

REPORT NUMBER: NCAP-KAR-12-041

**NEW CAR ASSESSMENT PROGRAM (NCAP)
FRONTAL BARRIER IMPACT TEST**

**HONDA OF CANADA MFG.
2012 HONDA CIVIC LX 2-DOOR COUPE**

NHTSA NUMBER: MC5310

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



FEBRUARY 1, 2012

FINAL REPORT

**U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
SAFETY PERFORMANCE STANDARDS
OFFICE OF CRASHWORTHINESS STANDARDS
1200 NEW JERSEY AVE, SE
ROOM W43-410
WASHINGTON, DC 20590**

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Date: 


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Date: 

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16. Abstract A 56.3 km/h NCAP Frontal Impact Test was conducted on a 2012 Honda Civic LX 2-door coupe in accordance with the specifications of the Office of Crashworthiness Standards Frontal NCAP Laboratory Test Procedure. This test was conducted to obtain data indicant of FMVSS 208, 212, 219 (partial), 301, and footwell intrusion performance. The test was conducted at the KARCO Engineering, LLC. facility in Adelanto, California on January 18, 2012. The impact velocity of the vehicle was 56.58 km/h and the ambient temperature at the barrier face at the time of impact was 20.0 deg. C. The target vehicle's post-test maximum crush was 450 mm at the vehicle's centerline. The test vehicle's performance is as follows: <table border="1"> <thead> <tr> <th rowspan="2">Measurement Description</th> <th rowspan="2">Units</th> <th colspan="2">Driver ATD</th> <th colspan="2">Passenger ATD</th> </tr> <tr> <th>Threshold</th> <th>Result</th> <th>Threshold</th> <th>Result</th> </tr> </thead> <tbody> <tr> <td>Head Injury Criteria (HIC₁₅)</td> <td>N/A</td> <td>700.0</td> <td>156.3</td> <td>700.0</td> <td>267.7</td> </tr> <tr> <td>Maximum Chest Compression</td> <td>mm</td> <td>63</td> <td>-20</td> <td>52</td> <td>-16</td> </tr> <tr> <td>Nij</td> <td>N/A</td> <td>1</td> <td>0.27</td> <td>1</td> <td>0.43</td> </tr> <tr> <td>Neck Tension</td> <td>N</td> <td>4170</td> <td>1021.0</td> <td>2620</td> <td>657.3</td> </tr> <tr> <td>Neck Compression</td> <td>N</td> <td>4000</td> <td>-71.4</td> <td>2520</td> <td>-95.3</td> </tr> <tr> <td>Left Femur Force</td> <td>N</td> <td>10008</td> <td>-1803.6</td> <td>6805</td> <td>-2643.6</td> </tr> <tr> <td>Right Femur Force</td> <td>N</td> <td>10008</td> <td>-2426.0</td> <td>6805</td> <td>-1029.6</td> </tr> </tbody> </table>						Measurement Description	Units	Driver ATD		Passenger ATD		Threshold	Result	Threshold	Result	Head Injury Criteria (HIC ₁₅)	N/A	700.0	156.3	700.0	267.7	Maximum Chest Compression	mm	63	-20	52	-16	Nij	N/A	1	0.27	1	0.43	Neck Tension	N	4170	1021.0	2620	657.3	Neck Compression	N	4000	-71.4	2520	-95.3	Left Femur Force	N	10008	-1803.6	6805	-2643.6	Right Femur Force	N	10008	-2426.0	6805	-1029.6
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SECTION 1

PURPOSE AND SUMMARY OF TEST

PURPOSE

This 56.3 km/h frontal barrier impact test is part of the Vehicle Barrier Impact Testing Program, sponsored by the National Highway Traffic Safety Administration (NHTSA) under contract number DTNH22-06-D-00027. The purpose of this test was to obtain vehicle crashworthiness and occupant restraint system performance data for consumer information purposes.

The 56.3 km/h frontal barrier impact test was conducted in accordance with the Office of Crashworthiness Standards Frontal NCAP Laboratory Test Procedure, dated August, 2011.

SUMMARY

A load cell barrier consisting of 36 load cells was impacted by a 2012 Honda Civic LX 2-door coupe at a velocity of 56.58 km/h. The test was performed at KARCO Engineering, LLC. on January 18, 2012. Pre- and post-test photographs of the vehicle and dummies can be found in Appendix A of this report.

Three (3) real-time cameras and sixteen (16) high-speed cameras were used to document the frontal barrier impact event. Camera locations and other pertinent camera information can be found in Data Sheet 6 of this report.

One Part 572E 50th percentile male anthropomorphic test device (ATD) was placed in the driver seating position and one Part 572O 5th percentile female ATD was placed in the right-front passenger seating position according to dummy placement instructions specified in the Frontal NCAP Laboratory Test Procedure.

Both ATDs were fully instrumented with head, chest and pelvis tri-axial accelerometers, chest displacement potentiometers, upper neck force transducers, right / left femur load cells, and lower leg instrumentation. The driver (position 1) ATD (Serial No. 035) and the right-front passenger (position 2) ATD (Serial No. 635) were calibrated prior to this test. Certification details, along with instrumentation calibration data, are found in Appendix C of this report.

The 132 channels of data were recorded on an on-board data acquisition system. Appendix B contains the dummy response data traces.

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

The maximum static crush of the test vehicle was 450 mm located at the vehicle's centerline. Both the driver and passenger side doors remained closed during the impact event and were operable after the impact.

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

The passenger's visible contact points were as follows: The passenger ATD's head contacted the airbag and the headrest. The upper torso contacted the airbag. Both the left and right knees contacted the glovebox.

The occupant data is summarized below:

ATD Position	HIC ₁₅	T ¹	T ²	Chest Disp. (mm)	Nij	Neck Tension (N)	Neck Comp. (N)	Left Femur (N)	Right Femur (N)
Driver (50th)	156.3	61.0	76.0	-20	0.27	1021.0	-71.4	-1803.6	-2426.0
Passenger (5th)	267.7	62.4	77.4	-16	0.43	657.3	-95.3	-2643.6	-1029.6

SECTION 2
DATA SHEETS

Test Vehicle: 2012 Honda Civic LX 2-Door Coupe NHTSA No.: MC5310
Test Program: 56 km/h Frontal Impact NCAP Test Test Date: 1/18/12

CONVERSION FACTORS

Quantity	Typical Application	Std Units	Metric Unit	Multiply By
Mass	Vehicle Weight	lb	kg	0.4536
Linear Velocity	Impact Velocity	miles/hr	km/hr	1.609344
Length or Distance	Measurements	in	mm	25.4
Volume	Fuel Systems	gal	liter	3.785
Volume	Small Fluids	oz	mL	29.574
Pressure	Tire Pressures	lbf/in ²	kPa	6.895
Temperature	General Use	°F	°C	$=(T_f - 32)/1.8$
Force	Dynamic Forces	lbf	N	4.448
Moment	Torque	lbf-ft	N•m	1.355

DATA SHEET NO. 1

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2012 Honda Civic LX 2-Door Coupe NHTSA No.: MC5310
 Test Program: 56 km/h Frontal Impact NCAP Test Test Date: 1/18/12

TEST VEHICLE INFORMATION AND OPTIONS

NHTSA Number	MC5310
Model Year	2012
Make	Honda
Model	Civic LX
Body Style	2-Door Coupe
VIN	2HGFG3B55CH515156
Body Color	Polished Metal Metallic
Odometer Reading (km / mi)	101 / 63
Engine Displacement (L)	1.8
Type / No. of Cylinders	Inline 4
Engine Placement	Transverse
Transmission Type	Automatic
Transmission Speeds	5
Overdrive	Yes
Final Drive	Front
Roof Rack	No
Sunroof / T-Top	No
Running Boards	No
Tilt Steering Wheel	Yes
Power Seats	No
Anti-Lock Brakes (ABS)	Yes
All Wheel Drive (AWD)	No
Traction Control System	Yes

Auto-Leveling System	No
Automatic Door Locks	Yes
Power Window Auto-Reverse	Yes
Other Optional Feature	None
Driver Front Airbag	Yes
Driver Curtain Airbag	Yes
Driver Head/Torso Airbag	No
Driver Torso Airbag	Yes
Driver Torso/Pelvis Airbag	No
Driver Pelvis Airbag	No
Driver Knee Airbag	No
Pass. Front Airbag	Yes
Pass. Curtain Airbag	Yes
Pass. Head/Torso Airbag	No
Pass. Torso Airbag	Yes
Pass. Torso/Pelvis Airbag	No
Pass. Pelvis Airbag	No
Pass. Knee Airbag	No
Driver Seat Belt Pretensioner	Yes
Pass. Seat Belt Pretensioner	Yes
Driver Load Limiter	Yes
Pass. Load Limiter	Yes
Other Safety Restraint	None

Does Owner's Manual provide instructions to turn off automatic door locks?

Yes

DATA FROM CERTIFICATION LABEL

Manufactured By	Honda of Canada MFG.
Date of Manufacture	Oct-12

GVWR (kg)	1660
GAWR Front (kg)	900
GAWR Rear (kg)	790

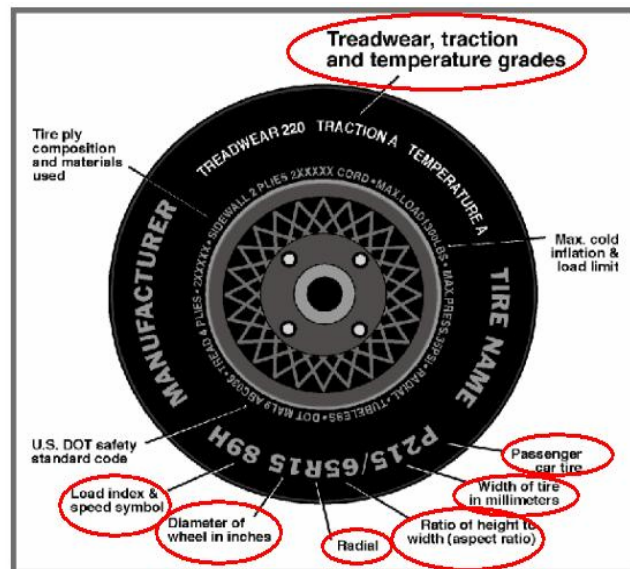
VEHICLE SEATING AND CAPACITY WEIGHT INFORMATION

Measured Parameter	Front	Rear	Third	Total	
Type of Seats	Bucket	Bench			
Designated Seating Capacity	2	3		5	
Capacity Weight (VCW) (kg)				385.0	A
DSC x 68.04 (kg)				340.2	B
Cargo Weight (RCLW) (kg)				44.8	A-B

DATA SHEET NO. 1 ... (CONTINUED)

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle:	2012 Honda Civic LX 2-Door Coupe	NHTSA No.:	MC5310
Test Program:	56 km/h Frontal Impact NCAP Test	Test Date:	1/18/12



VEHICLE TIRE INFORMATION

Measured Parameter	Front	Rear
Max. Tire Pressure (kPa)	300	300
Cold Pressure (kPa)	210	210
Recommended Tire Size	P195/65R15	P195/65R15
Tire Size on Vehicle	P195/65R15	P195/65R15
Tire Manufacturer	Continental	Continental
Tire Model	ContiPro Contact	ContiPro Contact
Treadwear	500	500
Traction	AA	AA
Temperature Grades	A	A
Tire Plies Sidewall	1 Polyester	1 Polyester
Tire Plies Body	1 Polyester, 1 Polyamide, 2 Steel	1 Polyester, 1 Polyamide, 2 Steel
Load Index / Speed Symbol	89H	89H
Tire Material	Polyester, Polyamide, Steel	Polyester, Polyamide, Steel
DOT Safety Code Left	A3C6 3W5 1811	A3C6 3W5 1811
DOT Safety Code Right	A3C6 3W5 1811	A3C6 3W5 1811

DATA SHEET NO. 1 ... (CONTINUED)**GENERAL TEST AND VEHICLE PARAMETER DATA**

Test Vehicle: 2012 Honda Civic LX 2-Door Coupe NHTSA No.: MC5310
 Test Program: 56 km/h Frontal Impact NCAP Test Test Date: 1/18/12

TEST VEHICLE WEIGHTS

	Units	As Delivered Weights (UVW)			As Tested Weights (ATW)		
		Front Axle	Rear Axle	Total	Front Axle	Rear Axle	Total
Left	kg	381.0	240.5		416.0	303.5	
Right	kg	369.0	231.5		392.5	291.0	
Ratio	%	61.4%	38.6%	100.0%	57.6%	42.4%	100.0%
Total	kg	750.0	472.0	1222.0	808.5	594.5	1403.0

TARGET TEST WEIGHT CALCULATION

Measured Parameter	Units	Value	
Total Delivered Weight (UVW)	kg	1222.0	A
Weight of 1 P572E ATD & 1 P572O ATD	kg	141.0	B
Rated Cargo/Luggage Weight (RCLW)	kg	44.8	C
Calculated Vehicle Target Weight (TVTW)	kg	1407.8	A+B+C

TEST VEHICLE ATTITUDES

Condition	Units	LF	RF	LR	RR	CG Aft of Front Axle
As Delivered	mm	677	681	676	681	1014
As Tested	mm	664	670	646	650	1112
Post-Test	mm	761	764	641	656	

GENERAL TEST VEHICLE DATA

Measurement Description	Units	Value
Total Vehicle Wheel Base	mm	2625
Total Vehicle Length at Left Side	mm	3802
Total Vehicle Length at Centerline	mm	4445
Total Vehicle Length at Right Side	mm	3802
Weight of Ballast in Cargo Area	kg	68.6
Weight of Vehicle Components Removed	kg	33.0
Amount of Stoddard Solvent in Fuel Tank	L	46.46

VEHICLE COMPONENTS REMOVED TO MEET TEST WEIGHT:

Taillights (3.0 kg), spare tire and tools (16.0 kg), trunk trim (2.0 kg), rear bumper beam (7.5 kg), rear bumper fascia (4.5 kg)

DATA SHEET NO. 1 ... (CONTINUED)**GENERAL TEST AND VEHICLE PARAMETER DATA**

Test Vehicle: 2012 Honda Civic LX 2-Door Coupe NHTSA No.: MC5310
Test Program: 56 km/h Frontal Impact NCAP Test Test Date: 1/18/12

TARGET VEHICLE STRUCTURAL MEASUREMENTS

No.	Description	Pre-Test	Post-Test	Difference
1	Total Length	4445	3995	-450
2	Total Width	1748	2020	272
3	Bumper Top Height	540	610	70
4	Bumper Bottom Height	395	460	65
5	Longitudinal Member Top Height	540	600	60
6	Distance Between Longitudinal Members	990	1012	22
7	Longitudinal Member Width	95	101	6
8	Engine Top Height	805	855	50
9	Engine Bottom Height	176	224	48
10	Engine and Gearbox Width	505	505	0
11	Front Bumper to Engine Distance	550	240	-310
12	Front Shock Absorber Fixing Height	845	920	75
13	Bonnet Leading Edge Height	675	770	95
14	Front Shock Absorber Fixing Width	1175	1125	-50
15	Front Bumper to Front Axle Distance	892	612	-280
16	Front Axle to A-Pillar Distance	473	355	-118
17	A-Pillar to B-Pillar Distance	1229	1226	-3
18	B-Pillar to Rear Axle Distance	857	860	3
19	B-Pillar to C-Pillar Distance	645	647	2
20	Roof Sill Bottom Height	1220	1281	61
21	Roof Sill Top Height	1335	1400	65
22	Floor Sill Bottom Height	200	241	41
23	Floor Sill Top Height	320	367	47

All measurements in millimeters.

DATA SHEET NO. 2

SEAT ADJUSTMENT, FUEL SYSTEMS, AND STEERING WHEEL DATA

Test Vehicle: 2012 Honda Civic LX 2-Door Coupe

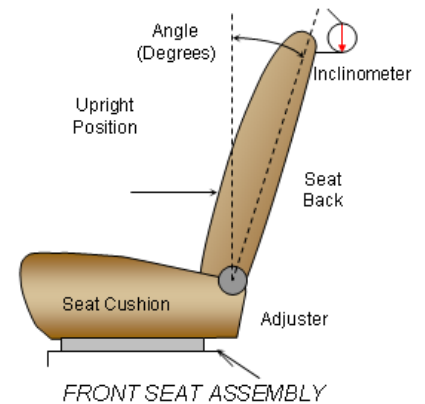
NHTSA No.: MC5310

Test Program: 56 km/h Frontal Impact NCAP Test

Test Date: 1/18/12

NOMINAL DESIGN RIDING POSITION

The procedure for the driver is as follows: the seat back is set to the manufacturer's designated angle. The procedure for the passenger is as follows: the seat back is set to position the transverse instrumentation platform of the dummy's head at $0^\circ \pm 0.5^\circ$. Seat back angle is measured at the seat back using a digital inclinometer.

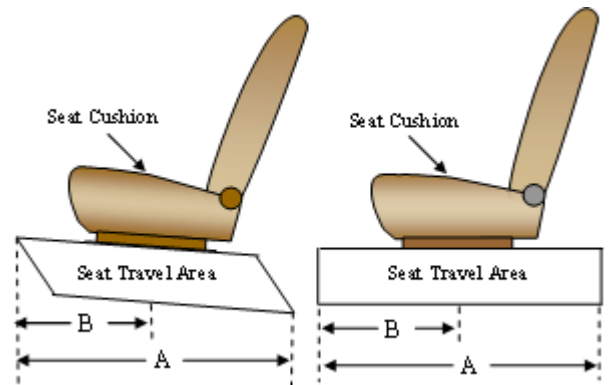


SEAT BACK ANGLE

Seating Position	Degrees
Driver Seat Back Angle	8.1
Passenger Seat Back Angle	9.3

SEAT FORE / AFT POSITIONING

The total seat travel is measured from the forward most possible position to the rear most possible position. The driver's seat is set to the middle of the fore-aft travel. The passenger's seat is set to the forward most position where the ATD will not contact any interior panels.



SEAT FORE/AFT POSITIONS

Seating Position	Total Fore-Aft Travel	Placed in Position
Driver Seat	280 mm [25 detents]	140 mm [10th detent]
Passenger Seat	240 mm [25 detents]	0 mm [1st Detent]

SEAT BELT UPPER ANCHORAGE

The seat belt upper anchorage is positioned to the manufacturer's design position for a 50th percentile adult male ATD for the driver, and a 5th percentile adult female ATD for the passenger. Position "H" is the uppermost position, followed by position "M1". Position "L" is the lowermost position.

SEAT BELT UPPER ANCHORAGES

Seating Position	Total No. of Positions	Placed in Position
Driver Seat	Fixed	Fixed
Passenger Seat	Fixed	Fixed

DATA SHEET NO. 2 ... (CONTINUED)

SEAT ADJUSTMENT, FUEL SYSTEMS, AND STEERING WHEEL DATA

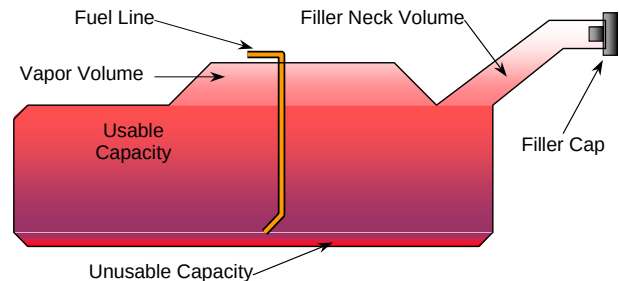
Test Vehicle: 2012 Honda Civic LX 2-Door Coupe NHTSA No.: MC5310
Test Program: 56 km/h Frontal Impact NCAP Test Test Date: 1/18/12

FUEL TANK CAPACITY

Description	Liters
Usable Capacity of "Standard Tank"	49.96
Usable Capacity of "Optional Tank"	
92 - 94% of Usable Capacity	45.97 to 46.96
Actual Amount of Stoddard Solvent Used	46.46
1/3 of Usable Capacity	16.65

FUEL PUMP

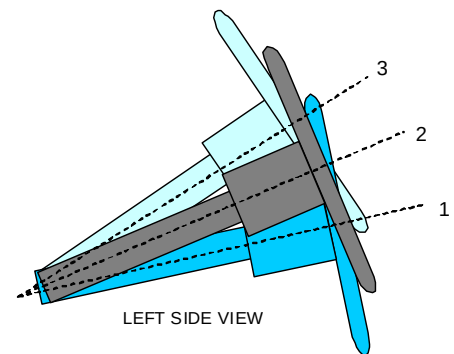
The vehicle is equipped with an electric fuel pump. The fuel pump will operate for 2 seconds when the ignition is turned to the "ON" position and then pressure is maintained.



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 moved through its full range of motion. A digital inclinometer is used to measure a plate which is placed across the rim of the steering wheel for angular measurements. A tape measure is used to measure telescoping steering wheel travel.



STEERING COLUMN ASSEMBLY

STEERING COLUMN POSITIONING

	Degrees	Fore-Aft Position (mm)
Lowermost Position, No. 1	20.0	166
Geometric Center Position, No. 2	21.8	183
Uppermost Position, No. 3	23.6	201
Telescoping Steering Wheel Travel		35
Test Position	21.8	183

DATA SHEET NO. 3

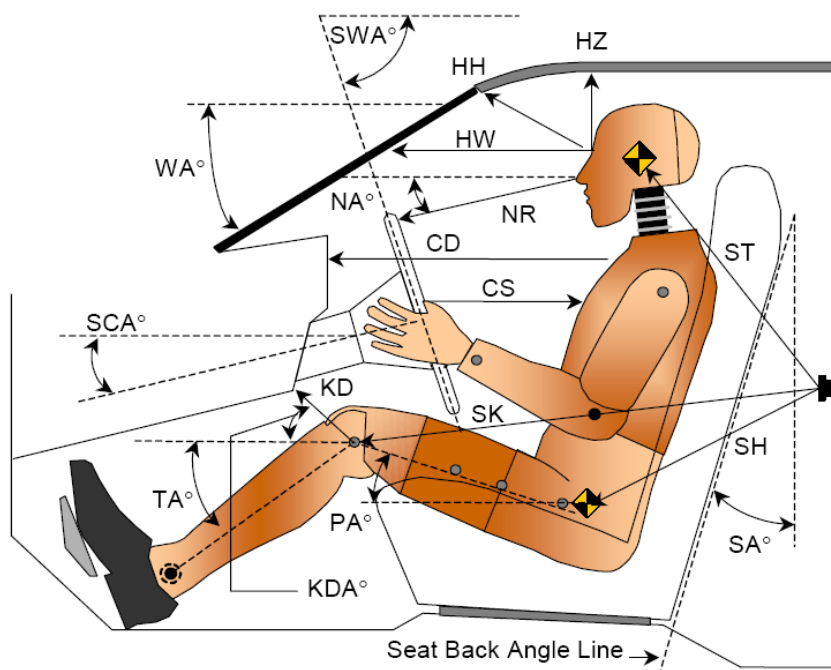
DUMMY LONGITUDINAL CLEARANCE DIMENSIONS

Test Vehicle: 2012 Honda Civic LX 2-Door Coupe

NHTSA No.: MC5310

Test Program: 56 km/h Frontal Impact NCAP Test

Test Date: 1/18/12

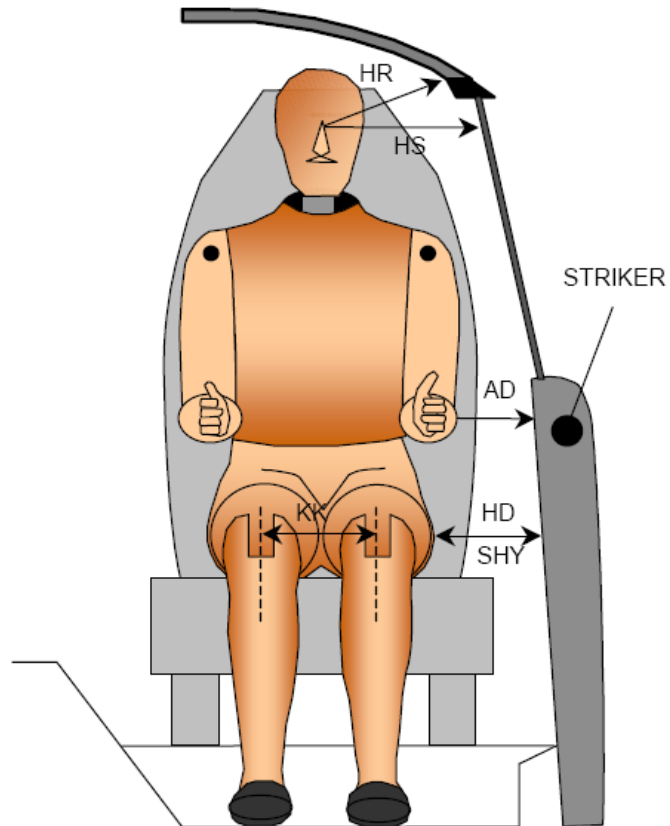


LEFT SIDE VIEW

Code	Measurement Description	Driver		Passenger	
		Length (mm)	Angle (°)	Length (mm)	Angle (°)
WA°	Windshield Angle		22.5		
SWA°	Steering Wheel Angle		68.2		
SCA°	Steering Column Angle		21.8		
SA°	Seat Back Angle (On Headrest Post)		8.1		9.3
HZ	Head to Roof	180	90.0	232	90.0
HH	Head to Header	331	22.4	302	43.5
HW	Head to Windshield	657	0.0	762	0.0
NR	Nose to Rim	366	12.7	434	26.7
CD	Chest to Dash	546	4.1	389	8.3
CS	Chest to Steering Hub	286	0.0		
RA	Rim to Abdomen	180	0.0		
KDL	Left Knee to Dash	130	32.7	80	42.4
KDR	Right Knee to Dash	123	37.3	104	43.8
PA°	Pelvic Angle		23.8		21.8
TA°	Tibia Angle		41.9		46.7
SK	Striker to Knee	847	8.9	900	10.7
ST	Striker to Head	515	21.2	547	35.7
SH	Striker to H-Point	533	29.3	635	24.0

DUMMY LATERAL CLEARANCE DIMENSIONS

Test Date: 1/18/12



Code	Description	Driver (mm)	Passenger (mm)
AD	Arm to Door	127	89
HD	H-Point to Door	136	181
HR	Head to Side Header	208	248
HS	Head to Side Window	330	354
KK	Knee to Knee	365	216
SHY	Striker to H-Point (Y-Direction)	240	267
AA	Ankle to Ankle	364	189

DATA SHEET NO. 5

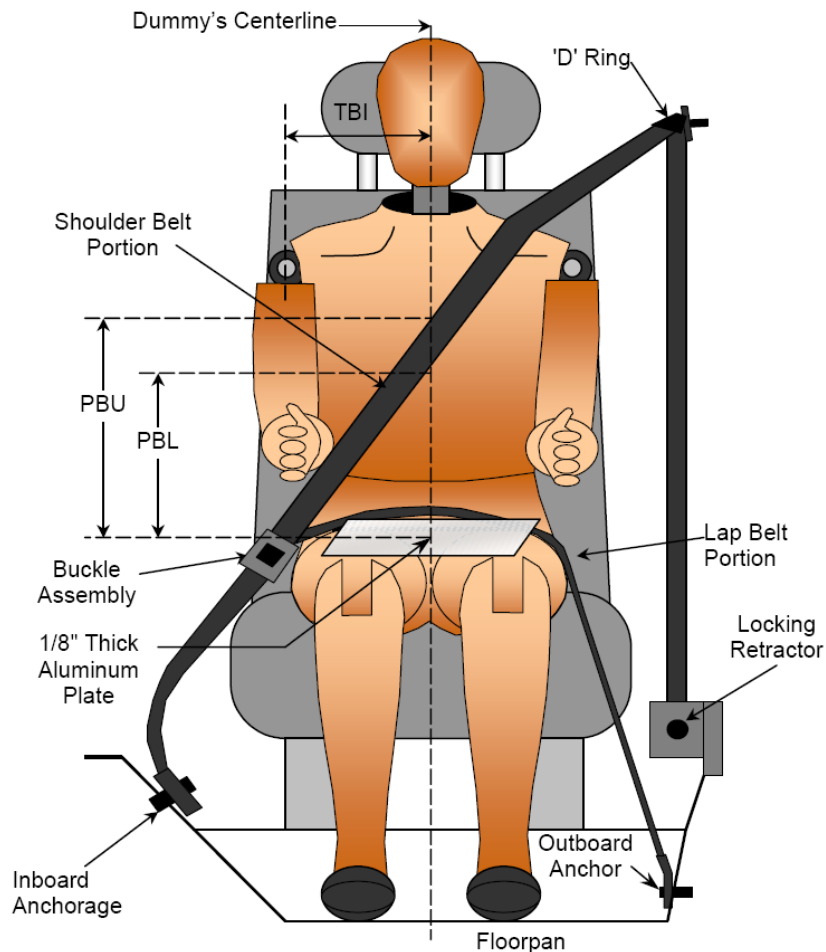
SEAT BELT POSITIONING DATA

Test Vehicle: 2012 Honda Civic LX 2-Door Coupe

NHTSA No.: MC5310

Test Program: 56 km/h Frontal Impact NCAP Test

Test Date: 1/18/12



FRONT VIEW OF DUMMY

SEAT BELT POSITIONING MEASUREMENTS

Code	Measurement Description	Units	Driver	Passenger
PBU	Top Surface of Aluminum Plate to Belt Upper Edge	mm	396	358
PBL	Top Surface of Aluminum Plate to Belt Lower Edge	mm	315	258

BELT LENGTH DATA

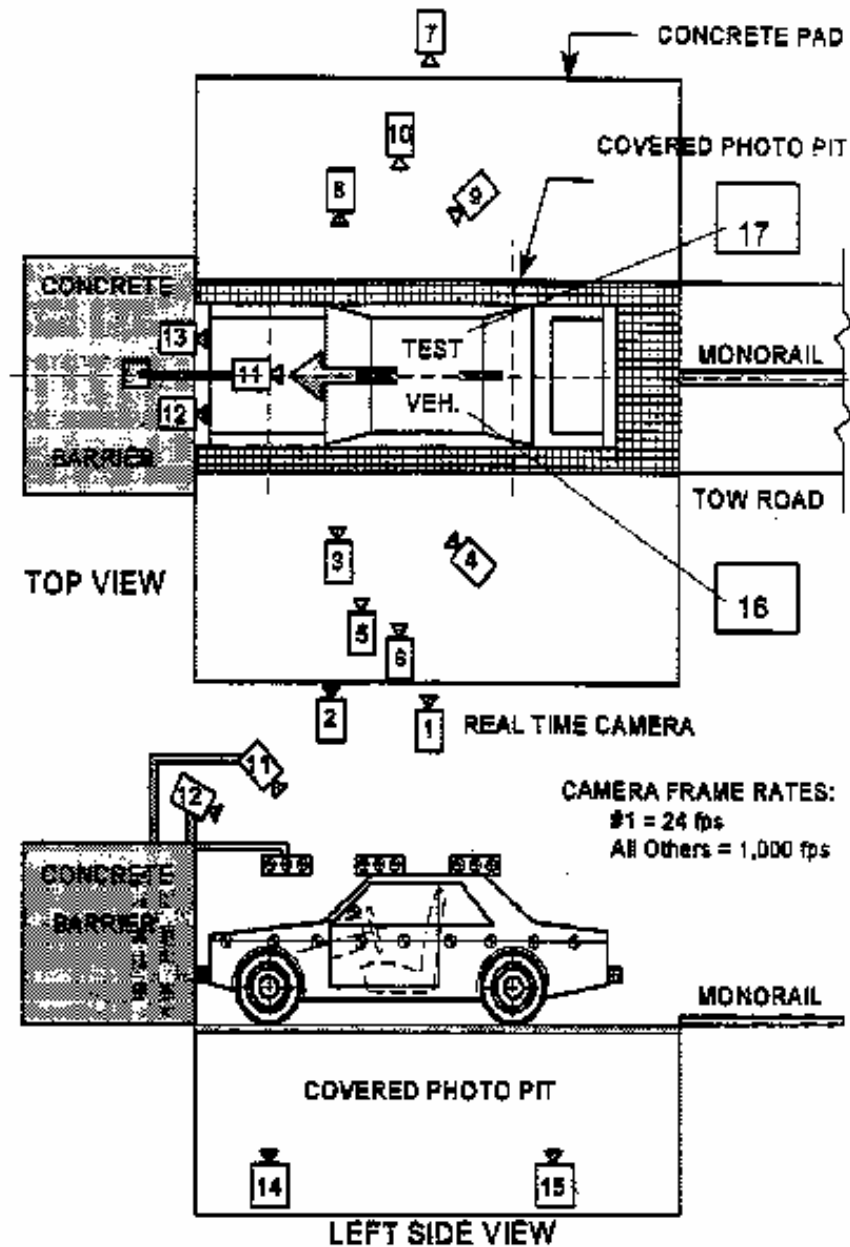
Measurement Description	Units	Driver	Passenger
Shoulder Belt Length as Measured on ATD	mm	1014	1061
Lap Belt Length as Measured on ATD	mm	616	577
Remainder of Belt on Reel	mm	921	948
Total Belt Length for Continuous Webbing Systems	mm	2551	2586

DATA SHEET NO. 6

HIGH-SPEED CAMERA LOCATIONS AND DATA

Test Vehicle: 2012 Honda Civic LX 2-Door Coupe NHTSA No.: MC5310
 Test Program: 56 km/h Frontal Impact NCAP Test Test Date: 1/18/12

CAMERA POSITIONS FOR FRONTAL IMPACTS



DATA SHEET NO. 6 ... (CONTINUED)

HIGH-SPEED CAMERA LOCATIONS AND DATA

Test Vehicle: 2012 Honda Civic LX 2-Door Coupe NHTSA No.: MC5310
 Test Program: 56 km/h Frontal Impact NCAP Test Test Date: 1/18/12

CAMERA LOCATIONS

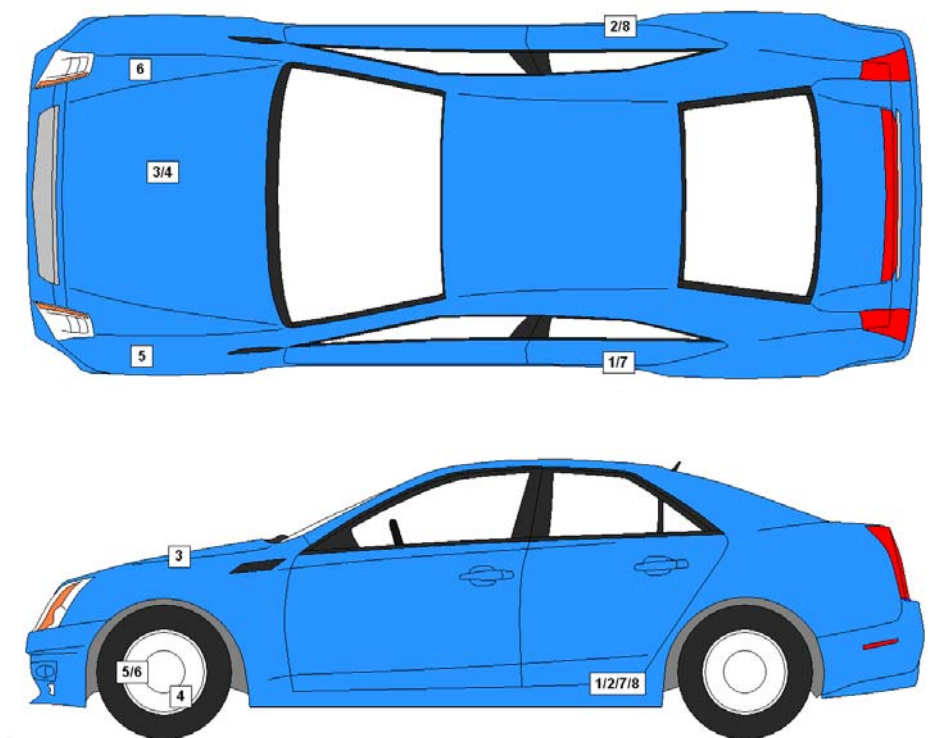
No.	Description	Location (mm)			Lens (mm)	Speed (fps)
		X	Y	Z		
1	Real-Time Left Overall	-11412	-8150	-1484		30
2	Driver Close-Up	-2590	-7950	-1371	24	1000
3	Left Front Half	-1701	-6197	-1701	50	1000
4	Left Angle	-6696	-10308	-3211	ZOOM	1000
5	Steering Column - Top	-1966	-10412	-3688	50	1000
6	Steering Column - Bottom	-1972	-10412	-3379	50	1000
7	Right Overall	-2336	7569	-1012	24	1000
8	Passenger Close-Up	-1733	7581	-1408	50	1000
9	Right Front Half	-1600	8214	-1811	ZOOM	1000
10	Right Angle	-6217	9516	-4830	ZOOM	1000
11	Windshield	-354	0	-5749	12	1000
12	Driver Windshield	297	-366	-2460	12	1000
13	Passenger Windshield	297	366	-2460	24	1000
14	Pit Front	-756	0	1495	12	1000
15	Pit Rear	-3398	0	1495	8	1000
16	Onboard Driver Airbag (Optional)	-2985	200	-1210	12	1000
17	Onboard Passenger Airbag (Optional)	-2985	-200	-1210	12	1000
18	Real-Time Left View of Impact					
19	Real-Time Right View of Impact					

