

REPORT NUMBER TR-P28048-01-NC

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

**NISSAN MOTOR CO., LTD.
2008 INFINITI EX35 AWD
5-DOOR HATCHBACK**

NHTSA NUMBER: N85202

**Prepared By:
KARCO ENGINEERING, LLC
9270 HOLLY ROAD
ADELANTO, CALIFORNIA 92301**



FEBRUARY 26, 2008

FINAL REPORT

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

This final test report was prepared for the U.S. Department of Transportation, National Highway Traffic Safety Administration, in response to Contract Number DTNH22-06-D-00027.

This publication is distributed by the U.S. Department of Transportation, National Highway Traffic Safety Administration, in the interest of information exchange. The opinions, findings and conclusions expressed in this publication are those of the author(s) and not necessarily those of the Department of Transportation or the National Highway Traffic Safety Administration. The United States Government assumes no liability for its contents or use thereof. If trade or manufacturers' names or products are mentioned it is only because they are considered essential to the object of the publication and should not be construed as an endorsement. The United States Government does not endorse products or manufacturers.

Prepared by: 
Mr. Kelsey A. Chiu, Project Engineer
KARCO Engineering, LLC
Date: February 26, 2008

Reviewed by: 
Mr. Michael L. Dunlap, Director of Operations
KARCO Engineering, LLC
Date: February 26, 2008

Approved by: 
Mr. Frank D. Richardson, Program Manager
KARCO Engineering, LLC
Date: February 26, 2008

FINAL REPORT ACCEPTED BY:

Manager, New Car Assessment Program

Date of Acceptance

COTR, NCAP Frontal Impact Program

Date of Acceptance

Technical Report Documentation Page

1. Report No. TR-P28048-01-NC	2. Government Accession No.	3. Recipients Catalog No.		
4. Title and Subtitle Final Report of New Car Assessment Program Testing of a 2008 Infiniti EX35 AWD 5-Door Hatchback NHTSA No. N85202		5. Report Date February 26, 2008		
		6. Performing Organization Code KAR		
7. Authors Mr. Kelsey A. Chiu, Project Engineer, KARCO Mr. Frank Richardson, Program Manager, KARCO		8. Performing Organization Report No. TR-P28048-01-NC		
9. Performing Organization Name and Address Karco Engineering, LLC 9270 Holly Rd. Adelanto, CA, 92301		10. Work Unit No.		
		11. Contract or Grant No. DTNH22-06-D-00027		
12. Sponsoring Agency Name and Address U. S. Department of Transportation National Highway Traffic Safety Administration Rulemaking Office of Crashworthiness Standards Mail Code NVS-111 1200 New Jersey Ave., SE, Room W43-410 Washington, D.C 20590		13. Type of Report and Period Covered Final Test Report		
		14. Sponsoring Agency Code DOT/NHTSA/NRM/OCS		
15. Supplementary Notes				
16. Abstract A 35 mph (56.3 km/h) frontal barrier impact test was conducted on the subject 2008 Infiniti EX35 AWD 5-Door Hatchback at KARCO Engineering, LLC, in Adelanto, CA, on February 26, 2008. This test was conducted to obtain data indicant of FMVSS 208, 212, 219 (partial), 301, and footwell intrusion performance. The impact velocity was 55.99 km/h. The ambient temperature at the barrier at the time of the crash was 17.8 degrees Celsius. The vehicle's maximum post static crush was 495 mm at the vehicle's centerline. The test vehicle was equipped with a 3-point continuous belt system and a second generation airbag at both front outboard 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	547.9	591.7
Max. Chest Accel. (3 msec. Chest Clip)	G's	60	45.3	48.4
Left Femur Force	Newtons	10008	-3288.3	-2511.4
Right Femur Force	Newtons	10008	-5627.1	-3033.3
17. Key Words 56.3 km/h NCAP Frontal Impact Test New Car Assesment Program (NCAP) I 2008 Infiniti EX35 AWD 5-Door Hatchback NHTSA No. N85202			18. Distribution Statement Copies of this report are available from: National Highway Traffic Safety Admin. NHTSA Technical Reference Division 1200 New Jersey Ave., SE, Room W43-410 Washington, DC 20590	
19. Security Classification of this report UNCLASSIFIED	20. Security Classification of this page UNCLASSIFIED	21. No. of Pages 111	22. Price	

Form DOT F1700.7 (8-72)

TR-P28048-01-NC

TABLE OF CONTENTS

Section	Description	Page
1	Purpose and Summary of Test N85202	1
2	Occupant and Vehicle Information/Data Sheets	3

Data Sheet	Description	Page
1	Crash Test Summary	4
2	General Test and Vehicle Parameter Data	5
3	Post-Test Impact Data	8
4	Test Vehicle Information	9
5	Dummy Positioning in Vehicle	11
6	Seat Belt Positioning Data	13
7	Vehicle Accelerometer Location	14
8	Seat Belt Assessment Test Data	15
9	Summary of FMVSS 212 Data	16
10	Windshield Zone Intrusion FMVSS 219 Data (Partial)	17
11	FMVSS 301 Fuel System Integrity Post-Impact Data	18
12	FMVSS 301 Static Rollover Data	19
13	Vehicle Measurements	21
14	Camera Locations	24
15	Photographic Reference Target Locations	25
16	Vehicle Intrusion Measurements	26
17	Fixed Barrier Load Cell Locations	31
18	Accident Investigation Division Data	32
19	Dummy/Vehicle Temperature Stabilization	33

Appendix	Description	Appendix
A	Photographs	A
B	Data Plots	B
C	Dummy Calibration Data	C
D	Child Restraint System Report	D

SECTION 1
PURPOSE AND SUMMARY OF TEST N85202

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 EX35 AWD 5-Door Hatchback at a velocity of 55.99 km/h. The test was performed at KARCO Engineering, LLC on February 26, 2008

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, Appendix C contains the Dummy Calibration data, and Appendix D contains the Child Restraint System Report.

There was 100% windshield retention and no intrusion into the protected zone of the windshield during impact. 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 495 mm at the vehicle's centerline. Both the driver and 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 knees contacted the bolster.

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

Occupant injury data is contained in table below.

OCCUPANT DATA SUMMARY

ATD Position	HIC 36	3 msec Chest Clip	Chest Defl. (mm)	Left Femur (N)	Right Femur (N)
Driver	547.9	45.3	-20.4	-3288.3	-5627.1
Passenger	591.7	48.4	-27.9	-2511.4	-3033.3

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 Infiniti EX35 AWD 5-Door Hatchback

NHTSA No.: N85202

Test Program: NHTSA 35mph NCAP

Test Date: 02/26/08

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	lb/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 Infiniti EX35 AWD 5-Door Hatchback
 Test Program: NHTSA 35mph NCAP

NHTSA No.: N85202
 Test Date: 02/26/08

PRIMARY IMPACT DATA

Measured Parameter	Units	Value
Velocity at Impact	km/h	55.99
Test Weight	kg	2017
Impact Angle	degrees	0
Average Rebound	mm	1680
Maximum Static Crush	mm	495

DOOR OPENING AND SEAT TRACK INFORMATION

Description	Driver	Passenger
Front Door Opening	Remained closed and latched, opened without tools	Remained closed and latched, opened without tools
Rear Door Opening	Remained closed and latched, opened without tools	Remained closed and latched, opened without tools
Seat Track Shift (mm)	None	None
Seatback 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	Airbag
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 EX35 AWD 5-Door HatchbackNHTSA No.: N85202Test Program: NHTSA 35mph NCAPTest Date: 02/26/08**TEST VEHICLE INFORMATION AND OPTIONS**

NHTSA No.	N85202
Make	Infiniti
Model	EX35 AWD
Body Style	5-Door Hatchback
VIN No.	JNKAJ09F78M353198
Color	Teal
Delivery Date	02/21/08
Odometer (Miles)	116.0
Dealer	Riverside Infiniti
Transmission	Automatic
Final Drive	5-Speed
Type/No. of Cylinders	V6
Engine Displ. (L)	3.5
Engine Placement	Longitudinal
Roof Rack	No
Sunroof/T-top	Yes
Tinted Glass	No
Traction Control	Yes
Power Brakes	Yes
Front Disc	Yes
Rear Disc	Yes

Anti-Lock Brakes	Yes
All Wheel Drive	Yes
Power Steering	Yes
Driver Front Airbag	Yes
Driver Side Torso Airbag	Yes
Driver Side Head Airbag	No
Driver Curtain Airbag	Yes
Pass. Airbag	Yes
Pass. Side Airbag	Yes
Pass. Head Airbag	No
Pass. Curtain Airbag	Yes
Pre-Tensioners	Yes
Load Limiters	Yes
Bucket Seats	Yes
Air Conditioning	Yes
AM/FM CD	Yes
Tilt Steering	Yes
Automatic Door Locks	Yes
Power Windows	Yes
Power Seats	Yes
Other	n/a

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

Yes

DATA FROM CERTIFICATION TABLE

Manufactured By	Nissan Motor Co., LTD.
Date of Manufacture	Dec-07

GVWR (kg)	2281
GAWR Front (kg)	1130
GAWR Rear (kg)	1155

VEHICLE SEATING CAPACITY AND WEIGHT INFORMATION

Measured Parameter	Front	Rear	Third	Total
Type of Seats	Bucket	Split Bench		
Number of Occupants	2	3		5
Capacity Weight (VCW) (kg)				390
Cargo Weight (RCLW) (kg)				50

DATA SHEET NO. 2...(CONTINUED)

GENERAL TEST AND VEHICLE PARAMETER DATA

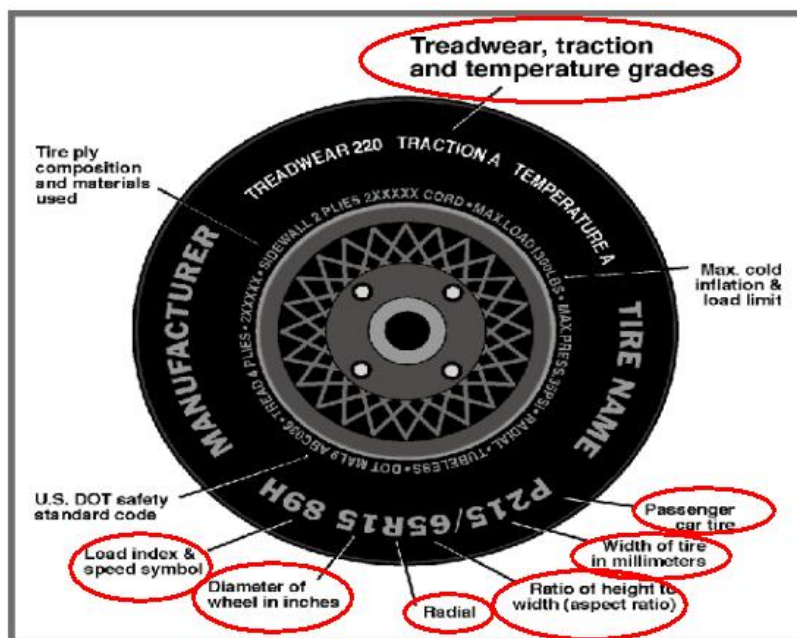
Test Vehicle: 2008 Infiniti EX35 AWD 5-Door Hatchback

NHTSA No.: N85202

Test Program: NHTSA 35mph NCAP

Test Date: 02/26/08

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



TIRE INFORMATION

Measured Paramater	Front	Rear
Max. Tire Pressure (kPa)	350	350
Cold Tire Pressure (kPa)	230	230
Recommended Tire Size	P225/60R17	P225/60R17
Tire Size on Vehicle	P225/60R17	P225/60R17
Tire Manufacturer	Michelin	Michelin
Treadwear	440	440
Traction	A	A
Temperature Grades	A	A
Tire Plies - Sidewall	2 Polyester	2 Polyester
Tire Plies - Body	2 Polyester, 2 Steel, 1 Polyamide	2 Polyester, 2 Steel, 1 Polyamide
Load Index/Speed Symbol	98V	98V
Tire Material	Polyester, Steel, Polyamide	Polyester, Steel, Polyamide
DOT Safety Code Right	EDXH N2WX 4207	EDXH N2WX 4207
DOT Safety Code Left	EDXH N2WX 4207	EDXH N2WX 4207

DATA SHEET NO. 2...(CONTINUED)

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2008 Infiniti EX35 AWD 5-Door Hatchback NHTSA No.: N85202
 Test Program: NHTSA 35mph NCAP Test Date: 02/26/08

TEST VEHICLE WEIGHTS

	Units	As Delivered Weights (UVW)			As Tested Weights (ATW)		
		Front Axle	Rear Axle	Total	Front Axle	Rear Axle	Total
Left	kg	486	425	911	522	488	1010
Right	kg	493	416	909	524	483	1007
Ratio	%	53.8	46.2	100.0	51.8	48.2	100.0
Totals	kg	979	841	1820	1046	971	2017

TARGET TEST WEIGHT CALCULATION

Measured Parameter	Units	Value
Total Delivered Weight (UVW)	kg	1820
Weight of 2 P572 ATD's	kg	152
Rated Cargo/Luggage Weight (RCLW)	kg	50
Calculated Target Vehicle Test Weight (TVTW)	kg	2022

TEST VEHICLE ATTITUDE AND CG

	Units	LF	RF	LR	RR	CG Aft of Front Axle
As Delivered	mm	787	782	797	794	1294
As Tested	mm	776	770	785	774	1350

Vehicle Wheel Base (mm) 2800
 Weight of Ballast Secured in Cargo Area (kg) 0
 Weight of Items Removed (kg) 96
 Vehicle Components Removed: Hatch door, rear tail lights, spare tire and tools, inside carpeting

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

FUEL SYSTEM DATA

Fuel System Capacity from Owner's Manual (L) 75.7
 Actual Test Volume with Entire Fuel System Filled (L) 70.4
 Test Fluid Type Stoddard Solvent
 Kinematic Viscosity as per ASTM Standard D484-71 Red
 Is Vehicle Fuel Pump Electric or Mechanical? electrical
 If electric, does pump operate with the 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 engine.

DATA SHEET NO. 3
POST-TEST IMPACT DATA

Test Vehicle: 2008 Infiniti EX35 AWD 5-Door Hatchback
 Test Program: NHTSA 35mph NCAP

NHTSA No.: N85202
 Test Date: 02/26/08

SPEED TRAP DATA

Measured Paramater	Units	Requirement	Value
Trap No. 1 Velocity	km/h	55.1 to 57.12	55.99
Trap No. 2 Velocity	km/h	55.1 to 57.12	55.98

VEHICLE STATIC CRUSH

Measured Parameter	Units	Pre-Test	Post-Test	Difference
Left Side	mm	4432	4092	340
Center	mm	4622	4127	495
Right Side	mm	4432	4092	340

VEHICLE REBOUND FROM BARRIER

Measured Paramater	Units	Value
Left Side	mm	1670
Center	mm	1550
Right Side	mm	1680
Average	mm	1633

DATA SHEET NO. 4

TEST VEHICLE INFORMATION

Test Vehicle: 2008 Infiniti EX35 AWD 5-Door Hatchback

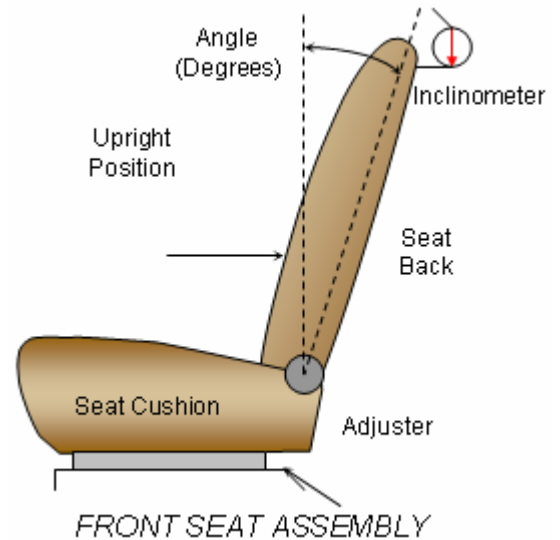
NHTSA No.: N85202

Test Program: NHTSA 35mph NCAP

Test Date: 02/26/08

NOMINAL DESIGN RIDING POSITION

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



SEAT BACK ANGLES

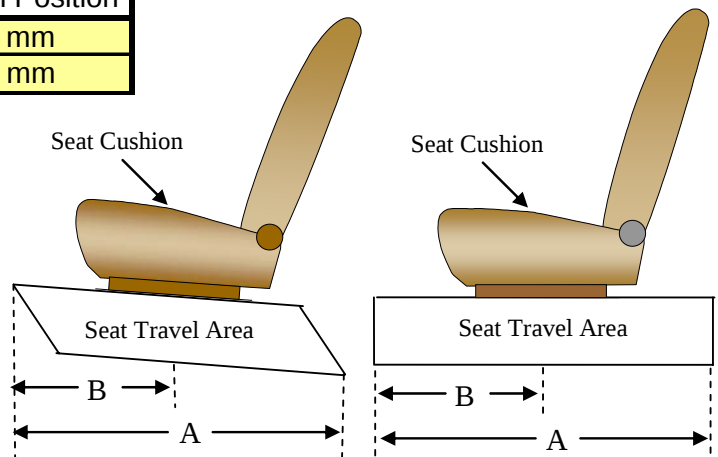
Position	Degrees
Driver w/ Seated Dummy	6.1 @ Headrest
Passenger w/ Seated Dummy	6.3 @ Headrest

SEAT FORE/AFT POSITIONS

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

SEAT FORE/AFT POSITIONING

Position	Total Fore/Aft Travel	Placed in Position
Driver Seat	320 mm	160 mm
Passenger Seat	288 mm	144 mm



SEAT BELT ANCHORAGE

Position number one (1) is the uppermost position.

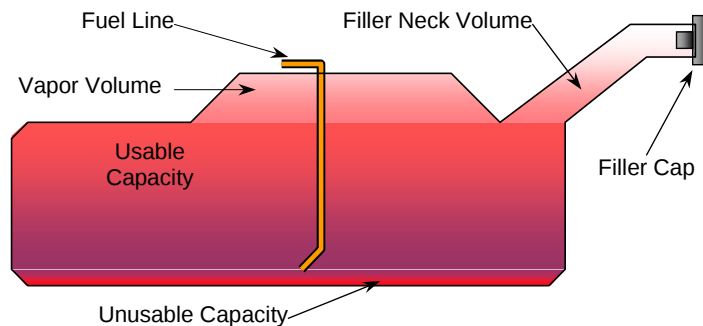
SEAT BELT ANCHORAGE POSITIONING

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

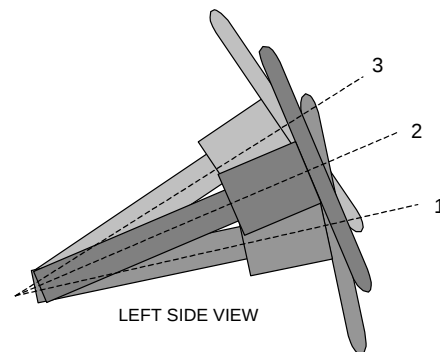
DATA SHEET NO. 4...(CONTINUED)**TEST VEHICLE INFORMATION**Test Vehicle: 2008 Infiniti EX35 AWD 5-Door HatchbackNHTSA No.: N85202Test Program: NHTSA 35mph NCAPTest Date: 02/26/08**FUEL TANK CAPACITY**

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

The test vehicle is equipped with an electric fuel pump. The fuel pump will operate for approximately two (2) seconds with the ignition in the "ON" position, after which the fuel pump automatically shuts off. The fuel filler door is located on the right rear fender. The standard fuel tank occupies the area under the rear passenger 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	20.8	171
Geometric Center - Position No. 2	23.1	193
Uppermost - Position No. 3	25.3	216

DATA SHEET NO. 5

DUMMY POSITIONING IN VEHICLE

Test Vehicle: 2008 Infiniti EX35 AWD 5-Door Hatchback

NHTSA No.: N85202

Test Program: NHTSA 35mph NCAP

Test Date: 02/26/08

TEST DUMMY POSITION MEASUREMENTS

Code	Measurement Description	Driver		Passenger	
		Length (mm)	Angle (°)	Length (mm)	Angle (°)
WA	Windsheild angle		26.3		
SWA	Steering wheel angle		23.1		
SCA	Steering column angle		66.9		
SA	Seat Back angle		6.1 @ Headrest		6.3 @ Headrest
HZ	Head to roof (Z)	978	90.0	94	90.0
HH	Head to header	316		299	
HW	Head to windshield	570		578	
HR	Head to side header (Y)	276		270	
NR	Nost to rim	384	12.2		
CD	Chest to dash	504		534	
CS	Chest to steering hub	308			
RA	Rim to abdomen	179			
KDL	Left knee to dash	136	18.4	123	
KDR	Right knee to dash	87		131	20.5
PA	Pelvic angle		22.0		22.1
TA	Tibia Angle		48.2		44.7
KK	Knee to knee	315		280	
SK	Striker to outboard knee	655	2.6	673	6.7
ST	Striker to head	553	81.0	566	76.3
SH	Striker to H-Point	249	0.0	259	0.0
SHY	Striker to H-Point (Y)	237		225	
HS	Head to side window	323		300	
HD	H-Point to door	121		124	
AD	Arm to door	82		20	

DATA SHEET NO. 5...(CONTINUED)

