REPORT NUMBER: 201-MGA-2008-003

SAFETY COMPLIANCE TESTING FOR FMVSS 201
RIGID POLE SIDE IMPACT TEST

HONDA MOTOR CO., LTD.
2008 HONDA CR-V 5-DR 2WD LX
NHTSA NUMBER: C85305

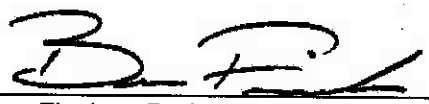
PREPARED BY:
MGA RESEARCH CORPORATION
5000 WARREN ROAD
BURLINGTON, WI 53105

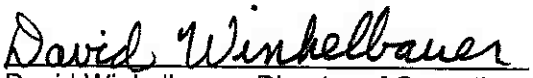
TEST DATE: JULY 9, 2008

FINAL REPORT

PREPARED FOR:
U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
OFFICE OF VEHICLE SAFETY COMPLIANCE
1200 NEW JERSEY AVENUE, SE
WASHINGTON, D.C. 20590

This final test report was prepared for the U.S. Department of Transportation, National Highway Traffic Safety Administration, in response to Contract Number DTNH22-06-C-00030.

Prepared by:  Date: September 19, 2008
Ben Fischer, Project Engineer

Reviewed by:  Date: September 19, 2008
David Winkelbauer, Director of Operations

FINAL REPORT ACCEPTED BY:

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COTR, Side Impact

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Date of Acceptance

Technical Report Documentation Page

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4. Title and Subtitle Final Report of FMVSS 201 Safety Compliance Rigid Pole Side Impact Test of a 2008 Honda CR-V 5-Door 2WD LX NHTSA No.: C85305		5. Report Date September 19, 2008 6. Performing Organization Code MGA
7. Author(s) Ben Fischer, Project Engineer		8. Performing Organization Report No. 201-MGA-2008-003
9. Performing Organization Name and Address MGA Research Corporation 5000 Warren Road Burlington, WI 53105		10. Work Unit No. 11. Contract or Grant No. DTNH22-06-C-00030
12. Sponsoring Agency Name and Address U.S. Department of Transportation National Highway Traffic Safety Administration Office of Vehicle Safety Compliance 1200 New Jersey Avenue, SE, Washington, D.C. 20590		13. Type of Report and Period Covered Final Report – 7/9/08 – 9/19/08 14. Sponsoring Agency Code NVS-200

15. Supplementary Notes

16. Abstract

A rigid pole side impact test was conducted on a 2008 Honda CR-V 5-Door 2WD LX in accordance with FMVSS 201, "Occupant Protection in Interior Impact", S6.2(b)(3) and the Office of Vehicle Safety Compliance Test Procedure No. TP-201P-02 "Rigid Pole Side Impact Test". The test was conducted at MGA Research Corporation in Burlington, Wisconsin on July 9, 2008.

The impact velocity of the vehicle was 28.2 kph, and the ambient temperature at the struck side (driver's) of the target vehicle at the time of impact was 21°C. The post-test maximum crush was 341 mm at level 2. The test vehicle's occupant performance is as follows:

	REQUIREMENT	DRIVER
HIC	≤ 1000	599

The doors on the struck side of the vehicle did not separate from the body at the hinges or latches and the opposite doors did not open during the side impact event.

17. Key Words Compliance Testing Rigid Pole Side Impact Test FMVSS 201	18. Distribution Statement Copies of this report are available from: National Highway Traffic Safety Adm. Technical Ref. Division, (NPO-230) 1200 New Jersey Avenue, SE Washington, D.C. 20590	
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SECTION 1
PURPOSE AND TEST PROCEDURE

1.1 PURPOSE

This rigid pole side impact test is conducted as part of the FY' 2008 test program sponsored by the National Highway Traffic Safety Administration (NHTSA), under contract No. DTNH22-06-C-00030. The purpose of this test was to evaluate occupant protection in interior impact in a 2008 Honda CR-V 5-Door 2WD manufactured by Honda Motor Company.

1.2 TEST PROCEDURE

The rigid pole side impact test was conducted in accordance with the current National Highway Traffic Safety Administration (NHTSA), Office of Vehicle Safety Compliance (OVSC), laboratory test procedure TP-201P-02, dated October 21, 2001 and the corresponding MGA Research Corporation Test Procedure MGA-NHTSA8. The procedures for receiving, inspection, testing, and reporting of test results are described in the test procedures and are not repeated in this report.

MGA does not endorse or certify products. The manufacturer's name appears solely for identification purposes.

SECTION 2
SUMMARY OF RIGID POLE SIDE IMPACT TEST

2.1 SUMMARY OF RIGID POLE SIDE IMPACT TEST

A rigid pole side impact test was performed on a 2008 Honda CR-V 5-Door 2WD. The subject vehicle was towed into a rigid pole at a velocity of 28.2 km/h. The specified impact velocity range is from 27.2 to 28.8 km/h. The test vehicle was positioned 90° to the line of forward motion. The weight of the vehicle as tested was 1652.2 kg. The test was conducted at MGA Research Corporation in Burlington, Wisconsin, on July 9, 2008.

One (1) real-time motion picture camera and eleven (11) high-speed motion picture cameras were used to document the impact event. Camera locations and pertinent camera information are documented in the data sheets. Pre- and post-test photographs of the vehicle and SID/HIII can be found in Appendix A. One SID/HIII was placed in the left front outboard designated seating position according to instructions specified in the TP-201P-02 dated October 21, 2001. The SID/HIII was instrumented in the following locations:

- Head Center of Gravity (CG) tri-axial accelerometers (X, Y, and Z axis)
- Upper Neck 6 channel load cell (X, Y, Z force and moment)
- Left Upper Rib (LUR) uni-axial accelerometer (Y-axis primary and redundant)
- Left Lower Rib (LLR) uni-axial accelerometer (Y-axis primary and redundant)
- Lower Thoracic Spine (T12) uni-axial accelerometer (Y-axis primary and redundant)
- Pelvic (PEV) section uni-axial accelerometer (Y-axis primary and redundant)

The test vehicle was instrumented with eighteen (18) structural accelerometers. All data channels were recorded with a fully self contained on-board DTS TDAS Pro. The data was digitally sampled at 10,000 samples per second and processed per Section 12.2 of the OVSC Test Procedure.

2.2 GENERAL COMMENTS

The test vehicle sustained a maximum static crush of 341 mm at level 2, at the vertical impact line. The driver SID/HIII, Serial No. 037, was calibrated just prior to this test. The SID/HIII's injury criteria are summarized as follows:

Measurements	Units	Driver
HIC		599
TTI*	G's	58.2
Pelvis*	G's	64.7
Neck Force X*	N	-533
Neck Force Y*	N	-567
Neck Force Z*	N	1016
Neck Moment X*	Nm	-66.3
Neck Moment Y*	Nm	-24.0
Neck Moment Z*	Nm	26.0

* For Information Purposes Only

Test summaries and post-test observations are presented in Section 3. The vehicle, camera, and occupant measurements are presented in Section 4. Appendix A contains the still photograph prints. Appendix B contains the SID/HIII and vehicle data traces. Appendix C contains the SID/HIII's configuration and performance verification data. Appendix D contains the calibration information data.

TEST NOTES

The following channels were not used in this test:

Driver Door Lower
Driver Door Mid
Driver Door Upper

SECTION 3
SIDE IMPACT DUMMY (SID/HIII) AND VEHICLE TEST DATA

Test Vehicle: 2008 Honda CR-V 5-Door 2WD LX NHTSA No. C85305
Test Program: FMVSS 201P Test Date: July 9, 2008

CONVERSION FACTORS USED IN THIS REPORT*

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

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

DATA SHEET NO. 1

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2008 Honda CR-V 5-Door 2WD LX NHTSA No. C85305
Test Program: FMVSS 201P Test Date: July 9, 2008

TEST VEHICLE INFORMATION

Make	Honda
Model	CRV
Body Style	SUV
NHTSA No.	C85305
VIN	JHLRE38338C036982
Color	Royal Blue Pearl
Delivery Date	4/30/2008
Odometer Reading (mile)	39
Dealer	Wilde Honda
Transmission	Automatic
Final Drive	Front
Number of Cylinders	4
Engine Displacement (L)	2.4
Engine Placement	Lateral

TEST VEHICLE OPTIONS

Front Airbag	Yes
Side Airbags	Yes
Power Windows	Yes
Power Steering	Yes
Power Door Locks	Yes
Tilt Wheel	Yes
Air Conditioning	Yes
Power Brakes	Yes
Disc Brakes, Front	Yes
Disc Brakes, Rear	Yes
Anti-lock Brakes	Yes
AM/FM/CD	Yes
Anti-theft System	Yes
Cruise Control	Yes

DATA FROM CERTIFICATION LABEL

Manufactured By	Honda Motor Co., Ltd
Date of Manufacture	03/08

GVWR (kg)	2070
GAWR Front (kg)	1050
GAWR Rear (kg)	1040

DATA FROM TIRE PLACARD

Measured Parameter	Front	Rear
Maximum Tire Pressure (kPa)	300	300
Cold Pressure (kPa)	210	210
Recommended Tire Size	P225/65R17	P225/65R17
Tire Size on Vehicle	P225/65R17	P225/65R17
Tire Manufacturer	Bridgestone	Bridgestone

Measured Parameter	Front	Rear	Third	Total
Type of Seats	Bucket	Bench		
Number Of Occupants	2	3		5
Capacity Wt. (VCW) (kg)				385
Cargo Wt. (RCLW) (kg)				45

DATA SHEET NO. 1... (continued)

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2008 Honda CR-V 5-Door 2WD LX NHTSA No. C85305
Test Program: FMVSS 201P Test Date: July 9, 2008

TEST VEHICLE WEIGHTS

	Units	As Delivered (UVW) (Axle)			As Tested (ATW) (Axle)		
		Front	Rear	Total	Front	Rear	Total
Left	kg	444.5	327.0		474.9	370.1	
Right	kg	444.5	318.0		458.6	350.6	
Ratio	%	58.0	42.0		56.5	43.5	
Totals	kg	889.0	645.0	1534.0	933.5	720.7	1652.2

TARGET TEST WEIGHT CALCULATION

Measured Parameter	Units	Value
Total Delivered Weight (UVW)	kg	1534.0
Weight of SID/HIII Side Impact Dummy	kg	80.7
Rated Cargo/Luggage Weight (RCLW)	kg	45
Calculated Vehicle Target Weight (TVTW)	kg	1659.7

TEST VEHICLE ATTITUDES

	Units	As Delivered	Fully Loaded	Ready For Test
Right Front	mm	798	794	886
Left Front	mm	797	789	888
Right Rear	mm	791	775	879
Left Rear	mm	787	766	878
Right Door Sill Angle	deg	0.1 ND	0.3 NU	0.1 NU
Left Door Sill Angle	deg	0.1 ND	0.1 NU	0.0
Front Bumper Angle	deg	0.0	0.1 LD	0.0
Rear Bumper Angle	deg	0.1 LD	0.3 LD	0.1 LD

ND = NOSE DOWN, NU = NOSE UP, BD = BACK DOWN, LD = LEFT DOWN, RD = RIGHT DOWN, RU = RIGHT UP

GENERAL TEST VEHICLE DATA

Measurement Description	Units	Value
Test Vehicle Wheel Base	mm	2625
Total Vehicle Length at Left Side	mm	3730
Total Vehicle Length at Centerline	mm	4364
Total Vehicle Length at Right Side	mm	3730
Total Vehicle Width at B-Post	mm	1880
Weight of Ballast in Cargo Area	kg	0
Amount of Stoddard Solvent in Fuel Tank	liters	53.6

DATA SHEET NO. 1... (Continued)

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2008 Honda CR-V 5-Door 2WD LX NHTSA No. C85305
Test Program: FMVSS 201P Test Date: July 9, 2008

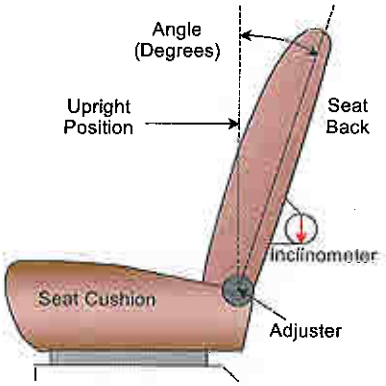
TEST VEHICLE VERTICAL IMPACT LINE DATA

Measurement Description	Units	Value
Target Impact Point Aft of Front Axle	mm	1392
Actual Impact Point Aft of Front Axle	mm	1391

NORMAL DESIGN RIDING POSITION

The driver's seat back is positioned to the manufacturer's designated angle. The procedure for the seat is as follows: Measure seatback angle at the lowest point of the head restraint post. Set at 11 degrees.

Initial driver seat back angle: 13.4 degrees on head rest post
Final driver seat back angle: 11.6 degrees on head rest post



FRONT SEAT ASSEMBLY

SEAT FORE/AFT POSITIONS

Initial Seat position: 11th notch (forward-most as 0)
Final Seat position: 11th notch (forward-most as 0)

SEAT BELT UPPER ANCHORAGE

The test vehicle is equipped with adjustable "D" ring anchorage for the driver's seat position. The driver's "D" ring anchorage was placed in the uppermost position.

DATA SHEET NO. 1... (continued)

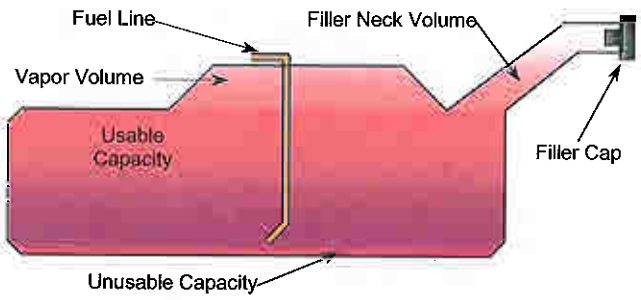
GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2008 Honda CR-V 5-Door 2WD LX NHTSA No. C85305
Test Program: FMVSS 201P Test Date: July 9, 2008

FUEL TANK CAPACITY DATA

The "Usable Capacity" of the standard equipment fuel tank is: 57.9 liters
The "Usable Capacity" of any optional equipment fuel tank is: N/A liters
92-94% of "Usable Capacity" for certification to FMVSS 301 requirements: 53.3 – 54.4 liters
Actual amount of Stoddard solvent added to vehicle for certification test 53.6 liters

The vehicle is equipped with electric fuel pump. After the ignition key is turned from the LOCK (0) to ON (II) position, the fuel pump will fill up for two seconds and then the pressure is maintained.

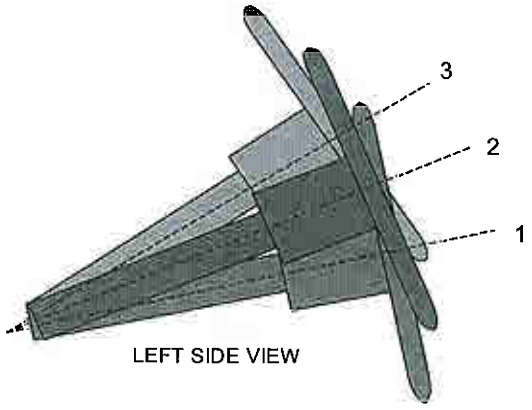


VEHICLE FUEL TANK ASSEMBLY

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 it is moved through its full range of motion.

The steering column was placed in the mid position at 61.9 degrees with the telescopic range set at mid position also.



STEERING COLUMN ASSEMBLY

DATA SHEET NO. 2

TEST VEHICLE SUMMARY OF RESULTS

Test Vehicle: 2008 Honda CR-V 5-Door 2WD LX NHTSA No. C85305
Test Program: FMVSS 201P Test Date: July 9, 2008

TEST VEHICLE WEIGHTS

	Units	As Delivered (UVW)			As Tested (ATW)		
		Front Axle	Rear Axle	Total	Front Axle	Rear Axle	Total
Left	kg	444.5	327.0		474.9	370.1	
Right	kg	444.5	318.0		458.6	350.6	
Weight Ratio	%	58.0	42.0		56.5	43.5	
Totals	kg	889.0	645.0	1534.0	933.5	720.7	1652.2

MAXIMUM EXTERIOR STATIC CRUSH

Level	Measured Parameter	Units	Maximum Crush	Above Ground
Level 1	Sill Top Height	mm	319	485
Level 2	Occupant H-Point	mm	341	692
Level 3	Mid Door	mm	339	740
Level 4	Window Sill	mm	311	1100
Level 5	Window Top	mm	134	1586
N/A	Maximum Penetration	mm	341	692

INSTRUMENTATION

SID/HIII Instrumentation	17
Vehicle Structure Accelerometers	18
Total	35

HIGH SPEED CAMERAS

Onboard Vehicle	3
Offboard Vehicle	8
Total	11

IMPACT POINT DATA

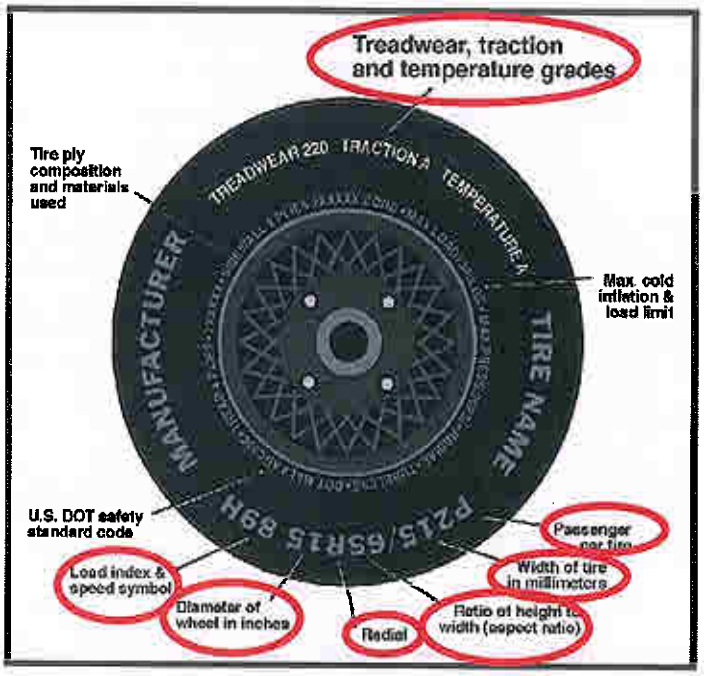
Measured Parameter	Units	Requirement	Value
Horizontal Offset	mm	+/- 38	1 forward

DATA SHEET NO. 3

TEST VEHICLE TIRE INFORMATION

Test Vehicle: 2008 Honda CR-V 5-Door 2WD LX
Test Program: FMVSS 201P
NHTSA No. C85305
Test Date: July 9, 2008

Vehicle Year	2008	Vehicle Make	Honda
VIN	JHLRE38338C036982	Vehicle Model	CR-V



	Front	Rear
Tire Manufacturer	Bridgestone	Bridgestone
Tire Name	Dueler H/T	Dueler H/T
Tire Type	P	P
Tire Width (mm)	225	225
Ratio of Height to Width (aspect ratio)	65	65
Radial	R	R
Wheel Diameter	17	17
Load Index & Speed Symbol	102T	102T
Treadwear	360	360
Traction Grade	B	B
Temperature Grade	B	B

DATA SHEET NO. 4

POST TEST OBSERVATIONS

Test Vehicle: 2008 Honda CR-V 5-Door 2WD LX NHTSA No. C85305
Test Program: FMVSS 201P Test Date: July 9, 2008

TEST DUMMY INFORMATION AND CONTACT POINTS

Description	Left Front Seating Position
Dummy Type / Serial No.	SID/HIII / 037
Head Contact	Curtain Airbag, Headrest
Upper Torso Contact	Side Airbag
Lower Torso Contact	Door Panel
Left Knee Contact	Door Panel
Right Knee Contact	Left Knee

POST TEST DOOR OPENING AND SEAT TRACK INFORMATION

Description	Front	Rear
Left Side Door Opening	Door remained closed and latched	Door remained closed and latched
Right Side Door Opening	Door remained closed and latched	Door remained closed and latched
Seat Movement	0	0
Seat Back Failure	None	None

POST TEST STRUCTURAL OBSERVATIONS

Critical Areas of Performance	Observations and Conclusions
Pillar Performance	No failures
Sill Separation	None
Windshield Damage	Cracked
Window Damage	Left side windows down for test
Other Notable Effects	None

AIRBAG DEPLOYMENT

	Driver
Front	No
Side	Yes
Curtain	Yes

ARMREST LOCATION AND SEAT CRUSH

	Driver
Front Armrest (from bottom of window)	214
Front Seat Back Crush	40
Front Seat Cushion Crush	11

SECTION 4
OCCUPANT AND VEHICLE INFORMATION

DATA SHEET NO. 5

SID/HIII INJURY CRITERIA AND SENSOR DATA

Test Vehicle: 2008 Honda CR-V 5-Door 2WD LX NHTSA No. C85305
Test Program: FMVSS 201P Test Date: July 9, 2008

THORAX AND PELVIS PEAK ACCELERATIONS (FIR 100 Filtered)

Location	Axis	Units	Driver			
			Max	Time	Min	Time
Upper Rib (LUR)	Y	G's	58.7	47	-13.2	126
Upper Rib (LUR) (R)	Y	G's	58.4	47	-13.0	126
Lower Rib (LLR)	Y	G's	62.0	47	-11.3	126
Lower Rib (LLR) (R)	Y	G's	62.5	47	-11.1	126
Lower Spine (T_{12})	Y	G's	54.4	44	-6.6	120
Lower Spine (T_{12}) (R)	Y	G's	53.8	44	-6.9	120
Pelvis (PEV)	Y	G's	64.3	42	-5.3	79
Pelvis (PEV) (R)	Y	G's	65.2	43	-5.4	79

THORACIC TRAUMA INDEX (TTI) AND PELVIC ACCELERATION (FIR 100 Filtered)

Location	Driver			
	LLR	T_{12}	TTI(g)	PEV(g)
Rib, Spine, and Pelvis	62.0	54.4	58.2	64.3
Rib, Spine, and Pelvis (R)	62.5	53.8	58.2	65.2

UPPER NECK FORCES AND MOMENTS (SAE CLASS 1000/600 Filtered)

Location	Axis	Units	Driver			
			Max	Time	Min	Time
Neck Force	X	N	105	180	-533	66
Neck Force	Y	N	479	55	-567	156
Neck Force	Z	N	1016	77	-9	8
Neck Moment	X	Nm	6.3	300	-66.3	52
Neck Moment	Y	Nm	11.4	295	-24.0	64
Neck Moment	Z	Nm	26.0	63	-14.8	136

HEAD CG PEAK ACCELERATIONS (SAE CLASS 1000 Filtered)

Location	Axis	Units	Driver			
			Max	Time	Min	Time
Head CG	X	G's	8.9	208	-18.1	65
Head CG	Y	G's	66.4	58	-13.9	157
Head CG	Z	G's	18.8	77	-0.9	62
Head CG Resultant		G's	68.4	61		

HEAD INJURY CRITERIA (SAE CLASS 1000 Filtered)

Location	Driver		
	HIC	T1	T2
Head CG Resultant	599	47.7	72.9

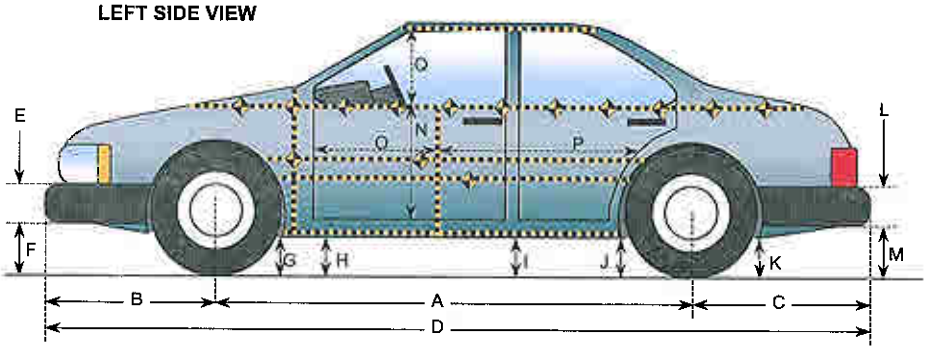
Positive Acceleration Polarities: (Conforms to SAE J211)
Longitudinal (X) = + Forward
Lateral (Y) = + Right
Vertical (Z) = + Down

DATA SHEET NO. 6

VEHICLE PRE-TEST AND POST-TEST MEASUREMENTS

Test Vehicle: 2008 Honda CR-V 5-Door 2WD LX NHTSA No. C85305
Test Program: FMVSS 201P Test Date: July 9, 2008

LEFT SIDE VIEW



All Measurements in mm

Code	Measurement Description	Pre-Test	Post-Test	Difference
A	Wheelbase	2625	2547	78
B	Front Axle to FSOV	765	763	2
C	Rear Axle to RSOV	974	975	-1
D	Total Length at Centerline	4364	4285	79
E	Front Bumper Thickness	*	*	*
F	Front Bumper Bottom to Ground	370	399	-29
G	Sill Height at Front Wheel Well	307	345	-38
H	Sill Height at Front Door Leading Edge	297	319	-22
I	Sill Height at "B" Pillar	328	311	17
J1	Sill Height at Rear Wheel Well	317	337	-20
J2	Pinch Weld Height at Rear Wheel Well	295	358	-63
K	Sill Height Aft of Rear Wheel Well	357	361	-4
L	Rear Bumper Thickness	105	105	0
M	Rear Bumper Bottom to Ground	505	504	1
N	Sill Height to Window Bottom Sill	930	919	11
O	Front Door Leading Edge to Impact CL	941	871	70
P	Rear Door Trailing Edge to Impact CL	1130	1086	44
Q	Front Window Opening	435	405	30
R	Right Side Length	3730	3738	-8
S	Left Side Length	3730	3640	90
T	Vehicle Width at "B" Post	1880	1609	271

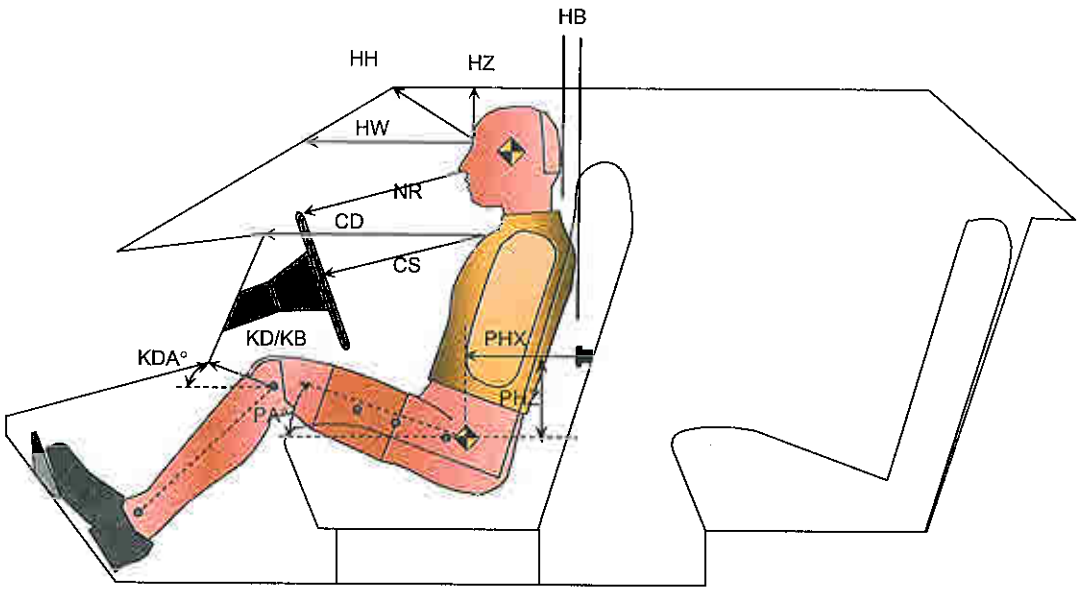
* Bumper was removed

DATA SHEET NO. 7

SID/HIII LONGITUDINAL CLEARANCE DIMENSIONS

Test Vehicle: 2008 Honda CR-V 5-Door 2WD LX
Test Program: FMVSS 201P

NHTSA No. C85305
Test Date: July 9, 2008

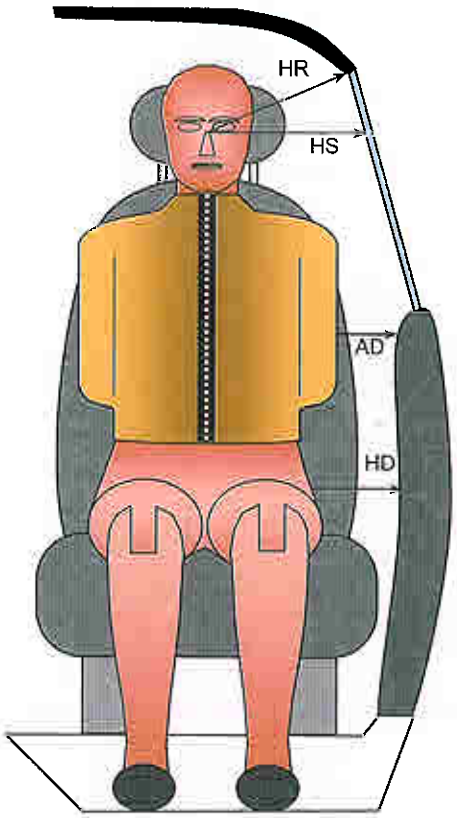


Driver Code	Measurement Description	Driver	
		Length (mm)	Angle (°)
HH	Head to Header	374	
HW	Head to Windshield	640	
HZ	Head to Roof	199	
NR	Nose to Rim	444	
CD	Chest to Dash	549	
CS	Chest to Steering Wheel	340	
KDL	Left Knee to Dash	142	30.1
KDR	Right Knee to Dash	105	33.1
PA	Pelvic Angle		23.8
PHX	H-Point to Striker (X-Axis)	240	
PHZ	H-Point to Striker (Z-Axis)	96	
HB	Head to Seatback Clearance	53	

DATA SHEET NO. 8

SID/HIII LATERAL CLEARANCE DIMENSIONS

Test Vehicle: 2008 Honda CR-V 5-Door 2WD LX NHTSA No. C85305
Test Program: FMVSS 201P Test Date: July 9, 2008



FRONT VIEW OF DUMMY

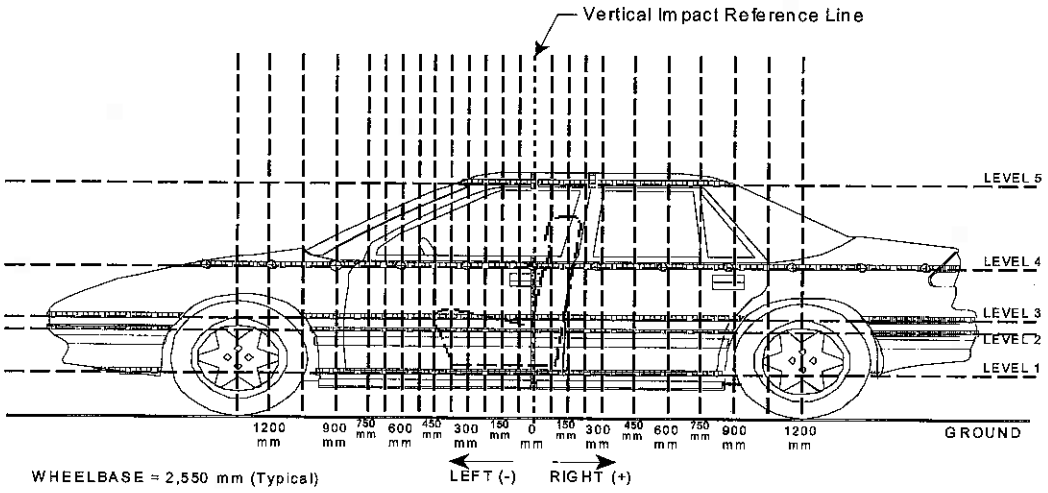
Code	Measurement Description	Units	Driver
HR	Head to Side Header	mm	205
HS	Head to Side Window	mm	325
AD	Arm to Door	mm	135
HD	H-Point to Door	mm	161

DATA SHEET NO. 9

VEHICLE SIDE MEASUREMENTS

Test Vehicle: 2008 Honda CR-V 5-Door 2WD LX NHTSA No. C85305
Test Program: FMVSS 201P Test Date: July 9, 2008

PRETEST AND POST TEST EXTERIOR PROFILE MEASUREMENTS



LEFT SIDE VIEW

Measurements are taken with vehicle in the as tested condition.
Measurements along the vertical 0 mm.

Level	Measurement Description	Units	Height Above Ground
5	Window	mm	1586
4	Window Sill	mm	1100
3	Mid Door	mm	740
2	Occupant H-Point	mm	692
1	Sill Top	mm	485

DATA SHEET NO. 10

VEHICLE EXTERIOR CRUSH PROFILES

Test Vehicle: 2008 Honda CR-V 5-Door 2WD LX NHTSA No. C85305
Test Program: FMVSS 201P Test Date: July 9, 2008

	Pre-Test					Post-Test					Difference				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
-1650				337					349					12	
-1500				317					333					16	
-1350				301					320					19	
-1200				287					304					17	
-1125				281					296					15	
-1050		188	191	278			197	201	293			9	10	15	
-975	201	195	198	277		196	199	205	290		-5	4	7	13	
-900	212	205	209	273		224	213	219	287		12	8	10	14	
-825	216	213	214	271		240	235	236	294		24	22	22	23	
-750	218	214	215	270		258	253	252	298		40	39	37	28	
-675	218	214	214	268		271	265	266	320		53	51	52	52	
-600	218	212	212	268		283	278	290	342		65	66	78	74	
-525	216	211	211	268		297	310	317	363		81	99	106	95	
-450	216	210	211	266		311	346	350	388		95	136	139	122	
-375	215	210	210	266		339	383	385	419		124	173	175	153	
-300	215	210	210	265		380	420	421	450		165	210	211	185	
-225	214	210	210	265	485	426	457	460	484	575	212	247	250	219	90
-150	124	210	210	265	477	474	497	499	523	585	260	287	289	258	108
-75	214	210	210	265	474	519	534	538	565	596	305	324	328	300	122
0	215	210	210	267	475	534	551	549	578	609	319	341	339	311	134
75	214	210	210	267	473	502	527	531	543	605	288	317	321	276	132
150	215	211	210	268	474	443	473	466	496	605	228	262	256	228	131
225	216	212	212	269	474	370	384	384	455	598	154	172	172	186	124
300	216	215	213	270	475	347	364	365	437	588	131	149	152	167	113
375	216	214	213	271	476	327	345	350	425	576	111	131	137	154	100
450	218	215	214	272	477	306	327	331	410	566	88	112	117	138	89
600	219	216	216	275	479	262	288	297	381	547	43	72	81	106	68
750	215	209	213	279	484	217	245	259	355	537	2	36	46	76	53
900		193	196	282	489		193	204	332	523		0	8	50	34
1050			190	288	496			204	309	520			14	21	24
1200				293	506				309	524				16	18
1350				299	518				313	531				14	13
1500				306	533				316	538				10	5
1650				317					318					1	

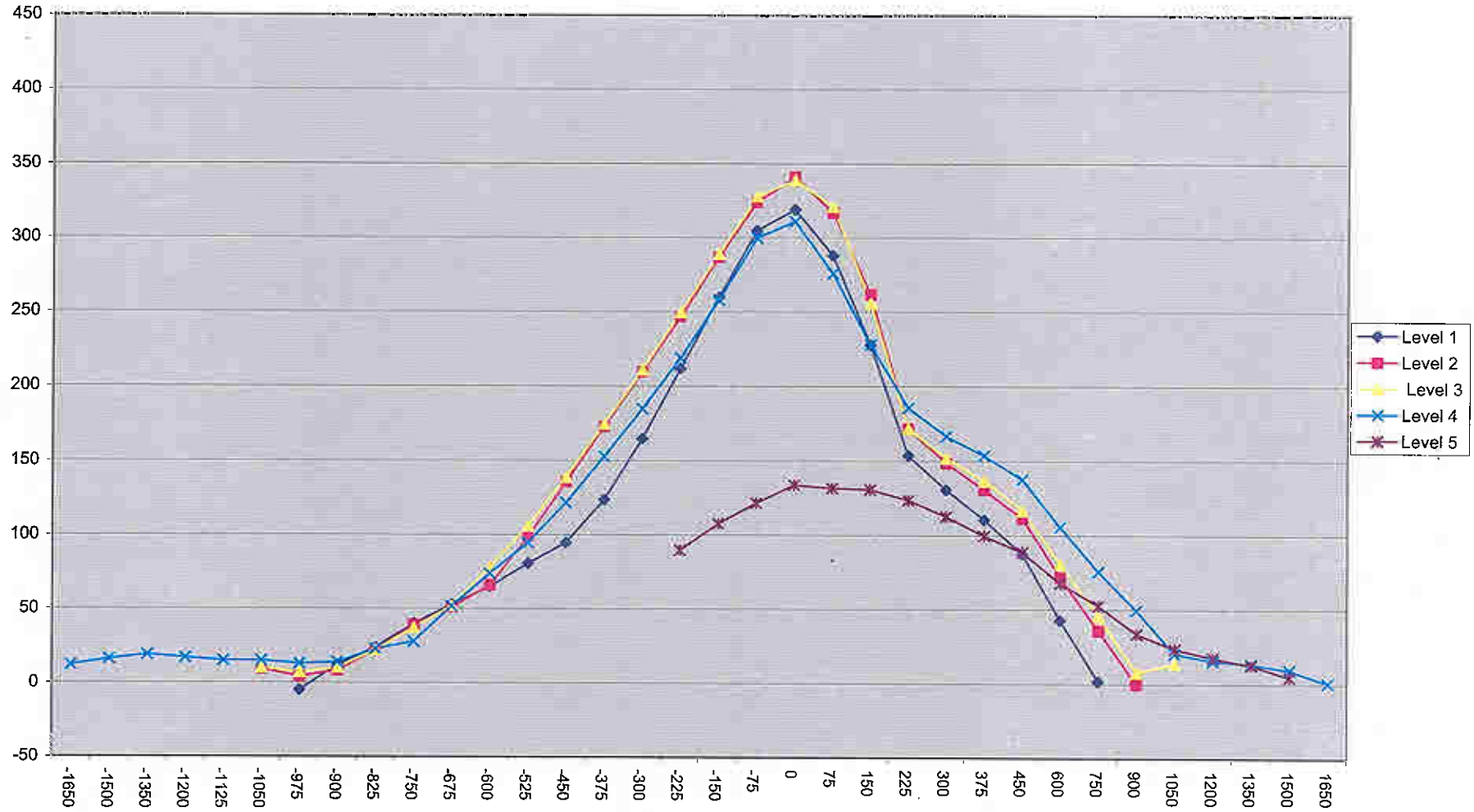
Reference plane is parallel to test vehicle longitudinal centerline Units = mm

Given dimensions = Reference plane to car body

DATA SHEET NO. 10... (continued)

VEHICLE EXTERIOR CRUSH PROFILES

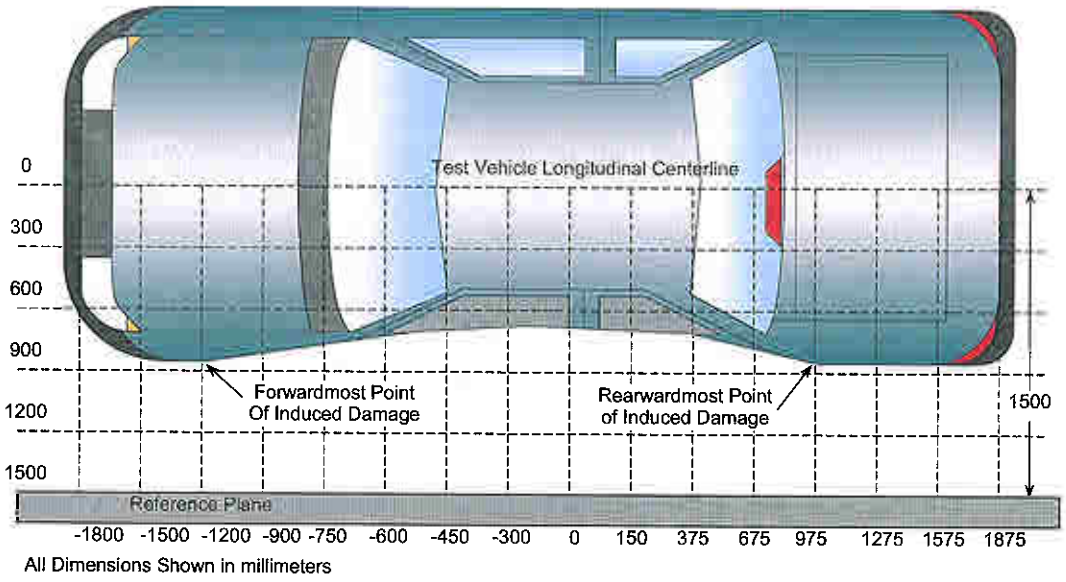
Test Vehicle: 2008 Honda CR-V 5-Door 2WD LX NHTSA No. C85305
Test Program: FMVSS 201P Test Date: July 9, 2008



DATA SHEET NO. 11

VEHICLE DAMAGE PROFILE DISTANCES

Test Vehicle: 2008 Honda CR-V 5-Door 2WD LX NHTSA No. C85305
Test Program: FMVSS 201P Test Date: July 9, 2008



TOP VIEW

Damage Profile Distances

DPD	Distance from Impact Point in mm	Level	Pre-Test (mm)	Post-Test (mm)	Max Static Crush (mm)
1	1650	4	317	318	1
2	985	4	285	321	36
3	330	3	213	358	145
4	-325	3	210	409	199
5	-990	4	277	290	13
6	-1650	4	337	349	12

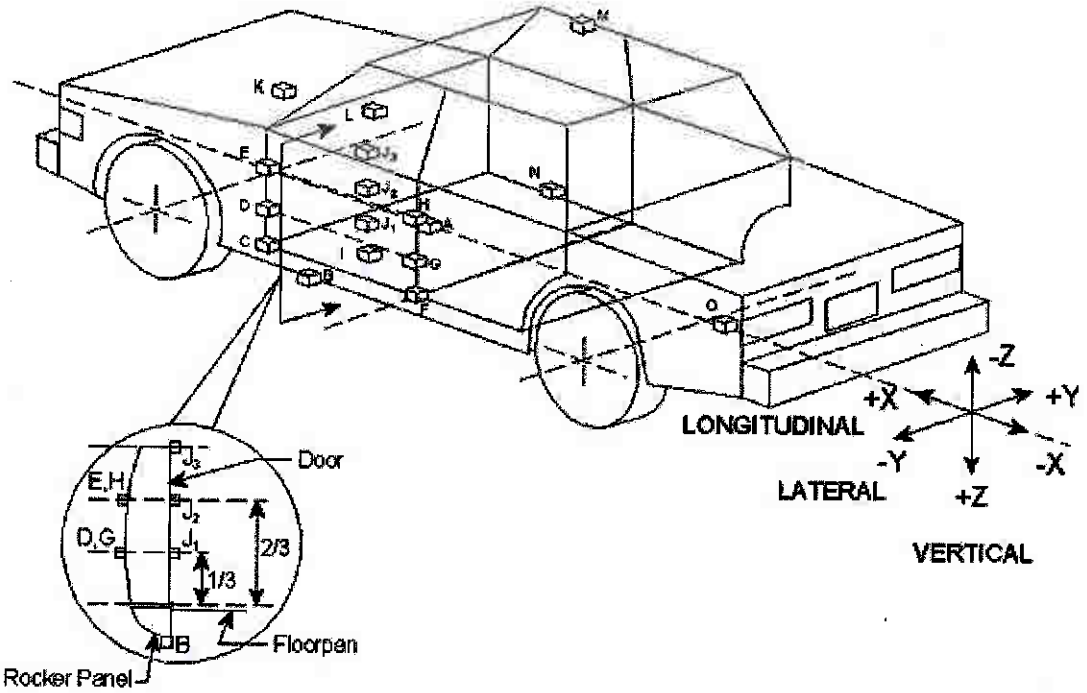
Reference plane is parallel to test vehicle longitudinal centerline

Given dimensions = Reference plane to car body

DATA SHEET NO. 12

VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY

Test Vehicle: 2008 Honda CR-V 5-Door 2WD LX NHTSA No. C85305
Test Program: FMVSS 201P Test Date: July 9, 2008



No.	Location
A	Vehicle CG
B	Left Floor Sill
C	A Pillar Sill
D	A Pillar Low
E	A Pillar Mid
F	B Pillar Sill
G	B Pillar Low
H	B Pillar Mid
I	Driver Seat

No.	Location
J1	Driver Door Lower / Knee
J2	Driver Door Mid / Pelvis
J3	Driver Door Upper / Rib
K	Engine
L	Firewall
M	Right Roof
N	Right Floor Sill
O	Rear Deck

DATA SHEET NO. 12... (continued)

VEHICLE ACCELEROMETER LOCATION AND DATA SUMMARY

Test Vehicle: 2008 Honda CR-V 5-Door 2WD LX NHTSA No. C85305
Test Program: FMVSS 201P Test Date: July 9, 2008

VEHICLE ACCELEROMETER PEAK DATA AND PRE-TEST LOCATIONS

Loc. No.	Accelerometer Location	Peak Values (G's)				
		Axis	Max	Time	Min	Time
A	Vehicle CG	X	5.9	42	-5.3	30
		Y	14.7	46	-8.4	42
		Z	9.6	61	-10.3	71
		RES	15.4	46		
B	Left Floor	Y	58.0	42	-8.5	19
C	A Pillar Sill	Y	25.2	74	-4.7	78
D	A Pillar Low	Y	15.9	22	-3.0	47
E	A Pillar Mid	Y	29.2	24	-2.3	4
F	B Pillar Sill	Y	54.1	15	-30.7	19
G	B Pillar Low	Y	78.0	16	-4.4	53
H	B Pillar Mid	Y	82.1	16	-5.5	28
I	Driver Seat	Y	61.5	27	-11.4	43
J1	Driver Door Lower / Knee	Y				
J2	Driver Door Mid / Pelvis	Y				
J3	Driver Door Upper / Rib	Y				
K	Engine	X	7.1	93	-11.8	40
		Y	13.7	50	-4.2	200
L	Firewall	Y	10.7	81	-2.9	44
M	Right Roof	Y	14.7	42	-1.4	269
N	Right Floor Sill	Y	14.0	27	-6.1	42
O	Rear Deck	X	3.1	18	-1.9	74
		Y	15.8	35	-1.1	181

Positive Acceleration Polarities: Longitudinal (X) = + Forward
(Conforms to SAE J211) Lateral (Y) = + Right
Vertical (Z) = + Down

DATA SHEET NO. 12... (continued)

VEHICLE ACCELEROMETER LOCATION AND DATA SUMMARY

Test Vehicle: 2008 Honda CR-V 5-Door 2WD LX NHTSA No. C85305
Test Program: FMVSS 201P Test Date: July 9, 2008

VEHICLE ACCELEROMETER PEAK DATA AND PRE-TEST LOCATIONS

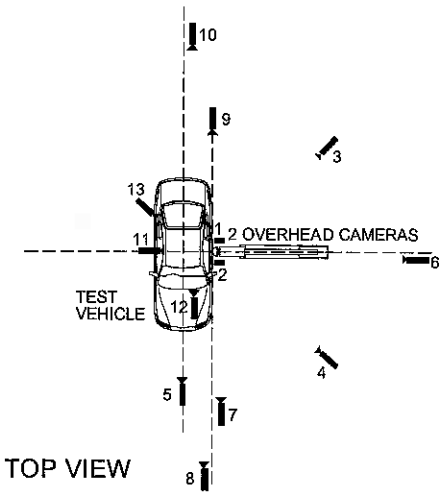
Loc. No.	Accelerometer Location	Measurements (mm)			
		Axis	Pre-Test	Post-Test	Difference
A	Vehicle CG	X	2478	2460	-18
		Y	0	20	20
		Z	335	351	-16
B	Left Floor Sill	X	2607	2532	-75
		Y	-726	-591	135
		Z	310	341	-31
C	A Pillar Sill	X	3128	3041	-87
		Y	-739	-725	14
		Z	314	340	-26
D	A Pillar Low	X	3086	3105	19
		Y	-731	-757	-26
		Z	602	635	-33
E	A Pillar Mid	X	3092	3031	-61
		Y	-792	-766	26
		Z	867	900	-33
F	B Pillar Sill	X	2027	2040	13
		Y	-730	-558	172
		Z	312	352	-40
G	B Pillar Low	X	2034	2038	4
		Y	-772	-612	160
		Z	685	702	-17
H	B Pillar Mid	X	2034	2030	-4
		Y	-783	-620	163
		Z	926	969	-43
I	Driver Seat	X	2151	2148	-3
		Y	-611	-465	146
		Z	449	467	-18
J1	Driver Door Lower / Knee				
J2	Driver Door Mid / Pelvis				
J3	Driver Door Upper / Rib				
K	Engine	X	3786	3780	-6
		Y	0	0	0
		Z	868	905	-37
L	Firewall	X	3598	3600	2
		Y	0	0	0
		Z	968	1010	-42
M	Right Roof	X	2275	2296	21
		Y	615	605	-10
		Z	1621	1625	-4
N	Right Floor	X	2206	2220	14
		Y	733	740	-7
		Z	311	339	-28
O	Rear Deck	X	852	851	-1
		Y	0	0	0
		Z	387	390	-3

Ref. Points: X-Rear of Vehicle (+ forward); Y-Vehicle Centerline (+ to right); Z-Ground Plane (+ down)

DATA SHEET NO. 13

HIGH SPEED CAMERA LOCATIONS AND DATA

Test Vehicle: 2008 Honda CR-V 5-Door 2WD LX NHTSA No. C85305
Test Program: FMVSS 201P Test Date: July 9, 2008



TOP VIEW

No.	Camera View	Location (mm)			Lens (mm)	Film Speed (fps)
		X	Y	Z		
1	Overhead Overall	380	0	5050	14	1000
2	Overhead Close-Up	25	-120	5050	50	1000
3	Left Side 45° Rearward Pole View	-2385	3985	1220	20	1000
4	Right Side 45° Forward Pole View	-2285	-3895	1190	20	1000
5	Real Time				13	24
6*	Left Side Rear Pole View					
7	Front Ground Level Vehicle/Pole Impact	280	-1200	1500	35	1000
8	Front Ground Level Vehicle Roof Targets and Vehicle/Pole Impact	35	-1595	1245	24	1000
9	Rear Ground Level Vehicle/Pole Impact	-75	1715	1310	24	1000
10	Rear Ground Level	260	1220	1590	35	1000
11	Test Vehicle Onboard Driver Side View				8	1000
12	Test Vehicle Onboard Driver Front View				12.5	1000
13	Test Vehicle Onboard Driver ¾ Rear View				8	1000

Reference Points X - + Forward of Impact
Y - + Right of Impact
Z - + Ground Plane Down

* Camera 6 was not used for this test.

DATA SHEET NO. 14

FMVSS 301 FUEL SYSTEM INTEGRITY POST IMPACT DATA

Test Vehicle: 2008 Honda CR-V 5-Door 2WD LX NHTSA No. C85305
Test Program: FMVSS 201P Test Date: July 9, 2008

Test Time: 10:15 AM Temperature at Time of Impact: 21°C

Stoddard Solvent Spillage Measurements

A. From impact until vehicle motion ceases: 0
(Maximum Allowable = 1 ounce)

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

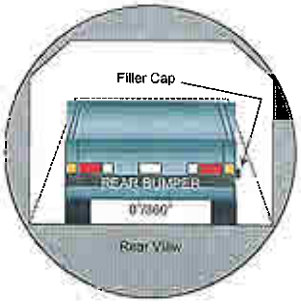
C. For the following 25 minutes: 0
(Maximum allowable = 1 oz./minute)

D. Spillage Details: None

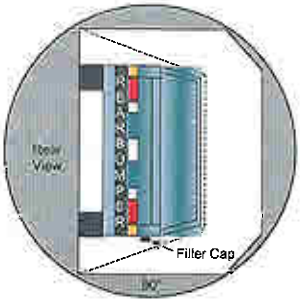
DATA SHEET NO. 15

FMVSS 301 STATIC ROLLOVER DATA SHEET

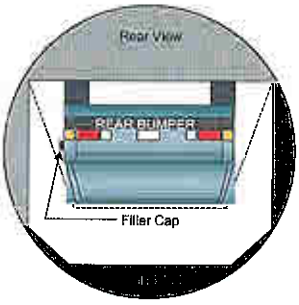
Test Vehicle: 2008 Honda CR-V 5-Door 2WD LX NHTSA No. C85305
Test Program: FMVSS 201P Test Date: July 9, 2008

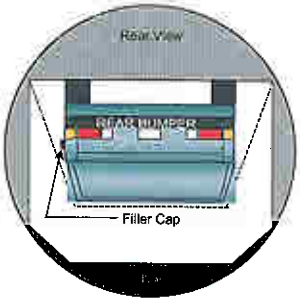


0° to 90°

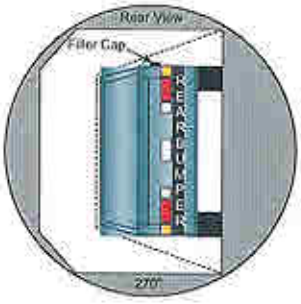


90° to 180°

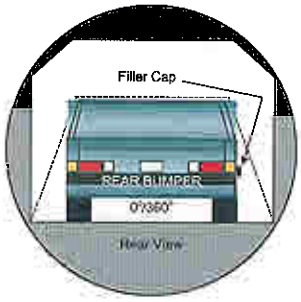




180° to 270°



270° to 360°



1. The specified fixture rollover rate for each 90° of rotation is 60 to 180 seconds.
2. The position hold time at each position is 300 seconds (minimum).
3. Details of Stoddard Solvent Spillage locations: None

Rollover Test Phase	Rotation Time (sec.)	Hold Time (sec.)	Spillage (oz.)
0° to 90°	118	300	0
90° to 180°	117	300	0
180° to 270°	111	300	0
270° to 360°	118	300	0

APPENDIX A

PHOTOGRAPHS

TABLE OF PHOTOGRAPHS

Pre-Test Front View of Test Vehicle

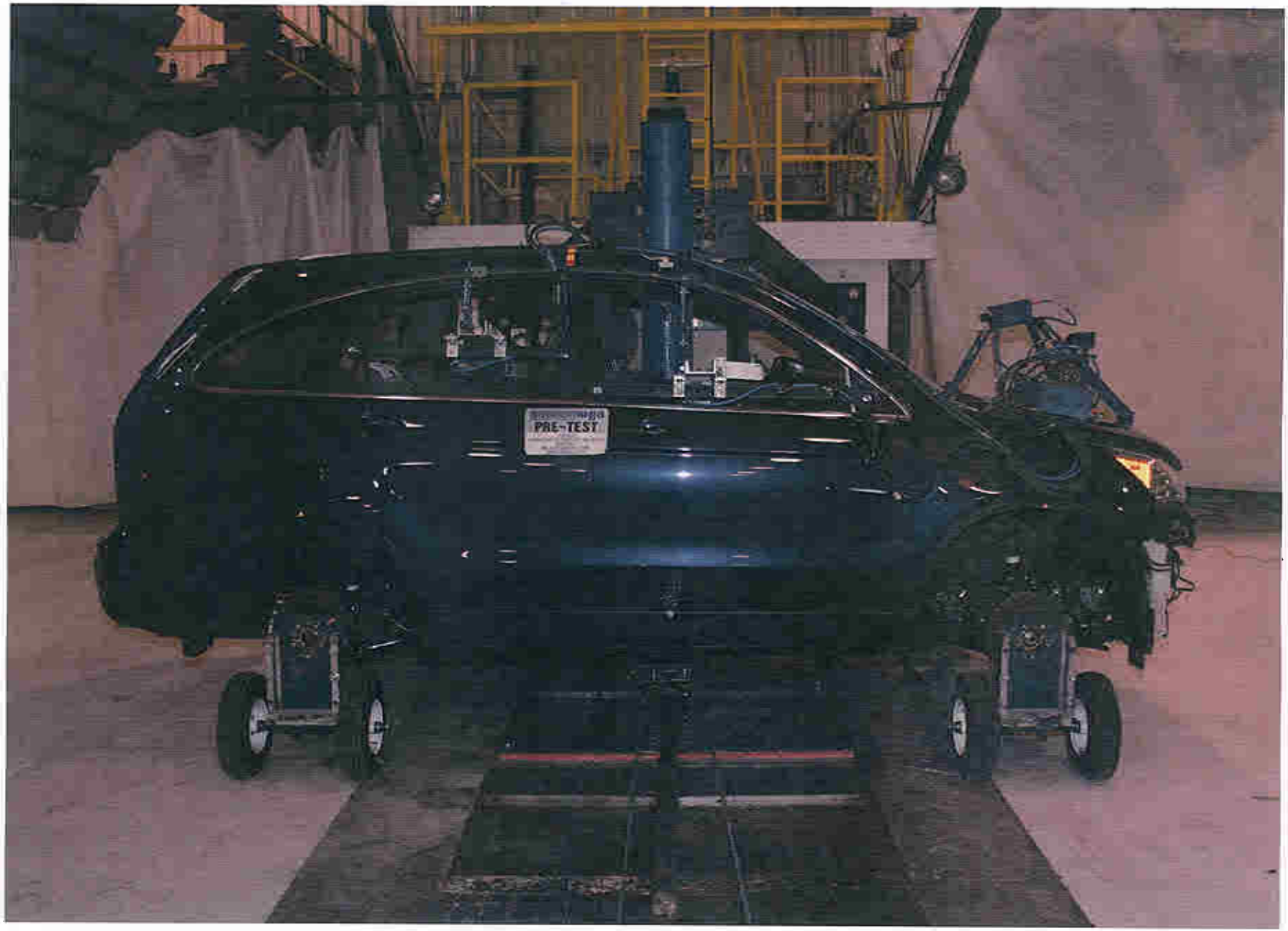
Post-Test Front View of Test Vehicle

Pre-Test Rear View of Test Vehicle

Post-Test Rear View of Test Vehicle

Pre-Test Left Side View of Test Vehicle

Post-Test Left Side View of Test Vehicle



Pre-Test Right Side View of Test Vehicle

Post-Test Right Side View of Test Vehicle

Pre-Test Left Rear Three-Quarter View

Post-Test Left Rear Three-Quarter View

Pre-Test Left Front Three-Quarter View

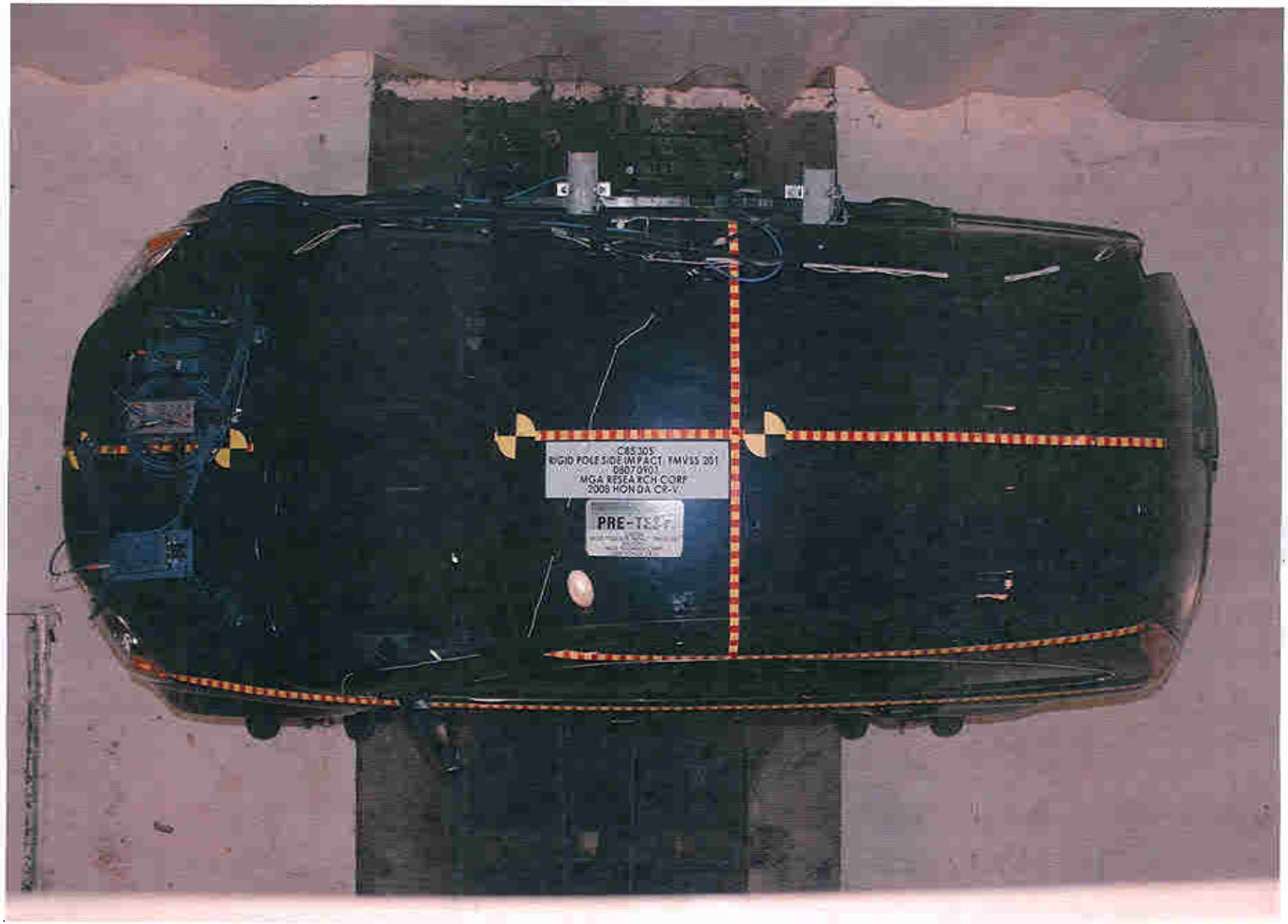
Post-Test Left Front Three-Quarter View

Pre-Test Right Rear Three-Quarter View

Post-Test Right Rear Three-Quarter View

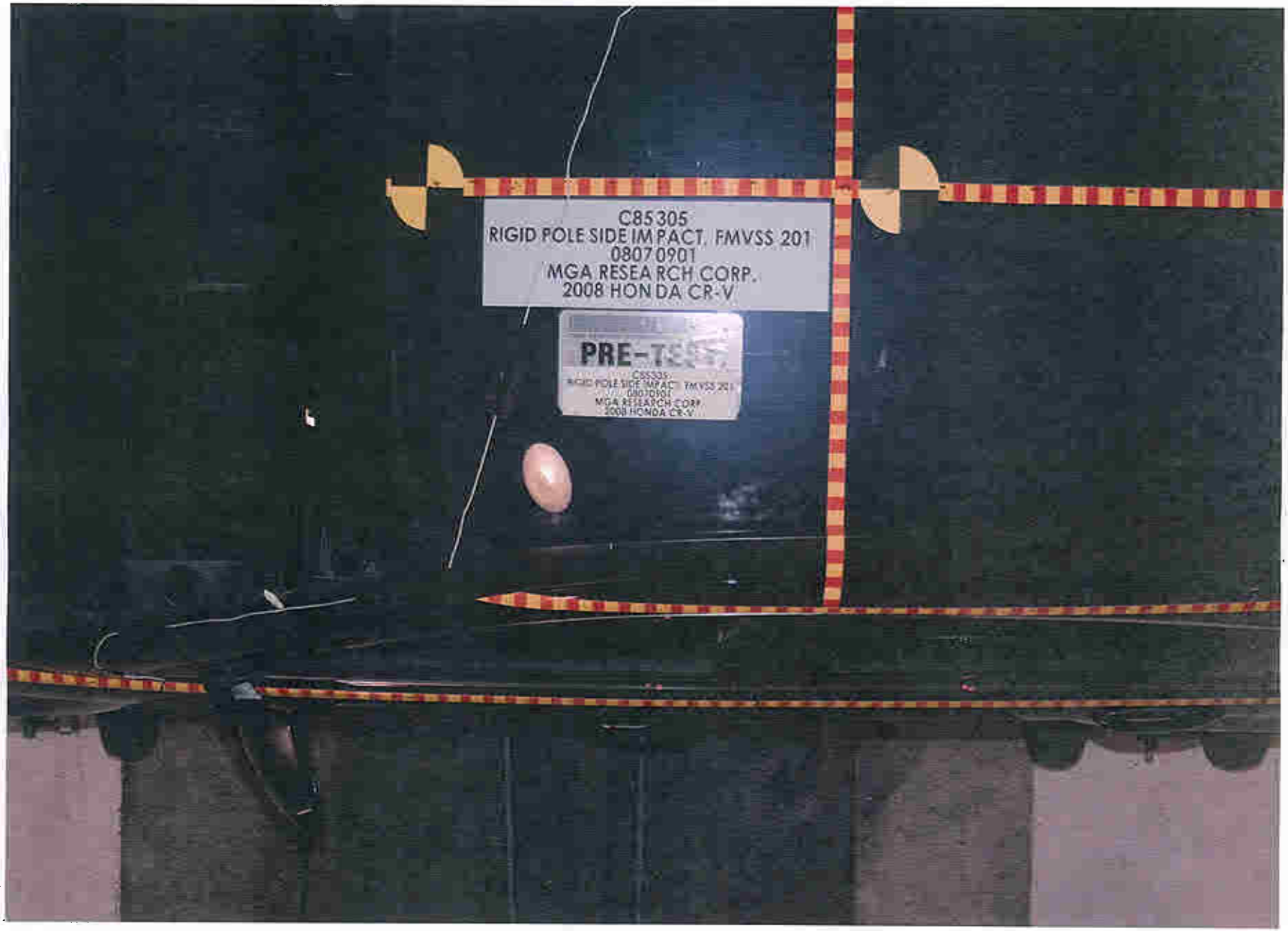
Pre-Test Right Front Three-Quarter View

Post-Test Right Front Three-Quarter View

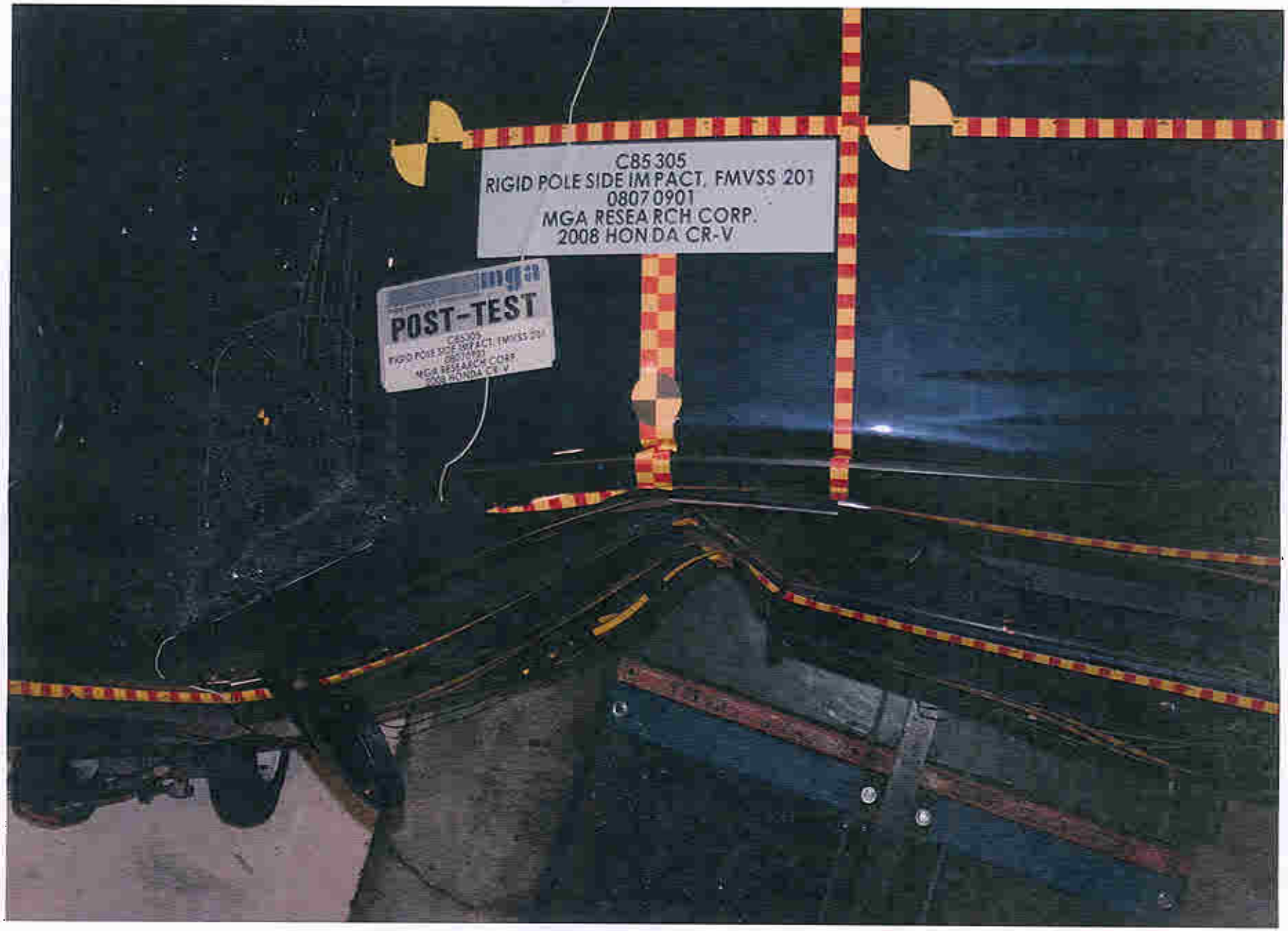


Pre-Test Overhead View of Test Vehicle

Post-Test Overhead View of Test Vehicle



Pre-Test Overhead View of Test Vehicle (Closeup)



Post-Test Overhead View of Test Vehicle (Closeup)

Pre-Test Driver Dummy Right Side View

Post-Test Driver Dummy Right Side View

Pre-Test Driver Dummy Left Side View

Post-Test Driver Dummy Left Side View

Pre-Test Driver Dummy Left Side View (Door Open)

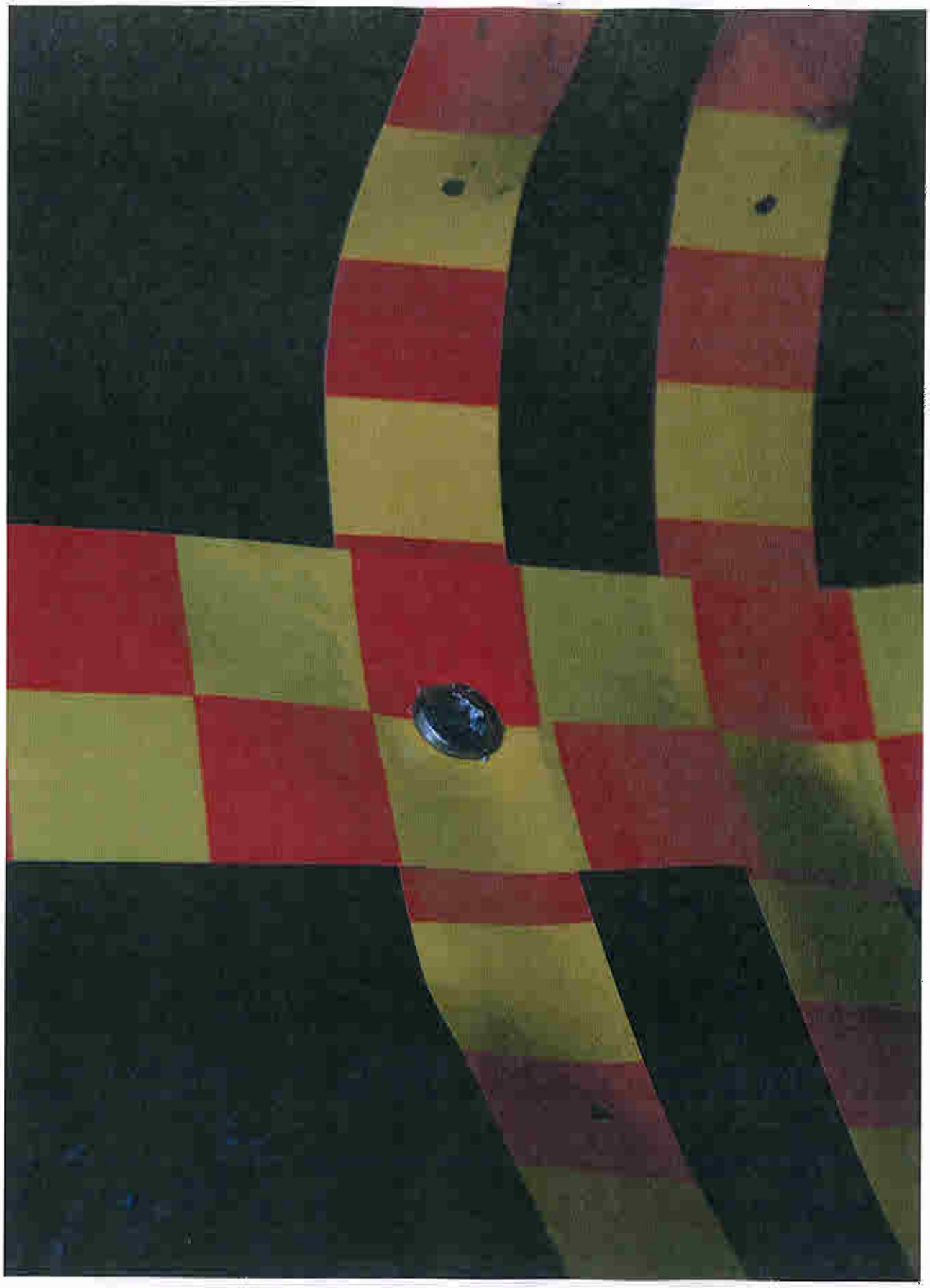
Post-Test Driver Dummy Head Contact (CAB)

Post-Test Driver Dummy Head Contact (Headrest)

Post-Test Driver Dummy Upper Thorax Contact

Post-Test Driver Dummy Lower Thorax Contact

Post-Test Driver Dummy Contact



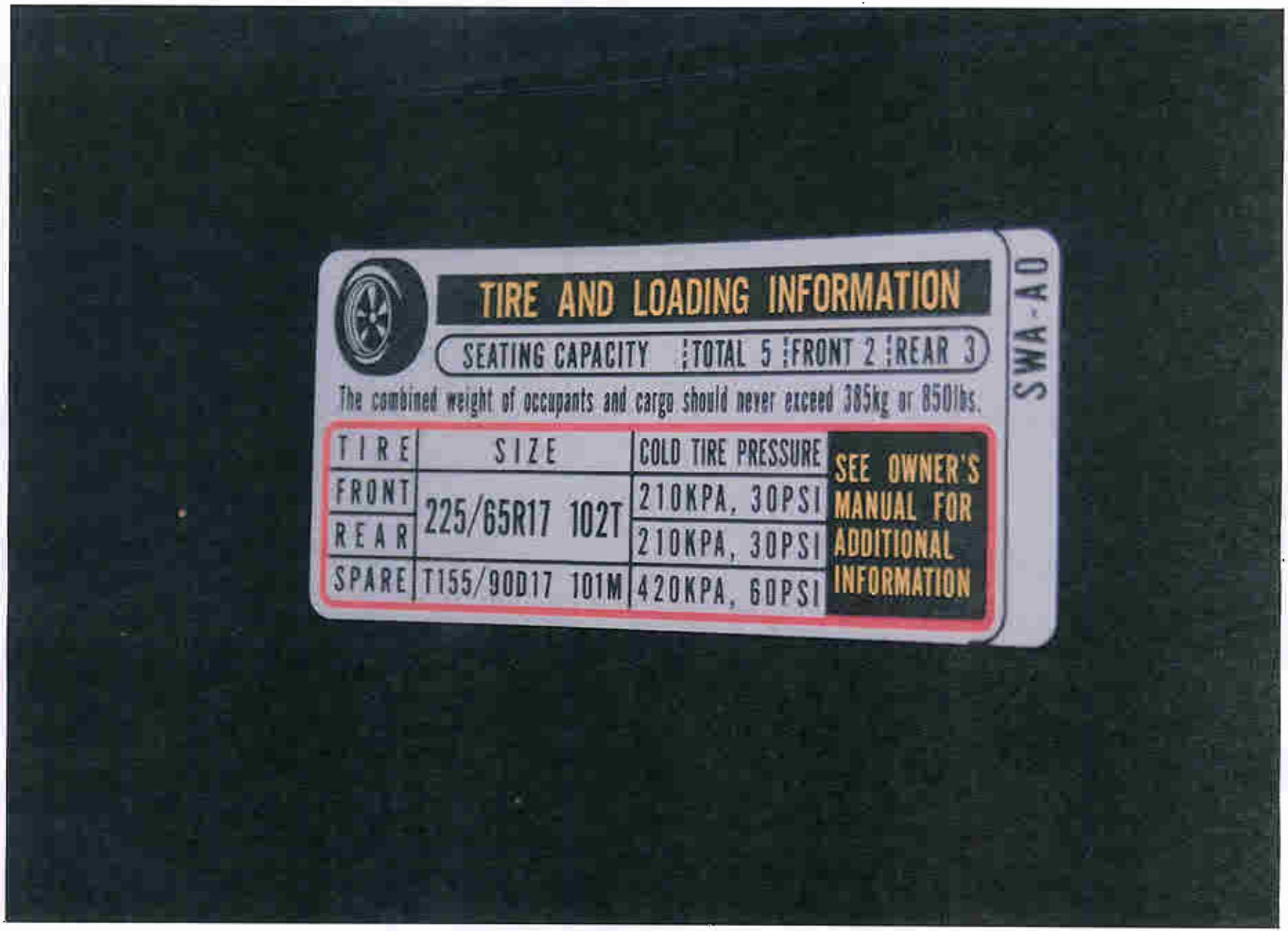
Post-Test Impact Point on Vehicle

Pre-Test Impact Zone Close-up View

Post-Test Impact Zone Close-up View

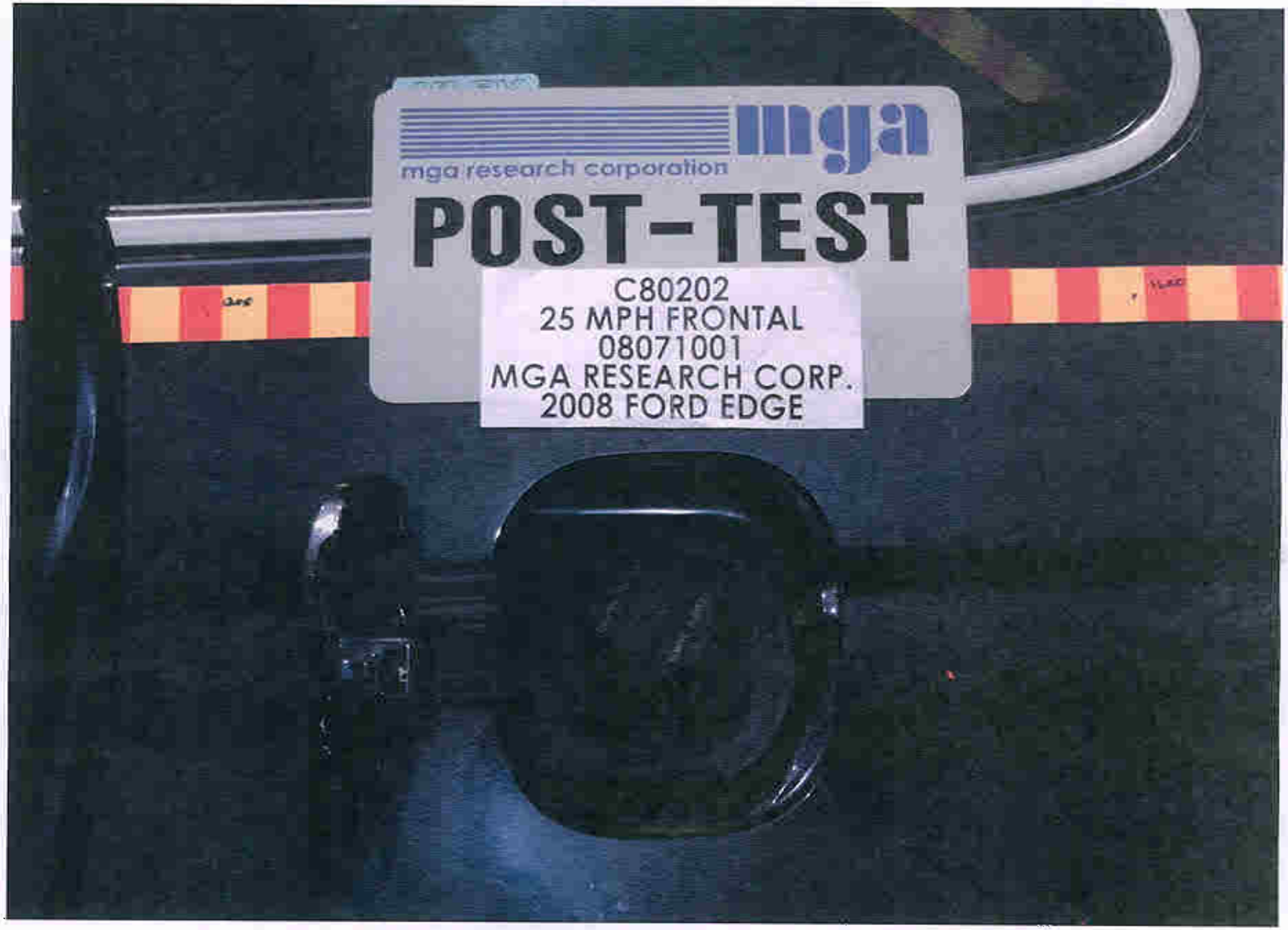
Vehicle Impact

Vehicle Certification Label



Tire Placard

Pre-Test Fuel Filler Cap



Post-Test Fuel Filler Cap

Pre-Test Left Front Wheel Dolly

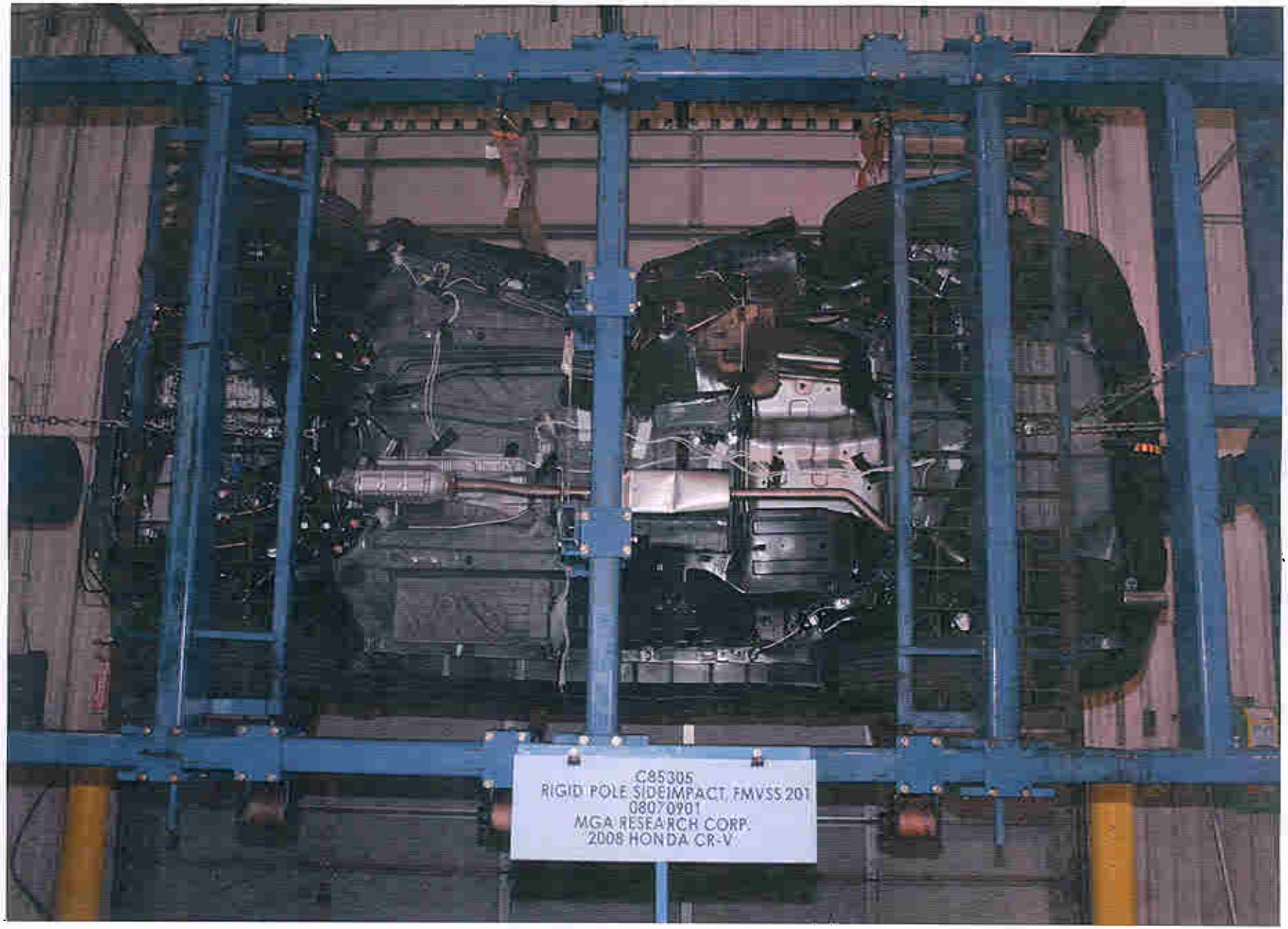
Post-Test Left Front Wheel Dolly

Pre-Test Left Rear Wheel Dolly

Post-Test Left Rear Wheel Dolly

Rollover 90 Degrees

Rollover 180 Degrees



Rollover 270 Degrees

Rollover 360 Degrees

APPENDIX B

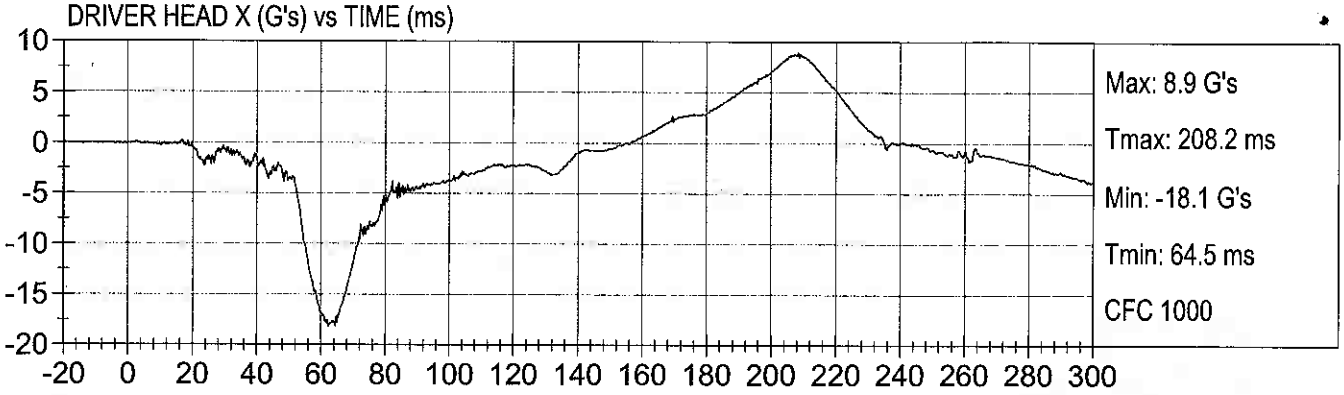
SID/HIII AND VEHICLE RESPONSE DATA

TABLE OF DATA PLOTS

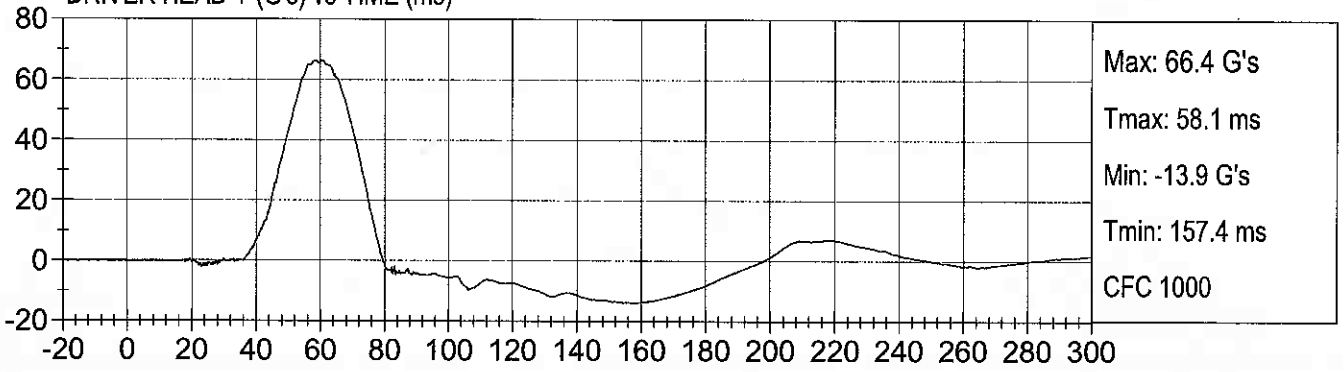
FMVSS 201 RIGID POLE
2008 HONDA CR-V C85305

Test Date: 07/09/2008
Speed: 17.5 mph (28.2 km/h)

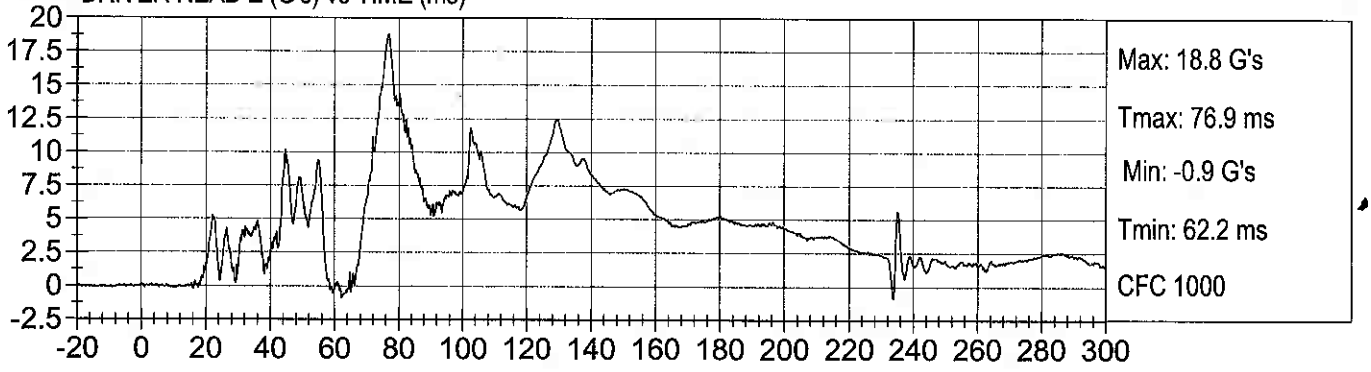
DRIVER HEAD X (G's) vs TIME (ms)



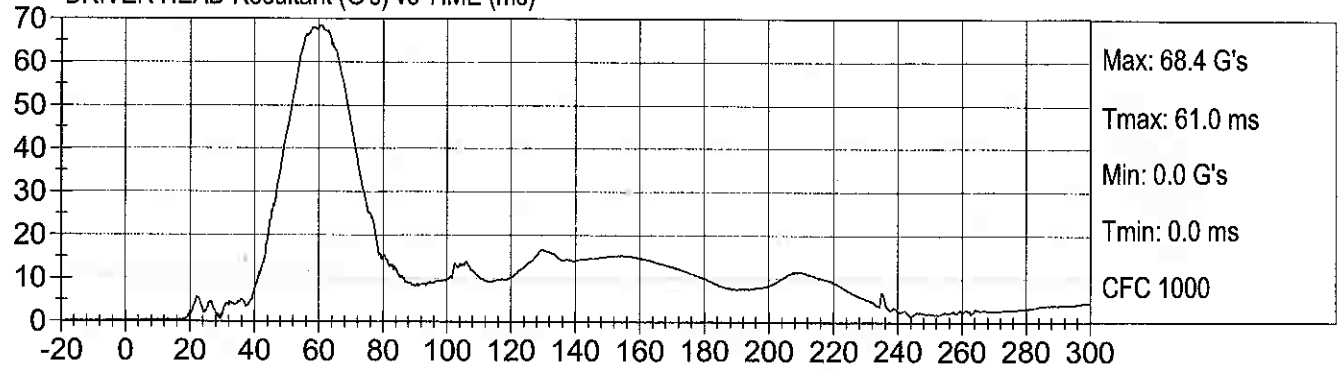
DRIVER HEAD Y (G's) vs TIME (ms)



DRIVER HEAD Z (G's) vs TIME (ms)

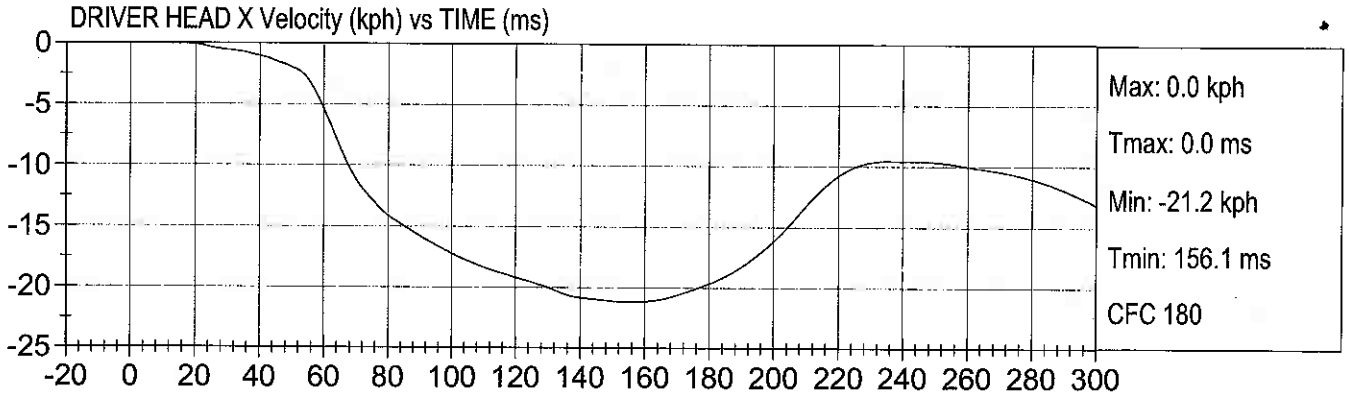


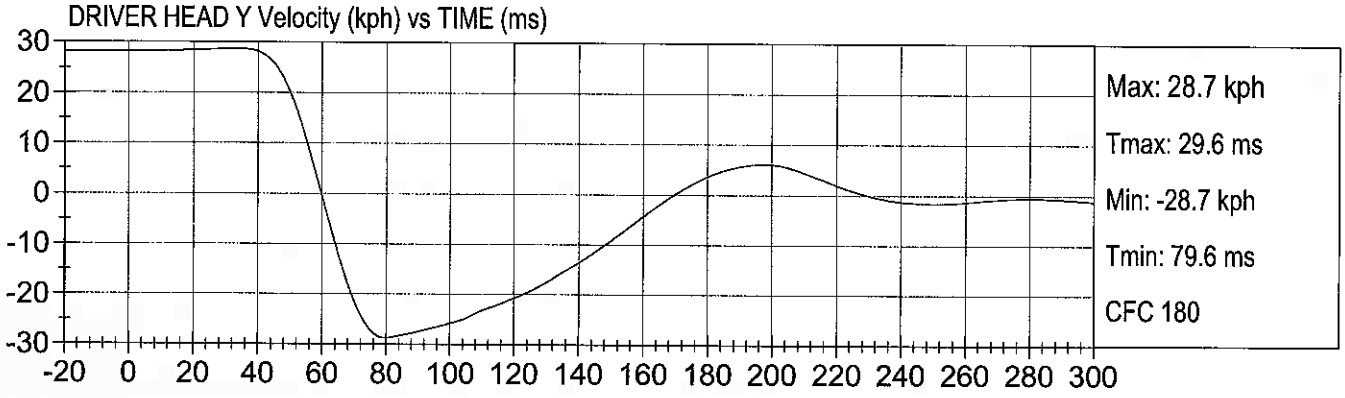
DRIVER HEAD Resultant (G's) vs TIME (ms)

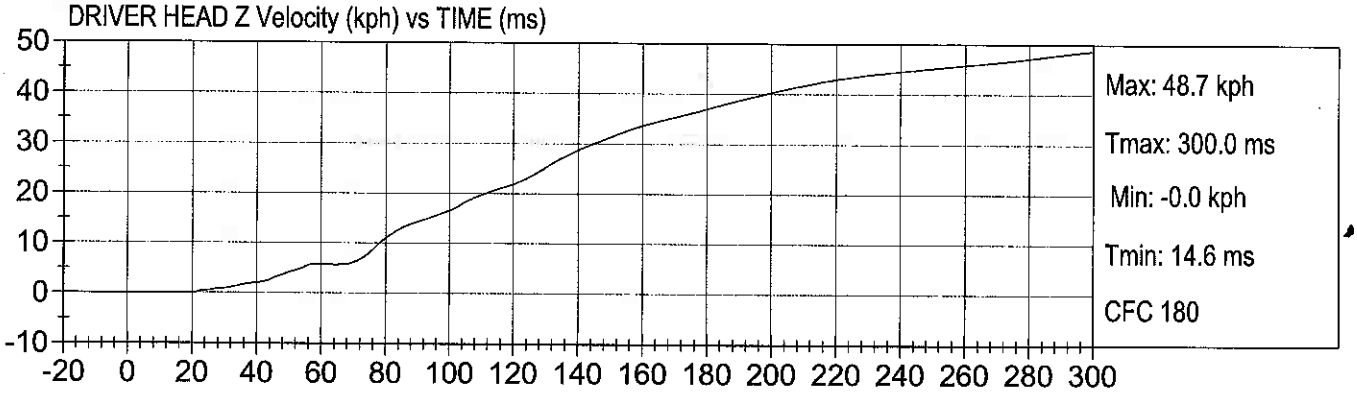


FMVSS 201 RIGID POLE
2008 HONDA CR-V C85305

Test Date: 07/09/2008
Speed: 17.5 mph (28.2 km/h)

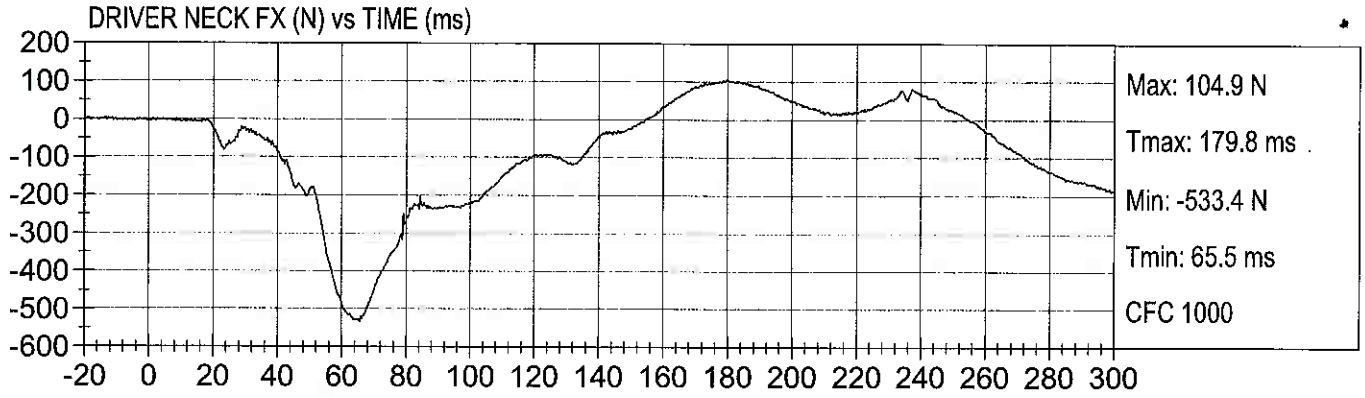


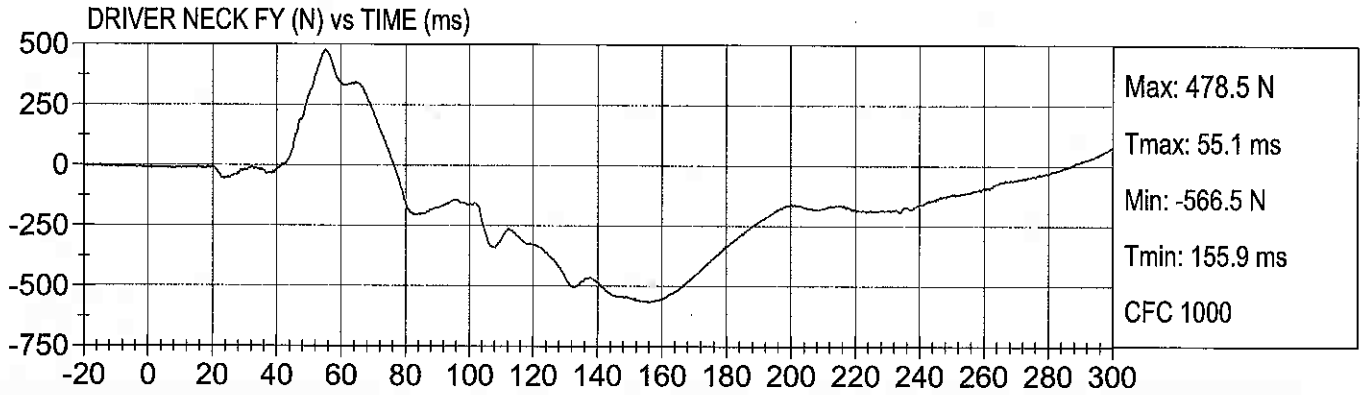


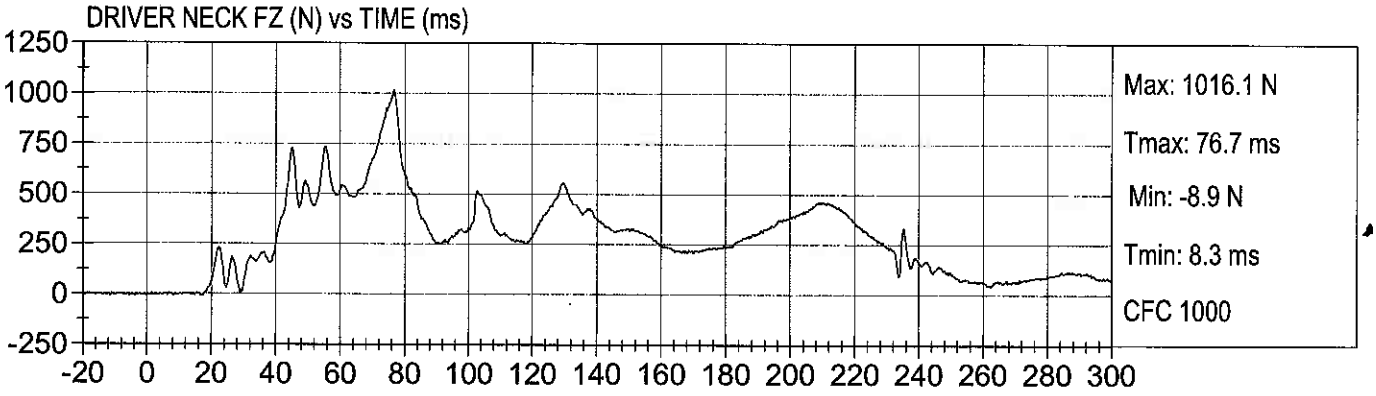


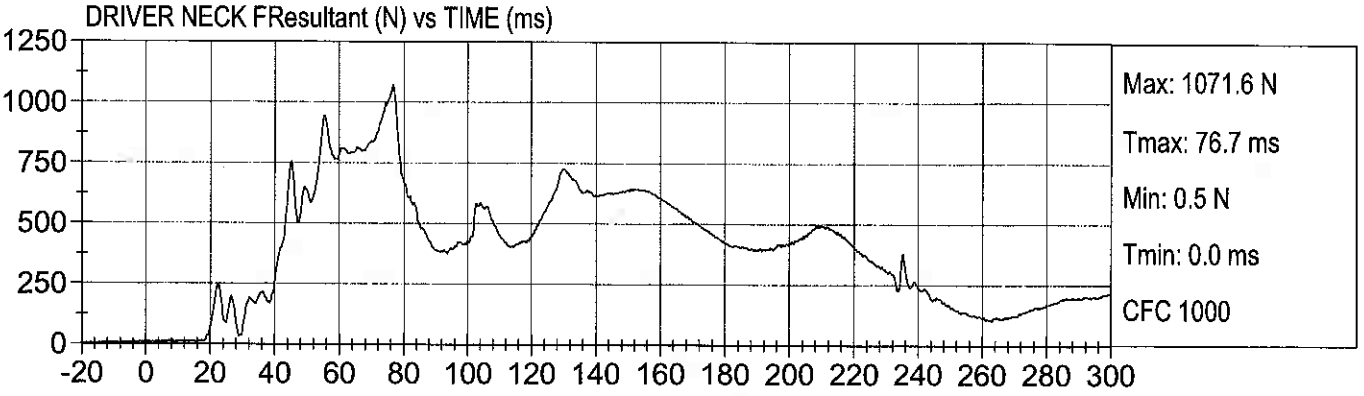
FMVSS 201 RIGID POLE
2008 HONDA CR-V C85305

Test Date: 07/09/2008
Speed: 17.5 mph (28.2 km/h)





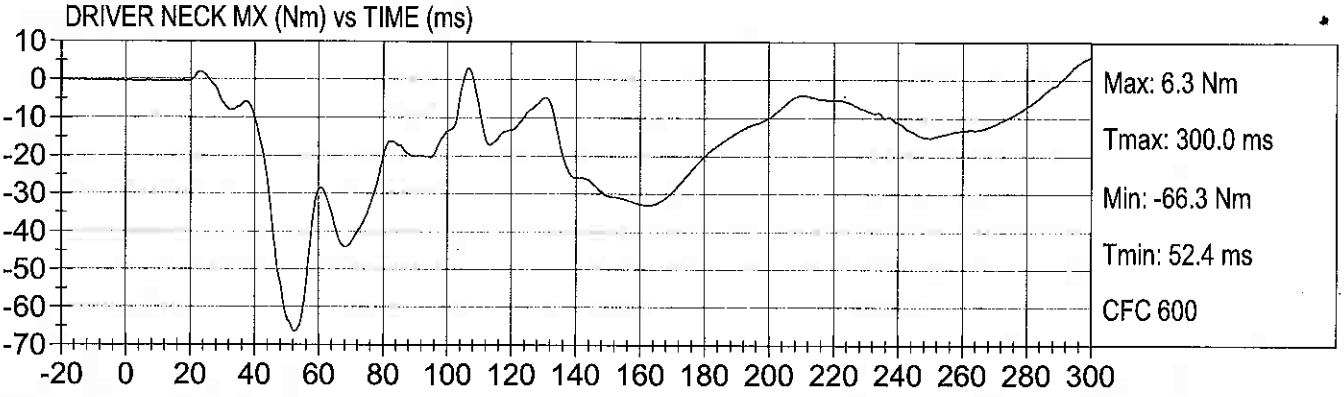




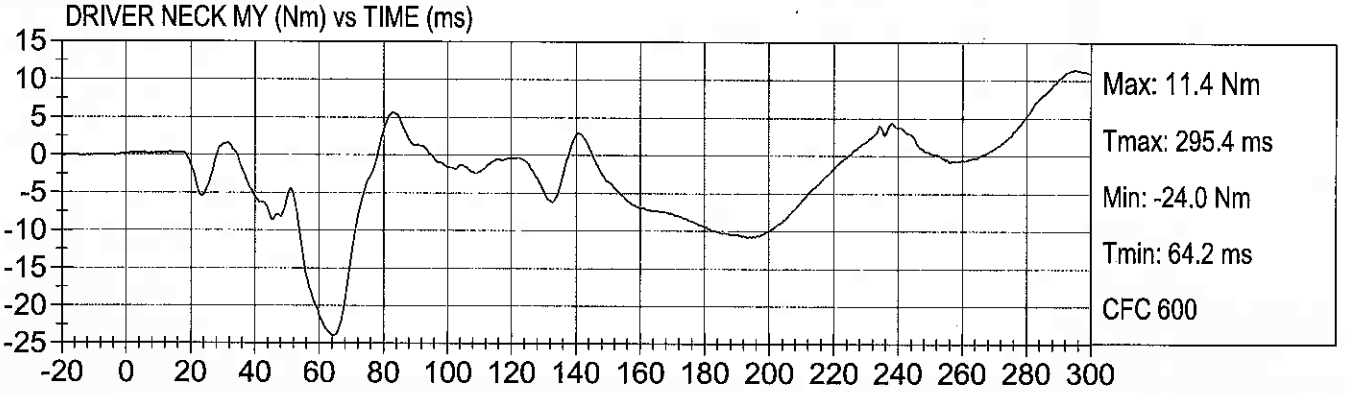
FMVSS 201 RIGID POLE
2008 HONDA CR-V C85305

Test Date: 07/09/2008
Speed: 17.5 mph (28.2 km/h)

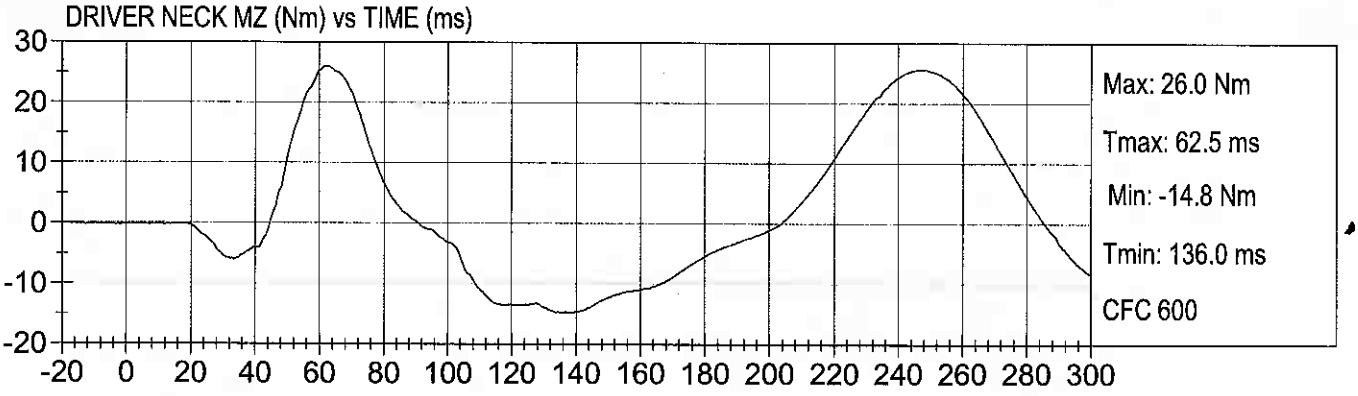
DRIVER NECK MX (Nm) vs TIME (ms)



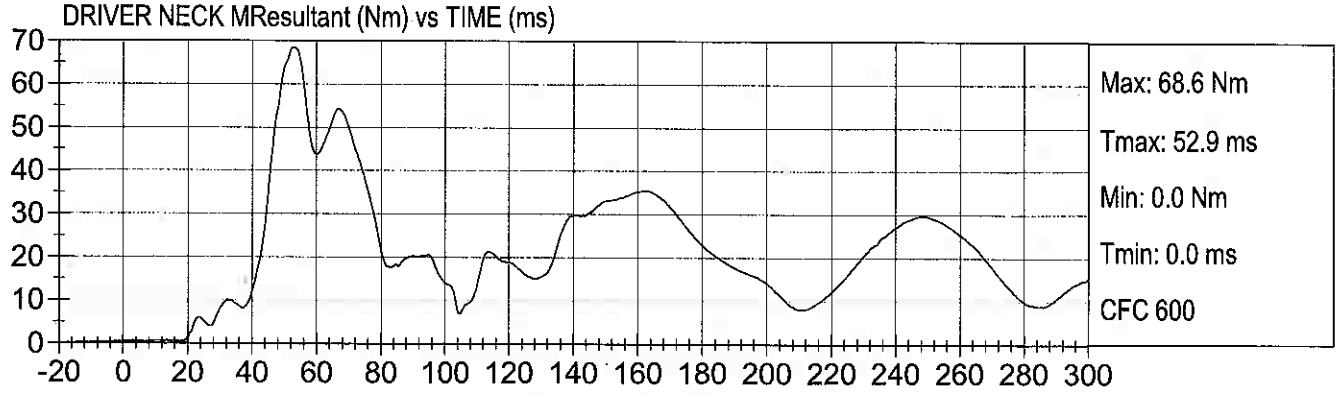
DRIVER NECK MY (Nm) vs TIME (ms)



DRIVER NECK MZ (Nm) vs TIME (ms)



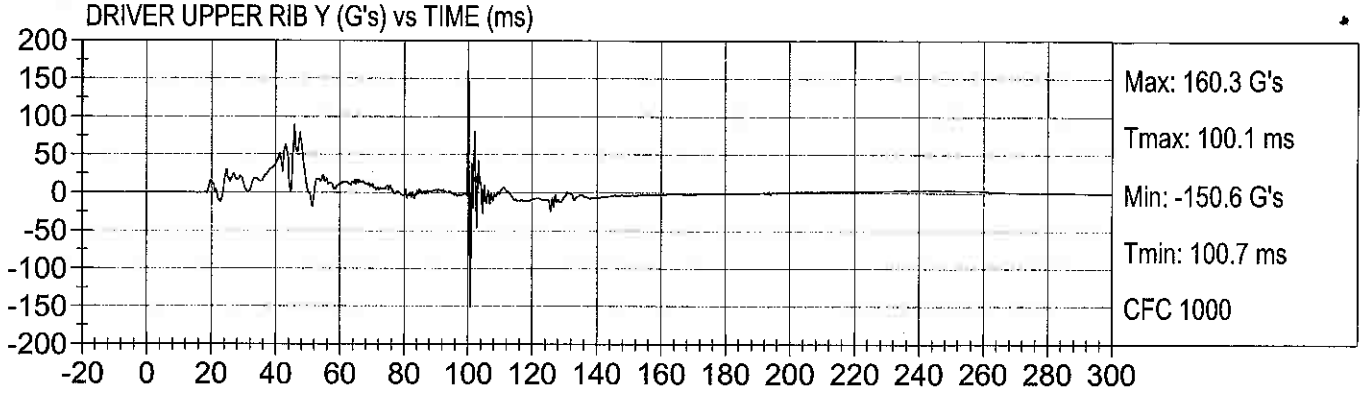
DRIVER NECK MResultant (Nm) vs TIME (ms)



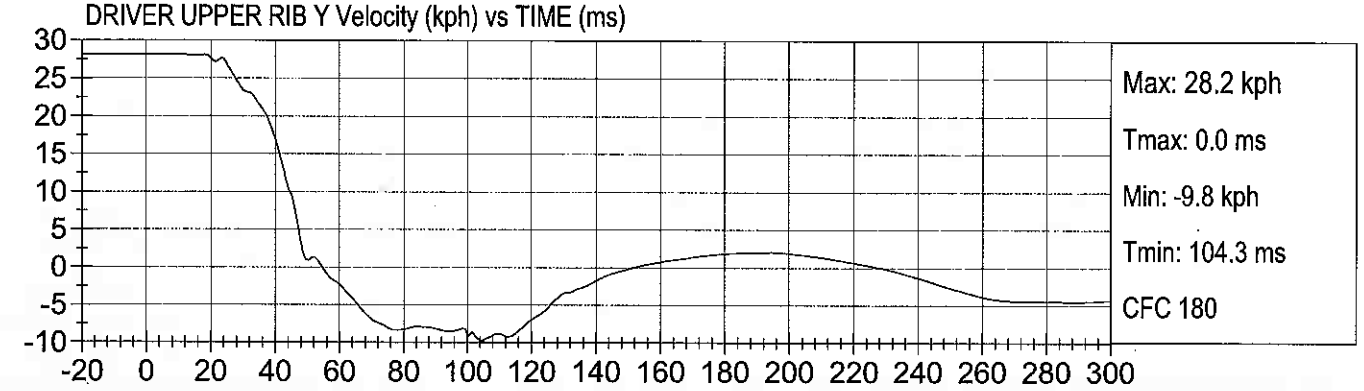
FMVSS 201 RIGID POLE
2008 HONDA CR-V C85305

Test Date: 07/09/2008
Speed: 17.5 mph (28.2 km/h)

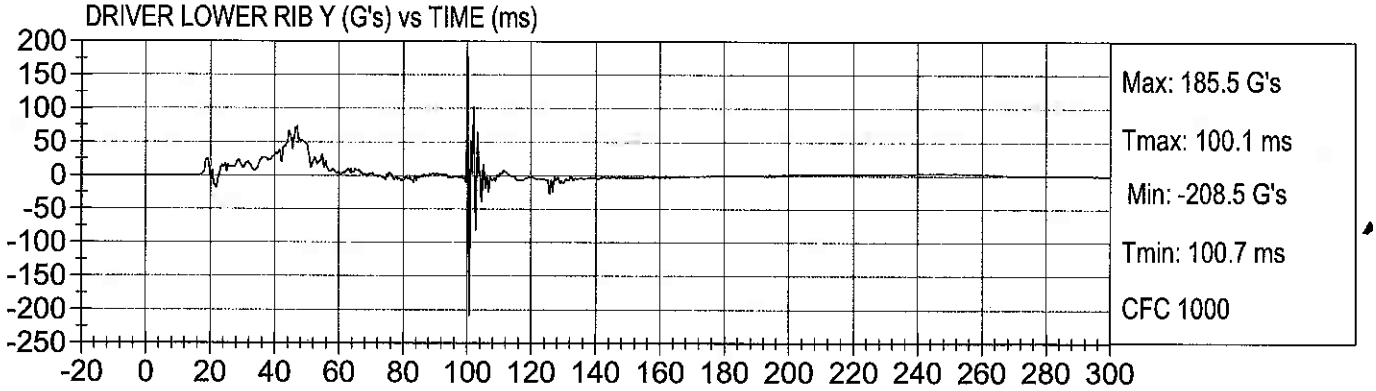
DRIVER UPPER RIB Y (G's) vs TIME (ms)



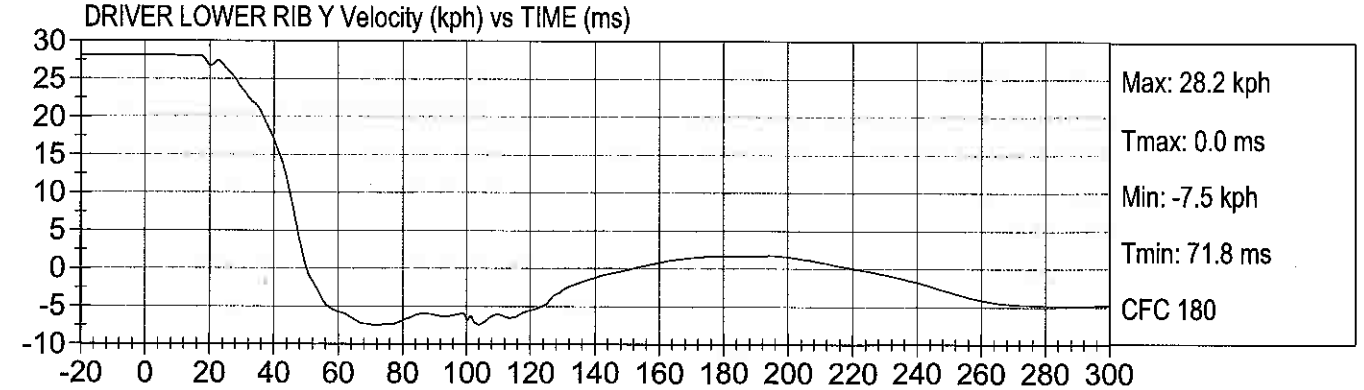
DRIVER UPPER RIB Y Velocity (kph) vs TIME (ms)



DRIVER LOWER RIB Y (G's) vs TIME (ms)



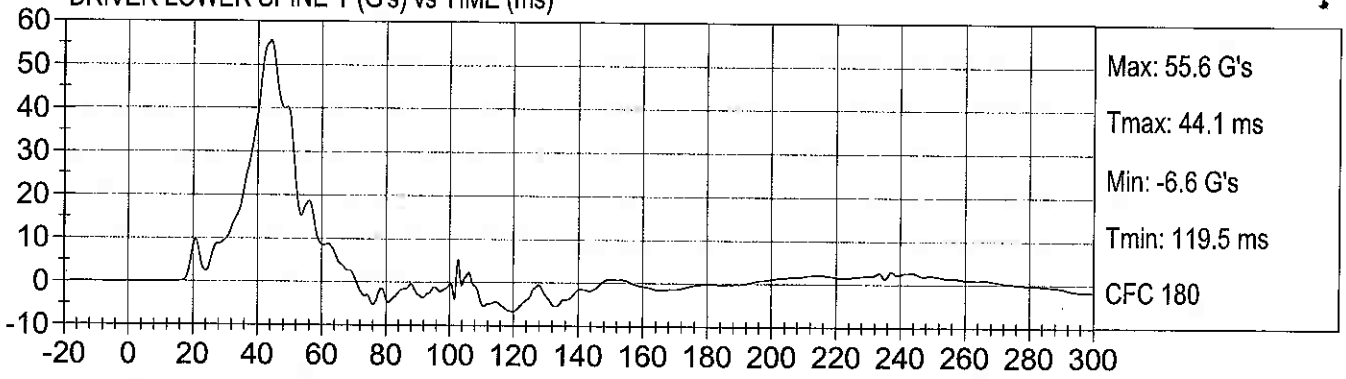
DRIVER LOWER RIB Y Velocity (kph) vs TIME (ms)



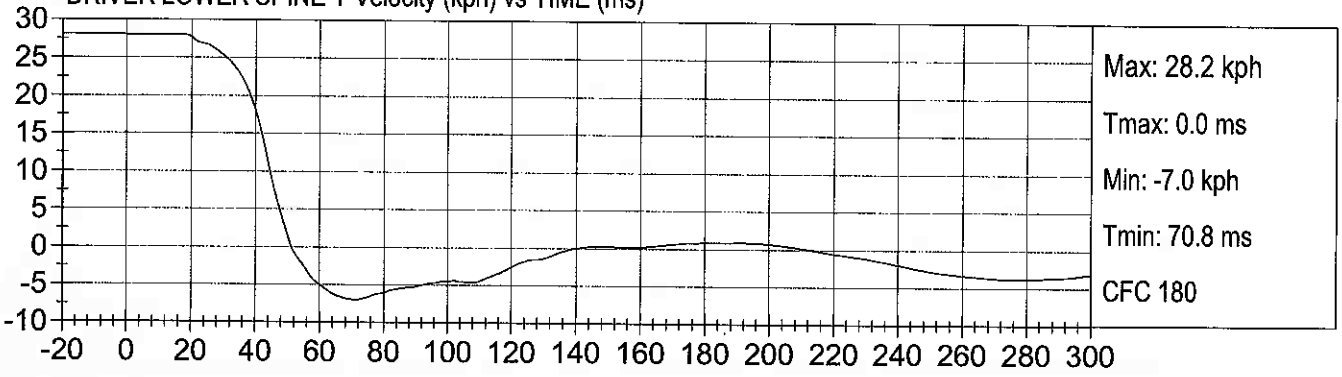
FMVSS 201 RIGID POLE
2008 HONDA CR-V C85305

Test Date: 07/09/2008
Speed: 17.5 mph (28.2 km/h)

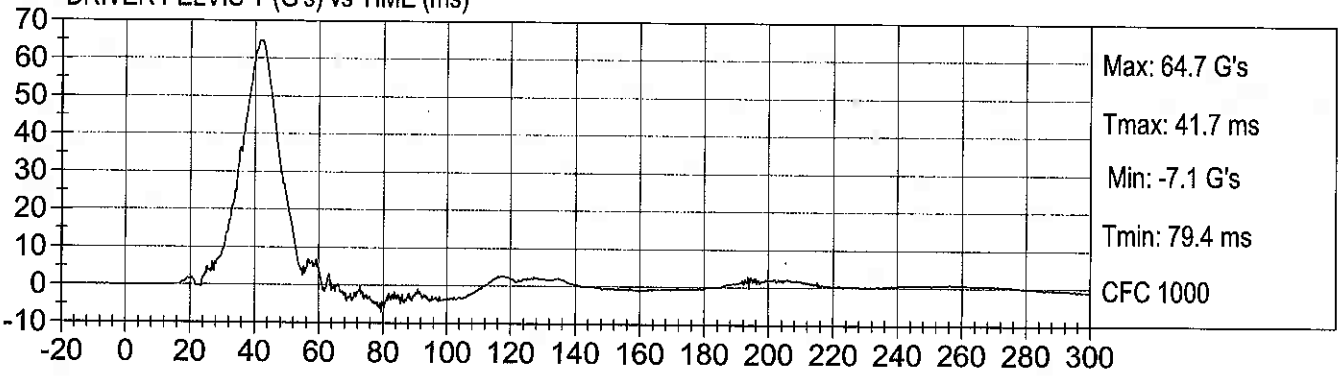
DRIVER LOWER SPINE Y (G's) vs TIME (ms)



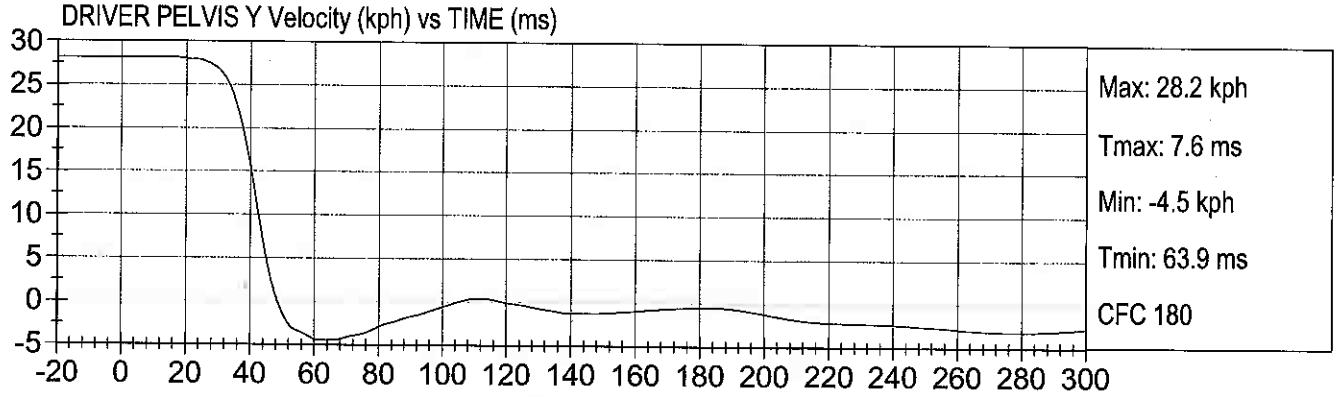
DRIVER LOWER SPINE Y Velocity (kph) vs TIME (ms)



DRIVER PELVIS Y (G's) vs TIME (ms)



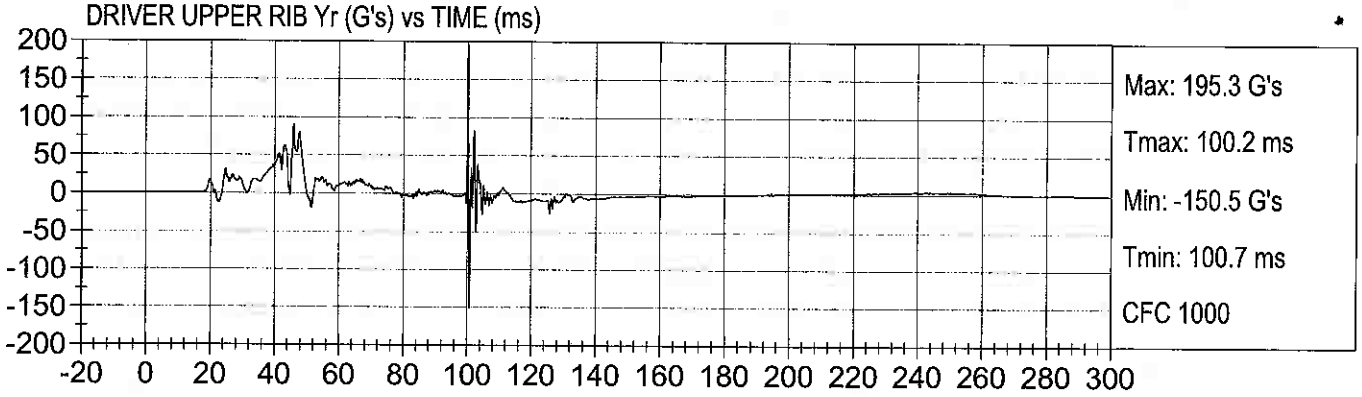
DRIVER PELVIS Y Velocity (kph) vs TIME (ms)



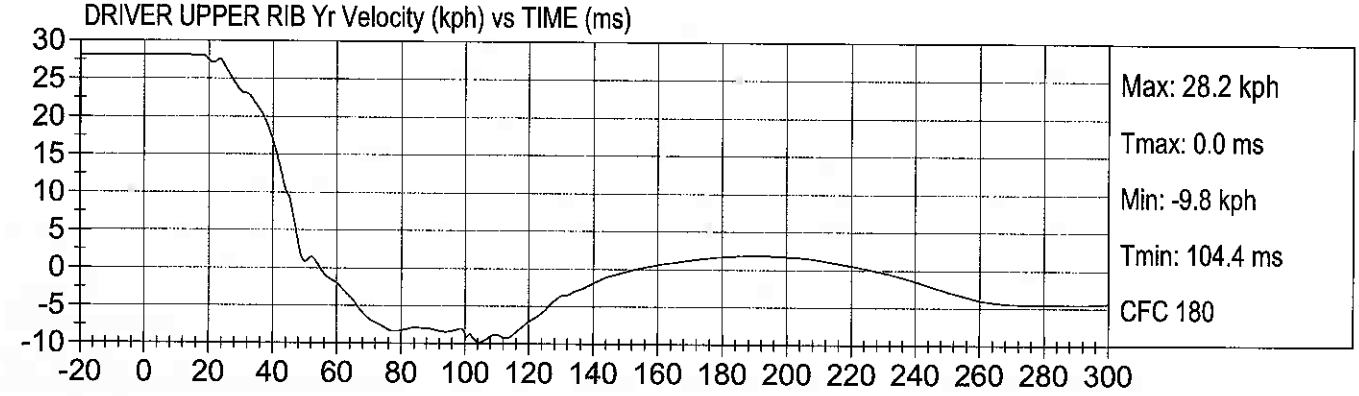
FMVSS 201 RIGID POLE
2008 HONDA CR-V C85305

Test Date: 07/09/2008
Speed: 17.5 mph (28.2 km/h)

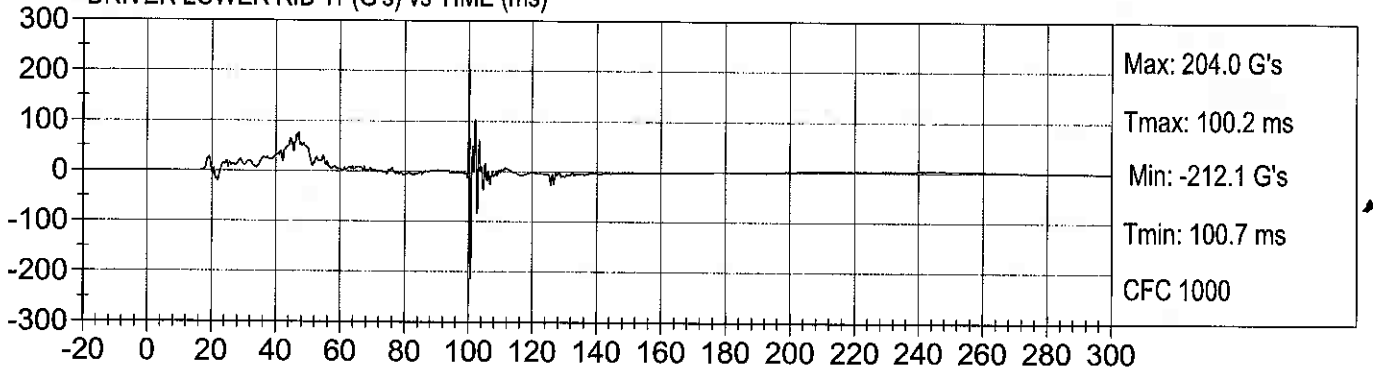
DRIVER UPPER RIB Yr (G's) vs TIME (ms)



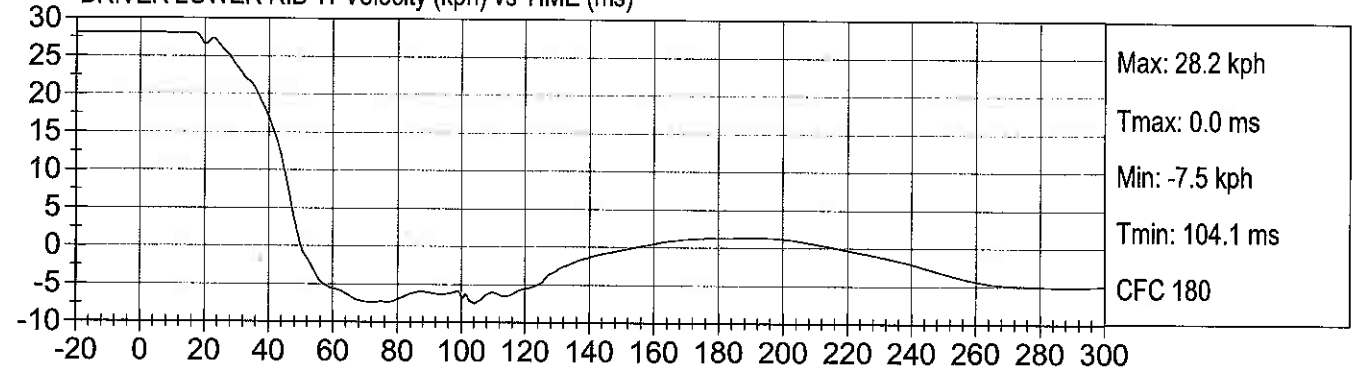
DRIVER UPPER RIB Yr Velocity (kph) vs TIME (ms)



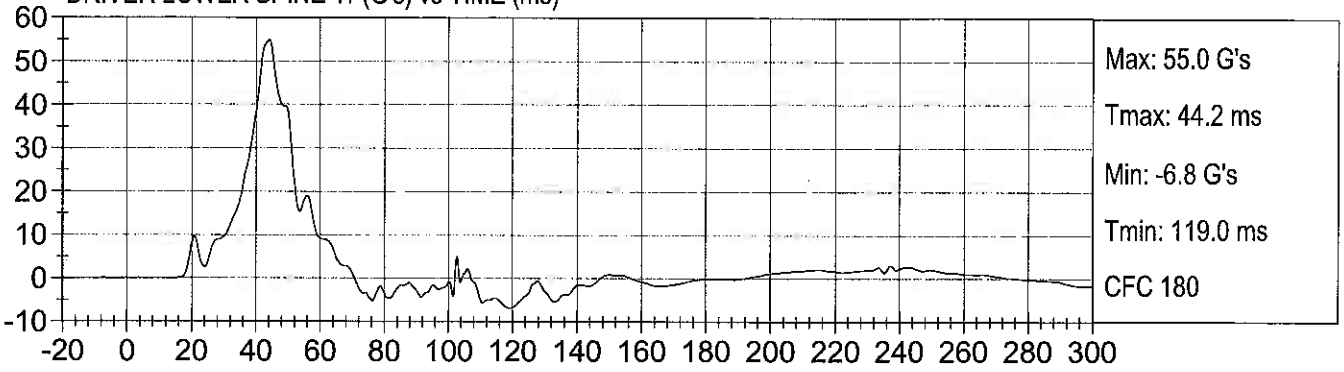
DRIVER LOWER RIB Yr (G's) vs TIME (ms)



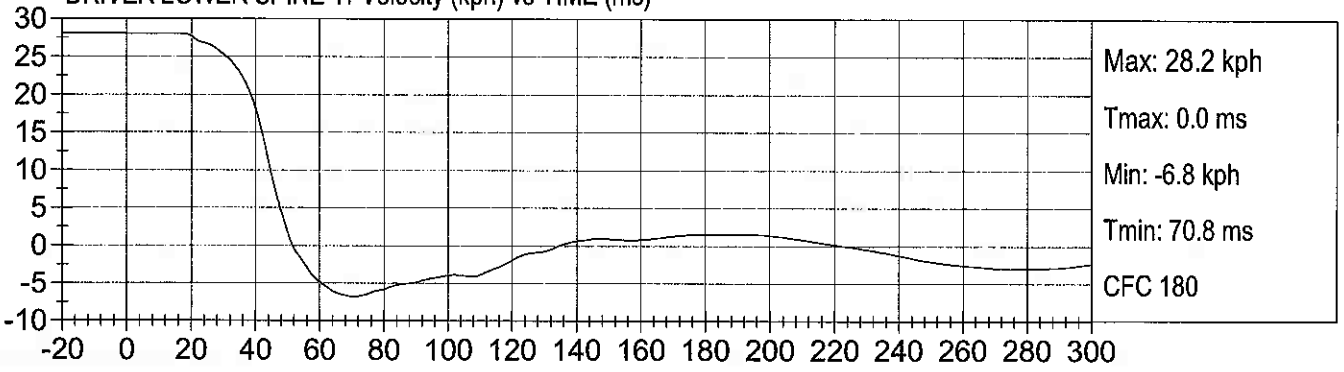
DRIVER LOWER RIB Yr Velocity (kph) vs TIME (ms)



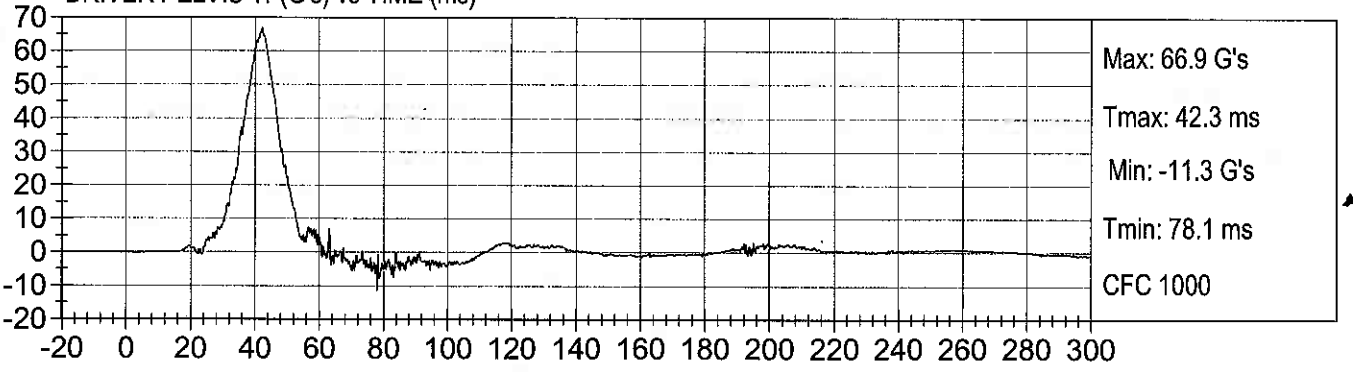
DRIVER LOWER SPINE Yr (G's) vs TIME (ms)



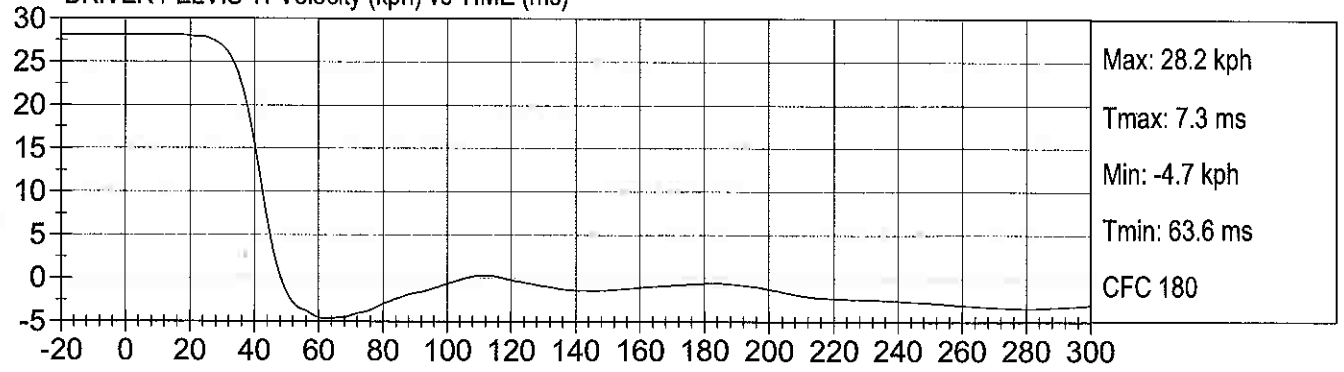
DRIVER LOWER SPINE Yr Velocity (kph) vs TIME (ms)



DRIVER PELVIS Yr (G's) vs TIME (ms)

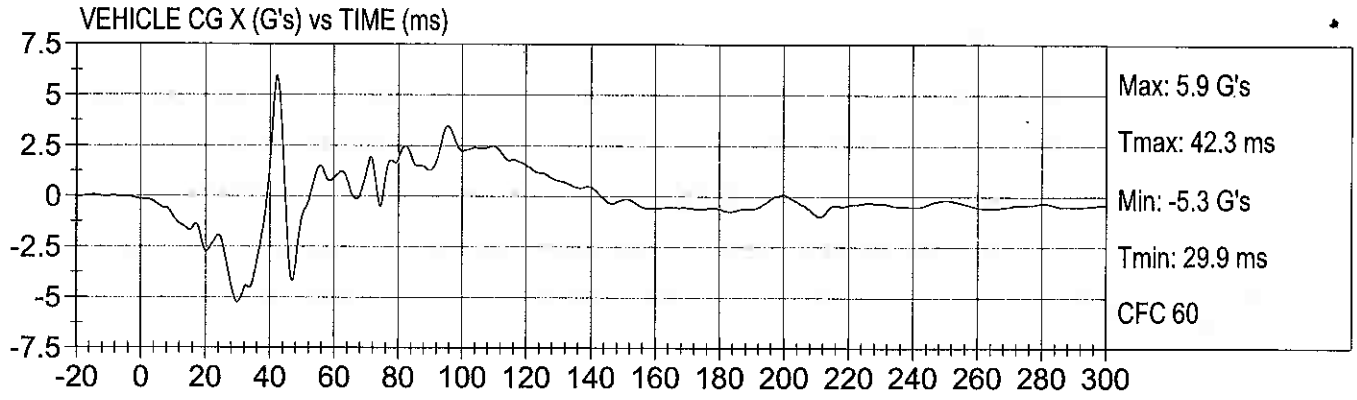


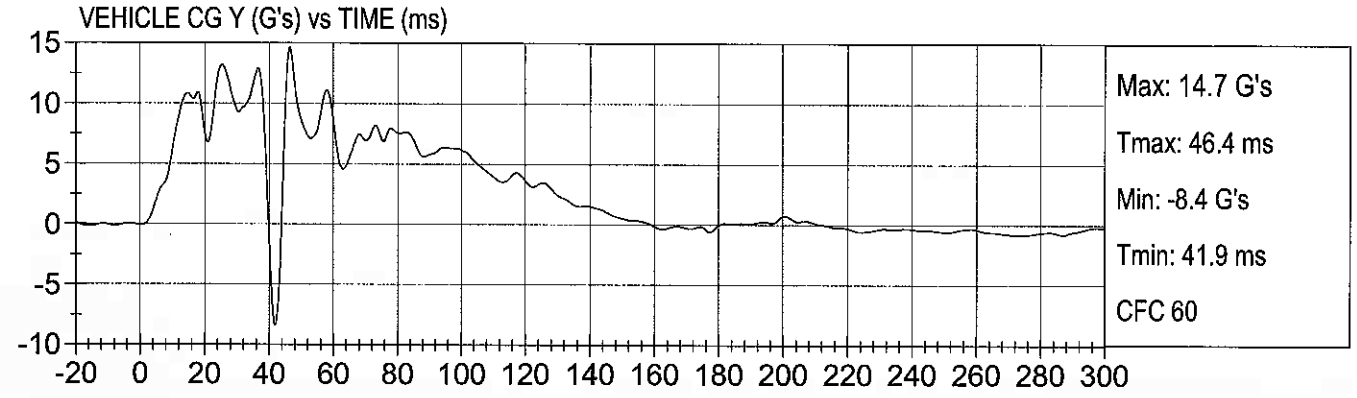
DRIVER PELVIS Yr Velocity (kph) vs TIME (ms)

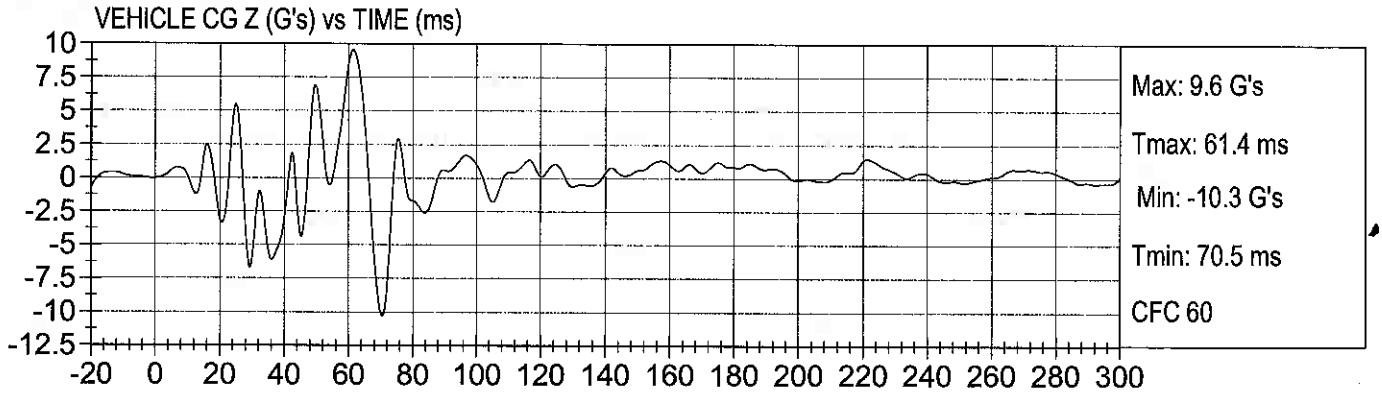


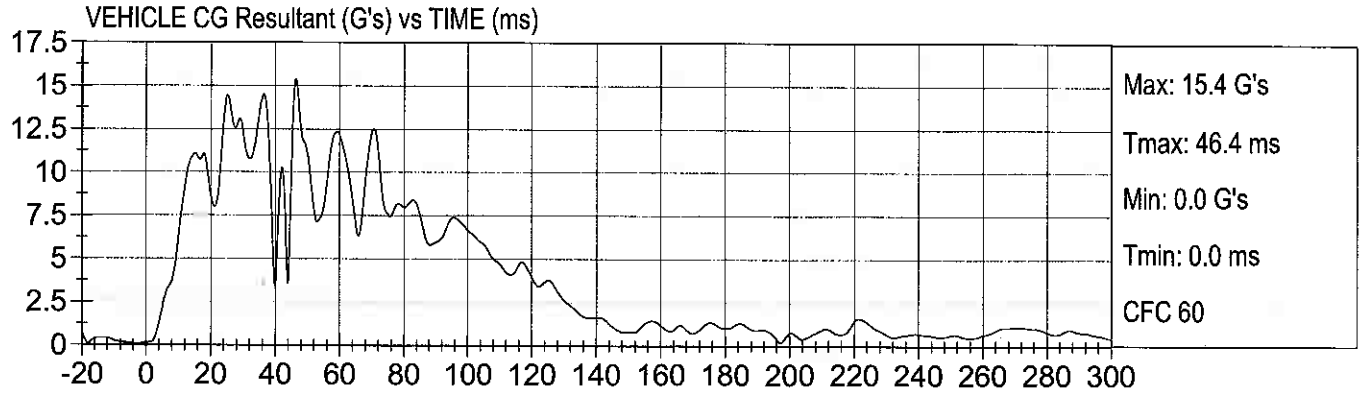
FMVSS 201 RIGID POLE
2008 HONDA CR-V C85305

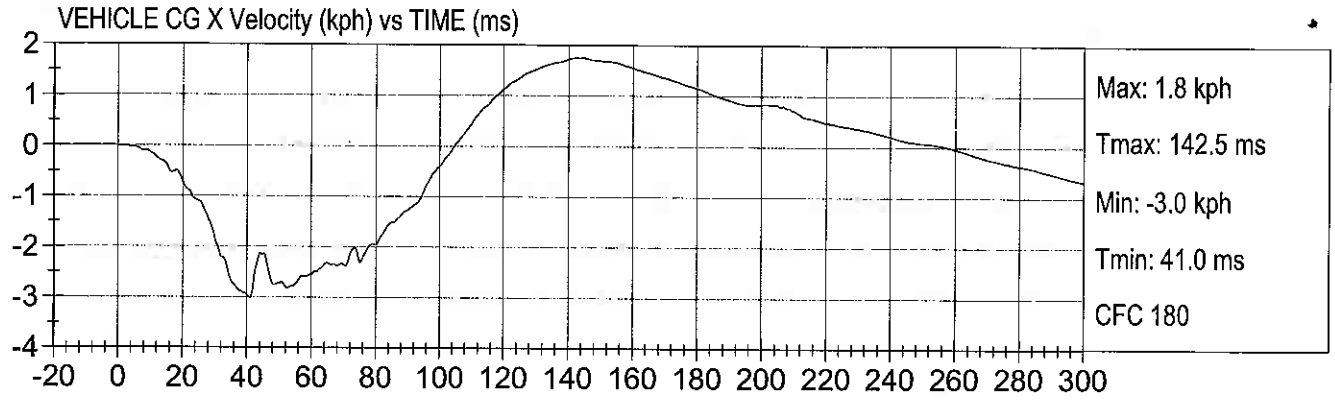
Test Date: 07/09/2008
Speed: 17.5 mph (28.2 km/h)

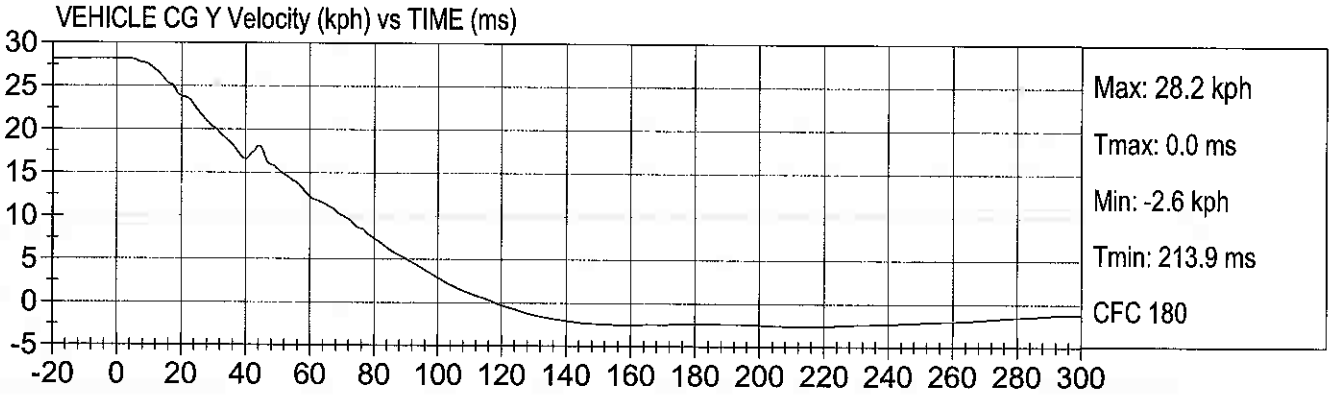


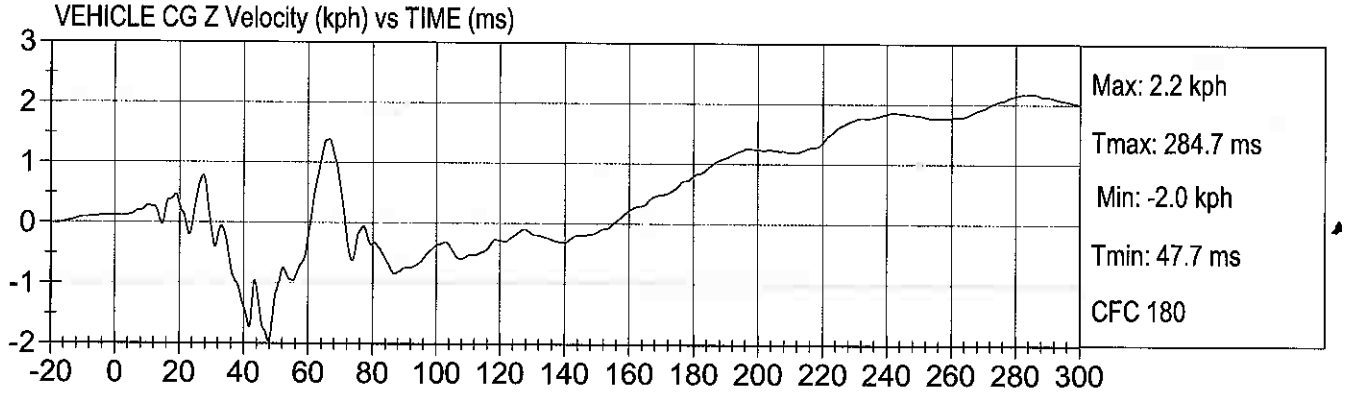







VEHICLE CG X Velocity (kph) vs TIME (ms)
2
1
0
-1
-2
-3
-4
-20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300
Max: 1.8 kph
Tmax: 142.5 ms
Min: -3.0 kph
Tmin: 41.0 ms
CFC 180

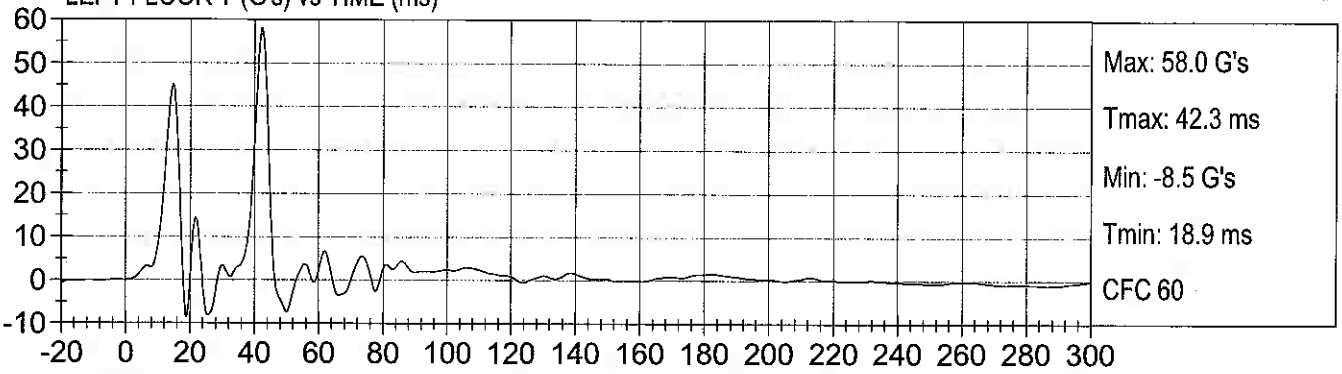

VEHICLE CG Y Velocity (kph) vs TIME (ms)
30
25
20
15
10
5
0
-5
-20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300
Max: 28.2 kph
Tmax: 0.0 ms
Min: -2.6 kph
Tmin: 213.9 ms
CFC 180


VEHICLE CG Z Velocity (kph) vs TIME (ms)
3
2
1
0
-1
-2
-20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300
Max: 2.2 kph
Tmax: 284.7 ms
Min: -2.0 kph
Tmin: 47.7 ms
CFC 180

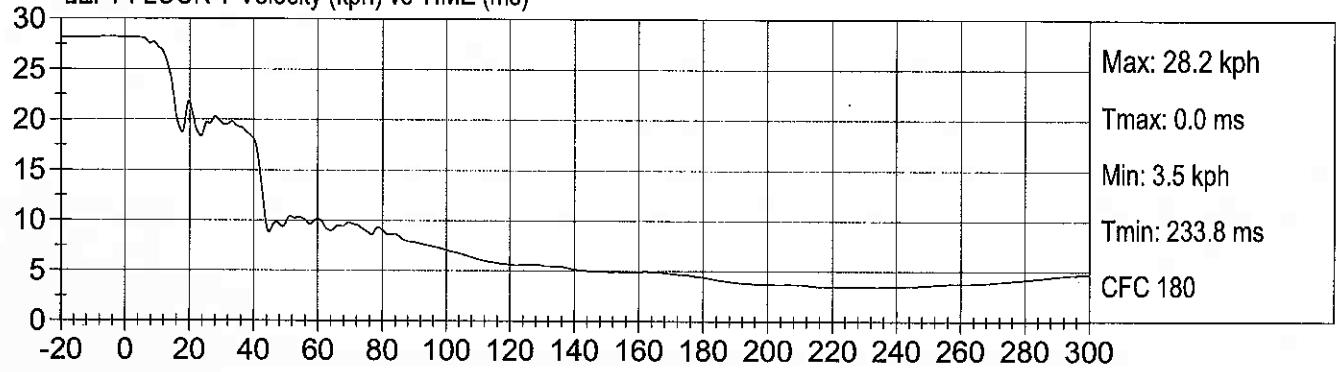
FMVSS 201 RIGID POLE
2008 HONDA CR-V C85305

Test Date: 07/09/2008
Speed: 17.5 mph (28.2 km/h)

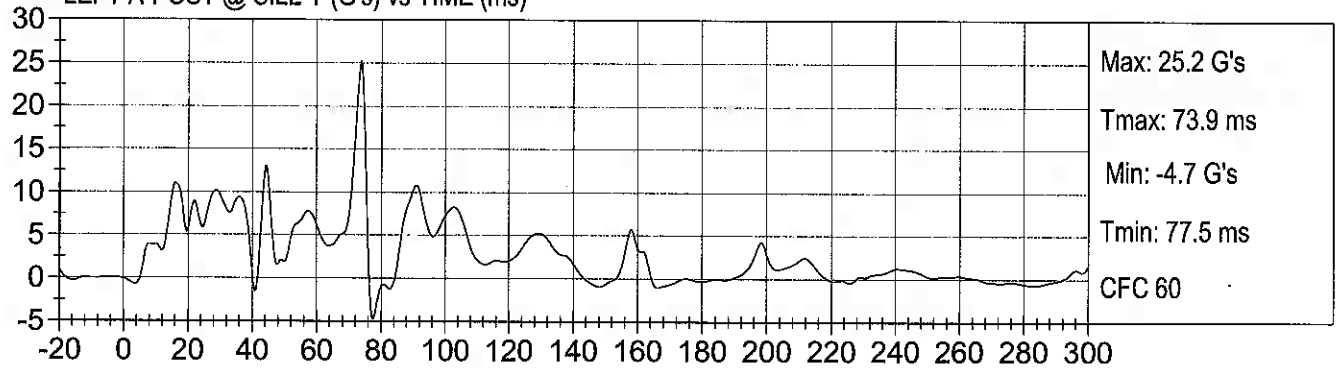
LEFT FLOOR Y (G's) vs TIME (ms)



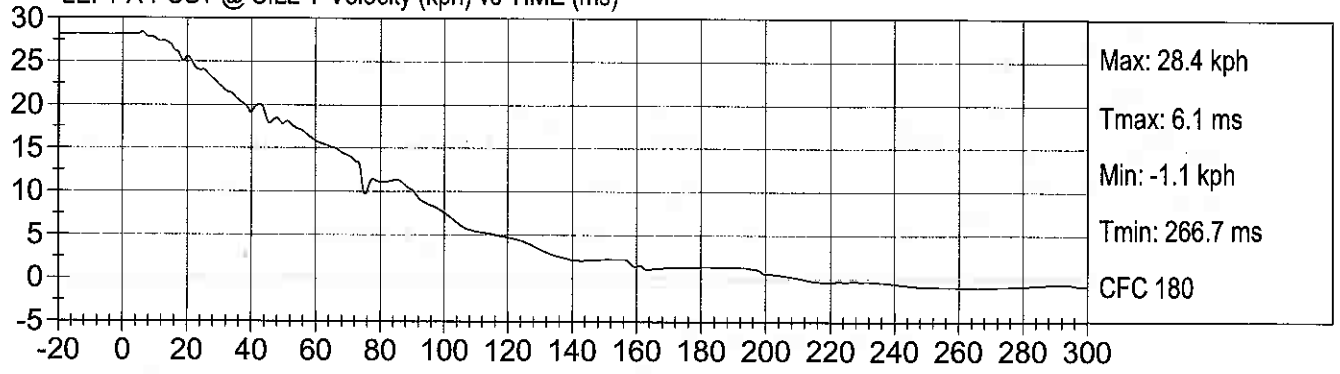
LEFT FLOOR Y Velocity (kph) vs TIME (ms)



LEFT A-POST @ SILL Y (G's) vs TIME (ms)



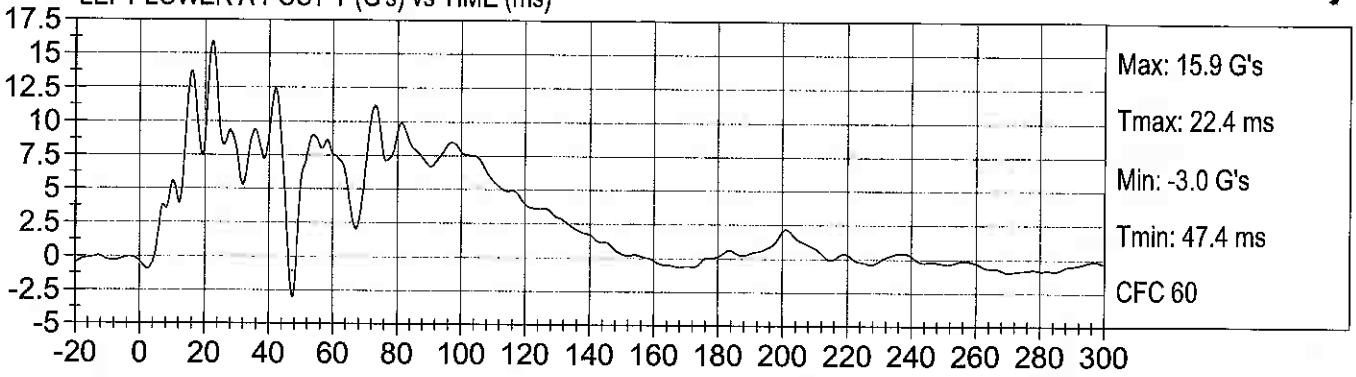
LEFT A-POST @ SILL Y Velocity (kph) vs TIME (ms)



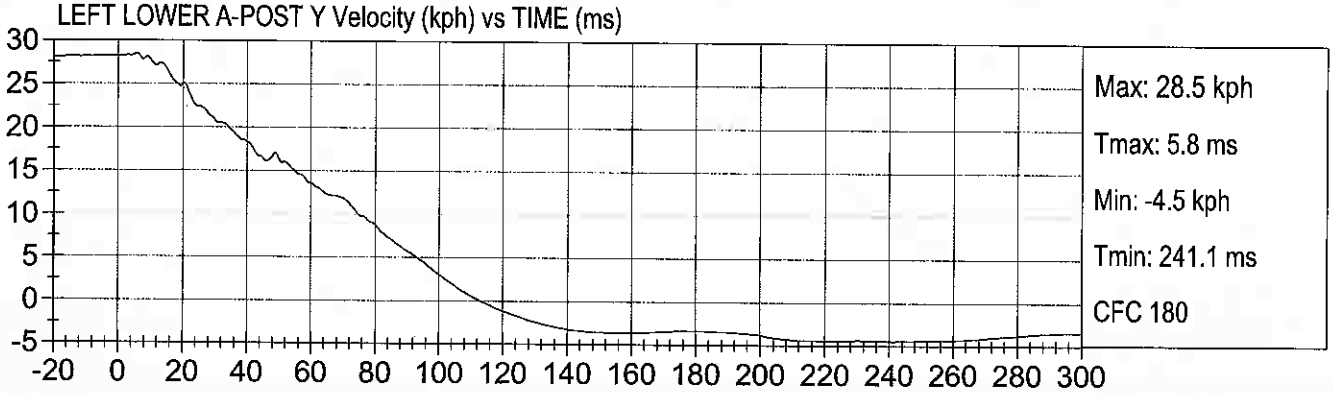
FMVSS 201 RIGID POLE
2008 HONDA CR-V C85305

Test Date: 07/09/2008
Speed: 17.5 mph (28.2 km/h)

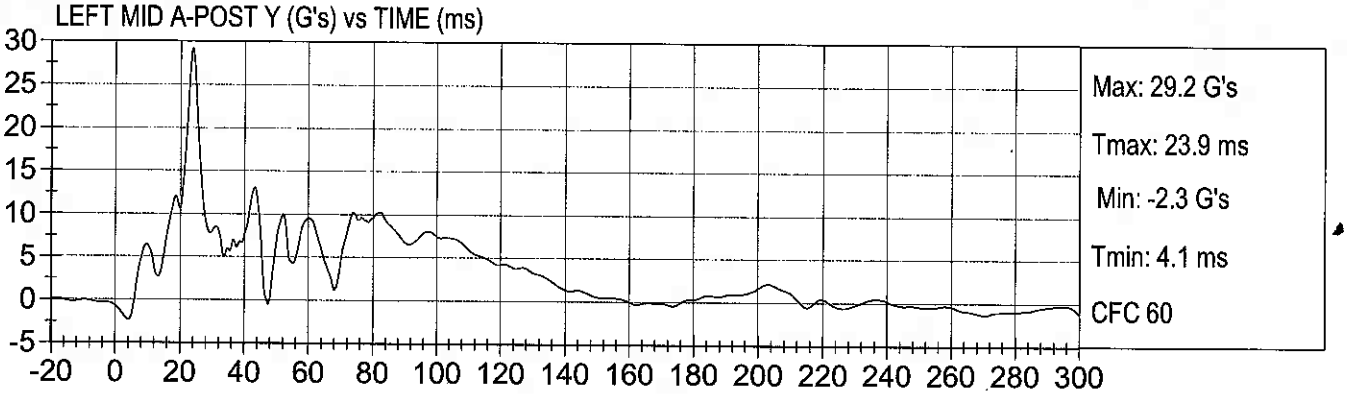
LEFT LOWER A-POST Y (G's) vs TIME (ms)



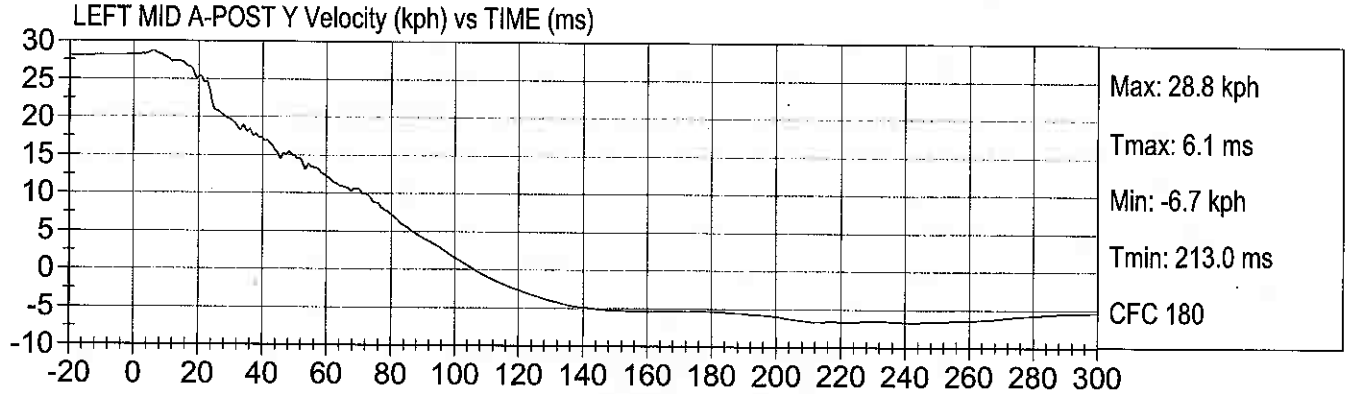
LEFT LOWER A-POST Y Velocity (kph) vs TIME (ms)



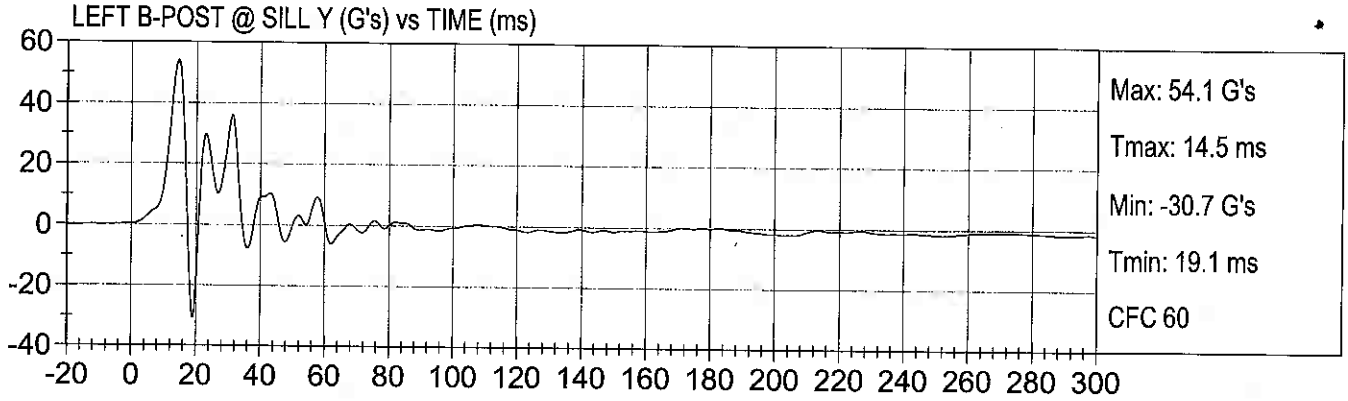
LEFT MID A-POST Y (G's) vs TIME (ms)



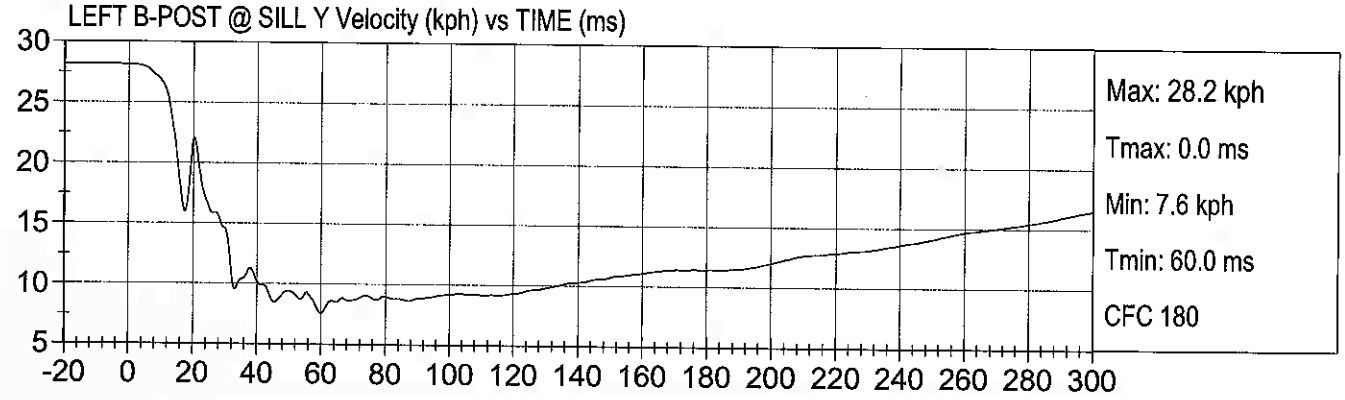
LEFT MID A-POST Y Velocity (kph) vs TIME (ms)



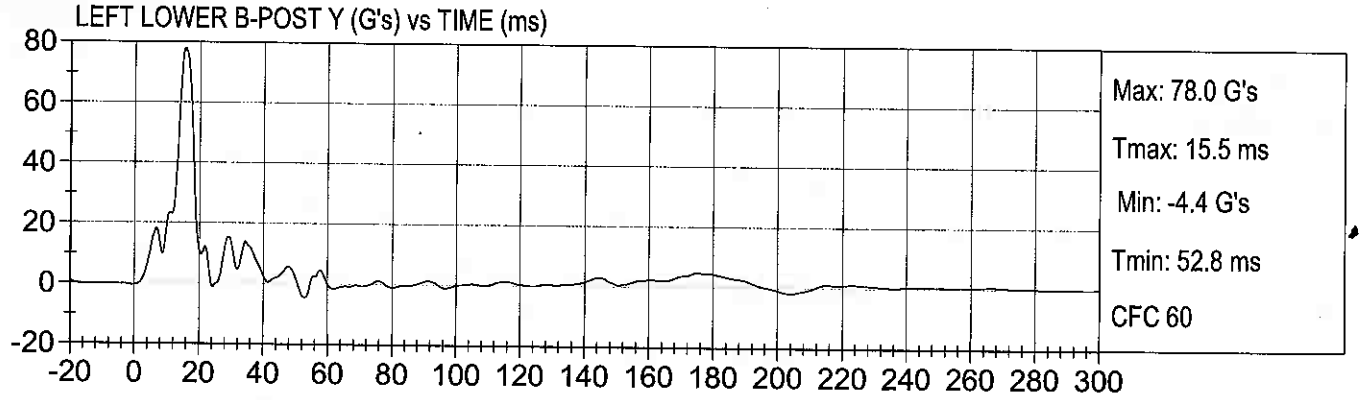
LEFT B-POST @ SILL Y (G's) vs TIME (ms)



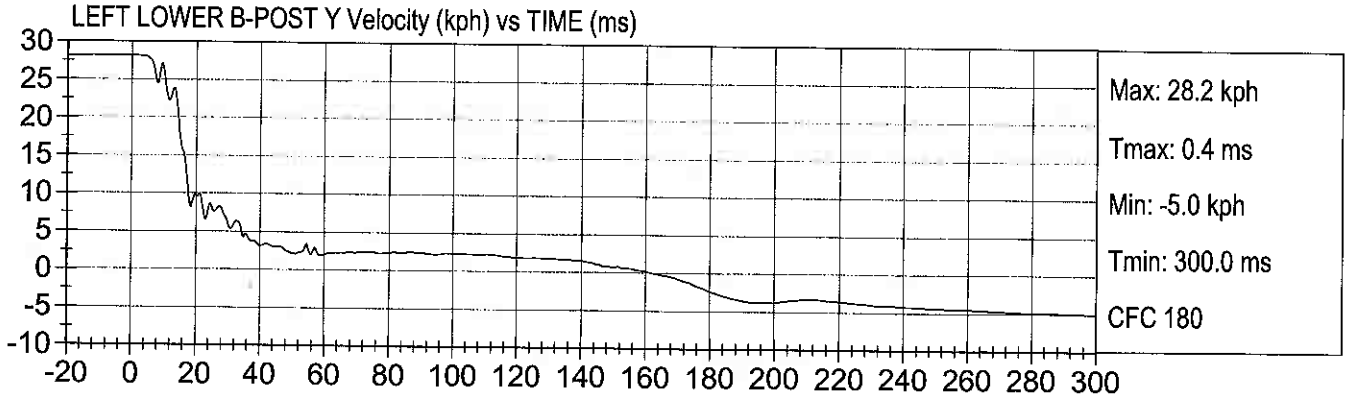
LEFT B-POST @ SILL Y Velocity (kph) vs TIME (ms)



LEFT LOWER B-POST Y (G's) vs TIME (ms)



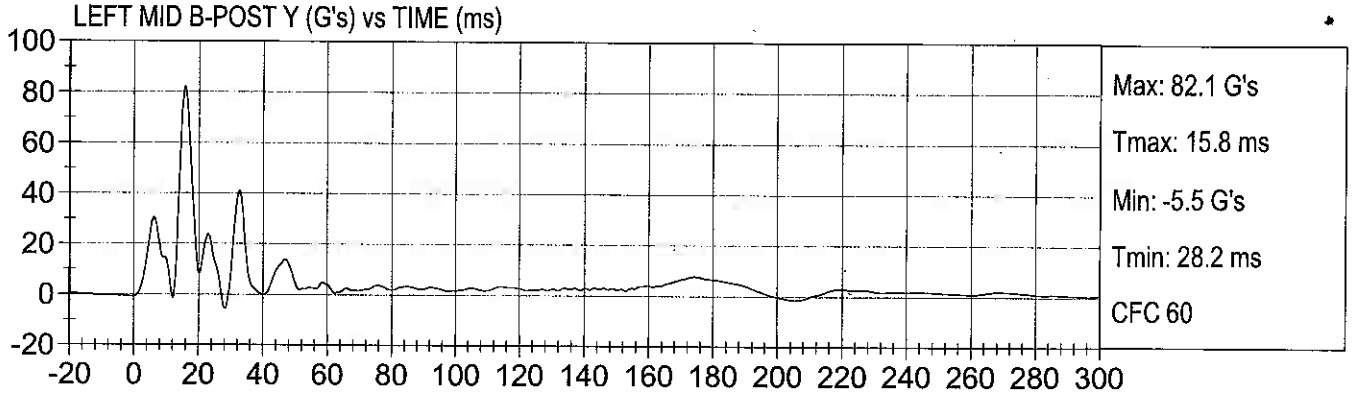
LEFT LOWER B-POST Y Velocity (kph) vs TIME (ms)



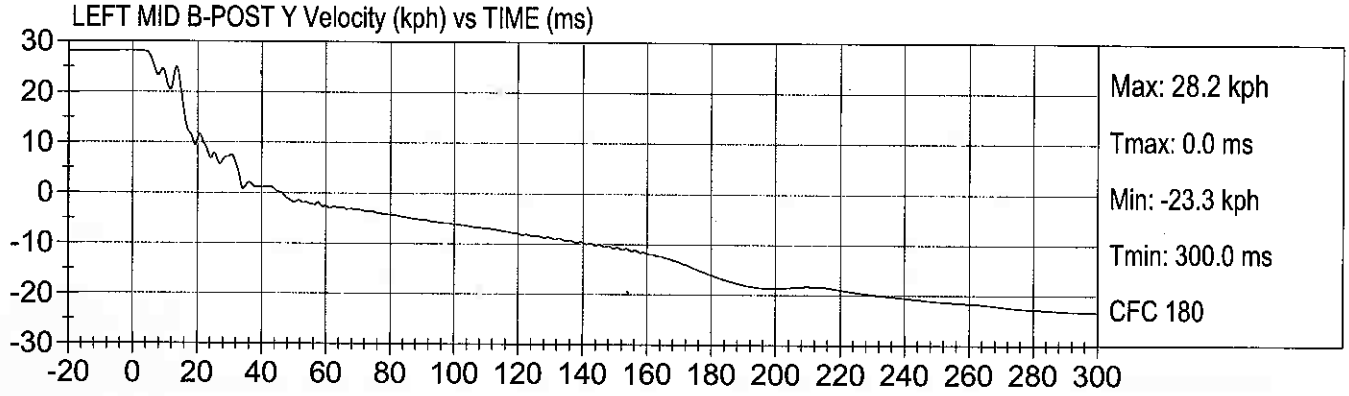
FMVSS 201 RIGID POLE
2008 HONDA CR-V C85305

Test Date: 07/09/2008
Speed: 17.5 mph (28.2 km/h)

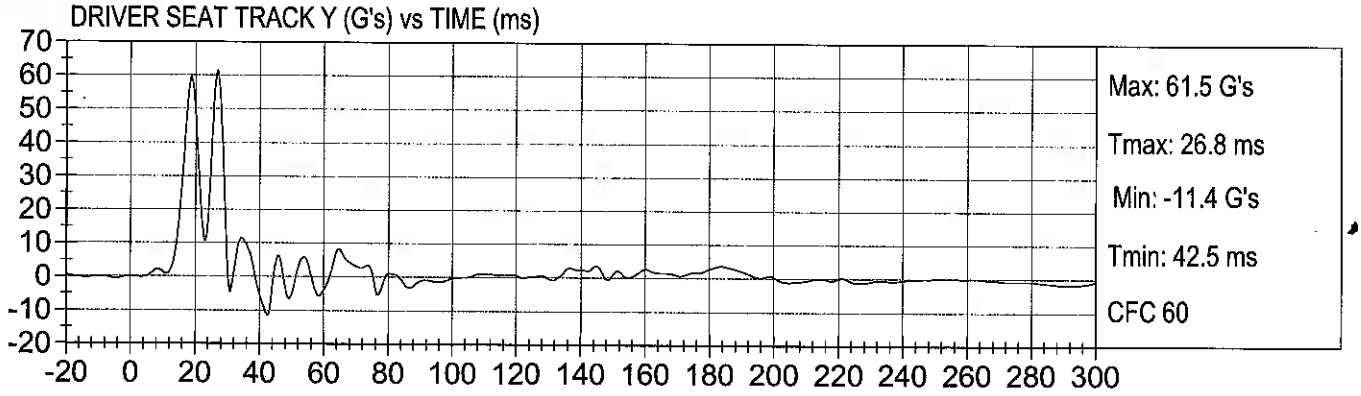
LEFT MID B-POST Y (G's) vs TIME (ms)



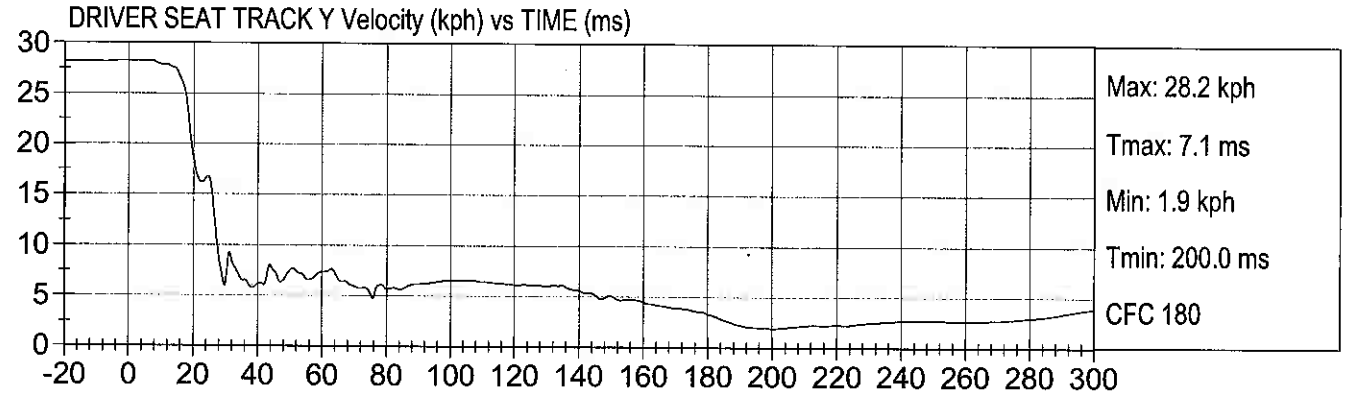
LEFT MID B-POST Y Velocity (kph) vs TIME (ms)



DRIVER SEAT TRACK Y (G's) vs TIME (ms)

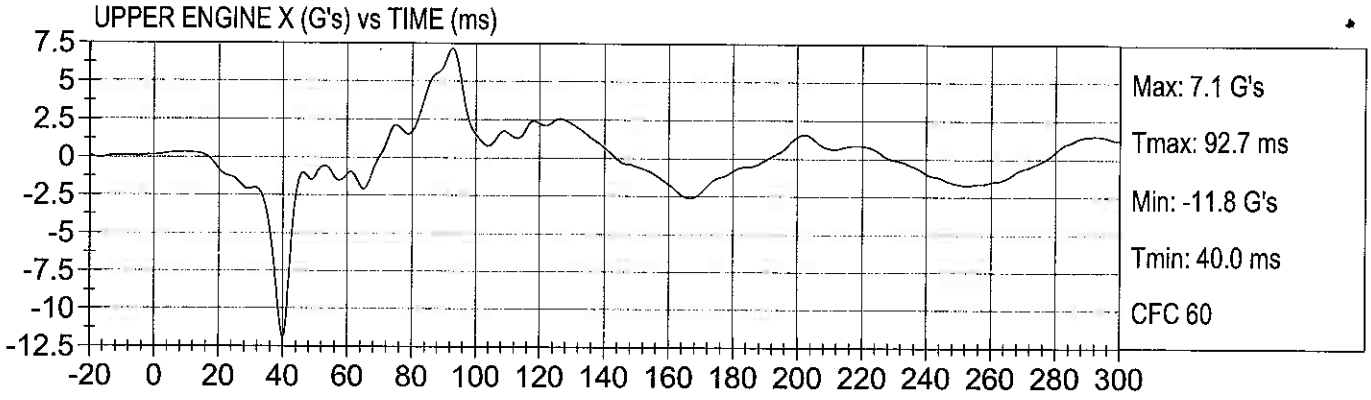


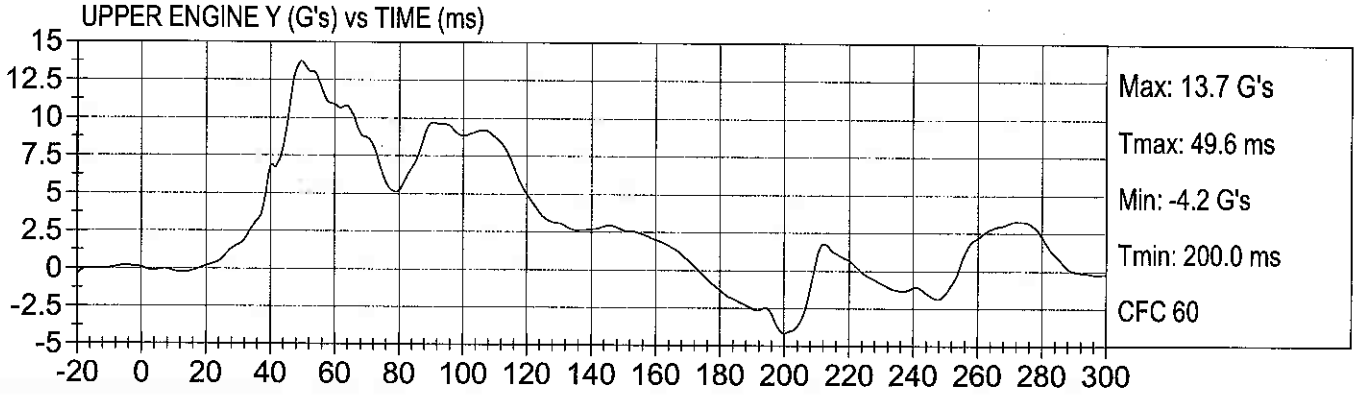
DRIVER SEAT TRACK Y Velocity (kph) vs TIME (ms)

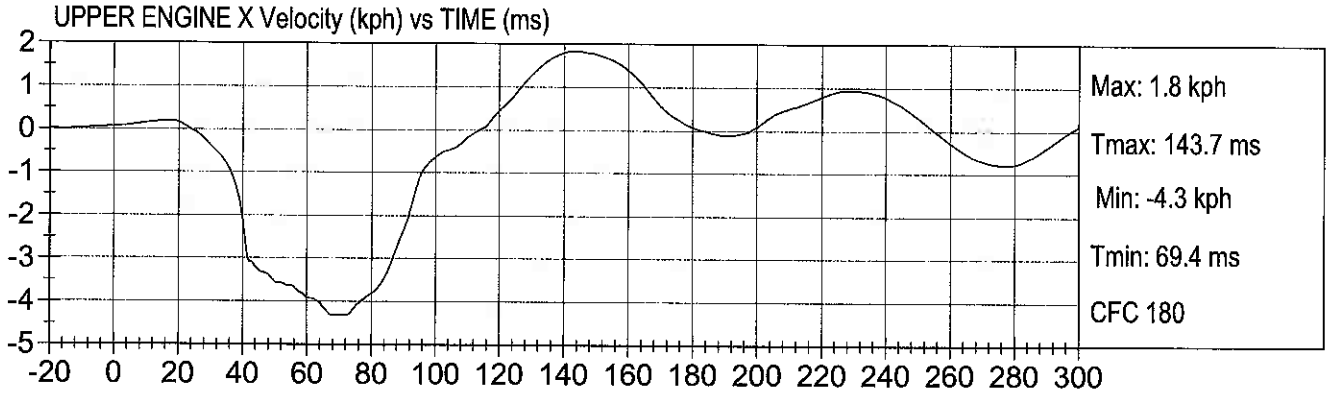


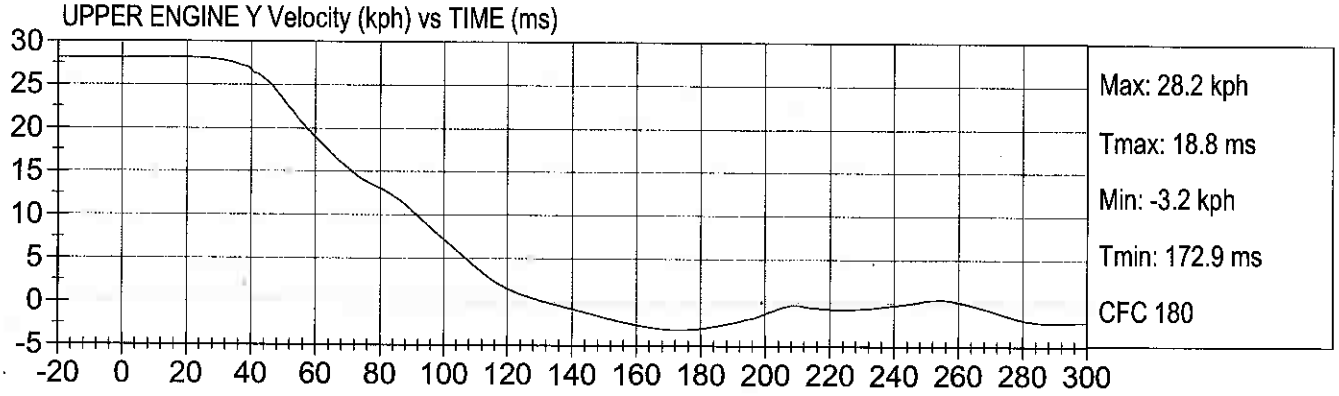
FMVSS 201 RIGID POLE
2008 HONDA CR-V C85305

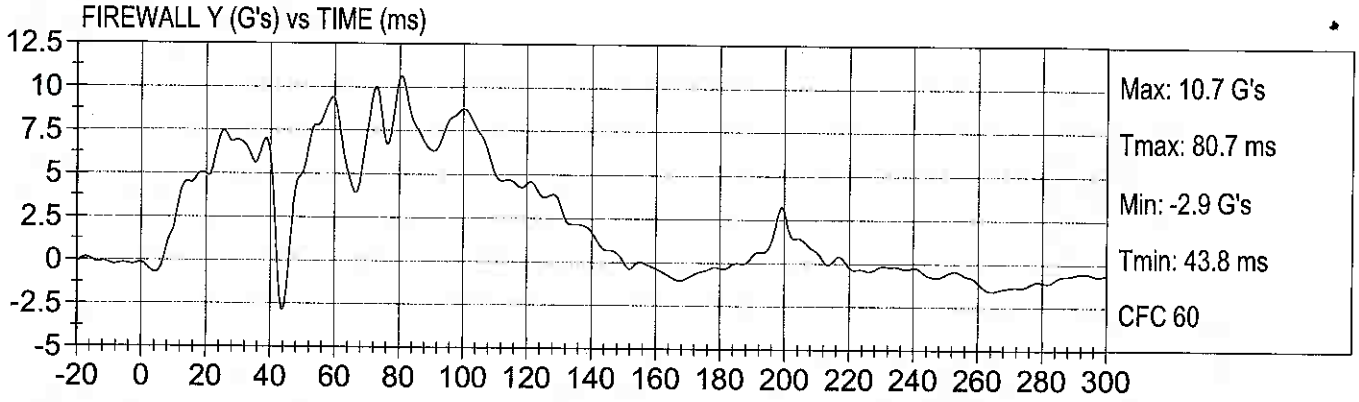
Test Date: 07/09/2008
Speed: 17.5 mph (28.2 km/h)

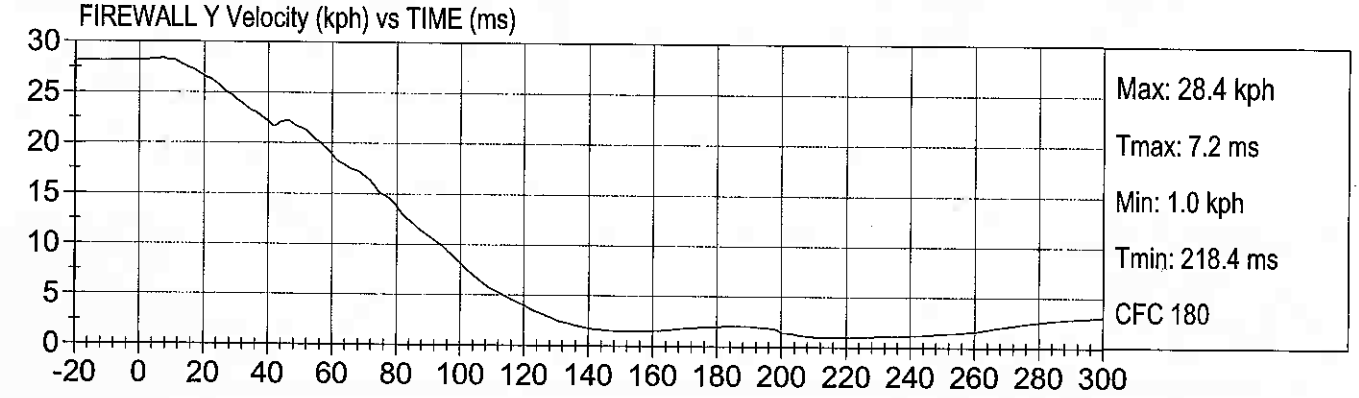


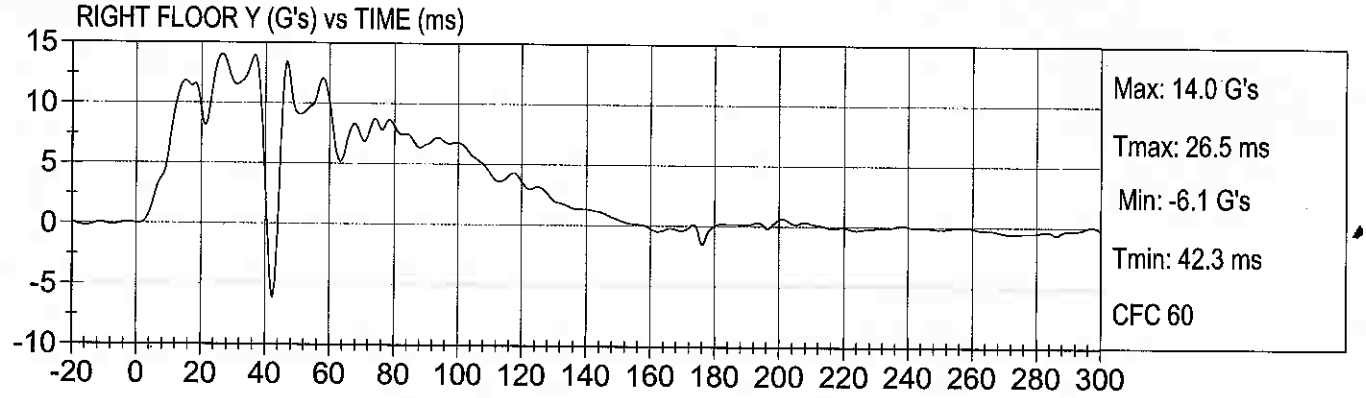


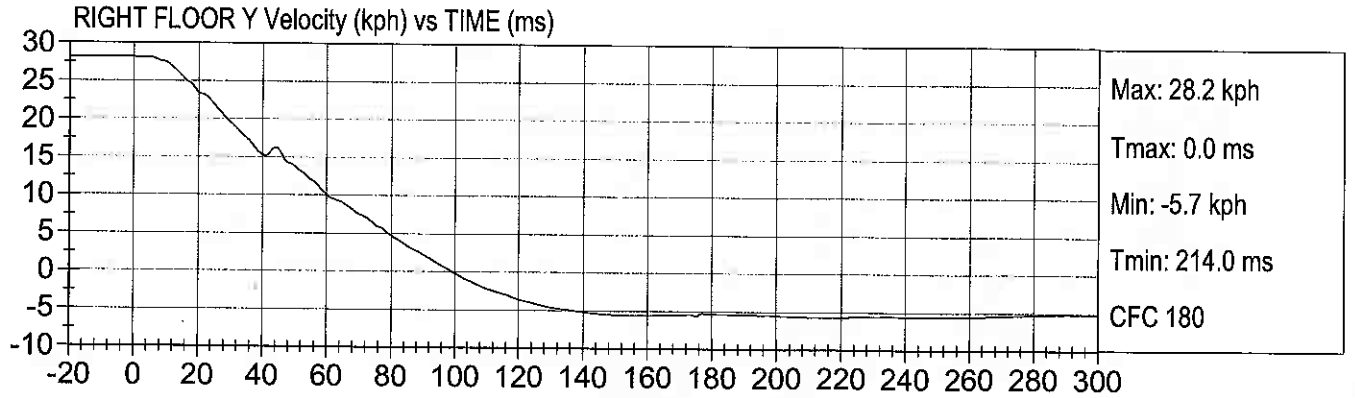





FIREWALL Y (G's) vs TIME (ms)
12.5
10
7.5
5
2.5
0
-2.5
-5
-20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300
Max: 10.7 G's
Tmax: 80.7 ms
Min: -2.9 G's
Tmin: 43.8 ms
CFC 60


FIREWALL Y Velocity (kph) vs TIME (ms)
30
25
20
15
10
5
0
-20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300
Max: 28.4 kph
Tmax: 7.2 ms
Min: 1.0 kph
Tmin: 218.4 ms
CFC 180

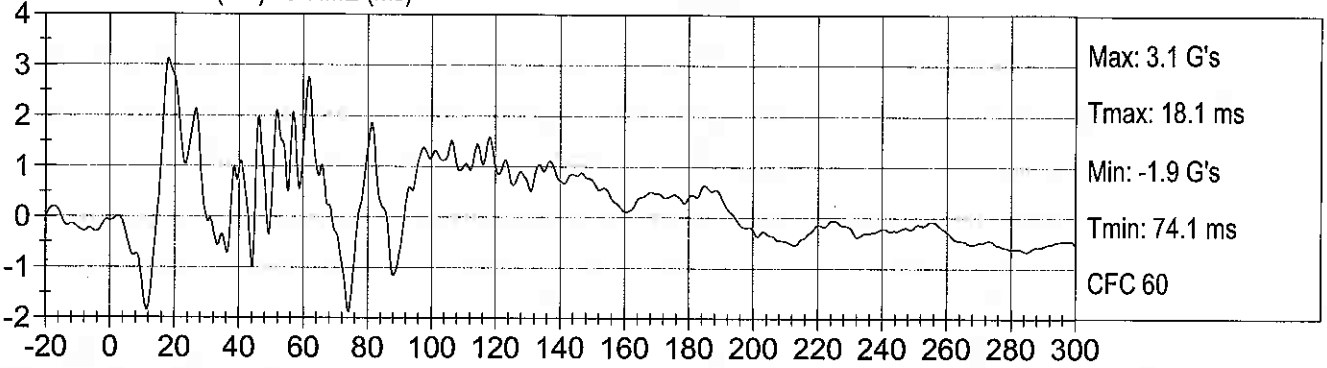

RIGHT FLOOR Y (G's) vs TIME (ms)
15
10
5
0
-5
-10
-20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300
Max: 14.0 G's
Tmax: 26.5 ms
Min: -6.1 G's
Tmin: 42.3 ms
CFC 60


RIGHT FLOOR Y Velocity (kph) vs TIME (ms)
30
25
20
15
10
5
0
-5
-10
-20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300
Max: 28.2 kph
Tmax: 0.0 ms
Min: -5.7 kph
Tmin: 214.0 ms
CFC 180

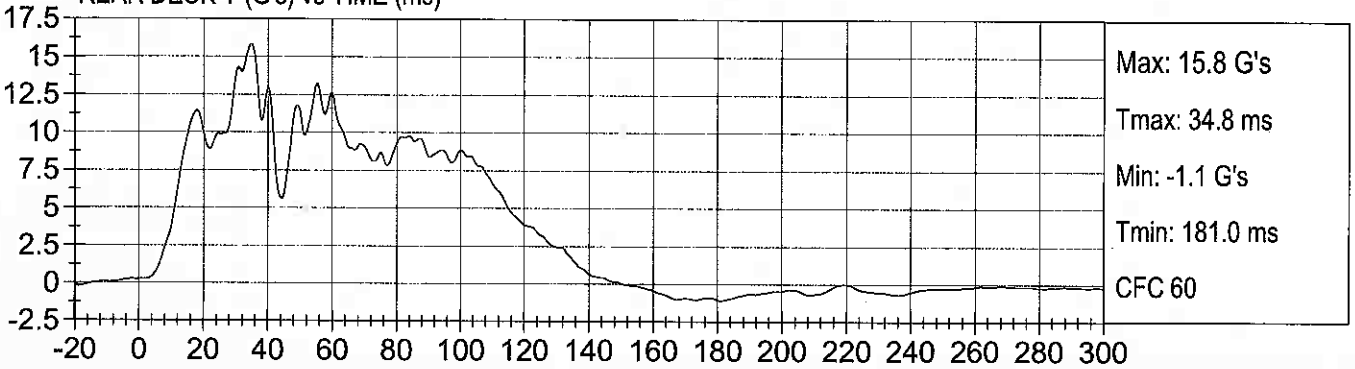
FMVSS 201 RIGID POLE
2008 HONDA CR-V C85305

Test Date: 07/09/2008
Speed: 17.5 mph (28.2 km/h)

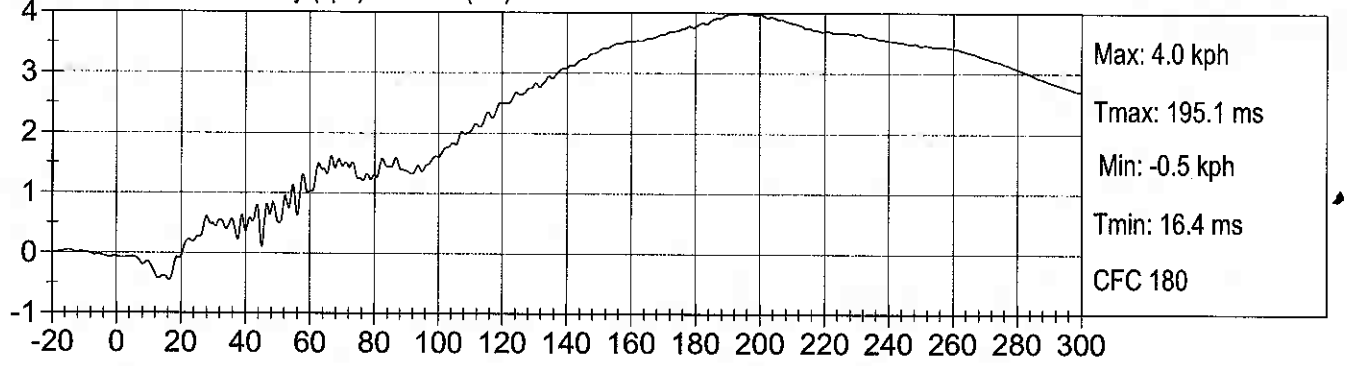
REAR DECK X (G's) vs TIME (ms)



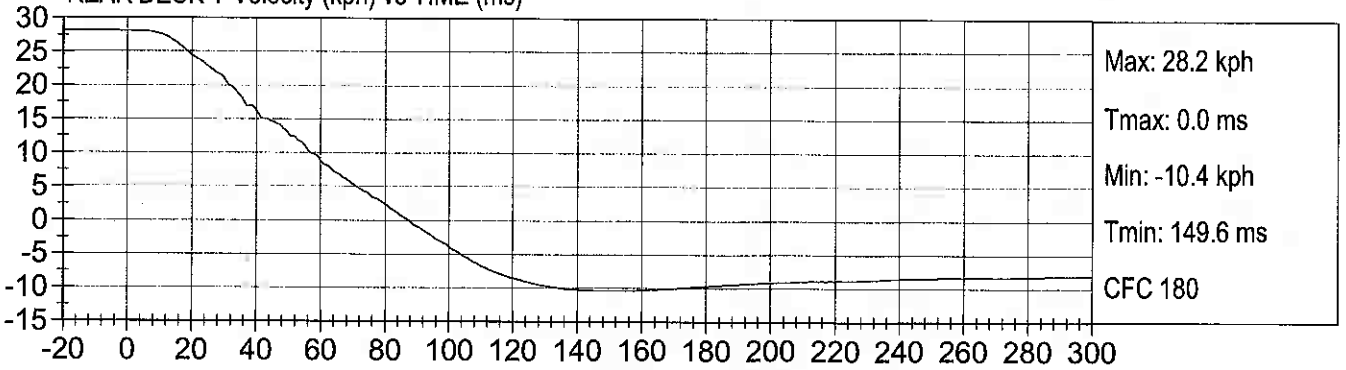
REAR DECK Y (G's) vs TIME (ms)



REAR DECK X Velocity (kph) vs TIME (ms)

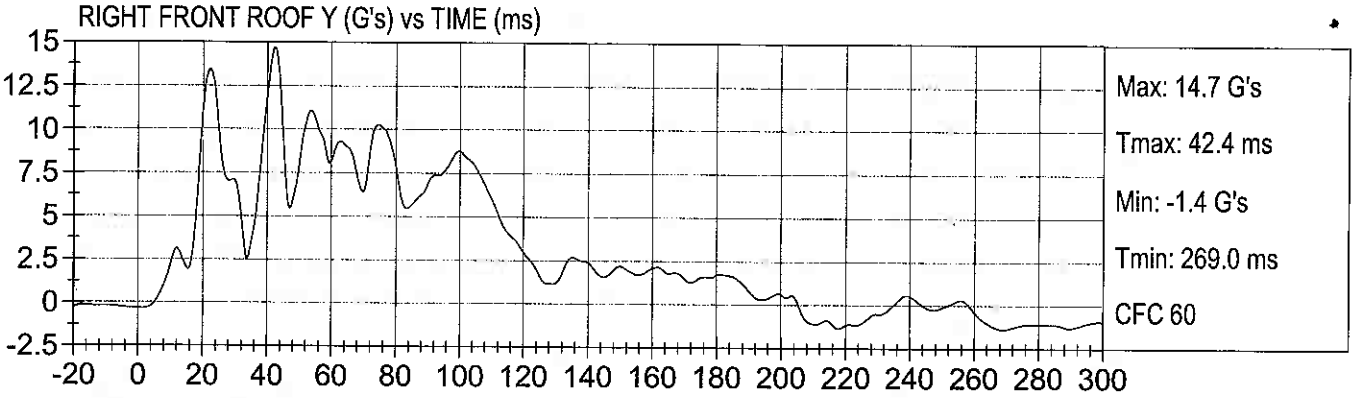


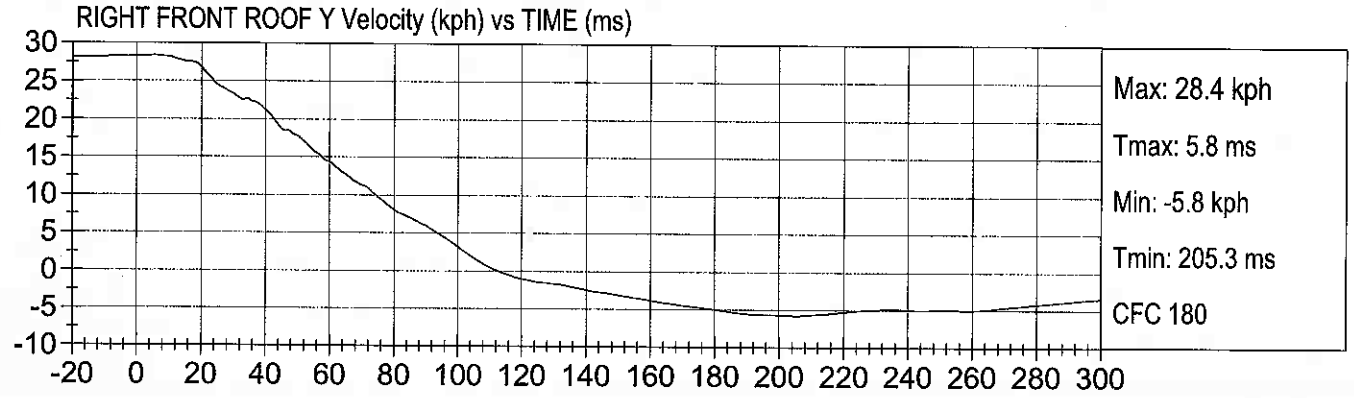
REAR DECK Y Velocity (kph) vs TIME (ms)



FMVSS 201 RIGID POLE
2008 HONDA CR-V C85305

Test Date: 07/09/2008
Speed: 17.5 mph (28.2 km/h)

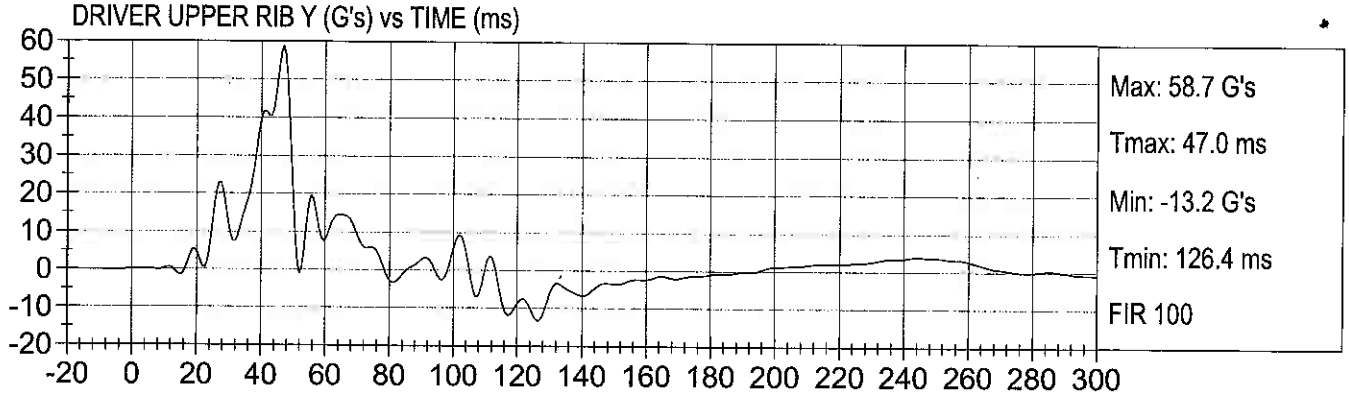




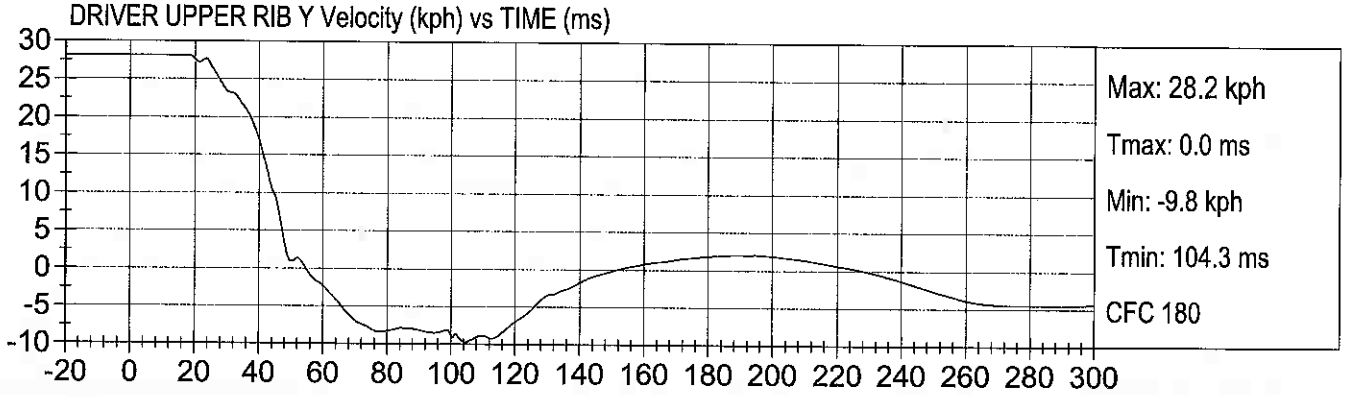
FMVSS 201 RIGID POLE
2008 HONDA CR-V C85305

Test Date: 07/09/2008
Speed: 17.5 mph (28.2 km/h)

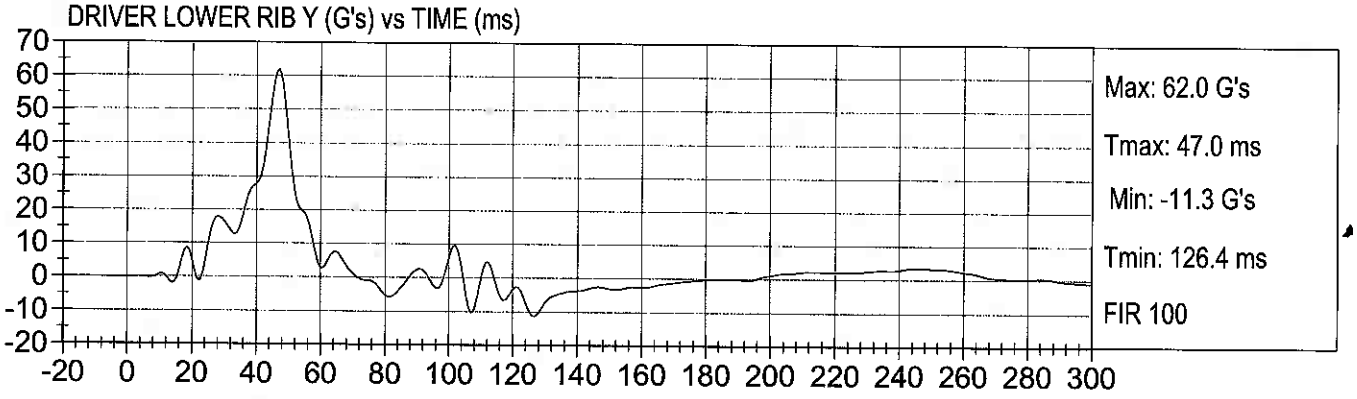
DRIVER UPPER RIB Y (G's) vs TIME (ms)



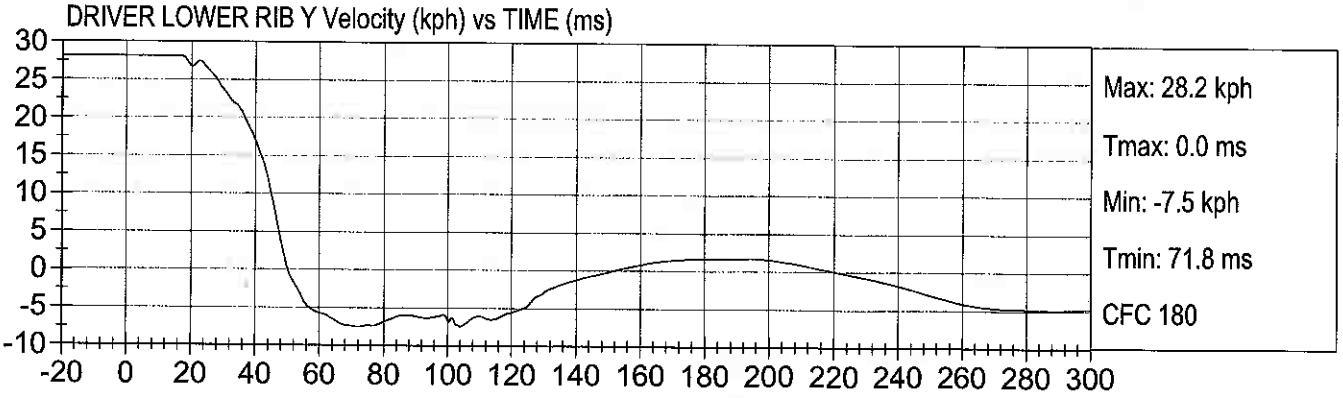
DRIVER UPPER RIB Y Velocity (kph) vs TIME (ms)



DRIVER LOWER RIB Y (G's) vs TIME (ms)



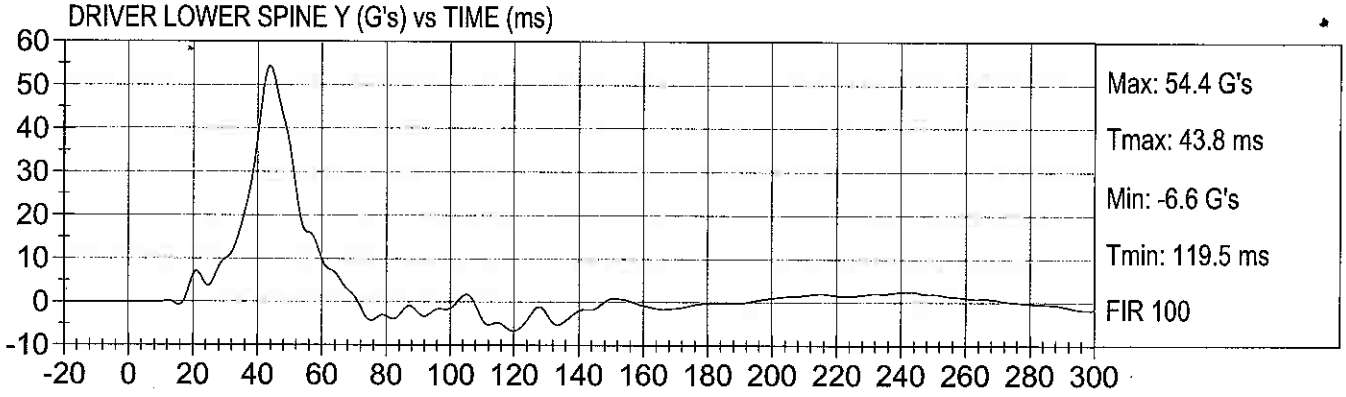
DRIVER LOWER RIB Y Velocity (kph) vs TIME (ms)



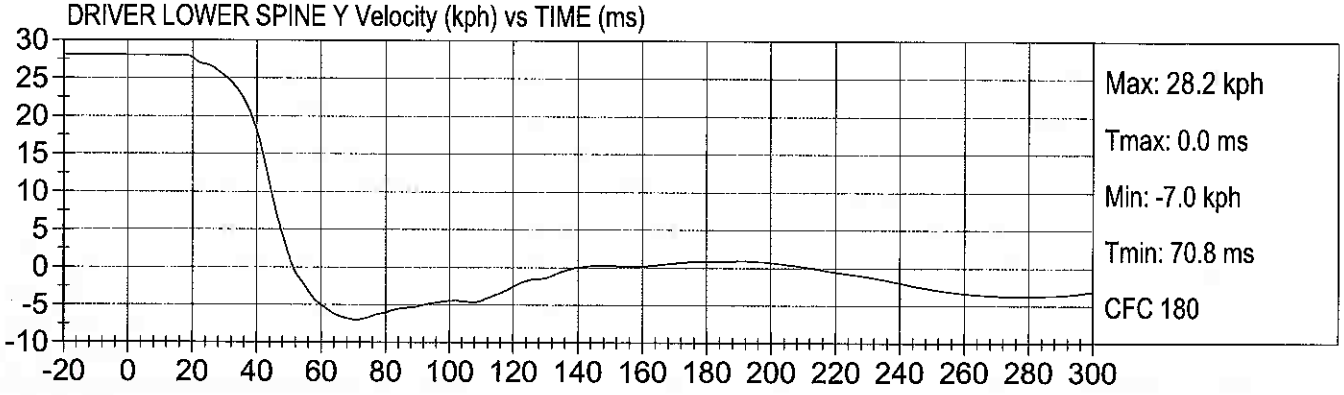
FMVSS 201 RIGID POLE
2008 HONDA CR-V C85305

Test Date: 07/09/2008
Speed: 17.5 mph (28.2 km/h)

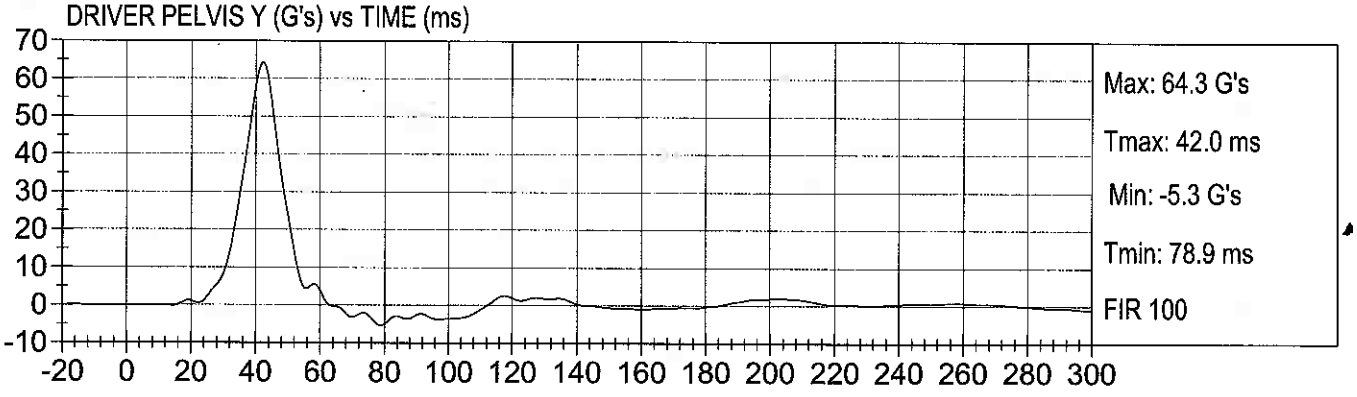
DRIVER LOWER SPINE Y (G's) vs TIME (ms)



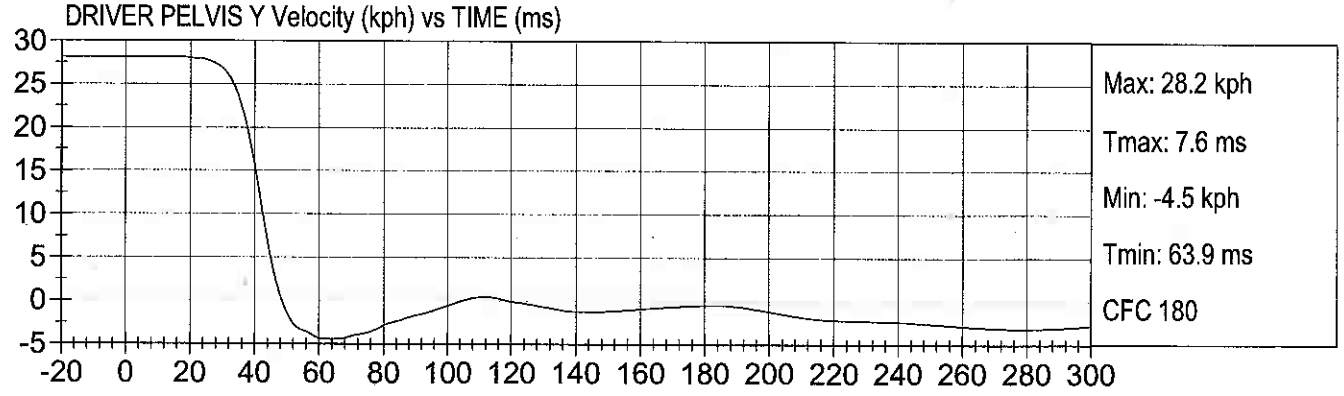
DRIVER LOWER SPINE Y Velocity (kph) vs TIME (ms)



DRIVER PELVIS Y (G's) vs TIME (ms)



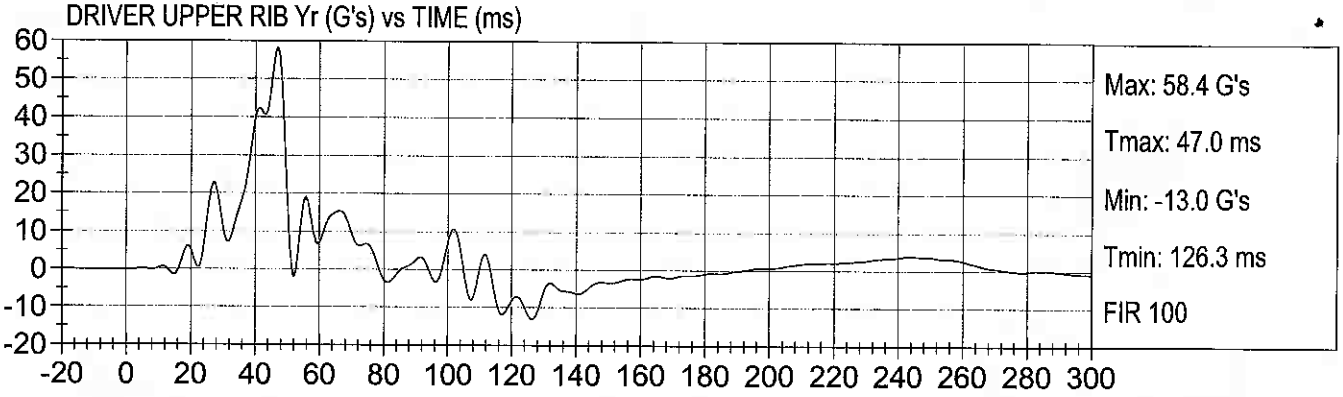
DRIVER PELVIS Y Velocity (kph) vs TIME (ms)



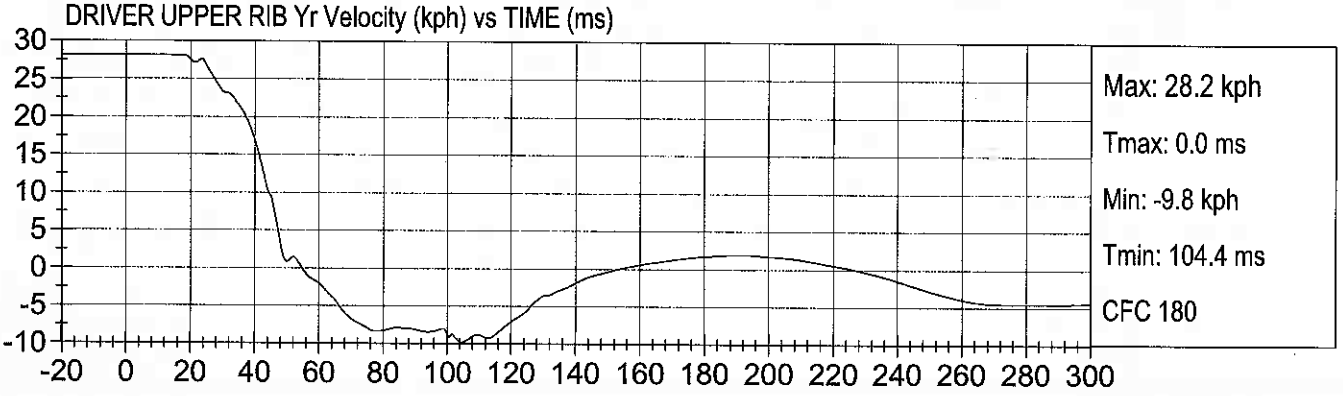
FMVSS 201 RIGID POLE
2008 HONDA CR-V C85305

Test Date: 07/09/2008
Speed: 17.5 mph (28.2 km/h)

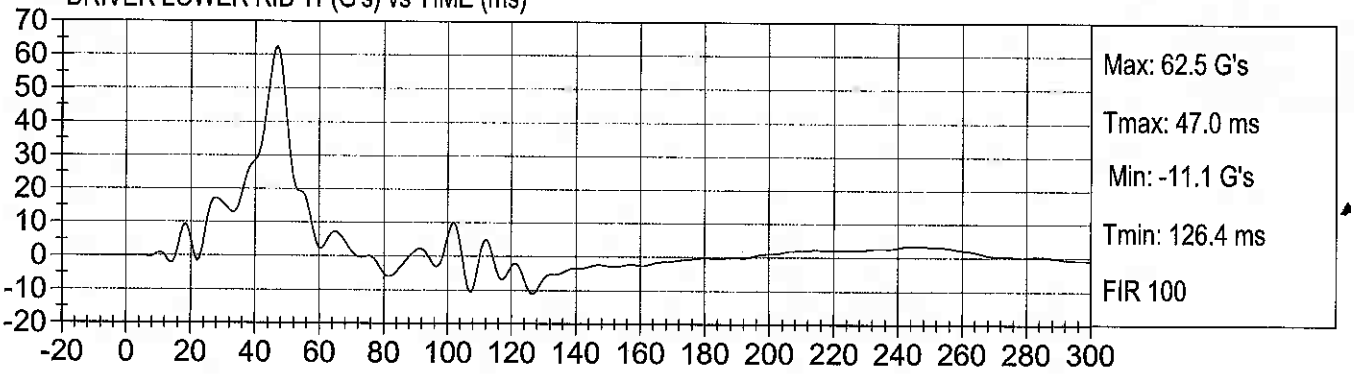
DRIVER UPPER RIB Yr (G's) vs TIME (ms)



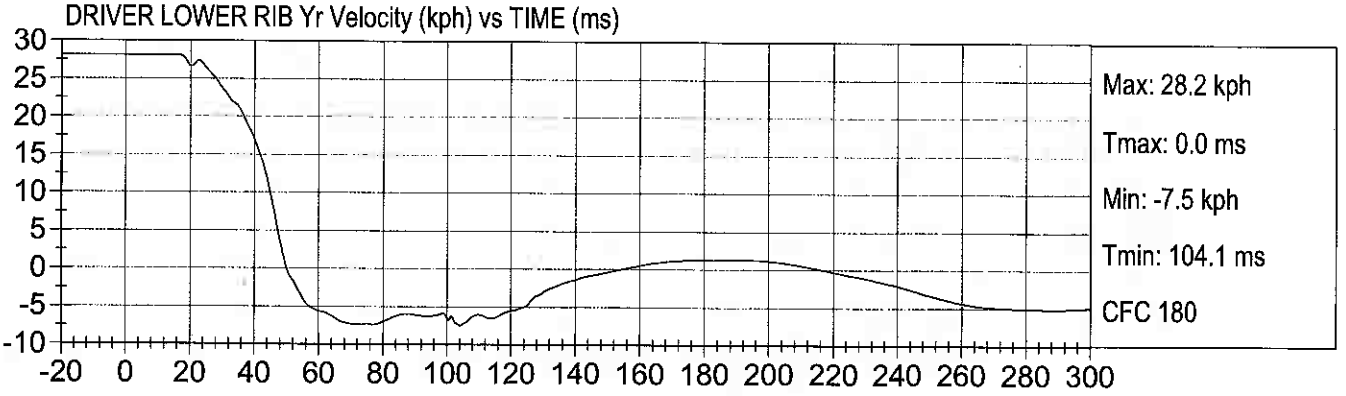
DRIVER UPPER RIB Yr Velocity (kph) vs TIME (ms)



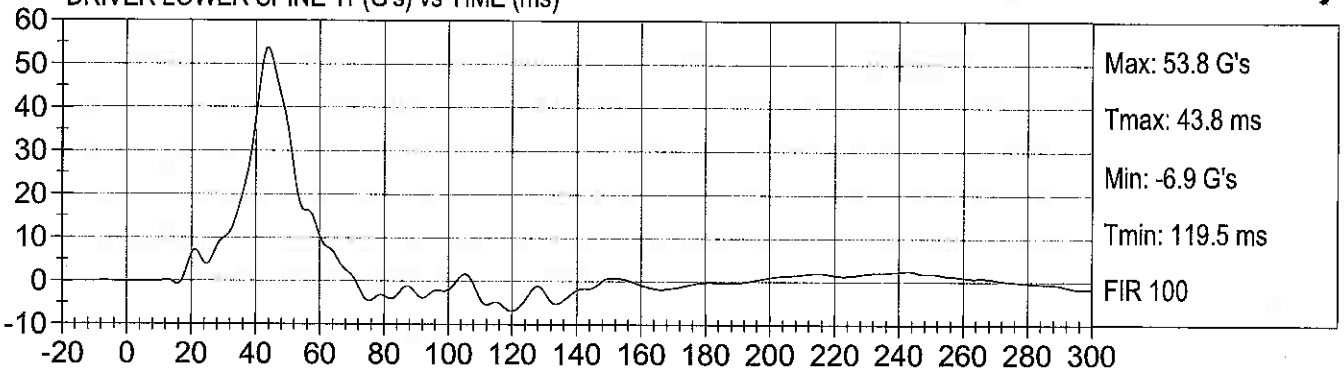
DRIVER LOWER RIB Yr (G's) vs TIME (ms)



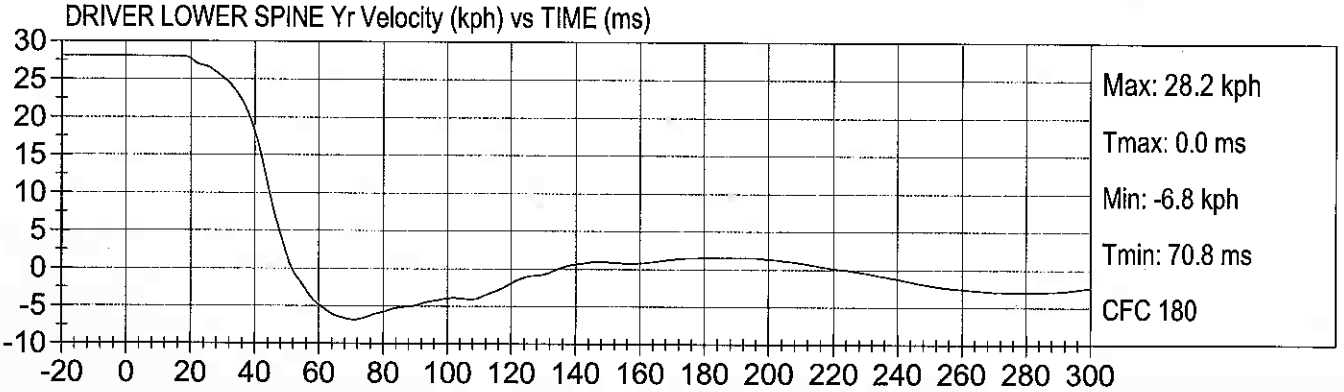
DRIVER LOWER RIB Yr Velocity (kph) vs TIME (ms)



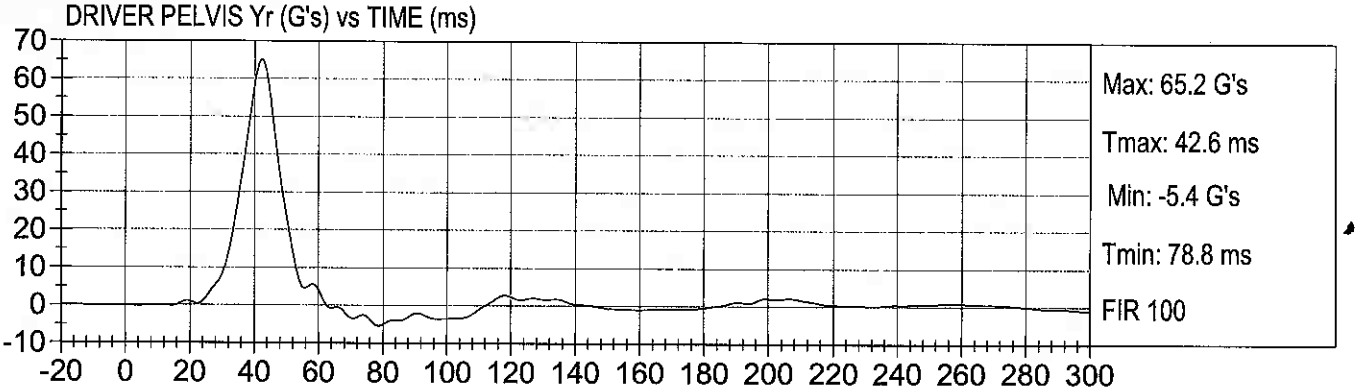
DRIVER LOWER SPINE Yr (G's) vs TIME (ms)



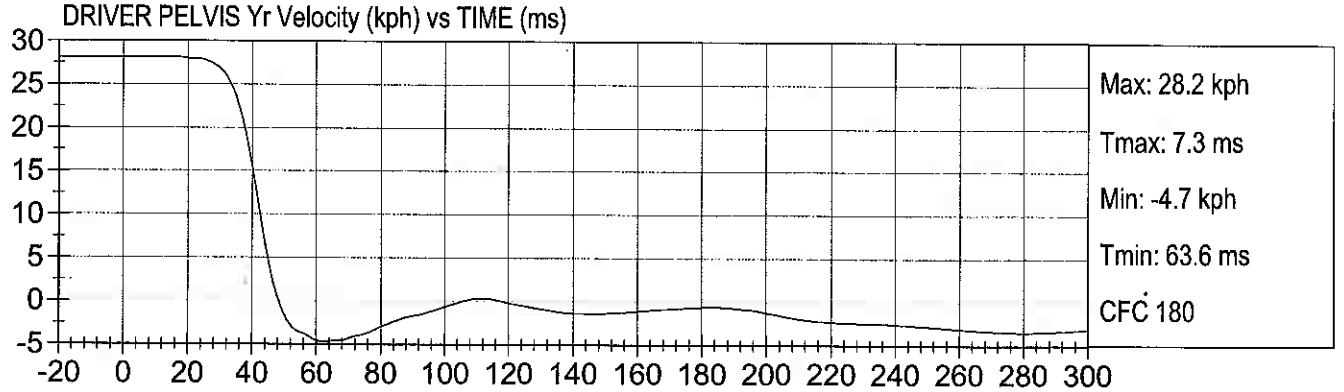
DRIVER LOWER SPINE Yr Velocity (kph) vs TIME (ms)



DRIVER PELVIS Yr (G's) vs TIME (ms)



DRIVER PELVIS Yr Velocity (kph) vs TIME (ms)

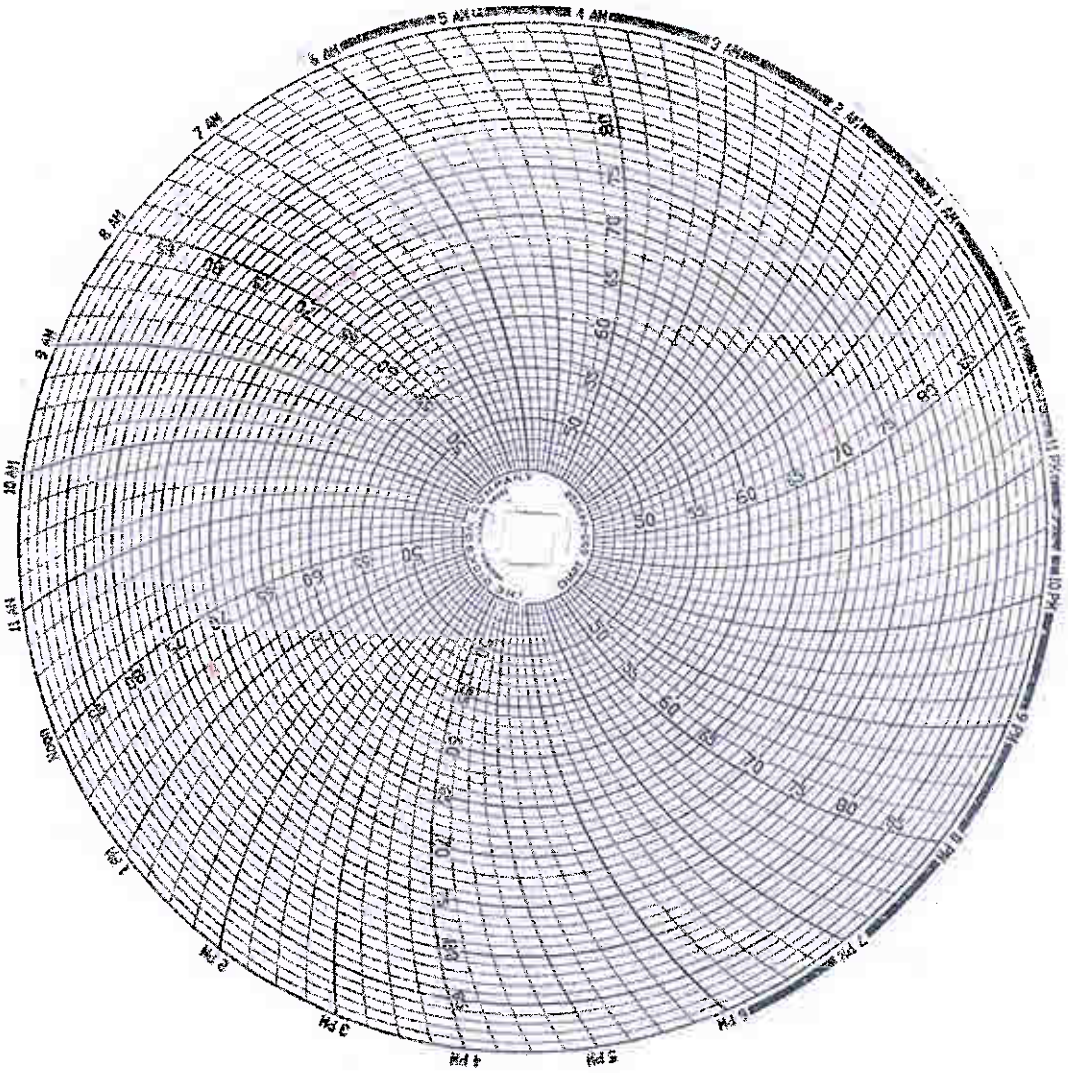


APPENDIX C

SID/HIII CONFIGURATION AND PERFORMANCE VERIFICATION DATA

Vehicle and Dummy Temperature

Test Vehicle:	2008 Honda CR-V	NHTSA No.	C85305
Test Program:	FMVSS 201P	Test Date:	July 9, 2008



SID/HIII Calibration Data Sheet

Side Impact Dummy

Head Drop Calibration (Lateral)

ATD Serial No: 037 **Test I.D:** D081551

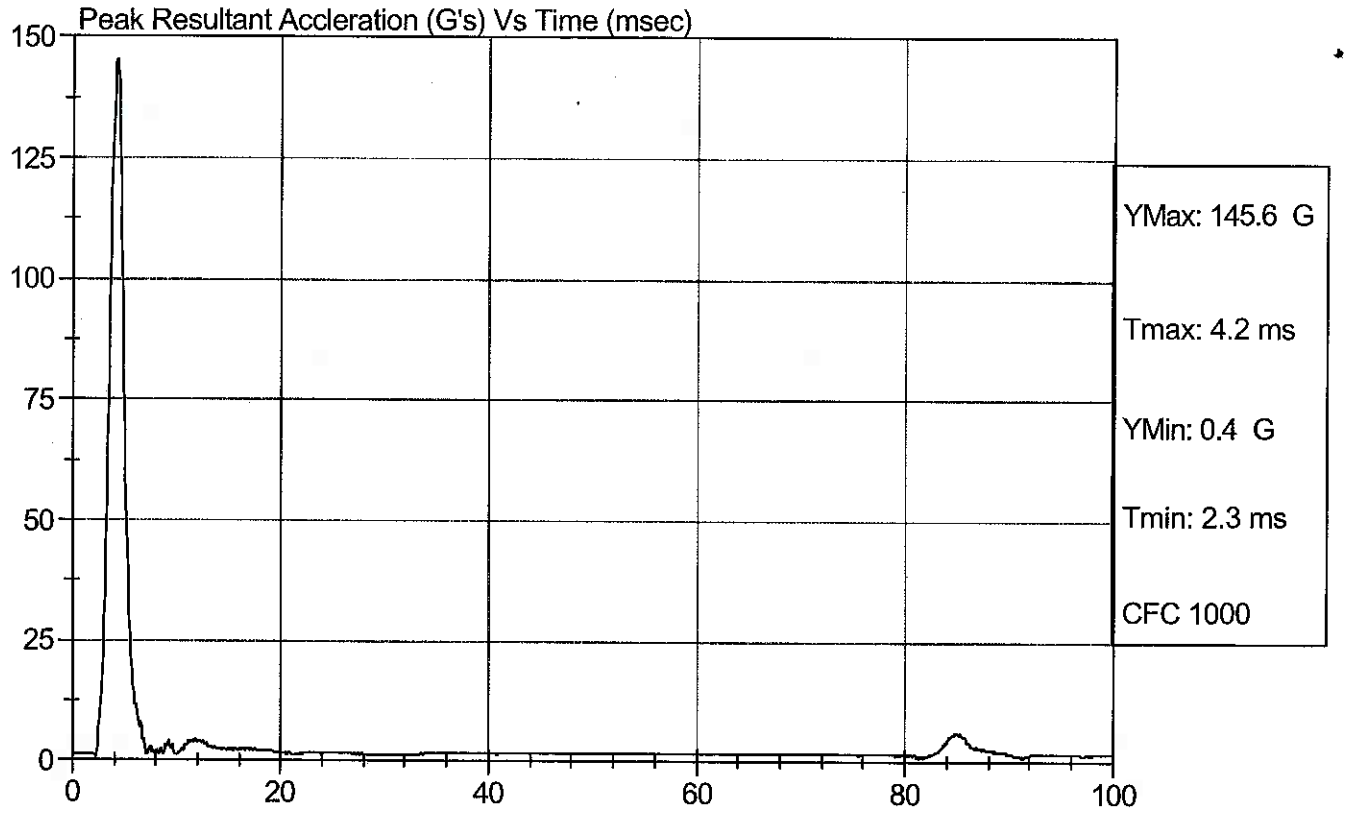
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	deg C	18.9 to 25.5	21.0	Pass
Laboratory Relative Humidity	%	10 to 70	40	Pass
Peak Resultant Acceleration	G's	120 to 150	146	Pass
Is Resultant Curve Unimodal?	N/A	15% of peak	Yes	Pass
Peak Longitudnal Acceleration	G's	+/- 15	-7.9	Pass
		Overall Test Results		Pass

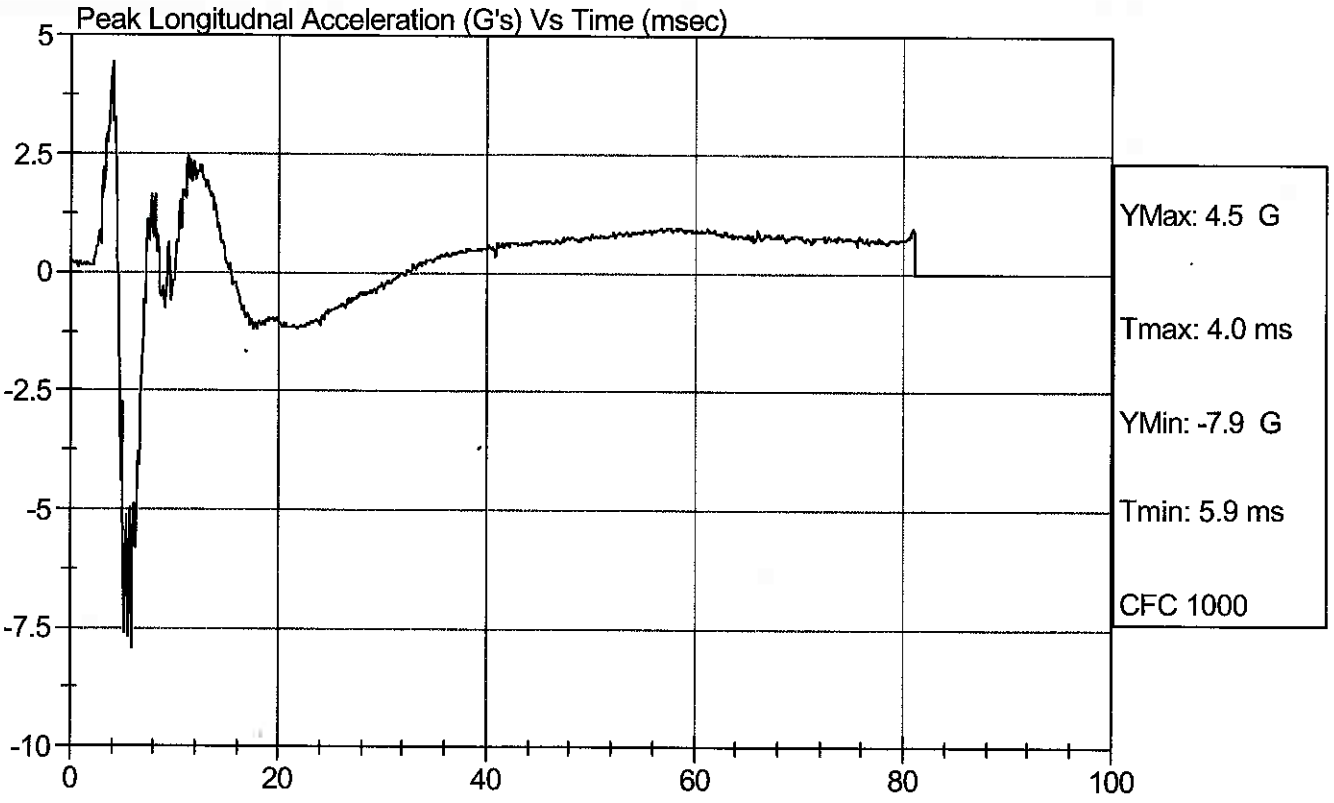
Laboratory Technician

6/4/08
Test Date

Approved By

mga	Test Description: Head Drop	Test Date: 6/4/08
	Component: D081551	Speed: 0 ft/s, 0 m/s





SID/HIII Calibration Data Sheet

Side Impact Dummy

Thorax Impact Test

ATD Serial No: 037 **Test I.D:** D081552

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	deg C	18.9 - 25.5	21.5	Pass
Laboratory Relative Humidity	%	10 to 70	44	Pass
Probe Velocity	m/s	4.22 - 4.31	4.27	Pass
Upper Rib	G's	37 - 46	45	Pass
Lower Rib	G's	37 - 46	41	Pass
Lower Spine	G's	15 - 22	21	Pass
		Overall Test Results		Pass

Laboratory Technician

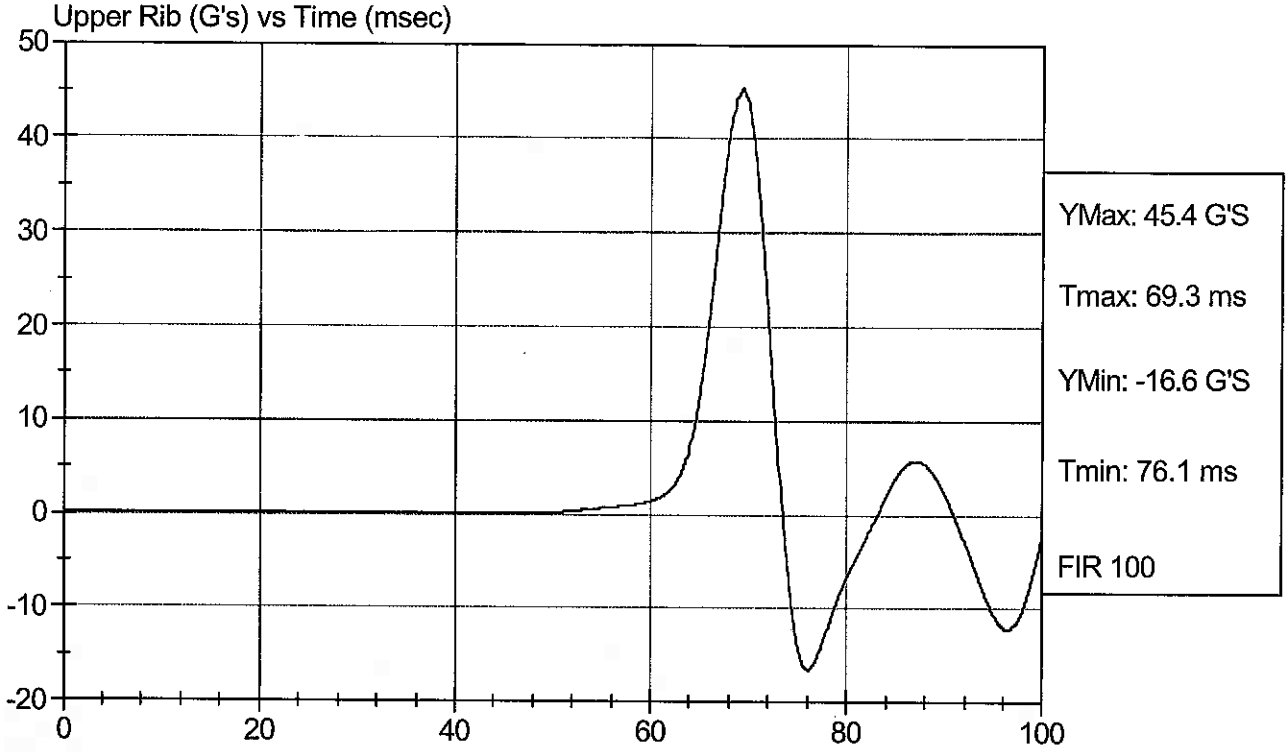
6/4/08
Test Date

Approved By

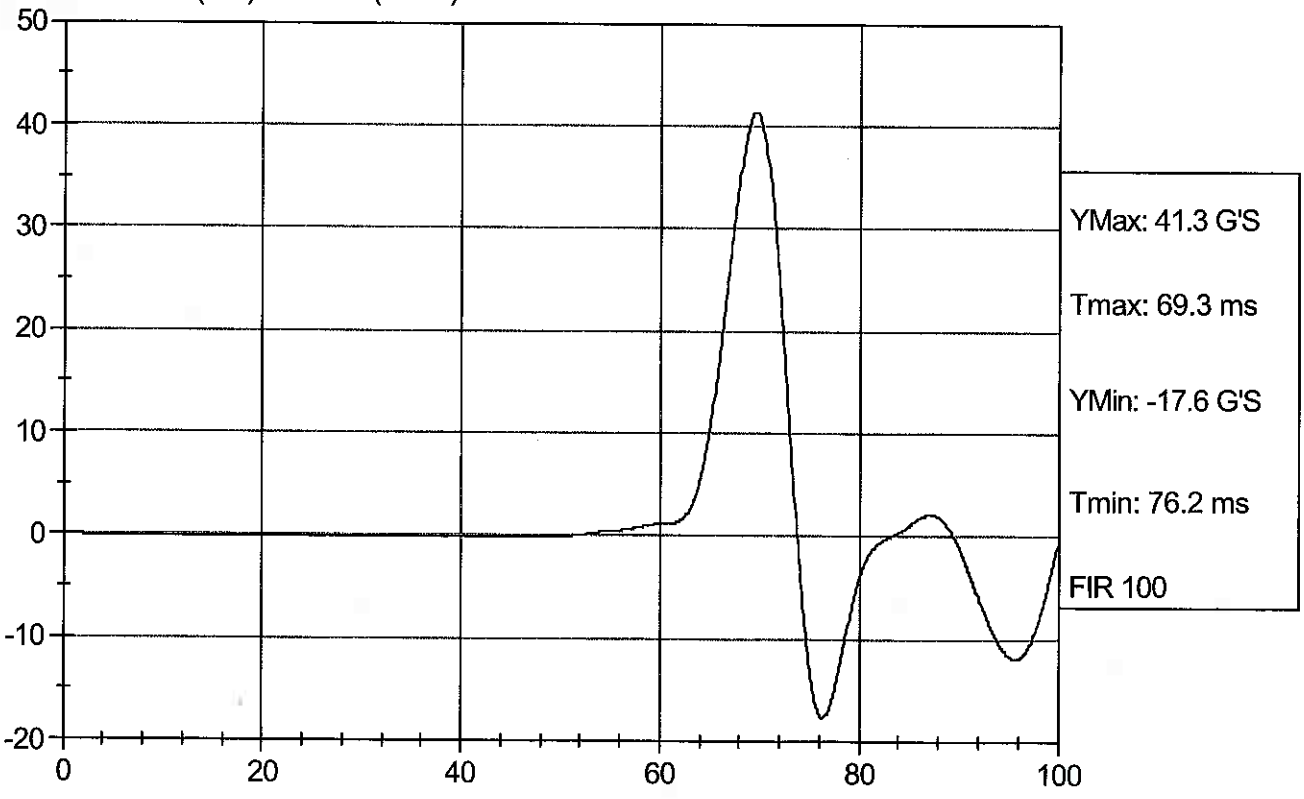
Test Desc: Thorax Impact
Component ID: D081552

Test Date: 6/4/08
Speed: 14.01 ft/sec, 4.27 m/sec

Upper Rib (G's) vs Time (msec)

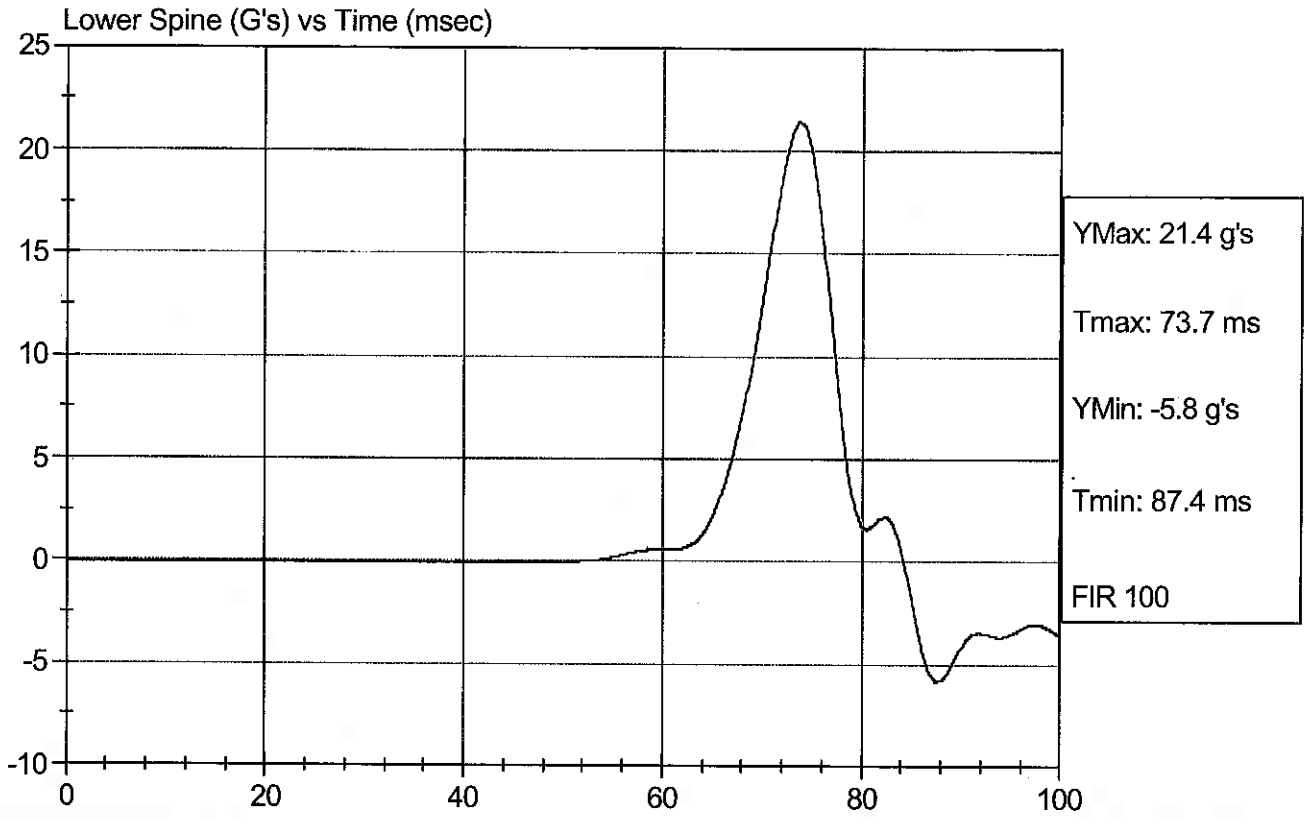


Lower Rib (G's) vs Time (msec)



Test Desc: Thorax Impact
Component ID: D081552

Test Date: 6/4/08
Speed: 14.01 ft/sec, 4.27 m/sec



SID/HIII Calibration Data Sheet

Side Impact Dummy

Pelvis Impact Test

ATD Serial No: 037 **Test I.D:** D081553

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	deg C	18.9 to 25.5	21.8	Pass
Laboratory Relative Humidity	%	10 to 70	46	Pass
Probe Velocity	m/s	4.27 - 4.33	4.30	Pass
Pelvis Acceleration	G's	40 - 60	45	Pass
		Overall Test Results		Pass

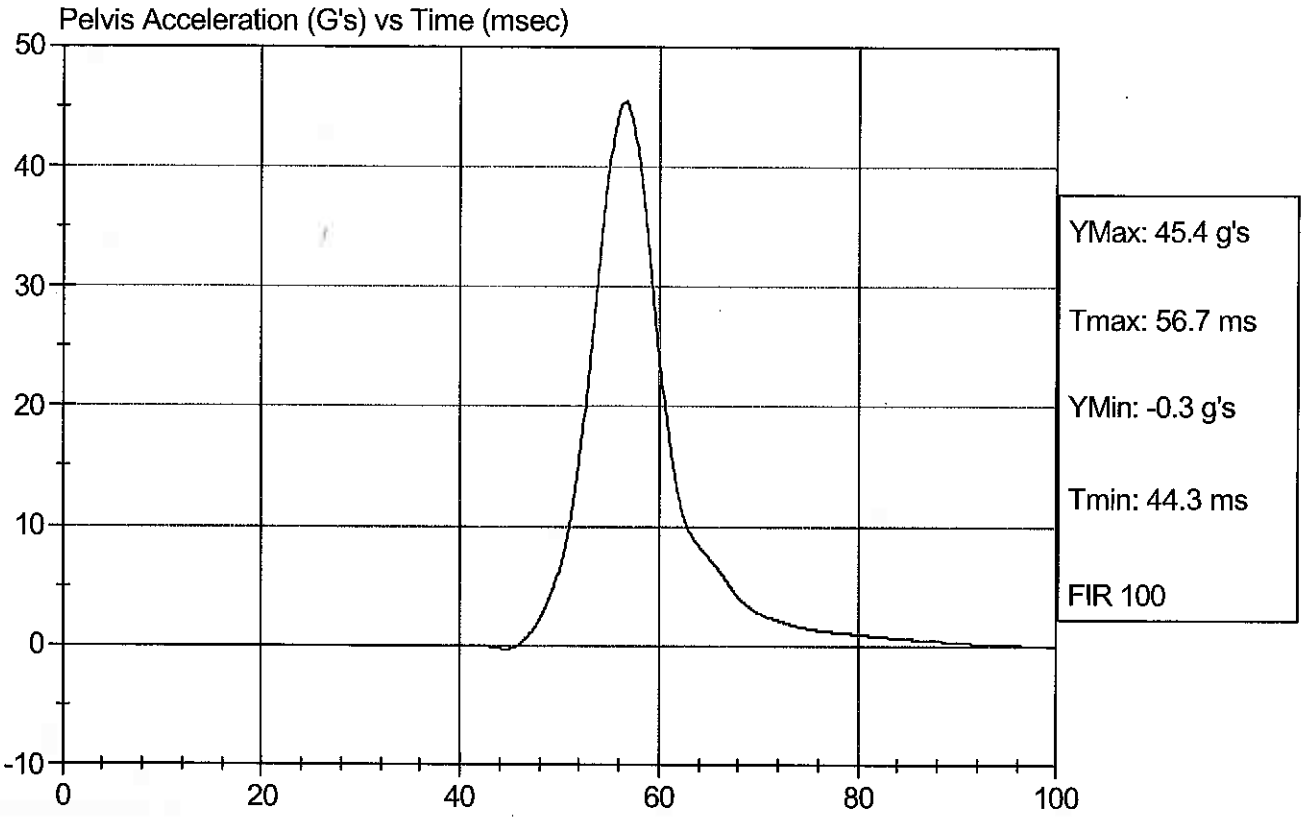
Laboratory Technician

6/4/08
Test Date

Approved By

Test Desc: Pelvis Impact
Component ID: D081553

Test Date: 6/4/08
Speed: 14.12 ft/sec, 4.30 m/sec



SID/HIII Calibration Data Sheet

Side Impact Dummy

Abdominal Compression Calibration (Pre-Load = 10 lbs)

ATD Serial No: 037 **Test I.D:** D081554

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	deg C	18.9 - 25.5	21.5	Pass
Laboratory Relative Humidity	%	10 to 70	42	Pass
Force At 12.7 mm	N	104 -162	132	Pass
Force At 19 mm	N	163 - 222	183	Pass
Force At 25.4 mm	N	222 - 280	250	Pass
Force At 33 mm	N	325 - 391	348	Pass
		Overall Test Results		Pass

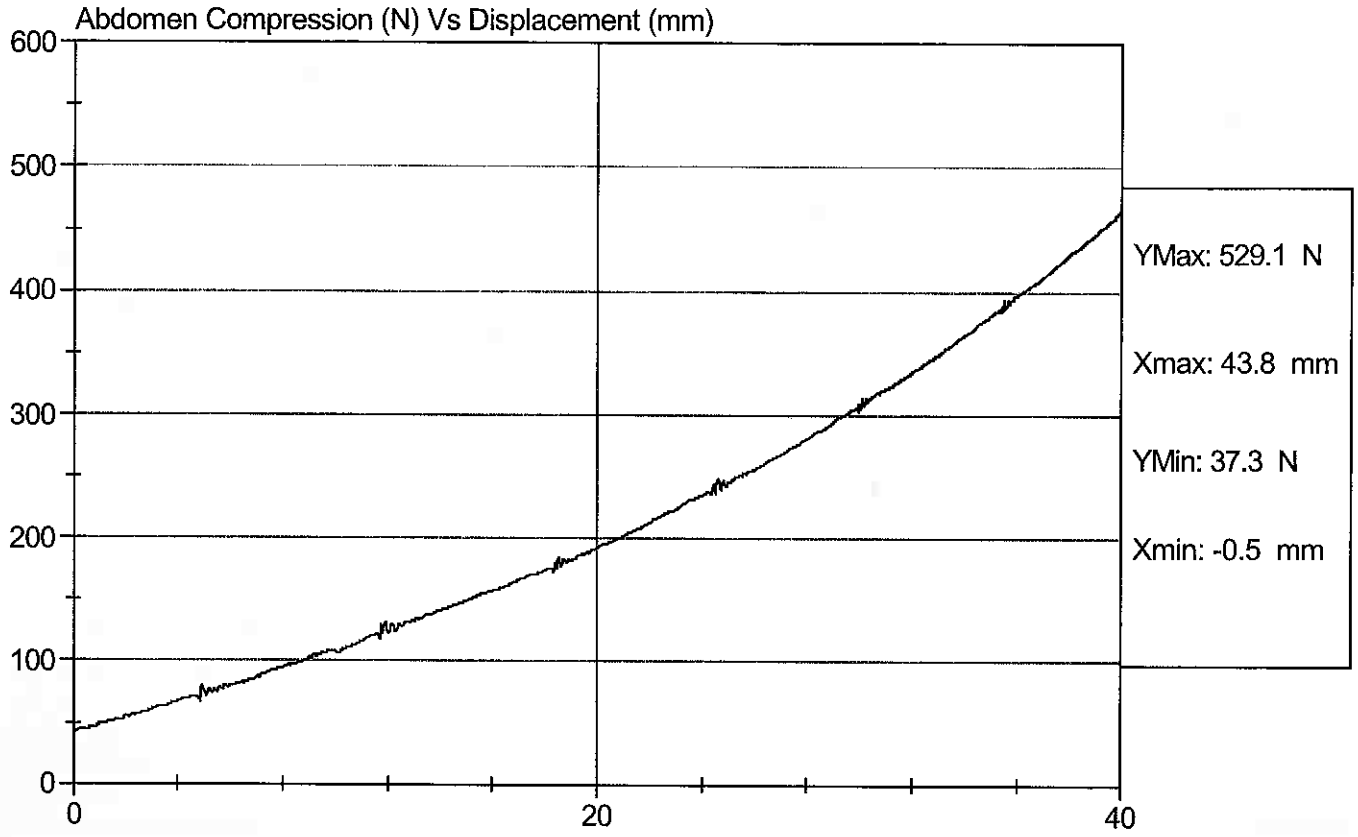
Laboratory Technician

6/4/08
Test Date

Approved By

Test Description: Abdomen Compression | Test Date: 6/4/08

Component: D081554 | Speed: 0 ft/sec, 0 m/sec



SID/HIII Calibration Data Sheet

Side Impact Dummy

Lumbar Flexion Calibration

ATD Serial No: 037 **Test I.D:** D081555

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	deg C	18.9 - 25.5	21.4	Pass
Laboratory Relative Humidity	%	10 to 70	43	Pass
Force At 0 deg	N	0 - 26.7	0	Pass
Force At 20 deg	N	97.9 - 151.2	123.7	Pass
Force At 30 deg	N	151.2 - 204.6	167.4	Pass
Force At 40 deg	N	204.6 - 258.0	224.1	Pass
Return Angle	Deg	12 Maximum	6	Pass
		Overall Test Results		Pass

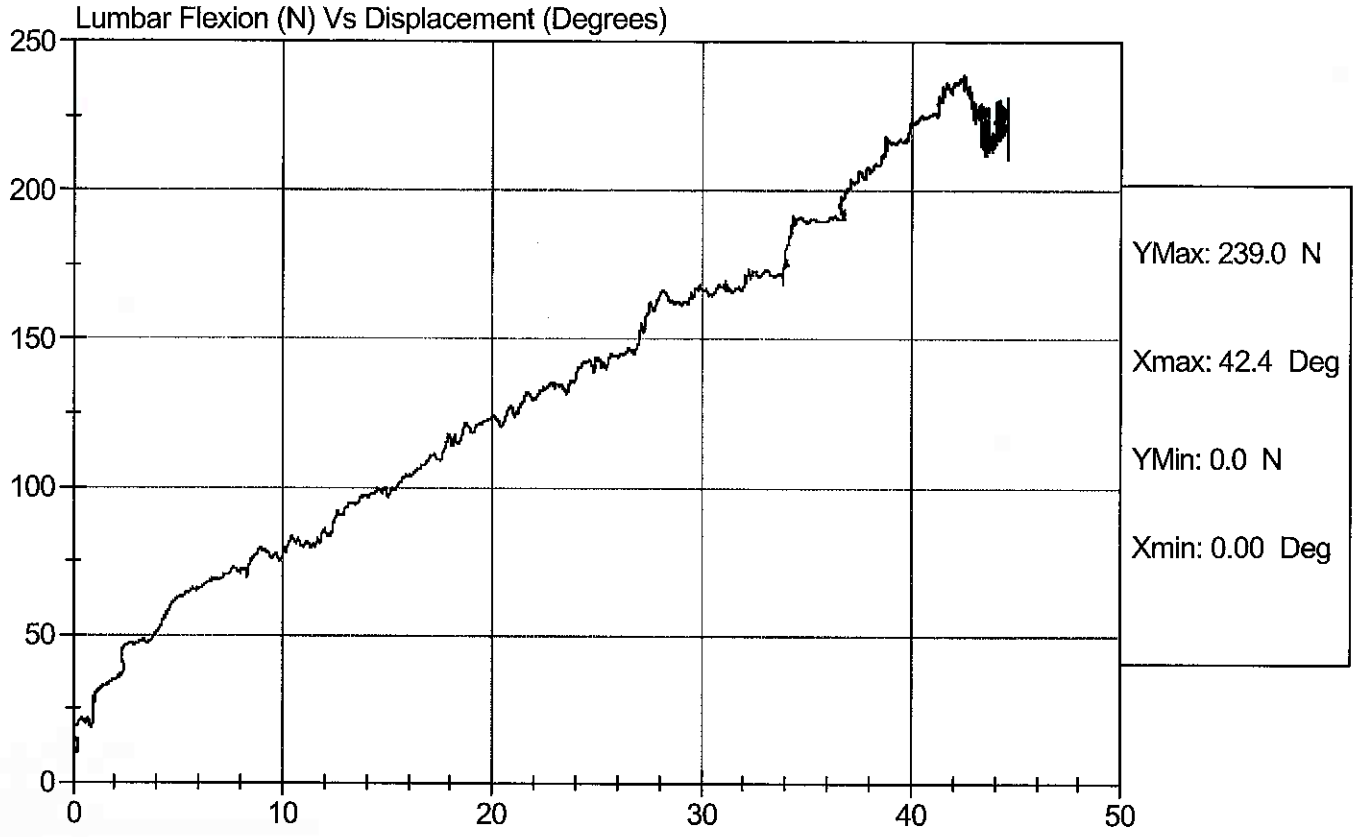
Tim Brady
Laboratory Technician

6/4/08
Test Date

Jessica Hall
Approved By

Test Description: Lumbar Flexion | Test Date: 6/4/08

Component: D081555 | Speed: 0 ft/sec, 0 m/sec



SID/HIII Calibration Data Sheet

Side Impact Dummy

Neck Pendulum Test

ATD Serial No: 037 **Test I.D:** D081559

Tested Parameter		Units	Specification	Result	Pass/Fail
Laboratory Temperature		deg C	20.6 to 22.2	21.0	Pass
Laboratory Relative Humidity		%	10 to 70	41	Pass
Impact Velocity		m/s	6.89 to 7.13	7.05	Pass
Pendulum Deceleration	10 msec	m/s	1.96 to 2.55	2.25	Pass
	20 msec	m/s	4.12 to 5.10	4.42	Pass
	30 msec	m/s	5.73 to 7.01	5.91	Pass
	40 to 70 msec	m/s	6.27 to 7.64	6.66	Pass
Midsaggital Plane Max Rotation		deg	66 to 82	69	Pass
Head Rotation Peak to Zero - Decay Time		msec	58 to 67	60	Pass
Max. Mx at Occipital Condyles		Nm	73 to 88	75	Pass
Mx Peak To Zero - Decay Time		msec	49 to 64	55	Pass
Mx Peak to Max. Head Rotation		msec	2 to 16	9	Pass

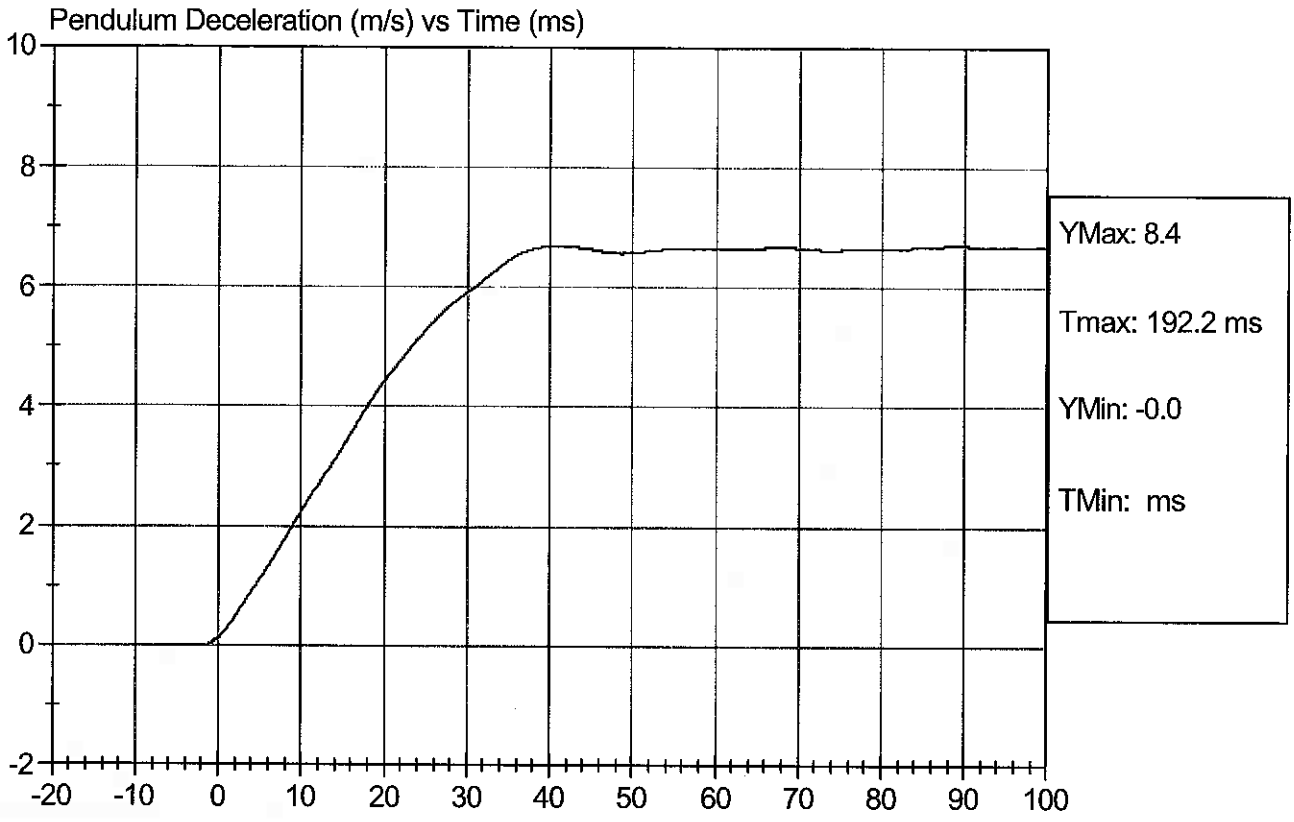
Laboratory Technician

6/4/08
Test Date

Approved By

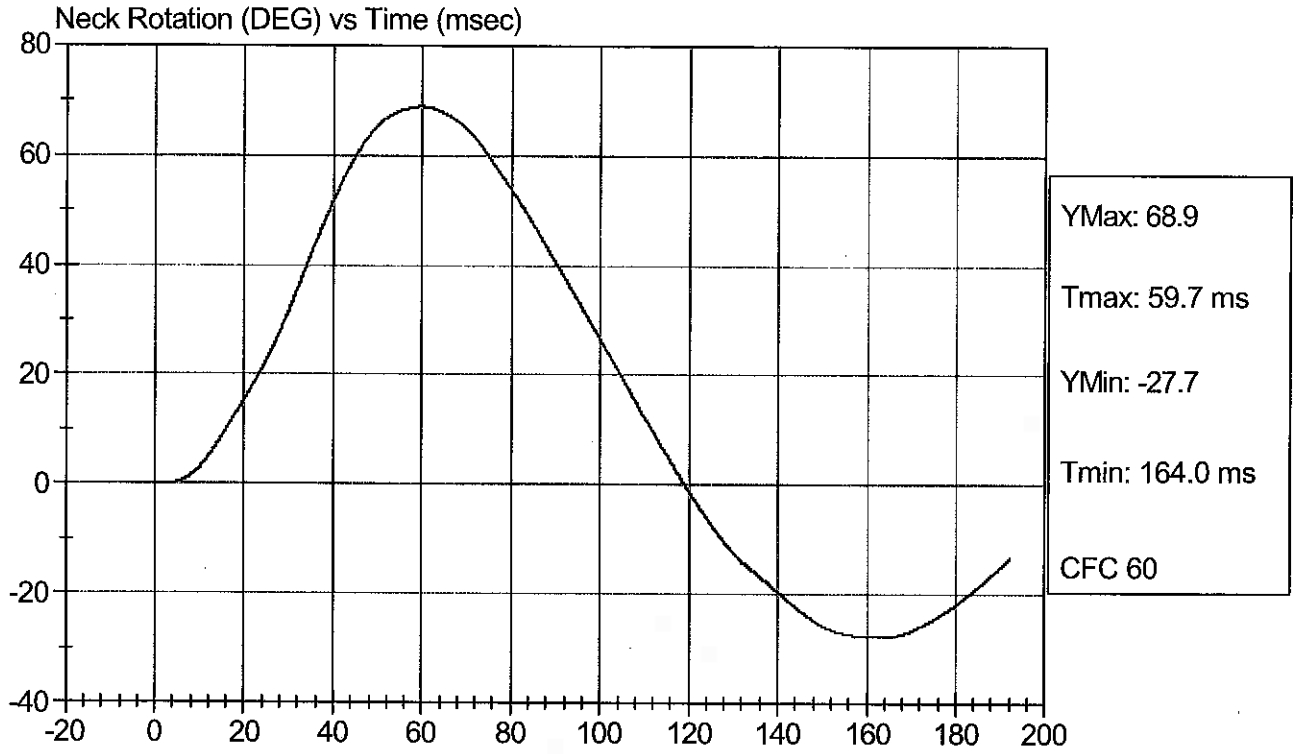
Test Desc: Neck Bending
Component ID: D081559

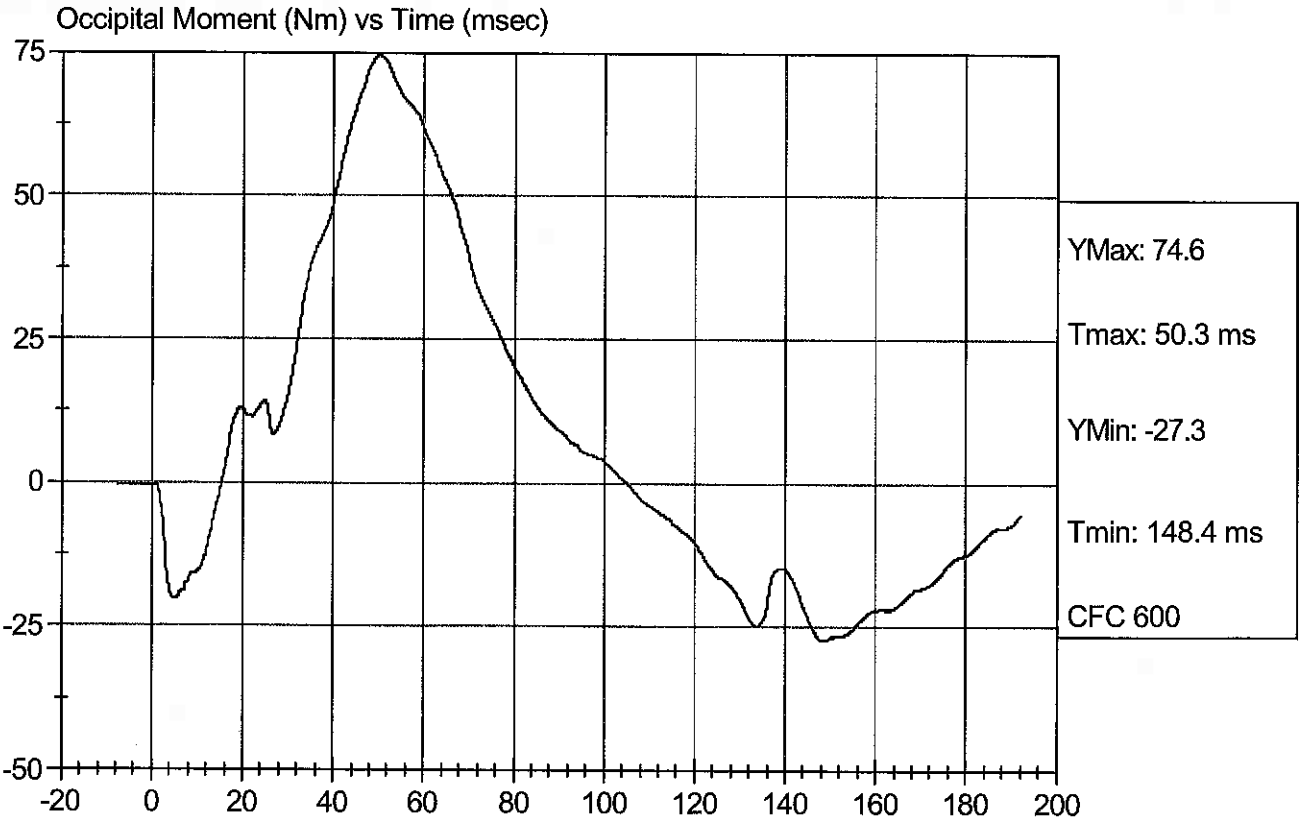
Test Date: 6/4/08
Speed: 23.14 ft/sec, 7.05 m/sec



Test Desc: Neck Bending
Component ID: D081559

Test Date: 6/4/08
Speed: 23.14 ft/sec, 7.05 m/sec





SID/HIII Calibration Data Sheet

Side Impact Dummy

Head Drop Calibration (Lateral)

ATD Serial No: 037 **Test I.D:** D081921

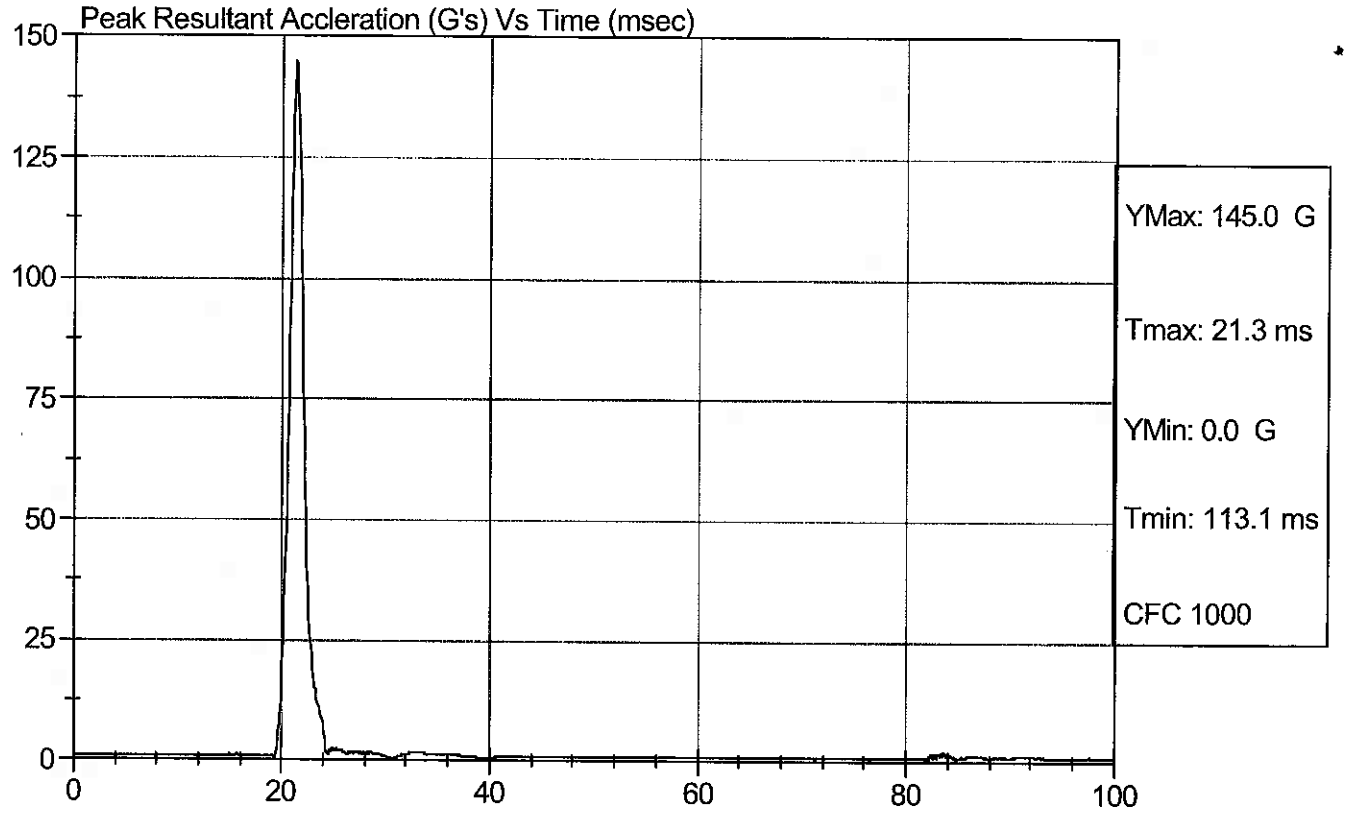
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	deg C	18.9 to 25.5	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	34	Pass
Peak Resultant Acceleration	G's	120 to 150	145	Pass
Is Resultant Curve Unimodal?	N/A	15% of peak	Yes	Pass
Peak Longitudnal Acceleration	G's	+/- 15	-7.2	Pass
		Overall Test Results		Pass

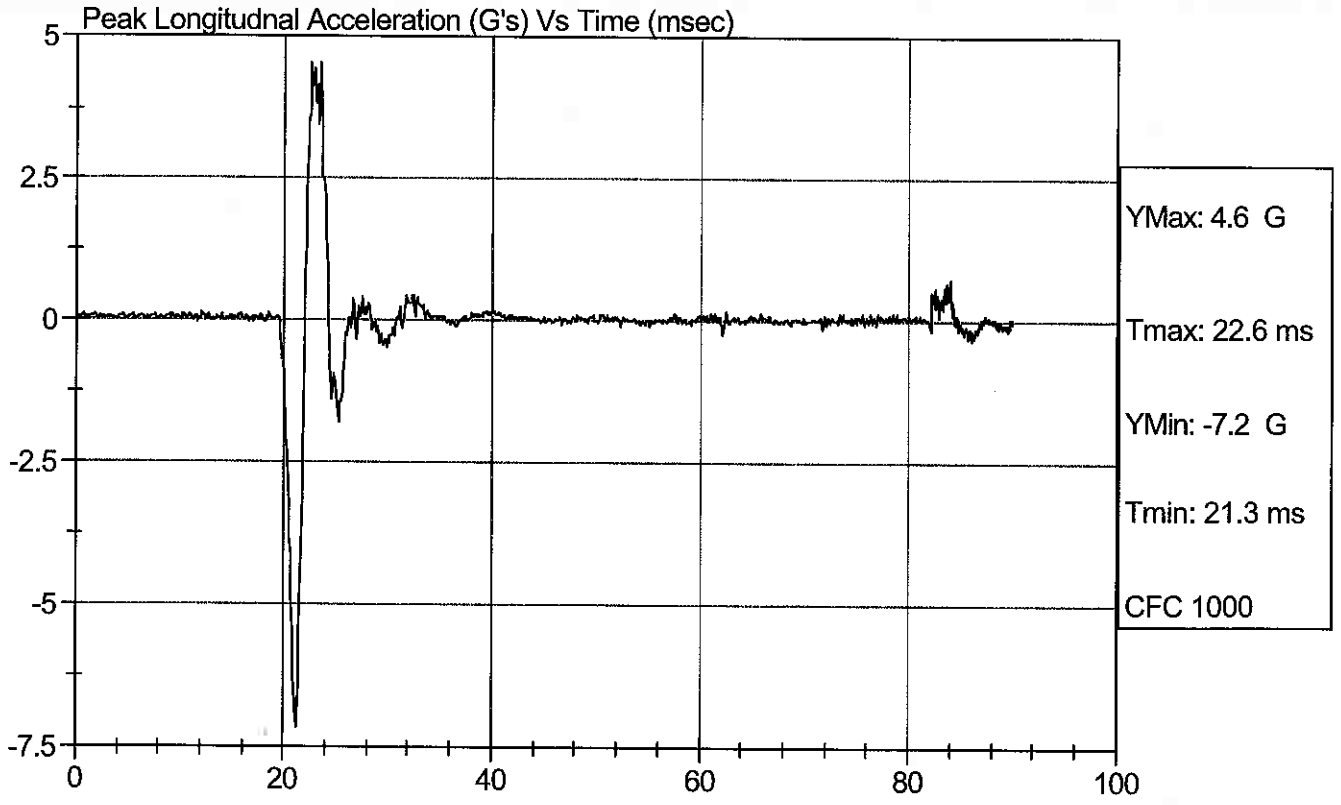
Laboratory Technician

7/10/08
Test Date

Approved By

	Test Description: Head Drop	Test Date: 7/10/08
	Component: D081921	Speed: 0 ft/s, 0 m/s





SID/HIII Calibration Data Sheet

Side Impact Dummy

Thorax Impact Test

ATD Serial No: 037 **Test I.D:** D081922

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	deg C	18.9 - 25.5	21.3	Pass
Laboratory Relative Humidity	%	10 to 70	39	Pass
Probe Velocity	m/s	4.22 - 4.31	4.23	Pass
Upper Rib	G's	37 - 46	45	Pass
Lower Rib	G's	37 - 46	39	Pass
Lower Spine	G's	15 - 22	22	Pass
		Overall Test Results		Pass

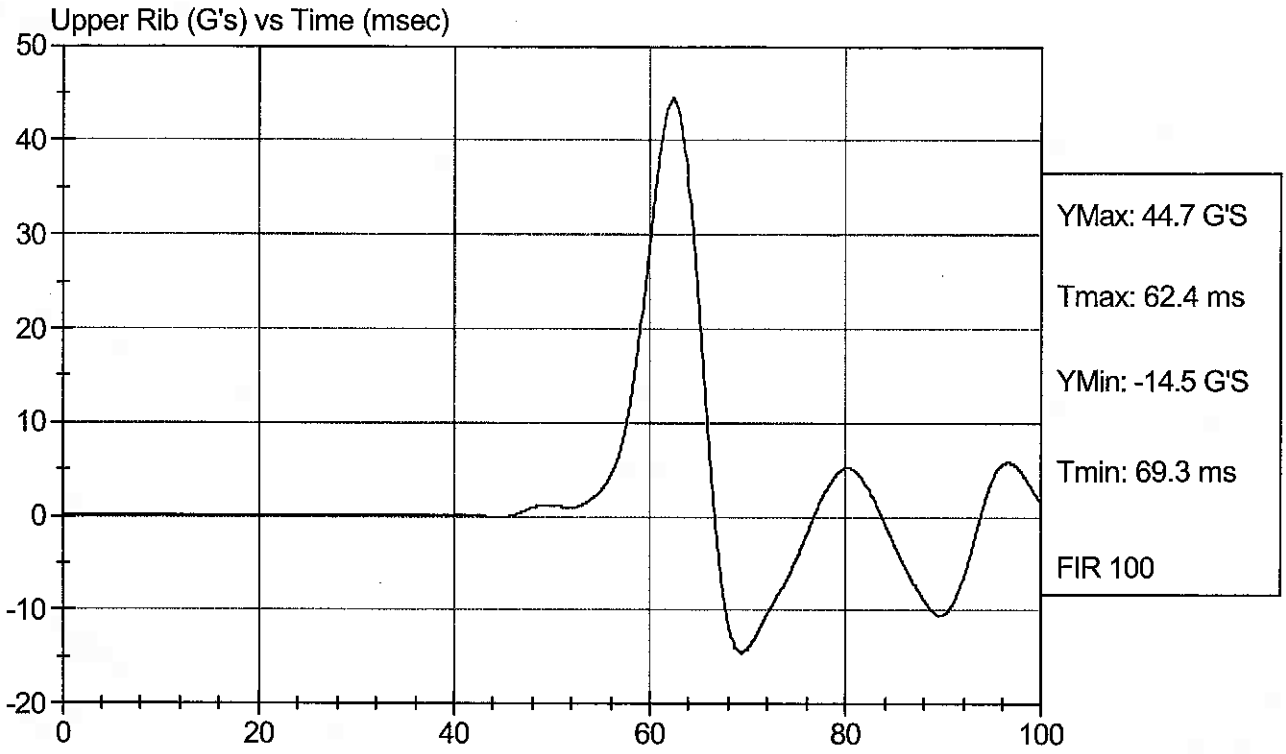
Laboratory Technician

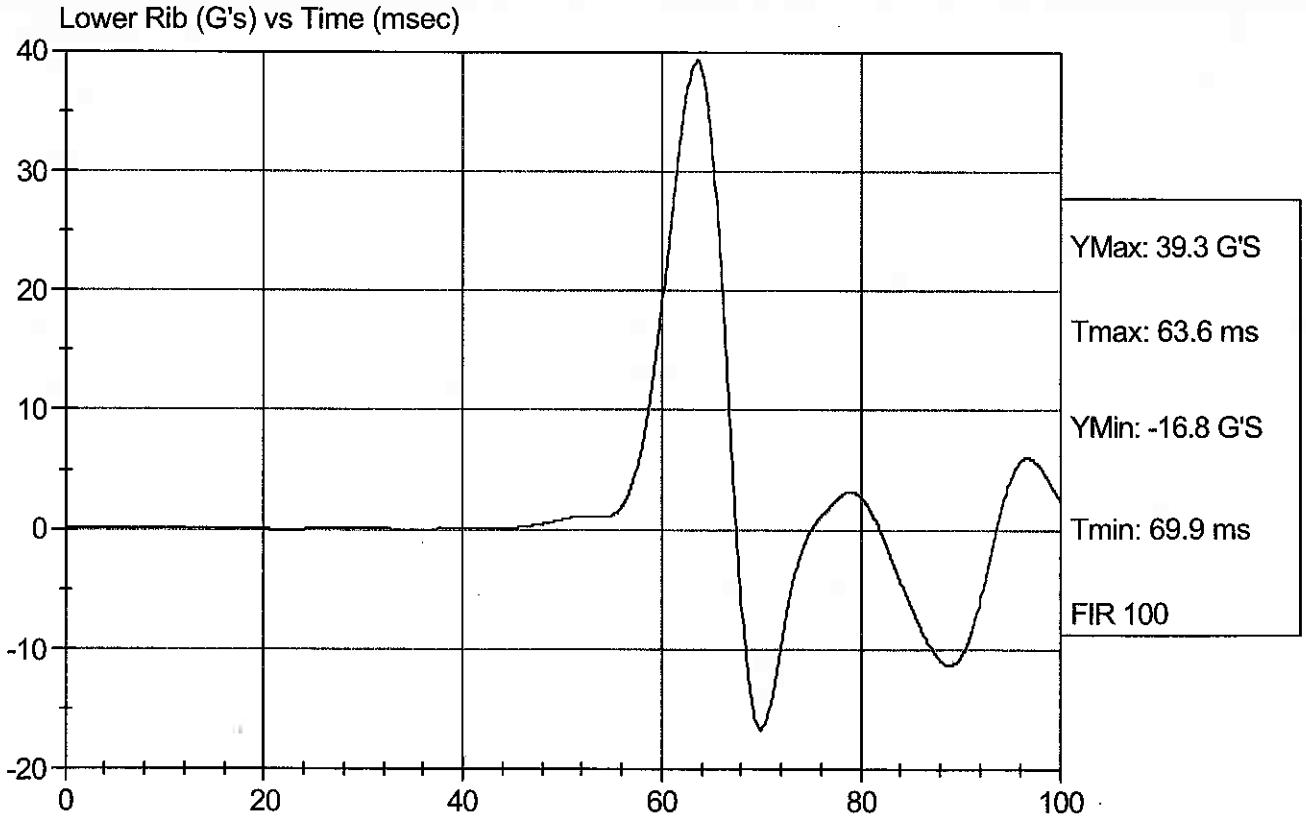
7/10/08
Test Date

Approved By

Test Desc: Thorax Impact
Component ID: D081922

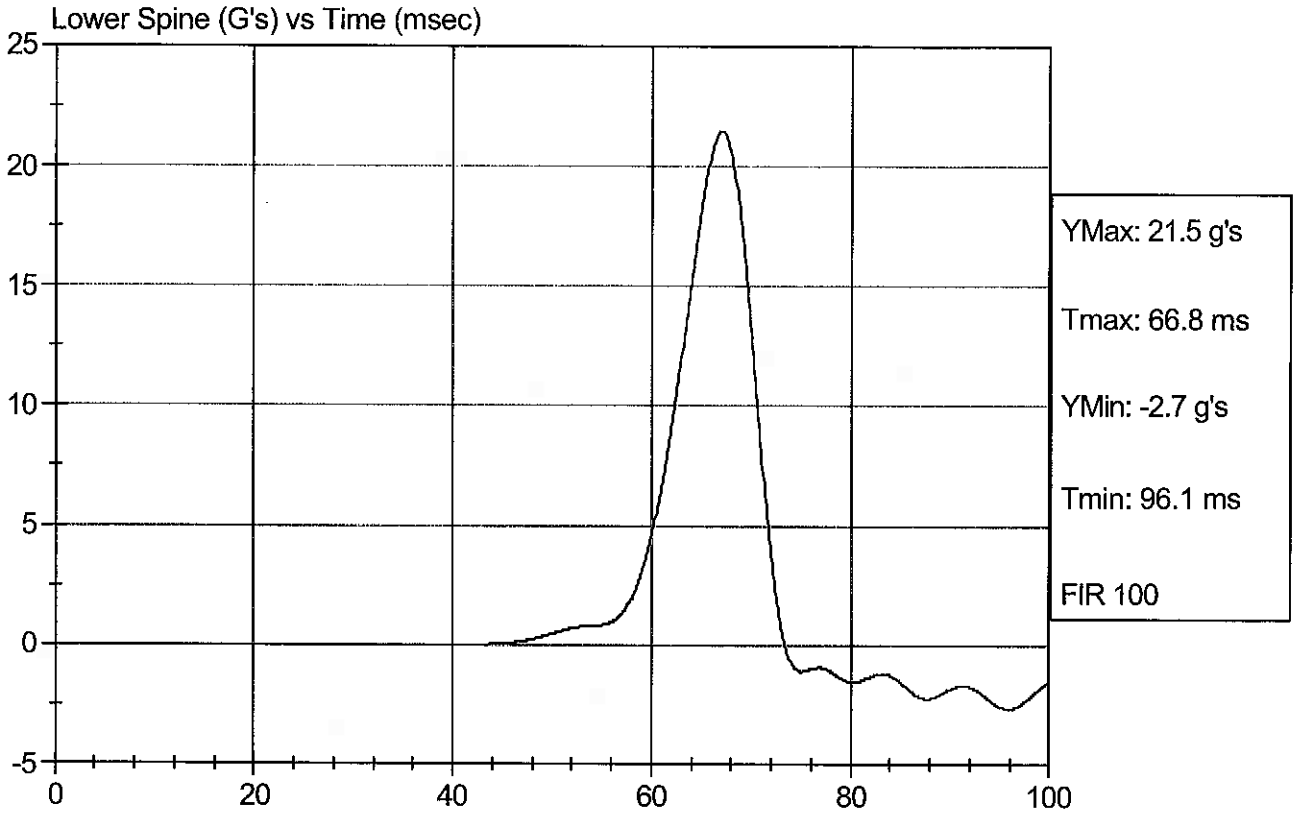
Test Date: 7/10/08
Speed: 13.89 ft/sec, 4.23 m/sec





Test Desc: Thorax Impact
Component ID: D081922

Test Date: 7/10/08
Speed: 13.89 ft/sec, 4.23 m/sec



SID/HIII Calibration Data Sheet

Side Impact Dummy

Pelvis Impact Test

ATD Serial No: 037 **Test I.D:** D081923

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	deg C	18.9 to 25.5	21.3	Pass
Laboratory Relative Humidity	%	10 to 70	39	Pass
Probe Velocity	m/s	4.27 - 4.33	4.30	Pass
Pelvis Acceleration	G's	40 - 60	41	Pass
		Overall Test Results		Pass

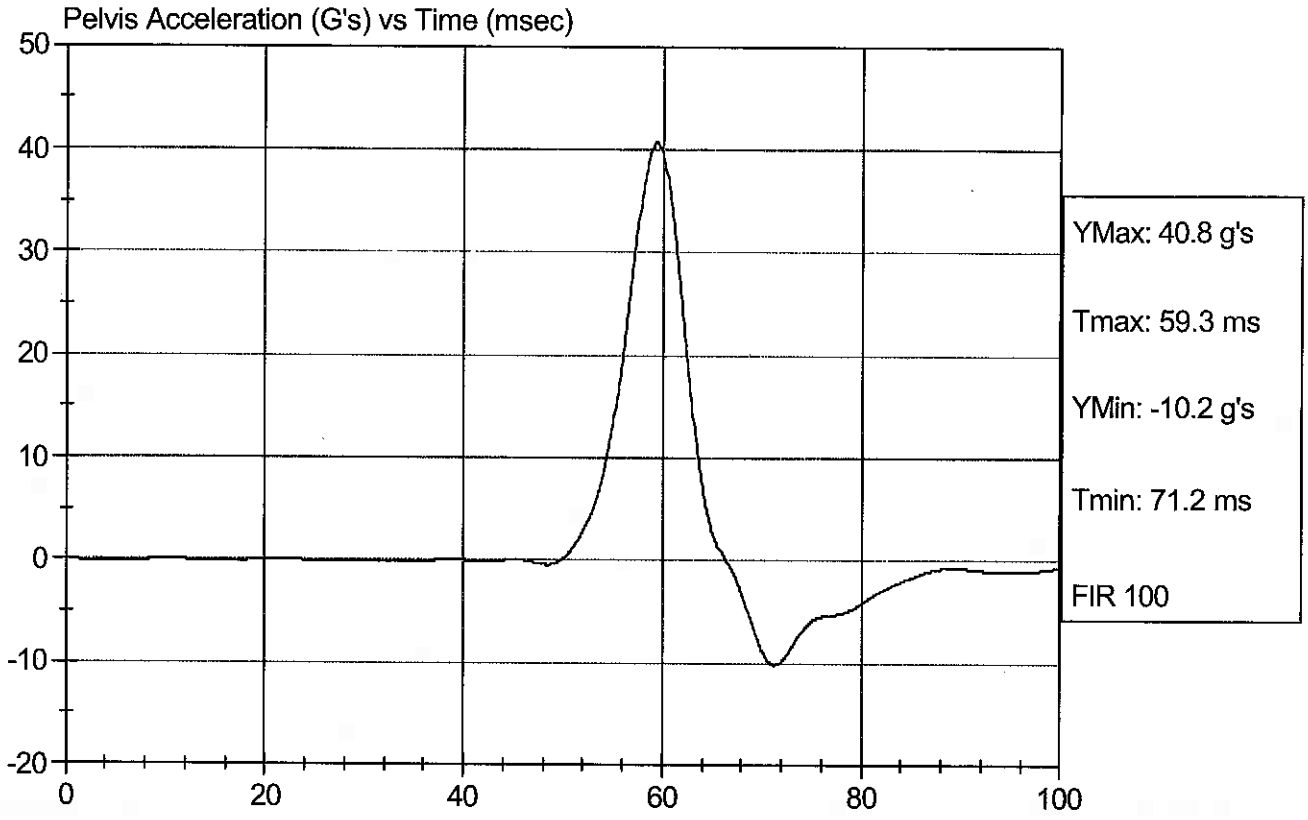
Laboratory Technician

7/10/08
Test Date

Jessica Hall
Approved By

Test Desc: Pelvis Impact
Component ID: D081923

Test Date: 7/10/08
Speed: 14.12 ft/sec, 4.30 m/sec



SID/HIII Calibration Data Sheet

Side Impact Dummy

Abdominal Compression Calibration (Pre-Load = 10 lbs)

ATD Serial No: 037 **Test I.D:** D081924

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	deg C	18.9 - 25.5	20.8	Pass
Laboratory Relative Humidity	%	10 to 70	39	Pass
Force At 12.7 mm	N	104 -162	133	Pass
Force At 19 mm	N	163 - 222	190	Pass
Force At 25.4 mm	N	222 - 280	258	Pass
Force At 33 mm	N	325 - 391	360	Pass
		Overall Test Results		Pass

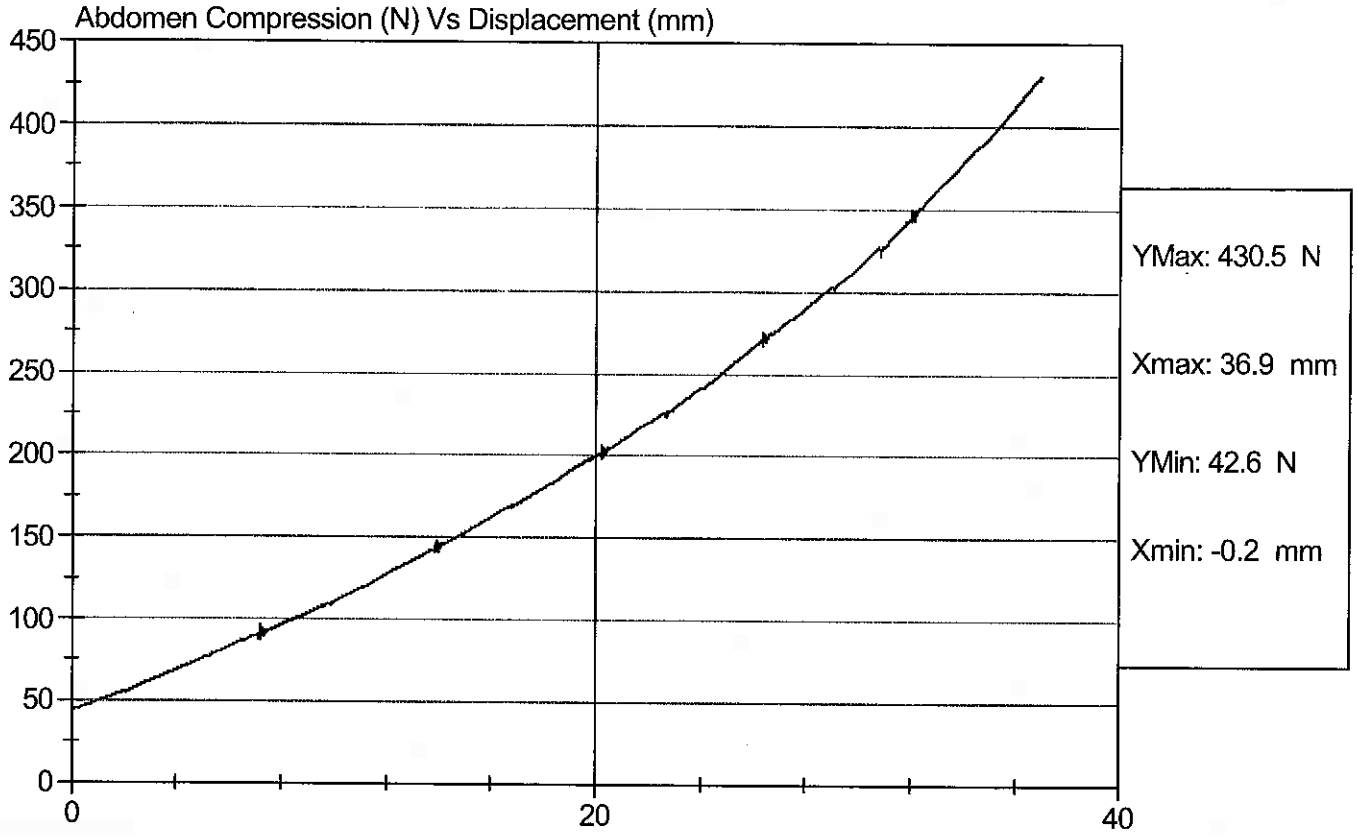
Laboratory Technician

7/10/08
Test Date

Approved By

Test Description: Abdomen Compression | Test Date: 7/10/08

Component: D081924 | Speed: 0 ft/sec, 0 m/sec



SID/HIII Calibration Data Sheet

Side Impact Dummy

Lumbar Flexion Calibration

ATD Serial No: 037 **Test I.D:** D081925

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	deg C	18.9 - 25.5	20.8	Pass
Laboratory Relative Humidity	%	10 to 70	39	Pass
Force At 0 deg	N	0 - 26.7	0	Pass
Force At 20 deg	N	97.9 - 151.2	121.6	Pass
Force At 30 deg	N	151.2 - 204.6	162.5	Pass
Force At 40 deg	N	204.6 - 258.0	226.0	Pass
Return Angle	Deg	12 Maximum	7	Pass
		Overall Test Results		Pass

Laboratory Technician

7/10/08
Test Date

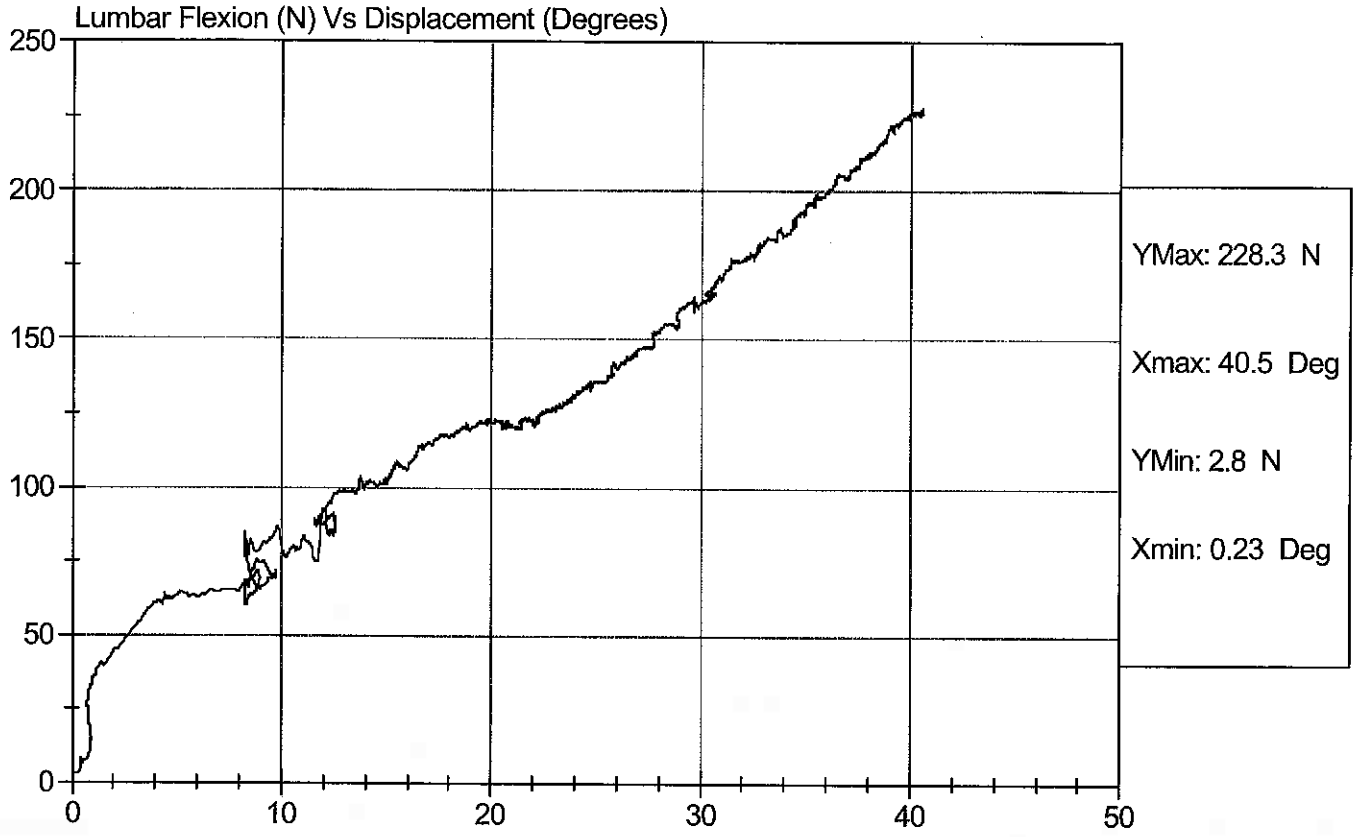
Jessica Hall
Approved By

Test Description: Lumbar Flexion

Test Date: 7/10/08

Component: D081925

Speed: 0 ft/sec, 0 m/sec



SID/HIII Calibration Data Sheet

Side Impact Dummy

Neck Pendulum Test

ATD Serial No: 037 **Test I.D:** D081929

Tested Parameter		Units	Specification	Result	Pass/Fail
Laboratory Temperature		deg C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity		%	10 to 70	34	Pass
Impact Velocity		m/s	6.89 to 7.13	7.05	Pass
Pendulum Deceleration	10 msec	m/s	1.96 to 2.55	2.38	Pass
	20 msec	m/s	4.12 to 5.10	4.47	Pass
	30 msec	m/s	5.73 to 7.01	6.25	Pass
	40 to 70 msec	m/s	6.27 to 7.64	6.72	Pass
Midsaggital Plane Max Rotation		deg	66 to 82	70	Pass
Head Rotation Peak to Zero - Decay Time		msec	58 to 67	62	Pass
Max. Mx at Occipital Condyles		Nm	73 to 88	77	Pass
Mx Peak To Zero - Decay Time		msec	49 to 64	57	Pass
Mx Peak to Max. Head Rotation		msec	2 to 16	12	Pass

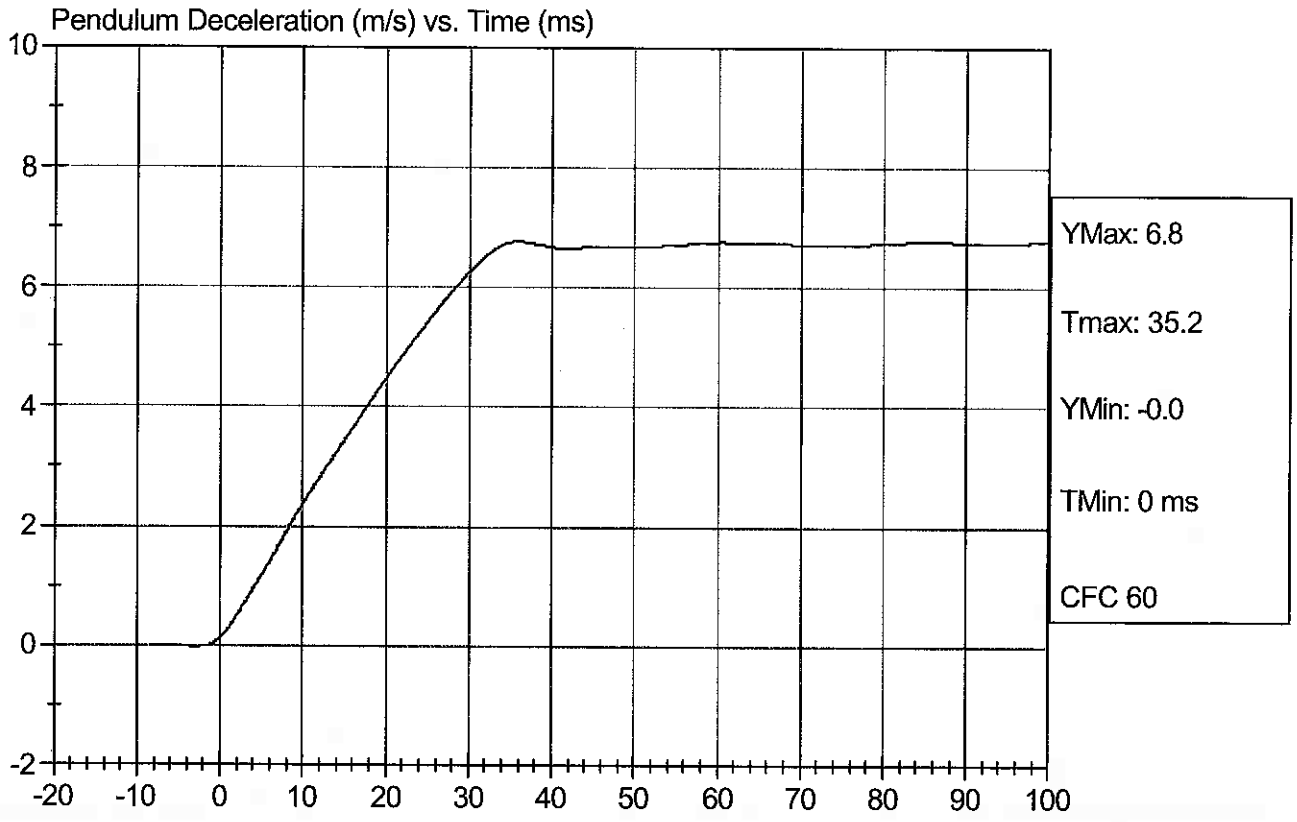
Laboratory Technician

7/10/08
Test Date

Approved By

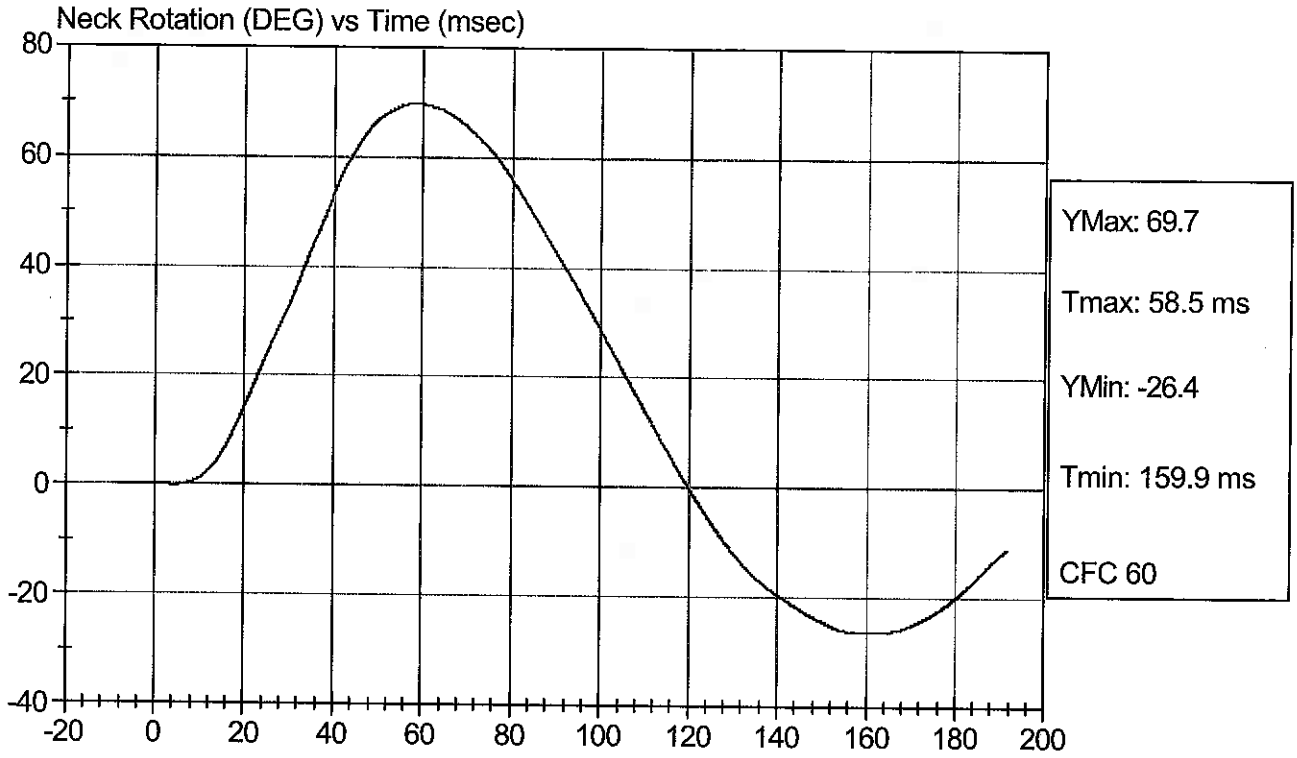
Test Desc: Neck Bending
Component ID: D081929

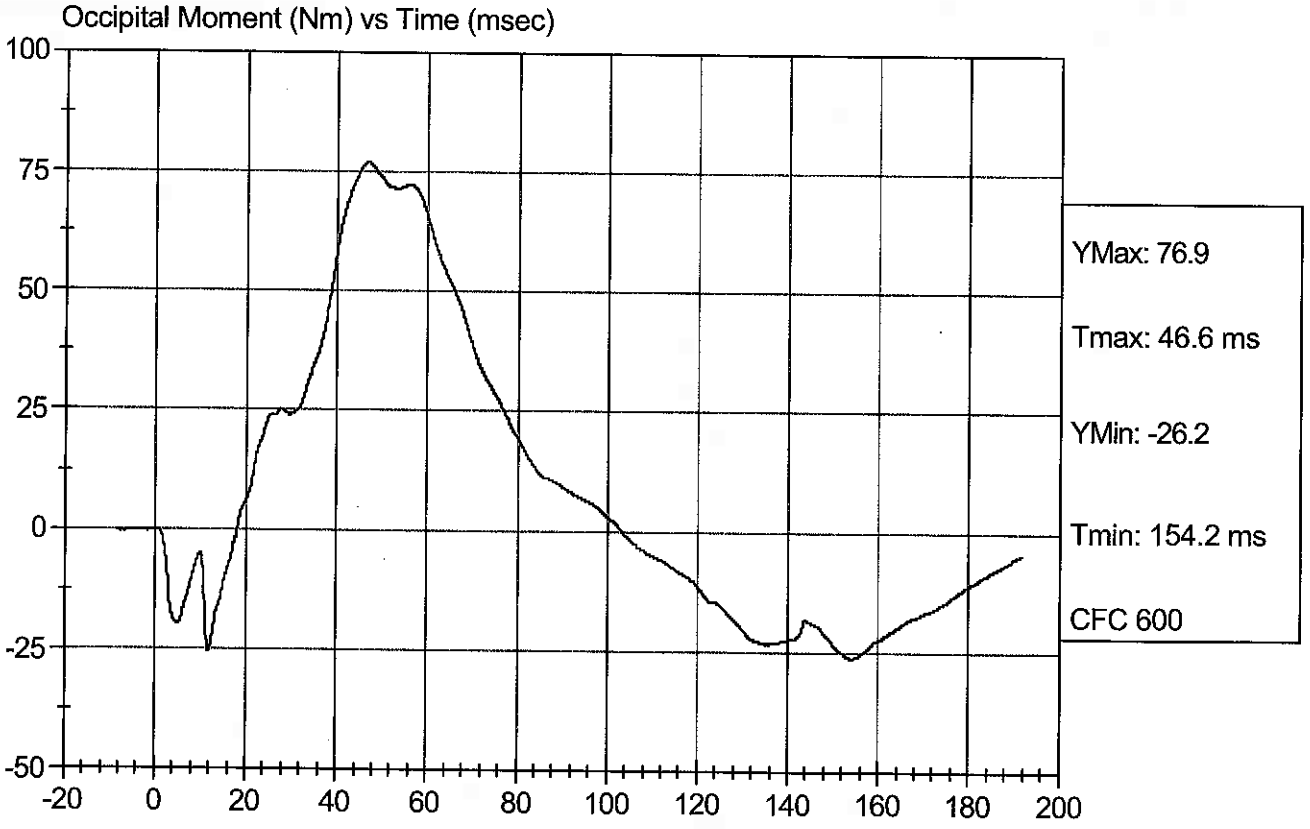
Test Date: 7/10/08
Speed: 23.1 ft/sec, 7.05 m/sec



Test Desc: Neck Bending
Component ID: D081929

Test Date: 7/10/08
Speed: 23.1 ft/sec, 7.05 m/sec





APPENDIX D

CALIBRATION INFORMATION DATA

DUMMY AND VEHICLE CALIBRATION DATA

	INSTRUMENTS FOR DRIVER S/N 037		
	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Head CG X	AH5E5	Endevco	1/25/2008
Head CG Y	C10770	Endevco	1/25/2008
Head CG Z	C12863	Endevco	1/25/2008
Neck Load Cell	1021	Denton	6/25/2008
Upper Rib Y	P50055	Endevco	1/24/2008
Lower Rib Y	P50053	Endevco	1/24/2008
Lower Spine Y	P47107	Endevco	1/15/2008
Pelvis Y	P49530	Endevco	1/24/2008
Upper Rib Redundant Y	P50054	Endevco	1/24/2008
Lower Rib Redundant Y	P50052	Endevco	1/24/2008
Lower Spine Redundant Y	P47078	Endevco	1/15/2008
Pelvis Redundant Y	P49531	Endevco	1/24/2008

VEHICLE INSTRUMENT CALIBRATION

	VEHICLE ACCELEROMETERS		
	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Vehicle CG X	A05-A20	Entran	4/21/2008
Vehicle CG Y	A07-J01	Entran	4/21/2008
Vehicle CG Z	A05-A21	Entran	4/21/2008
Left Floor Y	A27-Z07	Entran	4/23/2008
Left A-Post @ Sill Y	J07-Z17	Entran	4/23/2008
Left Lower A-Post Y	C24-J01	Entran	6/10/2008
Left Mid A-Post Y	L02-Z13	Entran	5/23/2008
Left B-Post @ Sill Y	A22-R08	Entran	4/11/2008
Left Lower B-Post Y	A12-Z02	Entran	6/10/2008
Left Mid B-Post Y	A04-R10	Entran	6/10/2008
Driver Seat Track Y	P26985	Endevco	6/10/2008
Upper Engine X	J26-H13	Entran	5/23/2008
Upper Engine Y	C29-N11	Entran	4/23/2008
Firewall Y	G22-L04	Entran	4/23/2008
Right Front Roof Y	F09-N03	Entran	4/11/2008
Right Floor Y	J26-H10	Entran	3/07/2008
Rear Deck X	H06-L24	Entran	1/24/2008
Rear Deck Y	A12-Z11	Entran	4/23/2008