Coordinates: +X = forward impact plane
 +Y = right of monorail center
 +Z = into ground

DATA SHEET NO. 7

VEHICLE ACCELEROMETER LOCATIONS

Test Vehicle: 2012 Honda Civic LX 2-Door Coupe NHTSA No.: MC5310
 Test Program: 56 km/h Frontal Impact NCAP Test Test Date: 1/18/12



VEHICLE ACCELEROMETER PRE-TEST LOCATIONS

No.	Description	Location		
		X	Y	Z
1	Left Rear Accelerometer X-Direction	2050	-748	-324
2	Right Rear Accelerometer X-Direction	2050	748	-324
3	Engine Top X	3660	362	-1003
4	Engine Bottom X	3680	124	-125
5	Left Brake Caliper X	3370	-686	-224
6	Right Brake Caliper X	3370	686	-224
7	Left Rear Accelerometer Z-Direction	2050	-748	-324
8	Right Rear Accelerometer Z-Direction	2050	748	-324

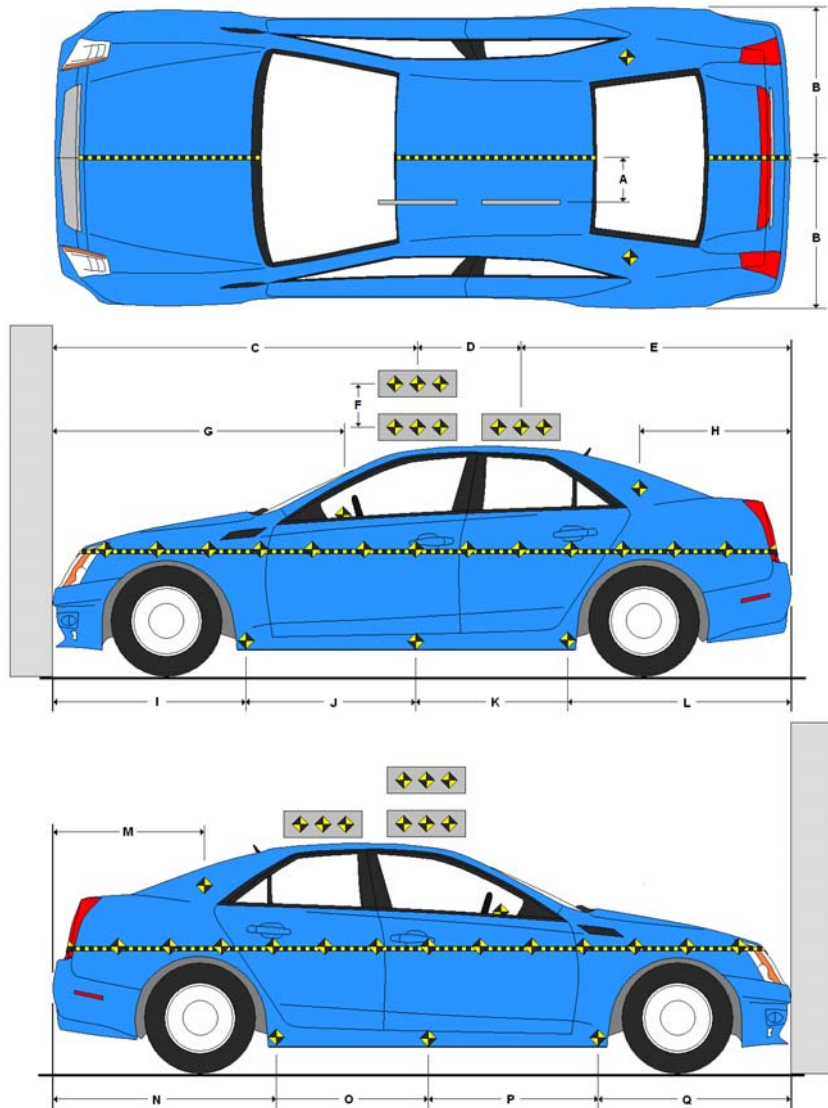
Reference Points: X – Rear Surface of Vehicle (+ forward)
 Y – Vehicle Centerline (+ to right)
 Z – Ground Plane (+ down)

DATA SHEET NO. 8

PHOTOGRAPHIC REFERENCE TARGET LOCATIONS

Test Vehicle: 2012 Honda Civic LX 2-Door Coupe NHTSA No.: MC5310
 Test Program: 56 km/h Frontal Impact NCAP Test Test Date: 1/18/12

Item	Value
A	387
B	874
C	2175
D	610
E	1675
F	305
G	1700
H	950
I	1338
J	874
K	874
L	1365
M	950
N	1365
O	874
P	874
Q	1338



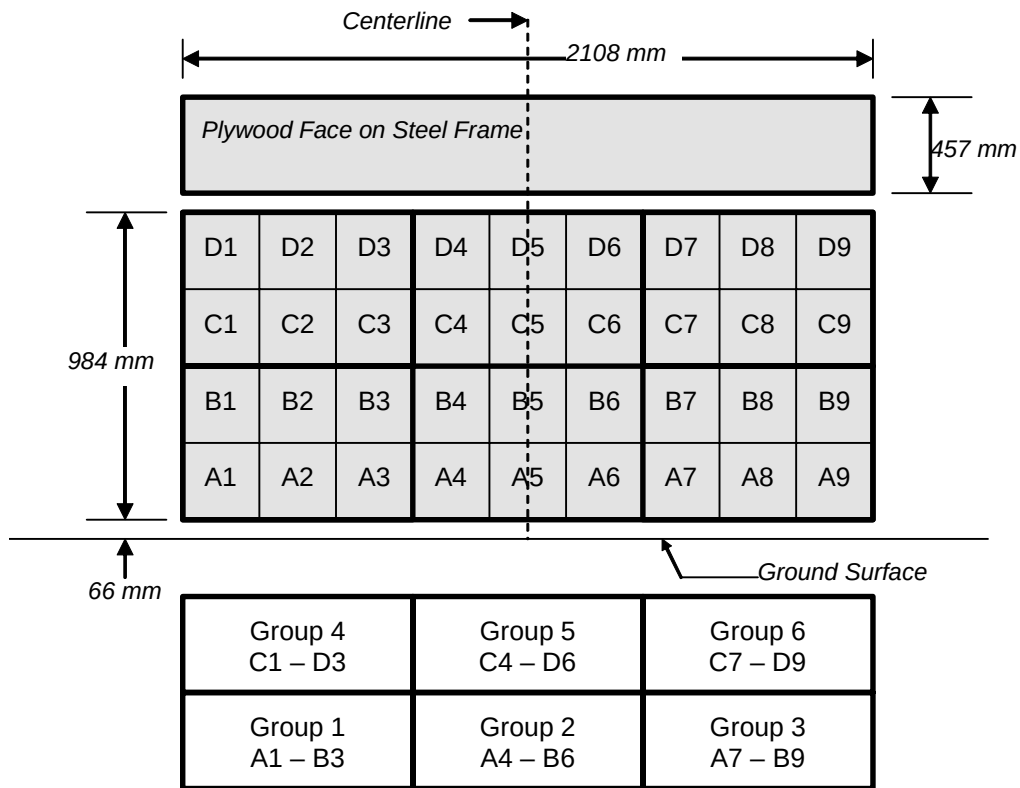
All measurements in millimeters.

DATA SHEET NO. 9

LOAD CELL LOCATIONS ON FIXED BARRIER

Test Vehicle: 2012 Honda Civic LX 2-Door Coupe NHTSA No.: MC5310
 Test Program: 56 km/h Frontal Impact NCAP Test Test Date: 1/18/12

36 Load Cell Rigid Barrier (NHTSA Standard) Load Cell Locations on Fixed Barrier



6 Groups of 6 Load Cells Each

DATA SHEET NO. 10

TEST VEHICLE CAMERA AND INSTRUMENTATION SUMMARY

Test Vehicle: 2012 Honda Civic LX 2-Door Coupe NHTSA No.: MC5310
Test Program: 56 km/h Frontal Impact NCAP Test Test Date: 1/18/12

INSTRUMENTATION

Driver Dummy Accelerometers	44
Passenger Dummy Accelerometers	44
Vehicle Structure Accelerometers	8
Seat Belt Load Cells	0
Load Cell Barrier	36
Total	132

CAMERA COVERAGE

High-Speed Vehicle On Board	2
High-Speed Off board	14
Real Time	3
Total	19

DATA SHEET NO. 11**POST-TEST OBSERVATIONS**

Test Vehicle: 2012 Honda Civic LX 2-Door Coupe NHTSA No.: MC5310
 Test Program: 56 km/h Frontal Impact NCAP Test Test Date: 1/18/12

TEST DUMMY INFORMATION AND CONTACT

Description	Driver	Passenger
Dummy Type/Serial No.	P572E 50th Percentile Male ATD / 035	P572O 5th Percentile Female ATD / 635
Head Contact	Airbag, Headrest	Airbag, Headrest
Upper Torso Contact	Airbag	Airbag
Lower Torso Contact	None	None
Left Knee Contact	Knee Bolster	Glovebox
Right Knee Contact	Knee Bolster, Steering Column	Glovebox

DOOR OPENING AND SEAT TRACK INFORMATION

Description	Driver	Passenger
Locked / Unlocked Doors	Unlocked	Unlocked
Front Door Opening	Remained closed and latched, operational	Remained closed and latched, operational
Rear Door Opening		
Seat Track Shift (mm)	1	5
Seat Back Failure	None	None
Glazing Damage	None	None

POST TEST STRUCTURAL OBSERVATIONS

Critical Areas of Performance	Observations and Conclusions
Windshield Damage	Cracked
Window Damage	None
Other Notable Effects	None

VEHICLE REBOUND FROM BARRIER

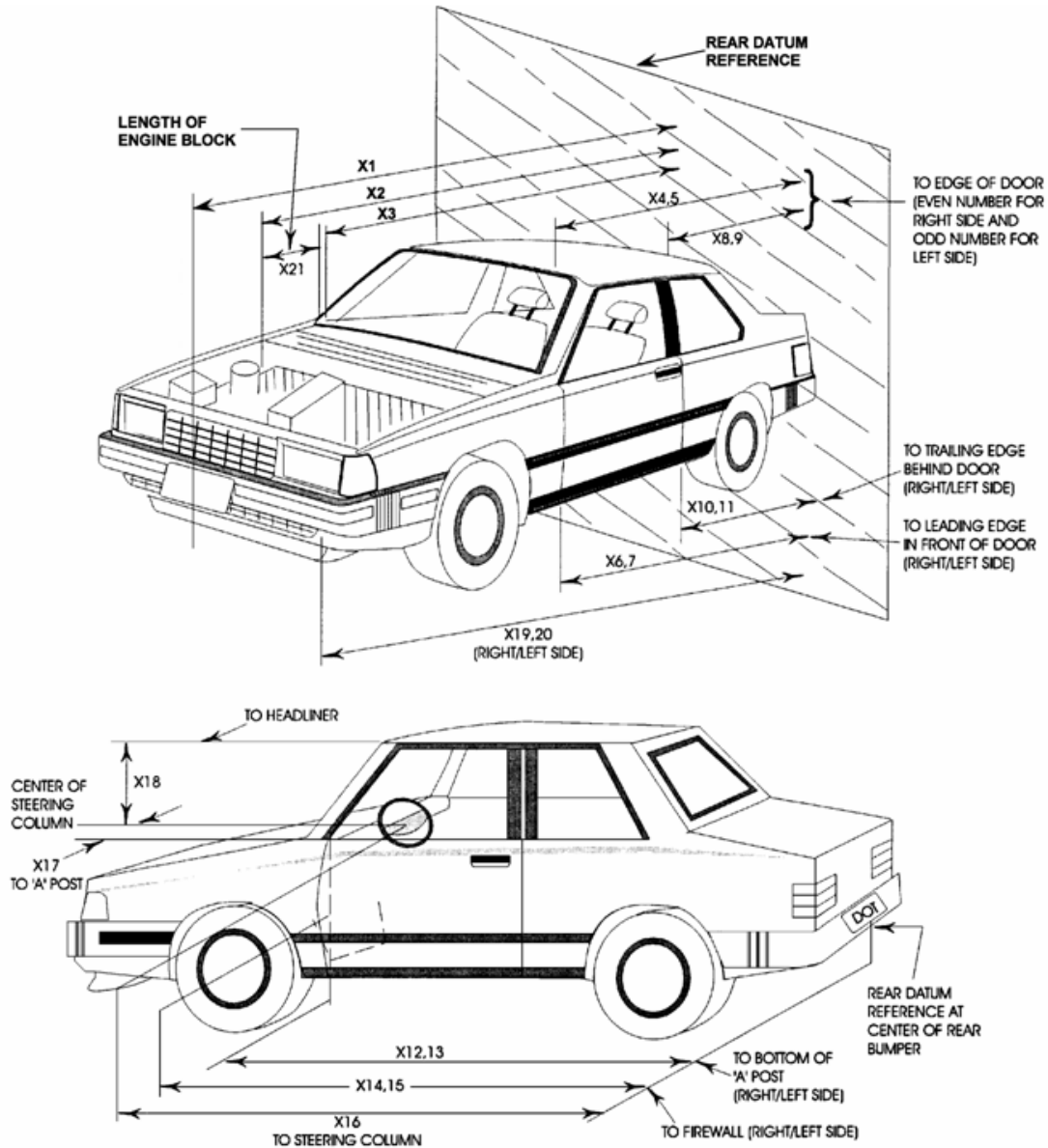
Measured Parameter	Units	Value
Left Side	mm	948
Center	mm	901
Right Side	mm	958
Average	mm	936

SUPPLEMENTAL RESTRAINT SYSTEM INFORMATION

Restraint Type	Driver		Passenger	
	Installed	Operated	Installed	Operated
Front Airbag	Yes	Yes	Yes	Yes
Side Airbag 1 (Curtain)	Yes	No	Yes	No
Side Airbag 2 (Torso)	Yes	No	Yes	No
Knee Airbag	No		No	
Seat Belt Pretensioner	Yes	Yes	Yes	Yes
Seat Belt Load Limiter	Yes	Yes	Yes	Yes
Other				

DATA SHEET NO. 12
VEHICLE PROFILE MEASUREMENTS

Test Vehicle: 2012 Honda Civic LX 2-Door Coupe NHTSA No.: MC5310
Test Program: 56 km/h Frontal Impact NCAP Test Test Date: 1/18/12

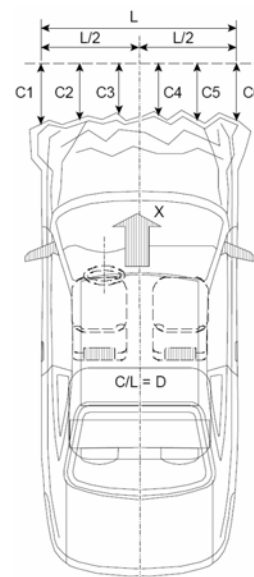


DATA SHEET NO. 12 ... (CONTINUED)**VEHICLE PROFILE MEASUREMENTS**

Test Vehicle: 2012 Honda Civic LX 2-Door Coupe NHTSA No.: MC5310
Test Program: 56 km/h Frontal Impact NCAP Test Test Date: 1/18/12

No.	Description	Pre-Test	Post-Test	Difference
1	Total Length of Vehicle at Centerline	4445	3995	-450
2	Rear Surface of Vehicle to Front of Engine	3895	3755	-140
3	RSOV to Firewall	3475	3355	-120
4	RSOV to Upper Leading Edge of Right Door	3112	3102	-10
5	RSOV to Upper Leading Edge of Left Door	3110	3096	-14
6	RSOV to Lower Leading Edge of Right Door	3082	3070	-12
7	RSOV to Lower Leading Edge of Left Door	3080	3070	-10
8	RSOV to Upper Trailing Edge of Right Door	1720	1715	-5
9	RSOV to Upper Trailing Edge of Left Door	1720	1707	-13
10	RSOV to Lower Trailing Edge of Right Door	1796	1799	3
11	RSOV to Lower Trailing Edge of Left Door	1797	1798	1
12	RSOV to Bottom of A-Pillar, Right Side	3046	3036	-10
13	RSOV to Bottom of A-Pillar, Left Side	3049	2935	-114
14	RSOV to Firewall, Right Side	3445	3340	-105
15	RSOV to Firewall, Left Side	3435	3235	-200
16	RSOV to Steering Column	2530	2610	80
17	Center of Steering Column to A-Pillar	410	435	25
18	Center of Steering Column to Headliner	445	420	-25
19	RSOV to Right Side of Front Bumper	3802	3582	-220
20	RSOV to Left Side of Front Bumper	3802	3625	-177
21	Length of Engine Block	500	500	0
RD	RSOV to Right Side of Dash Panel	2742	3730	988
CD	RSOV to Center of Dash Panel	2732	2715	-17
LD	RSOV to Left Side of Dash Panel	2730	2705	-25

All measurements in millimeters.

DATA SHEET NO. 13**ACCIDENT INVESTIGATION DATA**Test Vehicle: 2012 Honda Civic LX 2-Door CoupeNHTSA No.: MC5310Test Program: 56 km/h Frontal Impact NCAP TestTest Date: 1/18/12**VEHICLE INFORMATION**VIN: 2HGFG3B55CH515156Wheelbase (mm): 2625Vehicle Size Category: 2-Door CoupeTest Weight (kg): 1403.0**ACCELEROMETER DATA**Accelerometer Locations: Left Rear CrossmemberCal. Procedure/Interval: Drop Test / 6 monthsIntegration Algorithm: NHTSA StandardImpact Velocity (km/h): 56.58Velocity Change (km/h): 68.2Time of Separation (msec): 73.1Linearity: Good**CRUSH PROFILE**Collision Deformation Classification: 12FDEW2Midpoint of Damage: Vehicle CenterlineDamage Region Length (mm): 1511Impact Mode: Full Frontal

No.	Measurement Description	Units	Pre-Test	Post-Test	Difference
C1	Crush Zone 1 at Left Side	mm	236	455	219
C2	Crush Zone 2 at Left Side	mm	104	460	356
C3	Crush Zone 3 at Left Side	mm	38	455	417
C4	Crush Zone 4 at Right Side	mm	38	465	427
C5	Crush Zone 5 at Right Side	mm	104	505	401
C6	Crush Zone 6 at Right Side	mm	236	505	269
L	C1 to C6	mm	1511		

DATA SHEET NO. 14

VEHICLE INTRUSION MEASUREMENTS

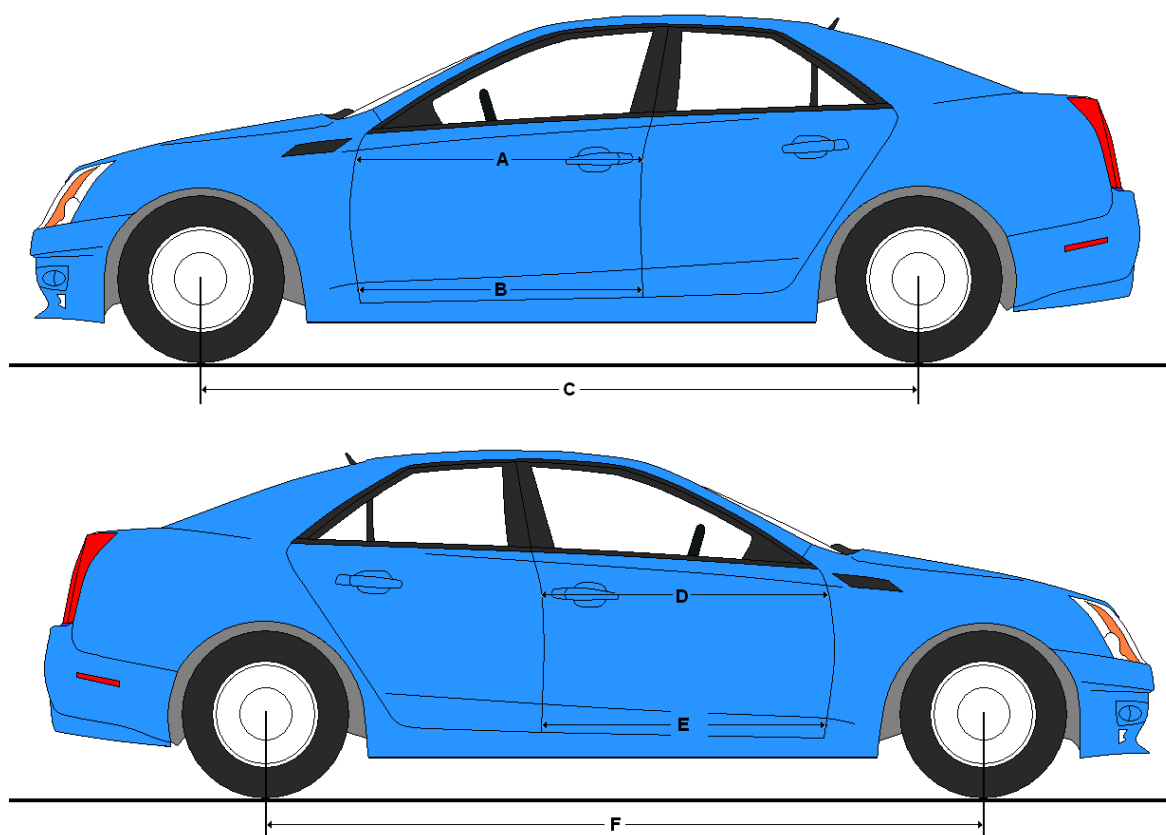
Test Vehicle: 2012 Honda Civic LX 2-Door Coupe NHTSA No.: MC5310
 Test Program: 56 km/h Frontal Impact NCAP Test Test Date: 1/18/12

DOOR OPENING WIDTH

Item	Description	Units	Pre-Test	Post-Test	Difference
A	Left Side Upper	mm	1229	1226	3
B	Left Side Lower	mm	1165	1168	-3
D	Right Side Upper	mm	1225	1226	-1
E	Right Side Lower	mm	1153	1156	-3

WHEELBASE MEASUREMENTS

Item	Description	Units	Pre-Test	Post-Test	Difference
C	Left Side Wheelbase	mm	2625	2510	115
F	Right Side Wheelbase	mm	2625	2499	126



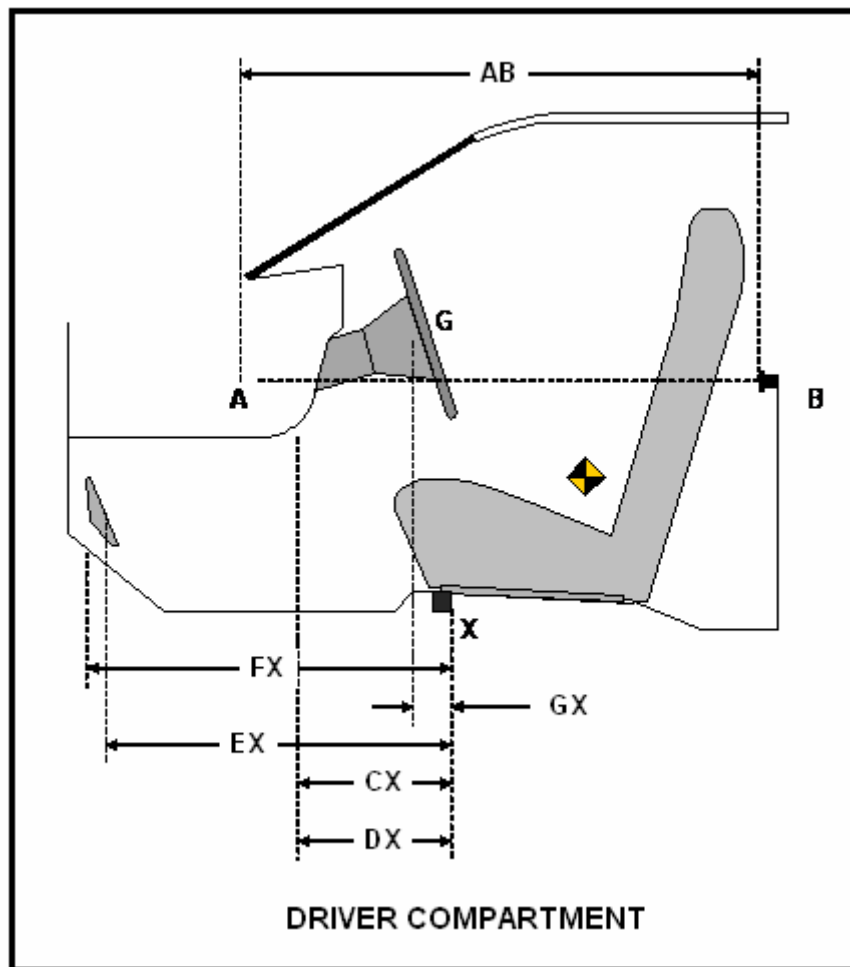
DATA SHEET NO. 14 ... (CONTINUED)
VEHICLE INTRUSION MEASUREMENTS

Test Vehicle: 2012 Honda Civic LX 2-Door Coupe NHTSA No.: MC5310
 Test Program: 56 km/h Frontal Impact NCAP Test Test Date: 1/18/12

DRIVER COMPARTMENT INTRUSION

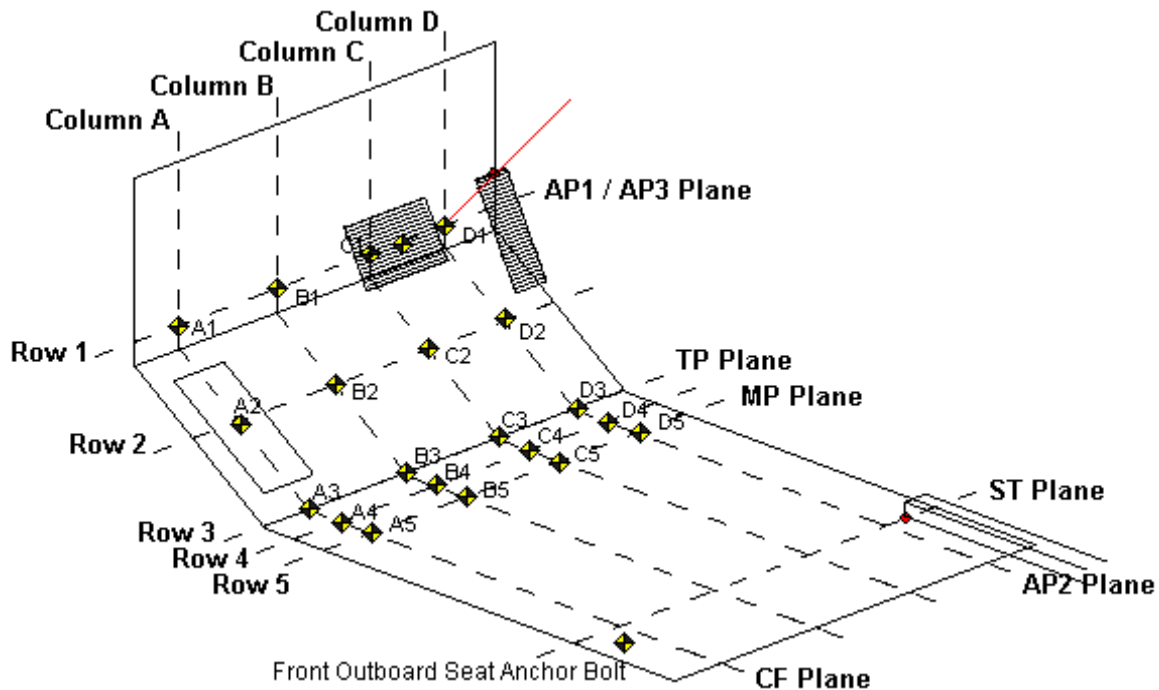
Item	Description	Units	Pre-Test	Post-Test	Difference
AB	Door Opening (Inside Window Jam)	mm	1173	1172	1
CX	Left Knee Bolster to X	mm	280	270	10
DX	Right Knee Bolster to X	mm	237	265	-28
EX	Brake Pedal to X	mm	567	600	-33
FX	Foot Rest to X	mm	595	620	-25
GX	Center of Steering Wheel Hub to X	mm	155	210	-855

X = Front of Seat Track (Stationary)



DATA SHEET NO. 14 ... (CONTINUED)
VEHICLE INTRUSION MEASUREMENTS

Test Vehicle:	2012 Honda Civic LX 2-Door Coupe	NHTSA No.:	MC5310
Test Program:	56 km/h Frontal Impact NCAP Test	Test Date:	1/18/12



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. 14 ... (CONTINUED)
VEHICLE INTRUSION MEASUREMENTS

Test Vehicle: 2012 Honda Civic LX 2-Door Coupe NHTSA No.: MC5310
 Test Program: 56 km/h Frontal Impact NCAP Test Test Date: 1/18/12

DRIVER FLOORPAN X-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	655	664	665	659	621	622	635	602	34	42	30	57
2	585	586	586	576	579	577	578	566	6	9	8	10
3	487	485	485	485	486	483	484	483	1	2	1	2
4	379	378	375	375	378	375	373	371	1	3	2	4
5	263	263	263	266	262	262	264	264	1	1	-1	2

DRIVER FLOORPAN Y-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	-19	-127	-228	-387	-28	-137	-234	-386	9	10	6	-1
2	-21	-125	-227	-390	-25	-129	-232	-395	4	4	5	5
3	-21	-123	-224	-387	-24	-124	-225	-391	3	1	1	4
4	-25	-121	-219	-384	-29	-122	-221	-384	4	1	2	0
5	-26	-118	-216	-375	-28	-119	-214	-376	2	1	-2	1

DRIVER FLOORPAN Z-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	26	18	24	34	46	40	31	42	-20	-22	-7	-8
2	-47	-48	-43	-23	-46	-50	-54	-41	-1	2	11	18
3	-62	-60	-58	-48	-64	-66	-69	-63	2	6	11	15
4	-61	-61	-59	-65	-69	-68	-69	-79	8	7	10	14
5	-66	-62	-59	-59	-71	-68	-69	-73	5	6	10	14

All measurements in millimeters

DATA SHEET NO. 14 ... (CONTINUED)
VEHICLE INTRUSION MEASUREMENTS

Test Vehicle: 2012 Honda Civic LX 2-Door Coupe NHTSA No.: MC5310
 Test Program: 56 km/h Frontal Impact NCAP Test Test Date: 1/18/12

PASSENGER FLOORPAN X-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	687	691	686	658	625	632	646	627	62	59	40	31
2	610	604	597	603	592	577	575	585	18	27	22	18
3	501	492	490	487	495	490	488	491	6	2	2	-4
4	390	387	384	379	387	383	384	378	3	4	0	1
5	283	276	271	263	279	272	270	263	4	4	1	0

PASSENGER FLOORPAN Y-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	355	193	99	-29	356	196	107	-24	-1	-3	-8	-5
2	361	196	99	-34	362	195	103	-33	-1	1	-4	-1
3	362	198	106	-27	357	195	101	-28	5	3	5	1
4	361	202	108	-23	363	199	108	-26	-2	3	0	3
5	370	202	111	-22	366	200	110	-23	4	2	1	1

PASSENGER FLOORPAN Z-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	44	40	36	54	51	51	44	68	-7	-11	-8	-14
2	-28	-32	-27	-37	-50	-46	-34	-27	22	14	7	-10
3	-52	-60	-60	-62	-75	-80	-74	-63	23	20	14	1
4	-59	-61	-62	-63	-84	-78	-72	-66	25	17	10	3
5	-58	-61	-63	-63	-80	-76	-71	-65	22	15	8	2

All measurements in millimeters

DATA SHEET NO. 15

SUMMARY OF FMVSS 212 AND 219 (PARTIAL) DATA

Test Vehicle: 2012 Honda Civic LX 2-Door Coupe NHTSA No.: MC5310

Test Program: 56 km/h Frontal Impact NCAP Test Test Date: 1/18/12

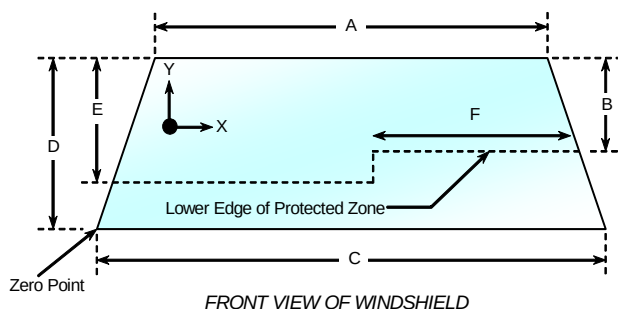
Windshield Mounting Details: Windshield glass is secured to the vehicle frame with rubber cement.

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

Temperature of windshield molding during test: 21.2 ° C

WINDSHIELD PERIPHERY MEASUREMENTS

Measurement	Pre-Test (mm)	Post-Test (mm)	% Retention
Left Side	2328	2328	100.0%
Right Side	2328	2328	100.0%
Total	4656	4656	100.0%



Item	Units	Value
A	mm	1185
B	mm	505
C	mm	1410
D	mm	1030
E	mm	605
F	mm	580

AREAS OF PROTECTED ZONE FAILURES

- A. Provide Coordinates of the area that the protected zone was penetrated more than 0.25 inches 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. 15 ... (CONTINUED)

SUMMARY OF FMVSS 212 AND 219 (PARTIAL) DATA

Test Vehicle: 2012 Honda Civic LX 2-Door Coupe NHTSA No.: MC5310
Test Program: 56 km/h Frontal Impact NCAP Test Test Date: 1/18/12

FMVSS 301 FUEL SYSTEM INTEGRITY POST IMPACT DATA

Temperature at Time of Impact: 20.0° C Test Time: 1:42 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: There was no Stoddard solvent spillage.

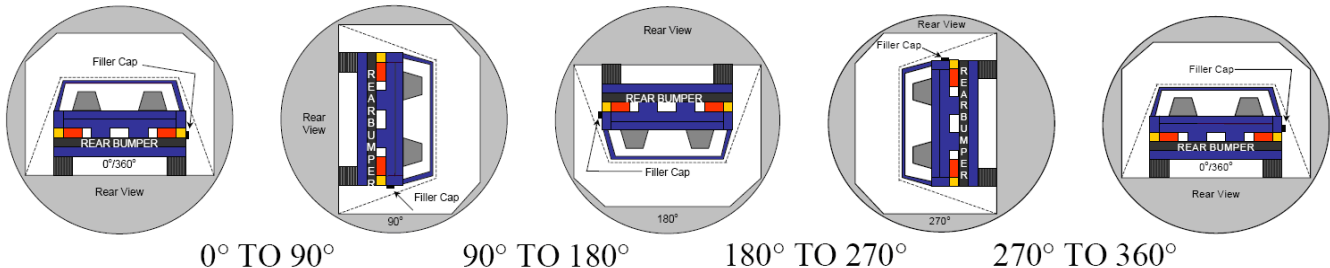
DATA SHEET NO. 16
FMVSS 301 STATIC ROLLOVER

Test Vehicle: 2012 Honda Civic LX 2-Door Coupe

NHTSA No.: MC5310

Test Program: 56 km/h Frontal Impact NCAP Test

Test Date: 1/18/12



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: There was no Stoddard solvent spillage.

