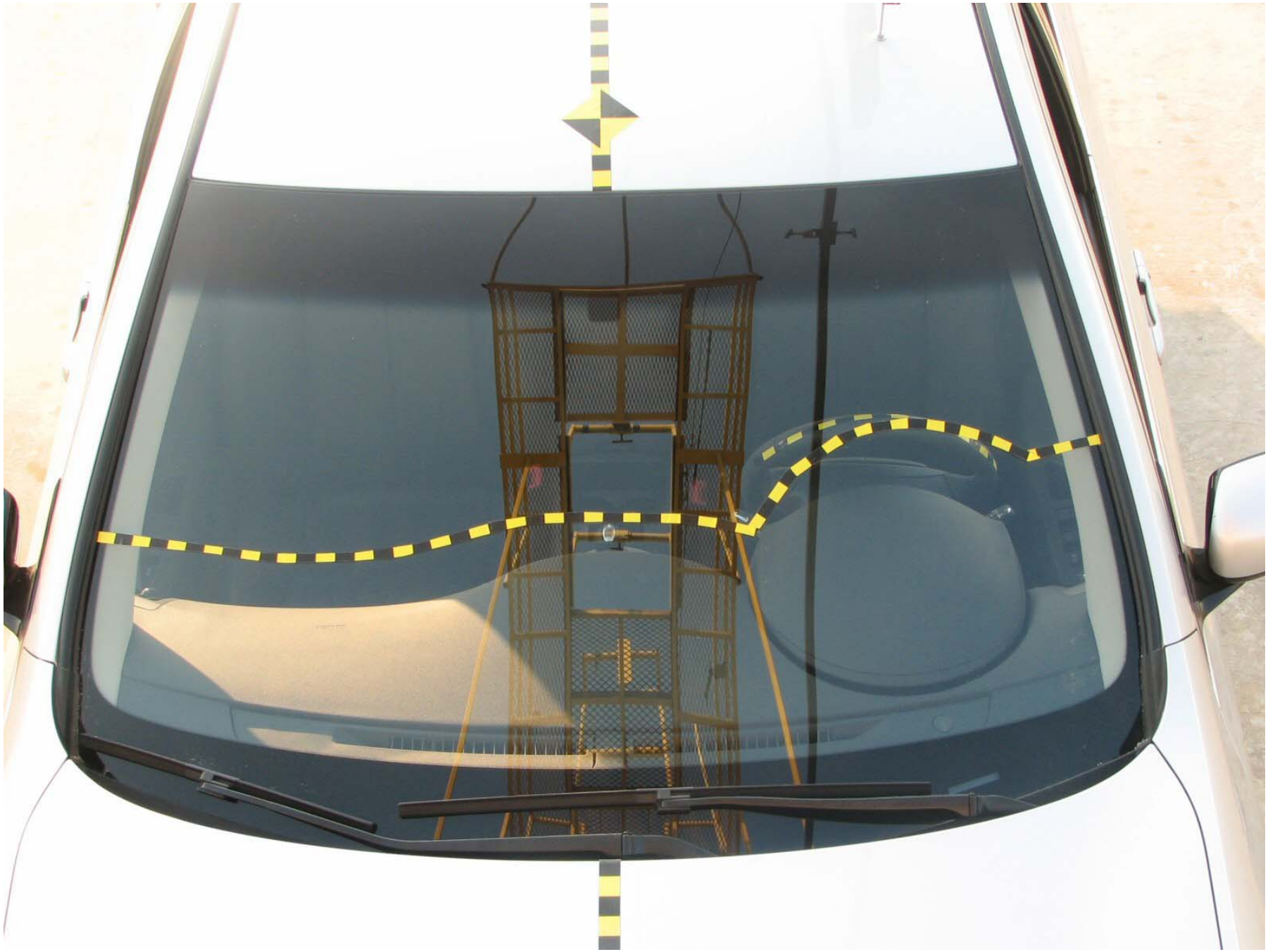


Figure A-18: Pre-Test Windshield

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

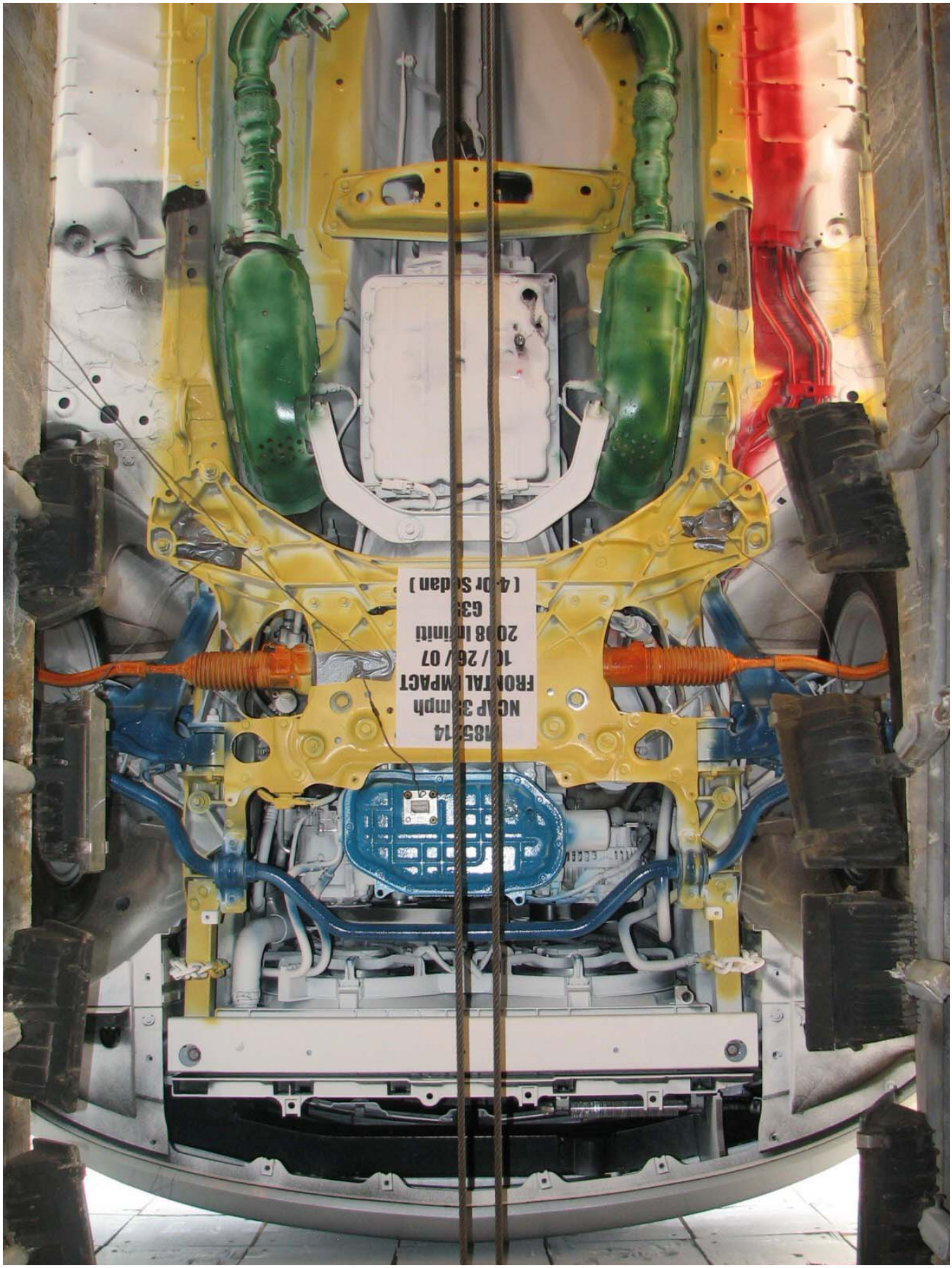


Figure A-24: Pre-Test Front Underbody

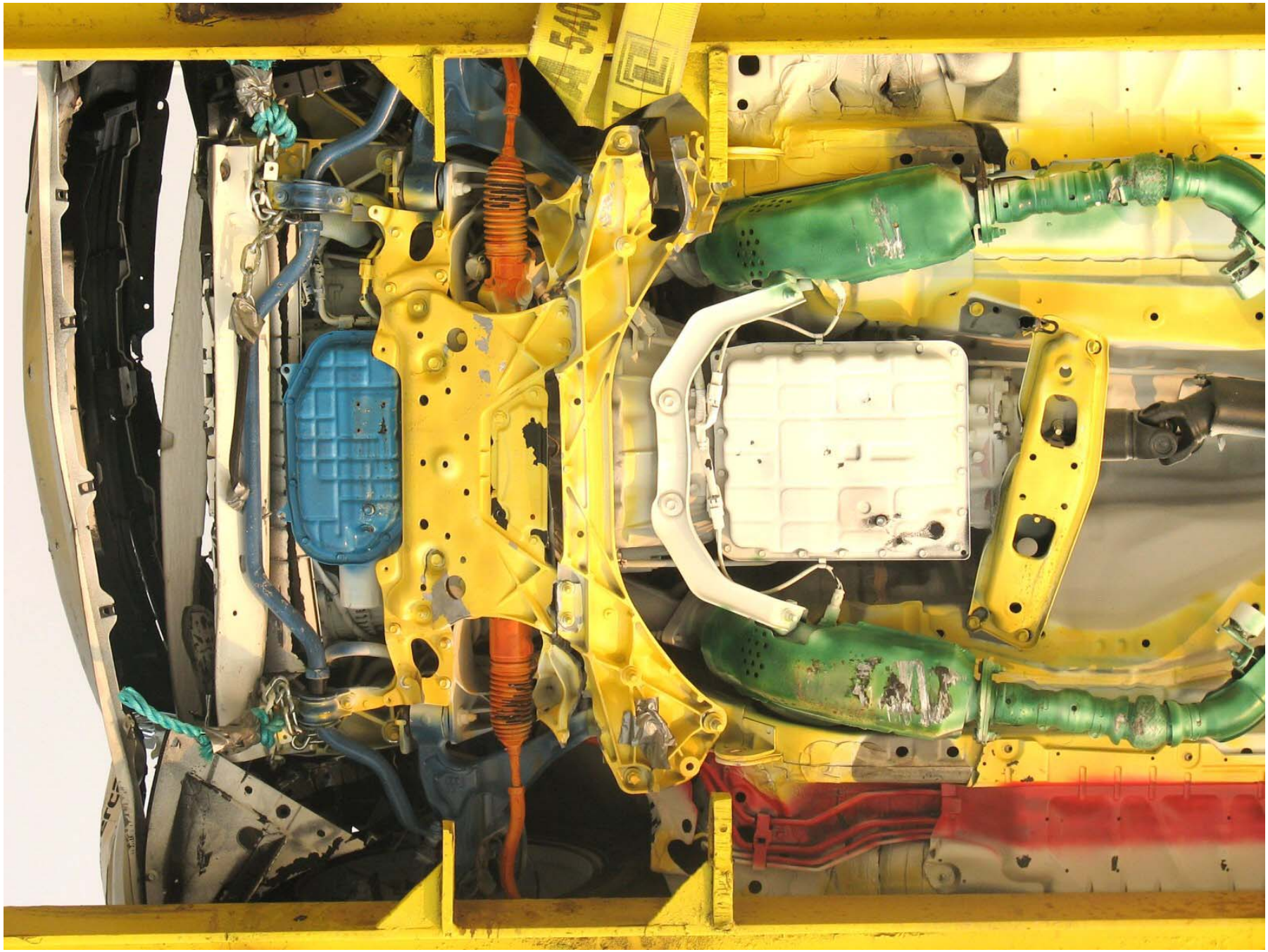


Figure A-25: Post-Test Front Underbody

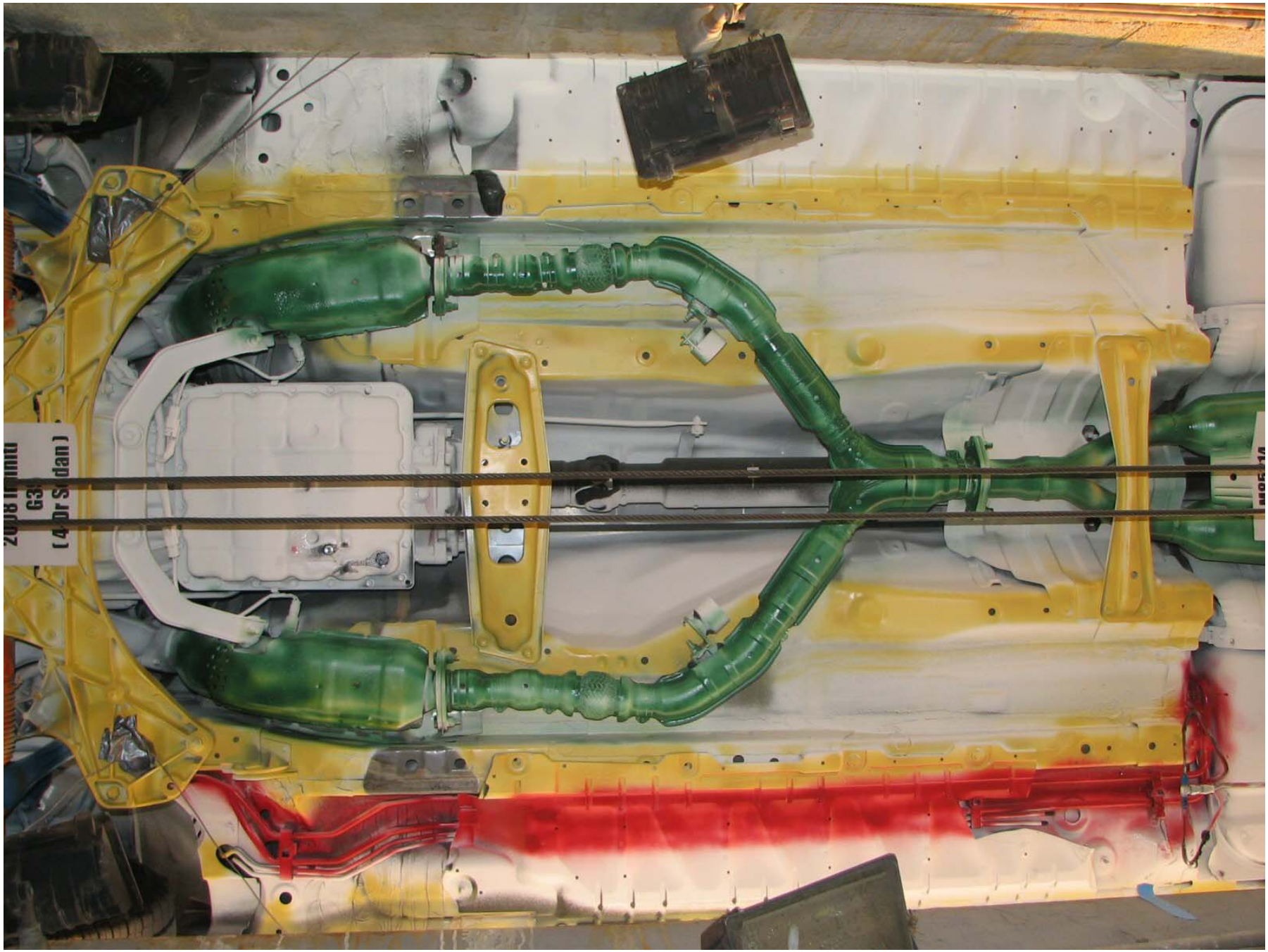


