

REPORT NUMBER: CAL-07-11

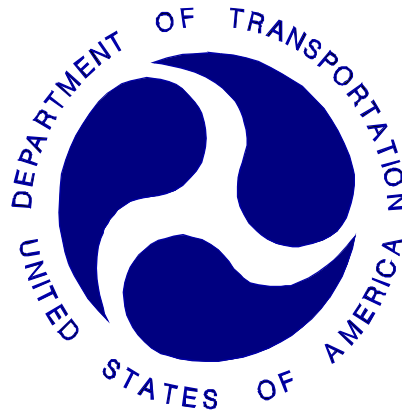
**NEW CAR ASSESSMENT PROGRAM (NCAP)
FRONTAL BARRIER IMPACT TEST**

GRACO SNUGRIDE AND CHICCO KEYFIT REAR-FACING

NHTSA NUMBER: M70306

CALSPAN TEST NUMBER: 8806-NCAP-11

CALSPAN
TRANSPORTATION SCIENCES CENTER
P.O. BOX 400
BUFFALO, NEW YORK 14225



February 27, 2007

FINAL REPORT

U. S. DEPARTMENT OF TRANSPORTATION
National Highway Traffic Safety Administration
Rulemaking
Office of Crashworthiness Standards
Mail Code: NVS-111
400 Seventh Street, SW, Room No. 5311
Washington, DC 20590

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TECHNICAL REPORT STANDARD TITLE PAGE

1. Report No. NCAP-CAL-07-11	2. Government Accession No.	3. Recipient's Catalog No.	
4. Title and Subtitle Final Report of Graco and Chicco Snugride and Keyfit Rear-facing NHTSA No.: M70306		5. Report Date February 27, 2007	
		6. Performing Organization Code CAL	
7. Author(s) James Czarnecki, Project Engineer Michael J. Kilgallon, Program Manager		8. Performing Organization Report No. 8806-NCAP-11	
9. Performing Organization Name and Address Calspan Corporation Transportation Sciences Center P.O. Box 400 Buffalo, New York 14225		10. Work Unit No.	
		11. Contract or Grant No. DTNH22-06-D-00024	
12. <i>Sponsoring Agency Name and Address</i> U.S. Department of Transportation National Highway Traffic Safety Administration Office of Crashworthiness Standards Mail Code: NVS-111 400 Seventh, SW, Room 5311 Washington, D.C. 20590		13. Type of Report and Period Covered Final Report, March 2007	
		14. Sponsoring Agency Code NVS-111	
15. Supplementary Notes			
16. Abstract This CRS test was performed in conjunction with a New Car Assessment Program (NCAP) load cell barrier test. A Graco Snugride Rear-facing rearward facing infant restraint was secured in Position 3 (P3). A Chicco Keyfit Rear-facing rearward facing infant restraint was secured in Position 4 (P4). This test was conducted at the Calspan Corporation Crash Test Facility in Buffalo, New York, on February 27, 2007.			
17. Key Words New Car Assessment Program (NCAP)		18. Distribution Statement <u>Copies of this report are available from:</u> NHTSA Technical Reference Division National Highway Traffic Safety Admin. 400 Seventh St., SW, Room 5111 Washington, DC 20590	
19. Security Classification of Report UNCLASSIFIED	20. Security Classification of Page UNCLASSIFIED	21. No. of Pages 56	22. Price

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SECTION 1

PURPOSE AND SUMMARY OF TEST M70306

The purpose of this test was to obtain CRS performance data in a frontal impact NCAP condition. These data constitute part of the general consumer information collected by the New Car Assessment Program (NCAP).

The 55.7 kph NCAP frontal impact test was conducted in accordance with the Office of Crashworthiness Standards (OCS) NCAP Laboratory Test Procedure.

SUMMARY

Both child dummies were instrumented with head and chest triaxial accelerometers. In addition, redundant head z acceleration, upper six axial neck force and moment transducers were utilized.

The right rear (Position 3) child dummy (serial no. 103) and left rear (Position 4) child dummy (serial no. 102) were calibrated previous to this test. Child dummy certification information is found in section 5.

The right rear child dummy's HIC (15 ms) was 341.2, maximum chest deceleration over 3 ms was 48.5 g's. The left rear child dummy's HIC (15 ms) was 522.6, maximum chest deceleration over 3 ms was 61.8 g's.

SECTION 2
DATA SHEET NO. 1
CRASH TEST SUMMARY

TEST DUMMY INFORMATION:

DESCRIPTION	Position #3 CRS	Position #4 CRS
ATD Type/Serial No.	CRABI/103	CRABI /102
Restraint System:	Graco Snugride Rear-facing	Chicco Keyfit Rear-facing

Number of Data Channels _____ 76 _____
 Number of Cameras: _____ 1 _____ Real Time
 _____ 2 _____ High Speed

POST TEST DOOR OPENING

DESCRIPTION	FRONT	REAR
Left Side Doors	Closed and operable without tools	Closed and operable without tools
Right Side Doors	Closed and operable without tools	Closed and operable without tools
Hatch/Other Door	Removed from vehicle to reduce weight	

POST TEST SEAT DATA

LOCATION	SEAT MOVEMENT (mm)	SEAT BACK FAILURE
P1 (Left Front)	8 mm	None
P2 (Right Front)	0	None
P3 (Right Rear)	0	None
P4 (Left Rear)	0	None

VISIBLE DUMMY CONTACT POINTS

	Position #3 CRS	Position #4 CRS
Head Contact:	Back of head to child seat on rebound	Back of head to child seat on rebound
Upper Torso Contact:	Child back to CRS seat	Child back to CRS seat
Lower Torso Contact:	Child back to CRS seat	Child back to CRS seat
Left Knee Contact:	Passenger seat back	Driver seat back
Right Knee Contact:	Passenger seat back	Driver seat back

DATA SHEET NO. 2

CRS PARAMETER DATA

CRS: _Graco Snugride and Chicco Keyfit Rear-facing

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CALCULATION OF VEHICLE'S TARGET TEST WEIGHT:

Delivered Weight of Vehicle with Maximum Fluids = 1536 kg (A)

AS TESTED WEIGHT OF VEHICLE (2 ATDs + 2 CRABI w/ CRS +CARGO + EQUIPMENT & INSTRUMENTATION):

Left Front	=	<u>498.5</u>	kg	Left Rear	=	<u>393.0</u>	kg
Right Front	=	<u>482.5</u>	kg	Right Rear	=	<u>387.0</u>	kg
TOTAL FRONT	=	<u>981.0</u>	kg	TOTAL REAR	=	<u>780.0</u>	kg
TOTAL TEST WEIGHT =		<u>1761.0</u>	kg				

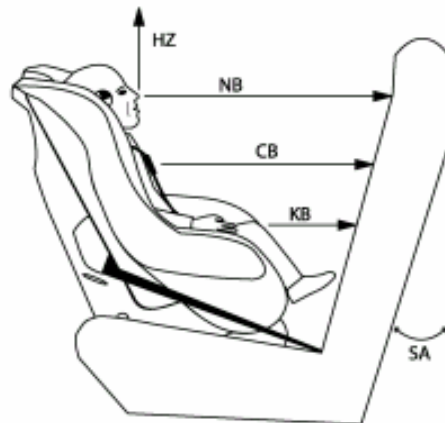
DATA SHEET NO. 3

CHILD DUMMY POSITIONING IN VEHICLE

CRS: Graco Snugride and Chicco Keyfit Rear-facing

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Dummy Measurements for Rear-facing CRS Passengers



X—Z View

HZ	-	Head to Roof
NB	-	Nose to Front of Back Seat
CB	-	Chest to Front of Back Seat
KB	-	Knee to Front of Back Seat
SA	-	Seat Back Angle

Measurement	Millimeters unless noted	
	P3 CRS (103)	P4 CRS (102)
SA	35°	35°
HZ	510	530
NB	531	564
CB	415	414
KB – LEFT	190	240
KB – RIGHT	185	245

All dimensions in mm (unless noted)

P3 – Right Rear Passenger (CRS #1)

P4 – Left Rear Passenger (CRS #2)

DATA SHEET 4

CHILD DUMMY INJURY CRITERIA VALUES (CONTINUED)

CRS: Graco Snugride and Chicco Keyfit Rear-facing

NHTSA No. M70306

HEAD INJURY CRITERIA (HIC)

	HIC15				HIC36			
	HIC	t ₁ (msec)	t ₂ (msec)	Average Acceleration t ₁ to t ₂	HIC	t ₁ (msec)	t ₂ (msec)	Average Acceleration t ₁ to t ₂
Position #3 - Right	341.2	71.7	86.7	62.3	899.0	51.6	87.7	57.4
Position #4 - Left	522.6	44.3	80.3	46.2	522.6	44.4	80.3	46.2

	CLIP SUMMARY*			
	CLIP (g's)	t ₁ (msec)	t ₂ (msec)	CSI
Position #3 - Right	48.5	51.3	54.3	658.8
Position #4 - Left	61.8	59.9	62.9	663.3

* The maximum chest resultant acceleration is defined as the maximum acceleration which exceeds 0.003 seconds in duration.

DATA SHEET NO. 5

CRS PERFORMANCE DATA

CRS: Graco Snugride and Chicco Keyfit Rear-facing

NHTSA No. M70306

		MAXIMUM VALUE			
DESCRIPTION	Unit	Positive	Time (ms)	Negative	Time (ms)
P3 CRS X	g	10.4	95.0	-49.7	56.6
P3 CRS Y	g	24.8	67.8	-26.2	71.5
P3 CRS Z	g	17.1	70.5	-8.5	30.4
P3 CRS Resultant	g	51.4	56.9	0.0	-22.4
P4 CRS X	g	18.2	162.2	-67.6	58.8
P4 CRS Y	g	4.7	87.9	-6.6	52.8
P4 CRS Z	g	11.3	30.4	-19.0	50.4
P4 CRS Resultant	g	67.6	58.8	0.0	-33.8

DATA SHEET NO. 5

CRS PERFORMANCE DATA (CONTINUED)

CRS: Graco Snugride and Chicco Keyfit Rear-facing

NHTSA No. M70306

POSITION #3 CRS POST-TEST INSPECTION (Model No. 8646RRY3)

LOCATION	DAMAGE	REMARKS
Upper Tether Strap	N/A	N/A
Upper Tether Buckle	N/A	N/A
Upper Tether Hook	N/A	N/A
Vehicle Upper Tether Anchor	N/A	N/A
Lower Anchor Strap	NO	NONE
Lower Anchor Buckle	NO	NONE
Lower Anchor Hooks	NO	NONE
Vehicle Lower CRS Anchors	NO	NONE
Five Point Harness Connections	NO	NONE
Cracks on CRS	NO	NONE
Fabric Tears on CRS	NO	NONE
Vehicle Seat Structure	NO	NONE
Vehicle Seat Fabric Tears	NO	NONE
Child Dummy	NO	NONE

POSITION #4 CRS POST-TEST INSPECTION (Model No. 0115)

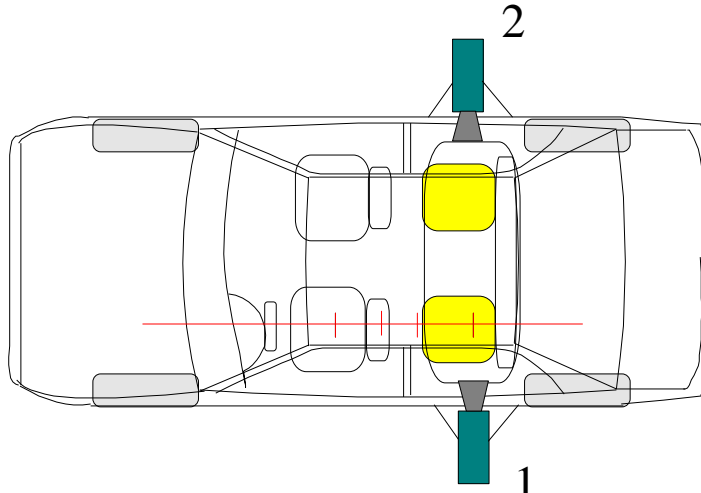
LOCATION	DAMAGE	REMARKS
Upper Tether Strap	N/A	N/A
Upper Tether Buckle	N/A	N/A
Upper Tether Hook	N/A	N/A
Vehicle Upper Tether Anchor	N/A	N/A
Lower Anchor Strap	NO	NONE
Lower Anchor Buckle	NO	NONE
Lower Anchor Hooks	NO	NONE
Vehicle Lower CRS Anchors	NO	NONE
Five Point Harness Connections	NO	NONE
Cracks on CRS	NO	NONE
Fabric Tears on CRS	NO	NONE
Vehicle Seat Structure	NO	NONE
Vehicle Seat Fabric Tears	NO	NONE
Child Dummy	NO	NONE

DATA SHEET NO. 6

CRS CAMERA DATA

CRS: Graco Snugride and Chicco Keyfit Rear-facing

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Camera No.	View	Coordinates (millimeters)			Angle (deg.)	Lens (mm)	Film Speed (fps)
		X*	Y*	Z*			
1	Left side CRS lateral view	825	2815	1250	-20.5	12.5	1000
2	Right side CRS lateral view	825	2771	1249	-5.6	12.5	1000

* Reference (from point of impact); all measurements accurate to within ± 6 mm.