SOLVENT COLLECTION TIME TABLE IN SECONDS

Test Phase	Rotation Time	Hold Time	Total Time
0° To 90°	83	300	383
90° To 180°	82	300	382
180° To 270°	79	300	379
270° To 360°	80	300	380

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			

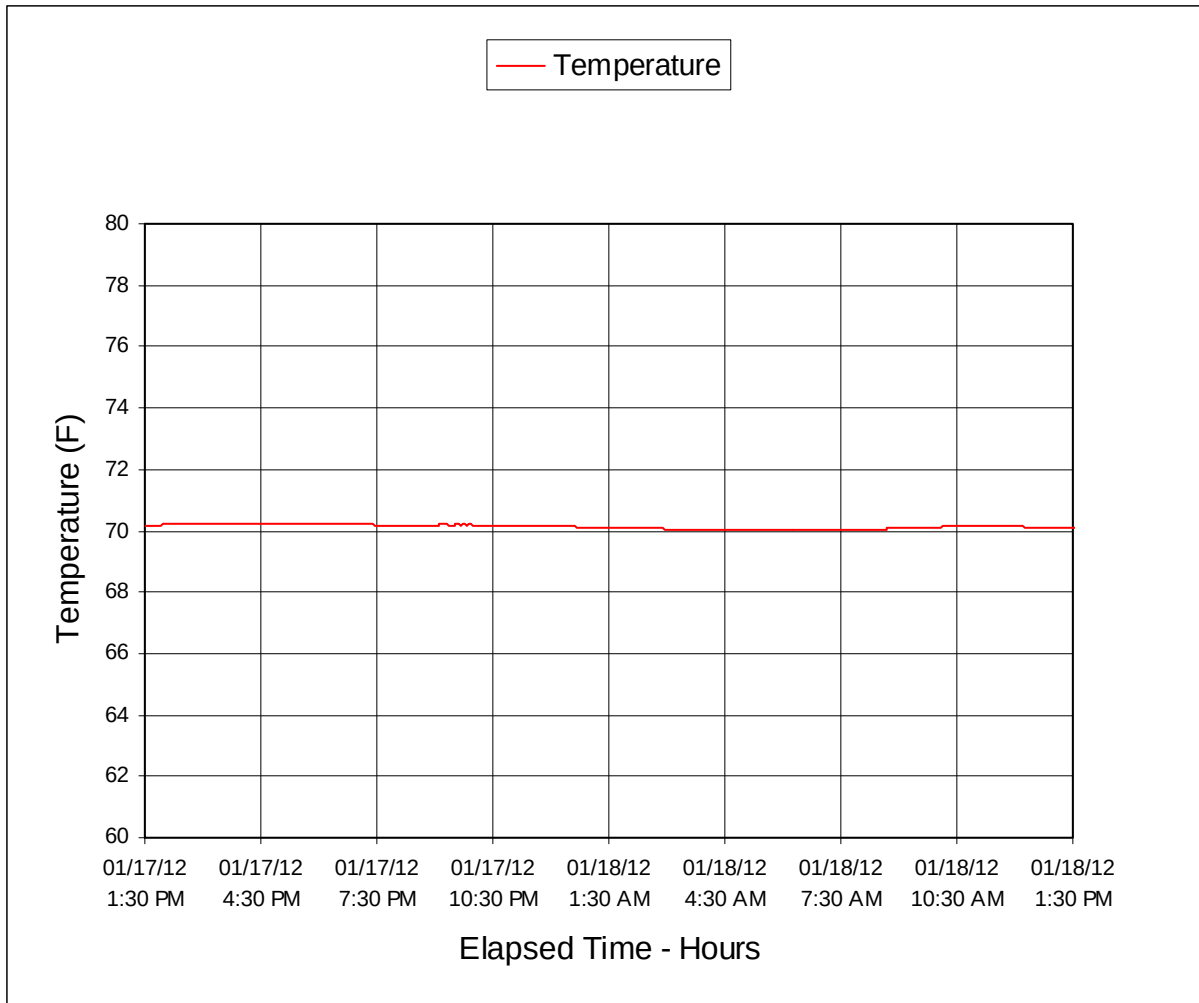
SOLVENT SPILLAGE LOCATION TABLE

Test Phase	Spillage Location
0° To 90°	
90° To 180°	
180° To 270°	
270° To 360°	

DATA SHEET NO. 17

DUMMY / VEHICLE TEMPERATURE STABILIZATION CHART

Test Vehicle: 2012 Honda Civic LX 2-Door Coupe NHTSA No.: MC5310
Test Program: 56 km/h Frontal Impact NCAP Test Test Date: 1/18/12



APPENDIX A
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FIGURE 1. Load Cell Location