Figure A-26: Pre-Test Mid Underbody

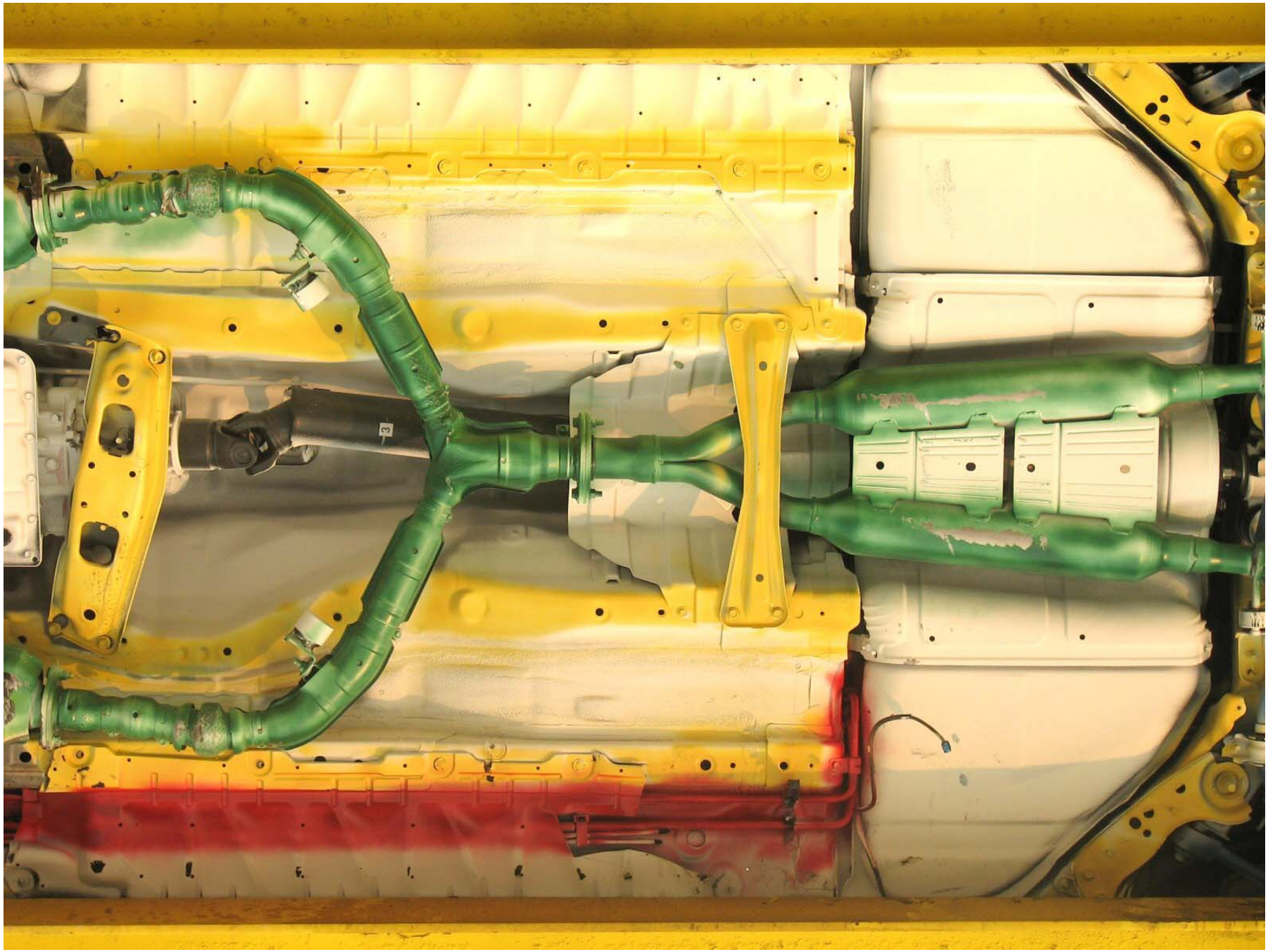


Figure A-27: Post-Test Mid Underbody

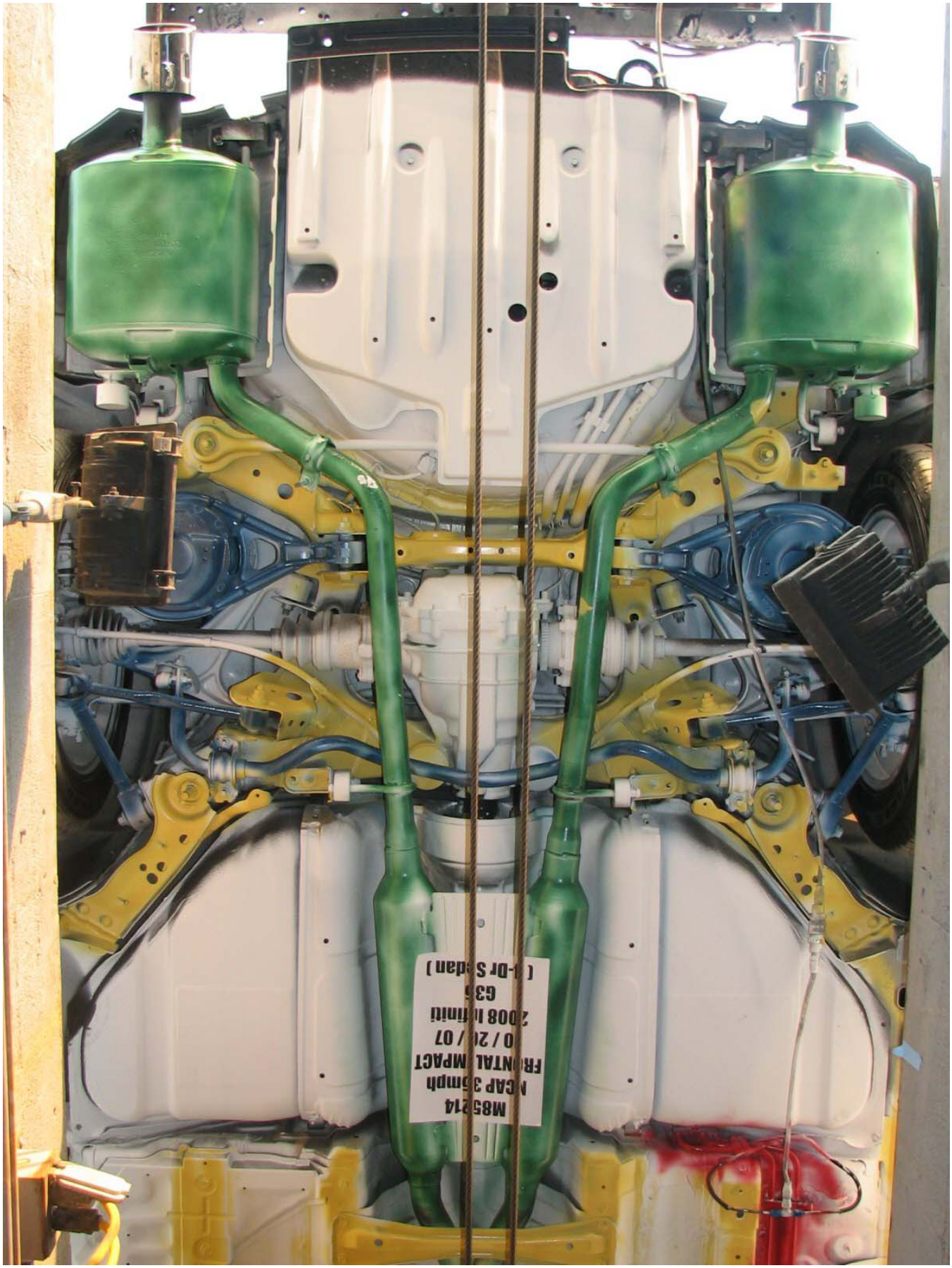


Figure A-28: Pre-Test Rear Underbody

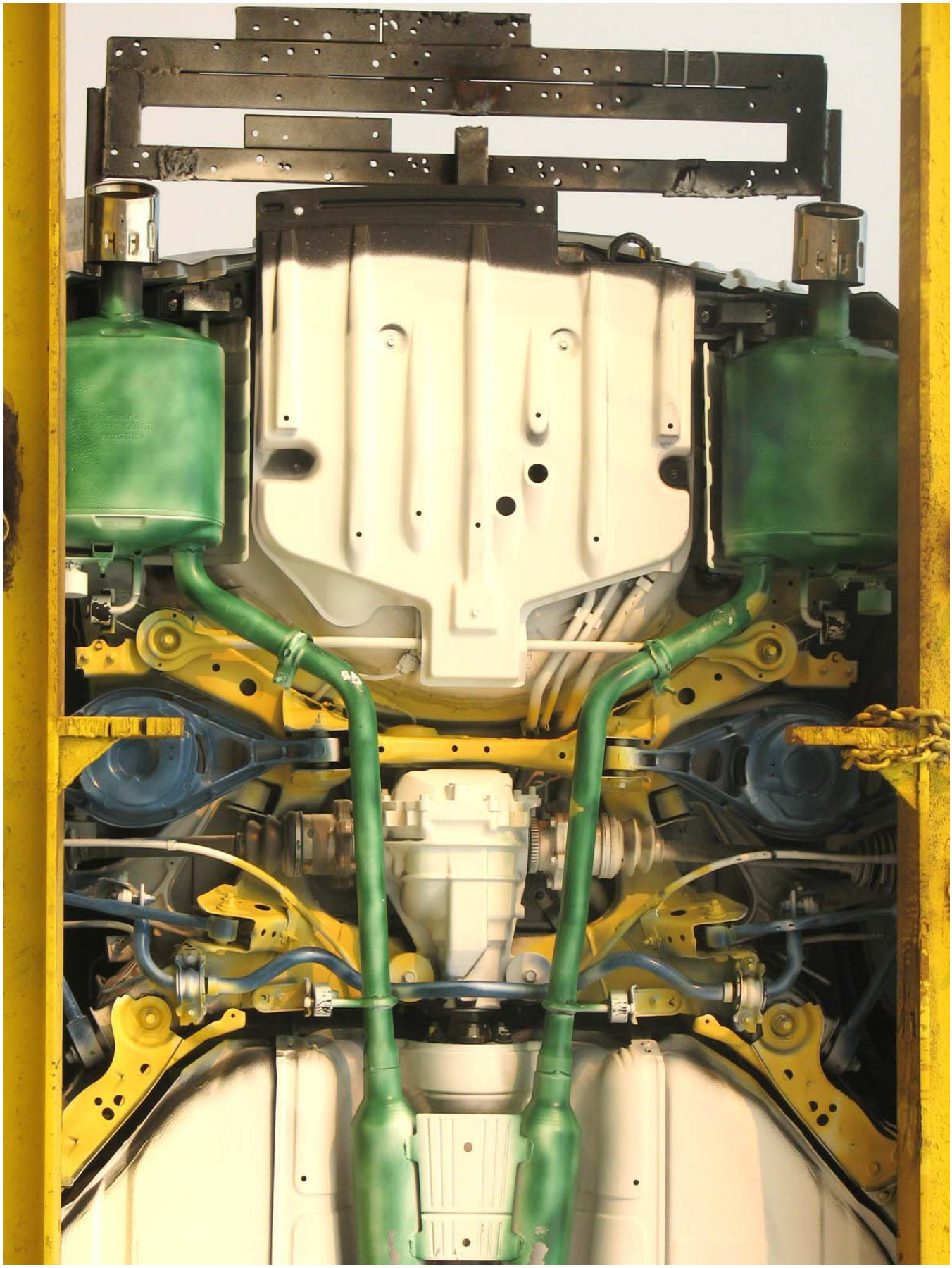


Figure A-29: Post-Test Rear Underbody

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)

