REPORT NUMBER: TR-P29125-02-NC

MOVING BARRIER TO VEHICLE CRASH TESTING IN SUPPORT OF NHTSA FRONTAL OBLIQUE OFFSET PROGRAM

FMVSS NO. 214 MOVING BARRIER INTO LEFT FRONT OF A 2007 FORD TAURUS SE – 18% OFFSET-OBLIQUE 15°

NHTSA No: R70207

PREPARED BY:

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ADELANTO, CA 92301

DECEMBER 9, 2009

FINAL REPORT

PREPARED FOR:

U.S. DEPARTMENT OF TRANSPORTATION / RITA / VOLPE CENTER

55 BROADWAY / RVT-92

CAMBRIDGE, MA 02142-1093

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16. Abstract

A test was conducted in accordance with instructions outlined in Task Order DTRTV-T9001 in which a FMVSS 214 barrier moving at 109 km/h impacted a stationary 2007 Ford Taurus SE 4-Door Sedan. The Ford Taurus was positioned 15 degrees relative to the moving barrier and the barrier impaced 18 percent of the left side of the Ford Taurus. Data indicant of FMVSS 208, 212, 219 (partial), 301 and foot well intrusion performance was collected. The test was conducted at KARCO Engineering, LLC. Facility in Adelanto, California on December 9, 2009.

The impact velocity of the moving barrier was 110.3 km/h. The Ford Taurus was positioned at an angle of 15.3 degrees and the offset was 597 mm from the centerline of the vehicle. The Ford Taurus's maximum exterior post-test crush was 586 mm to the left of the vehicle centerline. The dummies Injury Assessment Values are as follows:

Measurement Description	Units	Driver ATD		Left Rear Passenger	
		Threshold	Result	Threshold	Result
Head Injury Criteria (HIC_{15})	N/A	700.0	93.7	700.0	201.4
3 ms Head Clip	g	80.0	35.3		
3 ms Thorax Clip	g	60.0	40.3		
3 ms Chest Clip	g			60.0	38.7
Neck Tension	N	2520	1036.2	2620	1327.7
Neck Compression	N	-3600	1008.9	-2520	-677.1
Left Femur Force	N	-10000	-10506.4	-6805	-705.8
Right Femur Force	N	-10000	-4991.3	-6805	-1009.4

17. Key Words
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SECTION 1
PURPOSE AND TEST PROCEDURE

1.1 PURPOSE

This 109 km/h (68 mph) test was conducted in support of the National Highway Traffic Safety Administration's (NHTSA) Frontal Oblique Offset Program, under contract number DTRT57-05-D30106. The purpose of this test is to evaluate vehicle and occupant responses in a frontal oblique offset crash test.

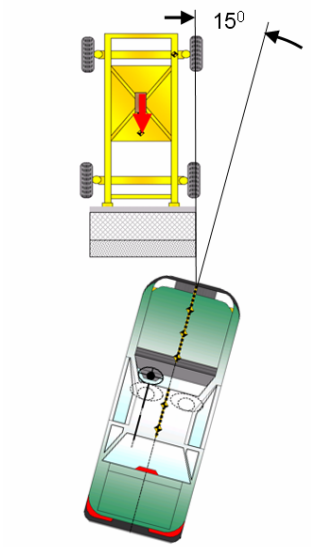
1.2 TEST PROCEDURE

This test was conducted in accordance with the instructions set forth by NHTSA/Volpe for a 15°, 18% offset moving barrier to vehicle impact, outlined in Task Order (TO) DTRTV-T9001. Data was obtained indicant of Federal Motor Vehicle Safety Standard (FMVSS) 208 – "Occupant Crash Protection", FMVSS 212 – "Windshield Mounting", FMVSS 219 (partial) – "Windshield Zone Intrusion", and FMVSS 301 – "Fuel System Integrity", in addition to the requirements of TO DTRTV-T90001.

SECTION 2
SUMMARY OF TEST

2.1 SUMMARY

A model year 2007 Ford Taurus SE 4-door sedan was impacted on the left front corner by an FMVSS 214 Moving Deformable Barrier. The test vehicle was stationary and positioned at a target angle of 15° and an offset of 18% to the line of forward motion of the MDB. The MDB was towed down the test track in a full forward direction, without any crabbing, and impacted the test vehicle at a velocity of 110.3 km/h (68.5 mph).



The test vehicle mass was 1740.0 kg (3836lbs), and the MDB mass was 1366.0 kg (3012 lbs). The test was conducted by KARCO Engineering, LLC. on December 9, 2009.

The test was documented by two (2) real time and thirteen (13) high-speed video cameras. Camera locations and other pertinent data are located in Data Sheet No. 18 of this report. Pre- and post-test photographs of the test vehicle, the MDB and the test setup were taken using a digital still camera. Photographic documentation of the test is presented in Appendix A of this report.

One 50% adult male THOR NT anthropomorphic test device (ATD) (Serial No.: 0006) was seated in the left front (driver's) seating position and one Part 572O 5% adult female ATD (Serial No.: 630) was seated in the left rear seating position. Both ATD's were positioned according to instructions specified in FMVSS 208, the driver for a Part 572E 50% adult male Hybrid III ATD and the rear passenger for a Part 572O 5% adult female Hybrid III ATD. The driver was restrained with a 3-point seat belt and a dual stage frontal airbag. The left rear passenger was restrained with a 3-point seat belt.

One-hundred ninety-two (192) channels of data from the two ATD's, test vehicle and MDB were collected using a TDAS data acquisition system. Appendix B contains dummy response data plots, as well as vehicle and MDB response data plots.

There was 44.2% total windshield retention, with 53.5% and 34.9% retention on the left and right sides respectively. There appeared to be no intrusion into the protected zone of the windshield during any portion of the impact test.

The maximum static crush of the exterior of the vehicle was 586 mm at DPD 1 to the left of the vehicle's centerline. The maximum crush of the underlying structure was 746 mm at DPD 1 of the bumper lip, to the left of the vehicle's centerline. The maximum static crush on the left side of the vehicle was 335 mm at level 4, 600 mm rearward of the front of the vehicle. Full vehicle measurements are presented in Section 3 of this report.

All four vehicle doors remained closed and latched during the test. All four doors were jammed shut as a result of the impact. The left front door skin fully separated from the door. The trunk remained closed and operational.

The driver ATD's visible contact points are as follows: the head contacted the airbag, A-pillar, visor, headliner, left shoulder and seatback; the chest contacted the airbag; both the left and right knees contacted the knee bolster.

The left rear passenger ATD's visible contact points are as follows: the head contacted the chest, C-Pillar and seatback; the upper torso contacted the chin, the knees had no apparent contact points.

OCCUPANT INJURY CRITERIA SUMMARY

Measurement Description	Units	Driver ATD		Passenger ATD	
		Threshold	Result	Threshold	Result
Head Injury Criteria (HIC_{15})	n/a	700	93.7	700	201.4
3 ms Head Clip	g	80	35.3		
3 ms Thorax Clip	g	60	40.3		
3 ms Chest Clip	g				38.7
Neck Tension	N	2,520	1036.2	2,620	1327.7
Neck Compression	N	3,600	1008.9	-2,520	-677.1
Left Femur Force	N	-10,000	-10506.4	-6,805	-705.8
Right Femur Force	N	-10,000	-4991.3	-6,805	-1009.4

SECTION 3

DATA SHEETS

Test Vehicle: 2007 Ford Taurus SE 4-Door Sedan NHTSA No.: R70207

Test Program: 68 mph, 15°, 18% Offset MDB to Vehicle Test Date: 12/09/09

CONVERSION FACTORS USED IN THE REPORT

Quantity	Typical Application	Std Units	Metric Unit	Multiply By
Mass	Vehicle Weight	lb	kg	0.4535
Linear Velocity	Impact Velocity	mile/h	km/h	1.609344
Length or Distance	Measurements	in	mm	25.4
Volume	Fuel Systems	gal	liter	3.785
Volume	Small Fluids	oz	mL	29.573
Pressure	Tire Pressures	lbf/in^2	kPa	7.0
Volume	Liquid	gal	liter	3.785
Temperature	General Use	^oF	^oC	=(tf -32)/1.8
Force	Dynamic Forces	lbf	N	4.448
Moment	Torque	lbf•ft	Nm	1.355

DATA SHEET NO. 1

CRASH TEST SUMMARY

Test Vehicle: 2007 Ford Taurus SE 4-Door Sedan NHTSA No.: R70207

Test Program: 68 mph, 15°, 18% Offset MDB to Vehicle Test Date: 12/09/09

PRIMARY IMPACT DATA

Measured Parameter	Units	Value
MDB Velocity at Impact	km/h	110.3
Impact Angle	°	15.3
MDB Test Weight	kg	1366.0
Vehicle Test Weight	kg	1740.0
MDB Maximum Static Crush	mm	321
Vehicle Maximum Static Crush	mm	747
Actual Vehicle Offset from Centerline	mm	597 [1]

MDB SPECIFICATIONS

Measurement Description	Units	Value
Overall Width of Framework Carriage	mm	1252
Overall Length, Including Honeycomb Face	mm	4115
Wheelbase of Framework Carraige	mm	2590
CG Location Aft of Front Axle	mm	1141

MAXIMUM STATIC CRUSH OF HONEYCOMB FACE

Vertical Location			From Centerline		Max. Crush
Row	Description	Height	Distance	Direction	
A	Center of Bumper	432	300	Left	286
B	Top of Bumper	533	800	Left	254
C	Mid Level	686	800	Left	323
D	Top of Stack	813	800	Left	325

DOOR OPENING AND SEAT TRACK DATA

Description	Driver Side	Passenger Side
Front Door Opening	Remained closed and latched, jammed shut, door skin fully separated	Remained closed and latched, jammed shut
Rear Door Opening	Remained closed and latched, jammed shut	Remained closed and latched, jammed shut
Seat Track Shift (mm)	34	
Seat Back Failure	No	No

[1] – Offset is measured from the left edge of the mdb to the centerline of the vehicle.

DATA SHEET NO. 1 … (CONTINUED)

CRASH TEST SUMMARY

Test Vehicle: 2007 Ford Taurus SE 4-Door Sedan NHTSA No.: R70207

Test Program: 68 mph, 15°, 18% Offset MDB to Vehicle Test Date: 12/09/09

STRUCTURAL OBSERVATIONS

Critical Areas of Performance	Observations
Pillar Performance	No separation occurred
Sill Separation	Interior sill separated from floorpan [2]
Windshield Damage	Broken, separated from frame [3]
Window Damage	Left front window broke in door
Other Notable Effects	None

TEST DUMMY DATA

Description	Driver	Rear Passenger
Dummy Type / Serial No.	THOR 50th NT, S/N 0006	P572O, 5% Adult Female, S/N: 630
Lower Legs	Left: 0039, Right: 0109	
Head Contact	Airbag, Left Shoulder, Chest, A-Pillar, Visor, Headliner	Chest, C-Pillar, Seat Back
Chest Contact	Airbag, Head	Head
Abdomen Contact	None	None
Left Knee Contact	Knee Bolster	None
Right Knee Contact	Knee Bolster	None

VIDEO COVERAGE

Camera Type	Number
Real Time	2
High-Speed Off-Board	8
High-Speed MDB On-Board	1
High-Speed Vehicle On-Board	4
Total	15

DATA CHANNELS

Description	Number
Driver ATD Sensors	119
Driver ATD Contact Switches	3
Rear Passenger ATD Sensors	36
Belt Assessment Sensors	4
MDB Structure Accelerometers	6
Vehicle Structure Accelerometers	22
Airbag Sensors	2
Total	192

[2] – See Figure 323 of Appendix A.

[3] – See Figures 318 through 322 of Appendix A.

DATA SHEET NO. 1 … (CONTINUED)

CRASH TEST SUMMARY

Test Vehicle: 2007 Ford Taurus SE 4-Door Sedan NHTSA No.: R70207

Test Program: 68 mph, 15°, 18% Offset MDB to Vehicle Test Date: 12/09/09

DATA CHANNEL ANOMALIES

Channel	Description	Axis	Problem
168	Vehicle Engine Bottom X	Z	Channel failed at 100.0 ms
169	Vehicle Left Brake Caliper X	X	Channel failed at 300.0 ms
170	Vehicle Right Brake Caliper X	X	Channel failed, no data
179	Vehicle Foot Rest X	X	Channel failed at 50.5 ms
180	Vehicle Foot Rest Y	Y	Channel failed at 50.5 ms
181	Vehicle Foot Rest Z	Z	Channel failed at 50.5 ms

DATA SHEET NO. 2

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/09/09

TEST VEHICLE INFORMATION AND OPTIONS

NHTSA No.	R70207	Rear Disc	No
Make	Ford	Anti-Lock Brakes	No
Model	Taurus SE	All Wheel Drive	No
Model Year	2007	Power Steering	Yes
Body Style	4-Door Sedan	Driver Front Airbag	Yes
VIN	1FAFP53U47A200648	Driver Side Torso Airbag	No
Color	Tan	Driver Side Head Airbag	No
Delivery Date	7/29/2009	Driver Curtain/Airbag	No
Odometer (Miles)	35,775	Rear Pass. Airbag	No
Dealer	Budget Rent-A-Car	Rear Pass. Side Airbag	No
Transmission	3-Speed Automatic	Rear Pass. Head Airbag	No
Final Drive	Front	Rear Pass. Curtain/Airbag	No
Type/No. Cyl.	V6	Pre-Tensioners	Yes
Engine Disp. (L)	3.0	Load Limiters	Yes
Engine Placement	Transverse	Bucket Seats	Yes
Roof Rack	No	Air Cond.	Yes
Sunroof/T-Top	No	AM/FM CD	Yes
Tinted Glass	No	Tilt Steering	Yes
Traction Control	No	Automatic Door Locks	Yes
Power Brakes	Yes	Power Windows	Yes
Front Disc	Yes	Power Seats	Yes

Does Owners Manual provide instructions to turn off automatic door locks.	No

DATA FROM CERTIFICATION LABEL

Manufactured By	Ford Motor Co.	GVWR (kg)	2,125
		GAWR Front (kg)	1,158
Date of Manufacture	Sep-06	GAWR Rear (kg)	967

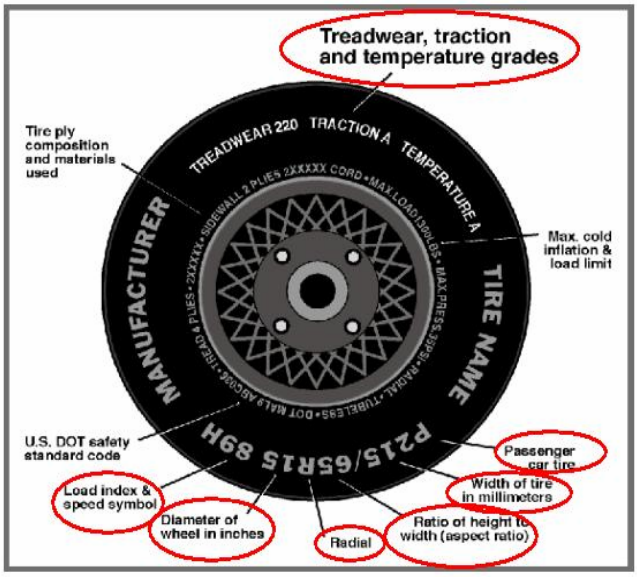
VEHICLE SEATING AND CAPACITY WEIGHT INFORMATION

Measured Parameter	Front	Rear	Third	Total
Type of Seats	Bucket	Bench		
Number of Occupants	3	3		6
Capacity Weight (VCW) (kg)				498.0
Cargo Weight (RCLW) (kg)				89.8

DATA SHEET NO. 2 … (CONTINUED)

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/09/09



TIRE DATA

Description	Front	Rear
Max. Tire Pressure	300	300
Cold Tire Pressure	210	210
Recommended Tire Size	P215/60R16	P215/60R16
Actual Tire Size	P215/60R16	P215/60R16
Tire Manufacturer	Continental	Continental
Tire Model	Touring Contact AS	Touring Contact AS
Load Range	670	670
Treadware Rating	520	520
Traction Rating	A	A
Temperature Rating	B	B
Tire Plies Sidewall	1 Polyester	1 Polyester
Tire Plies Body	1 Polyester, 2 Steel	1 Polyester, 2 Steel
Load Index/Speed Symbol	94T	94T
Tire Material	Polyester, Steel	Polyester, Steel
DOT Safety Code Left	LLX8 45LB 3206	LLX8 45LB 3206
DOT Safety Code Right	LLX8 45LB 3206	LLX8 45LB 3206

DATA SHEET NO. 2 … (CONTINUED)

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2007 Ford Taurus SE 4-Door Sedan NHTSA No.: R70207

Test Program: 68 mph, 15°, 18% Offset MDB to Vehicle Test Date: 12/09/09

TEST VEHICLE WEIGHTS

	Units	As Delivered Weights (UVW)			As Tested Weights (ATW)		
		Front Axle	Rear Axle	Total	Front Axle	Rear Axle	Total
Left	kg	473.5	270.5	744.0	514.5	380.5	895.0
Right	kg	484.5	274.5	759.0	473.0	372.0	845.0
Ratio	%	63.7	36.3	100.0	56.8	43.2	100.0
Total	kg	958.0	545.0	1503.0	987.5	752.5	1740.0

TARGET TEST WEIGHT CALCULATION

Measured Parameter	Units	Value
Total Delivered Weight (UVW)	kg	1503.0
Weight of 1 THOR 50th NT ATD	kg	101.0
Weight of 1 P572O ATD	kg	56.0
Rated Cargo/Luggage Wt (RCLW)	kg	89.8
Calculated Vehicle Target Wt (TVTW)	kg	1749.8 [4]

TEST VEHICLE ATTITUDES AND CG

	Units	LF	RF	LR	RR	CG Aft of Front Axle
As Delivered	mm	712	715	697	694	1001
As Tested	mm	709	721	632	629	1194

GENERAL TEST VEHICLE DATA

Vehicle Wheelbase (mm):	2761
Weight of Ballast Secured in Cargo Area (kg):	15.0
Weight of Items Removed (kg):	21.0
Vehicle Components Removed:	Spare Tire, Jack and Tools, Trunk Liner

FUEL SYSTEM DATA

Fuel System Capacity From Owner's Manual (L):	68.14
Actual Test Volume with Entire Fuel System Filled (L):	63.37
Test Fluid Type:	Stoddard Solvent
Kinematic Viscosity:	per ASTM D 484-71
Type of Vehicle Fuel Pump:	Electric

[4] – COTR requested Test Weight of 1733 kg.

DATA SHEET NO. 2 … (CONTINUED)

GENERAL TEST AND VEHICLE PARAMETER DATA

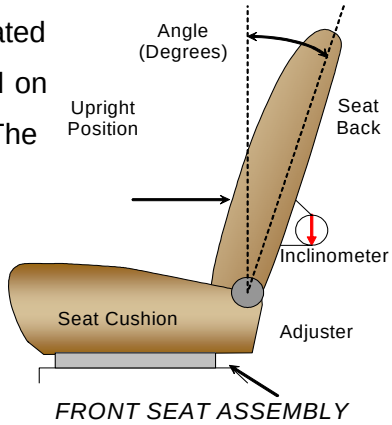
Test Vehicle: 2007 Ford Taurus SE 4-Door Sedan NHTSA No.: R70207

Test Program: 68 mph, 15°, 18% Offset MDB to Vehicle Test Date: 12/09/09

NOMINAL DESIGN RIDING POSITION

The driver seat back is positioned to the manufacturer's designated angle. The procedure is as follows: a digital inclinometer is placed on the seat back 330 mm (13 in.) above the seat back pivot point. The left rear passenger seat back is fixed.

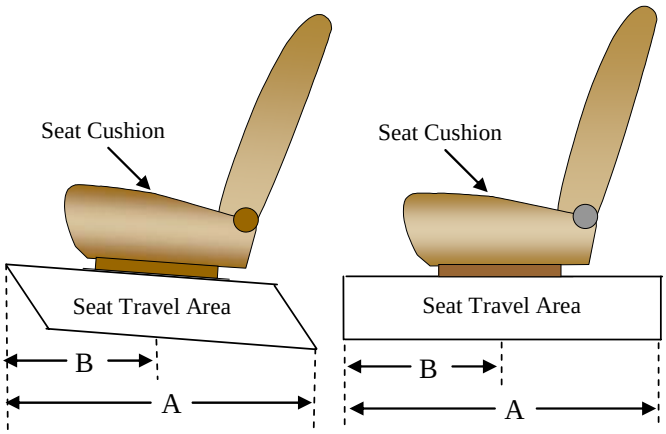
Description	Value
Driver w/Seated Dummy	28.3°
Left Rear Passenger w/Seated Dummy	Fixed



SEAT FORE/AFT POSITIONS

Total seat travel is measured from forward most possible position to the rearmost possible position. The driver seat is set to the longitudinal mid position, with the seat in the lowest possible height position. The left rear passenger seat is not adjustable horizontally or vertically.

Seating Position	Total Fore-Aft Travel	Test Position
Driver Seat	265 mm	133 mm
Left Rear Passenger Seat	Fixed	Fixed



SEAT BELT UPPER ANCHORAGE

The driver's seat belt upper anchorage is placed in the nominal design riding position for a 50th percentile adult male. The left rear passenger seat belt upper anchorage is fixed. Position number one (1) is considered the uppermost position.

Seating Position	Total No. of Positions	Test Position
Driver Seat	5	1
Left Rear Passenger Seat	Fixed	Fixed

DATA SHEET NO. 2 … (CONTINUED)

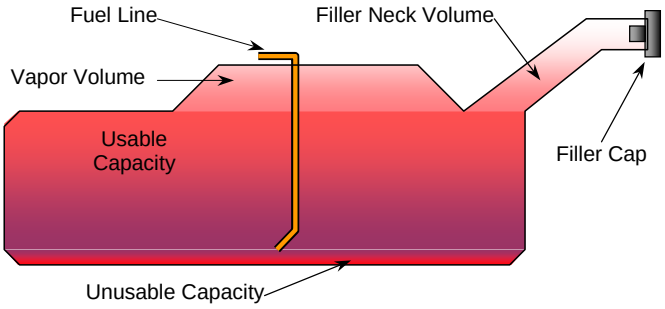
GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/09/09

FUEL TANK CAPACITY DATA

Description	Units	Value
Usable Capacity of "Standard Tank"	L	68.14
Usable Capacity of "Optional" Tank	L	
Allowable Capacity used for FMVSS 301	L	62.69 to 64.05
Actual Amount of Solvent used	L	63.37

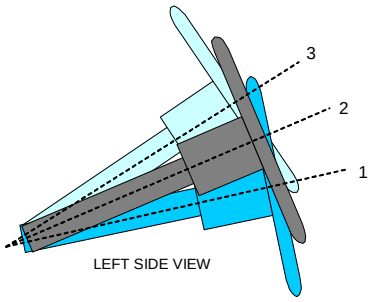
The test vehicle is equipped with an electric fuel pump. The fuel pump will operate when the key is in the "ON" position or when the engine is activated. The fuel filler door is located on the right rear fender. The standard fuel tank occupies the area under the rear seat.



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. The vehicle's steering column did not telescope.



STEERING COLUMN ASSEMBLY

STEERING COLUMN POSITIONS

Description	Tilt Angle (°)	Fore/Aft Position (mm)
Lowermost positon No. 1	12.9	
Geometric center position No. 2	20.7	
Uppermost position No. 3	28.8	

DATA SHEET NO. 3

POST-IMPACT OBSERVATIONS

Test Vehicle: 2007 Ford Taurus SE 4-Door Sedan NHTSA No.: R70207

Test Program: 68 mph, 15°, 18% Offset MDB to Vehicle Test Date: 12/09/09

SUPPLEMENTAL RESTRAINT SYSTEM INFORMATION

Restraint Type	Left Front (Driver)		Left Rear (Passenger)	
	Installed	Deployed	Installed	Deployed
Front Airbag	Yes	Yes	No	
Knee Airbag	No		No	
Side Torso Airbag	No		No	
Side Head Airbag	No		No	
Curtain Airbag	No		No	
Pre-Tensioners	Yes	Yes	No	
Load Limiters	Yes	Yes	No	

MBD IMPACT DATA

Measurement Description	Units	Value
Horizontal Offset from Target	mm	+33 (Left)
Vertical Offset from Target	mm	+13 (Up)
Impact Angle	°	15.3

VEHICLE STATIC CRUSH

Measured Parameter	Units	Value
Left Side	mm	611
Centerline	mm	254
Right Side	mm	-2

DATA SHEET NO. 4

OCCUPANT INJURY ASSESSMENT DATA

Test Vehicle: 2007 Ford Taurus SE 4-Door Sedan NHTSA No.: R70207

Test Program: 68 mph, 15°, 18% Offset MDB to Vehicle Test Date: 12/09/09

DRIVER ANTHROPOMORPHIC TEST DEVICE

Location	Metric	Description	SAE Filter Class	Max	Min
Head	Alpha-x	Angular acceleration (rad/sec^2)	simon	1241.2	-2034.2
	Alpha-y	Angular acceleration (rad/sec^2)	simon	1142.0	-1423.4
	Alpha-z	Angular acceleration (rad/sec^2)	simon	3944.4	-1651.2
	Alpha-res	Angular acceleration - resultant (rad/sec^2)	simon	3989.5	
	Wx	Angular velocity (rad/sec)	simon	20.8	-19.9
	Wy	Angular velocity (rad/sec)	simon	15.9	-16.8
	Wz	Angular velocity (rad/sec)	simon	26.6	-7.7
	Wres	Angular velocity - resultant (rad/sec)	simon	30.4	
	HIC36	36 ms clip	1000	114.9	
	HIC15	15 ms clip	1000	93.7	
	SFC	Skull fracture correlate	simon	33.0	
	CSDM	Cumulative strain (Tolerance = 0.05)	simon	1.0	
	CSDM	Cumulative strain (Tolerance = 0.10)	simon	0.5	
	CSDM	Cumulative strain (Tolerance = 0.15)	simon	0.1	
	Head CG G's	Head resultant CG acceleration, 3 ms clip (g's)	1000	35.3	
Neck	Fx at OC	UNLC Fx transferred to OC, neck system (N)	1000	135.9	-580.5
	Fz	UNLC Fz, neck system Tension (N)	1000	1431.7	-228.1
	Fz	UNLC Fz, neck system Compression (N)	1000	1431.7	-228.1
	My at OC	UNLC My transferred to OC, neck system Flexion (N-m)	FX 1000, MY 600	3.5	-12.4
	My at OC	UNLC My transferred to OC, neck system Extension (N-m)	FX 1000, MY 600	3.5	-12.4
	Fx_OC	On head acting through total neck section, (N)	1000	954.1	-407.8
	Fy_OC	On head acting through total neck section, (N)	1000	703.2	-144.7
	Fz_OC	On head acting through total neck section, (N)	1000	226.8	-1421.2
	Mx_OC	On head acting through total neck section, (Nm)	600	29.2	-60.9
	My_OC	On head acting through total neck section, (Nm)	600	4.7	-18.2
	Mz_OC	On head acting through total neck section, (Nm)	600	18.4	-16.0
	Fx_head	On head acting through O.C. joint only (N)	1000	533.5	-148.4
	Fz_head	On head acting through O.C. joint only (N)	1000	386.3	-1374.8
	My_head	On head acting through O.C. joint only (Nm)	600	3.5	-12.4

DATA SHEET NO. 4 … (CONTINUED)

OCCUPANT INJURY ASSESSMENT DATA

Test Vehicle: 2007 Ford Taurus SE 4-Door Sedan NHTSA No.: R70207

Test Program: 68 mph, 15°, 18% Offset MDB to Vehicle Test Date: 12/09/09

DRIVER ANTHROPOMORPHIC TEST DEVICE … (CONTINUED)

Location	Metric	Description	SAE Filter Class	Max	Min
Chest	UR x	Upper Crux x-defl , Right (mm)	180	0.2	-27.0
	UR y	Upper Crux y-defl , Right (mm)	180	1.1	-19.7
	UR z	Upper Crux x-defl , Right (mm)	180	16.3	-3.1
	UR d	Upper Crux "d" displacement , Right (mm)	180	0.2	-27.0
	UL x	Upper Crux x-defl , Left (mm)	180	2.1	-12.3
	UL y	Upper Crux y-defl , Left (mm)	180	1.3	-20.6
	UL z	Upper Crux x-defl , Left (mm)	180	17.2	-0.1
	UL d	Upper Crux "d" displacement , Left (mm)	180	2.9	-7.7
	LR x	Lower Crux x-defl , Right (mm)	180	10.2	-8.3
	LR y	Lower Crux y-defl , Right (mm)	180	2.8	-4.4
	LR z	Lower Crux x-defl , Right (mm)	180	1.6	-16.3
	LR d	Lower Crux "d" displacement , Right (mm)	180	2.0	-15.4
	LL x	Lower Crux x-defl , Left (mm)	180	8.4	-0.5
	LL y	Lower Crux y-defl , Left (mm)	180	7.5	-4.2
	LL z	Lower Crux x-defl , Left (mm)	180	13.2	-8.2
	LL d	Lower Crux "d" displacement , Left (mm)	180	9.0	-5.6
	Chest CG G's	Chest CG acceleration, 3 ms clip, (G's)	180	39.5	
Abdomen	Up x	Max upper string pot (mm)	180	4.9	-2.8
	Up V*C	Upper viscous criteria	180	0.0	
	LR x	Lower right x-deflection (mm)	180	0.0	-38.6
	LR y	Lower right y-deflection (mm)	180	8.4	-3.2
	LR z	Lower right z-deflection (mm)	180	7.2	-2.3
	LR V*C	Right viscous criterion based on x-deflection	180	2.6	
	LL x	Lower left x-deflection (mm)	180	0.2	-30.8
	LL y	Lower left y-deflection (mm)	180	8.9	-3.6
	LL z	Lower left z-deflection (mm)	180	8.1	-6.2
	LL V*C	Left viscous criterion based on x-deflection	180	1.2	
Pelvis	CG res.	Pelvis cg resultant acceleration (G)	1000	86.2	
Acetabulum	R Fx	Right Fx force (N)	600	663.1	-2473.1
	R Fy	Right Fy force (N)	600	2055.9	-297.9
	R Fz	Right Fz force (N)	600	1113.2	-521.0
	R Rres.	Resultant of Fx, Fy, Fz (N)	600	2675.2	
	L Fx	Left Fx force (N)	600	513.4	-5511.3
	L Fy	Left Fy force (N)	600	1078.7	-1000.7
	L Fz	Left Fz force (N)	600	3221.5	-128.0
	L Rres.	Resultant of Fx, Fy, Fz (N)	600	6386.9	

DATA SHEET NO. 4 … (CONTINUED)

OCCUPANT INJURY ASSESSMENT DATA

Test Vehicle: 2007 Ford Taurus SE 4-Door Sedan NHTSA No.: R70207

Test Program: 68 mph, 15°, 18% Offset MDB to Vehicle Test Date: 12/09/09

DRIVER ANTHROPOMORPHIC TEST DEVICE … (CONTINUED)

Location	Metric	Description	SAE Filter Class	Max	Min
Femur	R Fx	Right Fz force (N)	600	211.6	-4991.3
	R Mx	Right Mx moment (Nm)	600	42.6	-147.4
	R My	Right My moment (Nm)	600	58.5	-51.3
	R Mres	Resultant of Mx and My only (not Mz) (Nm)	600	147.7	
	L Fx	Left Fz force (N)	600	445.2	-10506.4
	L Mx	Left Mx moment (Nm)	600	36.3	-183.7
	L My	Left My moment (Nm)	600	66.6	-197.5
	L Mres	Resultant of Mx and My only (not Mz) (Nm)	600	198.1	
Knee	R knee	Knee displacement (mm)	180	0.6	-9.1
	L knee	Knee displacement (mm)	180	0.0	-7.4
Tibia	RU Fz	Right upper axial force (N)	600	349.7	-2193.8
	RL Fz	Right lower axial force (N)	600	32.6	-4082.6
	RU My	Right upper bending moment (Nm)	600	24.1	-115.1
	RL My	Right lower bending moment (Nm)	600	13.8	-85.7
	RU Index	Right upper tibia index	600	1.3	
	RL Index	Right lower tibia index	600	2.0	
	LU Fz	Left upper axial force (N)	600	2419.4	-661.1
	LL Fz	Left lower axial force (N)	600	1932.0	-2862.4
	LU My	Left upper bending moment (Nm)	600	139.2	-39.7
	LL My	Left lower bending moment (Nm)	600	75.4	-36.1
	LU Index	Left upper tibia index	600	0.7	
	LL Index	Left lower tibia index	600	0.8	
Ankle	R ankle Fx	Ankle X Force (N)	600	361.2	-797.3
	R ankle Fy	Ankle Y Force (N)	600	1916.4	-756.2
	R ankle Fz	Ankle Z Force (N)	600	32.3	-3906.4
	R ankle Mx	Ankle Mx Moment (Nm)	180	13.3	-234.5
	R ankle My	Ankle My Moment (Nm)	180	92.1	-18.1
	R inversion	Rotation about ankle X-axis, subtalar joint (deg)	180	-10.3	-47.3
	R dors	Rotation about ankle Y-axis joint (deg)	180	26.8	-5.8
	L ankle Fx	Ankle X Force (N)	600	791.3	-1079.7
	L ankle Fy	Ankle Y Force (N)	600	1320.3	-1154.1
	L ankle Fz	Ankle Z Force (N)	600	1866.0	-2621.5
	L ankle Mx	Ankle Mx Moment (Nm)	600	19.4	-178.6
	L ankle My	Ankle My Moment (Nm)	600	120.4	-62.7
	L inversion	Rotation about ankle X-axis, subtalar joint (deg)	180	0.1	-34.6
	L dors	Rotation about ankle Y-axis joint (deg)	180	36.1	-26.1

DATA SHEET NO. 4 … (CONTINUED)

OCCUPANT INJURY ASSESSMENT DATA

Test Vehicle: 2007 Ford Taurus SE 4-Door Sedan NHTSA No.: R70207

Test Program: 68 mph, 15°, 18% Offset MDB to Vehicle Test Date: 12/09/09

Description	Axis	Units	Max	Time (ms)	Min	Time (ms)
Driver Head CG	X	g	2.6	283.1	-35.0	83.6
Driver Head CG	Y	g	17.6	147.3	-6.3	76.4
Driver Head CG	Z	g	18.1	110.5	-0.4	21.5
Driver Top Head Array	X	g	5.2	279.9	-40.0	82.9
Driver Top Head Array	Y	g	25.6	146.4	-16.9	78.8
Driver Left Side Head Array	X	g	3.5	270.9	-37.5	75.9
Driver Left Side Head Array	Z	g	24.7	102.3	-4.2	155.5
Driver Rear Head Array	Y	g	21.4	119.3	-15.9	83.5
Driver Rear Head Array	Z	g	24.5	110.5	-1.3	156.2
Driver Head CG Redundant	X	g	2.4	282.1	-34.4	84.7
Driver Head CG Redundant	Y	g	17.8	136.4	-7.8	74.1
Driver Head CG Redundant	Z	g	18.9	110.4	-0.4	12.7
Driver Upper Neck Force	X	N	135.9	241.2	-580.5	137.3
Driver Upper Neck Force	Y	N	703.5	137.0	-144.9	281.2
Driver Upper Neck Force	Z	N	1431.7	82.2	-228.1	135.7
Driver Upper Neck Moment	X	Nm	76.0	146.2	-19.0	78.5
Driver Upper Neck Moment	Y	Nm	15.1	130.9	-7.5	274.1
Driver Upper Neck Moment	Z	Nm	6.5	79.7	-19.4	108.1
Driver Lower Neck Force	X	N	1275.4	86.1	-139.1	57.2
Driver Lower Neck Force	Y	N	44.9	38.7	-1175.7	93.2
Driver Lower Neck Force	Z	N	1036.2	71.9	-1008.9	136.7
Driver Lower Neck Moment	X	Nm	57.8	147.0	-46.8	272.3
Driver Lower Neck Moment	Y	Nm	48.0	150.3	-52.7	88.5
Driver Lower Neck Moment	Z	Nm	10.1	88.8	-12.8	111.4
Driver Front Neck Spring Force		N	250.1	278.4	-54.8	74.5
Driver Rear Neck Spring Force		N	470.9	136.4	-120.8	294.1
Driver Occipital Condyle Rotation		°	0.5	85.1	-4.7	185.9
Driver Upper Spine T1	X	g	8.8	123.5	-44.6	87.5
Driver Upper Spine T1	Y	g	27.3	96.7	-13.4	80.9
Driver Upper Spine T1	Z	g	10.1	75.0	-14.5	101.0
Driver Thorax	X	g	6.6	120.9	-36.9	84.5
Driver Thorax	Y	g	26.2	101.3	-5.2	76.6
Driver Thorax	Z	g	3.6	99.9	-19.5	84.2

DATA SHEET NO. 4 … (CONTINUED)

OCCUPANT INJURY ASSESSMENT DATA

Test Vehicle: 2007 Ford Taurus SE 4-Door Sedan NHTSA No.: R70207

Test Program: 68 mph, 15°, 18% Offset MDB to Vehicle Test Date: 12/09/09

Description	Axis	Units	Max	Time (ms)	Min	Time (ms)
Driver Lower Spine T12	X	g	7.9	93.4	-38.2	76.6
Driver Lower Spine T12	Y	g	26.4	103.7	-9.9	57.8
Driver Lower Spine T12	Z	g	4.3	96.8	-19.1	83.6
Driver Upper Left CRUX Base Rotation		°	147.6	152.7	138.3	8.2
Driver Upper Left CRUX Middle Rotation		°	198.3	89.9	181.6	131.5
Driver Upper Left CRUX Elbow Rotation		°	159.2	141.5	145.5	94.0
Driver Lower Left CRUX Base Rotation		°	160.6	69.3	155.3	106.2
Driver Lower Left CRUX Middle Rotation		°	144.3	9.3	138.3	132.4
Driver Lower Left CRUX Elbow Rotation		°	130.0	94.6	113.5	159.5
Driver Upper Right CRUX Base Rotation		°	177.3	298.4	166.9	113.3
Driver Upper Right CRUX Middle Rotation		°	123.0	80.2	106.5	108.9
Driver Upper Right CRUX Elbow Rotation		°	164.1	30.0	134.0	77.2
Driver Lower Right CRUX Base Rotation		°	187.0	109.0	179.4	7.8
Driver Lower Right CRUX Middle Rotation		°	278.1	99.6	266.4	67.8
Driver Lower Right CRUX Elbow Rotation		°	274.0	70.8	255.7	347.0
Driver Upper Abdomen Deflection		mm	4.9	82.9	-2.8	130.1
Driver Left DGSP Deflection	X	mm	83.4	114.0	52.8	1.7
Driver Left DGSP Rotation	Y	°	170.0	343.3	165.5	49.6
Driver Left DGSP Rotation	Z	°	160.6	63.3	154.0	145.3
Driver Right DGSP Deflection	X	mm	91.7	81.1	52.0	12.9
Driver Right DGSP Rotation	Y	°	179.4	97.5	172.8	73.2
Driver Right DGSP Rotation	Z	°	162.1	63.4	154.5	78.3
Driver Thoracic Spine Force	X	N	317.1	139.1	-1652.5	85.0
Driver Thoracic Spine Force	Y	N	1698.2	99.8	-472.0	76.8
Driver Upper Thoracic Spine Force	Z	N	450.9	242.9	-1496.6	95.3
Driver Upper Thoracic Spine Moment X	X	Nm	30.0	181.0	-186.1	89.2
Driver Upper Thoracic Spine Moment Y	Y	Nm	91.0	93.6	-72.1	76.5
Driver Pelvis	X	g	4.3	115.1	-59.4	72.3
Driver Pelvis	Y	g	64.0	72.6	-17.0	52.2
Driver Pelvis	Z	g	4.3	106.6	-21.3	85.5
Driver Left Acetabulum Force	X	N	513.4	61.3	-5511.3	72.2
Driver Left Acetabulum Force	Y	N	1078.6	74.2	-1000.7	72.0
Driver Left Acetabulum Force	Z	N	3221.5	72.5	-128.0	193.7

DATA SHEET NO. 4 … (CONTINUED)

OCCUPANT INJURY ASSESSMENT DATA

Test Vehicle: 2007 Ford Taurus SE 4-Door Sedan NHTSA No.: R70207

Test Program: 68 mph, 15°, 18% Offset MDB to Vehicle Test Date: 12/09/09

Description	Axis	Units	Max	Time (ms)	Min	Time (ms)
Driver Right Acetabulum Force	X	N	663.1	82.5	-2473.1	58.7
Driver Right Acetabulum Force	Y	N	2055.9	85.5	-297.9	105.4
Driver Right Acetabulum Force	Z	N	1113.2	64.9	-521.0	113.4
Driver Left Femur Force	X	N	1686.2	72.6	-475.8	88.4
Driver Left Femur Force	Y	N	1931.3	73.7	-392.3	59.9
Driver Left Femur Force	Z	N	445.2	43.9	-10506.4	71.5
Driver Left Femur Moment	X	Nm	36.3	78.6	-183.7	66.5
Driver Left Femur Moment	Y	Nm	66.6	54.8	-197.5	81.3
Driver Left Femur Moment	Z	Nm	31.8	115.3	-63.5	81.9
Driver Right Femur Force	X	N	1010.8	63.2	-220.3	103.4
Driver Right Femur Force	Y	N	883.8	69.9	-493.1	61.7
Driver Right Femur Force	Z	N	211.6	36.9	-4991.3	57.7
Driver Right Femur Moment	X	Nm	42.5	120.7	-147.4	65.3
Driver Right Femur Moment	Y	Nm	58.5	81.0	-51.3	71.6
Driver Right Femur Moment	Z	Nm	67.4	121.1	-38.6	66.4
Driver Left Knee Deflection		mm	0.6	45.8	-9.1	69.8
Driver Left Tibia	X	g	63.7	79.0	-103.5	65.4
Driver Left Tibia	Y	g	115.8	64.0	-79.1	79.4
Driver Left Foot	X	g	259.0	84.2	-226.3	85.3
Driver Left Foot	Y	g	133.4	63.5	-139.6	83.7
Driver Left Foot	Z	g	94.7	92.8	-226.1	84.9
Driver Left Ankle Rotation	X	°	0.1	16.4	-34.6	68.2
Driver Left Ankle Rotation	Y	°	36.1	66.0	-26.1	109.4
Driver Left Ankle Rotation	Z	°	22.5	65.7	3.7	27.6
Driver Left Upper Tibia Force	X	N	249.6	43.7	-1038.3	70.2
Driver Left Upper Tibia Force	Y	N	558.7	73.6	-505.8	59.6
Driver Left Upper Tibia Force	Z	N	2419.4	70.6	-661.1	39.4
Driver Left Upper Tibia Moment	X	Nm	90.9	101.3	-86.4	63.1
Driver Left Upper Tibia Moment	Y	Nm	139.2	69.1	-39.7	47.5
Driver Left Lower Tibia Force	X	N	611.4	91.7	-897.9	55.5
Driver Left Lower Tibia Force	Y	N	212.9	58.8	-692.0	99.9
Driver Left Lower Tibia Force	Z	N	1932.0	88.8	-2862.4	64.4
Driver Left Lower Tibia Moment	X	Nm	20.2	116.7	-149.3	85.2
Driver Left Lower Tibia Moment	Y	Nm	75.4	67.7	-36.1	43.5

DATA SHEET NO. 4 … (CONTINUED)

OCCUPANT INJURY ASSESSMENT DATA

Test Vehicle: 2007 Ford Taurus SE 4-Door Sedan NHTSA No.: R70207

Test Program: 68 mph, 15°, 18% Offset MDB to Vehicle Test Date: 12/09/09

Description	Axis	Units	Max	Time (ms)	Min	Time (ms)
Driver Right Knee Deflection		mm	0.0	31.0	-7.4	73.5
Driver Right Tibia	X	g	41.3	67.3	-58.0	47.6
Driver Right Tibia	Y	g	132.2	62.2	-42.2	84.1
Driver Right Foot	X	g	104.7	59.8	-112.8	50.0
Driver Right Foot	Y	g	197.1	50.3	-40.8	74.4
Driver Right Foot	Z	g	118.7	61.8	-67.7	52.8
Driver Right Ankle Rotation	X	°	-10.9	15.9	-47.3	62.1
Driver Right Ankle Rotation	Y	°	26.8	66.6	-5.8	26.7
Driver Right Ankle Rotation	Z	°	18.9	55.6	-18.8	128.3
Driver Right Upper Tibia Force	X	N	556.2	61.9	-229.7	65.7
Driver Right Upper Tibia Force	Y	N	421.7	83.1	-2246.9	61.9
Driver Right Upper Tibia Force	Z	N	349.7	107.9	-2193.8	62.6
Driver Right Upper Tibia Moment	X	Nm	80.9	109.0	-247.3	63.2
Driver Right Upper Tibia Moment	Y	Nm	24.1	105.6	-115.1	61.6
Driver Right Lower Tibia Force	X	N	105.2	103.2	-752.2	61.5
Driver Right Lower Tibia Force	Y	N	867.7	62.1	-528.0	84.6
Driver Right Lower Tibia Force	Z	N	32.6	20.9	-4082.6	61.4
Driver Right Lower Tibia Moment	X	Nm	58.8	84.5	-384.0	61.8
Driver Right Lower Tibia Moment	Y	Nm	13.8	102.6	-85.7	61.1
Driver Lap Belt Force		N	783.1	60.2	-9.5	27.7
Driver Shoulder Belt Force		N	1801.4	86.5	-22.1	220.4
LR Passenger Head CG	X	g	6.5	312.3	-36.1	114.8
LR Passenger Head CG	Y	g	14.0	117.8	-8.3	307.3
LR Passenger Head CG	Z	g	41.7	91.9	-2.8	48.6
LR Passenger Top Head Array	X	g	10.9	317.2	-53.7	114.8
LR Passenger Top Head Array	Y	g	19.3	118.4	-11.8	304.4
LR Passenger Left Side Head Array	X	g	9.3	299.7	-32.7	116.0
LR Passenger Left Side Head Array	Z	g	41.2	92.4	-1.9	40.9
LR Passenger Front Head Array	Y	g	17.2	117.5	-10.8	316.1
LR Passenger Front Head Array	Z	g	46.0	91.8	-7.4	109.2
LR Passenger Head CG Redundant	X	g	6.7	312.4	-36.4	114.9
LR Passenger Head CG Redundant	Y	g	14.0	118.3	-8.0	305.5
LR Passenger Head CG Redundant	Z	g	39.6	91.1	-2.0	47.1

DATA SHEET NO. 4 … (CONTINUED)

OCCUPANT INJURY ASSESSMENT DATA

Test Vehicle: 2007 Ford Taurus SE 4-Door Sedan NHTSA No.: R70207

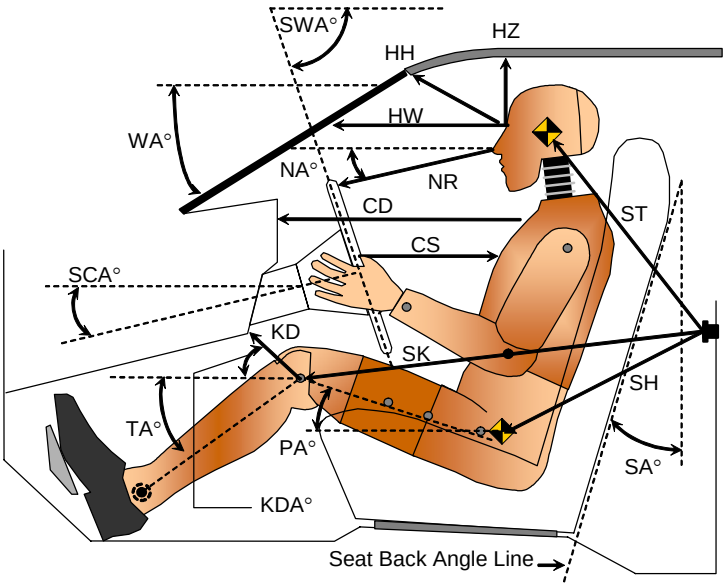
Test Program: 68 mph, 15°, 18% Offset MDB to Vehicle Test Date: 12/09/09

Description	Axis	Units	Max	Time (ms)	Min	Time (ms)
LR Passenger Upper Neck Force X	X	N	67.9	223.4	-1134.6	114.8
LR Passenger Upper Neck Force Y	Y	N	398.6	124.9	-137.2	318.1
LR Passenger Upper Neck Force Z	Z	N	1444.3	88.5	-105.4	50.2
LR Passenger Upper Neck Moment X	X	Nm	20.1	117.6	-10.9	303.8
LR Passenger Upper Neck Moment Y	Y	Nm	47.0	106.9	-26.9	87.3
LR Passenger Upper Neck Moment Z	Z	Nm	11.8	107.2	-7.8	319.0
LR Passenger Lower Neck Force X	X	N	1091.6	94.0	-104.3	196.0
LR Passenger Lower Neck Force Y	Y	N	213.4	303.8	-96.6	202.8
LR Passenger Lower Neck Force Z	Z	N	1329.7	86.9	-677.1	114.4
LR Passenger Lower Neck Moment X	X	Nm	88.3	122.1	-31.2	316.8
LR Passenger Lower Neck Moment Y	Y	Nm	245.3	114.8	-37.2	195.5
LR Passenger Lower Neck Moment Z	Z	Nm	26.0	137.8	-14.9	310.5
LR Passenger Chest X Primary	X	g	4.0	301.2	-36.6	85.3
LR Passenger Chest Y Primary	Y	g	17.4	90.1	-5.1	302.6
LR Passenger Chest Z Primary	Z	g	3.0	307.5	-9.2	96.5
LR Passenger Chest X Redundant	X	g	3.9	301.2	-36.7	85.2
LR Passenger Chest Y Redundant	Y	g	17.4	90.3	-5.0	303.4
LR Passenger Chest Z Redundant	Z	g	3.0	309.9	-9.4	96.5
LR Passenger Chest Deflection		mm	0.1	38.2	-18.5	90.1
LR Passenger Pelvis X Primary	Y	g	1.7	129.8	-26.6	76.4
LR Passenger Pelvis Y Primary	Z	g	16.0	80.9	-2.7	321.5
LR Passenger Pelvis Z Primary	X	g	2.7	319.2	-17.7	82.0
LR Passenger Left Femur Force Z	Z	N	705.8	82.2	-92.5	320.6
LR Passenger Right Femur Force Z	Z	N	1009.4	81.4	-79.4	204.3
LR Passenger Lap Belt Force		N	5715.2	78.8	0.3	0.0
LR Passenger Shoulder Belt Force		N	9838.4	85.9	-22.3	277.0

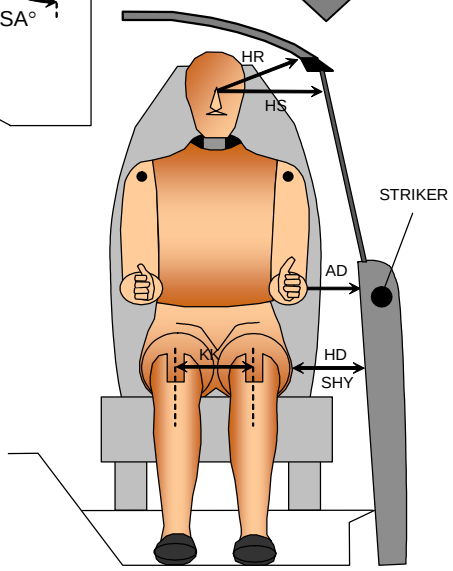
DATA SHEET NO. 5

DUMMY POSITIONING DATA

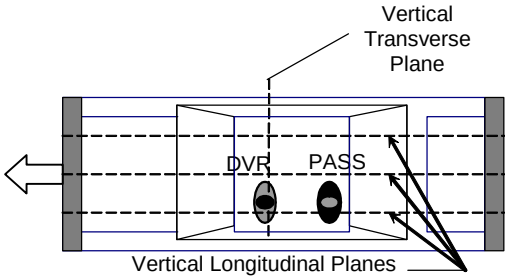
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/09/09



AD	Arm to Door
HD	H-Point to Door
HR	Head to Side Header
HS	Head to Side Window
KK	Knee to Knee
SHY	Striker to H-Point (Y Axis)



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



DATA SHEET NO. 5 … (CONTINUED)

DUMMY POSITIONING DATA

Test Vehicle: 2007 Ford Taurus SE 4-Door Sedan NHTSA No.: R70207

Test Program: 68 mph, 15°, 18% Offset MDB to Vehicle Test Date: 12/09/09

TEST DUMMY POSITION MEASUREMENTS

Code	Measurement Description	Driver		Left Rear Passenger	
		Length (mm)	Angle (°)	Length (mm)	Angle (°)
WA	Windshield Angle		25.7		
SWA	Steering Wheel Angle		69.3		
SCA	Steering Column Angle		20.7		
SA	Seat Back Angle		28.3		Fixed
HZ	Head to Roof (Z)	190	79.8	311	87.7
HH	Head to Header	366	28.3		
HR	Head to Side Header	217	34.9	276	25.3
NR	Nose to Rim	419	7.7		
CD	Chest to Dash	590	12.1		
CS	Chest to Steering Hub	371	0.2		
RA	Rim to Abdomen	208	0.9		
KDL	Left Knee to Dash / Seat Back	130	18.1	281	7.2
KDR	Right Knee to Dash / Seat Back	124	14.8	281	5.8
PA	Pelvis Angle		26		27.6
TA	Tibia Angle		47.9		55.1
KK	Knee to Knee	336		168	
SK	Striker to Knee	588	3.1	654	19.7
ST	Striker to Head	609	86.2	256	75.4
SH	Striker to H-Point	250	35.3	397	46.9
SHY	Striker to H-Point (Y)	212			
HS	Head to Side Window	269		384	
HD	H-Point to Door	149		205	
AD	Arm to Door	91		131	

DATA SHEET NO. 5 … (CONTINUED)

DUMMY POSITIONING DATA

Test Vehicle: 2007 Ford Taurus SE 4-Door Sedan NHTSA No.: R70207

Test Program: 68 mph, 15°, 18% Offset MDB to Vehicle Test Date: 12/09/09

TEST DUMMY POINT LOCATIONS

Description	Driver			Left Rear Passenger		
	X	Y	Z	X	Y	Z
Head CG	2527	458	1109	1533	418	1026
Bridge of Nose	2626	378	1096	1634	341	1020
Tip of Nose	2627	379	1057	1655	339	998
Chin	2626	379	979	1642	335	923
Hip Point	2696	563	446	1740	56	489
Left Knee	3079	589	621	2084	434	558
Right Knee	3102	302	602	2082	201	565
Left Ankle	3362	591	311	2275	427	283
Right Ankle	3417	231	323	2259	230	281
Front Outboard Seat Anchor Bolt	2939	530	234			
Center of Striker	2492	775	590	1469	764	778

Reference Planes: X – Rear of Vehicle Centerline, X+ forward

Y – Vehicle Centerline, Y+ left

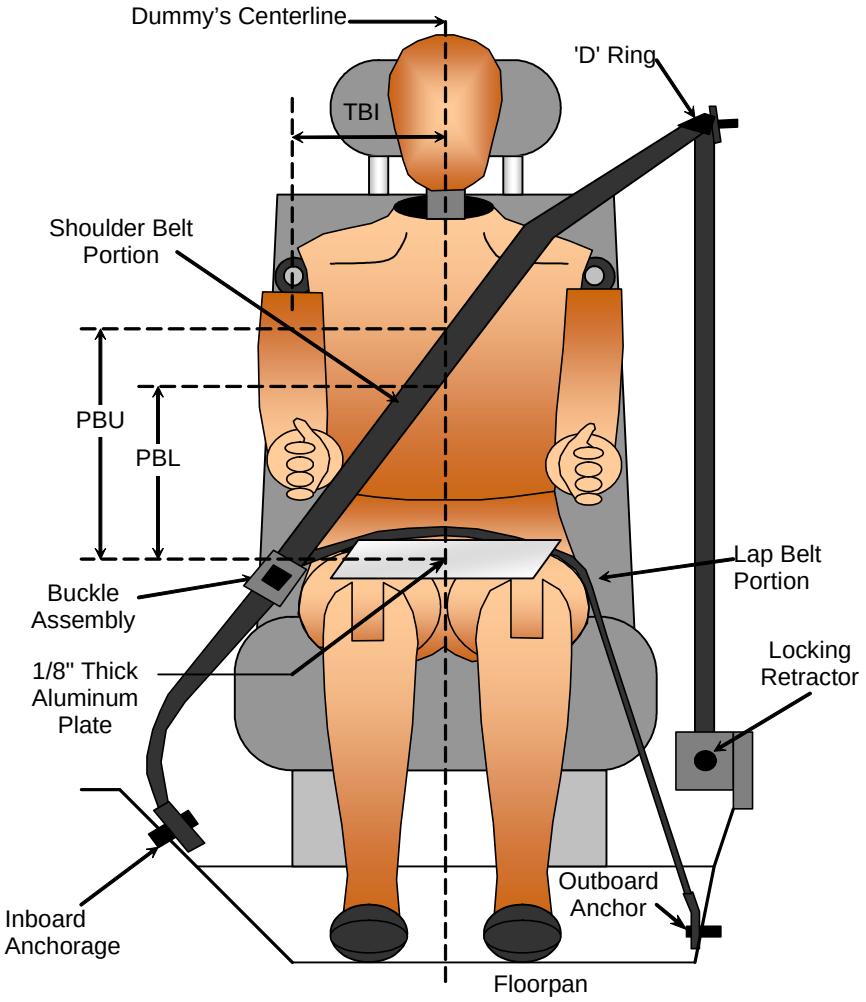
Z – Ground, Z+ up

All measurements in millimeters

DATA SHEET NO. 6

SEAT BELT POSITIONING DATA

Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/09/09



SEAT BELT POSITIONING MEASUREMENTS

Code	Measured Parameter	Units	Driver	Left Rear Passenger
TBI	Dummy C/L to Lap/Shoulder Belt Intersect	mm	271	155
PBU	Top Surface of Reference to Belt Upper	mm	325	295
PBL	Top Surface of Reference to Belt Lower	mm	255	210

DATA SHEET NO. 7

VEHICLE ACCELEROMETER LOCATIONS

Test Vehicle: 2007 Ford Taurus SE 4-Door Sedan NHTSA No.: R70207

Test Program: 68 mph, 15°, 18% Offset MDB to Vehicle Test Date: 12/09/09

Accelerometer Description	Axes	Location		
		X	Y	Z
Left Rear Sill	X,Y	-3080	755	395
Right Rear Sill	X,Y	-2080	-755	395
Vehicle CG	X,Y,Z	-2750	0	340
Engine Top	X	-680	105	710
Engine Bottom	X	-870	100	190
Left Front Brake Caliper	X	-920	645	350
Right Front Brake Caliper	X	-920	-645	350
Instrument Panel	X	-1580	-65	960
Driver Seat Track	X	-2080	620	315
Accelerator Pedal	X,Y,Z	-1395	200	550
Brake Pedal	X,Y,Z	-1475	360	475
Foot Rest	X,Y,Z	-1410	565	515

Reference Planes: X – Front of Vehicle Centerline, X+ forward

Y – Vehicle Centerline, Y+ left

Z – Ground Plane, Z+ up

All measurements in millimeters

DATA SHEET NO. 8

VEHICLE ACCELEROMETER DATA SUMMARY

Test Vehicle: 2007 Ford Taurus SE 4-Door Sedan NHTSA No.: R70207

Test Program: 68 mph, 15°, 18% Offset MDB to Vehicle Test Date: 12/09/09

No.	Accelerometer Description	Axis	Units	Max	Time (ms)	Min	Time (ms)	
1	Left Rear Sill	X	g	34.1	35.0	-5.9	25.8	
2		Y	g	20.4	50.2	-5.1	85.2	
4	Right Rear Sill	X	g	37.1	57.5	-1.0	160.7	
5		Y	g	17.3	51.1	-5.7	83.4	
7	Vehicle CG	X	g	30.4	57.0	-2.0	128.0	
8		Y	g	27.1	62.9	-4.7	85.8	
9		Z	g	13.4	59.5	-22.6	68.1	
10	Engine Top	X	g	142.4	40.8	-22.9	59.7	
11	Engine Bottom	X	g	71.2	42.3	-14.9	54.6	[5]
12	Left Front Brake Caliper	X	g	205.8	24.1	-134.6	47.0	[5]
13	Right Front Brake Caliper	X	g	0.0	0.0	0.0	0.0	[5]
14	Instrument Panel	X	g	65.3	50.6	-31.3	83.6	
15	Driver Seat Track	X	g	29.7	36.7	-3.0	130.2	
16	Accelerator Pedal	X	g	223.6	47.8	-66.6	58.3	
17		Y	g	50.1	50.9	-10.4	6.2	
18		Z	g	49.2	68.8	-195.5	48.3	
19	Brake Pedal	X	g	149.9	26.2	-124.9	52.2	
20		Y	g	461.9	60.4	-280.1	67.2	
21		Z	g	35.4	77.5	-63.3	56.9	
22	Foot Rest	X	g	67.7	34.7	-10.0	7.7	[5]
23		Y	g	95.5	48.9	-6.0	4.6	[5]
24		Z	g	32.1	43.1	-21.1	48.7	[5]

[5] – Channel failed, see Data Sheet 1 for more information

DATA SHEET NO. 9

MOVING DEFORMABLE BARRIER ACCELEROMETER LOCATIONS AND DATA SUMMARY

Test Vehicle: 2007 Ford Taurus SE 4-Door Sedan NHTSA No.: R70207

Test Program: 68 mph, 15°, 18% Offset MDB to Vehicle Test Date: 12/09/09

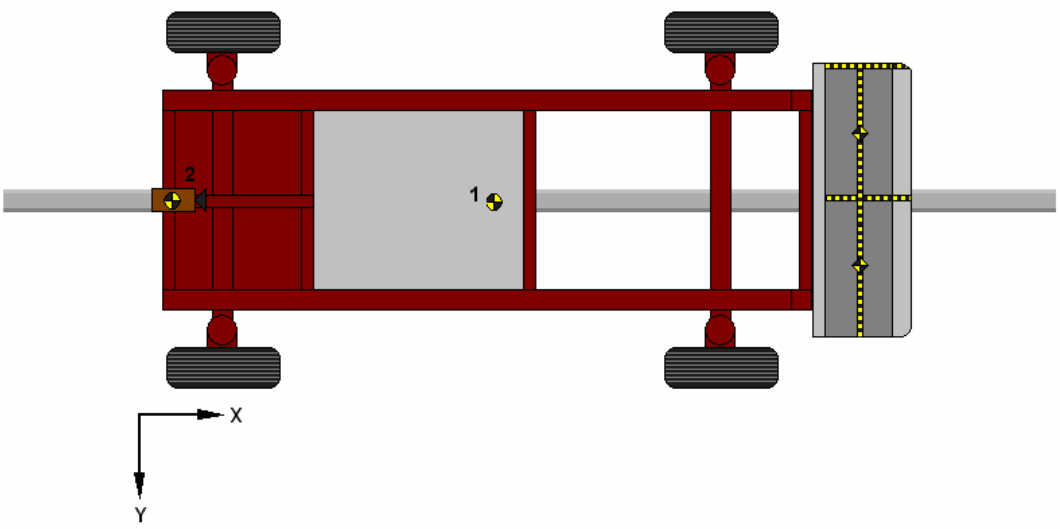
MDB ACCELEROMETER LOCATIONS

Description	Location (mm)		
	X	Y	Z
MDB CG	-1195	0	-430
MDB Rear Centerline	-2920	0	-840

Reference Planes: X – MDB Front Axle

Y – MDB Centerline

Z – Ground Plane



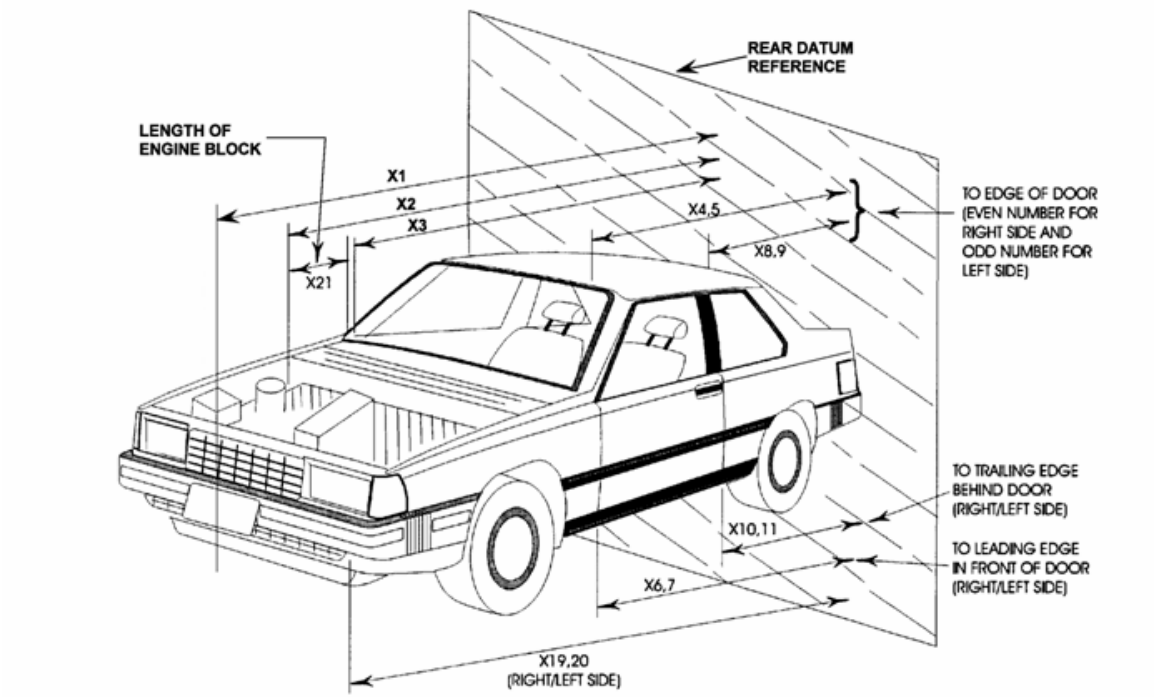
No.	Accelerometer Description	Axis	Units	Max	Time (ms)	Min	Time (ms)
1	MDB CG	X	g	3.7	206.4	-42.4	40.6
2		Y	g	19.8	45.7	-13.5	60.5
3		Z	g	46.7	125.0	-49.1	115.6
4	MDB Rear Centerline	X	g	25.3	111.8	-59.5	43.5
5		Y	g	39.9	63.0	-12.3	196.2
6		Z	g	0.0	0.0	0.0	0.0 [6]

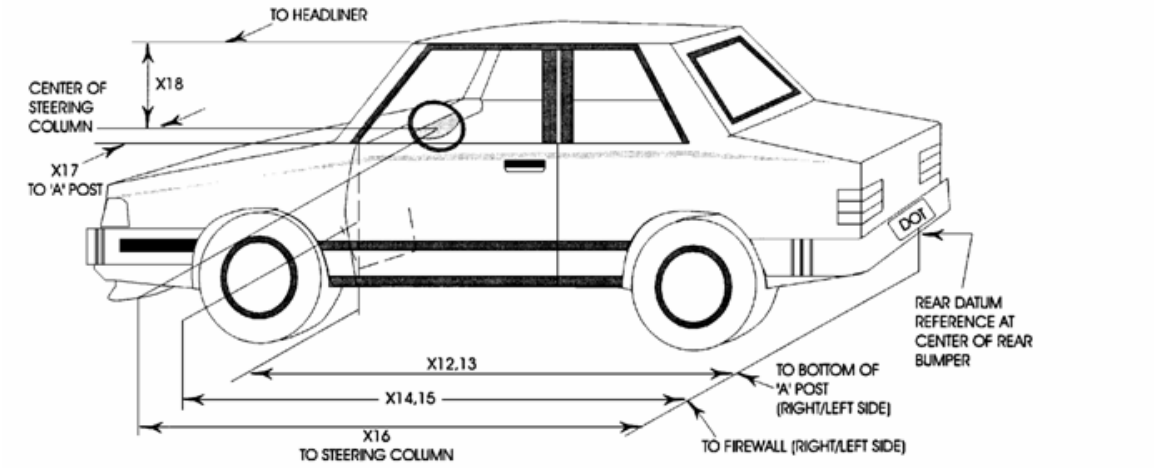
[6] – Channel failed, no data.

DATA SHEET NO. 10

TEST VEHICLE MEASUREMENTS

Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/09/09





DATA SHEET NO. 10 … (CONTINUED)

TEST VEHICLE MEASUREMENTS

Test Vehicle: 2007 Ford Taurus SE 4-Door Sedan NHTSA No.: R70207

Test Program: 68 mph, 15°, 18% Offset MDB to Vehicle Test Date: 12/09/09

VEHICLE MEASUREMENT TABLE

No.	Description	Pre-Test	Post-Test	Difference
1	Total Vehicle Length at Centerline	5037	4783	254 [7]
2	RSOV to Front of Engine	4404	4264	140
3	RSOV to Firewall Centerline	3907	3792	115 [7]
4	RSOV to Leading Edge of Right Door	3521	3503	18
5	RSOV to Leading Edge of Left Door	3524	3281	243
6	RSOV to Lower Leading Edge of Right Door	3433	3418	15
7	RSOV to Lower Leading Edge of Left Door	3435	3292	143
8	RSOV to Upper Leading Edge of Right Door	3462	3449	13
9	RSOV to Upper Leading Edge of Left Door	3466	3246	220
10	RSOV to Lower Trailing Edge of Right Door	2368	2354	14
11	RSOV to Lower Trailing Edge of Left Door	2371	2383	-12
12	RSOV to Bottom of Right A-Pillar	3428	3391	37
13	RSOV to Bottom of Left A-Pillar	3447	3294	153
14	RSOV to Firewall on Right Side	3864	3760	104
15	RSOV to Firewall on Left Side	3865	3546	319 [7]
16	RSOV to Steering Column	3017	2822	195
17	Center of Steering Column to Left A-Pillar	449	338	111
18	Center of Steering Column to Headliner	397	426	-29
19	RSOV to Right Side of Front Bumper	4280	4282	-2
20	RSOV to Left Side of Front Bumper	4294	3683	611
21	Engine Block Length	433	525	-92
RD	RSOV to Right Side of Dash	3116	3106	10
CD	RSOV to Center of Dash	3156	3033	123
LD	RSOV to Left Side of Dash	3128	2953	175

RSOV = Rear Surface of Vehicle

[7] – Pre-Test measurement point unavailable during Post-Test measurements. Points approximately equal to the original points were used for Post-Test measurements and Difference values.

All measurements in millimeters

DATA SHEET NO. 10 … (CONTINUED)

TEST VEHICLE MEASUREMENTS

Test Vehicle: 2007 Ford Taurus SE 4-Door Sedan NHTSA No.: R70207

Test Program: 68 mph, 15°, 18% Offset MDB to Vehicle Test Date: 12/09/09

VEHICLE STRUCTURAL MEASUREMENT TABLE

No.	Description	Pre-Test	Post-Test	Difference	
1	Total Vehicle Length	5037	4916	121	8
2	Total Vehicle Width	1853	1875	-22	
3	Bumper Top Height	549	628	-79	9
4	Bumper Bottom Height	394	478	-84	9
5	Longitudinal Member Top Height	520	620	-100	
6	Longitudinal Member Bottom Height	360	460	-100	
7	Distance Between Longitudinal Members	880	1000	-120	
8	Longitudinal Member Width	70	150	-80	
9	Engine Top Height	872	960	-88	
10	Engine Bottom Height	182	241	-59	
11	Engine and Gearbox Width	851	764	87	
12	Front Bumper to Engine Distance	633	-230	863	8
13	Front Shock Absorber Fixing Height	840	945	-105	9
14	Hood Leading Edge Height	705	804	-99	
15	Front Shock Absorber Fixing Width	1130	988	142	9
16	Front Bumper to Front Axle Distance	1049	1151	-102	8
17	Front Axle to A-Pillar Distance	541	338	203	
18	A-Pillar to B-Pillar Distance	1042	877	165	
19	B-Pillar to Rear Axle Distance	1178	1170	8	
20	B-Pillar to C-Pillar Distance	771	768	3	
21	Roof Sill Bottom Height	1301	1306	-5	
22	Roof Sill Top Height	1353	1338	15	
23	Floor Sill Bottom Height	210	168	42	
24	Floor Sill Top Height	269	232	37	

[8] – Pre-Test front bumper point unavailable during Post-Test measurements. A point approximately equal to the original point, on the foam of the bumper, beneath the bumper cover, was used for Post-Test measurement and Difference values. The point was taken at the centerline of the vehicle.

[9] – Pre-Test measurement point unavailable during Post-Test measurements. Points approximately equal to the original points were used for Post-Test measurements and Difference values.

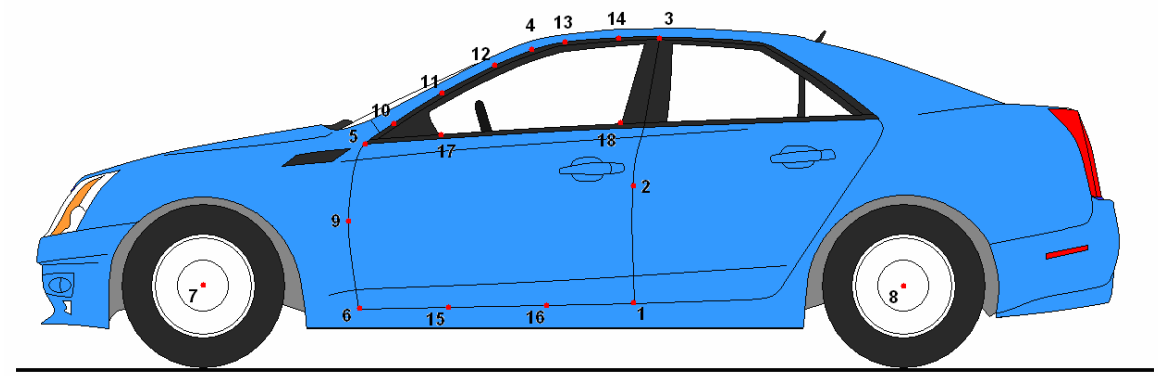
All measurements in millimeters

DATA SHEET NO. 10 … (CONTINUED)

TEST VEHICLE MEASUREMENTS

Test Vehicle: 2007 Ford Taurus SE 4-Door Sedan NHTSA No.: R70207

Test Program: 68 mph, 15°, 18% Offset MDB to Vehicle Test Date: 12/09/09



LEFT FRONT DOOR JAM MEASUREMENTS

Point	Pre-Test			Post-Test			Difference		
	X	Y	Z	X	Y	Z	X	Y	Z
1	2532	799	284	2545	700	245	13	-99	-39
2	2449	787	836	2466	726	799	17	-61	-37
3	2301	574	1276	2330	541	1253	29	-33	-23
4	2862	608	1207	2852	603	1328	-10	-5	121
5	3418	765	841	3206	643	740	-212	-122	-101
6	3385	793	283	3203	577	191	-182	-216	-92
7	3988	872	285	3632	655	234	-356	-217	-51
8	1228	847	307	1247	829	287	19	-18	-20
9	3416	778	573	3190	606	474	-226	-172	-99
10	3250	715	1012	3111	627	966	-139	-88	-46
11	3106	676	1093	3020	620	1108	-86	-56	15
12	2968	637	1163	2927	609	1237	-41	-28	74
13	2719	584	1245	2734	581	1350	15	-3	105
14	2398	571	1273	2426	556	1260	28	-15	-13
15	3146	798	238	3152	647	141	6	-151	-97
16	2827	798	233	2840	690	185	13	-108	-48
17	3251	831	866	3066	778	712	-185	-53	-154
18	2480	860	868	2491	819	813	11	-41	-55

NOTE: Points 1 through 6 and 9 through16 are taken in the door frame area. Points 17 and 18 are taken on the outer door surface.

Reference Planes: X – Rear of Vehicle Centerline, X+ forward
Y – Vehicle Centerline, Y+ left
Z – Ground, Z+ up

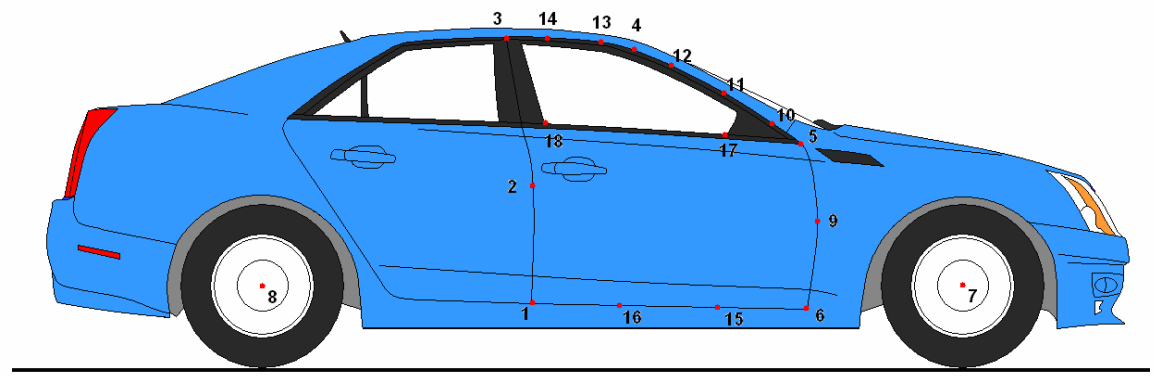
All measurements in millimeters

DATA SHEET NO. 10 … (CONTINUED)

TEST VEHICLE MEASUREMENTS

Test Vehicle: 2007 Ford Taurus SE 4-Door Sedan NHTSA No.: R70207

Test Program: 68 mph, 15°, 18% Offset MDB to Vehicle Test Date: 12/09/09



RIGHT FRONT DOOR JAM MEASUREMENTS

Point	Pre-Test			Post-Test			Difference		
	X	Y	Z	X	Y	Z	X	Y	Z
1	2547	-818	283	2528	-871	341	-19	-53	58
2	2459	-802	706	2447	-822	763	-12	-20	57
3	2303	-590	1282	2303	-563	1322	0	27	40
4	2873	-622	1215	2873	-598	1250	0	24	35
5	3416	-785	846	3399	-849	906	-17	-64	60
6	3365	-811	281	3342	-915	344	-23	-104	63
7	3978	-896	300	4040	-1023	288	62	-127	-12
8	1230	-908	305	1220	-944	309	-10	-36	4
9	3414	-794	624	3395	-874	685	-19	-80	61
10	3319	-747	982	3305	-786	1036	-14	-39	54
11	3133	-696	1091	3125	-705	1135	-8	-9	44
12	3010	-660	1154	3006	-652	1193	-4	8	39
13	2663	-588	1266	2663	-566	1299	0	22	33
14	2465	-580	1282	2465	-556	1318	0	24	36
15	3159	-814	254	3136	-907	317	-23	-93	63
16	2852	-816	250	2831	-887	309	-21	-71	59
17	3238	-849	882	3223	-909	938	-15	-60	56
18	2473	-872	884	2460	-887	941	-13	-15	57

NOTE: Points 1 through 6 and 9 through16 are taken in the door frame area. Points 17 and 18 are taken on the outer door surface.

Reference Planes: X – Rear of Vehicle Centerline, X+ forward
Y – Vehicle Centerline, Y+ left
Z – Ground, Z+ up

All measurements in millimeters

DATA SHEET NO. 11

TEST VEHICLE STRUCTURAL CRUSH MEASUREMENTS

Test Vehicle: 2007 Ford Taurus SE 4-Door Sedan NHTSA No.: R70207

Test Program: 68 mph, 15°, 18% Offset MDB to Vehicle Test Date: 12/09/09

Description	Pre-Test			Post-Test			Difference			
	X	Y	Z	X	Y	Z	X	Y	Z	
Lower Bumper Beam 1	4820	683	406	4167	415	521	-653	-268	115	10
Lower Bumper Beam 2	4950	403	400	4390	340	525	-560	-63	125	10
Lower Bumper Beam 3	5000	122	419	4585	147	542	-415	25	123	10
Lower Bumper Beam 4	5000	-154	419	4744	-81	533	-256	73	114	10
Lower Bumper Beam 5	4951	-438	406	4862	-339	506	-89	99	100	10
Lower Bumper Beam 6	4826	-714	419	4915	-642	503	89	72	84	10
Upper Bumper Beam 1	4791	655	528	4182	387	672	-609	-268	144	
Upper Bumper Beam 2	4864	407	532	4310	303	661	-554	-104	129	
Upper Bumper Beam 3	4882	125	535	4482	81	655	-400	-44	120	
Upper Bumper Beam 4	4883	-152	536	4641	-147	649	-242	5	113	
Upper Bumper Beam 5	4867	-432	538	4790	-385	643	-77	47	105	
Upper Bumper Beam 6	4796	-681	538	4871	-630	635	75	51	97	
Upper Radiator Support 1	4572	684	707	3940	320	820	-632	-364	113	
Upper Radiator Support 2	4689	402	717	4223	290	864	-466	-112	147	
Upper Radiator Support 3	4775	125	708	4445	104	834	-330	-21	126	
Upper Radiator Support 4	4775	-156	711	4604	-130	842	-171	26	131	
Upper Radiator Support 5	4687	-435	724	4626	-451	864	-61	-16	140	
Upper Radiator Support 6	4571	-715	719	4547	-737	792	-24	-22	73	
Front of Hood 1	4579	682	764	3991	381	819	-588	-301	55	
Front of Hood 2	4868	403	659	4360	368	661	-508	-35	2	
Front of Hood 3	4868	123	711	4537	171	767	-331	48	56	
Front of Hood 4	4867	-154	709	4686	-53	827	-181	101	118	
Front of Hood 5	4866	-436	663	4788	-318	825	-78	118	162	
Front of Hood 6	4574	-714	773	4577	-657	949	3	57	176	
Lower Radiator Support Lip 1	4727	683	555	3981	381	659	-746	-302	104	
Lower Radiator Support Lip 2	4810	402	570	4278	319	696	-532	-83	126	
Lower Radiator Support Lip 3	4805	124	574	4438	95	695	-367	-29	121	
Lower Radiator Support Lip 4	4807	-158	578	4596	-140	698	-211	18	120	
Lower Radiator Support Lip 5	4812	-436	577	4737	-381	700	-75	55	123	
Lower Radiator Support Lip 6	4730	-713	567	4738	-669	675	8	44	108	

[10] – Original measurement point unavailable due to component separating from vehicle during impact. Component was held in place for an approximation for Post-Test measurements.

All measurements in millimeters

DATA SHEET NO. 11 … (CONTINUED)

TEST VEHICLE STRUCTURAL CRUSH MEASUREMENTS

Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/09/09

Notes: Lower Bumper Beam measurement points were taken on the foam material of the bumper.

See Figures 304 through 312 of Appendix A for photographs of the crush measurements.

Reference Planes: X – Rear of Vehicle Centerline, X+ forward

Y – Vehicle Centerline, Y+ left

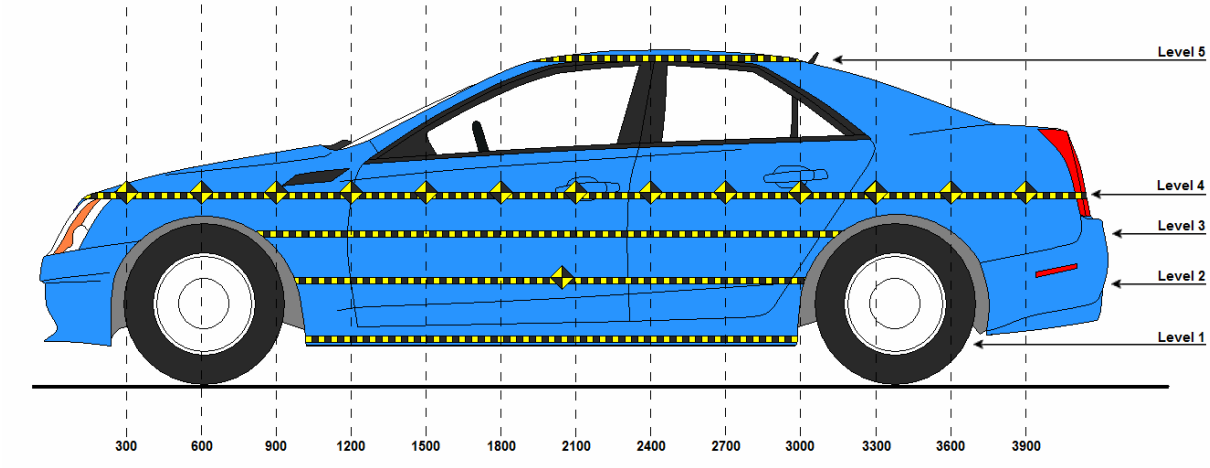
Z – Ground, Z+ up

DATA SHEET NO. 12

TEST VEHICLE SIDE CRUSH MEASUREMENTS

Test Vehicle: 2010 Hyundai Accent Blue 3-Door Hatchback NHTSA No.: MA0518

Test Program: 55/28 km/h Side Impact NCAP Test Date: 12/03/09



Level	Description	Height Above Ground
1	Sill Top	268
2	Occupant H-Point	469
3	Mid-Door	559
4	Vehicle Length	719
5	Window Top	1345

All measurements in millimeters

DATA SHEET NO. 12… (CONTINUED)

TEST VEHICLE SIDE CRUSH MEASUREMENTS

Test Vehicle: 2007 Ford Taurus SE 4-Door Sedan NHTSA No.: R70207

Test Program: 68 mph, 15°, 18% Offset MDB to Vehicle Test Date: 12/09/09

	Pre-Test					Post-Test					Difference				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
0															
150															
300															
450															
600				698					1033					335	
750				670					944					274	
900				648					916					268	
1050				632					880					248	
1200				625					889					264	
1350			621	621				892	815				271	194	
1500		627	626	617			867	825	775			240	199	158	
1650	669	621	623	613		756	780	776	724		87	159	153	111	
1800	661	616	620	610		716	748	735	664		55	132	115	54	
1950	657	612	618	608		677	700	690	630		20	88	72	22	
2100	650	608	616	607		639	655	644	583		-11	47	28	-24	
2250	642	604	612	605		606	606	598	546		-36	2	-14	-59	
2400	638	600	607	600	956	548	543	541	503	947	-90	-57	-66	-97	-9
2550	632	597	603	599	948	548	479	481	462	959	-84	-118	-122	-137	11
2700	626	597	603	598	945	689	655	656	643	965	63	58	53	45	20
2850	626	598	603	598	946	686	651	651	638	958	60	53	48	40	12
3000	626	598	602	598	950	681	646	645	633	953	55	48	43	35	3
3150	628	593	601	598	956	681	642	640	629	950	53	49	39	31	-6
3300	629	593	599	598	970	677	633	634	625	955	48	40	35	27	-15
3450		599	599	598			643	630	620			44	31	22	
3600				602					620					18	
3750				606					626					20	
3900				613					630					17	
4050				624					638					14	
4200				653					649					-4	
4350				673					666					-7	
4500				698					688					-10	

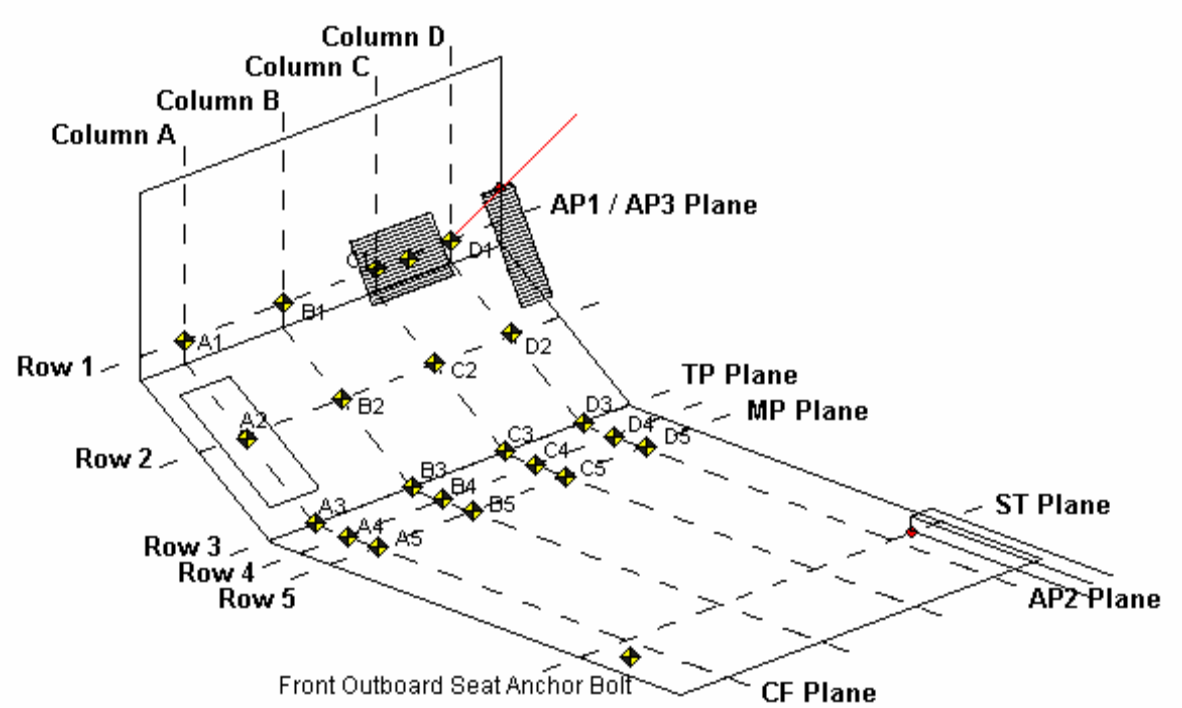
All measurements in millimeters

DATA SHEET NO. 13

TEST VEHICLE INTRUSION MEASUREMENTS

Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/09/09

STANDARD NHTSA FLOORPAN MEASUREMENTS



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. 13 … (CONTINUED)

TEST VEHICLE INTRUSION MEASUREMENTS

Test Vehicle: 2007 Ford Taurus SE 4-Door Sedan NHTSA No.: R70207

Test Program: 68 mph, 15°, 18% Offset MDB to Vehicle Test Date: 12/09/09

DRIVER FLOORPAN X-AXIS

Point	Pre-Test			Post-Test			Difference		
	X	Y	Z	X	Y	X	X	Y	Z
A1	3562	527	382	3315	322	310	-247	-205	-72
A2	3544	522	303	3336	579	233	-208	57	-70
A3	3506	532	232	3334	321	153	-172	-211	-79
A4	3426	534	196	3283	310	110	-143	-224	-86
A5	3320	532	189	3181	287	123	-139	-245	-66
B1	3658	422	316	3444	229	305	-214	-193	-11
B2	3591	423	262	3416	228	230	-175	-195	-32
B3	3527	424	213	3370	219	165	-157	-205	-48
B4	3426	422	194	3289	205	104	-137	-217	-90
B5	3319	420	189	3193	188	81	-126	-232	-108
C1	3655	297	317	3470	113	317	-185	-184	0
C2	3594	297	263	3420	102	254	-174	-195	-9
C3	3533	297	213	3389	94	180	-144	-203	-33
C4	3428	301	193	3297	85	128	-131	-216	-65
C5	3316	303	189	3197	76	85	-119	-227	-104
D1	3654	127	320	3500	-59	332	-154	-186	12
D2	3595	122	269	3456	-65	265	-139	-187	-4
D3	3535	124	221	3405	-79	212	-130	-203	-9
D4	3431	124	201	3309	-79	178	-122	-203	-23
D5	3313	133	205	3206	-19	173	-107	-152	-32
Left IP	3228	497	-187	3022	371	-231	-206	-126	-44
Right IP	3208	192	-197	3102	84	-281	-106	-108	-84
Steering Column	3008	335	-430	2763	300	-537	-245	-35	-107
Outboard Seat Bolt	3496	300	241	2942	451	188	-554	151	-53
Brake Pedal	2935	528	234	3229	225	264	294	-303	30

Reference Planes: X – Rear of Vehicle at Centerline, X+ forward

Y – Vehicle Centerline, Y+ left

Z – Ground, Z+ up

All measurements in millimeters

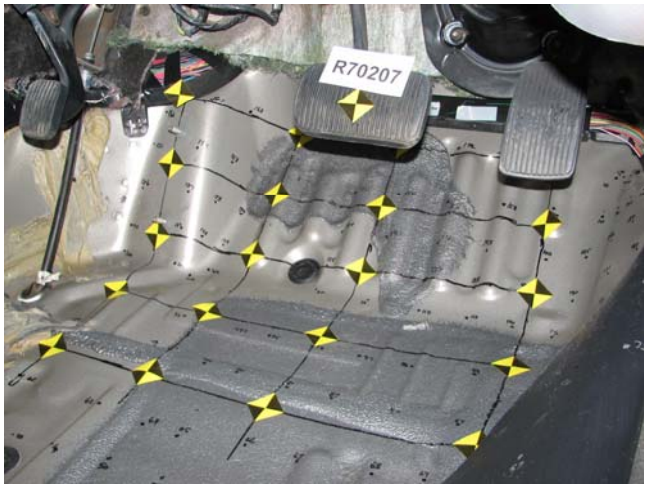
DATA SHEET NO. 13 … (CONTINUED)

TEST VEHICLE INTRUSION MEASUREMENTS

Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/09/09

ADDITIONAL FLOORPAN MEASUREMENT POINTS (NON-STANDARD)

PRE-TEST



POST-TEST

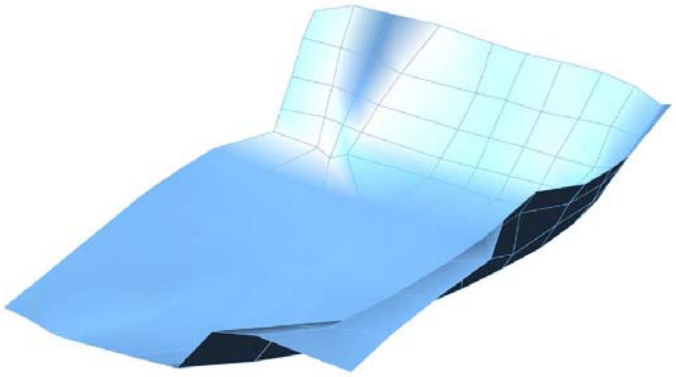
DATA SHEET NO. 13 … (CONTINUED)

TEST VEHICLE INTRUSION MEASUREMENTS

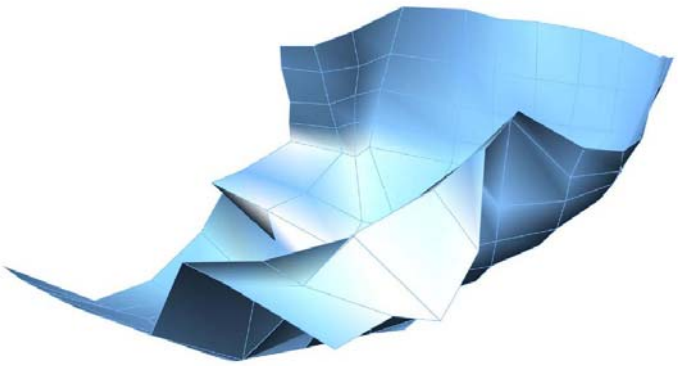
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/09/09

ADDITIONAL FLOORPAN MEASUREMENT POINTS (NON-STANDARD)

PRE-TEST



POST-TEST



Reference Planes: X – Rear of Vehicle Centerline, X+ forward

Y – Vehicle Centerline, Y+ left

Z – Ground, Z+ up

DATA SHEET NO. 13 … (CONTINUED)

TEST VEHICLE INTRUSION MEASUREMENTS

Test Vehicle: 2007 Ford Taurus SE 4-Door Sedan NHTSA No.: R70207

Test Program: 68 mph, 15°, 18% Offset MDB to Vehicle Test Date: 12/09/09

Point No.	Row	Pre-Test			Post-Test			Difference		
		X	Y	Z	X	Y	Z	X	Y	Z
1	A	2958	636	214	2967	522	158	9	-114	-56
2	A	2956	600	209	2958	487	157	2	-113	-52
3	A	2963	572	193	2962	456	145	-1	-116	-48
4	A	2964	558	189	2961	442	144	-3	-116	-45
5	A	2962	514	190	2952	400	151	-10	-114	-39
6	A	2962	477	191	2946	364	159	-16	-113	-32
7	A	2963	445	191	2941	333	167	-22	-112	-24
8	A	2963	415	192	2937	303	173	-26	-112	-19
9	A	2962	391	194	2932	280	179	-30	-111	-15
10	A	2963	369	193	2928	259	184	-35	-110	-9
11	A	2974	315	258	2980	228	278	6	-87	20
12	A	2974	245	270	2976	156	272	2	-89	2
13	A	2936	68	284	2955	-21	254	19	-89	-30
14	B	3034	640	212	3039	455	63	5	-185	-149
15	B	3040	608	212	3037	423	62	-3	-185	-150
16	B	3050	548	204	3031	364	78	-19	-184	-126
17	B	3050	496	187	3012	313	81	-38	-183	-106
18	B	3049	468	185	3005	288	91	-44	-180	-94
19	B	3048	403	185	2989	230	117	-59	-173	-68
20	B	3045	377	181	2979	207	124	-66	-170	-57
21	B	3044	334	182	2969	170	141	-75	-164	-41
22	B	3039	320	186	2963	159	151	-76	-161	-35
23	B	3031	294	189	2955	140	167	-76	-154	-22
24	B	3034	240	256	3035	147	265	1	-93	9
25	B	3029	168	275	3022	73	265	-7	-95	-10
26	B	3033	70	290	3057	-32	226	24	-102	-64
27	C	3119	640	214	3117	430	40	-2	-210	-174
28	C	3124	581	196	3102	368	48	-22	-213	-148
29	C	3135	504	195	3101	335	49	-34	-169	-146
30	C	3137	458	194	3083	249	73	-54	-209	-121
31	C	3131	400	186	3062	196	91	-69	-204	-95
32	C	3130	354	183	3046	155	100	-84	-199	-83
33	C	3132	306	188	3041	117	123	-91	-189	-65
34	C	3129	268	191	3043	96	153	-86	-172	-38
35	C	3132	213	194	3051	57	190	-81	-156	-4
36	C	3118	195	195	3113	62	255	-5	-133	60
37	C	3118	164	246	3102	17	291	-16	-147	45
38	C	3120	125	291	3102	50	292	-18	-75	1
39	C	3125	59	301	3104	-64	190	-21	-123	-111

All measurements in millimeters

DATA SHEET NO. 13 … (CONTINUED)

TEST VEHICLE INTRUSION MEASUREMENTS

Test Vehicle: 2007 Ford Taurus SE 4-Door Sedan NHTSA No.: R70207

Test Program: 68 mph, 15°, 18% Offset MDB to Vehicle Test Date: 12/09/09

Point No.	Row	Pre-Test			Post-Test			Difference		
		X	Y	Z	X	Y	Z	X	Y	Z
40	D	3211	640	216	3186	394	78	-25	-246	-138
41	D	3216	543	193	3158	299	59	-58	-244	-134
42	D	3219	493	189	3156	251	43	-63	-242	-146
43	D	3219	450	194	3150	211	40	-69	-239	-154
44	D	3229	403	187	3146	163	55	-83	-240	-132
45	D	3227	354	187	3133	120	74	-94	-234	-113
46	D	3226	309	189	3122	81	92	-104	-228	-97
47	D	3220	267	192	3123	70	132	-97	-197	-60
48	D	3222	211	196	3132	42	182	-90	-169	-14
49	D	3218	178	200	3134	32	214	-84	-146	14
50	D	3221	145	251	3209	29	273	-12	-116	22
51	D	3223	110	292	3199	-9	309	-24	-119	17
52	D	3228	47	309	3172	-87	260	-56	-134	-49
53	E	3281	640	218	3219	371	130	-62	-269	-88
54	E	3280	542	194	3191	275	107	-89	-267	-87
55	E	3275	448	195	3184	189	67	-91	-259	-128
56	E	3271	401	190	3165	149	55	-106	-252	-135
57	E	3270	368	189	3165	115	55	-105	-253	-134
58	E	3280	312	191	3159	60	74	-121	-252	-117
59	E	3278	267	193	3159	31	107	-119	-236	-86
60	E	3282	211	196	3165	0	158	-117	-211	-38
61	E	3285	173	199	3173	-16	190	-112	-189	-9
62	E	3288	143	207	3183	-34	231	-105	-177	24
63	E	3284	130	252	3268	7	284	-16	-123	32
64	E	3282	98	298	3254	-27	325	-28	-125	27
65	E	3285	64	334	3248	-63	359	-37	-127	25
66	F	3356	638	216	3199	368	163	-157	-270	-53
67	F	3357	545	201	3211	299	134	-146	-246	-67
68	F	3366	454	197	3230	201	85	-136	-253	-112
69	F	3358	394	198	3223	144	83	-135	-250	-115
70	F	3357	361	197	3224	111	88	-133	-250	-109
71	F	3352	309	198	3220	61	101	-132	-248	-97
72	F	3350	268	200	3222	22	107	-128	-246	-93
73	F	3346	215	202	3221	-19	137	-125	-234	-65
74	F	3344	162	207	3224	-50	174	-120	-212	-33
75	F	3344	116	217	3229	-63	217	-115	-179	0
76	F	3341	94	246	3246	-67	263	-95	-161	17
77	F	3352	86	305	3319	-47	343	-33	-133	38
78	F	3348	55	348	3304	-78	382	-44	-133	34

All measurements in millimeters

DATA SHEET NO. 13 … (CONTINUED)

TEST VEHICLE INTRUSION MEASUREMENTS

Test Vehicle: 2007 Ford Taurus SE 4-Door Sedan NHTSA No.: R70207

Test Program: 68 mph, 15°, 18% Offset MDB to Vehicle Test Date: 12/09/09

Point No.	Row	Pre-Test			Post-Test			Difference		
		X	Y	Z	X	Y	Z	X	Y	Z
79	G	3425	629	216	3259	371	131	-166	-258	-85
80	G	3422	544	205	3276	290	111	-146	-254	-94
81	G	3420	453	201	3278	209	94	-142	-244	-107
82	G	3418	392	199	3277	149	108	-141	-243	-91
83	G	3419	358	200	3277	115	116	-142	-243	-84
84	G	3417	313	200	3279	72	124	-138	-241	-76
85	G	3417	267	200	3282	26	131	-135	-241	-69
86	G	3417	218	201	3287	-22	136	-130	-240	-65
87	G	3419	164	204	3289	-73	161	-130	-237	-43
88	G	3420	109	211	3290	-109	204	-130	-218	-7
89	G	3421	81	253	3300	-126	251	-121	-207	-2
90	G	3421	58	291	3312	-132	283	-109	-190	-8
91	G	3431	36	322	3333	-147	321	-98	-183	-1
92	H	3497	583	216	3326	346	132	-171	-237	-84
93	H	3497	514	212	3341	278	128	-156	-236	-84
94	H	3497	495	201	3342	258	128	-155	-237	-73
95	H	3513	480	203	3358	247	136	-155	-233	-67
96	H	3512	348	204	3364	118	157	-148	-230	-47
97	H	3509	290	205	3364	60	165	-145	-230	-40
98	H	3507	236	205	3368	6	170	-139	-230	-35
99	H	3507	188	206	3370	-39	180	-137	-227	-26
100	H	3505	145	206	3371	-83	188	-134	-228	-18
101	H	3493	107	210	3361	-121	196	-132	-228	-14
102	H	3489	69	256	3357	-157	243	-132	-226	-13
103	H	3483	47	292	3351	-180	280	-132	-227	-12
104	H	3481	29	322	3358	-188	312	-123	-217	-10
105	I	3513	581	243	3329	344	161	-184	-237	-82
106	I	3518	514	247	3342	279	169	-176	-235	-78
107	I	3526	493	237	3365	268	163	-161	-225	-74
108	I	3540	475	223	3378	246	162	-162	-229	-61
109	I	3538	347	220	3379	119	182	-159	-228	-38
110	I	3540	291	221	3388	65	186	-152	-226	-35
111	I	3538	238	224	3394	13	192	-144	-225	-32
112	I	3540	189	224	3402	-38	197	-138	-227	-27
113	I	3539	142	226	3403	-81	211	-136	-223	-15
114	I	3531	94	230	3396	-129	219	-135	-223	-11
115	I	3525	67	267	3392	-157	256	-133	-224	-11
116	I	3522	48	296	3390	-177	284	-132	-225	-12
117	I	3520	27	322	3389	-195	311	-131	-222	-11

All measurements in millimeters

DATA SHEET NO. 13 … (CONTINUED)

TEST VEHICLE INTRUSION MEASUREMENTS

Test Vehicle: 2007 Ford Taurus SE 4-Door Sedan NHTSA No.: R70207

Test Program: 68 mph, 15°, 18% Offset MDB to Vehicle Test Date: 12/09/09

Point No.	Row	Pre-Test			Post-Test			Difference		
		X	Y	Z	X	Y	Z	X	Y	Z
118	J	3534	575	283	3326	330	206	-208	-245	-77
119	J	3538	513	284	3340	279	211	-198	-234	-73
120	J	3554	488	269	3372	263	205	-182	-225	-64
121	J	3574	468	249	3399	245	200	-175	-223	-49
122	J	3577	344	244	3404	121	219	-173	-223	-25
123	J	3573	292	248	3405	70	227	-168	-222	-21
124	J	3572	236	250	3417	14	229	-155	-222	-21
125	J	3571	185	250	3425	-37	230	-146	-222	-20
126	J	3572	125	250	3436	-95	237	-136	-220	-13
127	J	3572	86	259	3436	-131	251	-136	-217	-8
128	J	3568	67	282	3434	-152	274	-134	-219	-8
129	J	3566	51	305	3432	-167	298	-134	-218	-7
130	J	3569	36	324	3431	-177	319	-138	-213	-5
131	K	3559	570	330	3333	338	255	-226	-232	-75
132	K	3562	513	329	3345	283	260	-217	-230	-69
133	K	3588	482	307	3379	251	254	-209	-231	-53
134	K	3614	458	279	3423	238	243	-191	-220	-36
135	K	3619	342	278	3438	128	259	-181	-214	-19
136	K	3614	291	284	3430	75	273	-184	-216	-11
137	K	3615	236	282	3445	21	271	-170	-215	-11
138	K	3614	176	287	3454	-39	278	-160	-215	-9
139	K	3616	125	290	3468	-89	281	-148	-214	-9
140	K	3611	77	290	3474	-136	284	-137	-213	-6
141	K	3609	64	301	3474	-150	296	-135	-214	-5
142	K	3607	54	314	3470	-159	310	-137	-213	-4
143	K	3608	43	325	3471	-168	321	-137	-211	-4
144	L	3577	562	364	3334	332	295	-243	-230	-69
145	L	3592	509	379	3343	283	307	-249	-226	-72
146	L	3627	477	357	3382	251	311	-245	-226	-46
147	L	3671	431	329	3442	216	316	-229	-215	-13
148	L	3669	347	326	3472	140	317	-197	-207	-9
149	L	3664	290	328	3469	84	327	-195	-206	-1
150	L	3670	238	327	3482	33	331	-188	-205	4
151	L	3669	173	330	3492	-31	337	-177	-204	7
152	L	3664	118	327	3500	-88	334	-164	-206	7
153	L	3651	68	319	3504	-138	324	-147	-206	5
154	L	3650	60	323	3506	-144	327	-144	-204	4
155	L	3649	55	325	3507	-152	327	-142	-207	2
156	L	3646	49	328	3508	-159	329	-138	-208	1

All measurements in millimeters

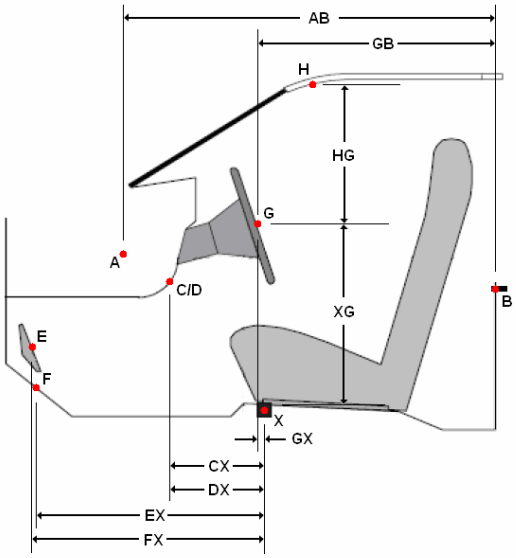
DATA SHEET NO. 13 … (CONTINUED)

TEST VEHICLE INTRUSION MEASUREMENTS

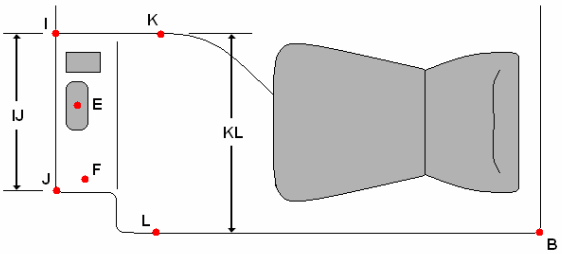
Test Vehicle: 2007 Ford Taurus SE 4-Door Sedan NHTSA No.: R70207

Test Program: 68 mph, 15°, 18% Offset MDB to Vehicle Test Date: 12/09/09

SIDE VIEW



TOP VIEW



DRIVER COMPARTMENT INTRUSION

Description	Driver's Side			Passenger's Side		
	Pre-Test	Post-Test	Difference	Pre-Test	Post-Test	Difference
AB	955	786	169	938	930	8
GB	525	314	211	643	601	42
CX	293	80	213	293	223	70
DX	273	162	111	285	254	31
EX	562	288	274			
FX	573	348	225	664	652	12
GX	78	-120	198	200	155	45
XG	645	742	-97	537	545	-8
HG	397	426	-29	490	464	26
IJ	489	461	28			
KL	462	362	100			

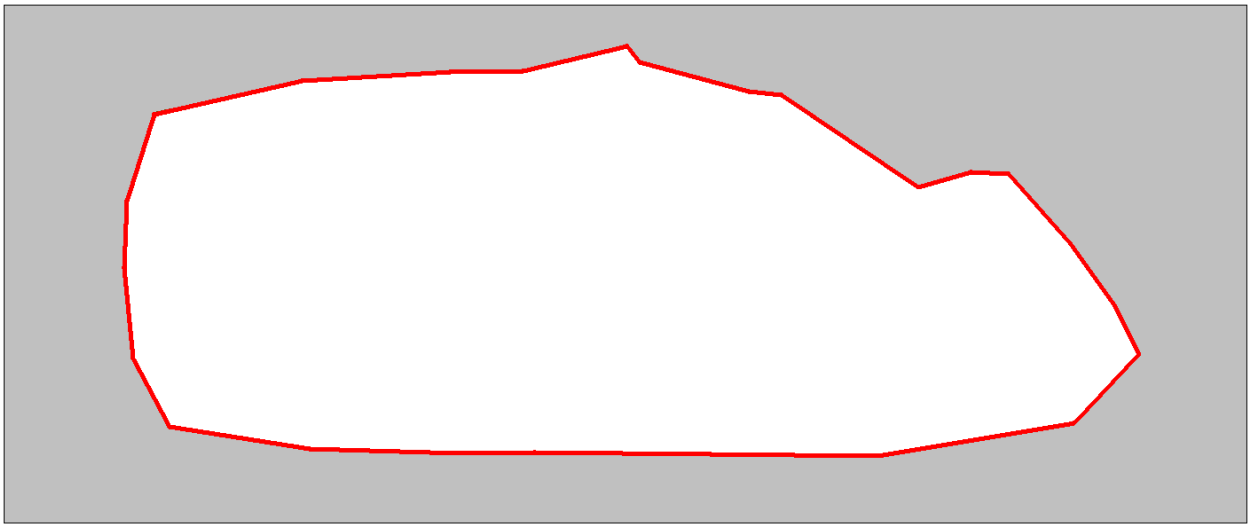
All measurements in millimeters

DATA SHEET NO. 14

EXTERIOR PROFILE MEASUREMENTS

Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/09/09

LEVEL 1



LEVEL 2

NOTE: No Pre-Test Measurements Available.

DATA SHEET NO. 14 … (CONTINUED)

EXTERIOR PROFILE MEASUREMENTS

Test Vehicle: 2007 Ford Taurus SE 4-Door Sedan NHTSA No.: R70207

Test Program: 68 mph, 15°, 18% Offset MDB to Vehicle Test Date: 12/09/09

LEVEL 1

Point	Pre-Test			Post-Test			Difference		
No.	X	Y	Z	X	Y	Z	X	Y	Z
1				4594	-754	608			
2				4293	-812	608			
3				3633	-911	605			
4				3074	-910	605			
5				2569	-907	605			
6				2025	-898	604			
7				1563	-900	605			
8				895	-884	602			
9				206	-772	602			
10				34	-440	602			
11				-2	-5	602			
12				4	312	588			
13				140	742	585			
14				888	901	584			
15				1572	947	584			
16				1933	941	584			
17				2427	1070	584			
18				2490	985	586			
19				2752	923	568			
20				3017	846	576			
21				3159	835	588			
22				3319	714	604			
23				3834	379	594			
24				4092	460	595			
25				4264	450	594			
26				4554	119	600			
27				4771	-189	607			
28				4896	-417	610			

DATA SHEET NO. 14 … (CONTINUED)

EXTERIOR PROFILE MEASUREMENTS

Test Vehicle: 2007 Ford Taurus SE 4-Door Sedan NHTSA No.: R70207

Test Program: 68 mph, 15°, 18% Offset MDB to Vehicle Test Date: 12/09/09

LEVEL 2

Point	Pre-Test			Post-Test			Difference		
No.	X	Y	Z	X	Y	Z	X	Y	Z
1				4494	-725	810			
2				3828	-877	809			
3				2992	-909	810			
4				2301	-894	810			
5				1683	-894	812			
6				1252	-890	807			
7				898	-869	800			
8				307	-762	803			
9				159	-356	801			
10				151	34	799			
11				143	315	752			
12				328	814	762			
13				867	920	765			
14				1391	972	766			
15				1956	969	766			
16				2338	963	763			
17				2654	1052	767			
18				2825	1029	767			
19				2927	1001	764			
20				3015	845	780			
21				3198	861	780			
22				3371	695	781			
23				3463	615	782			
24				3617	561	782			
25				3877	544	783			
26				4158	391	783			
27				4380	171	785			
28				4559	-94	788			
29				4729	-226	790			
30				4535	-644	798			

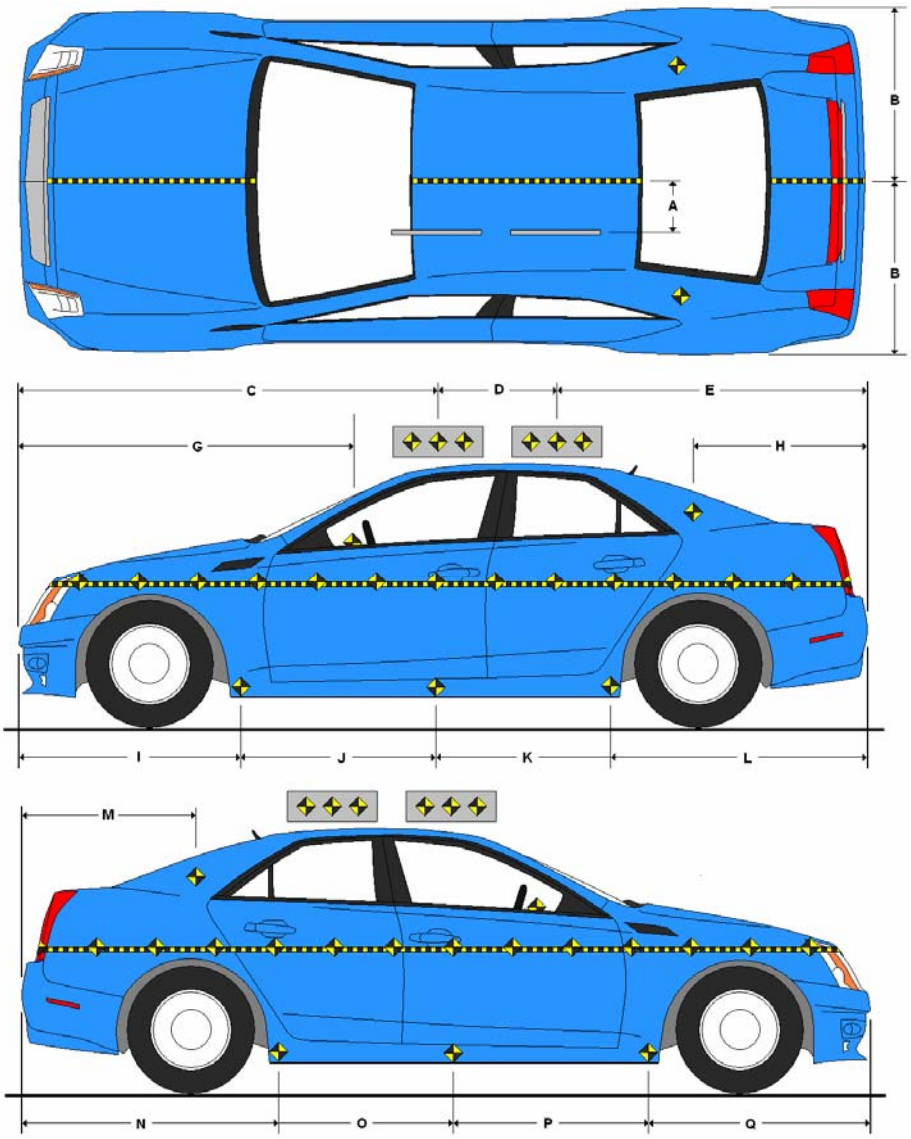
DATA SHEET NO. 15

PHOTOGRAPHIC REFERENCE TARGET LOCATIONS

Test Vehicle: 2007 Ford Taurus SE 4-Door Sedan NHTSA No.: R70207

Test Program: 68 mph, 15°, 18% Offset MDB to Vehicle Test Date: 12/09/09

Item	Value
A	411
B	927
C	2328
D	611
E	2097
F	
G	1931
H	1175
I	1525
J	926
K	924
L	1661
M	1179
N	1668
O	919
P	920
Q	1529



ADDITIONAL PHOTOGRAPHIC REFERENCE DATA

Description	Value	Notes
Driver's Door Panel Reference Target Spacing	305	Visible in Camera View No. 5
Passenger's Door Panel Reference Target Spacing	305	Visible in Camera View No. 9
Overhead Reference Panel Spacing	152	Visible in Camera View No. 7
Left and Right Side Vehicle Targets	300	Visible in left and right side views
Top Vehicle Targets	305	Visible in Camera Views No. 6,7

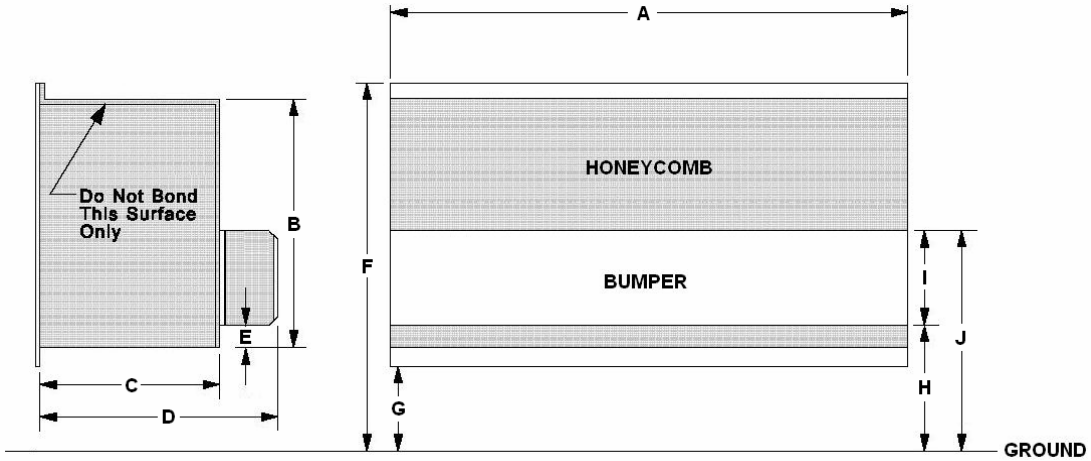
All measurements in millimeters

DATA SHEET NO. 16

DEFORMABLE BARRIER HONEYCOMB FACE STATIC CRUSH

Test Vehicle: 2007 Ford Taurus SE 4-Door Sedan NHTSA No.: R70207

Test Program: 68 mph, 15°, 18% Offset MDB to Vehicle Test Date: 12/09/09



MDB SETUP MEASUREMENTS

Letter	Description	Target	Value
A	Barrier Width	1676	1677
B	Barrier Height	559	559
C	Barrier Body Length	381	384
D	Total Barrier Length	483	486
E	Bumper Height Above Bottom of Barrier	51	49
F	Top of Barrier Flange Above Ground	838	841
G	Bottom of Barrier Flange Above Ground	279	280
H	Bottom of Bumper Above Ground	330	332
I	Bumper Height	203	205
J	Top of Bumper Above Ground	533	533

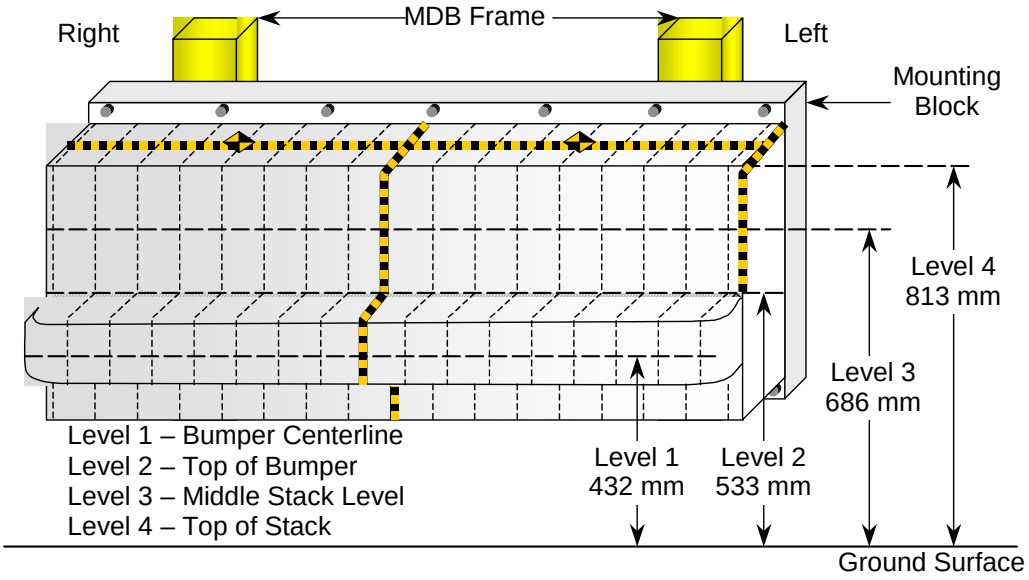
All measurements in millimeters

DATA SHEET NO. 16 … (CONTINUED)

DEFORMABLE BARRIER HONEYCOMB FACE STATIC CRUSH

Test Vehicle: 2007 Ford Taurus SE 4-Door Sedan NHTSA No.: R70207

Test Program: 68 mph, 15°, 18% Offset MDB to Vehicle Test Date: 12/09/09



DEFORMABLE BARRIER STATIC CRUSH

Stack Level	Distance Right of Center								CL	Distance Left of Center							
	800	700	600	500	400	300	200	100	0	100	200	300	400	500	600	700	800
1	-44	-38	-18	2	17	40	59	79	87	120	184	286	280	234	234	234	282
2	-78	-65	-50	-32	-15	-5	10	30	44	53	80	151	145	150	168	207	254
3	-88	-75	-60	-48	-35	-23	-12	0	50	29	49	48	75	117	174	252	323
4	-90	-85	-70	-61	-50	-35	-25	-18	5	75	54	90	137	125	171	254	325

All measurements in millimeters

DATA SHEET NO. 17

POST-TEST AIRBAG DATA

Test Vehicle: 2007 Ford Taurus SE 4-Door Sedan NHTSA No.: R70207

Test Program: 68 mph, 15°, 18% Offset MDB to Vehicle Test Date: 12/09/09

Description	Units	Driver	Right Front Passenger
Number of Vent Holes		2	
Size of Vent Holes	mm	20	
Shape of Vent Holes		Round	
Total Vent Area	mm^2	628	
Length of Deflated Bag (if Square)	mm		
Width if Deflated Bag (if Square)	mm		
Diameter of Deflated Bag (if Round)	mm	590	
Airbag Tethered		No	
Length of Tethers	mm		

DATA SHEET NO. 18

ACCIDENT INVESTIGATION DATA

Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/09/09

VEHICLE INFORMATION

VIN:	1FAFP53U47A200648	Wheelbase (mm):	2761
Vehicle Size Category:	4-Door Sedan	Test Weight (kg):	1740

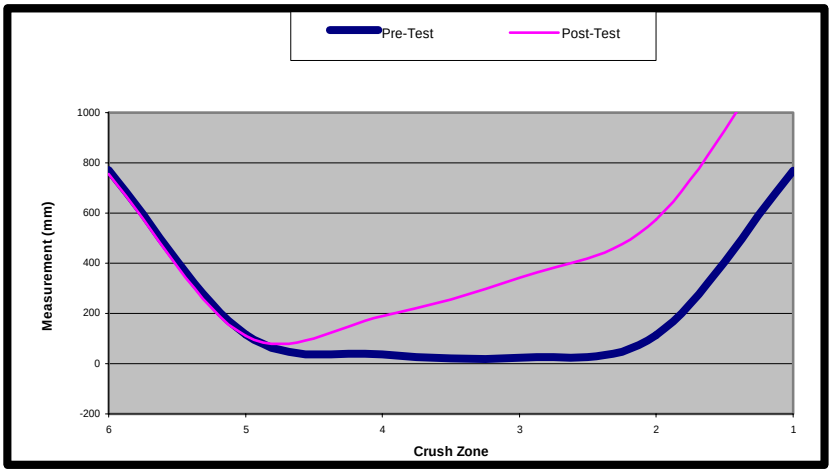
ACCELEROMETER DATA

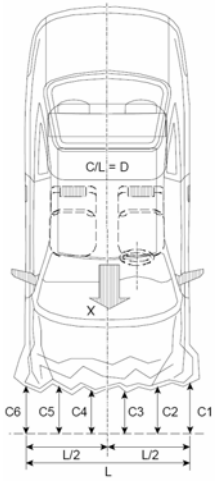
Accelerometer Location:	CG		
Cal. Procedure/Interval:	6 month/drop test		
Integration Algorithm:	NHTSA Standard	Linearity:	Good
Impact Velocity (km/h):	125.7		
Velocity Change (km/h):	44.1	Time of Separation (msec):	N/A

CRUSH PROFILE

Collision Damage Classification:	11FLAW2	Midpoint of Damage:	N/A
Damage Region Length:	1748	Impact Mode:	15°, 18% Offset

No.	Meaurement Description	Units	Pre-Test	Post-Test	Difference	
C1	Crush Zone 1 at Left Side of Vehicle	mm	768	1354	-586	11
C2	Crush Zone 2 at Left Side of Vehicle	mm	113	573	-460	11
C3	Crush Zone 3 at Left Side of Vehicle	mm	25	343	-318	11
C4	Crush Zone 4 at Right Side of Vehicle	mm	36	190	-154	11
C5	Crush Zone 5 at Right Side of Vehicle	mm	115	110	5	11
C6	Crush Zone 6 at Right Side of Vehicle	mm	771	755	16	11





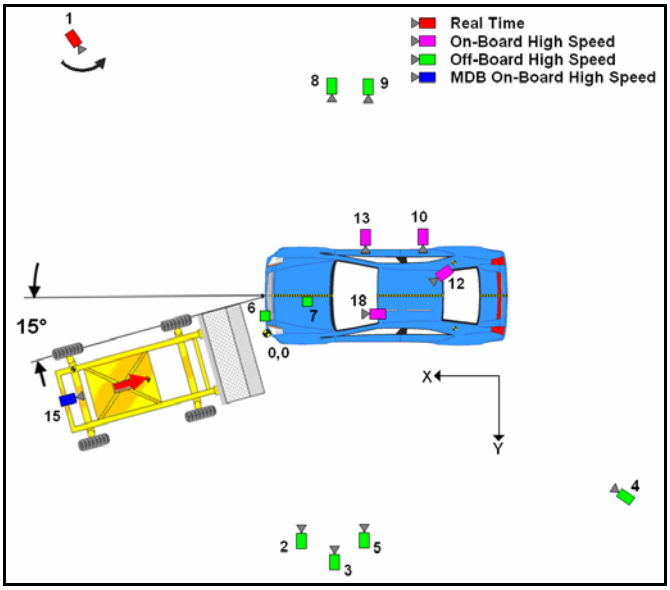
[11] – Post-Test measurements were taken in the approximate location of Pre-Test measurements with the bumper cover taped in place. Exact points were unavailable due to the bumper cover coming free from the vehicle.

DATA SHEET NO. 19

VIDEO COVERAGE DATA

Test Vehicle: 2007 Ford Taurus SE 4-Door Sedan NHTSA No.: R70207

Test Program: 68 mph, 15°, 18% Offset MDB to Vehicle Test Date: 12/09/09



View No.	Description	Location (m)			Angle (°)	Lens (mm)	Frame Rate	
		X	Y	Z				
1	Real Time Panning	16.47	-24.21	2.14			30	
2	Overall Left Side	-1.81	12.91	1.10	0	24	1000	
3	Left Side	-2.82	13.49	0.98	0	35	1000	
4	Driver and Interior	-12.43	6.83	2.63	-5	ZOOM	1000	
5	Left Tight Target Driver to IP Contact	-3.63	12.76	1.04	0	85	1000	
6	Overhead - Impact Point	-0.26	-0.45	7.17	90	50	1000	
7	Overhead - Overall	-1.11	-0.05	7.61	90	14	1000	
8	Right Side	0.55	14.07	1.19	0	35	1000	
9	Overall Right Side	1.07	13.55	1.23	0	24	1000	
10	Rear Occupant Side, On-Board	-2.90	1.28	1.15	-1	10	1000	
11	Right Passenger and Interior View							[12]
12	Driver Over Shoulder, On-Board	-2.93	0.74	1.31	-2	12.5	1000	
13	Driver Side, On-Board	-2.02	1.28	1.15	-1	10	1000	
14	Driver Front View from MDB							[12]
15	Windshield View from MDB							
16	Pit View of Engine							[13]
17	Pit View of Fuiel Tank	-3.38	-1.36	-1.93	-90	12.5	1000	
18	Driver Lower Leg, On-Board	-1.72	-0.18	0.51	0	8.5	1000	

[12] – Camera not required by COTR.

[13] – Camera not able to be used due to test setup.

DATA SHEET NO. 20

FMVSS 212 / 219 SUMMARY

Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/09/09

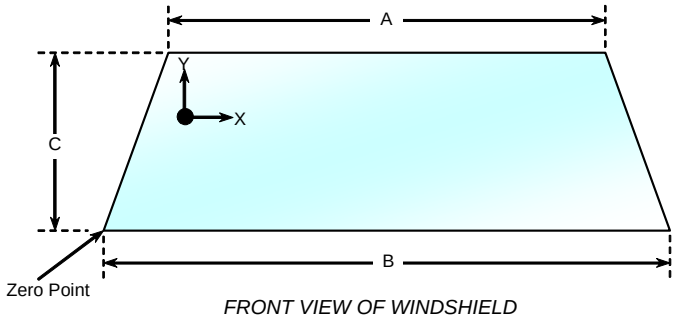
Windshield mounting details: windshield glass is secured to the vehicle frame with rubber cement type adhesive and rubber molding.

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

Temperature of windshield molding during the test: 21.1° C

WINDSHIELD PERIPHERY MEASUREMENTS

Measurement	Units	Pre-Test	Post-Test	% Retention
Left Side	mm	2207	1180	53.5%
Right Side	mm	2207	770	34.9%
Total	mm	4414	1950	



FRONT VIEW OF WINDSHIELD

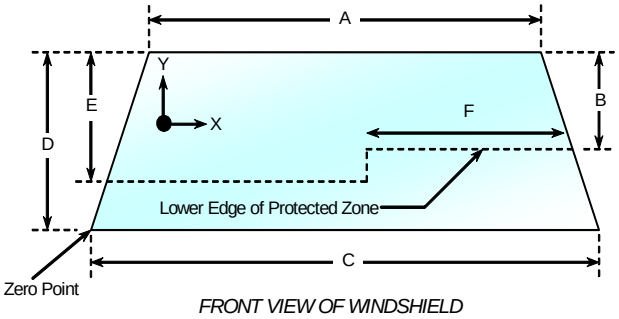
WINDSHIELD DIMENSIONS

Item	Units	Segment Length	Molding Width
A	mm	1150	23
B	mm	1625	15
C-Left	mm	820	23
C-Right	mm	820	23

DATA SHEET NO. 20 … (CONTINUED)

FMVSS 212 / 219 SUMMARY

Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/09/09



WINDSHIELD AND PROTECTED ZONE

Item	Units	Value
A	mm	1150
B	mm	390
C	mm	1625
D	mm	820
E	mm	495
F	mm	625

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. 21

FMVSS 301 FUEL SYSTEM INTEGRITY POST-IMPACT DATA

Test Vehicle: 2007 Ford Taurus SE 4-Door Sedan NHTSA No.: R70207

Test Program: 68 mph, 15°, 18% Offset MDB to Vehicle Test Date: 12/09/09

Temperature at Time of Impact: 3.9° C Test Time: 11:07 AM

Stoddard Solvent Spillage Measurements

A. From impact until vehicle motion ceases: 0 oz.
(Maximum allowable = 1 oz.)

B. For the 5 minute period after motion ceases: 0 oz.
(Maximum allowable = 5 oz.)

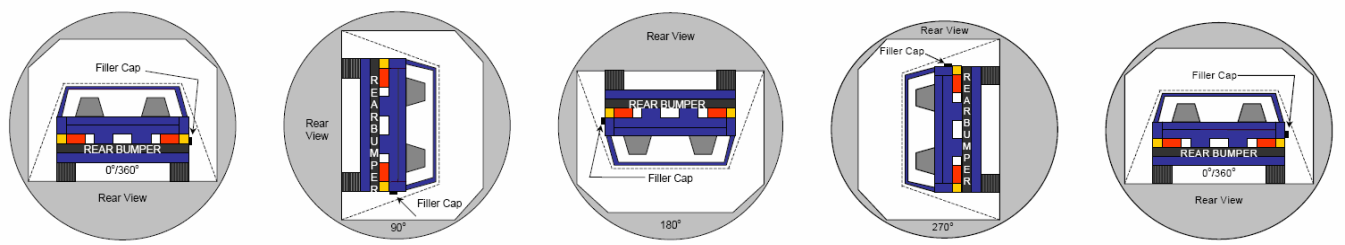
C. For the following 25 minutes: 0 oz.
(Maximum allowable = 1 oz./minute)

D. Spillage: No spillage occurred

DATA SHEET NO. 22

FMVSS 301 STATIC ROLLOVER DATA

Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/09/09



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 180 seconds.
2. The position hold time at each position is 300 seconds (minimum).
3. Details of Stoddard solvent spillage: No spillage occurred

SOLVENT COLLECTION TIME TABLE IN SECONDS

Test Phase	Rotation Time	Hold Time	Total Time
0° To 90°	81	310	391
90° To 180°	82	311	393
180° To 270°	83	322	405
270° To 360°	81	306	387

FMVSS 301 SPILLAGE TABLE

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

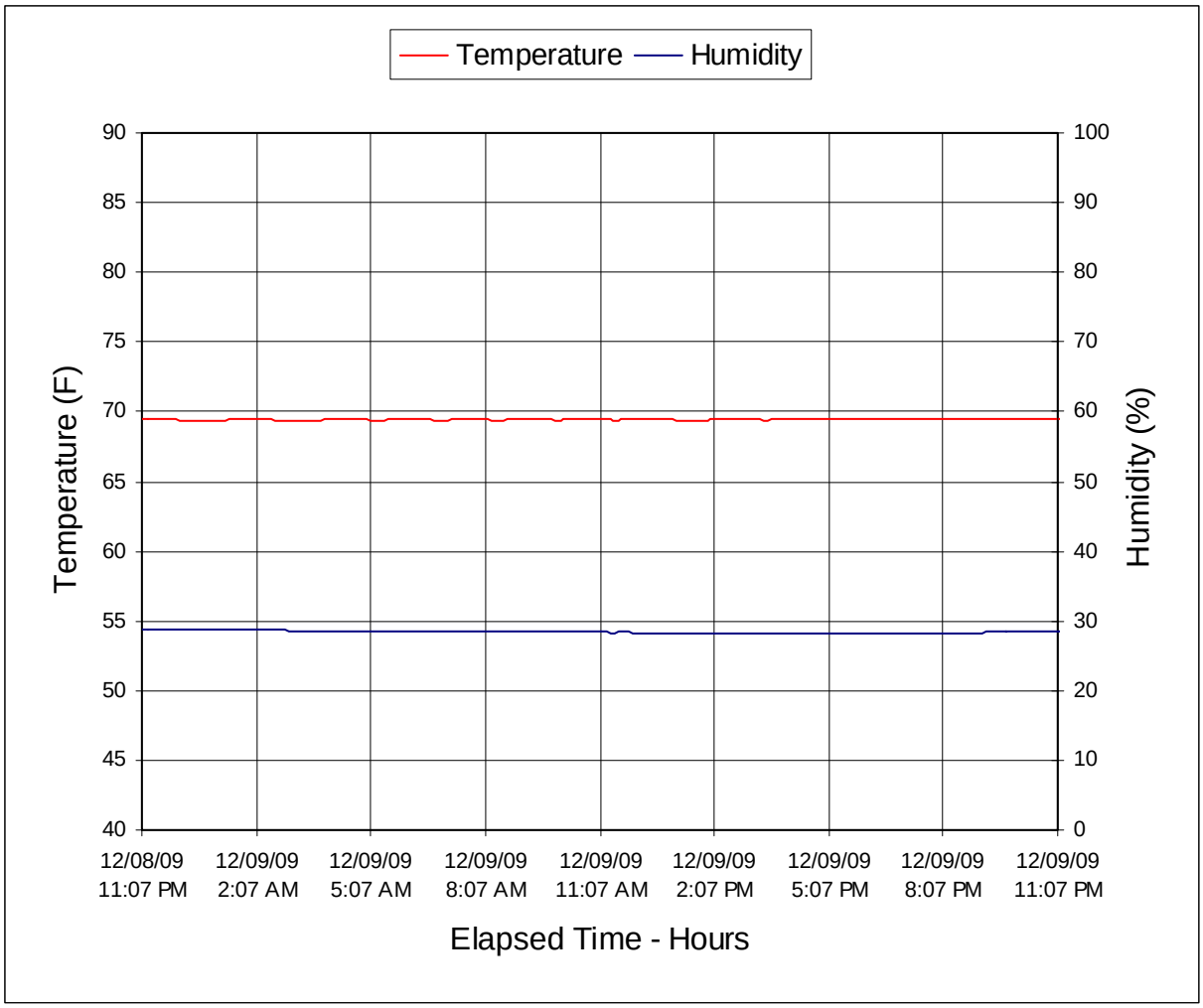
SOLVENT SPILLAGE LOCATION TABLE

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

DATA SHEET NO. 23

DUMMY / VEHICLE TEMPERATURE STABILIZATION

Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/09/09



APPENDIX A
PHOTOGRAPHS

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Figure A-2: Test Vehicle, Left Rear ¾ View, As-Received

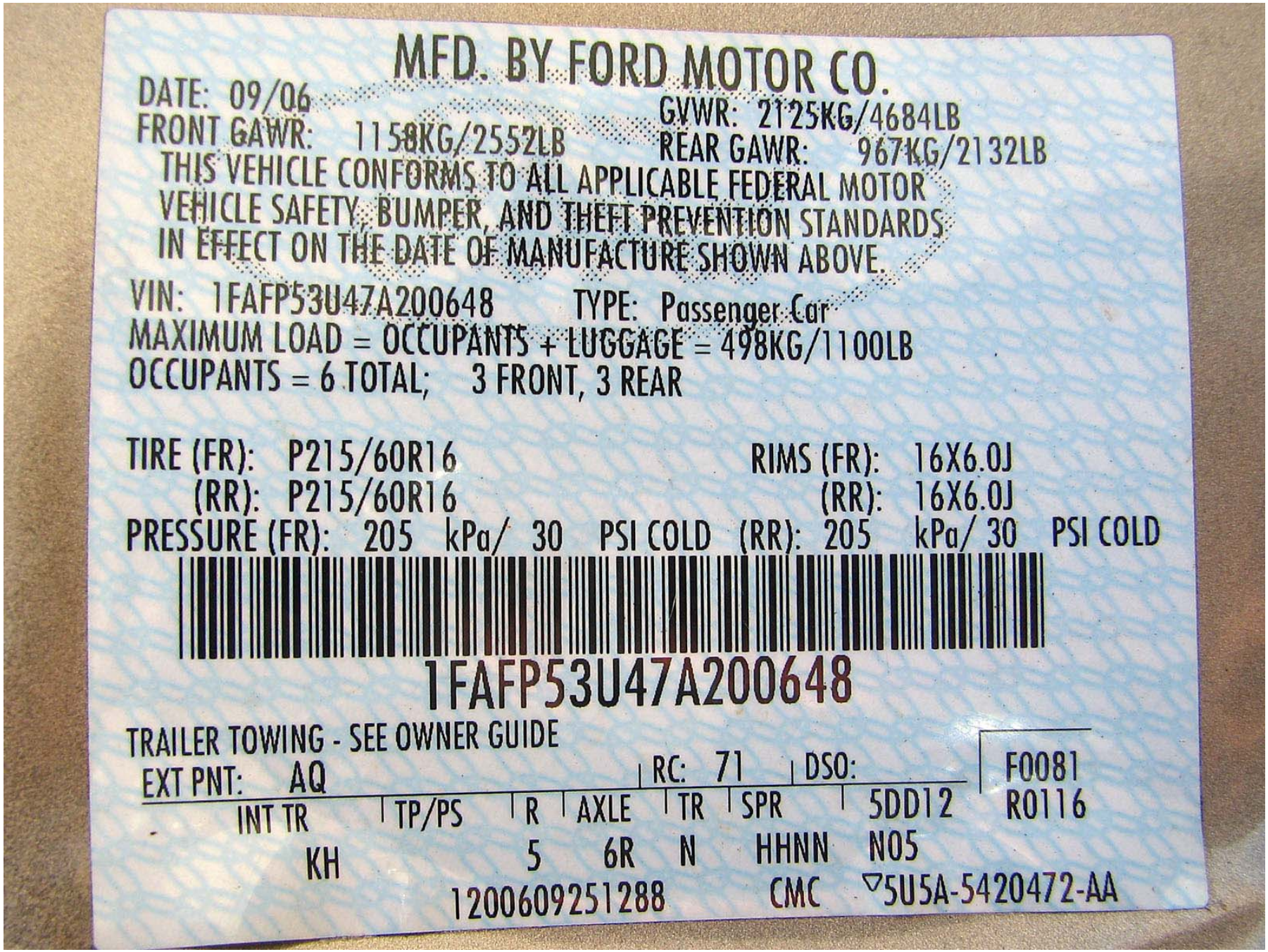

Figure A-3: Test Vehicle Manufacturer's Label

Figure A-4: Test Vehicle Tire Placard

Figure A-5: Test Vehicle Pre-Test Front View

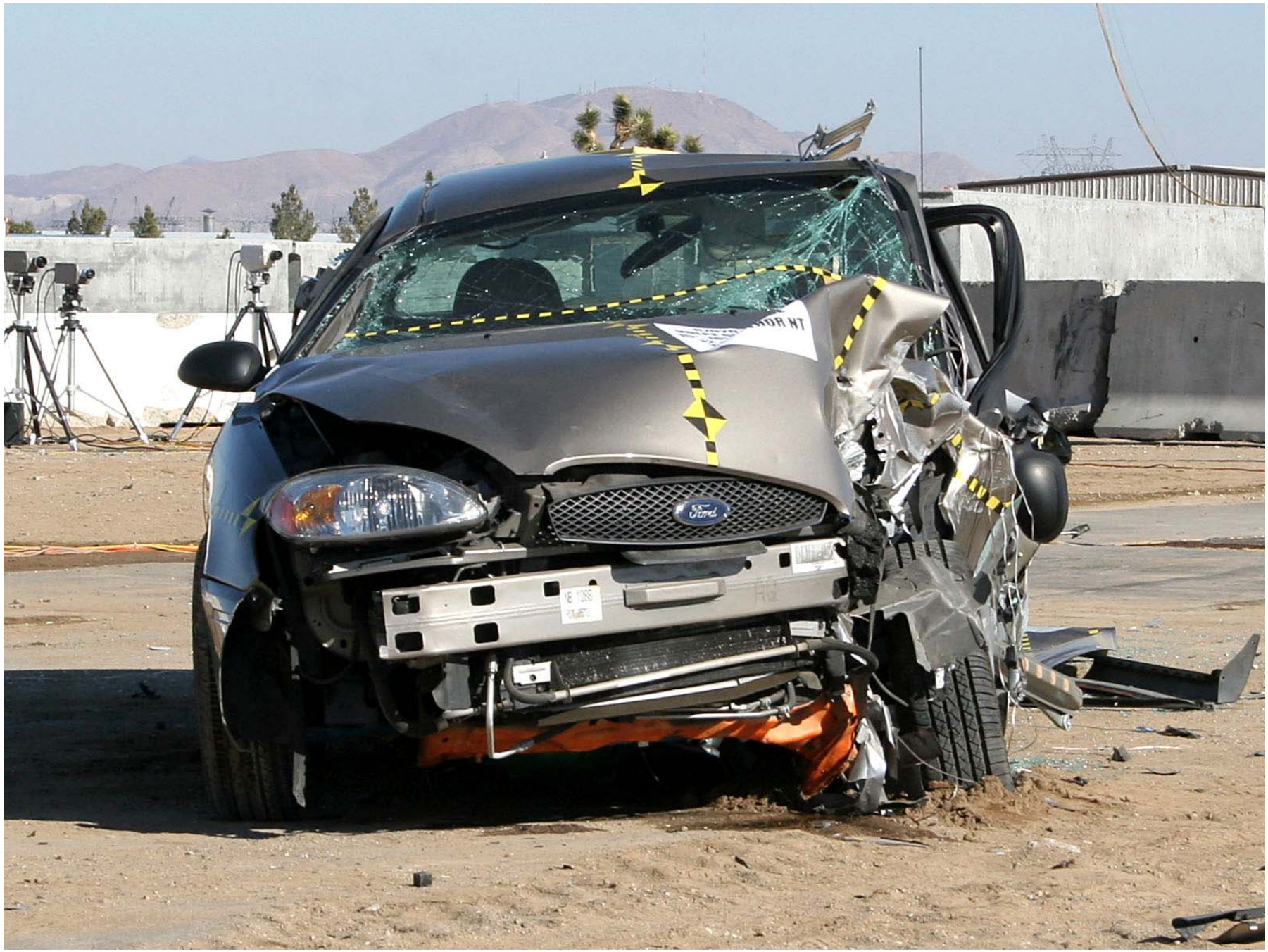

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Figure A-8: Test Vehicle Post-Test Left Front ¾ View

Figure A-9: Test Vehicle Pre-Test Left Side View

Figure A-10: Test Vehicle Post-Test Left Side View

Figure A-11: Test Vehicle Pre-Test Left Rear ¾ View

Figure A-12: Test Vehicle Post-Test Left Rear ¾ View

Figure A-13: Test Vehicle Pre-Test Rear View

Figure A-14: Test Vehicle Post-Test Rear View

Figure A-15: Test Vehicle Pre-Test Right Rear ¾ View

Figure A-16: Test Vehicle Post-Test Right Rear ¾ View

Figure A-17: Test Vehicle Pre-Test Right Side View

Figure A-18: Test Vehicle Post-Test Right Side View

Figure A-19: Test Vehicle Pre-Test Right Front ¾ View

Figure A-20: Test Vehicle Post-Test Right Front ¾ View

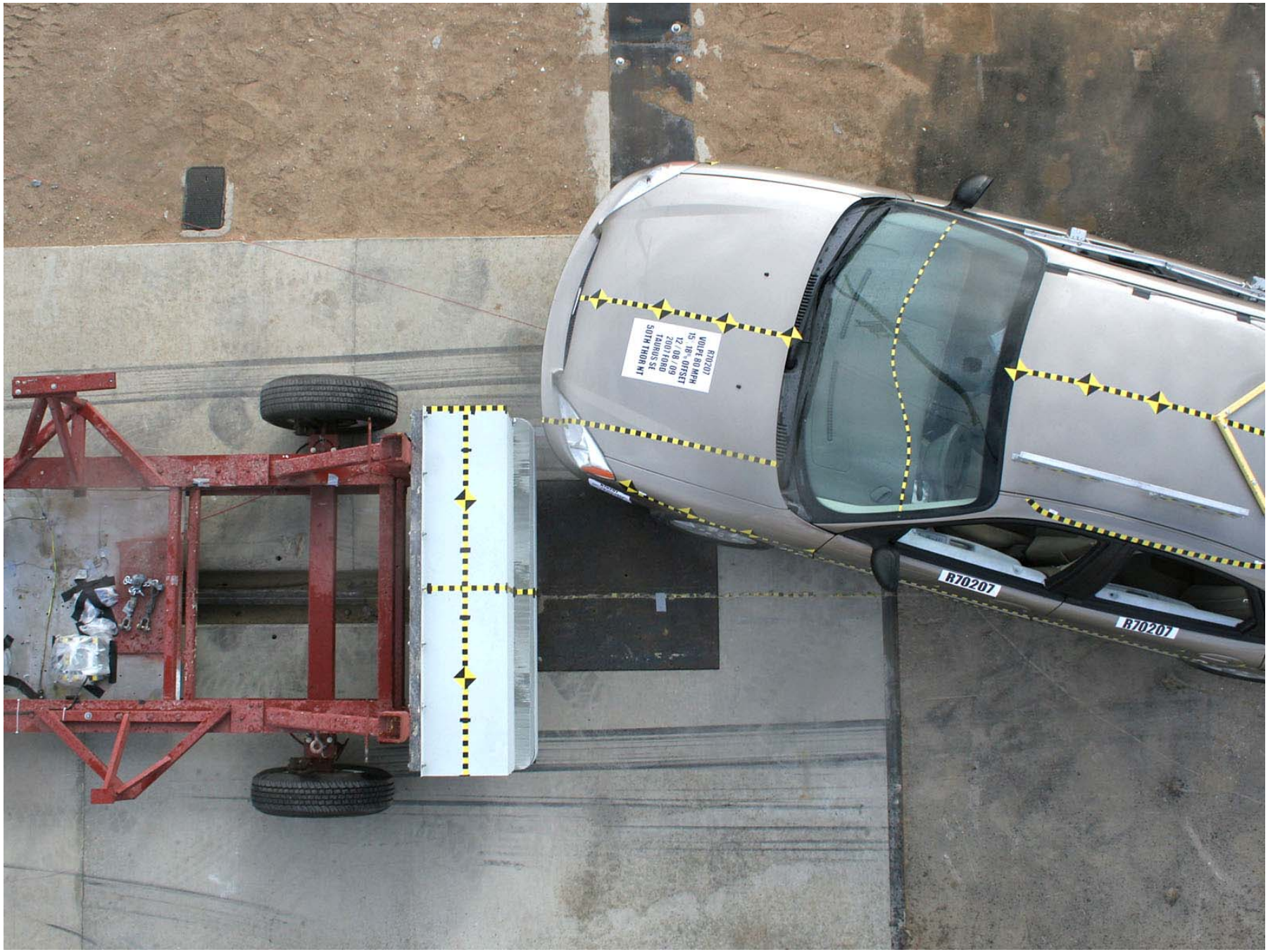

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Figure A-22: Test Vehicle Post-Test Overhead View

Figure A-23: Test Vehicle Pre-Test Overhead Close-Up View

Figure A-24: Test Vehicle Post-Test Overhead Close-Up View

Figure A-25: Test Vehicle Pre-Test Impact Point Marker

Figure A-26: Test Vehicle Post-Test Impact Point Marker

Figure A-27: Test Vehicle Pre-Test Impact Point Marker

Figure A-28: Test Vehicle Post-Test Impact Point Marker

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Figure A-30: Test Vehicle Post-Test Front ¾ View of Left Side Doors

Figure A-31: Test Vehicle Pre-Test Rear ¾ View of Left Side Doors

Figure A-32: Test Vehicle Post-Test Rear ¾ View of Left Side Doors

Figure A-33: Test Vehicle Pre-Test Front ¾ View of Right Side Doors

Figure A-34: Test Vehicle Post-Test Front ¾ View of Right Side Doors

Figure A-35: Test Vehicle Pre-Test Rear ¾ View of Right Side Doors

Figure A-36: Test Vehicle Post-Test Rear ¾ View of Right Side Doors

Figure A-37: Test Vehicle Pre-Test Left Front Door

Figure A-38: Test Vehicle Post-Test Left Front Door

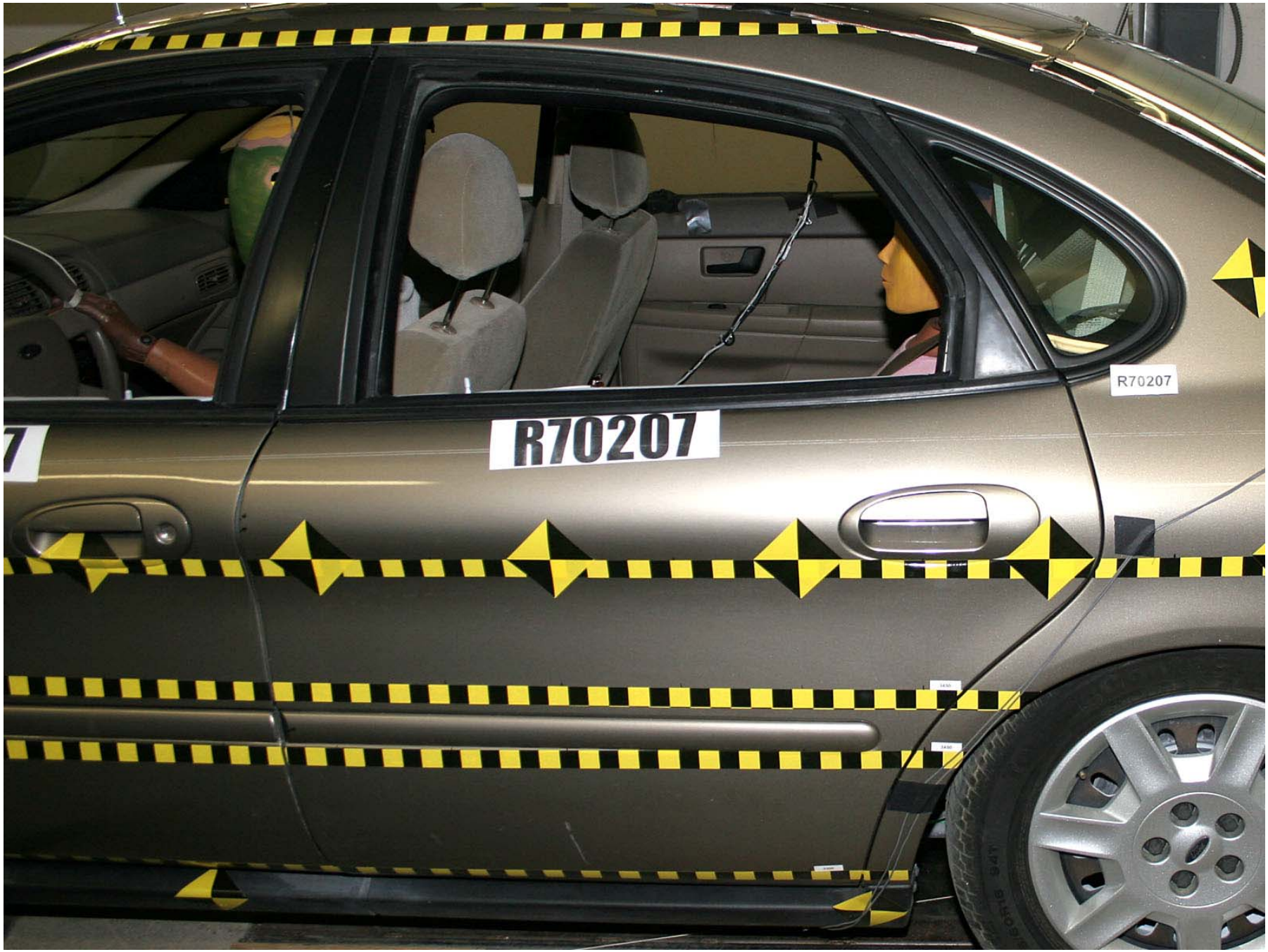

Figure A-39: Test Vehicle Pre-Test Left Rear Door

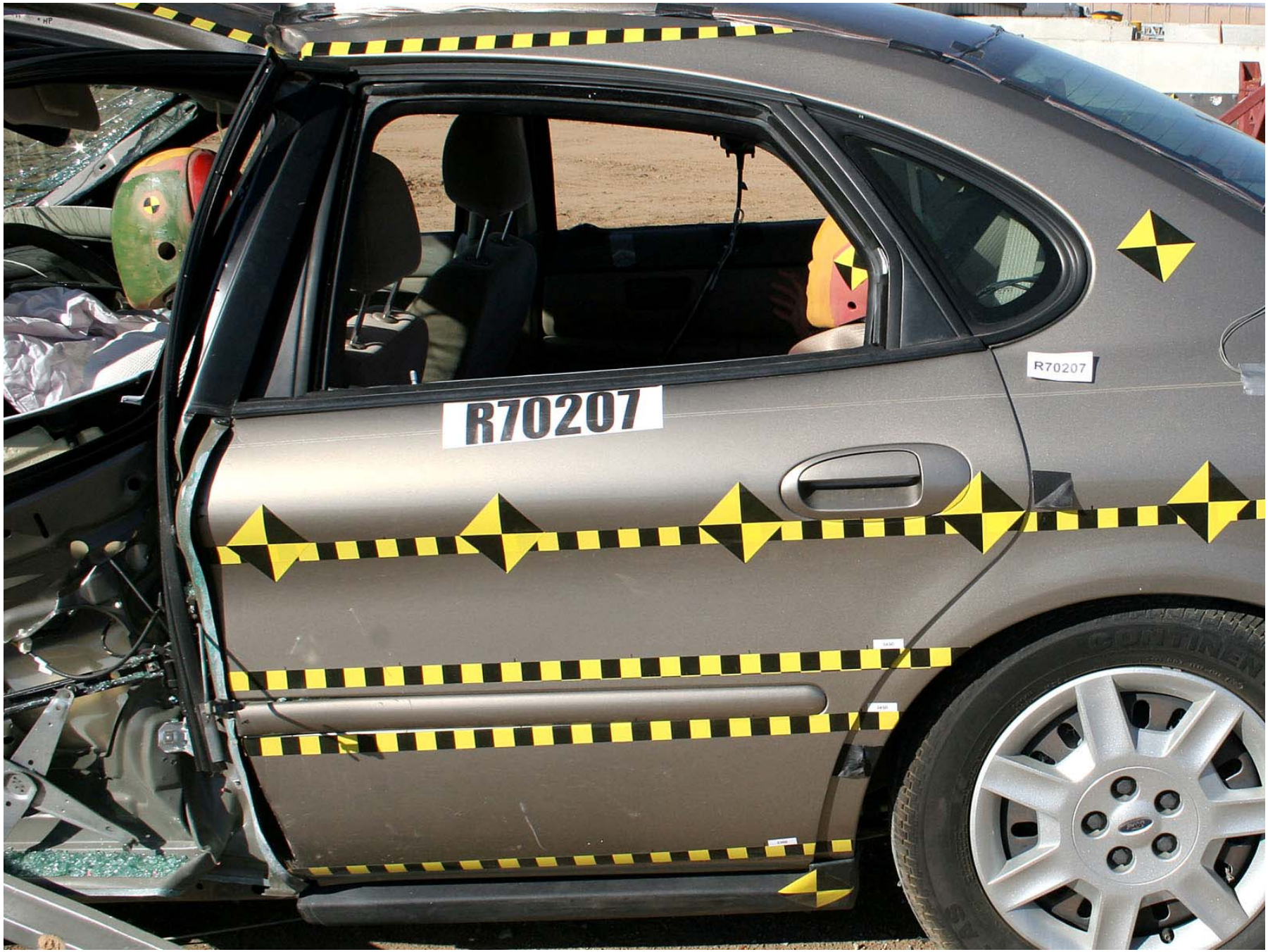

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Figure A-42: Test Vehicle Post-Test Right Front Door

Figure A-43: Test Vehicle Pre-Test Right Rear Door

Figure A-44: Test Vehicle Post-Test Right Rear Door

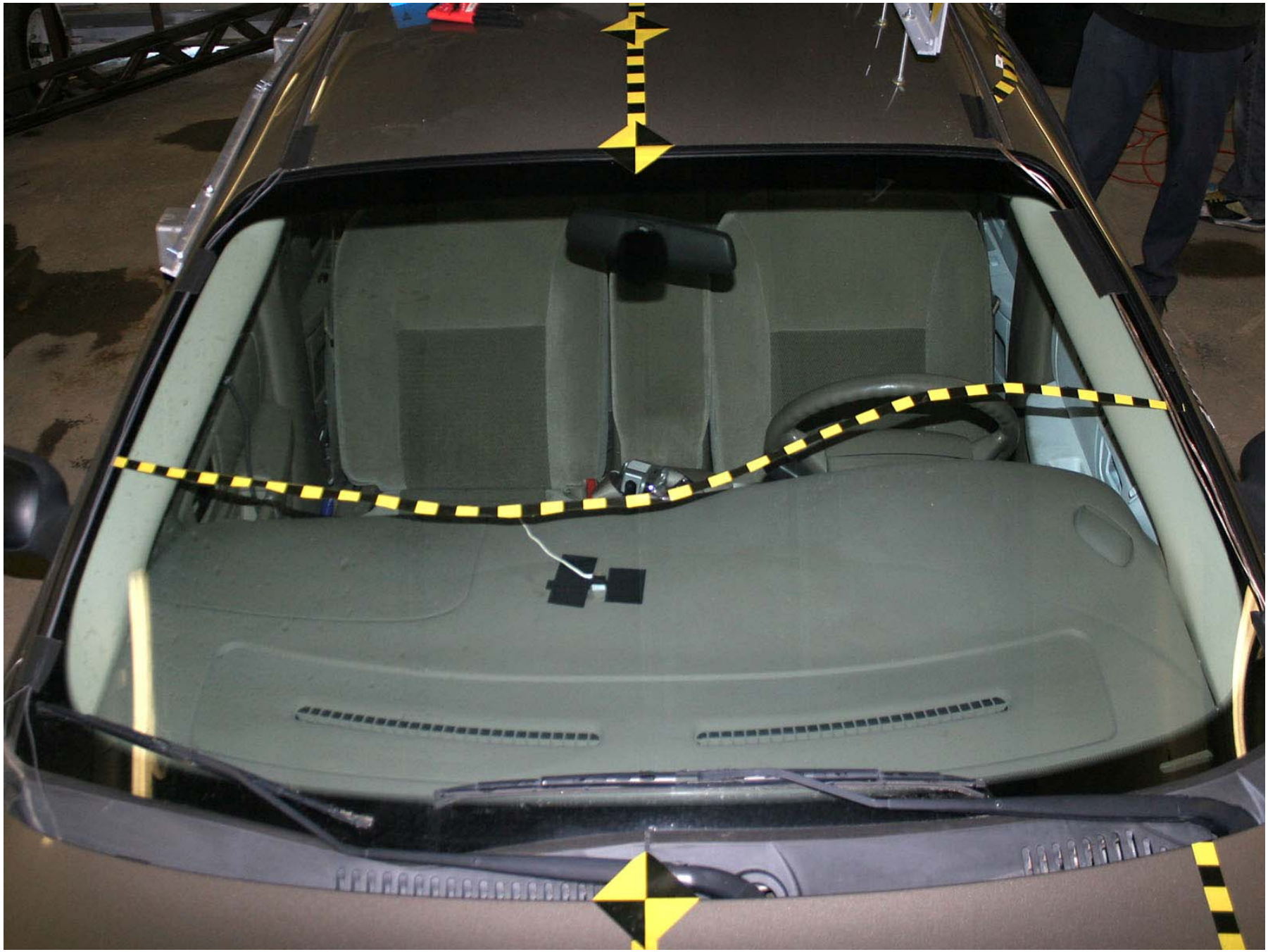

Figure A-45: Test Vehicle Pre-Test Windshield View

Figure A-46: Test Vehicle Post-Test Windshield View

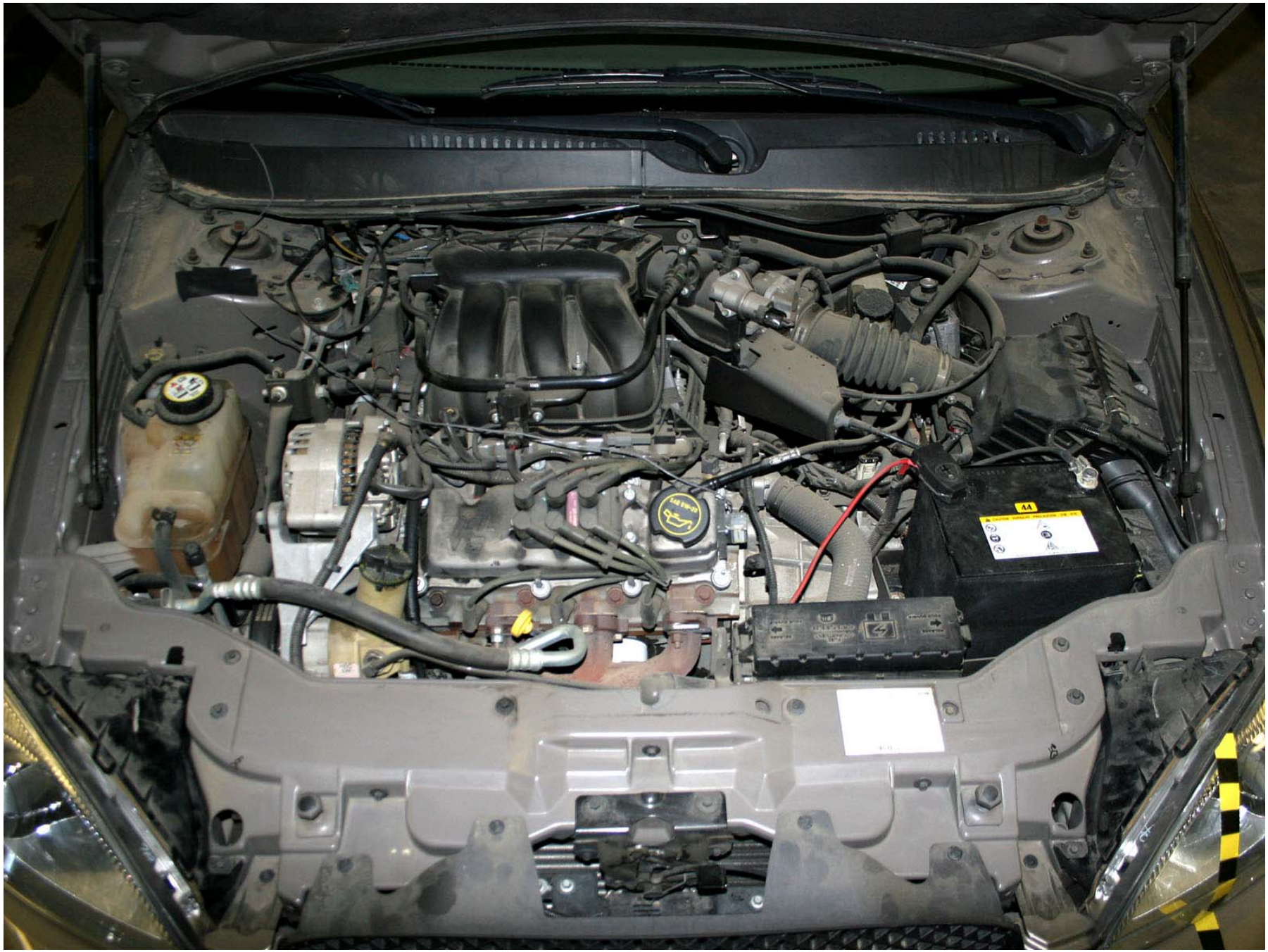

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Figure A-53: Test Vehicle Pre-Test Left Side A-Pillar Rear ¾ View

Figure A-54: Test Vehicle Post-Test Left Side A-Pillar Rear ¾ View

Figure A-55: Test Vehicle Pre-Test Left Side B-Pillar Side View

Figure A-56: Test Vehicle Post-Test Left Side B-Pillar Side View

Figure A-57: Test Vehicle Pre-Test Left Side B-Pillar Rear ¾ View

Figure A-58: Test Vehicle Post-Test Left Side B-Pillar Rear ¾ View

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Figure A-60: Test Vehicle Post-Test Left Side C-Pillar Side View

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Figure A-82: Test Vehicle Post-Test Right Side A-Pillar Rear ¾ View

Figure A-83: Test Vehicle Pre-Test Right Side B-Pillar Side View

Figure A-84: Test Vehicle Post-Test Right Side B-Pillar Side View

Figure A-85: Test Vehicle Pre-Test Right Side B-Pillar Rear ¾ View

Figure A-86: Test Vehicle Post-Test Right Side B-Pillar Rear ¾ View

Figure A-87: Test Vehicle Pre-Test Right Side C-Pillar Side View

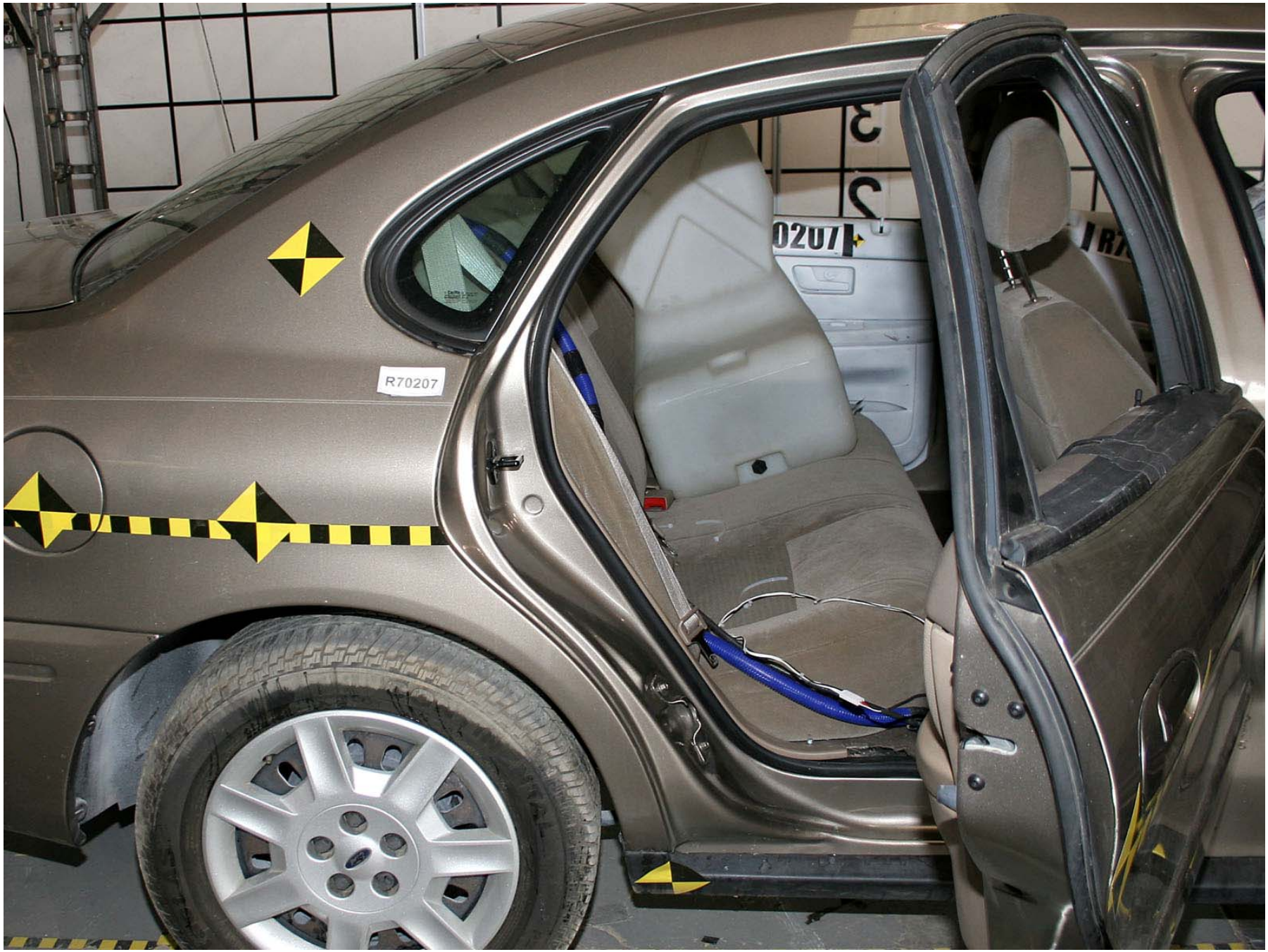

Figure A-88: Test Vehicle Post-Test Right Side C-Pillar Side View

Figure A-89: Test Vehicle Pre-Test Right Side C-Pillar Front ¾ View

Figure A-90: Test Vehicle Post-Test Right Side C-Pillar Front ¾ View

Figure A-91: Test Vehicle Pre-Test Right Front Sill Side View, Door Closed

Figure A-92: Test Vehicle Post-Test Right Front Sill Side View, Door Closed

Figure A-93: Test Vehicle Pre-Test Right Front Sill Side View, Door Open

Figure A-94: Test Vehicle Post-Test Right Front Sill Side View, Door Open

Figure A-95: Test Vehicle Pre-Test Right Front Sill Rear ¾ View, Door Closed

Figure A-96: Test Vehicle Post-Test Right Front Sill Rear ¾ View, Door Closed

Figure A-97: Test Vehicle Pre-Test Right Front Sill Rear ¾ View, Door Open

Figure A-98: Test Vehicle Post-Test Right Front Sill Rear ¾ View, Door Open

Figure A-99: Test Vehicle Pre-Test Right Rear Sill Side View, Door Closed

Figure A-100: Test Vehicle Post-Test Right Rear Sill Side View, Door Closed

Figure A-101: Test Vehicle Pre-Test Right Rear Sill Side View, Door Open

Figure A-102: Test Vehicle Post-Test Right Rear Sill Side View, Door Open

Figure A-103: Test Vehicle Pre-Test Right Rear Sill Rear ¾ View, Door Closed

Figure A-104: Test Vehicle Post-Test Right Rear Sill Rear ¾ View, Door Closed

Figure A-105: Test Vehicle Pre-Test Right Rear Sill Rear ¾ View, Door Open

Figure A-106: Test Vehicle Post-Test Right Rear Sill Rear ¾ View, Door Open

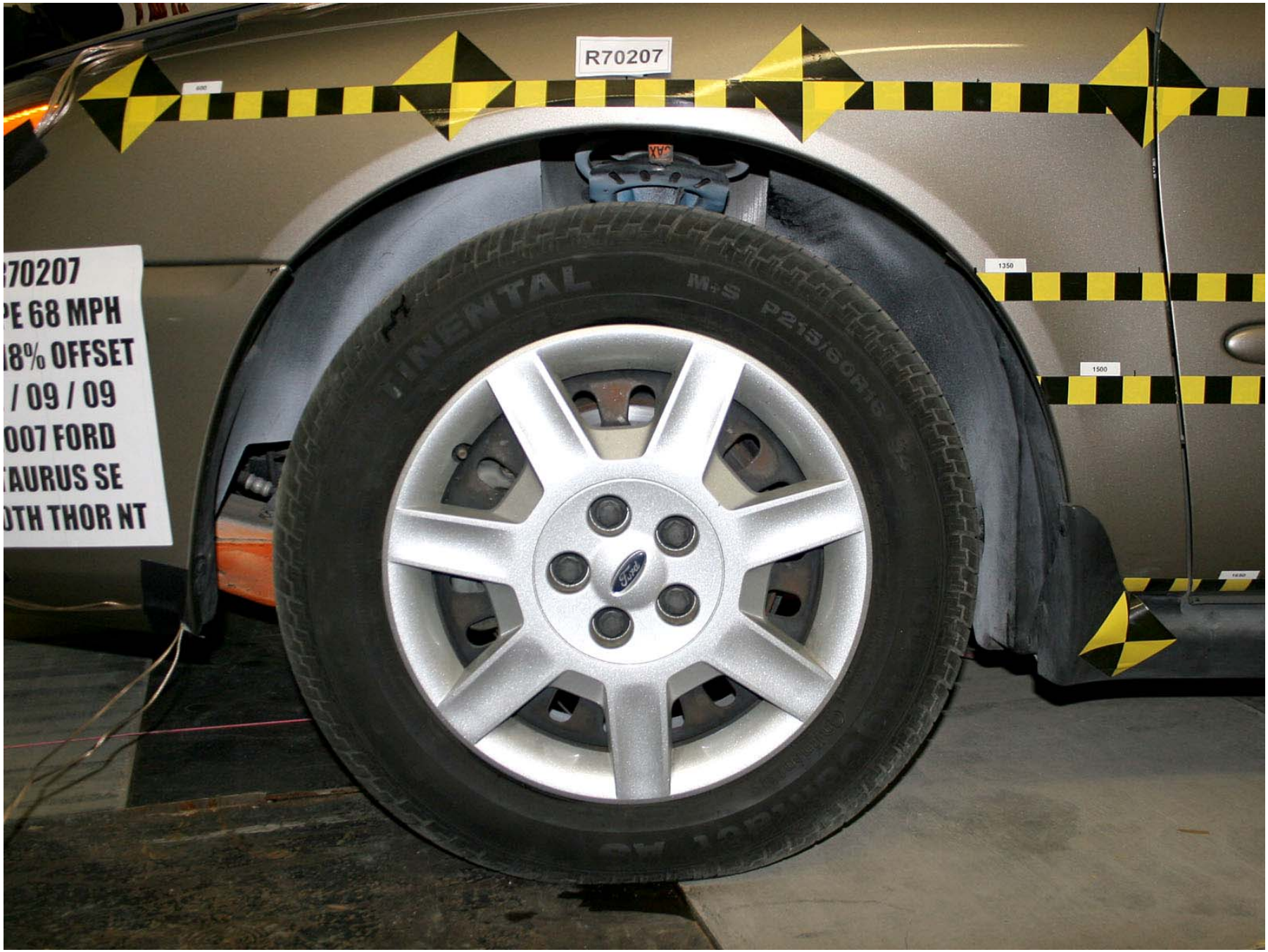

Figure A-107: Test Vehicle Pre-Test Left Front Wheel Side View

Figure A-108: Test Vehicle Post-Test Left Front Wheel Side View

Figure A-109: Test Vehicle Pre-Test Left Front Wheel Front ¾ View

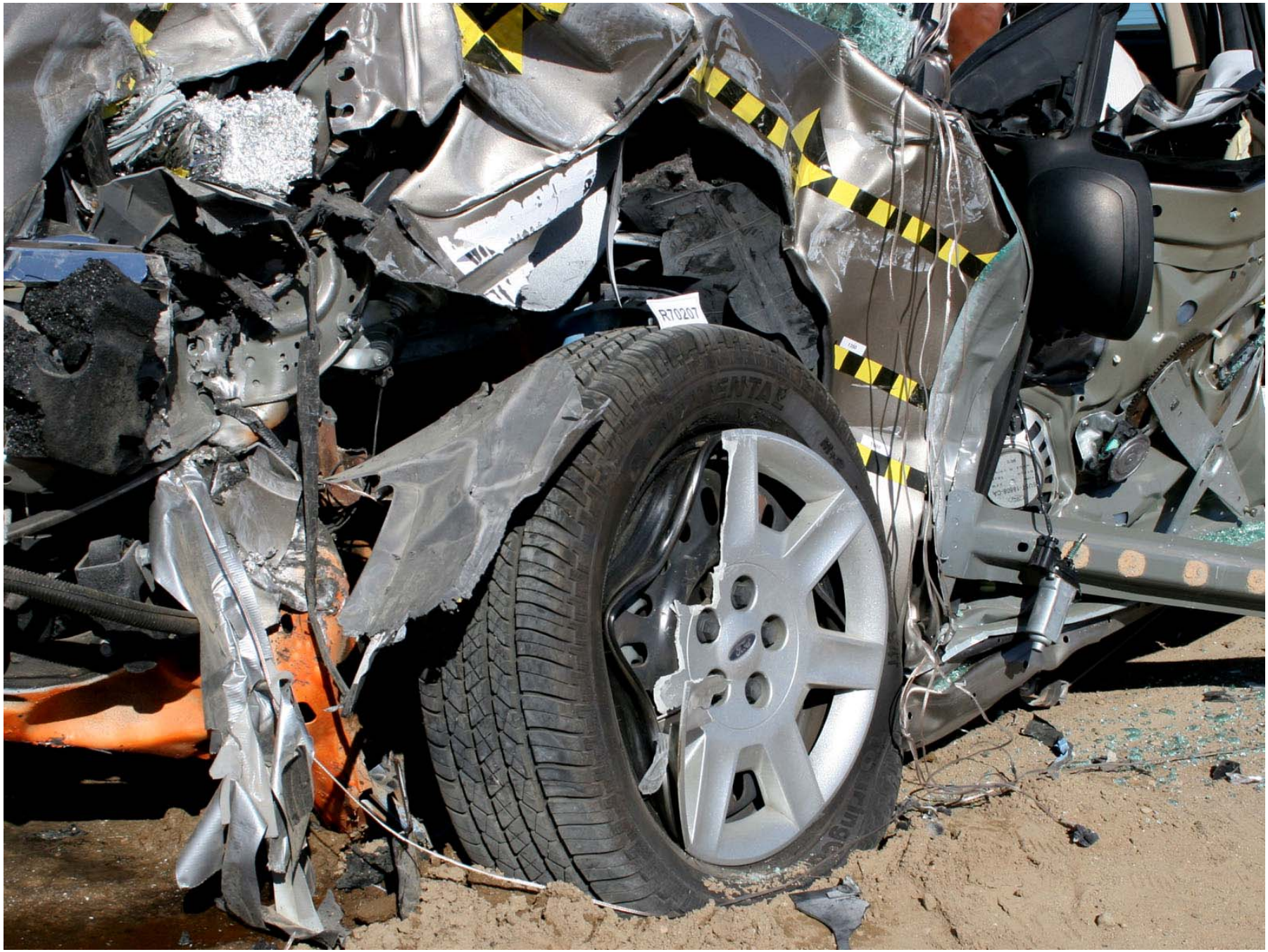

Figure A-110: Test Vehicle Post-Test Left Front Wheel Front ¾ View

Figure A-111: Test Vehicle Pre-Test Left Front Wheel Rear ¾ View

Figure A-112: Test Vehicle Post-Test Left Front Wheel Rear ¾ View

Figure A-113: Test Vehicle Pre-Test Left Front Wheel Top View

Figure A-114: Test Vehicle Post-Test Left Front Wheel Top View

Figure A-115: Test Vehicle Post-Test Left Front Wheel A-Pillar/Rocker Contact

Figure A-116: Test Vehicle Post-Test Left Front Wheel A-Pillar/Rocker Contact

Figure A-117: Test Vehicle Post-Test Left Front Wheel A-Pillar/Rocker Contact

Figure A-118: Test Vehicle Post-Test Left Front Wheel Damage (Outside)

Figure A-119: Test Vehicle Post-Test Left Front Wheel Damage (Inside)

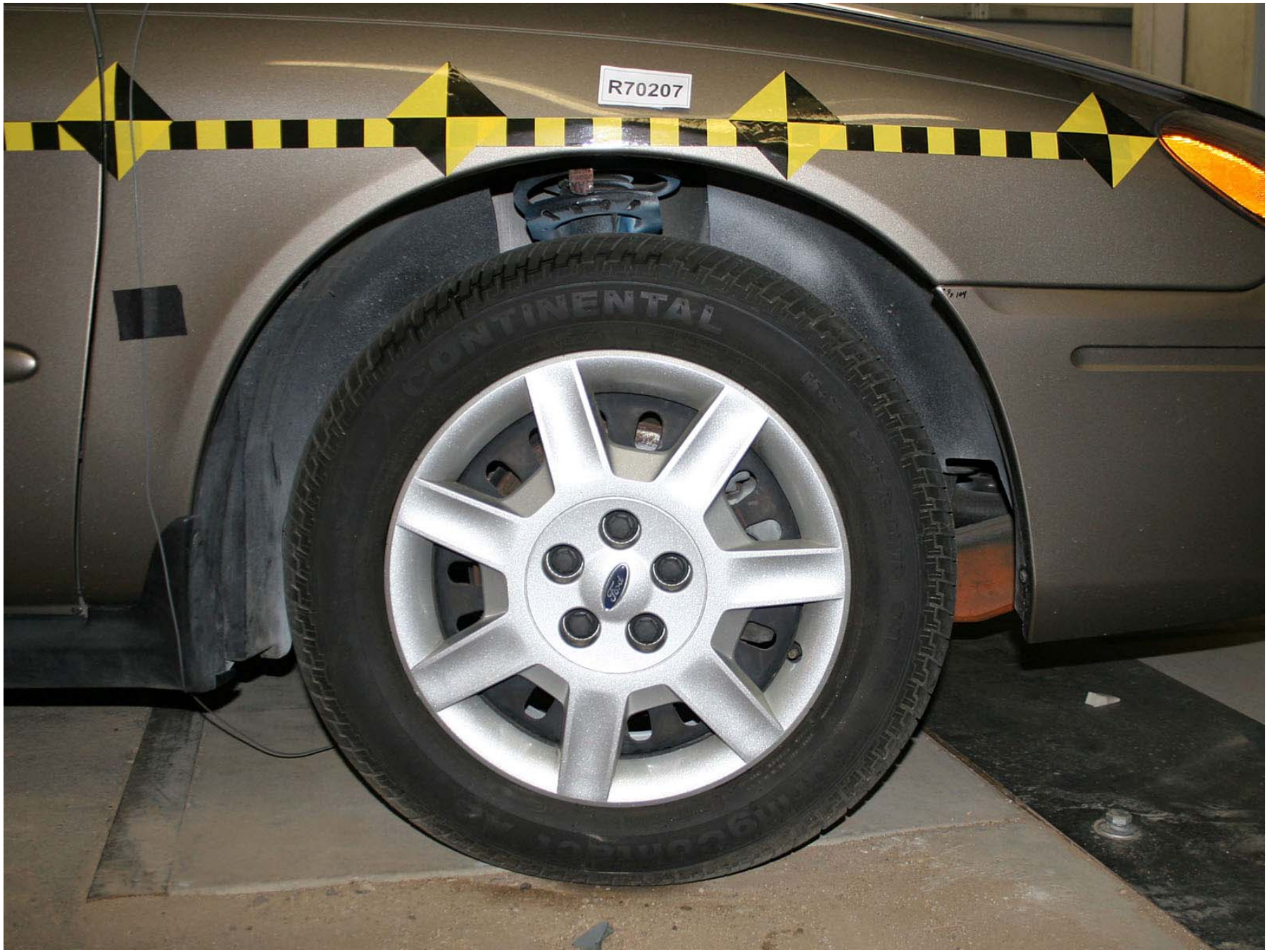

Figure A-120: Test Vehicle Pre-Test Right Front Wheel Side View

Figure A-121: Test Vehicle Post-Test Right Front Wheel Side View

Figure A-122: Test Vehicle Pre-Test Right Front Wheel Front ¾ View

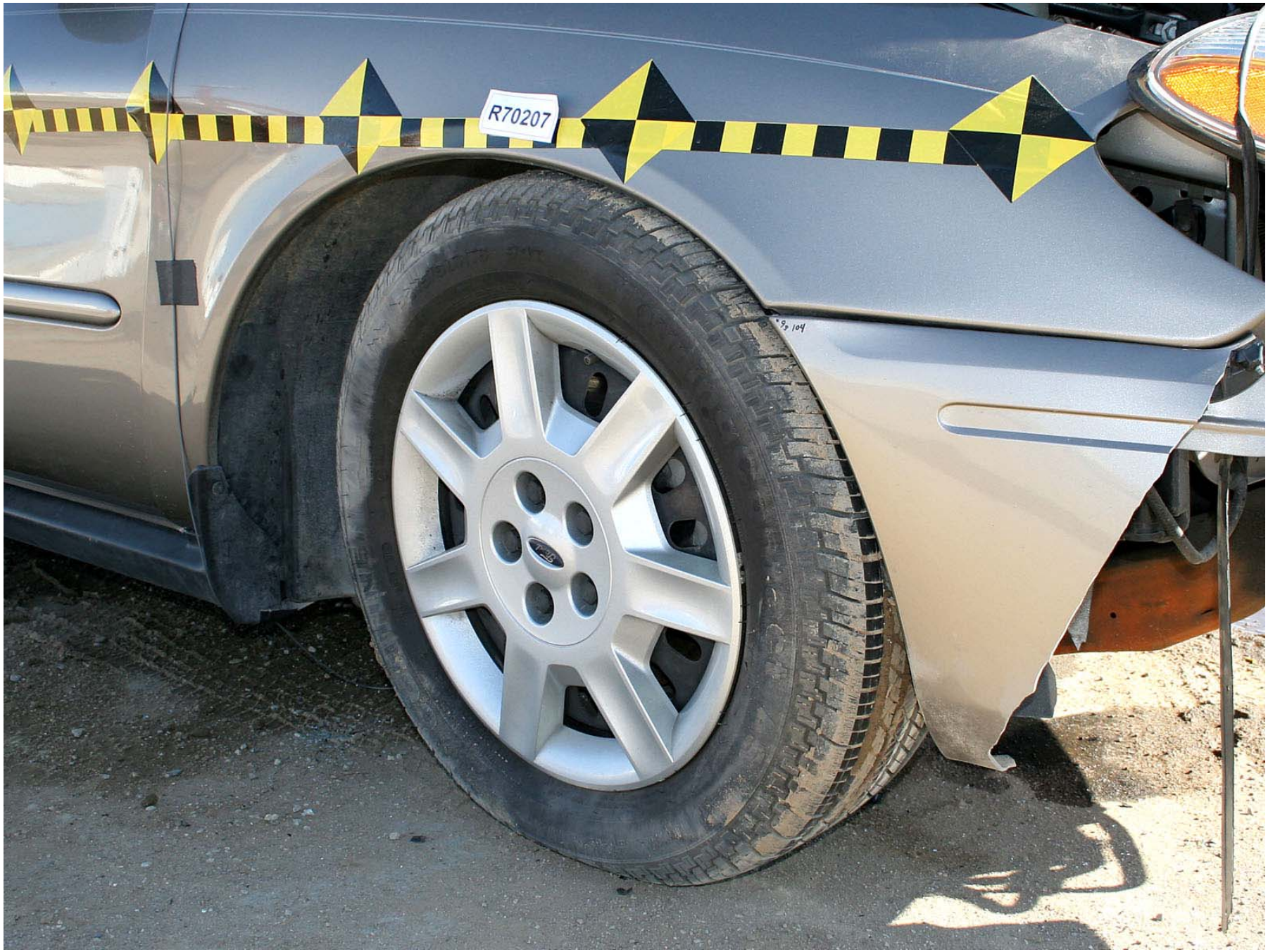

Figure A-123: Test Vehicle Post-Test Right Front Wheel Front ¾ View

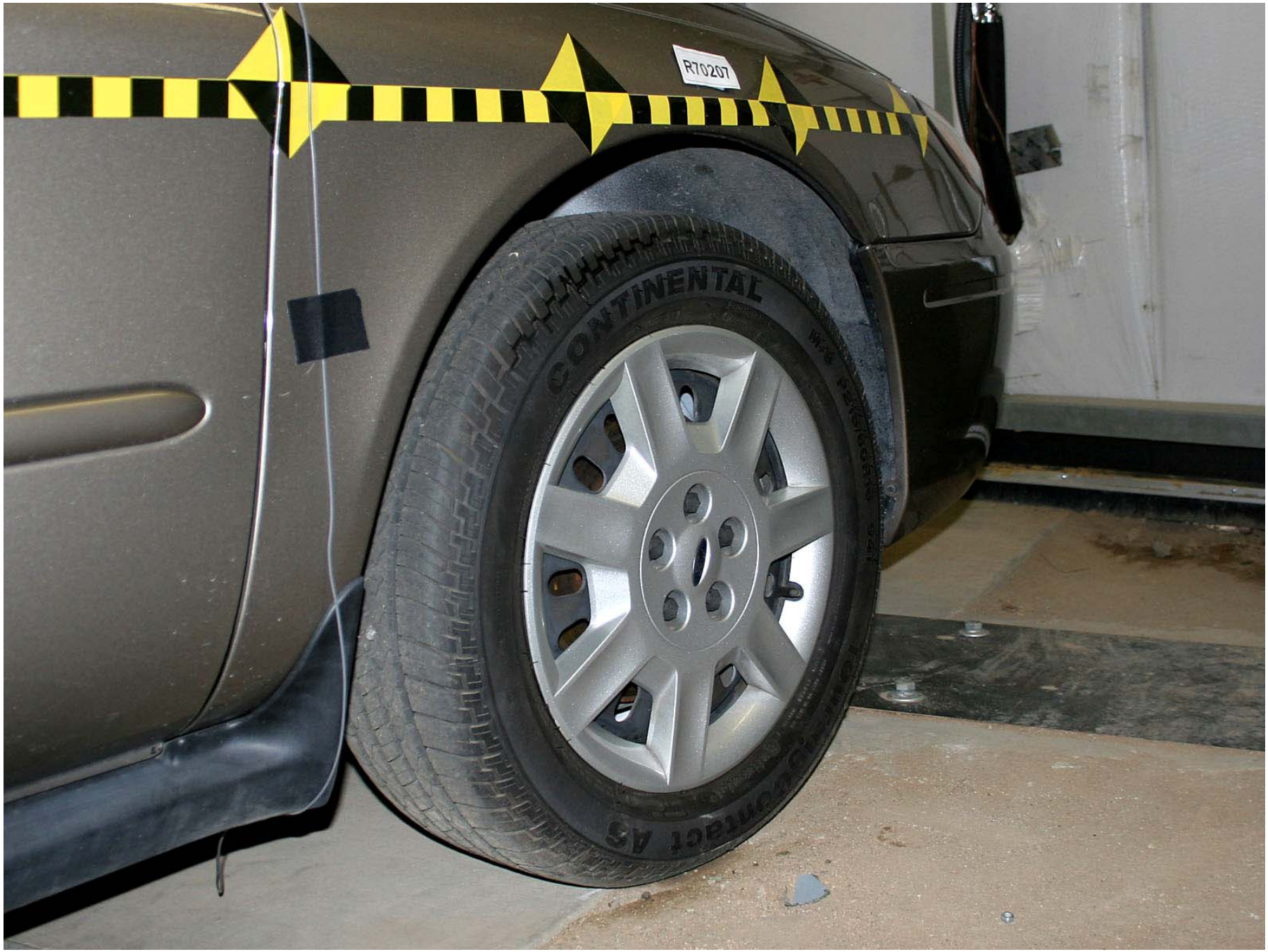

Figure A-124: Test Vehicle Pre-Test Right Front Wheel Rear ¾ View

Figure A-125: Test Vehicle Post-Test Right Front Wheel Rear ¾ View

Figure A-126: Test Vehicle Pre-Test Right Front Wheel Top View

Figure A-127: Test Vehicle Post-Test Right Front Wheel Top View

Figure A-128: Test Vehicle Post-Test Right Front Wheel A-Pillar/Rocker Contact

Figure A-129: Test Vehicle Post-Test Right Front Wheel A-Pillar/Rocker Contact

Figure A-130: Test Vehicle Post-Test Right Front Wheel A-Pillar/Rocker Contact

Figure A-131: Test Vehicle Post-Test Right Front Wheel Damage (Outside)

Figure A-132: Test Vehicle Post-Test Right Front Wheel Damage (Inside)

Figure A-133: Test Vehicle Pre-Test Left Front Wheel Well (Tire On)

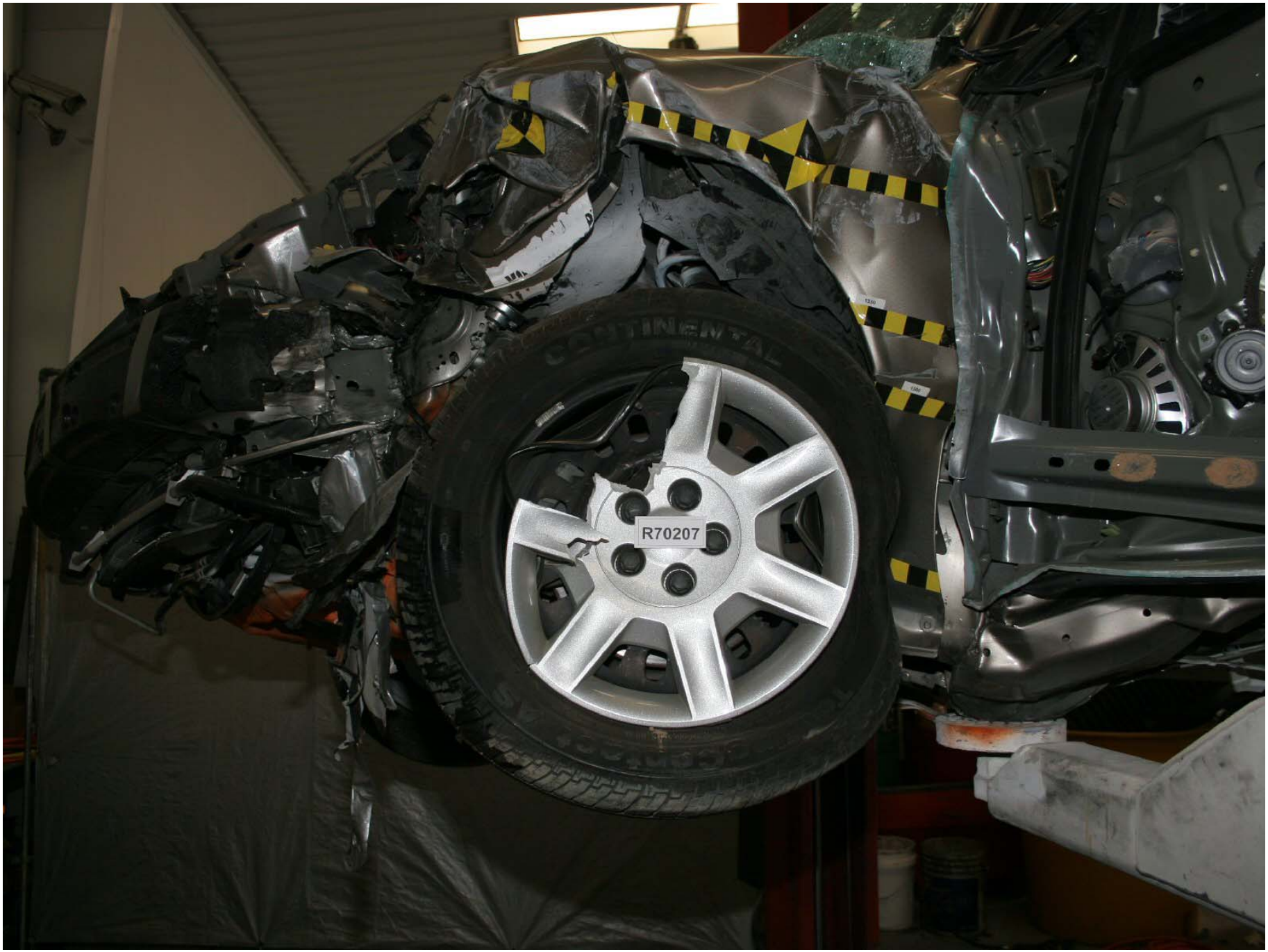

Figure A-134: Test Vehicle Post-Test Left Front Wheel Well (Tire On)

Figure A-135: Test Vehicle Pre-Test Left Front Wheel Well (Tire Off)

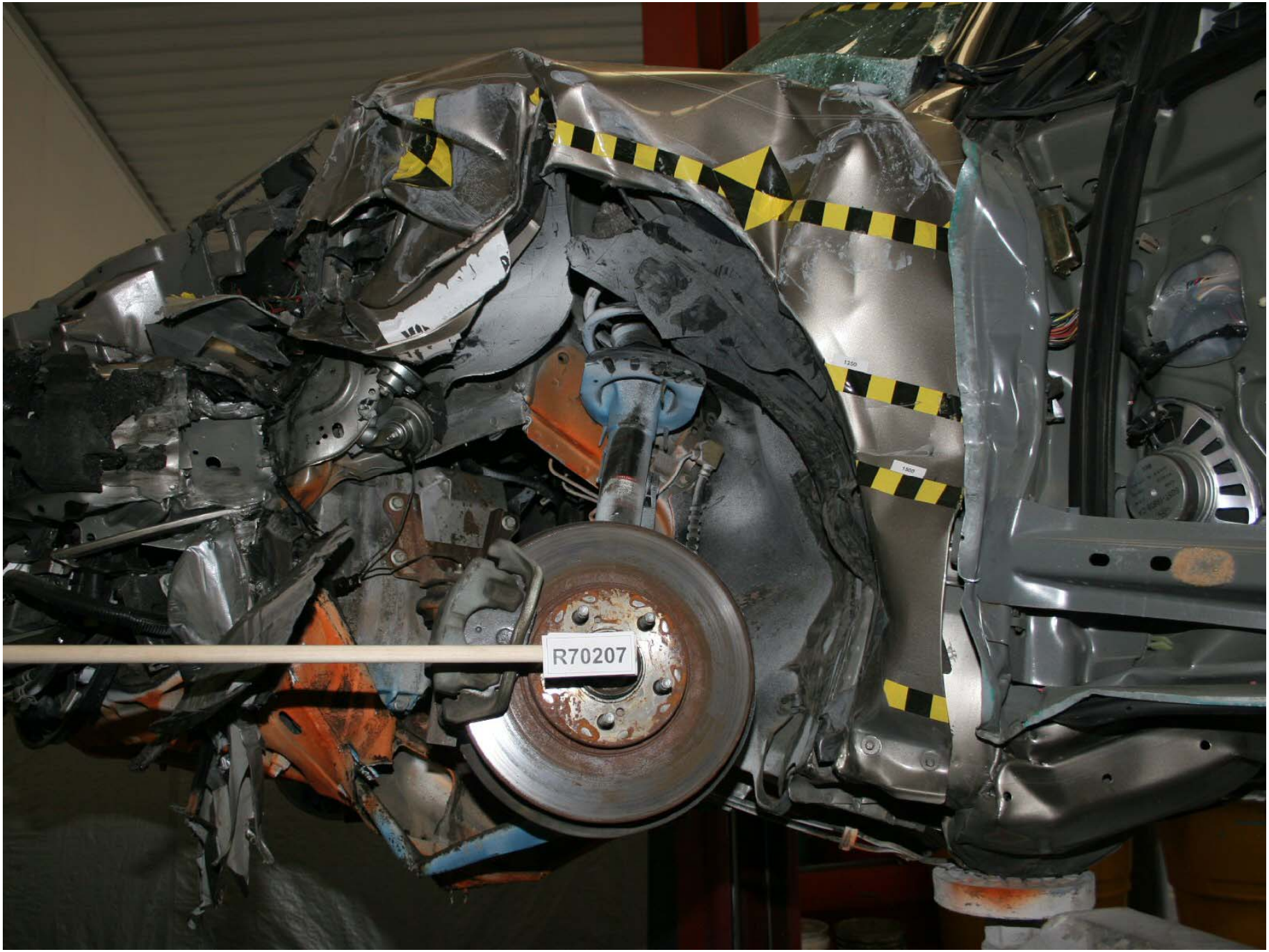

Figure A-136: Test Vehicle Post-Test Left Front Wheel Well (Tire Off)

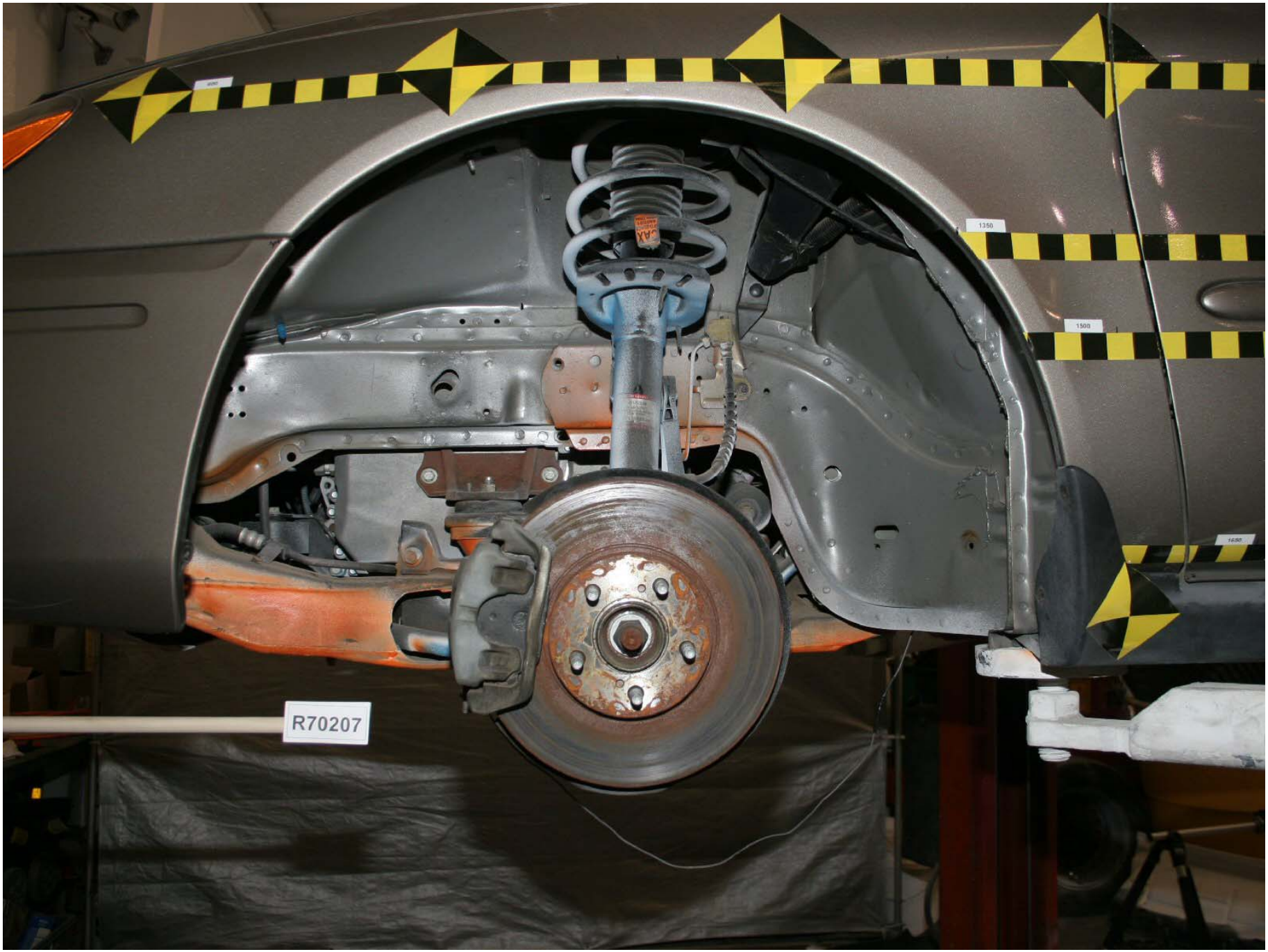

Figure A-137: Test Vehicle Pre-Test Left Front Wheel Well (Tire Off), Inner Fender Removed

Figure A-138: Test Vehicle Post-Test Left Front Wheel Well (Tire Off), Inner Fender Removed

Figure A-139: Test Vehicle Pre-Test Left Inner Fender Well View

Figure A-140: Test Vehicle Post-Test Left Inner Fender Well View

Figure A-141: Test Vehicle Pre-Test Left Inner Fender Well View

Figure A-142: Test Vehicle Post-Test Left Inner Fender Well View

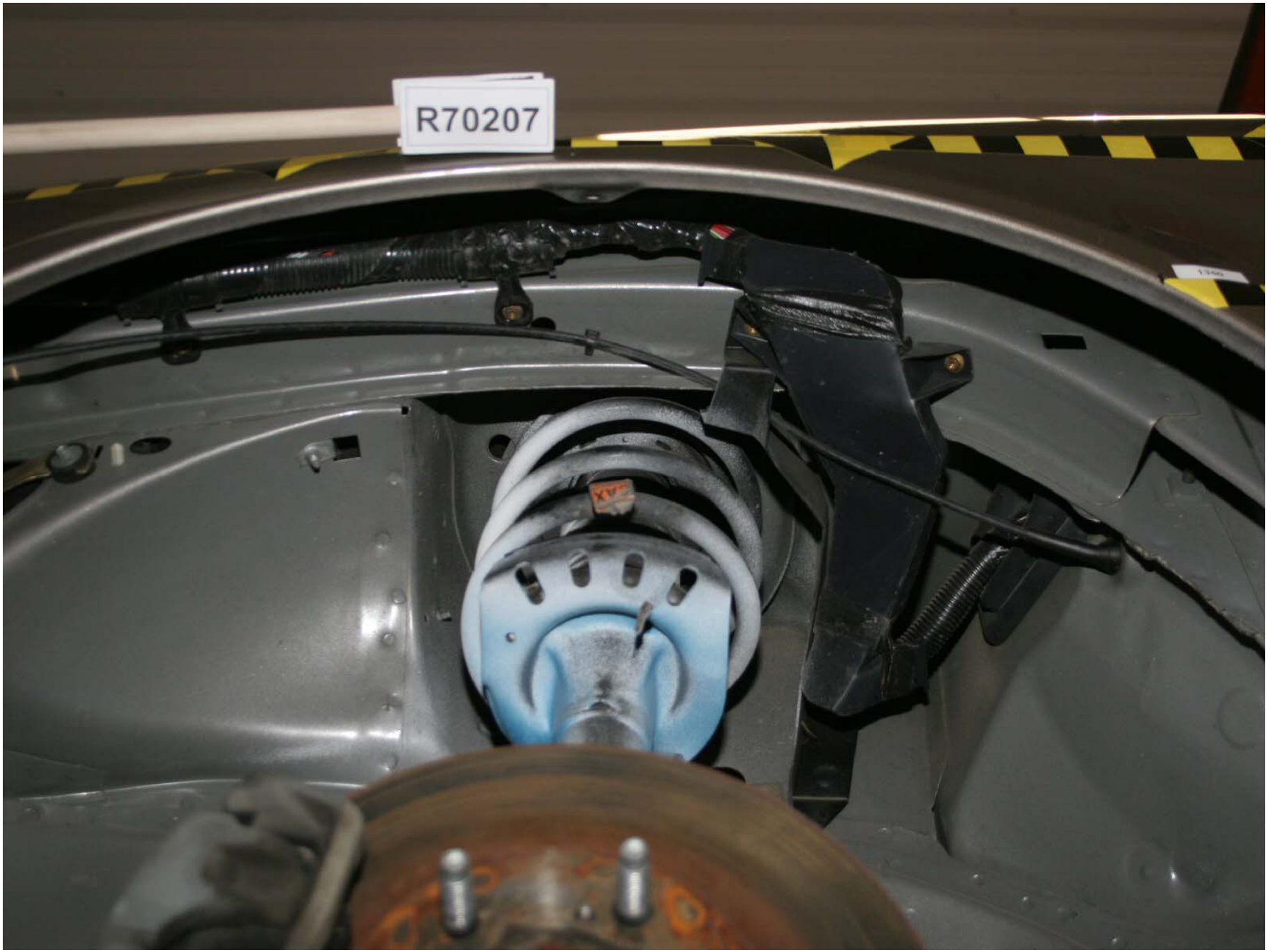

Figure A-143: Test Vehicle Pre-Test Left Inner Fender Well View

Figure A-144: Test Vehicle Post-Test Left Inner Fender Well View

Figure A-145: Test Vehicle Pre-Test Top Fender View

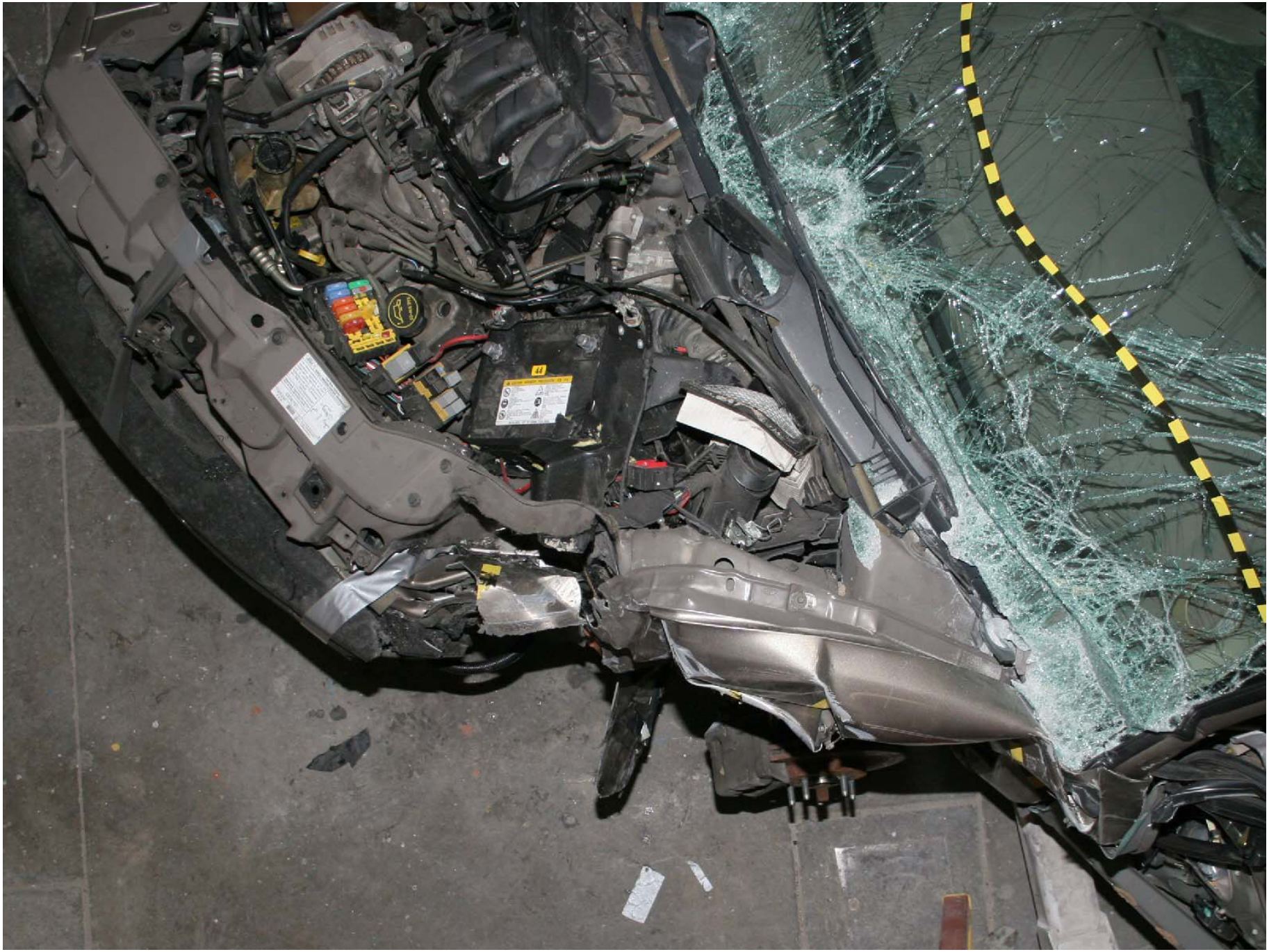

Figure A-146: Test Vehicle Post-Test Top Fender View

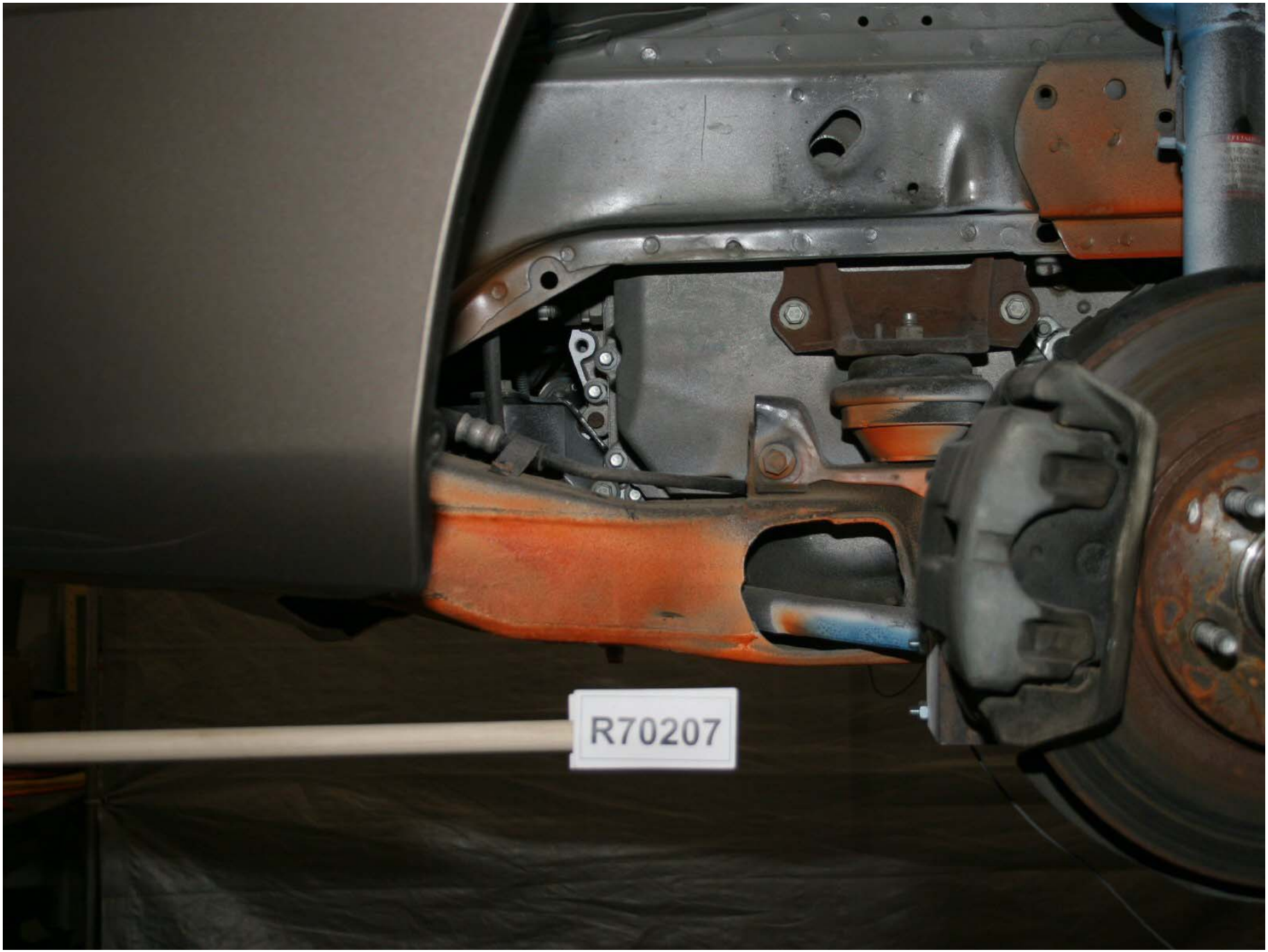

Figure A-147: Test Vehicle Pre-Test Left Front Frame Rail View

Figure A-148: Test Vehicle Post-Test Left Front Frame Rail View

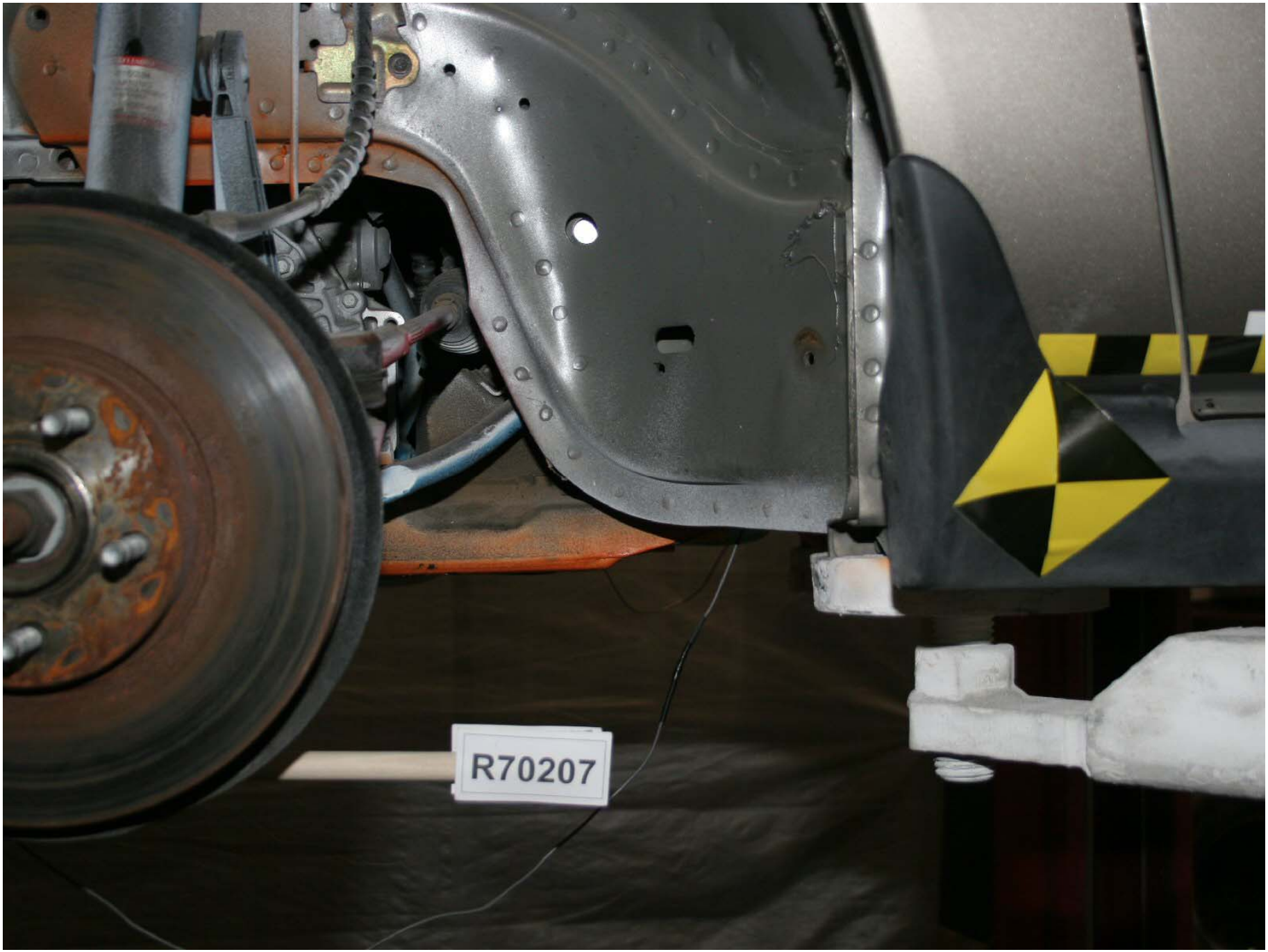

Figure A-149: Test Vehicle Pre-Test Left Front Frame Rail View

Figure A-150: Test Vehicle Post-Test Left Front Frame Rail View

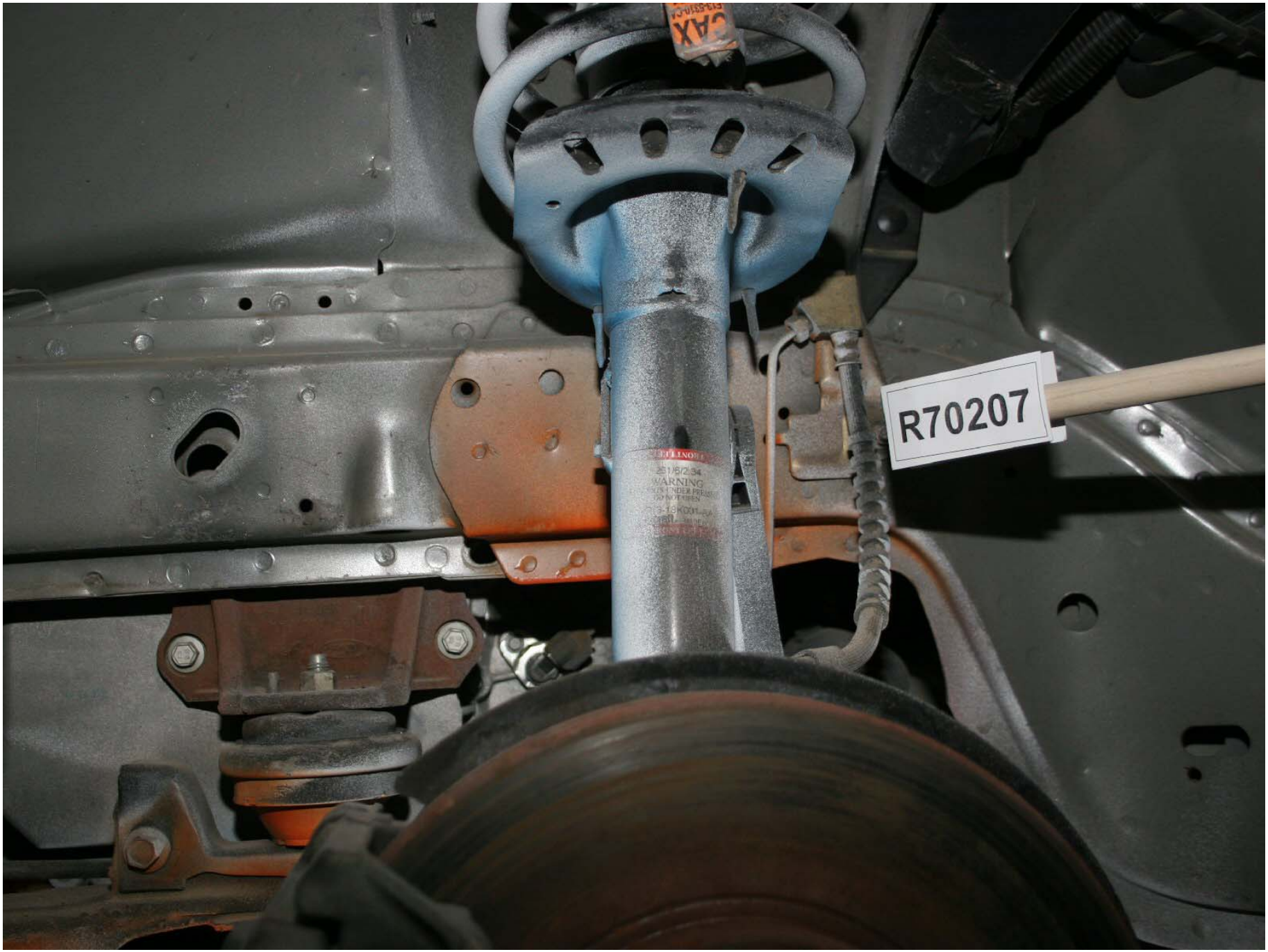

Figure A-151: Test Vehicle Pre-Test Left Front Frame Rail View

Figure A-152: Test Vehicle Post-Test Left Front Frame Rail View

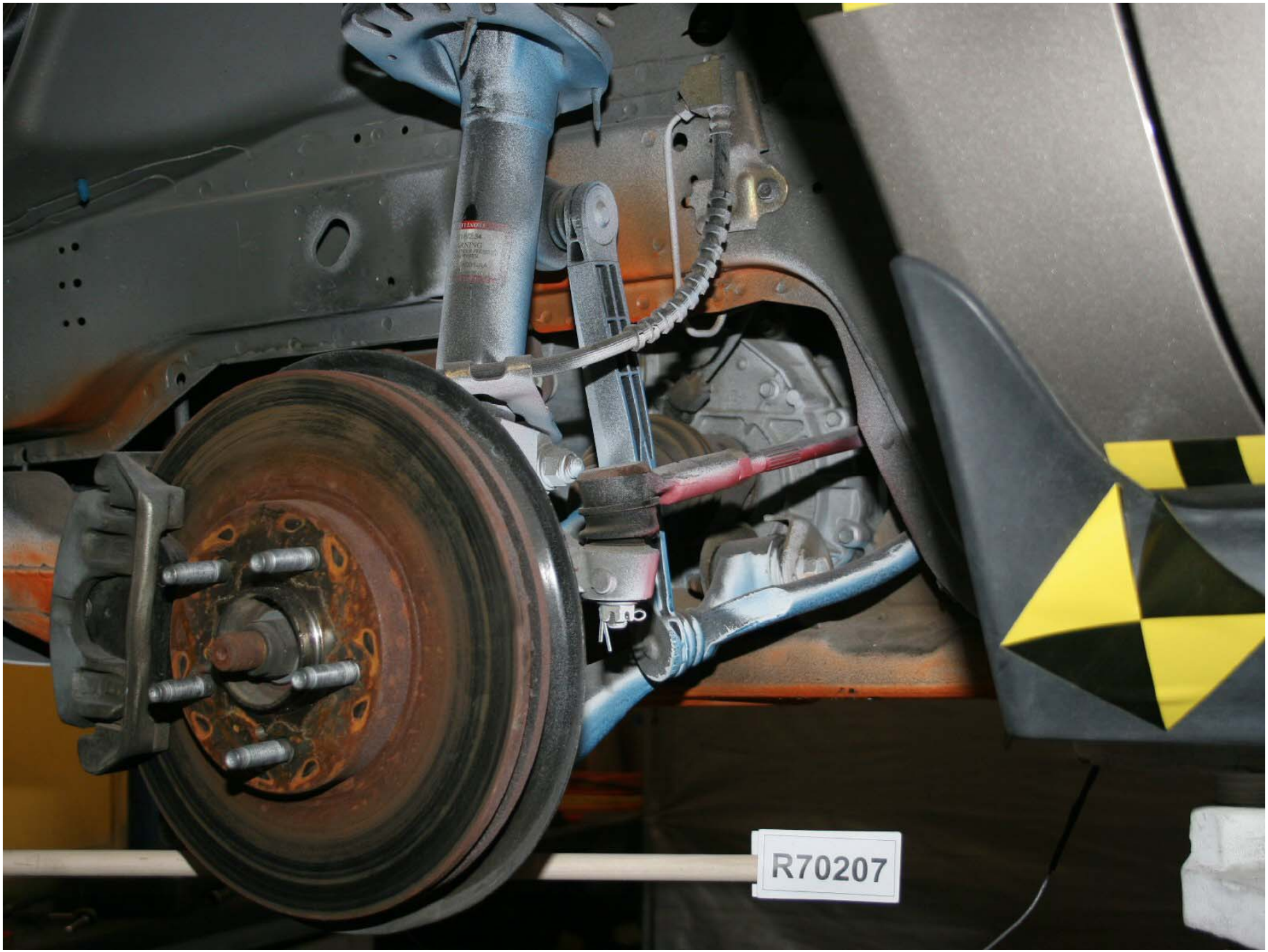

Figure A-153: Test Vehicle Pre-Test Left Side Tie Rod and Sway Bar Attachments Points

Figure A-154: Test Vehicle Post-Test Left Side Tie Rod and Sway Bar Attachments Points

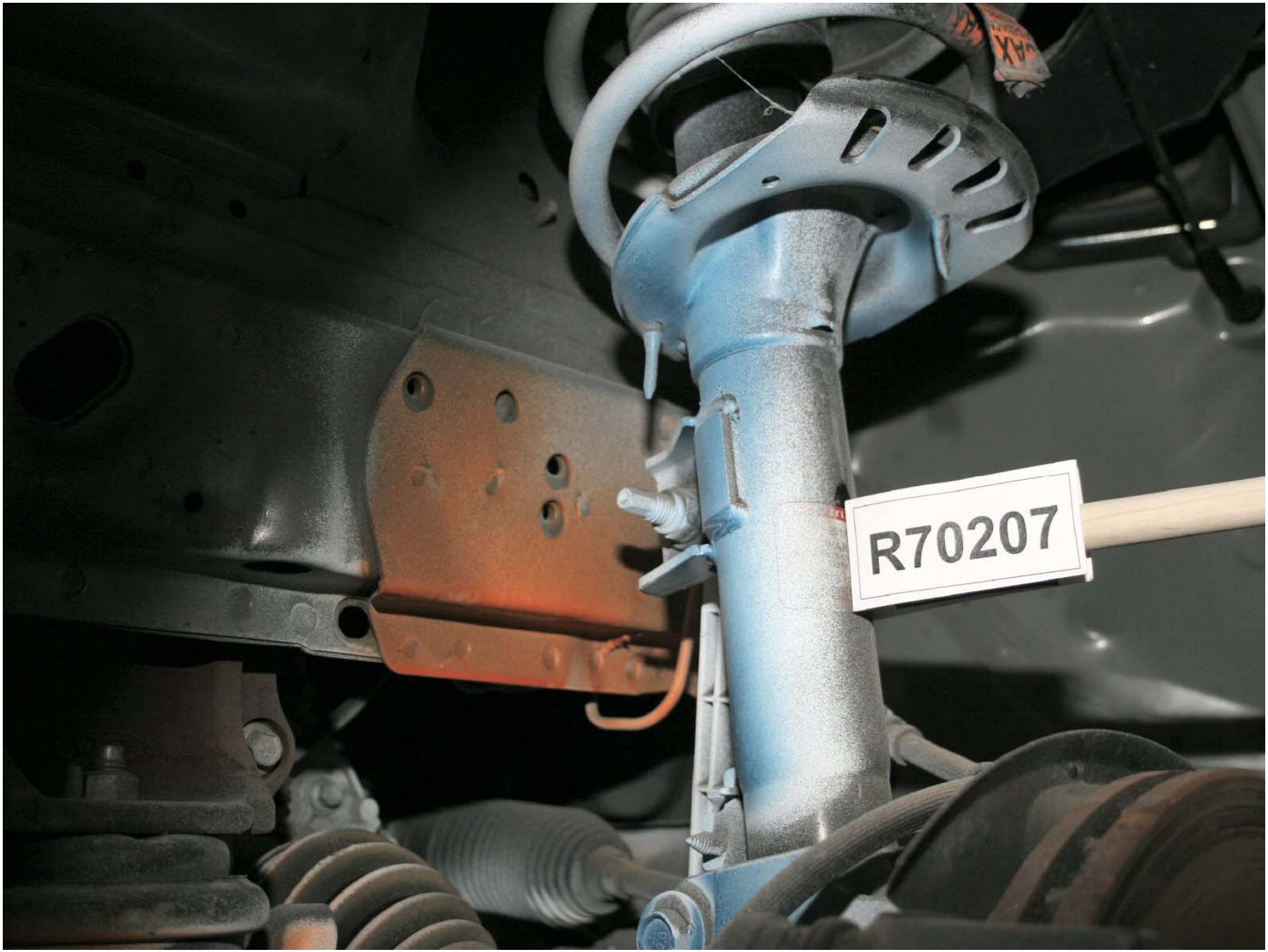

Figure A-155: Test Vehicle Pre-Test Left Side Upper Sway Bar Attachment Point

Figure A-156: Test Vehicle Post-Test Left Side Upper Sway Bar Attachment Point

Figure A-157: Test Vehicle Pre-Test Left Side Frame to A-Pillar Joint

Figure A-158: Test Vehicle Post-Test Left Side Frame to A-Pillar Joint

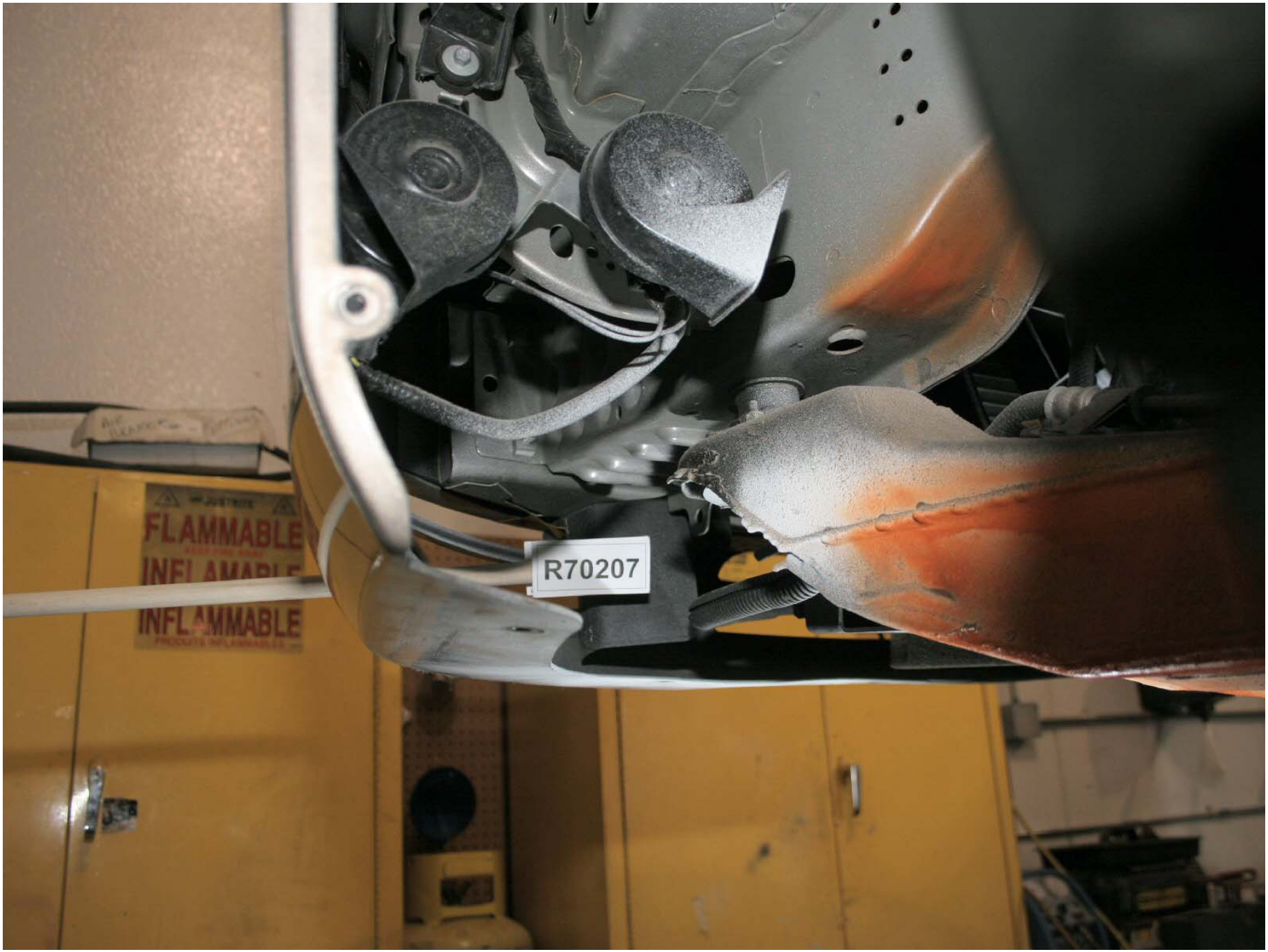

Figure A-159: Test Vehicle Pre-Test Left Side Crush Initiators

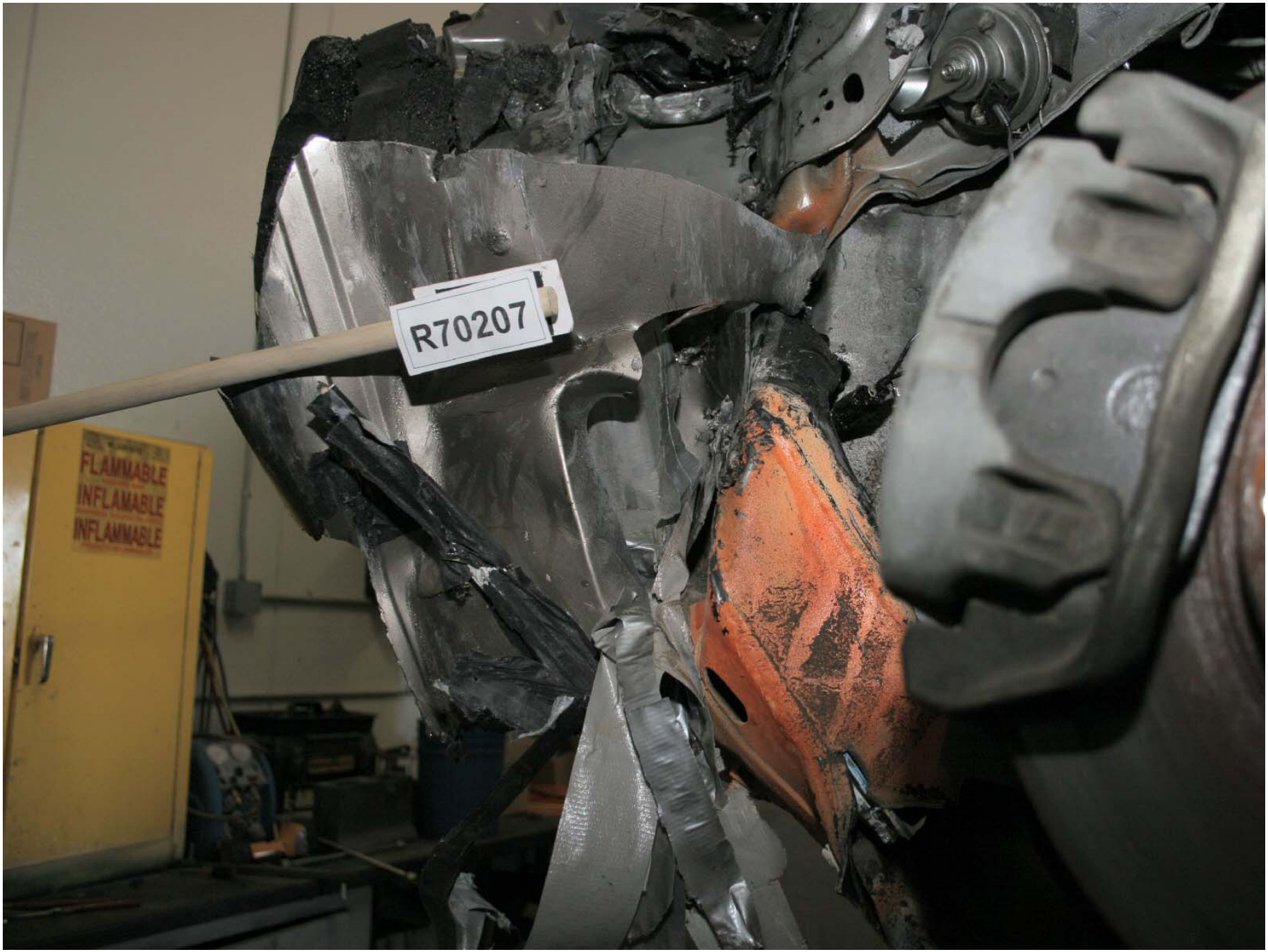

Figure A-160: Test Vehicle Post-Test Left Side Crush Initiators

Figure A-161: Test Vehicle Pre-Test Left Side Crush Initiators

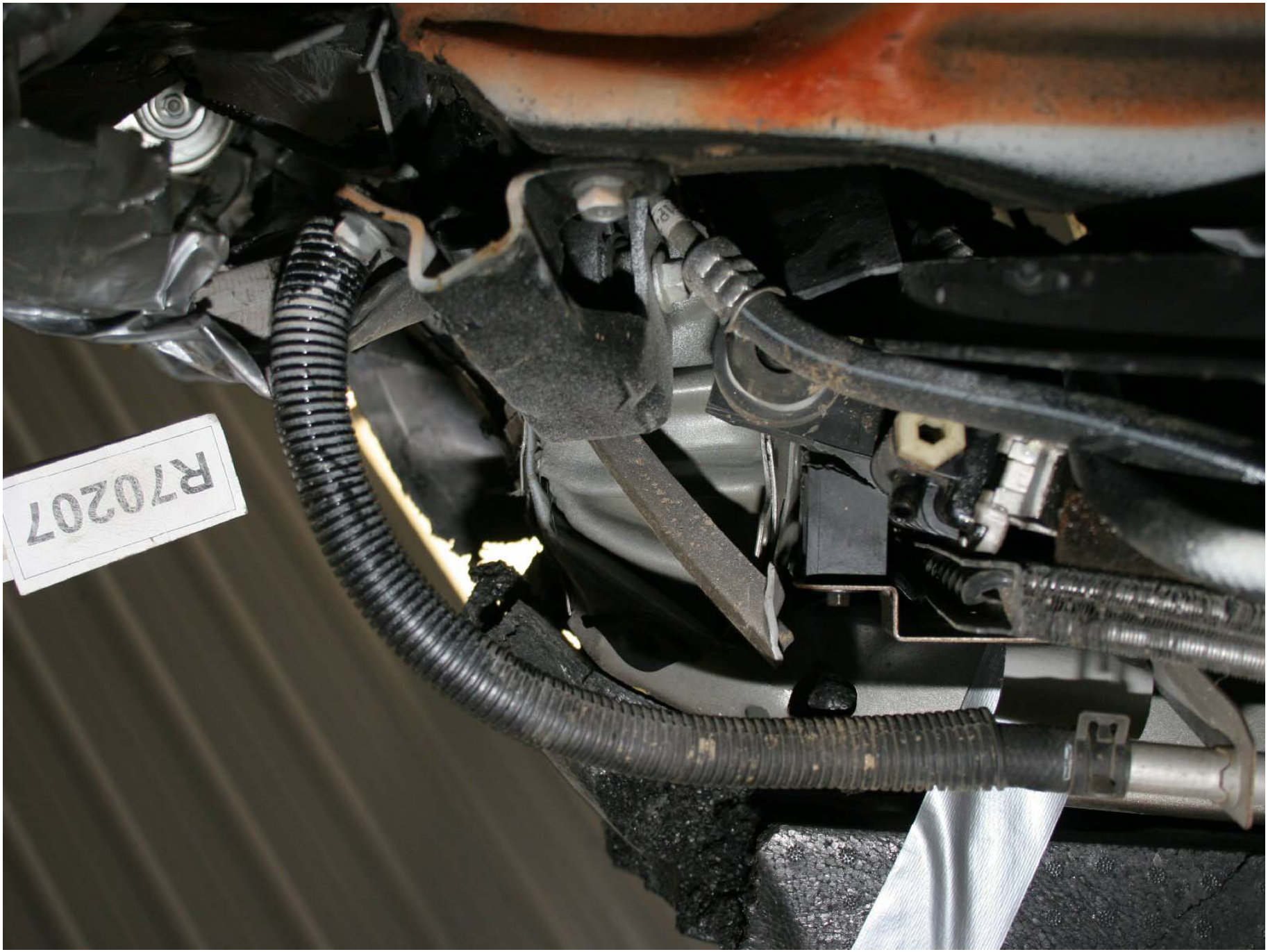

Figure A-162: Test Vehicle Post-Test Left Side Crush Initiators

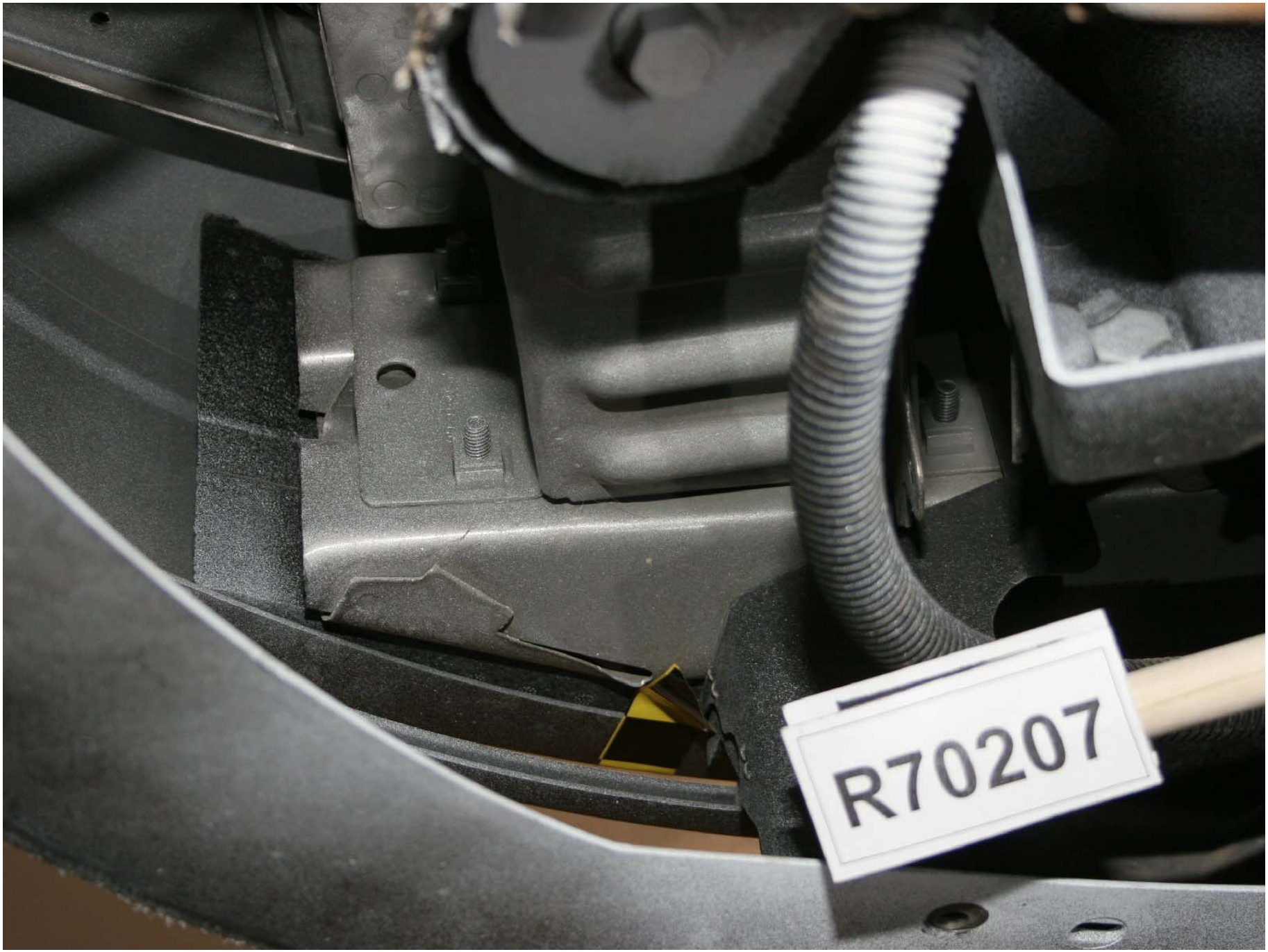

Figure A-163: Test Vehicle Pre-Test Left Side Bumper Attachment Point

Figure A-164: Test Vehicle Post-Test Left Side Bumper Attachment Point

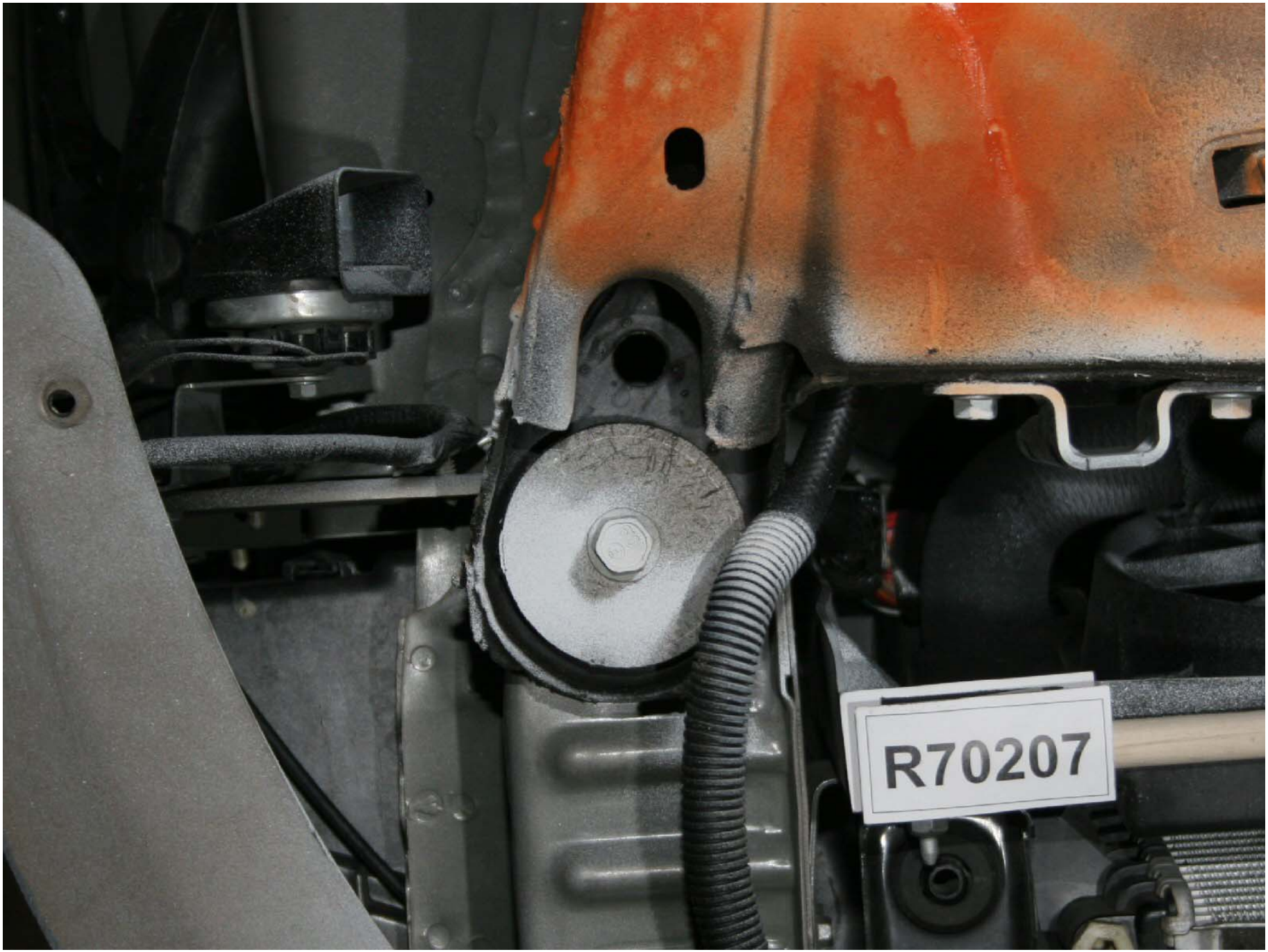

Figure A-165: Test Vehicle Pre-Test Left Front Sub-Frame Mounting Point

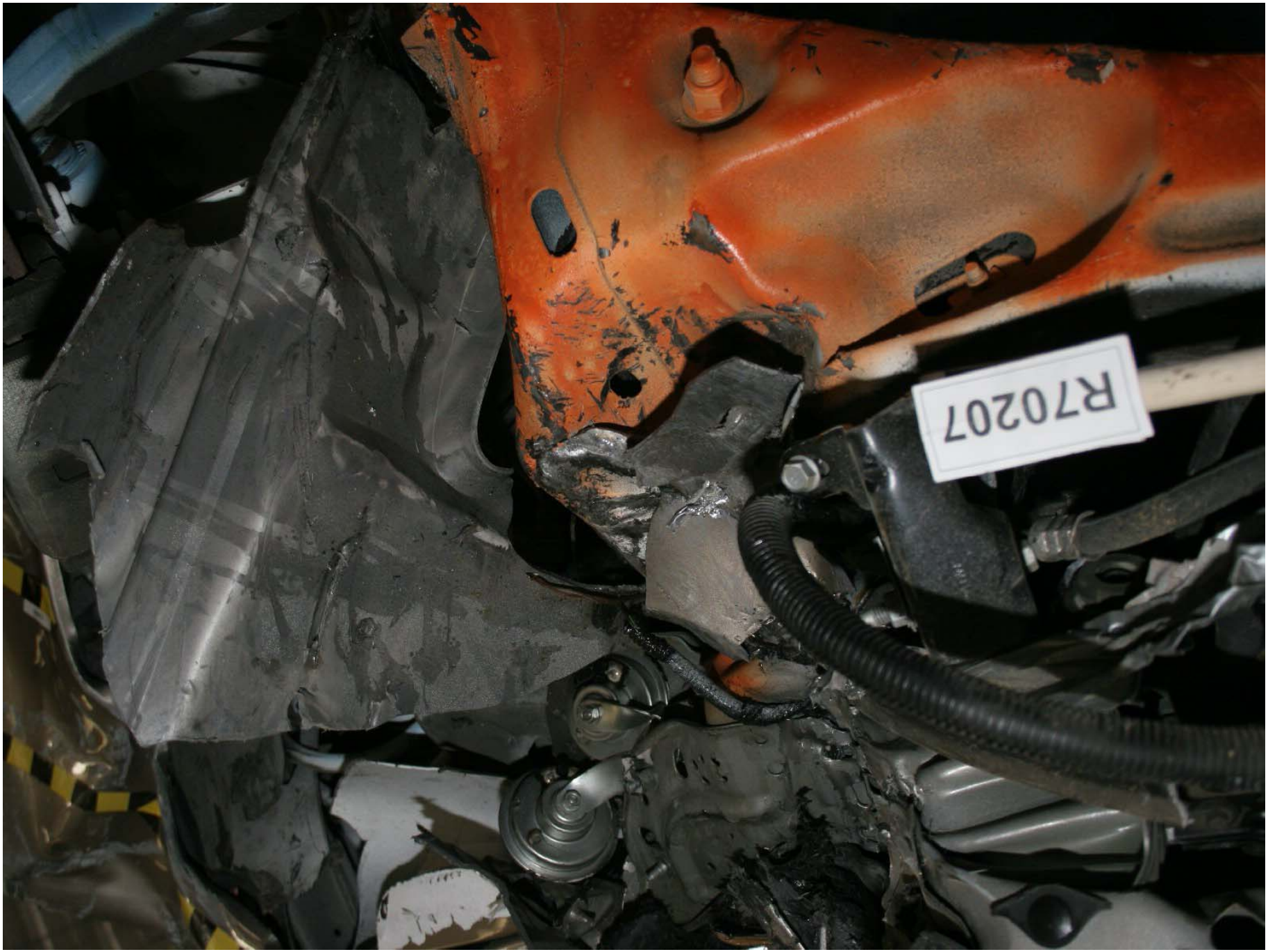

Figure A-166: Test Vehicle Post-Test Left Front Sub-Frame Mounting Point

Figure A-167: Test Vehicle Pre-Test Left Rear Sub-Frame Mounting Point

Figure A-168: Test Vehicle Post-Test Left Rear Sub-Frame Mounting Point

Figure A-169: Test Vehicle Pre-Test Right Front Wheel Well (Tire On)

Figure A-170: Test Vehicle Post-Test Right Front Wheel Well (Tire On)

Figure A-171: Test Vehicle Pre-Test Right Front Wheel Well (Tire Off)

Figure A-172: Test Vehicle Post-Test Right Front Wheel Well (Tire Off)

Figure A-173: Test Vehicle Pre-Test Right Front Wheel Well (Tire Off), Inner Fender Removed

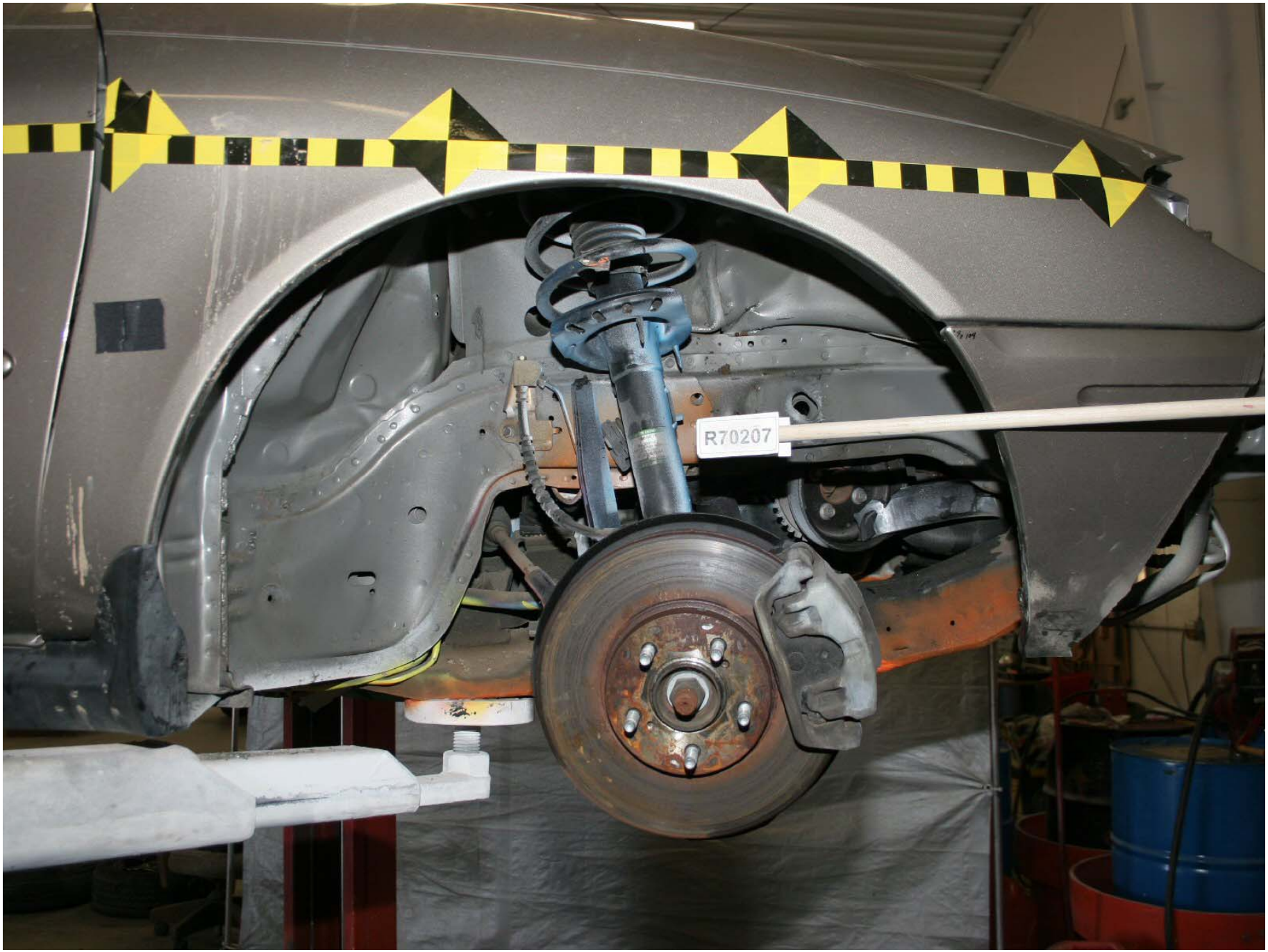

Figure A-174: Test Vehicle Post-Test Right Front Wheel Well (Tire Off), Inner Fender Removed

Figure A-175: Test Vehicle Pre-Test Right Inner Fender Well View

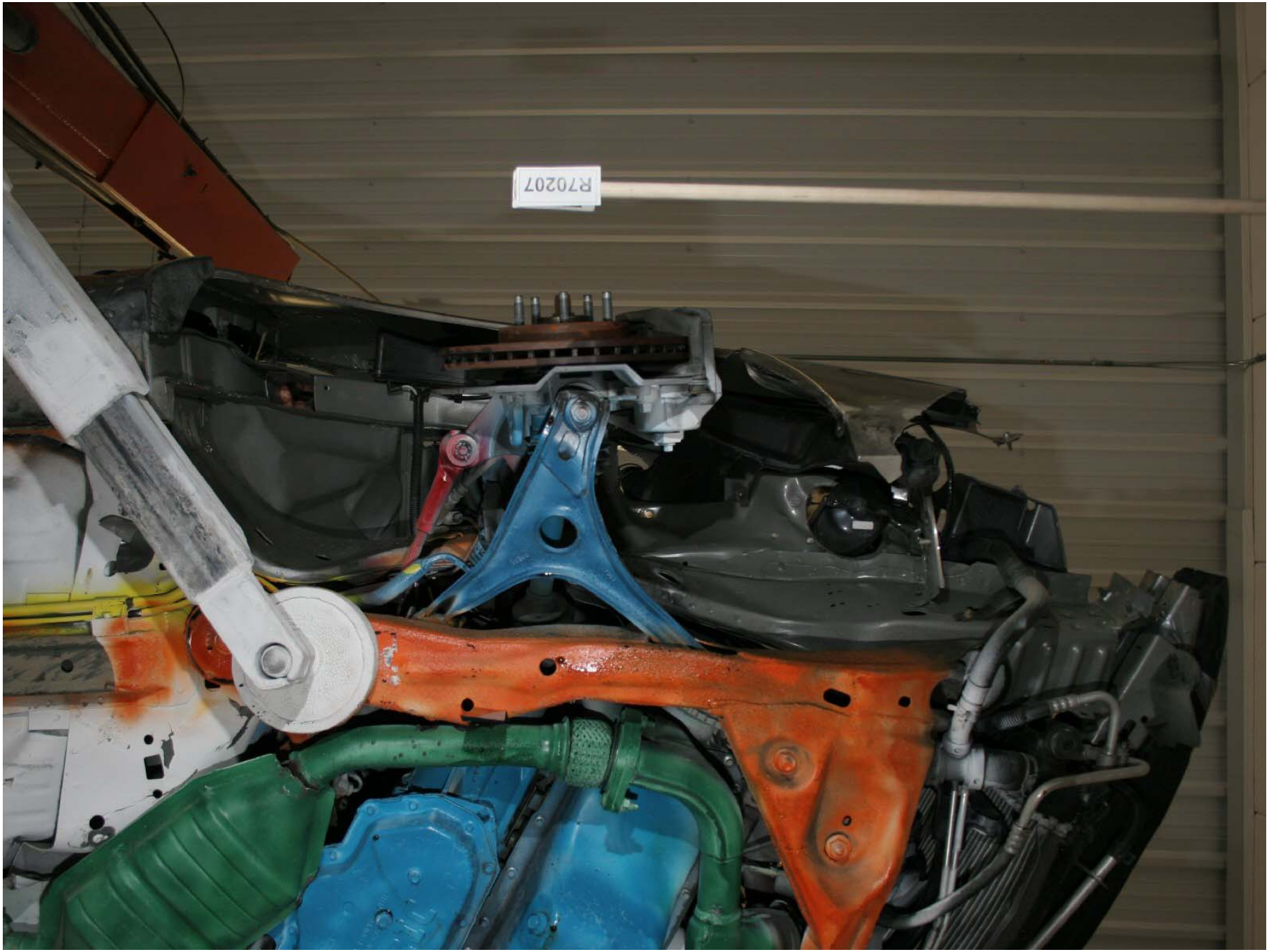

Figure A-176: Test Vehicle Post-Test Right Inner Fender Well View

Figure A-177: Test Vehicle Pre-Test Right Inner Fender Well View

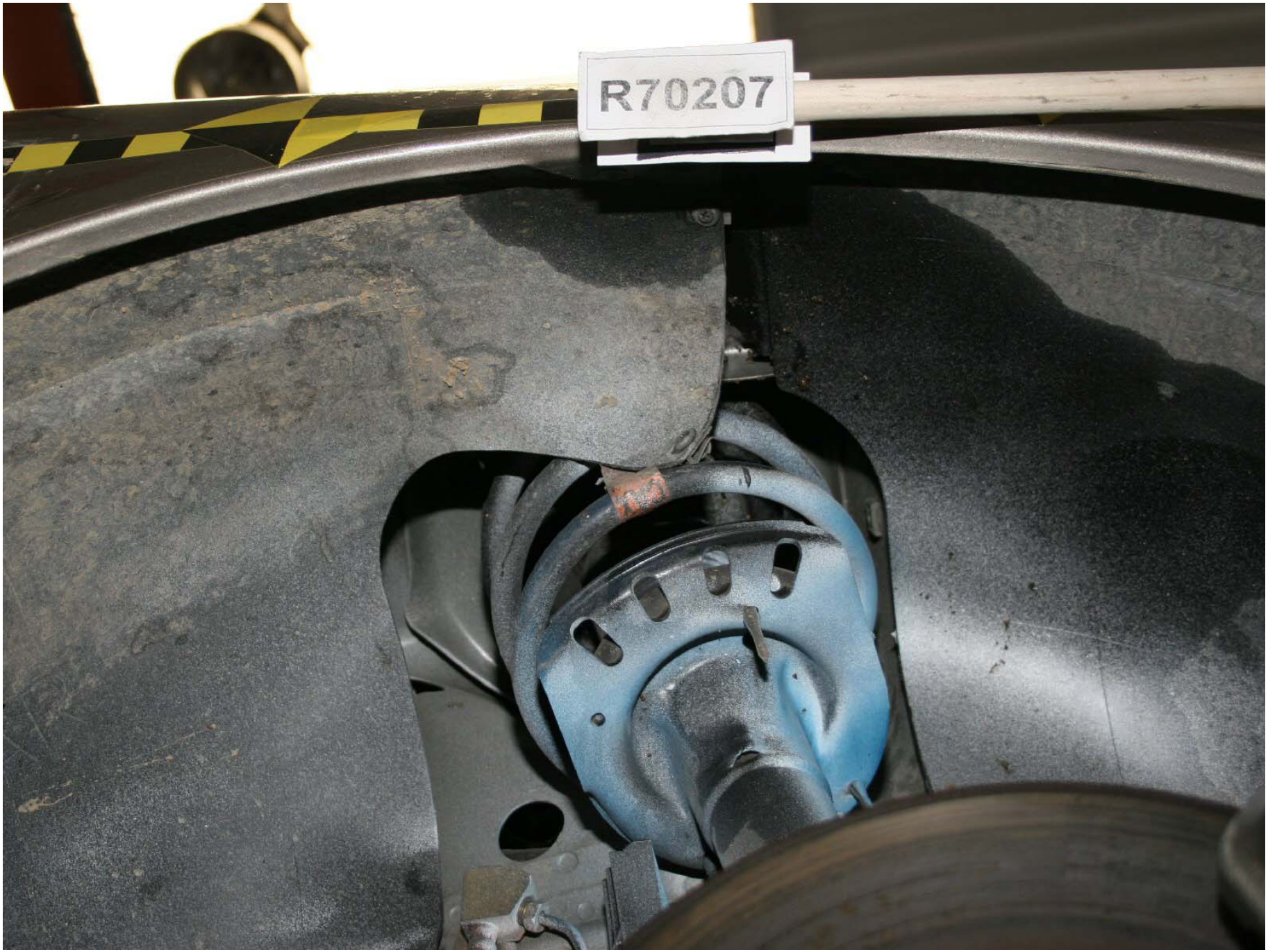

Figure A-178: Test Vehicle Post-Test Right Inner Fender Well View

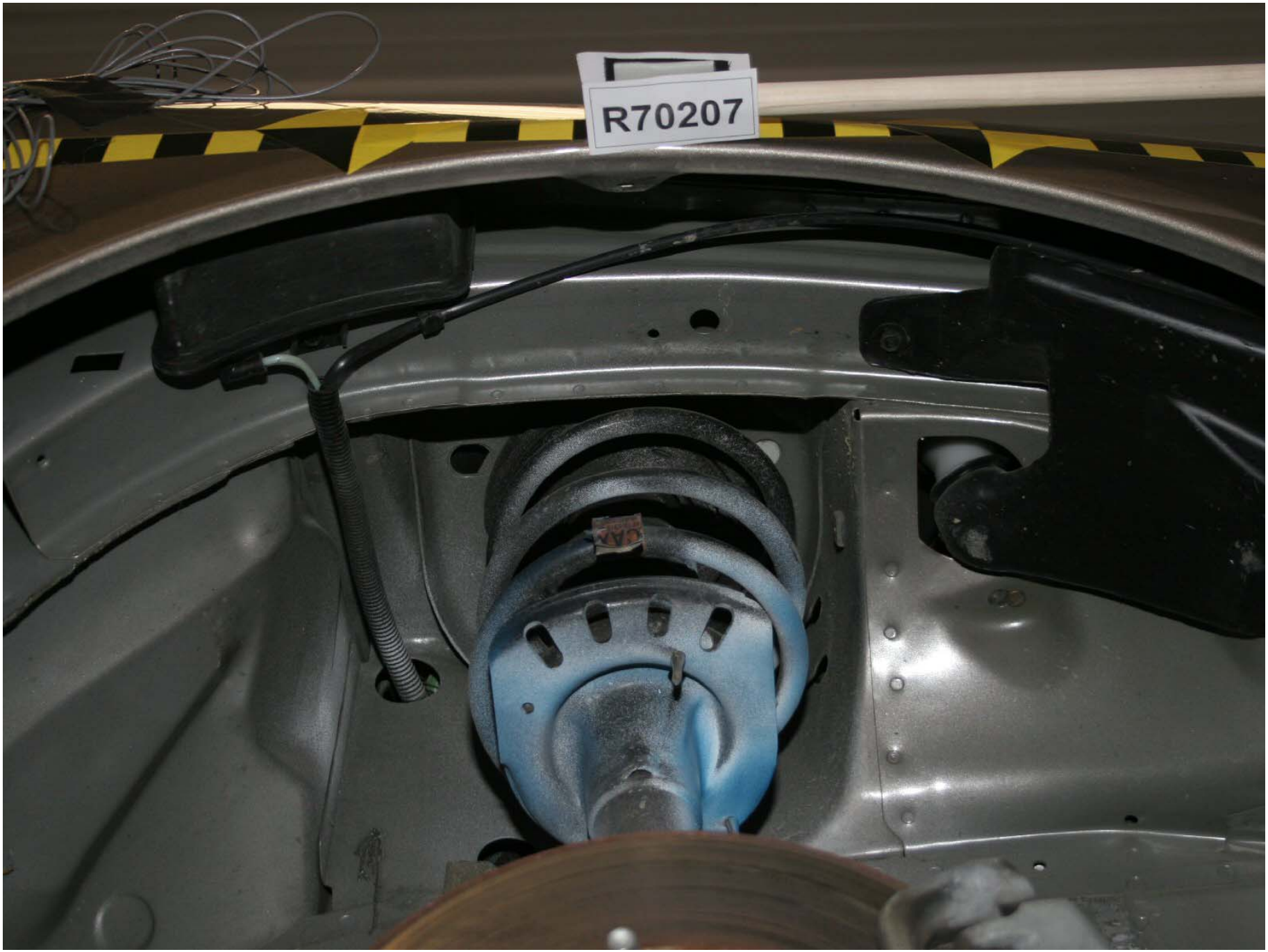

Figure A-179: Test Vehicle Pre-Test Right Inner Fender Well View

Figure A-180: Test Vehicle Post-Test Right Inner Fender Well View

Figure A-181: Test Vehicle Pre-Test Top Fender View

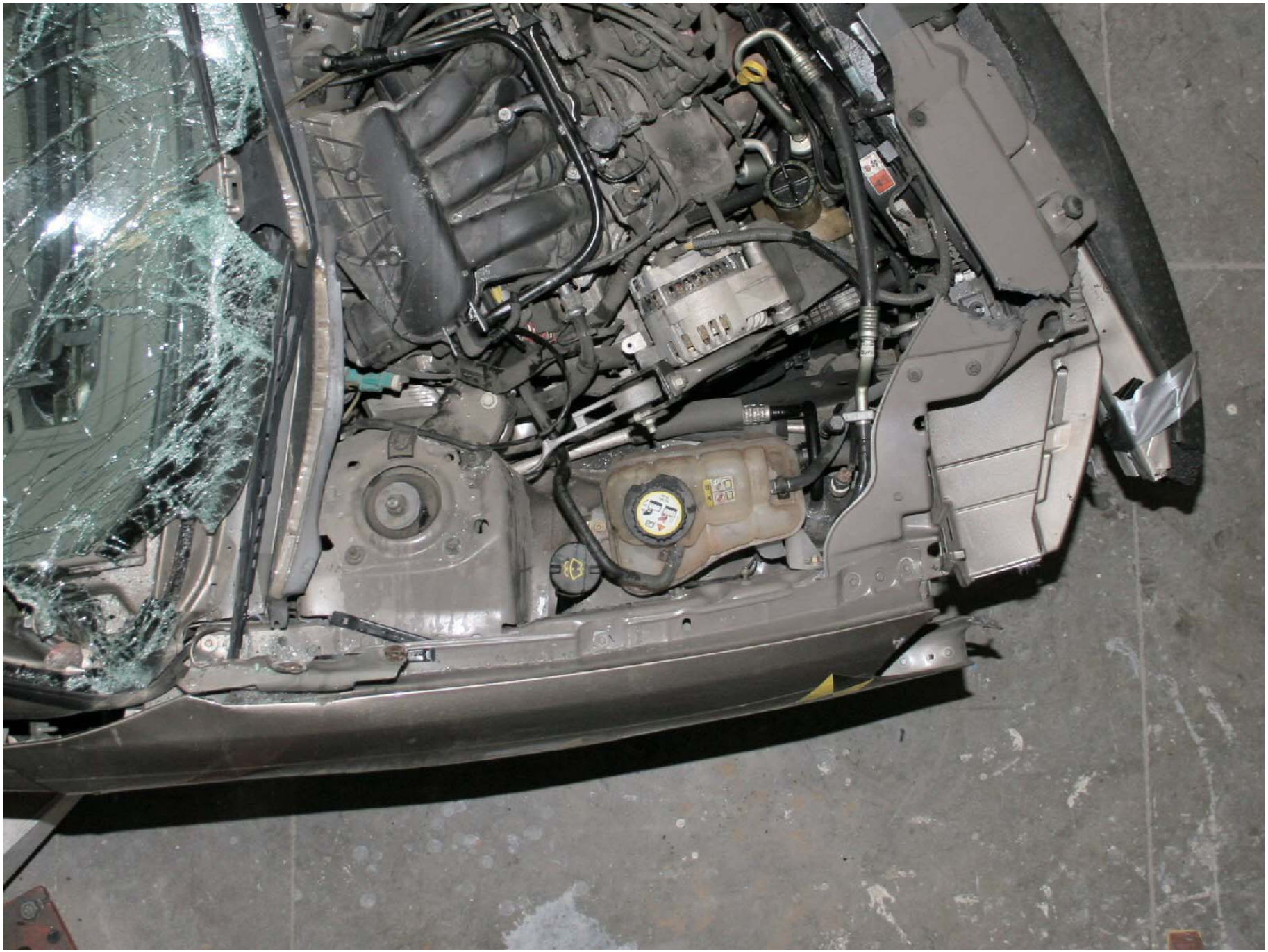

Figure A-182: Test Vehicle Post-Test Top Fender View

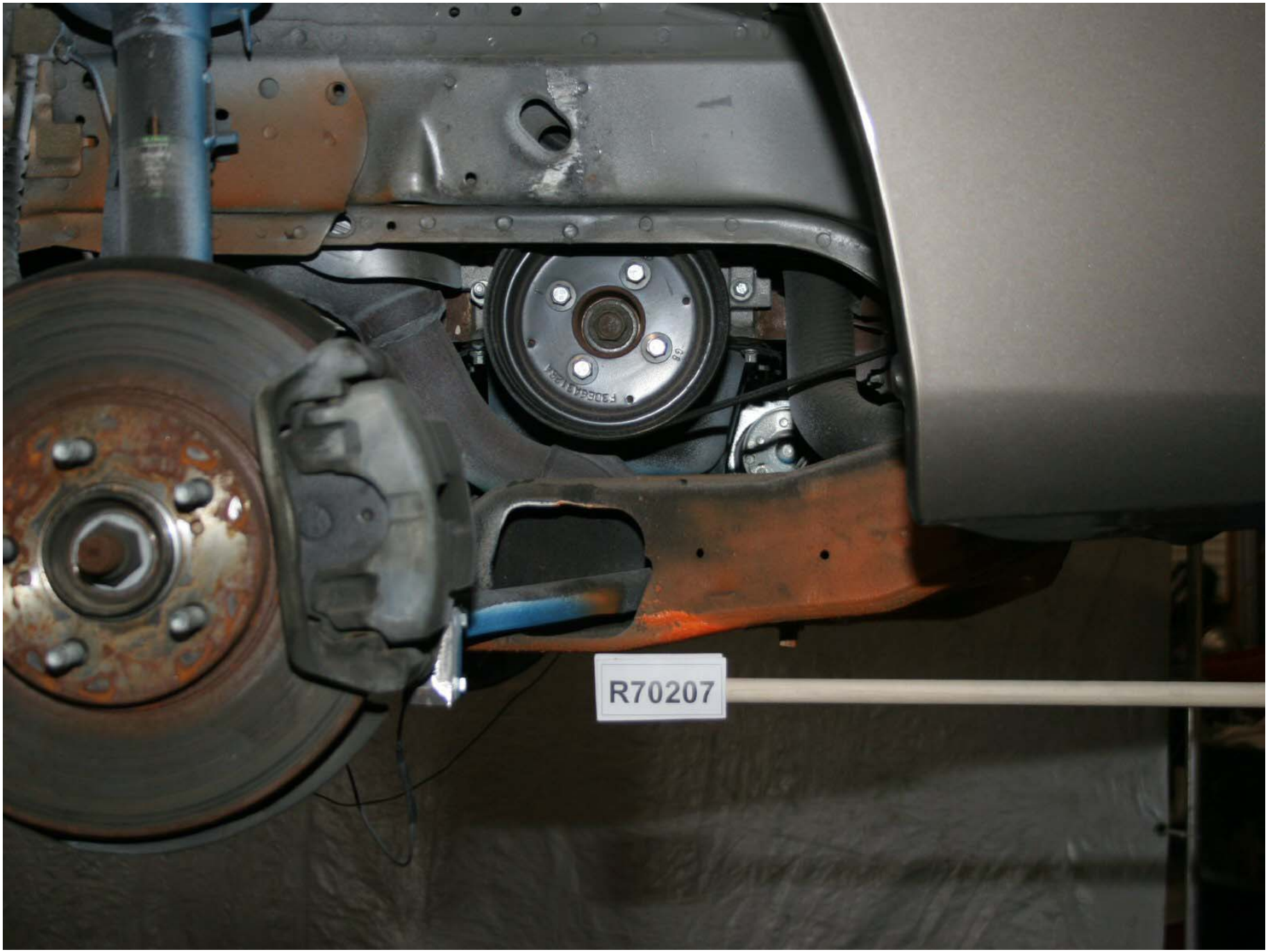

Figure A-183: Test Vehicle Pre-Test Right Front Frame Rail View

Figure A-184: Test Vehicle Post-Test Right Front Frame Rail View

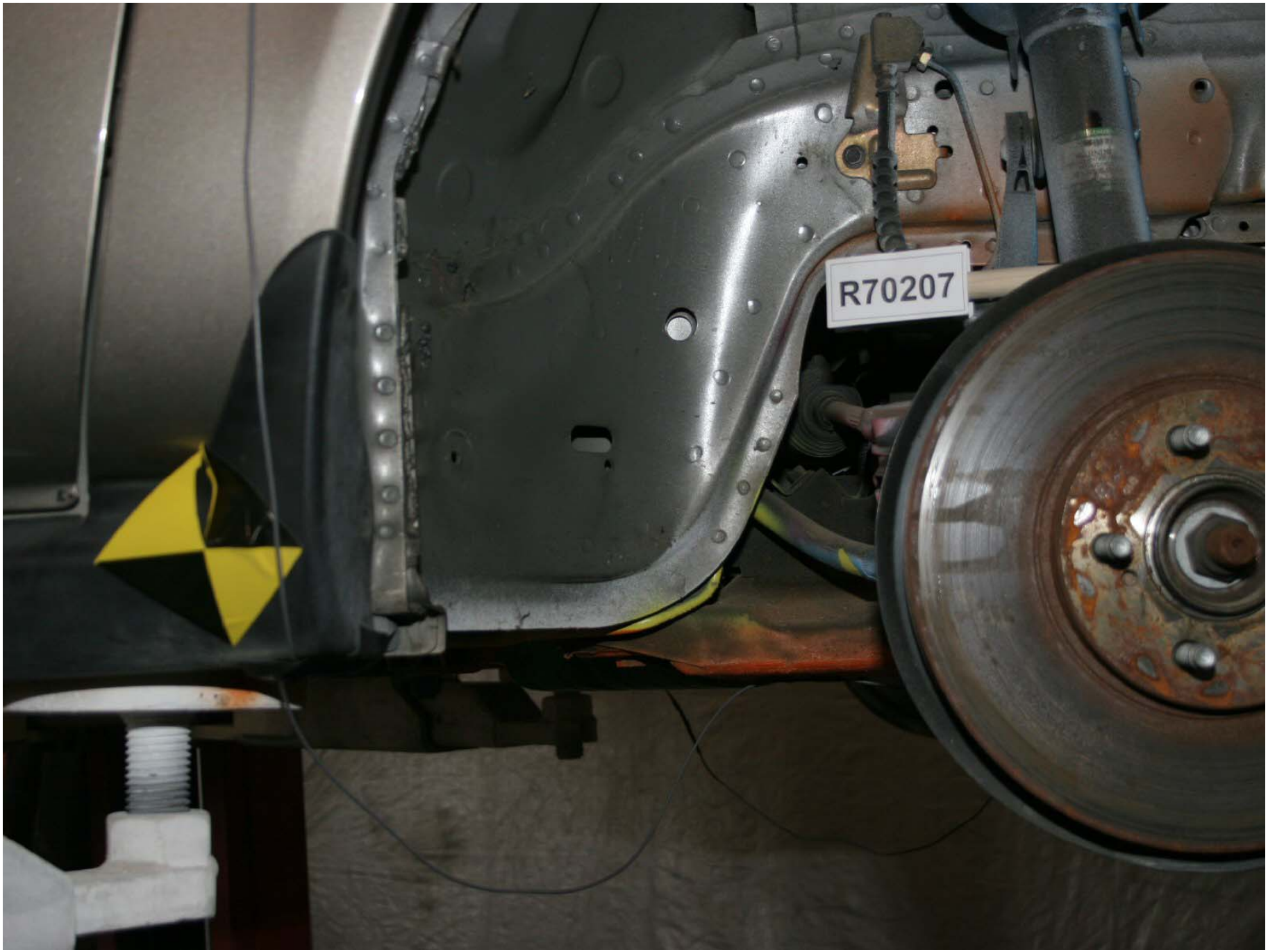

Figure A-185: Test Vehicle Pre-Test Right Front Frame Rail View

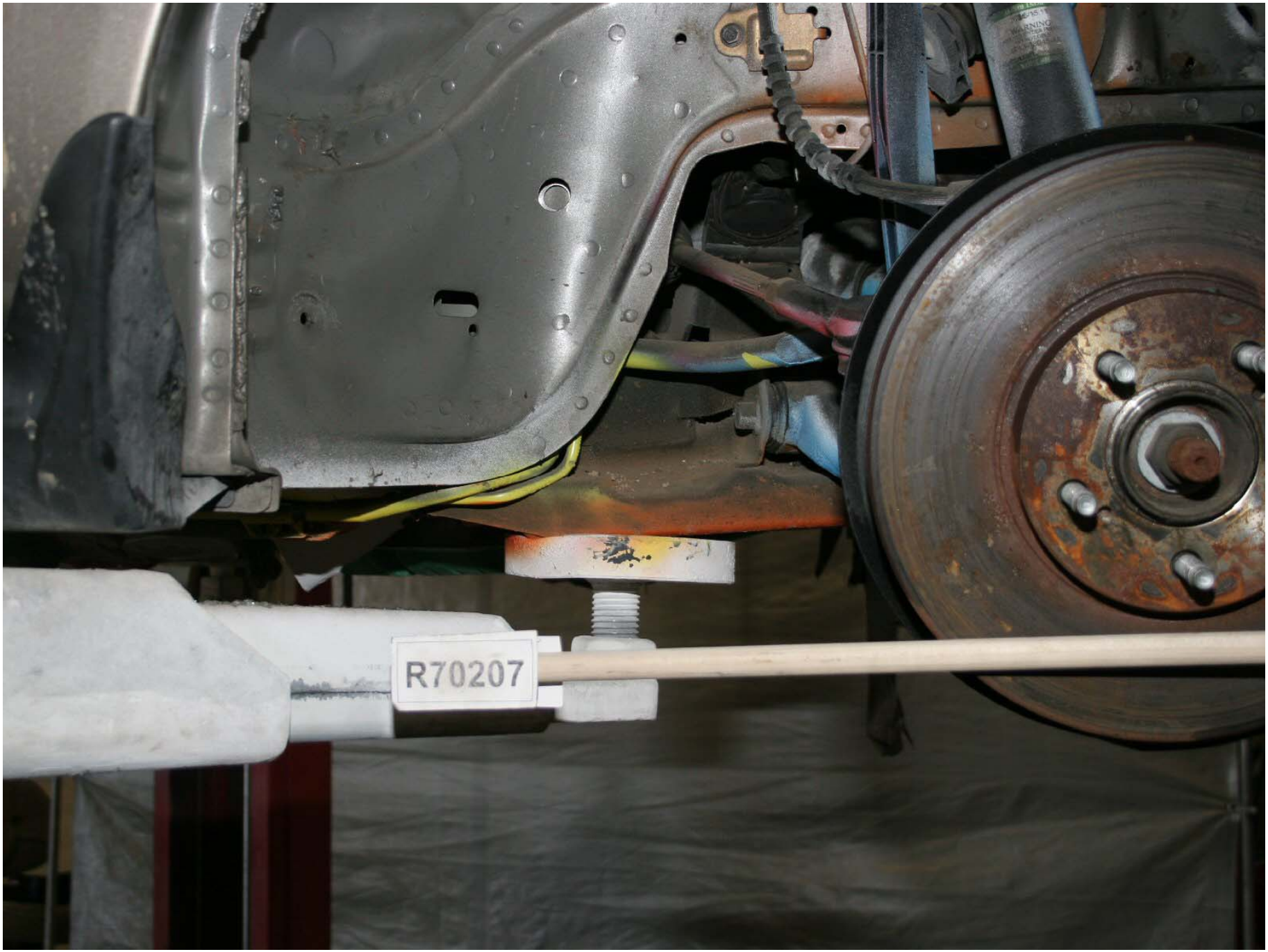

Figure A-186: Test Vehicle Post-Test Right Front Frame Rail View

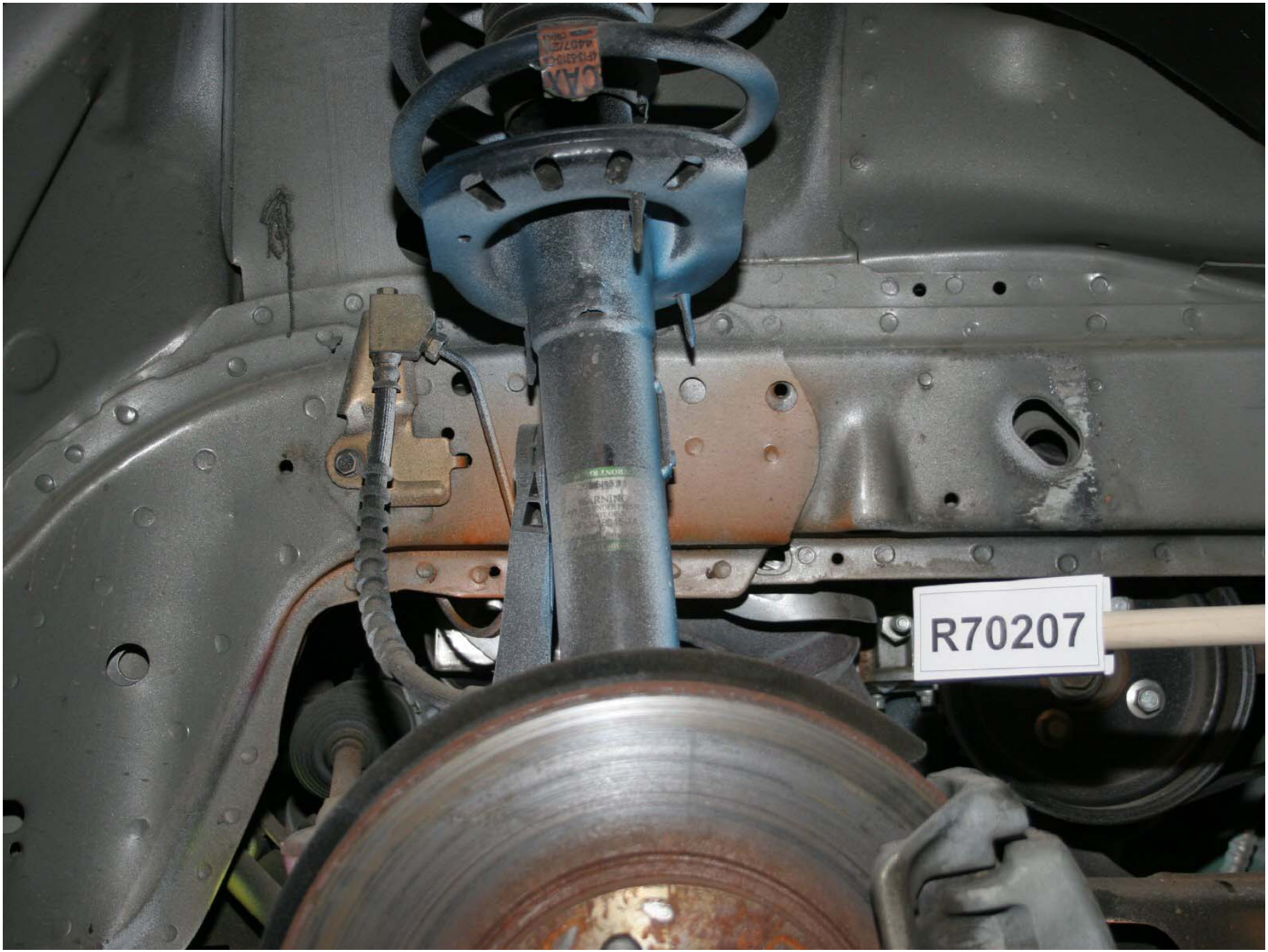

Figure A-187: Test Vehicle Pre-Test Right Front Frame Rail View

Figure A-188: Test Vehicle Post-Test Right Front Frame Rail View

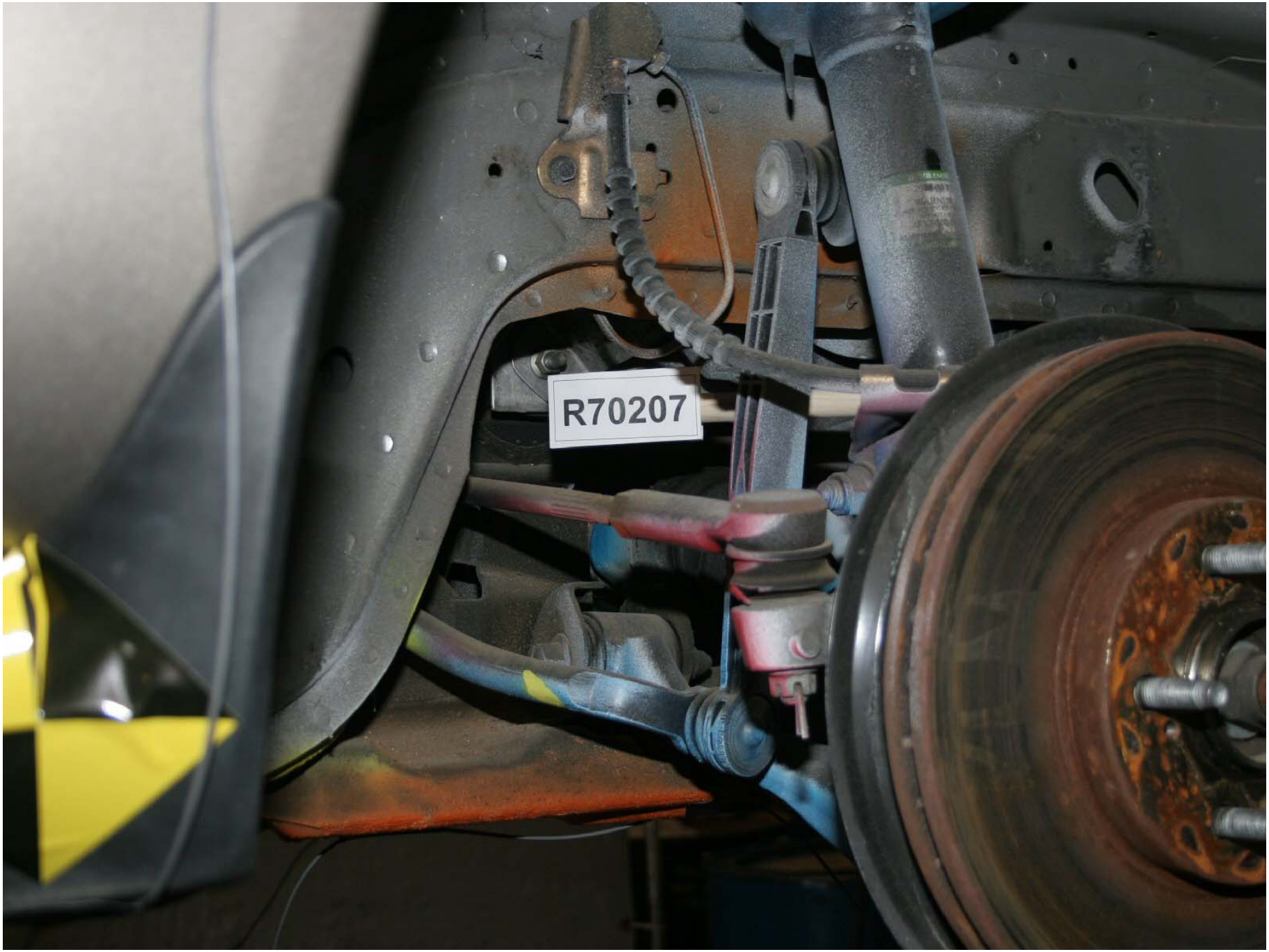

Figure A-189: Test Vehicle Pre-Test Right Side Frame to A-Pillar Joint

Figure A-190: Test Vehicle Post-Test Right Side Frame to A-Pillar Joint

Figure A-191: Test Vehicle Pre-Test Right Side Tie Rod and Sway Bar Attachments Points

Figure A-192: Test Vehicle Post-Test Right Side Tie Rod and Sway Bar Attachments Points

Figure A-193: Test Vehicle Pre-Test Right Side Upper Sway Bar Attachment Point

Figure A-194: Test Vehicle Post-Test Right Side Upper Sway Bar Attachment Point

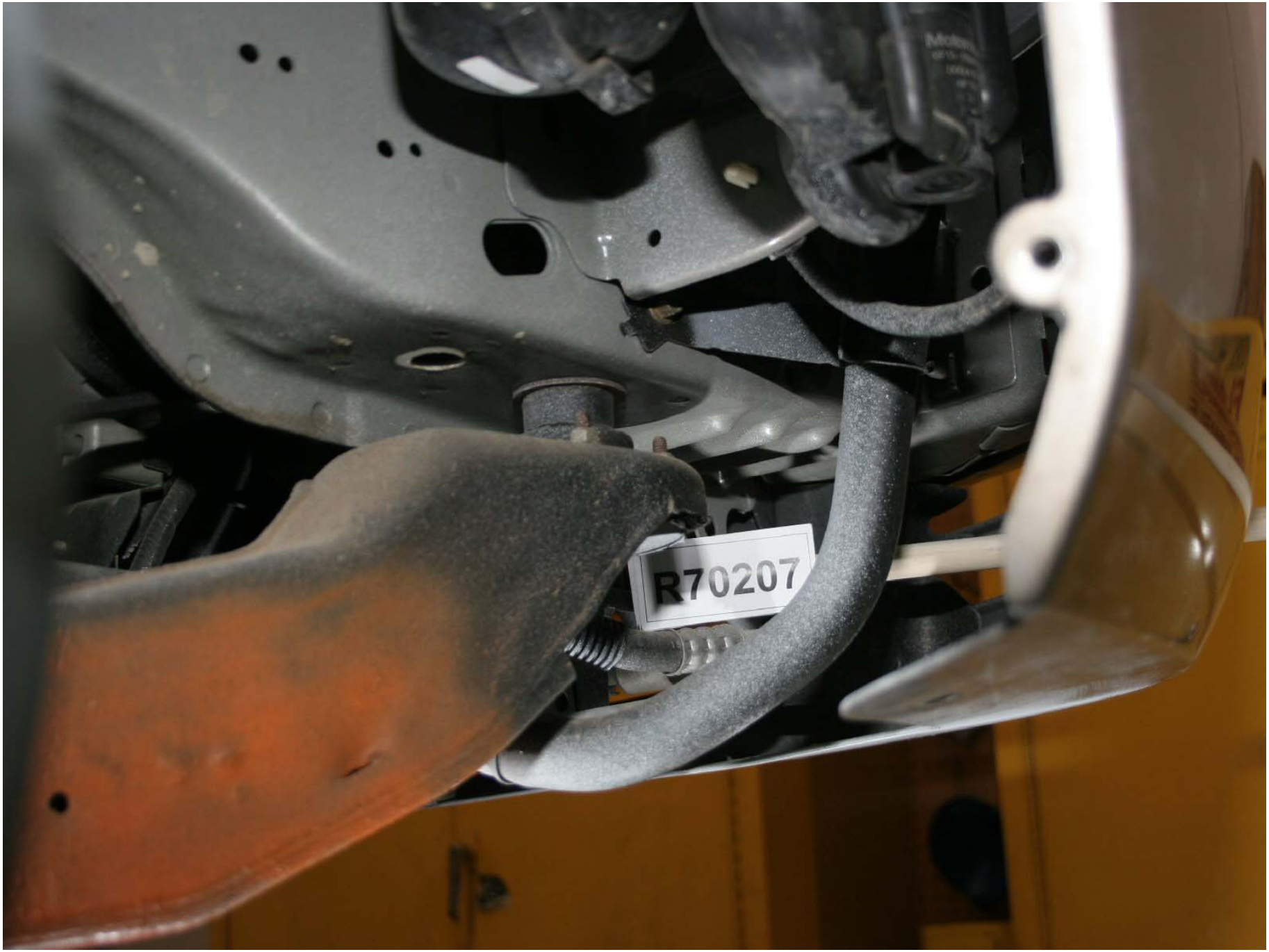

Figure A-195: Test Vehicle Pre-Test Right Side Crush Initiators

Figure A-196: Test Vehicle Post-Test Right Side Crush Initiators

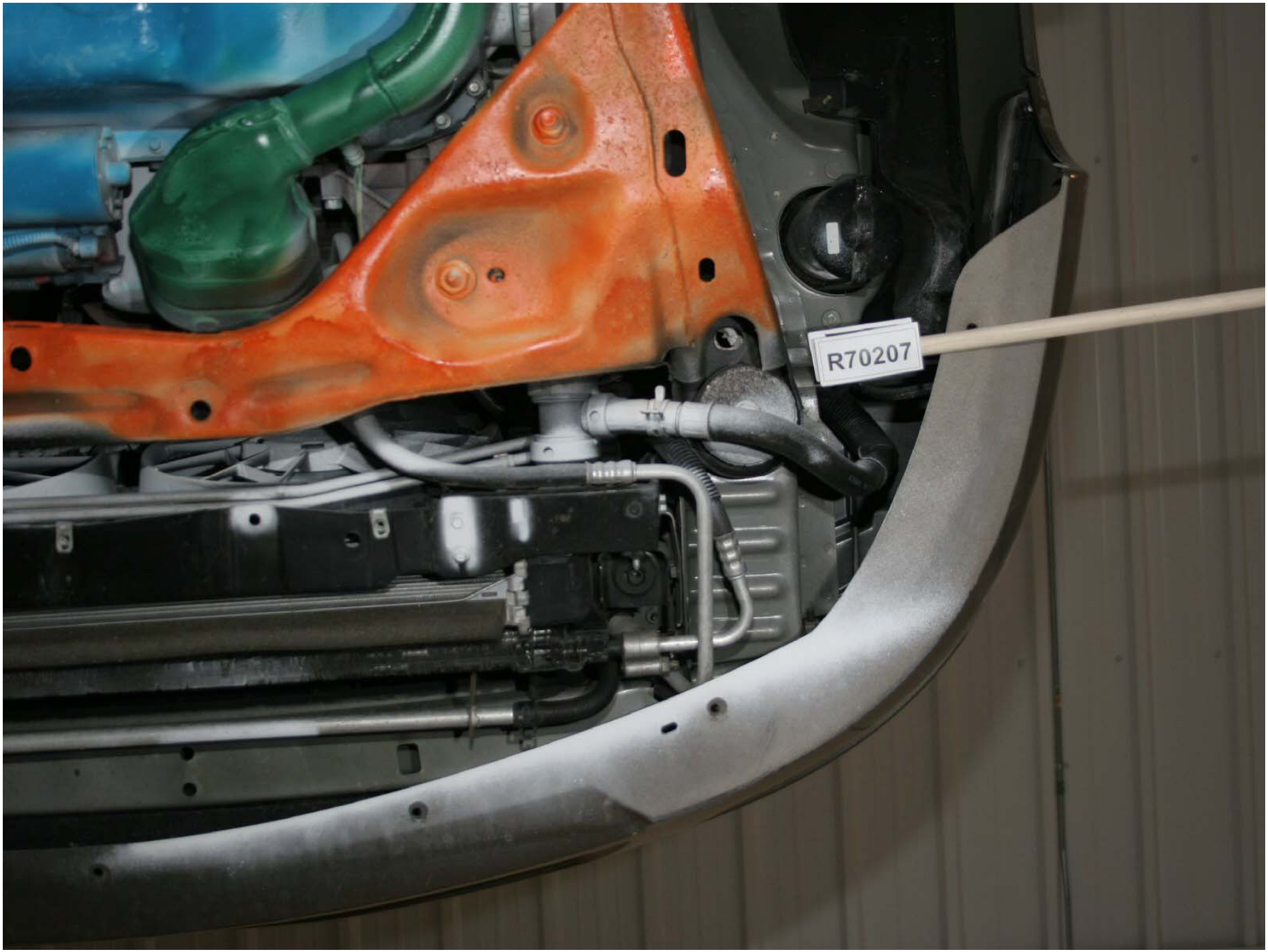

Figure A-197: Test Vehicle Pre-Test Right Side Crush Initiators

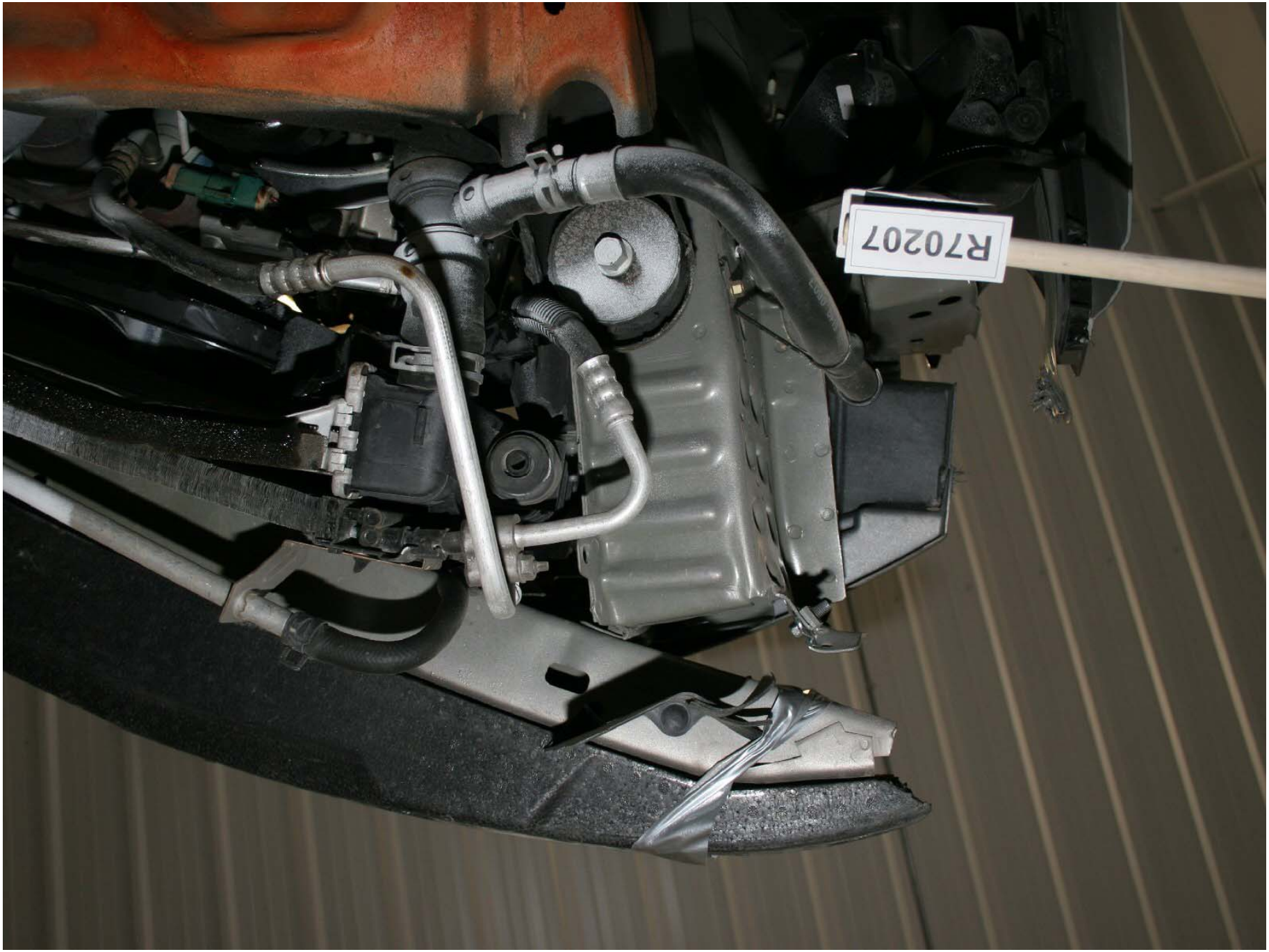

Figure A-198: Test Vehicle Post-Test Right Side Crush Initiators

Figure A-199: Test Vehicle Pre-Test Right Side Bumper Attachment Point

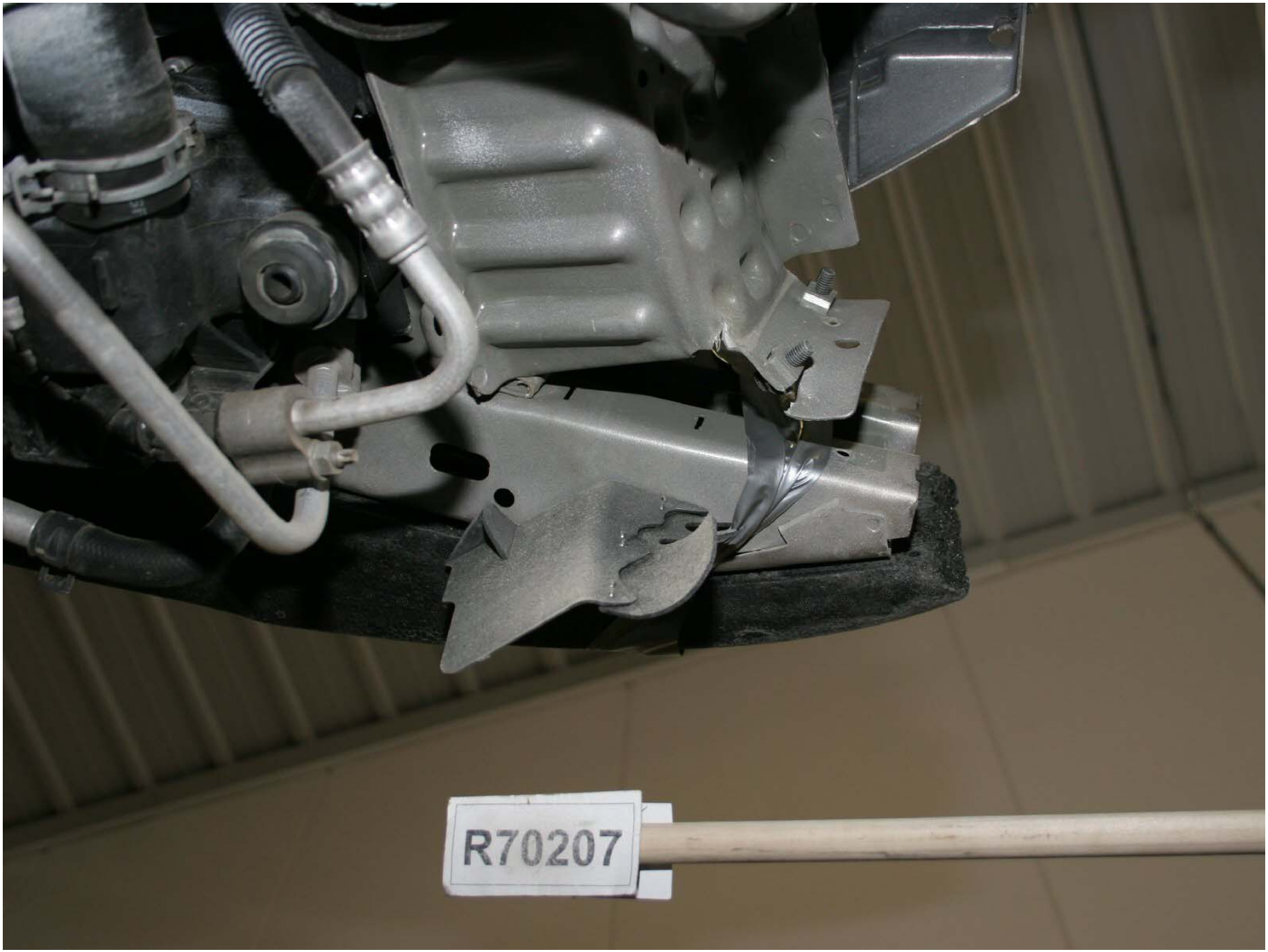

Figure A-200: Test Vehicle Post-Test Right Side Bumper Attachment Point

Figure A-201: Test Vehicle Pre-Test Right Front Sub-Frame Mounting Point

Figure A-202: Test Vehicle Post-Test Right Front Sub-Frame Mounting Point

Figure A-203: Test Vehicle Pre-Test Right Rear Sub-Frame Mounting Point

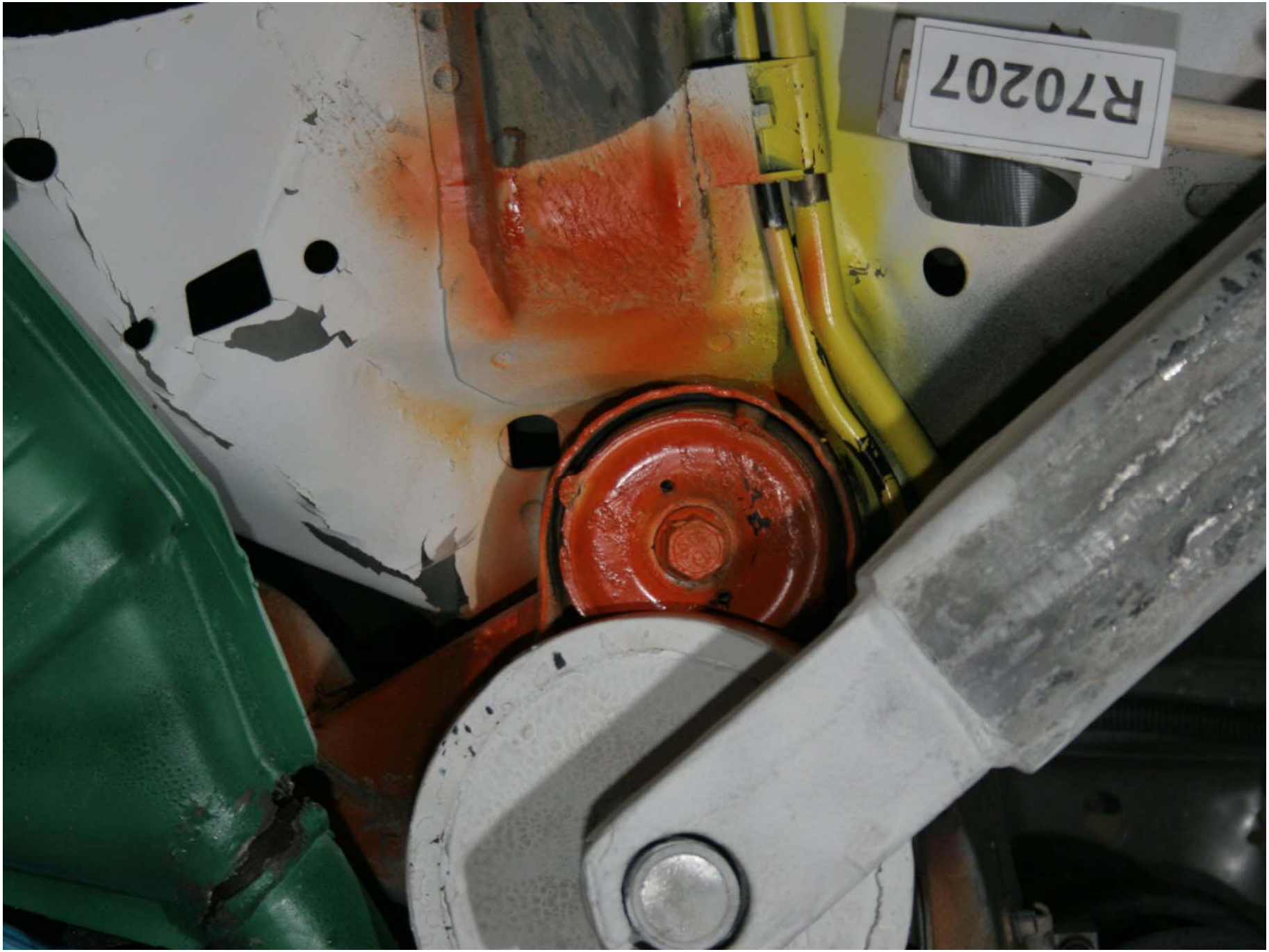

Figure A-204: Test Vehicle Post-Test Right Rear Sub-Frame Mounting Point

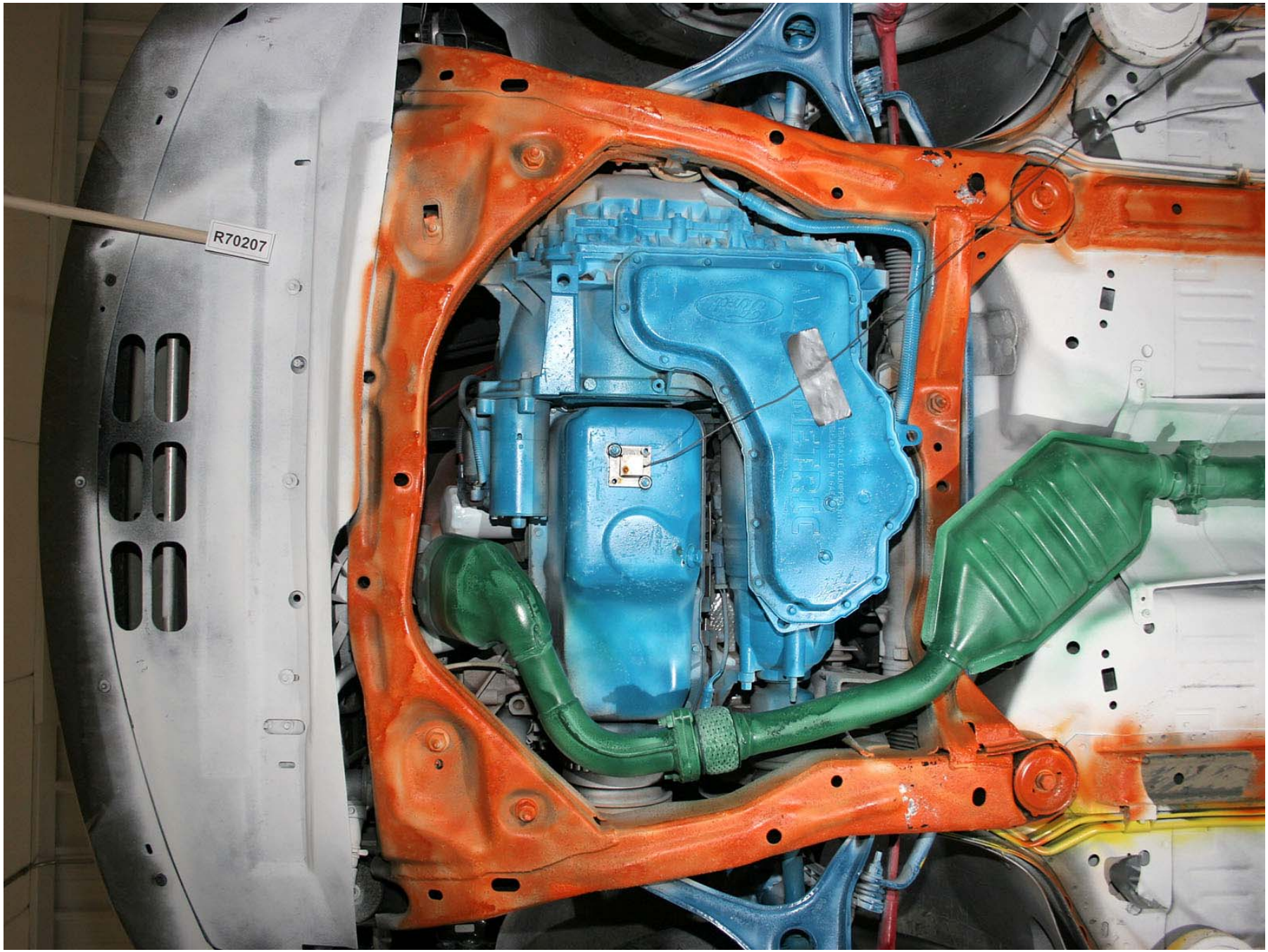

Figure A-205: Test Vehicle Pre-Test Front Underbody

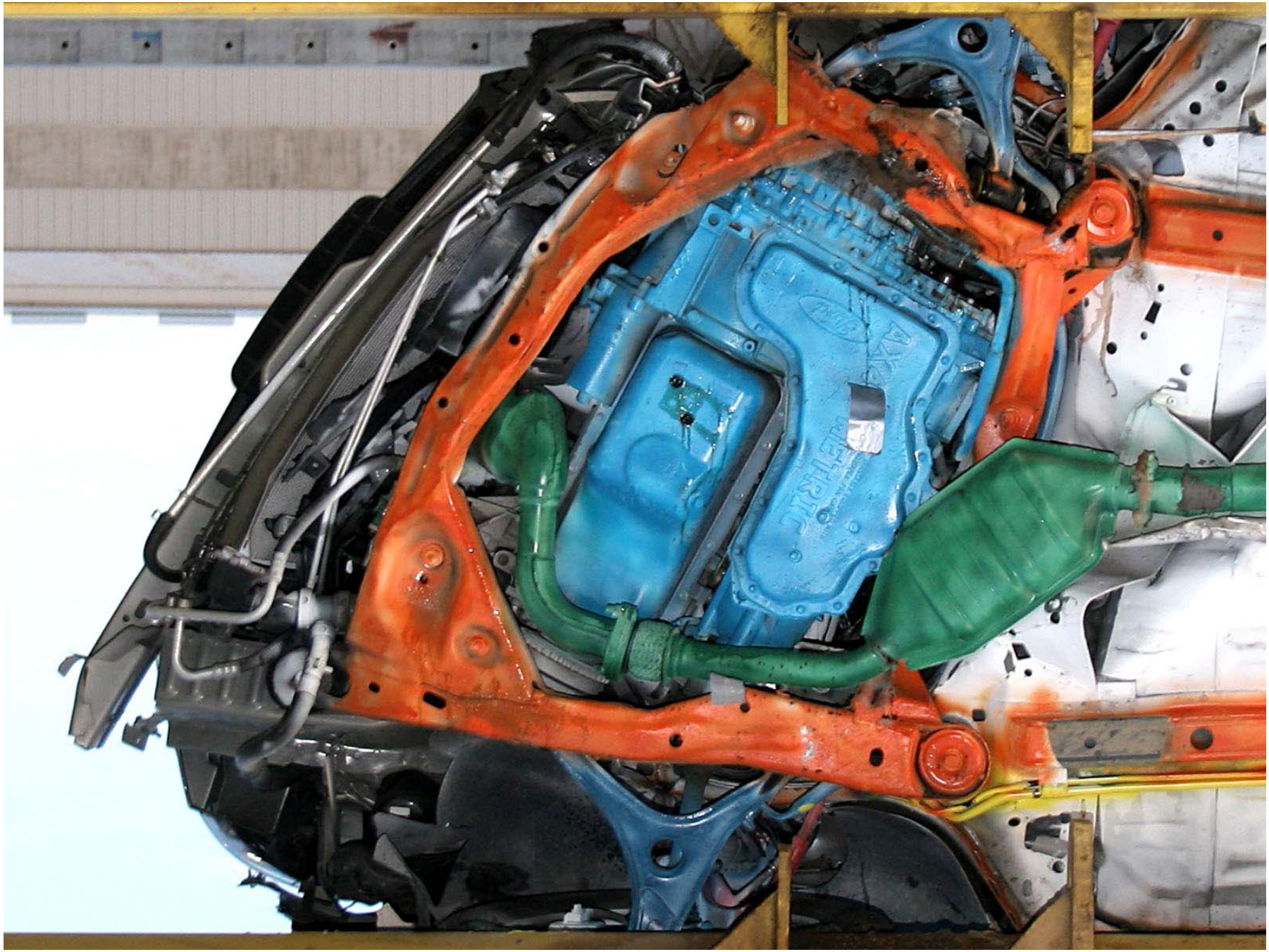

Figure A-206: Test Vehicle Post-Test Front Underbody

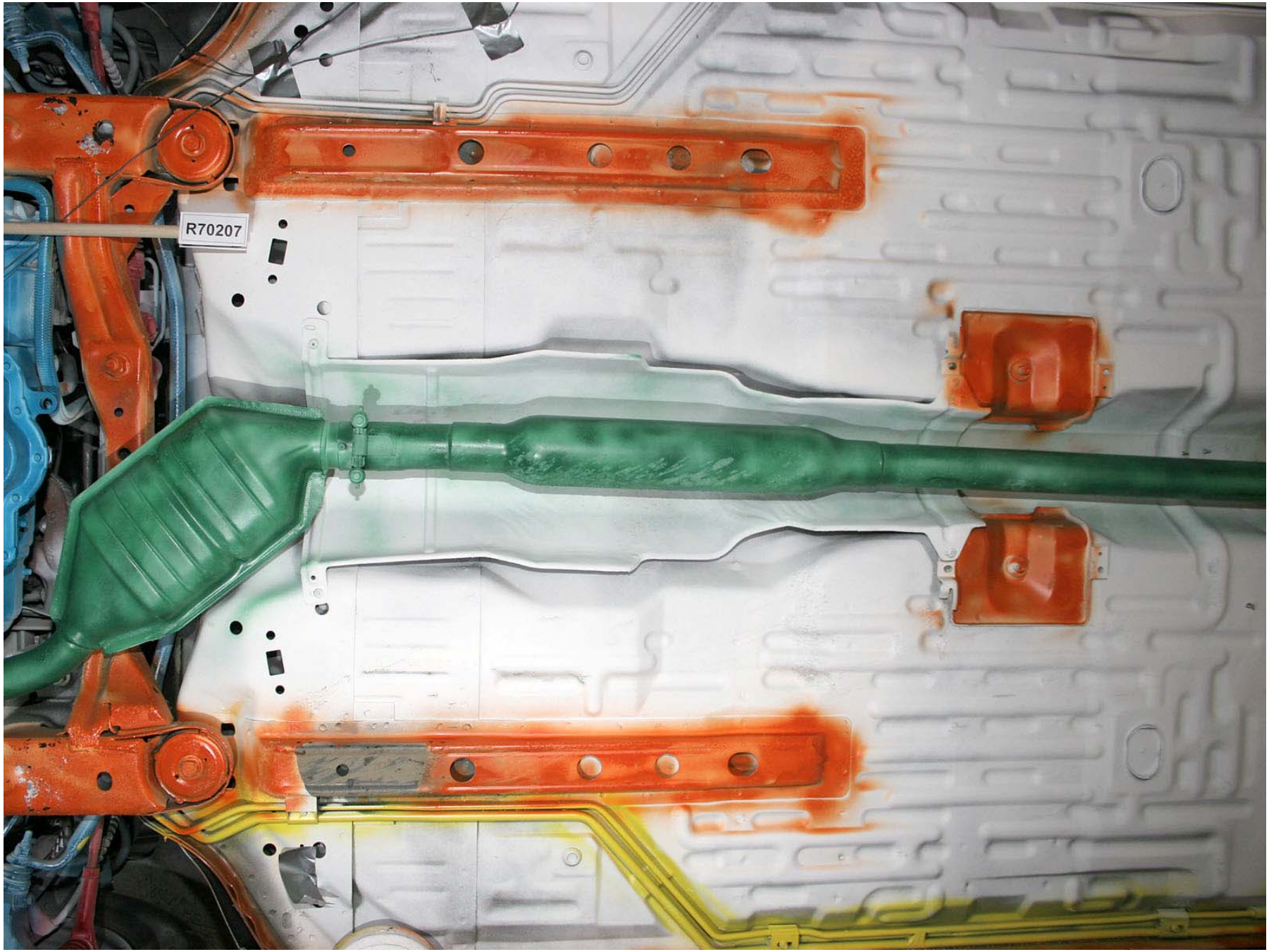

Figure A-207: Test Vehicle Pre-Test Mid Underbody

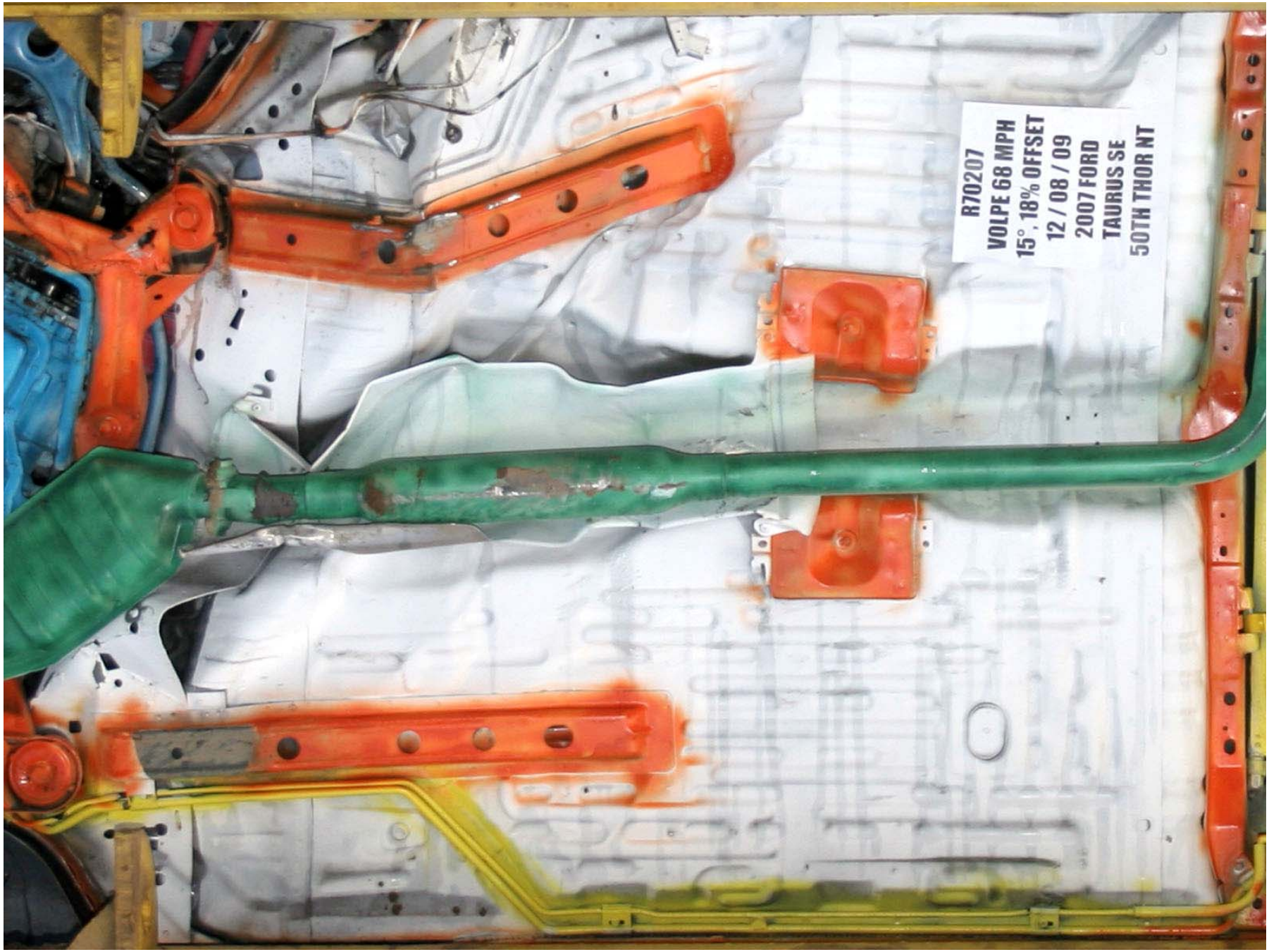

Figure A-208: Test Vehicle Post-Test Mid Underbody

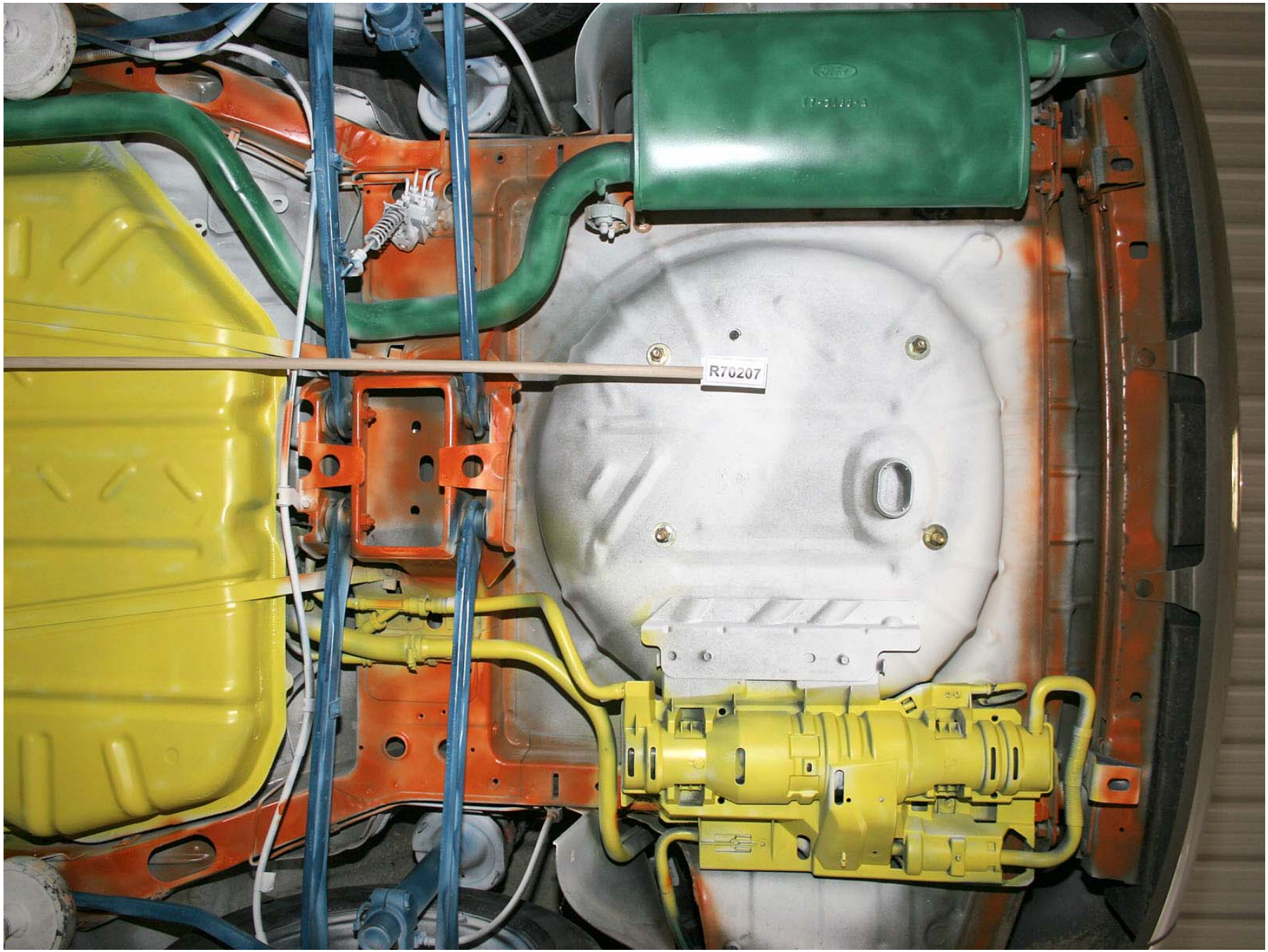

Figure A-209: Test Vehicle Pre-Test Rear Underbody

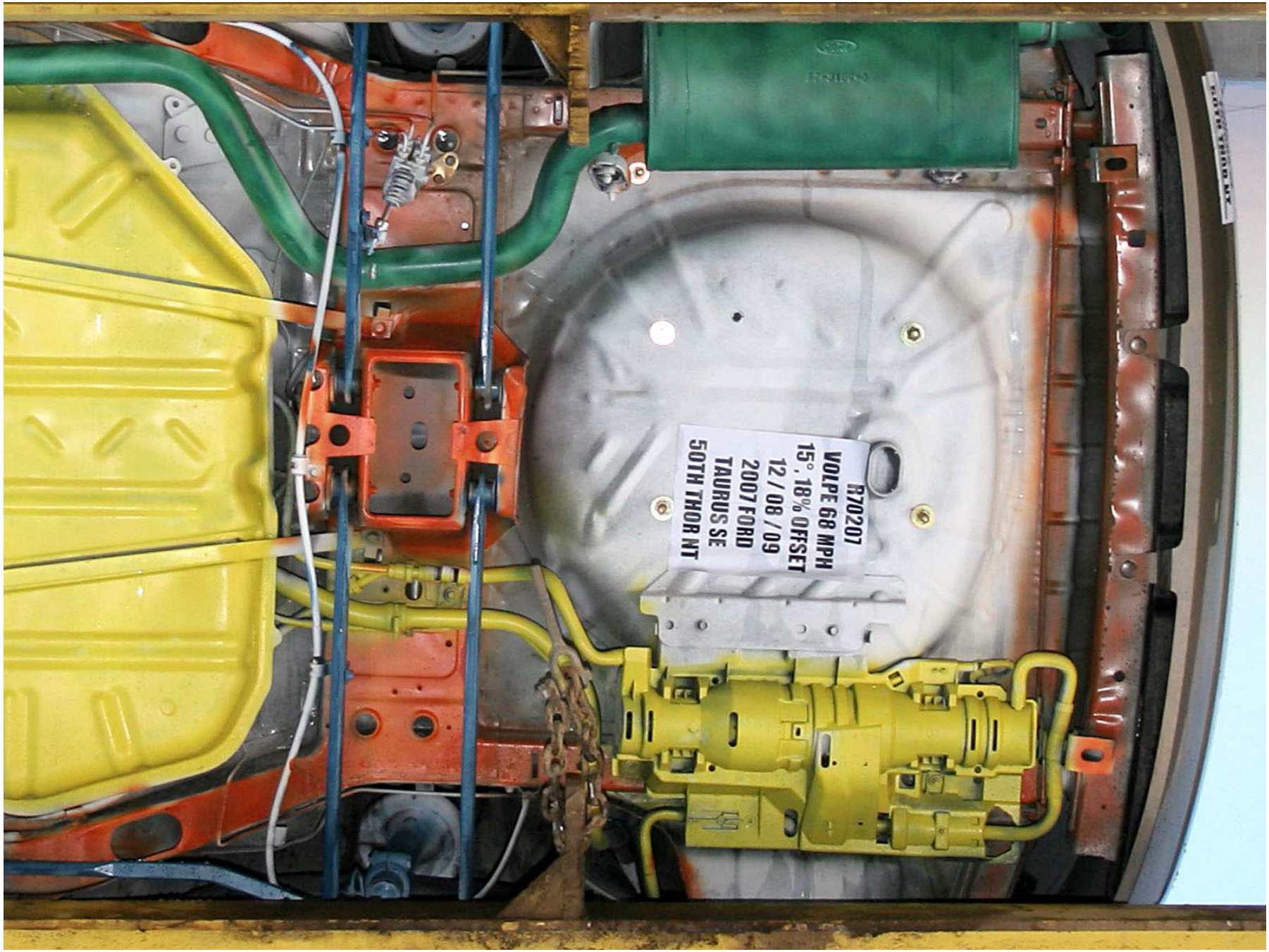

Figure A-210: Test Vehicle Post-Test Rear Underbody

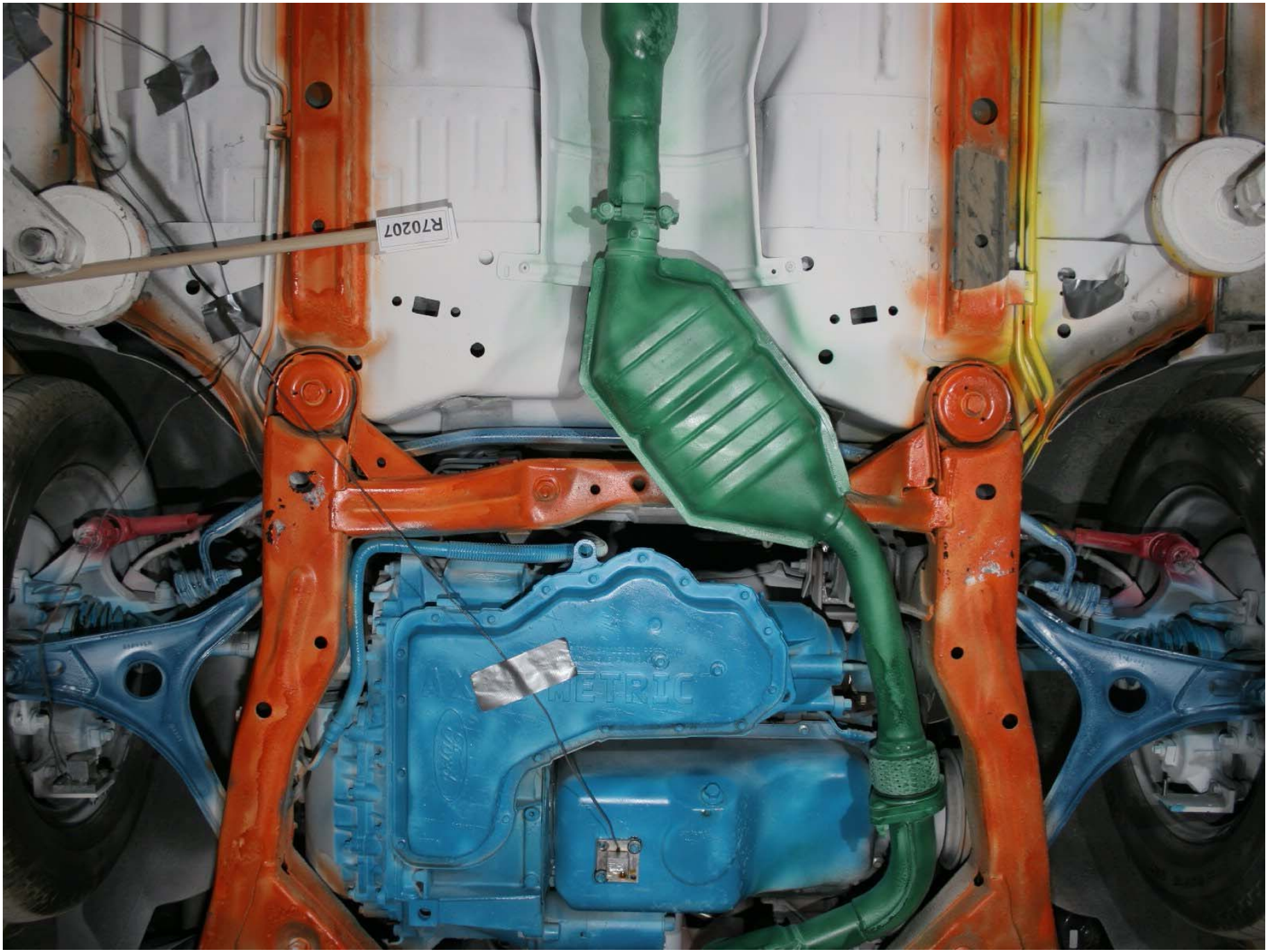

Figure A-211: Test Vehicle Pre-Test Steering Rack and Sway Bar View

Figure A-212: Test Vehicle Post-Test Steering Rack and Sway Bar View

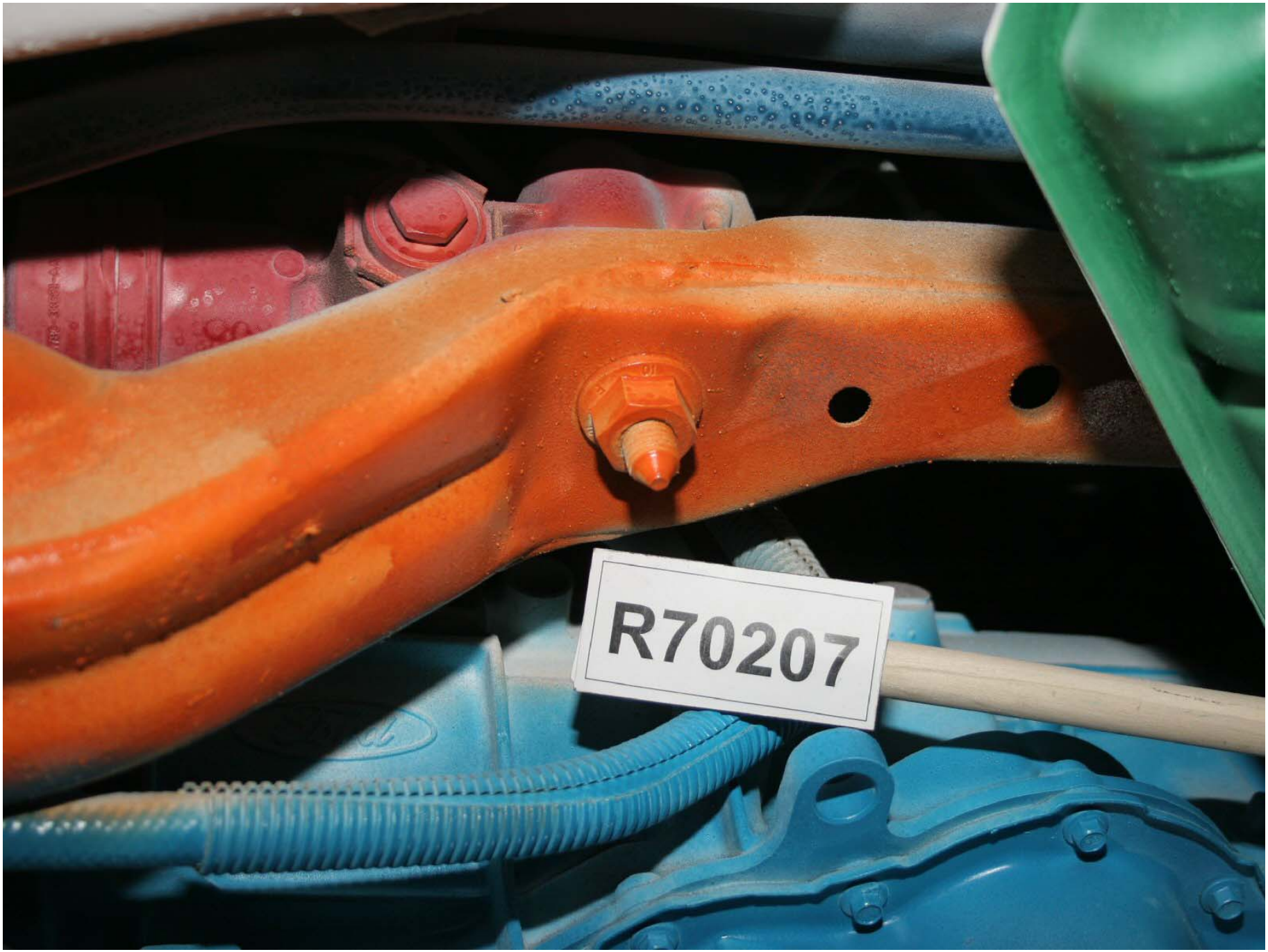

Figure A-213: Test Vehicle Pre-Test Steering Rack Left Side Mounting Bolt

Figure A-214: Test Vehicle Post-Test Steering Rack Left Side Mounting Bolt

Figure A-215: Test Vehicle Pre-Test Steering Rack Right Side Mounting Bolt

Figure A-216: Test Vehicle Post-Test Steering Rack Right Side Mounting Bolt

Figure A-217: Test Vehicle Pre-Test Sway Bar Left Side Mounting Bolts

Figure A-218: Test Vehicle Post-Test Sway Bar Left Side Mounting Bolts

Figure A-219: Test Vehicle Pre-Test Sway Bar Right Side Mounting Bolts

Figure A-220: Test Vehicle Post-Test Sway Bar Right Side Mounting Bolts

Figure A-221: Test Vehicle Pre-Test Front Door Panel

Figure A-222: Test Vehicle Post-Test Front Door Panel

Photograph Not Available

Figure A-223: Test Vehicle Pre-Test Driver Dummy Right Side View

Figure A-224: Test Vehicle Post-Test Driver Dummy Right Side View

Figure A-225: Test Vehicle Pre-Test Driver Dummy Front View

Figure A-226: Test Vehicle Post-Test Driver Dummy Front View

Figure A-227: Test Vehicle Pre-Test Driver Dummy Left Side View (Door Open)

Figure A-228: Test Vehicle Post-Test Driver Dummy Left Side View (Door Open)

Figure A-229: Test Vehicle Pre-Test Driver Dummy Abdomen Front View

Figure A-230: Test Vehicle Post-Test Driver Dummy Abdomen Front View

Figure A-231: Test Vehicle Pre-Test Driver Dummy Abdomen Side View

Figure A-232: Test Vehicle Post-Test Driver Dummy Abdomen Side View

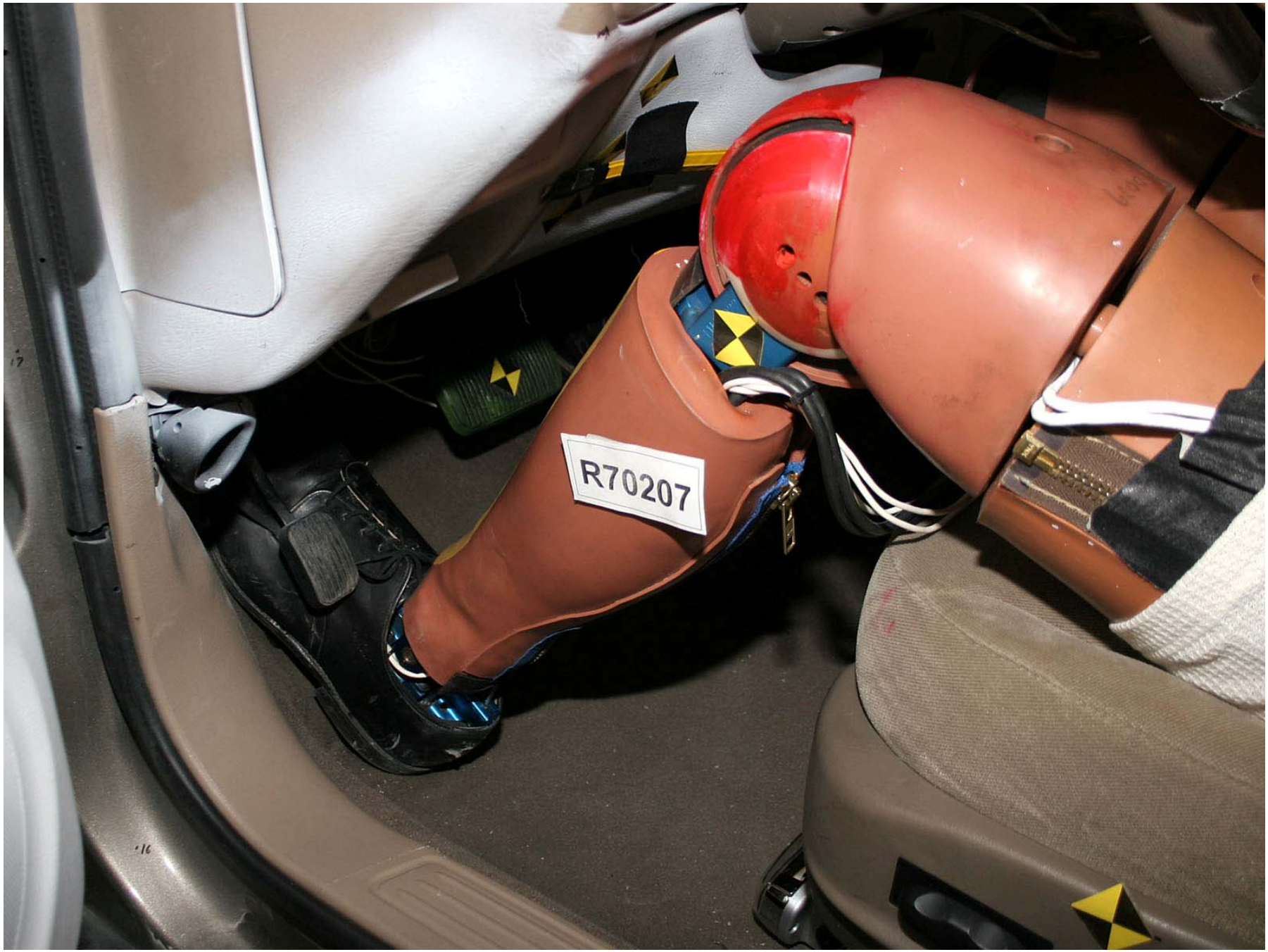

Figure A-233: Test Vehicle Pre-Test Driver Dummy Feet Positioning

Figure A-234: Test Vehicle Pre-Test Driver Dummy Feet Positioning

Figure A-235: Test Vehicle Pre-Test Driver Dummy Feet Positioning

Figure A-236: Test Vehicle Post-Test Driver Dummy Feet Positioning

Figure A-237: Test Vehicle Post-Test Driver Dummy Feet Positioning

Figure A-238: Test Vehicle Post-Test Driver Dummy Feet Positioning

Figure A-239: Test Vehicle Pre-Test Driver Dummy Left Side View (Through Window)

Figure A-240: Test Vehicle Post-Test Driver Dummy Left Side View (Through Window)

Figure A-241: Test Vehicle Pre-Test Driver Dummy Clearance from Door

Figure A-242: Test Vehicle Post-Test Driver Dummy Clearance from Door

Figure A-243: Test Vehicle Pre-Test Driver's Side Knee Bolster

Figure A-244: Test Vehicle Post-Test Driver's Side Knee Bolster

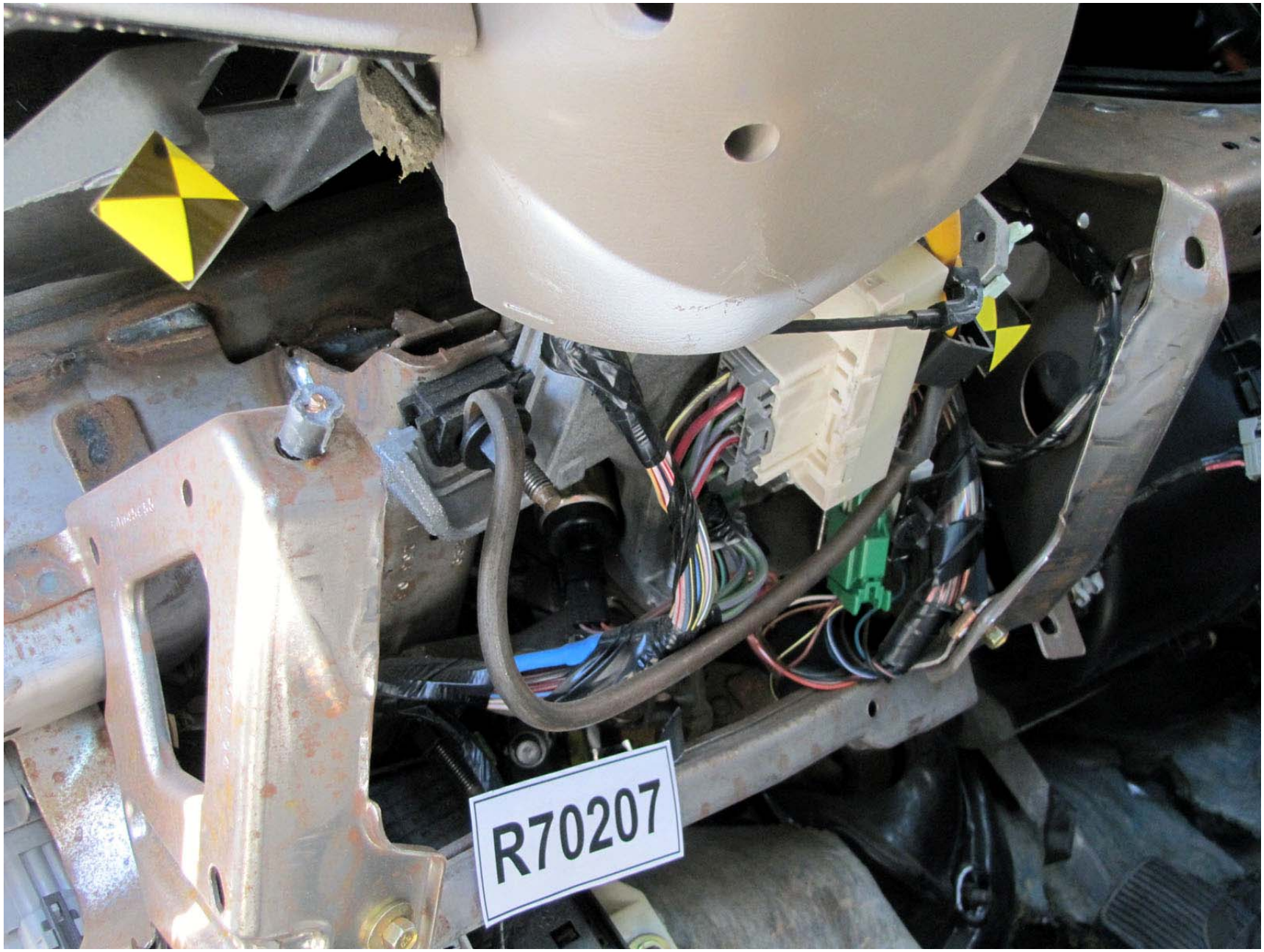

Figure A-245: Test Vehicle Post-Test Driver's Side Knee Bolster ¾ View

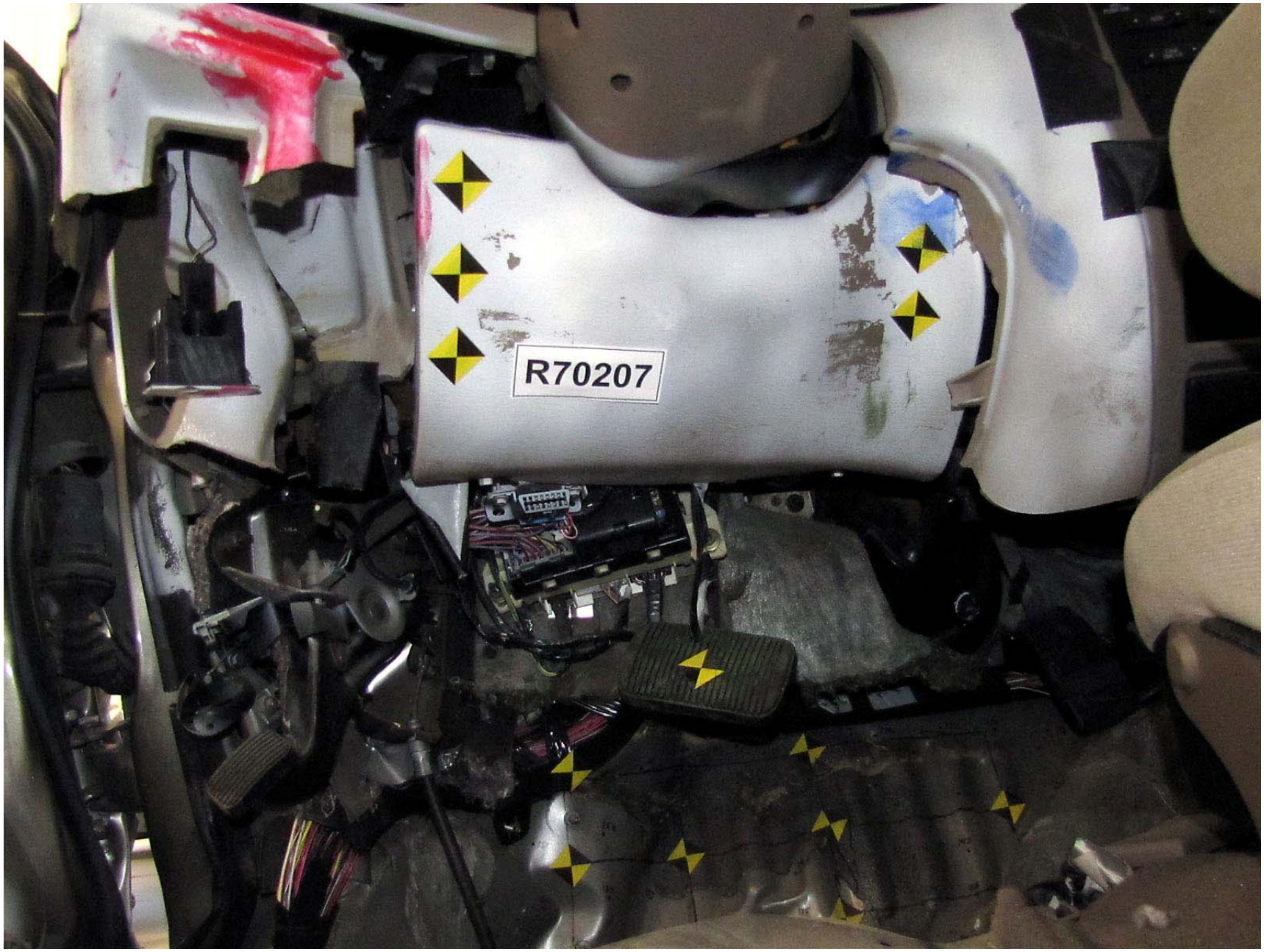

Figure A-246: Test Vehicle Post-Test Driver's Side Knee Bolster

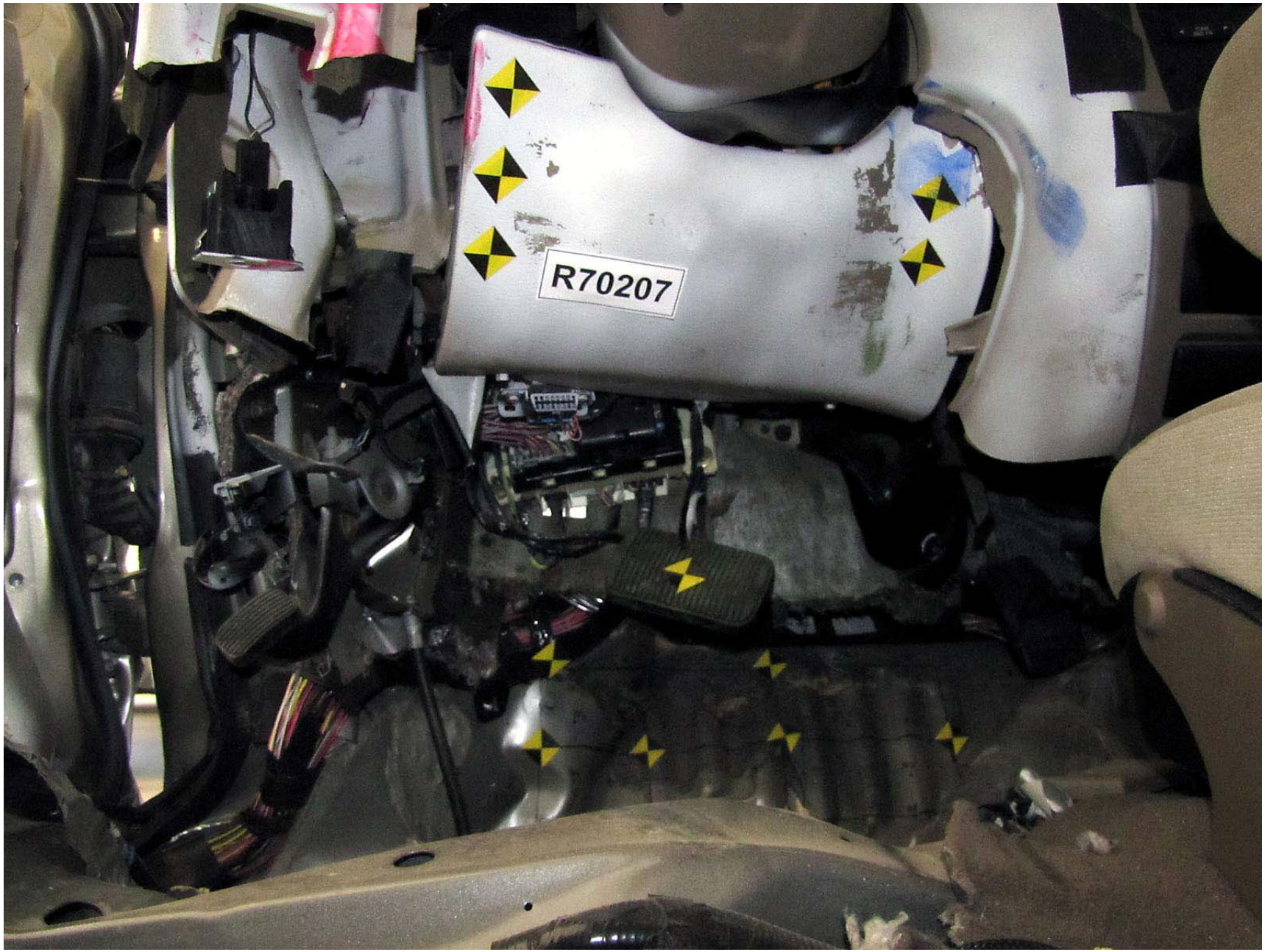

Figure A-247: Test Vehicle Post-Test Driver's Side Knee Bolster

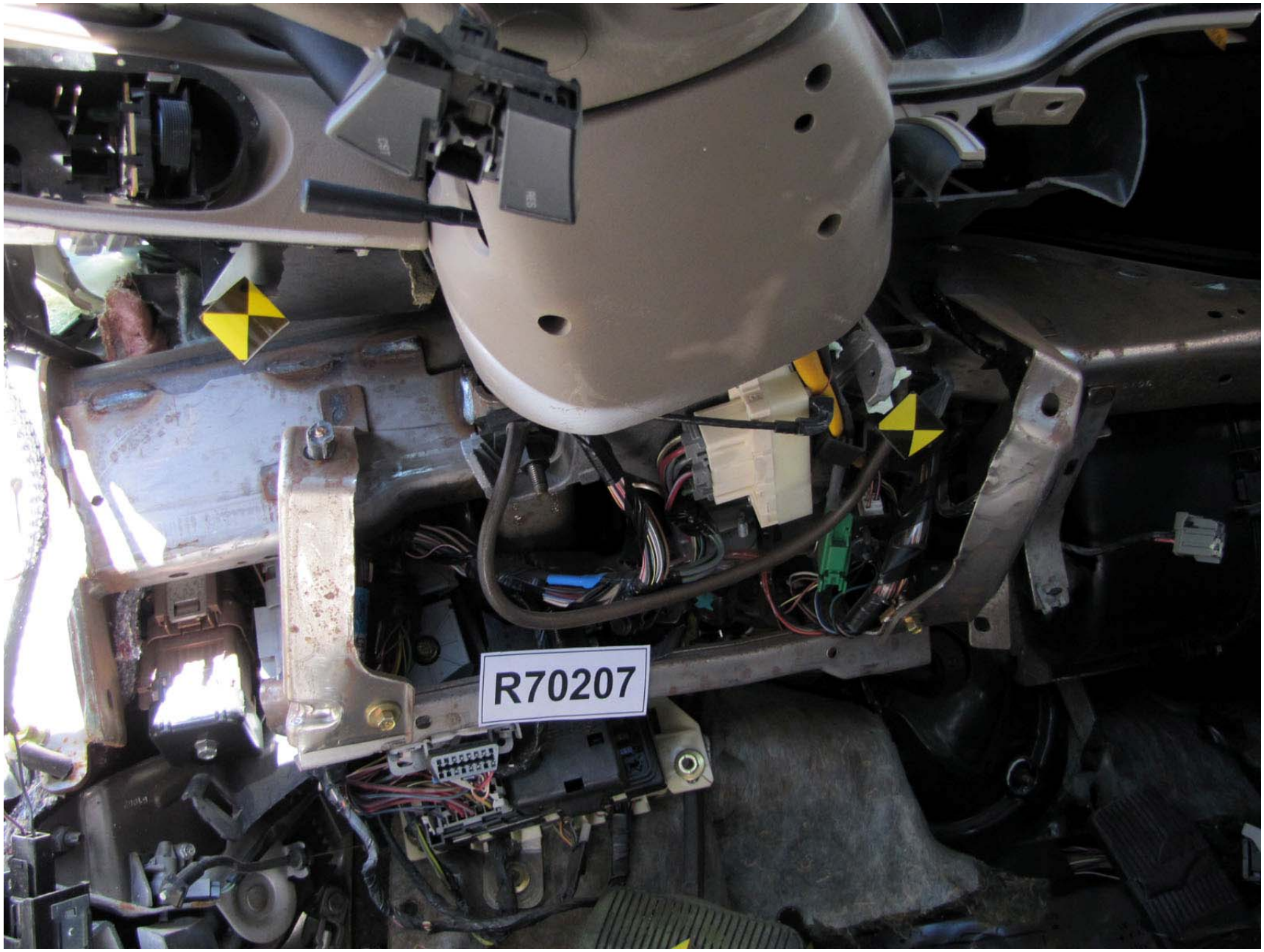

Figure A-248: Test Vehicle Post-Test Driver's Side Knee Bolster

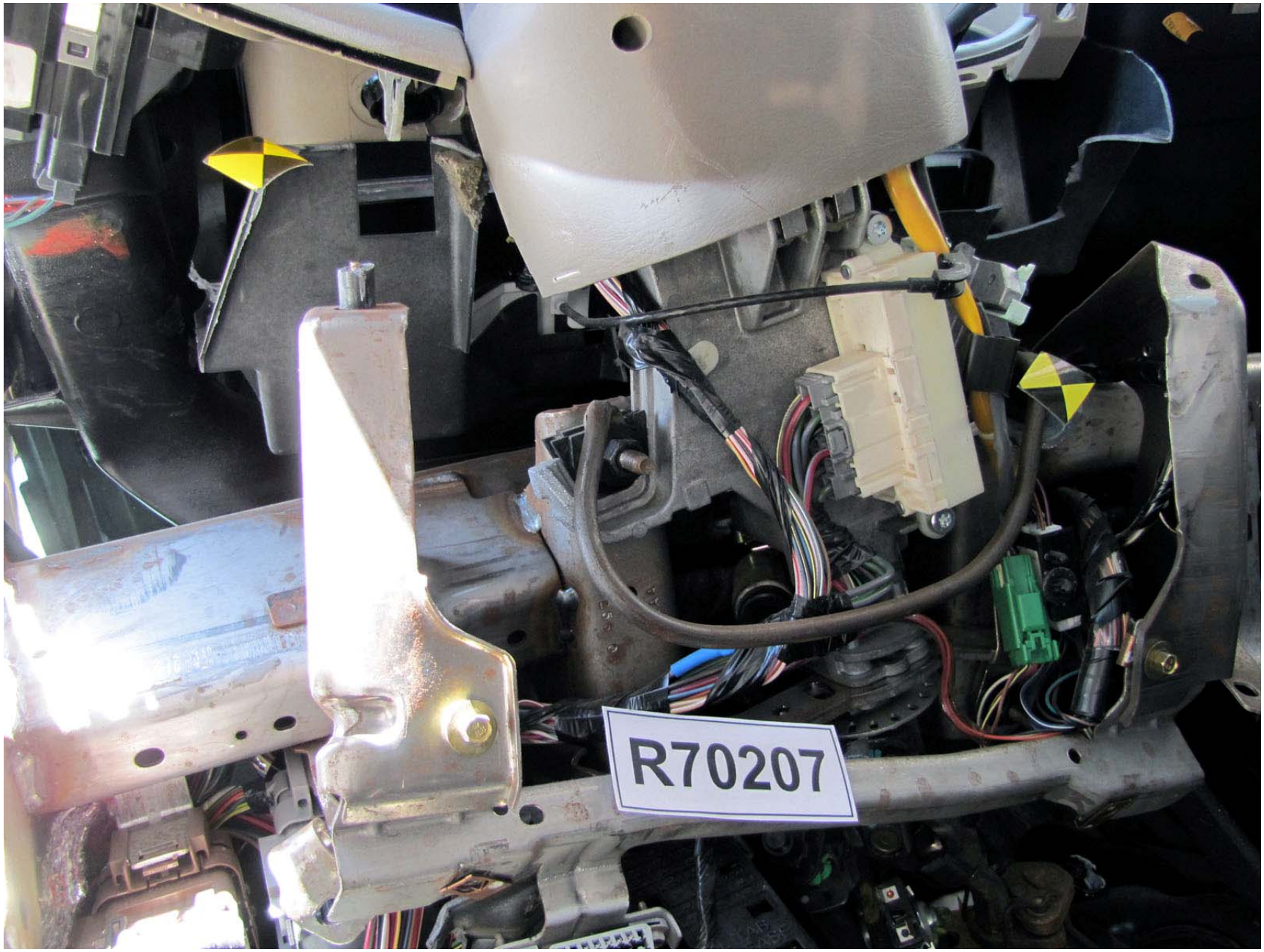

Figure A-249: Test Vehicle Post-Test Driver's Side Knee Bolster

Figure A-250: Test Vehicle Pre-Test Driver Dummy Head

Figure A-251: Test Vehicle Post-Test Driver Dummy Head

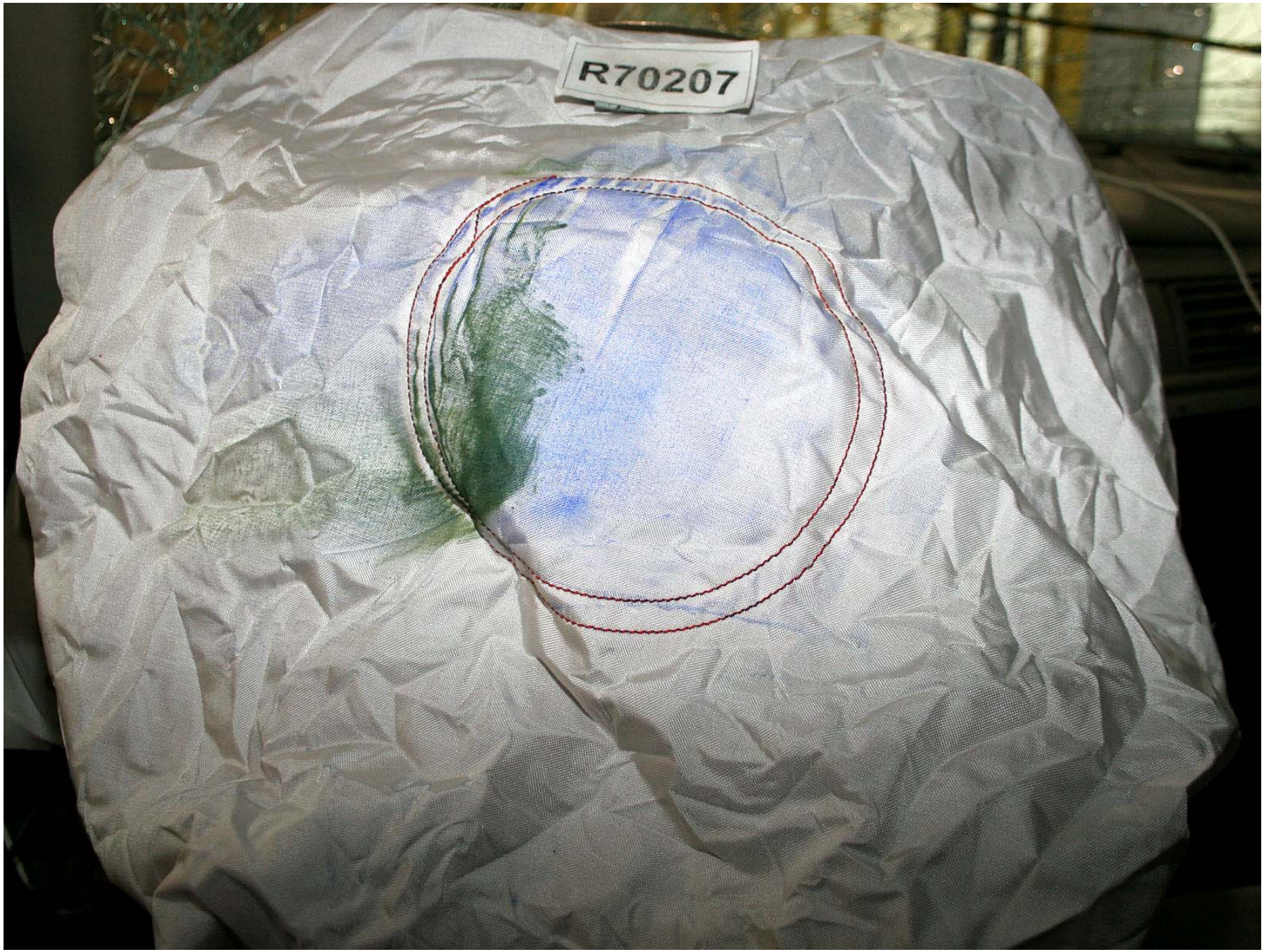

Figure A-252: Test Vehicle Post-Test Driver Dummy Contact, Airbag

Figure A-253: Test Vehicle Post-Test Driver Dummy Contact, A-Pillar

Figure A-254: Test Vehicle Post-Test Driver Dummy Contact, Roof

Figure A-255: Test Vehicle Post-Test Driver Dummy Contact, Sun Visor

Figure A-256: Test Vehicle Post-Test Driver Dummy Contact, Chest

Figure A-257: Test Vehicle Post-Test Driver Dummy Contact, Shoulder

Figure A-258: Test Vehicle Pre-Test Rear Door Panel

Figure A-259: Test Vehicle Post-Test Rear Door Panel

Photograph Not Available

Figure A-260: Test Vehicle Pre-Test Passenger Dummy Right Side View

Figure A-261: Test Vehicle Post-Test Passenger Dummy Right Side View

Figure A-262: Test Vehicle Pre-Test Passenger Dummy Front View

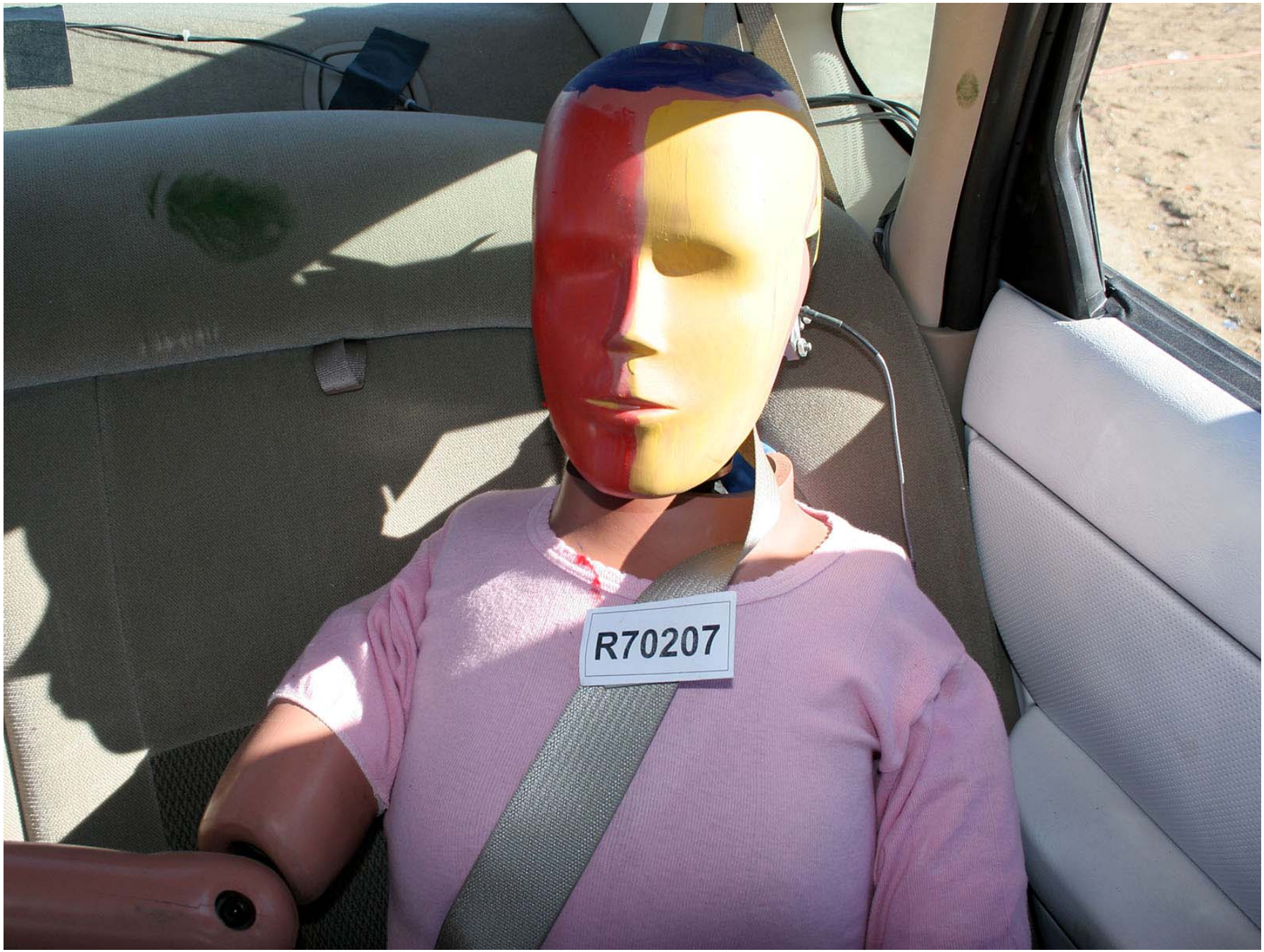

Figure A-263: Test Vehicle Post-Test Passenger Dummy Front View

Figure A-264: Test Vehicle Pre-Test Passenger Dummy Left Side View (Door Open)

Photograph Not Available

Figure A-265: Test Vehicle Post-Test Passenger Dummy Left Side View (Door Open)

Figure A-266: Test Vehicle Pre-Test Passenger Dummy Feet Positioning

Figure A-267: Test Vehicle Pre-Test Passenger Dummy Feet Positioning

Figure A-268: Test Vehicle Pre-Test Passenger Dummy Feet Positioning

Figure A-269: Test Vehicle Pre-Test Passenger Dummy Feet Positioning

Figure A-270: Test Vehicle Post-Test Passenger Dummy Feet Positioning

Figure A-271: Test Vehicle Post-Test Passenger Dummy Feet Positioning

Figure A-272: Test Vehicle Post-Test Passenger Dummy Feet Positioning

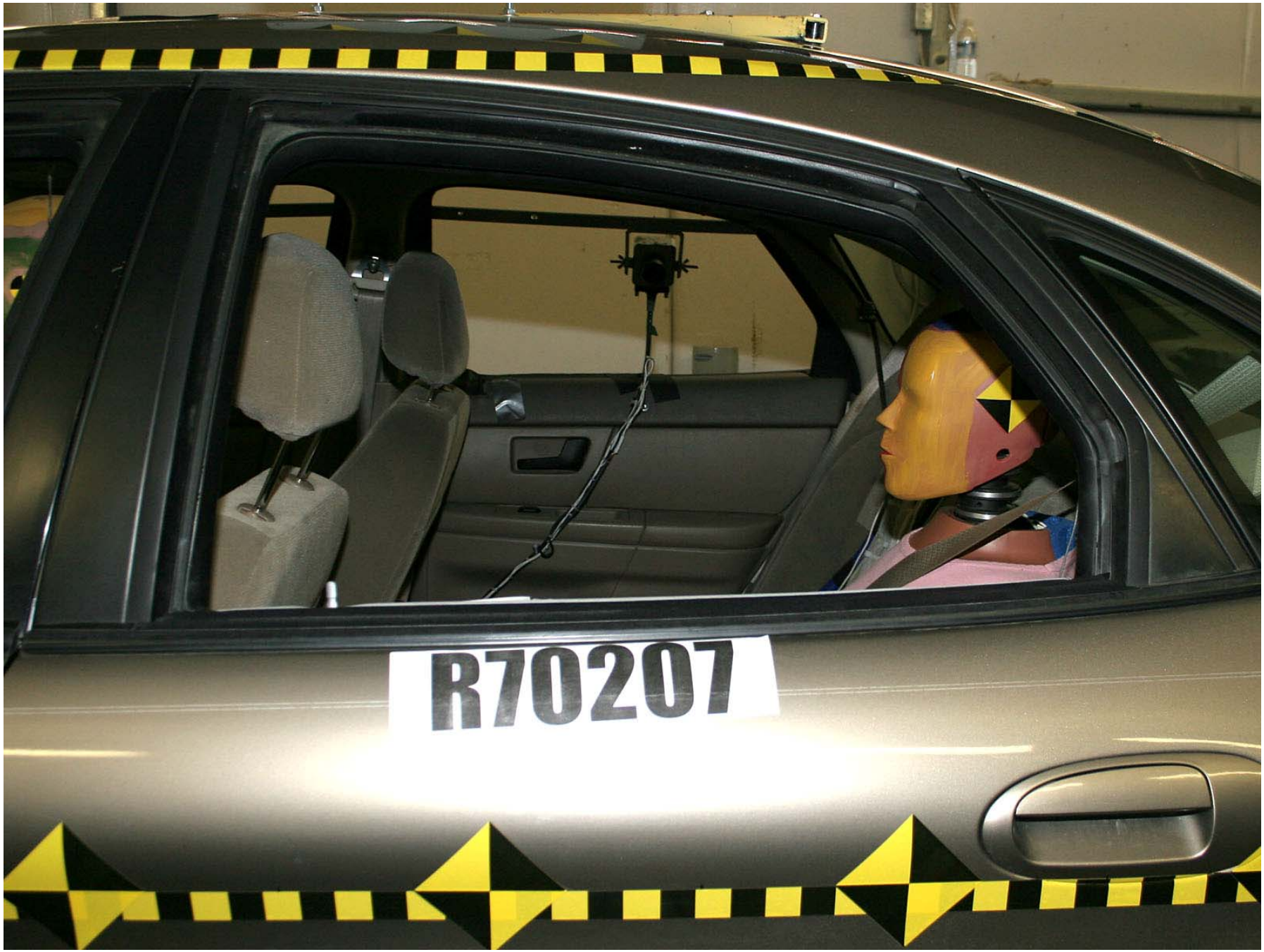

Figure A-273: Test Vehicle Pre-Test Passenger Dummy Left Side View (Through Window)

Figure A-274: Test Vehicle Post-Test Passenger Dummy Left Side View (Through Window)

Figure A-275: Test Vehicle Pre-Test Passenger Dummy Clearance from Door

Figure A-276: Test Vehicle Post-Test Passenger Dummy Clearance from Door

Figure A-277: Test Vehicle Pre-Test Passenger's Side Knee Bolster

Figure A-278: Test Vehicle Post-Test Passenger's Side Knee Bolster

Figure A-279: Test Vehicle Pre-Test Passenger Dummy Head

Figure A-280: Test Vehicle Post-Test Passenger Dummy Head

Figure A-281: Test Vehicle Post-Test Passenger Dummy Contact, Seat Back

Figure A-282: Test Vehicle Post-Test Passenger Dummy Contact, C-Pillar

Figure A-283: Test Vehicle Post-Test Passenger Dummy Contact, C-Pillar

Figure A-284: Test Vehicle Post-Test Passenger Dummy Contact, Chest

Figure A-285: Test Vehicle Pre-Test Driver Floorpan

Figure A-286: Test Vehicle Post-Test Driver Floorpan

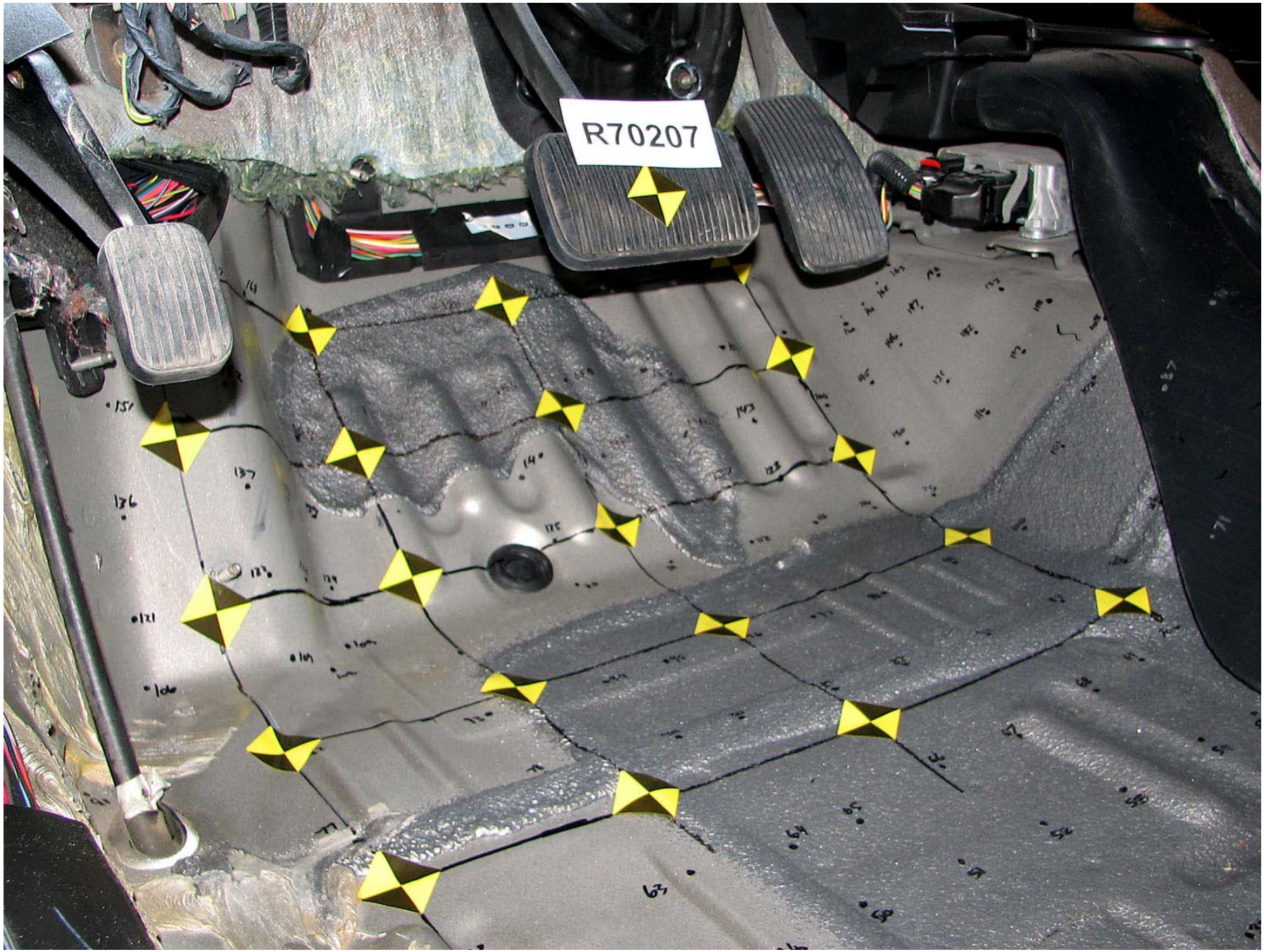

Figure A-287: Test Vehicle Pre-Test Driver Floorpan Left ¾ View, Seat Cushion Height

Figure A-288: Test Vehicle Post-Test Driver Floorpan Left ¾ View, Seat Cushion Height

Figure A-289: Test Vehicle Pre-Test Driver Floorpan Left ¾ View, Sill Height

Figure A-290: Test Vehicle Post-Test Driver Floorpan Left ¾ View, Sill Height

Figure A-291: Test Vehicle Pre-Test Driver Floorpan, Seat Cushion Height

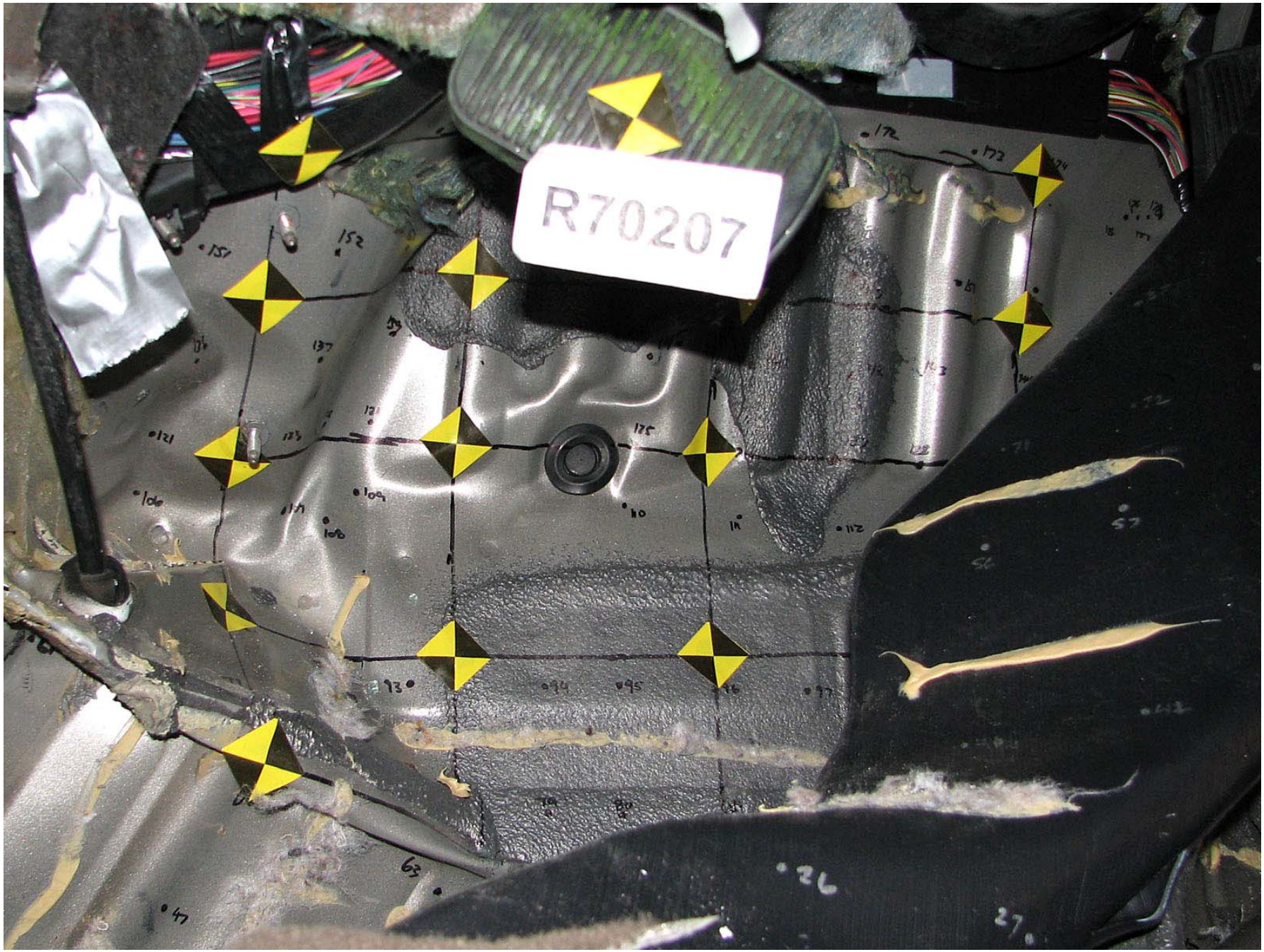

Figure A-292: Test Vehicle Post-Test Driver Floorpan, Seat Cushion Height

Figure A-293: Test Vehicle Pre-Test Driver Floorpan, Sill Height

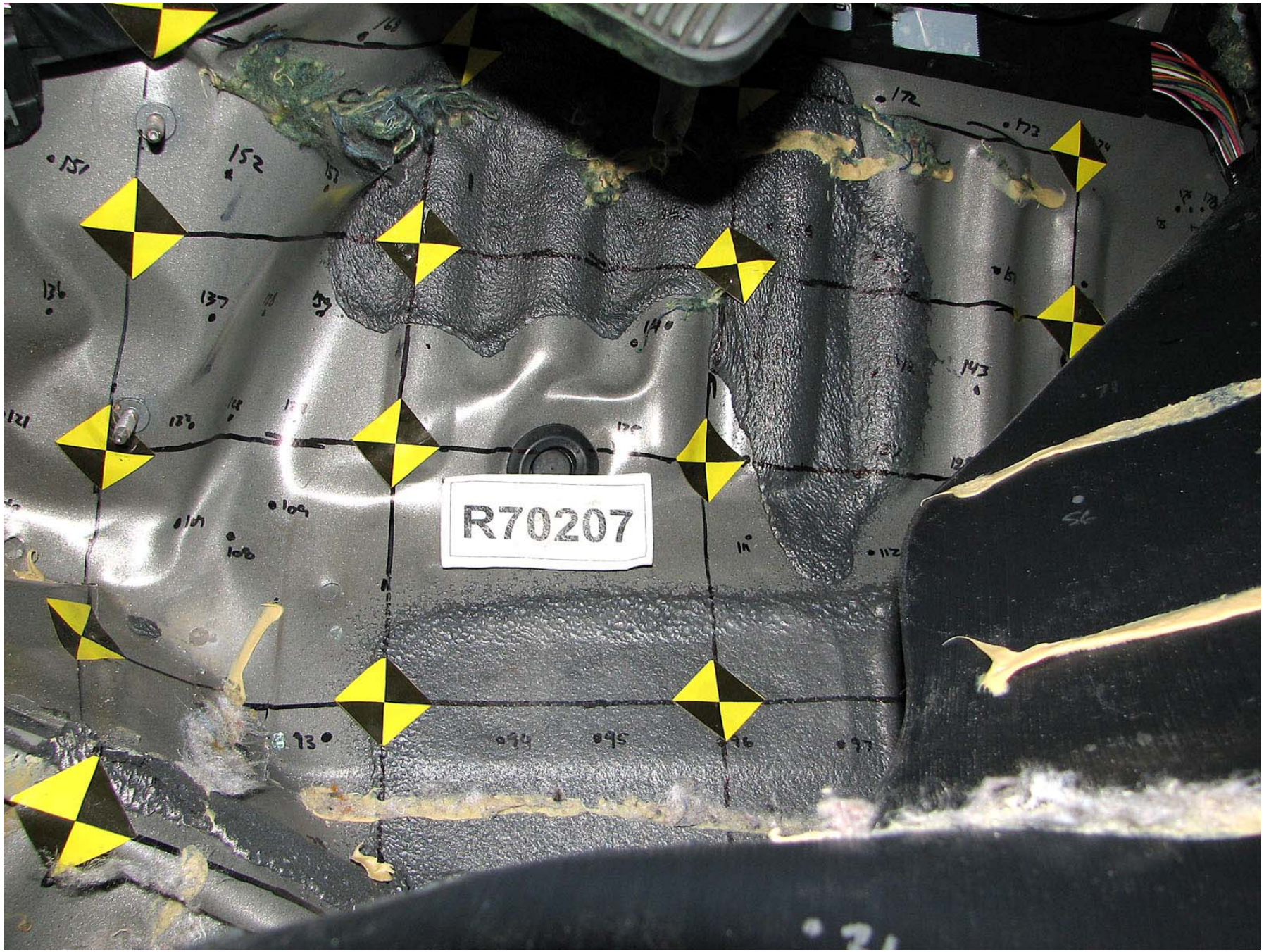

Figure A-294: Test Vehicle Post-Test Driver Floorpan, Sill Height

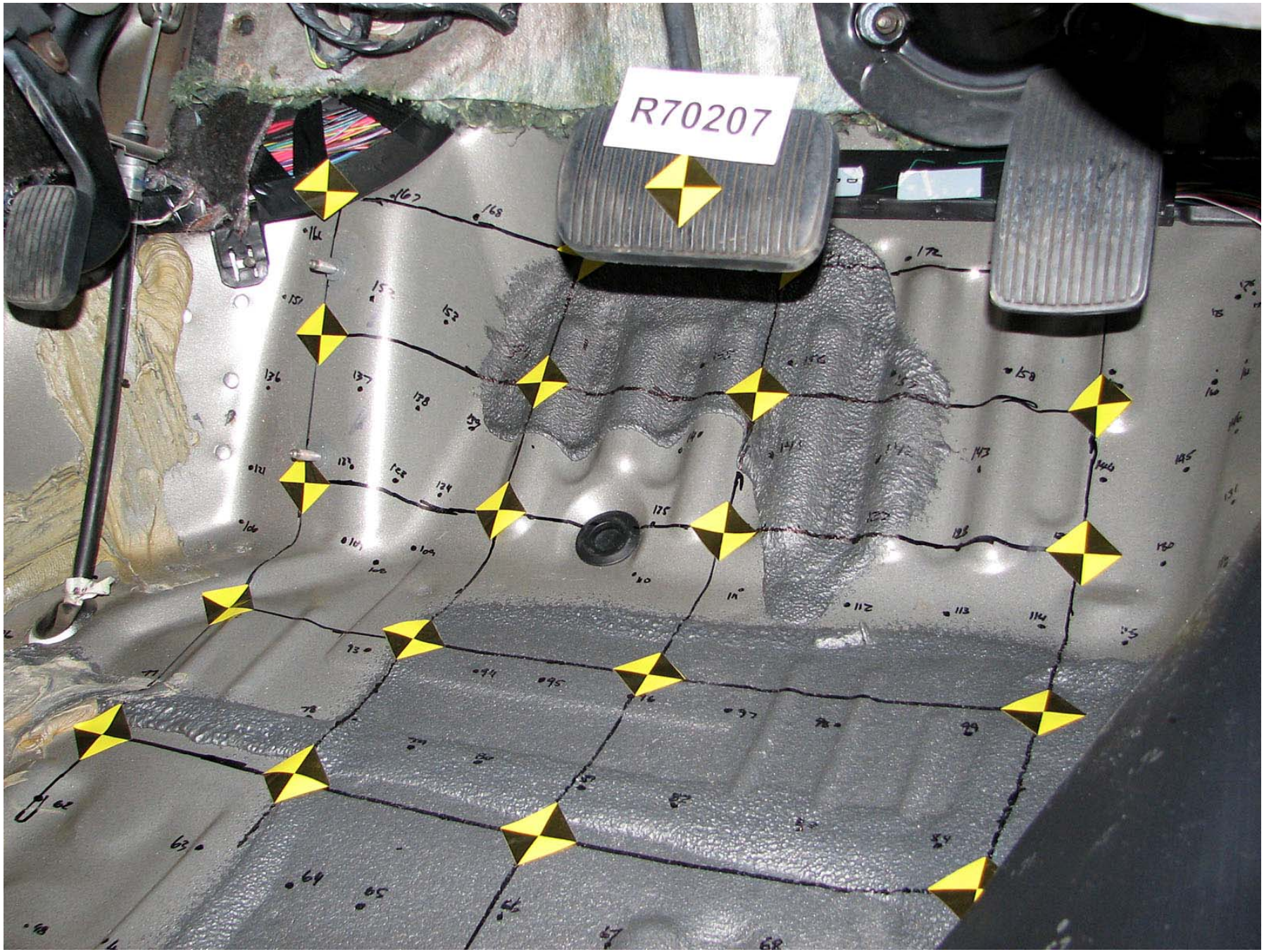

Figure A-295: Test Vehicle Pre-Test Driver Floorpan Right ¾ View, Seat Cushion Height

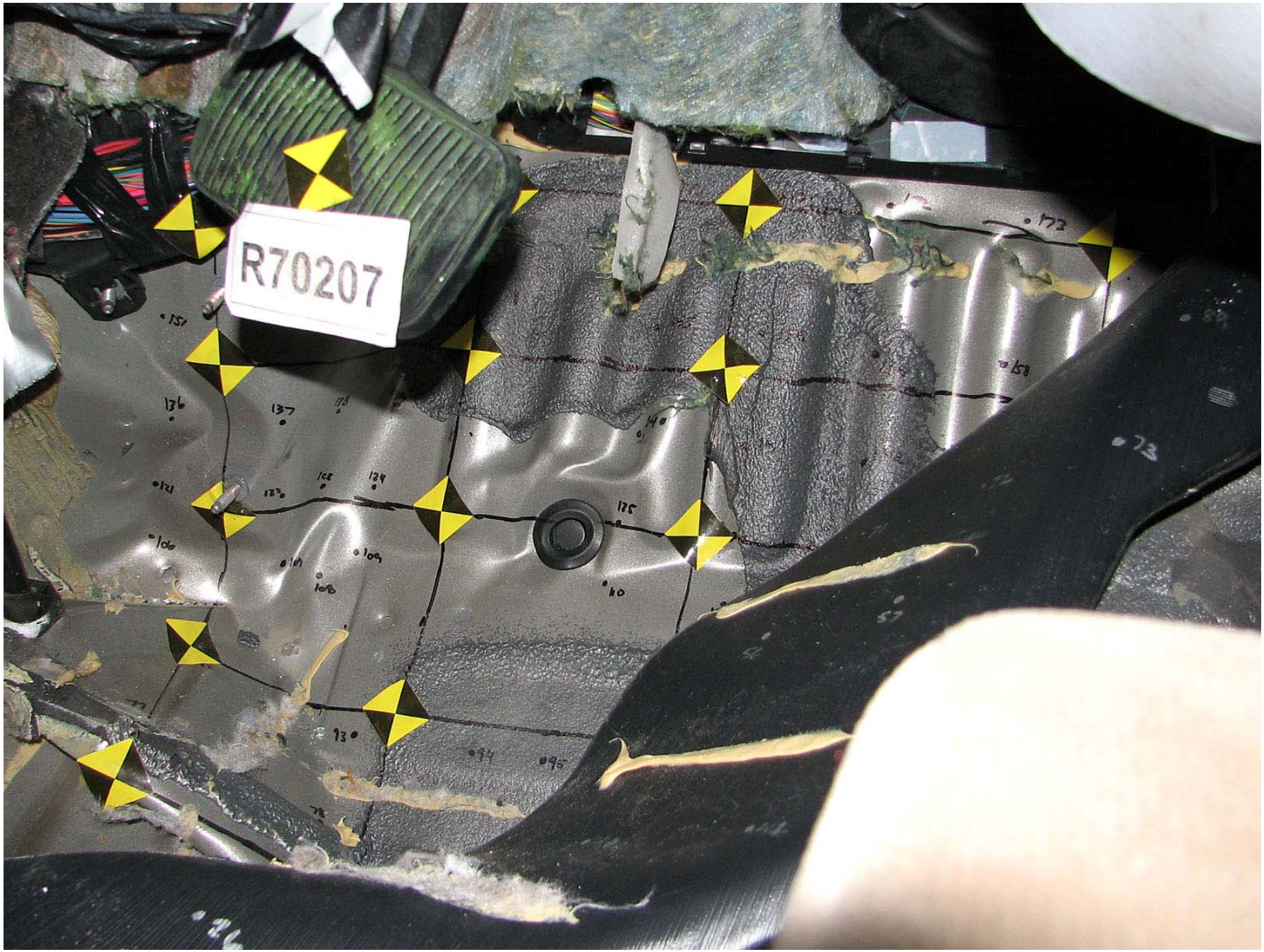

Figure A-296: Test Vehicle Post-Test Driver Floorpan Right ¾ View, Seat Cushion Height

Figure A-297: Test Vehicle Pre-Test Driver Floorpan Right ¾ View, Sill Height

Figure A-298: Test Vehicle Post-Test Driver Floorpan Right ¾ View, Sill Height

Figure A-299: Test Vehicle Pre-Test Accelerator Pedal, Seat Cushion Height

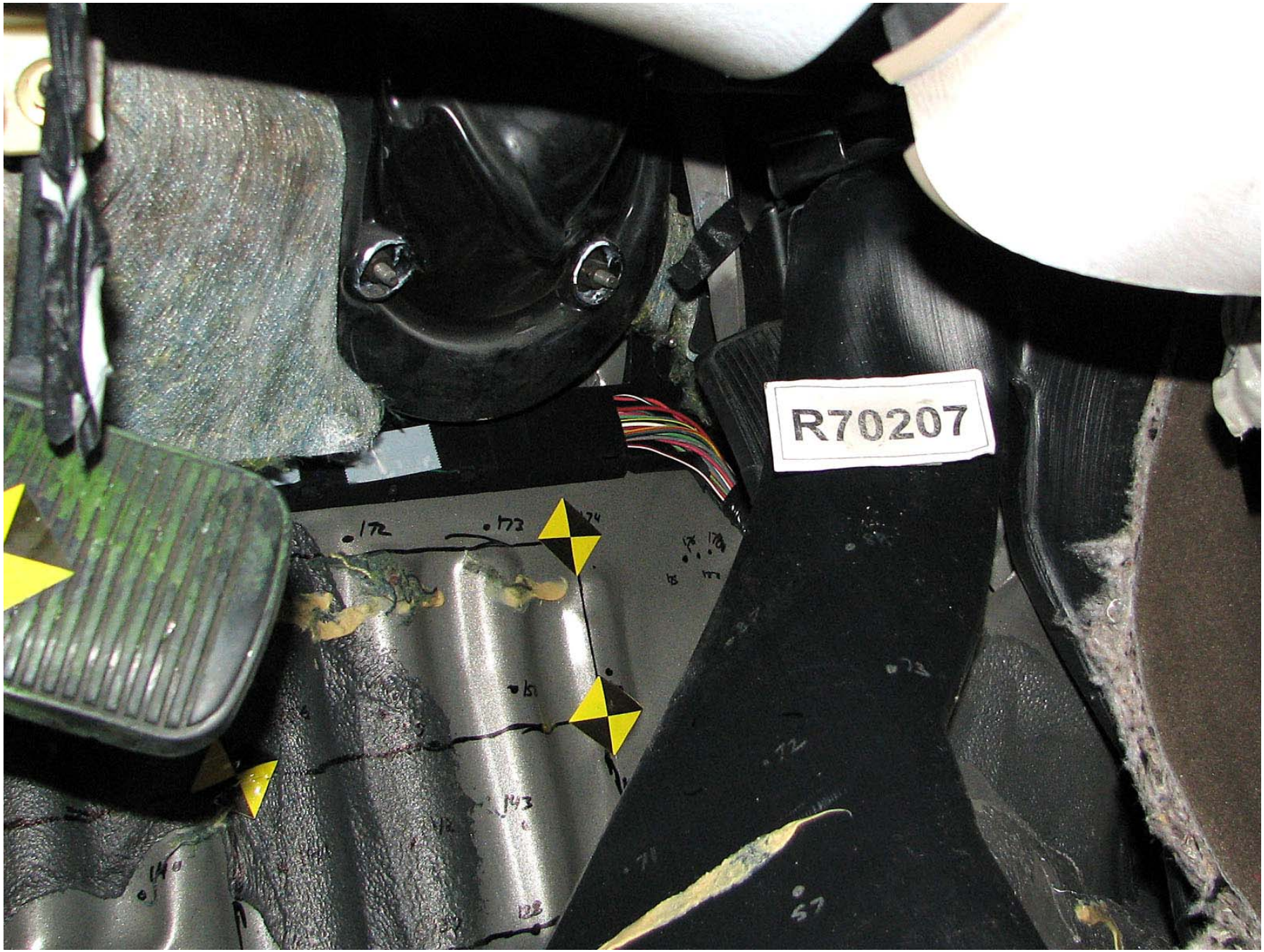

Figure A-300: Test Vehicle Post-Test Accelerator Pedal, Seat Cushion Height

Figure A-301: Test Vehicle Pre-Test Accelerator Pedal Side View, In Front of Brake Pedal

Figure A-302: Test Vehicle Post-Test Accelerator Pedal Side View, In Front of Brake Pedal

Figure A-303: Test Vehicle Pre-Test Accelerator Pedal Side View, Behind Brake Pedal

Figure A-304: Test Vehicle Post-Test Accelerator Pedal Side View, Behind Brake Pedal

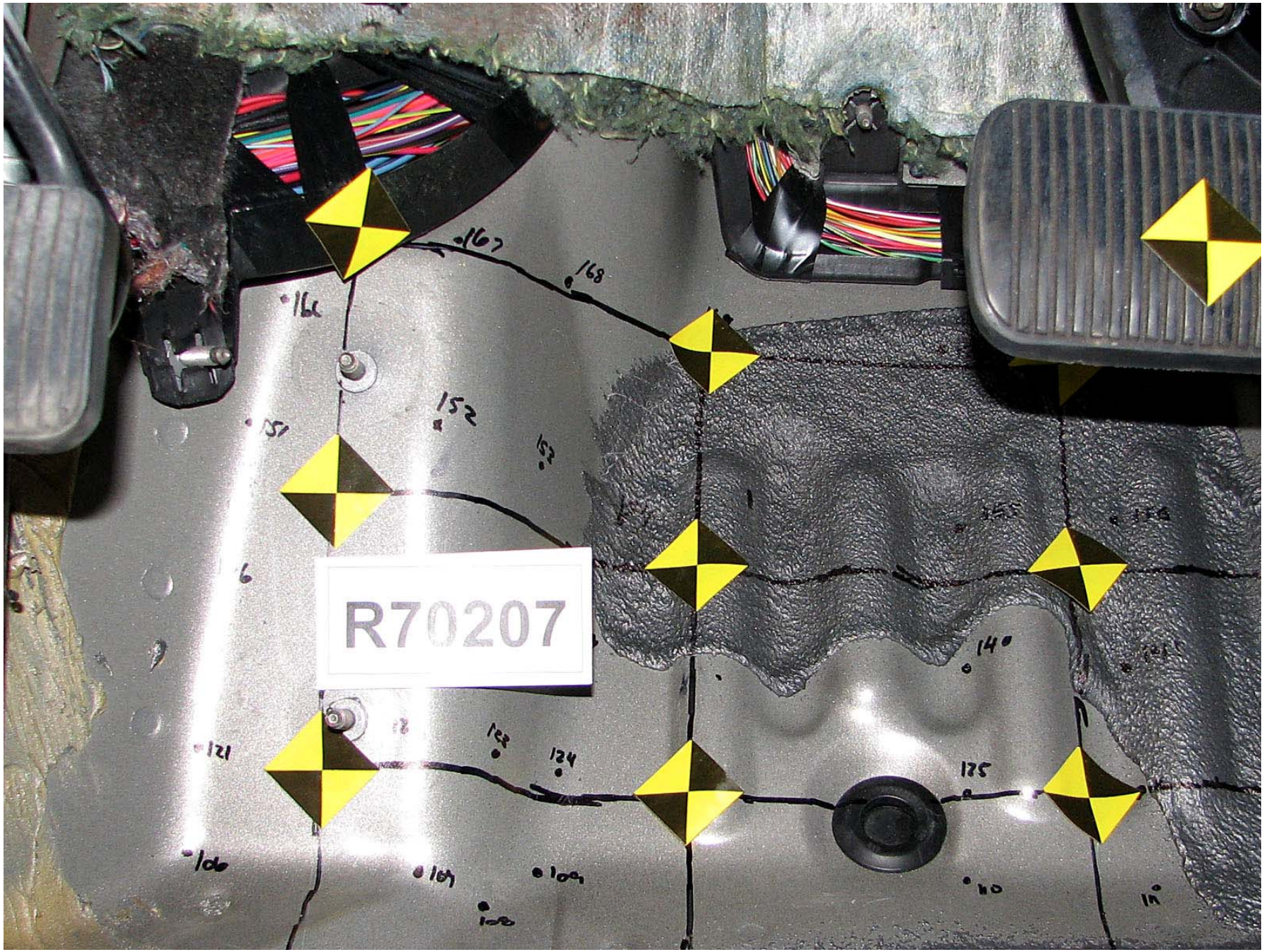

Figure A-305: Test Vehicle Pre-Test Foot Rest , Seat Cushion Height

Figure A-306: Test Vehicle Post-Test Foot Rest , Seat Cushion Height

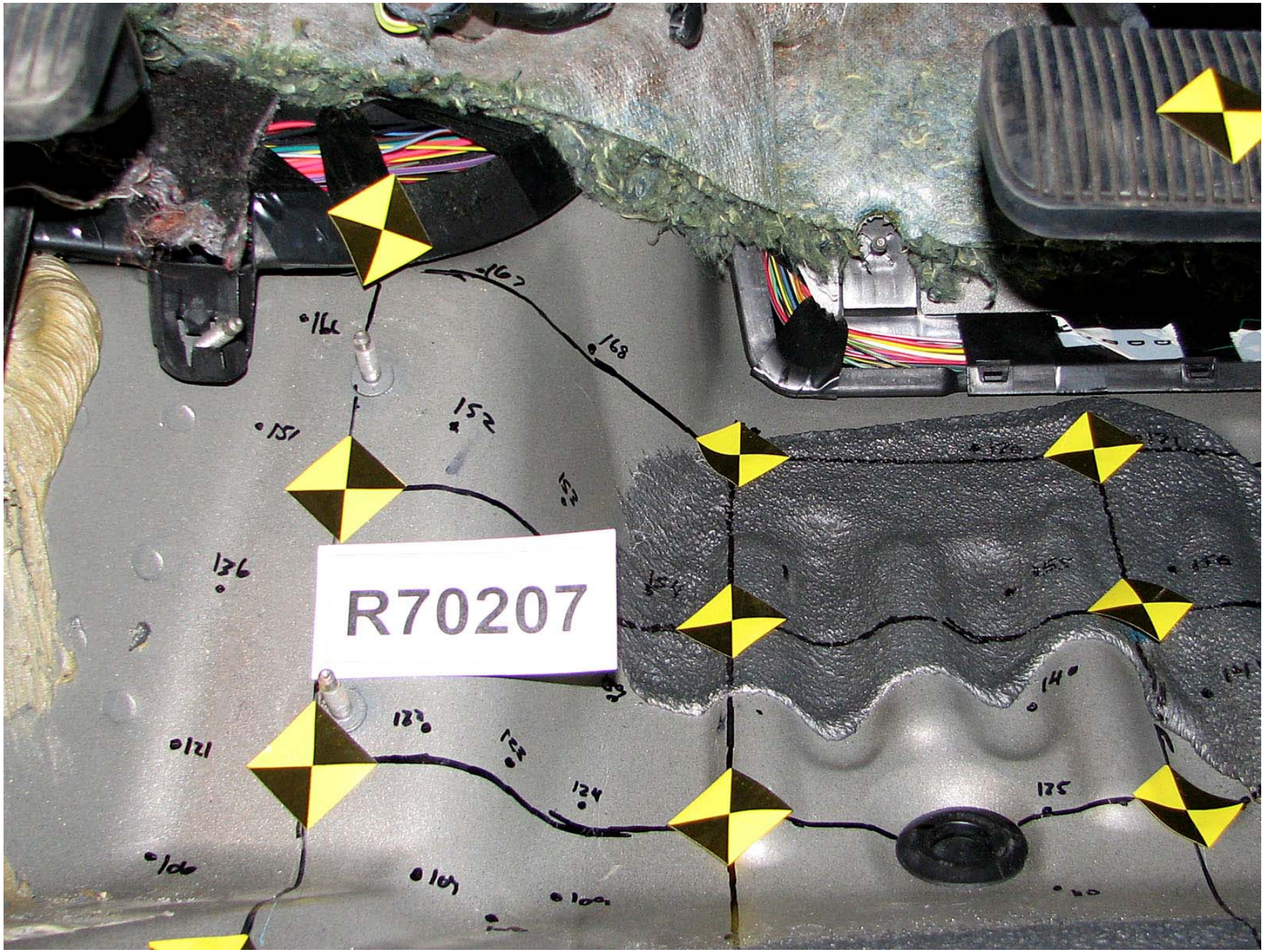

Figure A-307: Test Vehicle Pre-Test Foot Rest, Sill Height

Figure A-308: Test Vehicle Post-Test Foot Rest, Sill Height

Figure A-309: Test Vehicle Pre-Test Structural Member Crush Measurement

Figure A-310: Test Vehicle Post-Test Structural Member Crush Measurement

Figure A-311: Test Vehicle Post-Test Structural Member Crush Measurement

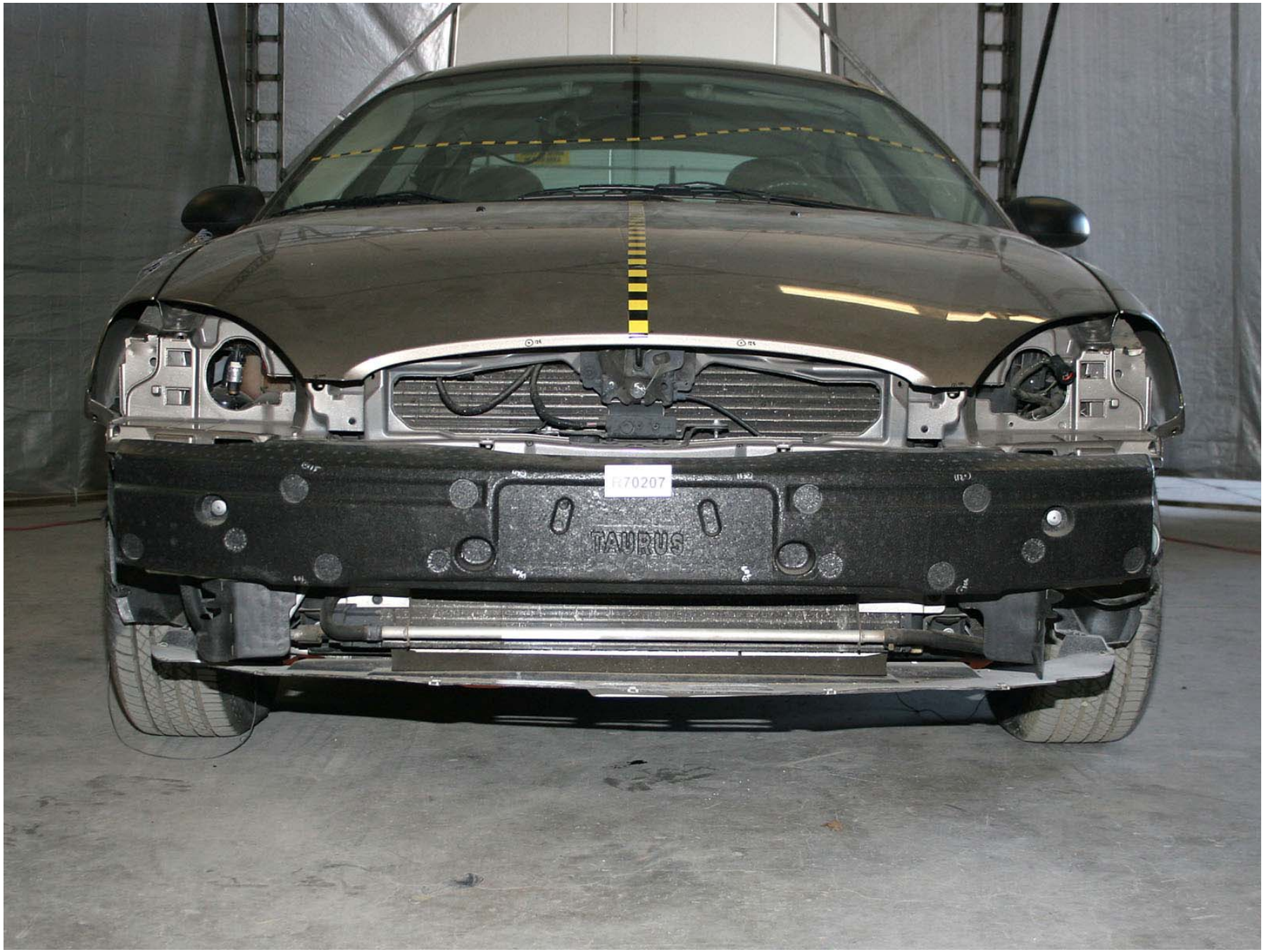

Figure A-312: Test Vehicle Pre-Test Structural Member Crush Measurement

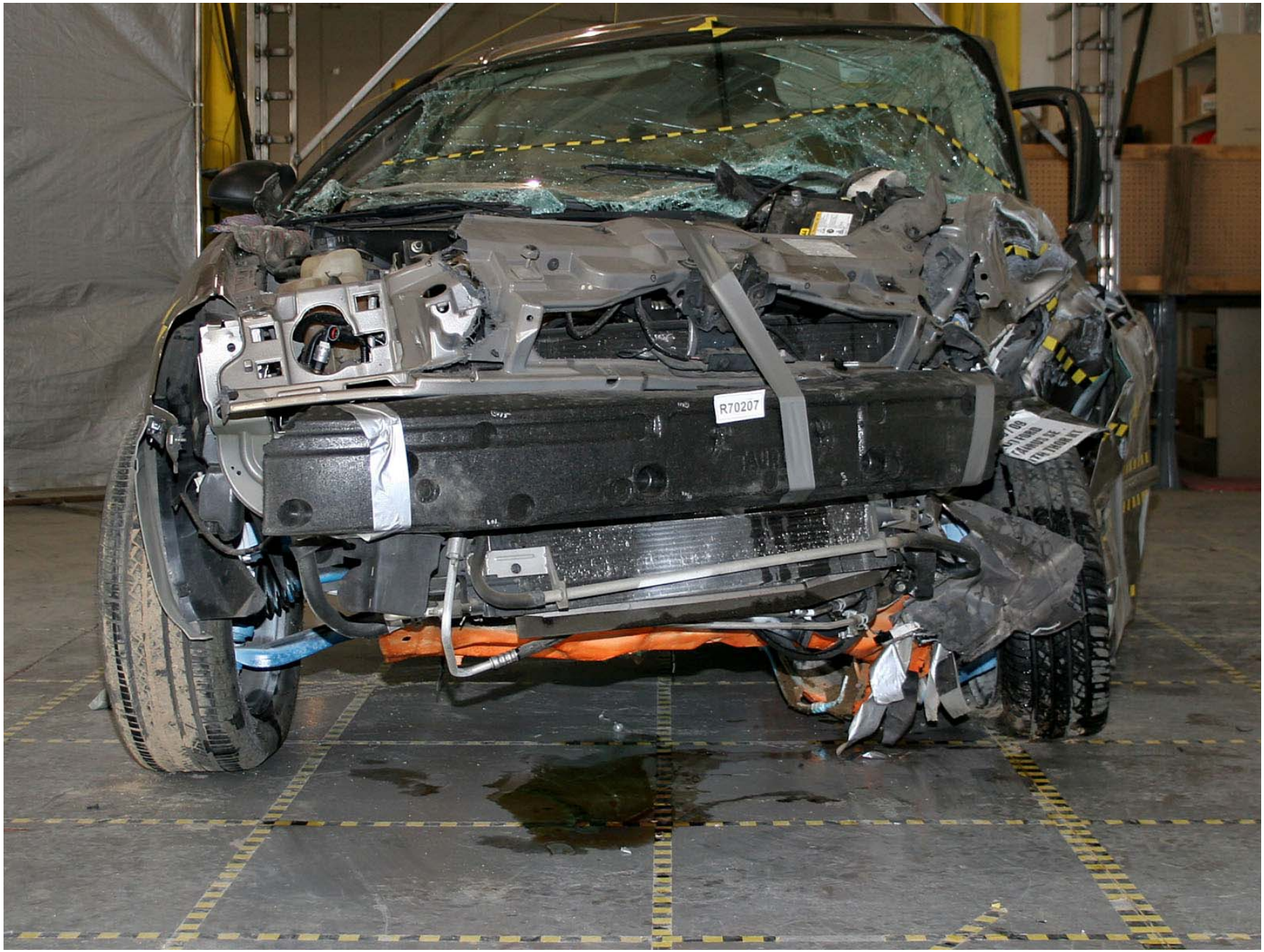

Figure A-313: Test Vehicle Post-Test Structural Member Crush Measurement

Figure A-314: Test Vehicle Pre-Test Structural Member Crush Measurement

Figure A-315: Test Vehicle Post-Test Structural Member Crush Measurement

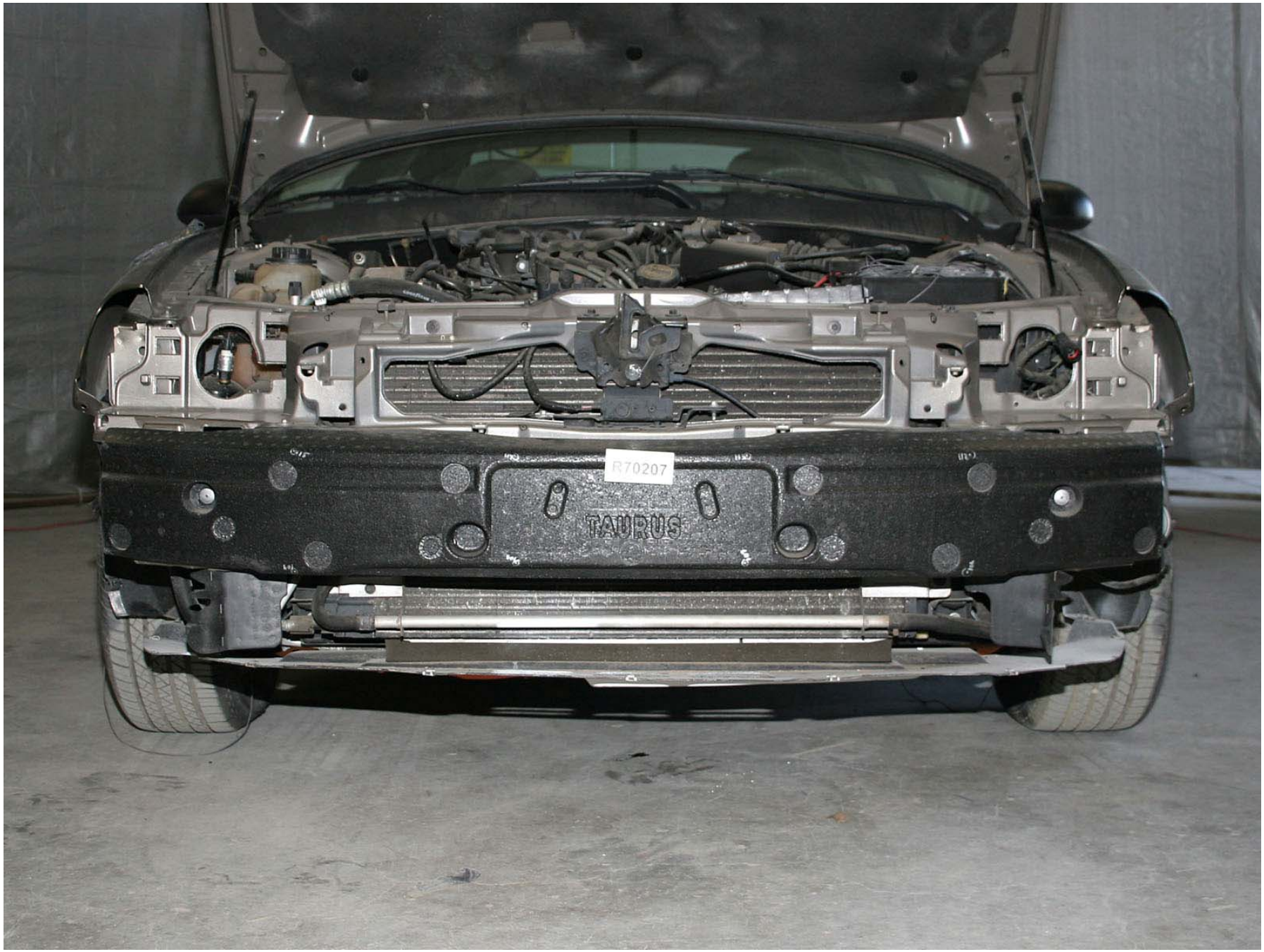

Figure A-316: Test Vehicle Pre-Test Structural Member Crush Measurement

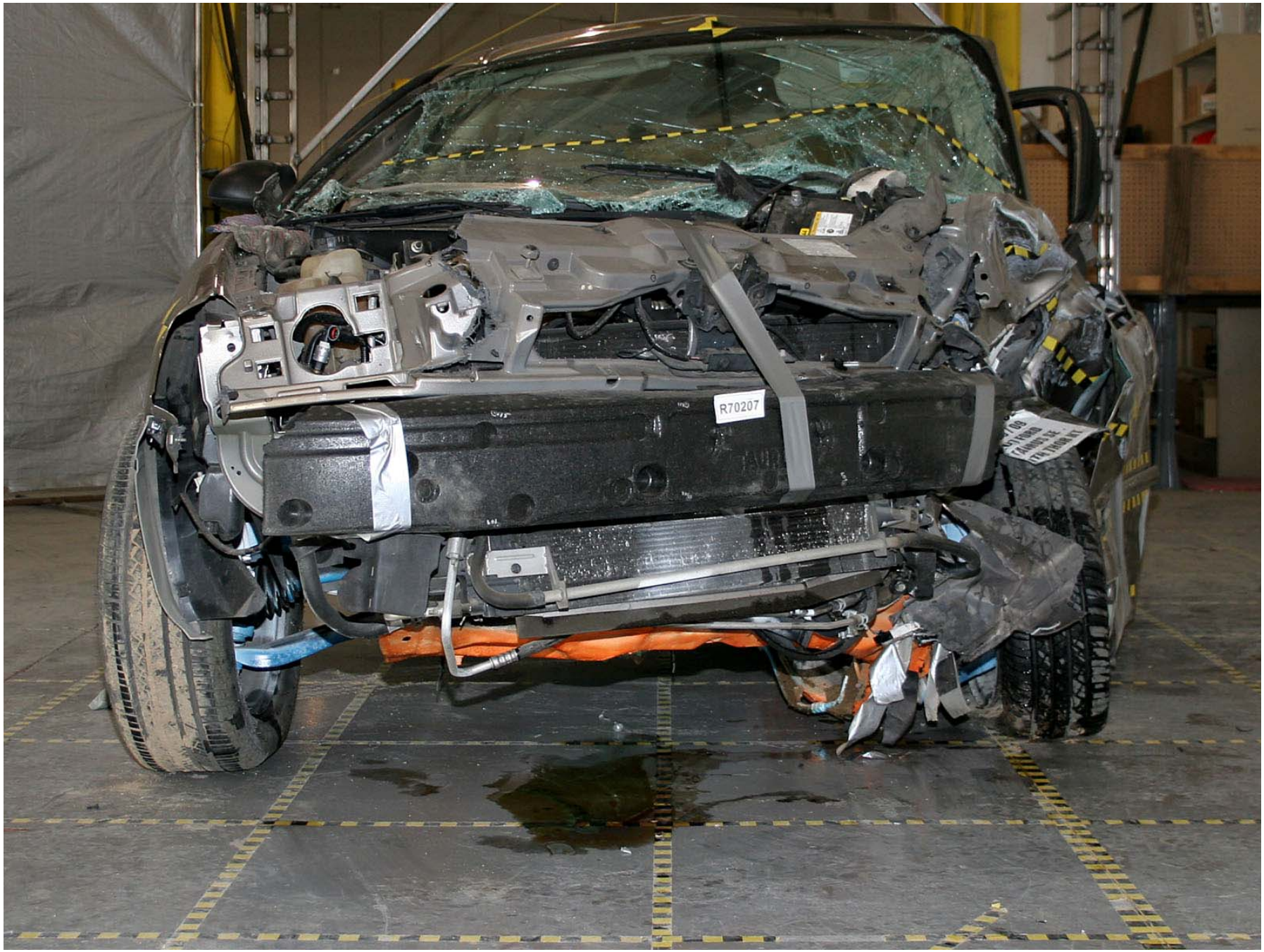

Figure A-317: Test Vehicle Post-Test Structural Member Crush Measurement

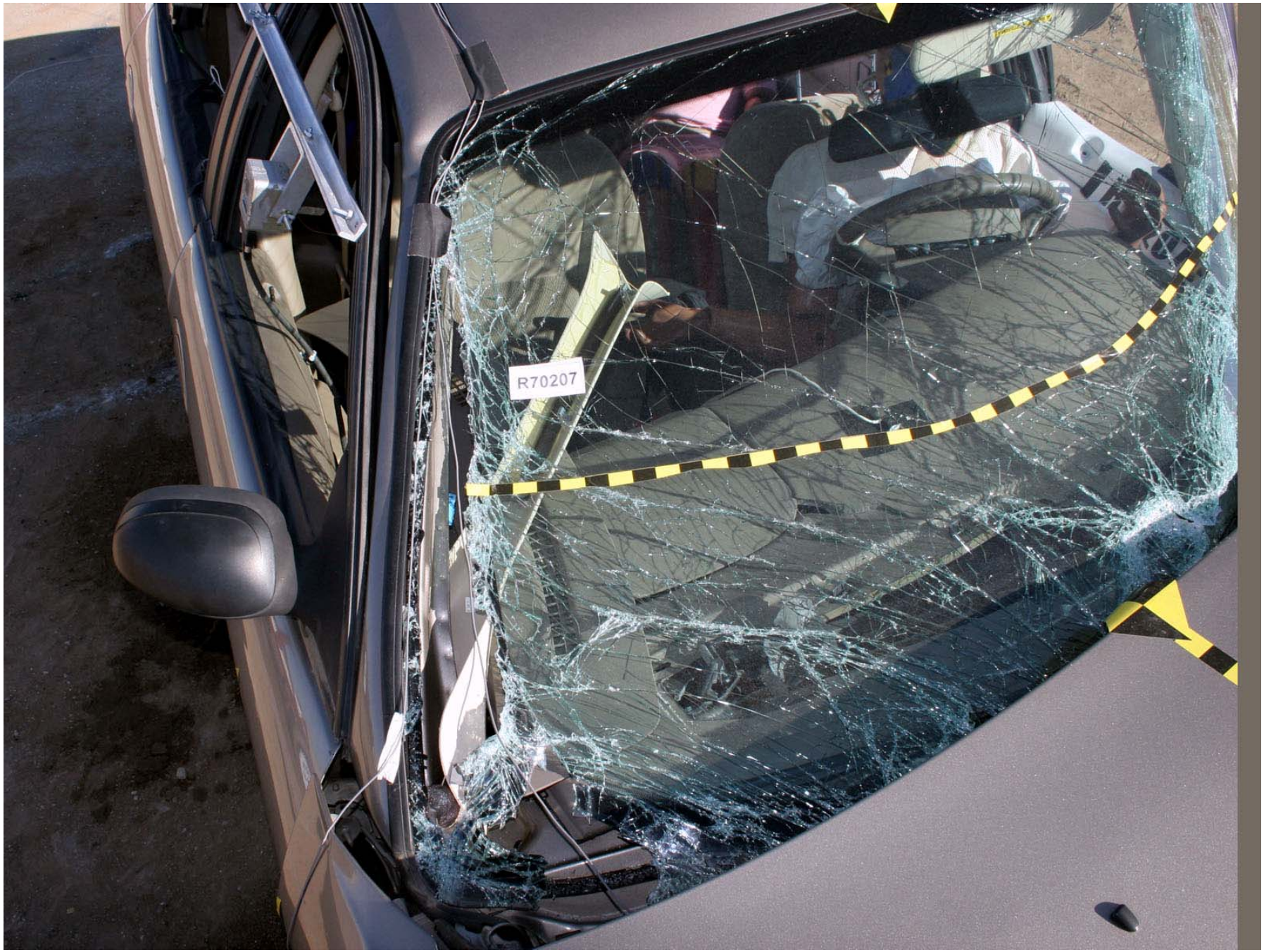

Figure A-318: Test Vehicle Post-Test Windshield Separation

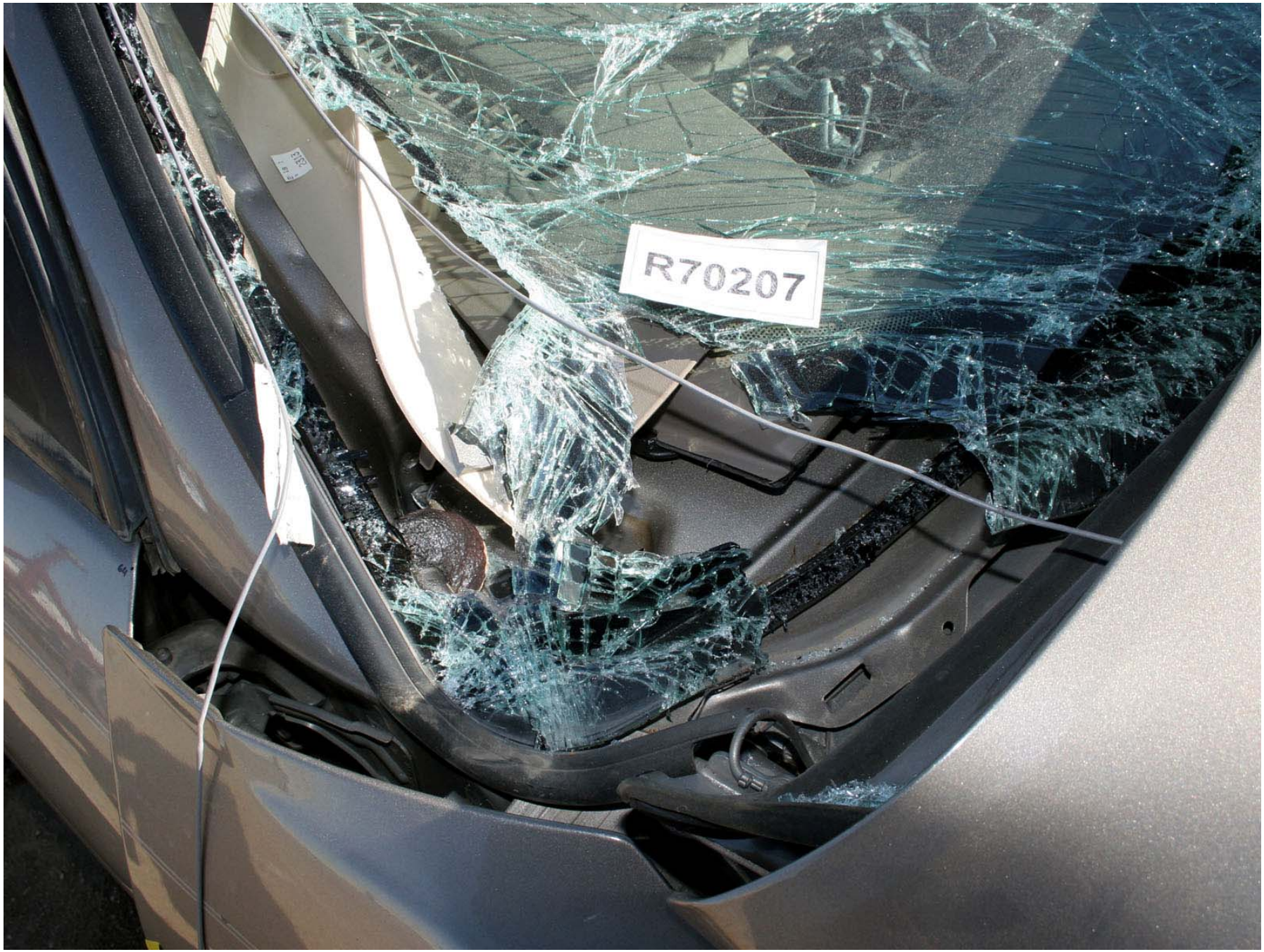

Figure A-319: Test Vehicle Post-Test Windshield Separation

Figure A-320: Test Vehicle Post-Test Windshield Separation

Figure A-321: Test Vehicle Post-Test Windshield Separation

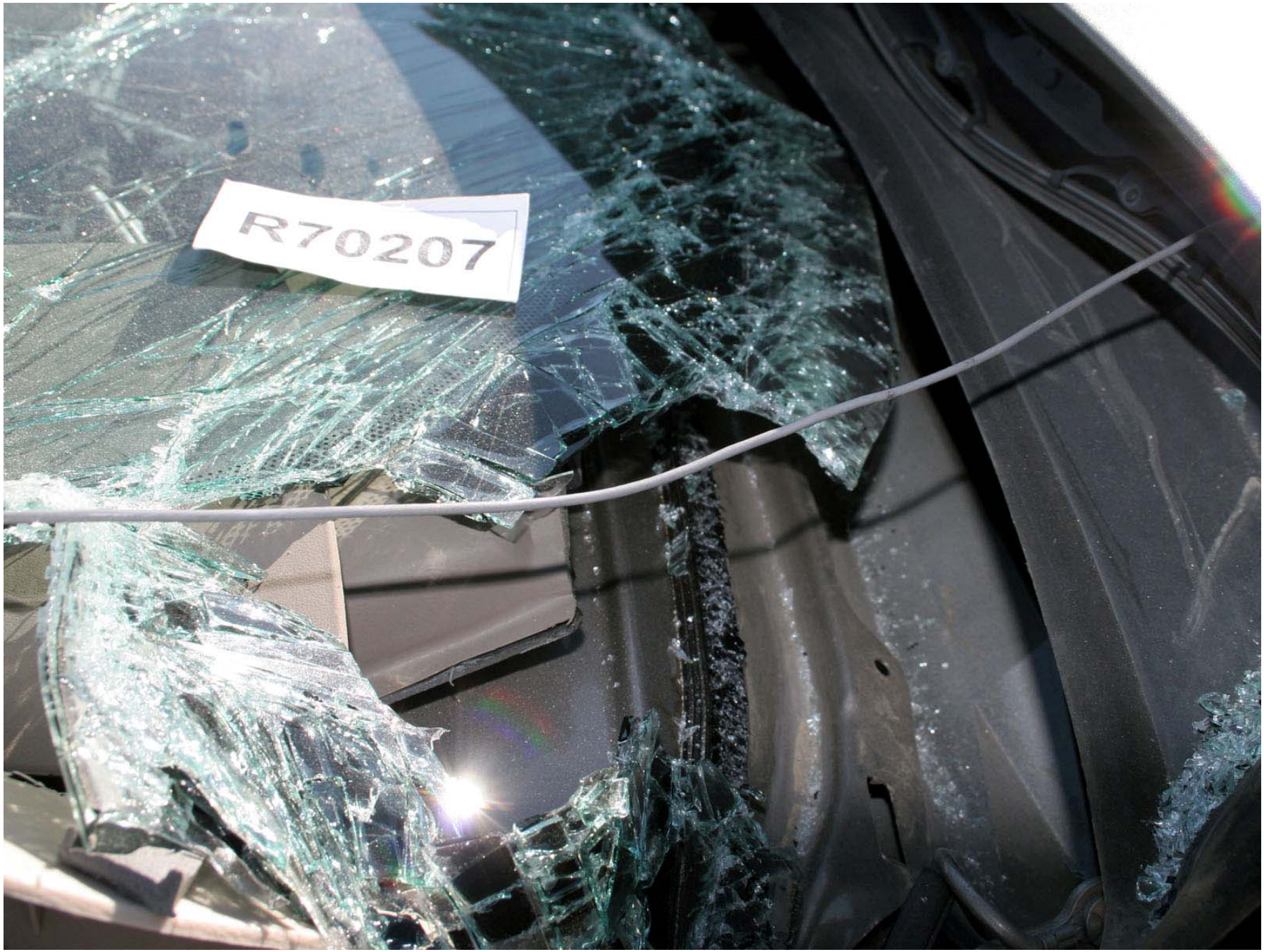

Figure A-322: Test Vehicle Post-Test Windshield Separation

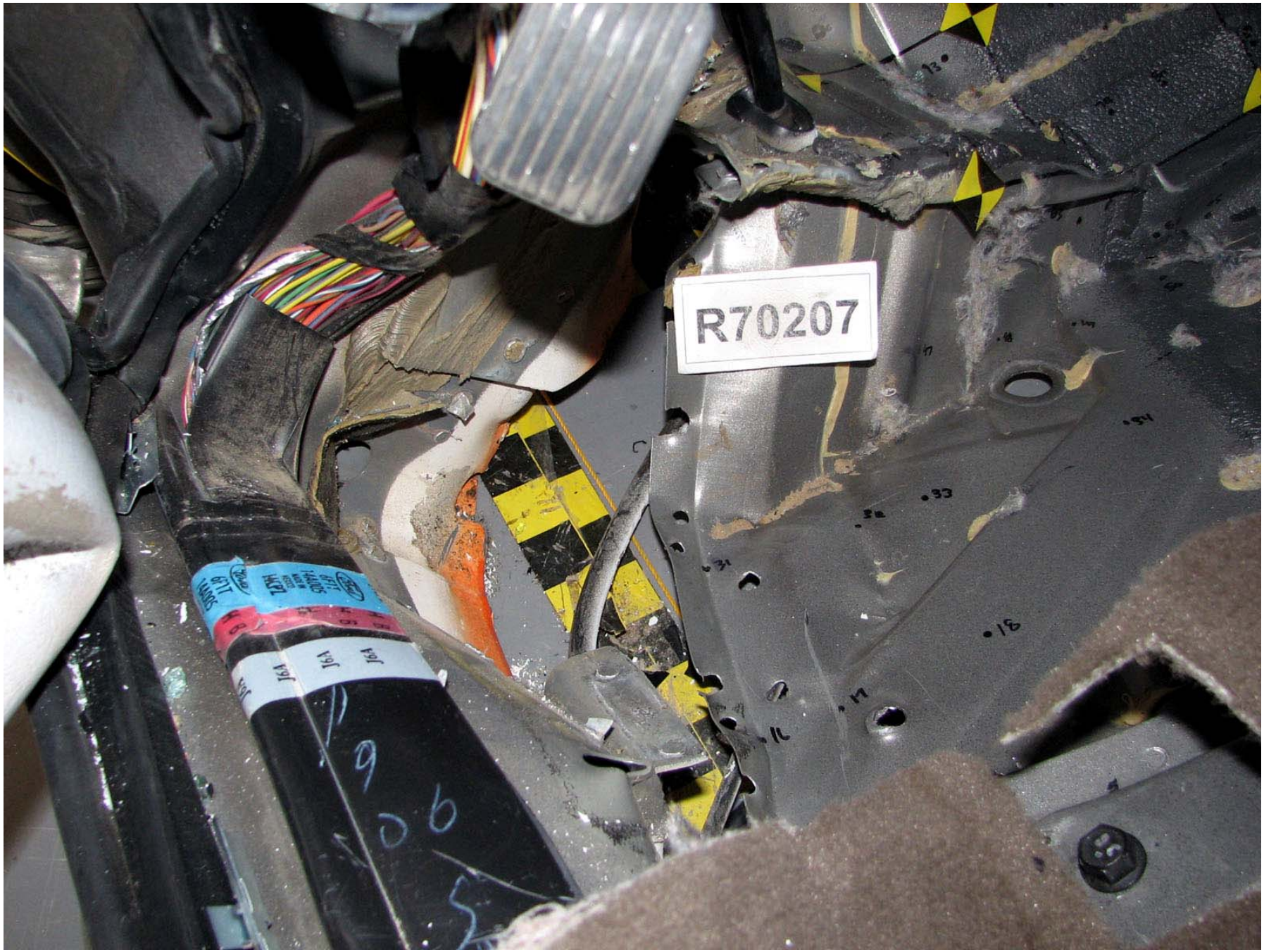

Figure A-323: Test Vehicle Post-Test Driver Floorpan Separation at Sill

Figure A-324: Test Vehicle Pre-Test Front View of Deformable Barrier

Figure A-325: Test Vehicle Post-Test Front View of Deformable Barrier

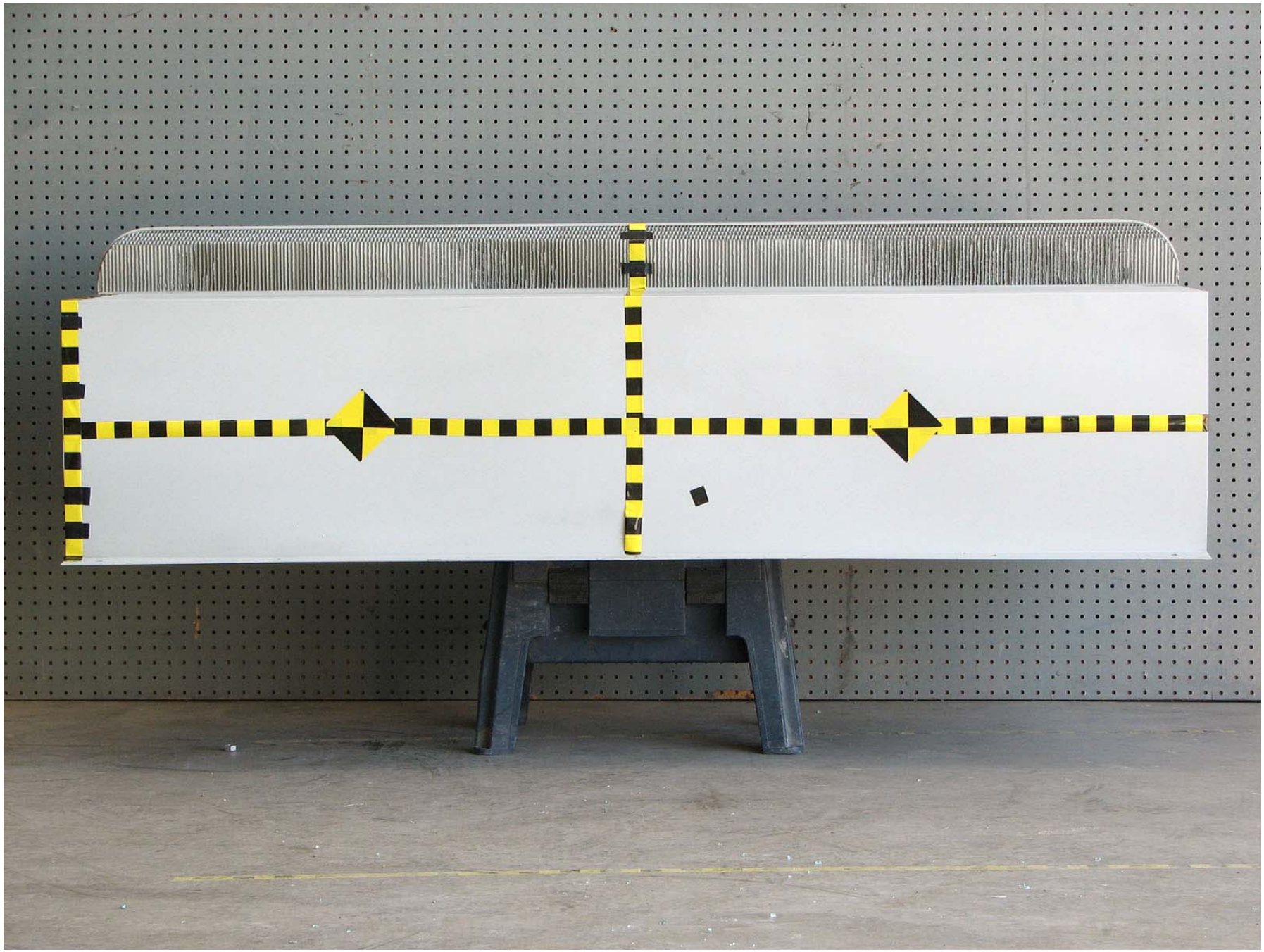

Figure A-326: Test Vehicle Pre-Test Top View of Deformable Barrier

Figure A-327: Test Vehicle Post-Test Top View of Deformable Barrier

Figure A-328: Test Vehicle Pre-Test Right Side View of Deformable Barrier

Figure A-329: Test Vehicle Post-Test Right Side View of Deformable Barrier

Figure A-330: Test Vehicle Pre-Test Left Side View of Deformable Barrier

Figure A-331: Test Vehicle Post-Test Left Side View of Deformable Barrier

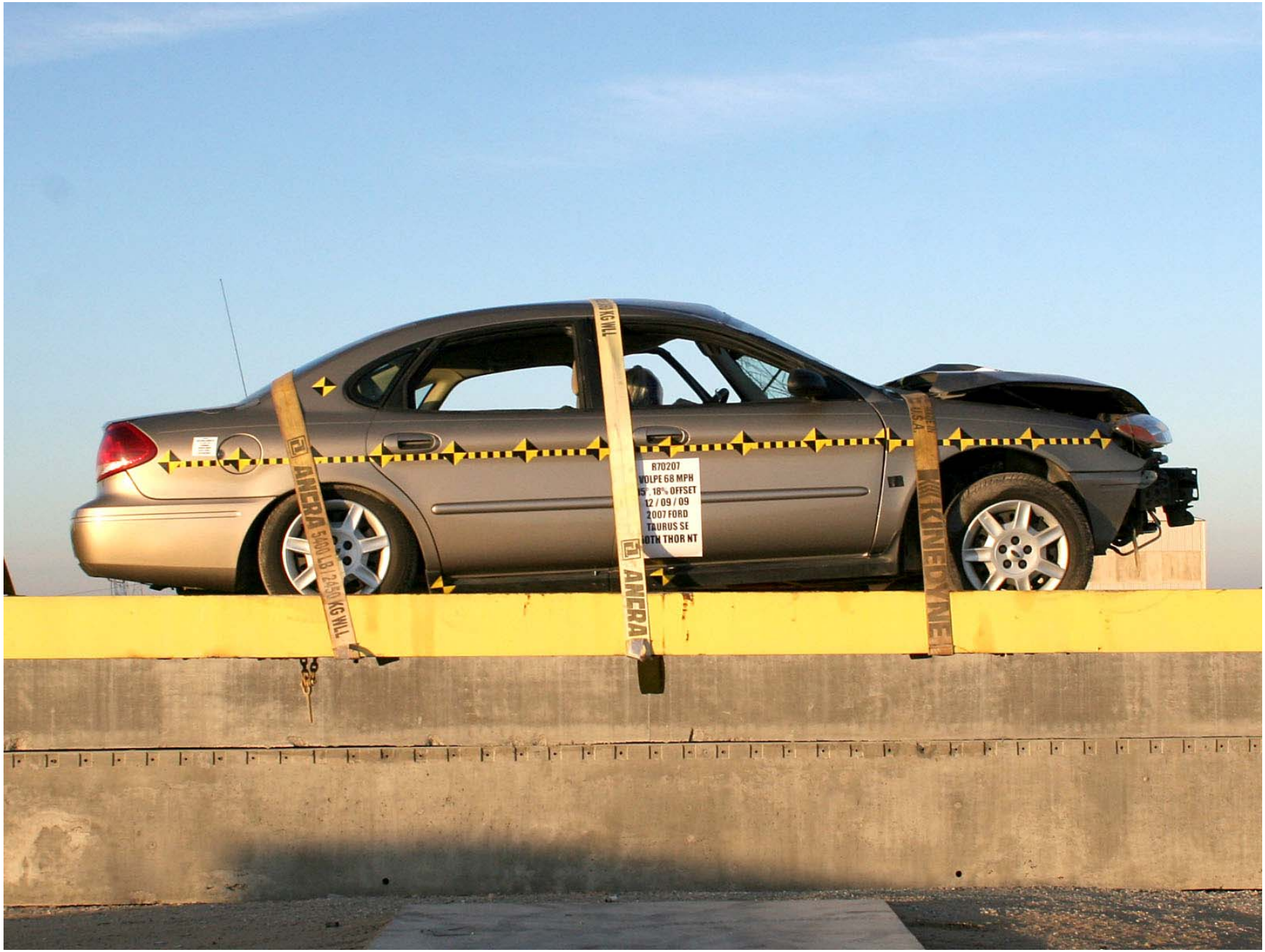

Figure A-332: Test Vehicle on Rollover Device (0°)

Figure A-333: Test Vehicle on Rollover Device (90°)

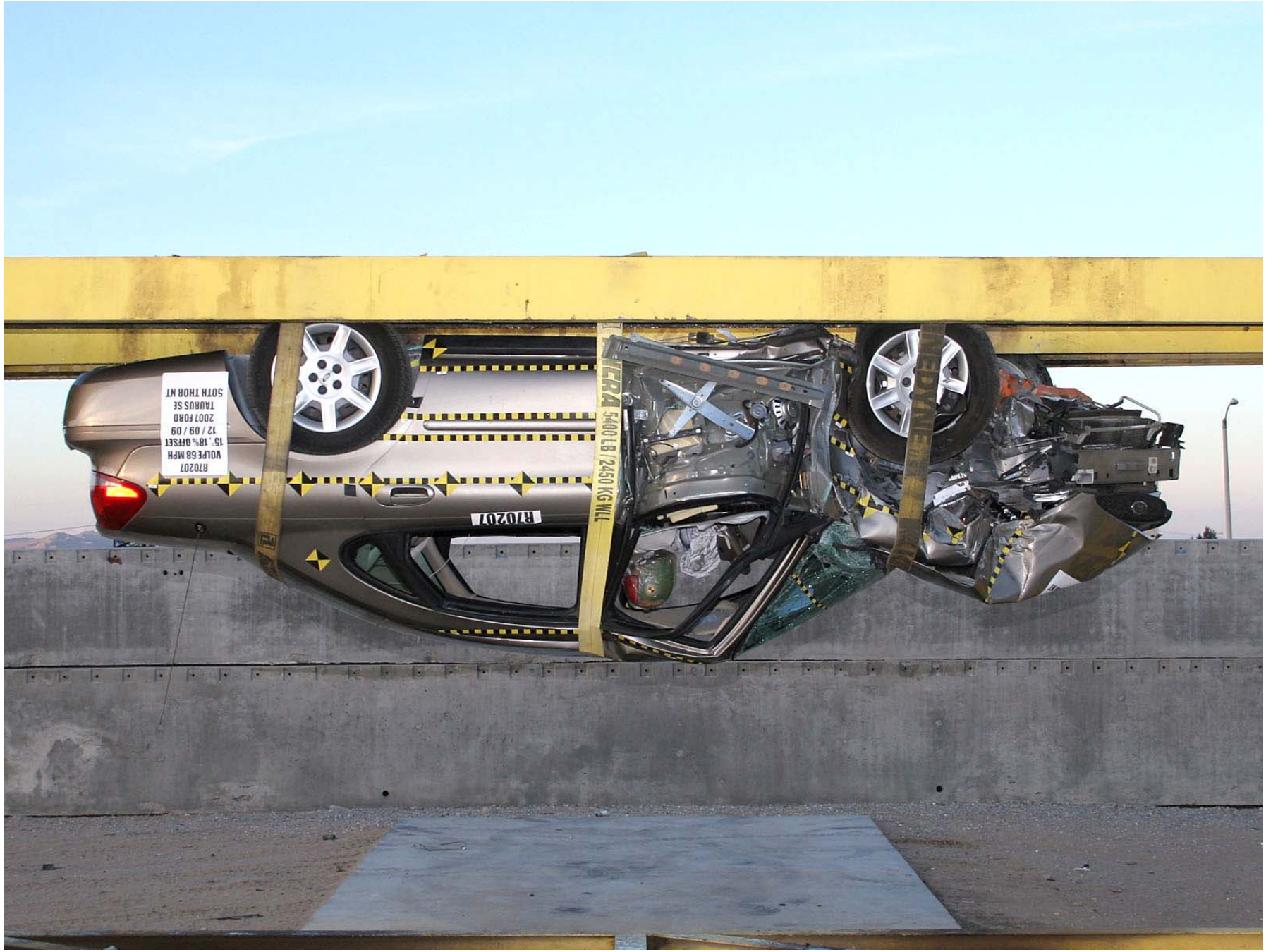

Figure A-334: Test Vehicle on Rollover Device (180°)

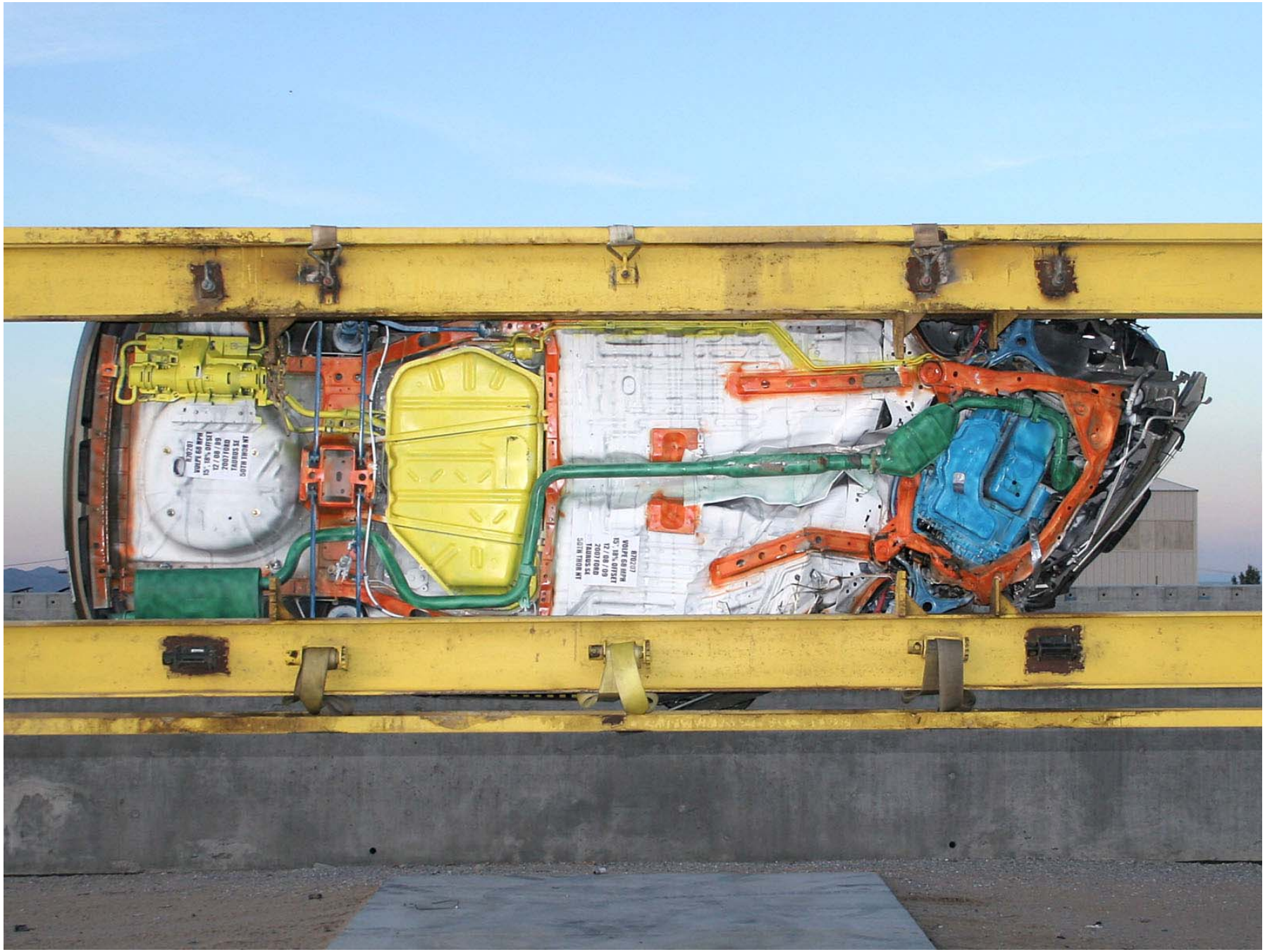

Figure A-335: Test Vehicle on Rollover Device (270°)

Figure A-336: Test Vehicle on Rollover Device (360°)

Figure A-337: Test Vehicle Impact

APPENDIX B
DATA PLOTS

LIST OF DATA PLOTS

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13	Driver Upper Neck Force X	B-4
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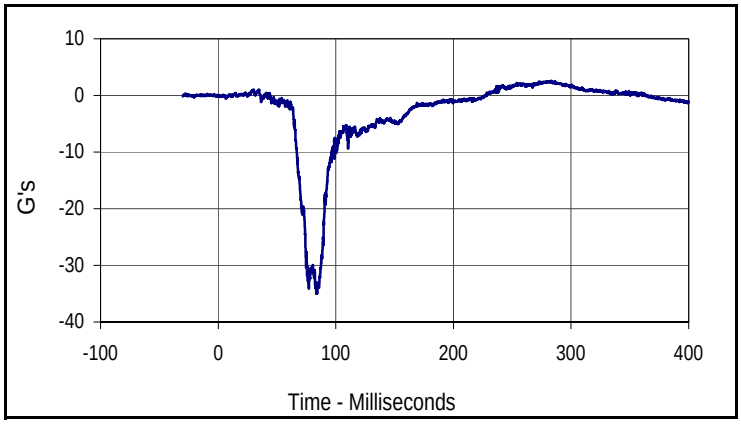
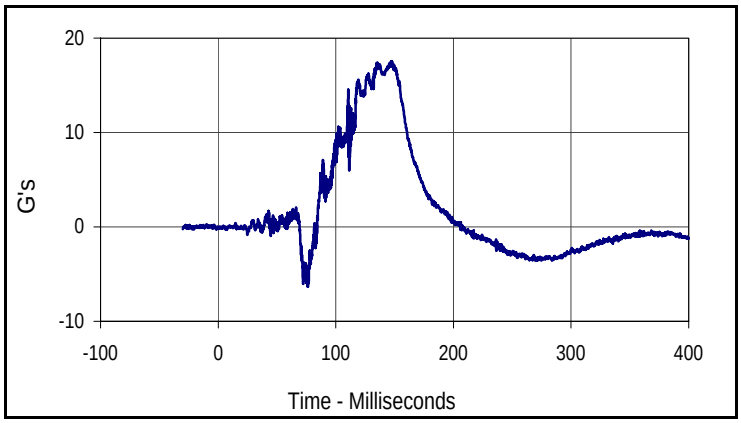
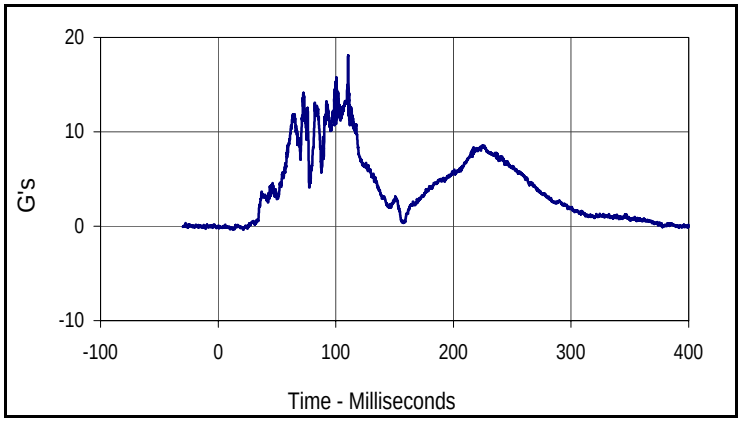
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



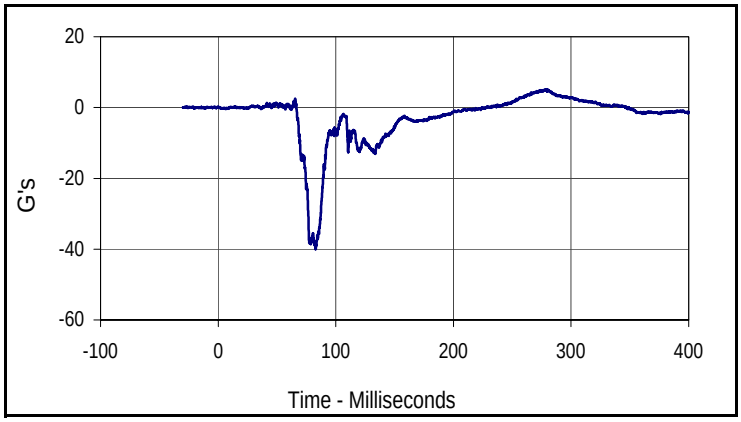
Curve Description			
Driver Head CG X			
CURNO	Type	SAE Class	Units
001	FIL	1000	G's
Max	Time	Min	Time
2.6	283.1	-35.0	83.6



Curve Description			
Driver Head CG Y			
CURNO	Type	SAE Class	Units
002	FIL	1000	G's
Max	Time	Min	Time
17.6	147.3	-6.3	76.4

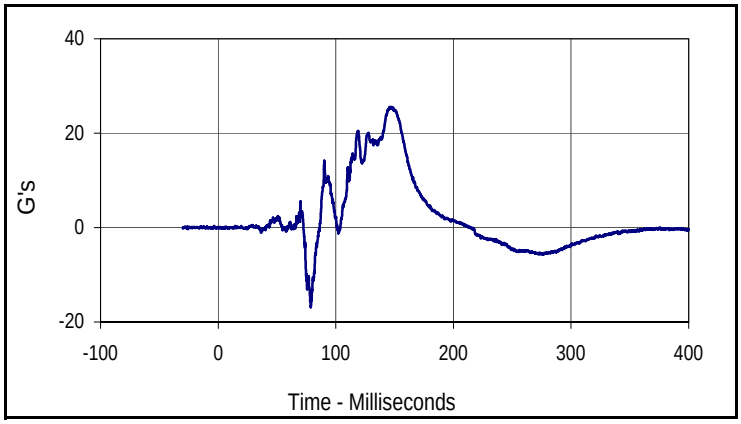


Curve Description			
Driver Head CG Z			
CURNO	Type	SAE Class	Units
003	FIL	1000	G's
Max	Time	Min	Time
18.1	110.5	-0.4	21.5

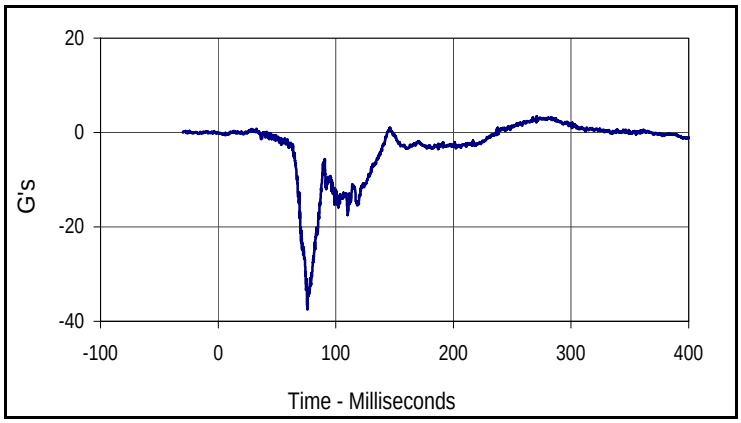


Curve Description			
Driver Top Head Array X			
CURNO	Type	SAE Class	Units
004	FIL	1000	G's
Max	Time	Min	Time
5.2	279.9	-40.0	82.9

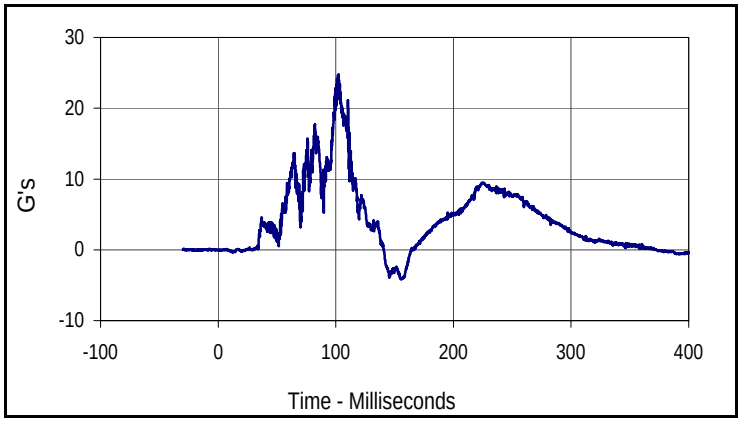
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



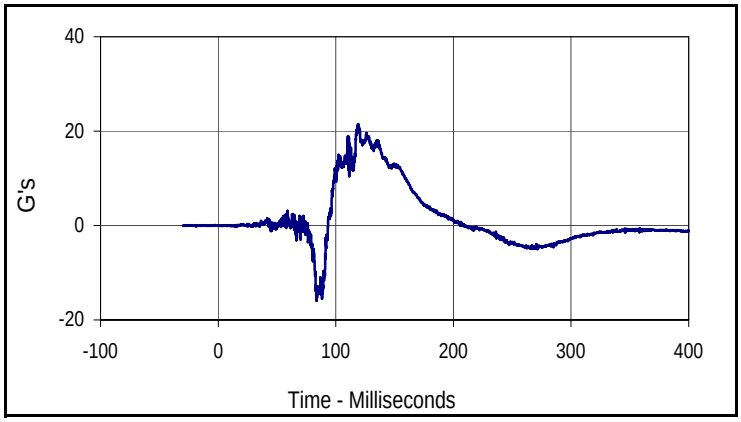
Curve Description			
Driver Top Head Array Y			
CURNO	Type	SAE Class	Units
005	FIL	1000	G's
Max	Time	Min	Time
25.6	146.4	-16.9	78.8



Curve Description			
Driver Left Side Head Array X			
CURNO	Type	SAE Class	Units
006	FIL	1000	G's
Max	Time	Min	Time
3.5	270.9	-37.5	75.9

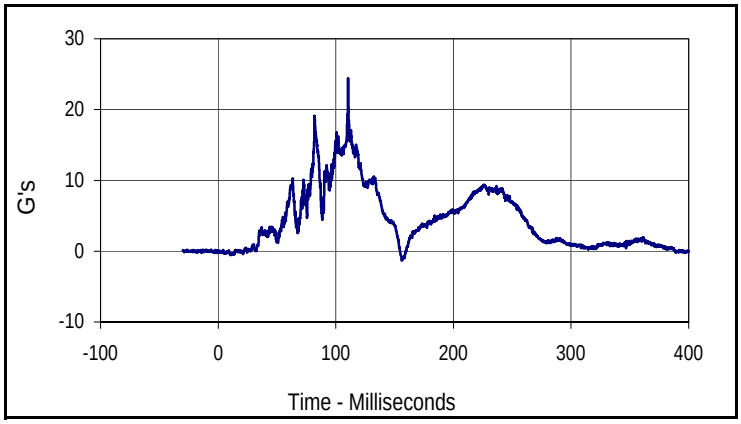


Curve Description			
Driver Left Side Head Array Z			
CURNO	Type	SAE Class	Units
007	FIL	1000	G's
Max	Time	Min	Time
24.7	102.3	-4.2	155.5

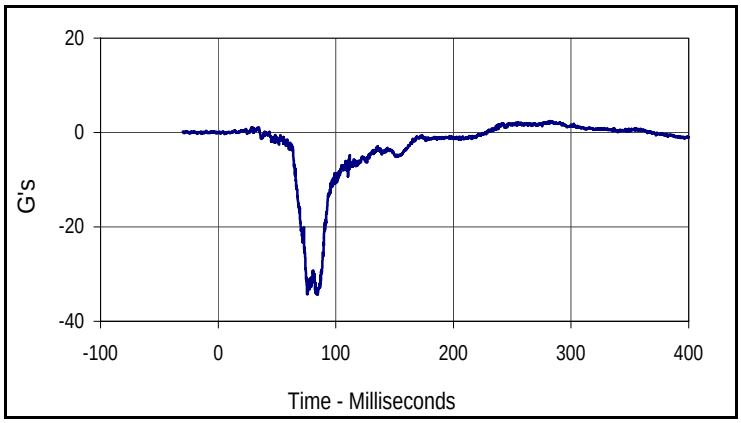


Curve Description			
Driver Rear Head Array Y			
CURNO	Type	SAE Class	Units
008	FIL	1000	G's
Max	Time	Min	Time
21.4	119.3	-15.9	83.5

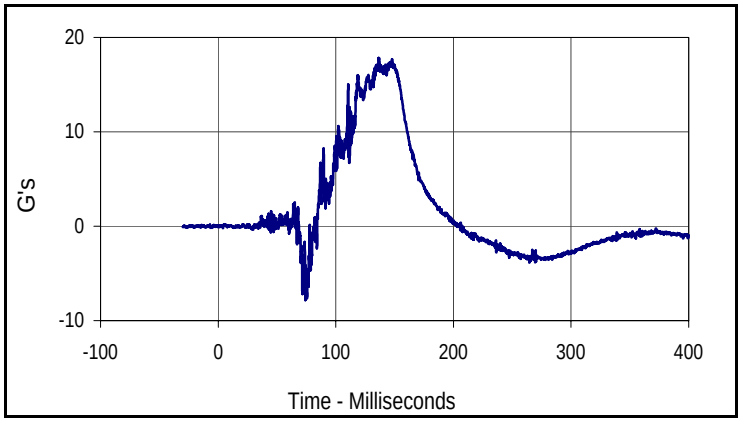
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



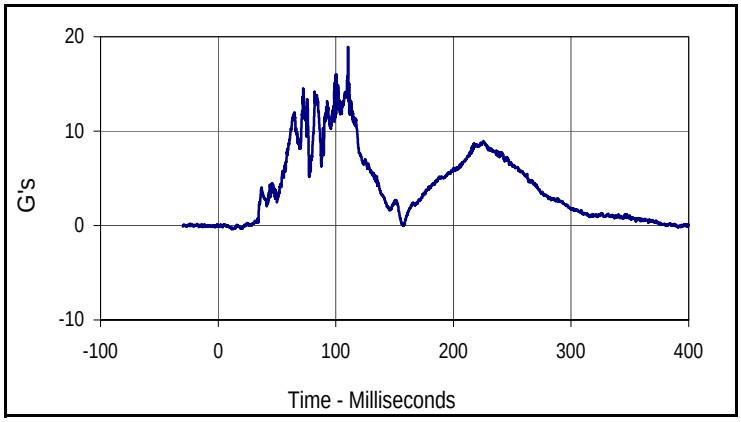
Curve Description			
Driver Rear Head Array Z			
CURNO	Type	SAE Class	Units
009	FIL	1000	G's
Max	Time	Min	Time
24.5	110.5	-1.3	156.2



Curve Description			
Driver Head CG X Redundant			
CURNO	Type	SAE Class	Units
010	FIL	1000	G's
Max	Time	Min	Time
2.4	282.1	-34.4	84.7

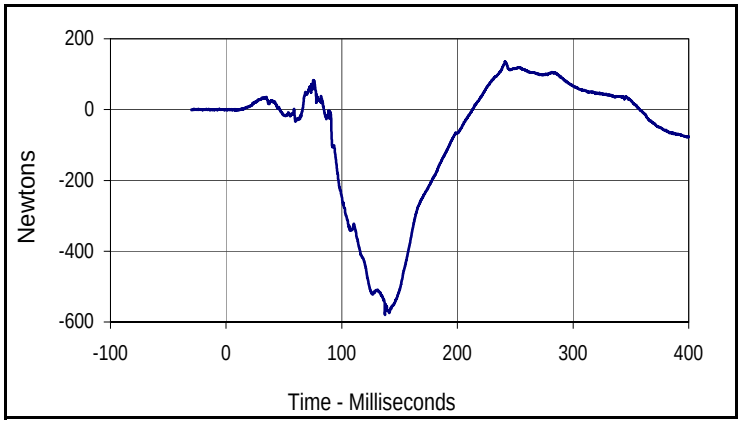


Curve Description			
Driver Head CG Y Redundant			
CURNO	Type	SAE Class	Units
011	FIL	1000	G's
Max	Time	Min	Time
17.8	136.4	-7.8	74.1

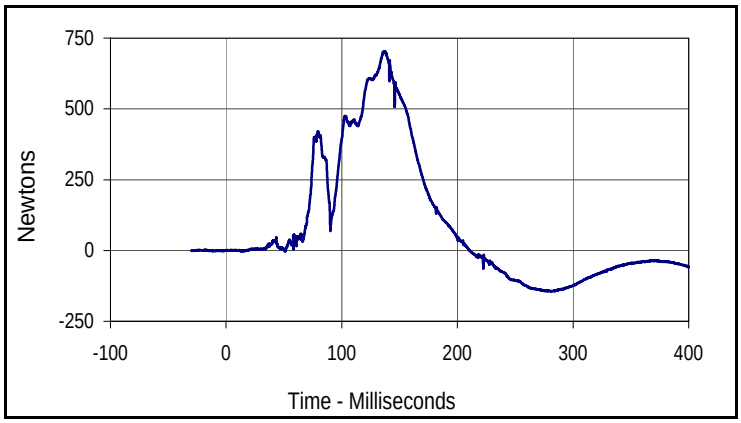


Curve Description			
Driver Head CG Z Redundant			
CURNO	Type	SAE Class	Units
012	FIL	1000	G's
Max	Time	Min	Time
18.9	110.4	-0.4	12.7

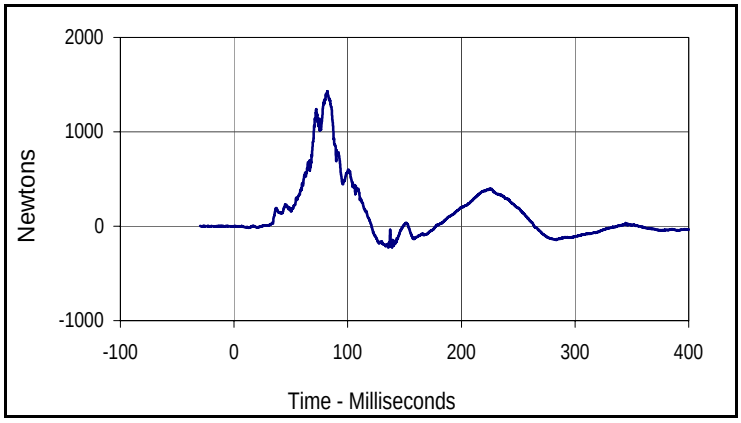
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



Curve Description			
Driver Upper Neck Force X			
CURNO	Type	SAE Class	Units
013	FIL	1000	Newtons
Max	Time	Min	Time
135.9	241.2	-580.5	137.3

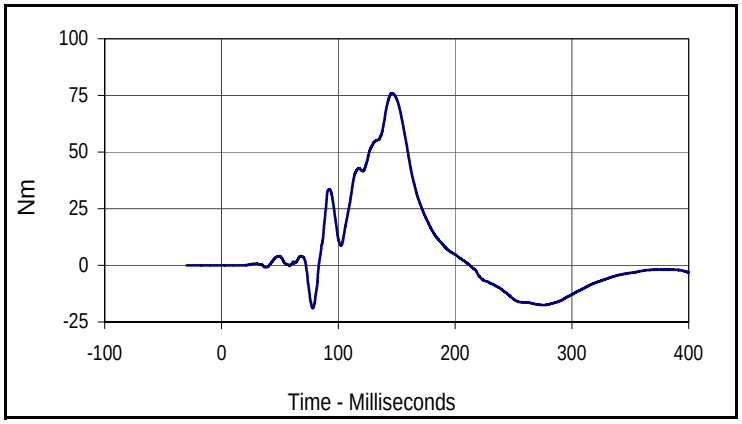


Curve Description			
Driver Upper Neck Force Y			
CURNO	Type	SAE Class	Units
014	FIL	1000	Newtons
Max	Time	Min	Time
703.5	137.0	-144.9	281.2

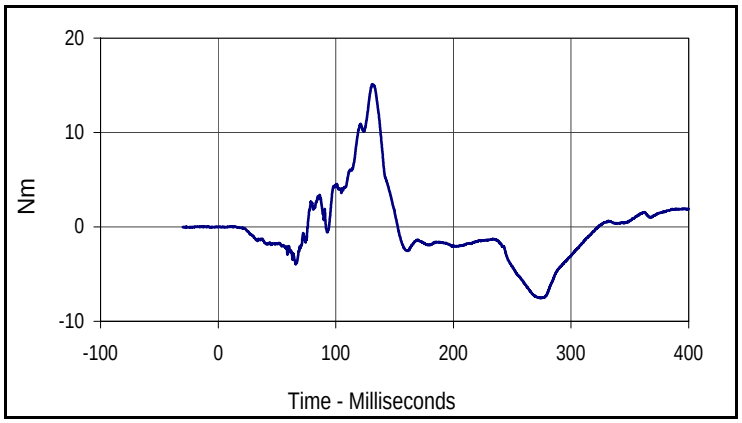


Curve Description			
Driver Upper Neck Force Z			
CURNO	Type	SAE Class	Units
015	FIL	1000	Newtons
Max	Time	Min	Time
1431.7	82.2	-228.1	135.7

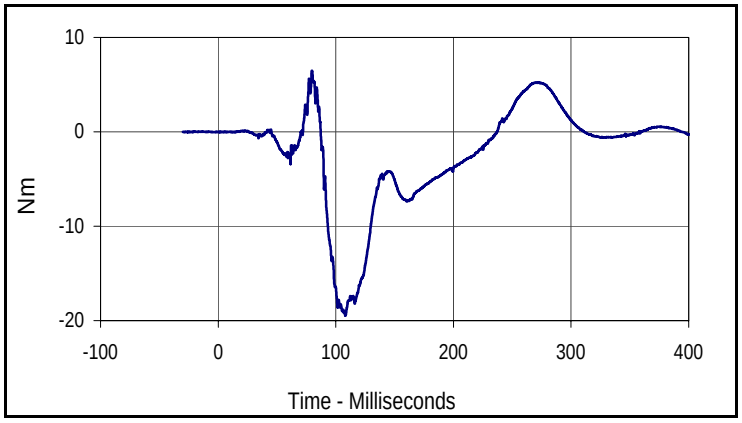
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



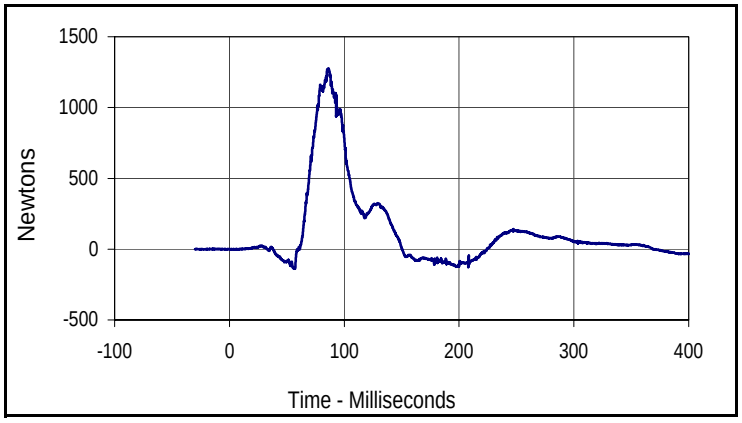
Curve Description			
Driver Upper Neck Moment X			
CURNO	Type	SAE Class	Units
016	FIL	600	Nm
Max	Time	Min	Time
76.0	146.2	-19.0	78.5



Curve Description			
Driver Upper Neck Moment Y			
CURNO	Type	SAE Class	Units
017	FIL	600	Nm
Max	Time	Min	Time
15.1	130.9	-7.5	274.1

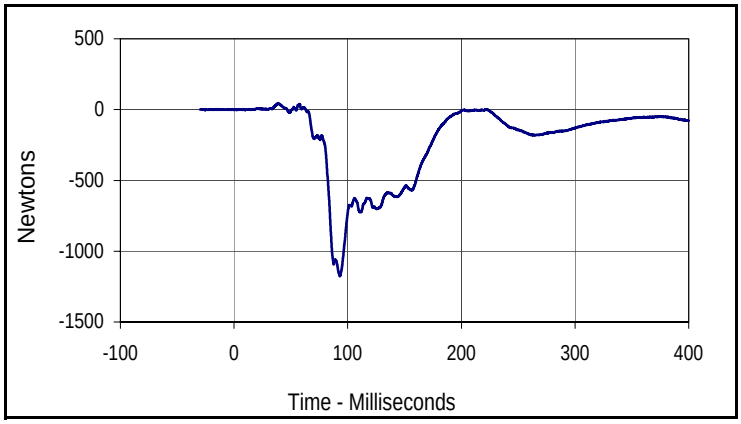


Curve Description			
Driver Upper Neck Moment Z			
CURNO	Type	SAE Class	Units
018	FIL	600	Nm
Max	Time	Min	Time
6.5	79.7	-19.4	108.1

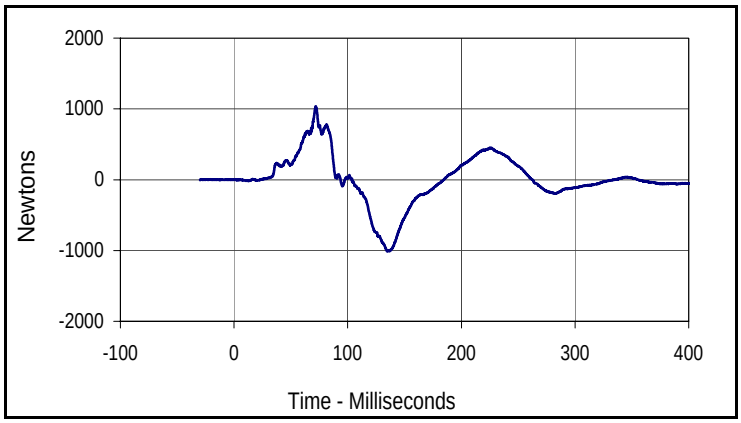


Curve Description			
Driver Lower Neck Force X			
CURNO	Type	SAE Class	Units
019	FIL	1000	Newtons
Max	Time	Min	Time
1275.4	86.1	-139.1	57.2

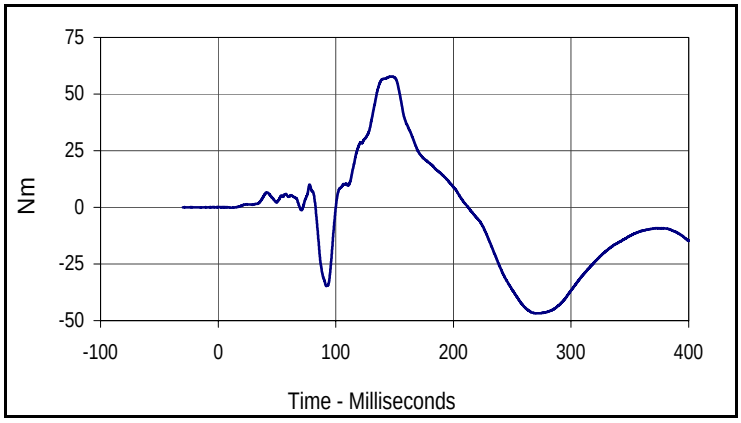
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



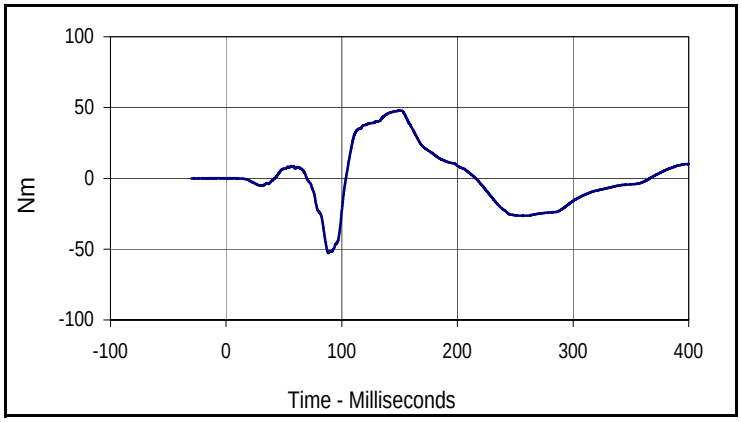
Curve Description			
Driver Lower Neck Force Y			
CURNO	Type	SAE Class	Units
020	FIL	1000	Newtons
Max	Time	Min	Time
44.9	38.7	-1175.7	93.2



Curve Description			
Driver Lower Neck Force Z			
CURNO	Type	SAE Class	Units
021	FIL	1000	Newtons
Max	Time	Min	Time
1036.2	71.9	-1008.9	136.7

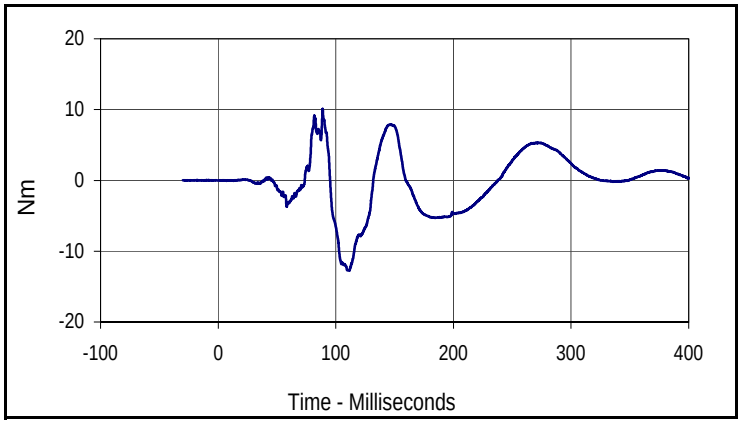


Curve Description			
Driver Lower Neck Moment X			
CURNO	Type	SAE Class	Units
022	FIL	600	Nm
Max	Time	Min	Time
57.8	147.0	-46.8	272.3

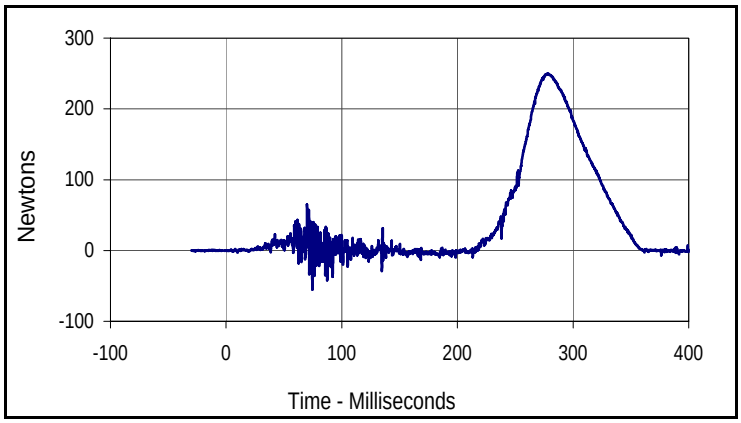


Curve Description			
Driver Lower Neck Moment Y			
CURNO	Type	SAE Class	Units
023	FIL	600	Nm
Max	Time	Min	Time
48.0	150.3	-52.7	88.5

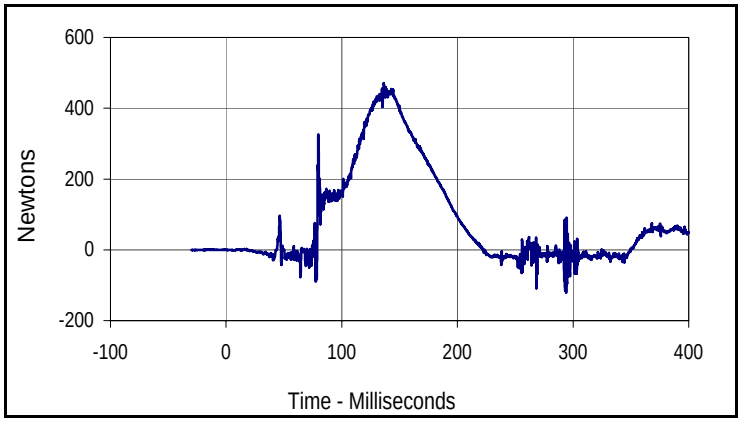
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



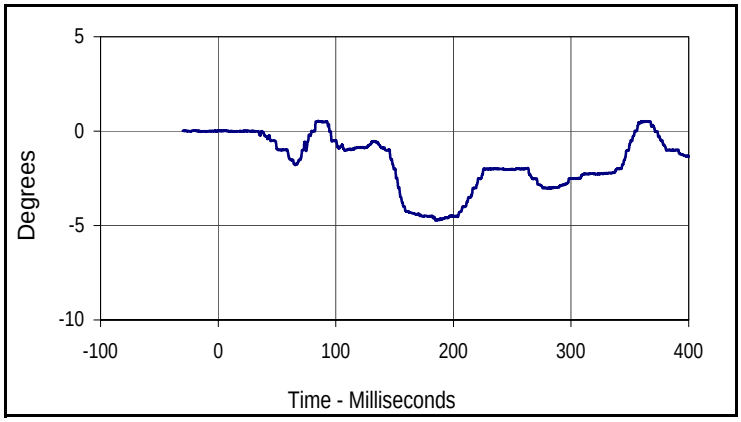
Curve Description			
Driver Lower Neck Moment Z			
CURNO	Type	SAE Class	Units
024	FIL	600	Nm
Max	Time	Min	Time
10.1	88.8	-12.8	111.4



Curve Description			
Driver Front Neck Spring Force			
CURNO	Type	SAE Class	Units
025	FIL	1000	Newtons
Max	Time	Min	Time
250.1	278.4	-54.8	74.5

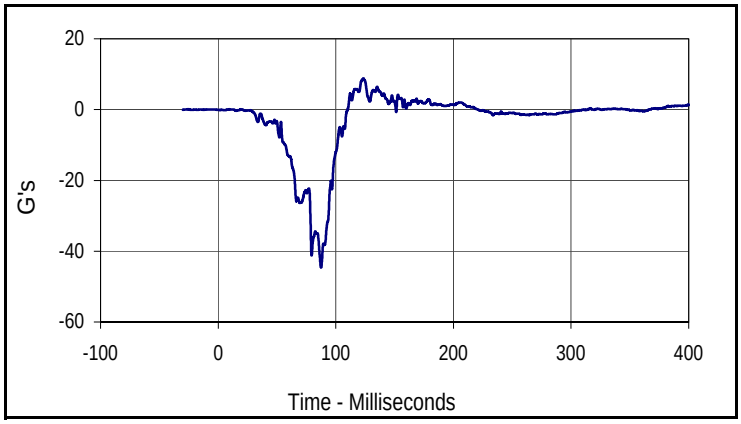


Curve Description			
Driver Rear Neck Spring Force			
CURNO	Type	SAE Class	Units
026	FIL	1000	Newtons
Max	Time	Min	Time
470.9	136.4	-120.8	294.1

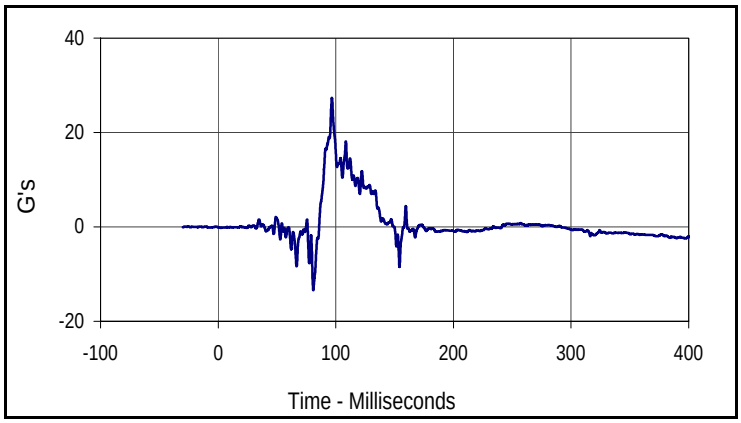


Curve Description			
Driver Occipital Condyle Rotation			
CURNO	Type	SAE Class	Units
027	FIL	600	Degrees
Max	Time	Min	Time
0.5	85.1	-4.7	185.9

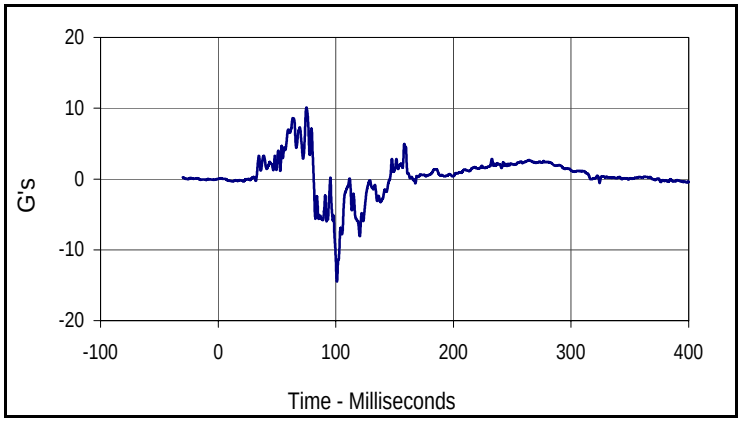
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



Curve Description			
Driver Upper Spine T1 X			
CURNO	Type	SAE Class	Units
028	FIL	180	G's
Max	Time	Min	Time
8.8	123.5	-44.6	87.5

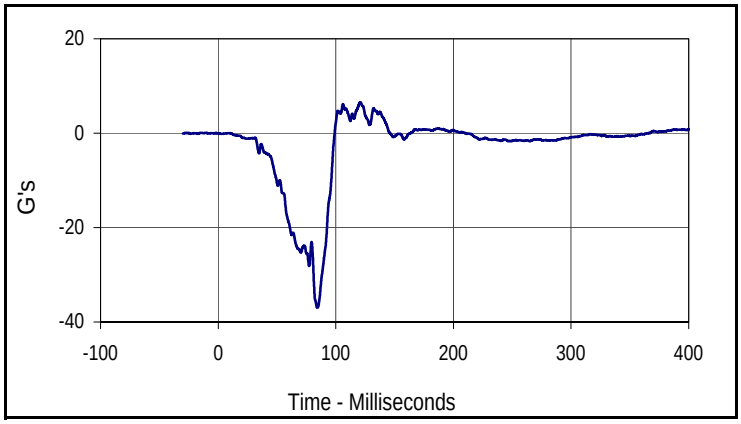


Curve Description			
Driver Upper Spine T1 Y			
CURNO	Type	SAE Class	Units
029	FIL	180	G's
Max	Time	Min	Time
27.3	96.7	-13.4	80.9

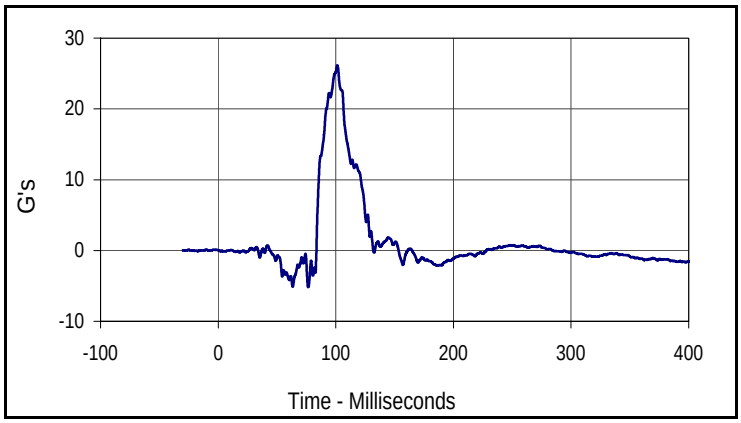


Curve Description			
Driver Upper Spine T1 Z			
CURNO	Type	SAE Class	Units
030	FIL	180	G's
Max	Time	Min	Time
10.1	75.0	-14.5	101.0

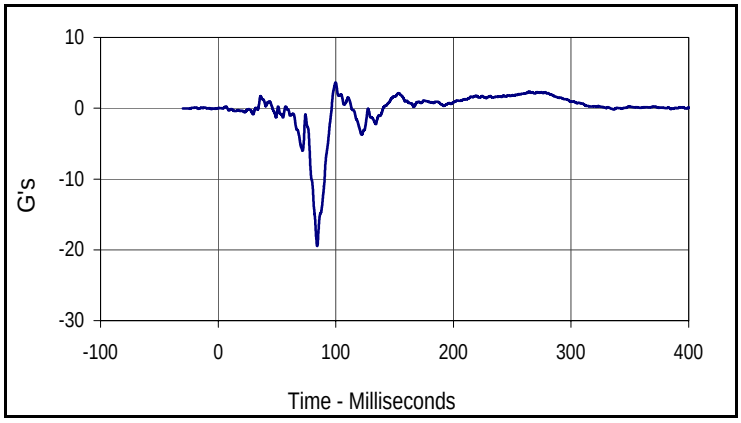
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



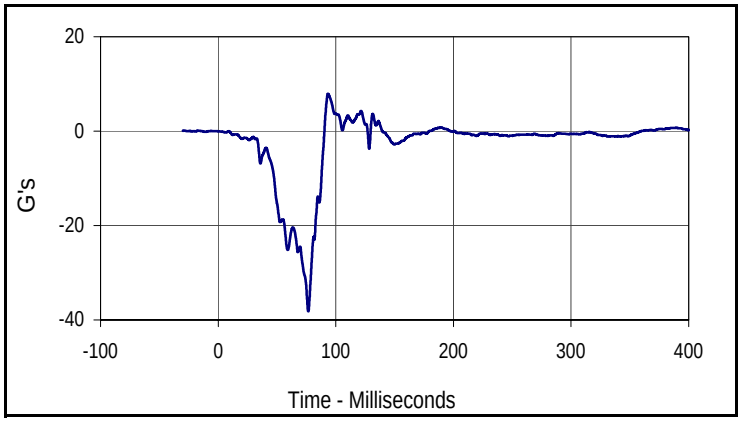
Curve Description			
Driver Thorax X			
CURNO	Type	SAE Class	Units
031	FIL	180	G's
Max	Time	Min	Time
6.6	120.9	-36.9	84.5



Curve Description			
Driver Thorax Y			
CURNO	Type	SAE Class	Units
032	FIL	180	G's
Max	Time	Min	Time
26.2	101.3	-5.2	76.6

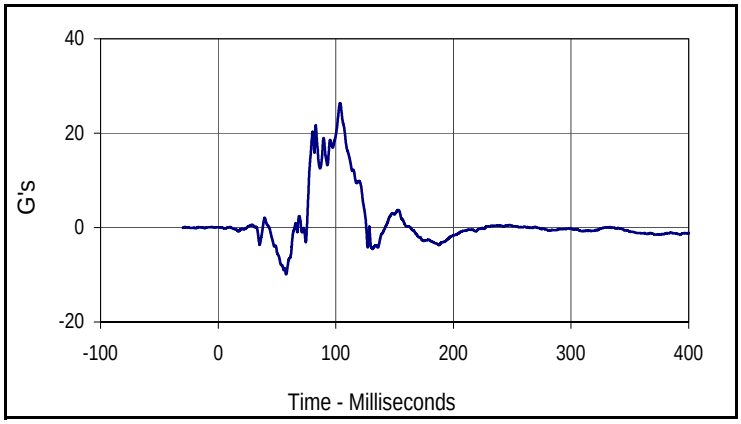


Curve Description			
Driver Thorax Z			
CURNO	Type	SAE Class	Units
033	FIL	180	G's
Max	Time	Min	Time
3.6	99.9	-19.5	84.2

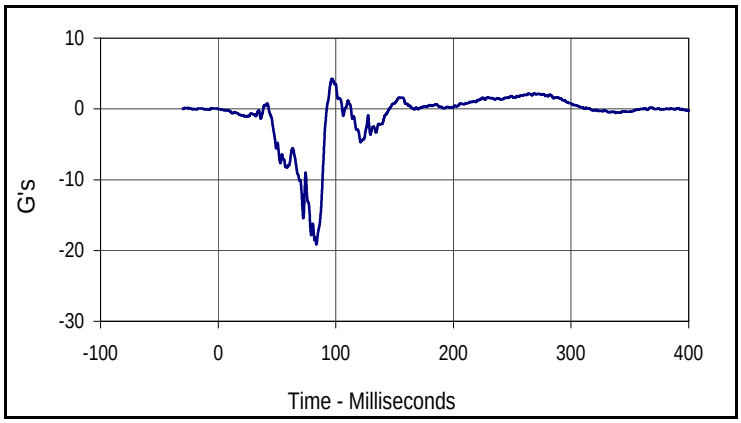


Curve Description			
Driver Lower Spine T12 X			
CURNO	Type	SAE Class	Units
034	FIL	180	G's
Max	Time	Min	Time
7.9	93.4	-38.2	76.6

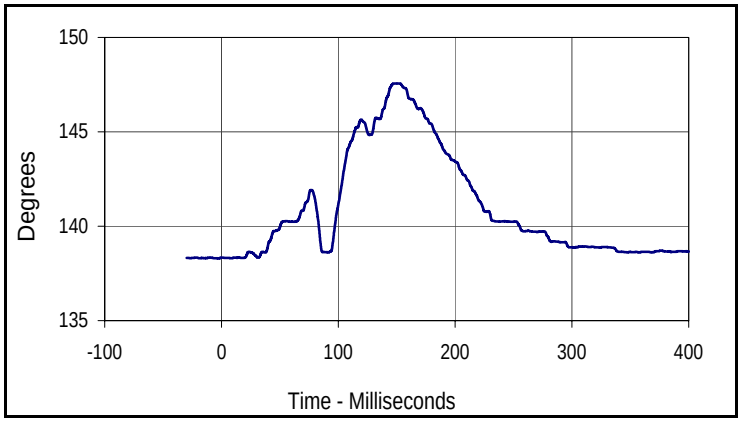
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



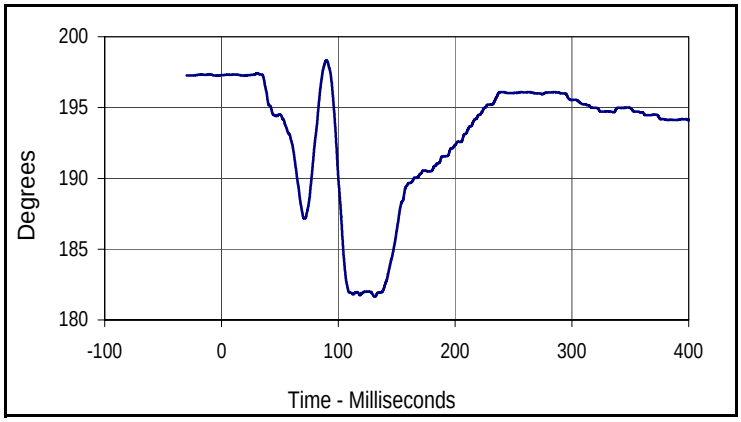
Curve Description			
Driver Lower Spine T12 Y			
CURNO	Type	SAE Class	Units
035	FIL	180	G's
Max	Time	Min	Time
26.4	103.7	-9.9	57.8



Curve Description			
Driver Lower Spine T12 Z			
CURNO	Type	SAE Class	Units
036	FIL	180	G's
Max	Time	Min	Time
4.3	96.8	-19.1	83.6

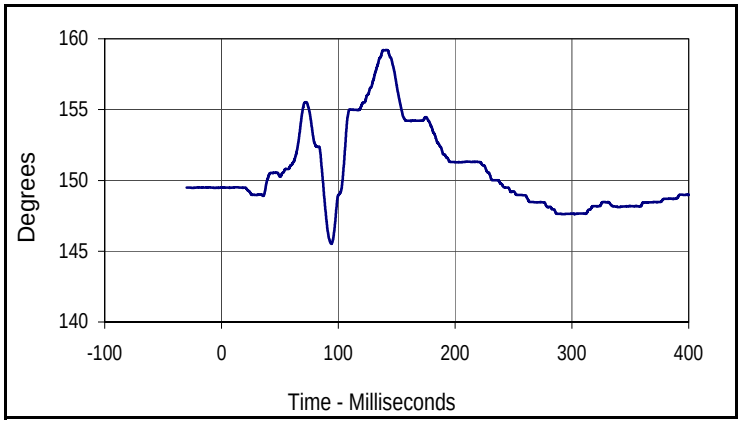


Curve Description			
Driver Upper Left CRUX Base Rotation			
CURNO	Type	SAE Class	Units
037	FIL	180	Degrees
Max	Time	Min	Time
147.6	152.7	138.3	8.2

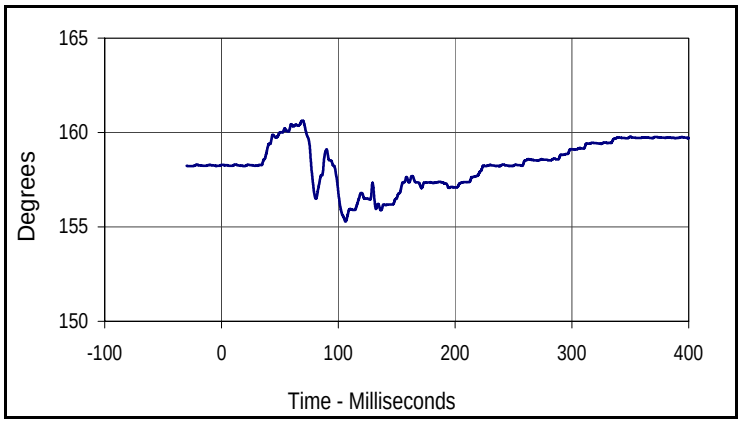


Curve Description			
Driver Upper Left CRUX Middle Rotation			
CURNO	Type	SAE Class	Units
038	FIL	180	Degrees
Max	Time	Min	Time
198.3	89.9	181.6	131.5

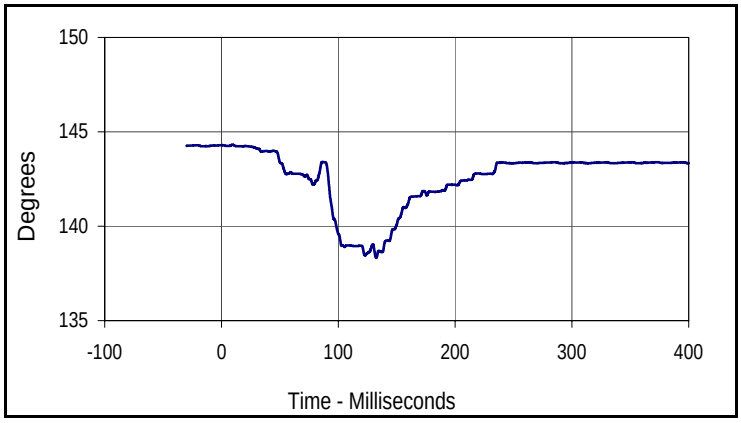
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



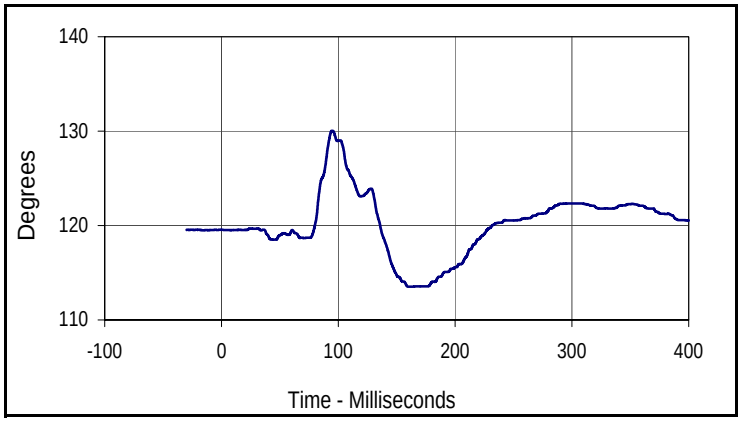
Curve Description			
Driver Upper Left CRUX Elbow Rotation			
CURNO	Type	SAE Class	Units
039	FIL	180	Degrees
Max	Time	Min	Time
159.2	141.5	145.5	94.0



Curve Description			
Driver Lower Left CRUX Base Rotation			
CURNO	Type	SAE Class	Units
040	FIL	180	Degrees
Max	Time	Min	Time
160.6	69.3	155.3	106.2

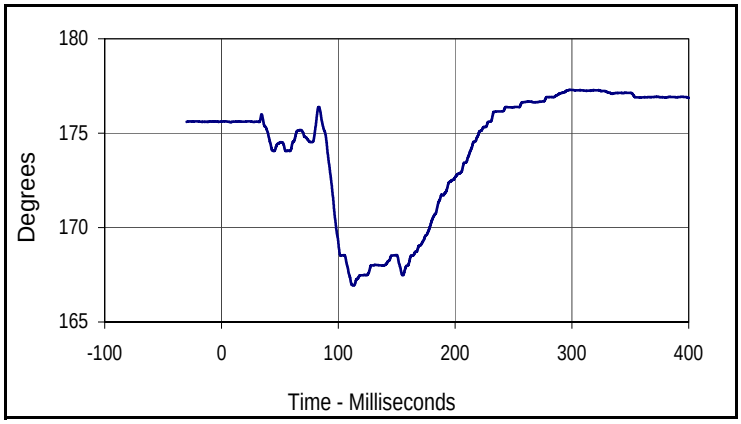


Curve Description			
Driver Lower Left CRUX Middle Rotation			
CURNO	Type	SAE Class	Units
041	FIL	180	Degrees
Max	Time	Min	Time
144.3	9.3	138.3	132.4

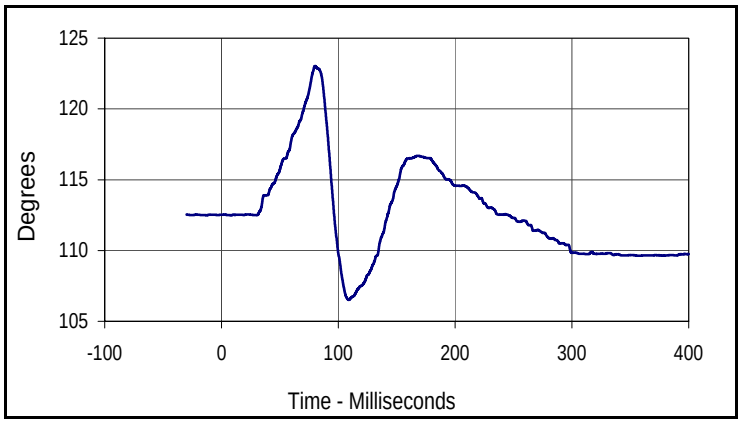


Curve Description			
Driver Lower Left CRUX Elbow Rotation			
CURNO	Type	SAE Class	Units
042	FIL	180	Degrees
Max	Time	Min	Time
130.0	94.6	113.5	159.5

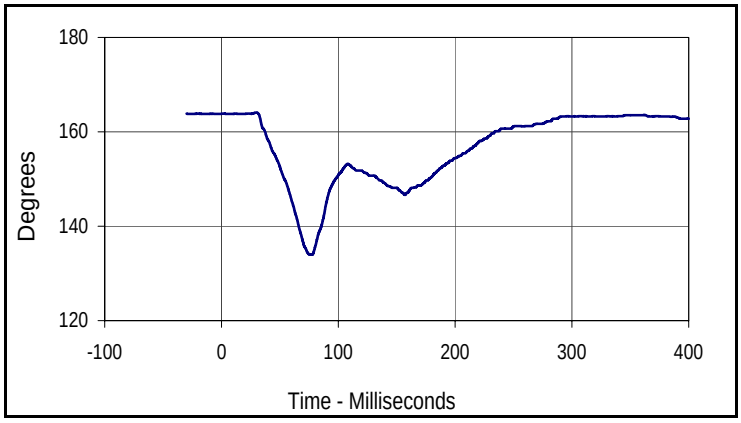
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



Curve Description			
Driver Upper Right CRUX Base Rotation			
CURNO	Type	SAE Class	Units
043	FIL	180	Degrees
Max	Time	Min	Time
177.3	298.4	166.9	113.3

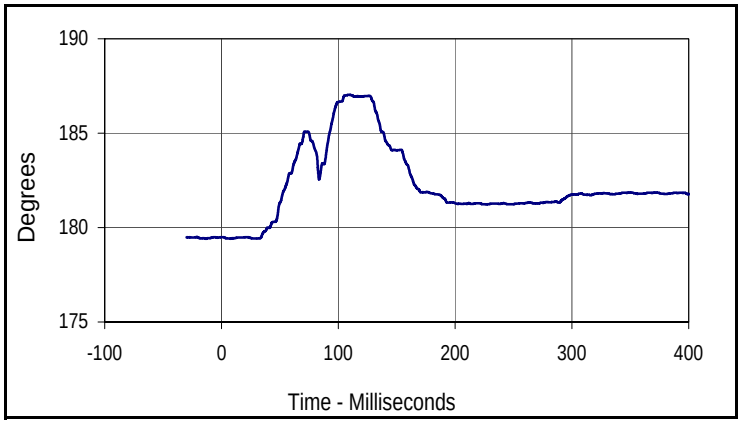


Curve Description			
Driver Upper Right CRUX Middle Rotation			
CURNO	Type	SAE Class	Units
044	FIL	180	Degrees
Max	Time	Min	Time
123.0	80.2	106.5	108.9

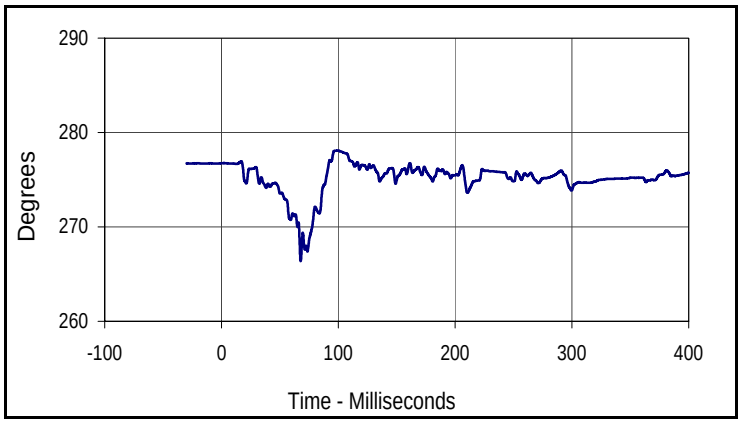


Curve Description			
Driver Upper Right CRUX Elbow Rotation			
CURNO	Type	SAE Class	Units
045	FIL	180	Degrees
Max	Time	Min	Time
164.1	30.0	134.0	77.2

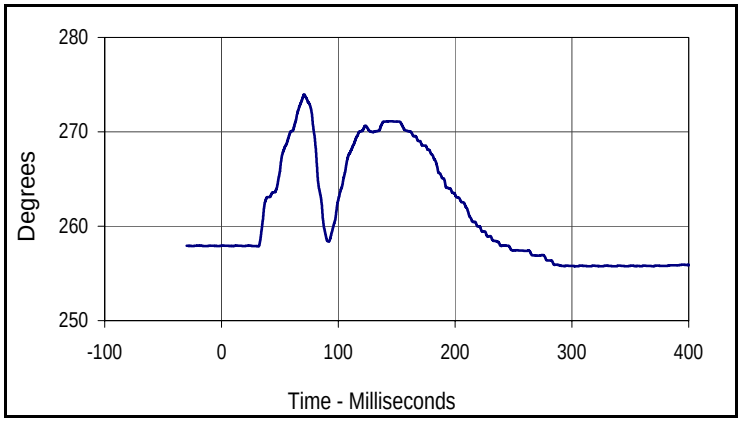
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



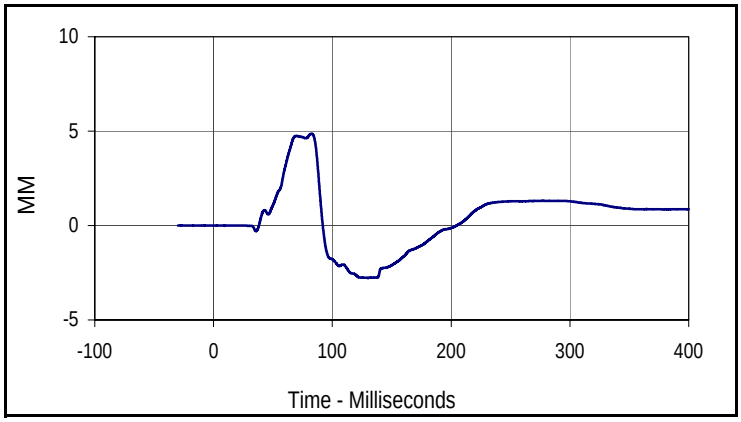
Curve Description			
Driver Lower Right CRUX Base Rotation			
CURNO	Type	SAE Class	Units
046	FIL	180	Degrees
Max	Time	Min	Time
187.0	109.0	179.4	7.8



Curve Description			
Driver Lower Right CRUX Middle Rotation			
CURNO	Type	SAE Class	Units
047	FIL	180	Degrees
Max	Time	Min	Time
278.1	99.6	266.4	67.8

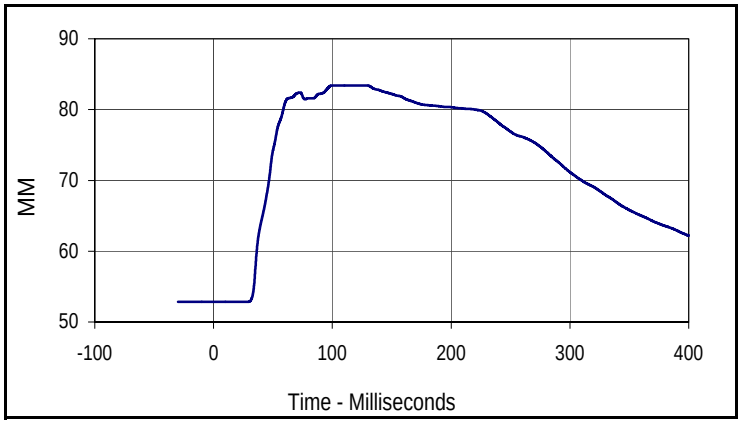


Curve Description			
Driver Lower Right CRUX Elbow Rotation			
CURNO	Type	SAE Class	Units
048	FIL	180	Degrees
Max	Time	Min	Time
274.0	70.8	255.7	347.0

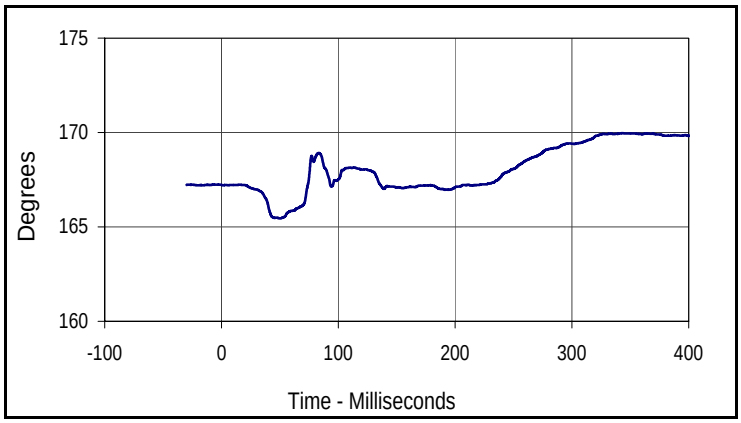


Curve Description			
Driver Upper Abdomen Deflection			
CURNO	Type	SAE Class	Units
049	FIL	180	MM
Max	Time	Min	Time
4.9	82.9	-2.8	130.1

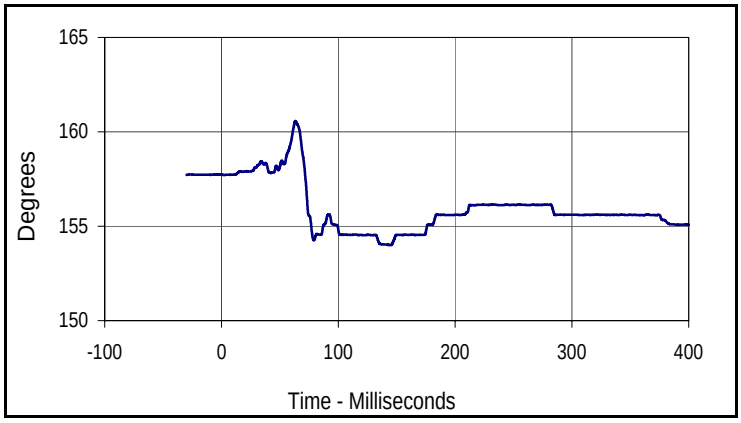
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



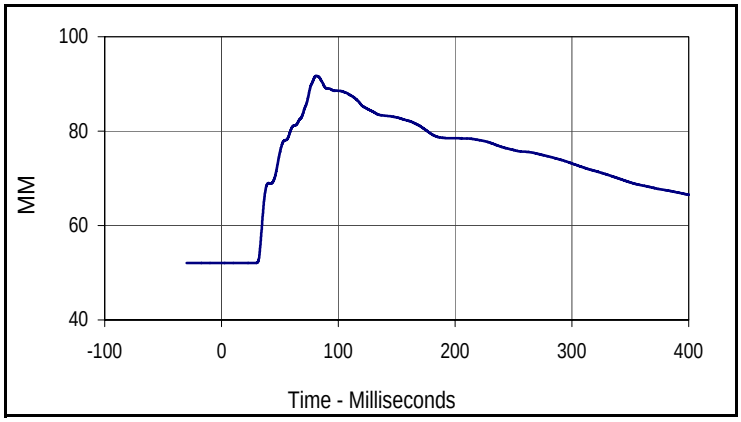
Curve Description			
Driver Left DGSP X Deflection			
CURNO	Type	SAE Class	Units
050	FIL	180	MM
Max	Time	Min	Time
83.4	114.0	52.8	1.7



Curve Description			
Driver Left DGSP Y Rotation			
CURNO	Type	SAE Class	Units
051	FIL	180	Degrees
Max	Time	Min	Time
170.0	343.3	165.5	49.6

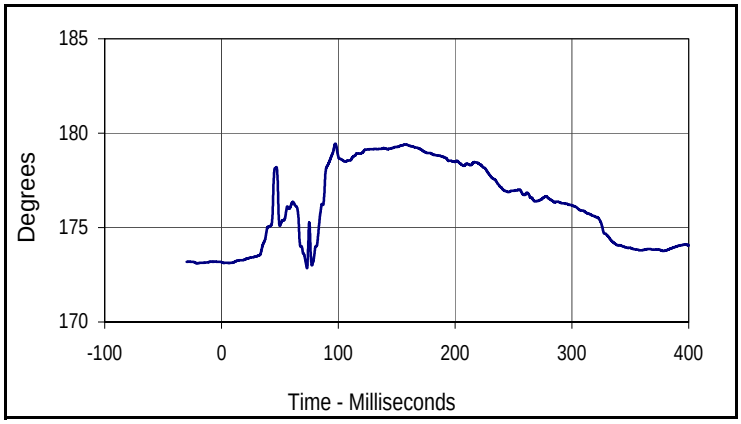


Curve Description			
Driver Left DGSP Z Rotation			
CURNO	Type	SAE Class	Units
052	FIL	180	Degrees
Max	Time	Min	Time
160.6	63.3	154.0	145.3

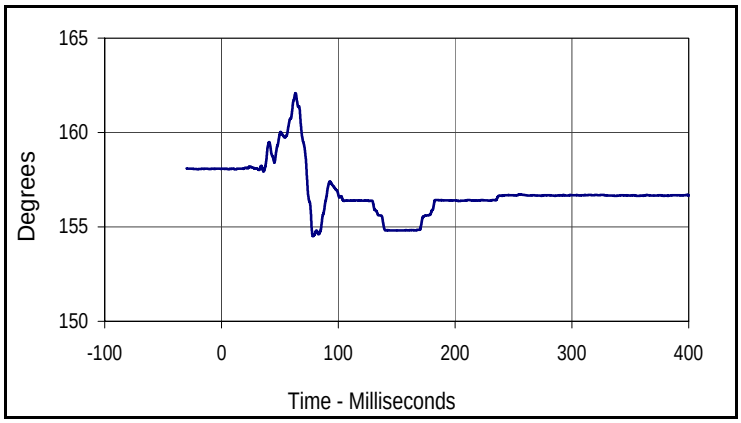


Curve Description			
Driver Right DGSP X Deflection			
CURNO	Type	SAE Class	Units
053	FIL	180	MM
Max	Time	Min	Time
91.7	81.1	52.0	12.9

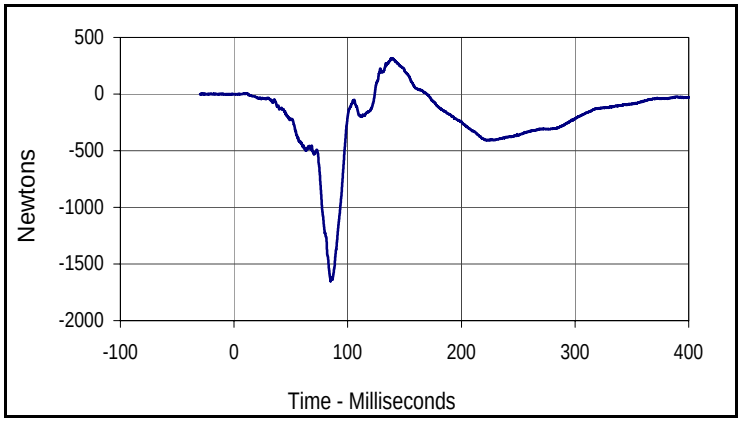
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



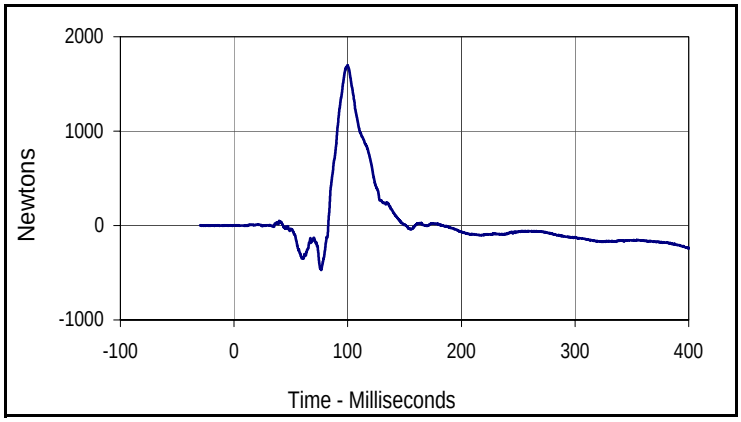
Curve Description			
Driver Right DGSP Y Rotation			
CURNO	Type	SAE Class	Units
054	FIL	180	Degrees
Max	Time	Min	Time
179.4	97.5	172.8	73.2



Curve Description			
Driver Right DGSP Z Rotation			
CURNO	Type	SAE Class	Units
055	FIL	180	Degrees
Max	Time	Min	Time
162.1	63.4	154.5	78.3

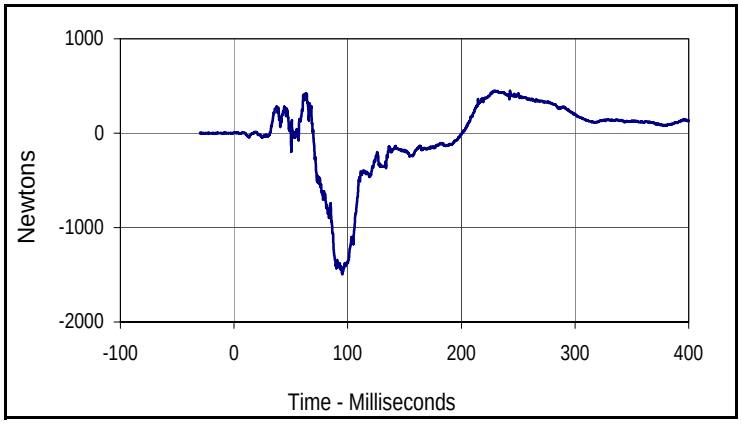


Curve Description			
Driver Thoracic Spine Force X			
CURNO	Type	SAE Class	Units
056	FIL	600	Newtons
Max	Time	Min	Time
317.1	139.1	-1652.5	85.0

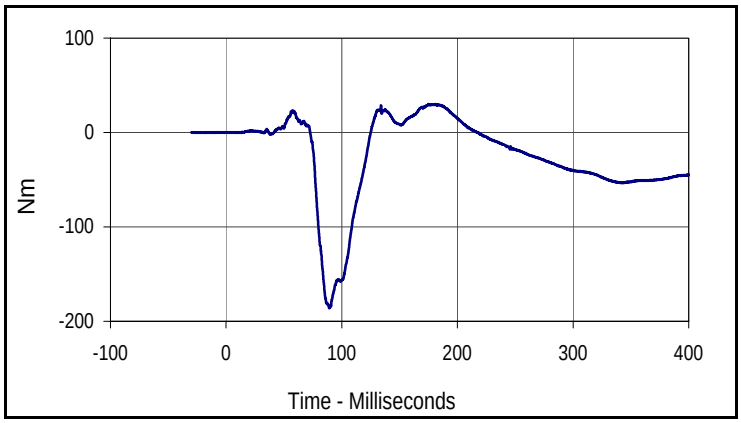


Curve Description			
Driver Thoracic Spine Force Y			
CURNO	Type	SAE Class	Units
057	FIL	600	Newtons
Max	Time	Min	Time
1698.2	99.8	-472.0	76.8

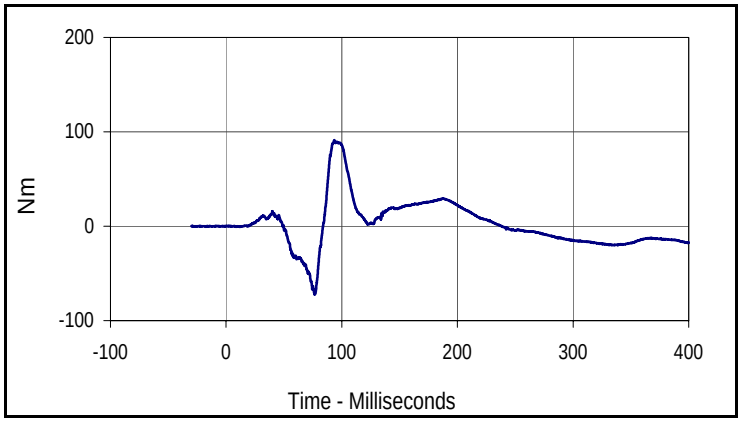
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



Curve Description			
Driver Upper Thoracic Spine Force Z			
CURNO	Type	SAE Class	Units
058	FIL	600	Newtons
Max	Time	Min	Time
450.9	242.9	-1496.6	95.3

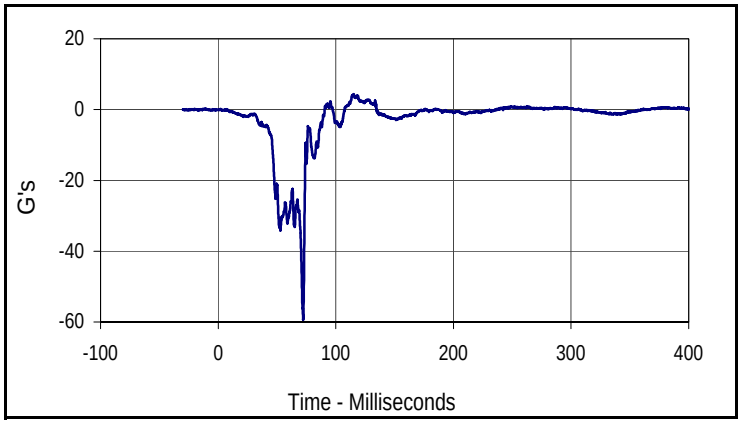


Curve Description			
Driver Upper Thoracic Spine Moment X			
CURNO	Type	SAE Class	Units
059	FIL	600	Nm
Max	Time	Min	Time
30.0	181.0	-186.1	89.2

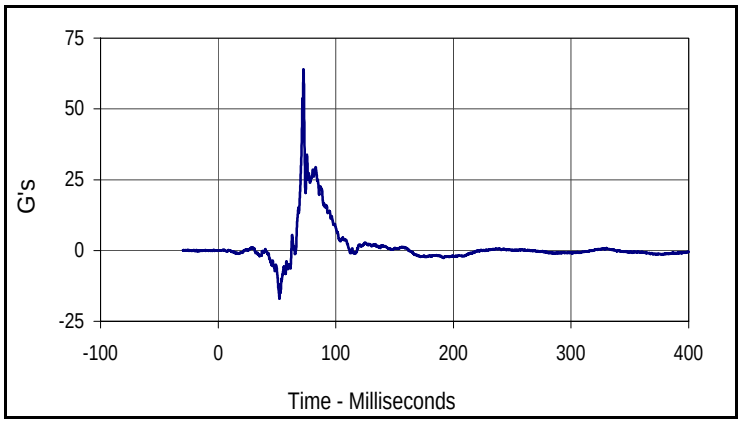


Curve Description			
Driver Upper Thoracic Spine Moment Y			
CURNO	Type	SAE Class	Units
060	FIL	600	Nm
Max	Time	Min	Time
91.0	93.6	-72.1	76.5

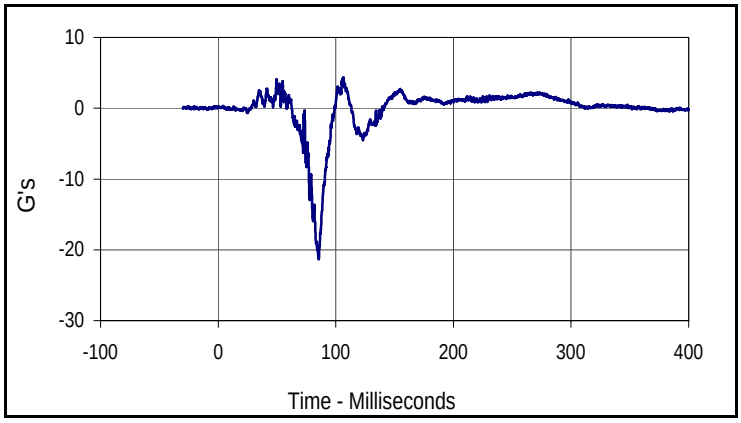
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



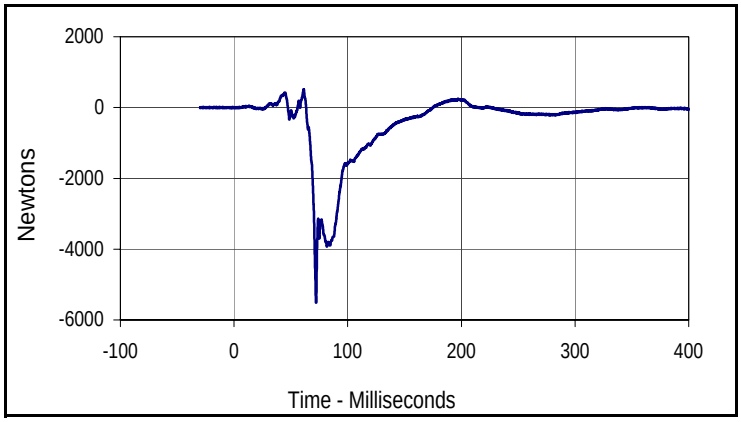
Curve Description			
Driver Pelvis X			
CURNO	Type	SAE Class	Units
061	FIL	1000	G's
Max	Time	Min	Time
4.3	115.1	-59.4	72.3



Curve Description			
Driver Pelvis Y			
CURNO	Type	SAE Class	Units
062	FIL	1000	G's
Max	Time	Min	Time
64.0	72.6	-17.0	52.2

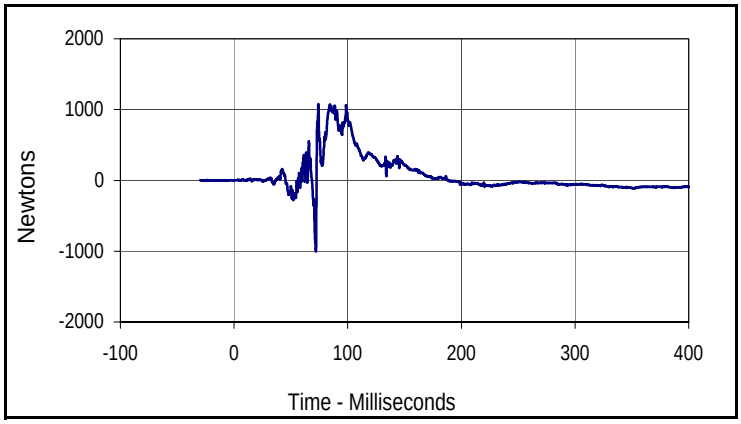


Curve Description			
Driver Pelvis Z			
CURNO	Type	SAE Class	Units
063	FIL	1000	G's
Max	Time	Min	Time
4.3	106.6	-21.3	85.5

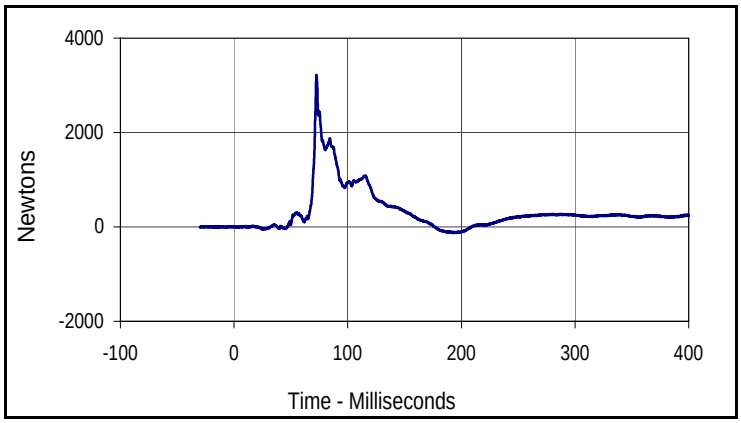


Curve Description			
Driver Left Acetabulum Force X			
CURNO	Type	SAE Class	Units
064	FIL	600	Newtons
Max	Time	Min	Time
513.4	61.3	-5511.3	72.2

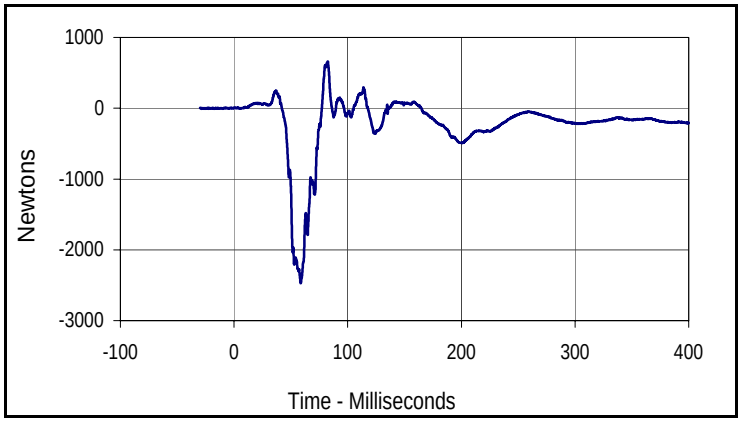
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



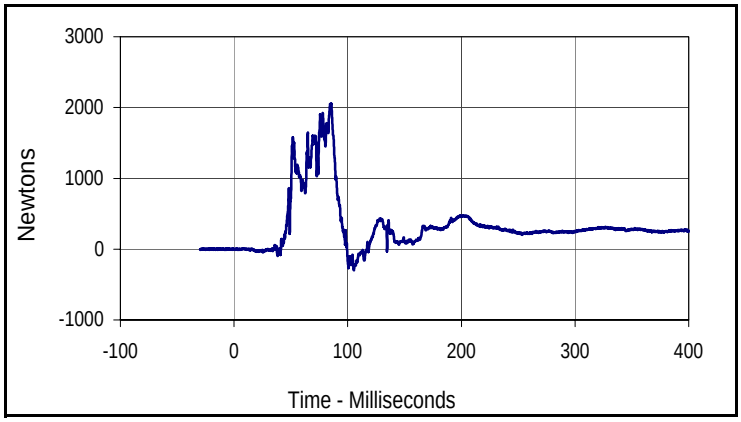
Curve Description			
Driver Left Acetabulum Force Y			
CURNO	Type	SAE Class	Units
065	FIL	600	Newtons
Max	Time	Min	Time
1078.6	74.2	-1000.7	72.0



Curve Description			
Driver Left Acetabulum Force Z			
CURNO	Type	SAE Class	Units
066	FIL	600	Newtons
Max	Time	Min	Time
3221.5	72.5	-128.0	193.7

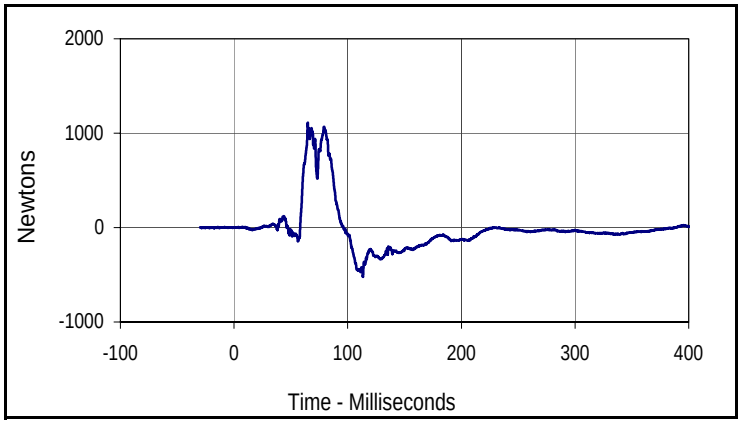


Curve Description			
Driver Right Acetabulum Force X			
CURNO	Type	SAE Class	Units
067	FIL	600	Newtons
Max	Time	Min	Time
663.1	82.5	-2473.1	58.7

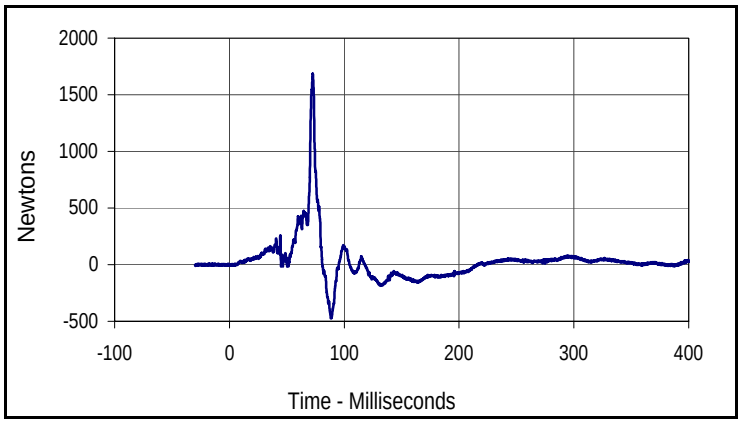


Curve Description			
Driver Right Acetabulum Force Y			
CURNO	Type	SAE Class	Units
068	FIL	600	Newtons
Max	Time	Min	Time
2055.9	85.5	-297.9	105.4

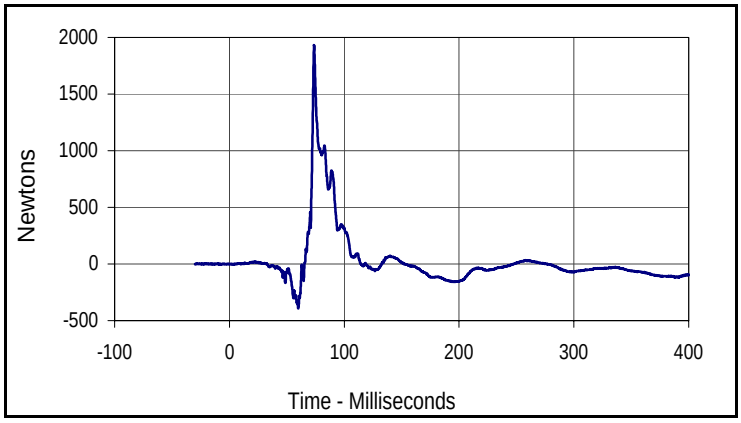
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



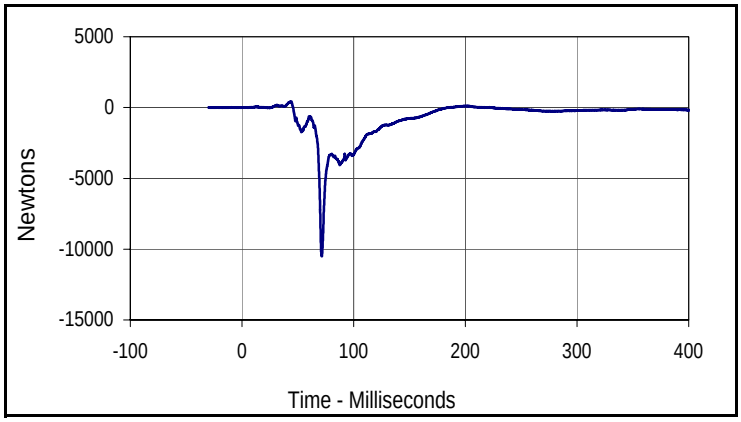
Curve Description			
Driver Right Acetabulum Force Z			
CURNO	Type	SAE Class	Units
069	FIL	600	Newtons
Max	Time	Min	Time
1113.2	64.9	-521.0	113.4



Curve Description			
Driver Left Femur Force X			
CURNO	Type	SAE Class	Units
070	FIL	600	Newtons
Max	Time	Min	Time
1686.2	72.6	-475.8	88.4

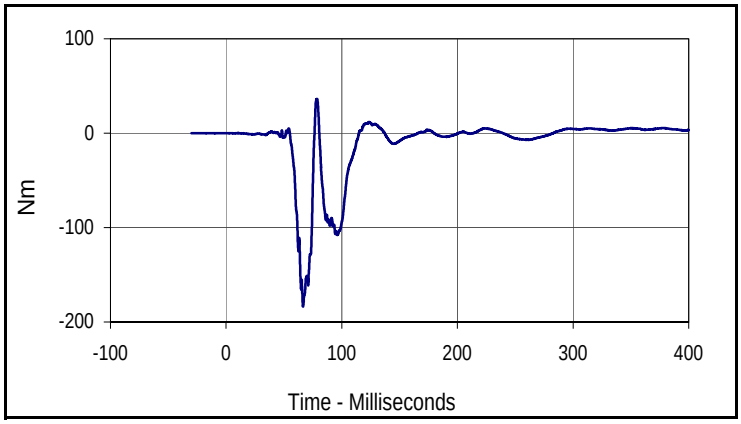


Curve Description			
Driver Left Femur Force Y			
CURNO	Type	SAE Class	Units
071	FIL	600	Newtons
Max	Time	Min	Time
1931.3	73.7	-392.3	59.9

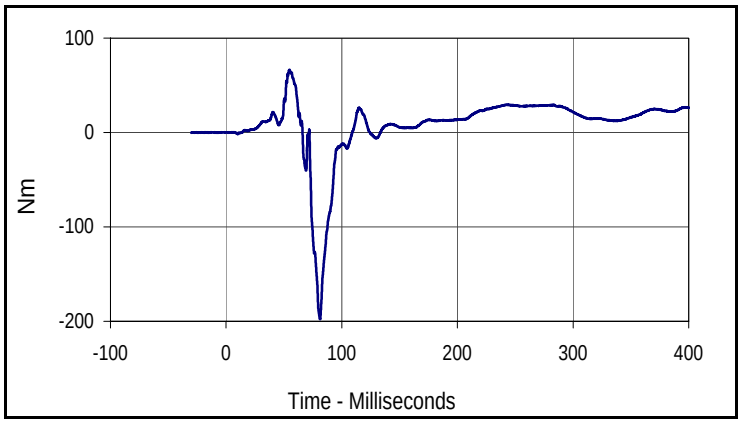


Curve Description			
Driver Left Femur Force Z			
CURNO	Type	SAE Class	Units
072	FIL	600	Newtons
Max	Time	Min	Time
445.2	43.9	-10506.4	71.5

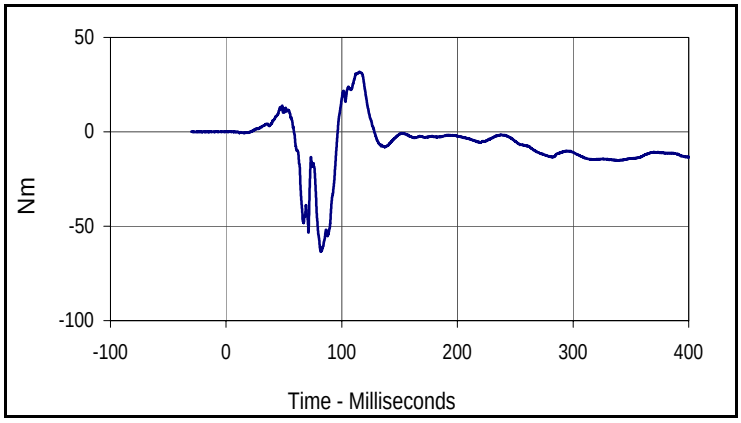
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



Curve Description			
Driver Left Femur Moment X			
CURNO	Type	SAE Class	Units
073	FIL	600	Nm
Max	Time	Min	Time
36.3	78.6	-183.7	66.5

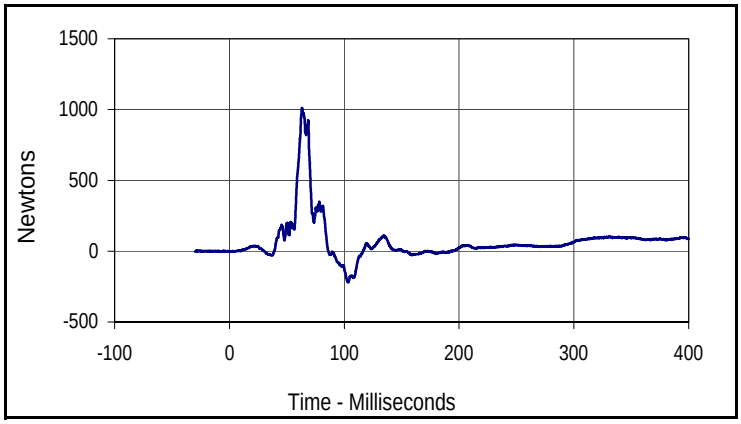


Curve Description			
Driver Left Femur Moment Y			
CURNO	Type	SAE Class	Units
074	FIL	600	Nm
Max	Time	Min	Time
66.6	54.8	-197.5	81.3

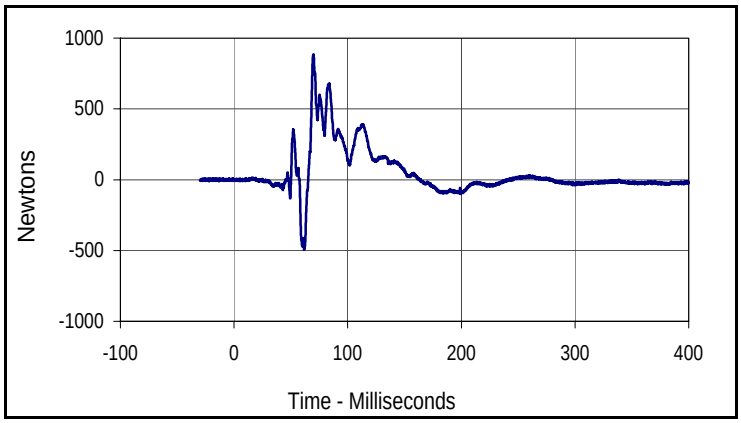


Curve Description			
Driver Left Femur Moment Z			
CURNO	Type	SAE Class	Units
075	FIL	600	Nm
Max	Time	Min	Time
31.8	115.3	-63.5	81.9

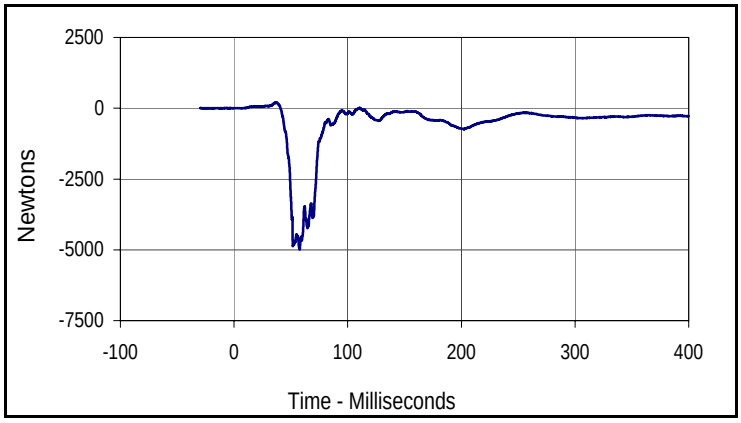
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



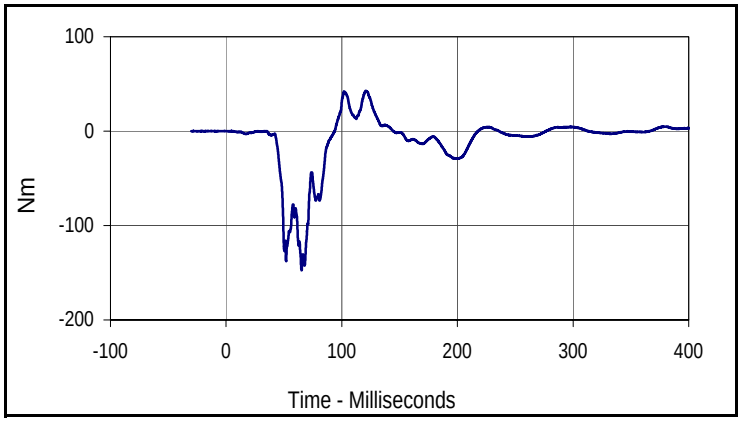
Curve Description			
Driver Right Femur Force X			
CURNO	Type	SAE Class	Units
076	FIL	600	Newtons
Max	Time	Min	Time
1010.8	63.2	-220.3	103.4



Curve Description			
Driver Right Femur Force Y			
CURNO	Type	SAE Class	Units
077	FIL	600	Newtons
Max	Time	Min	Time
883.8	69.9	-493.1	61.7

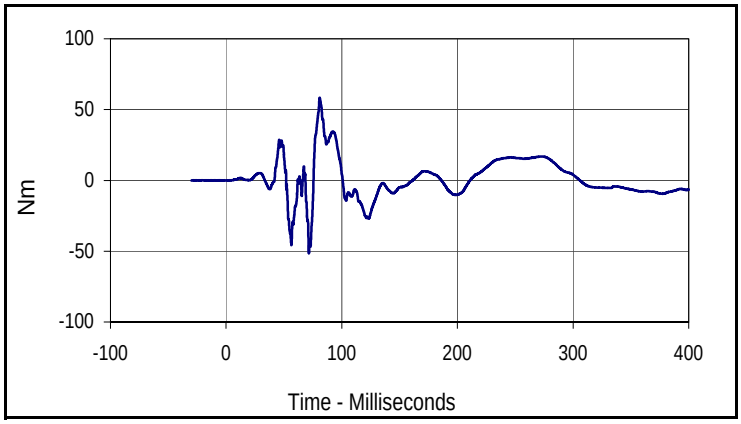


Curve Description			
Driver Right Femur Force Z			
CURNO	Type	SAE Class	Units
078	FIL	600	Newtons
Max	Time	Min	Time
211.6	36.9	-4991.3	57.7

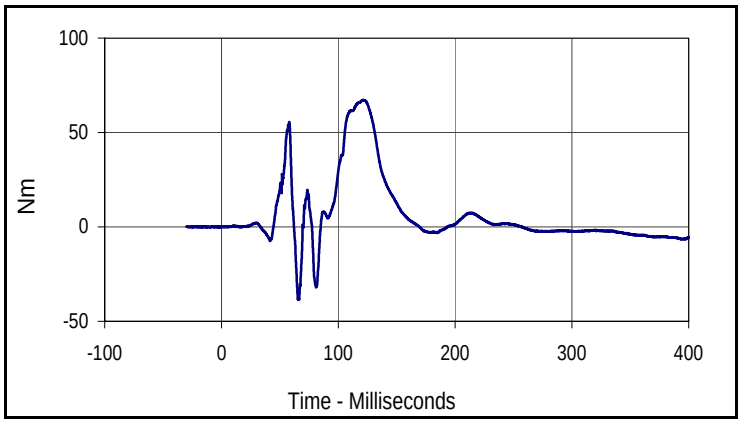


Curve Description			
Driver Right Femur Moment X			
CURNO	Type	SAE Class	Units
079	FIL	600	Nm
Max	Time	Min	Time
42.5	120.7	-147.4	65.3

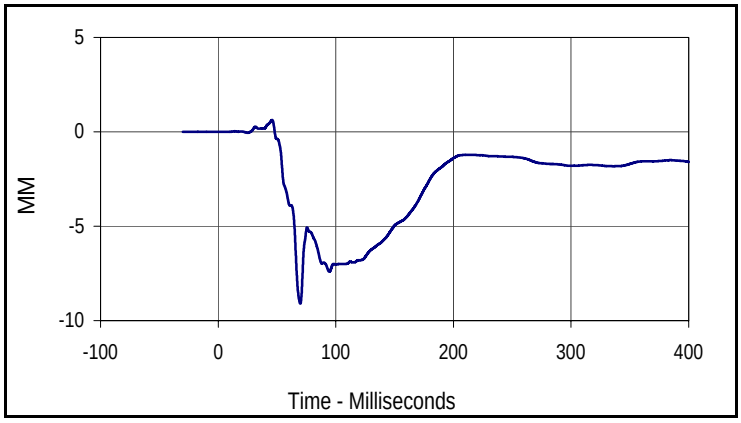
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



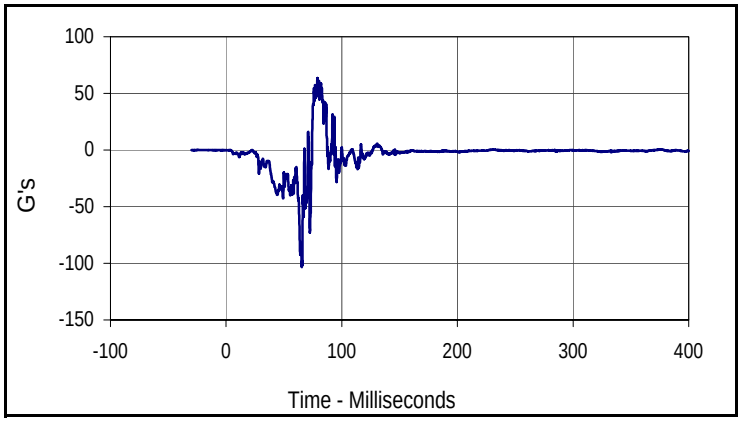
Curve Description			
Driver Right Femur Moment Y			
CURNO	Type	SAE Class	Units
080	FIL	600	Nm
Max	Time	Min	Time
58.5	81.0	-51.3	71.6



Curve Description			
Driver Right Femur Moment Z			
CURNO	Type	SAE Class	Units
081	FIL	600	Nm
Max	Time	Min	Time
67.4	121.1	-38.6	66.4

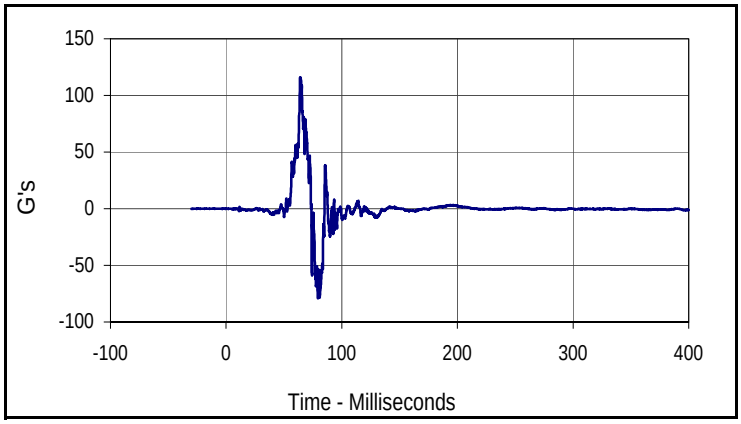


Curve Description			
Driver Left Knee Deflection			
CURNO	Type	SAE Class	Units
082	FIL	180	MM
Max	Time	Min	Time
0.6	45.8	-9.1	69.8

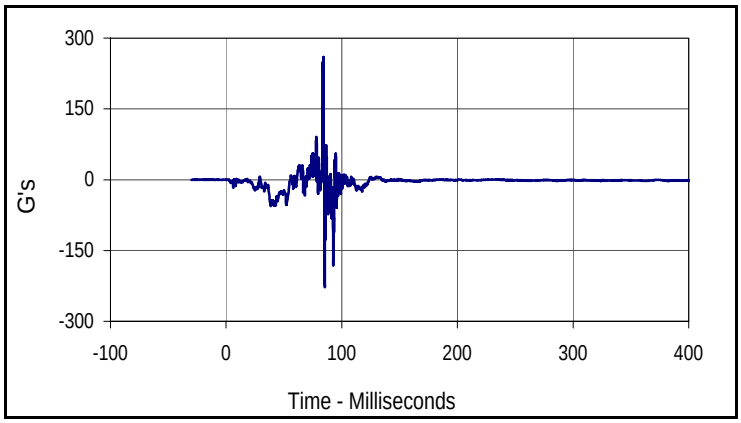


Curve Description			
Driver Left Tibia X			
CURNO	Type	SAE Class	Units
083	FIL	1000	G's
Max	Time	Min	Time
63.7	79.0	-103.5	65.4

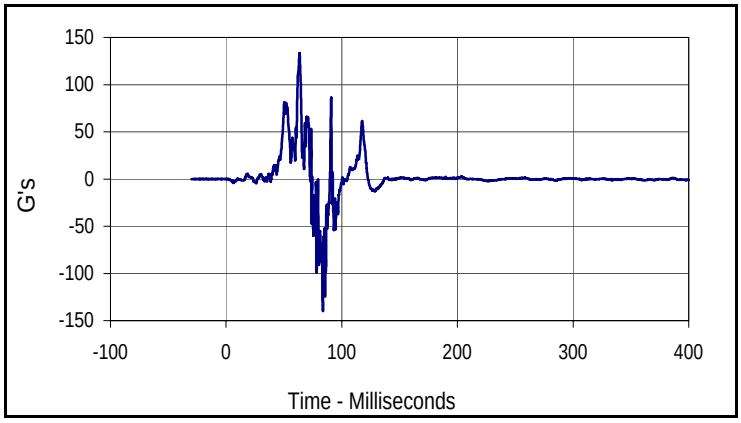
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



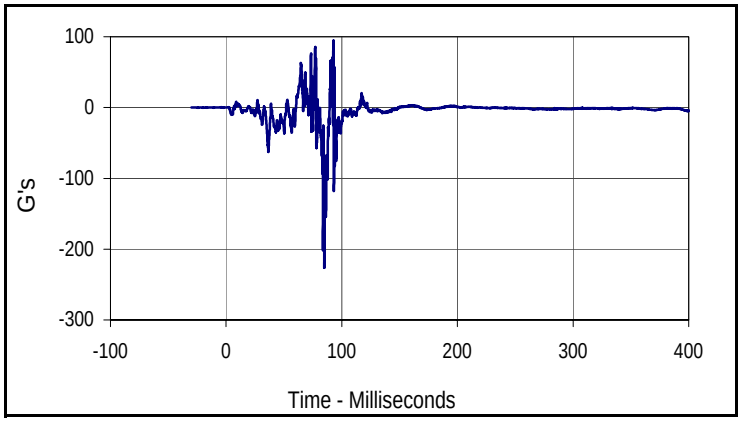
Curve Description			
Driver Left Tibia Y			
CURNO	Type	SAE Class	Units
084	FIL	1000	G's
Max	Time	Min	Time
115.8	64.0	-79.1	79.4



Curve Description			
Driver Left Foot X			
CURNO	Type	SAE Class	Units
085	FIL	1000	G's
Max	Time	Min	Time
259.0	84.2	-226.3	85.3

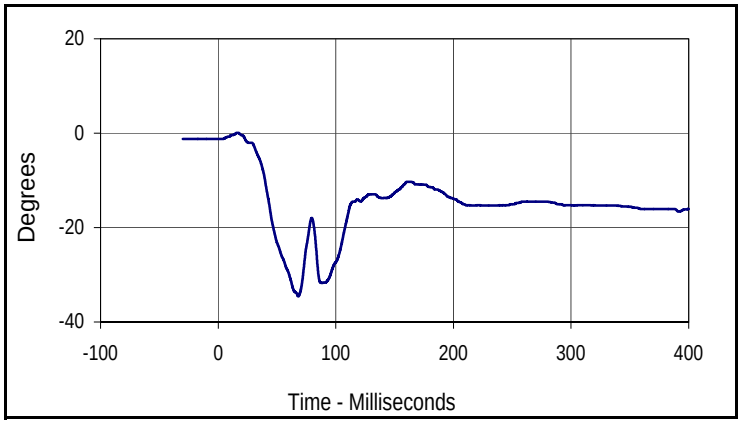


Curve Description			
Driver Left Foot Y			
CURNO	Type	SAE Class	Units
086	FIL	1000	G's
Max	Time	Min	Time
133.4	63.5	-139.6	83.7

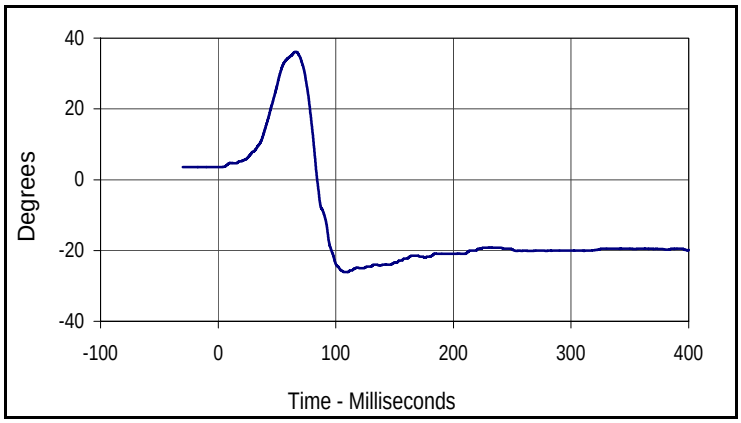


Curve Description			
Driver Left Foot Z			
CURNO	Type	SAE Class	Units
087	FIL	1000	G's
Max	Time	Min	Time
94.7	92.8	-226.1	84.9

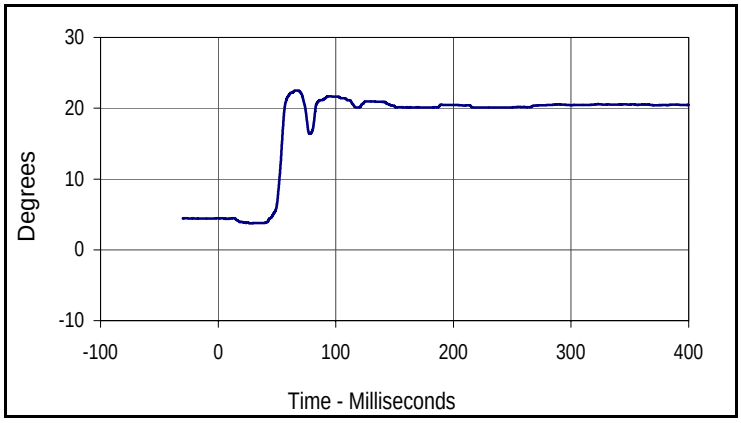
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



Curve Description			
Driver Left Ankle Rotation X			
CURNO	Type	SAE Class	Units
088	FIL	180	Degrees
Max	Time	Min	Time
0.1	16.4	-34.6	68.2

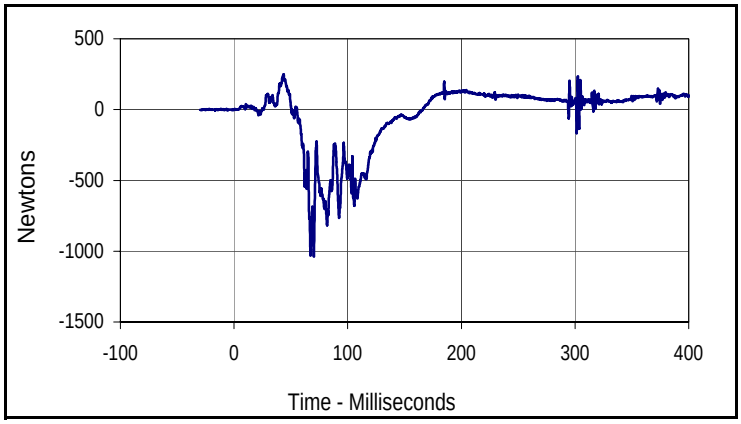


Curve Description			
Driver Left Ankle Rotation Y			
CURNO	Type	SAE Class	Units
089	FIL	180	Degrees
Max	Time	Min	Time
36.1	66.0	-26.1	109.4

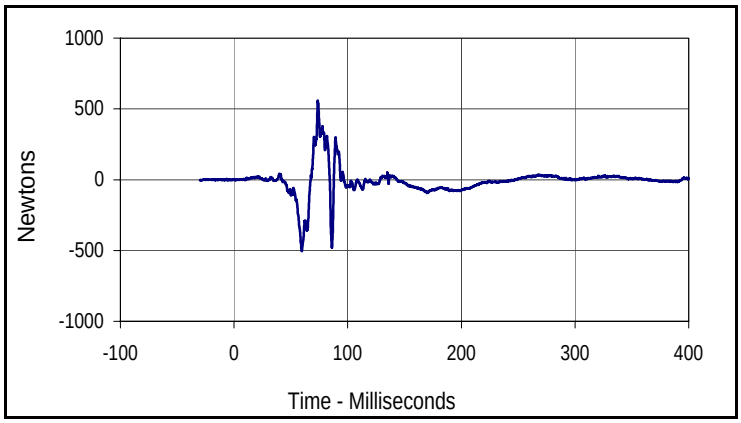


Curve Description			
Driver Left Ankle Rotation Z			
CURNO	Type	SAE Class	Units
090	FIL	180	Degrees
Max	Time	Min	Time
22.5	65.7	3.7	27.6

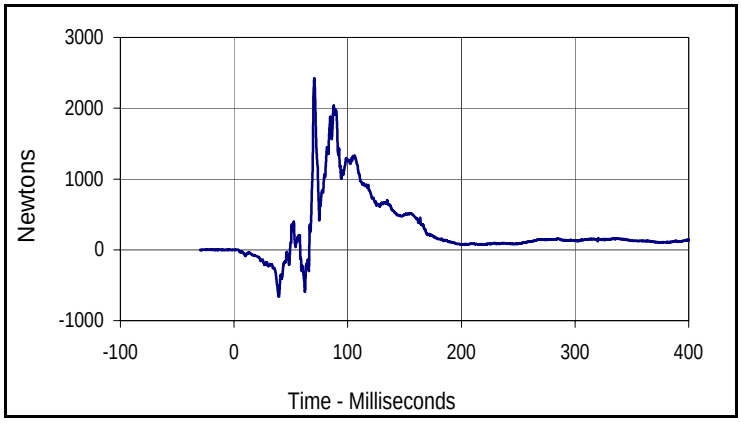
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



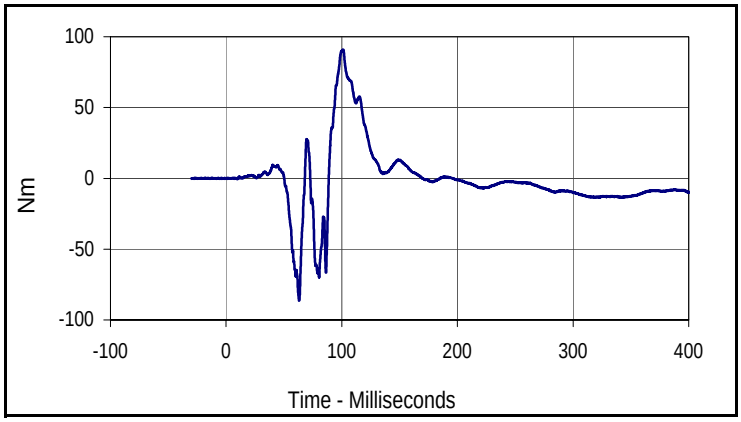
Curve Description			
Driver Left Upper Tibia Force X			
CURNO	Type	SAE Class	Units
091	FIL	600	Newtons
Max	Time	Min	Time
249.6	43.7	-1038.3	70.2



Curve Description			
Driver Left Upper Tibia Force Y			
CURNO	Type	SAE Class	Units
092	FIL	600	Newtons
Max	Time	Min	Time
558.7	73.6	-505.8	59.6

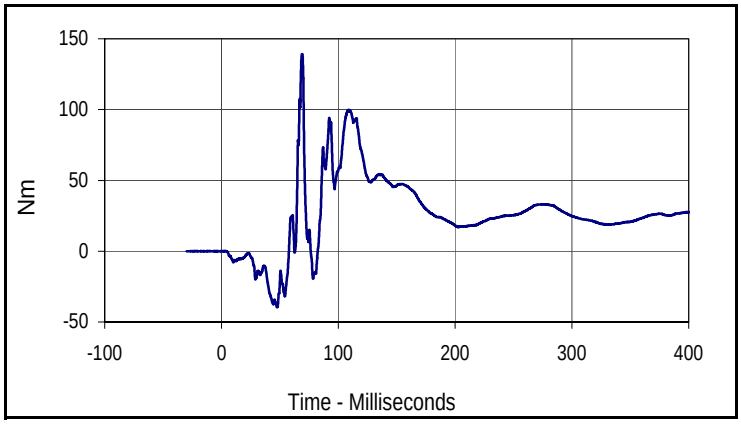


Curve Description			
Driver Left Upper Tibia Force Z			
CURNO	Type	SAE Class	Units
093	FIL	600	Newtons
Max	Time	Min	Time
2419.4	70.6	-661.1	39.4

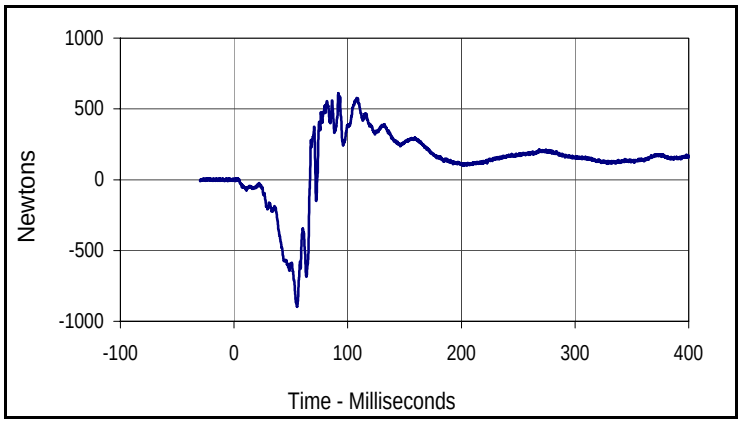


Curve Description			
Driver Left Upper Tibia Moment X			
CURNO	Type	SAE Class	Units
094	FIL	600	Nm
Max	Time	Min	Time
90.9	101.3	-86.4	63.1

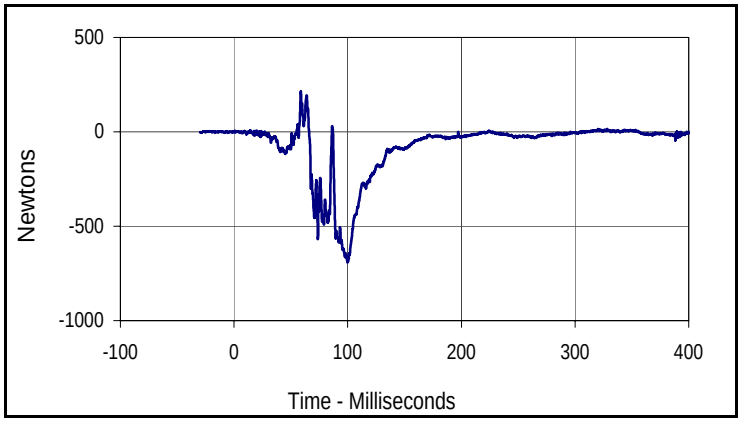
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



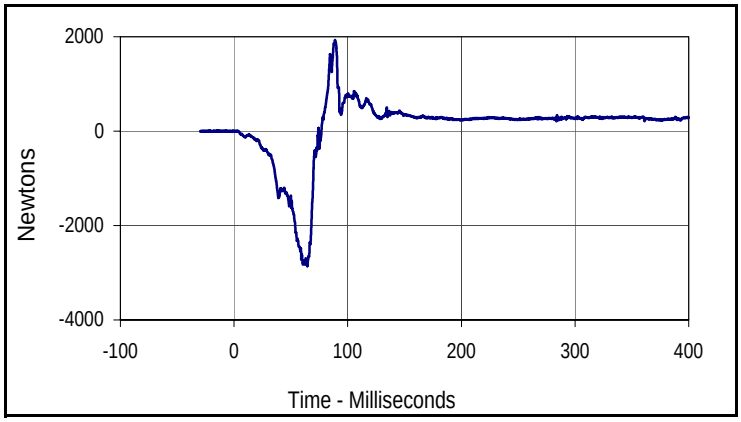
Curve Description			
Driver Left Upper Tibia Moment Y			
CURNO	Type	SAE Class	Units
095	FIL	600	Nm
Max	Time	Min	Time
139.2	69.1	-39.7	47.5



Curve Description			
Driver Left Lower Tibia Force X			
CURNO	Type	SAE Class	Units
096	FIL	600	Newtons
Max	Time	Min	Time
611.4	91.7	-897.9	55.5

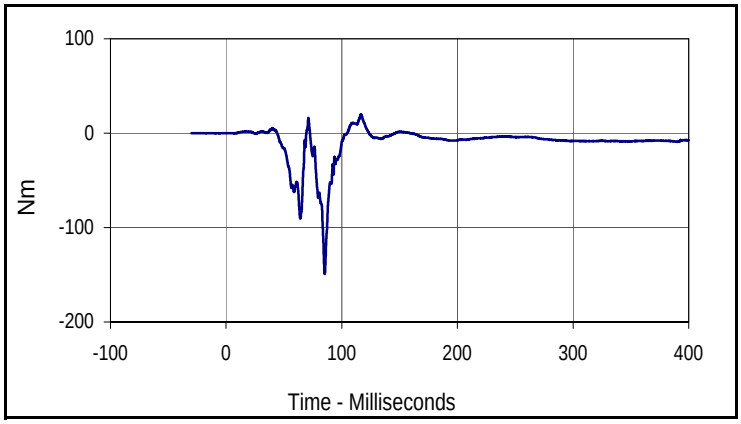


Curve Description			
Driver Left Lower Tibia Force Y			
CURNO	Type	SAE Class	Units
097	FIL	600	Newtons
Max	Time	Min	Time
212.9	58.8	-692.0	99.9

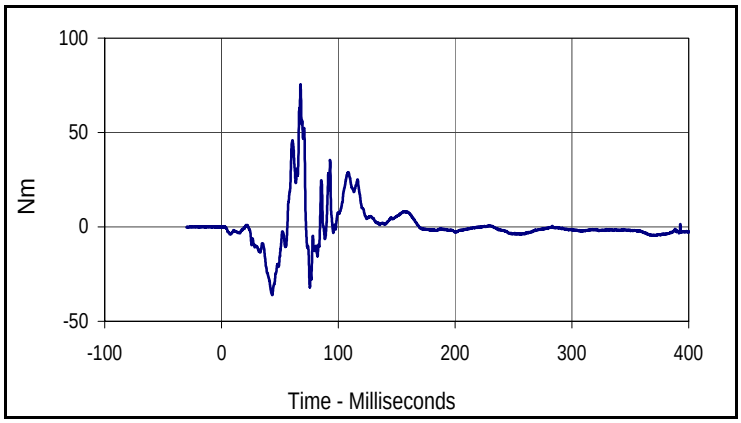


Curve Description			
Driver Left Lower Tibia Force Z			
CURNO	Type	SAE Class	Units
098	FIL	600	Newtons
Max	Time	Min	Time
1932.0	88.8	-2862.4	64.4

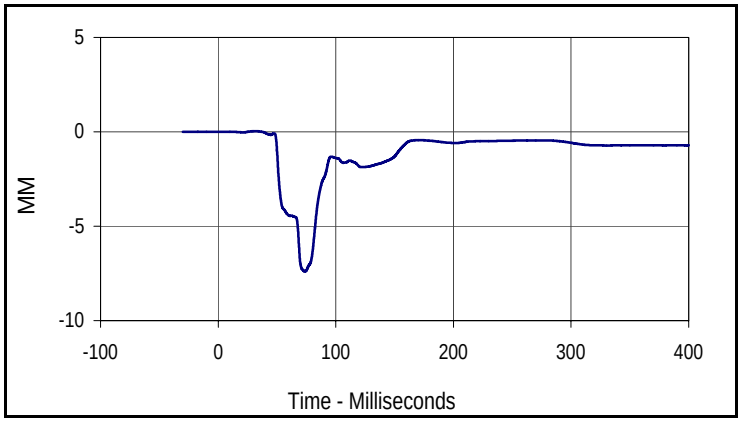
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



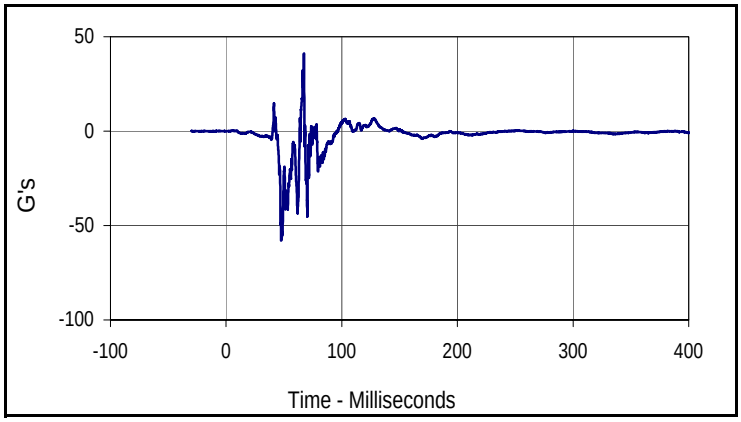
Curve Description			
Driver Left Lower Tibia Moment X			
CURNO	Type	SAE Class	Units
099	FIL	600	Nm
Max	Time	Min	Time
20.2	116.7	-149.3	85.2



Curve Description			
Driver Left Lower Tibia Moment Y			
CURNO	Type	SAE Class	Units
100	FIL	600	Nm
Max	Time	Min	Time
75.4	67.7	-36.1	43.5

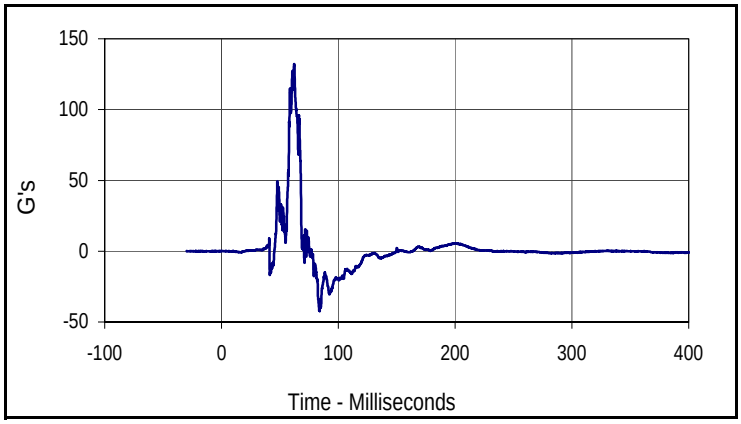


Curve Description			
Driver Right Knee Deflection			
CURNO	Type	SAE Class	Units
101	FIL	180	MM
Max	Time	Min	Time
0.0	31.0	-7.4	73.5

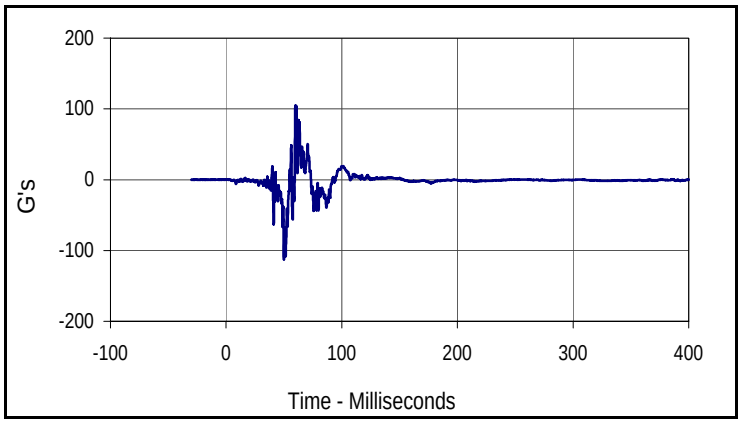


Curve Description			
Driver Right Tibia X			
CURNO	Type	SAE Class	Units
102	FIL	1000	G's
Max	Time	Min	Time
41.3	67.3	-58.0	47.6

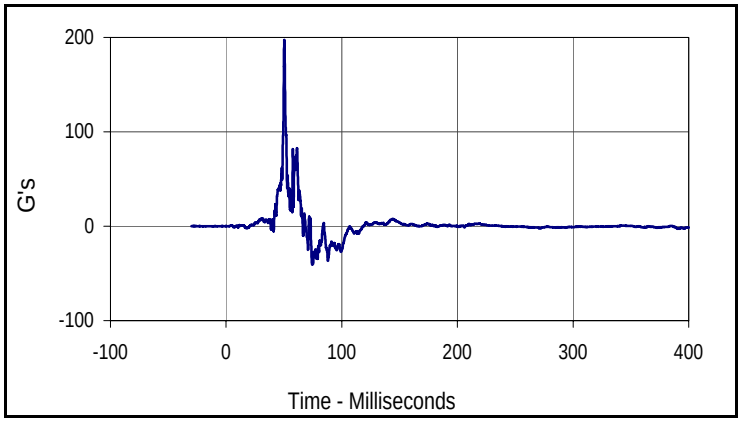
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



Curve Description			
Driver Right Tibia Y			
CURNO	Type	SAE Class	Units
103	FIL	1000	G's
Max	Time	Min	Time
132.2	62.2	-42.2	84.1

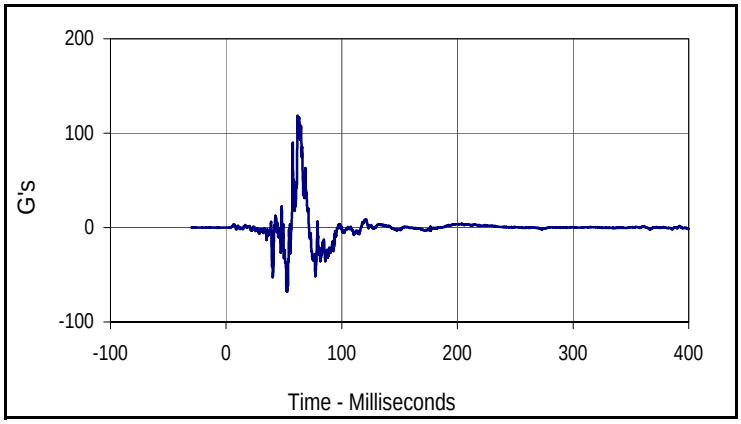


Curve Description			
Driver Right Foot X			
CURNO	Type	SAE Class	Units
104	FIL	1000	G's
Max	Time	Min	Time
104.7	59.8	-112.8	50.0

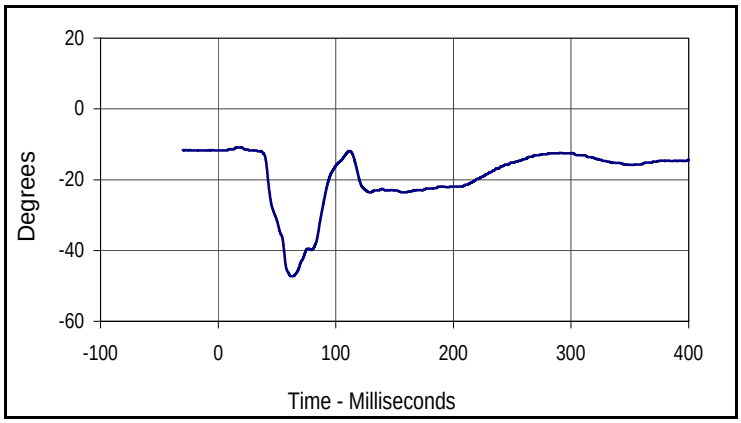


Curve Description			
Driver Right Foot Y			
CURNO	Type	SAE Class	Units
105	FIL	1000	G's
Max	Time	Min	Time
197.1	50.3	-40.8	74.4

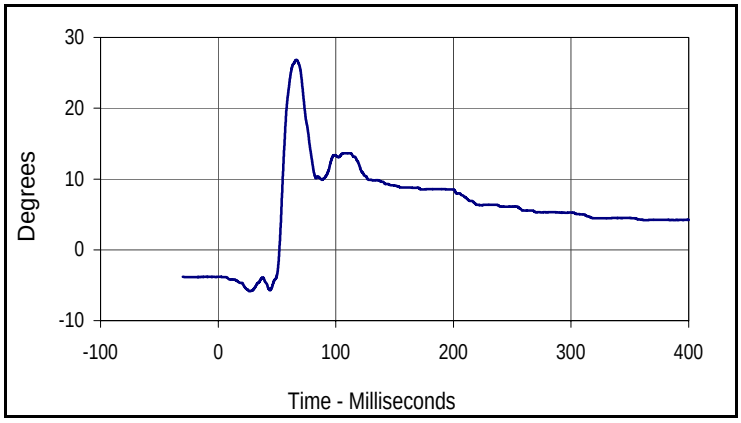
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



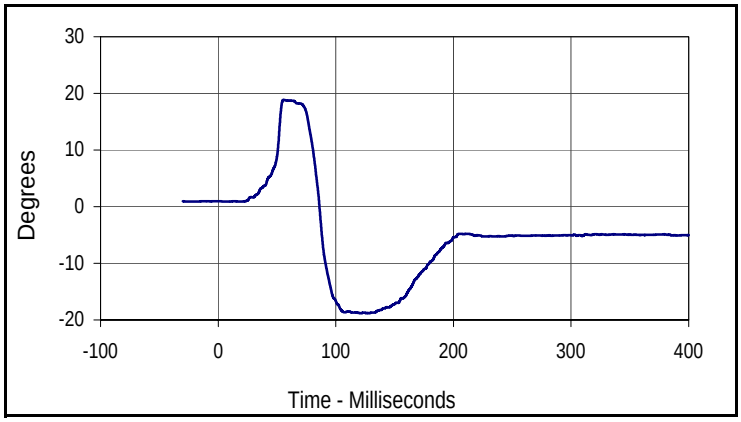
Curve Description			
Driver Right Foot Z			
CURNO	Type	SAE Class	Units
106	FIL	1000	G's
Max	Time	Min	Time
118.7	61.8	-67.7	52.8



Curve Description			
Driver Right Ankle Rotation X			
CURNO	Type	SAE Class	Units
107	FIL	180	Degrees
Max	Time	Min	Time
-10.9	15.9	-47.3	62.1

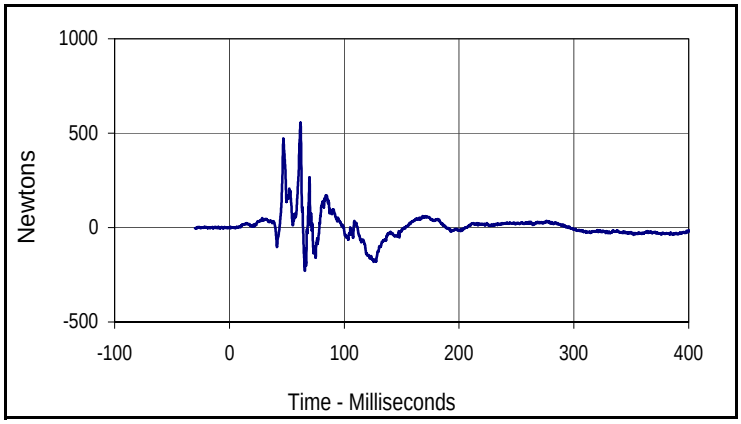


Curve Description			
Driver Right Ankle Rotation Y			
CURNO	Type	SAE Class	Units
108	FIL	180	Degrees
Max	Time	Min	Time
26.8	66.6	-5.8	26.7

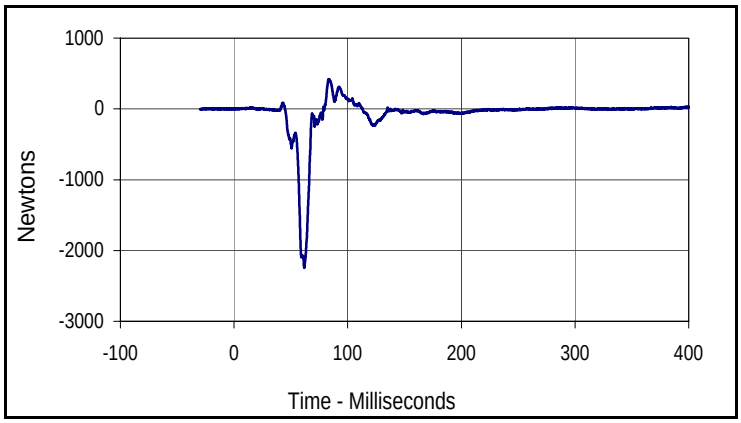


Curve Description			
Driver Right Ankle Rotation Z			
CURNO	Type	SAE Class	Units
109	FIL	180	Degrees
Max	Time	Min	Time
18.9	55.6	-18.8	128.3

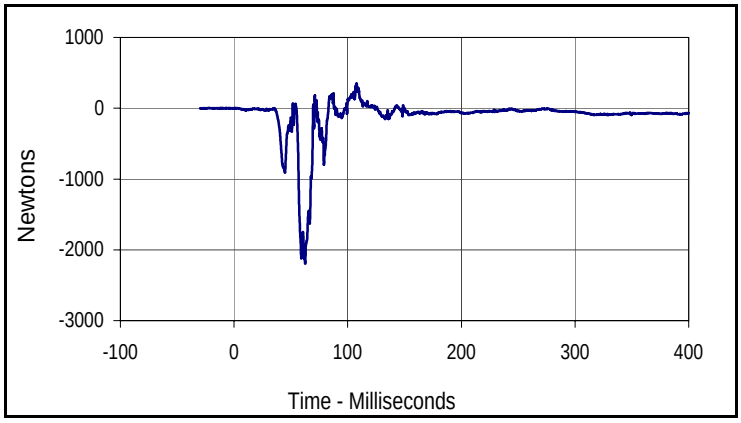
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



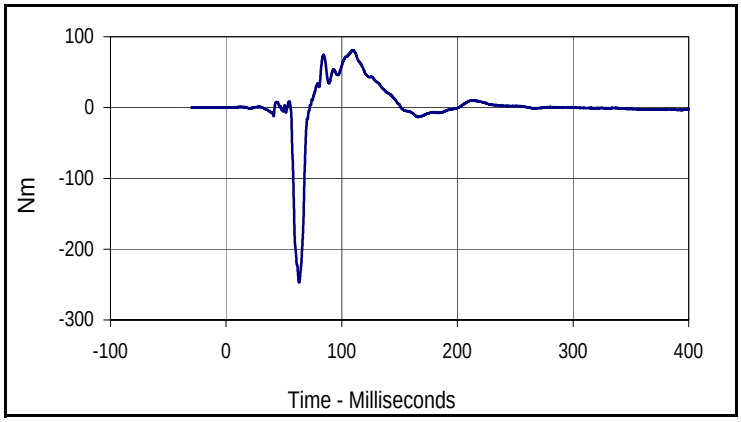
Curve Description			
Driver Right Upper Tibia Force X			
CURNO	Type	SAE Class	Units
110	FIL	600	Newtons
Max	Time	Min	Time
556.2	61.9	-229.7	65.7



Curve Description			
Driver Right Upper Tibia Force Y			
CURNO	Type	SAE Class	Units
111	FIL	600	Newtons
Max	Time	Min	Time
421.7	83.1	-2246.9	61.9

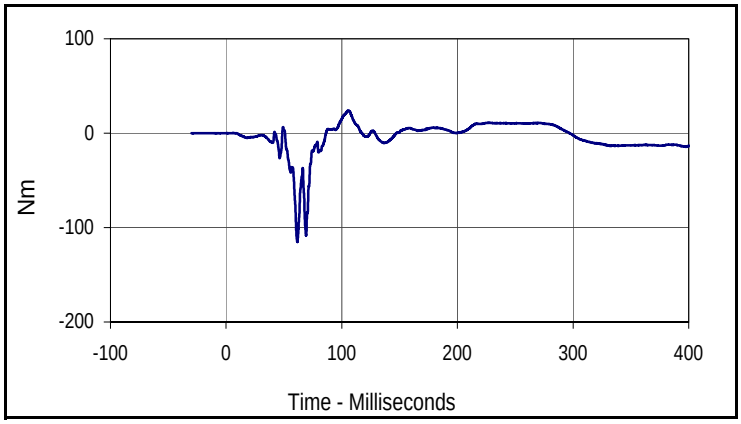


Curve Description			
Driver Right Upper Tibia Force Z			
CURNO	Type	SAE Class	Units
112	FIL	600	Newtons
Max	Time	Min	Time
349.7	107.9	-2193.8	62.6

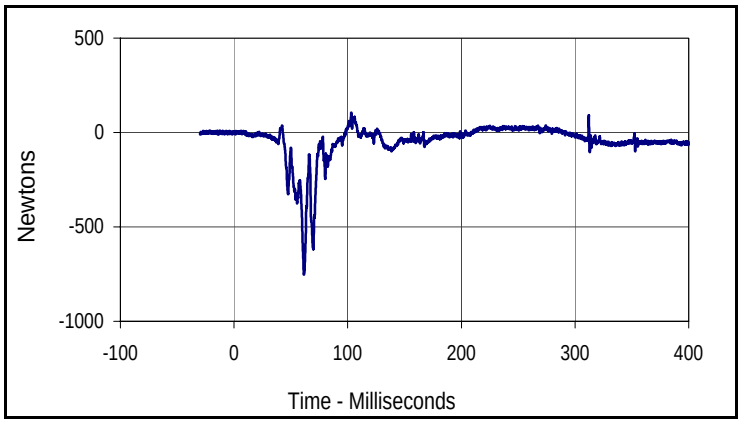


Curve Description			
Driver Right Upper Tibia Moment X			
CURNO	Type	SAE Class	Units
113	FIL	600	Nm
Max	Time	Min	Time
80.9	109.0	-247.3	63.2

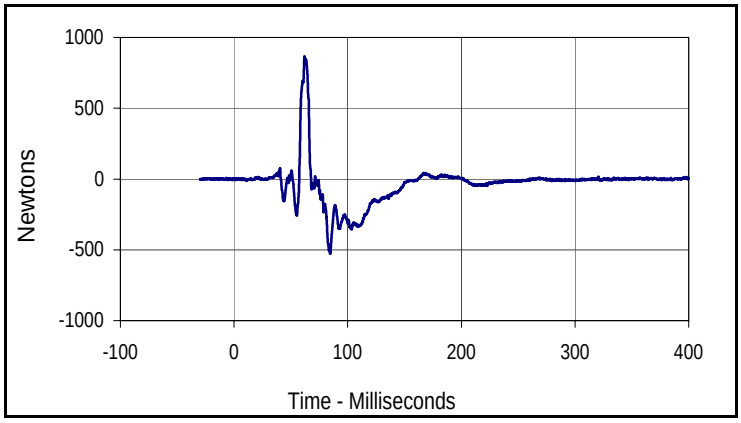
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



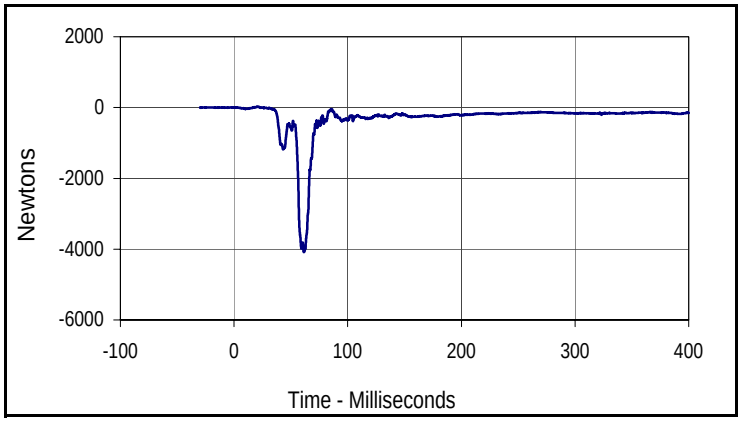
Curve Description			
Driver Right Upper Tibia Moment Y			
CURNO	Type	SAE Class	Units
114	FIL	600	Nm
Max	Time	Min	Time
24.1	105.6	-115.1	61.6



Curve Description			
Driver Right Lower Tibia Force X			
CURNO	Type	SAE Class	Units
115	FIL	600	Newtons
Max	Time	Min	Time
105.2	103.2	-752.2	61.5

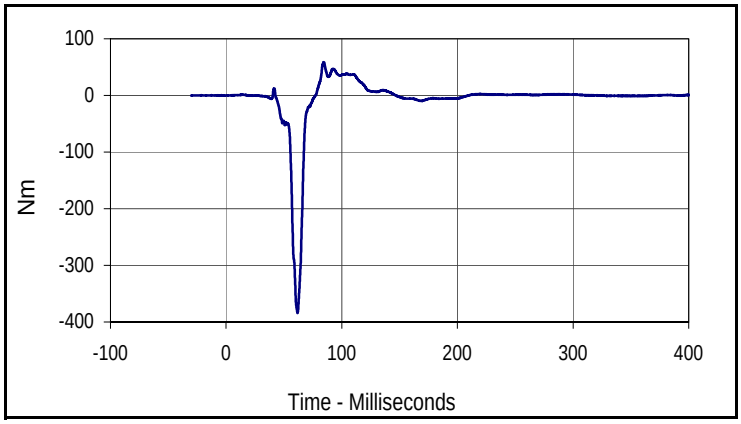


Curve Description			
Driver Right Lower Tibia Force Y			
CURNO	Type	SAE Class	Units
116	FIL	600	Newtons
Max	Time	Min	Time
867.7	62.1	-528.0	84.6

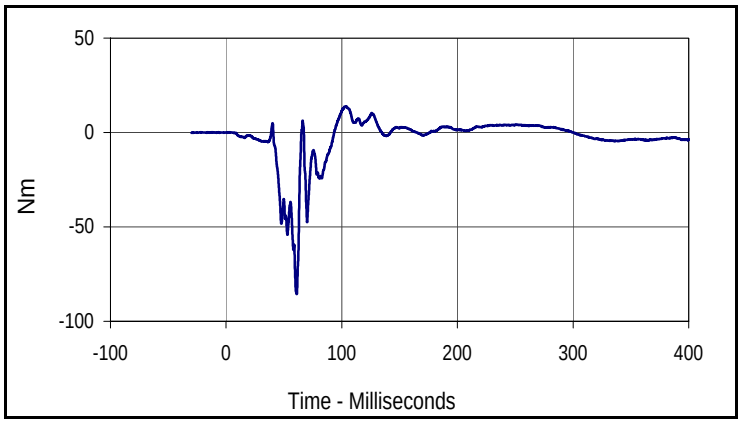


Curve Description			
Driver Right Lower Tibia Force Z			
CURNO	Type	SAE Class	Units
117	FIL	600	Newtons
Max	Time	Min	Time
32.6	20.9	-4082.6	61.4

Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09

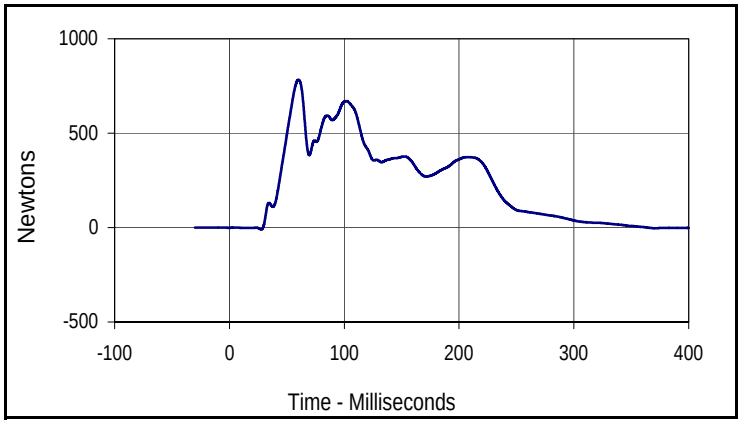


Curve Description			
Driver Right Lower Tibia Moment X			
CURNO	Type	SAE Class	Units
118	FIL	600	Nm
Max	Time	Min	Time
58.8	84.5	-384.0	61.8

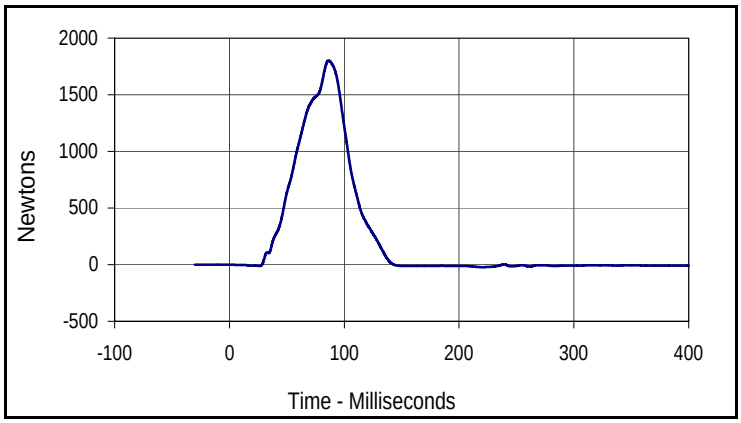


Curve Description			
Driver Right Lower Tibia Moment Y			
CURNO	Type	SAE Class	Units
119	FIL	600	Nm
Max	Time	Min	Time
13.8	102.6	-85.7	61.1

Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09

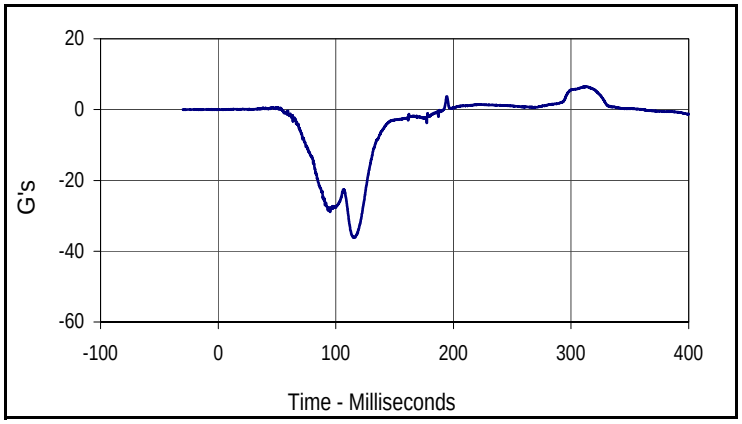


Curve Description			
Driver Lap Belt Force			
CURNO	Type	SAE Class	Units
120	FIL	60	Newtons
Max	Time	Min	Time
783.1	60.2	-9.5	27.7

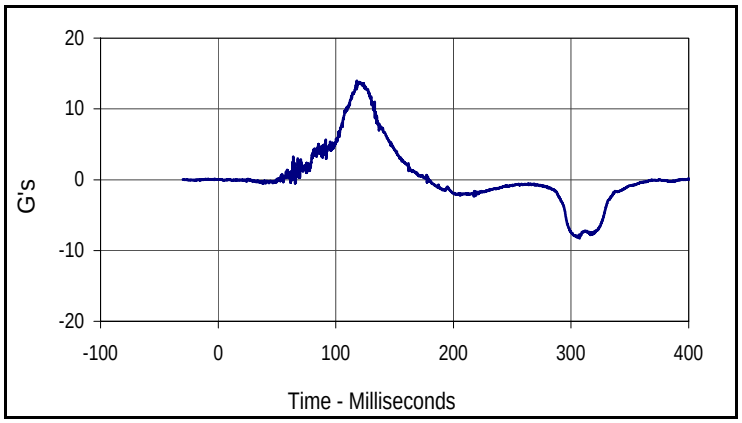


Curve Description			
Driver Shoulder Belt Force			
CURNO	Type	SAE Class	Units
121	FIL	60	Newtons
Max	Time	Min	Time
1801.4	86.5	-22.1	220.4

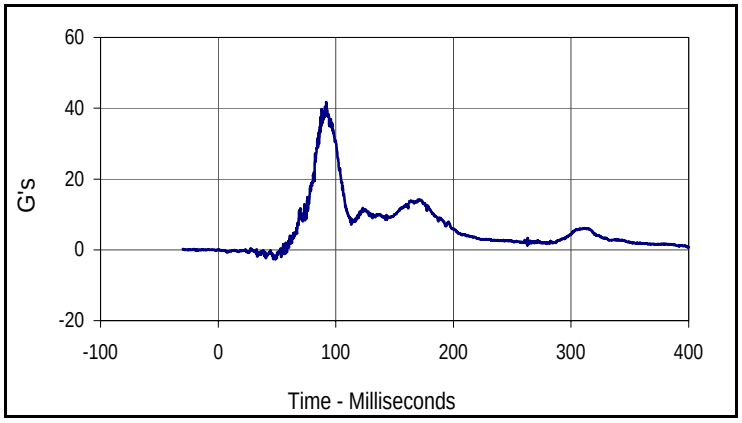
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



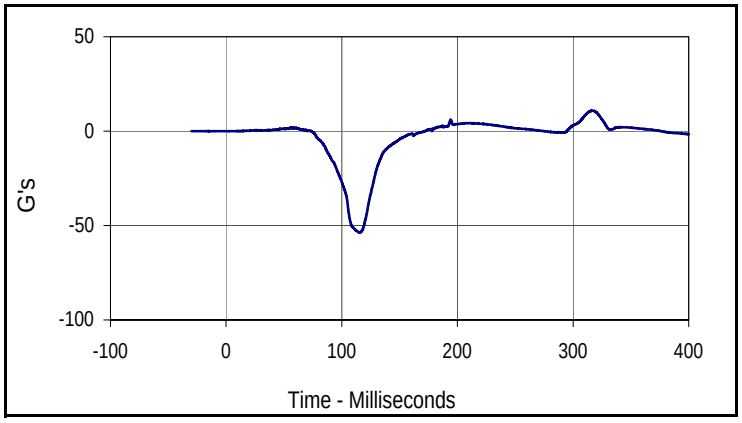
Curve Description			
LR Passenger Head CG X			
CURNO	Type	SAE Class	Units
122	FIL	1000	G's
Max	Time	Min	Time
6.5	312.3	-36.1	114.8



Curve Description			
LR Passenger Head CG Y			
CURNO	Type	SAE Class	Units
123	FIL	1000	G's
Max	Time	Min	Time
14.0	117.8	-8.3	307.3

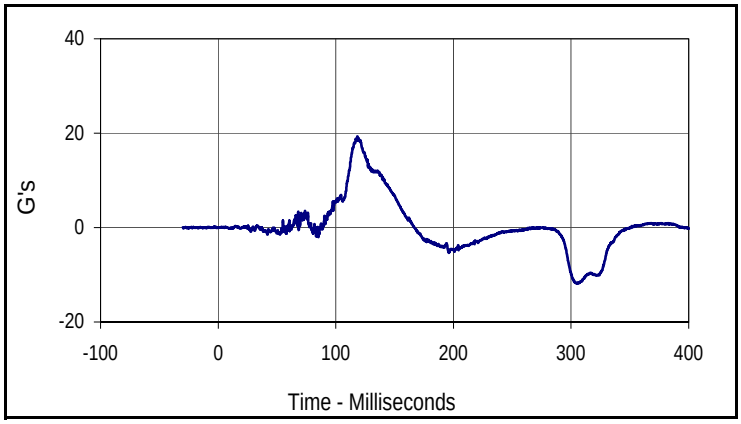


Curve Description			
LR Passenger Head CG Z			
CURNO	Type	SAE Class	Units
124	FIL	1000	G's
Max	Time	Min	Time
41.7	91.9	-2.8	48.6

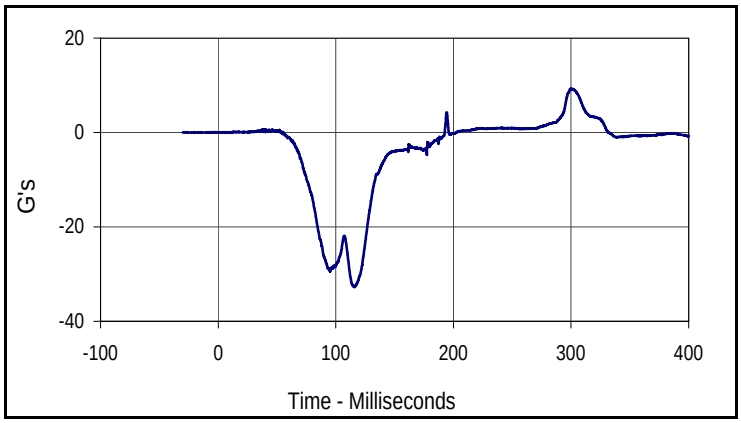


Curve Description			
LR Passenger Top Head Array X			
CURNO	Type	SAE Class	Units
125	FIL	1000	G's
Max	Time	Min	Time
10.9	317.2	-53.7	114.8

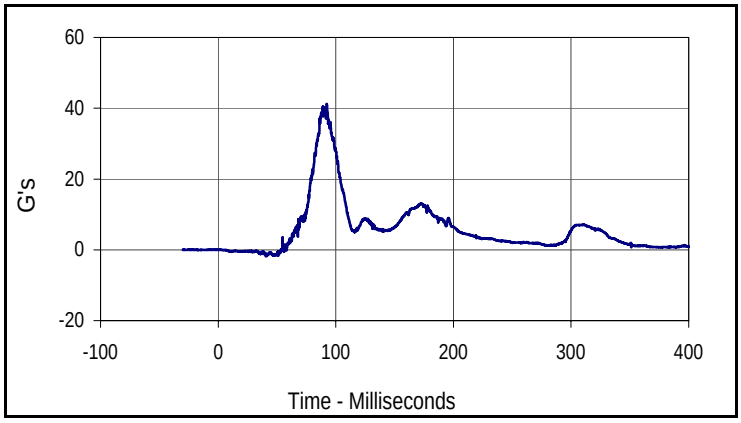
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



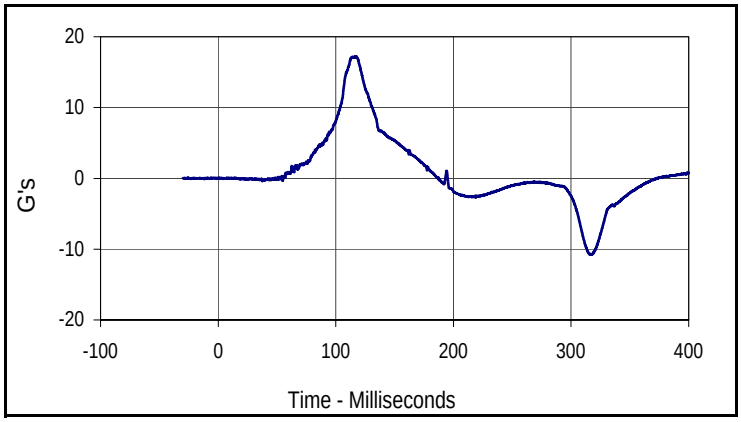
Curve Description			
LR Passenger Top Head Array Y			
CURNO	Type	SAE Class	Units
126	FIL	1000	G's
Max	Time	Min	Time
19.3	118.4	-11.8	304.4



Curve Description			
LR Passenger Left Side Head Array X			
CURNO	Type	SAE Class	Units
127	FIL	1000	G's
Max	Time	Min	Time
9.3	299.7	-32.7	116.0

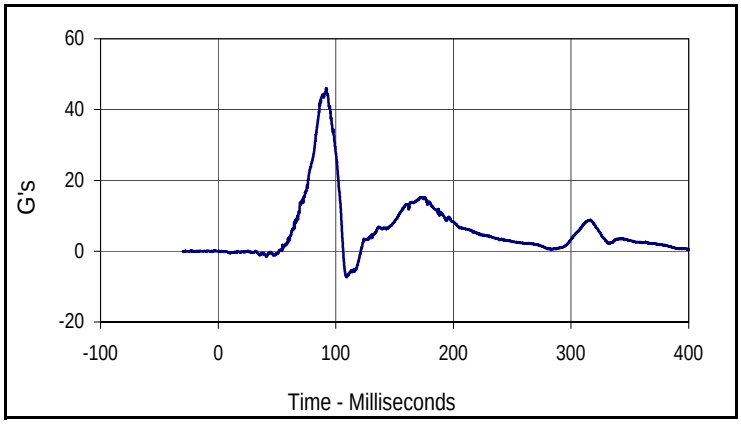


Curve Description			
LR Passenger Left Side Head Array Z			
CURNO	Type	SAE Class	Units
128	FIL	1000	G's
Max	Time	Min	Time
41.2	92.4	-1.9	40.9

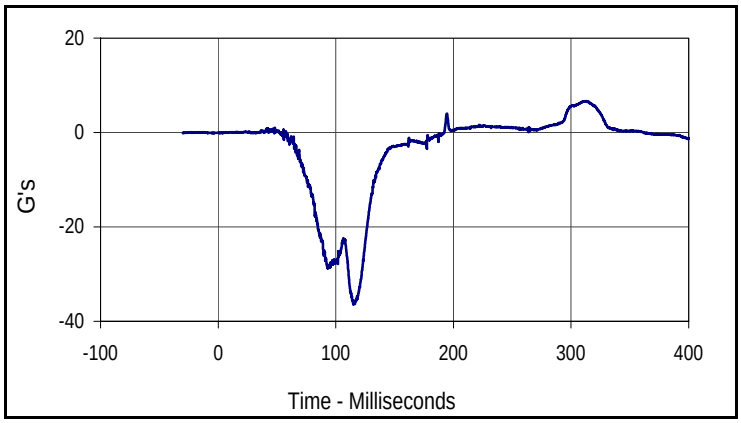


Curve Description			
LR Passenger Front Head Array Y			
CURNO	Type	SAE Class	Units
129	FIL	1000	G's
Max	Time	Min	Time
17.2	117.5	-10.8	316.1

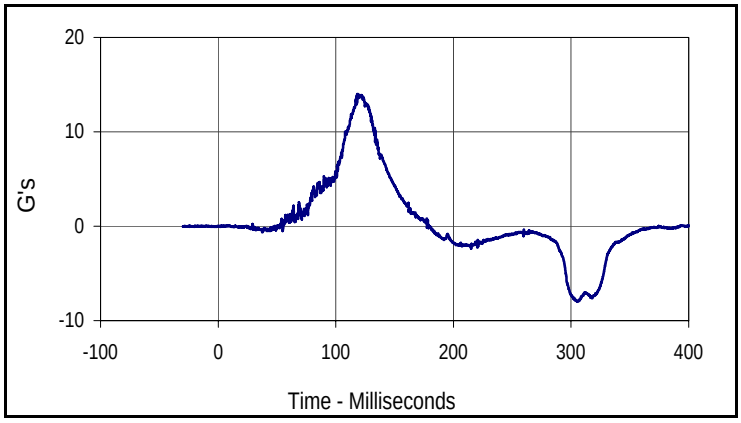
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



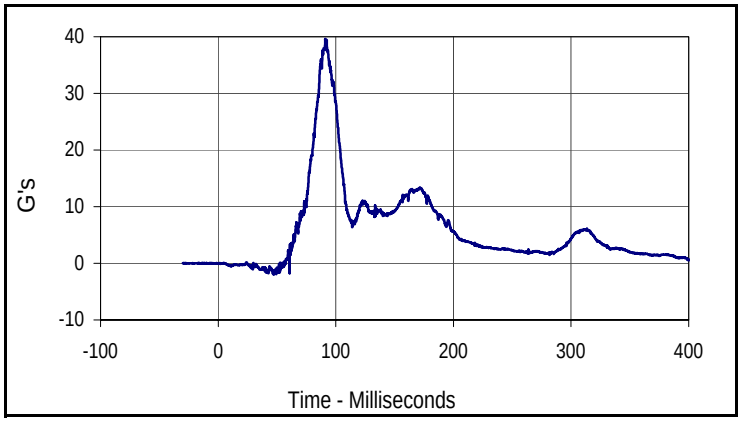
Curve Description			
LR Passenger Front Head Array Z			
CURNO	Type	SAE Class	Units
130	FIL	1000	G's
Max	Time	Min	Time
46.0	91.8	-7.4	109.2



Curve Description			
LR Passenger Head CG X Redundant			
CURNO	Type	SAE Class	Units
131	FIL	1000	G's
Max	Time	Min	Time
6.7	312.4	-36.4	114.9

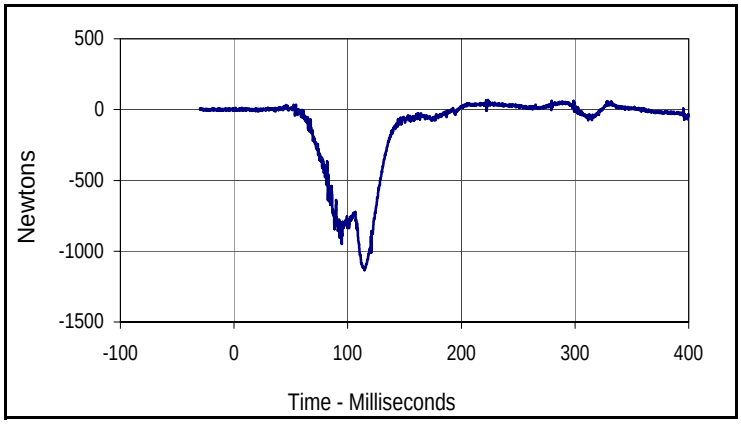


Curve Description			
LR Passenger Head CG Y Redundant			
CURNO	Type	SAE Class	Units
132	FIL	1000	G's
Max	Time	Min	Time
14.0	118.3	-8.0	305.5

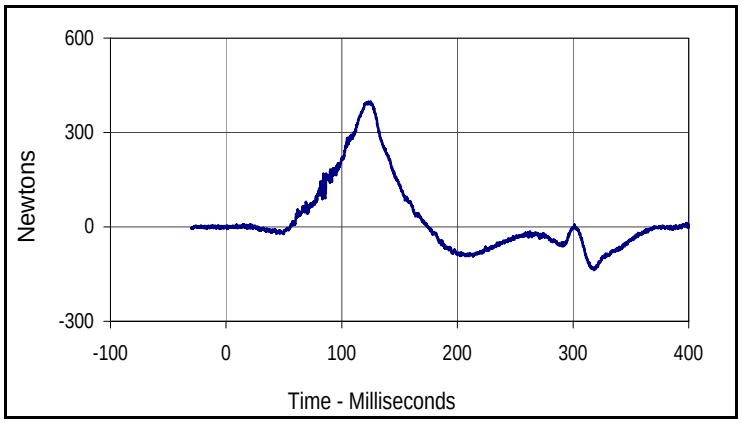


Curve Description			
LR Passenger Head CG Z Redundant			
CURNO	Type	SAE Class	Units
133	FIL	1000	G's
Max	Time	Min	Time
39.6	91.1	-2.0	47.1

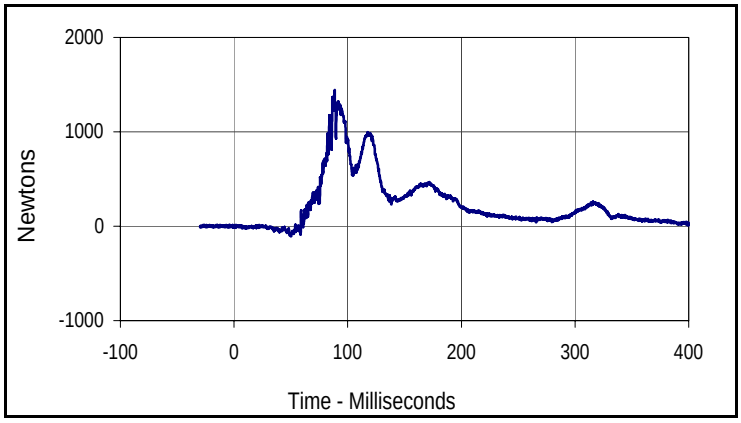
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



Curve Description			
LR Passenger Upper Neck Force X			
CURNO	Type	SAE Class	Units
134	FIL	1000	Newtons
Max	Time	Min	Time
67.9	223.4	-1134.6	114.8

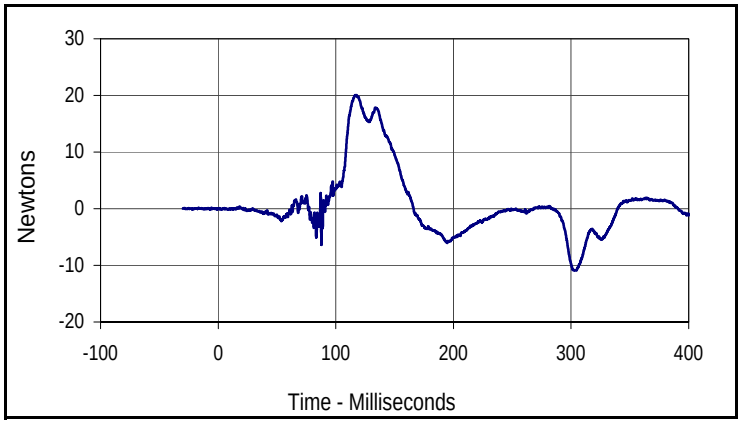


Curve Description			
LR Passenger Upper Neck Force Y			
CURNO	Type	SAE Class	Units
135	FIL	1000	Newtons
Max	Time	Min	Time
398.6	124.9	-137.2	318.1

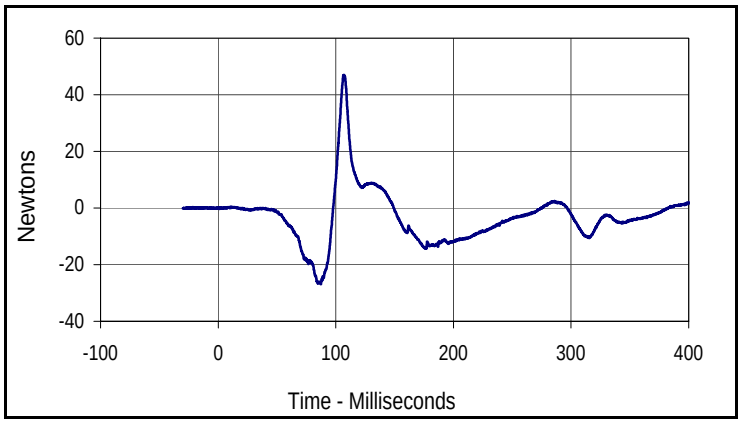


Curve Description			
LR Passenger Upper Neck Force Z			
CURNO	Type	SAE Class	Units
136	FIL	1000	Newtons
Max	Time	Min	Time
1444.3	88.5	-105.4	50.2

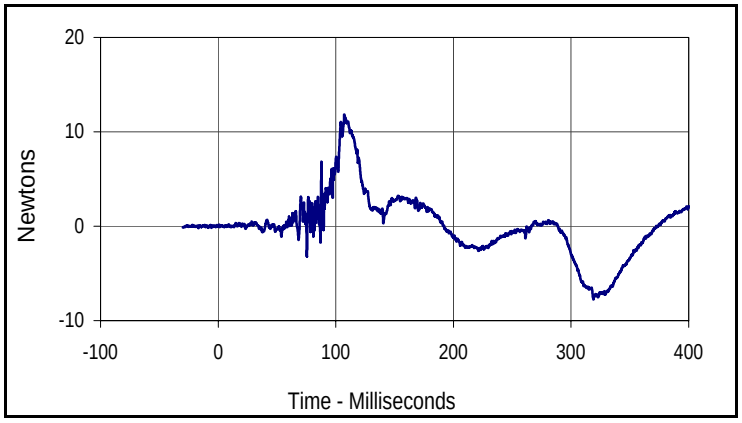
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



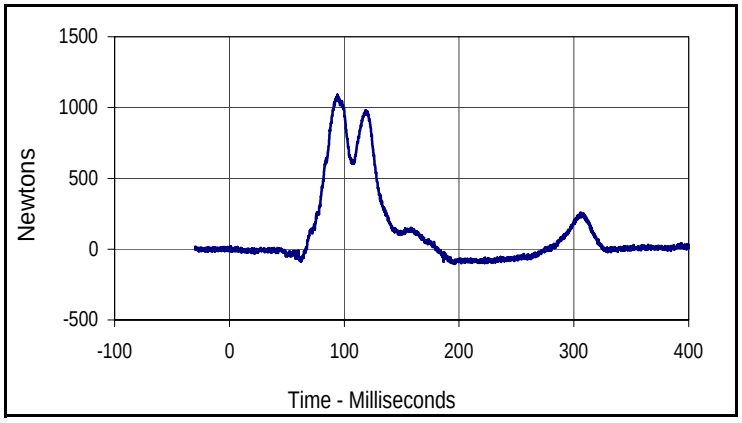
Curve Description			
LR Passenger Upper Neck Moment X			
CURNO	Type	SAE Class	Units
137	FIL	600	Newtons
Max	Time	Min	Time
20.1	117.6	-10.9	303.8



Curve Description			
LR Passenger Upper Neck Moment Y			
CURNO	Type	SAE Class	Units
138	FIL	600	Newtons
Max	Time	Min	Time
47.0	106.9	-26.9	87.3

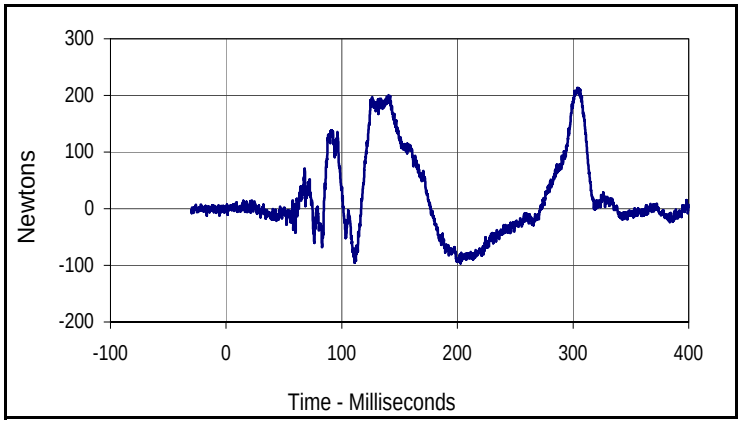


Curve Description			
LR Passenger Upper Neck Moment Z			
CURNO	Type	SAE Class	Units
139	FIL	600	Newtons
Max	Time	Min	Time
11.8	107.2	-7.8	319.0

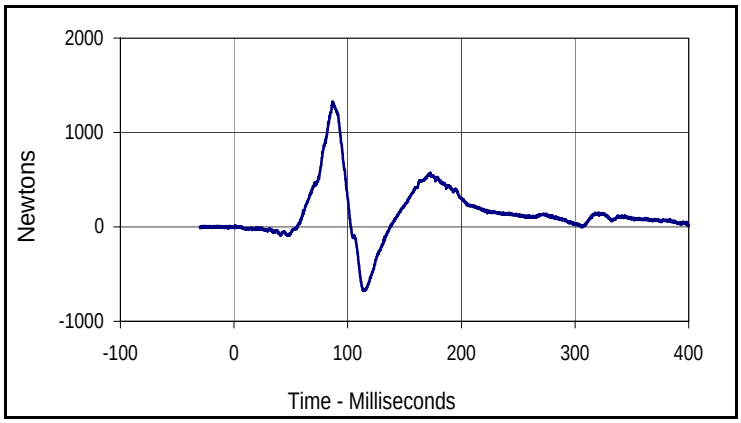


Curve Description			
LR Passenger Lower Neck Force X			
CURNO	Type	SAE Class	Units
140	FIL	1000	Newtons
Max	Time	Min	Time
1091.6	94.0	-104.3	196.0

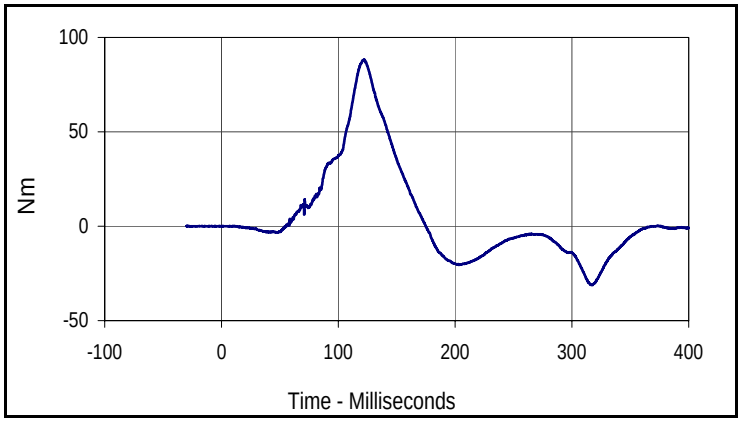
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



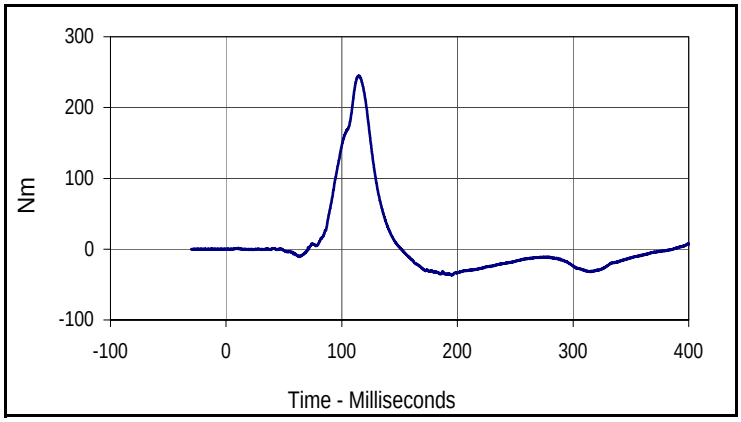
Curve Description			
LR Passenger Lower Neck Force Y			
CURNO	Type	SAE Class	Units
141	FIL	1000	Newtons
Max	Time	Min	Time
213.4	303.8	-96.6	202.8



Curve Description			
LR Passenger Lower Neck Force Z			
CURNO	Type	SAE Class	Units
142	FIL	1000	Newtons
Max	Time	Min	Time
1329.7	86.9	-677.1	114.4

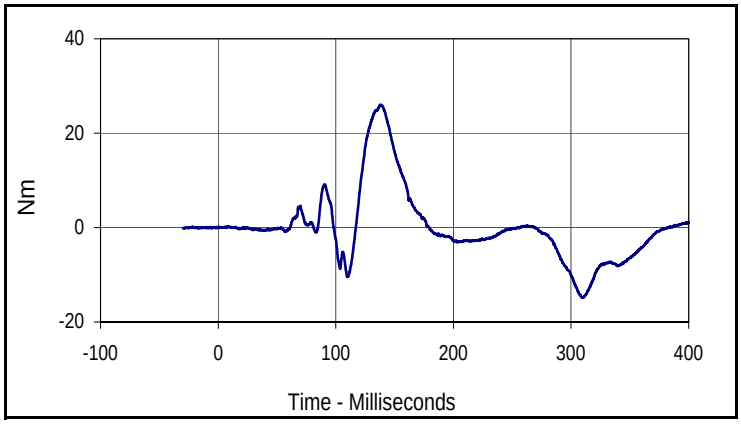


Curve Description			
LR Passenger Lower Neck Moment X			
CURNO	Type	SAE Class	Units
143	FIL	600	Nm
Max	Time	Min	Time
88.3	122.1	-31.2	316.8

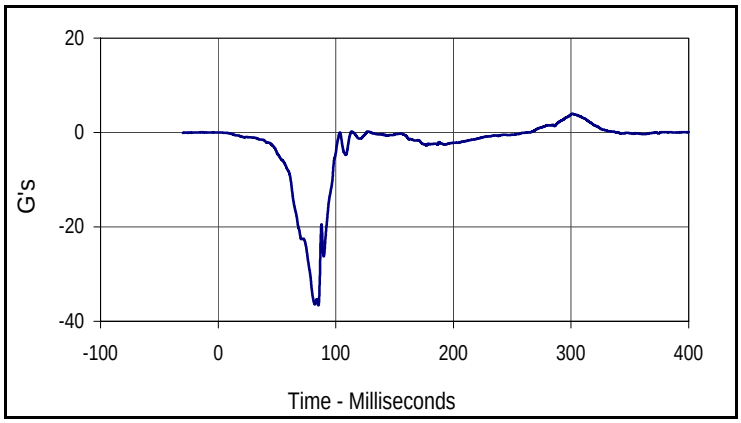


Curve Description			
LR Passenger Lower Neck Moment Y			
CURNO	Type	SAE Class	Units
144	FIL	600	Nm
Max	Time	Min	Time
245.3	114.8	-37.2	195.5

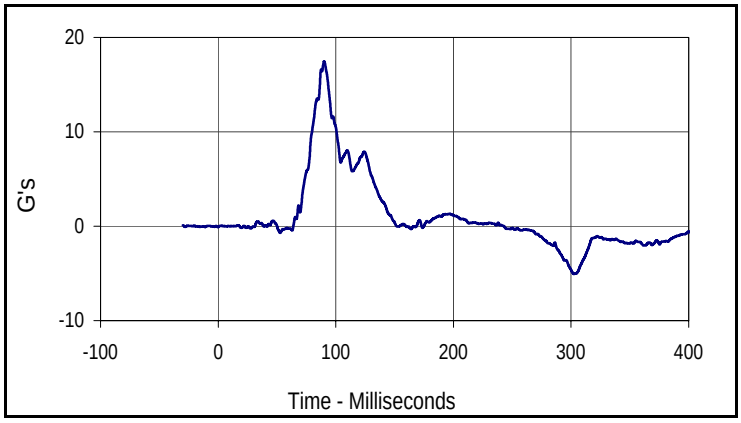
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



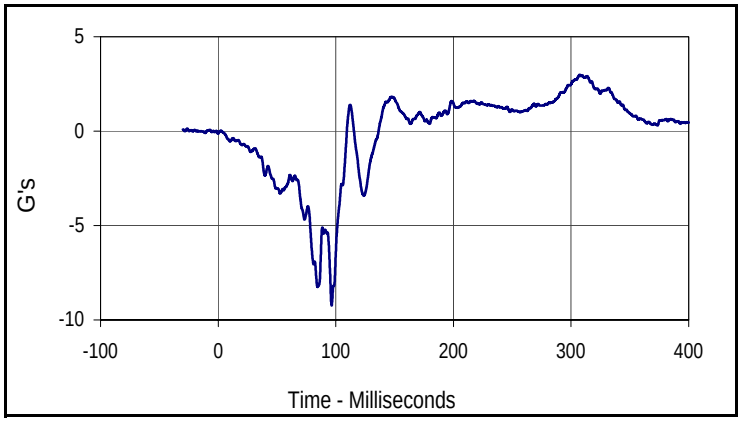
Curve Description			
LR Passenger Lower Neck Moment Z			
CURNO	Type	SAE Class	Units
145	FIL	600	Nm
Max	Time	Min	Time
26.0	137.8	-14.9	310.5



Curve Description			
LR Passenger Chest X Primary			
CURNO	Type	SAE Class	Units
146	FIL	180	G's
Max	Time	Min	Time
4.0	301.2	-36.6	85.3

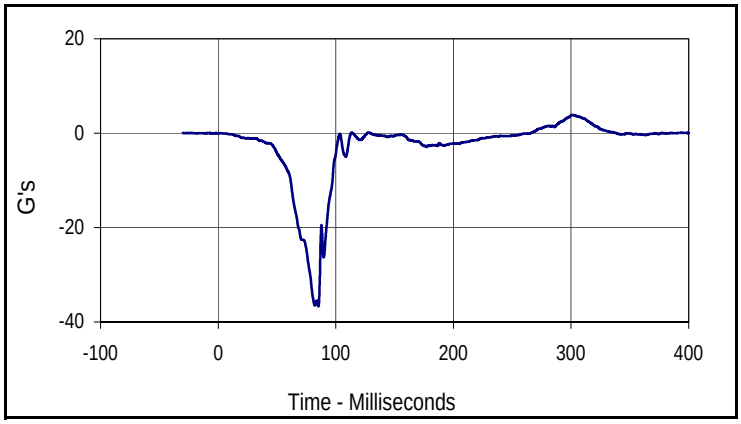


Curve Description			
LR Passenger Chest Y Primary			
CURNO	Type	SAE Class	Units
147	FIL	180	G's
Max	Time	Min	Time
17.4	90.1	-5.1	302.6

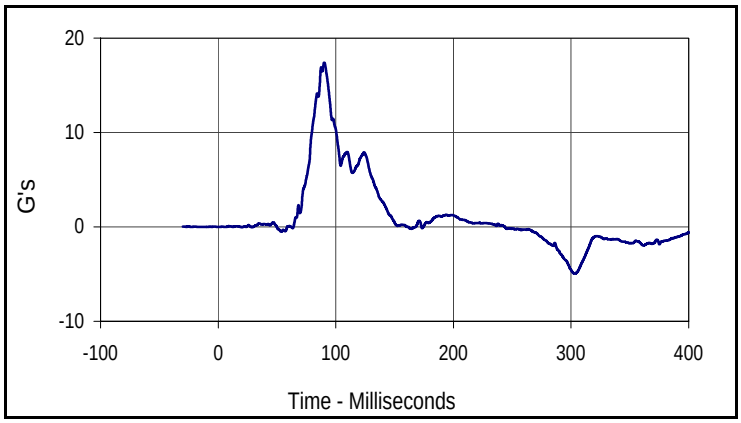


Curve Description			
LR Passenger Chest Z Primary			
CURNO	Type	SAE Class	Units
148	FIL	180	G's
Max	Time	Min	Time
3.0	307.5	-9.2	96.5

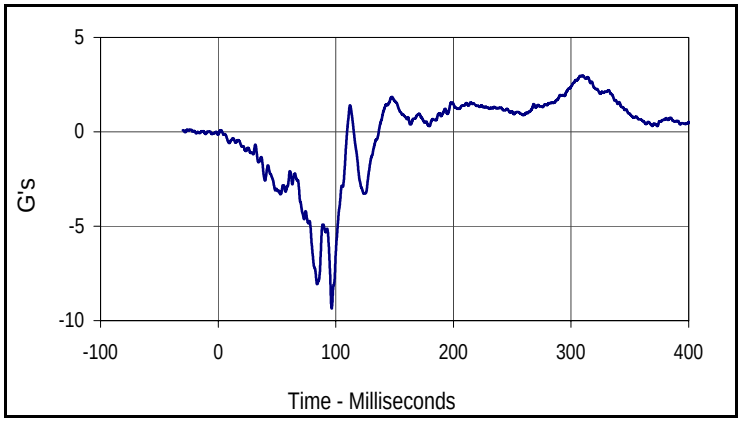
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



Curve Description			
LR Passenger Chest X Redundant			
CURNO	Type	SAE Class	Units
149	FIL	180	G's
Max	Time	Min	Time
3.9	301.2	-36.7	85.2

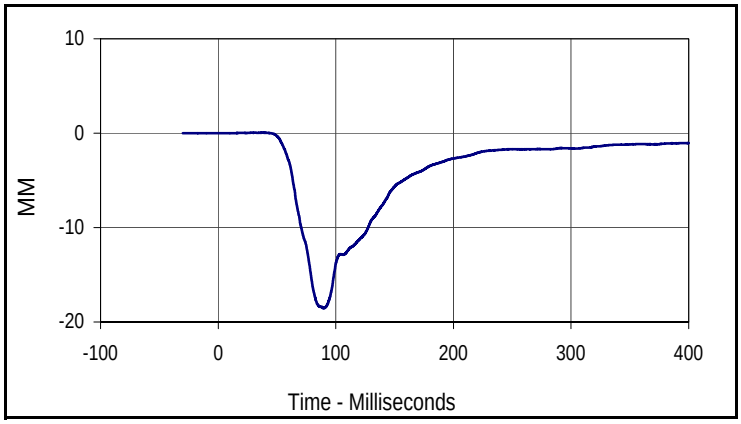


Curve Description			
LR Passenger Chest Y Redundant			
CURNO	Type	SAE Class	Units
150	FIL	180	G's
Max	Time	Min	Time
17.4	90.3	-5.0	303.4

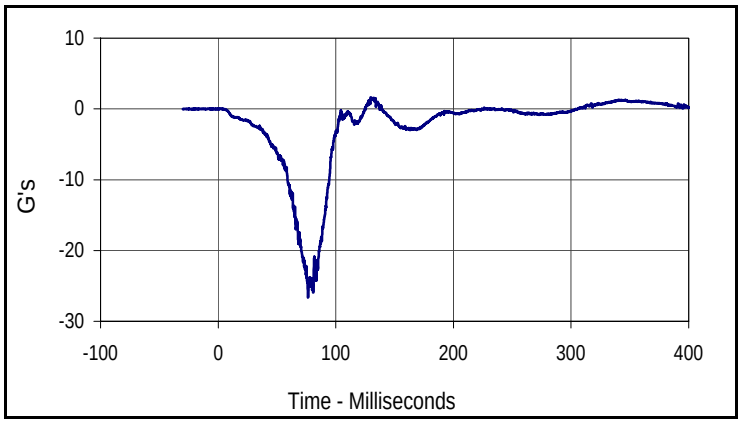


Curve Description			
LR Passenger Chest Z Redundant			
CURNO	Type	SAE Class	Units
151	FIL	180	G's
Max	Time	Min	Time
3.0	309.9	-9.4	96.5

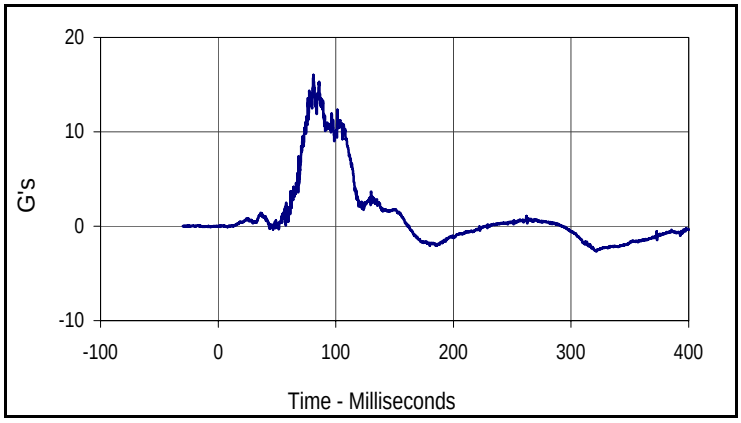
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



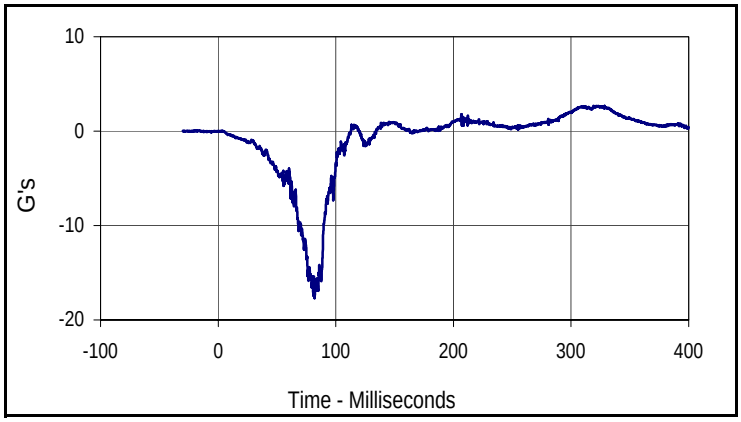
Curve Description			
LR Passenger Chest Deflection			
CURNO	Type	SAE Class	Units
152	FIL	600	MM
Max	Time	Min	Time
0.1	38.2	-18.5	90.1



Curve Description			
LR Passenger Pelvis X Primary			
CURNO	Type	SAE Class	Units
153	FIL	1000	G's
Max	Time	Min	Time
1.7	129.8	-26.6	76.4

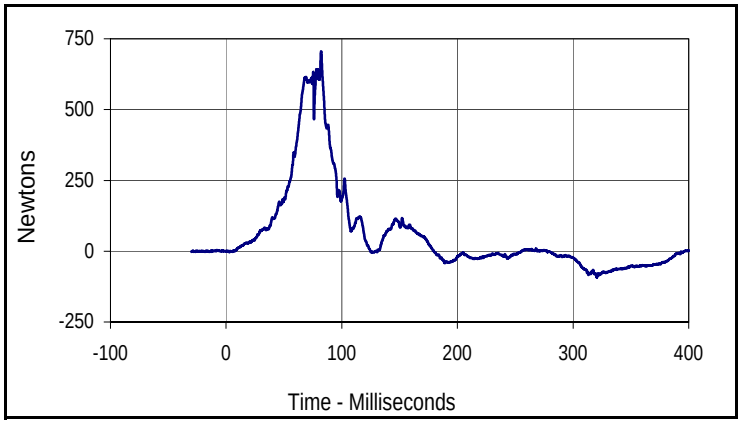


Curve Description			
LR Passenger Pelvis Y Primary			
CURNO	Type	SAE Class	Units
154	FIL	1000	G's
Max	Time	Min	Time
16.0	80.9	-2.7	321.5

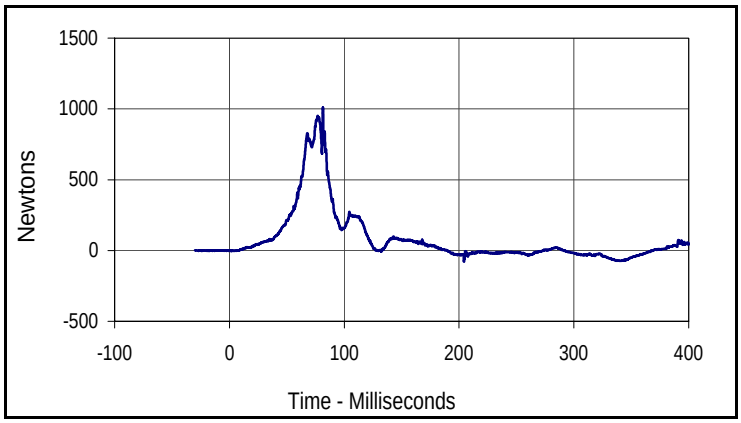


Curve Description			
LR Passenger Pelvis Z Primary			
CURNO	Type	SAE Class	Units
155	FIL	1000	G's
Max	Time	Min	Time
2.7	319.2	-17.7	82.0

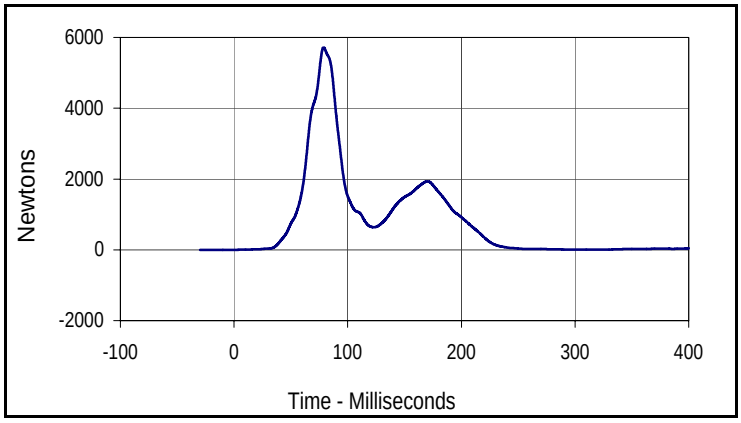
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



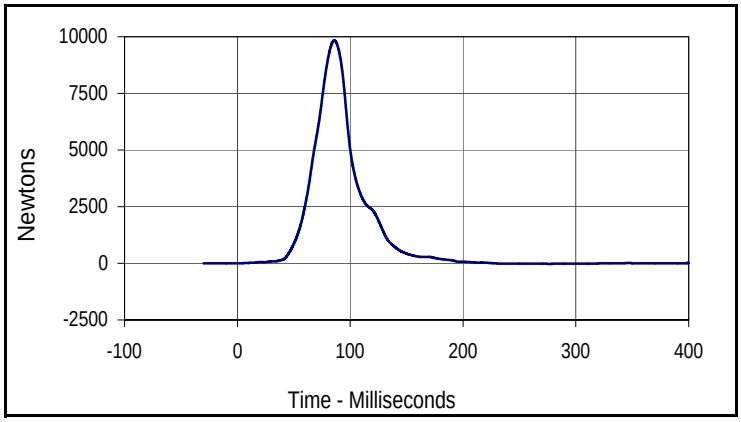
Curve Description			
LR Passenger Left Femur Force Z			
CURNO	Type	SAE Class	Units
156	FIL	600	Newtons
Max	Time	Min	Time
705.8	82.2	-92.5	320.6



Curve Description			
LR Passenger Right Femur Force Z			
CURNO	Type	SAE Class	Units
157	FIL	600	Newtons
Max	Time	Min	Time
1009.4	81.4	-79.4	204.3

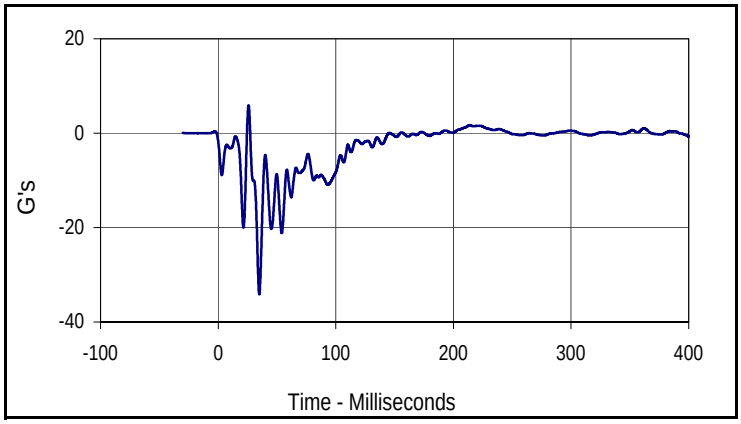


Curve Description			
LR Passenger Lap Belt Force			
CURNO	Type	SAE Class	Units
158	FIL	60	Newtons
Max	Time	Min	Time
5715.2	78.8	0.3	0.0

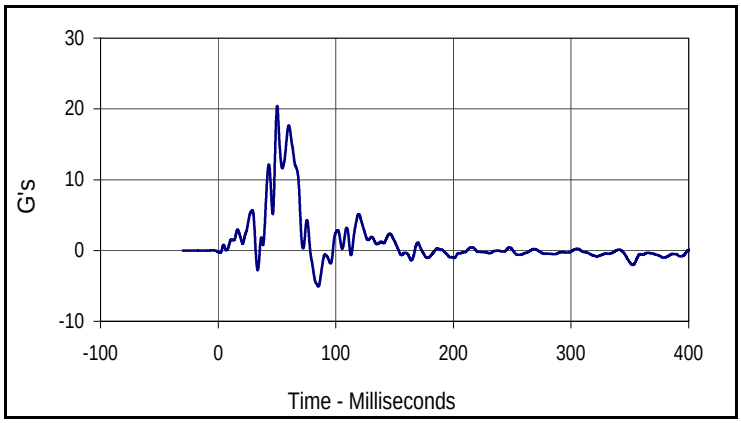


Curve Description			
LR Passenger Shoulder Belt Force			
CURNO	Type	SAE Class	Units
159	FIL	60	Newtons
Max	Time	Min	Time
9838.4	85.9	-22.3	277.0

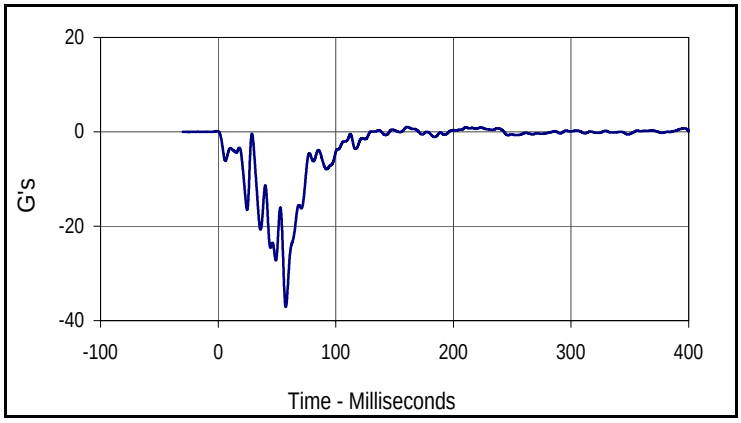
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



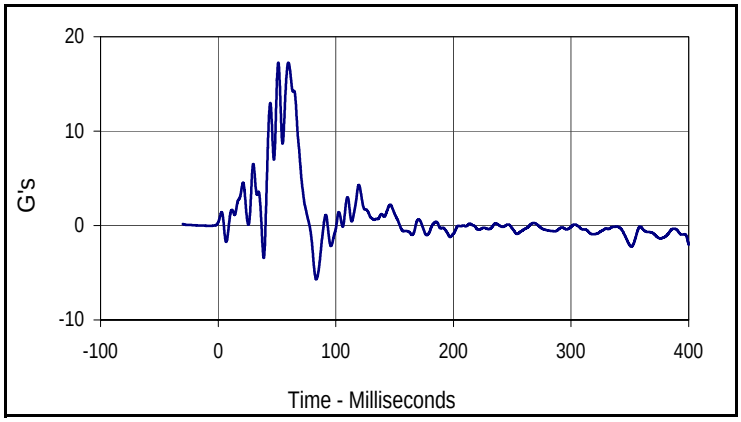
Curve Description			
Vehicle Left Rear Sill X			
CURNO	Type	SAE Class	Units
160	FIL	60	G's
Max	Time	Min	Time
5.9	25.8	-34.1	35.0



Curve Description			
Vehicle Left Rear Sill Y			
CURNO	Type	SAE Class	Units
161	FIL	60	G's
Max	Time	Min	Time
20.4	50.2	-5.1	85.2

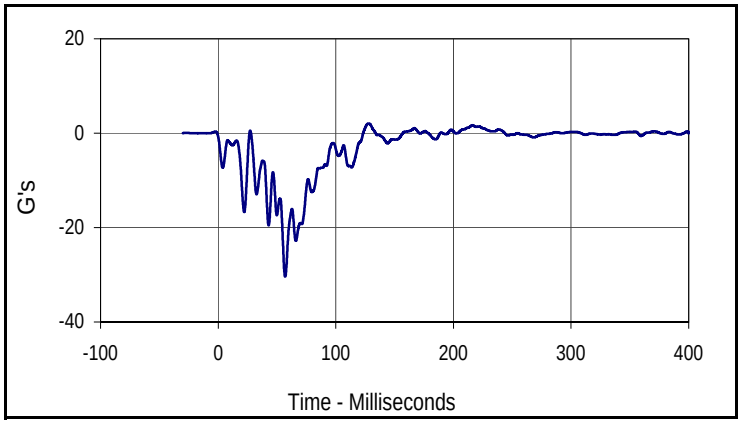


Curve Description			
Vehicle Right Rear Sill X			
CURNO	Type	SAE Class	Units
162	FIL	60	G's
Max	Time	Min	Time
1.0	160.7	-37.1	57.5

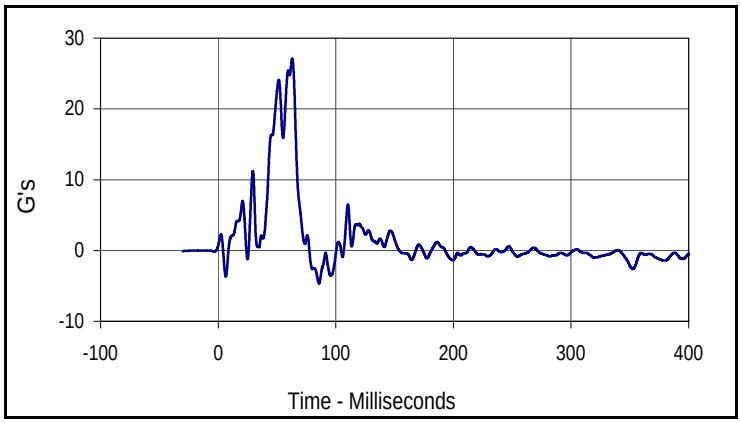


Curve Description			
Vehicle Right Rear Sill Y			
CURNO	Type	SAE Class	Units
163	FIL	60	G's
Max	Time	Min	Time
17.3	51.1	-5.7	83.4

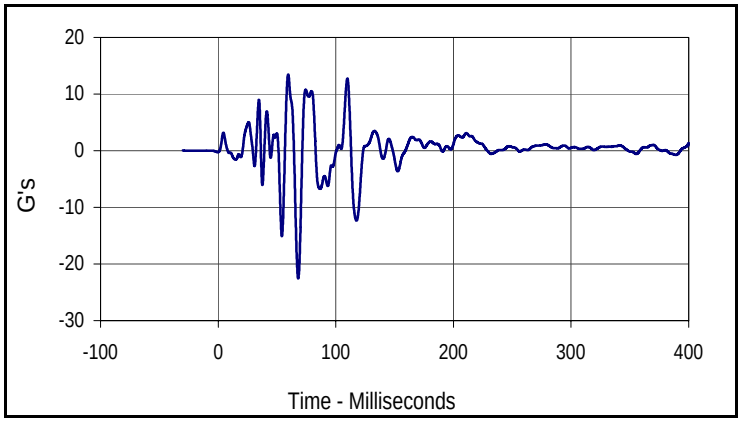
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



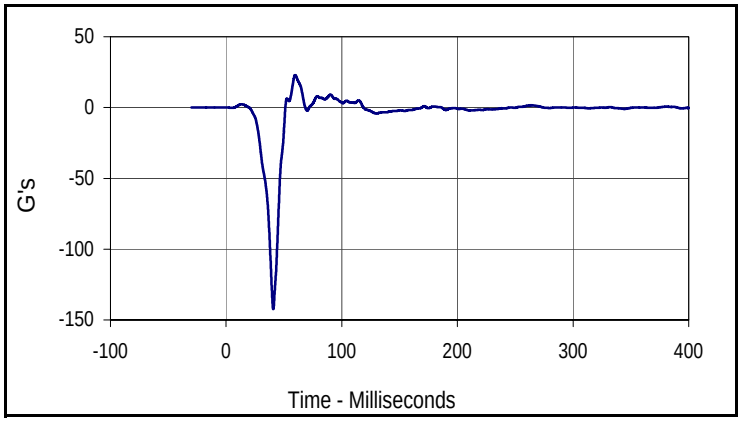
Curve Description			
Vehicle CG X			
CURNO	Type	SAE Class	Units
164	FIL	60	G's
Max	Time	Min	Time
2.0	128.0	-30.4	57.0



Curve Description			
Vehicle CG Y			
CURNO	Type	SAE Class	Units
165	FIL	60	G's
Max	Time	Min	Time
27.1	62.9	-4.7	85.8

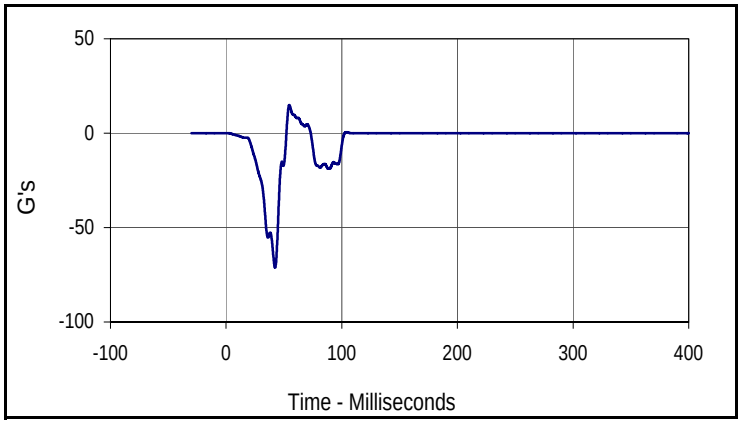


Curve Description			
Vehicle CG Z			
CURNO	Type	SAE Class	Units
166	FIL	60	G's
Max	Time	Min	Time
13.4	59.5	-22.6	68.1



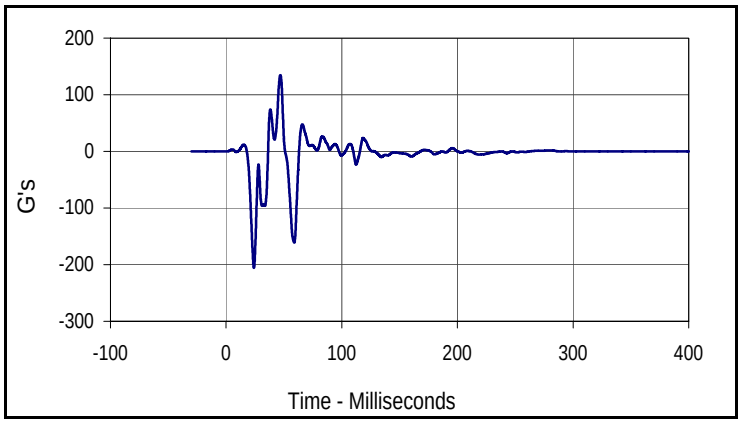
Curve Description			
Vehicle Engine Top X			
CURNO	Type	SAE Class	Units
167	FIL	60	G's
Max	Time	Min	Time
22.9	59.7	-142.4	40.8

Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



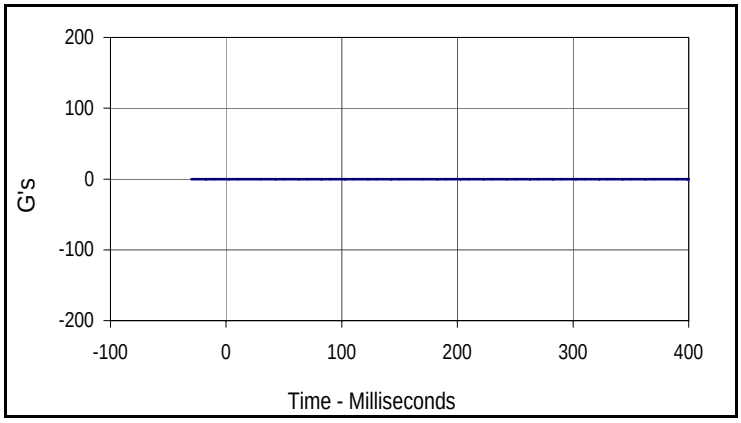
Curve Description			
Vehicle Engine Bottom X			
CURNO	Type	SAE Class	Units
168	FIL	60	G's
Max	Time	Min	Time
14.9	54.6	-71.2	42.3

* Channel failed at 100.0 msec



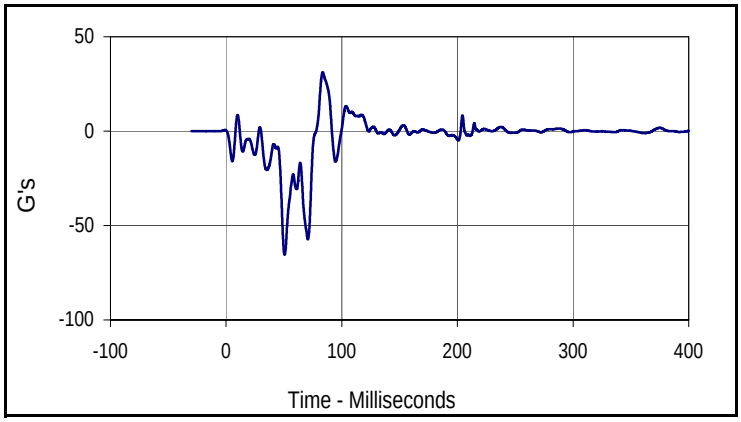
Curve Description			
Vehicle Left Brake Caliper X			
CURNO	Type	SAE Class	Units
169	FIL	60	G's
Max	Time	Min	Time
134.6	47.0	-205.8	24.1

* Channel failed at 300.0 msec



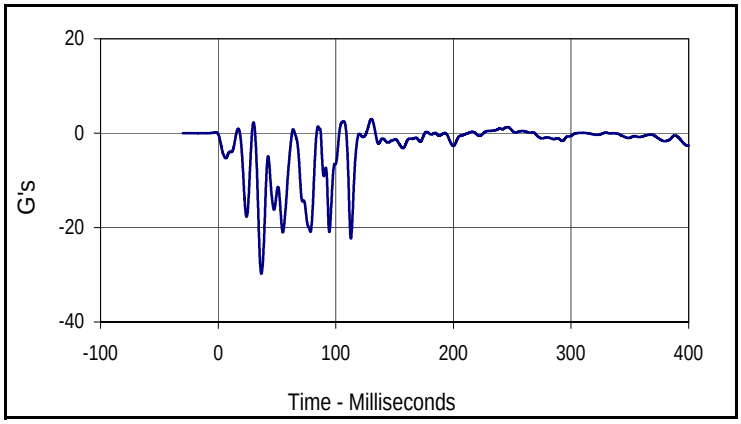
Curve Description			
Vehicle Right Brake Caliper X			
CURNO	Type	SAE Class	Units
170	FIL	60	G's
Max	Time	Min	Time
0.0	0.0	0.0	0.0

* Channel failed, no data

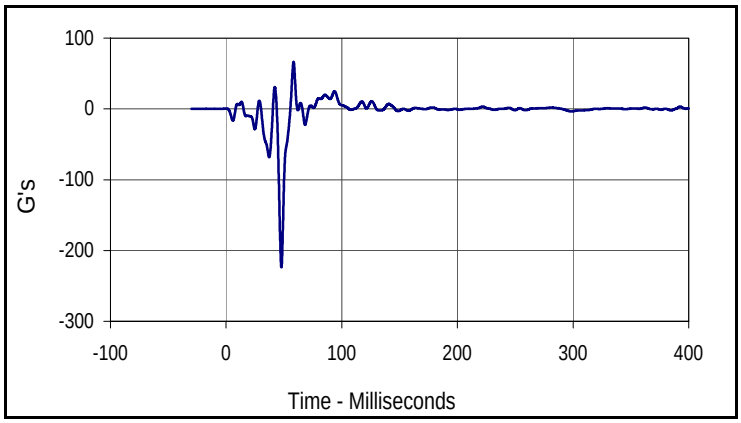


Curve Description			
Vehicle Instrument Panel X			
CURNO	Type	SAE Class	Units
171	FIL	60	G's
Max	Time	Min	Time
31.3	83.6	-65.4	50.6

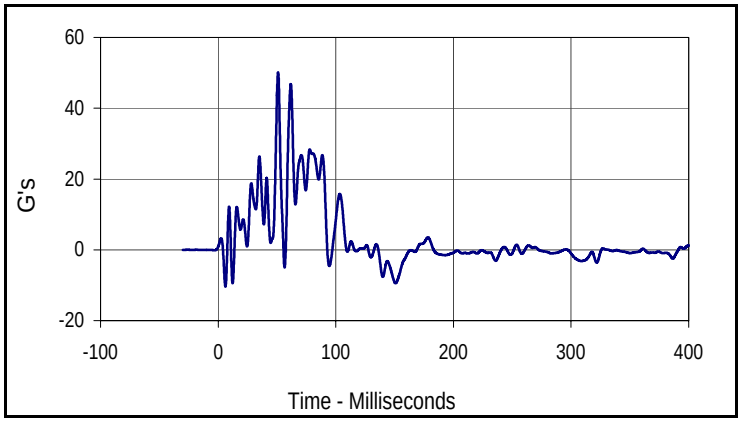
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



Curve Description			
Vehicle Left Driver Mid Seat Track X			
CURNO	Type	SAE Class	Units
172	FIL	60	G's
Max	Time	Min	Time
3.0	130.2	-29.7	36.7

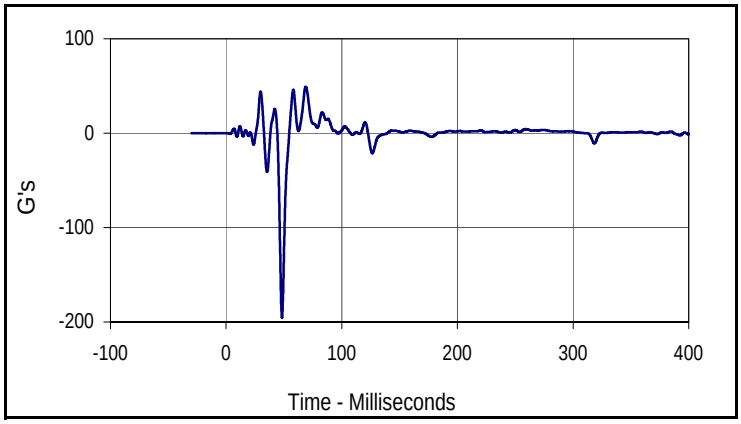


Curve Description			
Vehicle Accelerator Pedal X			
CURNO	Type	SAE Class	Units
173	FIL	60	G's
Max	Time	Min	Time
66.6	58.3	-223.6	47.8

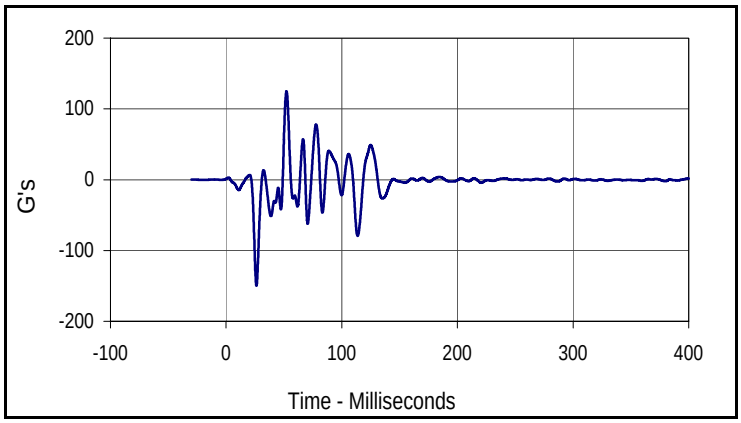


Curve Description			
Vehicle Accelerator Pedal Y			
CURNO	Type	SAE Class	Units
174	FIL	60	G's
Max	Time	Min	Time
50.1	50.9	-10.4	6.2

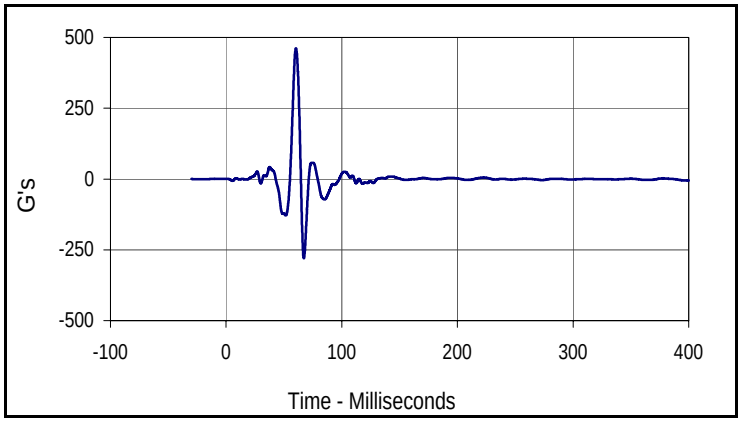
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



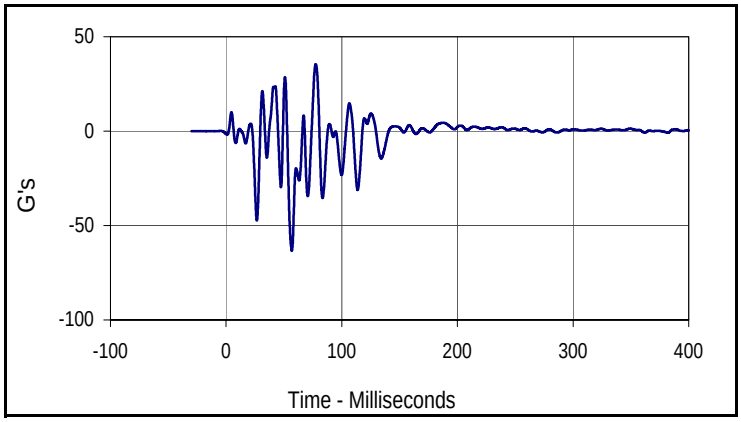
Curve Description			
Vehicle Accelerator Pedal Z			
CURNO	Type	SAE Class	Units
175	FIL	60	G's
Max	Time	Min	Time
49.2	68.8	-195.5	48.3



Curve Description			
Vehicle Brake Pedal X			
CURNO	Type	SAE Class	Units
176	FIL	60	G's
Max	Time	Min	Time
124.9	52.2	-149.9	26.2

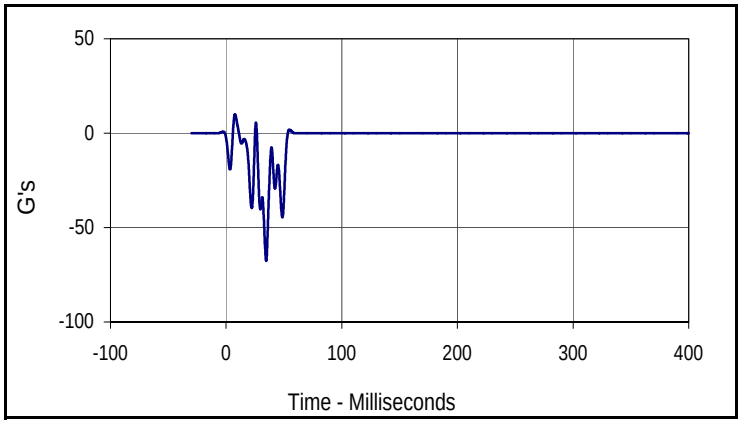


Curve Description			
Vehicle Brake Pedal Y			
CURNO	Type	SAE Class	Units
177	FIL	60	G's
Max	Time	Min	Time
461.9	60.4	-280.1	67.2



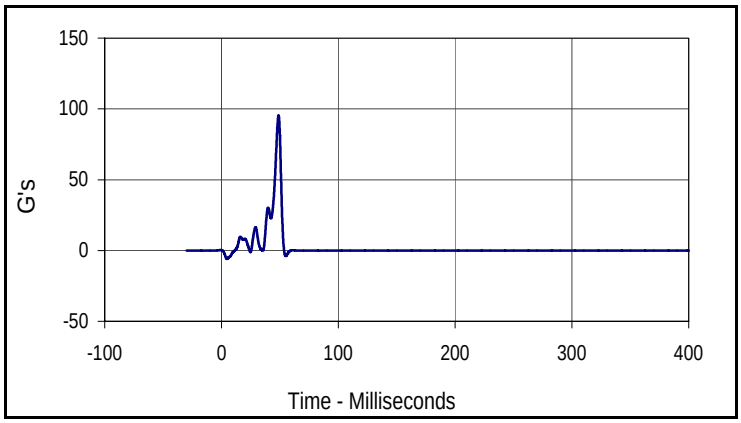
Curve Description			
Vehicle Brake Pedal Z			
CURNO	Type	SAE Class	Units
178	FIL	60	G's
Max	Time	Min	Time
35.4	77.5	-63.3	56.9

Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



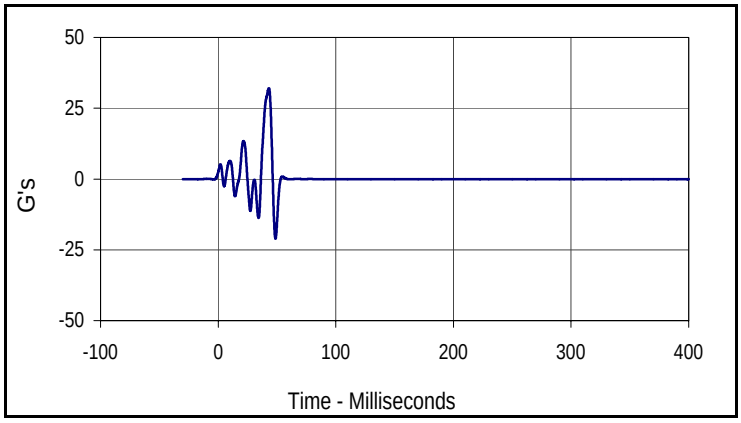
Curve Description			
Vehicle Foot Rest X			
CURNO	Type	SAE Class	Units
179	FIL	60	G's
Max	Time	Min	Time
10.0	7.7	-67.7	34.7

* Channe failed at 50.5 msec



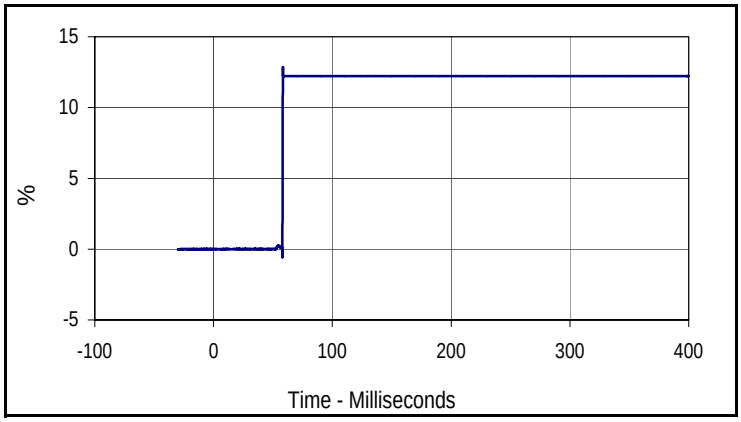
Curve Description			
Vehicle Foot Rest Y			
CURNO	Type	SAE Class	Units
180	FIL	60	G's
Max	Time	Min	Time
95.5	48.9	-6.0	4.6

* Channe failed at 50.5 msec



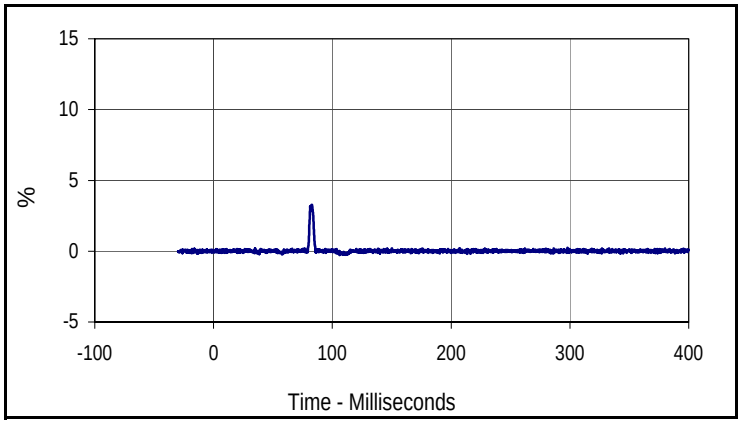
Curve Description			
Vehicle Foot Rest Z			
CURNO	Type	SAE Class	Units
181	FIL	60	G's
Max	Time	Min	Time
32.1	43.1	-21.1	48.7

* Channe failed at 50.5 msec

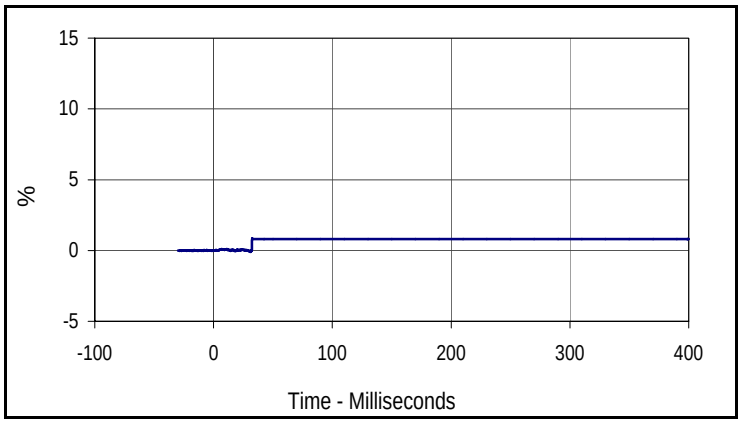


Curve Description			
Driver Foot Rest Contact			
CURNO	Type	SAE Class	Units
182	FIL	1000	%
Max	Time	Min	Time
12.9	58.4	-0.6	57.9

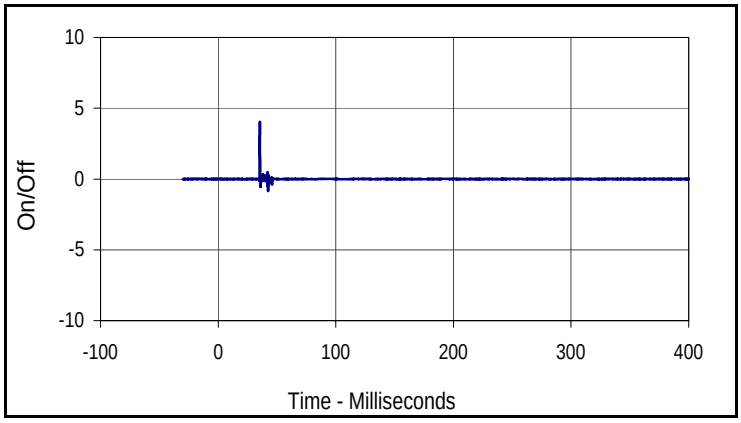
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



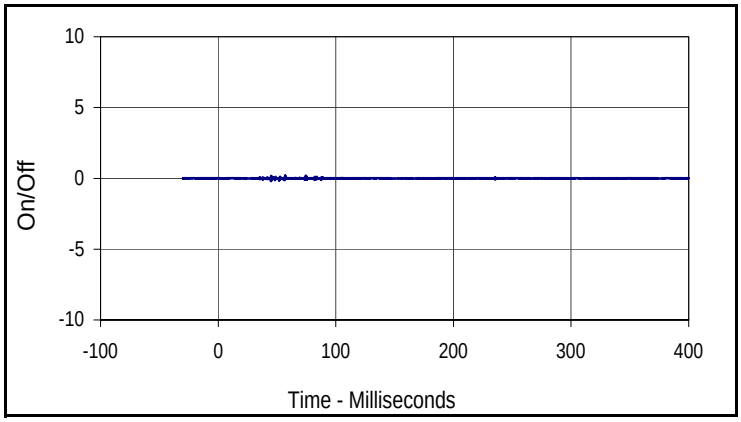
Curve Description			
Driver Accelerator Pedal Contact			
CURNO	Type	SAE Class	Units
183	FIL	1000	%
Max	Time	Min	Time
3.3	82.8	-0.3	106.0



Curve Description			
Driver Knee Contact			
CURNO	Type	SAE Class	Units
184	FIL	1000	%
Max	Time	Min	Time
0.8	32.6	-0.1	30.7

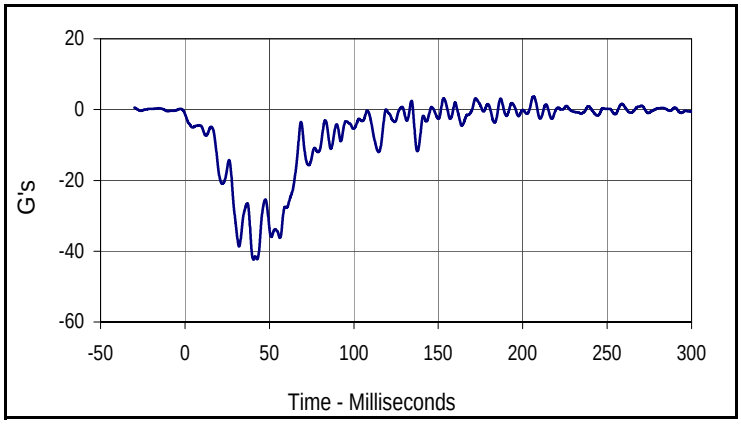


Curve Description			
Driver Airbag Squib Stage 1			
CURNO	Type	SAE Class	Units
185	FIL	1000	On/Off
Max	Time	Min	Time
4.0	35.5	-0.9	42.5

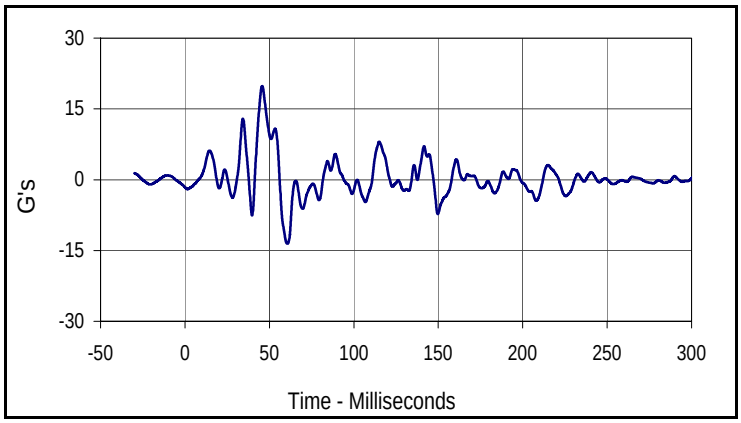


Curve Description			
Driver Airbag Squib Stage 2			
CURNO	Type	SAE Class	Units
186	FIL	1000	On/Off
Max	Time	Min	Time
0.2	57.0	-0.2	44.9

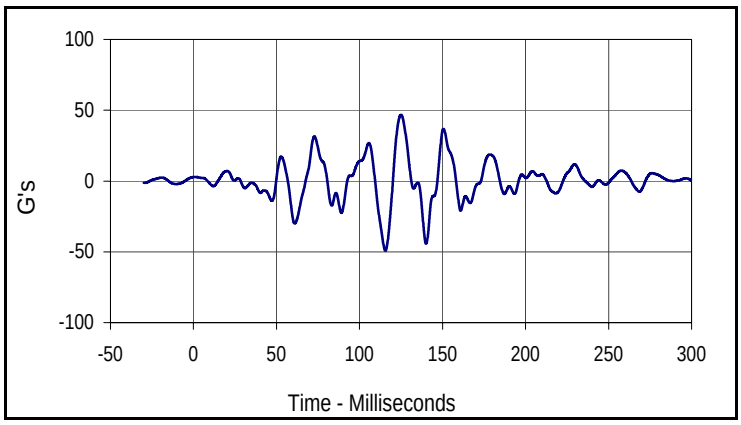
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	Test Date:	12/9/09
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Project No.:	R70207



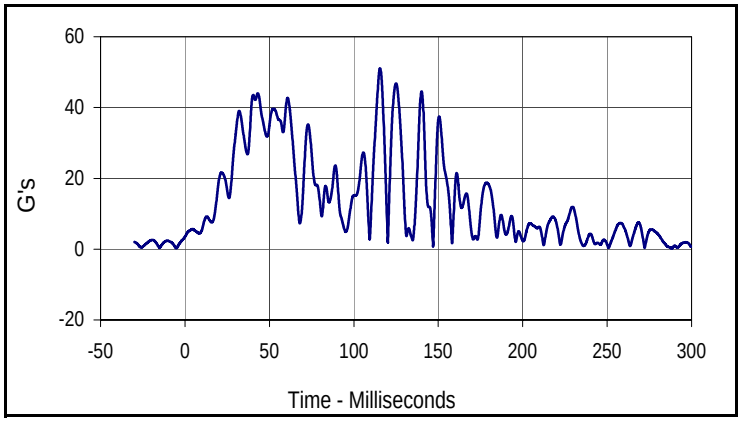
Curve Description			
MDB CG X			
CURNO	Type	SAE Class	Units
187	FIL	60	G's
Max	Time	Min	Time
3.7	206.4	-42.4	40.6



Curve Description			
MDB CG Y			
CURNO	Type	SAE Class	Units
188	FIL	60	G's
Max	Time	Min	Time
19.8	45.7	-13.5	60.5

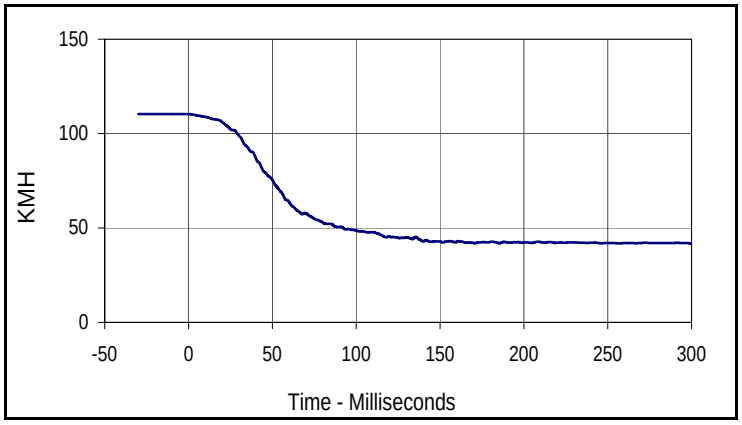


Curve Description			
MDB CG Z			
CURNO	Type	SAE Class	Units
189	FIL	60	G's
Max	Time	Min	Time
46.7	125.0	-49.1	115.6

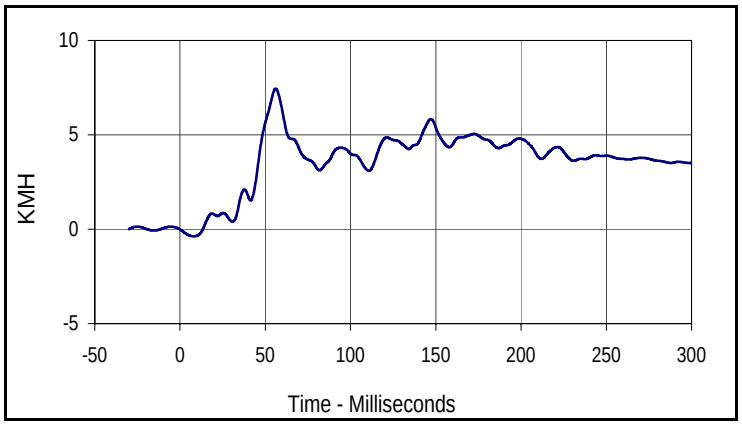


Curve Description			
MDB CG Resultant			
CURNO	Type	SAE Class	Units
187	RES	60	G's
Max	Time	Min	Time
51.0	115.5	0.2	-5.2

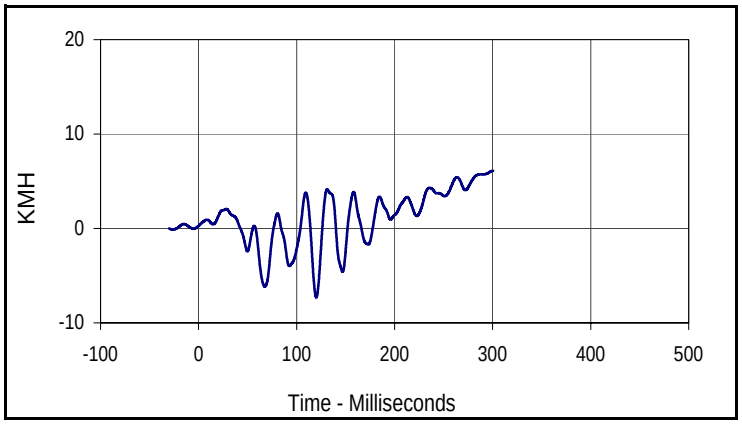
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	Test Date:	12/9/09
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Project No.:	R70207



Curve Description			
MDB CG X Velocity			
CURNO	Type	SAE Class	Units
187	IN1	180	KMH
Max	Time	Min	Time
110.4	-11.9	41.9	170.9

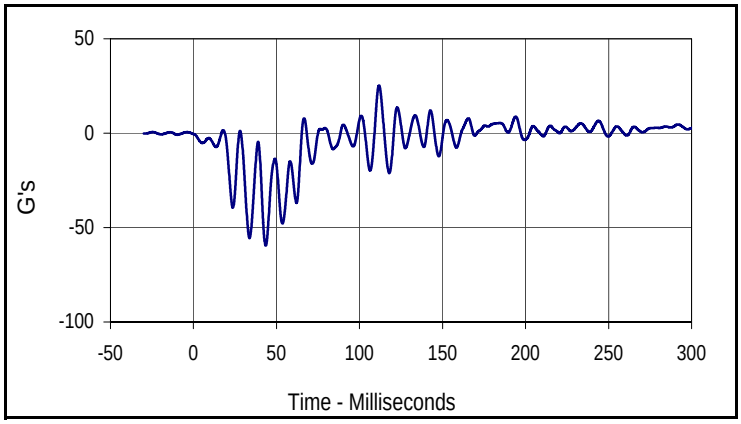


Curve Description			
MDB CG Y Velocity			
CURNO	Type	SAE Class	Units
188	IN1	180	KMH
Max	Time	Min	Time
7.4	56.1	-0.4	8.0

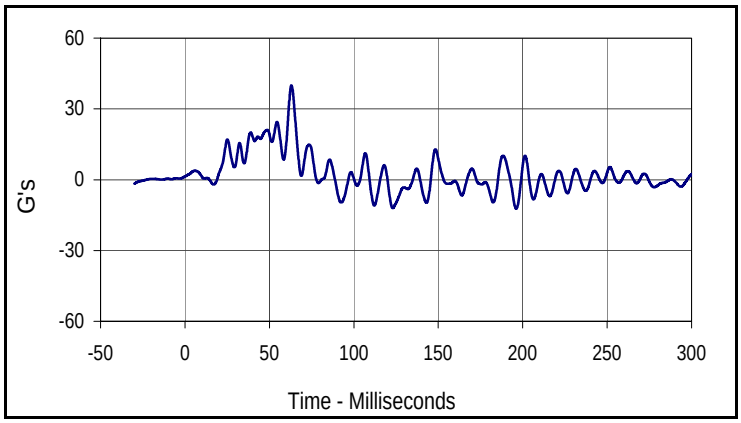


Curve Description			
MDB CG Z Velocity			
CURNO	Type	SAE Class	Units
189	IN1	180	KMH
Max	Time	Min	Time
4.3	235.0	-7.3	120.1

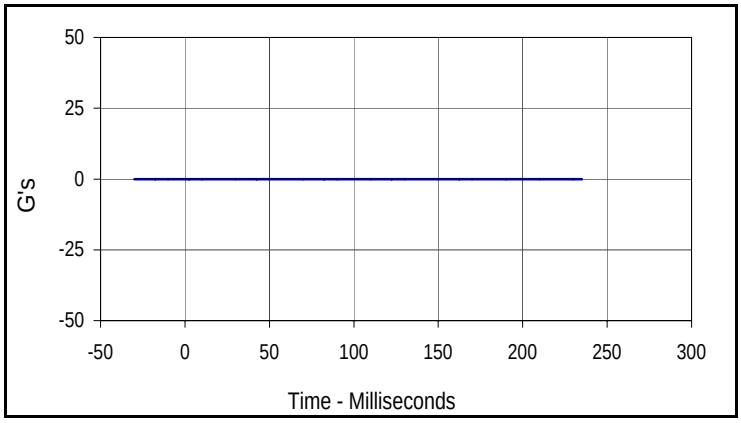
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	Test Date:	12/9/09
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Project No.:	R70207



Curve Description			
MDB Rear X			
CURNO	Type	SAE Class	Units
190	FIL	60	G's
Max	Time	Min	Time
25.3	111.8	-59.5	43.5

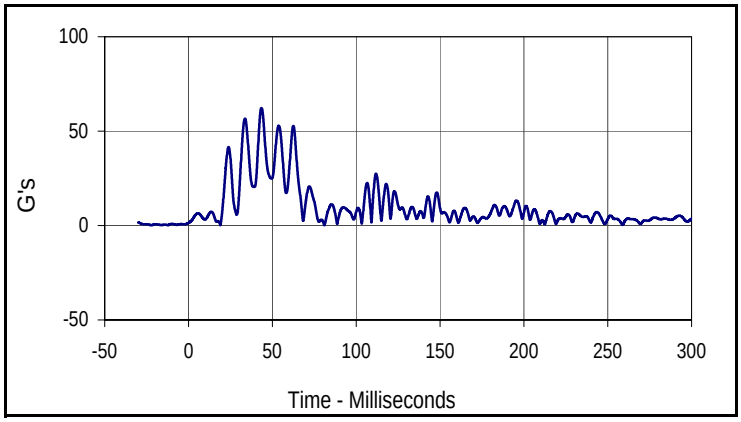


Curve Description			
MDB Rear Y			
CURNO	Type	SAE Class	Units
191	FIL	60	G's
Max	Time	Min	Time
39.9	63.0	-12.3	196.2



Curve Description			
MDB Rear Z			
CURNO	Type	SAE Class	Units
192	FIL	60	G's
Max	Time	Min	Time
0.0	-15.0	0.0	-15.0

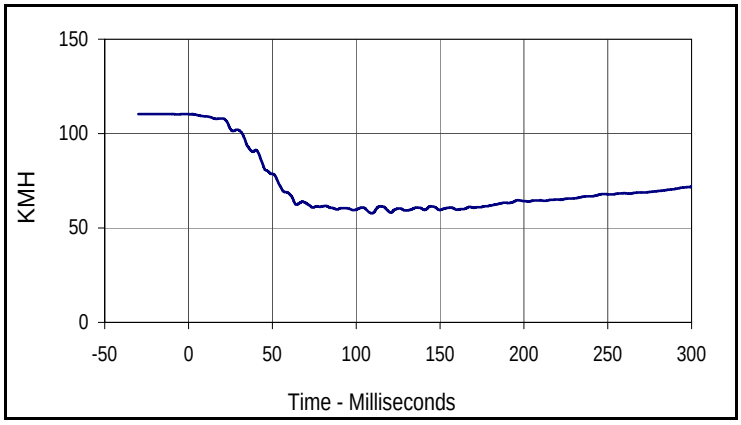
* Channel failed, no data



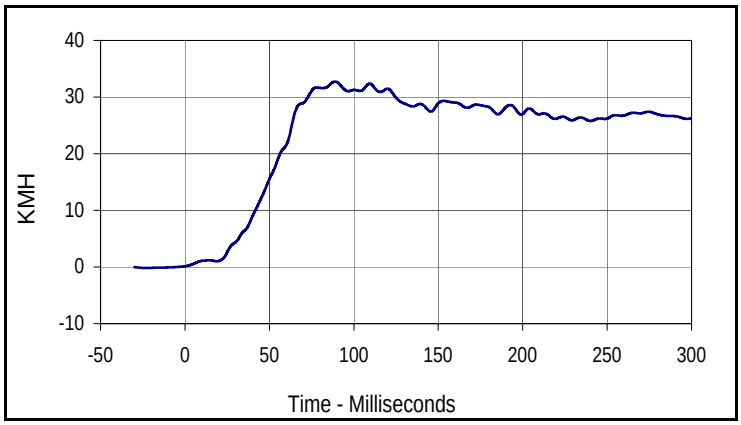
Curve Description			
MDB Rear Resultant			
CURNO	Type	SAE Class	Units
190	RES	60	G's
Max	Time	Min	Time
62.2	43.5	0.1	81.0

* X-Y Resultant only

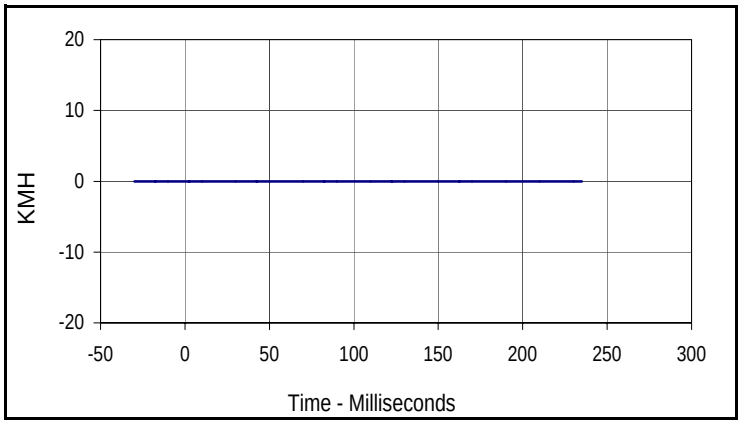
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	Test Date:	12/9/09
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Project No.:	R70207



Curve Description			
MDB Rear X Velocity			
CURNO	Type	SAE Class	Units
190	IN1	180	KMH
Max	Time	Min	Time
110.4	-12.1	57.7	109.3



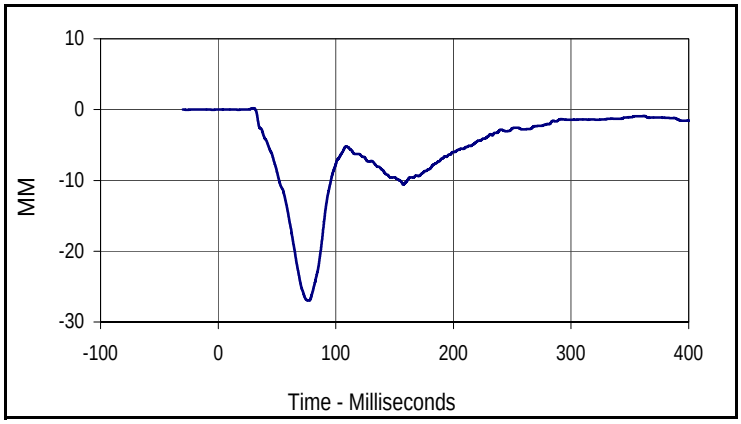
Curve Description			
MDB Rear Y Velocity			
CURNO	Type	SAE Class	Units
191	IN1	180	KMH
Max	Time	Min	Time
32.7	88.8	-0.1	-15.0



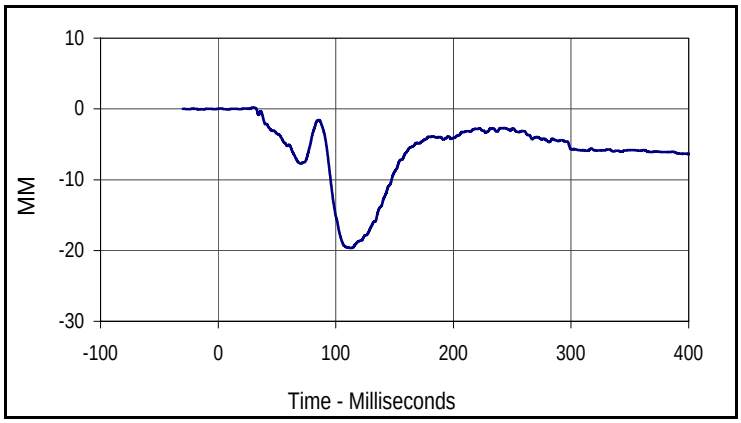
Curve Description			
MDB Rear Z Velocity			
CURNO	Type	SAE Class	Units
192	IN1	180	KMH
Max	Time	Min	Time
0.0	-15.0	0.0	-15.0

* Channel failed, no data

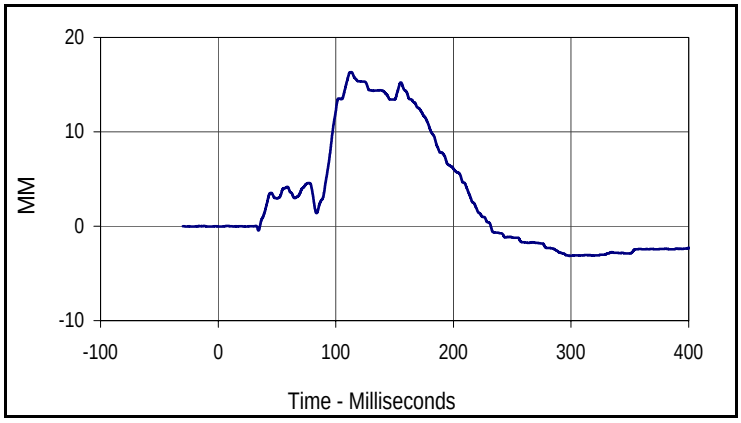
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



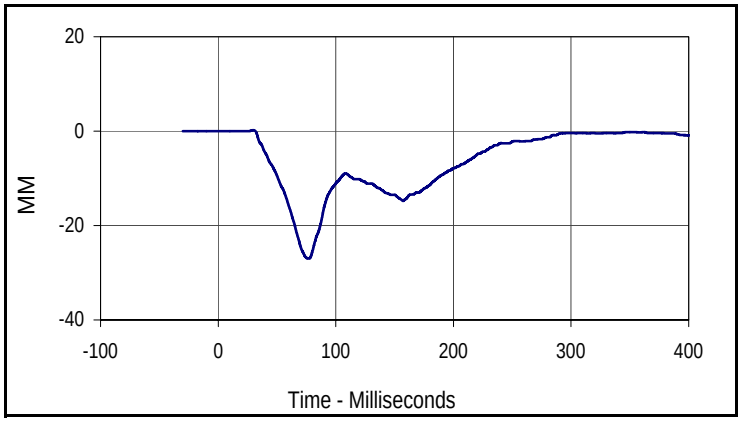
Curve Description			
Driver THOR CRUX Upper Right X			
CURNO	Type	SAE Class	Units
193	CALC	N/A	MM
Max	Time	Min	Time
0.2	29.5	-27.0	76.7



Curve Description			
Driver THOR CRUX Upper Right Y			
CURNO	Type	SAE Class	Units
194	CALC	N/A	MM
Max	Time	Min	Time
0.2	29.6	-19.7	112.3

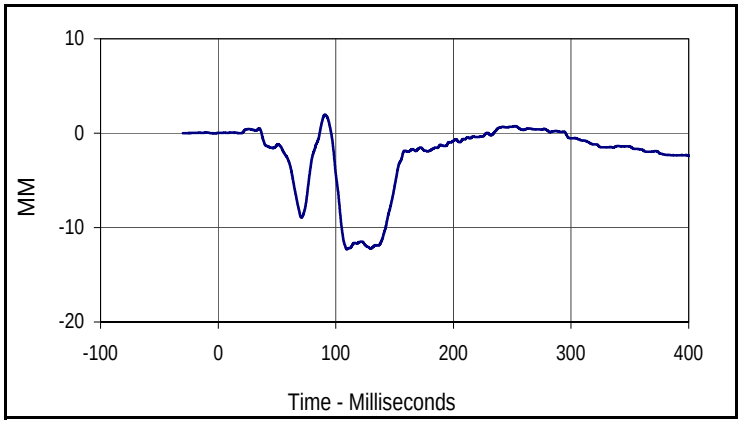


Curve Description			
Driver THOR CRUX Upper Right Z			
CURNO	Type	SAE Class	Units
195	CALC	N/A	MM
Max	Time	Min	Time
16.3	113.0	-3.1	298.2

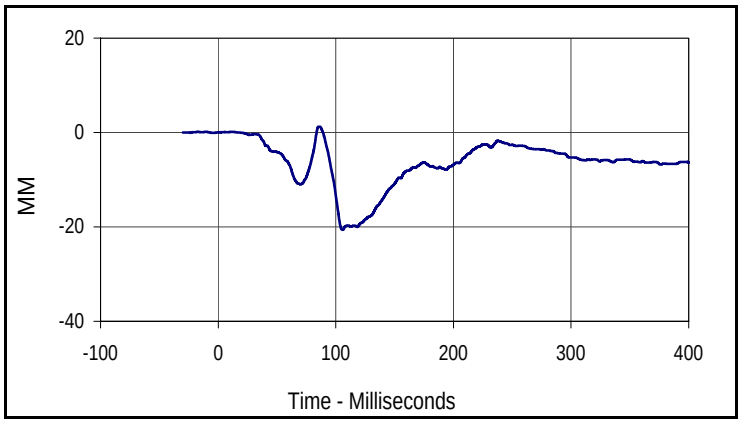


Curve Description			
Driver THOR CRUX Upper Right D			
CURNO	Type	SAE Class	Units
196	CALC	N/A	MM
Max	Time	Min	Time
0.2	29.7	-27.0	76.8

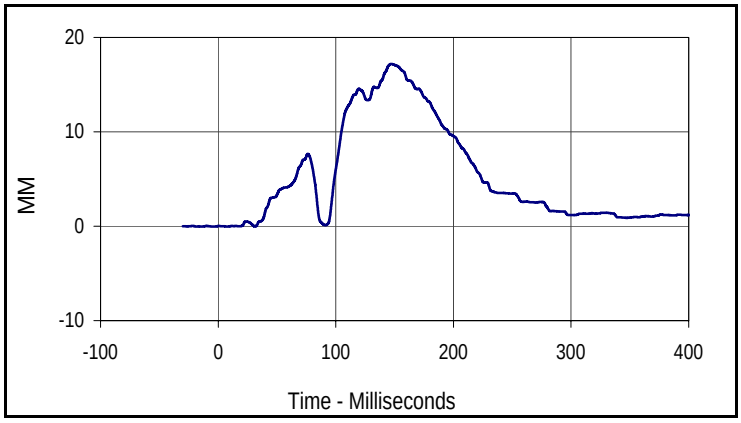
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



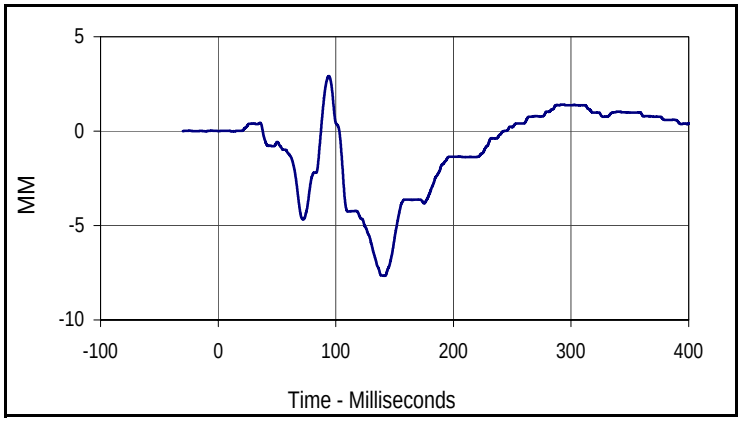
Curve Description			
Driver THOR CRUX Lower Right X			
CURNO	Type	SAE Class	Units
197	CALC	N/A	MM
Max	Time	Min	Time
2.0	90.7	-12.3	109.2



Curve Description			
Driver THOR CRUX Lower Right Y			
CURNO	Type	SAE Class	Units
198	CALC	N/A	MM
Max	Time	Min	Time
1.3	86.1	-20.6	105.5

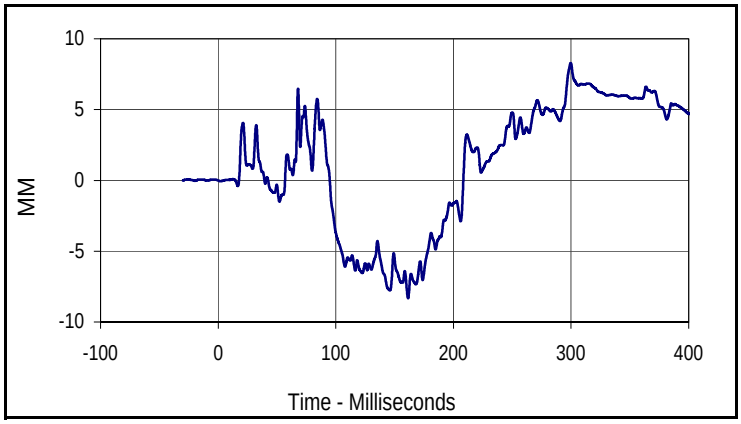


Curve Description			
Driver THOR CRUX Lower Right Z			
CURNO	Type	SAE Class	Units
199	CALC	N/A	MM
Max	Time	Min	Time
17.2	146.7	0.0	8.0

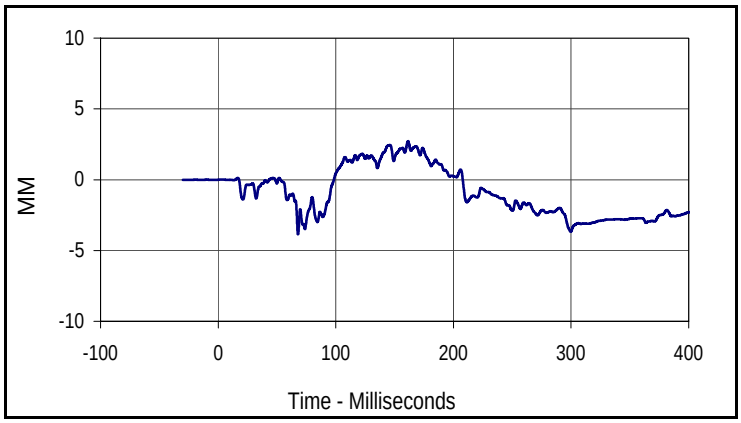


Curve Description			
Driver THOR CRUX Lower Right D			
CURNO	Type	SAE Class	Units
200	CALC	N/A	MM
Max	Time	Min	Time
2.9	94.0	-7.7	140.5

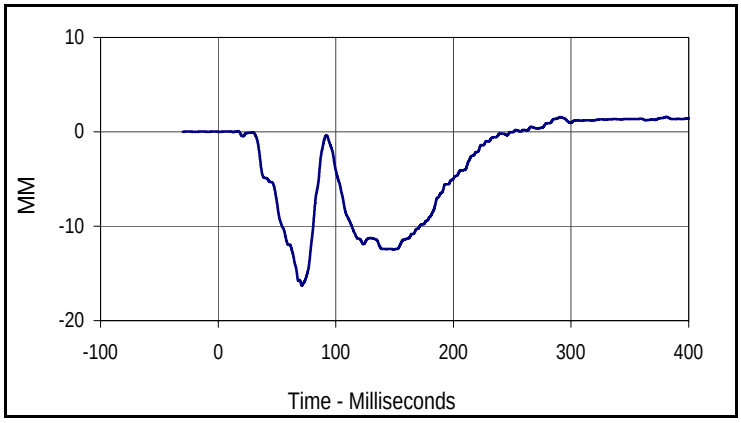
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



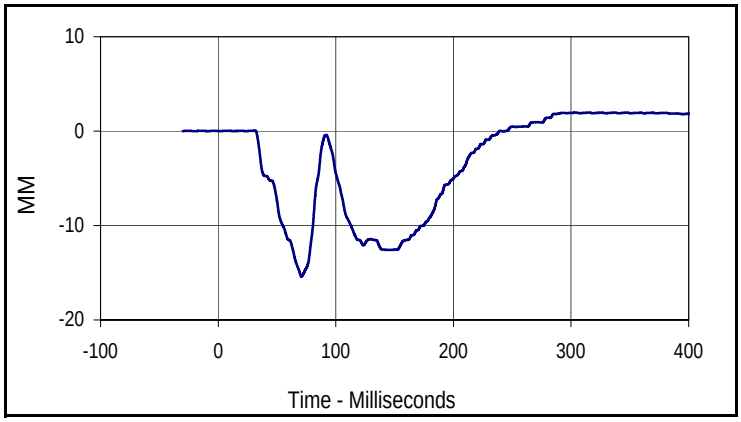
Curve Description			
Driver THOR CRUX Upper Left X			
CURNO	Type	SAE Class	Units
201	CALC	N/A	MM
Max	Time	Min	Time
8.3	299.7	-8.3	161.5



Curve Description			
Driver THOR CRUX Upper Left Y			
CURNO	Type	SAE Class	Units
202	CALC	N/A	MM
Max	Time	Min	Time
2.7	161.4	-3.9	67.9

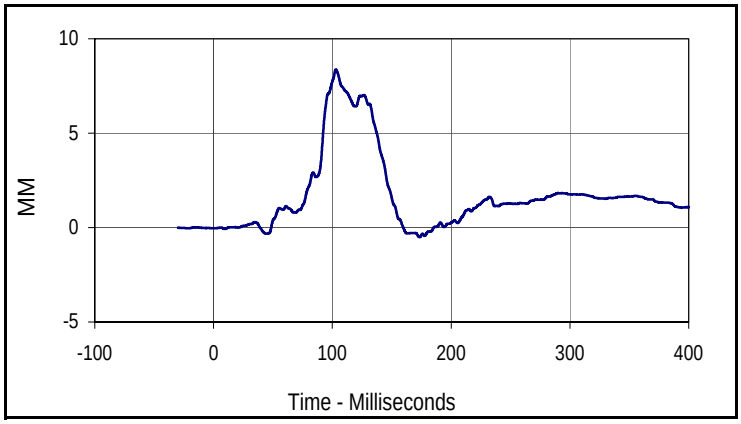


Curve Description			
Driver THOR CRUX Upper Left Z			
CURNO	Type	SAE Class	Units
203	CALC	N/A	MM
Max	Time	Min	Time
1.6	380.8	-16.3	71.1

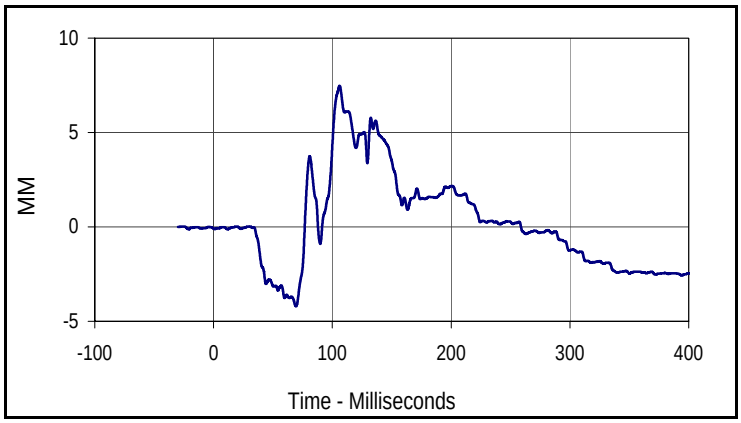


Curve Description			
Driver THOR CRUX Upper Left D			
CURNO	Type	SAE Class	Units
204	CALC	N/A	MM
Max	Time	Min	Time
2.0	303.5	-15.4	70.8

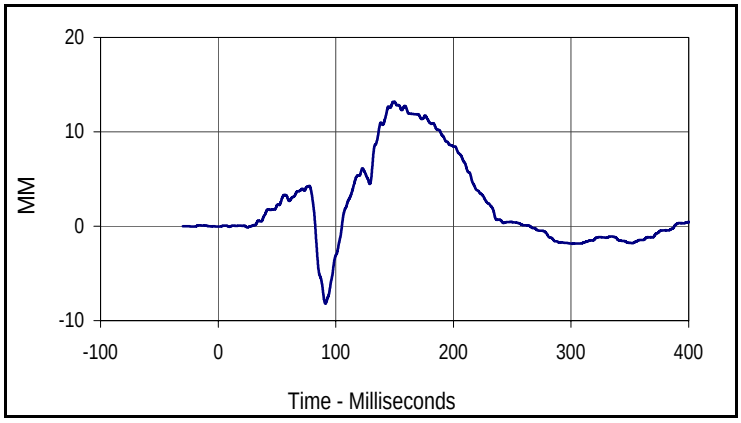
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



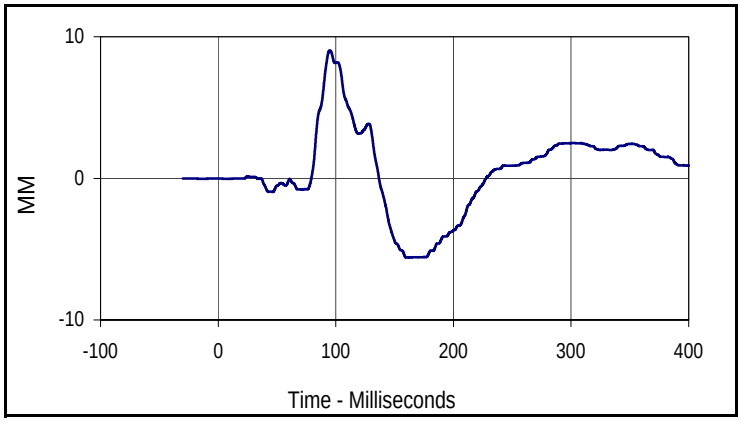
Curve Description			
Driver THOR CRUX Lower Left X			
CURNO	Type	SAE Class	Units
205	CALC	N/A	MM
Max	Time	Min	Time
8.4	102.8	-0.5	173.1



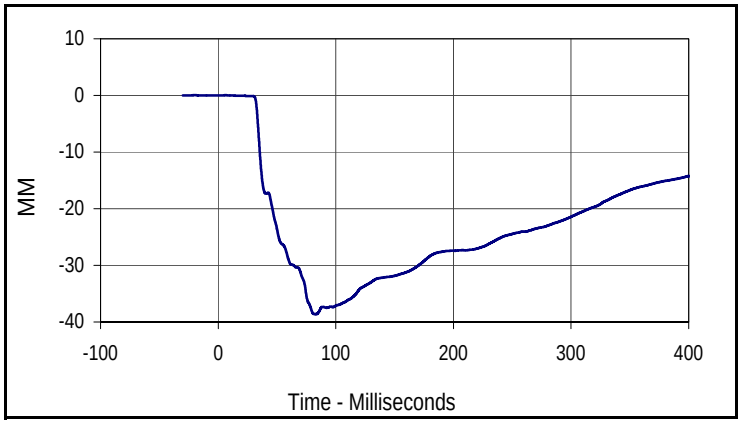
Curve Description			
Driver THOR CRUX Lower Left Y			
CURNO	Type	SAE Class	Units
206	CALC	N/A	MM
Max	Time	Min	Time
7.5	106.0	-4.2	69.2



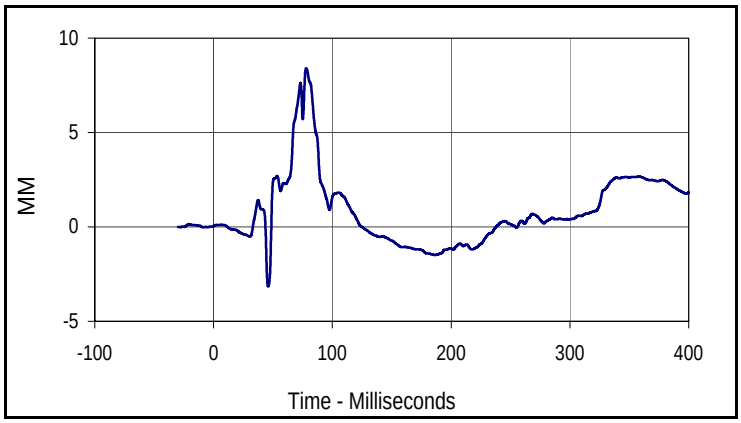
Curve Description			
Driver THOR CRUX Lower Left Z			
CURNO	Type	SAE Class	Units
207	CALC	N/A	MM
Max	Time	Min	Time
13.2	149.0	-8.2	91.1



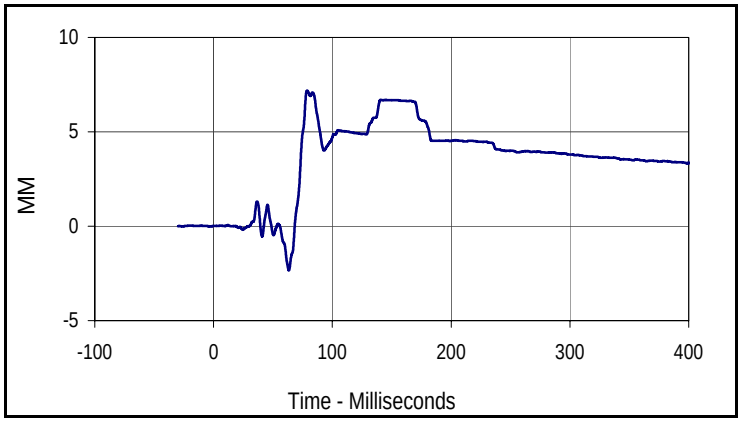
Curve Description			
Driver THOR CRUX Lower Left D			
CURNO	Type	SAE Class	Units
208	CALC	N/A	MM
Max	Time	Min	Time
9.0	94.6	-5.6	159.5



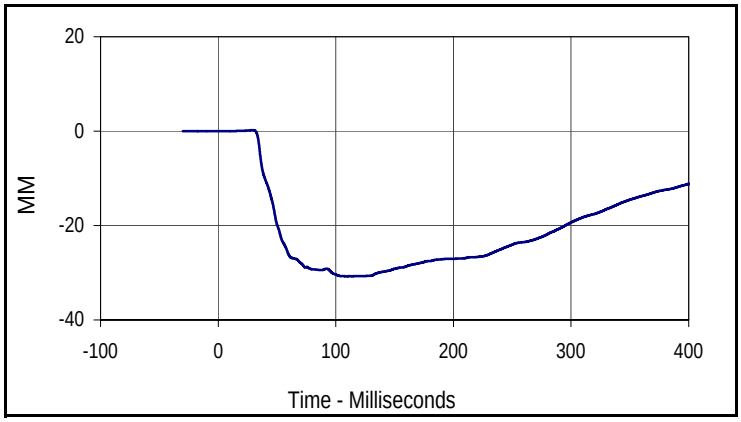
Curve Description			
Driver Right Lower Abdomen X			
CURNO	Type	SAE Class	Units
209	CALC	N/A	MM
Max	Time	Min	Time
0.0	5.5	-38.6	82.9



Curve Description			
Driver Right Lower Abdomen Y			
CURNO	Type	SAE Class	Units
210	CALC	N/A	MM
Max	Time	Min	Time
8.4	77.8	-3.2	45.9

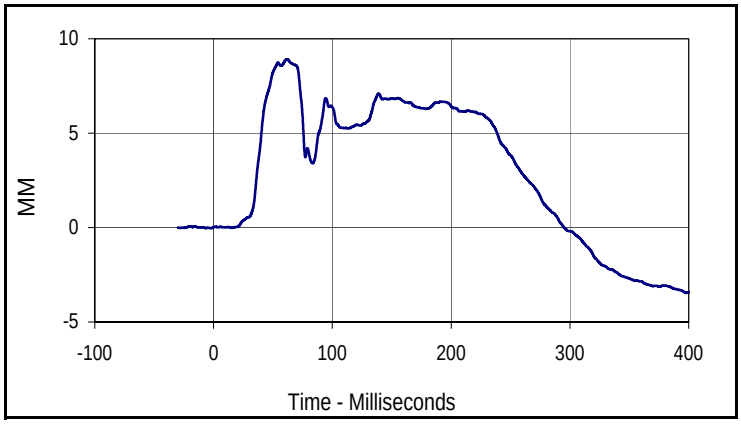


Curve Description			
Driver Right Lower Abdomen Z			
CURNO	Type	SAE Class	Units
211	CALC	N/A	MM
Max	Time	Min	Time
7.2	78.6	-2.3	63.4

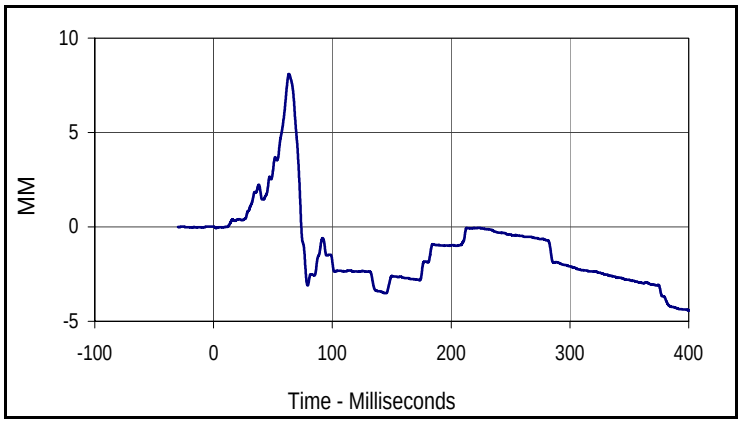


Curve Description			
Driver Left Lower Abdomen X			
CURNO	Type	SAE Class	Units
212	CALC	N/A	MM
Max	Time	Min	Time
0.2	28.5	-30.8	107.9

Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09

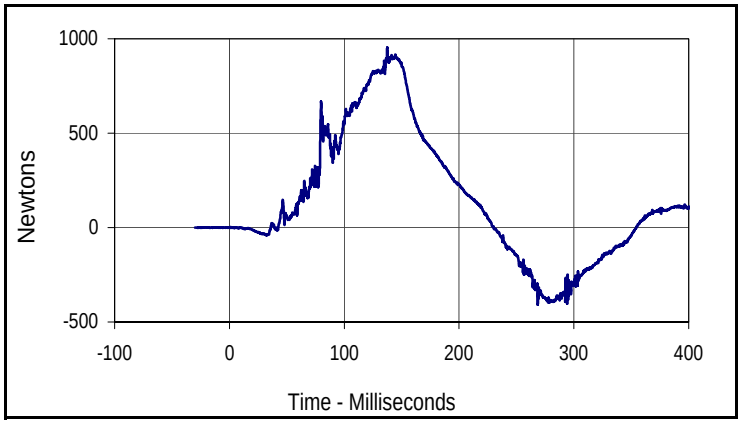


Curve Description			
Driver Left Lower Abdomen Y			
CURNO	Type	SAE Class	Units
213	CALC	N/A	MM
Max	Time	Min	Time
8.9	61.8	-3.5	397.1

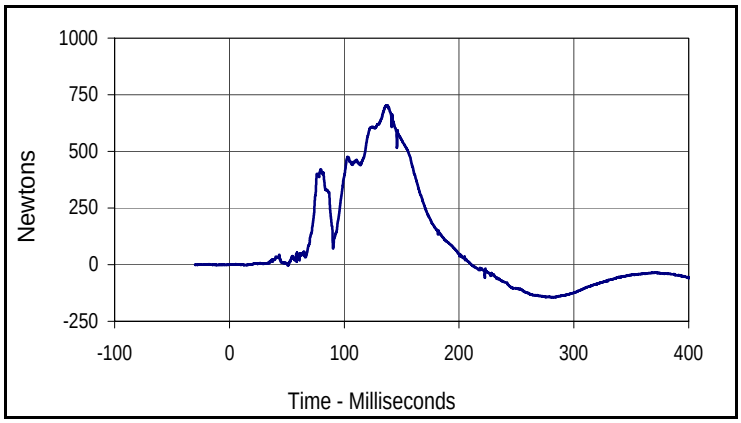


Curve Description			
Driver Left Lower Abdomen Z			
CURNO	Type	SAE Class	Units
214	CALC	N/A	MM
Max	Time	Min	Time
8.1	63.4	-4.4	399.8

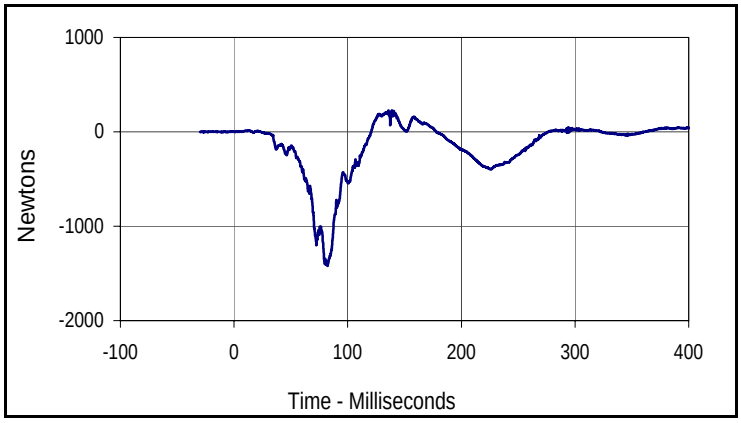
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



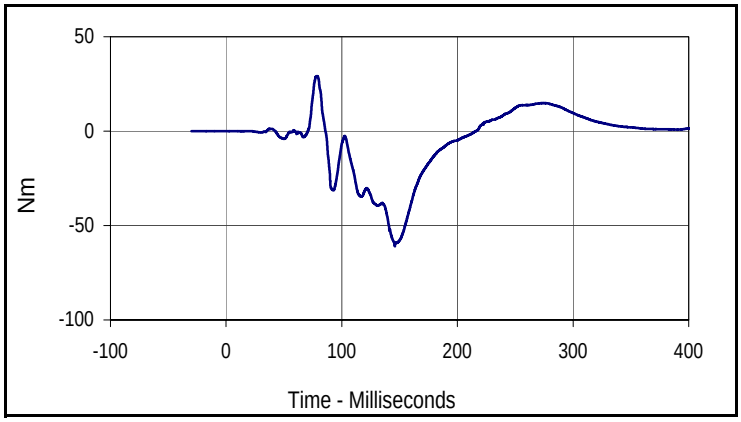
Curve Description			
Driver Upper Neck Force X			
CURNO	Type	SAE Class	Units
215	CALC	N/A	Newtons
Max	Time	Min	Time
954.1	137.4	-407.8	268.5



Curve Description			
Driver Upper Neck Force Y			
CURNO	Type	SAE Class	Units
216	CALC	N/A	Newtons
Max	Time	Min	Time
703.2	137.1	-144.7	281.3

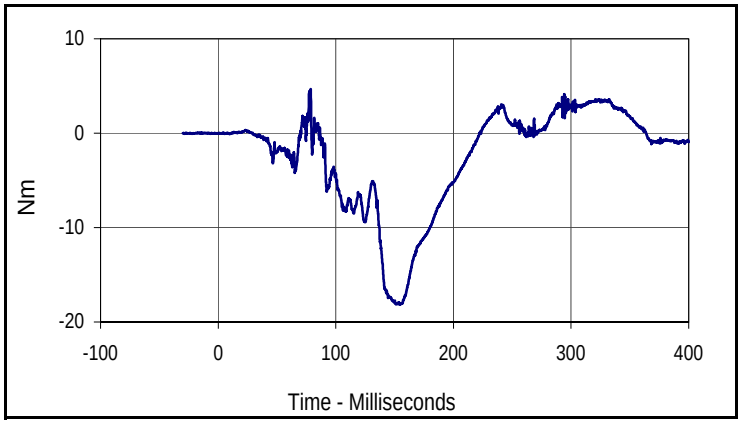


Curve Description			
Driver Upper Neck Force Z			
CURNO	Type	SAE Class	Units
217	CALC	N/A	Newtons
Max	Time	Min	Time
226.8	139.1	-1421.2	82.3

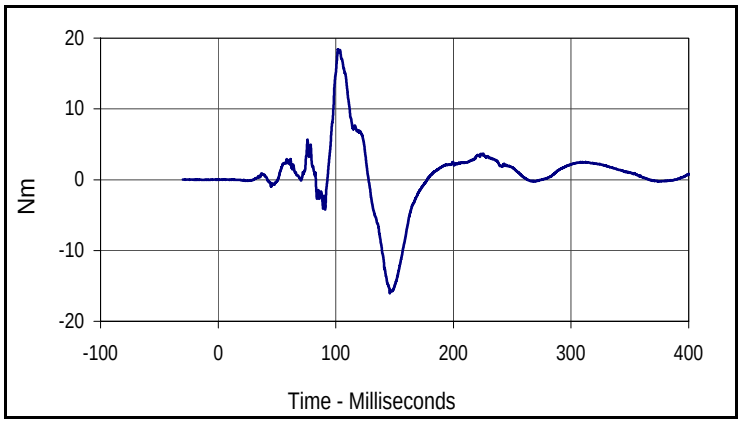


Curve Description			
Driver Upper Neck Moment X			
CURNO	Type	SAE Class	Units
218	CALC	N/A	Nm
Max	Time	Min	Time
29.2	78.5	-60.9	145.9

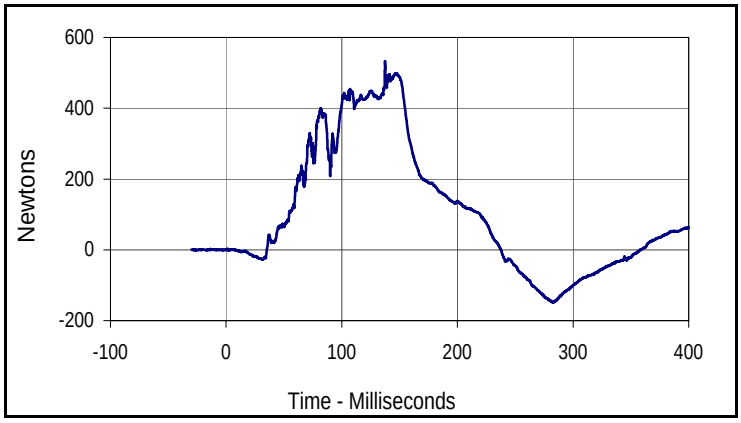
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



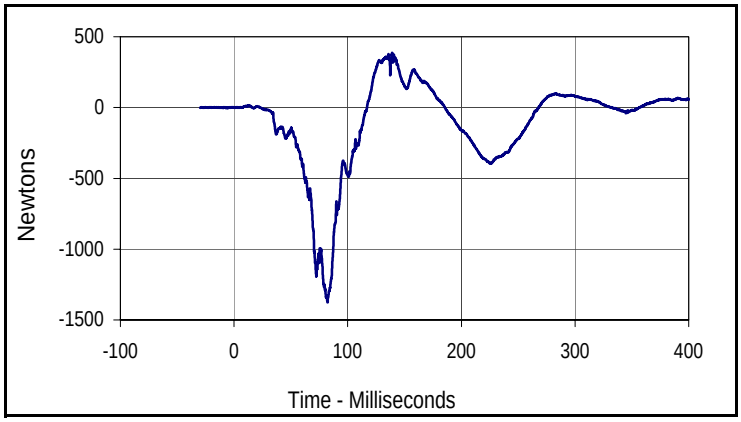
Curve Description			
Driver Upper Neck Moment Y			
CURNO	Type	SAE Class	Units
219	CALC	N/A	Nm
Max	Time	Min	Time
4.7	78.6	-18.2	154.3



Curve Description			
Driver Upper Neck Moment Z			
CURNO	Type	SAE Class	Units
220	CALC	N/A	Nm
Max	Time	Min	Time
18.4	101.9	-16.0	145.9

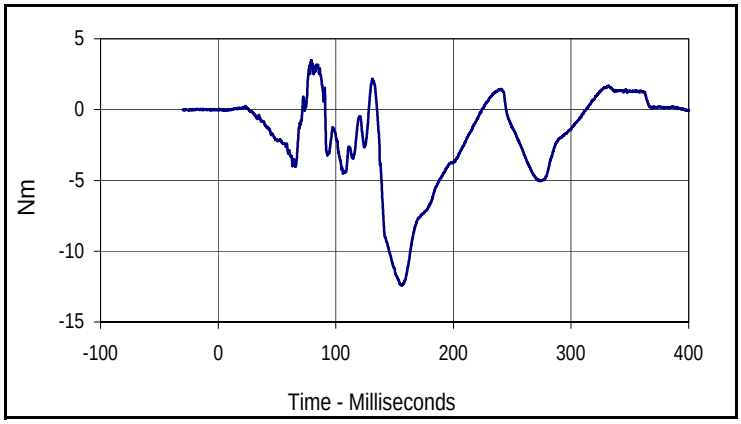


Curve Description			
Driver OC Force X			
CURNO	Type	SAE Class	Units
221	CALC	N/A	Newtons
Max	Time	Min	Time
533.5	137.4	-148.4	281.9

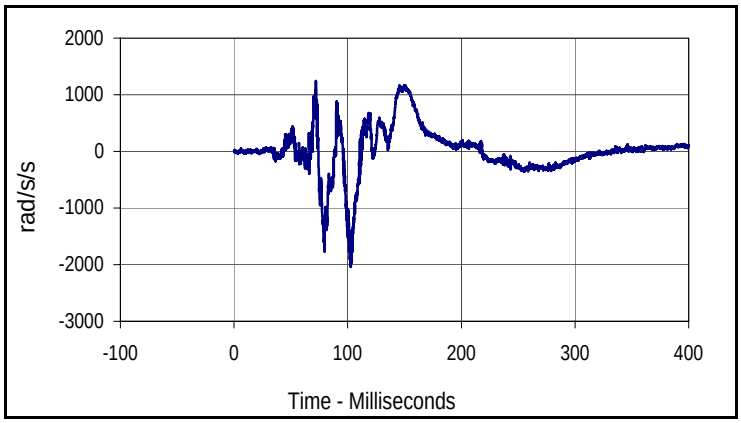


Curve Description			
Driver OC Force Z			
CURNO	Type	SAE Class	Units
222	CALC	N/A	Newtons
Max	Time	Min	Time
386.3	139.1	-1374.8	82.3

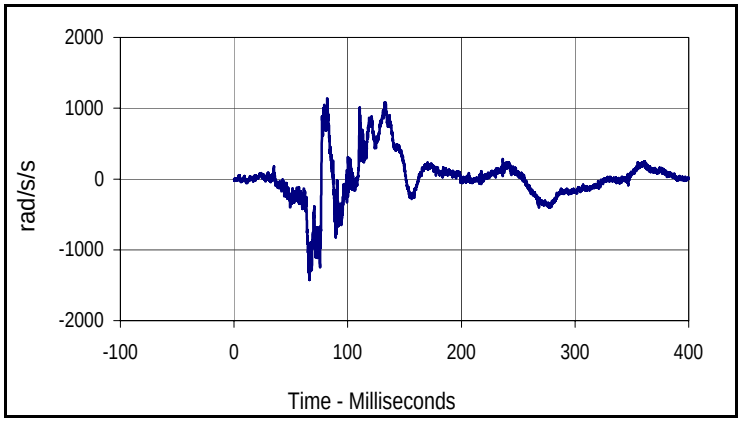
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



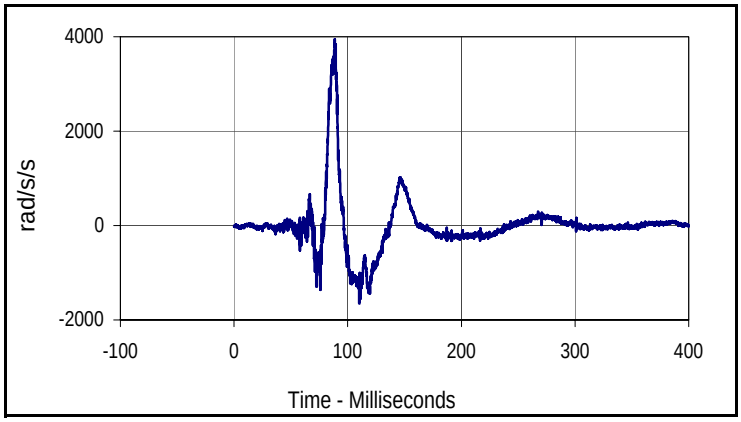
Curve Description			
Driver OC Moment Y			
CURNO	Type	SAE Class	Units
223	CALC	N/A	Nm
Max	Time	Min	Time
3.5	79.3	-12.4	156.1



Curve Description			
Driver Head Angular Acceleration X			
CURNO	Type	SAE Class	Units
224	CALC	N/A	rad/s/s
Max	Time	Min	Time
1241.2	72.1	-2034.2	102.7

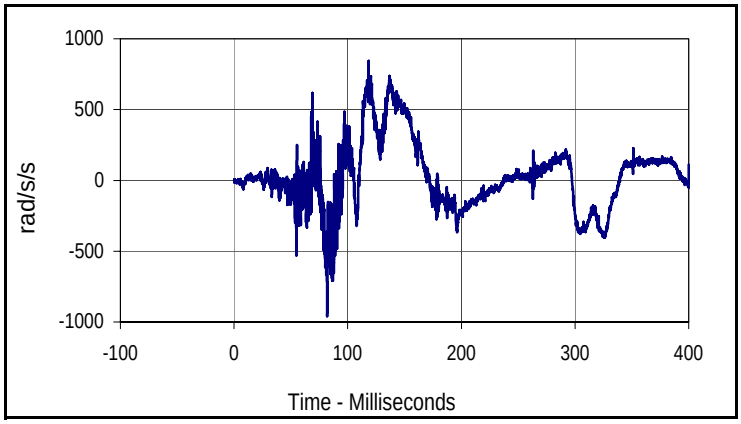


Curve Description			
Driver Head Angular Acceleration Y			
CURNO	Type	SAE Class	Units
225	CALC	N/A	rad/s/s
Max	Time	Min	Time
1142.0	82.0	-1423.4	66.3

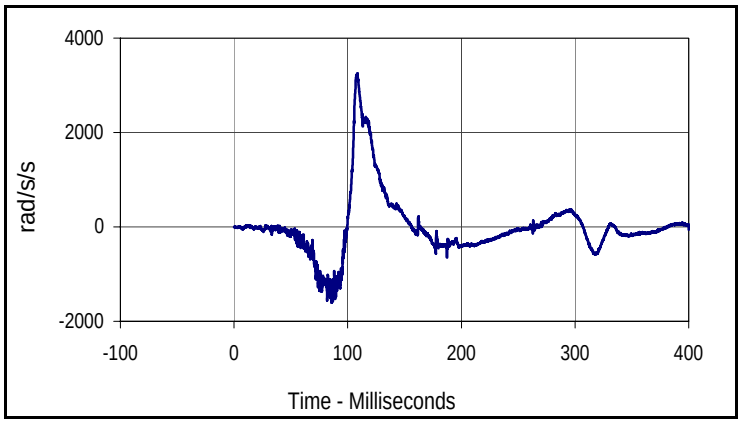


Curve Description			
Driver Head Angular Acceleration Z			
CURNO	Type	SAE Class	Units
226	CALC	N/A	rad/s/s
Max	Time	Min	Time
3944.4	88.6	-1651.2	110.2

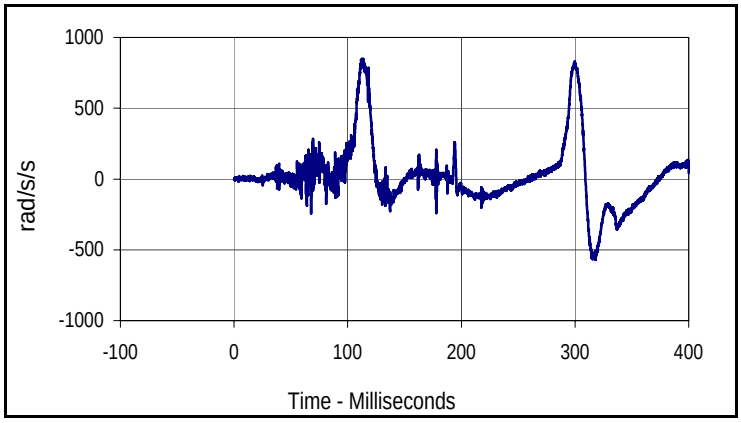
Test Vehicle:	2007 Ford Taurus SE 4-Door Sedan	NHTSA No.:	R70207
Test Program:	68 mph, 15°, 18% Offset MDB to Vehicle	Test Date:	12/9/09



Curve Description			
LR Passenger Head Angular Acceleration X			
CURNO	Type	SAE Class	Units
227	CALC	N/A	rad/s/s
Max	Time	Min	Time
840.7	118.4	-958.7	82.0



Curve Description			
LR Passenger Head Angular Acceleration Y			
CURNO	Type	SAE Class	Units
228	CALC	N/A	rad/s/s
Max	Time	Min	Time
3256.3	108.6	-1606.2	85.7

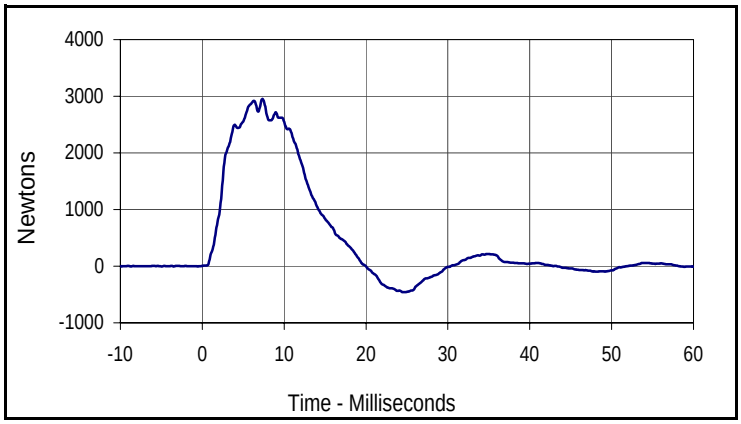


Curve Description			
LR Passenger Head Angular Acceleration Z			
CURNO	Type	SAE Class	Units
229	CALC	N/A	rad/s/s
Max	Time	Min	Time
849.3	113.7	-569.5	318.0

APPENDIX C
DUMMY CERTIFICATION DATA

Test Program:	Thor-LX Dynamic Heel of Foot Impact Test	Test Date:	11/5/09
Serial No.:	G109	Test I.D.:	Heel01

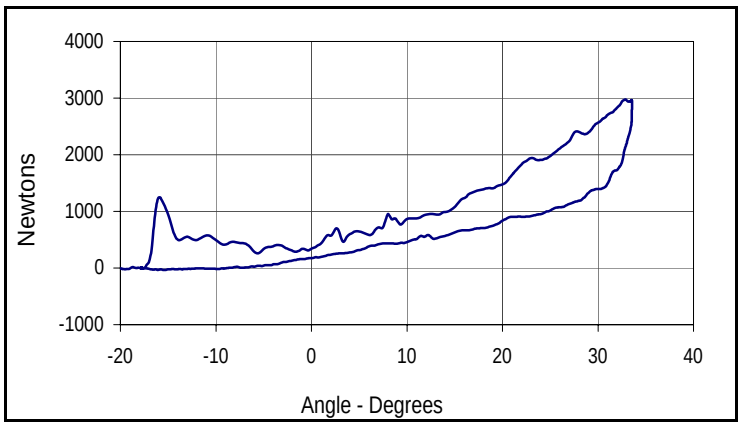
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	^{o}C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	3.90 to 4.10	4.05	Pass
Peak Lower Tibia Compressive Force	Newtons	2738 to 3346	2948	Pass
		Overall Test Results		Pass



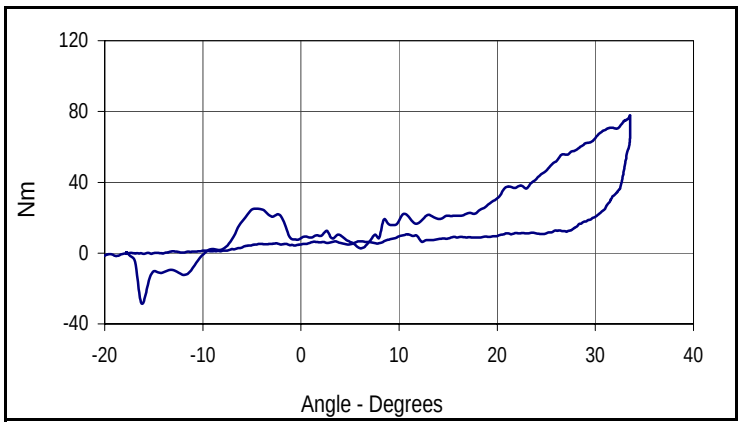
Curve Description			
Peak Lower Tibia Compressive Force			
CURNO	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Time	Min	Time
2948.3	7.4	-459.8	24.5

Test Program:	Thor-LX Dynamic Ball of Foot Impact Test	Test Date:	11/5/09
Serial No.:	G109	Test I.D.:	Ball001

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	4.90 to 5.10	4.95	Pass
Peak Lower Tibia Compressive Force	Newtons	2956 to 3613	2976	Pass
Peak Ankle Y Axis Rotation	Deg	32.7 to 39.9	33.6	Pass
Peak Ankle Resistive Moment	Nm	77.1 to 94.2	77.9	Pass
		Overall Test Results		Pass



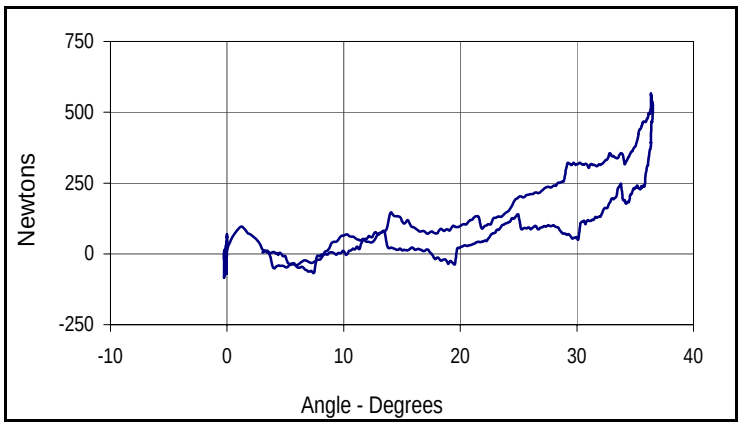
Curve Description			
Peak Lower Tibia Compressive Force vs. Angle			
CURNO	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Angle	Min	Angle
2975.6	32.9	-34.0	-25.4



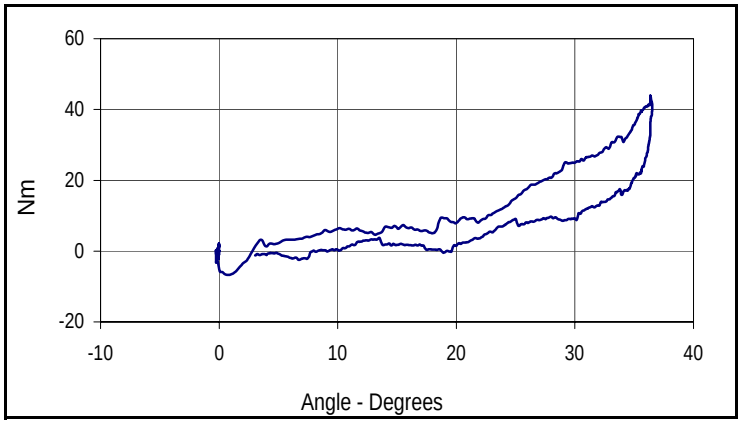
Curve Description			
Peak Ankle Resistive Moment vs. Angle			
CURNO	Type	SAE Class	Units
002	FIL	600	Nm
Max	Angle	Min	Angle
77.9	33.5	-28.4	-16.2

Test Program:	Thor-LX Dynamic Inversion Impact Test	Test Date:	11/5/09
Serial No.:	G109	Test I.D.:	INV001

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	^{o}C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	1.90 to 2.10	1.98	Pass
Peak Lower Tibia Compressive Force	Newtons	552 to 675	566	Pass
Peak Ankle X Axis Rotation	Deg	30.3 to 37.0	36.5	Pass
Peak Ankle Resistive Moment	Nm	36.3 to 44.4	43.9	Pass
		Overall Test Results		Pass



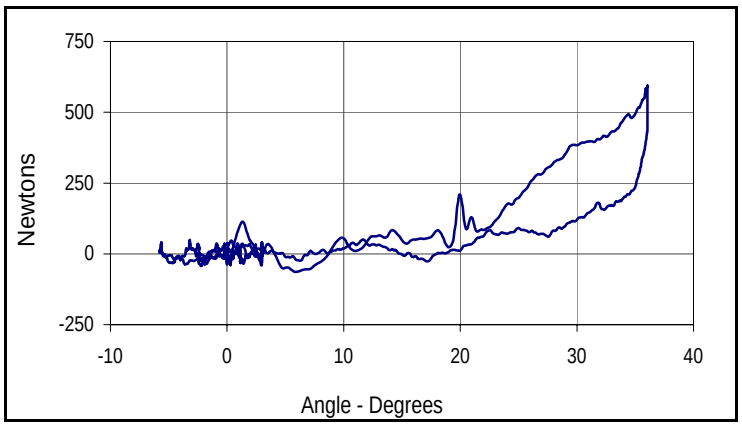
Curve Description			
Peak Lower Tibia Compressive Force vs. Angle			
CURNO	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Angle	Min	Angle
565.6	36.4	-83.6	-0.3



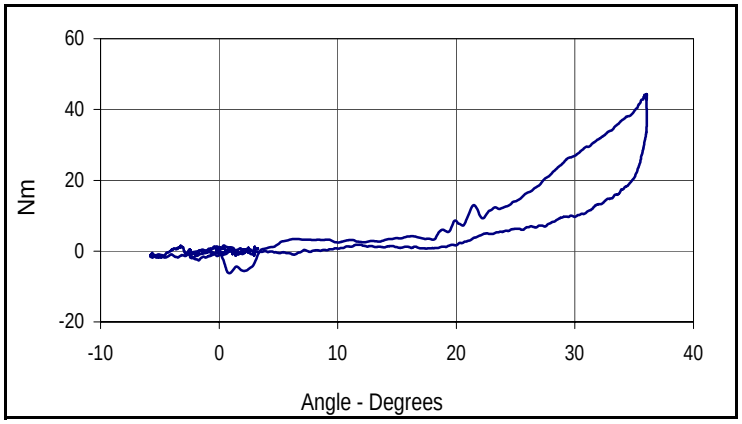
Curve Description			
Peak Ankle Resistive Moment vs. Angle			
CURNO	Type	SAE Class	Units
002	FIL	600	Nm
Max	Angle	Min	Angle
43.9	36.4	-6.7	0.8

Test Program:	Thor-LX Dynamic Eversion Impact Test	Test Date:	10/16/09
Serial No.:	G109	Test I.D.:	BLF1A

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	^{o}C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	1.90 to 2.10	1.98	Pass
Peak Lower Tibia Compressive Force	Newtons	552 to 675	594	Pass
Peak Ankle X Axis Rotation	Deg	30.3 to 37.0	36.1	Pass
Peak Ankle Resistive Moment	Nm	36.3 to 44.4	44.3	Pass
		Overall Test Results		Pass



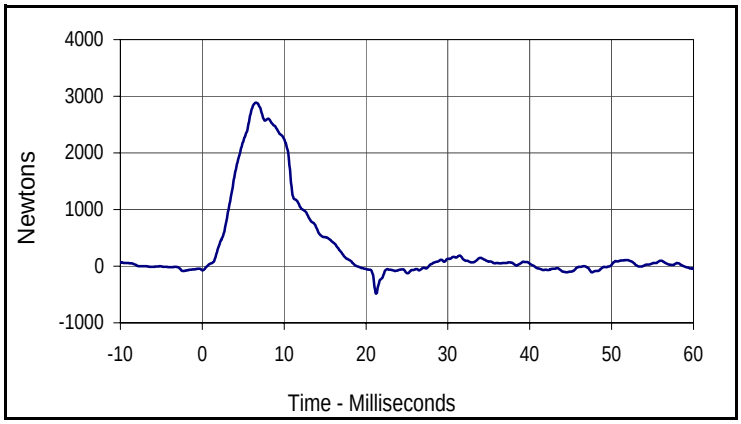
Curve Description			
Peak Lower Tibia Compressive Force vs. Angle			
CURNO	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Angle	Min	Angle
594.0	36.1	-64.1	5.9



Curve Description			
Peak Ankle Resistive Moment vs. Angle			
CURNO	Type	SAE Class	Units
002	FIL	600	Nm
Max	Angle	Min	Angle
44.3	36.0	-6.3	0.8

Test Program:	Thor-LX Dynamic Heel of Foot Impact Test	Test Date:	11/5/09
Serial No.:	0039	Test I.D.:	Heel02

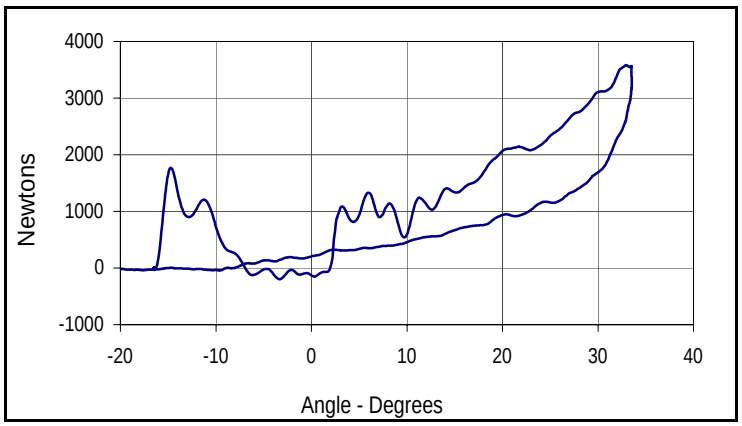
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	^{o}C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	3.90 to 4.10	4.05	Pass
Peak Lower Tibia Compressive Force	Newtons	2738 to 3346	2888	Pass
		Overall Test Results		Pass



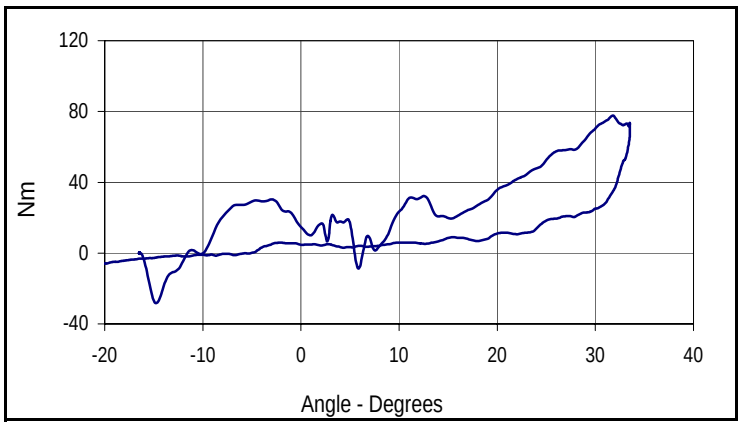
Curve Description			
Peak Lower Tibia Compressive Force			
CURNO	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Time	Min	Time
2888.1	6.6	-481.9	21.2

Test Program:	Thor-LX Dynamic Ball of Foot Impact Test	Test Date:	11/5/09
Serial No.:	0039	Test I.D.:	Ball002

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	4.90 to 5.10	5.04	Pass
Peak Lower Tibia Compressive Force	Newtons	2956 to 3613	3583	Pass
Peak Ankle Y Axis Rotation	Deg	32.7 to 39.9	33.5	Pass
Peak Ankle Resistive Moment	Nm	77.1 to 94.2	77.7	Pass
		Overall Test Results		Pass



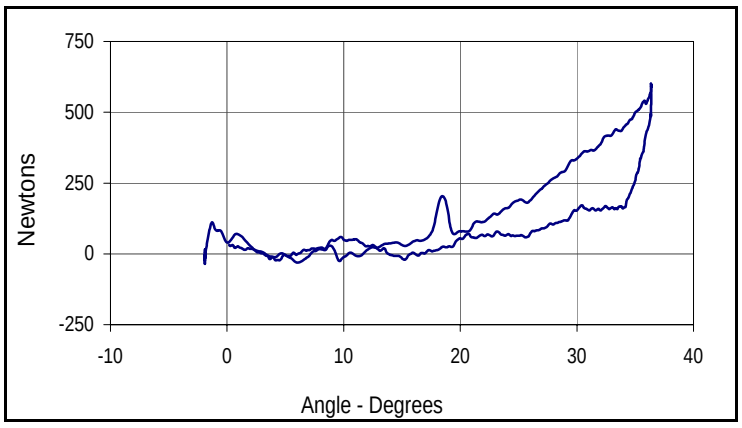
Curve Description			
Peak Lower Tibia Compressive Force vs. Angle			
CURNO	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Angle	Min	Angle
3583.3	32.9	-195.1	-3.3



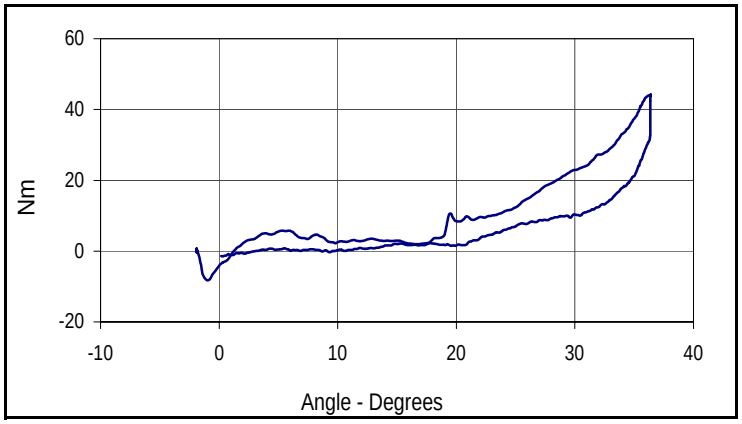
Curve Description			
Peak Ankle Resistive Moment vs. Angle			
CURNO	Type	SAE Class	Units
002	FIL	600	Nm
Max	Angle	Min	Angle
77.7	31.8	-28.2	-14.8

Test Program:	Thor-LX Dynamic Inversion Impact Test	Test Date:	11/5/09
Serial No.:	0039	Test I.D.:	INV001

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	1.90 to 2.10	1.94	Pass
Peak Lower Tibia Compressive Force	Newtons	552 to 675	601	Pass
Peak Ankle X Axis Rotation	Deg	30.3 to 37.0	36.4	Pass
Peak Ankle Resistive Moment	Nm	36.3 to 44.4	44.2	Pass
		Overall Test Results		Pass



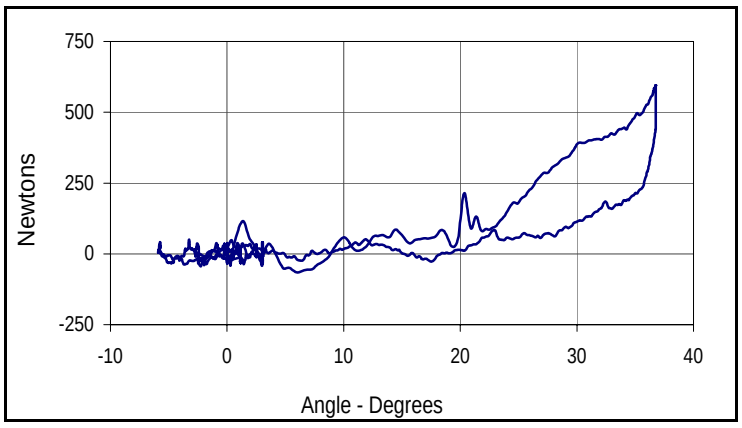
Curve Description			
Peak Lower Tibia Compressive Force vs. Angle			
CURNO	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Angle	Min	Angle
600.7	36.4	-35.3	-1.9



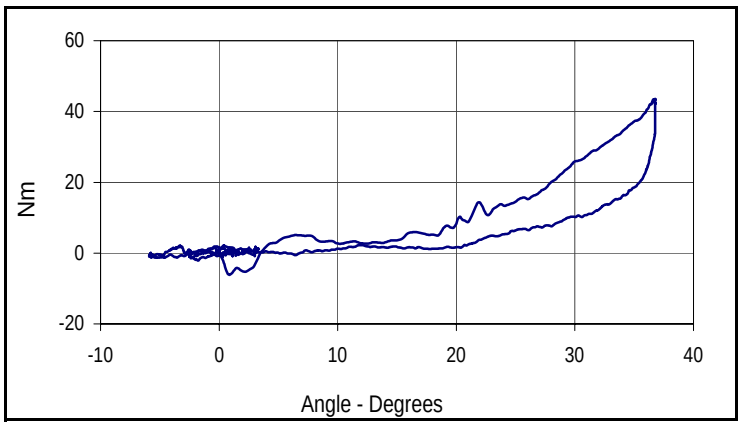
Curve Description			
Peak Ankle Resistive Moment vs. Angle			
CURNO	Type	SAE Class	Units
002	FIL	600	Nm
Max	Angle	Min	Angle
44.2	36.4	-8.3	-0.9

Test Program:	Thor-LX Dynamic Eversion Impact Test	Test Date:	10/16/09
Serial No.:	0039	Test I.D.:	EV002

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	^{o}C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	1.90 to 2.10	1.98	Pass
Peak Lower Tibia Compressive Force	Newtons	552 to 675	596	Pass
Peak Ankle X Axis Rotation	Deg	30.3 to 37.0	36.8	Pass
Peak Ankle Resistive Moment	Nm	36.3 to 44.4	43.5	Pass
		Overall Test Results		Pass



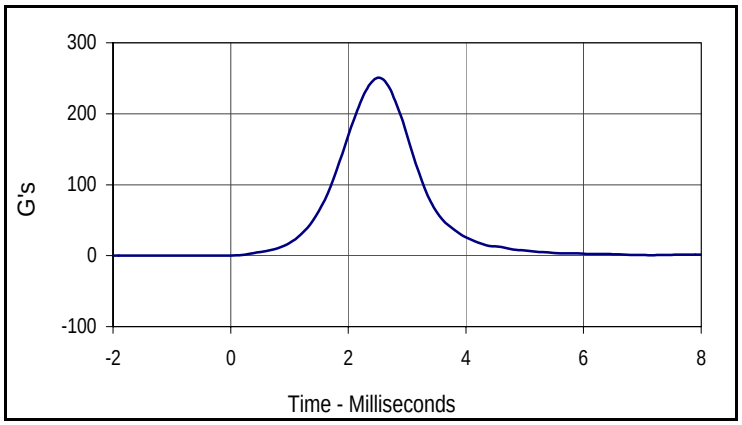
Curve Description			
Peak Lower Tibia Compressive Force vs. Angle			
CURNO	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Angle	Min	Angle
595.6	36.8	-65.5	6.1



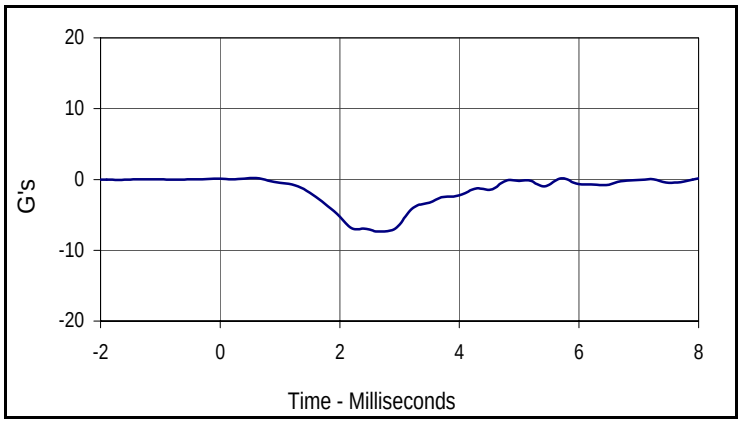
Curve Description			
Peak Ankle Resistive Moment vs. Angle			
CURNO	Type	SAE Class	Units
002	FIL	600	Nm
Max	Angle	Min	Angle
43.5	36.8	-6.1	0.9

Test Program:	Hybrid III 5th Percentile Female Head Drop Test	Test Date:	11/10/09
ATD Serial No.:	630	Test I.D.:	HD001

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	^{o}C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Peak Resultant Acceleration	G's	250.0 to 300.0	250.9	Pass
Peak Lateral Acceleration	G's	≤15.0	7.4	Pass
Is Acceleration Unimodal?	Yes/No	Yes	Yes	Pass
		Overall Test Results		Pass



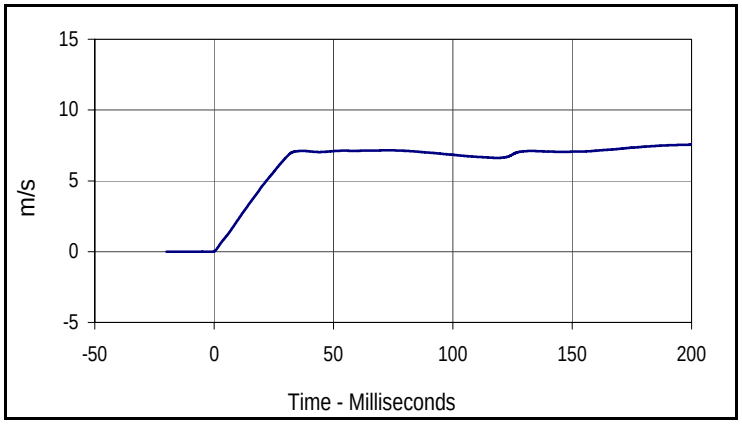
Curve Description			
Head Resultant			
CURNO	Type	SAE Class	Units
001	RES	1000	G's
Max	Time	Min	Time
250.9	2.5	0.0	-2.0



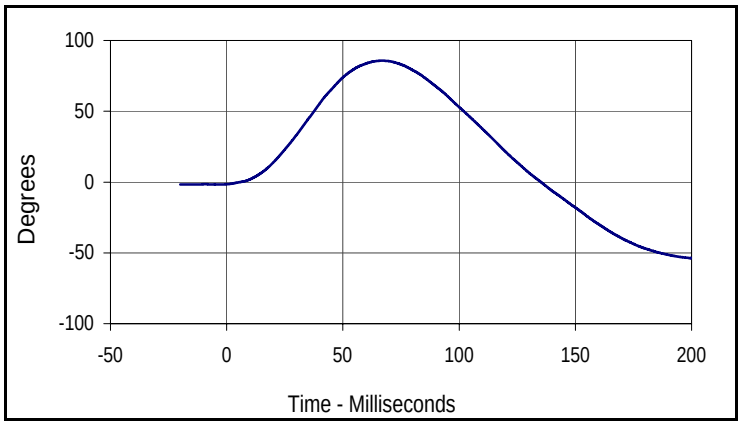
Curve Description			
Head Y			
CURNO	Type	SAE Class	Units
002	FIL	1000	G's
Max	Time	Min	Time
0.2	0.5	-7.4	2.7

Test Program:	Hybrid III 5th Percentile Female Neck Flexion Test	Test Date:	11/10/09
ATD Serial No.:	630	Test I.D.:	NF12B

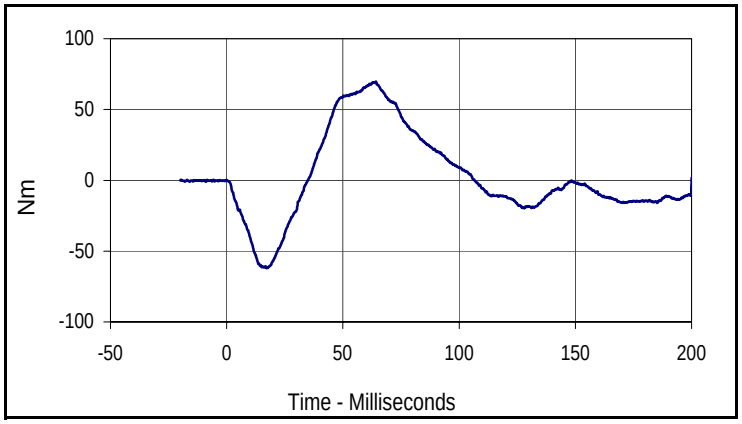
Tested Parameter		Units	Specification	Result	Pass/Fail
Laboratory Temperature		°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity		%	10 to 70	30	Pass
Pendulum Velocity		m/s	6.89 to 7.13	7.06	Pass
Pendulum Deceleration	10 Msec.	m/s	2.1 to 2.5	2.3	Pass
	20 Msec.	m/s	4.0 to 5.0	4.6	Pass
	30 Msec.	m/s	5.8 to 7.0	6.6	Pass
"D" Plane Rotation	Max	Degrees	77.0 to 91.0	85.7	Pass
Peak Moment in Rotation	Max	Nm	69.0 to 83.0	69.8	Pass
Positive Moment Decay, Time To 10 Nm		Msec.	80.0 to 100.0	99.8	Pass
			Overall Test Results		Pass



Curve Description			
Pendulum Velocity			
CURNO	Type	SAE Class	Units
001	FIL	180	m/s
Max	Time	Min	Time
7.6	200.0	0.0	-0.7



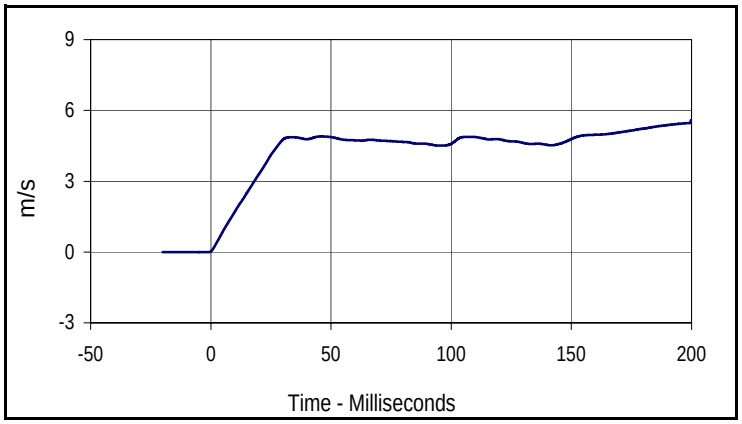
Curve Description			
"D" Plane Rotation			
CURNO	Type	SAE Class	Units
003	FIL	60	Degrees
Max	Time	Min	Time
85.7	66.9	-53.7	200.0



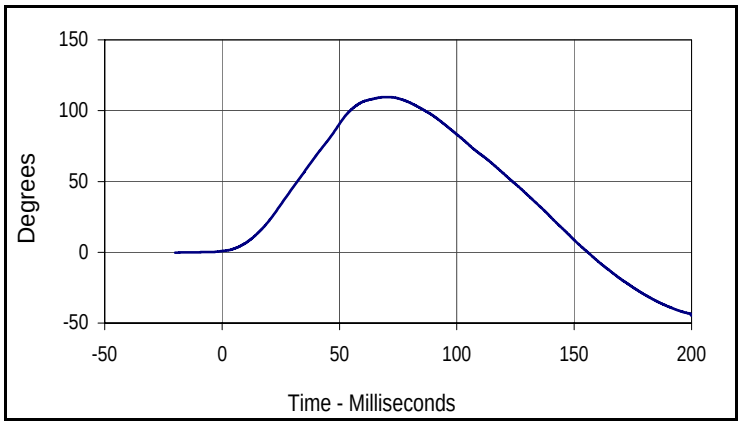
Curve Description			
Moment About Occipital Condyle			
CURNO	Type	SAE Class	Units
002	FIL	600	Nm
Max	Time	Min	Time
69.8	64.2	-62.1	17.2

Test Program:	Hybrid III 5th Percentile Female Neck Extension Test	Test Date:	11/10/09
ATD Serial No.:	630	Test I.D.:	NE12C

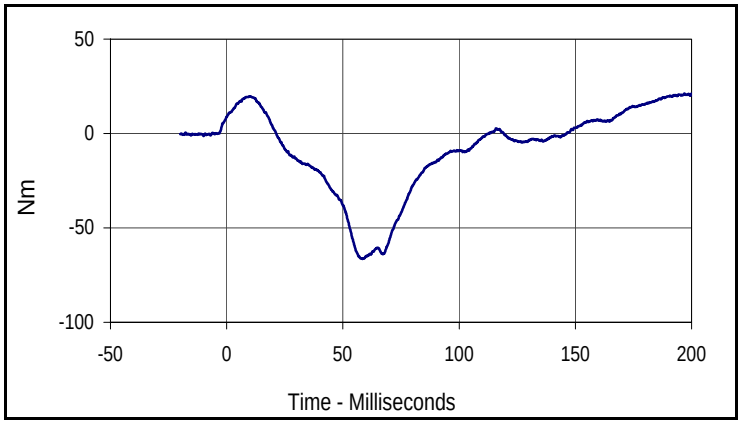
Tested Parameter		Units	Specification	Result	Pass/Fail
Laboratory Temperature		°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity		%	10 to 70	30	Pass
Pendulum Velocity		m/s	5.95 to 6.19	5.98	Pass
Pendulum Deceleration	10 Msec.	m/s	1.5 to 1.9	1.7	Pass
	20 Msec.	m/s	3.1 to 3.9	3.3	Pass
	30 Msec.	m/s	4.6 to 5.6	4.8	Pass
"D" Plane Rotation	Max	Degrees	99.0 to 114.0	109.6	Pass
Peak Moment in Rotation	Max	Nm	-53.0 to -65.0	64.9	Pass
Positive Moment Decay, Time To -10 Nm		Msec.	94.0 to 114.0	95.6	Pass
			Overall Test Results		Pass



Curve Description			
Pendulum Velocity			
CURNO	Type	SAE Class	Units
001	FIL	180	m/s
Max	Time	Min	Time
5.6	200.0	0.0	-0.9



Curve Description			
"D" Plane Rotation			
CURNO	Type	SAE Class	Units
003	FIL	60	Degrees
Max	Time	Min	Time
109.6	69.9	-44.5	200.0



Curve Description			
Moment About Occipital Condyle			
CURNO	Type	SAE Class	Units
002	FIL	600	Nm
Max	Time	Min	Time
21.1	197.0	-64.9	58.4

Test Program:	Hybrid III 5th Percentile Female Knee Impact Test	Test Date:	11/11/09
ATD Serial No.:	630	Test I.D.:	LK12A , RK12A

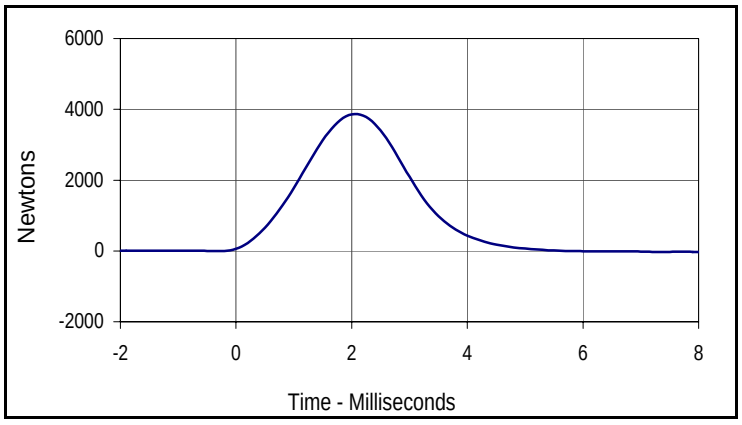
Left Knee

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Pendulum Velocity at T=0	m/sec	2.07 to 2.13	2.09	Pass
Peak Probe Force	Newtons	3450 to 4060	3765	Pass
		Overall Test Results		Pass

Right Knee

Pendulum Velocity at T=0	m/sec	2.07 to 2.13	2.09	Pass
Peak Probe Force	Newtons	3450 to 4060	3862	Pass
		Overall Test Results		Pass

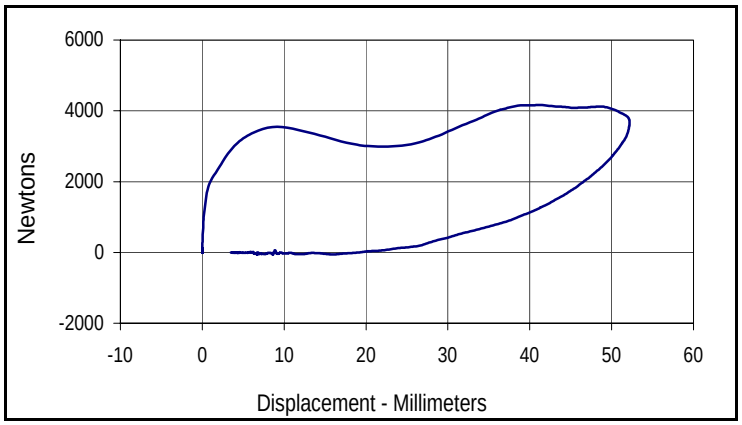
Curve Description			
Left Knee Probe Force			
CURNO	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Time	Min	Time
3765.4	2.1	-33.4	7.0



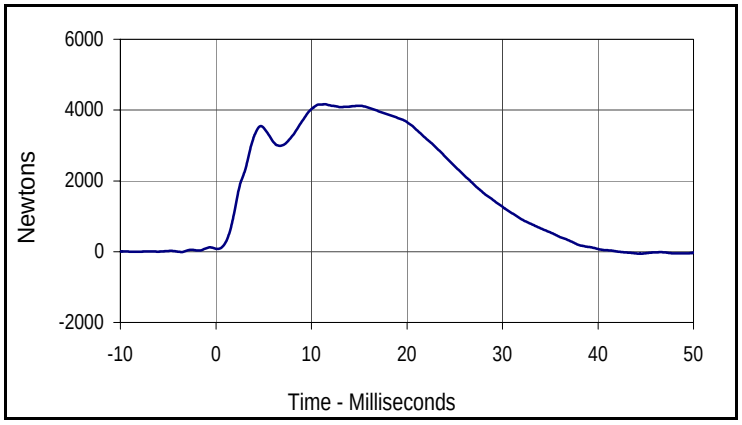
Curve Description			
Right Knee Probe Force			
CURNO	Type	SAE Class	Units
002	FIL	600	Newtons
Max	Time	Min	Time
3862.2	2.1	-34.3	8.7

Test Program:	Hybrid III 5th Percentile Female Thorax Impact Test	Test Date:	11/12/09
ATD Serial No.:	630	Test I.D.:	CH001

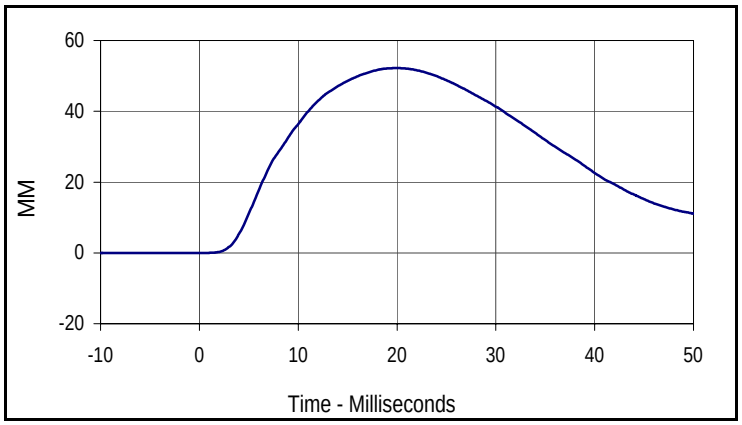
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	6.59 to 6.83	6.63	Pass
Peak Chest Deflection	MM	50.0 to 58.0	52.2	Pass
Peak Force Between 50 and 58 MM	Newtons	3900 to 4400	4162	Pass
Peak Force Between 18 and 50 MM	Newtons	≤4600	4058	Pass
Internal Hysterysis	%	69 to 85	81.4	Pass
		Overall Test Results		Pass



Curve Description			
Probe Force vs. Chest Deflection			
CURNO	Type	SAE Class	Hysterysis
003	FIL	180	81.4
Peak Probe Force		Peak Chest Displ.	
4161.9		52.2	



Curve Description			
Probe Force			
CURNO	Type	SAE Class	Units
002	FIL	180	Newtons
Max	Time	Min	Time
4161.9	11.4	-67.1	86.8



Curve Description			
Chest Deflection			
CURNO	Type	SAE Class	Units
001	FIL	180	MM
Max	Time	Min	Time
52.2	19.9	0.0	-9.0

Test Program:	Hybrid III 5th Percentile Female Torso Flexion Test	Test Date:	11/11/09
ATD Serial No.:	630	Test I.D.:	TF001

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	^{o}C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Initial reference plane angle	Degrees	≤ 20.0	5.2	Pass
Peak Force at 45 +/-0.5 degrees	Newtons	320.0 to 390.0	365.2	Pass
Torso rotation rate	deg/sec	0.5 to 1.5	1.2	Pass
Final reference plane angle	Degrees	+/-8	3.5	Pass
		Overall Test Results		Pass

Test Program:	Hybrid III 5th Percentile Female External Measurements	Test Date:	11/12/09
ATD Serial No.:	630	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	774.7 to 800.1	779	Pass
B - Shoulder pivot height	mm	431.8 to 457.2	445	Pass
C - "H" point height (Reference)	mm	81.3 to 86.3	84	Pass
D - "H" point from seat back (Ref.)	mm	144.8 to 149.8	145	Pass
E - Shoulder pivot from backline	mm	68.6 to 83.8	81	Pass
F - Thigh clearance	mm	119.4 to 134.6	131	Pass
G - Back of elbow to wrist pivot	mm	243.9 to 259.1	255	Pass
H - Head to back line	mm	40.7 to 45.7	44	Pass
I - Shoulder to elbow length	mm	276.8 to 297.2	290	Pass
J - Elbow rest heignt	mm	182.8 to 203.2	200	Pass
K - Buttock to knee length	mm	520.7 to 546.1	544	Pass
L - Poplipteal height	mm	355.6 to 376.0	365	Pass
M - Knee pivot height	mm	393.7 to 419.1	415	Pass
N - Buttock poplipteal length	mm	414.0 to 439.4	420	Pass
O - Chest depth without jacket	mm	175.3 to 190.5	185	Pass
P - Foot length	mm	218.5 to 233.7	230	Pass
R - Buttock to knee pivot length	mm	457.2 to 482.6	475	Pass
S - Head breadth	mm	137.1 to 147.3	145	Pass
T - Head depth	mm	177.8 to 188.0	180	Pass
U - Hip breadth	mm	299.7 to 314.9	312	Pass
V - Shoulder breadth	mm	350.5 to 365.7	365	Pass
W - Foot breadth	mm	78.8 to 94.0	90	Pass
X - Head circumference	mm	528.3 to 548.7	540	Pass
Y - Chest circumference with jacket	mm	850.8 to 881.3	880	Pass
Z - Waist circumference	mm	759.5 to 789.9	775	Pass
AA - Location for chest circumference	mm	299.7 to 309.9	305	Pass
BB - Location for waist circumference	mm	160.1 to 170.2	165	Pass
		Overall Test Results		Pass

APPENDIX D
SUPPLEMENTARY INFORMATION

DRIVER ATD INITIAL ANGLES OF POTENTIOMETERS

THOR S/N: 0006										Sensitivity (JARI)	Sensitivity (GESAC)	Setup Angle (GESAC) for *.set file
Sensor		Mfg	S/N	Capacity	Unit-1	Unit-2	Range	Direction	CFC	V/Unit-1	V/Unit-1	Degrees
NKCRP		Contolec	pd210-4B	318	deg	mV	1000	Rear +	180	0.031551	0.031551	
CX-1ULB		Contolec	CRUX-0040	318	deg	mV	2000	Rear +	180	0.031103	0.031103	151.6418
CX-2ULM		Contolec	CRUX-0041	318	deg	mV	2000	Rear +	180	0.031087	0.031087	256.3945
CX-3ULE		Contolec	CRUX-0042	318	deg	mV	2000	Rear +	180	0.0309	0.0309	74.82515
CX-1URB		Contolec	CRUX-0001	318	deg	mV	2000	Rear +	180	0.031531	0.031531	169.3518
CX-2URM		Contolec	CRUX-0307	318	deg	mV	2000	Rear +	180	0.031107	0.031107	72.01164
CX-3URE		Contolec	CRUX-0003	318	deg	mV	2000	Rear +	180	0.03199	0.03199	244.6895
CX-1LLB		Contolec	CRUX-0023	318	deg	mV	2000	Rear +	180	0.030492	0.030492	170.6074
CX-2LLM		Contolec	CRUX-0357	318	deg	mV	2000	Rear +	180	0.030519	0.030519	76.07653
CX-3LLE		Contolec	CRUX-0317	318	deg	mV	2000	Rear +	180	0.031613	0.031613	204.8654
CX-1LRB		Contolec	CRUX-0043	318	deg	mV	2000	Rear +	180	0.031539	0.031539	160.5694
CX-2LRM		Contolec	CRUX-0706	318	deg	mV	2000	Rear +	180	0.031197	0.031197	230.9136
CS-3LRE		Contolec	CRUX-0074	318	deg	mV	2000	Rear +	180	0.031896	0.031896	172.6564
DP1-L	LString	Space-Age	256	101.6	mm	mV	10000	Rear +	180	0.094593	0.094593	185.03
DP2-L	LZ-Pot	Contolec	0107	318	deg	mV	1000	Rear +	180	0.0299	0.0299	163.95
DP3-L	LY-Pot	Duncan	0410	360	deg	mV	1000	Rear +	180	0.031701	0.031701	154.24
DP1-R	RString	Space-Age	014486	101.6	mm	mV	10000	Rear +	180	0.096073	0.096073	188.02
DP2-R	RZ-Pot	Contolec	0104	318	deg	mV	1000	Rear +	180	0.028875	0.028875	153.13
DP3-R	RY-Pot	Duncan	0361	360	deg	mV	1000	Rear +	180	0.031631	0.031631	160.77

DRIVER ATD TILT SENSOR MEASUREMENTS

Channel	THOR NT	Tilt Sensor	
		X	Y
0	Head	4.0	7.4
1	Neck	-4.9	-13.0
2	Thoracic Spine	-39.0	43.7
3	Lumbar Spine	-13.4	40.8
4	Pelvis	193.4	6.2
	Neck Pitch Setting	Neutral	
	Spine Pitch Setting	Slouch	