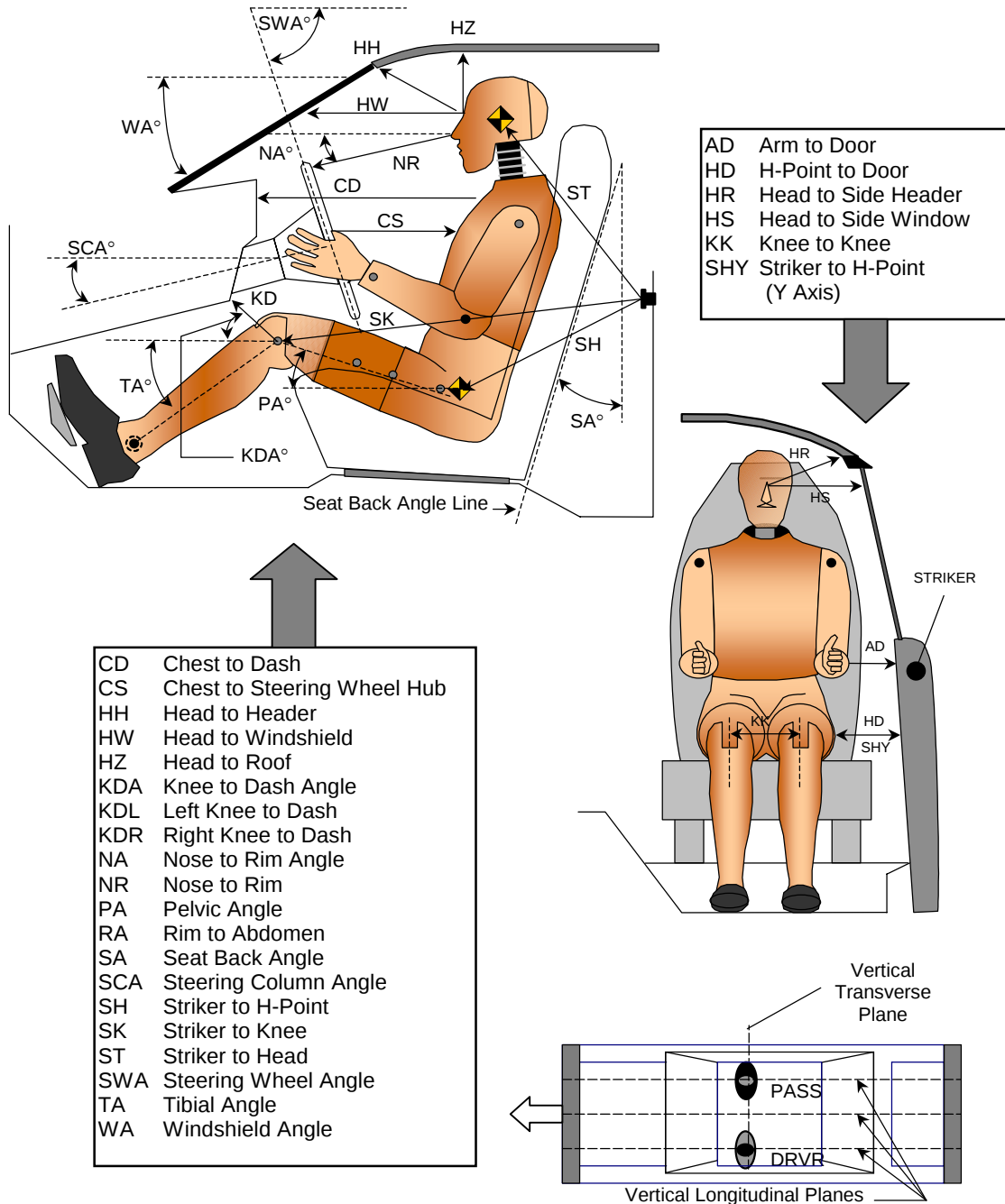
DUMMY POSITIONING IN VEHICLE

Test Vehicle: 2008 Infiniti EX35 AWD 5-Door Hatchback

NHTSA No.: N85202

Test Program: NHTSA 35mph NCAP

Test Date: 02/26/08



DATA SHEET NO. 6

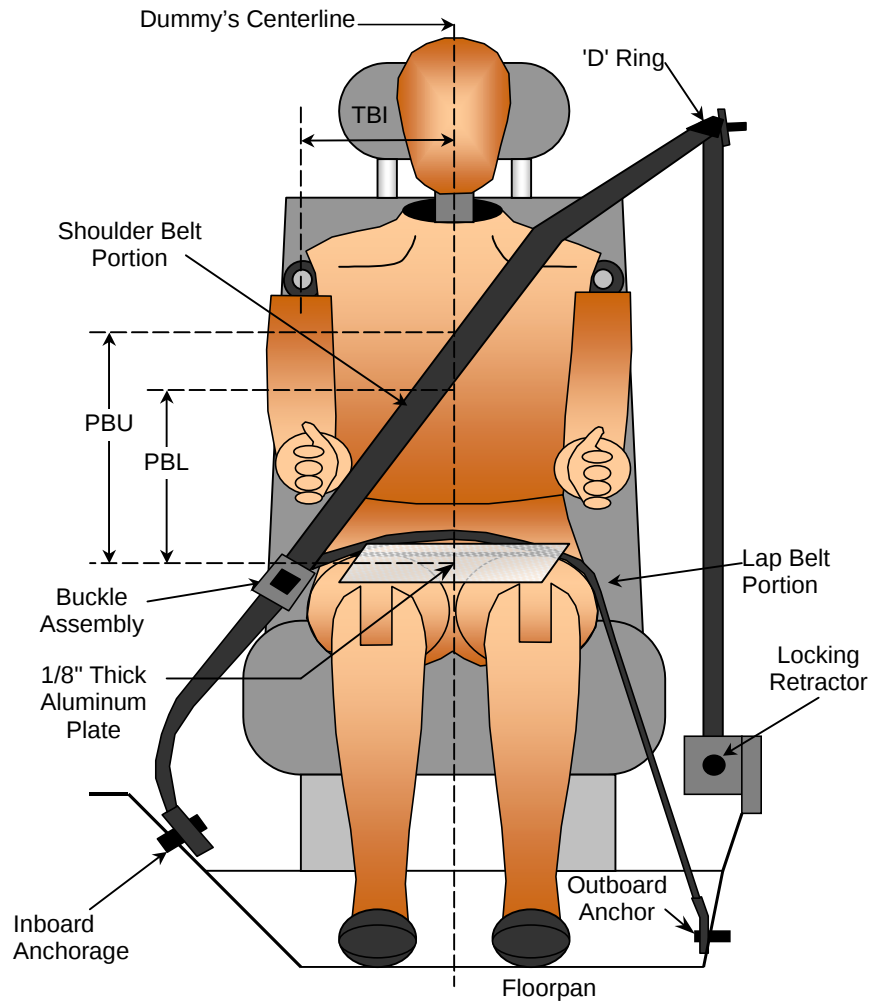
SEAT BELT POSITIONING DATA

Test Vehicle: 2008 Infiniti EX35 AWD 5-Door Hatchback

NHTSA No.: N85202

Test Program: NHTSA 35mph NCAP

Test Date: 02/26/08



SEAT BELT POSITIONING MEASUREMENTS

Measured Parameter	Units	Driver	Passenger
TBI - Dummy C/L to Lap/Shoulder Belt Intersect	mm	247	205
PBU - Top Surface of Reference to Belt Upper Edge	mm	362	364
PBL - Top Surface of Reference to Belt Lower Edge	mm	285	292
Lap Belt Tension	Newtons	10	10
Shoulder Belt Tension	N/A	Retractor	Retractor

DATA SHEET NO. 7**VEHICLE ACCELEROMETER LOCATIONS**Test Vehicle: 2008 Infiniti EX35 AWD 5-Door HatchbackNHTSA No.: N85202Test Program: NHTSA 35mph NCAPTest Date: 02/26/08**VEHICLE ACCELEROMETER PRE-TEST LOCATIONS**

No.	Accelerometer Location	Measurement (mm)		
		X	Y	Z
1	Left Rear X-Member	1648	-680	395
2	Right Rear X-Member	1648	680	395
3	Engine Top	4016	40	820
4	Engine Bottom	3840	-45	145
5	Left Brake Caliper	3882	-710	200
6	Right Brake Caliper	3882	70	200
7	Instrument Panel			
8	Left Rear X-Member (Z-Axis)	1648	-680	395
9	Right Rear X-Member (Z-Axis)	1648	680	395

Reference Planes: X=From Rear Surface of Vehicle, Y=Vehicle Centerline, Z=Ground Plane
 1.) Instrument Panel no longer used by NHTSA.

DATA SHEET NO. 8**SEAT BELT ASSESSMENT TEST DATA**Test Vehicle: 2008 Infiniti EX35 AWD 5-Door HatchbackNHTSA No.: N85202Test Program: NHTSA 35mph NCAPTest Date: 02/26/08**SEAT BELT POSITIONING MEASUREMENTS**

Measurement Description	Units	Driver	Passenger
Retractor Reel to D-Ring	mm	782	782
Shoulder Belt Length as Measured on ATD	mm	877	856
Lap Belt Length as Measured on ATD	mm	899	887
Remainder of Belt on Reel	mm	622	63
Total Belt Length for Continuous Webbing Systems	mm	3180	2588

SHOULDER BELT SPOOL-OFF DATA

Measurement Description	Units	Driver	Passenger
As determined mechanically	mm	175	90
As determined electronically	mm	99.3	393.9

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

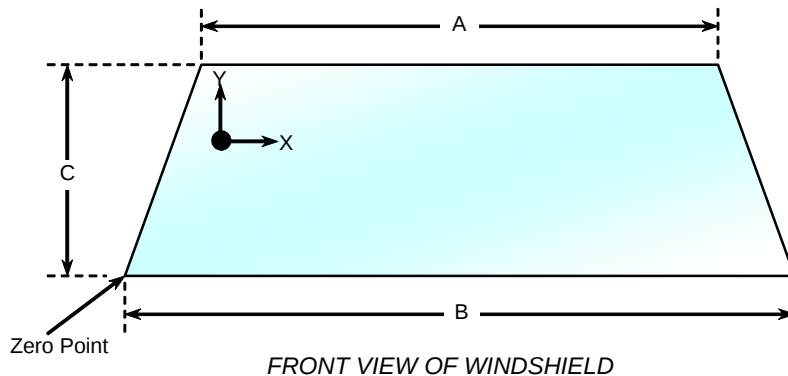
DATA SHEET NO. 9**SUMMARY OF FMVSS 212 DATA**Test Vehicle: 2008 Infiniti EX35 AWD 5-Door HatchbackNHTSA No.: N85202Test Program: NHTSA 35mph NCAPTest Date: 02/26/08

Windshield Mounting Details: Windshield glass is secured to the vehicle frame with rubber cement type adhesive. plastic molding covers the windshield periphery.

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: 17.8 °C**WINDSHIELD PERIPHERY MEASUREMENTS**

Measurement	Pre-Test (mm)	Post-Test (mm)	% of Retention
Left Side	2109	2109	100.0
Right Side	2109	2109	100.0
Total	4218	4218	100.0

**WINDSHIELD DIMENSIONS**

Item	Units	Segment Length	Molding Width
A	mm	1183	10
B	mm	1365	80
C-Left	mm	835	22
C-Right	mm	835	22

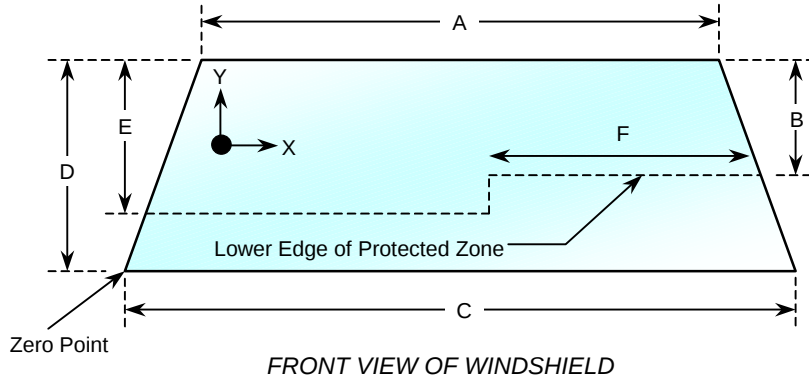
DATA SHEET NO. 10

WINDSHIELD ZONE INTRUSION FMVSS 219 DATA (PARTIAL)

Test Vehicle: 2008 Infiniti EX35 AWD 5-Door Hatchback
 Test Program: NHTSA 35mph NCAP

NHTSA No.: N85202
 Test Date: 02/26/08

WINDSHIELD AND PROTECTED ZONE



Item	Units	Value
A	mm	1183
B	mm	455
C	mm	1365
D	mm	835
E	mm	513
F	mm	664

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 EX35 AWD 5-Door Hatchback NHTSA No.: N85202
Test Program: NHTSA 35mph NCAP Test Date: 02/26/08

Test Time: 11:22 AM Temperature: 17.8 ° C

STODDARD SOLVENT SPILLAGE MEASUREMENTS

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

DATA SHEET NO. 12

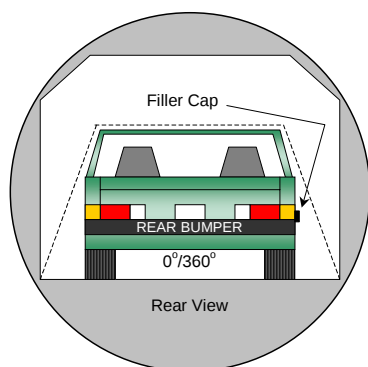
FMVSS 301 STATIC ROLLOVER DATA

Test Vehicle: 2008 Infiniti EX35 AWD 5-Door Hatchback

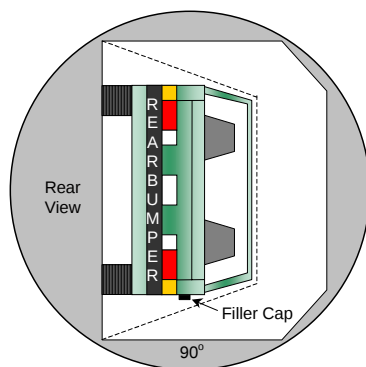
NHTSA No.: N85202

Test Program: NHTSA 35mph NCAP

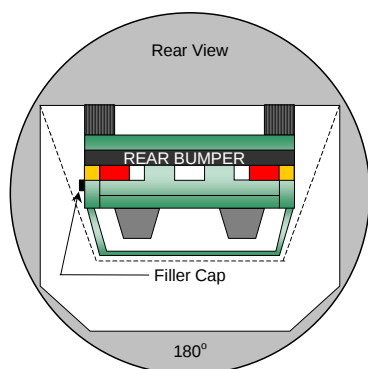
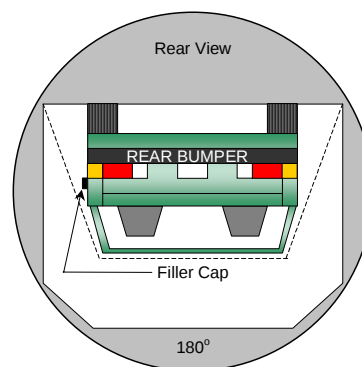
Test Date: 02/26/08



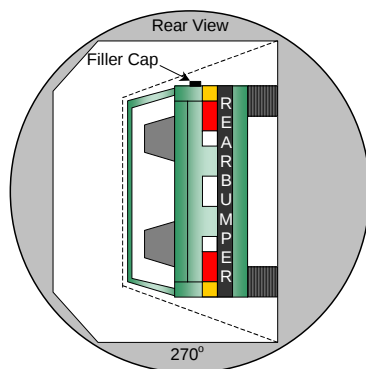
0° to 90°



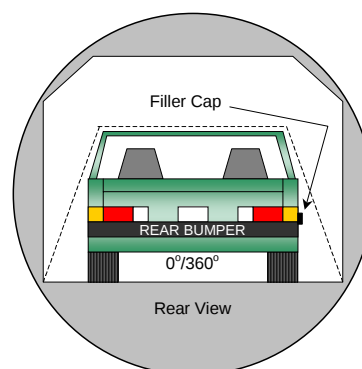
90° to 180°



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 EX35 AWD 5-Door HatchbackNHTSA No.: N85202Test Program: NHTSA 35mph NCAPTest Date: 02/26/08**SOLVENT COLLECTION TIME TABLE IN SECONDS**

Test Phase	Rotation Time	Hold Time	Total Time
0° to 90°	84	330	414
90° to 180°	83	331	414
180° to 270°	78	315	393
270° to 360°	80	305	385

FMVSS 301 SPILLAGE TABLE REQUIREMENT

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 EX35 AWD 5-Door Hatchback
Test Program: NHTSA 35mph NCAP

NHTSA No.: N85202
Test Date: 02/26/08

VEHICLE MEASUREMENT TABLE

No.	Measurement Description	Units	Pre-Test	Post-Test	Difference
1	Length of test vehicle at centerline	mm	4622	4127	-495
2	RSOV to front of engine	mm	4557	3809	-748
3	RSOV to firewall centerline	mm	3407	3427	20
4	RSOV to upper leading edge of right door	mm	3105	3106	1
5	RSOV to upper leading edge of left door	mm	3105	3110	5
6	RSOV to lower leading edge of right door	mm	3111	3100	-11
7	RSOV to lower leading edge of left door	mm	3108	3106	-2
8	RSOV to upper trailing edge of right door	mm	1992	1996	4
9	RSOV to upper trailing edge of left door	mm	1995	2000	5
10	RSOV to lower trailing edge of right door	mm	1995	1985	-10
11	RSOV to lower trailing edge of left door	mm	1992	1986	-6
12	RSOV to bottom of right A-pillar	mm	3076	3076	0
13	RSOV to bottom of left A-pillar	mm	3083	3061	-22
14	RSOV to firewall on right side	mm	3666	3613	-53
15	RSOV to firewall on left side	mm	3666	3582	-84
16	RSOV to steering column hub	mm	2620	2668	48
17	Center of steering column to left A-pillar, Y	mm	405	415	10
18	Center of steering column to headlining, Z	mm	425	420	-5
19	RSOV to right side of front bumper	mm	4432	4092	-340
20	RSOV to left side of front bumper	mm	4432	4092	-340
21	Length of engine block	mm	500	500	0
RD	RSOV to right side of dash panel	mm	2856	2854	-2
CD	RSOV to center of dash panel	mm	2840	2836	-4
LD	RSOV to left side of dash panel	mm	2856	2876	20

DATA SHEET NO. 13...(CONTINUED)

VEHICLE STRUCTURAL MEASUREMENTS

Test Vehicle: 2008 Infiniti EX35 AWD 5-Door Hatchback

NHTSA No.: N85202

Test Program: NHTSA 35mph NCAP

Test Date: 02/26/08

VEHICLE STRUCTURAL MEASUREMENT TABLE

No.	Measurement Description	Units	Pre-Test	Post-Test	Difference
1	Total length	mm	4622	4127	-495
2	Total width	mm	1774	1775	1
3	Front bumper top height	mm	640	685	45
4	Front bumper bottom height	mm	170	215	45
5	Longitudinal member top height	mm	545	560	15
6	Longitudinal member bottom height	mm	409	425	16
7	Distance between longitudinal members	mm	840	900	60
8	Longitudinal member width	mm	100	95	-5
9	Engine top height	mm	870	895	25
10	Engine bottom height	mm	181	141	-40
11	Engine and gearbox width	mm	685	685	0
12	Front bumper-engine distance	mm	650	435	-215
13	Front shock absorber height	mm	770	790	20
14	Front hood leading edge height	mm	830	820	-10
15	Distance between front shock absorbers	mm	830	795	-35
16	Front bumper-front axle distance	mm	875	470	-405
17	Front axle to A-pillar distance	mm	630	615	-15
18	A Pillar to B Pillar distance	mm	1120	1118	-2
19	B Pillar to rear axle distance	mm	1035	1039	4
20	B Pillar to C Pillar distance	mm	1000	1000	0
21	Roof sill bottom height	mm	1340	1380	40
22	Roof sill top height	mm	1460	1500	40
23	Floor sill bottom height	mm	195	181	-14
24	Floor sill top height	mm	375	370	-5

DATA SHEET NO. 13...(CONTINUED)

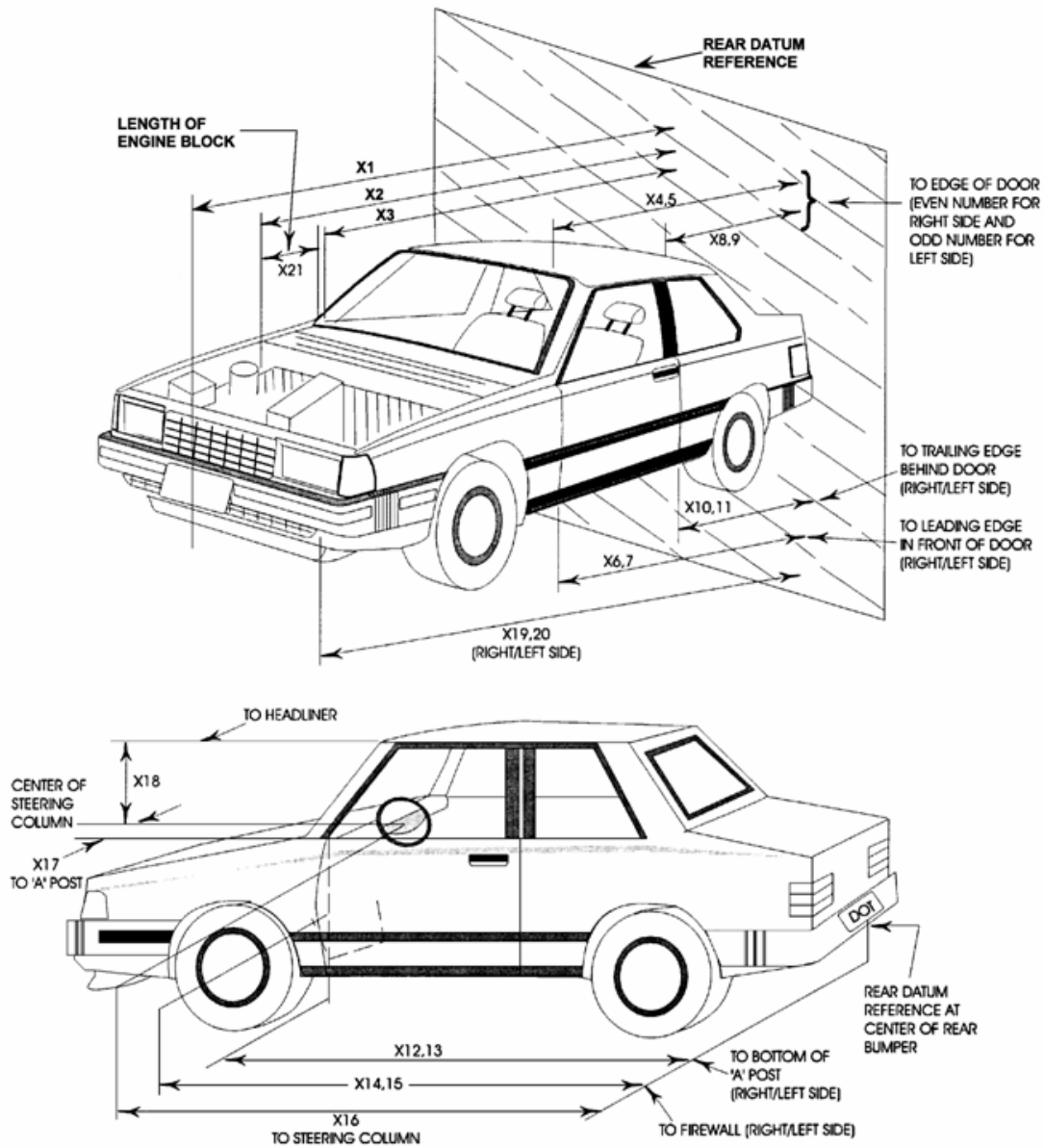
VEHICLE MEASUREMENTS

Test Vehicle: 2008 Infiniti EX35 AWD 5-Door Hatchback

NHTSA No.: N85202

Test Program: NHTSA 35mph NCAP

Test Date: 02/26/08



DATA SHEET NO. 14**CAMERA LOCATIONS**Test Vehicle: 2008 Infiniti EX35 AWD 5-Door HatchbackNHTSA No.: N85202Test Program: NHTSA 35mph NCAPTest Date: 02/26/08**VEHICLE CAMERA MEASUREMENT TABLE**

No.	Camera View	Location			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	-2388	7214	-1133	0	8105	20	1000
3	Closeup Left Side	-1758	6228	-1237	0	7844	50	1000
4	Driver and Interior View	-6696	-5987	-1071	-17	15570	ZOOM	1000
5	Steering Column (Bottom)	-1972	-8184	-2879	-13	9453	35	1000
6	Steering Column (Top)	-1966	-8141	-3258	-13	9549	35	1000
7	Overall Right Side	-2324	-6533	-1024	0	7409	20	1000
8	Closeup Right Side	-1763	-6149	-1062	0	7079	50	1000
9	Passenger and Interior View	-5136	9516	-2460	-10	10211	ZOOM	1000
10	Right Side View	-1582	7995	-1713	-6	7134	ZOOM	1000
11	Windshield View	-354	0	-5749	-90		24	1000
12	Driver Front View	363	-543	-2548	-34		25	1000
13	Passenger Front View	381	445	-2548	-34		25	1000
14	Pit View of Engine	-756	0	1495	90		12	1000
15	Pit View of Fuel Tank	-3398	0	1495	90		8	1000
16	Driver Side Dummy On-Board	-3185	-272	-1473	-3	922	12	1000
17	Passenger Side Dummy On-Board	-3124	272	-1466	-3	927	12	1000
18	Real Time Driver	-1926	-8089	-1704	-1	8532		30
19	Real Time Passenger	-1433	8047	-1704	-1	7700		30

All measurements are made relative to the point of impact.

