

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

**AUDI AG
2007 AUDI Q7
5-DOOR MPV**

NHTSA NUMBER: V75801

**PREPARED BY:
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SEPTEMBER 25, 2006

FINAL REPORT

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16. Abstract A 35 mph (56.3 km/h) frontal barrier impact was conducted on a 2007 Audi Q7 5-Door MPV at Karco Engineering, LLC on 09/25/06. This test was conducted to obtain data indicant of FMVSS 208, 212, 219 (partial), 301, and footwell intrusion performance. The impact velocity is 56.14 km/h. The ambient temperature at the barrier face at the time of impact is 30.0 degrees Celcius. The vehicle's maximum post-test static crush is 571 mm to the left of the vehicle's centerline. The test vehicle is equipped with a 3-point continuous belt system and second generation supplemental airbags in both front outboard seating positions. With respect to FMVSS 208 "Occupant Crash Protection", the occupant injury criteria summary is as follows:					
Measurement Description		Units	Threshold	Driver ATD	Passenger ATD
Head Injury Criteria (HIC)		N/A	1000	246.1	425.1
Max. Chest Accel. (3 msec Clip)		G's	60	45.0	44.0
Left Femur Force		Newtons	10008	-5117.8	-3241.0
Right Femur Force		Newtons	10008	-5665.6	-3684.9
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SECTION 1
PURPOSE AND SUMMARY OF TEST V75801

1.1 PURPOSE

This 35 mph (56.30 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 (48.30 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 May 2006. 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 was impacted by a 2007 Audi Q7 5-Door MPV at a velocity of 56.14 km/h. The test was performed at Karco Engineering, LLC on September 25, 2006.

Three (3) real-time and fifteen (15) 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 also placed on the driver's and passenger's lap and shoulder belts to measure dummy torso and pelvic section loading. Also, shoulder belt spool-off was measured for the driver and passenger dummy. The driver (position 1) ATD (Serial No. 34) and the right-front passenger (position 2) ATD (Serial No. 35) 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 and Appendix C contains the Dummy Calibration data.

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

The maximum static crush of the vehicle was 571 mm to the left of the vehicle's centerline and both the driver and the passenger side doors remained closed and latched during the impact event and were operable after the impact.

The driver's visible contact points were as follows: The driver ATD's head and chest contacted the airbag and the abdomen had no contact. Both knees contacted the knee bolster.

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

Occupant injury data is contained in table below.

OCCUPANT DATA SUMMARY

ATD Position	HIC 36	Clip (g)	Chest Defl. (mm)	Left Femur (N)	Right Femur (N)
Driver	246.1	45.0	-28.2	-5117.8	-5665.6
Passenger	425.1	44.0	-25.7	-3241.0	-3684.9

SECTION 2
OCCUPANT AND VEHICLE INFORMATION/DATA SHEETS

Test Vehicle: 2007 Audi Q7 5-Door MPV

NHTSA No.: V75801

Test Program: 35 MPH NCAP

Test Date: 9/25/06

CONVERSION FACTORS USED IN THIS REPORT*

Quantity	Typical Application	Std Units	Metric Unit	Multiply By
Mass	Vehicle Weight	lb	kg	0.4536
Linear Velocity	Impact Velocity	miles/hr	km/hr	1.609
Length or Distance	Measurements	in	mm	25.4
Volume	Fuel Systems	gal	liter	3.785
Volume	Small Fluids	oz	mL	29.573
Pressure	Tire Pressures	lb/in ²	kPa	7.0
Volume	Liquid	gal	liter	3.785
Temperature	General Use	°F	°C	$=(t_f - 32)/1.8$
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: 2007 Audi Q7 5-Door MPV
Test Program: 35 MPH NCAP

NHTSA No.: V75801
Test Date: 9/25/06

PRIMARY IMPACT DATA

Measured Parameter	Units	Value
Velocity at Impact	km/h	56.14
Test Weight	kg	2582
Impact Angle	degrees	0
Average Rebound	mm	2537
Maximum Static Crush	mm	571

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. 34	50% Male Hybrid III No. 35
Head Contact	Airbag	Airbag
Chest Contact	Airbag	Airbag
Abdomen Contact	None	Airbag
Left Knee Contact	Knee Bolster	Knee Bolster
Right Knee Contact	Knee Bolster	Knee Bolster

MOVIE COVERAGE

Cameras	Standard	Additional
High Speed	13	2
Real Time	1	2
Total	14	4

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: 2007 Audi Q7 5-Door MPV
 Test Program: 35 MPH NCAP

NHTSA No.: V75801
 Test Date: 9/25/06

TEST VEHICLE INFORMATION AND OPTIONS

NHTSA No.	V75801	Anti-Lock Brakes	Yes
Make	Audi	All Wheel Drive	Yes
Model	Q7	Power Steering	Yes
Body Style	5-Door MPV	Driver Front Airbag	Yes
Vin No.	WA1AY74LX7D032459	Driver Side Airbag	Yes
Color	White	Driver Head Airbag	No
Delivery Date	9/12/2006	Driver Curtain Airbag	Yes
Odometer (Miles)	23.0	Pass. Airbag	Yes
Dealer	Rusnak of Pasadena	Pass. Side Airbag	Yes
Transmission	Automatic	Pass. Head Airbag	No
Final Drive	AWD	Pass. Curtain Airbag	Yes
Type/No. Cyl.	V6	Pre-Tensioners	Yes
Engine Disp. (L)	3.6	Load Limiters	Yes
Engine Placement	Longitudinal	Bucket Seats	Yes
Roof Rack	Yes	Air. Cond.	Yes
Sunroof/T-Top	No	AM/FM CD player	Yes
Tinted Glass	Yes	Tilt Steering	Yes
Traction Control	Yes	Automatic Door Locks	Yes
Power Brakes	Yes	Power Windows	Yes
Front Disc	Yes	Power Seats	Yes
Rear Disc	Yes	Other	None

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

Yes

DATA FROM MANUFACTURER

Manufactured By	Audi AG	GWR (kg)	2980
Date of Manufacture	Jul-06	GAWR Front (kg)	1435
		GAWR Rear (kg)	1770

VEHICLE SEATING AND CAPACITY WEIGHT INFORMATION

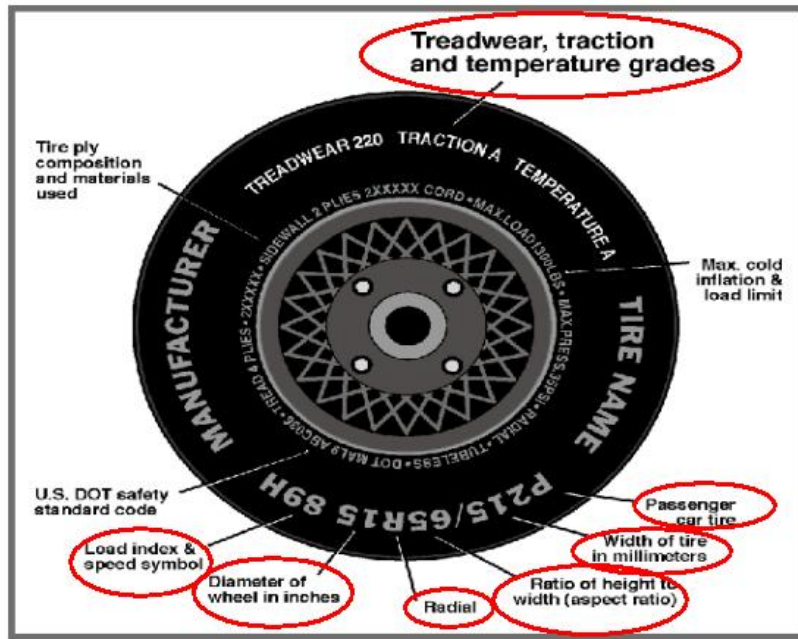
Measured Parameter	Front	Rear	Third	Total
Type of Seats	Bucket	Bucket	Bucket	
Number of Occupants	2	3	2	7
Capacity Weight (VCW) (kg)				600
Cargo Weight (RCLW) (kg)				124

DATA SHEET NO. 2...(CONTINUED)
GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2007 Audi Q7 5-Door MPV
 Test Program: 35 MPH NCAP

NHTSA No.: V75801
 Test Date: 9/25/06

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)	350	350
Cold Pressure (kpa)	300	340
Recommended Tire Size	P235/60 R18	P235/60 R18
Tire Size on Vehicle	P235/60 R18	P235/60 R18
Tire Manufacturer	Goodyear	Goodyear
Treadwear	400	400
Traction	A	A
Temperature Grades	A	A
Tire Plies Sidewall	2 Rayon	2 Rayon
Tire Plies Body	2 Rayon, 2 Steel, 2 Polyamide	2 Rayon, 2 Steel, 2 Polyamide
Load Index/Speed Symbol	107H	107H
Tire Material	Rayon, Steel, Polyamide	Rayon, Steel, Polyamide
DOT Safety Code Right	DOT NE45 2JTR 2706	DOT NE45 2JTR 2706
DOT Safety Code Left	DOT NE45 2JTR 2706	DOT NE45 2JTR 2706

DATA SHEET NO. 2...(CONTINUED)
GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2007 Audi Q7 5-Door MPV
 Test Program: 35 MPH NCAP

NHTSA No.: V75801
 Test Date: 9/25/06

TEST VEHICLE WEIGHTS

	Units	As Delivered Weights (UVW)			As Tested Weights (ATW)		
		Front Axle	Rear Axle	Total	Front Axle	Rear Axle	Total
Left	kg	572	569	1141	621	673	1294
Right	kg	603	567	1170	633	655	1288
Ratio	%	50.8	49.2	100	48.6	51.4	100
Totals	kg	1175	1136	2311	1254	1328	2582

TARGET TEST WEIGHT CALCULATION

Measured Parameter	Units	Value
Total Delivered Weight (UVW)	kg	2311
Weight of 2 P572 ATD's	kg	152
Rated Cargo/Luggage Wt. (RCLW)	kg	124
Calculated Vehicle Target Wt. (TVTW)	kg	2587

TEST VEHICLE ATTITUDE AND CG

	Units	LF	RF	LR	RR	CG (aft of front axle)
As Delivered	mm	828	835	843	845	1482
As Tested	mm	825	830	830	825	1548

Vehicle Wheel Base (mm)	3012
Weight of Ballast Secured in cargo area (kg)	80
Weight of Items Removed (kg)	80
Vehicle Components Removed	2 rear seats, rear bumper, rear carpet, spare tire changing tools

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

FUEL SYSTEM DATA

Fuel System Capacity From Owners Manual (L)	102.01
Actual Test Volume with entire fuel System Filled (L)	94.90
Test Fluid Type:	Stoddard Solvent
Kinematic Viscosity:	as per ASTM Standard D484-71
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 for 3 seconds when ignition is in "on" position.

DATA SHEET NO. 3
POST-TEST IMPACT DATA

Test Vehicle: 2007 Audi Q7 5-Door MPV
Test Program: 35 MPH NCAP

NHTSA No.: V75801
Test Date: 9/25/06

SPEED TRAP DATA

Measured Parameter	Units	Requirement	Value
Trap No.1 Velocity (Primary)	km/h	55.51 to 57.12	56.14
Trap No.2 Velocity (Redun.)	km/h	55.51 to 57.12	56.17

VEHICLE STATIC CRUSH

Measured Parameter	Units	Pre-Test	Post-Test	Difference
Left Side	mm	4837	4629	-208
Center	mm	5045	4482	-563
Right Side	mm	4837	4519	-318

VEHICLE REBOUND FROM BARRIER

Measured Parameter	Units	Value
Left Side	mm	2540
Center	mm	2510
Right Side	mm	2560
Average	mm	2537

DATA SHEET NO. 4

TEST VEHICLE INFORMATION

Test Vehicle: 2007 Audi Q7 5-Door MPV
 Test Program: 35 MPH NCAP

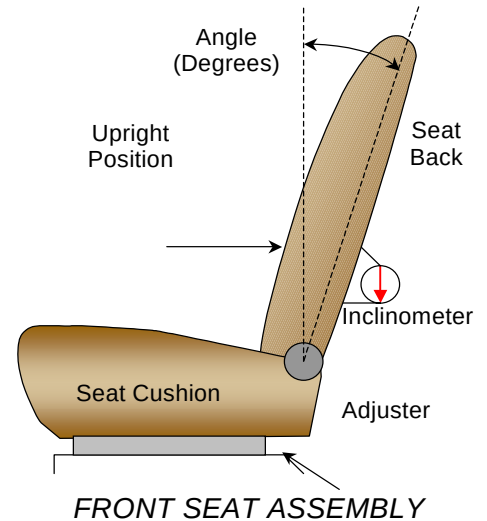
NHTSA No.: V75801
 Test Date: 9/25/06

NOMINAL DESIGN RIDING POSITION

The driver and passenger seat backs are positioned to the manufacturer's designated angle. The procedure is as follows:
 Place the digital inclinometer onto the covering of the seat back to measure the seat back angle.

SEAT BACK ANGLES

	Deg.
Driver w/seated Dummy	17.0
Passenger w/seated Dummy	17.0

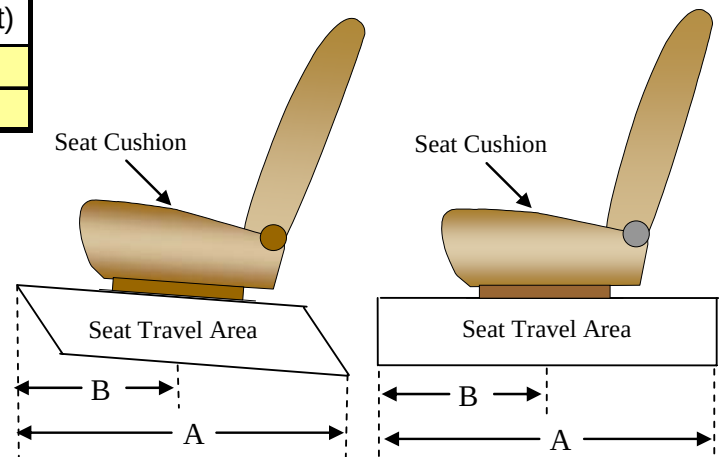


SEAT FORE/AFT POSITIONS

The total seat travel was measured from forward most position at the highest vertical seat height to rearmost position at the lowest vertical seat height. The seat was set at the longitudinal mid position with the vertical adjustment at the lowest position obtainable for the driver and passenger.

SEAT FORE/AFT POSITIONING

	Total Fore/Aft Travel (Detent)	Placed in Position (Detent)
Driver Seat	306 mm	153 mm
Passenger Seat	300 mm	150 mm



SEAT BELT UPPER ANCHORAGE

Position number one (1) is the uppermost position.

SEAT BELT UPPER ANCHORAGE

	Total # of Positions	Placed in Position #
Driver Seat	5	1
Passenger Seat	5	1

DATA SHEET NO. 4...(CONTINUED)
TEST VEHICLE INFORMATION

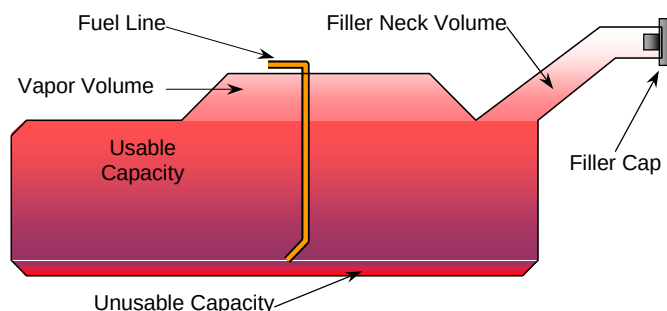
Test Vehicle: 2007 Audi Q7 5-Door MPV
 Test Program: 35 MPH NCAP

NHTSA No.: V75801
 Test Date: 9/25/06

FUEL TANK CAPACITY

	Liters
Usable Capacity of "Standard Tank"	102.01
Usable Capacity of "Optional" Tank	
Usable Capacity used for FMVSS 301	94.00 to 95.87
Actual Amount of Solvent used	94.90

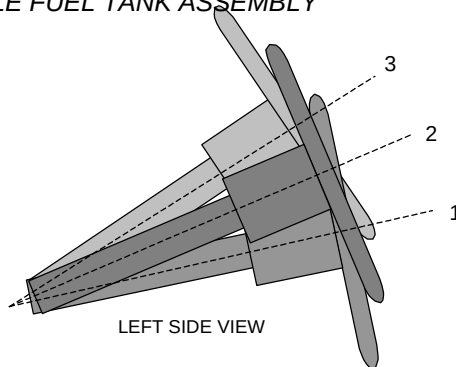
The test vehicle is equipped with an electric fuel pump. The fuel pump operates for approximately two seconds after the ignition is placed in the "ON" position, after which the fuel pump automatically shuts off. The fuel filler door is located on the right rear fender. The standard fuel tank occupies the area under the rear seat.



VEHICLE FUEL TANK ASSEMBLY

STEERING COLUMN ADJUSTMENT

Steering wheel and column adjustments are made so that the steering wheel hub is at the geometric center of the locus it describes when moved through its full range of motion. An aluminum plate is placed across the rim of the steering wheel, an inclinometer is placed on the plate and the angle is measured.



STEERING COLUMN ASSEMBLY

STEERING COLUMN POSITIONS

	Degrees	Fore/Aft Position (mm)
Lowermost position No. 1	18.5	145
Geometric center position No. 2	21.6	168
Uppermost position No. 3	24.8	192

DATA SHEET NO. 5
DUMMY POSITIONING IN VEHICLE

Test Vehicle: 2007 Audi Q7 5-Door MPV
Test Program: 35 MPH NCAP

NHTSA No.: V75801
Test Date: 9/25/06

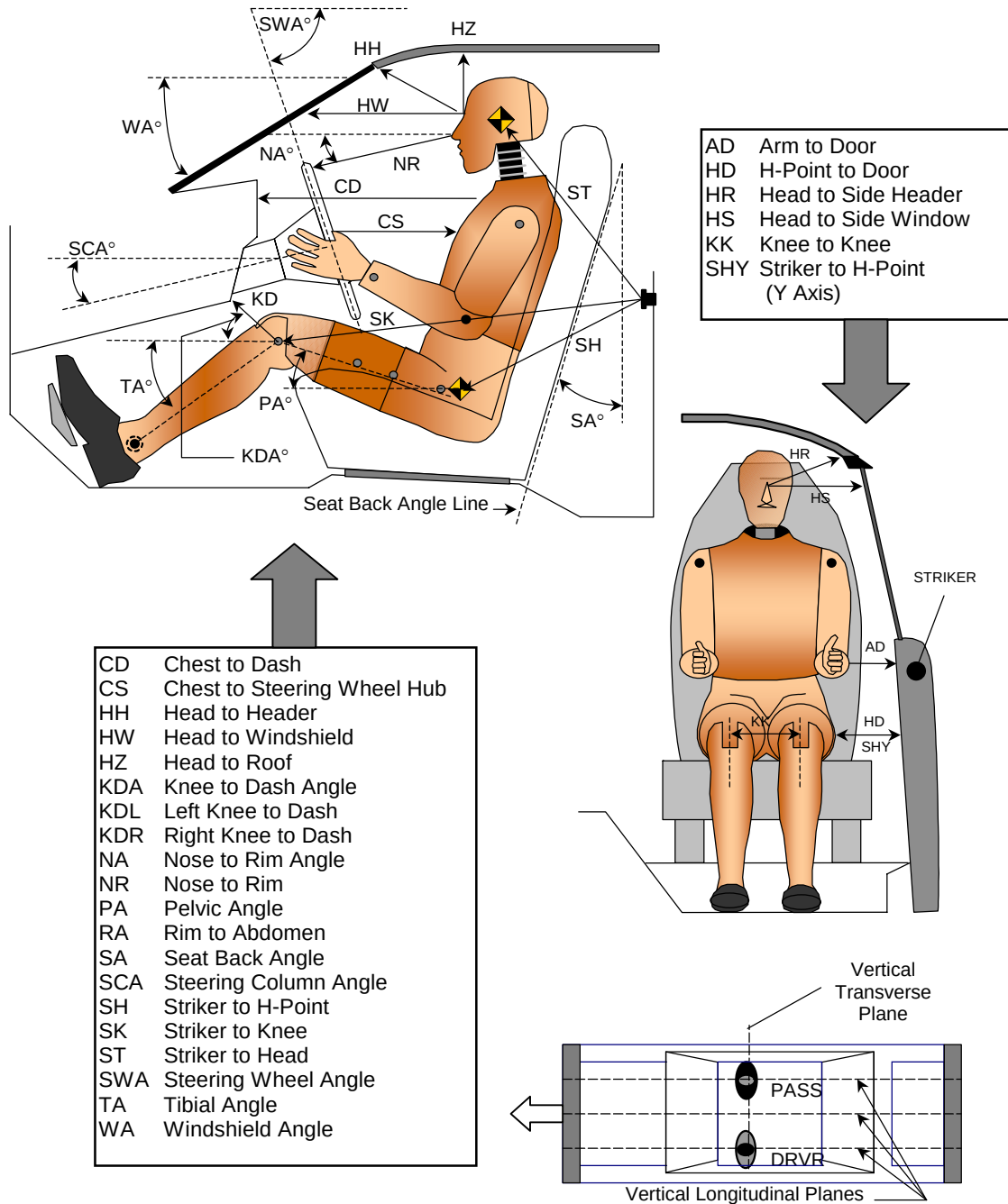
TEST DUMMY POSITION MEASUREMENTS

Code	Measurement Description	Driver		Passenger	
		Length (mm)	Angle (deg)	Length (mm)	Angle (deg)
WA	Windshield Angle		24.6		
SWA	Steering Wheel Angle		68.4		
SCA	Steering Column Angle		21.6		
SA	Seat Back Angle		17.0 @ seat back		17.0 @ seat back
HZ	Head to Roof (Z)	210	90.0	192	90.0
HH	Head to Header	343		345	
HW	Head to Windshield	640		700	
HR	Head to Side Header (Y)	300		310	
NR	Nose to Rim	311	10.9		
CD	Chest to Dash	600		90	
CS	Chest to Steering Hub	260			
RA	Rim to Abdomen	170			
KDL	Left Knee to Dash	185		210	
KDR	Right Knee to Dash	160		250	
PA	Pelvic Angle		23.3		21.7
TA	Tibia Angle		47.4		45.6
KK	Knee to Knee (Y)	319		277	
SK	Striker to Knee	615	0.1	645	2.4
ST	Striker to Head	500	73.3	543	76.0
SH	Striker to H-Point	290	29.0	310	26.0
SHY	Striker to H-Point (Y)	240		255	
HS	Head to Side Window	367		350	
HD	H-Point to Door (Y)	210		195	
AD	Arm to Door (Y)	105		128	

DATA SHEET NO. 5...(CONTINUED) **DUMMY POSITIONING IN VEHICLE**

Test Vehicle: 2007 Audi Q7 5-Door MPV
 Test Program: 35 MPH NCAP

NHTSA No.: V75801
 Test Date: 9/25/06

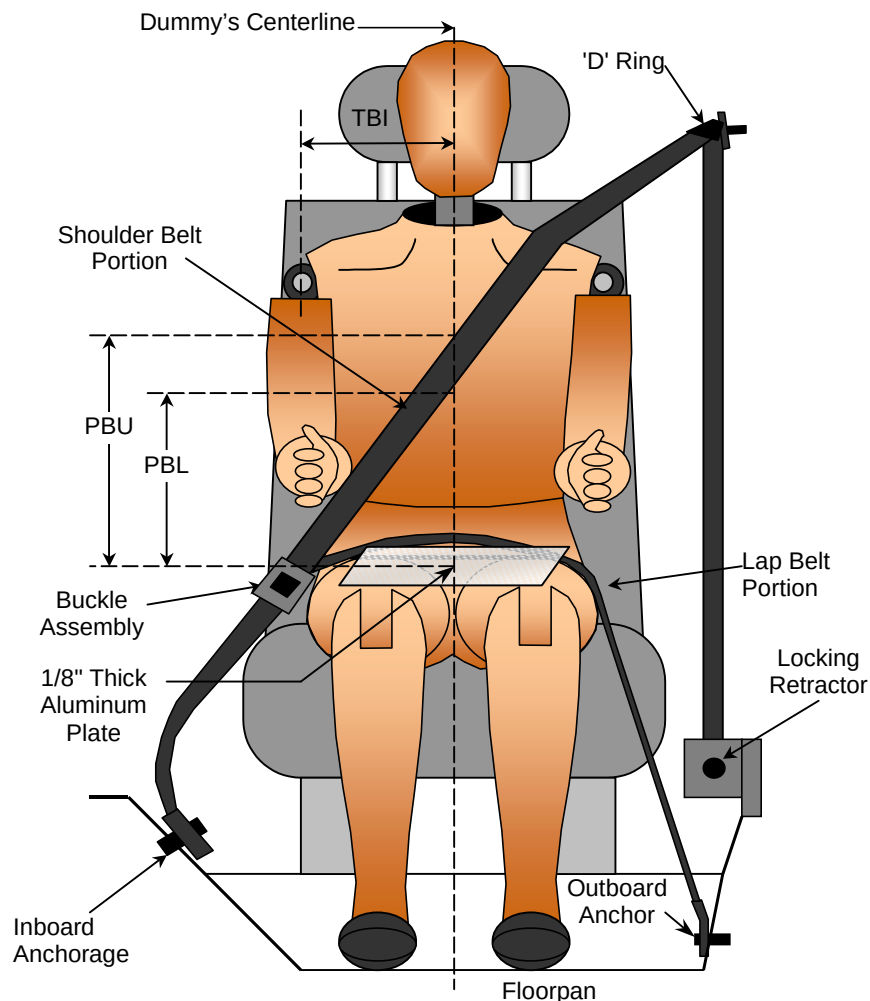


DUMMY MEASUREMENTS FOR FRONT SEAT OCCUPANTS

DATA SHEET NO. 6 **SEAT BELT POSITIONING DATA**

Test Vehicle: 2007 Audi Q7 5-Door MPV
 Test Program: 35 MPH NCAP

NHTSA No.: V75801
 Test Date: 9/25/06



SEAT BELT POSITIONING MEASUREMENTS

Measured Parameter	Units	Driver	Passenger
TBI - Dummy C/L to Lap/Shoulder Belt Intersect	mm	220	220
PBU - Top Surface of reference to belt upper edge	mm	372	365
PBL - Top Surface of reference to belt lower edge	mm	296	265
Lap Belt Tension	Newtons	10	10
Shoulder Belt Tension	N/A	Retractor	Retractor

DATA SHEET NO. 7
VEHICLE ACCELEROMETER LOCATION

Test Vehicle: 2007 Audi Q7 5-Door MPV

NHTSA No.: V75801

Test Program: 2007 NHTSA 35mph NCAP

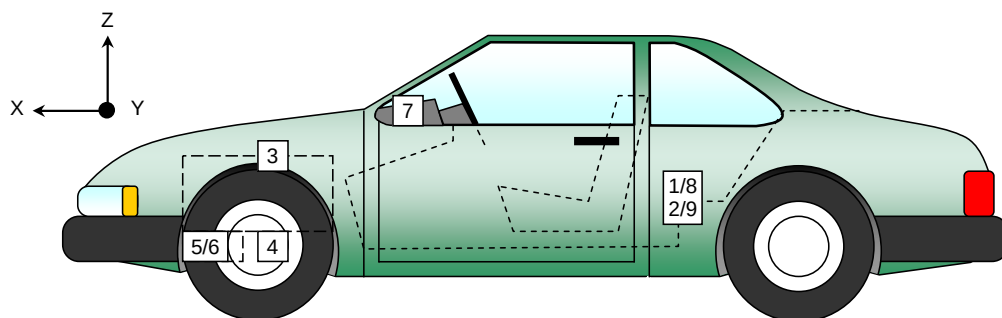
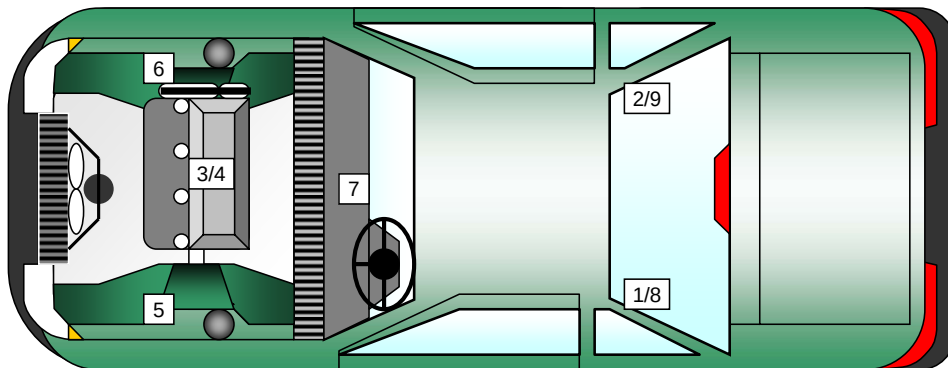
Test Date: 9/25/06

VEHICLE ACCELEROMETER PRE-TEST LOCATIONS

No.	Accelerometer Location	Measurements (mm)		
		X	Y	Z
1	Left Rear X-Member	1813	-776	485
2	Right Rear X-Member	1813	776	485
3	Engine Top	4208	0	1172
4	Engine Bottom	4208	70	336
5	Left Brake Caliper	1479	-752	340
6	Right Brake Caliper	1479	752	340
7	Instrument Panel			
8	Left Rear X-Member (Z-Axis)	1813	-776	485
9	Right Rear X-Member (Z-Axis)	1813	776	485

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

1.) Instrument Panel no longer used by NHTSA



DATA SHEET NO. 8
SEAT BELT ASSESSMENT TEST DATA

Test Vehicle: 2007 Audi Q7 5-Door MPV
 Test Program: 35 MPH NCAP

NHTSA No.: V75801
 Test Date: 9/25/06

SEAT BELT POSITIONING MEASUREMENTS

Measurement Description	Units	Driver	Passenger
Retractor Reel to "D" ring	mm	800	800
Shoulder Belt length as measured on ATD	mm	910	900
Lap Belt length as measured on ATD	mm	555	545
Remainder of belt on reel	mm	780	810
Total belt length for continuous webbing systems	mm	3045	3055

SHOULDER BELT SPOOL-OFF DATA

Measurement Description	Units	Driver	Passenger
As determined mechanically	mm	100.0	220.0
As determined electronically	mm	133.6	348.4

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: 2007 Audi Q7 5-Door MPV
 Test Program: 35 MPH NCAP

NHTSA No.: V75801
 Test Date: 9/25/06

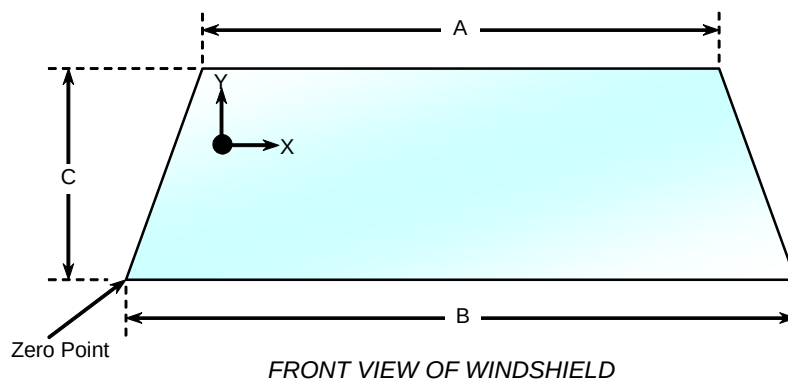
Windshield Mounting Details: Windshield glass is secured to the vehicle frame with a rubber type adhesive. No molding covers the windshield periphery at any point.

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

Temperature of windshield molding during test: 21.1 °C

WINDSHIELD PERIPHERY MEASUREMENTS

Measurement	Pre-Test(mm)	Post-Test(mm)	% of Retention
Left Side	2293	2293	100
Right Side	2293	2293	100
Total	4586	4586	100



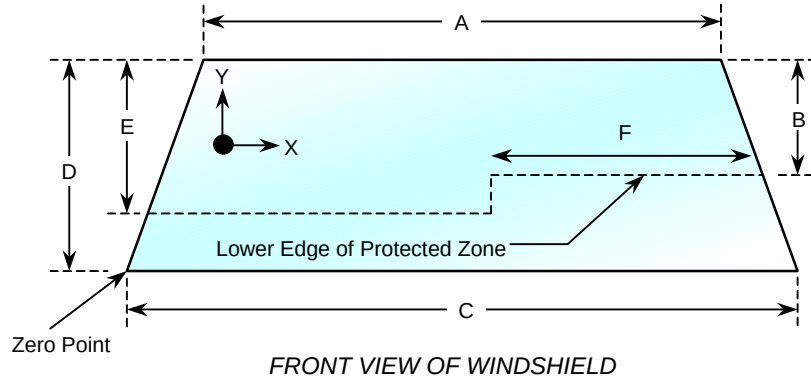
WINDSHIELD DIMENSIONS

Item	Units	Segment Length	Molding Width
A	mm	1300	
B	mm	1485	4
C-Left	mm	900	25
C-Right	mm	900	25

DATA SHEET NO. 10
WINDSHIELD ZONE INTRUSION FMVSS 219 DATA (PARTIAL)

Test Vehicle: 2007 Audi Q7 5-Door MPV
 Test Program: 35 MPH NCAP

NHTSA No.: V75801
 Test Date: 9/25/06



**WINDSHIELD AND
PROTECTED ZONE**

Item	Units	Value
A	mm	1300
B	mm	490
C	mm	1485
D	mm	900
E	mm	520
F	mm	460

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: 2007 Audi Q7 5-Door MPV

NHTSA No.: V75801

Test Program: 35 MPH NCAP

Test Date: 9/25/06

Test Time: 1:01 PM

Temperature: 30.0 Deg. 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)

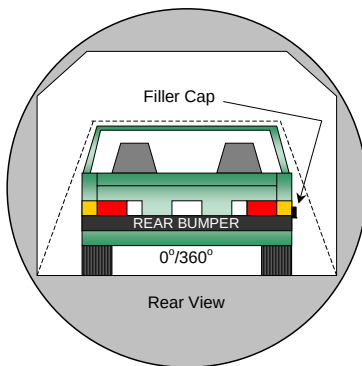
C. For the following 25 minutes: 0.0 oz.
(Maximum Allowable = 1 oz./minute)

D. Spillage Location Details: No leakage occurred

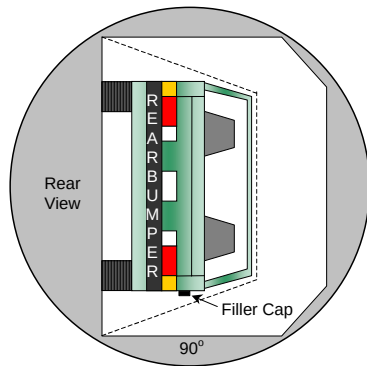
DATA SHEET NO. 12
FMVSS 301 STATIC ROLLOVER DATA

Test Vehicle: 2007 Audi Q7 5-Door MPV
Test Program: 35 MPH NCAP

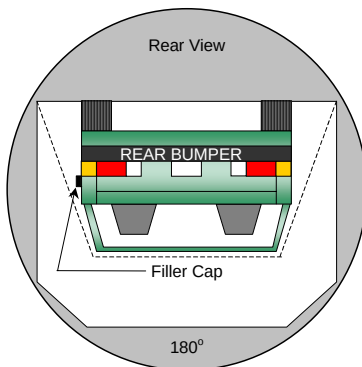
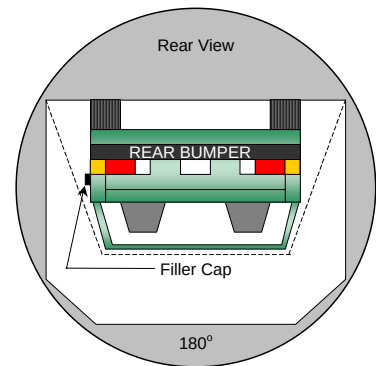
NHTSA No.: V75801
Test Date: 9/25/06



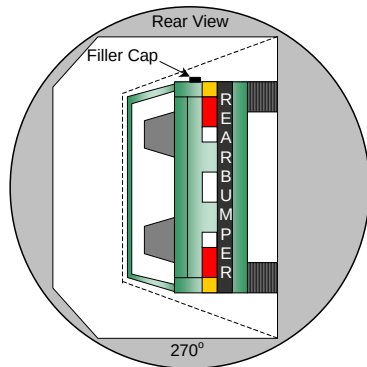
0° to 90°



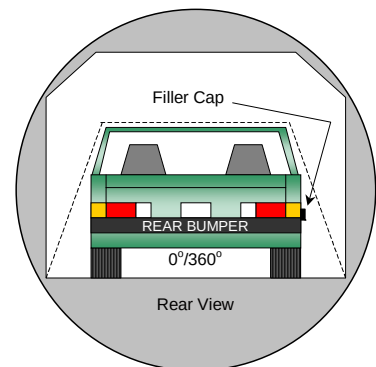
90° to 180°



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: 2007 Audi Q7 5-Door MPV
 Test Program: 35 MPH NCAP

NHTSA No.: V75801
 Test Date: 9/25/06

SOLVENT COLLECTION TIME TABLE IN SECONDS

Test Phase	Rotation Time	Hold Time	Total Time
0° to 90°	83	300	383
90° to 180°	80	300	380
180° to 270°	77	300	377
270° to 360°	77	300	377

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: 2007 Audi Q7 5-Door MPV
Test Program: 35 MPH NCAP

NHTSA No.: V75801
Test Date: 9/25/06

VEHICLE MEASUREMENT TABLE

No.	Measurement Description	Units	Pre-Test	Post-Test	Diff.
1	Total length of vehicle at centerline	mm	5045	4482	-563
2	RSOV to front of engine	mm	4449	4282	-167
3	RSOV to firewall centerline	mm	3953	3925	-28
4	RSOV to leading edge of right door	mm	3537	3539	2
5	RSOV to leading edge of left door	mm	3531	3526	-5
6	RSOV to lower leading edge of right door	mm	3520	3520	0
7	RSOV to lower leading edge of left door	mm	3525	3512	-13
8	RSOV to upper trailing edge of right door	mm	2370	2375	5
9	RSOV to upper trailing edge of left door	mm	2370	2370	0
10	RSOV to lower trailing edge of right door	mm	2371	2370	-1
11	RSOV to lower trailing edge of left door	mm	2375	2365	-10
12	RSOV to bottom of right 'A' pillar	mm	3462	3466	4
13	RSOV to bottom of left 'A' pillar	mm	3471	3468	-3
14	RSOV to firewall on right side	mm	4001	3993	-8
15	RSOV to firewall on left side	mm	4055	4049	-6
16	RSOV to steering column	mm	2957	3064	107
17	Center of steering column to left 'A' pillar	mm	450	454	4
18	Center of steering column to headlining	mm	460	430	-30
19	RSOV to right side of front bumper	mm	4837	4519	-318
20	RSOV to left side of front bumper	mm	4837	4629	-208
21	Length of engine block	mm	614	614	0
RD	RSOV to right side of dash panel	mm	3185	3185	0
CD	RSOV to center of dash panel	mm	3193	3224	31
LD	RSOV to left side of dash panel	mm	3178	3161	-17

DATA SHEET NO. 13...(CONTINUED)
VEHICLE STRUCTURAL MEASUREMENTS

Test Vehicle: 2007 Audi Q7 5-Door MPV
 Test Program: 35 MPH NCAP

NHTSA No.: V75801
 Test Date: 9/25/06

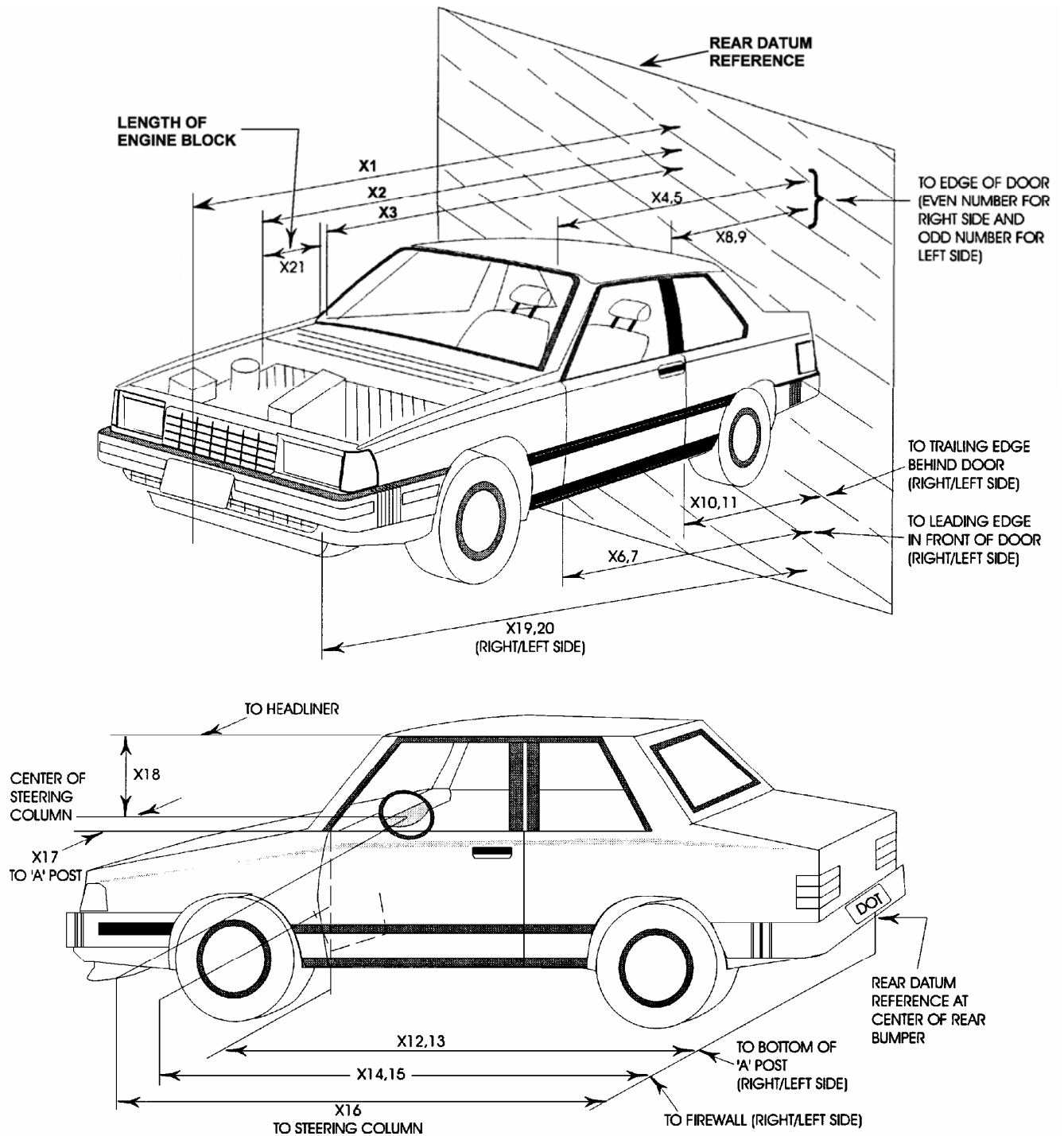
VEHICLE STRUCTURAL MEASUREMENT TABLE

No.	Measurement Description	Units	Pre-Test	Post-Test	Diff.
1	Total length	mm	5045	4482	-563
2	Total width	mm	1947	1954	7
3	Bumper top height	mm	930	820	-110
4	Bumper bottom height	mm	410	360	-50
5	Longitudinal member top height	mm	553	480	-73
6	Longitudinal member bottom height	mm	454	400	-54
7	Distance between longitudinal members	mm	850	916	66
8	Longitudinal member width	mm	70	68	-2
9	Engine top height	mm	1065	1070	5
10	Engine bottom height	mm	170	270	100
11	Engine and gear box width	mm	571	570	-1
12	Front bumper to engine distance	mm	585	230	-355
13	Front shock absorber fixing width	mm	910	886	-24
14	Bonnet leading edge height	mm	975	1062	87
15	Front shock absorber fixing width	mm	912	900	-12
16	Front bumper to front axle distance	mm	939	526	-413
17	Front axle to 'A' pillar distance	mm	605	530	-75
18	'A' pillar to 'B' pillar distance	mm	1162	1150	-12
19	'B' pillar to rear axle distance	mm	1240	1230	-10
20	'B' pillar to 'C' pillar distance	mm	1065	1109	44
21	Roof sill bottom height	mm	1530	1500	-30
22	Roof sill top height	mm	1632	1681	49
23	Floor sill bottom height	mm	372	370	-2
24	Floor sill top height	mm	477	480	3

DATA SHEET NO. 13...(CONTINUED)
VEHICLE MEASUREMENTS

Test Vehicle: 2007 Audi Q7 5-Door MPV
 Test Program: 35 MPH NCAP

NHTSA No.: V75801
 Test Date: 9/25/06



DATA SHEET NO. 14
CAMERA LOCATIONS

Test Vehicle: 2007 Audi Q7 5-Door MPV
Test Program: 35 MPH NCAP

NHTSA No.: V75801
Test Date: 9/25/06

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)	-15236	-7949	-1587	0			30
2	Overall Left Side	-1809	-7167	-1135	0	7894	20mm	1000
3	Closeup Left Side	-1536	-7119	-1179	0	7879	50mm	1000
4	Driver and Interior View	-8688	-12499	-4513	-17	15515	ZOOM	1000
5	Steering Column (Bottom)	-1648	-8237	-2645	-13	9439	35mm	1000
6	Steering Column (Top)	-1598	-8520	-3110	-13	9895	35mm	1000
7	Overall Right Side	-2584	2903	-1136	0	3492	20mm	1000
8	Closeup Right Side	-1989	6502	-1175	0	6596	50mm	1000
9	Passenger and Interior View	-5410	9355	-2380	-10	10218	ZOOM	1000
10	Right Side View	-2056	7012	-1475	-6	7179	ZOOM	1000
11	Windshield View	-595	0	-5556	-90		24mm	1000
12	Driver Front View	378	-286	-2438	-34		25mm	1000
13	Passenger Front View	375	413	-2439	-34		25mm	1000
14	Pit View of Engine	-745	0	1495	90		12mm	1000
15	Pit View of Fuel Tank	-3014	0	1495	90		8mm	1000
16	Driver Side O.B.	-2796	405	-1349	-7		12mm	1000
17	Passenger Side O.B.	-2796	-405	-1349	-7		12mm	1000
18	Real Time Camera	-1698	6487	-1124	0			30
19	Real Time Camera	-1815	-7155	-1149	0			30

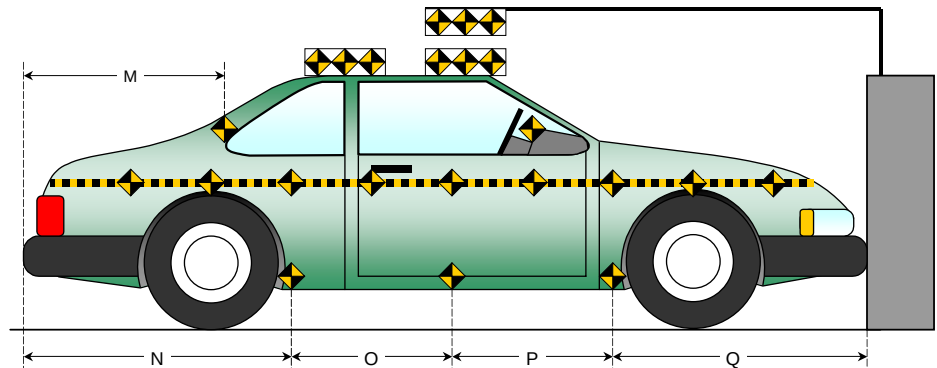
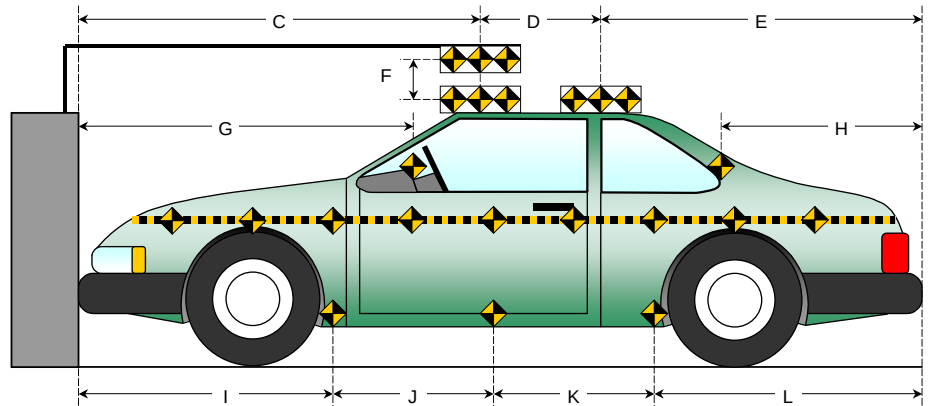
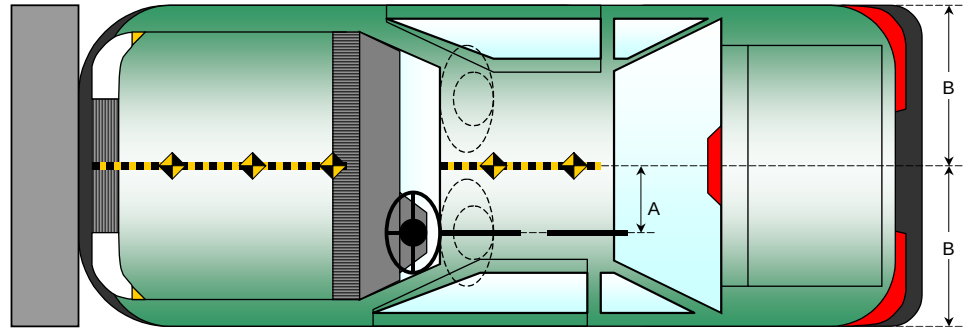
All measurements are made relative to the point of impact.

DATA SHEET NO. 15
PHOTOGRAPHIC REFERENCE TARGET LOCATIONS

Test Vehicle: 2007 Audi Q7 5-Door MPV
 Test Program: 35 MPH NCAP

NHTSA No.: V75801
 Test Date: 9/25/06

All Dimensions in (mm)	
Item	Value
A	375
B	973
C	2341
D	615
E	2103
F	155
G	916
H	1334
I	1434
J	1003
K	603
L	1602
M	1334
N	1602
O	1003
P	1003
Q	1434



DATA SHEET NO. 16
VEHICLE INTRUSION MEASUREMENTS

Test Vehicle: 2007 Audi Q7 5-Door MPV
 Test Program: 35 MPH NCAP

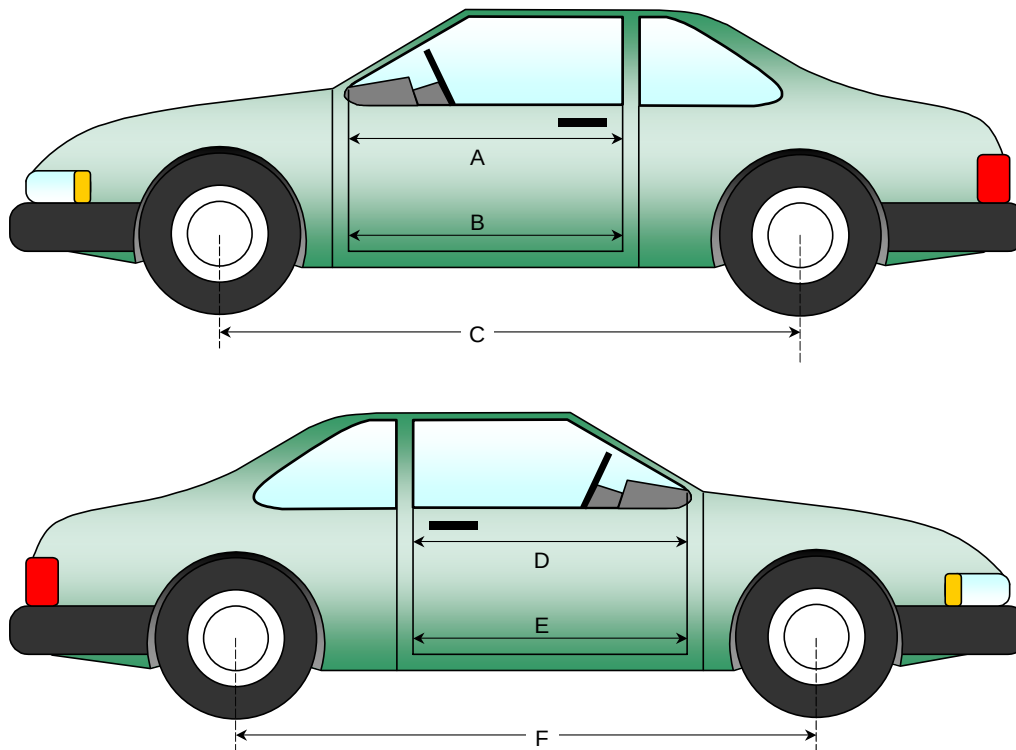
NHTSA No.: V75801
 Test Date: 9/25/06

DOOR OPENING WIDTH TABLE

Item	Description	Units	Pre-Test	Post-Test	Diff.
A	Left Side Upper	mm	1056	1048	-8
B	Left Side Lower	mm	1014	1007	-7
D	Right Side Upper	mm	1054	1049	-5
E	Right Side Lower	mm	998	991	-7

WHEELBASE MEASUREMENT TABLE

Item	Description	Units	Pre-Test	Post-Test	Diff.
C	Left Side Wheel Base	mm	3012	2949	-63
F	Right Side Wheel Base	mm	3012	2980	-32



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

Test Vehicle: 2007 Audi Q7 5-Door MPV

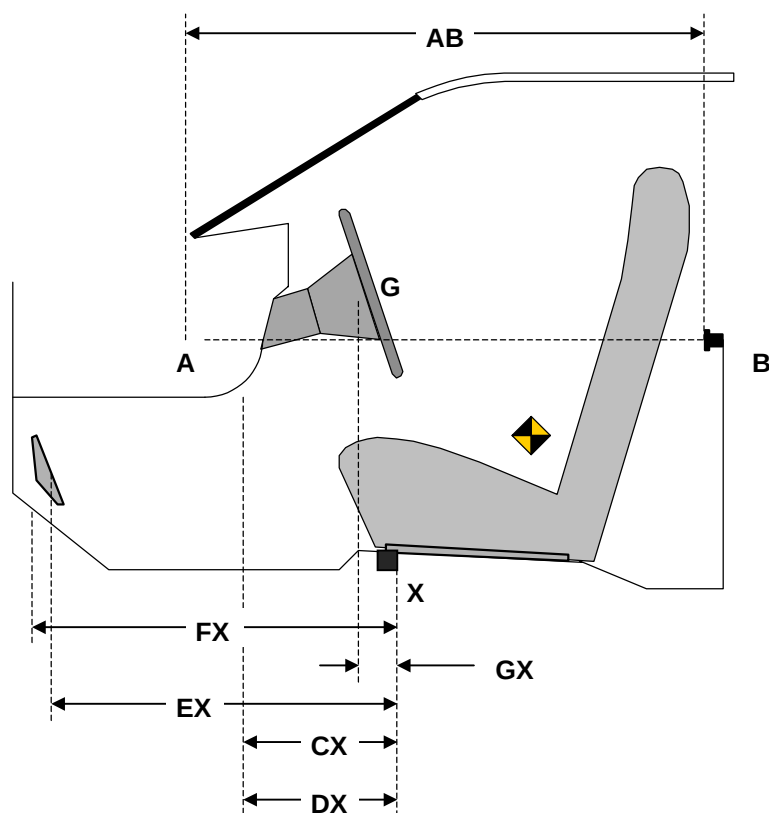
NHTSA No.: V75801

Test Program: 35 MPH NCAP

Test Date: 9/25/06

DRIVER COMPARTMENT INTRUSION TABLE

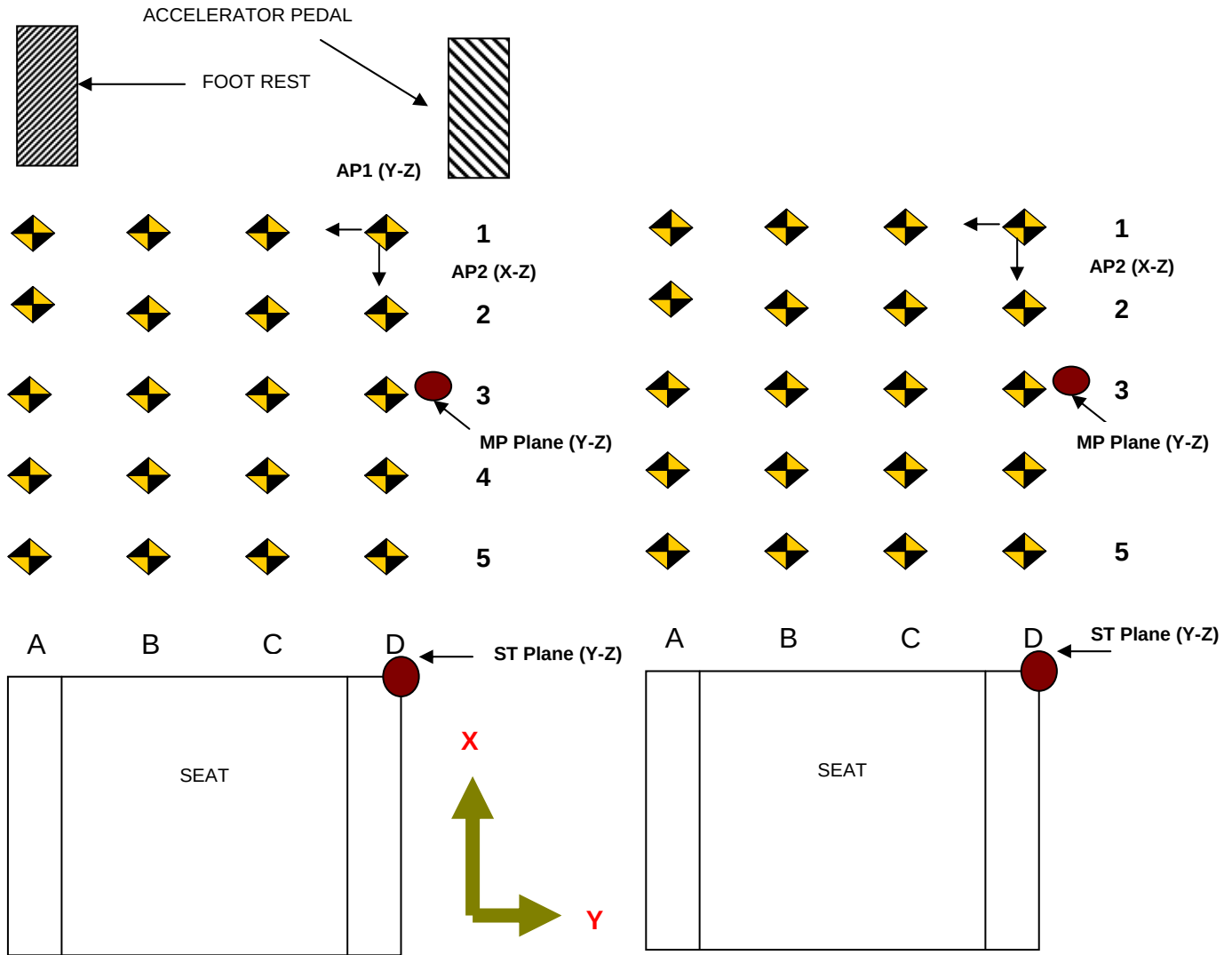
Item	Description	Units	Pre-Test	Post-Test	Diff.
AB	Door Opening (Inside window jam)	mm	1058	1046	-12
CX	Left Knee Bolster to X	mm	283	274	-9
DX	Right Knee Bolster to X	mm	286	270	-16
EX	Brake Pedal to X	mm	505	494	-11
FX	Foot Rest to X	mm	560	544	-16
GX	Center of Steering Wheel Hub to X	mm	25	105	80



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

Test Vehicle: 2007 Audi Q7 5-Door MPV
 Test Program: 35 MPH NCAP

NHTSA No.: V75801
 Test Date: 9/25/06



- 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: 2007 Audi Q7 5-Door MPV
 Test Program: 35 MPH NCAP

NHTSA No.: V75801
 Test Date: 9/25/06

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	594	719	709	684	598	710	694	669	4	-9	-15	-15
2	538	665	661	649	540	657	650	639	2	-8	-11	-10
3	499	559	560	553	501	543	545	540	2	-16	-15	-13
4	371	374	374	369	365	365	363	357	-6	-9	-11	-12
5	183	190	195	198	177	177	181	191	-6	-13	-14	-7

DRIVER FLOOR PAN Y-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	25	174	293	435	38	188	300	440	13	14	7	5
2	24	171	287	433	36	184	299	446	12	13	12	13
3	25	162	287	440	40	169	294	439	15	7	7	-1
4	29	163	282	428	40	173	294	439	11	10	12	11
5	37	153	279	421	49	170	286	427	12	17	7	6

DRIVER FLOOR PAN Z-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	-45	13	22	12	-64	-7	1	-14	-19	-20	-21	-26
2	19	94	90	92	-1	73	69	70	-20	-21	-21	-22
3	64	155	160	159	45	130	132	125	-19	-25	-28	-34
4	136	154	152	142	116	134	131	122	-20	-20	-21	-20
5	133	141	142	161	116	126	125	138	-17	-15	-17	-23

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

Test Vehicle: 2007 Audi Q7 5-Door MPV
 Test Program: 35 MPH NCAP

NHTSA No.: V75801
 Test Date: 9/25/06

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	669	700	701	686	629	655	658	642	-40	-45	-43	-44
2	622	632	625	626	587	591	583	580	-35	-41	-42	-46
3	541	534	530	543	503	494	487	500	-38	-40	-43	-43
4	385	384	381	375	340	343	339	327	-45	-41	-42	-48
5	214	217	219	221	180	180	180	173	-34	-37	-39	-48

PASSENGER FLOOR PAN Y-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	-429	-313	-183	-58	-410	-295	-176	-50	19	18	7	8
2	-447	-320	-182	-52	-421	-286	-173	-44	26	34	9	8
3	-449	-312	-181	-55	-422	-292	-151	-35	27	20	30	20
4	-452	-317	-184	-54	-432	-311	-169	-28	20	6	15	26
5	-419	-319	-184	-54	-404	-315	-161	-49	15	4	23	5

PASSENGER FLOOR PAN Z-AXIS

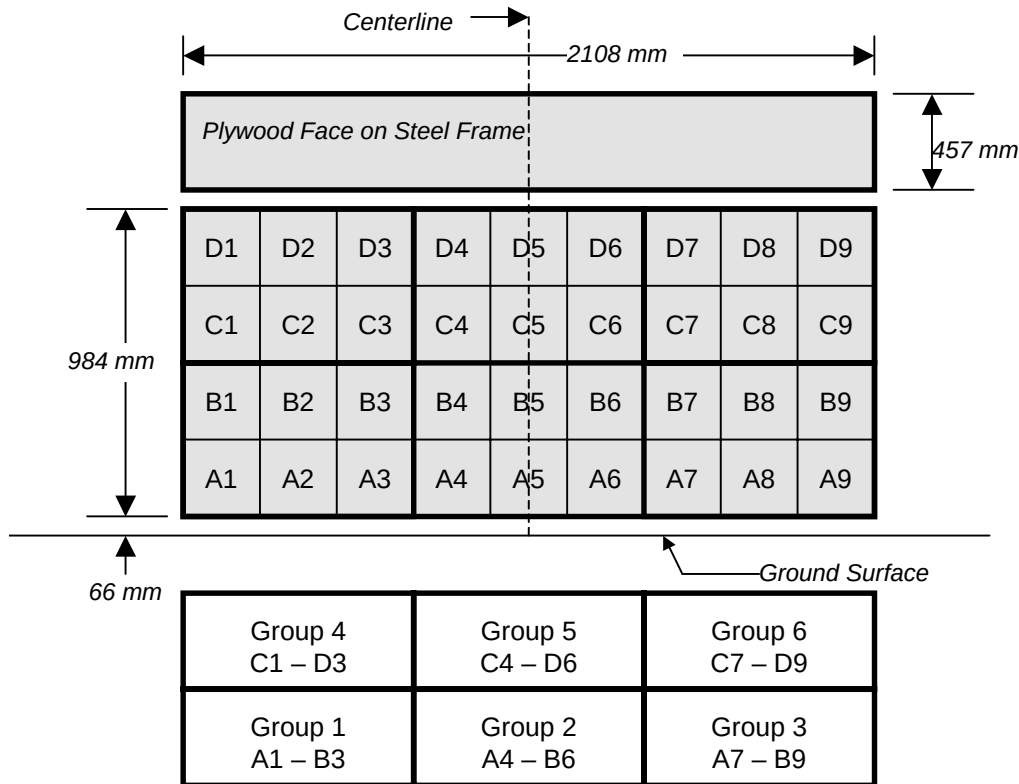
	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	28	56	63	53	25	46	64	55	-3	-10	1	2
2	98	125	127	124	93	120	128	125	-5	-5	1	1
3	130	151	149	149	118	146	150	152	-12	-5	1	3
4	133	150	145	133	119	141	143	131	-14	-9	-2	-2
5	45	137	141	135	32	127	134	135	-13	-10	-7	0

DATA SHEET NO. 17
FIXED BARRIER LOAD CELL LOCATIONS

Test Vehicle: 2007 Audi Q7 5-Door MPV
 Test Program: 35 MPH NCAP

NHTSA No.: V75801
 Test Date: 9/25/06

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: 2007 Audi Q7 5-Door MPV
 Test Program: 35 MPH NCAP

NHTSA No.: V75801
 Test Date: 9/25/06

VEHICLE INFORMATION

VIN: WA1AY74LX7D032459
 Vehicle Size Category: 5-Door

Wheel base (mm): 3012
 Test Weight (kg): 2582

ACCELEROMETER DATA

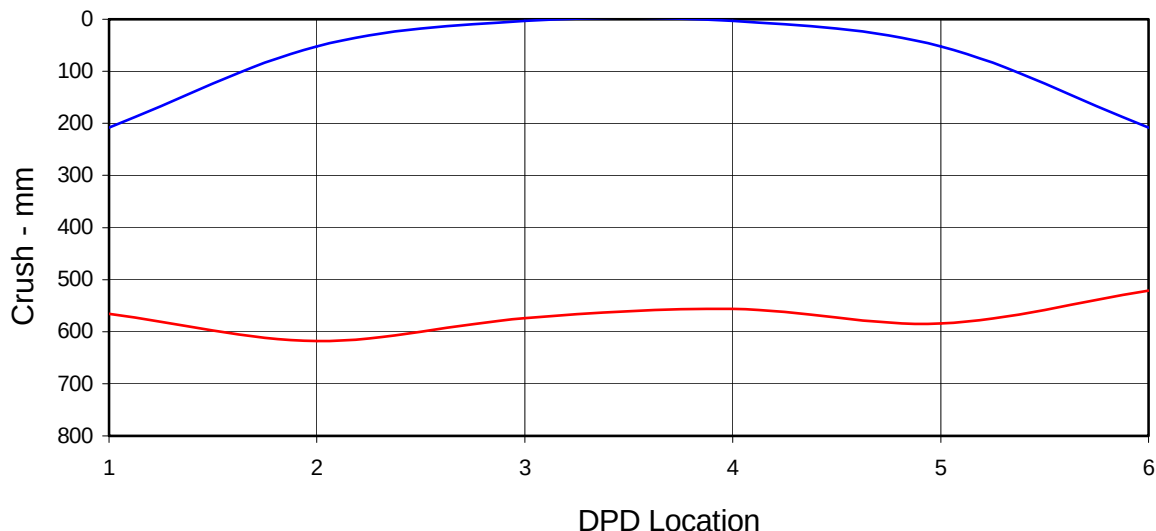
Accelerometer Location: Left rear cross member
 Cal. Procedure/Interval: 6 months / drop test
 Integration Algorithm: NHTSA Standard
 Impact Velocity (km/h): 56.14
 Velocity Change (km/h): 63.70

Linearity: Good
 Time of Separation (msec): 71.6

CRUSH PROFILE

Collision Deformation Classification: 12FDEW6 Midpoint of Damage: Vehicle Centerline
 Damage Region Length (mm): 1382 Impact Mode: Full Frontal

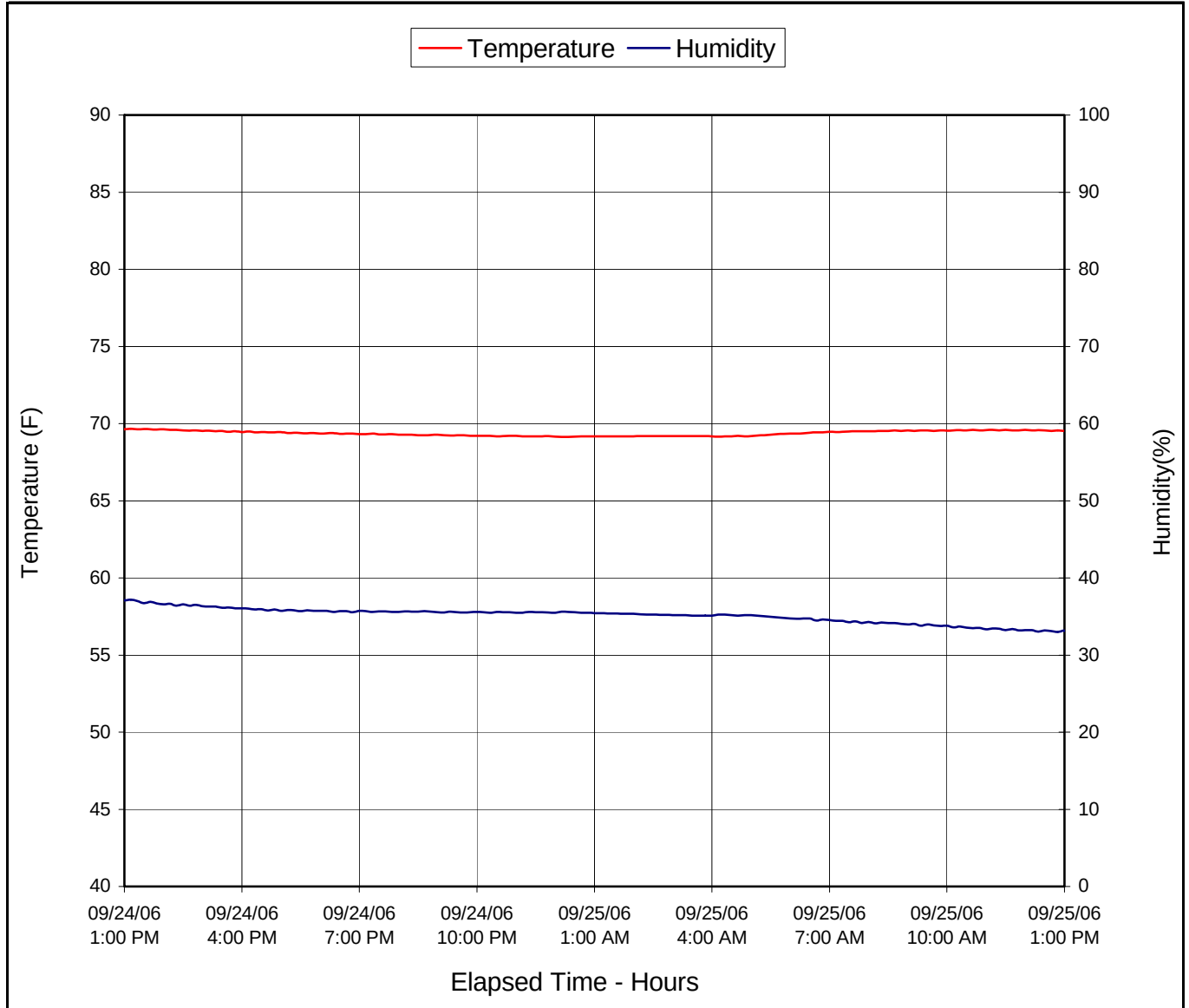
No.	Measurement Description	Units	Pre-Test	Post-Test	Difference
C1	Crush zone 1 at left side	mm	208	566	-358
C2	Crush zone 2 on left side	mm	52	618	-566
C3	Crush zone 3 on left side	mm	3	574	-571
C4	Crush zone 4 on right side	mm	3	556	-553
C5	Crush zone 5 on right side	mm	52	584	-532
C6	Crush zone 6 at right side	mm	208	521	-313



DATA SHEET NO. 19
DUMMY/VEHICLE TEMPERATURE STABILIZATION

Test Vehicle: 2007 Audi Q7 5-Door MPV
Test Program: 35 MPH NCAP

NHTSA No.: V75801
Test Date: 9/25/06



APPENDIX A
PHOTOGRAPHS

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A-59	Vehicle on Rollover Device (90°)	A-59
A-60	Vehicle on Rollover Device (180°)	A-60
A-61	Vehicle on Rollover Device (270°)	A-61
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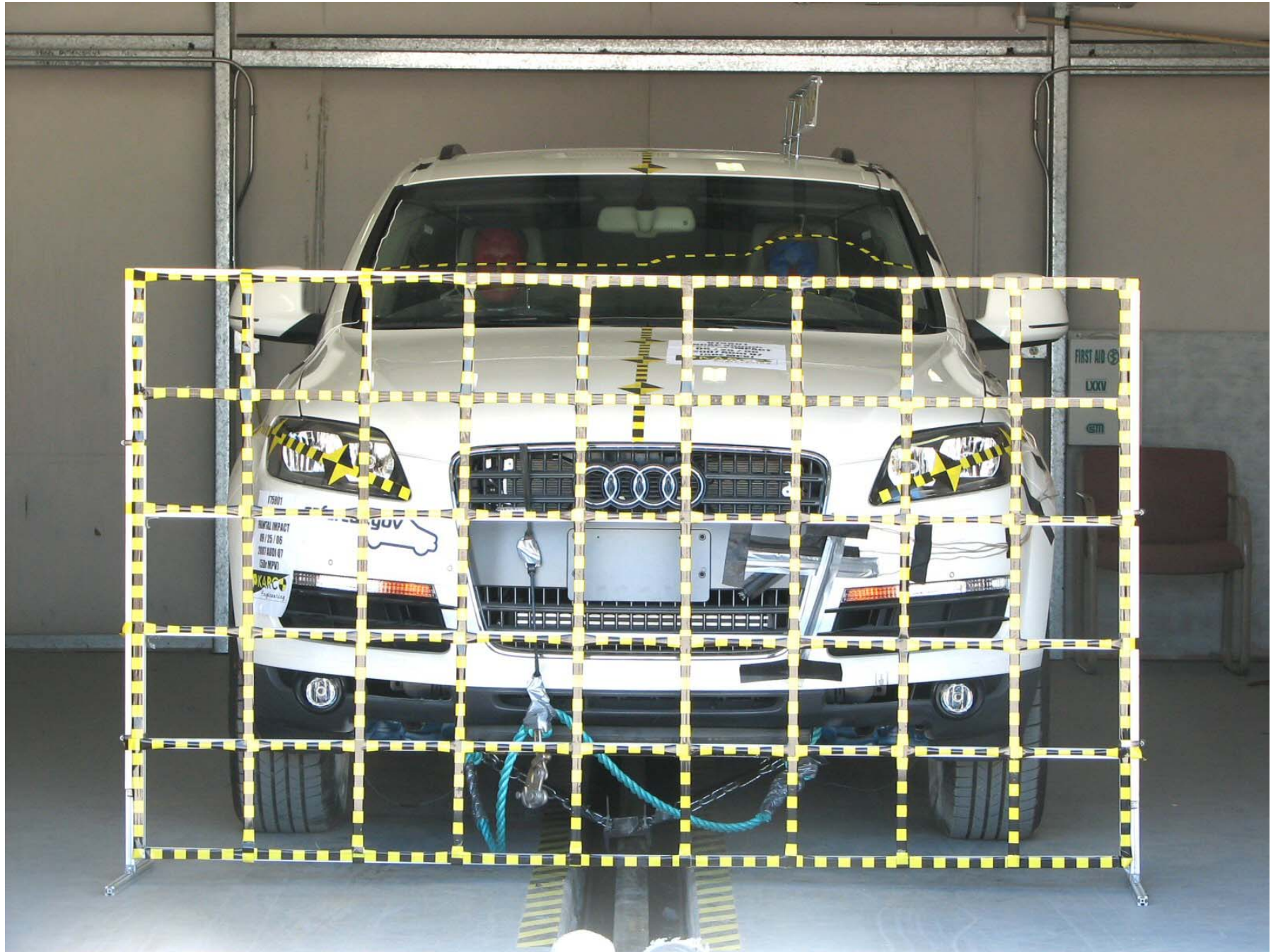


Figure A-1: Load Cell Location

MFD. BY AUDI AG 07 06

GVWR LBS 6570, KG 2980

GAWR FRONT LBS 3164, KG 1435

FRONT-TIRES 235/60 R18 XL

7.5JX18 RIMS, AT 300 KPA 44 PSI COLD

GAWR REAR LBS 3902, KG 1770

REAR-TIRES 235/60 R18 XL

7.5JX18 RIMS, AT 340 KPA 49 PSI COLD



Audi

**THIS VEHICLE CONFORMS TO ALL APPLICABLE
U.S. FEDERAL MOTOR VEHICLE SAFETY AND
THEFT PREVENTION STANDARDS IN EFFECT ON
THE DATE OF MANUFACTURE SHOWN ABOVE.
SLOVAKIA**

WA1AY74LX7D032459

**TYPE:
MPV**



Figure A-2: Manufacturer's Label



TIRE AND LOADING INFORMATION

SEATING CAPACITY TOTAL 7 FRONT 2 CENTER 3 REAR 2

The combined weight of occupants and cargo should never exceed 600 kg or 1323 lbs.

TIRE	SIZE	COLD TIRE PRESSURE
FRONT	235/60 R18 107H XL	300 KPA, 44 PSI
REAR	235/60 R18 107H XL	340 KPA, 49 PSI
SPARE	195/75-18	350 KPA, 51 PSI

**SEE OWNER'S
MANUAL FOR
ADDITIONAL
INFORMATION**

410 010 001 80

Figure A-3: Tire Placard



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



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

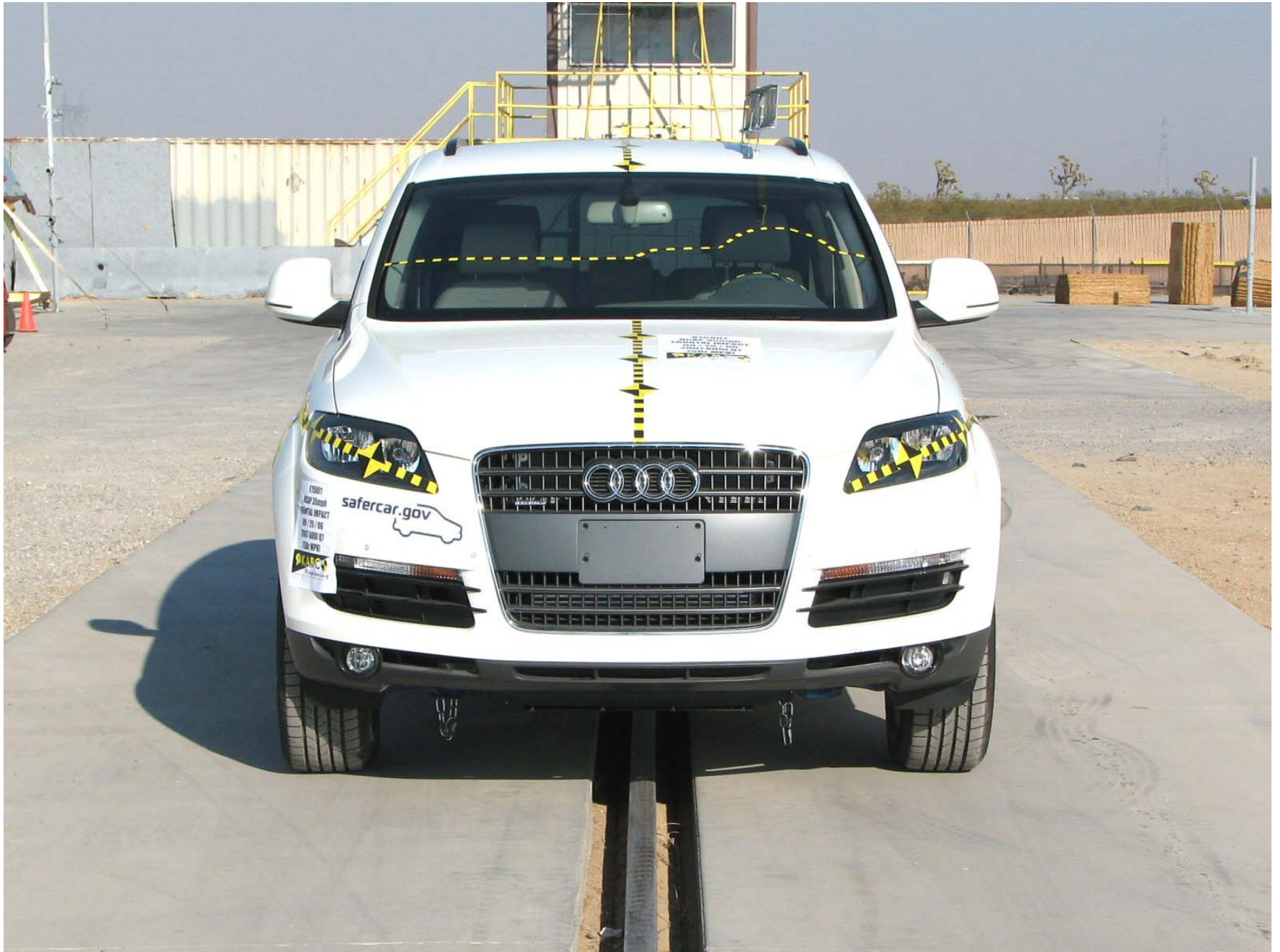


Figure A-6: Pre-Test Front View

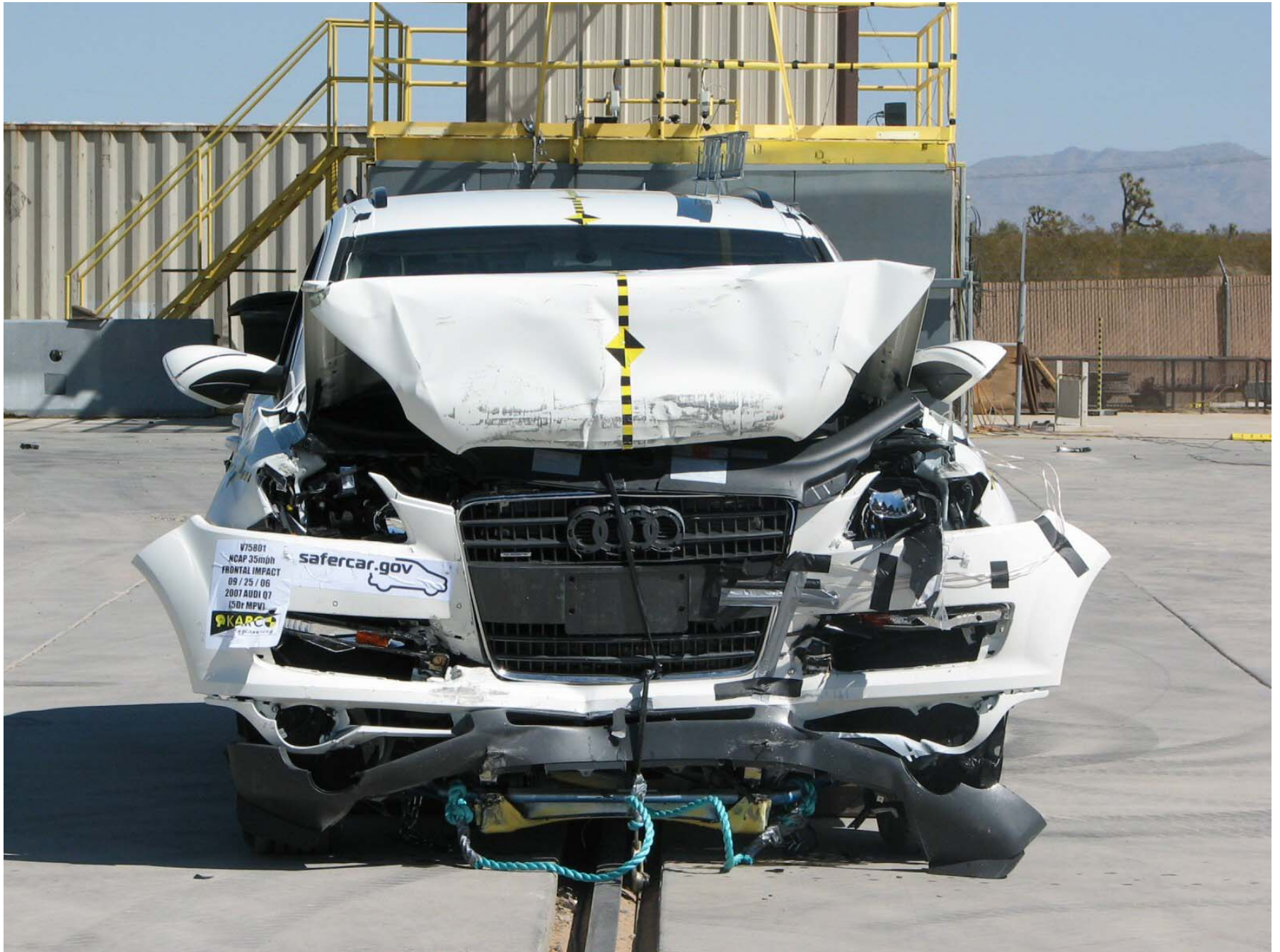


Figure A-7: Post-Test Front View (Vehicle Moved)



Figure A-8: Pre-Test Left Side View



Figure A-9: Post-Test Left Side View



Figure A-10: Pre-Test Right Side View



Figure A-11: Post-Test Right Side View



Figure A-12: Pre-Test Right Front $\frac{3}{4}$ 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 $\frac{3}{4}$ View



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



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

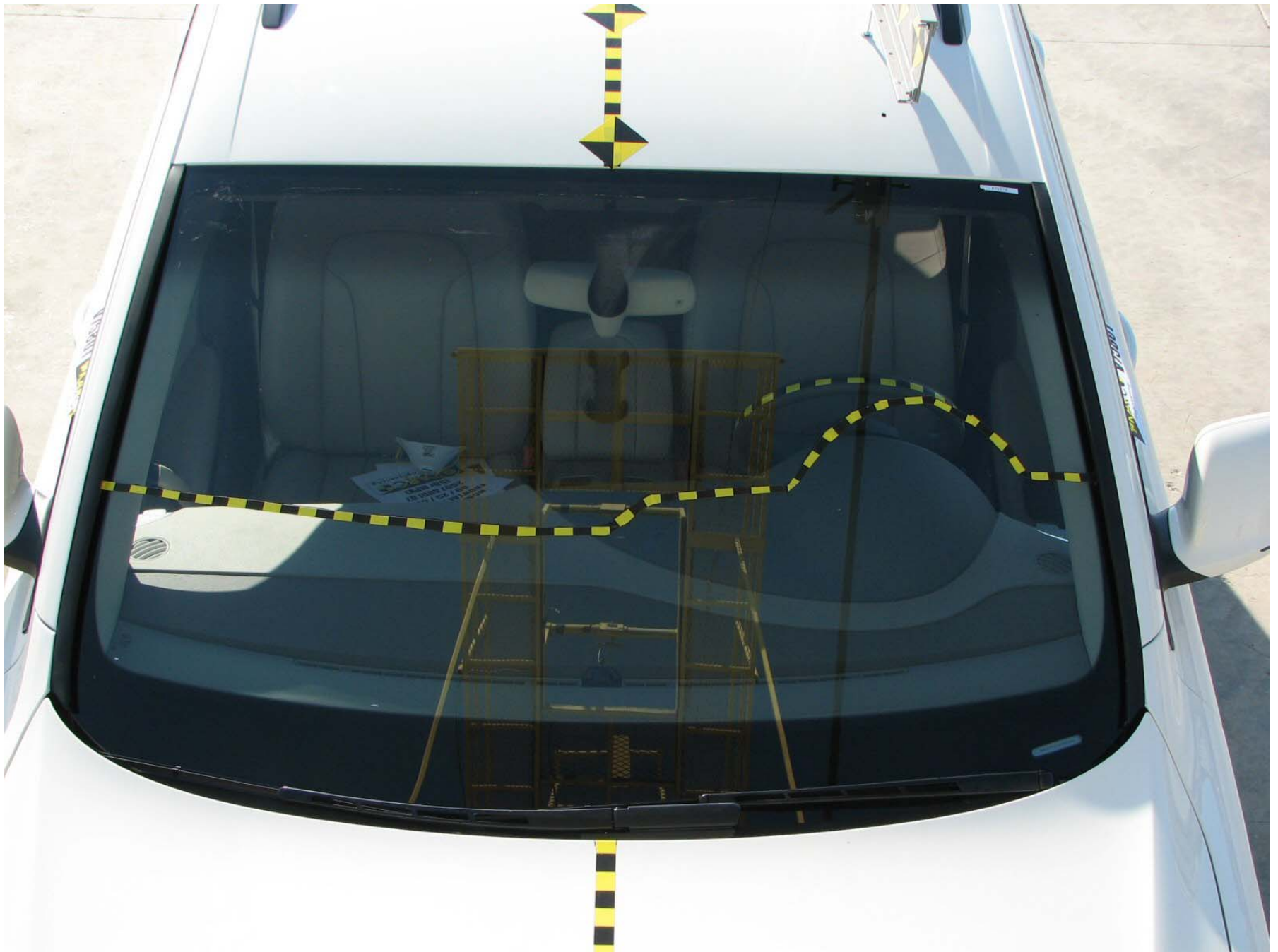


Figure A-18: Pre-Test Windshield



Figure A-19: Post-Test Windshield



Figure A-20: Pre-Test Engine Compartment



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



Figure A-22: Pre-Test Fuel Cap



Figure A-23: Post-Test Fuel Cap

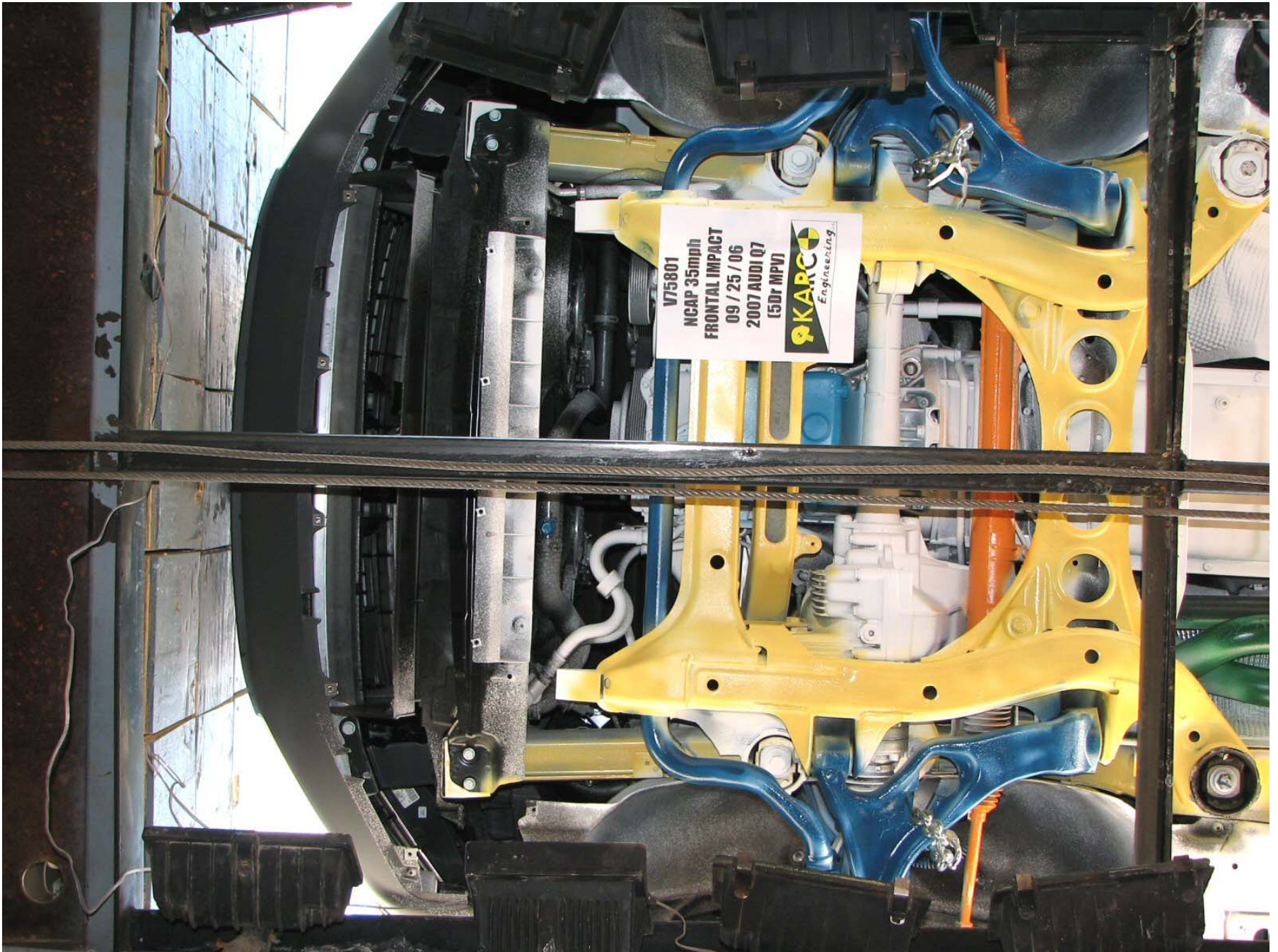


Figure A-24: Pre-Test Front Underbody

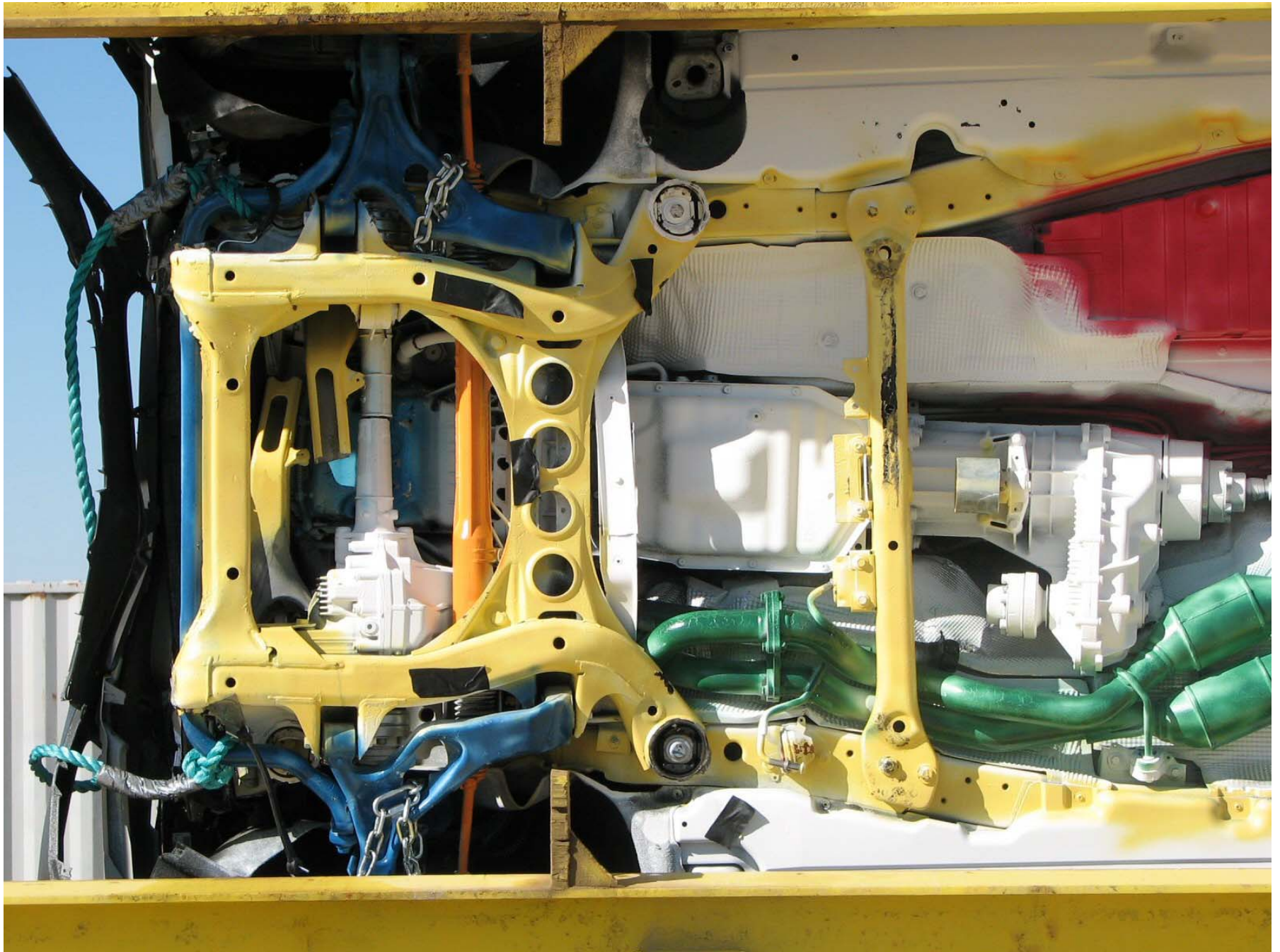


Figure A-25: Post-Test Front Underbody

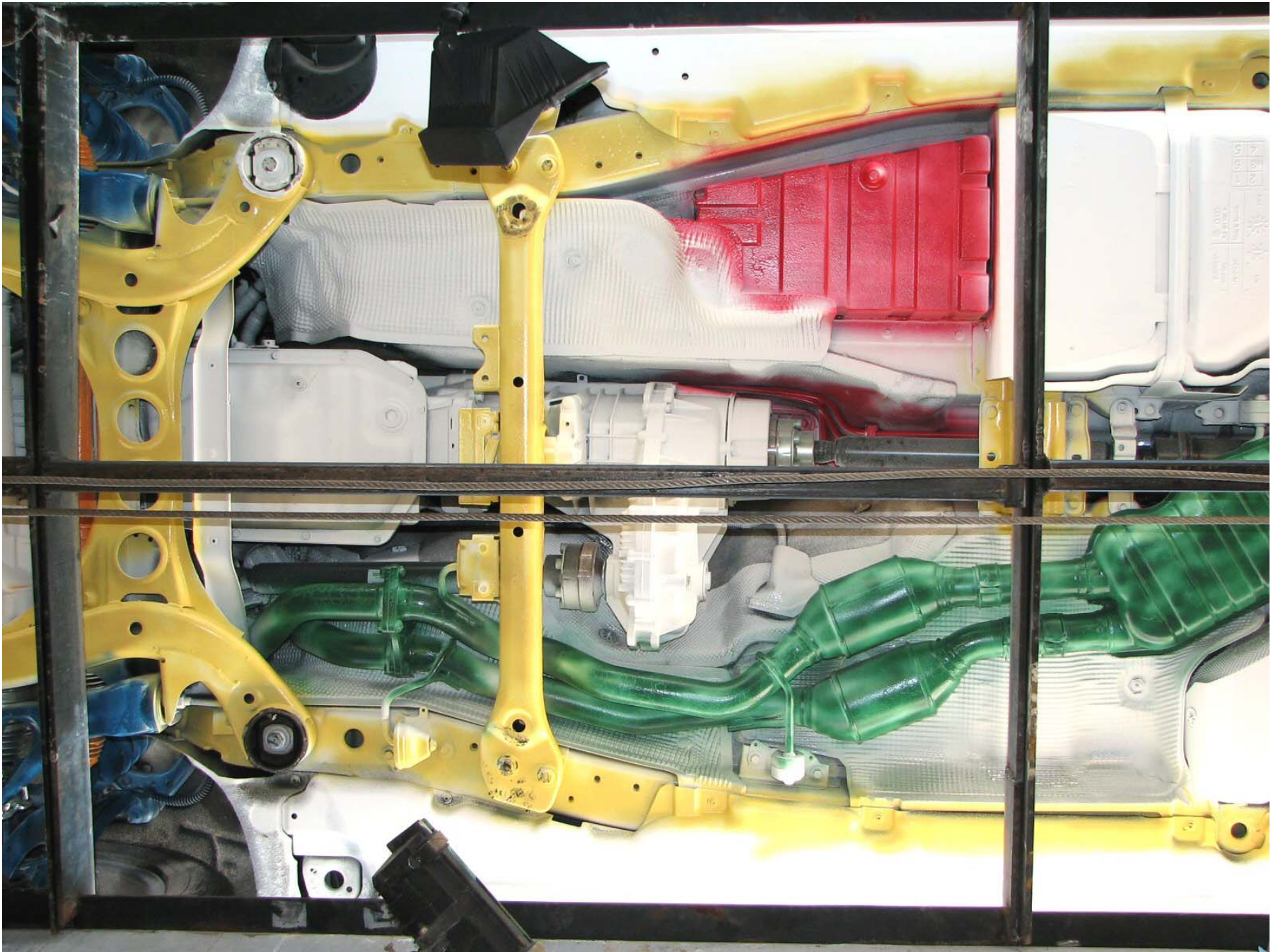


Figure A-26: Pre-Test Mid Underbody

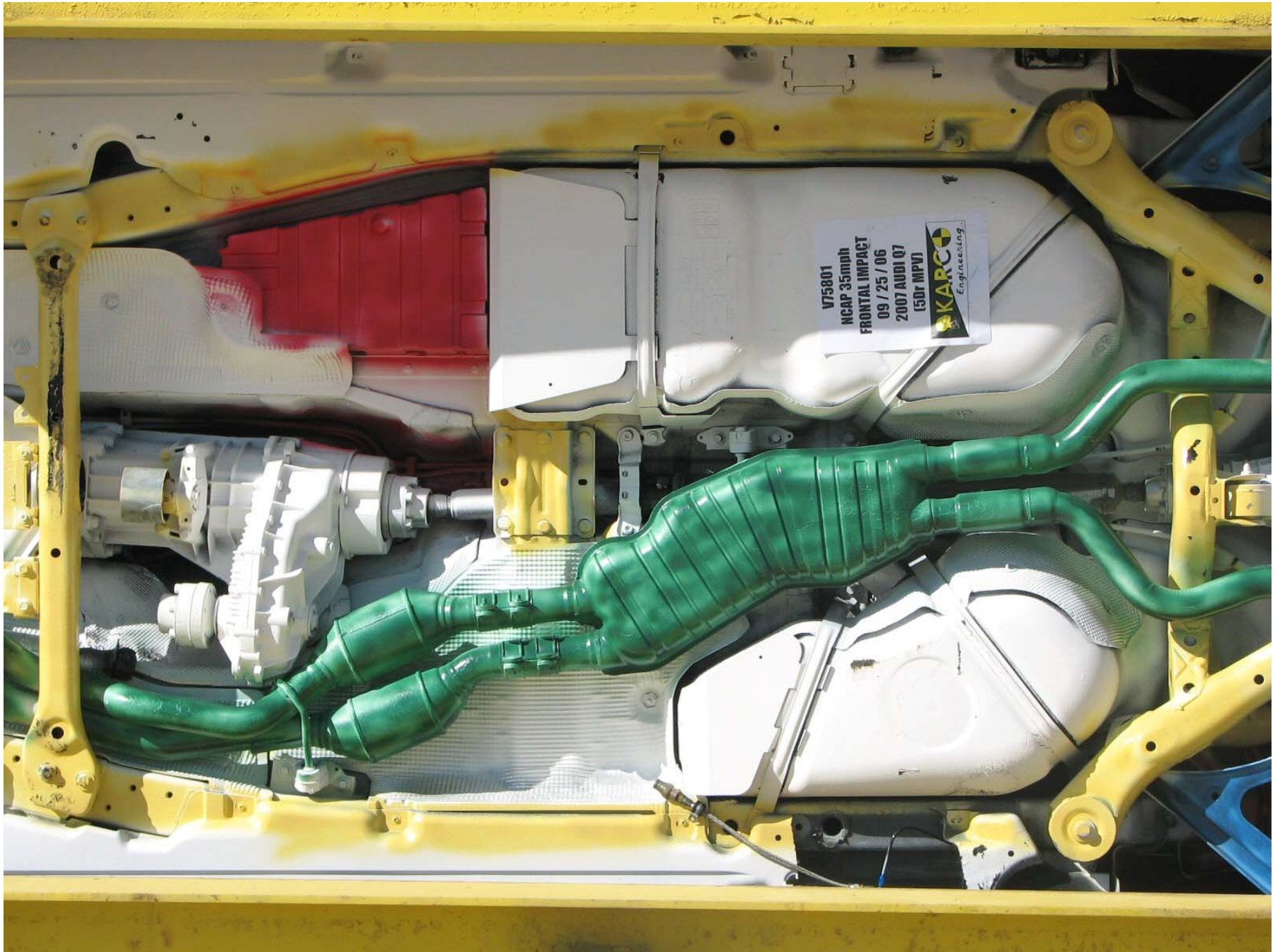


Figure A-27: Post-Test Mid Underbody

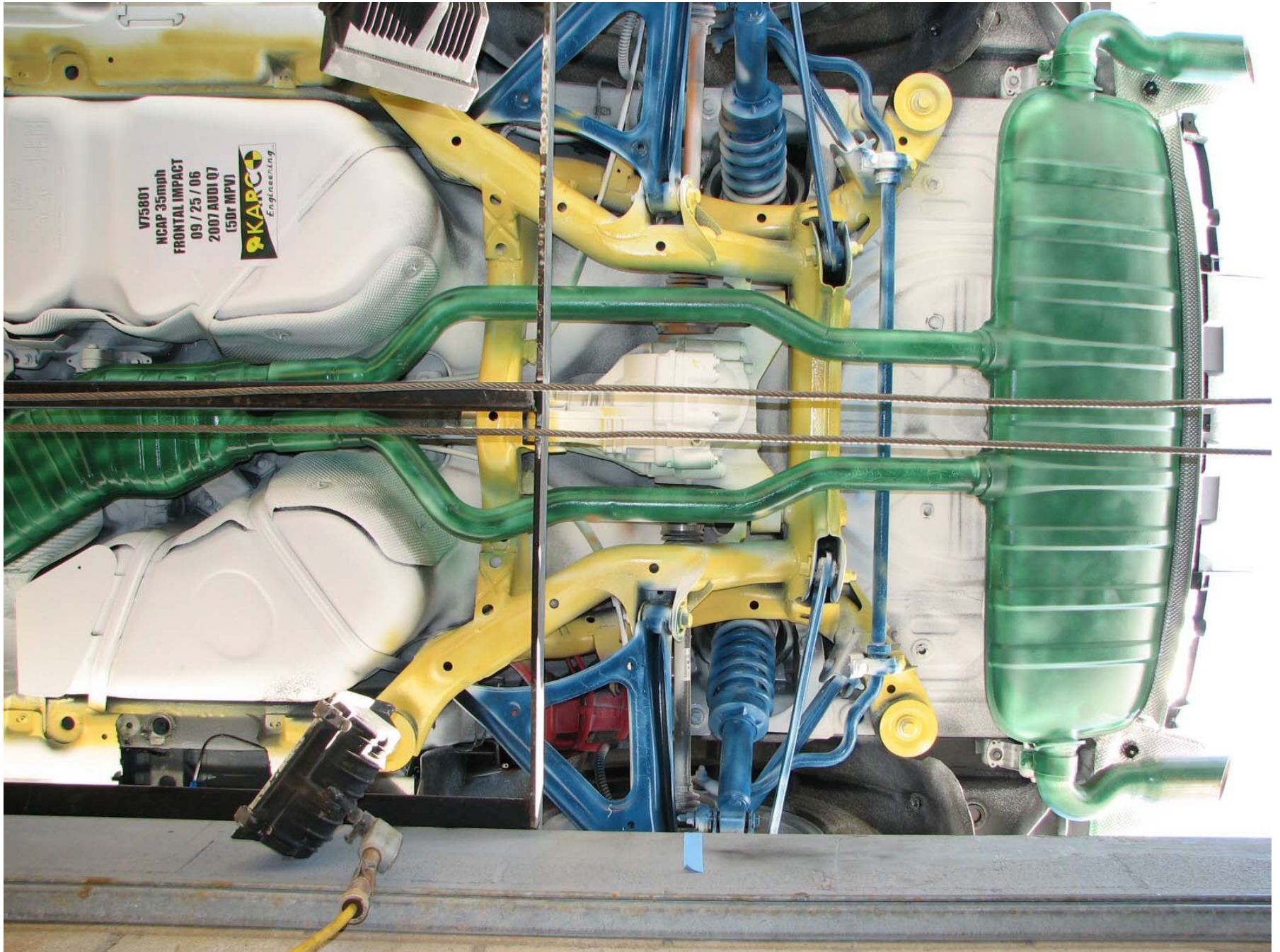


Figure A-28: Pre-Test Rear Underbody

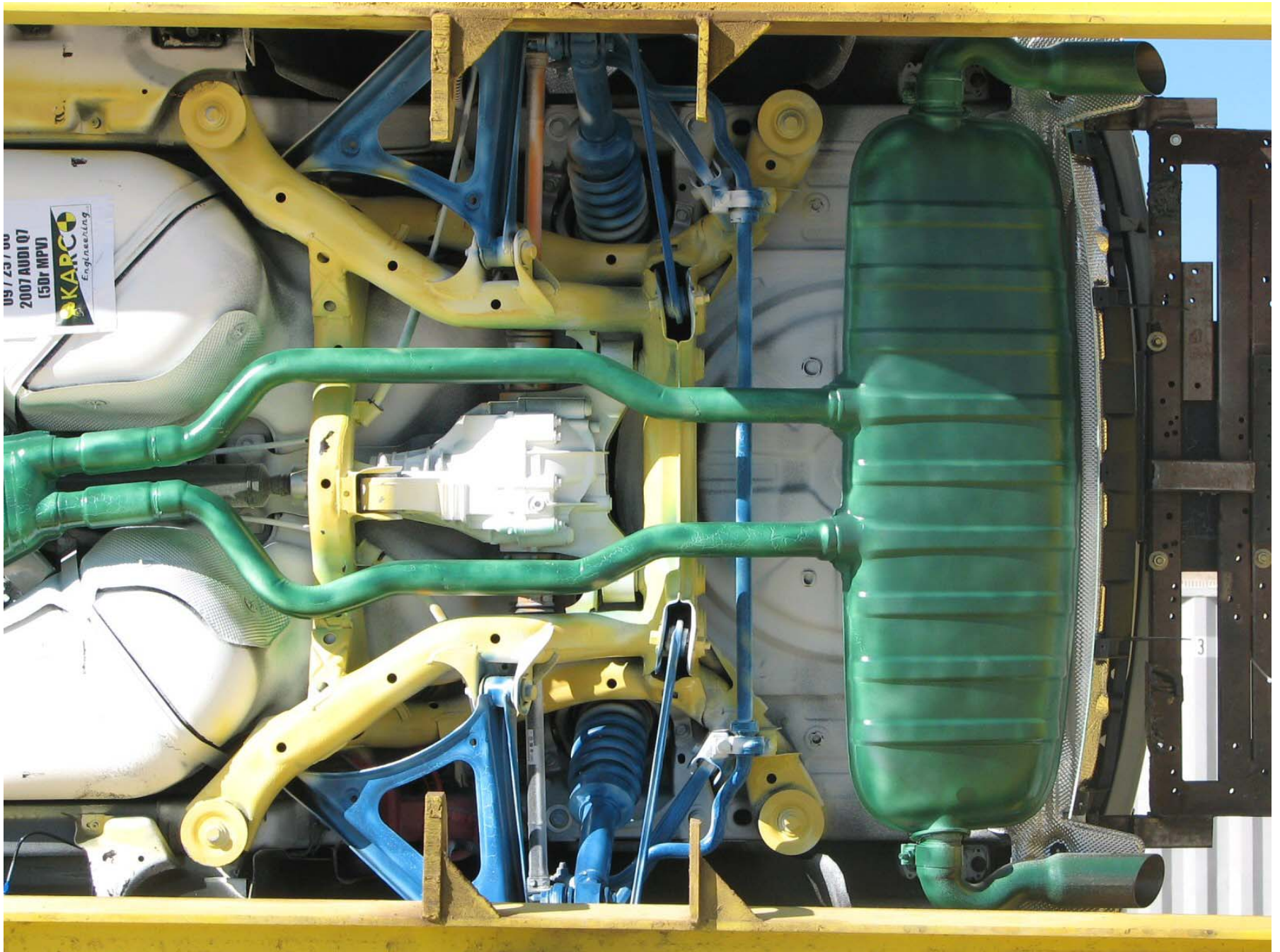


Figure A-29: Post-Test Rear Underbody

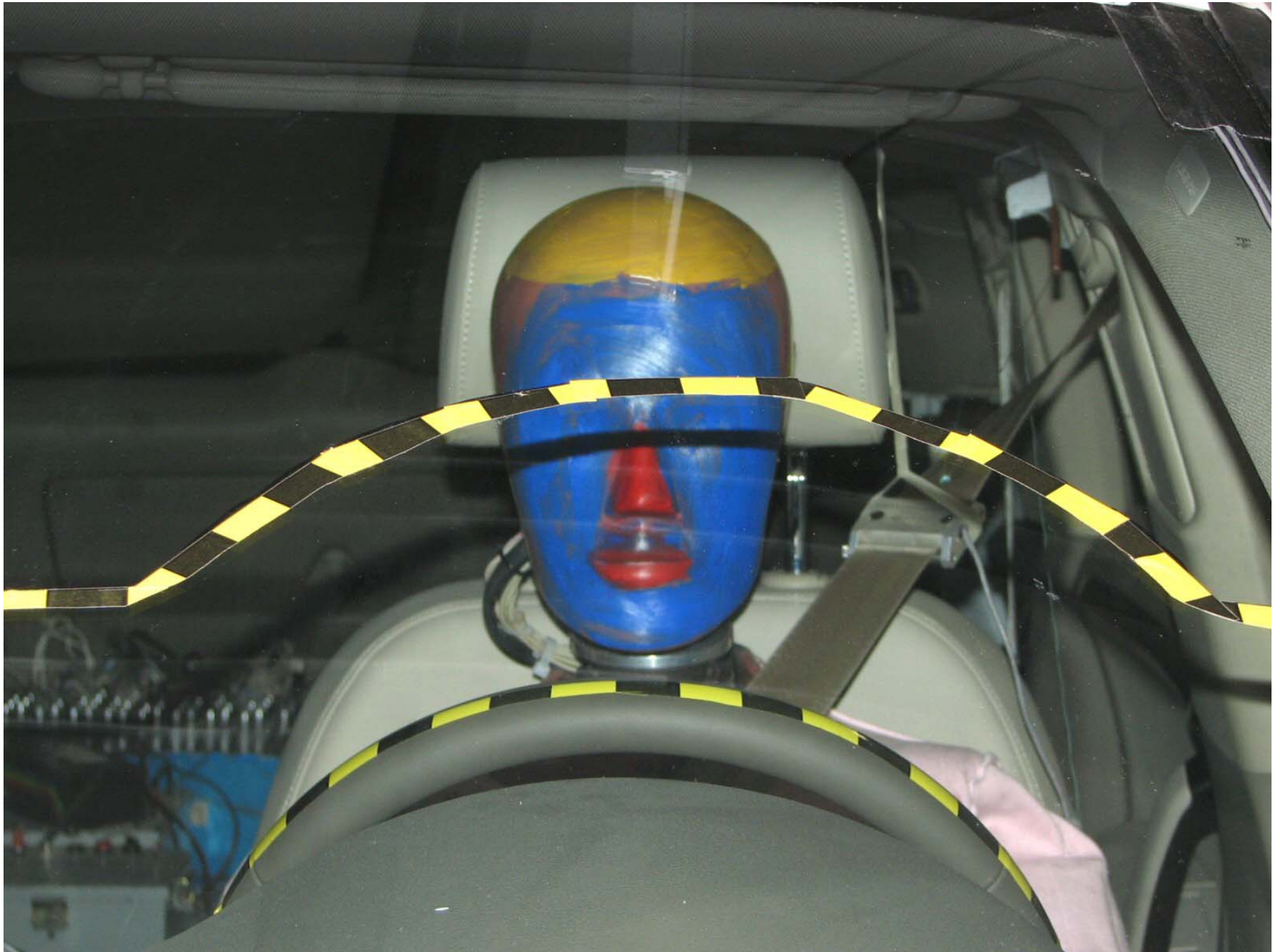


Figure A-30: Pre-Test Driver Dummy Front View (Head Position)



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



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



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



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



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

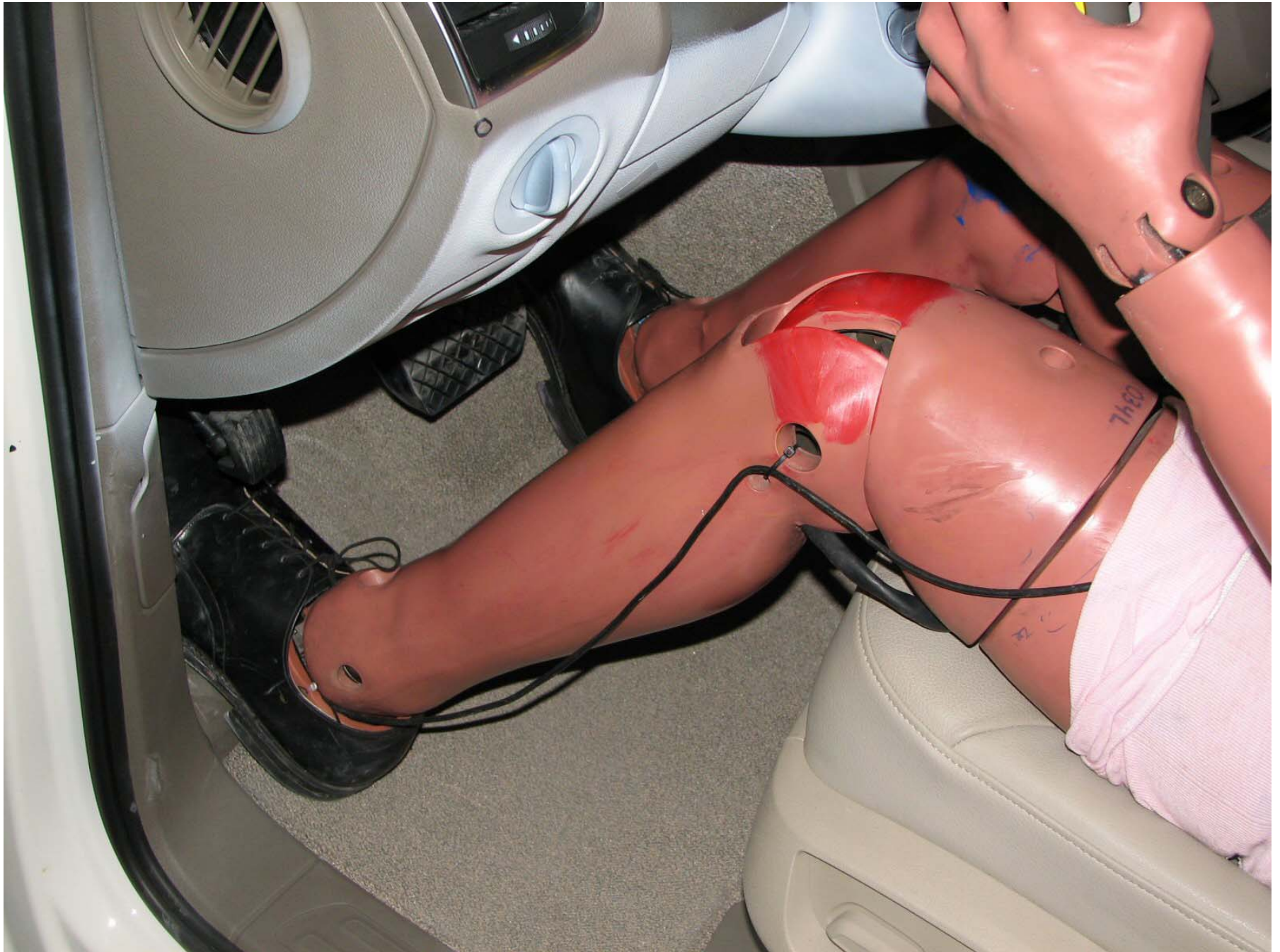


Figure A-36: Pre-Test Driver Dummy Feet



Figure A-37: Post-Test Driver Dummy Feet



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



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



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



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



Figure A-42: Post-Test Driver Dummy Head



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



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



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



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



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



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



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



Figure A-50: Pre-Test Passenger Dummy Feet



Figure A-51: Post-Test Passenger Dummy Feet



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



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



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



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



Figure A-56: Post-Test Passenger Dummy Head



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

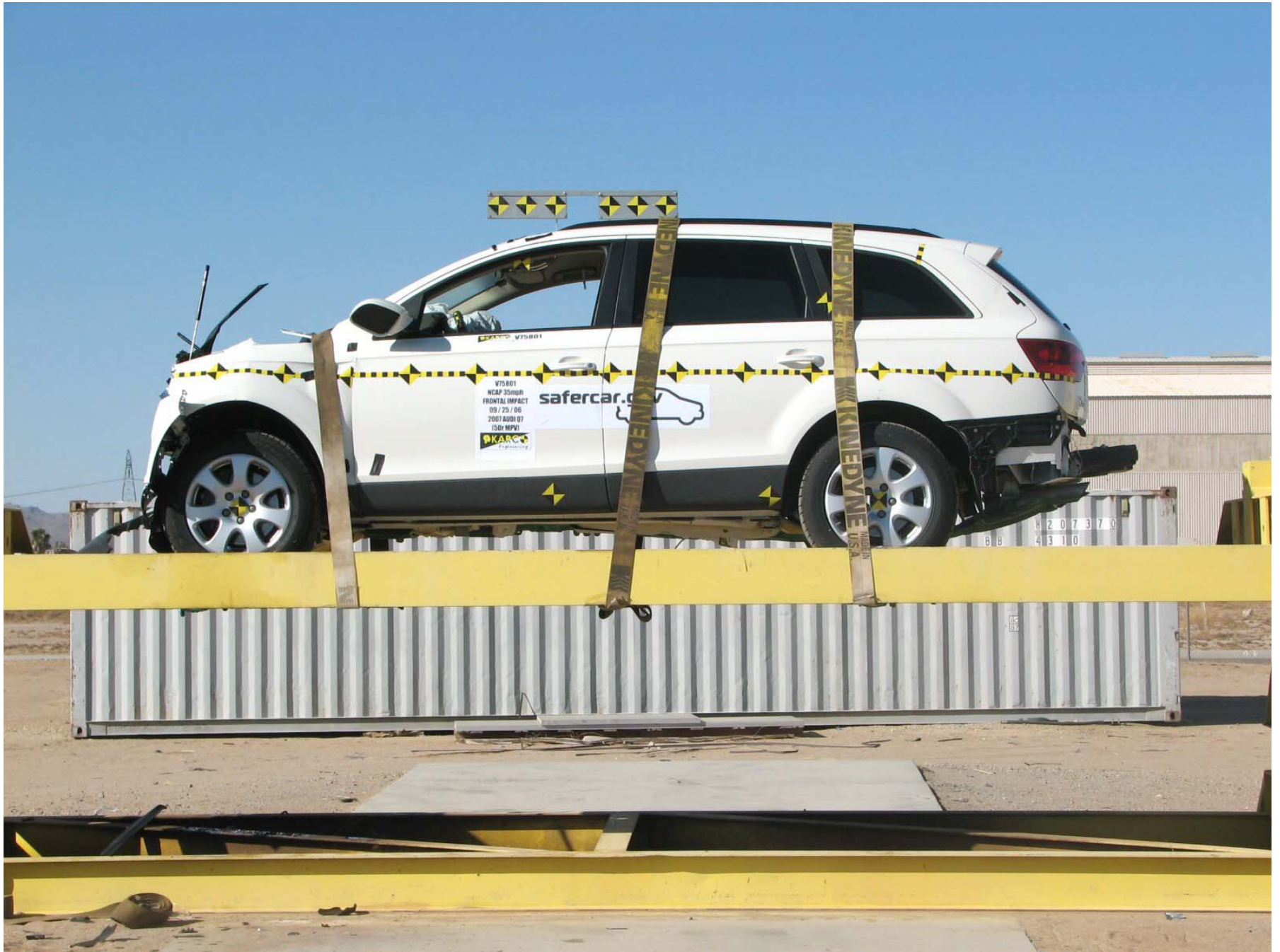


Figure A-58: Vehicle on Rollover Device (0°)



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



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

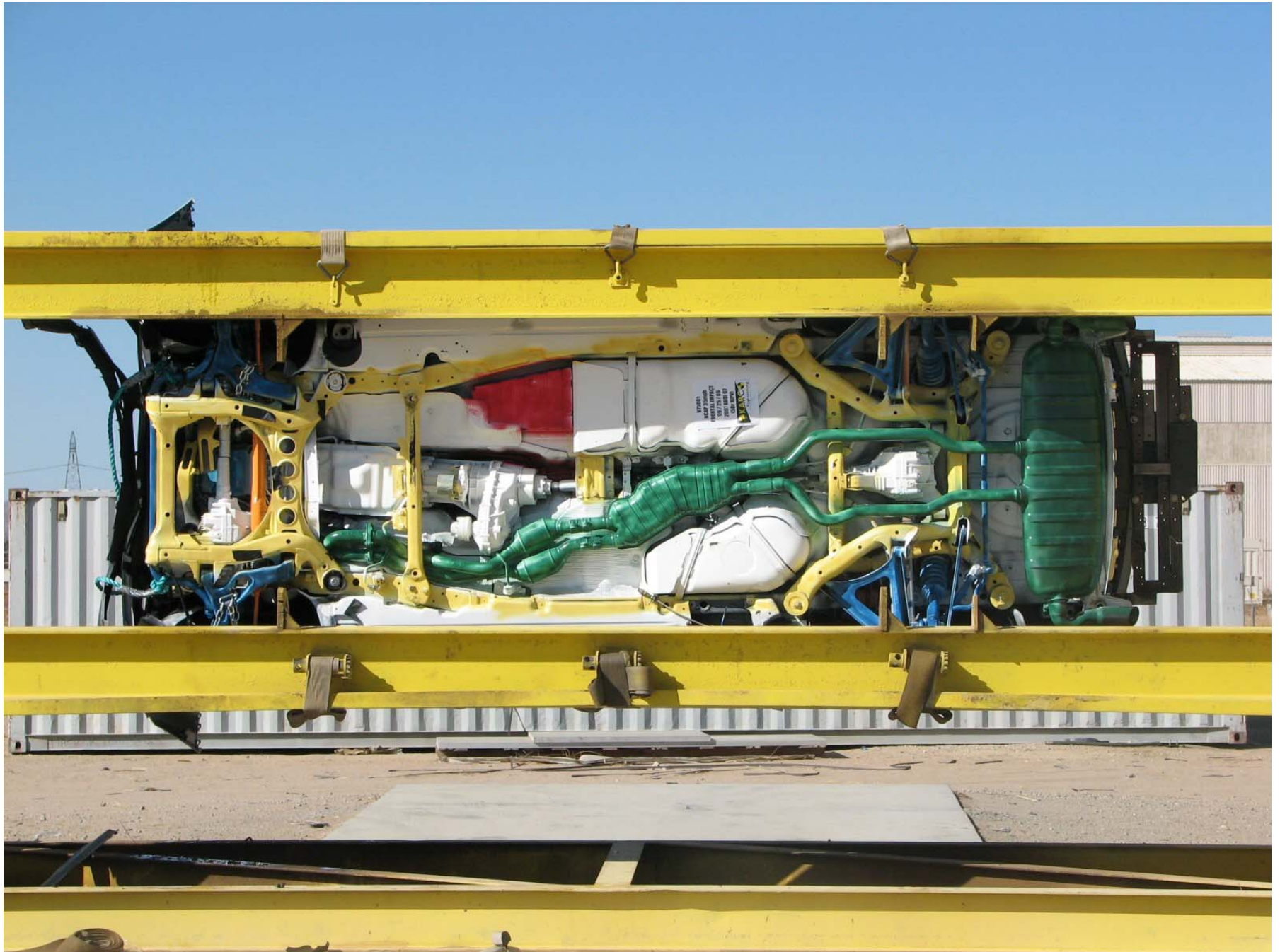


Figure A-61: Vehicle on Rollover Device (270°)



Figure A-62: Vehicle Impact

APPENDIX B
DATA PLOTS

LIST OF DATA PLOTS

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

LIST OF DATA PLOTS...(CONTINUED)

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

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

LIST OF DATA PLOTS...(CONTINUED)

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

LIST OF DATA PLOTS...(CONTINUED)

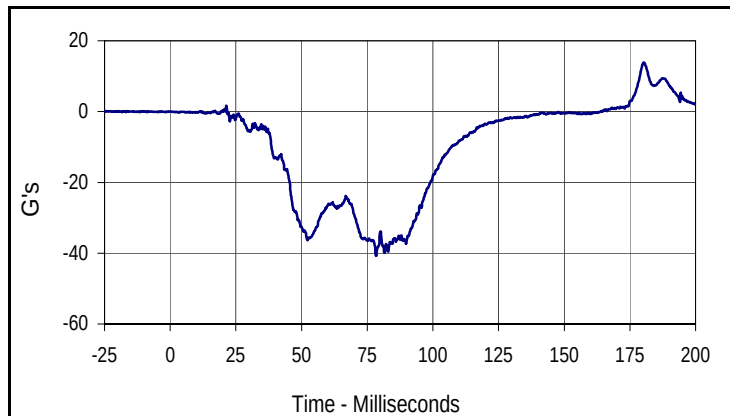
Passenger Chest Redundant Y
Passenger Chest Redundant Z
Passenger Chest Resultant Redundant
Passenger Chest Redundant X Velocity
Passenger Chest Redundant X Displacement
Passenger Chest Displacement
Passenger Pelvis X
Passenger Pelvis Y
Passenger Pelvis Z
Passenger Pelvis Resultant
Passenger Pelvis X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

LIST OF DATA PLOTS...(CONTINUED)

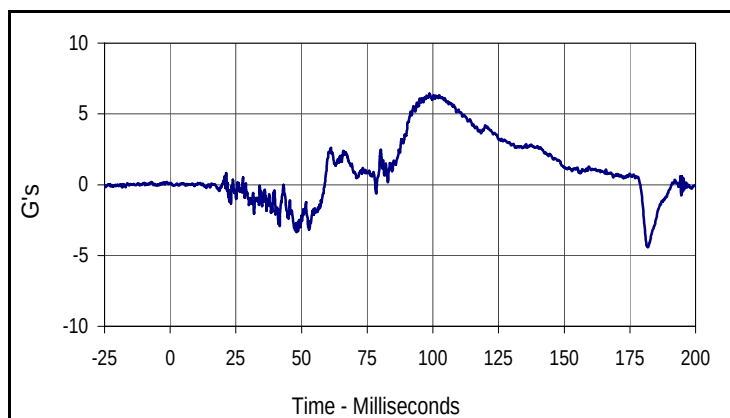
Vehicle Left Rear X Displacement
Vehicle Right Rear X
Vehicle Right Rear X Velocity
Vehicle Right Rear X Displacement
Vehicle Engine Top
Vehicle Engine Top Velocity
Vehicle Engine Top Displacement
Vehicle Engine Bottom
Vehicle Engine Bottom Velocity
Vehicle Engine Bottom Displacement
Vehicle Left Brake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

Test Vehicle: 2007 Audi Q7 5-Door MPV
 Test Program: 2007 NHTSA 35mph NCAP

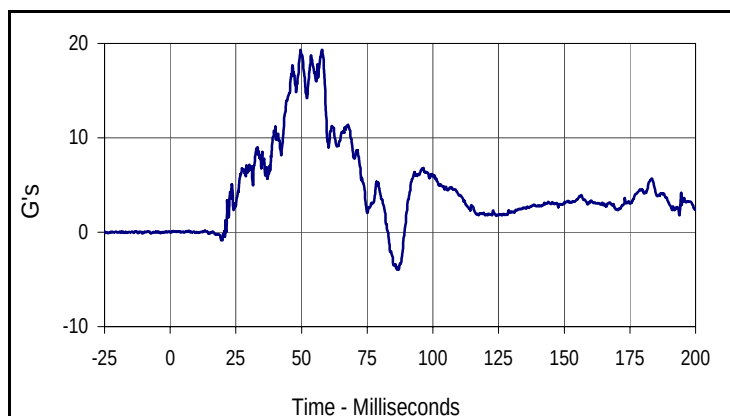
Test Date: 9/25/06
 NHTSA No.: V75801



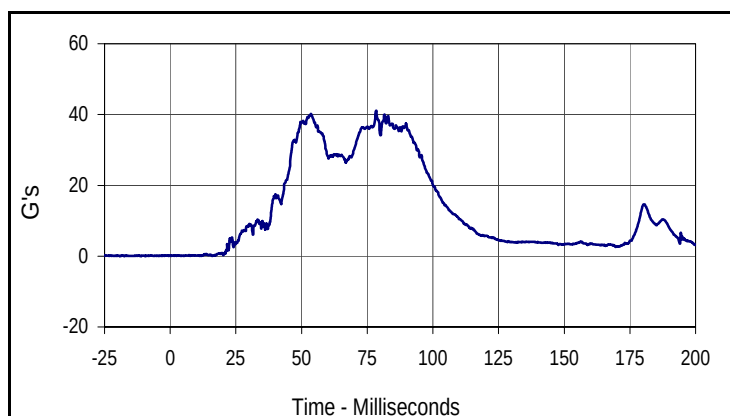
Curve Description			
Driver Head Primary X			
CURNO	Type	SAE Class	Units
001	FIL	1000	G's
Max	Time	Min	Time
13.9	180.2	-40.7	78.4



Curve Description			
Driver Head Primary Y			
CURNO	Type	SAE Class	Units
002	FIL	1000	G's
Max	Time	Min	Time
6.4	98.7	-4.4	181.9



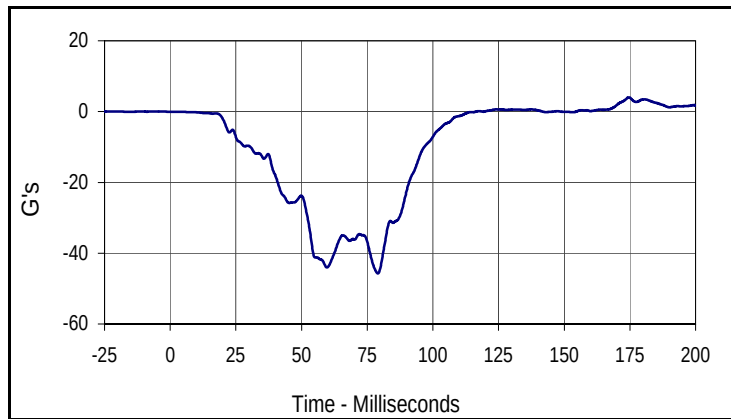
Curve Description			
Driver Head Primary Z			
CURNO	Type	SAE Class	Units
003	FIL	1000	G's
Max	Time	Min	Time
19.3	57.8	-4.0	87.0



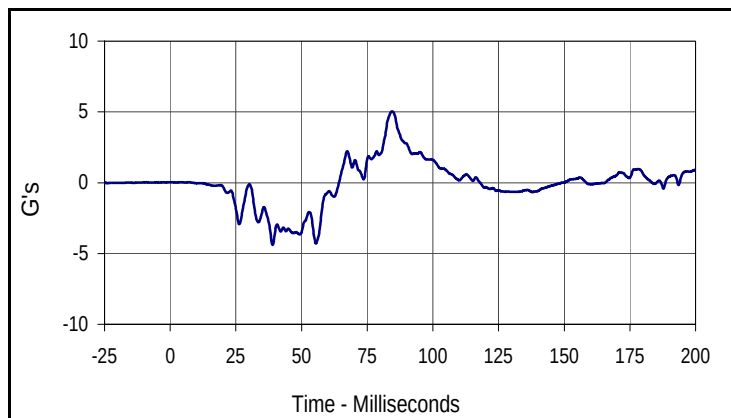
Curve Description			
Driver Head Resultant Primary			
CURNO	Type	SAE Class	Units
001	RES	1000	G's
Max	Time	Min	Time
41.1	78.4	0.0	16.0

Test Vehicle: 2007 Audi Q7 5-Door MPV
 Test Program: 2007 NHTSA 35mph NCAP

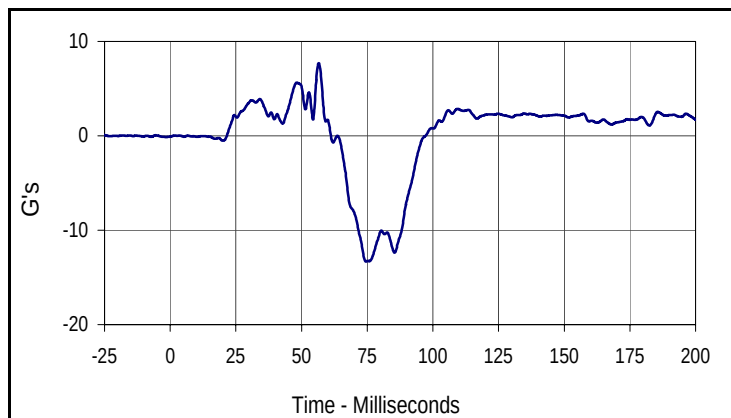
Test Date: 9/25/06
 NHTSA No.: V75801



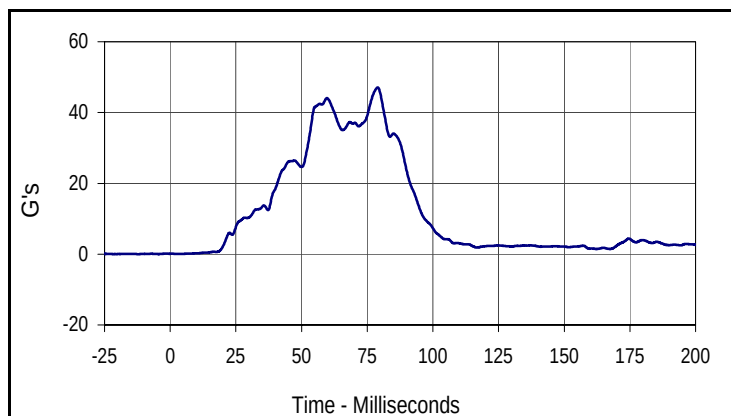
Curve Description			
Driver Chest Primary X			
CURNO	Type	SAE Class	Units
004	FIL	180	G's
Max	Time	Min	Time
4.0	174.6	-45.7	79.0



Curve Description			
Driver Chest Primary Y			
CURNO	Type	SAE Class	Units
005	FIL	180	G's
Max	Time	Min	Time
5.0	84.5	-4.4	39.0



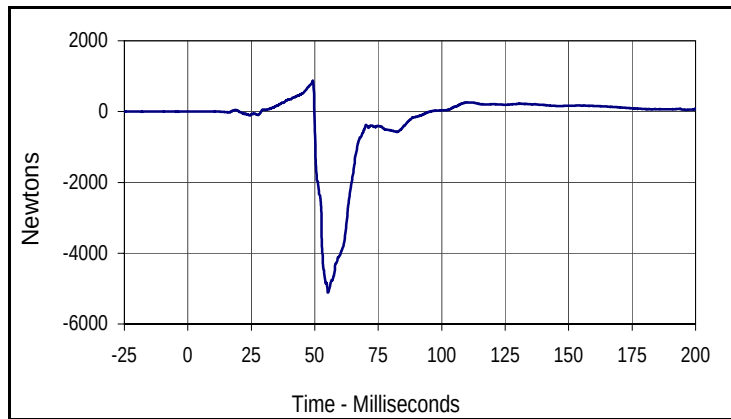
Curve Description			
Driver Chest Primary Z			
CURNO	Type	SAE Class	Units
006	FIL	180	G's
Max	Time	Min	Time
7.7	56.5	-13.3	74.5



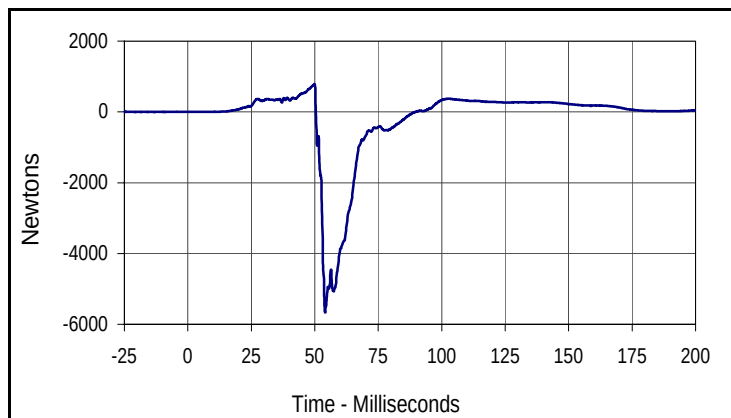
Curve Description			
Driver Chest Resultant Primary			
CURNO	Type	SAE Class	Units
004	RES	180	G's
Max	Time	Min	Time
47.1	79.0	0.1	4.3

Test Vehicle: 2007 Audi Q7 5-Door MPV
 Test Program: 2007 NHTSA 35mph NCAP

Test Date: 9/25/06
 NHTSA No.: V75801



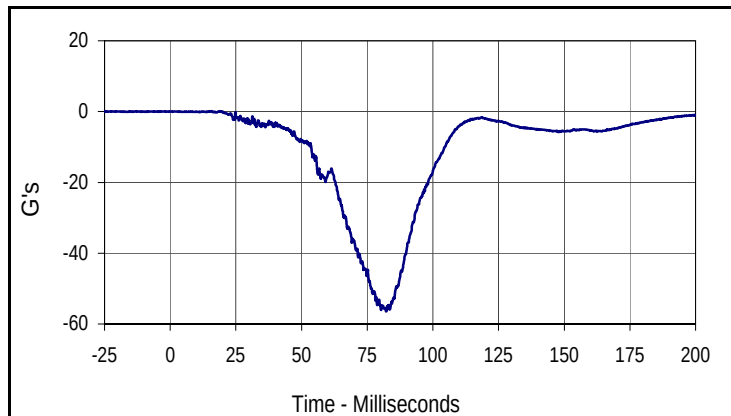
Curve Description			
Driver Left Femur Force Z			
CURNO	Type	SAE Class	Units
007	FIL	600	Newtons
Max	Time	Min	Time
873.6	49.3	-5117.8	55.2



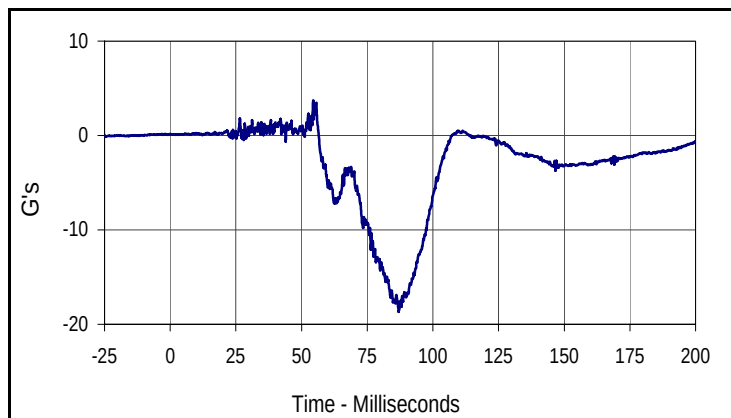
Curve Description			
Driver Right Femur Force Z			
CURNO	Type	SAE Class	Units
008	FIL	600	Newtons
Max	Time	Min	Time
792.4	49.9	-5665.6	54.0

Test Vehicle: 2007 Audi Q7 5-Door MPV
 Test Program: 2007 NHTSA 35mph NCAP

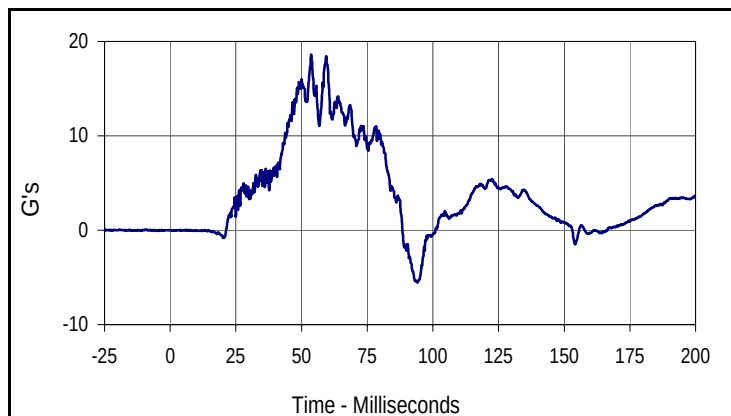
Test Date: 9/25/06
 NHTSA No.: V75801



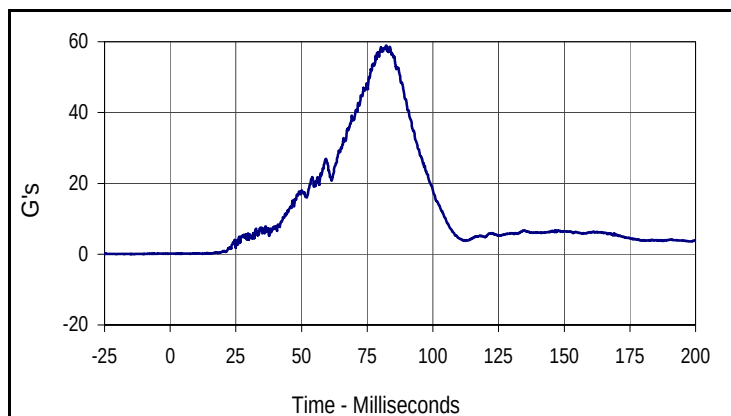
Curve Description			
Passenger Head Primary X			
CURNO	Type	SAE Class	Units
009	FIL	1000	G's
Max	Time	Min	Time
0.1	18.9	-56.4	82.2



Curve Description			
Passenger Head Primary Y			
CURNO	Type	SAE Class	Units
010	FIL	1000	G's
Max	Time	Min	Time
3.7	54.4	-18.7	87.0



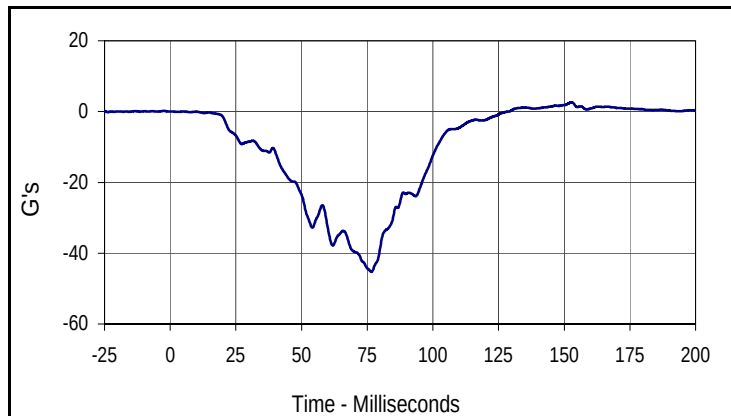
Curve Description			
Passenger Head Primary Z			
CURNO	Type	SAE Class	Units
011	FIL	1000	G's
Max	Time	Min	Time
18.6	53.7	-5.5	94.2



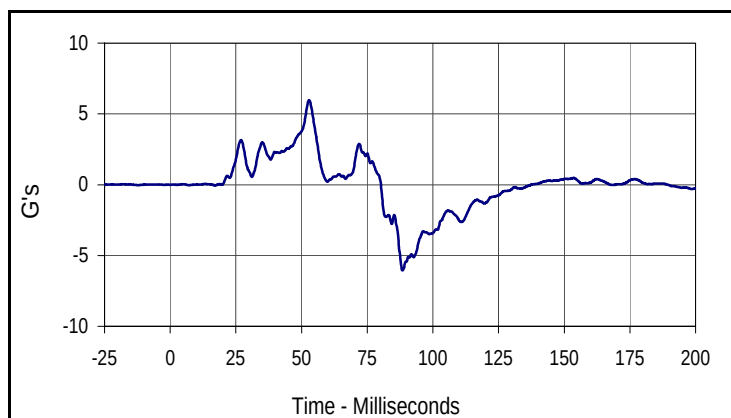
Curve Description			
Passenger Head Resultant Primary			
CURNO	Type	SAE Class	Units
009	RES	1000	G's
Max	Time	Min	Time
58.9	82.2	0.1	3.2

Test Vehicle: 2007 Audi Q7 5-Door MPV
 Test Program: 2007 NHTSA 35mph NCAP

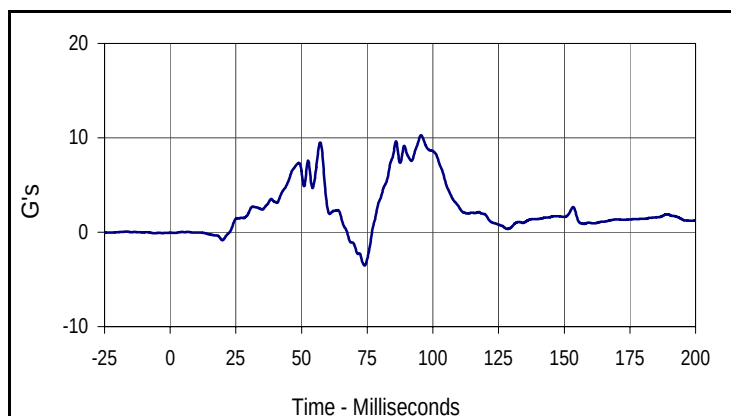
Test Date: 9/25/06
 NHTSA No.: V75801



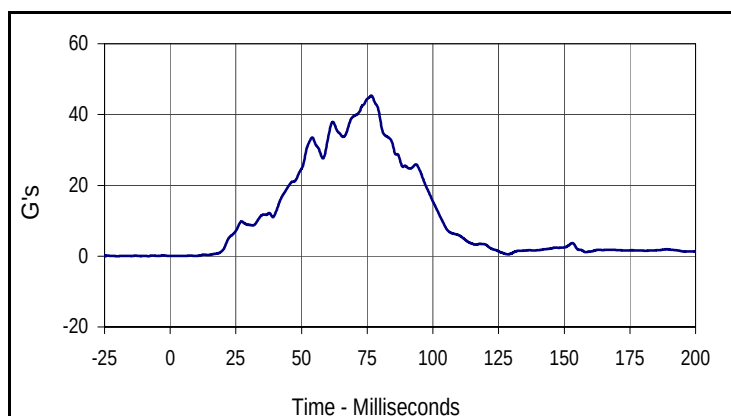
Curve Description			
Passenger Chest Primary X			
CURNO	Type	SAE Class	Units
012	FIL	180	G's
Max	Time	Min	Time
2.7	152.8	-45.3	76.6



Curve Description			
Passenger Chest Primary Y			
CURNO	Type	SAE Class	Units
013	FIL	180	G's
Max	Time	Min	Time
6.0	52.9	-6.0	88.4



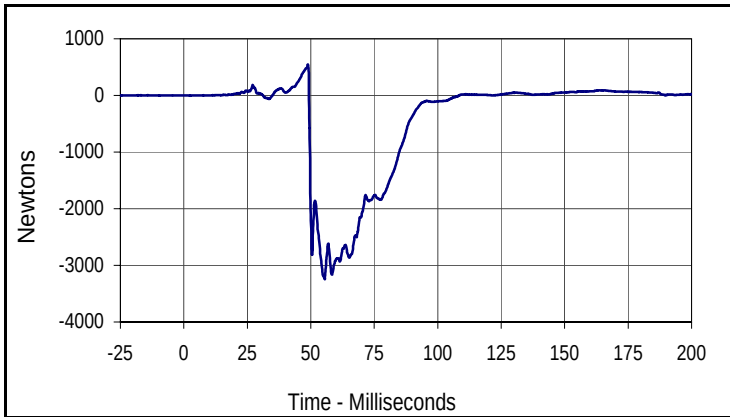
Curve Description			
Passenger Chest Primary Z			
CURNO	Type	SAE Class	Units
014	FIL	180	G's
Max	Time	Min	Time
10.3	95.5	-3.5	74.0



Curve Description			
Passenger Chest Resultant Primary			
CURNO	Type	SAE Class	Units
012	RES	180	G's
Max	Time	Min	Time
45.3	76.6	0.0	5.9

Test Vehicle: 2007 Audi Q7 5-Door MPV
 Test Program: 2007 NHTSA 35mph NCAP

Test Date: 9/25/06
 NHTSA No.: V75801



Curve Description			
Passenger Left Femur Force Z			
CURNO	Type	SAE Class	Units
015	FIL	600	Newtons
Max	Time	Min	Time
546.2	48.9	-3241.0	55.5



Curve Description			
Passenger Right Femur Force Z			
CURNO	Type	SAE Class	Units
016	FIL	600	Newtons
Max	Time	Min	Time
807.2	51.4	-3684.9	61.8

APPENDIX C
DUMMY CALIBRATION DATA

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

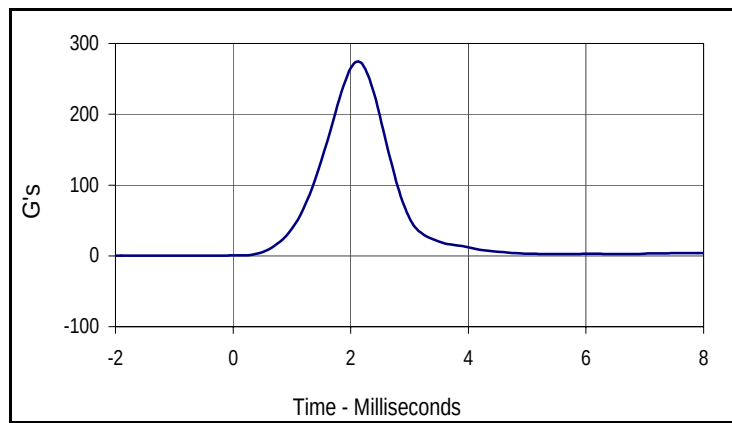
Test Date: 9/18/06

ATD Serial No.: 034

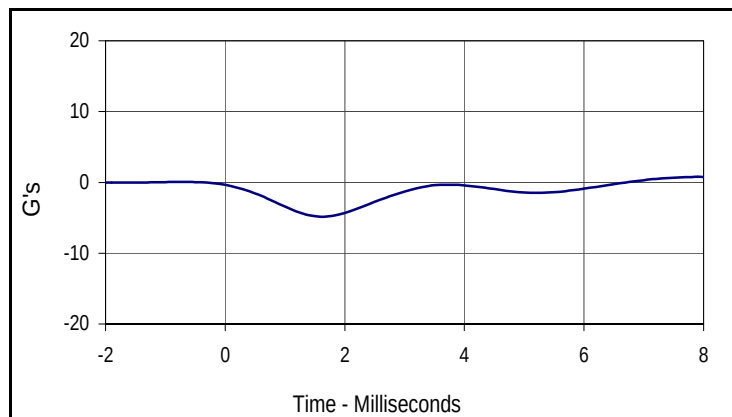
Test I.D.: HD9AH



Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.7	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Peak Resultant Acceleration	G's	225.0 to 275.0	274.4	Pass
Peak Lateral Acceleration	G's	≤15.0	4.9	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
274.4	2.1	0.5	-1.9



Curve Description			
Head Y			
CURNO	Type	SAE Class	Units
002	FIL	1000	G's
Max	Time	Min	Time
0.1	-0.7	-4.9	1.6

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

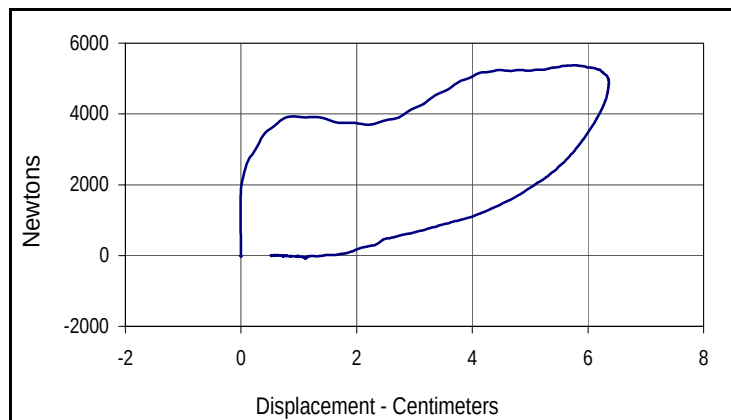
Test Date: 9/19/06

ATD Serial No.: 034

Test I.D.: CH9AI



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	6.73	Pass
Peak Probe Force	Newtons	5159 to 5893	5376	Pass
Peak Sternum Deflection	CM	6.35 to 7.26	6.36	Pass
Internal Hysteresis	%	69 to 85	75.8	Pass
Overall Test Results				Pass



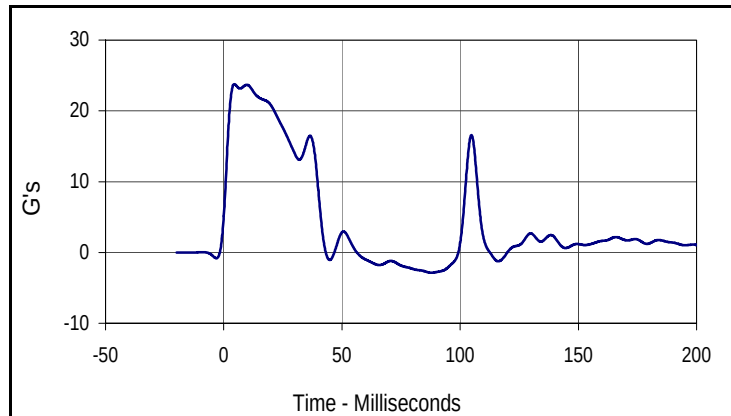
Curve Description			
Probe Force vs. Chest Deflection			
CURNO	Type	SAE Class	Hysteresis
001	FIL	180	75.8
Peak Probe Force		Peak Chest Deflection	
5376		6.36	

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

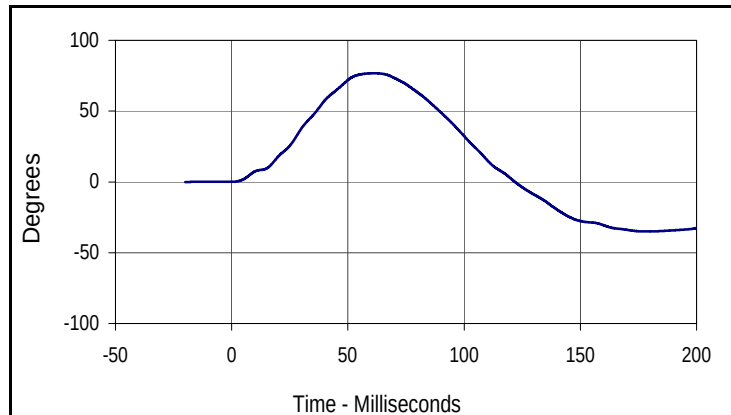
Test Date: 9/20/06
 Test I.D.: NF9AJ



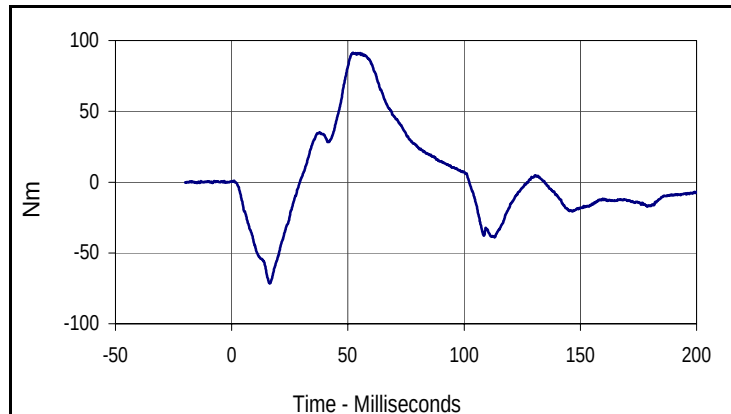
Tested Parameter		Units	Specification	Result	Pass/Fail
Laboratory Temperature		°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity		%	10 to 70	30	Pass
Pendulum Velocity		m/s	6.89 to 7.13	7.04	Pass
Pendulum Deceleration	10 Msec.	G's	22.5 to 27.5	23.7	Pass
	20 Msec.	G's	17.6 to 22.6	20.8	Pass
	30 Msec.	G's	12.5 to 18.5	14.0	Pass
Peak Pendulum Decel. after 30 Msec.		G's	≤ 29.0	16.6	Pass
Deceleration Decay, Time to Cross 5 G's		Msec.	34.0 to 42.0	41.1	Pass
Maximum "D" Plane Rotation	Max	Degrees	64.0 to 78.0	76.7	Pass
	Time	Msec.	57.0 to 64.0	60.8	Pass
"D" Plane Rotation Decay, Time To Zero Crossing		Msec.	113.0 to 128.0	121.9	Pass
Moment About Occ. Condyle	Max	Nm	84.1 to 108.5	91.3	Pass
	Time	Msec.	47.0 to 58.0	52.1	Pass
Positive Moment Decay, Time To Zero Crossing		Msec.	97.0 to 107.0	102.2	Pass
Overall Test Results				Pass	



Curve Description			
Pendulum Deceleration			
CURNO	Type	SAE Class	Units
001	FIL	60	G's
Max	Time	Min	Time
23.8	4.5	-2.9	87.9



Curve Description			
"D" Plane Rotation			
CURNO	Type	SAE Class	Units
003	FIL	60	Degrees
Max	Time	Min	Time
76.7	60.8	-35.0	178.8



Curve Description			
Moment About Occipital Condyle			
CURNO	Type	SAE Class	Units
004	FIL	600	Nm
Max	Time	Min	Time
91.3	52.1	-71.5	16.4

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

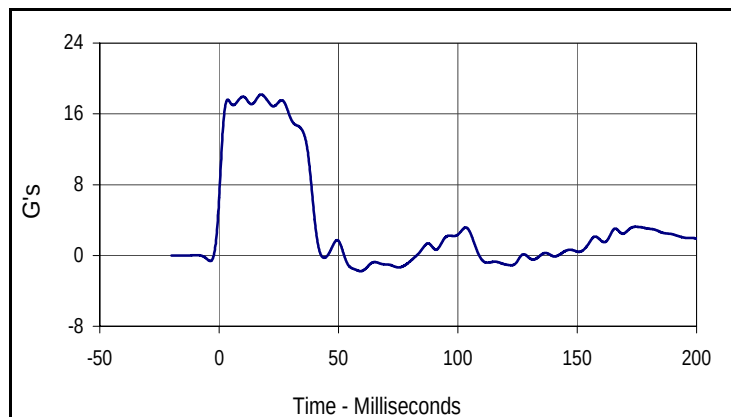
Test Date: 9/20/06

ATD Serial No.: 034

Test I.D.: NE9AK



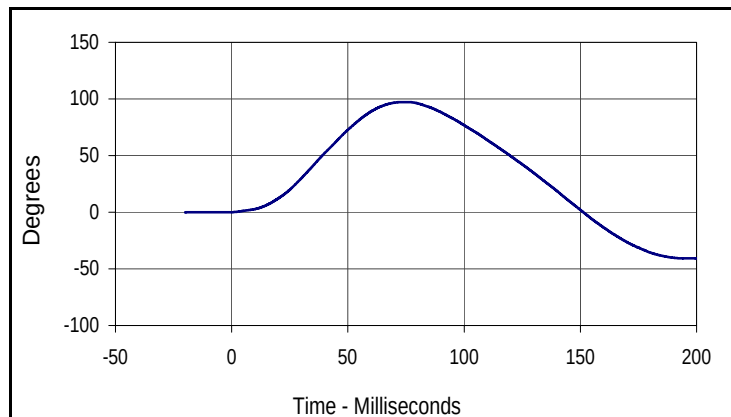
Tested Parameter		Units	Specification	Result	Pass/Fail
Laboratory Temperature		°C	20.6 to 22.2	20.6	Pass
Laboratory Relative Humidity		%	10 to 70	30	Pass
Pendulum Velocity		m/s	5.94 to 6.19	6.12	Pass
Pendulum Deceleration	10 Msec.	G's	17.2 to 21.2	17.9	Pass
	20 Msec.	G's	14.0 to 19.0	17.6	Pass
	30 Msec.	G's	11.0 to 16.0	15.5	Pass
Peak Pendulum Decel. after 30 Msec.		G's	≤ 22.0	15.5	Pass
Deceleration Decay, Time to Cross 5 G's		Msec.	38.0 to 46.0	39.7	Pass
Maximum "D" Plane Rotation	Max	Degrees	81.0 to 106.0	97.3	Pass
	Time	Msec.	72.0 to 82.0	74.6	Pass
"D" Plane Rotation Decay, Time To Zero Crossing		Msec.	147.0 to 174.0	151.3	Pass
Moment About Occ. Condyle	Max	Nm	-52.9 to- 79.9	-77.7	Pass
	Time	Msec.	65.0 to 79.0	66.7	Pass
Positive Moment Decay, Time To Zero Crossing		Msec.	120.0 to 148.0	140.2	Pass
Overall Test Results				Pass	



Curve Description

Pendulum Deceleration

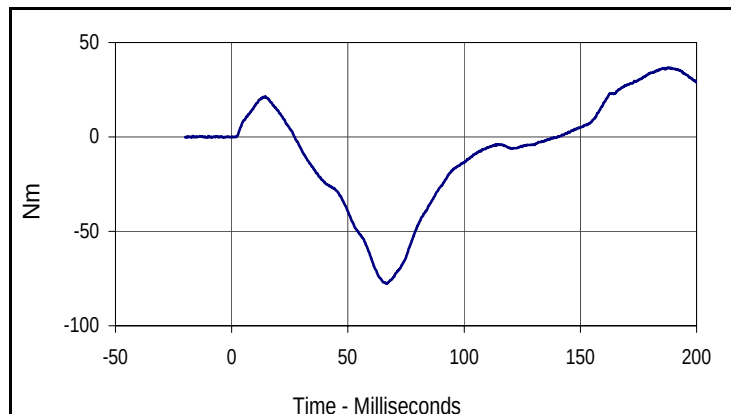
CURNO	Type	SAE Class	Units
001	FIL	60	G's
Max	Time	Min	Time
18.2	17.5	-1.8	59.2



Curve Description

"D" Plane Rotation

CURNO	Type	SAE Class	Units
003	FIL	60	Degrees
Max	Time	Min	Time
97.3	74.6	-40.7	197.6



Curve Description

Moment About Occipital Condyle

CURNO	Type	SAE Class	Units
004	FIL	600	Nm
Max	Time	Min	Time
36.7	188.1	-77.7	66.7

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

Test Date: 9/19/06

ATD Serial No.: 034

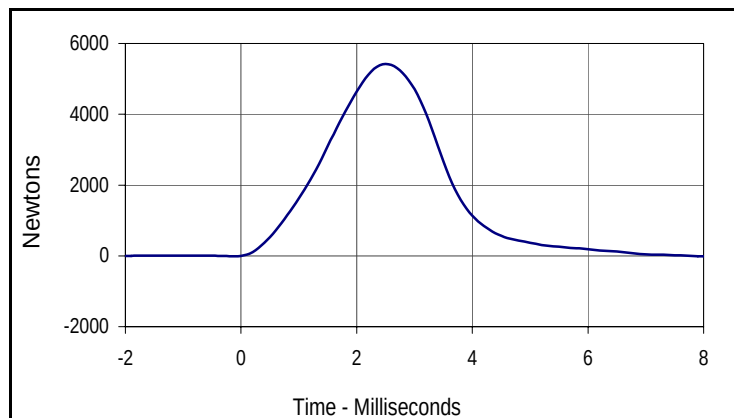
Test I.D.: LK9AL , RK9AM

**Left Knee**

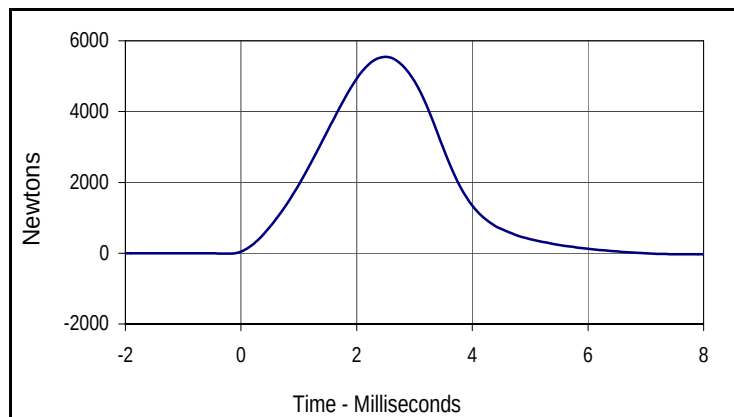
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.7	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Pendulum Velocity at T=0	m/sec	2.07 to 2.13	2.09	Pass
Peak Probe Force	Newtons	4715 to 5782	5425	Pass
Overall Test Results				Pass

Right Knee

Pendulum Velocity at T=0	m/sec	2.07 to 2.13	2.08	Pass
Peak Probe Force	Newtons	4715 to 5782	5546	Pass
Overall Test Results				Pass

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

CURNO	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Time	Min	Time
5425.0	2.5	-29.6	8.6

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

CURNO	Type	SAE Class	Units
002	FIL	600	Newtons
Max	Time	Min	Time
5546.2	2.5	-31.1	9.5

Test Program: Hybrid III 50th Percentile Male External Measurements

Test Date: 9/21/06

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	884	Pass
B - Shoulder pivot height	mm	505 to 521	511	Pass
C - "H" point height	mm	84 to 89	85	Pass
D - "H" point from seat back	mm	135 to 140	139	Pass
E - Shoulder pivot from back	mm	84 to 94	86	Pass
F - Thigh clearance	mm	140 to 155	150	Pass
G - Elbow back to wrist pivot	mm	290 to 305	300	Pass
H - Skull cap to back line	mm	41 to 46	44	Pass
I - Shoulder to elbow length	mm	330 to 345	335	Pass
J - Elbow rest height	mm	190 to 211	205	Pass
K - Buttock to knee length	mm	579 to 604	600	Pass
L - Popliteal length	mm	429 to 455	450	Pass
M - Knee pivot height	mm	485 to 500	489	Pass
N - Buttock popliteal length	mm	452 to 477	475	Pass
O - Chest depth	mm	213 to 229	225	Pass
P - Foot length	mm	251 to 267	255	Pass
V - Shoulder breadth	mm	422 to 437	435	Pass
W - Foot breadth	mm	91 to 107	102	Pass
Y - Chest circumference	mm	970 to 1001	985	Pass
Z - Waist circumference	mm	836 to 866	850	Pass
AA - Location for chest circumference	mm	429 to 434	431	Pass
BB - Location for waist circumference	mm	226 to 231	230	Pass
Overall Test Results				Pass

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

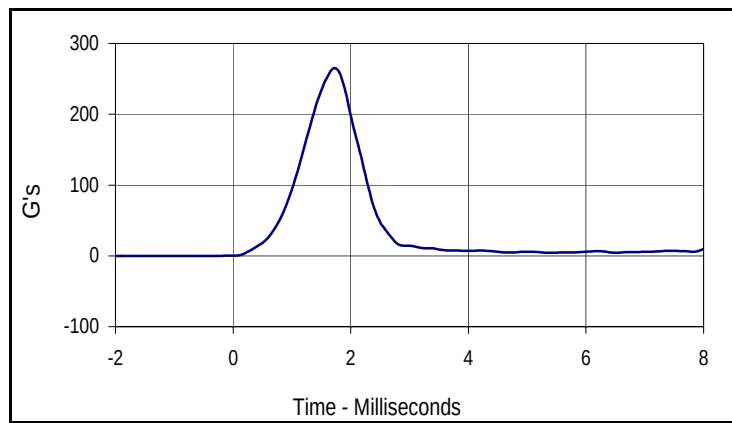
Test Date: 9/18/06

ATD Serial No.: 035

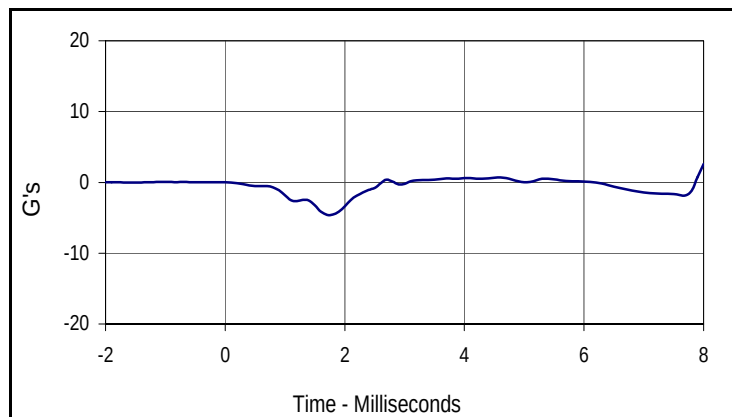
Test I.D.: HD9AA



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	264.5	Pass
Peak Lateral Acceleration	G's	≤15.0	4.6	Pass
Is Acceleration Unimodal?	Yes/No	Yes	Yes	Pass
Overall Test Results			Pass	



Curve Description			
Head Resultant			
CURNO	Type	SAE Class	Units
001	RES	1000	G's
Max	Time	Min	Time
264.5	1.7	0.0	-1.6



Curve Description			
Head Y			
CURNO	Type	SAE Class	Units
002	FIL	1000	G's
Max	Time	Min	Time
0.7	4.6	-4.6	1.7

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

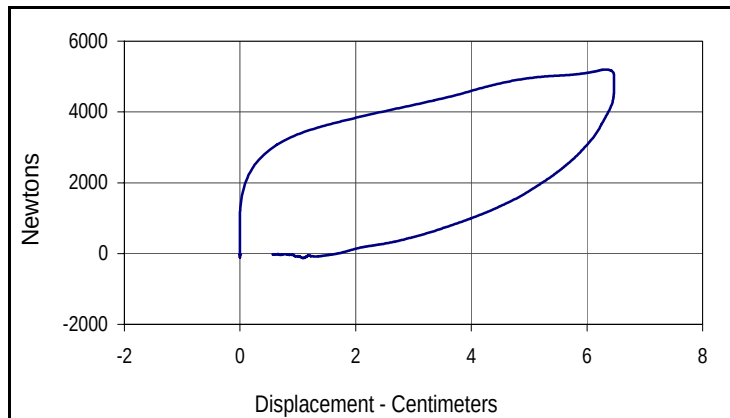
Test Date: 9/19/06

ATD Serial No.: 035

Test I.D.: CH9AB



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	6.66	Pass
Peak Probe Force	Newtons	5159 to 5893	5198	Pass
Peak Sternum Deflection	CM	6.35 to 7.26	6.47	Pass
Internal Hysteresis	%	69 to 85	76.2	Pass
Overall Test Results				Pass



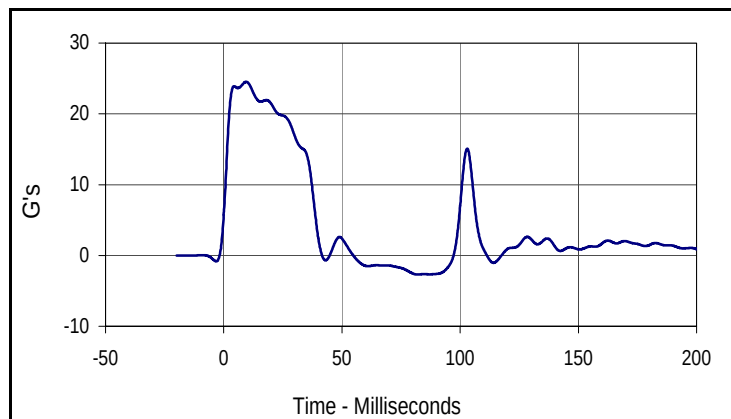
Curve Description			
Probe Force vs. Chest Deflection			
CURNO	Type	SAE Class	Hysteresis
001	FIL	180	76.2
Peak Probe Force		Peak Chest Deflection	
5198		6.47	

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

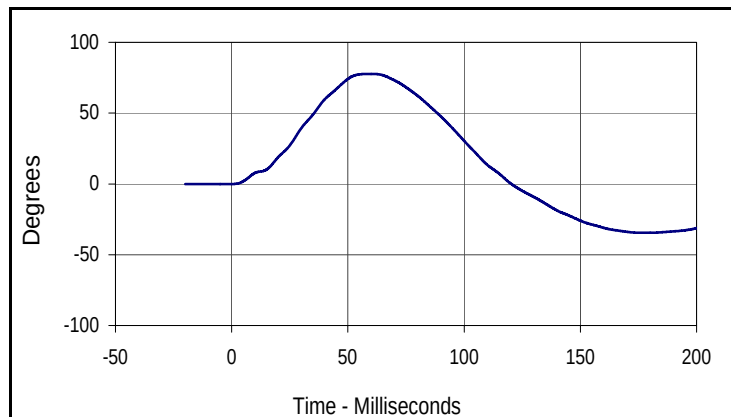
Test Date: 9/20/06
 Test I.D.: NF9AD



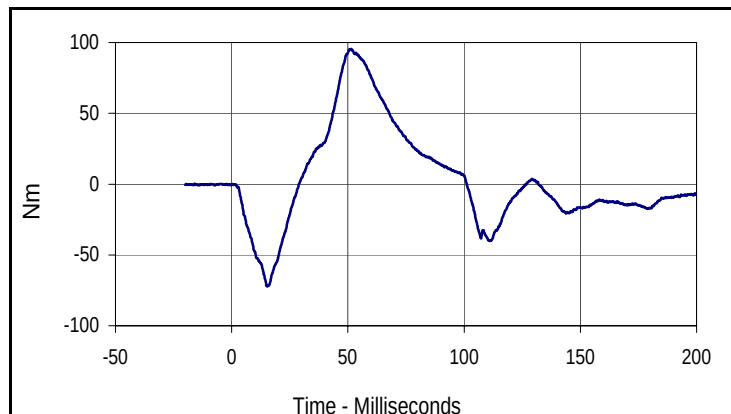
Tested Parameter		Units	Specification	Result	Pass/Fail
Laboratory Temperature		°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity		%	10 to 70	30	Pass
Pendulum Velocity		m/s	6.89 to 7.13	7.04	Pass
Pendulum Deceleration	10 Msec.	G's	22.5 to 27.5	24.5	Pass
	20 Msec.	G's	17.6 to 22.6	21.5	Pass
	30 Msec.	G's	12.5 to 18.5	16.9	Pass
Peak Pendulum Decel. after 30 Msec.		G's	≤ 29.0	16.9	Pass
Deceleration Decay, Time to Cross 5 G's		Msec.	34.0 to 42.0	39	Pass
Maximum "D" Plane Rotation	Max	Degrees	64.0 to 78.0	77.7	Pass
	Time	Msec.	57.0 to 64.0	59.3	Pass
"D" Plane Rotation Decay, Time To Zero Crossing		Msec.	113.0 to 128.0	120.3	Pass
Moment About Occ. Condyle	Max	Nm	84.1 to 108.5	95.5	Pass
	Time	Msec.	47.0 to 58.0	51.4	Pass
Positive Moment Decay, Time To Zero Crossing		Msec.	97.0 to 107.0	101.2	Pass
Overall Test Results				Pass	



Curve Description			
Pendulum Deceleration			
CURNO	Type	SAE Class	Units
001	FIL	60	G's
Max	Time	Min	Time
24.5	9.5	-2.7	82.1



Curve Description			
"D" Plane Rotation			
CURNO	Type	SAE Class	Units
003	FIL	60	Degrees
Max	Time	Min	Time
77.7	59.3	-34.6	177.8



Curve Description			
Moment About Occipital Condyle			
CURNO	Type	SAE Class	Units
004	FIL	600	Nm
Max	Time	Min	Time
95.5	51.4	-72.1	15.2

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

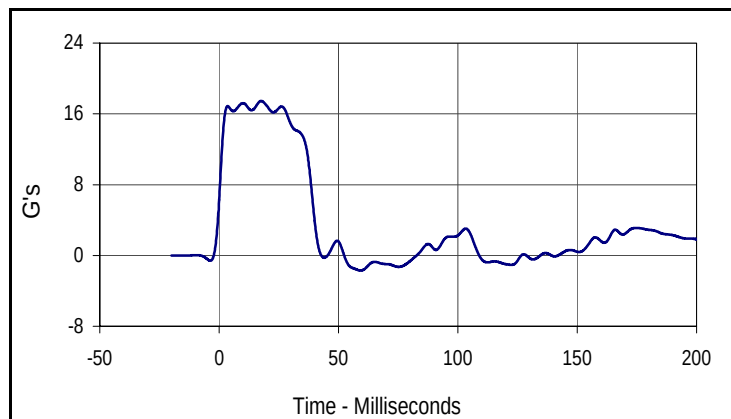
Test Date: 9/20/06

ATD Serial No.: 035

Test I.D.: NE9AE



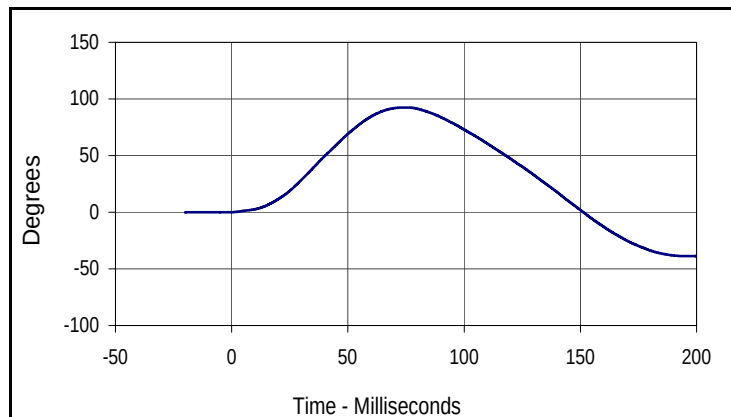
Tested Parameter		Units	Specification	Result	Pass/Fail
Laboratory Temperature		°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity		%	10 to 70	30	Pass
Pendulum Velocity		m/s	5.94 to 6.19	6.13	Pass
Pendulum Deceleration	10 Msec.	G's	17.2 to 21.2	17.2	Pass
	20 Msec.	G's	14.0 to 19.0	16.9	Pass
	30 Msec.	G's	11.0 to 16.0	14.8	Pass
Peak Pendulum Decel. after 30 Msec.		G's	≤ 22.0	14.8	Pass
Deceleration Decay, Time to Cross 5 G's		Msec.	38.0 to 46.0	39.6	Pass
Maximum "D" Plane Rotation	Max	Degrees	81.0 to 106.0	92.4	Pass
	Time	Msec.	72.0 to 82.0	74.6	Pass
"D" Plane Rotation Decay, Time To Zero Crossing		Msec.	147.0 to 174.0	151.3	Pass
Moment About Occ. Condyle	Max	Nm	-52.9 to- 79.9	-73.8	Pass
	Time	Msec.	65.0 to 79.0	66.7	Pass
Positive Moment Decay, Time To Zero Crossing		Msec.	120.0 to 148.0	140.2	Pass
Overall Test Results				Pass	



Curve Description

Pendulum Deceleration

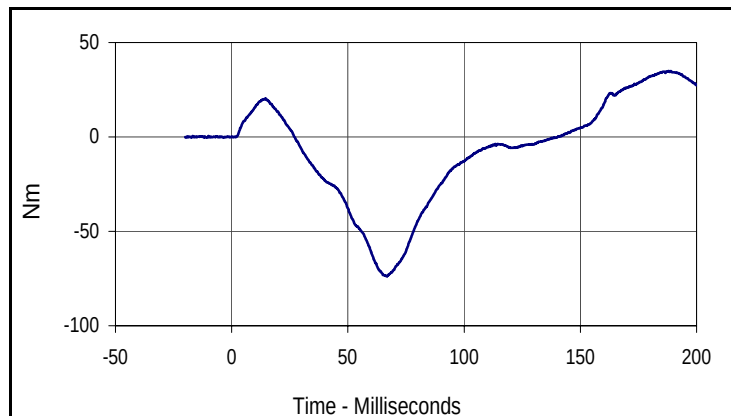
CURNO	Type	SAE Class	Units
001	FIL	60	G's
Max	Time	Min	Time
17.4	17.5	-1.7	59.2



Curve Description

"D" Plane Rotation

CURNO	Type	SAE Class	Units
003	FIL	60	Degrees
Max	Time	Min	Time
92.4	74.6	-38.7	197.6



Curve Description

Moment About Occipital Condyle

CURNO	Type	SAE Class	Units
004	FIL	600	Nm
Max	Time	Min	Time
34.9	188.1	-73.8	66.7

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

Test Date: 9/19/06

ATD Serial No.: 035

Test I.D.: LK9AG , RK9AF

**Left Knee**

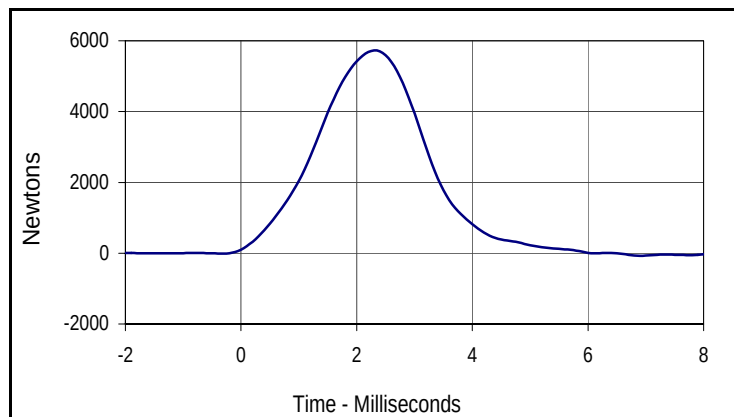
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Pendulum Velocity at T=0	m/sec	2.07 to 2.13	2.09	Pass
Peak Probe Force	Newtons	4715 to 5782	5691	Pass
Overall Test Results				Pass

Right Knee

Pendulum Velocity at T=0	m/sec	2.07 to 2.13	2.08	Pass
Peak Probe Force	Newtons	4715 to 5782	5724	Pass
Overall Test Results				Pass

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

CURNO	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Time	Min	Time
5691.0	2.5	-25.0	8.8

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

CURNO	Type	SAE Class	Units
002	FIL	600	Newtons
Max	Time	Min	Time
5724.4	2.3	-73.3	6.9

Test Program: Hybrid III 50th Percentile Male External Measurements

Test Date: 9/21/06

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	885	Pass
B - Shoulder pivot height	mm	505 to 521	512	Pass
C - "H" point height	mm	84 to 89	86	Pass
D - "H" point from seat back	mm	135 to 140	140	Pass
E - Shoulder pivot from back	mm	84 to 94	85	Pass
F - Thigh clearance	mm	140 to 155	144	Pass
G - Elbow back to wrist pivot	mm	290 to 305	301	Pass
H - Skull cap to back line	mm	41 to 46	43	Pass
I - Shoulder to elbow length	mm	330 to 345	336	Pass
J - Elbow rest height	mm	190 to 211	204	Pass
K - Buttock to knee length	mm	579 to 604	590	Pass
L - Popliteal length	mm	429 to 455	451	Pass
M - Knee pivot height	mm	485 to 500	490	Pass
N - Buttock popliteal length	mm	452 to 477	473	Pass
O - Chest depth	mm	213 to 229	221	Pass
P - Foot length	mm	251 to 267	259	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	989	Pass
Z - Waist circumference	mm	836 to 866	851	Pass
AA - Location for chest circumference	mm	429 to 434	430	Pass
BB - Location for waist circumference	mm	226 to 231	229	Pass
Overall Test Results				Pass

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

Test Date: 9/21/06
 Test I.D.: N/A



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

Comments on repair or replacement parts:

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

Test Date: 9/21/06
 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:
