

REPORT NUMBER TR-P28001-11-NC

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

**HONDA OF AMERICA MFG., INC
2008 HONDA ACCORD
2-DOOR COUPE**

NHTSA NUMBER: M85300

**PREPARED BY:
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9270 HOLLY ROAD
ADELANTO, CALIFORNIA 92301**



NOVEMBER 20, 2007

FINAL REPORT

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Date of Acceptance

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Date of Acceptance

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16. Abstract <p>A 35 mph (56.3 km/h) frontal barrier impact was conducted on a 2008 Honda Accord 2-Door Coupe at Karco Engineering, LLC on November 20, 2007. This test was conducted to obtain data indicant of FMVSS 208, 212, 219 (partial), 301, and footwell intrusion performance. The impact velocity is 56.26 km/h. The ambient temperature at the barrier face at the time of impact is 23.3 degrees Celcius. The vehicle's maximum post-test static crush is 596 mm to the right of the vehicle's centerline. The test vehicle is equipped with a 3-point continuous belt system and second generation supplemental airbags in both front outboard seating positions. With respect to FMVSS 208 "Occupant Crash Protection", the occupant injury criteria summary is as follows:</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="width: 35%;">Measurement Description</th> <th style="width: 10%;">Units</th> <th style="width: 10%;">Threshold</th> <th style="width: 15%;">Driver ATD</th> <th style="width: 30%;">Passenger ATD</th> </tr> </thead> <tbody> <tr> <td>Head Injury Criteria (HIC)</td> <td>N/A</td> <td>1000</td> <td style="background-color: #ffffcc;">248.5</td> <td style="background-color: #ffffcc;">238.9</td> </tr> <tr> <td>Max. Chest Accel. (3 msec Clip)</td> <td>G's</td> <td>60</td> <td style="background-color: #ffffcc;">42.3</td> <td style="background-color: #ffffcc;">39.3</td> </tr> <tr> <td>Left Femur Force</td> <td>Newtons</td> <td>10008</td> <td style="background-color: #ffffcc;">-1321.8</td> <td style="background-color: #ffffcc;">-2967.0</td> </tr> <tr> <td>Right Femur Force</td> <td>Newtons</td> <td>10008</td> <td style="background-color: #ffffcc;">-1051.5</td> <td style="background-color: #ffffcc;">-4092.3</td> </tr> </tbody> </table>				Measurement Description	Units	Threshold	Driver ATD	Passenger ATD	Head Injury Criteria (HIC)	N/A	1000	248.5	238.9	Max. Chest Accel. (3 msec Clip)	G's	60	42.3	39.3	Left Femur Force	Newtons	10008	-1321.8	-2967.0	Right Femur Force	Newtons	10008	-1051.5	-4092.3
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SECTION 1

PURPOSE AND SUMMARY OF TEST M85300

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 Honda Accord 2-Door Coupe at a velocity of 56.26 km/h. The test was performed at Karco Engineering, LLC on November 20, 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. 035) and the right-front passenger (position 2) ATD (Serial No. 034) were calibrated prior to this test.

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

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

The maximum static crush of the vehicle was 596 mm to the right of the vehicle's centerline at DPD 4. Both the driver and the passenger side doors remained closed and latched during the impact event, and were operable after the impact.

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

The passenger's visible contact points were as follows: The passenger ATD's head contacted the airbag and headrest. The chest also contacted the airbag. Both knees contacted the 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	248.5	42.3	-26.2	-1321.8	-1051.5
Passenger	238.9	39.3	-24.8	-2967.0	-4092.3

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 Honda Accord 2-Door Coupe

NHTSA No.: M85300

Test Program: NHTSA 35mph NCAP

Test Date: 11/20/07

CONVERSION FACTORS USED IN THIS REPORT*

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

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

DATA SHEET NO. 1
CRASH TEST SUMMARY

Test Vehicle: 2008 Honda Accord 2-Door Coupe

NHTSA No.: M85300

Test Program: NHTSA 35mph NCAP

Test Date: 11/20/07

PRIMARY IMPACT DATA

Measured Parameter	Units	Value
Velocity at Impact	km/h	56.26
Test Weight	kg	1673
Impact Angle	degrees	0
Average Rebound	mm	583
Maximum Static Crush	mm	596

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. 035	50% Male Hybrid III No. 034
Head Contact	Airbag, Headrest	Airbag, Headrest
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 Honda Accord 2-Door Coupe

NHTSA No.: M85300

Test Program: NHTSA 35mph NCAP

Test Date: 11/20/07

TEST VEHICLE INFORMATION AND OPTIONS

NHTSA No.	M85300
Make	Honda
Model	Accord
Body Style	2-Door Coupe
Vin No.	1HGCS12308A002200
Color	Black
Delivery Date	11/5/2007
Odometer (Miles)	82.0
Dealer	El Monte Spirit Honda
Transmission	5-Speed Automatic
Final Drive	Front
Type/No. Cyl.	Inline 4
Engine Disp. (L)	2.4
Engine Placement	Transverse
Roof Rack	No
Sunroof/T-Top	No
Tinted Glass	No
Traction Control	Yes
Power Brakes	Yes
Front Disc	Yes
Rear Disc	Yes

Anti-Lock Brakes	Yes
All Wheel Drive	No
Power Steering	Yes
Driver Front Airbag	Yes
Driver Side Airbag	Yes
Driver 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. Cond.	Yes
AM/FM CD	Yes
Tilt Steering	Yes
Automatic Door Locks	Yes
Power Windows	Yes
Power Seats	No
Other	N/A

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

Yes

DATA FROM MANUFACTURER

Manufactured By	Honda of America Mfg. Inc
Date of Manufacture	Oct-07

GVWR (kg)	1950
GAWR Front (kg)	1060
GAWR Rear (kg)	910

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)				385
Cargo Weight (RCLW) (kg)				45

DATA SHEET NO. 2...(CONTINUED)

GENERAL TEST AND VEHICLE PARAMETER DATA

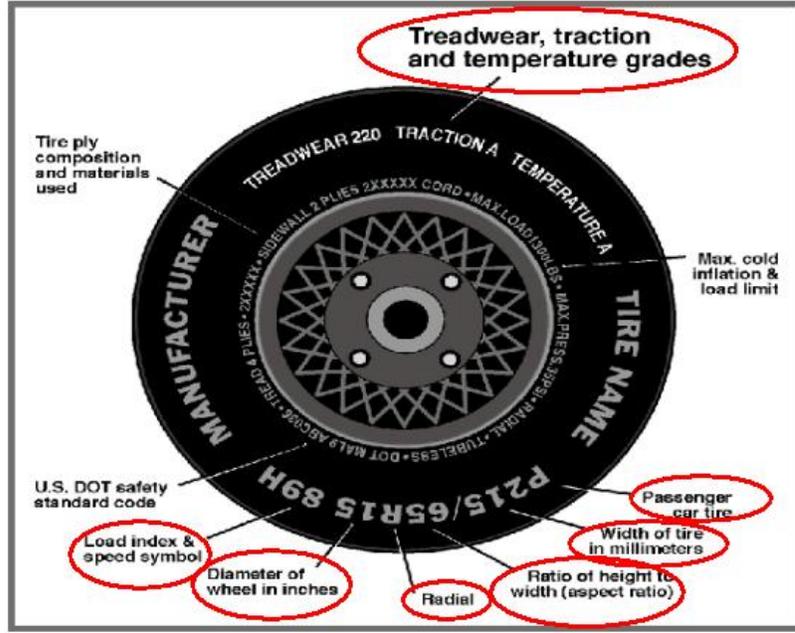
Test Vehicle: 2008 Honda Accord 2-Door Coupe

NHTSA No.: M85300

Test Program: NHTSA 35mph NCAP

Test Date: 11/20/07

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)	220	220
Recommended Tire Size	P225/50R17	P225/50R17
Tire Size on Vehicle	P225/50R17	P225/50R17
Tire Manufacturer	Michelin	Michelin
Treadwear	300	300
Traction	A	A
Temperature Grades	A	A
Tire Plies Sidewall	2 Polyester	2 Polyester
Tire Plies Body	2 Polyester, 2 Polyamide, 2 Steel	2 Polyester, 2 Polyamide, 2 Steel
Load Index/Speed Symbol	93V	93V
Tire Material	Polyester, Polyamide, Steel	Polyester, Polyamide, Steel
DOT Safety Code Right	B90A VJLX 3907	B90A VJLX 3907
DOT Safety Code Left	B90A VJLX 3907	B90A VJLX 3907

DATA SHEET NO. 2...(CONTINUED)

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2008 Honda Accord 2-Door Coupe

NHTSA No.: M85300

Test Program: NHTSA 35mph NCAP

Test Date: 11/20/07

TEST VEHICLE WEIGHTS

	Units	As Delivered Weights (UVW)			As Tested Weights (ATW)		
		Front Axle	Rear Axle	Total	Front Axle	Rear Axle	Total
Left	kg	464	293	757	489	369	858
Right	kg	451	273	724	472	343	815
Ratio	%	61.8%	38.2%	100.0%	57.4%	42.6%	100.0%
Totals	kg	915	566	1481	961	712	1673

TARGET TEST WEIGHT CALCULATION

Measured Parameter	Units	Value
Total Delivered Weight (UVW)	kg	1481
Weight of 2 P572 ATD's	kg	152
Rated Cargo/Luggage Wt. (RCLW)	kg	45
Calculated Vehicle Target Wt. (TVTW)	kg	1678

TEST VEHICLE ATTITUDE AND CG

	Units	LF	RF	LR	RR	CG (aft of front axle)
As Delivered	mm	719	723	727	731	1007
As Tested	mm	707	711	701	709	1122

Vehicle Wheel Base (mm) 2635

Weight of Ballast Secured in cargo area (kg) 0

Weight of Items Removed (kg) 67

Vehicle Components Removed Trunk lid, tail lights, spare tire, rear windows, rear bumper, exhaust

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

FUEL SYSTEM DATA

Fuel System Capacity From Owners Manual (L) 70.02

Actual Test Volume in fuel System (L) 22.71*

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.

*Due to weight constraints, this amount was used to achieve the appropriate weight for the target test weight.

DATA SHEET NO. 3

POST-TEST IMPACT DATA

Test Vehicle: 2008 Honda Accord 2-Door Coupe

NHTSA No.: M85300

Test Program: NHTSA 35mph NCAP

Test Date: 11/20/07

SPEED TRAP DATA

Measured Parameter	Units	Requirement	Value
Trap No.1 Velocity (Primary)	km/h	55.51 to 57.12	56.26
Trap No.2 Velocity (Redun.)	km/h	55.51 to 57.12	56.24

VEHICLE STATIC CRUSH

Measured Parameter	Units	Pre-Test	Post-Test	Difference
Left Side	mm	4611	4350	-261
Center	mm	4835	4280	-555
Right Side	mm	4611	4240	-371

VEHICLE REBOUND FROM BARRIER

Measured Parameter	Units	Value
Left Side	mm	575
Center	mm	550
Right Side	mm	625
Average	mm	583

DATA SHEET NO. 4

TEST VEHICLE INFORMATION

Test Vehicle: 2008 Honda Accord 2-Door Coupe

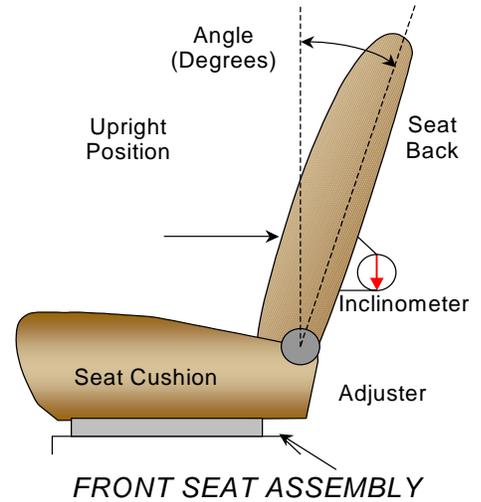
NHTSA No.: M85300

Test Program: NHTSA 35mph NCAP

Test Date: 11/20/07

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 seat back of the seat using a digital inclinometer.



SEAT BACK ANGLES

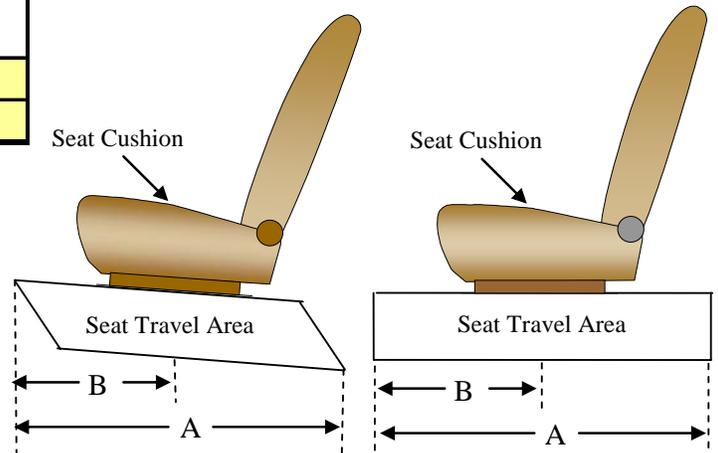
	Deg.
Driver w/seated Dummy	24.3 @ Seat back
Passenger w/seated Dummy	21.9 @ Seat back

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	25 Detents	13th Detent
Passenger Seat	25 Detents	13th Detent



SEAT BELT UPPER ANCHORAGE

Position number one (1), the uppermost position.

SEAT BELT UPPER ANCHORAGE

	Total # of Positions	Placed in Position #
Driver Seat	4	1
Passenger Seat	4	1

DATA SHEET NO. 4...(CONTINUED)

TEST VEHICLE INFORMATION

Test Vehicle: 2008 Honda Accord 2-Door Coupe

NHTSA No.: M85300

Test Program: NHTSA 35mph NCAP

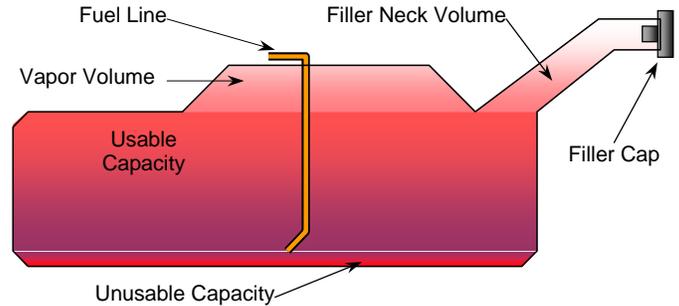
Test Date: 11/20/07

FUEL TANK CAPACITY

	Liters
Usable Capacity of "Standard Tank"	70.02
Usable Capacity of "Optional" Tank	
Usable Capacity used for FMVSS 301	64.42 to 65.82
Actual Amount of Solvent used	22.71*

*Due to weight constraints this vehicle was tested with approximately 1/3 of capacity in fuel tank

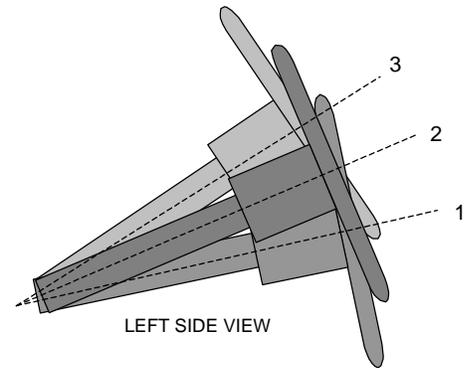
The test vehicle is equipped with an electric fuel pump. The fuel pump operates for approximately two seconds after the ignition is placed in the "ON" position, after which the fuel pump automatically shuts off. The fuel filler door is located on the left rear fender. The standard fuel tank occupies 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 position No. 1	18.8	200.0
Geometric center position No. 2	22.2	220.0
Uppermost position No. 3	25.6	240.0

DATA SHEET NO. 5

DUMMY POSITIONING IN VEHICLE

Test Vehicle: 2008 Honda Accord 2-Door Coupe

NHTSA No.: M85300

Test Program: NHTSA 35mph NCAP

Test Date: 11/20/07

TEST DUMMY POSITION MEASUREMENTS

Code	Measurement Description	Driver		Passenger	
		Length (mm)	Angle (deg)	Length (mm)	Angle (deg)
WA	Windshield Angle		25.9		
SWA	Steering Wheel Angle		67.8		
SCA	Steering Column Angle		22.2		
SA	Seat Back Angle		24.3 @ Seat back		21.9 @ Seat back
HZ	Head to Roof (Z)	239	90.0	209	90.0
HH	Head to Header	383		336	
HW	Head to Windshield	714		620	
HR	Head to Side Header (Y)	250		220	
NR	Nose to Rim	403	2.5		
CD	Chest to Dash	578		506	
CS	Chest to Steering Hub	344			
RA	Rim to Abdomen	212			
KDL	Left Knee to Dash	134	30.2	132	
KDR	Right Knee to Dash	134		138	27.8
PA	Pelvic Angle		24.6		22.0
TA	Tibia Angle		41.7		38.9
KK	Knee to Knee (Y)	349		288	
SK	Striker to Knee	808	9.2	866	11.5
ST	Striker to Head	463	56.8	523	51.7
SH	Striker to H-Point	400	0.0	436	0.0
SHY	Striker to H-Point (Y)	235		248	
HS	Head to Side Window	345		301	
HD	H-Point to Door (Y)	156		150	
AD	Arm to Door (Y)	138		161	

DATA SHEET NO. 5...(CONTINUED)

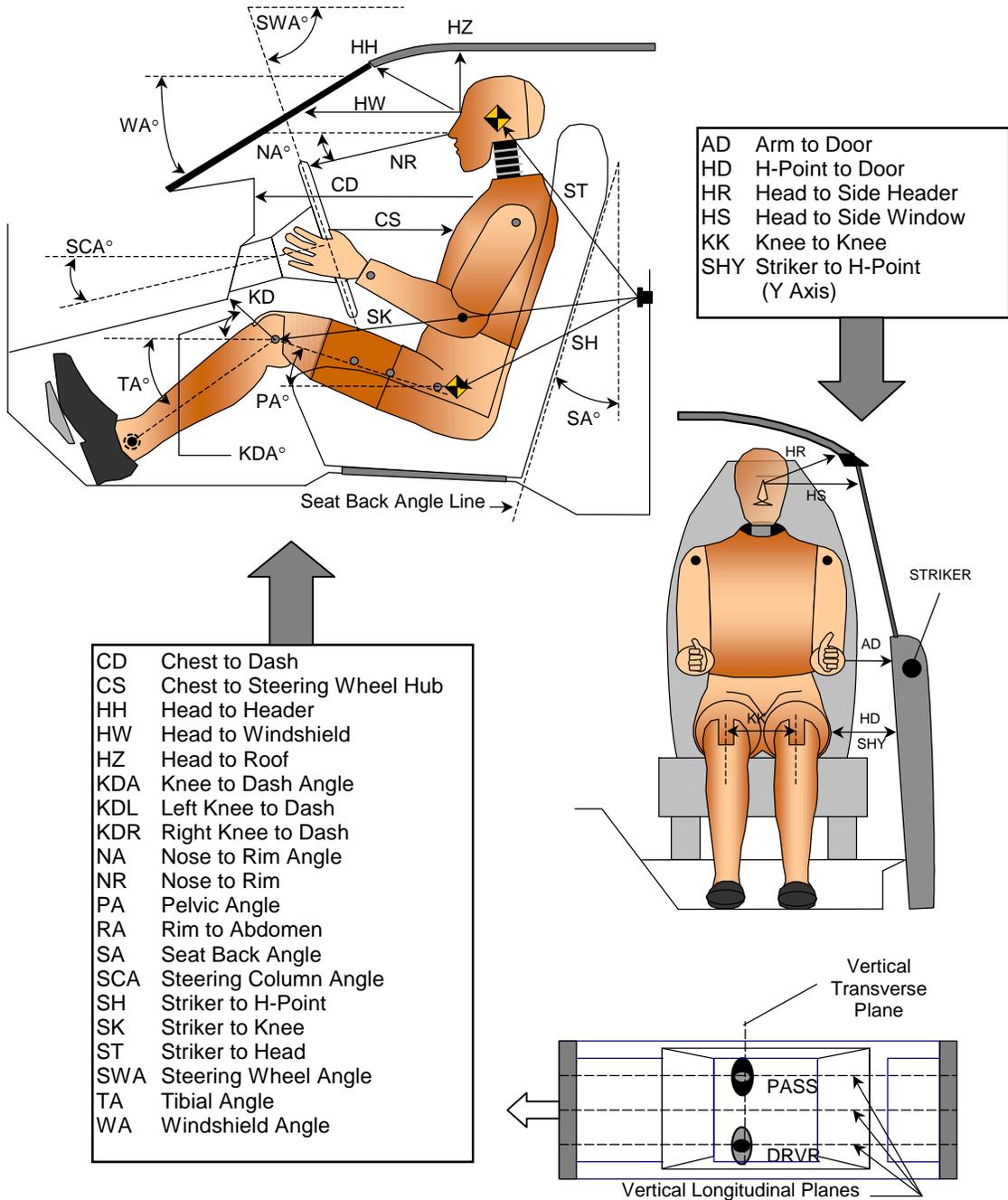
DUMMY POSITIONING IN VEHICLE

Test Vehicle: 2008 Honda Accord 2-Door Coupe

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CD	Chest to Dash
CS	Chest to Steering Wheel Hub
HH	Head to Header
HW	Head to Windshield
HZ	Head to Roof
KDA	Knee to Dash Angle
KDL	Left Knee to Dash
KDR	Right Knee to Dash
NA	Nose to Rim Angle
NR	Nose to Rim
PA	Pelvic Angle
RA	Rim to Abdomen
SA	Seat Back Angle
SCA	Steering Column Angle
SH	Striker to H-Point
SK	Striker to Knee
ST	Striker to Head
SWA	Steering Wheel Angle
TA	Tibial Angle
WA	Windshield Angle

DUMMY MEASUREMENTS FOR FRONT SEAT OCCUPANTS

DATA SHEET NO. 6

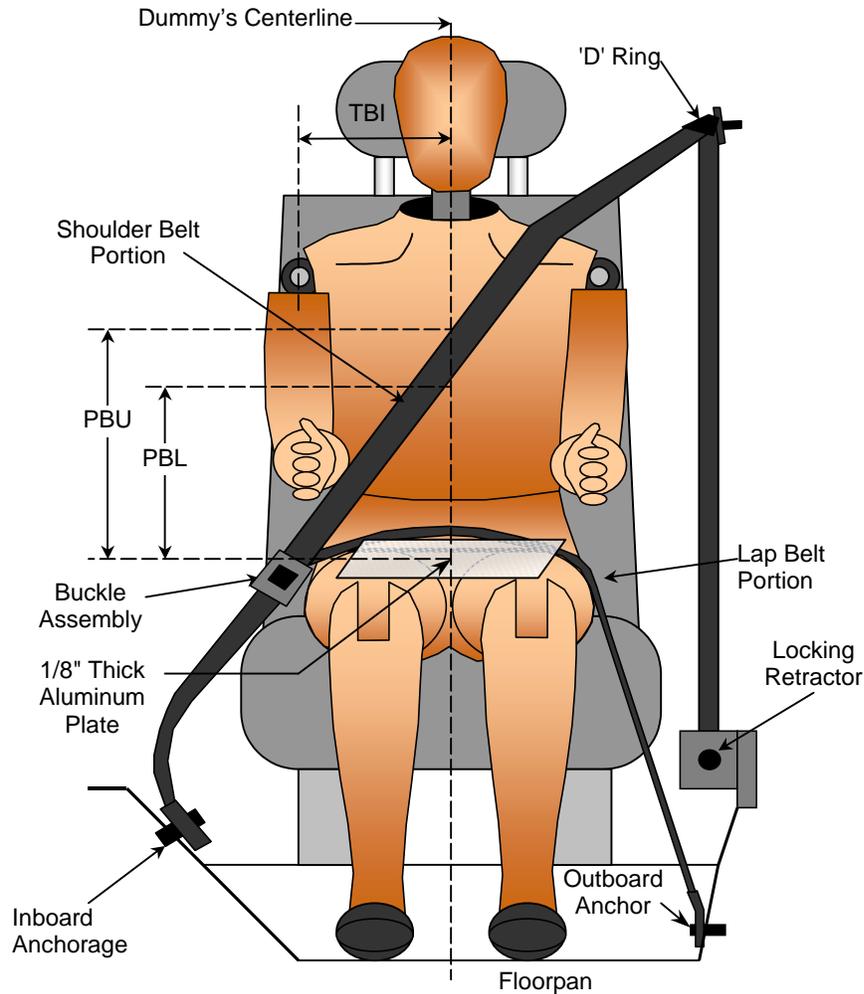
SEAT BELT POSITIONING DATA

Test Vehicle: 2008 Honda Accord 2-Door Coupe

NHTSA No.: M85300

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SEAT BELT POSITIONING MEASUREMENTS

Measured Parameter	Units	Driver	Passenger
TBI - Dummy C/L to Lap/Shoulder Belt Intersect	mm	195	210
PBU - Top Surface of reference to belt upper edge	mm	335	328
PBL - Top Surface of reference to belt lower edge	mm	242	252
Lap Belt Tension	Newtons	10	10
Shoulder Belt Tension	N/A	Retractor	Retractor

DATA SHEET NO. 7

VEHICLE ACCELEROMETER LOCATION

Test Vehicle: 2008 Honda Accord 2-Door Coupe

NHTSA No.: M85300

Test Program: NHTSA 35mph NCAP

Test Date: 11/20/07

VEHICLE ACCELEROMETER PRE-TEST LOCATIONS

No.	Accelerometer Location	Measurement (mm)		
		X	Y	Z
1	Left Rear X-Member	2357	-731	370
2	Right Rear X-Member	2357	731	370
3	Engine Top			
4	Engine Bottom	4065	-180	210
5	Left Brake Caliper	3931	-783	300
6	Right Brake Caliper	3931	783	300
7	Instrument Panel			
8	Left Rear X-Member (Z-Axis)	2357	-731	370
9	Right Rear X-Member (Z-Axis)	2357	731	370

- 1.) No longer required by NHTSA
- 2.) Not installed, due to insufficient room.

DATA SHEET NO. 8**SEAT BELT ASSESSMENT TEST DATA**Test Vehicle: 2008 Honda Accord 2-Door CoupeNHTSA No.: M85300Test Program: NHTSA 35mph NCAPTest Date: 11/20/07**SEAT BELT POSITIONING MEASUREMENTS**

Measurement Description	Units	Driver	Passenger
Retractor Reel to "D" ring	mm	429	429
Shoulder Belt length as measured on ATD	mm	969	1037
Lap Belt length as measured on ATD	mm	774	827
Remainder of belt on reel	mm	912	892
Total belt length for continuous webbing systems	mm	3084	3185

SHOULDER BELT SPOOL-OFF DATA

Measurement Description	Units	Driver	Passenger
As determined mechanically	mm	196	203
As determined electronically	mm	270	212

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 Honda Accord 2-Door Coupe

NHTSA No.: M85300

Test Program: NHTSA 35mph NCAP

Test Date: 11/20/07

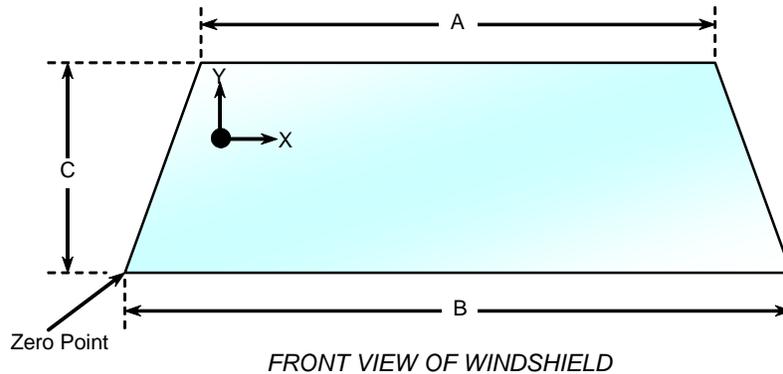
Windshield Mounting Details: Windshield glass is secured to the vehicle frame with a rubber type adhesive, and rubber molding.

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

Temperature of windshield molding during test: 20.0 °C

WINDSHIELD PERIPHERY MEASUREMENTS

Measurement	Pre-Test(mm)	Post-Test(mm)	% of Retention
Left Side	2088	2088	100
Right Side	2088	2088	100
Total	4176	4176	100



WINDSHIELD DIMENSIONS

Item	Units	Segment Length	Molding Width
A	mm	1165	20
B	mm	1470	25
C-Left	mm	770	25
C-Right	mm	770	25

DATA SHEET NO. 10

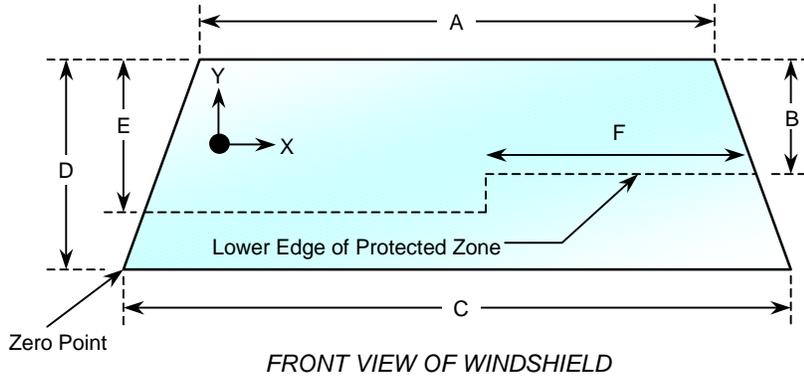
WINDSHIELD ZONE INTRUSION FMVSS 219 DATA (PARTIAL)

Test Vehicle: 2008 Honda Accord 2-Door Coupe

NHTSA No.: M85300

Test Program: NHTSA 35mph NCAP

Test Date: 11/20/07



WINDSHIELD AND PROTECTED ZONE

Item	Units	Value
A	mm	1165
B	mm	430
C	mm	1470
D	mm	770
E	mm	500
F	mm	420

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 Honda Accord 2-Door Coupe NHTSA No.: M85300
Test Program: NHTSA 35mph NCAP Test Date: 11/20/07

Test Time: 1:27 PM Temperature: 23.3 ° C

STODDARD SOLVENT SPILLAGE MEASUREMENTS

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

DATA SHEET NO. 12

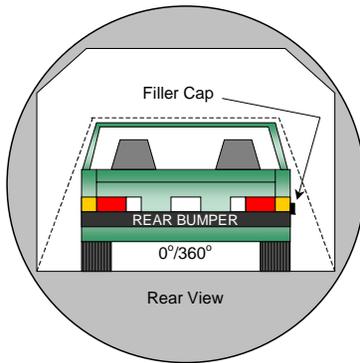
FMVSS 301 STATIC ROLLOVER DATA

Test Vehicle: 2008 Honda Accord 2-Door Coupe

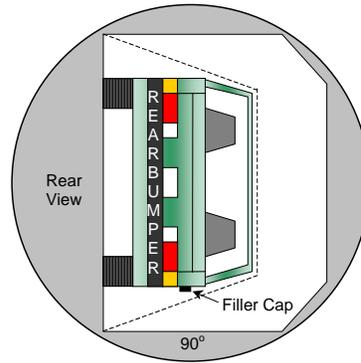
NHTSA No.: M85300

Test Program: NHTSA 35mph NCAP

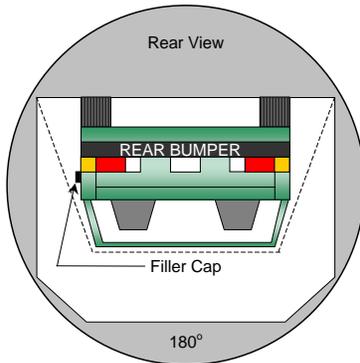
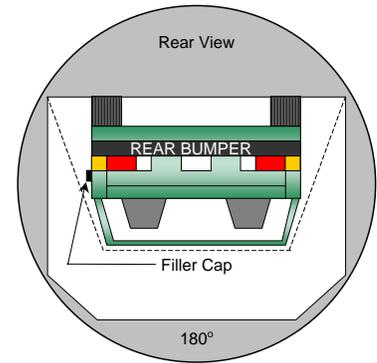
Test Date: 11/20/07



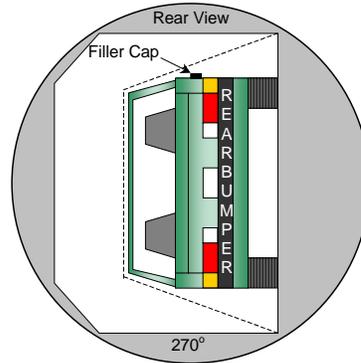
0° to 90°



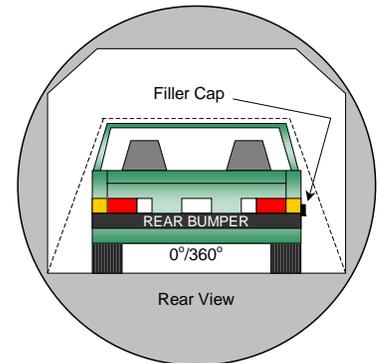
90° to 180°



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 Honda Accord 2-Door Coupe

NHTSA No.: M85300

Test Program: NHTSA 35mph NCAP

Test Date: 11/20/07

SOLVENT COLLECTION TIME TABLE IN SECONDS

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

FMVSS 301 SPILLAGE TABLE REQUIREMENT (oz.)

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

ACTUAL TEST VEHICLE SOLVENT SPILLAGE TABLE (oz.)

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

SOLVENT SPILLAGE LOCATION TABLE

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

DATA SHEET NO. 13

VEHICLE MEASUREMENTS

Test Vehicle: 2008 Honda Accord 2-Door Coupe

NHTSA No.: M85300

Test Program: NHTSA 35mph NCAP

Test Date: 11/20/07

VEHICLE MEASUREMENT TABLE

No.	Measurement Description	Units	Pre-Test	Post-Test	Diff.
1	Total length of vehicle at centerline	mm	4835	4280	-555
2	RSOV to front of engine	mm	4285	3715	-570
3	RSOV to firewall centerline	mm	3690	3730	40
4	RSOV to leading edge of right door	mm	3320	3318	-2
5	RSOV to leading edge of left door	mm	3310	3313	3
6	RSOV to lower leading edge of right door	mm	3334	3323	-11
7	RSOV to lower leading edge of left door	mm	3327	3332	5
8	RSOV to upper trailing edge of right door	mm	2010	2007	-3
9	RSOV to upper trailing edge of left door	mm	2003	2005	2
10	RSOV to lower trailing edge of right door	mm	2055	2047	-8
11	RSOV to lower trailing edge of left door	mm	2043	2043	0
12	RSOV to bottom of right 'A' pillar	mm	3321	3317	-4
13	RSOV to bottom of left 'A' pillar	mm	3311	3311	0
14	RSOV to firewall on right side	mm	4605	4607	2
15	RSOV to firewall on left side	mm	3645	3685	40
16	RSOV to steering column	mm	2843	2825	-18
17	Center of steering column to left 'A' pillar	mm	415	430	15
18	Center of steering column to headlining	mm	360	370	10
19	RSOV to right side of front bumper	mm	4611	4240	-371
20	RSOV to left side of front bumper	mm	4611	4350	-261
21	Length of engine block	mm	455	455	0
RD	RSOV to right side of dash panel	mm	2980	2968	-12
CD	RSOV to center of dash panel	mm	2986	2995	9
LD	RSOV to left side of dash panel	mm	2975	2956	-19

DATA SHEET NO. 13...(CONTINUED)

VEHICLE STRUCTURAL MEASUREMENTS

Test Vehicle: 2008 Honda Accord 2-Door Coupe

NHTSA No.: M85300

Test Program: NHTSA 35mph NCAP

Test Date: 11/20/07

VEHICLE STRUCTURAL MEASUREMENT TABLE

No.	Measurement Description	Units	Pre-Test	Post-Test	Diff.
1	Total length	mm	4835	4280	-555
2	Total width	mm	1830	1820	-10
3	Bumper top height	mm	600	570	-30
4	Bumper bottom height	mm	170	145	-25
5	Longitudinal member top height	mm	570	500	-70
6	Longitudinal member bottom height	mm	220	150	-70
7	Distance between longitudinal members	mm	980	990	10
8	Longitudinal member width	mm	250	250	0
9	Engine top height	mm	815	785	-30
10	Engine bottom height	mm	146	171	25
11	Engine and gear box width	mm	655	655	0
12	Front bumper to engine distance	mm	540	320	-220
13	Front shock absorber fixing width	mm	840	820	-20
14	Bonnet leading edge height	mm	760	785	25
15	Front shock absorber fixing width	mm	990	995	5
16	Front bumper to front axle distance	mm	1002	560	-442
17	Front axle to 'A' pillar distance	mm	455	380	-75
18	'A' pillar to 'B' pillar distance	mm	1405	1251	-154
19	'B' pillar to rear axle distance	mm	902	955	53
20	'B' pillar to 'C' pillar distance	mm	863	863	0
21	Roof sill bottom height	mm	1240	1235	-5
22	Roof sill top height	mm	1390	1385	-5
23	Floor sill bottom height	mm	208	250	42
24	Floor sill top height	mm	360	340	-20

DATA SHEET NO. 13...(CONTINUED)

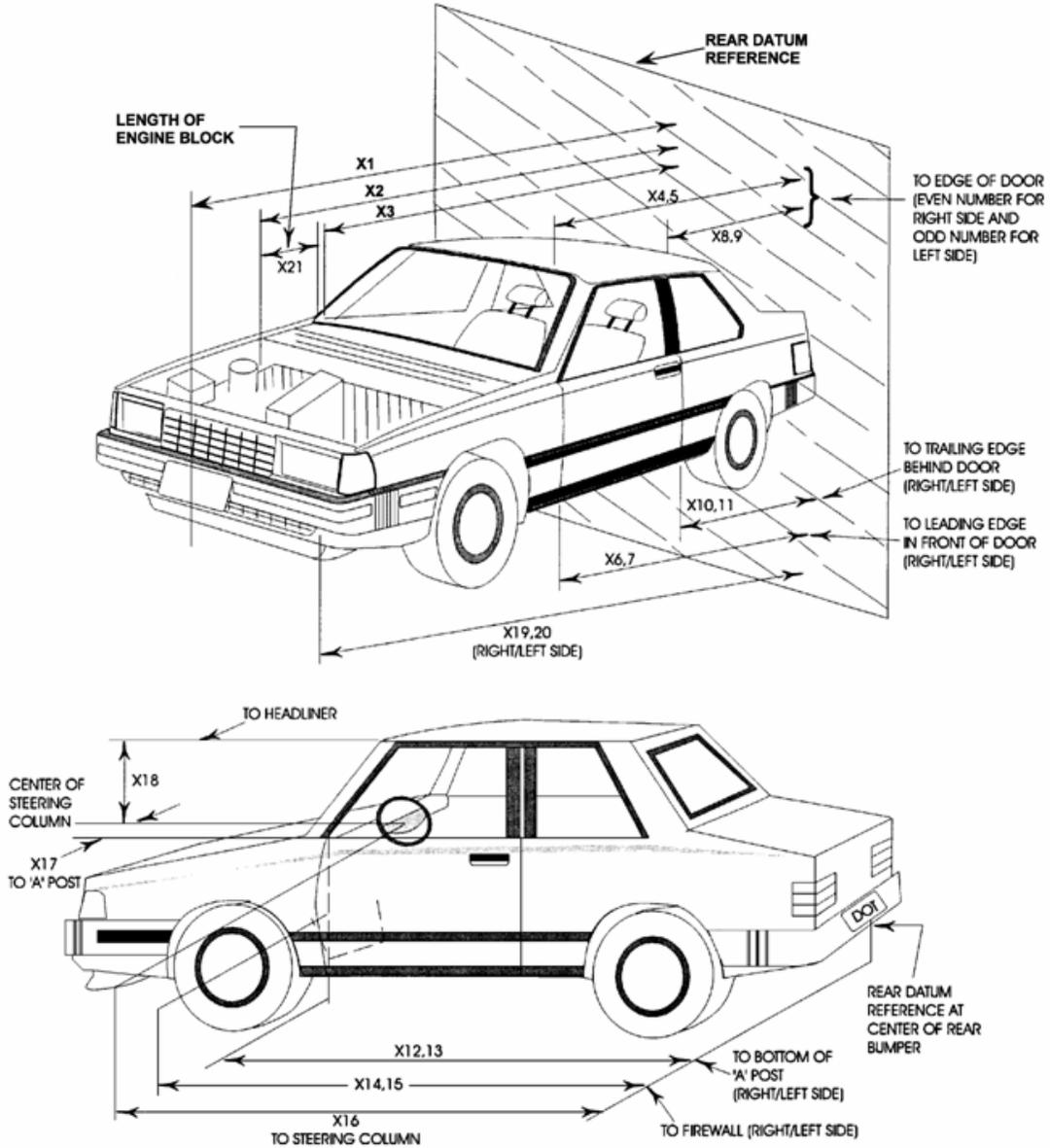
VEHICLE MEASUREMENTS

Test Vehicle: 2008 Honda Accord 2-Door Coupe

NHTSA No.: M85300

Test Program: NHTSA 35mph NCAP

Test Date: 11/20/07



DATA SHEET NO. 14**CAMERA LOCATIONS**Test Vehicle: 2008 Honda Accord 2-Door CoupeNHTSA No.: M85300Test Program: NHTSA 35mph NCAPTest Date: 11/20/07**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	-2575	-7691	-1027	0	8368	20mm	1000
3	Closeup Left Side	-1937	-6821	-1041	0	7531	50mm	1000
4	Driver and Interior View	-6696	-5987	-1071	-17	8126	ZOOM	1000
5	Steering Column (Bottom)	-1972	-8184	-2879	-13	9477	35mm	1000
6	Steering Column (Top)	-1966	-8141	-3258	-13	9610	35mm	1000
7	Overall Right Side	-2581	7718	-1058	0	7715	20mm	1000
8	Closeup Right Side	-1643	6301	-1073	0	6391	50mm	1000
9	Passenger and Interior View	-5136	9516	-2460	-10	10306	ZOOM	1000
10	Right Side View	-1582	7995	-1713	-6	8201	ZOOM	1000
11	Windshield View	-354	0	-5749	-90		24mm	1000
12	Driver Front View	363	-543	-2548	-34		25mm	1000
13	Passenger Front View	381	445	-2548	-34		25mm	1000
14	Pit View of Engine	-756	0	1495	90		12mm	1000
15	Pit View of Fuel Tank	-3398	0	1495	90		8mm	1000
16	Real Time Driver	-1926	-8089	-1704	-1			30
17	Real Time Passenger	-1433	8047	-1704	-1			30
18	Driver Side On-Board	-2973	231	-1311	-1	799	12	1000
19	Passenger Side On-Board	-2973	-133	-1313	-1	731	12	1000

All measurements are made relative to the point of impact.

DATA SHEET NO. 15

PHOTOGRAPHIC REFERENCE TARGET LOCATIONS

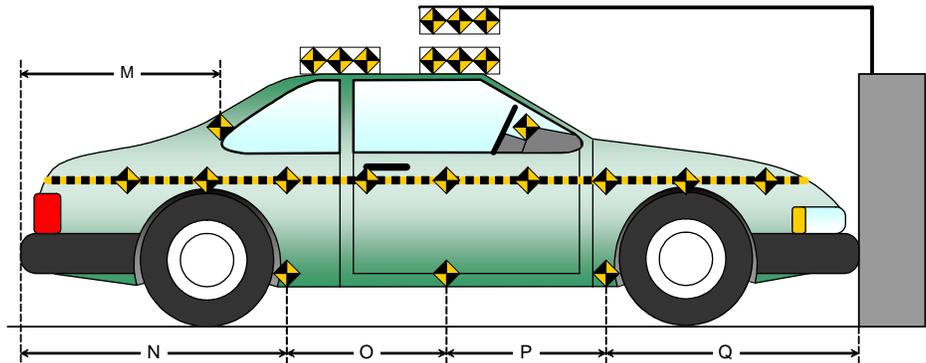
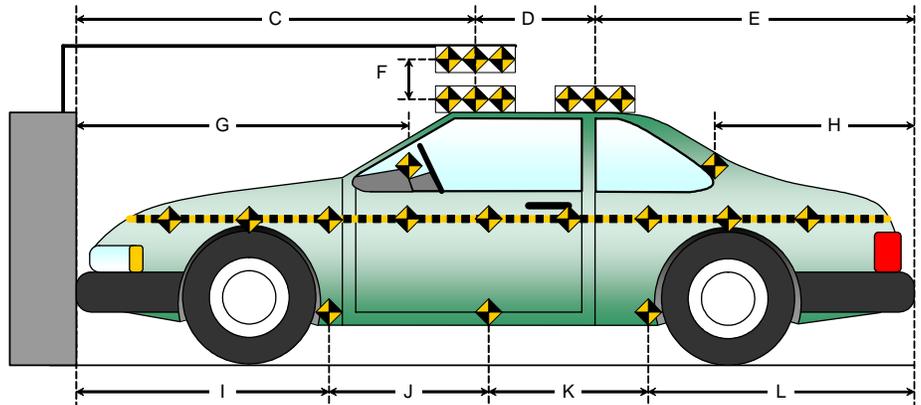
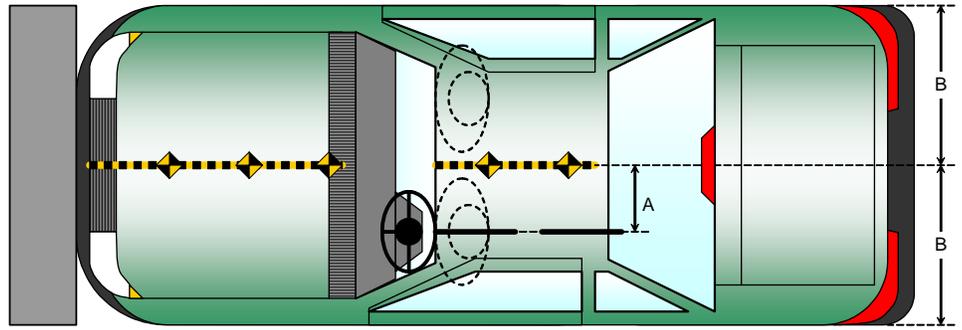
Test Vehicle: 2008 Honda Accord 2-Door Coupe

NHTSA No.: M85300

Test Program: NHTSA 35mph NCAP

Test Date: 11/20/07

All Dimensions in (mm)	
Item	Value
A	394
B	915
C	2315
D	615
E	2015
F	155
G	1815
H	1101
I	1478
J	917
K	917
L	1535
M	1120
N	1539
O	918
P	918
Q	1463



DATA SHEET NO. 16

VEHICLE INTRUSION MEASUREMENTS

Test Vehicle: 2008 Honda Accord 2-Door Coupe

NHTSA No.: M85300

Test Program: NHTSA 35mph NCAP

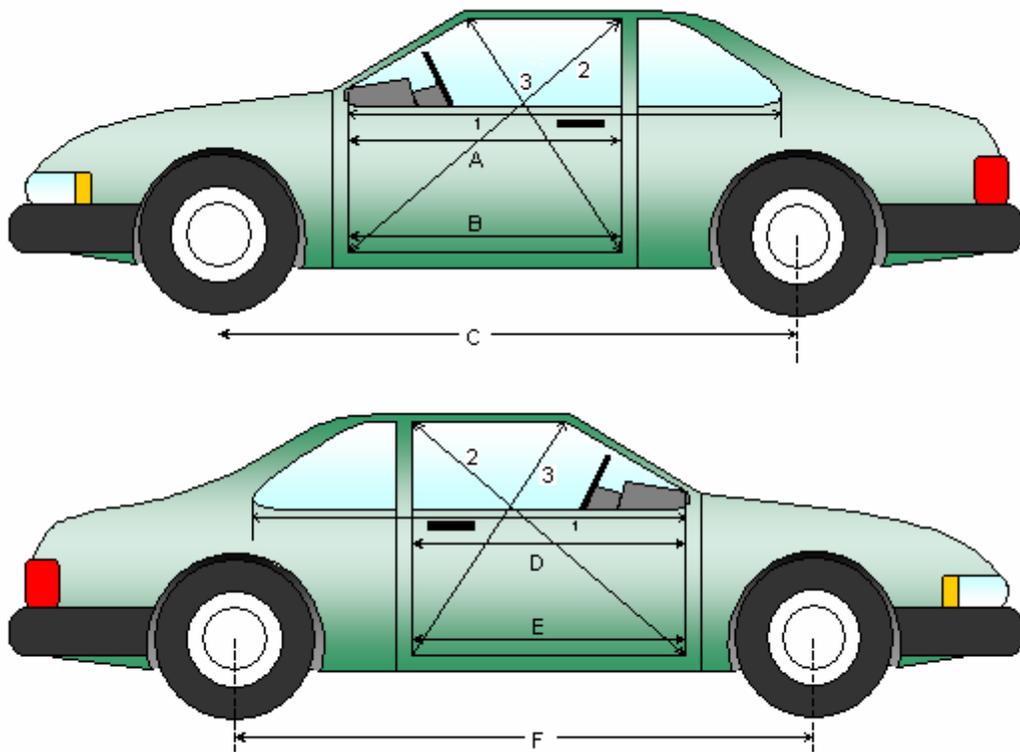
Test Date: 11/20/07

DOOR OPENING WIDTH TABLE

Item	Description	Units	Pre-Test	Post-Test	Diff.
1L	Left Side	mm	1252	1251	-1
2L	Left Side (Diagonally)	mm	1583	1570	-13
3L	Left Side (Diagonally)	mm	1101	1090	-11
1R	Right Side	mm	1256	1251	-5
2R	Right Side (Diagonally)	mm	1586	1573	-13
3R	Right Side (Diagonally)	mm	1090	1095	5

WHEELBASE MEASUREMENT TABLE

Item	Description	Units	Pre-Test	Post-Test	Diff.
C	Left Side Wheel Base	mm	2635	2622	-13
F	Right Side Wheel Base	mm	2635	2593	-42



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

Test Vehicle: 2008 Honda Accord 2-Door Coupe

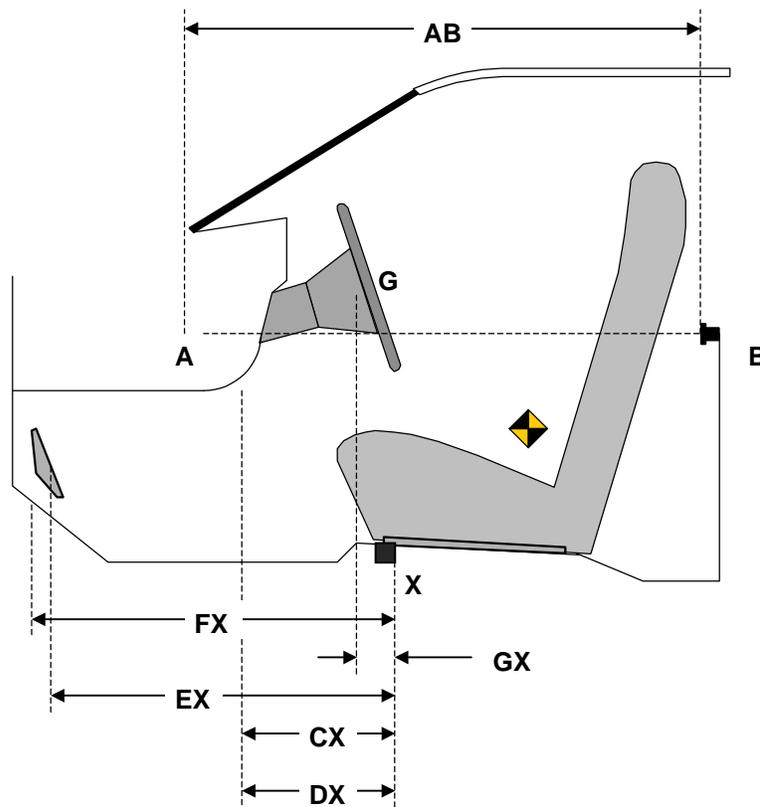
NHTSA No.: M85300

Test Program: NHTSA 35mph NCAP

Test Date: 11/20/07

DRIVER COMPARTMENT INTRUSION TABLE

Item	Description	Units	Pre-Test	Post-Test	Diff.
AB	Door Opening (Inside window jam)	mm	1256	1251	-5
CX	Left Knee Bolster to X	mm	270	245	-25
DX	Right Knee Bolster to X	mm	70	260	190
EX	Brake Pedal to X	mm	548	521	-27
FX	Foot Rest to X	mm	611	551	-60
GX	Center of Steering Wheel Hub to X	mm	75	90	15



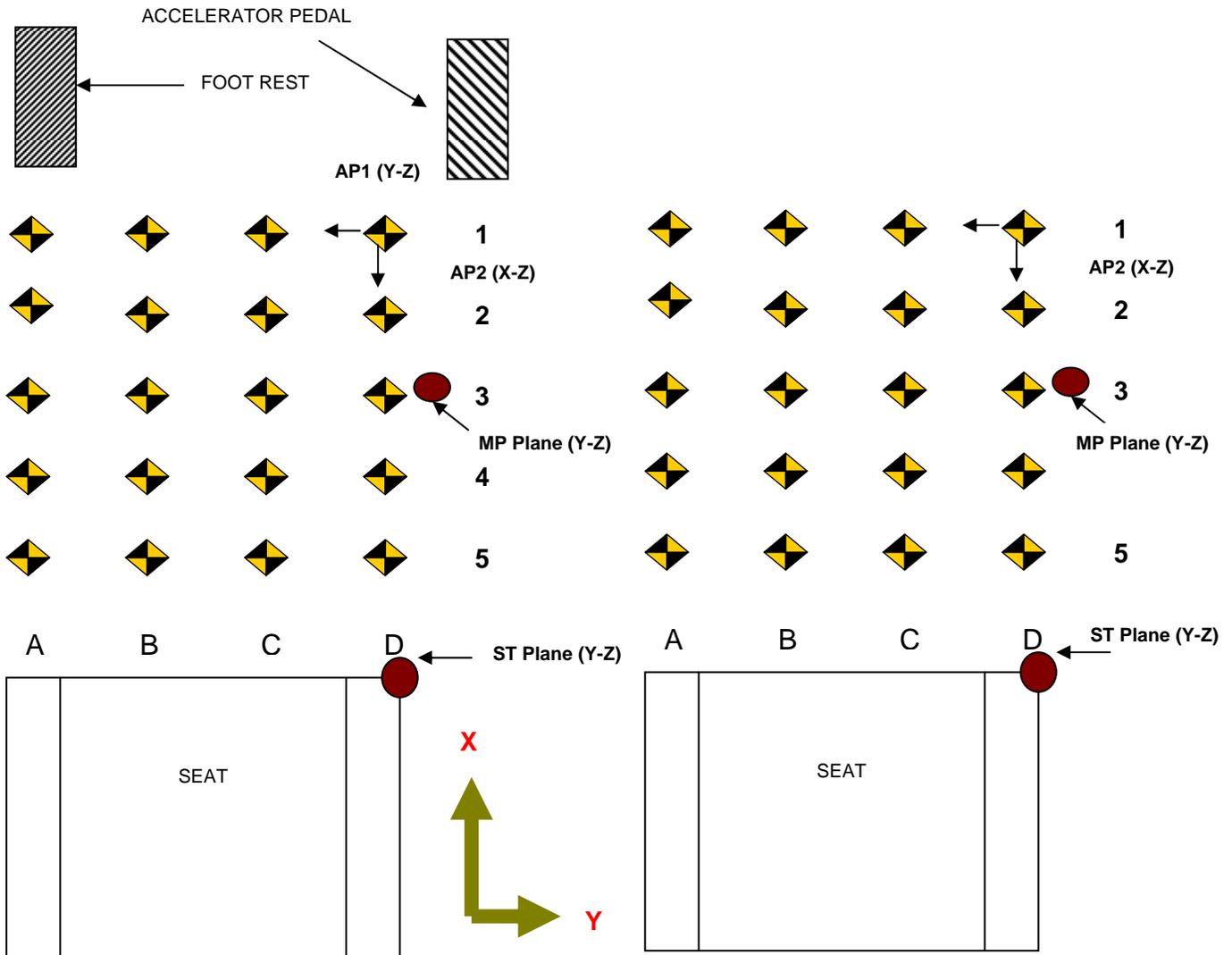
DATA SHEET NO. 16...(CONTINUED)
VEHICLE INTRUSION MEASUREMENTS

Test Vehicle: 2008 Honda Accord 2-Door Coupe

NHTSA No.: M85300

Test Program: NHTSA 35mph NCAP

Test Date: 11/20/07



- 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 Honda Accord 2-Door Coupe

NHTSA No.: M85300

Test Program: NHTSA 35mph NCAP

Test Date: 11/20/07

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	609	659	657	649	606	645	643	641	-3	-14	-14	-8
2	567	559	560	552	564	559	561	563	-3	0	1	11
3	451	442	440	434	450	445	445	447	-1	3	5	13
4	306	305	305	300	305	309	312	314	-1	4	7	14
5	170	171	167	169	170	174	173	181	0	3	6	12

DRIVER FLOOR PAN Y-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	8	123	232	409	-17	98	203	373	-25	-25	-29	-36
2	-1	119	223	411	-21	98	202	375	-20	-21	-21	-36
3	-4	116	222	406	-20	101	202	385	-16	-15	-20	-21
4	-3	114	215	402	-9	100	202	388	-6	-14	-13	-14
5	-6	111	211	404	-15	102	205	396	-9	-9	-6	-8

DRIVER FLOOR PAN Z-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	-73	-16	-21	-31	-78	-32	-35	-47	-5	-16	-14	-16
2	62	43	56	38	64	48	52	38	2	5	-4	0
3	85	79	75	42	97	84	81	55	12	5	6	13
4	89	85	75	50	98	93	83	62	9	8	8	12
5	78	83	75	52	79	90	83	62	1	7	8	10

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

Test Vehicle: 2008 Honda Accord 2-Door Coupe

NHTSA No.: M85300

Test Program: NHTSA 35mph NCAP

Test Date: 11/20/07

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	666	666	662	662	641	640	643	652	-25	-26	-19	-10
2	553	547	553	555	537	540	547	556	-16	-7	-6	1
3	430	421	421	421	416	414	416	425	-14	-7	-5	4
4	294	290	293	291	278	283	289	292	-16	-7	-4	1
5	165	162	161	157	150	156	159	160	-15	-6	-2	3
PASSENGER FLOOR PAN Y-AXIS												
	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	-356	-184	-67	47	-382	-209	-99	17	-26	-25	-32	-30
2	-373	-183	-74	41	-390	-203	-97	19	-17	-20	-23	-22
3	-376	-185	-77	40	-396	-198	-91	23	-20	-13	-14	-17
4	-379	-188	-73	36	-391	-197	-84	25	-12	-9	-11	-11
5	-386	-189	-78	33	-392	-193	-82	28	-6	-4	-4	-5
PASSENGER FLOOR PAN Z-AXIS												
	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	-32	-20	-15	-14	-14	-16	-17	-15	18	4	-2	-1
2	45	42	68	71	73	63	81	77	28	21	13	6
3	48	51	83	90	82	76	101	94	34	25	18	4
4	50	51	86	91	81	77	103	94	31	26	17	3
5	49	51	86	84	78	72	100	85	29	21	14	1

DATA SHEET NO. 17

FIXED BARRIER LOAD CELL LOCATIONS

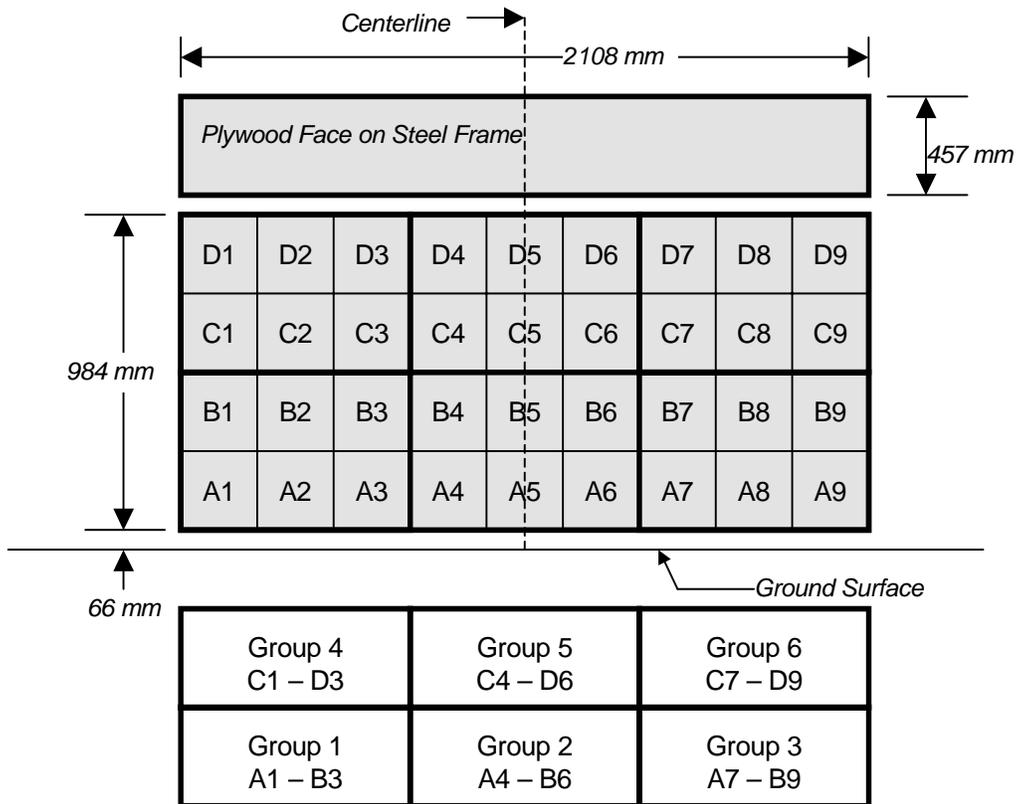
Test Vehicle: 2008 Honda Accord 2-Door Coupe

NHTSA No.: M85300

Test Program: NHTSA 35mph NCAP

Test Date: 11/20/07

**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 Honda Accord 2-Door Coupe

NHTSA No.: M85300

Test Program: NHTSA 35mph NCAP

Test Date: 11/20/07

VEHICLE INFORMATION

VIN: 1HGCS12308A002200

Wheel base (mm): 2635

Vehicle Size Category: 2-Door Coupe

Test Weight (kg): 1673

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): 56.26

Velocity Change (km/h): 56.3

Time of Separation (msec): 76.2

CRUSH PROFILE

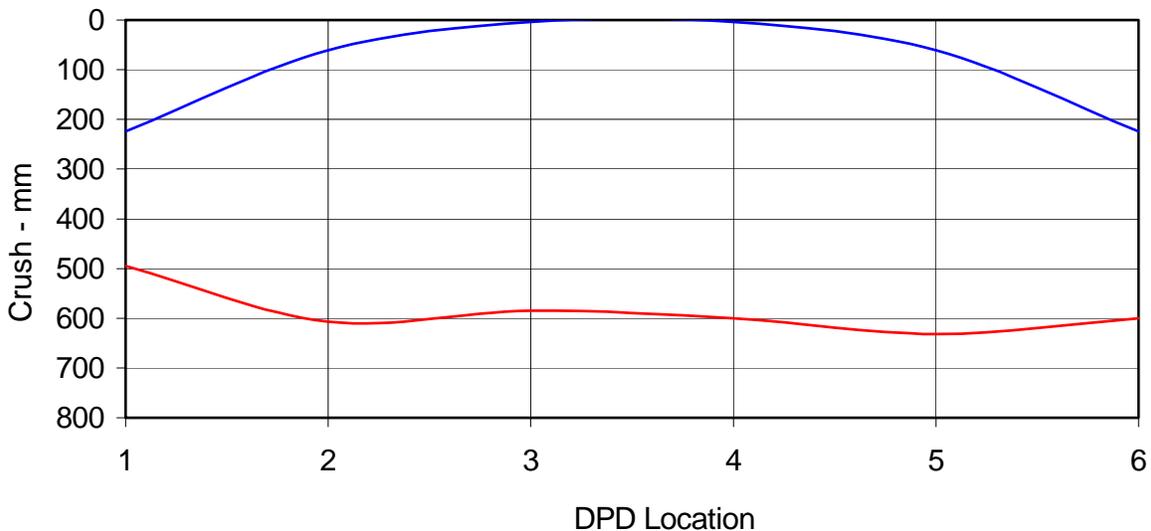
Collision Deformation Classification: 12FDEW6

Midpoint of Damage: Vehicle Centerline

Damage Region Length (mm): 1315

Impact Mode: Full Frontal

No.	Measurement Description	Units	Pre-Test	Post-Test	Difference
C1	Crush zone 1 at left side	mm	224	495	-271
C2	Crush zone 2 on left side	mm	61	607	-546
C3	Crush zone 3 on left side	mm	4	585	-581
C4	Crush zone 4 on right side	mm	4	600	-596
C5	Crush zone 5 on right side	mm	61	632	-571
C6	Crush zone 6 at right side	mm	224	600	-376



DATA SHEET NO. 19

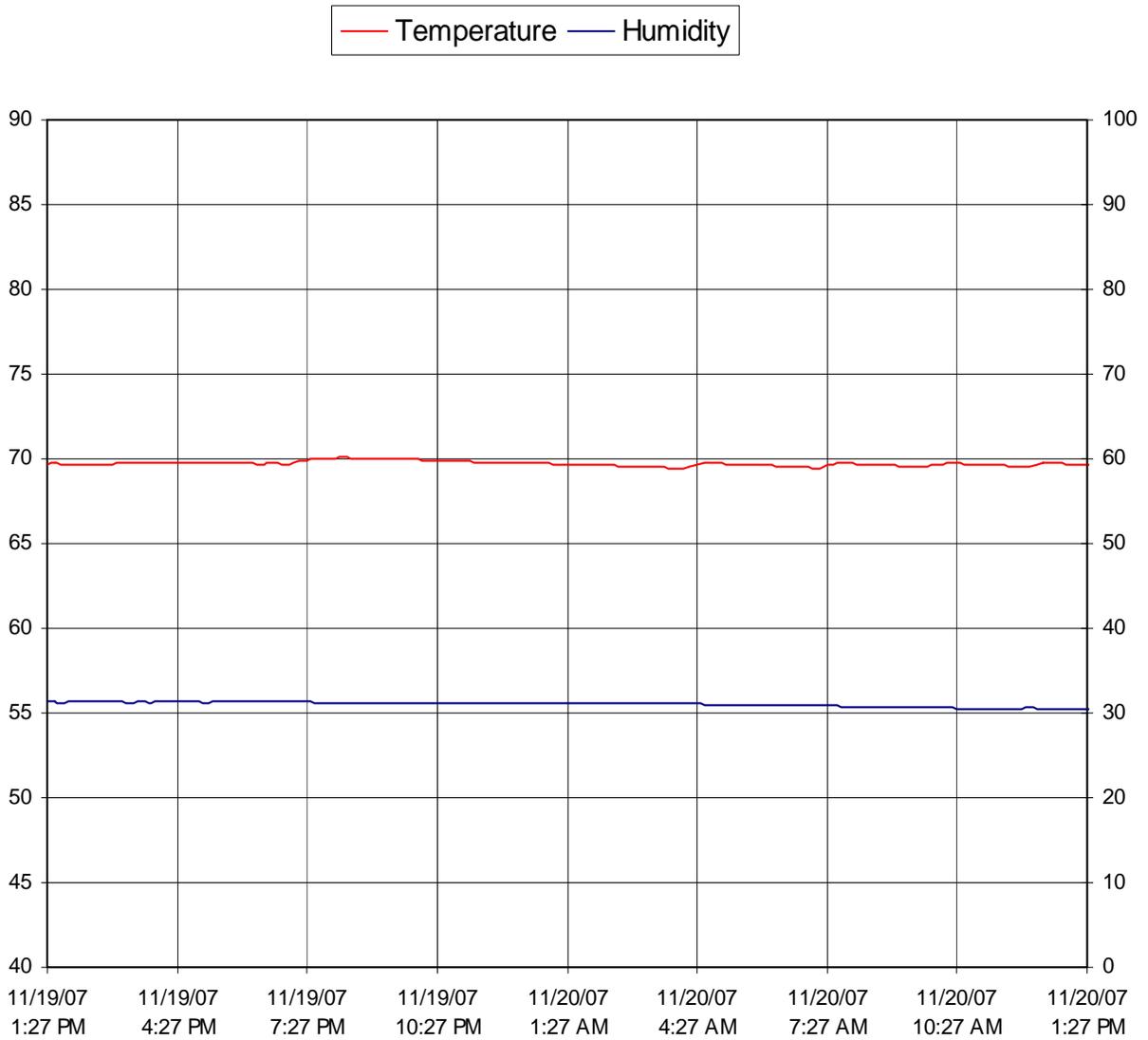
DUMMY/VEHICLE TEMPERATURE STABILIZATION

Test Vehicle: 2008 Honda Accord 2-Door Coupe

NHTSA No.: M85300

Test Program: NHTSA 35mph NCAP

Test Date: 11/20/07



APPENDIX A
PHOTOGRAPHS

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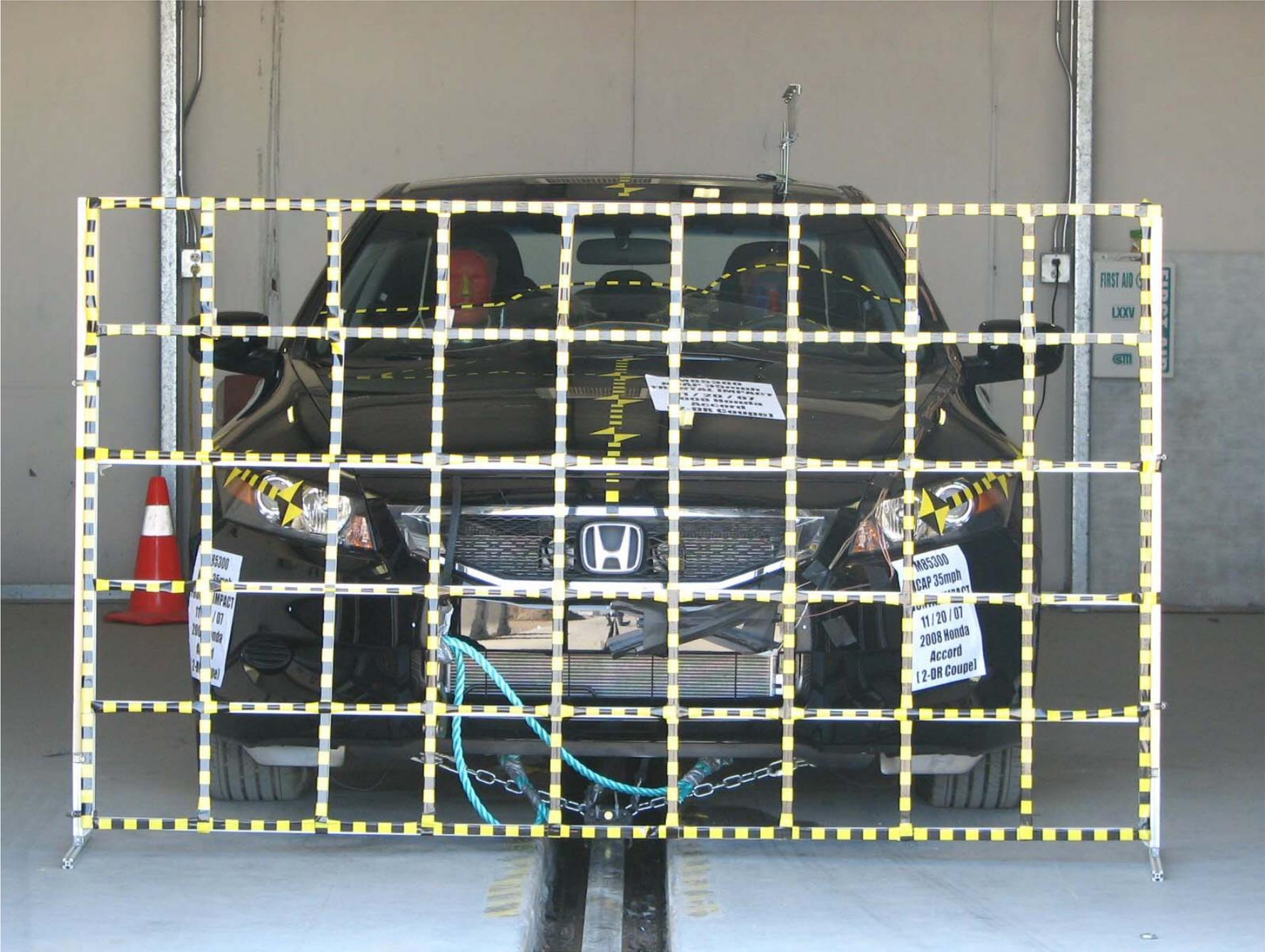


Figure A-1: Load Cell Location

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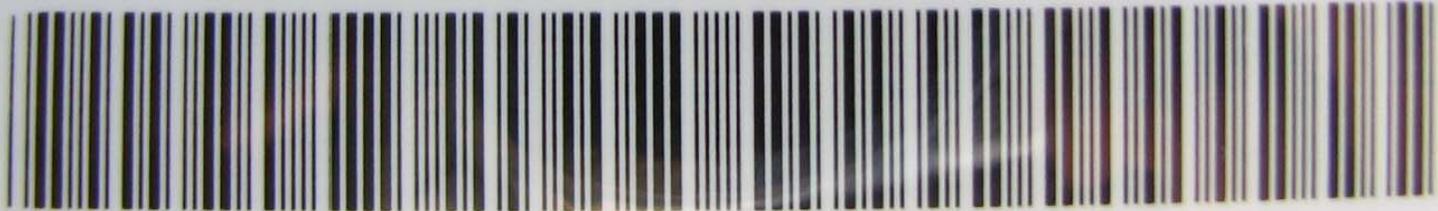
MFD. BY HONDA OF AMERICA MFG., INC. 10/07

GVWR 4299LBS GAWR F 2337LBS R 2006LBS

GVWR 1950KG GAWR F 1060KG R 910KG

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

V.I.N.: 1HGCS12308A002200 TYPE: PASSENGER CAR



TE0

8

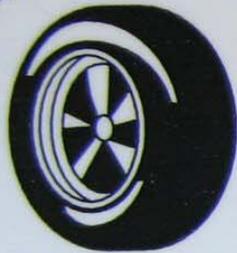
LA6

- B92P

- A

- A

Figure A-2: Manufacturer's Label



TIRE AND LOADING INFORMATION

SEATING CAPACITY :: TOTAL 5 :: FRONT 2 :: REAR 3

The combined weight of occupants and cargo should never exceed 385kg or 850lbs.

TIRE	SIZE	COLD TIRE PRESSURE	SEE OWNER'S MANUAL FOR ADDITIONAL INFORMATION
FRONT	P225/50R17 93V	220KPA, 32PSI	
REAR		220KPA, 32PSI	
SPARE	T135/80D16 101M	420KPA, 60PSI	

1E

Figure A-3: Tire Placard



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



A-5

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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 3/4 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 ¾ View



Figure A-16: Post-Test Left Side 3/4 View of Doors After Impact



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

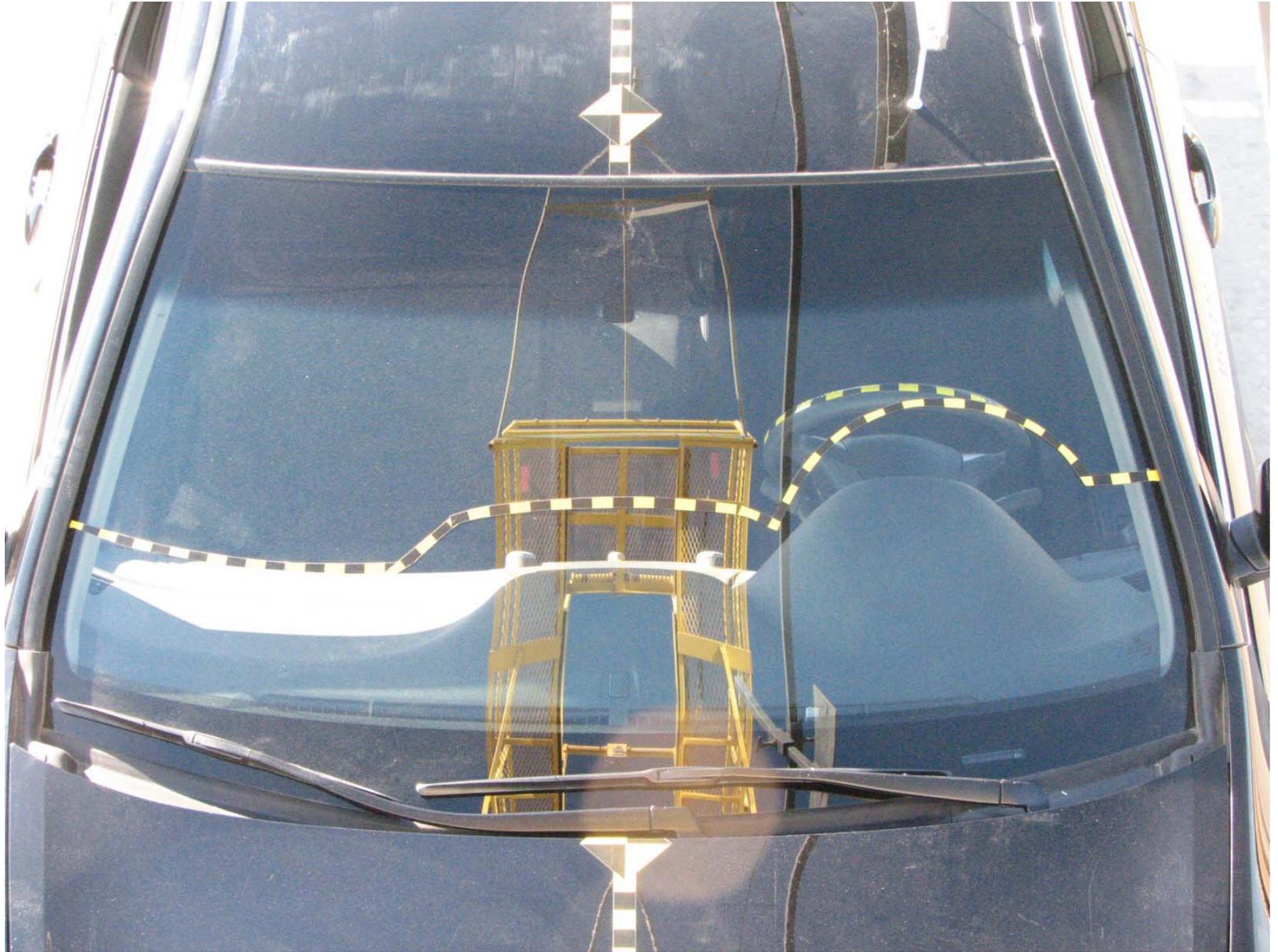


Figure A-18: Pre-Test Windshield

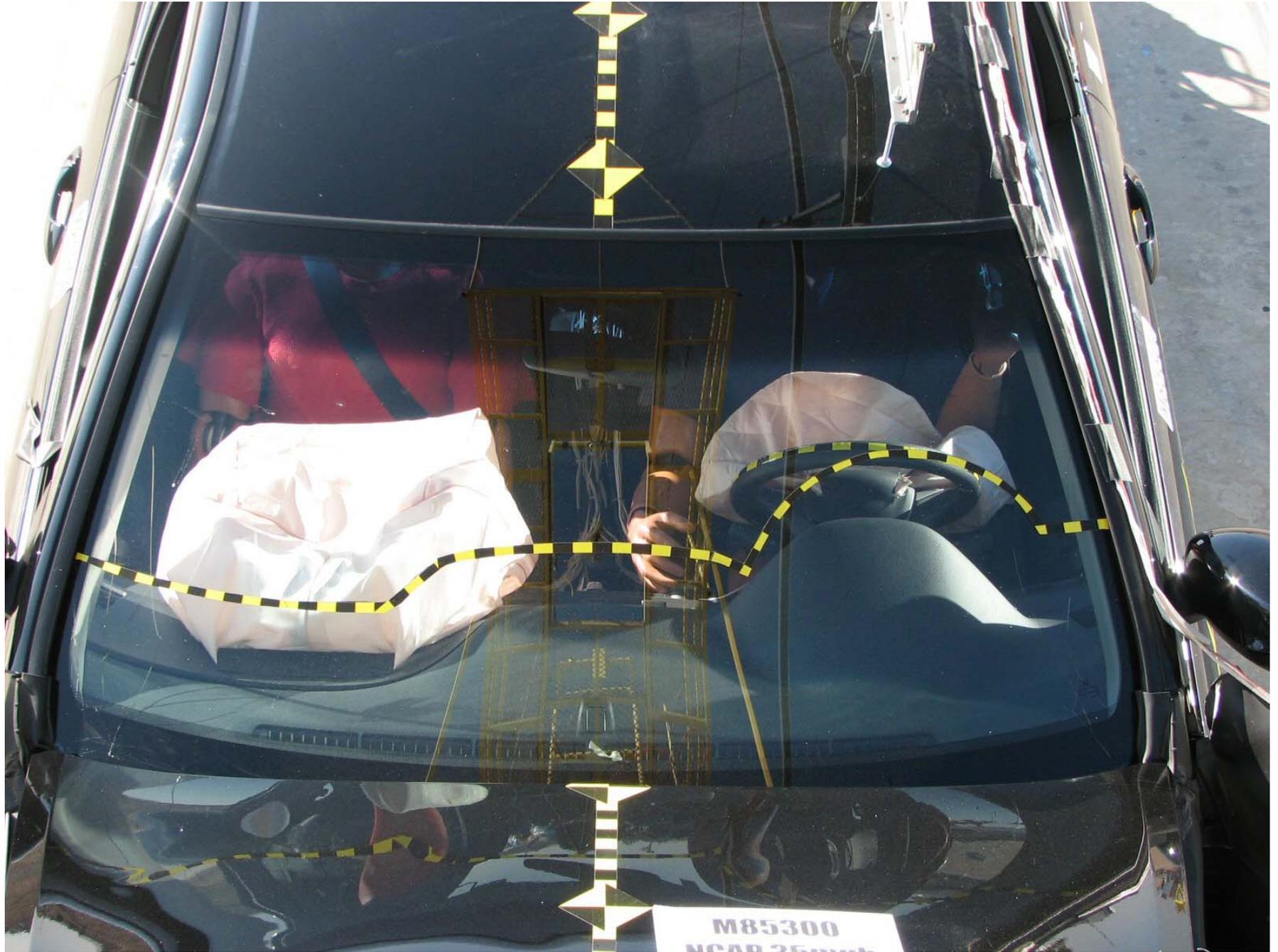


Figure A-19: Post-Test Windshield



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

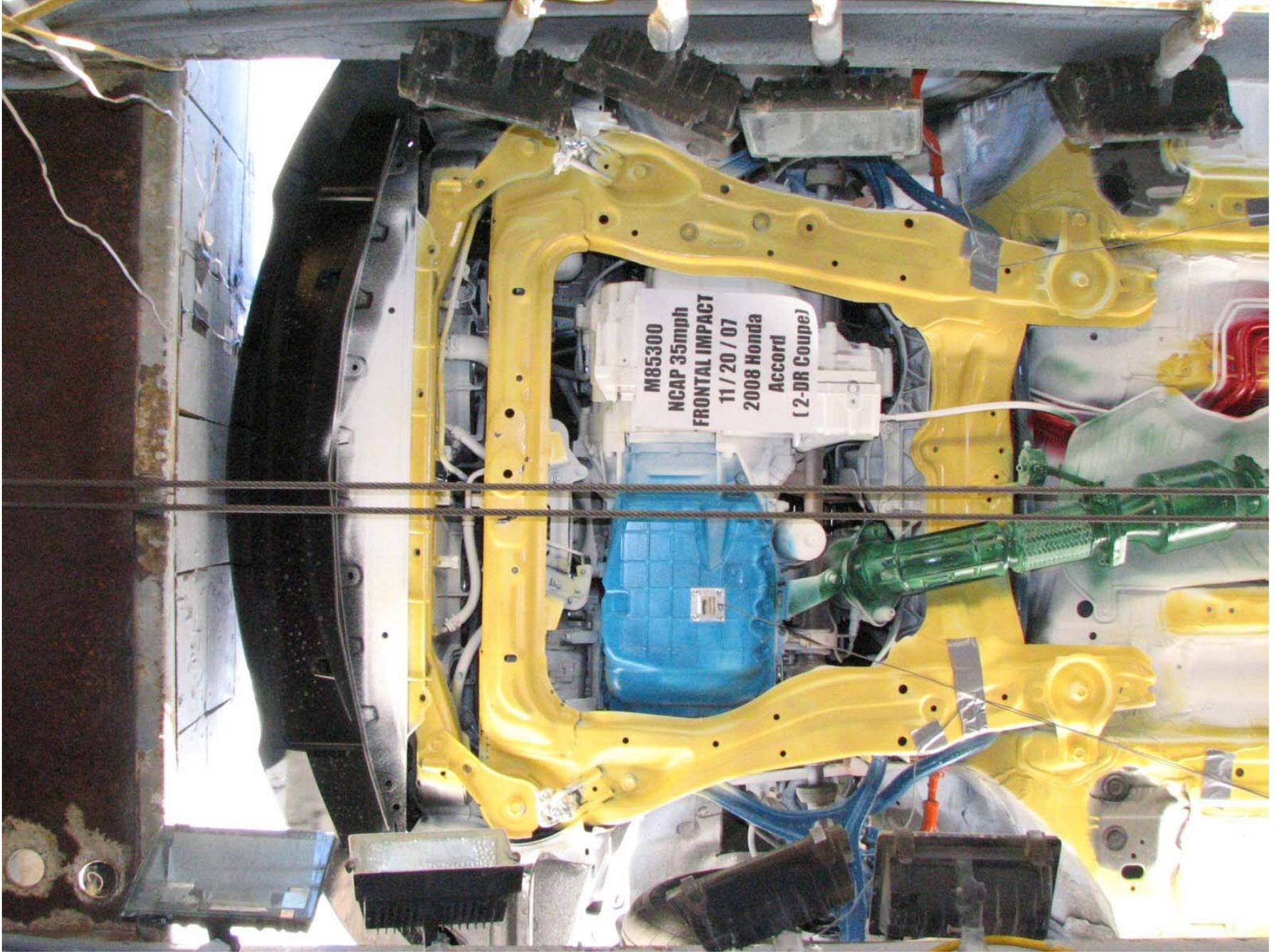


Figure A-24: Pre-Test Front Underbody

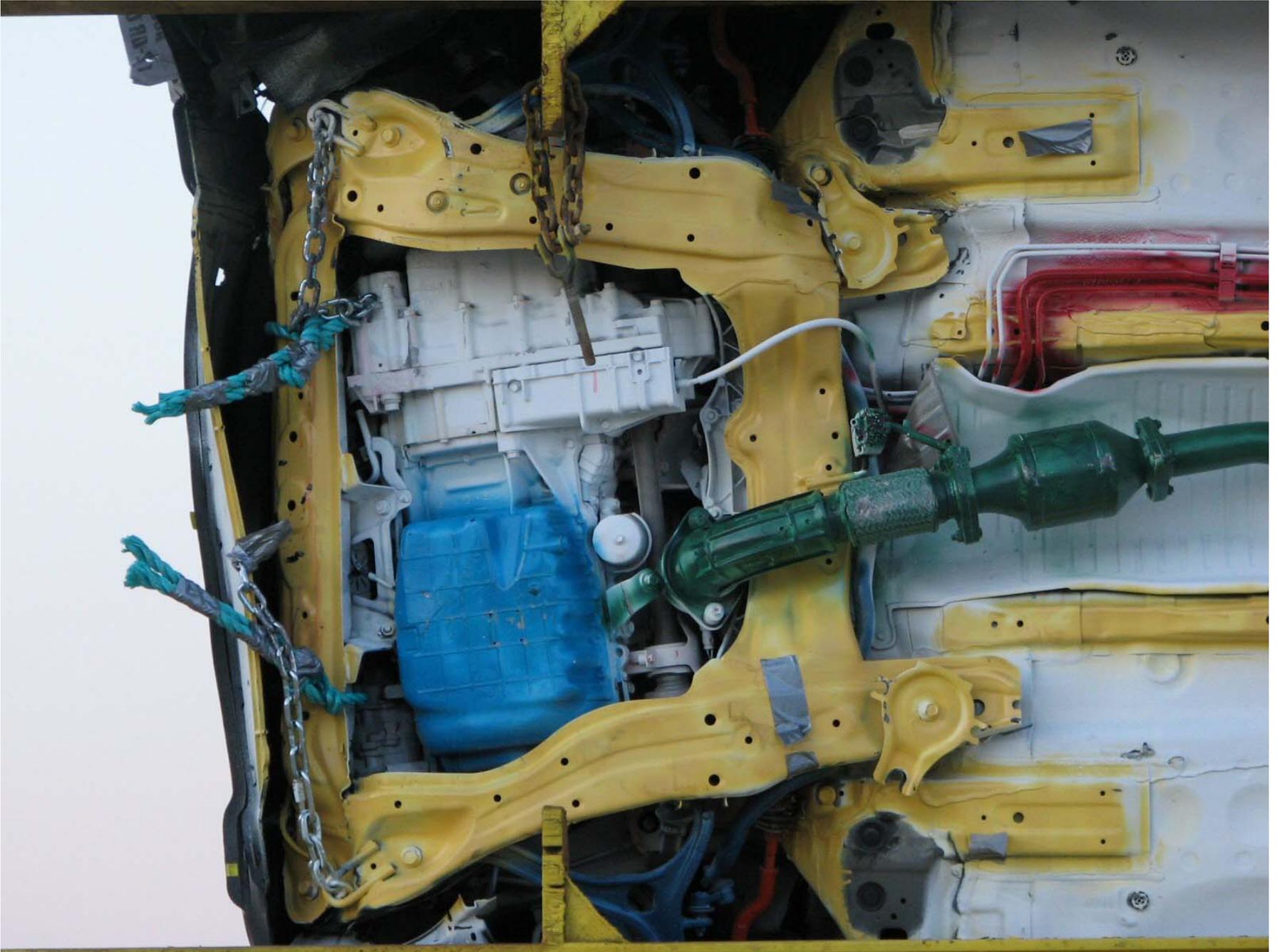


Figure A-25: Post-Test Front Underbody

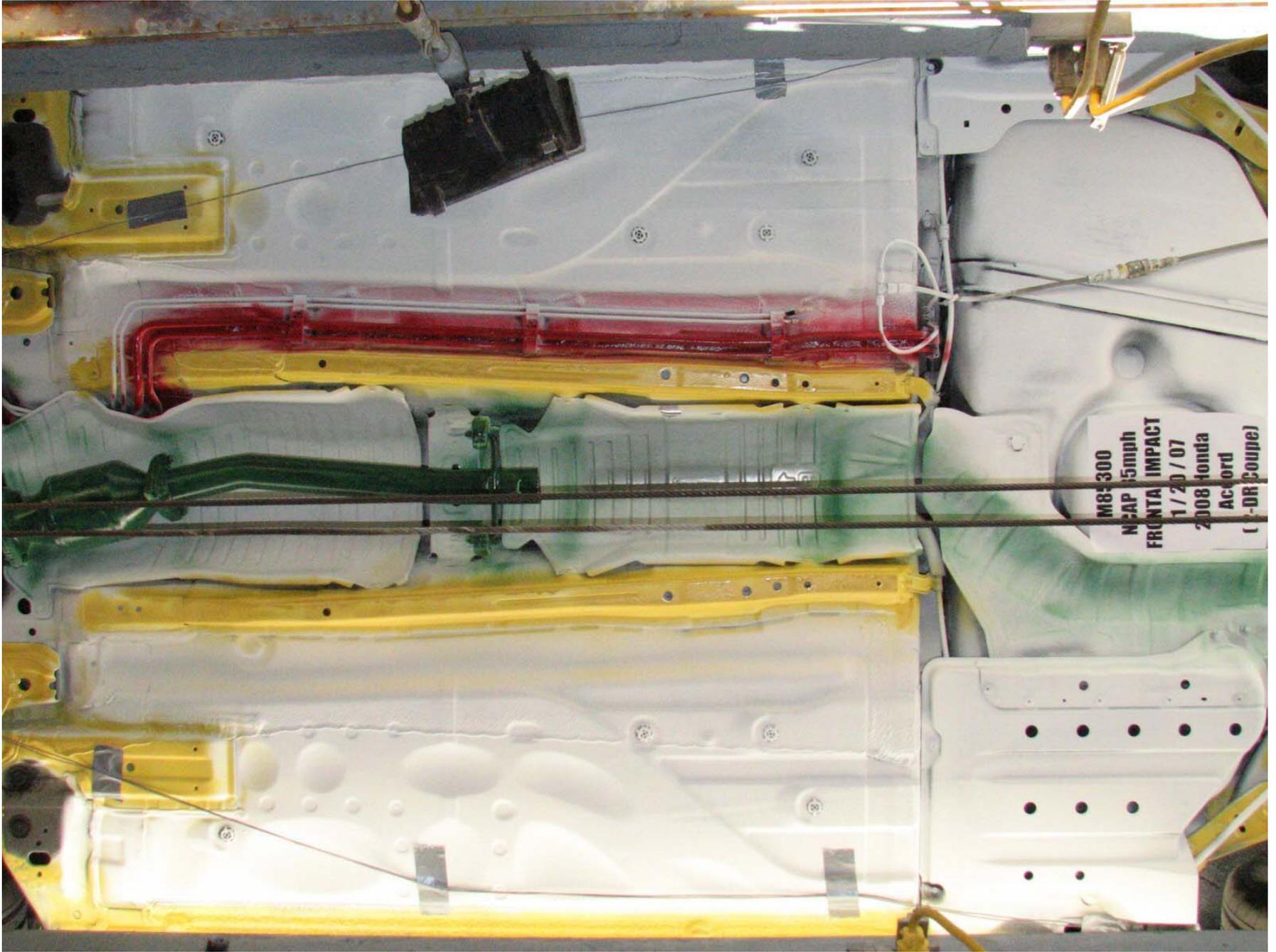


Figure A-26: Pre-Test Mid Underbody



Figure A-27: Post-Test Mid Underbody

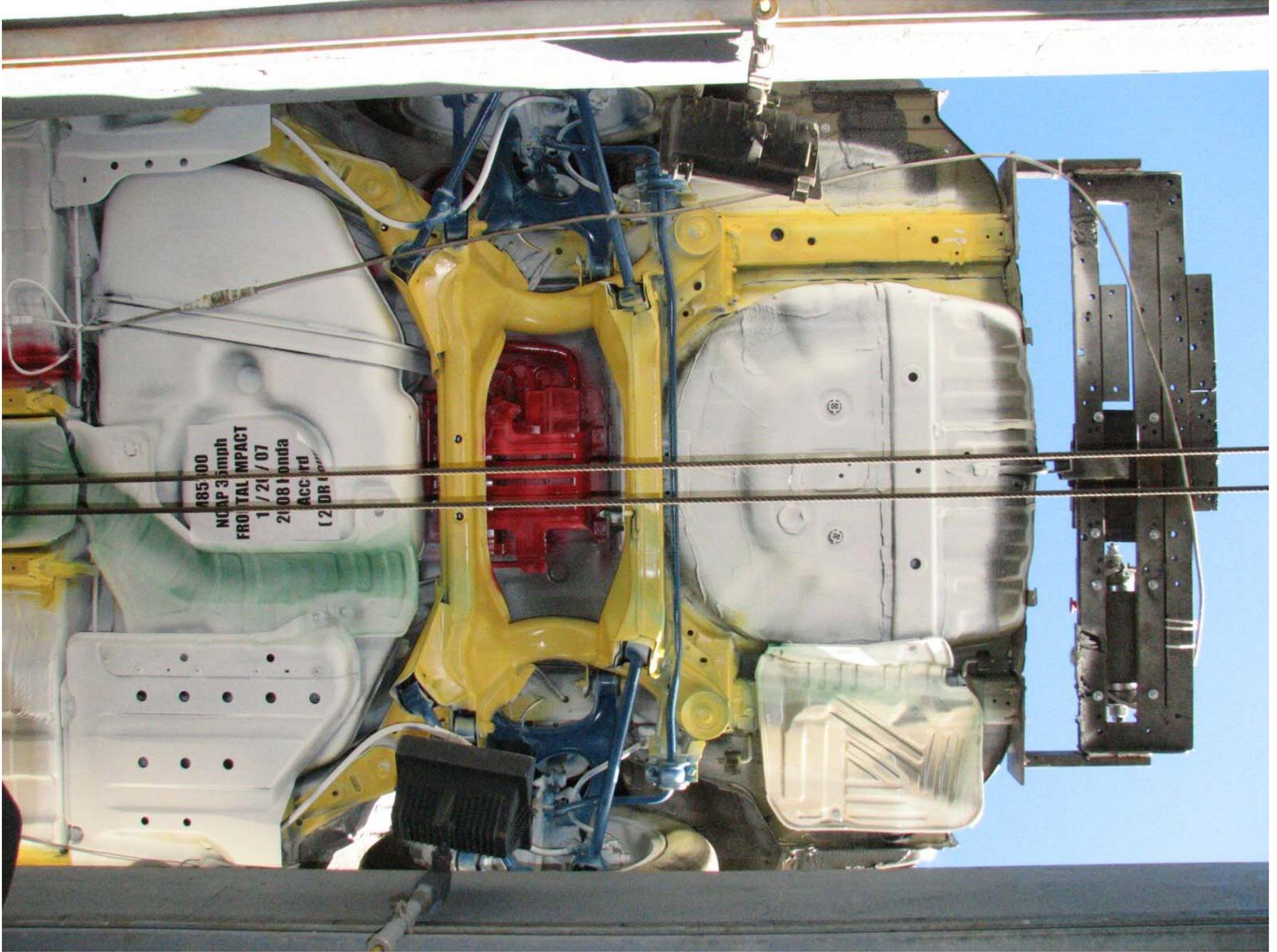


Figure A-28: Pre-Test Rear Underbody

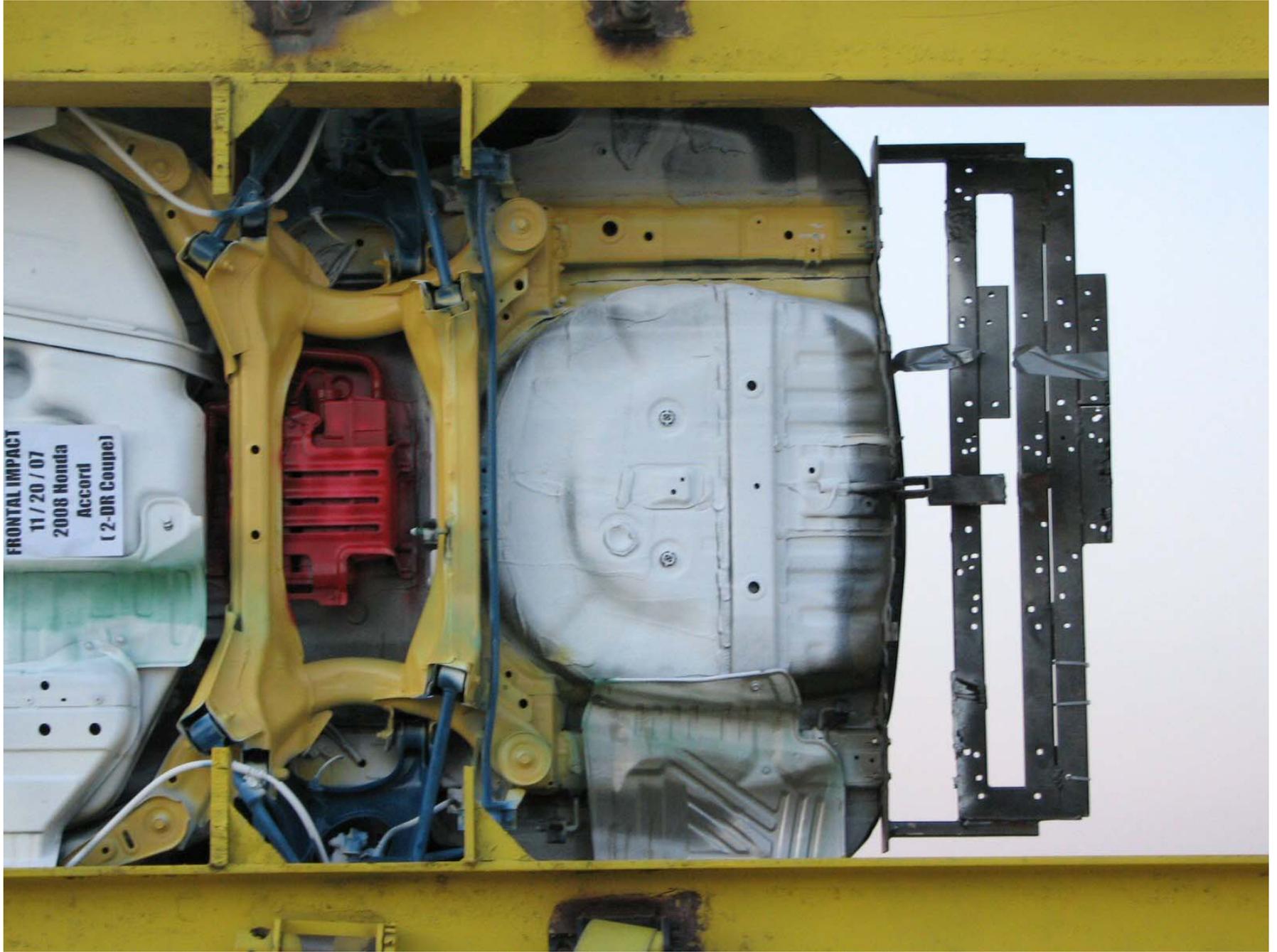


Figure A-29: Post-Test Rear Underbody



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

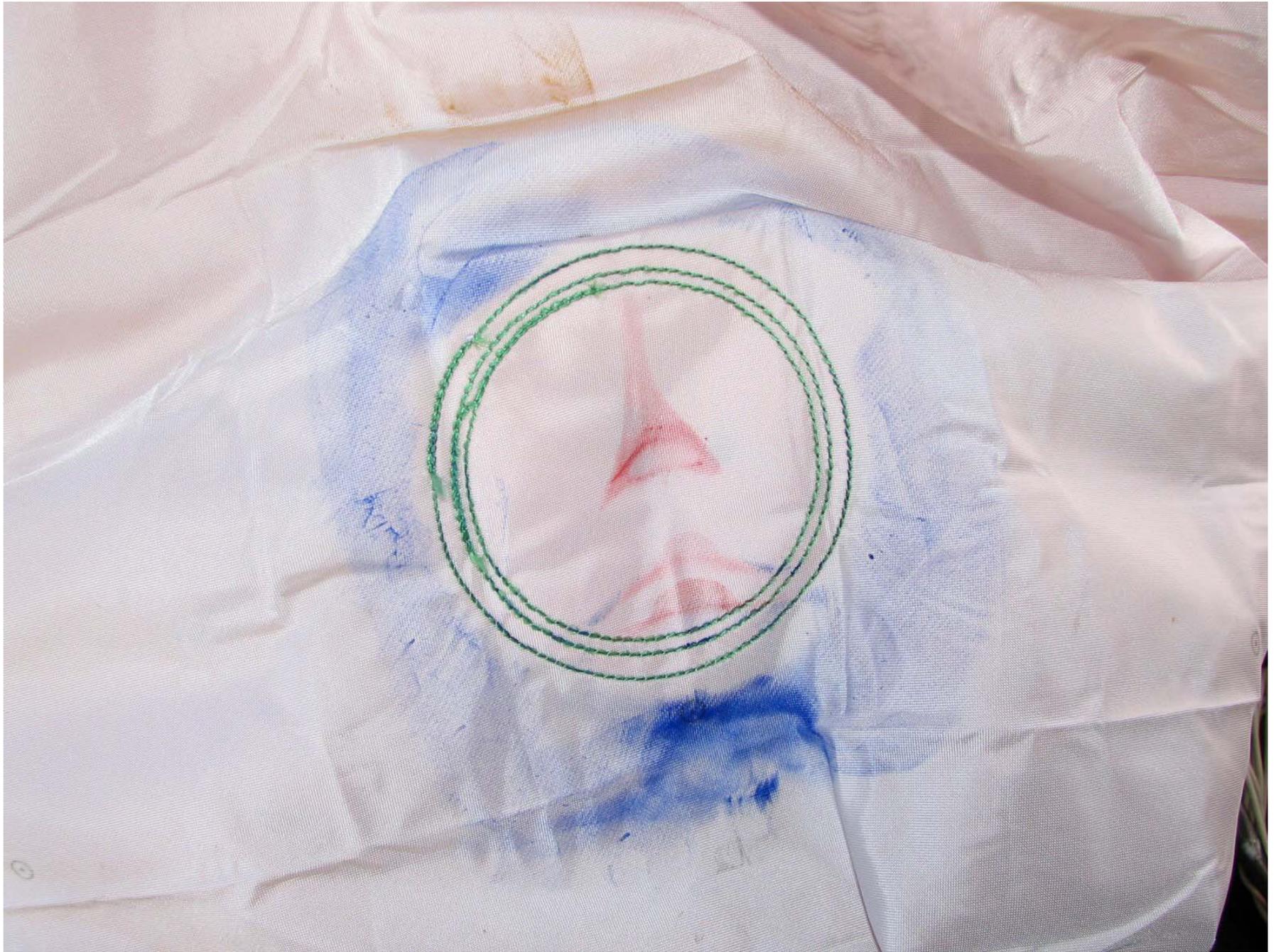


Figure A-43: Post-Test Driver Dummy Airbag Contact



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)

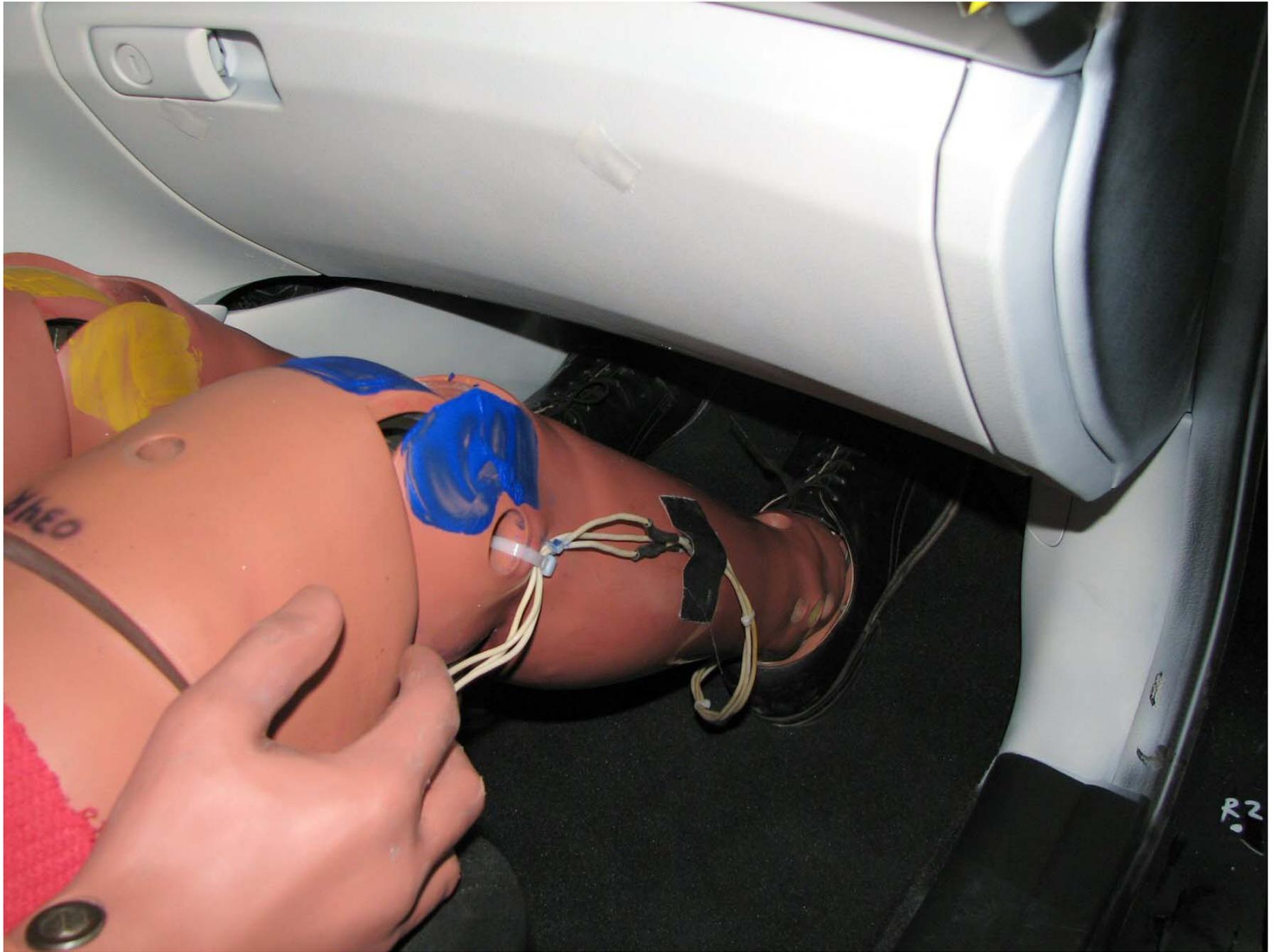


Figure A-50: Pre-Test Passenger Dummy Feet



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

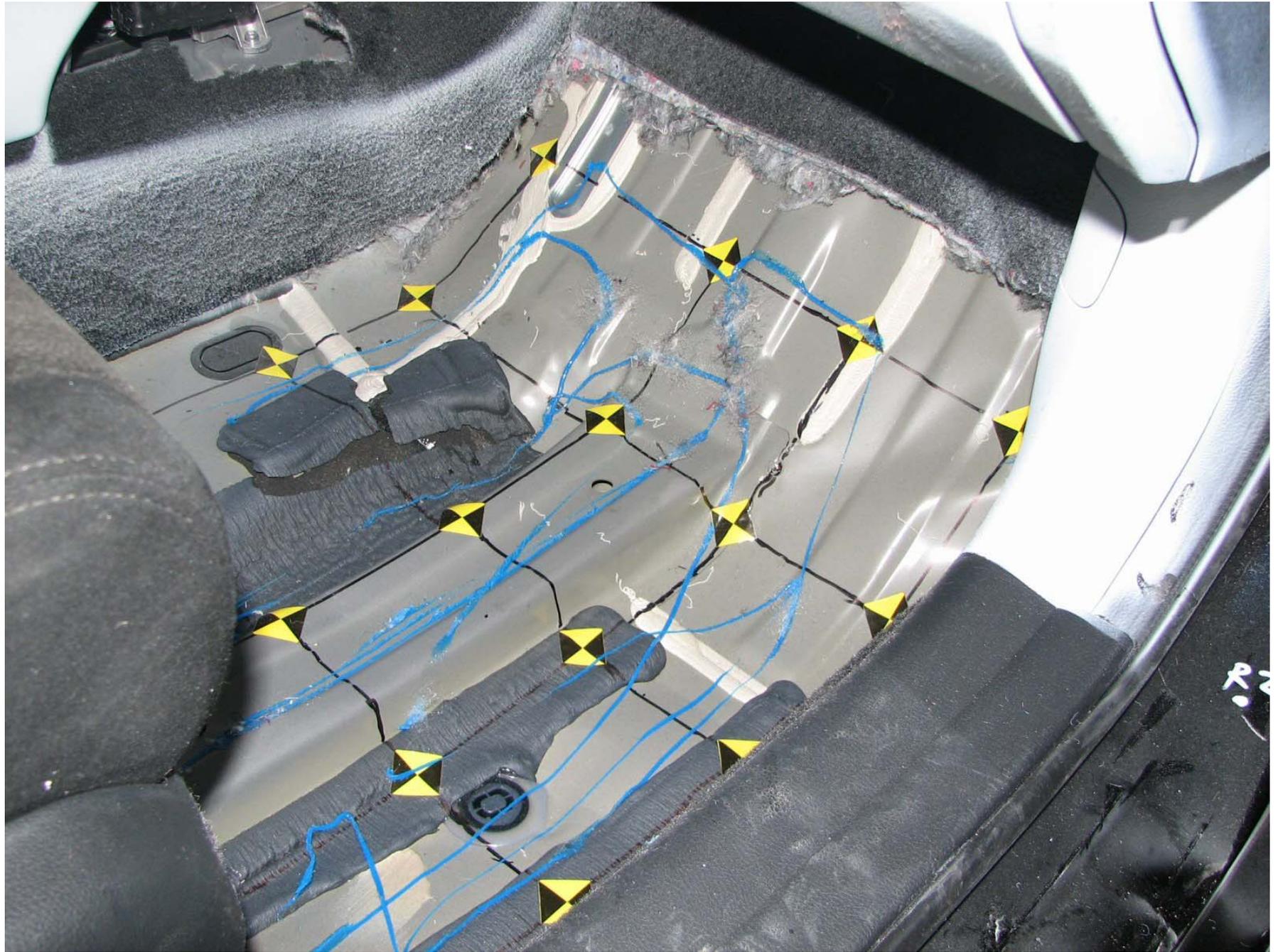


Figure A-55: Post-Test Passenger Side Floor Pan



Figure A-56: Post-Test Passenger Dummy Head



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



A-58

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



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

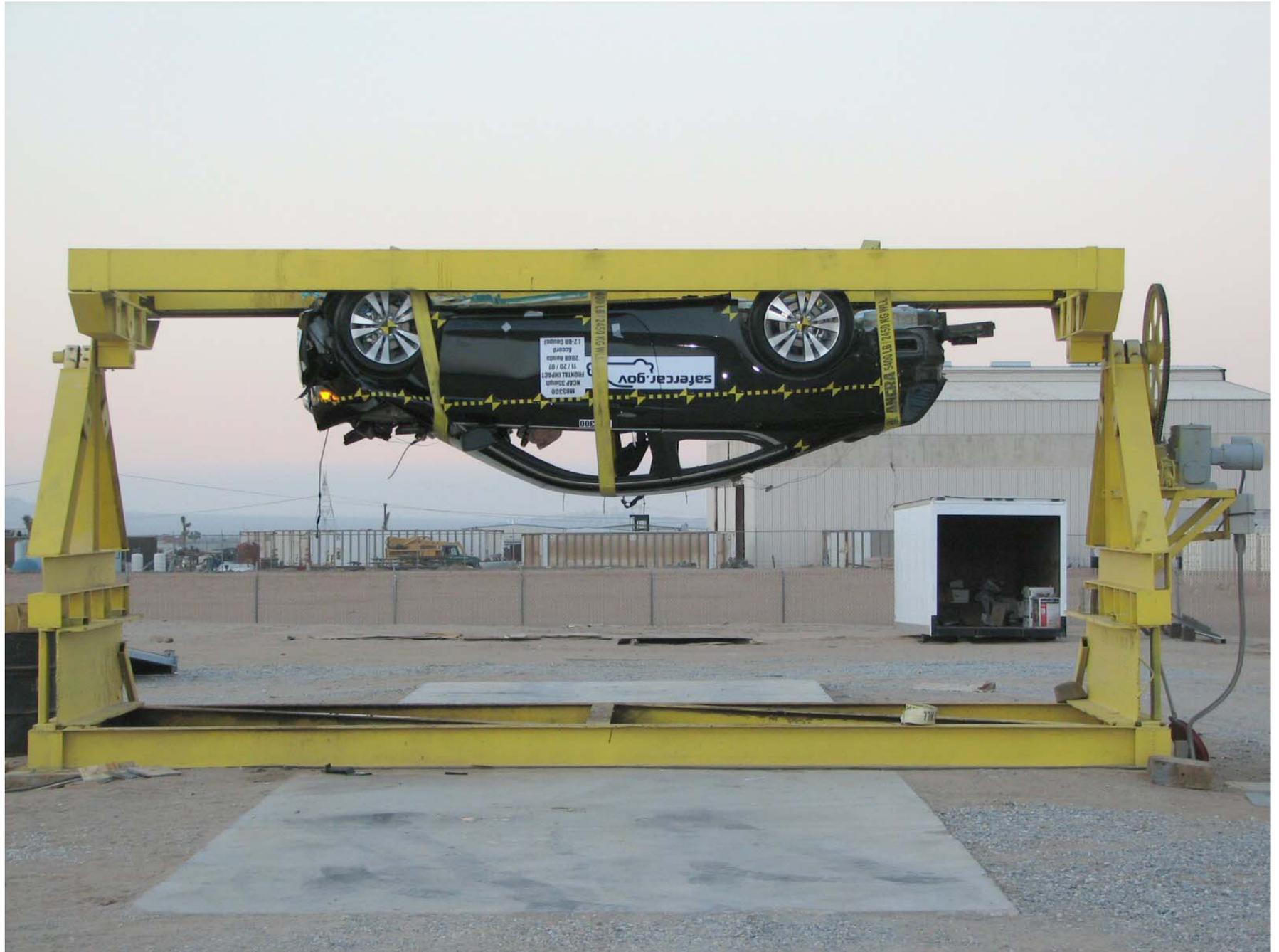


Figure A-60: Vehicle on Rollover Device (180°)

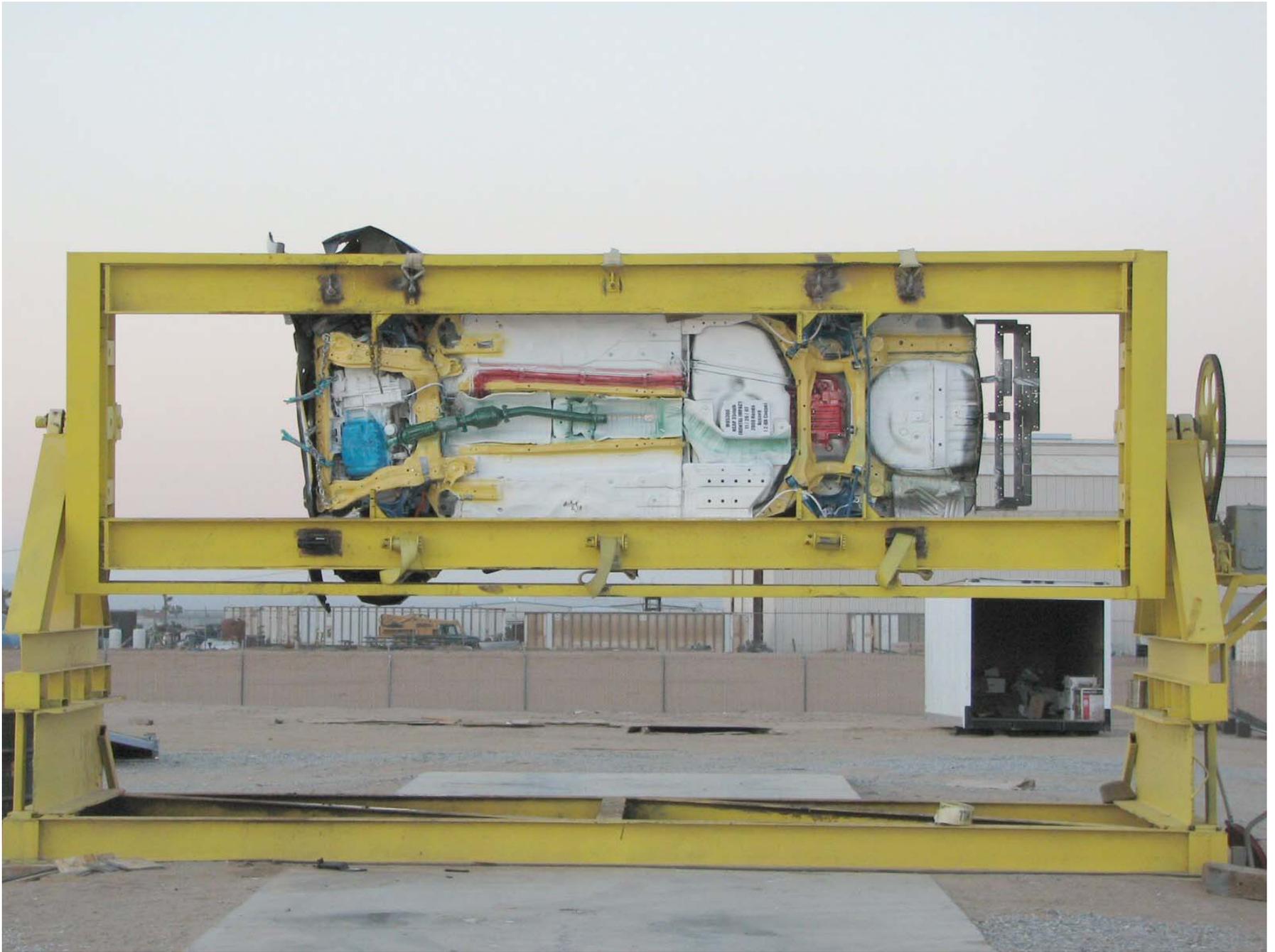


Figure A-61: Vehicle on Rollover Device (270°)

A-61

TR-P28001-11-NC



Figure A-62: Vehicle Impact

APPENDIX B
DATA PLOTS

LIST OF DATA PLOTS

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

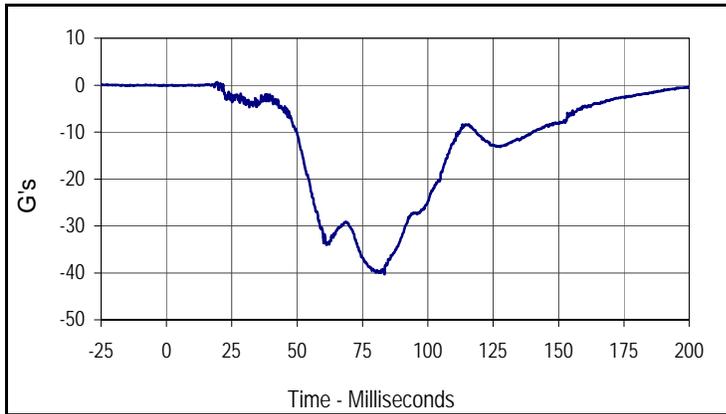
Passenger Chest Redundant Y
Passenger Chest Redundant Z
Passenger Chest Resultant Redundant
Passenger Chest Redundant X Velocity
Passenger Chest Redundant X Displacement
Passenger Chest Displacement
Passenger Pelvis X
Passenger Pelvis Y
Passenger Pelvis Z
Passenger Pelvis Resultant
Passenger Pelvis X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

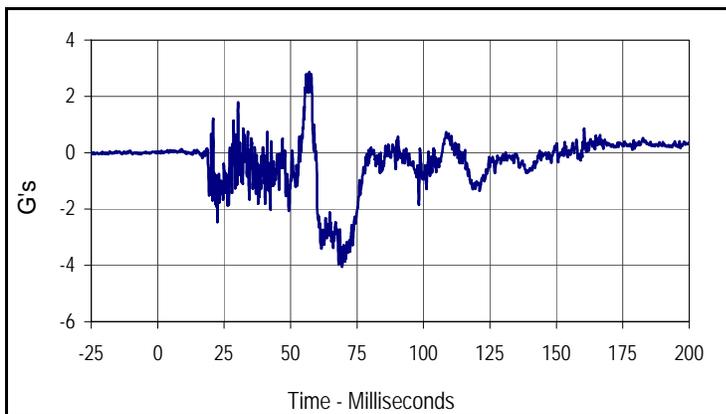
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Vehicle Right Rear X
Vehicle Right Rear X Velocity
Vehicle Right Rear X Displacement
Vehicle Engine Top
Vehicle Engine Top Velocity
Vehicle Engine Top Displacement
Vehicle Engine Bottom
Vehicle Engine Bottom Velocity
Vehicle Engine Bottom Displacement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

Test Vehicle: 2008 Honda Accord 2-Door Coupe
 Test Program: NHTSA 35mph NCAP

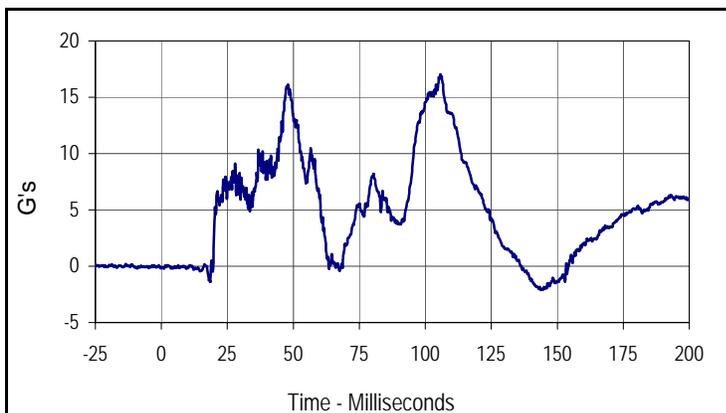
Test Date: 11/20/07
 NHTSA No.: M85300



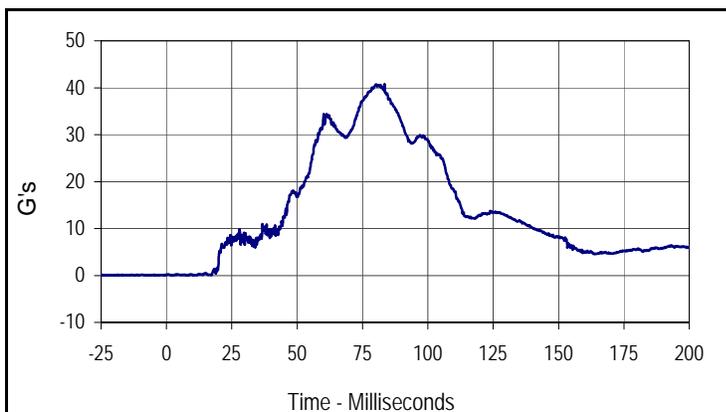
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CURNO	Type	SAE Class	Units
001	FIL	1000	G's
Max	Time	Min	Time
0.6	19.5	-40.3	83.4



Curve Description			
Driver Head Primary Y			
CURNO	Type	SAE Class	Units
002	FIL	1000	G's
Max	Time	Min	Time
2.9	57.1	-4.1	69.4



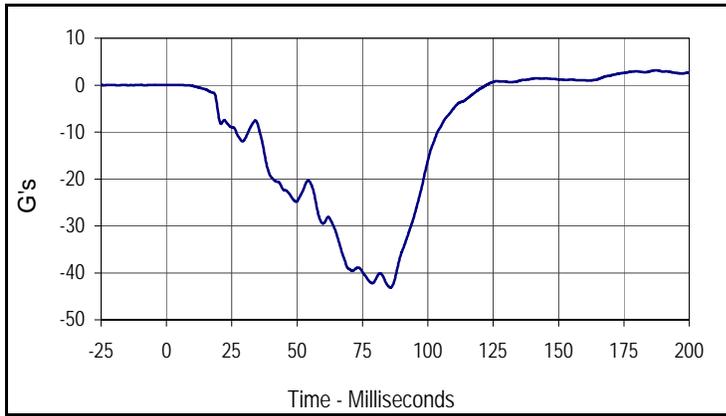
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003	FIL	1000	G's
Max	Time	Min	Time
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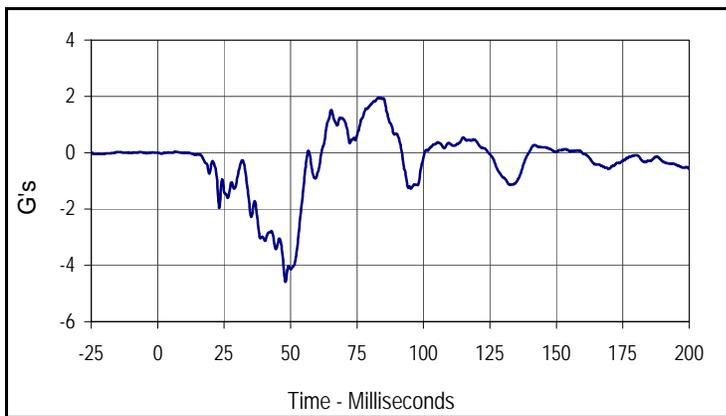
Curve Description			
Driver Head Resultant Primary			
CURNO	Type	SAE Class	Units
001	RES	1000	G's
Max	Time	Min	Time
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Test Vehicle: 2008 Honda Accord 2-Door Coupe
 Test Program: NHTSA 35mph NCAP

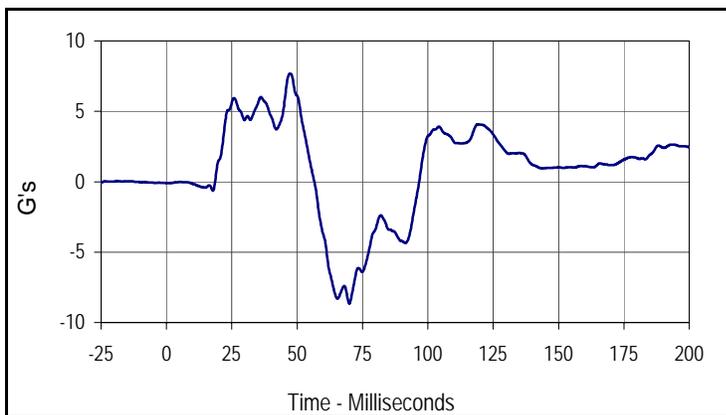
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 NHTSA No.: M85300



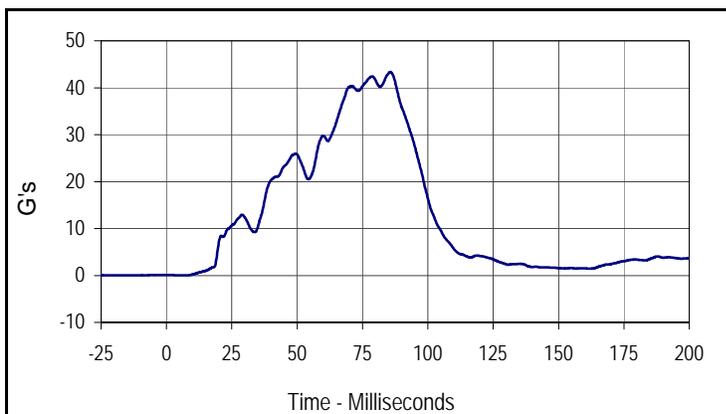
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Driver Chest Primary X			
CURNO	Type	SAE Class	Units
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Max	Time	Min	Time
3.2	187.4	-43.2	85.7



Curve Description			
Driver Chest Primary Y			
CURNO	Type	SAE Class	Units
005	FIL	180	G's
Max	Time	Min	Time
2.0	83.1	-4.6	48.1



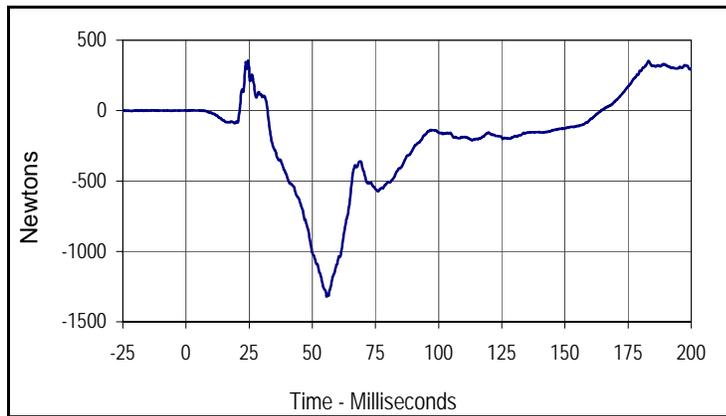
Curve Description			
Driver Chest Primary Z			
CURNO	Type	SAE Class	Units
006	FIL	180	G's
Max	Time	Min	Time
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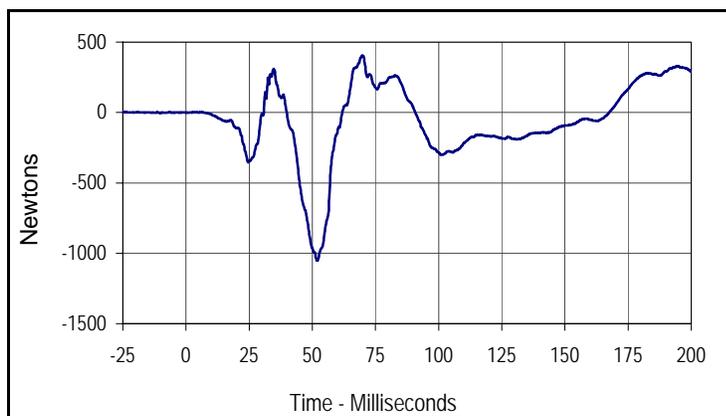
Curve Description			
Driver Chest Resultant Primary			
CURNO	Type	SAE Class	Units
004	RES	180	G's
Max	Time	Min	Time
43.3	85.7	0.0	5.0

Test Vehicle: 2008 Honda Accord 2-Door Coupe
 Test Program: NHTSA 35mph NCAP

Test Date: 11/20/07
 NHTSA No.: M85300



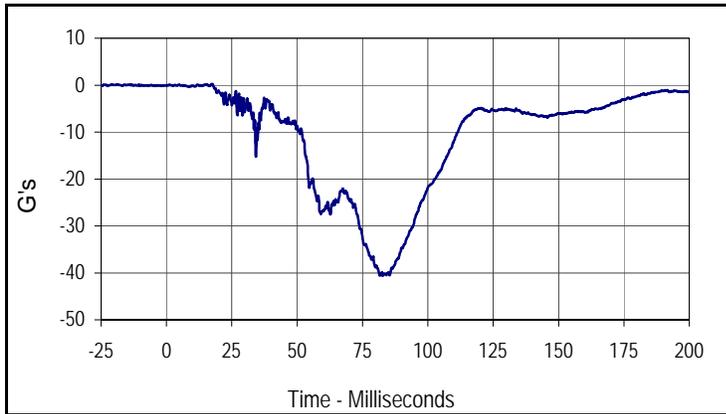
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CURNO	Type	SAE Class	Units
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Max	Time	Min	Time
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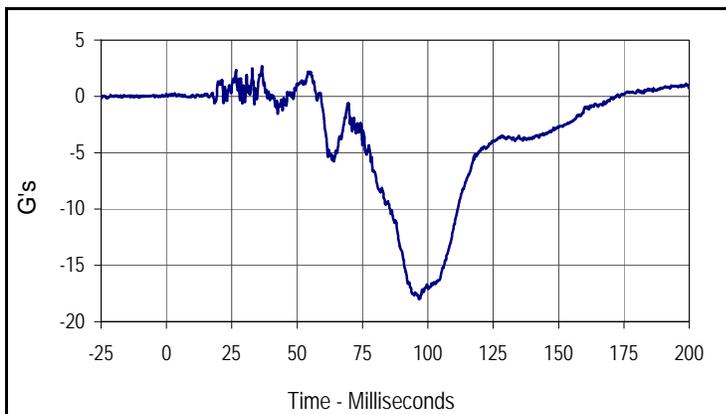
Curve Description			
Driver Right Femur Force Z			
CURNO	Type	SAE Class	Units
008	FIL	600	Newtons
Max	Time	Min	Time
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Test Vehicle: 2008 Honda Accord 2-Door Coupe
 Test Program: NHTSA 35mph NCAP

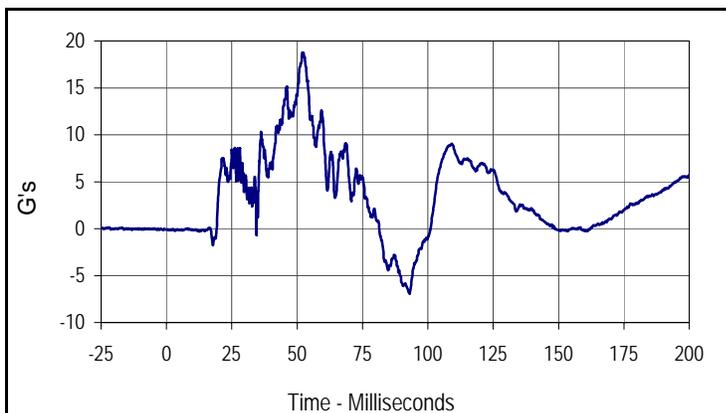
Test Date: 11/20/07
 NHTSA No.: M85300



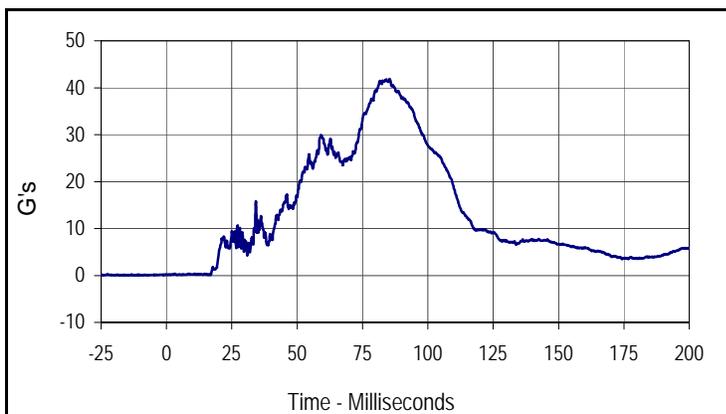
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Passenger Head Primary X			
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009	FIL	1000	G's
Max	Time	Min	Time
0.2	17.5	-40.7	82.7



Curve Description			
Passenger Head Primary Y			
CURNO	Type	SAE Class	Units
010	FIL	1000	G's
Max	Time	Min	Time
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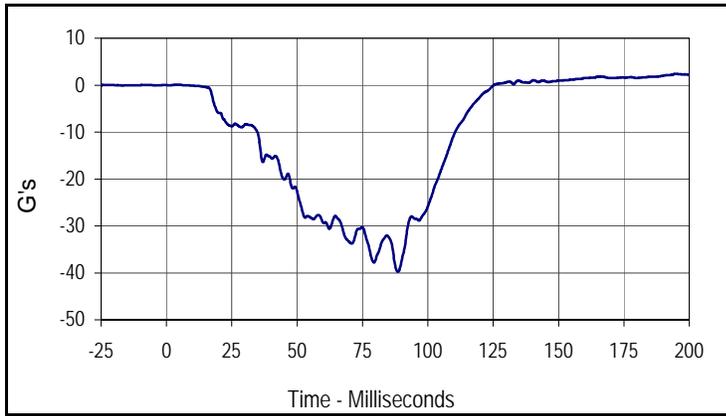
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Passenger Head Primary Z			
CURNO	Type	SAE Class	Units
011	FIL	1000	G's
Max	Time	Min	Time
18.8	52.0	-6.9	93.0



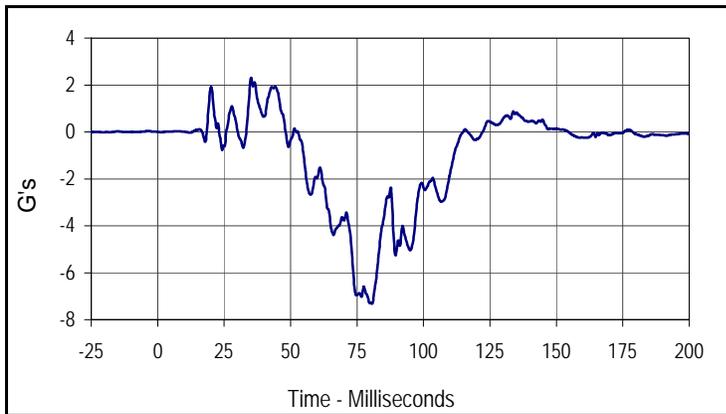
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Passenger Head Resultant Primary			
CURNO	Type	SAE Class	Units
009	RES	1000	G's
Max	Time	Min	Time
41.9	85.4	0.1	15.9

Test Vehicle: 2008 Honda Accord 2-Door Coupe
 Test Program: NHTSA 35mph NCAP

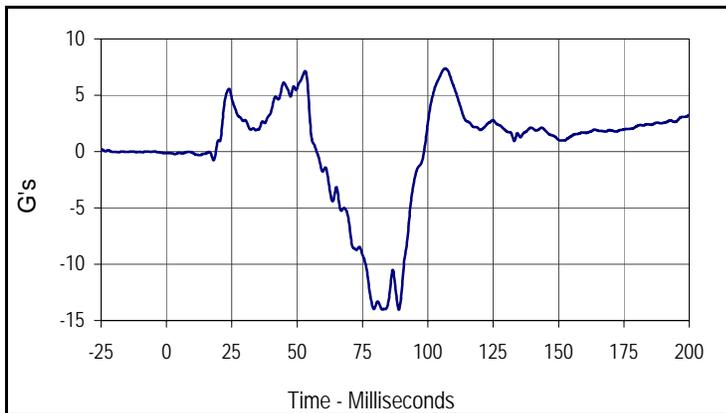
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 NHTSA No.: M85300



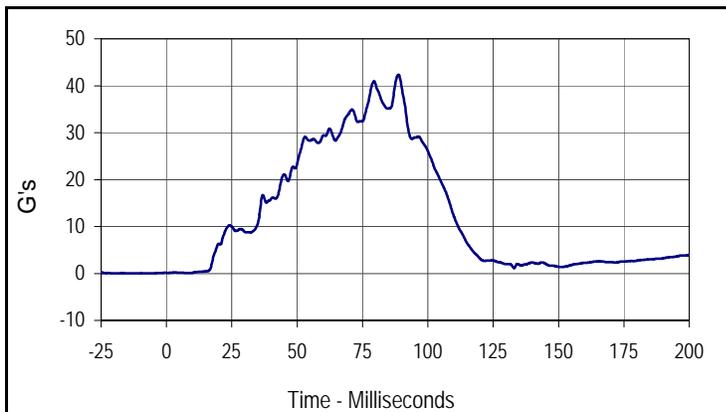
Curve Description			
Passenger Chest Primary X			
CURNO	Type	SAE Class	Units
012	FIL	180	G's
Max	Time	Min	Time
2.4	194.9	-39.8	88.6



Curve Description			
Passenger Chest Primary Y			
CURNO	Type	SAE Class	Units
013	FIL	180	G's
Max	Time	Min	Time
2.3	35.1	-7.3	80.7



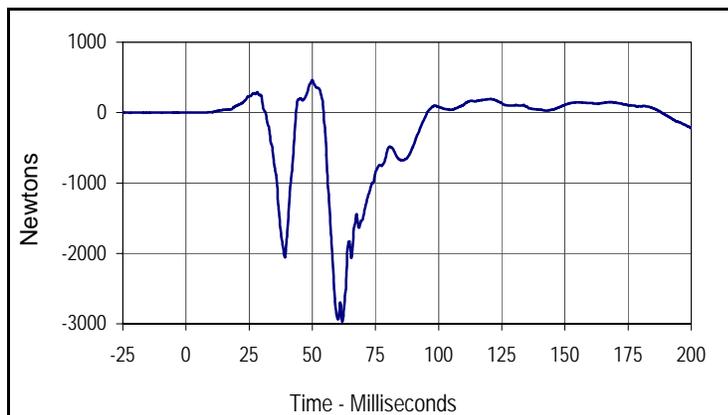
Curve Description			
Passenger Chest Primary Z			
CURNO	Type	SAE Class	Units
014	FIL	180	G's
Max	Time	Min	Time
7.4	106.5	-14.0	88.9



Curve Description			
Passenger Chest Resultant Primary			
CURNO	Type	SAE Class	Units
012	RES	180	G's
Max	Time	Min	Time
42.4	88.7	0.1	8.2

Test Vehicle: 2008 Honda Accord 2-Door Coupe
 Test Program: NHTSA 35mph NCAP

Test Date: 11/20/07
 NHTSA No.: M85300



Curve Description			
Passenger Left Femur Force Z			
CURNO	Type	SAE Class	Units
015	FIL	600	Newtons
Max	Time	Min	Time
460.2	50.0	-2967.0	61.9



Curve Description			
Passenger Right Femur Force Z			
CURNO	Type	SAE Class	Units
016	FIL	600	Newtons
Max	Time	Min	Time
177.3	122.6	-4092.3	63.5

APPENDIX C
DUMMY CALIBRATION DATA

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

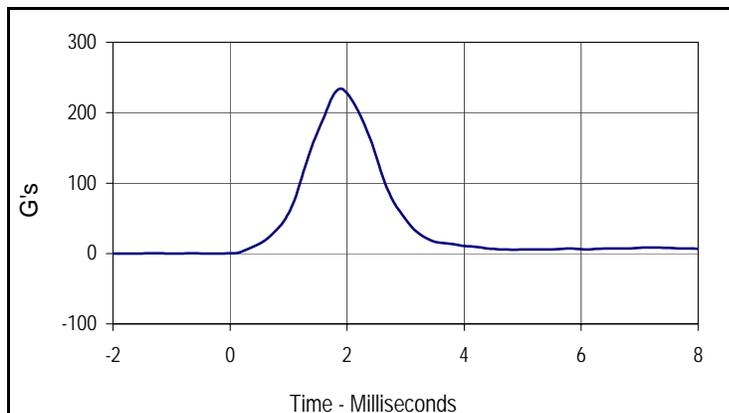
Test Date: 11/16/07

ATD Serial No.: 035

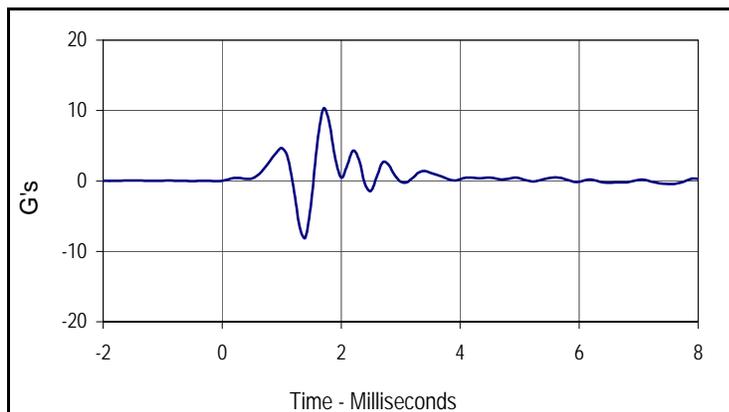
Test I.D.: HD11A



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

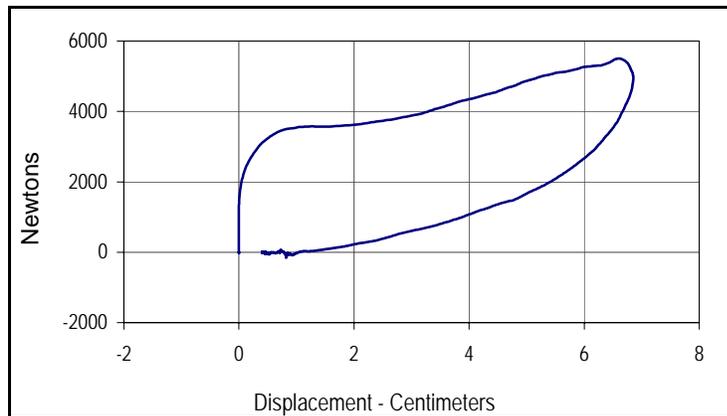
Test Date: 11/16/07

ATD Serial No.: 035

Test I.D.: CH11A



Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	6.58 to 6.82	6.62	Pass
Peak Probe Force	Newtons	5159 to 5893	5503	Pass
Peak Sternum Deflection	CM	6.35 to 7.26	6.85	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	
5503		6.85	

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

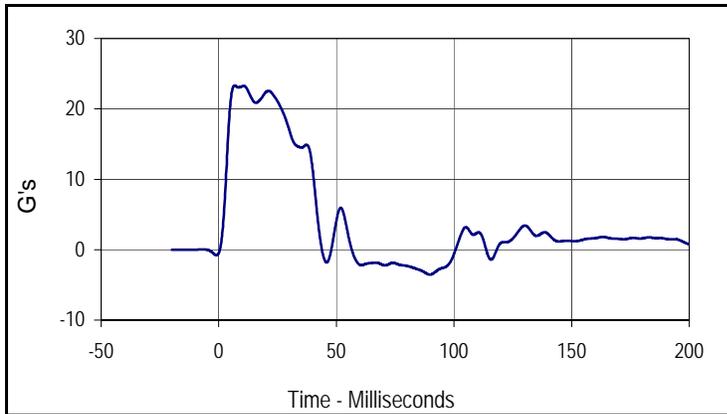
Test Date: 11/13/07

ATD Serial No.: 035

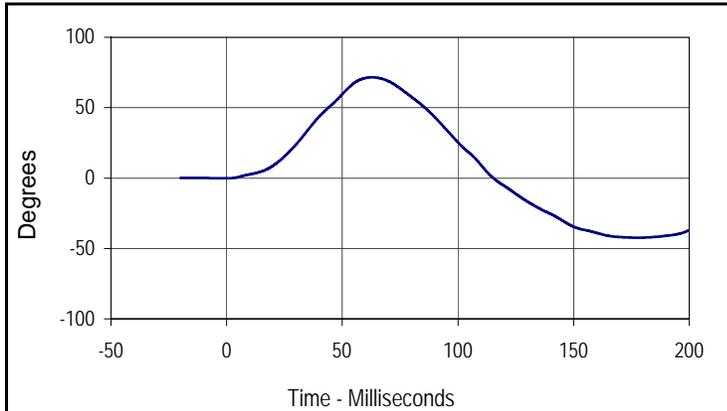
Test I.D.: NF11A



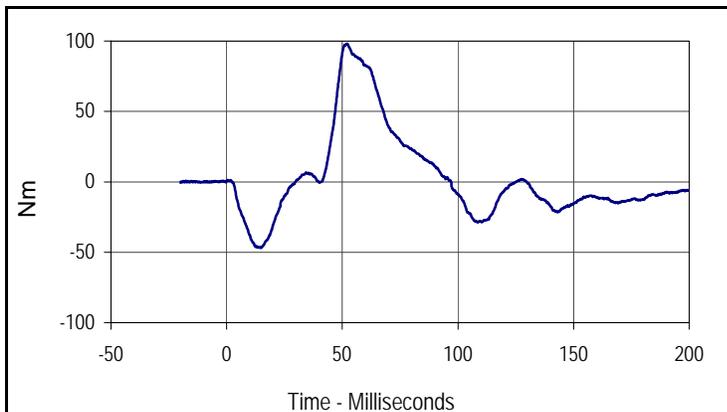
Tested Parameter	Units	Specification	Result	Pass/Fail	
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass	
Laboratory Relative Humidity	%	10 to 70	30	Pass	
Pendulum Velocity	m/s	6.89 to 7.13	6.92	Pass	
Pendulum Deceleration	10 Msec.	G's	22.5 to 27.5	23.2	Pass
	20 Msec.	G's	17.6 to 22.6	22.4	Pass
	30 Msec.	G's	12.5 to 18.5	17.0	Pass
Peak Pendulum Decel. after 30 Msec.	G's	≤ 29.0	17.0	Pass	
Deceleration Decay, Time to Cross 5 G's	Msec.	34.0 to 42.0	41.9	Pass	
Maximum "D" Plane Rotation	Max	Degrees	64.0 to 78.0	71.6	Pass
	Time	Msec.	57.0 to 64.0	62.8	Pass
"D" Plane Rotation Decay, Time To Zero Crossing	Msec.	113.0 to 128.0	115.3	Pass	
Moment About Occ. Condyle	Max	Nm	84.1 to 108.5	98.1	Pass
	Time	Msec.	47.0 to 58.0	52.1	Pass
Positive Moment Decay, Time To Zero Crossing	Msec.	97.0 to 107.0	97.0	Pass	
Overall Test Results				Pass	



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



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



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

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

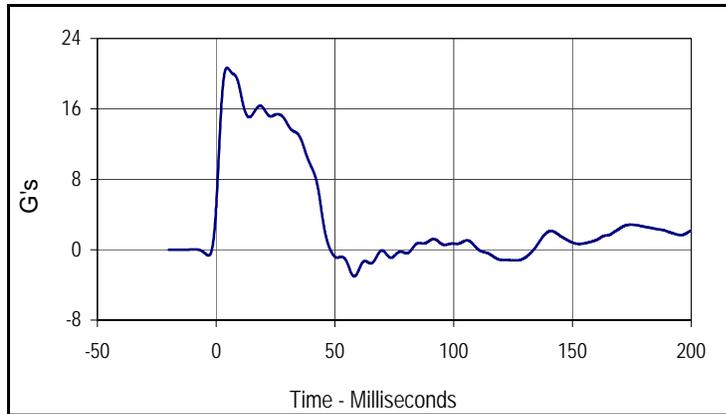
Test Date: 11/14/07

ATD Serial No.: 035

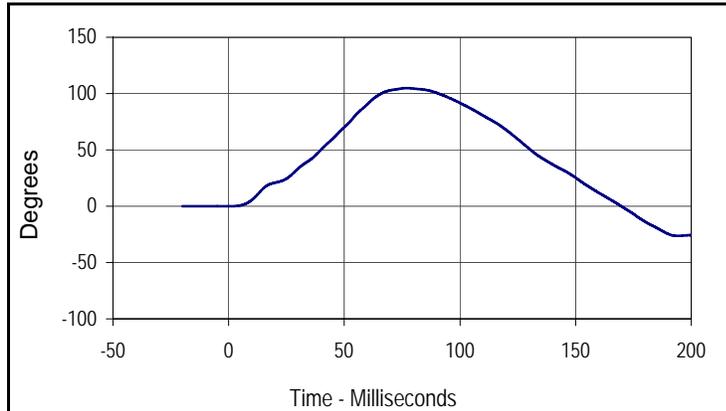
Test I.D.: NE11A



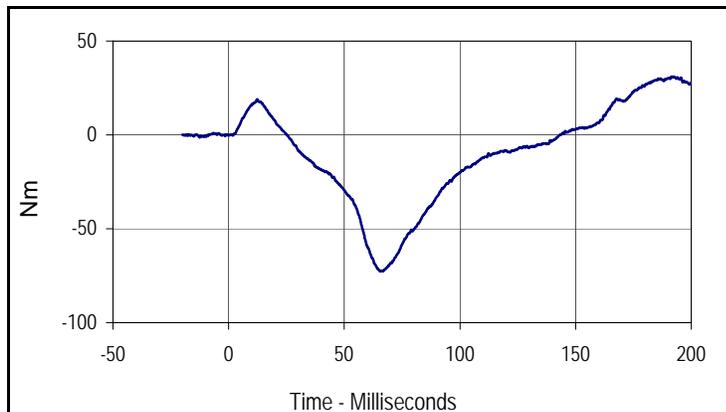
Tested Parameter	Units	Specification	Result	Pass/Fail	
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass	
Laboratory Relative Humidity	%	10 to 70	30	Pass	
Pendulum Velocity	m/s	5.94 to 6.19	6.09	Pass	
Pendulum Deceleration	10 Msec.	G's	17.2 to 21.2	18.2	Pass
	20 Msec.	G's	14.0 to 19.0	16.0	Pass
	30 Msec.	G's	11.0 to 16.0	14.3	Pass
Peak Pendulum Decel. after 30 Msec.	G's	≤ 22.0	14.3	Pass	
Deceleration Decay, Time to Cross 5 G's	Msec.	38.0 to 46.0	44.1	Pass	
Maximum "D" Plane Rotation	Max	Degrees	81.0 to 106.0	104.9	Pass
	Time	Msec.	72.0 to 82.0	76.9	Pass
"D" Plane Rotation Decay, Time To Zero Crossing	Msec.	147.0 to 174.0	169.7	Pass	
Moment About Occ. Condyle	Max	Nm	-52.9 to- 79.9	-72.7	Pass
	Time	Msec.	65.0 to 79.0	65.5	Pass
Positive Moment Decay, Time To Zero Crossing	Msec.	120.0 to 148.0	143.2	Pass	
Overall Test Results				Pass	



Curve Description			
Pendulum Deceleration			
CURNO	Type	SAE Class	Units
001	FIL	60	G's
Max	Time	Min	Time
20.7	4.6	-3.0	58.1



Curve Description			
"D" Plane Rotation			
CURNO	Type	SAE Class	Units
003	FIL	60	Degrees
Max	Time	Min	Time
104.9	76.9	-26.3	194.0



Curve Description			
Moment About Occipital Condyle			
CURNO	Type	SAE Class	Units
004	FIL	600	Nm
Max	Time	Min	Time
31.1	191.4	-72.7	65.5

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

Test Date: 11/16/07

ATD Serial No.: 035

Test I.D.: LK11A , RK11A

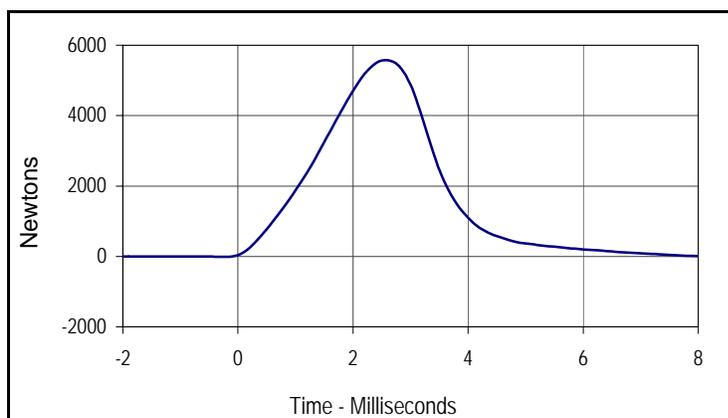


Left Knee

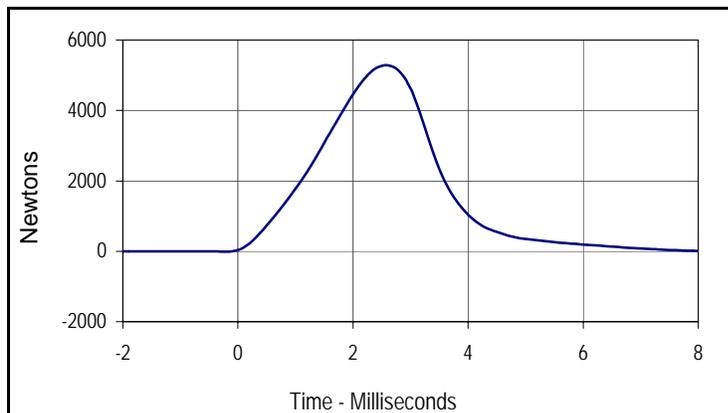
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Pendulum Velocity at T=0	m/sec	2.07 to 2.13	2.11	Pass
Peak Probe Force	Newtons	4715 to 5782	5577	Pass
Overall Test Results				Pass

Right Knee

Pendulum Velocity at T=0	m/sec	2.07 to 2.13	2.10	Pass
Peak Probe Force	Newtons	4715 to 5782	5284	Pass
Overall Test Results				Pass



Curve Description			
Left Knee Probe Force			
CURNO	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Time	Min	Time
5577.4	2.6	-15.3	-0.2



Curve Description			
Right Knee Probe Force			
CURNO	Type	SAE Class	Units
002	FIL	600	Newtons
Max	Time	Min	Time
5284.0	2.6	-14.2	-0.2

Test Program: Hybrid III 50th Percentile Male External Measurements

Test Date: 11/16/07

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	516	Pass
C - "H" point height	mm	84 to 89	85	Pass
D - "H" point from seat back	mm	135 to 140	138	Pass
E - Shoulder pivot from back	mm	84 to 94	89	Pass
F - Thigh clearance	mm	140 to 155	150	Pass
G - Elbow back to wrist pivot	mm	290 to 305	301	Pass
H - Skull cap to back line	mm	41 to 46	44	Pass
I - Shoulder to elbow length	mm	330 to 345	336	Pass
J - Elbow rest height	mm	190 to 211	206	Pass
K - Buttock to knee length	mm	579 to 604	595	Pass
L - Popliteal length	mm	429 to 455	446	Pass
M - Knee pivot height	mm	485 to 500	492	Pass
N - Buttock popliteal length	mm	452 to 477	475	Pass
O - Chest depth	mm	213 to 229	218	Pass
P - Foot length	mm	251 to 267	258	Pass
V - Shoulder breadth	mm	422 to 437	430	Pass
W - Foot breadth	mm	91 to 107	104	Pass
Y - Chest circumference	mm	970 to 1001	993	Pass
Z - Waist circumference	mm	836 to 866	857	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

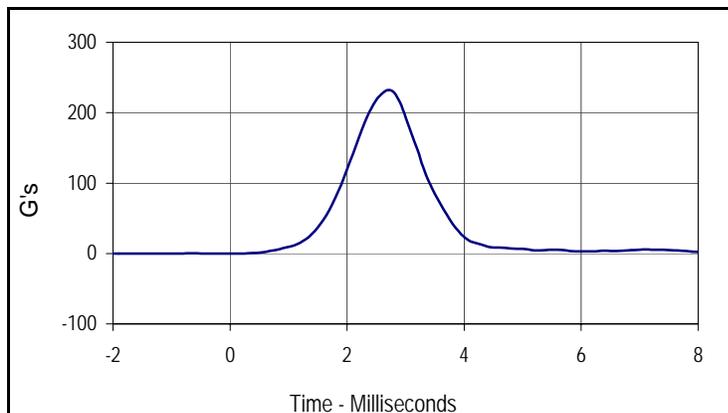
Test Date: 11/16/07

ATD Serial No.: 034

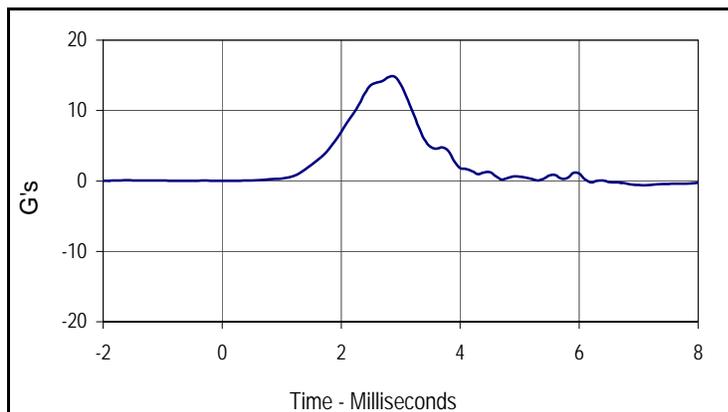
Test I.D.: HD11B



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	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

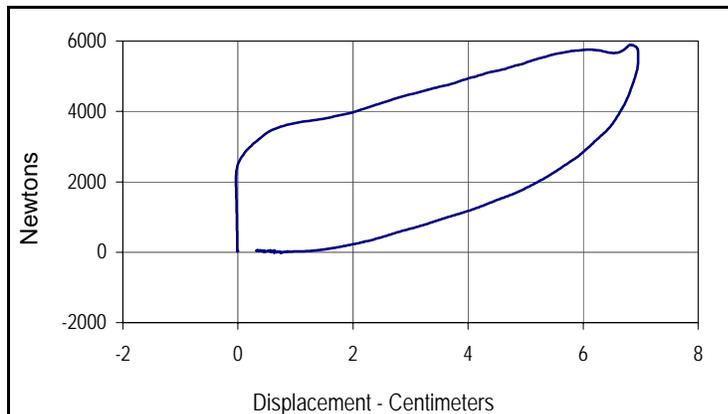
Test Date: 11/16/07

ATD Serial No.: 034

Test I.D.: CH11B



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	5891	Pass
Peak Sternum Deflection	CM	6.35 to 7.26	6.96	Pass
Internal Hysteresis	%	69 to 85	72.7	Pass
Overall Test Results				Pass



Curve Description			
Probe Force vs. Chest Deflection			
CURNO	Type	SAE Class	Hysteresis
001	FIL	180	72.7
Peak Probe Force		Peak Chest Deflection	
5891		6.96	

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

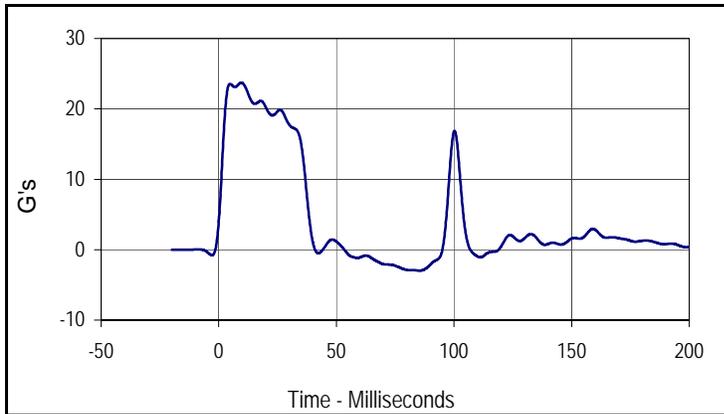
Test Date: 11/14/07

ATD Serial No.: 034

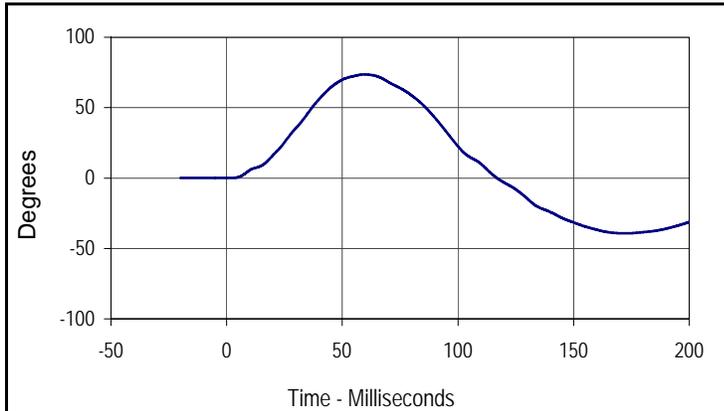
Test I.D.: NF11B



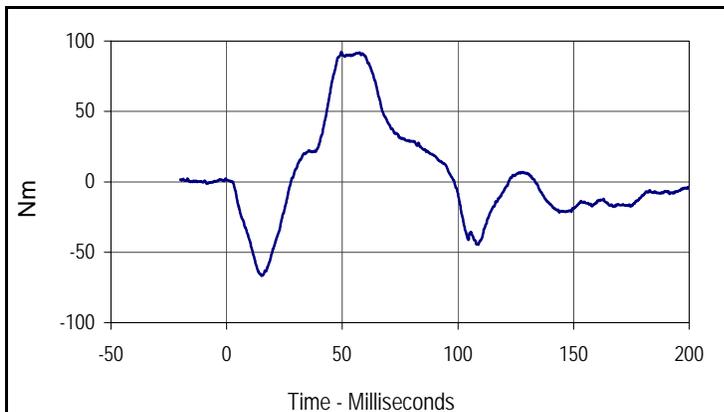
Tested Parameter	Units	Specification	Result	Pass/Fail	
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass	
Laboratory Relative Humidity	%	10 to 70	30	Pass	
Pendulum Velocity	m/s	6.89 to 7.13	6.90	Pass	
Pendulum Deceleration	10 Msec.	G's	22.5 to 27.5	23.7	Pass
	20 Msec.	G's	17.6 to 22.6	20.2	Pass
	30 Msec.	G's	12.5 to 18.5	17.7	Pass
Peak Pendulum Decel. after 30 Msec.	G's	≤ 29.0	17.7	Pass	
Deceleration Decay, Time to Cross 5 G's	Msec.	34.0 to 42.0	38.3	Pass	
Maximum "D" Plane Rotation	Max	Degrees	64.0 to 78.0	73.6	Pass
	Time	Msec.	57.0 to 64.0	59.5	Pass
"D" Plane Rotation Decay, Time To Zero Crossing	Msec.	113.0 to 128.0	116.9	Pass	
Moment About Occ. Condyle	Max	Nm	84.1 to 108.5	92.2	Pass
	Time	Msec.	47.0 to 58.0	49.6	Pass
Positive Moment Decay, Time To Zero Crossing	Msec.	97.0 to 107.0	98.5	Pass	
Overall Test Results				Pass	



Curve Description			
Pendulum Deceleration			
CURNO	Type	SAE Class	Units
001	FIL	60	G's
Max	Time	Min	Time
23.7	9.6	-3.0	85.3



Curve Description			
"D" Plane Rotation			
CURNO	Type	SAE Class	Units
003	FIL	60	Degrees
Max	Time	Min	Time
73.6	59.5	-39.3	172.4



Curve Description			
Moment About Occipital Condyle			
CURNO	Type	SAE Class	Units
004	FIL	600	Nm
Max	Time	Min	Time
92.2	49.6	-66.8	15.1

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

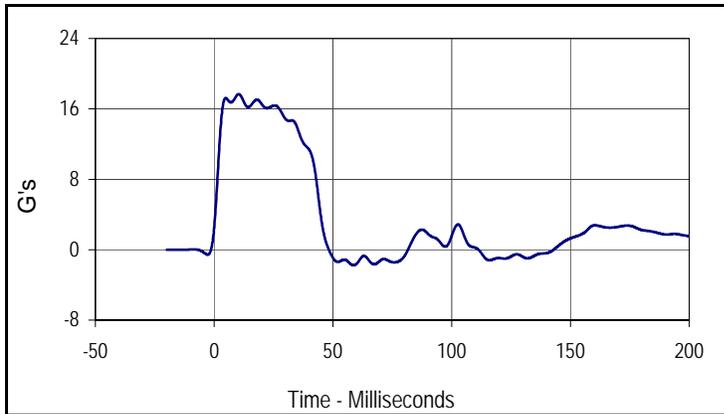
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ATD Serial No.: 034

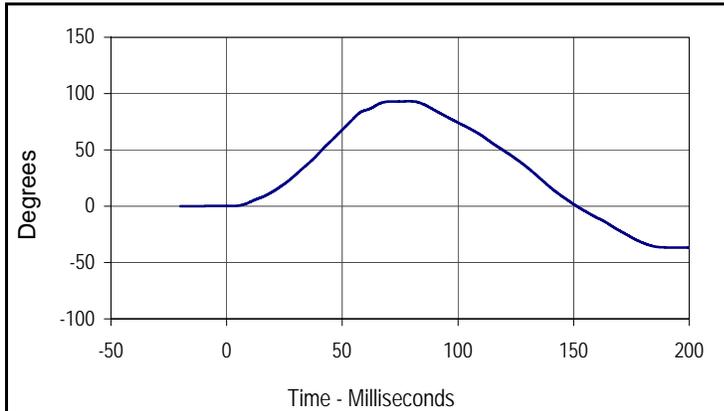
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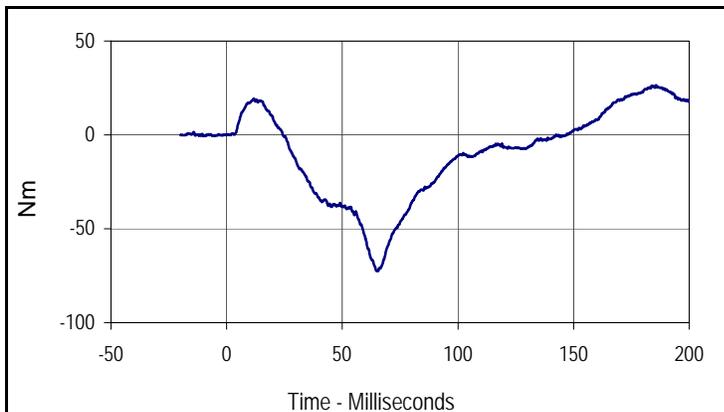
Tested Parameter	Units	Specification	Result	Pass/Fail	
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass	
Laboratory Relative Humidity	%	10 to 70	30	Pass	
Pendulum Velocity	m/s	5.94 to 6.19	6.04	Pass	
Pendulum Deceleration	10 Msec.	G's	17.2 to 21.2	17.7	Pass
	20 Msec.	G's	14.0 to 19.0	16.6	Pass
	30 Msec.	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	44.4	Pass	
Maximum "D" Plane Rotation	Max	Degrees	81.0 to 106.0	93.1	Pass
	Time	Msec.	72.0 to 82.0	79.4	Pass
"D" Plane Rotation Decay, Time To Zero Crossing	Msec.	147.0 to 174.0	151.4	Pass	
Moment About Occ. Condyle	Max	Nm	-52.9 to- 79.9	-72.6	Pass
	Time	Msec.	65.0 to 79.0	65.4	Pass
Positive Moment Decay, Time To Zero Crossing	Msec.	120.0 to 148.0	146.9	Pass	
Overall Test Results				Pass	



Curve Description			
Pendulum Deceleration			
CURNO	Type	SAE Class	Units
001	FIL	60	G's
Max	Time	Min	Time
17.7	10.3	-1.8	58.7



Curve Description			
"D" Plane Rotation			
CURNO	Type	SAE Class	Units
003	FIL	60	Degrees
Max	Time	Min	Time
93.1	79.4	-36.8	200.0



Curve Description			
Moment About Occipital Condyle			
CURNO	Type	SAE Class	Units
004	FIL	600	Nm
Max	Time	Min	Time
26.5	185.7	-72.6	65.4

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

Test Date: 11/16/07

ATD Serial No.: 034

Test I.D.: LK11B , RK11B

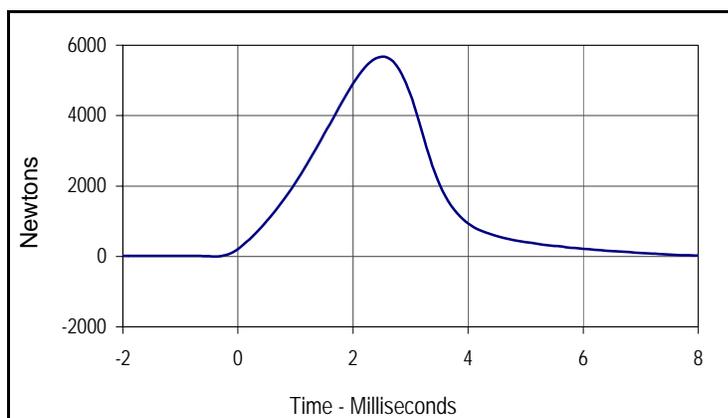


Left Knee

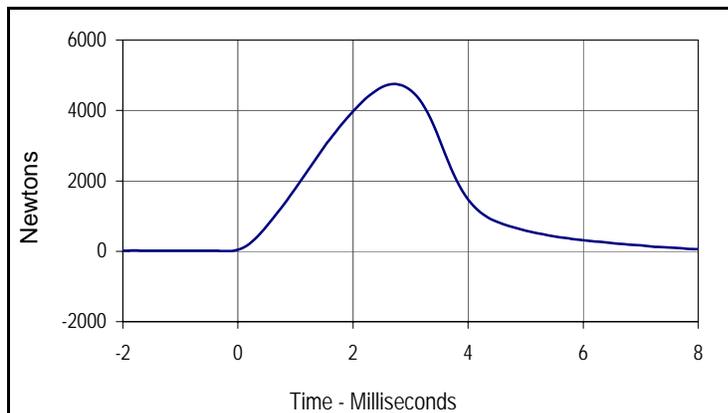
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Pendulum Velocity at T=0	m/sec	2.07 to 2.13	2.11	Pass
Peak Probe Force	Newtons	4715 to 5782	5679	Pass
Overall Test Results				Pass

Right Knee

Pendulum Velocity at T=0	m/sec	2.07 to 2.13	2.11	Pass
Peak Probe Force	Newtons	4715 to 5782	4749	Pass
Overall Test Results				Pass



Curve Description			
Left Knee Probe Force			
CURNO	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Time	Min	Time
5678.6	2.5	-4.4	10.0



Curve Description			
Right Knee Probe Force			
CURNO	Type	SAE Class	Units
002	FIL	600	Newtons
Max	Time	Min	Time
4748.6	2.7	-2.3	9.7

Test Program: Hybrid III 50th Percentile Male External Measurements

Test Date: 11/16/07

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	883	Pass
B - Shoulder pivot height	mm	505 to 521	515	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	90	Pass
F - Thigh clearance	mm	140 to 155	152	Pass
G - Elbow back to wrist pivot	mm	290 to 305	302	Pass
H - Skull cap to back line	mm	41 to 46	43	Pass
I - Shoulder to elbow length	mm	330 to 345	337	Pass
J - Elbow rest height	mm	190 to 211	204	Pass
K - Buttock to knee length	mm	579 to 604	596	Pass
L - Popliteal length	mm	429 to 455	447	Pass
M - Knee pivot height	mm	485 to 500	493	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	105	Pass
Y - Chest circumference	mm	970 to 1001	996	Pass
Z - Waist circumference	mm	836 to 866	861	Pass
AA - Location for chest circumference	mm	429 to 434	430	Pass
BB - Location for waist circumference	mm	226 to 231	229	Pass
Overall Test Results				Pass

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

Test Date: 11/16/07
 Test I.D.: N/A



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

Comments on repair or replacement parts:

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

Test Date: 11/16/07
 Test I.D.: N/A



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

Comments on repair or replacement parts:

APPENDIX D
CHILD RESTRAINT SYSTEM

REPORT NUMBER TR-P28001-11-NC

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

**HONDA OF AMERICA MFG, INC
2008 HONDA ACCORD
2-DOOR COUPE**

NHTSA NUMBER: M85300

**PREPARED BY:
KARCO ENGINEERING, LLC
9270 HOLLY ROAD
ADELANTO, CALIFORNIA 92301**



NOVEMBER 20, 2007

FINAL REPORT

**PREPARED FOR:
U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
RULEMAKING
OFFICE OF CRASHWORTHINESS STANDARDS
MAIL CODE: NVS-111
400 SEVENTH STREET, SW, ROOM 5311
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.

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Prepared by: 
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KARCO Engineering, LLC

Date: November 20, 2007

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Mr. Michael L. Dunlap, Director of Operations
KARCO Engineering, LLC

Date: November 20, 2007

Approved by: 
Mr. Frank D. Richardson, Program Manager
KARCO Engineering, LLC

Date: November 20, 2007

FINAL REPORT ACCEPTED BY:

Manager, New Car Assessment Program

Date of Acceptance

COTR, NCAP Frontal Impact Program

Date of Acceptance

Technical Report Documentation Page

1. Report No. TR-P28001-11-NC		2. Government Accession No.		3. Recipients Catalog No.	
4. Title and Subtitle Final Report of one (1) Combi Centre DX CRS NHTSA No. M85300				5. Report Date 11/20/2007	
				6. Performing Organization Code KAR	
7. Authors Mr. Pablo Vega, Test Engineer, Karco Mr. Frank Richardson, Program Manager, Karco				8. Performing Organization Report No. TR-P28001-11-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 NPS-111 400 Seventh Street, SW, Room 5311 Washington, D.C 20590				13. Type of Report and Period Covered Final Test Report Base Year	
				14. Sponsoring Agency Code DOT/NHTSA/NRM/OCS	
15. Supplementary Notes					
16. Abstract A frontal impact test was conducted on one (1) Combi Centre DX CRS in conjunction with frontal barrier impact NCAP testing on a 2008 Honda Accord 2-Door Coupe and in accordance with the specifications of the Office of Crashworthiness Standards Test Procedure for the determination of CRS crashworthiness. This test was conducted at Karco Engineering, LLC on November 20, 2007.					
Measurement Description		Units	Threshold	Left Rear (P4)	Right Rear (P3)
Head Injury Criteria (HIC15)		N/A	390		472.3
3 msec. Chest Clip		G's	50		61.3
17. Key Words New Car Assesment Program (Frontal NCAP) Frontal Barrier Impact Test Final Report of a Combi Centre DX CRS				18. Distribution of Statement Copies of this report available from: NHTSA Technical Reference Division National Highway Traffic Safety Admin. 400 Seventh St., SW, Room 5108 Washington, D.C. 20590	
19. Security Classification (this report) Unclassified		20. Security Classification (this page) Unclassified		21. No. of Pages 43	22. Price

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SECTION D1

PURPOSE AND SUMMARY OF TEST M85300

The purpose of this test is to obtain CRS performance data during 35 mph (56.3 km/h) frontal barrier impact NCAP test.

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

SUMMARY

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

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

CHILD DUMMY VALUES		
Location	HIC15 Values	3 Msec. Chest Clip
CRABI (P3)	472.3	61.3

DATA SHEET NO.1
CRASH TEST SUMMARY

Test Vehicle: 2008 Honda Accord 2-Door Coupe
Test Program: NHTSA 35mph NCAP

NHTSA No.: M85300
Test Date: 11/20/07

CHILD RESTRAINT SYSTEM INFORMATION

Description	Position #3 CRS
Manufacturer	Combi
Model Name	Centre DX
Serial No.	927500
Type	Infant
Forward/Rearward	Rearward

VISIBLE DUMMY CONTACT POINTS

Description	Position #3 CRS
Head Contact	Front Passenger Seat, CRS Handle*
Chest Contact	None
Abdomen Contact	None
Left Knee Contact	Front Passenger Seat
Right Knee Contact	Front Passenger Seat
Left Toe Contact	Front Passenger Seat
Right Toe Contact	Front Passenger Seat

POST-TEST DOOR OPENINGS

Description	Position #3 CRS
Right Rear Door	Remained closed and latched, opened w/o tools

* CRS seat became detached from base during impact.

CAMERA COVERAGE

Description	Standard
High Speed	2
Real Time	0
Total	2

DATA CHANNELS

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

DATA SHEET NO.2
VEHICLE PARAMETER DATA

Test Vehicle: 2008 Honda Accord 2-Door Coupe
Test Program: NHTSA 35mph NCAP

NHTSA No.: M85300
Test Date: 11/20/07

TEST VEHICLE WEIGHTS

	Units	As Delivered Weights (UVW)			As Tested Weights (ATW)		
		Front Axle	Rear Axle	Total	Front Axle	Rear Axle	Total
Left	kg	464	293	757	489	369	858
Right	kg	451	273	724	472	343	815
Ratio	%	61.8%	38.2%	100.0%	57.4%	42.6%	100.0%
Totals	kg	915	566	1481	961	712	1673

TARGET TEST WEIGHT CALCULATION

Measured Parameter	Units	Value
Total Delivered Weight (UVW)	kg	1481
Weight of 2 P572 ATD's	kg	152
Rated Cargo/Luggage Wt. (RCLW)	kg	45
Calculated Vehicle Target Wt. (TVTWT)	kg	1678

DATA SHEET NO.3

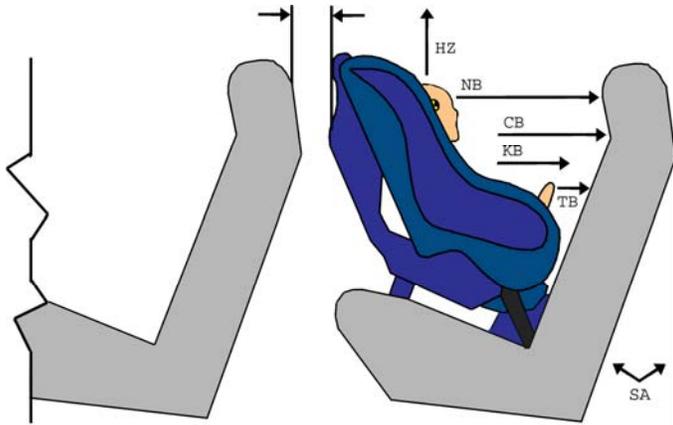
CRABI POSITIONING IN VEHICLE

Test Vehicle: 2008 Honda Accord 2-Door Coupe

NHTSA No.: M85300

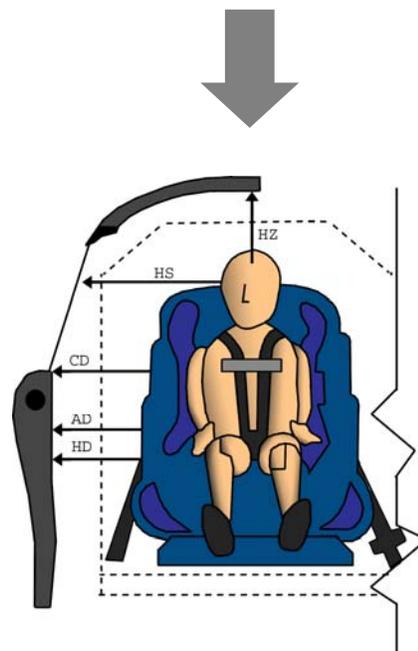
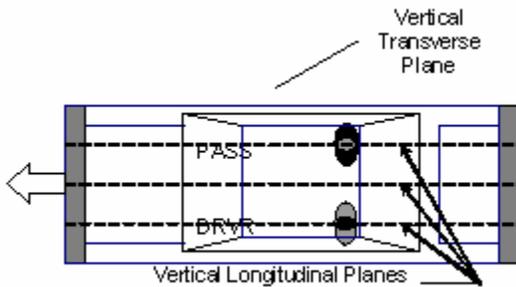
Test Program: NHTSA 35mph NCAP

Test Date: 11/20/07



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

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



DUMMY MEASUREMENTS FOR REAR SEAT OCCUPANTS

DATA SHEET NO.3**CRABI POSITIONING IN VEHICLE...(CONTINUED)**Test Vehicle: 2008 Honda Accord 2-Door CoupeNHTSA No.: M85300Test Program: NHTSA 35mph NCAPTest Date: 11/20/07**CRABI MEASUREMENTS**

Code	Measurement	Units	CRABI (P3) Serial No. 017
SA	Seat Back Angle	deg.	23.8
HZ	Head to Roof (Z)	mm	363
CD	Chest to Door	mm	380
KK	Knee to Knee (Y)	mm	100
HS	Head to Side Window	mm	420
HD	H-Point to Door (Y)	mm	320
AD	Arm to Door	mm	258
NB	Nose to Seat Back	mm	481
CB	Chest to Seat Back	mm	417
FF	Foot to Foot	mm	80
KB-Left	Knee to Seat Back	mm	253
KB-Right	Knee to Seat Back	mm	265
TB-Left	Toe to Seat Back	mm	73
TB-Right	Toe to Seat Back	mm	78
CCA	Car Cushion Angle	deg.	14
BA	Back Angle	deg.	56.6
SCA	Seat Cushion Angle	deg.	21.1

DATA SHEET NO.4
CRS PERFORMANCE DATA

Test Vehicle: 2008 Honda Accord 2-Door Coupe

NHTSA No.: M85300

Test Program: NHTSA 35mph NCAP

Test Date: 11/20/07

CRS PERFORMANCE DATA

Location	CRS (P3)	
	Damage	Description
Upper Tether Strap		
Upper Tether Buckle		
Upper Tether Hook		
Veh. Upper Tether Anchor		
Lower Anchor Strap		
Lower Anchor Buckle		
Lower Anchor Hooks	No	
Veh. Lower CRS Anchors	No	
5-Point Harness Connections	No	
Cracks on CRS	Yes	Surrounding hook on CRS base which connects to CRS seat
Fabric Tears on CRS	No	
Vehicle Seat Structure	No	
Vehicle Seat Fabric Tears	No	

* Child Seat became detached from the CRS base during impact

DATA SHEET NO.5
CRS ACCELEROMETER LOCATIONS

Test Vehicle: 2008 Honda Accord 2-Door Coupe

NHTSA No.: M85300

Test Program: NHTSA 35mph NCAP

Test Date: 11/20/07

Loc. No	Accelerometer Location	Measurements		
		X	Y	Z
1	CRS (P3)	1732	601	700
2	CRS Base (P3)	1912	536	770

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

DATA SHEET NO.6

CRS CAMERA LOCATIONS AND DATA

Test Vehicle: 2008 Honda Accord 2-Door Coupe

NHTSA No.: M85300

Test Program: NHTSA 35mph NCAP

Test Date: 11/20/07

CAMERA LOCATIONS

No.	Camera View	Location(mm)			Angle (Deg.)	Film Plane to Head	Lens (mm)	Speed (fps)
		X	Y	Z				
1	Passenger Side Upper CRS View	-3009	-765	-1081	-1	1043	10	1000

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

SECTION D2
PHOTOGRAPHS

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18	Post-Test Position 3 Dummy Legs	D2-18

Model Name : Centre Base
Model Number : 927500
Manufactured in : 08-28-2007
CC43C0315BC00519



B

Figure D2-1: Position 3 CRS Label



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



D2-3

TR-P28001-11-NC

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



WARNING **ADVERTENCIA**

MADE FOR:
COMBI USA, INC.
1982 Highway 130 West, Suite #190
Fort Mill, SC 29710-8027
Delivery Date: **08 28 07**
MADE IN CHINA

THIS ARTICLE MEETS
THE FLAMMABILITY
REQUIREMENTS
OF CALIFORNIA
BUREAU OF HOME
FURNISHINGS
TECHNICAL
BUILDING

**2008 Honda Accord
M85300
P-3
Combi
Centre DX**

D2-4

TR-P28001-11-NC

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



WARNING **ADVERTENCIA**
Do not use if car seat is used for other purposes.
No utilizar para otros fines.

COMBI USA, Inc.
1562 Highway 150 West, Suite #150
Ft. Mill, SC 29708-8027
Delivery Date **082807**
MADE IN CHINA

THIS ARTICLE MEETS
THE FLAMMABILITY
REQUIREMENTS
OF CALIFORNIA
BUREAU OF HOME
FURNISHINGS
TECHNICAL
BULLETIN 117.
CARE SHOULD BE
EXERCISED NEAR
OPEN FLAME OR WITH
BURNING CIGARETTES.

**2008 Honda Accord
M85300
P-3
Combi
Centre DX**

D2-5

TR-P28001-11-NC

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



D2-6

TR-P28001-11-NC

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



D2-7

TR-P28001-11-NC

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



D2-8

TR-P28001-11-NC

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



D2-9

TR-P28001-11-NC

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



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



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



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



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



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



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



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



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



D2-18

TR-P28001-11-NC

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

SECTION D3

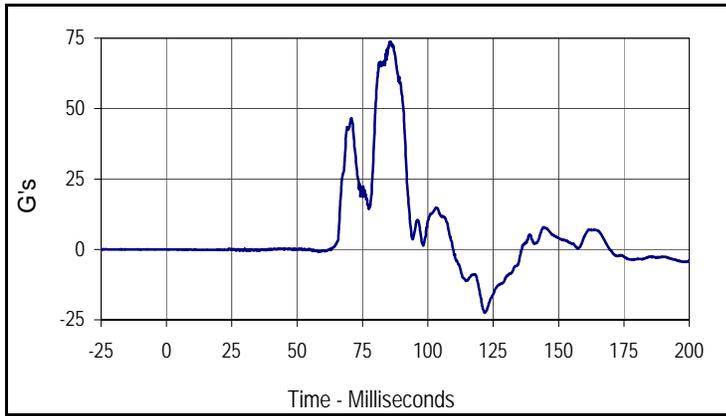
CRABI RESPONSE AND CRS DATA TRACES

LIST OF DATA PLOTS

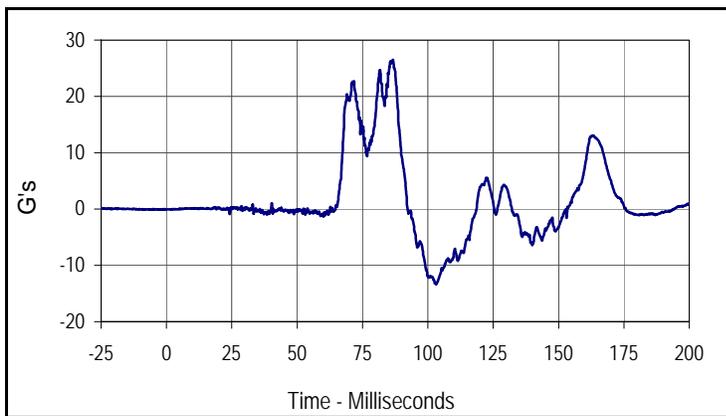
<u>Data Plot</u>		<u>Page</u>
D3-1	Right Rear CRABI (P3) Head X	D3-1
	Right Rear CRABI (P3) Head Y	D3-1
	Right Rear CRABI (P3) Head Z	D3-1
	Right Rear CRABI (P3) Head Resultant	D3-1
D3-2	Right Rear CRABI (P3) Chest X	D3-2
	Right Rear CRABI (P3) Chest Y	D3-2
	Right Rear CRABI (P3) Chest Z	D3-2
	Right Rear CRABI (P3) Chest Resultant	D3-2

Test Vehicle: 2008 Honda Accord 2-Door Coupe
 Test Program: NHTSA 35mph NCAP

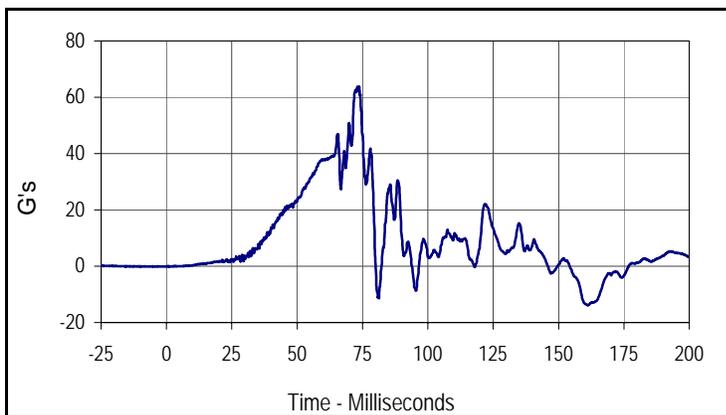
Test Date: 11/20/07
 NHTSA No.: M85300



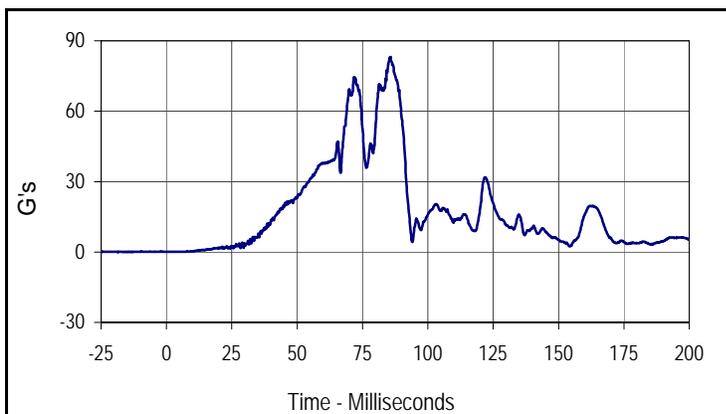
Curve Description			
CRABI Head X (P3)			
CURNO	Type	SAE Class	Units
133	FIL	1000	G's
Max	Time	Min	Time
73.7	85.4	-22.5	121.7



Curve Description			
CRABI Head Y (P3)			
CURNO	Type	SAE Class	Units
134	FIL	1000	G's
Max	Time	Min	Time
26.5	86.7	-13.4	103.2



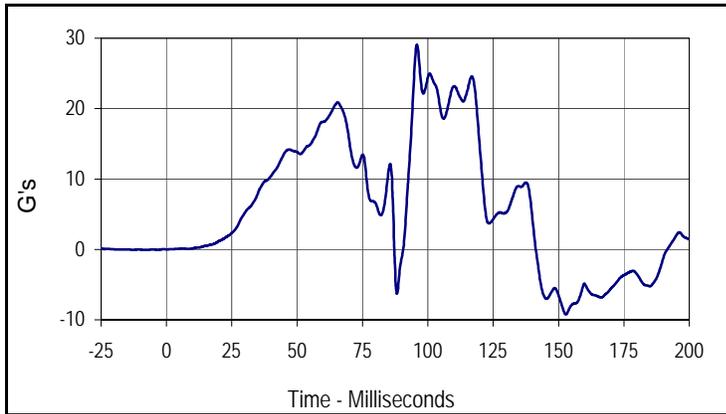
Curve Description			
CRABI Head Z (P3)			
CURNO	Type	SAE Class	Units
135	FIL	1000	G's
Max	Time	Min	Time
63.8	73.7	-13.9	161.3



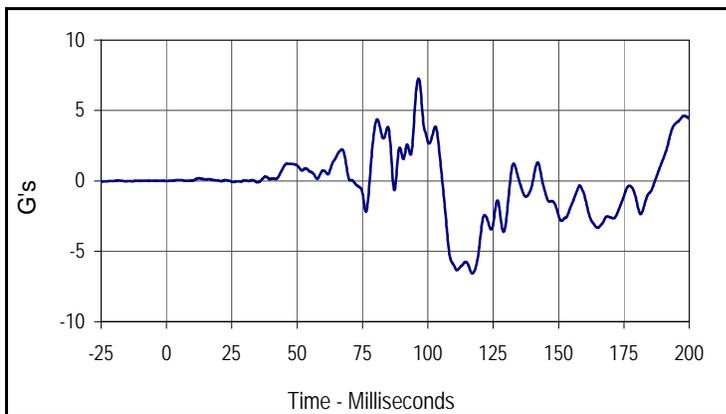
Curve Description			
CRABI Head Resultant (P3)			
CURNO	Type	SAE Class	Units
133	RES	1000	G's
Max	Time	Min	Time
83.1	85.7	0.0	2.5

Test Vehicle: 2008 Honda Accord 2-Door Coupe
 Test Program: NHTSA 35mph NCAP

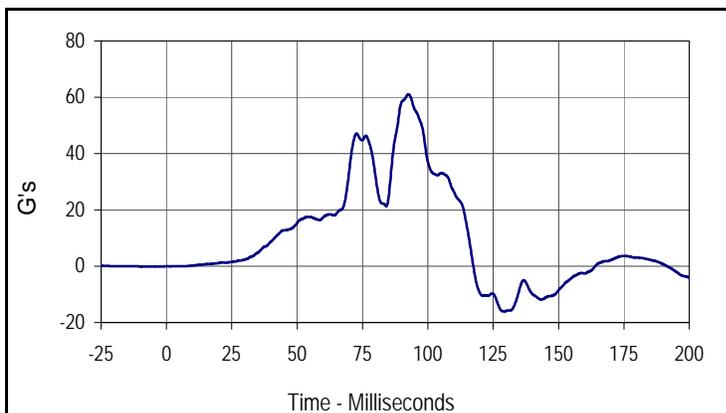
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 NHTSA No.: M85300



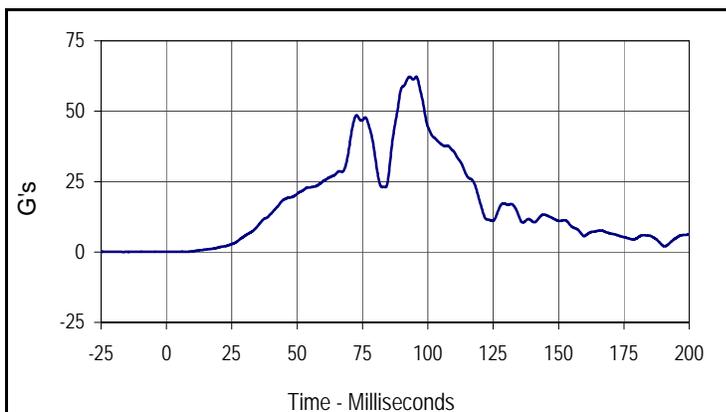
Curve Description			
CRABI Chest X (P3)			
CURNO	Type	SAE Class	Units
136	FIL	180	G's
Max	Time	Min	Time
29.1	95.8	-9.2	152.8



Curve Description			
CRABI Chest Y (P3)			
CURNO	Type	SAE Class	Units
137	FIL	180	G's
Max	Time	Min	Time
7.3	96.5	-6.6	117.0



Curve Description			
CRABI Chest Z (P3)			
CURNO	Type	SAE Class	Units
138	FIL	180	G's
Max	Time	Min	Time
61.0	92.6	-16.1	128.9



Curve Description			
CRABI Chest Resultant (P3)			
CURNO	Type	SAE Class	Units
136	RES	180	G's
Max	Time	Min	Time
62.2	95.6	0.0	0.2

SECTION D4

CRABI CALIBRATION INFORMATION

Test Program: CRABI 12 Month Old Frontal Head Drop Test

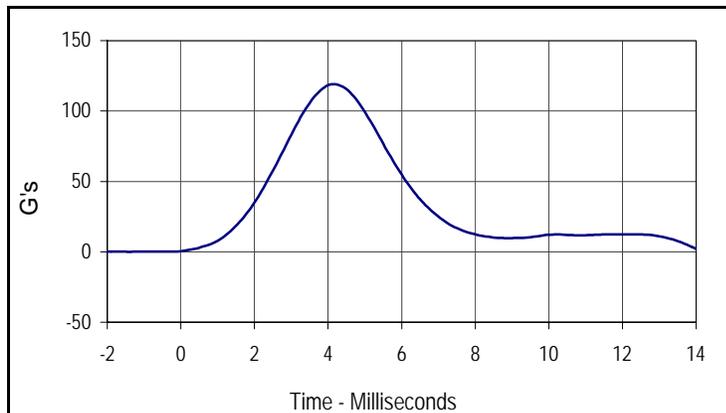
Test Date: 11/16/07

ATD Serial No.: 017

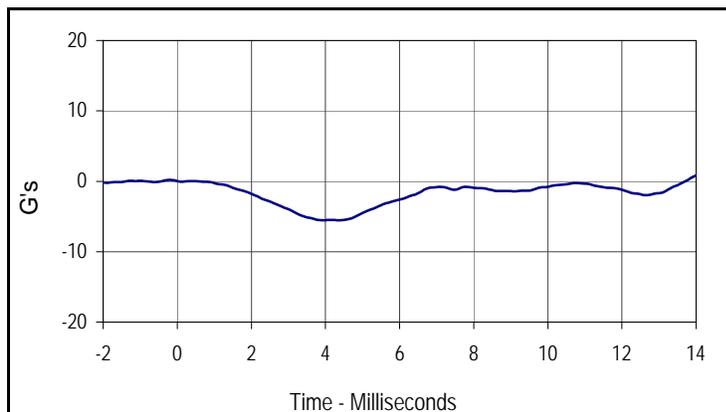
Test I.D.: FHD11C



Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Peak Resultant Acceleration	G's	100.0 to 120.0	119.0	Pass
Peak Lateral Acceleration	G's	≤15.0	5.5	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
119.0	4.2	0.0	-1.4



Curve Description			
Head Y			
CURNO	Type	SAE Class	Units
002	FIL	1000	G's
Max	Time	Min	Time
0.2	-0.2	-5.5	3.9

Test Program: CRABI 12 Month Old Rear Head Drop Test

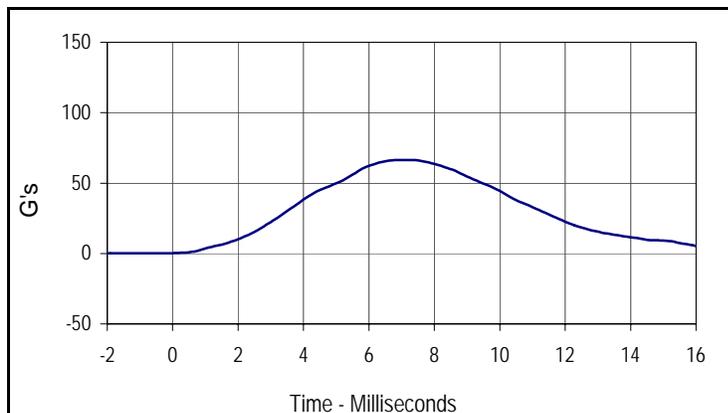
Test Date: 11/15/07

ATD Serial No.: 017

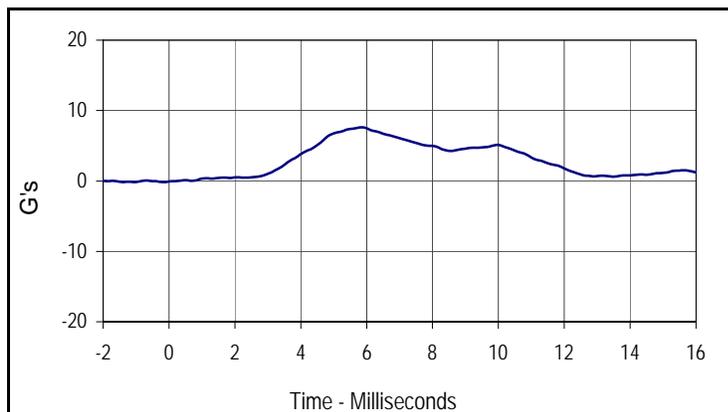
Test I.D.: RHD11C



Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Peak Resultant Acceleration	G's	55.0 to 71.0	62.2	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
62.2	6.0	0.1	-0.9



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

Test Program: CRABI 12 Month Old Thorax Impact Test

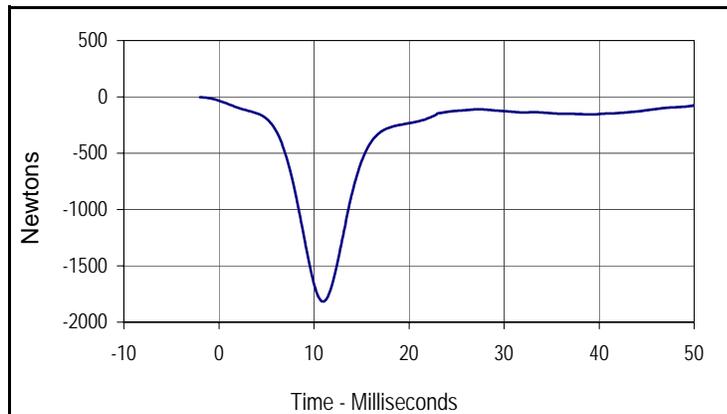
Test Date: 11/15/07

ATD Serial No.: 017

Test I.D.: CH11C



Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Pendulum Velocity at T=0	m/sec	4.90 to 5.10	5.04	Pass
Peak Probe Force	Newtons	-1514 to -1796	-1657	Pass
Overall Test Results				Pass



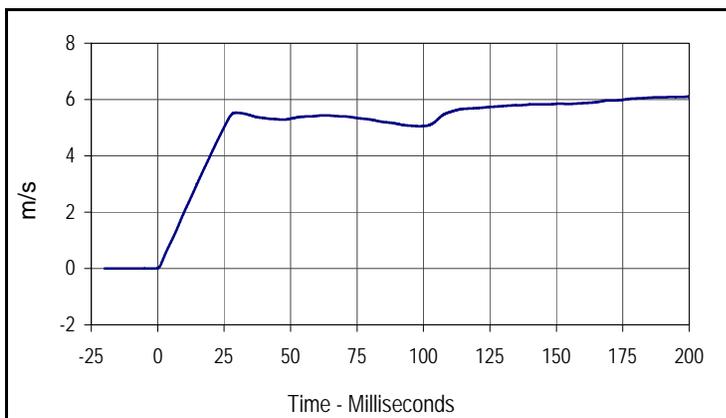
Curve Description			
Probe Force			
CURNO	Type	SAE Class	Units
001	FIL	60	Newtons
Max	Time	Min	Time
-2.3	-2.0	-1657.2	10.0

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

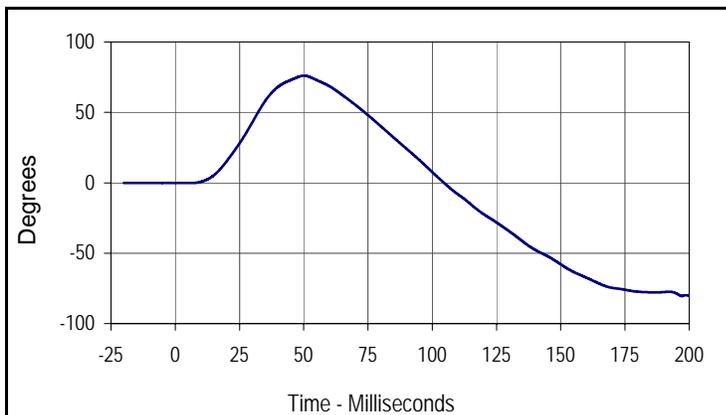
Test Date: 11/14/07
 Test I.D.: NF11C



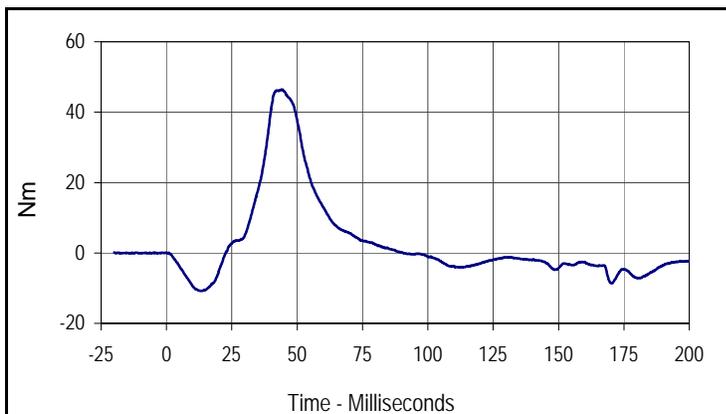
Tested Parameter	Units	Specification	Result	Pass/Fail	
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass	
Laboratory Relative Humidity	%	10 to 70	30	Pass	
Pendulum Velocity	m/s	5.10 to 5.30	5.15	Pass	
Pendulum Deceleration	10 Msec.	m/s	1.6 to 2.3	2.0	Pass
	20 Msec.	m/s	3.4 to 4.2	4.1	Pass
	25 Msec.	m/s	4.3 to 5.2	5.0	Pass
"D" Plane Rotation	Max	Degrees	75.0 to 86.0	76.1	Pass
Peak Moment in Rotation	Max	Nm	36.0 to 45.0	43.4	Pass
Positive Moment Decay, Time To 5 Nm	Msec.		60.0 to 80.0	71.5	Pass
Overall Test Results				Pass	



Curve Description			
Pendulum Velocity			
CURNO	Type	SAE Class	Units
001	FIL	180	m/s
Max	Time	Min	Time
6.1	199.3	0.0	-0.7



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



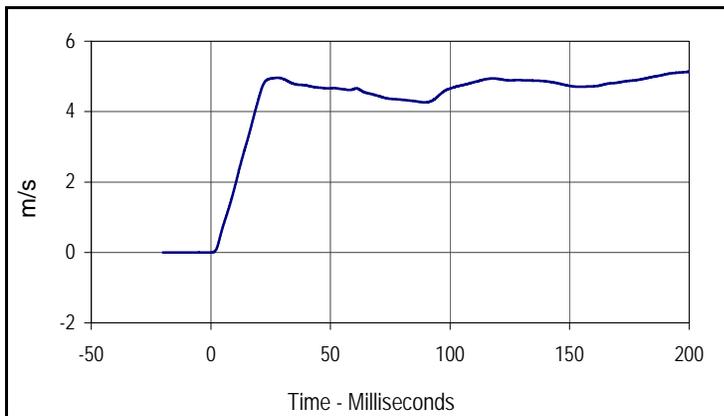
Curve Description			
Upper Neck Force Y			
CURNO	Type	SAE Class	Units
002	FIL	600	Nm
Max	Time	Min	Time
46.4	44.3	-10.8	13.5

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

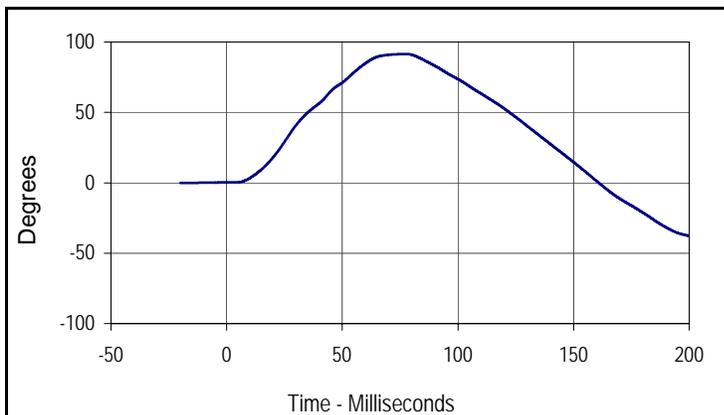
Test Date: 11/14/07
 Test I.D.: NE11C



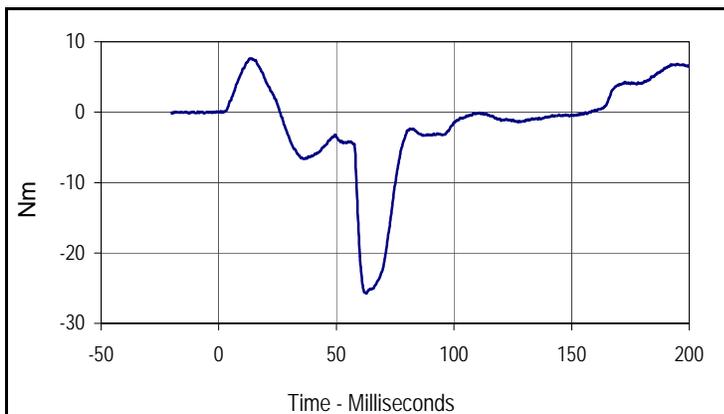
Tested Parameter	Units	Specification	Result	Pass/Fail	
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass	
Laboratory Relative Humidity	%	10 to 70	30	Pass	
Pendulum Velocity	m/s	2.4 to 2.6	2.40	Pass	
Pendulum Deceleration	6 Msec.	m/s	0.8 to 1.2	0.9	Pass
	10 Msec.	m/s	1.5 to 2.1	1.9	Pass
	14 Msec.	m/s	2.2 to 2.9	2.9	Pass
"D" Plane Rotation	Max	Degrees	80.0 to 92.0	91.5	Pass
Peak Moment in Rotation	Max	Nm	-12 to -23	-20.4	Pass
Positive Moment Decay, Time To -5 Nm	Msec.		76.0 to 90.0	77.9	Pass
Overall Test Results				Pass	



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



Curve Description			
"D" Plane Rotation			
CURNO	Type	SAE Class	Units
003	FIL	60	Degrees
Max	Time	Min	Time
91.5	77.5	-37.7	200.0



Curve Description			
Upper Neck Moment Y			
CURNO	Type	SAE Class	Units
002	FIL	600	Nm
Max	Time	Min	Time
7.6	13.2	-25.8	62.8

Test Program: CRABI 12 Month Old External Dimensions

Test Date: 11/16/07

ATD Serial No.: 017

Test I.D.: N/A



Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
A - Total sitting height	mm	456.0 to 471.2	462	Pass
B - Shoulder pivot height	mm	276.6 to 291.8	284	Pass
C - "H" point height	mm	27.9 to 38.1	33	Pass
D - "H" point from backline	mm	40.1 to 50.3	46	Pass
E - Shoulder pivot from back	mm	50.3 to 60.5	52	Pass
F - Thigh clearance	mm	63.0 to 73.2	66	Pass
G - Elbow pivot to fingertip	mm	176.6 to 191.8	185	Pass
I - Shoulder pivot to elbow pivot	mm	99.1 to 114.3	104	Pass
J - Elbow rest height	mm	150.1 to 165.3	159	Pass
K - Buttock to knee length	mm	202.7 to 217.9	204	Pass
L - Popliteal length	mm	138.7 to 153.9	142	Pass
M - Knee pivot height	mm	165.1 to 180.3	172	Pass
N - Buttock popliteal length	mm	144.8 to 160.0	150	Pass
O - Chest depth with jacket	mm	107.5 to 122.7	112	Pass
P - Foot length	mm	92.4 to 102.6	94	Pass
Q- Stature	mm	727.7 to 753.1	N/A	N/A
R - Buttock to knee pivot length	mm	178.5 to 188.7	182	Pass
S - Head Breadth	mm	124.4 to 134.6	127	Pass
T - Head Depth	mm	149.9 to 165.1	153	Pass
U - Hip breadth	mm	158.5 to 173.7	160	Pass
V - Shoulder breadth	mm	200.7 to 215.9	213	Pass
W - Foot breadth	mm	39.1 to 49.3	47	Pass
Y - Chest circumference with jacket	mm	452.4 to 477.8	461	Pass
Z - Waist circumference	mm	447.0 to 472.4	450	Pass
AA - Reference location for dimension Y & O	mm	256.5 to 266.7	263	Pass
BB - Reference Location For dimension Z	mm	106.7 to 116.9	110	Pass
CC - Shoulder Height	mm	299.7 to 314.9	303	Pass
DD - Chin Height	mm	289.6 to 304.8	294	Pass
Overall Test Results				Pass