DATA SHEET NO. 15

PHOTOGRAPHIC REFERENCE TARGET LOCATIONS

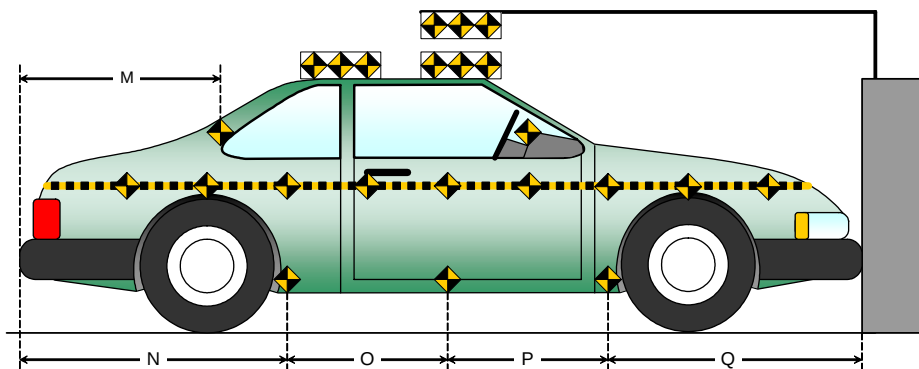
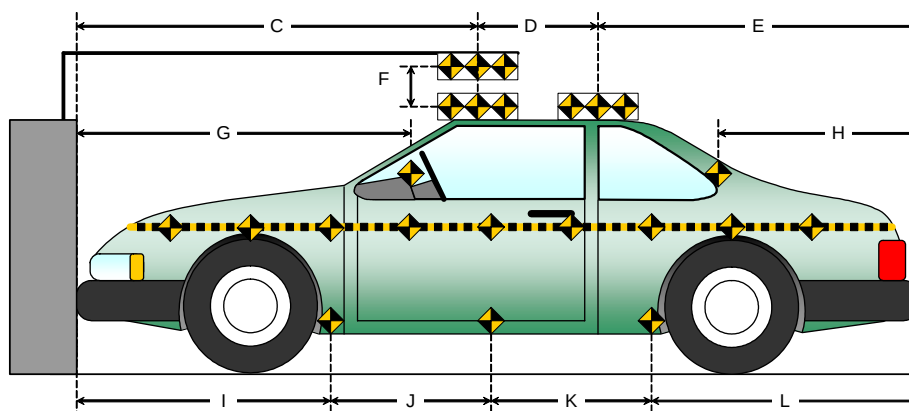
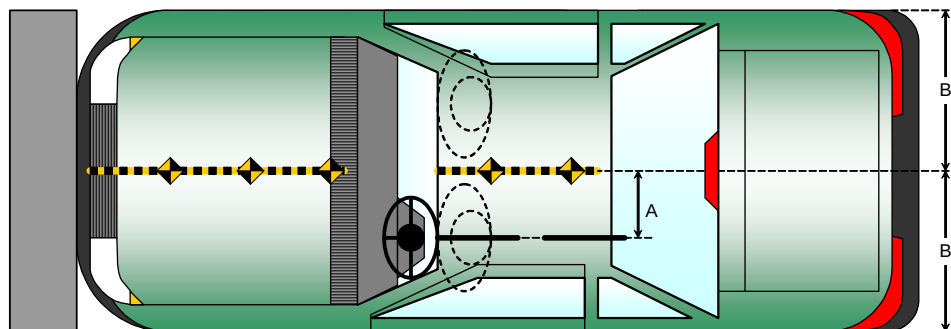
Test Vehicle: 2008 Infiniti EX35 AWD 5-Door Hatchback

NHTSA No.: N85202

Test Program: NHTSA 35mph NCAP

Test Date: 02/26/08

All Dimensions in Millimeters (mm)	
Item	Value
A	
B	887
C	
D	615
E	
F	155
G	1890
H	1146
I	1386
J	906
K	906
L	1425
M	1147
N	1438
O	900
P	900
Q	1384



DATA SHEET NO. 16

VEHICLE INTRUSION MEASUREMENTS

Test Vehicle: 2008 Infiniti EX35 AWD 5-Door Hatchback

NHTSA No.: N85202

Test Program: NHTSA 35mph NCAP

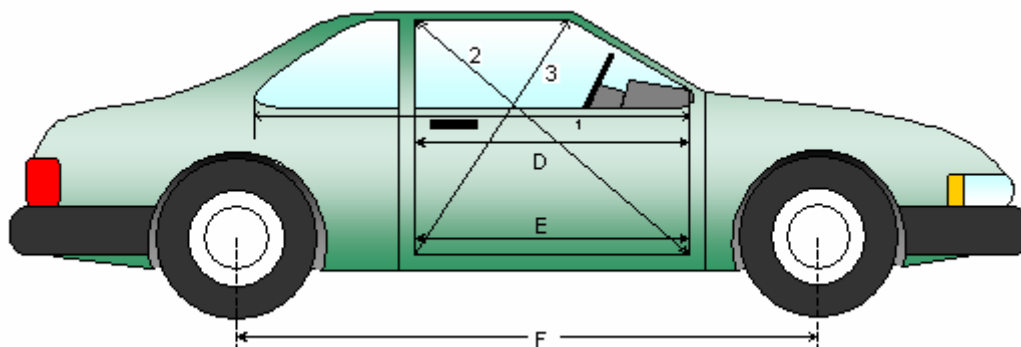
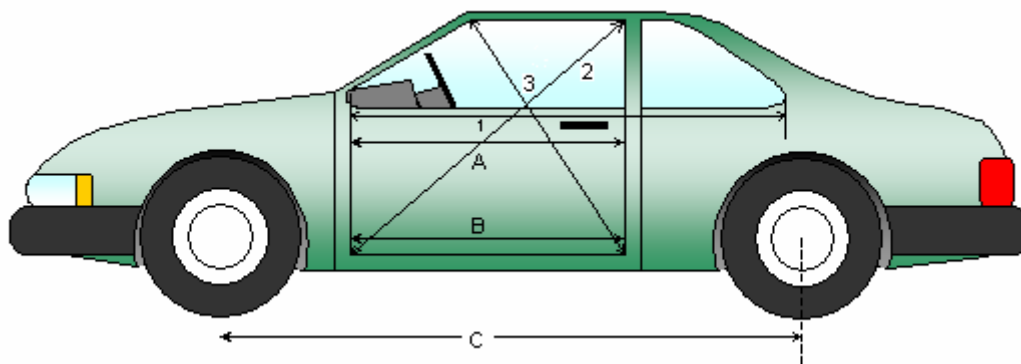
Test Date: 02/26/08

DOOR OPENING WIDTH TABLE

Item	Description	Units	Pre-Test	Post-Test	Difference
1L	Left Side	mm	1006	1006	0
2L	Left Side (Diagonally)	mm	1516	1516	0
3L	Left Side (Diagonally)	mm	931	941	-10
1R	Right Side	mm	1006	1001	5
2R	Right Side (Diagonally)	mm	1516	1516	0
3R	Right Side (Diagonally)	mm	931	937	-6

WHEELBASE MEASUREMENT TABLE

Item	Description	Units	Pre-Test	Post-Test	Difference
C	Left Side Wheelbase	mm	2800	2755	45
F	Right Side Wheelbase	mm	2800	2725	75



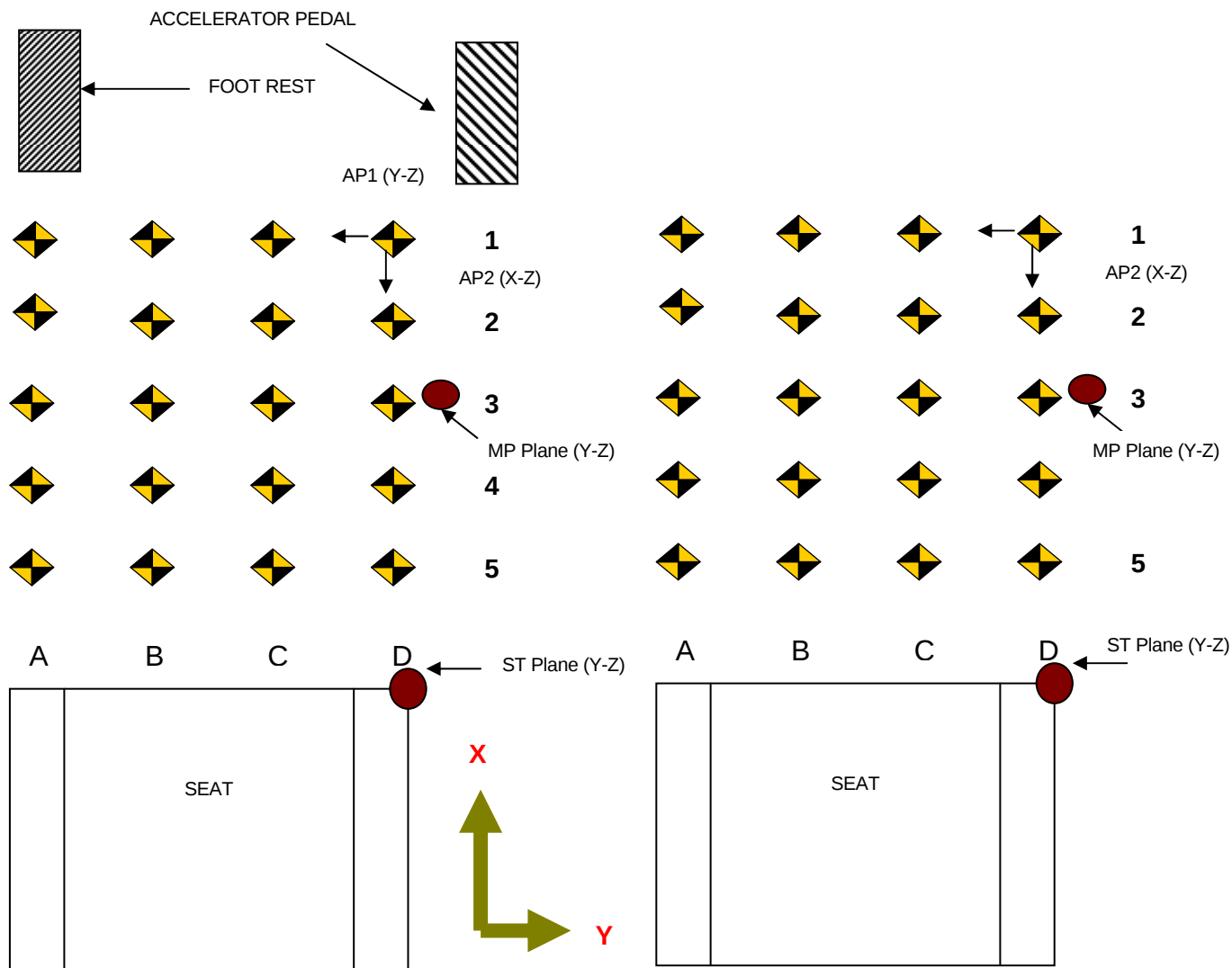
VEHICLE INTRUSION MEASUREMENTS

Test Date: 02/26/08

DATA SHEET NO. 16...(CONTINUED)
VEHICLE INTRUSION MEASUREMENTS

Test Vehicle: 2008 Infiniti EX35 AWD 5-Door Hatchback
 Test Program: NHTSA 35mph NCAP

NHTSA No.: N85202
 Test Date: 02/26/08



- 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 EX35 AWD 5-Door Hatchback

NHTSA No.: N85202

Test Program: NHTSA 35mph NCAP

Test Date: 02/26/08

All measurements in mm

DRIVER FLOORPAN X-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	691	686	674	658	623	621	619	626	68	65	55	32
2	633	627	616	607	581	570	577	570	52	57	39	37
3	487	477	472	461	430	424	431	441	57	53	41	20
4	329	320	314	310	267	268	279	282	62	52	35	28
5	175	168	165	163	121	115	124	136	54	53	41	27

DRIVER FLOORPAN Y-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	19	123	242	333	-19	84	208	299	38	39	34	34
2	13	122	236	330	-17	88	205	298	30	34	31	32
3	7	120	233	324	-14	104	217	311	21	16	16	13
4	-1	111	225	314	-13	118	231	323	12	-7	-6	-9
5	-8	102	214	307	14	133	241	333	-22	-31	-27	-26

DRIVER FLOORPAN Z-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	-8	-3	-7	-17	-45	-49	-50	-49	37	46	43	32
2	42	41	38	33	8	1	7	-6	34	40	31	39
3	124	90	88	85	80	57	60	62	44	33	28	23
4	145	86	84	83	81	55	56	66	64	31	28	17
5	144	86	84	89	114	51	54	67	30	35	30	22

DATA SHEET NO. 16...(CONTINUED)

VEHICLE INTRUSION MEASUREMENTS

Test Vehicle: 2008 Infiniti EX35 AWD 5-Door Hatchback

NHTSA No.: N85202

Test Program: NHTSA 35mph NCAP

Test Date: 02/26/08

All measurements in mm

PASSENGER FLOORPAN X-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	699	698	692	687	685	682	681	679	14	16	11	8
2	640	639	634	485	634	640	626	635	6	-1	8	-4
3	334	489	484	332	502	492	482	484	-8	-3	2	1
4	179	331	328	175	341	333	325	335	-7	-2	3	-3
5	179	173	176	175	189	177	172	182	-10	-4	4	-7

DRIVER FLOORPAN Y-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	-258	-176	-71	43	-237	-155	-51	62	-21	-21	-20	-19
2	-269	-180	-66	42	-245	-160	-45	61	-24	-20	-21	-19
3	-274	-179	-70	42	-257	-162	-53	60	-17	-17	-17	-18
4	-281	-190	-76	40	-272	-183	-71	40	-9	-7	-5	0
5	-283	-194	-82	36	-284	-198	-89	33	1	4	7	3

PASSENGER FLOORPAN Z-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	-21	-6	1	0	-18	-14	-10	-6	-3	8	11	6
2	29	38	34	45	26	43	33	46	3	-5	1	-1
3	93	94	96	126	103	102	99	123	-10	-8	-3	3
4	86	86	88	151	99	95	94	130	-13	-9	-6	21
5	77	87	88	147	89	93	91	149	-12	-6	-3	-2

DATA SHEET NO. 17

FIXED BARRIER LOAD CELL LOCATIONS

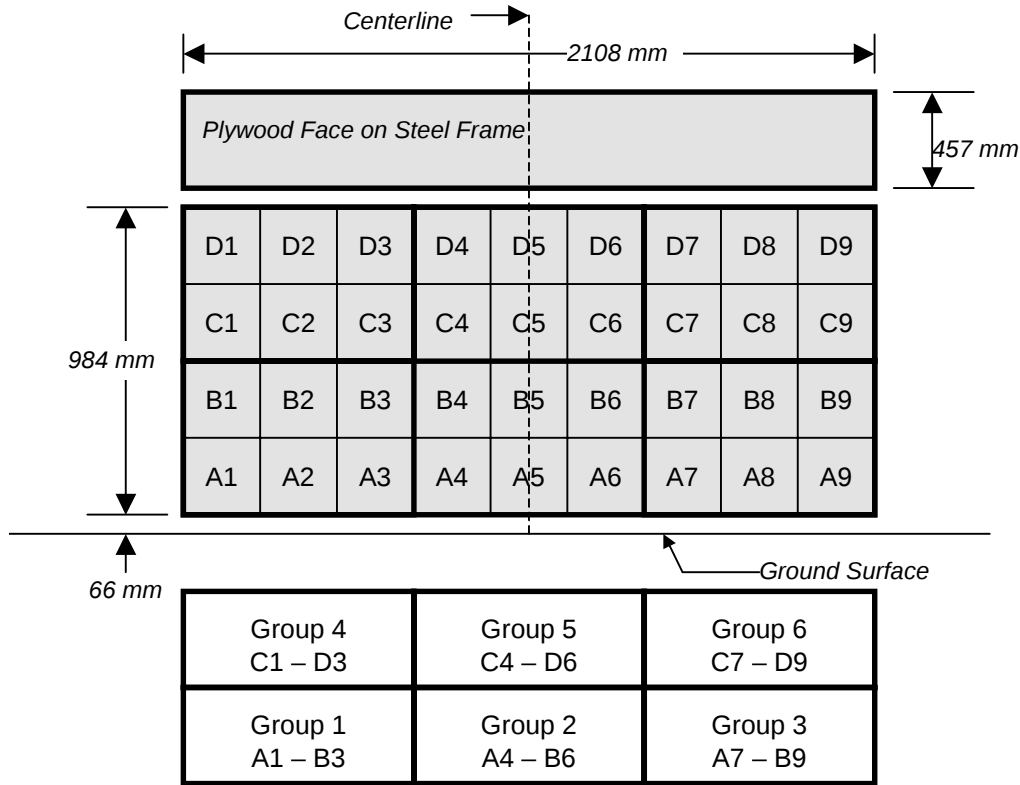
Test Vehicle: 2008 Infiniti EX35 AWD 5-Door Hatchback

NHTSA No.: N85202

Test Program: NHTSA 35mph NCAP

Test Date: 02/26/08

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 EX35 AWD 5-Door Hatchback NHTSA No.: N85202
 Test Program: NHTSA 35mph NCAP Test Date: 02/26/08

VEHICLE INFORMATION

VIN: JNKAJ09F78M353198 Wheelbase (mm): 2800
 Vehicle Size Category: 5-Door Hatchback Test Weight (kg): 2017

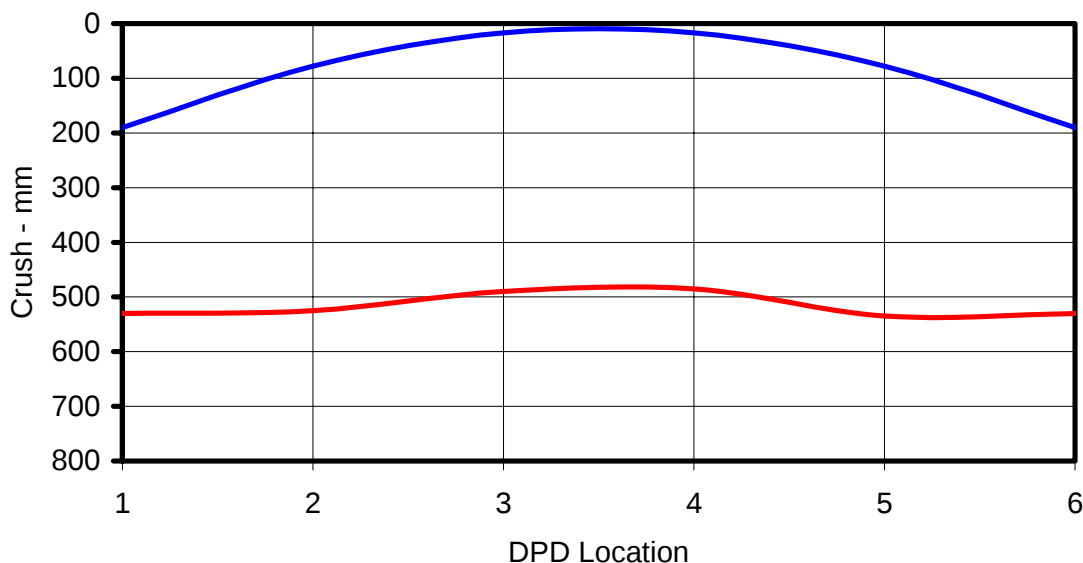
ACCELEROMETER DATA

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): 65.6 Time of Separation (msec): 64.4

CRUSH PROFILE

Collision Deformation Classification: 12FDEW6 Midpoint of Damage: Vehicle Centerline
 Damage Region Length: 1390 Impact Mode: Full frontal

No.	Measurement Description	Units	Pre-Test	Post-Test	Difference
C1	Crush zone 1 at left side of vehicle	mm	190	530	-340
C2	Crush zone 2 on left side of vehicle	mm	78	525	-447
C3	Crush zone 3 on left side of vehicle	mm	17	490	-473
C4	Crush zone 4 on right side of vehicle	mm	17	485	-468
C5	Crush zone 5 on right side of vehicle	mm	78	535	-457
C6	Crush zone 6 at right side of vehicle	mm	190	530	-340



Note: During the test the front bumper was severed from the test vehicle. The DPD measurements were taken after placing the front bumper in its approximate position and holding it in place.