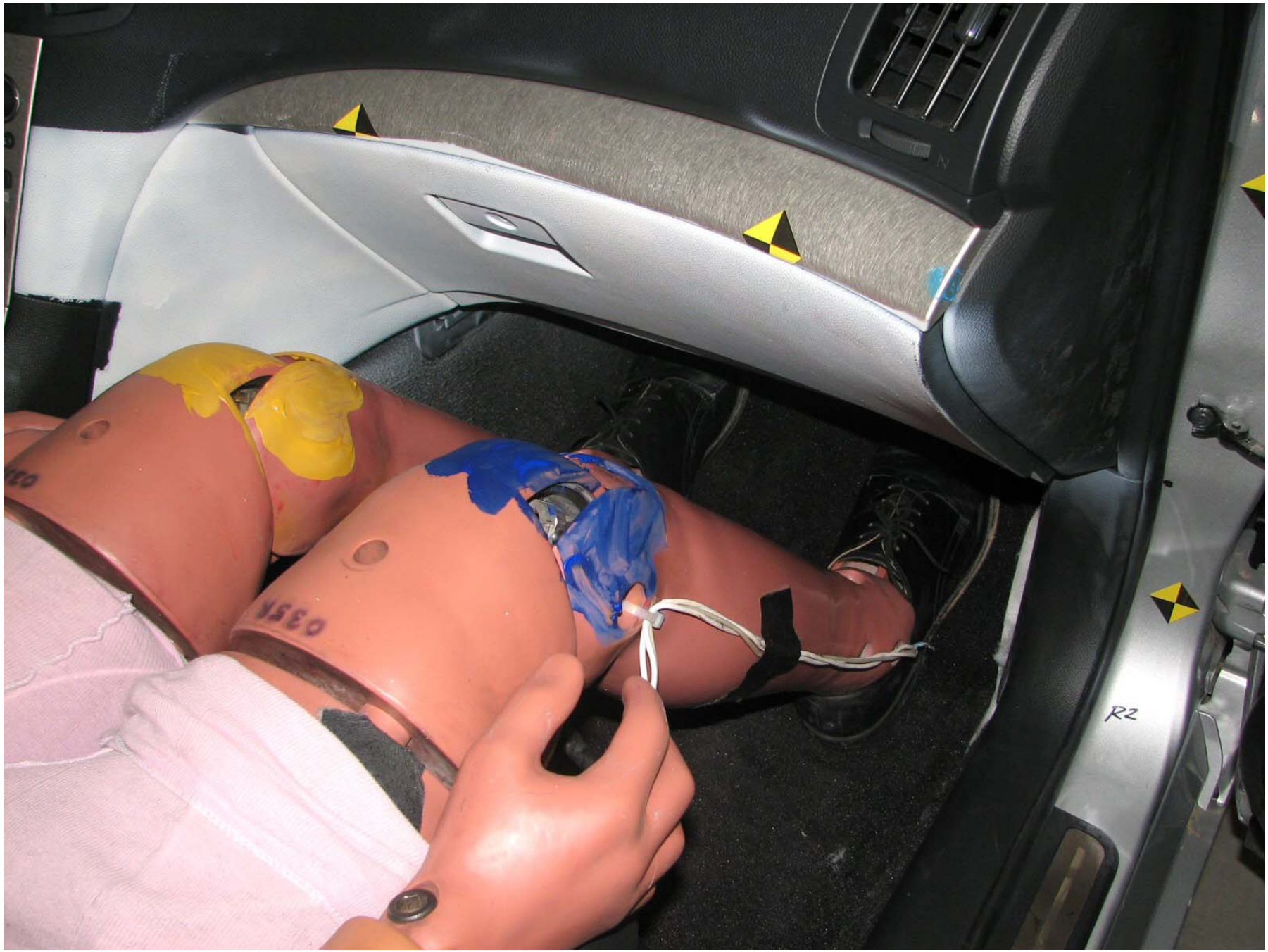


Figure A-50: Pre-Test Passenger Dummy Feet

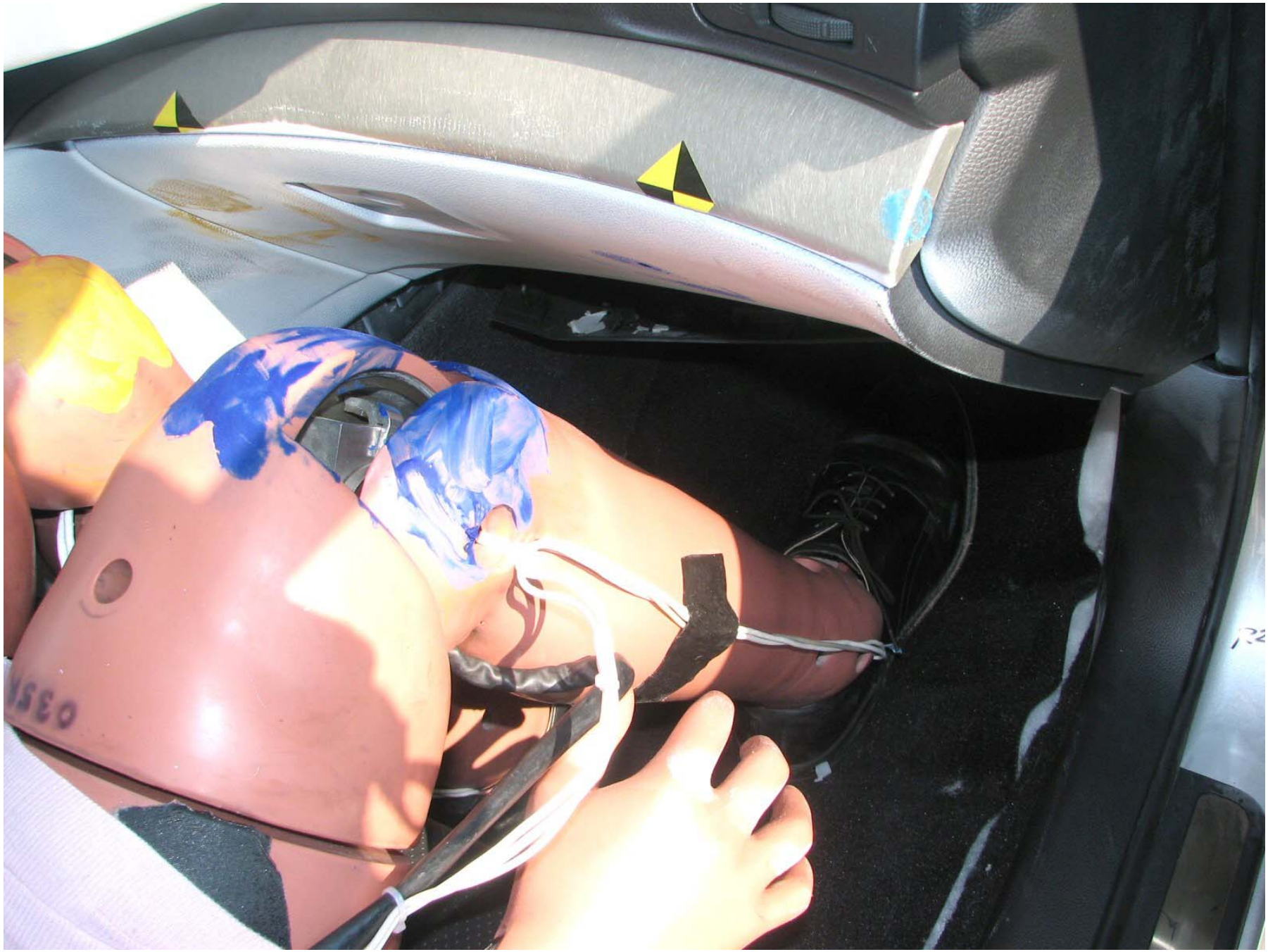


Figure A-51: Post-Test Passenger Dummy Feet

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

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

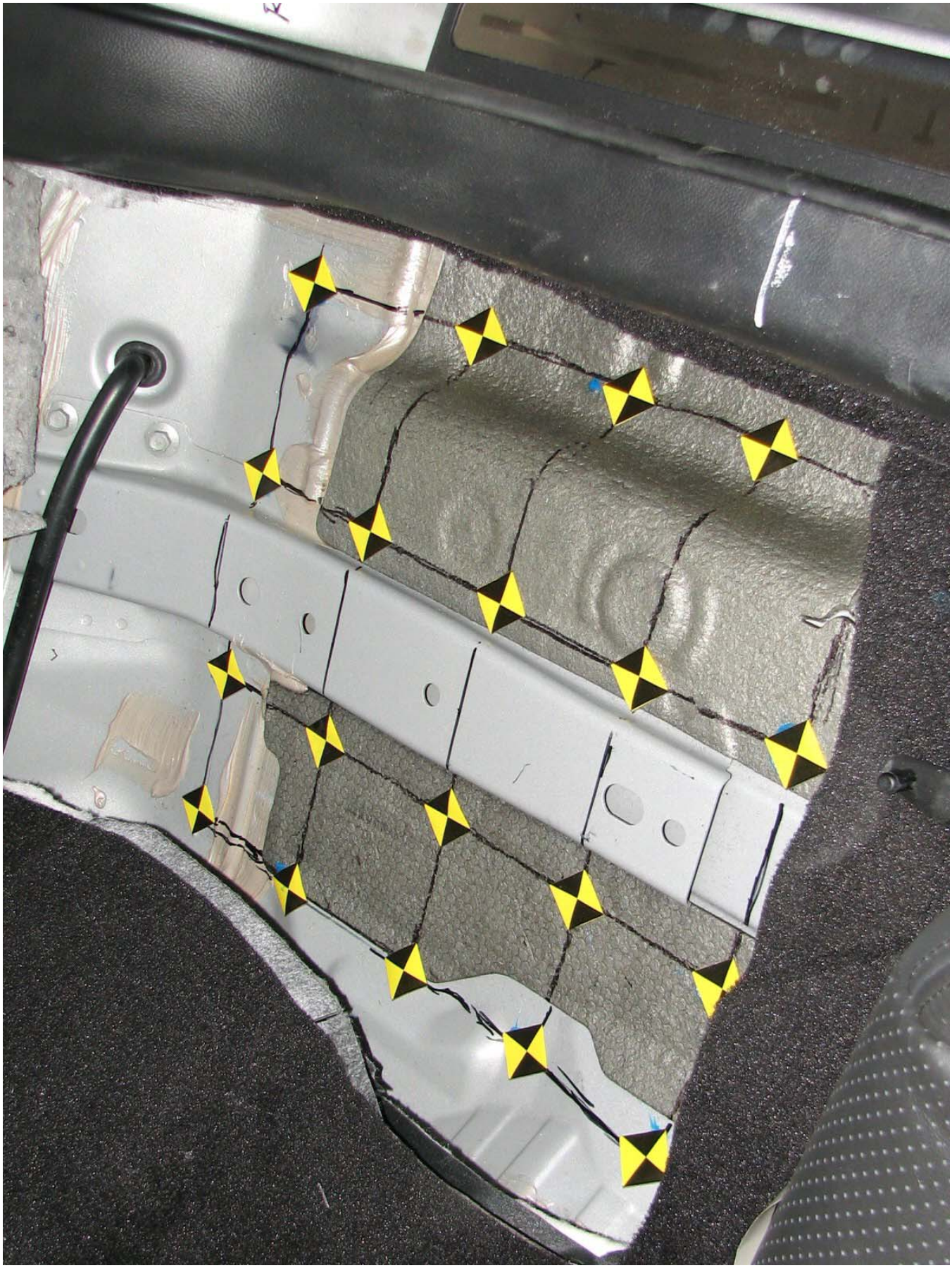


Figure A-54: Pre-Test Passenger Side Floor Pan

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°)