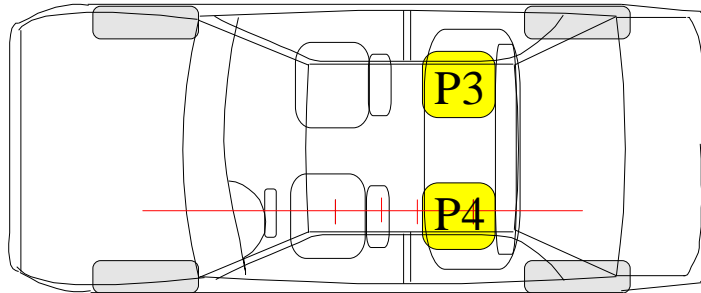
- X = + Forward
- Y = + To Right
- Z = + Up

DATA SHEET NO. 7

CRS ANCHIOR DATA

CRS: Graco Snugride and Chicco Keyfit Rear-facing

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Description	P3			P4		
	X*	Y*	Z*	X	Y	Z
Outboard Seatbelt floor anchor	1290	-583.5	468.7	1289	584	475.4
Inboard Seatbelt buckle anchor	1169	-219.5	616.4	1164	214.7	613
D-Ring Anchor	1096	-645.3	1272	1097	646.9	1271
Inboard LATCH anchor	1177	-188	608.4	1173	187.8	607.3
Outboard LATCH anchor	1171	-465.3	620.7	1171	469.3	618.2
Top Tether anchor	1019	-333.7	903	1023	334.1	898.3

* Reference (from rear bumper centerline); all measurements accurate to within ± 6 mm.

- X = + Forward
- Y = + To Right
- Z = + Up

SECTION 3

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Figure 3-1: CLOSE-UP VIEW OF POSITION 3CRS BASE LABEL



Figure 3-2: CLOSE-UP VIEW OF POSITION 3CRS CARRIER LABEL



Figure 3-3: PRE-TEST FRONTAL VIEW OF POSITION 3CRS



Figure 3-4: POST-TEST FRONTAL VIEW OF POSITION 3CRS



Figure 3-5: PRE-TEST REAR VIEW OF POSITION 3CRS



Figure 3-6: POST-TEST REAR VIEW OF POSITION 3CRS



Figure 3-7: PRE-TEST LEFT SIDE VIEW OF POSITION 3CRS



Figure 3-8: PRE-TEST LEFT SIDE VIEW OF POSITION 3CRS



Figure 3-9: PRE-TEST RIGHT SIDE VIEW OF POSITION 3CRS



Figure 3-10: POST-TEST RIGHT SIDE VIEW OF POSITION 3CRS



Figure 3-11: CLOSE-UP VIEW OF POSITION 4CRS BASE LABEL



Figure 3-12: CLOSE-UP VIEW OF POSITION 4CRS CARRIER LABEL



Figure 3-13: PRE-TEST FRONTAL VIEW OF POSITION 4CRS



Figure 3-14: POST-TEST FRONTAL VIEW OF POSITION 4CRS



Figure 3-15: PRE-TEST REAR VIEW OF POSITION 4CRS



Figure 3-16: POST-TEST REAR VIEW OF POSITION 4CRS



Figure 3-17: PRE-TEST LEFT SIDE VIEW OF POSITION 4CRS



Figure 3-18: POST-TEST LEFT SIDE VIEW OF POSITION 4CRS



Figure 3-19: PRE-TEST RIGHT SIDE VIEW OF POSITION 4CRS



Figure 3-20: POST-TEST RIGHT SIDE VIEW OF POSITION 4CRS



Figure 3-21: PRE-TEST POSITION 3 LEFT SIDE VIEW



Figure 3-22: POST-TEST POSITION 3 LEFT SIDE VIEW



Figure 3-23: PRE-TEST POSITION 3 RIGHT SIDE VIEW



Figure 3-24: POST-TEST POSITION 3 RIGHT SIDE VIEW



Figure 3-25: PRE-TEST POSITION 3 REAR VIEW



Figure 3-26: POST-TEST POSITION 3 REAR VIEW



Figure 3-27: PRE-TEST POSITION 4 LEFT SIDE VIEW



Figure 3-28: POST-TEST POSITION 4 LEFT SIDE VIEW



Figure 3-29: PRE-TEST POSITION 4 RIGHT SIDE VIEW



Figure 3-30: POST-TEST POSITION 4 RIGHT SIDE VIEW



Figure 3-31: PRE-TEST POSITION 4 REAR VIEW



Figure 3-32: POST-TEST POSITION 4 REAR VIEW

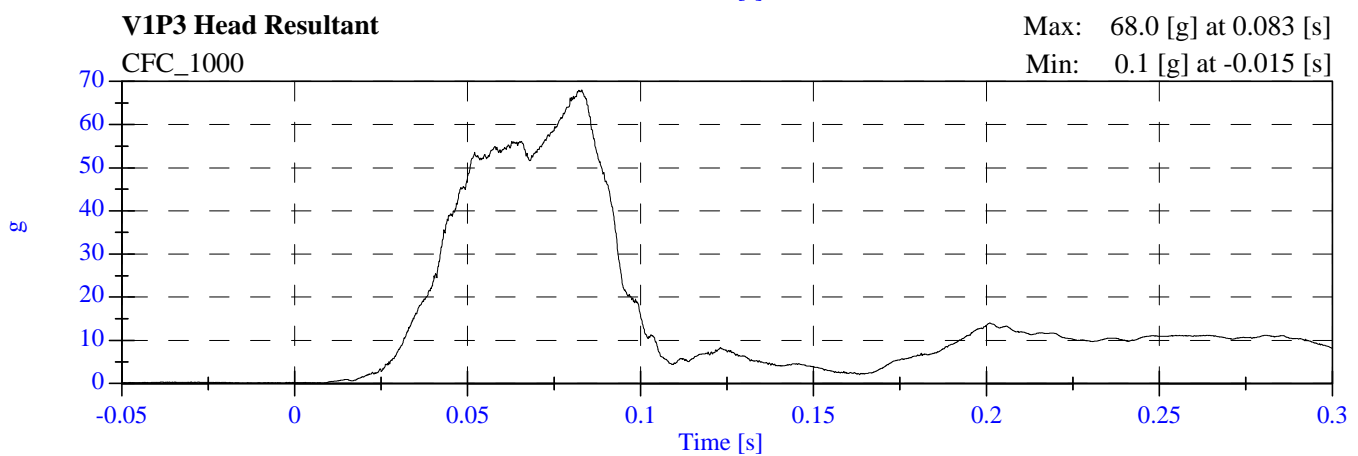
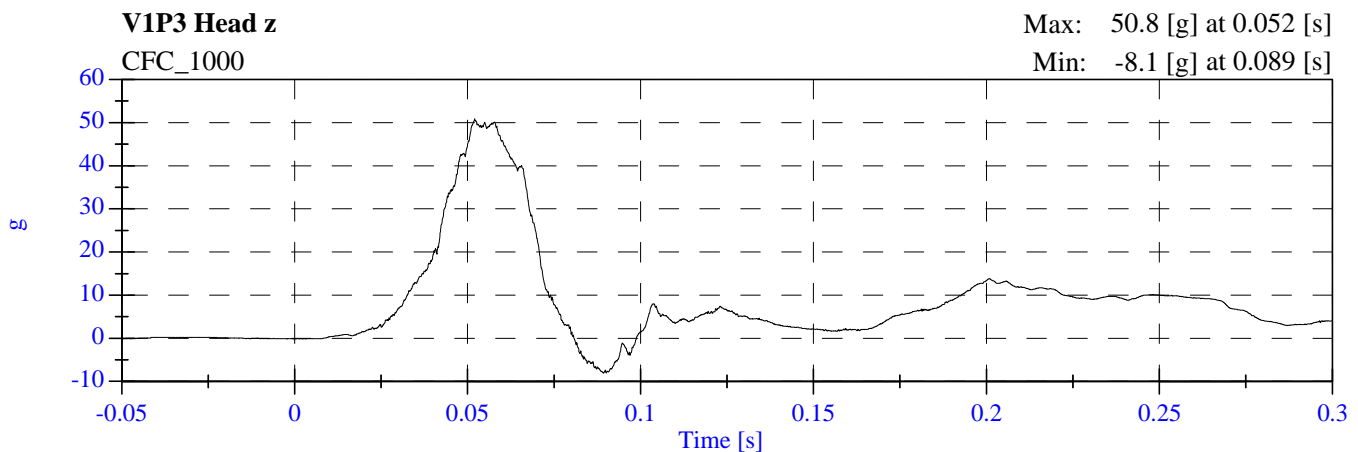
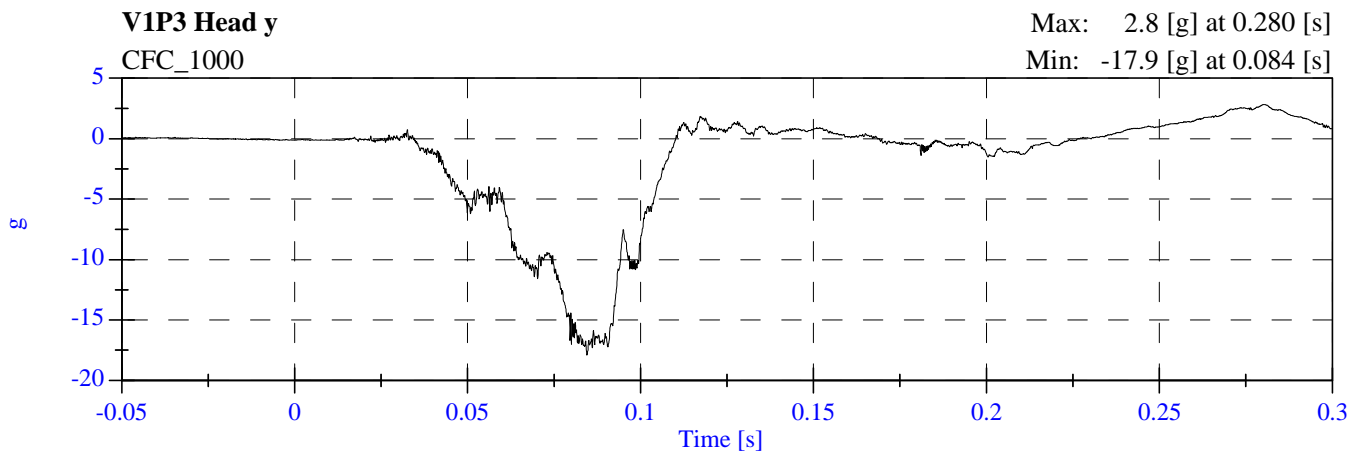
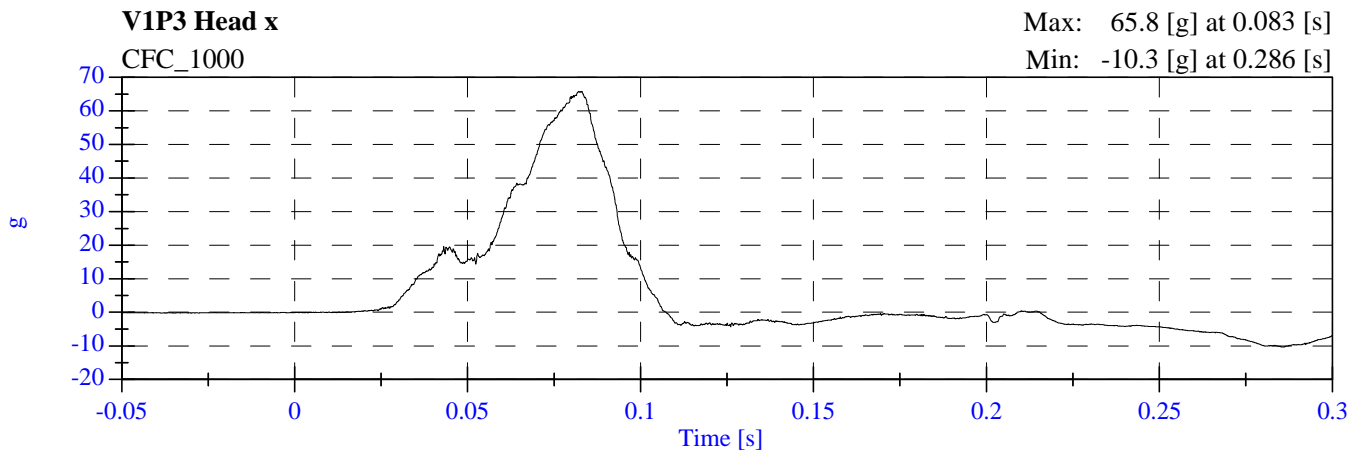
SECTION 4

CHILD DUMMY RESPONSE AND CRS DATA TRACES

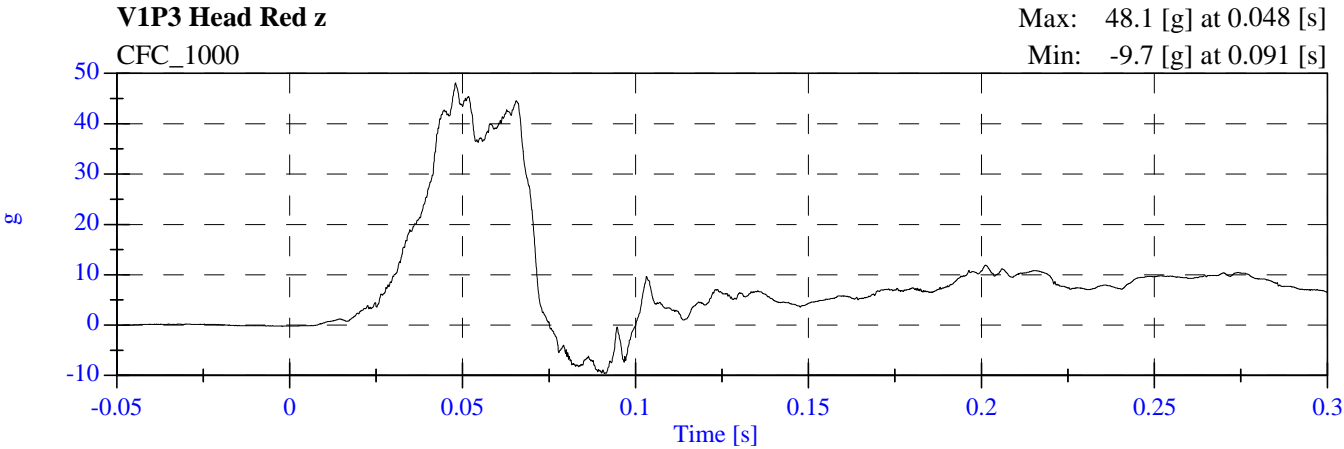
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12	P3 Child Seat z [g, CFC_60]	4-6
13	P3 Child Seat Resultant [g, CFC_60]	4-6
14	P4 Head x [g, CFC_1000]	4-7
15	P4 Head y [g, CFC_1000]	4-7
16	P4 Head z [g, CFC_1000]	4-7
17	P4 Head Resultant [g, CFC_1000]	4-7
18	P4 Head Red z [g, CFC_1000]	4-8
19	P4 Chest x [g, CFC_180]	4-9
20	P4 Chest y [g, CFC_180]	4-9
21	P4 Chest z [g, CFC_180]	4-9
22	P4 Chest Resultant [g, CFC_180]	4-9
23	P4 Child Seat x [g, CFC_60]	4-10
24	P4 Child Seat y [g, CFC_60]	4-10
25	P4 Child Seat z [g, CFC_60]	4-10
26	P4 Child Seat Resultant [g, CFC_60]	4-10

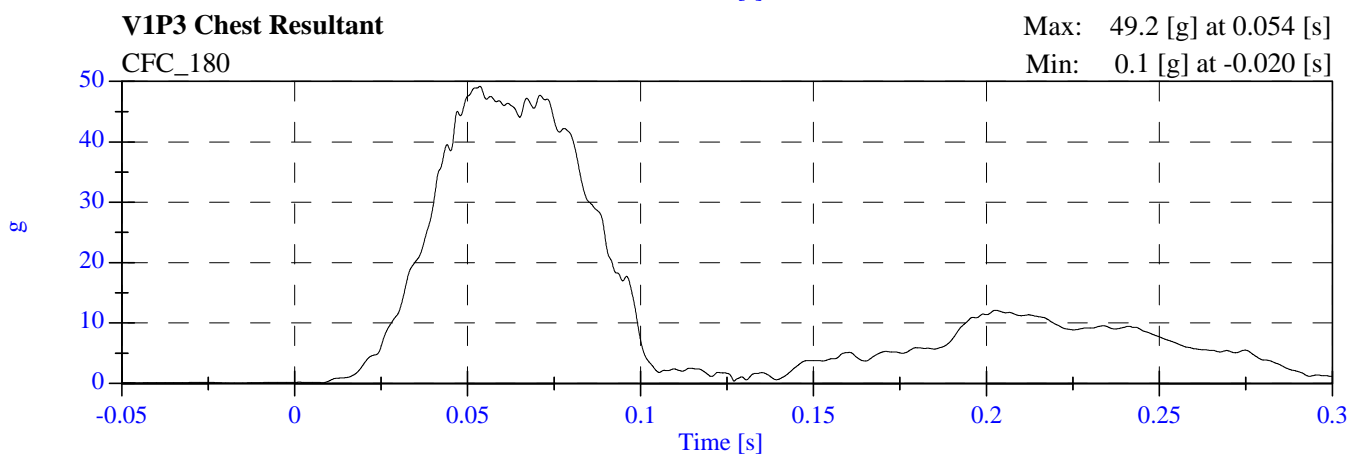
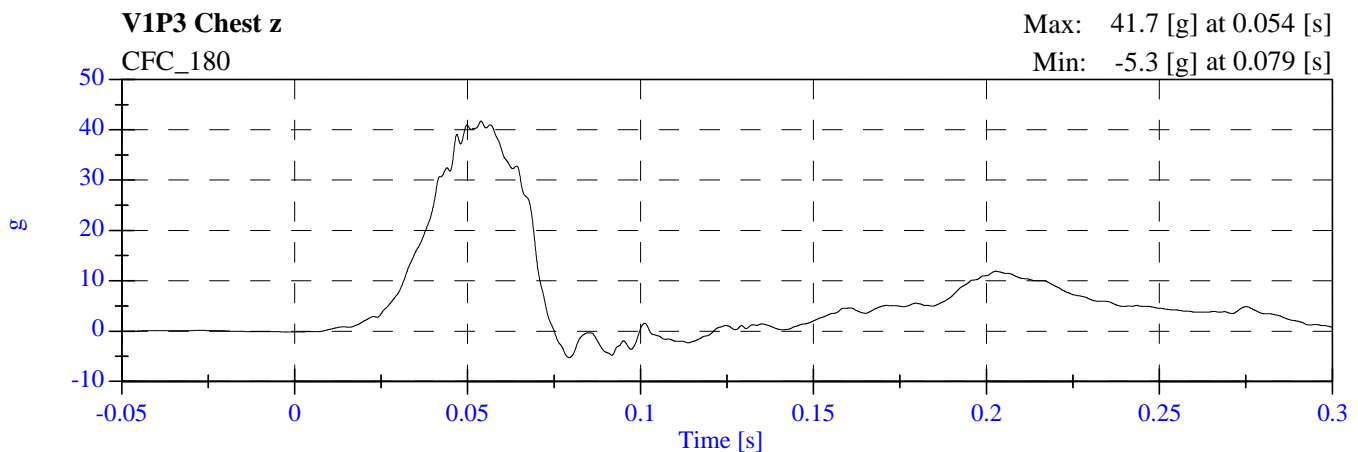
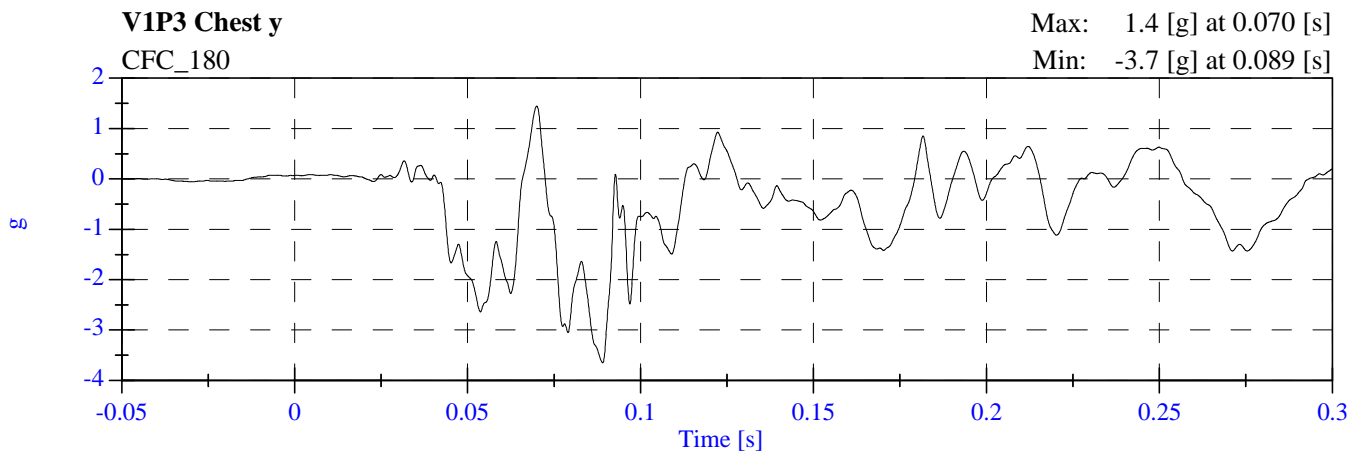
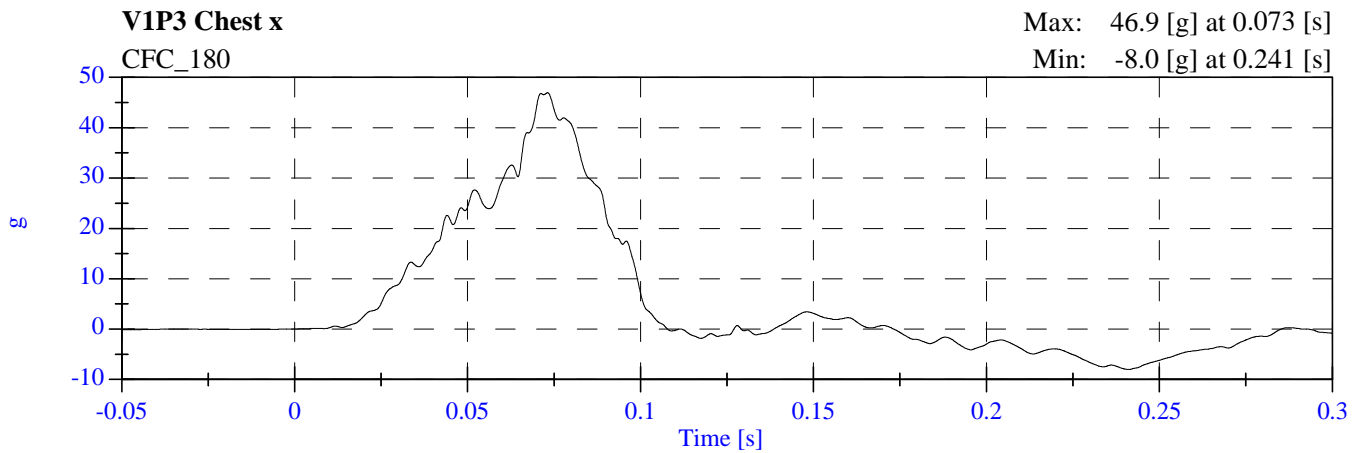
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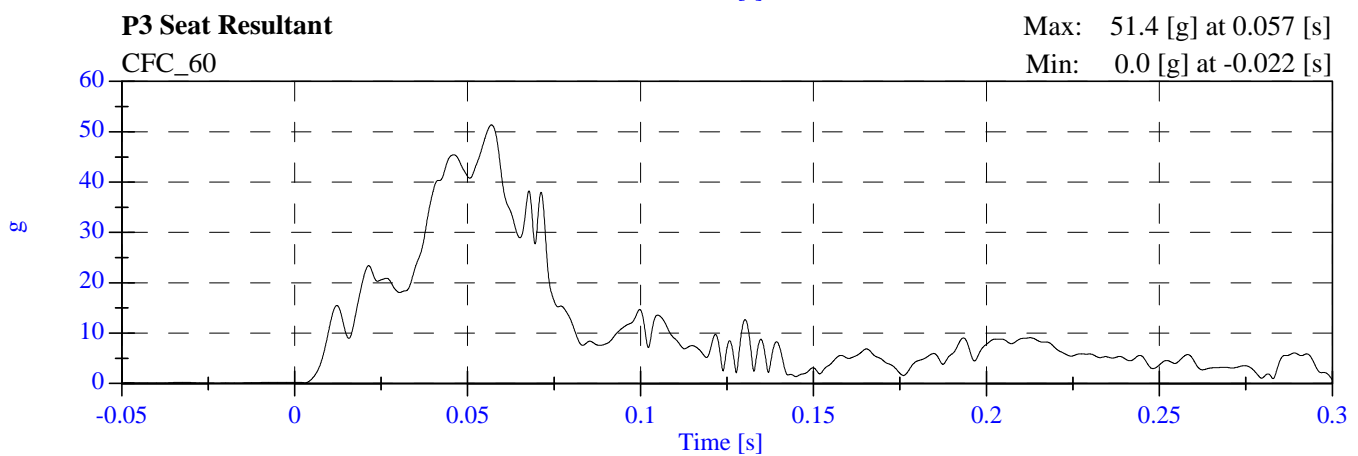
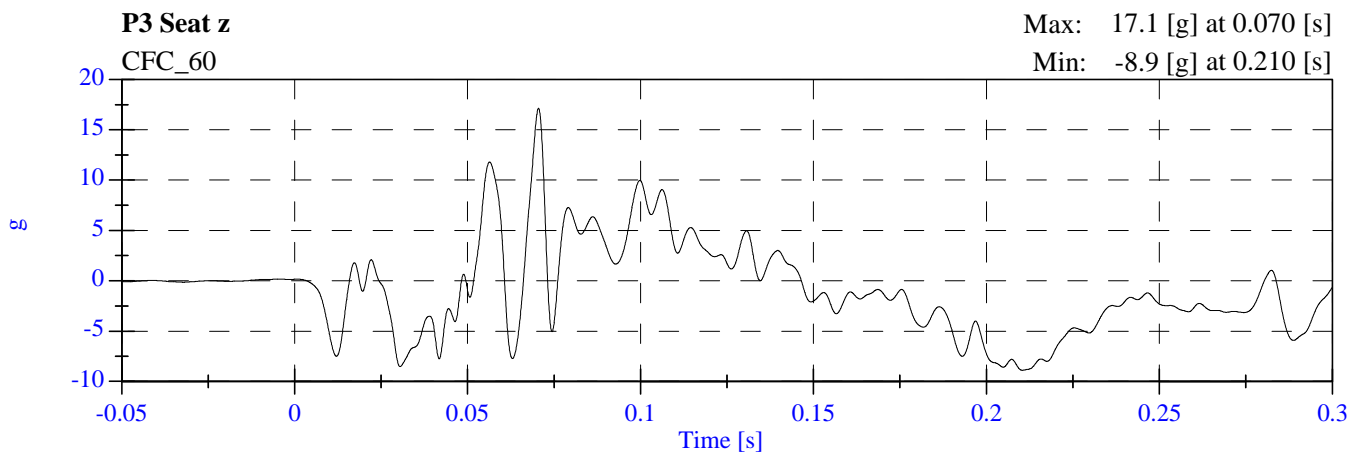
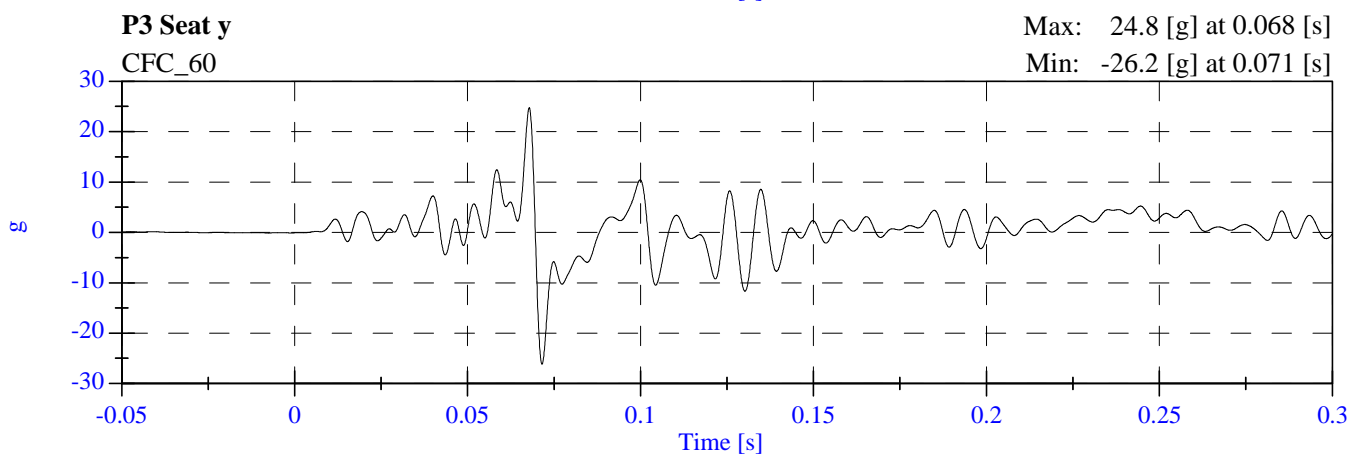
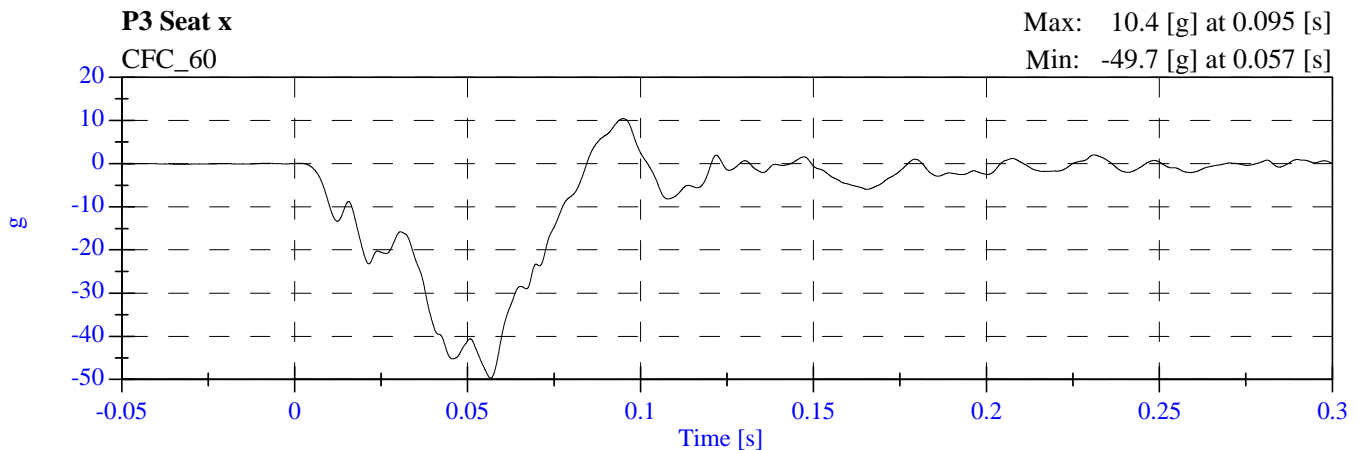
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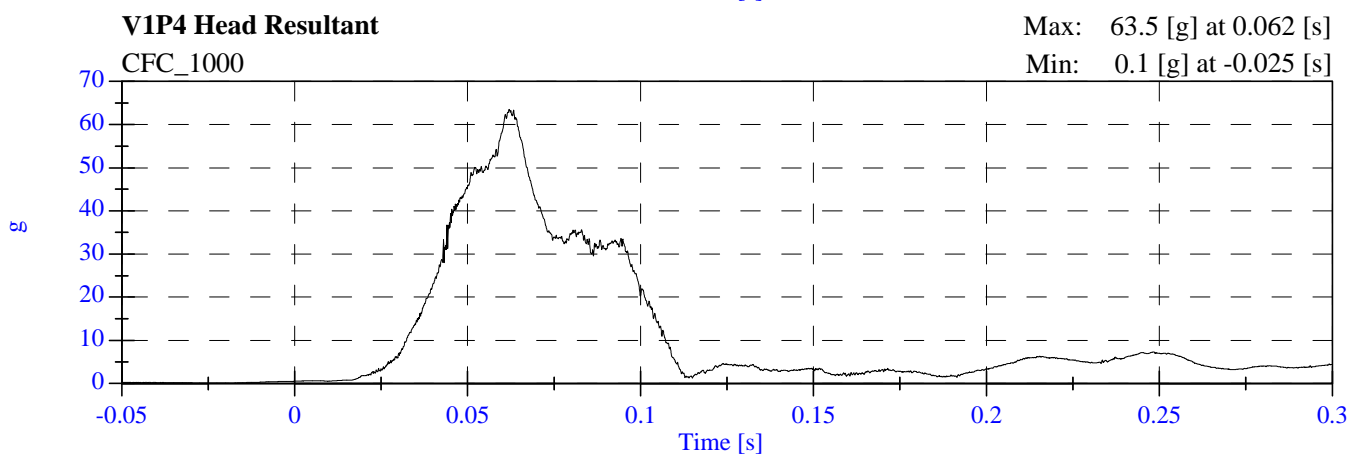
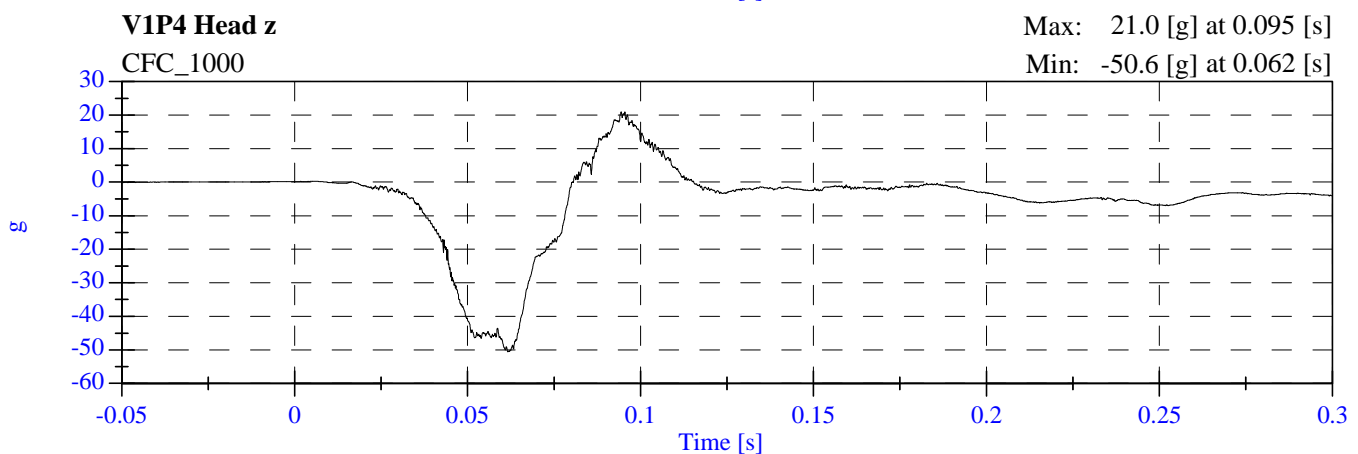
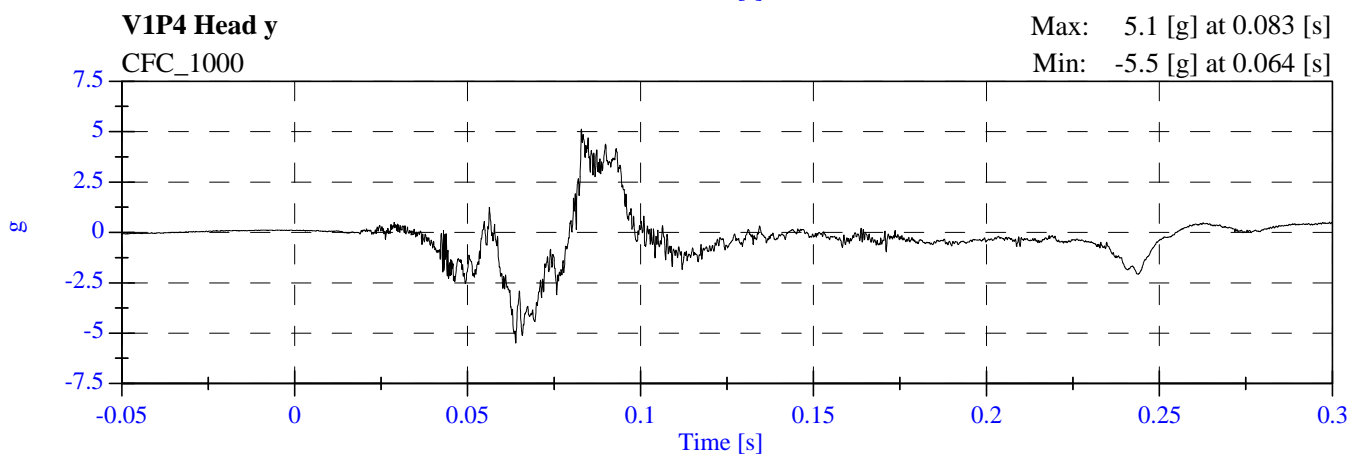
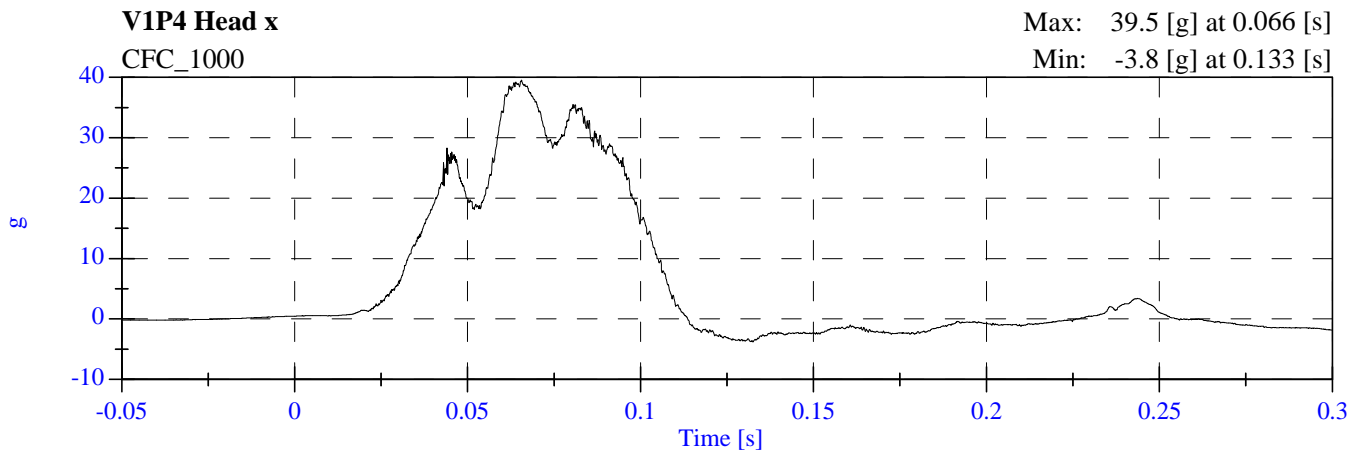
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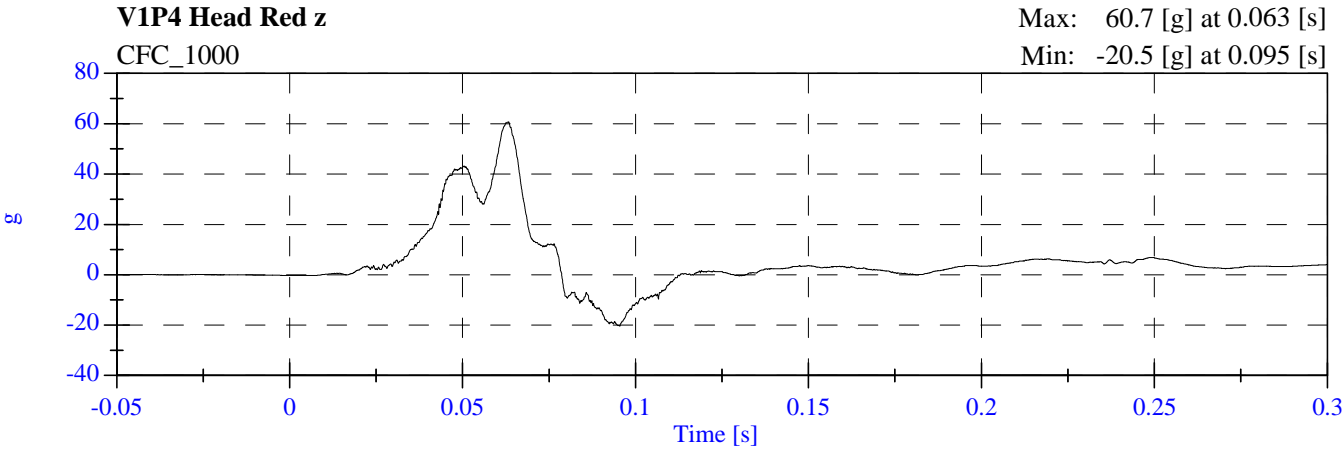
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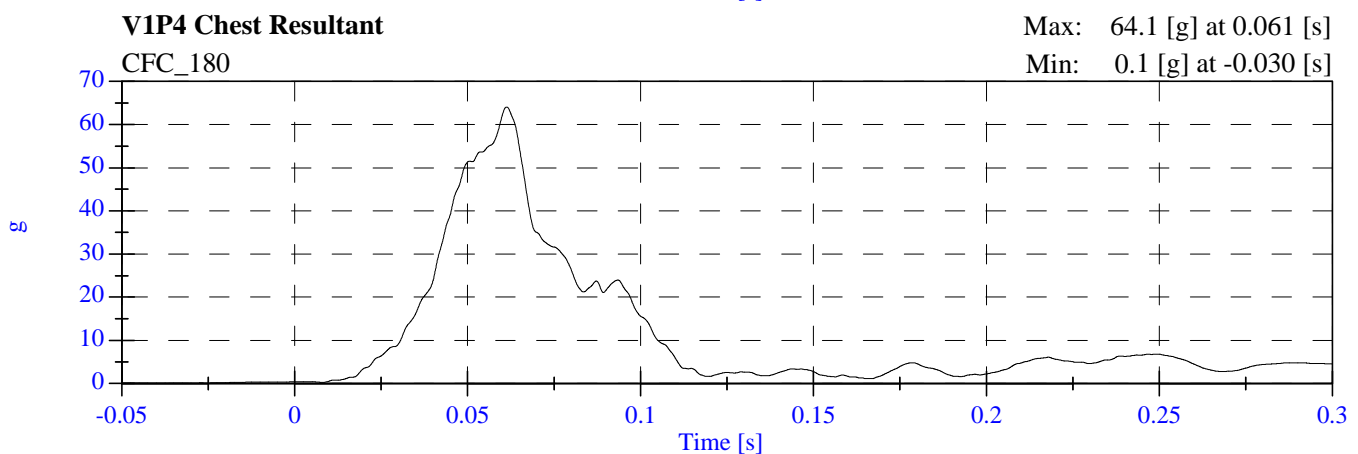
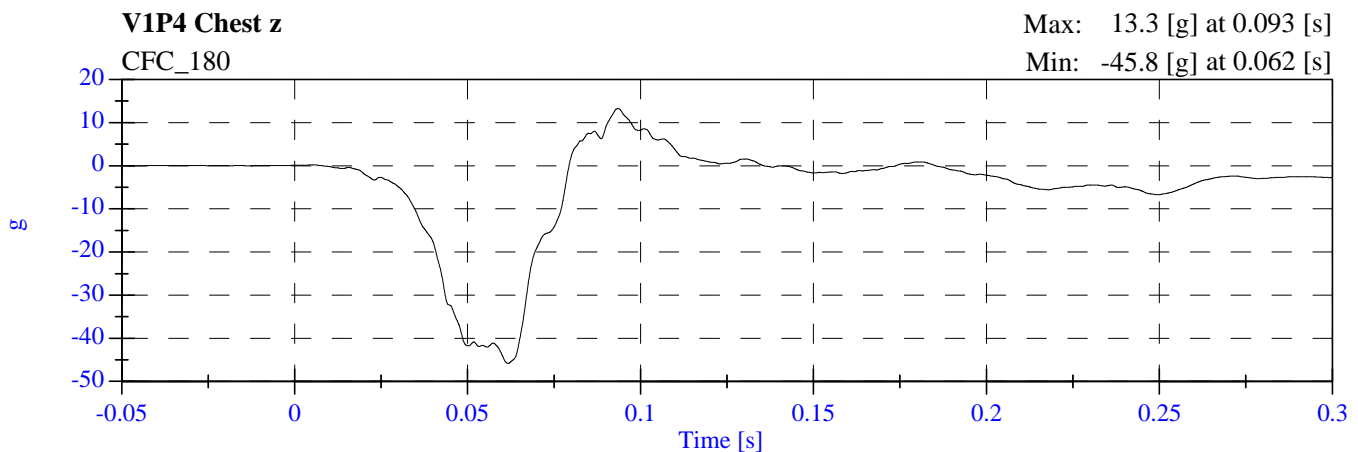
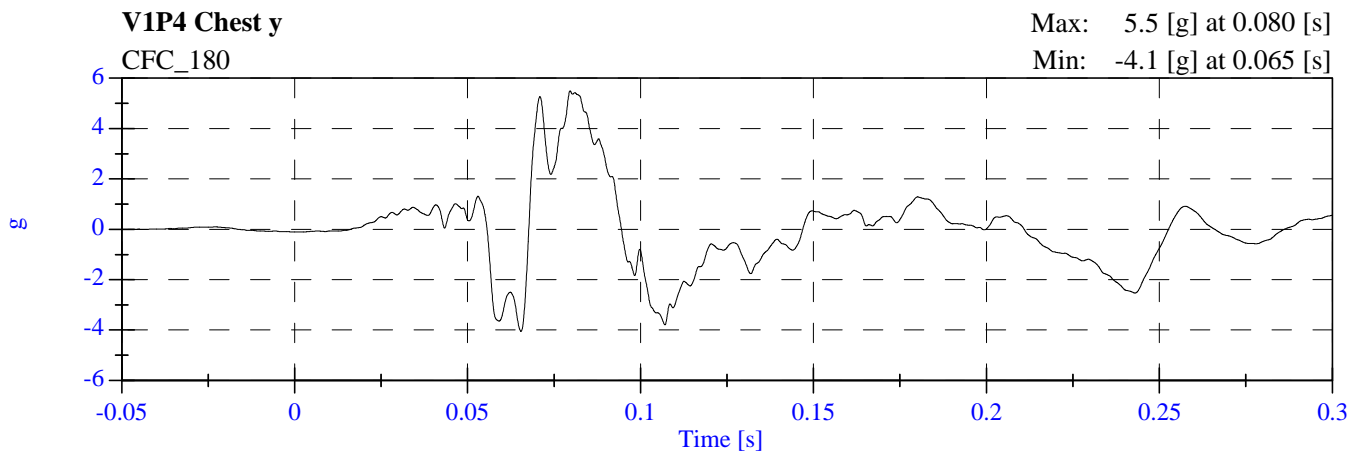
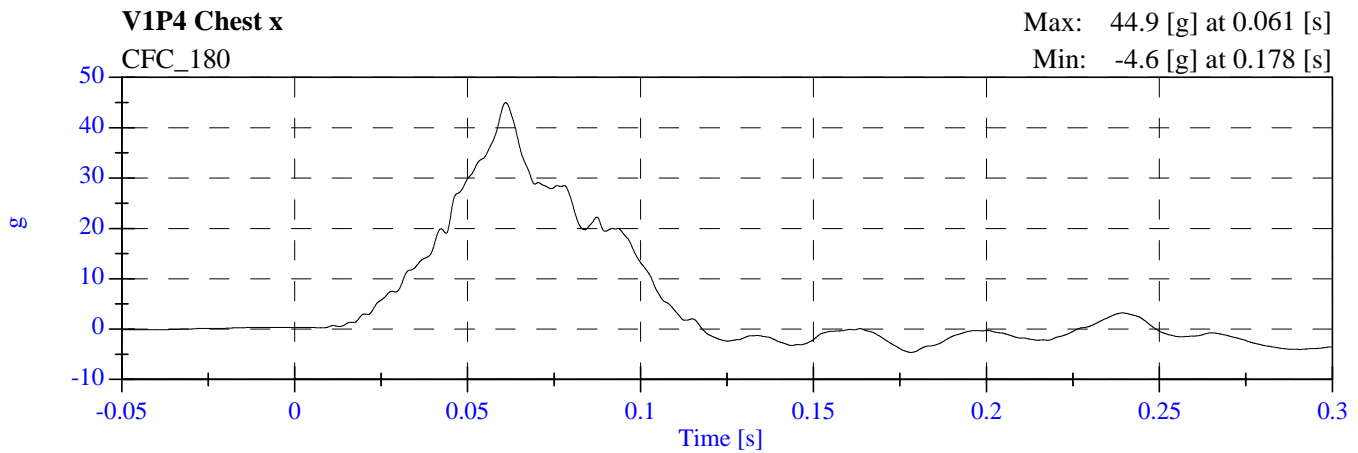
2007 NCAP Test 11 2007 Jeep Patriot M70306 - February 27, 2007



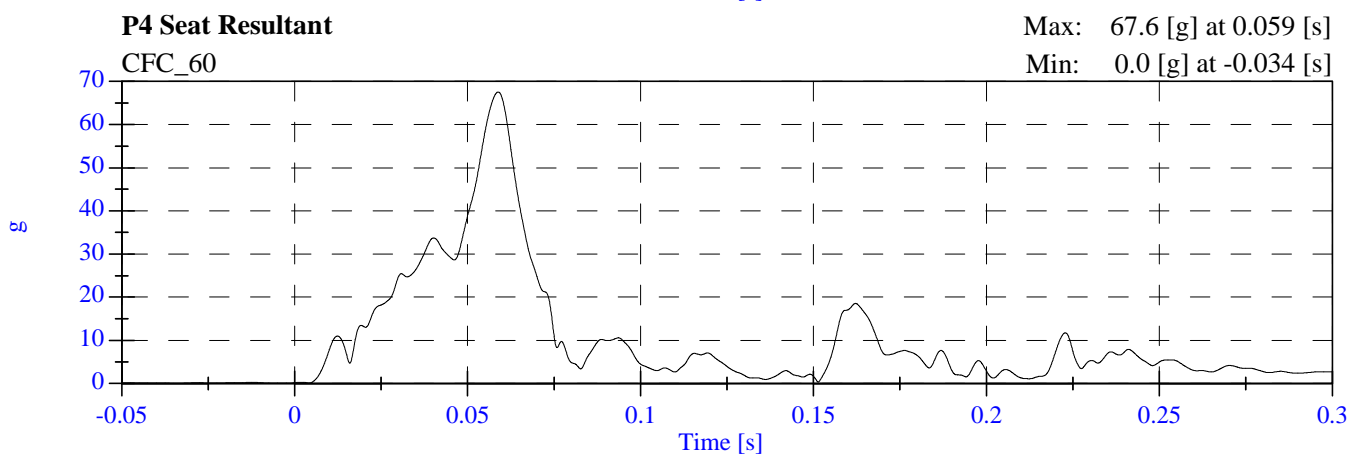
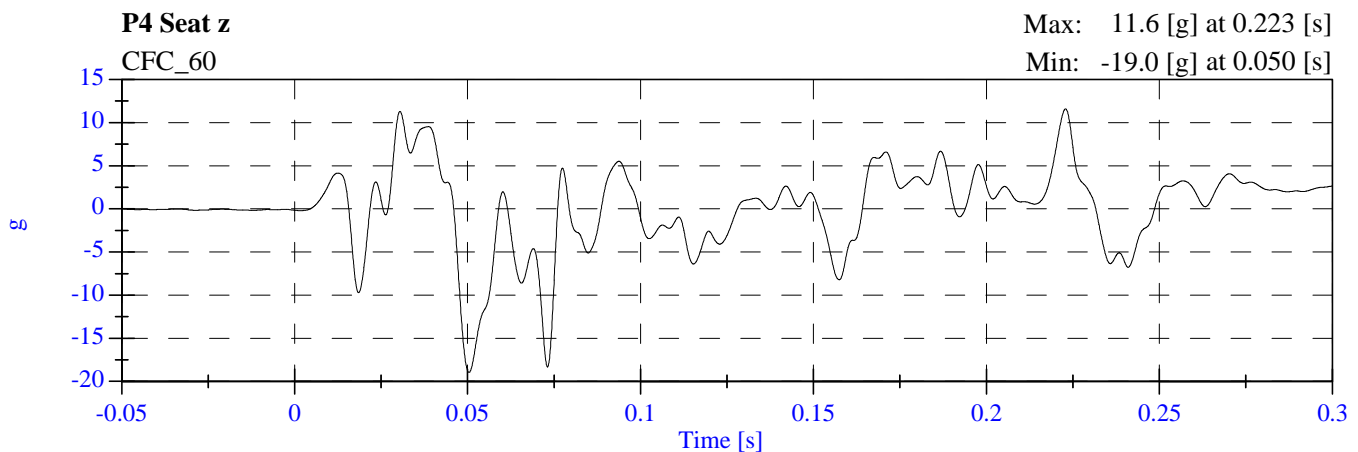
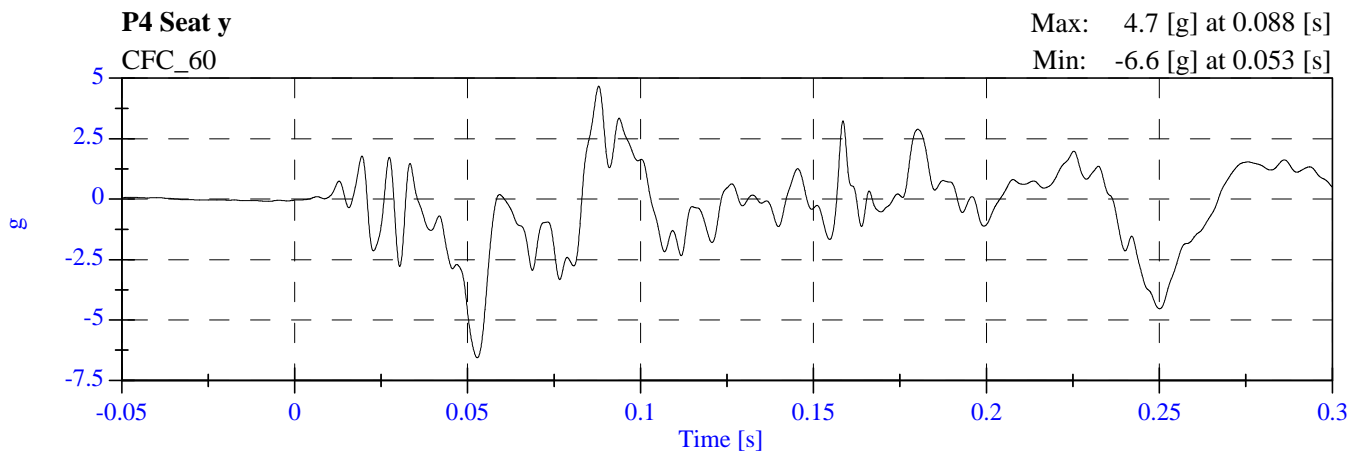
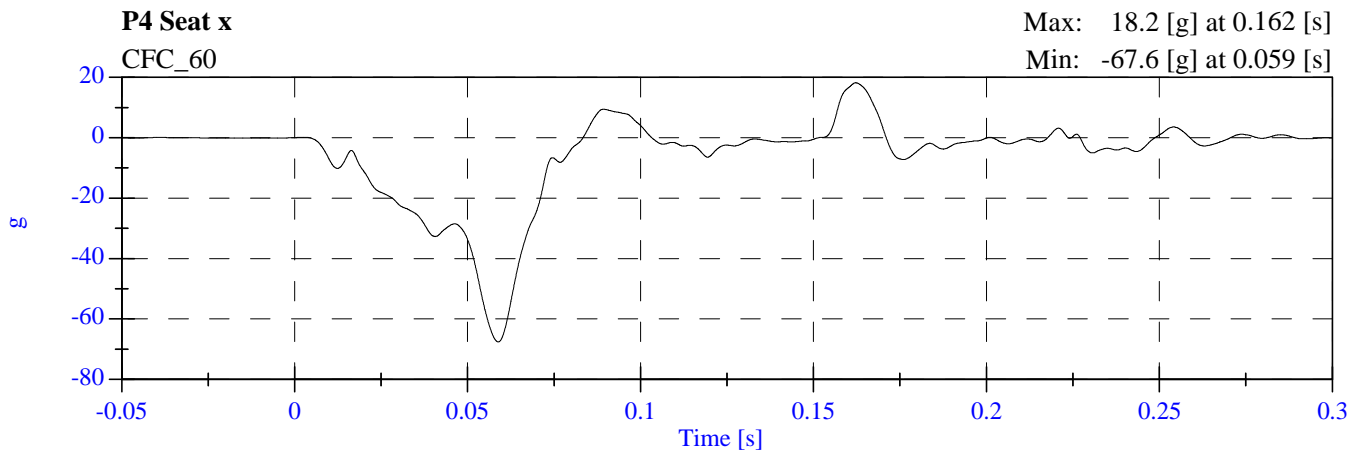
**2007 NCAP Test 11 2007 Jeep Patriot
M70306 - February 27, 2007**



2007 NCAP Test 11 2007 Jeep Patriot M70306 - February 27, 2007



2007 NCAP Test 11 2007 Jeep Patriot M70306 - February 27, 2007



SECTION 5

CHILD DUMMY CALIBRATION INFORMATION

Head Drop Frontal

Part 572R Frontal Head Drop

Calibration Date: 01-15-07

Serial No: 103

Work File: Crabi_103_HD_Front_

-----TEST RESULTS-----

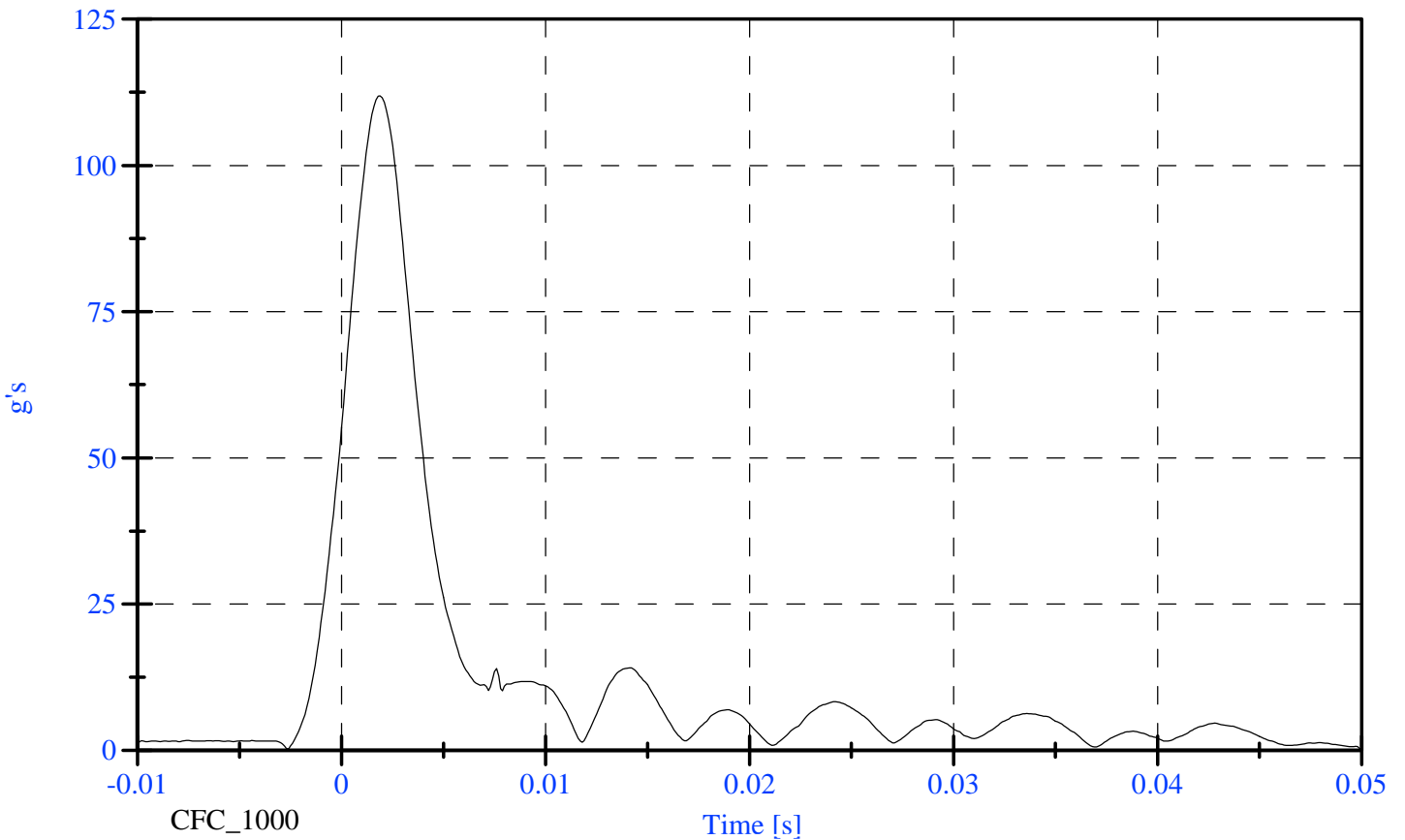
<u>TEST CONDITION</u>	<u>PARAMETERS</u>	<u>RESULTS</u>	<u>STATUS</u>
Lab Temperature:	18.9-25.6 C	21.1 C	Passed
Lab Humidity:	10-70 %	36.00 %	Passed
Peak Resultant Accel.:	100-120 Gs	111.95 Gs	Passed
Peak Lateral Accel.:	15 Gs Max	13.03 Gs	Passed
Curve PerCent NonModal:	< 17%	12.59 %	Passed

Head Drop Frontal

Head Resultant

Max: 112.0 [g's] at 0.002 [s]

Min: 0.2 [g's] at -0.003 [s]



Head Drop Rear

Part 572R Rear Head Drop

Calibration Date: 01-15-07

Serial No: 103

Work File: Crabi_103_HD_Rear_01-15-07

-----TEST RESULTS-----

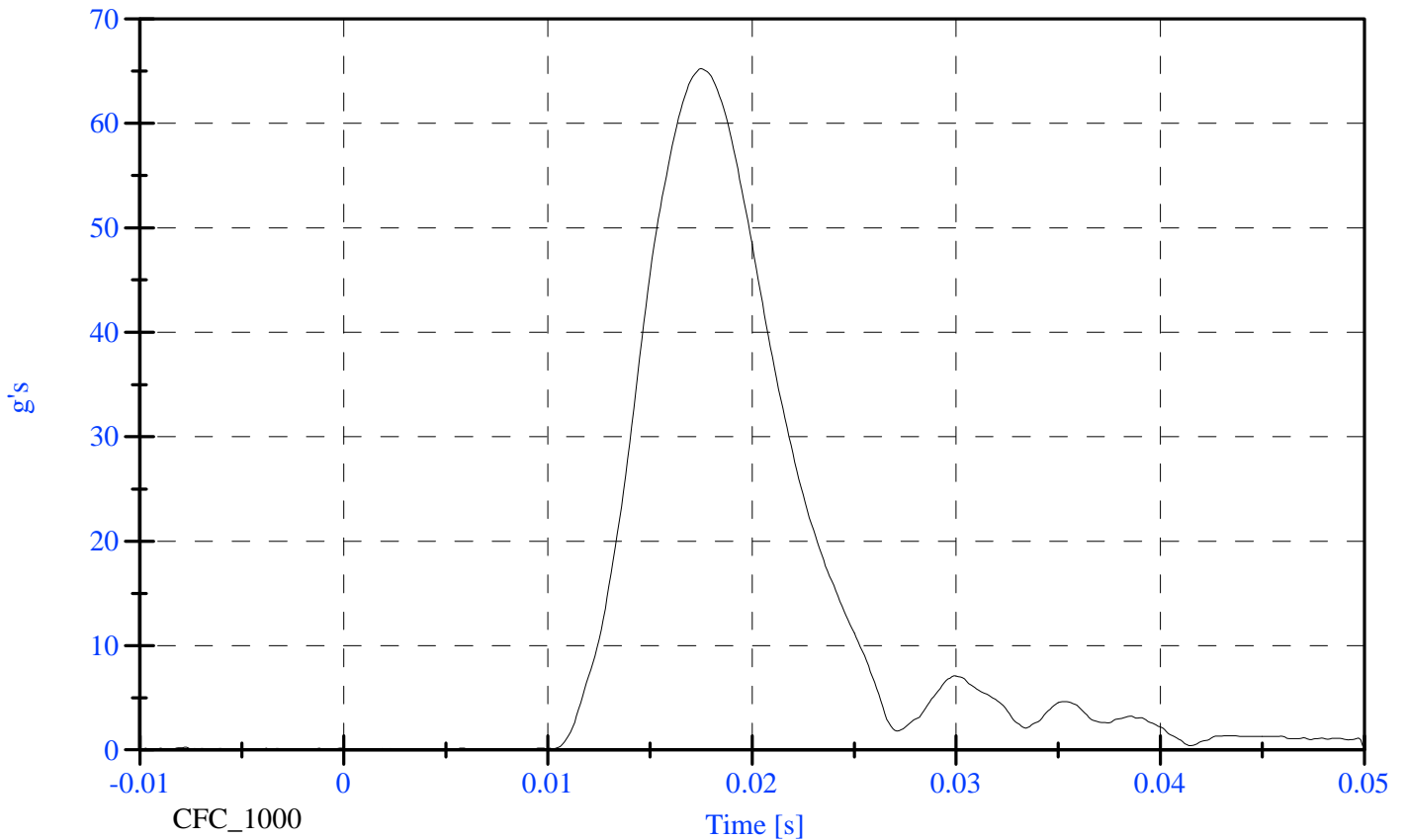
<u>TEST CONDITION</u>	<u>PARAMETERS</u>	<u>RESULTS</u>	<u>STATUS</u>
Lab Temperature:	18.9-25.6 C	21.1 C	Passed
Lab Humidity:	10-70 %	36.00 %	Passed
Peak Resultant Accel.:	55-71 Gs	65.22 Gs	Passed
Peak Lateral Accel.:	15 Gs Max	2.91 Gs	Passed
Curve PerCent NonModal:	< 17%	10.88 %	Passed

Head Drop Rear

Head Resultant

Max: 65.2 [g's] at 0.018 [s]

Min: 0.0 [g's] at -0.005 [s]



Neck Flexion

Part 572R

Neck Flexion Test

Calibration Date:

01-15-07

Serial No:

103

Work File:

Crabi_103_NF_01-15-0

-----TEST RESULTS-----

<u>TEST CONDITION</u>	<u>PARAMETERS</u>	<u>RESULTS</u>	<u>STATUS</u>
Lab Temperature:	20.6-22.2 C	21.11 C	Passed
Lab Humidity:	10-70 %	37.00 %	Passed
Test Pendulum Speed:	5.10- 5.30 m/s	5.25 m/s	Passed

-----PENDULUM PULSE-----

Pulse at 10 ms:	1.60- 2.30 m/s	1.78 m/s	Passed
Pulse at 20 ms:	3.40- 4.20 m/s	3.75 m/s	Passed
Pulse at 25 ms:	4.30- 5.20 m/s	4.59 m/s	Passed

-----D PLANE ROTATION-----

Maximum Rotation:	75.0-86.0 Deg	84.66 Deg	Passed
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-----MOMENT ABOUT THE OCCIPITAL CONDYLE-----

Max Occipital Moment:	36.00- 45.00 N-m	39.67 N-m	Passed
Occipital Moment Decay:	60.0-80.0 ms	76.00 ms	Passed

FM-ATDLAB-572.143E-0005-R00

Neck Extension

Part 572R

Neck Extension Test

Calibration Date:

01-15-07

Serial No:

103

Work File:

Crabi_103_NE1_01-15-

-----TEST RESULTS-----

<u>TEST CONDITION</u>	<u>PARAMETERS</u>	<u>RESULTS</u>	<u>STATUS</u>
Lab Temperature:	20.6-22.2 C	21.11 C	Passed
Lab Humidity:	10-70 %	37.00 %	Passed
Test Pendulum Speed:	2.40- 2.60 m/s	2.43 m/s	Passed

-----PENDULUM PULSE-----

Pulse at 6 ms:	0.80- 1.20 m/s	0.83 m/s	Passed
Pulse at 10 ms:	1.50- 2.10 m/s	1.62 m/s	Passed
Pulse at 14 ms:	2.20- 2.90 m/s	2.50 m/s	Passed

-----D PLANE ROTATION-----

Maximum Rotation:	80.0-92.0 Deg	80.83 Deg	Passed
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-----MOMENT ABOUT THE OCCIPITAL CONDYLE-----

Max Occipital Moment:	-23.00--12.00 N-m	-15.61 N-m	Passed
Occipital Moment Decay:	76.0-90.0 ms	83.10 ms	Passed

FM-ATDLAB-572.143E-0005-R00

Thorax Impact

Part 572R Thorax Impact

Calibration Date: 01-16-07

Serial No: 103

Work File: Crabi_103_T3_01-16-07

-----TEST RESULTS-----

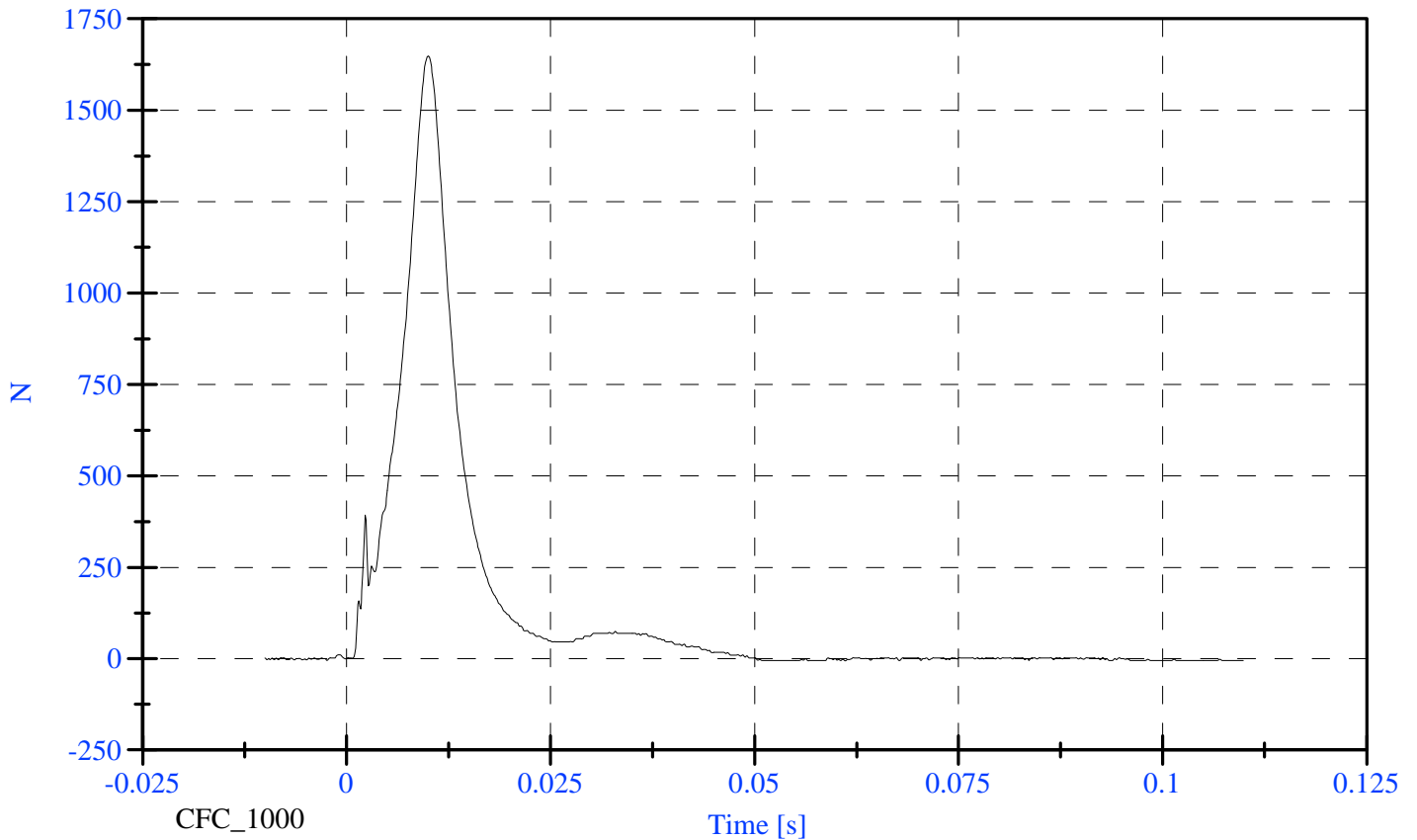
<u>TEST CONDITION</u>	<u>PARAMETERS</u>	<u>RESULTS</u>	<u>STATUS</u>
Lab Temperature:	20.6-22.2 C	21.1 C	Passed
Lab Humidity:	10-70 %	35.00 %	Passed
Pendulum Velocity:	4.90- 5.10 m/s	5.01 m/s	Passed
Maximum Res. Force:	1514.00-1796.00 N	1648.54 N	Passed

Thorax Impact

Probe Force vs. Time

Max: 1648.5 [N] at 0.010 [s]

Min: -5.5 [N] at 0.061 [s]



Head Drop Frontal

Part 572R Frontal Head Drop

Calibration Date: 01-15-07

Serial No: 102

Work File: Crabi_102_HD1_01-15

-----TEST RESULTS-----

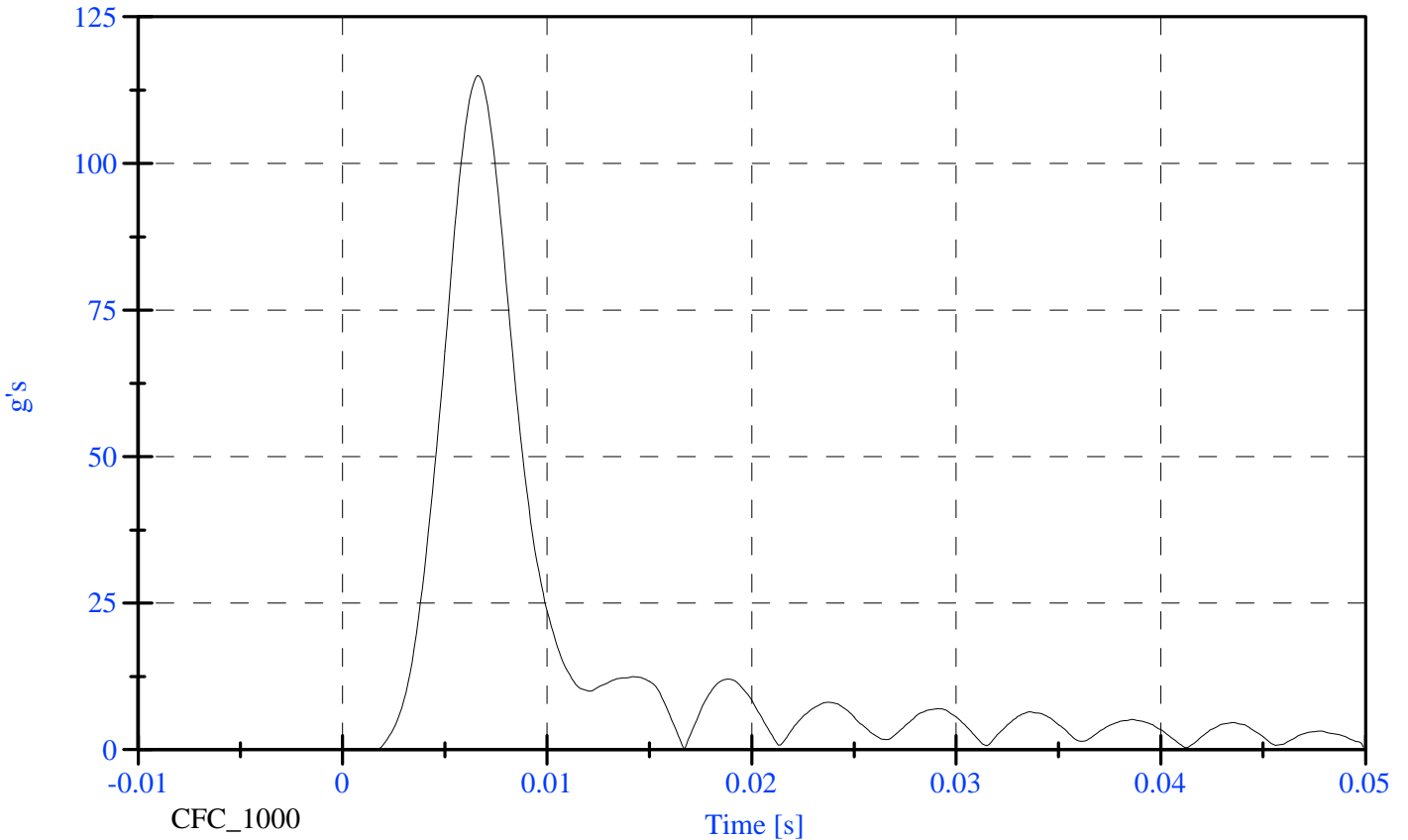
<u>TEST CONDITION</u>	<u>PARAMETERS</u>	<u>RESULTS</u>	<u>STATUS</u>
Lab Temperature:	18.9-25.6 C	21.1 C	Passed
Lab Humidity:	10-70 %	36.00 %	Passed
Peak Resultant Accel.:	100-120 Gs	114.95 Gs	Passed
Peak Lateral Accel.:	15 Gs Max	13.62 Gs	Passed
Curve PerCent NonModal:	< 17%	10.85 %	Passed

Head Drop Frontal

Head Resultant

Max: 114.9 [g's] at 0.007 [s]

Min: 0.0 [g's] at -0.010 [s]



Head Drop Rear

Part 572R Rear Head Drop

Calibration Date: 01-15-07

Serial No: 102

Work File: Crabi_102_HD_Rear_01-15-07

-----TEST RESULTS-----

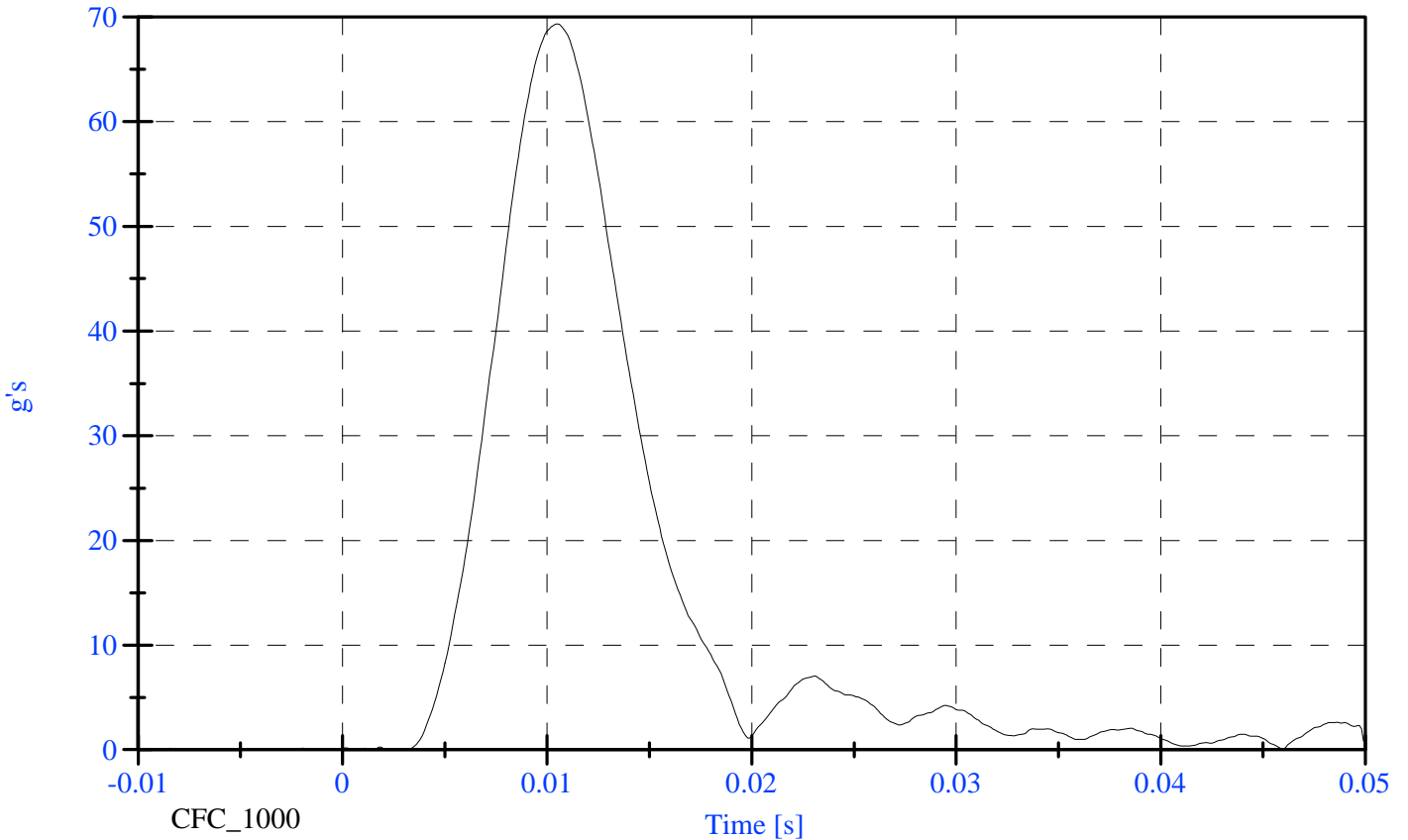
<u>TEST CONDITION</u>	<u>PARAMETERS</u>	<u>RESULTS</u>	<u>STATUS</u>
Lab Temperature:	66.0-78.0 F	70.0 F	Passed
Lab Humidity:	10-70 %	36.00 %	Passed
Peak Resultant Accel.:	55-71 Gs	69.35 Gs	Passed
Peak Lateral Accel.:	15 Gs Max	7.02 Gs	Passed
Curve PerCent NonModal:	< 17%	10.15 %	Passed

Head Drop Rear

Head Resultant

Max: 69.3 [g's] at 0.011 [s]

Min: 0.0 [g's] at 0.001 [s]



Neck Flexion

Part 572R

Neck Flexion Test

Calibration Date:

01-15-07

Serial No:

102

Work File:

Crabi_102_NF1_01-15-

-----TEST RESULTS-----

<u>TEST CONDITION</u>	<u>PARAMETERS</u>	<u>RESULTS</u>	<u>STATUS</u>
Lab Temperature:	20.6-22.2 C	21.11 C	Passed
Lab Humidity:	10-70 %	36.00 %	Passed
Test Pendulum Speed:	5.10- 5.30 m/s	5.25 m/s	Passed

-----PENDULUM PULSE-----

Pulse at 10 ms:	1.60- 2.30 m/s	1.79 m/s	Passed
Pulse at 20 ms:	3.40- 4.20 m/s	3.77 m/s	Passed
Pulse at 25 ms:	4.30- 5.20 m/s	4.58 m/s	Passed

-----D PLANE ROTATION-----

Maximum Rotation:	75.0-86.0 Deg	85.14 Deg	Passed
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-----MOMENT ABOUT THE OCCIPITAL CONDYLE-----

Max Occipital Moment:	36.00- 45.00 N-m	42.67 N-m	Passed
Occipital Moment Decay:	60.0-80.0 ms	74.00 ms	Passed

FM-ATDLAB-572.143E-0005-R00

Neck Extension

Part 572R

Neck Extension Test

Calibration Date:

01-15-07

Serial No:

102

Work File:

Crabi_102_NE_01-15-0

-----TEST RESULTS-----

<u>TEST CONDITION</u>	<u>PARAMETERS</u>	<u>RESULTS</u>	<u>STATUS</u>
Lab Temperature:	69.0-72.0 F	70.00 F	Passed
Lab Humidity:	10-70 %	36.00 %	Passed
Test Pendulum Speed:	7.90- 8.50 ft/s	7.95 ft/s	Passed

-----PENDULUM PULSE-----

Pulse at 6 ms:	2.60- 3.90 ft/s	2.80 ft/s	Passed
Pulse at 10 ms:	4.90- 6.90 ft/s	5.28 ft/s	Passed
Pulse at 14 ms:	7.20- 9.50 ft/s	8.02 ft/s	Passed

-----D PLANE ROTATION-----

Maximum Rotation:	80.0-92.0 Deg	80.60 Deg	Passed
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-----MOMENT ABOUT THE OCCIPITAL CONDYLE-----

Max Occipital Moment:	-23.00--12.00 N-m	-12.85 N-m	Passed
Occipital Moment Decay:	76.0-90.0 ms	86.10 ms	Passed

FM-ATDLAB-572.143E-0005-R00

Thorax Impact

Part 572R Thorax Impact

Calibration Date: 01-16-07

Serial No: 102

Work File: Crabi_102_T2_01-16-07

-----TEST RESULTS-----

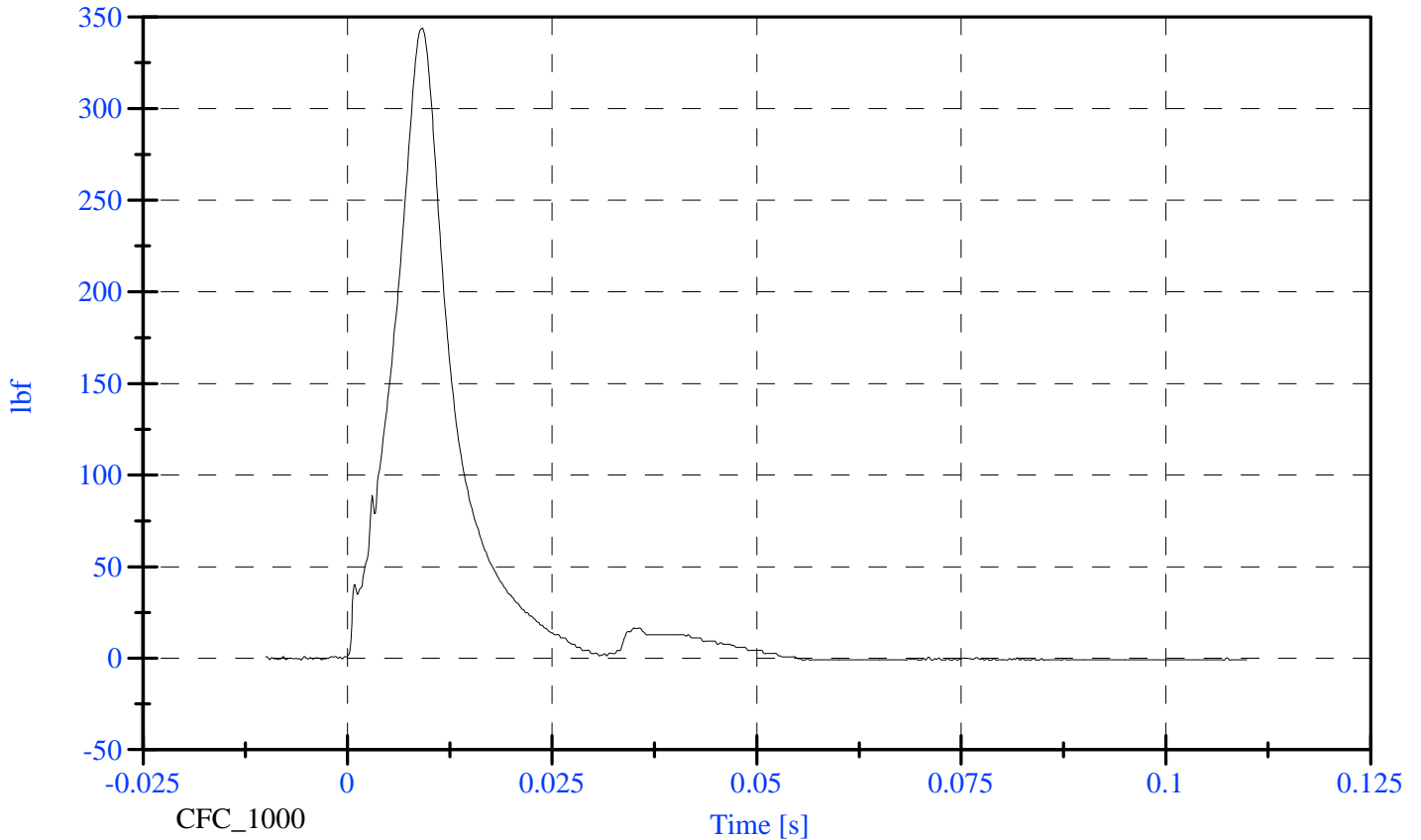
<u>TEST CONDITION</u>	<u>PARAMETERS</u>	<u>RESULTS</u>	<u>STATUS</u>
Lab Temperature:	69.0-72.0 F	70.0 F	Passed
Lab Humidity:	10-70 %	35.00 %	Passed
Pendulum Velocity:	16.20-16.80 ft/s	16.42 ft/s	Passed
Maximum Res. Force:	340.70- 404.10 lbf	344.01 lbf	Passed

Thorax Impact

Probe Force vs. Time

Max: 344.0 [lbf] at 0.009 [s]

Min: -1.1 [lbf] at 0.082 [s]



SECTION 6

TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

P572C INSTRUMENTATION

	POSITION #3 (RIGHT) SERIAL NO.: 103		
	SERIAL NUMBER	MANUFACTURER	CALIBRATION DATE
HEAD AX	03E03E20-N04	ENTRAN	9-Jan-07
HEAD AY	02A18-N01	ENTRAN	9-Jan-07
HEAD AZ	B02A25-N01	ENTRAN	9-Jan-07
HEAD RAZ	03D03D09-N08	ENTRAN	9-Jan-07
UPPER NECK FX	211Fx	DENTON	8-Jan-07
UPPER NECK FY	211Fy	DENTON	8-Jan-07
UPPER NECK FZ	211Fz	DENTON	8-Jan-07
UPPER NECK MX	211Mx	DENTON	8-Jan-07
UPPER NECK MY	211My	DENTON	8-Jan-07
UPPER NECK MZ	211Mz	DENTON	8-Jan-07
CHEST AX	98H14-K14	ENTRAN	9-Jan-07
CHEST AY	98H10-F02	ENTRAN	9-Jan-07
CHEST AZ	P50093	ENDEVCO	9-Jan-07

TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

P572C INSTRUMENTATION

	POSITION #4 (LEFT) SERIAL NO.: 102		
	SERIAL NUMBER	MANUFACTURER	CALIBRATION DATE
HEAD AX	P51288	ENDEVCO	11-Jan-07
HEAD AY	P51295	ENDEVCO	9-Jan-07
HEAD AZ	P51282	ENDEVCO	9-Jan-07
HEAD RAZ	P51298	ENDEVCO	9-Jan-07
UPPER NECK FX	231Fx	DENTON	11-Jan-07
UPPER NECK FY	231Fy	DENTON	11-Jan-07
UPPER NECK FZ	231Fz	DENTON	11-Jan-07
UPPER NECK MX	231Mx	DENTON	11-Jan-07
UPPER NECK MY	231My	DENTON	11-Jan-07
UPPER NECK MZ	231Mz	DENTON	11-Jan-07
CHEST AX	B02A18-N21	ENTRAN	9-Jan-07
CHEST AY	99H30-Z14	ENTRAN	9-Jan-07
CHEST AZ	00L13-F39	ENTRAN	9-Jan-07

TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

VEHICLE AND MDB INSTRUMENTATION

	VEHICLE AND CRS INSTRUMENTS		
	SERIAL NUMBER	MANUFACTURER	CALIBRATION DATE
P3 CRS (X)	P23174	ENDEVCO	15-Jan-07
P3 CRS (Y)	J31059	ENDEVCO	15-Jan-07
P3 CRS (Z)	J31101	ENDEVCO	15-Jan-07
P4 CRS (X)	P23939	ENDEVCO	15-Jan-07
P4 CRS (Y)	P23999	ENDEVCO	15-Jan-07
P4 CRS (Z)	P23993	ENDEVCO	15-Jan-07

REMARKS: None