FIGURE 2. Load Cell Wall



FIGURE 3. Manufacturer's Label



FIGURE 4. Tire Placard



FIGURE 5. 2012 Honda Civic Frontal, As Delivered



FIGURE 6. Left Rear $\frac{3}{4}$ View, As Received



FIGURE 7. Pre-Test Front View of Test Vehicle

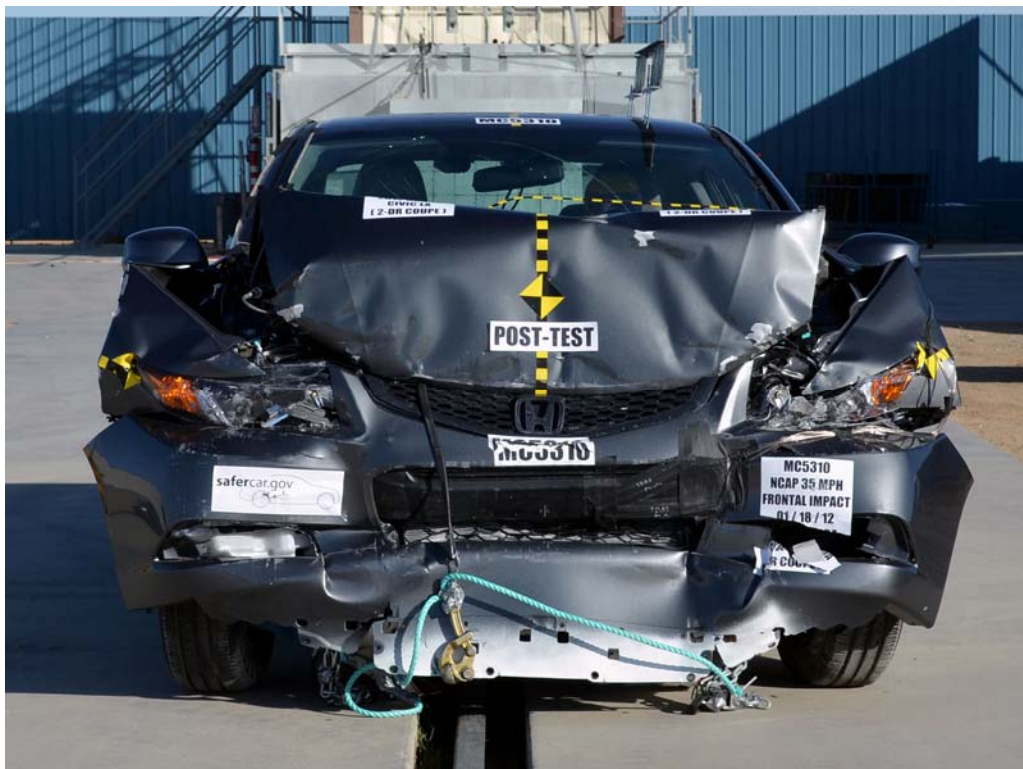


FIGURE 8. Post-Test Front View of Test Vehicle



FIGURE 9. Pre-Test Left View of Test Vehicle



FIGURE 10. Post-Test Left View of Test Vehicle

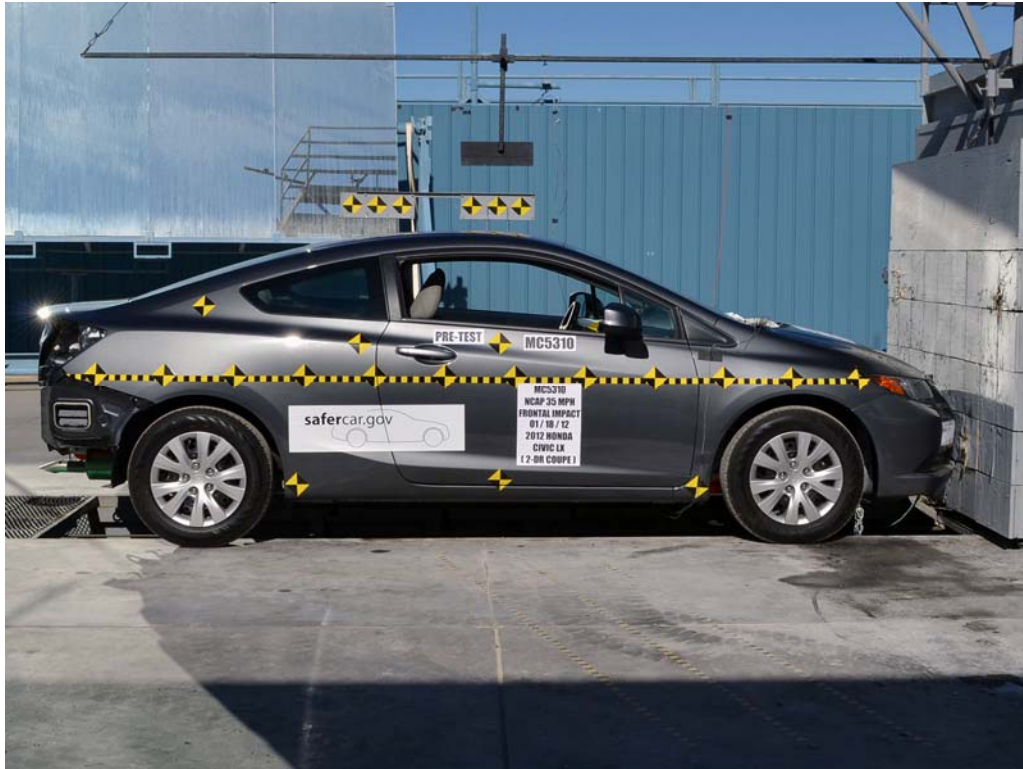


FIGURE 11. Pre-Test Right View of Test Vehicle



FIGURE 12. Post-Test Right View of Test Vehicle



FIGURE 13. Pre-Test Right Front ¾ View

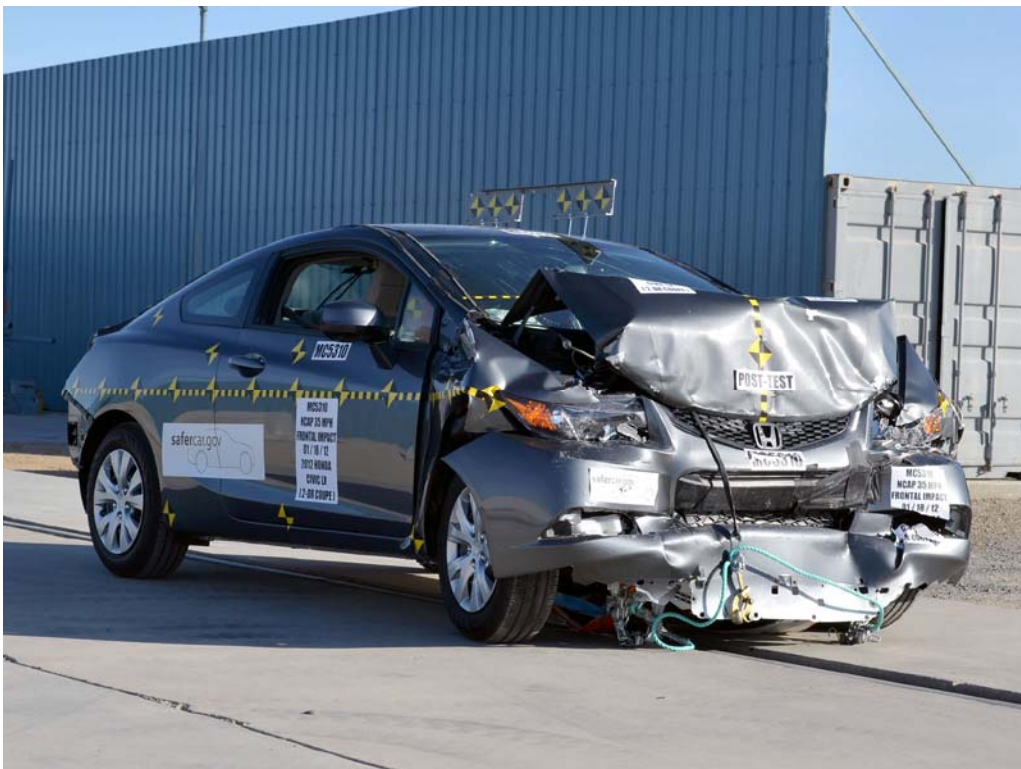


FIGURE 14. Post-Test Right Front ¾ View



FIGURE 15. Pre-Test Left Rear $\frac{3}{4}$ View



FIGURE 16. Post-Test Left Rear $\frac{3}{4}$ View

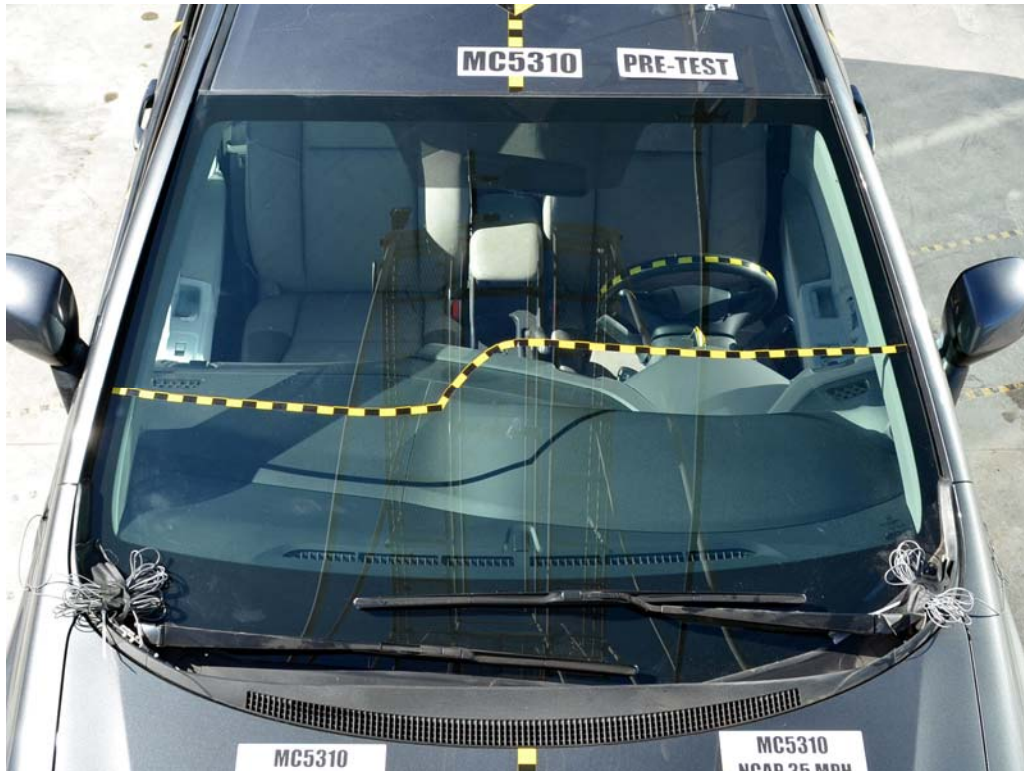


FIGURE 17. Pre-Test Windshield View



FIGURE 18. Post-Test Windshield View

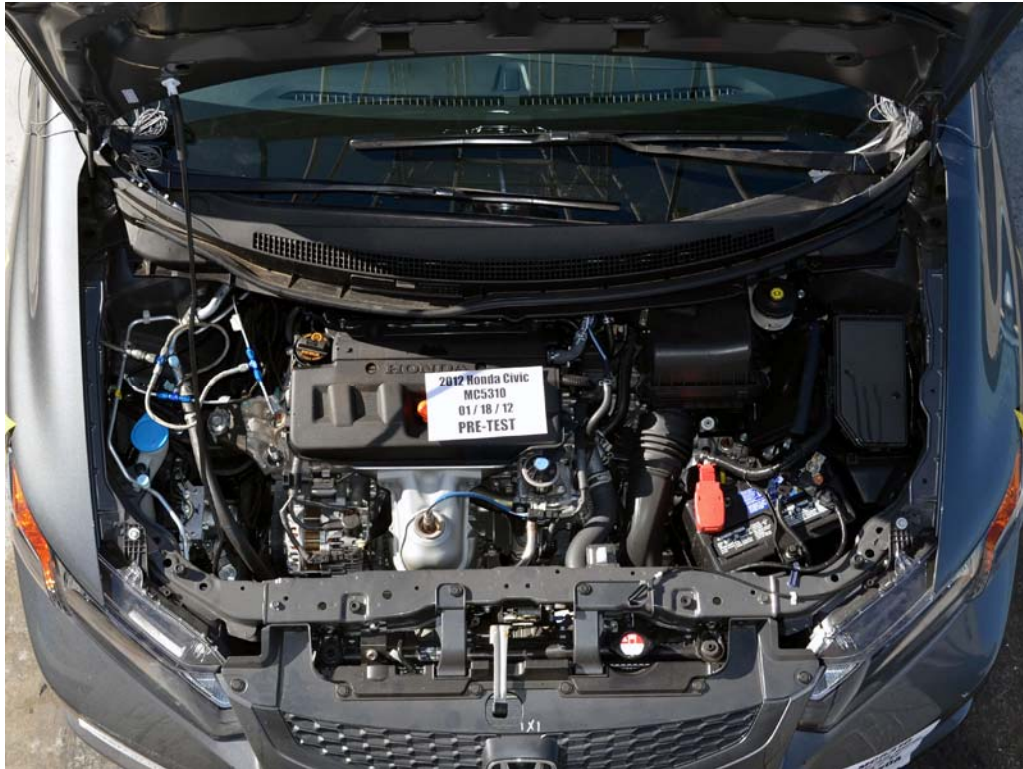


FIGURE 19. Pre-Test Engine Compartment View



FIGURE 20. Post-Test Engine Compartment View



FIGURE 21. Pre-Test Fuel Filler Cap View



FIGURE 22. Post-Test Fuel Filler Cap View

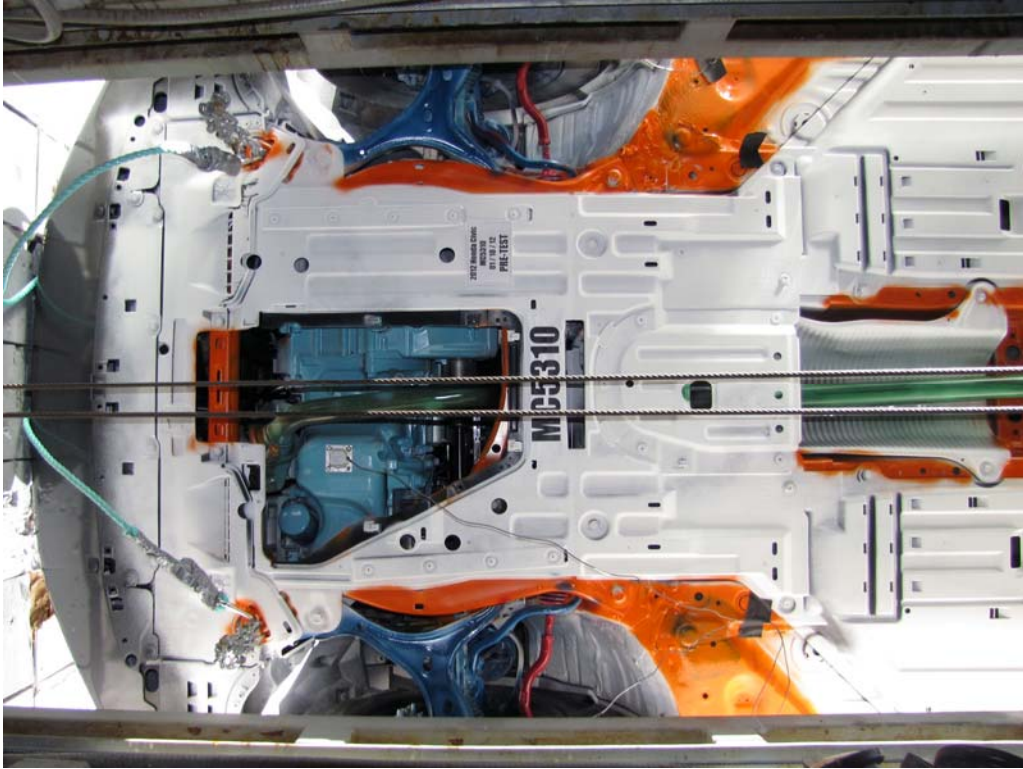


FIGURE 23. Pre-Test Front Underbody View

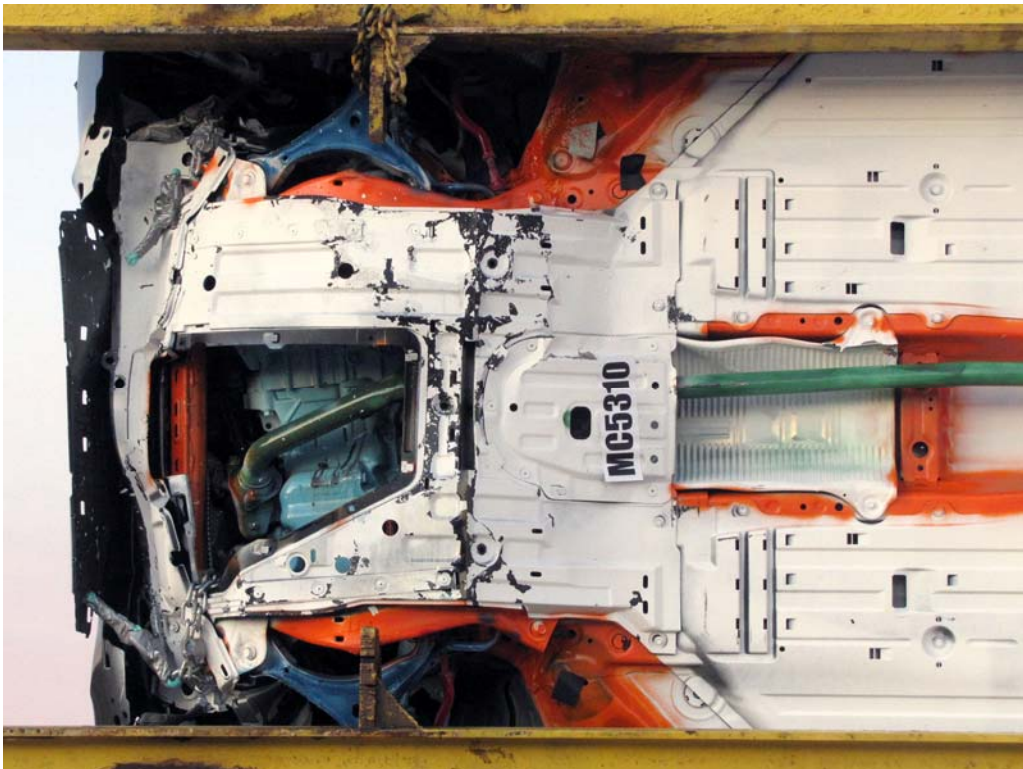


FIGURE 24. Post-Test Front Underbody View

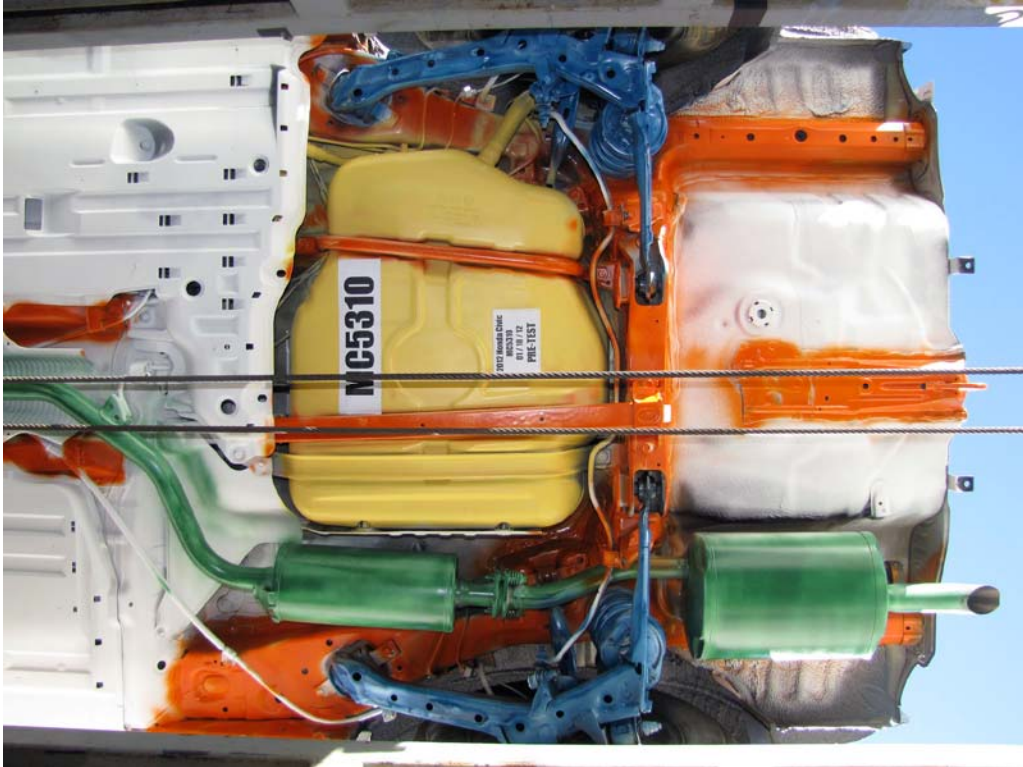


FIGURE 25. Pre-Test Rear Underbody View



FIGURE 26. Post-Test Rear Underbody View



FIGURE 27. Pre-Test Dummy Cable Routing



FIGURE 28. Post-Test Dummy Cable Routing



FIGURE 29. Pre-Test Driver Dummy Front View



FIGURE 30. Post-Test Driver Dummy Front View



FIGURE 31. Pre-Test Driver Dummy Window View



FIGURE 32. Post-Test Driver Dummy Window View



FIGURE 33. Pre-Test Driver Dummy and Vehicle Interior View



FIGURE 34. Post-Test Driver Dummy and Vehicle Interior View



FIGURE 35. Pre-Test Driver's Seat Fore-Aft Markings



FIGURE 36. Post-Test Driver's Seat Fore-Aft Markings



FIGURE 37. Pre-Test Driver Dummy Feet



FIGURE 38. Post-Test Driver Dummy Feet



FIGURE 39. Pre-Test Driver's Side Knee Bolster



FIGURE 40. Post-Test Driver's Side Knee Bolster



FIGURE 41. Pre-Test Driver's Side Floorpan



FIGURE 42. Post-Test Driver's Side Floorpan



FIGURE 43. Post-Test Driver Dummy Face

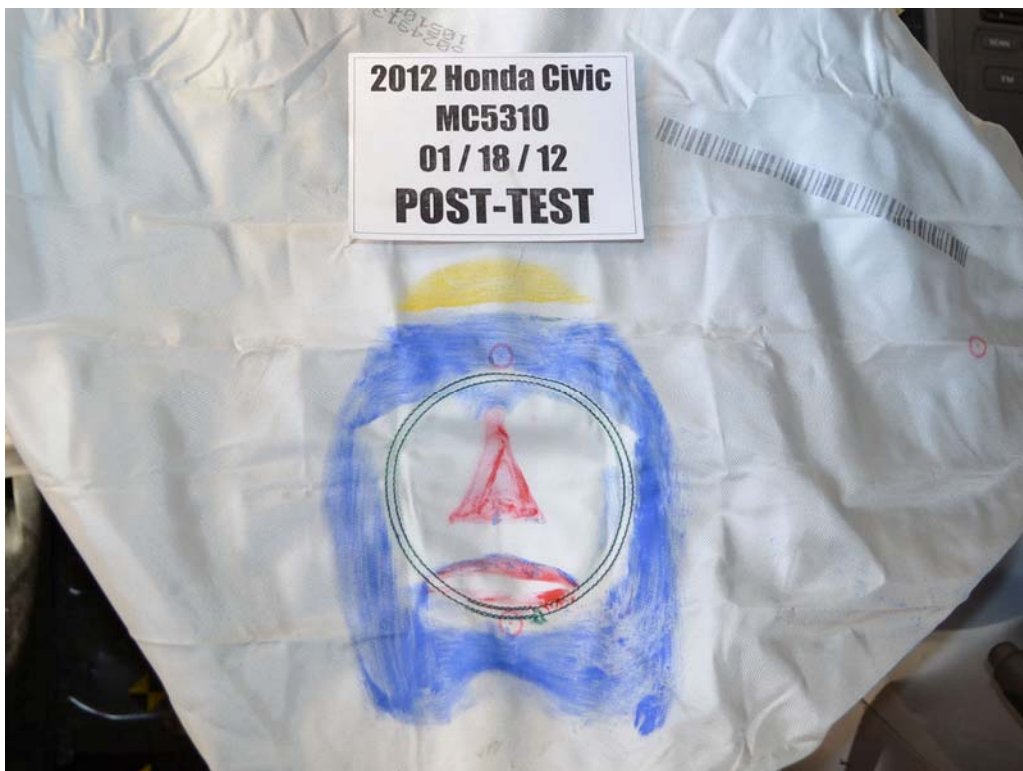


FIGURE 44. Post-Test Driver Dummy Contact With Airbag



FIGURE 45. Post-Test Driver Dummy Contact With Headrest



FIGURE 45a. Post-Test Driver Dummy Contact With Knee Bolster



FIGURE 45b. Post-Test Driver Dummy Contact With Steering Column



FIGURE 46. Pre-Test View Of Steering Wheel

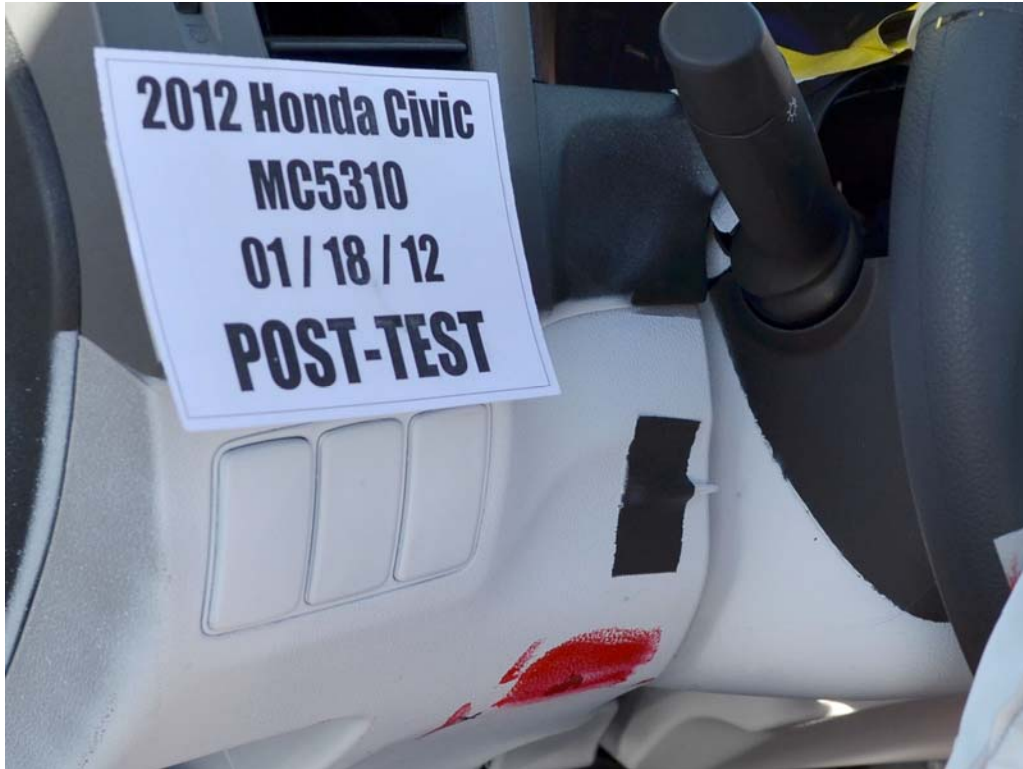


FIGURE 47. Post-Test View Of Steering Wheel



FIGURE 48. Pre-Test Passenger Dummy Front View



FIGURE 49. Post-Test Passenger Dummy Front View



FIGURE 50. Pre-Test Passenger Dummy Window View



FIGURE 51. Post-Test Passenger Dummy Window View



FIGURE 52. Pre-Test Passenger Dummy and Vehicle Interior View



FIGURE 53. Post-Test Passenger Dummy and Vehicle Interior View

Photograph Not Available

FIGURE 54. Pre-Test Passenger's Seat Fore-Aft Markings



FIGURE 55. Post-Test Passenger's Seat Fore-Aft Markings



FIGURE 56. Pre-Test Passenger Dummy Feet



FIGURE 57. Post-Test Passenger Dummy Feet



FIGURE 58. Pre-Test Passenger's Side Knee Bolster



FIGURE 59. Post-Test Passenger's Side Knee Bolster



FIGURE 60. Pre-Test Passenger's Side Floorpan



FIGURE 61. Post-Test Passenger's Side Floorpan



FIGURE 62. Post-Test Passenger Dummy Contact With Airbag



FIGURE 62a. Post-Test Passenger Dummy Contact With Headrest



FIGURE 62b. Post-Test Passenger Dummy Contact With Glovebox



FIGURE 63. Pre-Test of Ballast Installed in Vehicle

Photograph Not Applicable
No Stoddard
Solvent Spillage

FIGURE 64. Post-Test Stoddard Solvent Spillage Location



FIGURE 65. Post-Test Speed Trap Read Out

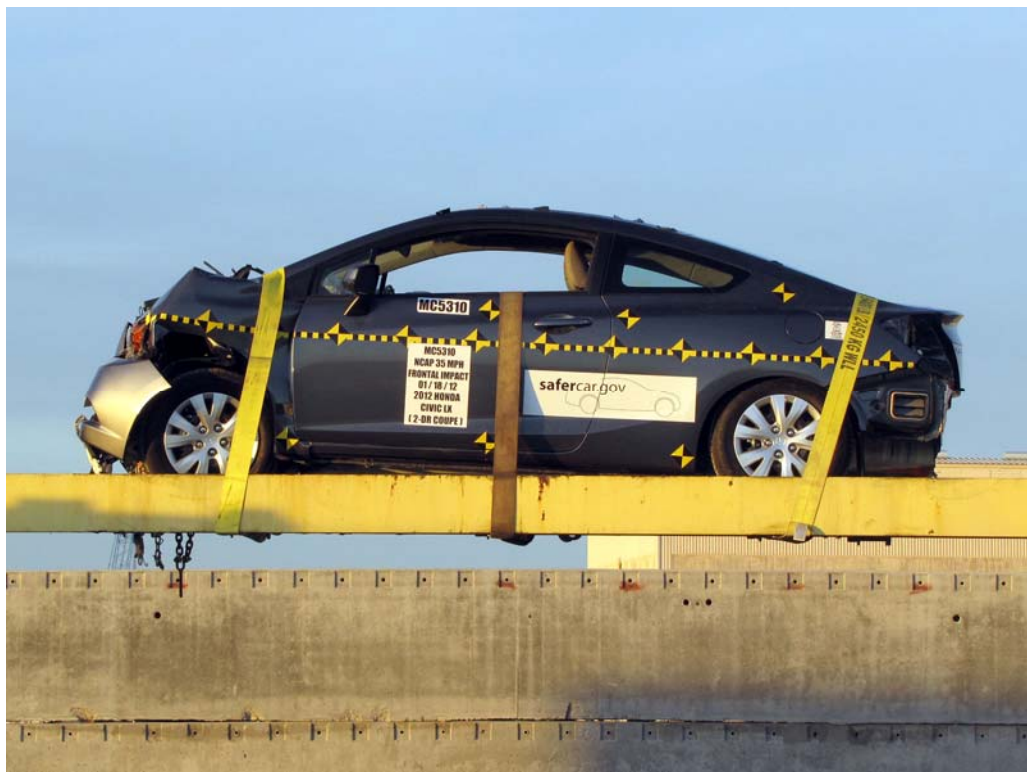


FIGURE 66. Vehicle at 0° on Static Rollover Device



FIGURE 67. Vehicle at 90°on Static Rollover Device

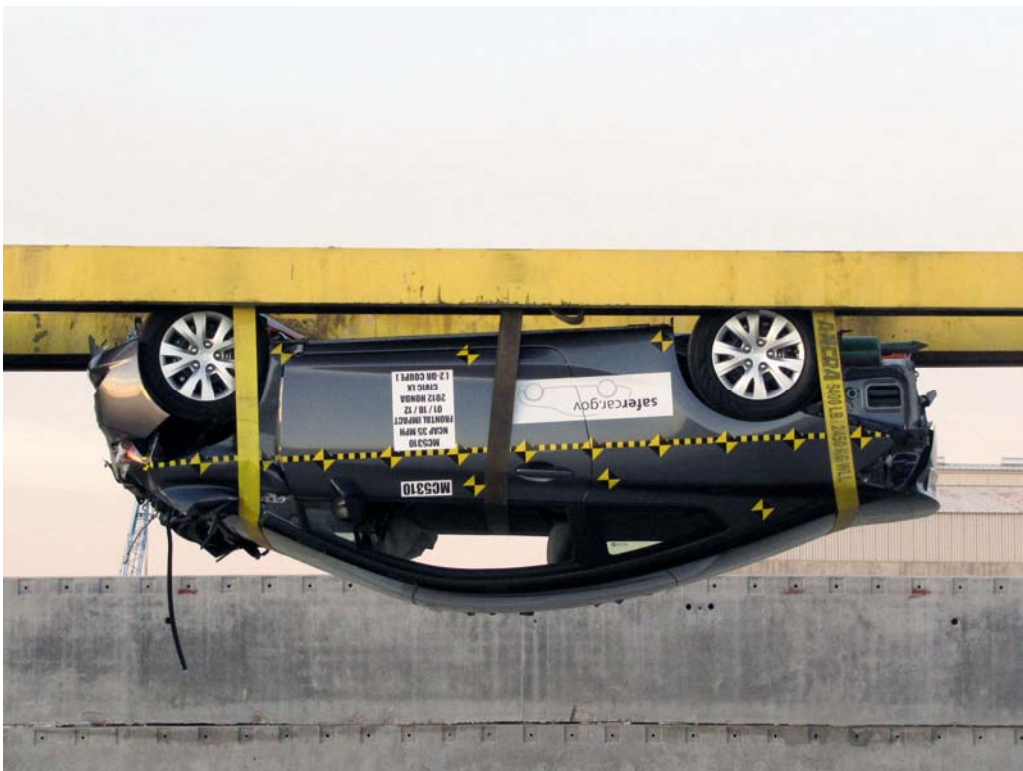


FIGURE 68. Vehicle at 180°on Static Rollover Device

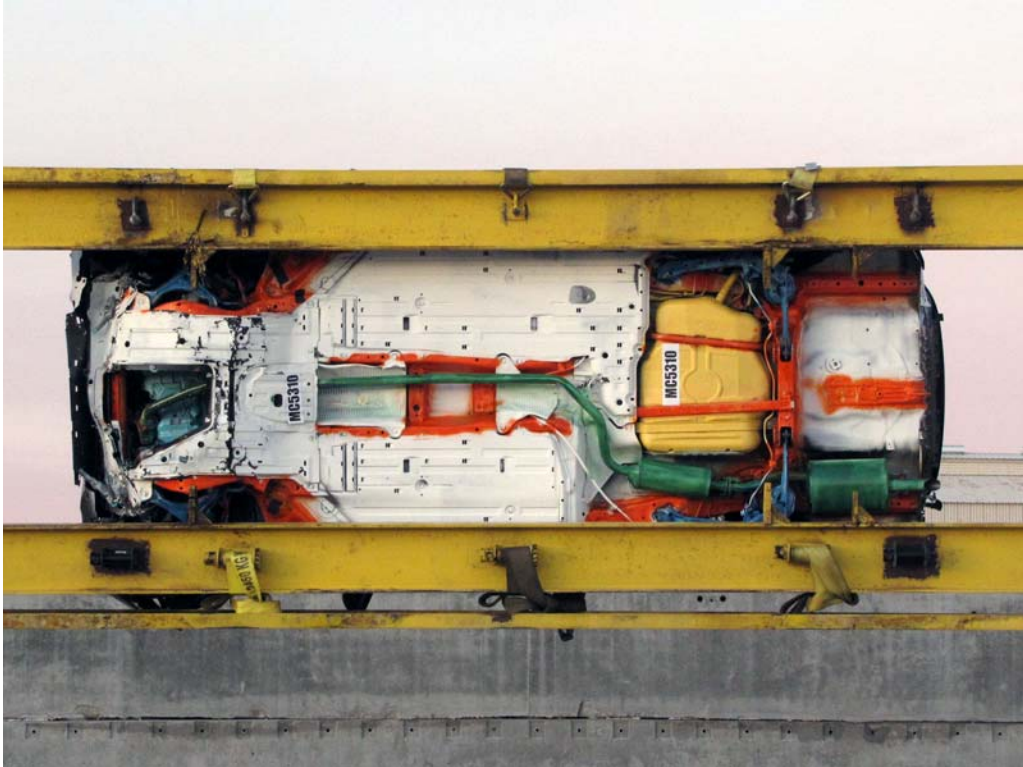


FIGURE 69. Vehicle at 270°on Static Rollover Device

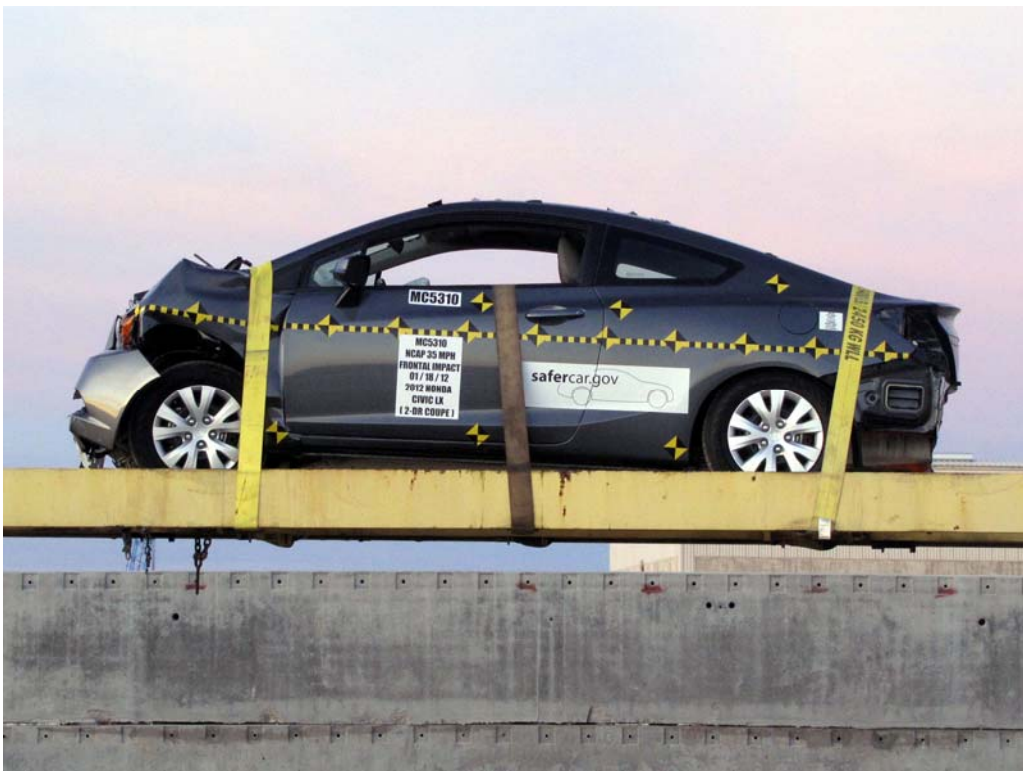


FIGURE 70. Vehicle at 360°on Static Rollover Device



FIGURE 71. 2012 Honda Civic Frontal Impact Event

2012 CIVIC 2DR LX

VEHICLE NUMBER: 2HGFG3B55CHS15156
ENGINE NUMBER: R1827-2076376 EXT. POLISHED METAL M.
CONTROL NUMBER: 866554 INT. GRAY

Manufacturer's Suggested Retail Price
\$18,455.00

Full Tank of Fuel No Charge

Destination and Handling 770.00

TOTAL VEHICLE PRICE (includes Pre-Delivery Service)
\$19,225.00

License and title fees, state and local taxes and dealer options and accessories are not included in the manufacturer's suggested retail price.

STANDARD EQUIPMENT AT NO EXTRA COST

*** TECHNICAL FEATURES ***

- 140hp 1.8 Liter SOHC 16-Valve VTEC 4-Cylinder Engine
- 5-Speed Automatic Transmission with Grade Logic Control
- Front MacPherson Strut Suspension
- Rear Multi-Link Suspension
- Electric Power-Assisted Rack-and-Pinion Steering
- CARB-Certified P2EV
- Immobilizer Theft Deterrent System

*** SAFETY FEATURES ***

- Driver's and Front Passenger's Dual-Stage Airbags (DSG)
- Driver's and Front Passenger's Side Airbags
- Side Curtain Airbags
- Anti-Lock Braking System (ABS)
- Brake Assist
- Electronic Brake Distribution (EBD)
- Vehicle Stability Assist (VSA)
- 3-Point Seat Belts
- Front Seat Belts with Automatic Retracting System
- Side-Impact Door Beams
- Front and Rear Crumple Zones
- ACE Body Structure
- Daytime Running Lights (DRL)
- LATCH System for Child Seats

*** INTERIOR FEATURES ***

- 160-Watt AM/FM/CD Audio System with 6 Speakers and MP3/WMA Playback
- Steering Wheel Mounted Controls
- USB Audio Interface
- MP3 Auxiliary Input Jack
- Air Conditioning
- with Air Filtration System
- Intelligent Multi-Information Display (i-MID)
- Driver's Seat Height Adjustment
- Fold Down Rear Seatback
- Front Center Console with Armrest
- Power Windows and Door Locks
- Driver's Auto Up/Down Window
- Tilt & Telescopic Steering Column
- Front Map Lights & Cargo Area Light
- 12-Volt Power Outlet
- Cruise Control
- Floor Mats
- Eco Assist with Econ Button
- Maintenance Minder System

*** EXTERIOR FEATURES ***

- 15" x 6.0" Steel Wheels with Full Wheel Covers
- P185/65 R15 All-Season Tires
- Auto-Off Headlights
- Intermittent Windshield Wipers
- Rear Window Defroster
- Power Door Mirrors
- Rear Spoiler
- Remote Entry System
- Security System

EPA Fuel Economy Estimates

CITY MPG 28
Expected range for most drivers 23 to 33 MPG

Estimated Annual Fuel Cost \$1,732
Based on 15,000 miles at \$3.79 per gallon

HIGHWAY MPG 39
Expected range for most drivers 32 to 48 MPG

Combined Fuel Economy
32
This Vehicle
10 to 60
All Compacts

Your actual mileage will vary depending on how you drive and maintain your vehicle.

See the FREE Fuel Economy Guide at dealers or www.fueleconomy.gov

Environmental Performance

Protect the environment, choose vehicles with higher scores:

Global Warming Score 9 (Average new vehicle 11)

Smog Score 9 (Average new vehicle 11)

Vehicle emissions are a primary contributor to global warming and smog. Scores are determined by the California Air Resources Board based on this vehicle's measured emissions. Please visit www.airresourcesboard.org or www.DriveClean.ca.gov for more information. AIR RESOURCES BOARD

RIVERSIDE HONDA
8330A RICHMAN AVENUE
RIVERSIDE, CA 92504

PORT OF ENTRY: BUFFALO
DELIVERY POINT: LOS ANGELES
Gulfair
POWERSPACE: 427-001
TRANSMETHOD: A79 SAN BERNARDINO
VIN: 2HGFG3B55CHS15156

ORIG. DLR: 20253
REF. AG: 40445
HN CODE: HN-3614
EMISIGN: CALIFORNIA
DEALER: 20253

FOR THIS VEHICLE
Final Assembly Plant: ALLISTON, ONTARIO CANADA
Country of Origin: Engine: U.S.A.
Transmission: JAPAN

HSC 39037.05 Low-Emission Motor Vehicle

PARTS CONTENT INFORMATION

FOR VEHICLES IN THIS COUNTRY
U.S./Canadian Parts Content: **65 %**
Major Sources of Foreign Parts Content: **JAPAN 20 %**

NOTE: Parts content does not include final assembly, distribution or other non-parts costs.

GOVERNMENT SAFETY RATINGS

Crash	Driver Passenger	Not Rated
Frontal	Not Rated	Not Rated
Side	Not Rated	Not Rated
Rollover	Not Rated	Not Rated

Star ratings based on the risk of injury in a frontal impact.
Frontal ratings should ONLY be compared to other vehicles of similar size and weight.

Star ratings based on the risk of injury in a side impact.
Side ratings should ONLY be compared to other vehicles of similar size and weight.

Star ratings based on the risk of rollover in a single vehicle crash.
Star ratings range from 1 to 5 stars (5 being the highest).
Source: National Highway Traffic Safety Administration (NHTSA).

www.safercar.gov or 1-888-327-4236

This vehicle is equipped with a front bumper of a type that has been tested at an impact speed of 5 miles per hour, and a rear bumper of a type that has been tested at an impact speed of 5 miles per hour, resulting in no damage to the vehicle's body and safety systems, and minimal damage to the bumper and attachment hardware. "Minimal damage to the bumper" means minor cosmetic damage that can be repaired with the use of common repair materials and without replacing any parts. The stronger the bumper, the less likely the vehicle will require repair after a low-speed collision. This vehicle exceeds the current federal bumper standard of 2.5 miles per hour.

FIGURE 72. Monroney Label Photograph

APPENDIX B
DUMMY RESPONSE DATA TRACES

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6	Driver Chest X Acceleration vs. Time Primary	B-3
7	Driver Chest Y Acceleration vs. Time Primary	B-3
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9	Driver Chest Resultant Acceleration vs. Time Primary	B-3
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11	Driver Upper Neck Force Z vs. Time Primary	B-4
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18	Passenger Head Z Acceleration vs. Time Primary	B-6
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21	Passenger Chest X Acceleration vs. Time Primary	B-8
22	Passenger Chest Y Acceleration vs. Time Primary	B-8
23	Passenger Chest Z Acceleration vs. Time Primary	B-8
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26	Passenger Upper Neck Force Z vs. Time Primary	B-9
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30	Passenger Right Femur Force vs. Time	B-10

The following additional dummy and vehicle response data can be found in the R&D section of the NHTSA website at www.nhtsa.dot.gov

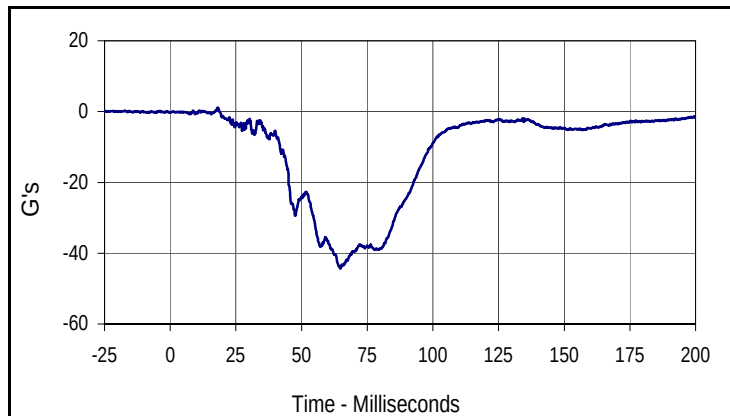
Driver Head X Acceleration Redundant
Driver Head Y Acceleration Redundant
Driver Head Z Acceleration Redundant
Driver Upper Neck Force Y
Driver Upper Neck Moment X
Driver Upper Neck Moment Z
Driver Chest X Acceleration Redundant
Driver Chest Y Acceleration Redundant
Driver Chest Z Acceleration Redundant
Driver Pelvis X
Driver Pelvis Y
Driver Pelvis Z
Driver Left Femur Force Z Redundant
Driver Right Femur Force Z Redundant
Driver Shoulder Belt Force
Driver Lap Belt Force
Driver Left Upper Tibia Moment X
Driver Left Upper Tibia Moment Y
Driver Left Upper Tibia Force Z
Driver Left Lower Tibia Moment X
Driver Left Lower Tibia Moment Y
Driver Left Lower Tibia Force Z
Driver Right Upper Tibia Moment X
Driver Right Upper Tibia Moment Y
Driver Right Upper Tibia Force Z
Driver Right Lower Tibia Moment X
Driver Right Lower Tibia Moment Y
Driver Right Lower Tibia Force Z
Driver Left Foot Fore Z
Driver Left Foot Aft X
Driver Left Foot Aft Z
Driver Right Foot Fore Z
Driver Right Foot Aft X

Driver Right Foot Aft Z
Passenger Head X Acceleration Redundant
Passenger Head Y Acceleration Redundant
Passenger Head Z Acceleration Redundant
Passenger Upper Neck Force X
Passenger Upper Neck Force Z
Passenger Upper Neck Moment Y
Passenger Chest X Acceleration Redundant
Passenger Chest Y Acceleration Redundant
Passenger Chest Z Acceleration Redundant
Passenger Pelvis X
Passenger Pelvis Y
Passenger Pelvis Z
Passenger Left Femur Force Z Redundant
Passenger Right Femur Force Z Redundant
Passenger Shoulder Belt Force
Passenger Lap Belt Force
Passenger Left Upper Tibia Moment X
Passenger Left Upper Tibia Moment Y
Passenger Left Upper Tibia Force Z
Passenger Left Lower Tibia Moment X
Passenger Left Lower Tibia Moment Y
Passenger Left Lower Tibia Force Z
Passenger Right Upper Tibia Moment X
Passenger Right Upper Tibia Moment Y
Passenger Right Upper Tibia Force Z
Passenger Right Lower Tibia Moment X
Passenger Right Lower Tibia Moment Y
Passenger Right Lower Tibia Force Z
Passenger Left Foot Fore Z
Passenger Left Foot Aft X
Passenger Left Foot Aft Z
Passenger Right Foot Fore Z
Passenger Right Foot Aft X
Passenger Right Foot Aft Z
Left Rear Seat Crossmember X

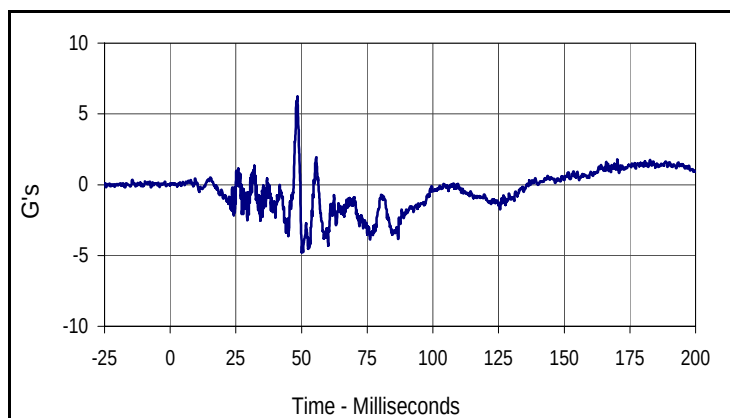
Left Rear Seat Crossmember Z
Right Rear Seat Crossmember X
Right Rear Seat Crossmember Z
Vehicle Engine Top X
Vehicle Engine Bottom X
Vehicle Left Brake Caliper X
Vehicle Right Brake Caliper X
Load Cell Barrier A1-A9
Load Cell Barrier B1-B9
Load Cell Barrier C1-C9
Load Cell Barrier D1-D9

Test Vehicle: 2012 Honda Civic LX 2-Door Coupe
 Test Program: 56 km/h Frontal Impact NCAP Test

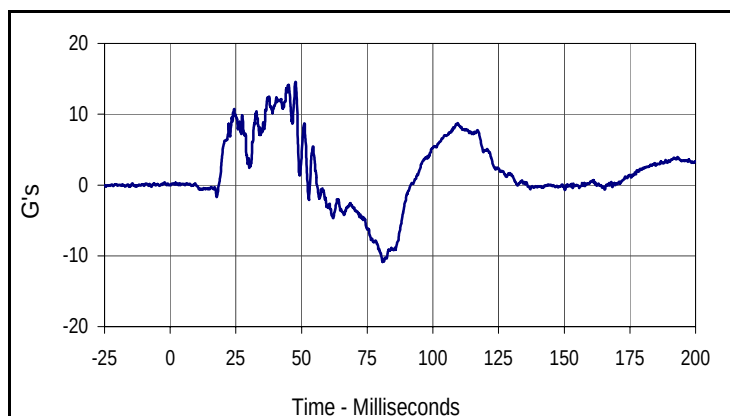
NHTSA No.: MC5310
 Test Date: 1/18/12



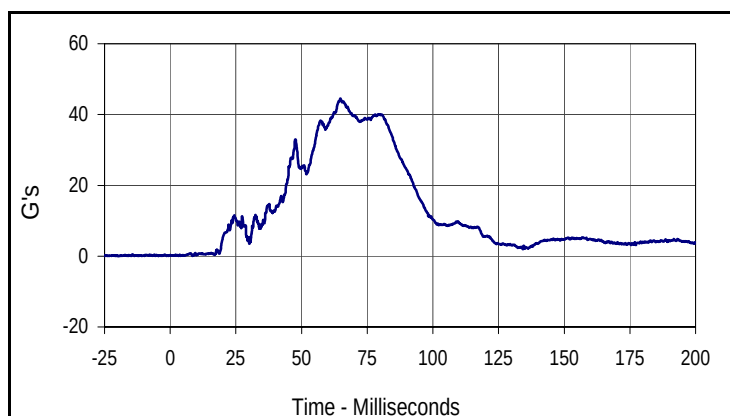
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Plot No.	Type	SAE Class	Units
001	FIL	1000	G's
Max	Time	Min	Time
1.1	18.1	-44.4	64.8



Curve Description			
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Plot No.	Type	SAE Class	Units
002	FIL	1000	G's
Max	Time	Min	Time
6.2	48.4	-4.8	50.1



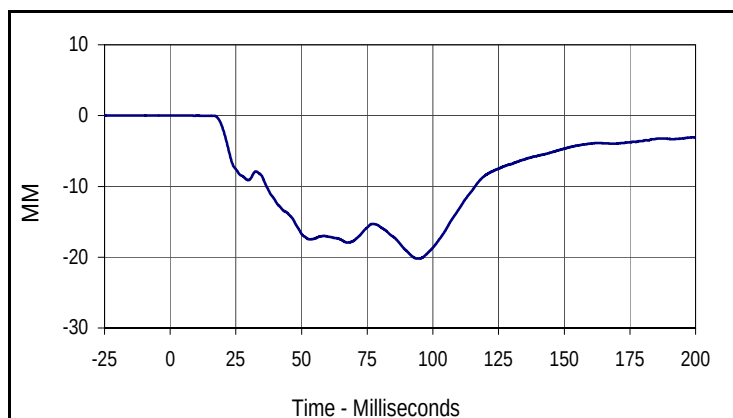
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Plot No.	Type	SAE Class	Units
003	FIL	1000	G's
Max	Time	Min	Time
14.6	47.7	-10.9	80.8



Curve Description			
Driver Head Resultant Acceleration Primary			
Plot No.	Type	SAE Class	Units
004	RES	1000	G's
Max	Time	Min	Time
44.6	64.8	0.1	8.5

Test Vehicle: 2012 Honda Civic LX 2-Door Coupe
 Test Program: 56 km/h Frontal Impact NCAP Test

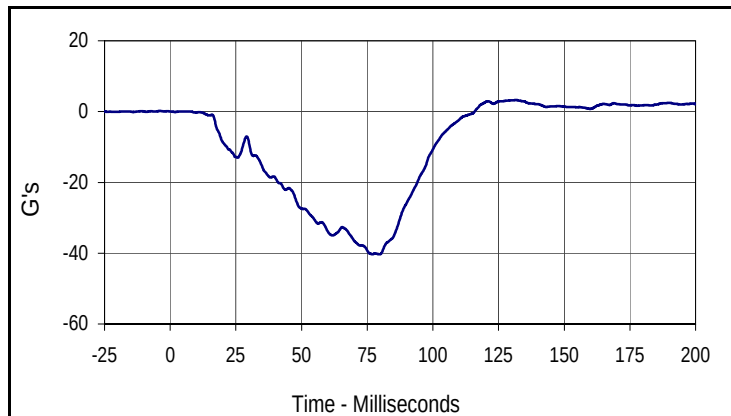
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 Test Date: 1/18/12



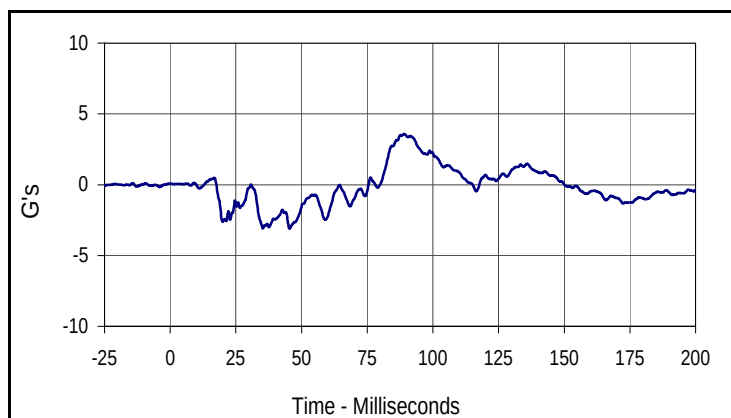
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Driver Chest Deflection			
Plot No.	Type	SAE Class	Units
005	FIL	180	MM
Max	Time	Min	Time
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Test Vehicle: 2012 Honda Civic LX 2-Door Coupe
 Test Program: 56 km/h Frontal Impact NCAP Test

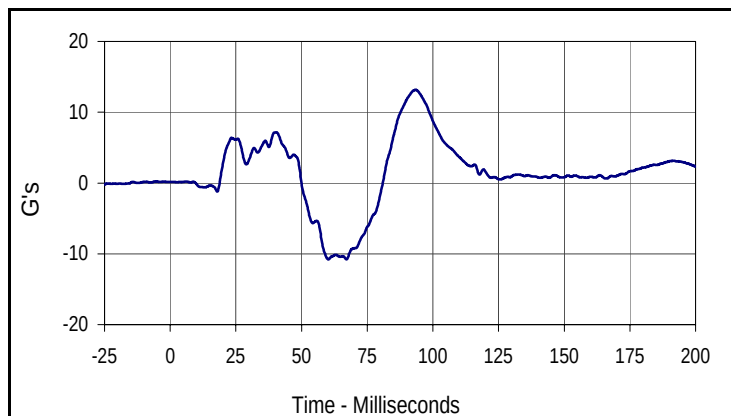
NHTSA No.: MC5310
 Test Date: 1/18/12



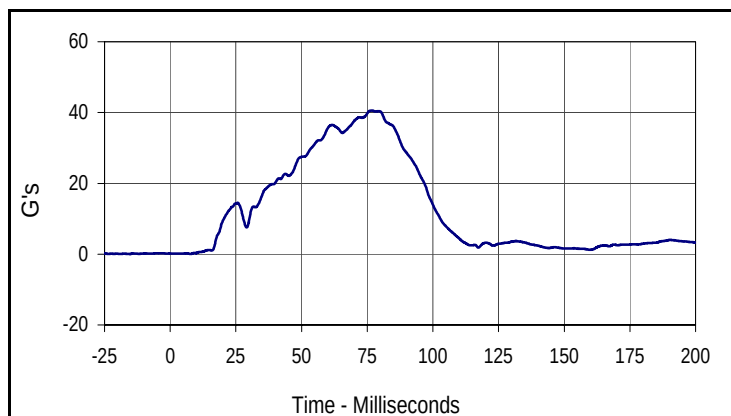
Curve Description			
Driver Chest Acceleration X Primary			
Plot No.	Type	SAE Class	Units
006	FIL	180	G's
Max	Time	Min	Time
3.3	131.6	-40.3	79.7



Curve Description			
Driver Chest Acceleration Y Primary			
Plot No.	Type	SAE Class	Units
007	FIL	180	G's
Max	Time	Min	Time
3.6	89.0	-3.1	45.5



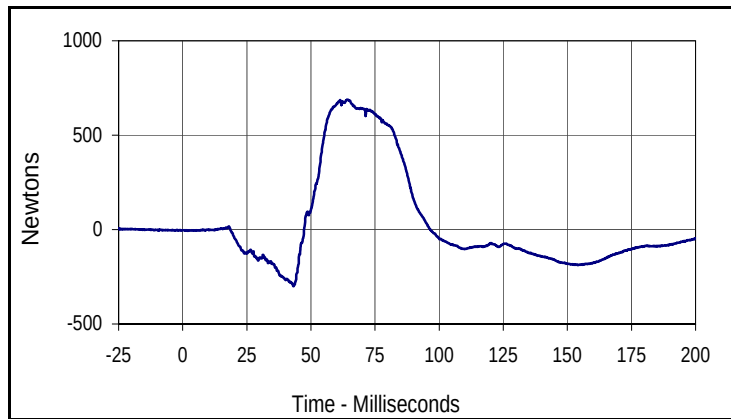
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Driver Chest Acceleration Z Primary			
Plot No.	Type	SAE Class	Units
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Max	Time	Min	Time
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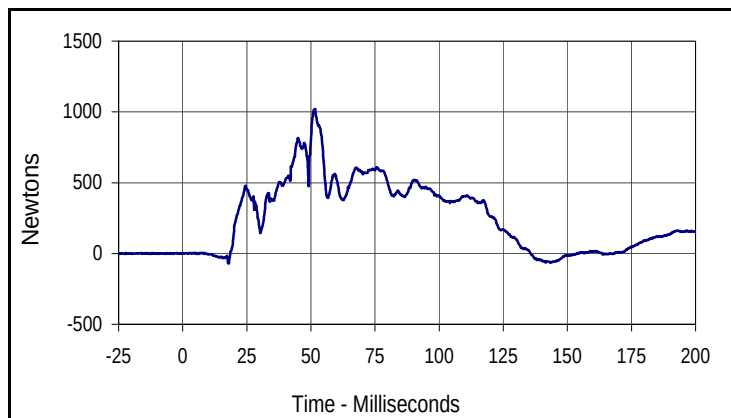
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Driver Chest Resultant Acceleration Primary			
Plot No.	Type	SAE Class	Units
009	RES	180	G's
Max	Time	Min	Time
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Test Vehicle: 2012 Honda Civic LX 2-Door Coupe
 Test Program: 56 km/h Frontal Impact NCAP Test

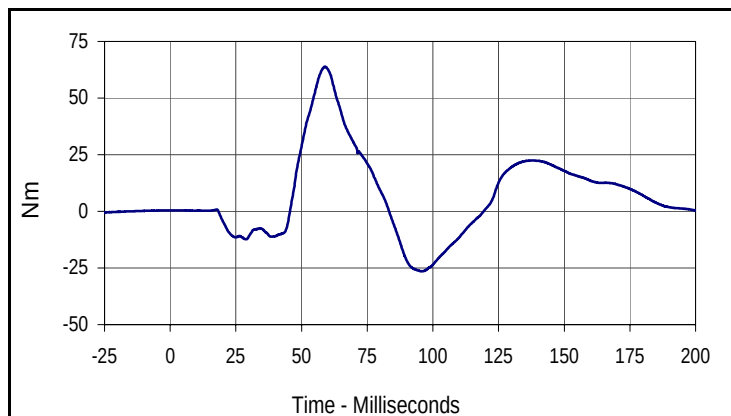
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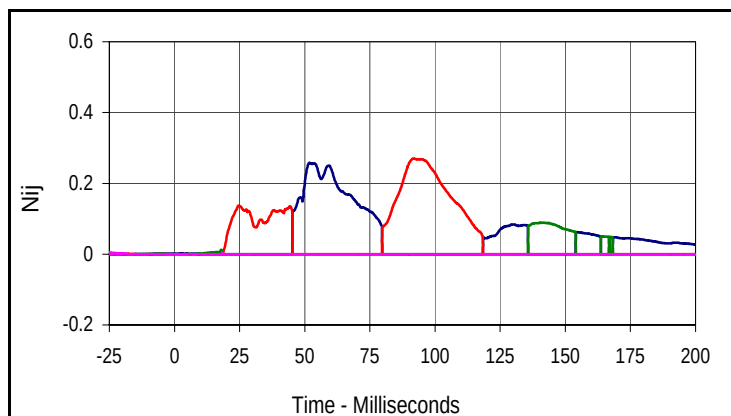
Curve Description			
Driver Upper Neck Force X			
Plot No.	Type	SAE Class	Units
010	FIL	1000	Newtons
Max	Time	Min	Time
688.7	64.3	-300.3	43.2



Curve Description			
Driver Upper Neck Force Z			
Plot No.	Type	SAE Class	Units
011	FIL	1000	Newtons
Max	Time	Min	Time
1021.0	51.6	-71.4	17.8



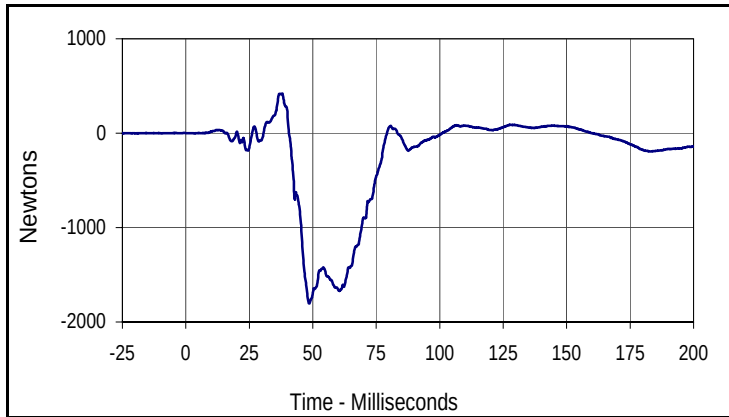
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Driver Upper Neck Moment Y			
Plot No.	Type	SAE Class	Units
012	FIL	600	Nm
Max	Time	Min	Time
63.8	58.9	-26.5	95.7



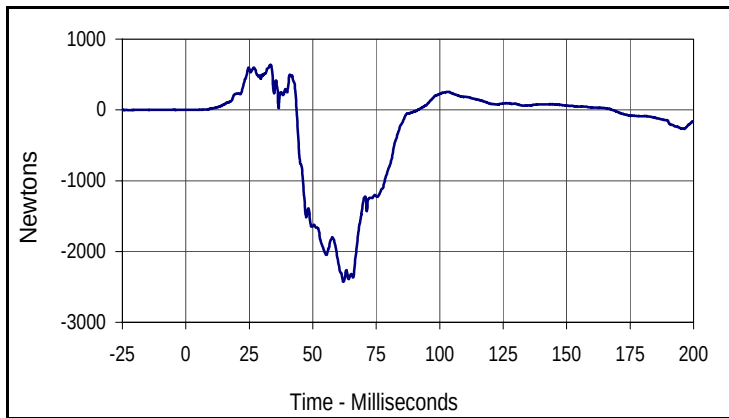
Curve Description			
Driver Nij			
Units	Type	Max	Time
Ntf	FIL	0.26	51.8
Units	Type	Max	Time
Nte	FIL	0.27	91.8
Units	Type	Max	Time
Ncf	FIL	0.09	141.7
Units	Type	Max	Time
Nce	FIL	0.01	-29.3

Test Vehicle: 2012 Honda Civic LX 2-Door Coupe
Test Program: 56 km/h Frontal Impact NCAP Test

NHTSA No.: MC5310
Test Date: 1/18/12



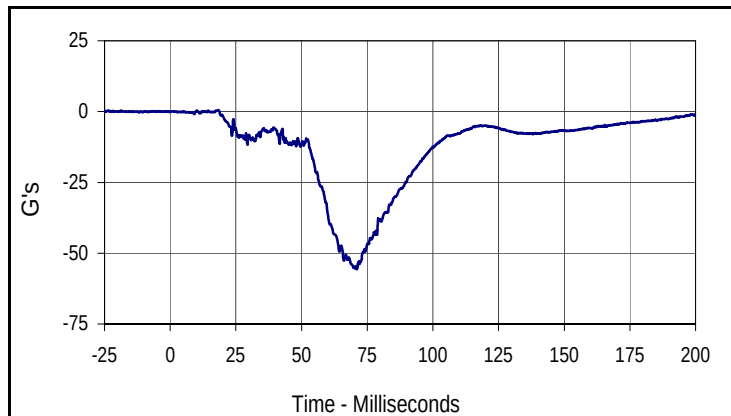
Curve Description			
Driver Left Femur Force Z			
Plot No.	Type	SAE Class	Units
013	FIL	600	Newtons
Max	Time	Min	Time
420.1	38.0	-1803.6	48.6



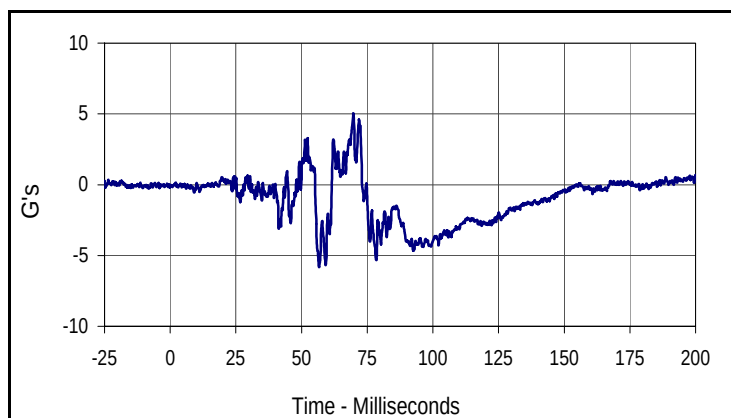
Curve Description			
Driver Right Femur Force Z			
Plot No.	Type	SAE Class	Units
014	FIL	600	Newtons
Max	Time	Min	Time
636.7	33.3	-2426.0	62.0

Test Vehicle: 2012 Honda Civic LX 2-Door Coupe
 Test Program: 56 km/h Frontal Impact NCAP Test

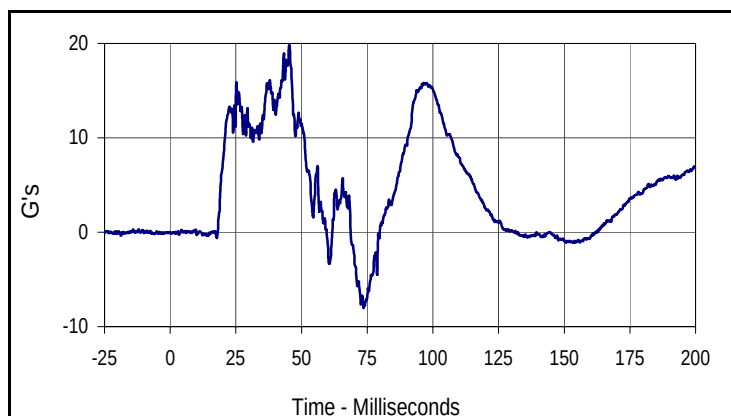
NHTSA No.: MC5310
 Test Date: 1/18/12



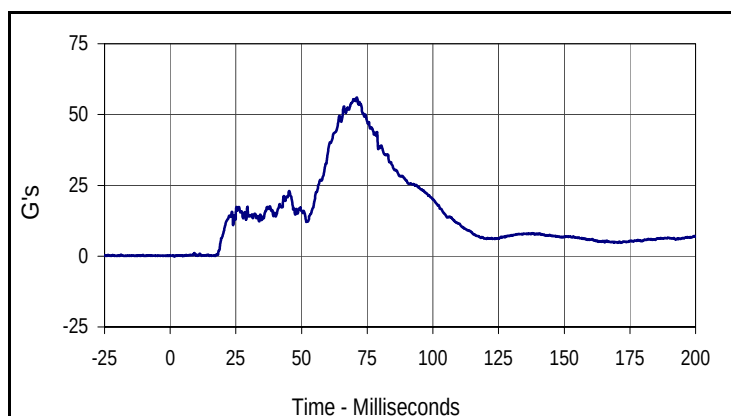
Curve Description			
Passenger Head Acceleration X Primary			
Plot No.	Type	SAE Class	Units
015	FIL	1000	G's
Max	Time	Min	Time
0.5	18.4	-55.7	71.0



Curve Description			
Passenger Head Acceleration Y Primary			
Plot No.	Type	SAE Class	Units
016	FIL	1000	G's
Max	Time	Min	Time
5.1	69.7	-5.8	56.7



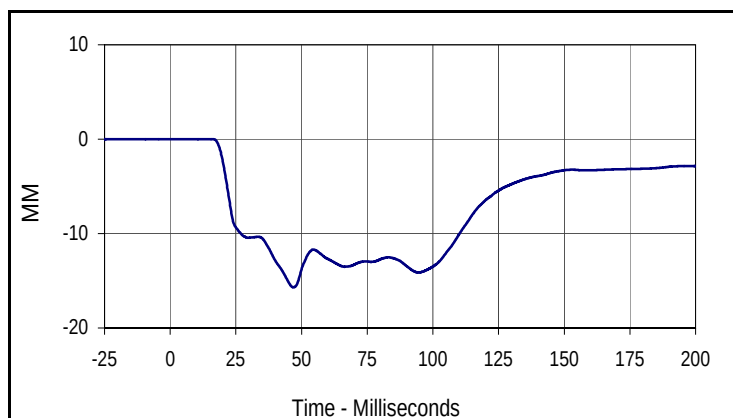
Curve Description			
Passenger Head Acceleration Z Primary			
Plot No.	Type	SAE Class	Units
017	FIL	1000	G's
Max	Time	Min	Time
19.8	45.3	-8.0	73.6



Curve Description			
Passenger Head Resultant Acceleration Primary			
Plot No.	Type	SAE Class	Units
018	RES	1000	G's
Max	Time	Min	Time
56.0	71.0	0.0	4.7

Test Vehicle: 2012 Honda Civic LX 2-Door Coupe
 Test Program: 56 km/h Frontal Impact NCAP Test

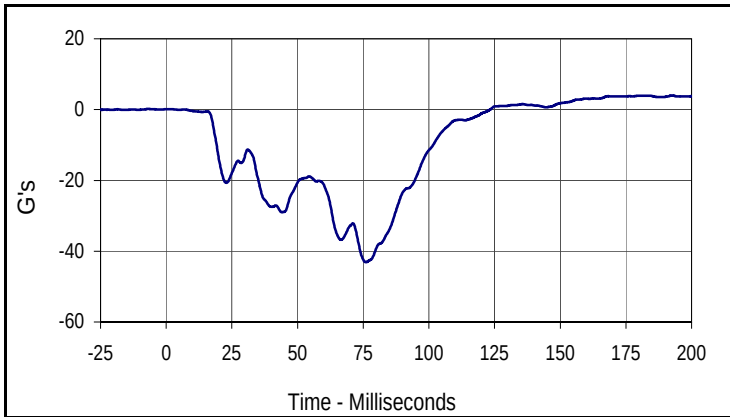
NHTSA No.: MC5310
 Test Date: 1/18/12



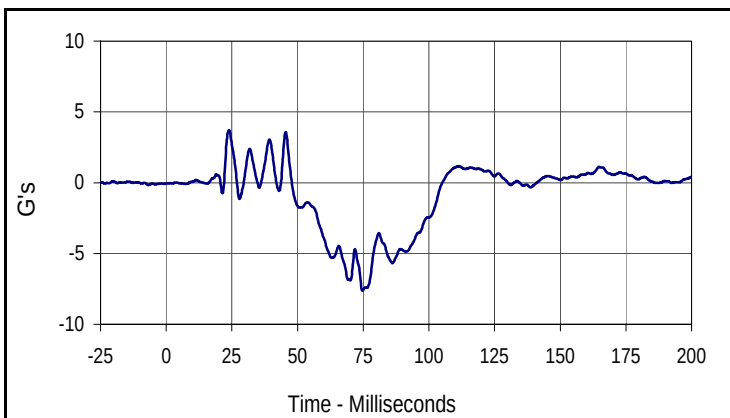
Curve Description			
Passenger Chest Deflection			
Plot No.	Type	SAE Class	Units
019	FIL	180	MM
Max	Time	Min	Time
0.0	6.0	-15.7	46.9

Test Vehicle: 2012 Honda Civic LX 2-Door Coupe
 Test Program: 56 km/h Frontal Impact NCAP Test

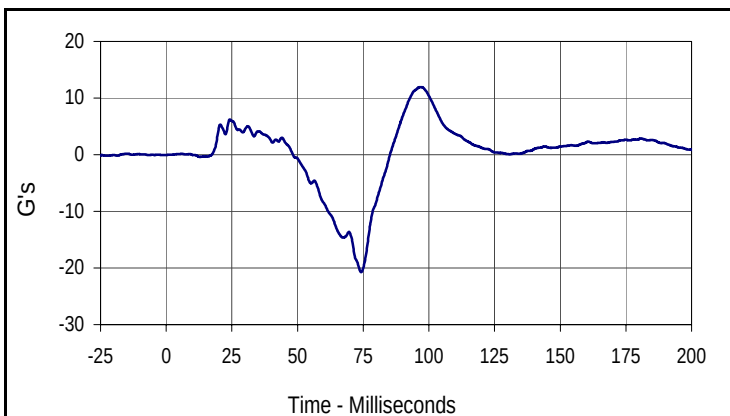
NHTSA No.: MC5310
 Test Date: 1/18/12



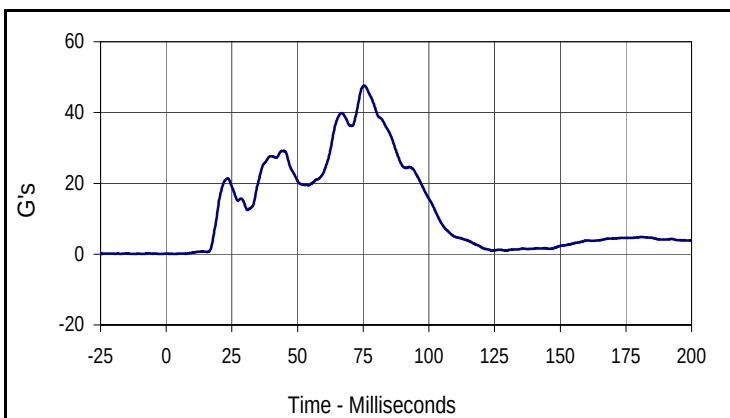
Curve Description			
Passenger Chest Acceleration X Primary			
Plot No.	Type	SAE Class	Units
020	FIL	180	G's
Max	Time	Min	Time
4.0	192.5	-43.1	76.0



Curve Description			
Passenger Chest Acceleration Y Primary			
Plot No.	Type	SAE Class	Units
021	FIL	180	G's
Max	Time	Min	Time
3.7	23.9	-7.6	74.7



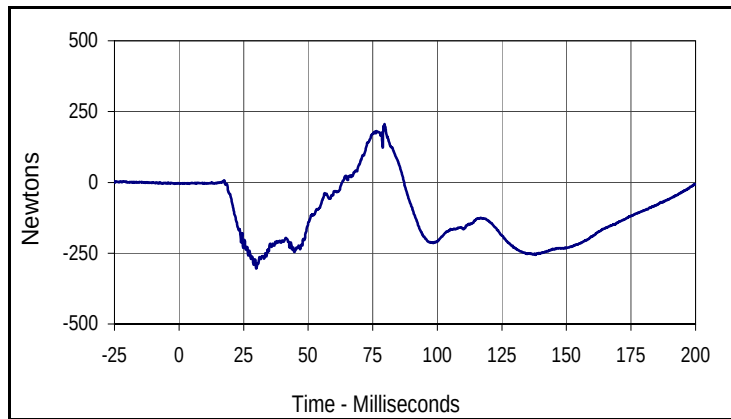
Curve Description			
Passenger Chest Acceleration Z Primary			
Plot No.	Type	SAE Class	Units
022	FIL	180	G's
Max	Time	Min	Time
11.9	96.8	-20.7	74.2



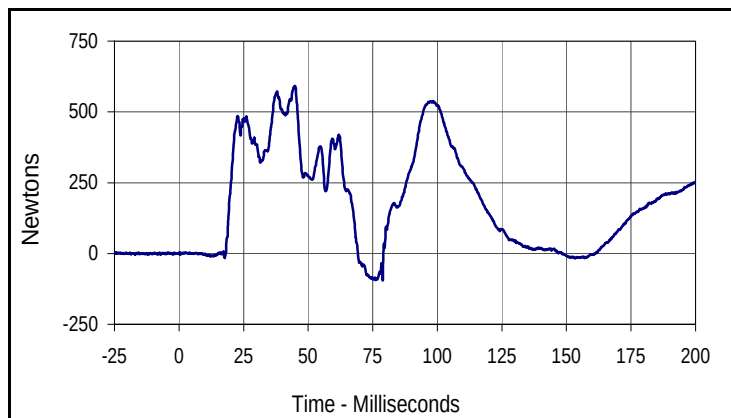
Curve Description			
Passenger Chest Resultant Acceleration Primary			
Plot No.	Type	SAE Class	Units
023	RES	180	G's
Max	Time	Min	Time
47.6	75.4	0.1	3.4

Test Vehicle: 2012 Honda Civic LX 2-Door Coupe
 Test Program: 56 km/h Frontal Impact NCAP Test

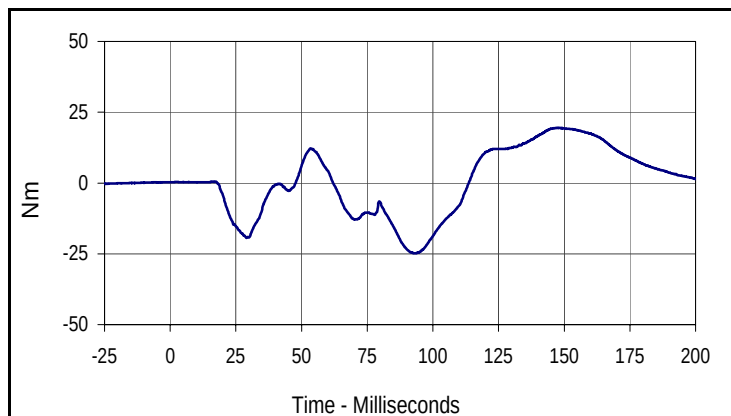
NHTSA No.: MC5310
 Test Date: 1/18/12



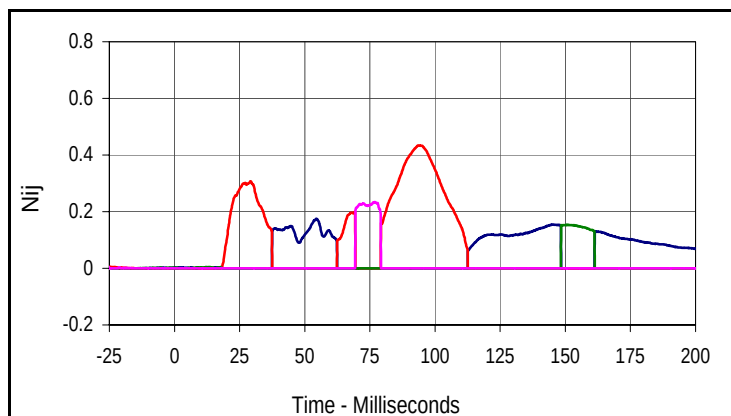
Curve Description			
Passenger Upper Neck Force X			
Plot No.	Type	SAE Class	Units
024	FIL	1000	Newtons
Max	Time	Min	Time
206.4	79.6	-304.3	29.9



Curve Description			
Passenger Upper Neck Force Z			
Plot No.	Type	SAE Class	Units
025	FIL	1000	Newtons
Max	Time	Min	Time
592.0	44.9	-95.3	78.8



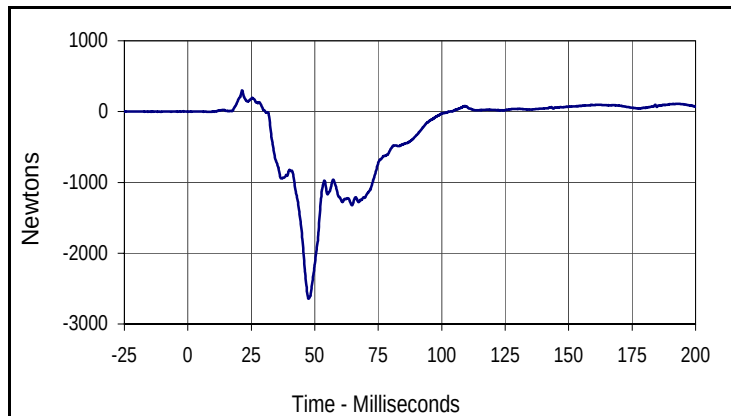
Curve Description			
Passenger Upper Neck Moment Y			
Plot No.	Type	SAE Class	Units
026	FIL	600	Nm
Max	Time	Min	Time
19.5	148.3	-24.8	93.4



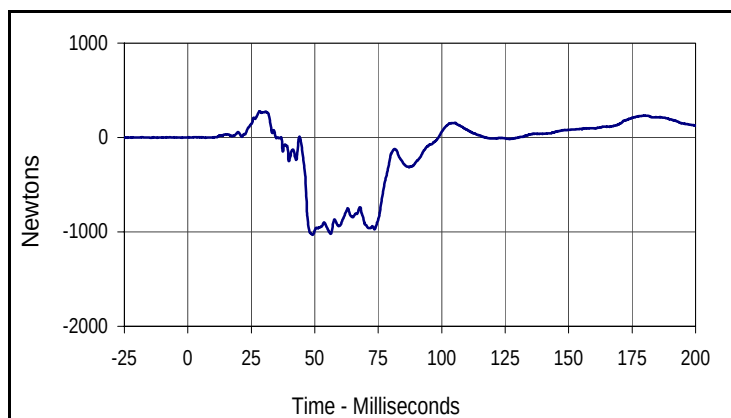
Curve Description			
Passenger Nij			
Units	Type	Max	Time
Ntf	FIL	0.19	224.6
Units	Type	Max	Time
Nte	FIL	0.43	93.6
Units	Type	Max	Time
Ncf	FIL	0.15	151.0
Units	Type	Max	Time
Nce	FIL	0.23	76.8

Test Vehicle: 2012 Honda Civic LX 2-Door Coupe
 Test Program: 56 km/h Frontal Impact NCAP Test

NHTSA No.: MC5310
 Test Date: 1/18/12



Curve Description			
Passenger Left Femur Force Z			
Plot No.	Type	SAE Class	Units
027	FIL	600	Newtons
Max	Time	Min	Time
299.9	21.4	-2643.6	47.5



Curve Description			
Passenger Right Femur Force Z			
Plot No.	Type	SAE Class	Units
028	FIL	600	Newtons
Max	Time	Min	Time
276.7	28.3	-1029.6	49.1

APPENDIX C
DUMMY CALIBRATION AND PERFORMANCE VERIFICATION DATA

APPENDIX C
PRE-TEST / ATD CONFIGURATION AND PERFORMANCE VERIFICATION DATA

Test Program: Hybrid III 50th Percentile Male Dummy Damage Checklist

Test Date: 1/16/12

ATD Serial No.: 035

Test I.D.: N/A



Dummy Item	Inspect for	Comments	Damaged	OK
Entire Dummy	Perform general cleaning			X
Outer Skin	Gashes, rips, cracks			X
Head	Ballast secure			X
	General appearance			X
Neck	Broken or cracked rubber			X
	Upper neck bracket firmly attached to the lower neck bracket			X
	Looseness at the condyle joint			X
	Nodding blocks cracked or out of position			X
Spine	Broken or cracks in rubber			X
Ribs	Broken or bent ribs			X
	Broken or bent rib supports			X
	Damping material separated or cracked			X
	Rubber bumpers in place			X
Chest Displacement Assembly	Bent shaft			X
	Slider arm riding in track			X
Transducer Leads	Torn cables			X
Accelerometer Mountings	Head mounting secure			X
	Chest mounting secure			X
Knees	Skin condition			X
	Insert (do not remove)			X
	Casting			X
Limbs	Normal movement and adjustment			X
Knee Sliders	Wires intact			X
	Rubber returned to "at rest" position			X
Pelvis	Broken			X
Other				X

Describe the repair on repair or replacement of parts:

Test Program: Hybrid III 50th Percentile Male External Measurements

Test Date: 1/16/12

ATD Serial No.: 035

Test I.D.: N/A



Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	21.22	Pass
Laboratory Relative Humidity	%	10 to 70	29.6	Pass
A - Total sitting height	mm	879 to 889	885	Pass
B - Shoulder pivot height	mm	505 to 521	516	Pass
C - H point height	mm	84 to 89	87	Pass
D - H point location from backline	mm	135 to 140	138	Pass
E - Shoulder pivot from backline	mm	84 to 94	87	Pass
F - Thigh clearance	mm	140 to 155	148	Pass
G - Back of elbow to wrist pivot	mm	290 to 305	298	Pass
H - Head back to backline	mm	41 to 46	44	Pass
I - Shoulder to elbow length	mm	330 to 345	335	Pass
J - Elbow rest height	mm	190 to 211	204	Pass
K - Buttock to knee length	mm	579 to 604	586	Pass
L - Popliteal length	mm	429 to 455	438	Pass
M - Knee pivot height	mm	485 to 500	489	Pass
N - Buttock popliteal length	mm	452 to 477	472	Pass
O - Chest depth without jacket	mm	213 to 229	226	Pass
P - Foot length	mm	251 to 267	260	Pass
V - Shoulder breadth	mm	422 to 437	433	Pass
W - Foot breadth	mm	91 to 107	99	Pass
Y - Chest circumference (with chest jacket)	mm	970 to 1001	986	Pass
Z - Waist circumference	mm	836 to 866	864	Pass
AA - Location for chest circumference	mm	429 to 434	431	Pass
BB - Location for waist circumference	mm	226 to 231	230	Pass
Overall Test Results			Pass	

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

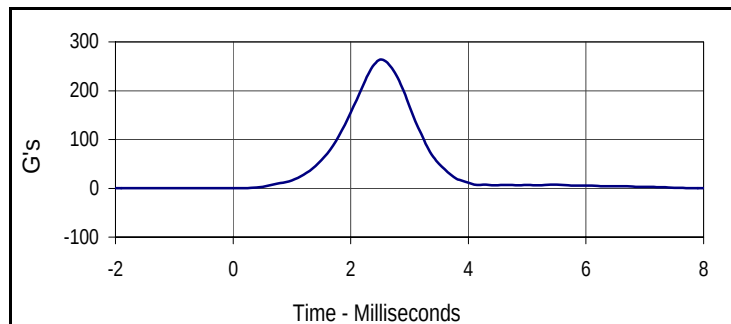
Test Date: 1/16/12

ATD Serial No.: 035

Test I.D.: M035HD031



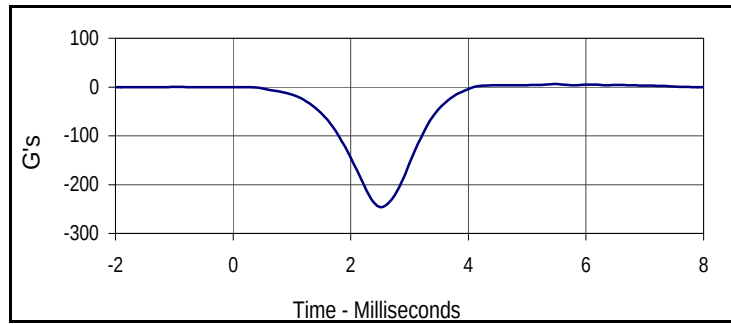
Tested Parameter		Units	Specification	Result	Pass/Fail
Head Assembly Soak Time		Minutes	≥240	245	Pass
Temperature During Soak	Max	°C	18.9 to 25.6	21.7	Pass
	Min	°C		21.1	Pass
Humidity During Soak	Max	%	10.0 to 70.0	36.0	Pass
	Min	%		30.0	Pass
Laboratory Temperature During Test		°C	18.9 to 25.6	21.1	Pass
Laboratory Humidity During Test		%	10.0 to 70.0	30.0	Pass
Peak Resultant Acceleration		G's	225.0 to 275.0	264.1	Pass
Peak Lateral Acceleration		G's	≤15.0	6.3	Pass
Oscillations After Main Pulse		%	<10% of peak Res. Acceleration	4.3	Pass
Is Acceleration Unimodal?		Yes/No	Yes	Yes	Pass
Overall Test Results				Pass	



Curve Description

Head Resultant

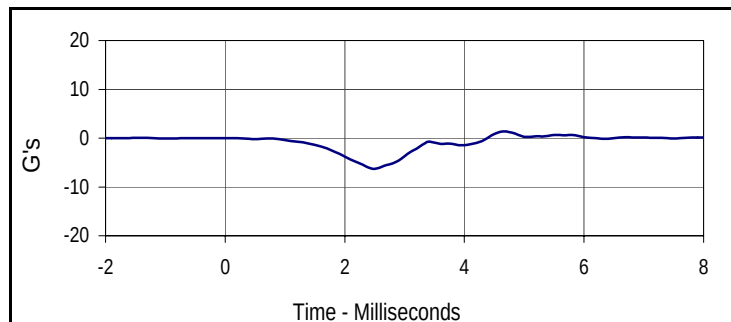
Plot No.	Type	SAE Class	Units
001	RES	1000	G's
Max	Time	Min	Time
264.1	2.5	0.1	-0.1



Curve Description

Head X

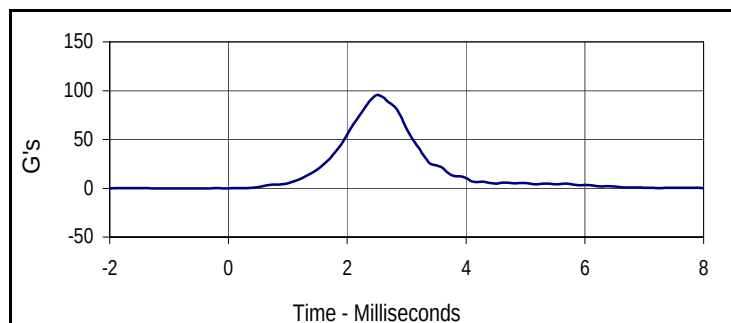
Plot No.	Type	SAE Class	Units
002	FIL	1000	G's
Max	Time	Min	Time
6.0	5.5	-246.1	2.5



Curve Description

Head Y

Plot No.	Type	SAE Class	Units
003	FIL	1000	G's
Max	Time	Min	Time
1.4	4.7	-6.3	2.5



Curve Description

Head Z

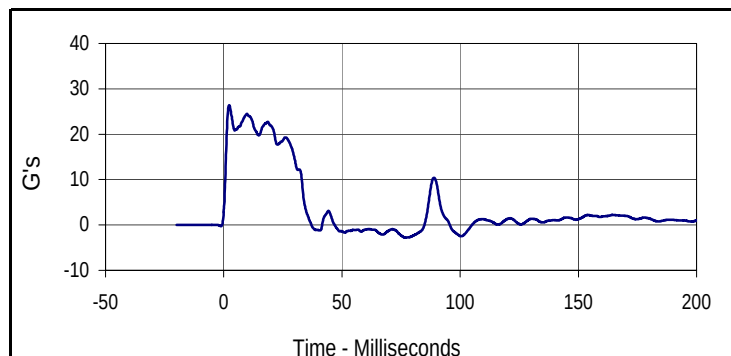
Plot No.	Type	SAE Class	Units
004	FIL	1000	G's
Max	Time	Min	Time
95.6	2.5	-0.2	-0.9

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

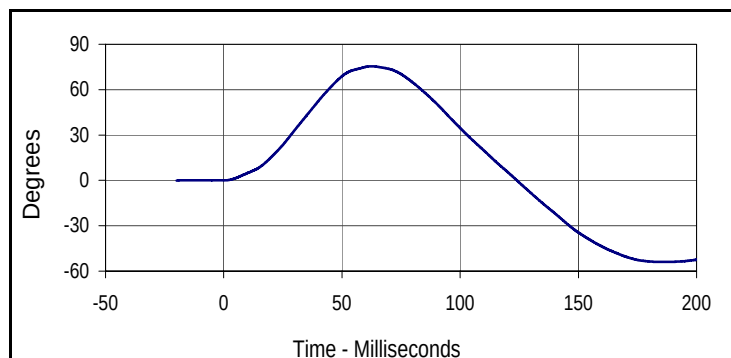
Test Date: 1/16/12
 Test I.D.: M035NF031



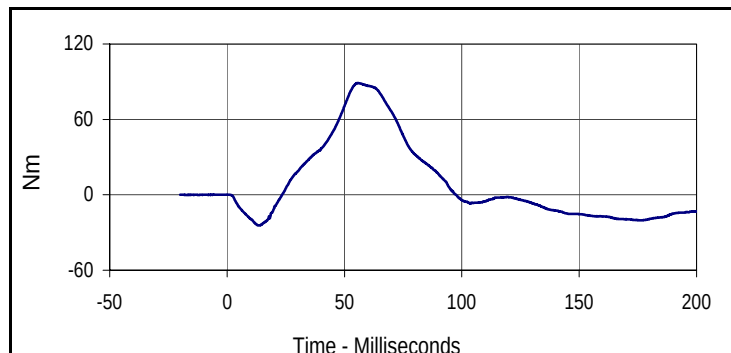
Tested Parameter		Units	Specification	Result	Pass/Fail
Neck Assembly Soak Time		Minutes	≥240	285	Pass
Temperature During Soak	Max	°C	20.6 to 22.2	21.7	Pass
	Min	°C		21.1	Pass
Humidity During Soak	Max	%	10.0 to 70.0	36.0	Pass
	Min	%		30.0	Pass
Laboratory Temperature During Test		°C	20.6 to 22.2	21.2	Pass
Laboratory Humidity During Test		%	10.0 to 70.0	30.0	Pass
Pendulum Velocity		m/s	6.89 to 7.13	7.02	Pass
Pendulum Deceleration	10 Msec.	G's	22.5 to 27.5	24.4	Pass
	20 Msec.	G's	17.6 to 22.6	21.8	Pass
	30 Msec.	G's	12.5 to 18.5	14.5	Pass
Peak Pendulum Decel. after 30 Msec.		G's	≤ 29.0	14.5	Pass
Deceleration Decay, Time to Cross 5 G's		Msec.	34.0 to 42.0	34.1	Pass
Maximum "D" Plane Rotation	Max	Degrees	64.0 to 78.0	75.5	Pass
	Time	Msec.	57.0 to 64.0	62.6	Pass
"D" Plane Rotation Decay, Time To Zero Crossing		Msec.	113.0 to 128.0	124	Pass
Moment About Occ. Condyle	Max	Nm	84.1 to 108.5	89.0	Pass
	Time	Msec.	47.0 to 58.0	55.9	Pass
Positive Moment Decay, Time To Zero Crossing		Msec.	97.0 to 107.0	97.6	Pass
Overall Test Results					Pass



Curve Description			
Pendulum Deceleration			
Plot No.	Type	SAE Class	Units
001	FIL	60	G's
Max	Time	Min	Time
26.4	2.3	-2.8	76.8



Curve Description			
"D" Plane Rotation			
Plot No.	Type	SAE Class	Units
002	FIL	60	Degrees
Max	Time	Min	Time
75.5	62.6	-53.9	185.7



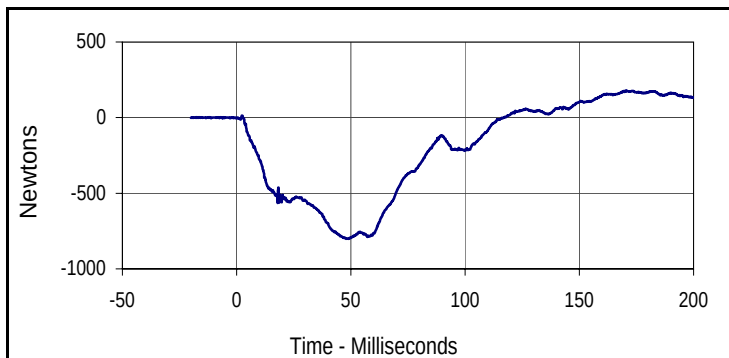
Curve Description			
Moment About Occipital Condyle			
Plot No.	Type	SAE Class	Units
003	FIL	600	Nm
Max	Time	Min	Time
89.0	55.9	-24.4	13.4

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

ATD Serial No.: 035

Test Date: 1/16/12

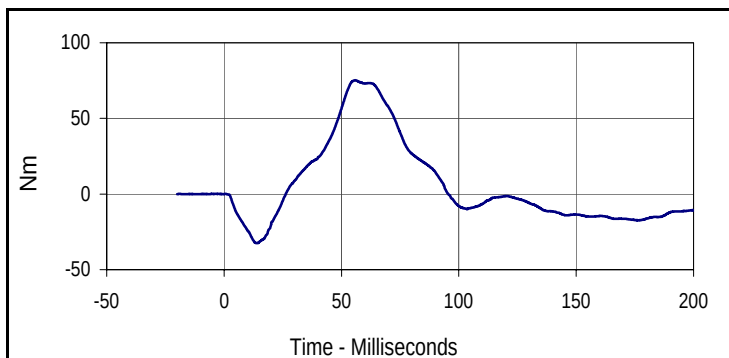
Test I.D.: M035NF031



Curve Description

Neck Force X

Plot No.	Type	SAE Class	Units
004	FIL	1000	Newtons
Max	Time	Min	Time
180.6	170.6	-801.5	47.8



Curve Description

Neck Moment Y

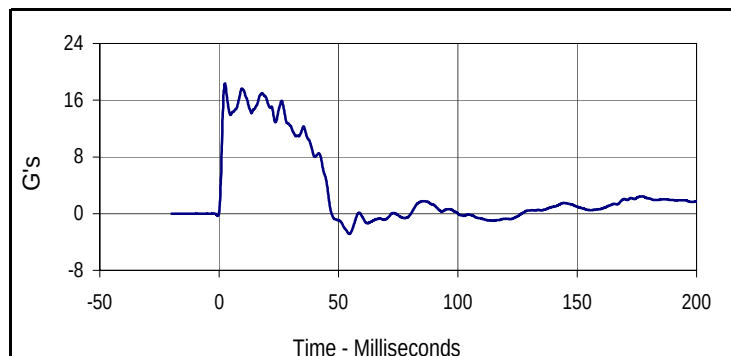
Plot No.	Type	SAE Class	Units
005	FIL	600	Nm
Max	Time	Min	Time
75.2	55.9	-32.5	13.9

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

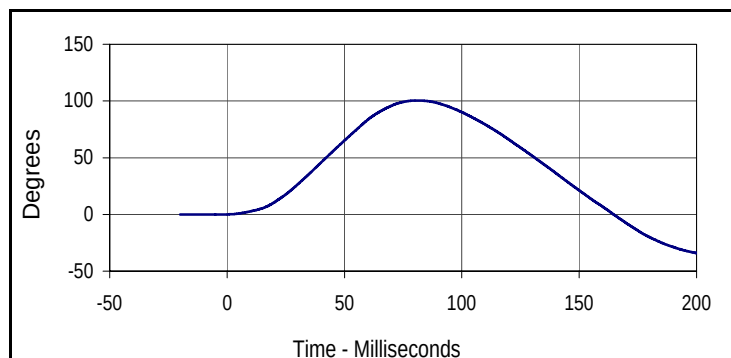
Test Date: 1/16/12
 Test I.D.: M035NE031



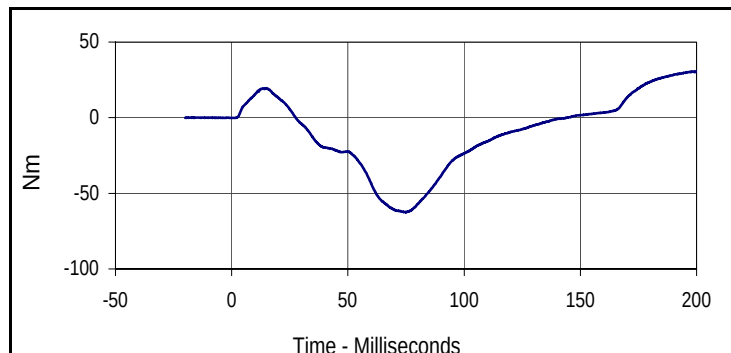
Tested Parameter		Units	Specification	Result	Pass/Fail
Neck Assembly Soak Time		Minutes	≥240	305	Pass
Temperature During Soak	Max	°C	20.6 to 22.2	21.7	Pass
	Min	°C		21.1	Pass
Humidity During Soak	Max	%	10.0 to 70.0	36.0	Pass
	Min	%		30.0	Pass
Laboratory Temperature During Test		°C	20.6 to 22.2	21.1	Pass
Laboratory Humidity During Test		%	10.0 to 70.0	30.0	Pass
Pendulum Velocity		m/s	5.94 to 6.19	5.96	Pass
Pendulum Deceleration	10 Msec.	G's	17.2 to 21.2	17.5	Pass
	20 Msec.	G's	14.0 to 19.0	16.0	Pass
	30 Msec.	G's	11.0 to 16.0	12.3	Pass
Peak Pendulum Decel. after 30 Msec.		G's	≤ 22.0	12.3	Pass
Deceleration Decay, Time to Cross 5 G's		Msec.	38.0 to 46.0	44.7	Pass
Maximum "D" Plane Rotation	Max	Degrees	81.0 to 106.0	100.4	Pass
	Time	Msec.	72.0 to 82.0	80.9	Pass
"D" Plane Rotation Decay, Time To Zero Crossing		Msec.	147.0 to 174.0	164.7	Pass
Moment About Occ. Condyle	Max	Nm	-52.9 to -79.9	-62.5	Pass
	Time	Msec.	65.0 to 79.0	74.9	Pass
Positive Moment Decay, Time To Zero Crossing		Msec.	120.0 to 148.0	144.2	Pass
Overall Test Results					Pass



Curve Description			
Pendulum Deceleration			
Plot No.	Type	SAE Class	Units
001	FIL	60	G's
Max	Time	Min	Time
18.4	2.4	-2.8	54.6



Curve Description			
"D" Plane Rotation			
Plot No.	Type	SAE Class	Units
002	FIL	60	Degrees
Max	Time	Min	Time
100.4	80.9	-34.1	200.0



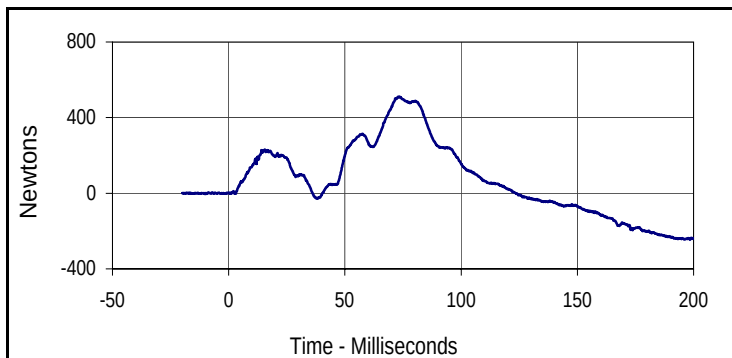
Curve Description			
Moment About Occipital Condyle			
Plot No.	Type	SAE Class	Units
003	FIL	600	Nm
Max	Time	Min	Time
30.6	198.4	-62.5	74.9

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

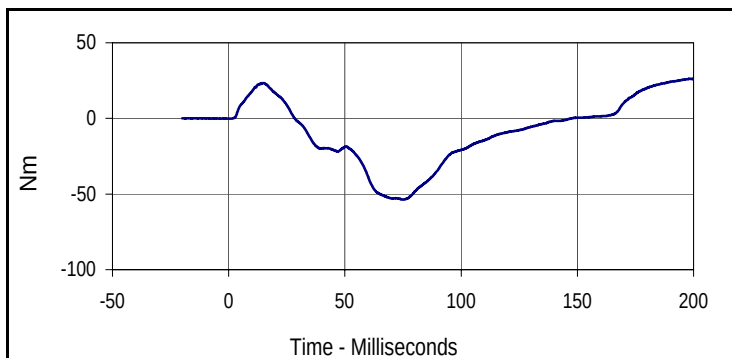
Test Date: 1/16/12

ATD Serial No.: 035

Test I.D.: M035NE031



Curve Description			
Neck Force X			
Plot No.	Type	SAE Class	Units
004	FIL	1000	Newtons
Max	Time	Min	Time
511.2	73.2	-246.2	198.4



Curve Description			
Neck Moment Y			
Plot No.	Type	SAE Class	Units
005	FIL	600	Nm
Max	Time	Min	Time
26.3	198.3	-53.6	74.9

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

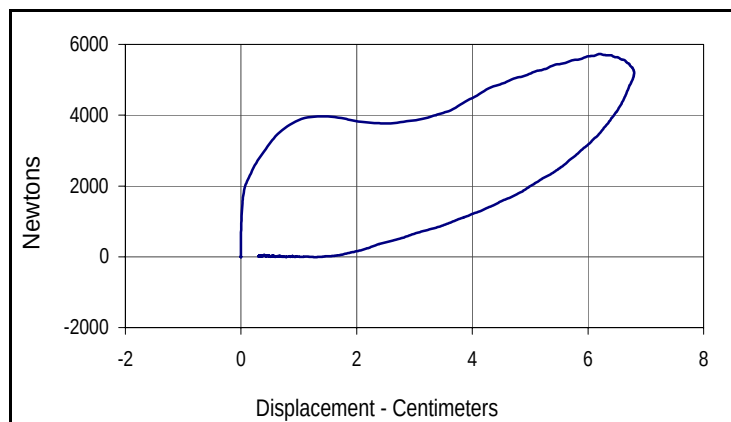
Test Date: 1/16/12

ATD Serial No.: 035

Test I.D.: M035CH031



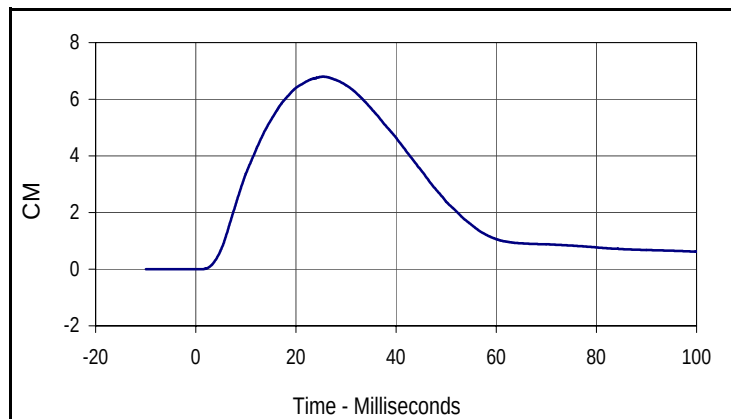
Tested Parameter		Units	Specification	Result	Pass/Fail
Dummy Soak Time		Minutes	≥240	345	Pass
Temperature During Soak	Max	°C	20.6 to 22.2	21.7	Pass
	Min	°C		21.1	Pass
Humidity During Soak	Max	%	10.0 to 70.0	36.0	Pass
	Min	%		30.0	Pass
Laboratory Temperature During Test		°C	20.6 to 22.2	21.1	Pass
Laboratory Humidity During Test		%	10.0 to 70.0	30.0	Pass
Probe Velocity		m/s	6.58 to 6.82	6.73	Pass
Peak Probe Force		Newtons	5159 to 5893	5726	Pass
Peak Sternum Deflection		CM	6.35 to 7.26	6.80	Pass
Internal Hysteresis		%	69 to 85	70.9	Pass
Overall Test Results				Pass	



Curve Description

Probe Force vs. Chest Deflection

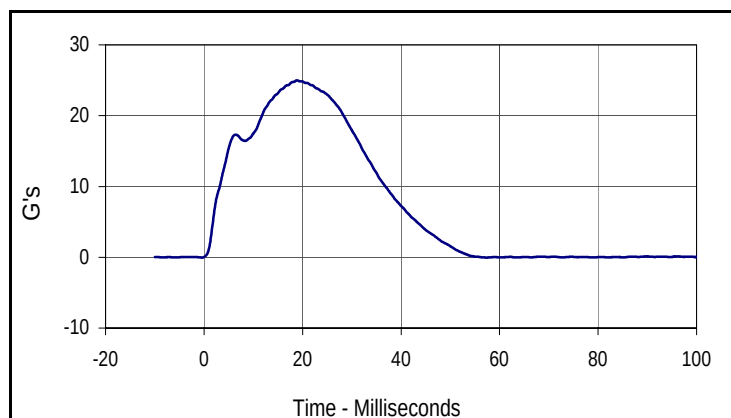
Plot No.	Type	SAE Class	Hysteresis
001	FIL	180	70.9
Peak Probe Force		Peak Chest Deflection	
5726		6.80	



Curve Description

Chest Deflection

Plot No.	Type	SAE Class	Units
002	FIL	180	CM
Max	Time	Min	Time
6.8	25.5	0.0	1.0



Curve Description

Impactor Acceleration

Plot No.	Type	SAE Class	Units
003	FIL	180	G's
Max	Time	Min	Time
25.0	18.9	0.0	57.3

Test Program: Hybrid III 50th Percentile Male Knee Impact Test
 ATD Serial No.: 035

Test Date: 1/16/12
 Test I.D.: M035LK031, M035RK031

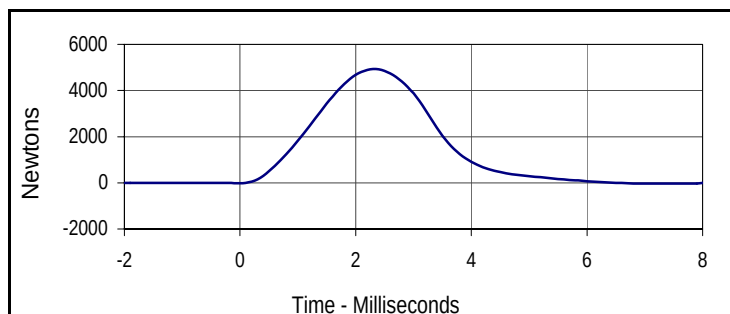


Left Knee

Tested Parameter		Units	Specification	Result	Pass/Fail
Knee Assembly Soak Time		Minutes	≥240	385	Pass
Temperature During Soak	Max	°C	18.9 to 25.6	21.7	Pass
	Min	°C		21.1	Pass
Humidity During Soak	Max	%	10.0 to 70.0	36.0	Pass
	Min	%		30.0	Pass
Laboratory Temperature During Test		°C	18.9 to 25.6	21.2	Pass
Laboratory Humidity During Test		%	10.0 to 70.0	30.0	Pass
Pendulum Velocity at T=0		m/sec	2.07 to 2.13	2.10	Pass
Peak Probe Force		Newtons	4715 to 5782	4926	Pass
Overall Test Results				Pass	

Right Knee

Pendulum Velocity at T=0		m/sec	2.07 to 2.13	2.10	Pass
Peak Probe Force		Newtons	4715 to 5782	4932	Pass
Overall Test Results				Pass	



Curve Description

Left Knee Probe Force

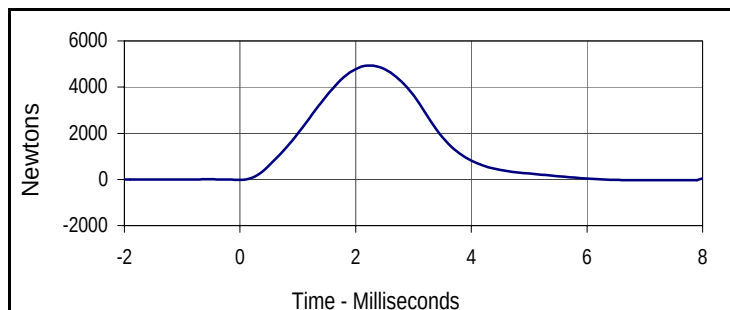
Plot No.	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Time	Min	Time
4925.9	2.3	-61.2	9.0



Curve Description

Left Knee Acceleration

Plot No.	Type	SAE Class	Units
002	FIL	600	G's
Max	Time	Min	Time
100.7	2.3	-1.3	9.0



Curve Description

Right Knee Probe Force

Plot No.	Type	SAE Class	Units
003	FIL	600	Newtons
Max	Time	Min	Time
4932.0	2.2	-35.1	7.8



Curve Description

Right Knee Acceleration

Plot No.	Type	SAE Class	Units
004	FIL	600	G's
Max	Time	Min	Time
100.8	2.2	-0.7	7.8

Test Program: Hybrid III 50th Percentile Male Hip Joint-Femur Flexion Test
 ATD Serial No.: 035

Test Date: 1/16/12
 Test I.D.: M035LF031, M035RF031

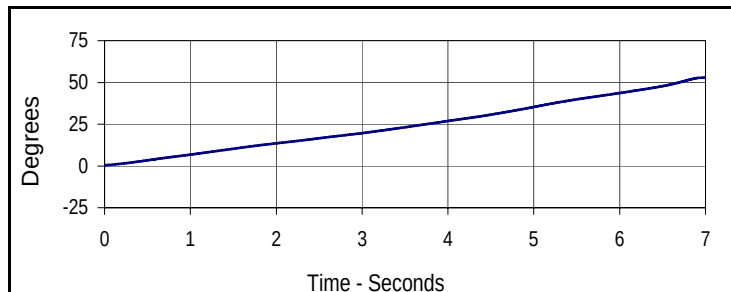


Left Hip Joint-Femur Results

Tested Parameter	Units	Specification	Result	Pass/Fail
Hip Joint-Femur Assembly Soak Time	Minutes	≥240	420	Pass
Temperature During Soak	Max	18.9 to 25.6	21.7	Pass
	Min		21.1	Pass
Humidity During Soak	Max	10.0 to 70.0	36.0	Pass
	Min		30.0	Pass
Laboratory Temperature During Test	°C	18.9 to 25.6	21.2	Pass
Laboratory Humidity During Test	%	10.0 to 70.0	30.0	Pass
Rotation Rate	deg/sec	5 to 10	7.6	Pass
Femur Torque at 30°	Nm	≤ 95	85.6	Pass
Rotation at 203 Nm	Degrees	40.0 to 50.0	49.5	Pass
Overall Test Results				Pass

Right Hip Joint-Femur Results

Rotation Rate	deg/sec	5 to 10	7.2	Pass
Femur Torque at 30°	Nm	≤ 95	88.0	Pass
Rotation at 203 Nm	Degrees	40.0 to 50.0	47.2	Pass
Overall Test Results				Pass



Curve Description

Left Hip-Femur Rotation

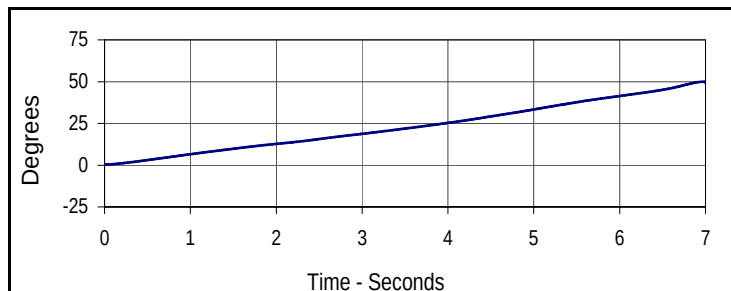
Plot No.	Type	SAE Class	Units
001	FIL	60	Degrees
Max	Time	Min	Time
52.8	7.0	0.4	0.0



Curve Description

Left Femur Torque

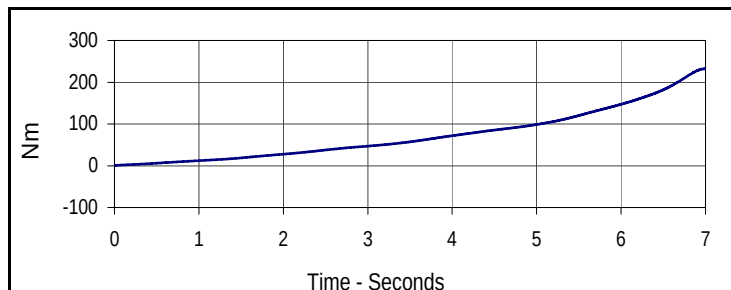
Plot No.	Type	SAE Class	Units
002	FIL	600	Nm
Max	Time	Min	Time
238.3	7.0	1.0	0.0



Curve Description

Right Hip-Femur Rotation

Plot No.	Type	SAE Class	Units
003	FIL	60	Degrees
Max	Time	Min	Time
49.9	7.0	0.2	0.0



Curve Description

Right Femur Torque

Plot No.	Type	SAE Class	Units
004	FIL	600	Nm
Max	Time	Min	Time
232.2	7.0	1.0	0.0

Test Program: Hybrid III 5th Percentile Female Dummy Damage Checklist

Test Date: 1/11/12

ATD Serial No.: 635

Test I.D.: N/A



Dummy Item	Inspect for	Comments	Damaged	OK
Entire Dummy	Perform general cleaning			X
Outer Skin	Gashes, rips, cracks			X
Head	Ballast secure			X
	General appearance			X
Neck	Broken or cracked rubber			X
	Upper neck bracket firmly attached to the lower neck bracket			X
	Looseness at the condyle joint			X
	Nodding blocks cracked or out of position			X
Spine	Broken or cracks in rubber			X
Ribs	Broken or bent ribs			X
	Broken or bent rib supports			X
	Damping material separated or cracked			X
	Rubber bumpers in place			X
Chest Displacement Assembly	Bent shaft			X
	Slider arm riding in track			X
Transducer Leads	Torn cables			X
Accelerometer Mountings	Head mounting secure			X
	Chest mounting secure			X
Knees	Skin condition			X
	Insert (do not remove)			X
	Casting			X
Limbs	Normal movement and adjustment			X
Knee Sliders	Wires intact			X
	Rubber returned to "at rest" position			X
Pelvis	Broken			X
Other				X

Describe the repair on repair or replacement of parts:

Test Program: Hybrid III 5th Percentile Female External Measurements

Test Date: 1/11/12

ATD Serial No.: 635

Test I.D.: N/A



Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	21.16	Pass
Laboratory Relative Humidity	%	10 to 70	30.2	Pass
A - Total sitting height	mm	774.7 to 800.1	779	Pass
B - Shoulder pivot height	mm	431.8 to 457.2	434	Pass
C - H point height	mm	81.3 to 86.3	84	Pass
D - H point location from backline	mm	144.8 to 149.8	146	Pass
E - Shoulder pivot from backline	mm	68.6 to 83.8	77	Pass
F - Thigh clearance	mm	119.4 to 134.6	125	Pass
G - Back of elbow to wrist pivot	mm	243.9 to 259.1	247	Pass
H - Head back to backline	mm	40.7 to 45.7	44	Pass
I - Shoulder to elbow length	mm	276.8 to 297.2	283	Pass
J - Elbow rest height	mm	182.8 to 203.2	196	Pass
K - Buttock to knee length	mm	520.7 to 546.1	535	Pass
L - Popliteal length	mm	355.6 to 376.0	373	Pass
M - Knee pivot height	mm	393.7 to 419.1	396	Pass
N - Buttock popliteal length	mm	414.0 to 439.4	429	Pass
O - Chest depth without jacket	mm	175.3 to 190.5	189	Pass
P - Foot length	mm	218.5 to 233.7	220	Pass
R - Buttock to Knee Pivot Length	mm	457.2 to 482.6	476	Pass
S - Head Breadth	mm	137.1 to 147.3	142	Pass
T - Head Depth	mm	177.8 to 188.0	182	Pass
U - Hip Breadth	mm	299.7 to 314.9	302	Pass
V - Shoulder breadth	mm	350.5 to 365.7	357	Pass
W - Foot breadth	mm	78.8 to 94.0	84	Pass
X - Head circumference	mm	528.3 to 548.7	544	Pass
Y - Chest circumference (with chest jacket)	mm	850.8 to 881.3	858	Pass
Z - Waist circumference	mm	759.5 to 789.9	787	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	165	Pass
Overall Test Results				Pass

Test Program: Hybrid III 5th Percentile Female Head Drop Test

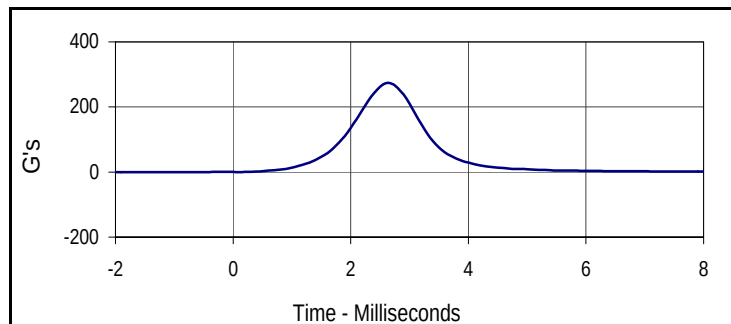
Test Date: 1/11/12

ATD Serial No.: 635

Test I.D.: F635HD027



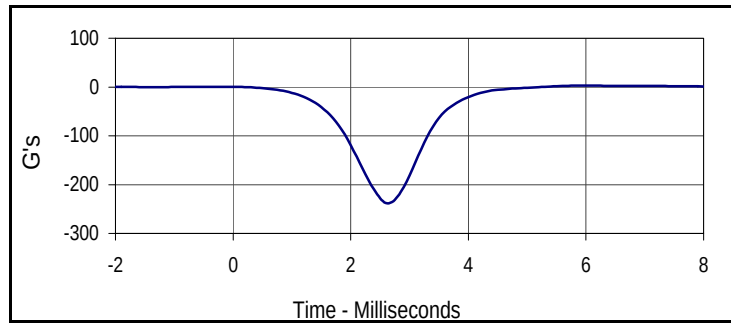
Tested Parameter		Units	Specification	Result	Pass/Fail
Head Assembly Soak Time		Minutes	≥240	260	Pass
Temperature During Soak	Max	°C	18.9 to 25.6	21.7	Pass
	Min	°C		20.7	Pass
Humidity During Soak	Max	%	10.0 to 70.0	38.0	Pass
	Min	%		28.0	Pass
Laboratory Temperature During Test		°C	18.9 to 25.6	21.1	Pass
Laboratory Humidity During Test		%	10.0 to 70.0	30.1	Pass
Peak Resultant Acceleration		G's	250.0 to 300.0	273.1	Pass
Peak Lateral Acceleration		G's	≤15.0	2.5	Pass
Oscillations After Main Pulse		%	<10% of peak Res. Acceleration	1.4	Pass
Is Acceleration Unimodal?		Yes/No	Yes	Yes	Pass
Overall Test Results				Pass	



Curve Description

Head Resultant

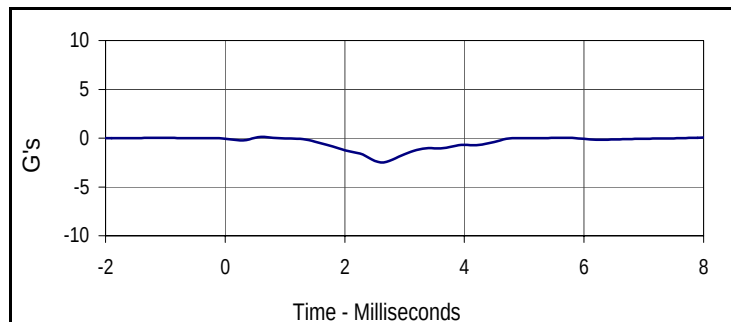
Plot No.	Type	SAE Class	Units
001	RES	1000	G's
Max	Time	Min	Time
273.1	2.6	0.0	-2.0



Curve Description

Head X

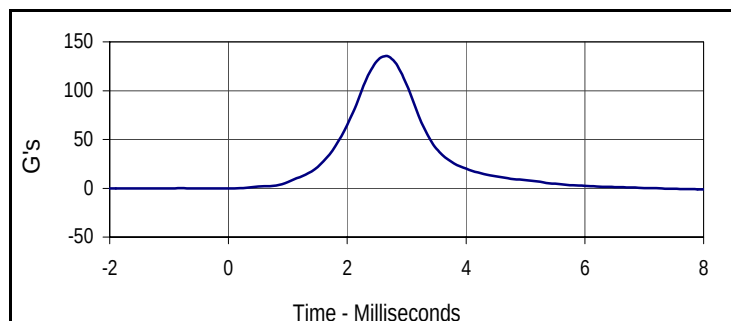
Plot No.	Type	SAE Class	Units
002	FIL	1000	G's
Max	Time	Min	Time
2.9	6.0	-237.4	2.6



Curve Description

Head Y

Plot No.	Type	SAE Class	Units
003	FIL	1000	G's
Max	Time	Min	Time
0.1	0.6	-2.5	2.6



Curve Description

Head Z

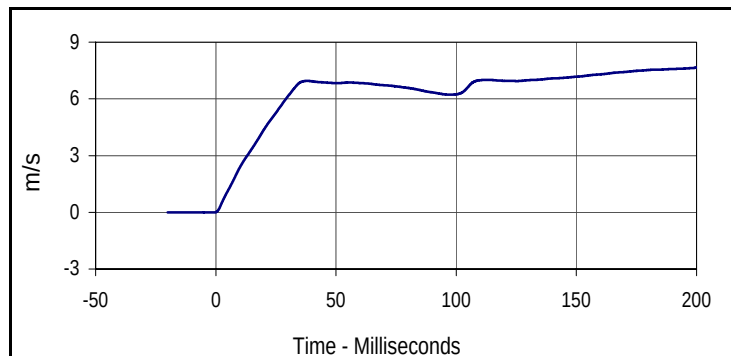
Plot No.	Type	SAE Class	Units
004	FIL	1000	G's
Max	Time	Min	Time
135.1	2.6	-0.1	-0.1

Test Program: Hybrid III 5th Percentile Female Neck Flexion Test
 ATD Serial No.: 635

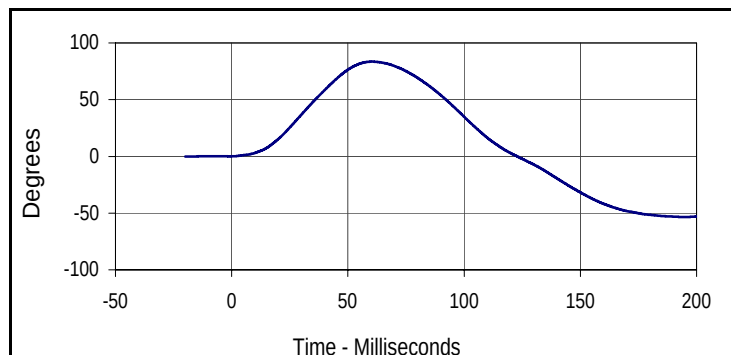
Test Date: 1/11/12
 Test I.D.: F635NF027



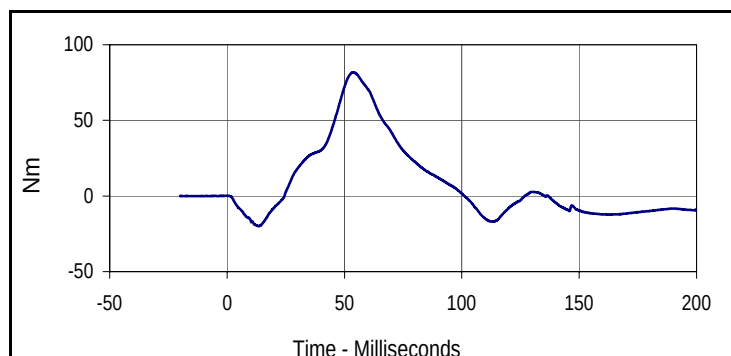
Tested Parameter		Units	Specification	Result	Pass/Fail
Neck Assembly Soak Time		Minutes	≥240	400	Pass
Temperature During Soak	Max	°C	20.6 to 22.2	21.7	Pass
	Min	°C		20.7	Pass
Humidity During Soak	Max	%	10.0 to 70.0	38.0	Pass
	Min	%		28.0	Pass
Laboratory Temperature During Test		°C	20.6 to 22.2	21.2	Pass
Laboratory Humidity During Test		%	10.0 to 70.0	30.1	Pass
Pendulum Velocity		m/s	6.89 to 7.13	7.00	Pass
Pendulum Deceleration	10 Msec.	m/s	2.1 to 2.5	2.4	Pass
	20 Msec.	m/s	4.0 to 5.0	4.4	Pass
	30 Msec.	m/s	5.8 to 7.0	6.1	Pass
"D" Plane Rotation	Max	Degrees	77.0 to 91.0	83.5	Pass
Peak Moment in Rotation	Max	Nm	69.0 to 83.0	69.6	Pass
Positive Moment Decay, Time To 10 Nm		Msec.	80.0 to 100.0	91.2	Pass
Overall Test Results				Pass	



Curve Description			
Pendulum Velocity			
Plot No.	Type	SAE Class	Units
001	FIL	180	m/s
Max	Time	Min	Time
7.6	200.0	0.0	-0.8



Curve Description			
"D" Plane Rotation			
Plot No.	Type	SAE Class	Units
002	FIL	60	Degrees
Max	Time	Min	Time
83.5	60.4	-53.4	194.7



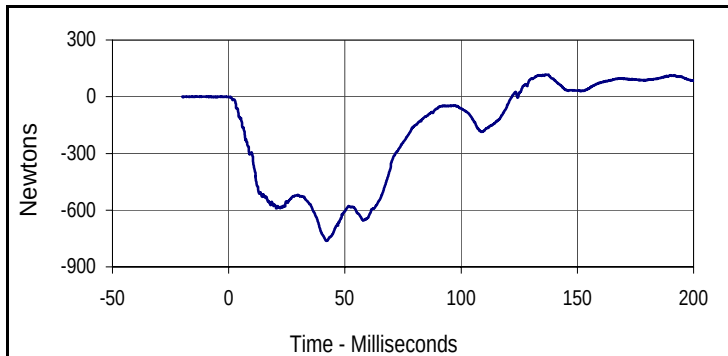
Curve Description			
Moment About Occipital Condyle			
Plot No.	Type	SAE Class	Units
003	FIL	600	Nm
Max	Time	Min	Time
81.7	53.7	-19.9	13.3

Test Program: Hybrid III 5th Percentile Female Neck Flexion Test

ATD Serial No.: 635

Test Date: 1/11/12

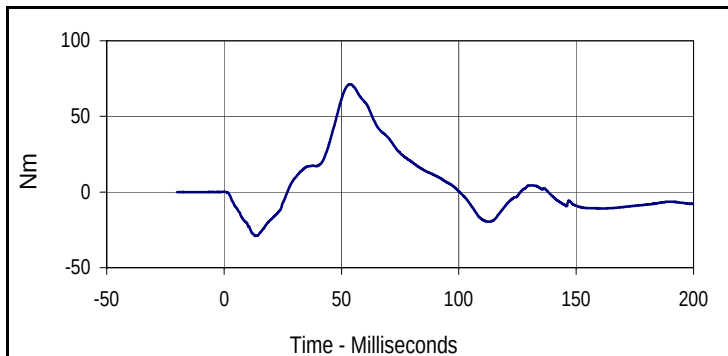
Test I.D.: F635NF027



Curve Description

Upper Neck Force X

Plot No.	Type	SAE Class	Units
004	FIL	1000	Newtons
Max	Time	Min	Time
117.5	136.5	-762.2	41.9



Curve Description

Neck Moment Y

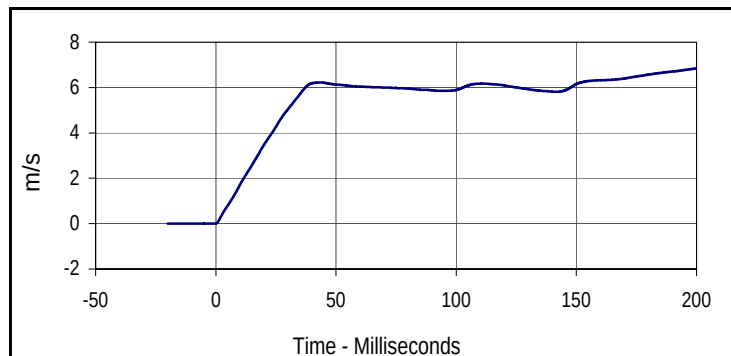
Plot No.	Type	SAE Class	Units
005	FIL	600	Nm
Max	Time	Min	Time
71.3	53.7	-29.0	13.4

Test Program: Hybrid III 5th Percentile Female Neck Extension Test
 ATD Serial No.: 635

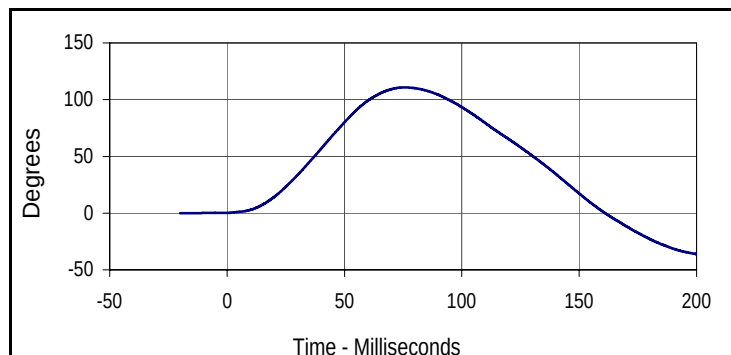
Test Date: 1/11/12
 Test I.D.: F635NE027



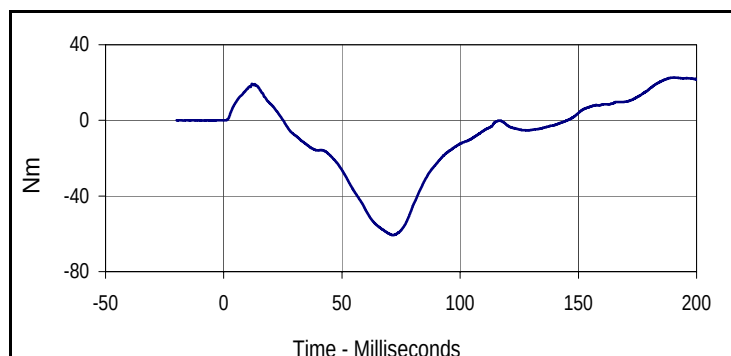
Tested Parameter		Units	Specification	Result	Pass/Fail
Neck Assembly Soak Time		Minutes	≥240	430	Pass
Temperature During Soak	Max	°C	20.6 to 22.2	21.7	Pass
	Min	°C		20.7	Pass
Humidity During Soak	Max	%	10.0 to 70.0	38.0	Pass
	Min	%		28.0	Pass
Laboratory Temperature During Test		°C	20.6 to 22.2	21.1	Pass
Laboratory Humidity During Test		%	10.0 to 70.0	30.1	Pass
Pendulum Velocity		m/s	5.95 to 6.19	6.18	Pass
Pendulum Deceleration	10 Msec.	m/s	1.5 to 1.9	1.7	Pass
	20 Msec.	m/s	3.1 to 3.9	3.5	Pass
	30 Msec.	m/s	4.6 to 5.6	5.0	Pass
"D" Plane Rotation	Max	Degrees	99.0 to 114.0	110.8	Pass
Peak Moment in Rotation	Max	Nm	-53.0 to -65.0	-60.7	Pass
Positive Moment Decay, Time To -10 Nm		Msec.	94.0 to 114.0	104.5	Pass
Overall Test Results				Pass	



Curve Description			
Pendulum Velocity			
Plot No.	Type	SAE Class	Units
001	FIL	180	m/s
Max	Time	Min	Time
6.8	200.0	0.0	-0.7



Curve Description			
"D" Plane Rotation			
Plot No.	Type	SAE Class	Units
002	FIL	60	Degrees
Max	Time	Min	Time
110.8	75.7	-36.2	200.0



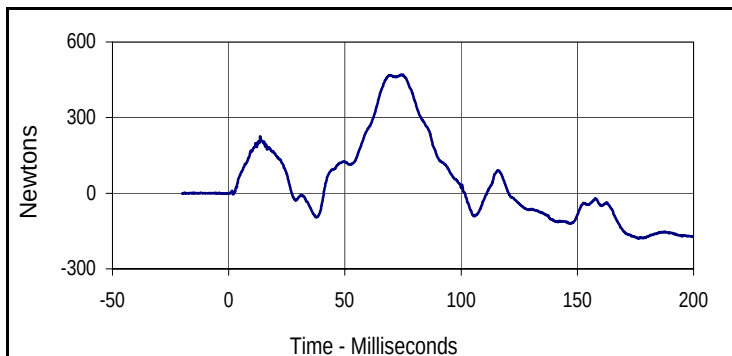
Curve Description			
Moment About Occipital Condyle			
Plot No.	Type	SAE Class	Units
003	FIL	600	Nm
Max	Time	Min	Time
22.7	190.4	-60.7	71.6

Test Program: Hybrid III 5th Percentile Female Neck Extension Test

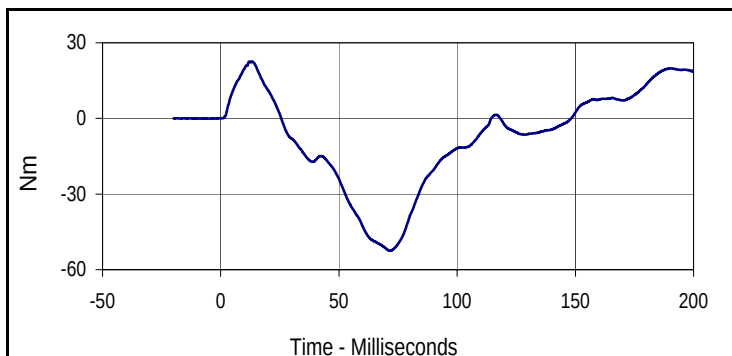
ATD Serial No.: 635

Test Date: 1/11/12

Test I.D.: F635NE027



Curve Description			
Upper Neck Force X			
Plot No.	Type	SAE Class	Units
004	FIL	1000	Newtons
Max	Time	Min	Time
471.1	74.1	-179.5	176.0



Curve Description			
Neck Moment Y			
Plot No.	Type	SAE Class	Units
005	FIL	600	Nm
Max	Time	Min	Time
22.6	13.2	-52.5	71.6

Test Program: Hybrid III 5th Percentile Female Thorax Impact Test

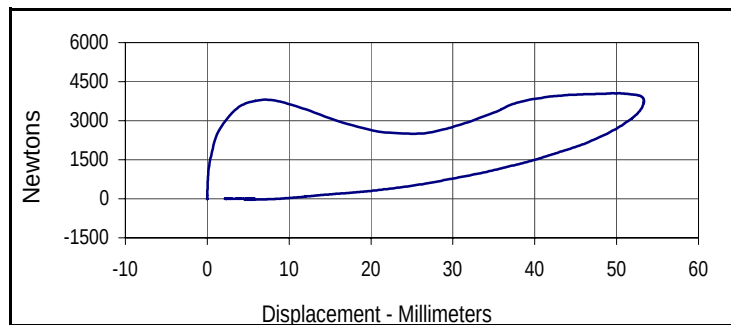
Test Date: 1/11/12

ATD Serial No.: 635

Test I.D.: F635CH027



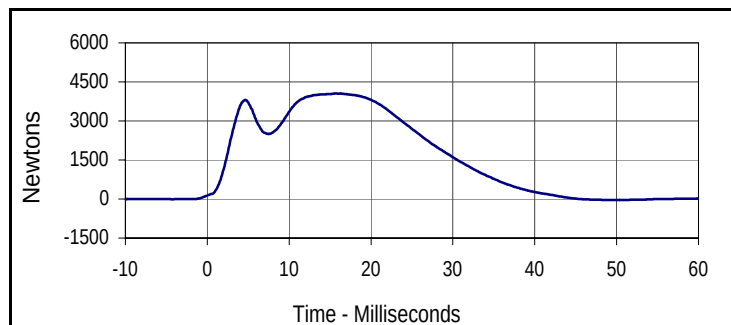
Tested Parameter		Units	Specification	Result	Pass/Fail
Dummy Soak Time		Minutes	≥240	475	Pass
Temperature During Soak	Max	°C	20.6 to 22.2	21.7	Pass
	Min	°C		20.7	Pass
Humidity During Soak	Max	%	10.0 to 70.0	38.0	Pass
	Min	%		28.0	Pass
Laboratory Temperature During Test		°C	20.6 to 22.2	21.2	Pass
Laboratory Humidity During Test		%	10.0 to 70.0	30.1	Pass
Probe Velocity		m/s	6.59 to 6.83	6.67	Pass
Peak Chest Deflection		mm	50.0 to 58.0	53.3	Pass
Peak Force Between 50 and 58 MM		Newtons	3900 to 4400	4054	Pass
Peak Force Between 18 and 50 MM		Newtons	≤4600	4052	Pass
Internal Hysteresis		%	69 to 85	72.5	Pass
Overall Test Results					Pass



Curve Description

Probe Force vs. Chest Deflection

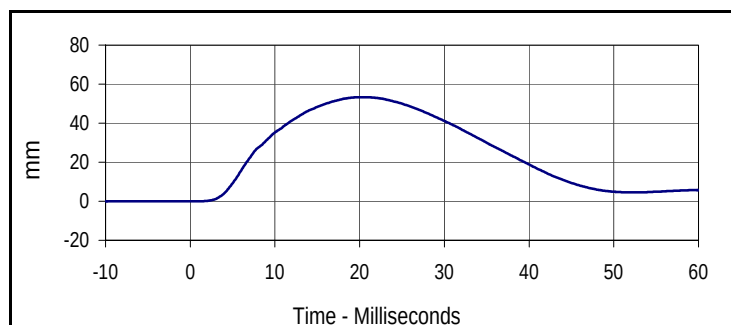
Plot No.	Type	SAE Class	Hysteresis
001	FIL	180	72.5
Peak Probe Force		Peak Chest Deflection	
4053.5		53.3	



Curve Description

Probe Force

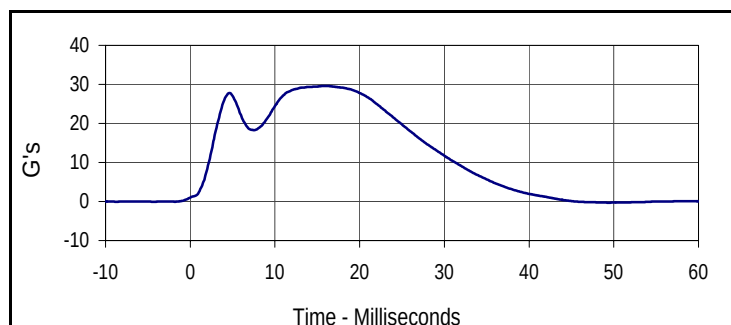
Plot No.	Type	SAE Class	Units
002	FIL	180	Newtons
Max	Time	Min	Time
4053.5	15.7	-39.7	49.4



Curve Description

Chest Deflection

Plot No.	Type	SAE Class	Units
003	FIL	600	mm
Max	Time	Min	Time
53.3	20.4	0.0	-3.1



Curve Description

Impactor Acceleration

Plot No.	Type	SAE Class	Units
004	FIL	180	G's
Max	Time	Min	Time
29.6	15.7	-0.3	49.4

Test Program: Hybrid III 5th Percentile Female Knee Impact Test

Test Date: 1/11/12

ATD Serial No.: 635

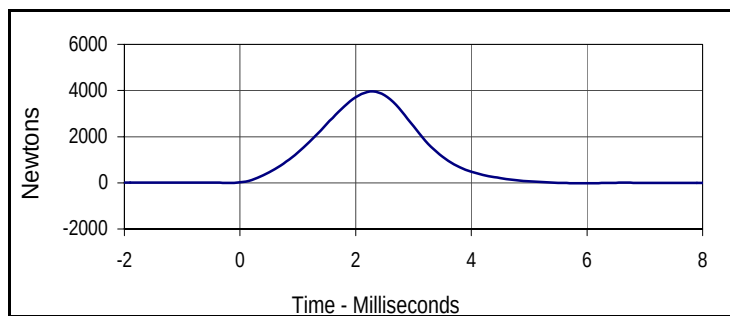
Test I.D.: F635LK027, F635RK027

**Left Knee**

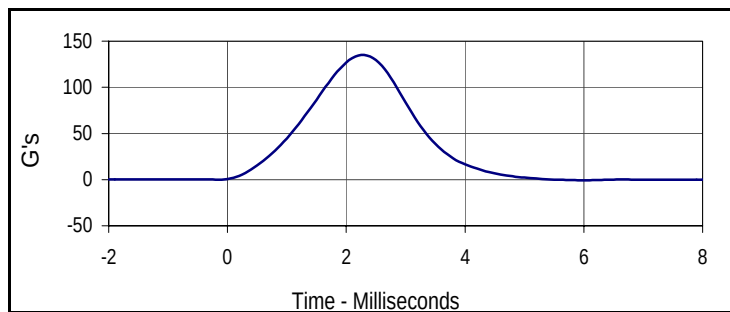
Tested Parameter		Units	Specification	Result	Pass/Fail
Knee Assembly Soak Time		Minutes	≥240	330	Pass
Temperature During Soak	Max	°C	18.9 to 25.6	21.7	Pass
	Min	°C		20.7	Pass
Humidity During Soak	Max	%	10.0 to 70.0	38.0	Pass
	Min	%		28.0	Pass
Laboratory Temperature During Test		°C	18.9 to 25.6	21.1	Pass
Laboratory Humidity During Test		%	10.0 to 70.0	30.1	Pass
Pendulum Velocity at T=0		m/sec	2.07 to 2.13	2.10	Pass
Peak Probe Force		Newtons	3450 to 4060	3955	Pass
Overall Test Results					Pass

Right Knee

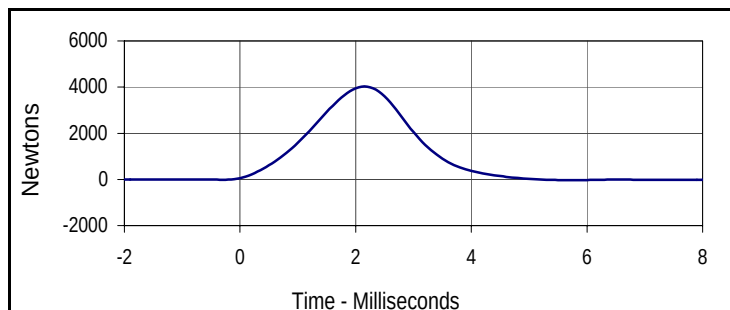
Pendulum Velocity at T=0		m/sec	2.07 to 2.13	2.11	Pass
Peak Probe Force		Newtons	3450 to 4060	4018	Pass
Overall Test Results					Pass

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

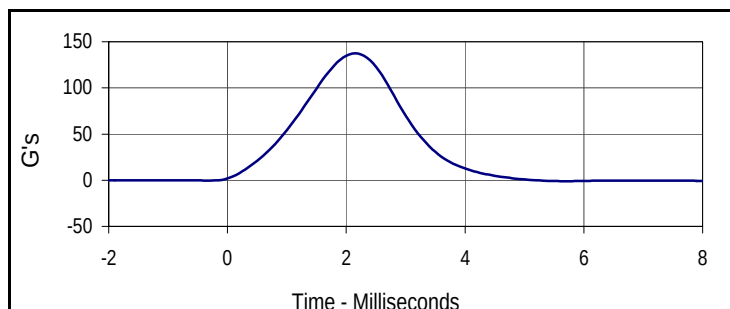
Plot No.	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Time	Min	Time
3955.1	2.3	-22.9	6.0

**Curve Description****Left Knee Acceleration**

Plot No.	Type	SAE Class	Units
002	FIL	600	G's
Max	Time	Min	Time
134.9	2.3	-0.8	6.0

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

Plot No.	Type	SAE Class	Units
003	FIL	600	Newtons
Max	Time	Min	Time
4018.4	2.2	-30.4	5.7

**Curve Description****Right Knee Acceleration**

Plot No.	Type	SAE Class	Units
004	FIL	600	G's
Max	Time	Min	Time
137.1	2.2	-1.0	5.7

Test Program: Hybrid III 5th Percentile Female Torso Flexion Test

Test Date: 1/11/12

ATD Serial No.: 635

Test I.D.: F635TF027



Tested Parameter		Units	Specification	Result	Pass/Fail
Dummy Soak Time		Minutes	≥240	520	Pass
Temperature During Soak	Max	°C	18.9 to 25.6	21.7	Pass
	Min	°C		20.6	Pass
Humidity During Soak	Max	%	10.0 to 70.0	38.0	Pass
	Min	%		28.5	Pass
Laboratory Temperature During Test		°C	18.9 to 25.6	21.2	Pass
Laboratory Humidity During Test		%	10.0 to 70.0	29.9	Pass
Initial Reference Plane Angle		Degrees	≤ 20	7.1	Pass
Peak Force at 45° +/-0.5°		Newtons	320.0 to 390.0	371.4	Pass
Torso Rotation Rate		deg/sec	0.5 to 1.5	1.3	Pass
Final Reference Plane Angle		Degrees	+/-8	2.0	Pass
Overall Test Results					Pass

APPENDIX C
POST-TEST / ATD CONFIGURATION AND PERFORMANCE VERIFICATION DATA

Test Program: Hybrid III 50th Percentile Male Dummy Damage Checklist

Test Date: 1/19/12

ATD Serial No.: 035

Test I.D.: N/A



Dummy Item	Inspect for	Comments	Damaged	OK
Entire Dummy	Perform general cleaning			X
Outer Skin	Gashes, rips, cracks			X
Head	Ballast secure			X
	General appearance			X
Neck	Broken or cracked rubber			X
	Upper neck bracket firmly attached to the lower neck bracket			X
	Looseness at the condyle joint			X
	Nodding blocks cracked or out of position			X
Spine	Broken or cracks in rubber			X
Ribs	Broken or bent ribs			X
	Broken or bent rib supports			X
	Damping material separated or cracked			X
	Rubber bumpers in place			X
Chest Displacement Assembly	Bent shaft			X
	Slider arm riding in track			X
Transducer Leads	Torn cables			X
Accelerometer Mountings	Head mounting secure			X
	Chest mounting secure			X
Knees	Skin condition			X
	Insert (do not remove)			X
	Casting			X
Limbs	Normal movement and adjustment			X
Knee Sliders	Wires intact			X
	Rubber returned to "at rest" position			X
Pelvis	Broken			X
Other				X

Describe the repair on repair or replacement of parts:

Test Program: Hybrid III 50th Percentile Male External Measurements

Test Date: 1/19/12

ATD Serial No.: 035

Test I.D.: N/A



Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	21.22	Pass
Laboratory Relative Humidity	%	10 to 70	29.5	Pass
A - Total sitting height	mm	879 to 889	884	Pass
B - Shoulder pivot height	mm	505 to 521	515	Pass
C - H point height	mm	84 to 89	88	Pass
D - H point location from backline	mm	135 to 140	138	Pass
E - Shoulder pivot from backline	mm	84 to 94	87	Pass
F - Thigh clearance	mm	140 to 155	148	Pass
G - Back of elbow to wrist pivot	mm	290 to 305	298	Pass
H - Head back to backline	mm	41 to 46	44	Pass
I - Shoulder to elbow length	mm	330 to 345	335	Pass
J - Elbow rest height	mm	190 to 211	203	Pass
K - Buttock to knee length	mm	579 to 604	586	Pass
L - Popliteal length	mm	429 to 455	438	Pass
M - Knee pivot height	mm	485 to 500	489	Pass
N - Buttock popliteal length	mm	452 to 477	472	Pass
O - Chest depth without jacket	mm	213 to 229	225	Pass
P - Foot length	mm	251 to 267	260	Pass
V - Shoulder breadth	mm	422 to 437	433	Pass
W - Foot breadth	mm	91 to 107	99	Pass
Y - Chest circumference (with chest jacket)	mm	970 to 1001	986	Pass
Z - Waist circumference	mm	836 to 866	865	Pass
AA - Location for chest circumference	mm	429 to 434	431	Pass
BB - Location for waist circumference	mm	226 to 231	230	Pass
Overall Test Results			Pass	

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

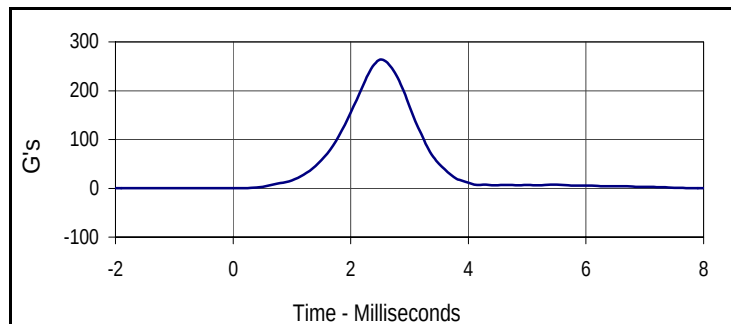
Test Date: 1/19/12

ATD Serial No.: 035

Test I.D.: M035HD032



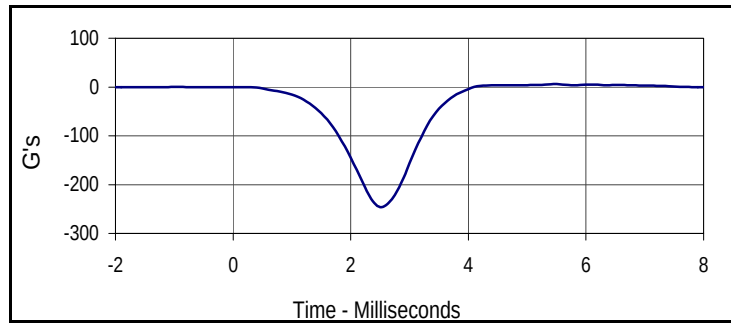
Tested Parameter		Units	Specification	Result	Pass/Fail
Head Assembly Soak Time		Minutes	≥240	240	Pass
Temperature During Soak	Max	°C	18.9 to 25.6	21.7	Pass
	Min	°C		21.1	Pass
Humidity During Soak	Max	%	10.0 to 70.0	36.0	Pass
	Min	%		30.0	Pass
Laboratory Temperature During Test		°C	18.9 to 25.6	21.2	Pass
Laboratory Humidity During Test		%	10.0 to 70.0	29.9	Pass
Peak Resultant Acceleration		G's	225.0 to 275.0	264.1	Pass
Peak Lateral Acceleration		G's	≤15.0	6.3	Pass
Oscillations After Main Pulse		%	<10% of peak Res. Acceleration	4.3	Pass
Is Acceleration Unimodal?		Yes/No	Yes	Yes	Pass
Overall Test Results				Pass	



Curve Description

Head Resultant

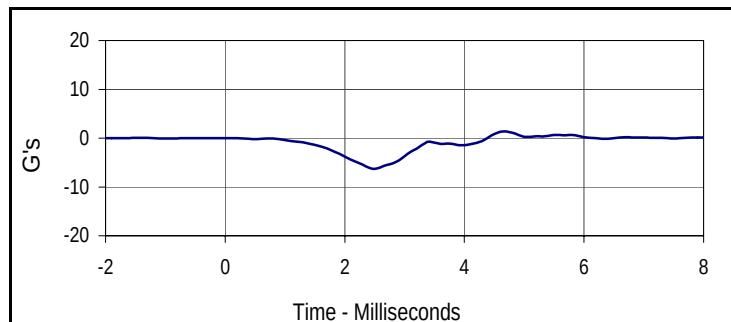
Plot No.	Type	SAE Class	Units
001	RES	1000	G's
Max	Time	Min	Time
264.1	2.5	0.1	-0.1



Curve Description

Head X

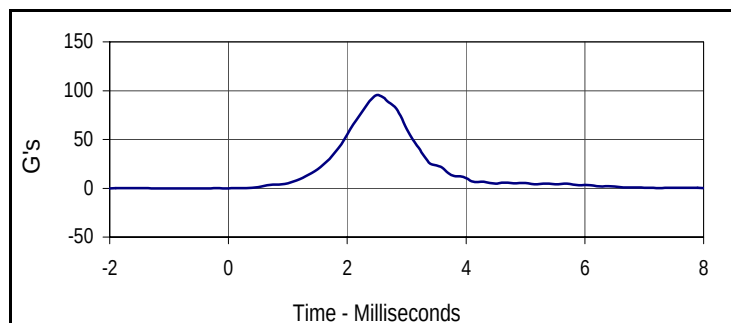
Plot No.	Type	SAE Class	Units
002	FIL	1000	G's
Max	Time	Min	Time
6.0	5.5	-246.1	2.5



Curve Description

Head Y

Plot No.	Type	SAE Class	Units
003	FIL	1000	G's
Max	Time	Min	Time
1.4	4.7	-6.3	2.5



Curve Description

Head Z

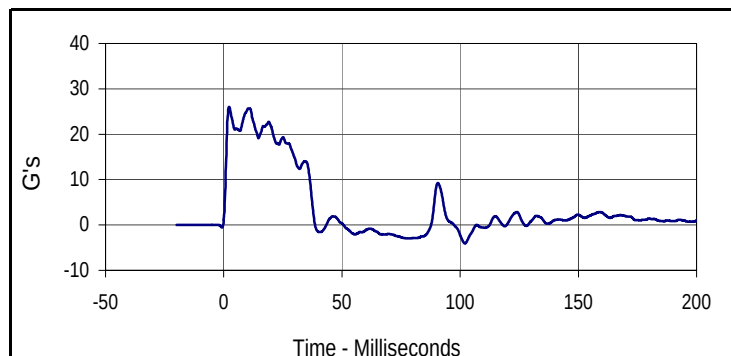
Plot No.	Type	SAE Class	Units
004	FIL	1000	G's
Max	Time	Min	Time
95.6	2.5	-0.2	-0.9

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

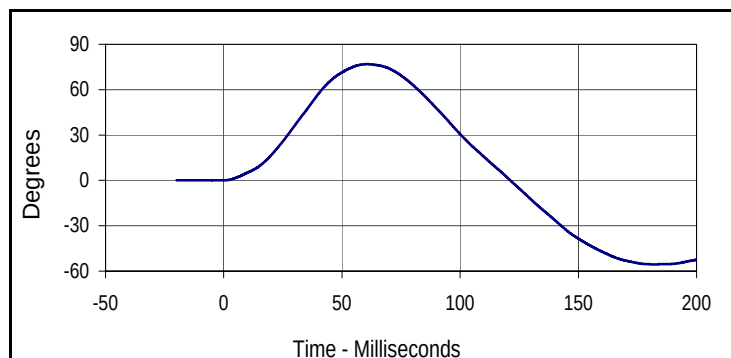
Test Date: 1/19/12
 Test I.D.: M035NF032



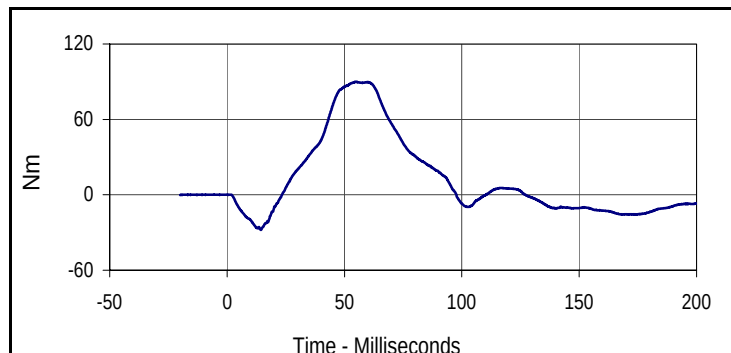
Tested Parameter		Units	Specification	Result	Pass/Fail
Neck Assembly Soak Time		Minutes	≥240	275	Pass
Temperature During Soak	Max	°C	20.6 to 22.2	21.7	Pass
	Min	°C		21.1	Pass
Humidity During Soak	Max	%	10.0 to 70.0	36.0	Pass
	Min	%		30.0	Pass
Laboratory Temperature During Test		°C	20.6 to 22.2	21.2	Pass
Laboratory Humidity During Test		%	10.0 to 70.0	29.9	Pass
Pendulum Velocity		m/s	6.89 to 7.13	6.99	Pass
Pendulum Deceleration	10 Msec.	G's	22.5 to 27.5	25.5	Pass
	20 Msec.	G's	17.6 to 22.6	21.7	Pass
	30 Msec.	G's	12.5 to 18.5	14.8	Pass
Peak Pendulum Decel. after 30 Msec.		G's	≤ 29.0	14.8	Pass
Deceleration Decay, Time to Cross 5 G's		Msec.	34.0 to 42.0	37.4	Pass
Maximum "D" Plane Rotation	Max	Degrees	64.0 to 78.0	76.8	Pass
	Time	Msec.	57.0 to 64.0	60.6	Pass
"D" Plane Rotation Decay, Time To Zero Crossing		Msec.	113.0 to 128.0	121.2	Pass
Moment About Occ. Condyle	Max	Nm	84.1 to 108.5	90.0	Pass
	Time	Msec.	47.0 to 58.0	54.8	Pass
Positive Moment Decay, Time To Zero Crossing		Msec.	97.0 to 107.0	97.7	Pass
Overall Test Results					Pass



Curve Description			
Pendulum Deceleration			
Plot No.	Type	SAE Class	Units
001	FIL	60	G's
Max	Time	Min	Time
26.1	2.3	-4.1	102.0



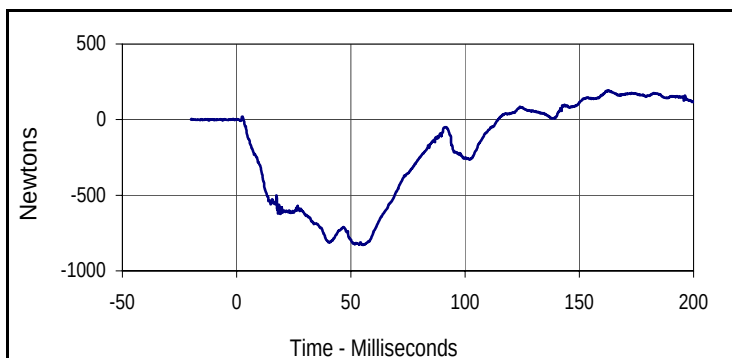
Curve Description			
"D" Plane Rotation			
Plot No.	Type	SAE Class	Units
002	FIL	60	Degrees
Max	Time	Min	Time
76.8	60.6	-55.5	181.8



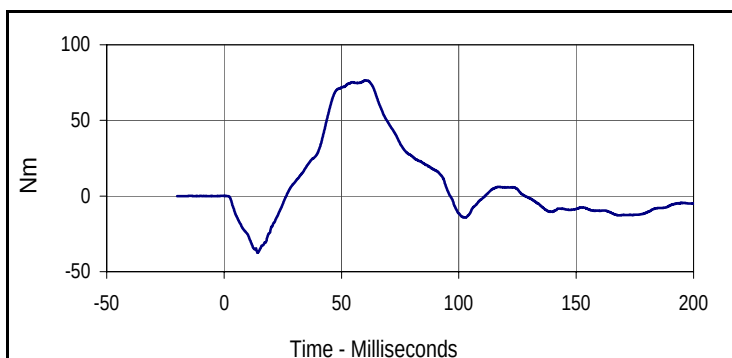
Curve Description			
Moment About Occipital Condyle			
Plot No.	Type	SAE Class	Units
003	FIL	600	Nm
Max	Time	Min	Time
90.0	54.8	-28.0	14.4

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

Test Date: 1/19/12
 Test I.D.: M035NF032



Curve Description			
Neck Force X			
Plot No.	Type	SAE Class	Units
004	FIL	1000	Newtons
Max	Time	Min	Time
192.5	162.9	-827.8	55.3



Curve Description			
Neck Moment Y			
Plot No.	Type	SAE Class	Units
005	FIL	600	Nm
Max	Time	Min	Time
76.5	60.3	-37.5	14.4

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

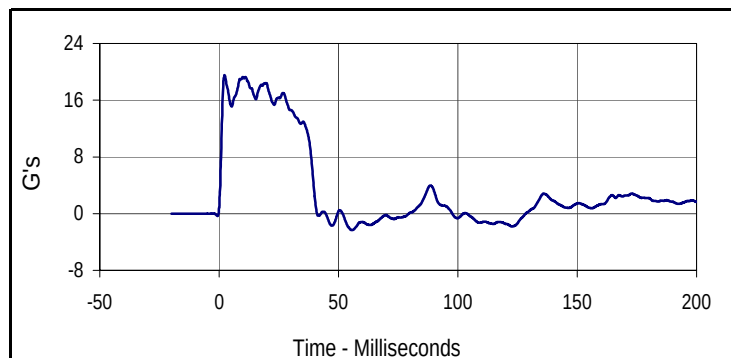
Test Date: 1/19/12

ATD Serial No.: 035

Test I.D.: M035NE032



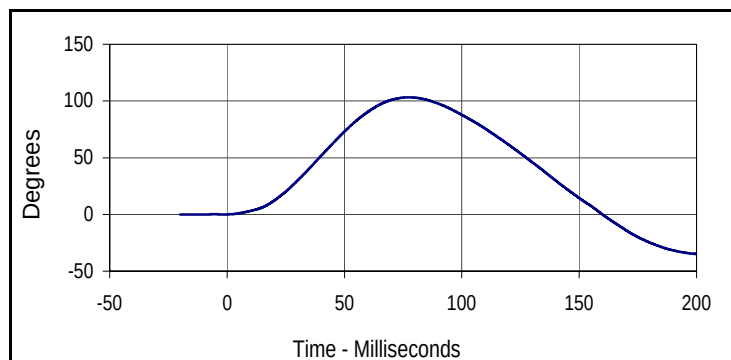
Tested Parameter		Units	Specification	Result	Pass/Fail
Neck Assembly Soak Time		Minutes	≥240	305	Pass
Temperature During Soak	Max	°C	20.6 to 22.2	21.7	Pass
	Min	°C		21.1	Pass
Humidity During Soak	Max	%	10.0 to 70.0	36.0	Pass
	Min	%		30.0	Pass
Laboratory Temperature During Test		°C	20.6 to 22.2	21.2	Pass
Laboratory Humidity During Test		%	10.0 to 70.0	30.0	Pass
Pendulum Velocity		m/s	5.94 to 6.19	6.02	Pass
Pendulum Deceleration	10 Msec.	G's	17.2 to 21.2	19.2	Pass
	20 Msec.	G's	14.0 to 19.0	18.3	Pass
	30 Msec.	G's	11.0 to 16.0	14.6	Pass
Peak Pendulum Decel. after 30 Msec.		G's	≤ 22.0	14.6	Pass
Deceleration Decay, Time to Cross 5 G's		Msec.	38.0 to 46.0	39.4	Pass
Maximum "D" Plane Rotation	Max	Degrees	81.0 to 106.0	103.2	Pass
	Time	Msec.	72.0 to 82.0	77.2	Pass
"D" Plane Rotation Decay, Time To Zero Crossing		Msec.	147.0 to 174.0	159.9	Pass
Moment About Occ. Condyle	Max	Nm	-52.9 to -79.9	-70.7	Pass
	Time	Msec.	65.0 to 79.0	71.9	Pass
Positive Moment Decay, Time To Zero Crossing		Msec.	120.0 to 148.0	138.3	Pass
Overall Test Results					Pass



Curve Description

Pendulum Deceleration

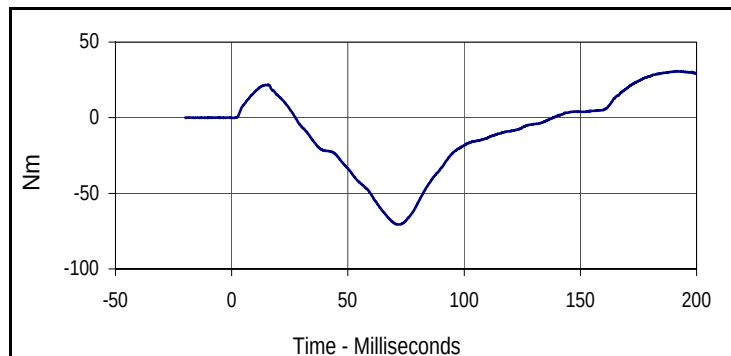
Plot No.	Type	SAE Class	Units
001	FIL	60	G's
Max	Time	Min	Time
19.5	2.3	-2.3	55.5



Curve Description

"D" Plane Rotation

Plot No.	Type	SAE Class	Units
002	FIL	60	Degrees
Max	Time	Min	Time
103.2	77.2	-34.8	200.0



Curve Description

Moment About Occipital Condyle

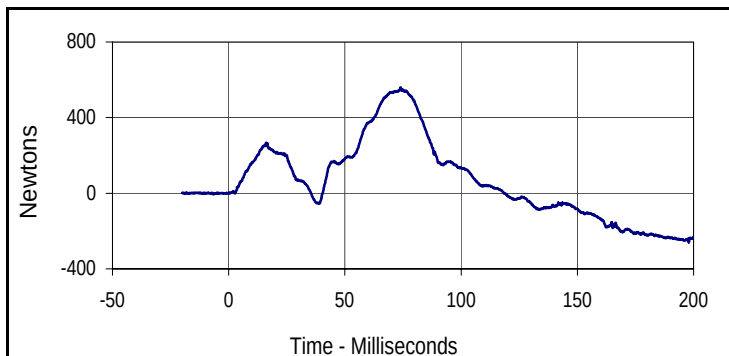
Plot No.	Type	SAE Class	Units
003	FIL	600	Nm
Max	Time	Min	Time
30.8	191.4	-70.7	71.9

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

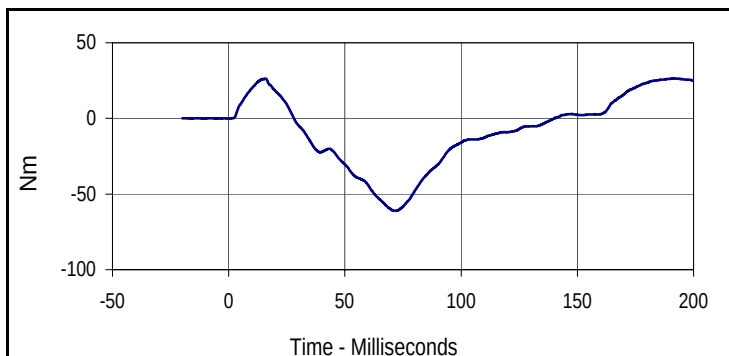
ATD Serial No.: 035

Test Date: 1/19/12

Test I.D.: M035NE032



Curve Description			
Neck Force X			
Plot No.	Type	SAE Class	Units
004	FIL	1000	Newtons
Max	Time	Min	Time
559.8	74.0	-258.8	198.0



Curve Description			
Neck Moment Y			
Plot No.	Type	SAE Class	Units
005	FIL	600	Nm
Max	Time	Min	Time
26.5	191.4	-61.1	71.9

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

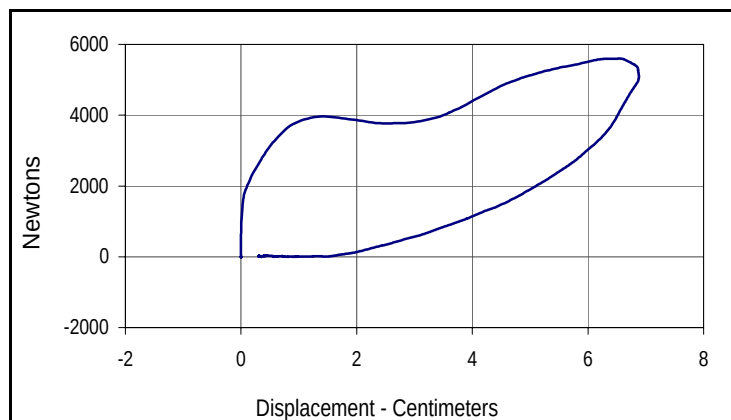
Test Date: 1/19/12

ATD Serial No.: 035

Test I.D.: M035CH032



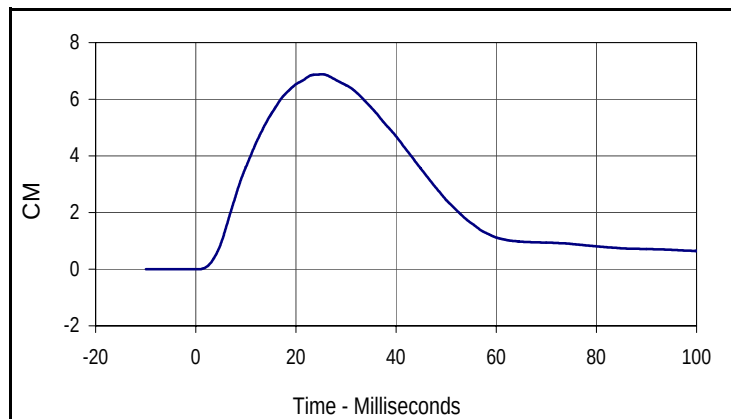
Tested Parameter		Units	Specification	Result	Pass/Fail
Dummy Soak Time		Minutes	≥240	360	Pass
Temperature During Soak	Max	°C	20.6 to 22.2	21.7	Pass
	Min	°C		21.1	Pass
Humidity During Soak	Max	%	10.0 to 70.0	36.0	Pass
	Min	%		30.0	Pass
Laboratory Temperature During Test		°C	20.6 to 22.2	21.2	Pass
Laboratory Humidity During Test		%	10.0 to 70.0	29.9	Pass
Probe Velocity		m/s	6.58 to 6.82	6.72	Pass
Peak Probe Force		Newtons	5159 to 5893	5599	Pass
Peak Sternum Deflection		CM	6.35 to 7.26	6.88	Pass
Internal Hysteresis		%	69 to 85	71.1	Pass
Overall Test Results				Pass	



Curve Description

Probe Force vs. Chest Deflection

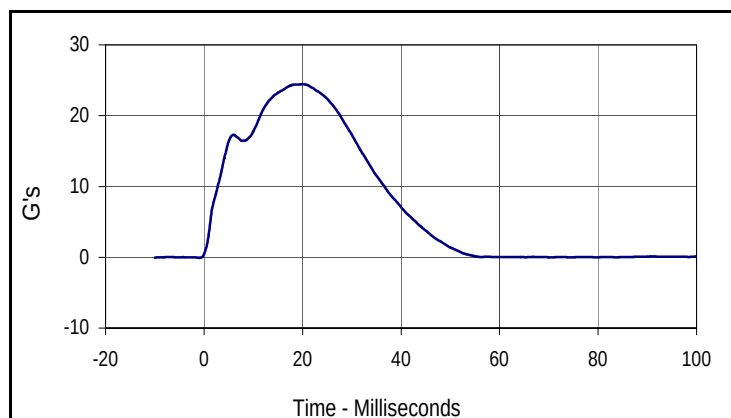
Plot No.	Type	SAE Class	Hysteresis
001	FIL	180	71.1
Peak Probe Force		Peak Chest Deflection	
5599		6.88	



Curve Description

Chest Deflection

Plot No.	Type	SAE Class	Units
002	FIL	180	CM
Max	Time	Min	Time
6.9	25.2	0.0	0.4



Curve Description

Impactor Acceleration

Plot No.	Type	SAE Class	Units
003	FIL	180	G's
Max	Time	Min	Time
24.4	20.1	-0.1	-0.9

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

Test Date: 1/19/12

ATD Serial No.: 035

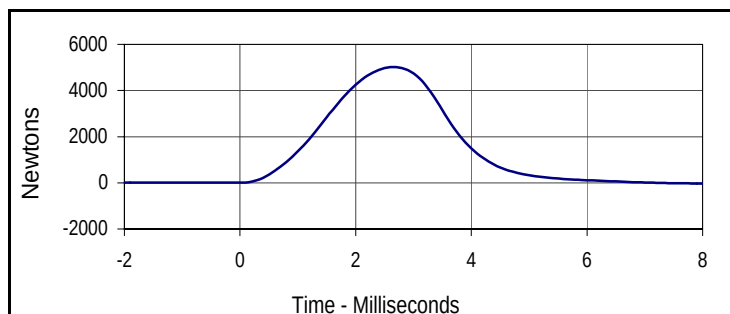
Test I.D.: M035LK032, M035RK032

**Left Knee**

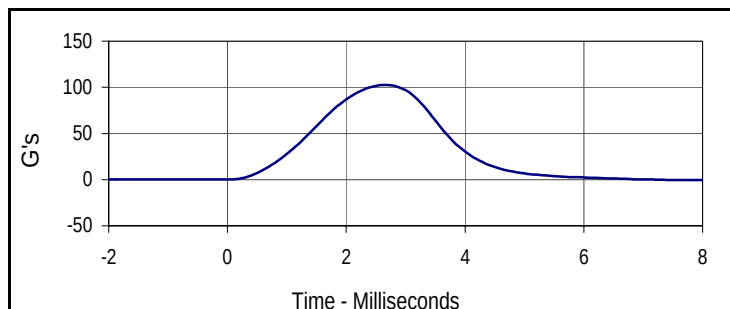
Tested Parameter		Units	Specification	Result	Pass/Fail
Knee Assembly Soak Time		Minutes	≥240	320	Pass
Temperature During Soak	Max	°C	18.9 to 25.6	21.7	Pass
	Min	°C		21.1	Pass
Humidity During Soak	Max	%	10.0 to 70.0	36.0	Pass
	Min	%		30.0	Pass
Laboratory Temperature During Test		°C	18.9 to 25.6	21.2	Pass
Laboratory Humidity During Test		%	10.0 to 70.0	30.0	Pass
Pendulum Velocity at T=0		m/sec	2.07 to 2.13	2.10	Pass
Peak Probe Force		Newtons	4715 to 5782	5015	Pass
Overall Test Results				Pass	

Right Knee

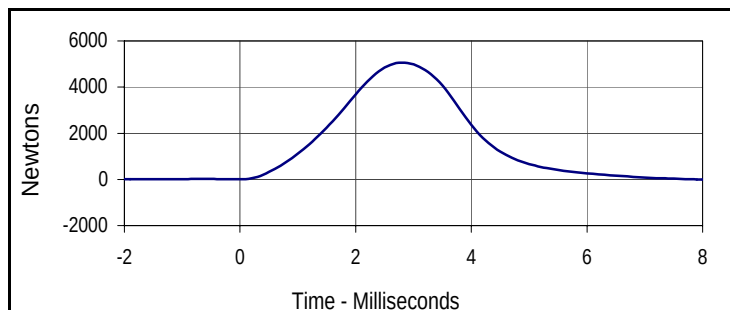
Pendulum Velocity at T=0		m/sec	2.07 to 2.13	2.10	Pass
Peak Probe Force		Newtons	4715 to 5782	5063	Pass
Overall Test Results				Pass	

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

Plot No.	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Time	Min	Time
5014.5	2.7	-26.2	8.0

**Curve Description****Left Knee Acceleration**

Plot No.	Type	SAE Class	Units
002	FIL	600	G's
Max	Time	Min	Time
102.5	2.7	-0.5	8.0

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

Plot No.	Type	SAE Class	Units
003	FIL	600	Newtons
Max	Time	Min	Time
5063.4	2.8	-13.2	8.7

**Curve Description****Right Knee Acceleration**

Plot No.	Type	SAE Class	Units
004	FIL	600	G's
Max	Time	Min	Time
103.5	2.8	-0.3	8.7

Test Program: Hybrid III 50th Percentile Male Hip Joint-Femur Flexion Test

Test Date: 1/19/12

ATD Serial No.: 035

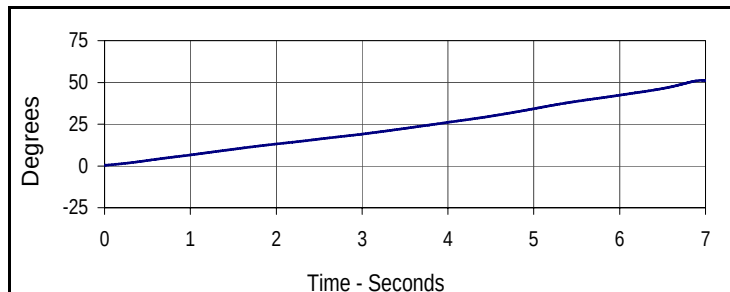
Test I.D.: M035LF032, M035RF032

**Left Hip Joint-Femur Results**

Tested Parameter		Units	Specification	Result	Pass/Fail
Hip Joint-Femur Assembly Soak Time		Minutes	≥240	395	Pass
Temperature During Soak	Max	°C	18.9 to 25.6	21.7	Pass
	Min	°C		21.1	Pass
Humidity During Soak	Max	%	10.0 to 70.0	36.0	Pass
	Min	%		30.0	Pass
Laboratory Temperature During Test		°C	18.9 to 25.6	21.2	Pass
Laboratory Humidity During Test		%	10.0 to 70.0	29.9	Pass
Rotation Rate		deg/sec	5 to 10	7.4	Pass
Femur Torque at 30°		Nm	≤ 95	89.4	Pass
Rotation at 203 Nm		Degrees	40.0 to 50.0	47.8	Pass
Overall Test Results					Pass

Right Hip Joint-Femur Results

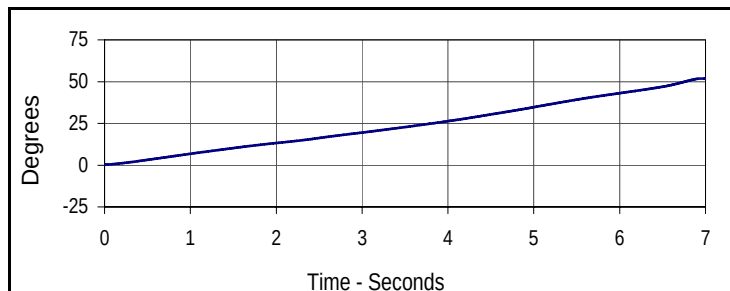
Rotation Rate		deg/sec	5 to 10	7.5	Pass
Femur Torque at 30°		Nm	≤ 95	85.3	Pass
Rotation at 203 Nm		Degrees	40.0 to 50.0	48.9	Pass
Overall Test Results					Pass

**Curve Description****Left Hip-Femur Rotation**

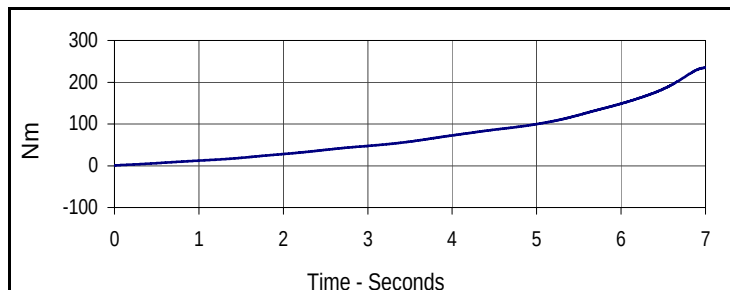
Plot No.	Type	SAE Class	Units
001	FIL	60	Degrees
Max	Time	Min	Time
51.3	7.0	0.4	0.0

**Curve Description****Left Femur Torque**

Plot No.	Type	SAE Class	Units
002	FIL	600	Nm
Max	Time	Min	Time
240.7	7.0	1.0	0.0

**Curve Description****Right Hip-Femur Rotation**

Plot No.	Type	SAE Class	Units
003	FIL	60	Degrees
Max	Time	Min	Time
51.9	7.0	0.2	0.0

**Curve Description****Right Femur Torque**

Plot No.	Type	SAE Class	Units
004	FIL	600	Nm
Max	Time	Min	Time
234.6	7.0	1.0	0.0

Test Program: Hybrid III 5th Percentile Female Dummy Damage Checklist

Test Date: 1/19/12

ATD Serial No.: 635

Test I.D.: N/A



Dummy Item	Inspect for	Comments	Damaged	OK
Entire Dummy	Perform general cleaning			X
Outer Skin	Gashes, rips, cracks			X
Head	Ballast secure			X
	General appearance			X
Neck	Broken or cracked rubber			X
	Upper neck bracket firmly attached to the lower neck bracket			X
	Looseness at the condyle joint			X
	Nodding blocks cracked or out of position			X
Spine	Broken or cracks in rubber			X
Ribs	Broken or bent ribs			X
	Broken or bent rib supports			X
	Damping material separated or cracked			X
	Rubber bumpers in place			X
Chest Displacement Assembly	Bent shaft			X
	Slider arm riding in track			X
Transducer Leads	Torn cables			X
Accelerometer Mountings	Head mounting secure			X
	Chest mounting secure			X
Knees	Skin condition			X
	Insert (do not remove)			X
	Casting			X
Limbs	Normal movement and adjustment			X
Knee Sliders	Wires intact			X
	Rubber returned to "at rest" position			X
Pelvis	Broken			X
Other				X

Describe the repair on repair or replacement of parts:

Test Program: Hybrid III 5th Percentile Female External Measurements

Test Date: 1/19/12

ATD Serial No.: 635

Test I.D.: N/A



Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	21.16	Pass
Laboratory Relative Humidity	%	10 to 70	29.9	Pass
A - Total sitting height	mm	774.7 to 800.1	779	Pass
B - Shoulder pivot height	mm	431.8 to 457.2	433	Pass
C - H point height	mm	81.3 to 86.3	85	Pass
D - H point location from backline	mm	144.8 to 149.8	146	Pass
E - Shoulder pivot from backline	mm	68.6 to 83.8	77	Pass
F - Thigh clearance	mm	119.4 to 134.6	125	Pass
G - Back of elbow to wrist pivot	mm	243.9 to 259.1	247	Pass
H - Head back to backline	mm	40.7 to 45.7	44	Pass
I - Shoulder to elbow length	mm	276.8 to 297.2	283	Pass
J - Elbow rest height	mm	182.8 to 203.2	196	Pass
K - Buttock to knee length	mm	520.7 to 546.1	535	Pass
L - Popliteal length	mm	355.6 to 376.0	373	Pass
M - Knee pivot height	mm	393.7 to 419.1	396	Pass
N - Buttock popliteal length	mm	414.0 to 439.4	429	Pass
O - Chest depth without jacket	mm	175.3 to 190.5	188	Pass
P - Foot length	mm	218.5 to 233.7	220	Pass
R - Buttock to Knee Pivot Length	mm	457.2 to 482.6	476	Pass
S - Head Breadth	mm	137.1 to 147.3	142	Pass
T - Head Depth	mm	177.8 to 188.0	182	Pass
U - Hip Breadth	mm	299.7 to 314.9	302	Pass
V - Shoulder breadth	mm	350.5 to 365.7	357	Pass
W - Foot breadth	mm	78.8 to 94.0	84	Pass
X - Head circumference	mm	528.3 to 548.7	544	Pass
Y - Chest circumference (with chest jacket)	mm	850.8 to 881.3	858	Pass
Z - Waist circumference	mm	759.5 to 789.9	787	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	165	Pass
Overall Test Results				Pass

Test Program: Hybrid III 5th Percentile Female Head Drop Test

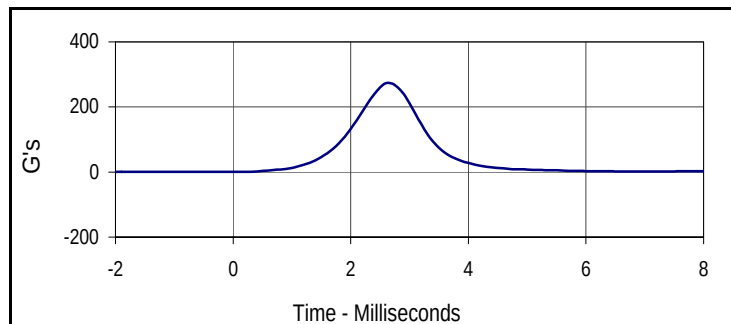
Test Date: 1/19/12

ATD Serial No.: 635

Test I.D.: F635HD028



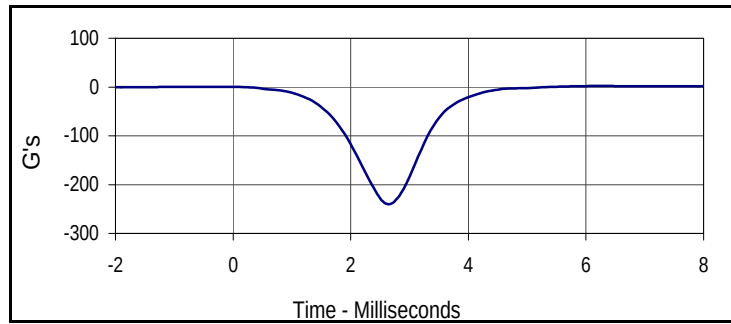
Tested Parameter		Units	Specification	Result	Pass/Fail
Head Assembly Soak Time		Minutes	≥240	265	Pass
Temperature During Soak	Max	°C	18.9 to 25.6	21.7	Pass
	Min	°C		20.7	Pass
Humidity During Soak	Max	%	10.0 to 70.0	38.0	Pass
	Min	%		28.0	Pass
Laboratory Temperature During Test		°C	18.9 to 25.6	21.2	Pass
Laboratory Humidity During Test		%	10.0 to 70.0	30.1	Pass
Peak Resultant Acceleration		G's	250.0 to 300.0	272.7	Pass
Peak Lateral Acceleration		G's	≤15.0	2.4	Pass
Oscillations After Main Pulse		%	<10% of peak Res. Acceleration	1.1	Pass
Is Acceleration Unimodal?		Yes/No	Yes	Yes	Pass
Overall Test Results				Pass	



Curve Description

Head Resultant

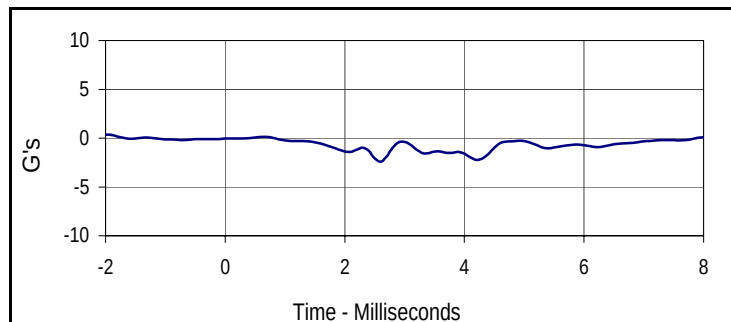
Plot No.	Type	SAE Class	Units
001	RES	1000	G's
Max	Time	Min	Time
272.7	2.6	0.4	-1.7



Curve Description

Head X

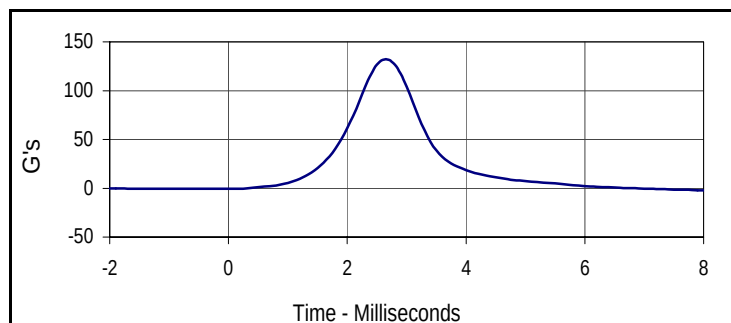
Plot No.	Type	SAE Class	Units
002	FIL	1000	G's
Max	Time	Min	Time
1.9	6.0	-238.7	2.6



Curve Description

Head Y

Plot No.	Type	SAE Class	Units
003	FIL	1000	G's
Max	Time	Min	Time
0.4	-2.0	-2.4	2.6



Curve Description

Head Z

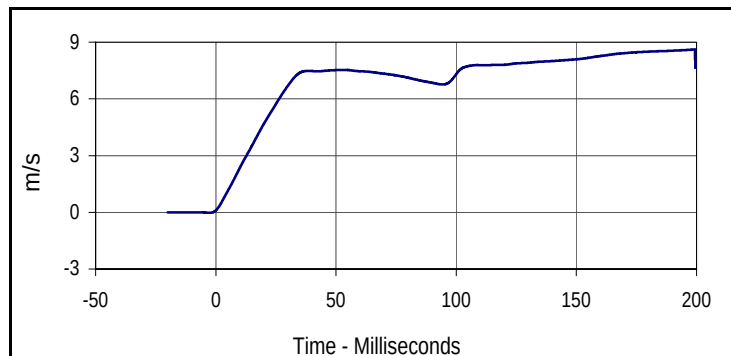
Plot No.	Type	SAE Class	Units
004	FIL	1000	G's
Max	Time	Min	Time
131.8	2.7	-0.5	0.0

Test Program: Hybrid III 5th Percentile Female Neck Flexion Test
 ATD Serial No.: 635

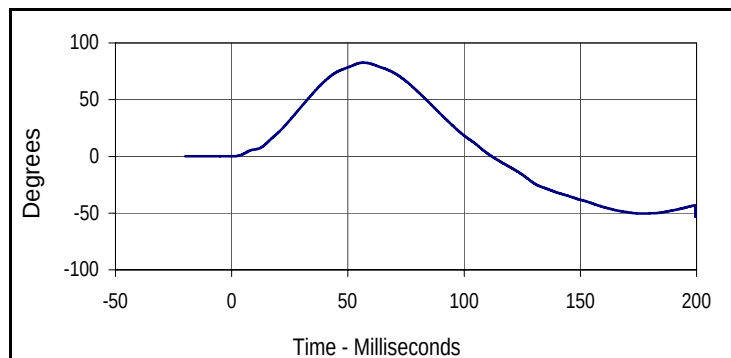
Test Date: 1/19/12
 Test I.D.: F635NF028



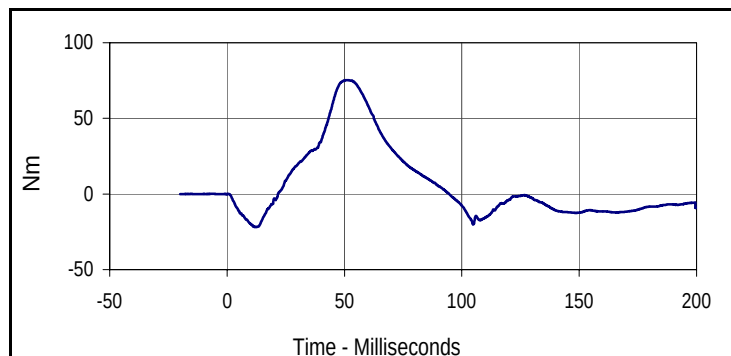
Tested Parameter		Units	Specification	Result	Pass/Fail
Neck Assembly Soak Time		Minutes	≥240	460	Pass
Temperature During Soak	Max	°C	20.6 to 22.2	21.7	Pass
	Min	°C		20.7	Pass
Humidity During Soak	Max	%	10.0 to 70.0	38.0	Pass
	Min	%		28.0	Pass
Laboratory Temperature During Test		°C	20.6 to 22.2	21.2	Pass
Laboratory Humidity During Test		%	10.0 to 70.0	29.9	Pass
Pendulum Velocity		m/s	6.89 to 7.13	7.06	Pass
Pendulum Deceleration	10 Msec.	m/s	2.1 to 2.5	2.4	Pass
	20 Msec.	m/s	4.0 to 5.0	4.7	Pass
	30 Msec.	m/s	5.8 to 7.0	6.7	Pass
"D" Plane Rotation	Max	Degrees	77.0 to 91.0	82.7	Pass
Peak Moment in Rotation	Max	Nm	69.0 to 83.0	75.3	Pass
Positive Moment Decay, Time To 10 Nm		Msec.	80.0 to 100.0	84.7	Pass
Overall Test Results				Pass	



Curve Description			
Pendulum Velocity			
Plot No.	Type	SAE Class	Units
001	FIL	180	m/s
Max	Time	Min	Time
8.6	199.4	0.0	-2.7



Curve Description			
"D" Plane Rotation			
Plot No.	Type	SAE Class	Units
002	FIL	60	Degrees
Max	Time	Min	Time
82.7	56.7	-53.1	199.5



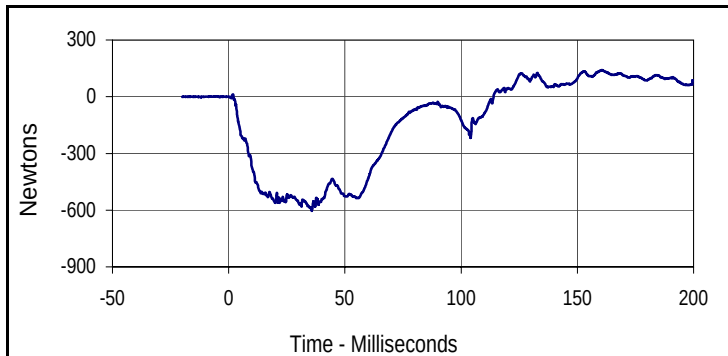
Curve Description			
Moment About Occipital Condyle			
Plot No.	Type	SAE Class	Units
003	FIL	600	Nm
Max	Time	Min	Time
75.3	51.7	-21.9	12.4

Test Program: Hybrid III 5th Percentile Female Neck Flexion Test

ATD Serial No.: 635

Test Date: 1/19/12

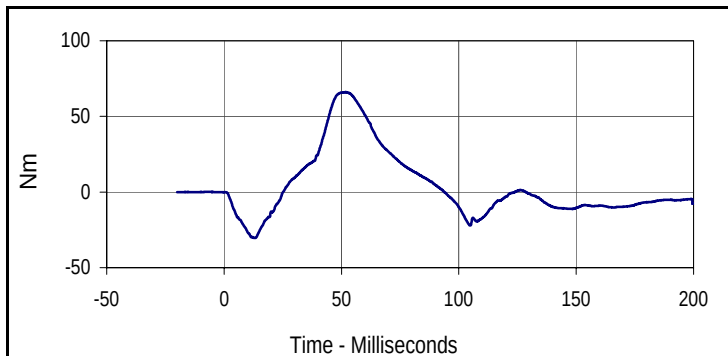
Test I.D.: F635NF028



Curve Description

Upper Neck Force X

Plot No.	Type	SAE Class	Units
004	FIL	1000	Newtons
Max	Time	Min	Time
141.6	160.4	-603.7	35.7



Curve Description

Neck Moment Y

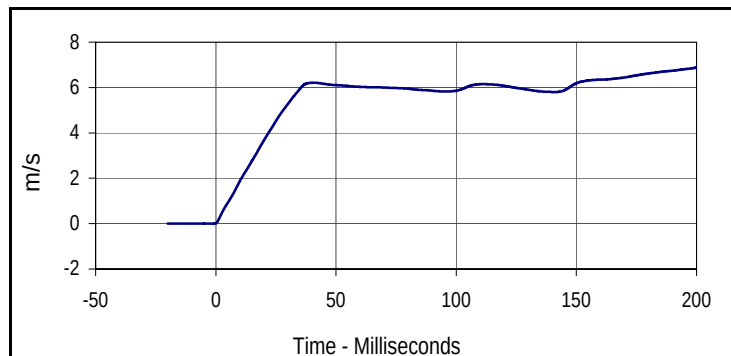
Plot No.	Type	SAE Class	Units
005	FIL	600	Nm
Max	Time	Min	Time
66.2	51.7	-30.4	13.1

Test Program: Hybrid III 5th Percentile Female Neck Extension Test
 ATD Serial No.: 635

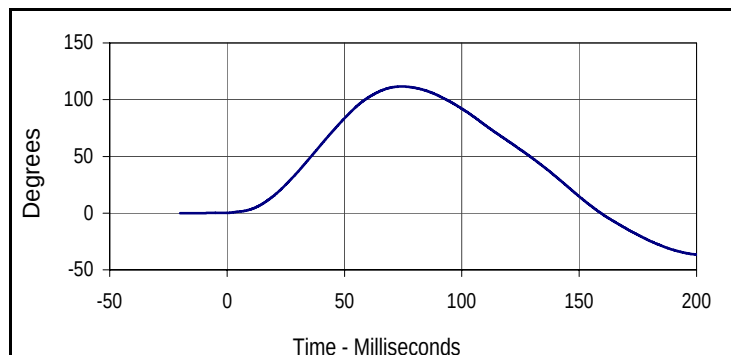
Test Date: 1/19/12
 Test I.D.: F635NE028



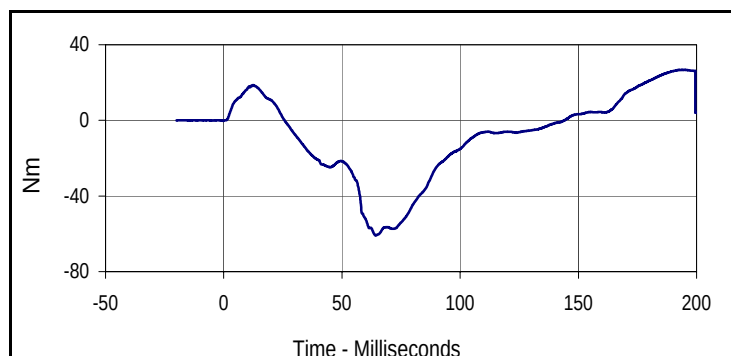
Tested Parameter		Units	Specification	Result	Pass/Fail
Neck Assembly Soak Time		Minutes	≥240	425	Pass
Temperature During Soak	Max	°C	20.6 to 22.2	21.7	Pass
	Min	°C		20.7	Pass
Humidity During Soak	Max	%	10.0 to 70.0	38.0	Pass
	Min	%		28.0	Pass
Laboratory Temperature During Test		°C	20.6 to 22.2	21.2	Pass
Laboratory Humidity During Test		%	10.0 to 70.0	29.9	Pass
Pendulum Velocity		m/s	5.95 to 6.19	6.14	Pass
Pendulum Deceleration	10 Msec.	m/s	1.5 to 1.9	1.9	Pass
	20 Msec.	m/s	3.1 to 3.9	3.7	Pass
	30 Msec.	m/s	4.6 to 5.6	5.3	Pass
"D" Plane Rotation	Max	Degrees	99.0 to 114.0	111.6	Pass
Peak Moment in Rotation	Max	Nm	-53.0 to -65.0	-60.8	Pass
Positive Moment Decay, Time To -10 Nm		Msec.	94.0 to 114.0	104.2	Pass
Overall Test Results				Pass	



Curve Description			
Pendulum Velocity			
Plot No.	Type	SAE Class	Units
001	FIL	180	m/s
Max	Time	Min	Time
6.9	200.0	0.0	-0.9



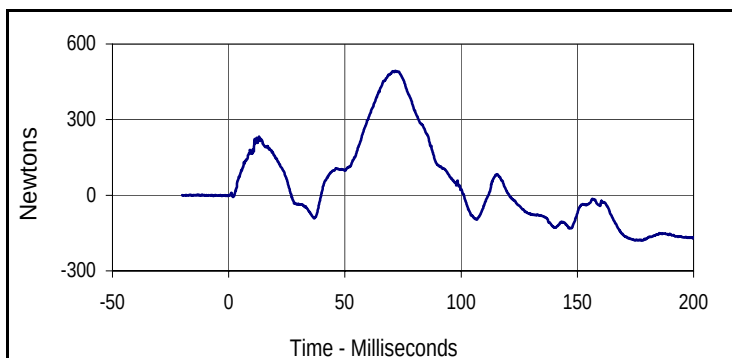
Curve Description			
"D" Plane Rotation			
Plot No.	Type	SAE Class	Units
002	FIL	60	Degrees
Max	Time	Min	Time
111.6	74.4	-36.6	200.0



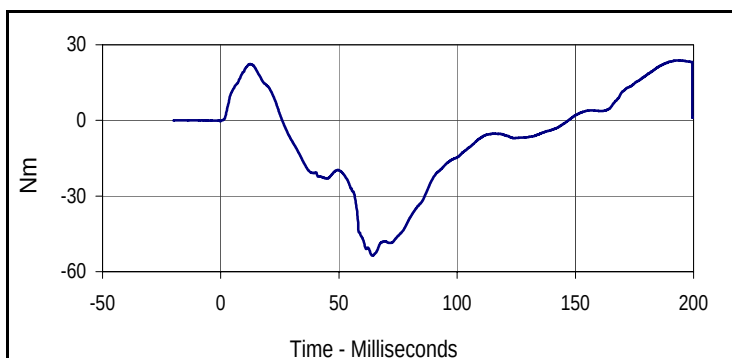
Curve Description			
Moment About Occipital Condyle			
Plot No.	Type	SAE Class	Units
003	FIL	600	Nm
Max	Time	Min	Time
26.7	194.9	-60.8	64.4

Test Program: Hybrid III 5th Percentile Female Neck Extension Test
 ATD Serial No.: 635

Test Date: 1/19/12
 Test I.D.: F635NE028



Curve Description			
Upper Neck Force X			
Plot No.	Type	SAE Class	Units
004	FIL	1000	Newtons
Max	Time	Min	Time
492.9	71.7	-180.0	177.9



Curve Description			
Neck Moment Y			
Plot No.	Type	SAE Class	Units
005	FIL	600	Nm
Max	Time	Min	Time
23.8	192.5	-53.6	64.2

Test Program: Hybrid III 5th Percentile Female Thorax Impact Test

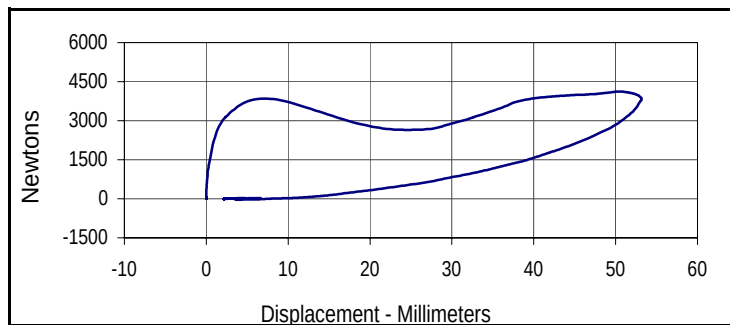
Test Date: 1/19/12

ATD Serial No.: 635

Test I.D.: F635CH028



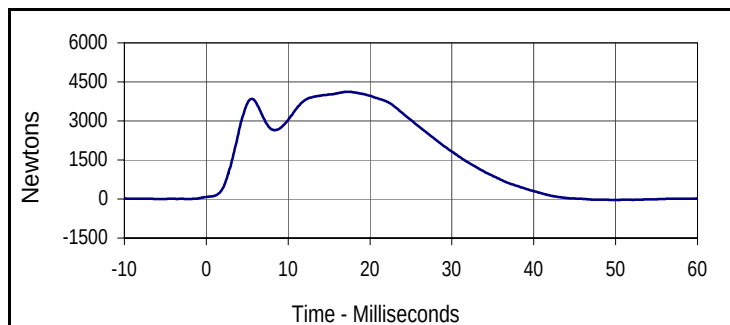
Tested Parameter		Units	Specification	Result	Pass/Fail
Dummy Soak Time		Minutes	≥240	500	Pass
Temperature During Soak	Max	°C	20.6 to 22.2	21.7	Pass
	Min	°C		20.7	Pass
Humidity During Soak	Max	%	10.0 to 70.0	38.0	Pass
	Min	%		28.0	Pass
Laboratory Temperature During Test		°C	20.6 to 22.2	21.2	Pass
Laboratory Humidity During Test		%	10.0 to 70.0	29.9	Pass
Probe Velocity		m/s	6.59 to 6.83	6.66	Pass
Peak Chest Deflection		mm	50.0 to 58.0	53.2	Pass
Peak Force Between 50 and 58 MM		Newtons	3900 to 4400	4113	Pass
Peak Force Between 18 and 50 MM		Newtons	≤4600	4118	Pass
Internal Hysteresis		%	69 to 85	71.8	Pass
Overall Test Results					Pass



Curve Description

Probe Force vs. Chest Deflection

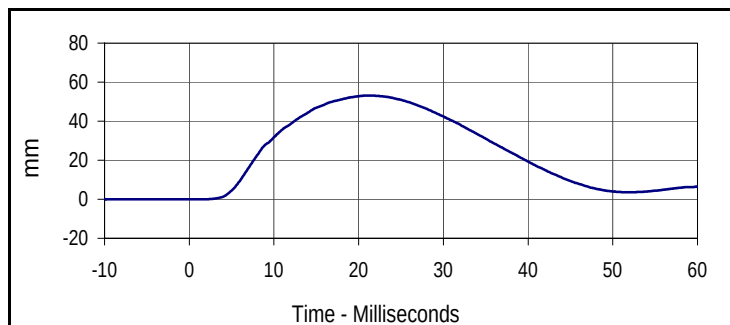
Plot No.	Type	SAE Class	Hysteresis
001	FIL	180	71.8
Peak Probe Force		Peak Chest Deflection	
4118.0		53.2	



Curve Description

Probe Force

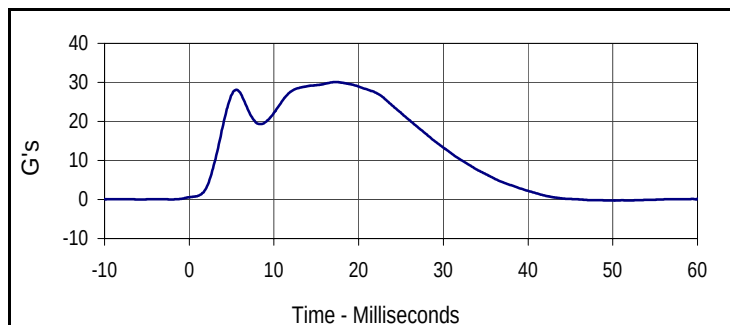
Plot No.	Type	SAE Class	Units
002	FIL	180	Newtons
Max	Time	Min	Time
4118.0	17.4	-35.0	49.9



Curve Description

Chest Deflection

Plot No.	Type	SAE Class	Units
003	FIL	600	mm
Max	Time	Min	Time
53.2	21.1	0.0	-10.0



Curve Description

Impactor Acceleration

Plot No.	Type	SAE Class	Units
004	FIL	180	G's
Max	Time	Min	Time
30.1	17.4	-0.3	49.9

Test Program: Hybrid III 5th Percentile Female Knee Impact Test
 ATD Serial No.: 635

Test Date: 1/19/12
 Test I.D.: F635LK028 , F635RK028

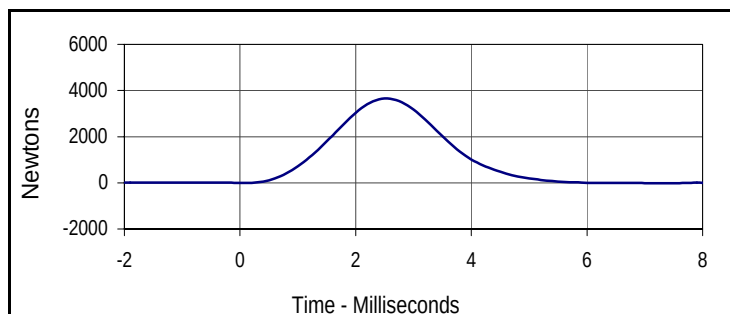


Left Knee

Tested Parameter		Units	Specification	Result	Pass/Fail
Knee Assembly Soak Time		Minutes	≥240	290	Pass
Temperature During Soak	Max	°C	18.9 to 25.6	21.7	Pass
	Min	°C		20.7	Pass
Humidity During Soak	Max	%	10.0 to 70.0	38.0	Pass
	Min	%		28.0	Pass
Laboratory Temperature During Test		°C	18.9 to 25.6	21.2	Pass
Laboratory Humidity During Test		%	10.0 to 70.0	29.9	Pass
Pendulum Velocity at T=0		m/sec	2.07 to 2.13	2.10	Pass
Peak Probe Force		Newtons	3450 to 4060	3655	Pass
Overall Test Results					Pass

Right Knee

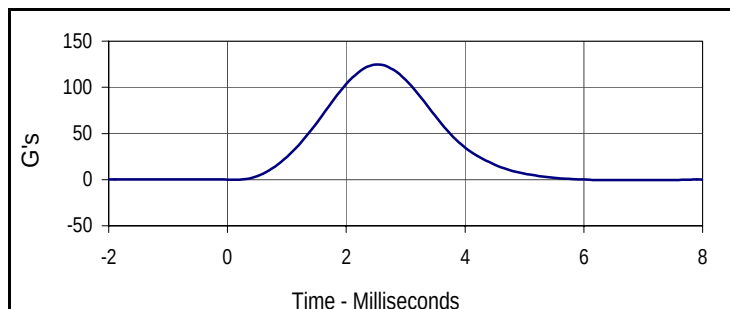
Pendulum Velocity at T=0		m/sec	2.07 to 2.13	2.11	Pass
Peak Probe Force		Newtons	3450 to 4060	3592	Pass
Overall Test Results					Pass



Curve Description

Left Knee Probe Force

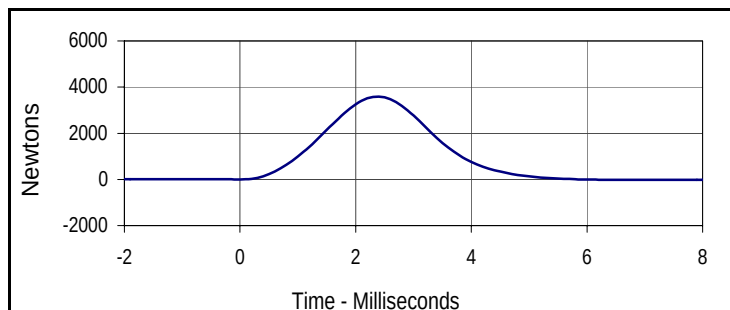
Plot No.	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Time	Min	Time
3654.7	2.5	-16.2	7.4



Curve Description

Left Knee Acceleration

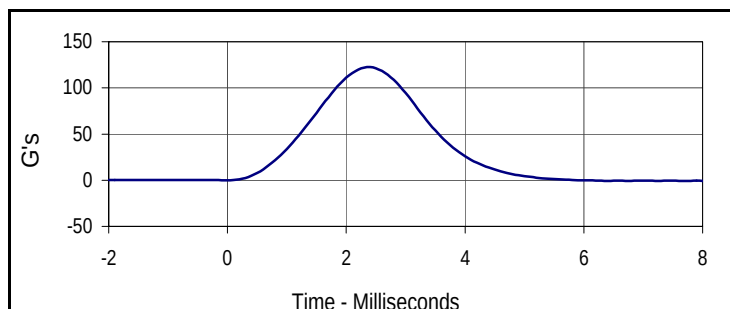
Plot No.	Type	SAE Class	Units
002	FIL	600	G's
Max	Time	Min	Time
124.7	2.5	-0.6	7.4



Curve Description

Right Knee Probe Force

Plot No.	Type	SAE Class	Units
003	FIL	600	Newtons
Max	Time	Min	Time
3591.7	2.4	-28.6	9.3



Curve Description

Right Knee Acceleration

Plot No.	Type	SAE Class	Units
004	FIL	600	G's
Max	Time	Min	Time
122.5	2.4	-1.0	9.3

Test Program: Hybrid III 5th Percentile Female Torso Flexion Test

Test Date: 1/19/12

ATD Serial No.: 635

Test I.D.: F635TF028



Tested Parameter		Units	Specification	Result	Pass/Fail
Dummy Soak Time		Minutes	≥240	535	Pass
Temperature During Soak	Max	°C	18.9 to 25.6	21.7	Pass
	Min	°C		20.6	Pass
Humidity During Soak	Max	%	10.0 to 70.0	38.0	Pass
	Min	%		28.5	Pass
Laboratory Temperature During Test		°C	18.9 to 25.6	21.2	Pass
Laboratory Humidity During Test		%	10.0 to 70.0	30.0	Pass
Initial Reference Plane Angle		Degrees	≤ 20	7.5	Pass
Peak Force at 45° +/-0.5°		Newtons	320.0 to 390.0	368.5	Pass
Torso Rotation Rate		deg/sec	0.5 to 1.5	1.2	Pass
Final Reference Plane Angle		Degrees	+/-8	3.7	Pass
Overall Test Results					Pass