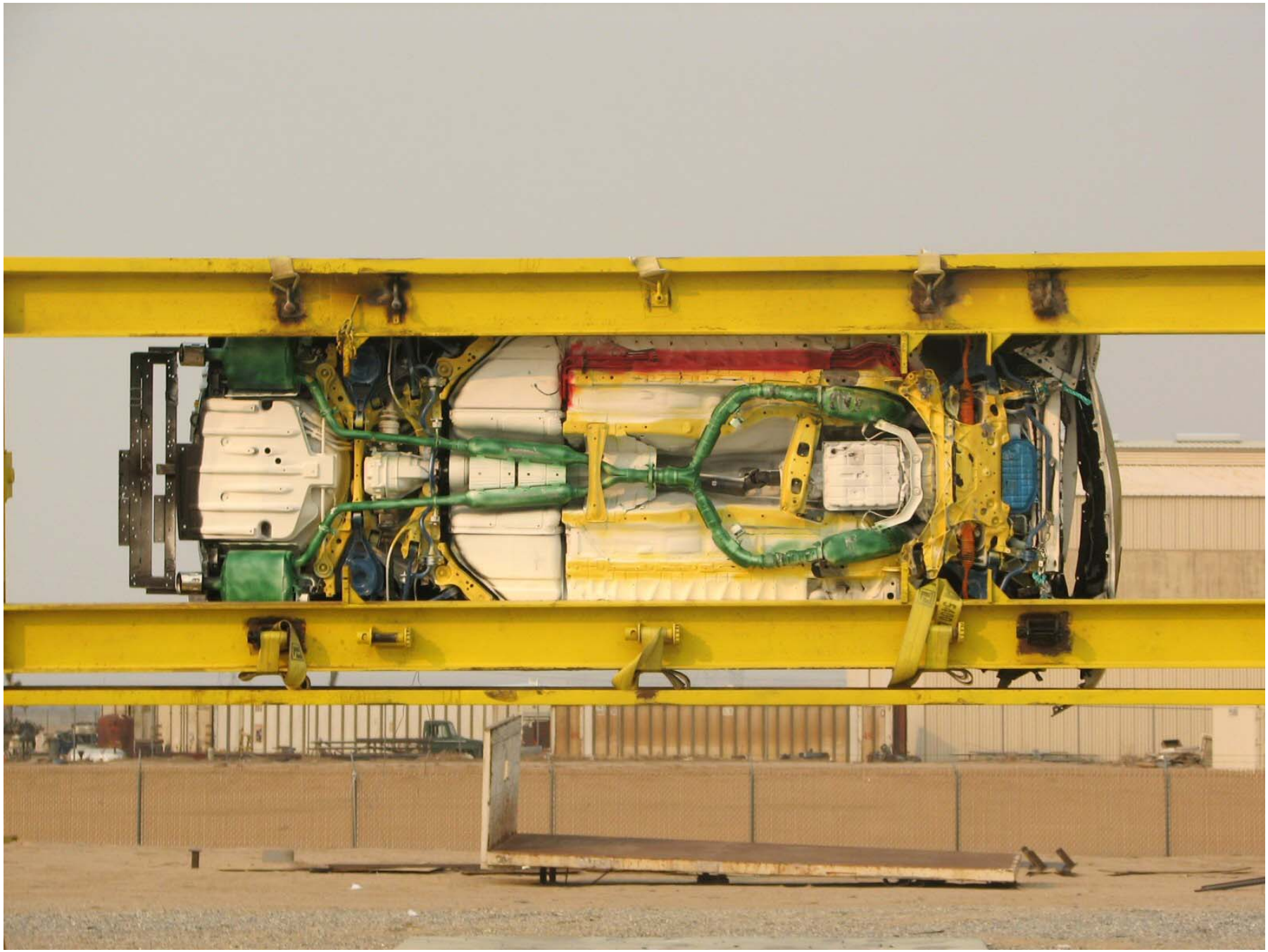


Figure A-61: Vehicle on Rollover Device (270°)

Figure A-62: Vehicle Impact

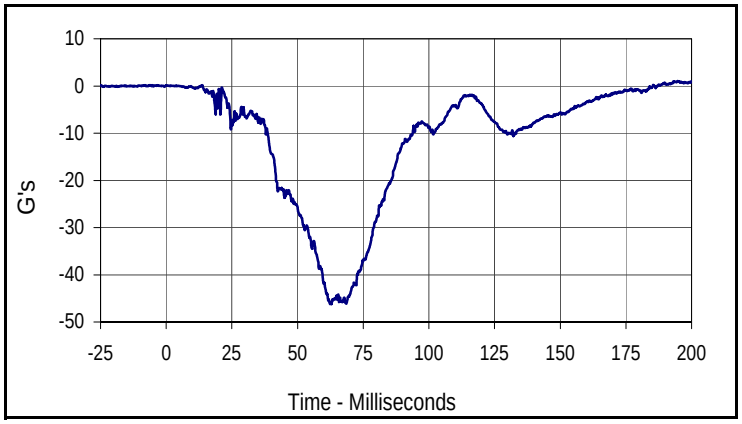
APPENDIX B
DATA PLOTS

LIST OF DATA PLOTS

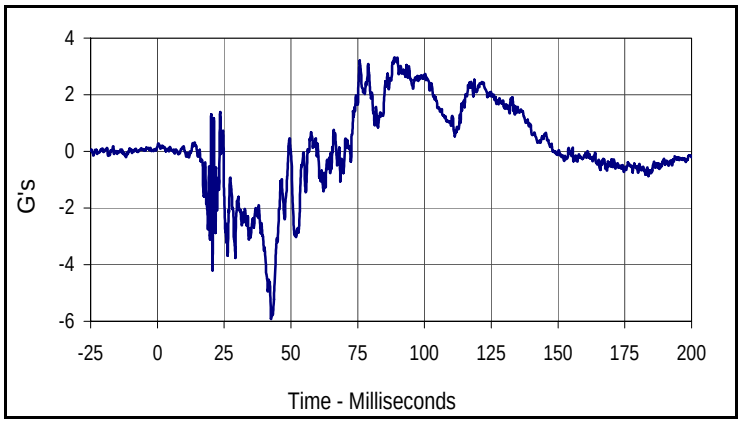
The following additional data plots for this test can be obtained from the research and development section of the NHTSA website. The website can be found at www.NHTSA.dot.gov.

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

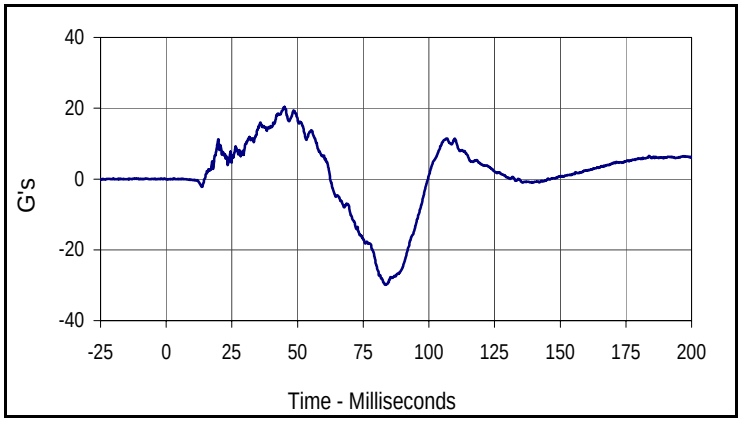
Test Vehicle:	2008 Infiniti G35 4-Door Sedan	Test Date:	10/26/07
Test Program:	2007 NHTSA 35mph NCAP	NHTSA No.:	M85214



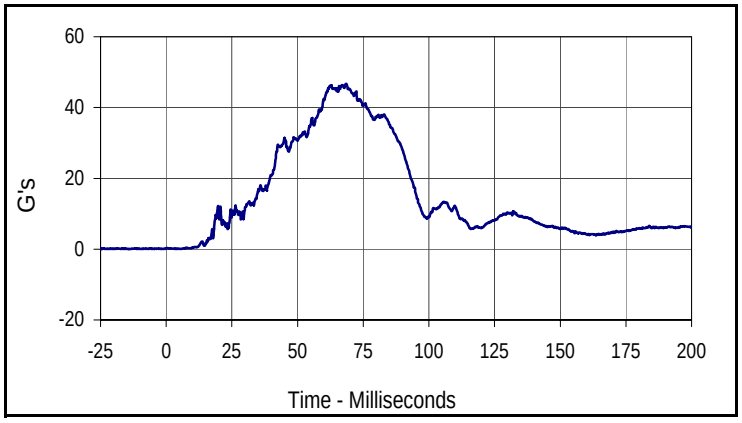
Curve Description			
Driver Head Primary X			
CURNO	Type	SAE Class	Units
001	FIL	1000	G's
Max	Time	Min	Time
1.0	194.8	-46.2	63.0



Curve Description			
Driver Head Primary Y			
CURNO	Type	SAE Class	Units
002	FIL	1000	G's
Max	Time	Min	Time
3.3	88.8	-5.9	42.6

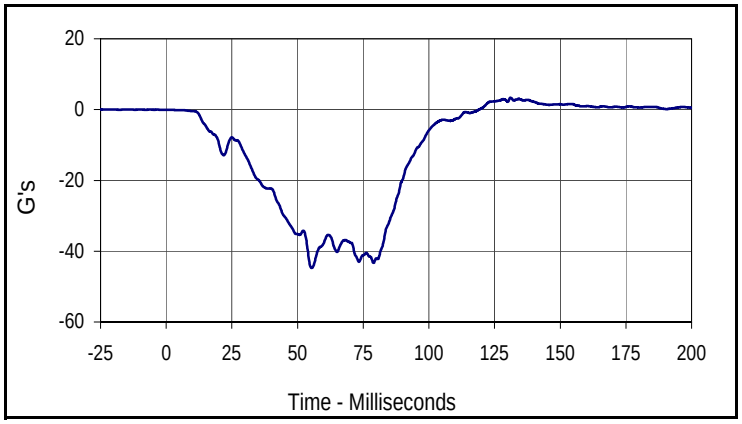


Curve Description			
Driver Head Primary Z			
CURNO	Type	SAE Class	Units
003	FIL	1000	G's
Max	Time	Min	Time
20.4	45.1	-29.9	83.4

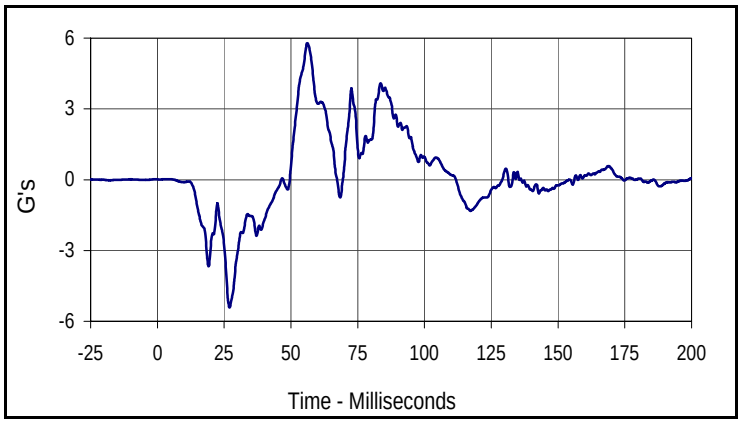


Curve Description			
Driver Head Resultant Primary			
CURNO	Type	SAE Class	Units
001	RES	1000	G's
Max	Time	Min	Time
46.7	68.5	0.0	4.1

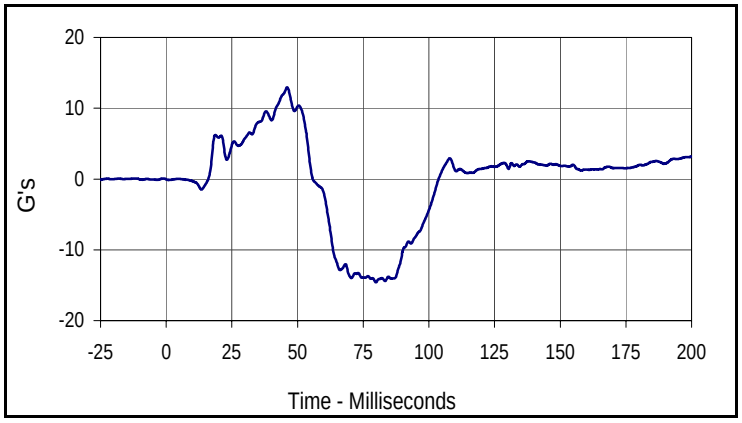
Test Vehicle:	2008 Infiniti G35 4-Door Sedan	Test Date:	10/26/07
Test Program:	2007 NHTSA 35mph NCAP	NHTSA No.:	M85214