DATA SHEET NO. 19

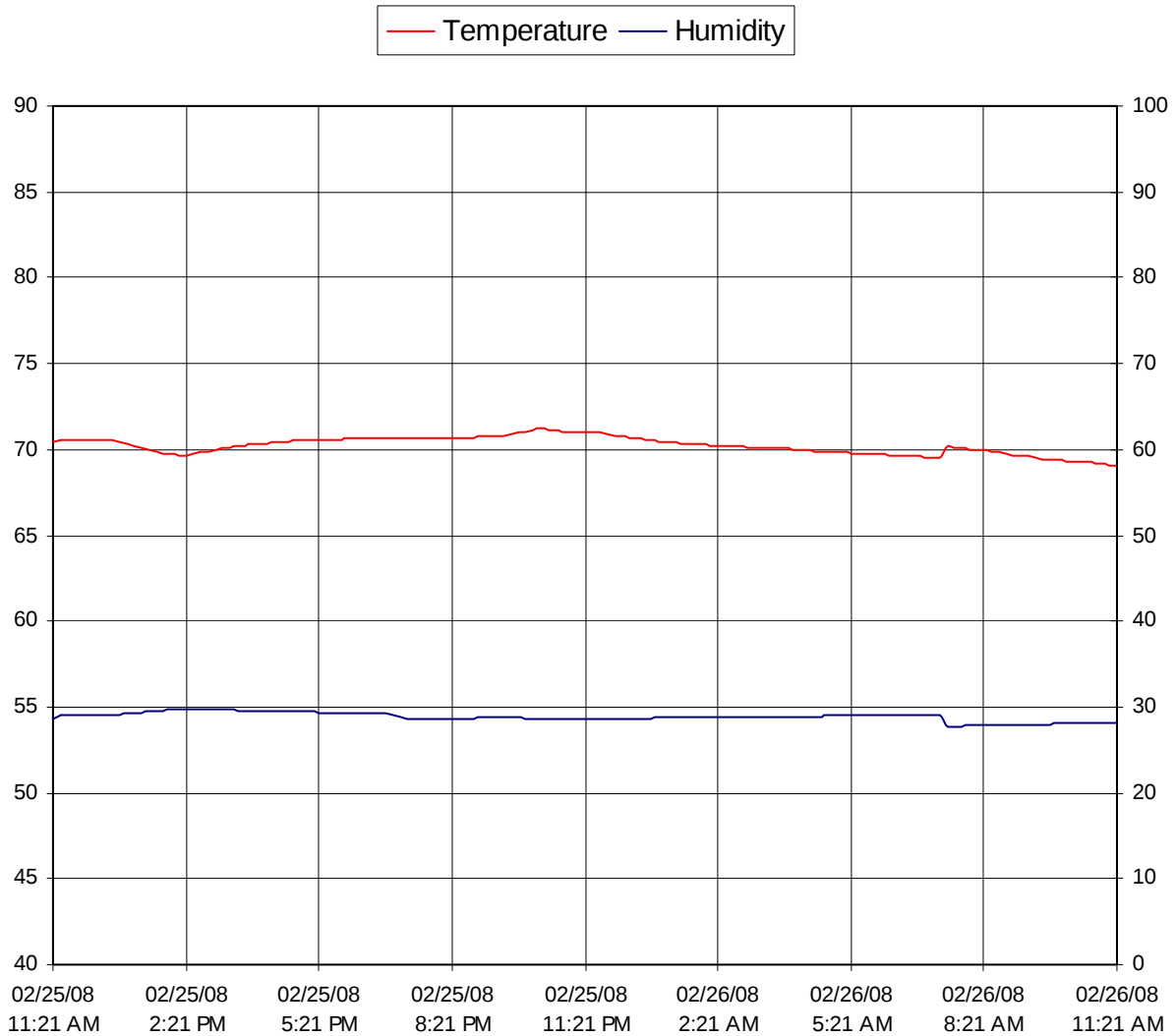
DUMMY/VEHICLE TEMPERATURE STABILIZATION

Test Vehicle: 2008 Infiniti EX35 AWD 5-Door Hatchback

NHTSA No.: N85202

Test Program: NHTSA 35mph NCAP

Test Date: 02/26/08



APPENDIX A
PHOTOGRAPHS

LIST OF PHOTOGRAPHS

Figure		Page
A-1	Load Cell Location	A-1
A-2	Manufacturer's Label	A-2
A-3	Tire Placard	A-3
A-4	Right Front $\frac{3}{4}$ View, As Received	A-4
A-5	Left Rear $\frac{3}{4}$ View, As Received	A-5
A-6	Pre-Test Front View	A-6
A-7	Post-Test Front View	A-7
A-8	Pre-Test Left Side View	A-8
A-9	Post-Test Left Side View	A-9
A-10	Pre-Test Right Side View	A-10
A-11	Post-Test Right Side View	A-11
A-12	Pre-Test Right Front $\frac{3}{4}$ View	A-12
A-13	Post-Test Right Front $\frac{3}{4}$ View	A-13
A-14	Pre-Test Left Rear $\frac{3}{4}$ View	A-14
A-15	Post-Test Left Rear $\frac{3}{4}$ View	A-15
A-16	Post-Test Left Side $\frac{3}{4}$ View of Doors After Impact	A-16
A-17	Post-Test Right Side $\frac{3}{4}$ View of Doors After Impact	A-17
A-18	Pre-Test Windshield	A-18
A-19	Post-Test Windshield	A-19
A-20	Pre-Test Engine Compartment	A-20
A-21	Post-Test Engine Compartment (Vehicle Moved)	A-21
A-22	Pre-Test Fuel Cap	A-22
A-23	Post-Test Fuel Cap	A-23
A-24	Pre-Test Front Underbody	A-24
A-25	Post-Test Front Underbody	A-25
A-26	Pre-Test Mid Underbody	A-26
A-27	Post-Test Mid Underbody	A-27
A-28	Pre-Test Rear Underbody	A-28
A-29	Post-Test Rear Underbody	A-29
A-30	Pre-Test Driver Dummy Front View (Head Position)	A-30
A-31	Post-Test Driver Dummy Front View (Head Position)	A-31
A-32	Pre-Test Driver Dummy (Through Window)	A-32
A-33	Post-Test Driver Dummy (Through Window)	A-33
A-34	Pre-Test Driver Dummy (Door Open)	A-34
A-35	Post-Test Driver Dummy (Door Open)	A-35

LIST OF PHOTOGRAPHS...(CONTINUED)

Figure		Page
A-36	Pre-Test Driver Dummy Feet	A-36
A-37	Post-Test Driver Dummy Feet	A-37
A-38	Pre-Test Driver Side Knee Bolster	A-38
A-39	Post-Test Driver Side Knee Bolster	A-39
A-40	Pre-Test Driver Side Floor Pan	A-40
A-41	Post-Test Driver Side Floor Pan	A-41
A-42	Post-Test Driver Dummy Head	A-42
A-43	Post-Test Driver Dummy Airbag Contact	A-43
A-44	Pre-Test Passenger Dummy Front View (Head Position)	A-44
A-45	Post-Test Passenger Dummy Front View (Head Position)	A-45
A-46	Pre-Test Passenger Dummy Front (Through Window)	A-46
A-47	Post-Test Passenger Dummy Front (Through Window)	A-47
A-48	Pre-Test Passenger Dummy (Door Open)	A-48
A-49	Post-Test Passenger Dummy (Door Open)	A-49
A-50	Pre-Test Passenger Dummy Feet	A-50
A-51	Post-Test Passenger Dummy Feet	A-51
A-52	Pre-Test Passenger Side Glove Box	A-52
A-53	Post-Test Passenger Side Glove Box	A-53
A-54	Pre-Test Passenger Side Floor Pan	A-54
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
A-58	Vehicle on Rollover Device (0°)	A-58
A-59	Vehicle on Rollover Device (90°)	A-59
A-60	Vehicle on Rollover Device (180°)	A-60
A-61	Vehicle on Rollover Device (270°)	A-61
A-62	Vehicle Impact	A-62

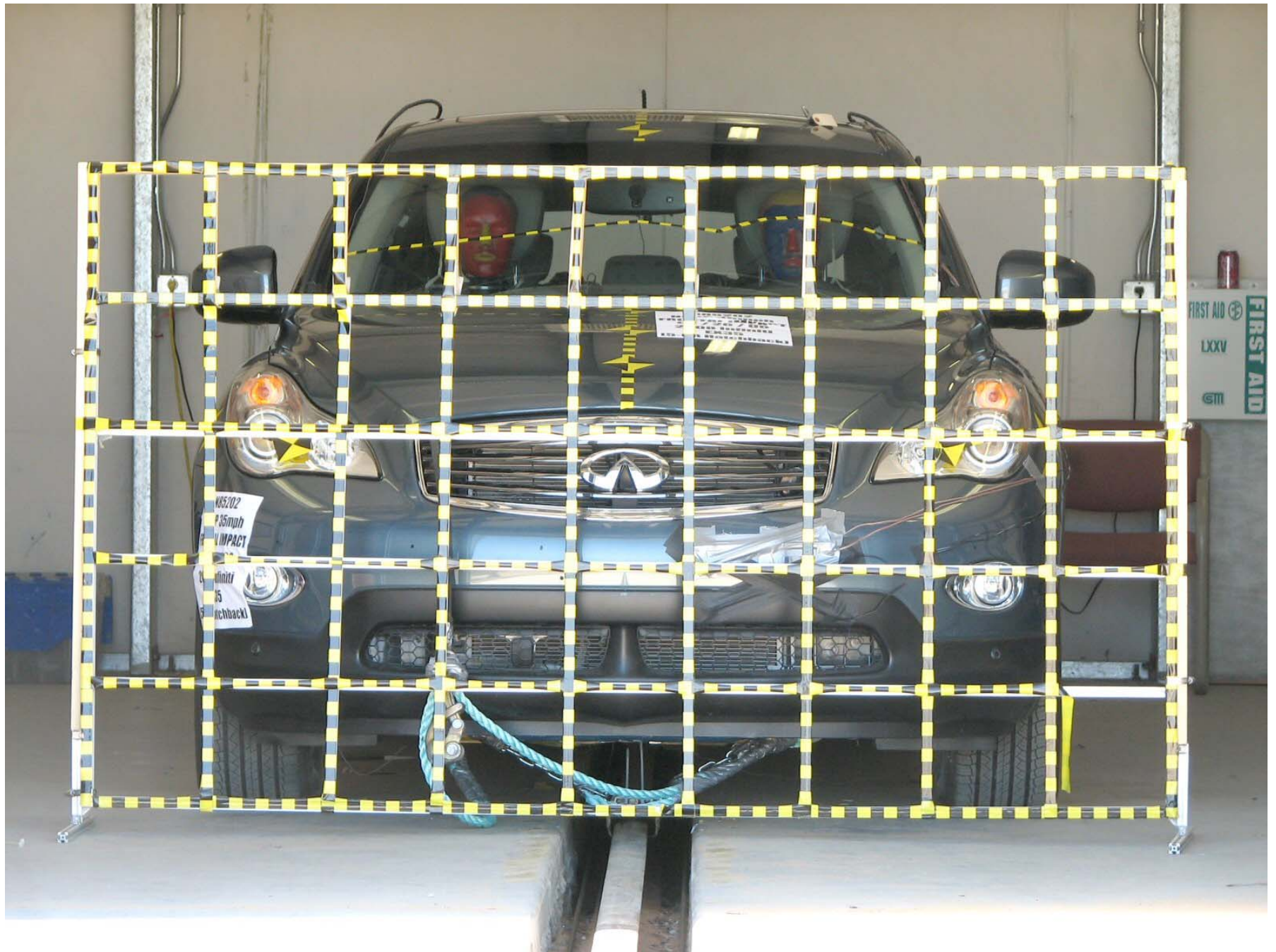


Figure A-1: Load Cell Location

This Space Intentionally Left Blank

MANUFACTURED BY NISSAN MOTOR CO.,LTD.

DATE: 12/07

GVWR/PNBV: 5029 LBS.

GAWR/PNBE FR: 2491 LBS. RR: 2546 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: JNKAJ09F78M353198 PASSENGER CAR

COLOR

TRIM

TRANS

AXLE

ENGINE

FAA

K

RE5R05A

RC31

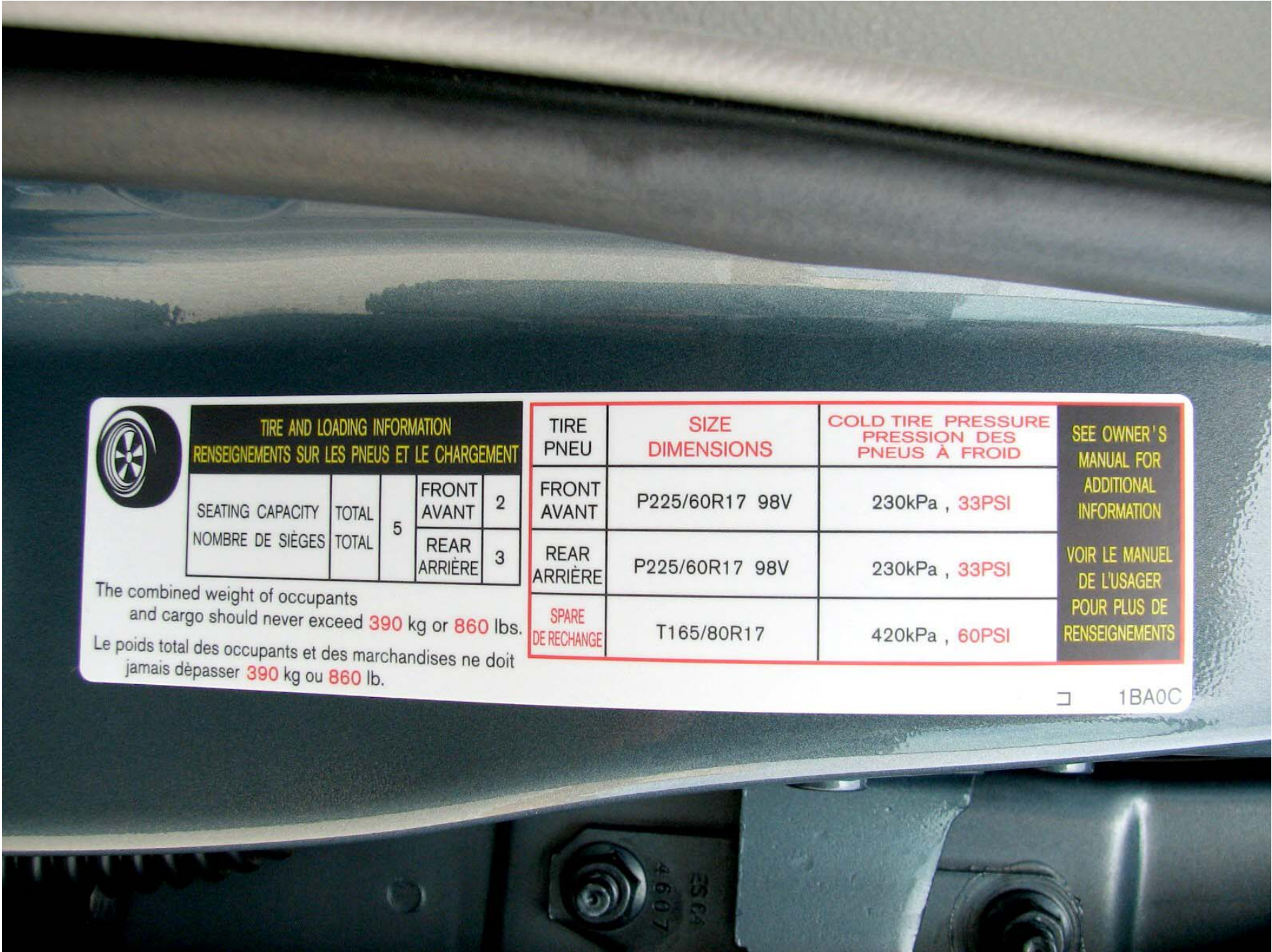
VQ35(HR)

3498CC



JNKAJ09F78M353198

Figure A-2: Manufacturer's Label





TIRE AND LOADING INFORMATION

RENSEIGNEMENTS SUR LES PNEUS ET LE CHARGEMENT

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

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

Le poids total des occupants et des marchandises ne doit jamais dépasser **390 kg** ou **860 lb.**

TIRE PNEU	SIZE DIMENSIONS	COLD TIRE PRESSURE PRESSION DES PNEUS À FROID
FRONT AVANT	P225/60R17 98V	230kPa , 33PSI
REAR ARRIÈRE	P225/60R17 98V	230kPa , 33PSI
SPARE DE RECHANGE	T165/80R17	420kPa , 60PSI

SEE OWNER'S MANUAL FOR ADDITIONAL INFORMATION

VOIR LE MANUEL DE L'USAGER POUR PLUS DE RENSEIGNEMENTS

1BA0C

1BA0C

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-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 $\frac{3}{4}$ 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

