REPORT NUMBER: TR-P29125-05-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 FIVE HUNDRED SEL – 50% OFFSET-OBLIQUE 15°

NHTSA No: R70212

PREPARED BY:

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ADELANTO, CA 92301

MARCH 30, 2010

FINAL REPORT

PREPARED FOR:

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

55 BROADWAY / RVT-92

CAMBRIDGE, MA 02142-1093

This final test report was prepared for the U.S. Department of Transportation / RITA / Volpe National Transportation Systems Center, in response to Contract Number DTRT57-05-D30106.

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16. Abstract

A test was conducted in accordance with instructions outlined in Task Order DTRTV-T9001 in which a modified FMVSS 301 barrier moving at 115.2 km/h impacted a stationary 2007 Ford Five Hundred SEL 4-Door Sedan. The Ford Five Hundred was positioned 15 degrees relative to the moving barrier and the barrier impacted 50 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 the KARCO Engineering, LLC. Facility in Adelanto, California on March 30, 2010.

The impact velocity of the moving barrier was 115.2 km/h. The Ford Five Hundred was positioned at an angle of 14.7 degrees and the offset of the MDB was 946 mm from the left side of the vehicle. The Ford Five Hundred's maximum post-test crush was 585 mm to the left of the vehicle centerline. The dummies Injury Assessment Values are as followed:

Measurement Description	Units	Driver ATD		Left Rear Passenger	
		Threshold	Result	Threshold	Result
Head Injury Criteria (HIC_{15})	N/A	700.0	576.0	700.0	940.3
3 ms Head Clip	g	80.0	74.5		
3 ms Thorax Clip	g	60.0	41.8		
3 ms Chest Clip	g			60.0	66.4
Neck Tension	N	2520	2157.0	2620	2983.5
Neck Compression	N	-3600	-1215.7	-2520	-872.6
Left Femur Force	N	-10000	-3090.4	-6805	-421.0
Right Femur Force	N	-10000	-4708.4	-6805	-1587.0

17. Key Words
2007 Ford Five Hundred SEL 4-Door Sedan
NHTSA No. R70212
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50th THOR NT

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SECTION 1
PURPOSE AND TEST PROCEDURE

1.1 PURPOSE

This 115.9 km/h (72 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.

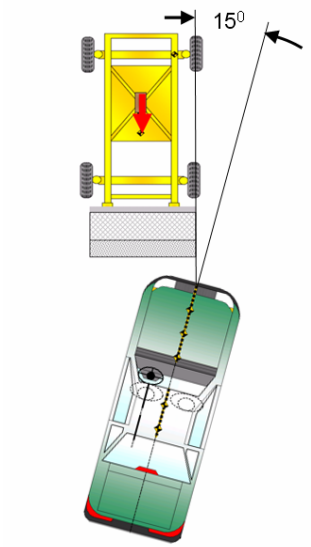
1.2 TEST PROCEDURE

This test was conducted in accordance with the instructions set forth by NHTSA/Volpe for a 15°, 50% 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 five hundred SEL 4-door sedan was impacted on the left front corner by a modified FMVSS 301 Moving Deformable Barrier. The test vehicle was stationary and positioned at a target angle of 15° and an offset of 50% 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 115.2 km/h (71.6 mph).



The test vehicle mass was 1891.0 kg (4170 lbs), and the MDB mass was 1795.5 kg (3959 lbs). The test was conducted by KARCO Engineering, LLC. on March 30, 2010.

The test was documented by two (2) real time and fifteen (15) high-speed video cameras. Camera locations and other pertinent data are located in Data Sheet No. 17 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.: 6) 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 was 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 74.5% total windshield retention, with 71.6% and 77.3% 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 600 mm at DPD 3 to the left of the vehicle's centerline. The maximum crush of the underlying structure was 815 mm at DPD 1 of the lower bumper beam, to the left of the vehicle's centerline. Full vehicle measurements are presented in Section 3 of this report.

All four vehicle doors remained closed and latched during the test. The left front, right front and right rear doors were all jammed shut as a result of the impact. The left rear door remained operational.

The driver ATD's visible contact points are as follows: the head contacted the airbag, door frame and headrest; 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 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	233.6	700	533.8
3 ms Head Clip	g	80	49.6		
3 ms Thorax Clip	g	60	39.6		
3 ms Chest Clip	g				54.8
Neck Tension	N	2,520	1887.1	2,620	2143.9
Neck Compression	N	3,600	527.1	-2,520	-1262.6
Left Femur Force	N	-10,000	-6546.9	-6,805	-196.2
Right Femur Force	N	-10,000	-6768.3	-6,805	-174.0

SECTION 3

DATA SHEETS

Test Vehicle: 2007 Ford 500 SEL 4-Door Sedan NHTSA No.: R70212

Test Program: 72 mph, 15°, 50% Offset MDB to Vehicle Test Date: 3/30/10

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 500 SEL 4-Door Sedan NHTSA No.: R70212

Test Program: 72 mph, 15°, 50% Offset MDB to Vehicle Test Date: 3/30/10

PRIMARY IMPACT DATA

Measured Parameter	Units	Value
MDB Velocity at Impact	km/h	125.7
Test Vehicle Angle	°	15.5
MDB Test Weight	kg	1366.0
Vehicle Test Weight	kg	1740.0
MDB Maximum Static Crush	mm	439
Vehicle Maximum Static Crush	mm	815
Actual Vehicle Offset	mm	970 [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	442
B	Top of Bumper	533	800	Left	365
C	Mid Level	686	800	Left	314
D	Top of Stack	813	800	Left	300

DOOR OPENING AND SEAT TRACK DATA

Description	Driver Side	Passenger Side
Front Door Opening	Remained closed and latched, jammed shut	Remained closed and latched, jammed shut
Rear Door Opening	Remained closed and latched, operational	Remained closed and latched, jammed shut
Seat Track Shift (mm)	14 mm	
Seat Back Failure	No	No

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

DATA SHEET NO. 1 … (CONTINUED)

CRASH TEST SUMMARY

Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/30/10

STRUCTURAL OBSERVATIONS

Critical Areas of Performance	Observations
Pillar Performance	No separation occurred
Sill Separation	No sill separation
Windshield Damage	Broken, separated from frame [2]
Window Damage	No damage occurred
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: G109	
Head Contact	Airbag, Hand, Door Panel, Side Header	Chest, Left Arm, Door Panel, Seat Back
Chest Contact	Airbag, Door Panel	Chin
Abdomen Contact	None	None
Left Knee Contact	Knee Bolster	B-Pillar
Right Knee Contact	Knee Bolster	None

VIDEO COVERAGE

Camera Type	Number
Real Time	2
High-Speed Off-Board	10
High-Speed MDB On-Board	1
High-Speed Vehicle On-Board	4 [3]
Total	17

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 figures 303 through 308 of Appendix A.

[3] – Camera views were lost due to battery failure.

DATA SHEET NO. 1 … (CONTINUED)

CRASH TEST SUMMARY

Test Vehicle: 2007 Ford 500 SEL 4-Door Sedan NHTSA No.: R70212

Test Program: 72 mph, 15°, 50% Offset MDB to Vehicle Test Date: 3/30/10

DATA CHANNEL ANOMALIES

Channel	Description	Axis	Unit	Problem
100	Driver Left Lower Tibia Moment	Y	g	Channel failed, no data
120	Driver Lap Belt Force		N	Channel failed at 73.7 ms
121	Driver Shoulder Belt Force		N	Channel failed at 102.5 ms
134	LR Passenger Upper Neck Foce	X	N	Channel failed, no data
169	Vehicle Left Brake Caliper	X	g	Channel failed at 57.8 ms
170	Vehicle Right Brake Caliper	X	g	Channel failed, no data
175	Vehicle Accelerator Pedal	Z	g	Channel failed, no data
195	MDB Rear	Z	g	Channel failed, no data

DATA SHEET NO. 2

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/30/10

TEST VEHICLE INFORMATION AND OPTIONS

NHTSA No.	R70212	Anti-Lock Brakes	Yes
Year	2007	Traction Control	No
Make	Ford	All Wheel Drive	No
Model	500 SEL	Power Steering	Yes
Body Style	4-Door Sedan	Driver Front Airbag	Yes
VIN	1FAHP24117G142670	Driver Side Torso Airbag	Yes
Color	Black	Driver Side Head Airbag	No
Delivery Date	1/9/2010	Driver Curtain/Airbag	Yes
Odometer (Miles)	47,924	Rear Pass. Airbag	No
Dealer	Valuecarsinc.com	Rear Pass. Side Airbag	No
Transmission	6-Speed Automatic	Rear Pass. Head Airbag	No
Final Drive	Front	Rear Pass. Curtain/Airbag	Yes
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	Yes	Tilt Steering	Yes
Power Brakes	Yes	Automatic Door Locks	Yes
Front Disc	Yes	Power Windows	Yes
Rear Disc	Yes	Power Seats	Yes

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

DATA FROM CERTIFICATION LABEL

Manufactured By	Ford Motor Co.	GVWR (kg)	2,186
		GAWR Front (kg)	1,150
Date of Manufacture	Nov-06	GAWR Rear (kg)	1,066

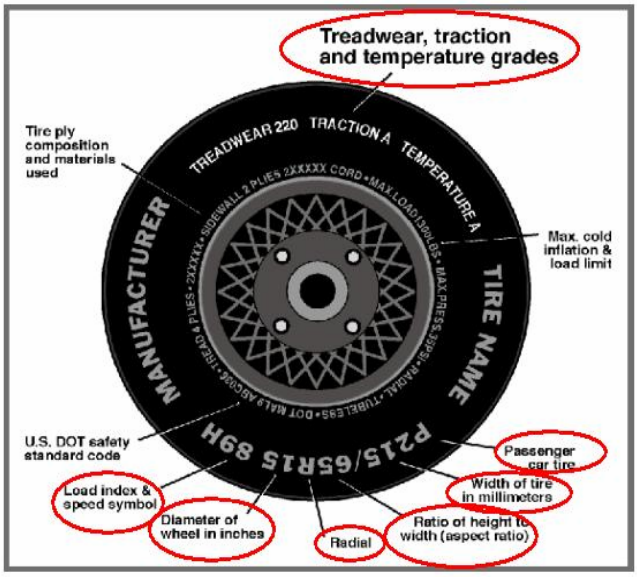
VEHICLE SEATING AND CAPACITY WEIGHT INFORMATION

Measured Parameter	Front	Rear	Third	Total
Type of Seats	Bucket	Bench		
Number of Occupants	2	3		5
Capacity Weight (VCW) (kg)				430.0
Cargo Weight (RCLW) (kg)				89.8

DATA SHEET NO. 2 … (CONTINUED)

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/30/10



TIRE DATA

Description	Front	Rear
Max. Tire Pressure	300	300
Cold Tire Pressure	220	220
Recommended Tire Size	P215/60R17	P215/60R17
Actual Tire Size	P215/60R17	P215/60R17
Tire Manufacturer	Continental	Continental
Tire Model	Touring Contact	Touring Contact
Load Range	690	690
Treadware Rating	360	360
Traction Rating	A	A
Temperature Rating	A	A
Tire Plies Sidewall	1 Polyester	1 Polyester
Tire Plies Body	1 Polyester, 2 Steel, 1 Nylon	1 Polyester, 2 Steel, 1 Nylon
Load Index/Speed Symbol	95T	95T
Tire Material	Polyester, Steel, Nylon	Polyester, Steel, Nylon
DOT Safety Code Left	A3KT 8MT 3906	A3KT 5MT 3906
DOT Safety Code Right	A3KT 8MT 3906	A3KT 5MT 3906

DATA SHEET NO. 2 … (CONTINUED)

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2007 Ford 500 SEL 4-Door Sedan NHTSA No.: R70212

Test Program: 72 mph, 15°, 50% Offset MDB to Vehicle Test Date: 3/30/10

TEST VEHICLE WEIGHTS

	Units	As Delivered Weights (UVW)			As Tested Weights (ATW)		
		Front Axle	Rear Axle	Total	Front Axle	Rear Axle	Total
Left	kg	504.0	337.0	841.0	557.0	447.5	1004.5
Right	kg	496.5	309.5	806.0	493.0	393.5	886.5
Ratio	%	60.7	39.3	100.0	55.5	44.5	100.0
Total	kg	1000.5	646.5	1647.0	1050.0	841.0	1891.0

TARGET TEST WEIGHT CALCULATION

Measured Parameter	Units	Value
Total Delivered Weight (UVW)	kg	1647.0
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	1893.8 [4]

TEST VEHICLE ATTITUDES AND CG

	Units	LF	RF	LR	RR	CG Aft of Front Axle
As Delivered	mm	733	739	750	755	1082
As Tested	mm	721	740	704	723	1226

GENERAL TEST VEHICLE DATA

Vehicle Wheelbase (mm):	2757
Weight of Ballast Secured in Cargo Area (kg):	16.5
Weight of Items Removed (kg):	17.5
Vehicle Components Removed:	Spare Tire, Jack and Tools, Rear Trunk Liner

FUEL SYSTEM DATA

Fuel System Capacity From Owner's Manual (L):	75.71
Actual Test Volume with Entire Fuel System Filled (L):	70.41
Test Fluid Type:	Stoddard Solvent
Kinematic Viscosity:	per ASTM D 484-71
Type of Vehicle Fuel Pump:	Electric

[4] – COTR requested Test Weight of 1891 kg.

DATA SHEET NO. 2 … (CONTINUED)

GENERAL TEST AND VEHICLE PARAMETER DATA

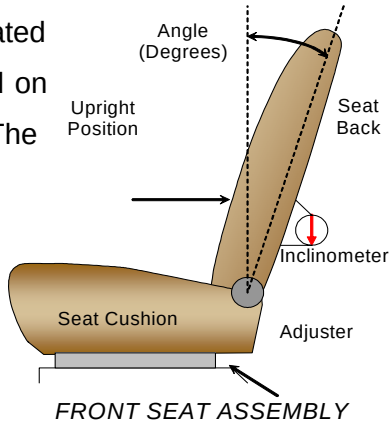
Test Vehicle: 2007 Ford 500 SEL 4-Door Sedan NHTSA No.: R70212

Test Program: 72 mph, 15°, 50% Offset MDB to Vehicle Test Date: 3/30/10

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.

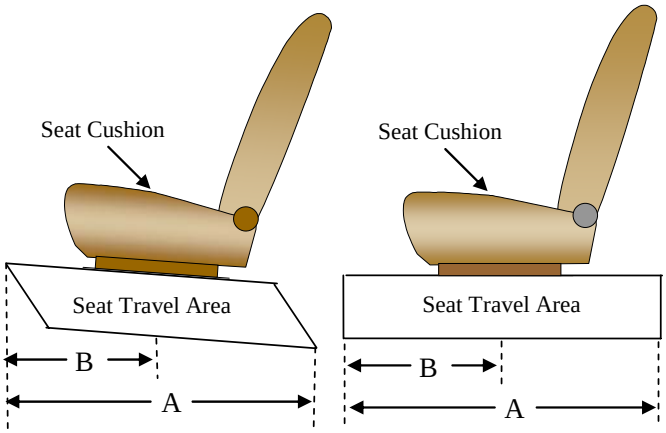
Description	Value
Driver w/Seated Dummy	25.0
Left Rear Passenger w/Seated Dummy	Fixed



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	262 mm	131 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

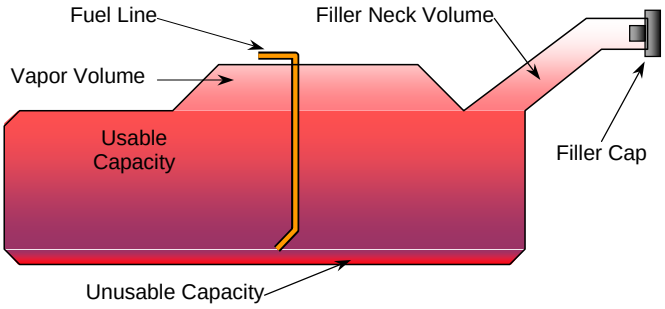
Test Vehicle: 2007 Ford 500 SEL 4-Door Sedan NHTSA No.: R70212

Test Program: 72 mph, 15°, 50% Offset MDB to Vehicle Test Date: 3/30/10

FUEL TANK CAPACITY DATA

Description	Units	Value
Usable Capacity of "Standard Tank"	L	75.71
Usable Capacity of "Optional" Tank	L	
Allowable Capacity used for FMVSS 301	L	69.65 to 71.17
Actual Amount of Solvent used	L	70.41

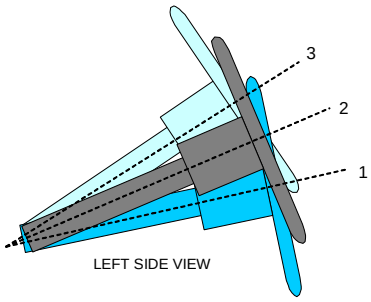
The test vehicle is equipped with an electric fuel pump. The fuel pump will operate when the key is in the "ON" position or when the engine is activated. The fuel filler door is located on the right rear fender. The standard fuel tank occupies the area under the rear seat.



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	20.3	
Geometric center position No. 2	22.9	
Uppermost position No. 3	25.6	

DATA SHEET NO. 3

POST-IMPACT OBSERVATIONS

Test Vehicle: 2007 Ford 500 SEL 4-Door Sedan NHTSA No.: R70212

Test Program: 72 mph, 15°, 50% Offset MDB to Vehicle Test Date: 3/30/10

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	Yes	No	No	[5]
Side Head Airbag	No		No	
Curtain Airbag	Yes	No	Yes	[5]
Pre-Tensioners	Yes	Yes	No	
Load Limiters	Yes	Yes	No	

IMPACT DATA

Measurement Description	Units	Value
Horizontal Offset from Target	mm	+25 (Left)
Vertical Offset from Target	mm	-1 (Down)
Stationary Vehicle Angle Relative to MDB	°	14.7

VEHICLE STATIC CRUSH

Measured Parameter	Units	Value
Left Side	mm	458
Centerline	mm	240
Right Side	mm	-114

[5] – Side and curtain airbags were disabled.

DATA SHEET NO. 4

OCCUPANT INJURY ASSESSMENT DATA

Test Vehicle: 2007 Ford 500 SEL 4-Door Sedan NHTSA No.: R70212

Test Program: 72 mph, 15°, 50% Offset MDB to Vehicle Test Date: 3/30/10

DRIVER ANTHROPOMORPHIC TEST DEVICE

Location	Metric	Description	SAE Filter Class	Max	Min
Head	Alpha-x	Angular acceleration (rad/sec^2)	simon	7108.5	-2972.6
	Alpha-y	Angular acceleration (rad/sec^2)	simon	6111.6	-2818.2
	Alpha-z	Angular acceleration (rad/sec^2)	simon	3739.4	-6067.8
	Alpha-res	Angular acceleration - resultant (rad/sec^2)	simon	8700.4	
	Wx	Angular velocity (rad/sec)	simon	28.0	-19.4
	Wy	Angular velocity (rad/sec)	simon	19.4	-37.5
	Wz	Angular velocity (rad/sec)	simon	13.8	-16.6
	Wres	Angular velocity - resultant (rad/sec)	simon	39.2	
	HIC36	36 ms clip	1000	905.4	
	HIC15	15 ms clip	1000	576.0	
	SFC	Skull fracture correlate	simon	68.3	
	CSDM	Cumulative strain (Tolerance = 0.05)	simon	1.0	
	CSDM	Cumulative strain (Tolerance = 0.10)	simon	0.9	
	CSDM	Cumulative strain (Tolerance = 0.15)	simon	0.4	
	Head CG G's	Head resultant CG acceleration, 3 ms clip (g's)	1000	74.5	
Neck	Fx at OC	UNLC Fx transferred to OC, neck system (N)	1000	110.0	-1188.2
	Fz	UNLC Fz, neck system Tension (N)	1000	2157.0	-1215.7
	Fz	UNLC Fz, neck system Compression (N)	1000	2157.0	-1215.7
	My at OC	UNLC My transferred to OC, neck system Flexion (N-m)	1000, 600	4.3	-28.0
	My at OC	UNLC My transferred to OC, neck system Extension (N-m)	1000, 600	4.3	-28.0
	Fx_OC	On head acting through total neck section, (N)	1000	1779.3	-372.4
	Fy_OC	On head acting through total neck section, (N)	1000	686.5	-186.1
	Fz_OC	On head acting through total neck section, (N)	1000	1165.9	-2046.6
	Mx_OC	On head acting through total neck section, (Nm)	600	26.2	-42.0
	My_OC	On head acting through total neck section, (Nm)	600	4.3	-35.1
	Mz_OC	On head acting through total neck section, (Nm)	600	13.1	-15.5
	Fx_head	On head acting through O.C. joint only (N)	1000	1338.8	-365.1
	Fz_head	On head acting through O.C. joint only (N)	1000	1164.0	-2031.9
	My_head	On head acting through O.C. joint only (Nm)	600	4.3	-27.9

DATA SHEET NO. 4 … (CONTINUED)

OCCUPANT INJURY ASSESSMENT DATA

Test Vehicle: 2007 Ford 500 SEL 4-Door Sedan NHTSA No.: R70212

Test Program: 72 mph, 15°, 50% Offset MDB to Vehicle Test Date: 3/30/10

DRIVER ANTHROPOMORPHIC TEST DEVICE … (CONTINUED)

Location	Metric	Description	SAE Filter Class	Max	Min
Chest	UR x	Upper Crux x-defl , Right (mm)	180	0.0	-44.7
	UR y	Upper Crux y-defl , Right (mm)	180	5.9	-18.3
	UR z	Upper Crux x-defl , Right (mm)	180	28.1	-1.6
	UR d	Upper Crux "d" displacement , Right (mm)	180	0.0	-44.4
	UL x	Upper Crux x-defl , Left (mm)	180	6.7	-11.8
	UL y	Upper Crux y-defl , Left (mm)	180	8.1	-13.6
	UL z	Upper Crux x-defl , Left (mm)	180	39.0	-6.5
	UL d	Upper Crux "d" displacement , Left (mm)	180	3.5	-31.6
	LR x	Lower Crux x-defl , Right (mm)	180	3.2	-11.4
	LR y	Lower Crux y-defl , Right (mm)	180	4.3	-3.1
	LR z	Lower Crux x-defl , Right (mm)	180	0.0	-47.2
	LR d	Lower Crux "d" displacement , Right (mm)	180	0.0	-45.2
	LL x	Lower Crux x-defl , Left (mm)	180	9.9	-9.5
	LL y	Lower Crux y-defl , Left (mm)	180	3.0	-4.1
	LL z	Lower Crux x-defl , Left (mm)	180	16.0	-14.4
	LL d	Lower Crux "d" displacement , Left (mm)	180	13.2	-14.2
	Chest CG G's	Chest CG acceleration, 3 ms clip, (G's)	180	41.8	
Abdomen	Up x	Max upper string pot (mm)	180	-0.6	16.5
	Up V*C	Upper viscous criteria	180	0.1	
	LR x	Lower right x-deflection (mm)	180	0.0	-36.7
	LR y	Lower right y-deflection (mm)	180	8.1	-4.6
	LR z	Lower right z-deflection (mm)	180	3.8	-1.0
	LR V*C	Right viscous criterion based on x-deflection	180	0.2	
	LL x	Lower left x-deflection (mm)	180	0.0	.24.57
	LL y	Lower left y-deflection (mm)	180	18.6	-0.5
	LL z	Lower left z-deflection (mm)	180	11.1	-2.2
	LL V*C	Left viscous criterion based on x-deflection	180	0.1	
Pelvis	CG res.	Pelvis cg resultant acceleration (G)	1000	50.5	
Acetabulum	R Fx	Right Fx force (N)	600	909.2	-1341.3
	R Fy	Right Fy force (N)	600	1559.8	-551.1
	R Fz	Right Fz force (N)	600	751.9	-595.4
	R Rres.	Resultant of Fx, Fy, Fz (N)	600	2059.9	
	L Fx	Left Fx force (N)	600	1588.8	-1463.5
	L Fy	Left Fy force (N)	600	507.6	-449.9
	L Fz	Left Fz force (N)	600	1398.8	-777.9
	L Rres.	Resultant of Fx, Fy, Fz (N)	600	1726.7	

DATA SHEET NO. 4 … (CONTINUED)

OCCUPANT INJURY ASSESSMENT DATA

Test Vehicle: 2007 Ford 500 SEL 4-Door Sedan NHTSA No.: R70212

Test Program: 72 mph, 15°, 50% Offset MDB to Vehicle Test Date: 3/30/10

DRIVER ANTHROPOMORPHIC TEST DEVICE … (CONTINUED)

Location	Metric	Description	SAE Filter Class	Max	Min
Femur	R Fz	Right Fz force (N)	600	294.5	-4708.4
	R Mx	Right Mx moment (Nm)	600	7.9	-94.0
	R My	Right My moment (Nm)	600	71.0	-37.8
	R Mres	Resultant of Mx and My only (not Mz) (Nm)	600	99.3	
	L Fz	Left Fz force (N)	600	445.1	-3090.5
	L Mx	Left Mx moment (Nm)	600	73.8	-101.0
	L My	Left My moment (Nm)	600	117.8	-21.0
	L Mres	Resultant of Mx and My only (not Mz) (Nm)	600	134.4	
Knee	R knee	Knee displacement (mm)	180	0.1	-4.0
	L knee	Knee displacement (mm)	180	0.2	-6.5
Tibia	RU Fz	Right upper axial force (N)	600	254.9	-1629.3
	RL Fz	Right lower axial force (N)	600	142.7	-3485.1
	RU My	Right upper bending moment (Nm)	600	96.9	-152.8
	RL My	Right lower bending moment (Nm)	600	75.8	-87.0
	RU Index	Right upper tibia index	600	0.8	
	RL Index	Right lower tibia index	600	0.5	
	LU Fz	Left upper axial force (N)	600	299.1	-1943.1
	LL Fz	Left lower axial force (N)	600	133.4	-3378.4
	LU My	Left upper bending moment (Nm)	600	112.5	-92.4
	LL My	Left lower bending moment (Nm)	600		[6]
	LU Index	Left upper tibia index	600	0.6	
	LL Index	Left lower tibia index	600	0.4	
Ankle	R ankle Fx	Ankle X Force (N)	600	504.2	-2413.2
	R ankle Fy	Ankle Y Force (N)	600	3008.4	-1053.0
	R ankle Fz	Ankle Z Force (N)	600	143.3	-3046.4
	R ankle Mx	Ankle Mx Moment (Nm)	600	254.0	-59.6
	R ankle My	Ankle My Moment (Nm)	600	147.5	-27.9
	R inversion	Rotation about ankle X-axis, subtalar joint (deg)	180	-1.7	-38.1
	R dors	Rotation about ankle Y-axis joint (deg)	180	32.5	-10.2
	L ankle Fx	Ankle X Force (N)	600	702.3	-1448.8
	L ankle Fy	Ankle Y Force (N)	600	877.1	-100.5
	L ankle Fz	Ankle Z Force (N)	600	127.8	-3130.0
	L ankle Mx	Ankle Mx Moment (Nm)	600	41.9	-14.9
	L ankle My	Ankle My Moment (Nm)	600	109.4	-53.1
	L inversion	Rotation about ankle X-axis, subtalar joint (deg)	180	24.8	-25.7
	L dors	Rotation about ankle Y-axis joint (deg)	180	24.7	-26.7

[6] – Channel failed, no data

DATA SHEET NO. 4 … (CONTINUED)

OCCUPANT INJURY ASSESSMENT DATA

Test Vehicle: 2007 Ford 500 SEL 4-Door Sedan NHTSA No.: R70212

Test Program: 72 mph, 15°, 50% Offset MDB to Vehicle Test Date: 3/30/10

Description	Axis	Units	Max	Time (ms)	Min	Time (ms)
Driver Head CG	X	g	211.8	-85.2	96.0	0.0
Driver Head CG	Y	g	106.8	-24.9	208.8	0.0
Driver Head CG	Z	g	95.8	-2.5	134.9	0.0
Driver Top Head Array	X	g	210.8	-124.2	96.1	0.0
Driver Top Head Array	Y	g	106.6	-32.4	208.7	0.0
Driver Left Side Head Array	X	g	213.0	-88.7	108.8	0.0
Driver Left Side Head Array	Z	g	95.6	-3.8	113.5	0.0
Driver Rear Head Array	Y	g	106.8	-27.1	208.8	0.0
Driver Rear Head Array	Z	g	96.0	-6.4	217.8	0.0
Driver Head CG Redundant	X	g	213.0	-81.7	96.0	0.0
Driver Head CG Redundant	Y	g	106.8	-24.2	208.8	0.0
Driver Head CG Redundant	Z	g	95.8	-3.4	135.3	0.0
Driver Upper Neck Force	X	N	73.6	-1188.2	111.0	0.0
Driver Upper Neck Force	Y	N	95.1	-185.2	399.6	0.0
Driver Upper Neck Force	Z	N	73.3	-1215.7	215.3	0.0
Driver Upper Neck Moment	X	Nm	105.8	-18.9	399.9	0.0
Driver Upper Neck Moment	Y	Nm	122.2	-5.2	66.6	0.0
Driver Upper Neck Moment	Z	Nm	77.1	-22.6	104.5	0.0
Driver Lower Neck Force	X	N	219.9	-890.8	70.6	0.0
Driver Lower Neck Force	Y	N	72.1	-701.9	103.4	0.0
Driver Lower Neck Force	Z	N	83.0	-1038.6	215.6	0.0
Driver Lower Neck Moment	X	Nm	90.0	-51.6	399.9	0.0
Driver Lower Neck Moment	Y	Nm	123.5	-14.7	220.3	0.0
Driver Lower Neck Moment	Z	Nm	95.0	-9.4	224.4	0.0
Driver Front Neck Spring Force		N				[7]
Driver Rear Neck Spring Force		N	123.0	-55.9	37.3	0.0
Driver Occipital Condyle Rotation		°	87.3	-5.3	148.9	0.0
Driver Upper Spine T1	X	g	138.5	-50.2	78.5	0.0
Driver Upper Spine T1	Y	g	87.7	-7.9	67.5	0.0
Driver Upper Spine T1	Z	g	62.9	-27.2	103.1	0.0
Driver Thorax	X	g	108.3	-38.1	80.6	0.0
Driver Thorax	Y	g	91.5	-3.6	27.9	0.0
Driver Thorax	Z	g	67.5	-19.4	99.6	0.0

[7]– Channel failed, no data

DATA SHEET NO. 4 … (CONTINUED)

OCCUPANT INJURY ASSESSMENT DATA

Test Vehicle: 2007 Ford 500 SEL 4-Door Sedan NHTSA No.: R70212

Test Program: 72 mph, 15°, 50% Offset MDB to Vehicle Test Date: 3/30/10

Description	Axis	Units	Max	Time (ms)	Min	Time (ms)
Driver Lower Spine T12	X	g	17.9	100.9	-46.7	63.8
Driver Lower Spine T12	Y	g	30.4	94.8	-7.9	123.8
Driver Lower Spine T12	Z	g	7.1	214.5	-19.9	90.7
Driver Upper Left CRUX Base Rotation		°	122.3	66.9	105.1	390.9
Driver Upper Left CRUX Middle Rotation		°	211.8	235.7	176.1	78.3
Driver Upper Left CRUX Elbow Rotation		°	172.4	77.1	124.6	235.0
Driver Lower Left CRUX Base Rotation		°	160.6	98.8	157.2	273.4
Driver Lower Left CRUX Middle Rotation		°	142.7	391.4	133.2	109.5
Driver Lower Left CRUX Elbow Rotation		°	135.7	106.3	105.0	71.0
Driver Upper Right CRUX Base Rotation		°	176.7	392.7	159.6	116.7
Driver Upper Right CRUX Middle Rotation		°	133.2	64.6	112.5	109.3
Driver Upper Right CRUX Elbow Rotation		°	165.3	7.5	118.0	76.1
Driver Lower Right CRUX Base Rotation		°	189.8	64.7	179.4	23.0
Driver Lower Right CRUX Middle Rotation		°	277.0	20.3	259.5	66.7
Driver Lower Right CRUX Elbow Rotation		°	301.5	65.2	258.2	5.5
Driver Upper Abdomen Deflection		mm	16.5	72.8	-0.5	75.6
Driver Left DGSP Deflection	X	mm	79.6	80.9	52.8	6.7
Driver Left DGSP Rotation	Y	mm	167.8	394.8	160.4	115.6
Driver Left DGSP Rotation	Z	mm	162.8	74.0	156.6	390.6
Driver Right DGSP Deflection	X	mm	89.5	65.7	52.0	19.4
Driver Right DGSP Rotation	Y	°	179.7	121.4	173.1	75.1
Driver Right DGSP Rotation	Z	°	160.5	78.1	156.7	138.9
Driver Thoracic Spine Force	X	N	154.5	40.2	-849.4	93.4
Driver Thoracic Spine Force	Y	N	1502.0	102.7	-410.0	62.4
Driver Upper Thoracic Spine Force	Z	N	2822.5	123.8	-2181.9	91.9
Driver Upper Thoracic Spine Moment X	X	Nm	198.0	102.7	-26.1	52.0
Driver Upper Thoracic Spine Moment Y	Y	Nm	69.5	74.5	-94.3	95.2
Driver Pelvis	X	g	6.4	96.9	-45.5	57.5
Driver Pelvis	Y	g	37.4	71.3	-7.2	51.2
Driver Pelvis	Z	g	10.7	63.9	-27.0	91.7
Driver Left Acetabulum Force	X	N	1588.8	71.4	-1463.5	47.7
Driver Left Acetabulum Force	Y	N	507.6	100.1	-449.9	88.4
Driver Left Acetabulum Force	Z	N	1398.8	83.0	-777.8	104.0

DATA SHEET NO. 4 … (CONTINUED)

OCCUPANT INJURY ASSESSMENT DATA

Test Vehicle: 2007 Ford 500 SEL 4-Door Sedan NHTSA No.: R70212

Test Program: 72 mph, 15°, 50% Offset MDB to Vehicle Test Date: 3/30/10

Description	Axis	Units	Max	Time (ms)	Min	Time (ms)
Driver Right Acetabulum Force	X	N	909.2	102.8	-1341.3	65.8
Driver Right Acetabulum Force	Y	N	1559.8	63.6	-551.1	98.1
Driver Right Acetabulum Force	Z	N	751.9	76.2	-595.4	52.1
Driver Left Femur Force	X	N	587.0	75.3	-231.3	117.3
Driver Left Femur Force	Y	N	390.7	87.9	-272.7	103.0
Driver Left Femur Force	Z	N	445.1	102.9	-3090.4	47.2
Driver Left Femur Moment	X	Nm	73.8	105.2	-101.0	56.9
Driver Left Femur Moment	Y	Nm	117.8	102.6	-21.0	56.4
Driver Left Femur Moment	Z	Nm	24.6	56.6	-37.0	117.9
Driver Right Femur Force	X	N	298.8	73.1	-360.7	97.0
Driver Right Femur Force	Y	N	552.4	96.6	-66.5	266.2
Driver Right Femur Force	Z	N	294.5	28.9	-4708.4	63.0
Driver Right Femur Moment	X	Nm	7.9	266.7	-94.0	64.3
Driver Right Femur Moment	Y	Nm	71.0	79.9	-37.8	110.6
Driver Right Femur Moment	Z	Nm	62.8	51.6	-7.6	133.3
Driver Left Knee Deflection		mm	0.2	319.7	-6.5	69.8
Driver Left Tibia	X	g	25.9	93.5	-88.8	48.4
Driver Left Tibia	Y	g	53.9	69.1	-13.0	119.9
Driver Left Foot	X	g	67.7	55.9	-171.2	54.8
Driver Left Foot	Y	g	89.2	62.6	-32.3	111.1
Driver Left Foot	Z	g	152.8	55.0	-109.9	54.7
Driver Left Ankle Rotation	X	°	24.8	119.0	-25.7	68.8
Driver Left Ankle Rotation	Y	°	24.7	102.7	-26.7	384.8
Driver Left Ankle Rotation	Z	°	23.2	68.6	8.6	218.9
Driver Left Upper Tibia Force	X	N	751.0	48.2	-1821.8	67.8
Driver Left Upper Tibia Force	Y	N	223.1	117.0	-348.7	59.1
Driver Left Upper Tibia Force	Z	N	299.1	59.4	-1943.1	102.6
Driver Left Upper Tibia Moment	X	Nm	32.3	49.7	-81.9	68.3
Driver Left Upper Tibia Moment	Y	Nm	112.5	65.3	-92.4	47.2
Driver Left Lower Tibia Force	X	N	523.8	65.4	-943.5	48.1
Driver Left Lower Tibia Force	Y	N	740.2	68.5	-188.4	50.1
Driver Left Lower Tibia Force	Z	N	133.4	168.5	-3378.4	101.5
Driver Left Lower Tibia Moment	X	Nm	13.9	219.4	-31.0	60.4
Driver Left Lower Tibia Moment	Y	Nm	0.0	0.0	0.0	0.0 [8]

[8] – Channel failed, no data

DATA SHEET NO. 4 … (CONTINUED)

OCCUPANT INJURY ASSESSMENT DATA

Test Vehicle: 2007 Ford 500 SEL 4-Door Sedan NHTSA No.: R70212

Test Program: 72 mph, 15°, 50% Offset MDB to Vehicle Test Date: 3/30/10

Description	Axis	Units	Max	Time (ms)	Min	Time (ms)	
Driver Right Knee Deflection		mm	0.1	38.2	-4.0	64.1	
Driver Right Tibia	X	g	28.2	79.2	-185.3	54.6	
Driver Right Tibia	Y	g	272.3	54.5	-38.1	81.1	
Driver Right Foot	X	g	80.6	64.6	-228.8	54.6	
Driver Right Foot	Y	g	290.3	54.5	-63.2	58.8	
Driver Right Foot	Z	g	351.2	54.9	-302.5	54.4	
Driver Right Ankle Rotation	X	°	-1.7	150.7	-38.1	85.6	
Driver Right Ankle Rotation	Y	°	32.5	77.5	-10.2	183.0	
Driver Right Ankle Rotation	Z	°	17.6	64.5	-1.0	255.9	
Driver Right Upper Tibia Force	X	N	767.0	54.3	-926.8	60.0	
Driver Right Upper Tibia Force	Y	N	252.8	80.7	-526.0	54.4	
Driver Right Upper Tibia Force	Z	N	254.9	99.9	-1629.2	80.7	
Driver Right Upper Tibia Moment	X	Nm	90.0	81.7	-48.4	55.1	
Driver Right Upper Tibia Moment	Y	Nm	96.9	60.8	-152.8	55.0	
Driver Right Lower Tibia Force	X	N	515.7	60.9	-1977.6	54.2	
Driver Right Lower Tibia Force	Y	N	1729.1	54.1	-815.8	80.4	
Driver Right Lower Tibia Force	Z	N	142.7	142.2	-3485.0	80.3	
Driver Right Lower Tibia Moment	X	Nm	83.3	55.0	-41.5	50.6	
Driver Right Lower Tibia Moment	Y	Nm	75.8	61.5	-87.0	53.7	
Driver Lap Belt Force		N	5981.3	69.1	-187.7	77.8	[9]
Driver Shoulder Belt Force		N	5375.9	56.1	-95.5	106.5	[10]
LR Passenger Head CG	X	g	5.1	221.6	-123.3	106.8	
LR Passenger Head CG	Y	g	65.5	106.7	-6.1	245.9	
LR Passenger Head CG	Z	g	64.2	77.1	-2.9	30.1	
LR Passenger Top Head Array	X	g	11.3	222.3	-179.2	106.6	
LR Passenger Top Head Array	Y	g	116.3	106.7	-10.9	97.4	
LR Passenger Left Side Head Array	X	g	11.1	153.5	-111.9	106.9	
LR Passenger Left Side Head Array	Z	g	66.3	76.3	-1.7	36.7	
LR Passenger Front Head Array	Y	g	82.5	106.7	-6.3	268.0	
LR Passenger Front Head Array	Z	g	73.9	77.5	-14.1	106.0	
LR Passenger Head CG Redundant	X	g	5.3	221.7	-122.8	106.8	
LR Passenger Head CG Redundant	Y	g	65.8	106.7	-5.9	249.4	
LR Passenger Head CG Redundant	Z	g	64.4	77.6	-2.1	34.5	

[9] – Channel failed at 73.7 ms

[10] – Channel failed at 102.5 ms

DATA SHEET NO. 4 … (CONTINUED)

OCCUPANT INJURY ASSESSMENT DATA

Test Vehicle: 2007 Ford 500 SEL 4-Door Sedan NHTSA No.: R70212

Test Program: 72 mph, 15°, 50% Offset MDB to Vehicle Test Date: 3/30/10

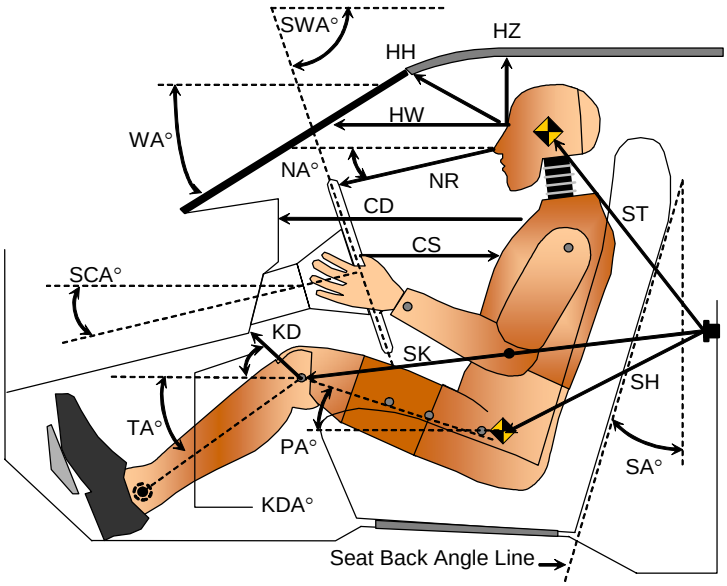
Description	Axis	Units	Max	Time (ms)	Min	Time (ms)
LR Passenger Upper Neck Force X	X	N	0.0	0.0	0.0	0.0 [11]
LR Passenger Upper Neck Force Y	Y	N	530.6	109.4	-78.0	168.8
LR Passenger Upper Neck Force Z	Z	N	2983.5	110.4	-872.6	280.3
LR Passenger Upper Neck Moment X	X	Nm	22.4	104.2	-13.7	159.7
LR Passenger Upper Neck Moment Y	Y	Nm	12.2	103.6	-55.4	278.3
LR Passenger Upper Neck Moment Z	Z	Nm	8.2	101.8	-6.8	285.0
LR Passenger Lower Neck Force X	X	N	2521.8	110.2	-402.1	195.6
LR Passenger Lower Neck Force Y	Y	N	412.8	78.7	-568.8	105.8
LR Passenger Lower Neck Force Z	Z	N	2412.1	75.7	-2129.7	107.2
LR Passenger Lower Neck Moment X	X	Nm	73.6	111.3	-34.8	171.3
LR Passenger Lower Neck Moment Y	Y	Nm	511.3	108.7	-78.3	184.5
LR Passenger Lower Neck Moment Z	Z	Nm	15.6	78.6	-34.9	104.3
LR Passenger Chest X Primary	X	g	7.6	121.4	-70.1	74.2
LR Passenger Chest Y Primary	Y	g	15.7	78.8	-3.5	367.9
LR Passenger Chest Z Primary	Z	g	10.0	76.7	-30.7	104.1
LR Passenger Chest X Redundant	X	g	7.9	121.4	-69.8	74.2
LR Passenger Chest Y Redundant	Y	g	15.9	78.8	-3.5	367.7
LR Passenger Chest Z Redundant	Z	g	10.4	76.5	-30.6	103.9
LR Passenger Chest Deflection	X	mm	0.1	31.1	-44.1	88.1
LR Passenger Pelvis X Primary	X	g	26.2	103.5	-62.9	70.4
LR Passenger Pelvis Y Primary	Y	g	17.8	91.2	-5.4	353.9
LR Passenger Pelvis Z Primary	Z	g	4.7	113.6	-21.8	98.2
LR Passenger Left Femur Force Z	Z	N	1579.6	64.3	-421.0	105.4
LR Passenger Right Femur Force Z	Z	N	205.8	99.5	-1587.0	77.5
LR Passenger Lap Belt Force		N	6813.4	69.5	-17.5	100.4
LR Passenger Shoulder Belt Force		N	6403.3	79.7	-31.9	232.9

[11] – Channel failed, no data

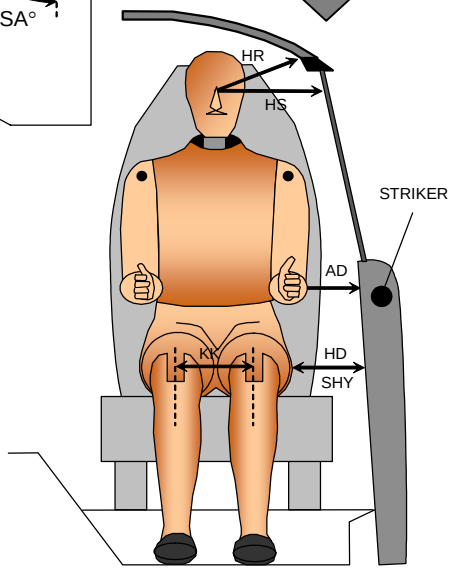
DATA SHEET NO. 5

DUMMY POSITIONING DATA

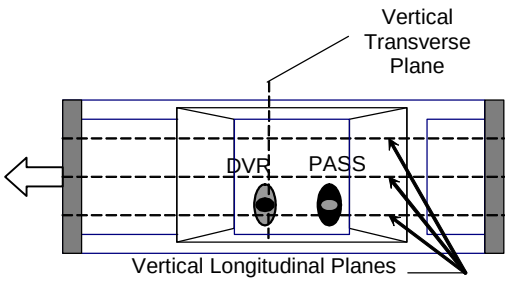
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/30/10



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 500 SEL 4-Door Sedan NHTSA No.: R70212

Test Program: 72 mph, 15°, 50% Offset MDB to Vehicle Test Date: 3/30/10

TEST DUMMY POSITION MEASUREMENTS

Code	Measurement Description	Driver		Left Rear Passenger	
		Length (mm)	Angle (°)	Length (mm)	Angle (°)
WA	Windshield Angle		24.2		
SWA	Steering Wheel Angle		67.1		
SCA	Steering Column Angle		22.9		
SA	Seat Back Angle		5		Fixed
HZ	Head to Roof (Z)	163	89.6	325	0
HH	Head to Header	335	25.9		
HR	Head to Side Header	256	25.2	300	40.5
NR	Nose to Rim	3160	12.4		
CD	Chest to Dash	580	13.6		
CS	Chest to Steering Hub	330	1.2		
RA	Rim to Abdomen	201	0.3		
KDL	Left Knee to Dash / Seat Back	118	12.7	378	14.7
KDR	Right Knee to Dash / Seat Back	247	4.1	365	16.4
PA	Pelvis Angle		28.3		22.1
TA	Tibia Angle		53.1		53
KK	Knee to Knee	297		152	
SK	Striker to Knee	627	1.6	630	20.3
ST	Striker to Head	546	81.2	317	73.9
SH	Striker to H-Point	285	29	371	42.8
SHY	Striker to H-Point (Y)	247		290	
HS	Head to Side Window	354		392	
HD	H-Point to Door	112		171	
AD	Arm to Door	111		103	

DATA SHEET NO. 5 … (CONTINUED)

DUMMY POSITIONING DATA

Test Vehicle: 2007 Ford 500 SEL 4-Door Sedan NHTSA No.: R70212

Test Program: 72 mph, 15°, 50% Offset MDB to Vehicle Test Date: 3/30/10

TEST DUMMY POINT LOCATIONS

Description	Driver			Left Rear Passenger		
	X	Y	Z	X	Y	Z
Head CG	1621	460	1095	1621	460	1095
Bridge of Nose	1722	388	1094	1722	388	1094
Tip of Nose	1744	390	1062	1744	390	1062
Chin	1725	392	983	1725	392	983
Hip Point	1805	113	538	1804	536	511
Left Knee	2124	505	571	2124	505	571
Right Knee	2140	360	564	2140	360	564
Left Ankle	2346	526	303	2346	526	303
Right Ankle	2342	340	336	2342	340	336
Front Outboard Seat Anchor Bolt	3075	589	266			
Seat Back Pivot Point						
Center of Striker	2558	829	676	1534	828	792

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

Y – Vehicle Centerline, Y+ left

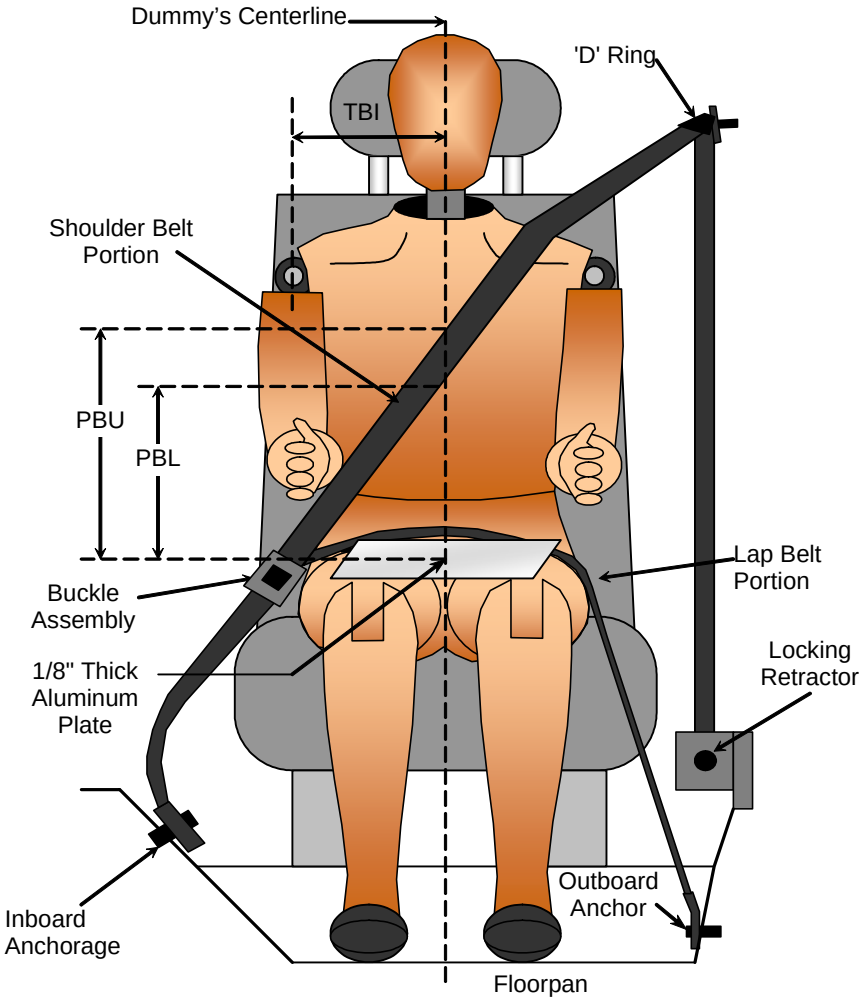
Z – Ground, Z+ up

All measurements in millimeters

DATA SHEET NO. 6

SEAT BELT POSITIONING DATA

Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/30/10



SEAT BELT POSITIONING MEASUREMENTS

Code	Measured Parameter	Units	Driver	Left Rear Passenger
TBI	Dummy C/L to Lap/Shoulder Belt Intersect	mm	223	222
PBU	Top Surface of Reference to Belt Upper	mm	345	305
PBL	Top Surface of Reference to Belt Lower	mm	269	221

DATA SHEET NO. 7

VEHICLE ACCELEROMETER LOCATIONS

Test Vehicle: 2007 Ford 500 SEL 4-Door Sedan NHTSA No.: R70212

Test Program: 72 mph, 15°, 50% Offset MDB to Vehicle Test Date: 3/30/10

Accelerometer Description	Axes	Location		
		X	Y	Z
Left Rear Crossmember	X,Y	2720	710	380
Right Rear Crossmember	X,Y	2710	710	380
Vehicle CG	X,Y,Z	2570	0	420
Engine Top	X	630	10	770
Engine Bottom	X	780	110	153
Left Front Brake Caliper	X	825	810	270
Right Front Brake Caliper	X	830	800	265
Instrument Panel	X	1790	0	880
Driver Seat Track	X	2220	610	350
Accelerator Pedal	X,Y,Z	1450	160	360
Brake Pedal	X,Y,Z	1490	330	410
Foot Rest	X,Y,Z	1570	370	380

All measurements are made relative to the front of vehicle centerline at ground level.

All measurements in millimeters

DATA SHEET NO. 8

VEHICLE ACCELEROMETER DATA SUMMARY

Test Vehicle: 2007 Ford 500 SEL 4-Door Sedan NHTSA No.: R70212

Test Program: 72 mph, 15°, 50% Offset MDB to Vehicle Test Date: 3/30/10

No.	Accelerometer Description	Axis	Units	Max	Time (ms)	Min	Time (ms)	
1	Left Rear Sill	X	g	2.4	146.2	-36.8	54.8	
2		Y	g	27.8	46.9	-7.3	70.8	
4	Right Rear Sill	X	g	1.5	128.7	-50.7	44.1	
5		Y	g	27.0	46.3	-7.6	71.9	
7	Vehicle CG	X	g	1.6	123.0	-48.5	52.7	
8		Y	g	23.1	40.6	-7.1	71.5	
9		Z	g	22.7	46.7	-17.0	62.3	
10	Engine Top	X	g	59.2	55.0	-204.4	37.3	
11	Engine Bottom	X	g	83.5	51.2	-104.4	36.1	
12	Left Front Brake Caliper	X	g	69.7	51.5	-63.9	44.8	[12]
13	Right Front Brake Caliper	X	g	0.0	0.0	0.0	0.0	[13]
14	Instrument Panel	X	g	87.5	81.1	-161.4	53.6	
15	Driver Seat Track	X	g	1.0	62.1	-33.6	54.5	
16	Accelerator Pedal	X	g	103.3	56.5	-132.9	48.3	
17		Y	g	48.8	65.9	-124.7	46.7	
18		Z	g	0.0	0.0	0.0	0.0	[14]
19	Brake Pedal	X	g	218.9	64.9	-375.7	50.3	
20		Y	g	135.6	59.9	-179.0	54.4	
21		Z	g	107.0	53.5	-88.5	44.7	
22	Foot Rest	X	g	44.6	92.1	-95.5	44.2	
23		Y	g	59.3	47.0	-39.8	112.9	
24		Z	g	49.1	87.5	-26.9	61.2	

[12] – Channel failed at 57.8 ms

[13] – Channel failed, no data

[14] – Channel failed, no data

DATA SHEET NO. 9

MOVING DEFORMABLE BARRIER ACCELEROMETER LOCATIONS AND DATA SUMMARY

Test Vehicle: 2007 Ford 500 SEL 4-Door Sedan NHTSA No.: R70212

Test Program: 72 mph, 15°, 50% Offset MDB to Vehicle Test Date: 3/30/10

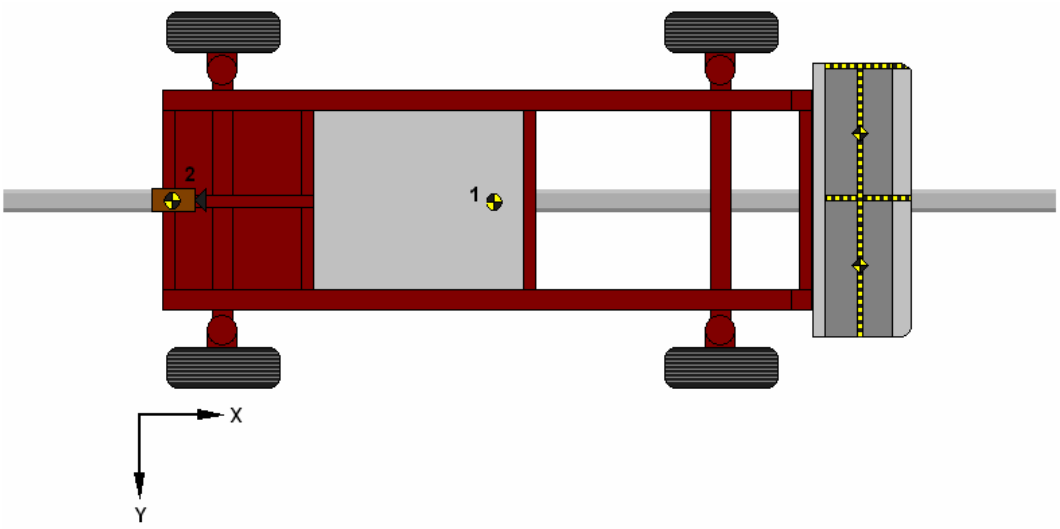
MDB ACCELEROMETER LOCATIONS

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



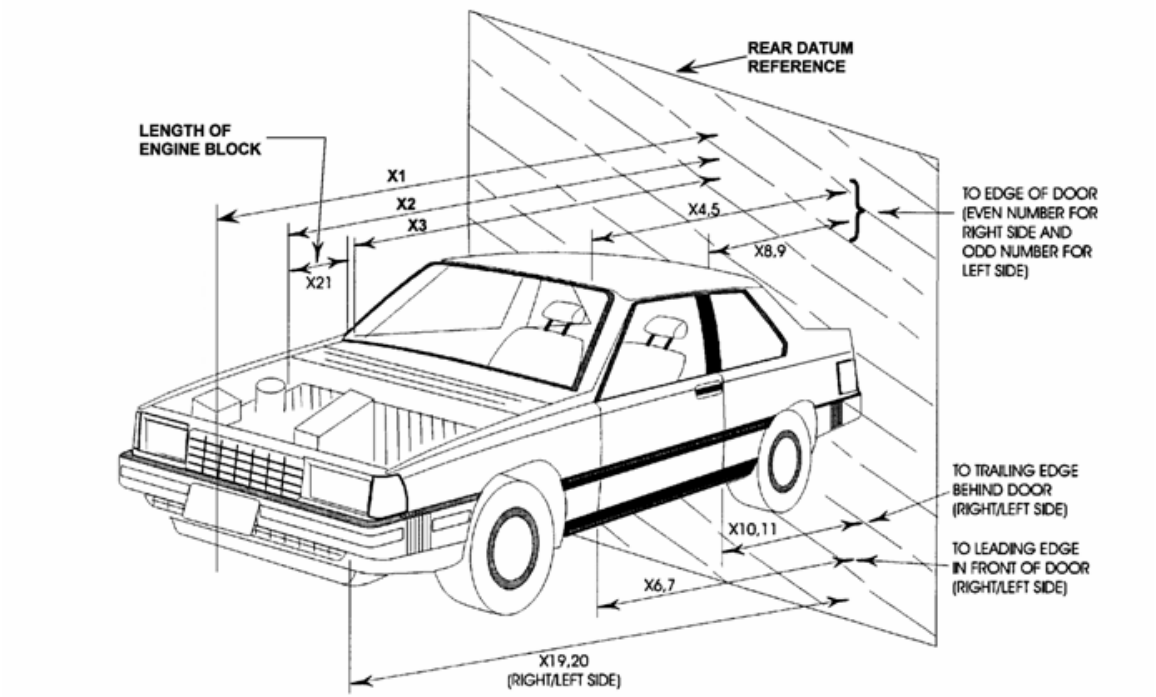
No.	Accelerometer Description	Axis	Units	Max	Time (ms)	Min	Time (ms)
1	MDB CG	X	g	0.8	213.7	-52.7	38.9
2		Y	g	14.3	41.2	-12.2	48.5
3		Z	g	7.6	32.6	-14.7	41.8
4	MDB Rear Centerline	X	g	1.0	163.4	-51.7	39.1
5		Y	g	4.6	56.4	-15.6	29.4
6		Z	g	0.0	-15.0	0.0	-15.0 [15]

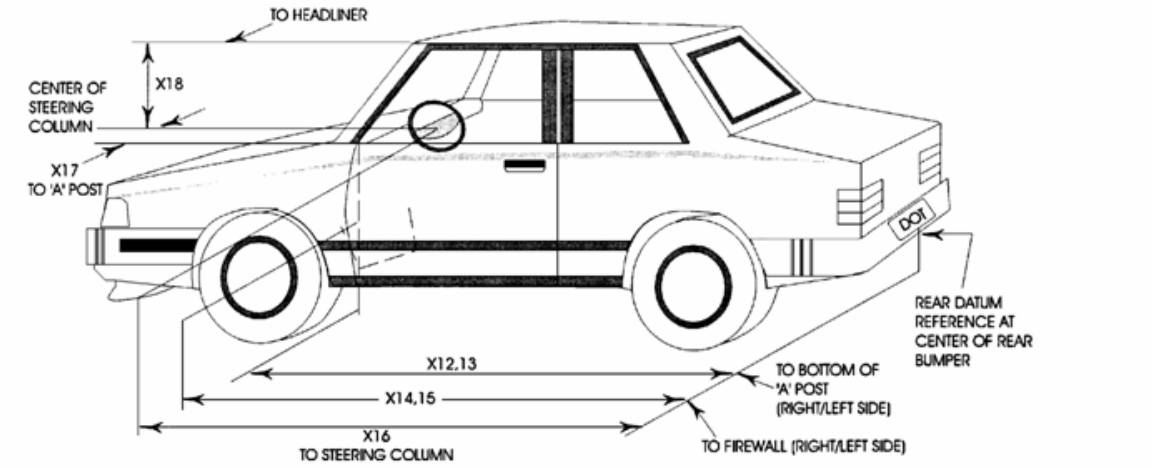
[15] – Channel failed, no data.

DATA SHEET NO. 10

TEST VEHICLE MEASURMENTS

Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/30/10





DATA SHEET NO. 10 … (CONTINUED)

TEST VEHICLE MEASURMENTS

Test Vehicle: 2007 Ford 500 SEL 4-Door Sedan NHTSA No.: R70212

Test Program: 72 mph, 15°, 50% Offset MDB to Vehicle Test Date: 3/30/10

VEHICLE MEASUREMENT TABLE

No.	Description	Pre-Test	Post-Test	Difference
1	Total Vehicle Length at Centerline	5086	4846	240
2	RSOV to Front of Engine	4580	4369	211
3	RSOV to Firewall Centerline	4028	3893	135
4	RSOV to Leading Edge of Right Door	3555	3593	-38
5	RSOV to Leading Edge of Left Door	3531	3567	-36
6	RSOV to Lower Leading Edge of Right Door	3537	3572	-35
7	RSOV to Lower Leading Edge of Left Door	3507	3544	-37
8	RSOV to Upper Leading Edge of Right Door	3572	3620	-48
9	RSOV to Upper Leading Edge of Left Door	3551	3586	-35
10	RSOV to Lower Trailing Edge of Right Door	2487	2523	-36
11	RSOV to Lower Trailing Edge of Left Door	2481	2504	-23
12	RSOV to Bottom of Right A-Pillar	3536	3572	-36
13	RSOV to Bottom of Left A-Pillar	3540	3545	-5
14	RSOV to Firewall on Right Side	3944	3920	24
15	RSOV to Firewall on Left Side	3930	3757	173
16	RSOV to Steering Column	3085	3087	-2
17	Center of Steering Column to Left A-Pillar	464	421	43
18	Center of Steering Column to Headliner	434	490	-56
19	RSOV to Right Side of Front Bumper	4386	4500	-114
20	RSOV to Left Side of Front Bumper	4370	3912	458
21	Engine Block Length	547	411	136
RD	RSOV to Right Side of Dash	3269	3293	-24
CD	RSOV to Center of Dash	3269	3246	23
LD	RSOV to Left Side of Dash	3264	3250	14

RSOV = Rear Surface of Vehicle

All measurements in millimeters

DATA SHEET NO. 10 … (CONTINUED)

TEST VEHICLE MEASUREMENTS

Test Vehicle: 2007 Ford 500 SEL 4-Door Sedan NHTSA No.: R70212

Test Program: 72 mph, 15°, 50% Offset MDB to Vehicle Test Date: 3/30/10

VEHICLE STRUCTURAL MEASUREMENT TABLE

No.	Description	Pre-Test	Post-Test	Difference	
1	Total Vehicle Length	5086	4846	240	
2	Total Vehicle Width	1841	1929	-88	
3	Bumper Top Height	592	503	89	
4	Bumper Bottom Height	389	338	51	
5	Longitudinal Member Top Height	530	615	-85	
6	Longitudinal Member Bottom Height	410	480	-70	
7	Distance Between Longitudinal Members	1000	1100	-100	
8	Longitudinal Member Width	115	120	-5	
9	Engine Top Height	903	819	84	
10	Engine Bottom Height	168	235	-67	
11	Engine and Gearbox Width	733	462	271	
12	Front Bumper to Engine Distance	506	477	29	[16]
13	Front Shock Absorber Fixing Height	897	989	-92	
14	Hood Leading Edge Height	800	719	81	
15	Front Shock Absorber Fixing Width	1258	1221	37	
16	Front Bumper to Front Axle Distance	1011	959	52	[16]
17	Front Axle to A-Pillar Distance	535	342	193	
18	A-Pillar to B-Pillar Distance	1038	1002	36	
19	B-Pillar to Rear Axle Distance	1282	1274	8	
20	B-Pillar to C-Pillar Distance	820	816	4	
21	Roof Sill Bottom Height	1373	1377	-4	
22	Roof Sill Top Height	1438	1441	-3	
23	Floor Sill Bottom Height	247	233	14	
24	Floor Sill Top Height	277	267	10	

[16] – Pre-Test front bumper point unavailable during Post-Test measurements. A point approximately equal to the original point was used for Post-Test measurement and Difference values.

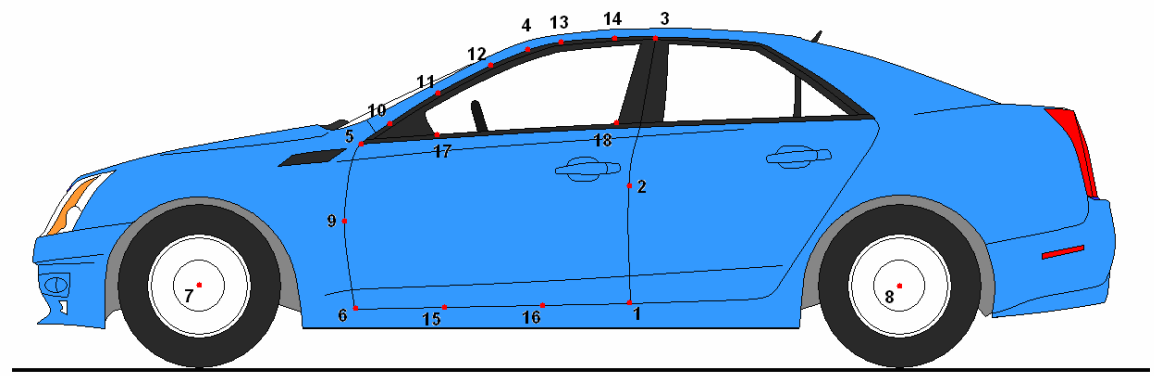
All measurements in millimeters

DATA SHEET NO. 10 … (CONTINUED)

TEST VEHICLE MEASUREMENTS

Test Vehicle: 2007 Ford 500 SEL 4-Door Sedan NHTSA No.: R70212

Test Program: 72 mph, 15°, 50% Offset MDB to Vehicle Test Date: 3/30/10



LEFT FRONT DOOR JAM MEASUREMENTS

Point	Pre-Test			Post-Test			Difference		
	X	Y	Z	X	Y	Z	X	Y	Z
1	2695	823	349	2737	809	341	42	-14	-8
2	2504	823	873	2559	813	871	55	-10	-2
3	2380	651	1378	2452	648	1380	72	-3	2
4	2937	690	1298	3012	685	1318	75	-5	20
5	3486	805	930	3498	814	893	12	9	-37
6	3442	817	317	3464	824	281	22	7	-36
7	4075	904	317	3887	840	311	-188	-64	-6
8	1220	907	287	1269	901	286	49	-6	-1
9	3479	816	629	3482	828	597	3	12	-32
10	3462	797	981	3478	813	946	16	16	-35
11	3228	751	1153	3273	763	1151	45	12	-2
12	3011	704	1268	3091	698	1290	80	-6	22
13	2844	674	1327	2918	669	1343	74	-5	16
14	2455	645	1378	2527	644	1381	72	-1	3
15	3264	807	268	3302	800	244	38	-7	-24
16	3055	804	267	3095	784	245	40	-20	-22
17	3259	860	970	3291	909	908	32	49	-62
18	2528	869	950	2551	973	937	23	104	-13

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

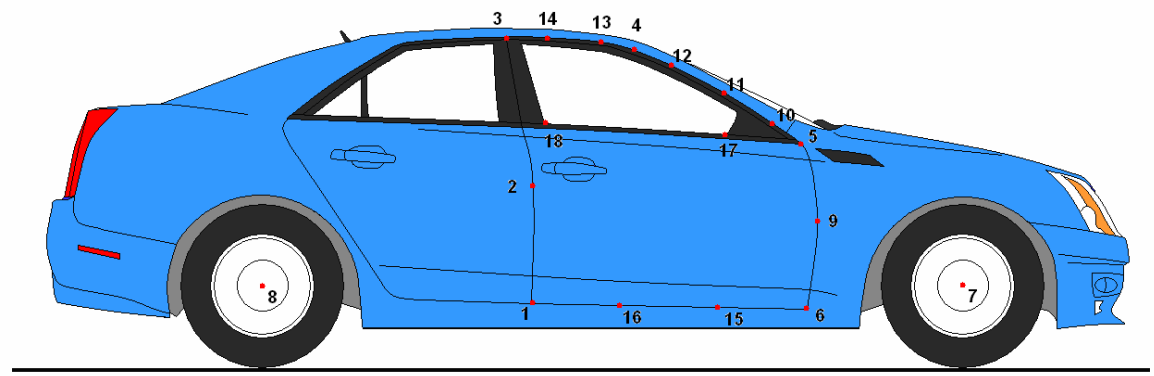
All measurements in millimeters

DATA SHEET NO. 10 … (CONTINUED)

TEST VEHICLE MEASUREMENTS

Test Vehicle: 2007 Ford 500 SEL 4-Door Sedan NHTSA No.: R70212

Test Program: 72 mph, 15°, 50% Offset MDB to Vehicle Test Date: 3/30/10



RIGHT FRONT DOOR JAM MEASUREMENTS

Point	Pre-Test			Post-Test			Difference		
	X	Y	Z	X	Y	Z	X	Y	Z
1	2716	-794	392	2756	-841	406	40	-47	14
2	2526	-807	861	2577	-831	879	51	-24	18
3	2388	-623	1438	2451	-631	1452	63	-8	14
4	2942	-660	1351	3005	-674	1357	63	-14	6
5	3478	-767	1017	3525	-816	1010	47	-49	-7
6	3461	-787	391	3500	-865	387	39	-78	-4
7	4098	-912	311	4188	-897	316	90	15	5
8	1233	-899	325	1295	-923	315	62	-24	-10
9	3487	-784	746	3531	-850	740	44	-66	-6
10	3414	-749	1081	3461	-795	1076	47	-46	-5
11	3207	-713	1221	3263	-740	1220	56	-27	-1
12	3015	-676	1325	3078	-687	1327	63	-11	2
13	2718	-632	1409	2782	-642	1418	64	-10	9
14	2444	-616	1431	2508	-624	1445	64	-8	14
15	3343	-786	322	3382	-862	320	39	-76	-2
16	3040	-789	320	3078	-850	326	38	-61	6
17	3283	-837	984	3337	-888	986	54	-51	2
18	2535	-840	1009	2590	-863	1025	55	-23	16

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 500 SEL 4-Door Sedan NHTSA No.: R70212

Test Program: 72 mph, 15°, 50% Offset MDB to Vehicle Test Date: 3/30/10

Description	Pre-Test			Post-Test			Difference		
	X	Y	Z	X	Y	Z	X	Y	Z
Lower Bumper Beam 1	4918	676	375	4378	380	481	-540	-296	106
Lower Bumper Beam 2	4994	406	384	4308	253	493	-686	-153	109
Lower Bumper Beam 3	5008	138	389	4436	40	526	-572	-98	137
Lower Bumper Beam 4	5010	-131	394	4620	-148	518	-390	-17	124
Lower Bumper Beam 5	4997	-401	399	4847	-292	505	-150	109	106
Lower Bumper Beam 6	4923	-669	395	4993	-534	463	70	135	68
Upper Bumper Beam 1	4931	675	531	4347	390	583	-584	-285	52
Upper Bumper Beam 2	4993	408	535	4268	239	664	-725	-169	129
Upper Bumper Beam 3	5006	137	540	4441	30	671	-565	-107	131
Upper Bumper Beam 4	5009	-133	540	4622	-158	666	-387	-25	126
Upper Bumper Beam 5	4993	-401	547	4827	-333	646	-166	68	99
Upper Bumper Beam 6	4931	-670	549	4995	-548	612	64	122	63
Upper Radiator Support 1	4622	676	795	4216	515	947	-406	-161	152
Upper Radiator Support 2	4788	407	805	4271	233	976	-517	-174	171
Upper Radiator Support 3	4787	138	815	4395	36	1058	-392	-102	243
Upper Radiator Support 4	4789	-131	817	4530	-196	1044	-259	-65	227
Upper Radiator Support 5	4791	-402	814	4705	-348	930	-86	54	116
Upper Radiator Support 6	4629	-670	816	4649	-622	859	20	48	43
Front of Hood 1	4717	677	825	4322	634	880	-395	-43	55
Front of Hood 2	4908	406	778	4342	351	749	-566	-55	-29
Front of Hood 3	4951	138	795	4519	116	748	-432	-22	-47
Front of Hood 4	4952	-132	798	4701	-78	756	-251	54	-42
Front of Hood 5	4909	-402	790	4816	-313	830	-93	89	40
Front of Hood 6	4715	-668	846	4763	-587	955	48	81	109

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

See Figures 299 through 302 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

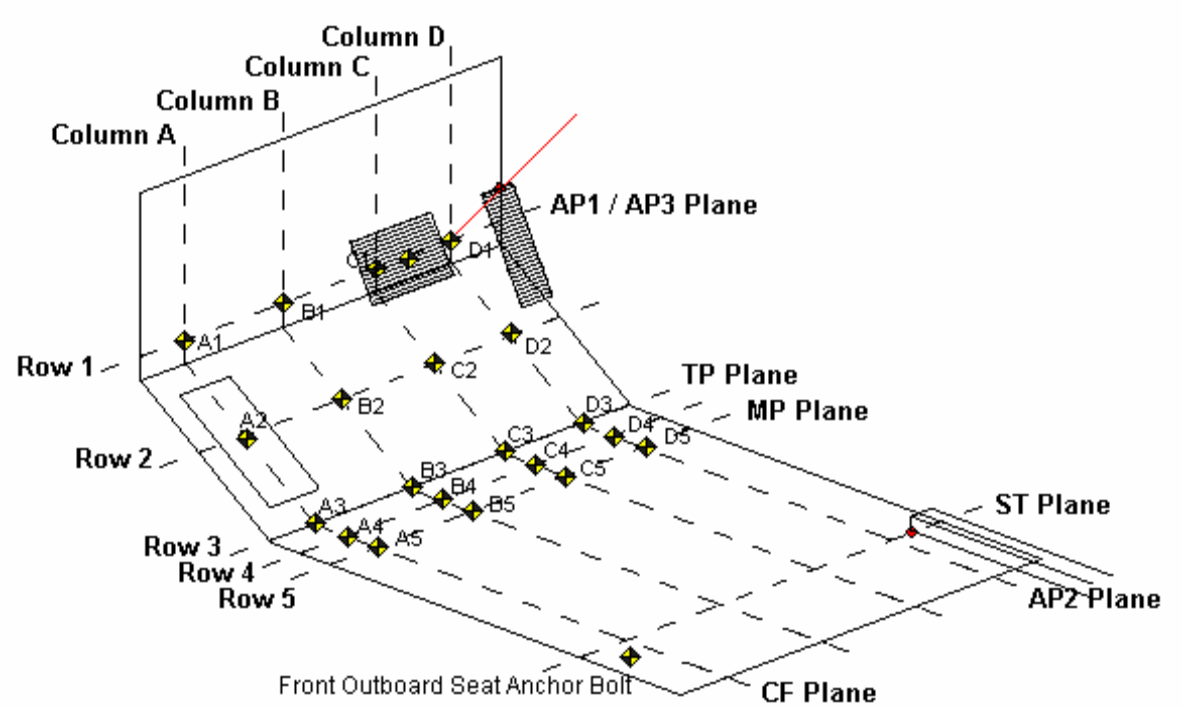
All measurements in millimeters

DATA SHEET NO. 12

VEHICLE INTRUSION MEASUREMENTS

Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/30/10

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. 12 … (CONTINUED)

VEHICLE INTRUSION MEASUREMENTS

Test Vehicle: 2007 Ford 500 SEL 4-Door Sedan NHTSA No.: R70212

Test Program: 72 mph, 15°, 50% Offset MDB to Vehicle Test Date: 3/30/10

DRIVER FLOORPAN

Point	Pre-Test			Post-Test			Difference		
	X	Y	Z	X	Y	X	X	Y	Z
A1	3675	543	365	3597	485	353	-78	-58	-12
A2	3633	560	242	3586	493	221	-47	-67	-21
A3	3511	562	200	3506	501	158	-5	-61	-42
A4	3402	562	196	3396	502	147	-6	-60	-49
A5	3292	565	199	3286	506	149	-6	-59	-50
B1	3729	443	319	3632	367	325	-97	-76	6
B2	3631	445	237	3602	381	204	-29	-64	-33
B3	3508	449	201	3501	386	161	-7	-63	-40
B4	3401	447	198	3393	387	156	-8	-60	-42
B5	3291	451	195	3283	392	155	-8	-59	-40
C1	3719	334	317	3635	259	307	-84	-75	-10
C2	3621	332	240	3611	270	186	-10	-62	-54
C3	3505	333	202	3498	271	163	-7	-62	-39
C4	3399	332	199	3390	274	163	-9	-58	-36
C5	3290	329	199	3282	272	163	-8	-57	-36
D1	3727	232	299	3675	156	286	-52	-76	-13
D2	3631	225	222	3612	159	186	-19	-66	-36
D3	3503	222	202	3493	162	164	-10	-60	-38
D4	3397	225	198	3386	166	165	-11	-59	-33
D5	3289	221	198	3279	164	164	-10	-57	-34
Left IP	3296	559	736	3233	507	698	-63	-52	-38
Right IP	3293	237	738	3233	184	697	-60	-53	-41
Steering Column	3082	382	922	3027	365	839	-55	-17	-83
Outboard Seat Bolt	3075	587	282	3077	535	233	2	-52	-49
Brake Pedal	3550	372	386	3481	429	394	-69	57	8

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. 12 … (CONTINUED)

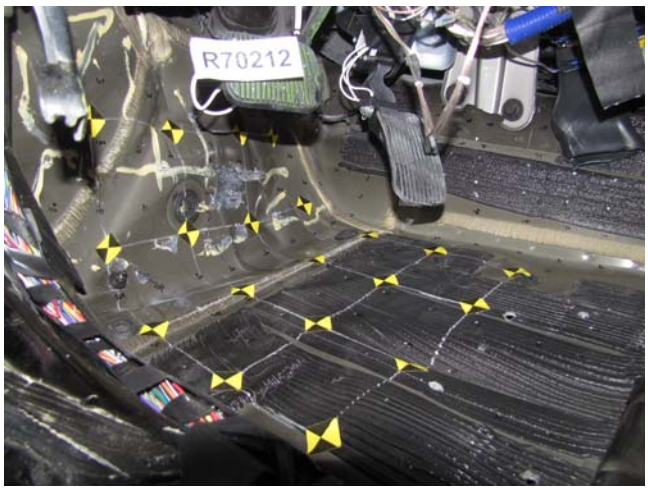
VEHICLE INTRUSION MEASUREMENTS

Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/30/10

ADDITIONAL FLOORPAN MEASUREMENT POINTS (NON-STANDARD)

PRE-TEST

POST-TEST



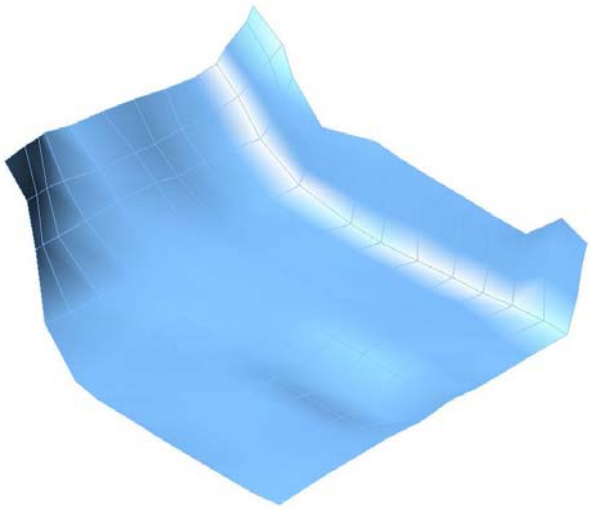
DATA SHEET NO. 12 … (CONTINUED)

VEHICLE INTRUSION MEASUREMENTS

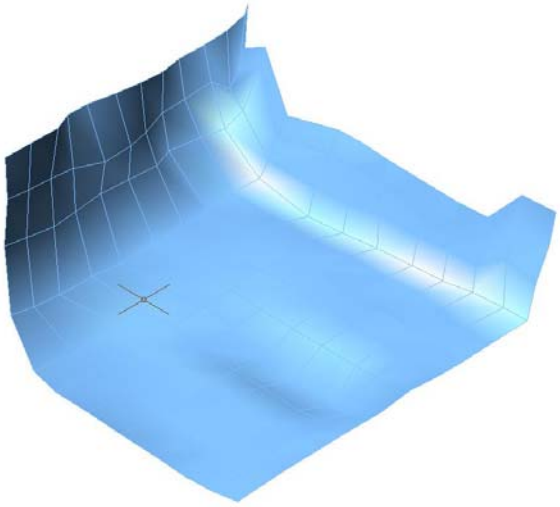
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/30/10

ADDITIONAL FLOORPAN MEASUREMENT POINTS (NON-STANDARD)

PRE-TEST



POST-TEST



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

Y – Vehicle Centerline, Y+ left

Z – Ground, Z+ up

DATA SHEET NO. 12 … (CONTINUED)

VEHICLE INTRUSION MEASUREMENTS

Test Vehicle: 2007 Ford 500 SEL 4-Door Sedan NHTSA No.: R70212

Test Program: 72 mph, 15°, 50% Offset MDB to Vehicle Test Date: 3/30/10

Point No.	Row	Pre-Test			Post-Test			Difference		
		X	Y	Z	X	Y	Z	X	Y	Z
1	A	3118	651	203	3152	644	155	34	-7	-48
2	A	3116	573	209	3151	566	162	35	-7	-47
3	A	3117	503	209	3152	497	163	35	-6	-46
4	A	3118	460	208	3152	454	165	34	-6	-43
5	A	3118	395	205	3153	389	164	35	-6	-41
6	A	3118	345	211	3153	338	171	35	-7	-40
7	A	3119	294	205	3154	287	167	35	-7	-38
8	A	3120	249	205	3154	245	168	34	-4	-37
9	A	3119	203	206	3154	196	170	35	-7	-36
10	A	3120	135	207	3155	129	173	35	-6	-34
11	A	3116	120	257	3153	115	223	37	-5	-34
12	A	3120	108	300	3153	91	271	33	-17	-29
13	A	3118	100	330	3151	82	317	33	-18	-13
14	B	3159	655	201	3193	648	152	34	-7	-49
15	B	3157	572	205	3191	566	156	34	-6	-49
16	B	3161	501	204	3193	498	162	32	-3	-42
17	B	3164	456	201	3199	452	159	35	-4	-42
18	B	3168	400	180	3202	393	138	34	-7	-42
19	B	3179	347	204	3213	340	163	34	-7	-41
20	B	3181	296	207	3216	292	166	35	-4	-41
21	B	3176	250	206	3210	241	168	34	-9	-38
22	B	3171	200	206	3205	193	168	34	-7	-38
23	B	3163	133	205	3199	127	170	36	-6	-35
24	B	3173	121	264	3209	112	231	36	-9	-33
25	B	3176	105	306	3213	95	271	37	-10	-35
26	B	3166	98	344	3210	83	314	44	-15	-30
27	C	3208	655	201	3241	649	152	33	-6	-49
28	C	3211	578	199	3241	575	149	30	-3	-50
29	C	3202	502	203	3236	496	159	34	-6	-44
30	C	3200	458	200	3235	452	157	35	-6	-43
31	C	3203	400	180	3236	391	136	33	-9	-44
32	C	3214	348	204	3248	340	162	34	-8	-42
33	C	3217	291	206	3251	285	168	34	-6	-38
34	C	3226	237	203	3259	232	164	33	-5	-39
35	C	3223	186	203	3257	179	165	34	-7	-38
36	C	3215	137	204	3249	131	170	34	-6	-34
37	C	3219	128	238	3255	119	203	36	-9	-35
38	C	3217	122	271	3254	112	234	37	-10	-37
39	C	3214	114	304	3252	102	268	38	-12	-36
40	D	3261	655	201	3294	647	154	33	-8	-47

All measurements in millimeters

DATA SHEET NO. 12 … (CONTINUED)

VEHICLE INTRUSION MEASUREMENTS

Test Vehicle: 2007 Ford 500 SEL 4-Door Sedan NHTSA No.: R70212

Test Program: 72 mph, 15°, 50% Offset MDB to Vehicle Test Date: 3/30/10

Point No.	Row	Pre-Test			Post-Test			Difference		
		X	Y	Z	X	Y	Z	X	Y	Z
41	D	3271	581	194	3304	575	143	33	-6	-51
42	D	3273	502	203	3307	496	161	34	-6	-42
43	D	3271	455	197	3306	448	156	35	-7	-41
44	D	3273	399	179	3307	394	136	34	-5	-43
45	D	3275	345	203	3310	338	161	35	-7	-42
46	D	3275	292	206	3309	284	168	34	-8	-38
47	D	3275	240	202	3309	234	164	34	-6	-38
48	D	3267	180	203	3302	174	164	35	-6	-39
49	D	3262	143	203	3297	137	167	35	-6	-36
50	D	3264	131	243	3300	123	206	36	-8	-37
51	D	3265	126	272	3300	116	234	35	-10	-38
52	D	3263	117	306	3300	105	268	37	-12	-38
53	E	3324	655	202	3358	647	157	34	-8	-45
54	E	3324	577	198	3359	568	143	35	-9	-55
55	E	3323	498	200	3358	490	156	35	-8	-44
56	E	3321	454	199	3356	446	156	35	-8	-43
57	E	3322	395	191	3357	389	145	35	-6	-46
58	E	3328	346	203	3362	337	161	34	-9	-42
59	E	3326	287	205	3361	279	167	35	-8	-38
60	E	3326	241	203	3361	234	166	35	-7	-37
61	E	3317	190	203	3351	183	168	34	-7	-35
62	E	3313	146	204	3347	140	166	34	-6	-38
63	E	3315	136	240	3351	126	202	36	-10	-38
64	E	3321	129	278	3357	116	239	36	-13	-39
65	E	3319	120	311	3358	107	272	39	-13	-39
66	F	3384	654	204	3417	645	160	33	-9	-44
67	F	3386	567	203	3421	561	148	35	-6	-55
68	F	3388	497	201	3423	489	153	35	-8	-48
69	F	3387	452	199	3422	446	155	35	-6	-44
70	F	3386	392	202	3421	385	155	35	-7	-47
71	F	3387	340	204	3422	335	160	35	-5	-44
72	F	3388	285	205	3423	277	167	35	-8	-38
73	F	3388	239	204	3421	232	168	33	-7	-36
74	F	3380	192	205	3415	186	169	35	-6	-36
75	F	3370	152	204	3405	144	166	35	-8	-38
76	F	3381	141	246	3418	128	202	37	-13	-44
77	F	3385	132	285	3422	120	241	37	-12	-44
78	F	3387	124	316	3424	107	273	37	-17	-43
79	G	3445	650	201	3477	642	159	32	-8	-42
80	G	3445	565	201	3479	555	151	34	-10	-50

All measurements in millimeters

DATA SHEET NO. 12 … (CONTINUED)

VEHICLE INTRUSION MEASUREMENTS

Test Vehicle: 2007 Ford 500 SEL 4-Door Sedan NHTSA No.: R70212

Test Program: 72 mph, 15°, 50% Offset MDB to Vehicle Test Date: 3/30/10

Point No.	Row	Pre-Test			Post-Test			Difference		
		X	Y	Z	X	Y	Z	X	Y	Z
81	G	3442	492	193	3476	485	147	34	-7	-46
82	G	3440	445	201	3475	437	158	35	-8	-43
83	G	3439	390	203	3474	382	161	35	-8	-42
84	G	3440	340	204	3476	334	162	36	-6	-42
85	G	3440	291	205	3475	283	166	35	-8	-39
86	G	3441	238	204	3475	231	166	34	-7	-38
87	G	3441	198	206	3475	190	167	34	-8	-39
88	G	3431	156	203	3462	148	162	31	-8	-41
89	G	3434	144	240	3468	132	198	34	-12	-42
90	G	3434	135	288	3471	120	246	37	-15	-42
91	G	3430	125	319	3468	107	276	38	-18	-43
92	H	3491	643	203	3523	635	165	32	-8	-38
93	H	3495	565	200	3527	560	154	32	-5	-46
94	H	3498	491	201	3531	482	156	33	-9	-45
95	H	3497	445	201	3529	436	158	32	-9	-43
96	H	3496	395	202	3530	388	160	34	-7	-42
97	H	3496	335	204	3530	327	162	34	-8	-42
98	H	3497	285	204	3529	280	164	32	-5	-40
99	H	3497	241	204	3530	234	164	33	-7	-40
100	H	3498	195	204	3530	187	164	32	-8	-40
101	H	3486	156	204	3520	151	160	34	-5	-44
102	H	3486	146	239	3524	136	195	38	-10	-44
103	H	3480	136	288	3515	120	243	35	-16	-45
104	H	3473	123	321	3511	106	274	38	-17	-47
105	I	3595	594	215	3610	588	183	15	-6	-32
106	I	3592	553	213	3612	546	174	20	-7	-39
107	I	3590	500	211	3618	494	164	28	-6	-47
108	I	3589	441	211	3621	434	160	32	-7	-51
109	I	3586	391	209	3620	384	155	34	-7	-54
110	I	3584	332	215	3619	325	158	35	-7	-57
111	I	3584	284	212	3617	276	161	33	-8	-51
112	I	3589	239	207	3622	229	157	33	-10	-50
113	I	3588	195	210	3622	185	162	34	-10	-48
114	I	3581	153	215	3614	144	168	33	-9	-47
115	I	3575	146	242	3609	132	192	34	-14	-50
116	I	3568	142	271	3605	122	222	37	-20	-49
117	I	3559	134	306	3598	111	255	39	-23	-51
118	J	3622	584	310	3622	588	282	0	4	-28
119	J	3648	545	286	3632	539	266	-16	-6	-20
120	J	3664	501	269	3636	486	254	-28	-15	-15

All measurements in millimeters

DATA SHEET NO. 12 … (CONTINUED)

VEHICLE INTRUSION MEASUREMENTS

Test Vehicle: 2007 Ford 500 SEL 4-Door Sedan NHTSA No.: R70212

Test Program: 72 mph, 15°, 50% Offset MDB to Vehicle Test Date: 3/30/10

Point No.	Row	Pre-Test			Post-Test			Difference		
		X	Y	Z	X	Y	Z	X	Y	Z
121	J	3666	450	267	3647	437	247	-19	-13	-20
122	J	3664	395	269	3657	382	242	-7	-13	-27
123	J	3658	333	271	3664	326	232	6	-7	-39
124	J	3666	285	252	3672	268	221	6	-17	-31
125	J	3666	238	251	3690	229	214	24	-9	-37
126	J	3663	192	249	3679	183	218	16	-9	-31
127	J	3655	149	248	3683	136	206	28	-13	-42
128	J	3639	139	282	3675	112	225	36	-27	-57
129	J	3631	132	312	3670	86	284	39	-46	-28
130	J	3633	113	337	3669	79	309	36	-34	-28
131	K	3647	575	369	3626	579	347	-21	4	-22
132	K	3671	533	346	3637	529	331	-34	-4	-15
133	K	3698	488	320	3651	476	315	-47	-12	-5
134	K	3710	446	304	3661	427	301	-49	-19	-3
135	K	3701	390	298	3659	373	285	-42	-17	-13
136	K	3694	334	300	3669	317	277	-25	-17	-23
137	K	3706	286	283	3688	271	265	-18	-15	-18
138	K	3707	238	283	3709	221	259	2	-17	-24
139	K	3704	186	280	3715	176	255	11	-10	-25
140	K	3701	143	287	3712	131	260	11	-12	-27
141	K	3684	135	317	3699	111	247	15	-24	-70
142	K	3664	123	353	3702	92	265	38	-31	-88
143	K	3658	106	371	3695	89	299	37	-17	-72
144	L	3690	572	407	3643	566	396	-47	-6	-11
145	L	3703	523	400	3646	517	392	-57	-6	-8
146	L	3733	468	370	3664	450	373	-69	-18	3
147	L	3759	430	346	3691	407	358	-68	-23	12
148	L	3759	387	335	3702	361	346	-57	-26	11
149	L	3753	334	334	3702	310	337	-51	-24	3
150	L	3752	278	325	3710	258	324	-42	-20	-1
151	L	3748	226	317	3720	209	310	-28	-17	-7
152	L	3744	180	312	3736	165	300	-8	-15	-12
153	L	3738	144	320	3732	124	303	-6	-20	-17
154	L	3734	130	342	3707	109	330	-27	-21	-12
155	L	3701	127	395	3698	86	348	-3	-41	-47
156	L	3701	115	413	3702	77	357	1	-38	-56

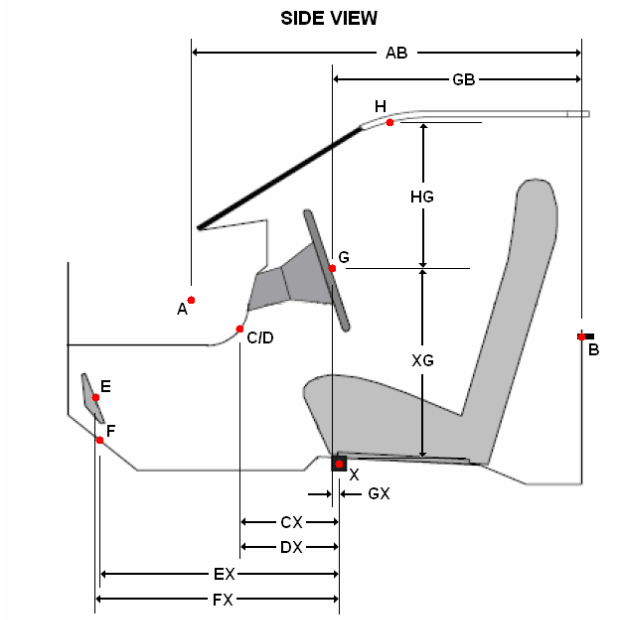
All measurements in millimeters

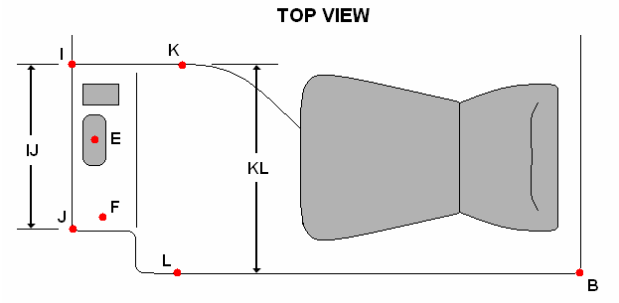
DATA SHEET NO. 12 … (CONTINUED)

VEHICLE INTRUSION MEASUREMENTS

Test Vehicle: 2007 Ford 500 SEL 4-Door Sedan NHTSA No.: R70212

Test Program: 72 mph, 15°, 50% Offset MDB to Vehicle Test Date: 3/30/10





DRIVER COMPARTMENT INTRUSION

Description	Driver's Side			Passenger's Side		
	Pre-Test	Post-Test	Difference	Pre-Test	Post-Test	Difference
AB	939	869	-70	930	902	-28
GB	500	390	-110	648	595	-53
HG	411	367	-44	503	519	16
XG	623	737	114	534	510	-24
CX	258	216	-42	267	165	-102
DX	257	190	-67	254	196	-58
EX	560	314	-246			
FX	572	446	-126	586	546	-40
GX	56	-42	-98	211	176	-35
IJ	379	370	-9			
KL	525	433	-92			

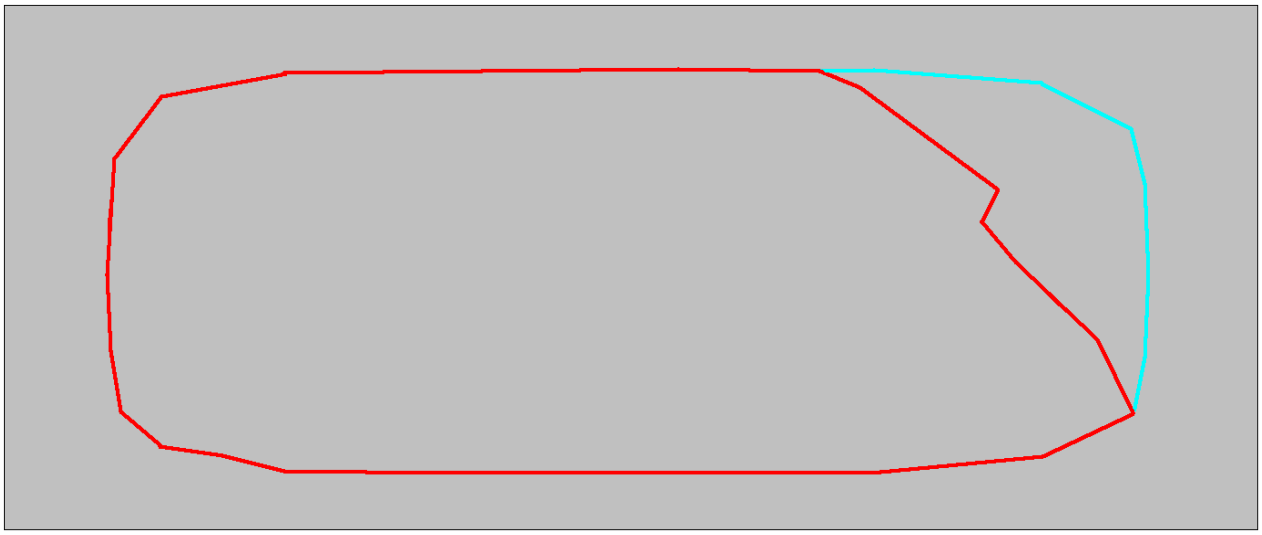
All measurements in millimeters

DATA SHEET NO. 13

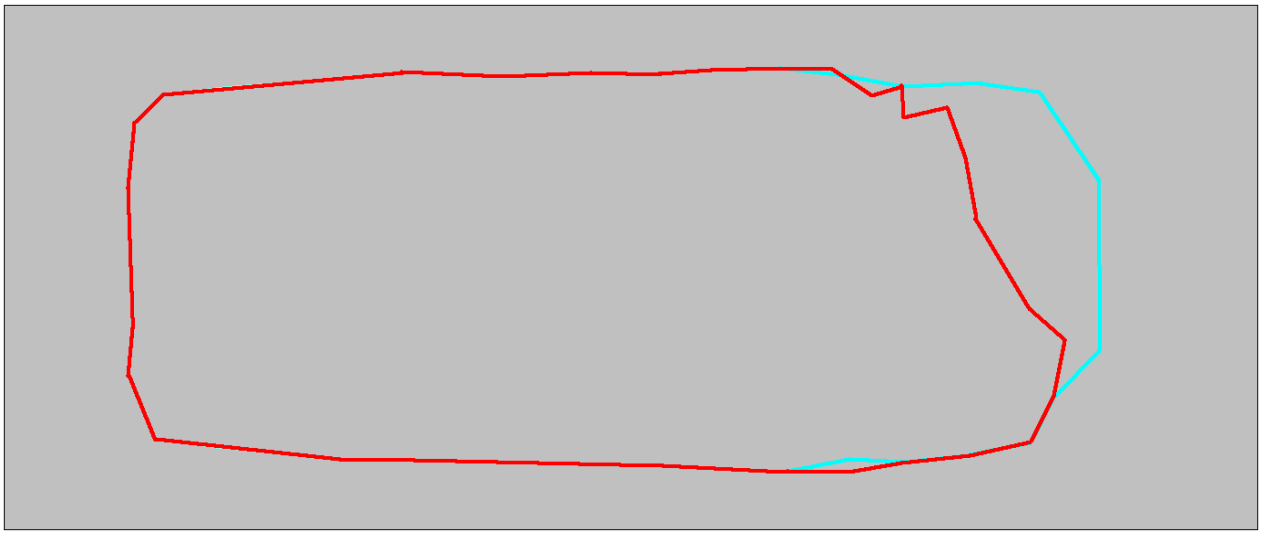
EXTERIOR PROFILE MEASUREMENTS

Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/30/10

LEVEL 1



LEVEL 2



DATA SHEET NO. 13 … (CONTINUED)

EXTERIOR PROFILE MEASUREMENTS

Test Vehicle: 2007 Ford 500 SEL 4-Door Sedan NHTSA No.: R70212

Test Program: 72 mph, 15°, 50% Offset MDB to Vehicle Test Date: 3/30/10

LEVEL 1

Point No.	Pre-Test			Post-Test			Difference		
	X	Y	Z	X	Y	Z	X	Y	Z
1	5004	-132	545	4558	-151	678	-446	-19	133
2	4990	-401	550	4762	-328	663	-228	73	113
3	4927	-671	553	4930	-542	632	3	129	79
4	4493	-883	535	4499	-840	586	6	43	51
5	3726	-960	537	3714	-982	555	-12	-22	18
6	3426	-956	538	3393	-980	560	-33	-24	22
7	3126	-960	537	3098	-973	559	-28	-13	22
8	2826	-962	536	2799	-974	562	-27	-12	26
9	2527	-964	536	2498	-968	567	-29	-4	31
10	2228	-959	538	2201	-950	573	-27	9	35
11	1926	-954	537	1900	-942	574	-26	12	37
12	1627	-957	535	1604	-940	580	-23	17	45
13	883	-953	535	862	-936	586	-21	17	51
14	582	-883	535	562	-888	582	-20	-5	47
15	282	-832	535	263	-837	581	-19	-5	46
16	82	-662	535	63	-668	580	-19	-6	45
17	37	-362	535	6	-365	568	-31	-3	33
18	20	-61	538	-11	-58	573	-31	3	35
19	26	239	536	-4	241	566	-30	2	30
20	56	540	536	27	541	560	-29	1	24
21	288	838	536	255	839	550	-33	1	14
22	588	888	535	512	884	536	-76	-4	1
23	883	948	504	860	937	536	-23	-11	32
24	1630	949	502	1616	930	499	-14	-19	-3
25	1928	950	501	1911	932	495	-17	-18	-6
26	2229	955	501	2211	935	485	-18	-20	-16
27	2529	960	500	2485	945	479	-44	-15	-21
28	2829	960	499	2784	958	473	-45	-2	-26
29	3128	959	499	3082	965	468	-46	6	-31
30	3429	956	498	3383	973	463	-46	17	-35
31	3729	962	497	3618	879	511	-111	-83	14
32	4498	901	502						[17]
33	4926	676	535	4281	394	593	-645	-282	58
34	4987	407	540	4207	246	669	-780	-161	129
35	5001	137	544	4375	35	682	-626	-102	138

[17] – Post-Test measurement point unavailable

DATA SHEET NO. 13 … (CONTINUED)

EXTERIOR PROFILE MEASUREMENTS

Test Vehicle: 2007 Ford 500 SEL 4-Door Sedan NHTSA No.: R70212

Test Program: 72 mph, 15°, 50% Offset MDB to Vehicle Test Date: 3/30/10

LEVEL 2

Point	Pre-Test			Post-Test			Difference		
No.	X	Y	Z	X	Y	Z	X	Y	Z
1	4627	688	814	4152	535	951	-475	-153	137
2	4793	420	822	4202	242	982	-591	-178	160
3	4792	150	829	4325	46	1067	-467	-104	238
4	4795	-118	828	4461	-186	1056	-334	-68	228
5	4795	-389	824	4637	-341	943	-158	48	119
6	4634	-658	822	4581	-614	874	-53	44	52
7	4504	-835	821	4474	-821	877	-30	14	56
8	4203	-888	822	4176	-890	856	-27	-2	34
9	3904	-900	821	3879	-920	837	-25	-20	16
10	3603	-908	822	3582	-967	829	-21	-59	7
11	3304	-918	821	3278	-967	840	-26	-49	19
12	3003	-930	822	2979	-956	842	-24	-26	20
13	2705	-922	821	2682	-937	845	-23	-15	24
14	2404	-932	821	2382	-936	849	-22	-4	28
15	2103	-928	821	2079	-929	852	-24	-1	31
16	1804	-921	821	1781	-919	854	-23	2	33
17	1502	-913	821	1480	-907	857	-22	6	36
18	1204	-915	821	1187	-906	862	-17	9	41
19	903	-887	821	885	-879	864	-18	8	43
20	604	-862	822	587	-853	867	-17	9	45
21	305	-817	822	287	-809	869	-18	8	47
22	151	-513	808	157	-505	856	6	8	48
23	166	-214	809	174	-202	852	8	12	43
24	161	85	808	168	94	842	7	9	34
25	137	387	808	145	397	836	8	10	28
26	178	687	808	186	695	832	8	8	24
27	310	827	808	318	835	828	8	8	20
28	610	865	808	619	871	831	9	6	23
29	911	888	808	920	892	833	9	4	25
30	1511	925	804	1221	910	832	-290	-15	28
31	1810	919	804	1490	935	828	-320	16	24
32	2109	927	804	1793	924	796	-316	-3	-8
33	2410	932	805	2092	929	791	-318	-3	-14
34	2711	929	804	2394	933	783	-317	4	-21
35	3008	935	805	2665	924	771	-343	-11	-34

DATA SHEET NO. 13 … (CONTINUED)

EXTERIOR PROFILE MEASUREMENTS

Test Vehicle: 2007 Ford 500 SEL 4-Door Sedan NHTSA No.: R70212

Test Program: 72 mph, 15°, 50% Offset MDB to Vehicle Test Date: 3/30/10

LEVEL 2 … (CONTINUED)

Point No.	Pre-Test			Post-Test			Difference		
	X	Y	Z	X	Y	Z	X	Y	Z
36	3310	931	805	2961	954	770	-349	23	-35
37	3609	922	804	3265	958	765	-344	36	-39
38	3910	908	805	3519	953	764	-391	45	-41
39	4209	890	804	3706	831	830	-503	-59	26
40	4509	844	805	3856	873	1000	-653	29	195

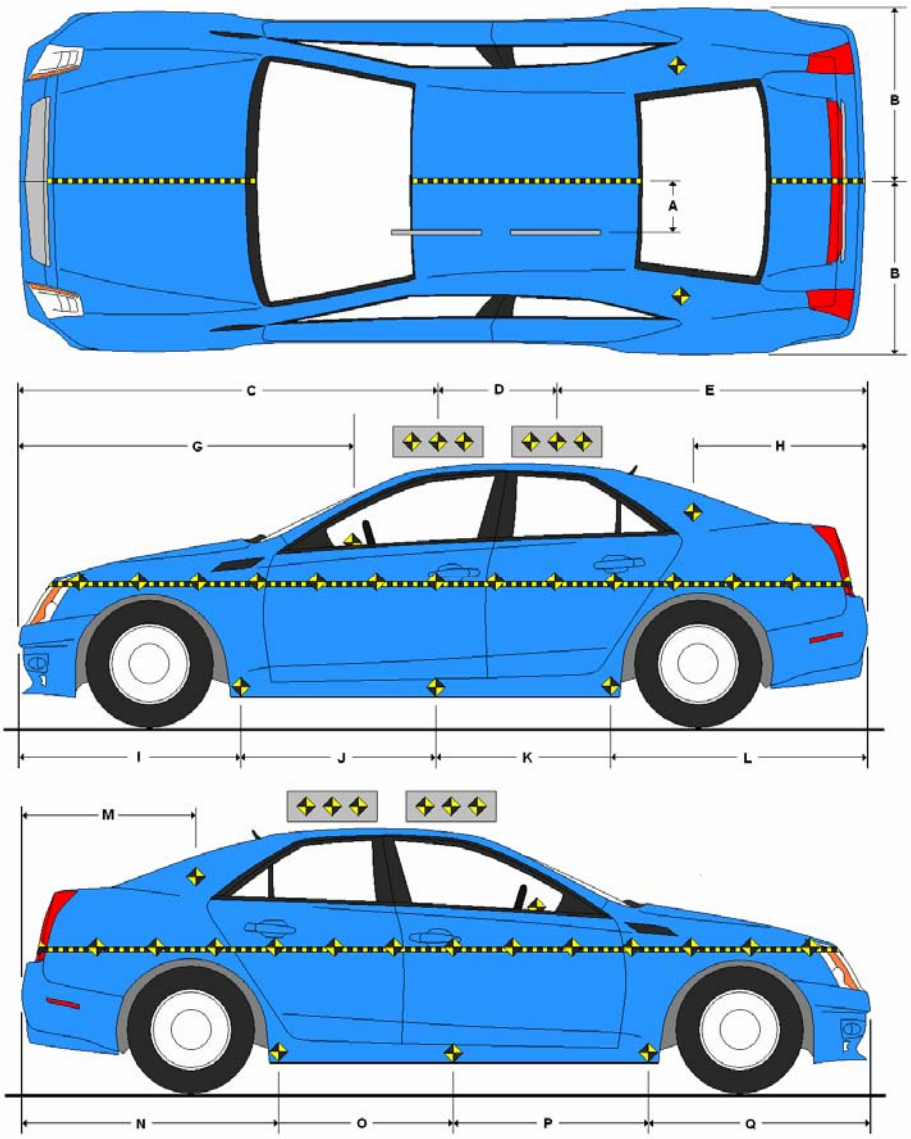
DATA SHEET NO. 14

PHOTOGRAPHIC REFERENCE TARGET LOCATIONS

Test Vehicle: 2007 Ford 500 SEL 4-Door Sedan NHTSA No.: R70212

Test Program: 72 mph, 15°, 50% Offset MDB to Vehicle Test Date: 3/30/10

Item	Value
A	430
B	921
C	2314
D	609
E	2163
F	
G	1829
H	1543
I	1466
J	966
K	963
L	1691
M	1529
N	1700
O	959
P	957
Q	1470



ADDITIONAL PHOTOGRAPHIC REFERENCE DATA

Description	Value	Notes
Driver's Door Panel Reference Target Spacing	305	Visible in Camera View No. 13
Passenger's Door Panel Reference Target Spacing	305	Visible in Camera View No. 10
Overhead Reference Panel Spacing	305	Visible in Camera View No. 7

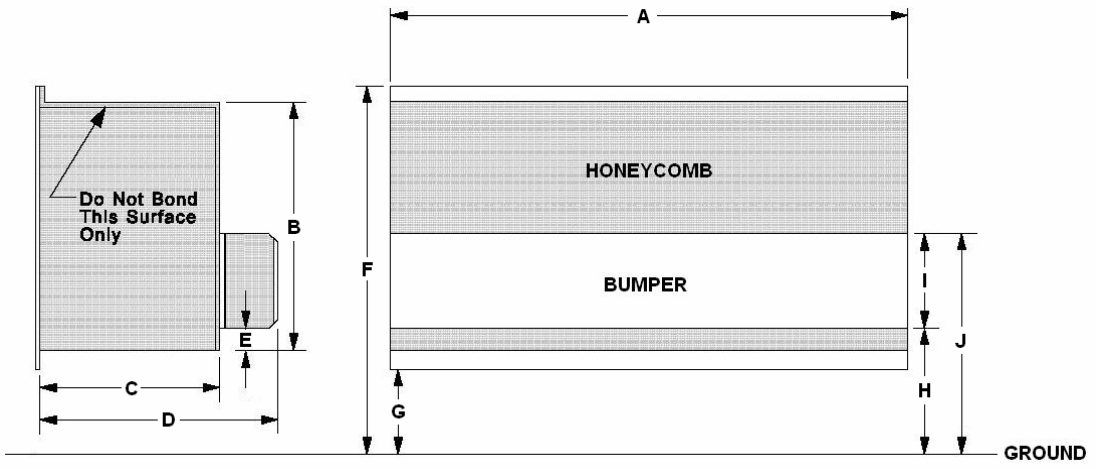
All measurements in millimeters

DATA SHEET NO. 15

DEFORMABLE BARRIER HONEYCOMB FACE SETUP AND STATIC CRUSH

Test Vehicle: 2007 Ford 500 SEL 4-Door Sedan NHTSA No.: R70212

Test Program: 72 mph, 15°, 50% Offset MDB to Vehicle Test Date: 3/30/10



MDB SETUP MEASUREMENTS

Letter	Description	Target	Value
A	Barrier Width	1676	1677
B	Barrier Height	559	560
C	Barrier Body Length	381	380
D	Total Barrier Length	483	483
E	Bumper Height Above Bottom of Barrier	51	51
F	Top of Barrier Flange Above Ground	838	840
G	Bottom of Barrier Flange Above Ground	279	281
H	Bottom of Bumper Above Ground	330	332
I	Bumper Height	203	203
J	Top of Bumper Above Ground	533	535

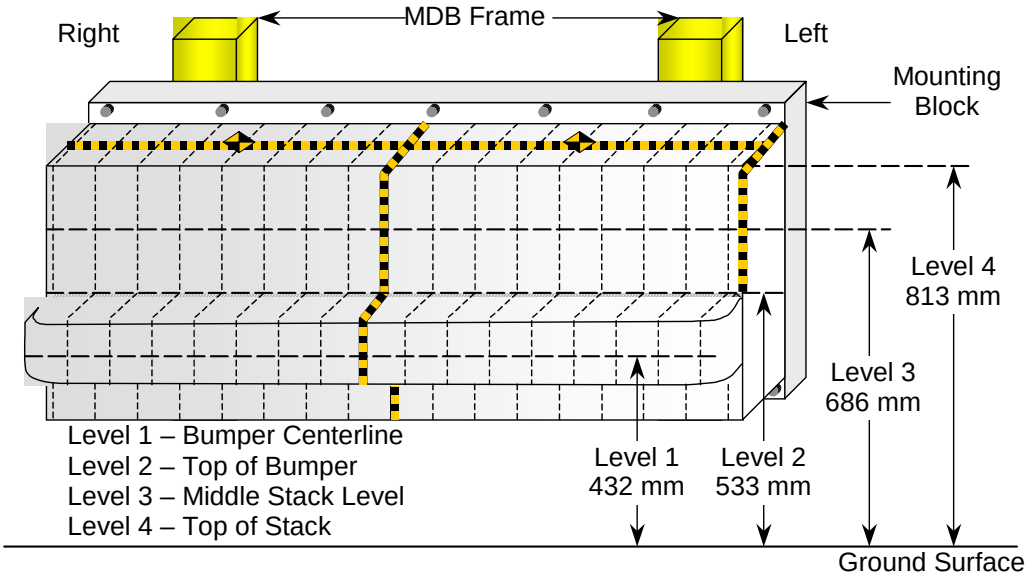
All measurements in millimeters

DATA SHEET NO. 15 … (CONTINUED)

DEFORMABLE BARRIER HONEYCOMB FACE SETUP AND STATIC CRUSH

Test Vehicle: 2007 Ford 500 SEL 4-Door Sedan NHTSA No.: R70212

Test Program: 72 mph, 15°, 50% Offset MDB to Vehicle Test Date: 3/30/10



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	66	129	181	242	288	269	291	331	371	411	431	411	363	386	411	428	432
2	-47	-20	19	69	117	139	188	273	282	299	297	253	288	298	308	318	332
3	-52	-25	0	33	43	88	148	220	185	190	207	201	218	257	278	278	274
4	-67	-42	-8	76	106	150	218	283	203	190	193	170	173	197	208	208	214

All measurements in millimeters

DATA SHEET NO. 16

POST-TEST AIRBAG DATA

Test Vehicle: 2007 Ford 500 SEL 4-Door Sedan NHTSA No.: R70212

Test Program: 72 mph, 15°, 50% Offset MDB to Vehicle Test Date: 3/30/10

Description	Units	Driver	Right Front Passenger
Number of Vent Holes		2	
Size of Vent Holes	mm	30	
Shape of Vent Holes		Round	
Total Vent Area	mm^2	707	
Length of Deflated Bag (if Square)	mm		
Width if Deflated Bag (if Square)	mm		
Diameter of Deflated Bag (if Round)	mm	470	
Airbag Tethered		No	
Length of Tethers	mm		

DATA SHEET NO. 17

ACCIDENT INVESTIGATION DATA

Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/30/10

VEHICLE INFORMATION

VIN:	1FAHP24117G142670	Wheelbase (mm):	2855
Vehicle Size Category:	4-Door Sedan	Test Weight (kg):	1891

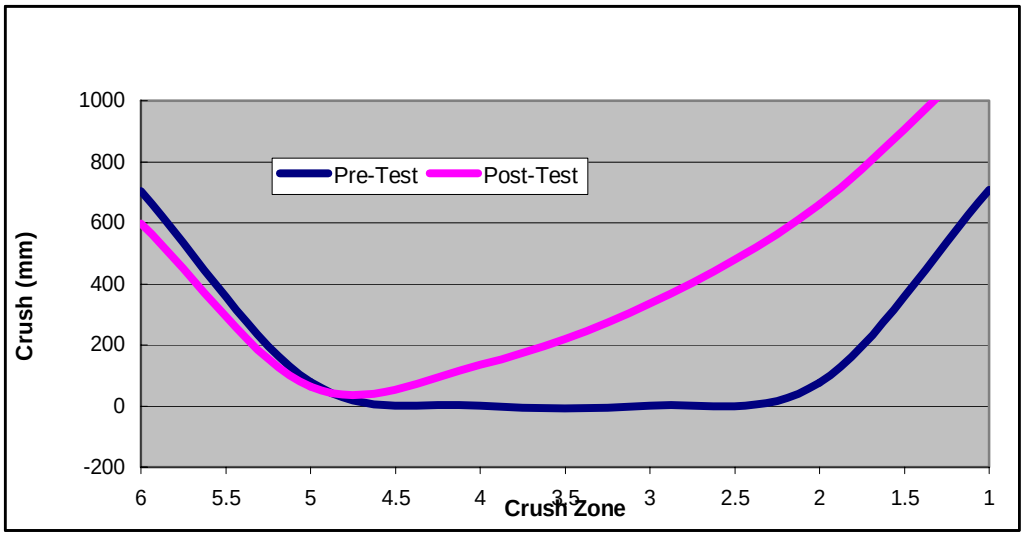
ACCELEROMETER DATA

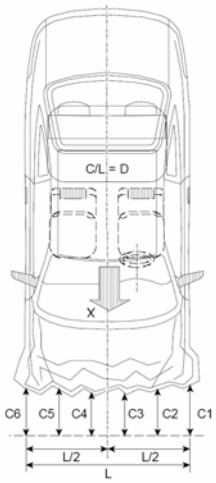
Accelerometer Location:	CG		
Cal. Procedure/Interval:	6 month/drop test		
Integration Algorithm:	NHTSA Standard	Linearity:	Good
Impact Velocity (km/h):	115.2		
Velocity Change (km/h):	56.2	Time of Separation (msec):	N/A

CRUSH PROFILE

Collision Damage Classification:	11FLAW2	Midpoint of Damage:	N/A
Damage Region Length:	1872	Impact Mode:	15°, 50% Offset

No.	Meaurement Description	Units	Pre-Test	Post-Test	Difference	
C1	Crush Zone 1 at Left Side of Vehicle	mm	709	1172	-463	18
C2	Crush Zone 2 at Left Side of Vehicle	mm	76	661	-585	18
C3	Crush Zone 3 at Left Side of Vehicle	mm	1	336	-335	18
C4	Crush Zone 4 at Right Side of Vehicle	mm	2	135	-133	18
C5	Crush Zone 5 at Right Side of Vehicle	mm	78	64	14	18
C6	Crush Zone 6 at Right Side of Vehicle	mm	703	597	106	18





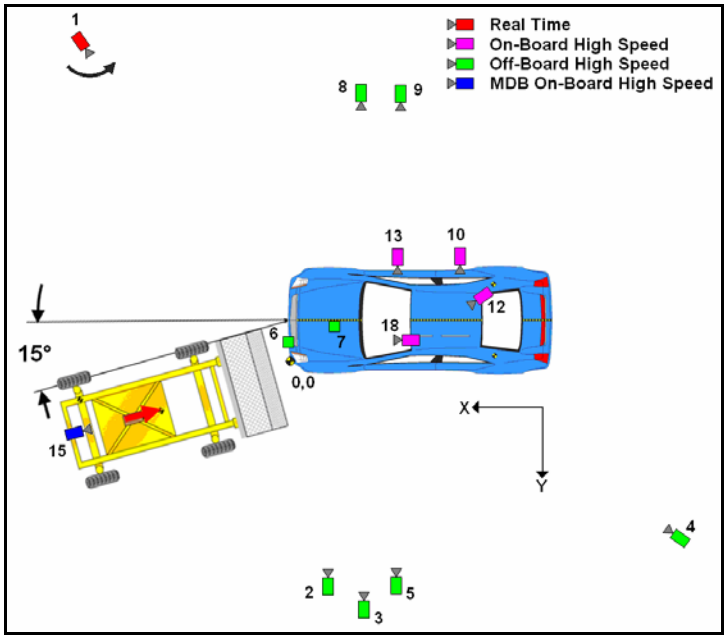
[18] - Post-Test measurements were taken in the approximate location of Pre-Test measurements. Exact points were unavailable due to the bumper cover coming free from the vehicle.