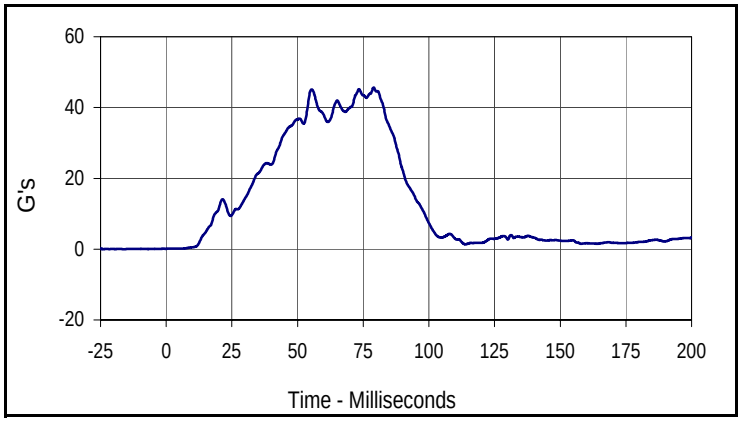
Curve Description			
Driver Chest Primary X			
CURNO	Type	SAE Class	Units
004	FIL	180	G's
Max	Time	Min	Time
3.4	131.0	-44.8	55.3



Curve Description			
Driver Chest Primary Y			
CURNO	Type	SAE Class	Units
005	FIL	180	G's
Max	Time	Min	Time
5.8	56.1	-5.4	27.0

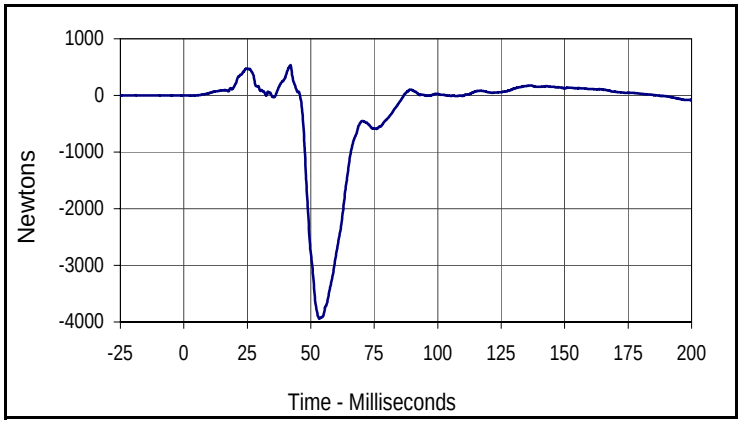


Curve Description			
Driver Chest Primary Z			
CURNO	Type	SAE Class	Units
006	FIL	180	G's
Max	Time	Min	Time
12.9	46.0	-14.6	79.8

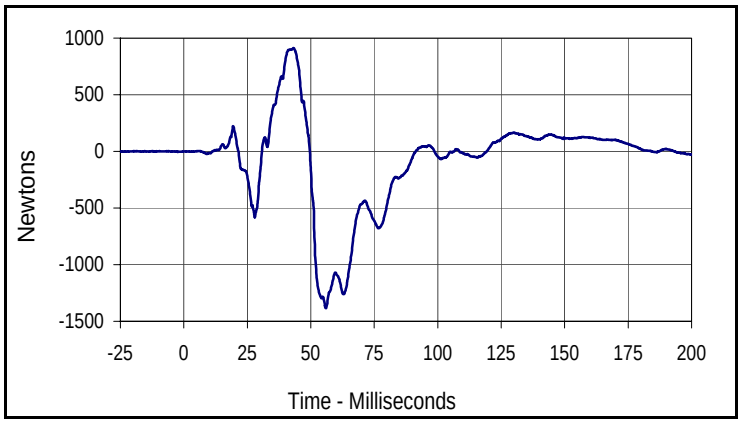


Curve Description			
Driver Chest Resultant Primary			
CURNO	Type	SAE Class	Units
004	RES	180	G's
Max	Time	Min	Time
45.6	79.0	0.1	0.0

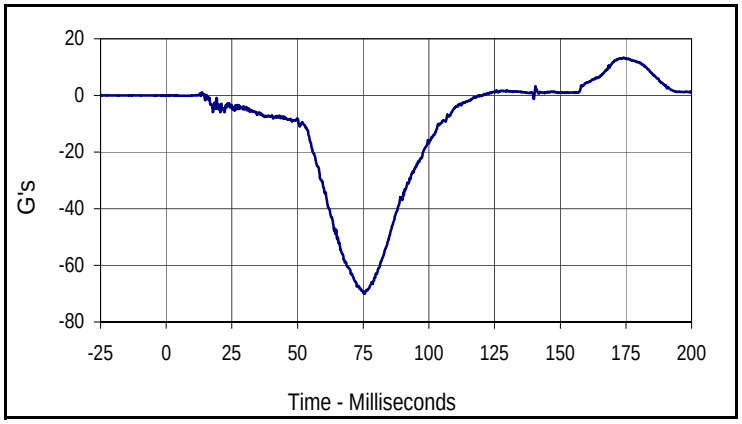
Test Vehicle:	2008 Infiniti G35 4-Door Sedan	Test Date:	10/26/07
Test Program:	2007 NHTSA 35mph NCAP	NHTSA No.:	M85214



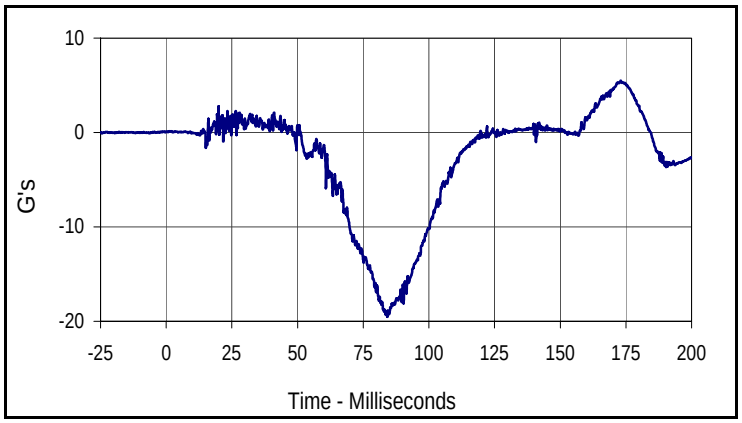
Curve Description			
Driver Left Femur Force Z			
CURNO	Type	SAE Class	Units
007	FIL	600	Newtons
Max	Time	Min	Time
535.7	42.0	-3941.9	53.4



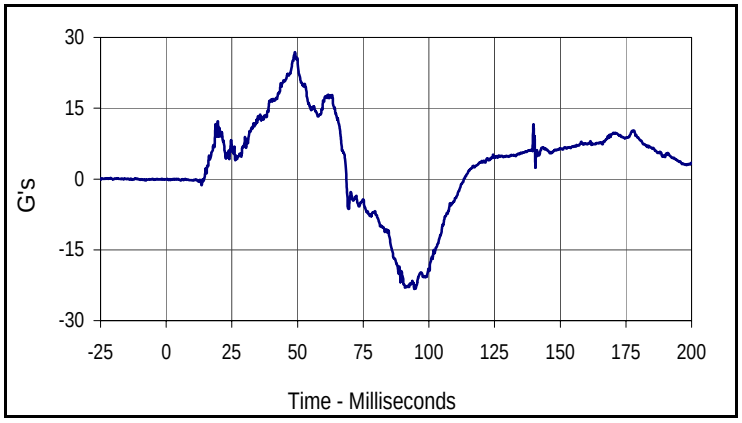
Curve Description			
Driver Right Femur Force Z			
CURNO	Type	SAE Class	Units
008	FIL	600	Newtons
Max	Time	Min	Time
911.5	43.2	-1383.8	55.9



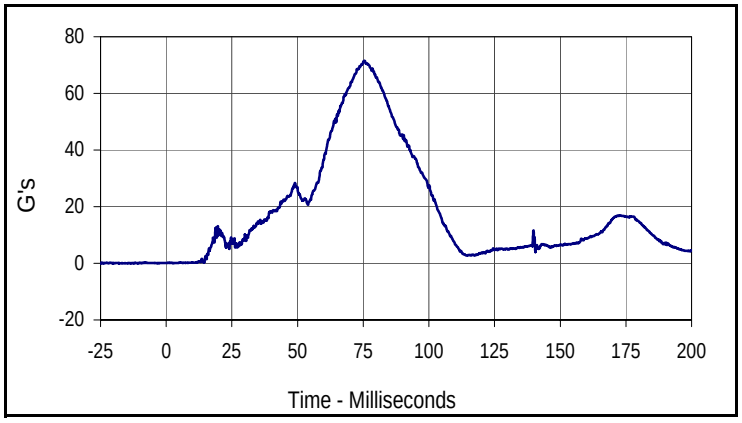
Curve Description			
Passenger Head Primary X			
CURNO	Type	SAE Class	Units
009	FIL	1000	G's
Max	Time	Min	Time
13.3	174.1	-70.1	75.5



Curve Description			
Passenger Head Primary Y			
CURNO	Type	SAE Class	Units
010	FIL	1000	G's
Max	Time	Min	Time
5.5	173.0	-19.5	84.1

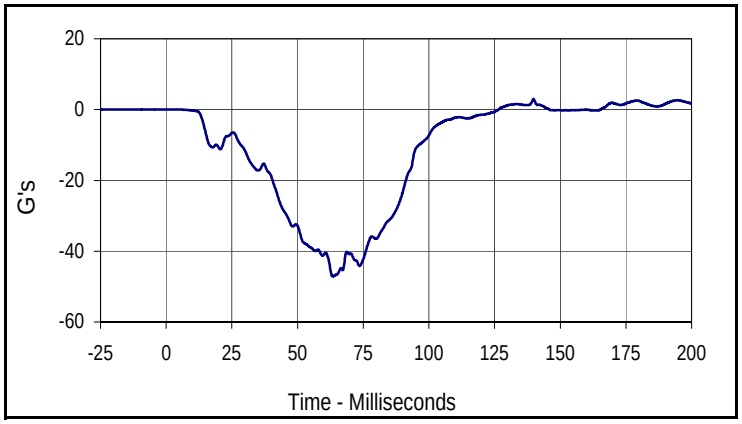


Curve Description			
Passenger Head Primary Z			
CURNO	Type	SAE Class	Units
011	FIL	1000	G's
Max	Time	Min	Time
26.9	49.1	-23.3	94.5

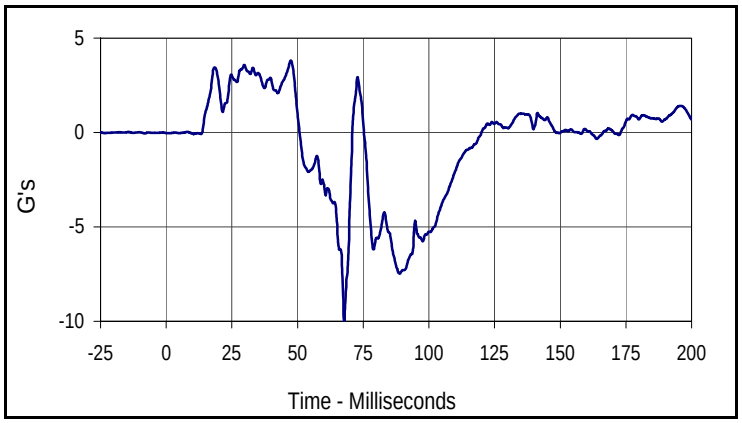


Curve Description			
Passenger Head Resultant Primary			
CURNO	Type	SAE Class	Units
009	RES	1000	G's
Max	Time	Min	Time
71.5	75.5	0.1	2.8

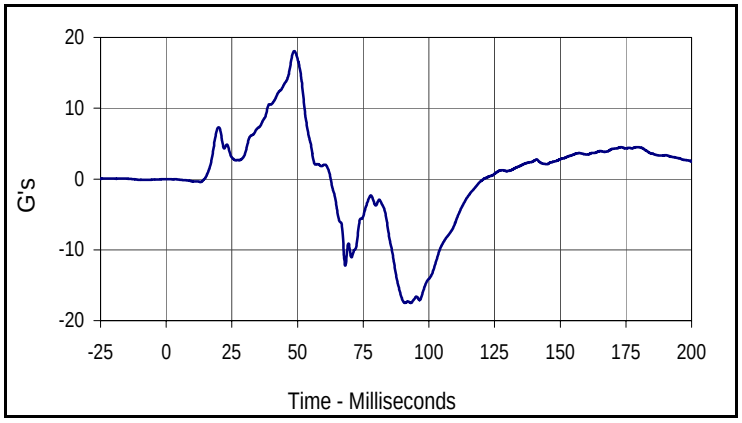
Test Vehicle:	2008 Infiniti G35 4-Door Sedan	Test Date:	10/26/07
Test Program:	2007 NHTSA 35mph NCAP	NHTSA No.:	M85214



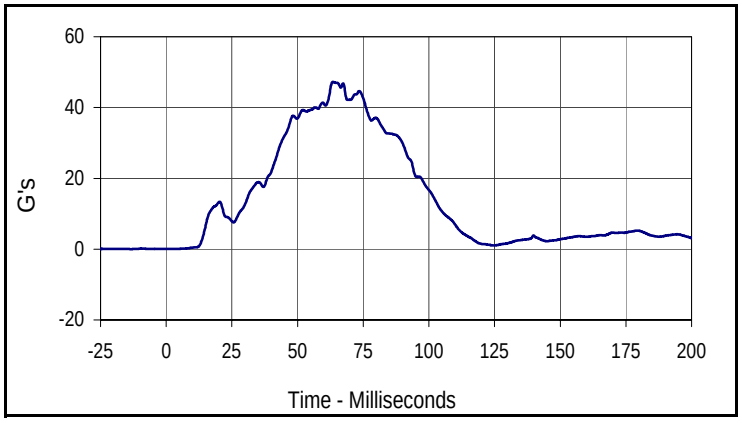
Curve Description			
Passenger Chest Primary X			
CURNO	Type	SAE Class	Units
012	FIL	180	G's
Max	Time	Min	Time
3.0	139.8	-47.1	63.4



Curve Description			
Passenger Chest Primary Y			
CURNO	Type	SAE Class	Units
013	FIL	180	G's
Max	Time	Min	Time
3.8	47.4	-10.0	67.8

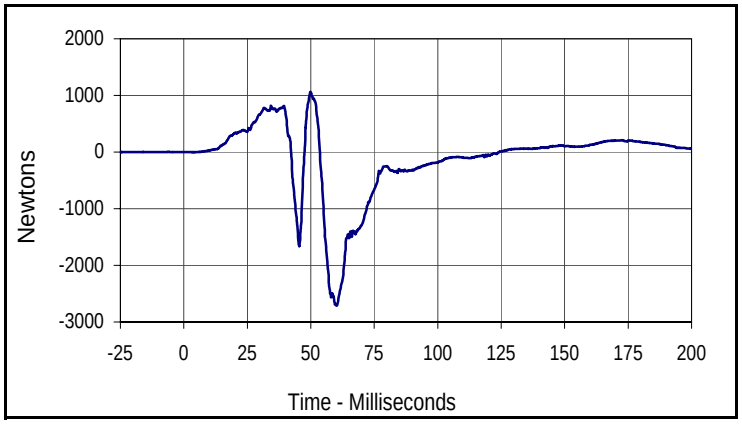


Curve Description			
Passenger Chest Primary Z			
CURNO	Type	SAE Class	Units
014	FIL	180	G's
Max	Time	Min	Time
18.1	48.8	-17.5	93.1

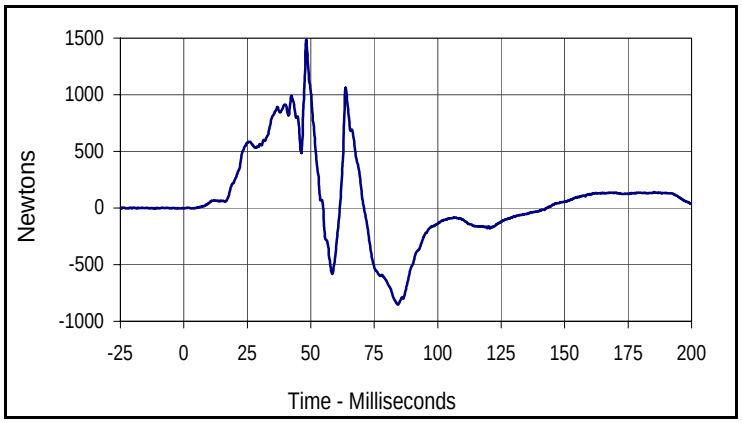


Curve Description			
Passenger Chest Resultant Primary			
CURNO	Type	SAE Class	Units
012	RES	180	G's
Max	Time	Min	Time
47.3	63.4	0.0	0.0

Test Vehicle:	2008 Infiniti G35 4-Door Sedan	Test Date:	10/26/07
Test Program:	2007 NHTSA 35mph NCAP	NHTSA No.:	M85214



Curve Description			
Passenger Left Femur Force Z			
CURNO	Type	SAE Class	Units
015	FIL	600	Newtons
Max	Time	Min	Time
1064.4	49.9	-2713.9	60.1



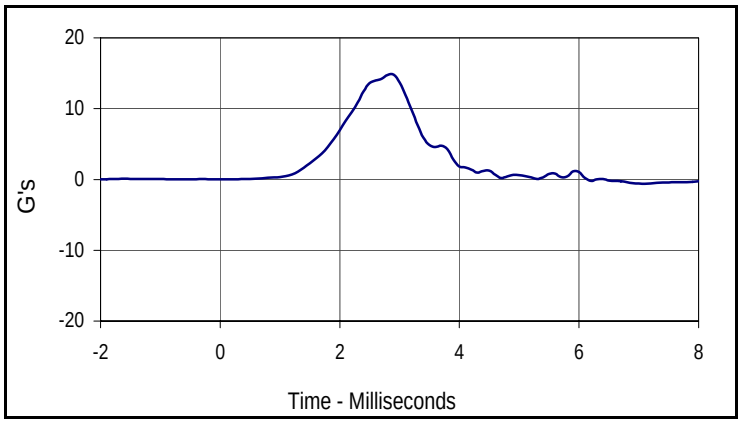
Curve Description			
Passenger Right Femur Force Z			
CURNO	Type	SAE Class	Units
016	FIL	600	Newtons
Max	Time	Min	Time
1486.0	48.2	-852.5	84.3

APPENDIX C
DUMMY CALIBRATION DATA

Test Program:	Hybrid III 50th Percentile Male Head Drop Test	Test Date:	10/25/07
ATD Serial No.:	034	Test I.D.:	HD10S

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	232.0	Pass
Peak Lateral Acceleration	G's	≤15.0	14.8	Pass
Is Acceleration Unimodal?	Yes/No	Yes	Yes	Pass
		Overall Test Results		Pass

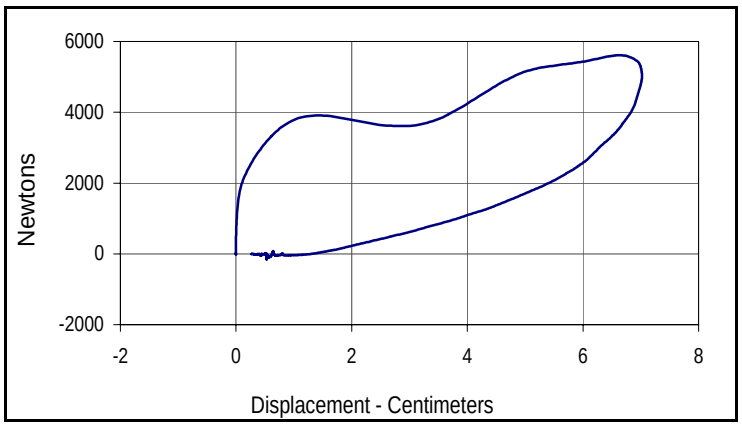
Curve Description			
Head Resultant			
CURNO	Type	SAE Class	Units
001	RES	1000	G's
Max	Time	Min	Time
232.0	2.7	0.0	0.0



Curve Description			
Head Y			
CURNO	Type	SAE Class	Units
002	FIL	1000	G's
Max	Time	Min	Time
14.8	2.9	0.0	0.0

Test Program:	Hybrid III 50th Percentile Male Thorax Impact Test	Test Date:	10/25/07
ATD Serial No.:	034	Test I.D.:	CH10S

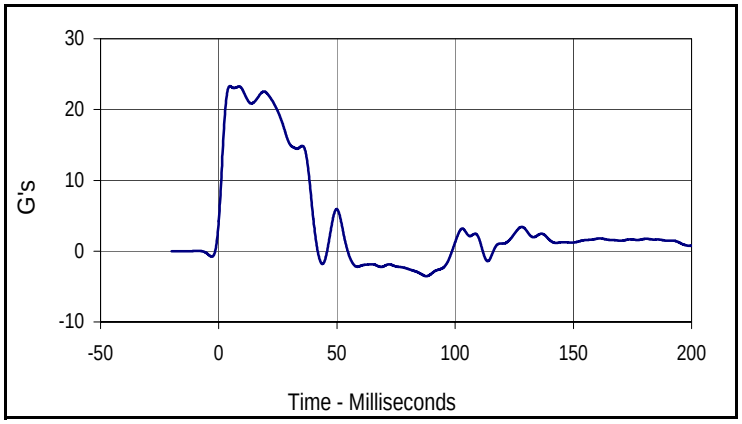
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	6.58 to 6.82	6.63	Pass
Peak Probe Force	Newtons	5159 to 5893	5613	Pass
Peak Sternum Deflection	CM	6.35 to 7.26	7.02	Pass
Internal Hysterysis	%	69 to 85	72.2	Pass
		Overall Test Results		Pass



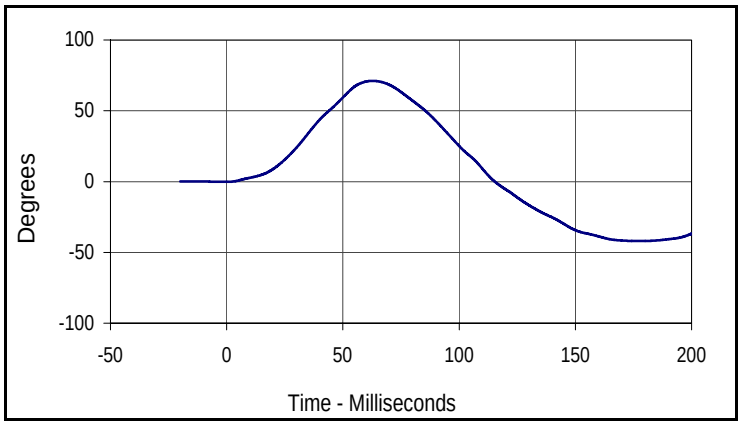
Curve Description			
Probe Force vs. Chest Deflection			
CURNO	Type	SAE Class	Hysterysis
001	FIL	180	72.2
Peak Probe Force		Peak Chest Deflection	
5613		7.02	

Test Program:	Hybrid III 50th Percentile Male Neck Flexion Test	Test Date:	10/25/07
ATD Serial No.:	034	Test I.D.:	NF10S

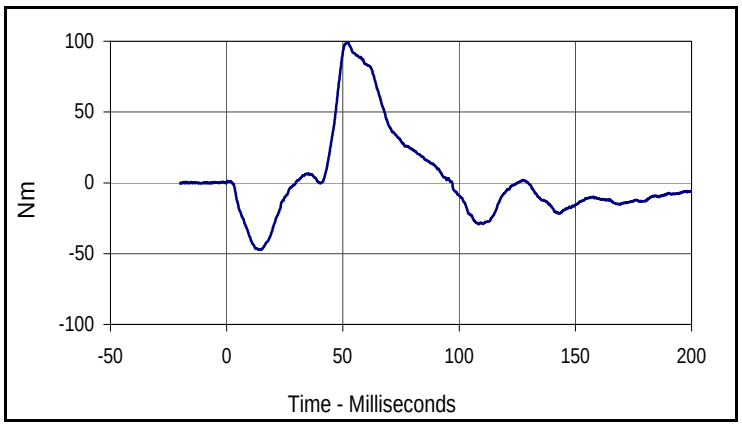
Tested Parameter		Units	Specification	Result	Pass/Fail
Laboratory Temperature		°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity		%	10 to 70	30	Pass
Pendulum Velocity		m/s	6.89 to 7.13	7.05	Pass
Pendulum Deceleration	10 Msec.	G's	22.5 to 27.5	22.8	Pass
	20 Msec.	G's	17.6 to 22.6	22.4	Pass
	30 Msec.	G's	12.5 to 18.5	15.1	Pass
Peak Pendulum Decel. after 30 Msec.		G's	≤ 29.0	15.1	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	71.2	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	99.3	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	4.7	-3.5	87.8