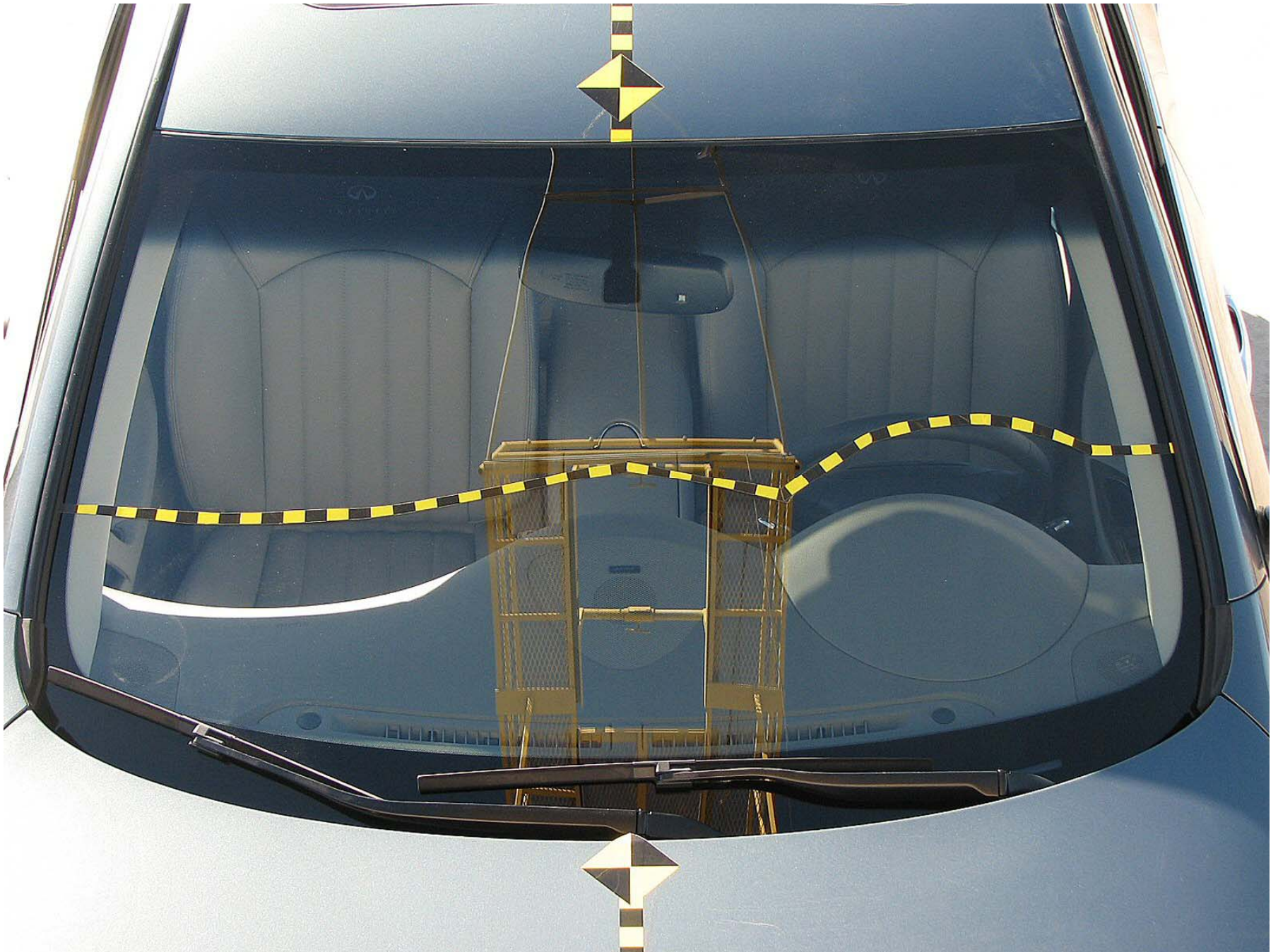


Figure A-18: Pre-Test Windshield



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

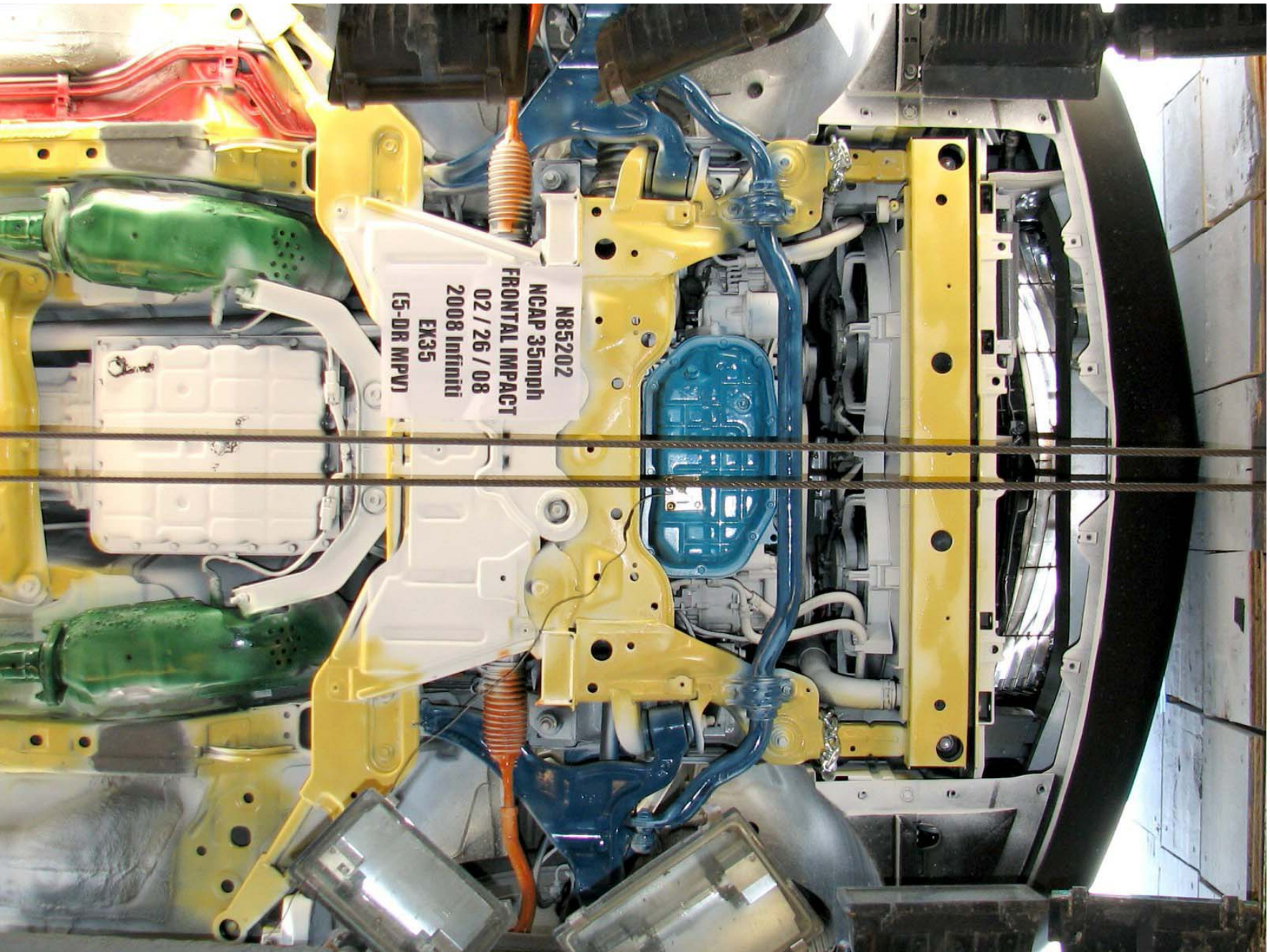


Figure A-24: Pre-Test Front Underbody

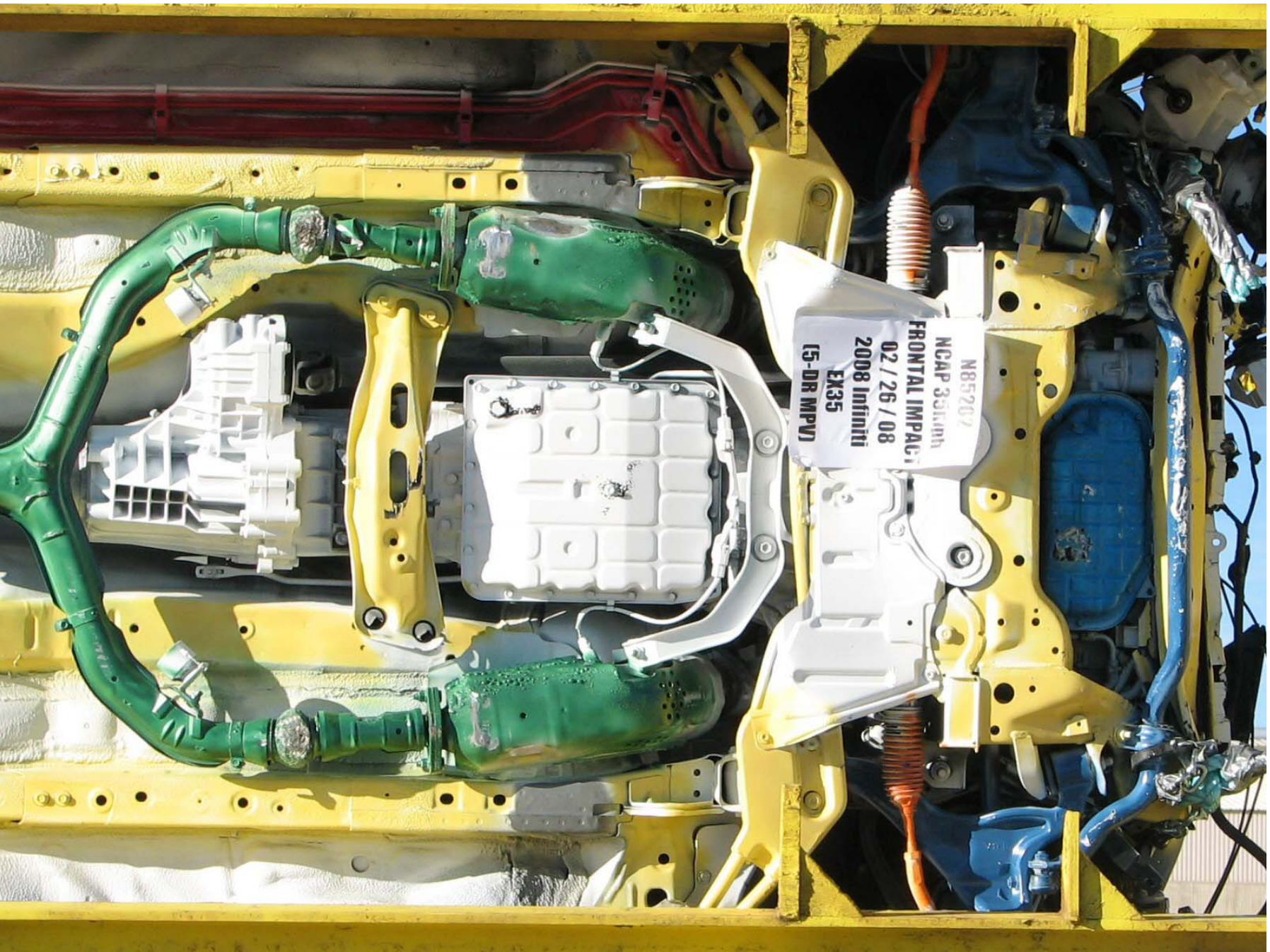


Figure A-25: Post-Test Front Underbody

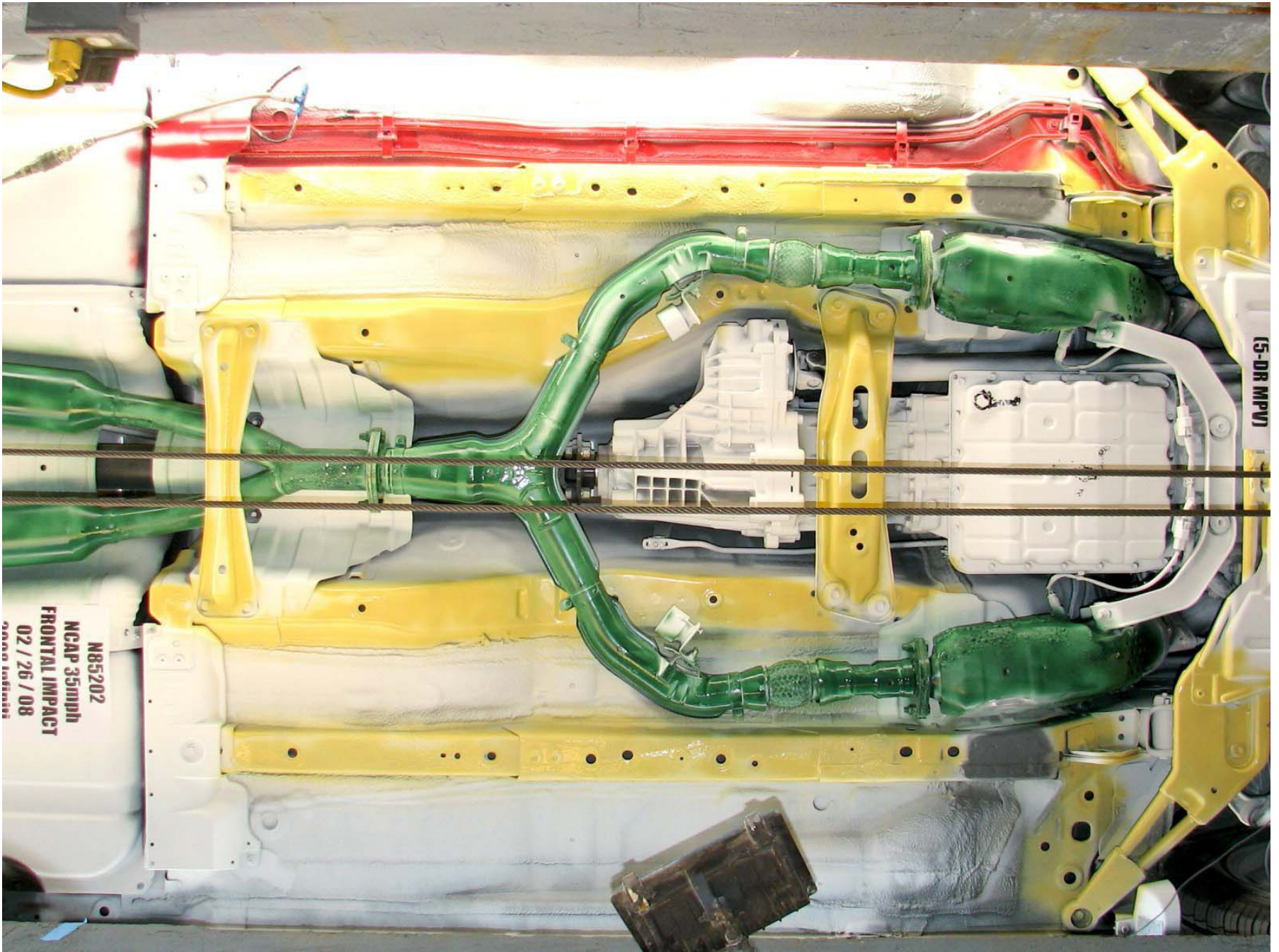


Figure A-26: Pre-Test Mid Underbody

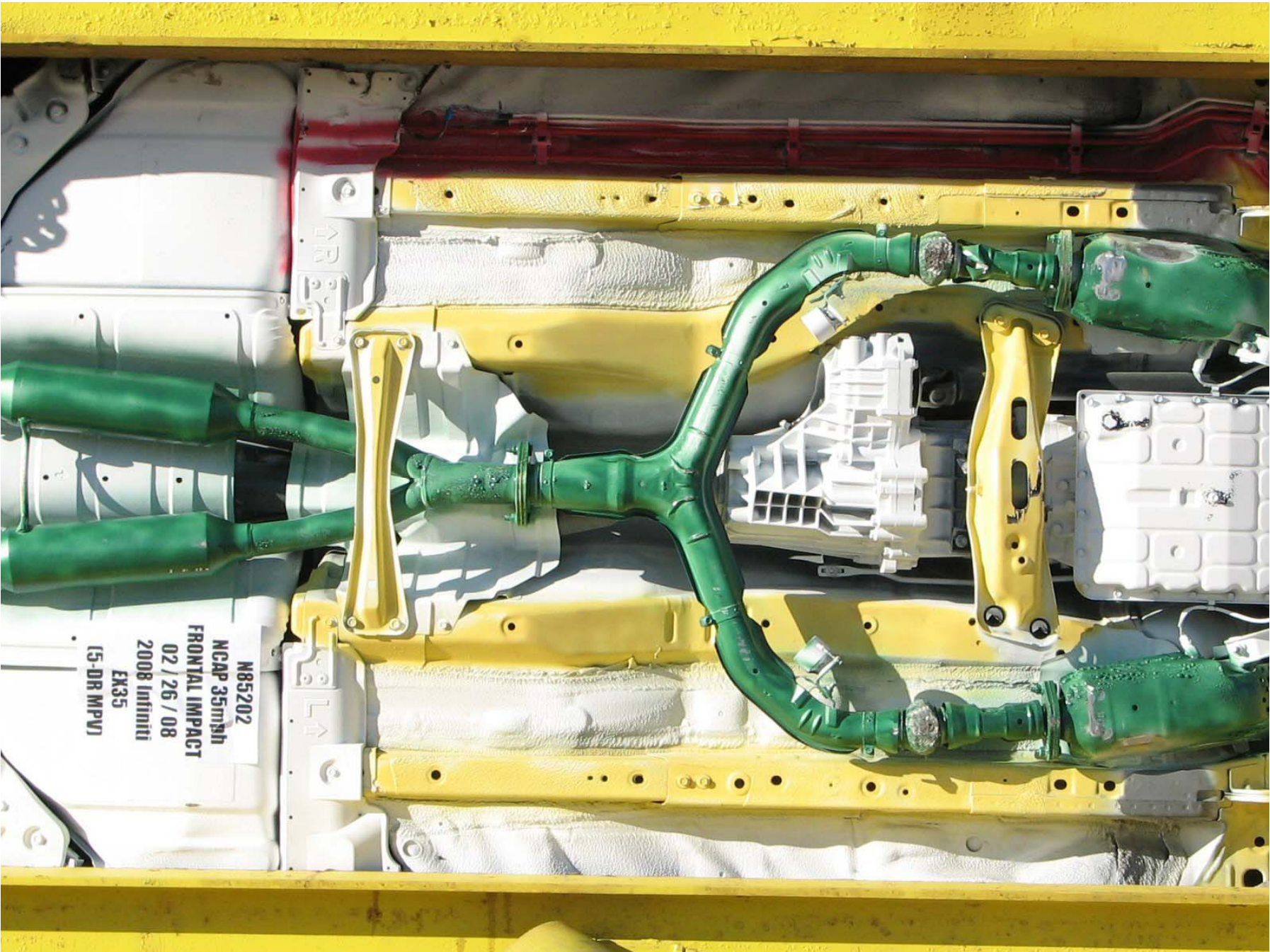


Figure A-27: Post-Test Mid Underbody

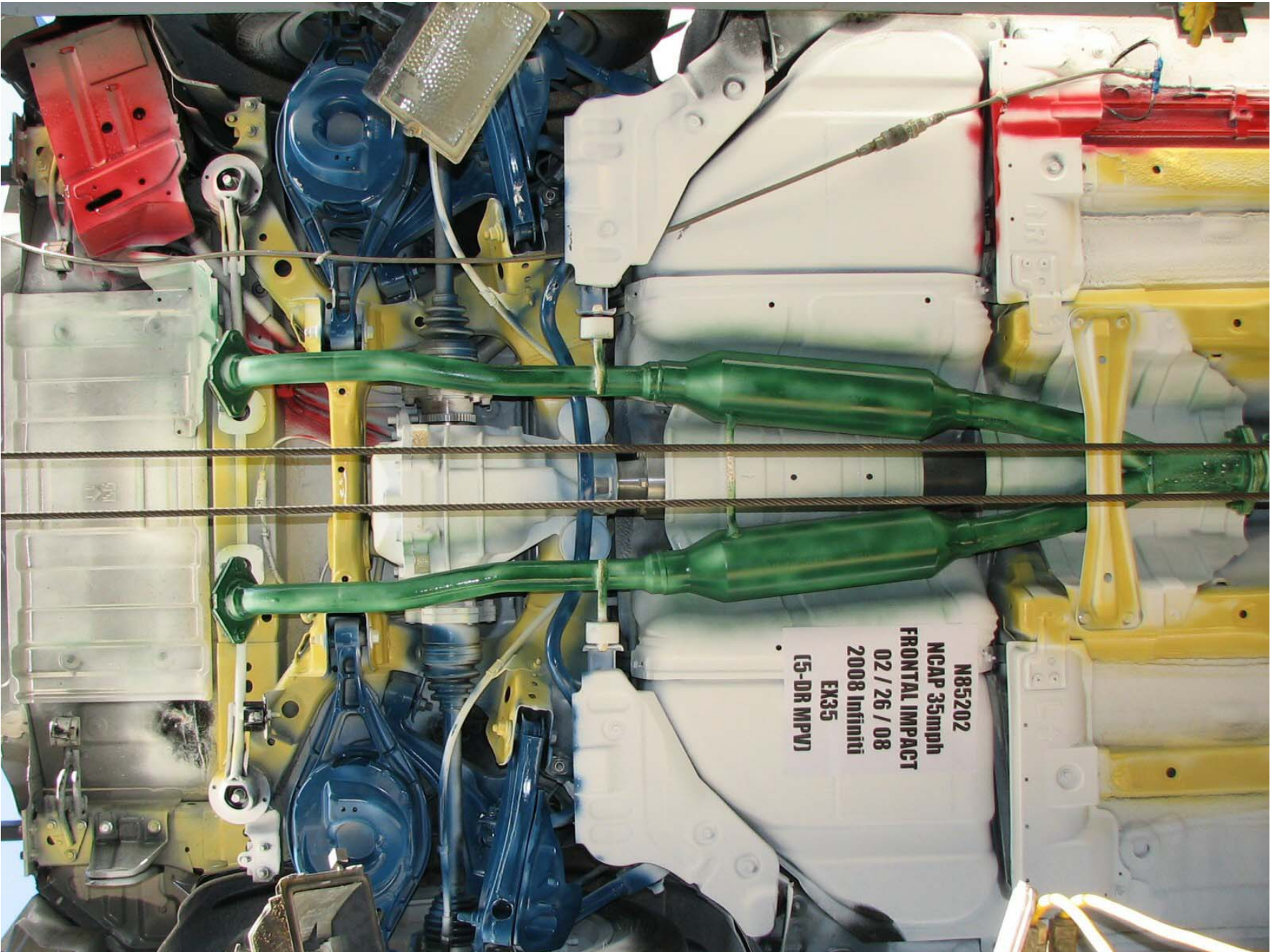


Figure A-28: Pre-Test Rear Underbody

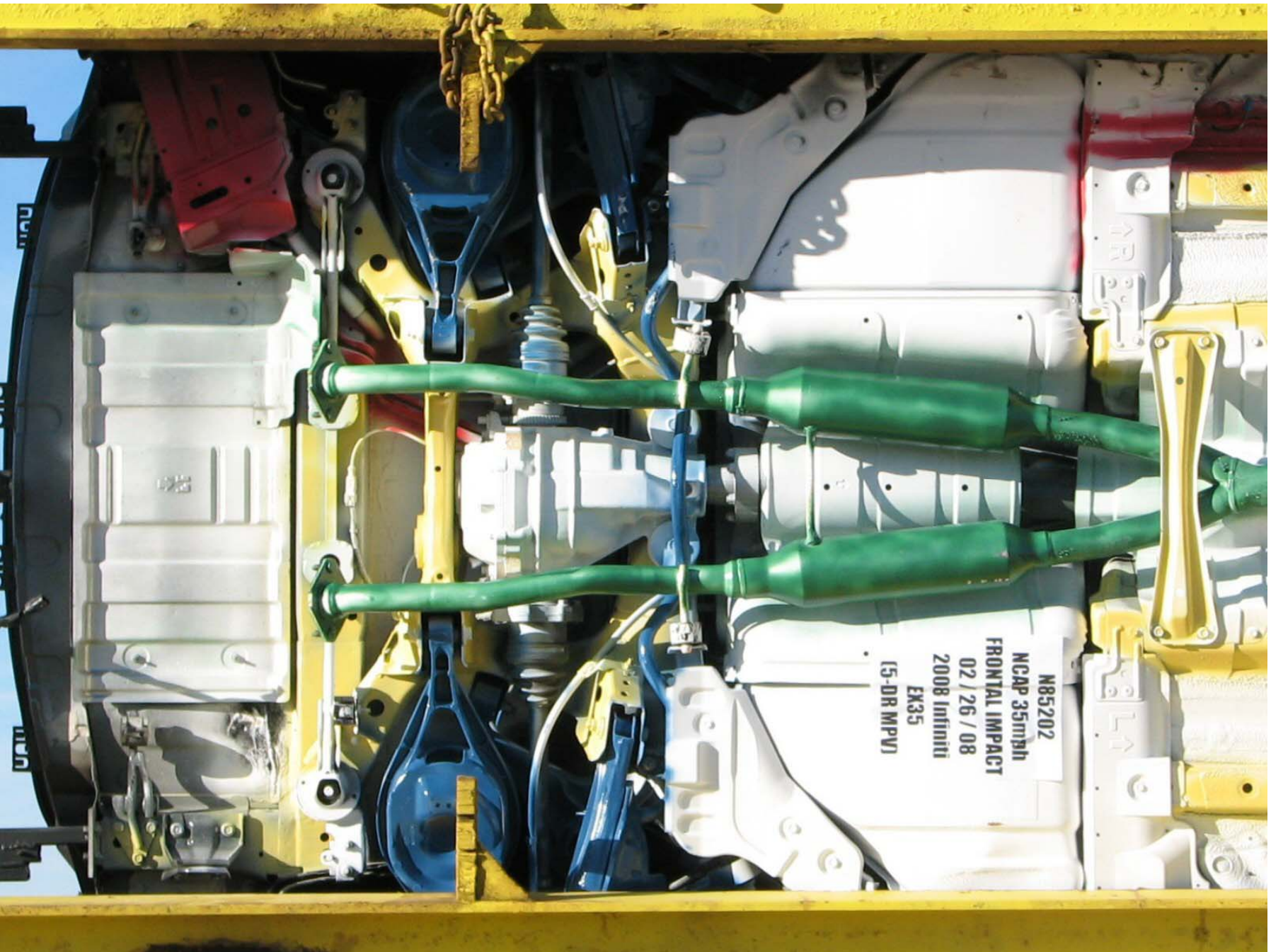


Figure A-29: Post-Test Rear Underbody



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)

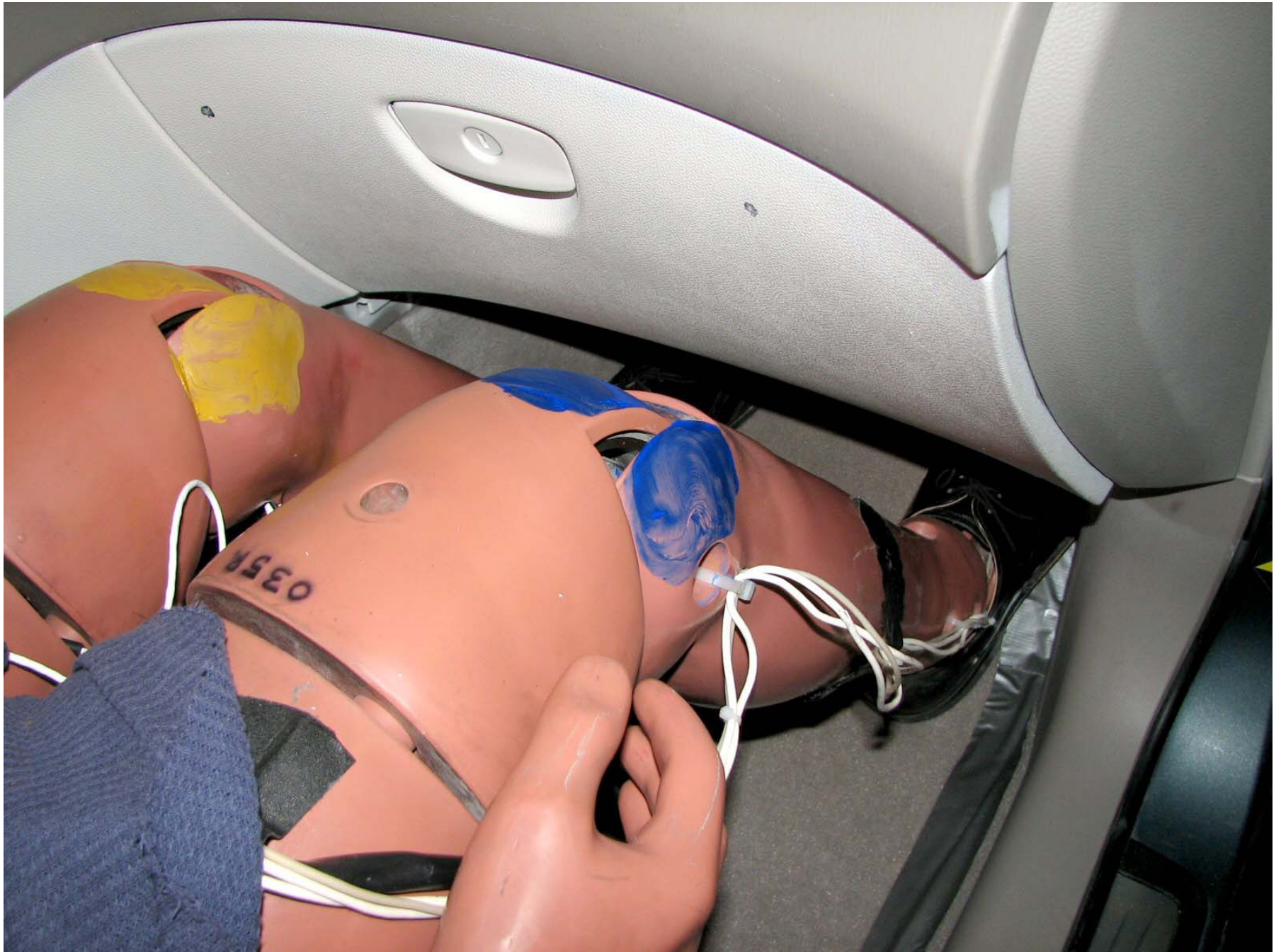


Figure A-50: Pre-Test Passenger Dummy Feet



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°)

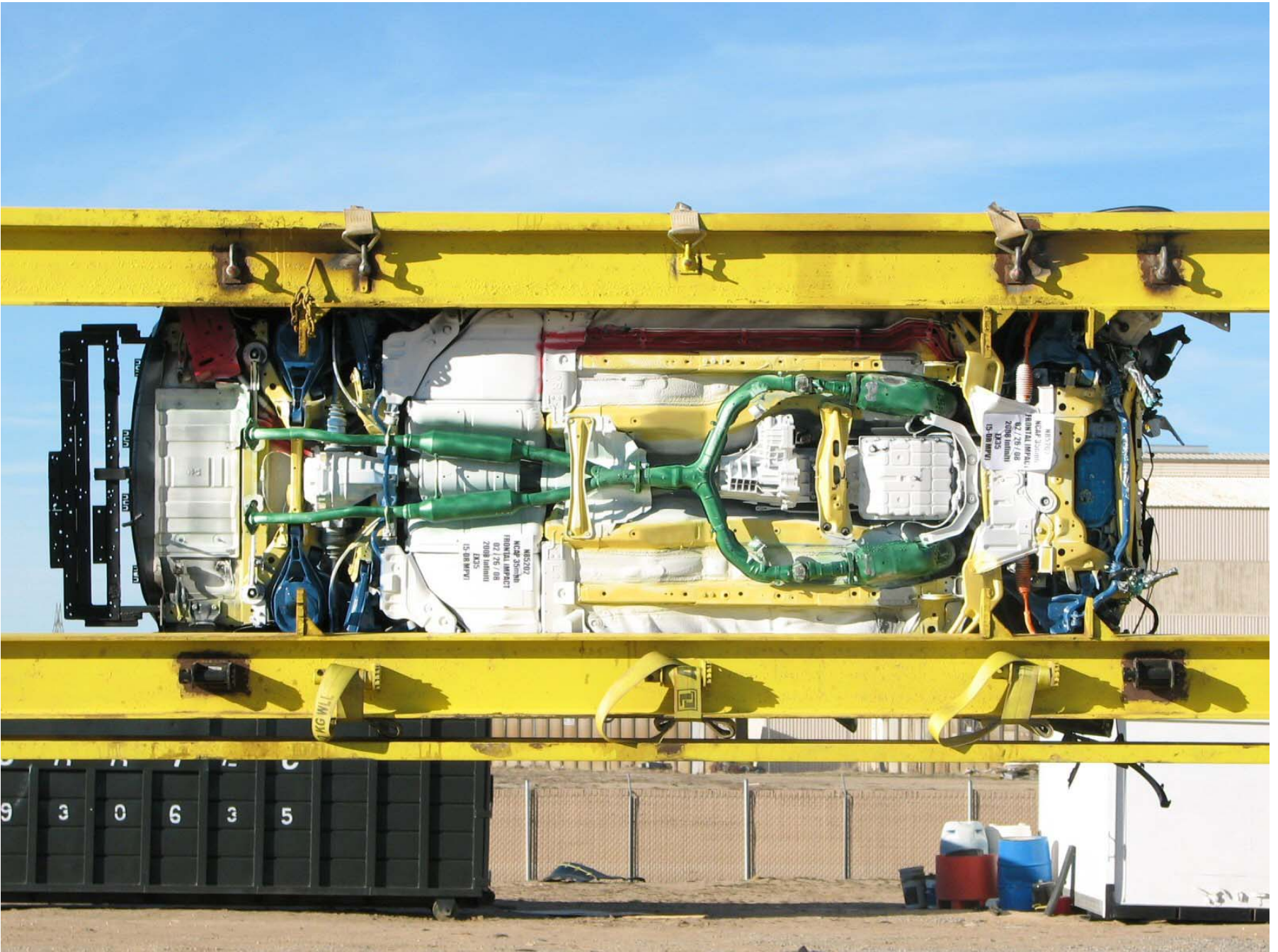


Figure A-61: Vehicle on Rollover Device (270°)



Figure A-62: Vehicle Impact

APPENDIX B
DATA PLOTS

LIST OF DATA PLOTS

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

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)

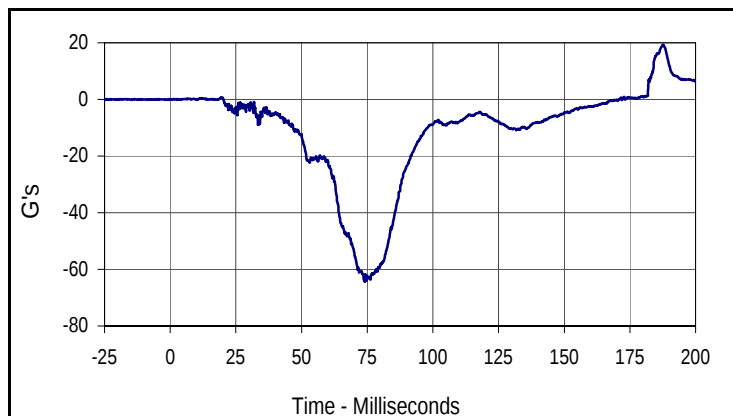
Passenger Chest Redundant Y
Passenger Chest Redundant Z
Passenger Chest Resultant Redundant
Passenger Chest Redundant X Velocity
Passenger Chest Redundant X Displacement
Passenger Chest Displacement
Passenger Pelvis X
Passenger Pelvis Y
Passenger Pelvis Z
Passenger Pelvis Resultant
Passenger Pelvis X 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)

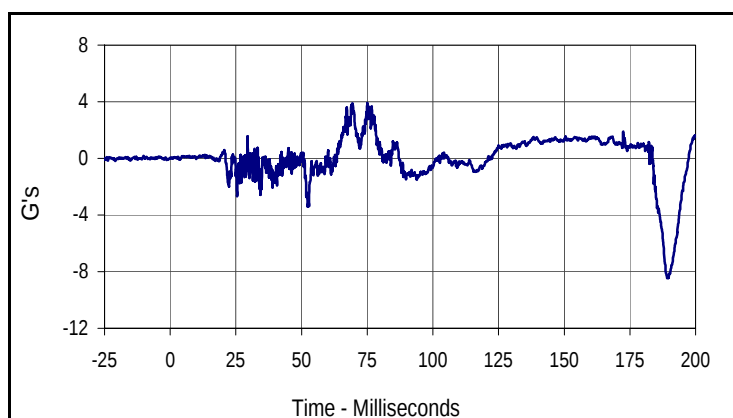
Vehicle Left Rear X Displacement
Vehicle Right Rear X
Vehicle Right Rear X Velocity
Vehicle Right Rear X Displacement
Vehicle Engine Top
Vehicle Engine Top Velocity
Vehicle Engine Top Displacement
Vehicle Engine Bottom
Vehicle Engine Bottom Velocity
Vehicle Engine Bottom Displacement
Vehicle Left Brake 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 Infiniti EX35 AWD 5-Door Hatchback
 Test Program: NHTSA 35mph NCAP

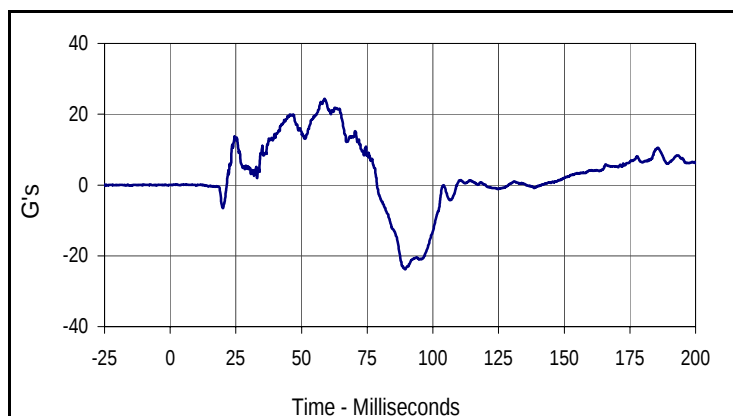
Test Date: 2/26/08
 NHTSA No.: N85202



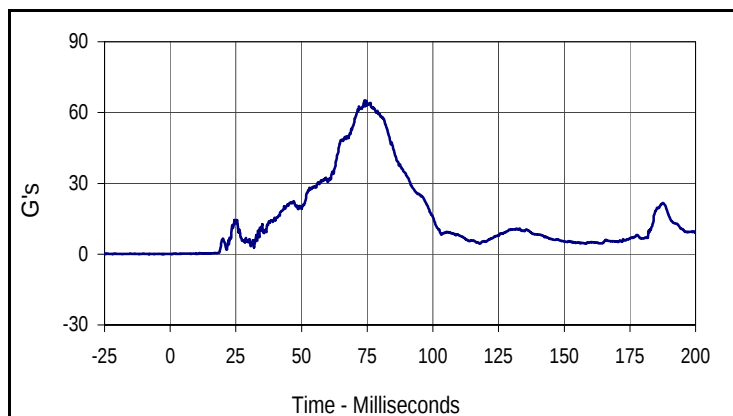
Curve Description			
Driver Head Primary X			
CURNO	Type	SAE Class	Units
001	FIL	1000	G's
Max	Time	Min	Time
19.3	187.7	-64.5	74.0



Curve Description			
Driver Head Primary Y			
CURNO	Type	SAE Class	Units
002	FIL	1000	G's
Max	Time	Min	Time
3.9	75.0	-8.5	189.7



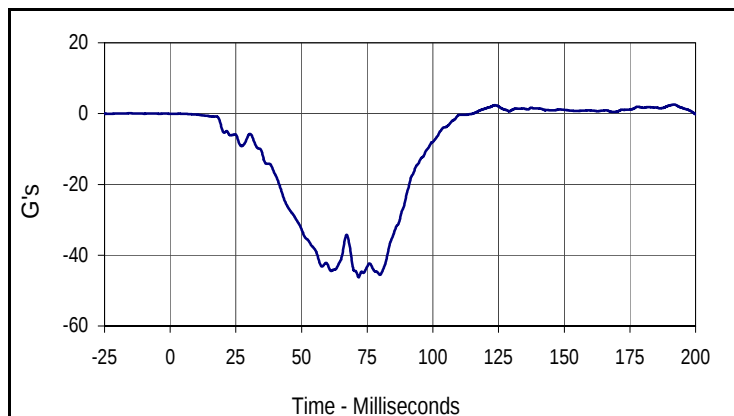
Curve Description			
Driver Head Primary Z			
CURNO	Type	SAE Class	Units
003	FIL	1000	G's
Max	Time	Min	Time
24.4	58.8	-23.8	89.5



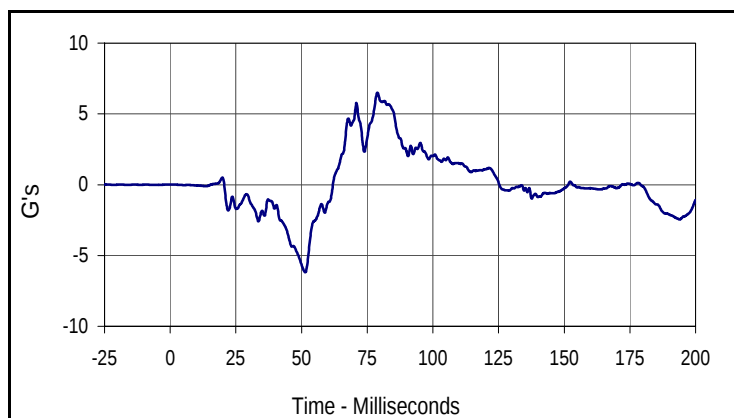
Curve Description			
Driver Head Resultant Primary			
CURNO	Type	SAE Class	Units
001	RES	1000	G's
Max	Time	Min	Time
65.2	74.0	0.0	0.7

Test Vehicle: 2008 Infiniti EX35 AWD 5-Door Hatchback
 Test Program: NHTSA 35mph NCAP

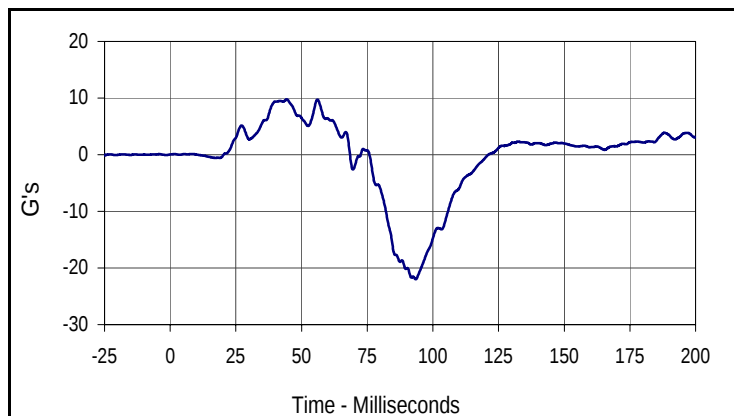
Test Date: 2/26/08
 NHTSA No.: N85202



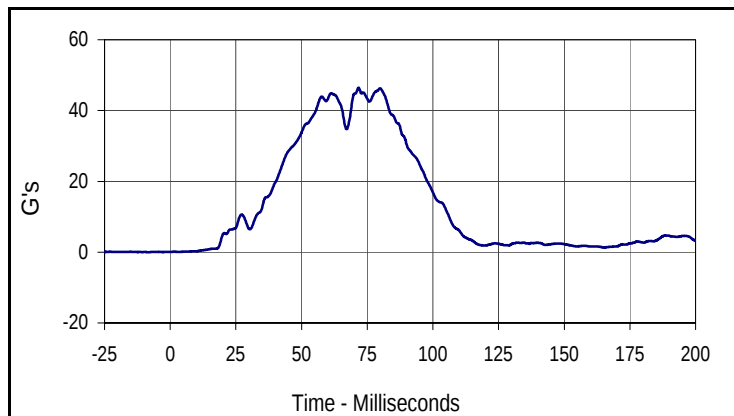
Curve Description			
Driver Chest Primary X			
CURNO	Type	SAE Class	Units
004	FIL	180	G's
Max	Time	Min	Time
2.5	191.8	-46.2	71.7



Curve Description			
Driver Chest Primary Y			
CURNO	Type	SAE Class	Units
005	FIL	180	G's
Max	Time	Min	Time
6.5	78.9	-6.2	51.4



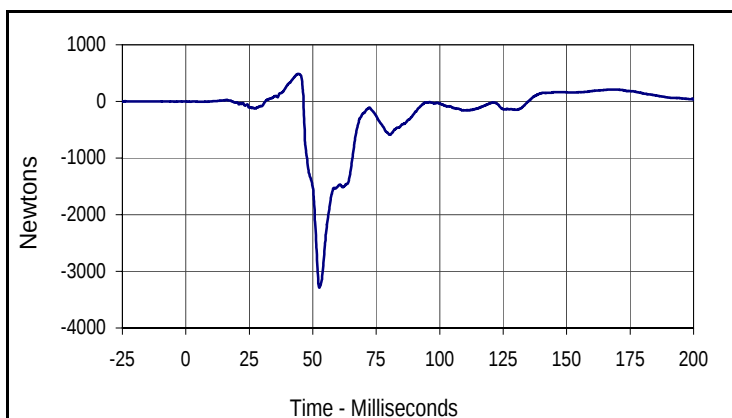
Curve Description			
Driver Chest Primary Z			
CURNO	Type	SAE Class	Units
006	FIL	180	G's
Max	Time	Min	Time
9.8	44.5	-22.0	93.5



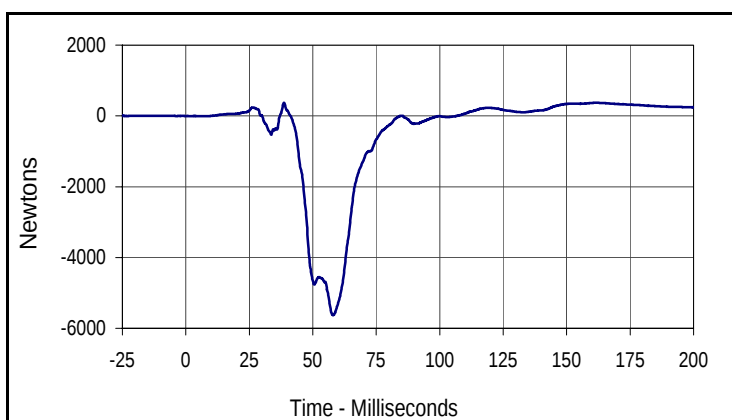
Curve Description			
Driver Chest Resultant Primary			
CURNO	Type	SAE Class	Units
004	RES	180	G's
Max	Time	Min	Time
46.5	71.7	0.0	3.2

Test Vehicle: 2008 Infiniti EX35 AWD 5-Door Hatchback
 Test Program: NHTSA 35mph NCAP

Test Date: 2/26/08
 NHTSA No.: N85202



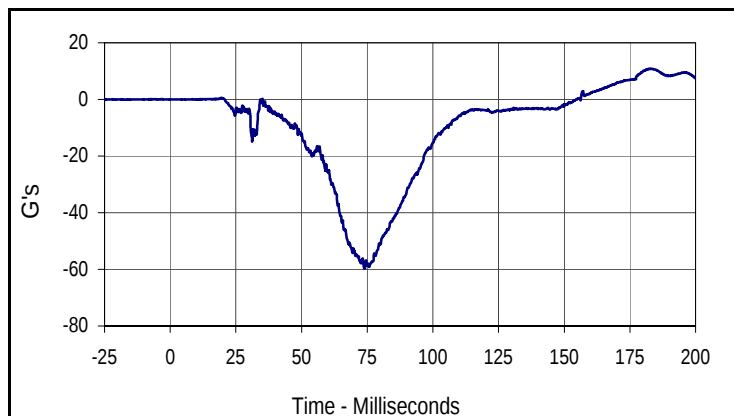
Curve Description			
Driver Left Femur Force Z			
CURNO	Type	SAE Class	Units
007	FIL	600	Newtons
Max	Time	Min	Time
487.4	44.3	-3288.3	52.6



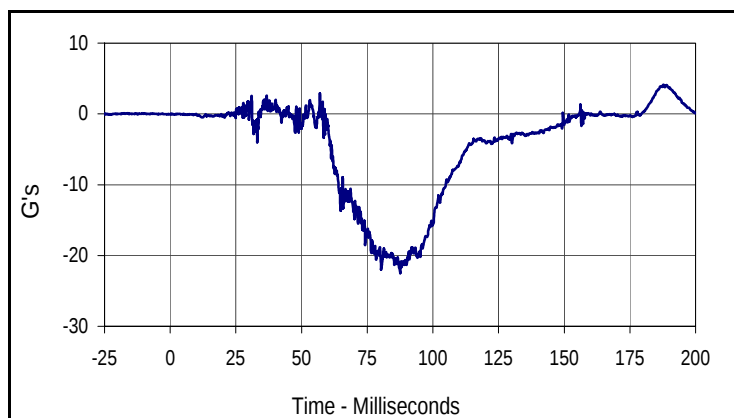
Curve Description			
Driver Right Femur Force Z			
CURNO	Type	SAE Class	Units
008	FIL	600	Newtons
Max	Time	Min	Time
373.3	38.6	-5627.1	58.1

Test Vehicle: 2008 Infiniti EX35 AWD 5-Door Hatchback
 Test Program: NHTSA 35mph NCAP

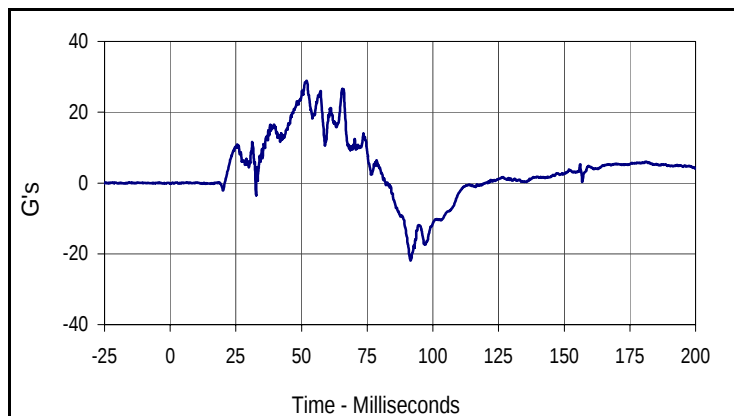
Test Date: 2/26/08
 NHTSA No.: N85202



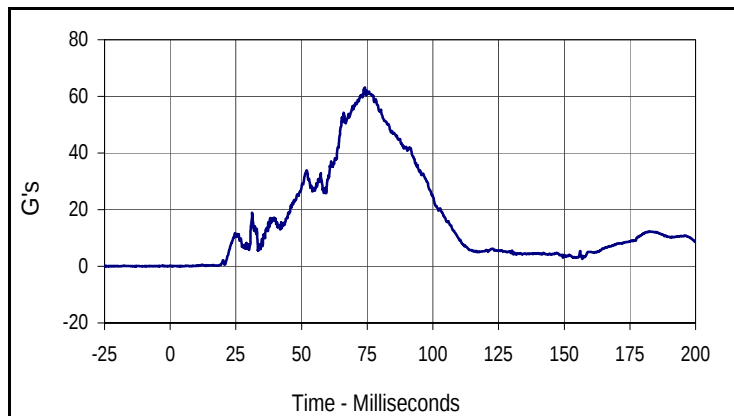
Curve Description			
Passenger Head Primary X			
CURNO	Type	SAE Class	Units
009	FIL	1000	G's
Max	Time	Min	Time
10.8	182.2	-59.8	74.0



Curve Description			
Passenger Head Primary Y			
CURNO	Type	SAE Class	Units
010	FIL	1000	G's
Max	Time	Min	Time
4.1	187.8	-22.5	87.5



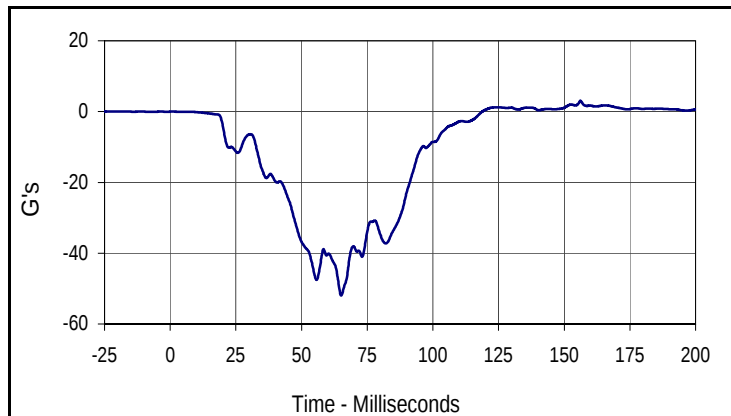
Curve Description			
Passenger Head Primary Z			
CURNO	Type	SAE Class	Units
011	FIL	1000	G's
Max	Time	Min	Time
28.9	51.9	-22.0	91.5



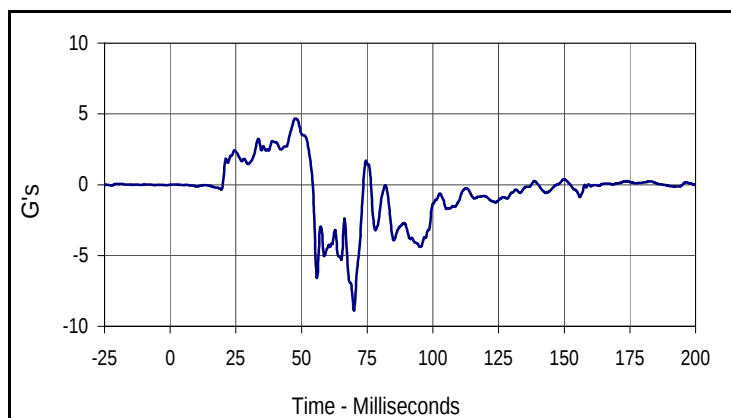
Curve Description			
Passenger Head Resultant Primary			
CURNO	Type	SAE Class	Units
009	RES	1000	G's
Max	Time	Min	Time
63.1	74.1	0.0	5.2

Test Vehicle: 2008 Infiniti EX35 AWD 5-Door Hatchback
 Test Program: NHTSA 35mph NCAP

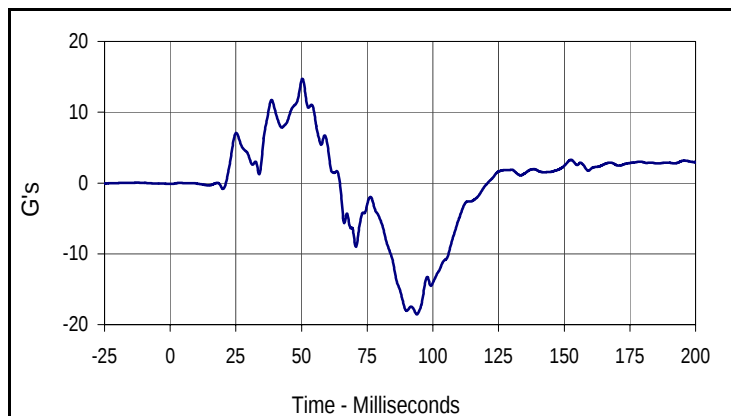
Test Date: 2/26/08
 NHTSA No.: N85202



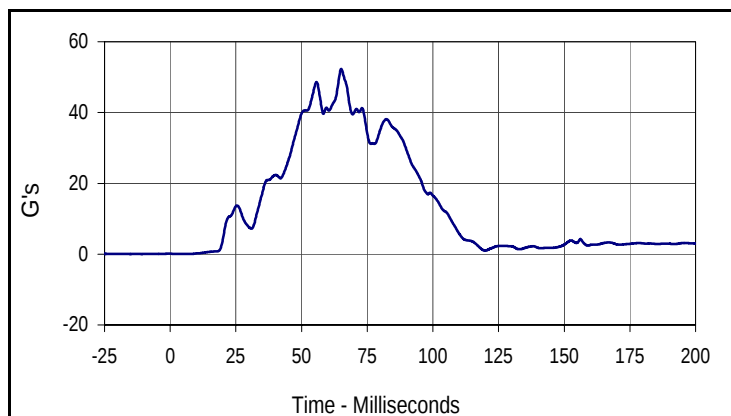
Curve Description			
Passenger Chest Primary X			
CURNO	Type	SAE Class	Units
012	FIL	180	G's
Max	Time	Min	Time
3.1	156.2	-52.0	65.1



Curve Description			
Passenger Chest Primary Y			
CURNO	Type	SAE Class	Units
013	FIL	180	G's
Max	Time	Min	Time
4.7	47.6	-8.9	70.0



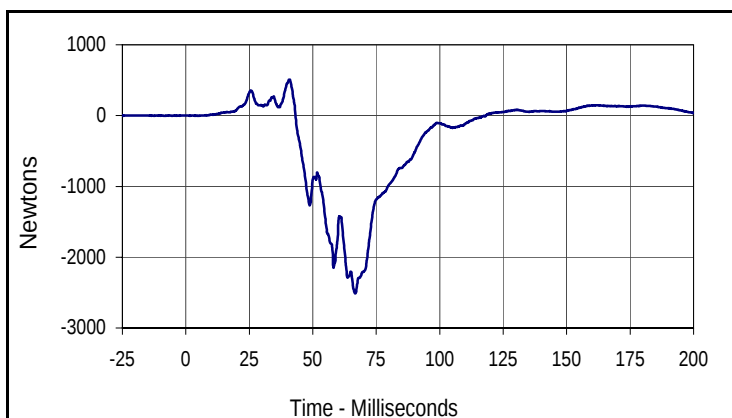
Curve Description			
Passenger Chest Primary Z			
CURNO	Type	SAE Class	Units
014	FIL	180	G's
Max	Time	Min	Time
14.7	50.3	-18.6	93.9



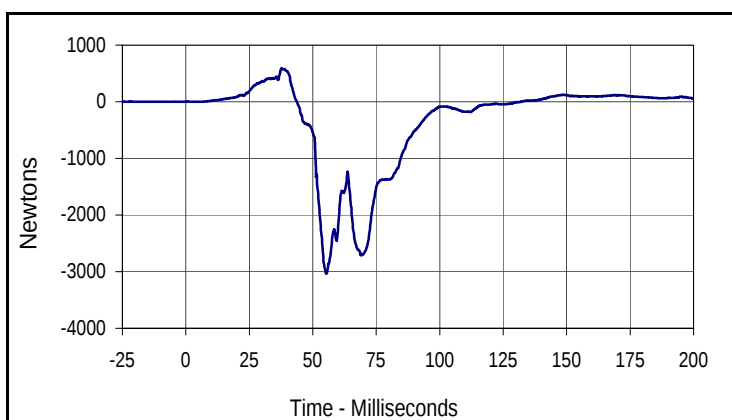
Curve Description			
Passenger Chest Resultant Primary			
CURNO	Type	SAE Class	Units
012	RES	180	G's
Max	Time	Min	Time
52.3	65.1	0.0	2.5

Test Vehicle: 2008 Infiniti EX35 AWD 5-Door Hatchback
 Test Program: NHTSA 35mph NCAP

Test Date: 2/26/08
 NHTSA No.: N85202



Curve Description			
Passenger Left Femur Force Z			
CURNO	Type	SAE Class	Units
015	FIL	600	Newtons
Max	Time	Min	Time
509.6	40.9	-2511.4	66.8



Curve Description			
Passenger Right Femur Force Z			
CURNO	Type	SAE Class	Units
016	FIL	600	Newtons
Max	Time	Min	Time
592.5	37.7	-3033.3	55.4

APPENDIX C
DUMMY CALIBRATION DATA

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

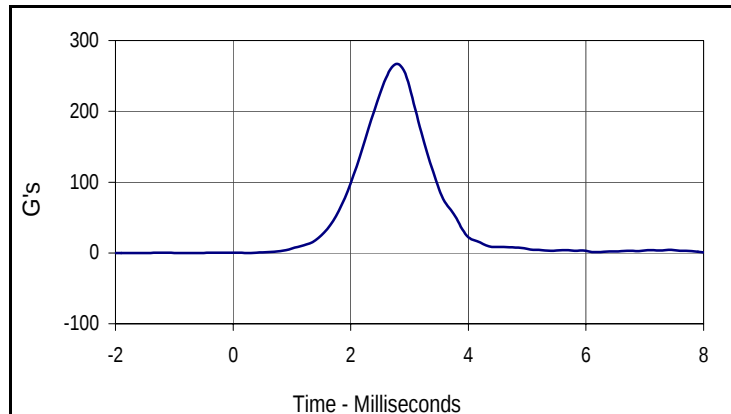
Test Date: 1/15/08

ATD Serial No.: 034

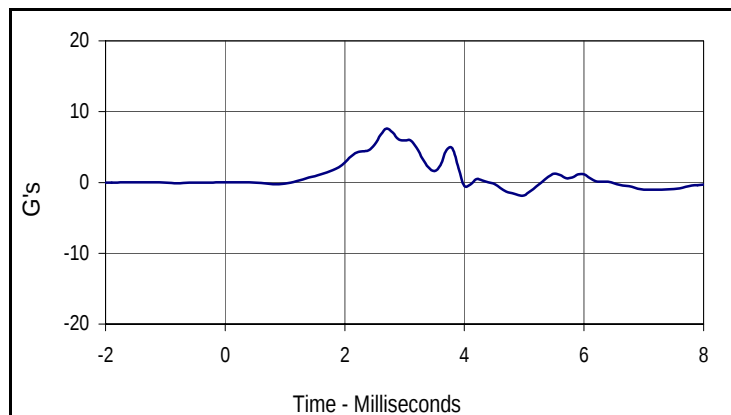
Test I.D.: HD12B



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	267.2	Pass
Peak Lateral Acceleration	G's	≤15.0	7.6	Pass
Is Acceleration Unimodal?	Yes/No	Yes	Yes	Pass
Overall Test Results				Pass



Curve Description			
Head Resultant			
CURNO	Type	SAE Class	Units
001	RES	1000	G's
Max	Time	Min	Time
267.2	2.8	0.0	-1.9



Curve Description			
Head Y			
CURNO	Type	SAE Class	Units
002	FIL	1000	G's
Max	Time	Min	Time
7.6	2.7	-1.8	5.0

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

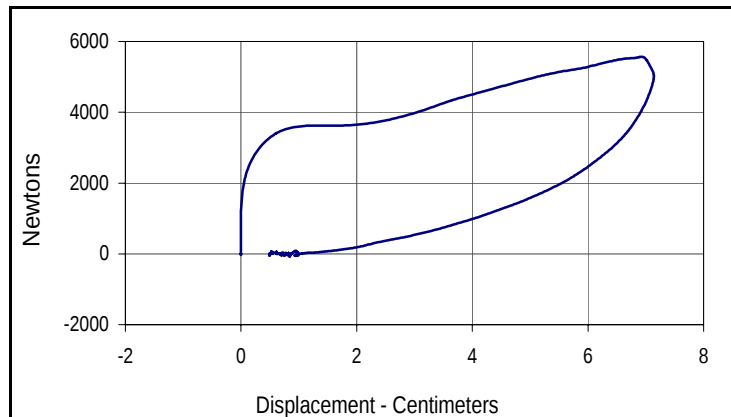
Test Date: 1/16/08

ATD Serial No.: 034

Test I.D.: CH12B



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	5565	Pass
Peak Sternum Deflection	CM	6.35 to 7.26	7.14	Pass
Internal Hysteresis	%	69 to 85	73.0	Pass
Overall Test Results			Pass	



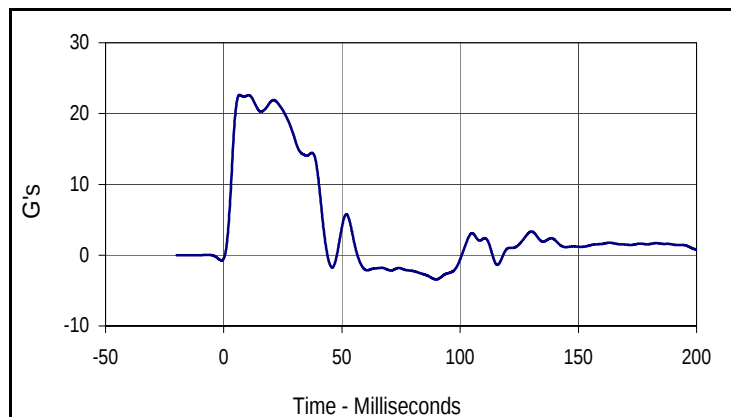
Curve Description			
Probe Force vs. Chest Deflection			
CURNO	Type	SAE Class	Hysteresis
001	FIL	180	73.0
Peak Probe Force		Peak Chest Deflection	
5565		7.14	

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

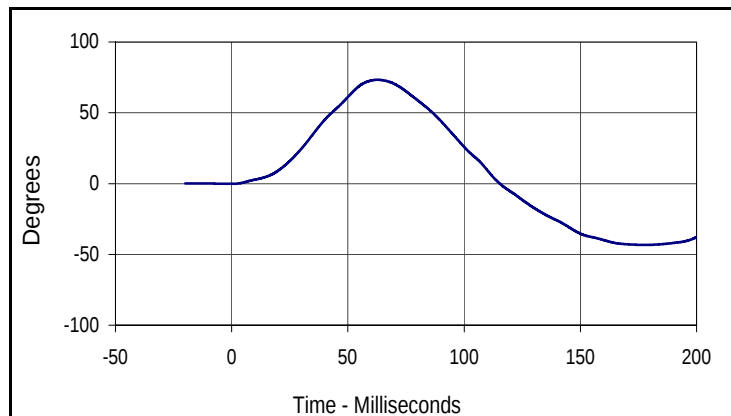
Test Date: 1/16/08
 Test I.D.: NF12B



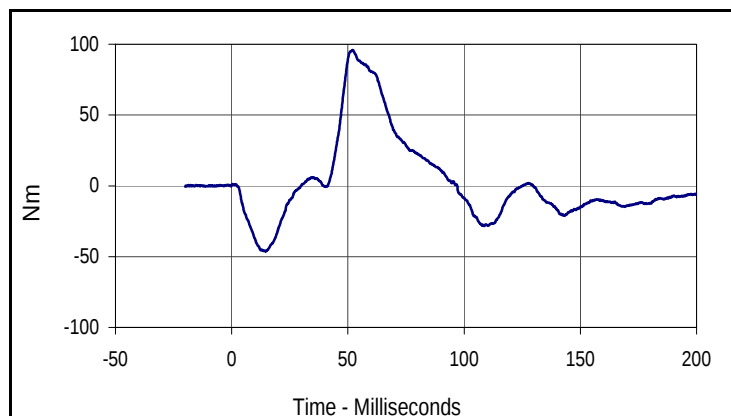
Tested Parameter		Units	Specification	Result	Pass/Fail
Laboratory Temperature		°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity		%	10 to 70	30	Pass
Pendulum Velocity		m/s	6.89 to 7.13	7.04	Pass
Pendulum Deceleration	10 Msec.	G's	22.5 to 27.5	22.6	Pass
	20 Msec.	G's	17.6 to 22.6	21.7	Pass
	30 Msec.	G's	12.5 to 18.5	16.5	Pass
Peak Pendulum Decel. after 30 Msec.		G's	≤ 29.0	16.5	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	73.3	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	95.9	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
22.6	6.7	-3.4	89.8



Curve Description			
"D" Plane Rotation			
CURNO	Type	SAE Class	Units
003	FIL	60	Degrees
Max	Time	Min	Time
73.3	62.7	-43.3	178.6



Curve Description			
Moment About Occipital Condyle			
CURNO	Type	SAE Class	Units
004	FIL	600	Nm
Max	Time	Min	Time
95.9	52.1	-46.2	14.7

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

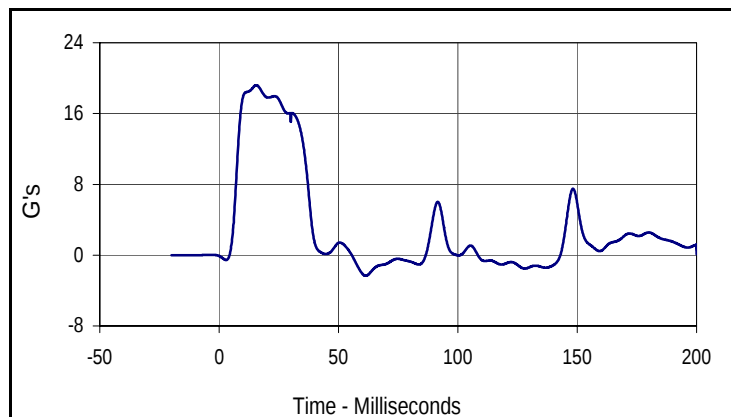
Test Date: 1/15/08

ATD Serial No.: 034

Test I.D.: NE12B



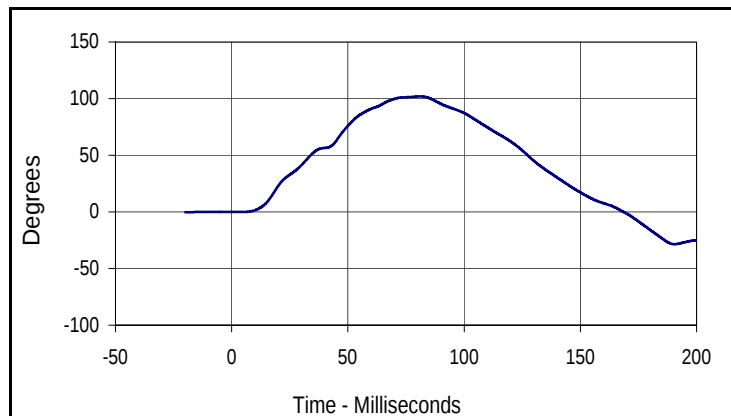
Tested Parameter		Units	Specification	Result	Pass/Fail
Laboratory Temperature		°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity		%	10 to 70	30	Pass
Pendulum Velocity		m/s	5.94 to 6.19	6.16	Pass
Pendulum Deceleration	10 Msec.	G's	17.2 to 21.2	17.9	Pass
	20 Msec.	G's	14.0 to 19.0	17.8	Pass
	30 Msec.	G's	11.0 to 16.0	15.1	Pass
Peak Pendulum Decel. after 30 Msec.		G's	≤ 22.0	15.1	Pass
Deceleration Decay, Time to Cross 5 G's		Msec.	38.0 to 46.0	38.3	Pass
Maximum "D" Plane Rotation	Max	Degrees	81.0 to 106.0	102.0	Pass
	Time	Msec.	72.0 to 82.0	81.0	Pass
"D" Plane Rotation Decay, Time To Zero Crossing		Msec.	147.0 to 174.0	168.5	Pass
Moment About Occ. Condyle	Max	Nm	-52.9 to- 79.9	-77.5	Pass
	Time	Msec.	65.0 to 79.0	67.0	Pass
Positive Moment Decay, Time To Zero Crossing		Msec.	120.0 to 148.0	146.2	Pass
Overall Test Results					Pass



Curve Description

Pendulum Deceleration

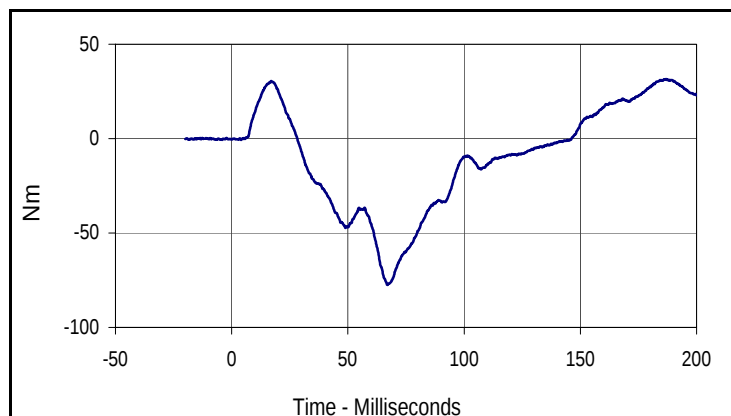
CURNO	Type	SAE Class	Units
001	FIL	60	G's
Max	Time	Min	Time
19.2	15.6	-2.3	61.4



Curve Description

"D" Plane Rotation

CURNO	Type	SAE Class	Units
003	FIL	60	Degrees
Max	Time	Min	Time
102.0	81.0	-28.5	190.5



Curve Description

Moment About Occipital Condyle

CURNO	Type	SAE Class	Units
004	FIL	600	Nm
Max	Time	Min	Time
31.5	186.9	-77.5	67.0

Test Program: Hybrid III 50th Percentile Male Knee Impact Test
 ATD Serial No.: 034

Test Date: 1/16/08
 Test I.D.: LK12B , RK12B

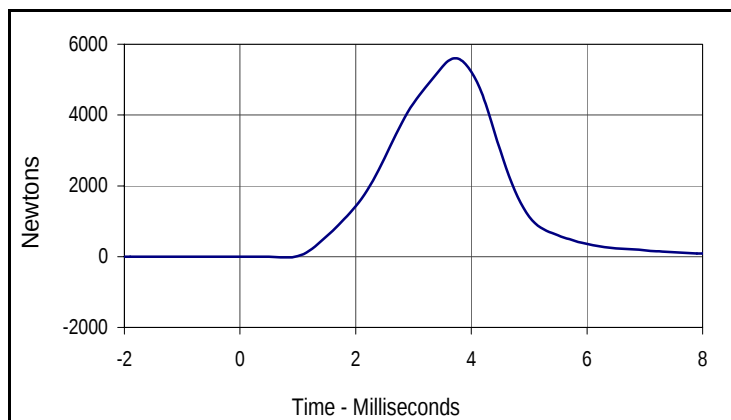


Left Knee

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	5605	Pass
Overall Test Results				Pass

Right Knee

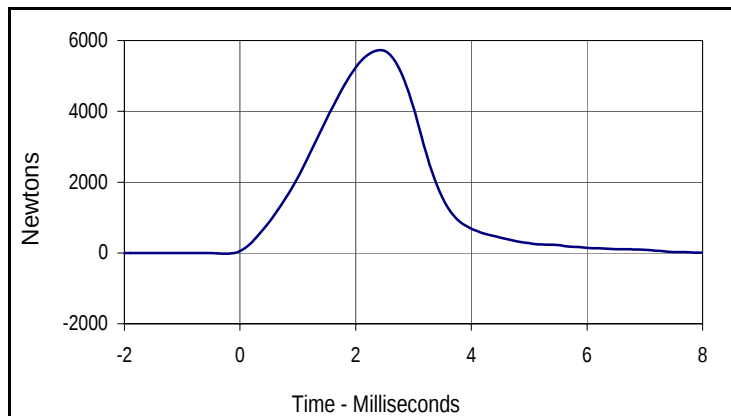
Pendulum Velocity at T=0	m/sec	2.07 to 2.13	2.12	Pass
Peak Probe Force	Newtons	4715 to 5782	5732	Pass
Overall Test Results				Pass



Curve Description

Left Knee Probe Force

CURNO	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Time	Min	Time
5604.8	3.7	-21.3	0.8



Curve Description

Right Knee Probe Force

CURNO	Type	SAE Class	Units
002	FIL	600	Newtons
Max	Time	Min	Time
5732.4	2.4	-24.2	9.8

Test Program: Hybrid III 50th Percentile Male External Measurements

Test Date: 1/16/08

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	881	Pass
B - Shoulder pivot height	mm	505 to 521	516	Pass
C - "H" point height	mm	84 to 89	88	Pass
D - "H" point from seat back	mm	135 to 140	137	Pass
E - Shoulder pivot from back	mm	84 to 94	90	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	45	Pass
I - Shoulder to elbow length	mm	330 to 345	341	Pass
J - Elbow rest height	mm	190 to 211	193	Pass
K - Buttock to knee length	mm	579 to 604	597	Pass
L - Popliteal length	mm	429 to 455	450	Pass
M - Knee pivot height	mm	485 to 500	489	Pass
N - Buttock popliteal length	mm	452 to 477	470	Pass
O - Chest depth	mm	213 to 229	216	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	100	Pass
Y - Chest circumference	mm	970 to 1001	992	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	230	Pass
Overall Test Results				Pass

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

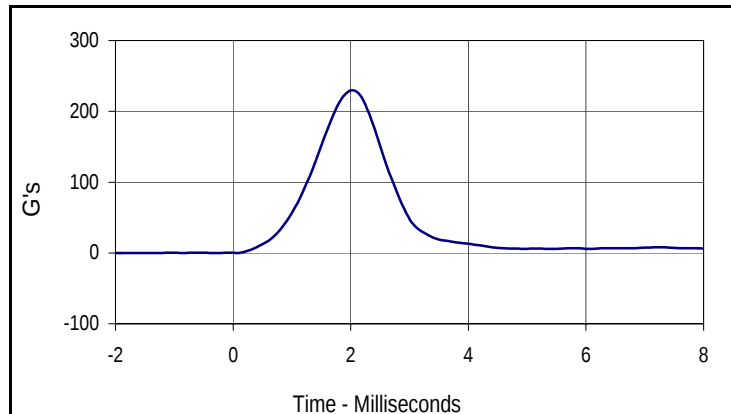
Test Date: 1/15/08

ATD Serial No.: 035

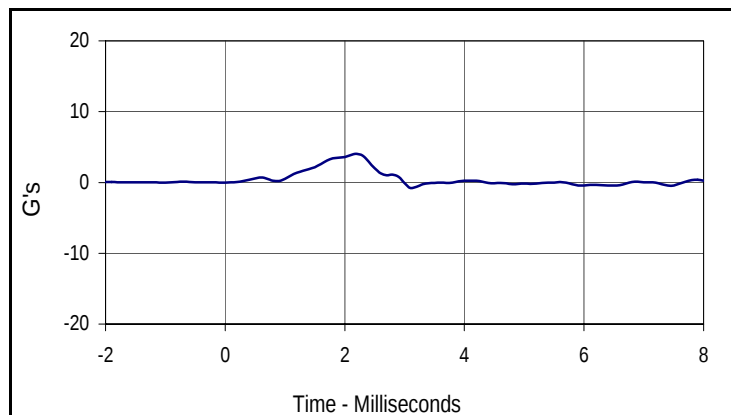
Test I.D.: HD12A



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	229.5	Pass
Peak Lateral Acceleration	G's	≤15.0	4.0	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
229.5	2.0	0.0	-1.3



Curve Description			
Head Y			
CURNO	Type	SAE Class	Units
002	FIL	1000	G's
Max	Time	Min	Time
4.0	2.2	-0.8	3.1

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

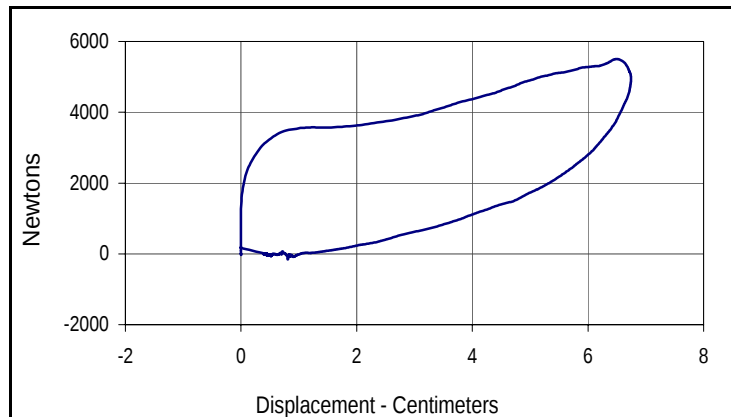
Test Date: 1/15/08

ATD Serial No.: 035

Test I.D.: CH12A



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	6.68	Pass
Peak Probe Force	Newtons	5159 to 5893	5503	Pass
Peak Sternum Deflection	CM	6.35 to 7.26	6.75	Pass
Internal Hysteresis	%	69 to 85	72.9	Pass
Overall Test Results				Pass



Curve Description			
Probe Force vs. Chest Deflection			
CURNO	Type	SAE Class	Hysteresis
001	FIL	180	72.9
Peak Probe Force		Peak Chest Deflection	
5503		6.75	

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

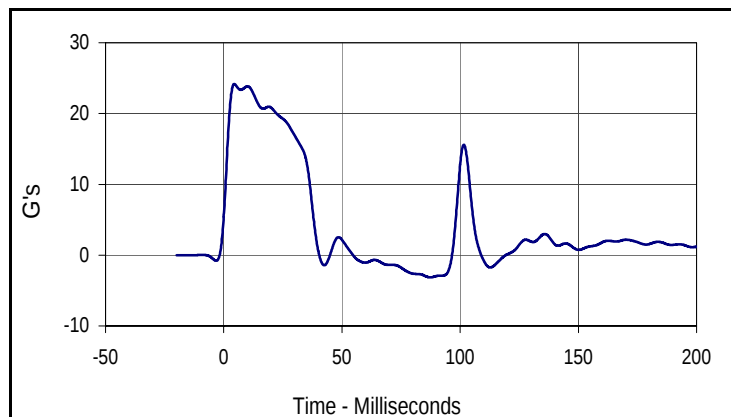
Test Date: 1/15/08

ATD Serial No.: 035

Test I.D.: NF12A



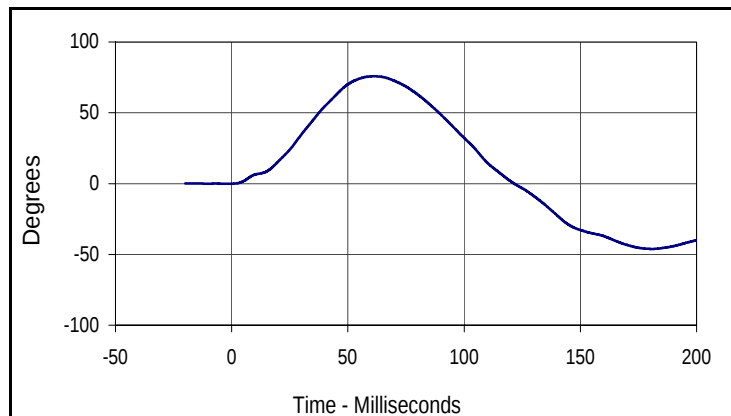
Tested Parameter		Units	Specification	Result	Pass/Fail
Laboratory Temperature		°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity		%	10 to 70	30	Pass
Pendulum Velocity		m/s	6.89 to 7.13	7.04	Pass
Pendulum Deceleration	10 Msec.	G's	22.5 to 27.5	23.8	Pass
	20 Msec.	G's	17.6 to 22.6	20.8	Pass
	30 Msec.	G's	12.5 to 18.5	16.9	Pass
Peak Pendulum Decel. after 30 Msec.		G's	≤ 29.0	16.9	Pass
Deceleration Decay, Time to Cross 5 G's		Msec.	34.0 to 42.0	38.1	Pass
Maximum "D" Plane Rotation	Max	Degrees	64.0 to 78.0	75.8	Pass
	Time	Msec.	57.0 to 64.0	61.1	Pass
"D" Plane Rotation Decay, Time To Zero Crossing		Msec.	113.0 to 128.0	121.6	Pass
Moment About Occ. Condyle	Max	Nm	84.1 to 108.5	87.2	Pass
	Time	Msec.	47.0 to 58.0	56.3	Pass
Positive Moment Decay, Time To Zero Crossing		Msec.	97.0 to 107.0	102.4	Pass
Overall Test Results					Pass



Curve Description

Pendulum Deceleration

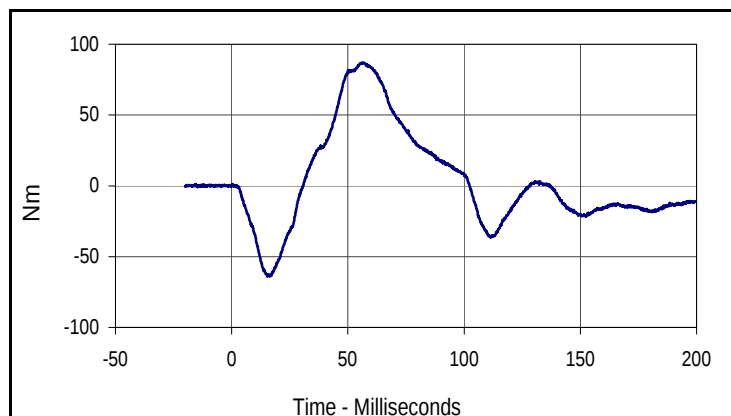
CURNO	Type	SAE Class	Units
001	FIL	60	G's
Max	Time	Min	Time
24.2	4.5	-3.1	87.3



Curve Description

"D" Plane Rotation

CURNO	Type	SAE Class	Units
003	FIL	60	Degrees
Max	Time	Min	Time
75.8	61.1	-46.1	180.8



Curve Description

Moment About Occipital Condyle

CURNO	Type	SAE Class	Units
004	FIL	600	Nm
Max	Time	Min	Time
87.2	56.3	-64.0	16.4

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

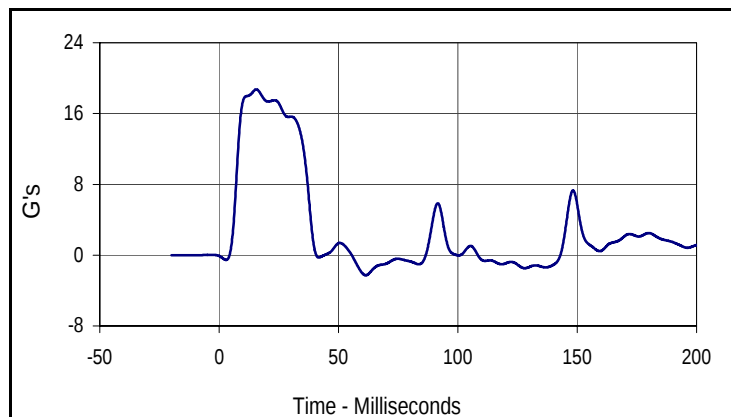
Test Date: 1/15/08

ATD Serial No.: 035

Test I.D.: NE12A



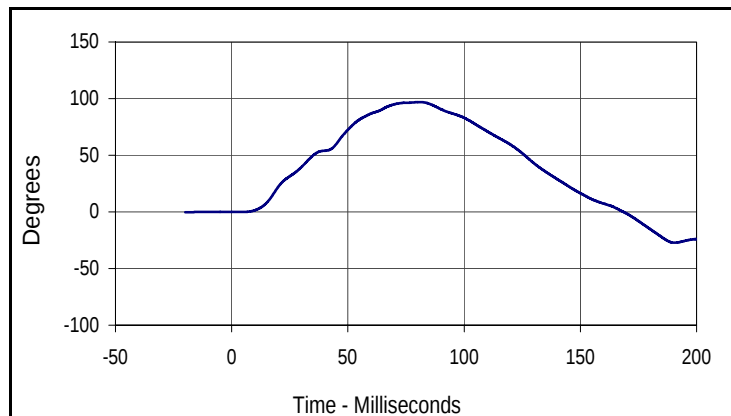
Tested Parameter		Units	Specification	Result	Pass/Fail
Laboratory Temperature		°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity		%	10 to 70	30	Pass
Pendulum Velocity		m/s	5.94 to 6.19	6.16	Pass
Pendulum Deceleration	10 Msec.	G's	17.2 to 21.2	17.4	Pass
	20 Msec.	G's	14.0 to 19.0	17.4	Pass
	30 Msec.	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	38.1	Pass
Maximum "D" Plane Rotation	Max	Degrees	81.0 to 106.0	97.0	Pass
	Time	Msec.	72.0 to 82.0	81.0	Pass
"D" Plane Rotation Decay, Time To Zero Crossing		Msec.	147.0 to 174.0	168.5	Pass
Moment About Occ. Condyle	Max	Nm	-52.9 to- 79.9	-75.8	Pass
	Time	Msec.	65.0 to 79.0	67.0	Pass
Positive Moment Decay, Time To Zero Crossing		Msec.	120.0 to 148.0	146.2	Pass
Overall Test Results					Pass



Curve Description

Pendulum Deceleration

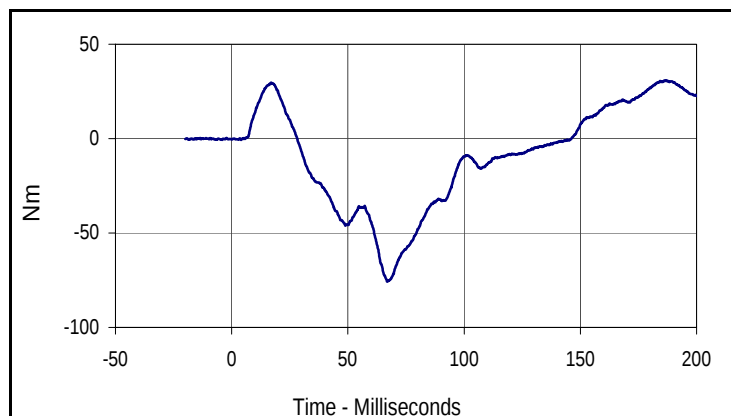
CURNO	Type	SAE Class	Units
001	FIL	60	G's
Max	Time	Min	Time
18.7	15.6	-2.3	61.4



Curve Description

"D" Plane Rotation

CURNO	Type	SAE Class	Units
003	FIL	60	Degrees
Max	Time	Min	Time
97.0	81.0	-27.2	190.5



Curve Description

Moment About Occipital Condyle

CURNO	Type	SAE Class	Units
004	FIL	600	Nm
Max	Time	Min	Time
30.8	186.9	-75.8	67.0

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

Test Date: 1/15/08

ATD Serial No.: 035

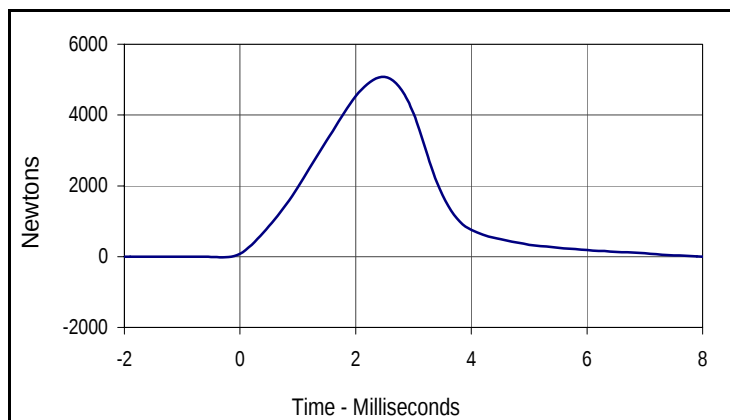
Test I.D.: LK12A , RK12A

**Left Knee**

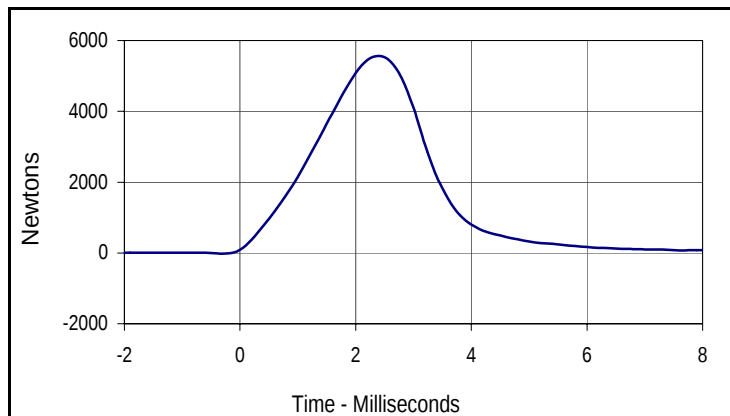
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Pendulum Velocity at T=0	m/sec	2.07 to 2.13	2.08	Pass
Peak Probe Force	Newtons	4715 to 5782	5074	Pass
Overall Test Results				Pass

Right Knee

Pendulum Velocity at T=0	m/sec	2.07 to 2.13	2.12	Pass
Peak Probe Force	Newtons	4715 to 5782	5569	Pass
Overall Test Results				Pass

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

CURNO	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Time	Min	Time
5073.6	2.5	-25.6	9.7

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

CURNO	Type	SAE Class	Units
002	FIL	600	Newtons
Max	Time	Min	Time
5568.7	2.4	-16.3	-0.3

Test Program: Hybrid III 50th Percentile Male External Measurements

Test Date: 1/14/08

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	886	Pass
B - Shoulder pivot height	mm	505 to 521	510	Pass
C - "H" point height	mm	84 to 89	86	Pass
D - "H" point from seat back	mm	135 to 140	137	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	301	Pass
H - Skull cap to back line	mm	41 to 46	44	Pass
I - Shoulder to elbow length	mm	330 to 345	339	Pass
J - Elbow rest height	mm	190 to 211	205	Pass
K - Buttock to knee length	mm	579 to 604	591	Pass
L - Popliteal length	mm	429 to 455	446	Pass
M - Knee pivot height	mm	485 to 500	498	Pass
N - Buttock popliteal length	mm	452 to 477	474	Pass
O - Chest depth	mm	213 to 229	220	Pass
P - Foot length	mm	251 to 267	260	Pass
V - Shoulder breadth	mm	422 to 437	431	Pass
W - Foot breadth	mm	91 to 107	100	Pass
Y - Chest circumference	mm	970 to 1001	989	Pass
Z - Waist circumference	mm	836 to 866	851	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: Dummy Damage Checklist
 ATD Serial No.: 034

Test Date: 1/14/08
 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: 1/14/08
 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:

APPENDIX D
CHILD RESTRAINT SYSTEM