DATA SHEET NO. 18

VIDEO COVERAGE DATA

Test Vehicle: 2007 Ford 500 SEL 4-Door Sedan NHTSA No.: R70212

Test Program: 72 mph, 15°, 50% Offset MDB to Vehicle Test Date: 3/30/10



View No.	Description	Location (m)			Angle (°)	Lens (mm)	Frame Rate
		X	Y	Z			
1	Real Time Panning						30
2	Overall Left Side	-1.69	12.11	1.15	0	24	1000
3	Left Side	-3.42	14.67	1.09	0	35	1000
4	Driver and Interior	-12.54	8.16	3.02	-5	ZOOM	1000
5	Left Tight Target Driver to IP Contact	-4.29	12.04	1.16	0	85	1000
6	Overhead - Impact Point	0.36	0.05	7.17	90	50	1000
7	Overhead - Overall	-0.11	0.12	7.63	90	14	1000
8	Right Side	0.68	-14.93	1.23	0	35	1000
9	Overall Right Side	1.98	-13.50	1.22	0	24	1000
10	Rear Occupant Side, On-Board	-3.21	0.80	1.23	-1	10	1000
11	Right Passenger and Interior View						[19]
12	Driver Over Shoulder, On-Board	-3.38	0.20	1.45	-2	12.5	1000
13	Driver Side, On-Board	-2.27	0.80	1.19	-1	10	1000
14	Driver Front View from MDB						[19]
15	Windshield View from MDB						
16	Pit View of Engine	-0.68	-0.57	-1.82	-90	8	1000
17	Pit View of Fuiel Tank	-3.07	-0.67	-1.93	-90	12.5	1000
18	Driver Lower Leg, On-Board	-1.89	-0.36	0.33	0	8.5	1000

All measurements are made relative to the point of impact.

[19] – Camera not required by COTR.

DATA SHEET NO. 19

FMVSS 212 / 219 SUMMARY

Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/30/10

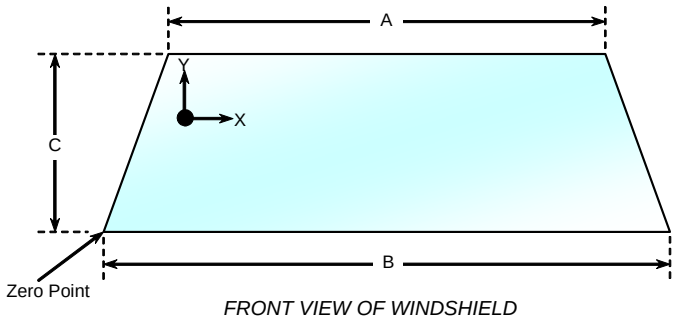
Windshield mounting details: windshield glass is secured to the vehicle frame with rubber cement type adhesive and rubber molding.

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	2326	990	42.6%
Right Side	mm	2326	1330	57.2%
Total	mm	4652	2320	49.9%



FRONT VIEW OF WINDSHIELD

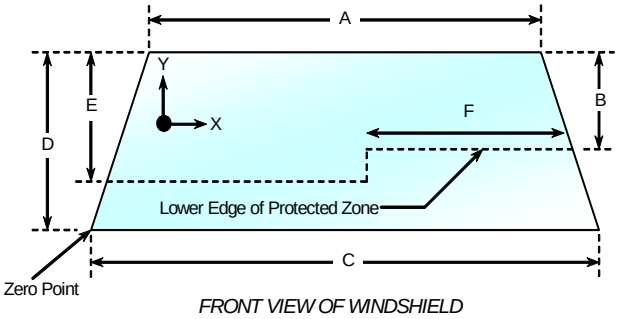
WINDSHIELD DIMENSIONS

Item	Units	Segment Length	Molding Width
A	mm	1328	10
B	mm	1657	90
C-Left	mm	833	8
C-Right	mm	833	8

DATA SHEET NO. 19 … (CONTINUED)

FMVSS 212 / 219 SUMMARY

Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/30/10



WINDSHIELD AND PROTECTED ZONE

Item	Units	Value
A	mm	1328
B	mm	392
C	mm	1657
D	mm	833
E	mm	568
F	mm	563

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. 20

FMVSS 301 FUEL SYSTEM INTEGRITY POST-IMPACT DATA

Test Vehicle: 2007 Ford 500 SEL 4-Door Sedan NHTSA No.: R70212

Test Program: 72 mph, 15°, 50% Offset MDB to Vehicle Test Date: 3/30/10

Temperature at Time of Impact: 71° Test Time: 12:50 PM

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)

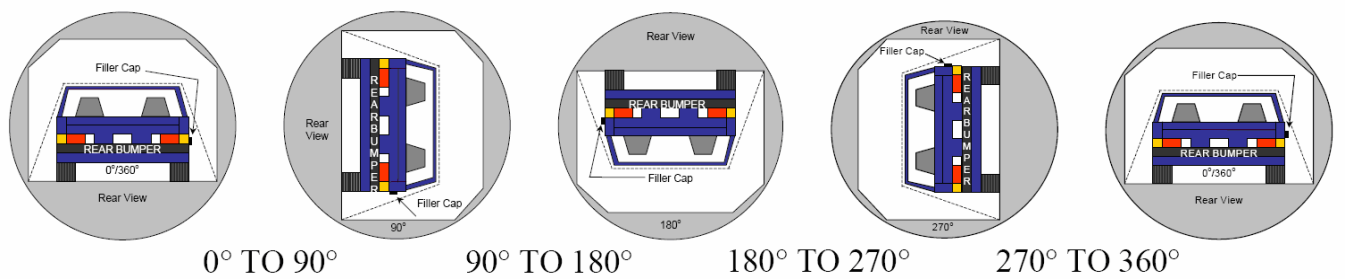
D. Spillage: No spillage occurred

DATA SHEET NO. 21

FMVSS 301 STATIC ROLLOVER DATA

Test Vehicle: 2007 Ford 500 SEL 4-Door Sedan NHTSA No.: R70212

Test Program: 72 mph, 15°, 50% Offset MDB to Vehicle Test Date: 3/30/10



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°	86	300	386
90° To 180°	86	300	386
180° To 270°	78	300	378
270° To 360°	82	300	382

FMVSS 301 SPILLAGE TABLE

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

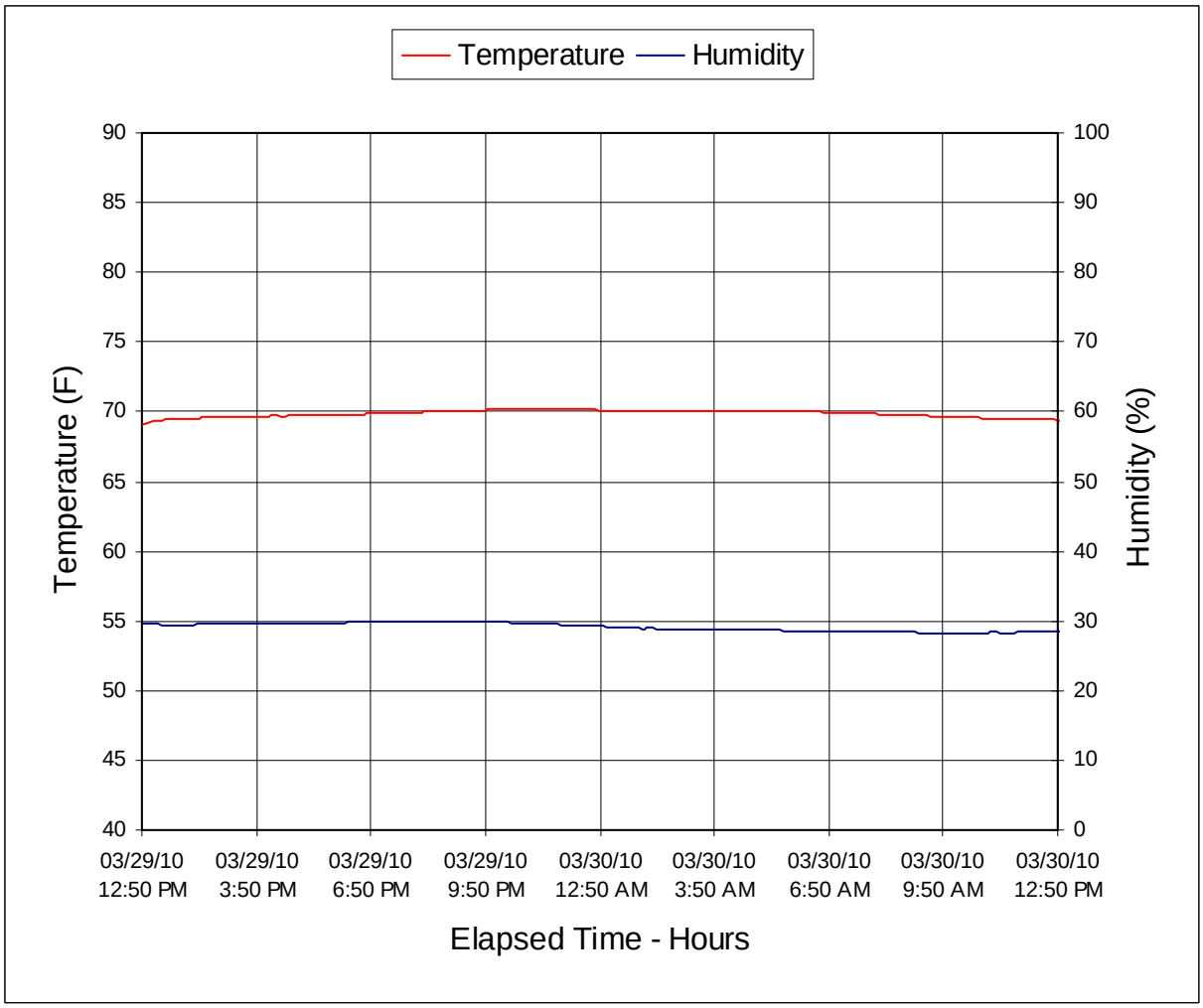
SOLVENT SPILLAGE LOCATION TABLE

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

DATA SHEET NO. 22

DUMMY / VEHICLE TEMPERATURE STABILIZATION

Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/30/10



APPENDIX A
PHOTOGRAPHS

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Figure A-1: Test Vehicle, Right Front ¾ View, As-Received

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

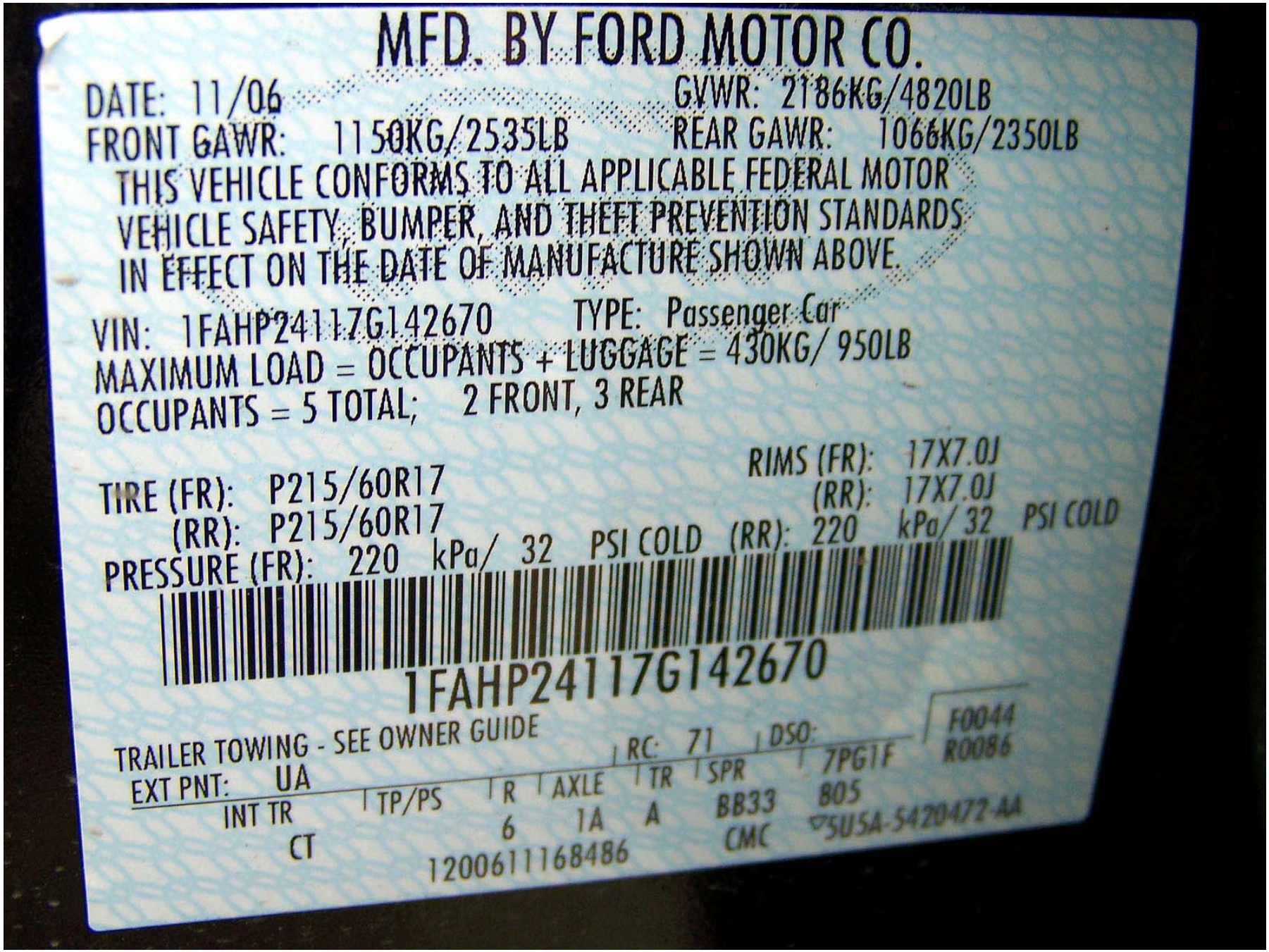

Figure A-3: Test Vehicle Manufacturer's Label

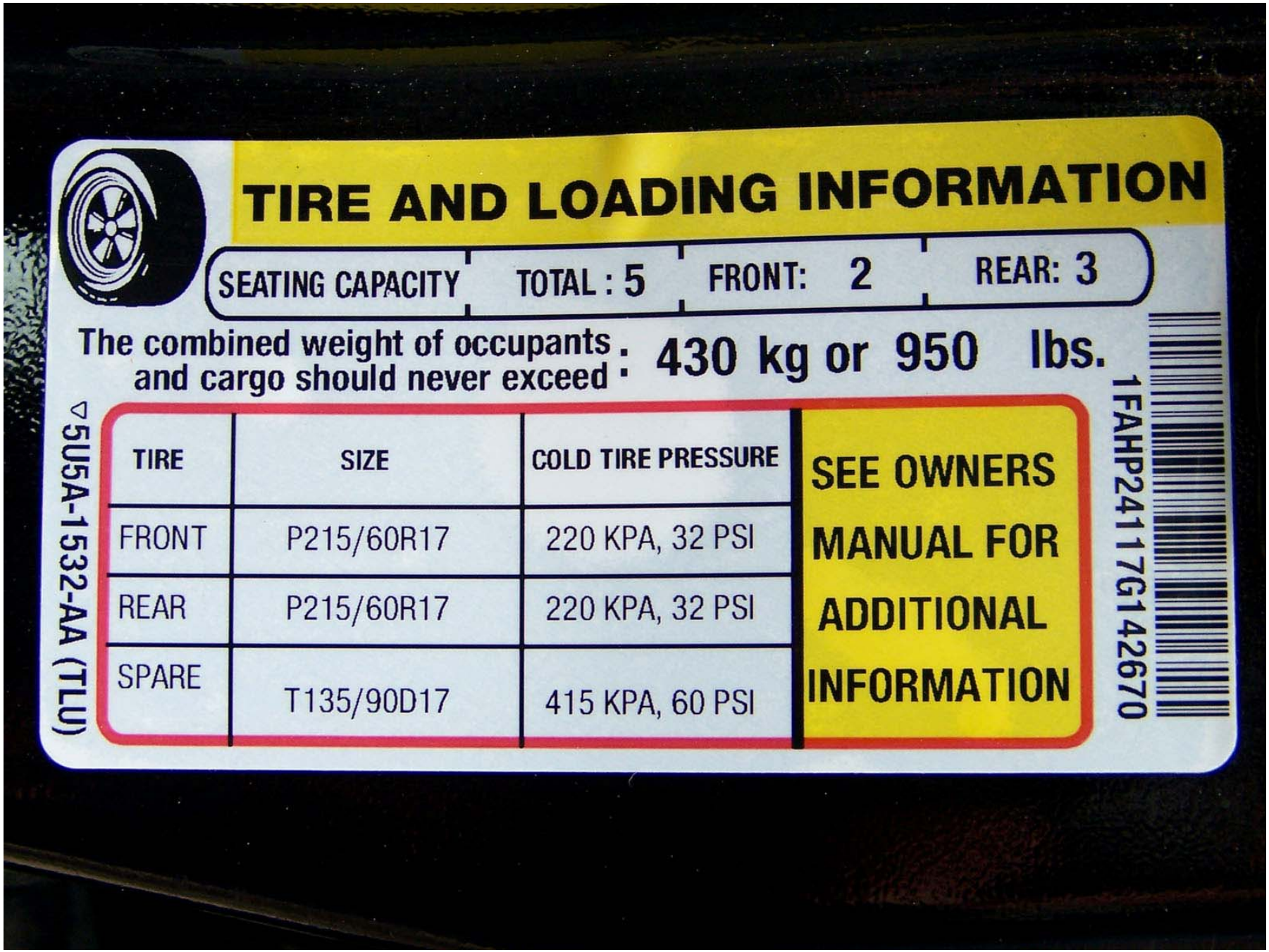

Figure A-4: Test Vehicle Tire Placard

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

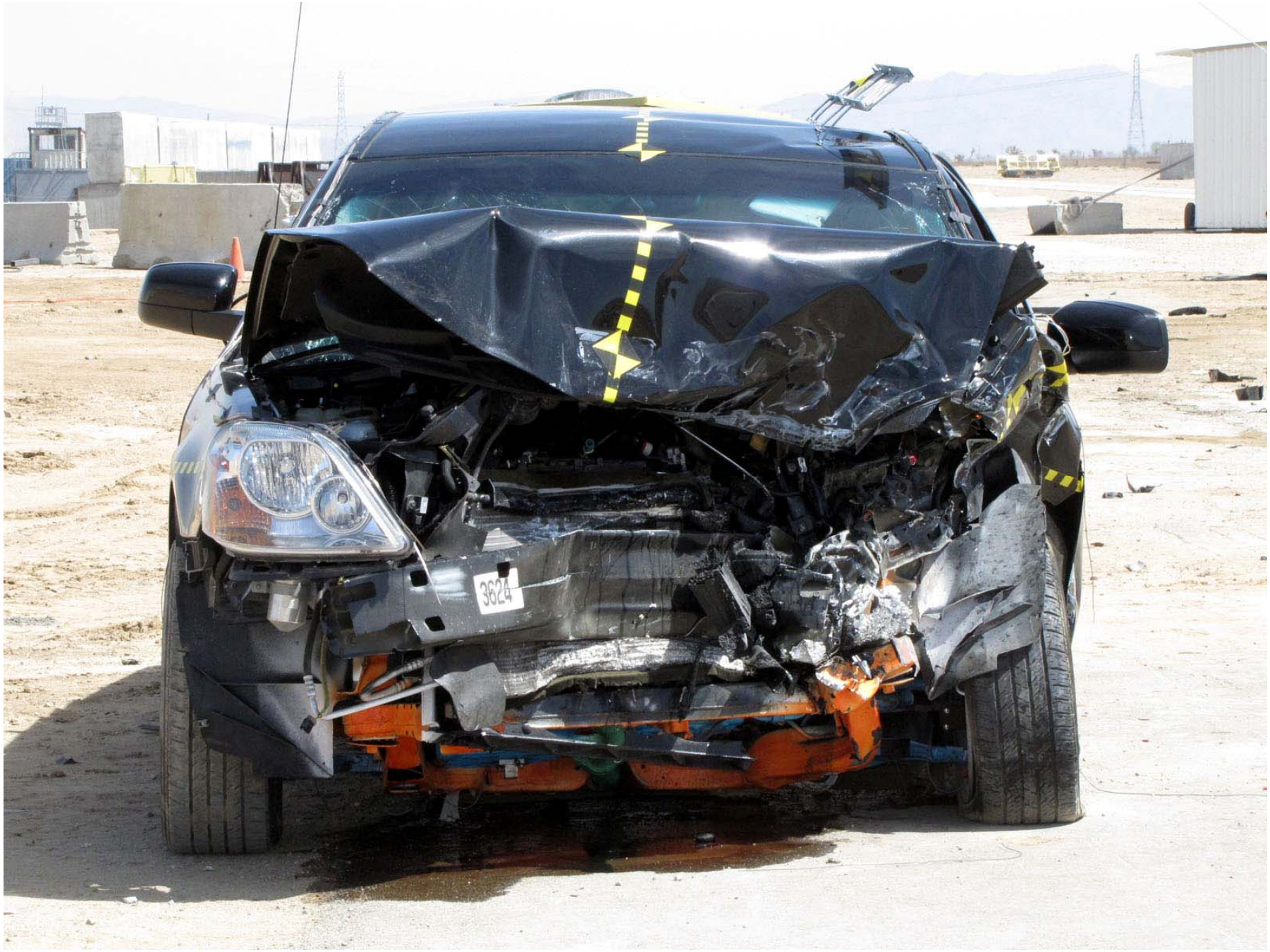

Figure A-6: Test Vehicle Post-Test Front View

Figure A-7: Test Vehicle Pre-Test Left Front ¾ View

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

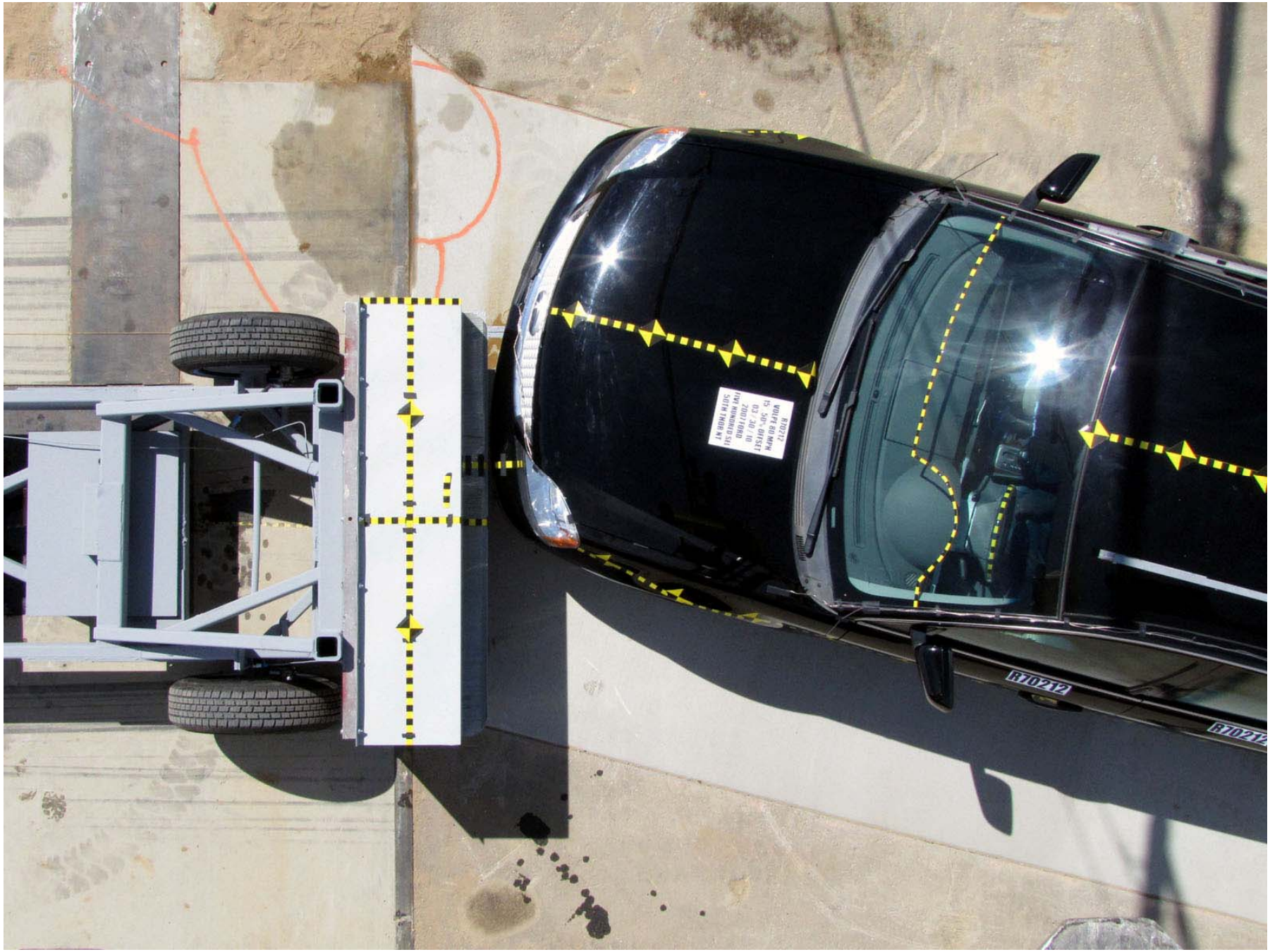

Figure A-21: Test Vehicle Pre-Test Overhead View

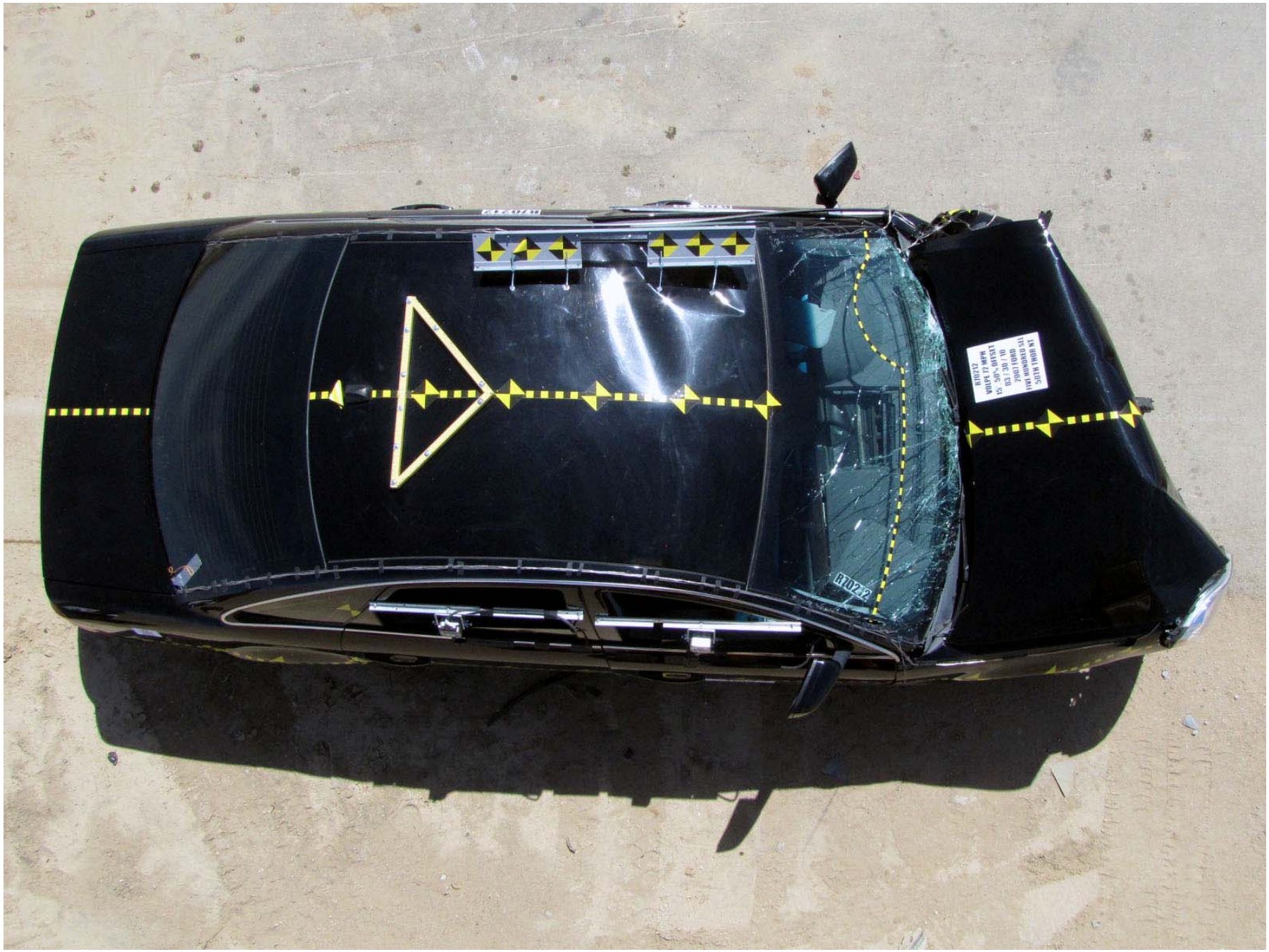

Figure A-22: Test Vehicle Post-Test Overhead View

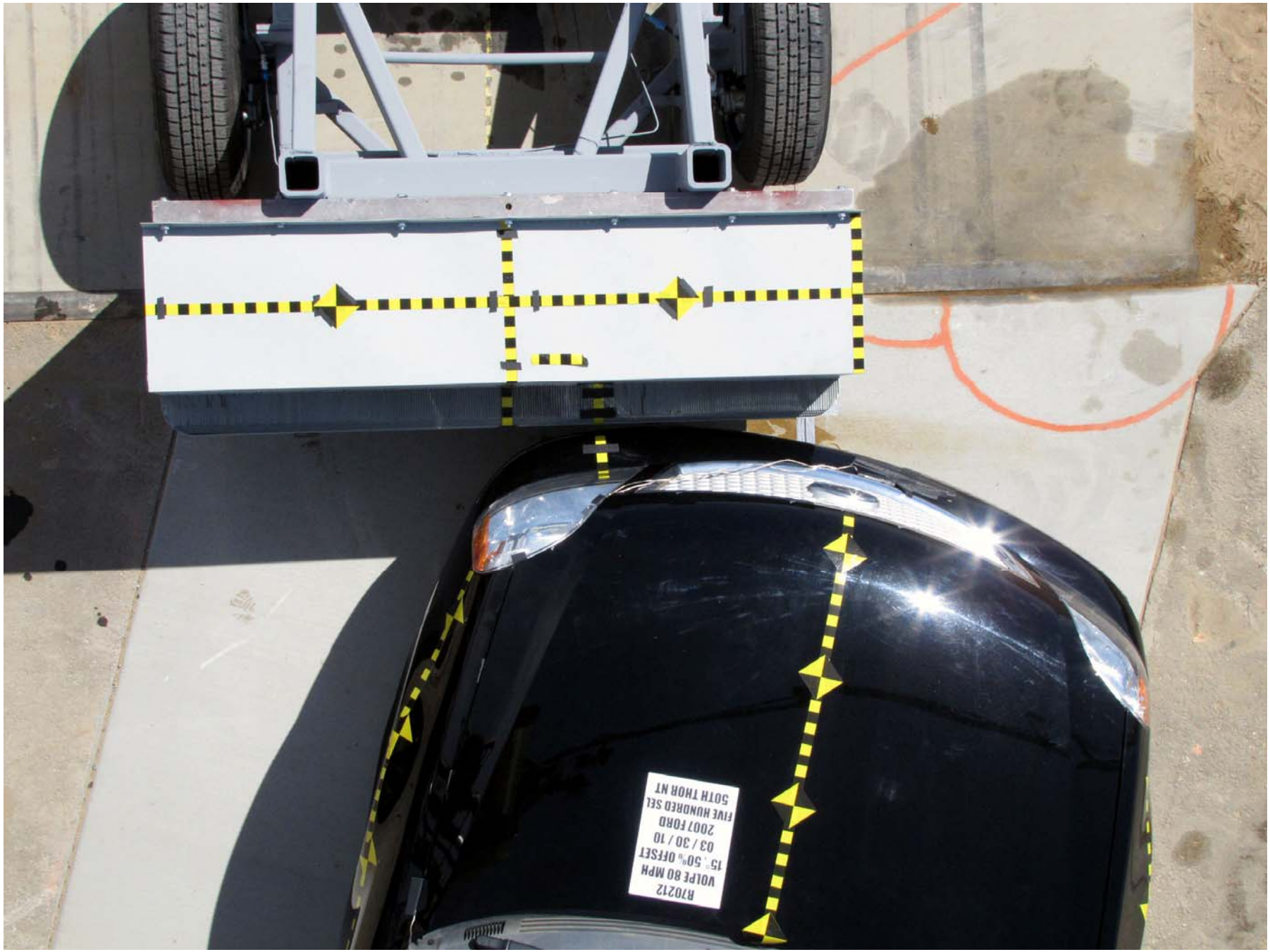

Figure A-23: Test Vehicle Pre-Test Overhead Close-Up View

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

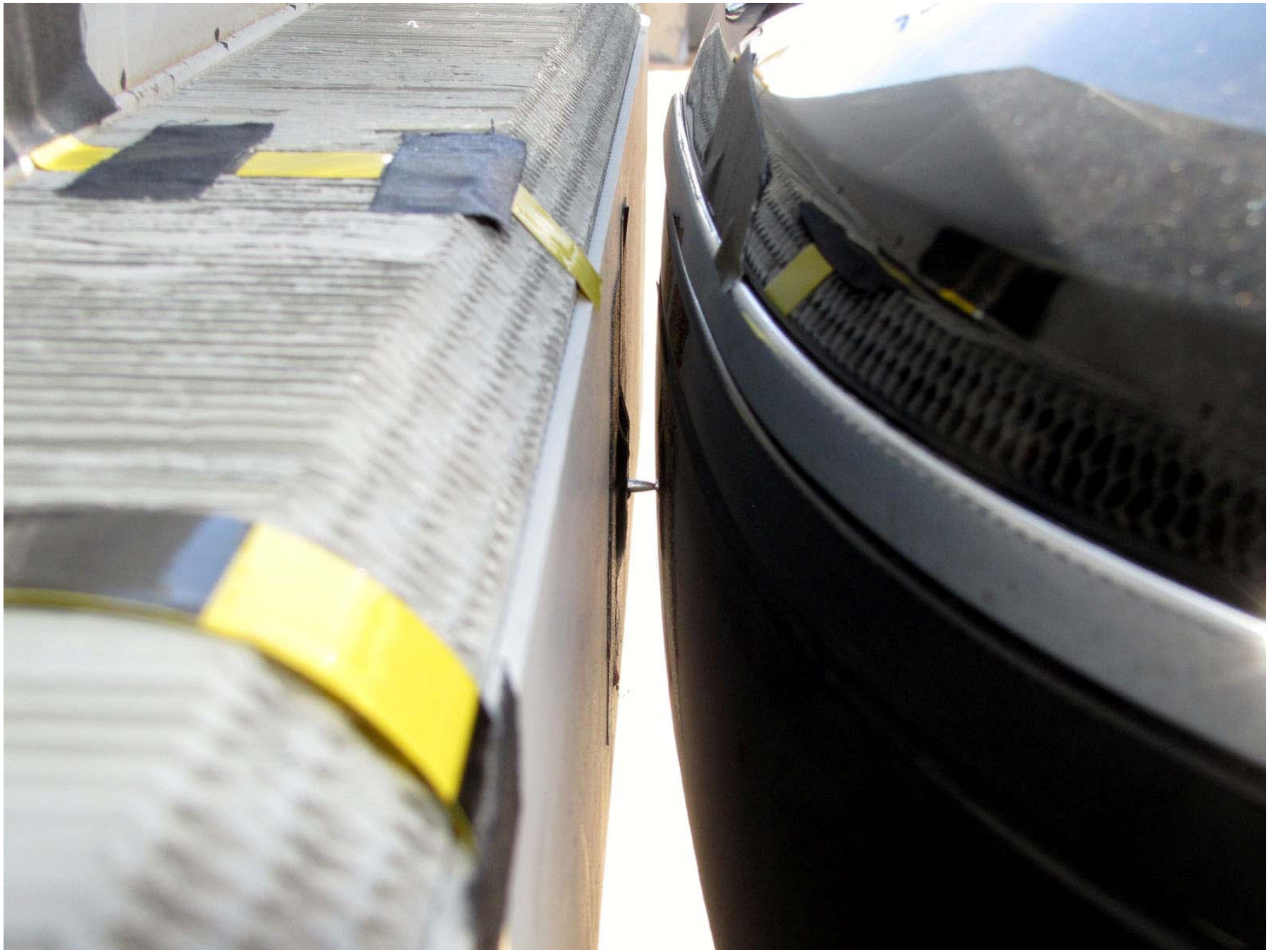

Figure A-25: Test Vehicle Pre-Test Impact Point Marker

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

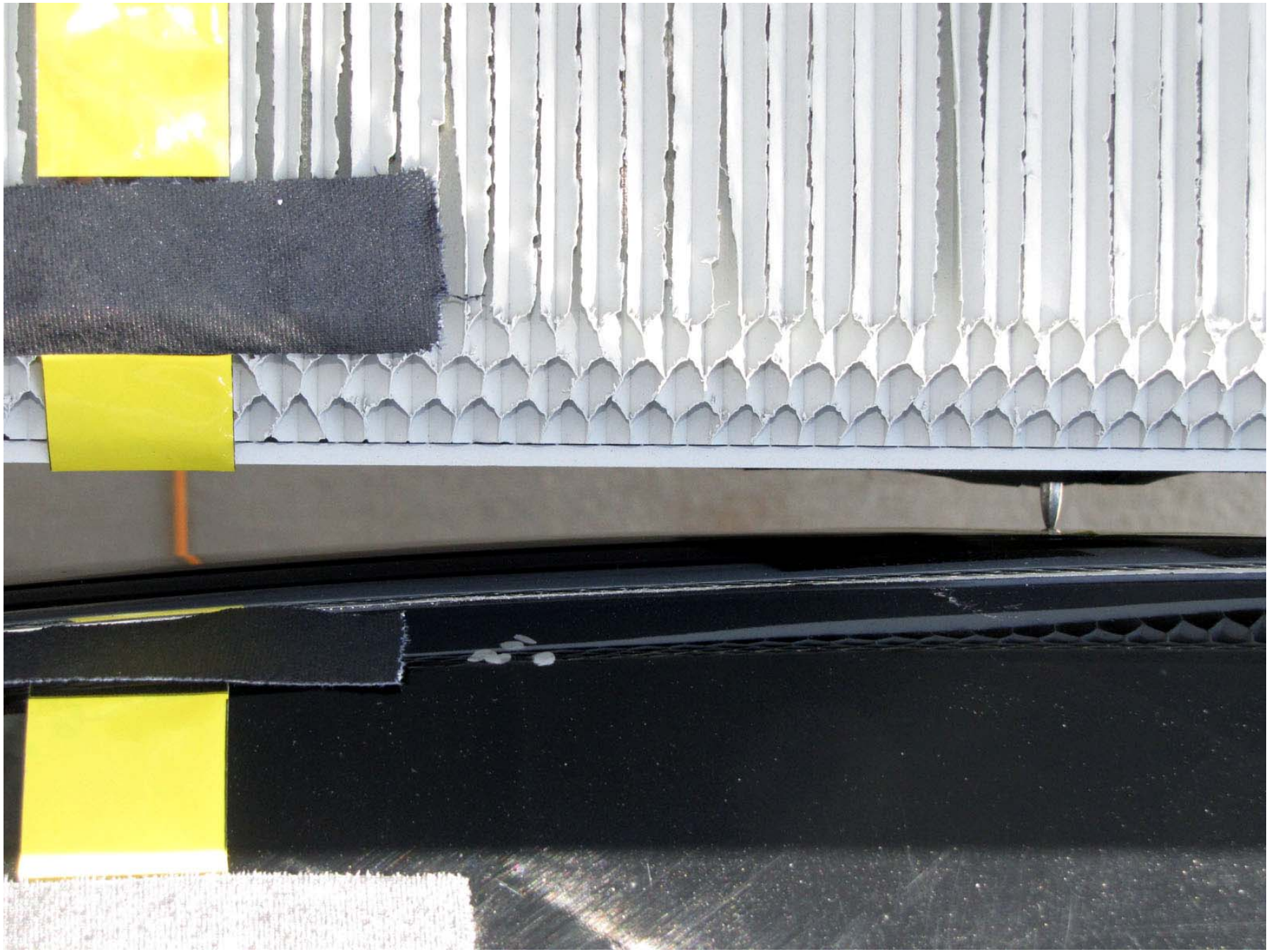

Figure A-27: Test Vehicle Pre-Test Impact Point Marker

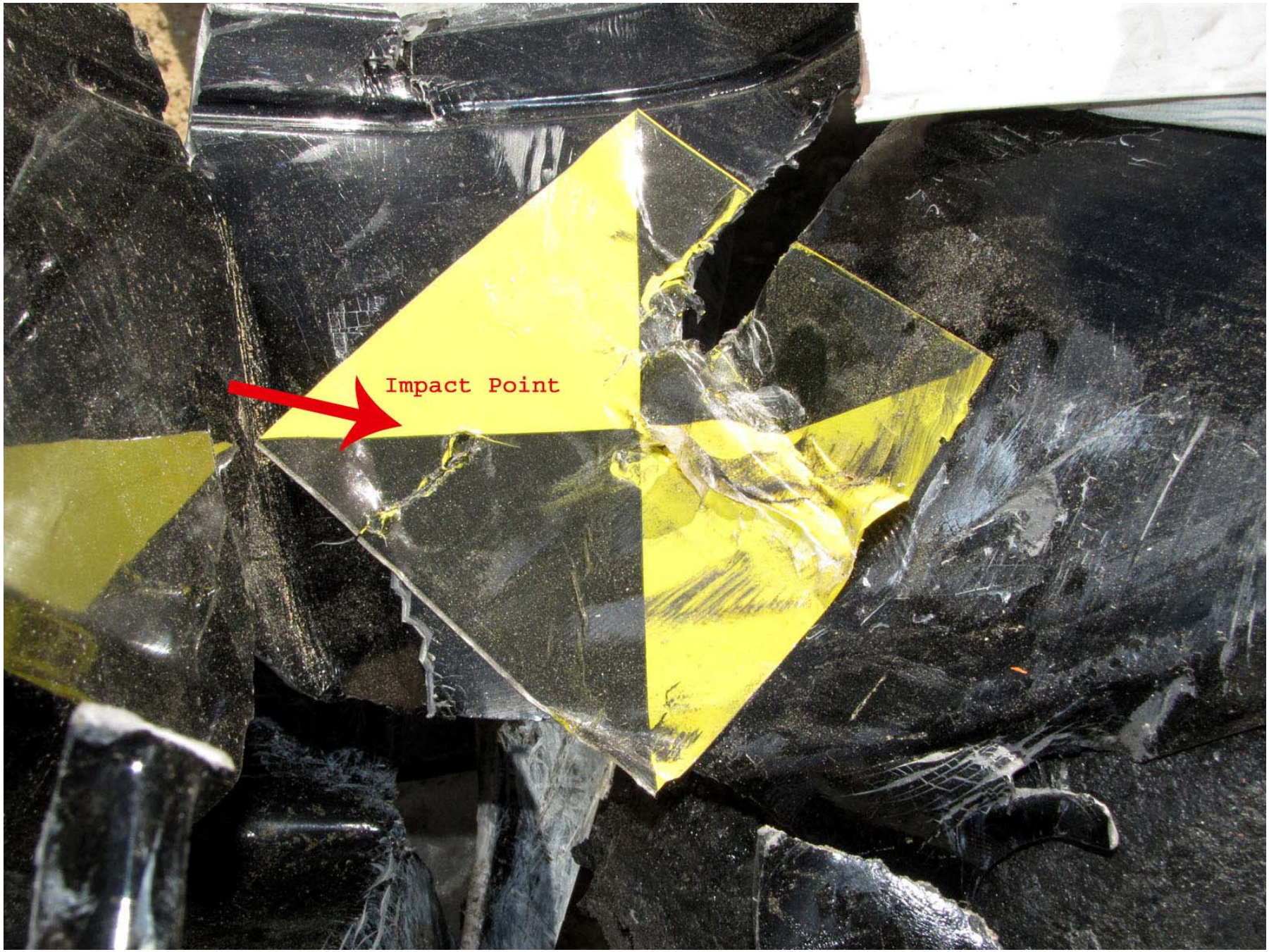

Figure A-28: Test Vehicle Post-Test Impact Point Marker

Figure A-29: Test Vehicle Pre-Test Front ¾ View of Left Side Doors

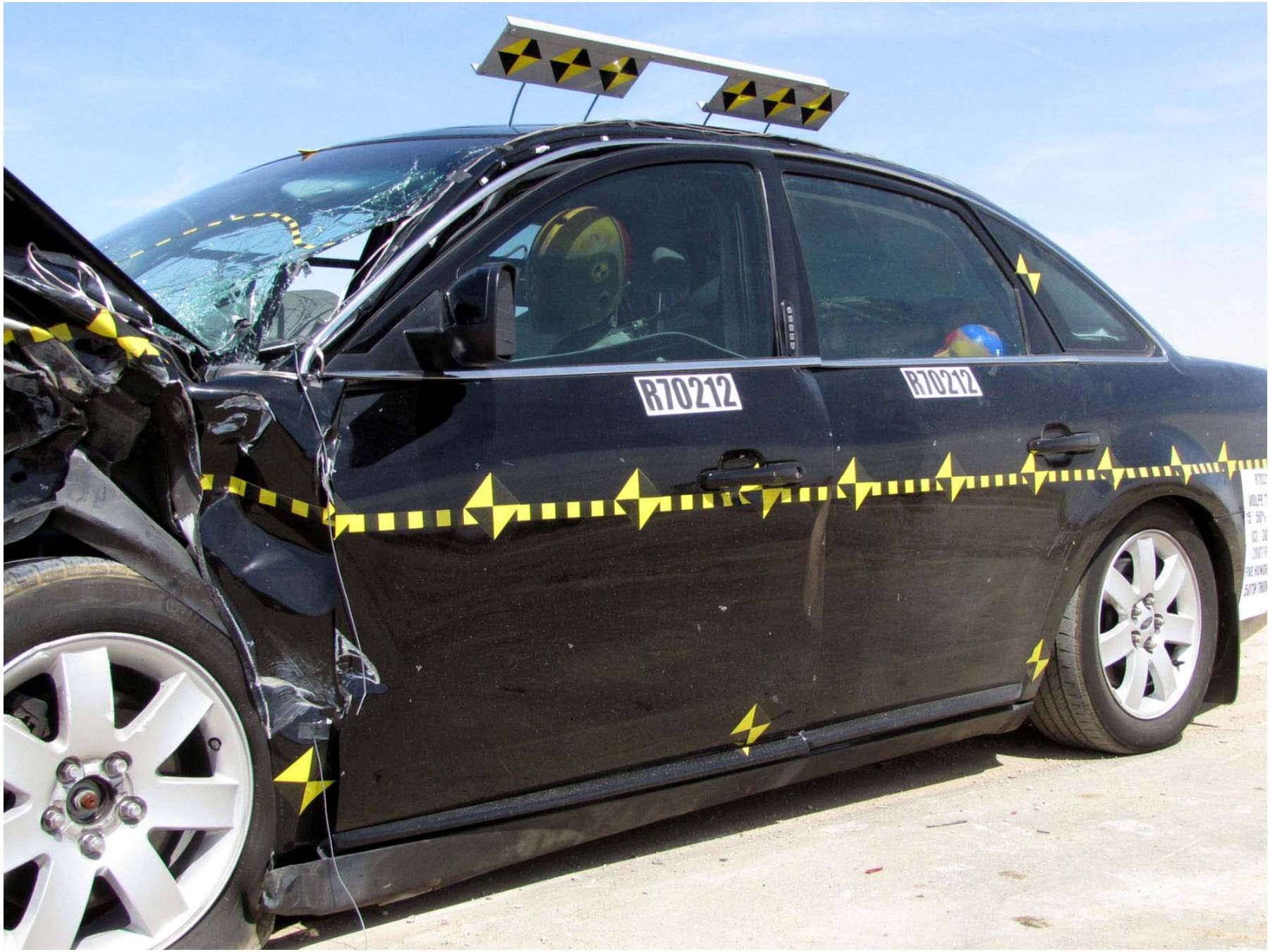

Figure A-30: Test Vehicle Post-Test Front ¾ View of Left Side Doors

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

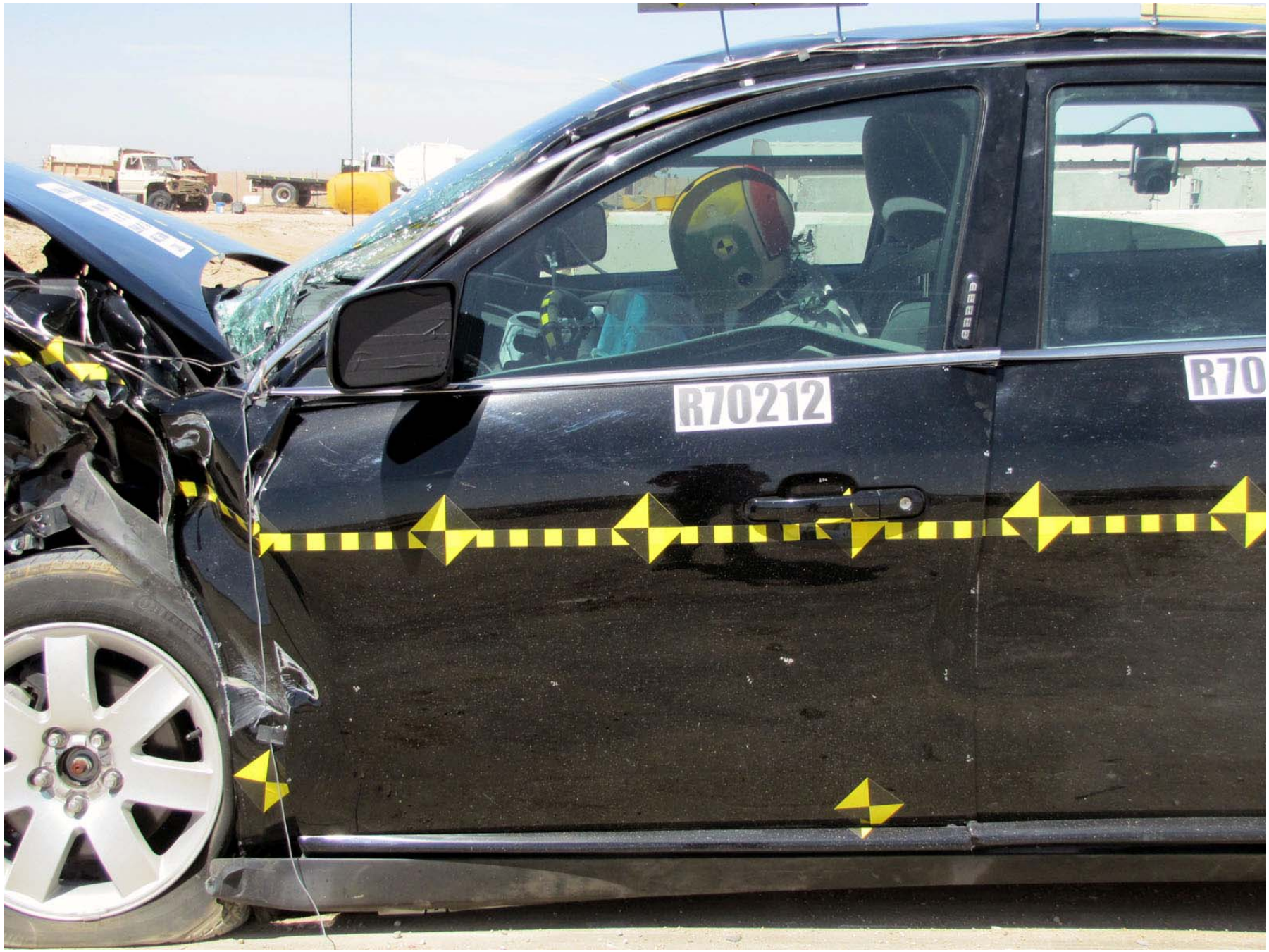

Figure A-38: Test Vehicle Post-Test Left Front Door

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

Figure A-40: Test Vehicle Post-Test Left Rear Door

Figure A-41: Test Vehicle Pre-Test Right Front Door

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

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

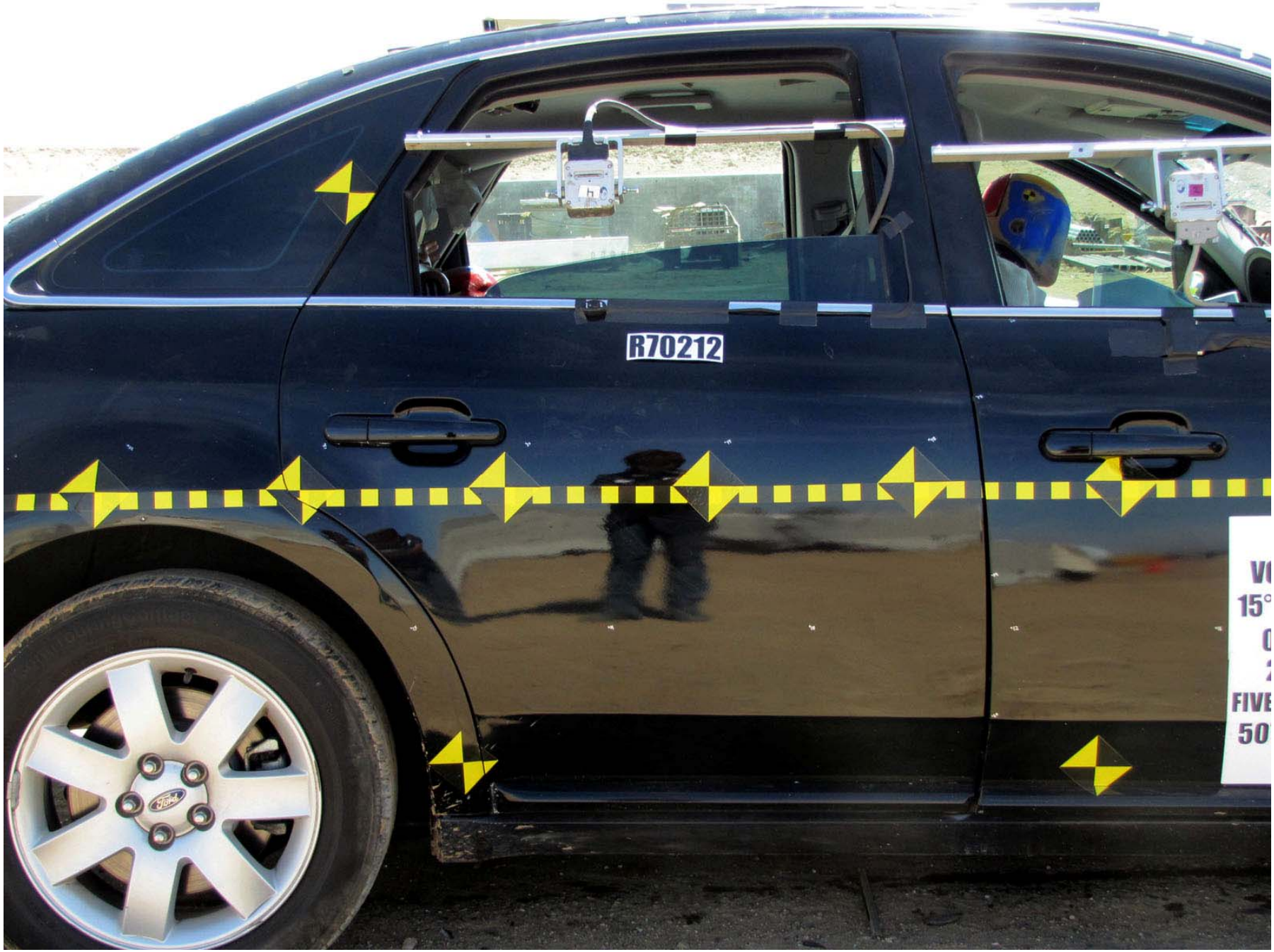

Figure A-44: Test Vehicle Post-Test Right Rear Door

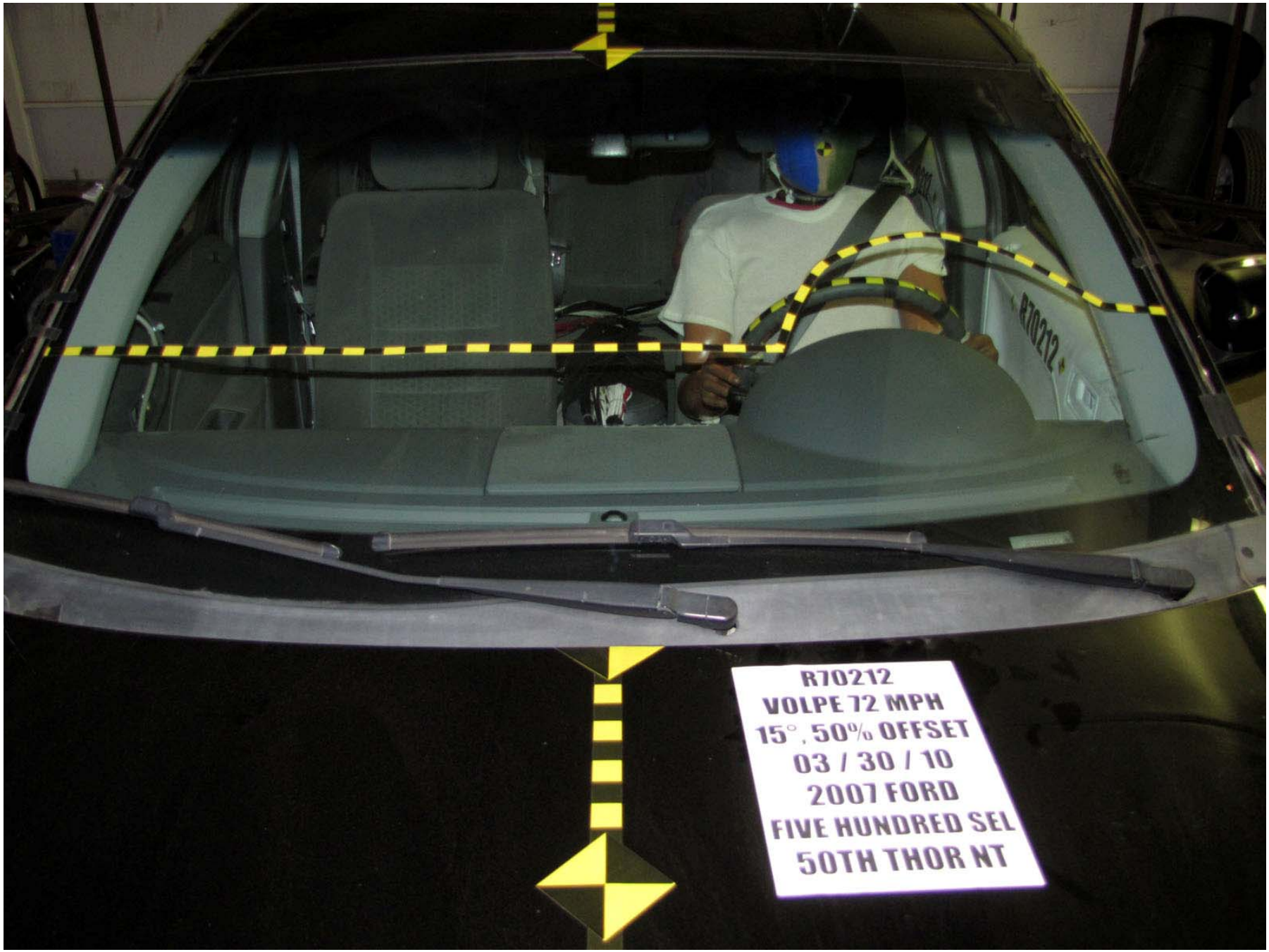

Figure A-45: Test Vehicle Pre-Test Windshield View

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

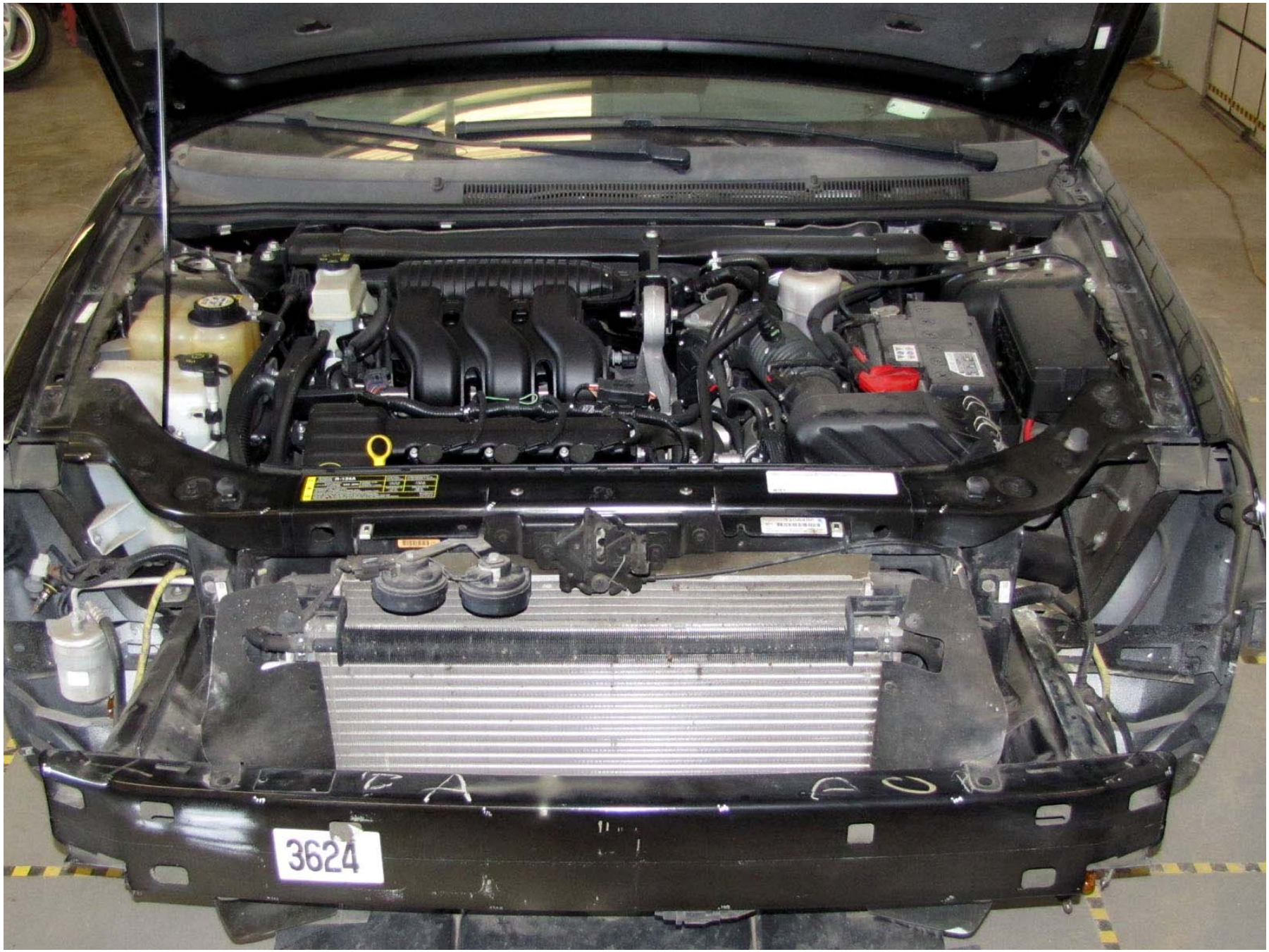

Figure A-47: Test Vehicle Pre-Test Engine Compartment View

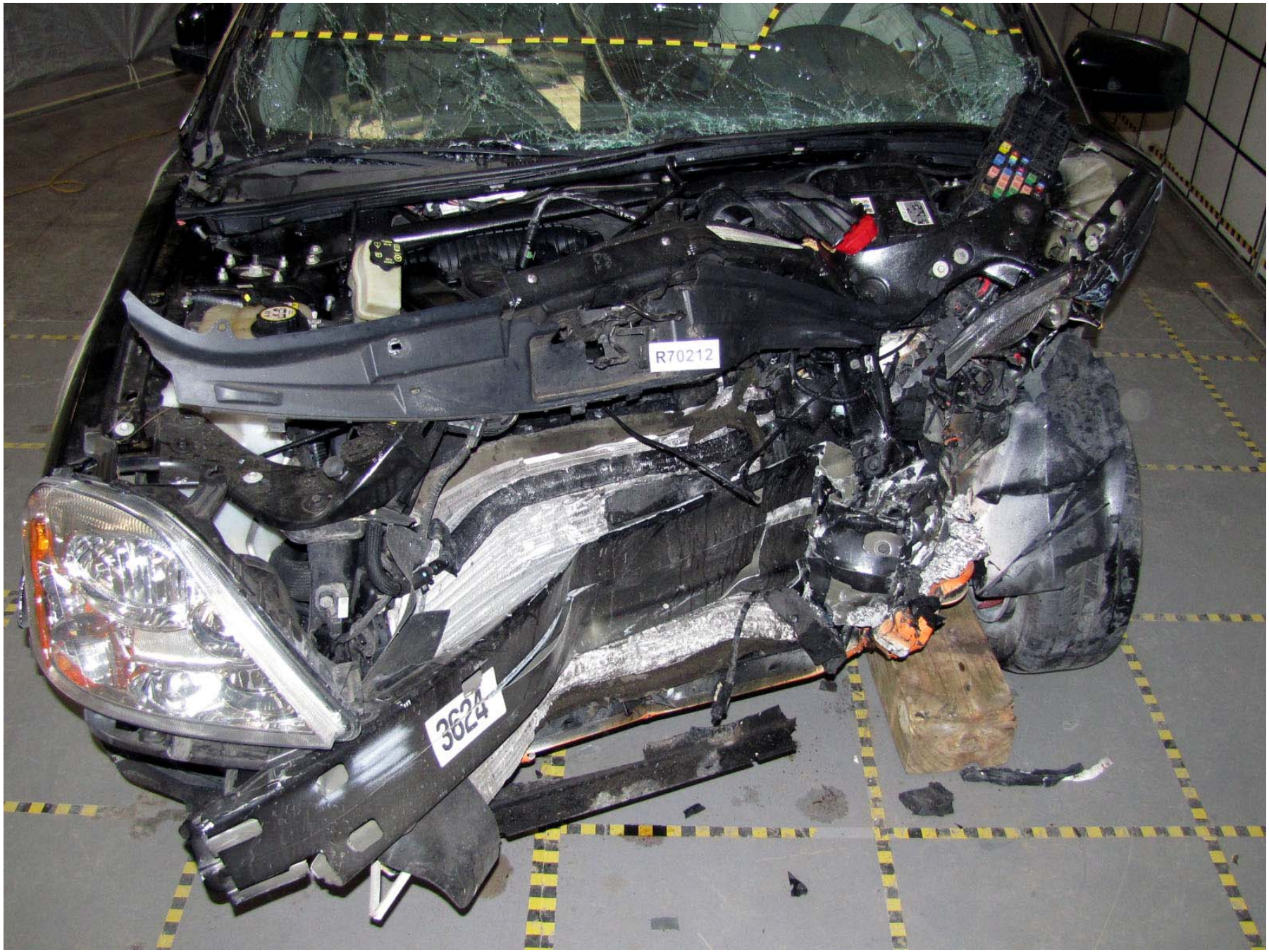

Figure A-48: Test Vehicle Post-Test Engine Compartment View

Figure A-49: Test Vehicle Pre-Test Fuel Filler Cap View

Figure A-50: Test Vehicle Post-Test Fuel Filler Cap View

Figure A-51: Test Vehicle Pre-Test Left Side A-Pillar Side View

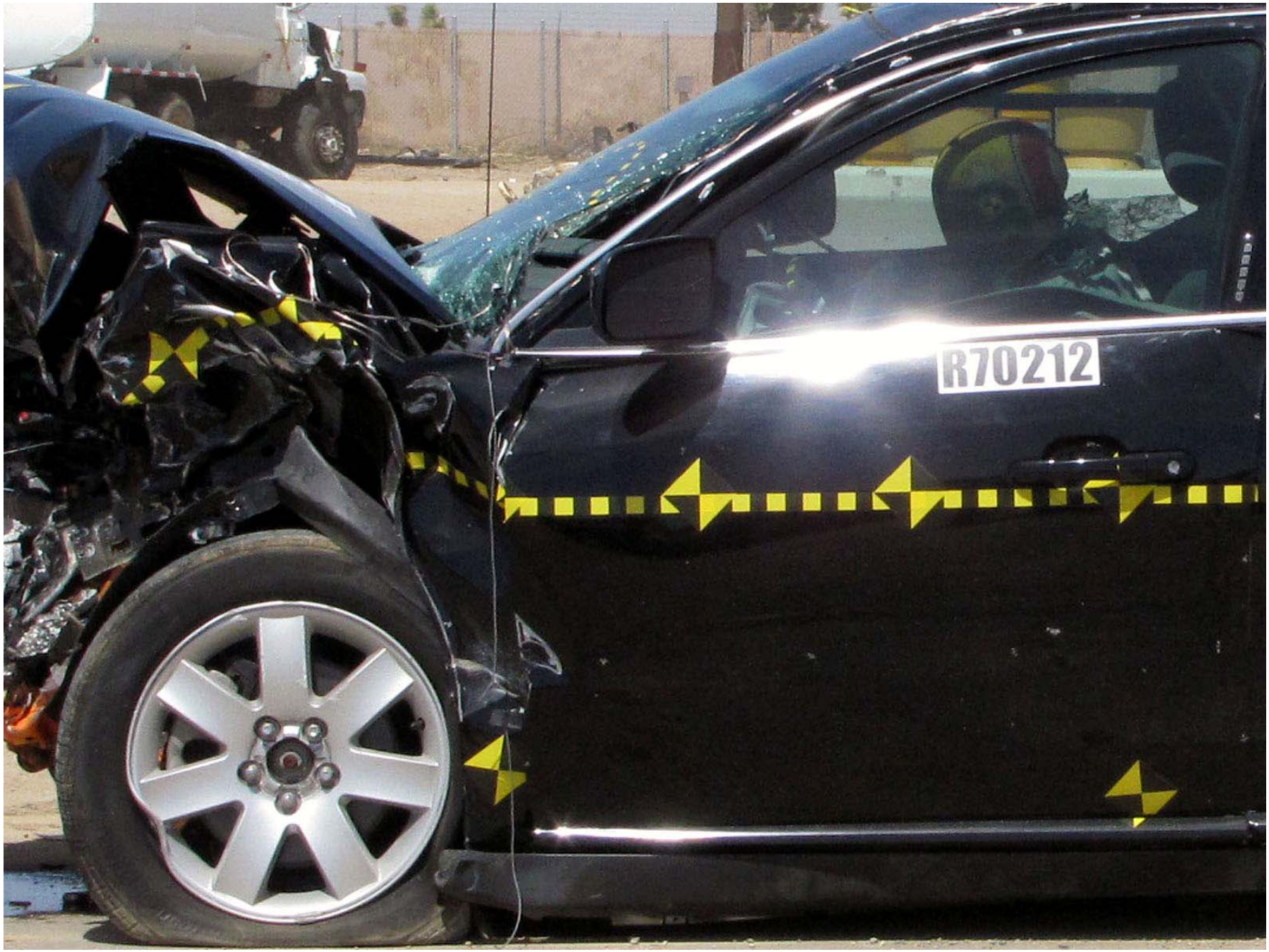

Figure A-52: Test Vehicle Post-Test Left Side A-Pillar Side View

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

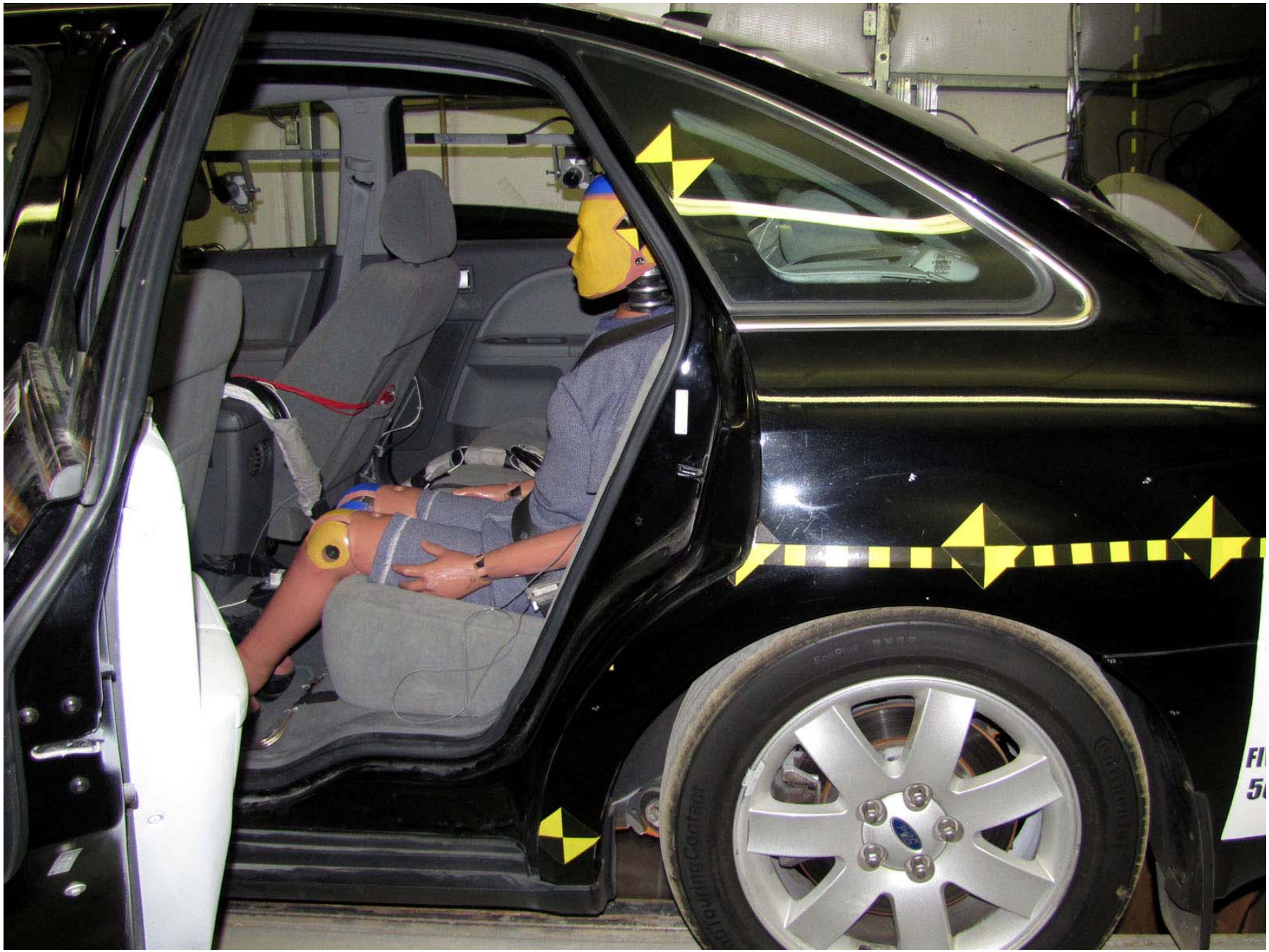

Figure A-59: Test Vehicle Pre-Test Left Side C-Pillar Side View

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

Figure A-61: Test Vehicle Pre-Test Left Side C-Pillar Front ¾ View

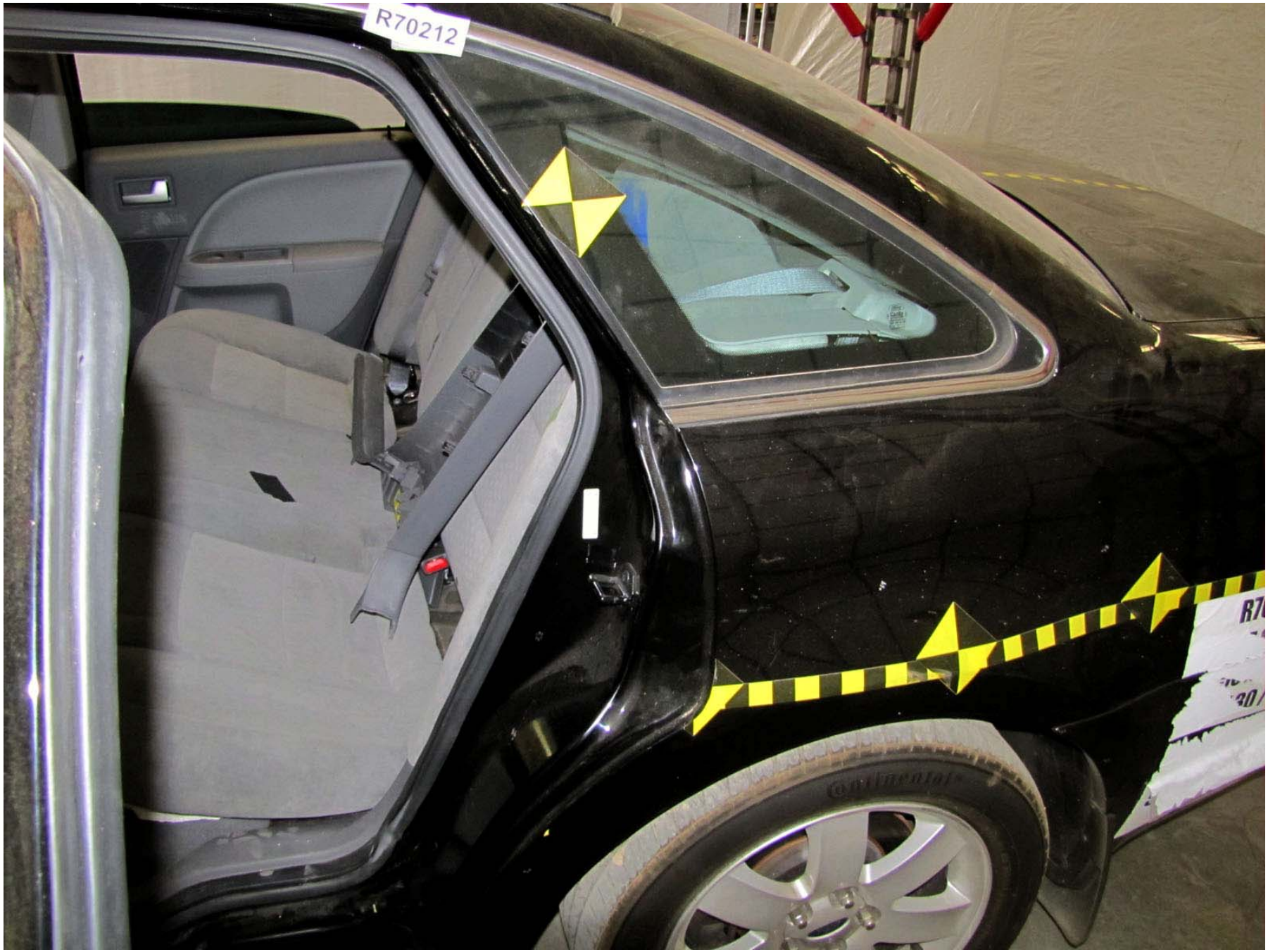

Figure A-62: Test Vehicle Post-Test Left Side C-Pillar Front ¾ View

Figure A-63: Test Vehicle Pre-Test Left Front Sill Side View, Door Closed

Figure A-64: Test Vehicle Post-Test Left Front Sill Side View, Door Closed

Figure A-65: Test Vehicle Pre-Test Left Front Sill Side View, Door Open

Figure A-66: Test Vehicle Post-Test Left Front Sill Side View, Door Open

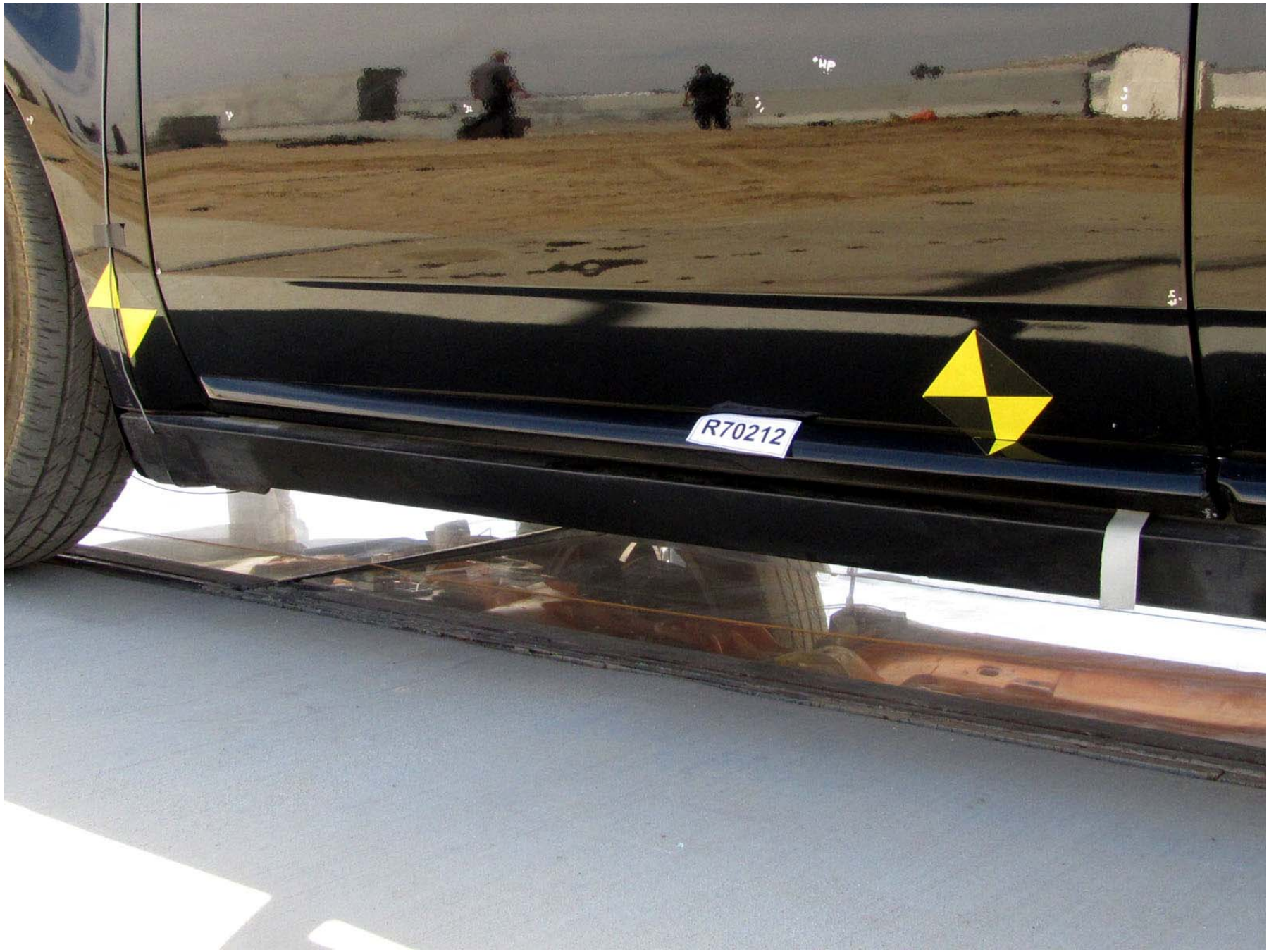

Figure A-67: Test Vehicle Pre-Test Left Front Sill Rear ¾ View, Door Closed

Figure A-68: Test Vehicle Post-Test Left Front Sill Rear ¾ View, Door Closed

Figure A-69: Test Vehicle Pre-Test Left Front Sill Rear ¾ View, Door Open

Figure A-70: Test Vehicle Post-Test Left Front Sill Rear ¾ View, Door Open

Figure A-71: Test Vehicle Pre-Test Left Rear Sill Side View, Door Closed

Figure A-72: Test Vehicle Post-Test Left Rear Sill Side View, Door Closed

Figure A-73: Test Vehicle Pre-Test Left Rear Sill Side View, Door Open

Figure A-74: Test Vehicle Post-Test Left Rear Sill Side View, Door Open

Figure A-75: Test Vehicle Pre-Test Left Rear Sill Rear ¾ View, Door Closed

Figure A-76: Test Vehicle Post-Test Left Rear Sill Rear ¾ View, Door Closed

Figure A-77: Test Vehicle Pre-Test Left Rear Sill Rear ¾ View, Door Open

Figure A-78: Test Vehicle Post-Test Left Rear Sill Rear ¾ View, Door Open

Figure A-79: Test Vehicle Pre-Test Right Side A-Pillar Side View

Figure A-80: Test Vehicle Post-Test Right Side A-Pillar Side View

Figure A-81: Test Vehicle Pre-Test Right Side A-Pillar Rear ¾ View

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

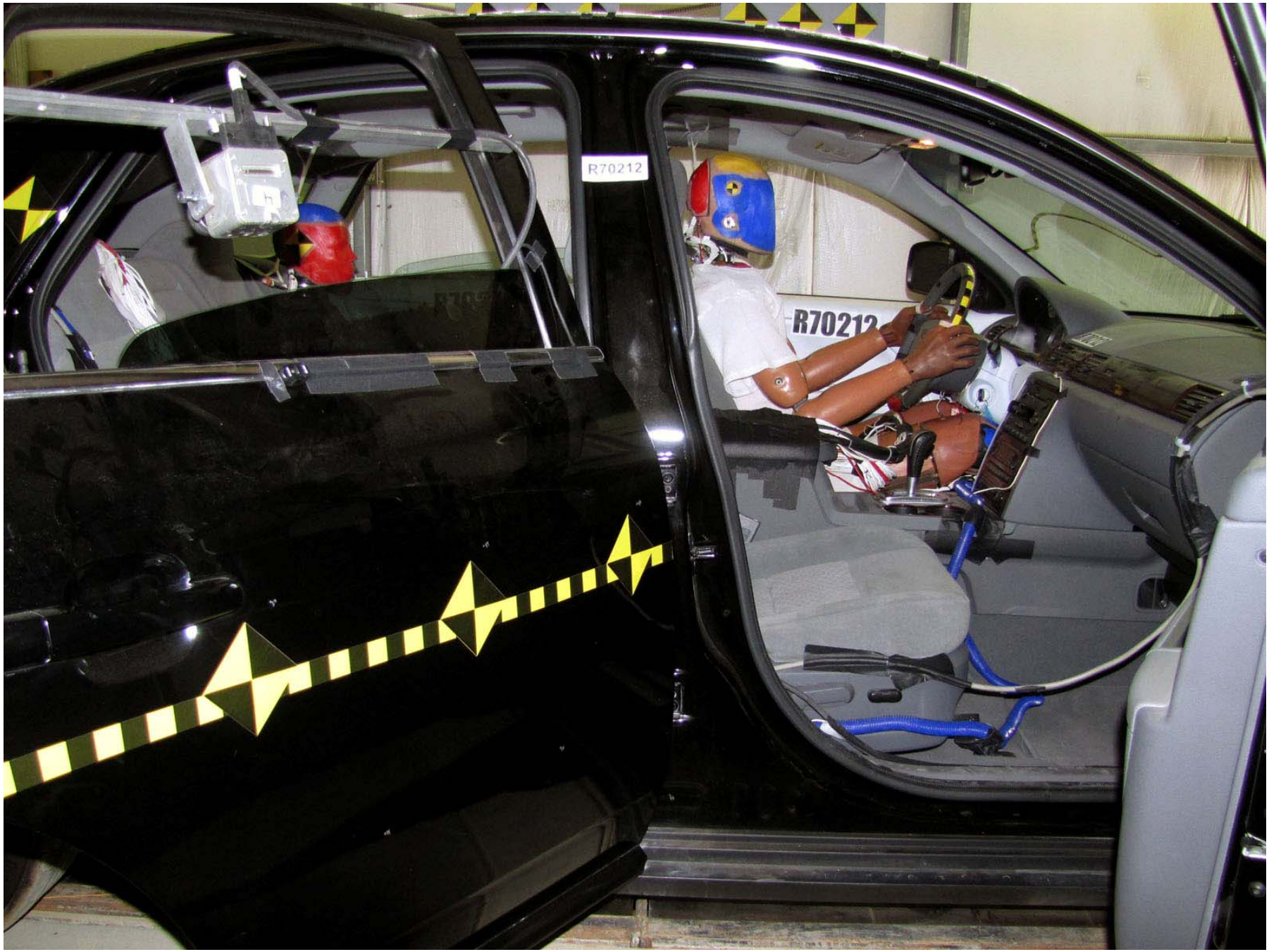

Figure A-83: Test Vehicle Pre-Test Right Side B-Pillar Side View

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

Photograph Not Available

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

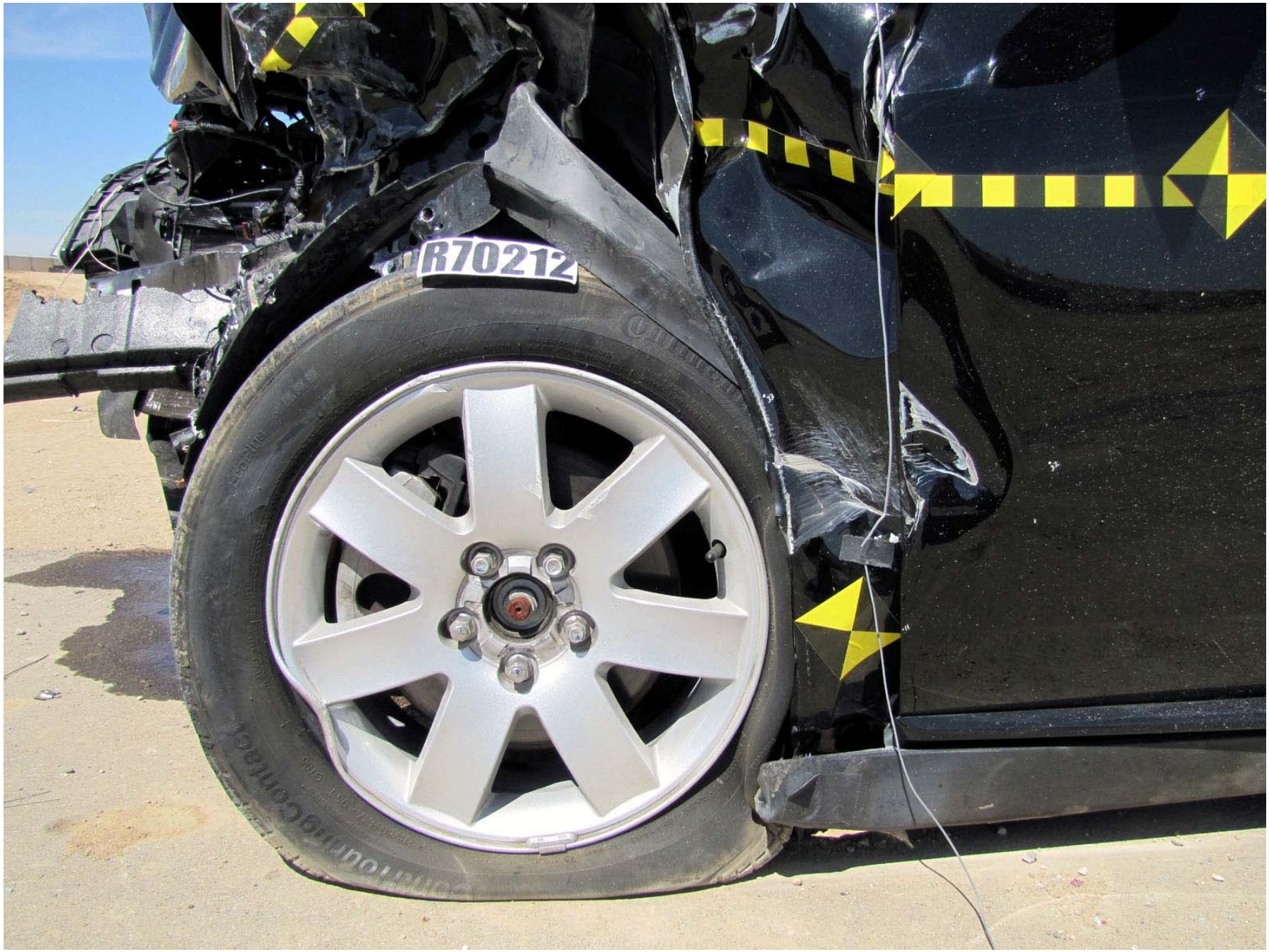

Figure A-118: Test Vehicle Post-Test Left Front Wheel A-Pillar/Rocker Contact

Figure A-119: Test Vehicle Post-Test Right Left Wheel A-Pillar/Rocker Contact

Figure A-120: Test Vehicle Post-Test Left Front Wheel Damage (Outside)

Figure A-121: Test Vehicle Post-Test Left Front Wheel Damage (Inside)

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

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

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

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

Figure A-126: Test Vehicle Pre-Test Right Front Wheel Rear ¾ View

Figure A-127: Test Vehicle Post-Test Right Front Wheel Rear ¾ View

Figure A-128: Test Vehicle Pre-Test Right Front Wheel Top View

Figure A-129: Test Vehicle Post-Test Right Front Wheel Top View

Figure A-130: Test Vehicle Post-Test Right Front Wheel Damage (Outside)

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

Figure A-132: Test Vehicle Pre-Test Left Front Wheel Well (Tire On)

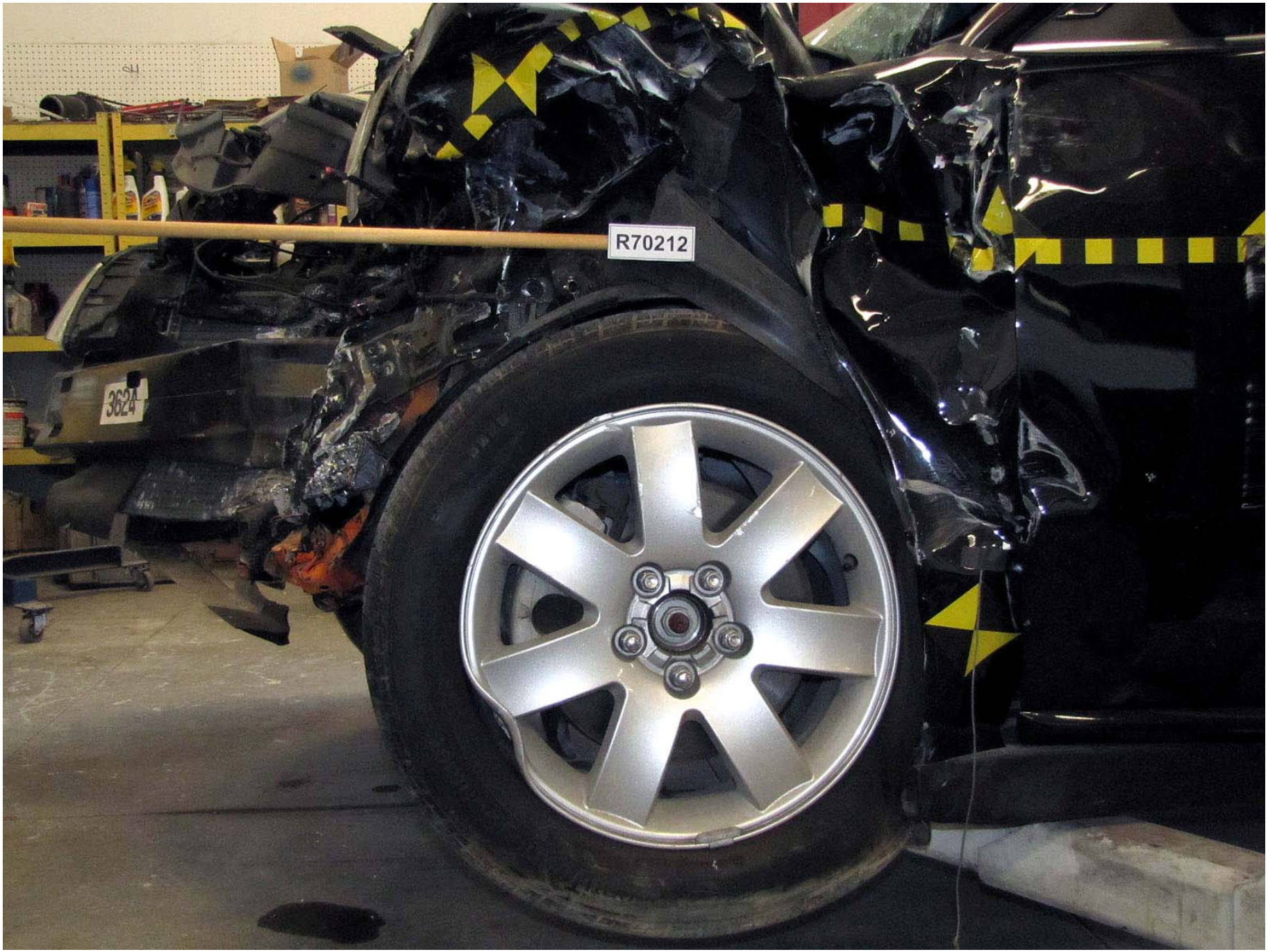

Figure A-133: Test Vehicle Post-Test Left Front Wheel Well (Tire On)

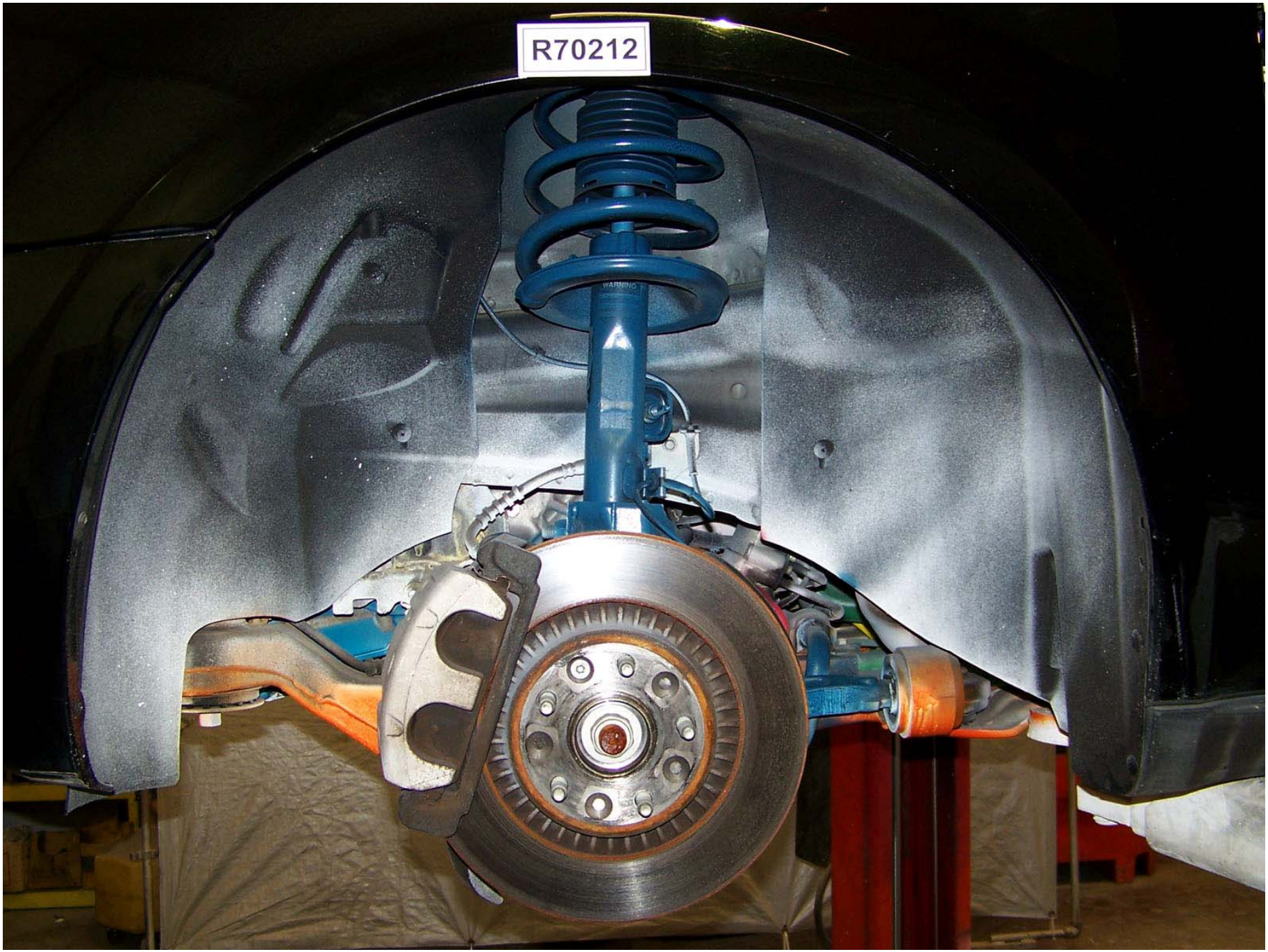

Figure A-134: Test Vehicle Pre-Test Left Front Wheel Well (Tire Off)

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

Figure A-136: Test Vehicle Pre-Test Left Front Wheel Well (Tire Off), Inner Fender Removed

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

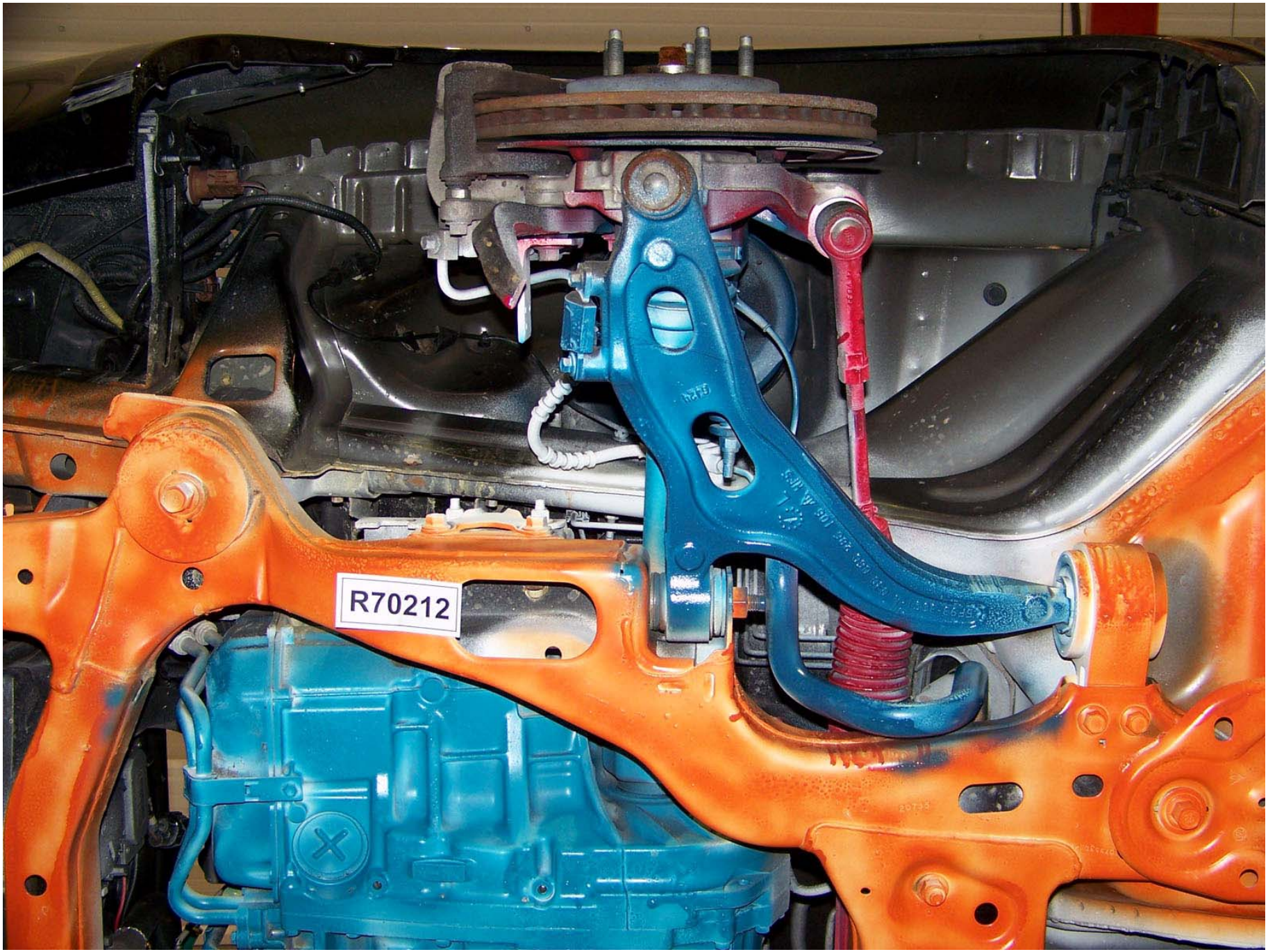

Figure A-138: Test Vehicle Pre-Test Left Inner Fender Well View

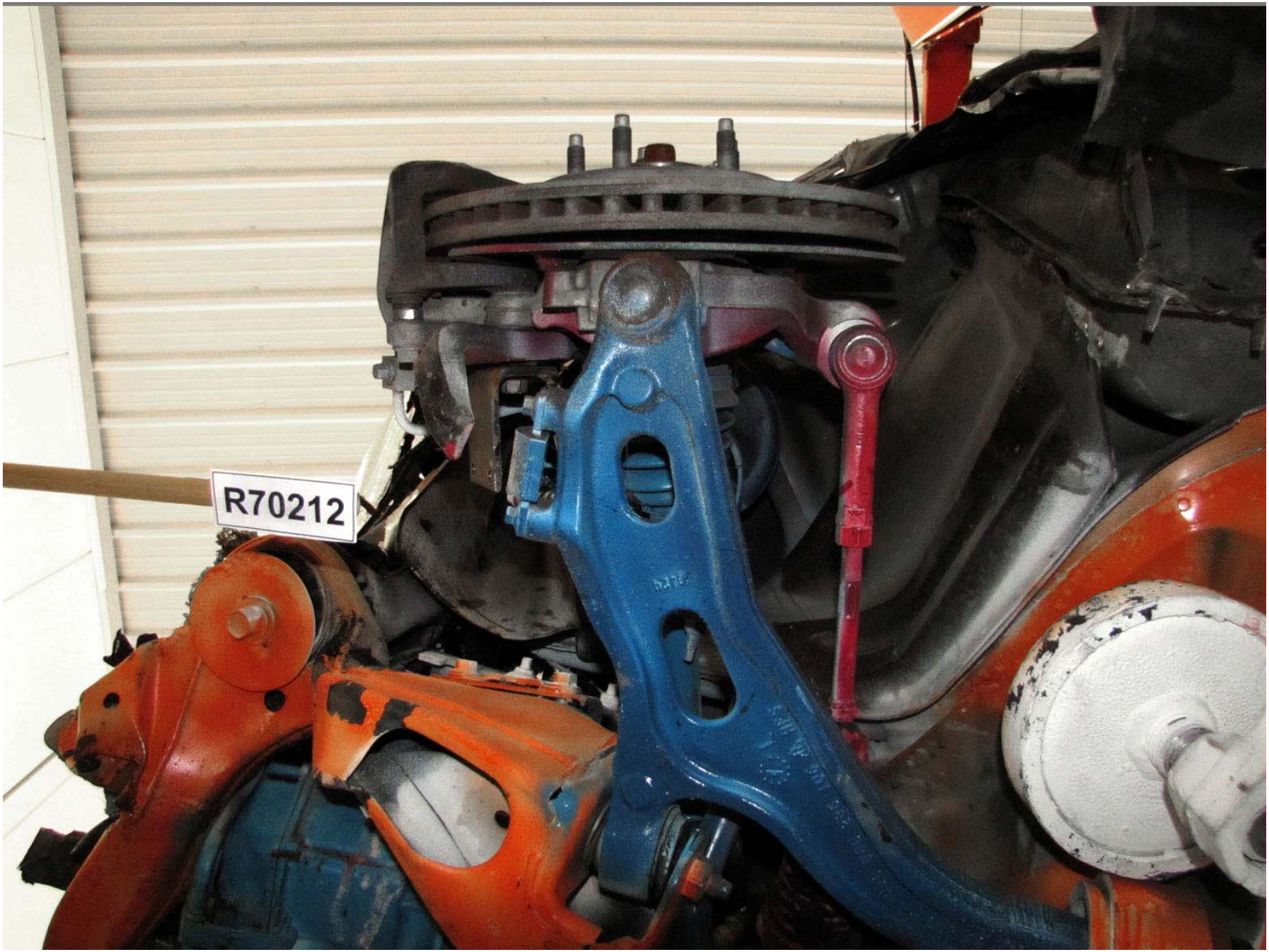

Figure A-139: Test Vehicle Post-Test Left Inner Fender Well View

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

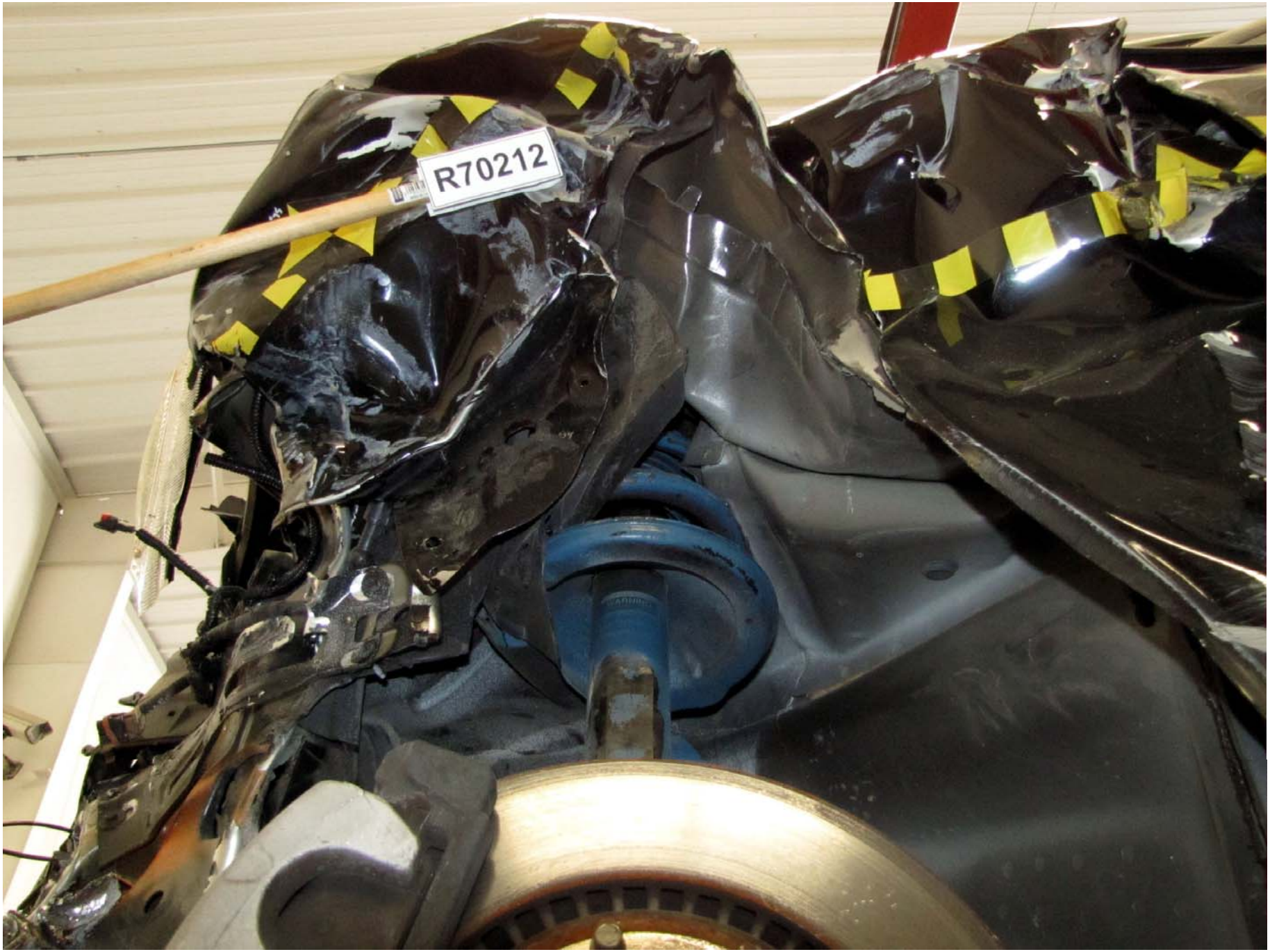

Figure A-141: Test Vehicle Post-Test Left Inner Fender Well View

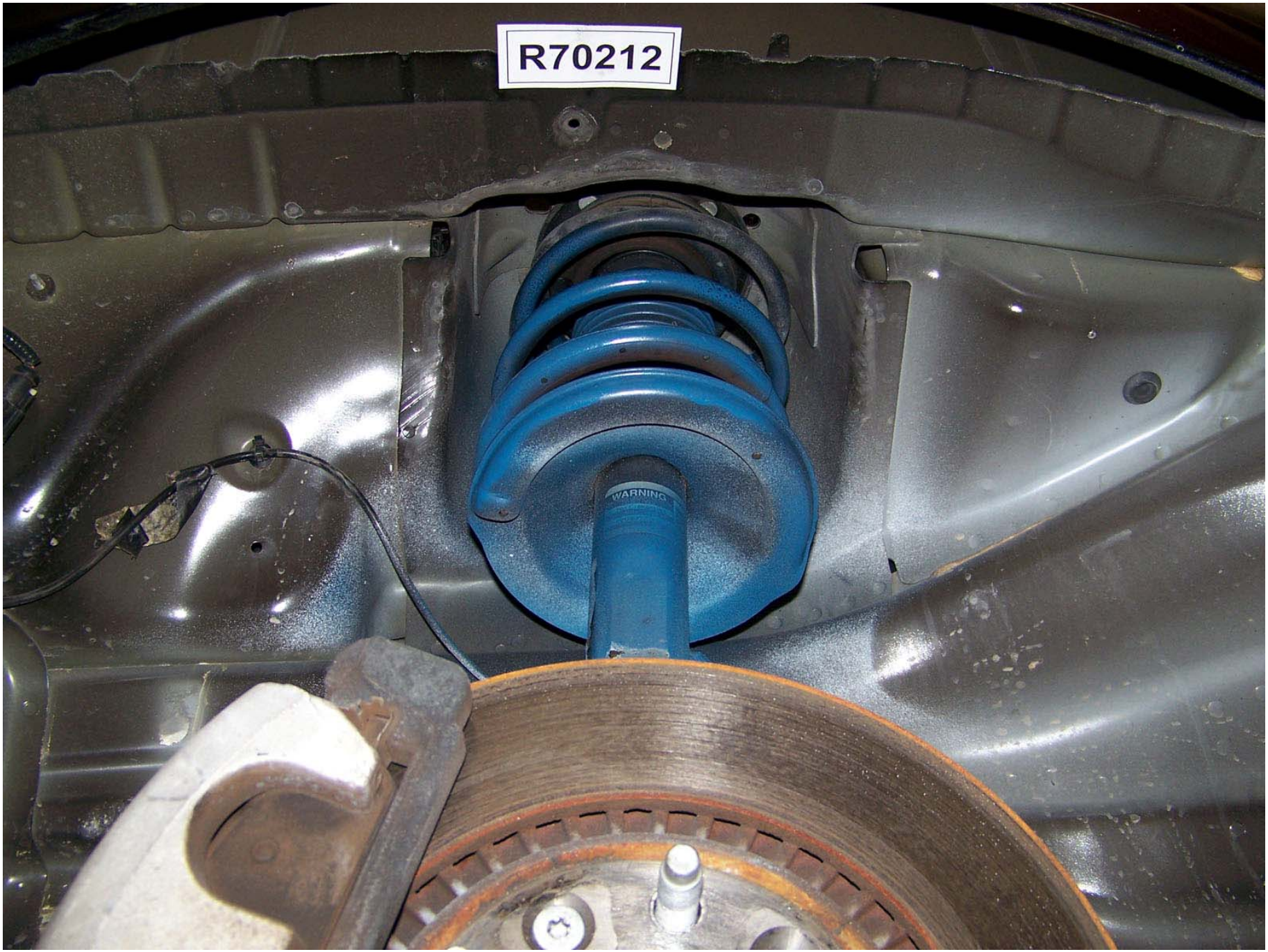

Figure A-142: Test Vehicle Pre-Test Left Inner Fender Well View

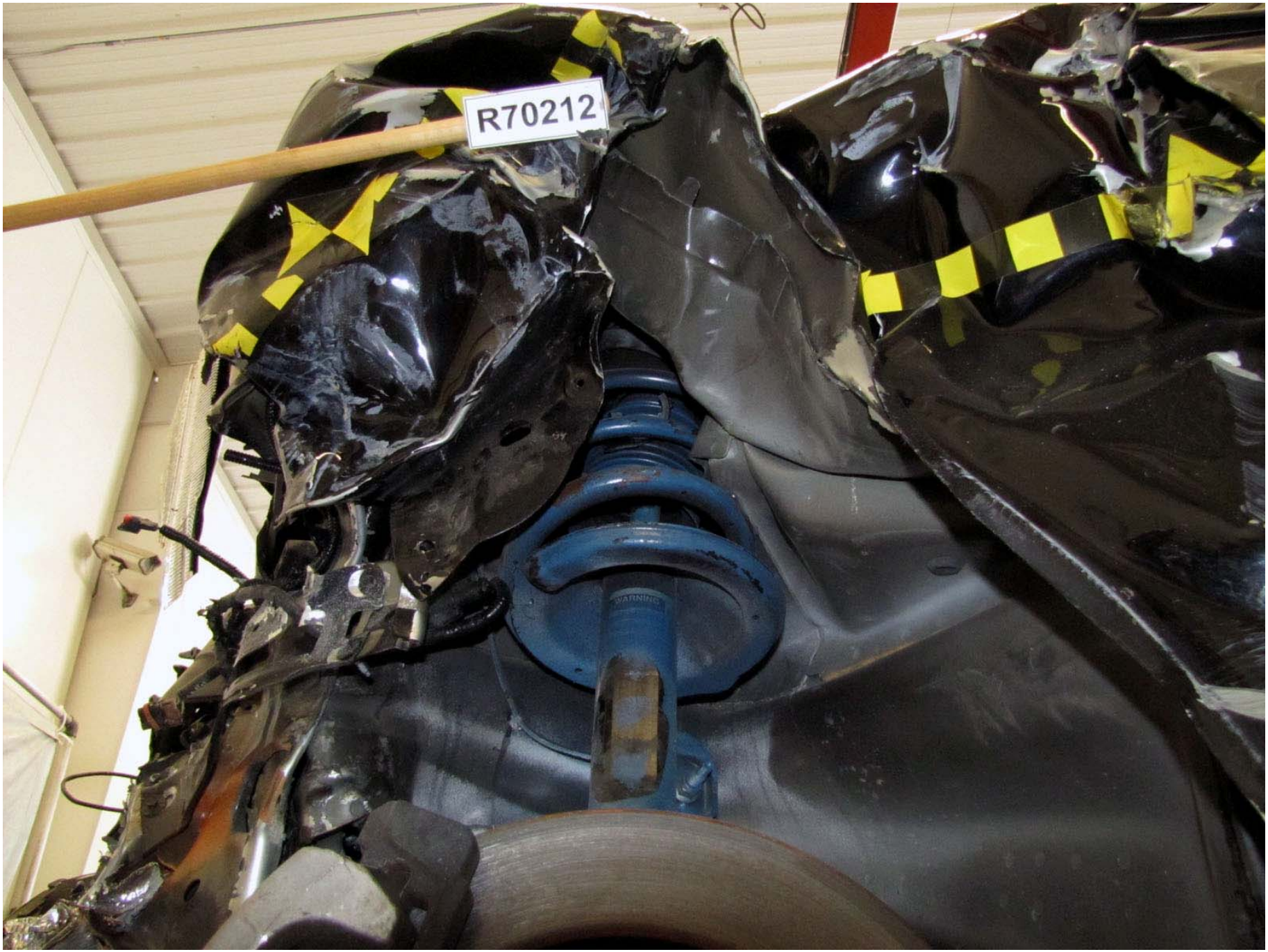

Figure A-143: Test Vehicle Post-Test Left Inner Fender Well View

Figure A-144: Test Vehicle Pre-Test Top Fender View

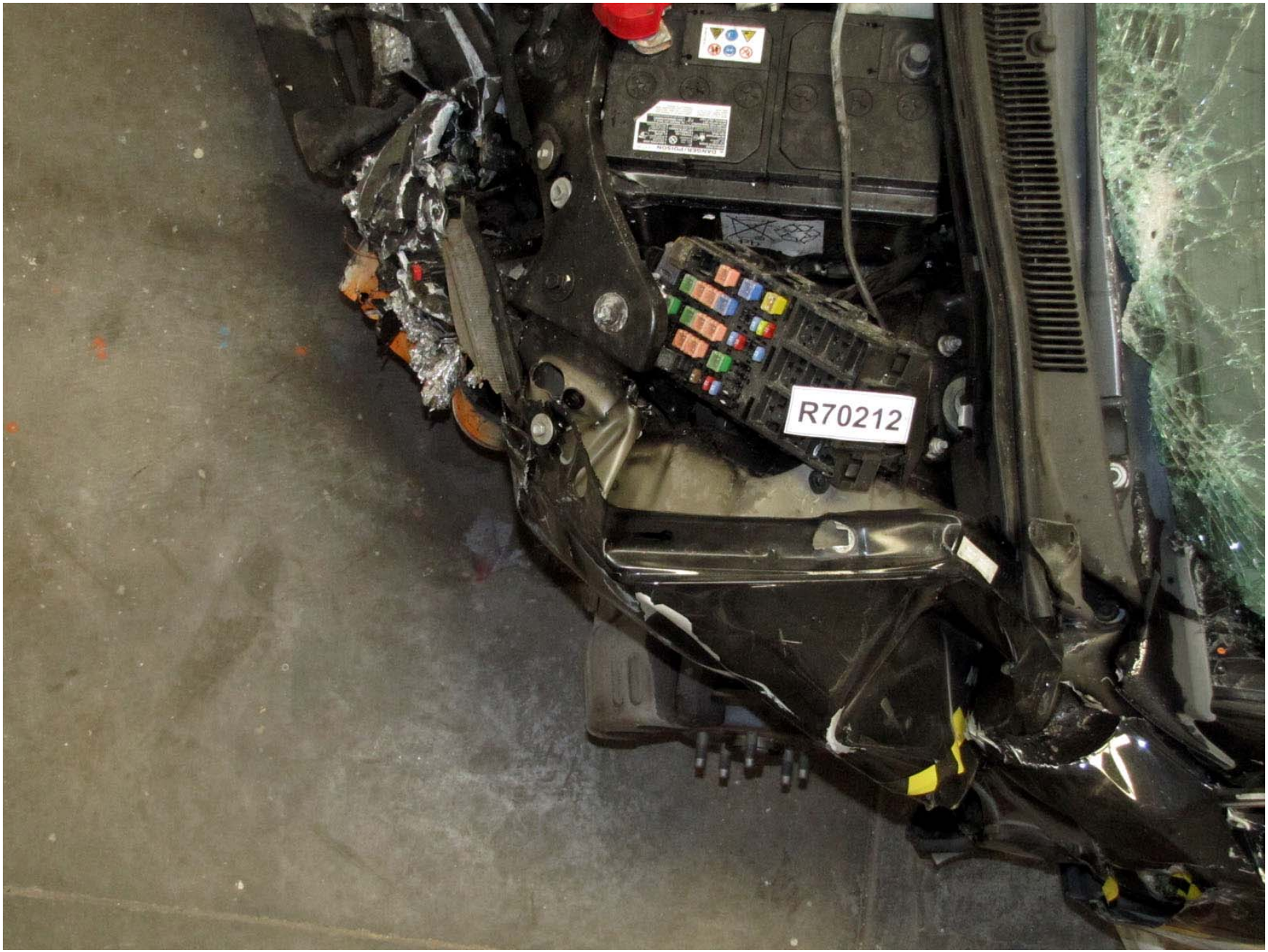

Figure A-145: Test Vehicle Post-Test Top Fender View

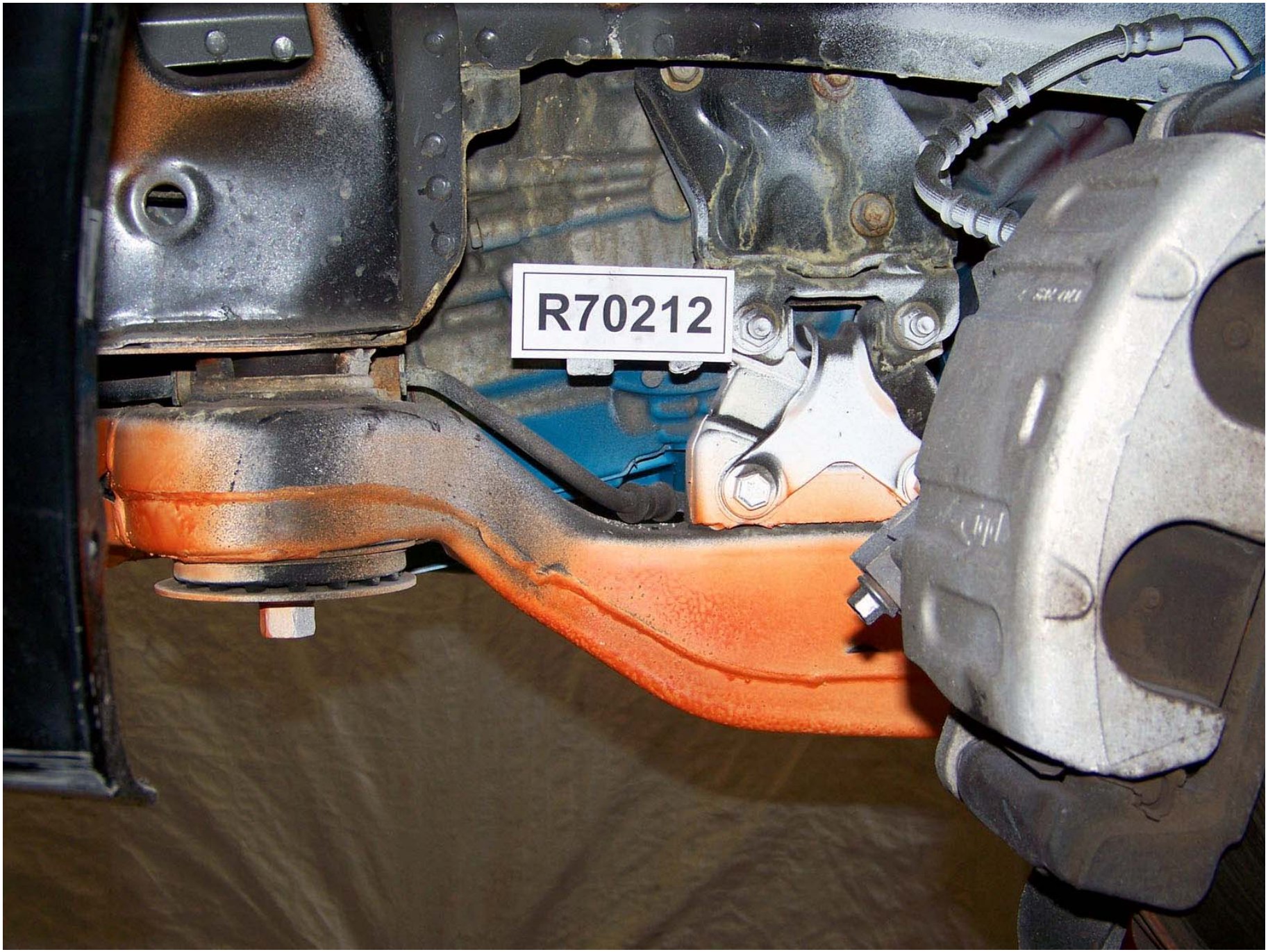

Figure A-146: Test Vehicle Pre-Test Left Front Frame Rail View

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

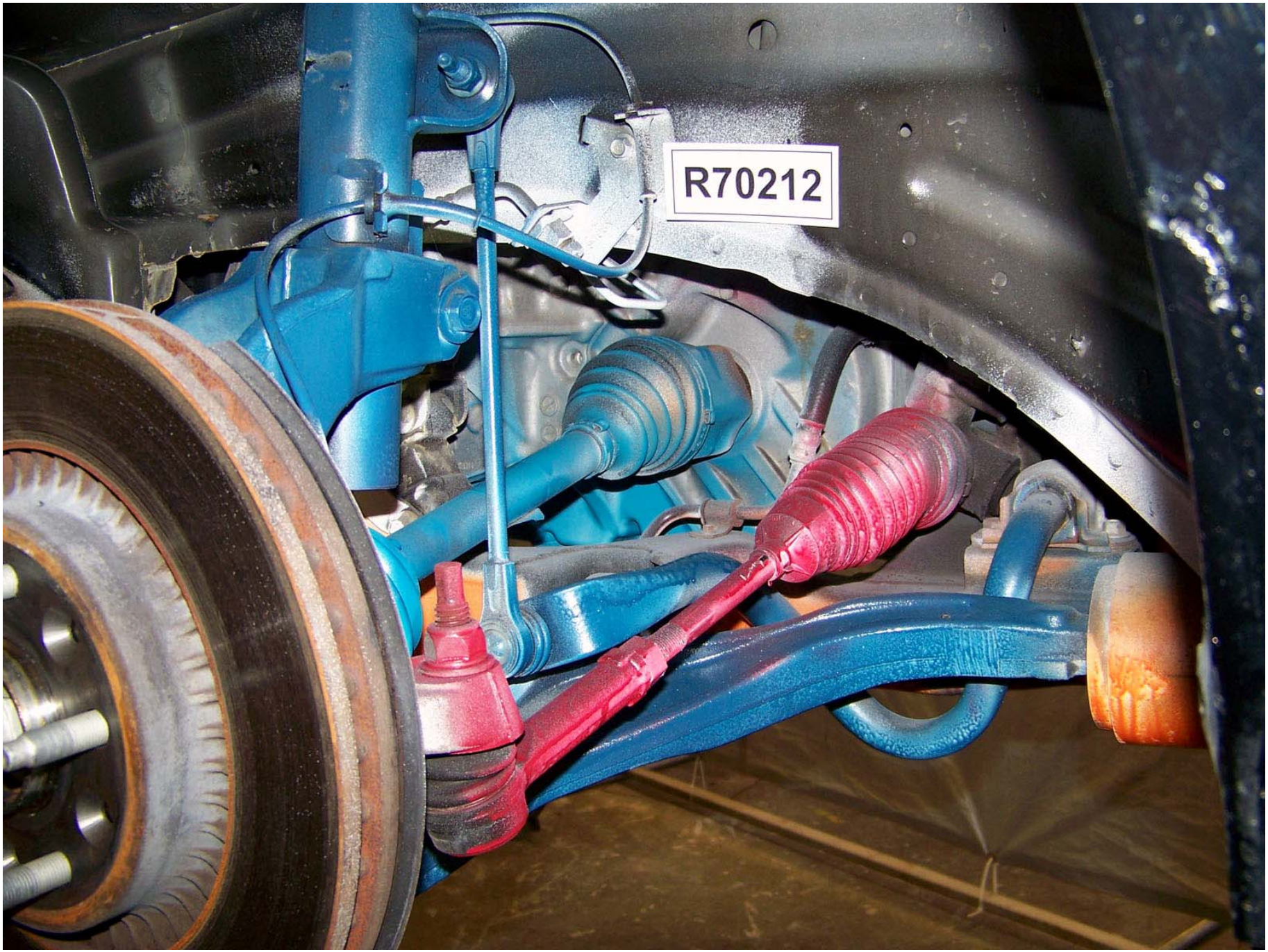

Figure A-148: Test Vehicle Pre-Test Left Front Frame Rail View

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

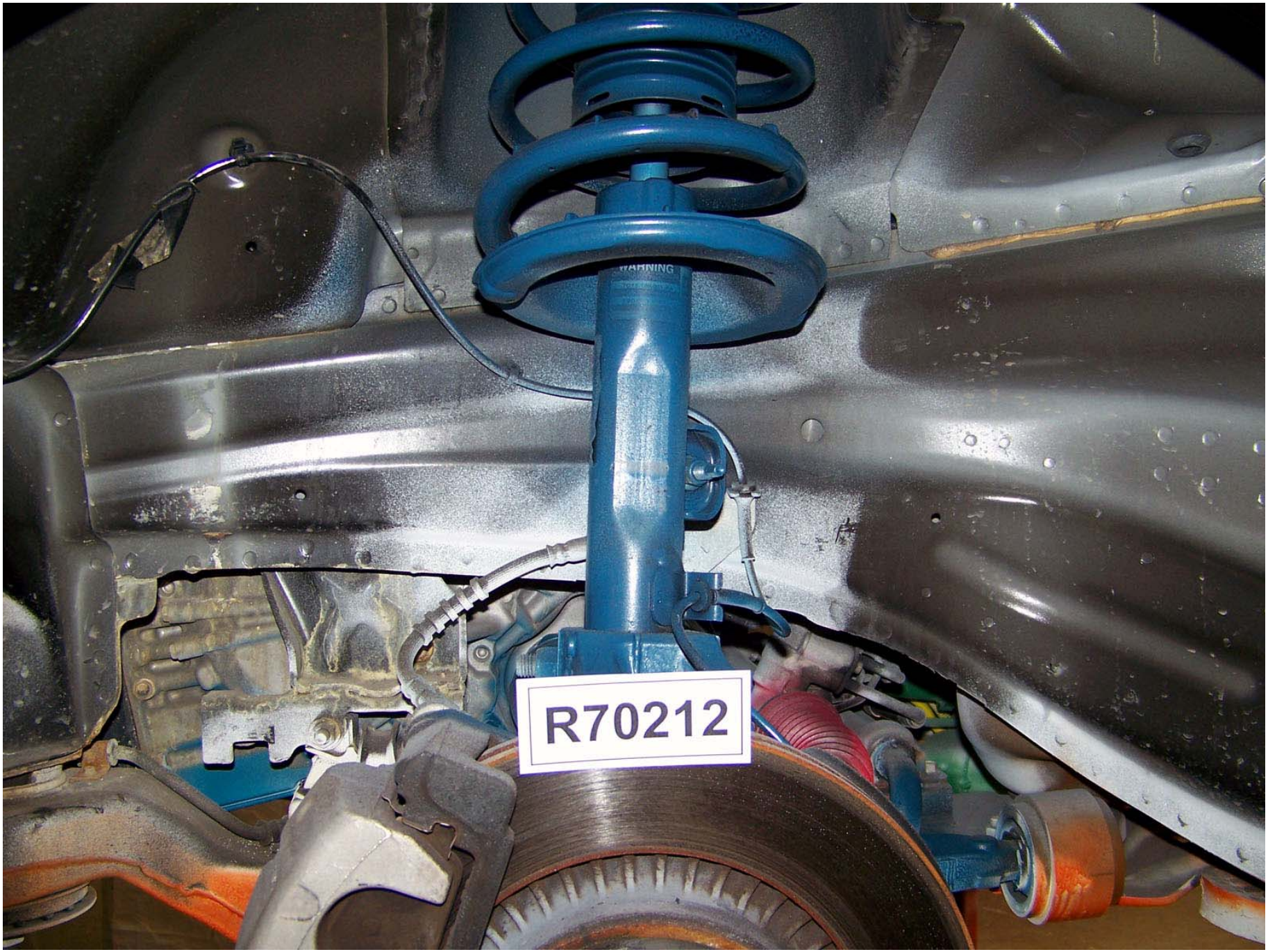

Figure A-150: Test Vehicle Pre-Test Left Front Frame Rail View

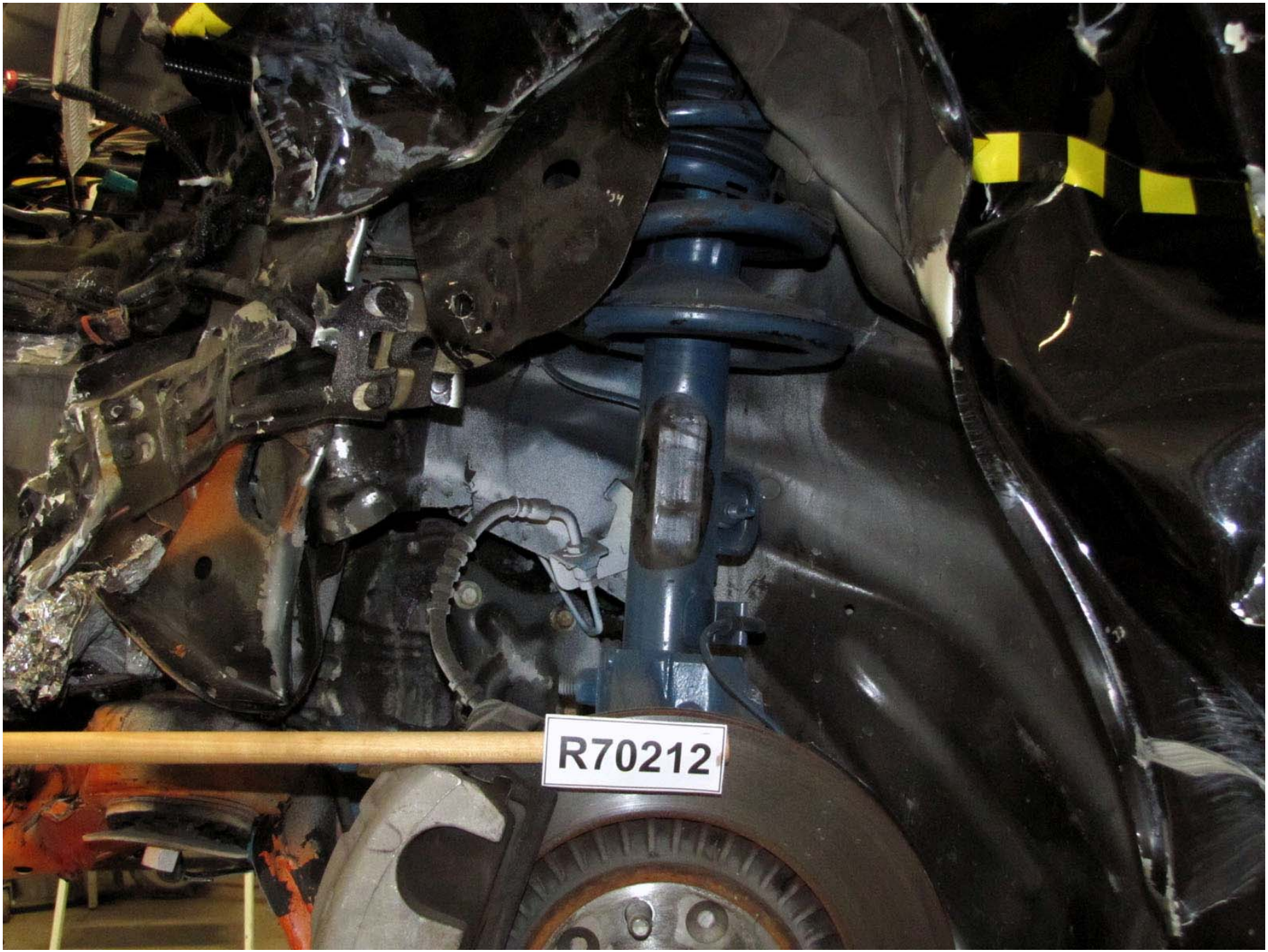

Figure A-151: Test Vehicle Post-Test Left Front Frame Rail View

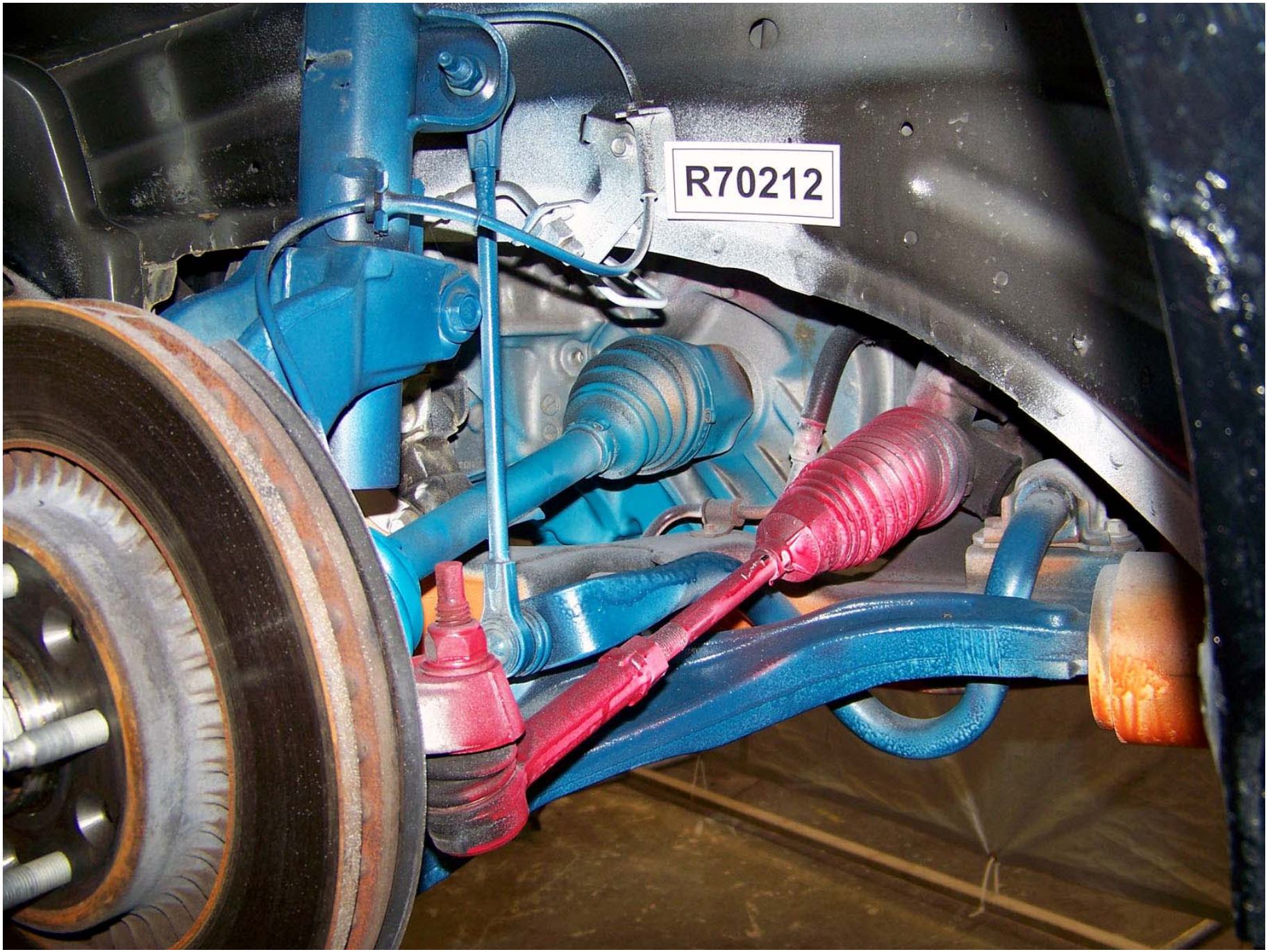

Figure A-152: Test Vehicle Pre-Test Left Side Tie Rod and Sway Bar Attachments Points

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

Figure A-154: Test Vehicle Pre-Test Left Side Upper Sway Bar Attachment Point

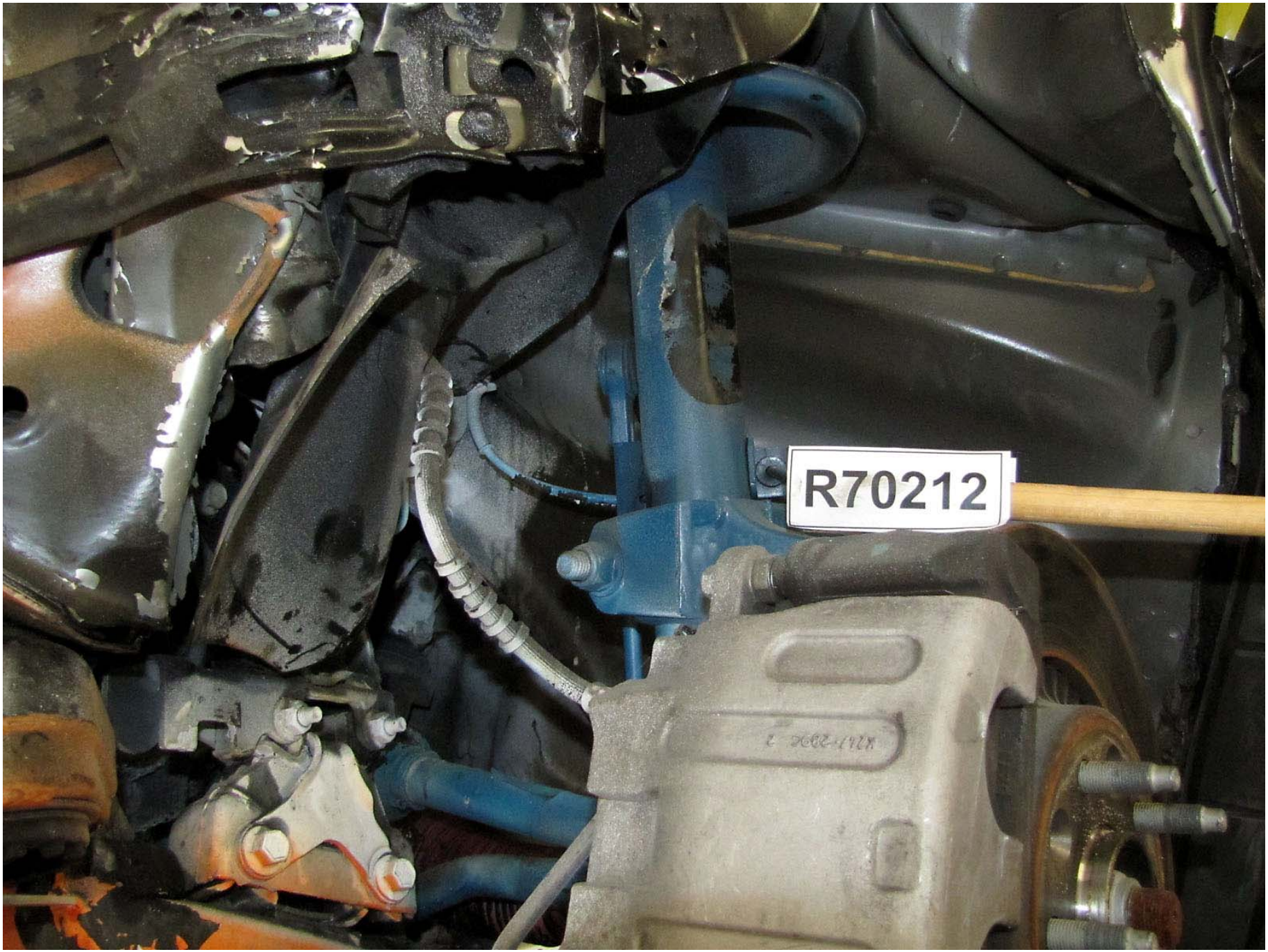

Figure A-155: Test Vehicle Post-Test Left Side Upper Sway Bar Attachment Point

Figure A-156: Test Vehicle Pre-Test Left Side Frame to A-Pillar Joint

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

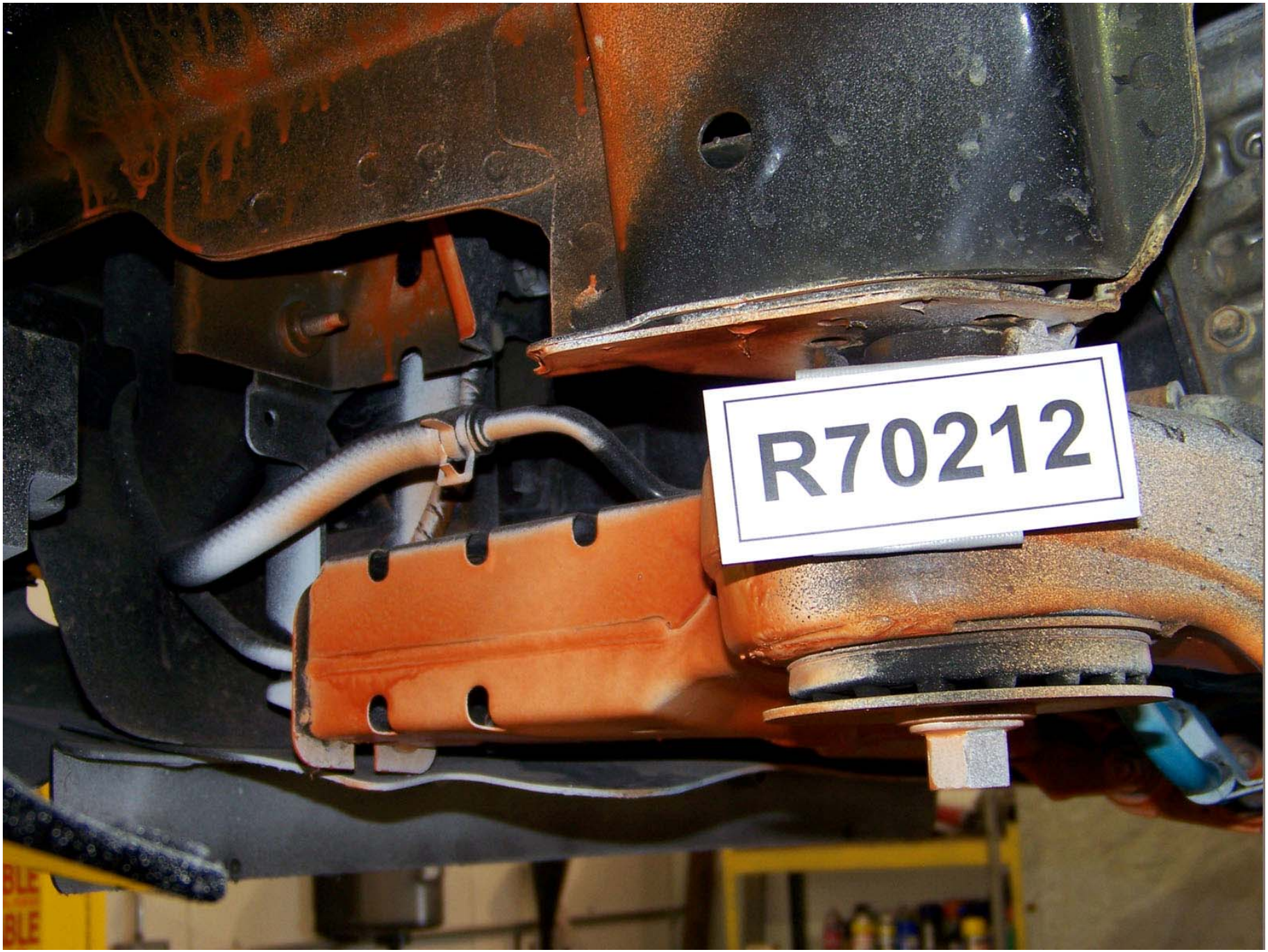

Figure A-158: Test Vehicle Pre-Test Left Side Crush Initiators

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

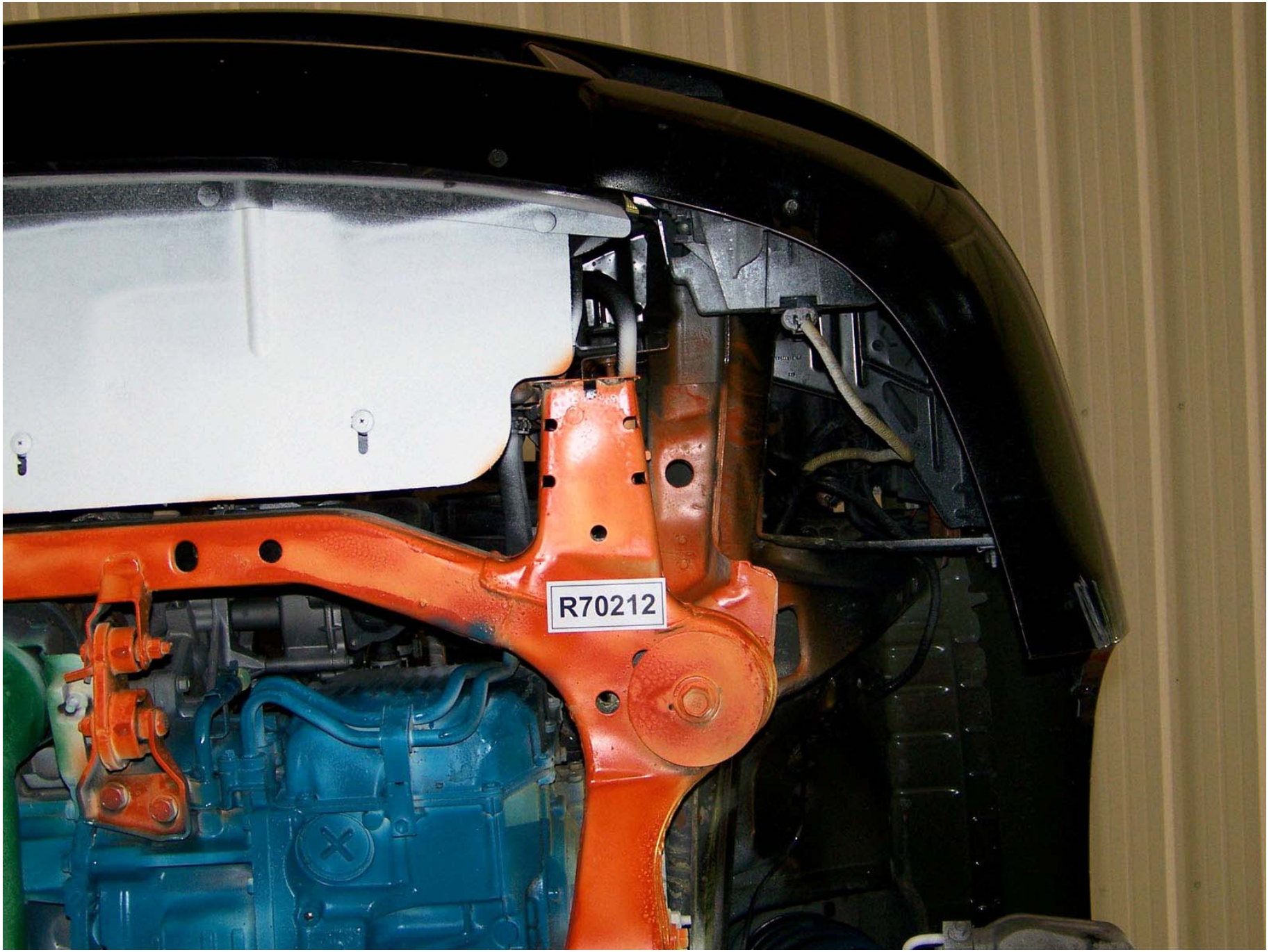

Figure A-160: Test Vehicle Pre-Test Left Side Crush Initiators

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

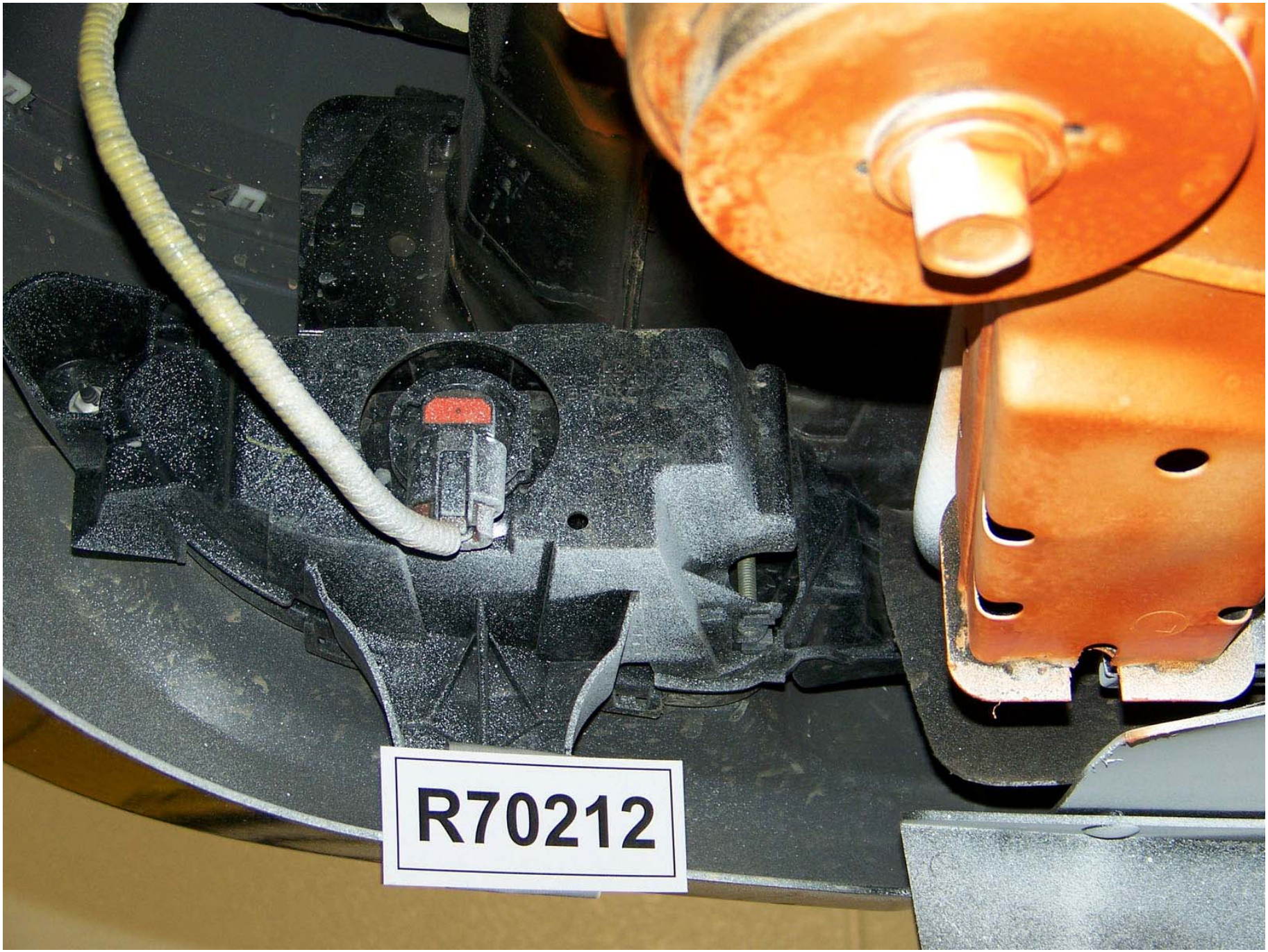

Figure A-162: Test Vehicle Pre-Test Left Side Bumper Attachment Point

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

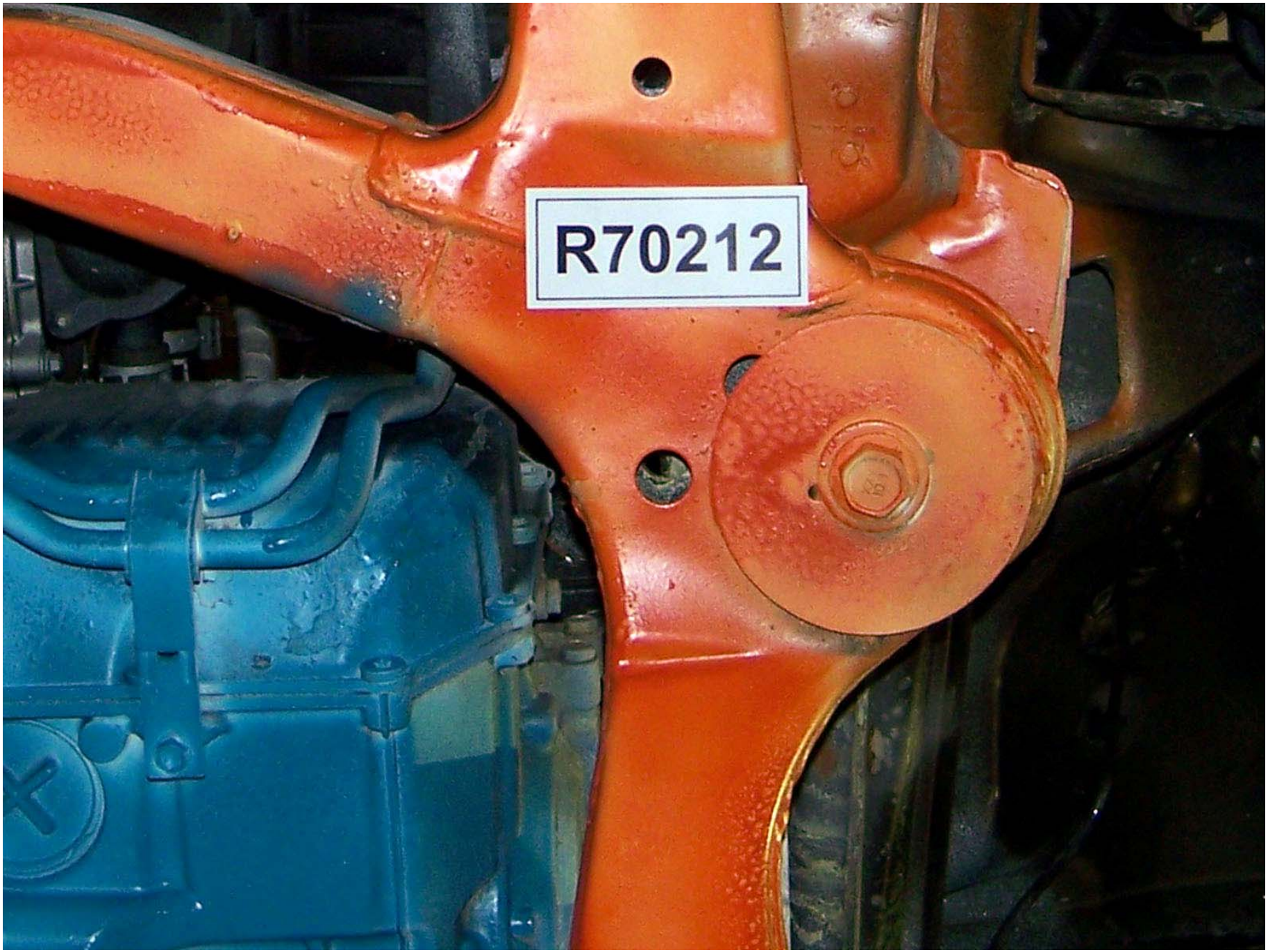

Figure A-164: Test Vehicle Pre-Test Left Front Sub-Frame Mounting Point

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

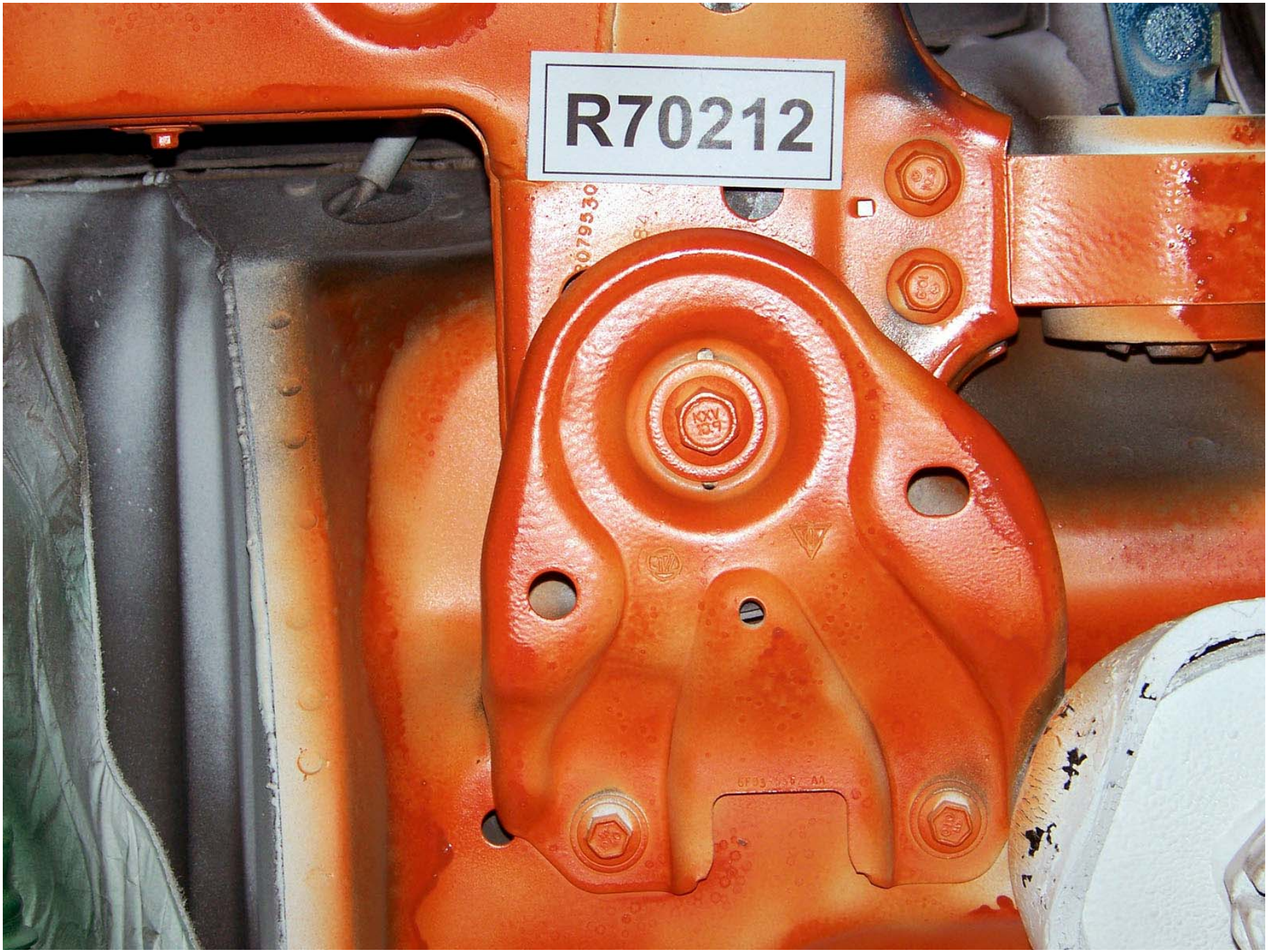

Figure A-166: Test Vehicle Pre-Test Left Rear Sub-Frame Mounting Point

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

Figure A-168: Test Vehicle Pre-Test Right Front Wheel Well (Tire On)

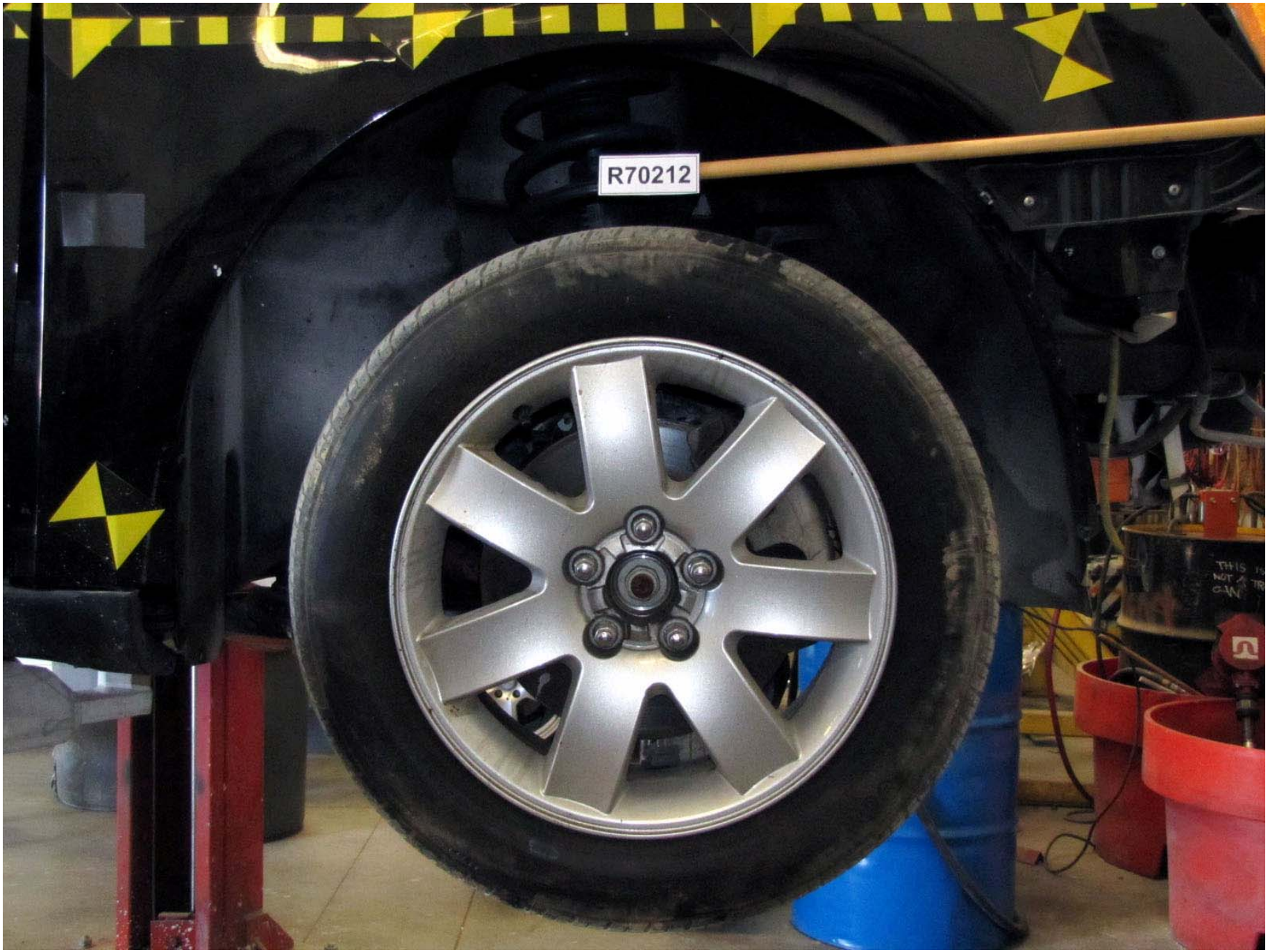

Figure A-169: Test Vehicle Post-Test Right Front Wheel Well (Tire On)

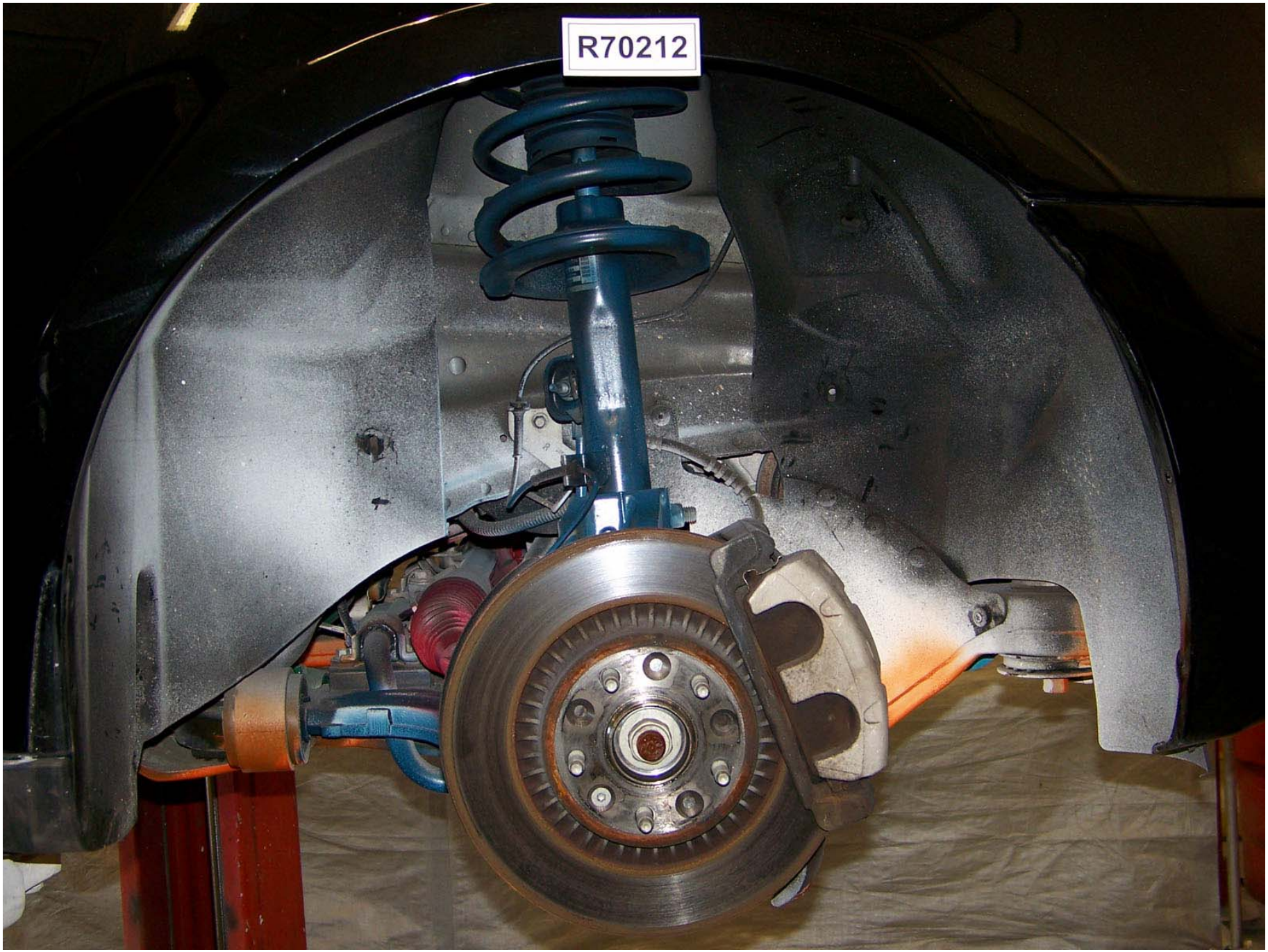

Figure A-170: Test Vehicle Pre-Test Right Front Wheel Well (Tire Off)

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

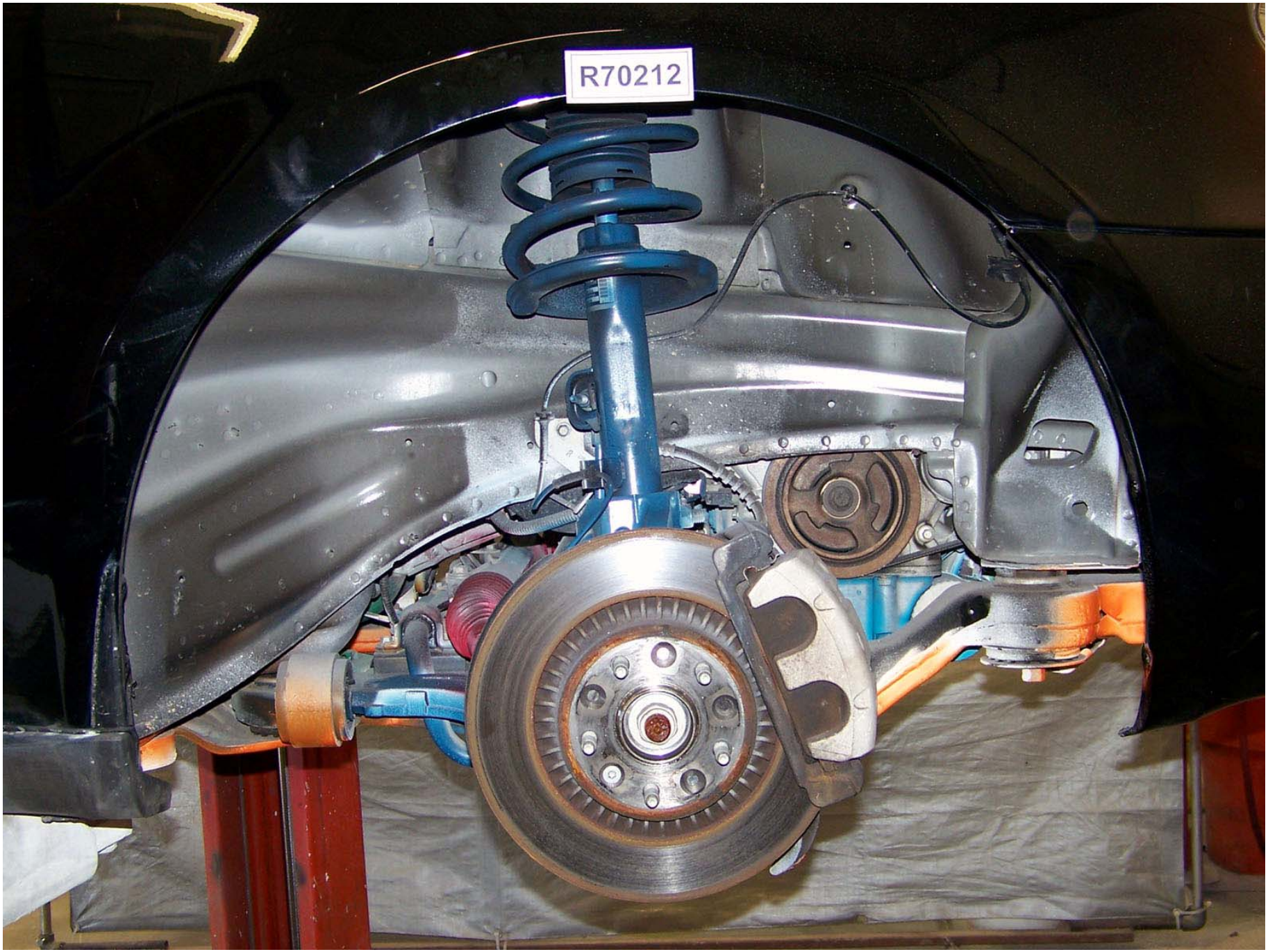

Figure A-172: Test Vehicle Pre-Test Right Front Wheel Well (Tire Off), Inner Fender Removed

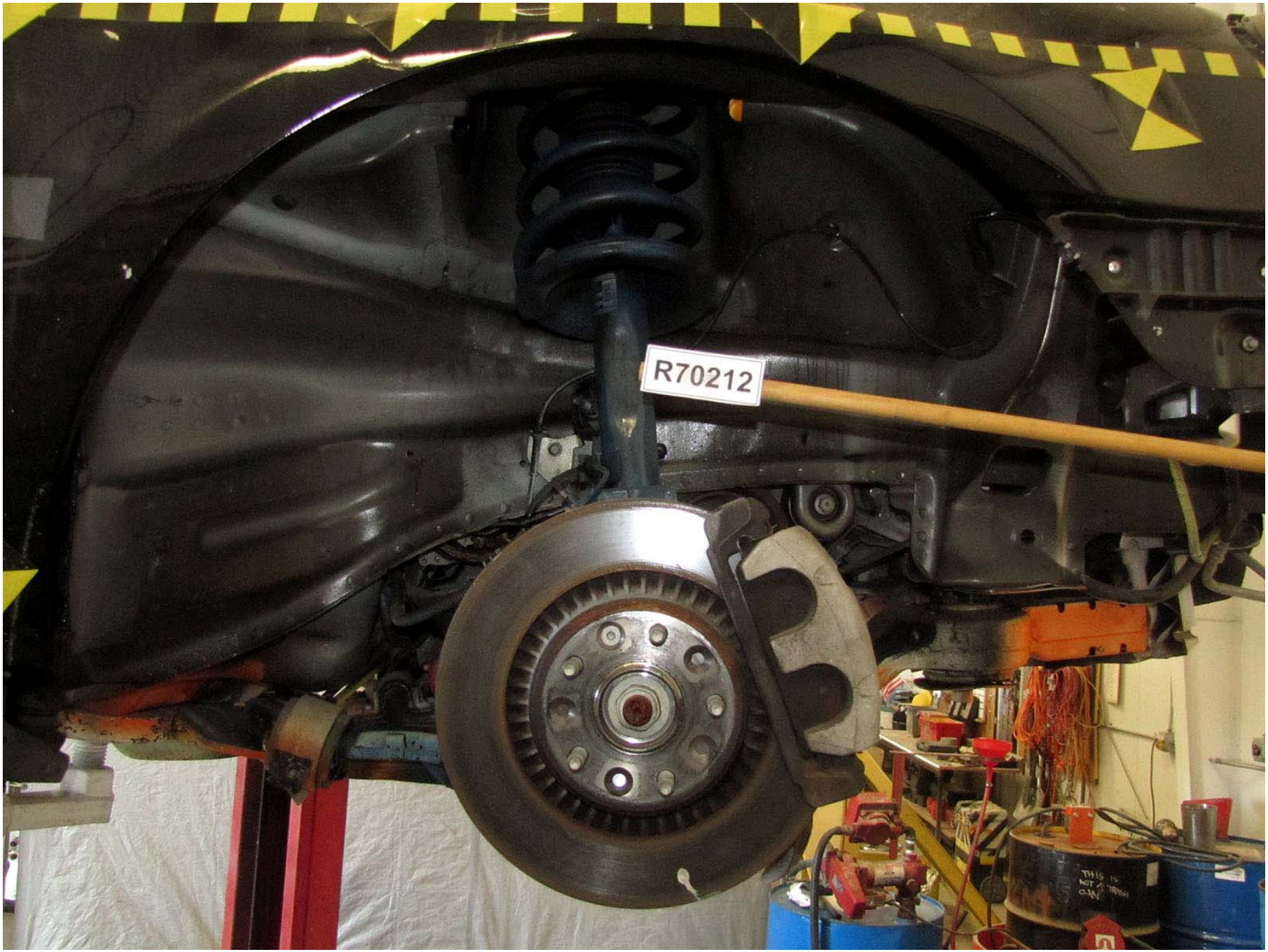

Figure A-173: Test Vehicle Post-Test Right Front Wheel Well (Tire Off), Inner Fender Removed

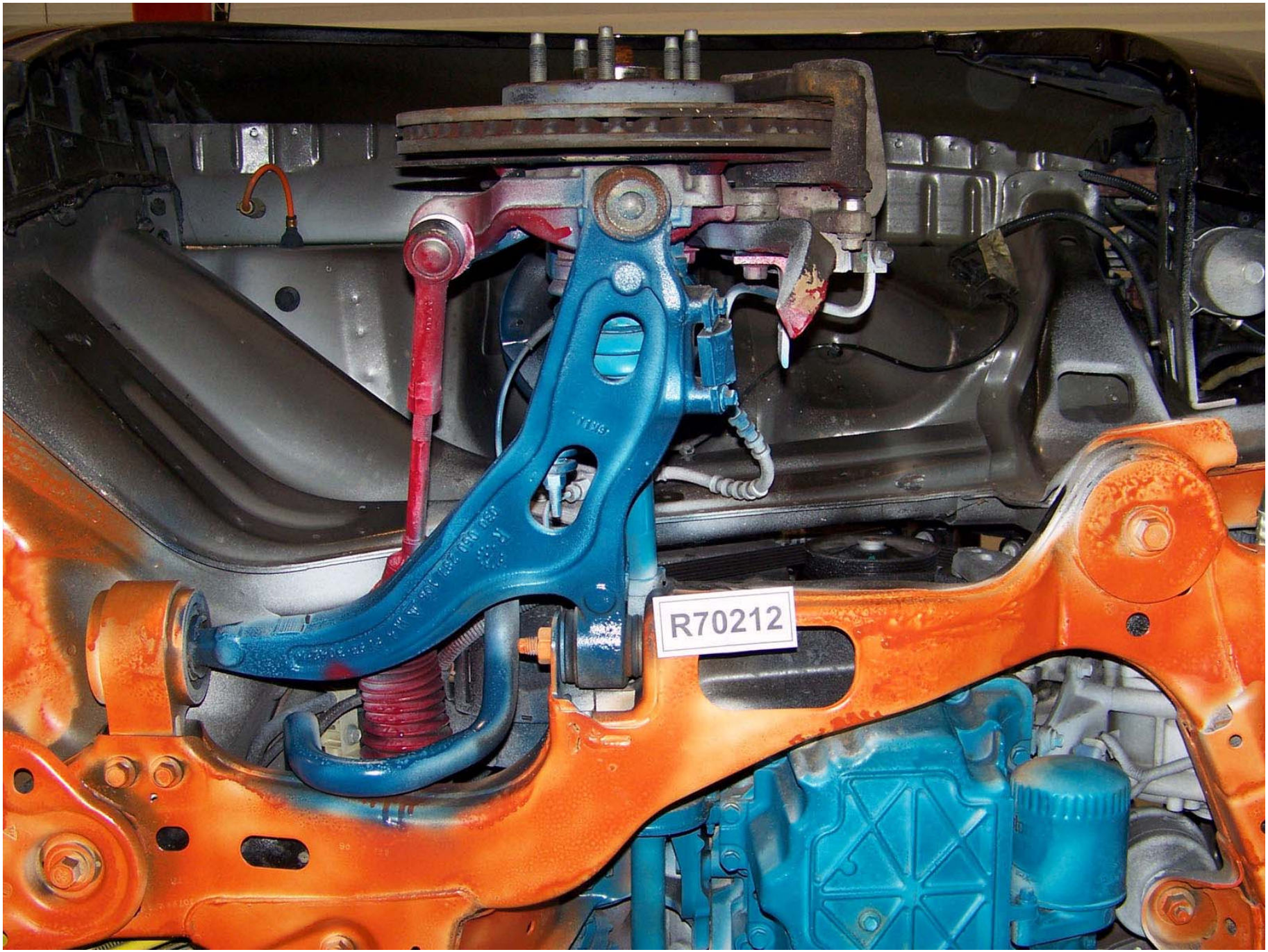

Figure A-174: Test Vehicle Pre-Test Right Inner Fender Well View

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

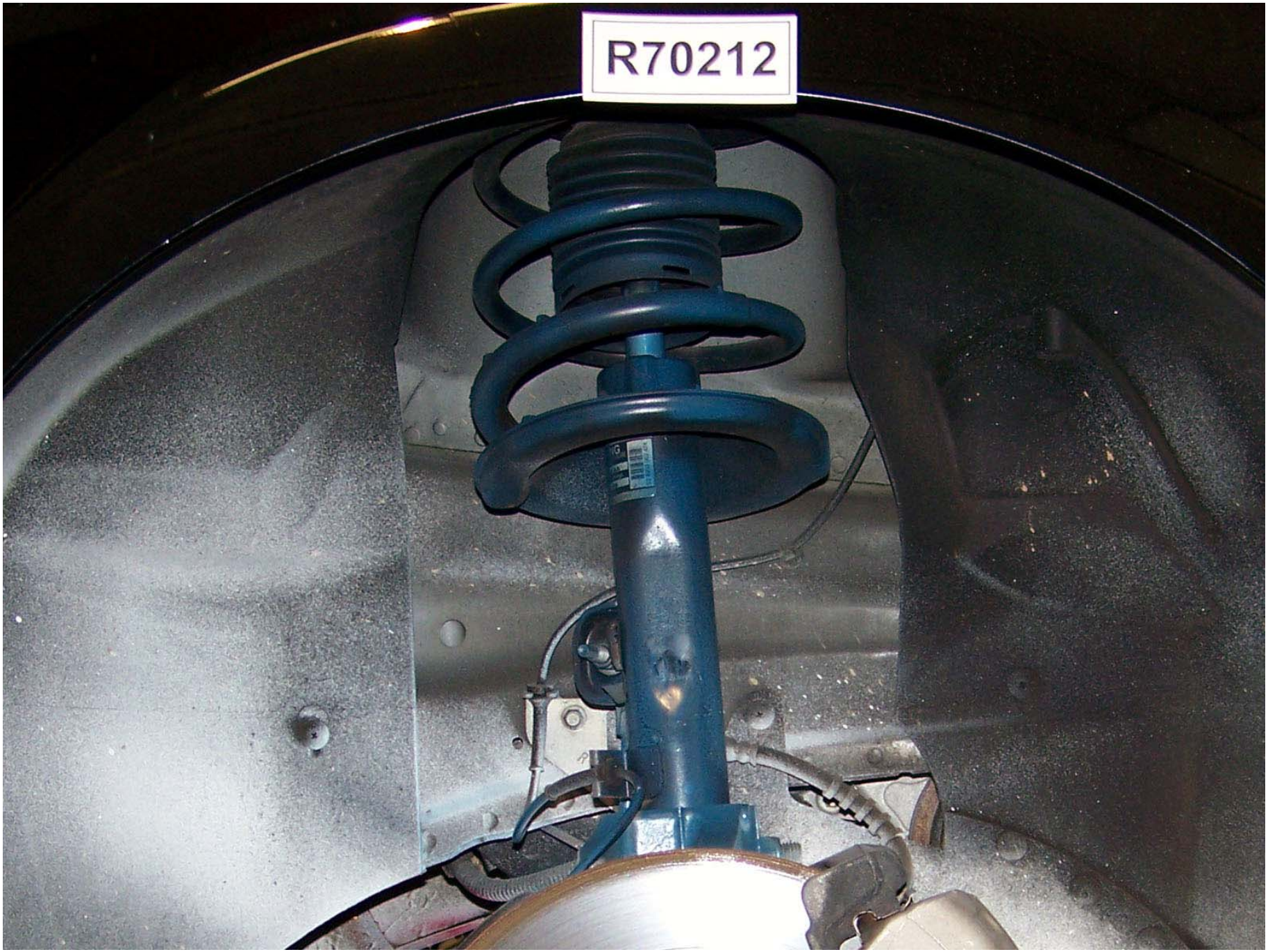

Figure A-176: Test Vehicle Pre-Test Right Inner Fender Well View

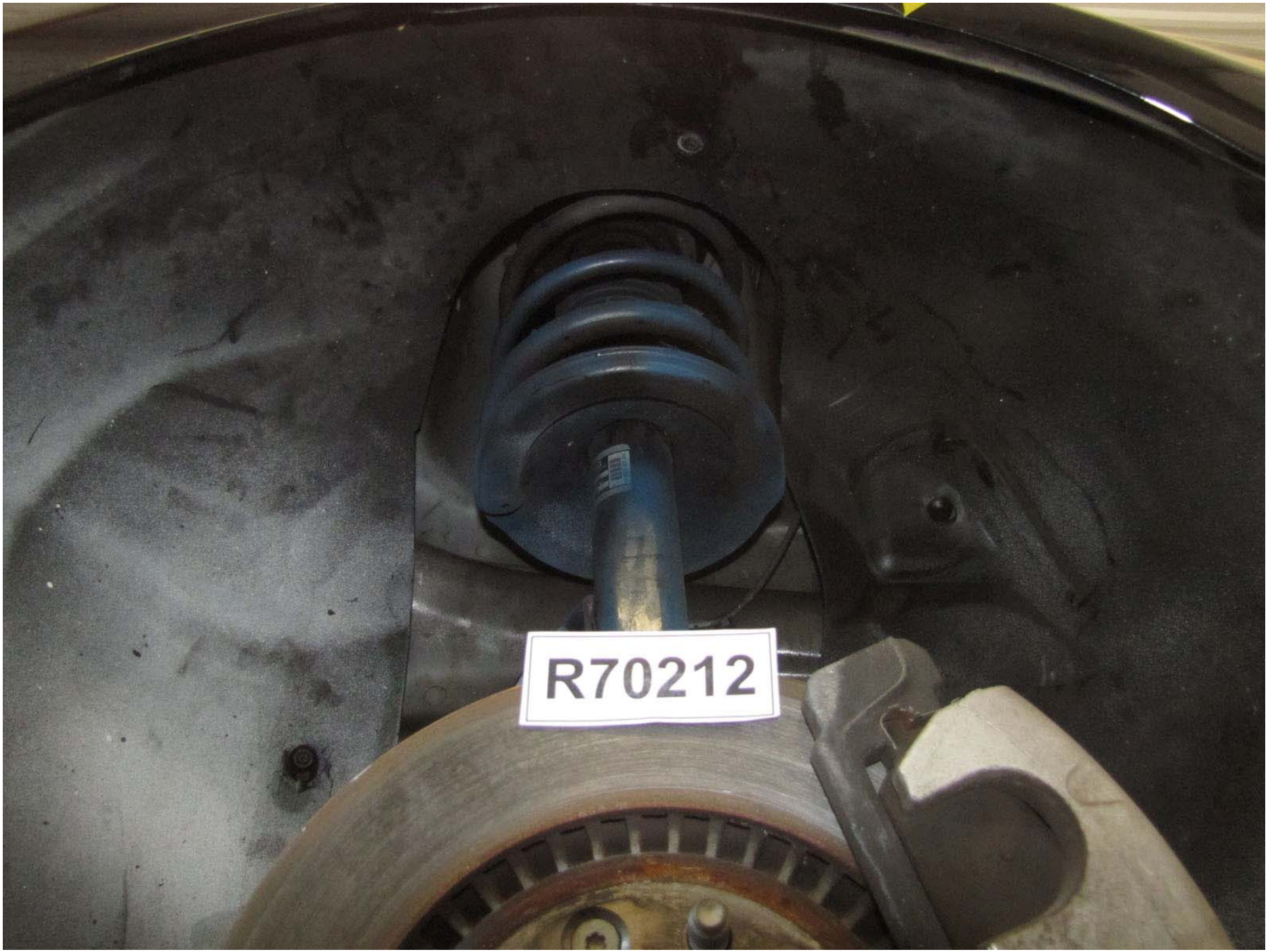

Figure A-177: Test Vehicle Post-Test Right Inner Fender Well View

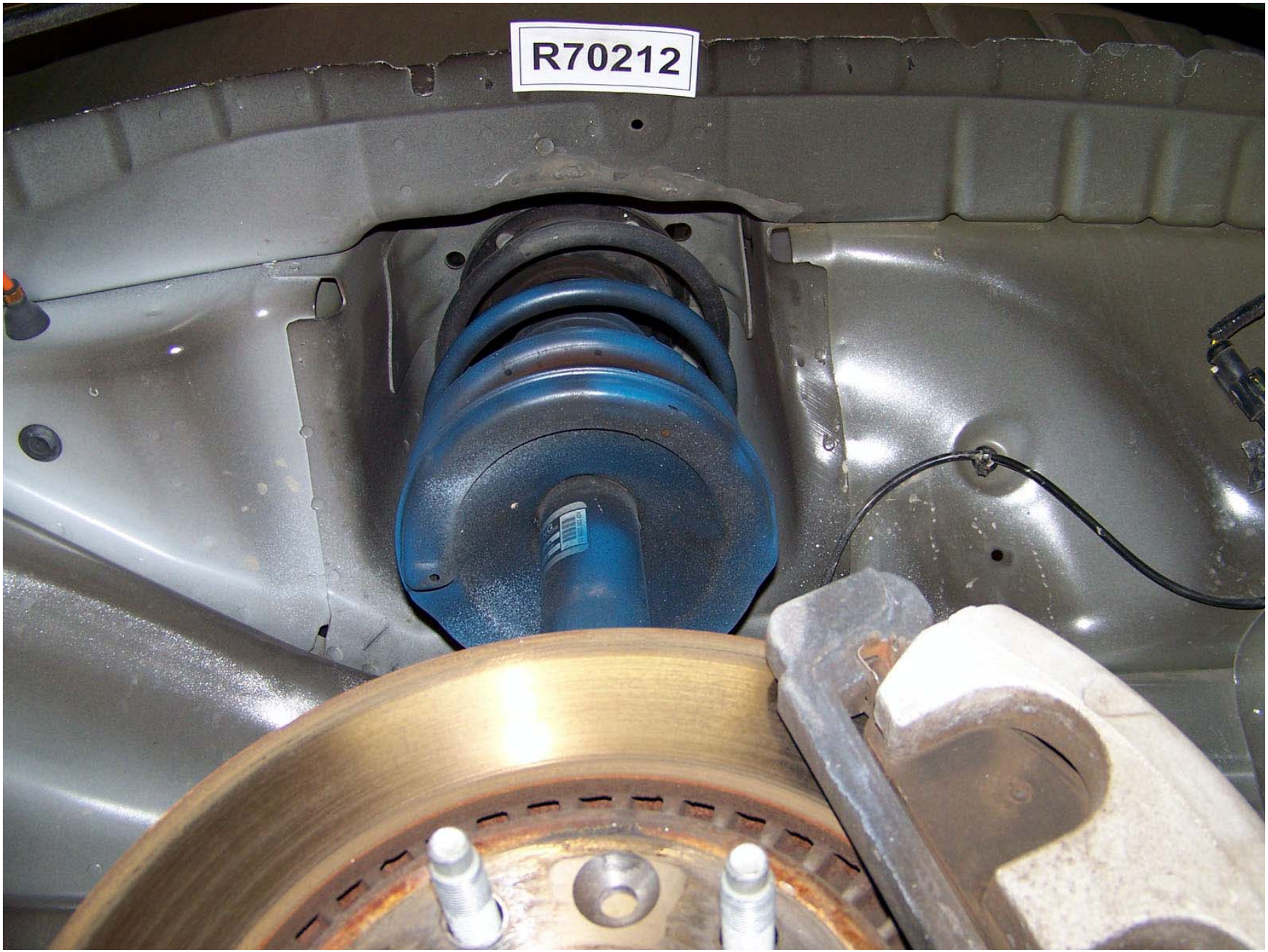

Figure A-178: Test Vehicle Pre-Test Right Inner Fender Well View

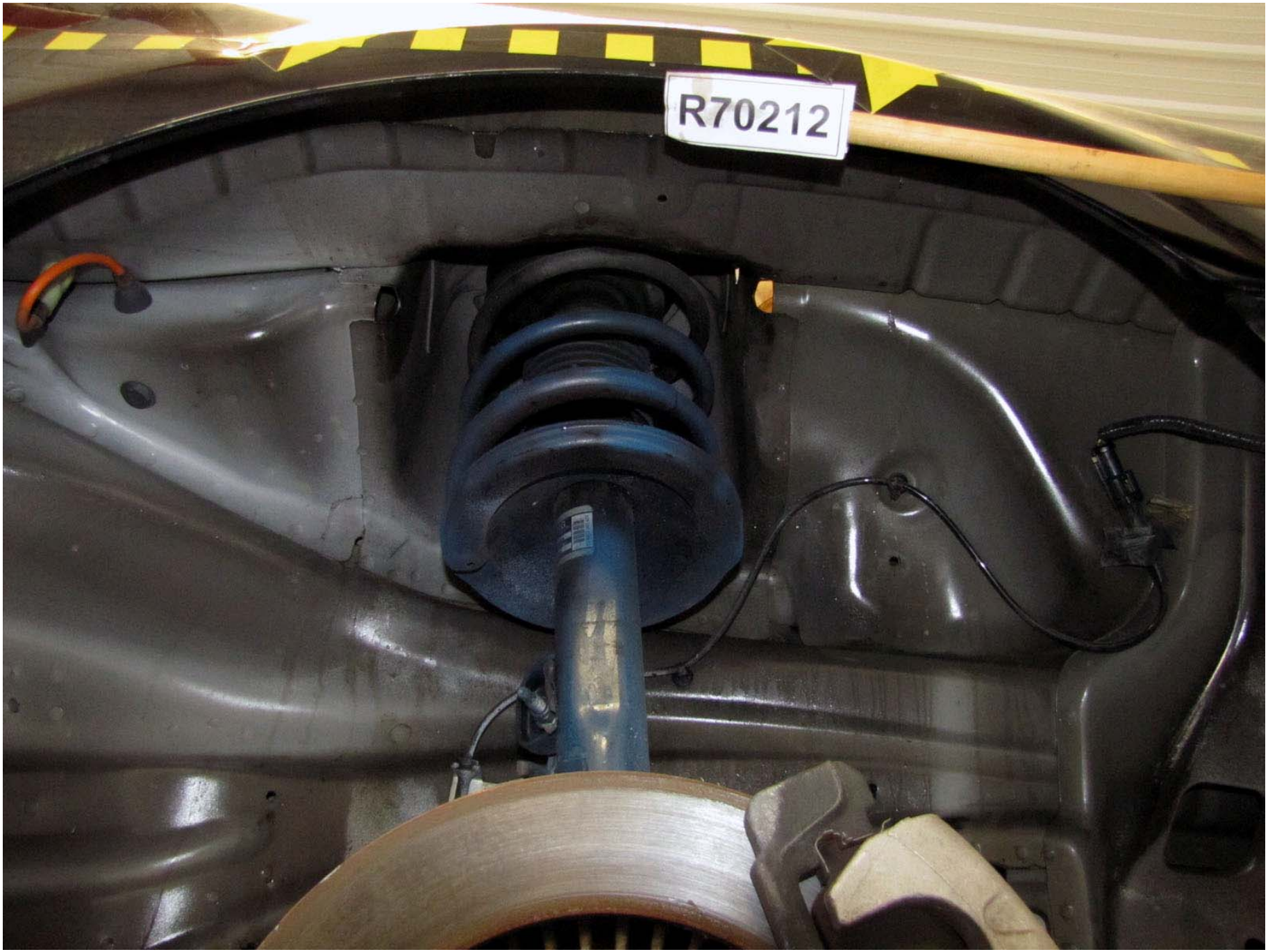

Figure A-179: Test Vehicle Post-Test Right Inner Fender Well View

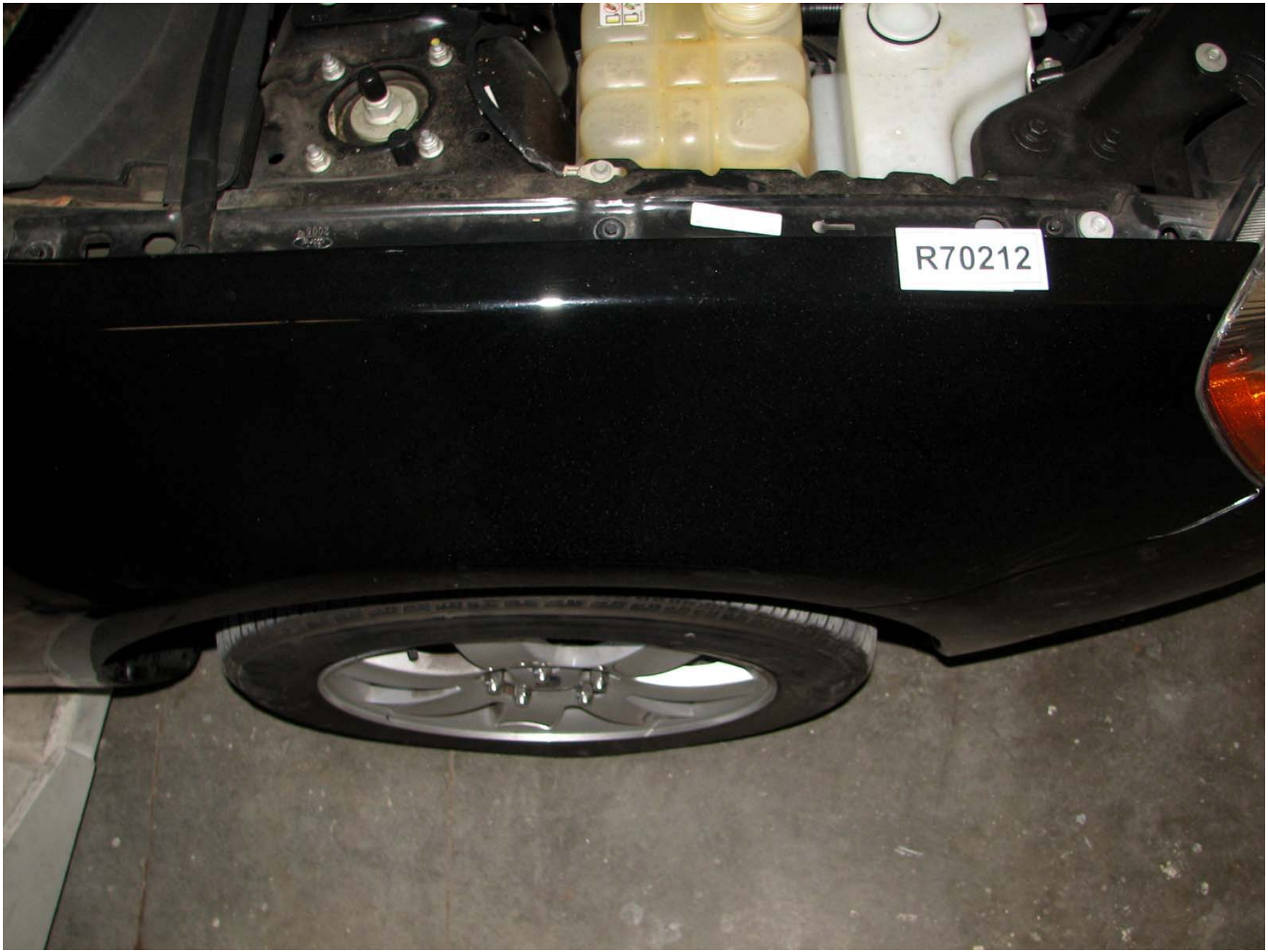

Figure A-180: Test Vehicle Pre-Test Top Fender View

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

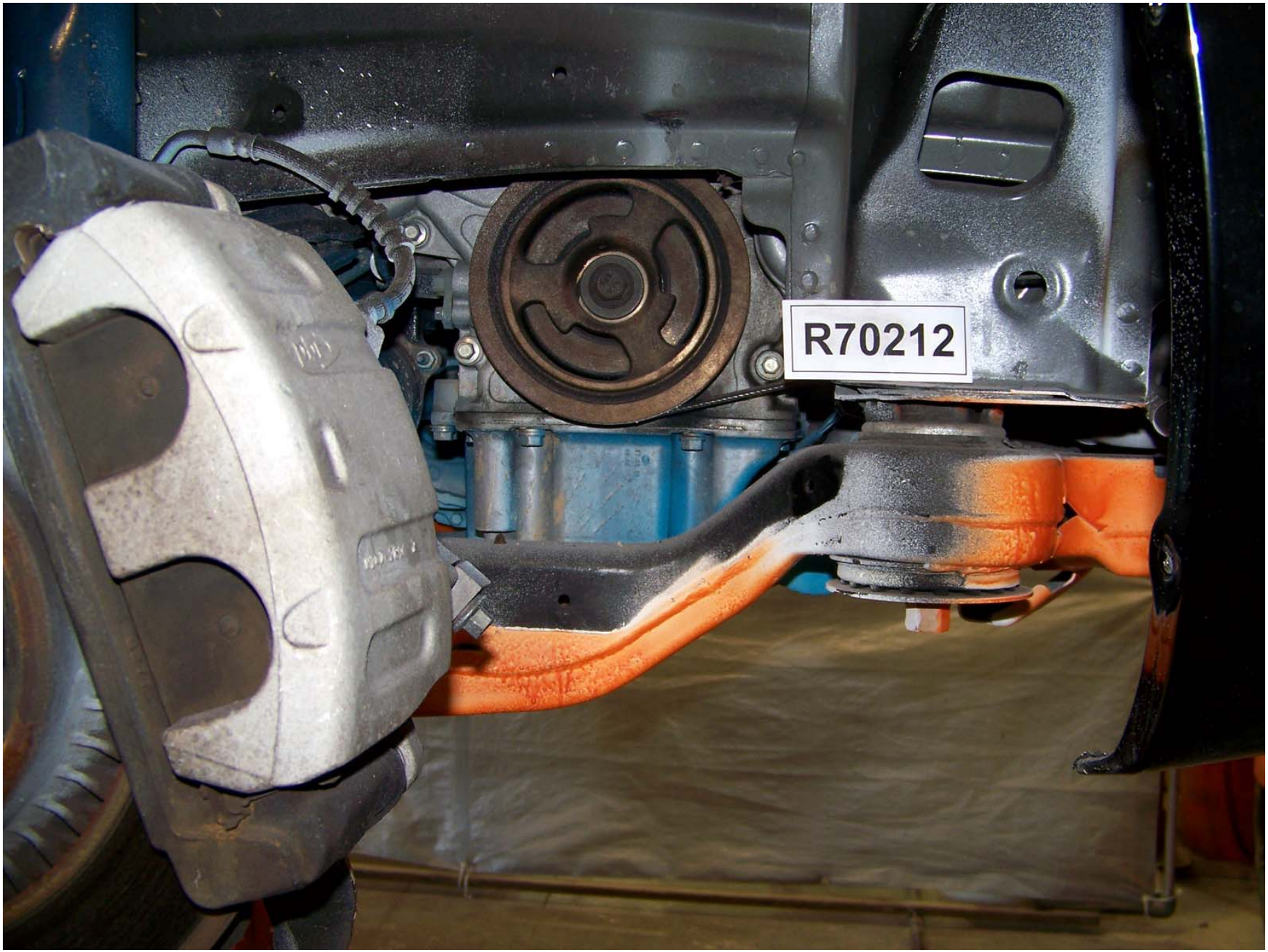

Figure A-182: Test Vehicle Pre-Test Right Front Frame Rail View

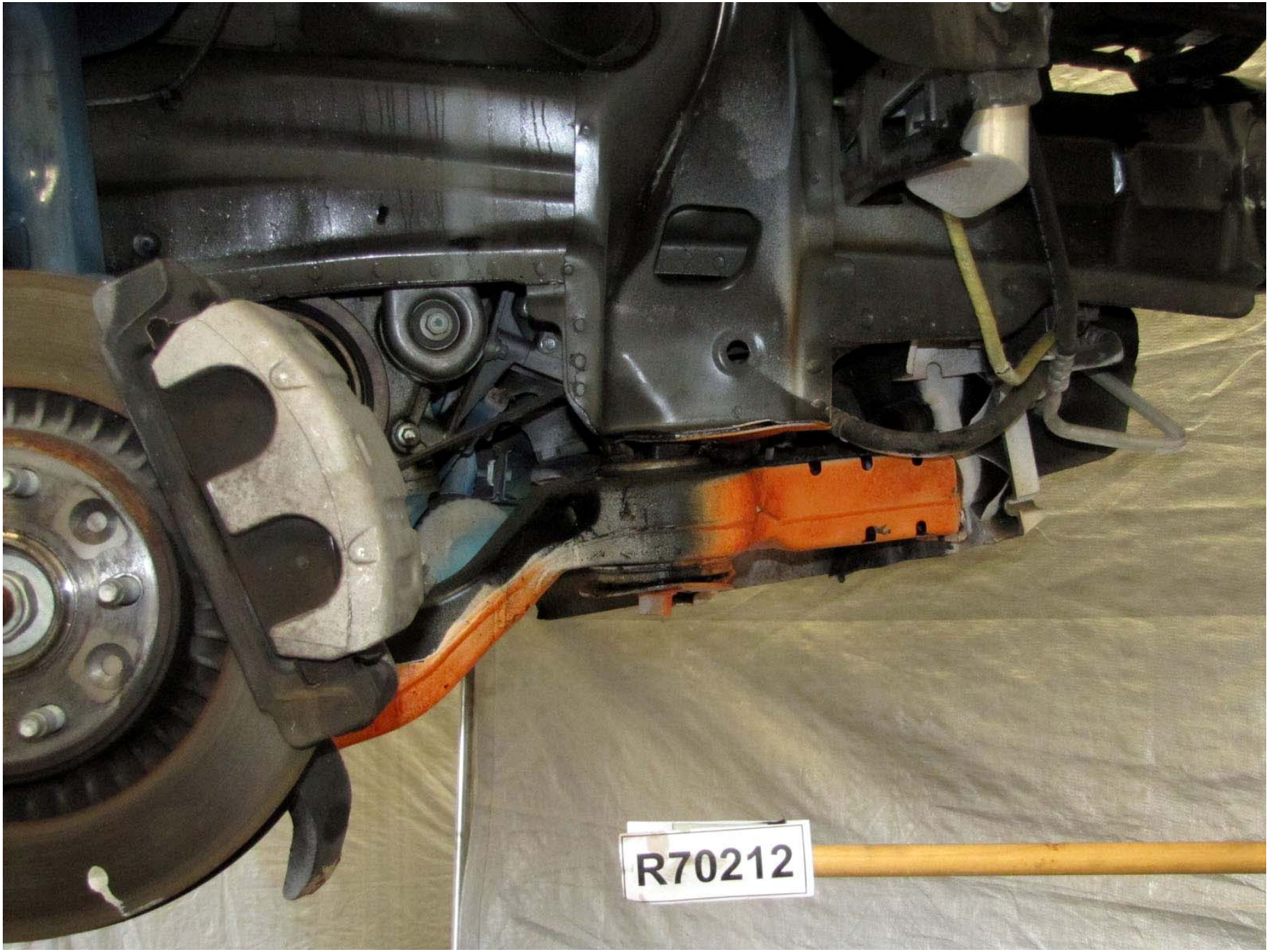

Figure A-183: Test Vehicle Post-Test Right Front Frame Rail View

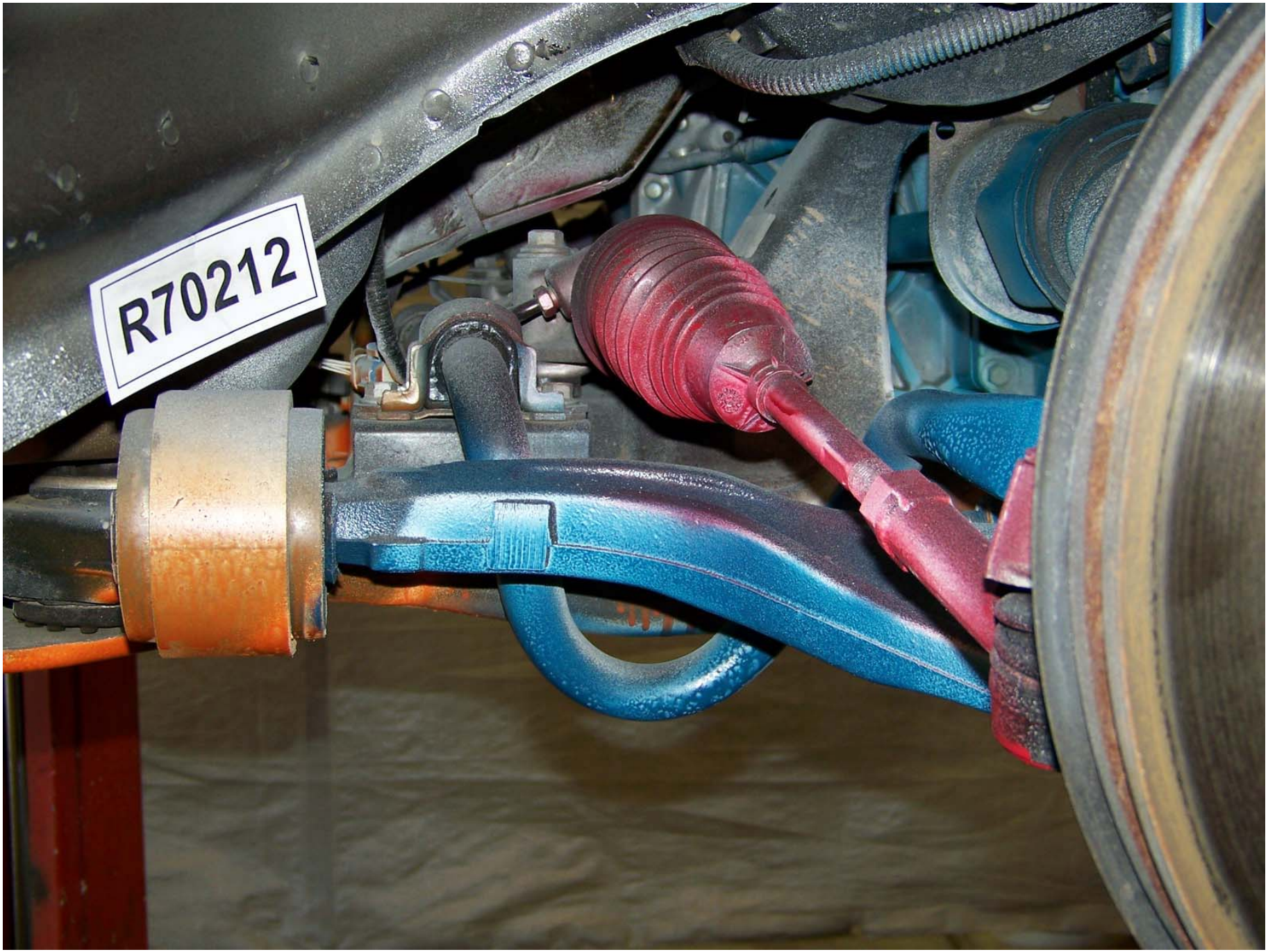

Figure A-184: Test Vehicle Pre-Test Right Front Frame Rail View

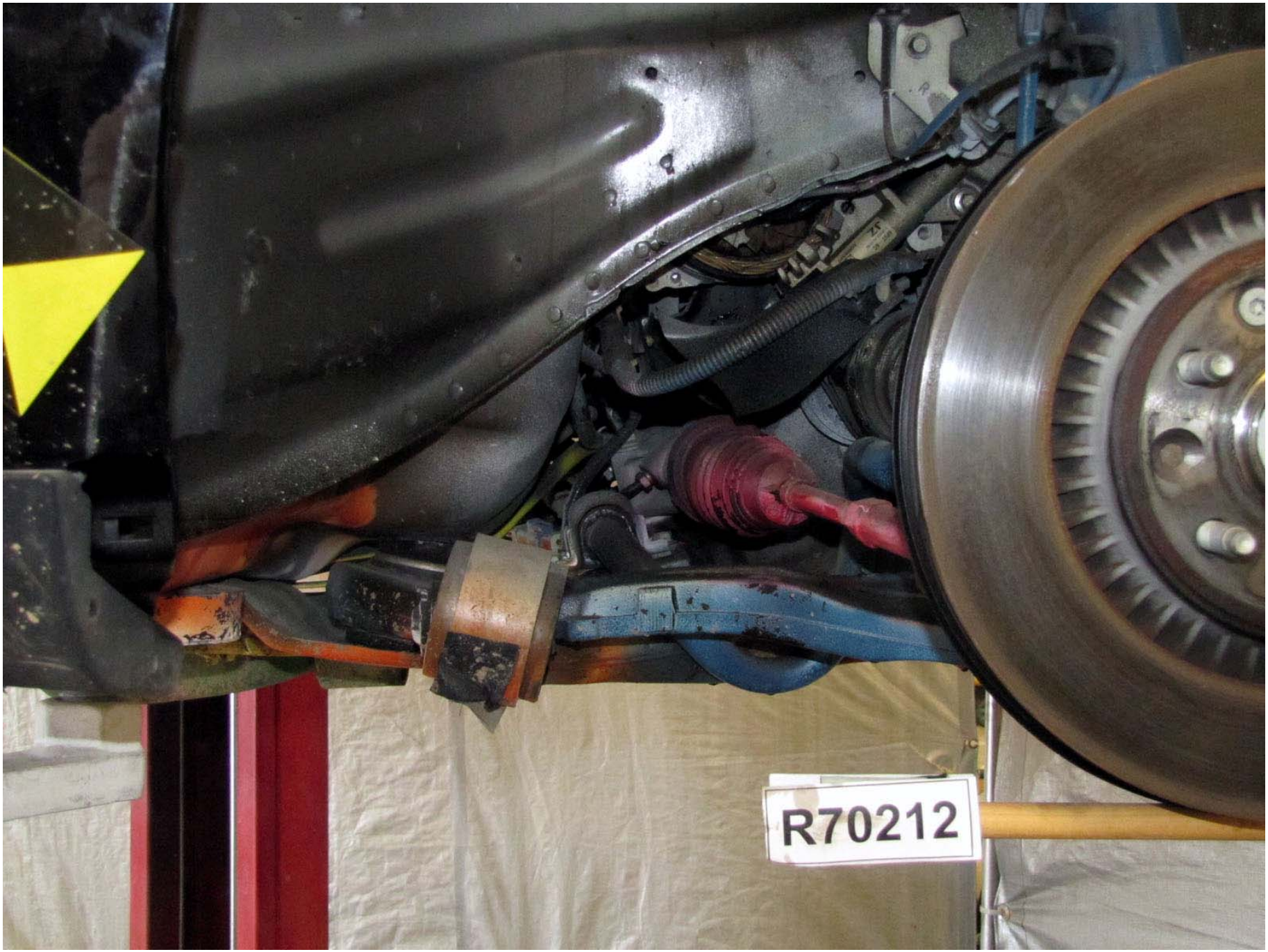

Figure A-185: Test Vehicle Post-Test Right Front Frame Rail View

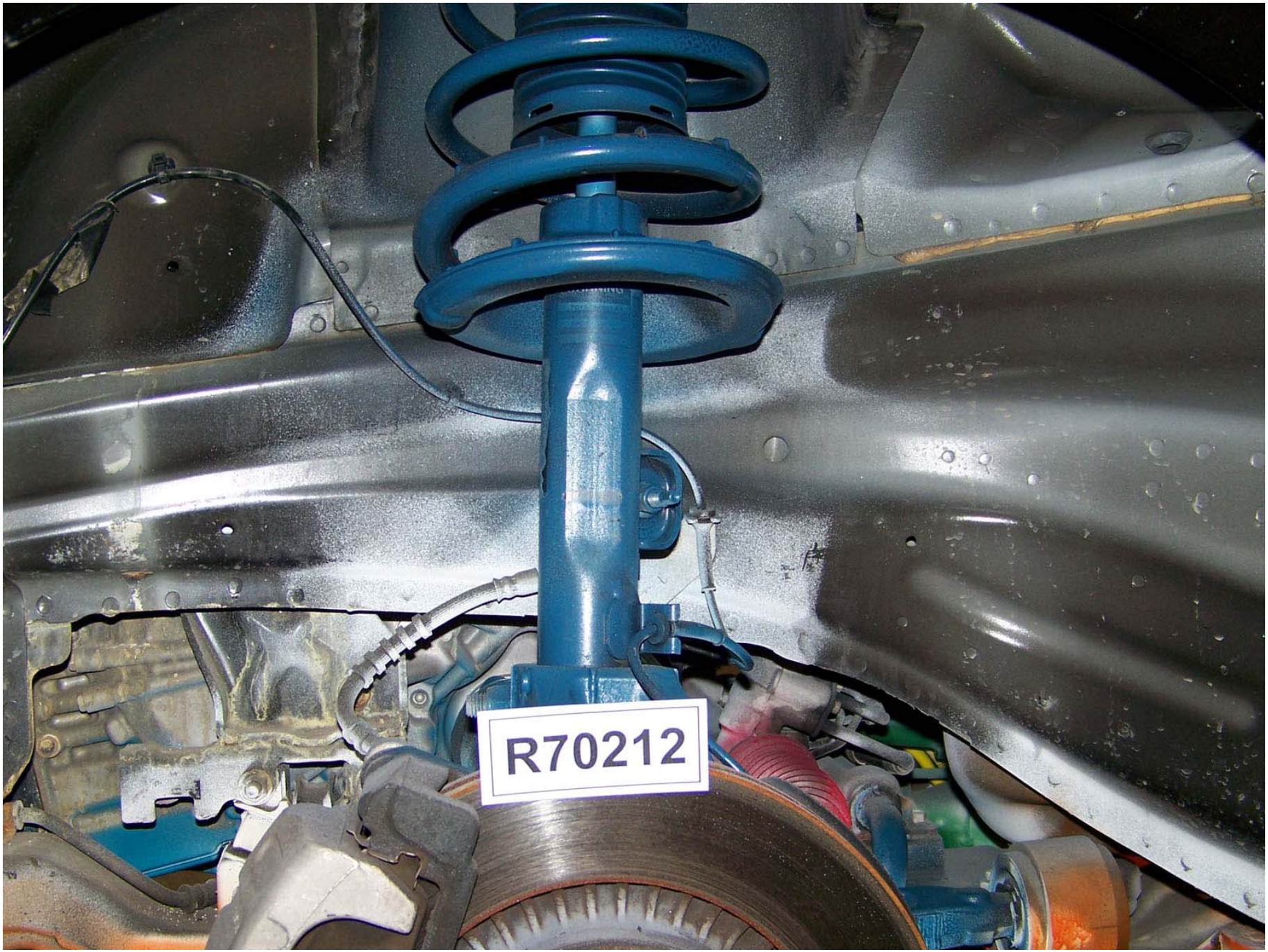

Figure A-186: Test Vehicle Pre-Test Right Front Frame Rail View

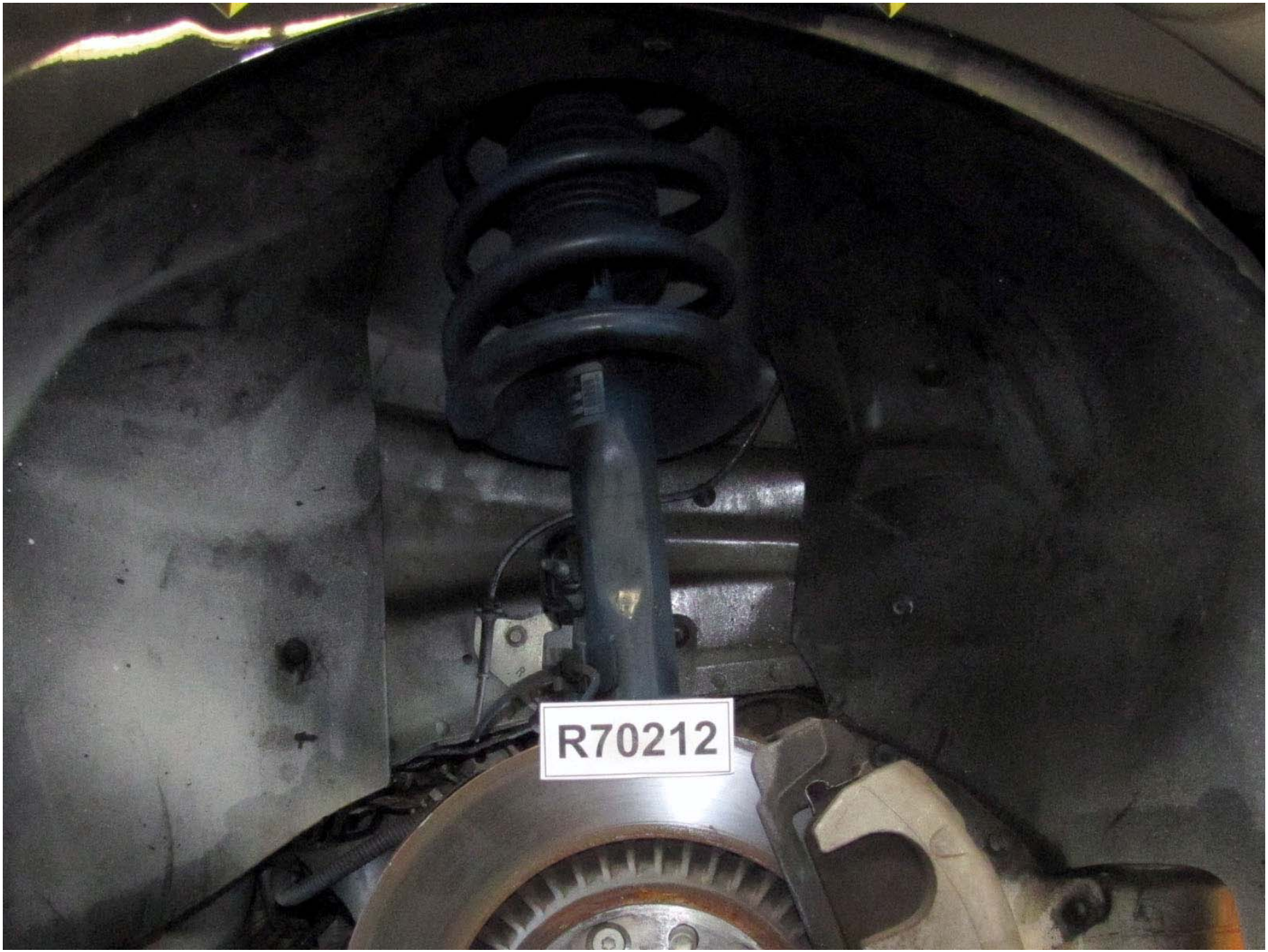

Figure A-187: Test Vehicle Post-Test Right Front Frame Rail View

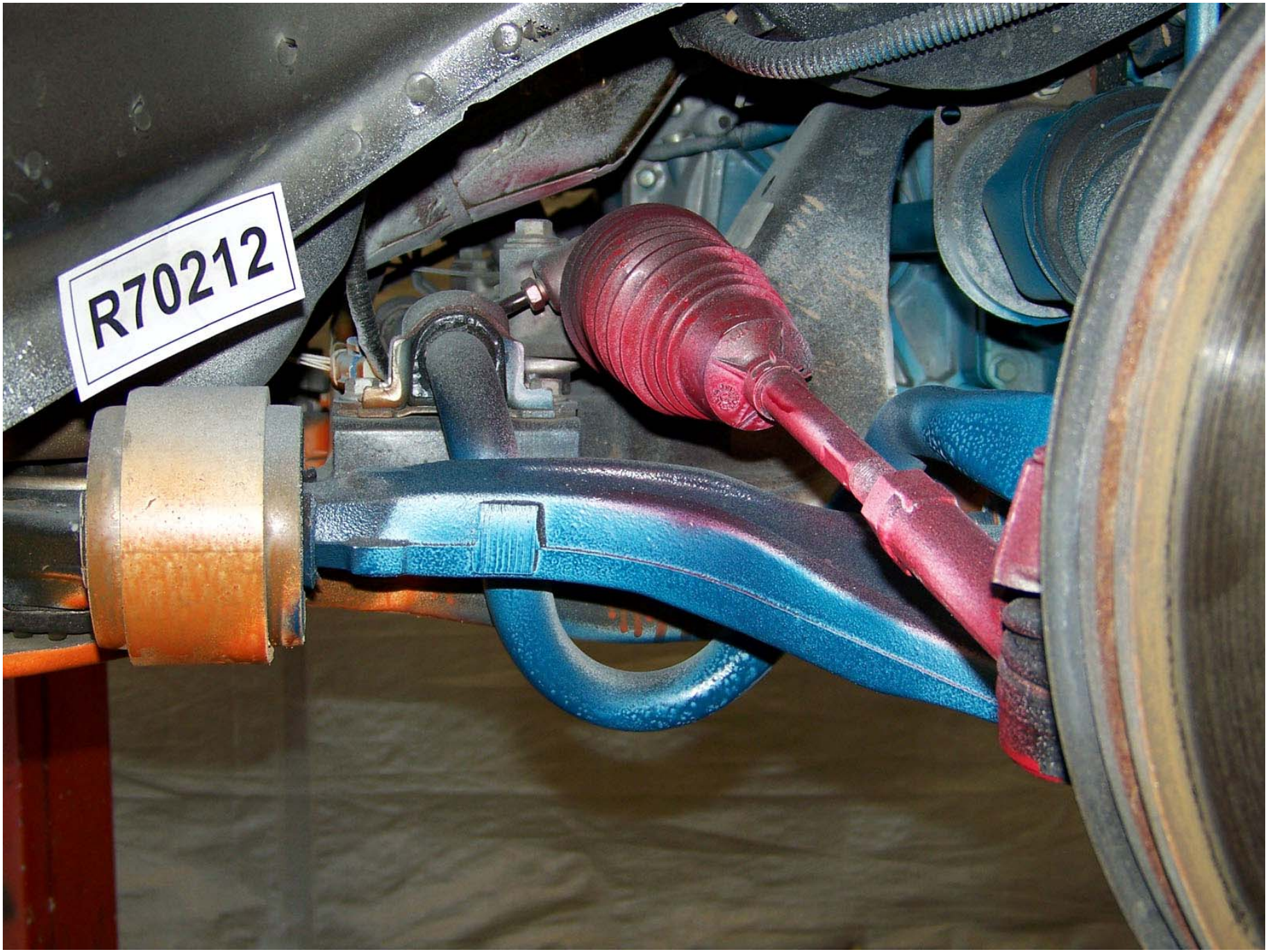

Figure A-188: Test Vehicle Pre-Test Right Side Frame to A-Pillar Joint

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

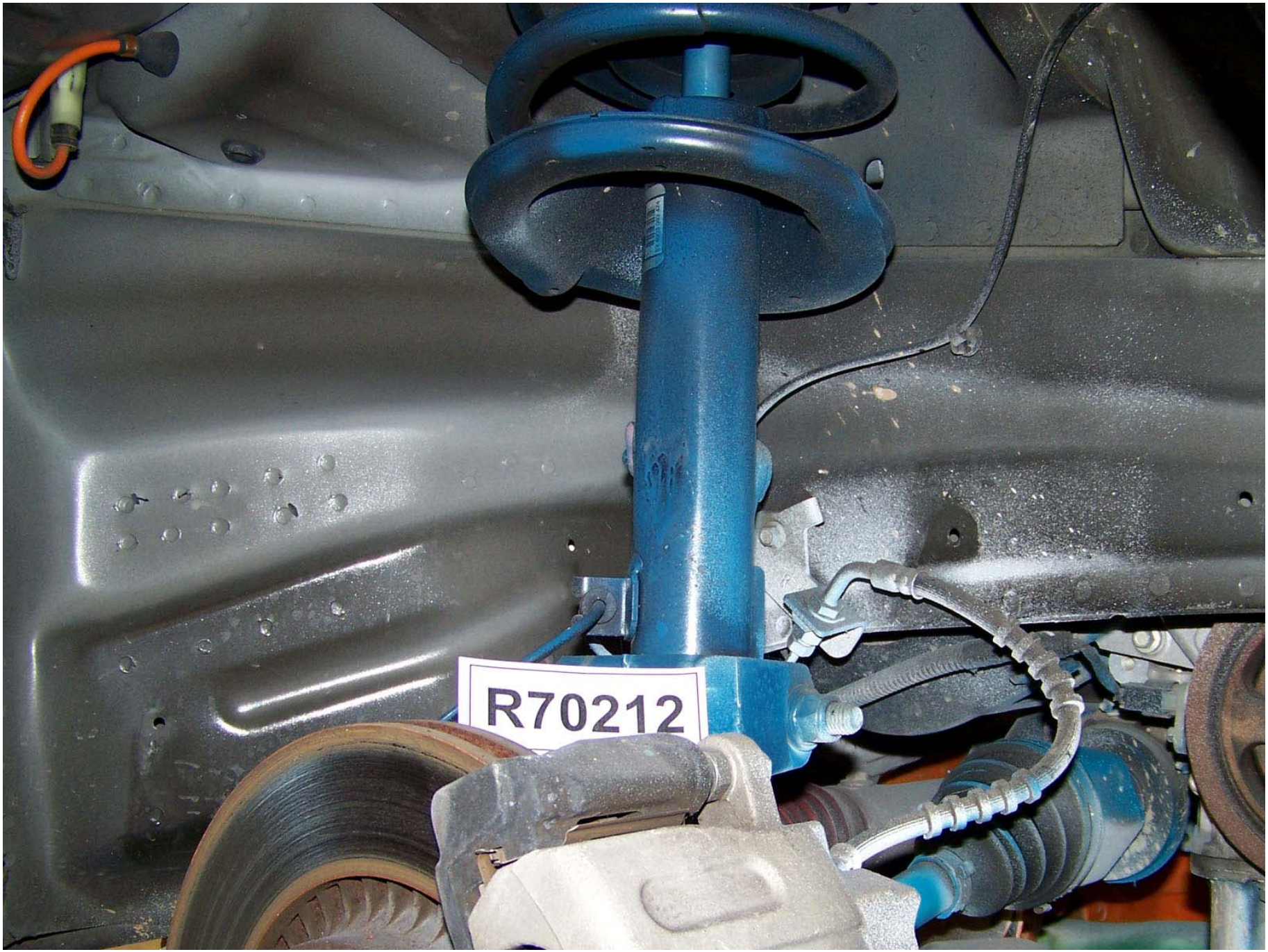

Figure A-190: Test Vehicle Pre-Test Right Side Tie Rod and Sway Bar Attachments Points

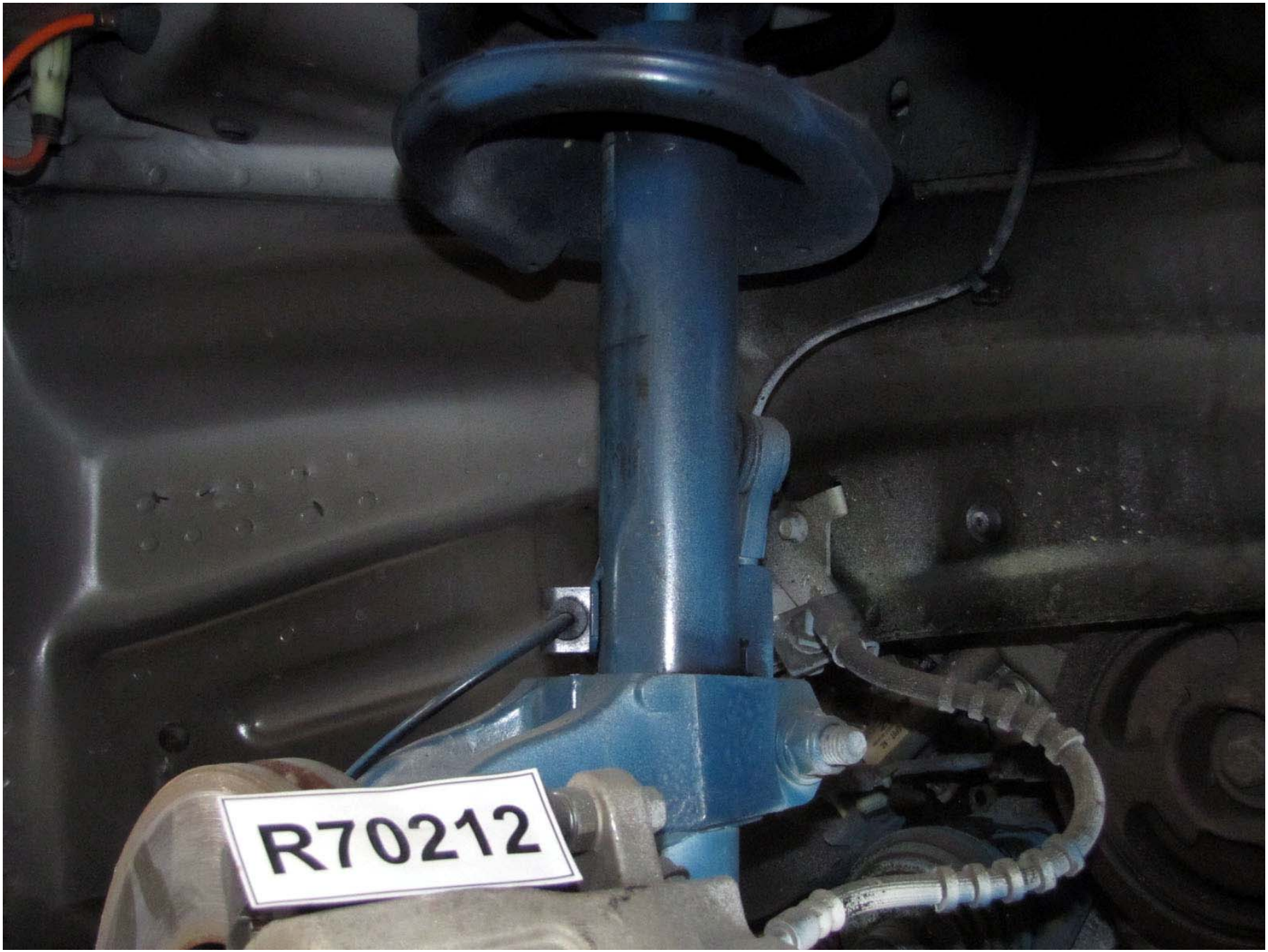

Figure A-191: Test Vehicle Post-Test Right Side Tie Rod and Sway Bar Attachments Points

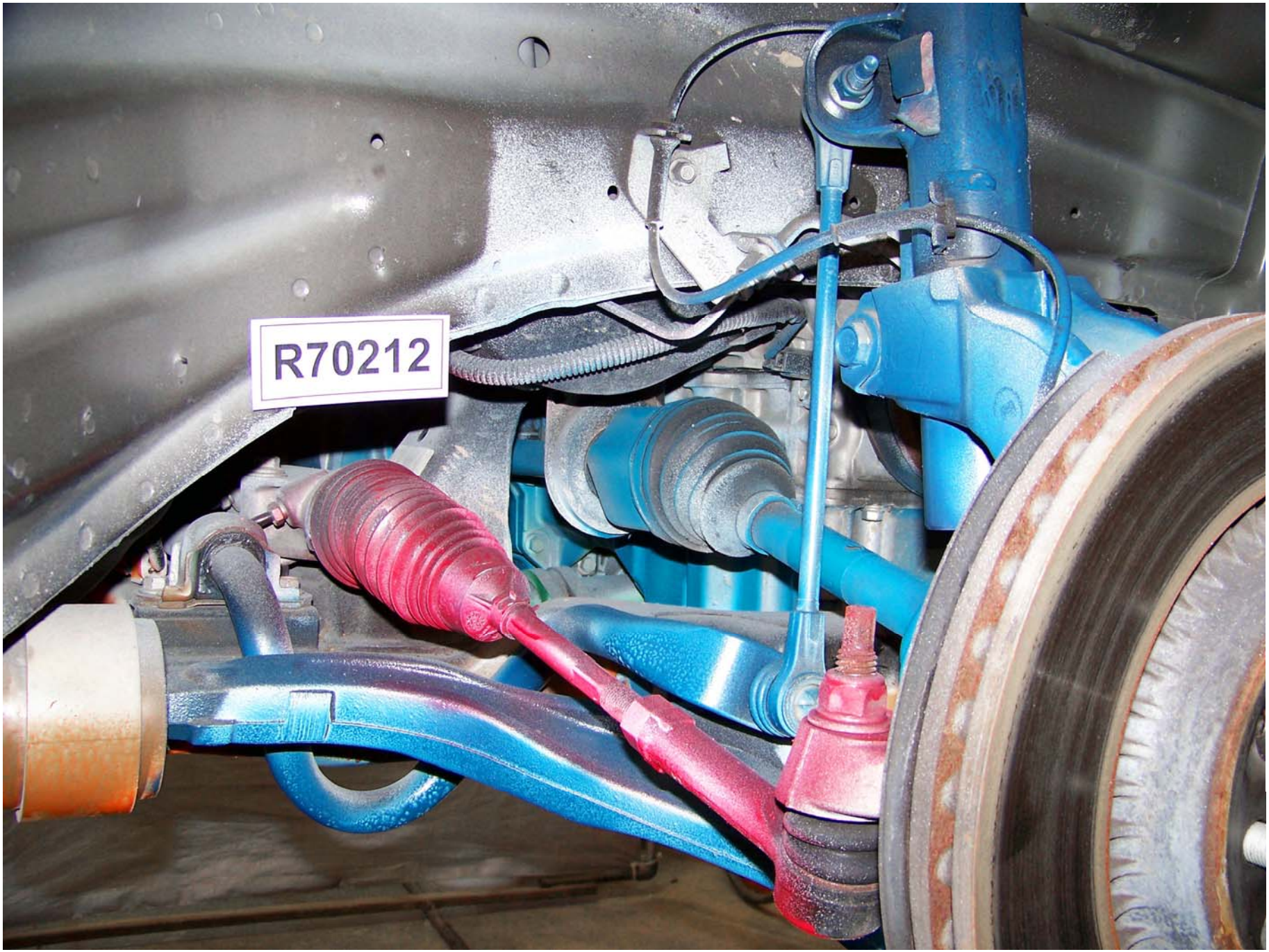

Figure A-192: Test Vehicle Pre-Test Right Side Upper Sway Bar Attachment Point

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

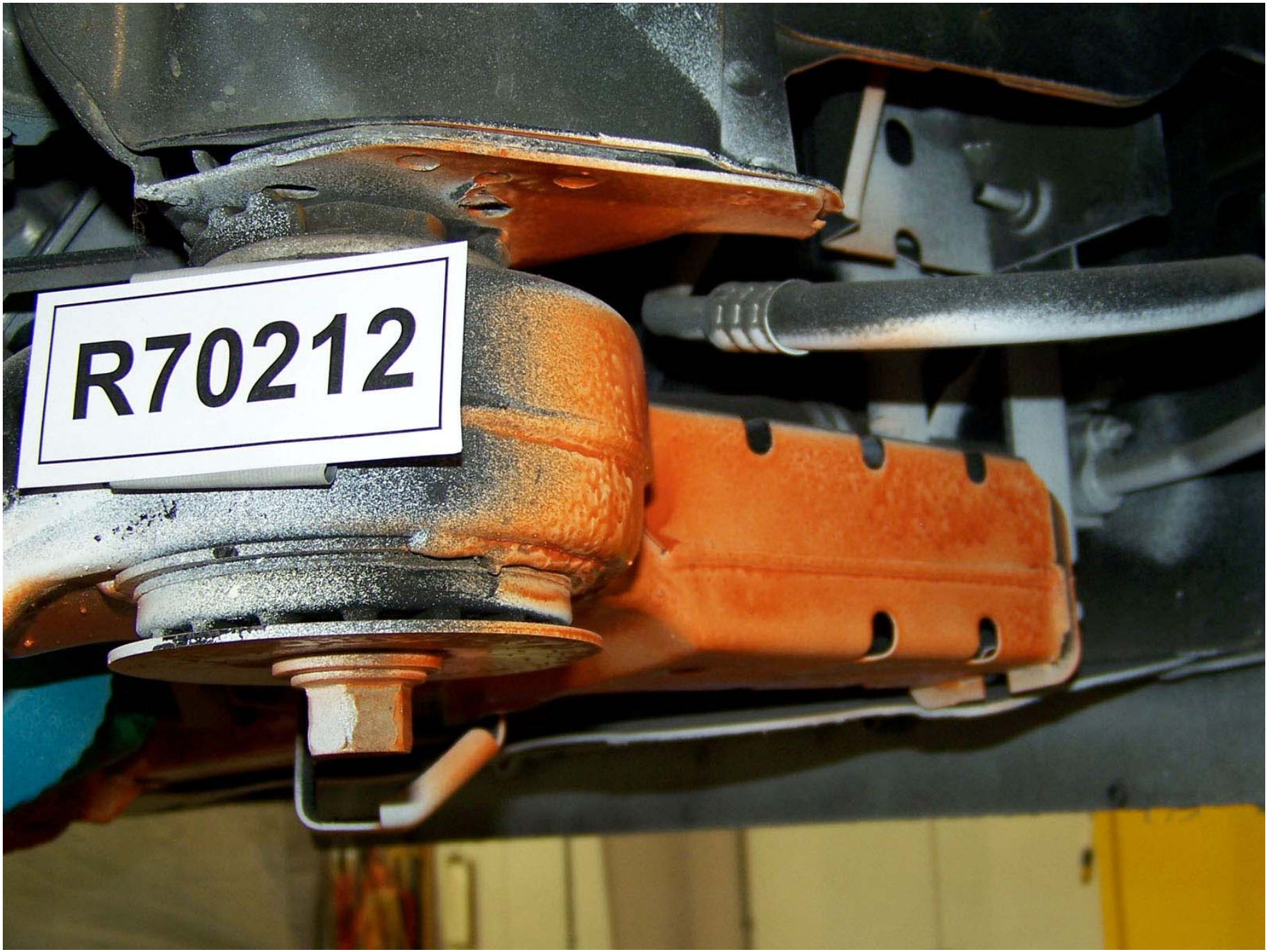

Figure A-194: Test Vehicle Pre-Test Right Side Crush Initiators

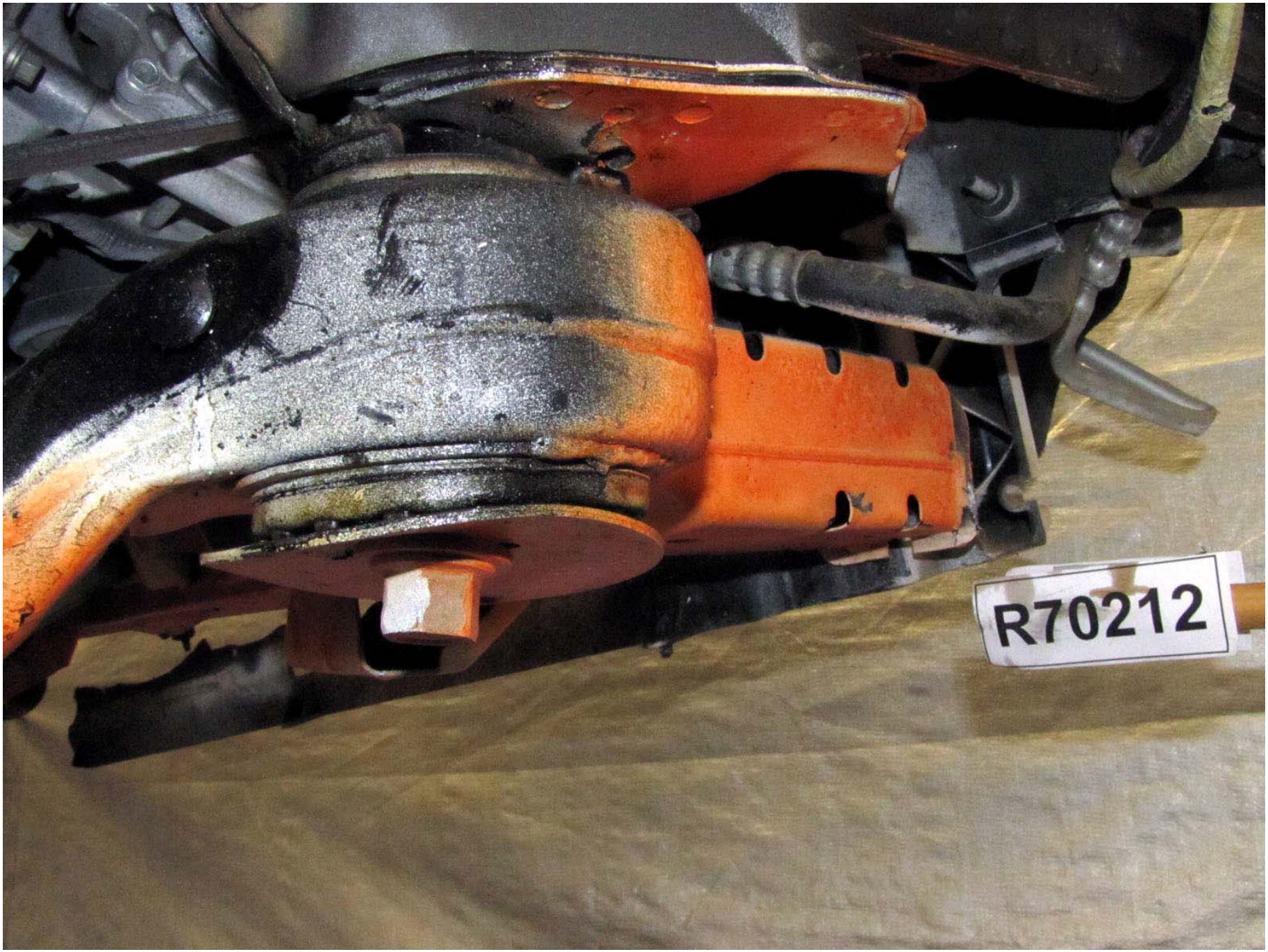

Figure A-195: Test Vehicle Post-Test Right Side Crush Initiators

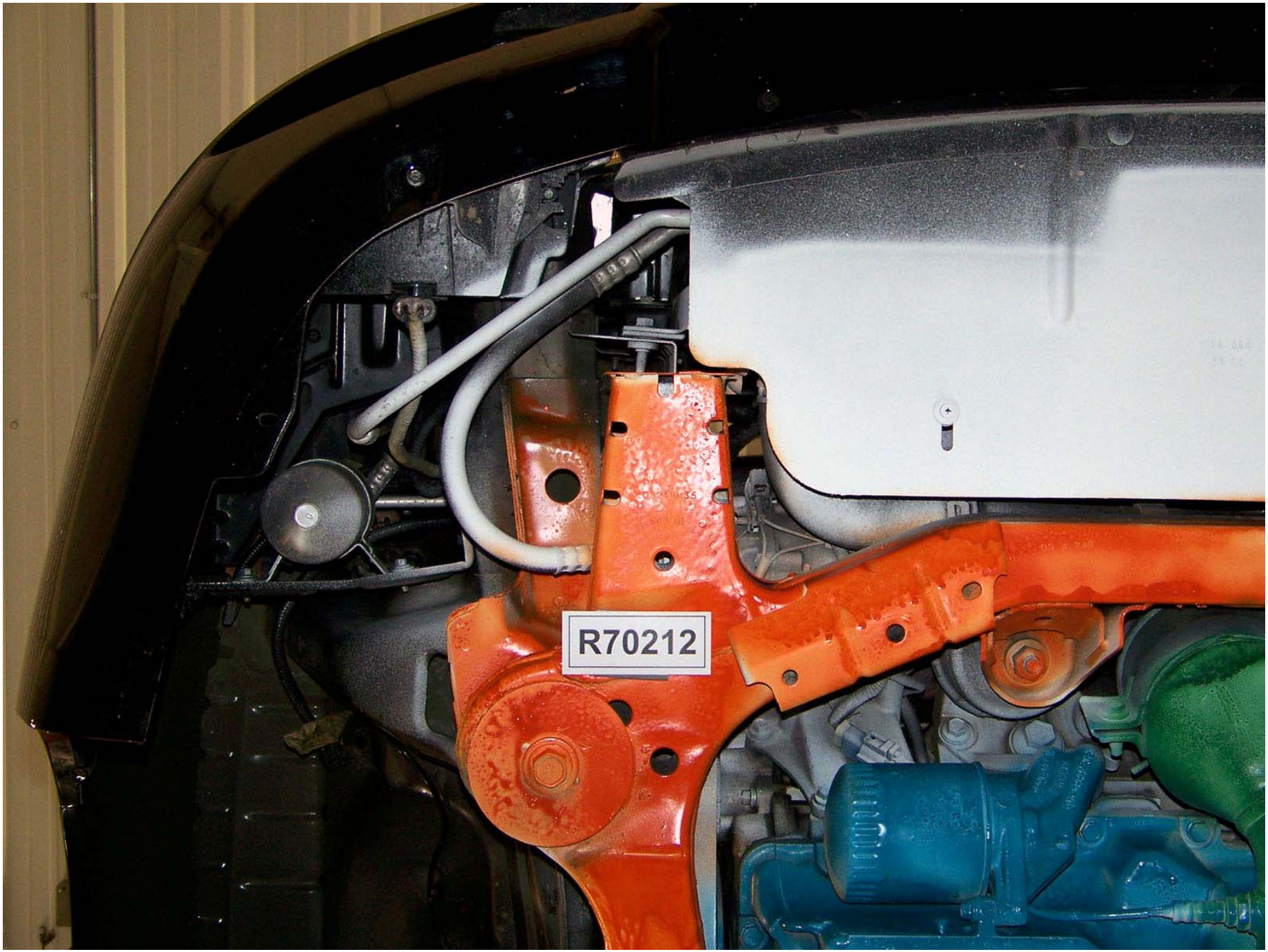

Figure A-196: Test Vehicle Pre-Test Right Side Crush Initiators

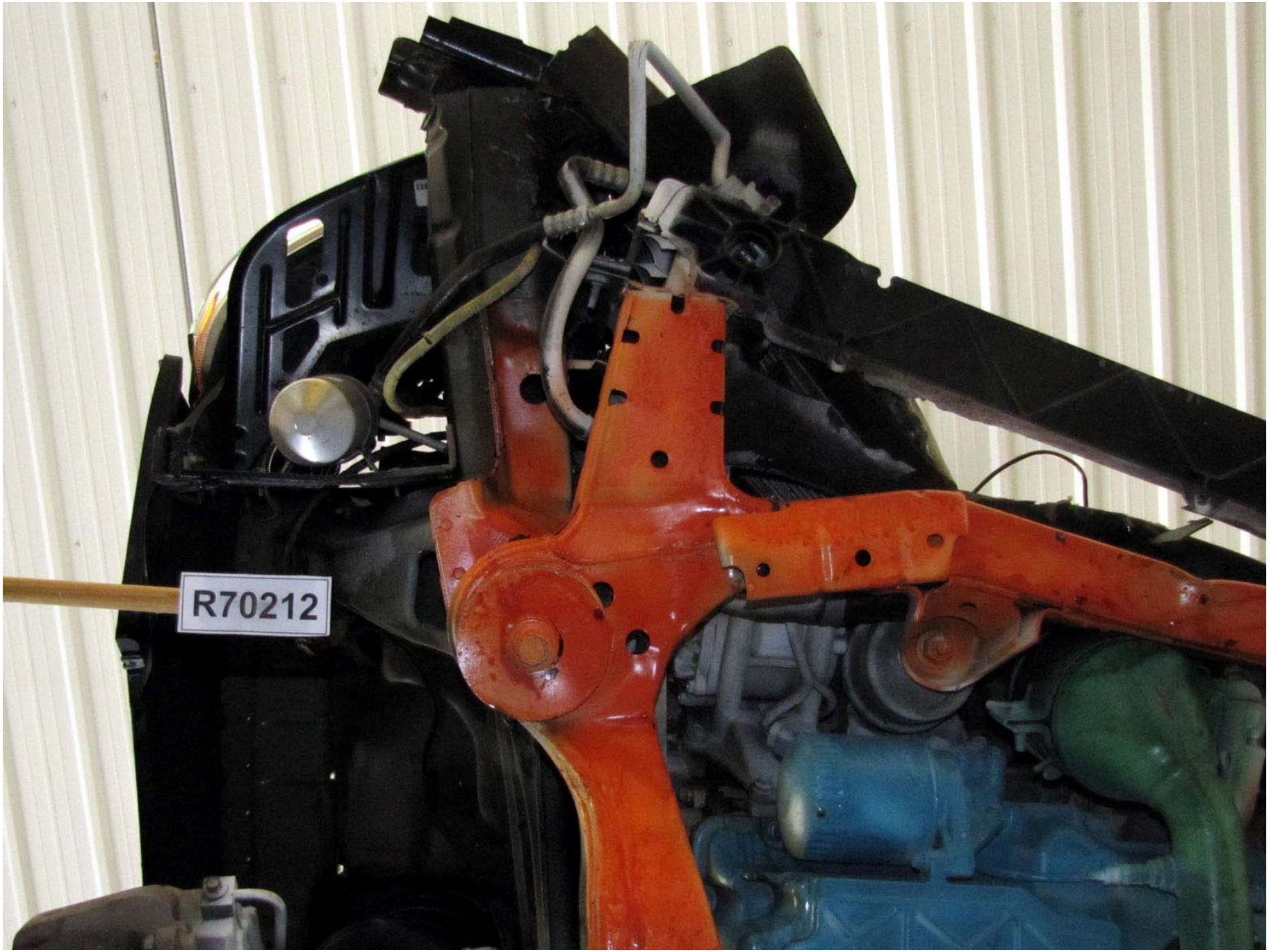

Figure A-197: Test Vehicle Post-Test Right Side Crush Initiators

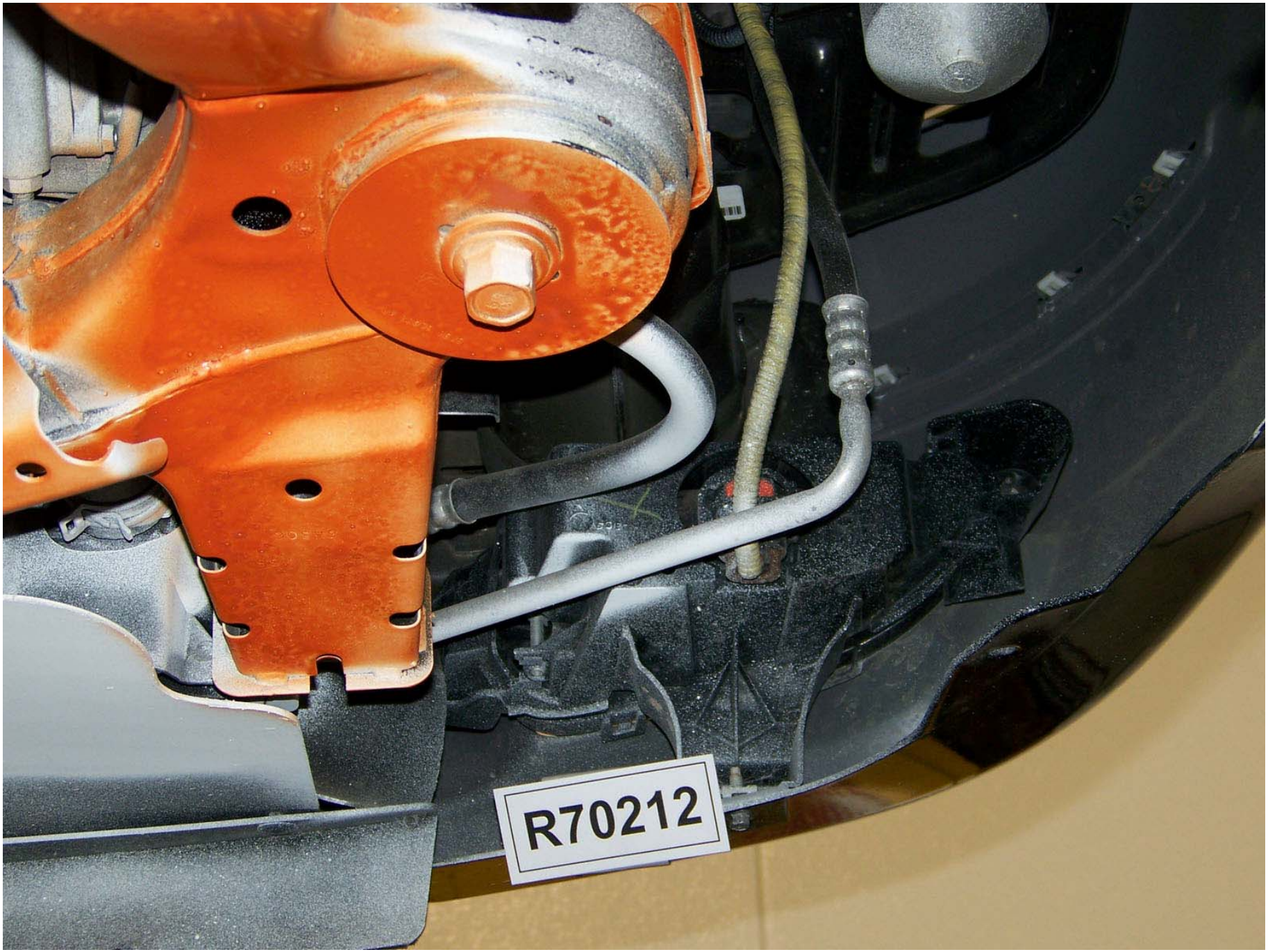

Figure A-198: Test Vehicle Pre-Test Right Side Bumper Attachment Point

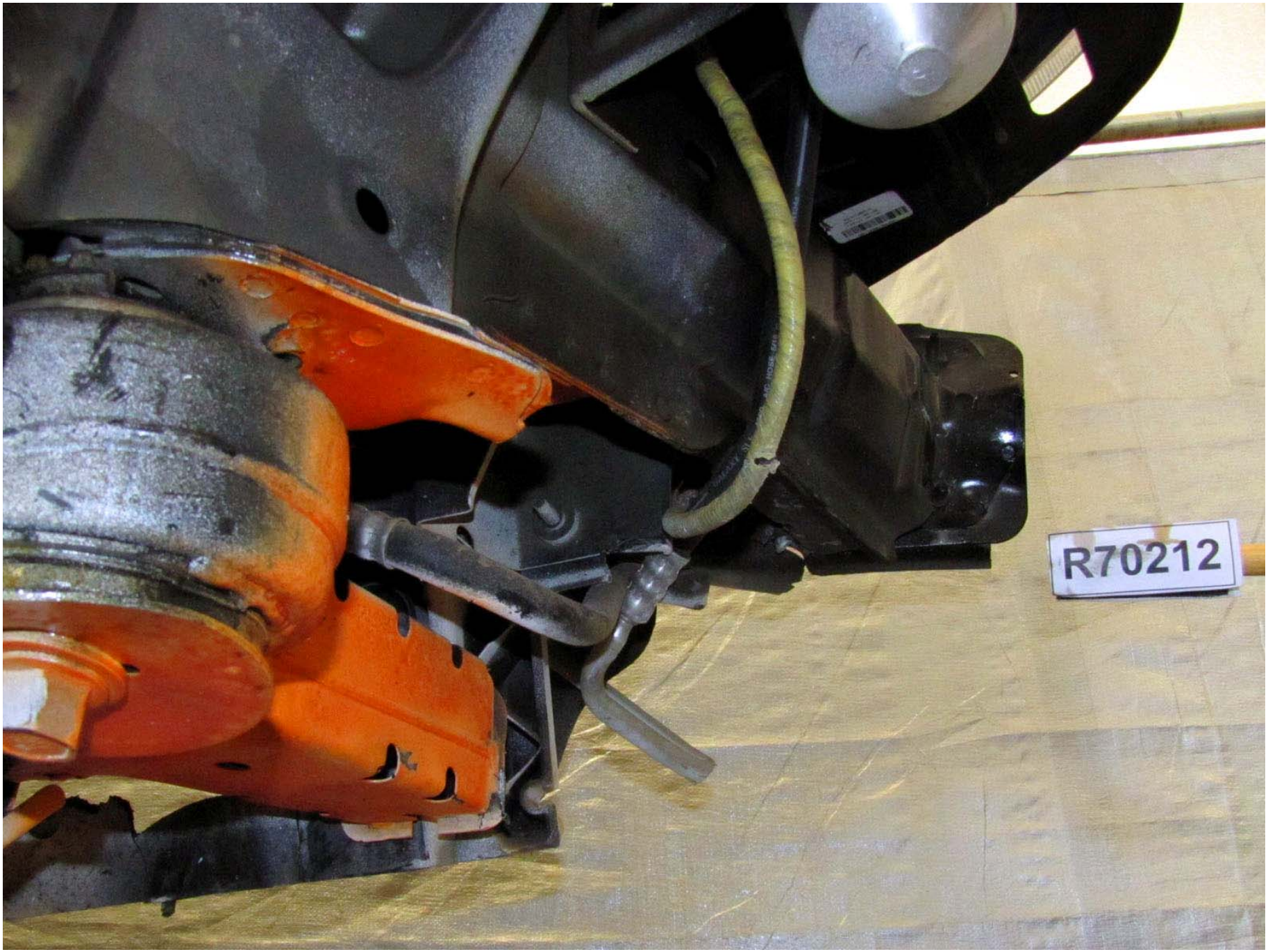

Figure A-199: Test Vehicle Post-Test Right Side Bumper Attachment Point

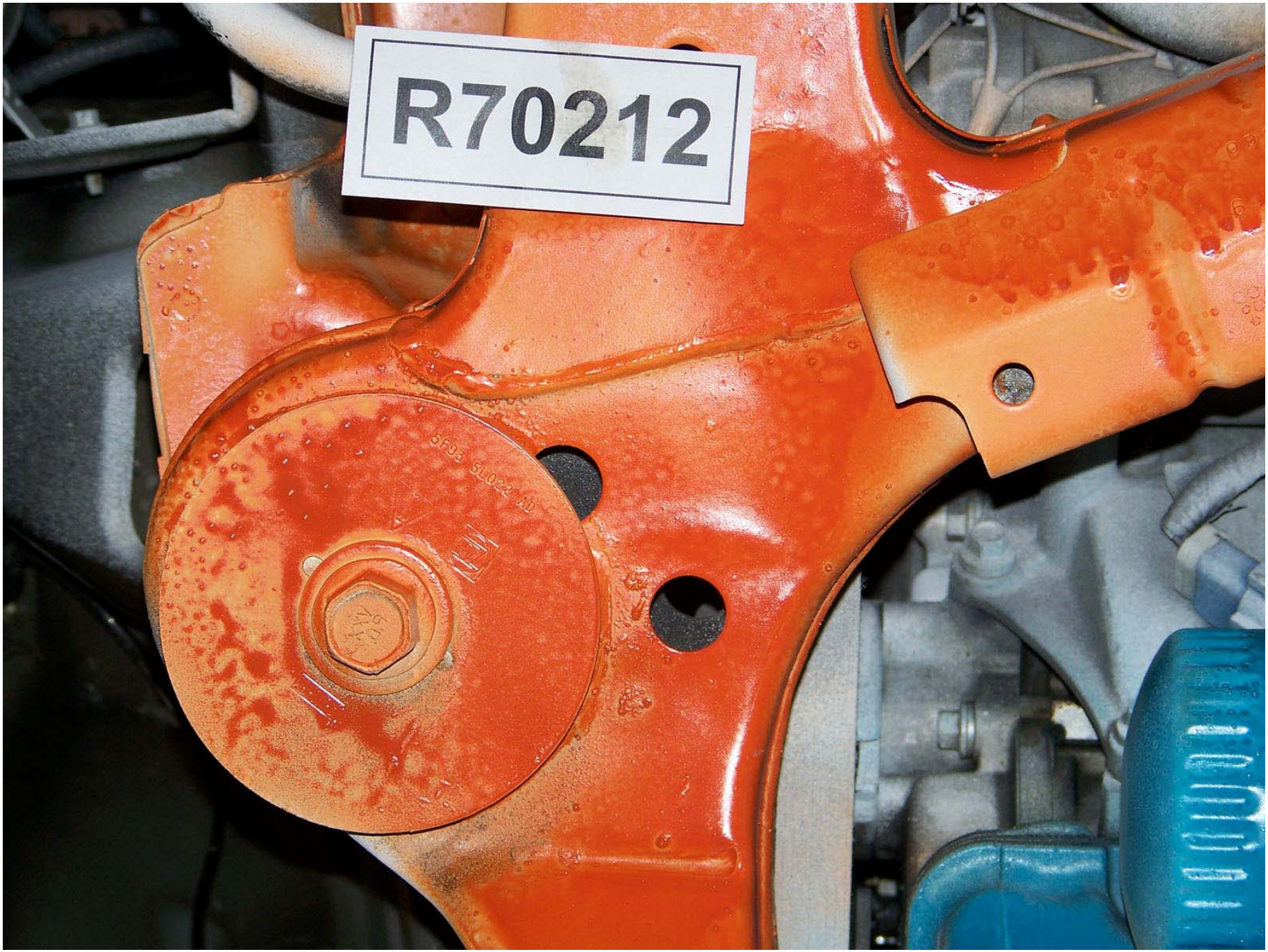

Figure A-200: Test Vehicle Pre-Test Right Front Sub-Frame Mounting Point

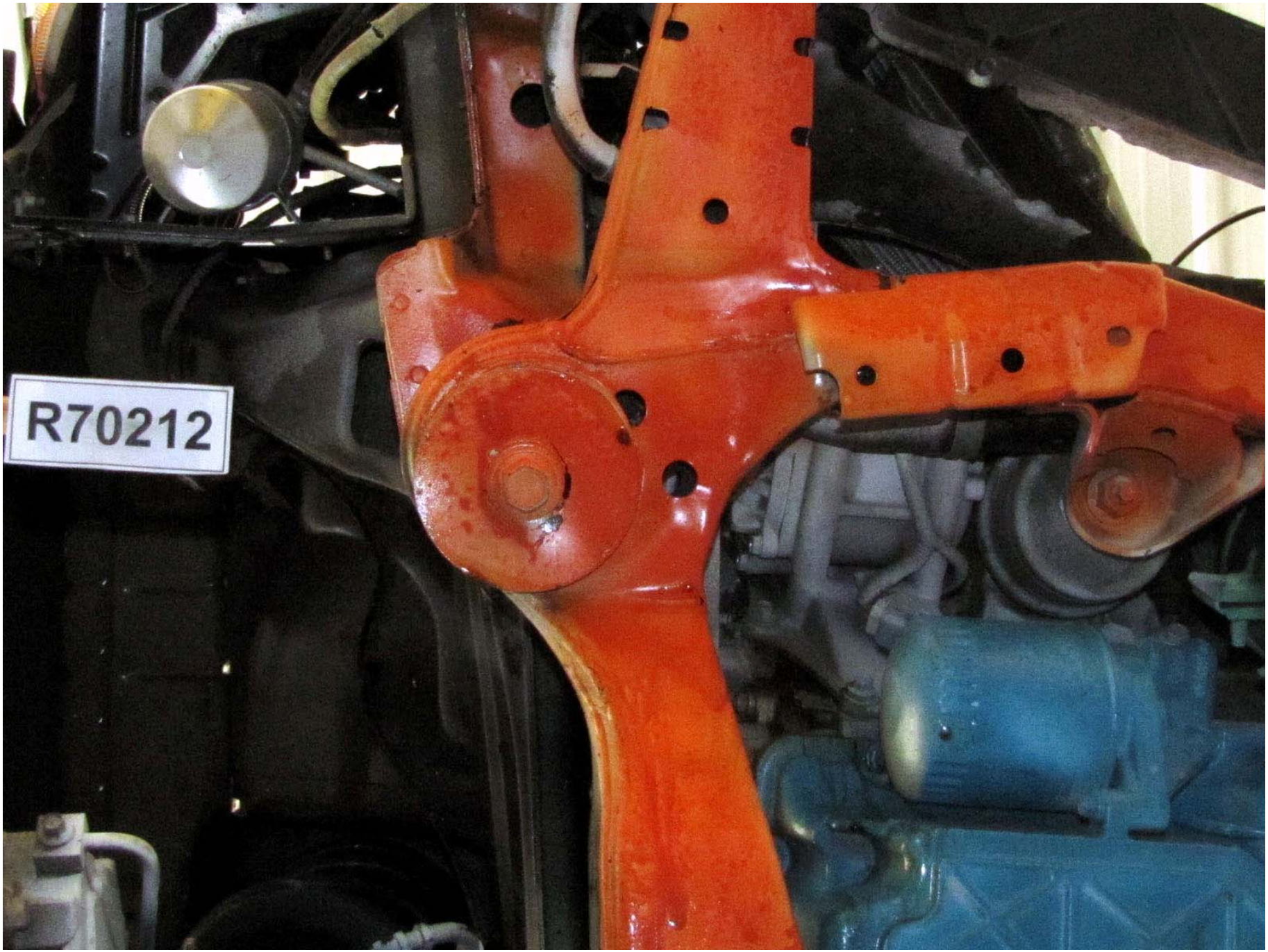

Figure A-201: Test Vehicle Post-Test Right Front Sub-Frame Mounting Point

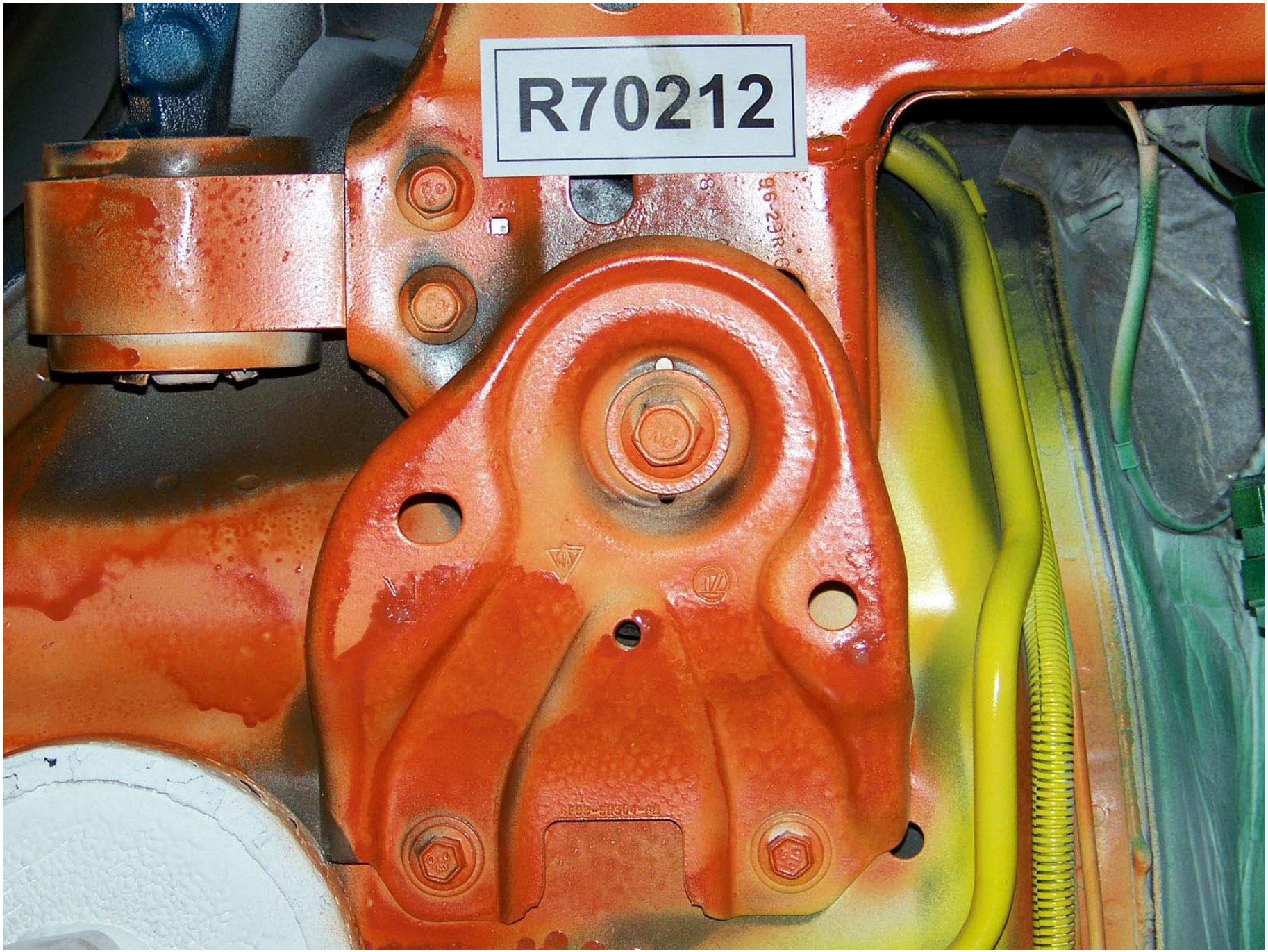

Figure A-202: Test Vehicle Pre-Test Right Rear Sub-Frame Mounting Point

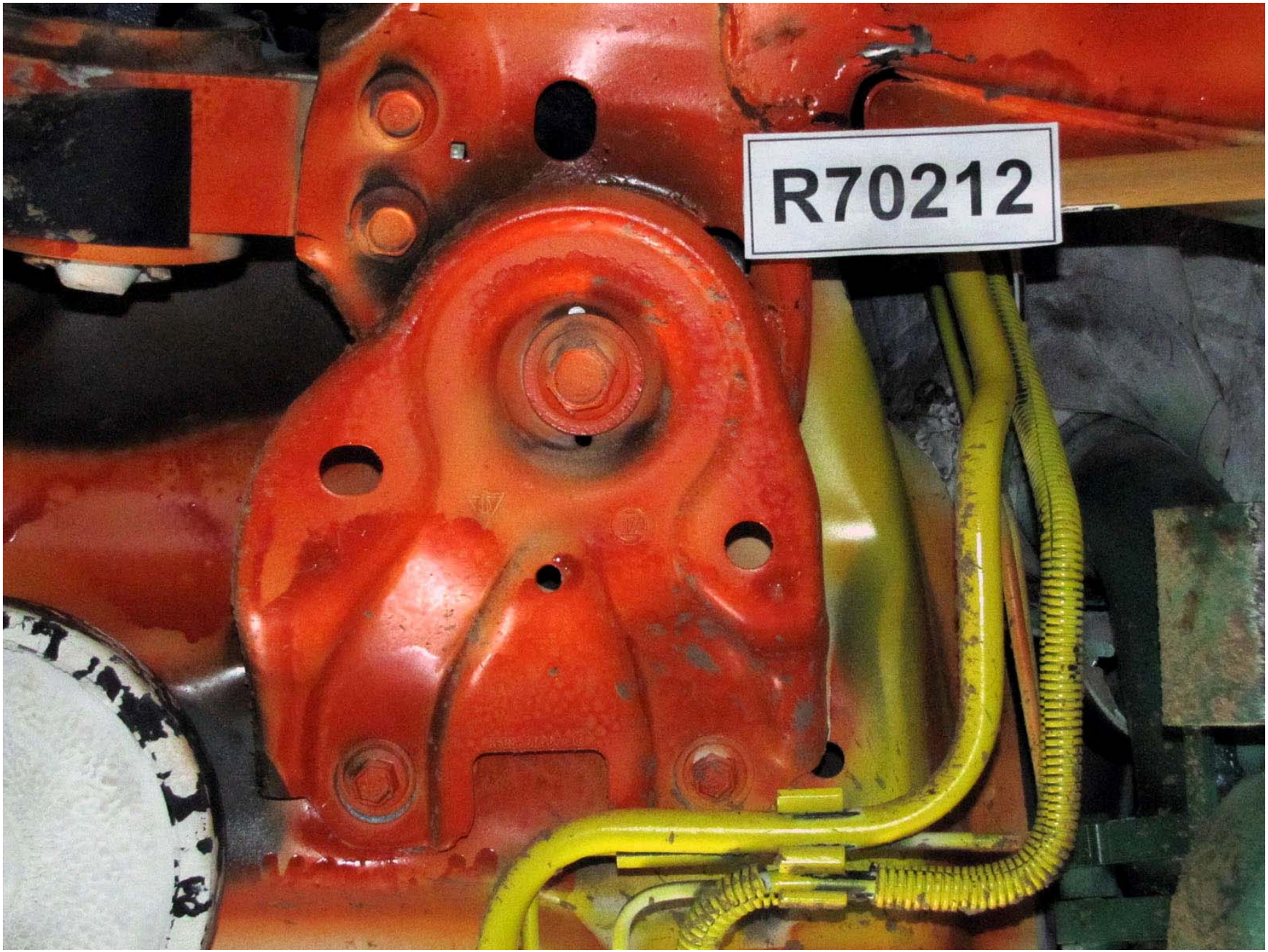

Figure A-203: Test Vehicle Post-Test Right Rear Sub-Frame Mounting Point

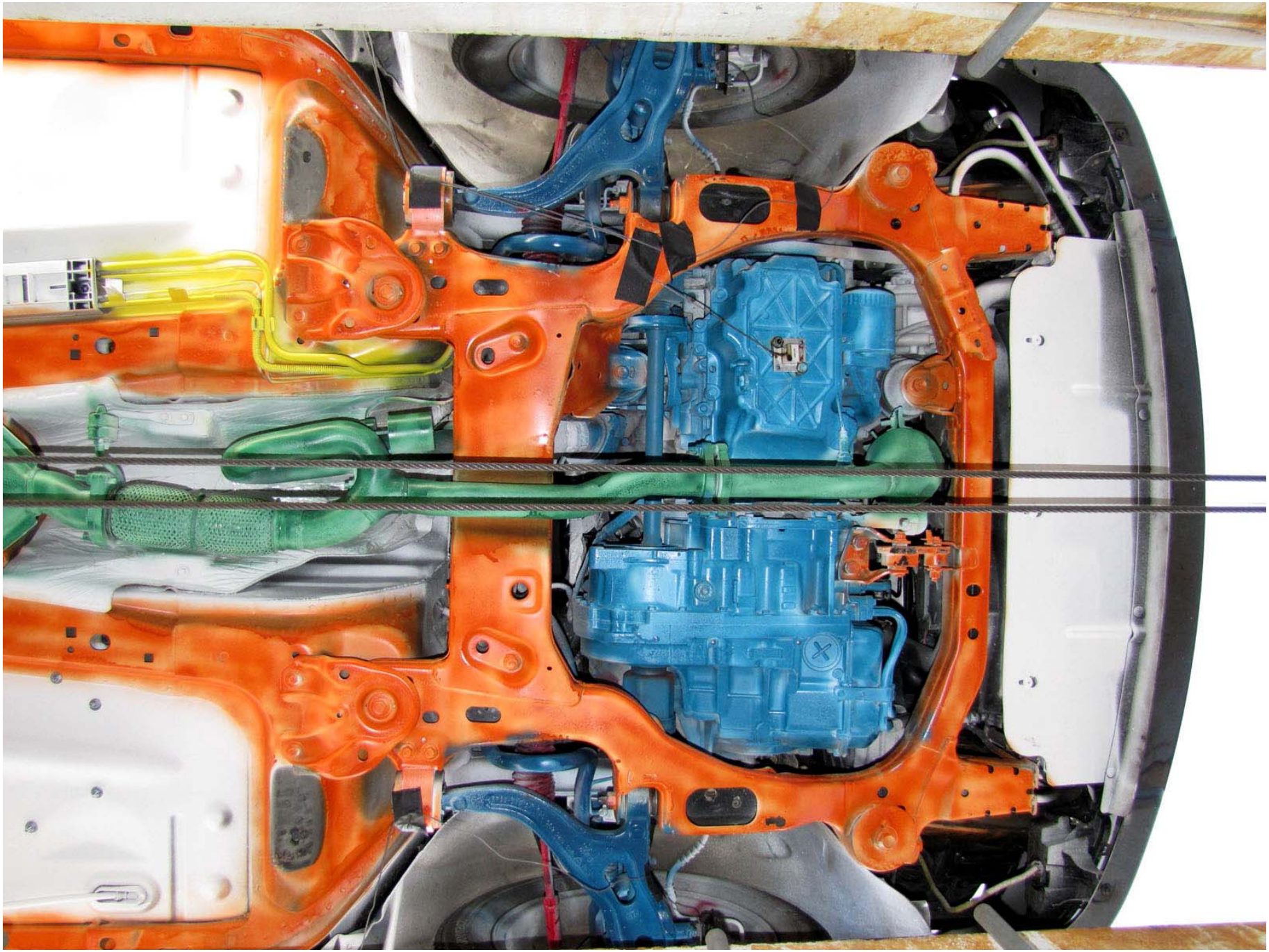

Figure A-204: Test Vehicle Pre-Test Front Underbody

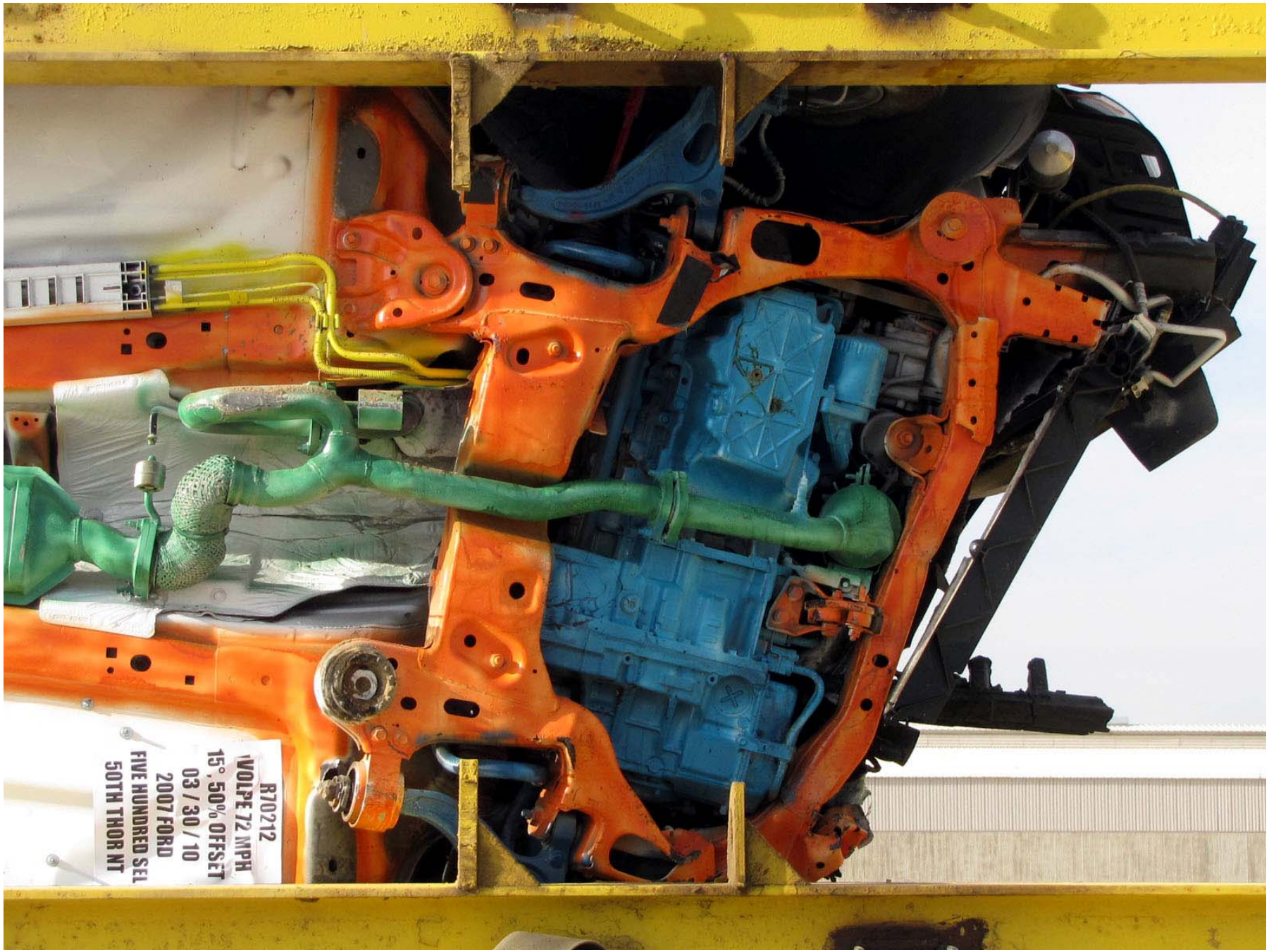

Figure A-205: Test Vehicle Post-Test Front Underbody

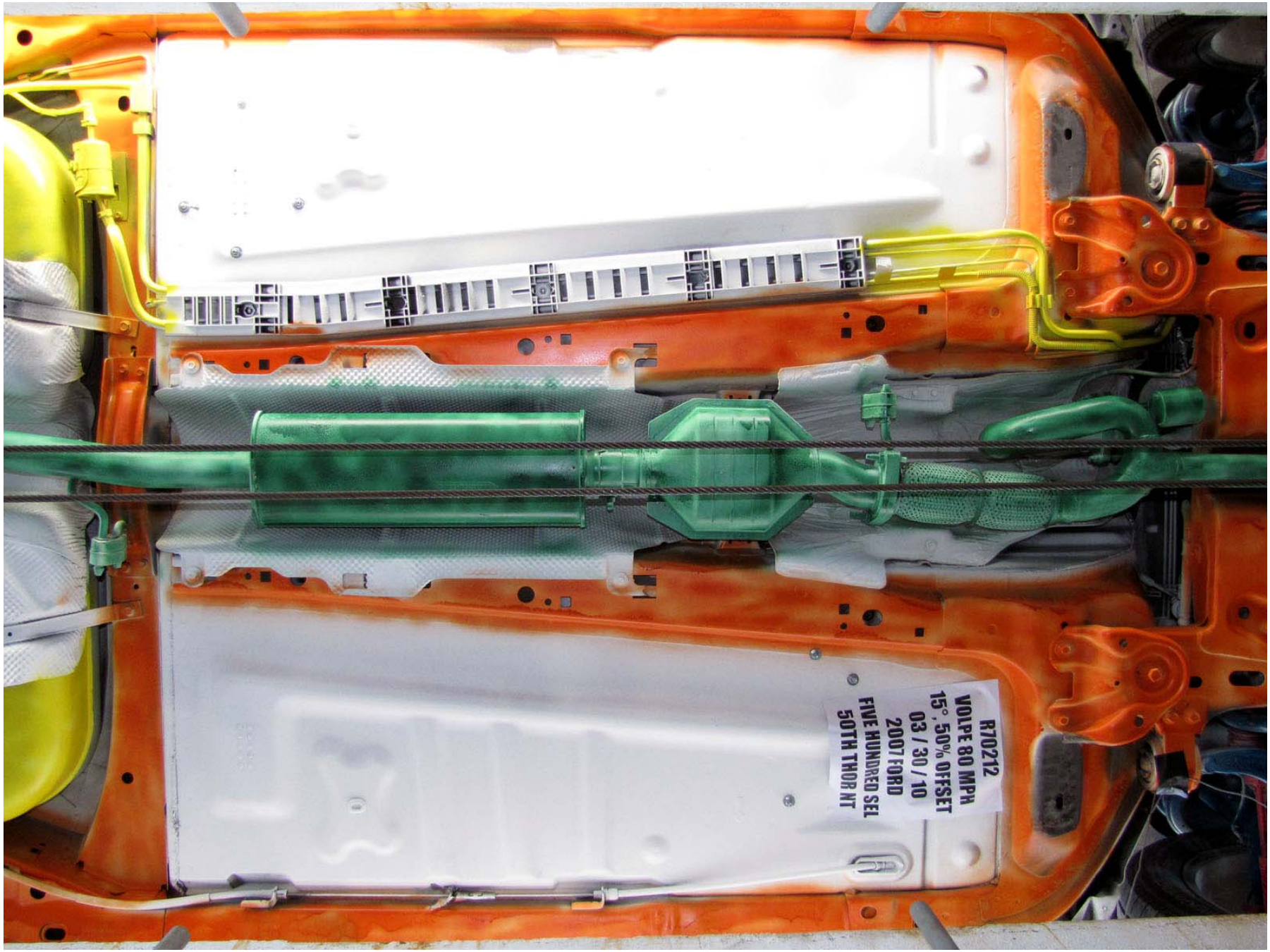

Figure A-206: Test Vehicle Pre-Test Mid Underbody

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

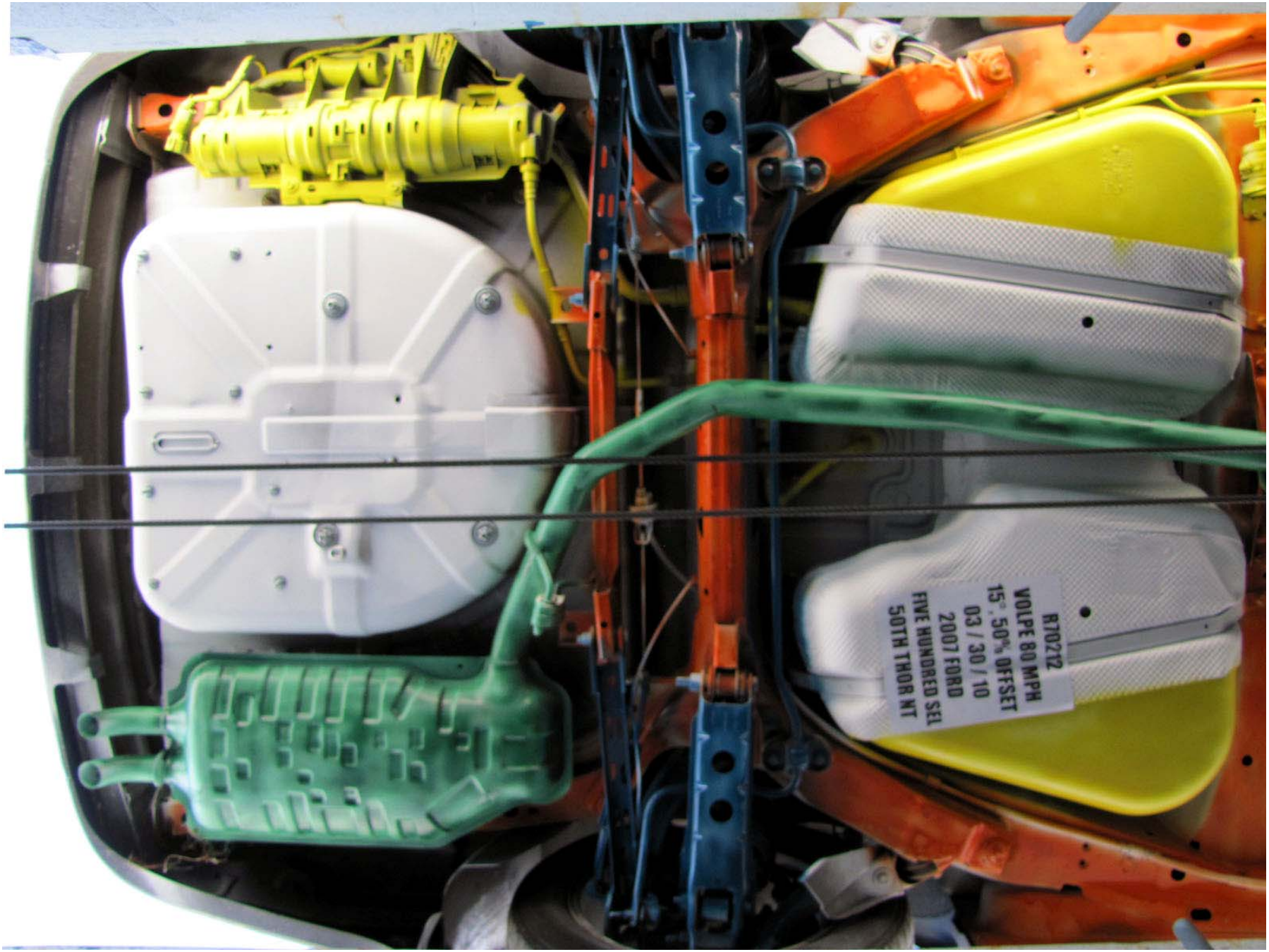

Figure A-208: Test Vehicle Pre-Test Rear Underbody

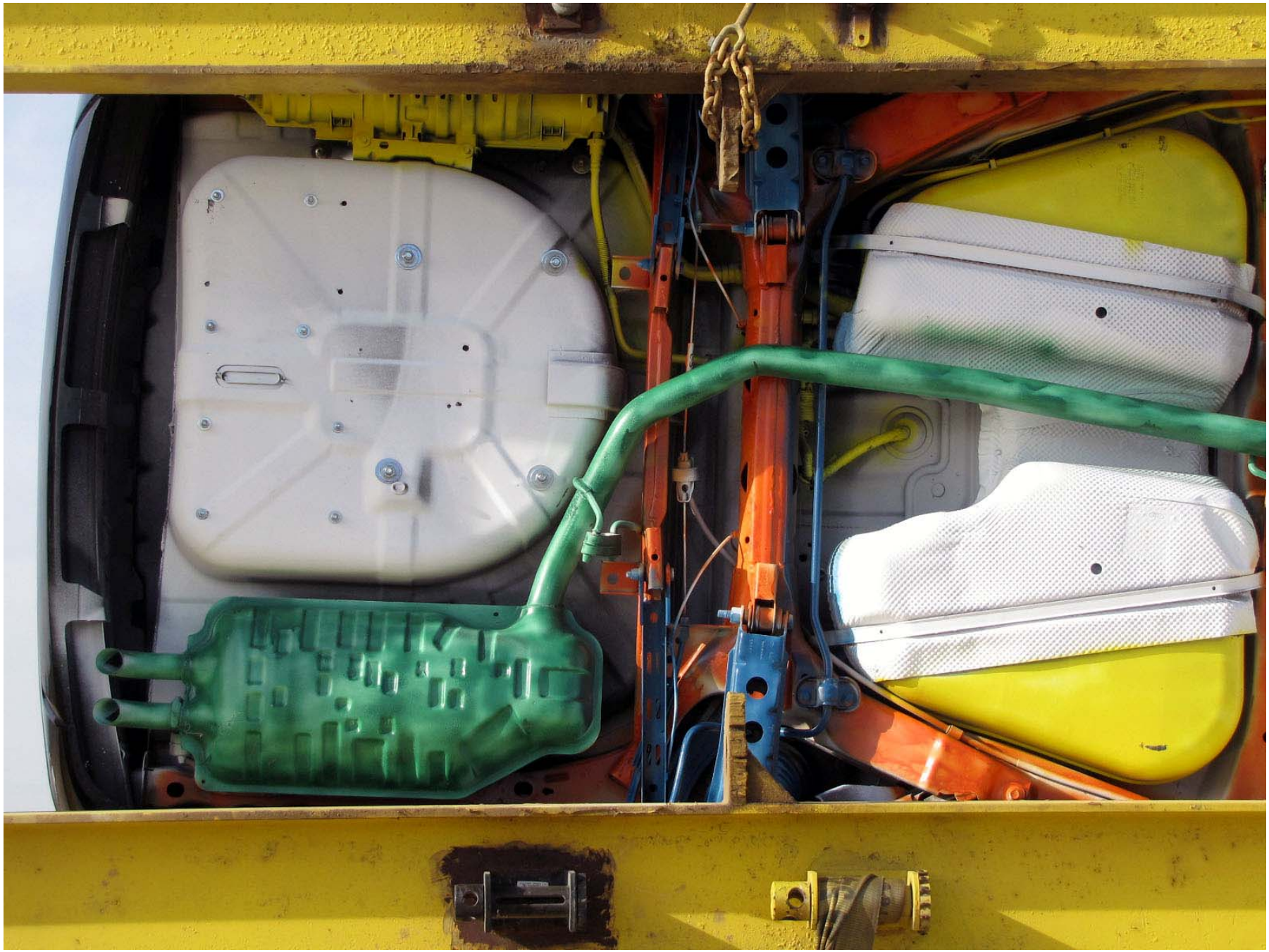

Figure A-209: Test Vehicle Post-Test Rear Underbody

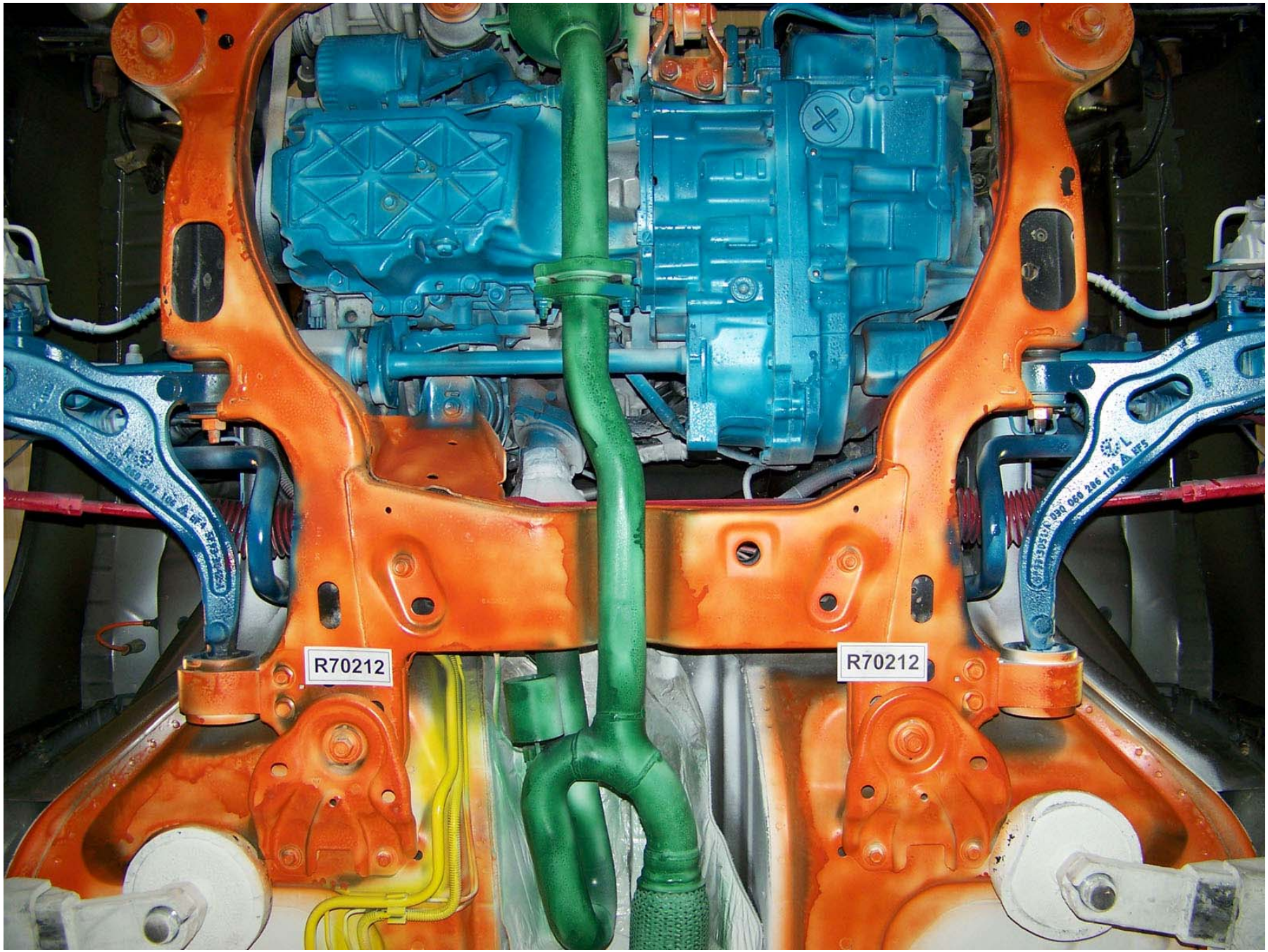

Figure A-210: Test Vehicle Pre-Test Steering Rack and Sway Bar View

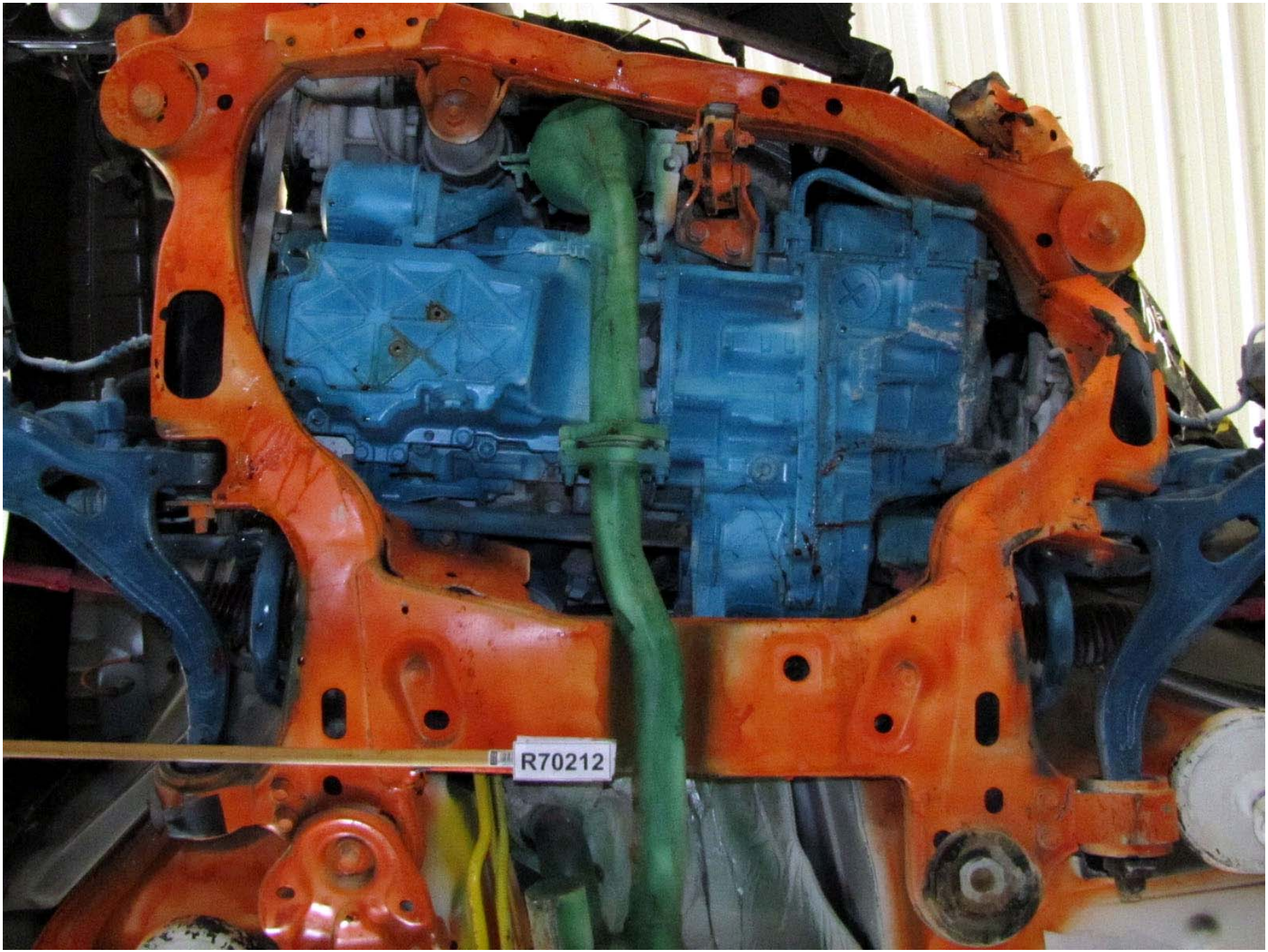

Figure A-211: Test Vehicle Post-Test Steering Rack and Sway Bar View

Figure A-212: Test Vehicle Pre-Test Steering Rack Left Side Mounting Bolt

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

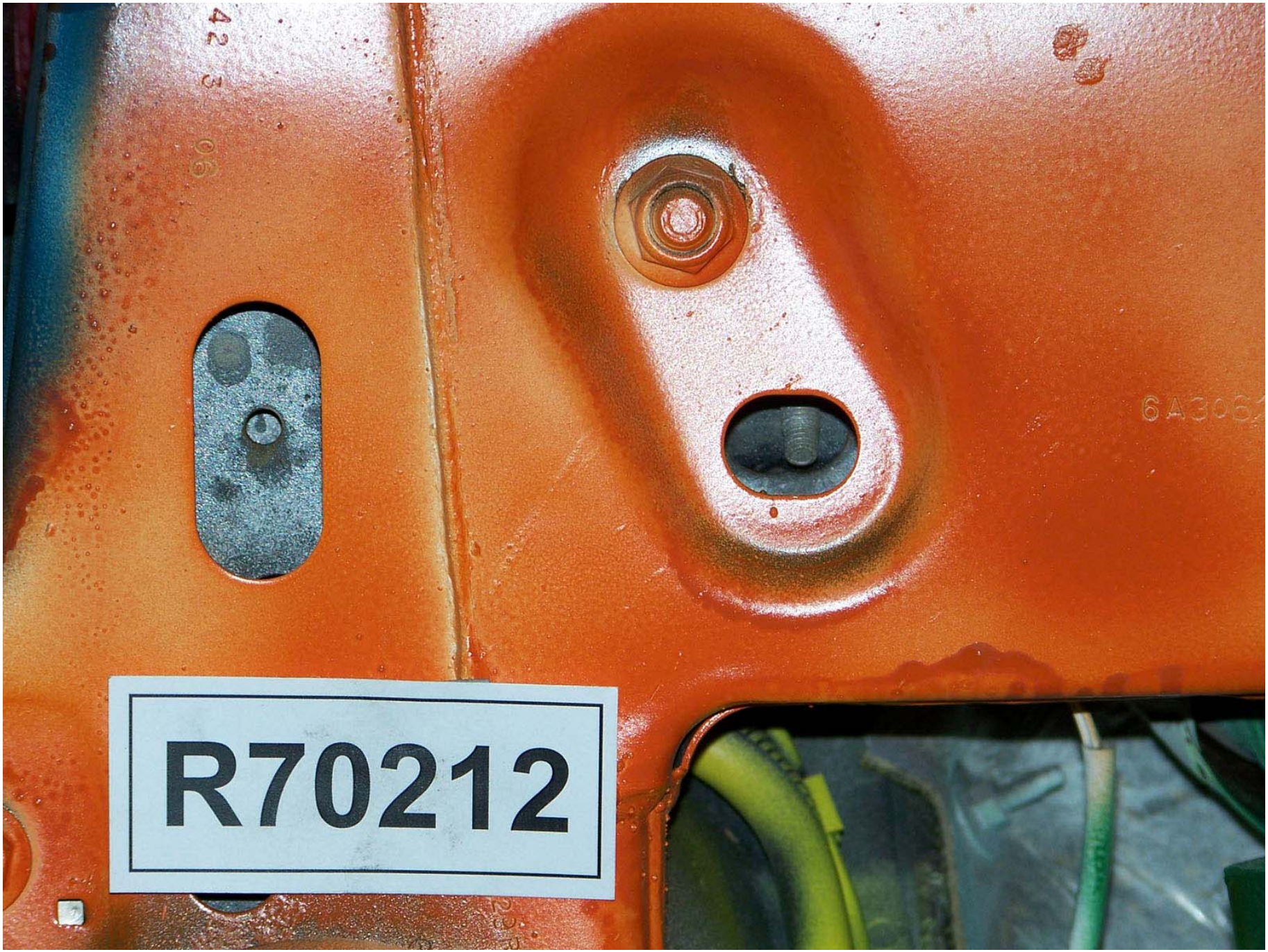

Figure A-214: Test Vehicle Pre-Test Steering Rack Right Side Mounting Bolt

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

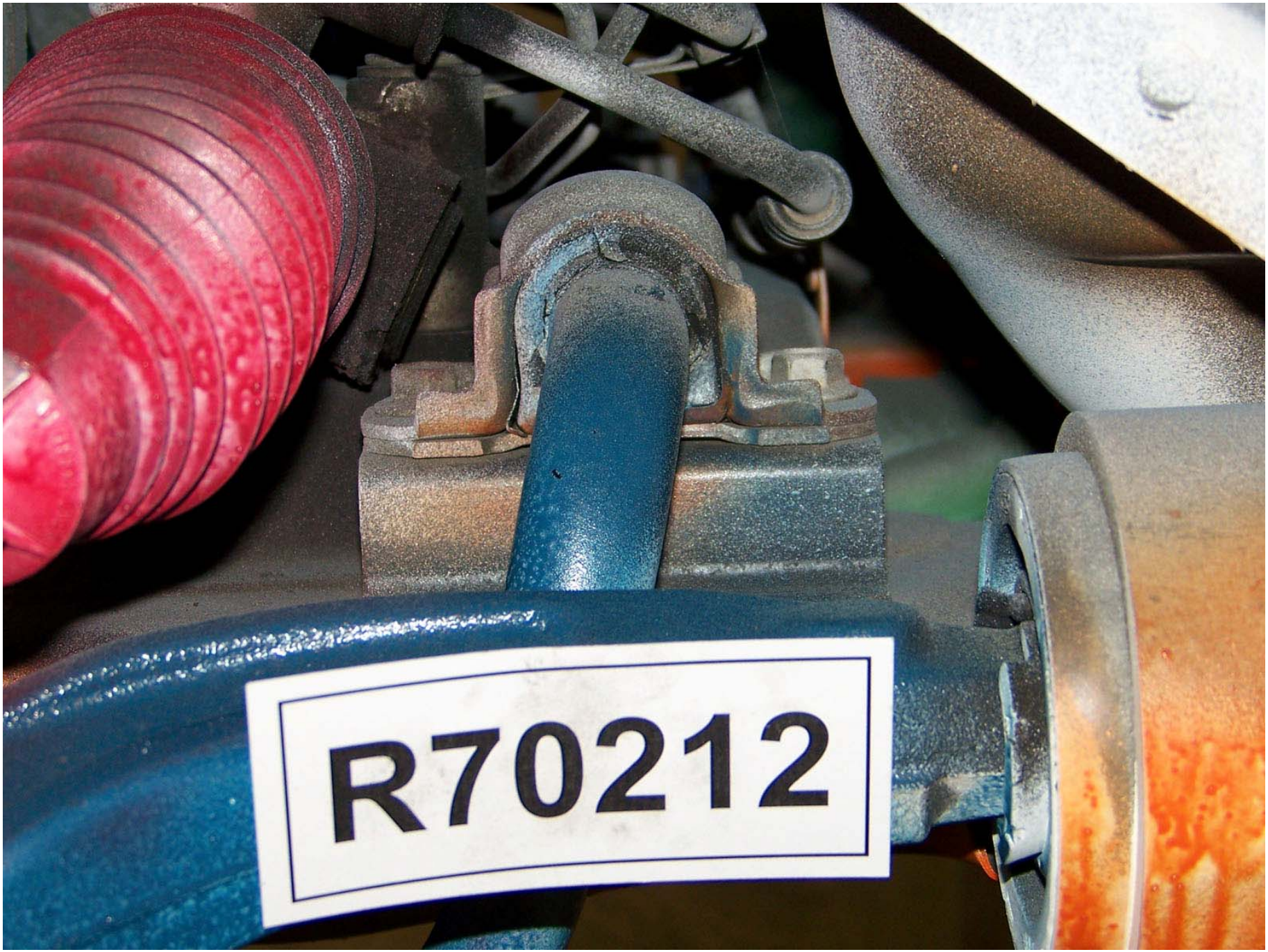

Figure A-216: Test Vehicle Pre-Test Sway Bar Left Side Mounting Bolts

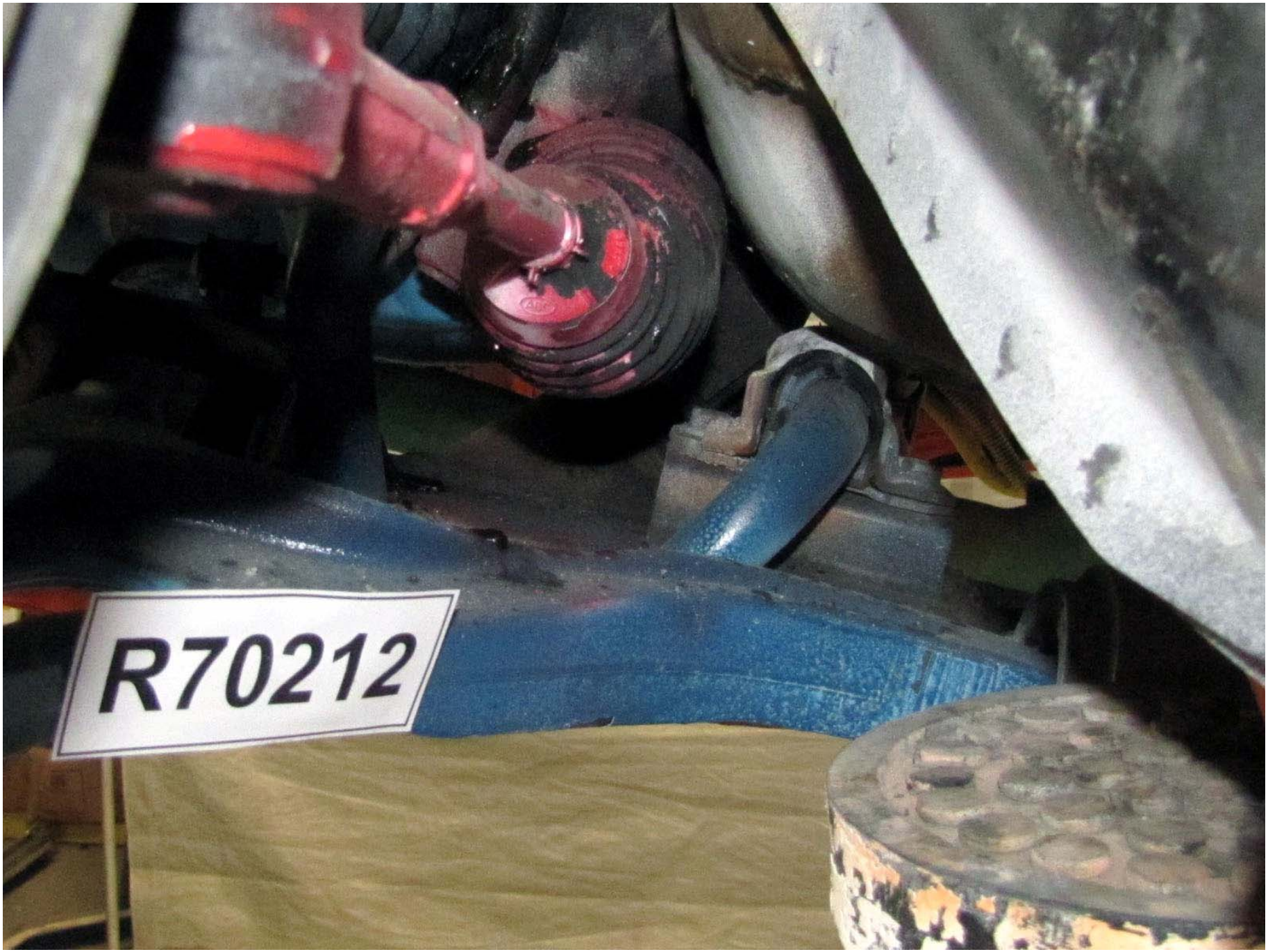

Figure A-217: Test Vehicle Post-Test Sway Bar Left Side Mounting Bolts

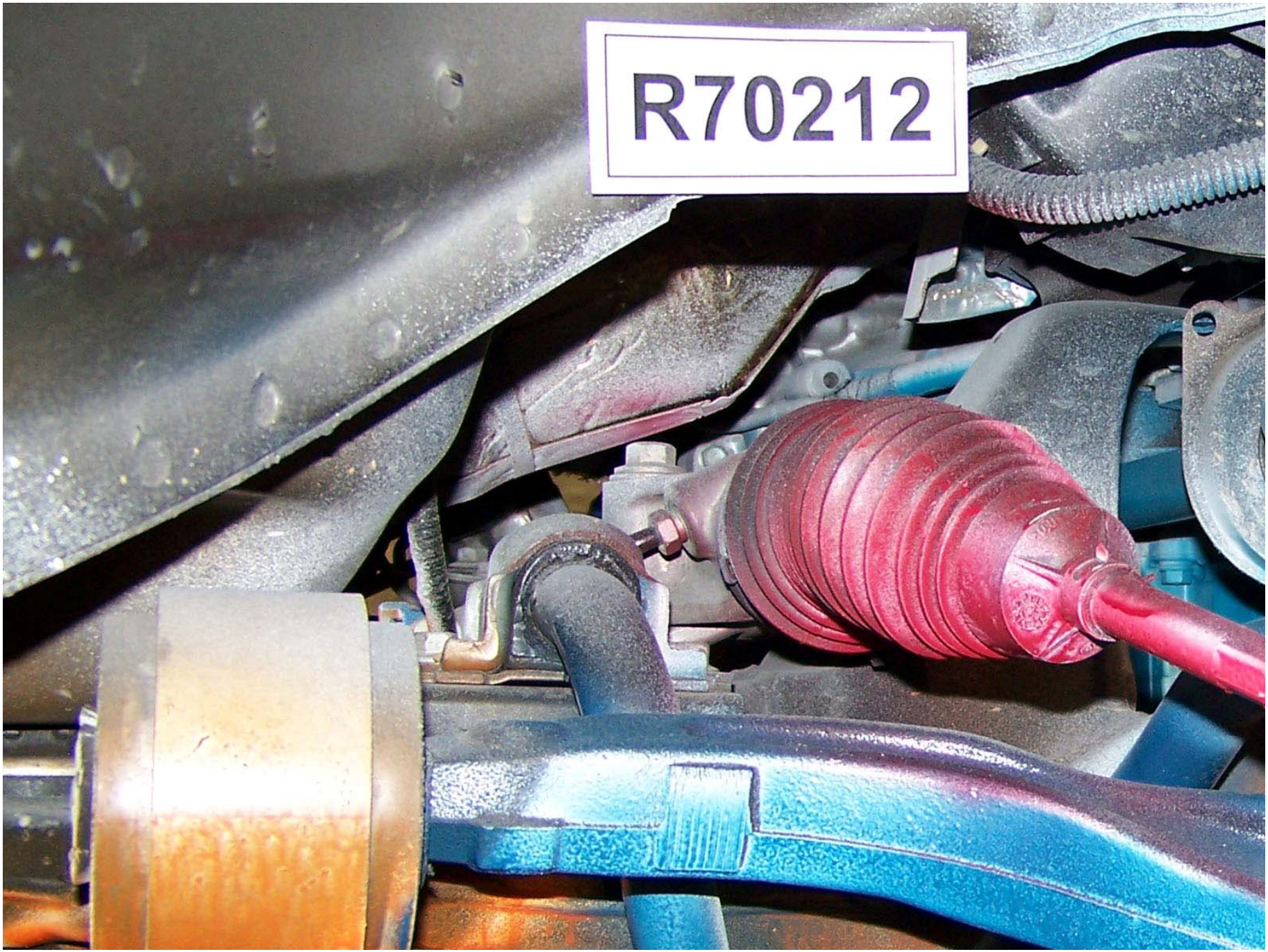

Figure A-218: Test Vehicle Pre-Test Sway Bar Right Side Mounting Bolts

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

Figure A-220: Test Vehicle Pre-Test Front Door Panel

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

Figure A-222: Test Vehicle Pre-Test Driver Dummy Right Side View

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

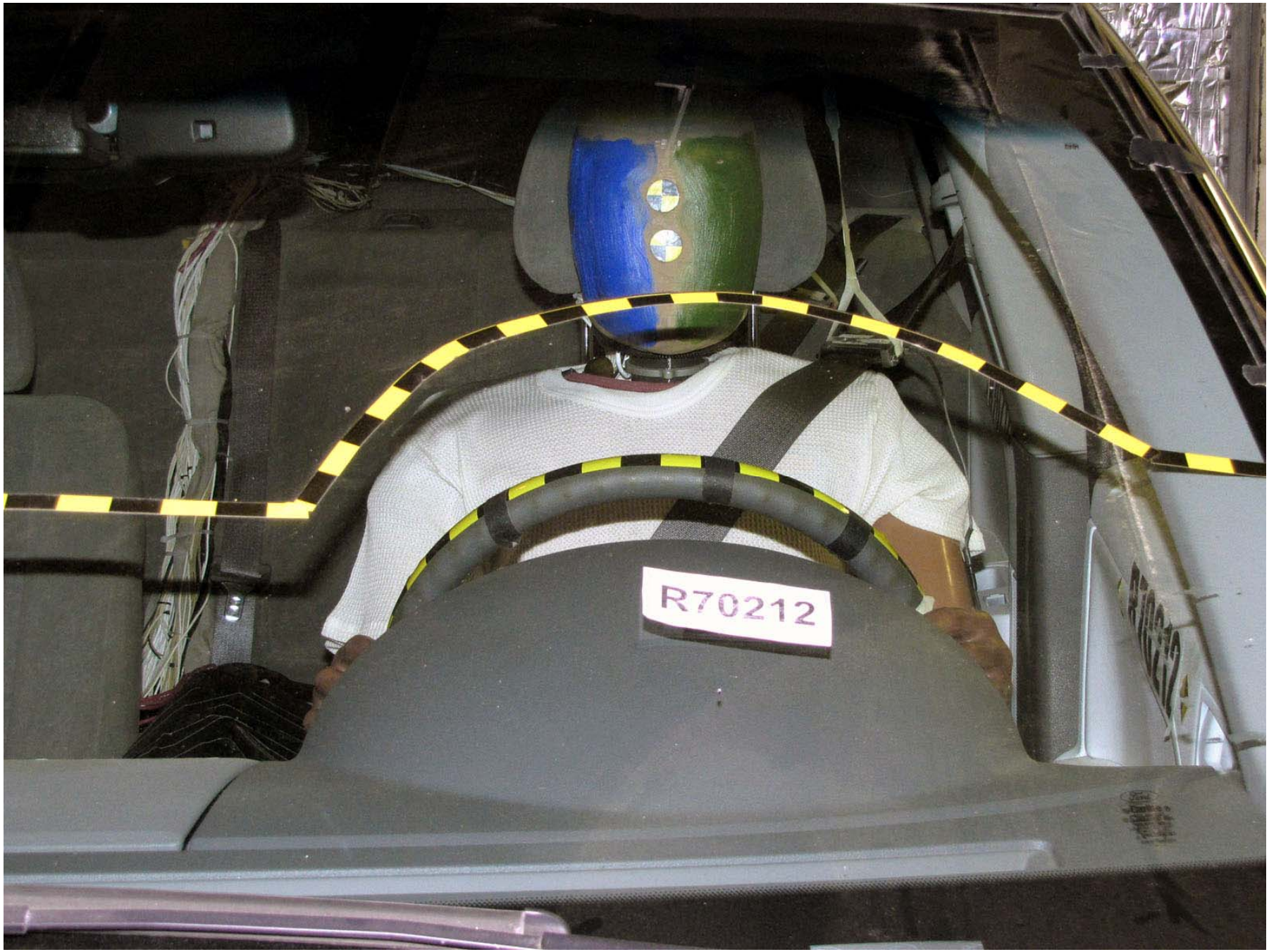

Figure A-224: Test Vehicle Pre-Test Driver Dummy Front View

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

Figure A-226: Test Vehicle Pre-Test Driver Dummy Left Side View (Door Open)

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

Figure A-228: Test Vehicle Pre-Test Driver Dummy Abdomen Front View

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

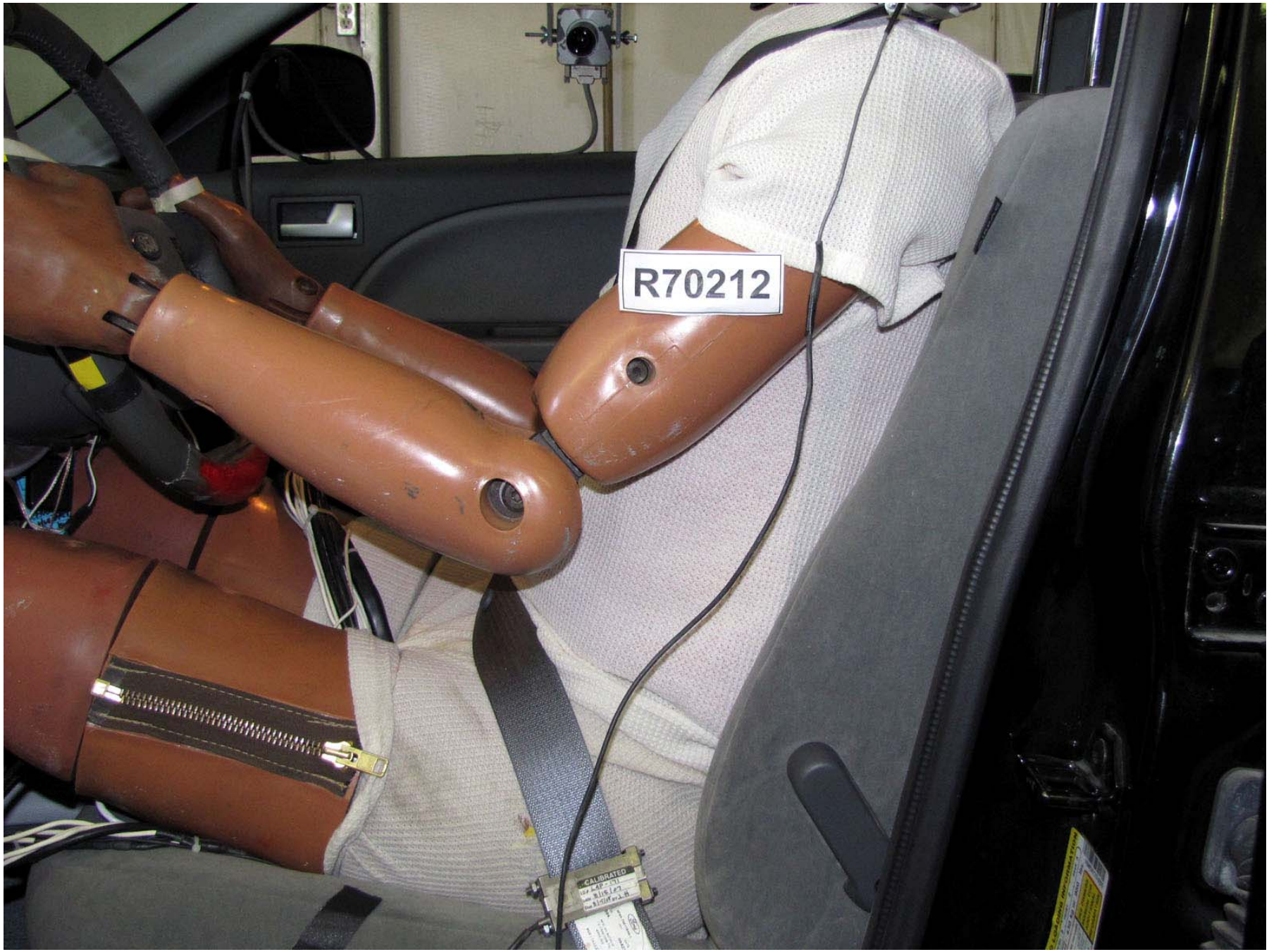

Figure A-230: Test Vehicle Pre-Test Driver Dummy Abdomen Side View

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

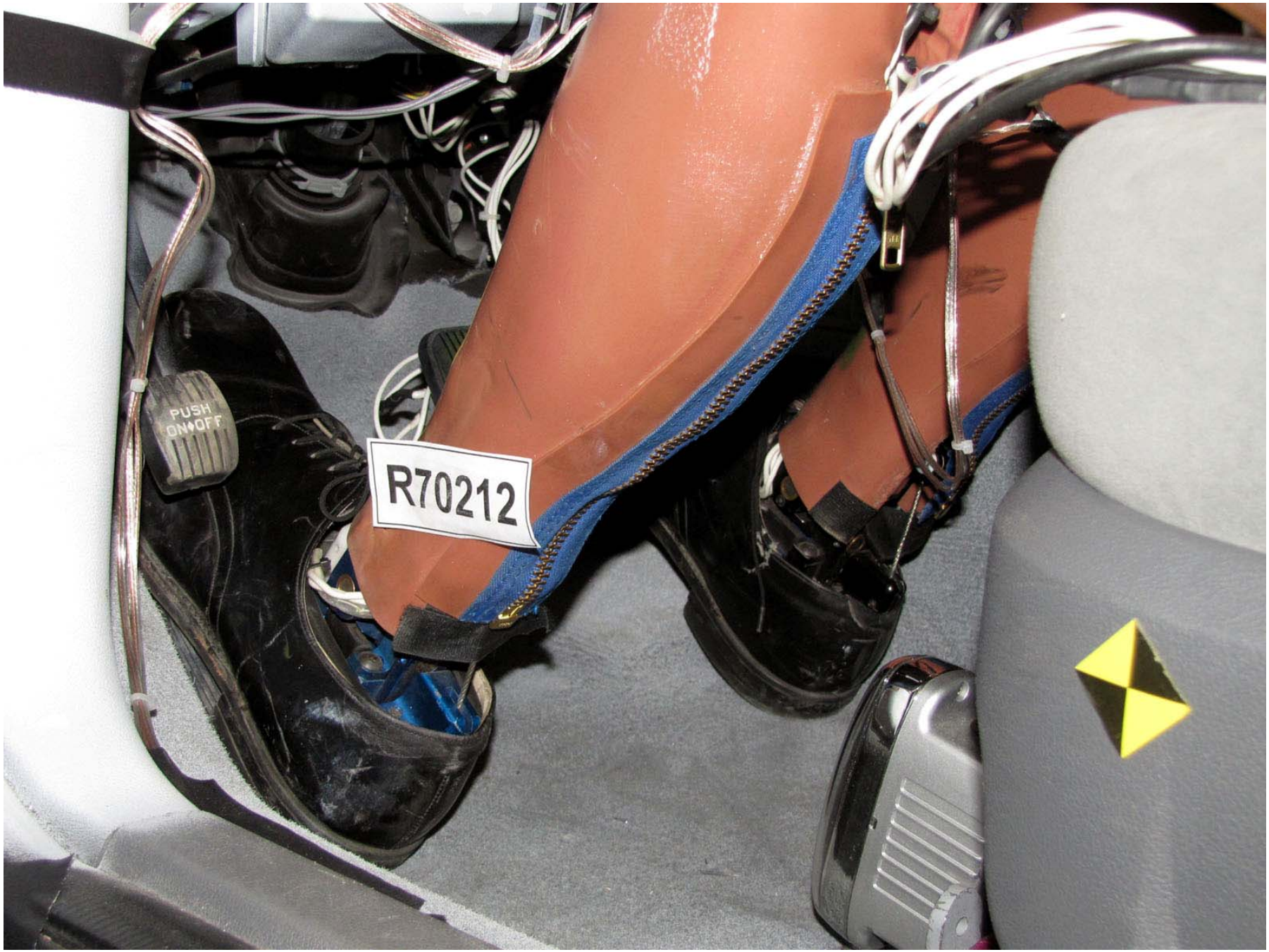

Figure A-232: Test Vehicle Pre-Test Driver Dummy Feet Positioning

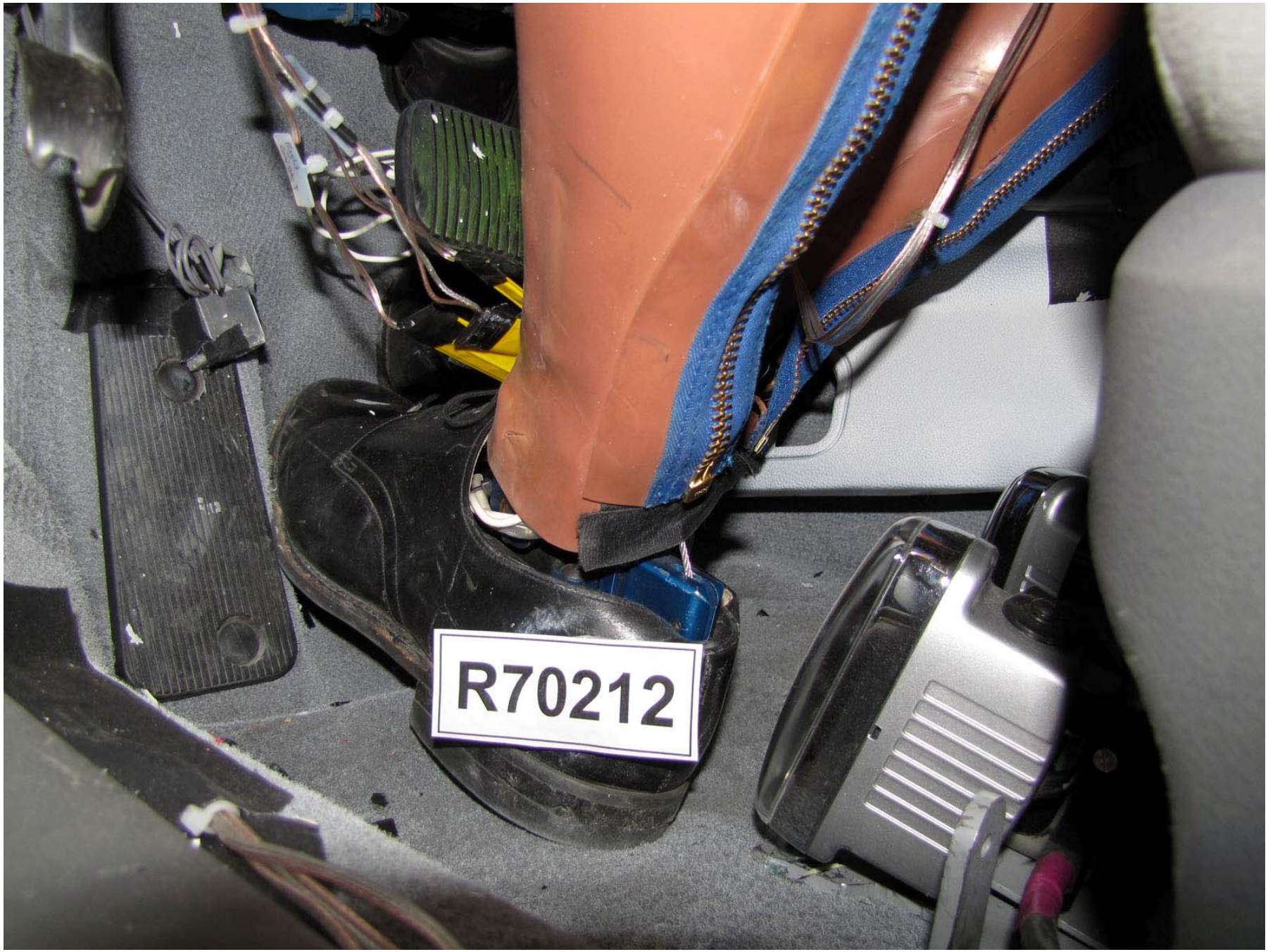

Figure A-233: Test Vehicle Post-Test Driver Dummy Feet Positioning

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

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

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

Figure A-237: Test Vehicle Pre-Test Driver Dummy Left Side View (Through Window)

Figure A-238: Test Vehicle Post-Test Driver Dummy Left Side View (Through Window)

Figure A-239: Test Vehicle Pre-Test Driver Dummy Clearance from Door

Figure A-240: Test Vehicle Post-Test Driver Dummy Clearance from Door

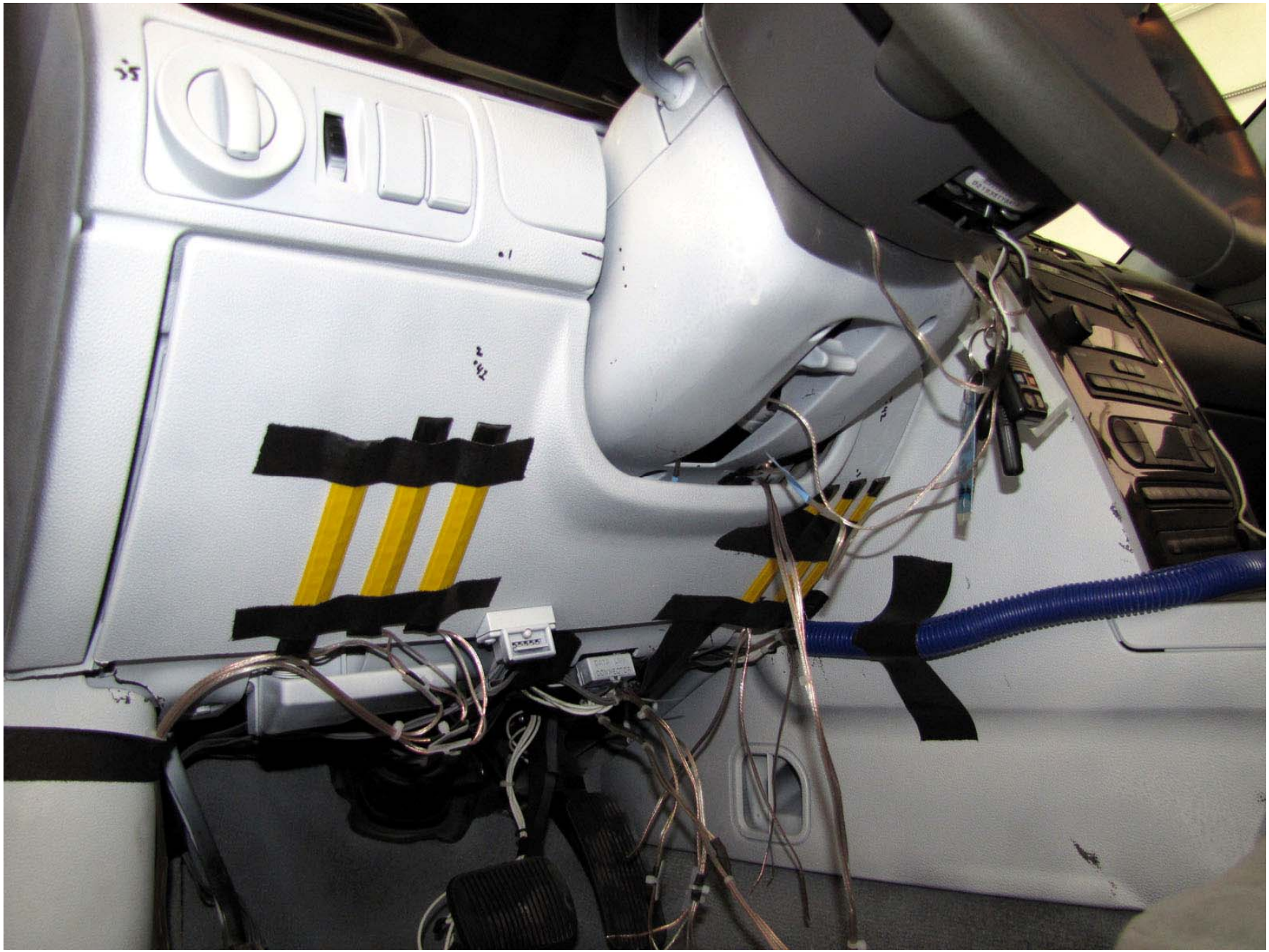

Figure A-241: Test Vehicle Pre-Test Driver's Side Knee Bolster

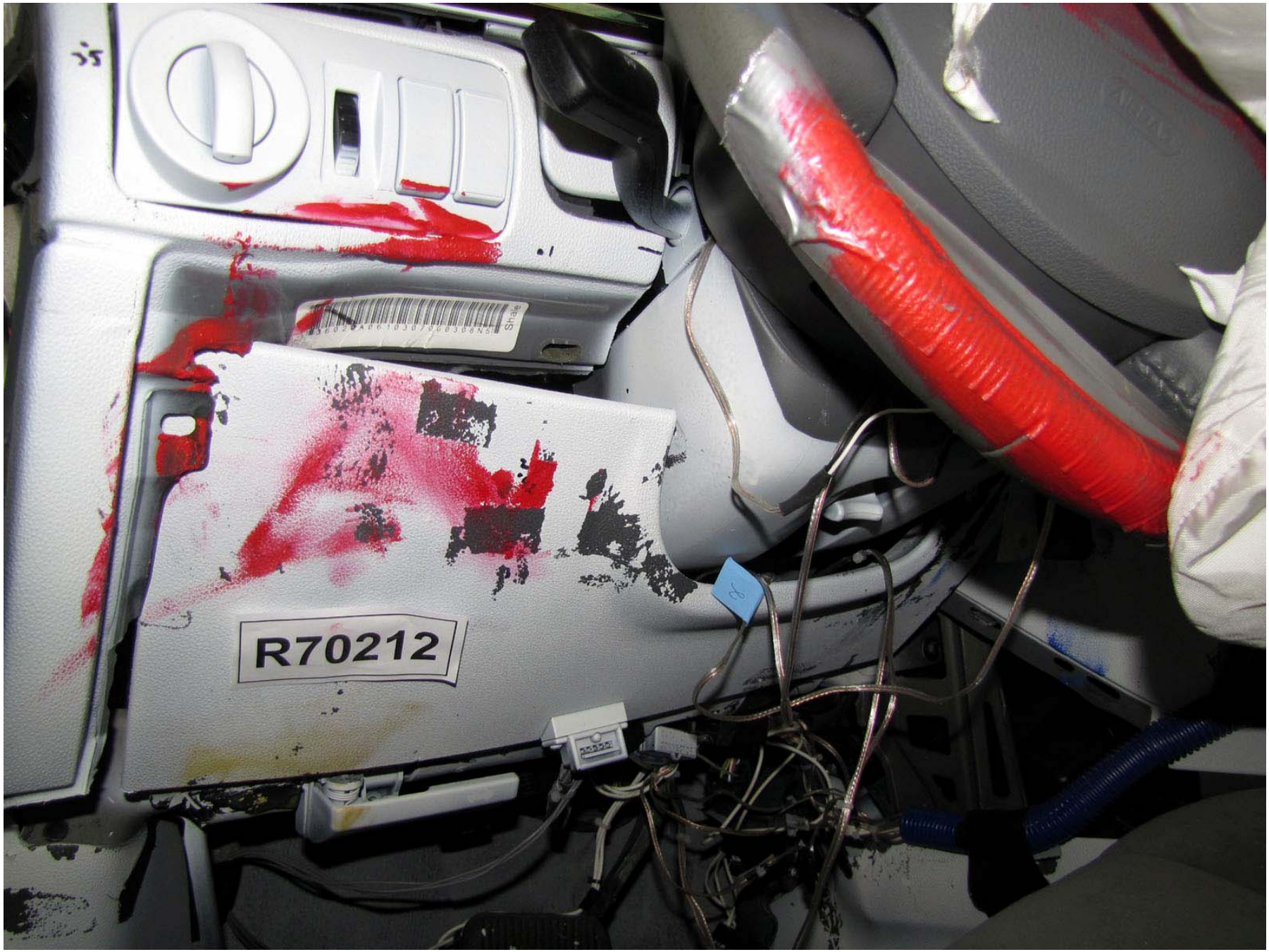

Figure A-242: Test Vehicle Post-Test Driver's Side Knee Bolster

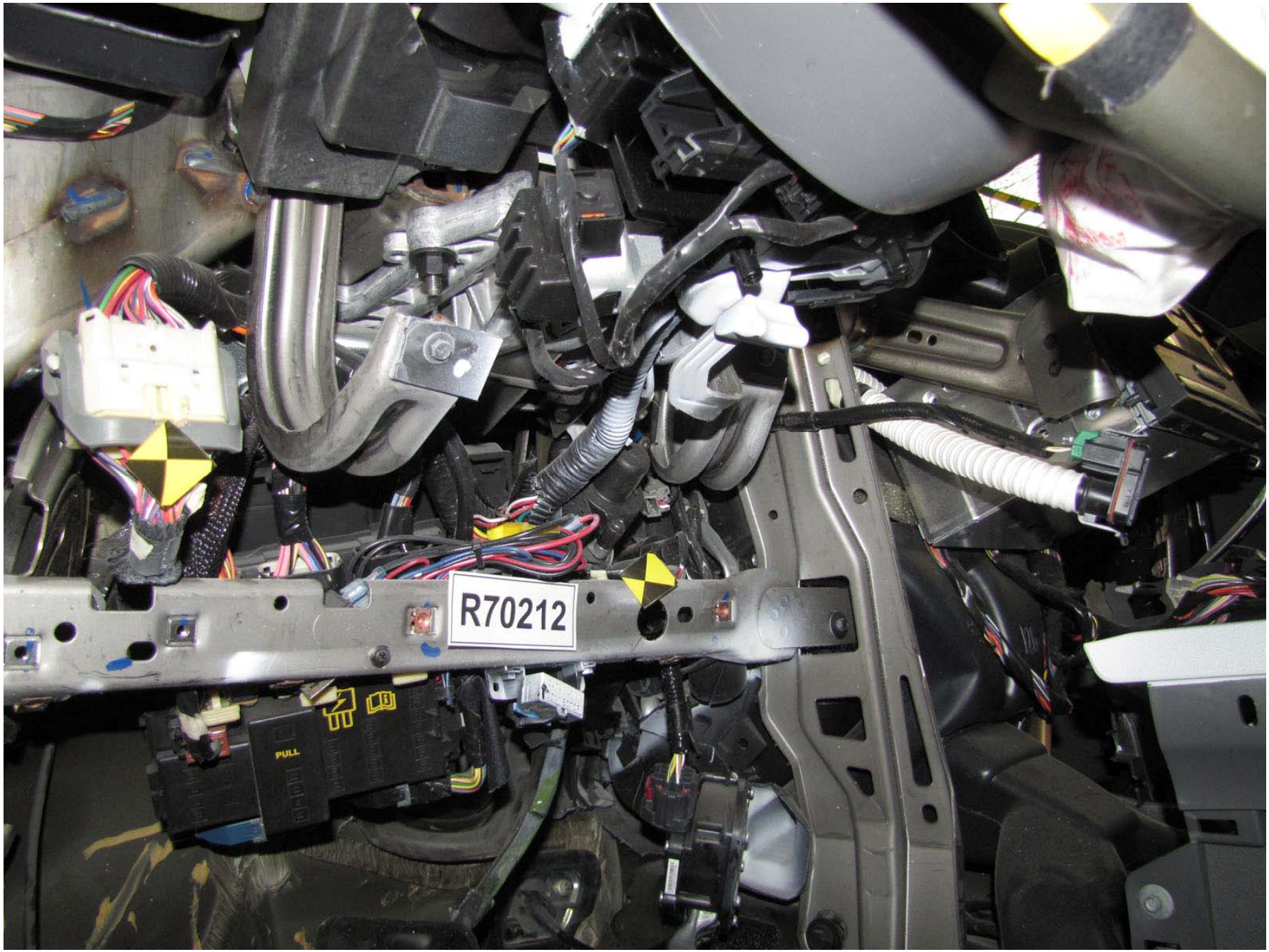

Figure A-243: Test Vehicle Post-Test Driver's Side Knee Bolster, Left ¾ View

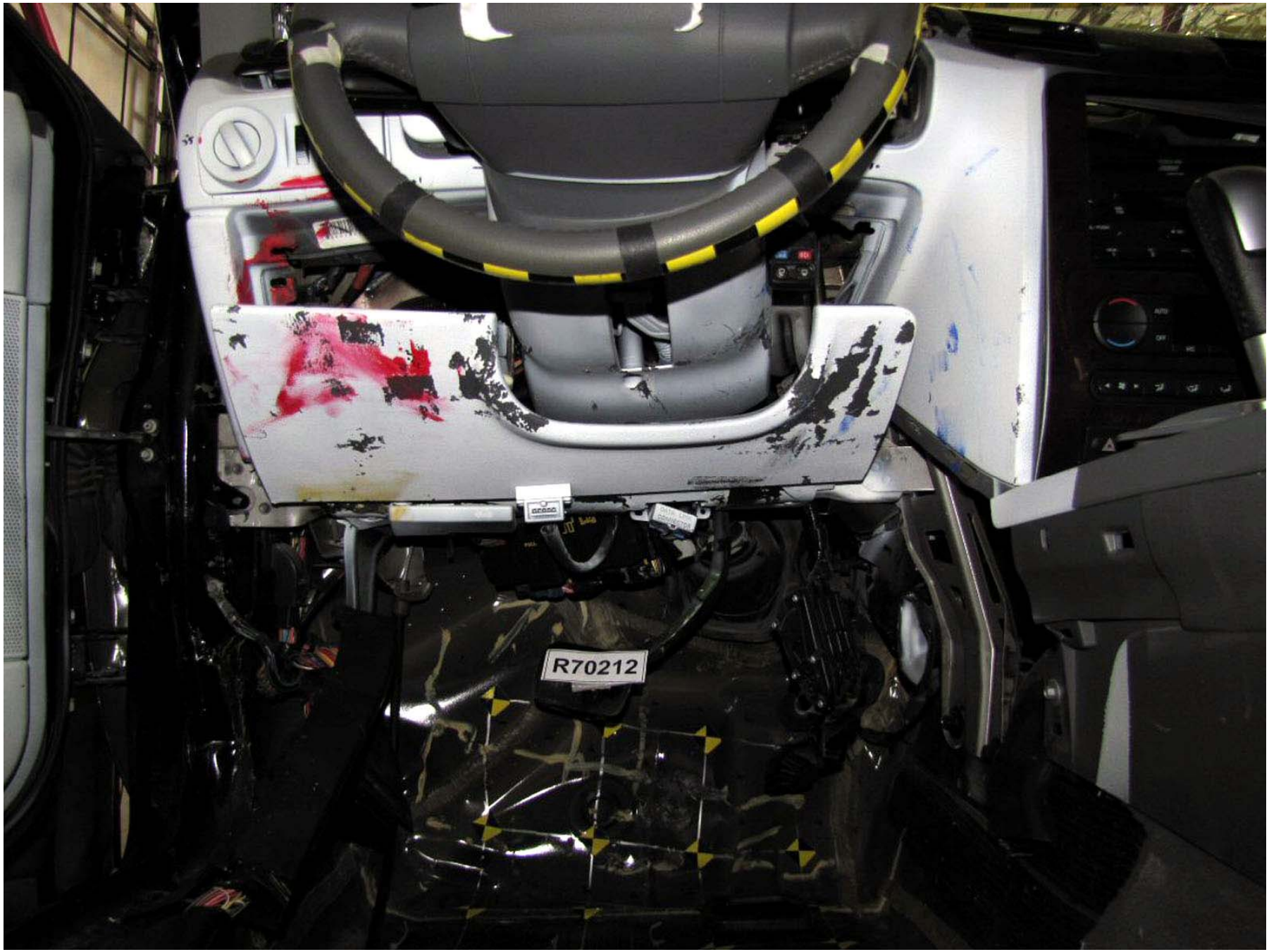

Figure A-244: Test Vehicle Post-Test Driver's Side Knee Bolster

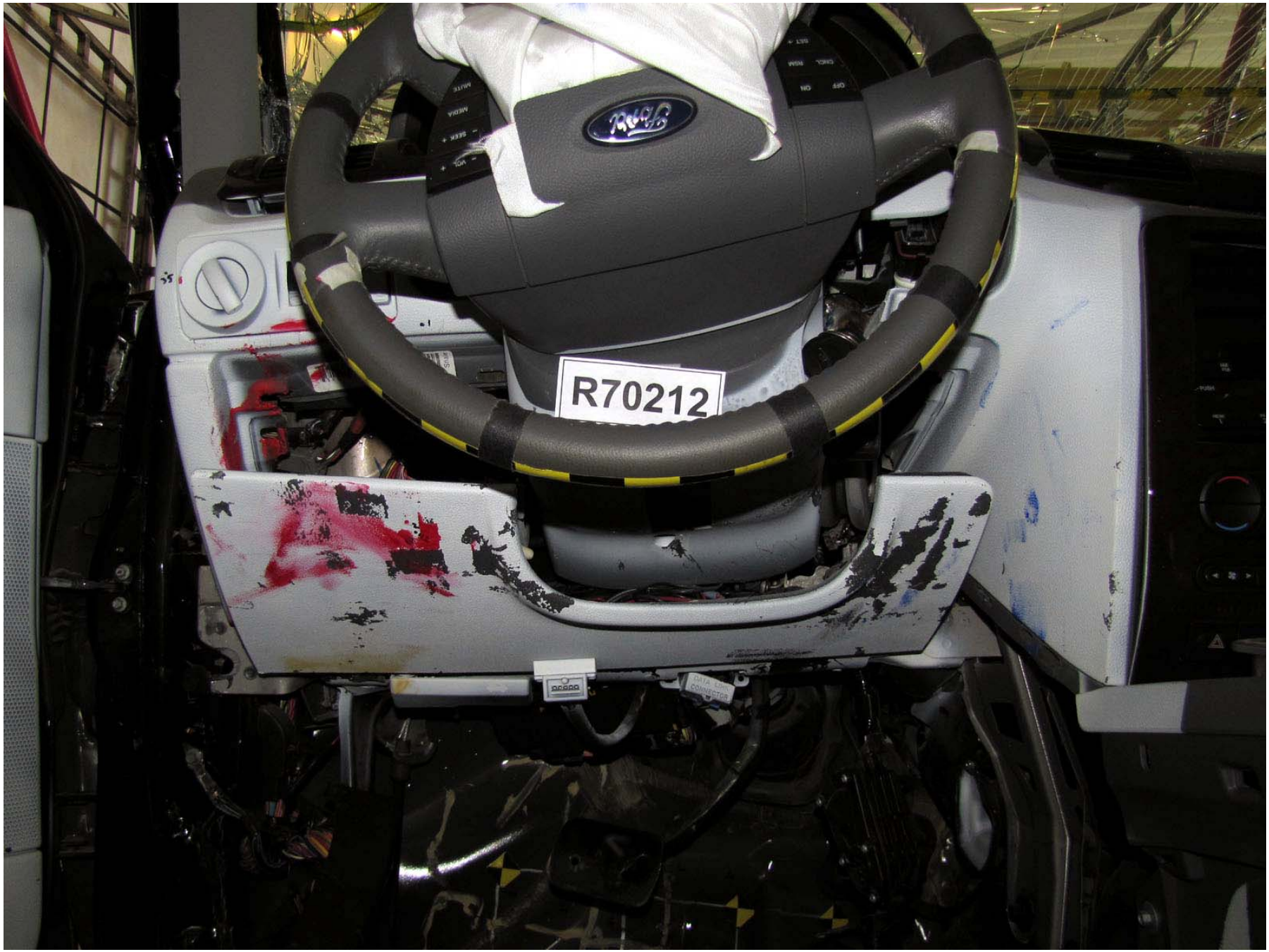

Figure A-245: Test Vehicle Post-Test Driver's Side Knee Bolster

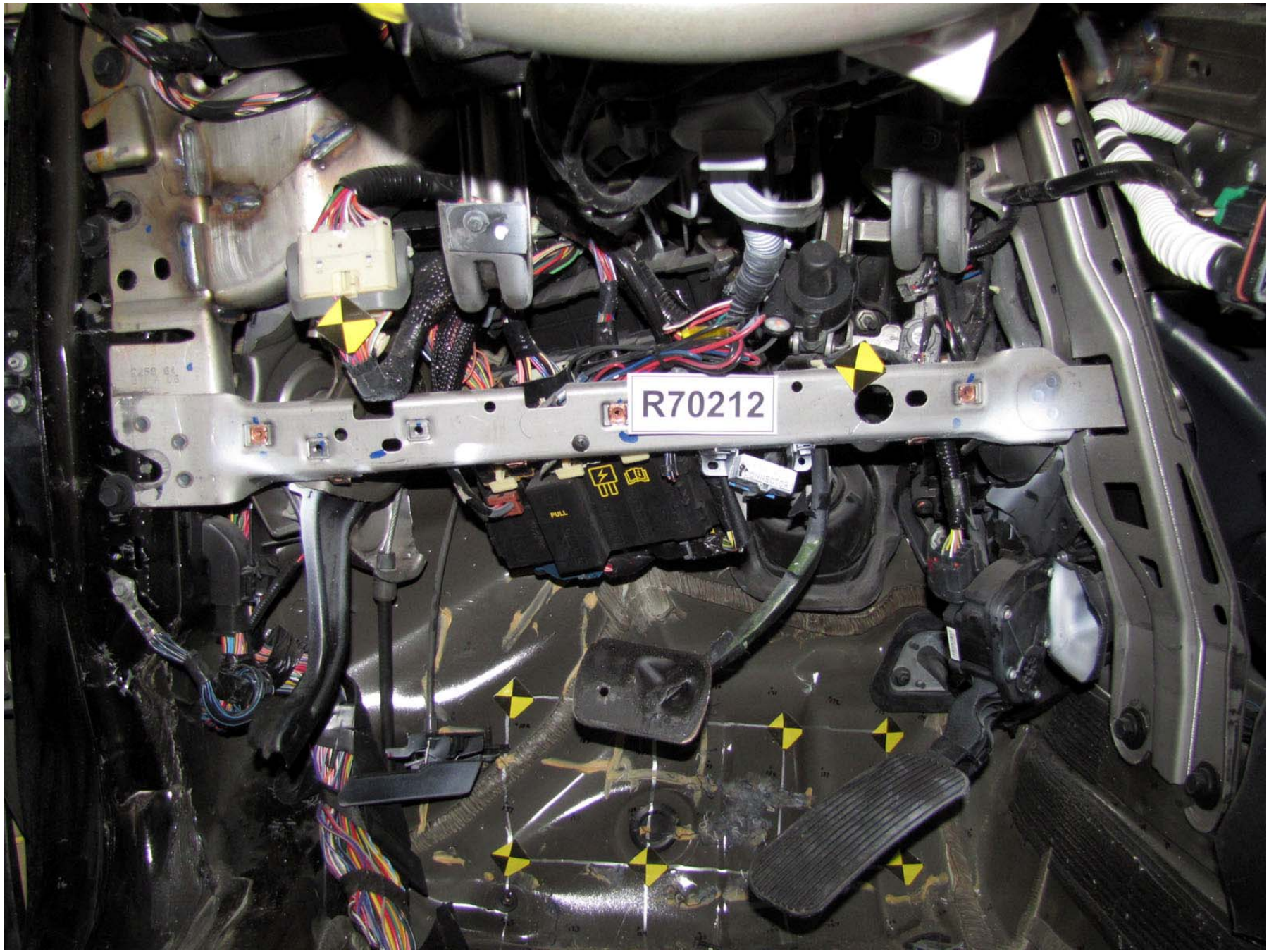

Figure A-246: Test Vehicle Post-Test Driver's Side Knee Bolster

Figure A-247: Test Vehicle Pre-Test Driver Dummy Head

Figure A-248: Test Vehicle Post-Test Driver Dummy Head

Figure A-249. Test Vehicle Post-Test Driver Dummy Contact, Airbag

Figure A-250: Test Vehicle Post-Test Driver Dummy Contact, Arm

Figure A-251: Test Vehicle Post-Test Driver Dummy Contact, Door Panel

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

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

Figure A-254: Test Vehicle Pre-Test Rear Door Panel

Figure A-255: Test Vehicle Post-Test Rear Door Panel

Figure A-256: Test Vehicle Pre-Test Passenger Dummy Right Side View

Figure A-257: Test Vehicle Post-Test Passenger Dummy Right Side View

Figure A-258: Test Vehicle Pre-Test Passenger Dummy Front View

Figure A-259: Test Vehicle Post-Test Passenger Dummy Front View

Figure A-260: Test Vehicle Pre-Test Passenger Dummy Left Side View (Door Open)

Figure A-261: Test Vehicle Post-Test Passenger Dummy Left Side View (Door Closed)

Figure A-262: Test Vehicle Pre-Test Passenger Dummy Feet Positioning

Figure A-263: Test Vehicle Pre-Test Passenger Dummy Feet Positioning

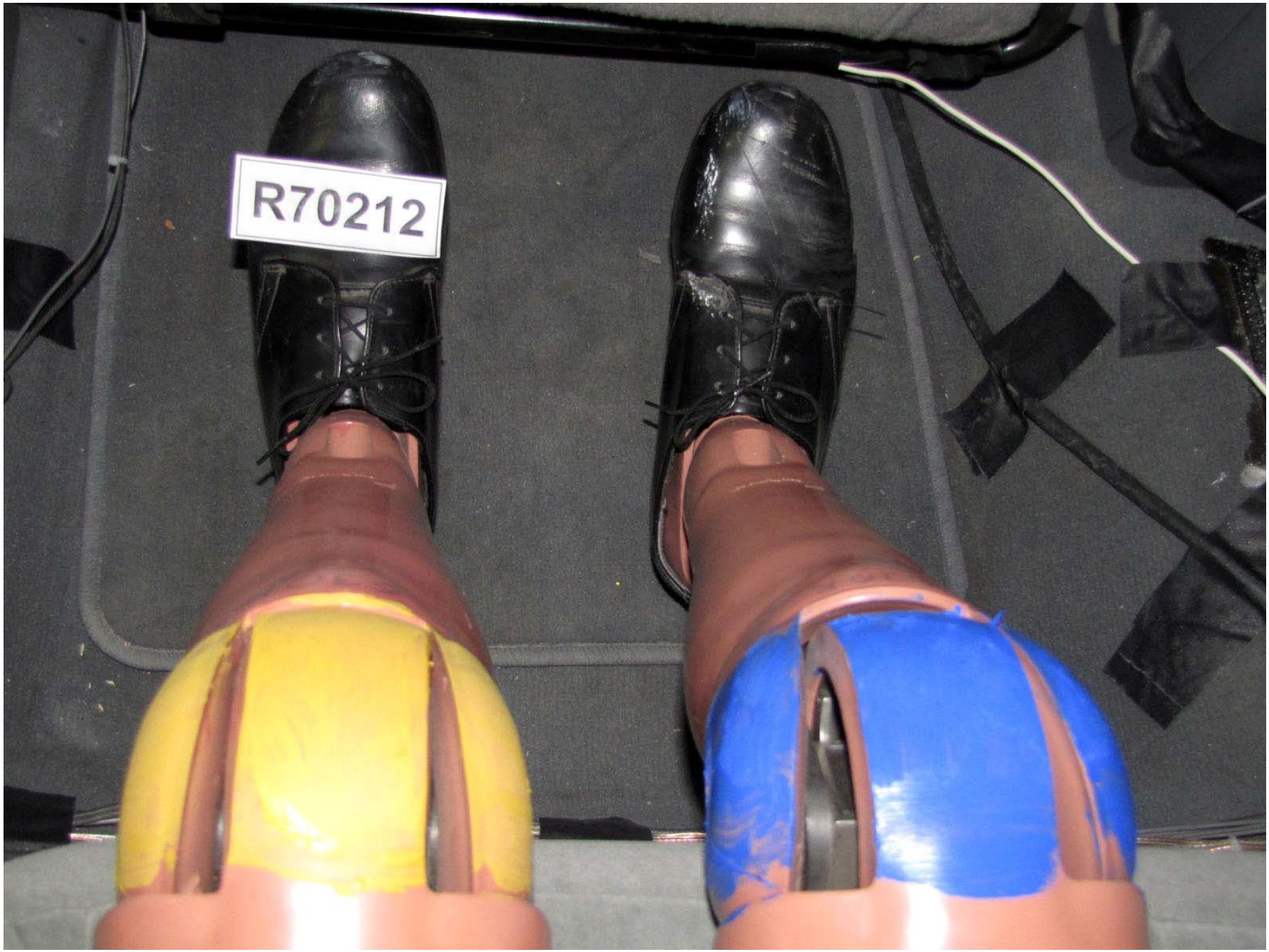

Figure A-264: Test Vehicle Pre-Test Passenger Dummy Feet Positioning

Figure A-265: Test Vehicle Pre-Test Passenger Dummy Feet Positioning

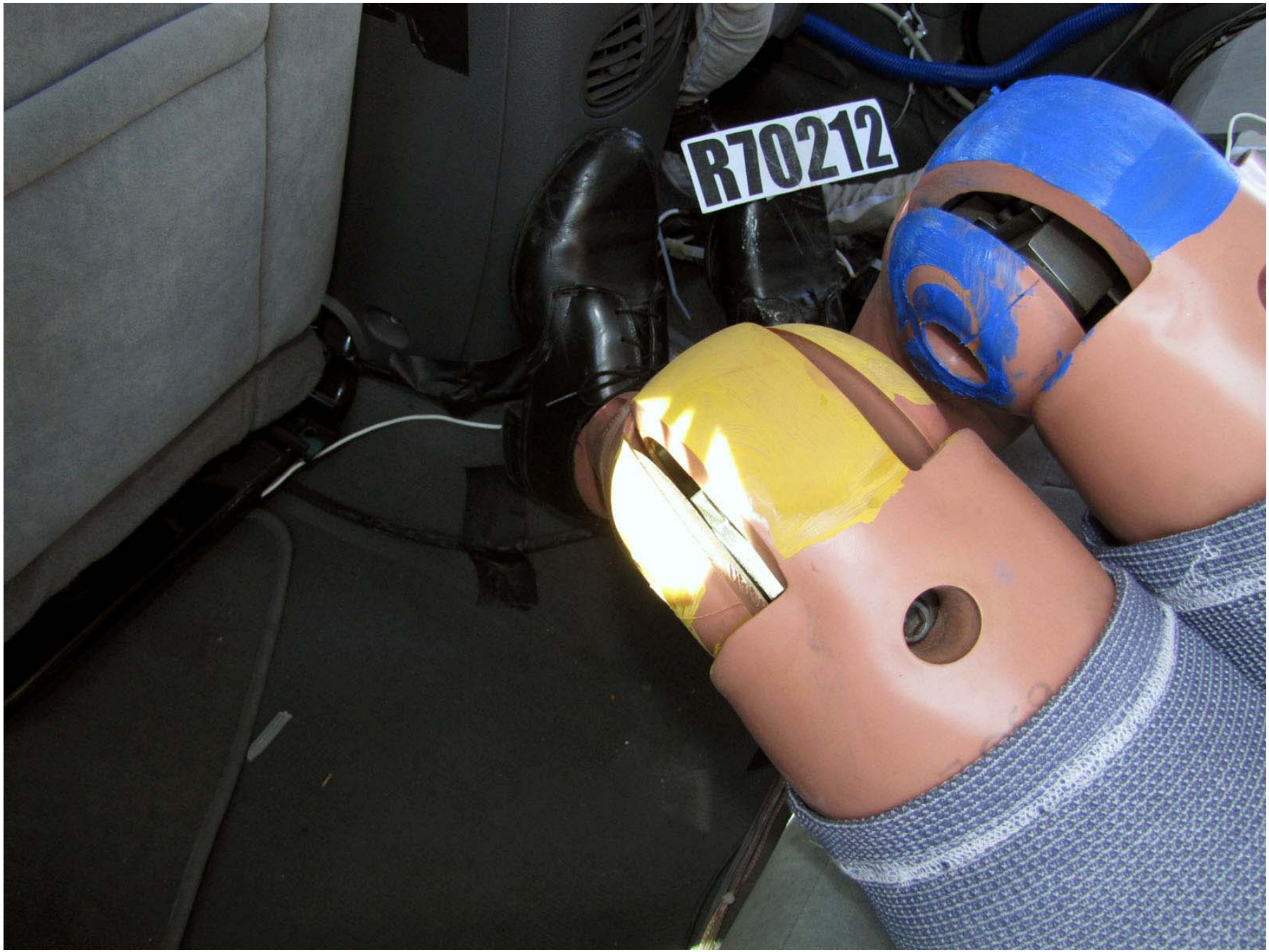

Figure A-266: Test Vehicle Post-Test Passenger Dummy Feet Positioning

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

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

Figure A-269: Test Vehicle Pre-Test Passenger Dummy Left Side View (Through Window)

Figure A-270: Test Vehicle Post-Test Passenger Dummy Left Side View (Through Window)

Figure A-271: Test Vehicle Pre-Test Passenger Dummy Clearance from Door

Figure A-272: Test Vehicle Post-Test Passenger Dummy Clearance from Door

Figure A-273: Test Vehicle Pre-Test Passenger's Knee Bolster

Figure A-274: Test Vehicle Post-Test Passenger's Knee Bolster

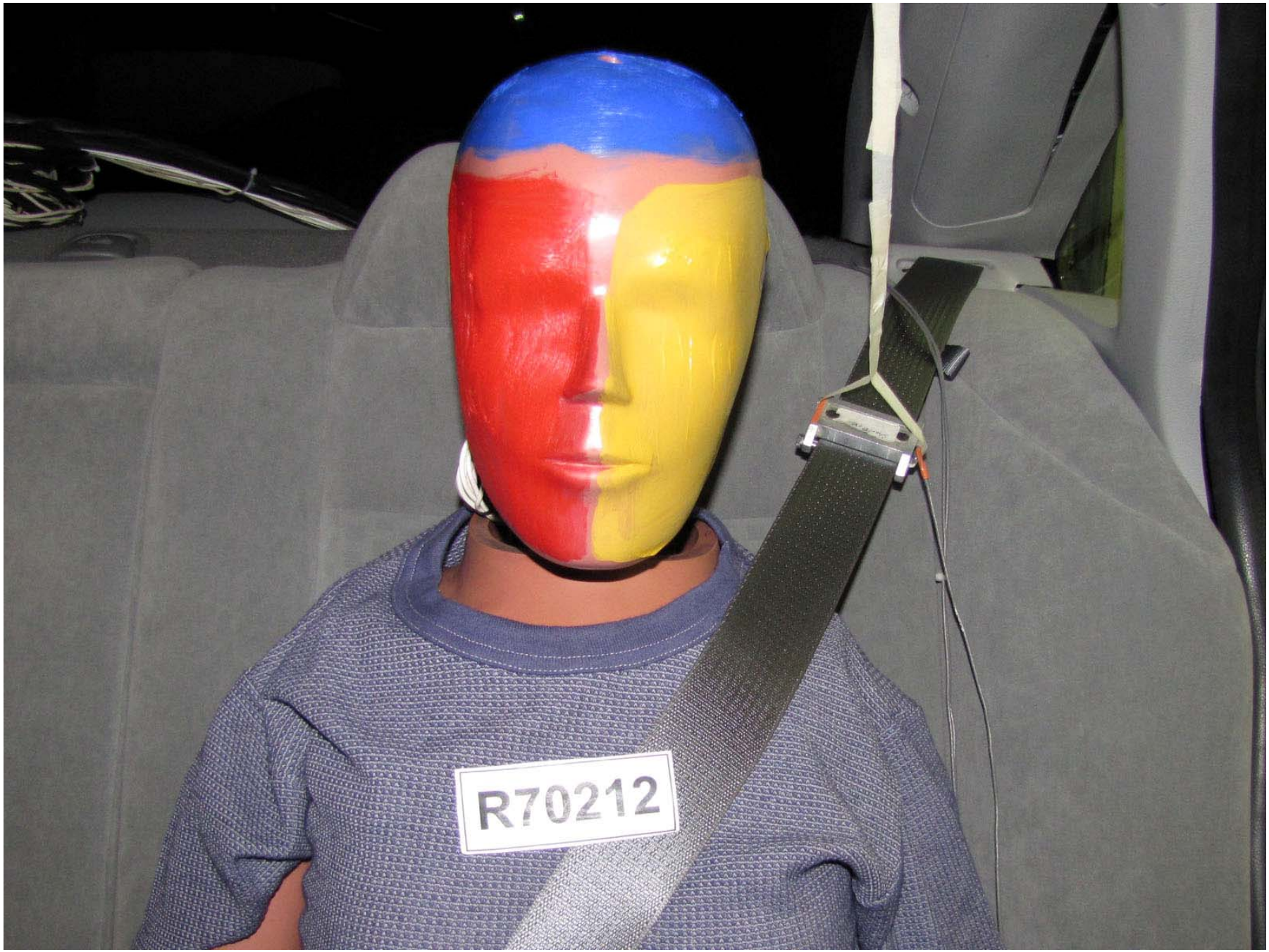

Figure A-275: Test Vehicle Pre-Test Passenger Dummy Head

Figure A-276: Test Vehicle Post-Test Passenger Dummy Head

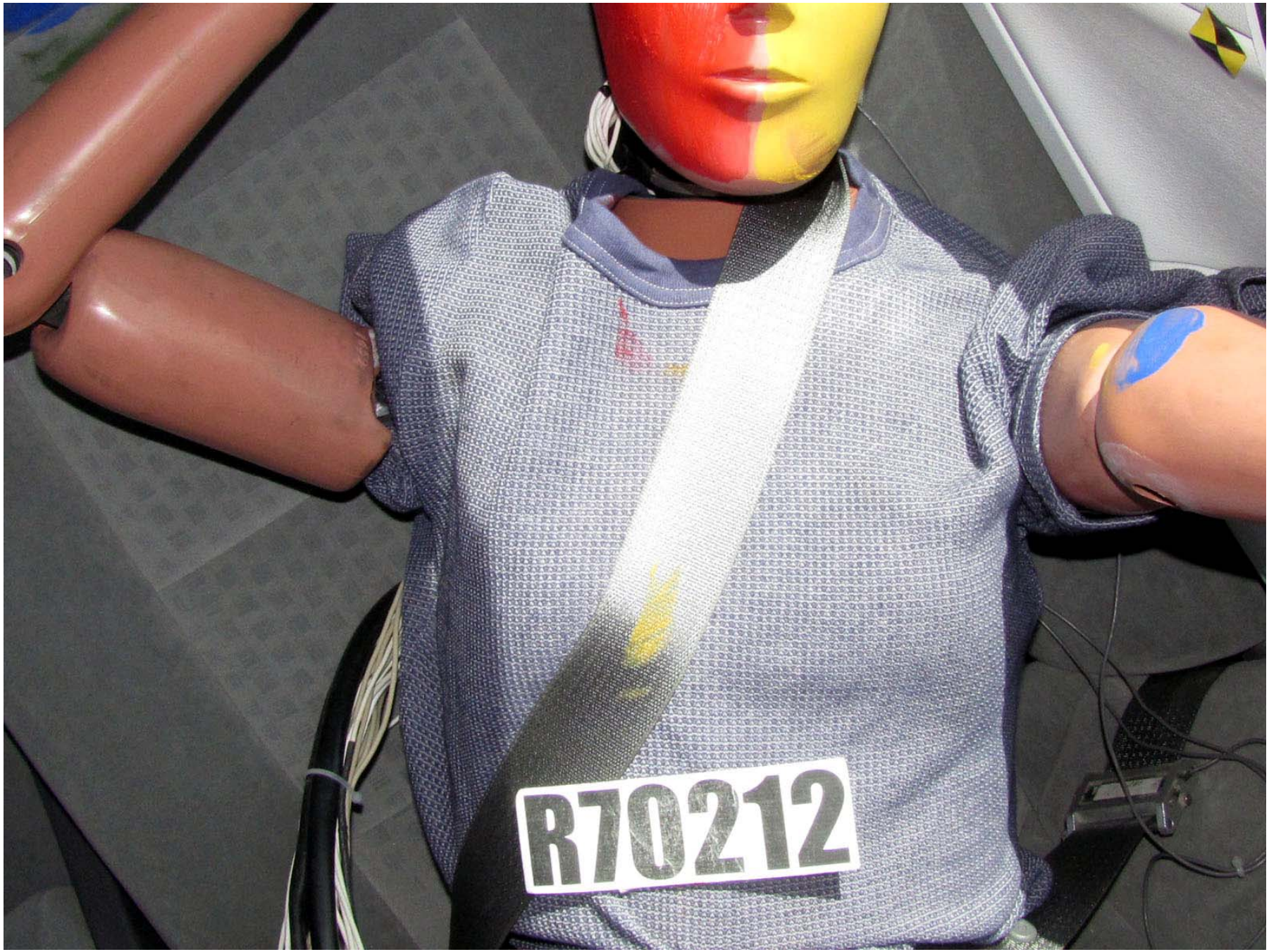

Figure A-277: Test Vehicle Post-Test Passenger Dummy Contact, Chest

Figure A-278: Test Vehicle Post-Test Passenger Dummy Contact, Left Arm

Figure A-279: Test Vehicle Post-Test Passenger Dummy Contact, Door Panel

Figure A-280: Test Vehicle Post-Test Passenger Dummy Contact, Seat Back

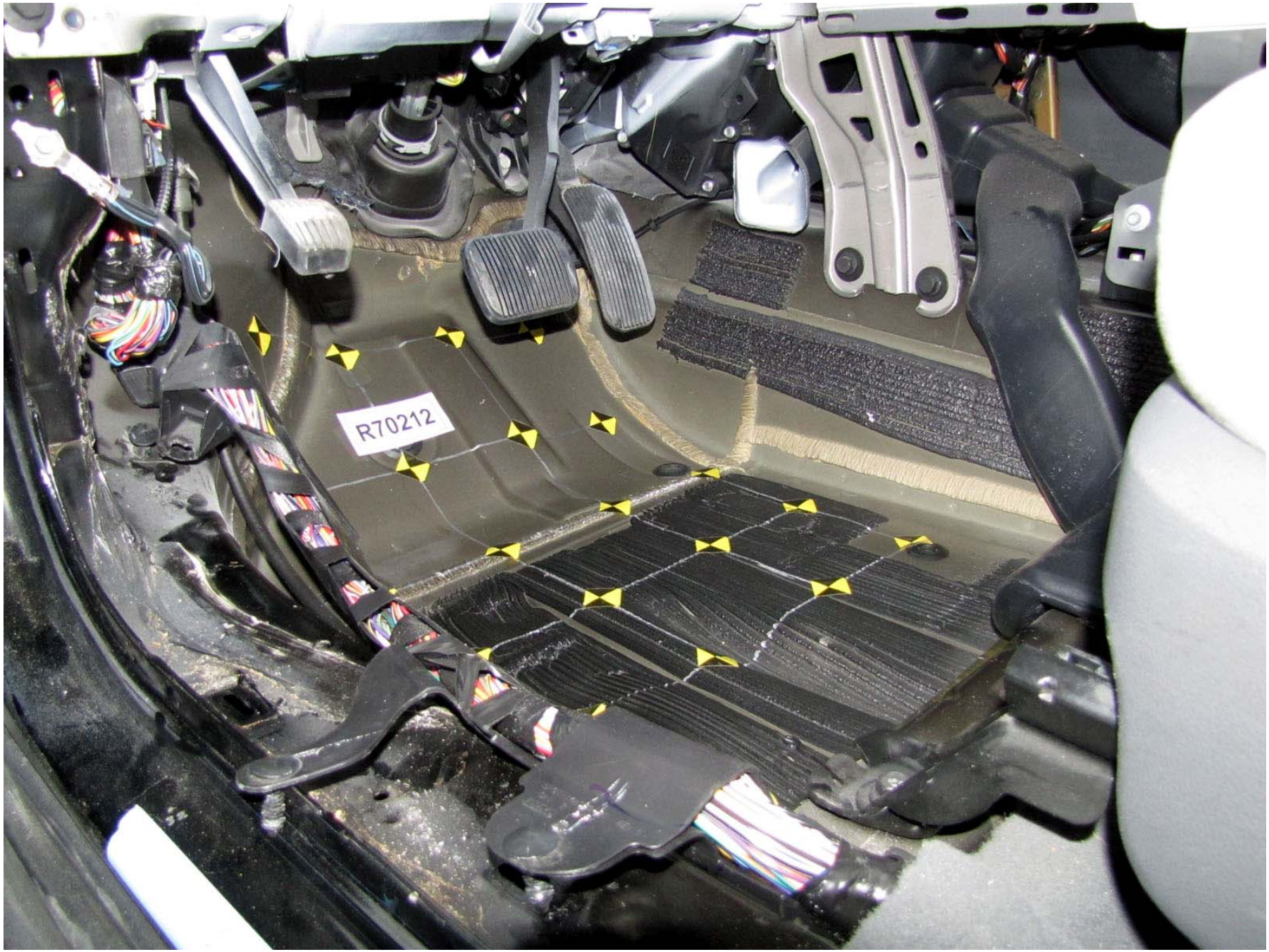

Figure A-281: Test Vehicle Pre-Test Driver Floorpan

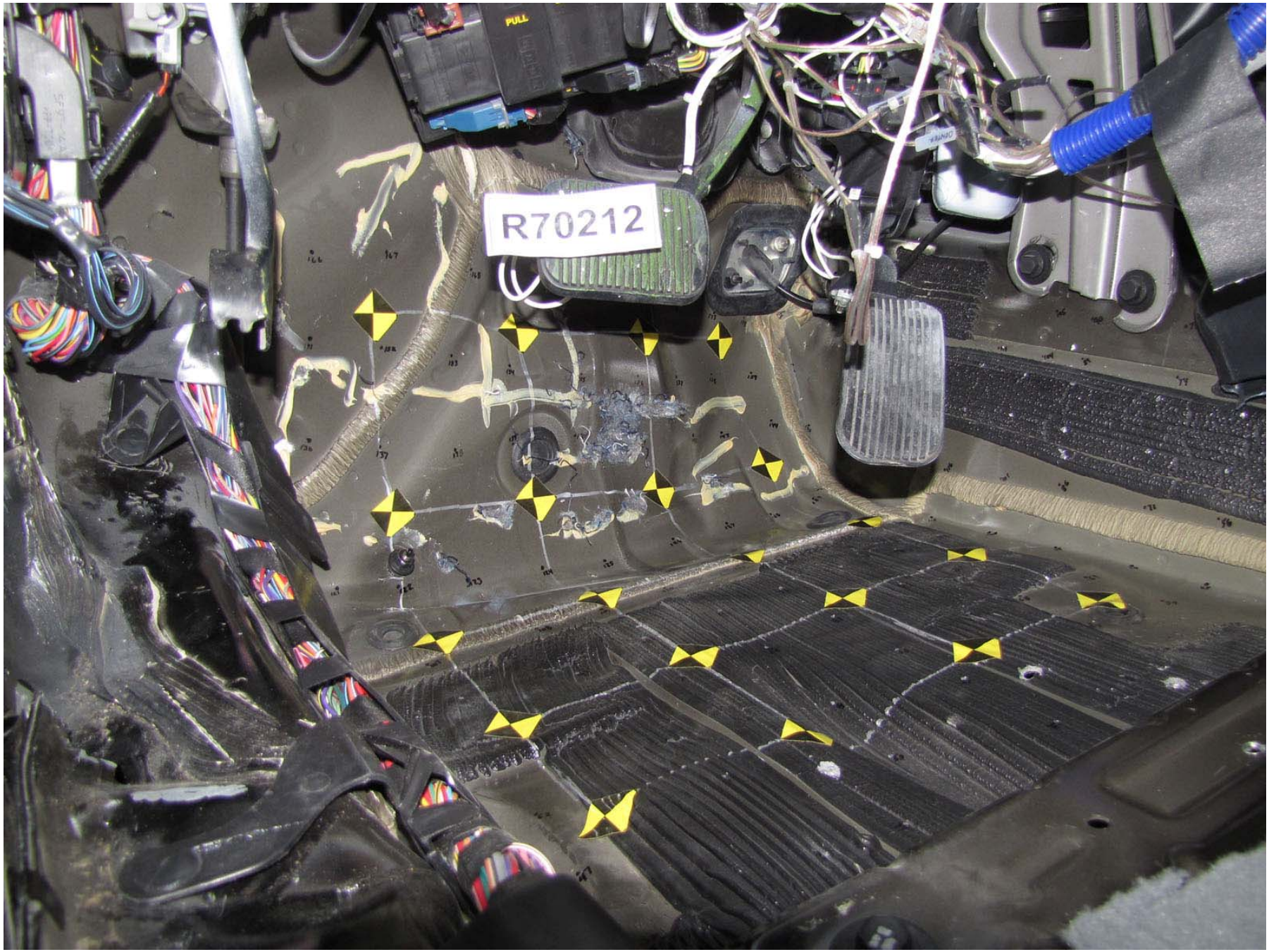

Figure A-282: Test Vehicle Post-Test Driver Floorpan

Figure A-283: Test Vehicle Pre-Test Driver Floorpan Left ¾ View, Seat Cushion Height

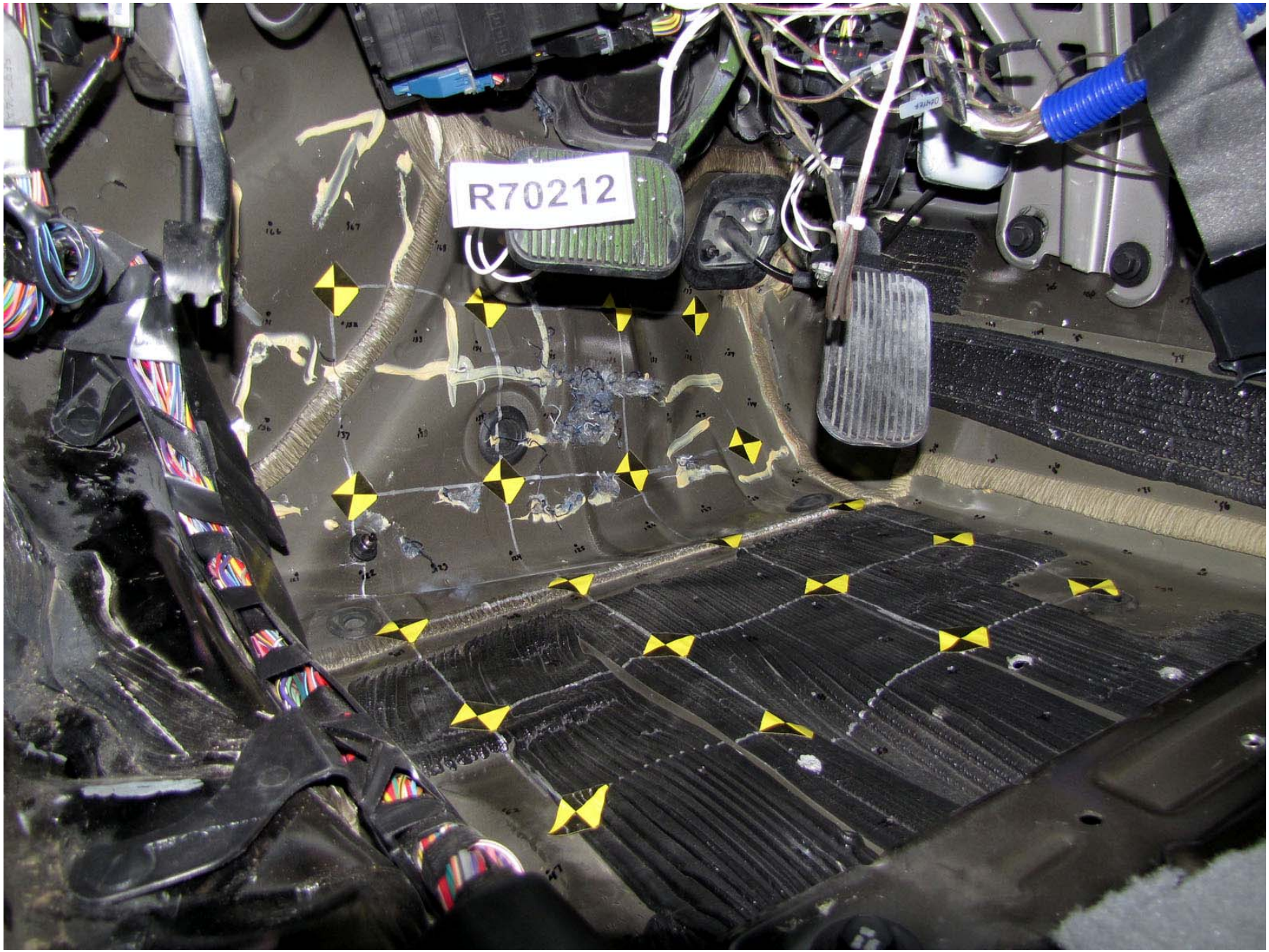

Figure A-284: Test Vehicle Post-Test Driver Floorpan Left ¾ View, Seat Cushion Height

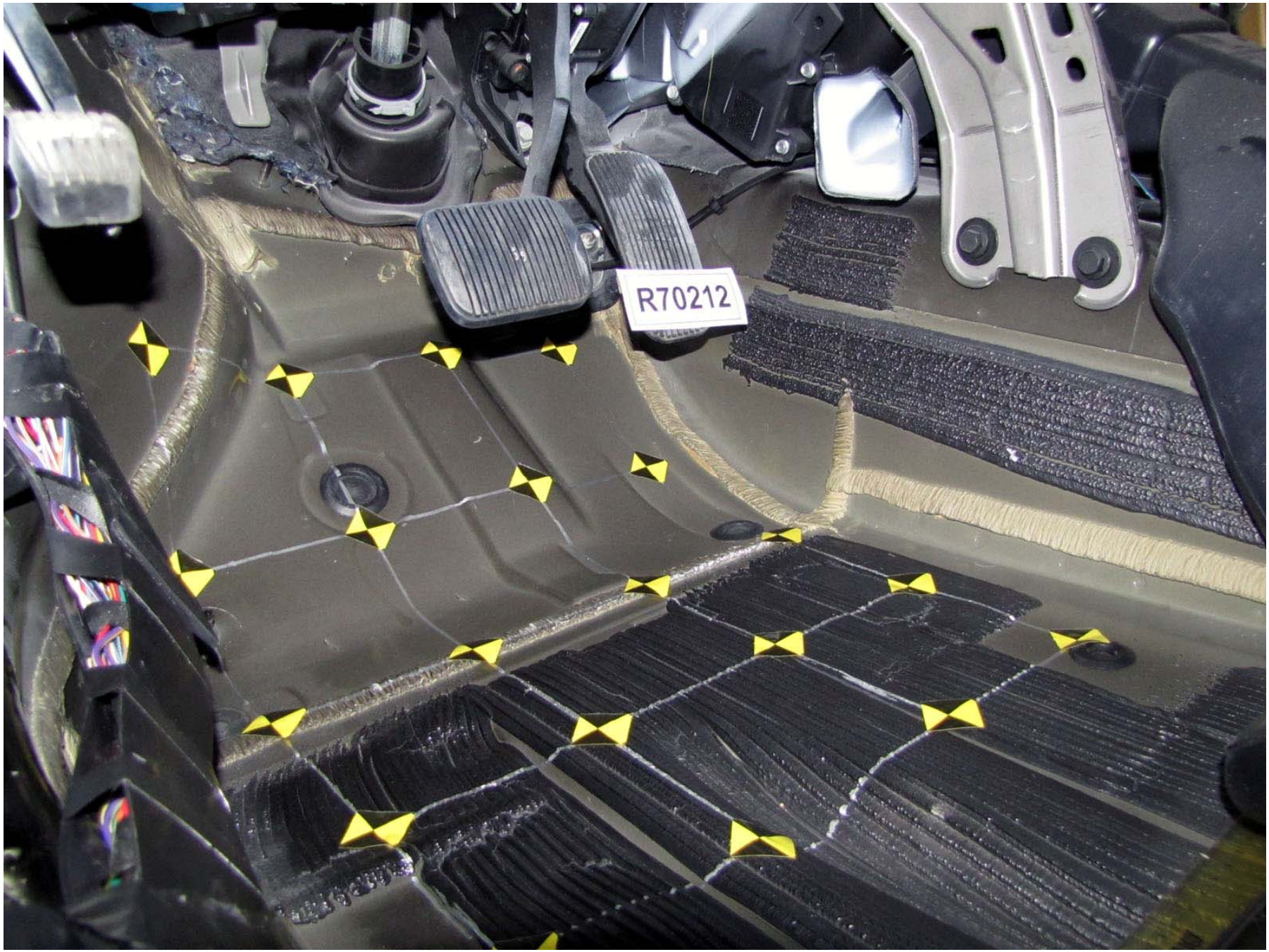

Figure A-285: Test Vehicle Pre-Test Driver Floorpan Left ¾ View, Sill Height

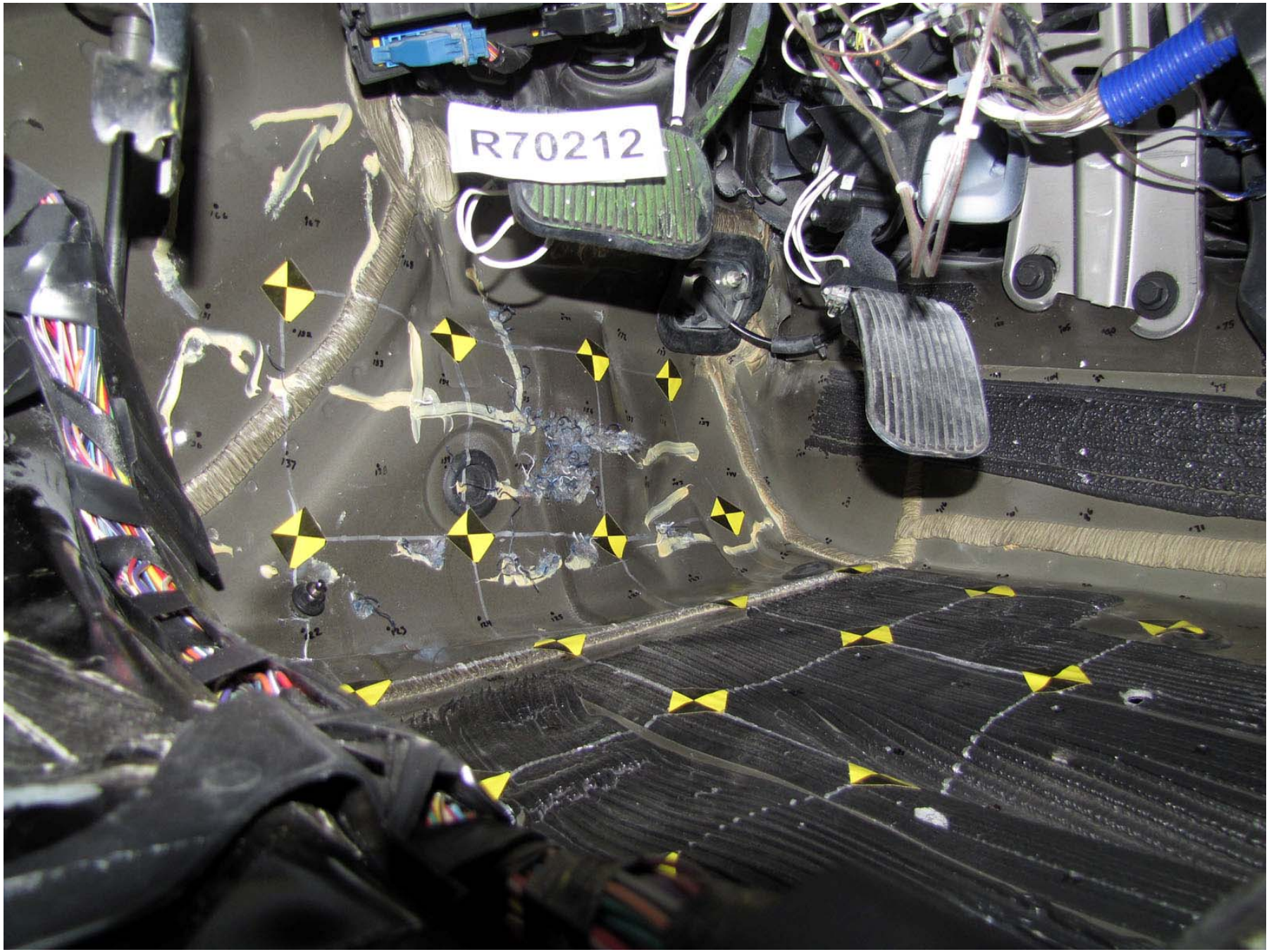

Figure A-286: Test Vehicle Post-Test Driver Floorpan Left ¾ View, Sill Height

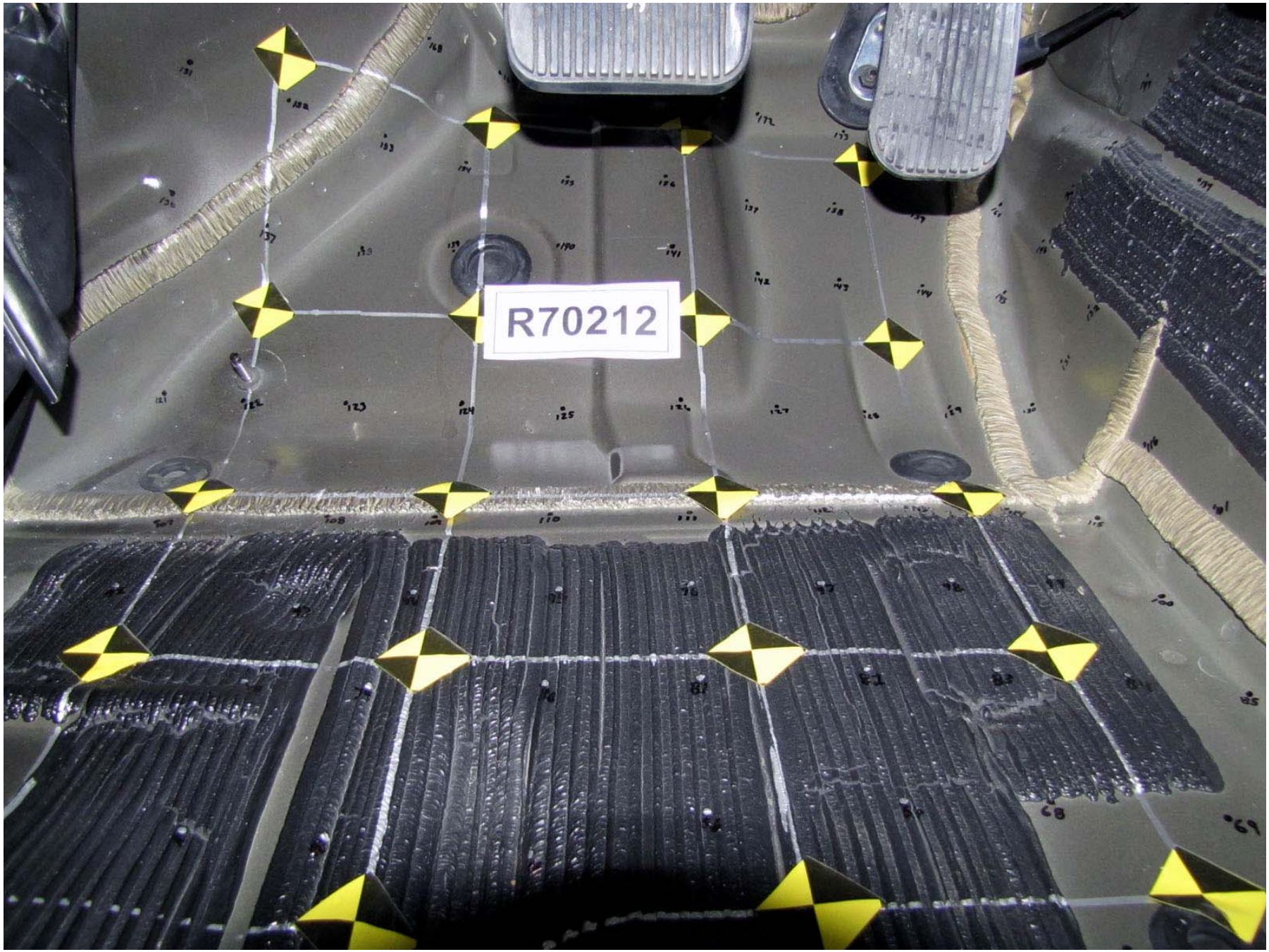

Figure A-287: Test Vehicle Pre-Test Driver Floorpan, Seat Cushion Height

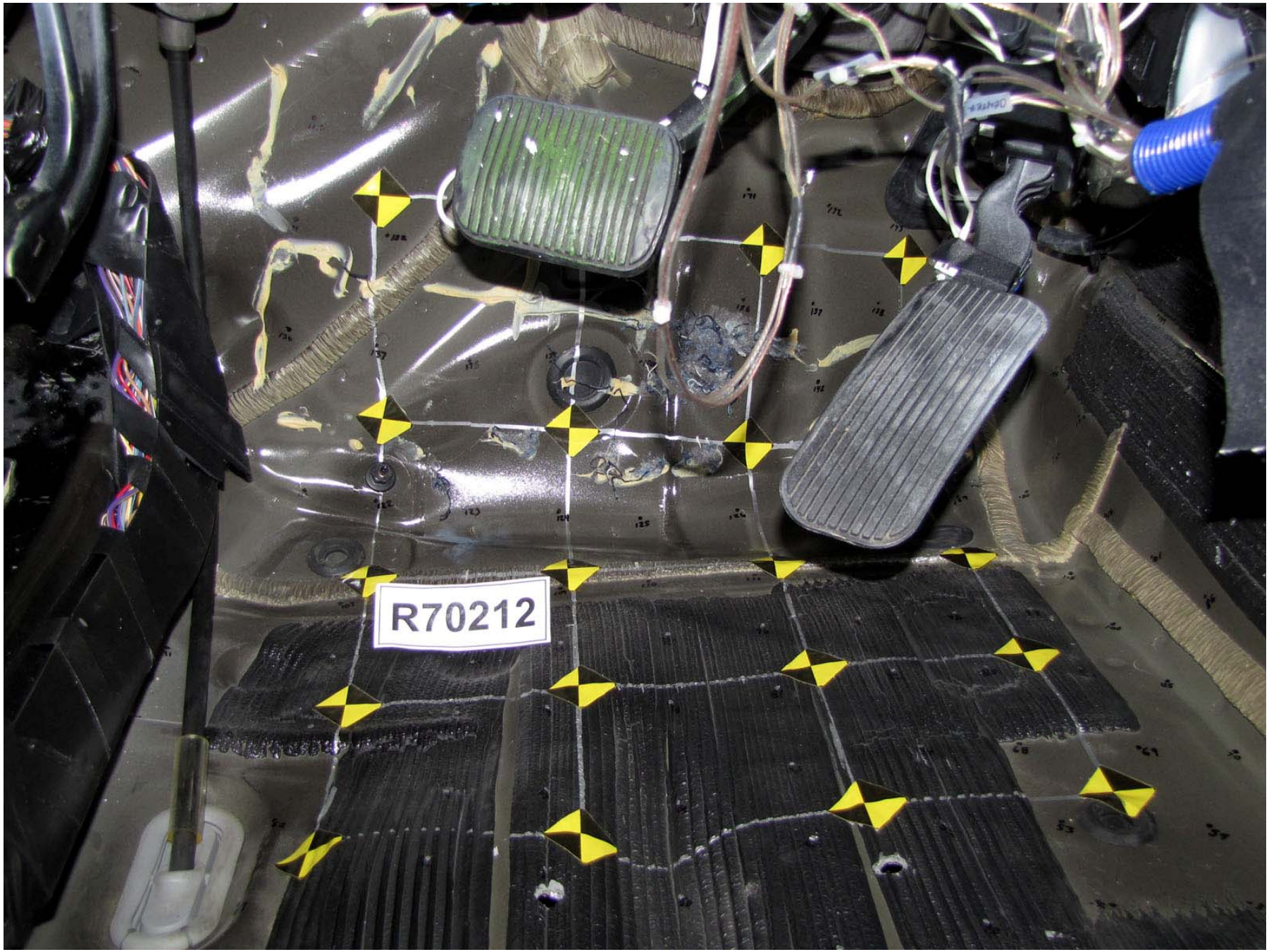

Figure A-288: Test Vehicle Post-Test Driver Floorpan, Seat Cushion Height

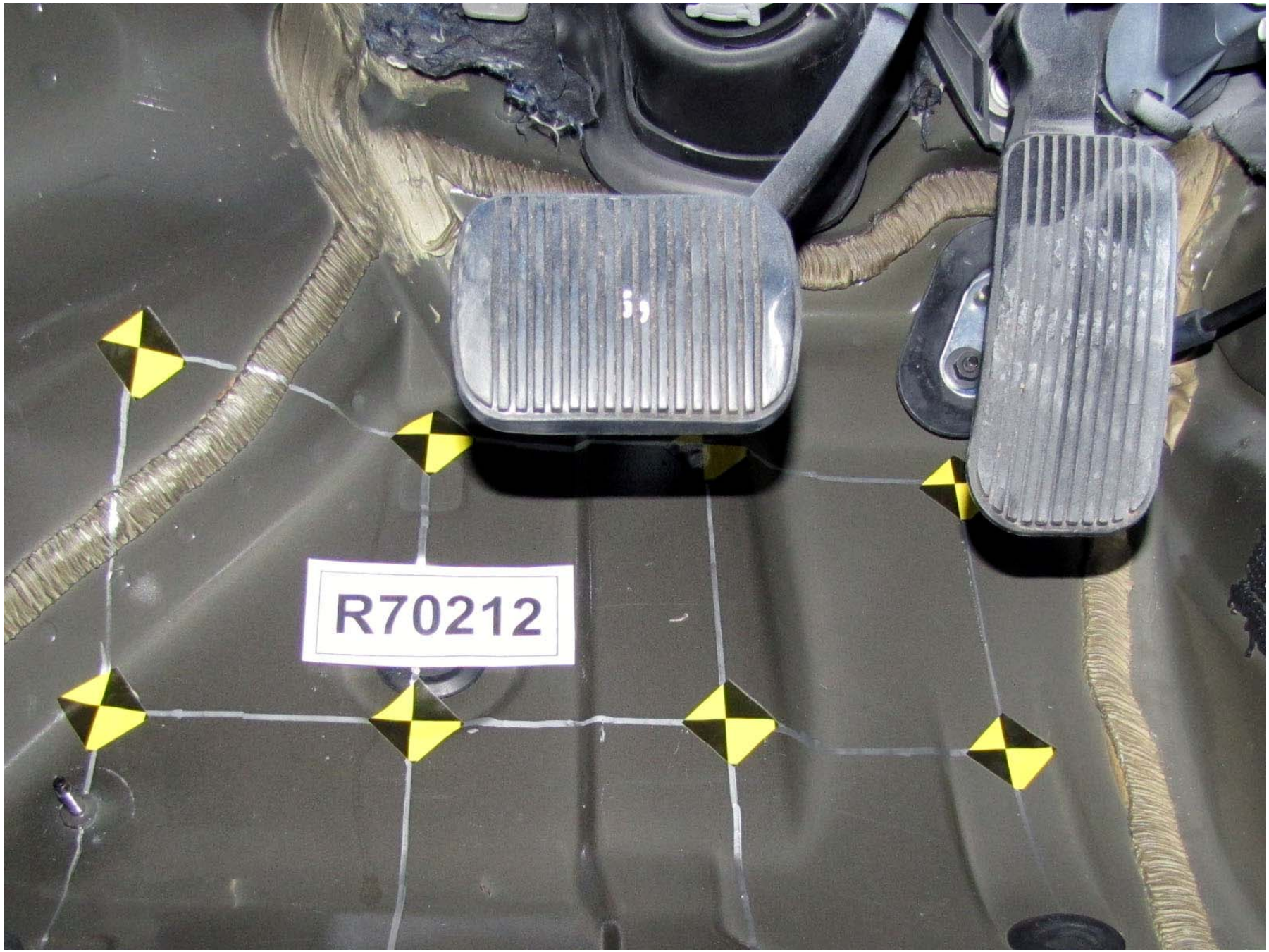

Figure A-289: Test Vehicle Pre-Test Accelerator Pedal, Seat Cushion Height

Figure A-290: Test Vehicle Post-Test Accelerator Pedal, Seat Cushion Height

Figure A-291: Test Vehicle Pre-Test Accelerator Pedal Side View, In Front of Brake Pedal

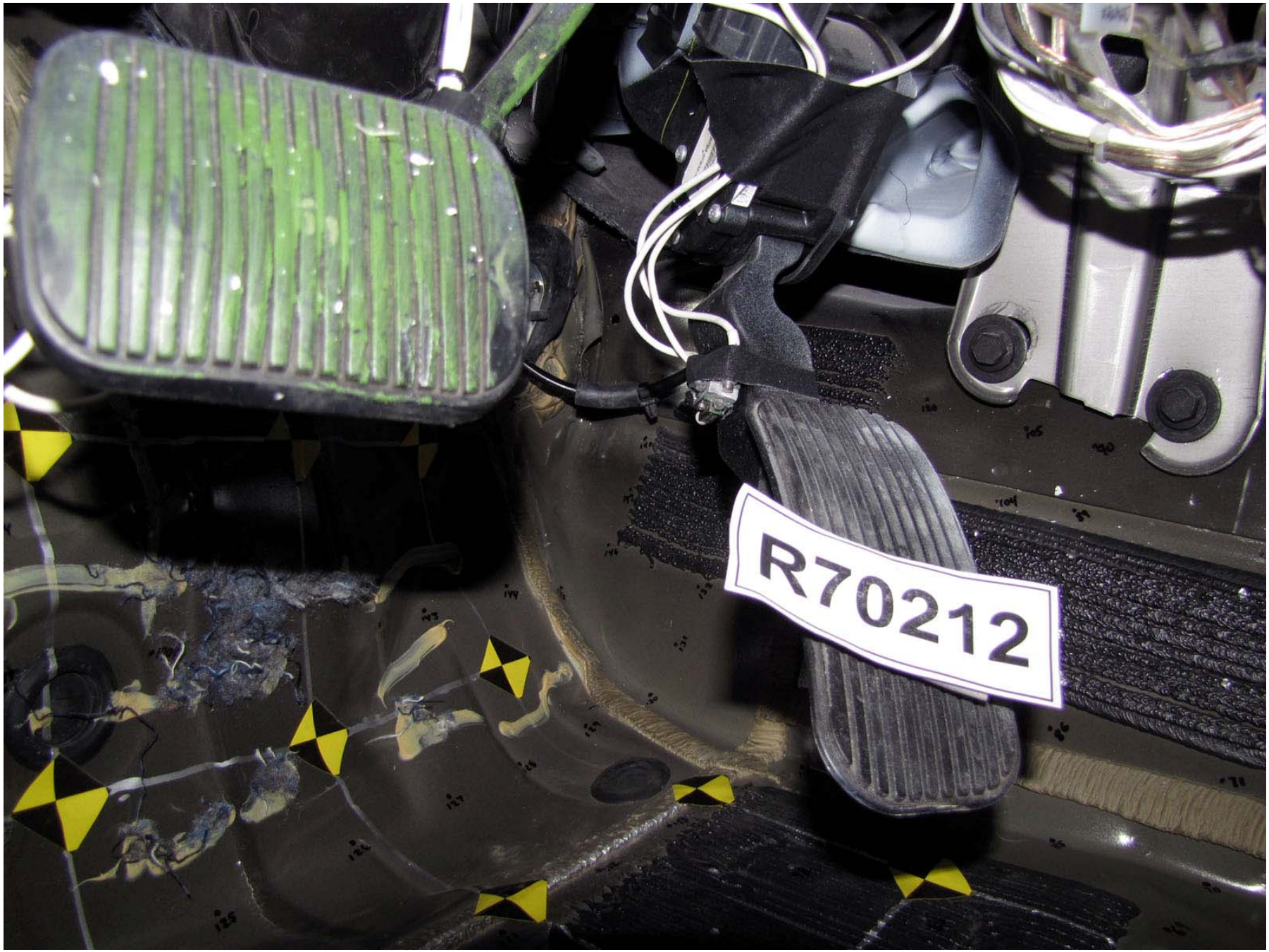

Figure A-292: Test Vehicle Post-Test Accelerator Pedal Side View, In Front of Brake Pedal

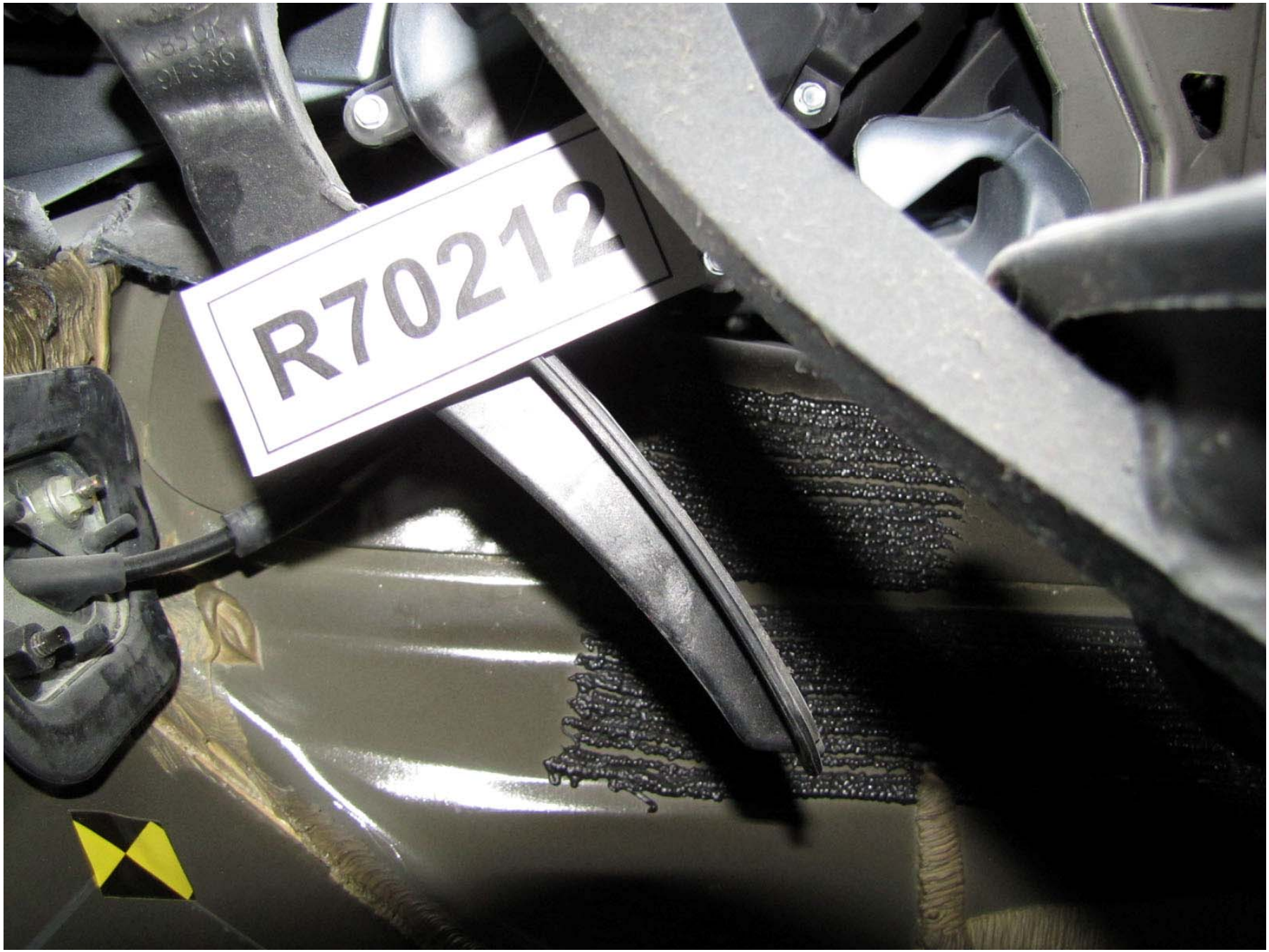

Figure A-293: Test Vehicle Pre-Test Accelerator Pedal Side View, Behind Brake Pedal

Figure A-294: Test Vehicle Post-Test Accelerator Pedal Side View, Behind Brake Pedal

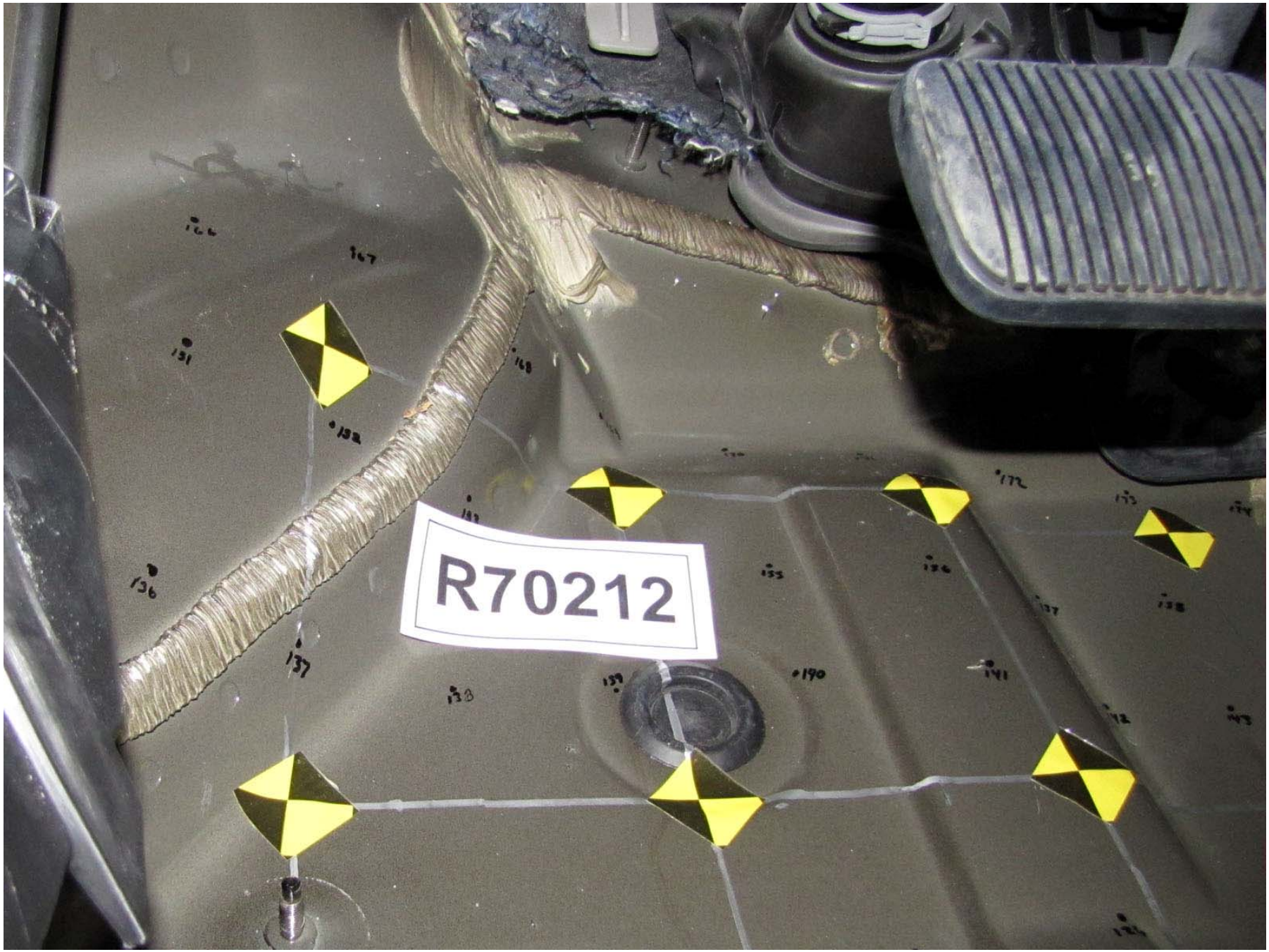

Figure A-295: Test Vehicle Pre-Test Foot Rest, Seat Cushion Height

Figure A-296: Test Vehicle Post-Test Foot Rest, Seat Cushion Height

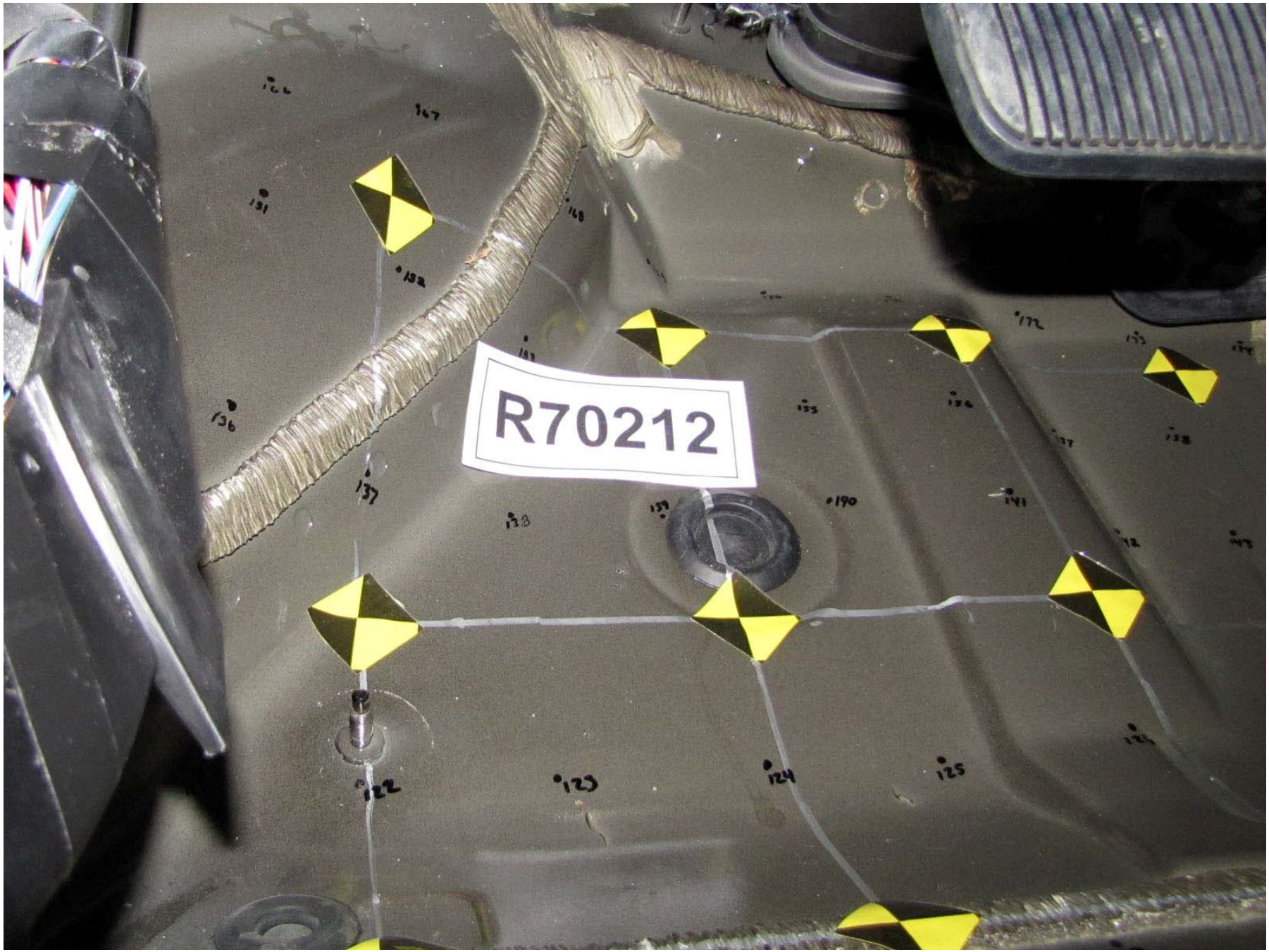

Figure A-297: Test Vehicle Pre-Test Foot Rest, Sill Height

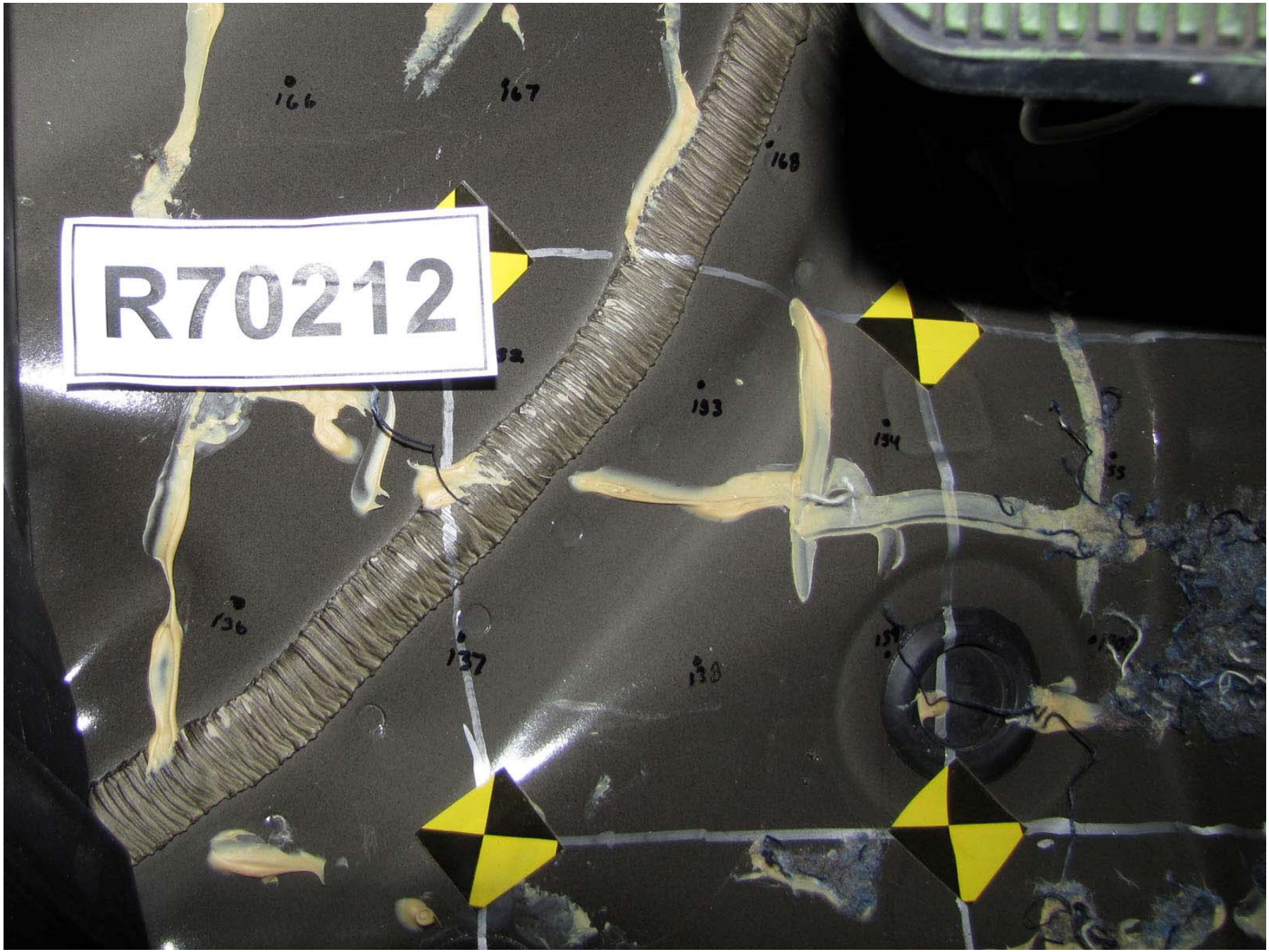

Figure A-298: Test Vehicle Post-Test Foot Rest, Sill Height

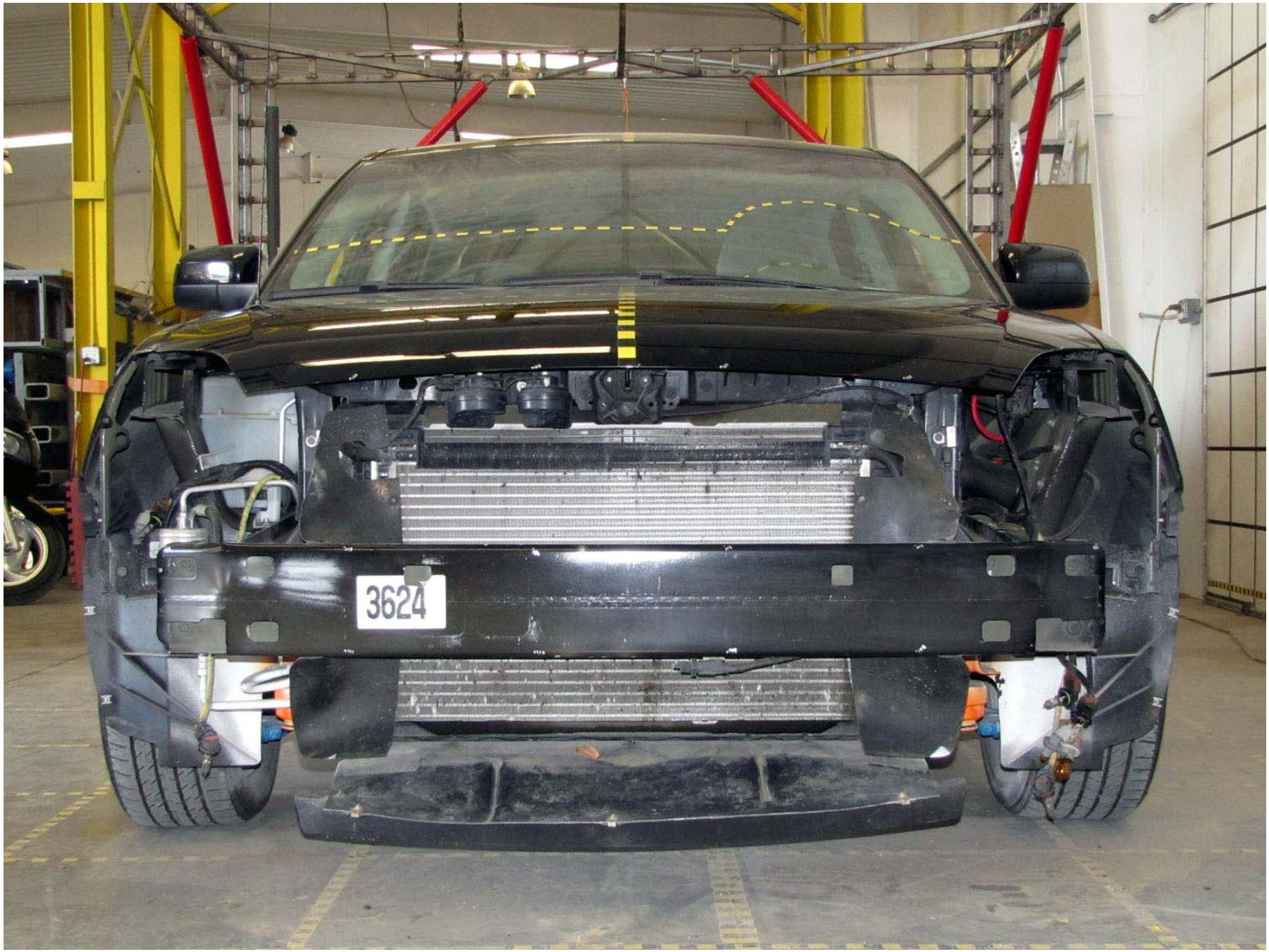

Figure A-299: Test Vehicle Pre-Test Structural Member Crush Measurement

Figure A-300: Test Vehicle Post-Test Structural Member Crush Measurement

Figure A-301: Test Vehicle Pre-Test Structural Member Crush Measurement

Figure A-302: Test Vehicle Post-Test Structural Member Crush Measurement

Figure A-303: Test Vehicle Post-Test Windshield Separation

Figure A-304: Test Vehicle Post-Test Windshield Separation

Figure A-305: Test Vehicle Post-Test Windshield Separation

Figure A-306: Test Vehicle Post-Test Windshield Separation

Figure A-307: Test Vehicle Post-Test Windshield Separation

Figure A-308: Test Vehicle Post-Test Windshield Separation

Figure A-309: Test Vehicle Post-Test Windshield Separation

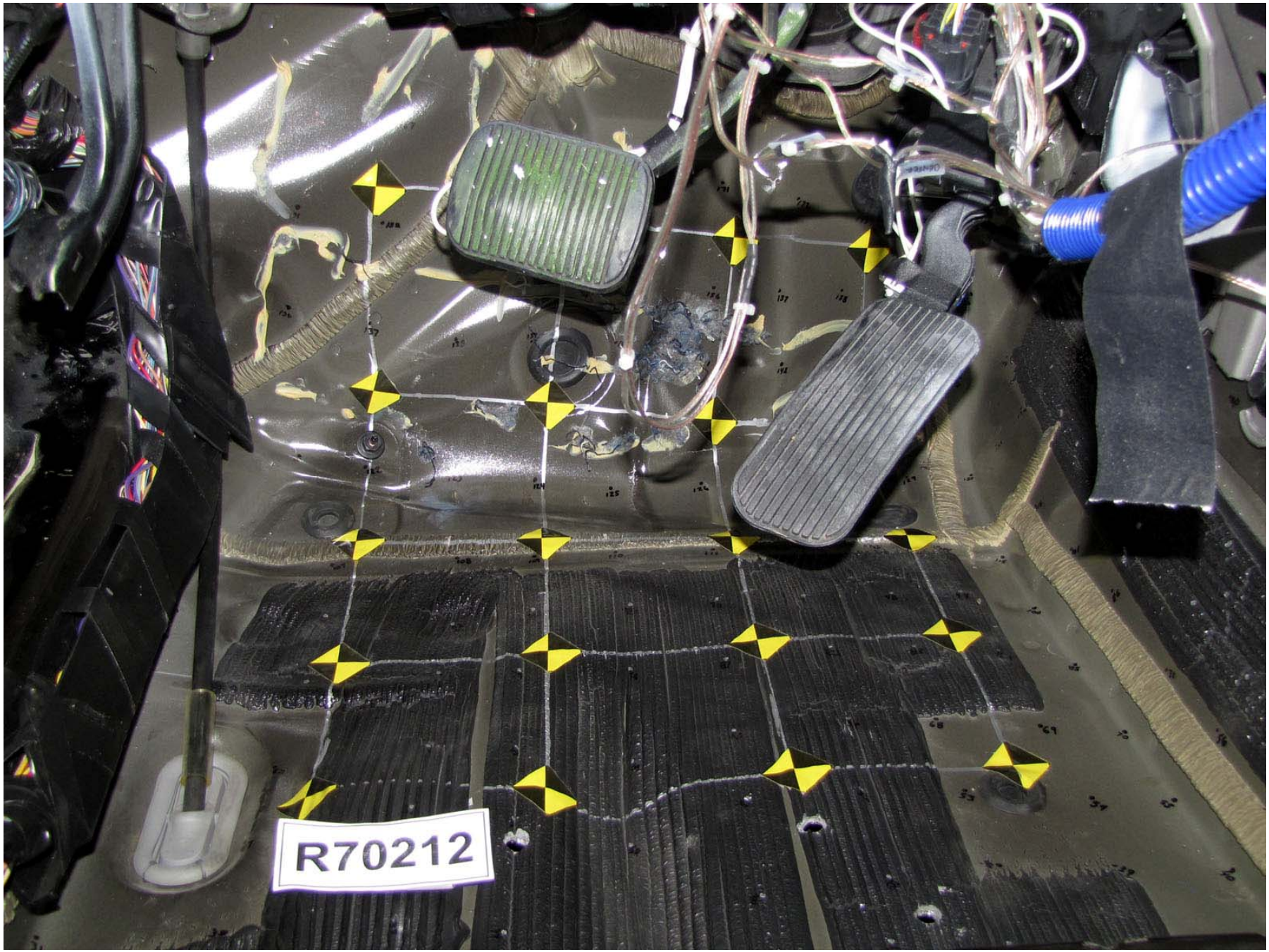

Figure A-310: Test Vehicle Post-Test Driver Side Floorpan

Figure A-311: Test Vehicle Post-Test Driver Side Floorpan, Close-Up

Figure A-312: Test Vehicle Pre-Test Front View of Deformable Barrier

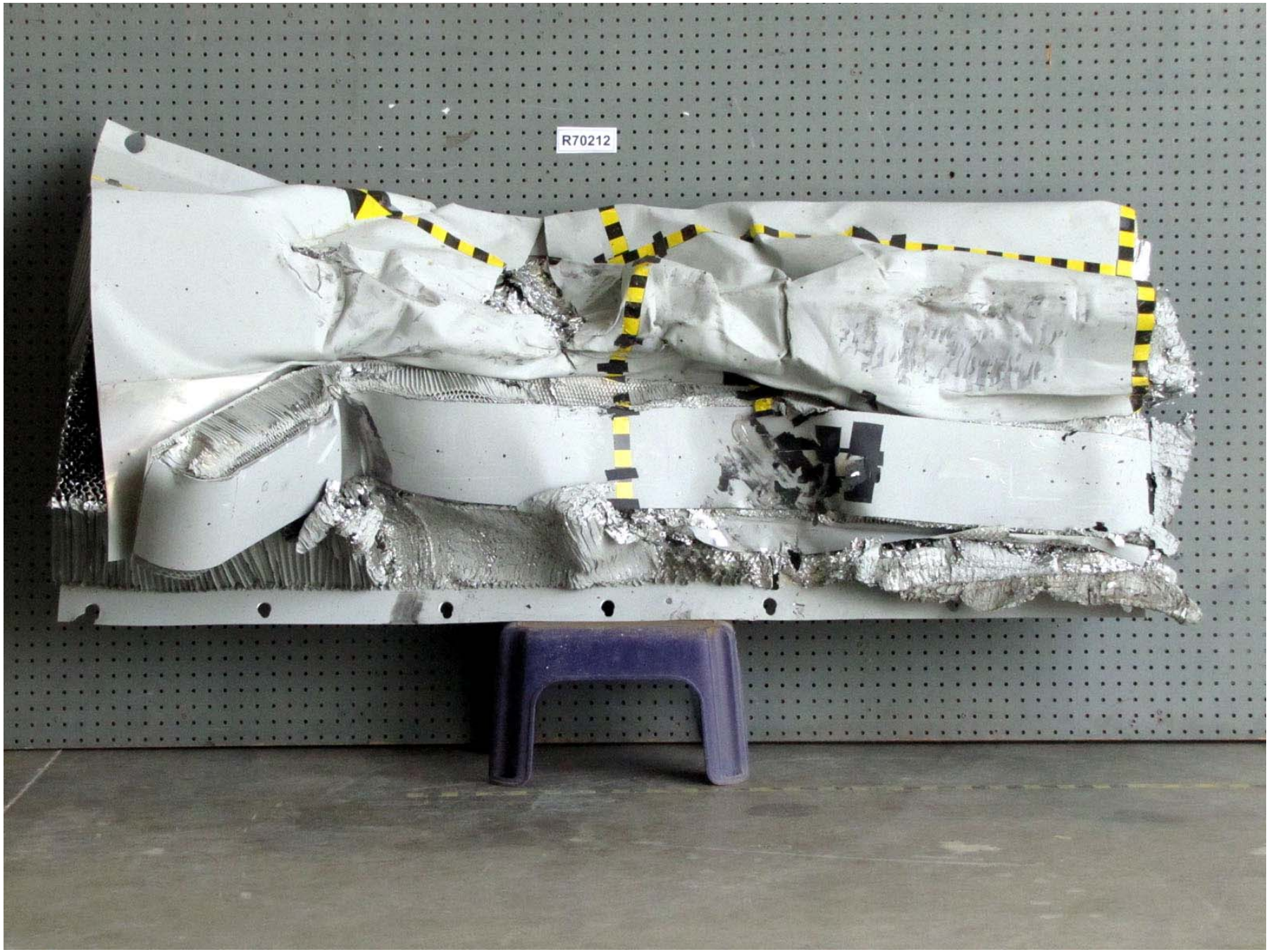

Figure A-313: Test Vehicle Post-Test Front View of Deformable Barrier

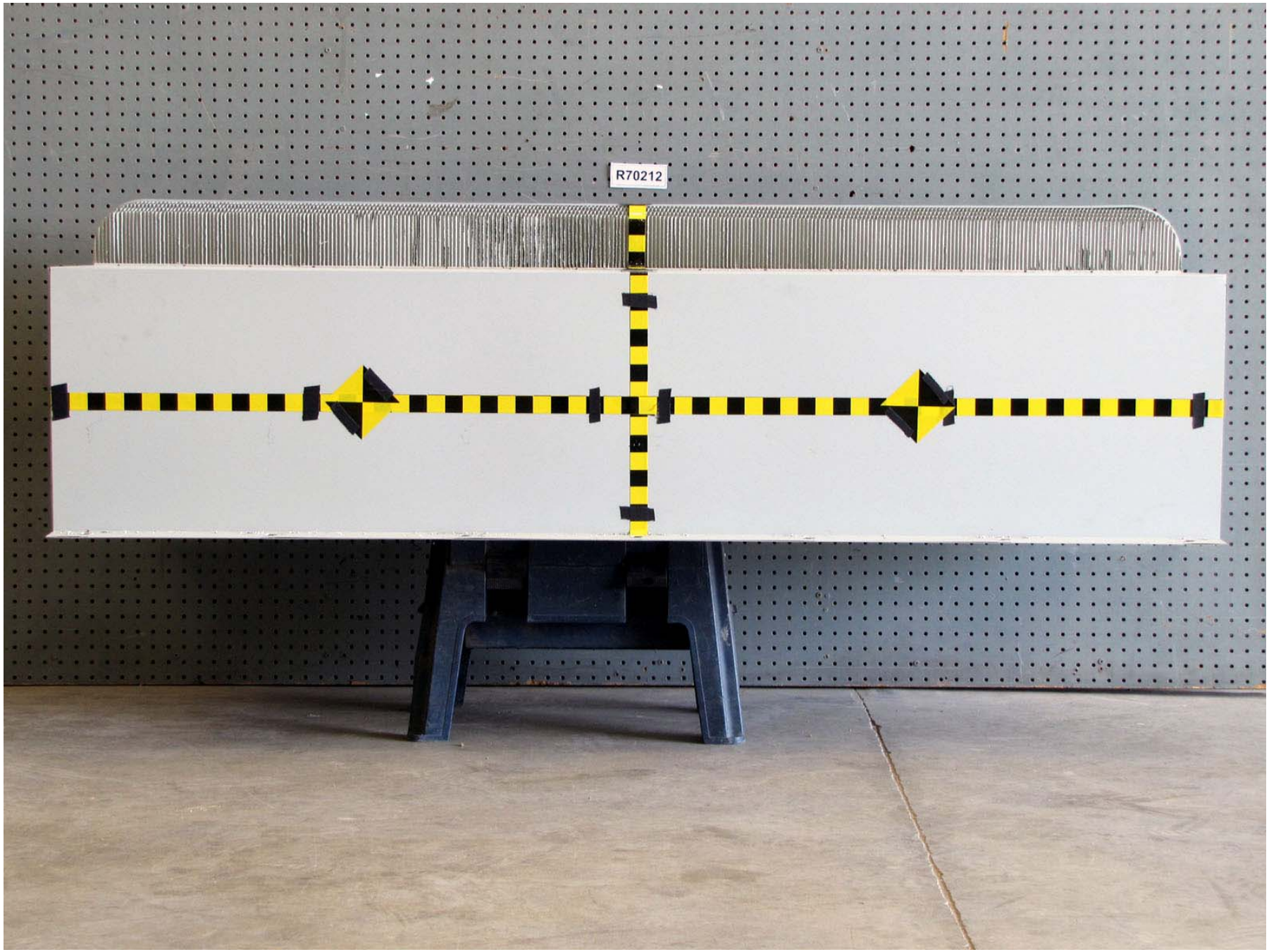

Figure A-314: Test Vehicle Pre-Test Top View of Deformable Barrier

Figure A-315: Test Vehicle Post-Test Top View of Deformable Barrier

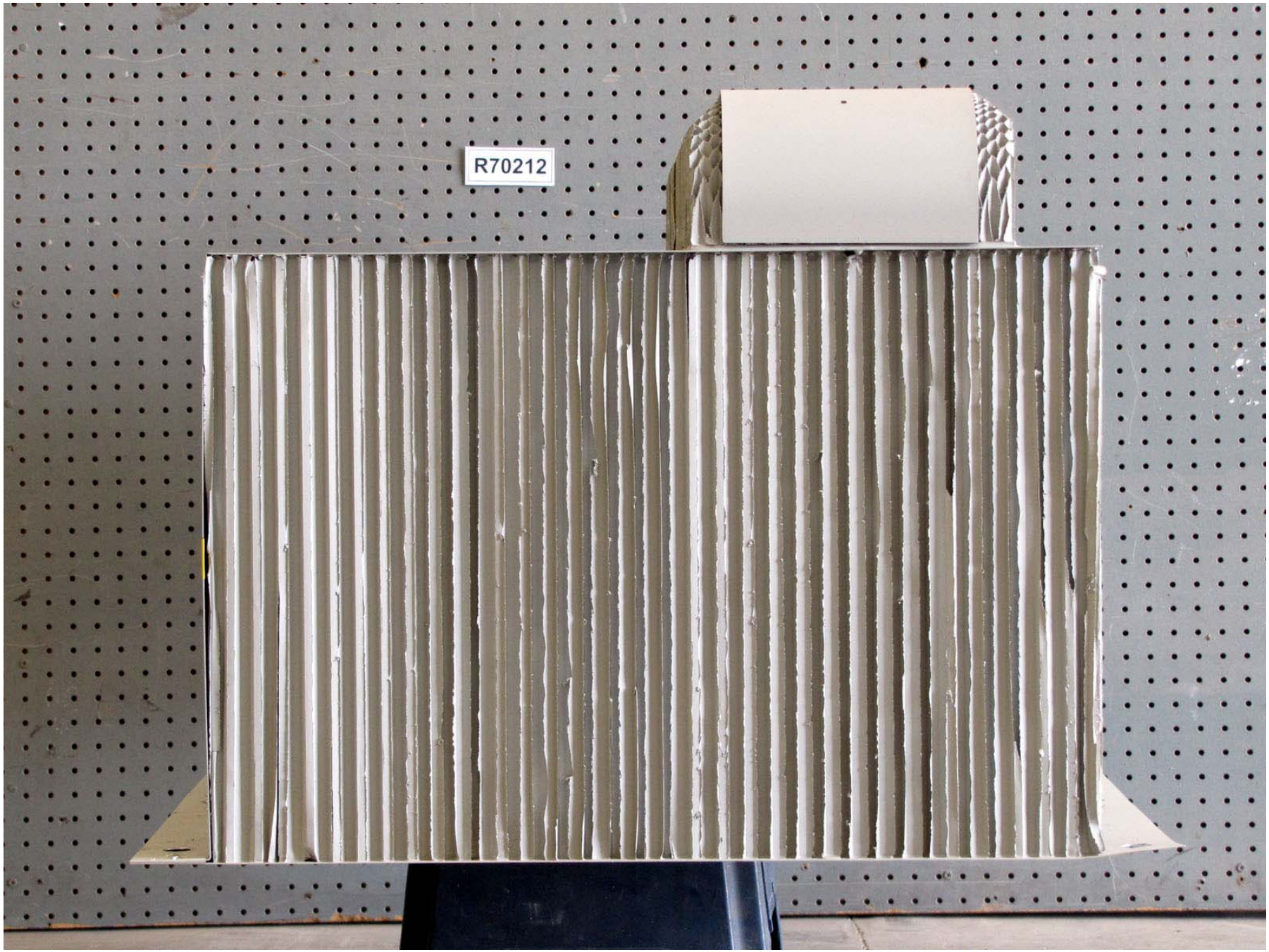

Figure A-316: Test Vehicle Pre-Test Right Side View of Deformable Barrier

Figure A-317: Test Vehicle Post-Test Right Side View of Deformable Barrier

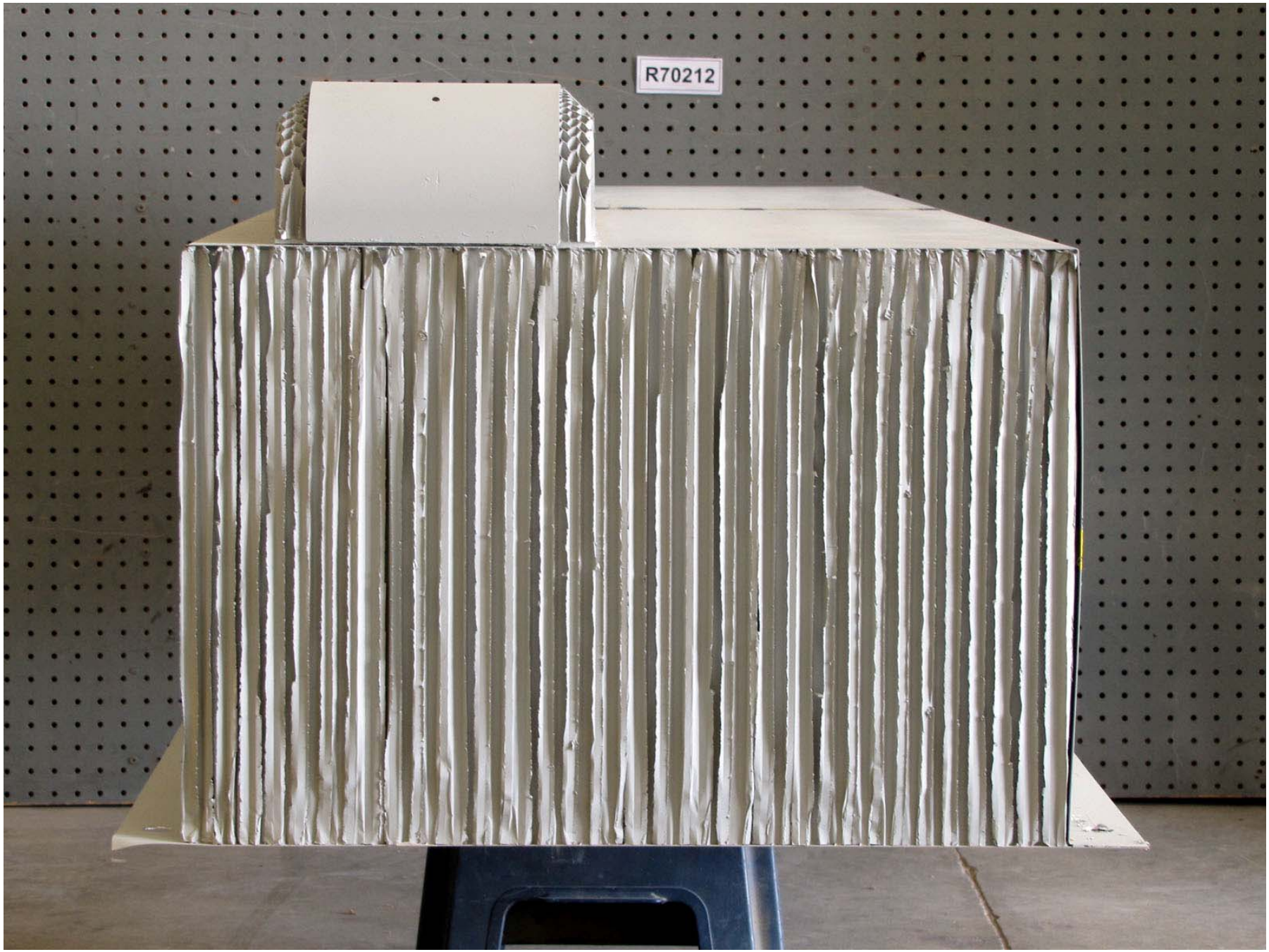

Figure A-318: Test Vehicle Pre-Test Left Side View of Deformable Barrier

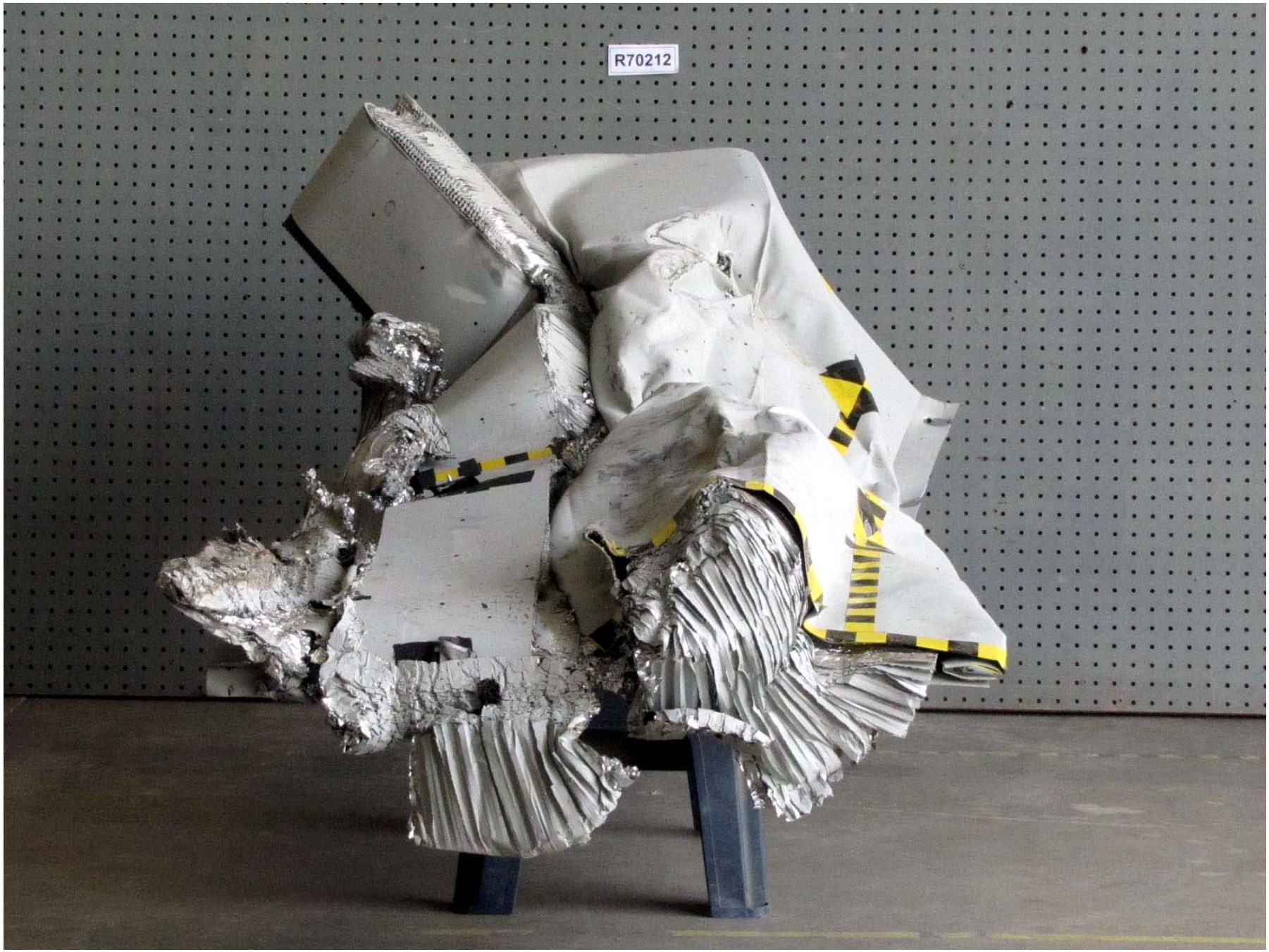

Figure A-319: Test Vehicle Post-Test Left Side View of Deformable Barrier

Figure A-320: Test Vehicle on Rollover Device (0°)

Figure A-321: Test Vehicle on Rollover Device (90°)

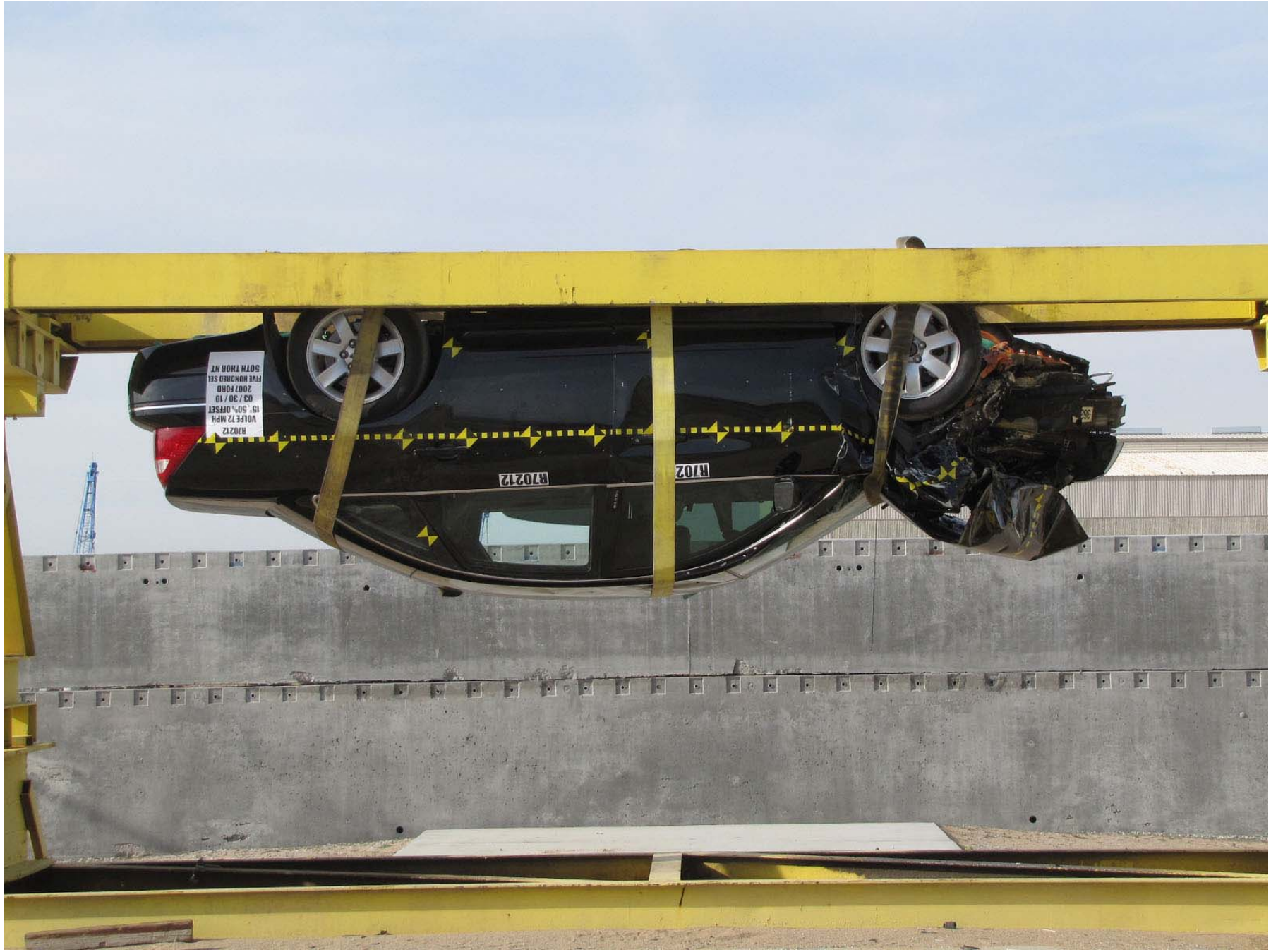

Figure A-322: Test Vehicle on Rollover Device (180°)

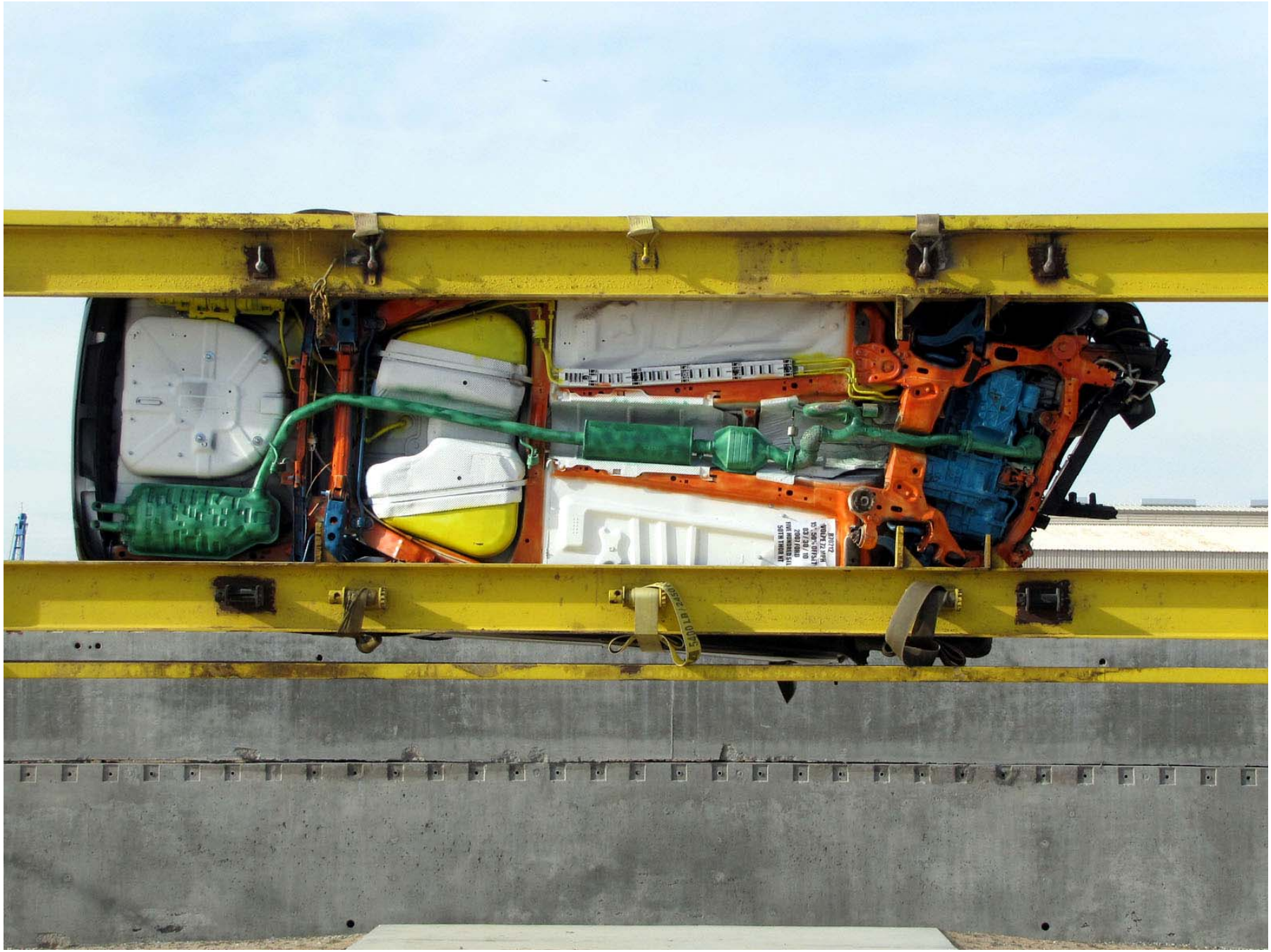

Figure A-323: Test Vehicle on Rollover Device (270°)

Figure A-324: Test Vehicle on Rollover Device (360°)

Figure A-325: Test Vehicle Impact

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DATA PLOTS

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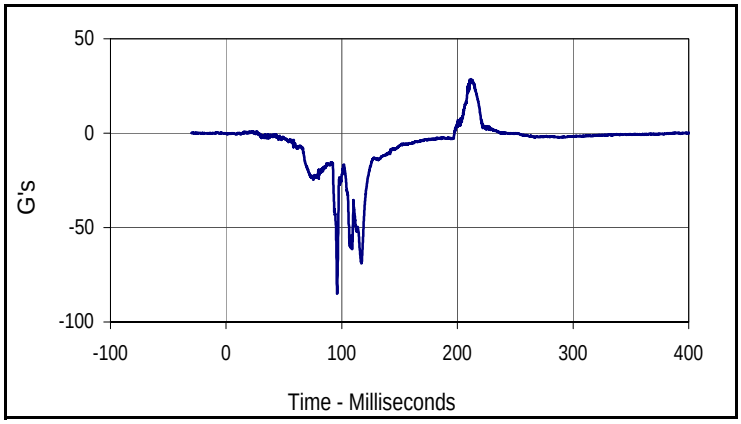
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10



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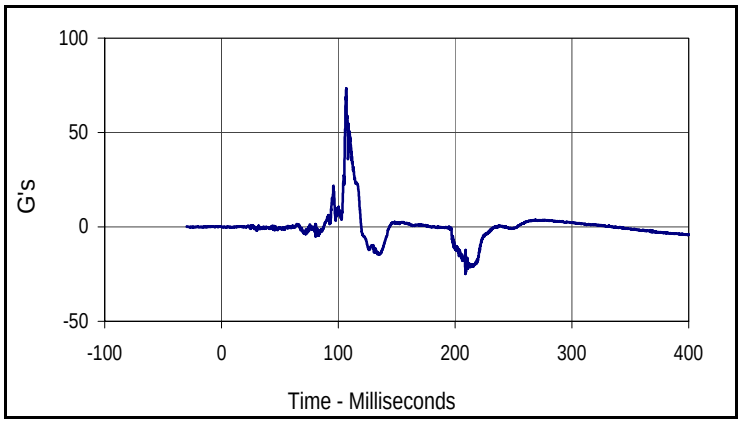

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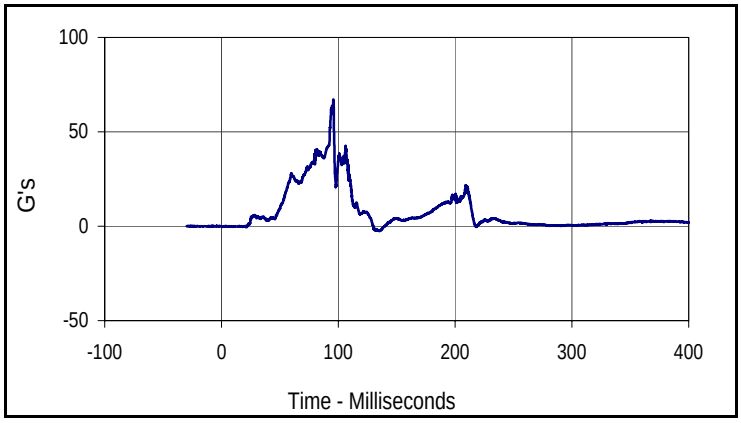

Curve Description			
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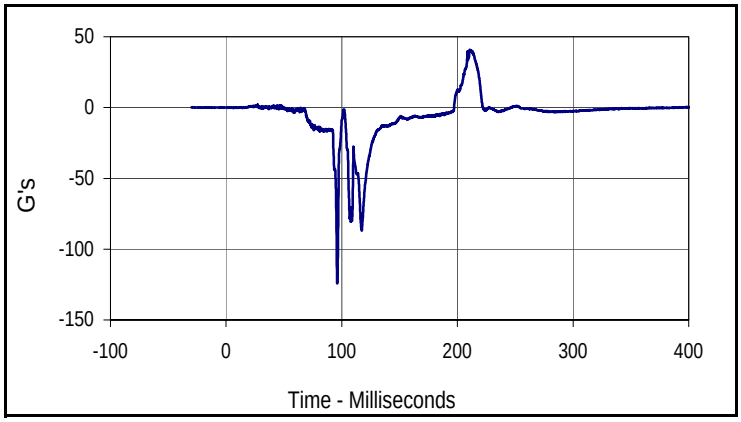
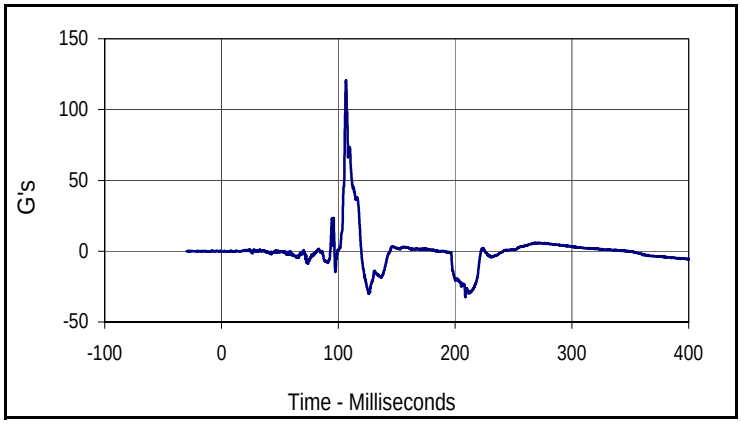
Max	Time	Min	Time
67.2	95.8	-2.5	134.9

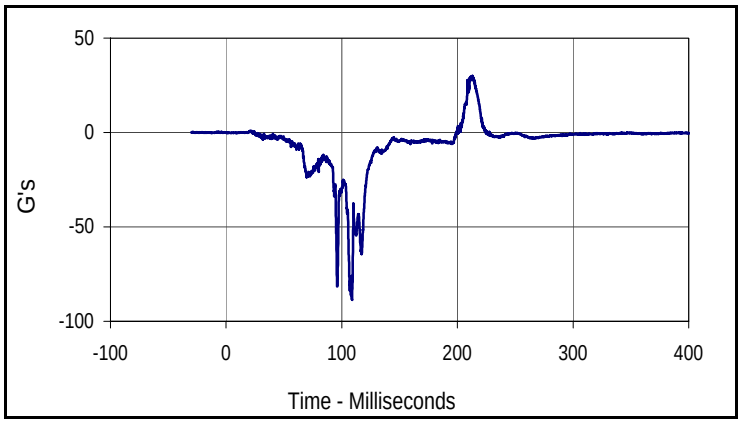


Curve Description			
Driver Top Head Array X			
CURNO	Type	SAE Class	Units
004	FIL	1000	G's
Max	Time	Min	Time
40.7	210.8	-124.2	96.1

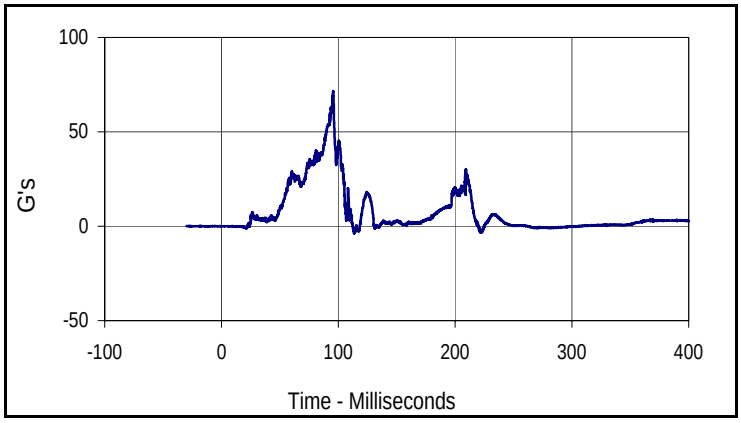
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10



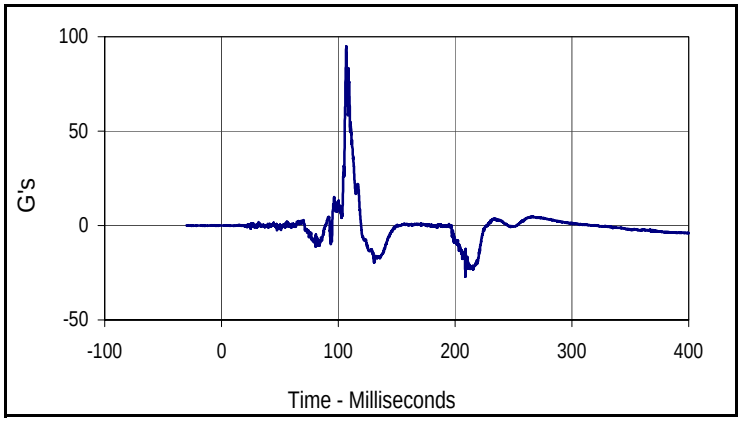
Curve Description			
Driver Top Head Array Y			
CURNO	Type	SAE Class	Units
005	FIL	1000	G's
Max	Time	Min	Time
120.6	106.6	-32.4	208.7



Curve Description			
Driver Left Side Head Array X			
CURNO	Type	SAE Class	Units
006	FIL	1000	G's
Max	Time	Min	Time
29.9	213.0	-88.7	108.8

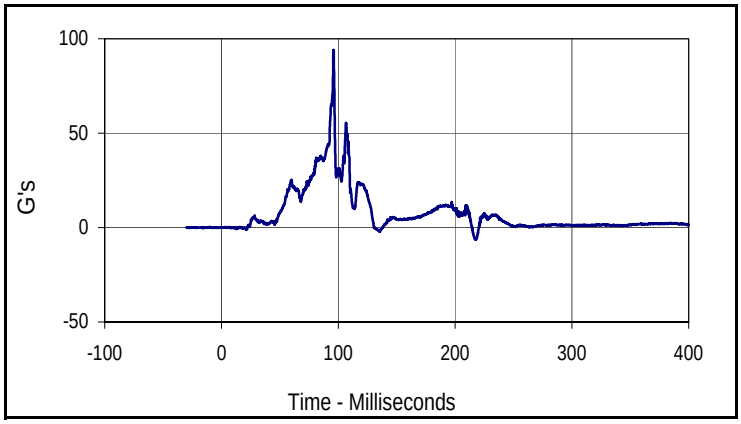


Curve Description			
Driver Left Side Head Array Z			
CURNO	Type	SAE Class	Units
007	FIL	1000	G's
Max	Time	Min	Time
71.5	95.6	-3.8	113.5

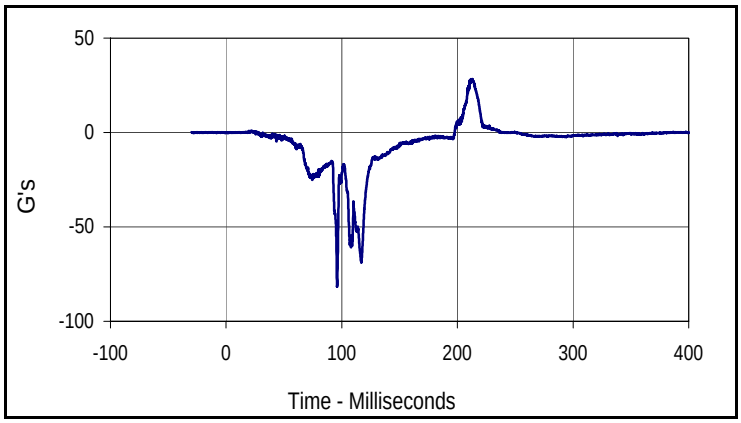


Curve Description			
Driver Rear Head Array Y			
CURNO	Type	SAE Class	Units
008	FIL	1000	G's
Max	Time	Min	Time
94.9	106.8	-27.1	208.8

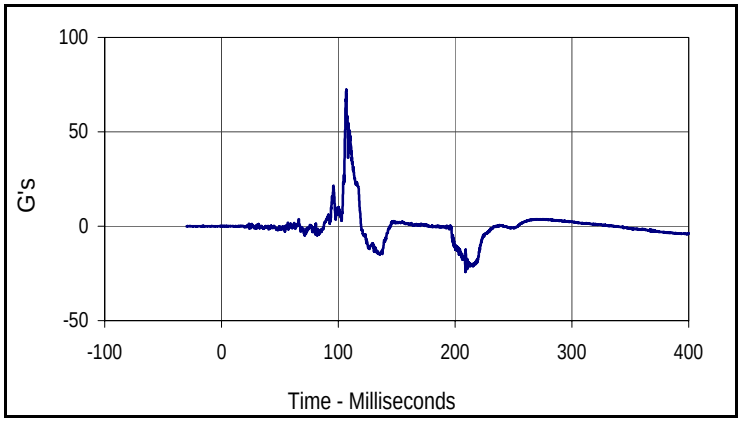
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10



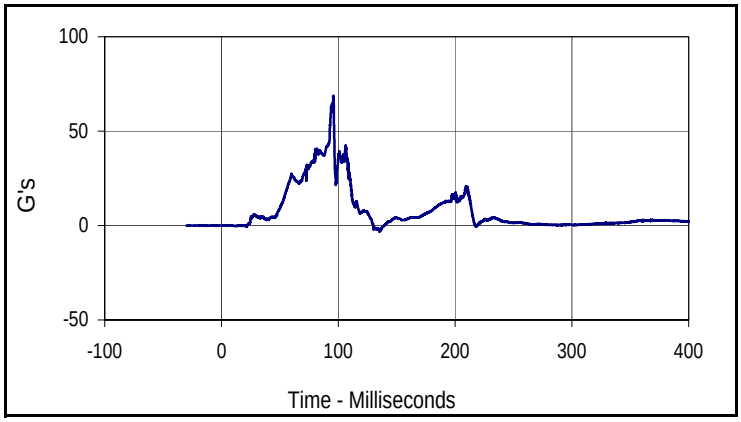
Curve Description			
Driver Rear Head Array Z			
CURNO	Type	SAE Class	Units
009	FIL	1000	G's
Max	Time	Min	Time
94.0	96.0	-6.4	217.8



Curve Description			
Driver Head CG X Redundant			
CURNO	Type	SAE Class	Units
010	FIL	1000	G's
Max	Time	Min	Time
28.3	213.0	-81.7	96.0

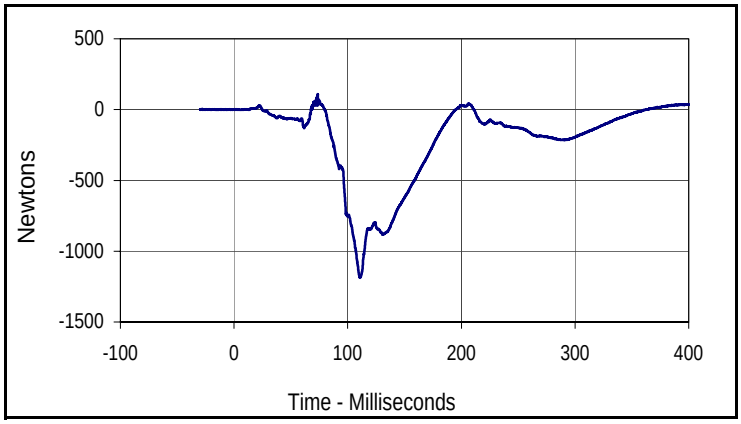


Curve Description			
Driver Head CG Y Redundant			
CURNO	Type	SAE Class	Units
011	FIL	1000	G's
Max	Time	Min	Time
72.4	106.8	-24.2	208.8

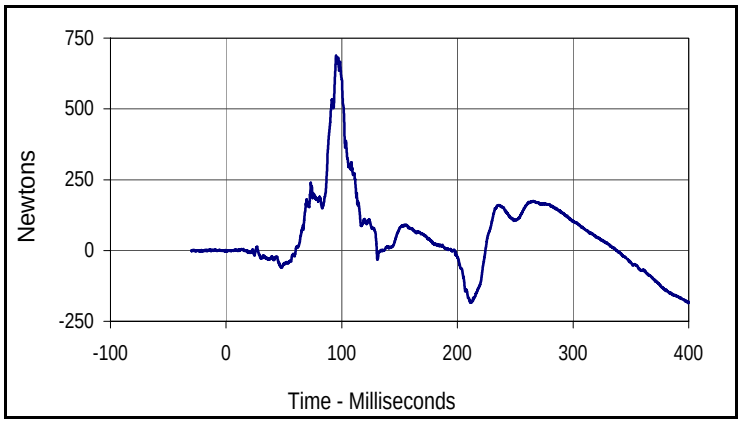


Curve Description			
Driver Head CG Z Redundant			
CURNO	Type	SAE Class	Units
012	FIL	1000	G's
Max	Time	Min	Time
68.9	95.8	-3.4	135.3

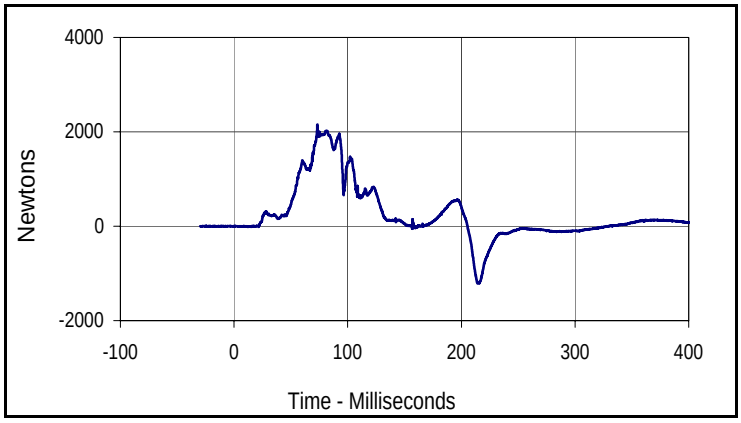
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10



Curve Description			
Driver Upper Neck Force X			
CURNO	Type	SAE Class	Units
013	FIL	1000	Newtons
Max	Time	Min	Time
110.0	73.6	-1188.2	111.0

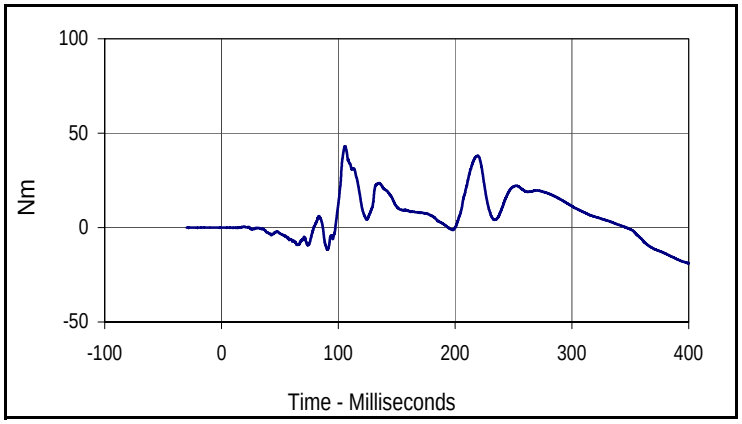


Curve Description			
Driver Upper Neck Force Y			
CURNO	Type	SAE Class	Units
014	FIL	1000	Newtons
Max	Time	Min	Time
687.5	95.1	-185.2	399.6

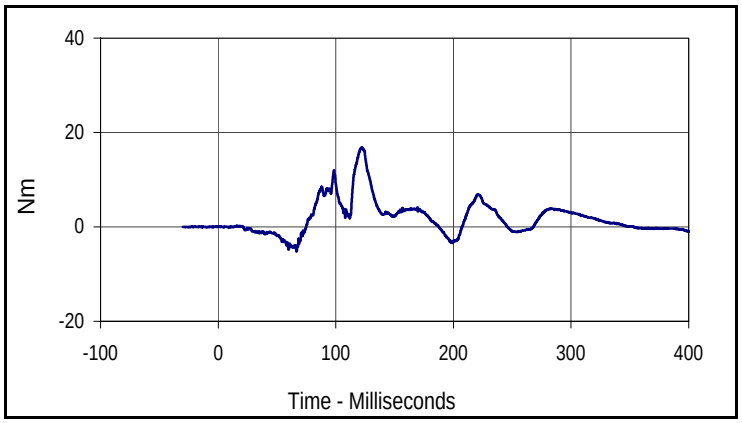


Curve Description			
Driver Upper Neck Force Z			
CURNO	Type	SAE Class	Units
015	FIL	1000	Newtons
Max	Time	Min	Time
2157.0	73.3	-1215.7	215.3

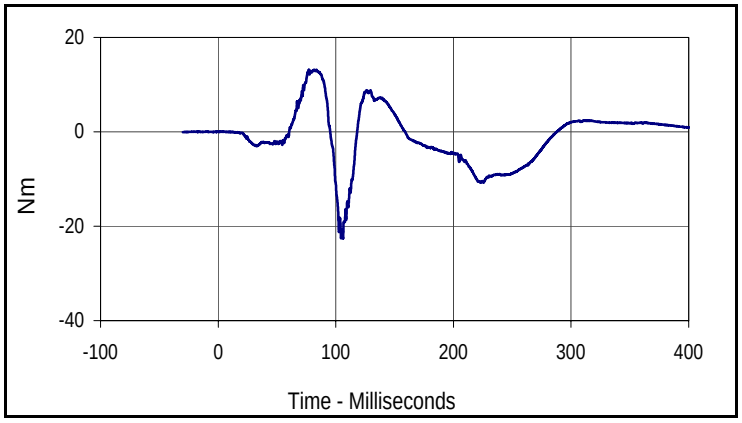
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10



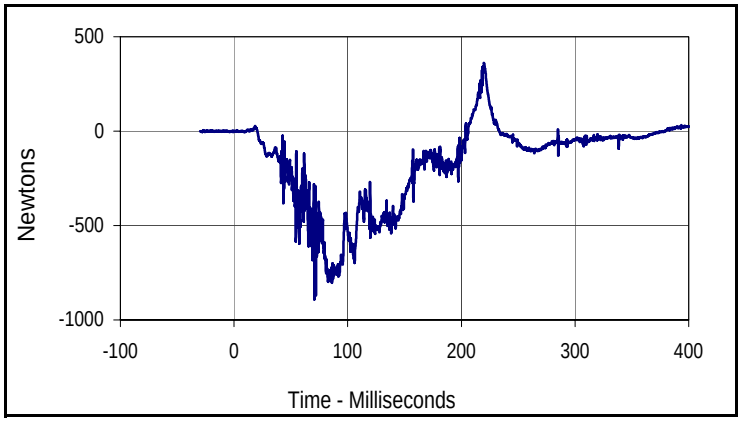
Curve Description			
Driver Upper Neck Moment X			
CURNO	Type	SAE Class	Units
016	FIL	600	Nm
Max	Time	Min	Time
43.1	105.8	-18.9	399.9



Curve Description			
Driver Upper Neck Moment Y			
CURNO	Type	SAE Class	Units
017	FIL	600	Nm
Max	Time	Min	Time
16.9	122.2	-5.2	66.6

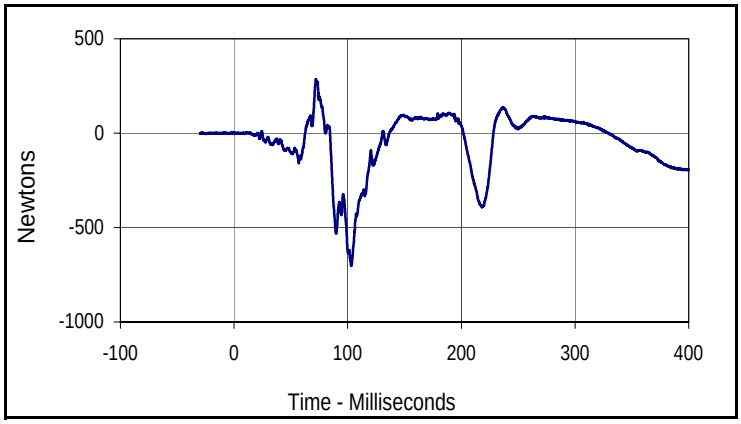


Curve Description			
Driver Upper Neck Moment Z			
CURNO	Type	SAE Class	Units
018	FIL	600	Nm
Max	Time	Min	Time
13.2	77.1	-22.6	104.5

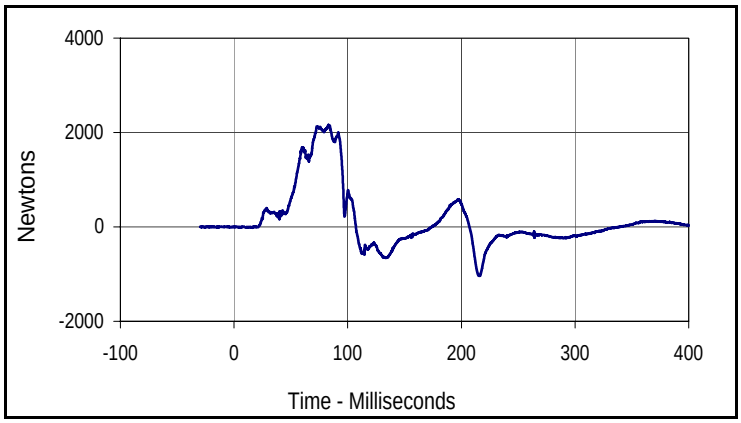


Curve Description			
Driver Lower Neck Force X			
CURNO	Type	SAE Class	Units
019	FIL	1000	Newtons
Max	Time	Min	Time
360.6	219.9	-890.8	70.6

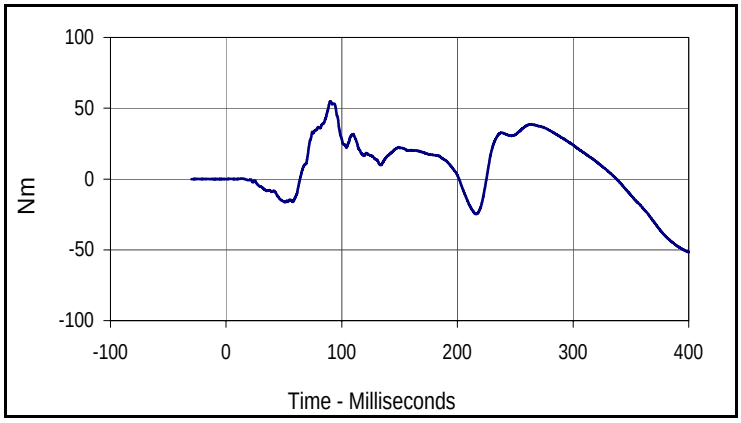
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10



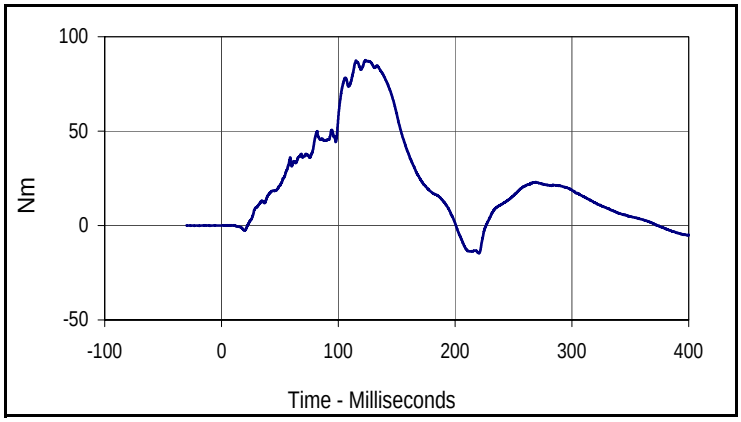
Curve Description			
Driver Lower Neck Force Y			
CURNO	Type	SAE Class	Units
020	FIL	1000	Newtons
Max	Time	Min	Time
284.1	72.1	-701.9	103.4



Curve Description			
Driver Lower Neck Force Z			
CURNO	Type	SAE Class	Units
021	FIL	1000	Newtons
Max	Time	Min	Time
2162.1	83.0	-1038.6	215.6

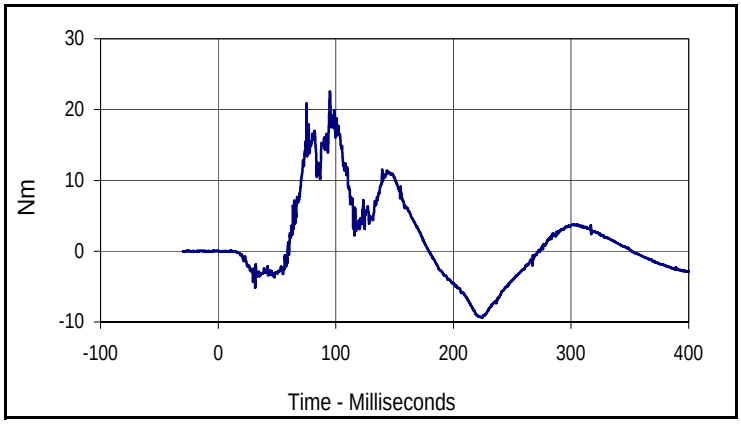


Curve Description			
Driver Lower Neck Moment X			
CURNO	Type	SAE Class	Units
022	FIL	600	Nm
Max	Time	Min	Time
54.9	90.0	-51.6	399.9

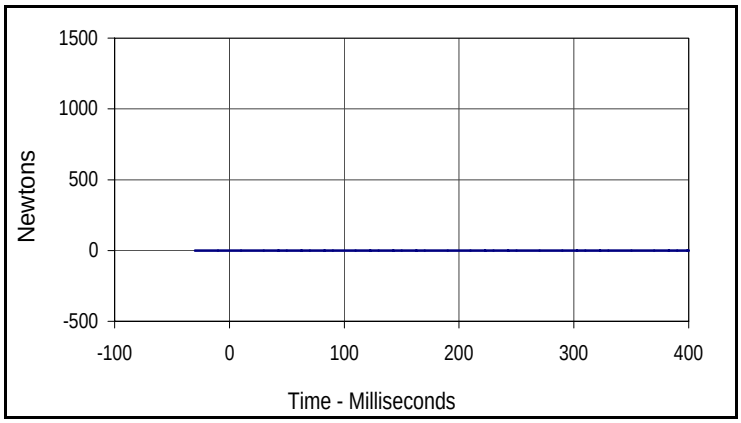


Curve Description			
Driver Lower Neck Moment Y			
CURNO	Type	SAE Class	Units
023	FIL	600	Nm
Max	Time	Min	Time
87.6	123.5	-14.7	220.3

Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10

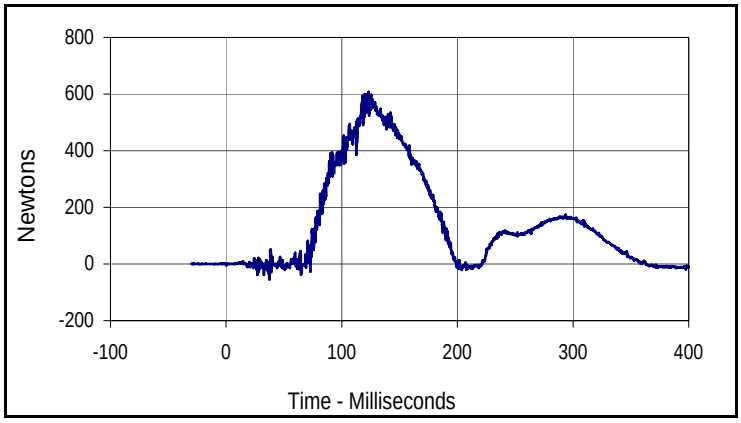


Curve Description			
Driver Lower Neck Moment Z			
CURNO	Type	SAE Class	Units
024	FIL	600	Nm
Max	Time	Min	Time
22.6	95.0	-9.4	224.4



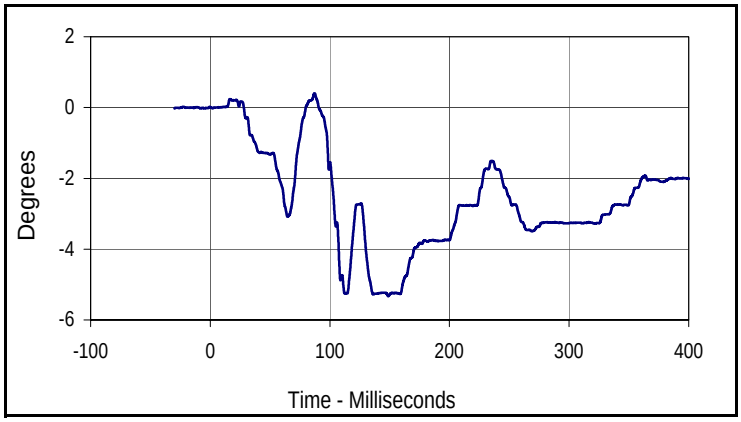
Curve Description			
Driver Front Neck Spring Force			
CURNO	Type	SAE Class	Units
025	FIL	1000	Newtons
Max	Time	Min	Time
0.0	0.0	0.0	0.0

* Channel failed, no data



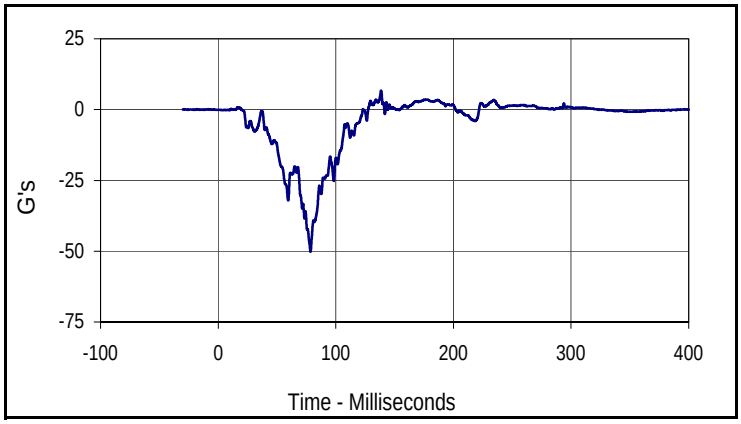
Curve Description			
Driver Rear Neck Spring Force			
CURNO	Type	SAE Class	Units
026	FIL	1000	Newtons
Max	Time	Min	Time
608.4	123.0	-55.9	37.3

* Channel failed, no data

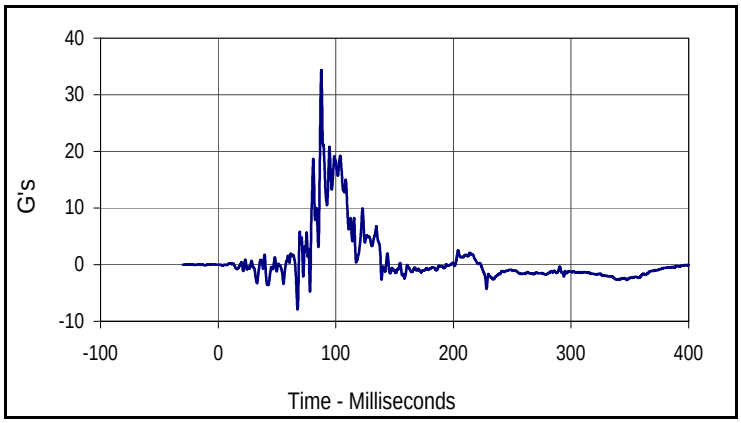


Curve Description			
Driver Occipital Condyle Rotation			
CURNO	Type	SAE Class	Units
027	FIL	180	Degrees
Max	Time	Min	Time
0.4	87.3	-5.3	148.9

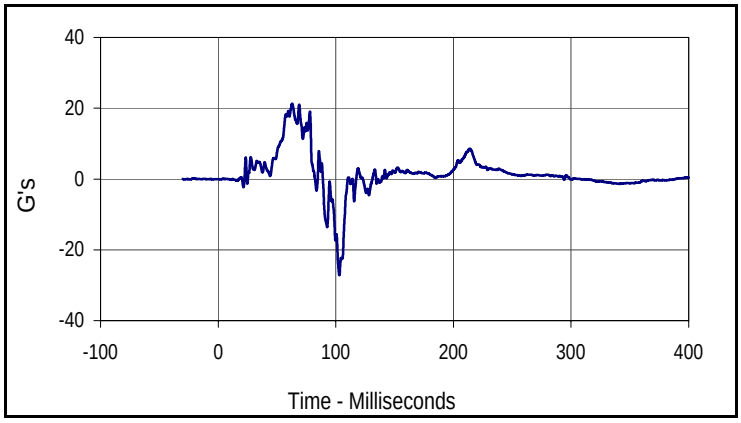
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10



Curve Description			
Driver Upper Spine T1 X			
CURNO	Type	SAE Class	Units
028	FIL	180	G's
Max	Time	Min	Time
6.7	138.5	-50.2	78.5

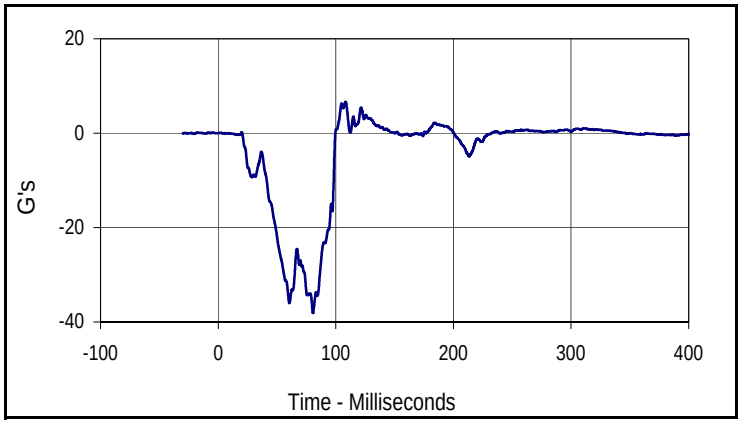


Curve Description			
Driver Upper Spine T1 Y			
CURNO	Type	SAE Class	Units
029	FIL	180	G's
Max	Time	Min	Time
34.3	87.7	-7.9	67.5

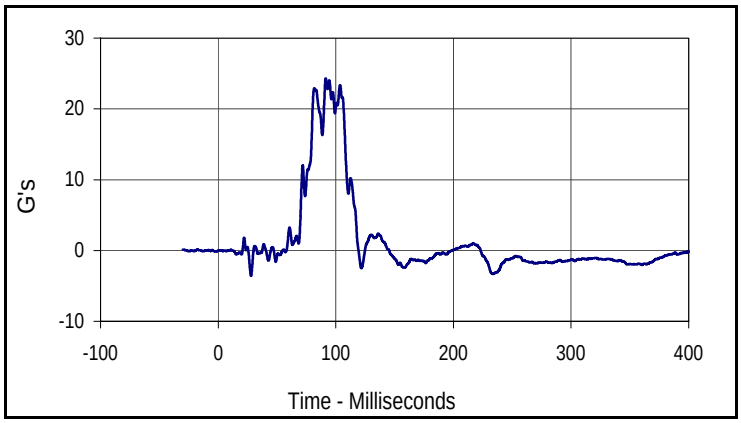


Curve Description			
Driver Upper Spine T1 Z			
CURNO	Type	SAE Class	Units
030	FIL	180	G's
Max	Time	Min	Time
21.3	62.9	-27.2	103.1

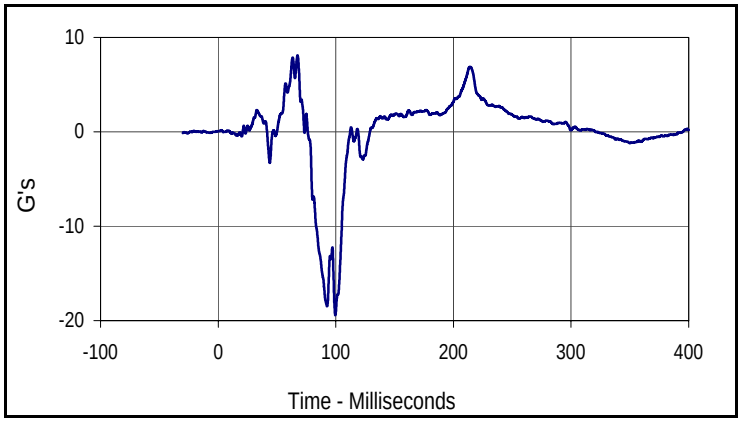
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10



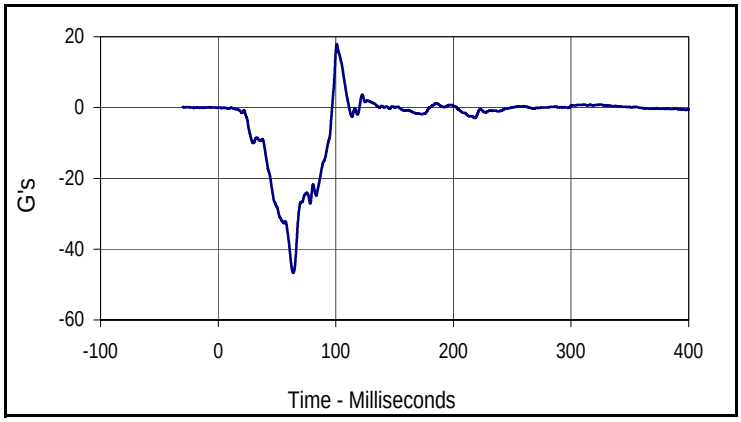
Curve Description			
Driver Thorax X			
CURNO	Type	SAE Class	Units
031	FIL	180	G's
Max	Time	Min	Time
6.6	108.3	-38.1	80.6



Curve Description			
Driver Thorax Y			
CURNO	Type	SAE Class	Units
032	FIL	180	G's
Max	Time	Min	Time
24.3	91.5	-3.6	27.9

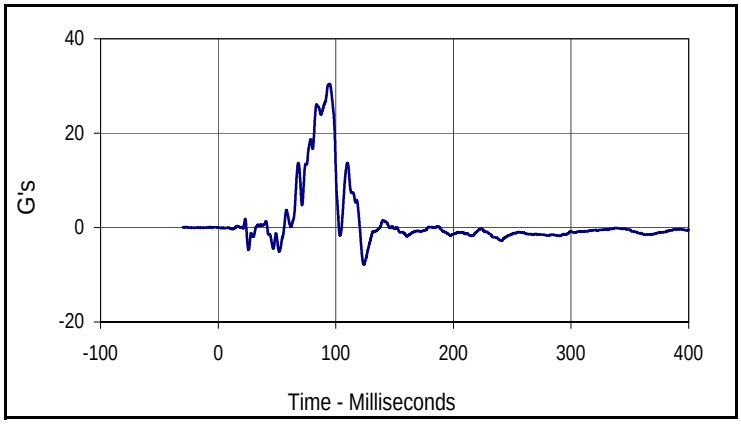


Curve Description			
Driver Thorax Z			
CURNO	Type	SAE Class	Units
033	FIL	180	G's
Max	Time	Min	Time
8.1	67.5	-19.4	99.6

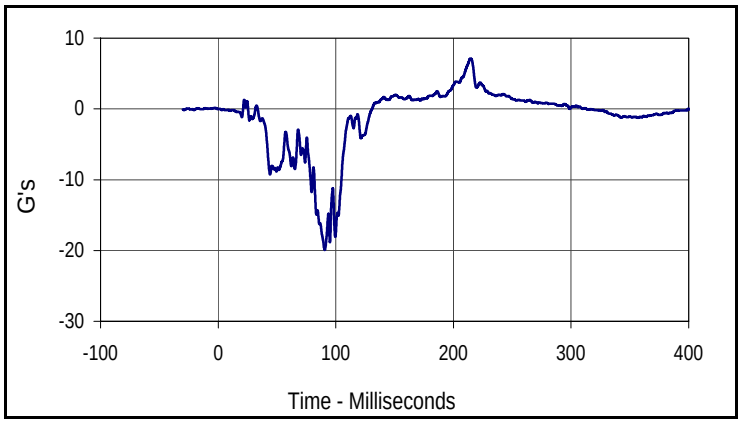


Curve Description			
Driver Lower Spine T12 X			
CURNO	Type	SAE Class	Units
034	FIL	180	G's
Max	Time	Min	Time
17.9	100.9	-46.7	63.8

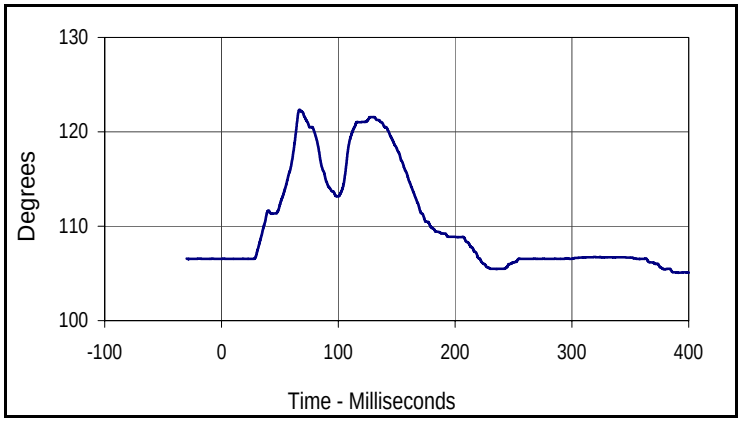
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10



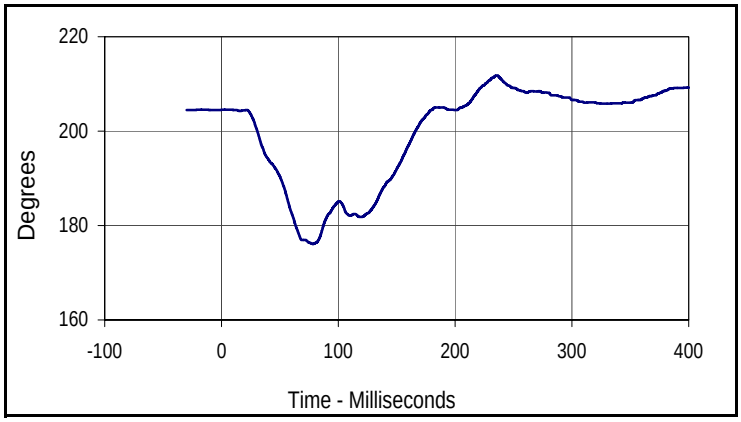
Curve Description			
Driver Lower Spine T12 Y			
CURNO	Type	SAE Class	Units
035	FIL	180	G's
Max	Time	Min	Time
30.4	94.8	-7.9	123.8



Curve Description			
Driver Lower Spine T12 Z			
CURNO	Type	SAE Class	Units
036	FIL	180	G's
Max	Time	Min	Time
7.1	214.5	-19.9	90.7

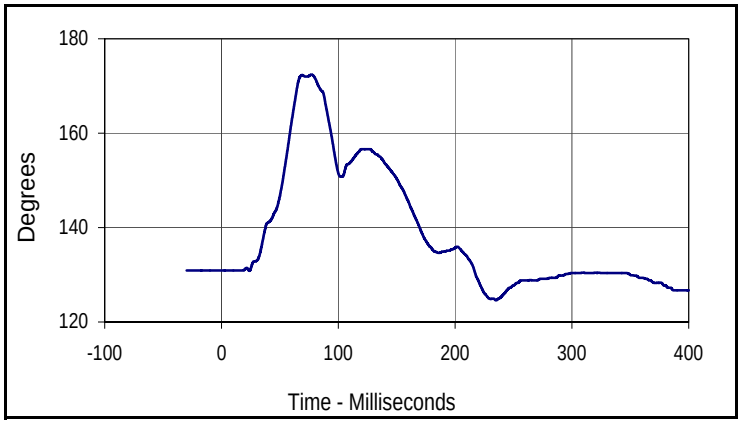


Curve Description			
Driver Upper Left CRUX Base Rotation			
CURNO	Type	SAE Class	Units
037	FIL	180	Degrees
Max	Time	Min	Time
122.3	66.9	105.1	390.9

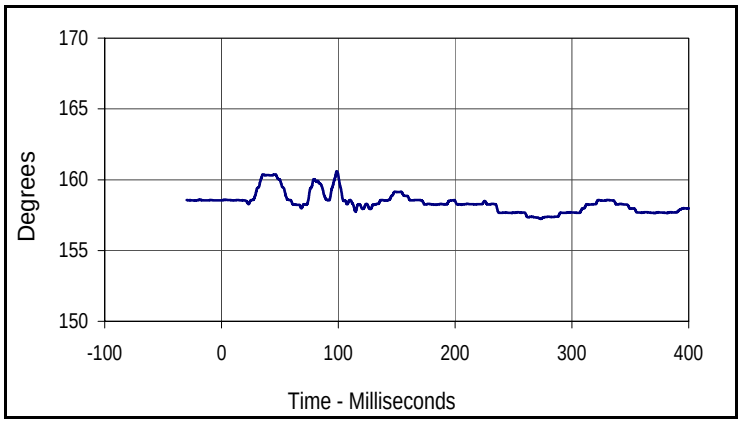


Curve Description			
Driver Upper Left CRUX Middle Rotation			
CURNO	Type	SAE Class	Units
038	FIL	180	Degrees
Max	Time	Min	Time
211.8	235.7	176.1	78.3

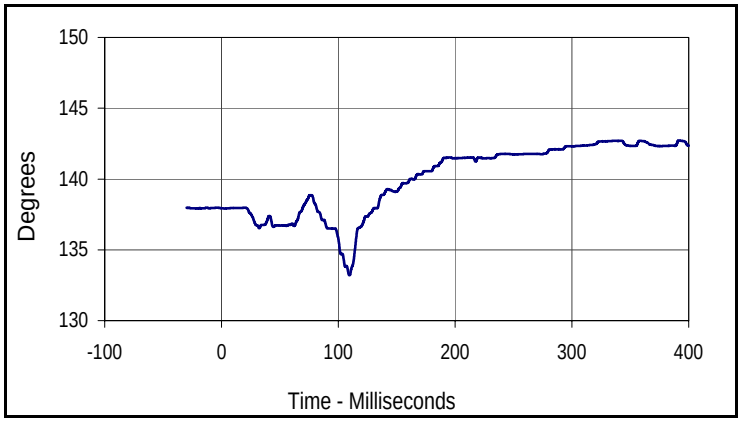
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10



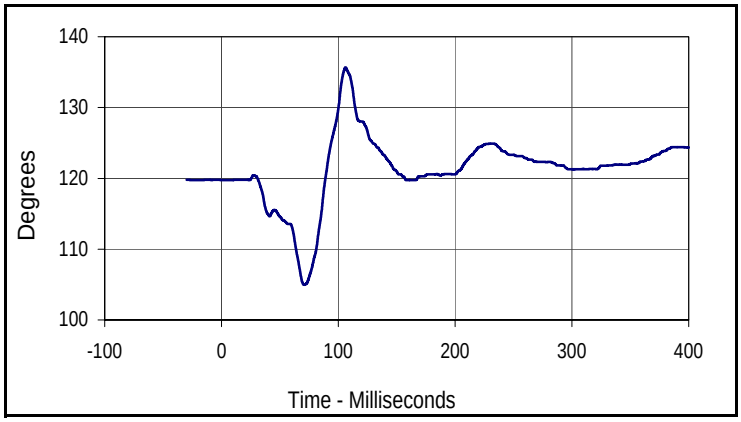
Curve Description			
Driver Upper Left CRUX Elbow Rotation			
CURNO	Type	SAE Class	Units
039	FIL	180	Degrees
Max	Time	Min	Time
172.4	77.1	124.6	235.0



Curve Description			
Driver Lower Left CRUX Base Rotation			
CURNO	Type	SAE Class	Units
040	FIL	180	Degrees
Max	Time	Min	Time
160.6	98.8	157.2	273.4

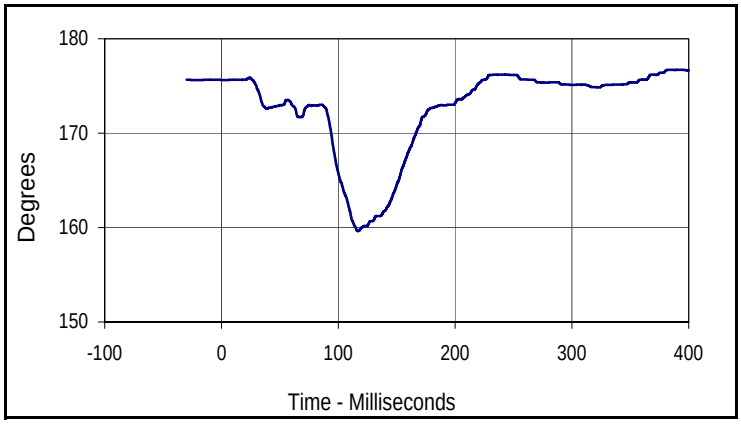


Curve Description			
Driver Lower Left CRUX Middle Rotation			
CURNO	Type	SAE Class	Units
041	FIL	180	Degrees
Max	Time	Min	Time
142.7	391.4	133.2	109.5

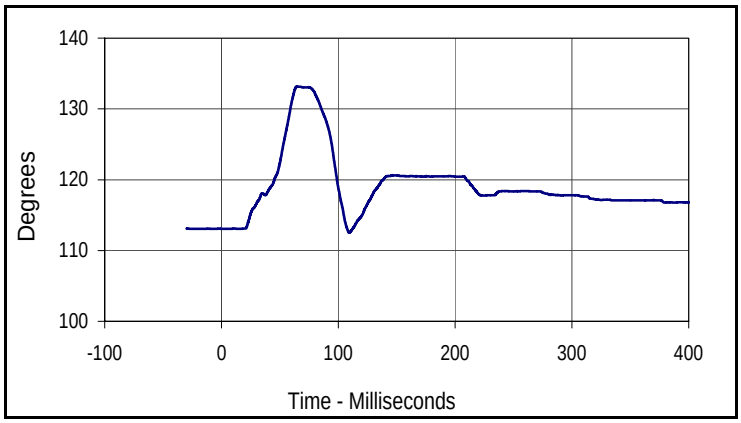


Curve Description			
Driver Lower Left CRUX Elbow Rotation			
CURNO	Type	SAE Class	Units
042	FIL	180	Degrees
Max	Time	Min	Time
135.7	106.3	105.0	71.0

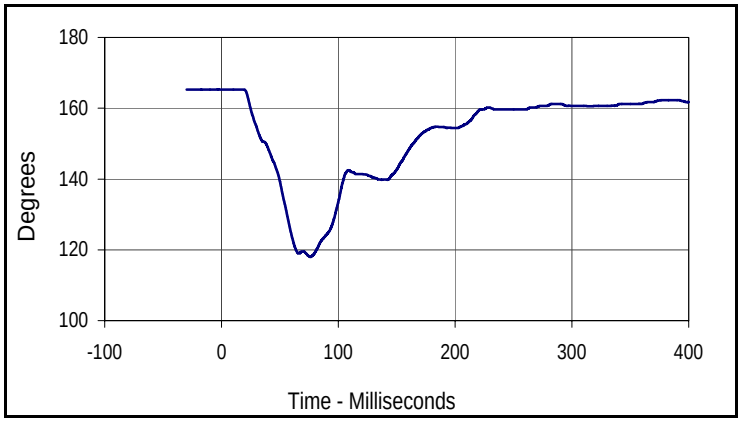
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10



Curve Description			
Driver Upper Right CRUX Base Rotation			
CURNO	Type	SAE Class	Units
043	FIL	180	Degrees
Max	Time	Min	Time
176.7	392.7	159.6	116.7

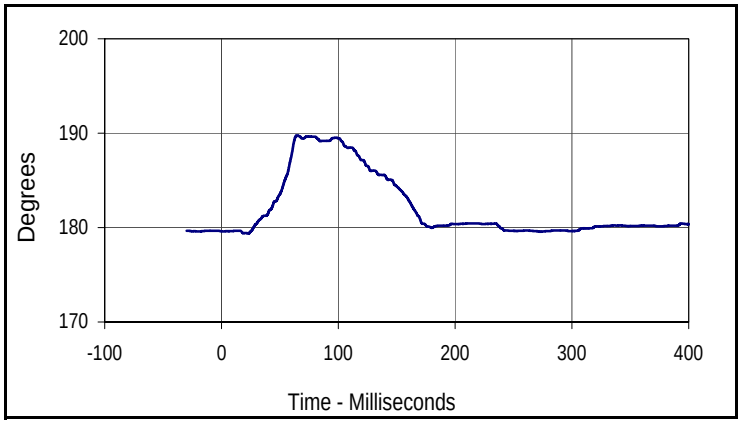


Curve Description			
Driver Upper Right CRUX Middle Rotation			
CURNO	Type	SAE Class	Units
044	FIL	180	Degrees
Max	Time	Min	Time
133.2	64.6	112.5	109.3

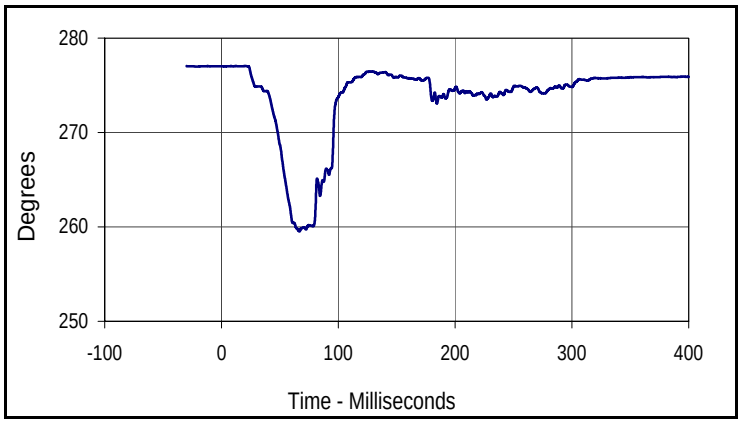


Curve Description			
Driver Upper Right CRUX Elbow Rotation			
CURNO	Type	SAE Class	Units
045	FIL	180	Degrees
Max	Time	Min	Time
165.3	7.5	118.0	76.1

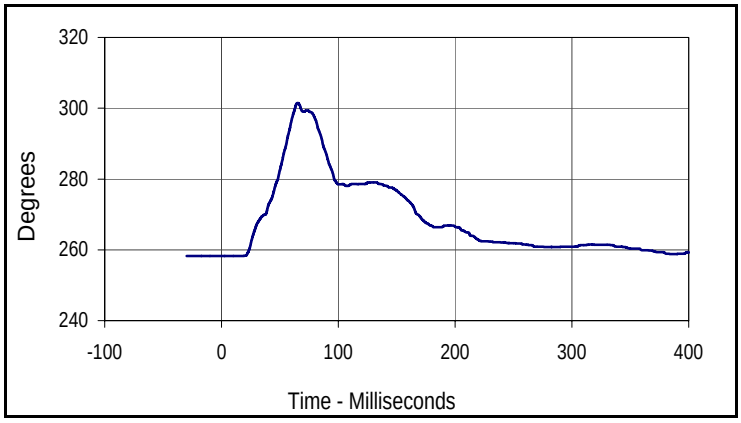
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10



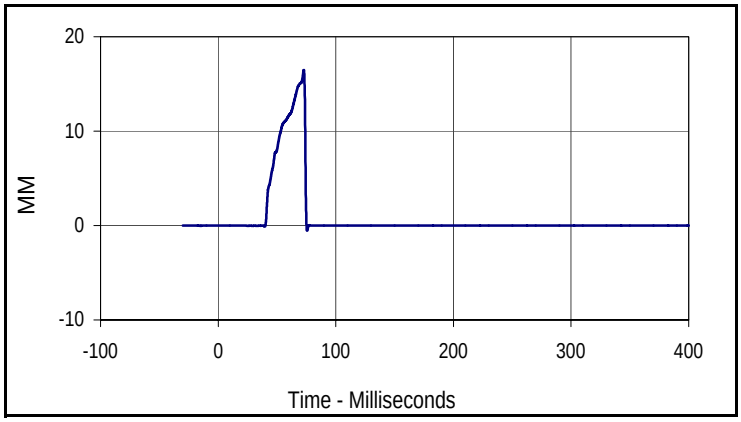
Curve Description			
Driver Lower Right CRUX Base Rotation			
CURNO	Type	SAE Class	Units
046	FIL	180	Degrees
Max	Time	Min	Time
189.8	64.7	179.4	23.0



Curve Description			
Driver Lower Right CRUX Middle Rotation			
CURNO	Type	SAE Class	Units
047	FIL	180	Degrees
Max	Time	Min	Time
277.0	20.3	259.5	66.7



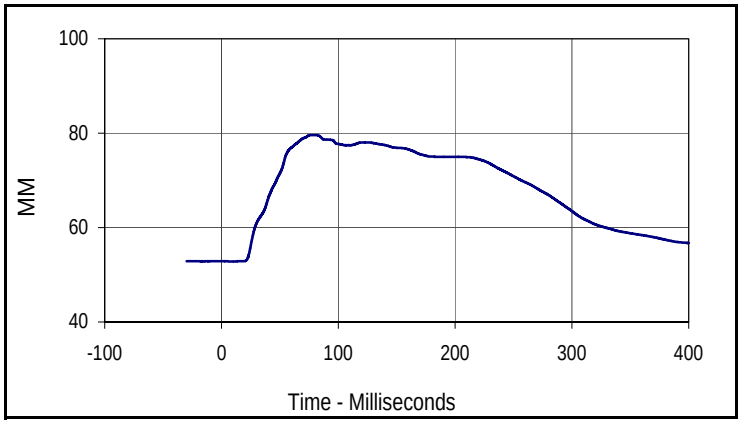
Curve Description			
Driver Lower Right CRUX Elbow Rotation			
CURNO	Type	SAE Class	Units
048	FIL	180	Degrees
Max	Time	Min	Time
301.5	65.2	258.2	5.5



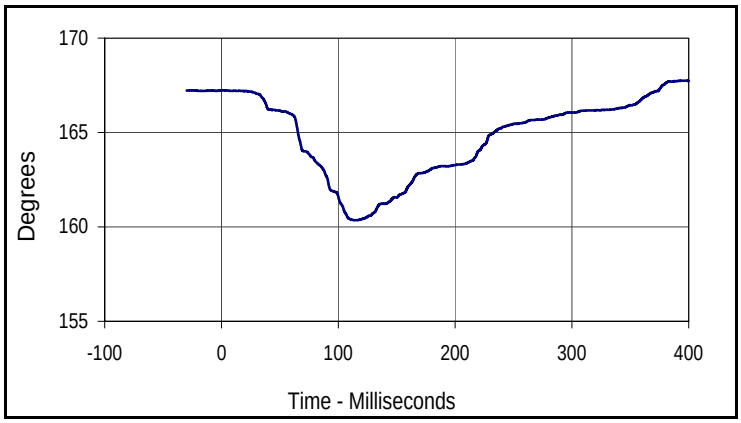
Curve Description			
Driver Upper Abdomen Deflection			
CURNO	Type	SAE Class	Units
049	FIL	180	MM
Max	Time	Min	Time
16.5	72.8	-0.5	75.6

* Channel failed at 74.2 msec.

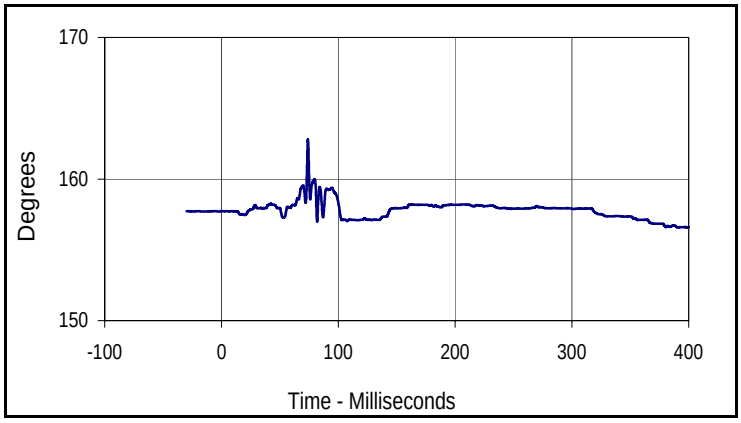
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10



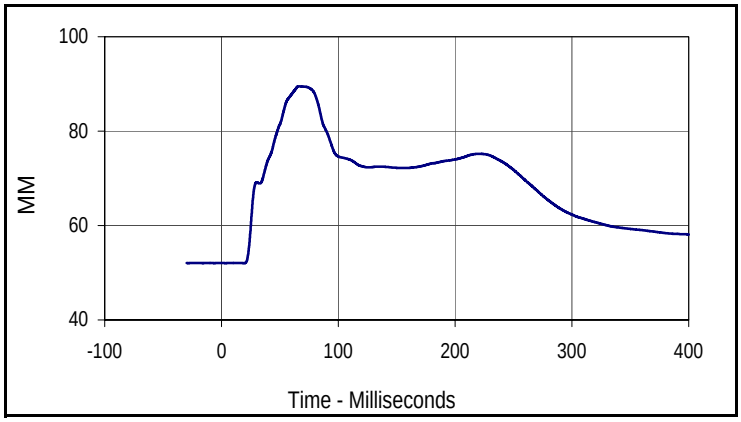
Curve Description			
Driver Left DGSP X Deflection			
CURNO	Type	SAE Class	Units
050	FIL	180	MM
Max	Time	Min	Time
79.6	80.9	52.8	6.7



Curve Description			
Driver Left DGSP Y Rotation			
CURNO	Type	SAE Class	Units
051	FIL	180	Degrees
Max	Time	Min	Time
167.8	394.8	160.4	115.6

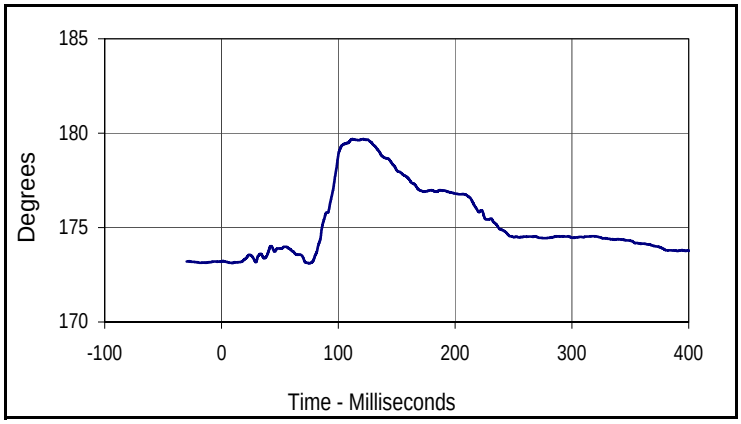


Curve Description			
Driver Left DGSP Z Rotation			
CURNO	Type	SAE Class	Units
052	FIL	180	Degrees
Max	Time	Min	Time
162.8	74.0	156.6	390.6

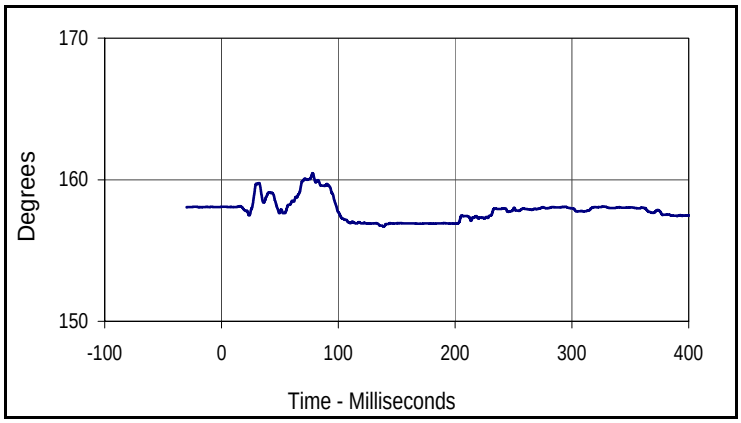


Curve Description			
Driver Right DGSP X Deflection			
CURNO	Type	SAE Class	Units
053	FIL	180	MM
Max	Time	Min	Time
89.5	65.7	52.0	19.4

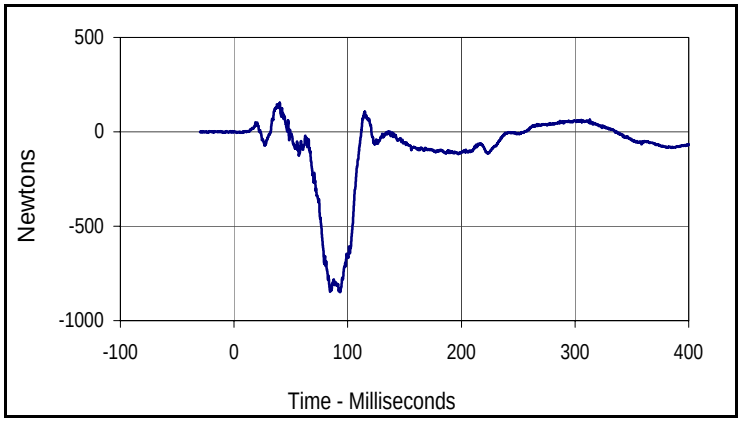
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10



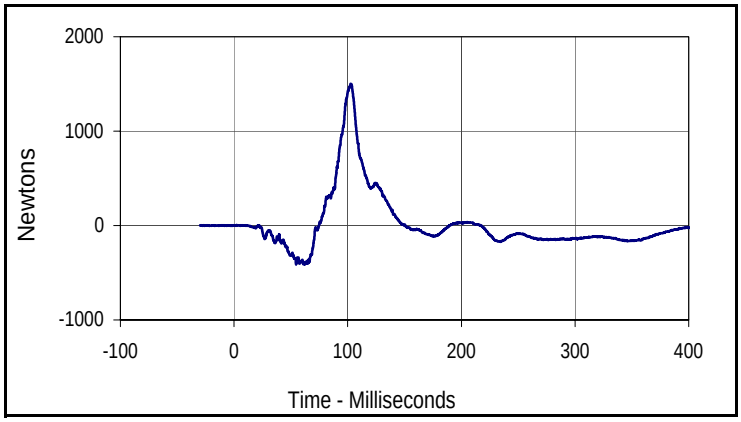
Curve Description			
Driver Right DGSP Y Rotation			
CURNO	Type	SAE Class	Units
054	FIL	180	Degrees
Max	Time	Min	Time
179.7	121.4	173.1	75.1



Curve Description			
Driver Right DGSP Z Rotation			
CURNO	Type	SAE Class	Units
055	FIL	180	Degrees
Max	Time	Min	Time
160.5	78.1	156.7	138.9

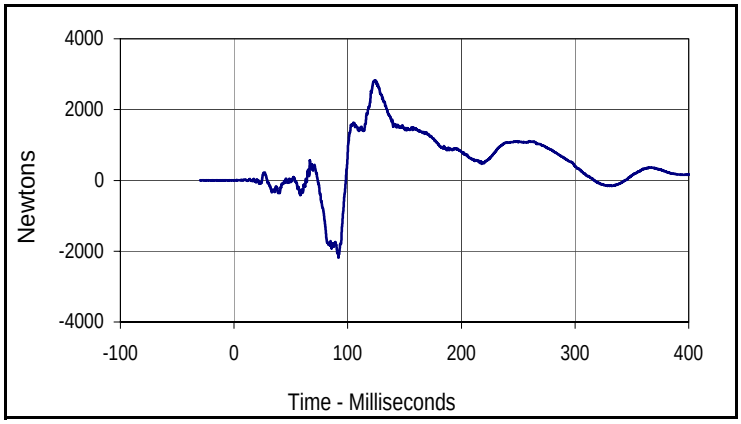


Curve Description			
Driver Thoracic Spine Force X			
CURNO	Type	SAE Class	Units
056	FIL	600	Newtons
Max	Time	Min	Time
154.5	40.2	-849.4	93.4

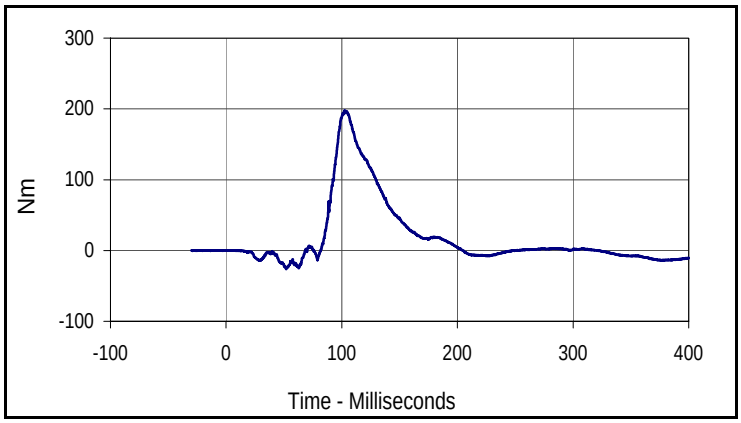


Curve Description			
Driver Thoracic Spine Force Y			
CURNO	Type	SAE Class	Units
057	FIL	600	Newtons
Max	Time	Min	Time
1502.0	102.7	-410.0	62.4

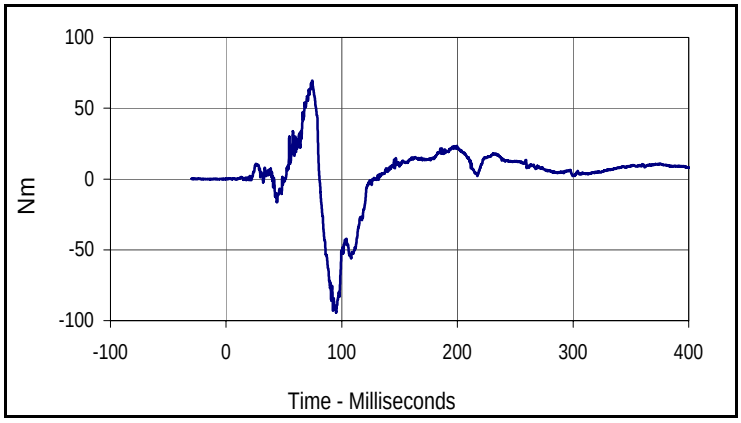
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10



Curve Description			
Driver Upper Thoracic Spine Force Z			
CURNO	Type	SAE Class	Units
058	FIL	600	Newtons
Max	Time	Min	Time
2822.5	123.8	-2181.9	91.9

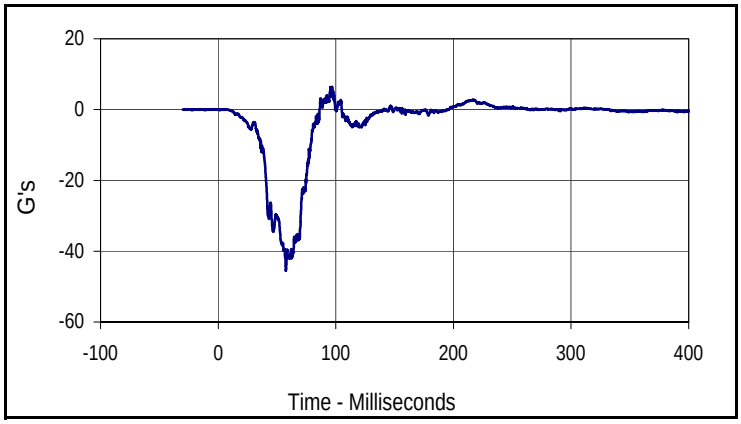


Curve Description			
Driver Upper Thoracic Spine Moment X			
CURNO	Type	SAE Class	Units
059	FIL	600	Nm
Max	Time	Min	Time
198.0	102.7	-26.1	52.0

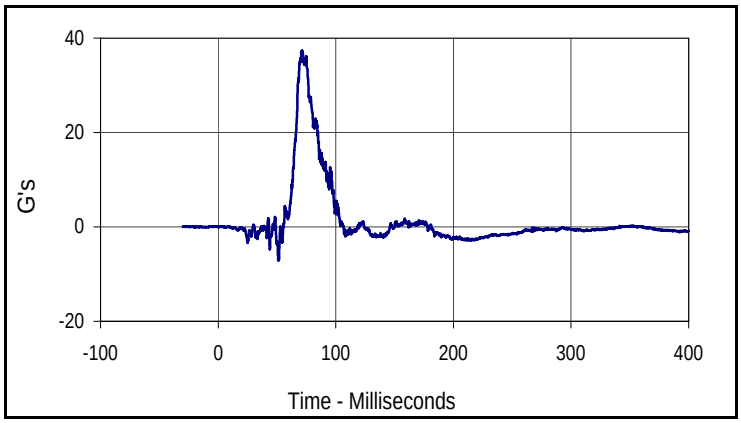


Curve Description			
Driver Upper Thoracic Spine Moment Y			
CURNO	Type	SAE Class	Units
060	FIL	600	Nm
Max	Time	Min	Time
69.5	74.5	-94.3	95.2

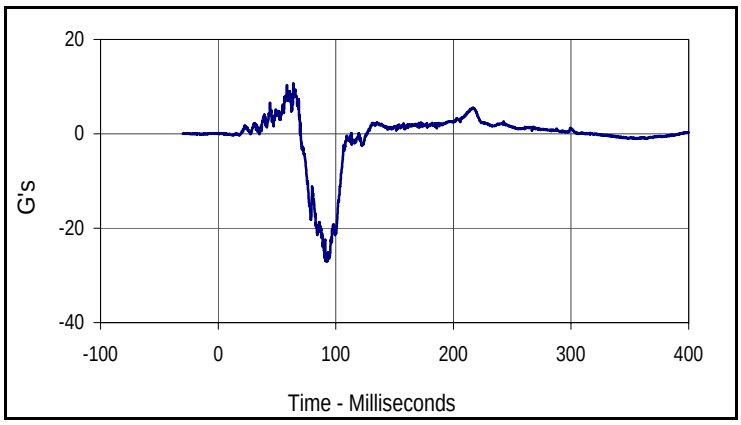
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10



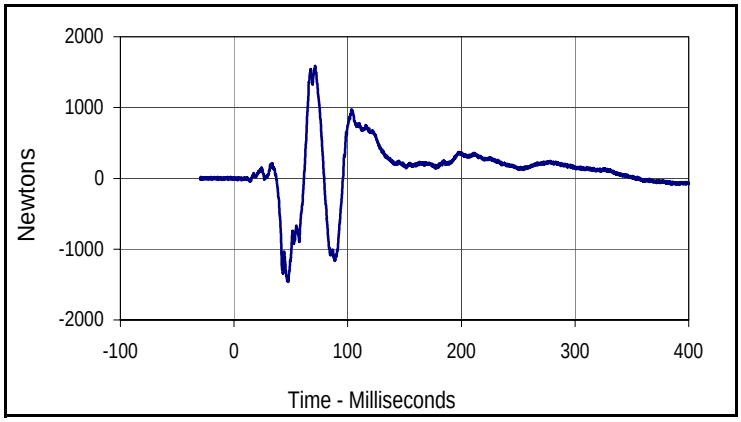
Curve Description			
Driver Pelvis X			
CURNO	Type	SAE Class	Units
061	FIL	1000	G's
Max	Time	Min	Time
6.4	96.9	-45.5	57.5



Curve Description			
Driver Pelvis Y			
CURNO	Type	SAE Class	Units
062	FIL	1000	G's
Max	Time	Min	Time
37.4	71.3	-7.2	51.2

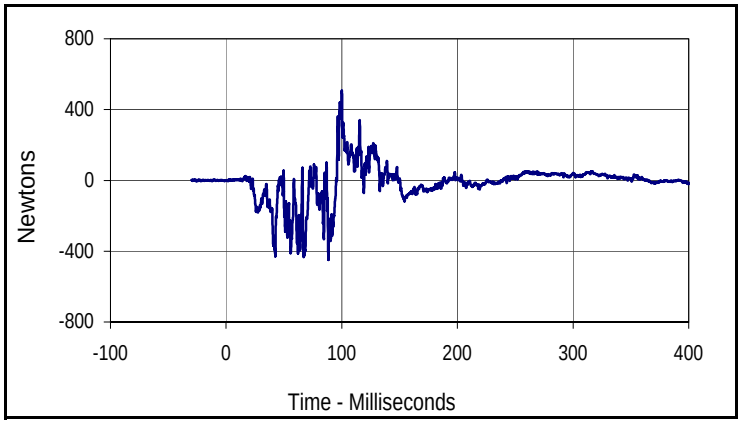


Curve Description			
Driver Pelvis Z			
CURNO	Type	SAE Class	Units
063	FIL	1000	G's
Max	Time	Min	Time
10.7	63.9	-27.0	91.7

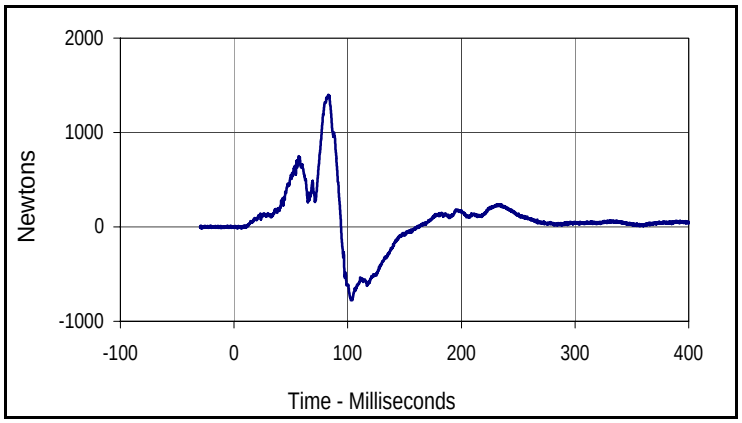


Curve Description			
Driver Left Acetabulum Force X			
CURNO	Type	SAE Class	Units
064	FIL	600	Newtons
Max	Time	Min	Time
1588.8	71.4	-1463.5	47.7

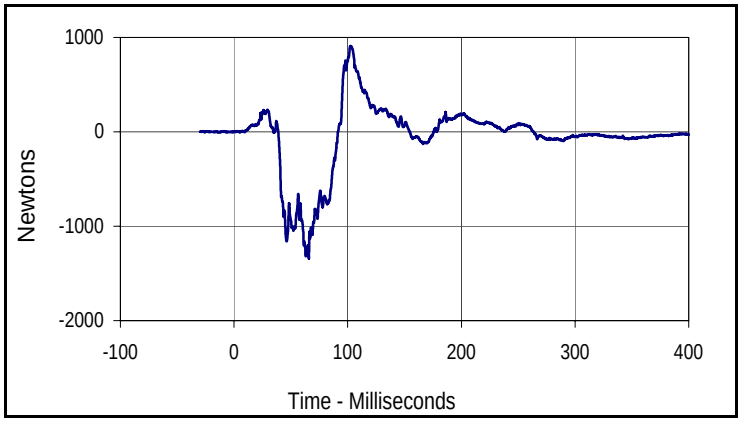
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10



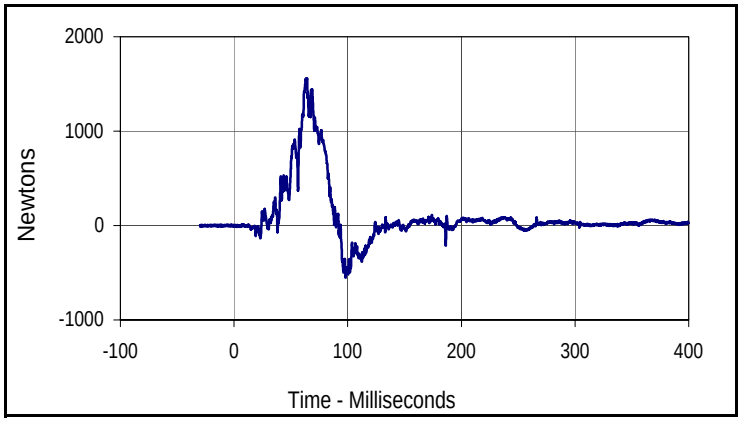
Curve Description			
Driver Left Acetabulum Force Y			
CURNO	Type	SAE Class	Units
065	FIL	600	Newtons
Max	Time	Min	Time
507.6	100.1	-449.9	88.4



Curve Description			
Driver Left Acetabulum Force Z			
CURNO	Type	SAE Class	Units
066	FIL	600	Newtons
Max	Time	Min	Time
1398.8	83.0	-777.8	104.0

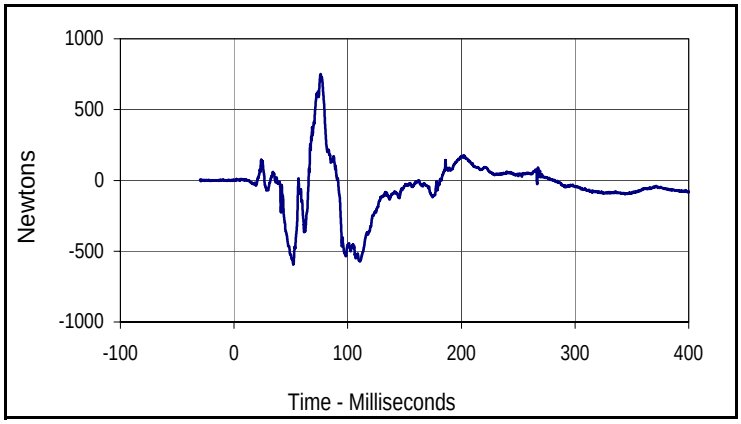


Curve Description			
Driver Right Acetabulum Force X			
CURNO	Type	SAE Class	Units
067	FIL	600	Newtons
Max	Time	Min	Time
909.2	102.8	-1341.3	65.8

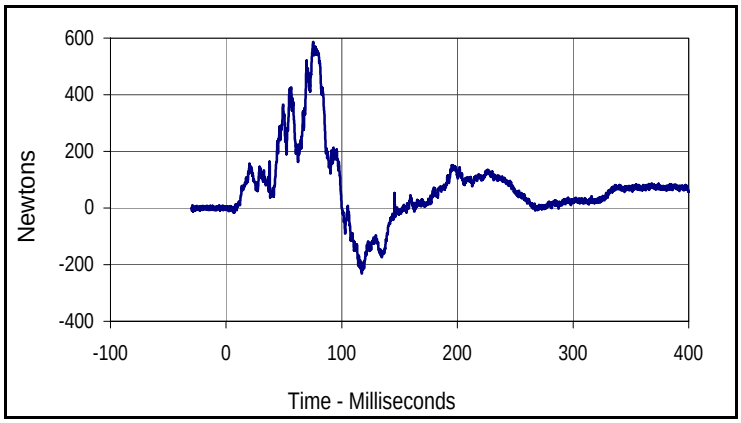


Curve Description			
Driver Right Acetabulum Force Y			
CURNO	Type	SAE Class	Units
068	FIL	600	Newtons
Max	Time	Min	Time
1559.8	63.6	-551.1	98.1

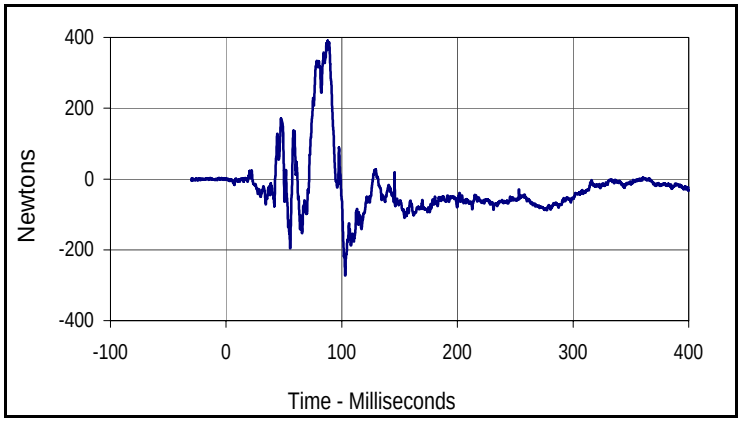
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10



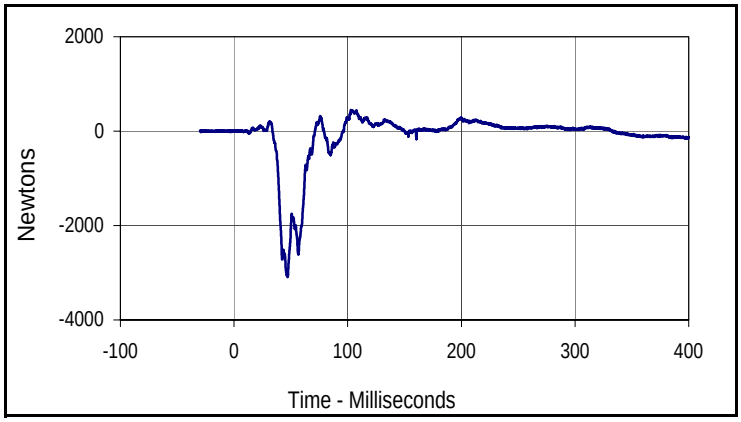
Curve Description			
Driver Right Acetabulum Force Z			
CURNO	Type	SAE Class	Units
069	FIL	600	Newtons
Max	Time	Min	Time
751.9	76.2	-595.4	52.1



Curve Description			
Driver Left Femur Force X			
CURNO	Type	SAE Class	Units
070	FIL	600	Newtons
Max	Time	Min	Time
587.0	75.3	-231.3	117.3

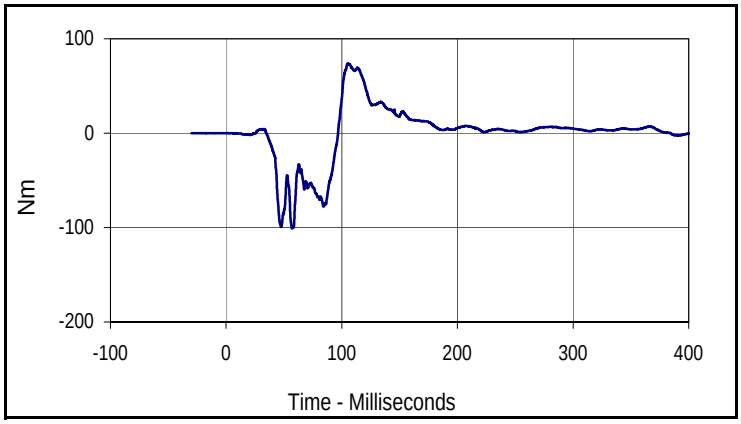


Curve Description			
Driver Left Femur Force Y			
CURNO	Type	SAE Class	Units
071	FIL	600	Newtons
Max	Time	Min	Time
390.7	87.9	-272.7	103.0

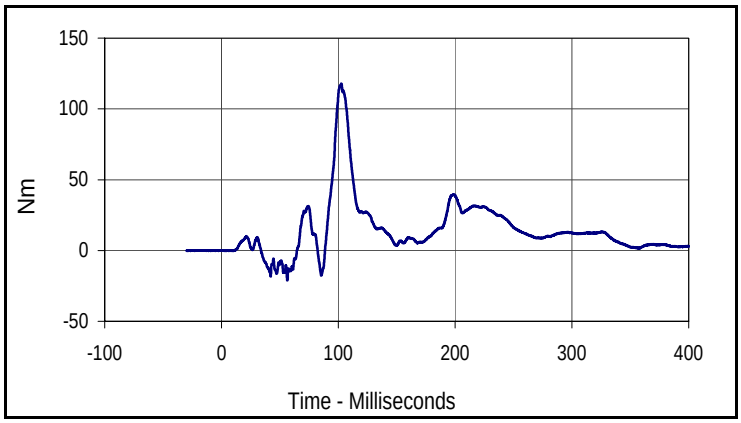


Curve Description			
Driver Left Femur Force Z			
CURNO	Type	SAE Class	Units
072	FIL	600	Newtons
Max	Time	Min	Time
445.1	102.9	-3090.4	47.2

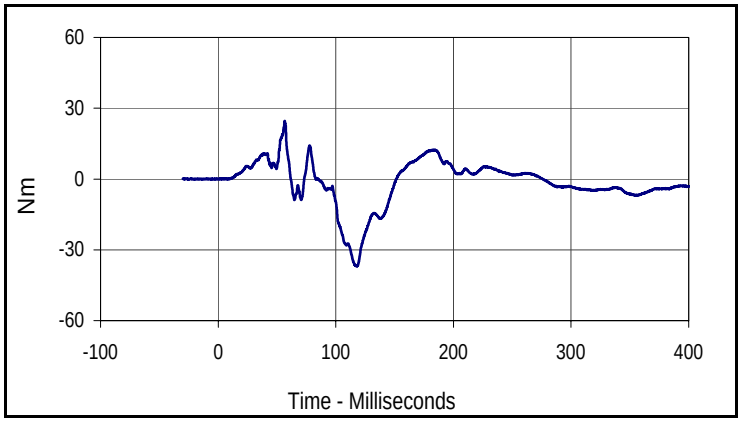
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10



Curve Description			
Driver Left Femur Moment X			
CURNO	Type	SAE Class	Units
073	FIL	600	Nm
Max	Time	Min	Time
73.8	105.2	-101.0	56.9

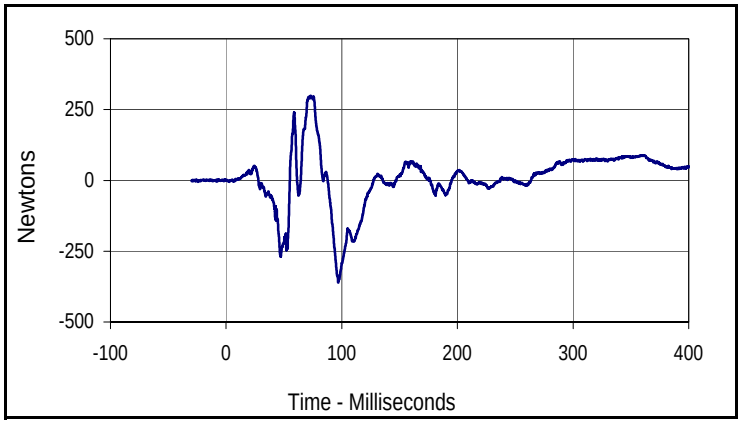


Curve Description			
Driver Left Femur Moment Y			
CURNO	Type	SAE Class	Units
074	FIL	600	Nm
Max	Time	Min	Time
117.8	102.6	-21.0	56.4

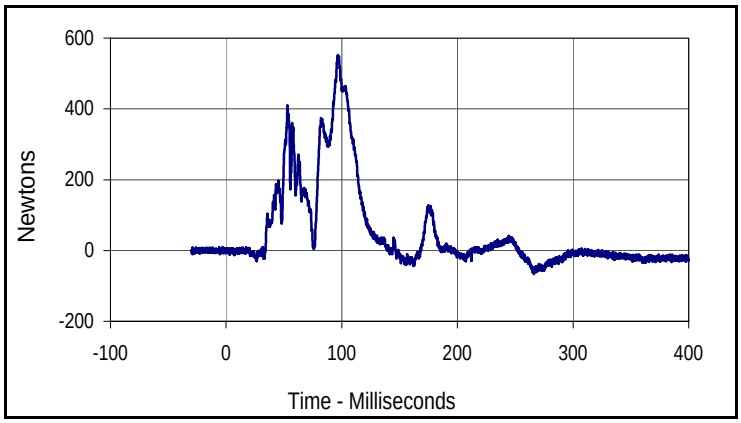


Curve Description			
Driver Left Femur Moment Z			
CURNO	Type	SAE Class	Units
075	FIL	600	Nm
Max	Time	Min	Time
24.6	56.6	-37.0	117.9

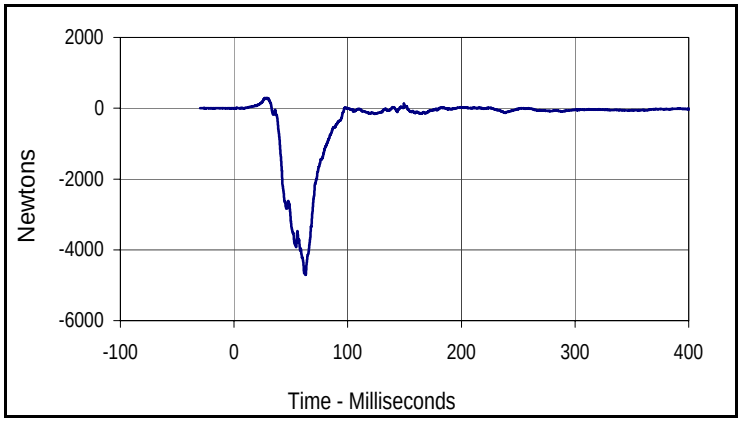
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10



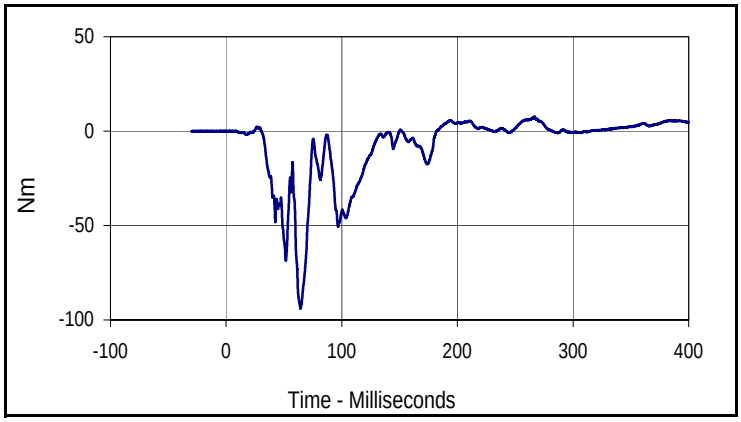
Curve Description			
Driver Right Femur Force X			
CURNO	Type	SAE Class	Units
076	FIL	600	Newtons
Max	Time	Min	Time
298.8	73.1	-360.7	97.0



Curve Description			
Driver Right Femur Force Y			
CURNO	Type	SAE Class	Units
077	FIL	600	Newtons
Max	Time	Min	Time
552.4	96.6	-66.5	266.2

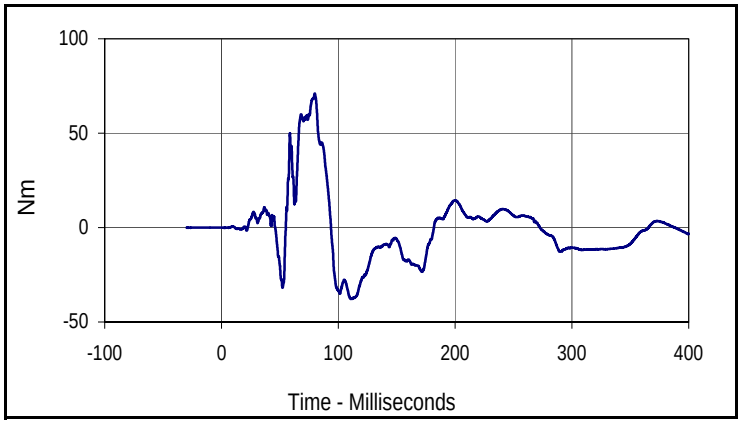


Curve Description			
Driver Right Femur Force Z			
CURNO	Type	SAE Class	Units
078	FIL	600	Newtons
Max	Time	Min	Time
294.5	28.9	-4708.4	63.0

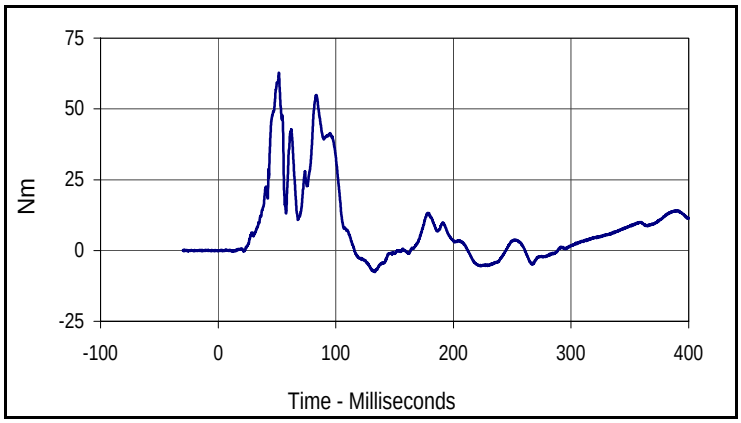


Curve Description			
Driver Right Femur Moment X			
CURNO	Type	SAE Class	Units
079	FIL	600	Nm
Max	Time	Min	Time
7.9	266.7	-94.0	64.3

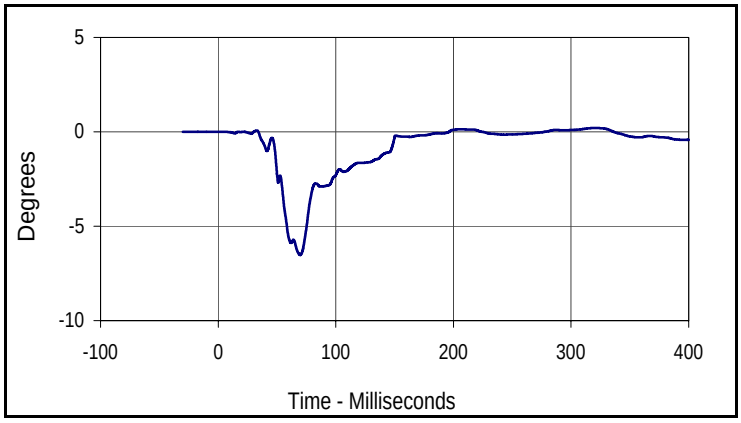
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10



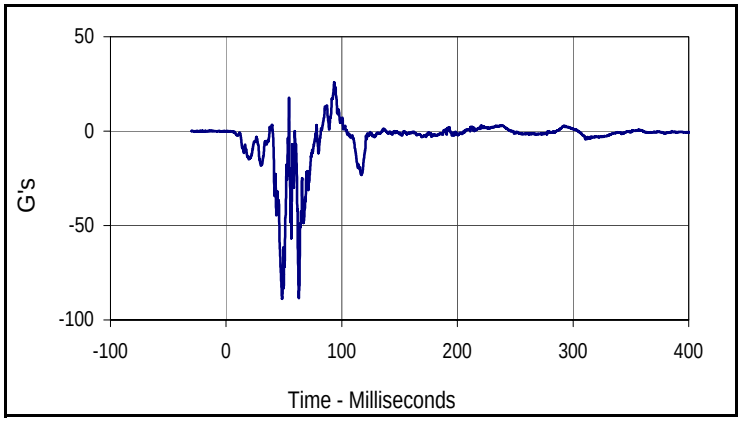
Curve Description			
Driver Right Femur Moment Y			
CURNO	Type	SAE Class	Units
080	FIL	600	Nm
Max	Time	Min	Time
71.0	79.9	-37.8	110.6



Curve Description			
Driver Right Femur Moment Z			
CURNO	Type	SAE Class	Units
081	FIL	600	Nm
Max	Time	Min	Time
62.8	51.6	-7.6	133.3

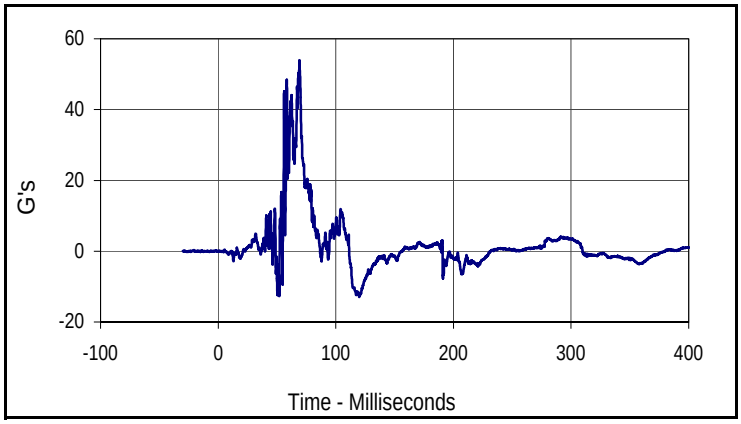


Curve Description			
Driver Left Knee Deflection			
CURNO	Type	SAE Class	Units
082	FIL	180	Degrees
Max	Time	Min	Time
0.2	319.7	-6.5	69.8

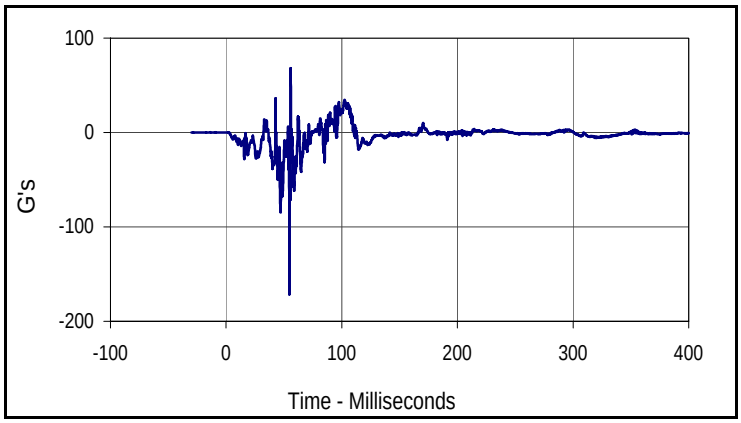


Curve Description			
Driver Left Tibia X			
CURNO	Type	SAE Class	Units
083	FIL	1000	G's
Max	Time	Min	Time
25.9	93.5	-88.8	48.4

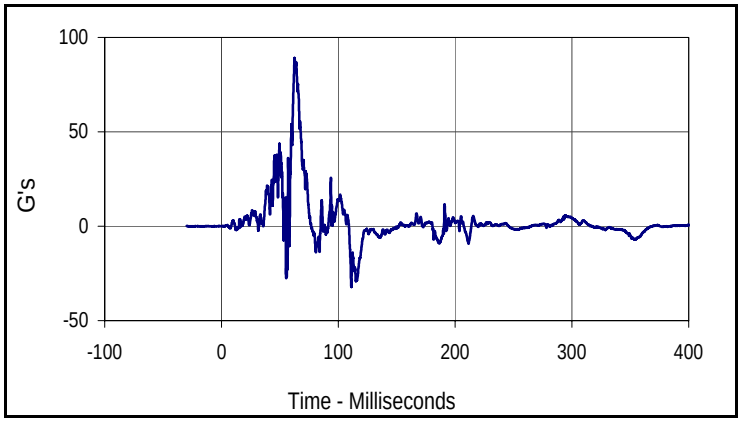
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10



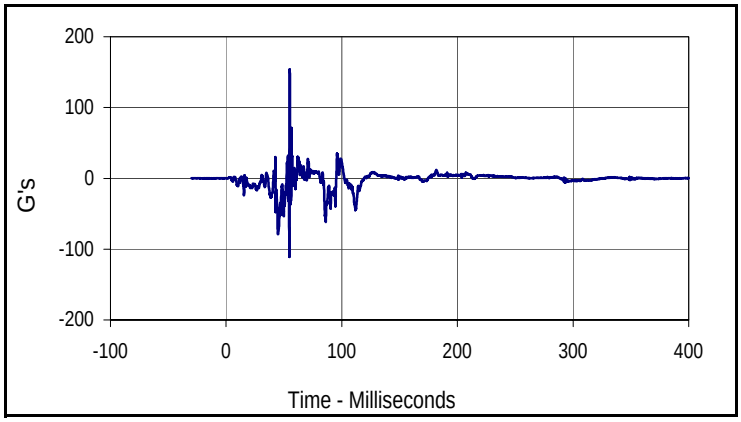
Curve Description			
Driver Left Tibia Y			
CURNO	Type	SAE Class	Units
084	FIL	1000	G's
Max	Time	Min	Time
53.9	69.1	-13.0	119.9



Curve Description			
Driver Left Foot X			
CURNO	Type	SAE Class	Units
085	FIL	1000	G's
Max	Time	Min	Time
67.7	55.9	-171.2	54.8

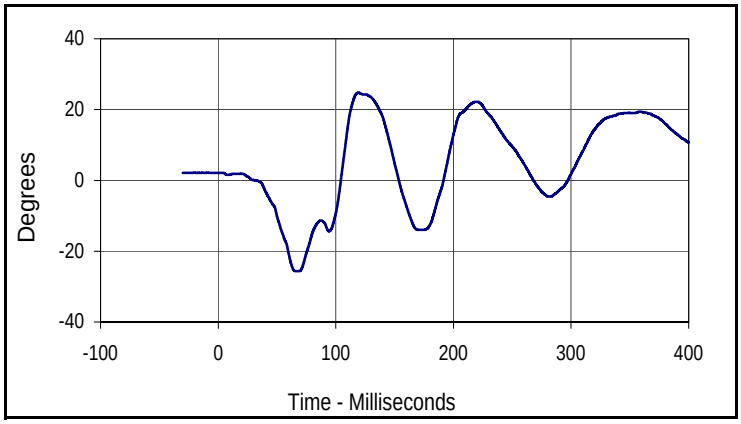


Curve Description			
Driver Left Foot Y			
CURNO	Type	SAE Class	Units
086	FIL	1000	G's
Max	Time	Min	Time
89.2	62.6	-32.3	111.1

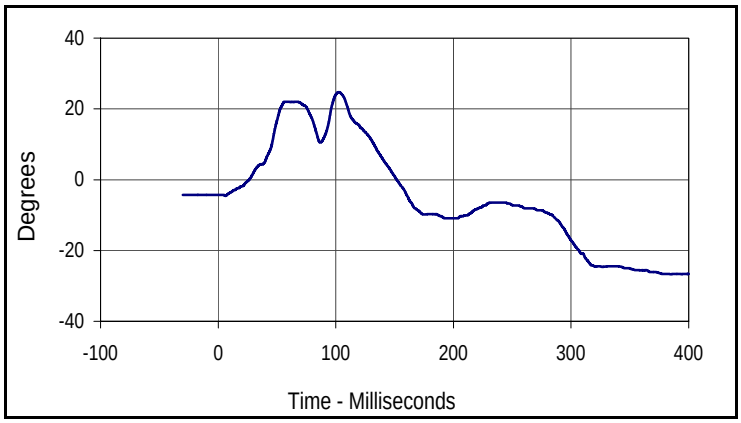


Curve Description			
Driver Left Foot Z			
CURNO	Type	SAE Class	Units
087	FIL	1000	G's
Max	Time	Min	Time
152.8	55.0	-109.9	54.7

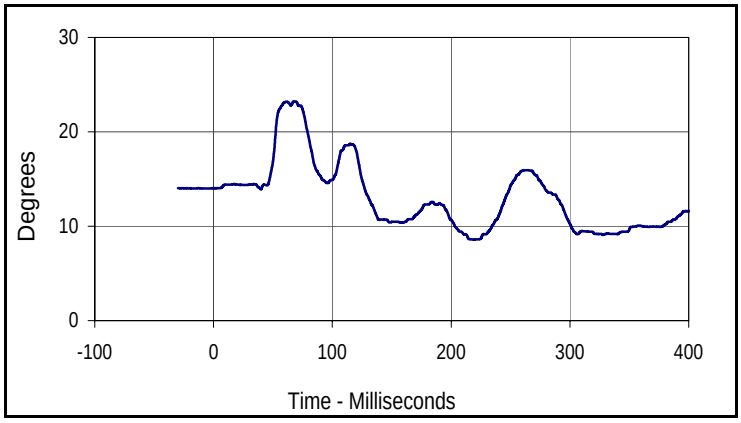
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10



Curve Description			
Driver Left Ankle Rotation X			
CURNO	Type	SAE Class	Units
088	FIL	180	Degrees
Max	Time	Min	Time
24.8	119.0	-25.7	68.8

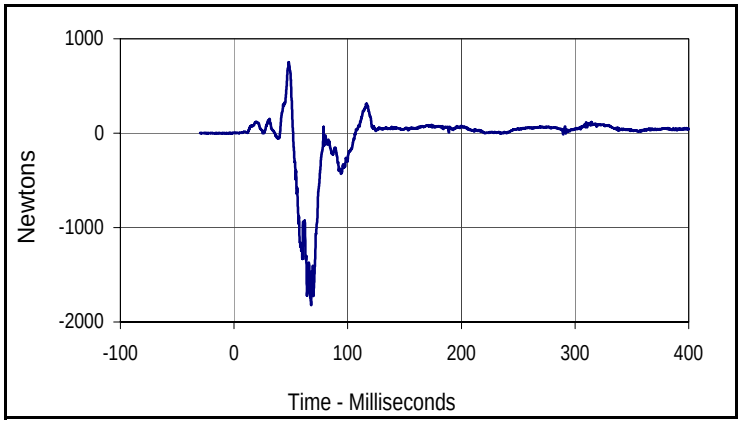


Curve Description			
Driver Left Ankle Rotation Y			
CURNO	Type	SAE Class	Units
089	FIL	180	Degrees
Max	Time	Min	Time
24.7	102.7	-26.7	384.8

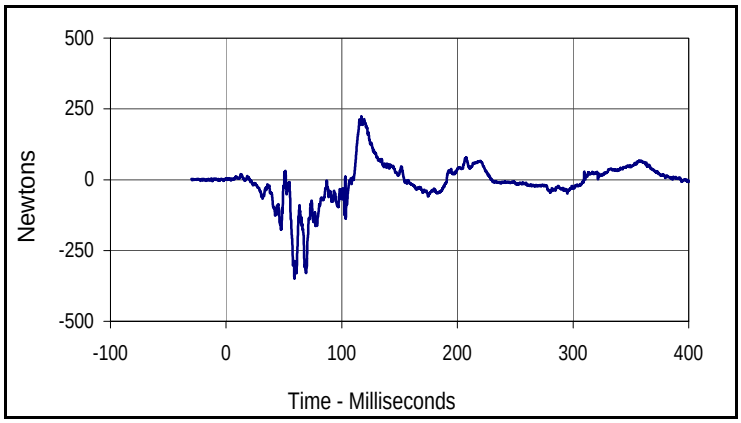


Curve Description			
Driver Left Ankle Rotation Z			
CURNO	Type	SAE Class	Units
090	FIL	180	Degrees
Max	Time	Min	Time
23.2	68.6	8.6	218.9

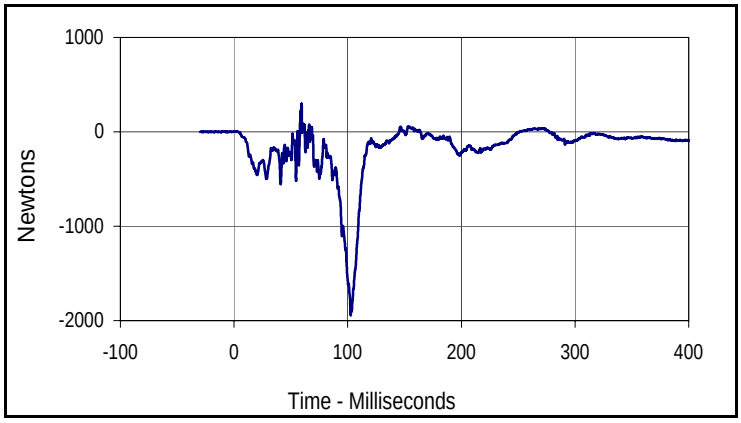
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10



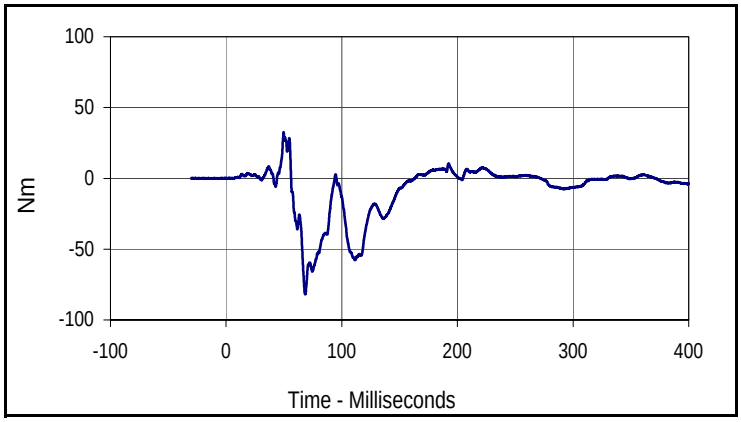
Curve Description			
Driver Left Upper Tibia Force X			
CURNO	Type	SAE Class	Units
091	FIL	600	Newtons
Max	Time	Min	Time
751.0	48.2	-1821.8	67.8



Curve Description			
Driver Left Upper Tibia Force Y			
CURNO	Type	SAE Class	Units
092	FIL	600	Newtons
Max	Time	Min	Time
223.1	117.0	-348.7	59.1

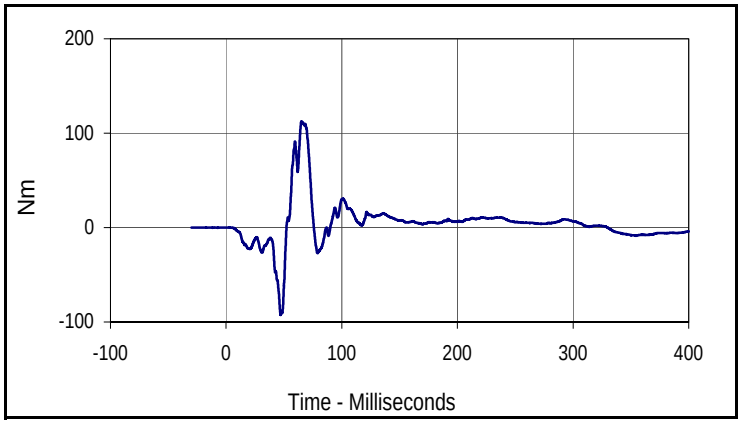


Curve Description			
Driver Left Upper Tibia Force Z			
CURNO	Type	SAE Class	Units
093	FIL	600	Newtons
Max	Time	Min	Time
299.1	59.4	-1943.1	102.6

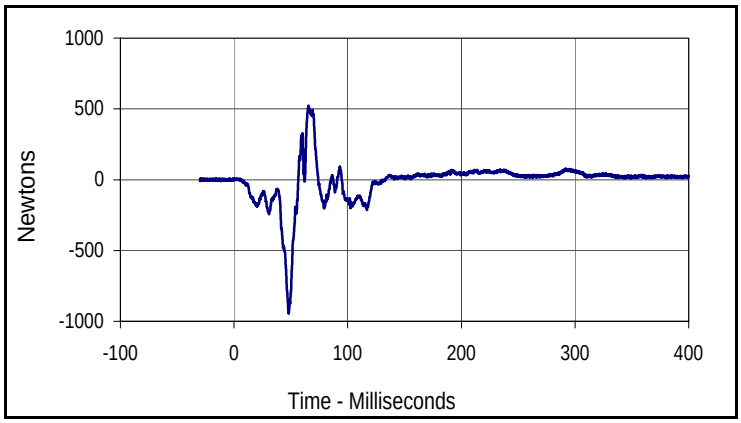


Curve Description			
Driver Left Upper Tibia Moment X			
CURNO	Type	SAE Class	Units
094	FIL	600	Nm
Max	Time	Min	Time
32.3	49.7	-81.9	68.3

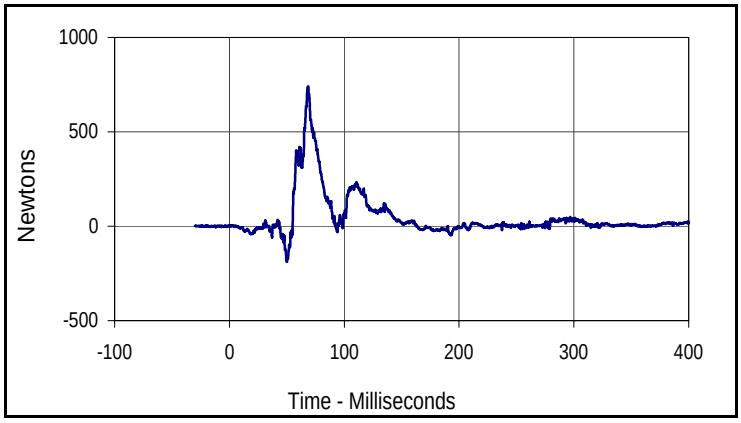
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10



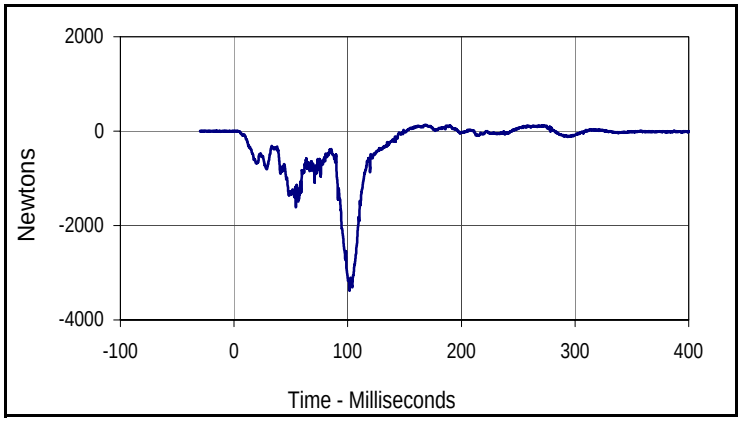
Curve Description			
Driver Left Upper Tibia Moment Y			
CURNO	Type	SAE Class	Units
095	FIL	600	Nm
Max	Time	Min	Time
112.5	65.3	-92.4	47.2



Curve Description			
Driver Left Lower Tibia Force X			
CURNO	Type	SAE Class	Units
096	FIL	600	Newtons
Max	Time	Min	Time
523.8	65.4	-943.5	48.1

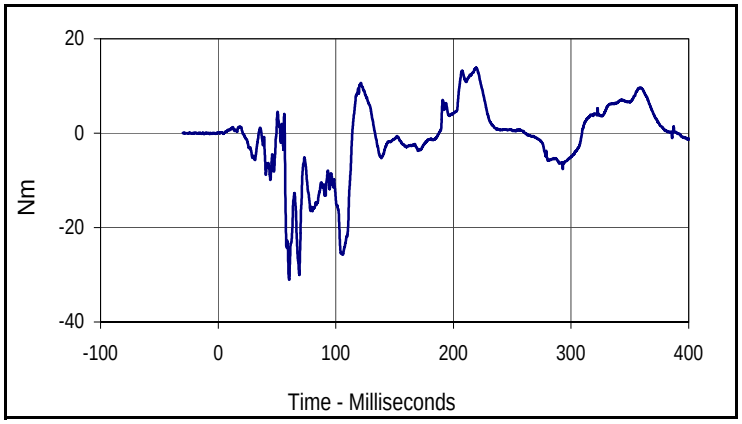


Curve Description			
Driver Left Lower Tibia Force Y			
CURNO	Type	SAE Class	Units
097	FIL	600	Newtons
Max	Time	Min	Time
740.2	68.5	-188.4	50.1

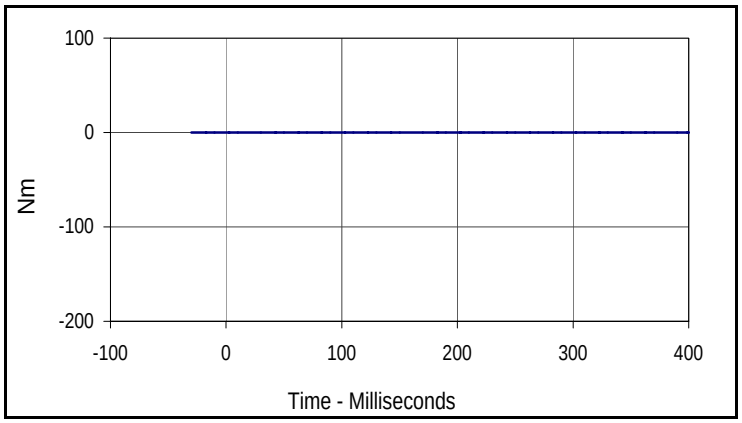


Curve Description			
Driver Left Lower Tibia Force Z			
CURNO	Type	SAE Class	Units
098	FIL	600	Newtons
Max	Time	Min	Time
133.4	168.5	-3378.4	101.5

Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10

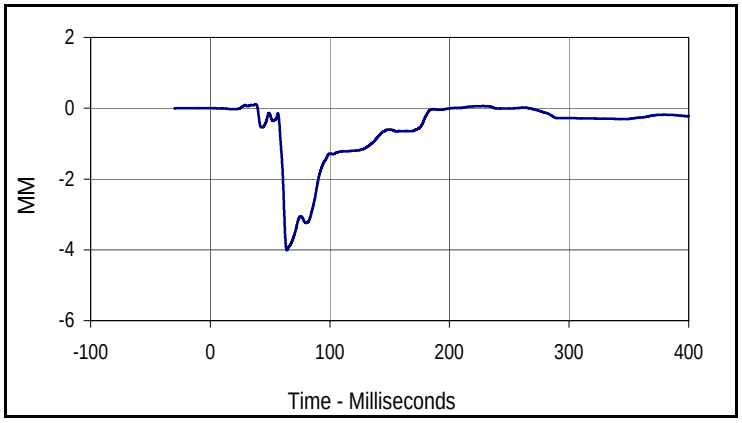


Curve Description			
Driver Left Lower Tibia Moment X			
CURNO	Type	SAE Class	Units
099	FIL	600	Nm
Max	Time	Min	Time
13.9	219.4	-31.0	60.4

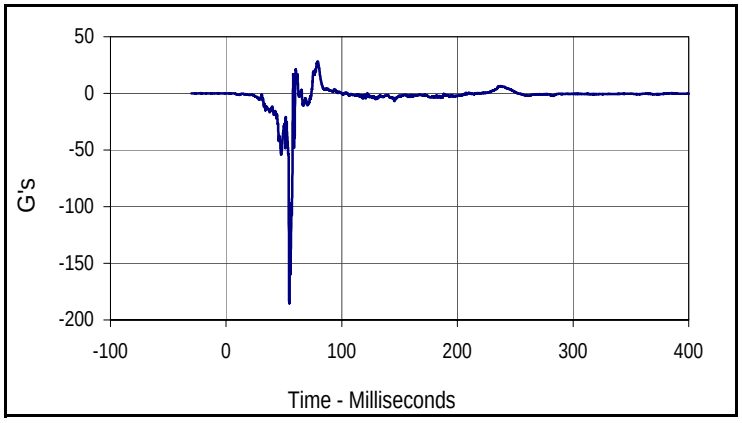


Curve Description			
Driver Left Lower Tibia Moment Y			
CURNO	Type	SAE Class	Units
100	FIL	600	Nm
Max	Time	Min	Time
0.0	0.0	0.0	0.0

* Channel failed, no data

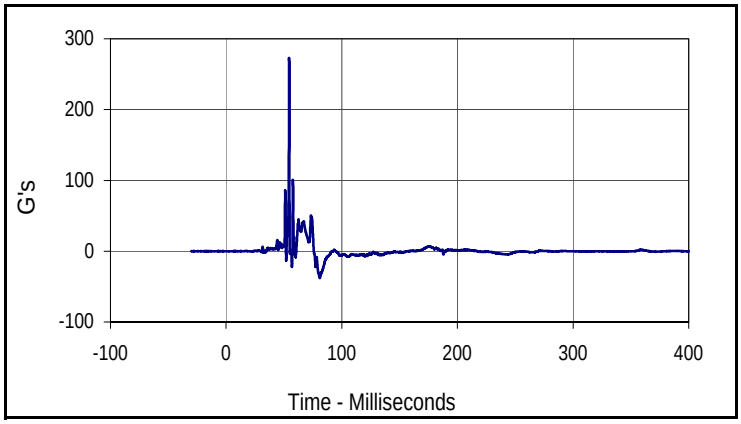


Curve Description			
Driver Right Knee Deflection			
CURNO	Type	SAE Class	Units
101	FIL	180	MM
Max	Time	Min	Time
0.1	38.2	-4.0	64.1

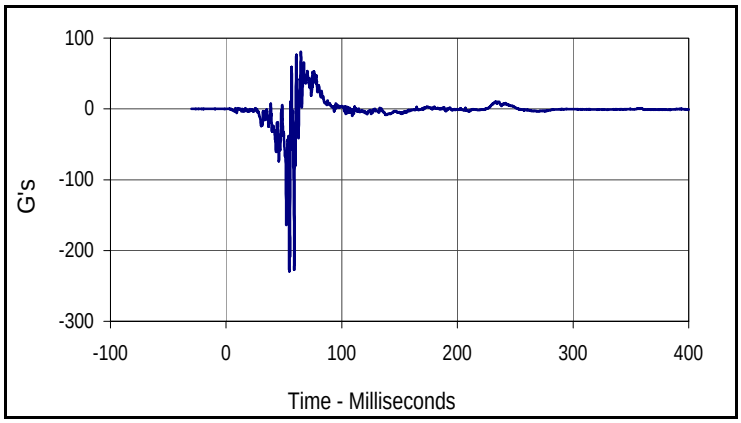


Curve Description			
Driver Right Tibia X			
CURNO	Type	SAE Class	Units
102	FIL	1000	G's
Max	Time	Min	Time
28.2	79.2	-185.3	54.6

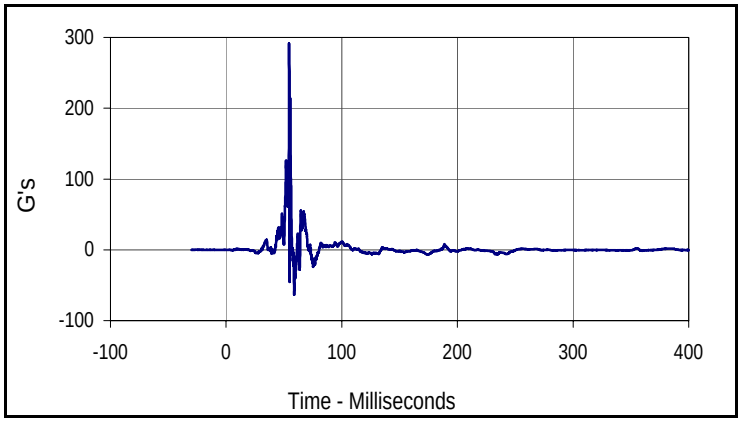
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10



Curve Description			
Driver Right Tibia Y			
CURNO	Type	SAE Class	Units
103	FIL	1000	G's
Max	Time	Min	Time
272.3	54.5	-38.1	81.1

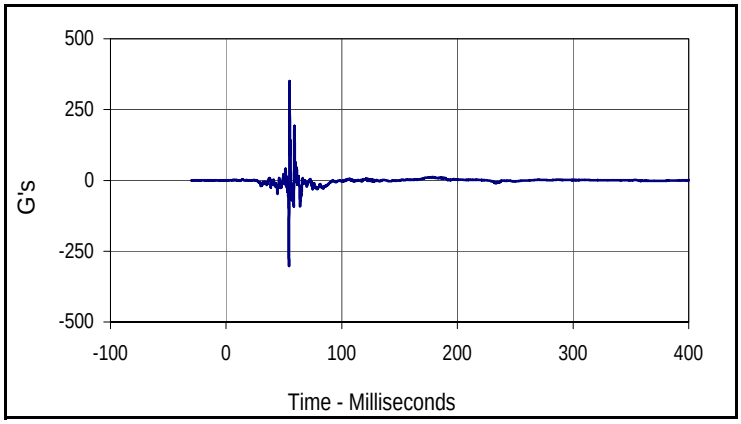


Curve Description			
Driver Right Foot X			
CURNO	Type	SAE Class	Units
104	FIL	1000	G's
Max	Time	Min	Time
80.6	64.6	-228.8	54.6

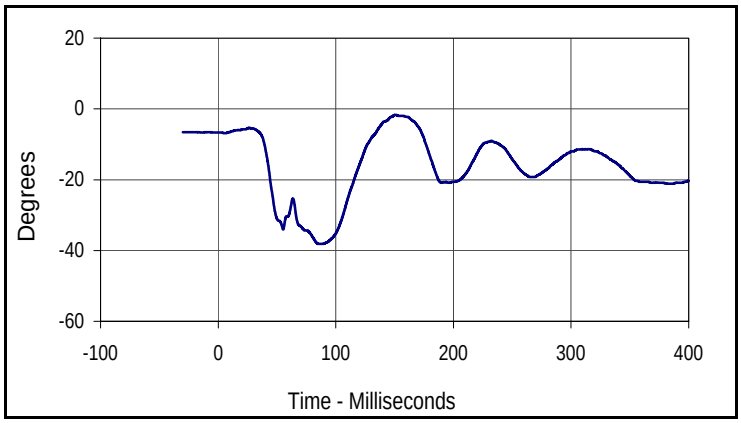


Curve Description			
Driver Right Foot Y			
CURNO	Type	SAE Class	Units
105	FIL	1000	G's
Max	Time	Min	Time
290.3	54.5	-63.2	58.8

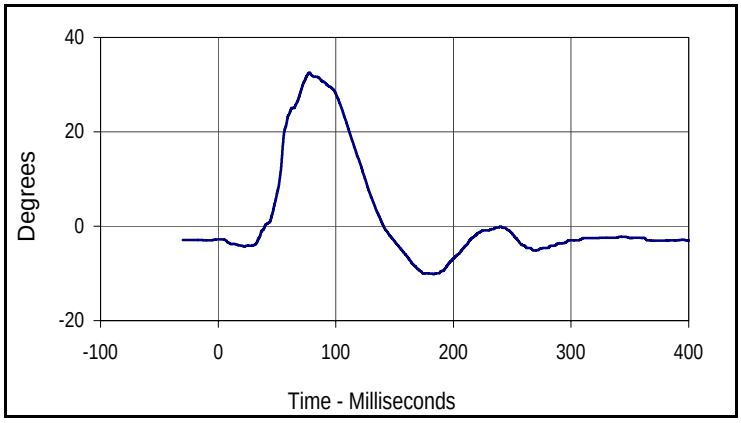
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10



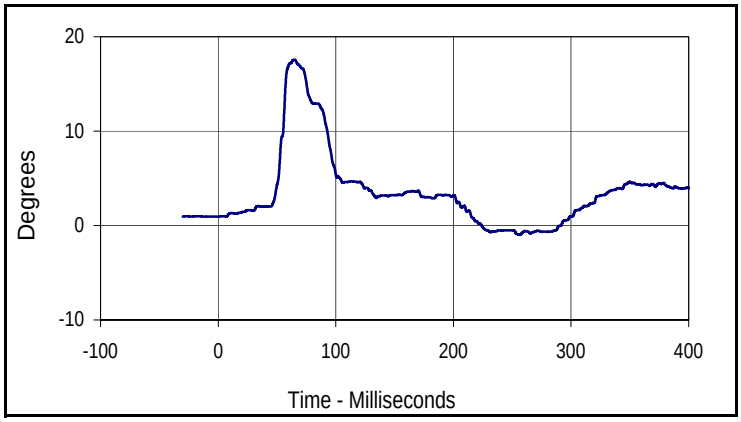
Curve Description			
Driver Right Foot Z			
CURNO	Type	SAE Class	Units
106	FIL	1000	G's
Max	Time	Min	Time
351.2	54.9	-302.5	54.4



Curve Description			
Driver Right Ankle Rotation X			
CURNO	Type	SAE Class	Units
107	FIL	180	Degrees
Max	Time	Min	Time
-1.7	150.7	-38.1	85.6

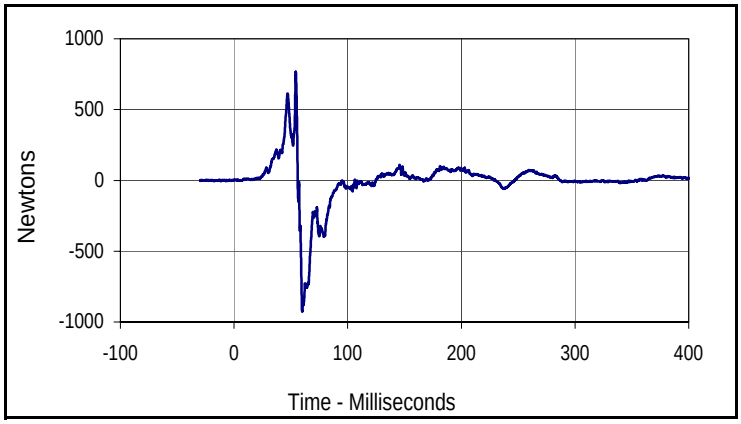


Curve Description			
Driver Right Ankle Rotation Y			
CURNO	Type	SAE Class	Units
108	FIL	180	Degrees
Max	Time	Min	Time
32.5	77.5	-10.2	183.0

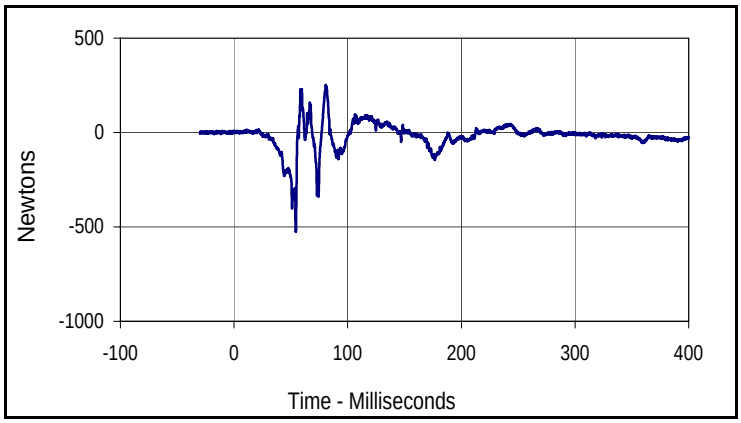


Curve Description			
Driver Right Ankle Rotation Z			
CURNO	Type	SAE Class	Units
109	FIL	180	Degrees
Max	Time	Min	Time
17.6	64.5	-1.0	255.9

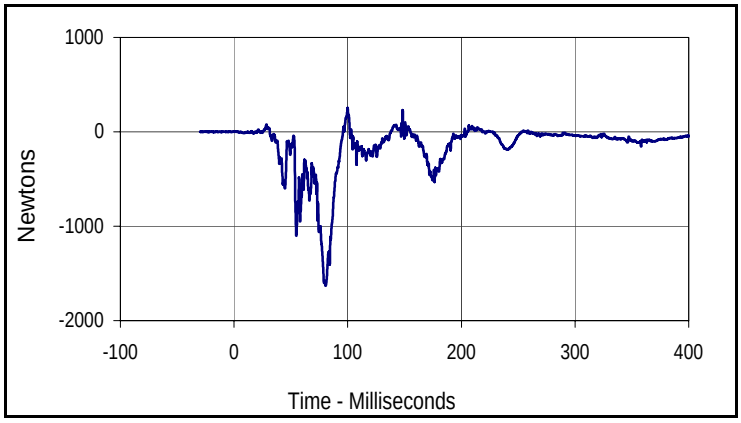
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10



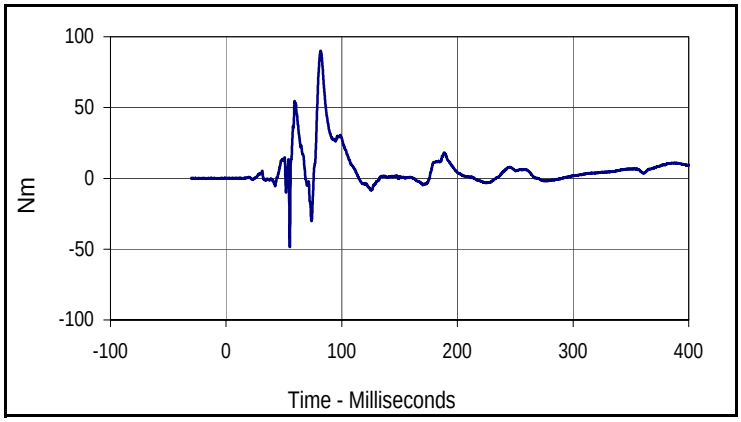
Curve Description			
Driver Right Upper Tibia Force X			
CURNO	Type	SAE Class	Units
110	FIL	600	Newtons
Max	Time	Min	Time
767.0	54.3	-926.8	60.0



Curve Description			
Driver Right Upper Tibia Force Y			
CURNO	Type	SAE Class	Units
111	FIL	600	Newtons
Max	Time	Min	Time
252.8	80.7	-526.0	54.4

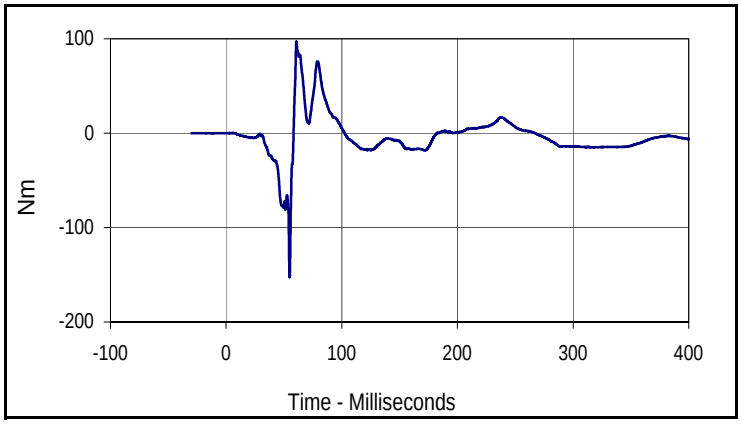


Curve Description			
Driver Right Upper Tibia Force Z			
CURNO	Type	SAE Class	Units
112	FIL	600	Newtons
Max	Time	Min	Time
254.9	99.9	-1629.2	80.7

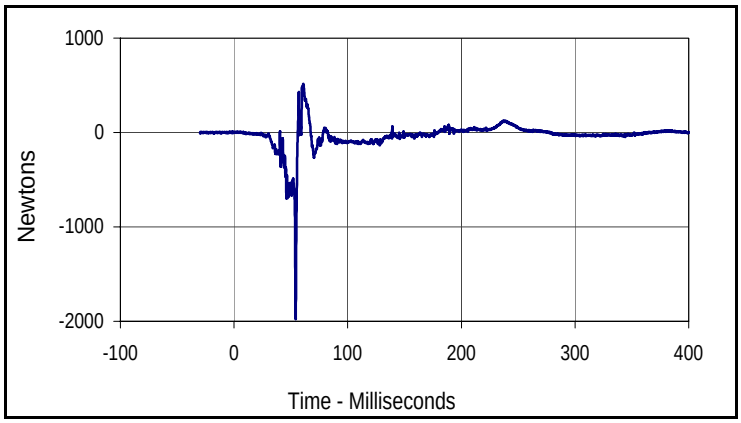


Curve Description			
Driver Right Upper Tibia Moment X			
CURNO	Type	SAE Class	Units
113	FIL	600	Nm
Max	Time	Min	Time
90.0	81.7	-48.4	55.1

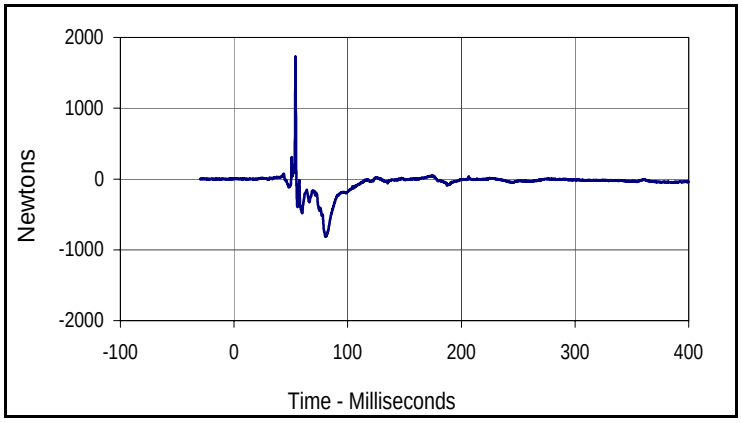
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10



Curve Description			
Driver Right Upper Tibia Moment Y			
CURNO	Type	SAE Class	Units
114	FIL	600	Nm
Max	Time	Min	Time
96.9	60.8	-152.8	55.0



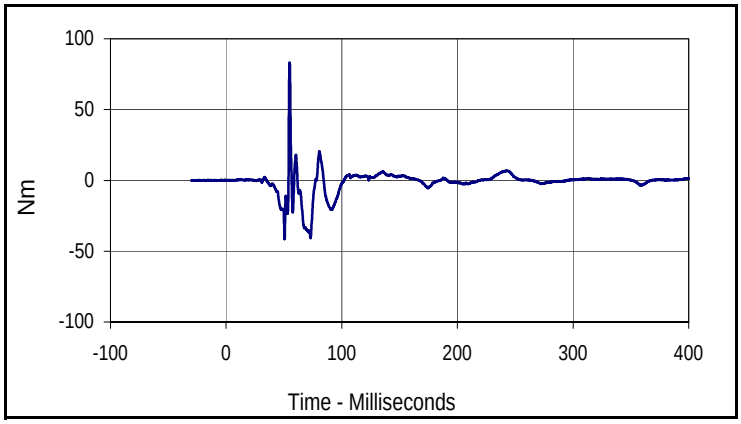
Curve Description			
Driver Right Lower Tibia Force X			
CURNO	Type	SAE Class	Units
115	FIL	600	Newtons
Max	Time	Min	Time
515.7	60.9	-1977.6	54.2



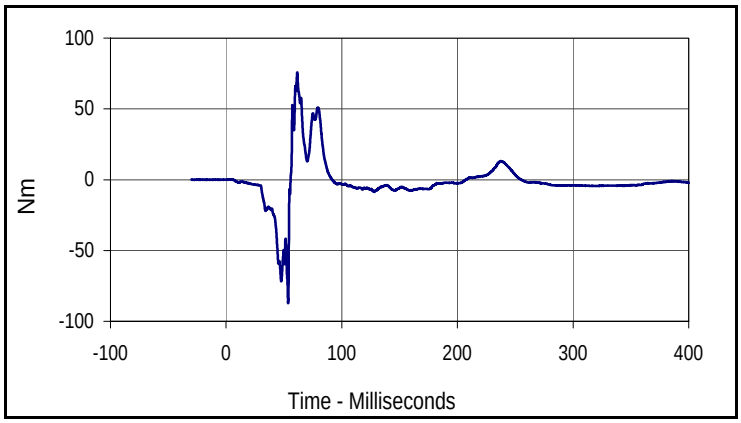
Curve Description			
Driver Right Lower Tibia Force Y			
CURNO	Type	SAE Class	Units
116	FIL	600	Newtons
Max	Time	Min	Time
1729.1	54.1	-815.8	80.4

Curve Description			
Driver Right Lower Tibia Force Z			
CURNO	Type	SAE Class	Units
117	FIL	600	Newtons
Max	Time	Min	Time
142.7	142.2	-3485.0	80.3

Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10

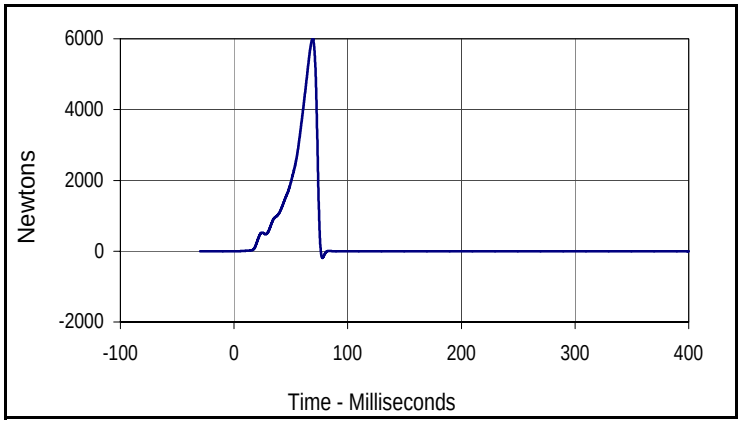


Curve Description			
Driver Right Lower Tibia Moment X			
CURNO	Type	SAE Class	Units
118	FIL	600	Nm
Max	Time	Min	Time
83.3	55.0	-41.5	50.6



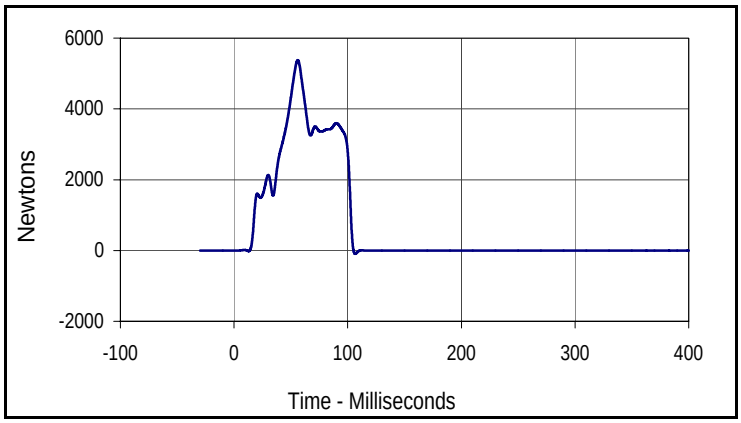
Curve Description			
Driver Right Lower Tibia Moment Y			
CURNO	Type	SAE Class	Units
119	FIL	600	Nm
Max	Time	Min	Time
75.8	61.5	-87.0	53.7

Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10



Curve Description			
Driver Lap Belt Force			
CURNO	Type	SAE Class	Units
120	FIL	60	Newtons
Max	Time	Min	Time
5981.3	69.1	-187.7	77.8

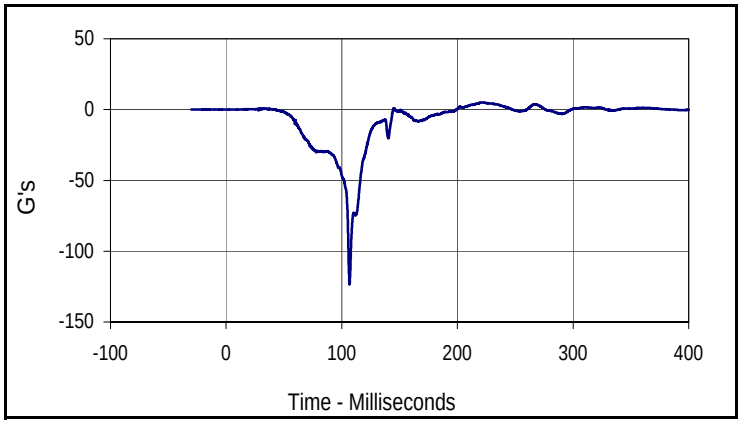
* Channel failed at 73.7 msec.



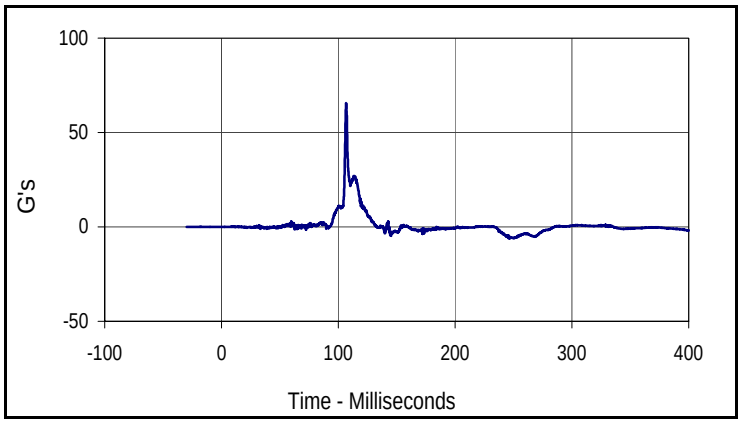
Curve Description			
Driver Shoulder Belt Force			
CURNO	Type	SAE Class	Units
121	FIL	60	Newtons
Max	Time	Min	Time
5375.9	56.1	-95.5	106.5

* Channel failed at 102.5 msec.

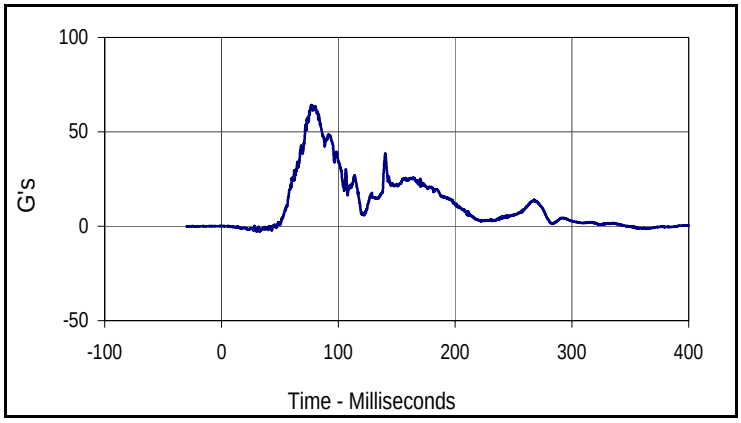
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10



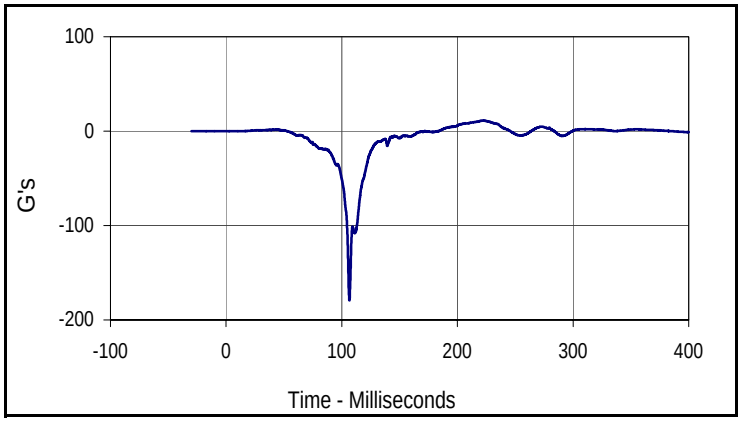
Curve Description			
LR Passenger Head CG X			
CURNO	Type	SAE Class	Units
122	FIL	1000	G's
Max	Time	Min	Time
5.1	221.6	-123.3	106.8



Curve Description			
LR Passenger Head CG Y			
CURNO	Type	SAE Class	Units
123	FIL	1000	G's
Max	Time	Min	Time
65.5	106.7	-6.1	245.9

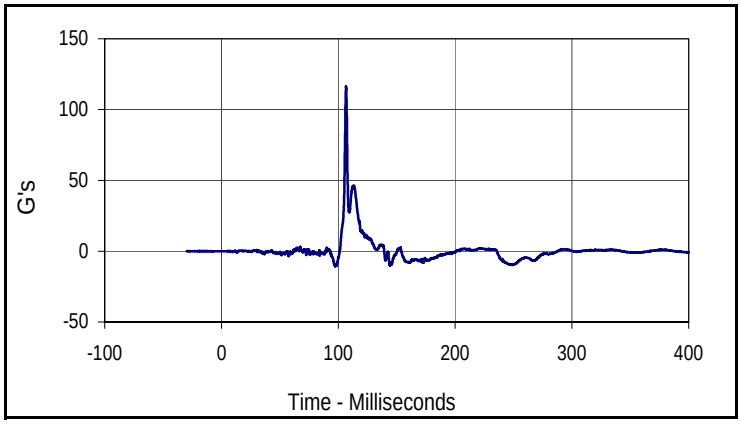


Curve Description			
LR Passenger Head CG Z			
CURNO	Type	SAE Class	Units
124	FIL	1000	G's
Max	Time	Min	Time
64.2	77.1	-2.9	30.1

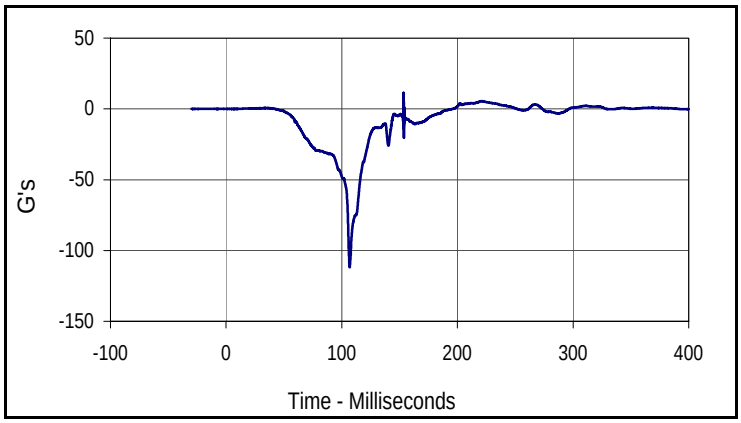


Curve Description			
LR Passenger Top Head Array X			
CURNO	Type	SAE Class	Units
125	FIL	1000	G's
Max	Time	Min	Time
11.3	222.3	-179.2	106.6

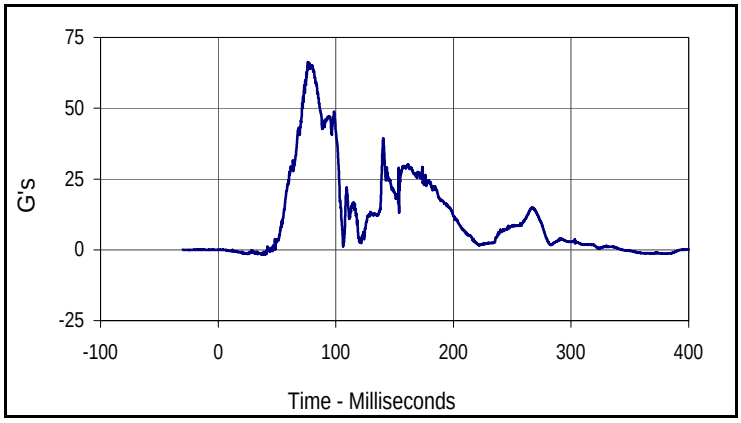
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10



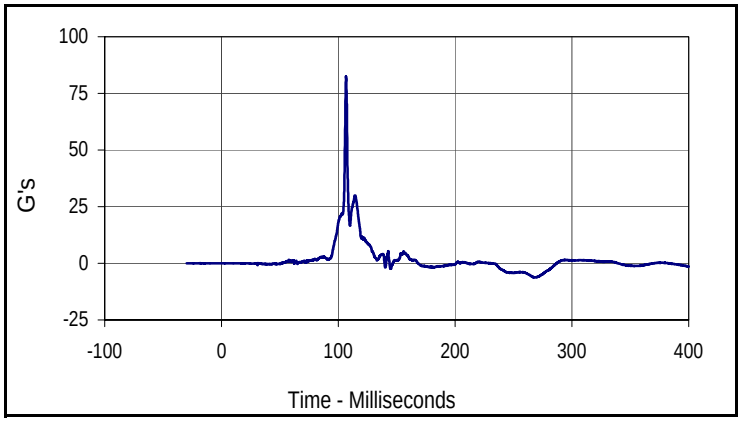
Curve Description			
LR Passenger Top Head Array Y			
CURNO	Type	SAE Class	Units
126	FIL	1000	G's
Max	Time	Min	Time
116.3	106.7	-10.9	97.4



Curve Description			
LR Passenger Left Side Head Array X			
CURNO	Type	SAE Class	Units
127	FIL	1000	G's
Max	Time	Min	Time
11.1	153.5	-111.9	106.9

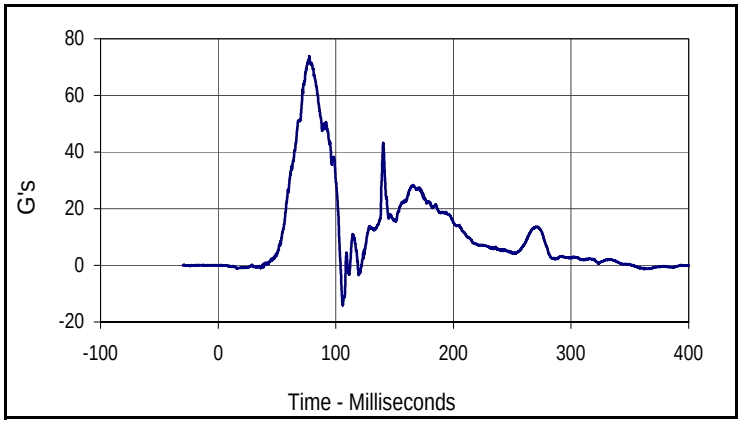


Curve Description			
LR Passenger Left Side Head Array Z			
CURNO	Type	SAE Class	Units
128	FIL	1000	G's
Max	Time	Min	Time
66.3	76.3	-1.7	36.7

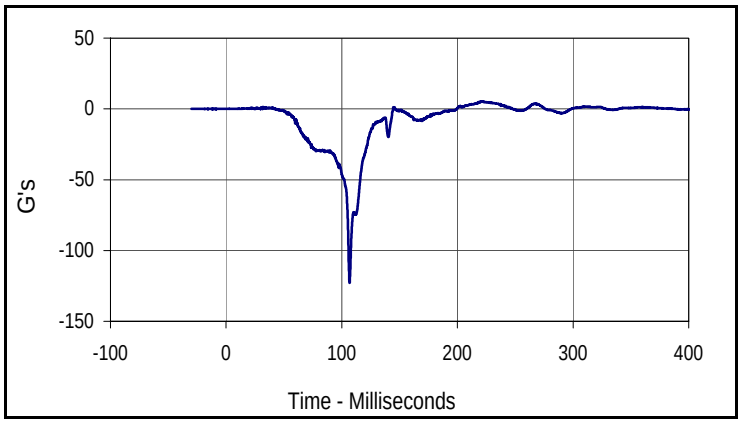


Curve Description			
LR Passenger Front Head Array Y			
CURNO	Type	SAE Class	Units
129	FIL	1000	G's
Max	Time	Min	Time
82.5	106.7	-6.3	268.0

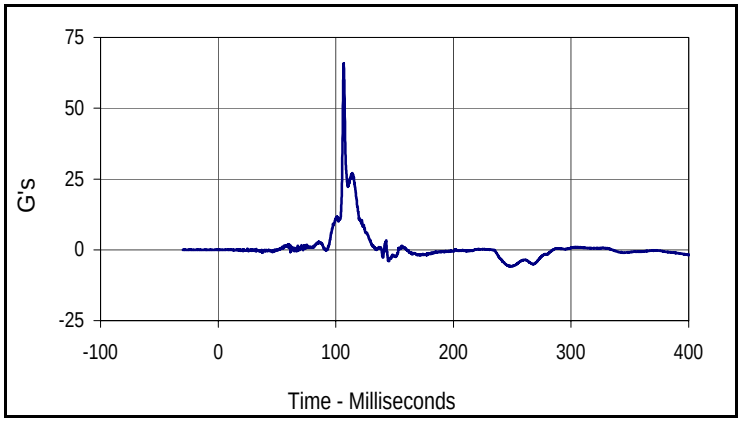
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10



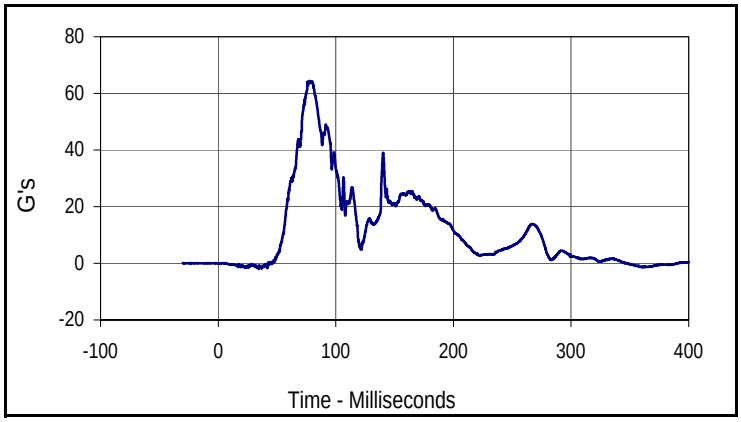
Curve Description			
LR Passenger Front Head Array Z			
CURNO	Type	SAE Class	Units
130	FIL	1000	G's
Max	Time	Min	Time
73.9	77.5	-14.1	106.0



Curve Description			
LR Passenger Head CG X Redundant			
CURNO	Type	SAE Class	Units
131	FIL	1000	G's
Max	Time	Min	Time
5.3	221.7	-122.8	106.8

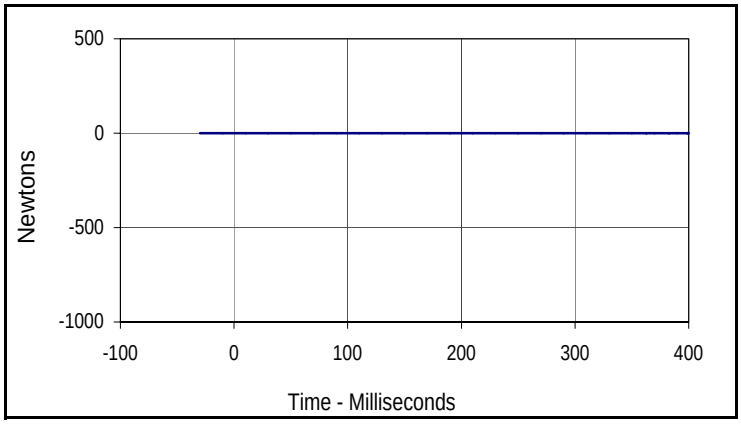


Curve Description			
LR Passenger Head CG Y Redundant			
CURNO	Type	SAE Class	Units
132	FIL	1000	G's
Max	Time	Min	Time
65.8	106.7	-5.9	249.4



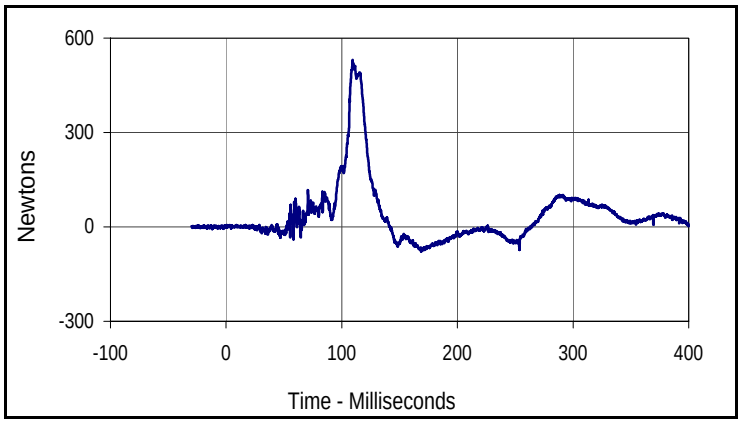
Curve Description			
LR Passenger Head CG Z Redundant			
CURNO	Type	SAE Class	Units
133	FIL	1000	G's
Max	Time	Min	Time
64.4	77.6	-2.1	34.5

Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10

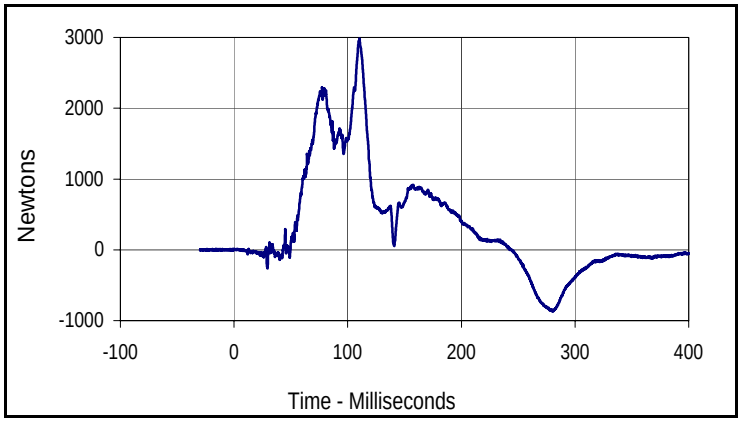


Curve Description			
LR Passenger Upper Neck Force X			
CURNO	Type	SAE Class	Units
134	FIL	1000	Newtons
Max	Time	Min	Time
0.0	0.0	0.0	0.0

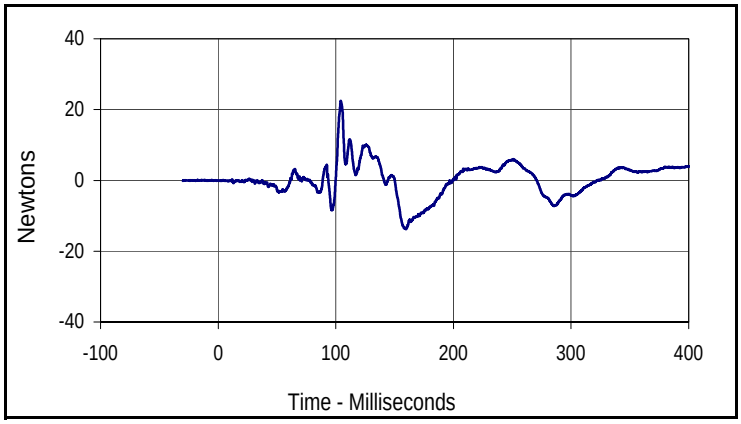
* Channel failed, no data



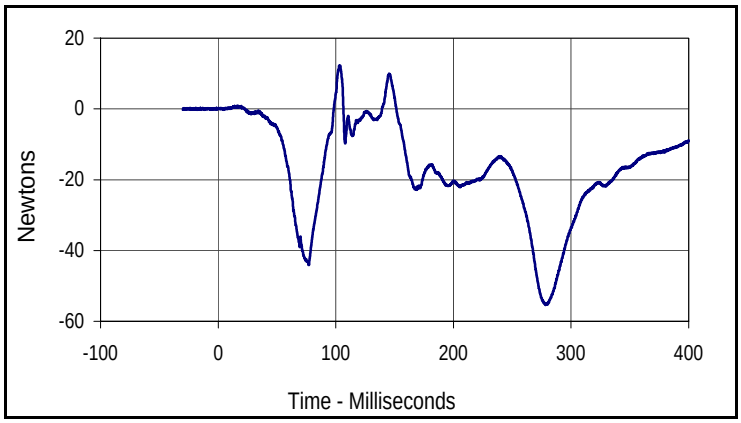
Curve Description			
LR Passenger Upper Neck Force Y			
CURNO	Type	SAE Class	Units
135	FIL	1000	Newtons
Max	Time	Min	Time
530.6	109.4	-78.0	168.8



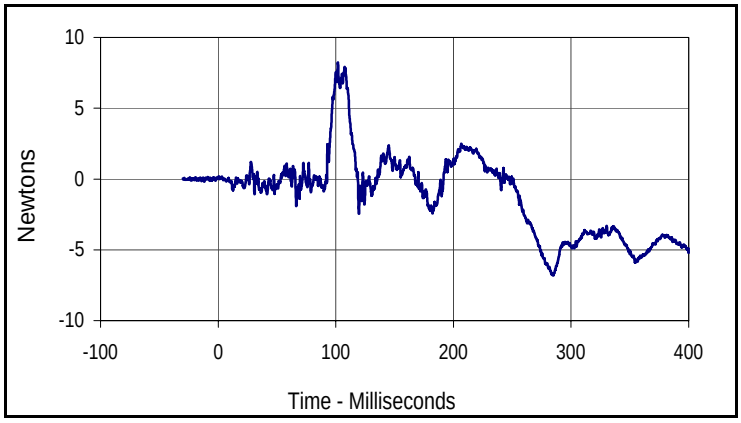
Curve Description			
LR Passenger Upper Neck Force Z			
CURNO	Type	SAE Class	Units
136	FIL	1000	Newtons
Max	Time	Min	Time
2983.5	110.4	-872.6	280.3



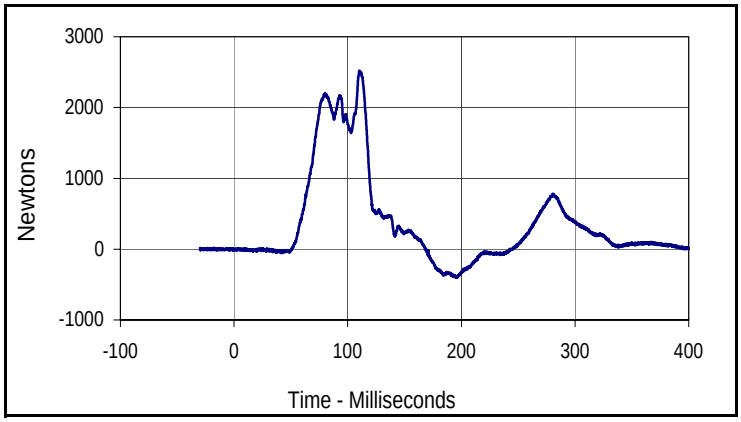
Curve Description			
LR Passenger Upper Neck Moment X			
CURNO	Type	SAE Class	Units
137	FIL	600	Newtons
Max	Time	Min	Time
22.4	104.2	-13.7	159.7



Curve Description			
LR Passenger Upper Neck Moment Y			
CURNO	Type	SAE Class	Units
138	FIL	600	Newtons
Max	Time	Min	Time
12.2	103.6	-55.4	278.3

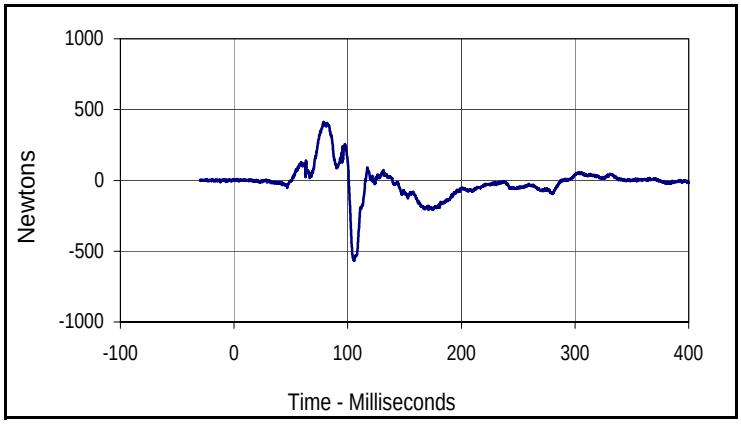


Curve Description			
LR Passenger Upper Neck Moment Z			
CURNO	Type	SAE Class	Units
139	FIL	600	Newtons
Max	Time	Min	Time
8.2	101.8	-6.8	285.0

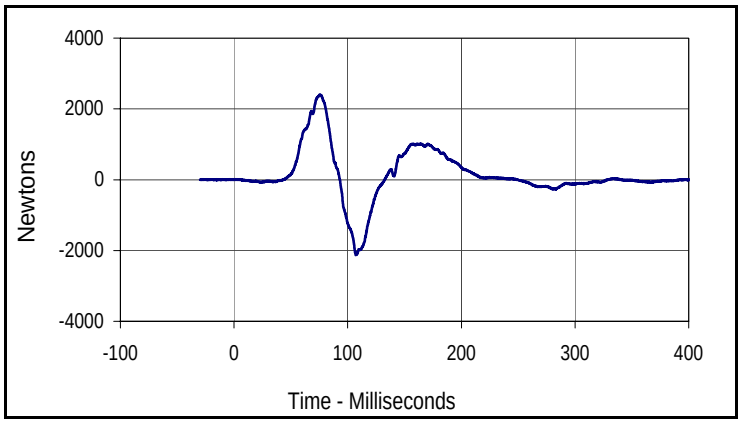


Curve Description			
LR Passenger Lower Neck Force X			
CURNO	Type	SAE Class	Units
140	FIL	1000	Newtons
Max	Time	Min	Time
2521.8	110.2	-402.1	195.6

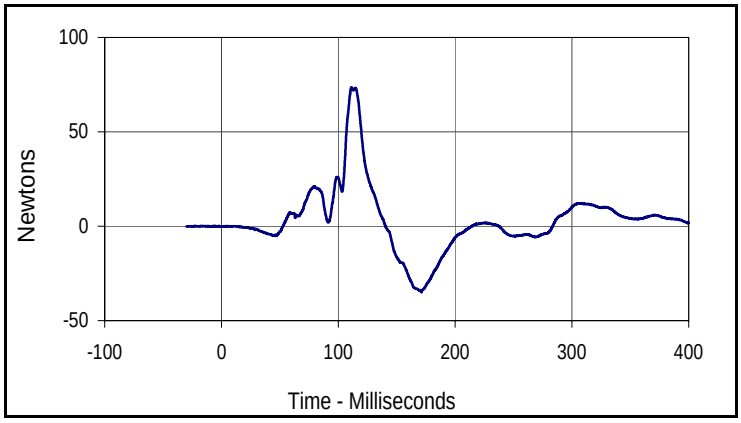
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10



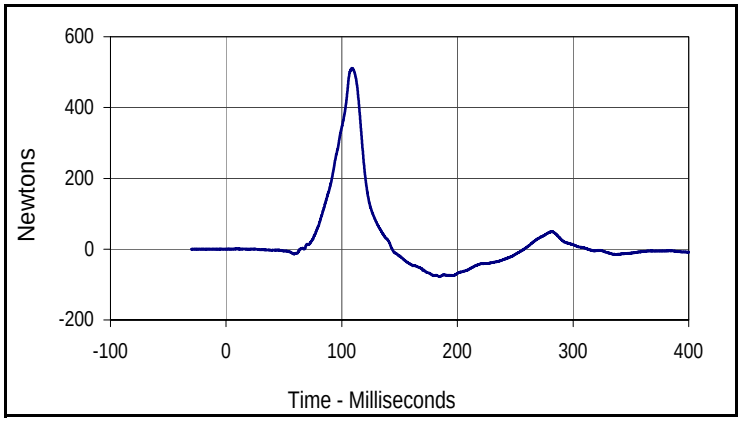
Curve Description			
LR Passenger Lower Neck Force Y			
CURNO	Type	SAE Class	Units
141	FIL	1000	Newtons
Max	Time	Min	Time
412.8	78.7	-568.8	105.8



Curve Description			
LR Passenger Lower Neck Force Z			
CURNO	Type	SAE Class	Units
142	FIL	1000	Newtons
Max	Time	Min	Time
2412.1	75.7	-2129.7	107.2

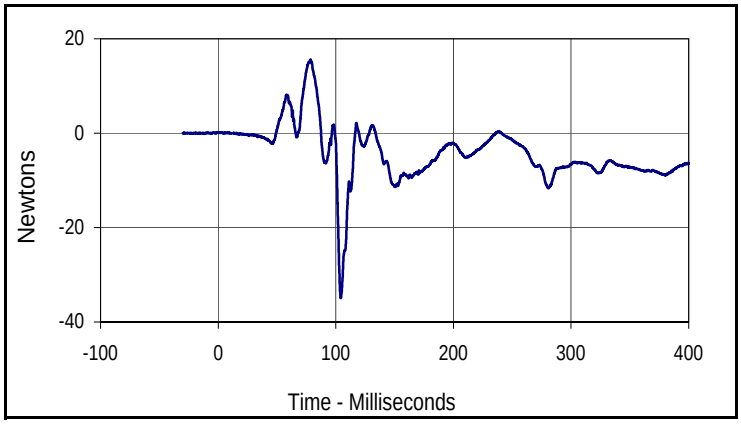


Curve Description			
LR Passenger Lower Neck Moment X			
CURNO	Type	SAE Class	Units
143	FIL	600	Newtons
Max	Time	Min	Time
73.6	111.3	-34.8	171.3

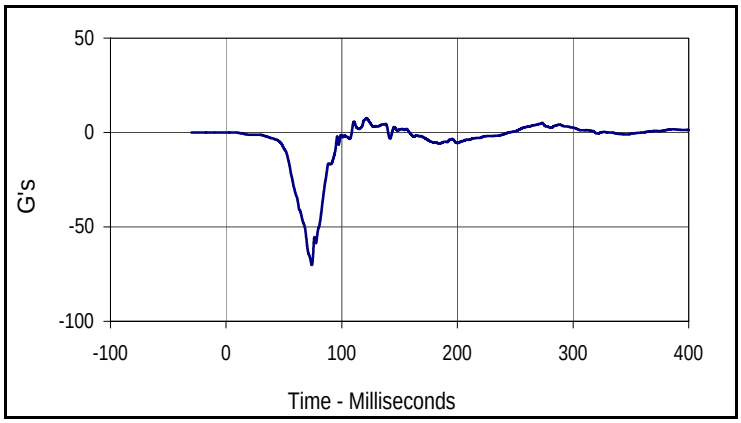


Curve Description			
LR Passenger Lower Neck Moment Y			
CURNO	Type	SAE Class	Units
144	FIL	600	Newtons
Max	Time	Min	Time
511.3	108.7	-78.3	184.5

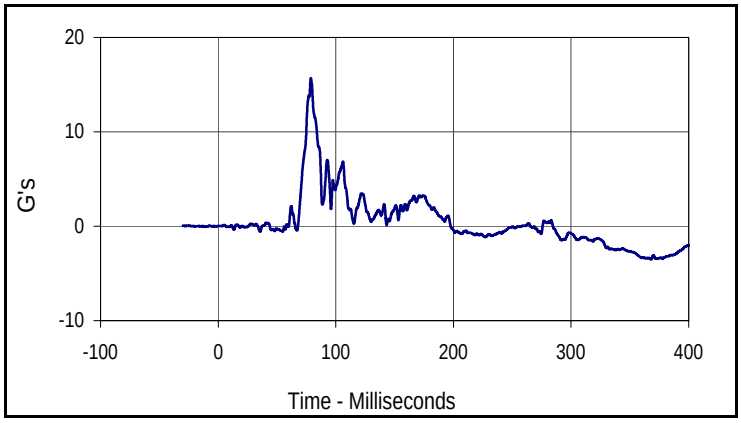
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10



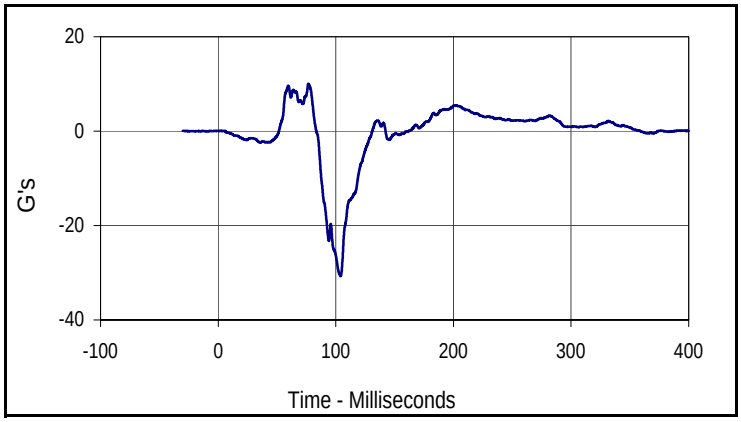
Curve Description			
LR Passenger Lower Neck Moment Z			
CURNO	Type	SAE Class	Units
145	FIL	600	Newtons
Max	Time	Min	Time
15.6	78.6	-34.9	104.3



Curve Description			
LR Passenger Chest X Primary			
CURNO	Type	SAE Class	Units
146	FIL	180	G's
Max	Time	Min	Time
7.6	121.4	-70.1	74.2

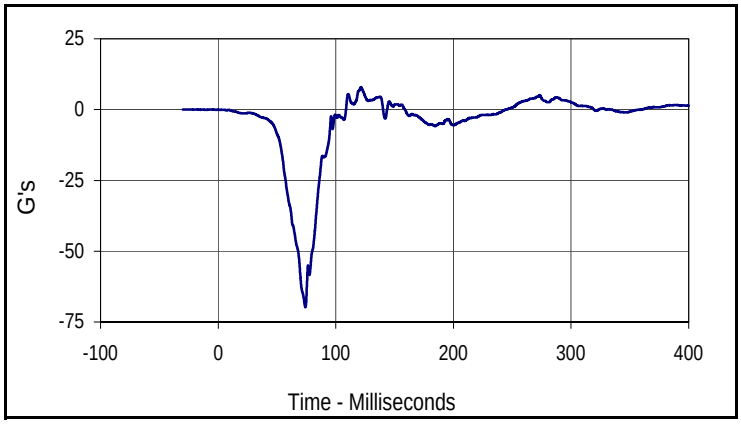


Curve Description			
LR Passenger Chest Y Primary			
CURNO	Type	SAE Class	Units
147	FIL	180	G's
Max	Time	Min	Time
15.7	78.8	-3.5	367.9

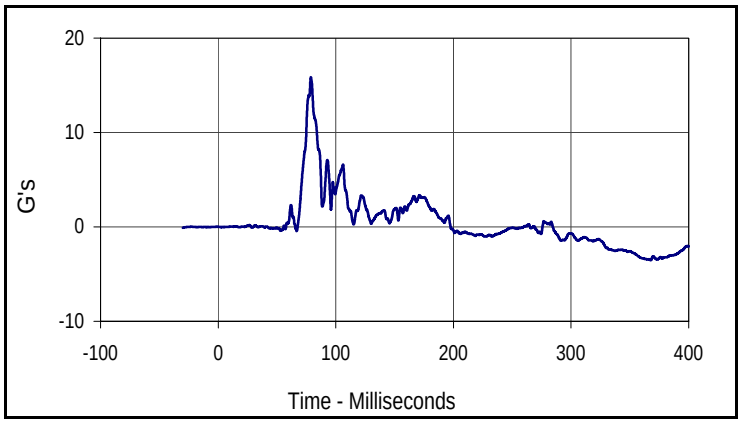


Curve Description			
LR Passenger Chest Z Primary			
CURNO	Type	SAE Class	Units
148	FIL	180	G's
Max	Time	Min	Time
10.0	76.7	-30.7	104.1

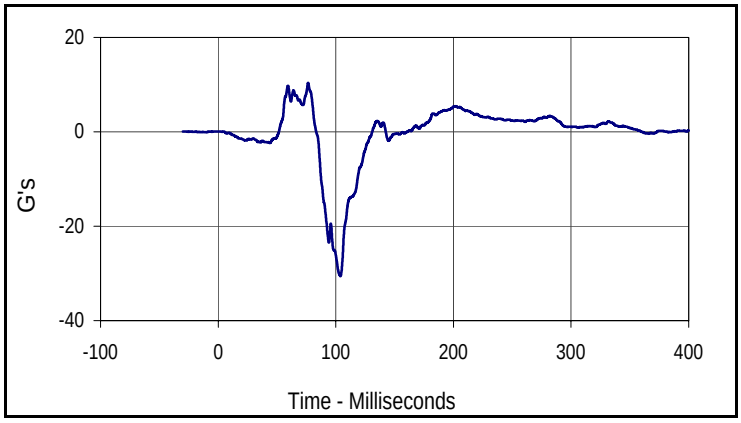
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10



Curve Description			
LR Passenger Chest X Redundant			
CURNO	Type	SAE Class	Units
149	FIL	180	G's
Max	Time	Min	Time
7.9	121.4	-69.8	74.2

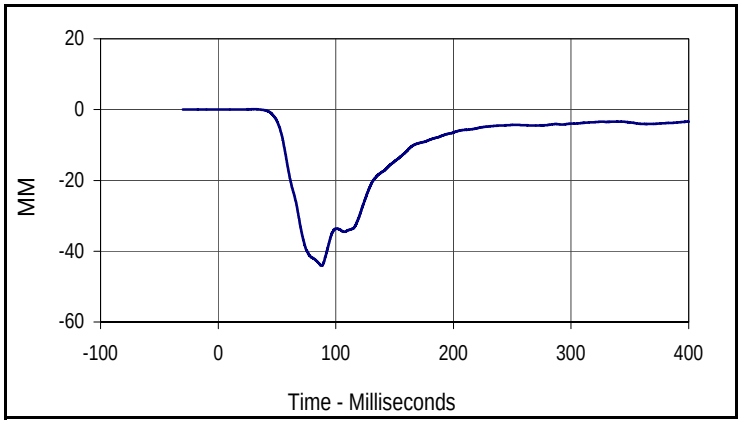


Curve Description			
LR Passenger Chest Y Redundant			
CURNO	Type	SAE Class	Units
150	FIL	180	G's
Max	Time	Min	Time
15.9	78.8	-3.5	367.7

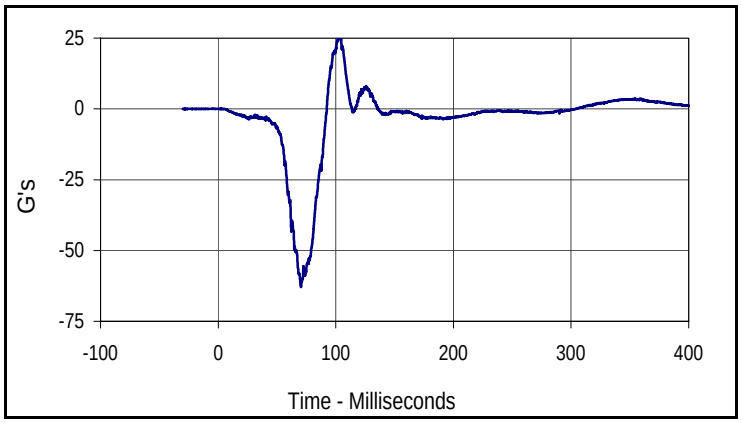


Curve Description			
LR Passenger Chest Z Redundant			
CURNO	Type	SAE Class	Units
151	FIL	180	G's
Max	Time	Min	Time
10.4	76.5	-30.6	103.9

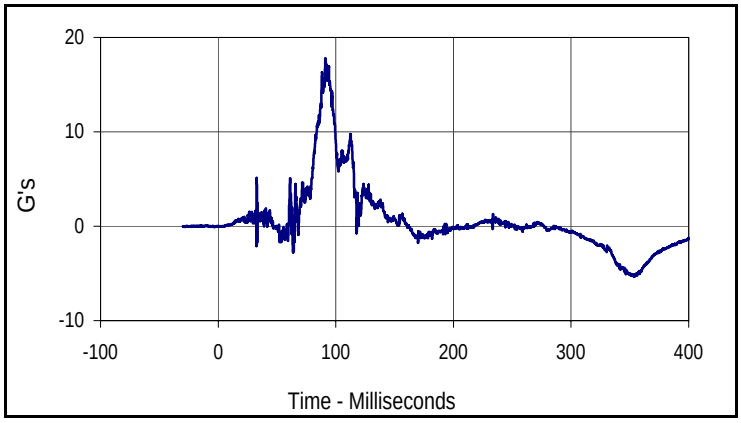
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10



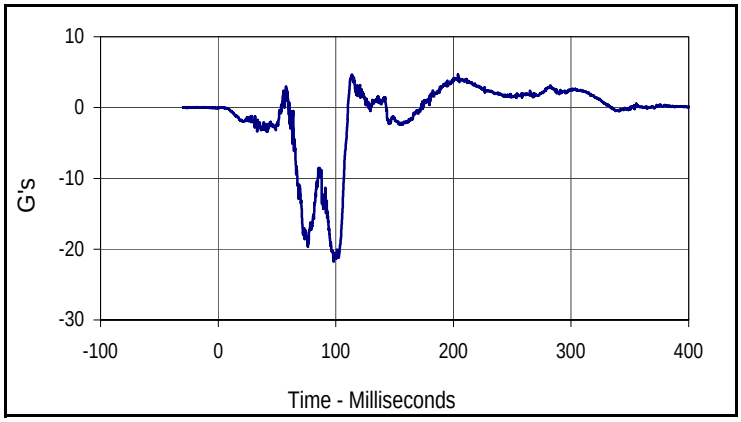
Curve Description			
LR Passenger Chest Deflection			
CURNO	Type	SAE Class	Units
152	FIL	600	MM
Max	Time	Min	Time
0.1	31.1	-44.1	88.1



Curve Description			
LR Passenger Pelvis X Primary			
CURNO	Type	SAE Class	Units
153	FIL	1000	G's
Max	Time	Min	Time
26.2	103.5	-62.9	70.4

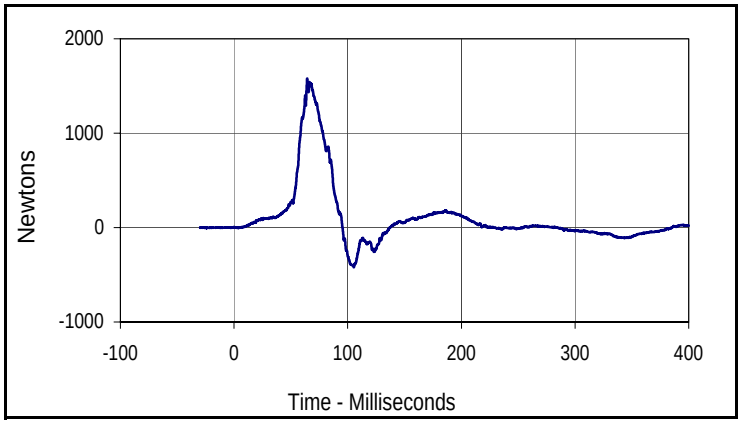


Curve Description			
LR Passenger Pelvis Y Primary			
CURNO	Type	SAE Class	Units
154	FIL	1000	G's
Max	Time	Min	Time
17.8	91.2	-5.4	353.9

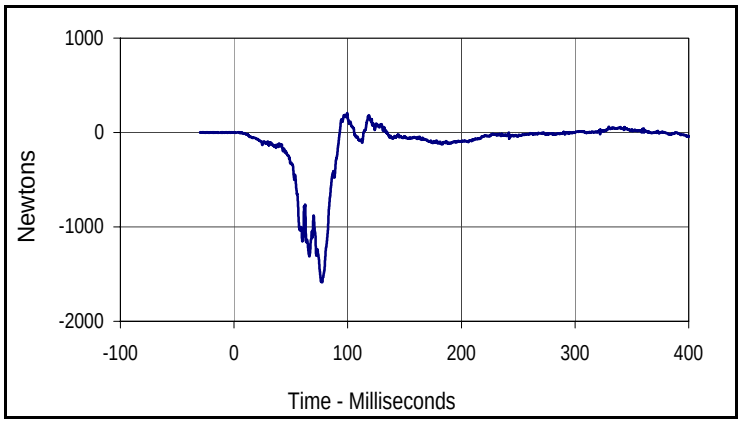


Curve Description			
LR Passenger Pelvis Z Primary			
CURNO	Type	SAE Class	Units
155	FIL	1000	G's
Max	Time	Min	Time
4.7	113.6	-21.8	98.2

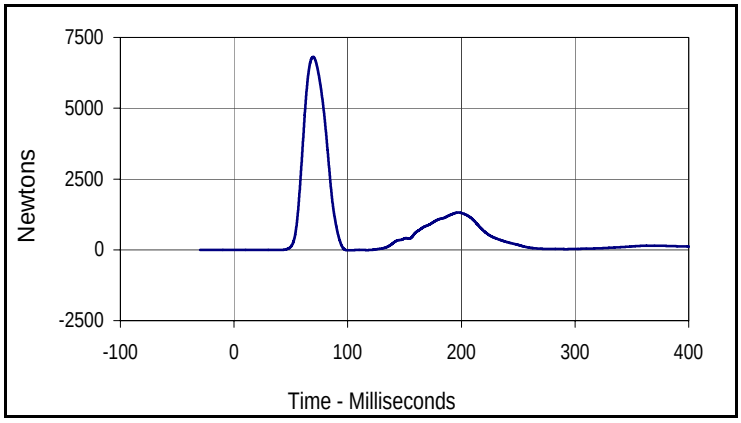
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10



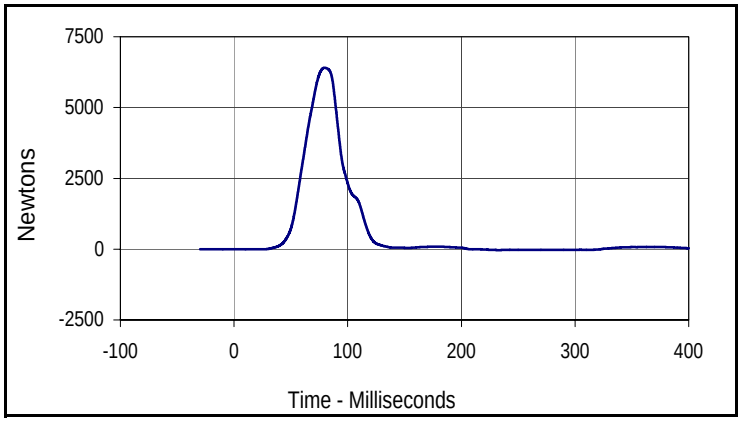
Curve Description			
LR Passenger Left Femur Force Z			
CURNO	Type	SAE Class	Units
156	FIL	600	Newtons
Max	Time	Min	Time
1579.6	64.3	-421.0	105.4



Curve Description			
LR Passenger Right Femur Force Z			
CURNO	Type	SAE Class	Units
157	FIL	600	Newtons
Max	Time	Min	Time
205.8	99.5	-1587.0	77.5

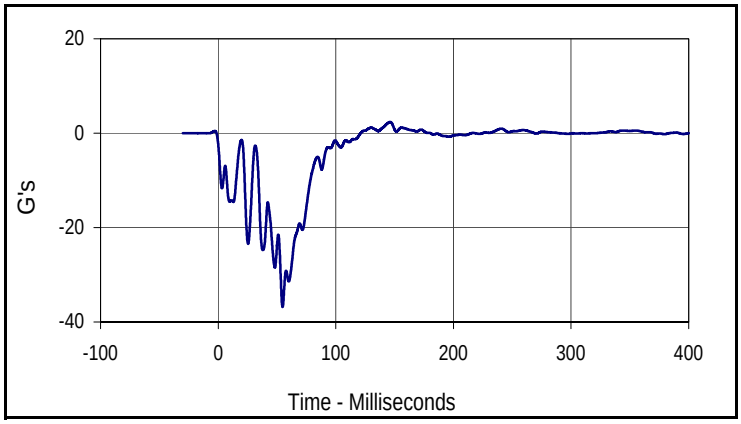


Curve Description			
LR Passenger Lap Belt Force			
CURNO	Type	SAE Class	Units
158	FIL	60	Newtons
Max	Time	Min	Time
6813.4	69.5	-17.5	100.4

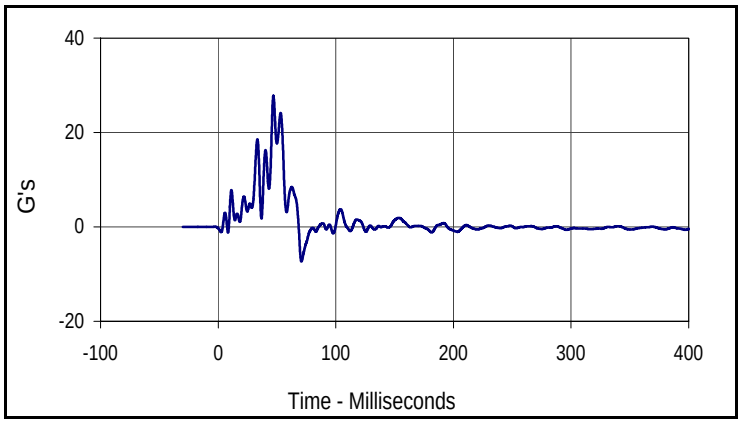


Curve Description			
LR Passenger Shoulder Belt Force			
CURNO	Type	SAE Class	Units
159	FIL	60	Newtons
Max	Time	Min	Time
6403.3	79.7	-31.9	232.9

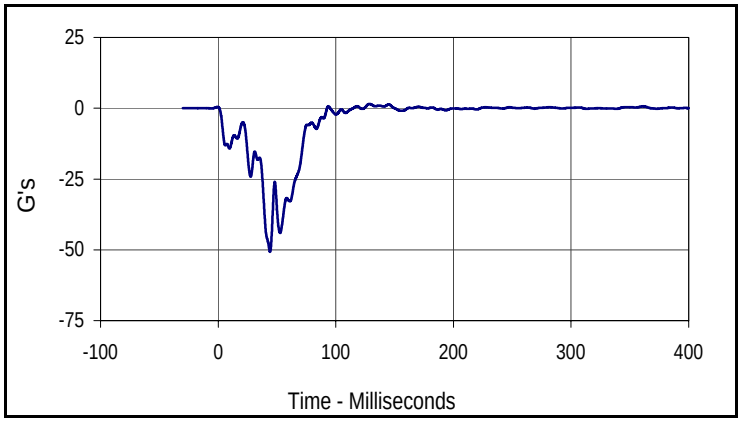
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10



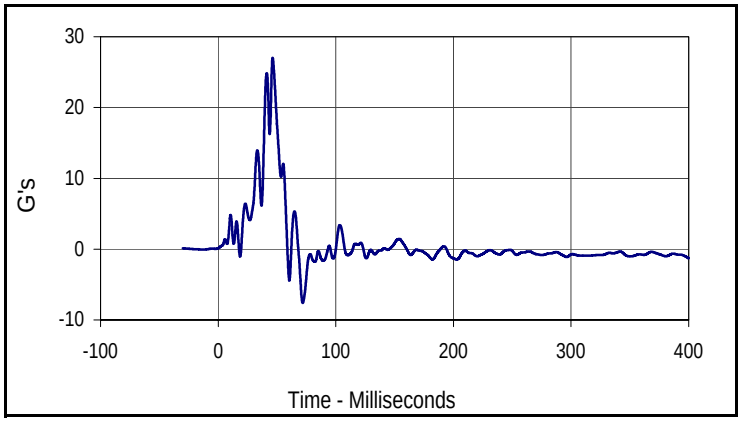
Curve Description			
Vehicle Left Rear Sill X			
CURNO	Type	SAE Class	Units
160	FIL	60	G's
Max	Time	Min	Time
2.4	146.2	-36.8	54.8



Curve Description			
Vehicle Left Rear Sill Y			
CURNO	Type	SAE Class	Units
161	FIL	60	G's
Max	Time	Min	Time
27.8	46.9	-7.3	70.8

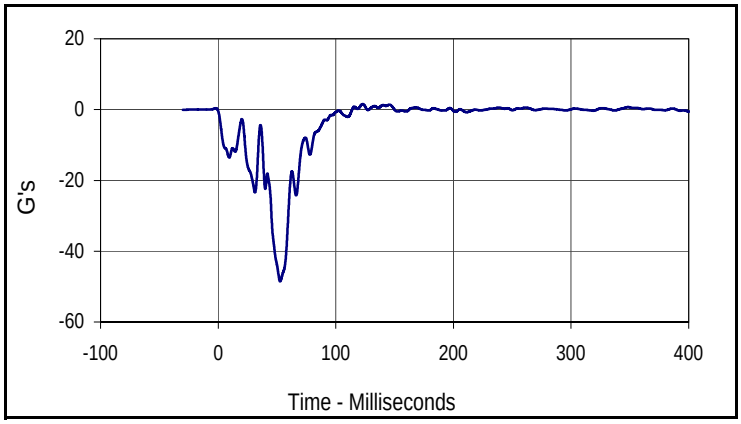


Curve Description			
Vehicle Right Rear Sill X			
CURNO	Type	SAE Class	Units
162	FIL	60	G's
Max	Time	Min	Time
1.5	128.7	-50.7	44.1

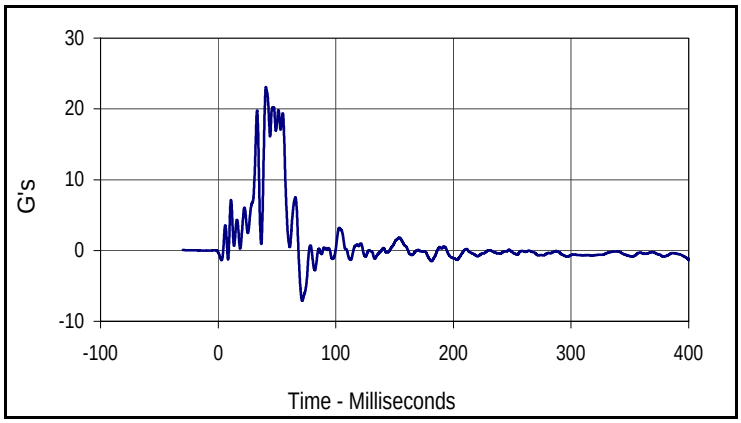


Curve Description			
Vehicle Right Rear Sill Y			
CURNO	Type	SAE Class	Units
163	FIL	60	G's
Max	Time	Min	Time
27.0	46.3	-7.6	71.9

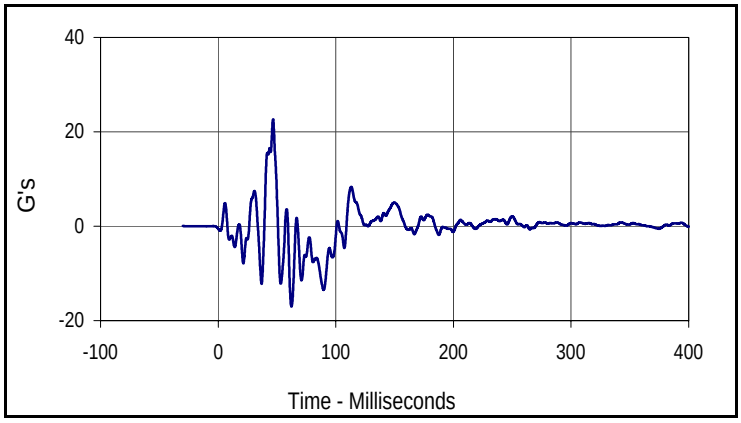
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10



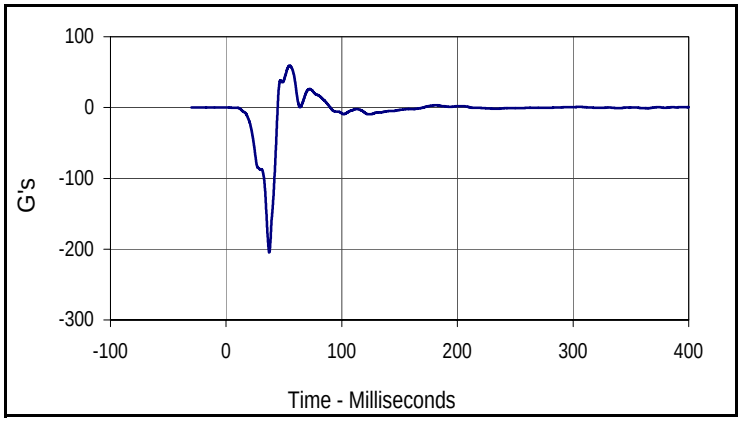
Curve Description			
Vehicle CG X			
CURNO	Type	SAE Class	Units
164	FIL	60	G's
Max	Time	Min	Time
1.6	123.0	-48.5	52.7



Curve Description			
Vehicle CG Y			
CURNO	Type	SAE Class	Units
165	FIL	60	G's
Max	Time	Min	Time
23.1	40.6	-7.1	71.5

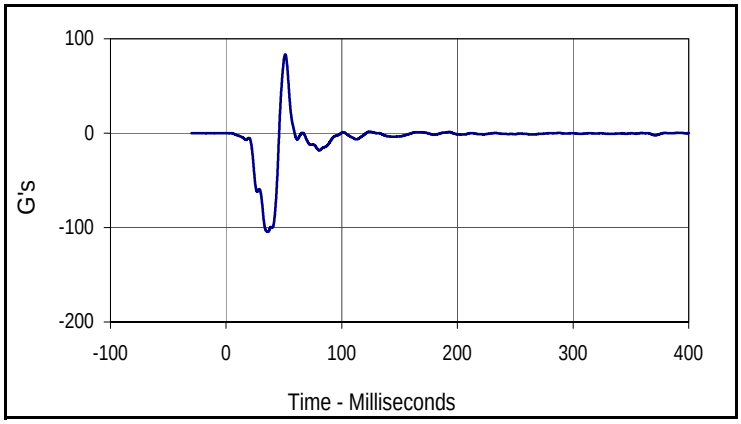


Curve Description			
Vehicle CG Z			
CURNO	Type	SAE Class	Units
166	FIL	60	G's
Max	Time	Min	Time
22.7	46.7	-17.0	62.3

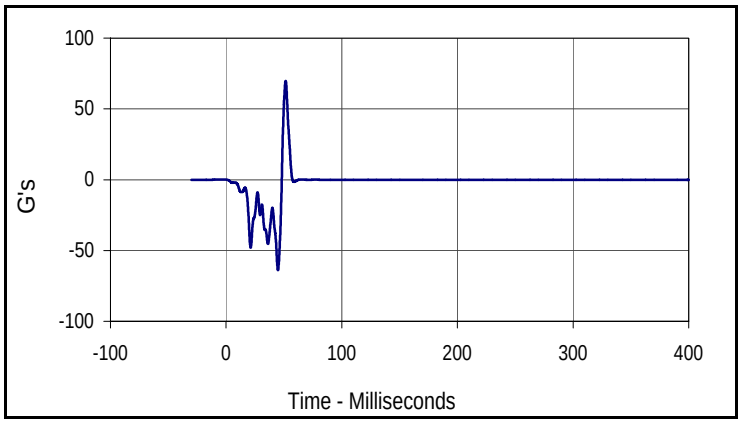


Curve Description			
Vehicle Engine Top X			
CURNO	Type	SAE Class	Units
167	FIL	60	G's
Max	Time	Min	Time
59.2	55.0	-204.4	37.3

Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10

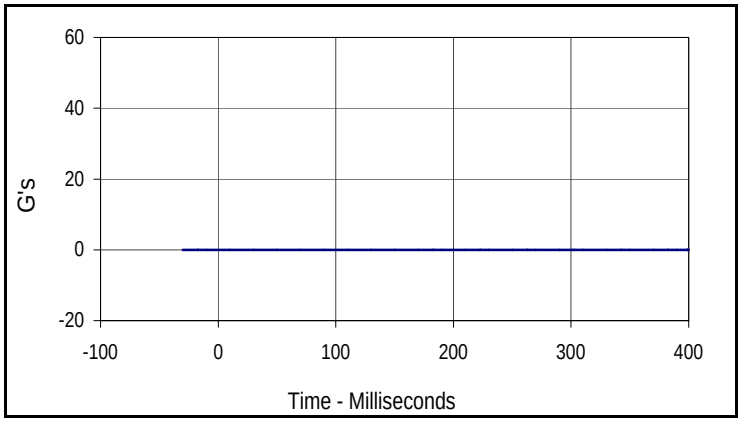


Curve Description			
Vehicle Engine Bottom X			
CURNO	Type	SAE Class	Units
168	FIL	60	G's
Max	Time	Min	Time
83.5	51.2	-104.4	36.1



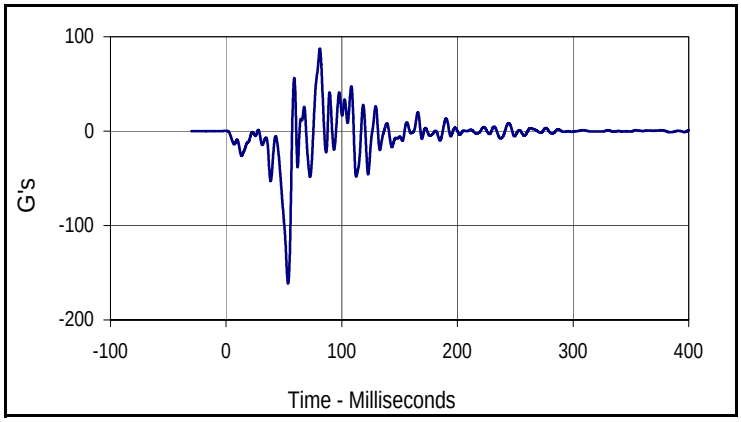
Curve Description			
Vehicle Left Brake Caliper X			
CURNO	Type	SAE Class	Units
169	FIL	60	G's
Max	Time	Min	Time
69.7	51.5	-63.9	44.8

* Channel failed at 57.8 msec.



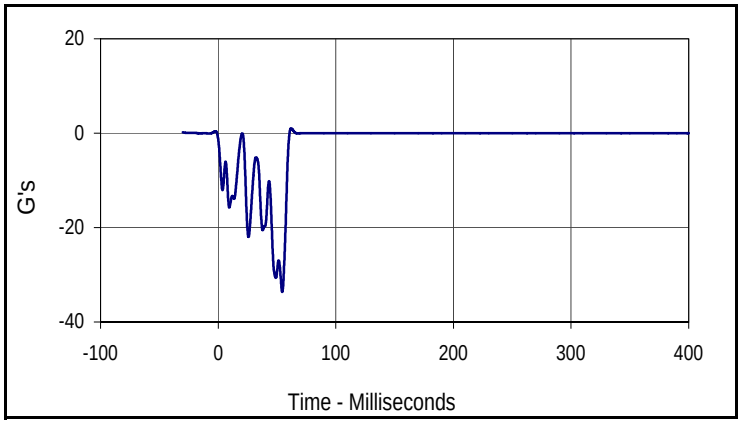
Curve Description			
Vehicle Right Brake Caliper X			
CURNO	Type	SAE Class	Units
170	FIL	60	G's
Max	Time	Min	Time
0.0	0.0	0.0	0.0

* Channel failed, no data



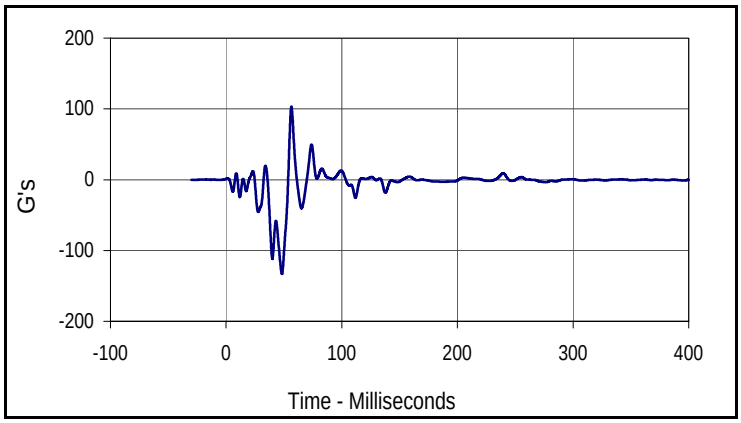
Curve Description			
Vehicle Instrument Panel X			
CURNO	Type	SAE Class	Units
171	FIL	60	G's
Max	Time	Min	Time
87.5	81.1	-161.4	53.6

Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10

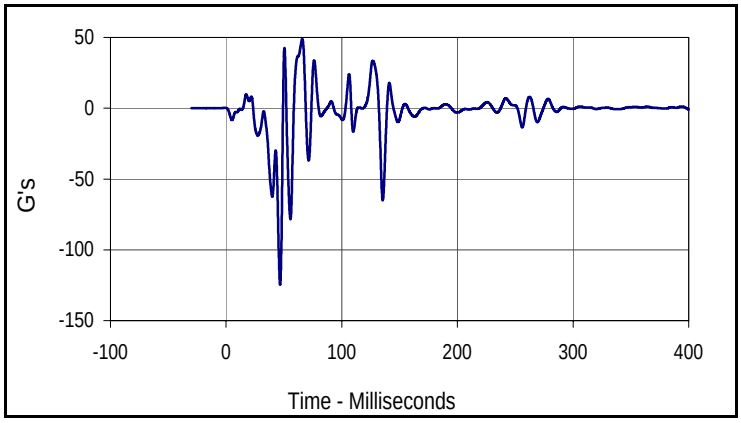


Curve Description			
Vehicle Left Driver Mid Seat Track X			
CURNO	Type	SAE Class	Units
172	FIL	60	G's
Max	Time	Min	Time
1.0	62.1	-33.6	54.5

* Channel failed at 58.0 msec.

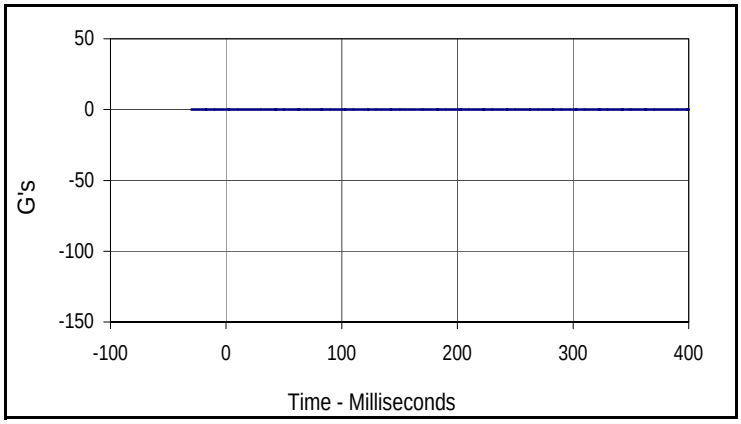


Curve Description			
Vehicle Accelerator Pedal X			
CURNO	Type	SAE Class	Units
173	FIL	60	G's
Max	Time	Min	Time
103.3	56.5	-132.9	48.3



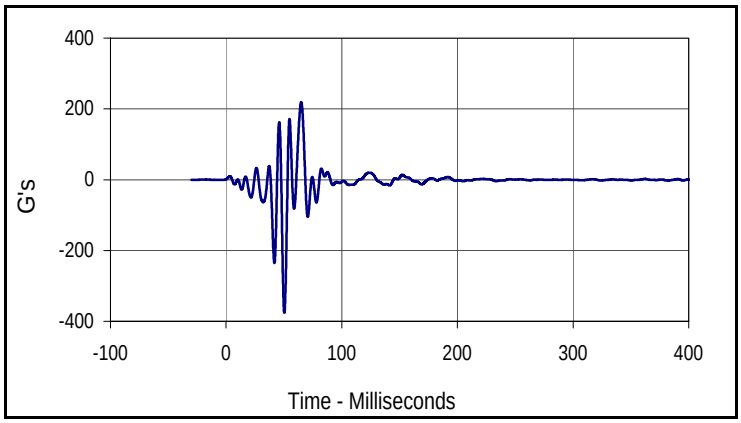
Curve Description			
Vehicle Accelerator Pedal Y			
CURNO	Type	SAE Class	Units
174	FIL	60	G's
Max	Time	Min	Time
48.8	65.9	-124.7	46.7

Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10

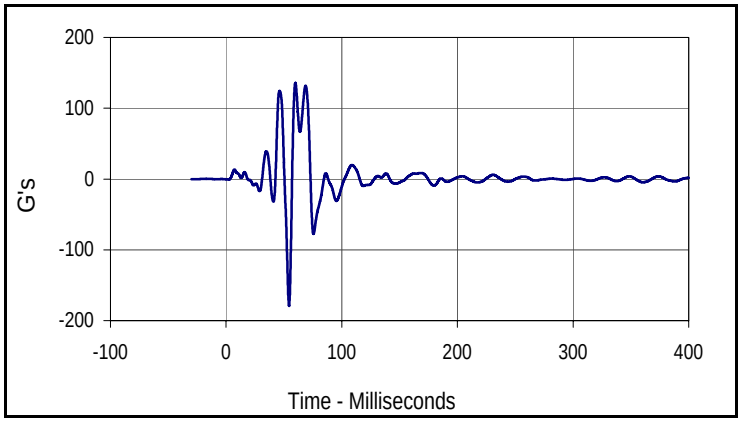


Curve Description			
Vehicle Accelerator Pedal Z			
CURNO	Type	SAE Class	Units
175	FIL	60	G's
Max	Time	Min	Time
0.0	0.0	0.0	0.0

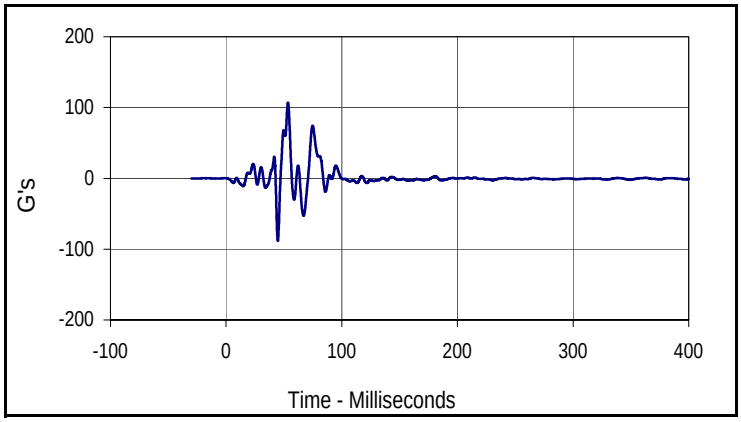
* Channel failed, no data



Curve Description			
Vehicle Brake Pedal X			
CURNO	Type	SAE Class	Units
176	FIL	60	G's
Max	Time	Min	Time
218.9	64.9	-375.7	50.3

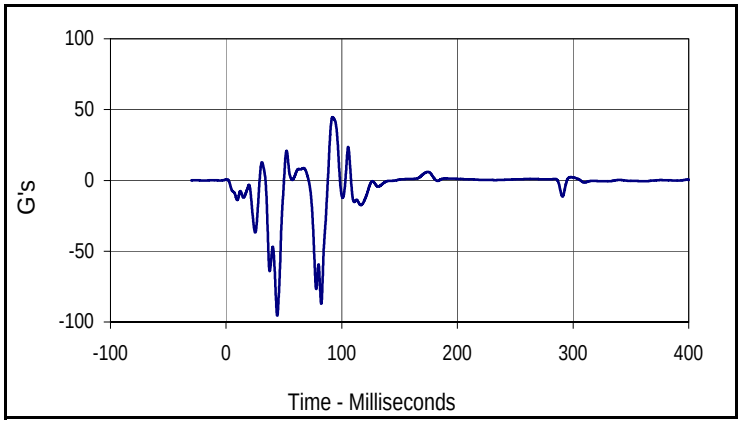


Curve Description			
Vehicle Brake Pedal Y			
CURNO	Type	SAE Class	Units
177	FIL	60	G's
Max	Time	Min	Time
135.6	59.9	-179.0	54.4

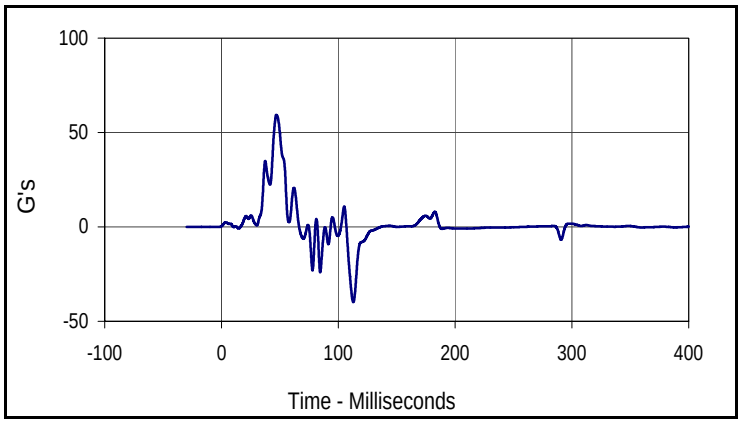


Curve Description			
Vehicle Brake Pedal Z			
CURNO	Type	SAE Class	Units
178	FIL	60	G's
Max	Time	Min	Time
107.0	53.5	-88.5	44.7

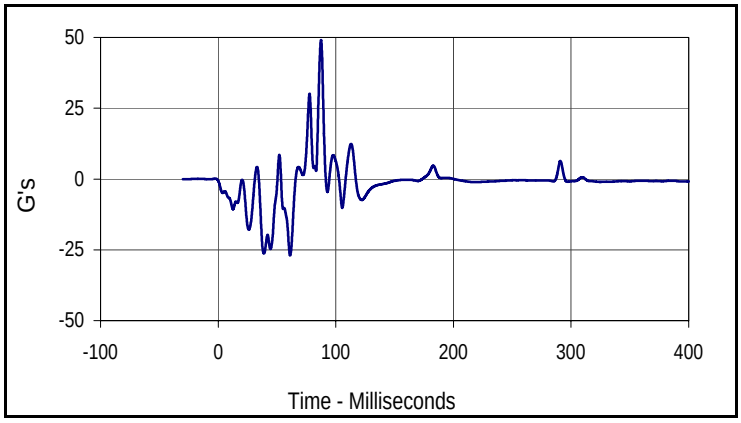
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10



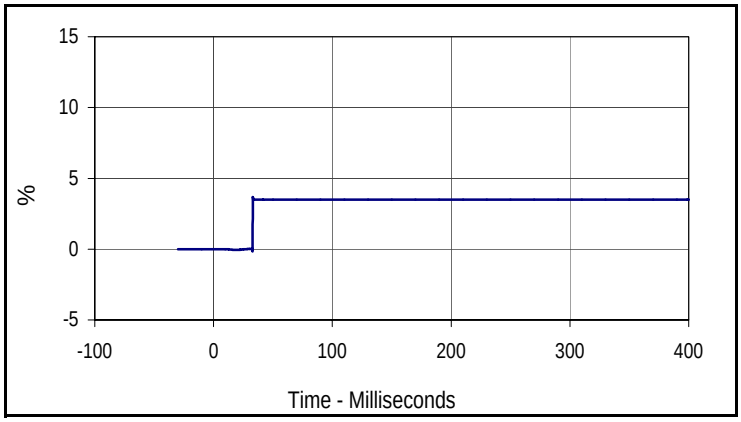
Curve Description			
Vehicle Foot Rest X			
CURNO	Type	SAE Class	Units
179	FIL	60	G's
Max	Time	Min	Time
44.6	92.1	-95.5	44.2



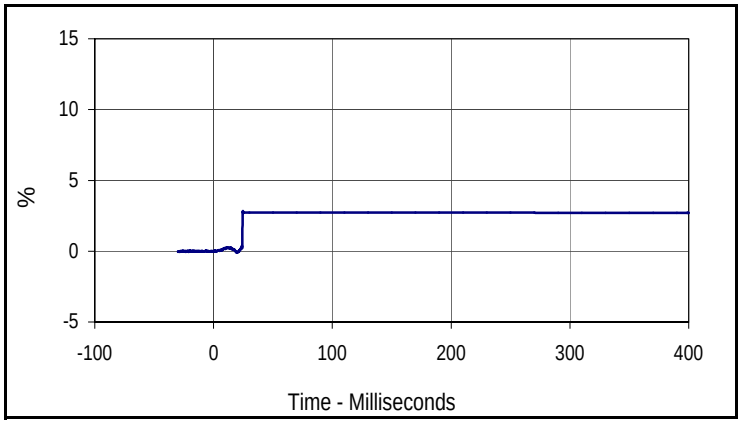
Curve Description			
Vehicle Foot Rest Y			
CURNO	Type	SAE Class	Units
180	FIL	60	G's
Max	Time	Min	Time
59.3	47.0	-39.8	112.9



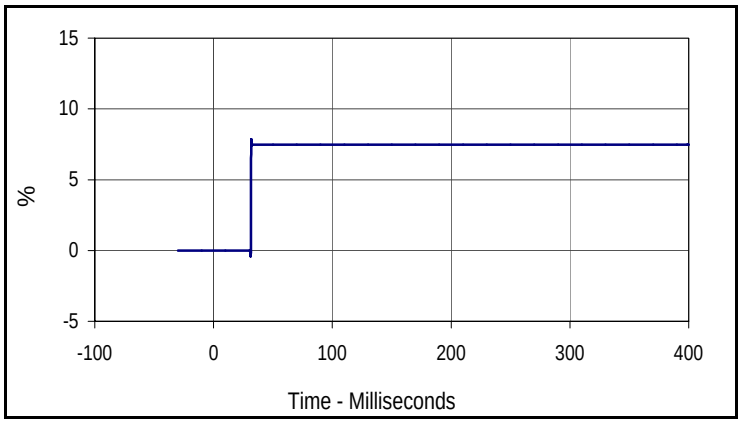
Curve Description			
Vehicle Foot Rest Z			
CURNO	Type	SAE Class	Units
181	FIL	60	G's
Max	Time	Min	Time
49.1	87.5	-26.9	61.2



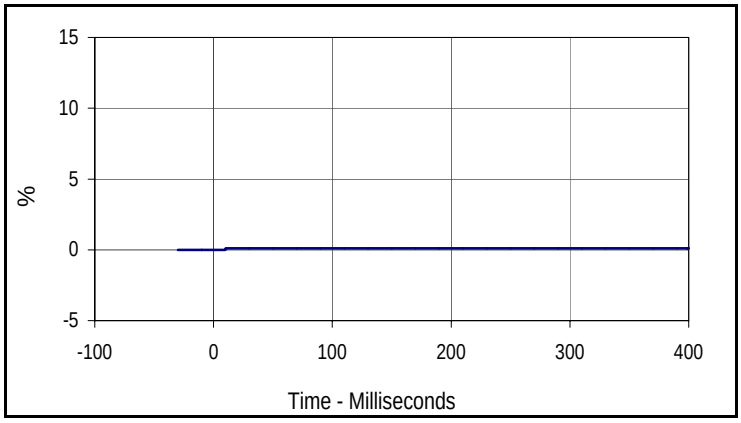
Curve Description			
Driver Left Knee Contact - Center			
CURNO	Type	SAE Class	Units
182	FIL	1000	%
Max	Time	Min	Time
3.7	33.2	-0.2	32.7



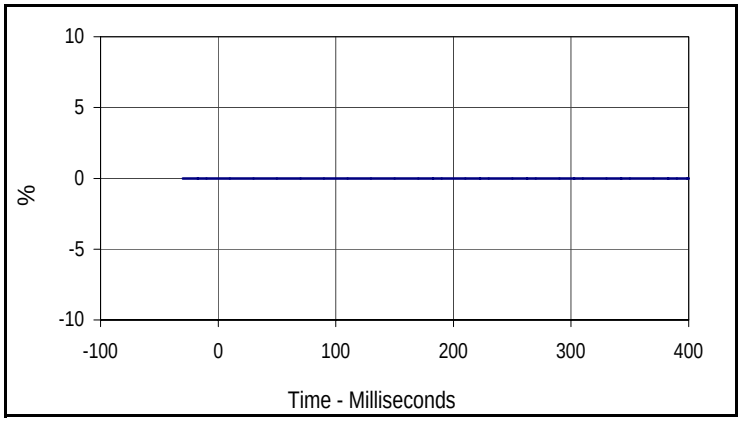
Curve Description			
Driver Left Knee Contact - Left			
CURNO	Type	SAE Class	Units
183	FIL	1000	%
Max	Time	Min	Time
2.8	24.6	-0.1	19.8



Curve Description			
Driver Left Knee Contact - Right			
CURNO	Type	SAE Class	Units
184	FIL	1000	%
Max	Time	Min	Time
7.9	31.8	-0.4	31.3

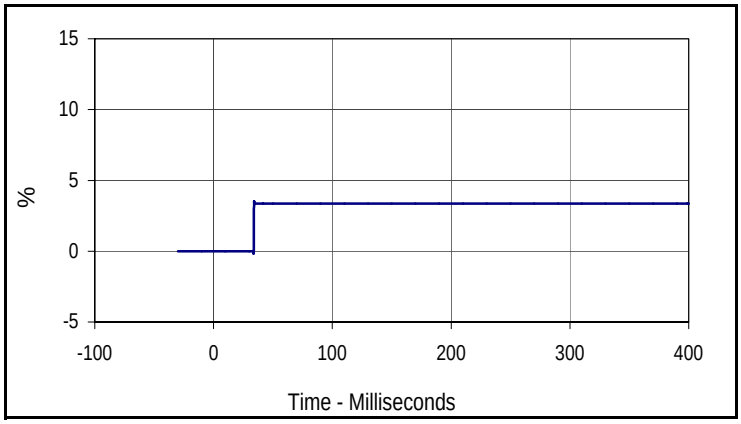


Curve Description			
Driver Right Knee Contact - Center			
CURNO	Type	SAE Class	Units
185	FIL	1000	%
Max	Time	Min	Time
0.1	10.3	0.0	9.7

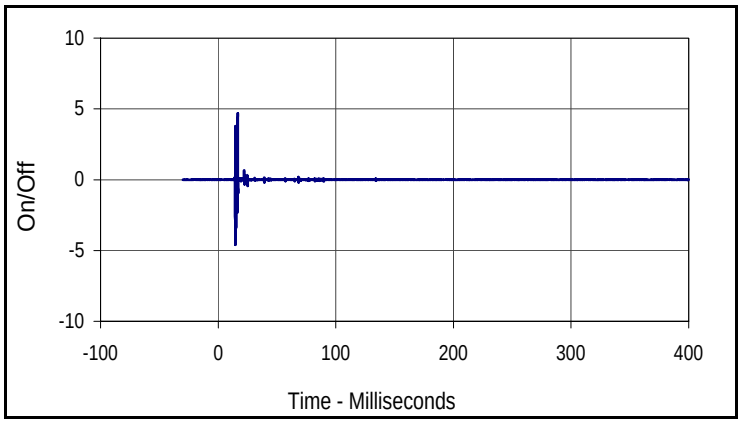


Curve Description			
Driver Right Knee Contact - Left			
CURNO	Type	SAE Class	Units
186	FIL	1000	%
Max	Time	Min	Time
0.0	0.0	0.0	0.0

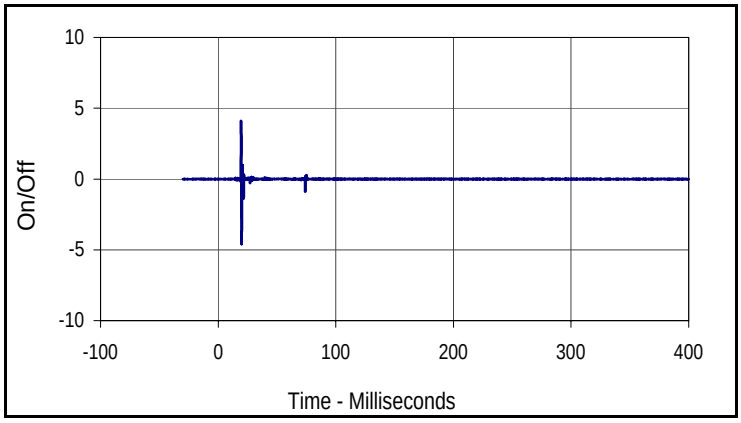
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10



Curve Description			
Driver Right Knee Contact - Right			
CURNO	Type	SAE Class	Units
187	FIL	1000	%
Max	Time	Min	Time
3.5	34.2	-0.2	33.7

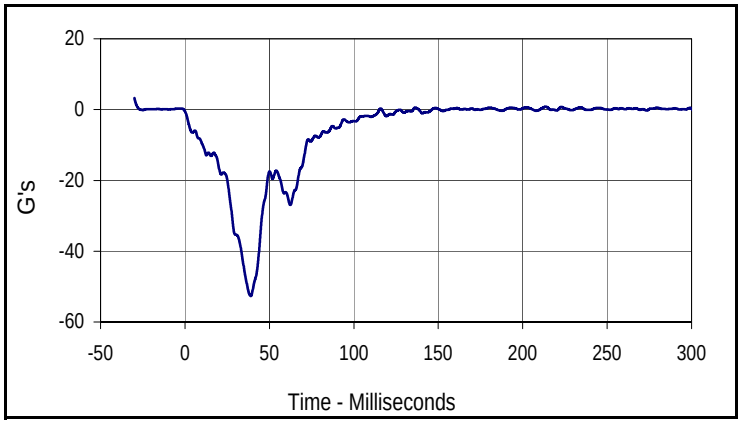


Curve Description			
Vehicle Front Airbag Squib Stage 1			
CURNO	Type	SAE Class	Units
188	FIL	1000	On/Off
Max	Time	Min	Time
4.7	16.6	-4.6	14.5

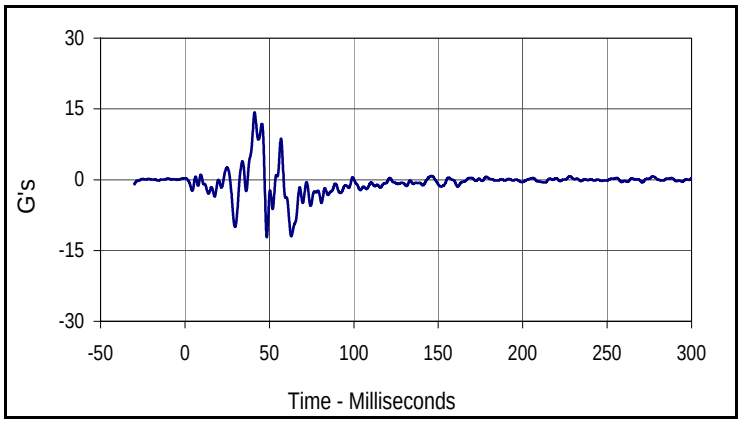


Curve Description			
Vehicle Front Airbag Squib Stage 2			
CURNO	Type	SAE Class	Units
189	FIL	1000	On/Off
Max	Time	Min	Time
4.1	19.5	-4.6	20.1

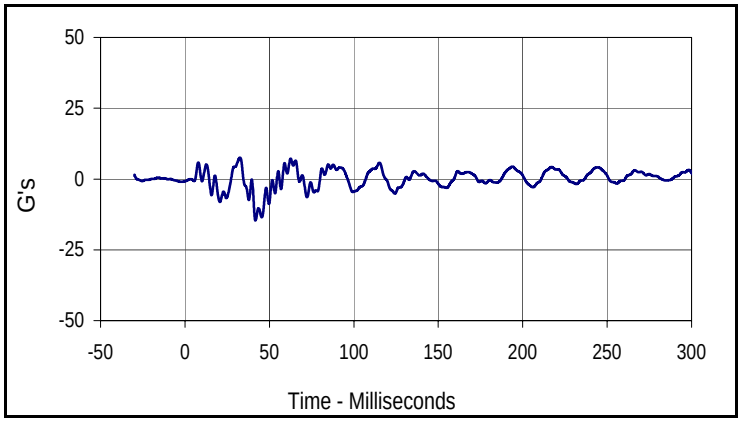
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	Test Date:	3/31/10
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Project No.:	R70212



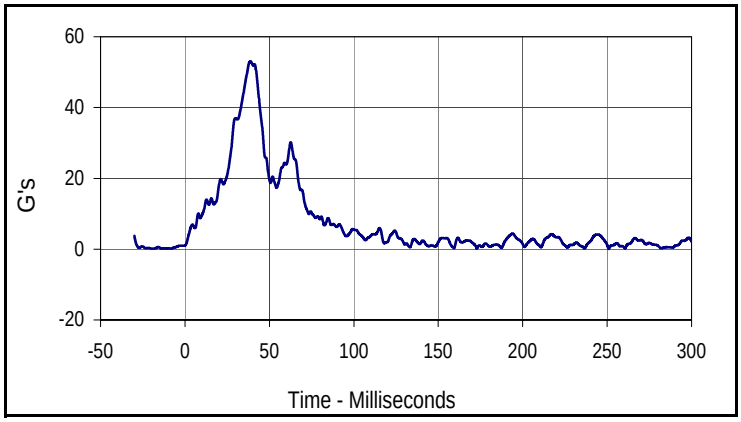
Curve Description			
MDB CG X			
CURNO	Type	SAE Class	Units
190	FIL	60	G's
Max	Time	Min	Time
0.8	213.7	-52.7	38.9



Curve Description			
MDB CG Y			
CURNO	Type	SAE Class	Units
191	FIL	60	G's
Max	Time	Min	Time
14.3	41.2	-12.2	48.5

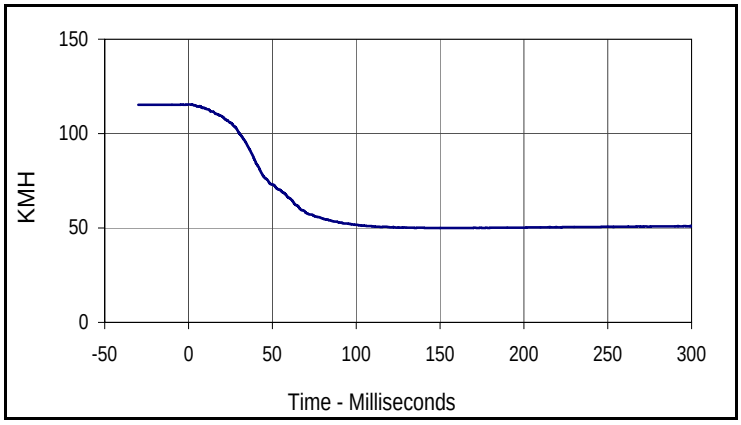


Curve Description			
MDB CG Z			
CURNO	Type	SAE Class	Units
192	FIL	60	G's
Max	Time	Min	Time
7.6	32.6	-14.7	41.8

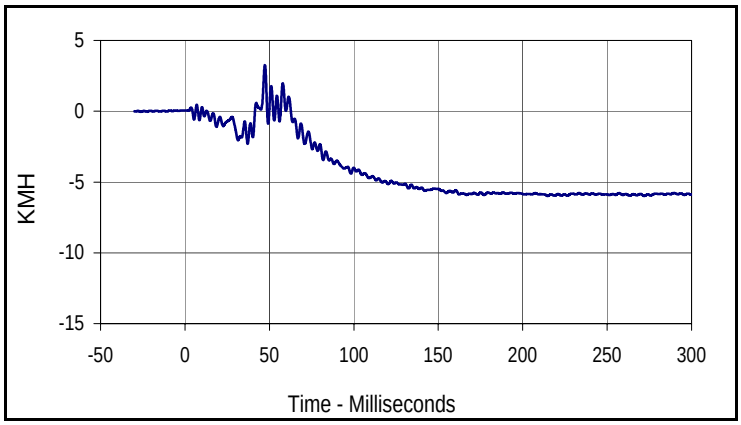


Curve Description			
MDB CG Resultant			
CURNO	Type	SAE Class	Units
190	RES	60	G's
Max	Time	Min	Time
53.0	38.7	0.1	-8.4

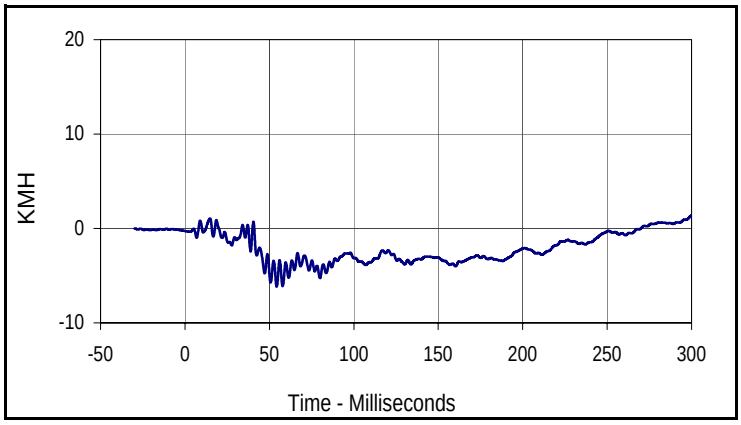
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	Test Date:	3/31/10
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Project No.:	R70212



Curve Description			
MDB CG X Velocity			
CURNO	Type	SAE Class	Units
190	IN1	180	KMH
Max	Time	Min	Time
115.4	1.1	49.9	156.8

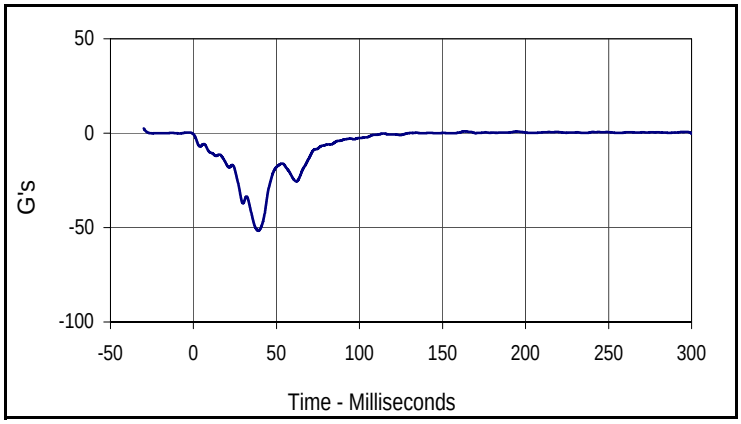


Curve Description			
MDB CG Y Velocity			
CURNO	Type	SAE Class	Units
191	IN1	180	KMH
Max	Time	Min	Time
3.2	47.3	-6.0	214.8

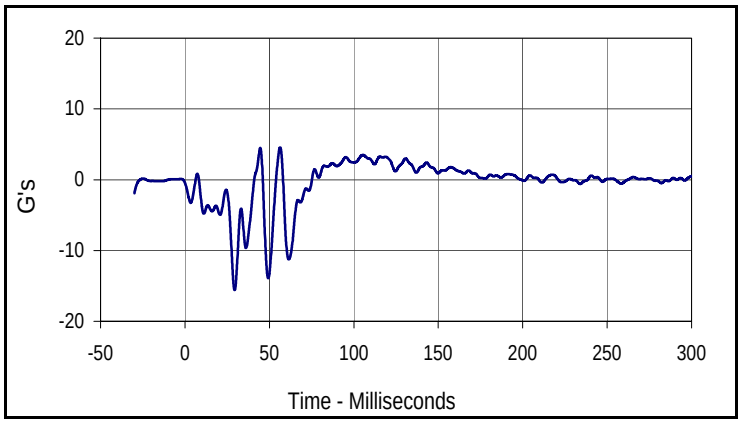


Curve Description			
MDB CG Z Velocity			
CURNO	Type	SAE Class	Units
192	IN1	180	KMH
Max	Time	Min	Time
1.1	14.9	-6.2	54.3

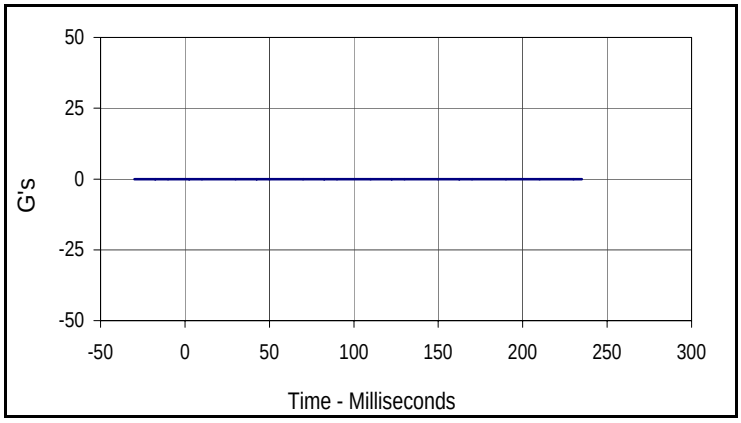
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	Test Date:	3/31/10
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Project No.:	R70212



Curve Description			
MDB Rear X			
CURNO	Type	SAE Class	Units
193	FIL	60	G's
Max	Time	Min	Time
1.0	163.4	-51.7	39.1

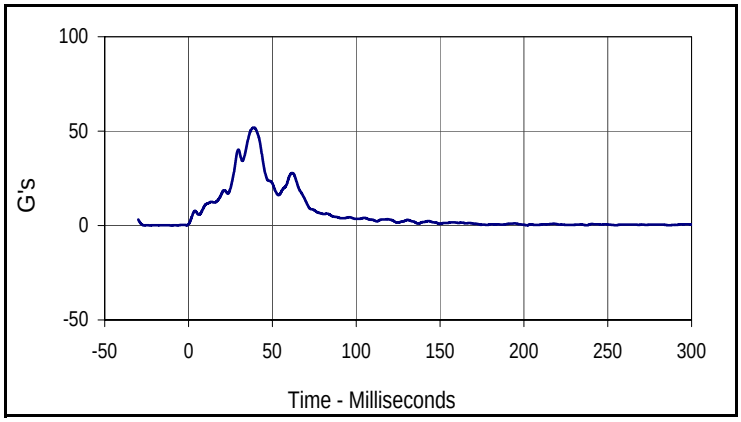


Curve Description			
MDB Rear Y			
CURNO	Type	SAE Class	Units
194	FIL	60	G's
Max	Time	Min	Time
4.6	56.4	-15.6	29.4



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

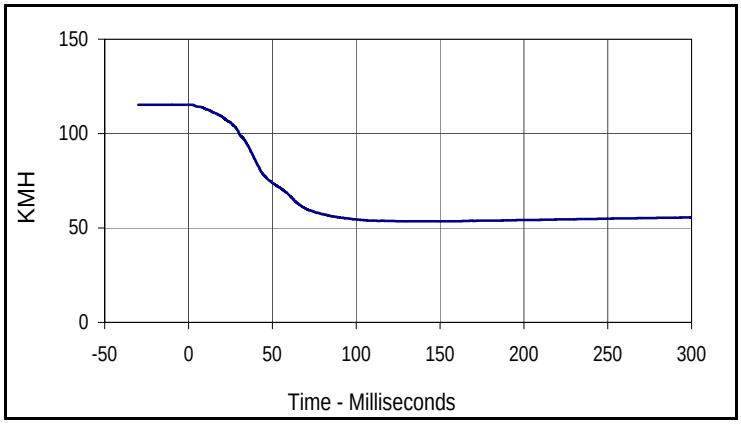
* Channel failed, no data



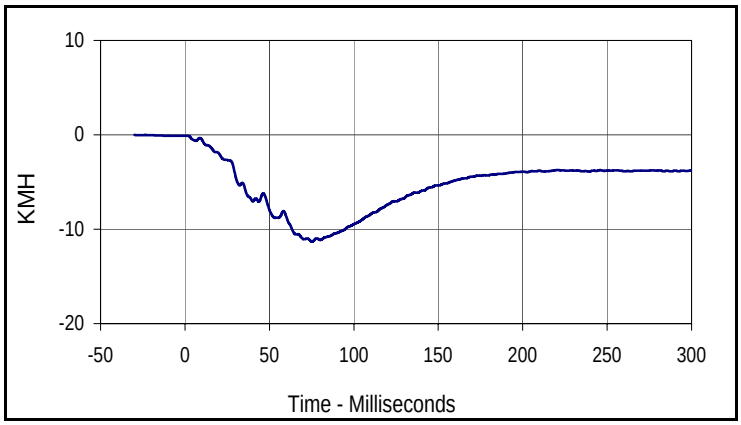
Curve Description			
MDB Rear Resultant			
CURNO	Type	SAE Class	Units
193	RES	60	G's
Max	Time	Min	Time
51.9	38.9	0.0	-10.3

* X-Y Resultant only

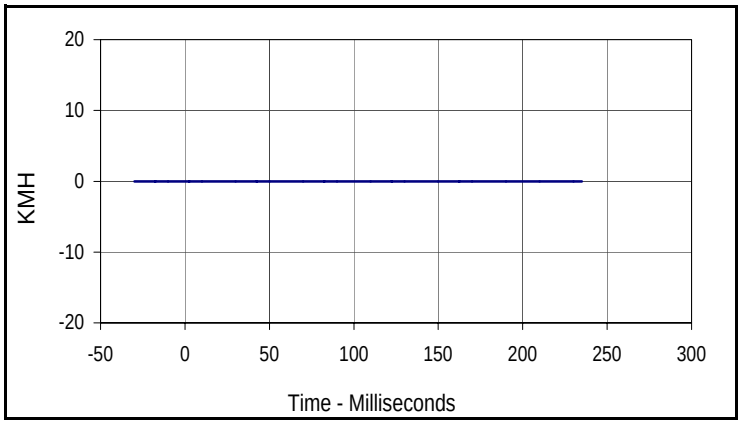
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	Test Date:	3/31/10
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Project No.:	R70212



Curve Description			
MDB Rear X Velocity			
CURNO	Type	SAE Class	Units
193	IN1	180	KMH
Max	Time	Min	Time
115.3	1.5	53.5	133.4



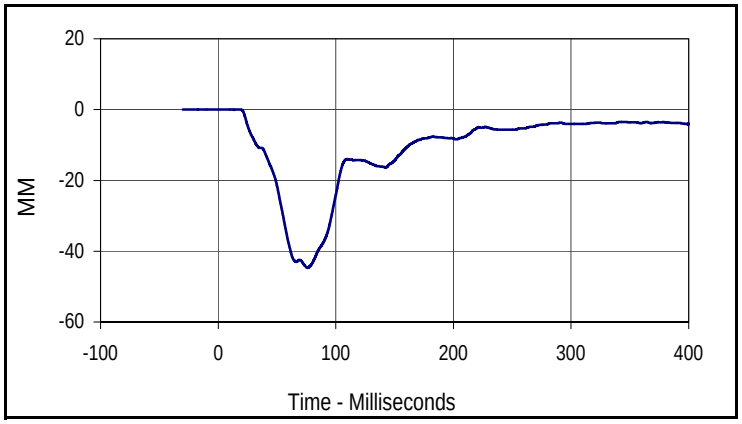
Curve Description			
MDB Rear Y Velocity			
CURNO	Type	SAE Class	Units
194	IN1	180	KMH
Max	Time	Min	Time
-0.1	-15.0	-11.3	75.3



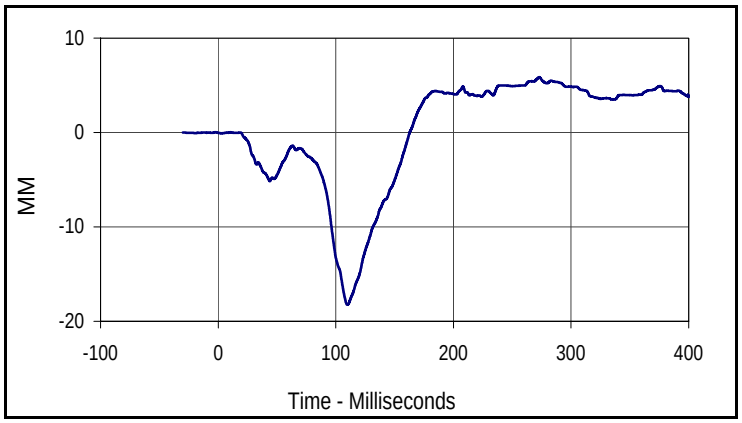
Curve Description			
MDB Rear Z Velocity			
CURNO	Type	SAE Class	Units
195	IN1	180	KMH
Max	Time	Min	Time
0.0	-15.0	0.0	-15.0

* Channel failed, no data

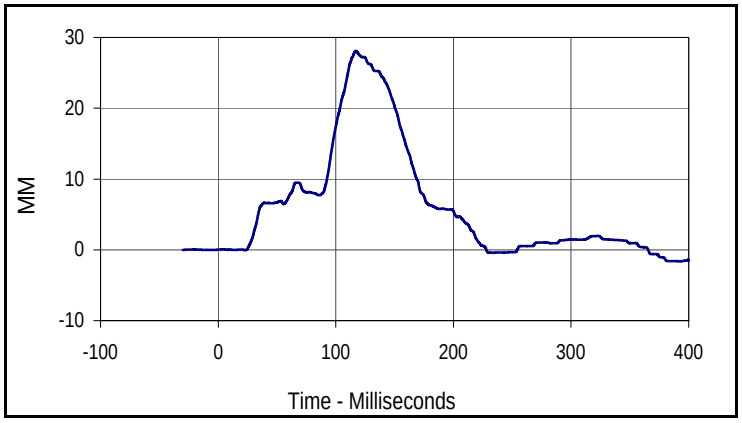
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10



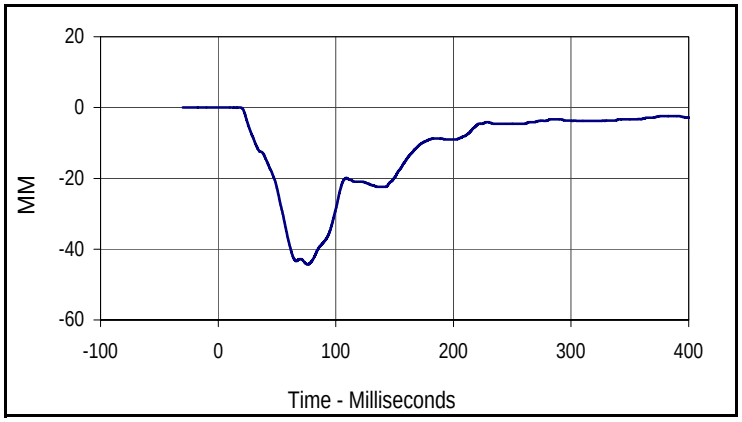
Curve Description			
Driver THOR CRUX Upper Right X			
CURNO	Type	SAE Class	Units
196	CALC	N/A	MM
Max	Time	Min	Time
0.0	0.0	-44.7	76.0



Curve Description			
Driver THOR CRUX Upper Right Y			
CURNO	Type	SAE Class	Units
197	CALC	N/A	MM
Max	Time	Min	Time
5.9	272.8	-18.3	109.6

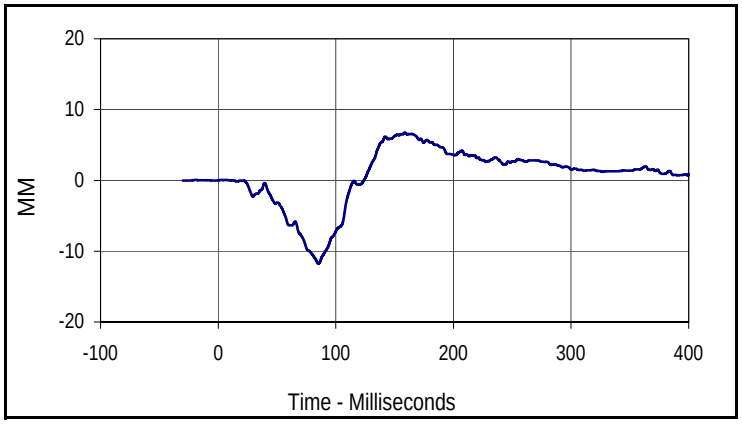


Curve Description			
Driver THOR CRUX Upper Right Z			
CURNO	Type	SAE Class	Units
198	CALC	N/A	MM
Max	Time	Min	Time
28.1	116.9	-1.6	390.9

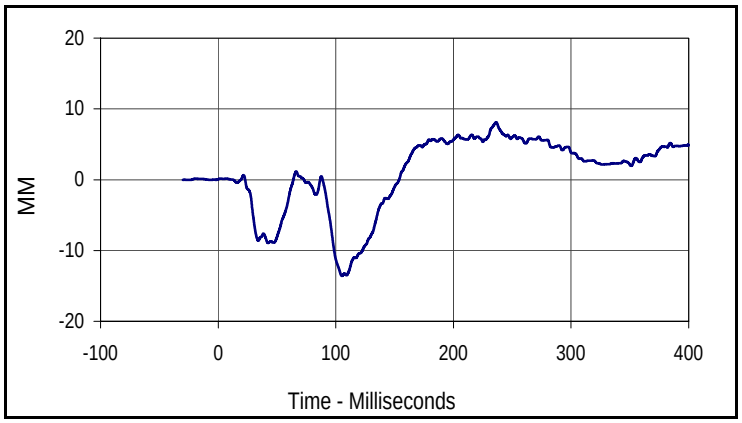


Curve Description			
Driver THOR CRUX Upper Right D			
CURNO	Type	SAE Class	Units
199	CALC	N/A	MM
Max	Time	Min	Time
0.0	7.0	-44.4	76.0

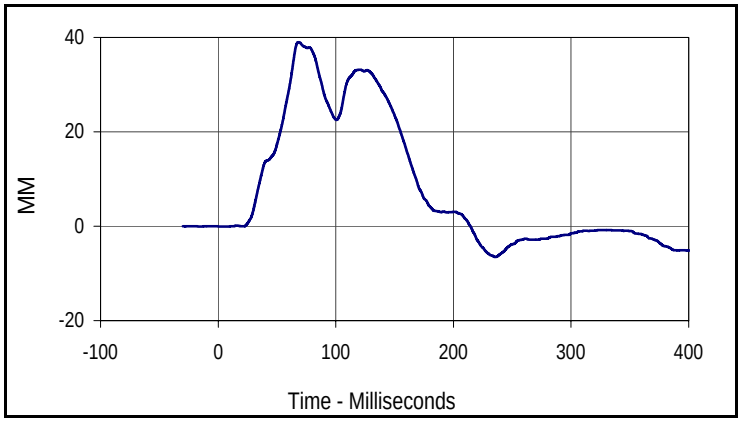
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10



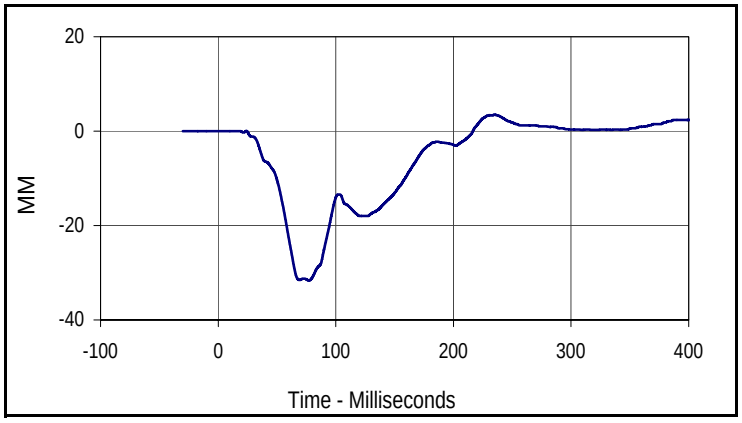
Curve Description			
Driver THOR CRUX Lower Right X			
CURNO	Type	SAE Class	Units
200	CALC	N/A	MM
Max	Time	Min	Time
6.7	158.5	-11.8	85.1



Curve Description			
Driver THOR CRUX Lower Right Y			
CURNO	Type	SAE Class	Units
201	CALC	N/A	MM
Max	Time	Min	Time
8.1	236.3	-13.6	105.0

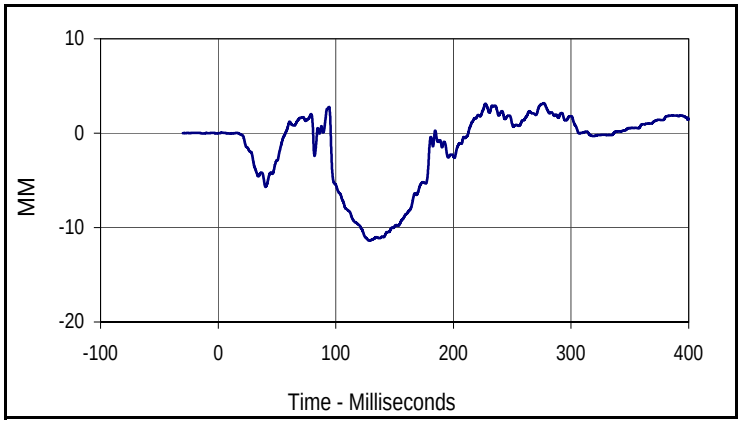


Curve Description			
Driver THOR CRUX Lower Right Z			
CURNO	Type	SAE Class	Units
202	CALC	N/A	MM
Max	Time	Min	Time
39.0	68.5	-6.5	235.4

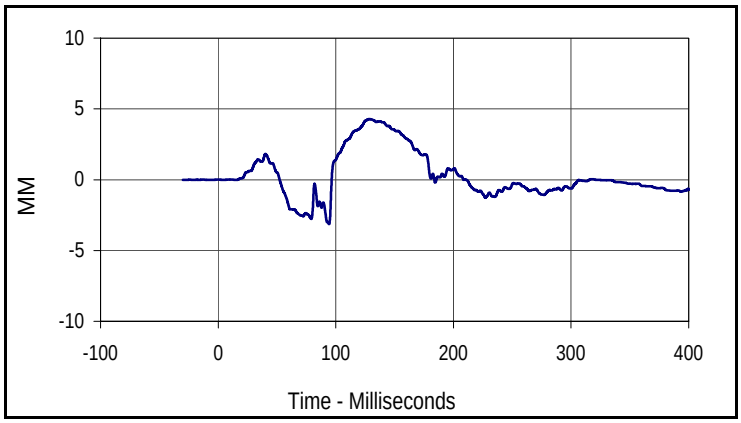


Curve Description			
Driver THOR CRUX Lower Right D			
CURNO	Type	SAE Class	Units
203	CALC	N/A	MM
Max	Time	Min	Time
3.5	234.9	-31.6	77.1

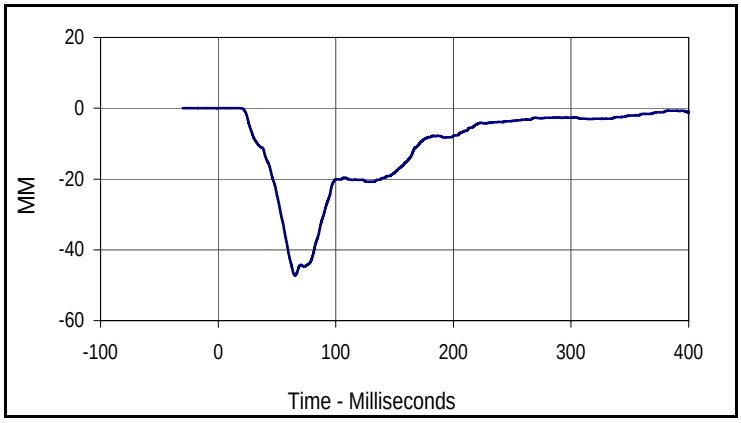
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10



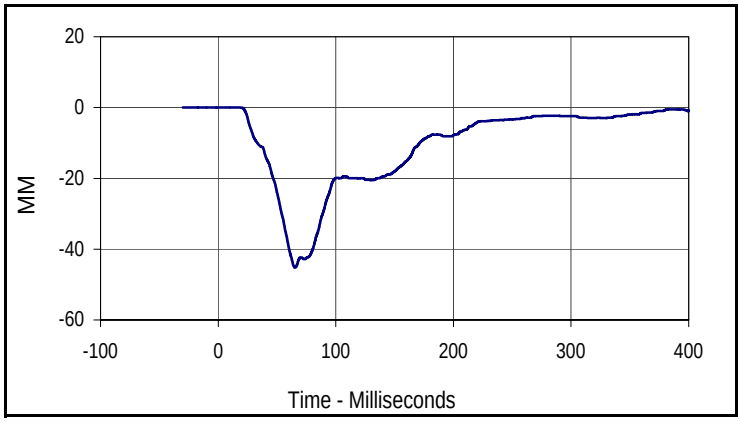
Curve Description			
Driver THOR CRUX Upper Left X			
CURNO	Type	SAE Class	Units
204	CALC	N/A	MM
Max	Time	Min	Time
3.2	276.9	-11.4	128.4



Curve Description			
Driver THOR CRUX Upper Left Y			
CURNO	Type	SAE Class	Units
205	CALC	N/A	MM
Max	Time	Min	Time
4.3	128.5	-3.1	94.2

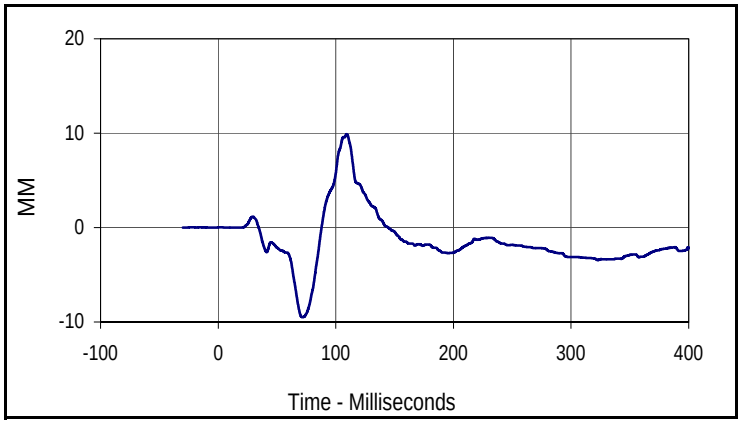


Curve Description			
Driver THOR CRUX Upper Left Z			
CURNO	Type	SAE Class	Units
206	CALC	N/A	MM
Max	Time	Min	Time
0.0	4.0	-47.2	65.3

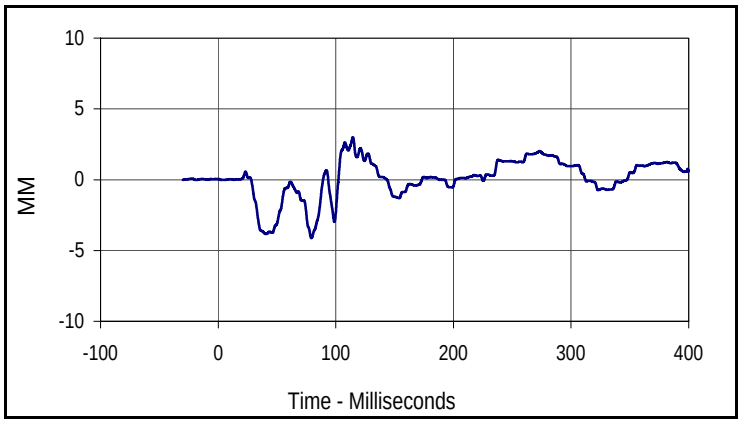


Curve Description			
Driver THOR CRUX Upper Left D			
CURNO	Type	SAE Class	Units
207	CALC	N/A	MM
Max	Time	Min	Time
0.0	5.3	-45.2	65.2

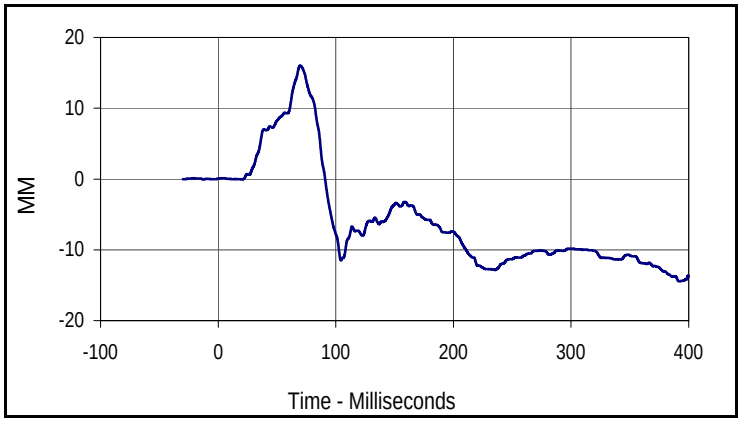
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10



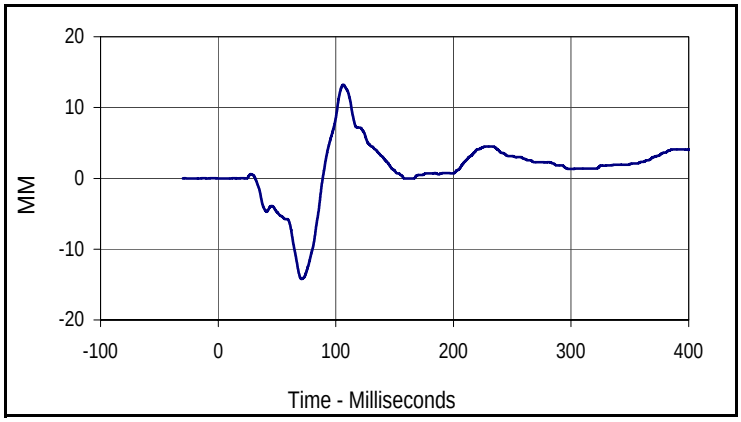
Curve Description			
Driver THOR CRUX Lower Left X			
CURNO	Type	SAE Class	Units
208	CALC	N/A	MM
Max	Time	Min	Time
9.9	109.3	-9.5	71.6



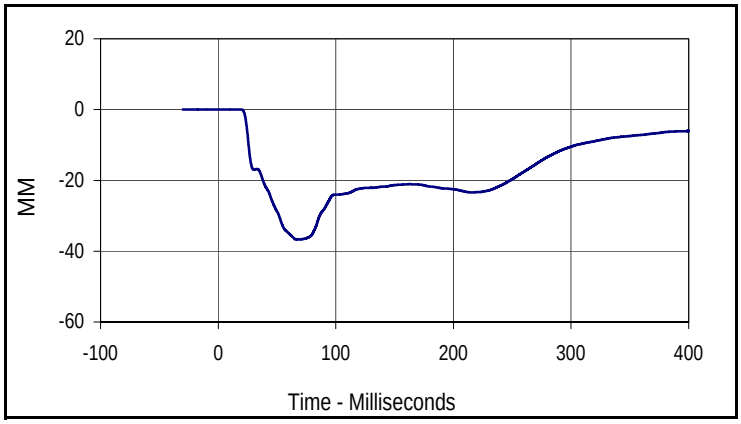
Curve Description			
Driver THOR CRUX Lower Left Y			
CURNO	Type	SAE Class	Units
209	CALC	N/A	MM
Max	Time	Min	Time
3.0	114.5	-4.1	79.1



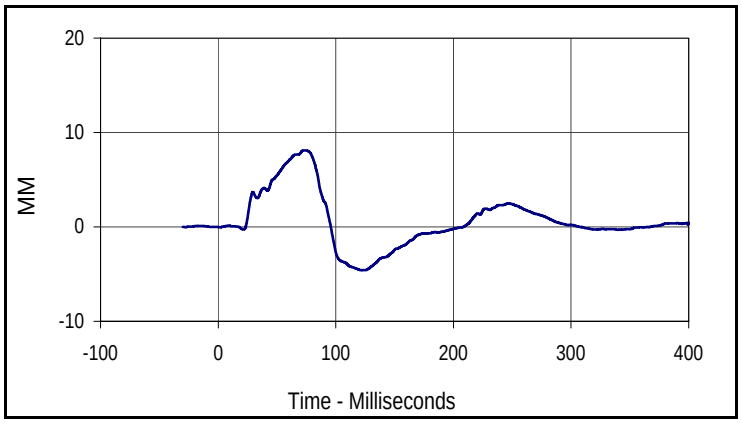
Curve Description			
Driver THOR CRUX Lower Left Z			
CURNO	Type	SAE Class	Units
210	CALC	N/A	MM
Max	Time	Min	Time
16.0	69.5	-14.4	391.5



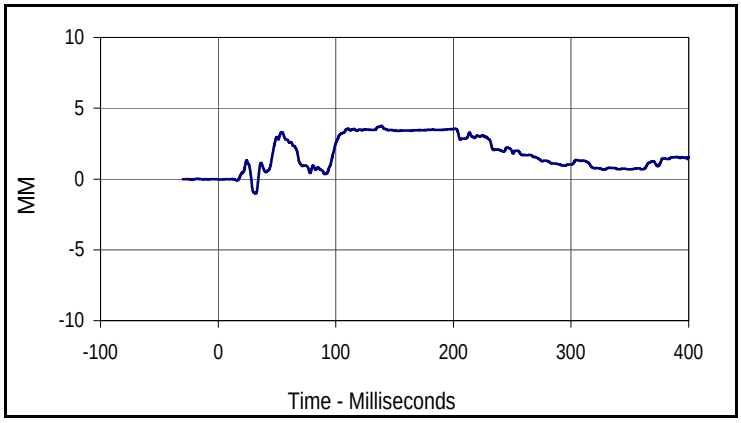
Curve Description			
Driver THOR CRUX Lower Left D			
CURNO	Type	SAE Class	Units
211	CALC	N/A	MM
Max	Time	Min	Time
13.2	106.3	-14.2	70.8



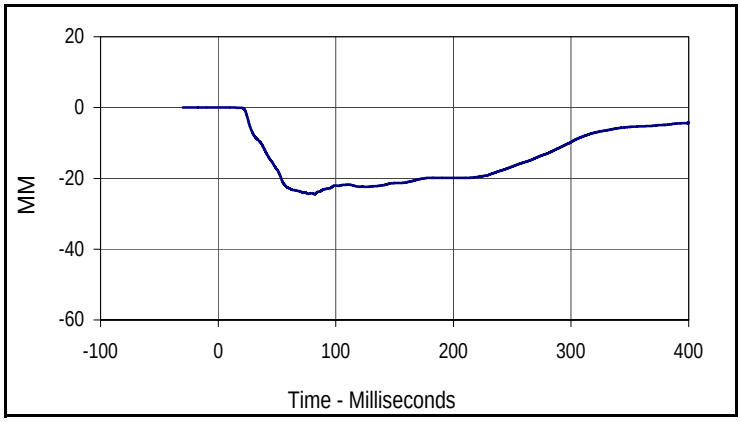
Curve Description			
Driver Right Lower Abdomen X			
CURNO	Type	SAE Class	Units
212	CALC	N/A	MM
Max	Time	Min	Time
0.0	8.3	-36.7	68.6



Curve Description			
Driver Right Lower Abdomen Y			
CURNO	Type	SAE Class	Units
213	CALC	N/A	MM
Max	Time	Min	Time
8.1	72.4	-4.6	121.4

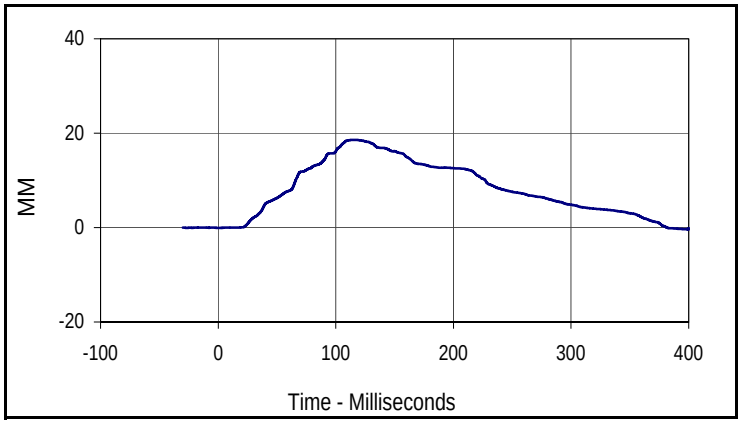


Curve Description			
Driver Right Lower Abdomen Z			
CURNO	Type	SAE Class	Units
214	CALC	N/A	MM
Max	Time	Min	Time
3.8	138.7	-1.0	31.7

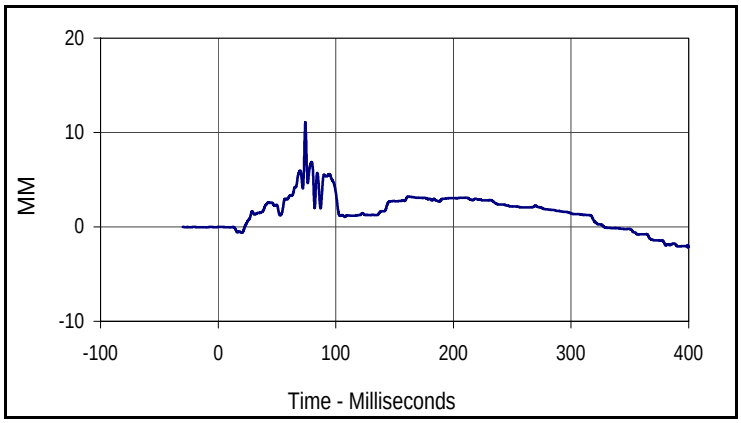


Curve Description			
Driver Left Lower Abdomen X			
CURNO	Type	SAE Class	Units
215	CALC	N/A	MM
Max	Time	Min	Time
0.0	12.9	-24.6	81.9

Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10

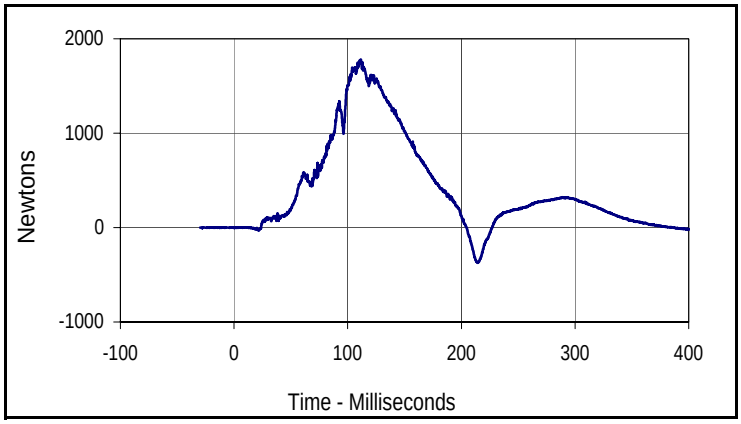


Curve Description			
Driver Left Lower Abdomen Y			
CURNO	Type	SAE Class	Units
216	CALC	N/A	MM
Max	Time	Min	Time
18.6	115.6	-0.5	399.4

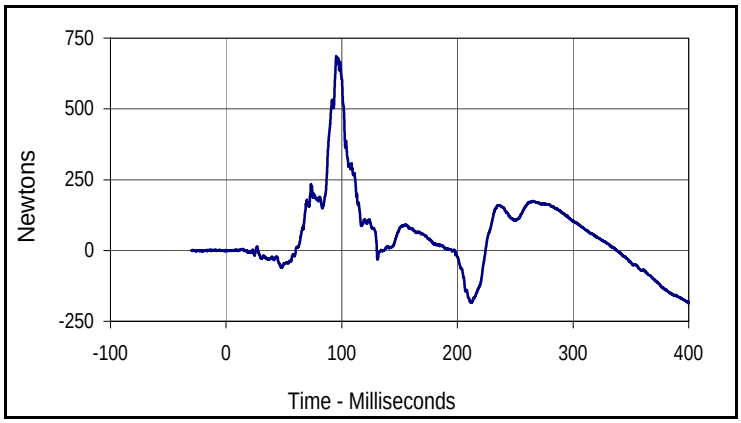


Curve Description			
Driver Left Lower Abdomen Z			
CURNO	Type	SAE Class	Units
217	CALC	N/A	MM
Max	Time	Min	Time
11.1	74.1	-2.2	399.1

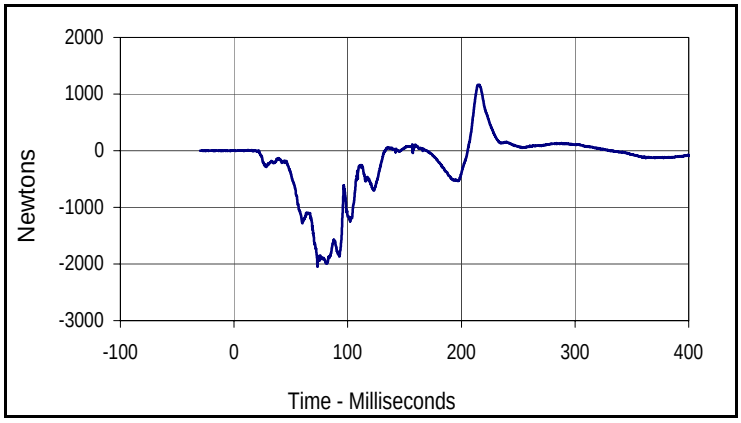
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10



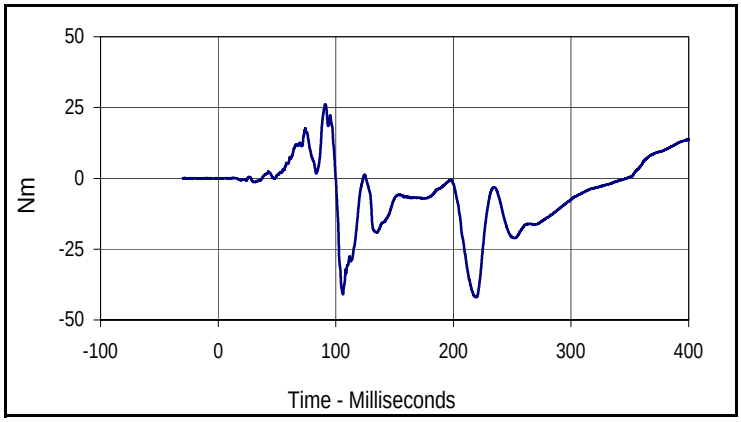
Curve Description			
Driver Upper Neck Force X			
CURNO	Type	SAE Class	Units
218	CALC	N/A	Newtons
Max	Time	Min	Time
1779.3	111.6	-372.4	214.0



Curve Description			
Driver Upper Neck Force Y			
CURNO	Type	SAE Class	Units
219	CALC	N/A	Newtons
Max	Time	Min	Time
686.5	95.2	-186.1	399.7

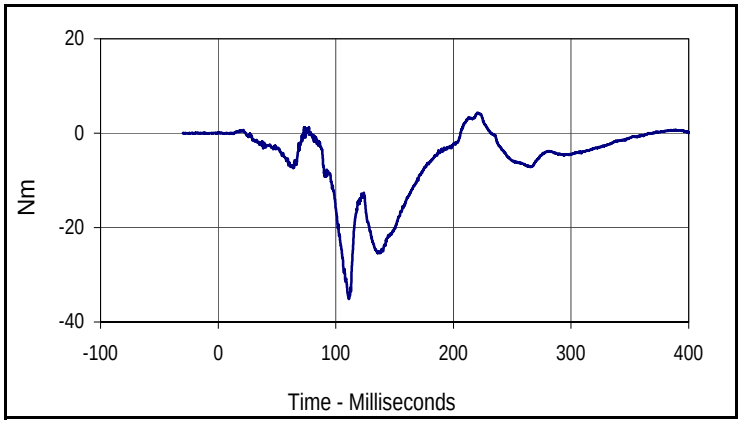


Curve Description			
Driver Upper Neck Force Z			
CURNO	Type	SAE Class	Units
220	CALC	N/A	Newtons
Max	Time	Min	Time
1165.9	215.5	-2046.6	73.4

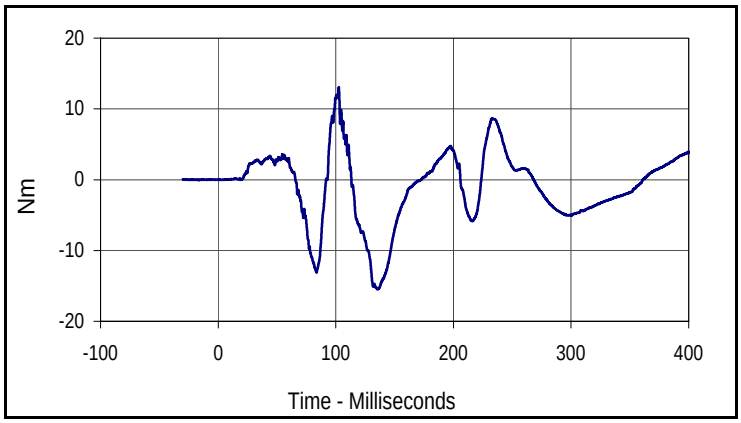


Curve Description			
Driver Upper Neck Moment X			
CURNO	Type	SAE Class	Units
221	CALC	N/A	Nm
Max	Time	Min	Time
26.2	91.1	-42.0	219.7

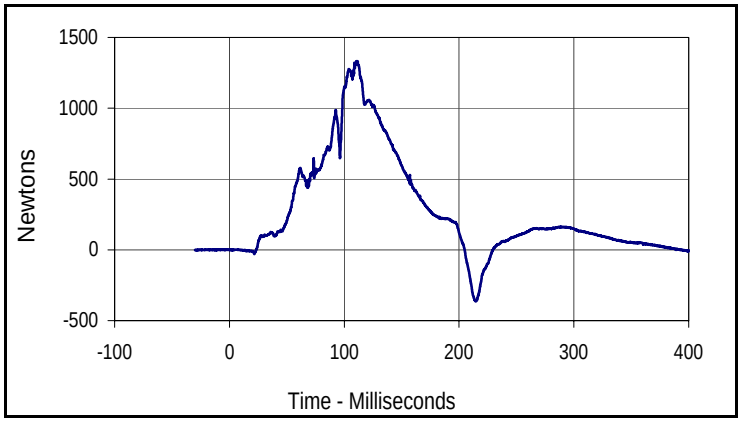
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10



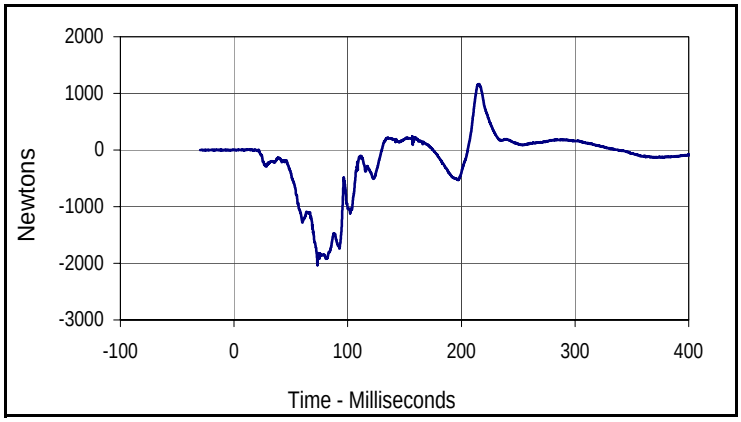
Curve Description			
Driver Upper Neck Moment Y			
CURNO	Type	SAE Class	Units
222	CALC	N/A	Nm
Max	Time	Min	Time
4.3	220.5	-35.1	111.2



Curve Description			
Driver Upper Neck Moment Z			
CURNO	Type	SAE Class	Units
223	CALC	N/A	Nm
Max	Time	Min	Time
13.1	102.6	-15.5	135.3

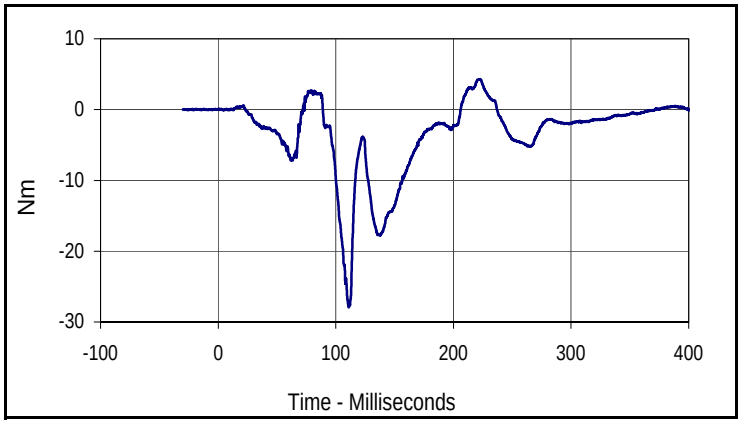


Curve Description			
Driver OC Force X			
CURNO	Type	SAE Class	Units
224	CALC	N/A	Newtons
Max	Time	Min	Time
1333.8	111.6	-365.1	214.5

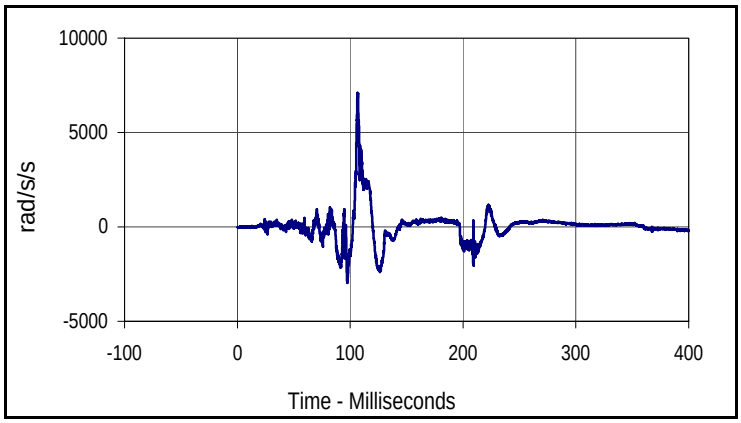


Curve Description			
Driver OC Force Z			
CURNO	Type	SAE Class	Units
225	CALC	N/A	Newtons
Max	Time	Min	Time
1164.0	215.5	-2031.9	73.4

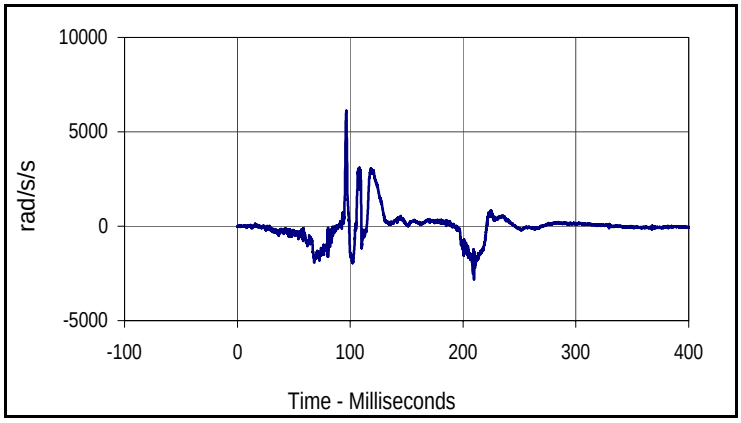
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10



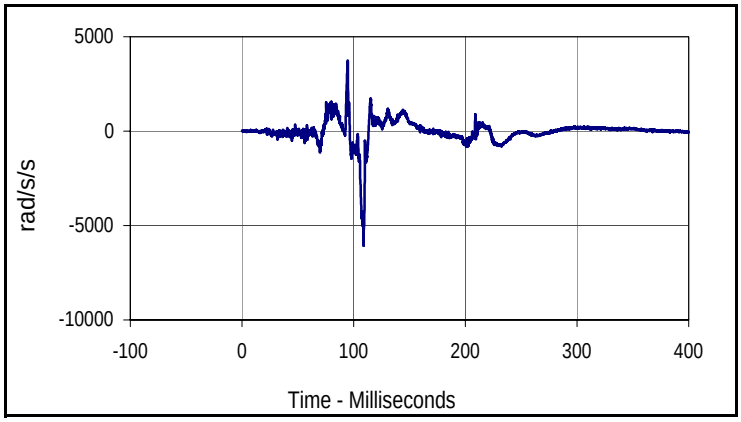
Curve Description			
Driver OC Moment Y			
CURNO	Type	SAE Class	Units
226	CALC	N/A	Nm
Max	Time	Min	Time
4.3	222.7	-27.9	111.1



Curve Description			
Driver Head Angular Acceleration X			
CURNO	Type	SAE Class	Units
227	CALC	N/A	rad/s/s
Max	Time	Min	Time
7108.5	106.5	-2972.6	97.6

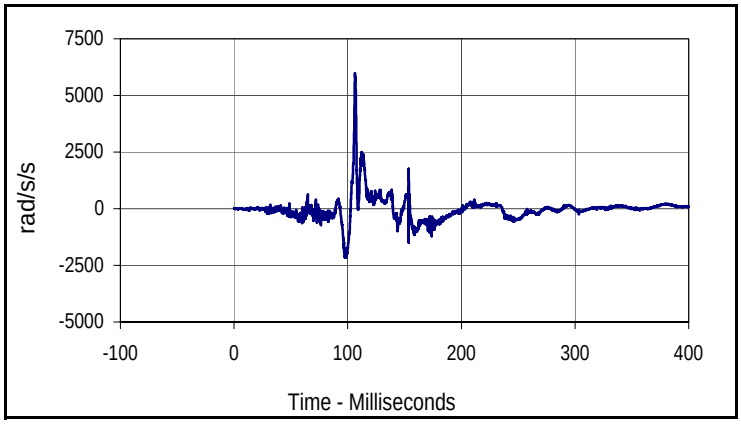


Curve Description			
Driver Head Angular Acceleration Y			
CURNO	Type	SAE Class	Units
228	CALC	N/A	rad/s/s
Max	Time	Min	Time
6111.6	96.5	-2818.2	209.7

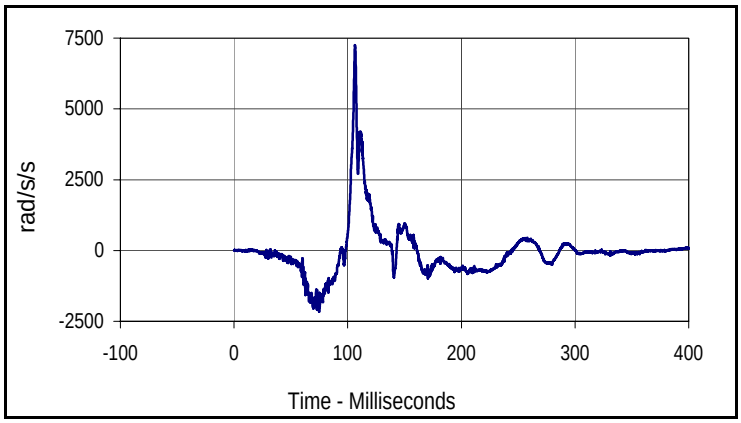


Curve Description			
Driver Head Angular Acceleration Z			
CURNO	Type	SAE Class	Units
229	CALC	N/A	rad/s/s
Max	Time	Min	Time
3739.4	94.6	-6067.8	108.8

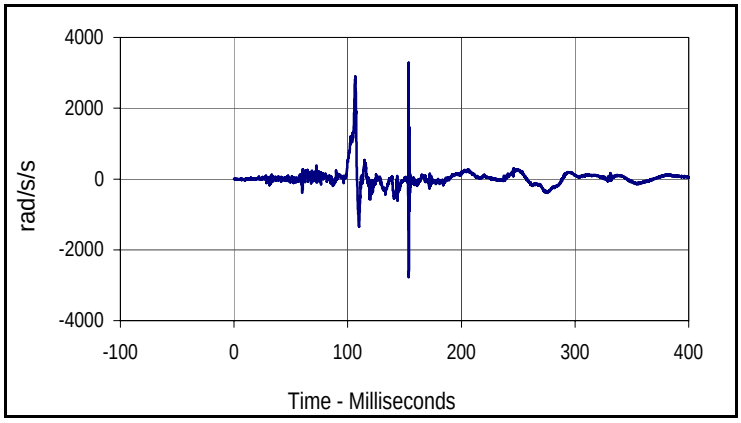
Test Vehicle:	2007 Ford 500 SEL 4-Door Sedan	NHTSA No.:	R70212
Test Program:	72 mph, 15°, 50% Offset MDB to Vehicle	Test Date:	3/31/10



Curve Description			
LR Passenger Head Angular Acceleration X			
CURNO	Type	SAE Class	Units
230	CALC	N/A	rad/s/s
Max	Time	Min	Time
5975.7	106.4	-2147.0	98.9



Curve Description			
LR Passenger Head Angular Acceleration Y			
CURNO	Type	SAE Class	Units
231	CALC	N/A	rad/s/s
Max	Time	Min	Time
7247.4	106.5	-2165.8	74.9

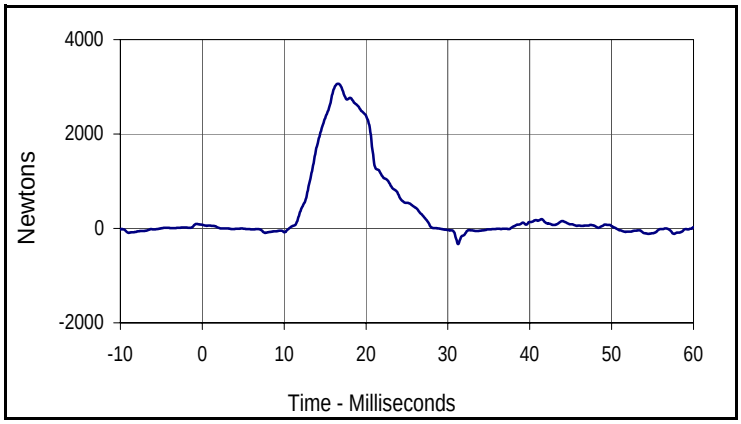


Curve Description			
LR Passenger Head Angular Acceleration Z			
CURNO	Type	SAE Class	Units
232	CALC	N/A	rad/s/s
Max	Time	Min	Time
3283.7	153.6	-2714.8	153.8

APPENDIX C
DUMMY CERTIFICATION DATA

Test Program:	Thor-LX Dynamic Heel of Foot Impact Test	Test Date:	1/4/10
Serial No.:	G110	Test I.D.:	Heel05

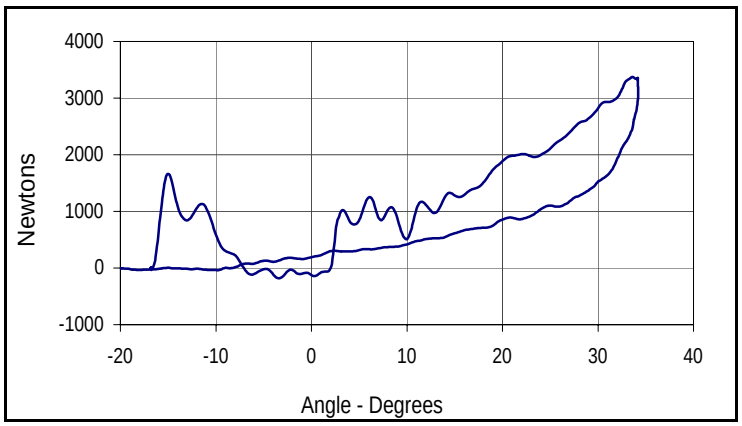
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	^{o}C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	3.90 to 4.10	3.96	Pass
Peak Lower Tibia Compressive Force	Newtons	2738 to 3346	3067	Pass
		Overall Test Results		Pass



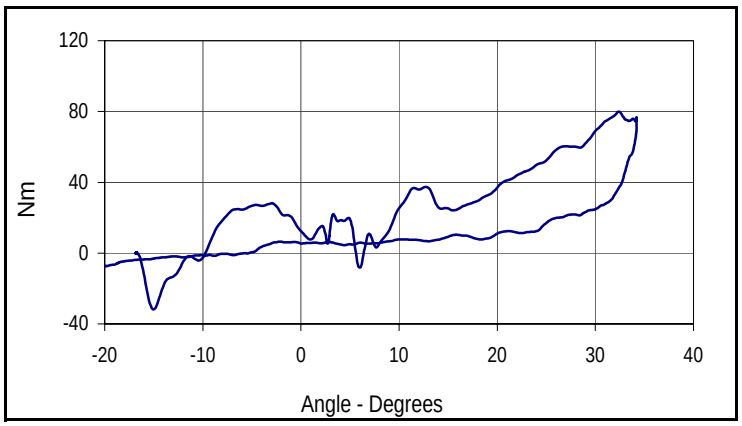
Curve Description			
Peak Lower Tibia Compressive Force			
CURNO	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Time	Min	Time
3066.5	16.6	-327.3	31.2

Test Program:	Thor-LX Dynamic Ball of Foot Impact Test	Test Date:	1/4/10
Serial No.:	G110	Test I.D.:	Ball005

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	5.03	Pass
Peak Lower Tibia Compressive Force	Newtons	2956 to 3613	3373	Pass
Peak Ankle Y Axis Rotation	Deg	32.7 to 39.9	34.2	Pass
Peak Ankle Resistive Moment	Nm	77.1 to 94.2	79.9	Pass
		Overall Test Results		Pass



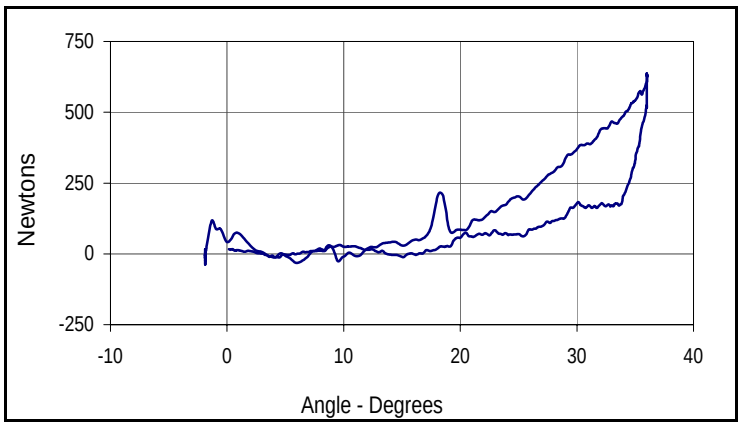
Curve Description			
Peak Lower Tibia Compressive Force vs. Angle			
CURNO	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Angle	Min	Angle
3372.5	33.6	-183.5	-3.4



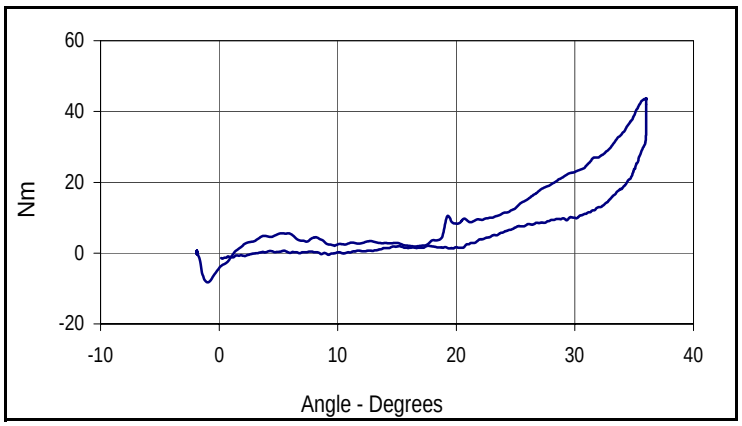
Curve Description			
Peak Ankle Resistive Moment vs. Angle			
CURNO	Type	SAE Class	Units
002	FIL	600	Nm
Max	Angle	Min	Angle
79.9	32.4	-31.7	-15.1

Test Program:	Thor-LX Dynamic Inversion Impact Test	Test Date:	1/4/10
Serial No.:	G110	Test I.D.:	INV005

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	1.93	Pass
Peak Lower Tibia Compressive Force	Newtons	552 to 675	637	Pass
Peak Ankle X Axis Rotation	Deg	30.3 to 37.0	36.0	Pass
Peak Ankle Resistive Moment	Nm	36.3 to 44.4	43.7	Pass
		Overall Test Results		Pass



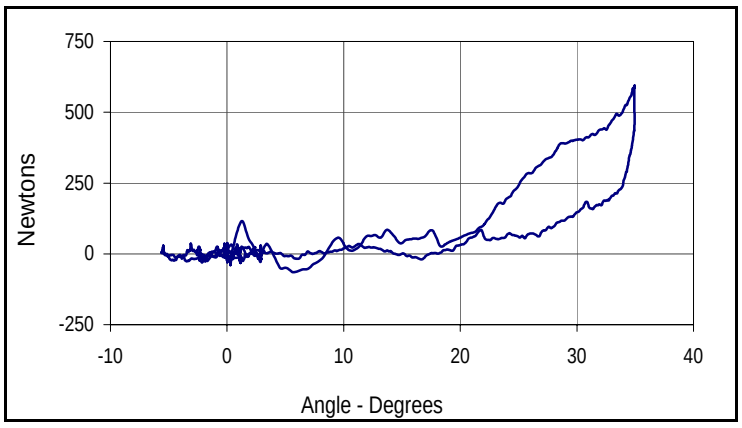
Curve Description			
Peak Lower Tibia Compressive Force vs. Angle			
CURNO	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Angle	Min	Angle
637.3	36.0	-37.4	-1.9



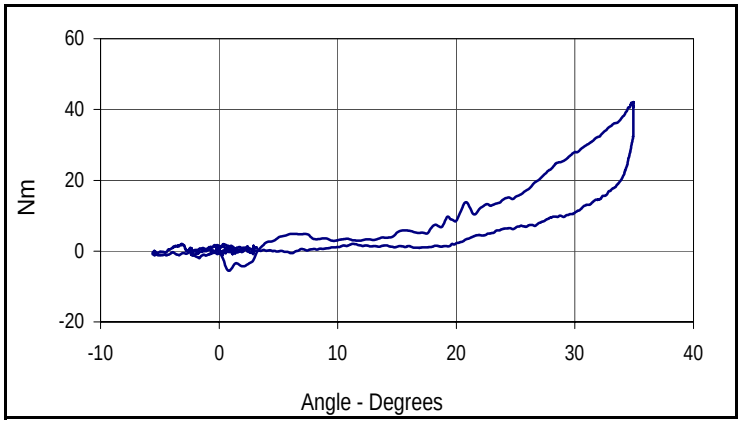
Curve Description			
Peak Ankle Resistive Moment vs. Angle			
CURNO	Type	SAE Class	Units
002	FIL	600	Nm
Max	Angle	Min	Angle
43.7	36.0	-8.3	-0.9

Test Program:	Thor-LX Dynamic Eversion Impact Test	Test Date:	1/5/10
Serial No.:	G110	Test I.D.:	EV005

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	1.99	Pass
Peak Lower Tibia Compressive Force	Newtons	552 to 675	594	Pass
Peak Ankle X Axis Rotation	Deg	30.3 to 37.0	34.9	Pass
Peak Ankle Resistive Moment	Nm	36.3 to 44.4	42.1	Pass
		Overall Test Results		Pass



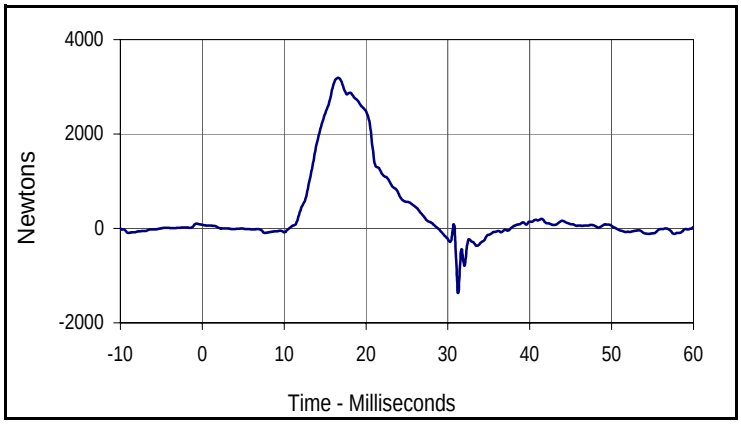
Curve Description			
Peak Lower Tibia Compressive Force vs. Angle			
CURNO	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Angle	Min	Angle
593.6	34.9	-65.1	5.8



Curve Description			
Peak Ankle Resistive Moment vs. Angle			
CURNO	Type	SAE Class	Units
002	FIL	600	Nm
Max	Angle	Min	Angle
42.1	34.9	-5.6	0.8

Test Program:	Thor-LX Dynamic Heel of Foot Impact Test	Test Date:	1/4/10
Serial No.:	G109	Test I.D.:	Heel06

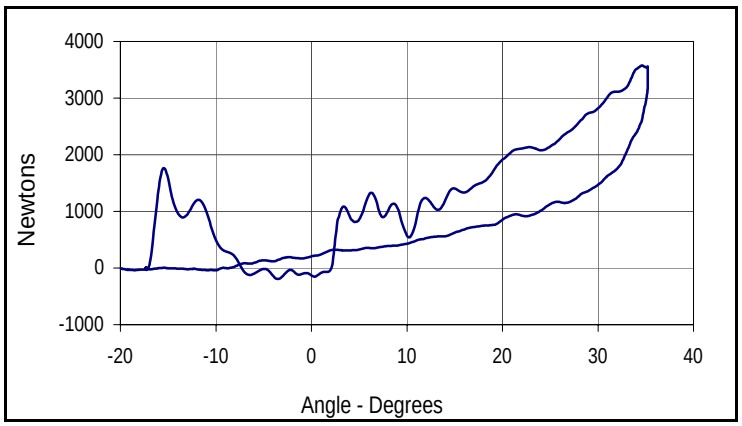
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	^{o}C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	3.90 to 4.10	3.96	Pass
Peak Lower Tibia Compressive Force	Newtons	2738 to 3346	3190	Pass
		Overall Test Results		Pass



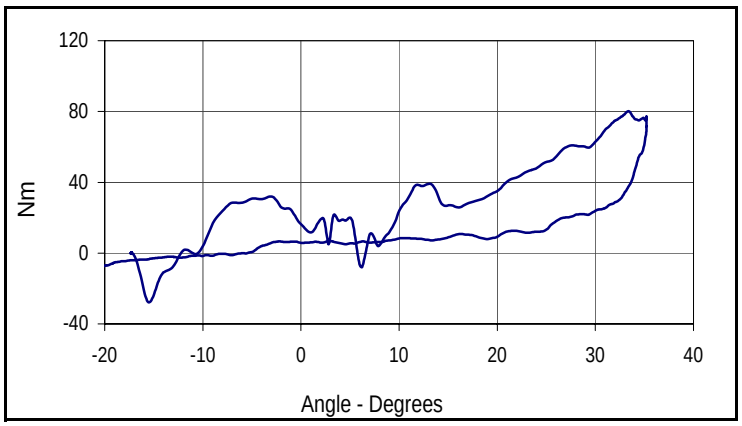
Curve Description			
Peak Lower Tibia Compressive Force			
CURNO	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Time	Min	Time
3190.3	16.6	-1362.2	31.2

Test Program:	Thor-LX Dynamic Ball of Foot Impact Test	Test Date:	1/4/10
Serial No.:	G109	Test I.D.:	Ball006

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	3578	Pass
Peak Ankle Y Axis Rotation	Deg	32.7 to 39.9	35.2	Pass
Peak Ankle Resistive Moment	Nm	77.1 to 94.2	80.2	Pass
		Overall Test Results		Pass



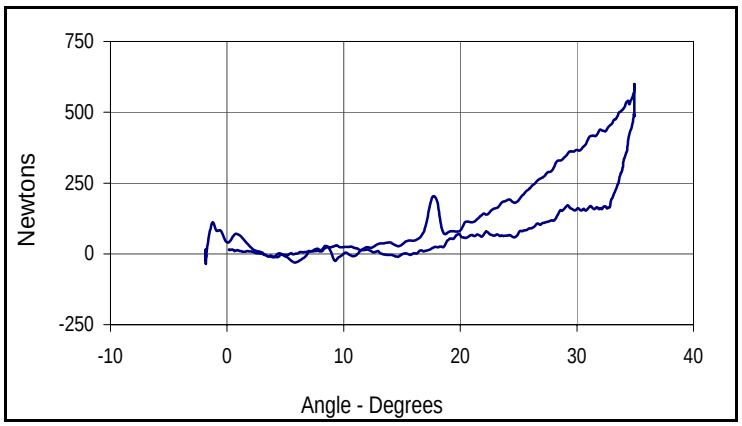
Curve Description			
Peak Lower Tibia Compressive Force vs. Angle			
CURNO	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Angle	Min	Angle
3577.9	34.6	-194.6	-3.5



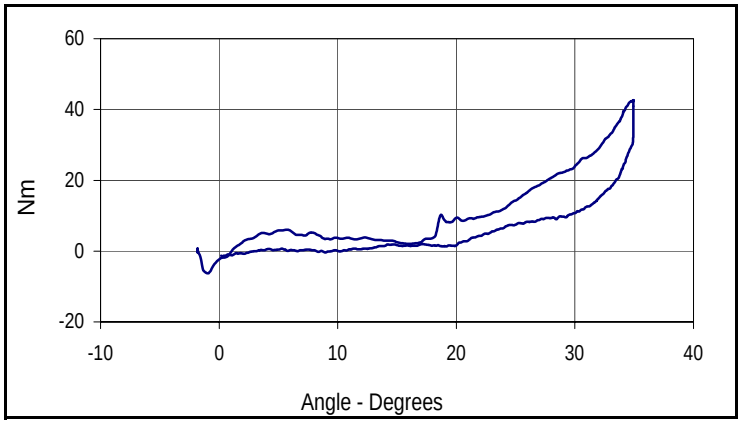
Curve Description			
Peak Ankle Resistive Moment vs. Angle			
CURNO	Type	SAE Class	Units
002	FIL	600	Nm
Max	Angle	Min	Angle
80.2	33.4	-27.7	-15.6

Test Program:	Thor-LX Dynamic Inversion Impact Test	Test Date:	1/4/10
Serial No.:	G109	Test I.D.:	INV006

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	2.05	Pass
Peak Lower Tibia Compressive Force	Newtons	552 to 675	600	Pass
Peak Ankle X Axis Rotation	Deg	30.3 to 37.0	34.9	Pass
Peak Ankle Resistive Moment	Nm	36.3 to 44.4	42.6	Pass
		Overall Test Results		Pass



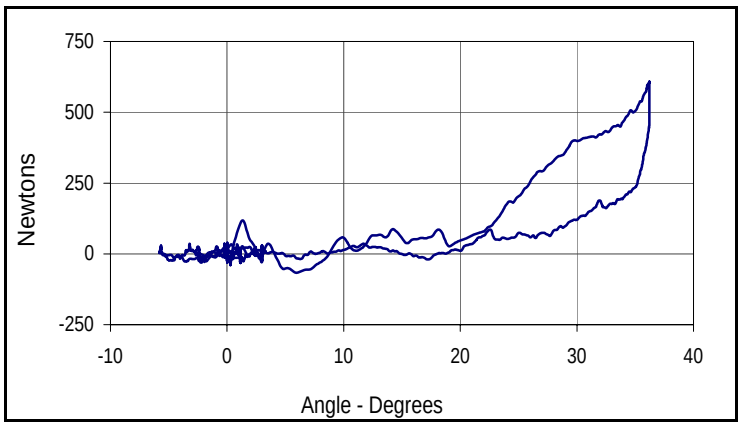
Curve Description			
Peak Lower Tibia Compressive Force vs. Angle			
CURNO	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Angle	Min	Angle
599.6	34.9	-35.2	-1.8



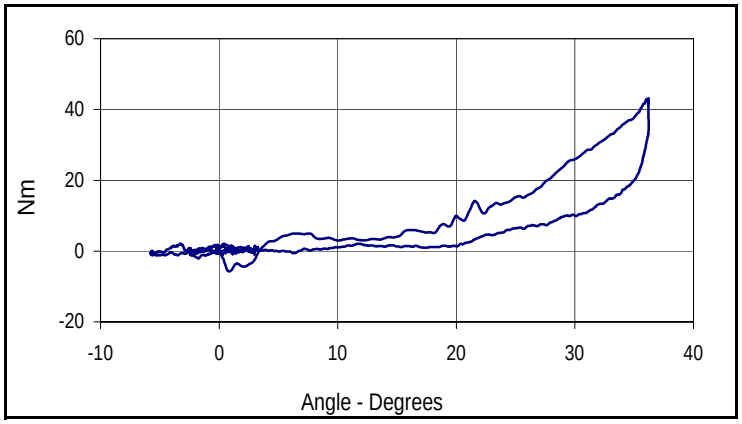
Curve Description			
Peak Ankle Resistive Moment vs. Angle			
CURNO	Type	SAE Class	Units
002	FIL	600	Nm
Max	Angle	Min	Angle
42.6	34.9	-6.3	-1.0

Test Program:	Thor-LX Dynamic Eversion Impact Test	Test Date:	1/5/10
Serial No.:	G109	Test I.D.:	EV006

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	1.94	Pass
Peak Lower Tibia Compressive Force	Newtons	552 to 675	608	Pass
Peak Ankle X Axis Rotation	Deg	30.3 to 37.0	36.2	Pass
Peak Ankle Resistive Moment	Nm	36.3 to 44.4	43.1	Pass
		Overall Test Results		Pass



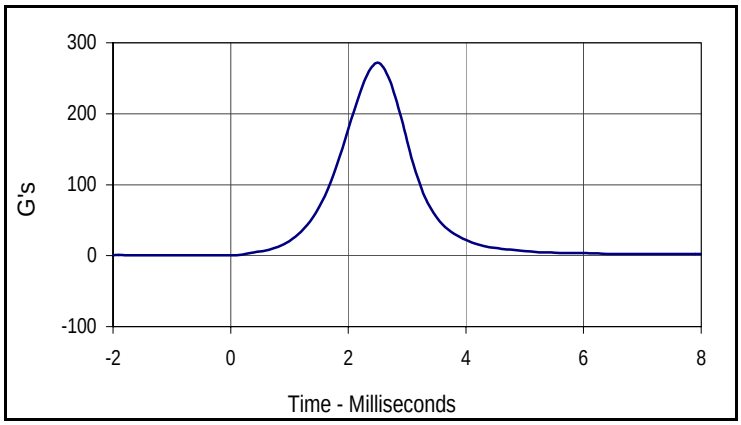
Curve Description			
Peak Lower Tibia Compressive Force vs. Angle			
CURNO	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Angle	Min	Angle
608.1	36.2	-66.9	6.0



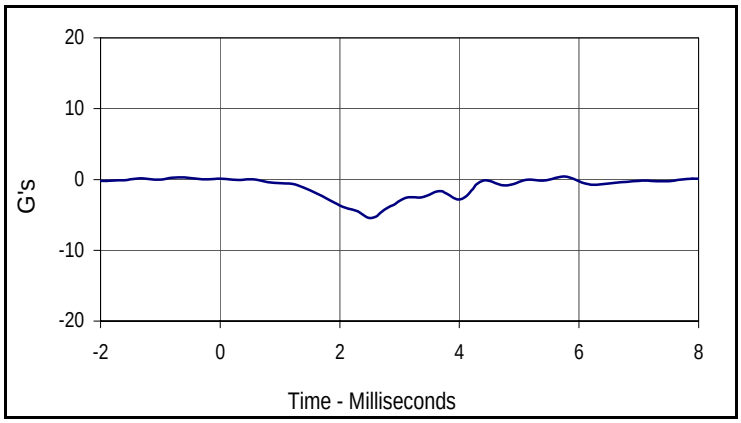
Curve Description			
Peak Ankle Resistive Moment vs. Angle			
CURNO	Type	SAE Class	Units
002	FIL	600	Nm
Max	Angle	Min	Angle
43.1	36.2	-5.7	0.8

Test Program:	Hybrid III 5th Percentile Female Head Drop Test	Test Date:	1/5/10
ATD Serial No.:	630	Test I.D.:	HD01B

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Peak Resultant Acceleration	G's	250.0 to 300.0	271.8	Pass
Peak Lateral Acceleration	G's	≤15.0	5.5	Pass
Is Acceleration Unimodal?	Yes/No	Yes	Yes	Pass
		Overall Test Results		Pass



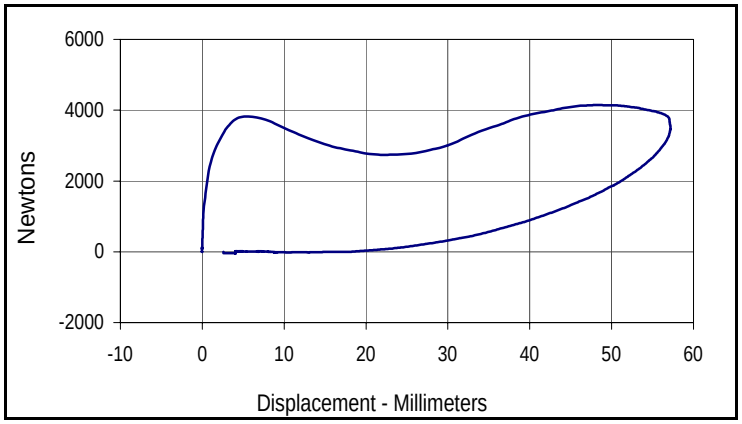
Curve Description			
Head Resultant			
CURNO	Type	SAE Class	Units
001	RES	1000	G's
Max	Time	Min	Time
271.8	2.5	0.5	0.0



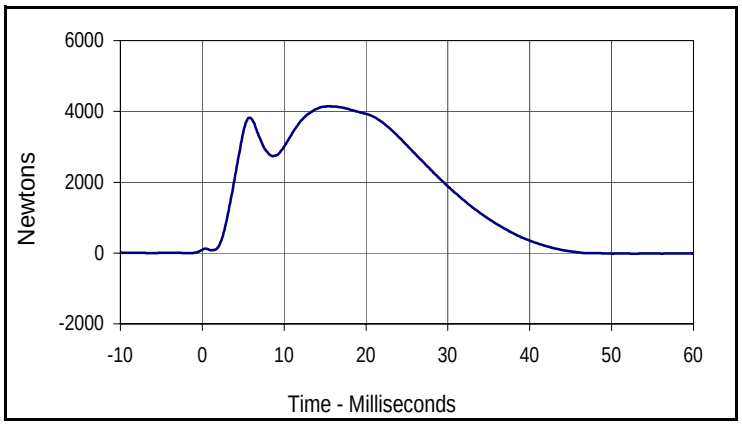
Curve Description			
Head Y			
CURNO	Type	SAE Class	Units
002	FIL	1000	G's
Max	Time	Min	Time
0.4	5.7	-5.5	2.5

Test Program:	Hybrid III 5th Percentile Female Thorax Impact Test	Test Date:	1/5/10
ATD Serial No.:	630	Test I.D.:	CH01B

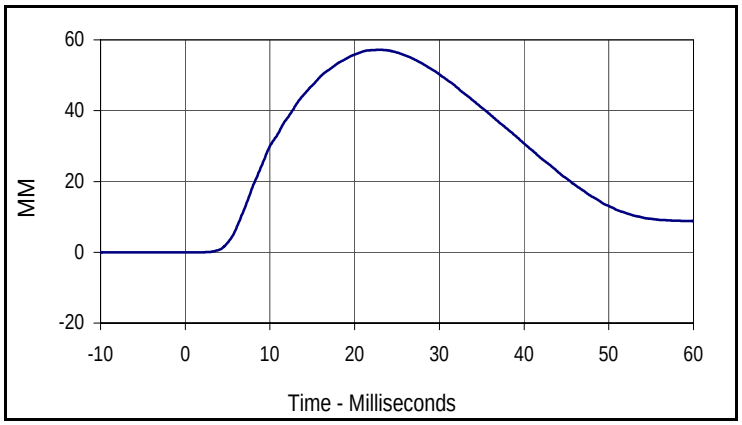
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	6.59 to 6.83	6.74	Pass
Peak Chest Deflection	MM	50.0 to 58.0	57.2	Pass
Peak Force Between 50 and 58 MM	Newtons	3900 to 4400	4146	Pass
Peak Force Between 18 and 50 MM	Newtons	≤4600	4139	Pass
Internal Hysterysis	%	69 to 85	80.5	Pass
		Overall Test Results		Pass



Curve Description			
Probe Force vs. Chest Deflection			
CURNO	Type	SAE Class	Hysterysis
003	FIL	180	80.5
Peak Probe Force		Peak Chest Displ.	
4145.6		57.2	



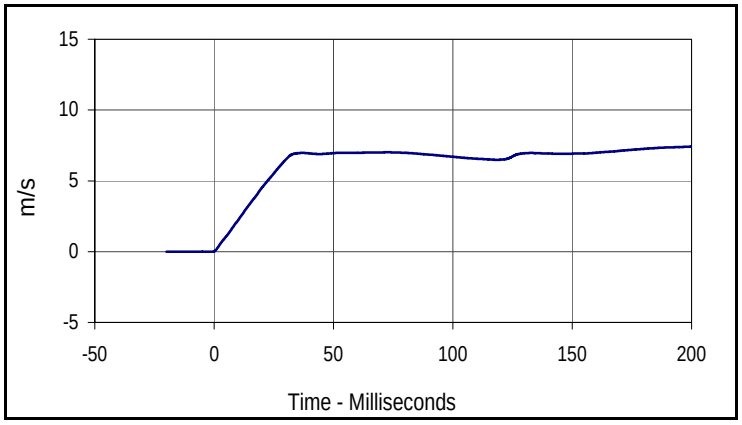
Curve Description			
Probe Force			
CURNO	Type	SAE Class	Units
002	FIL	180	Newtons
Max	Time	Min	Time
4145.6	15.4	-52.9	187.8



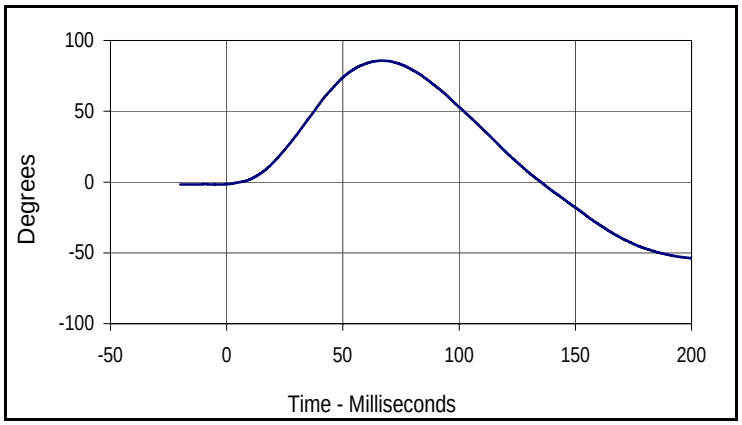
Curve Description			
Chest Deflection			
CURNO	Type	SAE Class	Units
001	FIL	180	MM
Max	Time	Min	Time
57.2	22.9	0.0	-8.5

Test Program:	Hybrid III 5th Percentile Female Neck Flexion Test	Test Date:	1/5/10
ATD Serial No.:	630	Test I.D.:	NF01B

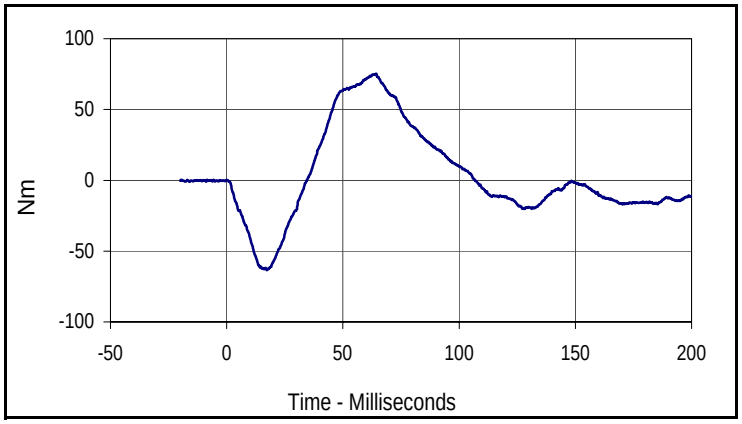
Tested Parameter		Units	Specification	Result	Pass/Fail
Laboratory Temperature		°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity		%	10 to 70	30	Pass
Pendulum Velocity		m/s	6.89 to 7.13	6.94	Pass
Pendulum Deceleration	10 Msec.	m/s	2.1 to 2.5	2.2	Pass
	20 Msec.	m/s	4.0 to 5.0	4.5	Pass
	30 Msec.	m/s	5.8 to 7.0	6.5	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	75.4	Pass
Positive Moment Decay, Time To 10 Nm		Msec.	80.0 to 100.0	98.6	Pass
			Overall Test Results		Pass



Curve Description			
Pendulum Velocity			
CURNO	Type	SAE Class	Units
001	FIL	180	m/s
Max	Time	Min	Time
7.4	200.0	0.0	-0.7



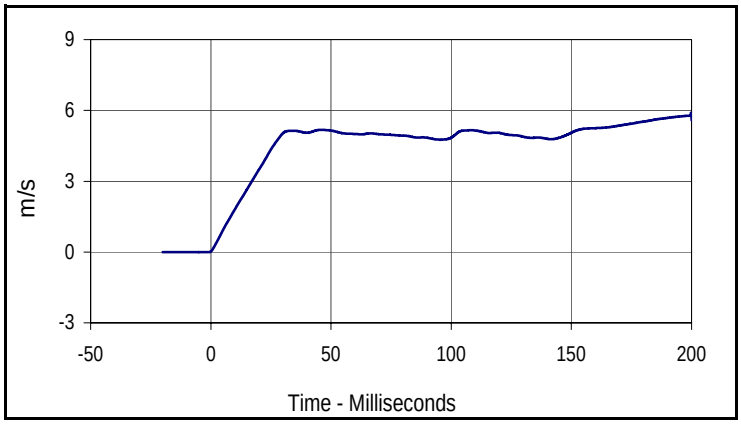
Curve Description			
"D" Plane Rotation			
CURNO	Type	SAE Class	Units
003	FIL	60	Degrees
Max	Time	Min	Time
85.7	66.9	-53.7	200.0



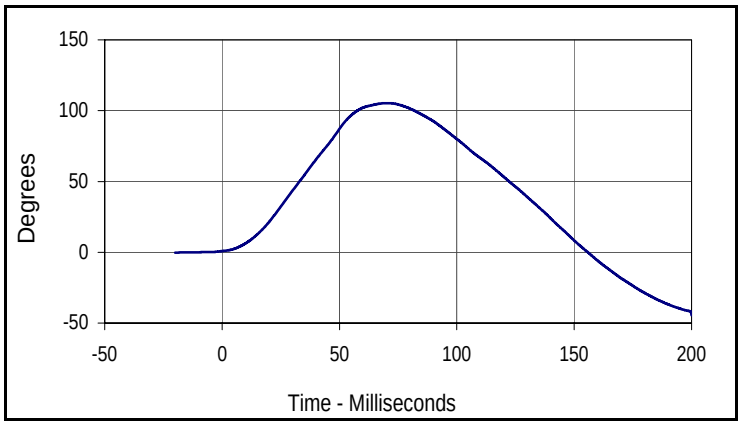
Curve Description			
Moment About Occipital Condyle			
CURNO	Type	SAE Class	Units
002	FIL	600	Nm
Max	Time	Min	Time
75.4	64.2	-63.3	17.3

Test Program:	Hybrid III 5th Percentile Female Neck Extension Test	Test Date:	1/5/10
ATD Serial No.:	630	Test I.D.:	NE01B

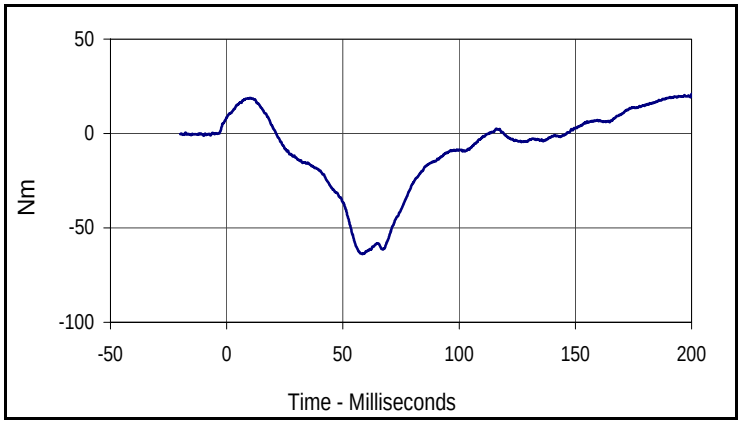
Tested Parameter		Units	Specification	Result	Pass/Fail
Laboratory Temperature		°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity		%	10 to 70	30	Pass
Pendulum Velocity		m/s	5.95 to 6.19	5.96	Pass
Pendulum Deceleration	10 Msec.	m/s	1.5 to 1.9	1.8	Pass
	20 Msec.	m/s	3.1 to 3.9	3.5	Pass
	30 Msec.	m/s	4.6 to 5.6	5.0	Pass
"D" Plane Rotation	Max	Degrees	99.0 to 114.0	105.3	Pass
Peak Moment in Rotation	Max	Nm	-53.0 to -65.0	-63.8	Pass
Positive Moment Decay, Time To -10 Nm		Msec.	94.0 to 114.0	95.2	Pass
			Overall Test Results		Pass



Curve Description			
Pendulum Velocity			
CURNO	Type	SAE Class	Units
001	FIL	180	m/s
Max	Time	Min	Time
5.9	199.9	0.0	-0.9



Curve Description			
"D" Plane Rotation			
CURNO	Type	SAE Class	Units
003	FIL	60	Degrees
Max	Time	Min	Time
105.3	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	200.0	-64.9	58.4

Test Program:	Hybrid III 5th Percentile Female Knee Impact Test	Test Date:	1/5/10
ATD Serial No.:	630	Test I.D.:	LK01C , RK01D

Left Knee

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Pendulum Velocity at T=0	m/sec	2.07 to 2.13	2.11	Pass
Peak Probe Force	Newtons	3450 to 4060	3804	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	3598	Pass
		Overall Test Results		Pass

Curve Description			
Left Knee Probe Force			
CURNO	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Time	Min	Time
3803.8	2.6	-15.6	7.6

Curve Description			
Right Knee Probe Force			
CURNO	Type	SAE Class	Units
002	FIL	600	Newtons
Max	Time	Min	Time
3597.8	2.6	-16.0	8.3

Test Program:	Hybrid III 5th Percentile Female Torso Flexion Test	Test Date:	1/5/10
ATD Serial No.:	630	Test I.D.:	TF01B

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	3.5	Pass
Peak Force at 45 +/-0.5 degrees	Newtons	320.0 to 390.0	354.3	Pass
Torso rotation rate	deg/sec	0.5 to 1.5	1.5	Pass
Final reference plane angle	Degrees	+/-8	2.8	Pass
		Overall Test Results		Pass

Test Program:	Hybrid III 5th Percentile Female External Measurements	Test Date:	1/5/10
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	780	Pass
B - Shoulder pivot height	mm	431.8 to 457.2	445	Pass
C - "H" point height (Reference)	mm	81.3 to 86.3	85	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	83	Pass
F - Thigh clearance	mm	119.4 to 134.6	130	Pass
G - Back of elbow to wrist pivot	mm	243.9 to 259.1	250	Pass
H - Head to back line	mm	40.7 to 45.7	45	Pass
I - Shoulder to elbow length	mm	276.8 to 297.2	291	Pass
J - Elbow rest heignt	mm	182.8 to 203.2	202	Pass
K - Buttock to knee length	mm	520.7 to 546.1	543	Pass
L - Poplipteal height	mm	355.6 to 376.0	357	Pass
M - Knee pivot height	mm	393.7 to 419.1	416	Pass
N - Buttock poplipteal length	mm	414.0 to 439.4	423	Pass
O - Chest depth without jacket	mm	175.3 to 190.5	187	Pass
P - Foot length	mm	218.5 to 233.7	231	Pass
R - Buttock to knee pivot length	mm	457.2 to 482.6	476	Pass
S - Head breadth	mm	137.1 to 147.3	145	Pass
T - Head depth	mm	177.8 to 188.0	185	Pass
U - Hip breadth	mm	299.7 to 314.9	300	Pass
V - Shoulder breadth	mm	350.5 to 365.7	364	Pass
W - Foot breadth	mm	78.8 to 94.0	90	Pass
X - Head circumference	mm	528.3 to 548.7	543	Pass
Y - Chest circumference with jacket	mm	850.8 to 881.3	865	Pass
Z - Waist circumference	mm	759.5 to 789.9	773	Pass
AA - Location for chest circumference	mm	299.7 to 309.9	300	Pass
BB - Location for waist circumference	mm	160.1 to 170.2	164	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	2	8.6
1	Neck	-2.8	-11.8
2	Thoracic Spine	-34.5	94.4
3	Lumbar Spine	-9.7	34.1
4	Pelvis	161.7	5.8
	Neck Pitch Setting	Neutral	
	Spine Pitch Setting	Slouch	