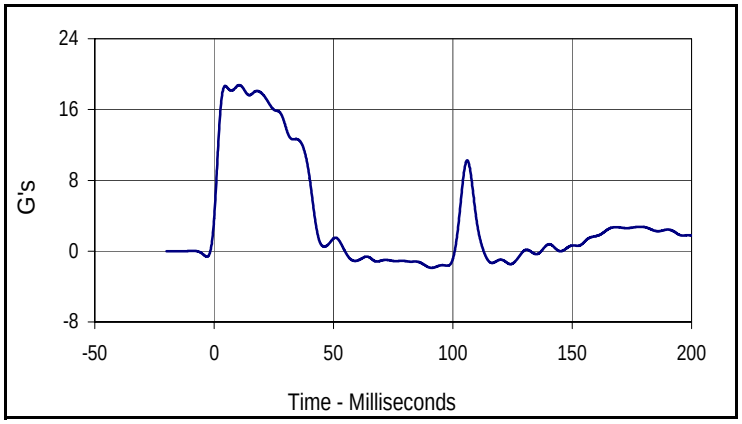
Curve Description			
"D" Plane Rotation			
CURNO	Type	SAE Class	Units
003	FIL	60	Degrees
Max	Time	Min	Time
71.2	62.7	-42.0	178.6



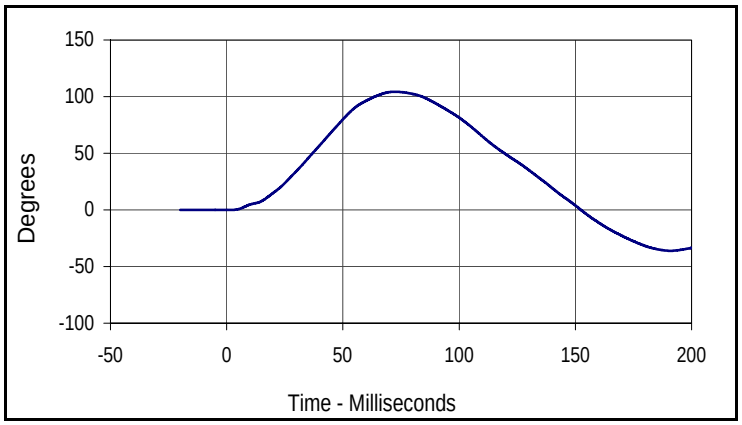
Curve Description			
Moment About Occipital Condyle			
CURNO	Type	SAE Class	Units
004	FIL	600	Nm
Max	Time	Min	Time
99.3	52.1	-47.4	14.7

Test Program:	Hybrid III 50th Percentile Male Neck Extension Test	Test Date:	10/25/07
ATD Serial No.:	034	Test I.D.:	NE10S

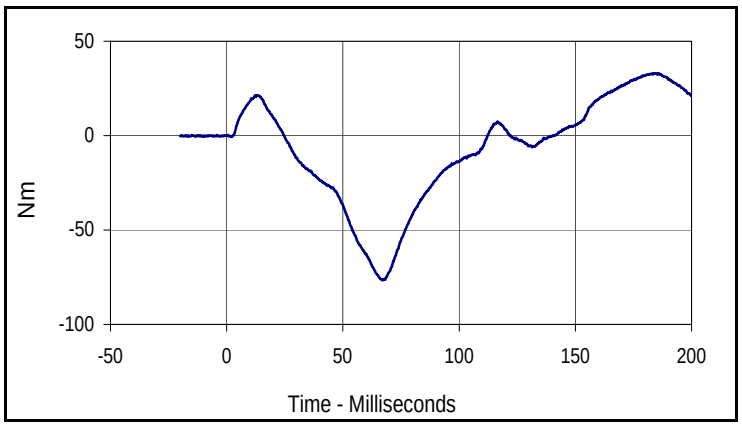
Tested Parameter		Units	Specification	Result	Pass/Fail
Laboratory Temperature		°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity		%	10 to 70	30	Pass
Pendulum Velocity		m/s	5.94 to 6.19	6.05	Pass
Pendulum Deceleration	10 Msec.	G's	17.2 to 21.2	18.7	Pass
	20 Msec.	G's	14.0 to 19.0	17.8	Pass
	30 Msec.	G's	11.0 to 16.0	14.0	Pass
Peak Pendulum Decel. after 30 Msec.		G's	≤ 22.0	14.0	Pass
Deceleration Decay, Time to Cross 5 G's		Msec.	38.0 to 46.0	41.6	Pass
Maximum "D" Plane Rotation	Max	Degrees	81.0 to 106.0	104.3	Pass
	Time	Msec.	72.0 to 82.0	72.4	Pass
"D" Plane Rotation Decay, Time To Zero Crossing		Msec.	147.0 to 174.0	152.4	Pass
Moment About Occ. Condyle	Max	Nm	-52.9 to- 79.9	-76.5	Pass
	Time	Msec.	65.0 to 79.0	67.0	Pass
Positive Moment Decay, Time To Zero Crossing		Msec.	120.0 to 148.0	140.8	Pass
			Overall Test Results		Pass



Curve Description			
Pendulum Deceleration			
CURNO	Type	SAE Class	Units
001	FIL	60	G's
Max	Time	Min	Time
18.8	10.5	-1.9	91.2



Curve Description			
"D" Plane Rotation			
CURNO	Type	SAE Class	Units
003	FIL	60	Degrees
Max	Time	Min	Time
104.3	72.4	-36.1	190.9



Curve Description			
Moment About Occipital Condyle			
CURNO	Type	SAE Class	Units
004	FIL	600	Nm
Max	Time	Min	Time
33.1	184.8	-76.5	67.0

Test Program:	Hybrid III 50th Percentile Male Knee Impact Test	Test Date:	10/25/07
ATD Serial No.:	034	Test I.D.:	LK10S , RK10S

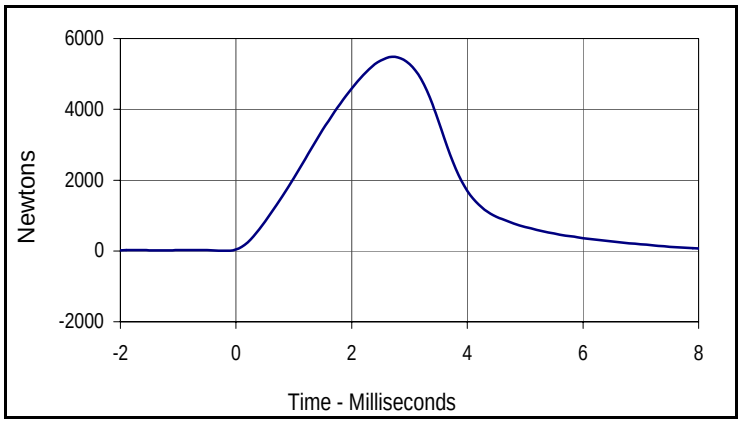
Left Knee

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	2.10	Pass
Peak Probe Force	Newtons	4715 to 5782	5442	Pass
		Overall Test Results		Pass

Right Knee

Pendulum Velocity at T=0	m/sec	2.07 to 2.13	2.09	Pass
Peak Probe Force	Newtons	4715 to 5782	5482	Pass
		Overall Test Results		Pass

Curve Description			
Left Knee Probe Force			
CURNO	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Time	Min	Time
5442.4	2.6	-14.7	-0.2



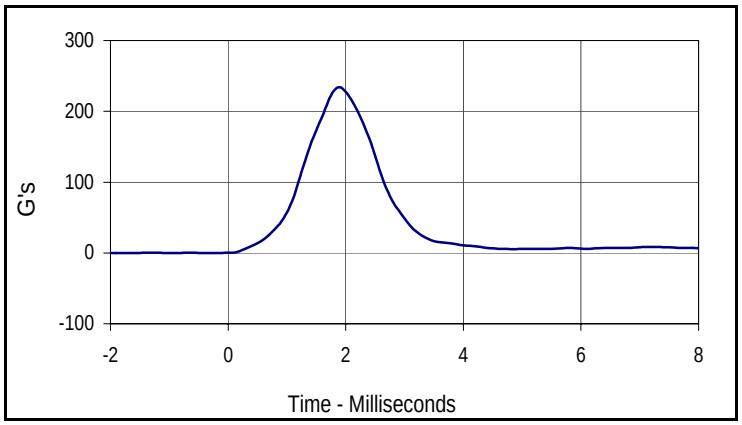
Curve Description			
Right Knee Probe Force			
CURNO	Type	SAE Class	Units
002	FIL	600	Newtons
Max	Time	Min	Time
5482.2	2.7	-2.6	9.8

Test Program:	Hybrid III 50th Percentile Male External Measurements	Test Date:	10/25/07
ATD Serial No.:	034	Test I.D.:	N/A

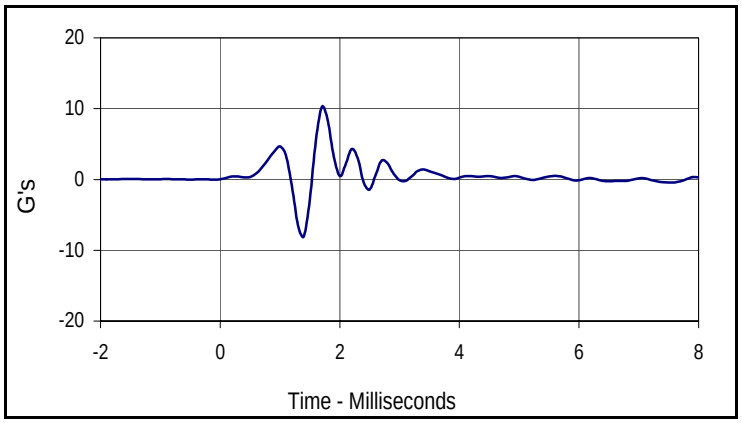
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
A - Total sitting height	mm	879 to 889	882	Pass
B - Shoulder pivot height	mm	505 to 521	510	Pass
C - "H" point height	mm	84 to 89	89	Pass
D - "H" point from seat back	mm	135 to 140	136	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	335	Pass
J - Elbow rest height	mm	190 to 211	204	Pass
K - Buttock to knee length	mm	579 to 604	597	Pass
L - Poplipteal length	mm	429 to 455	443	Pass
M - Knee pivot height	mm	485 to 500	491	Pass
N - Buttock poplipteal length	mm	452 to 477	476	Pass
O - Chest depth	mm	213 to 229	213	Pass
P - Foot length	mm	251 to 267	256	Pass
V - Shoulder breadth	mm	422 to 437	428	Pass
W - Foot breadth	mm	91 to 107	100	Pass
Y - Chest circumference	mm	970 to 1001	993	Pass
Z - Waist circumference	mm	836 to 866	842	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:	Hybrid III 50th Percentile Male Head Drop Test	Test Date:	10/25/07
ATD Serial No.:	035	Test I.D.:	HD10T

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	233.9	Pass
Peak Lateral Acceleration	G's	≤15.0	10.3	Pass
Is Acceleration Unimodal?	Yes/No	Yes	Yes	Pass
		Overall Test Results		Pass



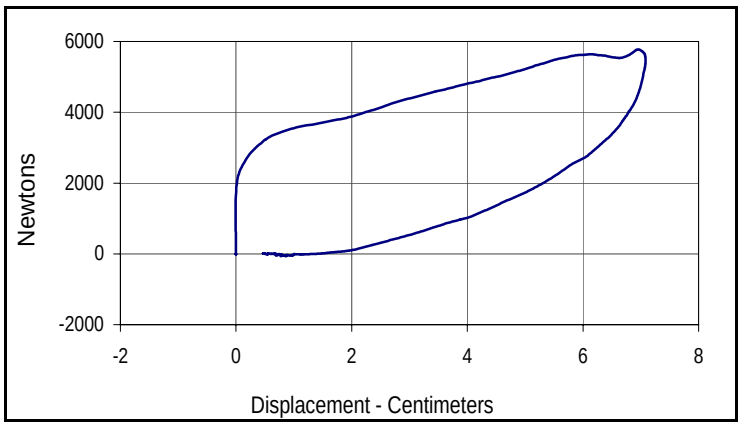
Curve Description			
Head Resultant			
CURNO	Type	SAE Class	Units
001	RES	1000	G's
Max	Time	Min	Time
233.9	1.9	0.0	-0.2



Curve Description			
Head Y			
CURNO	Type	SAE Class	Units
002	FIL	1000	G's
Max	Time	Min	Time
10.3	1.7	-8.1	1.4

Test Program:	Hybrid III 50th Percentile Male Thorax Impact Test	Test Date:	10/25/07
ATD Serial No.:	035	Test I.D.:	CH10T

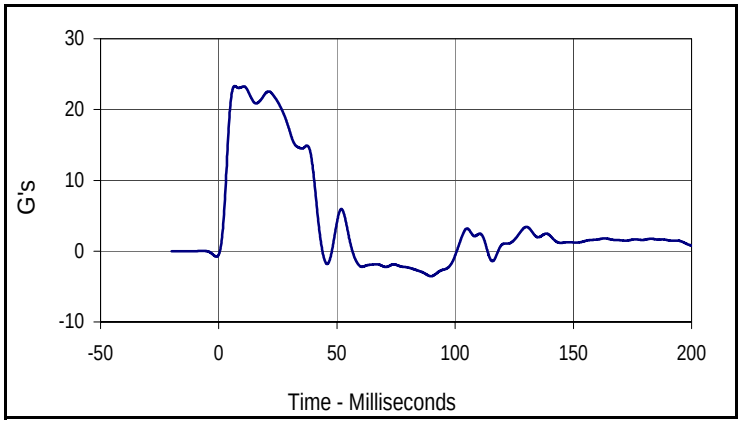
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	6.58 to 6.82	6.80	Pass
Peak Probe Force	Newtons	5159 to 5893	5777	Pass
Peak Sternum Deflection	CM	6.35 to 7.26	7.08	Pass
Internal Hysterysis	%	69 to 85	73.2	Pass
		Overall Test Results		Pass



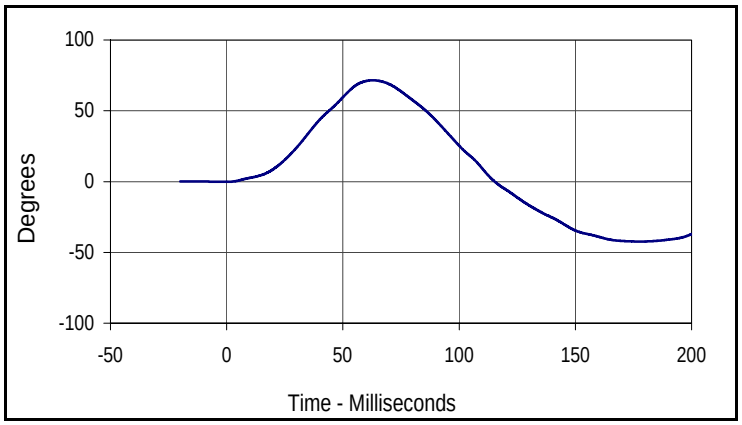
Curve Description			
Probe Force vs. Chest Deflection			
CURNO	Type	SAE Class	Hysterysis
001	FIL	180	73.2
Peak Probe Force		Peak Chest Deflection	
5777		7.08	

Test Program:	Hybrid III 50th Percentile Male Neck Flexion Test	Test Date:	10/25/07
ATD Serial No.:	035	Test I.D.:	NF10T

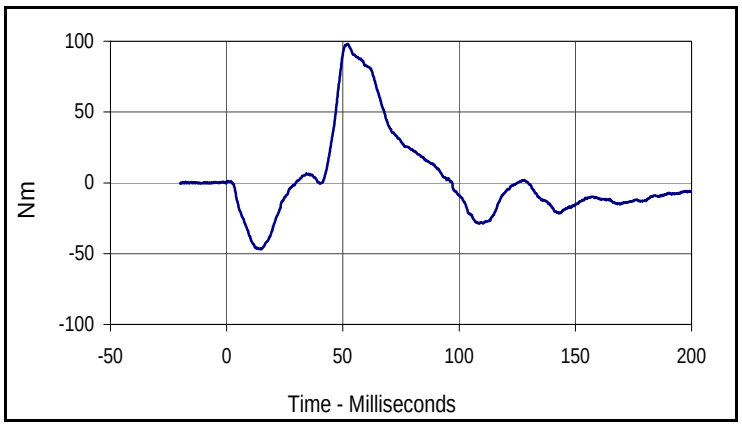
Tested Parameter		Units	Specification	Result	Pass/Fail
Laboratory Temperature		°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity		%	10 to 70	30	Pass
Pendulum Velocity		m/s	6.89 to 7.13	7.04	Pass
Pendulum Deceleration	10 Msec.	G's	22.5 to 27.5	23.2	Pass
	20 Msec.	G's	17.6 to 22.6	22.4	Pass
	30 Msec.	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



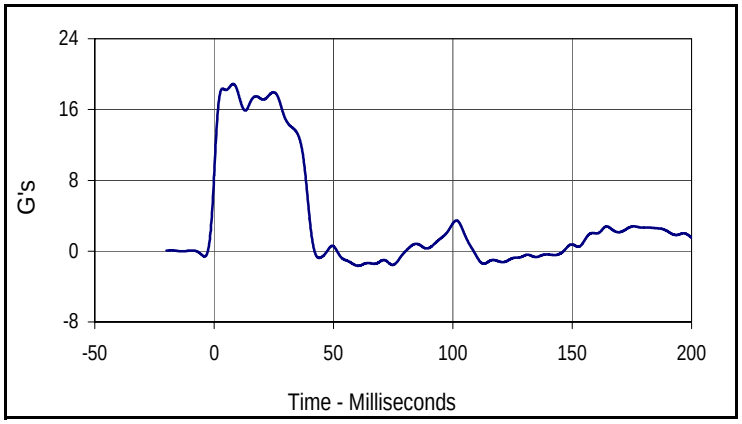
Curve Description			
"D" Plane Rotation			
CURNO	Type	SAE Class	Units
003	FIL	60	Degrees
Max	Time	Min	Time
71.6	62.8	-42.3	178.6



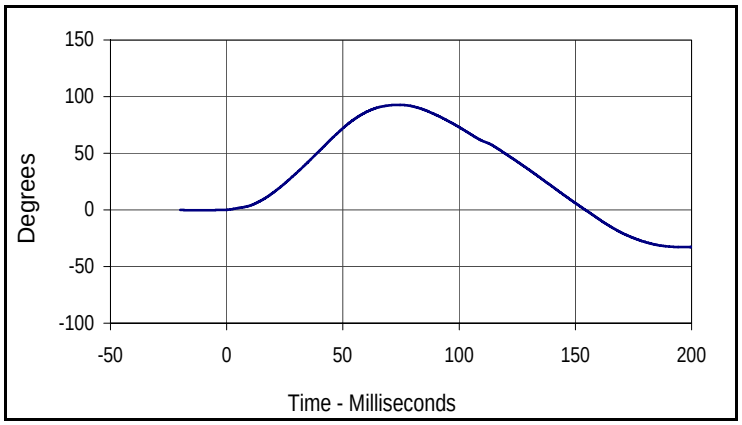
Curve Description			
Moment About Occipital Condyle			
CURNO	Type	SAE Class	Units
004	FIL	600	Nm
Max	Time	Min	Time
98.1	52.1	-47.0	14.7

Test Program:	Hybrid III 50th Percentile Male Neck Extension Test	Test Date:	10/25/07
ATD Serial No.:	035	Test I.D.:	NE10T

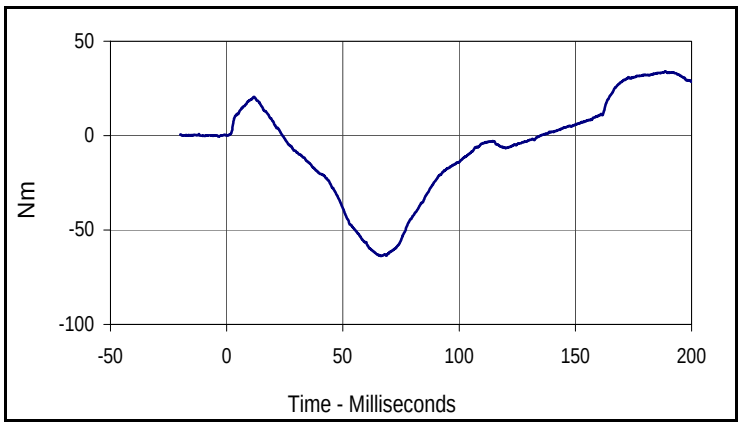
Tested Parameter		Units	Specification	Result	Pass/Fail
Laboratory Temperature		°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity		%	10 to 70	30	Pass
Pendulum Velocity		m/s	5.94 to 6.19	6.07	Pass
Pendulum Deceleration	10 Msec.	G's	17.2 to 21.2	17.9	Pass
	20 Msec.	G's	14.0 to 19.0	17.2	Pass
	30 Msec.	G's	11.0 to 16.0	14.8	Pass
Peak Pendulum Decel. after 30 Msec.		G's	≤ 22.0	14.8	Pass
Deceleration Decay, Time to Cross 5 G's		Msec.	38.0 to 46.0	39.6	Pass
Maximum "D" Plane Rotation	Max	Degrees	81.0 to 106.0	92.7	Pass
	Time	Msec.	72.0 to 82.0	73.7	Pass
"D" Plane Rotation Decay, Time To Zero Crossing		Msec.	147.0 to 174.0	154.3	Pass
Moment About Occ. Condyle	Max	Nm	-52.9 to- 79.9	-63.8	Pass
	Time	Msec.	65.0 to 79.0	66.4	Pass
Positive Moment Decay, Time To Zero Crossing		Msec.	120.0 to 148.0	135.0	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	8.0	-1.7	60.3



Curve Description			
"D" Plane Rotation			
CURNO	Type	SAE Class	Units
003	FIL	60	Degrees
Max	Time	Min	Time
92.7	73.7	-32.8	196.1



Curve Description			
Moment About Occipital Condyle			
CURNO	Type	SAE Class	Units
004	FIL	600	Nm
Max	Time	Min	Time
34.0	188.9	-63.8	66.4

Test Program:	Hybrid III 50th Percentile Male Knee Impact Test	Test Date:	10/25/07
ATD Serial No.:	035	Test I.D.:	LK10T , RK10T

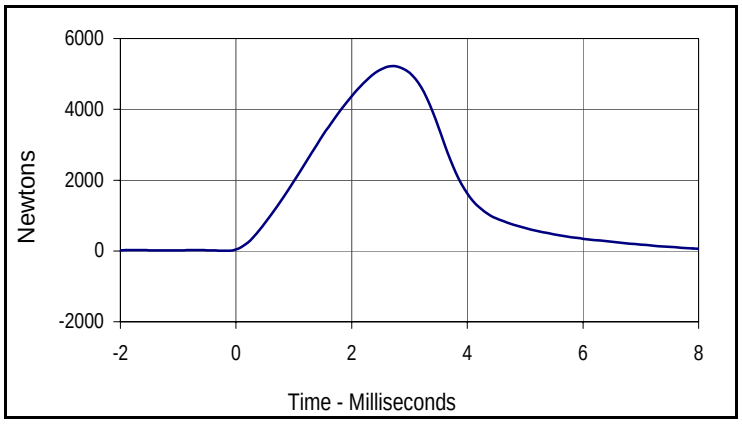
Left Knee

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	2.10	Pass
Peak Probe Force	Newtons	4715 to 5782	5136	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	5223	Pass
		Overall Test Results		Pass

Curve Description			
Left Knee Probe Force			
CURNO	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Time	Min	Time
5136.3	2.7	3.7	9.8



Curve Description			
Right Knee Probe Force			
CURNO	Type	SAE Class	Units
002	FIL	600	Newtons
Max	Time	Min	Time
5223.3	2.7	-2.6	9.8

Test Program:	Hybrid III 50th Percentile Male External Measurements	Test Date:	10/25/07
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	882	Pass
B - Shoulder pivot height	mm	505 to 521	515	Pass
C - "H" point height	mm	84 to 89	88	Pass
D - "H" point from seat back	mm	135 to 140	139	Pass
E - Shoulder pivot from back	mm	84 to 94	87	Pass
F - Thigh clearance	mm	140 to 155	150	Pass
G - Elbow back to wrist pivot	mm	290 to 305	300	Pass
H - Skull cap to back line	mm	41 to 46	42	Pass
I - Shoulder to elbow length	mm	330 to 345	334	Pass
J - Elbow rest height	mm	190 to 211	209	Pass
K - Buttock to knee length	mm	579 to 604	596	Pass
L - Poplipteal length	mm	429 to 455	448	Pass
M - Knee pivot height	mm	485 to 500	497	Pass
N - Buttock poplipteal length	mm	452 to 477	473	Pass
O - Chest depth	mm	213 to 229	220	Pass
P - Foot length	mm	251 to 267	255	Pass
V - Shoulder breadth	mm	422 to 437	427	Pass
W - Foot breadth	mm	91 to 107	103	Pass
Y - Chest circumference	mm	970 to 1001	985	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	229	Pass
		Overall Test Results		Pass

Test Program:	Dummy Damage Checklist	Test Date:	10/25/07
ATD Serial No.:	034	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	Test Date:	10/25/07
ATD Serial No.:	035	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: