

REPORT NUMBER: 201UI-CAL-08-06

**SAFETY COMPLIANCE TESTING FOR FMVSS 201
OCCUPANT PROTECTION IN INTERIOR IMPACT
UPPER INTERIOR HEAD IMPACT PROTECTION**

**CHRYSLER LLC
2008 DODGE GRAND CARAVAN**

NHTSA NUMBER: C80305

CALSPAN TEST NUMBER: 8851-06

CALSPAN
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BUFFALO, NEW YORK 14225



Test Date: April 22, 2008

FINAL REPORT

PREPARED FOR:

U. S. DEPARTMENT OF TRANSPORTATION
National Highway Traffic Safety Administration
Enforcement
Office of Vehicle Safety Compliance
Mail Code: NVS-220, West Building 4th Floor
1200 New Jersey Avenue, SE
Washington, DC 20590

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Date of Report Acceptance

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15. <i>Supplementary Notes</i>																							
16. <i>Abstract</i> Compliance tests were conducted on the subject vehicle a, 2008 Dodge Grand Caravan, in accordance with the specifications of the Office of Vehicle Safety Compliance Test Procedure TP-201U-01 for determination of FMVSS 201 compliance. Test failures identified were as follows in the table below:																							
<table border="1"> <thead> <tr> <th>Target Point</th> <th>Horizontal</th> <th>Vertical</th> <th>Velocity</th> <th>HIC</th> <th>HICd</th> </tr> </thead> <tbody> <tr> <td>None</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>None</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> </tbody> </table>						Target Point	Horizontal	Vertical	Velocity	HIC	HICd	None	-	-	-	-	-	None	-	-	-	-	-
Target Point	Horizontal	Vertical	Velocity	HIC	HICd																		
None	-	-	-	-	-																		
None	-	-	-	-	-																		
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TABLE OF CONTENTS

SECTION		PAGE NO.
1	PURPOSE AND TEST PROCEDURE	1-1
2	SUMMARY OF UPPER INTERIOR HEAD IMPACTS	2-1
3	SUMMARY OF TEST RESULTS AND DATA PLOTS	3-1
APPENDIX A	PHOTOGRAPHS	A-1
APPENDIX B	PART 572L PERFORMANCE CALIBRATION IN SUPPORT OF VEHICLE SAFETY COMPLIANCE TESTING FOR OCCUPANT PROTECTION IN INTERIOR IMPACT	B-1

LIST OF DATA SHEETS

DATA SHEET	DESCRIPTION	PAGE NO.
2-1	SUMMARY OF UPPER INTERIOR HEAD IMPACT TESTS	2-2
2-2	GENERAL TEST AND VEHICLE PARAMETER DATA	2-3
2-3	APPROACH ANGLE LIMITS	2-5
2-4	SUMMARY TARGET IMPACT LOCATION ON FMH	2-6

SECTION 1

PURPOSE AND TEST PROCEDURE

This head impact compliance test is part of the FMVSS 201 Upper Interior Head Impact Protection Test Program sponsored by the National Highway Traffic Safety Administration (NHTSA) under Contract No. DTNH22-04-C-01027. The purpose of this head impact compliance test was to determine whether the subject vehicle, a 2008 Dodge Grand Caravan, NHTSA No. C80305, met the performance requirements of FMVSS 201, Occupant Protection in Interior Impact. The compliance test was conducted in accordance with the OVSC Laboratory Test Procedure No. TP-201U-01 dated April 03, 1998.

SECTION 2

SUMMARY OF UPPER INTERIOR HEAD IMPACTS

A 2008 Dodge Grand Caravan , NHTSA No. C80305 , was tested at various upper interior locations by a 4.54 kg 50th percentile headform. A total of twelve (12) impacts were performed in this test series. The target area impacts were chosen by the NHTSA Contracting Officer's Technical Representative (COTR). A summary of test results can be found on Data Sheet 2-1, Summary of Upper Interior Head Impact Tests. The twelve (12) area chosen for testing were:

OP1	SD	BP4	RP1	BP2
BP1	AP3	AP1	BP3	URBP
SR2B	AP2			

The selected impact areas on the test vehicle appeared to comply with the performance requirements of FMVSS 201.

Five Free Motion Headforms (FMH) were used in this test series. All five FMH's were calibrated prior to and after the test series. Calibration information are included in Appendix B. Each FMH weighed 4.54 ± 0.5 kg and had an orthogonal tri-axis accelerometer pack mounted at the headform's center of gravity (c.g.).

A total of three (3) channels of data for each test were recorded on a Keyser-Threde data acquisition system. Data plots, along with still images, can be found in Section 3, Summary of Test Results and Data Plots.

To document each target area impact test, a Weinberger high-speed video camera was placed at an appropriate location to record the headform contact with the selected target area.

DATA SHEET 2-1
SUMMARY OF UPPER INTERIOR HEAD IMPACT TESTS

VEHICLE YEAR/MAKE/MODEL/STYLE:	2008 Dodge Grand Caravan
VIN:	2D8HN44H78R627521
DATE OF MANUFACTURE:	12/07 (SEE CERTIFICATION LABEL)
COLOR:	Blue

TARGET CODE	Target Coordinates						Approach Angles (degrees)		Velocity (kph)	FMH HIC	HIC(d)
	Driver Side			Passenger Side			Horizontal	Vertical			
	X(mm)	Y(mm)	Z(mm)	X(mm)	Y(mm)	Z(mm)					
AP1	2132.299	-675.845	1640.419	2115.916	661.341	1644.326	122°	50°	18.69	442.6	500.3
AP2	1938.42	-699.331	1555.057	1943.665	661.9562	1557.341	220°	40°	18.57	273.0	372.4
AP3	1796.29	-732.048	1466.04	1810.097	677.9949	1471.894	138°	44°	18.37	250.0	355.0
BP1	2591.836	-559.125	1705.018	2577.476	558.6827	1704.74	90°	44°	18.83	252.0	356.5
BP2	2592.1	-679.847	1513.666	2576.645	677.0073	1518.247	90°	16°	23.62	509.8	551.0
BP3	2550.437	-748.414	1449.563	2525.731	748.5288	1451.303	270°	NEG10°	23.75	705.7	698.8
BP4	2668.365	-755.018	1318.455	2651.102	752.359	1327.149	141°	NEG10°	23.68	700.5	694.9
FH1	2057.869	-584.134	1685.284	2044.67	575.4246	1691.624	Relocated 1 circle		-	-	-
FH1_R1	2051.829	-558.858	1681.417	2034.691	556.3679	1685.911	-	-	-	-	-
FH2	2023.958	-442.432	1685.548	2020.422	446.8742	1688.577	-	-	-	-	-
OP1	3707.558	-650.094	1587.848	3691.536	672.7009	1585.978	90°	4°	23.40	579.1	603.3
OP2	3713.84	-716.403	1503.787	3686.733	738.5687	1511.506	Relocated 3 circles		-	-	-
OP2_R3	3714.898	-691.727	1432.252	3689.95	713.5507	1439.471	-	-	-	-	-
RH	4378.582	-354.445	1761.792	4396.837	357.1074	1772.523	-	-	-	-	-
RP1	4407.991	-621.341	1636.936	4403.385	581.7382	1643.384	Relocated 2 circles		-	-	-
RP1_R2	4378.123	-588.077	1659.921	4367.219	564.3631	1671.63	61°	31°	18.62	141.3	273.0
RP2	4452.42	-641.559	1488.102	4458.912	611.9034	1492.668	Relocated 2 circles		-	-	-
RP2_R2	4463.892	-599.126	1507.567	4465.139	588.1112	1504.128	-	-	-	-	-
SD	3126.948	-559.839	1742.736	3110.248	567.6153	1744.811	Relocated 2 circles		-	-	-
SD_R2	3127.407	-590.999	1723.849	3109.432	604.5987	1723.903	90°	50°	18.46	129.5	264.1
SR1	2278.564	-614.58	1726.347	2264.845	603.8019	1729.562	Relocated 1 circles		-	-	-
SR1_R1	2269.501	-643.686	1687.046	2265.486	632.0787	1691.145	-	-	-	-	-
SR2A	2428.223	-591.218	1735.524	2415.081	584.9117	1735.286	-	-	-	-	-
SR2B	2292.401	-611.366	1727.218	2276.869	603.0529	1729.05	Relocated 2 circles		-	-	-
SR2B_R2	2307.94	-638.875	1690.401	2277.552	632.5472	1690.016	270°	23°	18.43	175.5	298.8
SR3F	3005.725	-536.522	1730.6	2992.08	542.5981	1731.08	-	-	-	-	-
SR3R	3168.952	-533.754	1734.414	3157.971	543.227	1735.556	-	-	-	-	-
URAP	2378.051	-469.349	1778.033	2354.95	464.0727	1776.042	-	-	-	-	-
URBP	2597.419	-484.117	1783.806	2577.712	481.1754	1786.062	270°	23°	23.79	238.0	346.0
UROP	3694.068	-462.706	1798.928	3681.602	474.5449	1804.226	-	-	-	-	-
URRP	4183.111	-492.598	1795.492	4208.606	459.317	1804.789	-	-	-	-	-
URSD	3304.665	-465.508	1800.544	3314.653	475.0847	1802.836	-	-	-	-	-
URSR	2465.337	-468.204	1790.811	2445.175	468.4105	1791.173	-	-	-	-	-

*HIC(d)=0.75446(Free Motion Headform HIC)+166.4

DATA SHEET 2-2

GENERAL TEST AND VEHICLE PARAMETER DATA

TEST VEHICLE INFORMATION:									
Year/Make/Model/Body Style:				2008 Dodge Grand Caravan					
VIN:				2D8HN44H78R627521					
Month & Year of Manufacture:				12/07 (SEE CERTIFICATION LABEL)					
Vehicle Body Color:				Blue					
Engine Data:	6	Cylinders;	-	CID;	3.3	Liters;	-	cc	
Engine Placement:		x	Longitudinal;		or		-		Lateral
Transmission:	4	Speed;	-		Manual;	x	Automatic;	-	
Final Drive:		-		Rear Wheel Drive;		x		Front Wheel Drive;	
								-	
Odometer Reading:		124		km					
Options:	x	A/C;	x	Power Steering;	x	Pwr.Brakes;	x	Pwr. Windows	
Interior Trim Information :									
1. Adjustable seat belt anchorages on B-pillars									
2. Interior assist handles on all outboard seating positions									

DATA FROM TIRE PLACARD:										
Tire Pressure (at capacity);				250			kPa FRONT			
				250			kPa REAR			
Recommended Tire Size:				P225/65R16						
Tires on Test Vehicle:		P225/65R16			Manufacturer:			-		
Vehicle Capacity Data:										
Number of Occupants:		2	Front;		2	Rear;		3	3rd Seat; 7 Total	
Type of Front Seats:		x	Bucket;		-		Bench;		-	
Type of Front Seat Back:		-		Fixed;		x		Adjustable with		
								x		
								Lever or		
								-		
Vehicle Capacity Weight (VCW)=				521			kg (A)			
No. of Occupants x 68 kg. =				476			kg (B)			
Rated Cargo/Luggage Weight (RCLW) =				45.0			kg (A-B) Max. RCLW = 136 kg.			

DATA SHEET 2-2

GENERAL TEST AND VEHICLE PARAMETER DATA (cont.)

TEST VEHICLE DELIVERED WEIGHT WITH MAXIMUM FLUIDS:							
Left Front	=	569	kg	Left Rear	=	422.5	kg
Right Front	=	529	kg	Right Rear	=	422.0	kg
TOTAL FRONT	=	1098.0	kg	TOTAL REAR	=	844.5	kg
% of Total Weight	=	56.5%	%	% of Total Weight	=	43.5%	%
TOTAL WEIGHT	=	1942.5					kg

CALCULATION OF VEHICLE'S TARGET TEST WEIGHT:		
Total Test Vehicle Delivered Weight=	1942.5	kg (A)
+ Rated Cargo/Luggage Weight =	45.0	kg (B)
TEST VEHICLE TARGET WEIGHT =	1987.5	kg (A+B)

WEIGHT OF TEST VEHICLE (FULLY LOADED):							
Left Front	=	569.5	kg	Left Rear	=	446.0	kg
Right Front	=	523.0	kg	Right Rear	=	444.0	kg
TOTAL FRONT	=	1092.5	kg	TOTAL REAR	=	890.0	kg
% of Total Weight	=	55.1%	%	% of Total Weight	=	44.9%	%
TOTAL TEST WEIGHT	=	1982.5					
Weight of vehicle secured in test vehicles cargo area	=	40.0					kg

TEST VEHICLE ATTITUDE (all dimensions in millimeters):				
AS DELIVERED:	Left Front	791	Left Rear	805
	Right Front	784	Right Rear	795
FULLY LOADED:	Left Front	797	Left Rear	797
	Right Front	788	Right Rear	788
Test Vehicle Wheelbase:	-			millimeters

TEST VEHICLE PITCH AND ROLL ANGLES:				
AS DELIVERED:	PITCH ANGLES		ROLL ANGLES	
	Left Door Sill	↑1.8↓	Front Bumper	↑0.4↓
	Right Door Sill	↓1.7↑	Rear Bumper	↑0.2↓
FULLY LOADED:	PITCH ANGLES		ROLL ANGLES	
	Left Door Sill	↑1.5↓	Front Bumper	↑0.4↓
	Right Door Sill	↓1.5↑	Rear Bumper	↑0.2↓
AS TESTED:	PITCH ANGLES		ROLL ANGLES	
	Left Door Sill	↑1.7↓	Front Bumper	↑0.4↓
	Right Door Sill	↓1.6↑	Rear Bumper	↑0.2↓

DATA SHEET 2-3

APPROACH ANGLE LIMITS

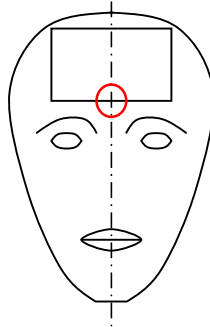
Target Code	Left Side				Target Code	Right Side			
	Horizontal Angles (deg.)		Vertical Angles (deg.)			Horizontal Angles (deg.)		Vertical Angles (deg.)	
	Minimum	Maximum	Minimum	Maximum		Minimum	Maximum	Minimum	Maximum
AP1	205	251	-5	50	AP1	109	155	-5	50
AP2	205	251	-5	40	AP2	109	155	-5	40
AP3	205	251	-5	44	AP3	109	155	-5	44
BP1	201	284	-10	44	BP1	76	159	-10	44
BP2	ANY		0	16	BP2	ANY		0	16
BP3	201	284	-10	-10	BP3	76	159	-10	-10
BP4	201	284	-10	-10	BP4	76	159	-10	-10
OP1	ANY		0	4	OP1	ANY		0	4
OP2	270		-10	4	OP2	90		-10	4
RP1	270	345	-10	31	RP1	15	90	-10	31
RP2	270	345	-10	-	RP2	15	90	-10	-
FH1	180		0	50	FH1	180		0	50
FH2	180		0	50	FH2	180		0	50
RH	360		0	43	RH	0		0	43
SR1	270		0	10	SR1	90		0	10
SR2A	270		0	13	SR2A	90		0	13
SR2B	270		0	23	SR2B	90		0	23
SR3	270		0	35	SR3	90		0	35
SD	270		0	50	SR3GH	90		0	50
URAP	ANY		0	50	URAP	ANY		0	50
URBP	ANY		0	23	URBP	ANY		0	23
URRP	ANY		0	50	URRP	ANY		0	50

Note : BP2 and OP1 target location – Seat belt anchorage

DATA SHEET 2-4

SUMMARY TARGET IMPACT LOCATION ON FMH

VEHICLE YEAR/MAKE/MODEL/STYLE:	2008 Dodge Grand Caravan
VIN:	2D8HN44H78R627521
DATE OF MANUFACTURE:	12/07(SEE CERTIFICATION LABEL)
COLOR:	Blue



ã RIGHT SIDE OF FACE

TARGET	Distance Above Point 0 (mm)	Distance Over From Pt. O (mm)
OP1	17	10L
SD	27	9L
BP4	46	3L
RP1	18	3L
BP2	2	5L
BP1	6	16R
AP3	24	2L
AP1	7	2R
BP3	26	27L
URBP	38	10L
SR2B	3	0
AP2	4	0

SECTION 3

SUMMARY OF TEST RESULTS AND DATA PLOTS

VEHICLE YEAR/MAKE/MODEL/STYLE:	2008 Dodge Grand Caravan
VIN:	2D8HN44H78R627521
DATE OF MANUFACTURE:	12/07(SEE CERTIFICATION LABEL)
COLOR:	Blue

Test Number:	01
Test Date:	04/22/08
Target Location:	OTHER PILLAR
Target Code:	OP1
Horizontal Impact Angle:	90°
Vertical Impact Angle:	4°
Ambient Temperature:	21.0 C°
Relative Humidity:	36.5%
Time of Impact:	10:00
Headform Number:	1142

Impact Point Description (from lower midpoint on midsagittal line)			
On Centerline	10	mm right	x mm left
On Centerline	17	mm up	



POST-IMPACT OP1 HEADFORM

Free Motion HIC	579.1
HIC(d)	603.3
Impact Velocity (kph)	23.4
HIC T1 (msec)	1.8
HIC T2 (msec)	8.8

FMVSS 201U 2008 Dodge Grand Caravan C80305 - OP1

FMH Headform 1142

Location: OP1

Test Date: April 22, 2008

Work File: OP1

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

Lab Temperature: 21 C

HICd: 603.3

Lab Humidity: 36.5 %

HIC (36ms): 579.1

Velocity at Impact: 23.40 KPH

t1: 1.8 msec

t2: 8.8 msec

Free Flight Distance: 217.68 mm

Duration: 7.0 msec

Average Acceleration: 10.1 g

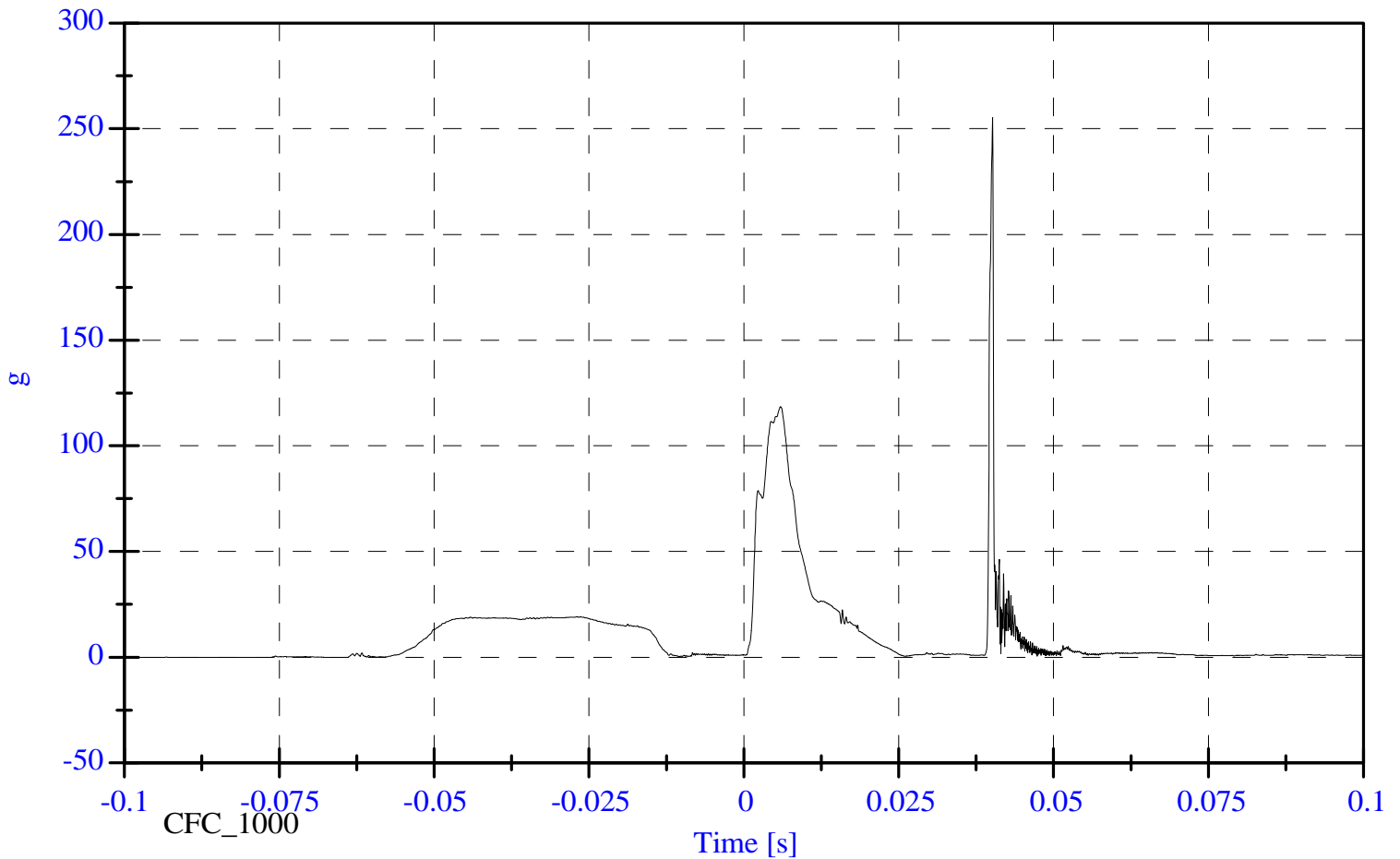
Maximum: 118.5 g

FMVSS 201U 2008 Dodge Grand Caravan

Headform Resultant

Max: 118.5 [g] at 0.006 [s]

Min: -0.0 [g] at -0.099 [s]



FMVSS 201U 2008 Dodge Grand Caravan

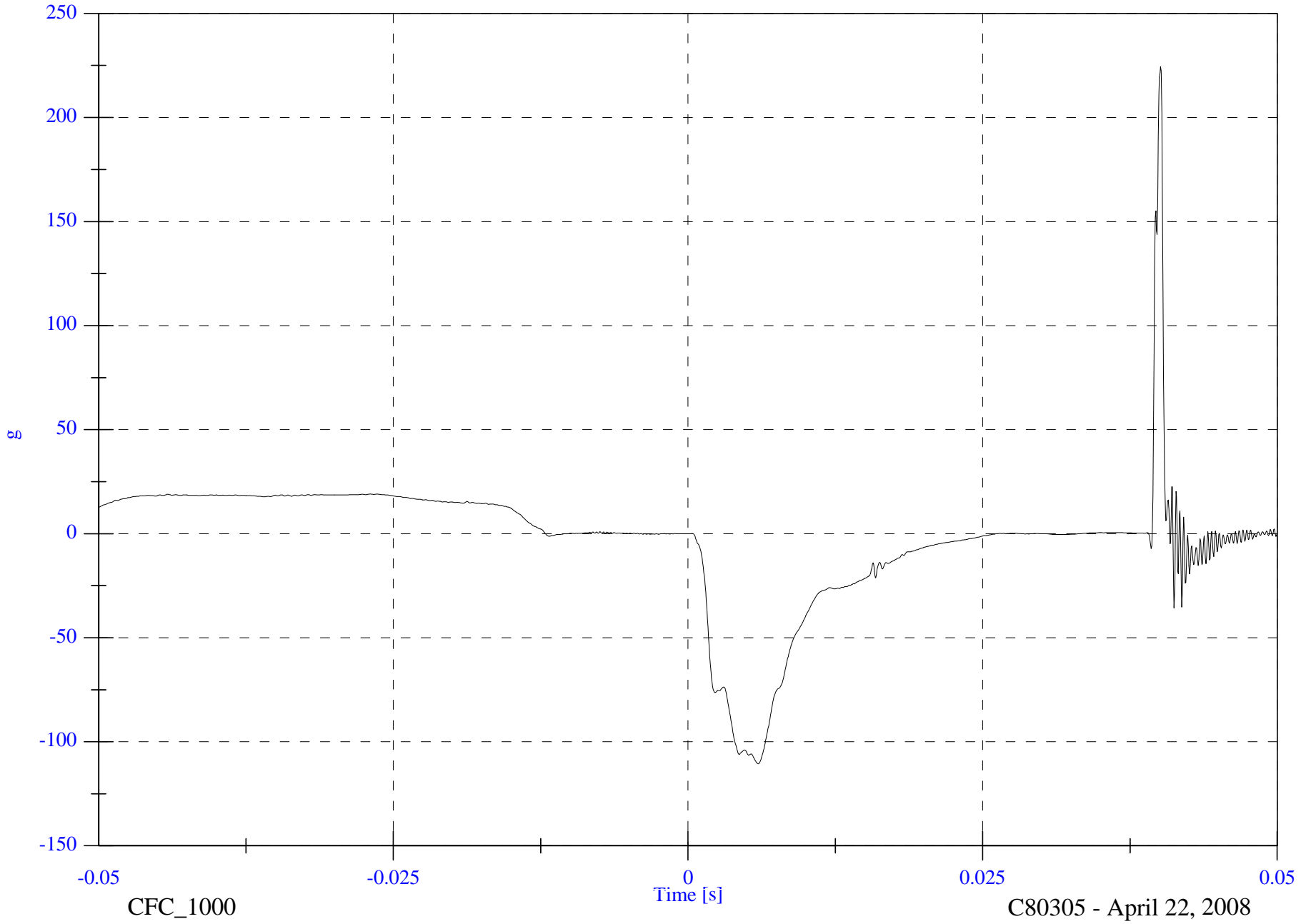
Headform X Acceleration

Max: 224.5 [g] at 0.040 [s]

Min: -110.6 [g] at 0.006 [s]

C80305 PASSENGER SIDE OP1 IMPACT PLOT #2

8851-06



CFC_1000

C80305 - April 22, 2008

FMVSS 201U 2008 Dodge Grand Caravan

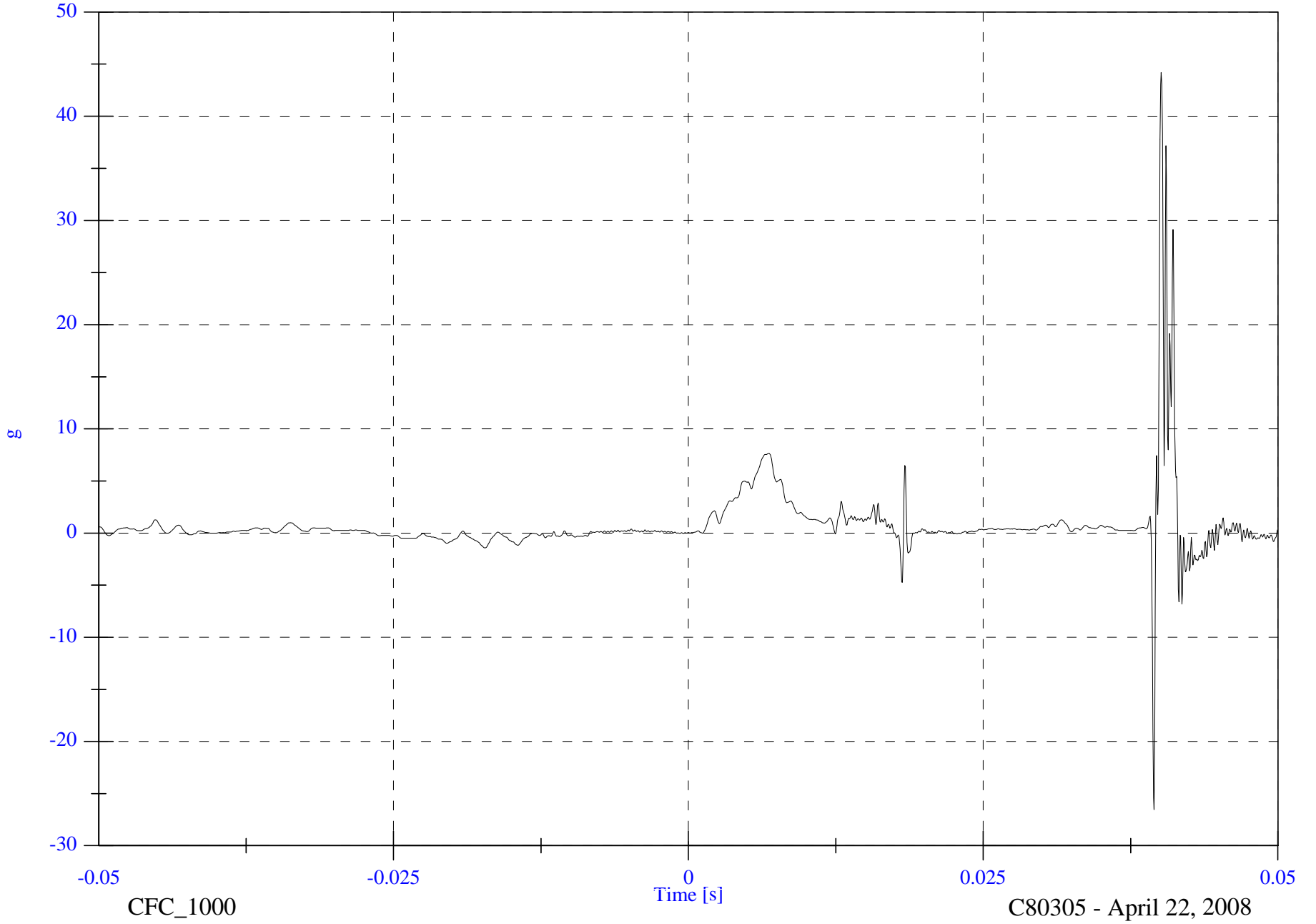
Headform Y Acceleration

Max: 44.2 [g] at 0.040 [s]

Min: -26.5 [g] at 0.039 [s]

C80305 PASSENGER SIDE OP1 IMPACT PLOT #3

8851-06



CFC_1000

Time [s]

C80305 - April 22, 2008

FMVSS 201U 2008 Dodge Grand Caravan

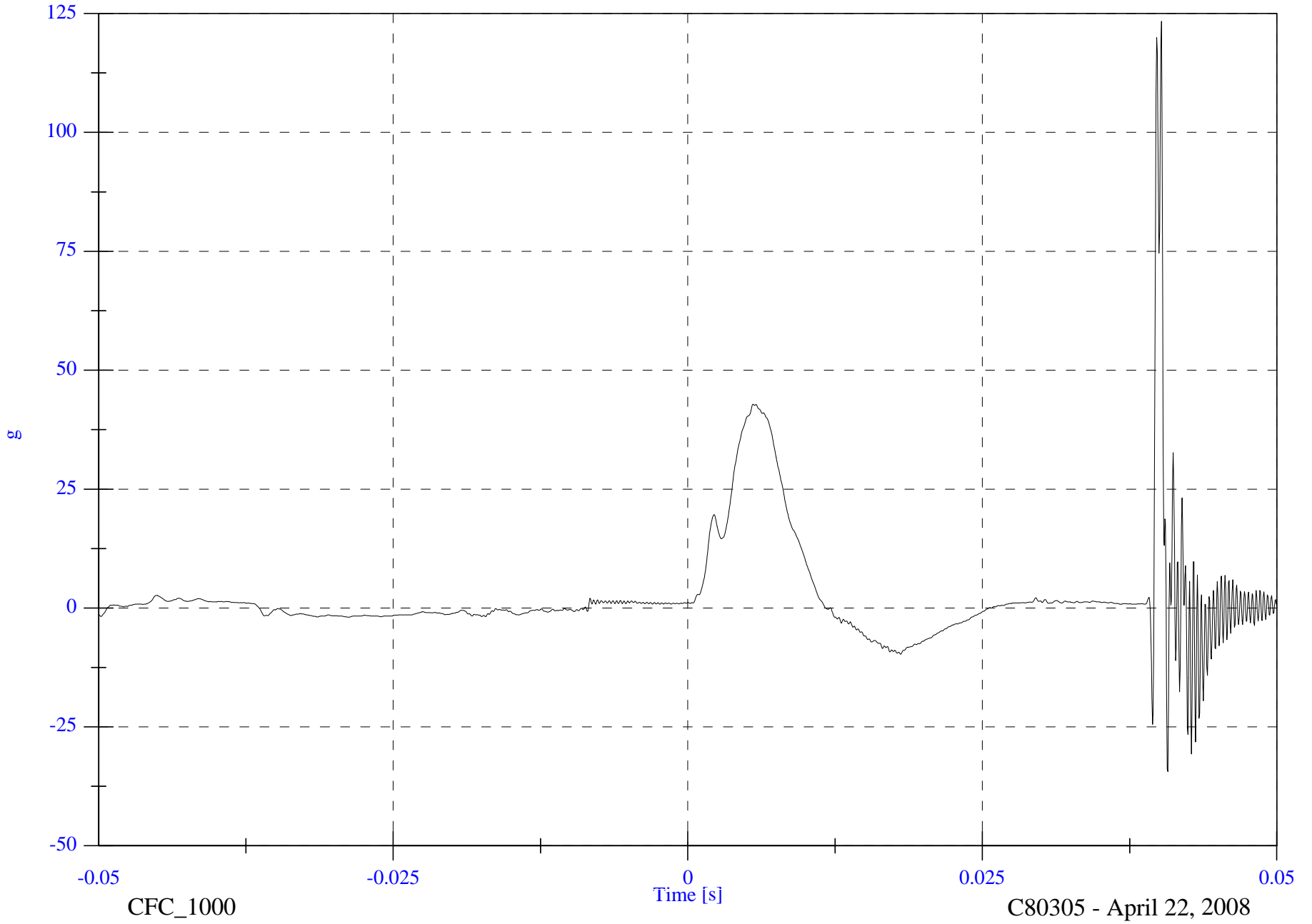
Headform Z Acceleration

Max: 123.4 [g] at 0.040 [s]

Min: -34.4 [g] at 0.041 [s]

C80305 PASSENGER SIDE OP1 IMPACT PLOT #4

8851-06



CFC_1000

Time [s]

C80305 - April 22, 2008

FMVSS 201U 2008 Dodge Grand Caravan

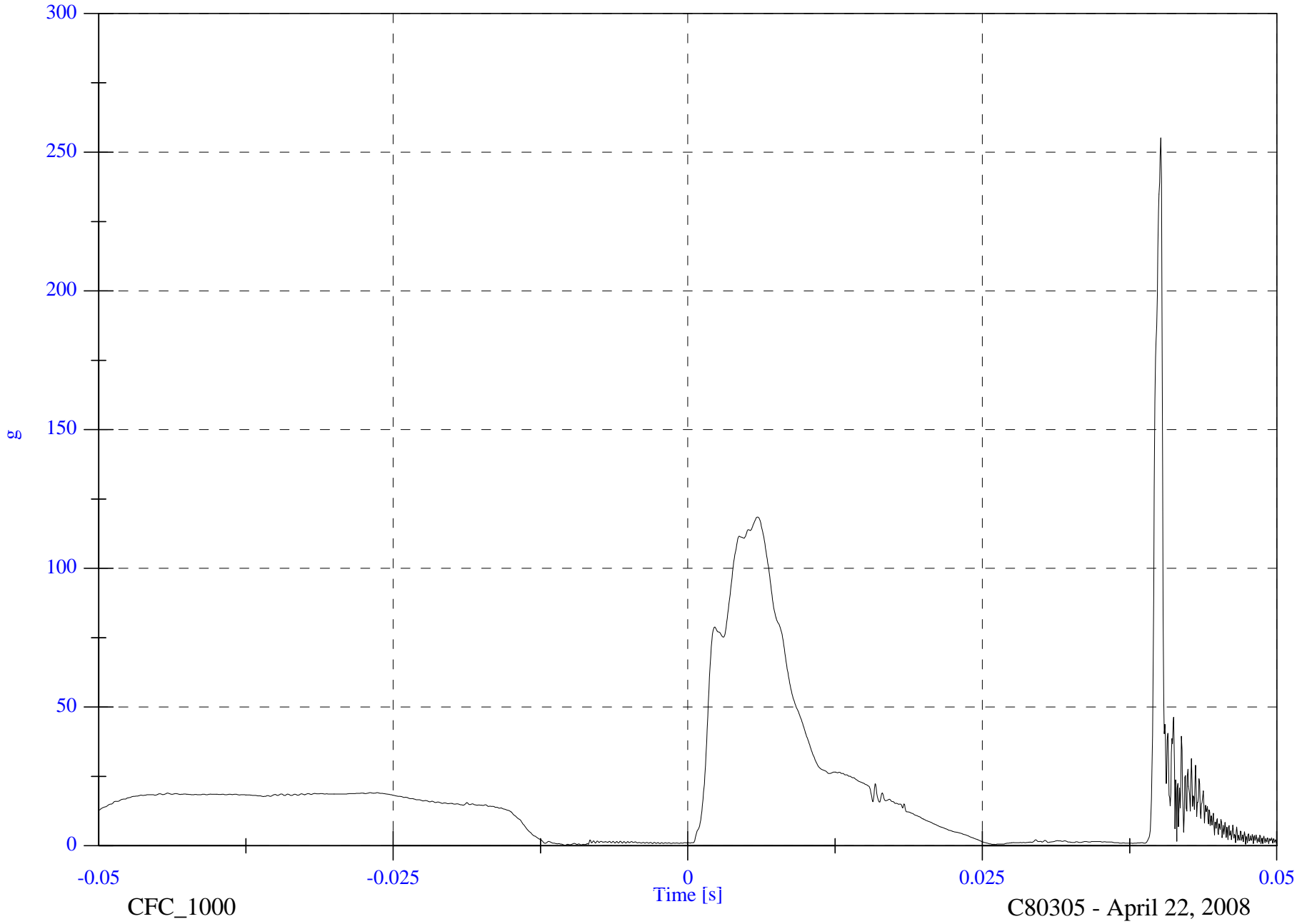
Headform Resultant

Max: 255.2 [g] at 0.040 [s]

Min: 0.2 [g] at -0.010 [s]

C80305 PASSENGER SIDE OP1 IMPACT PLOT #5

8851-06



CFC_1000

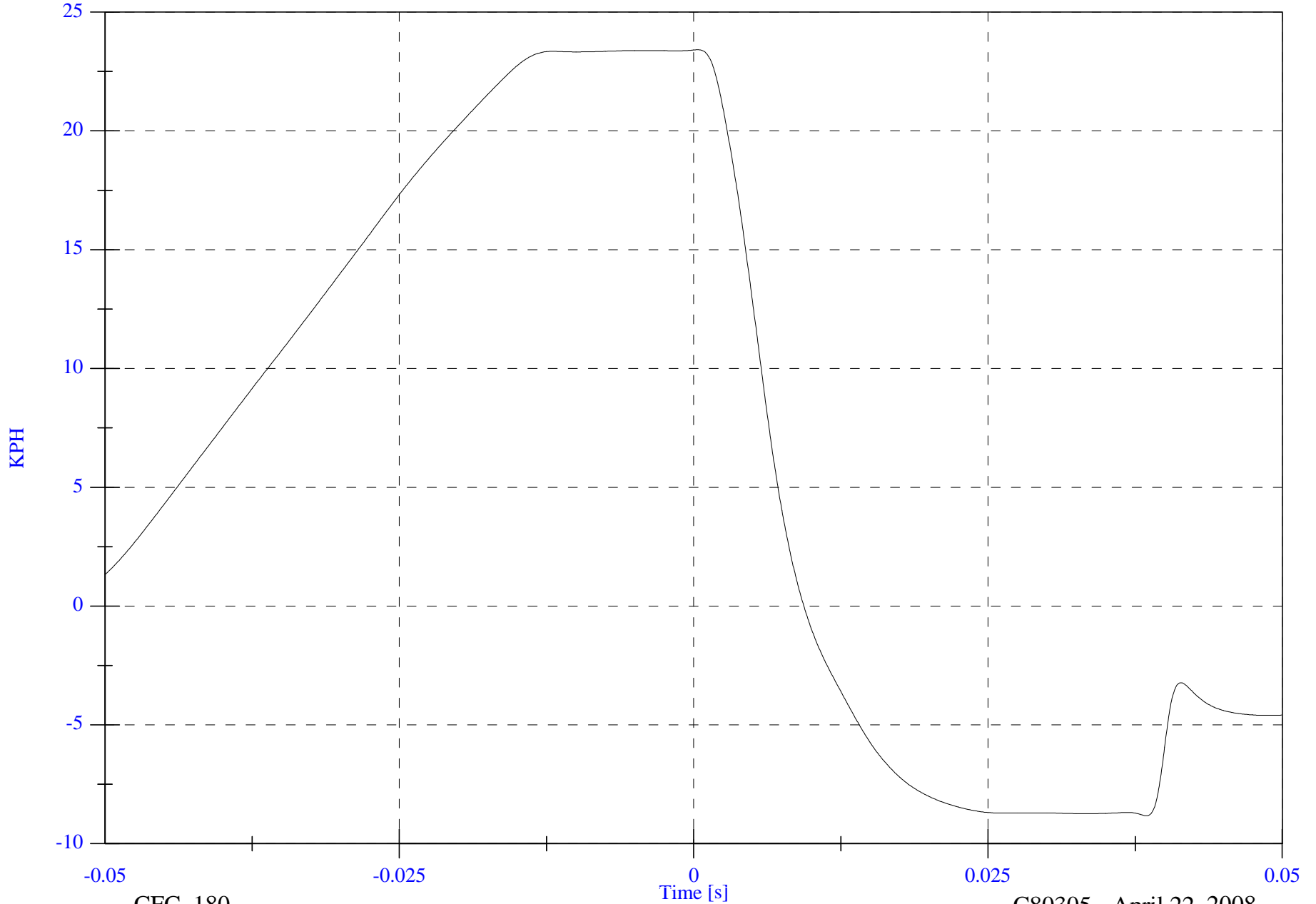
C80305 - April 22, 2008

FMVSS 201U 2008 Dodge Grand Caravan

Max: 23.4 [KPH] at 0.000 [s]

Min: -8.8 [KPH] at 0.038 [s]

Headform Velocity

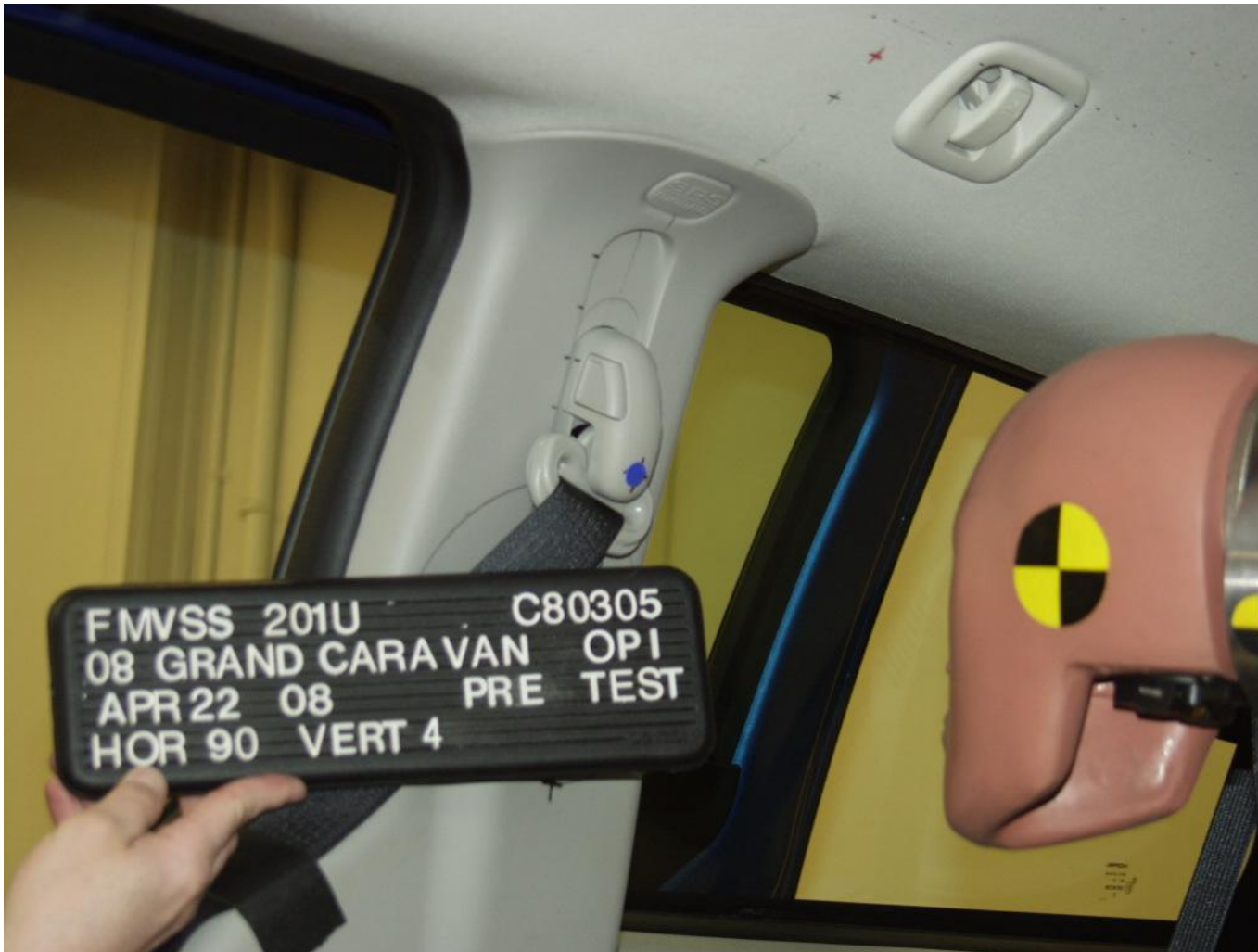


C80305 PASSENGER SIDE OP1 IMPACT PLOT #6

8851-06

CFC_180

C80305 - April 22, 2008



PRE-IMPACT OPI



POST-IMPACT OPI

VEHICLE YEAR/MAKE/MODEL/STYLE:	2008 Dodge Grand Caravan
VIN:	2D8HN44H78R627521
DATE OF MANUFACTURE:	12/07(SEE CERTIFICATION LABEL)
COLOR:	Blue

Test Number:	02
Test Date:	04/22/08
Target Location:	SLIDING DOOR
Target Code:	SD
Horizontal Impact Angle:	90°
Vertical Impact Angle:	50°
Ambient Temperature:	21.1 C°
Relative Humidity:	32.1%
Time of Impact:	10:30
Headform Number:	0355

Impact Point Description (from lower midpoint on midsagittal line)			
On Centerline	9	<input type="checkbox"/>	mm right <input checked="" type="checkbox"/> mm left
On Centerline	27		mm up



POST-IMPACT SD HEADFORM

Free Motion HIC	129.5
HIC(d)	264.1
Impact Velocity (kph)	18.46
HIC T1 (msec)	6.7
HIC T2 (msec)	18.6

FMVSS 201U 2008 Dodge Grand Caravan C80305 - SD

FMH Headform 0355

Location: SD

Test Date: April 22, 2008

Work File: SD

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

Lab Temperature: 21.1 C

HICd: 264.1

Lab Humidity: 32.1 %

HIC (36ms): 129.5

Velocity at Impact: 18.46 KPH

t1: 6.7 msec

t2: 18.6 msec

Free Flight Distance: 226.58 mm

Duration: 11.9 msec

Average Acceleration: 6.7 g

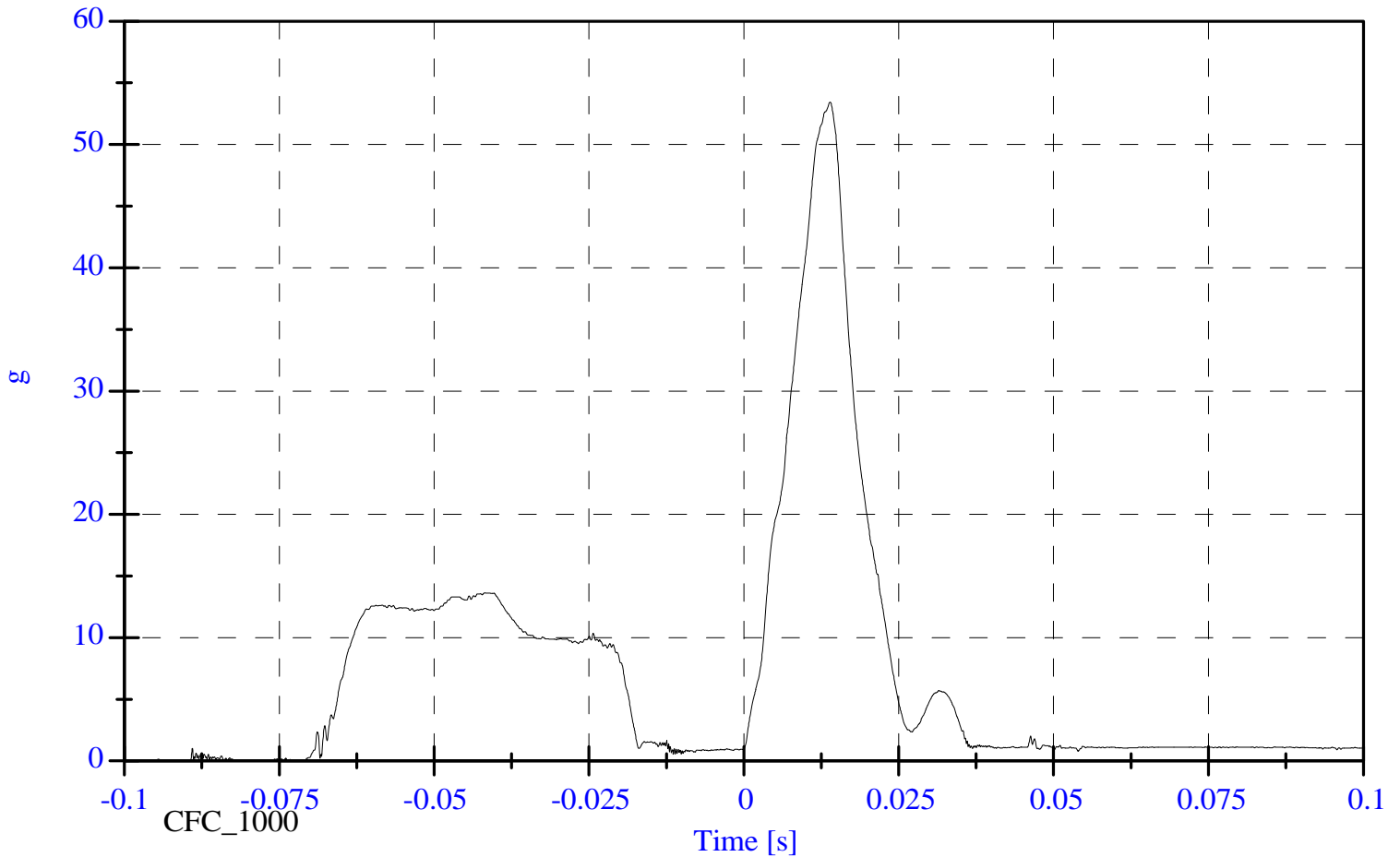
Maximum: 53.4 g

FMVSS 201U 2008 Dodge Grand Caravan

Headform Resultant

Max: 53.4 [g] at 0.014 [s]

Min: 0.0 [g] at -0.094 [s]



FMVSS 201U 2008 Dodge Grand Caravan

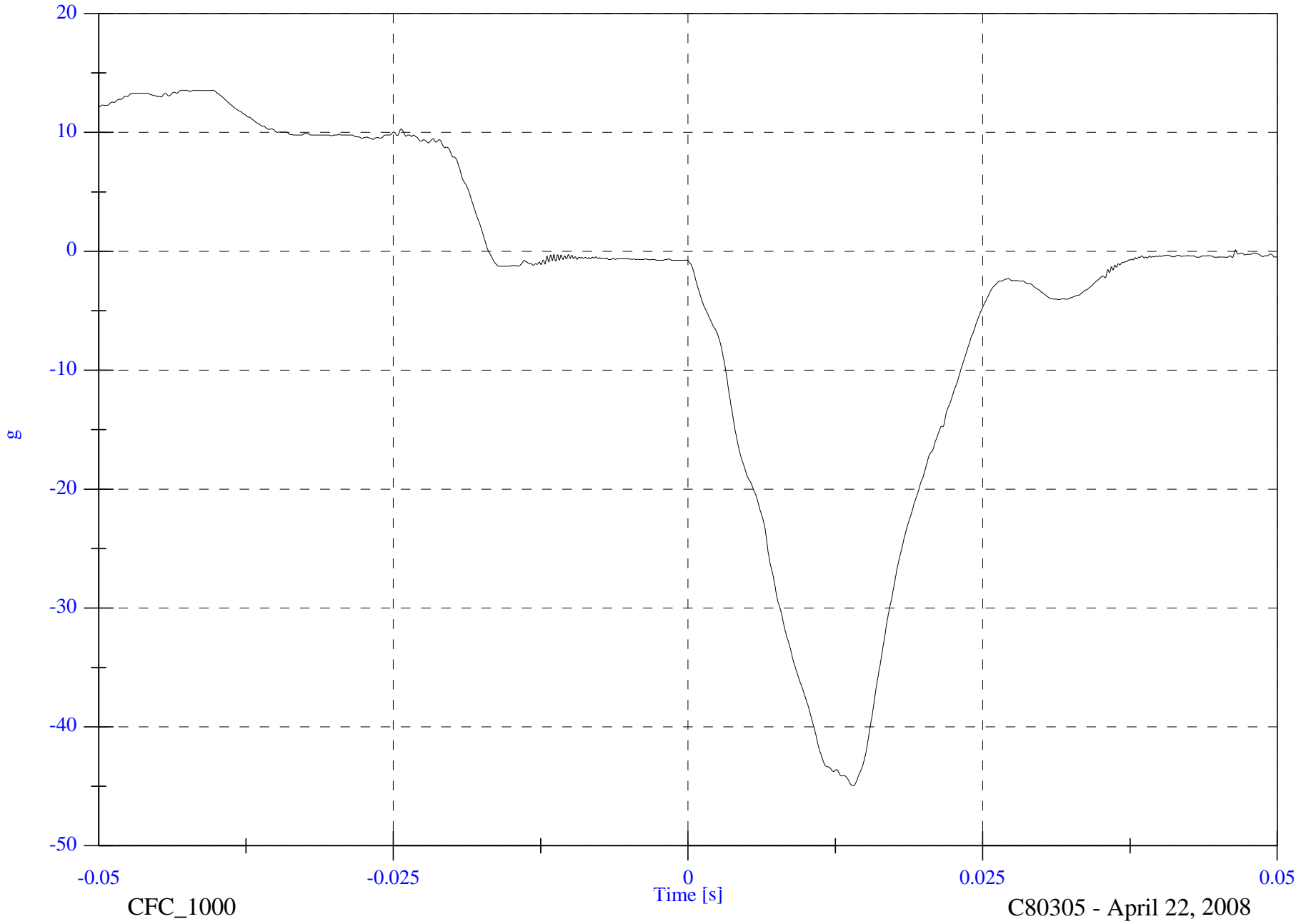
Headform X Acceleration

Max: 13.5 [g] at -0.043 [s]

Min: -45.0 [g] at 0.014 [s]

C80305 PASSENGER SIDE SD IMPACT PLOT #2

8851-06



CFC_1000

Time [s]

C80305 - April 22, 2008

FMVSS 201U 2008 Dodge Grand Caravan

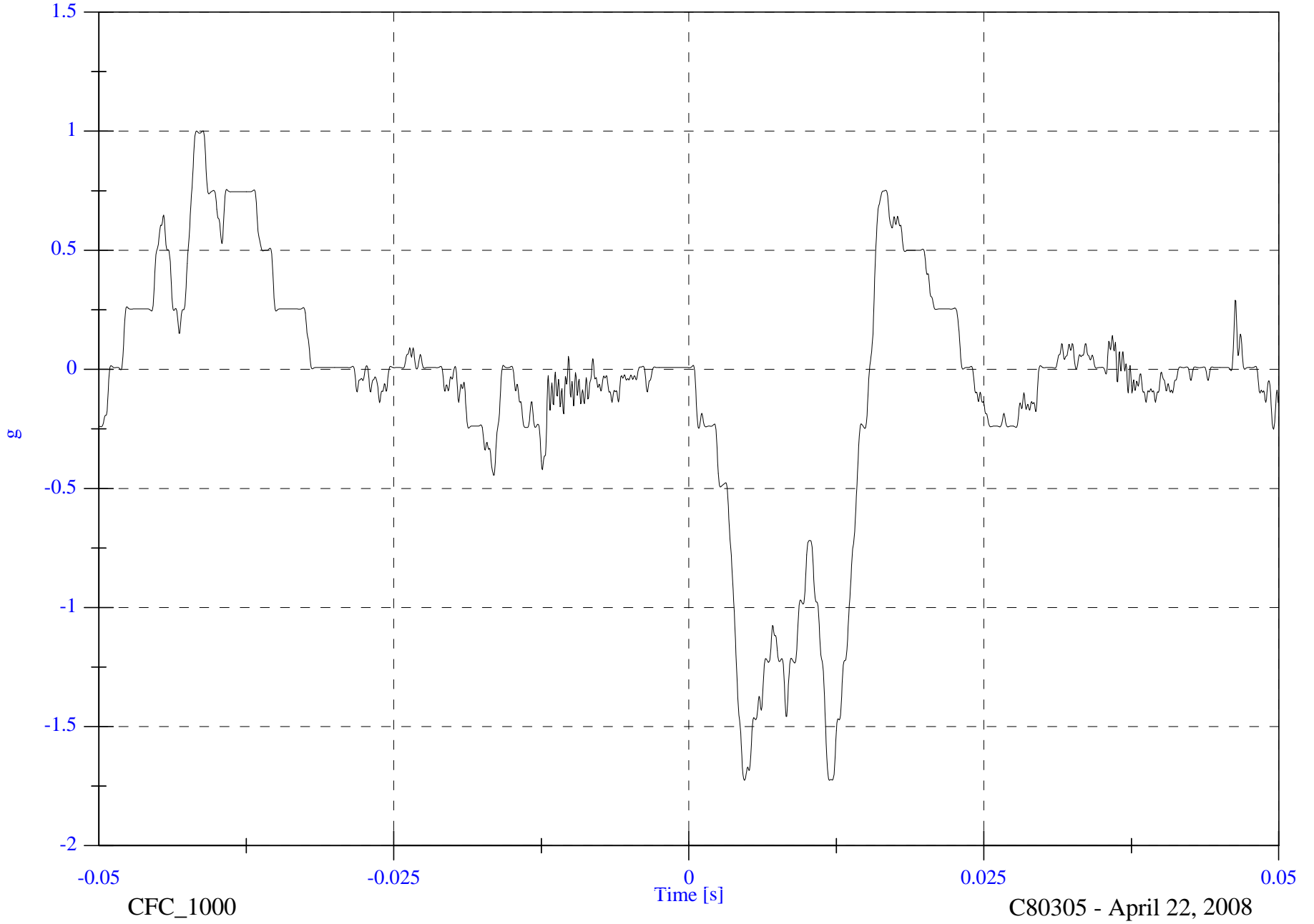
Headform Y Acceleration

Max: 1.0 [g] at -0.041 [s]

Min: -1.7 [g] at 0.005 [s]

C80305 PASSENGER SIDE SD IMPACT PLOT #3

8851-06



CFC_1000

Time [s]

C80305 - April 22, 2008

FMVSS 201U 2008 Dodge Grand Caravan

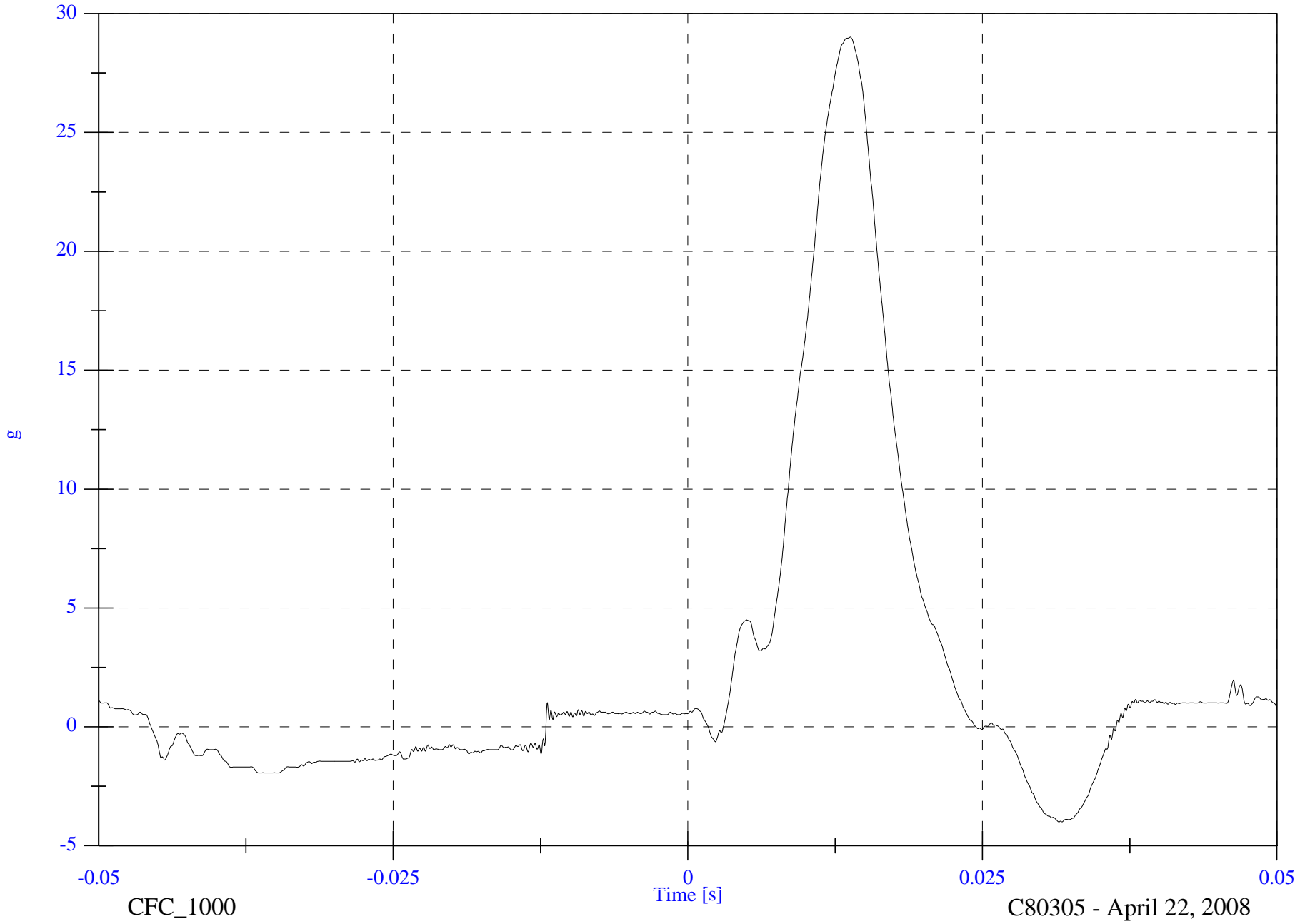
Headform Z Acceleration

Max: 29.0 [g] at 0.014 [s]

Min: -4.0 [g] at 0.032 [s]

C80305 PASSENGER SIDE SD IMPACT PLOT #4

8851-06



CFC_1000

C80305 - April 22, 2008

FMVSS 201U 2008 Dodge Grand Caravan

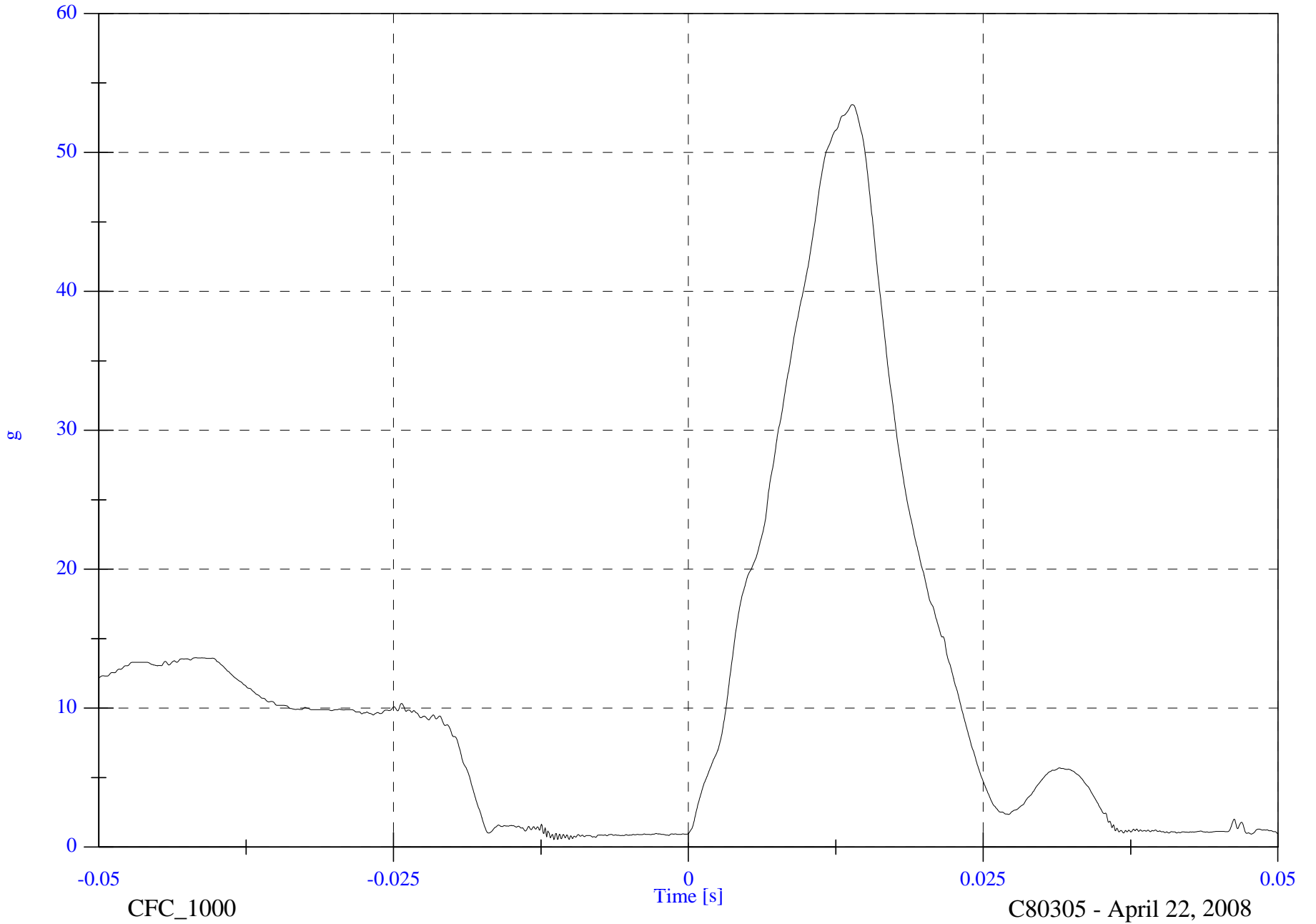
Headform Resultant

Max: 53.4 [g] at 0.014 [s]

Min: 0.5 [g] at -0.011 [s]

C80305 PASSENGER SIDE SD IMPACT PLOT #5

8851-06



CFC_1000

C80305 - April 22, 2008

FMVSS 201U 2008 Dodge Grand Caravan

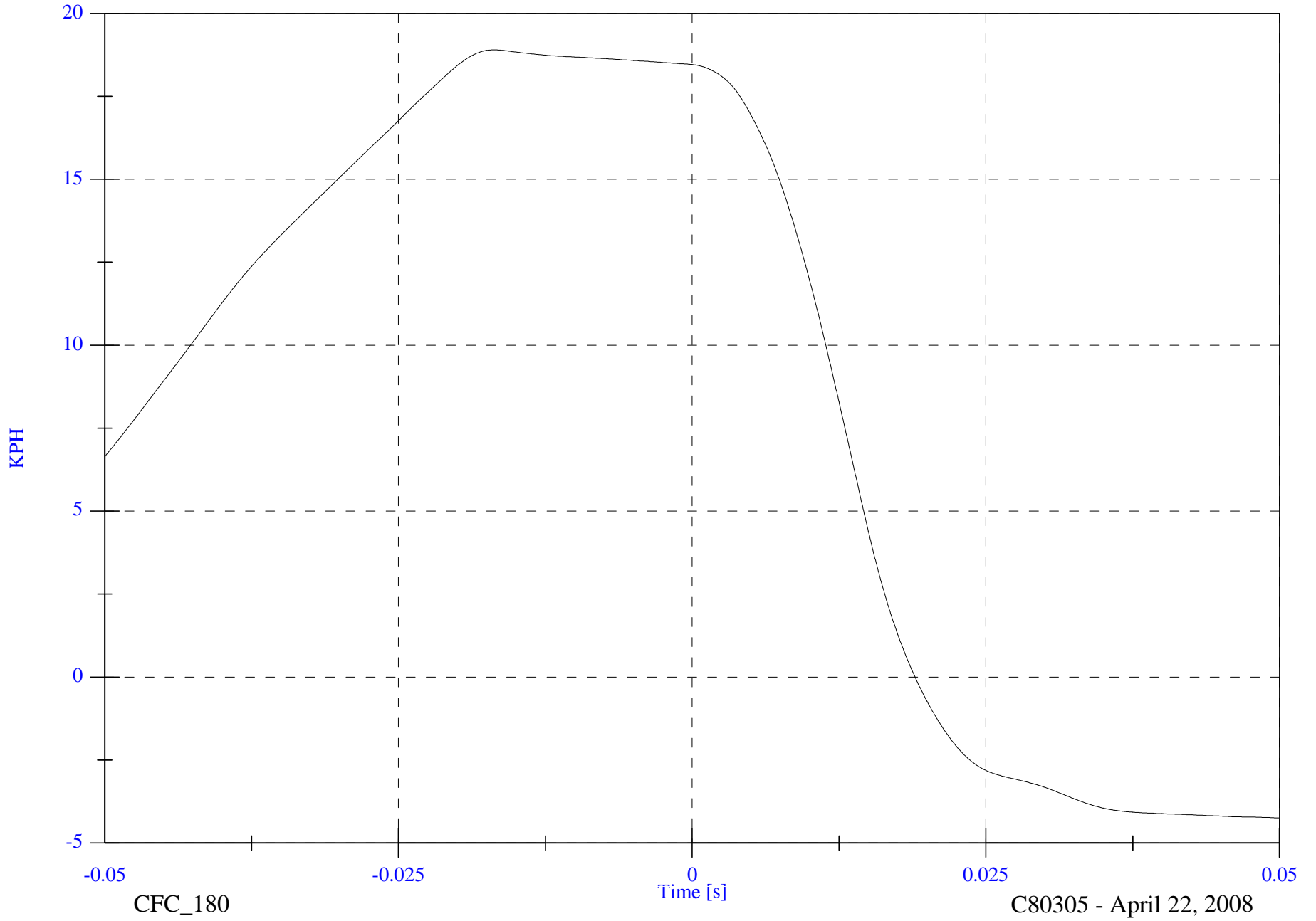
Max: 18.9 [KPH] at -0.017 [s]

Min: -4.2 [KPH] at 0.050 [s]

Headform Velocity

C80305 PASSENGER SIDE SD IMPACT PLOT #6

8851-06



CFC_180

C80305 - April 22, 2008



PRE-IMPACT SD



POST-IMPACT SD

VEHICLE YEAR/MAKE/MODEL/STYLE:	2008 Dodge Grand Caravan
VIN:	2D8HN44H78R627521
DATE OF MANUFACTURE:	12/07(SEE CERTIFICATION LABEL)
COLOR:	Blue

Test Number:	03
Test Date:	04/22/08
Target Location:	B-PILLAR
Target Code:	BP4
Horizontal Impact Angle:	141°
Vertical Impact Angle:	-10°
Ambient Temperature:	21.1 C°
Relative Humidity:	31.8%
Time of Impact:	11:10
Headform Number:	1140

Impact Point Description (from lower midpoint on midsagittal line)			
On Centerline	3	<input type="checkbox"/>	mm right <input checked="" type="checkbox"/> mm left
On Centerline	46		mm up



POST-IMPACT BP4 HEADFORM

Free Motion HIC	700.5
HIC(d)	694.9
Impact Velocity (kph)	23.68
HIC T1 (msec)	1.8
HIC T2 (msec)	7.1

FMVSS 201U 2008 Dodge Grand Caravan C80305 - BP4

FMH Headform 1140

Location: BP4

Test Date: April 22, 2008

Work File: BP4

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

Lab Temperature: 21.1 C

HICd: 694.9

Lab Humidity: 31.8 %

HIC (36ms): 700.5

Velocity at Impact: 23.68 KPH

t1: 1.8 msec

t2: 7.1 msec

Free Flight Distance: 216.53 mm

Duration: 5.3 msec

Average Acceleration: 8.5 g

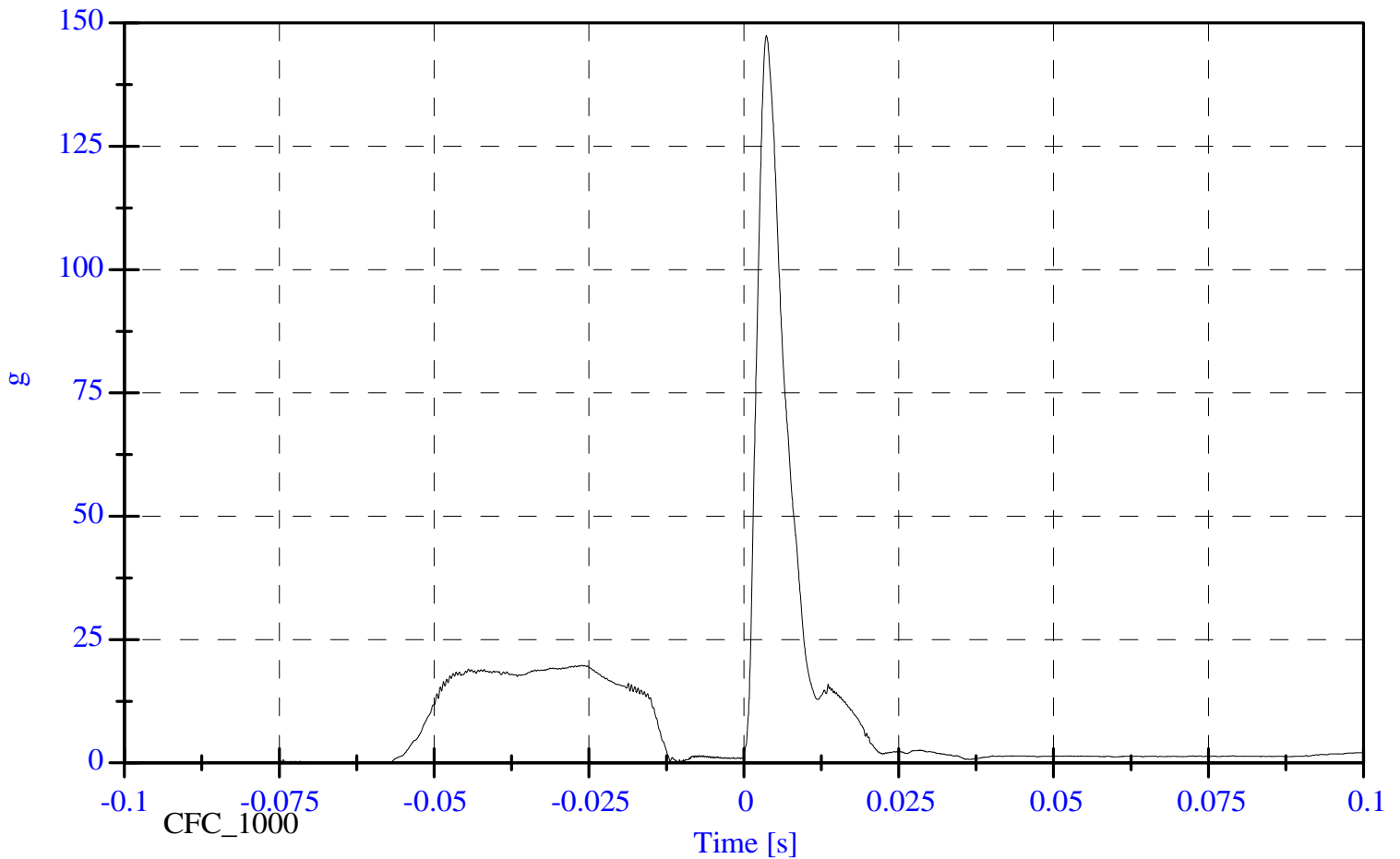
Maximum: 147.4 g

FMVSS 201U 2008 Dodge Grand Caravan

Headform Resultant

Max: 147.4 [g] at 0.004 [s]

Min: 0.0 [g] at -0.082 [s]



FMVSS 201U 2008 Dodge Grand Caravan

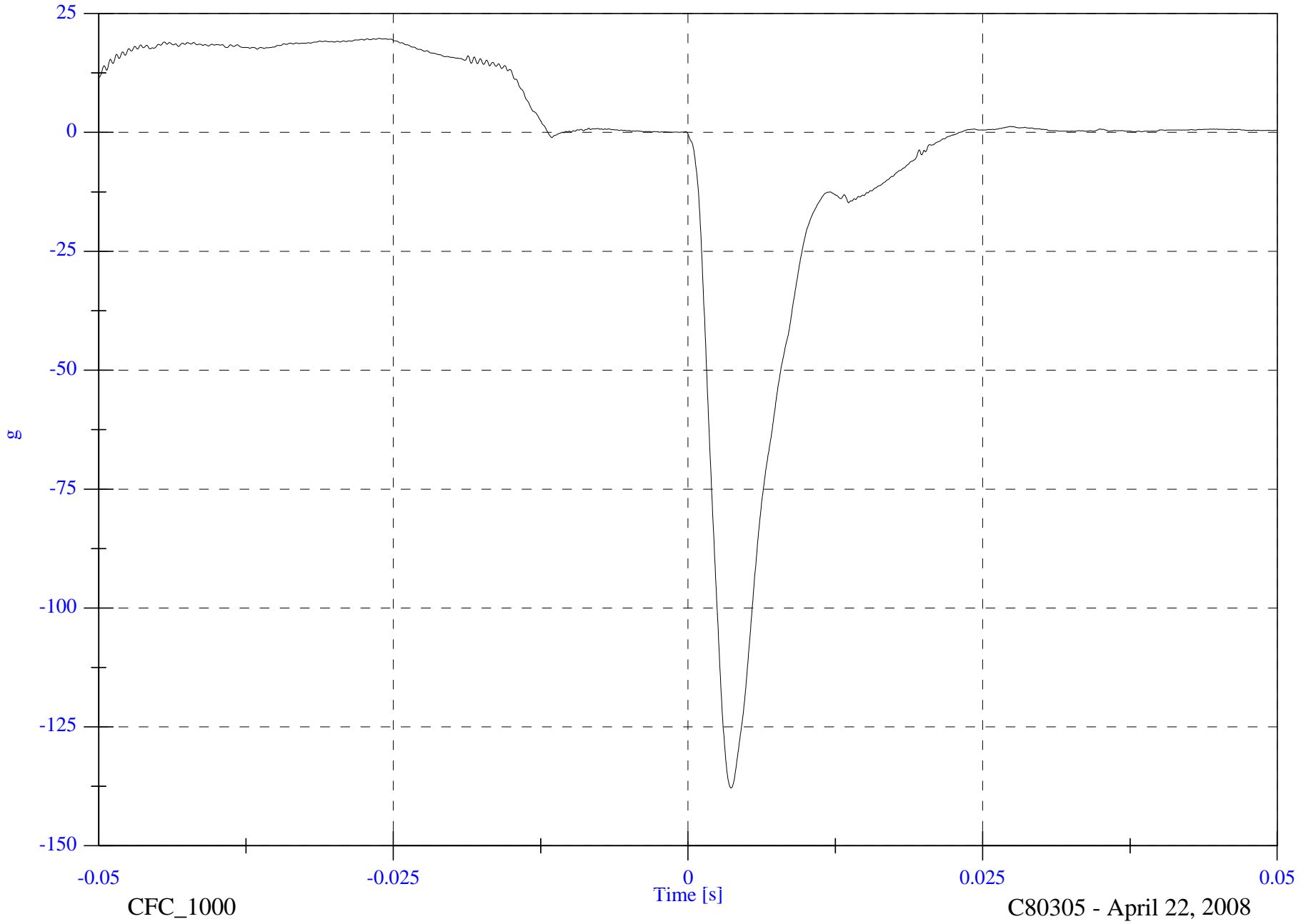
Headform X Acceleration

Max: 19.8 [g] at -0.026 [s]

Min: -137.9 [g] at 0.004 [s]

C80305 PASSENGER SIDE BP4 IMPACT PLOT #2

8851-06



CFC_1000

C80305 - April 22, 2008

FMVSS 201U 2008 Dodge Grand Caravan

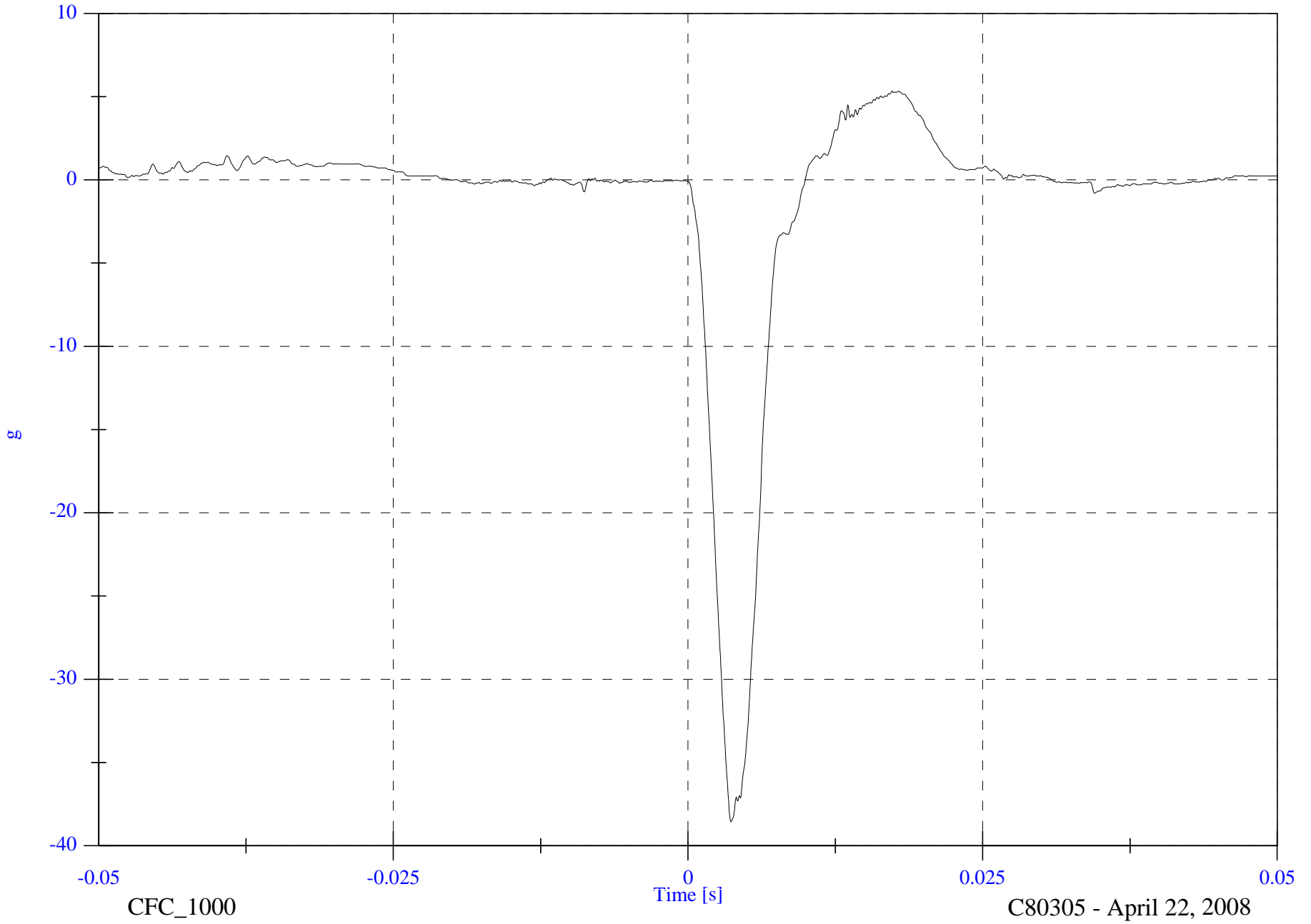
Headform Y Acceleration

Max: 5.3 [g] at 0.017 [s]

Min: -38.6 [g] at 0.004 [s]

C80305 PASSENGER SIDE BP4 IMPACT PLOT #3

8851-06



CFC_1000

C80305 - April 22, 2008

FMVSS 201U 2008 Dodge Grand Caravan

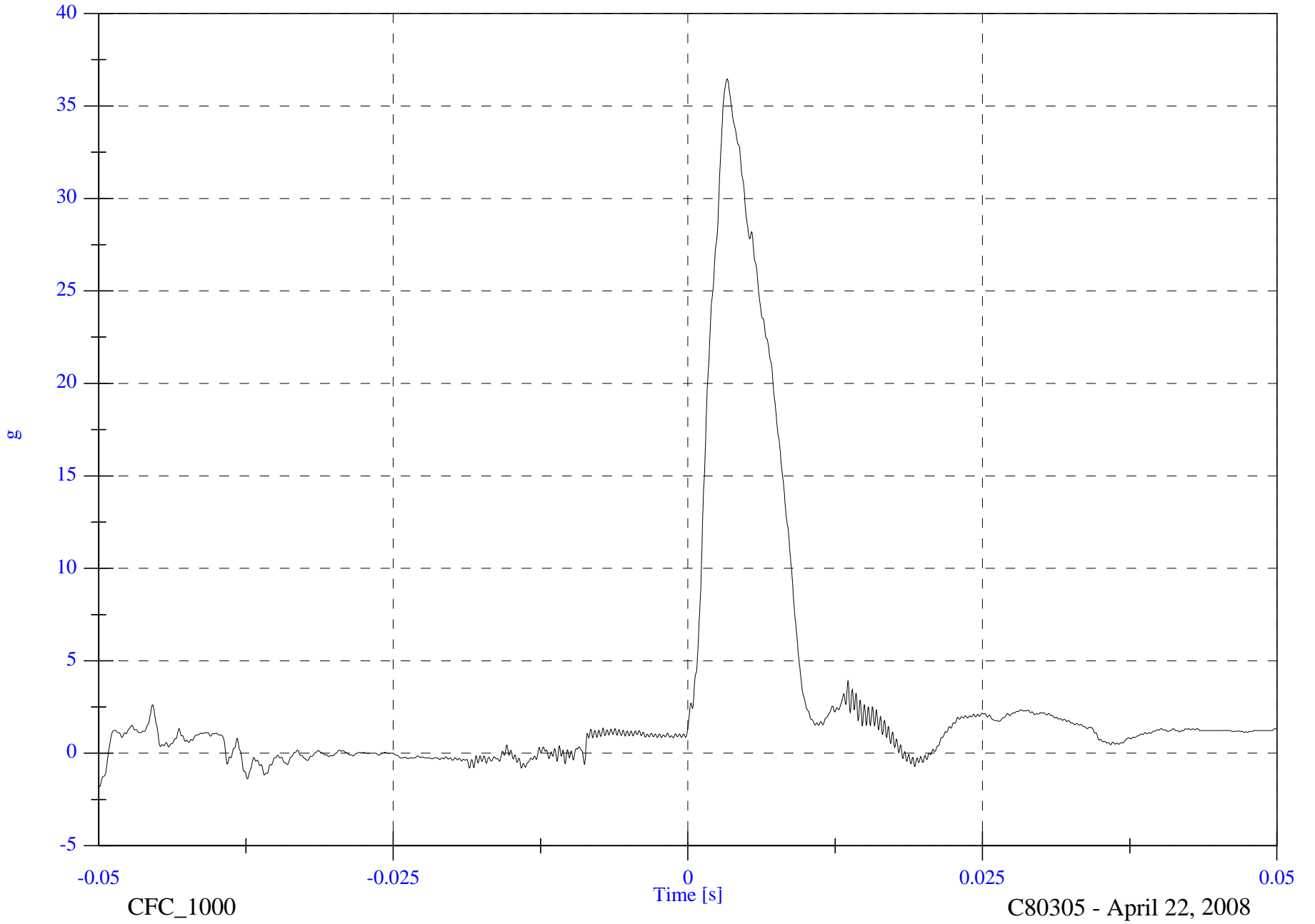
Headform Z Acceleration

Max: 36.5 [g] at 0.003 [s]

Min: -1.8 [g] at -0.050 [s]

C80305 PASSENGER SIDE BP4 IMPACT PLOT #4

8851-06



CFC_1000

C80305 - April 22, 2008

FMVSS 201U 2008 Dodge Grand Caravan

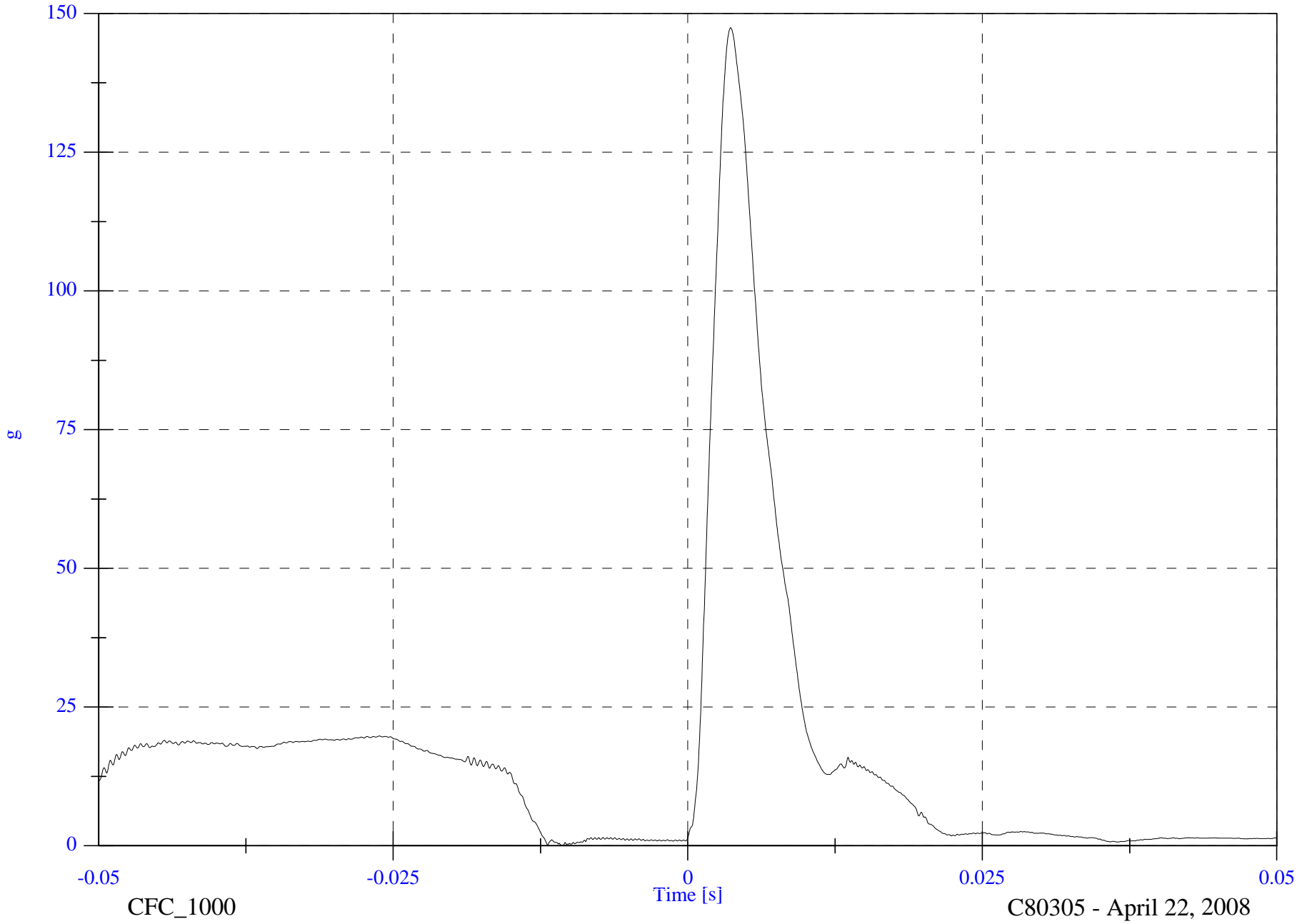
Max: 147.4 [g] at 0.004 [s]

Headform Resultant

Min: 0.1 [g] at -0.011 [s]

C80305 PASSENGER SIDE BP4 IMPACT PLOT #5

8851-06

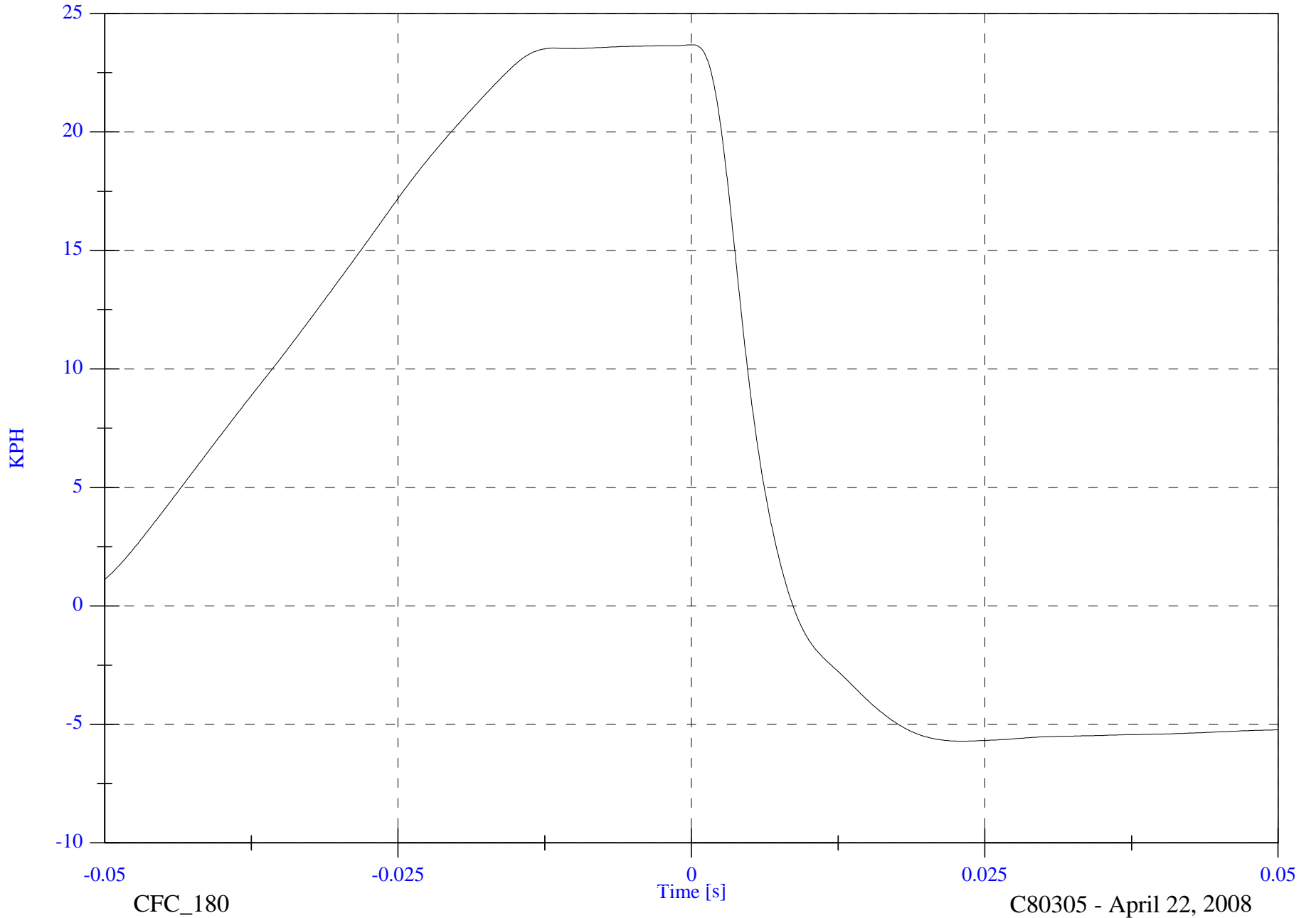


FMVSS 201U 2008 Dodge Grand Caravan

Max: 23.7 [KPH] at 0.000 [s]

Min: -5.7 [KPH] at 0.023 [s]

Headform Velocity



C80305 PASSENGER SIDE BP4 IMPACT PLOT #6

8851-06

CFC_180

C80305 - April 22, 2008



PRE-IMPACT BP4



POST-IMPACT BP4

VEHICLE YEAR/MAKE/MODEL/STYLE:	2008 Dodge Grand Caravan
VIN:	2D8HN44H78R627521
DATE OF MANUFACTURE:	12/07(SEE CERTIFICATION LABEL)
COLOR:	Blue

Test Number:	04
Test Date:	04/22/08
Target Location:	REAR PILLAR
Target Code:	RP1
Horizontal Impact Angle:	61°
Vertical Impact Angle:	31°
Ambient Temperature:	21.0 C°
Relative Humidity:	32.3%
Time of Impact:	11:40
Headform Number:	0805

Impact Point Description (from lower midpoint on midsagittal line)			
On Centerline	3	<input type="checkbox"/>	mm right <input checked="" type="checkbox"/> mm left
On Centerline	18		mm up



POST-IMPACT RP1 HEADFORM

Free Motion HIC	141.3
HIC(d)	273.0
Impact Velocity (kph)	18.62
HIC T1 (msec)	5.2
HIC T2 (msec)	20.4

FMVSS 201U 2008 Dodge Grand Caravan C80305 - RP1

FMH Headform 0805

Location: RP1

Test Date: April 22, 2008

Work File: RP1

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

Lab Temperature: 21.0 C

HICd: 273.0

Lab Humidity: 32.3 %

HIC (36ms): 141.3

Velocity at Impact: 18.62 KPH

t1: 5.2 msec

t2: 20.4 msec

Free Flight Distance: 222.81 mm

Duration: 15.2 msec

Average Acceleration: 7.5 g

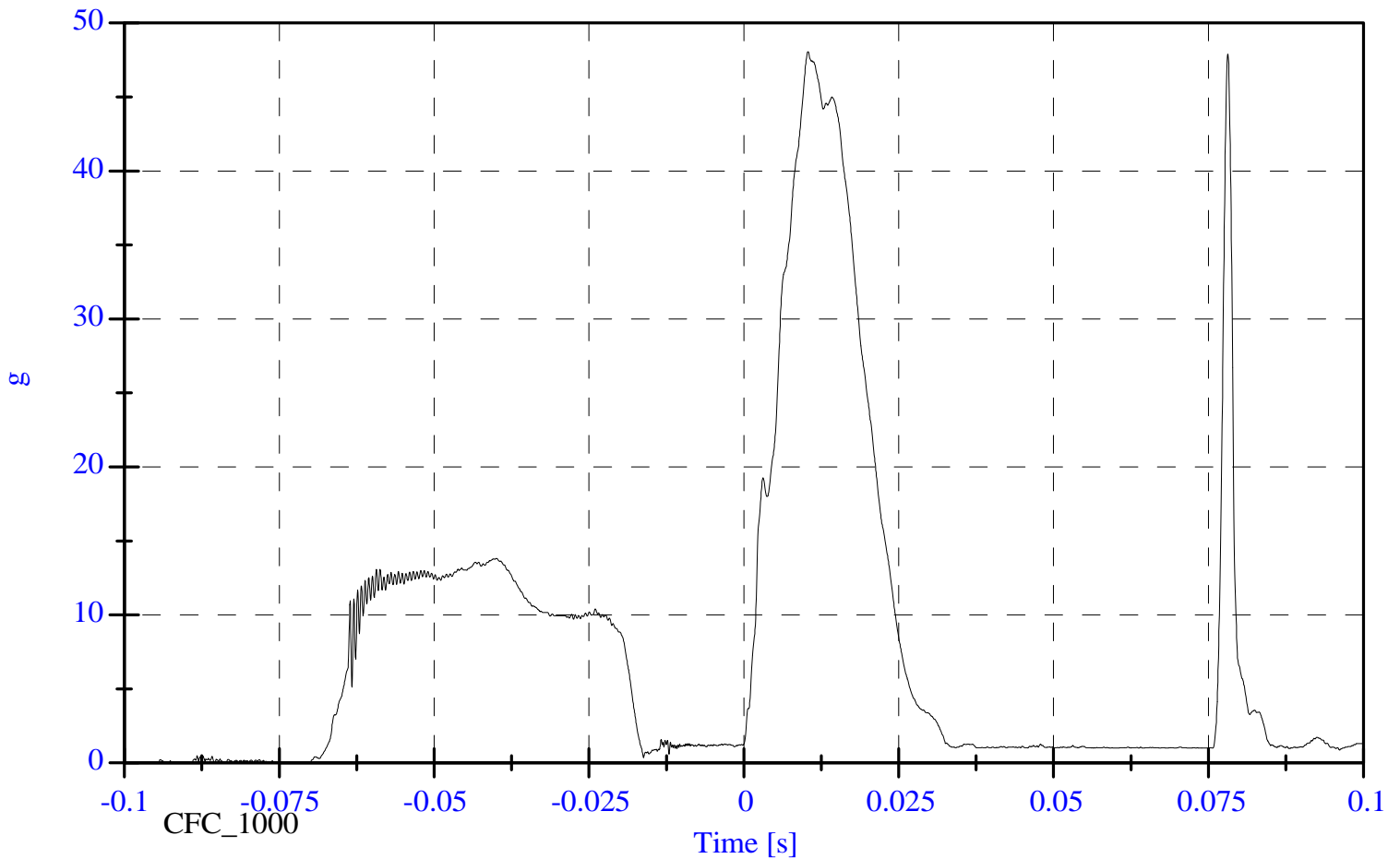
Maximum: 48.1 g

FMVSS 201U 2008 Dodge Grand Caravan

Headform Resultant

Max: 48.1 [g] at 0.010 [s]

Min: 0.0 [g] at -0.091 [s]



FMVSS 201U 2008 Dodge Grand Caravan

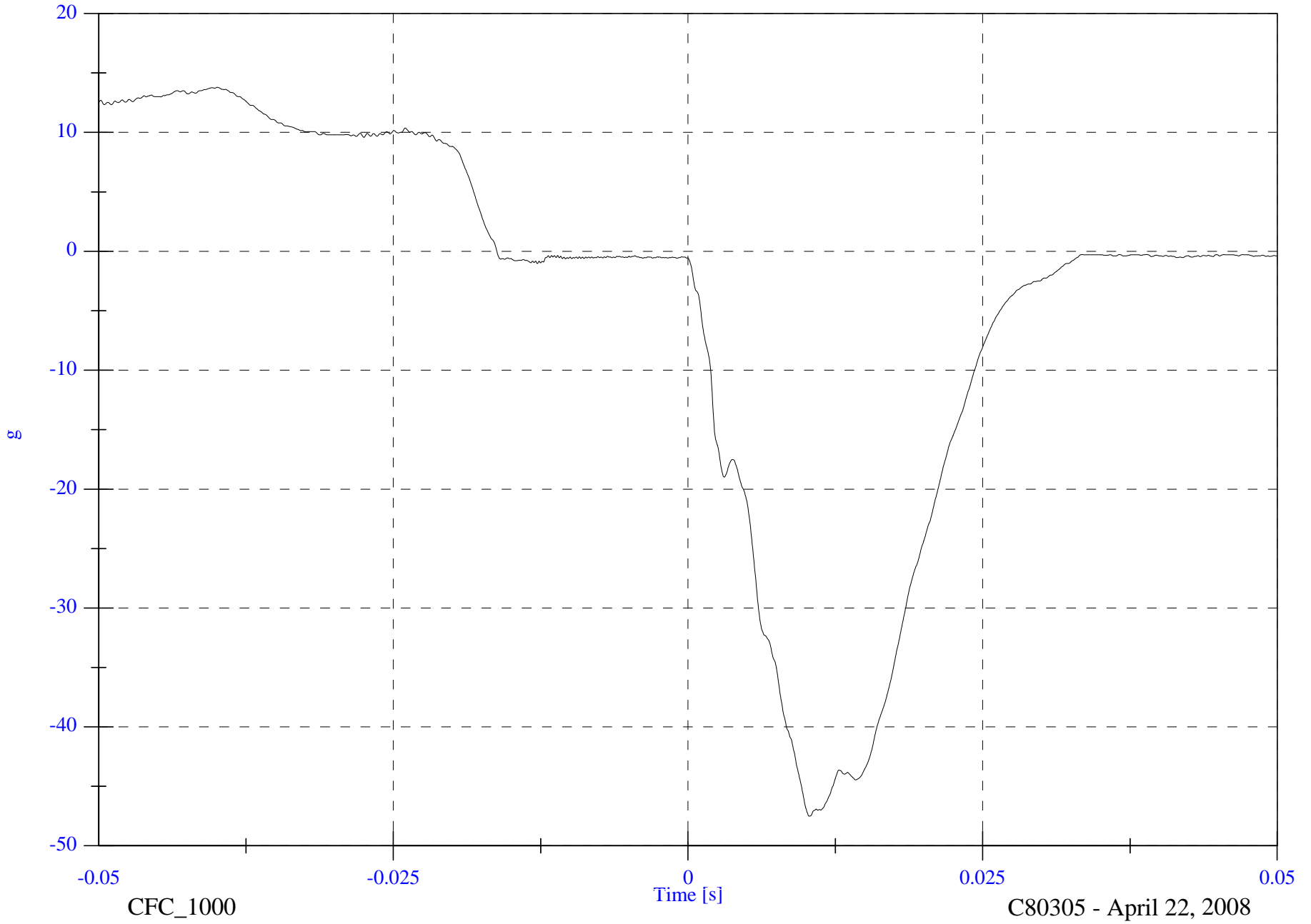
Headform X Acceleration

Max: 13.8 [g] at -0.040 [s]

Min: -47.5 [g] at 0.010 [s]

C80305 PASSENGER SIDE RPI IMPACT PLOT #1

8851-06



CFC_1000

C80305 - April 22, 2008

FMVSS 201U 2008 Dodge Grand Caravan

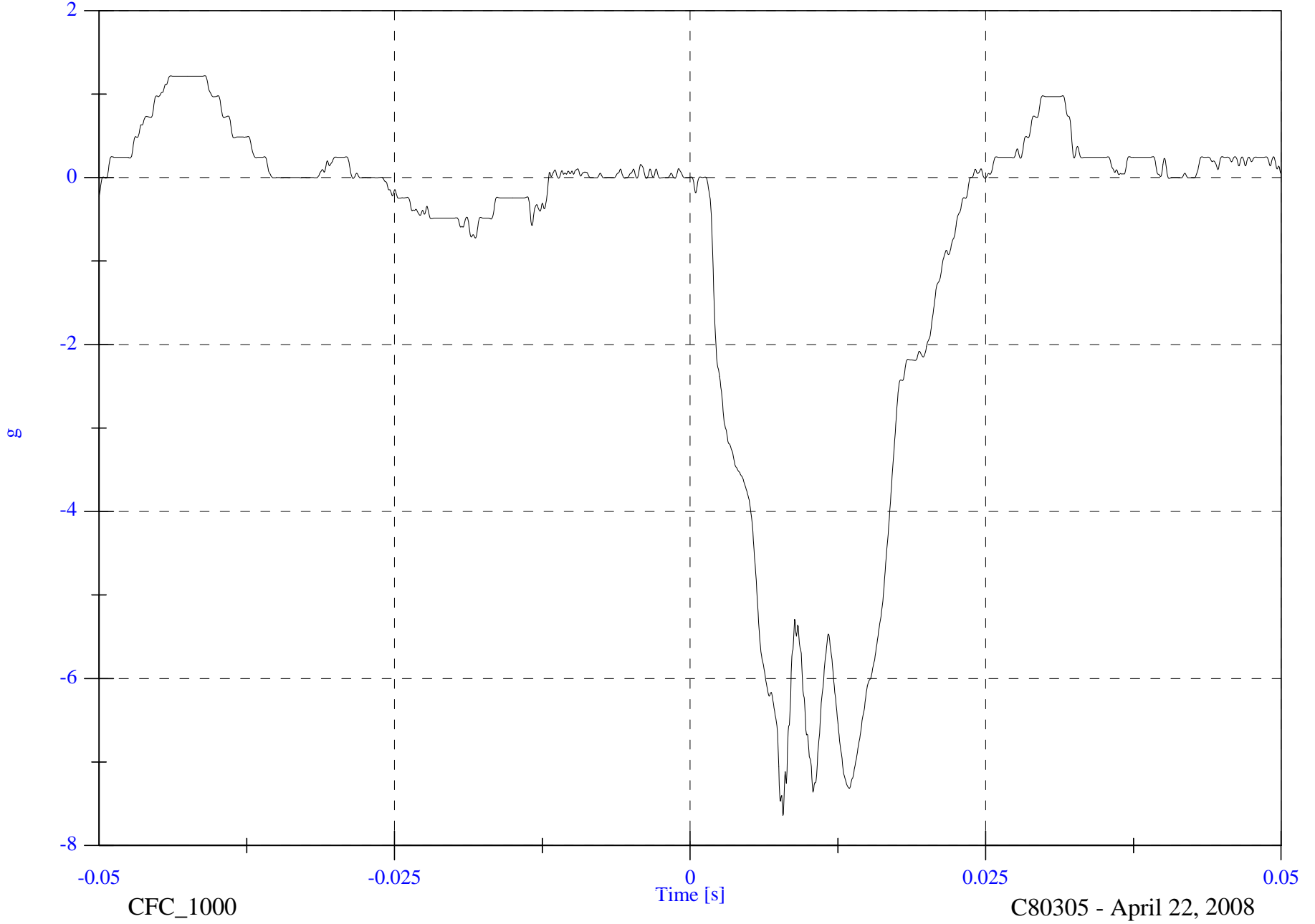
Headform Y Acceleration

Max: 1.2 [g] at -0.041 [s]

Min: -7.6 [g] at 0.008 [s]

C80305 PASSENGER SIDE RP1 IMPACT PLOT #2

8851-06



CFC_1000

C80305 - April 22, 2008

FMVSS 201U 2008 Dodge Grand Caravan

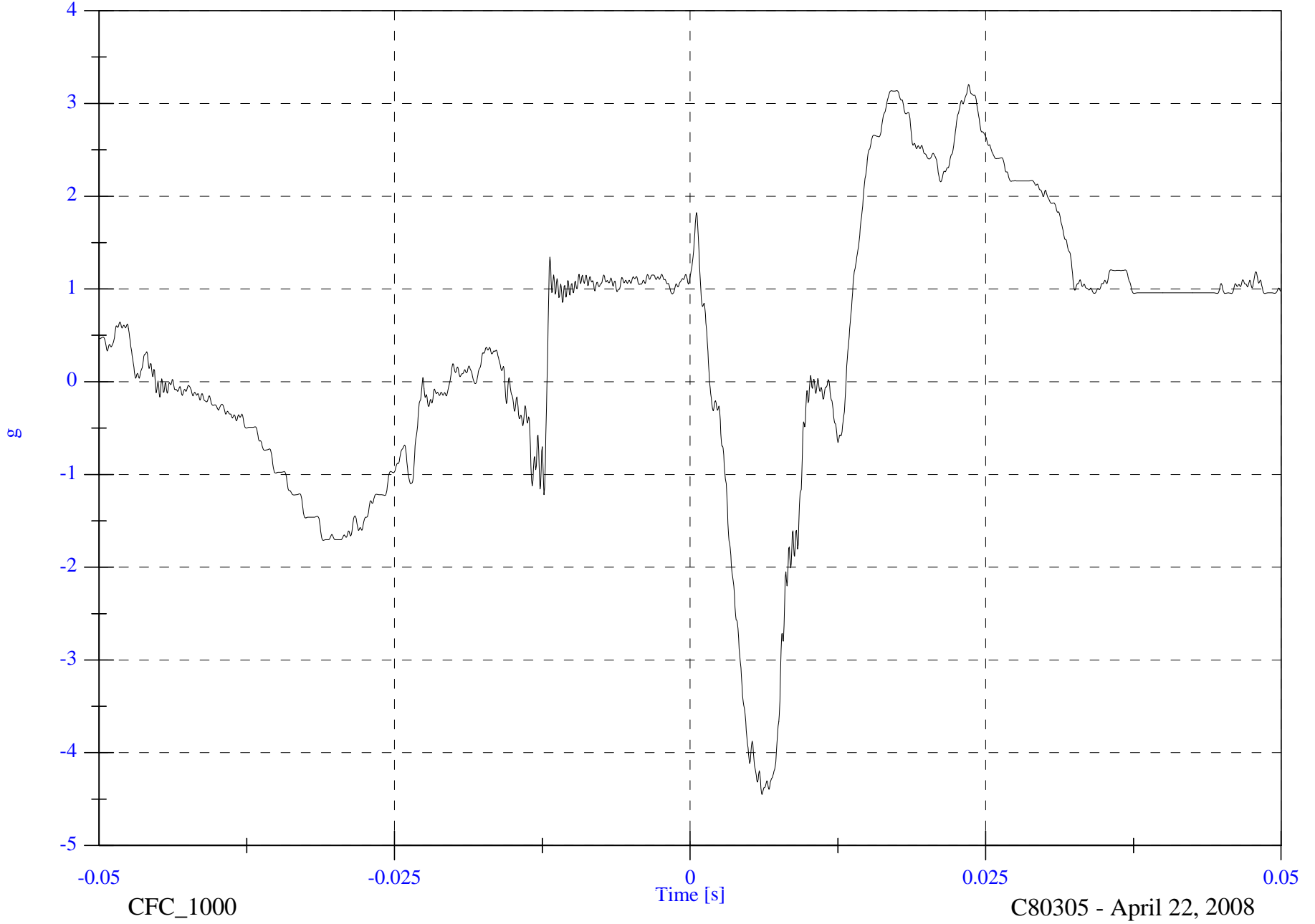
Headform Z Acceleration

Max: 3.2 [g] at 0.024 [s]

Min: -4.4 [g] at 0.006 [s]

C80305 PASSENGER SIDE RP1 IMPACT PLOT #3

8851-06



CFC_1000

C80305 - April 22, 2008

FMVSS 201U 2008 Dodge Grand Caravan

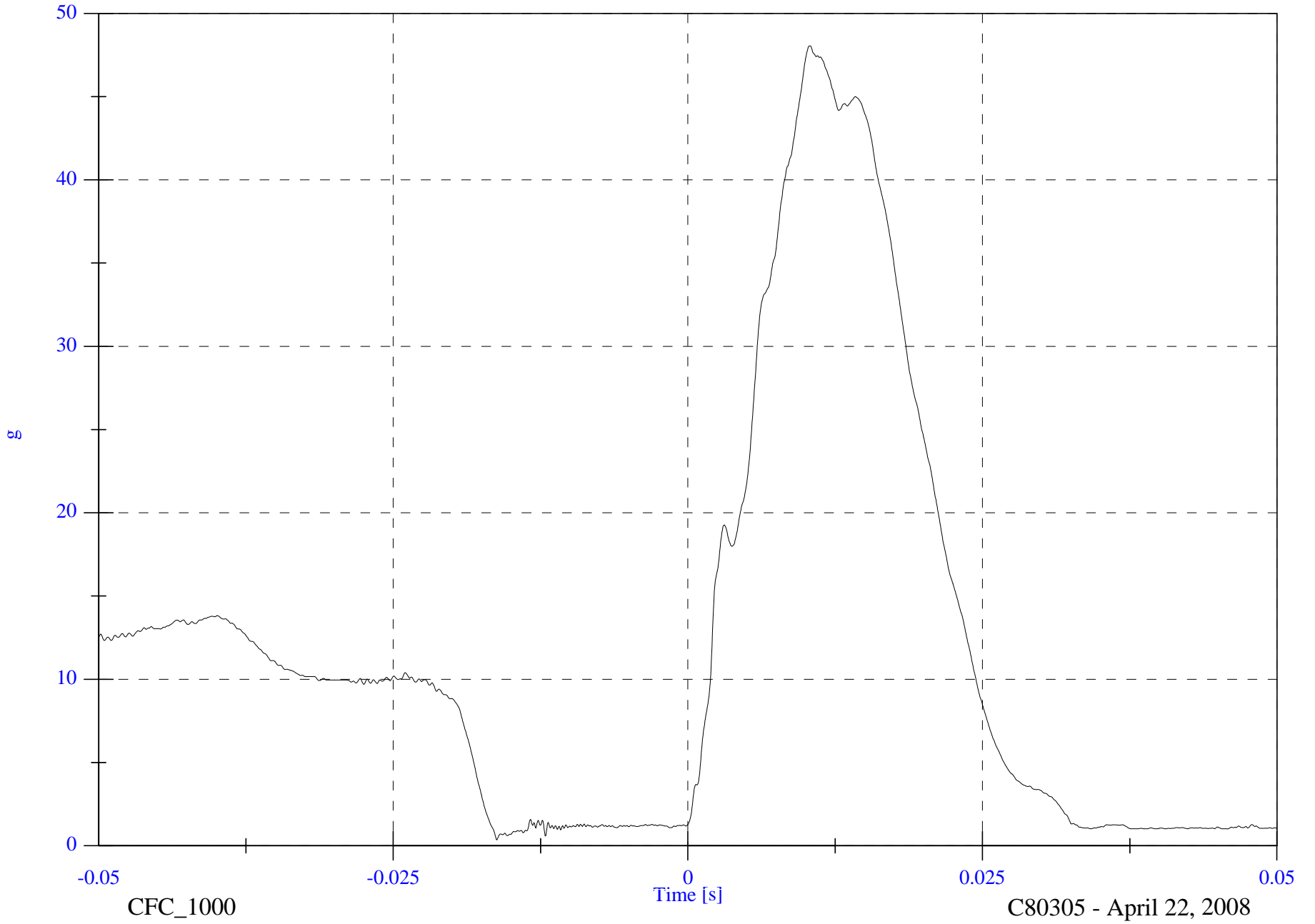
Headform Resultant

Max: 48.1 [g] at 0.010 [s]

Min: 0.4 [g] at -0.016 [s]

C80305 PASSENGER SIDE RPI IMPACT PLOT #4

8851-06



CFC_1000

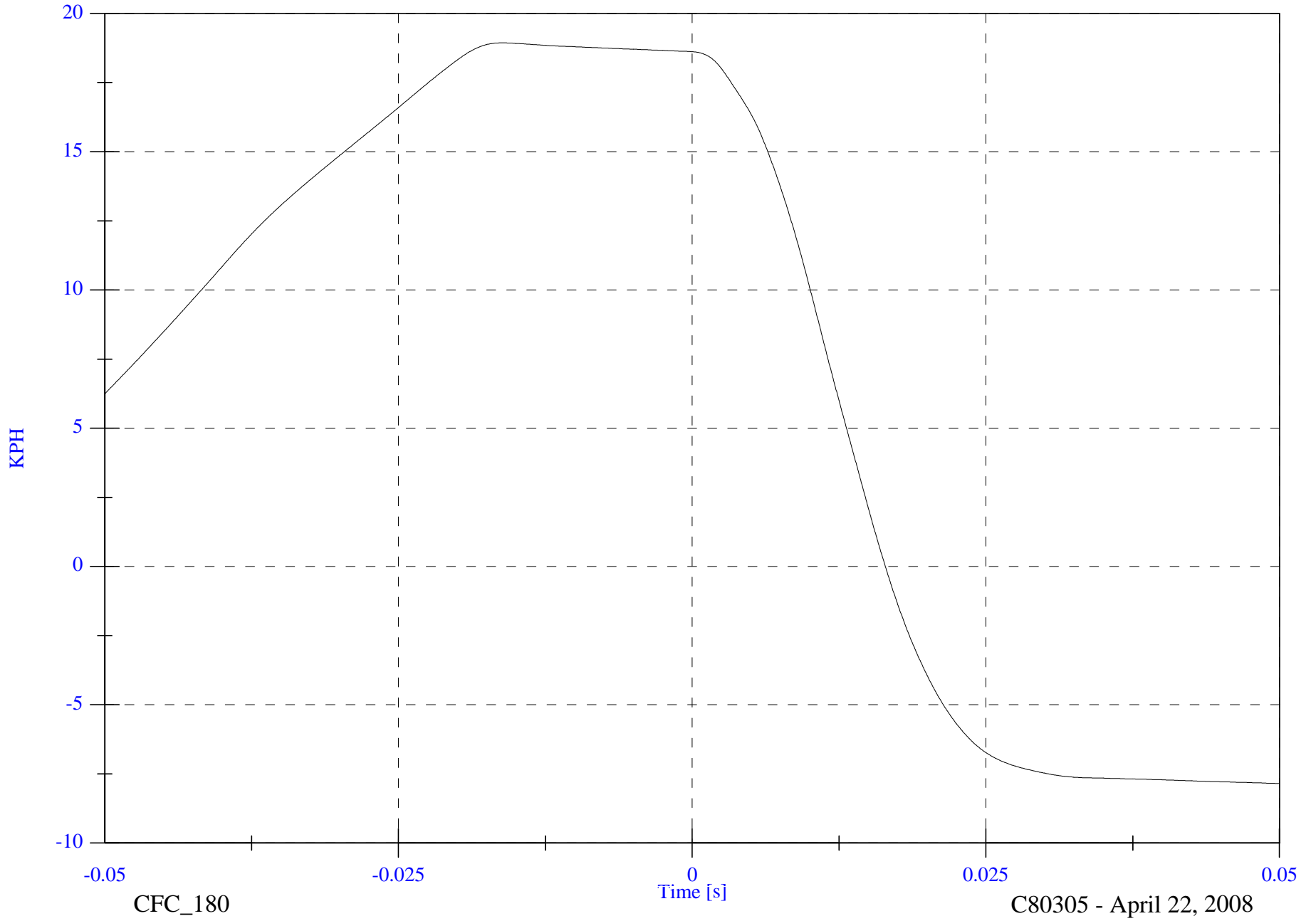
C80305 - April 22, 2008

FMVSS 201U 2008 Dodge Grand Caravan

Max: 18.9 [KPH] at -0.016 [s]

Min: -7.8 [KPH] at 0.050 [s]

Headform Velocity



C80305 PASSENGER SIDE RPI IMPACT PLOT #5

8851-06

CFC_180

C80305 - April 22, 2008



PRE-IMPACT RP1



POST-IMPACT RP1

VEHICLE YEAR/MAKE/MODEL/STYLE:	2008 Dodge Grand Caravan
VIN:	2D8HN44H78R627521
DATE OF MANUFACTURE:	12/07(SEE CERTIFICATION LABEL)
COLOR:	Blue

Test Number:	05
Test Date:	04/22/08
Target Location:	B-PILLAR
Target Code:	BP2
Horizontal Impact Angle:	90°
Vertical Impact Angle:	16°
Ambient Temperature:	21.0 C°
Relative Humidity:	33.8%
Time of Impact:	13:40
Headform Number:	0062

Impact Point Description (from lower midpoint on midsagittal line)			
On Centerline	5	mm right	x mm left
On Centerline	2	mm up	



POST-IMPACT BP2 HEADFORM

Free Motion HIC	509.8
HIC(d)	551.0
Impact Velocity (kph)	23.62
HIC T1 (msec)	0.8
HIC T2 (msec)	9.0

FMVSS 201U 2008 Dodge Grand Caravan C80305 - BP2

FMH Headform 0062

Location: BP2

Test Date: April 22, 2008

Work File: BP2

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

Lab Temperature: 21.0 C

HICd: 551.0

Lab Humidity: 33.8 %

HIC (36ms): 509.8

Velocity at Impact: 23.62 KPH

t1: 0.8 msec

t2: 9.0 msec

Free Flight Distance: 216.73 mm

Duration: 8.1 msec

Average Acceleration: 8.3 g

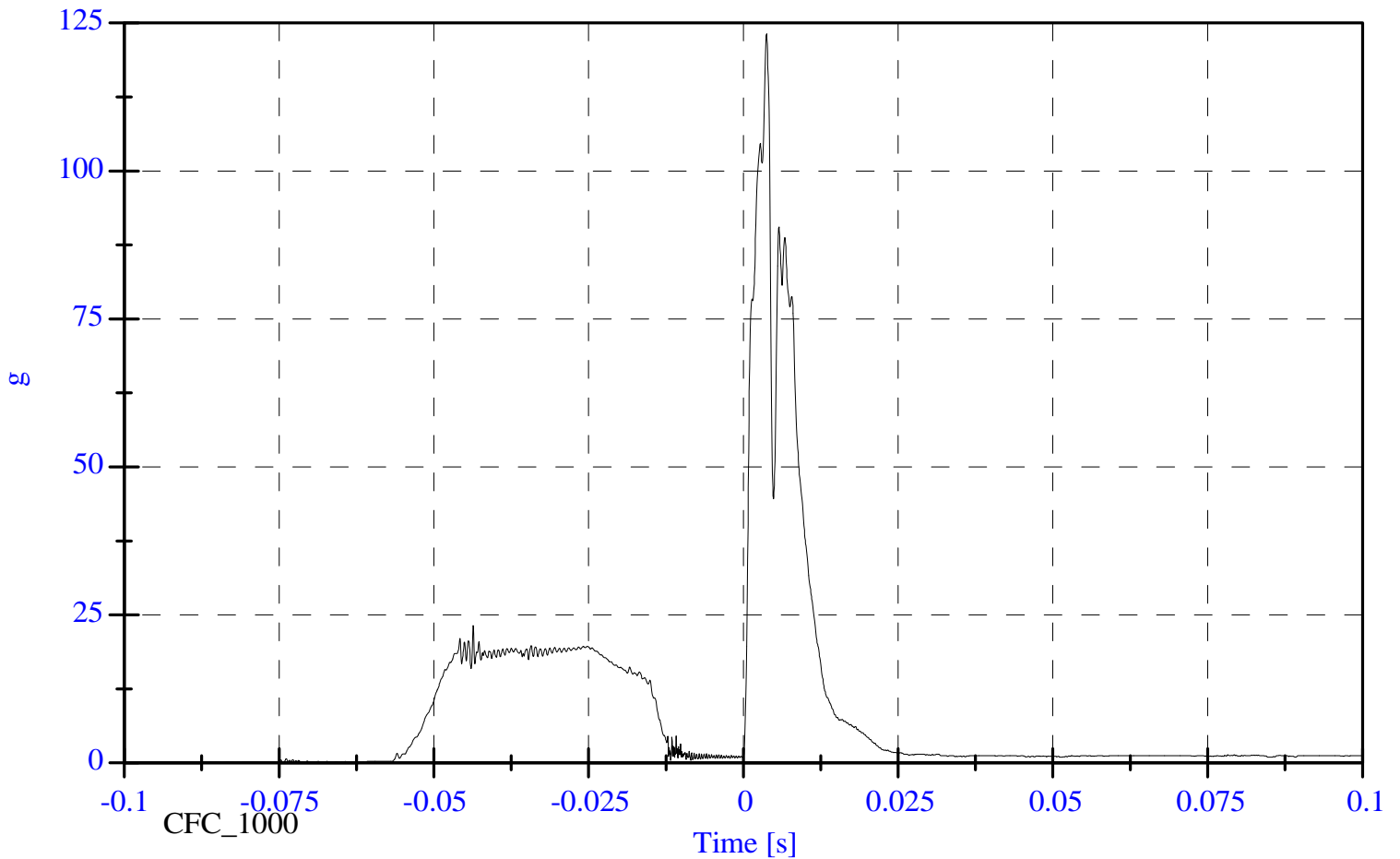
Maximum: 123.2 g

FMVSS 201U 2008 Dodge Grand Caravan

Headform Resultant

Max: 123.2 [g] at 0.004 [s]

Min: 0.0 [g] at -0.064 [s]

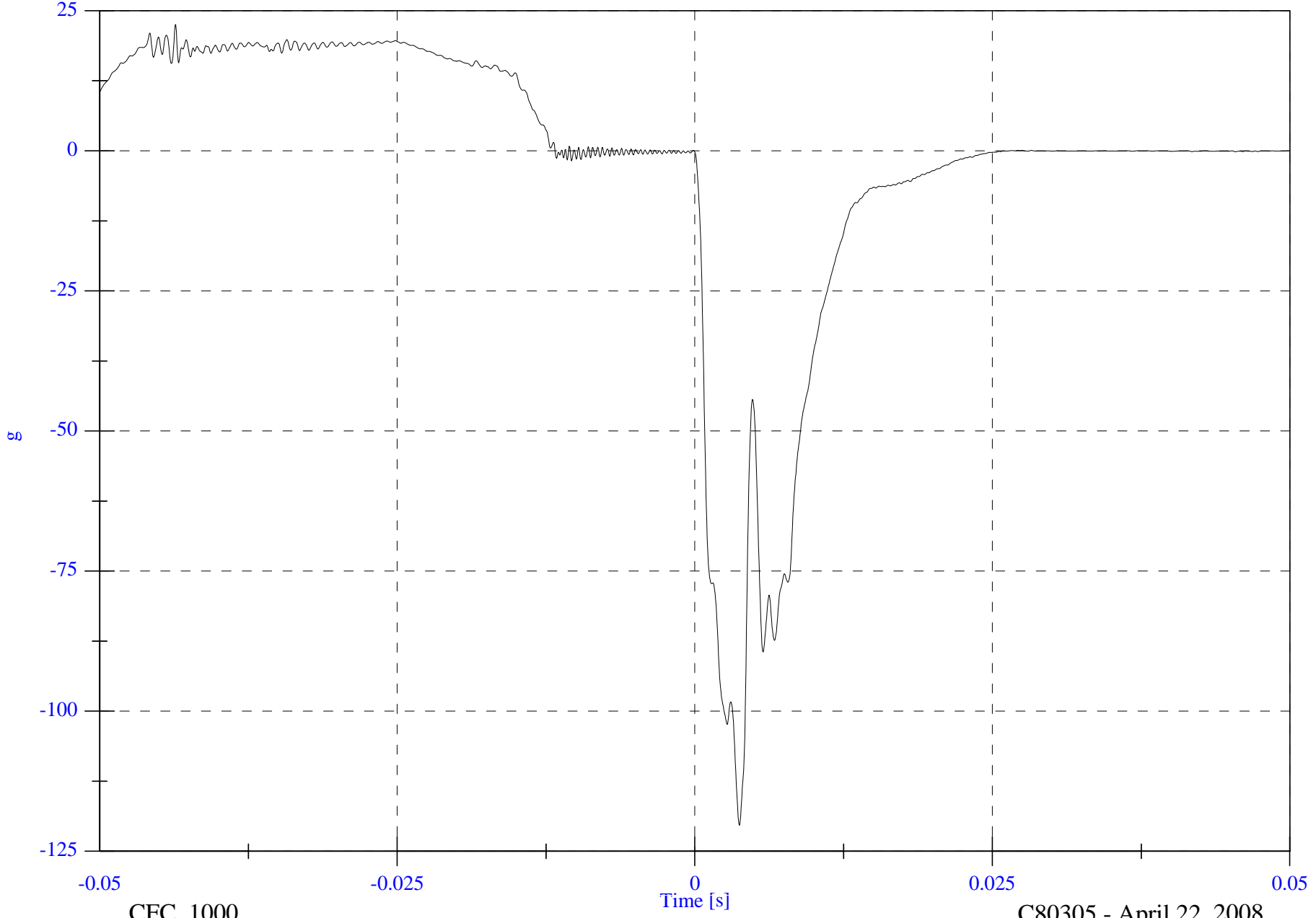


FMVSS 201U 2008 Dodge Grand Caravan

Headform X Acceleration

Max: 22.6 [g] at -0.044 [s]

Min: -120.4 [g] at 0.004 [s]



C80305 PASSENGER SIDE BP2 IMPACT PLOT #2

8851-06

CFC_1000

C80305 - April 22, 2008

FMVSS 201U 2008 Dodge Grand Caravan

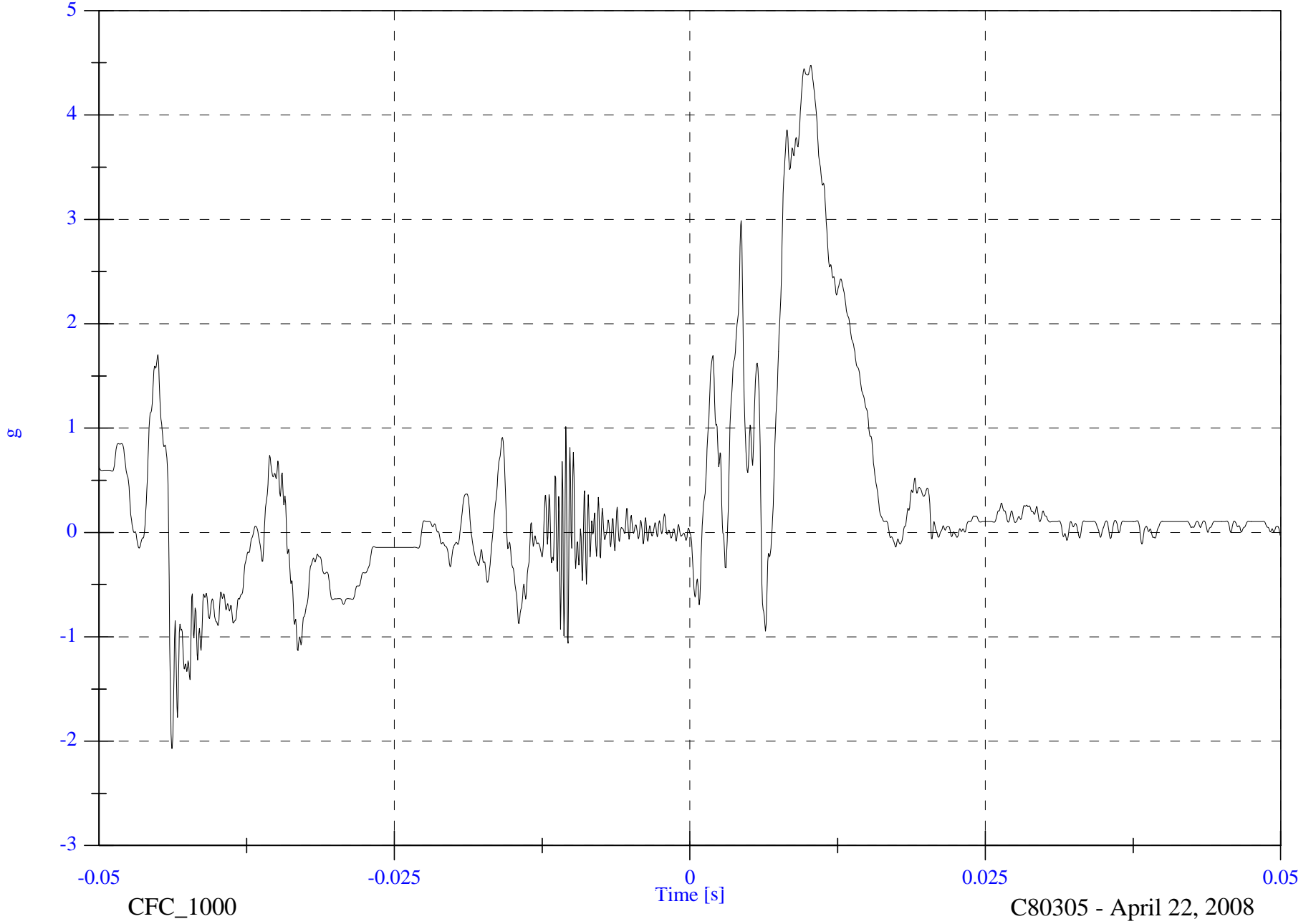
Headform Y Acceleration

Max: 4.5 [g] at 0.010 [s]

Min: -2.1 [g] at -0.044 [s]

C80305 PASSENGER SIDE BP2 IMPACT PLOT #3

8851-06



C80305 - April 22, 2008

FMVSS 201U 2008 Dodge Grand Caravan

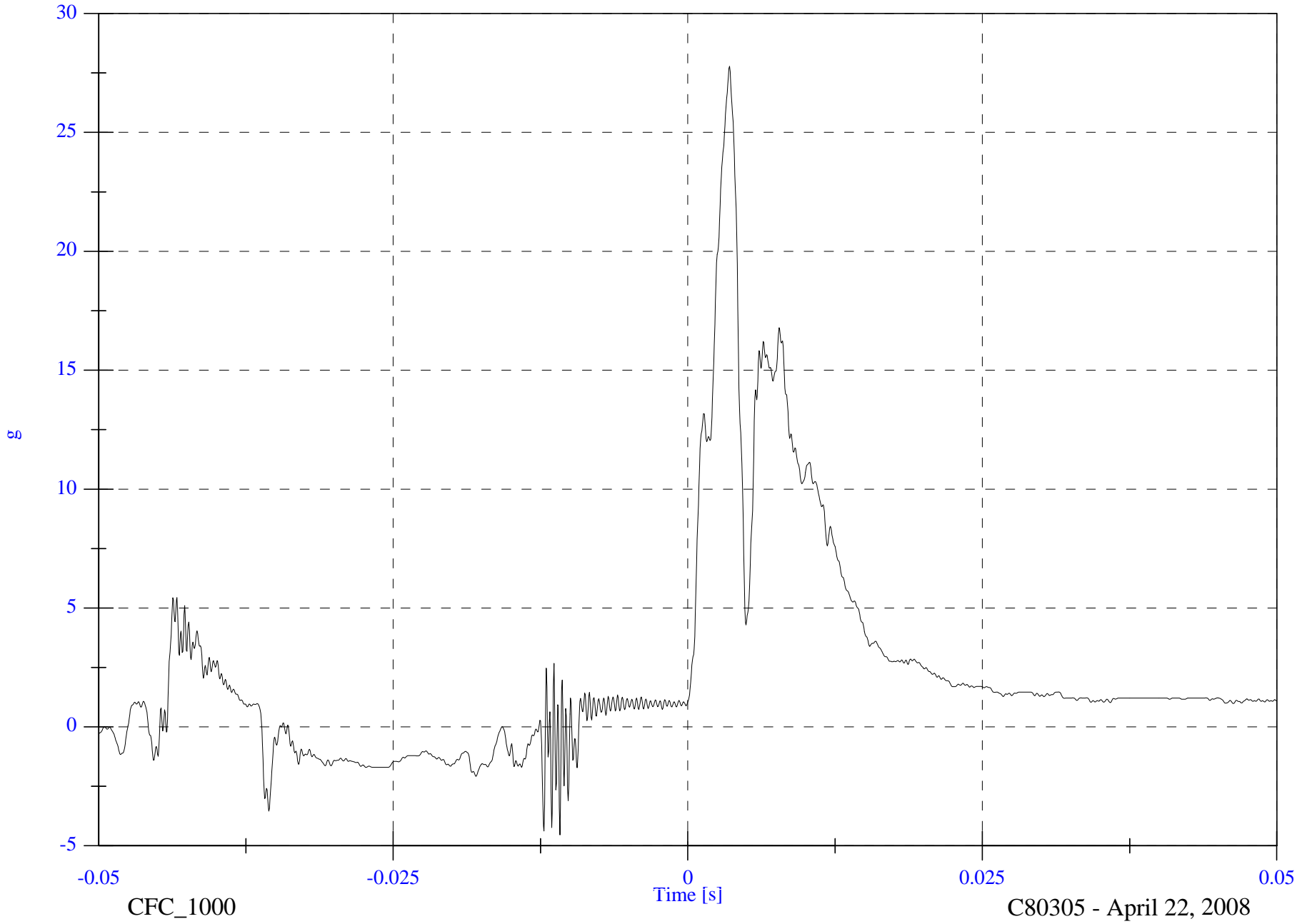
Headform Z Acceleration

Max: 27.8 [g] at 0.004 [s]

Min: -4.5 [g] at -0.011 [s]

C80305 PASSENGER SIDE BP2 IMPACT PLOT #4

8851-06



FMVSS 201U 2008 Dodge Grand Caravan

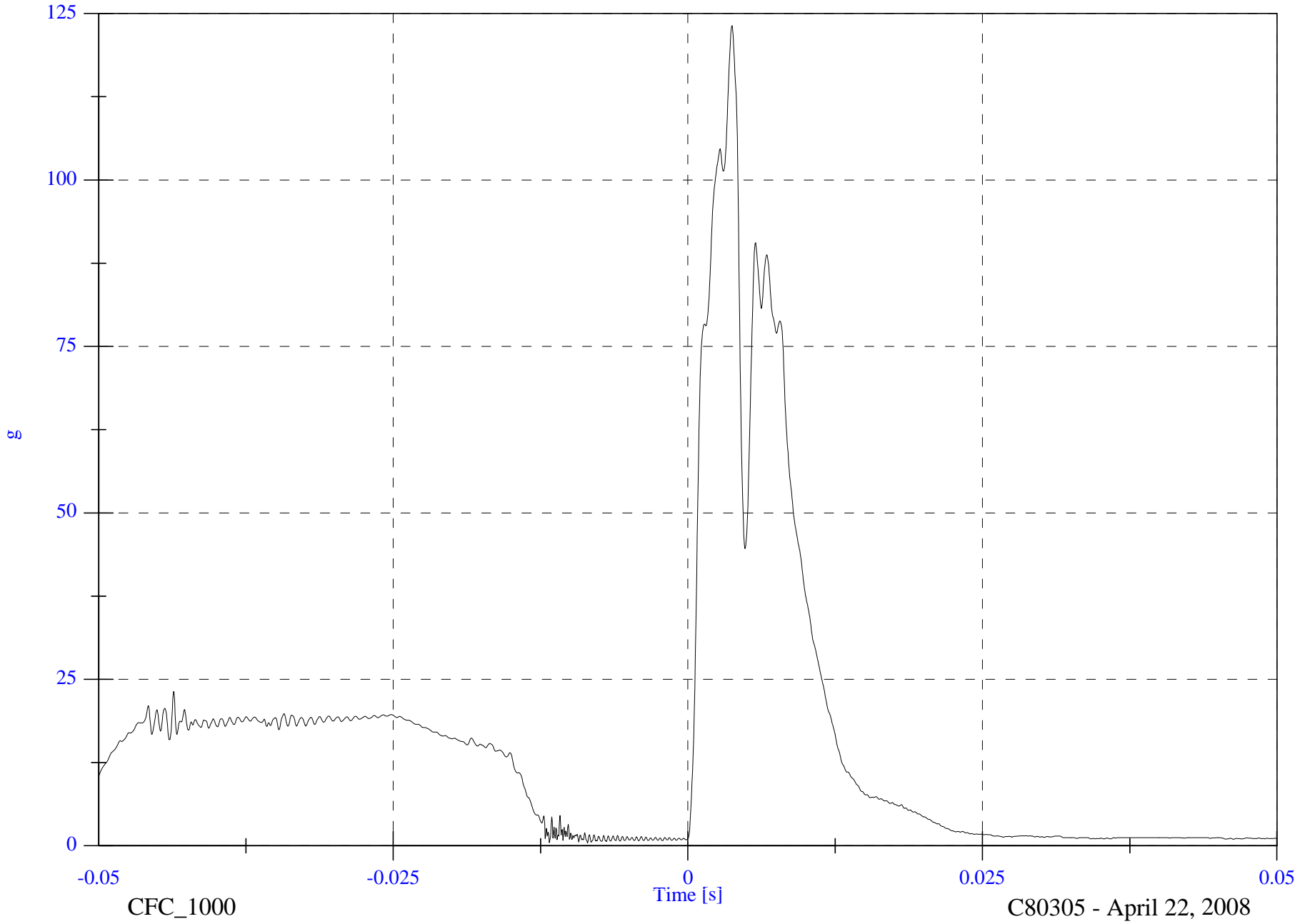
Headform Resultant

Max: 123.2 [g] at 0.004 [s]

Min: 0.4 [g] at -0.009 [s]

C80305 PASSENGER SIDE BP2 IMPACT PLOT #5

8851-06



CFC_1000

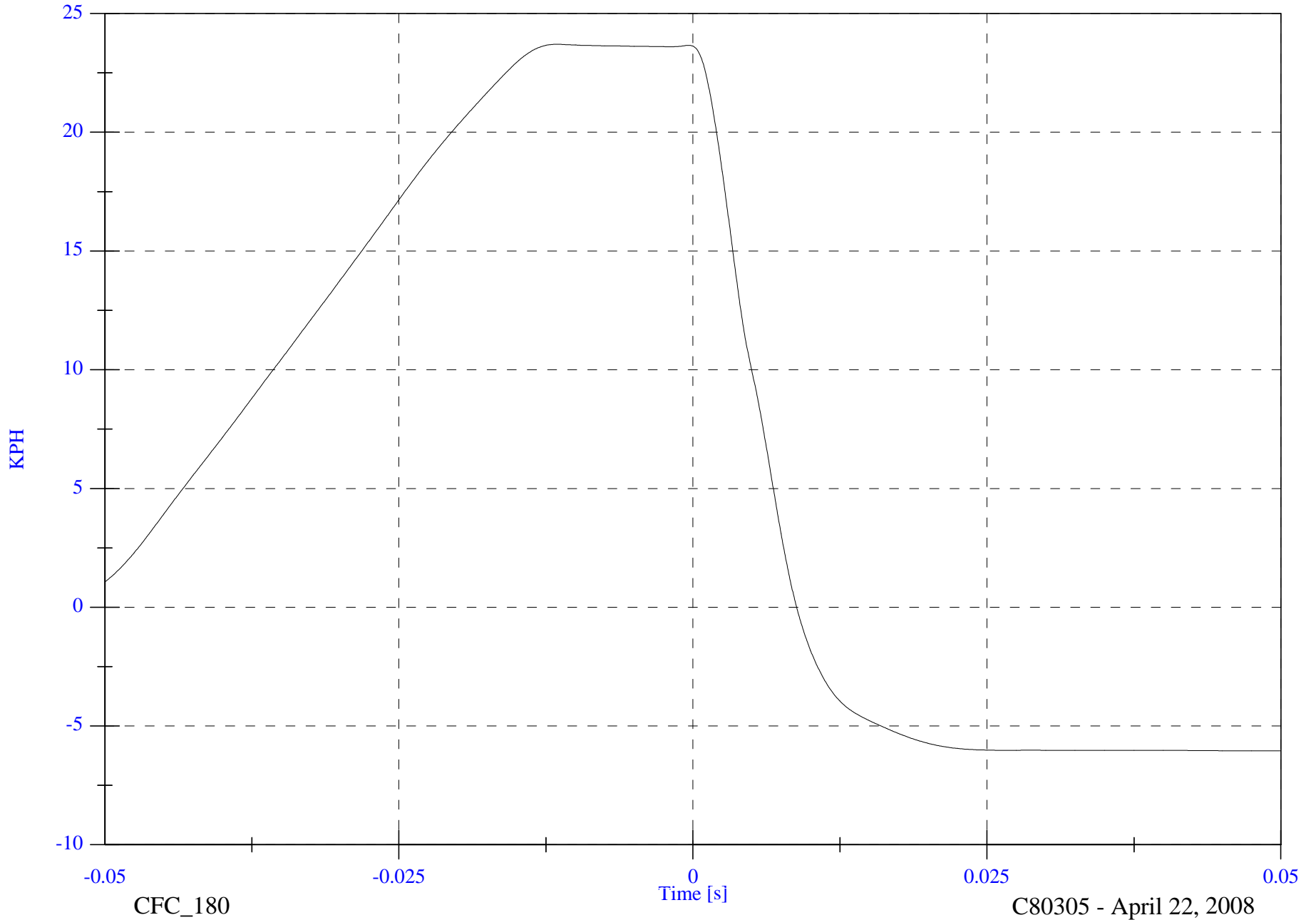
C80305 - April 22, 2008

FMVSS 201U 2008 Dodge Grand Caravan

Max: 23.7 [KPH] at -0.012 [s]

Min: -6.0 [KPH] at 0.050 [s]

Headform Velocity



C80305 PASSENGER SIDE BP2 IMPACT PLOT #6

8851-06

CFC_180

C80305 - April 22, 2008



PRE-IMPACT BP2



POST-IMPACT BP2

VEHICLE YEAR/MAKE/MODEL/STYLE:	2008 Dodge Grand Caravan
VIN:	2D8HN44H78R627521
DATE OF MANUFACTURE:	12/07(SEE CERTIFICATION LABEL)
COLOR:	Blue

Test Number:	06
Test Date:	04/22/08
Target Location:	B-PILLAR
Target Code:	BP1
Horizontal Impact Angle:	90°
Vertical Impact Angle:	44°
Ambient Temperature:	21.0 C°
Relative Humidity:	33.9%
Time of Impact:	14:17
Headform Number:	1142

Impact Point Description (from lower midpoint on midsagittal line)				
On Centerline	16	x	mm right	mm left
On Centerline	6		mm up	



POST-IMPACT BP1 HEADFORM

Free Motion HIC	252.0
HIC(d)	356.5
Impact Velocity (kph)	18.83
HIC T1 (msec)	6.6
HIC T2 (msec)	15.9

FMVSS 201U 2008 Dodge Grand Caravan C80305 - BP1

FMH Headform 1142

Location: BP1

Test Date: April 22, 2008

Work File: BP1

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

Lab Temperature: 21.0 C

HICd: 356.5

Lab Humidity: 33.9 %

HIC (36ms): 252.0

Velocity at Impact: 18.83 KPH

t1: 6.6 msec

t2: 15.9 msec

Free Flight Distance: 221.90 mm

Duration: 9.3 msec

Average Acceleration: 8.6 g

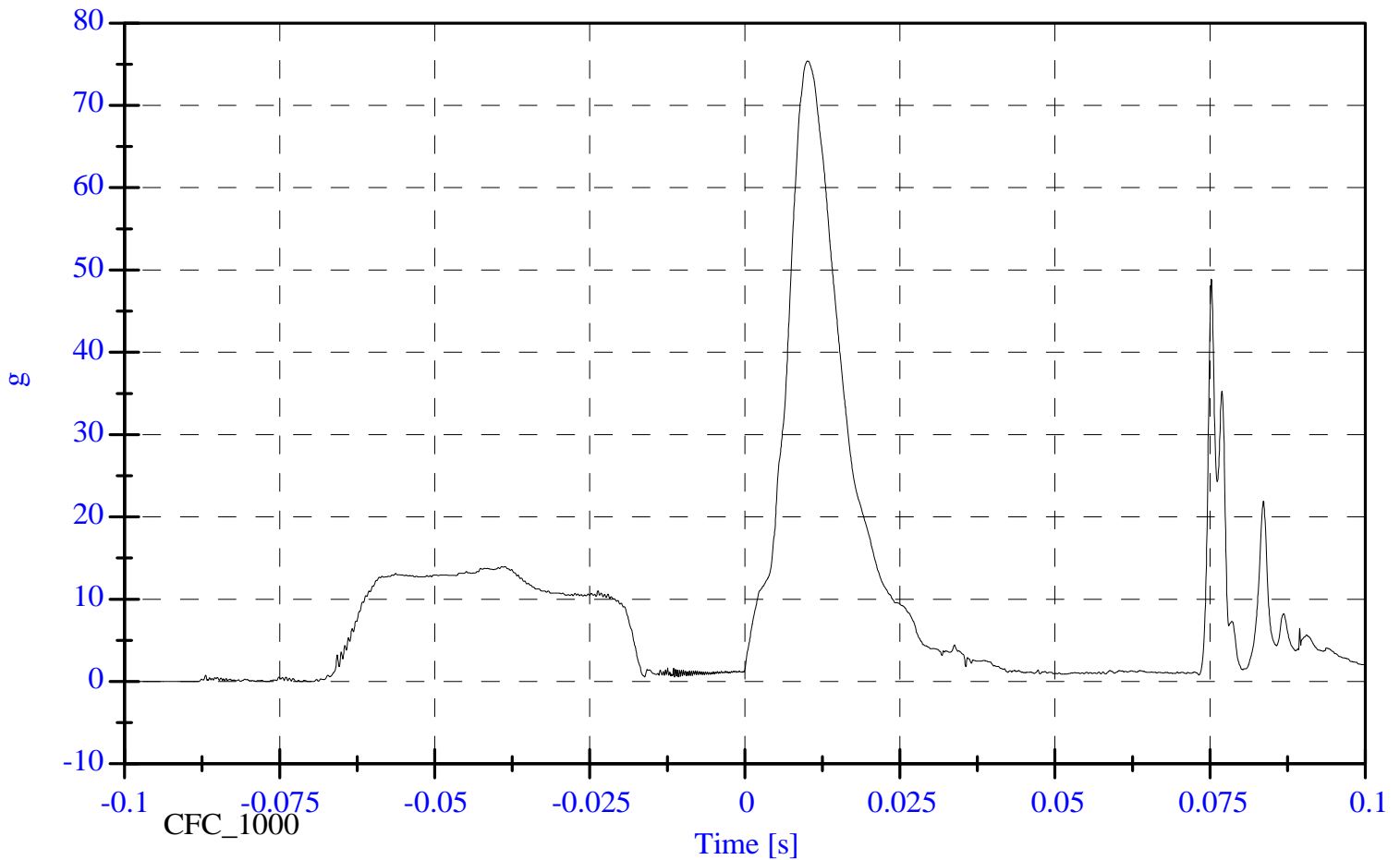
Maximum: 75.4 g

FMVSS 201U 2008 Dodge Grand Caravan

Headform Resultant

Max: 75.4 [g] at 0.010 [s]

Min: -0.0 [g] at -0.099 [s]



FMVSS 201U 2008 Dodge Grand Caravan

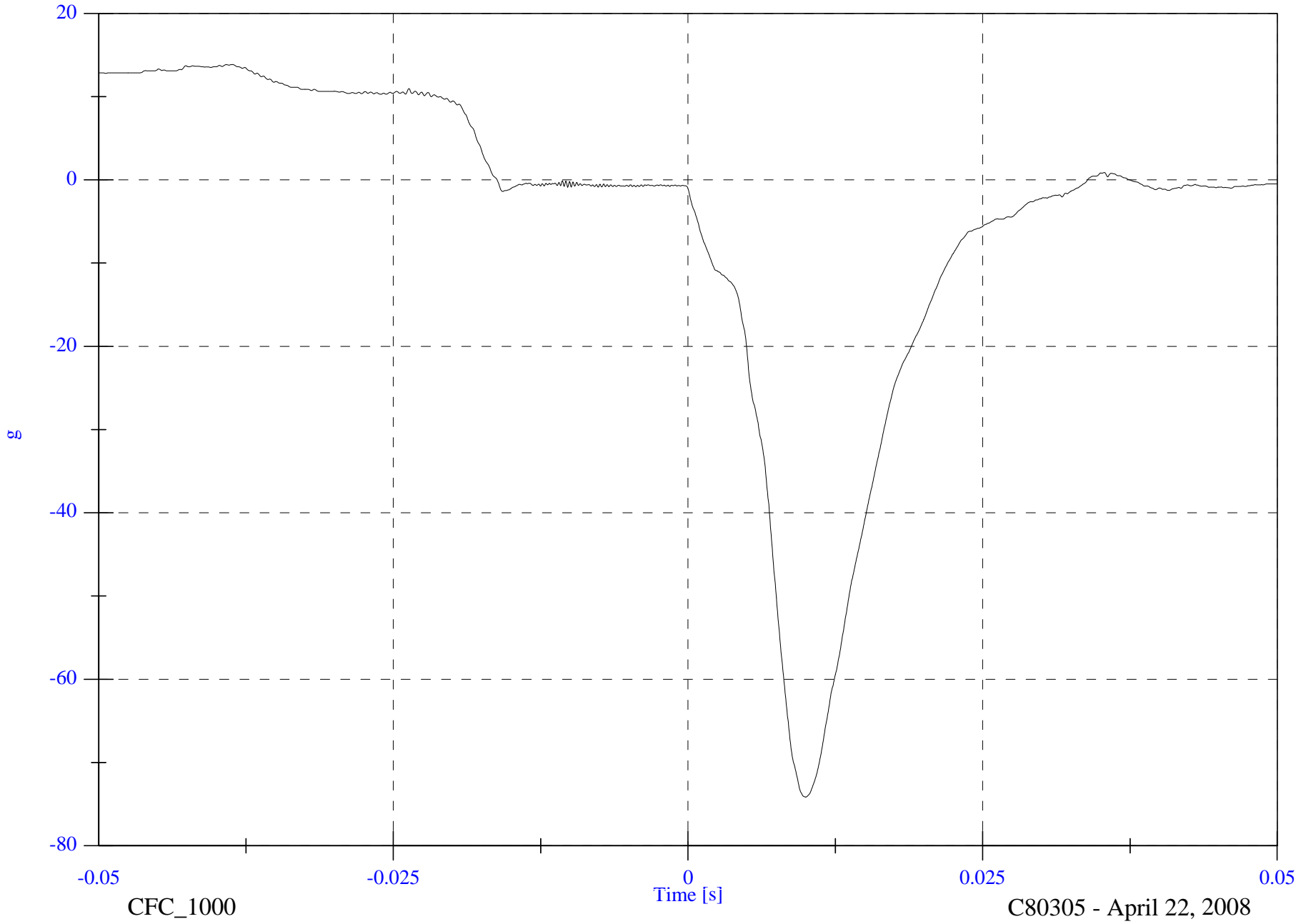
Headform X Acceleration

Max: 13.9 [g] at -0.039 [s]

Min: -74.2 [g] at 0.010 [s]

C80305 PASSENGER SIDE BPI IMPACT PLOT #2

8851-06



CFC_1000

C80305 - April 22, 2008

FMVSS 201U 2008 Dodge Grand Caravan

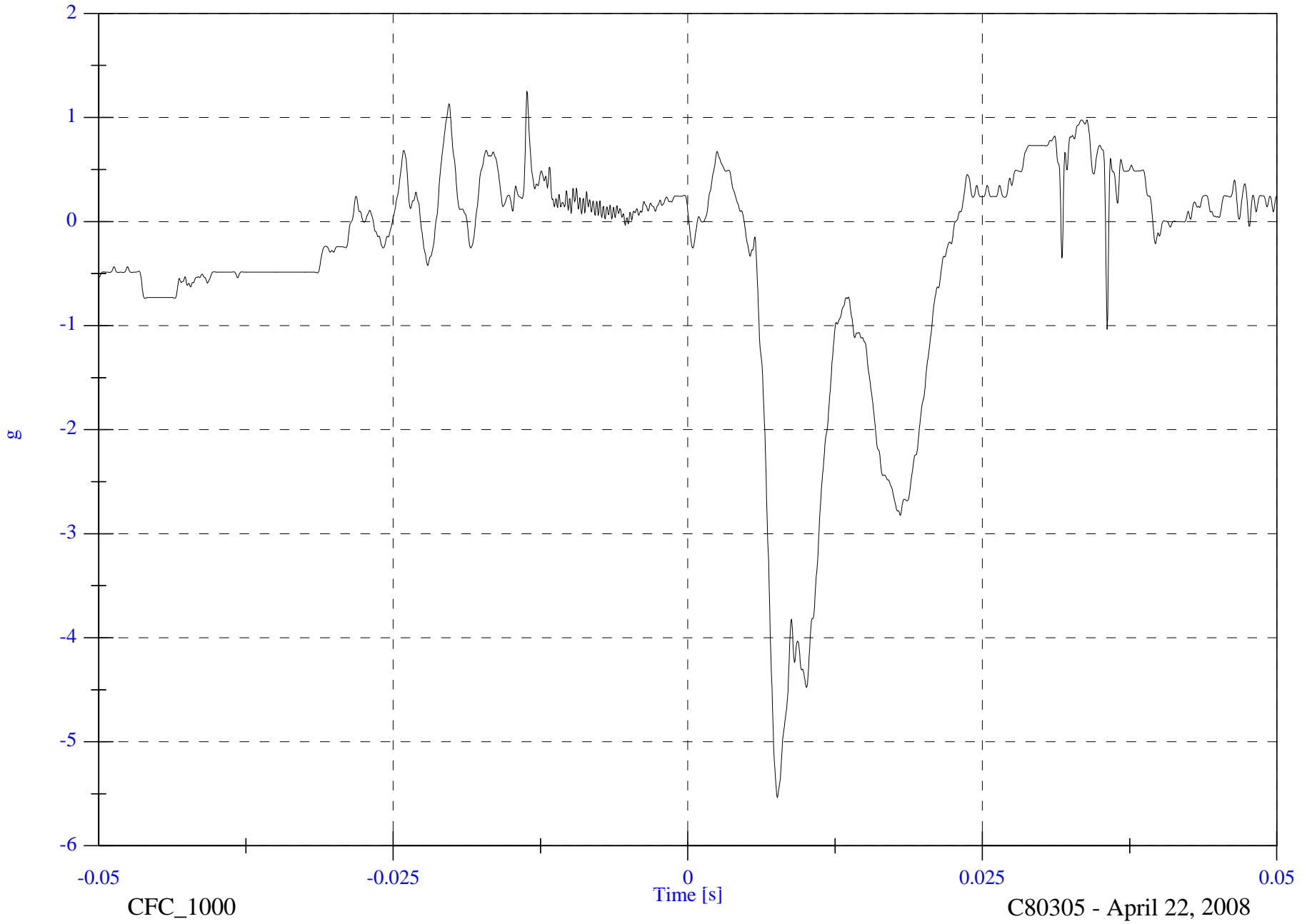
Headform Y Acceleration

Max: 1.3 [g] at -0.014 [s]

Min: -5.5 [g] at 0.008 [s]

C80305 PASSENGER SIDE BPI IMPACT PLOT #3

8851-06



CFC_1000

C80305 - April 22, 2008

FMVSS 201U 2008 Dodge Grand Caravan

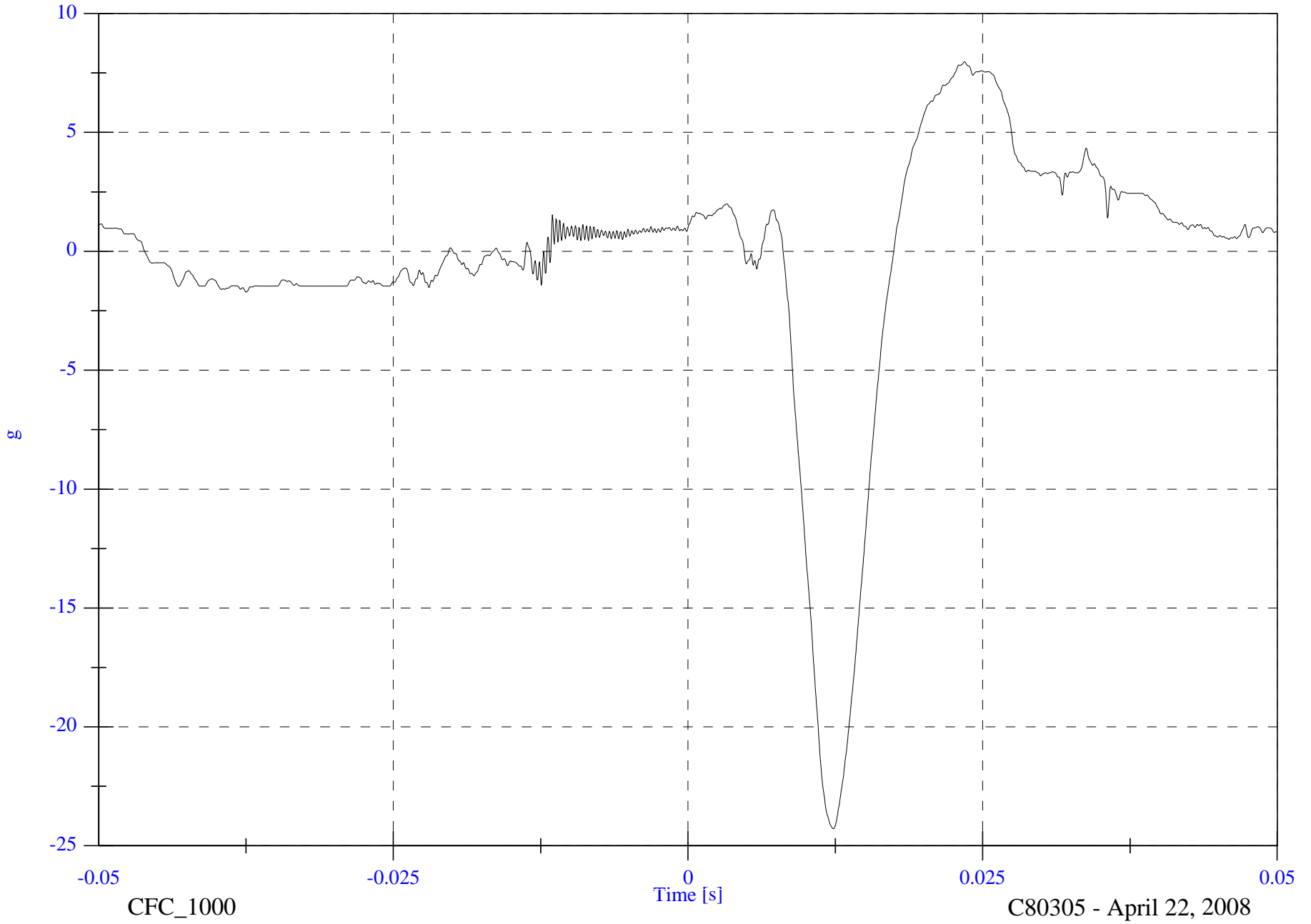
Headform Z Acceleration

Max: 8.0 [g] at 0.023 [s]

Min: -24.3 [g] at 0.012 [s]

C80305 PASSENGER SIDE BPI IMPACT PLOT #4

8851-06



CFC_1000

C80305 - April 22, 2008

FMVSS 201U 2008 Dodge Grand Caravan

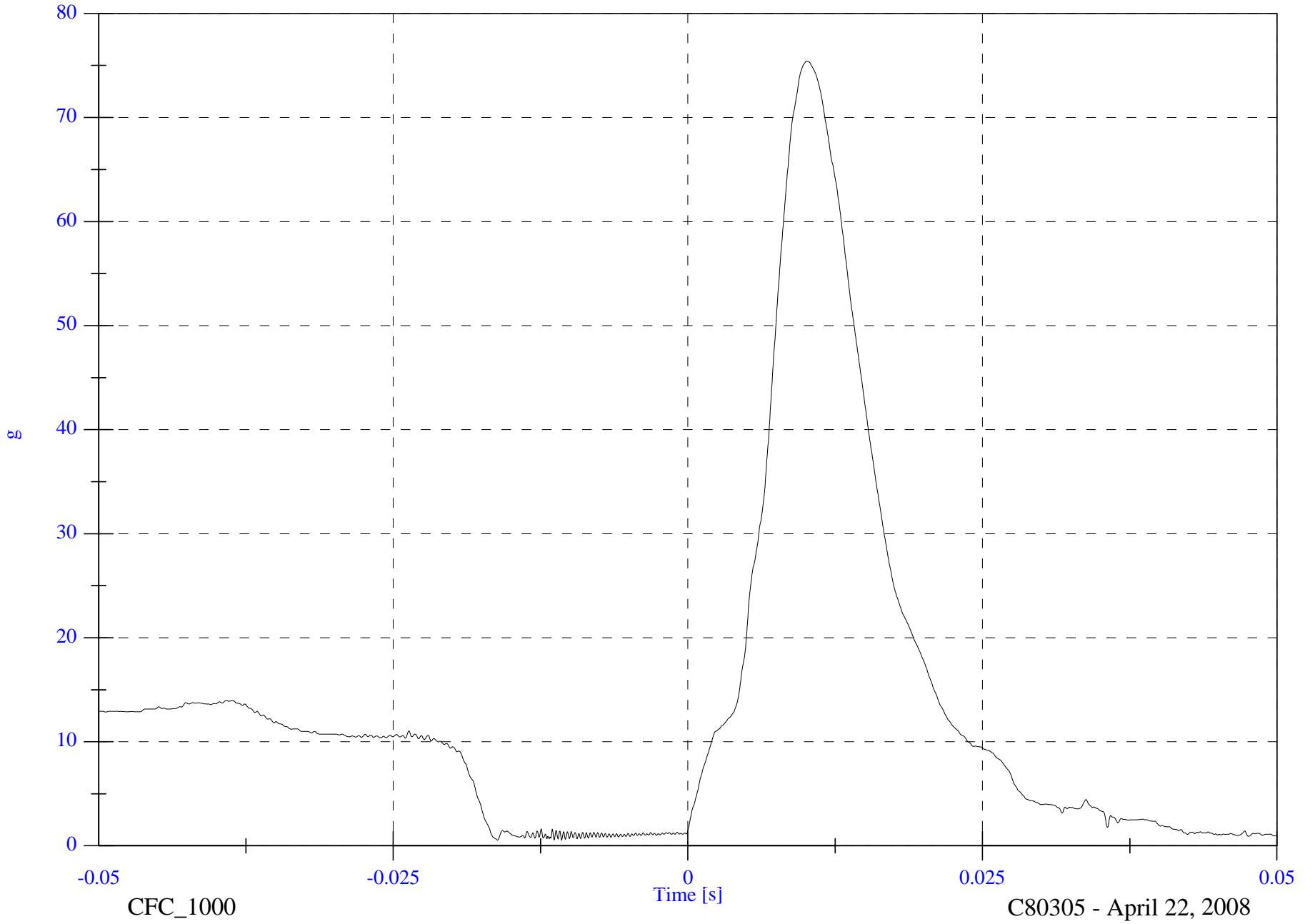
Headform Resultant

Max: 75.4 [g] at 0.010 [s]

Min: 0.5 [g] at -0.011 [s]

C80305 PASSENGER SIDE BPI IMPACT PLOT #5

8851-06

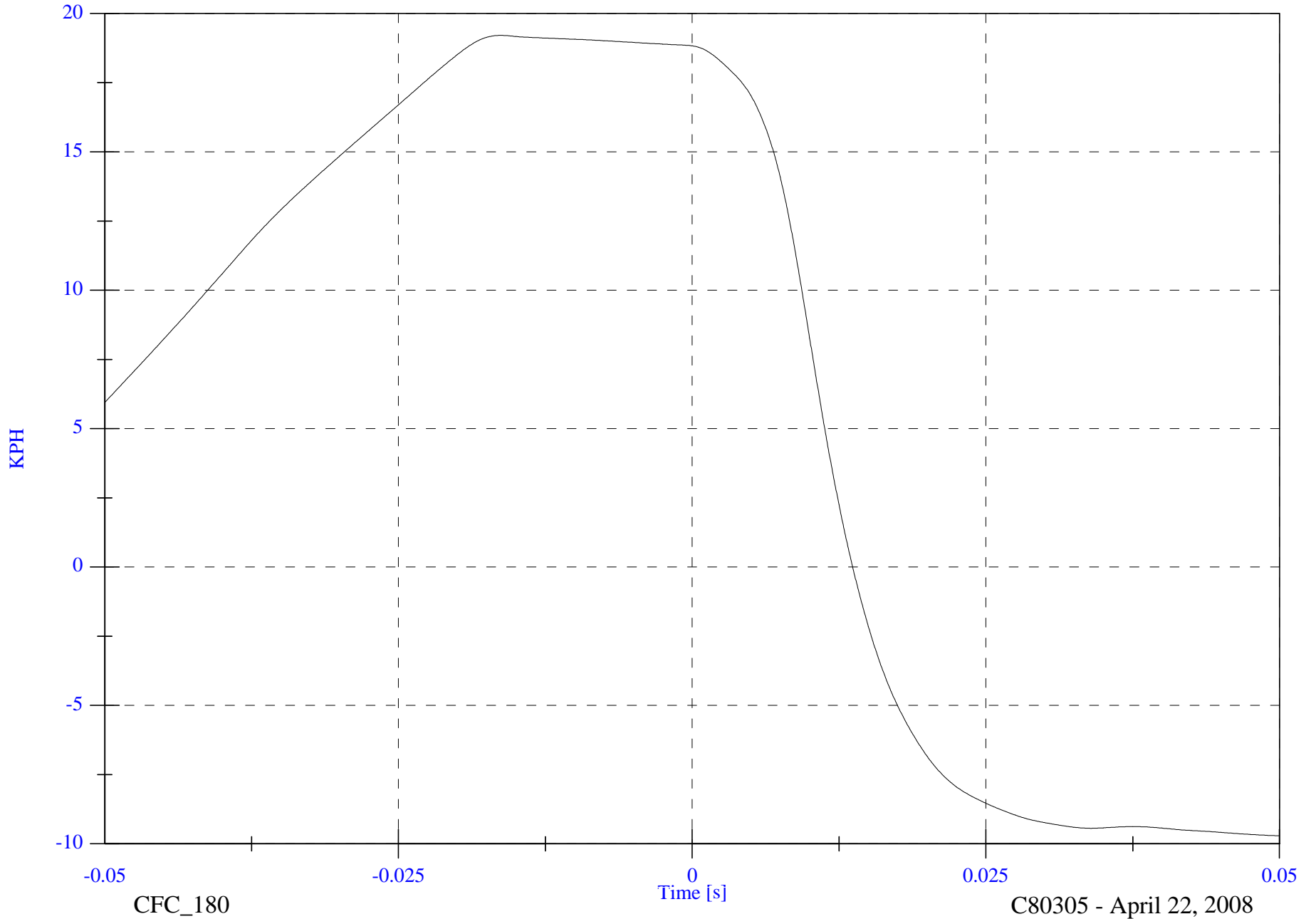


FMVSS 201U 2008 Dodge Grand Caravan

Max: 19.2 [KPH] at -0.016 [s]

Min: -9.7 [KPH] at 0.050 [s]

Headform Velocity



C80305 PASSENGER SIDE BPI IMPACT PLOT #6

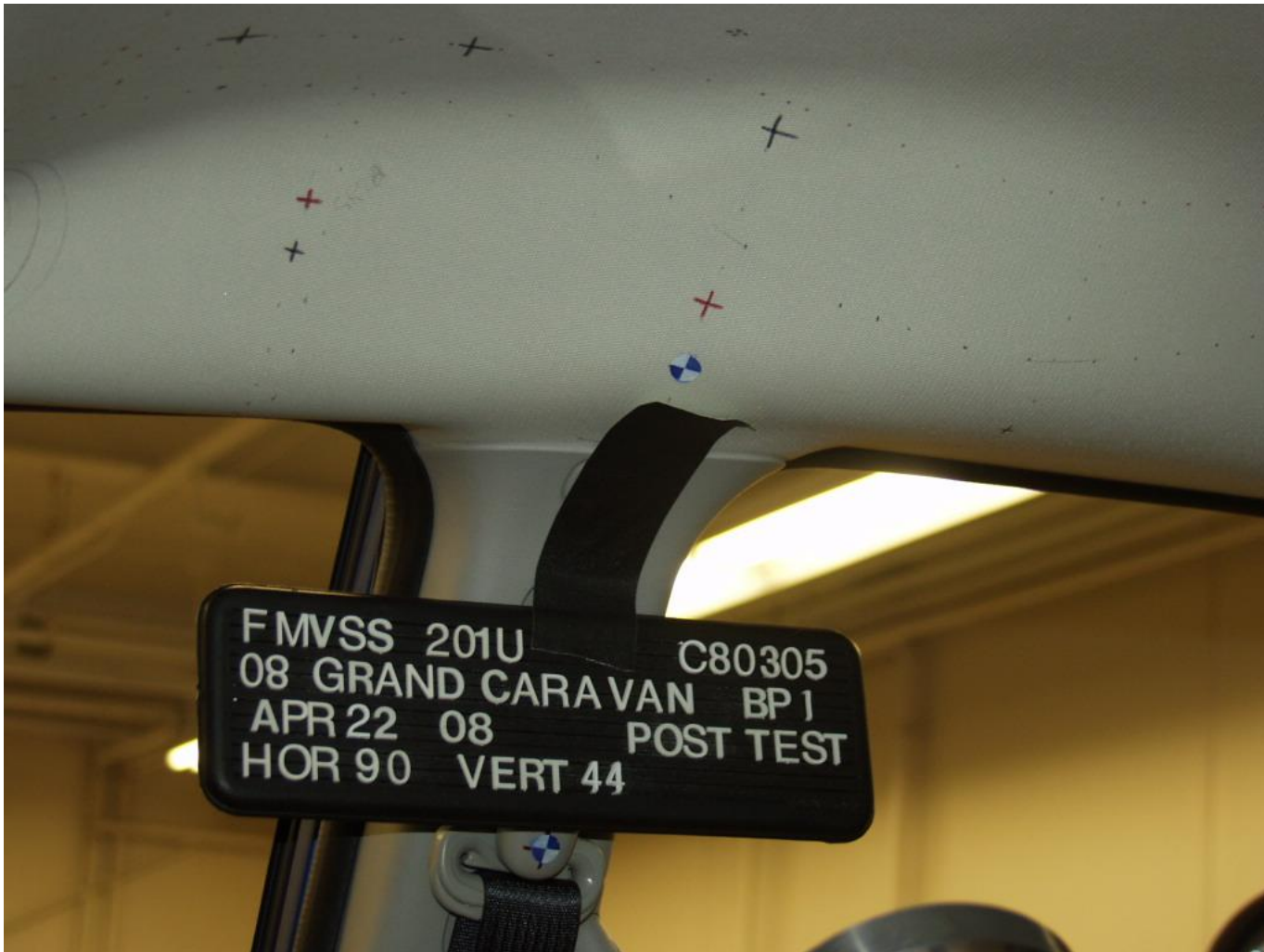
8851-06

CFC_180

C80305 - April 22, 2008



PRE-IMPACT BP1



POST-IMPACT BP1

VEHICLE YEAR/MAKE/MODEL/STYLE:	2008 Dodge Grand Caravan
VIN:	2D8HN44H78R627521
DATE OF MANUFACTURE:	12/07(SEE CERTIFICATION LABEL)
COLOR:	Blue

Test Number:	07
Test Date:	04/22/08
Target Location:	A-PILLAR
Target Code:	AP3
Horizontal Impact Angle:	138°
Vertical Impact Angle:	44°
Ambient Temperature:	21.1 C°
Relative Humidity:	35.0 %
Time of Impact:	15:15
Headform Number:	0355

Impact Point Description (from lower midpoint on midsagittal line)					
On Centerline	2	<input type="checkbox"/>	mm right	<input checked="" type="checkbox"/>	mm left
On Centerline	24				mm up



POST-IMPACT AP3 HEADFORM

Free Motion HIC	250.0
HIC(d)	355.0
Impact Velocity (kph)	18.37
HIC T1 (msec)	2.4
HIC T2 (msec)	8.2

FMVSS 201U 2008 Dodge Grand Caravan C80305 - AP3

FMH Headform 0355

Location: AP3

Test Date: April 22, 2008

Work File: AP3

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

Lab Temperature: 21.1 C

HICd: 355.0

Lab Humidity: 35.0 %

HIC (36ms): 250.0

Velocity at Impact: 18.37 KPH

t1: 2.4 msec

t2: 8.2 msec

Free Flight Distance: 215.43 mm

Duration: 5.8 msec

Average Acceleration: 8.9 g

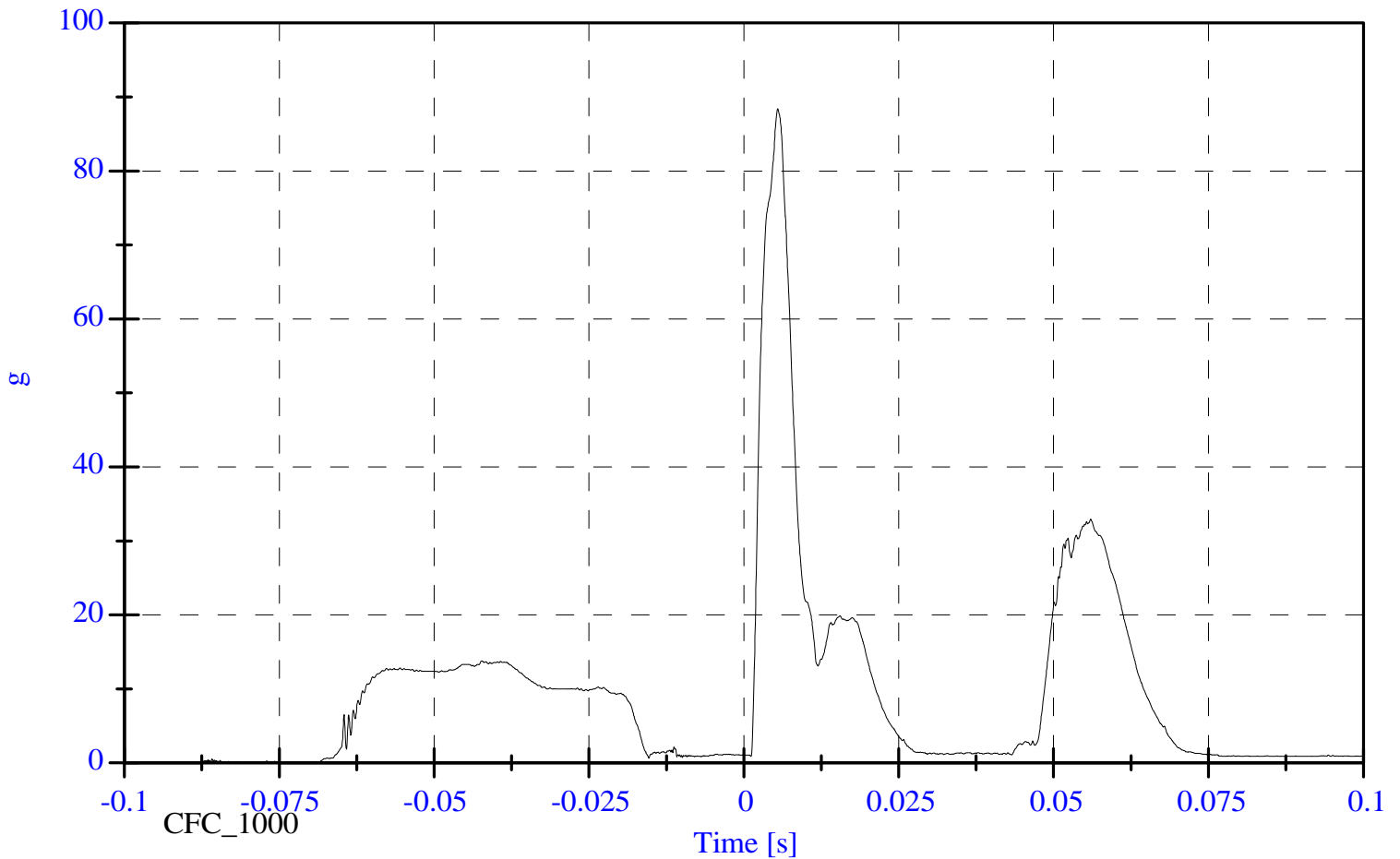
Maximum: 88.4 g

FMVSS 201U 2008 Dodge Grand Caravan

Headform Resultant

Max: 88.4 [g] at 0.005 [s]

Min: 0.0 [g] at -0.093 [s]



FMVSS 201U 2008 Dodge Grand Caravan

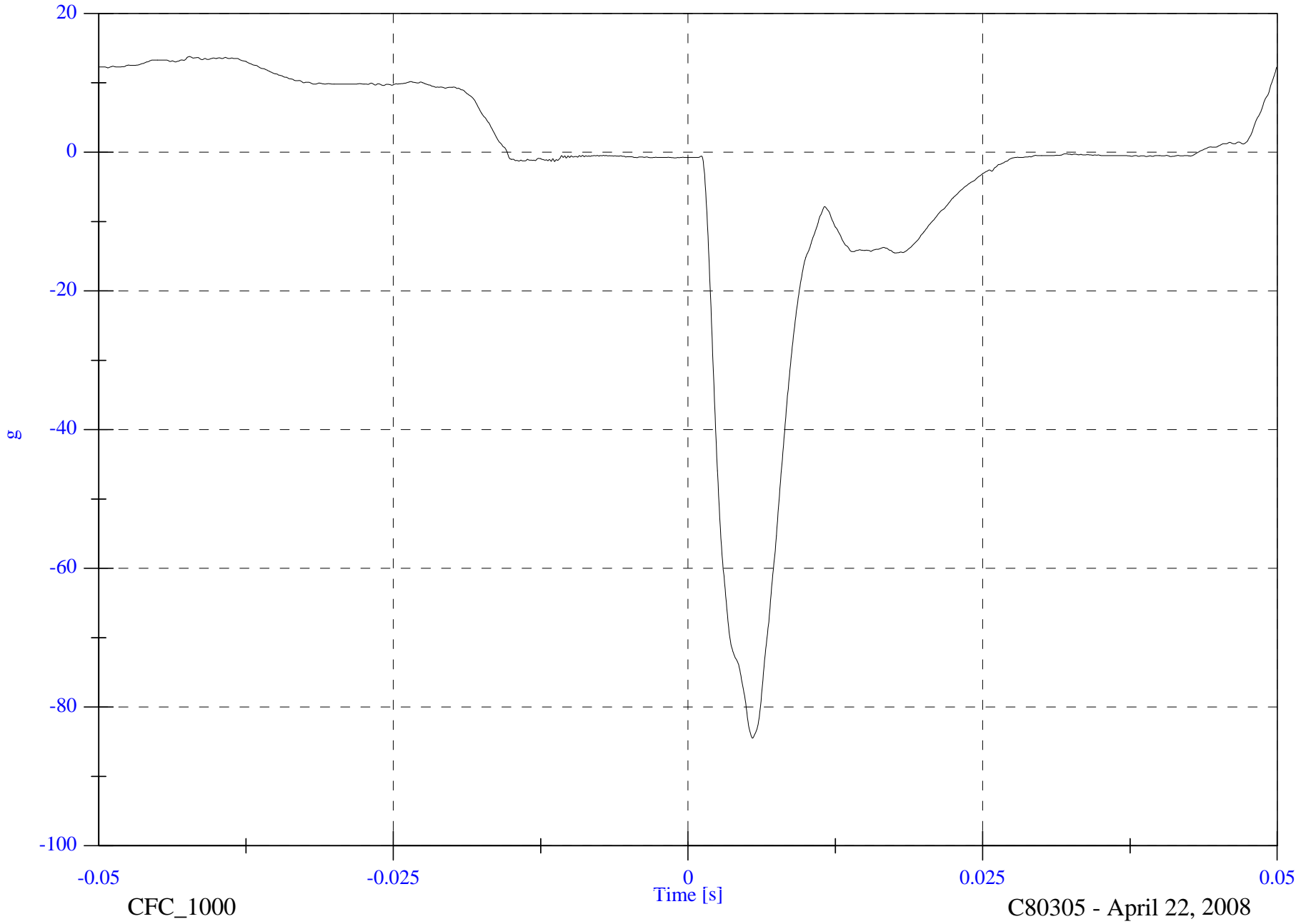
Headform X Acceleration

Max: 13.8 [g] at -0.042 [s]

Min: -84.5 [g] at 0.005 [s]

C80305 PASSENGER SIDE AP3 IMPACT PLOT #2

8851-06



CFC_1000

C80305 - April 22, 2008

FMVSS 201U 2008 Dodge Grand Caravan

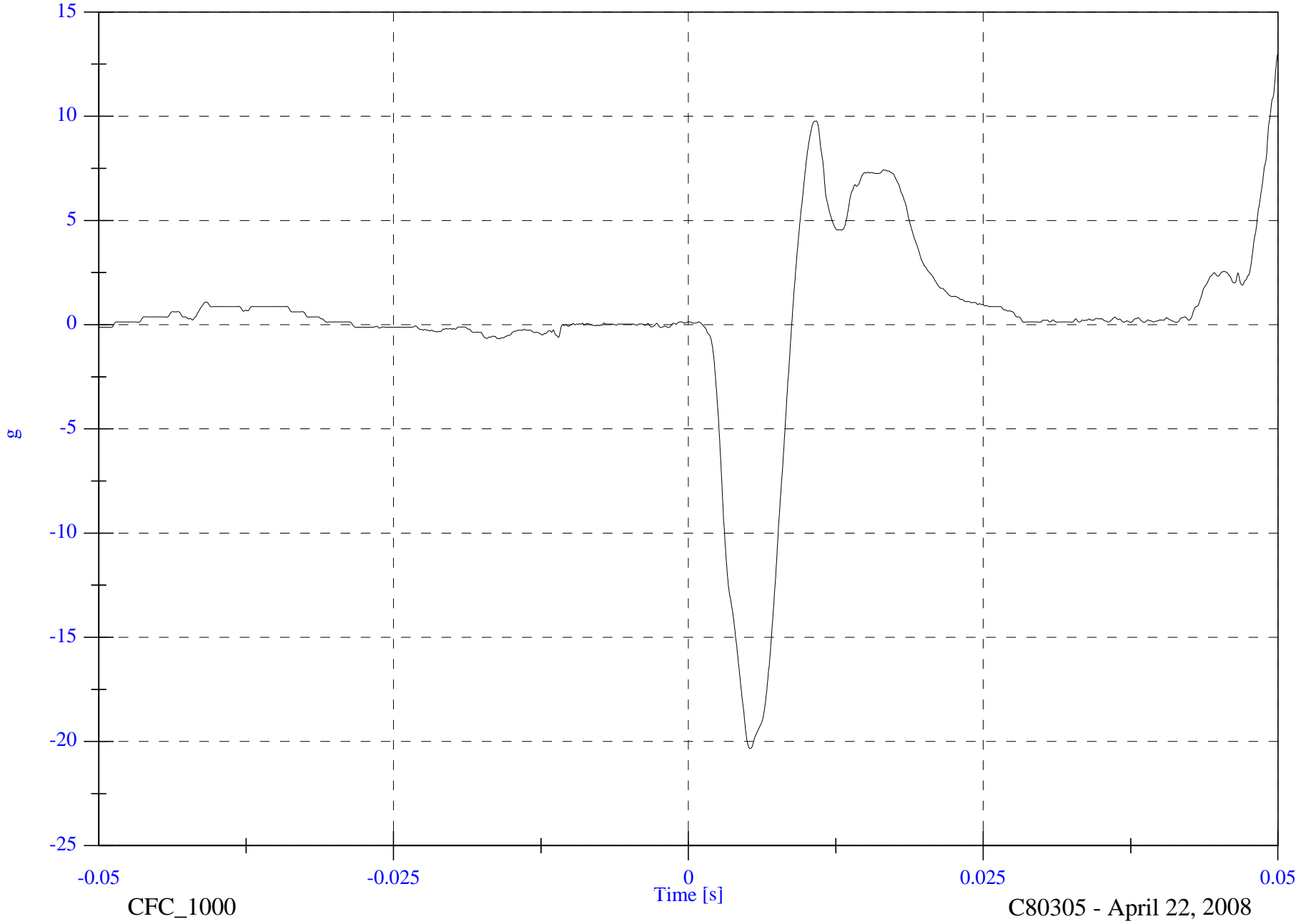
Headform Y Acceleration

Max: 12.9 [g] at 0.050 [s]

Min: -20.3 [g] at 0.005 [s]

C80305 PASSENGER SIDE AP3 IMPACT PLOT #3

8851-06



CFC_1000

C80305 - April 22, 2008

FMVSS 201U 2008 Dodge Grand Caravan

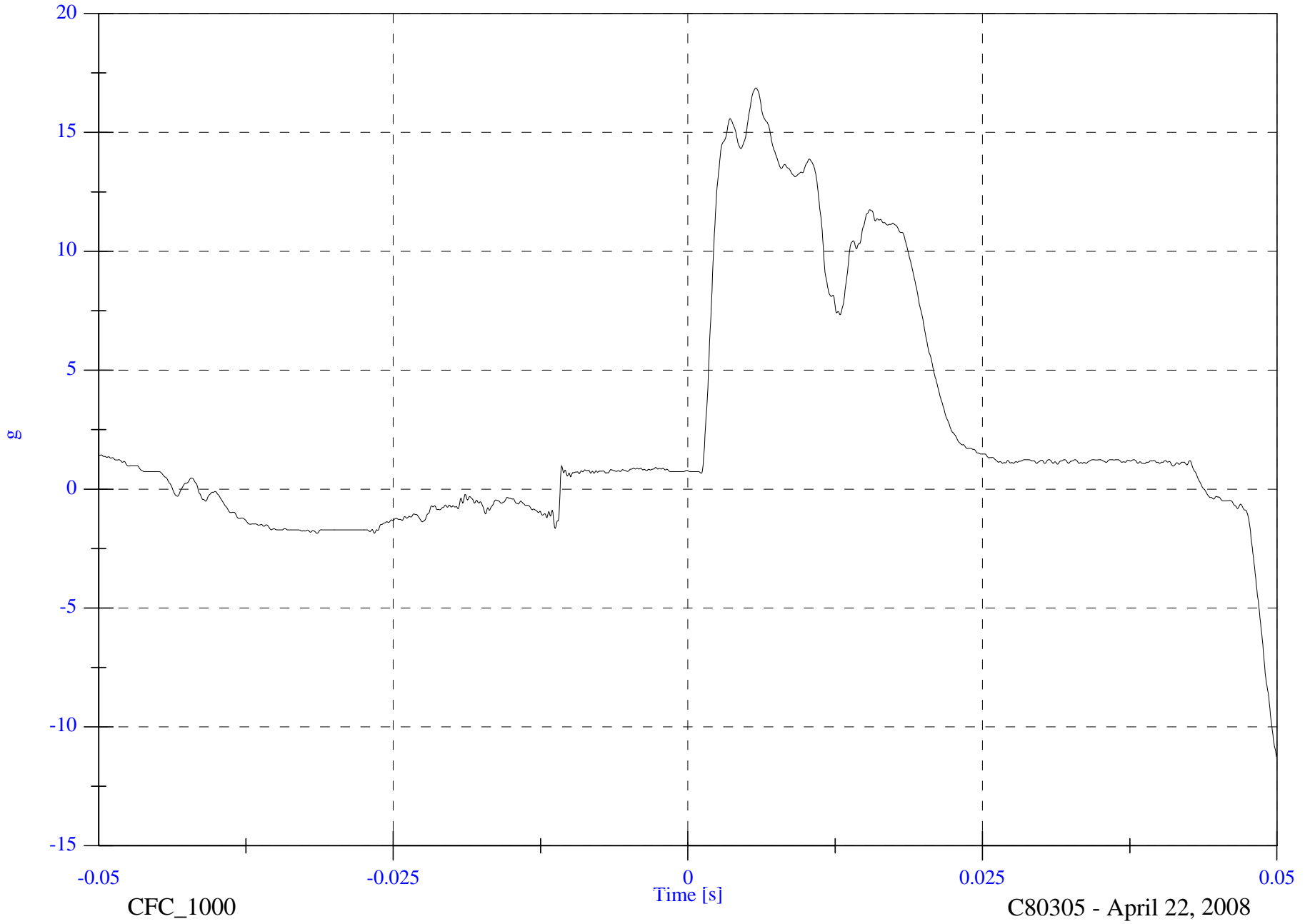
Headform Z Acceleration

Max: 16.9 [g] at 0.006 [s]

Min: -11.2 [g] at 0.050 [s]

C80305 PASSENGER SIDE AP3 IMPACT PLOT #4

8851-06



FMVSS 201U 2008 Dodge Grand Caravan

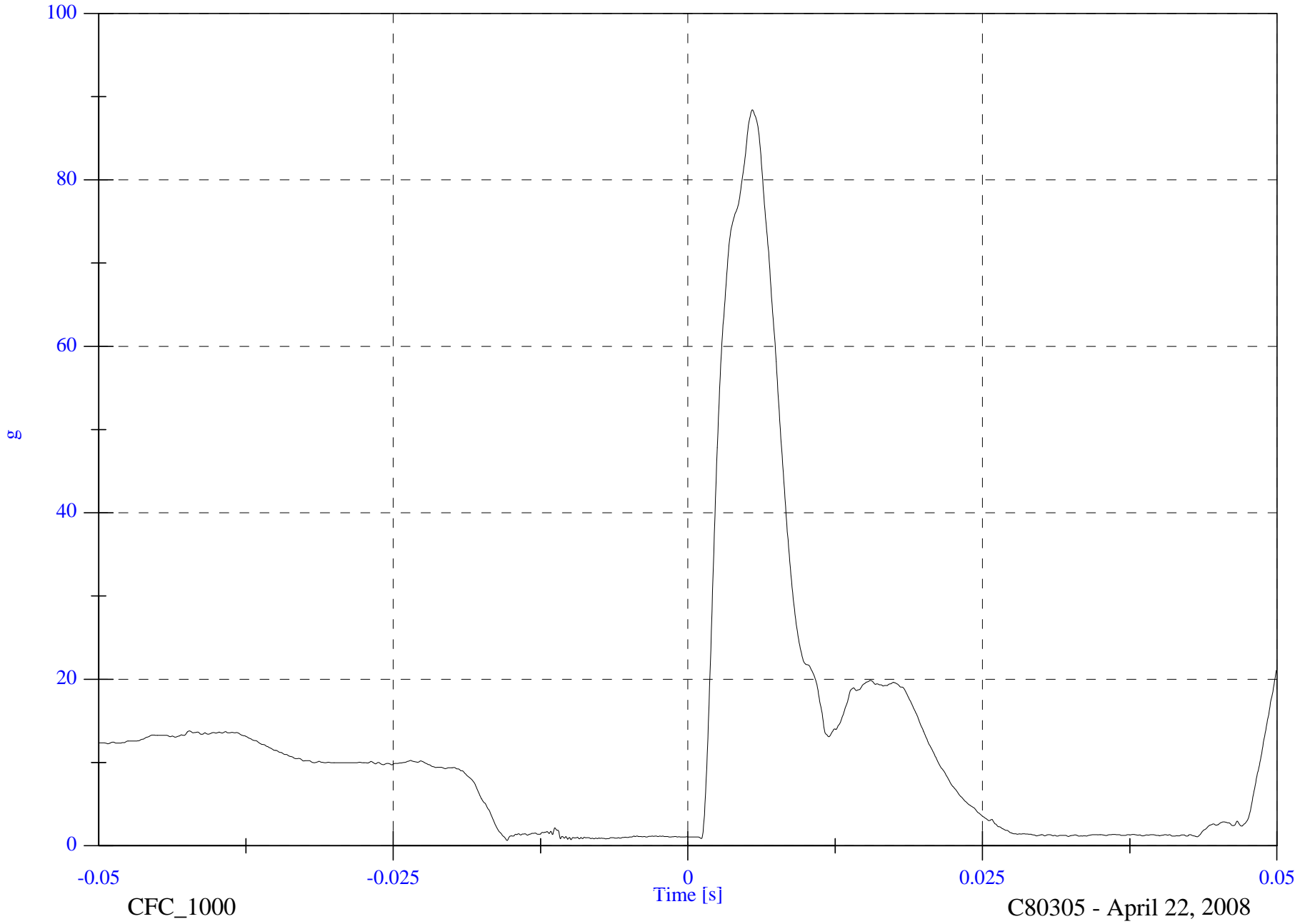
Headform Resultant

Max: 88.4 [g] at 0.005 [s]

Min: 0.6 [g] at -0.015 [s]

C80305 PASSENGER SIDE AP3 IMPACT PLOT #5

8851-06



CFC_1000

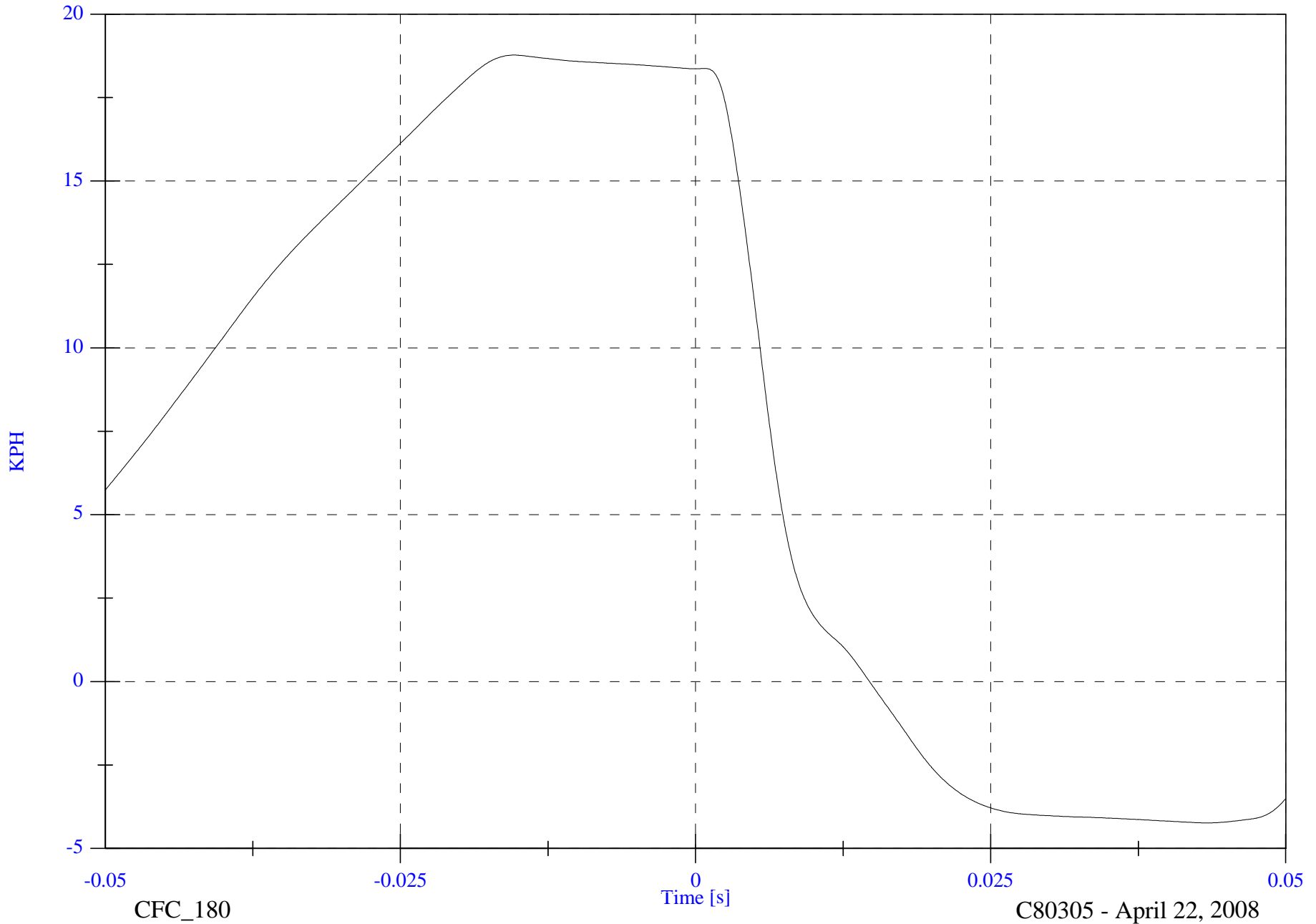
C80305 - April 22, 2008

FMVSS 201U 2008 Dodge Grand Caravan

Max: 18.8 [KPH] at -0.015 [s]

Min: -4.2 [KPH] at 0.043 [s]

Headform Velocity



C80305 PASSENGER SIDE AP3 IMPACT PLOT #6

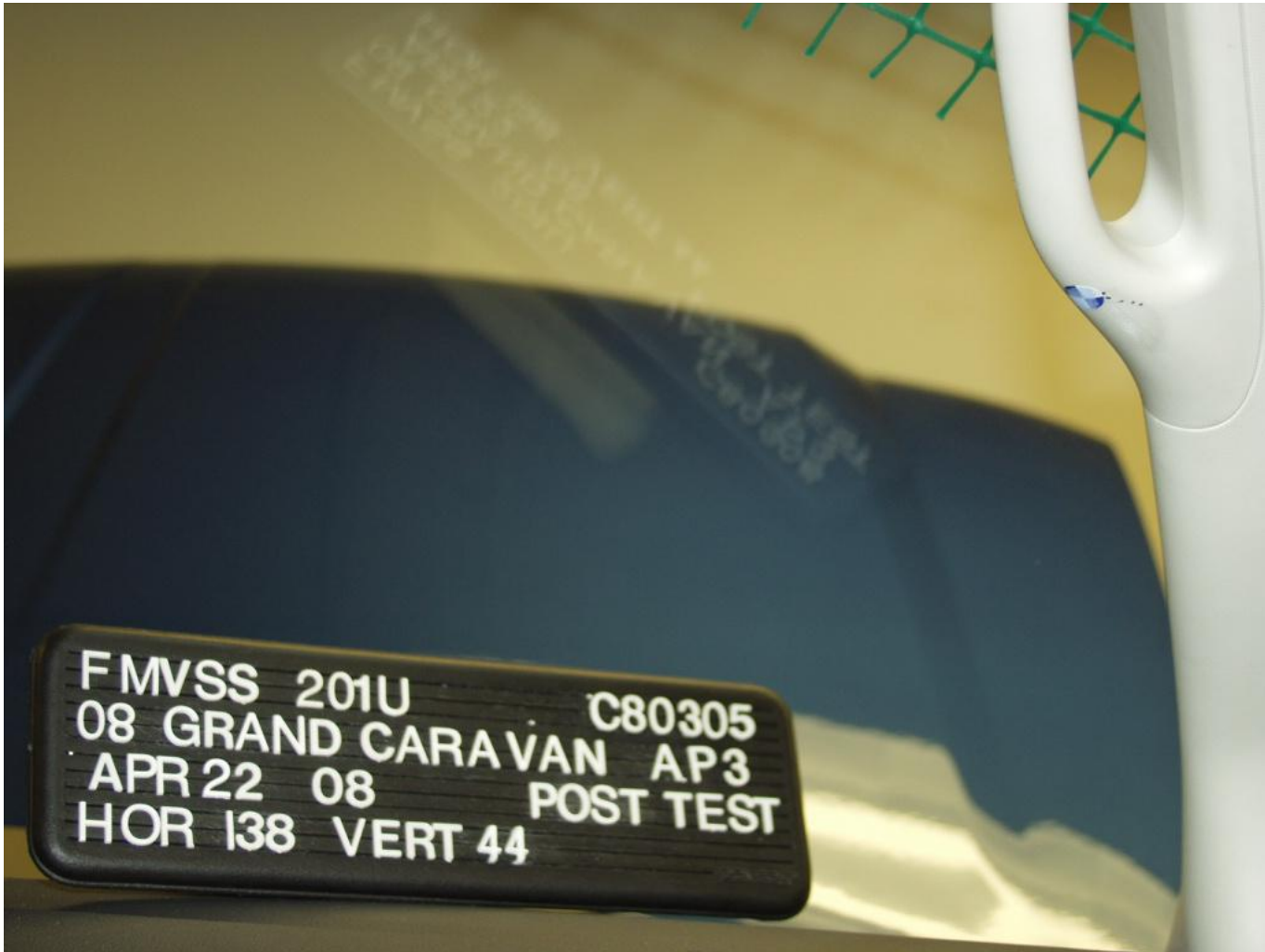
8851-06

CFC_180

C80305 - April 22, 2008



PRE-IMPACT AP3



POST-IMPACT AP3

VEHICLE YEAR/MAKE/MODEL/STYLE:	2008 Dodge Grand Caravan
VIN:	2D8HN44H78R627521
DATE OF MANUFACTURE:	12/07(SEE CERTIFICATION LABEL)
COLOR:	Blue

Test Number:	08
Test Date:	04/22/08
Target Location:	A-PILLAR
Target Code:	AP1
Horizontal Impact Angle:	122°
Vertical Impact Angle:	50°
Ambient Temperature:	21.1 C°
Relative Humidity:	34.6 %
Time of Impact:	16:00
Headform Number:	1140

Impact Point Description (from lower midpoint on midsagittal line)			
On Centerline	2	<input checked="" type="checkbox"/> mm right	<input type="checkbox"/> mm left
On Centerline	7	mm up	



POST-IMPACT AP1 HEADFORM

Free Motion HIC	442.6
HIC(d)	500.3
Impact Velocity (kph)	18.69
HIC T1 (msec)	7.6
HIC T2 (msec)	13.0

FMVSS 201U 2008 Dodge Grand Caravan C80305 - AP1

FMH Headform 1140

Location: AP1

Test Date: April 22, 2008

Work File: AP1

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

Lab Temperature: 21.1 C

HICd: 500.3

Lab Humidity: 34.6 %

HIC (36ms): 442.6

Velocity at Impact: 18.69 KPH

t1: 7.6 msec

t2: 13.0 msec

Free Flight Distance: 222.79 mm

Duration: 5.4 msec

Average Acceleration: 10.8 g

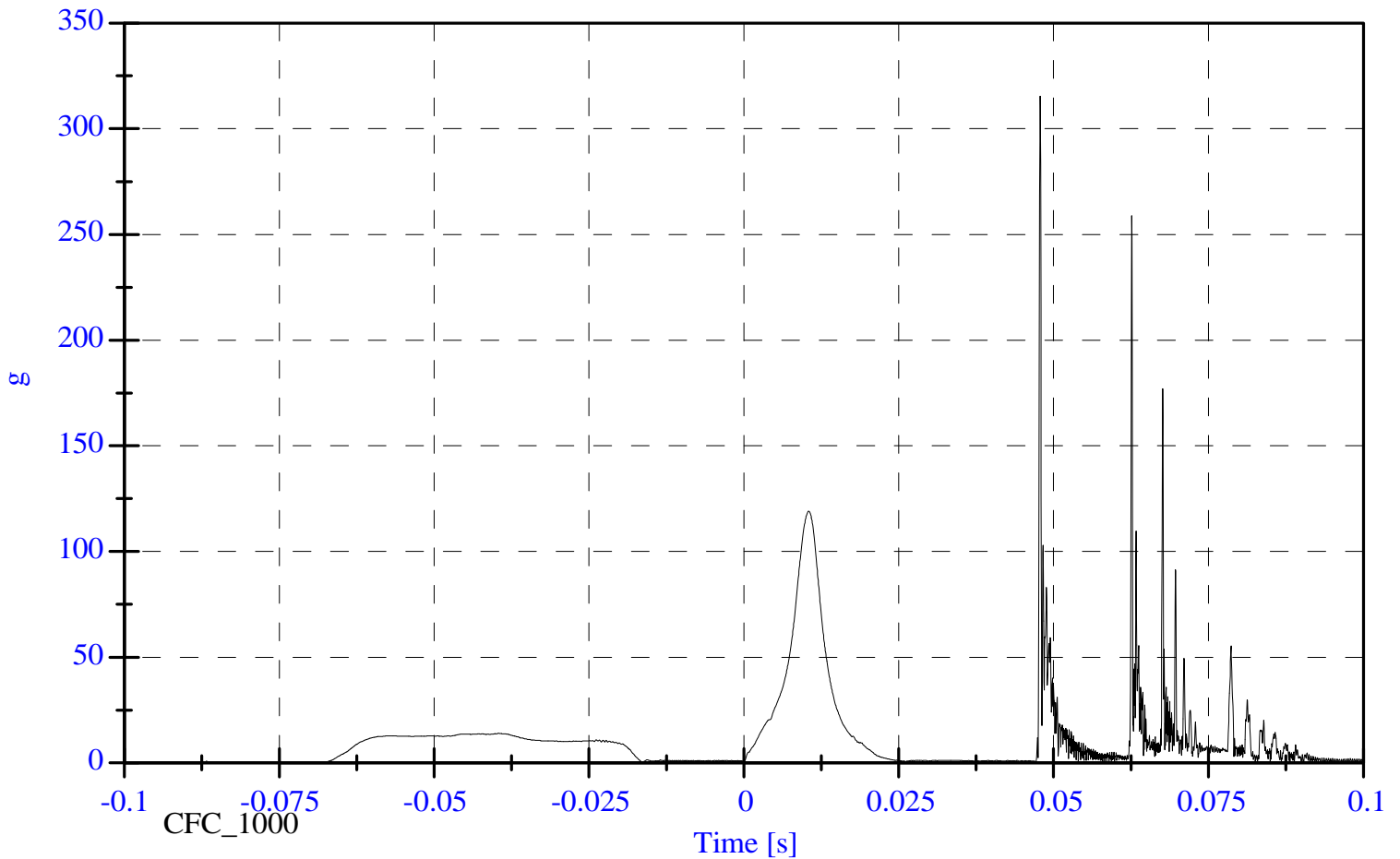
Maximum: 119.0 g

FMVSS 201U 2008 Dodge Grand Caravan

Headform Resultant

Max: 119.0 [g] at 0.010 [s]

Min: 0.0 [g] at -0.094 [s]



FMVSS 201U 2008 Dodge Grand Caravan

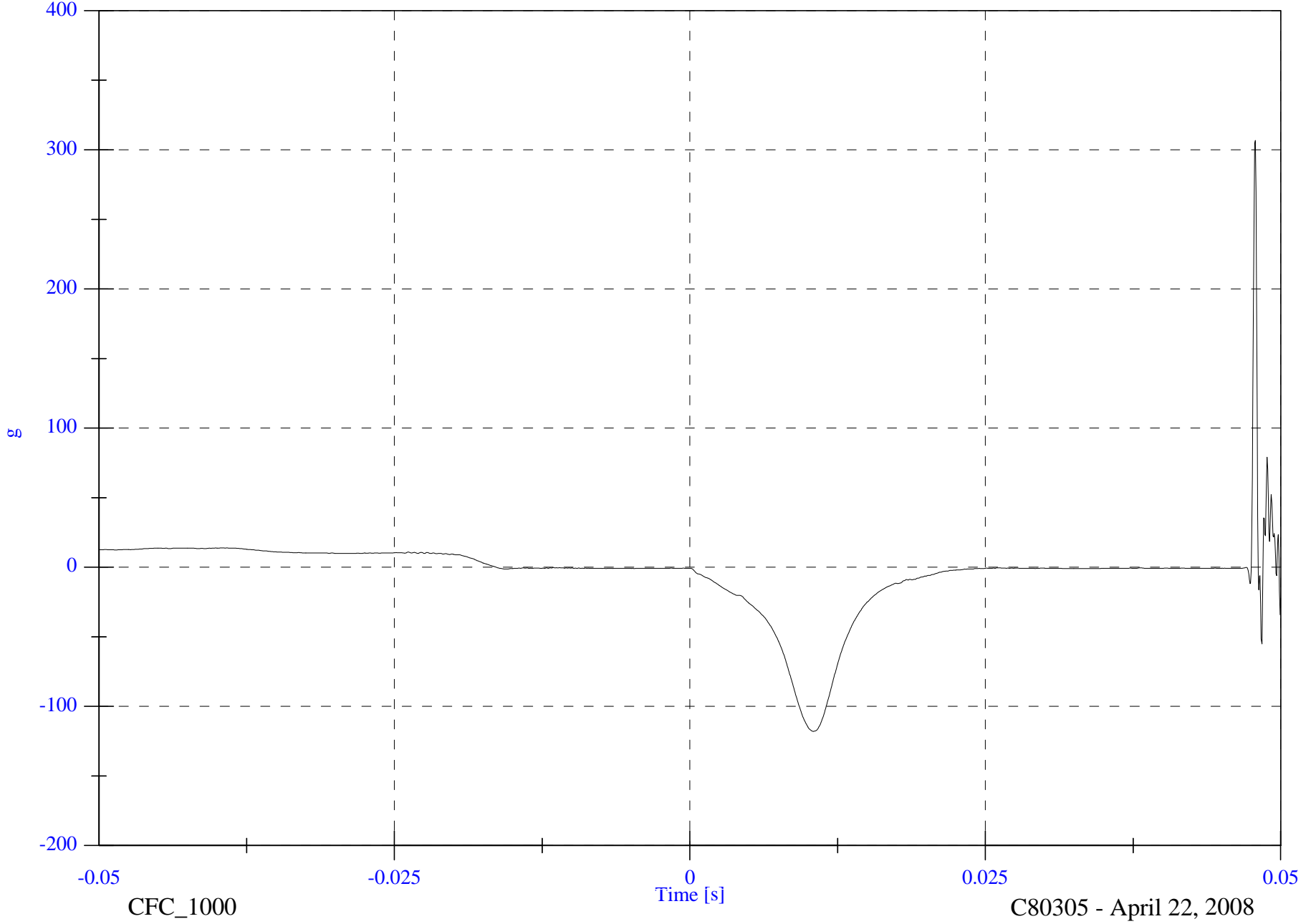
Headform X Acceleration

Max: 306.8 [g] at 0.048 [s]

Min: -118.0 [g] at 0.010 [s]

C80305 PASSENGER SIDE AP1 IMPACT PLOT #2

8851-06



FMVSS 201U 2008 Dodge Grand Caravan

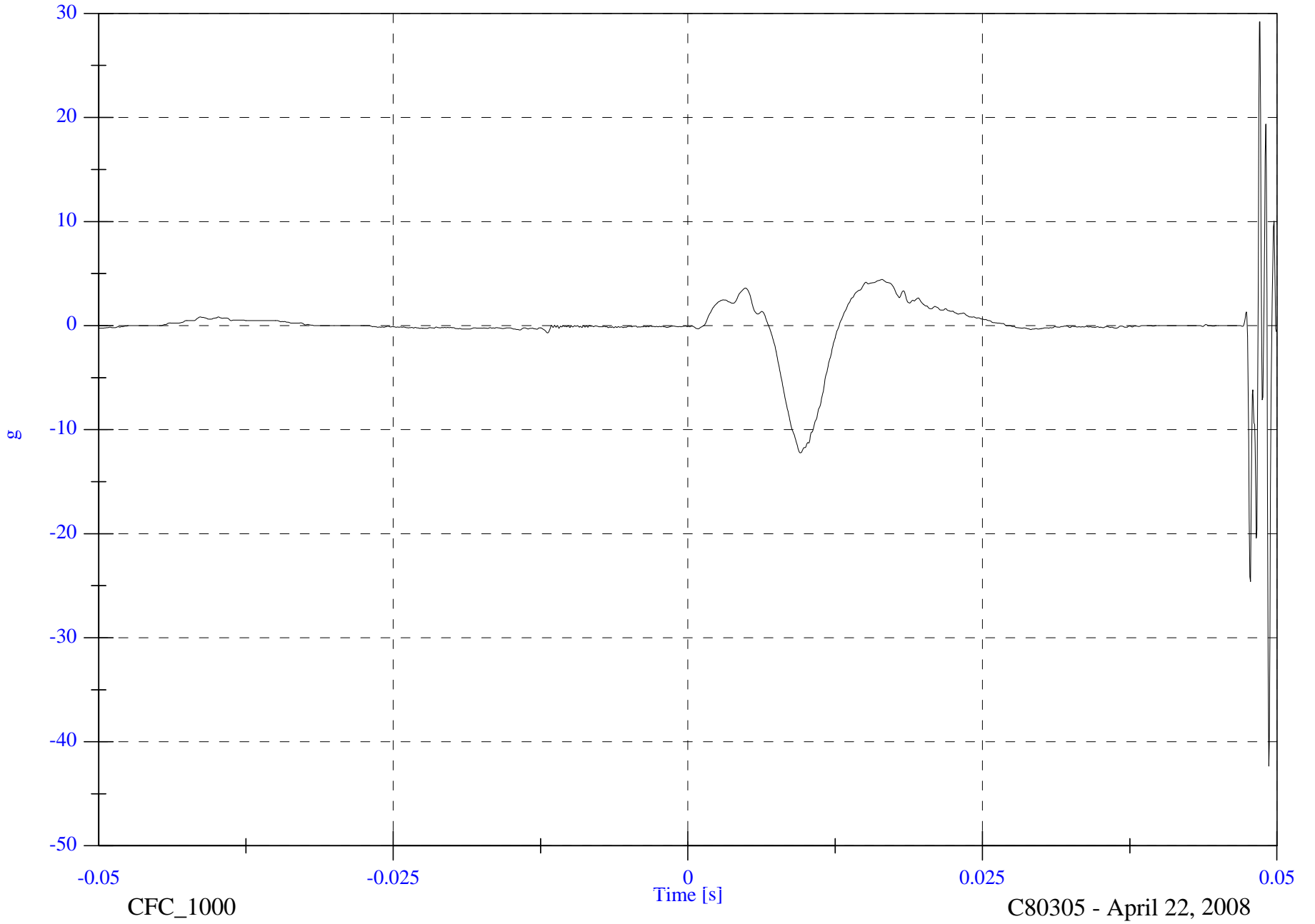
Headform Y Acceleration

Max: 29.2 [g] at 0.049 [s]

Min: -42.3 [g] at 0.049 [s]

C80305 PASSENGER SIDE AP1 IMPACT PLOT #3

8851-06



CFC_1000

C80305 - April 22, 2008

FMVSS 201U 2008 Dodge Grand Caravan

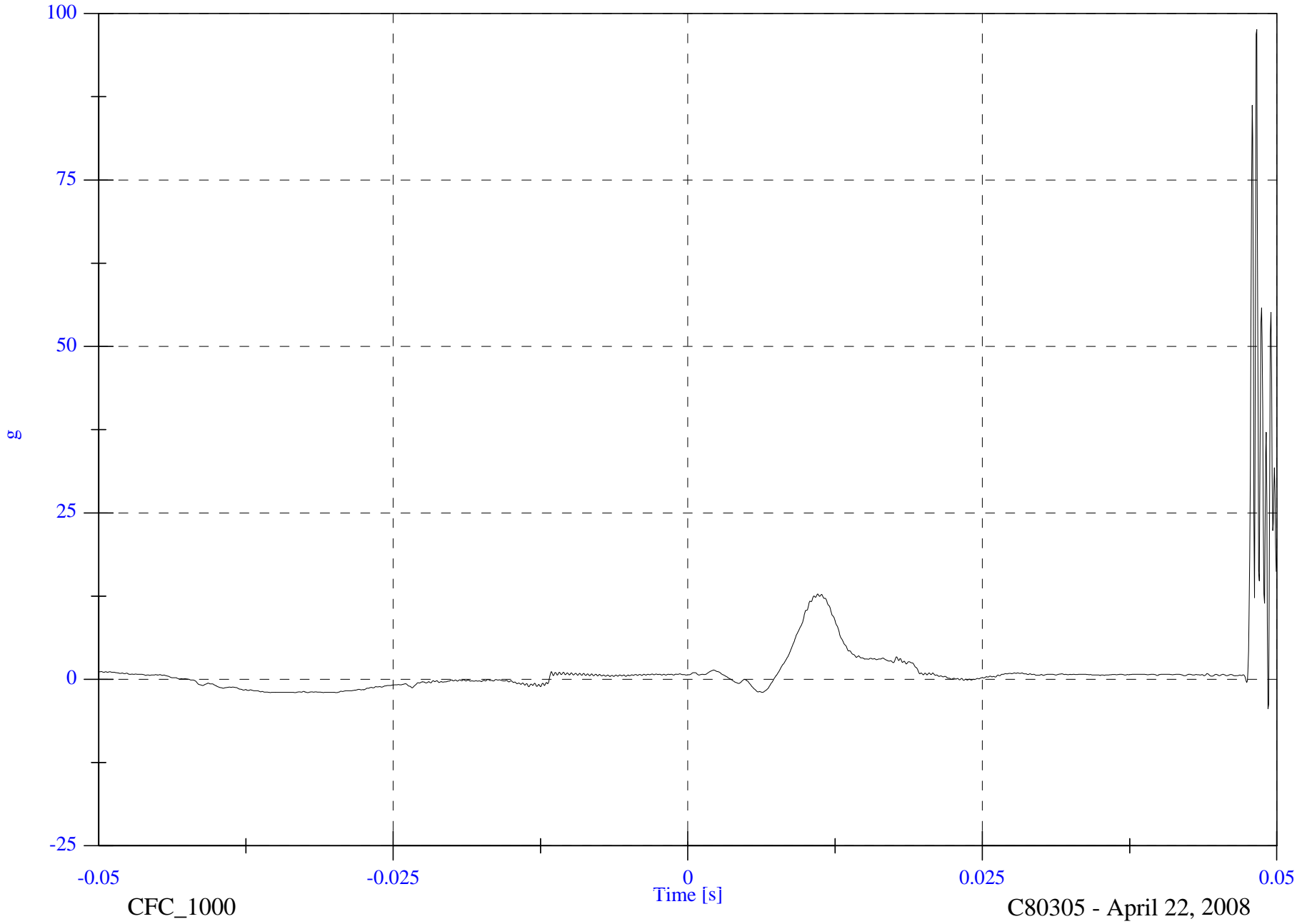
Headform Z Acceleration

Max: 97.6 [g] at 0.048 [s]

Min: -4.4 [g] at 0.049 [s]

C80305 PASSENGER SIDE AP1 IMPACT PLOT #4

8851-06



CFC_1000

C80305 - April 22, 2008

FMVSS 201U 2008 Dodge Grand Caravan

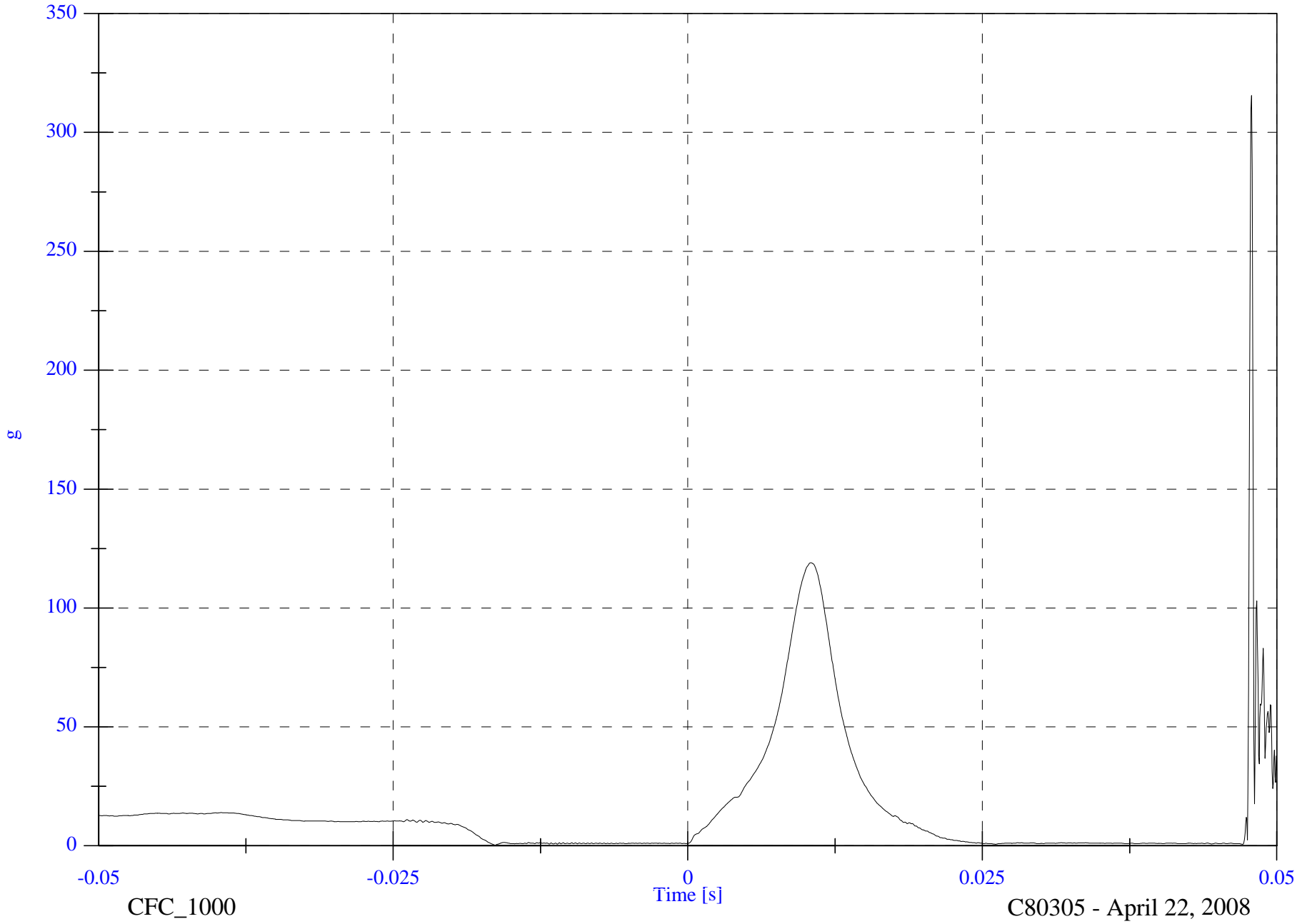
Headform Resultant

Max: 315.4 [g] at 0.048 [s]

Min: 0.3 [g] at -0.016 [s]

C80305 PASSENGER SIDE AP1 IMPACT PLOT #5

8851-06



CFC_1000

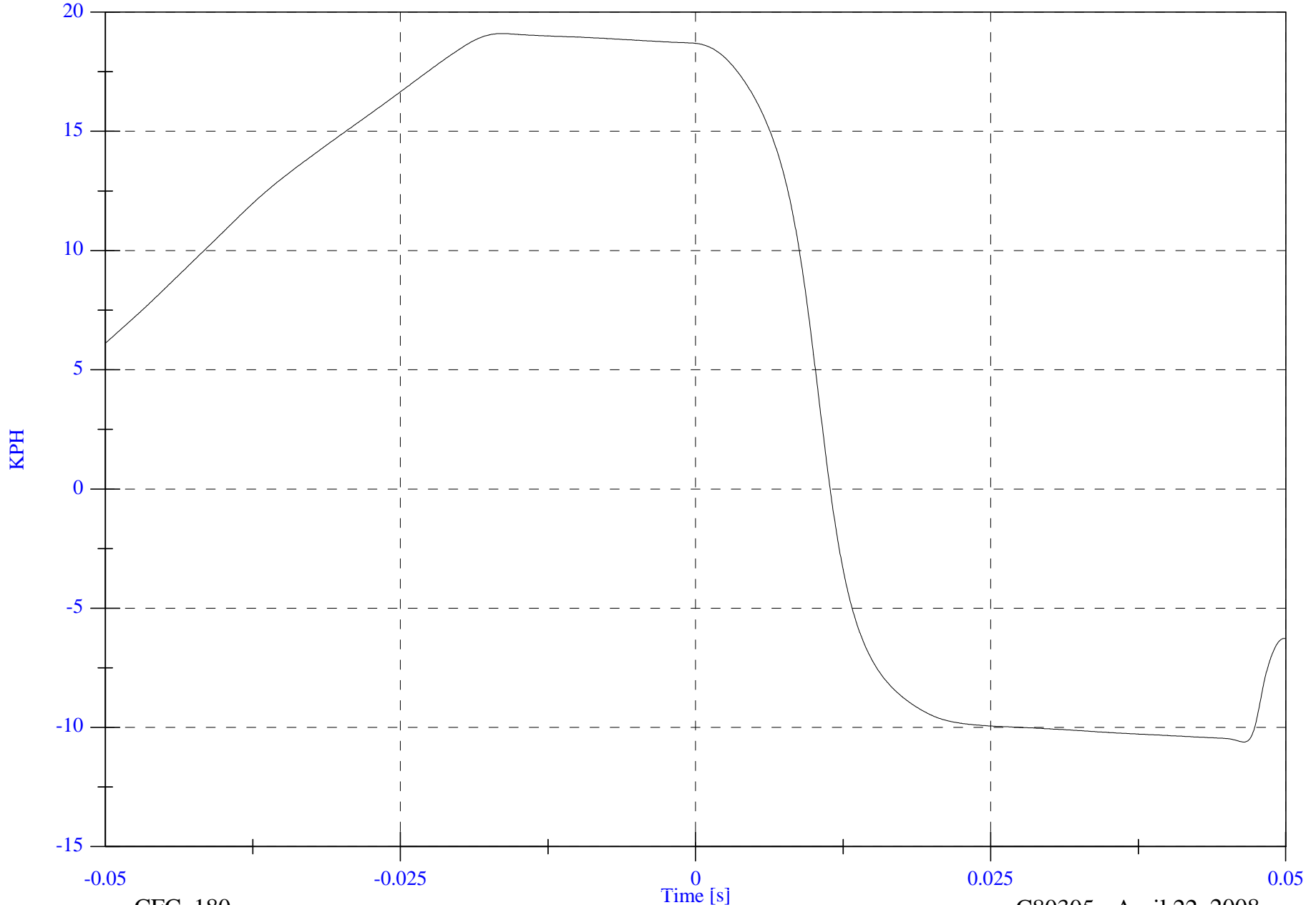
C80305 - April 22, 2008

FMVSS 201U 2008 Dodge Grand Caravan

Max: 19.1 [KPH] at -0.016 [s]

Min: -10.6 [KPH] at 0.046 [s]

Headform Velocity



C80305 PASSENGER SIDE AP1 IMPACT PLOT #6

8851-06

CFC_180

C80305 - April 22, 2008



PRE-IMPACT API



POST-IMPACT AP1

VEHICLE YEAR/MAKE/MODEL/STYLE:	2008 Dodge Grand Caravan
VIN:	2D8HN44H78R627521
DATE OF MANUFACTURE:	12/07(SEE CERTIFICATION LABEL)
COLOR:	Blue

Test Number:	09
Test Date:	04/23/08
Target Location:	B-PILLAR
Target Code:	BP3
Horizontal Impact Angle:	270°
Vertical Impact Angle:	-10°
Ambient Temperature:	21.0 C°
Relative Humidity:	31.4 %
Time of Impact:	9:00
Headform Number:	1140

Impact Point Description (from lower midpoint on midsagittal line)			
On Centerline	27	mm right	x mm left
On Centerline	26	mm up	



POST-IMPACT BP3 HEADFORM

Free Motion HIC	705.7
HIC(d)	698.8
Impact Velocity (kph)	23.75
HIC T1 (msec)	5.2
HIC T2 (msec)	11.0

FMVSS 201U 2008 Dodge Grand Caravan C80305 - BP3

FMH Headform 1140

Location: BP3

Test Date: April 23, 2008

Work File: BP3

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

Lab Temperature: 21.0 C

HICd: 698.8

Lab Humidity: 31.4 %

HIC (36ms): 705.7

Velocity at Impact: 23.75 KPH

t1: 5.2 msec

t2: 11.0 msec

Free Flight Distance: 220.14 mm

Duration: 5.7 msec

Average Acceleration: 8.8 g

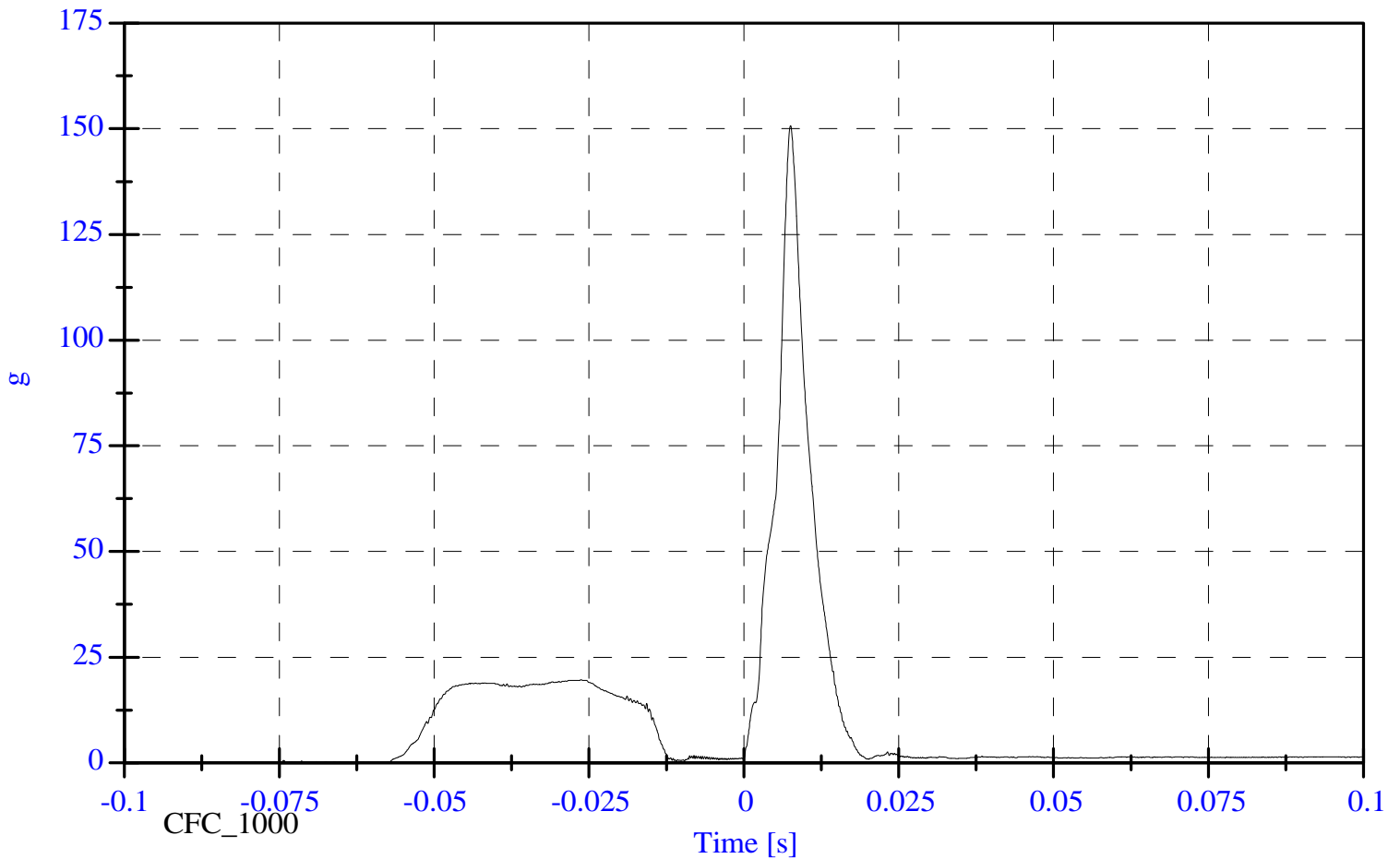
Maximum: 150.8 g

FMVSS 201U 2008 Dodge Grand Caravan

Headform Resultant

Max: 150.8 [g] at 0.008 [s]

Min: 0.0 [g] at -0.061 [s]



FMVSS 201U 2008 Dodge Grand Caravan

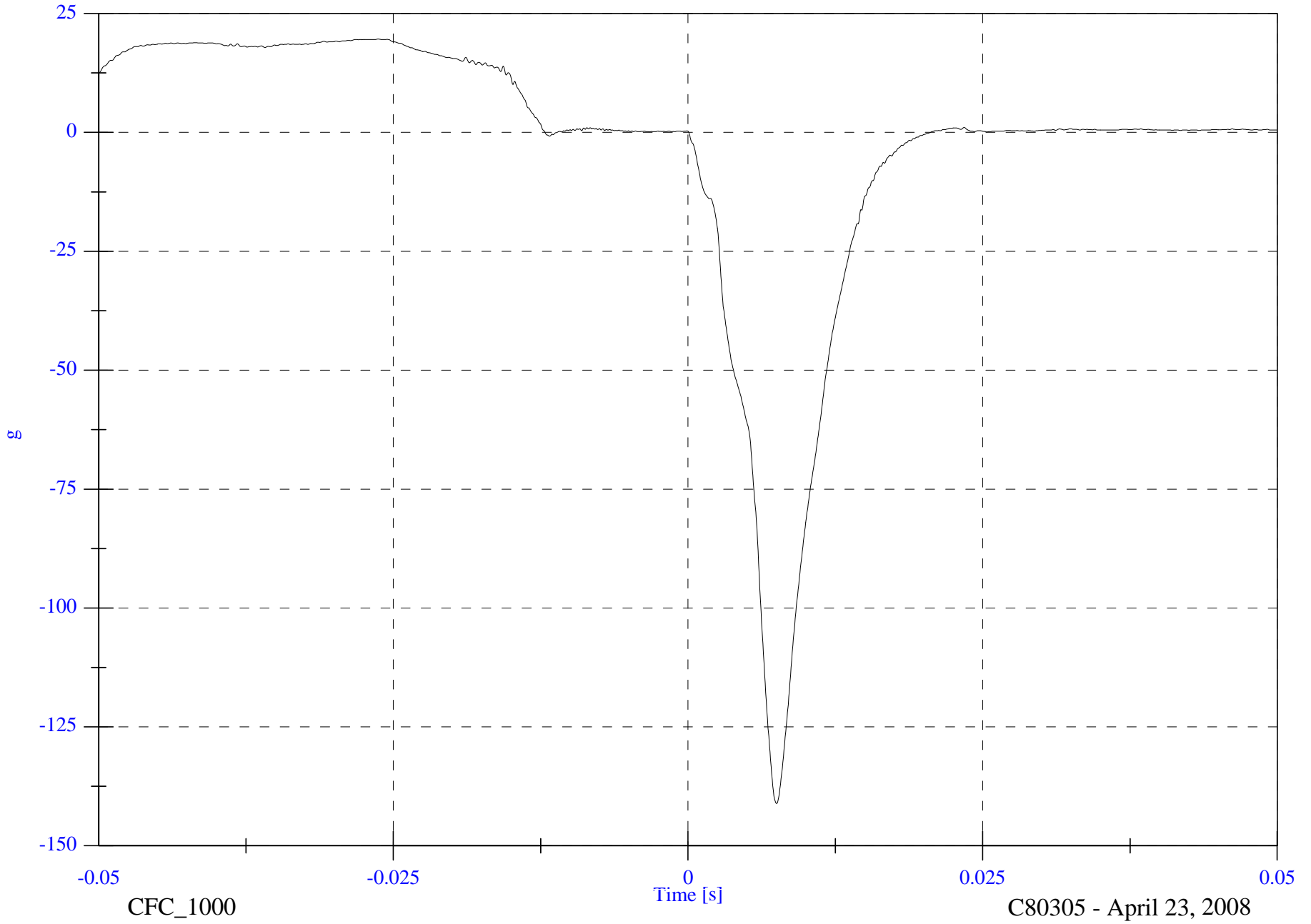
Headform X Acceleration

Max: 19.6 [g] at -0.026 [s]

Min: -141.1 [g] at 0.008 [s]

C80305 DRIVER SIDE IMPACT PLOT #2

8851-06



CFC_1000

C80305 - April 23, 2008

FMVSS 201U 2008 Dodge Grand Caravan

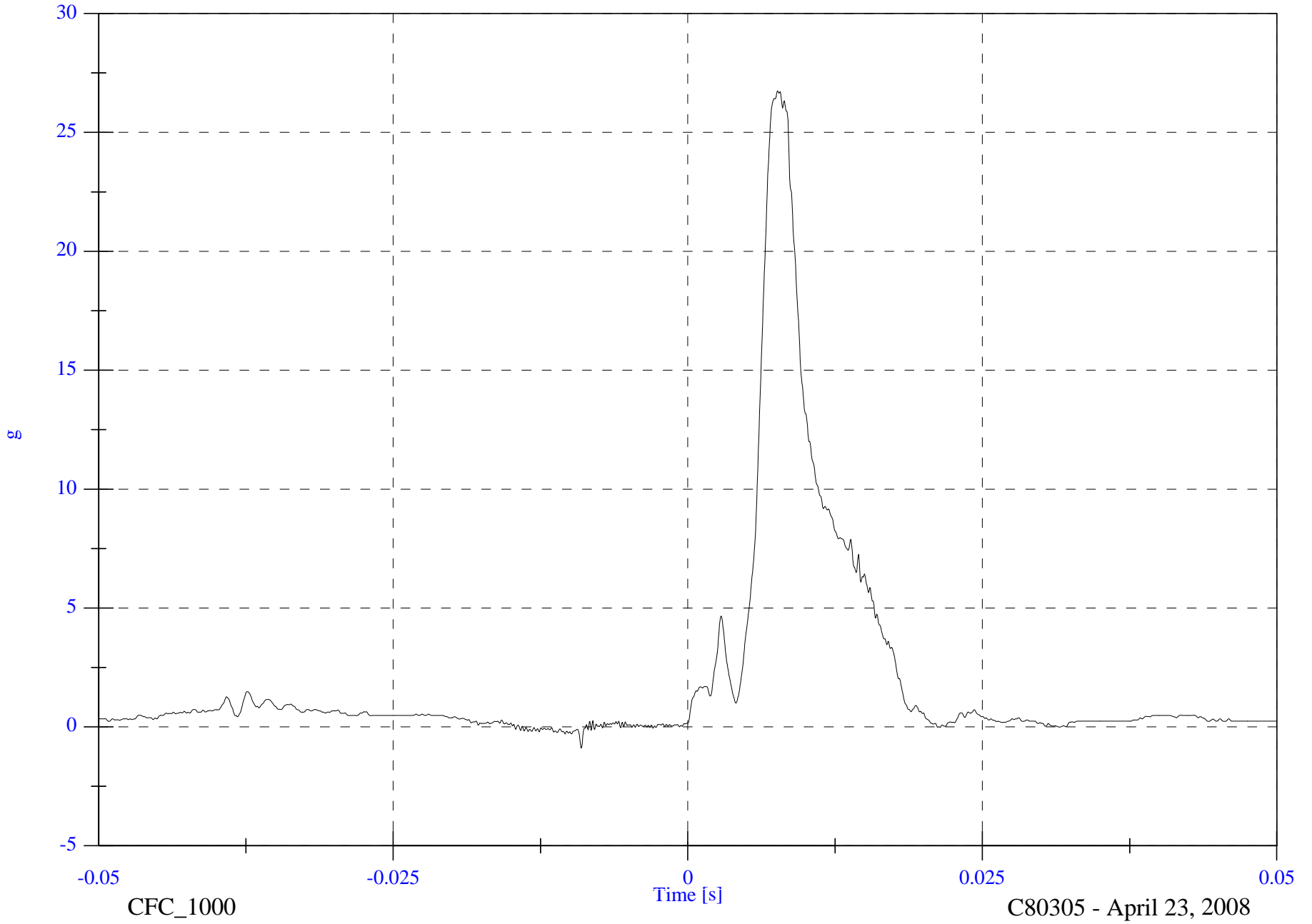
Headform Y Acceleration

Max: 26.7 [g] at 0.008 [s]

Min: -0.9 [g] at -0.009 [s]

C80305 DRIVER SIDE IMPACT PLOT #3

8851-06



CFC_1000

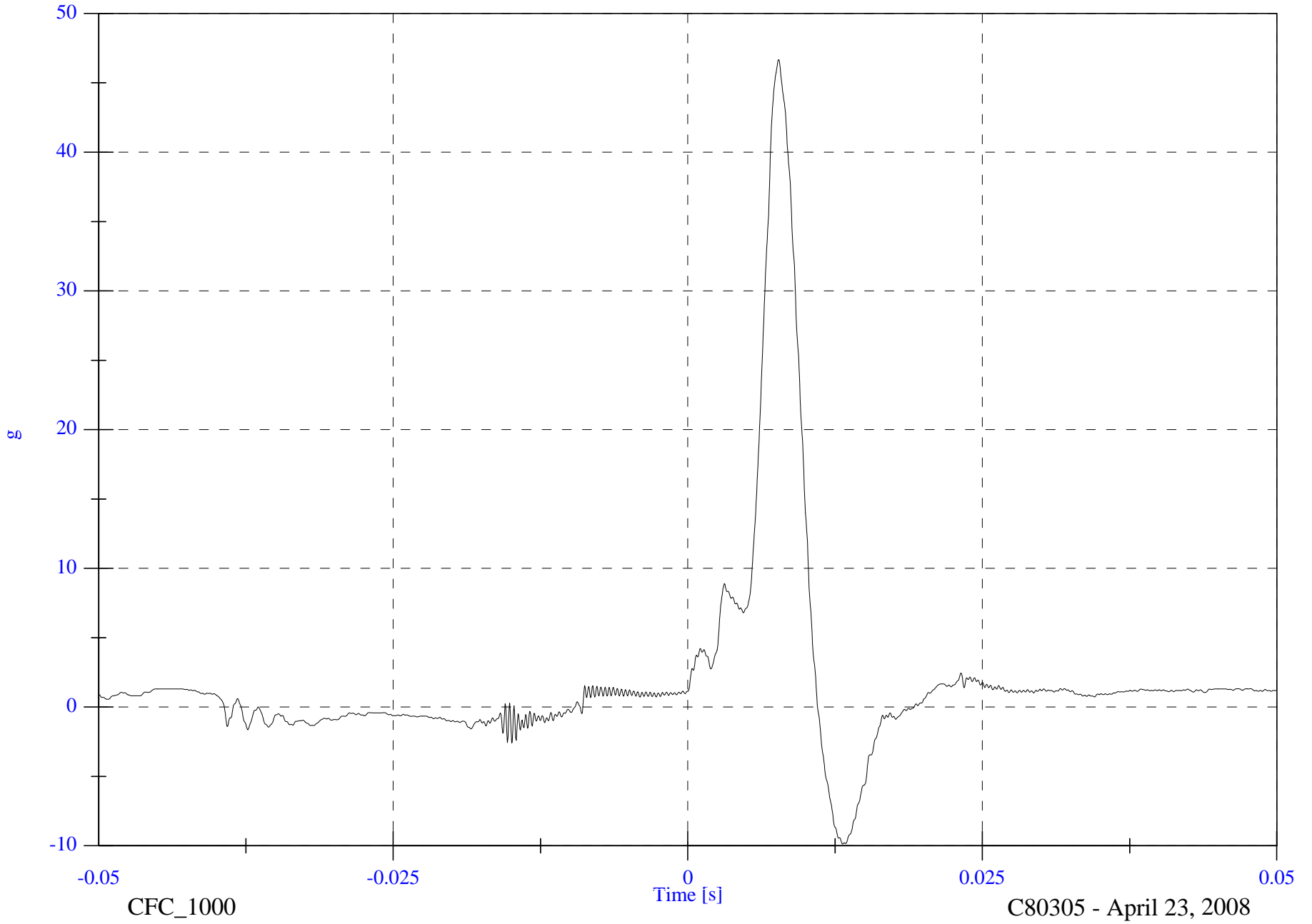
C80305 - April 23, 2008

FMVSS 201U 2008 Dodge Grand Caravan

Headform Z Acceleration

Max: 46.7 [g] at 0.008 [s]

Min: -9.9 [g] at 0.013 [s]



C80305 DRIVER SIDE IMPACT PLOT #4

8851-06

CFC_1000

C80305 - April 23, 2008

FMVSS 201U 2008 Dodge Grand Caravan

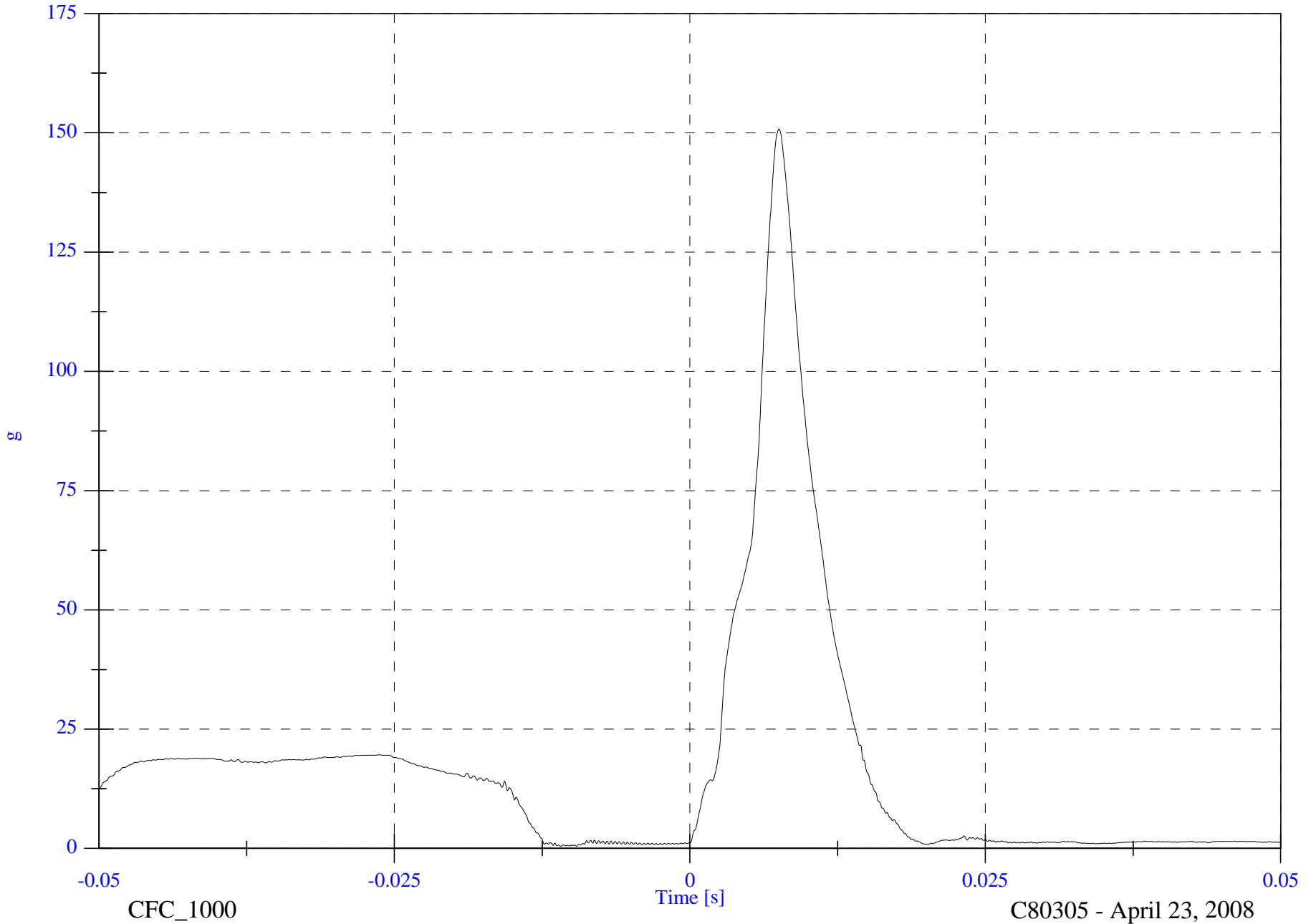
Headform Resultant

Max: 150.8 [g] at 0.008 [s]

Min: 0.4 [g] at -0.011 [s]

C80305 DRIVER SIDE IMPACT PLOT #5

8851-06



CFC_1000

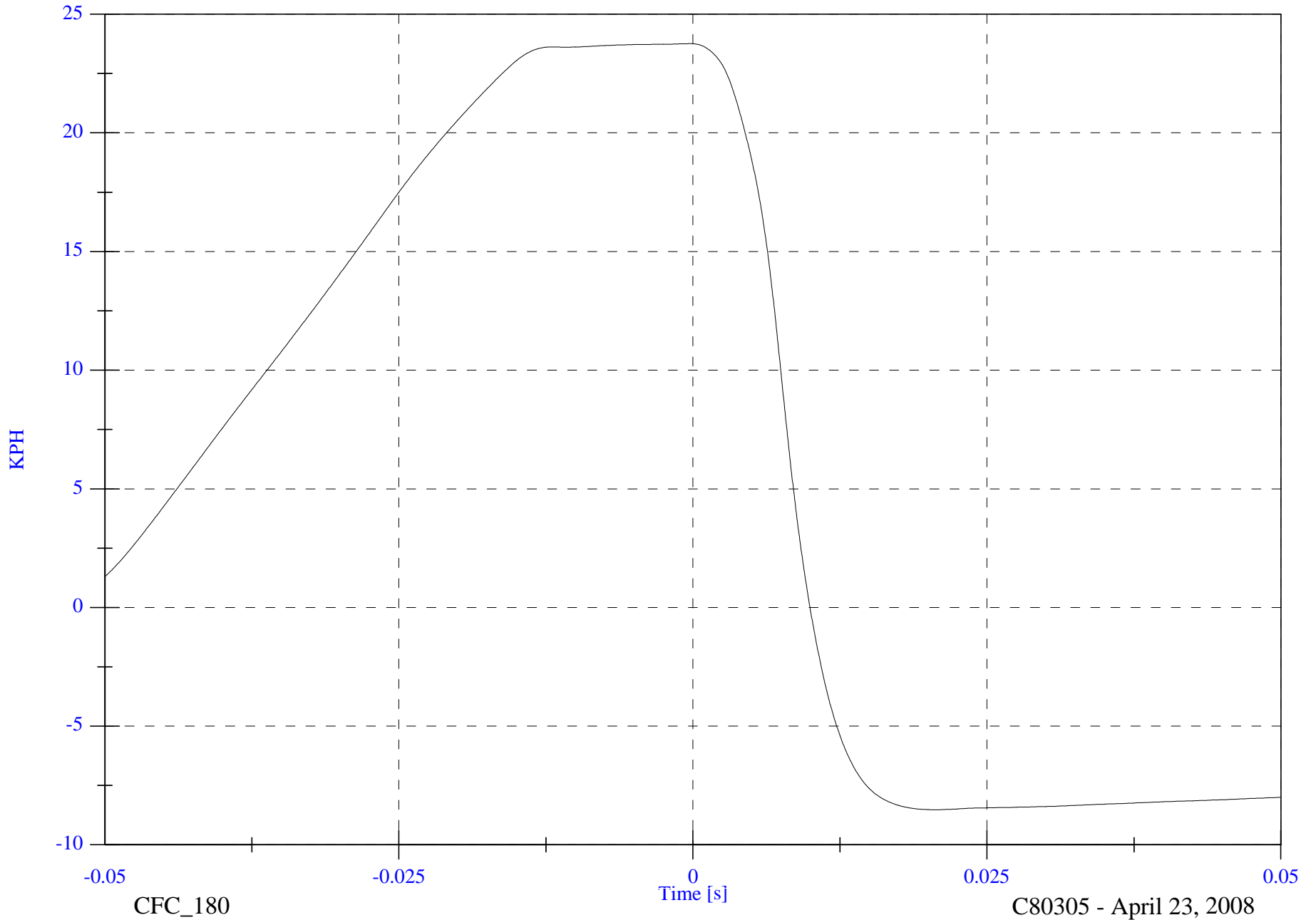
C80305 - April 23, 2008

FMVSS 201U 2008 Dodge Grand Caravan

Max: 23.8 [KPH] at -0.000 [s]

Min: -8.5 [KPH] at 0.021 [s]

Headform Velocity



C80305 DRIVER SIDE IMPACT PLOT #6

8851-06

CFC_180

C80305 - April 23, 2008



PRE-IMPACT BP3



POST-IMPACT BP3

VEHICLE YEAR/MAKE/MODEL/STYLE:	2008 Dodge Grand Caravan
VIN:	2D8HN44H78R627521
DATE OF MANUFACTURE:	12/07(SEE CERTIFICATION LABEL)
COLOR:	Blue

Test Number:	10
Test Date:	04/23/08
Target Location:	UPPER ROOF
Target Code:	URBP
Horizontal Impact Angle:	270°
Vertical Impact Angle:	23°
Ambient Temperature:	21.1 C°
Relative Humidity:	34.1 %
Time of Impact:	9:40
Headform Number:	0805

Impact Point Description (from lower midpoint on midsagittal line)			
On Centerline	10	mm right	x mm left
On Centerline	38	mm up	



POST-IMPACT URBP HEADFORM

Free Motion HIC	238.0
HIC(d)	346.0
Impact Velocity (kph)	23.79
HIC T1 (msec)	1.7
HIC T2 (msec)	15.1

FMVSS 201U 2008 Dodge Grand Caravan C80305 - URBP

FMH Headform 0805

Location: URBP

Test Date: April 23, 2008

Work File: URBP

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

Lab Temperature: 21.1 C

HICd: 346.0

Lab Humidity: 34.1 %

HIC (36ms): 238.0

Velocity at Impact: 23.79 KPH

t1: 1.7 msec

t2: 15.1 msec

Free Flight Distance: 217.08 mm

Duration: 13.4 msec

Average Acceleration: 8.7 g

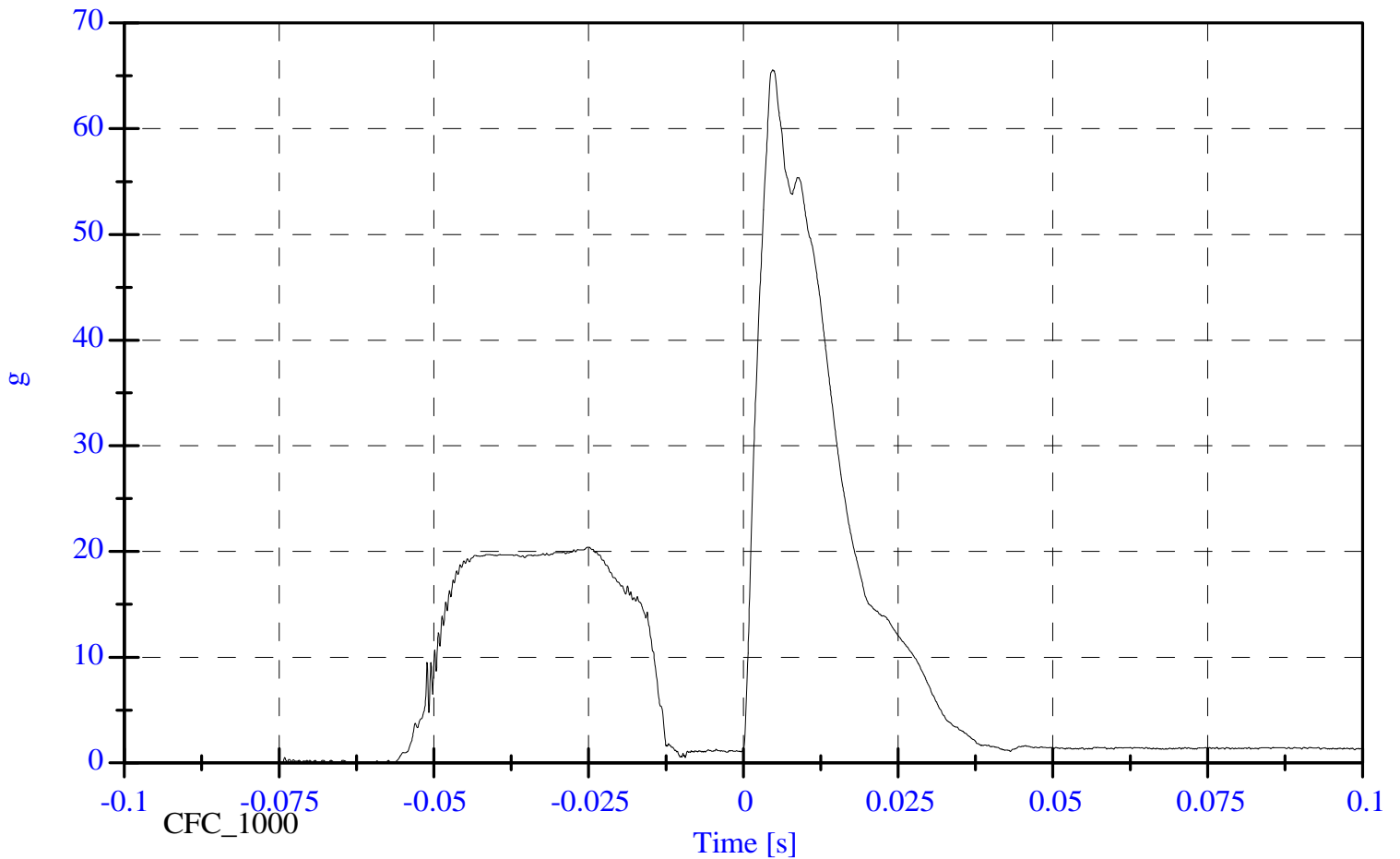
Maximum: 65.6 g

FMVSS 201U 2008 Dodge Grand Caravan

Headform Resultant

Max: 65.6 [g] at 0.005 [s]

Min: 0.0 [g] at -0.059 [s]



FMVSS 201U 2008 Dodge Grand Caravan

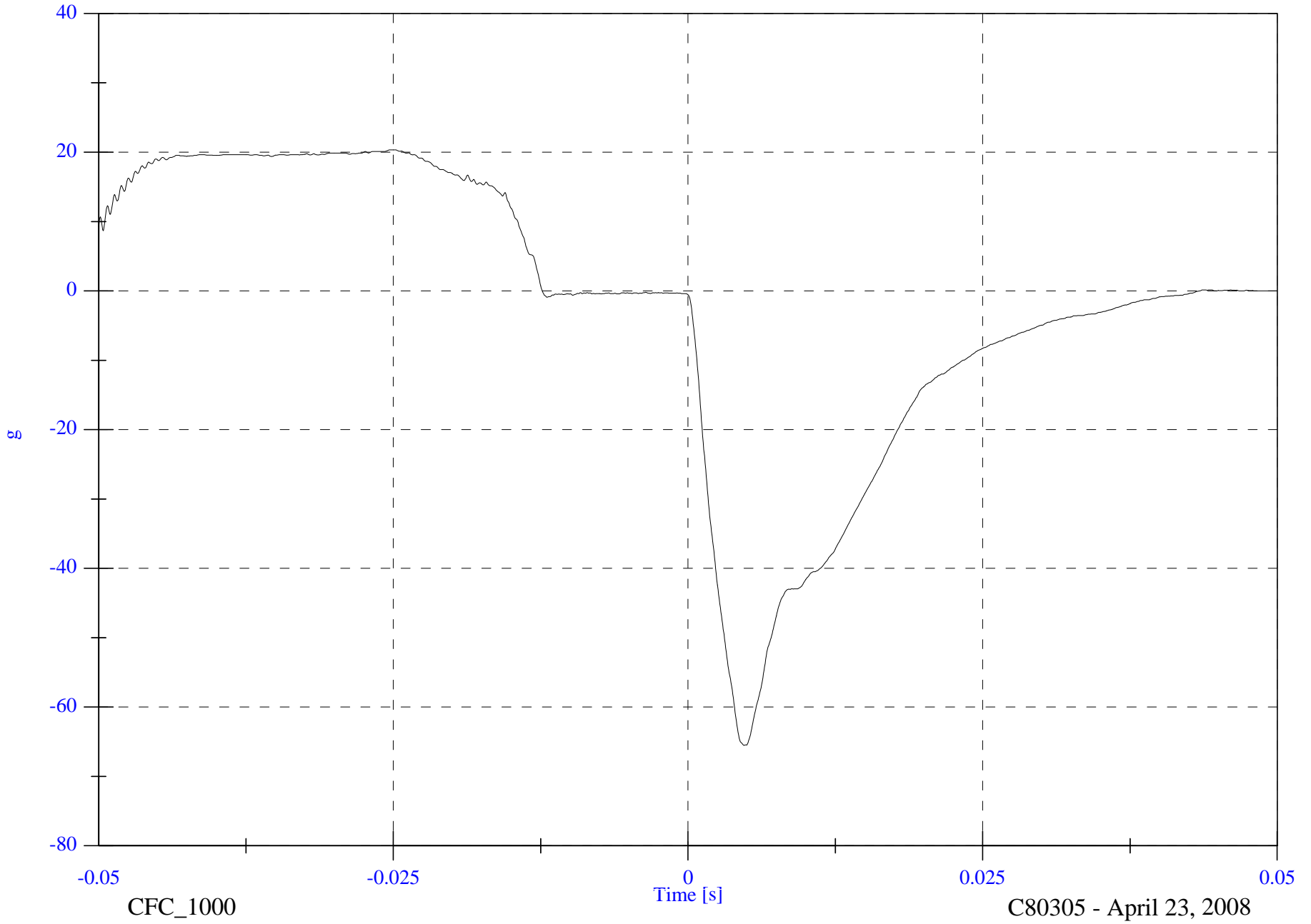
Headform X Acceleration

Max: 20.3 [g] at -0.025 [s]

Min: -65.5 [g] at 0.005 [s]

C80305 DRIVER SIDE URBP IMPACT PLOT #2

8851-06



C80305 - April 23, 2008

FMVSS 201U 2008 Dodge Grand Caravan

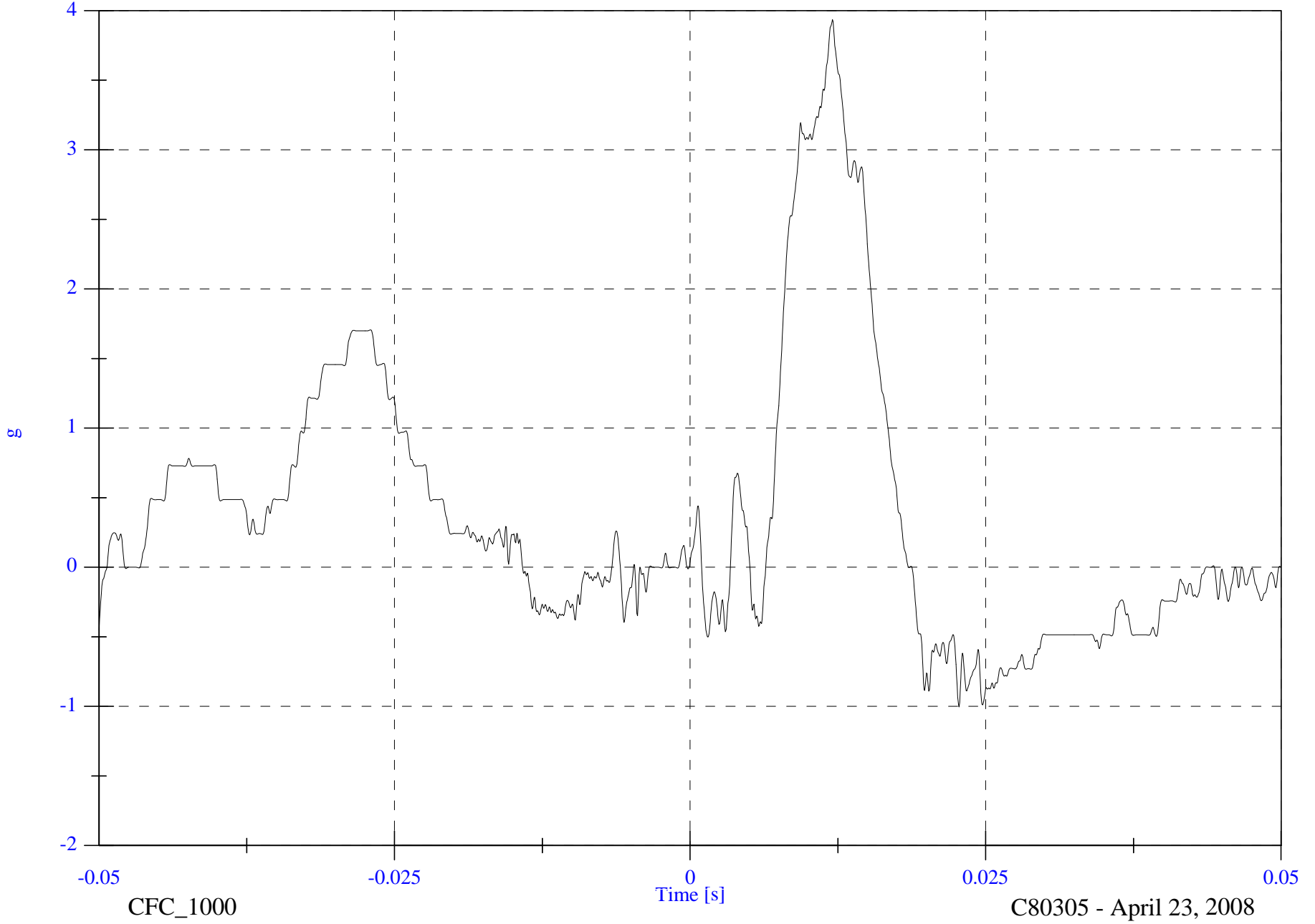
Headform Y Acceleration

Max: 3.9 [g] at 0.012 [s]

Min: -1.0 [g] at 0.023 [s]

C80305 DRIVER SIDE URBP IMPACT PLOT #3

8851-06



CFC_1000

C80305 - April 23, 2008

FMVSS 201U 2008 Dodge Grand Caravan

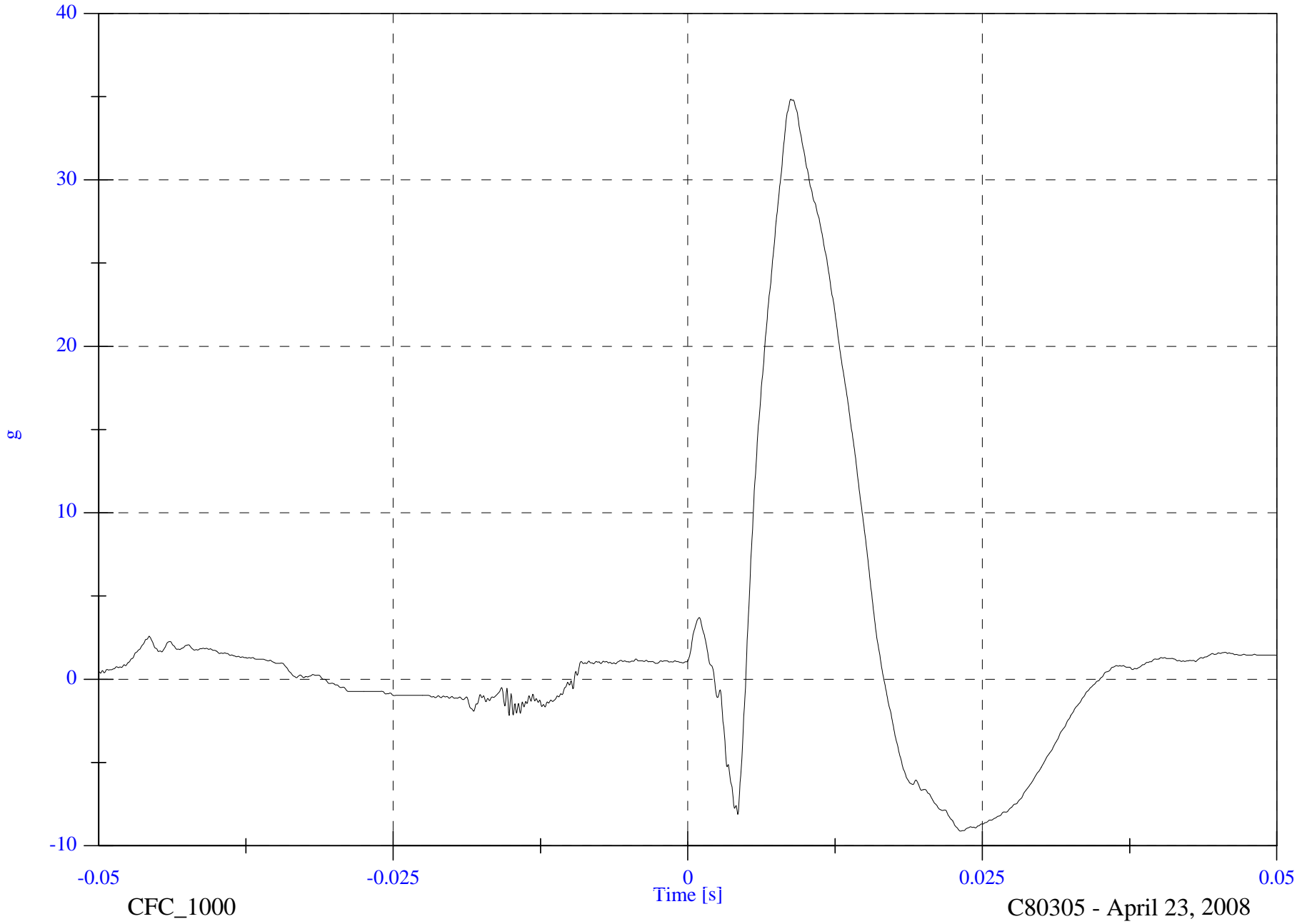
Headform Z Acceleration

Max: 34.8 [g] at 0.009 [s]

Min: -9.1 [g] at 0.023 [s]

C80305 DRIVER SIDE URBP IMPACT PLOT #4

8851-06



CFC_1000

C80305 - April 23, 2008

FMVSS 201U 2008 Dodge Grand Caravan

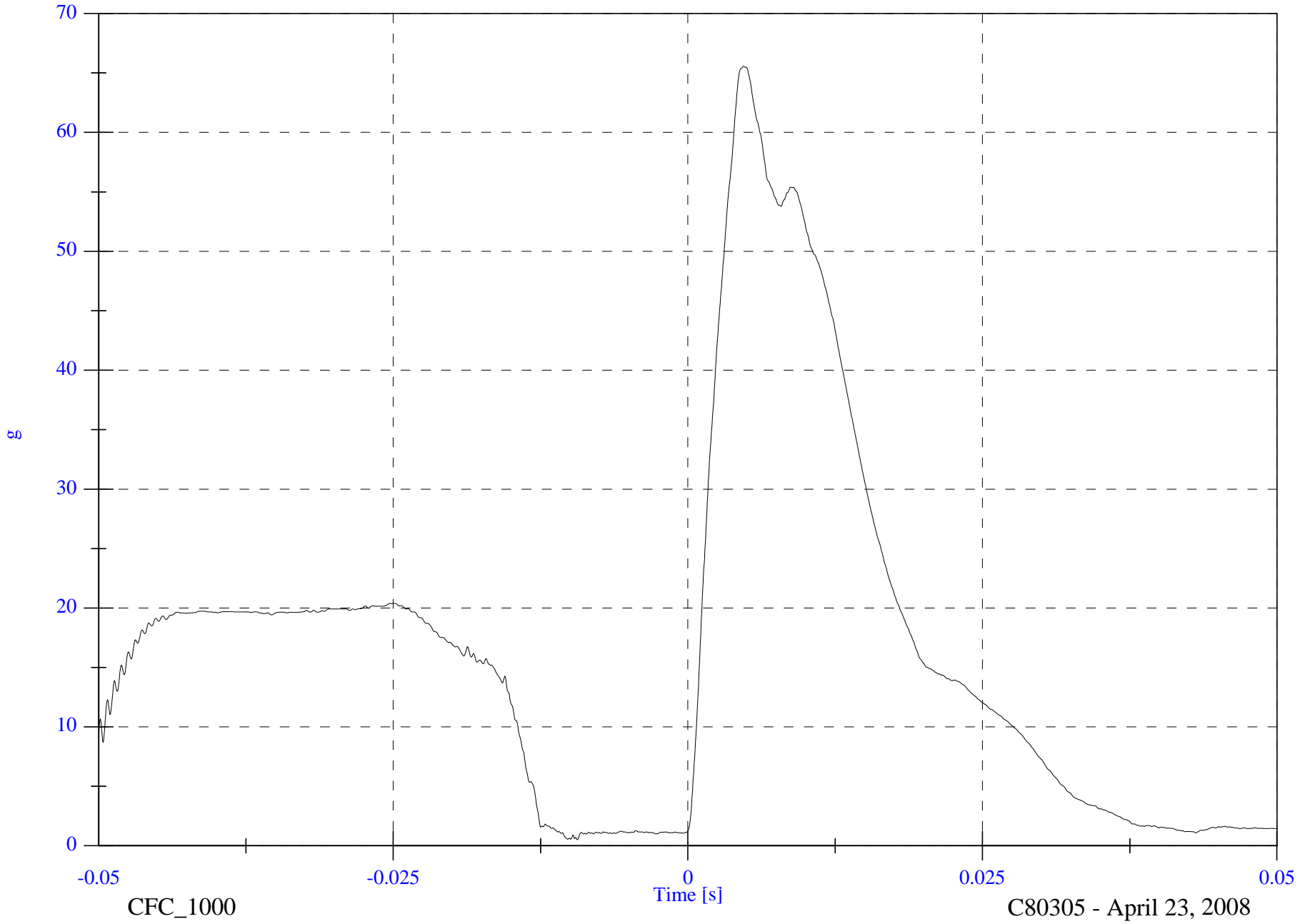
Headform Resultant

Max: 65.6 [g] at 0.005 [s]

Min: 0.5 [g] at -0.009 [s]

C80305 DRIVER SIDE URBP IMPACT PLOT #5

8851-06



CFC_1000

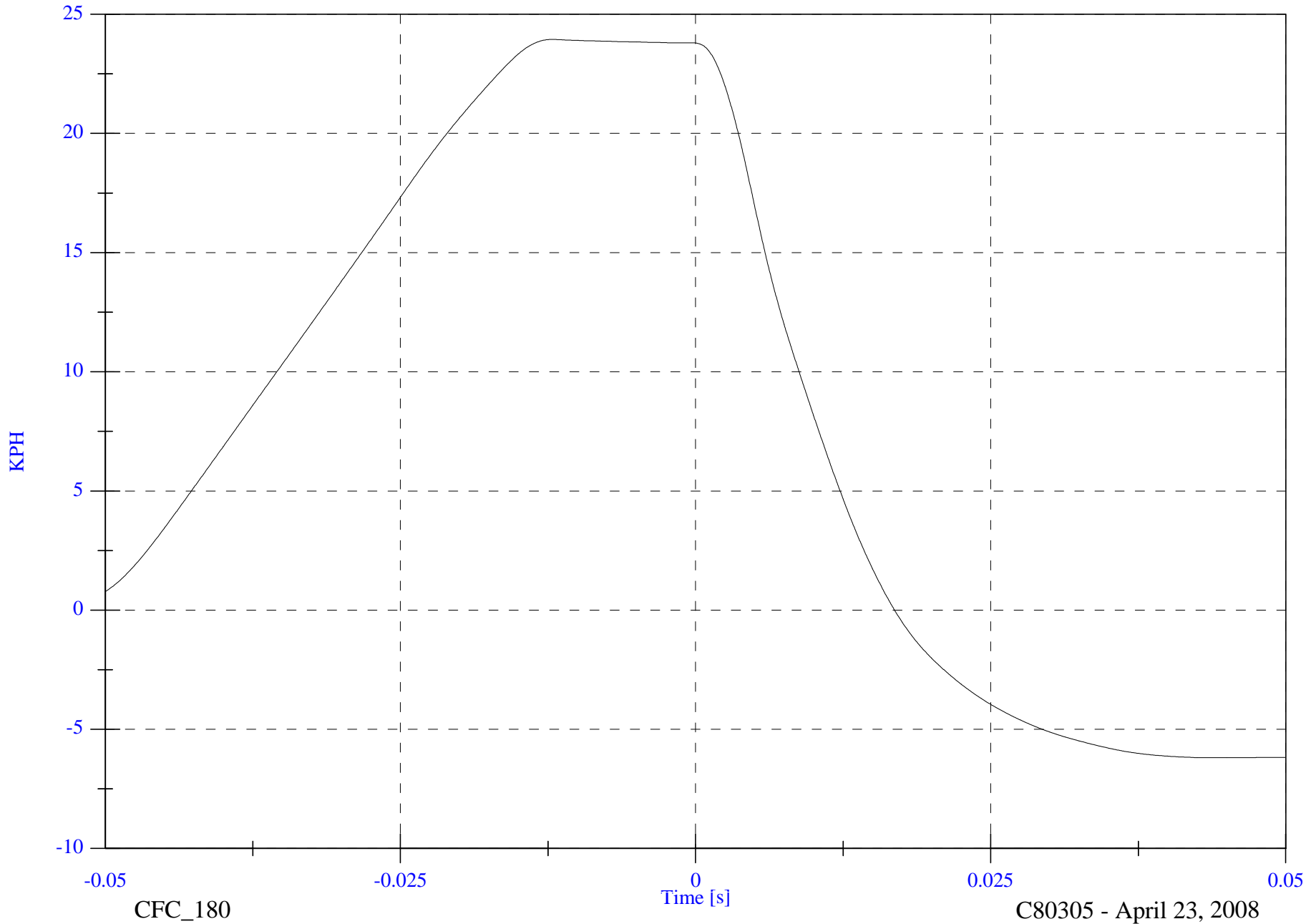
C80305 - April 23, 2008

FMVSS 201U 2008 Dodge Grand Caravan

Max: 23.9 [KPH] at -0.012 [s]

Min: -6.2 [KPH] at 0.043 [s]

Headform Velocity



C80305 DRIVER SIDE URBP IMPACT PLOT #6

8851-06

CFC_180

C80305 - April 23, 2008



PRE-IMPACT URBP



POST-IMPACT URBP

VEHICLE YEAR/MAKE/MODEL/STYLE:	2008 Dodge Grand Caravan
VIN:	2D8HN44H78R627521
DATE OF MANUFACTURE:	12/07(SEE CERTIFICATION LABEL)
COLOR:	Blue

Test Number:	11
Test Date:	04/23/08
Target Location:	FRONT SIDE RAIL
Target Code:	SR2B
Horizontal Impact Angle:	270°
Vertical Impact Angle:	23°
Ambient Temperature:	21.1 C°
Relative Humidity:	35.3 %
Time of Impact:	10:25
Headform Number:	0062

Impact Point Description (from lower midpoint on midsagittal line)					
On Centerline	0	<input type="checkbox"/>	mm right	<input type="checkbox"/>	mm left
On Centerline	3				mm up



POST-IMPACT SR2B HEADFORM

Free Motion HIC	175.5
HIC(d)	298.8
Impact Velocity (kph)	18.43
HIC T1 (msec)	3.8
HIC T2 (msec)	14.3

FMVSS 201U 2008 Dodge Grand Caravan C80305 - SR2B

FMH Headform 0062

Location: SR2B

Test Date: April 23, 2008

Work File: SR2B

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

Lab Temperature: 21.1 C

HICd: 298.8

Lab Humidity: 35.3 %

HIC (36ms): 175.5

Velocity at Impact: 18.43 KPH

t1: 3.8 msec

t2: 14.3 msec

Free Flight Distance: 218.14 mm

Duration: 10.5 msec

Average Acceleration: 6.8 g

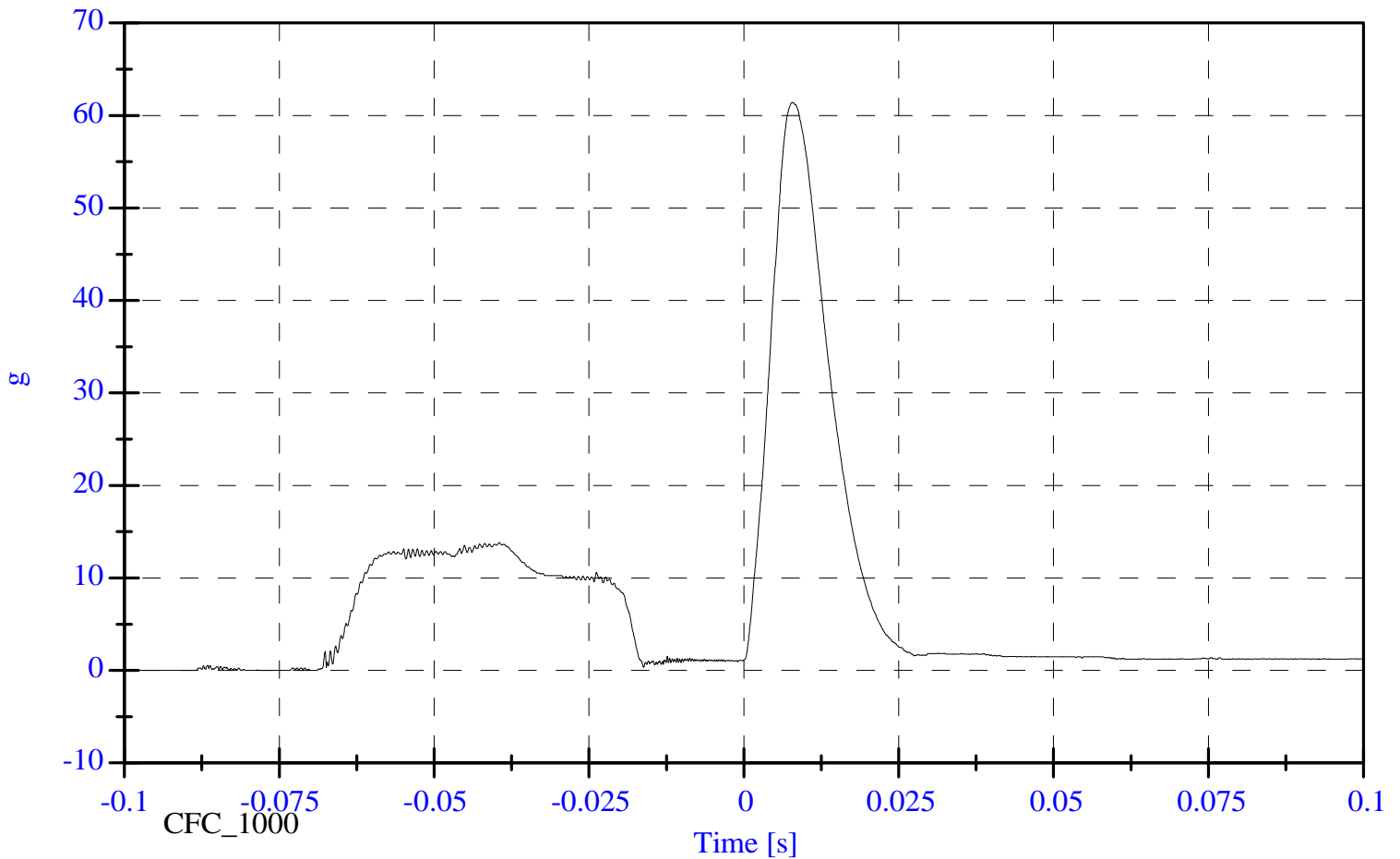
Maximum: 61.4 g

FMVSS 201U 2008 Dodge Grand Caravan

Headform Resultant

Max: 61.4 [g] at 0.008 [s]

Min: -0.0 [g] at -0.099 [s]



FMVSS 201U 2008 Dodge Grand Caravan

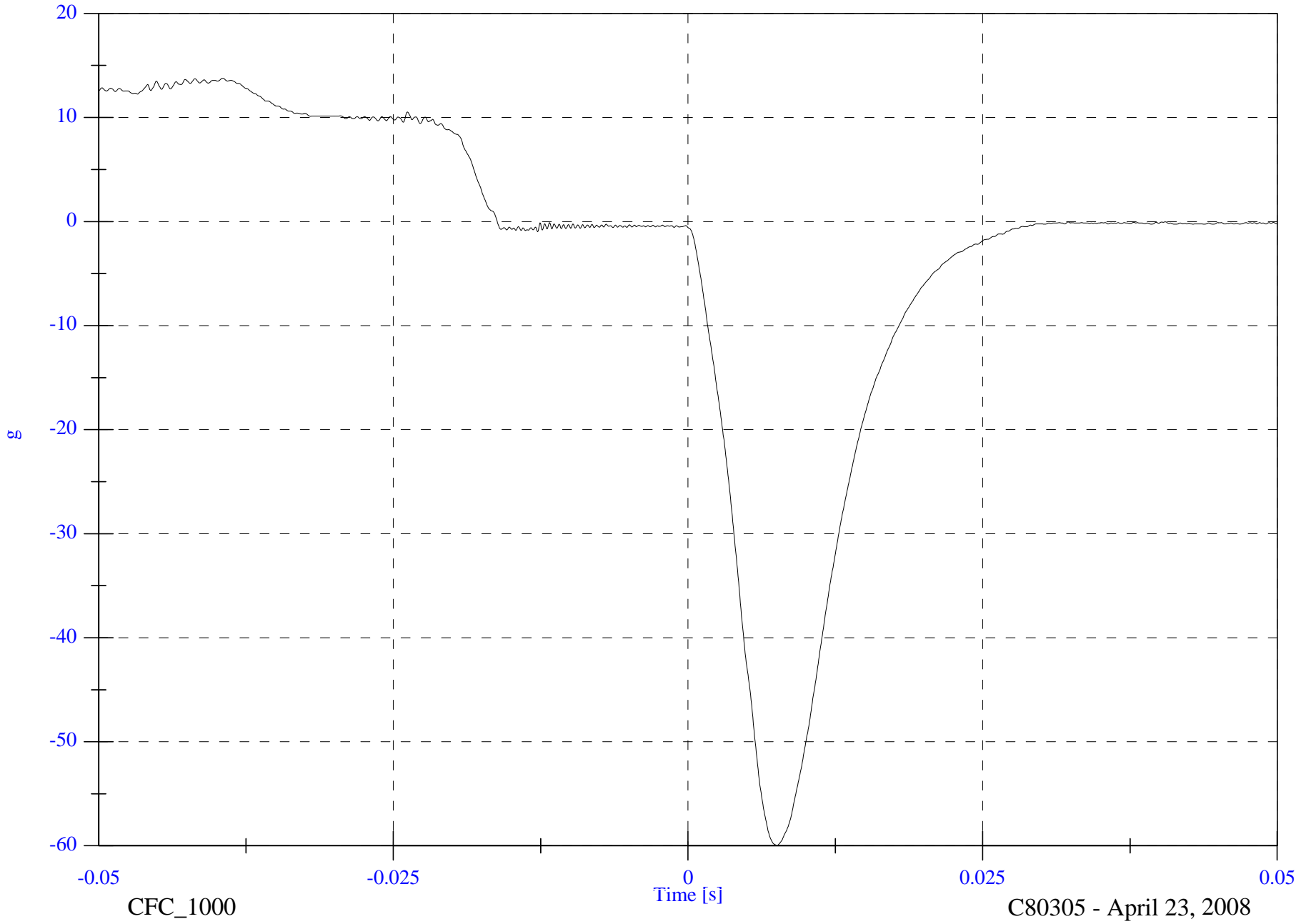
Headform X Acceleration

Max: 13.8 [g] at -0.040 [s]

Min: -60.0 [g] at 0.008 [s]

C80305 DRIVER SIDE SR2B IMPACT PLOT #2

8851-06



CFC_1000

C80305 - April 23, 2008

FMVSS 201U 2008 Dodge Grand Caravan

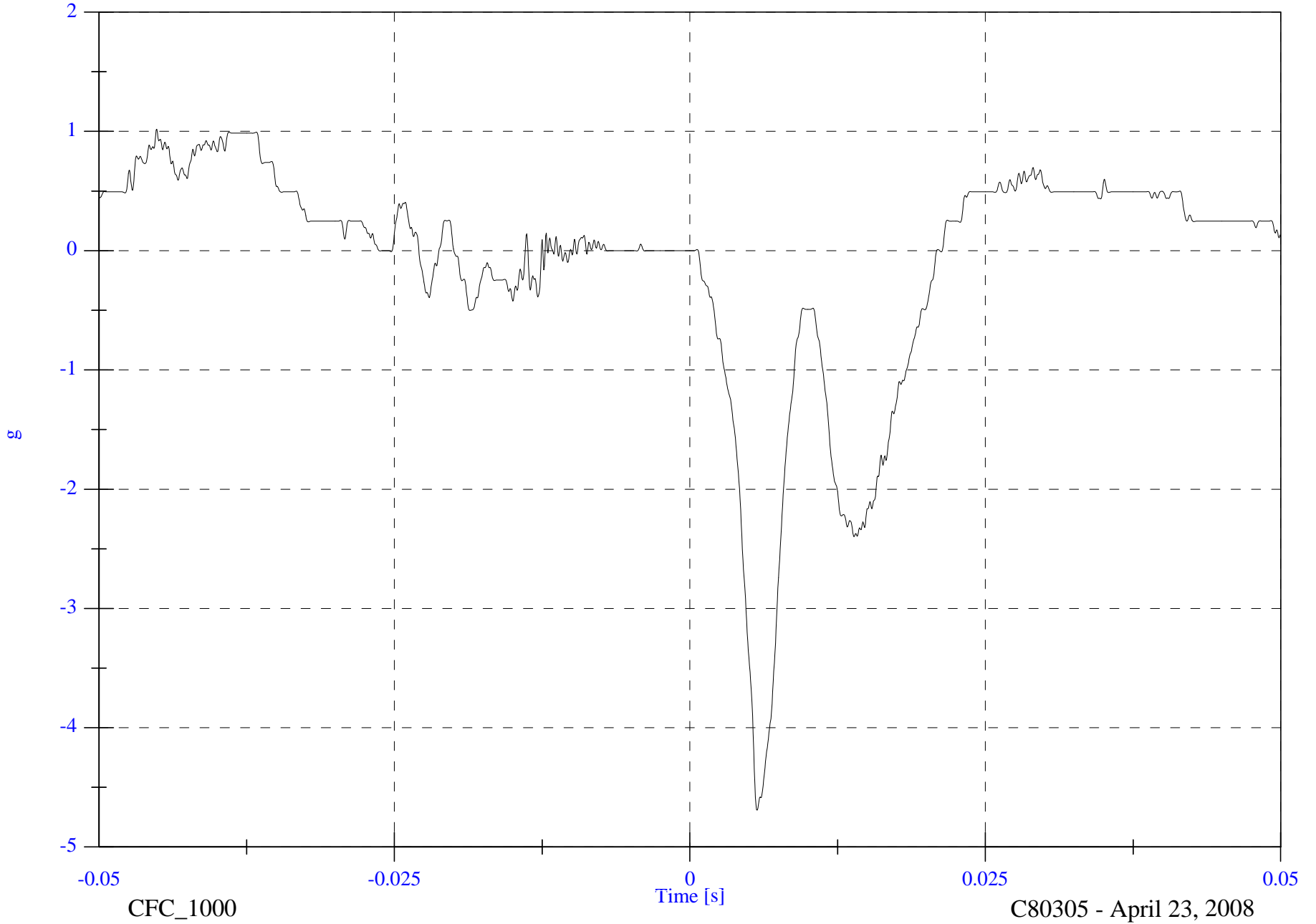
Headform Y Acceleration

Max: 1.0 [g] at -0.045 [s]

Min: -4.7 [g] at 0.006 [s]

C80305 DRIVER SIDE SR2B IMPACT PLOT #3

8851-06



CFC_1000

Time [s]

C80305 - April 23, 2008

FMVSS 201U 2008 Dodge Grand Caravan

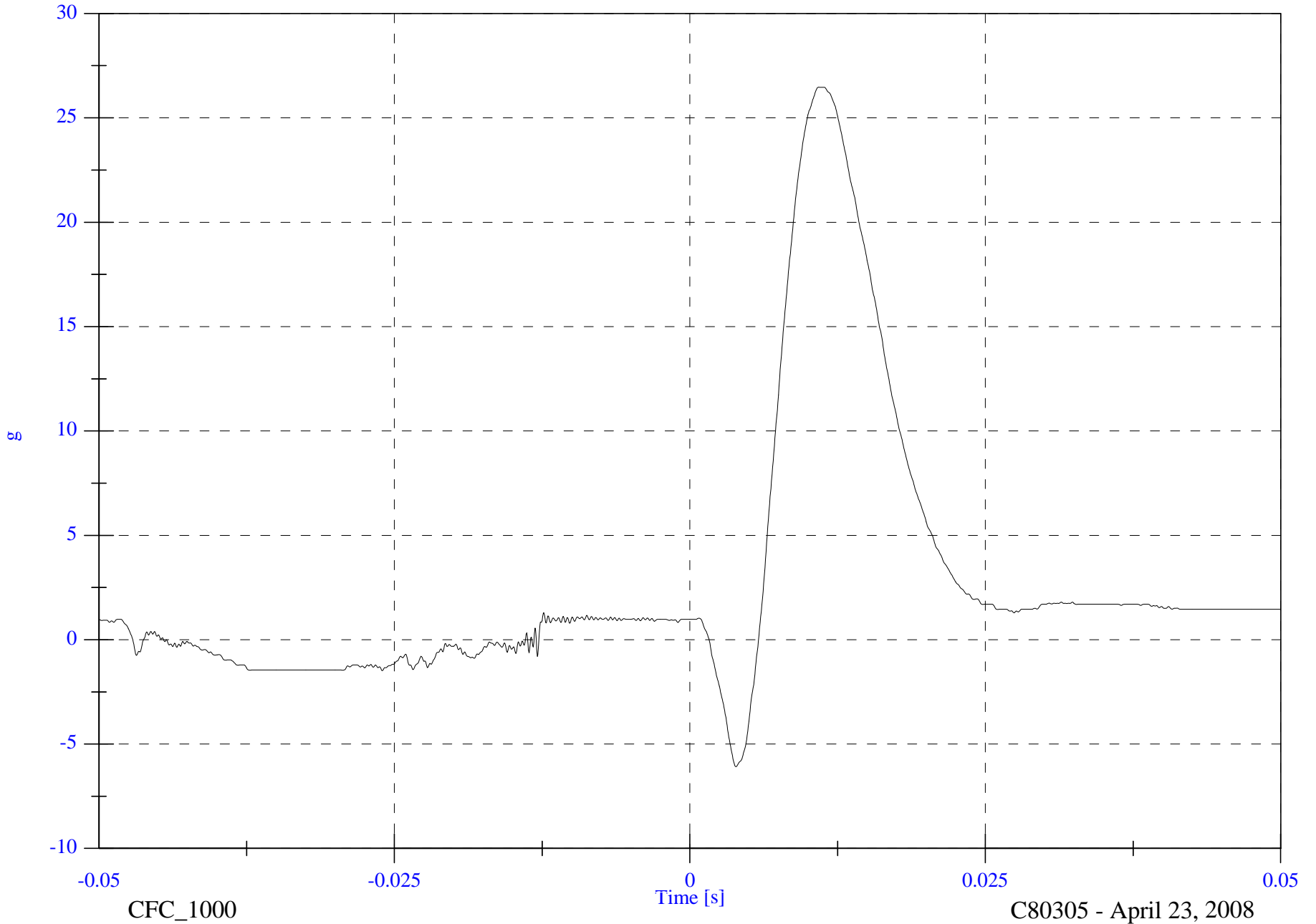
Headform Z Acceleration

Max: 26.5 [g] at 0.011 [s]

Min: -6.1 [g] at 0.004 [s]

C80305 DRIVER SIDE SR2B IMPACT PLOT #4

8851-06



CFC_1000

Time [s]

C80305 - April 23, 2008

FMVSS 201U 2008 Dodge Grand Caravan

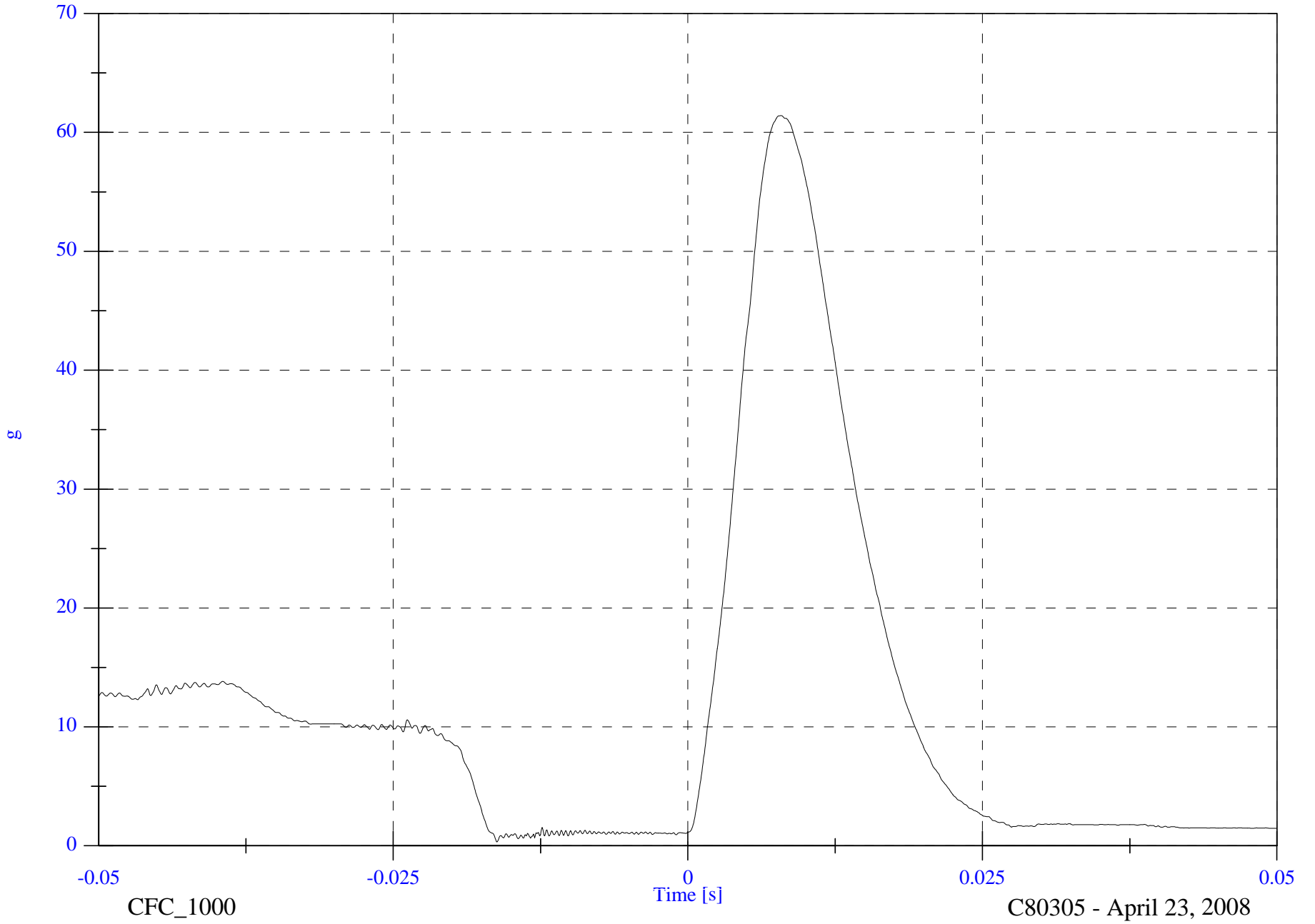
Headform Resultant

Max: 61.4 [g] at 0.008 [s]

Min: 0.3 [g] at -0.016 [s]

C80305 DRIVER SIDE SR2B IMPACT PLOT #5

8851-06



CFC_1000

C80305 - April 23, 2008

FMVSS 201U 2008 Dodge Grand Caravan

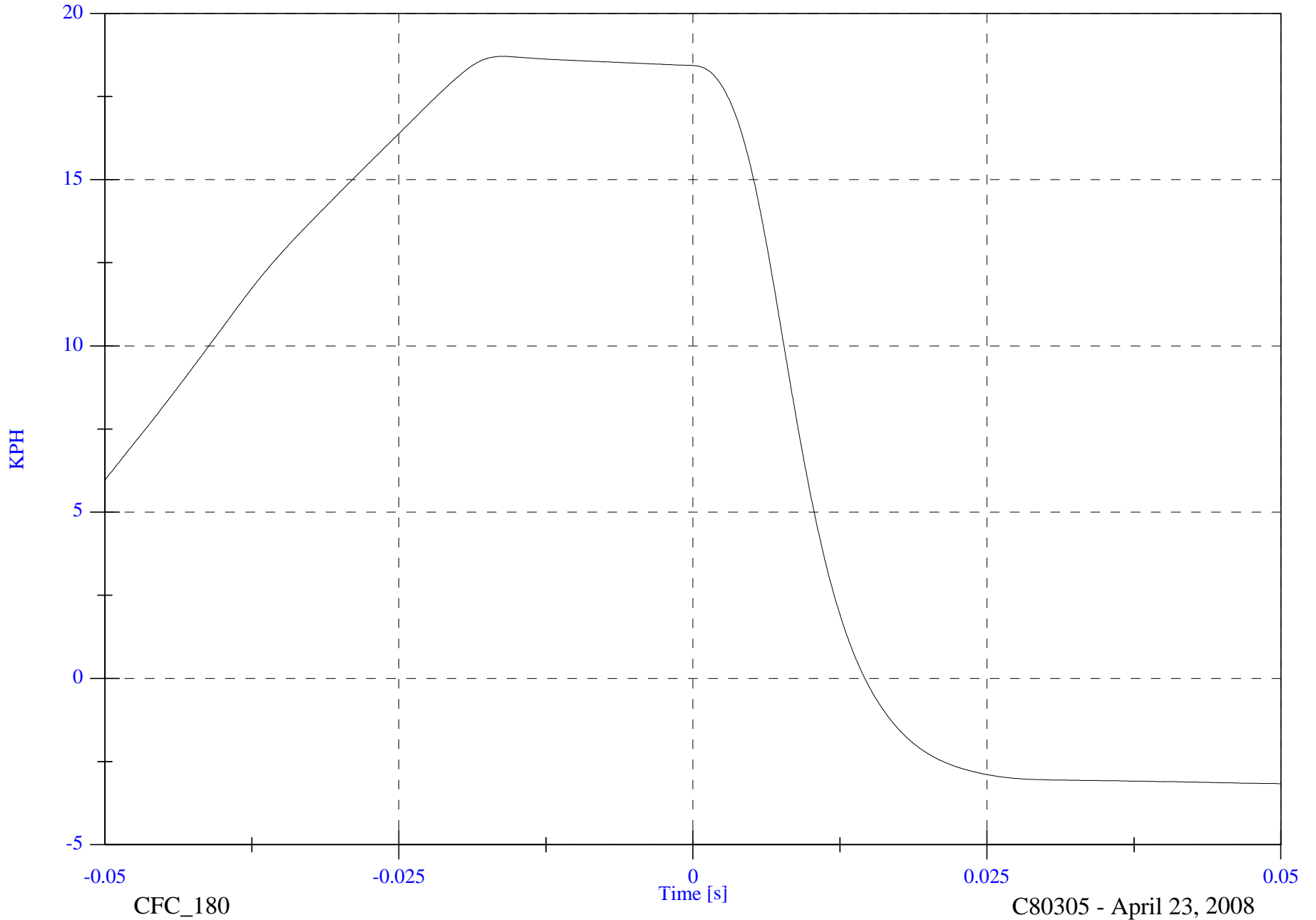
Headform Velocity

Max: 18.7 [KPH] at -0.016 [s]

Min: -3.2 [KPH] at 0.050 [s]

C80305 DRIVER SIDE SR2B IMPACT PLOT #6

8851-06



CFC_180

C80305 - April 23, 2008



PRE-IMPACT SR2B



POST-IMPACT SR2B

VEHICLE YEAR/MAKE/MODEL/STYLE:	2008 Dodge Grand Caravan
VIN:	2D8HN44H78R627521
DATE OF MANUFACTURE:	12/07(SEE CERTIFICATION LABEL)
COLOR:	Blue

Test Number:	12
Test Date:	04/23/08
Target Location:	A-PILLAR
Target Code:	AP2
Horizontal Impact Angle:	220°
Vertical Impact Angle:	40°
Ambient Temperature:	21.1 C°
Relative Humidity:	36.5 %
Time of Impact:	13:11
Headform Number:	1142

Impact Point Description (from lower midpoint on midsagittal line)					
On Centerline	0	<input type="checkbox"/>	mm right	<input type="checkbox"/>	mm left
On Centerline	4				mm up



POST-IMPACT AP2 HEADFORM

Free Motion HIC	273.0
HIC(d)	372.4
Impact Velocity (kph)	18.57
HIC T1 (msec)	2.2
HIC T2 (msec)	14.4

FMVSS 201U 2008 Dodge Grand Caravan C80305 - AP2

FMH Headform 1142

Location: AP2

Test Date: April 23, 2008

Work File: AP2

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

Lab Temperature: 21.1 C

HICd: 372.4

Lab Humidity: 36.5 %

HIC (36ms): 273.0

Velocity at Impact: 18.57 KPH

t1: 2.2 msec

t2: 14.4 msec

Free Flight Distance: 214.83 mm

Duration: 12.2 msec

Average Acceleration: 7.9 g

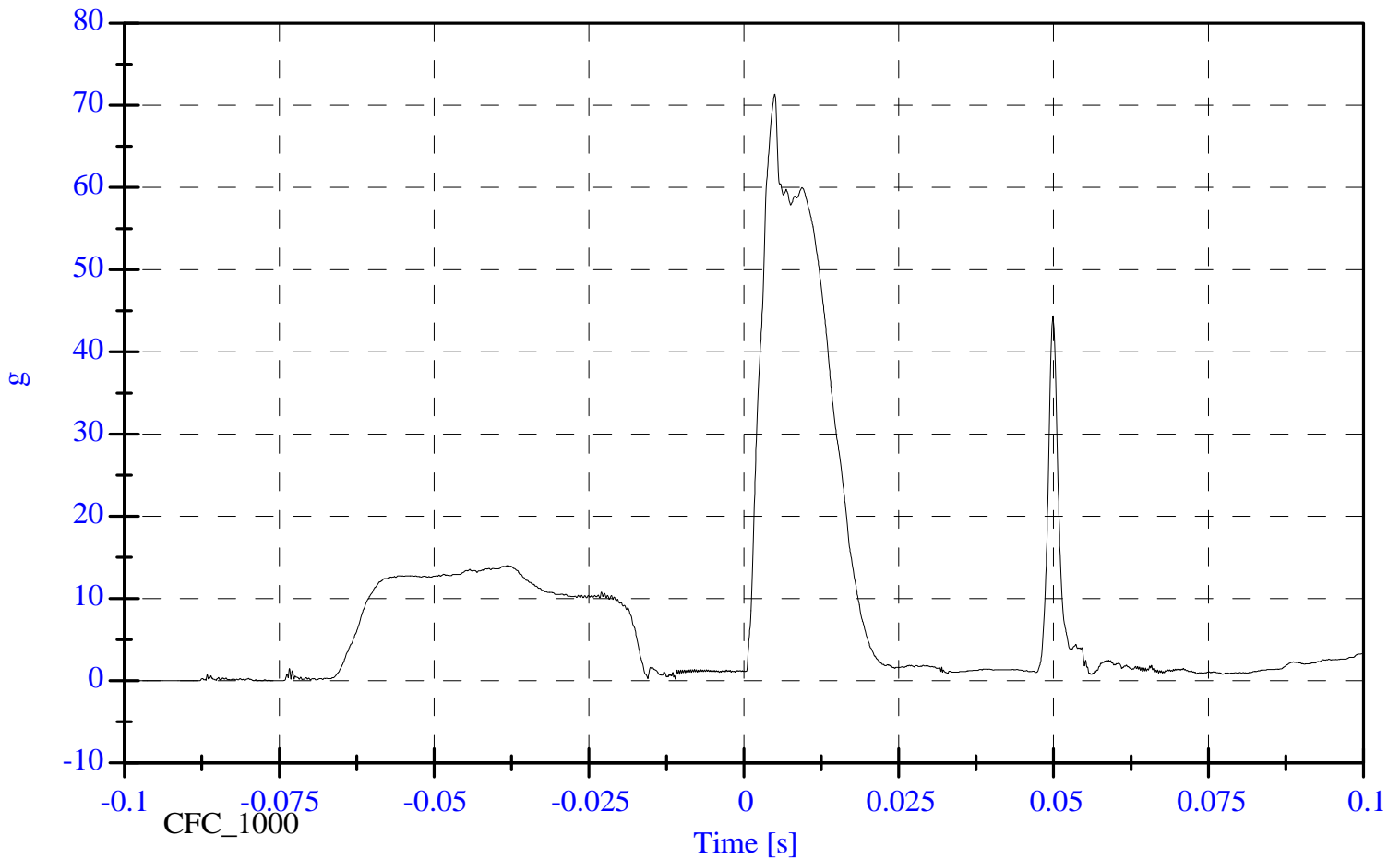
Maximum: 71.3 g

FMVSS 201U 2008 Dodge Grand Caravan

Headform Resultant

Max: 71.3 [g] at 0.005 [s]

Min: -0.0 [g] at -0.099 [s]



FMVSS 201U 2008 Dodge Grand Caravan

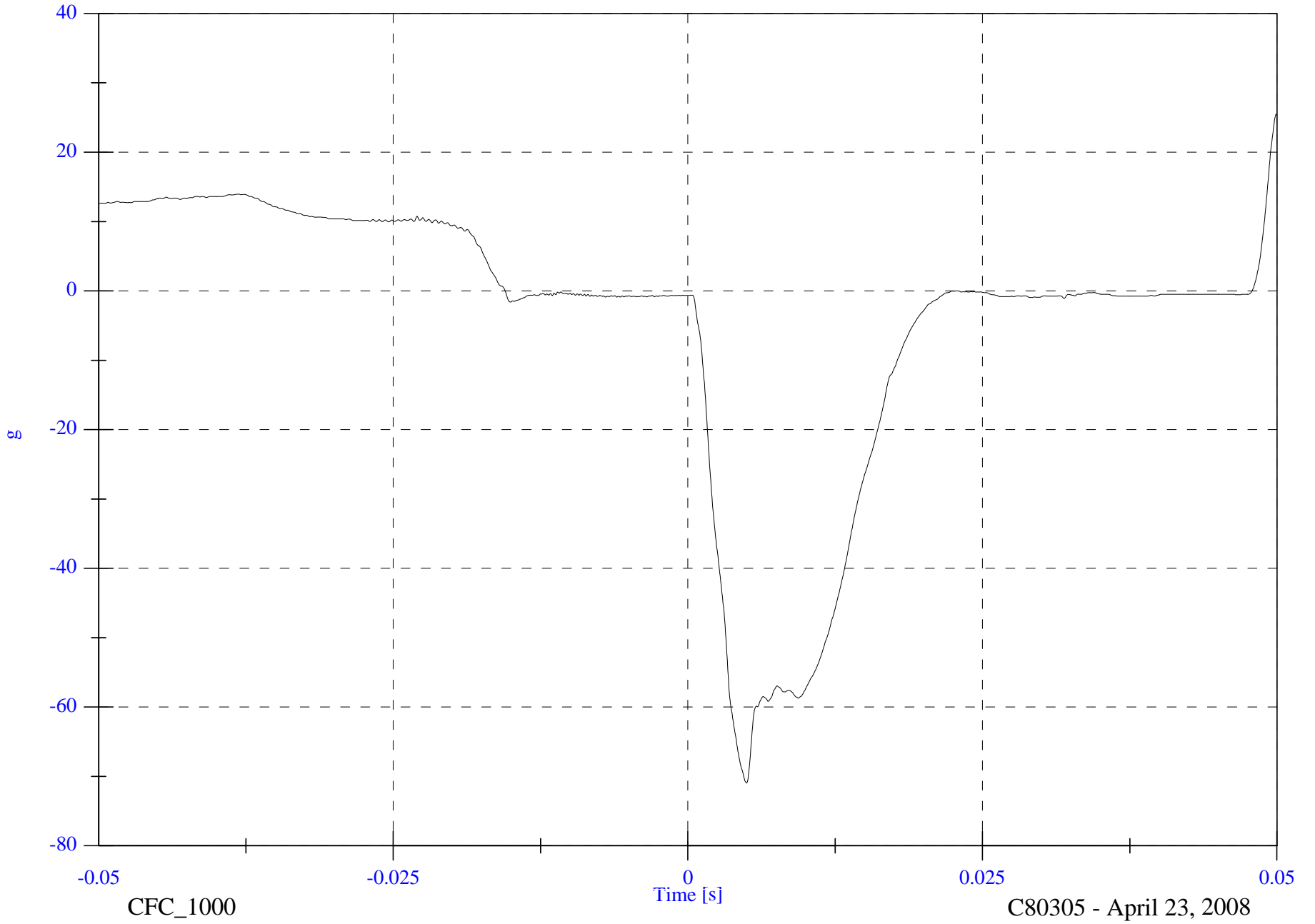
Headform X Acceleration

Max: 25.5 [g] at 0.050 [s]

Min: -70.9 [g] at 0.005 [s]

C80305 DRIVER SIDE AP2 IMPACT PLOT #2

8851-06



CFC_1000

C80305 - April 23, 2008

FMVSS 201U 2008 Dodge Grand Caravan

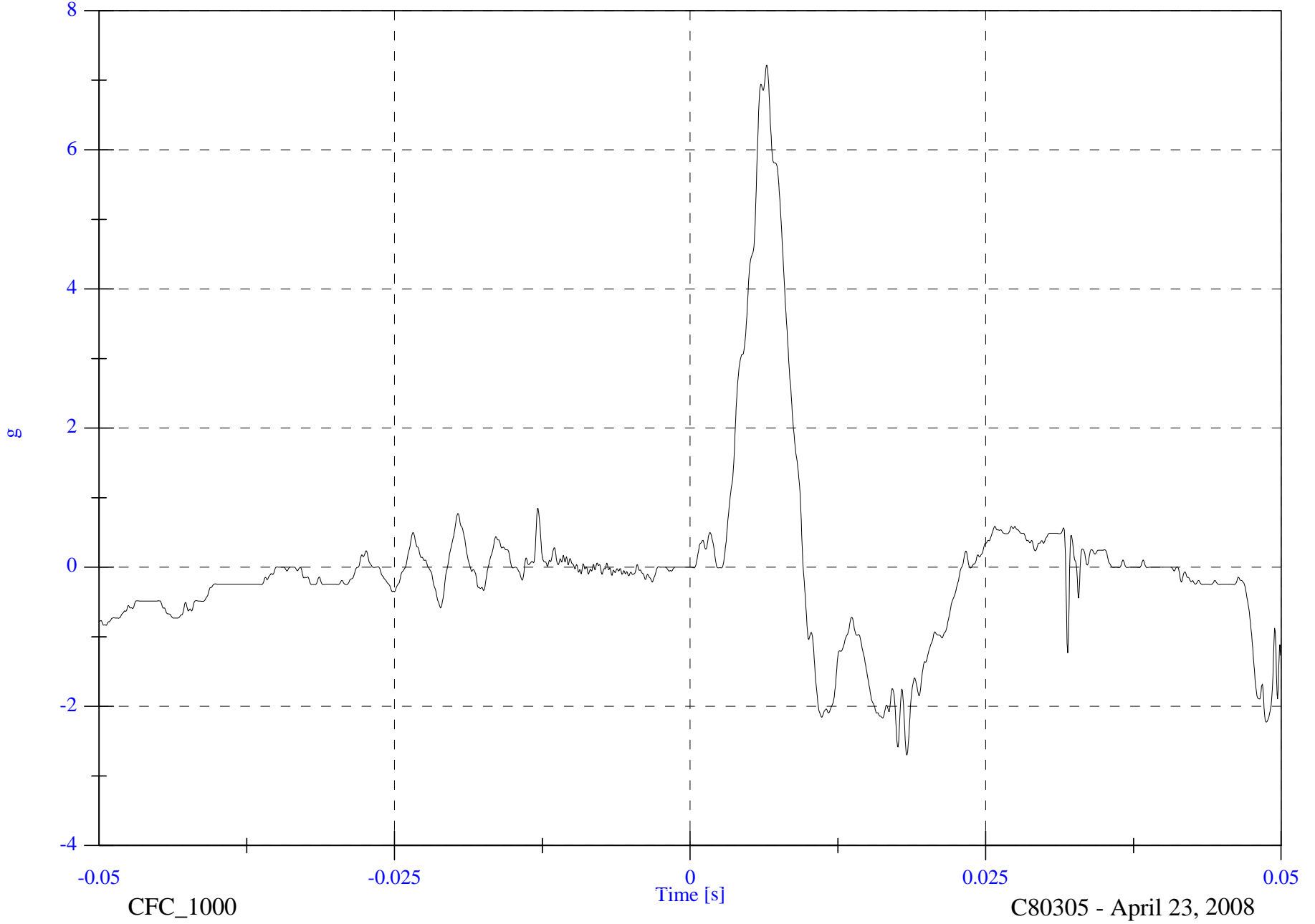
Headform Y Acceleration

Max: 7.2 [g] at 0.006 [s]

Min: -2.7 [g] at 0.018 [s]

C80305 DRIVER SIDE AP2 IMPACT PLOT #3

8851-06



CFC_1000

C80305 - April 23, 2008

FMVSS 201U 2008 Dodge Grand Caravan

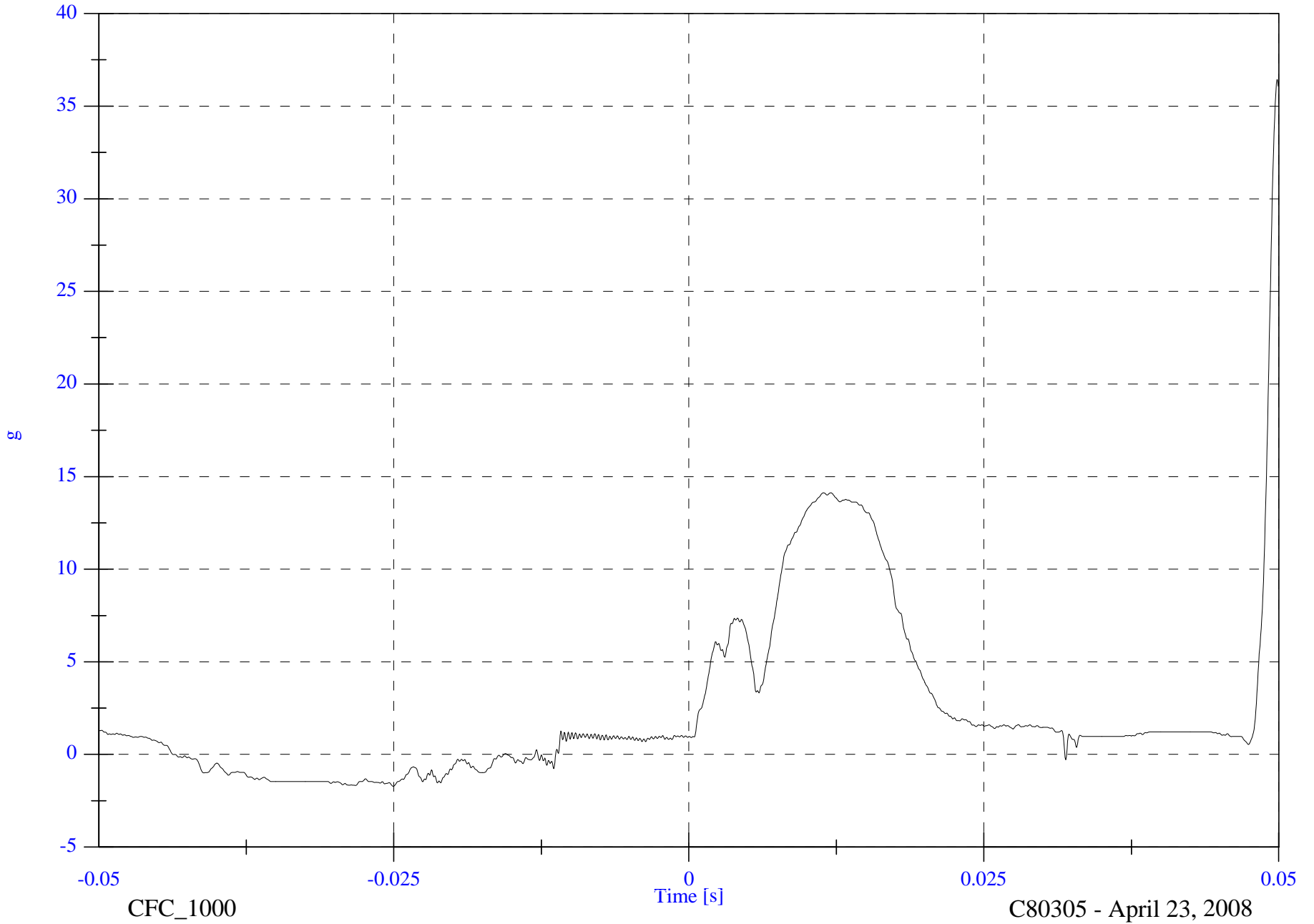
Headform Z Acceleration

Max: 36.4 [g] at 0.050 [s]

Min: -1.7 [g] at -0.025 [s]

C80305 DRIVER SIDE AP2 IMPACT PLOT #4

8851-06



FMVSS 201U 2008 Dodge Grand Caravan

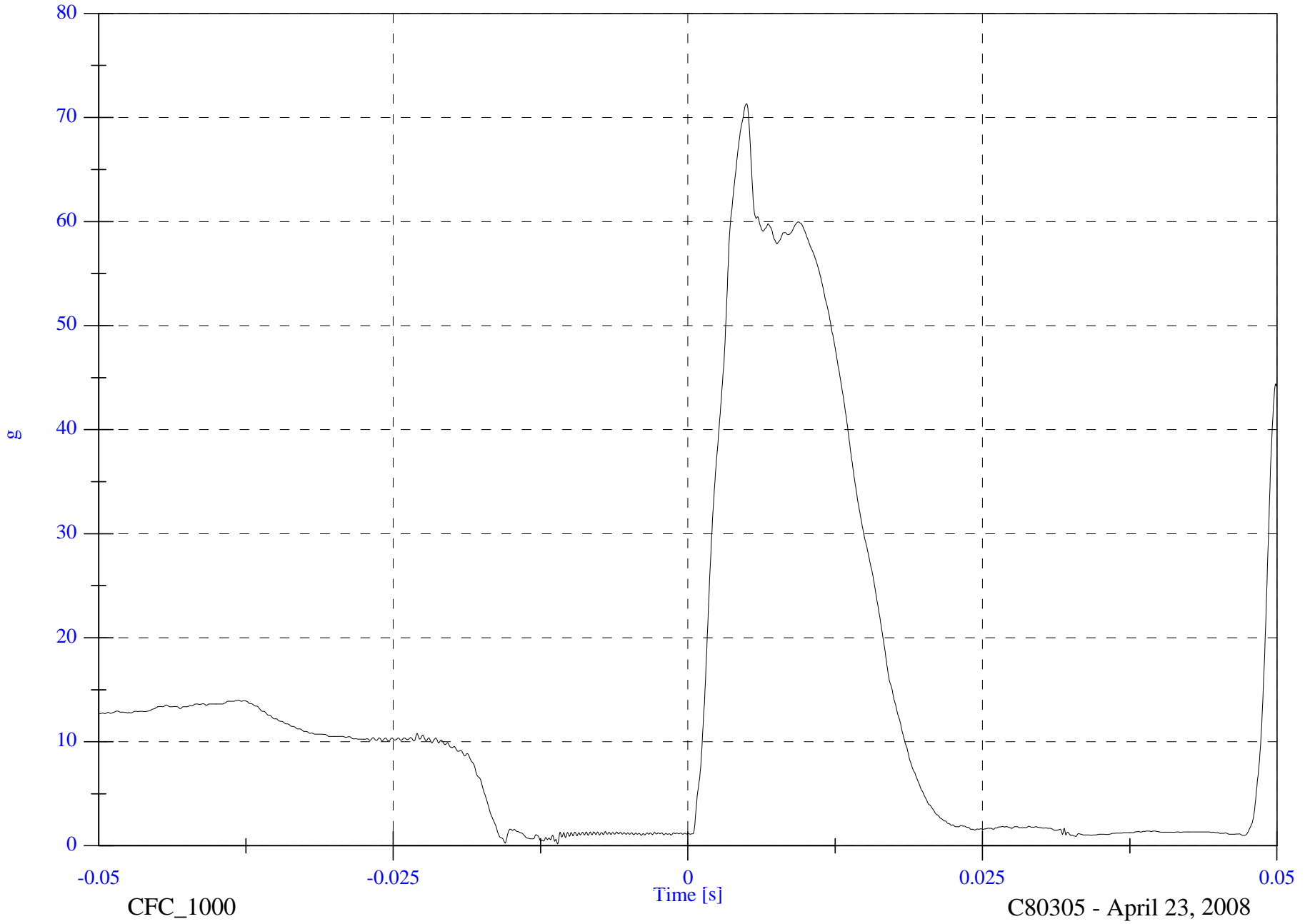
Headform Resultant

Max: 71.3 [g] at 0.005 [s]

Min: 0.2 [g] at -0.011 [s]

C80305 DRIVER SIDE AP2 IMPACT PLOT #5

8851-06



CFC_1000

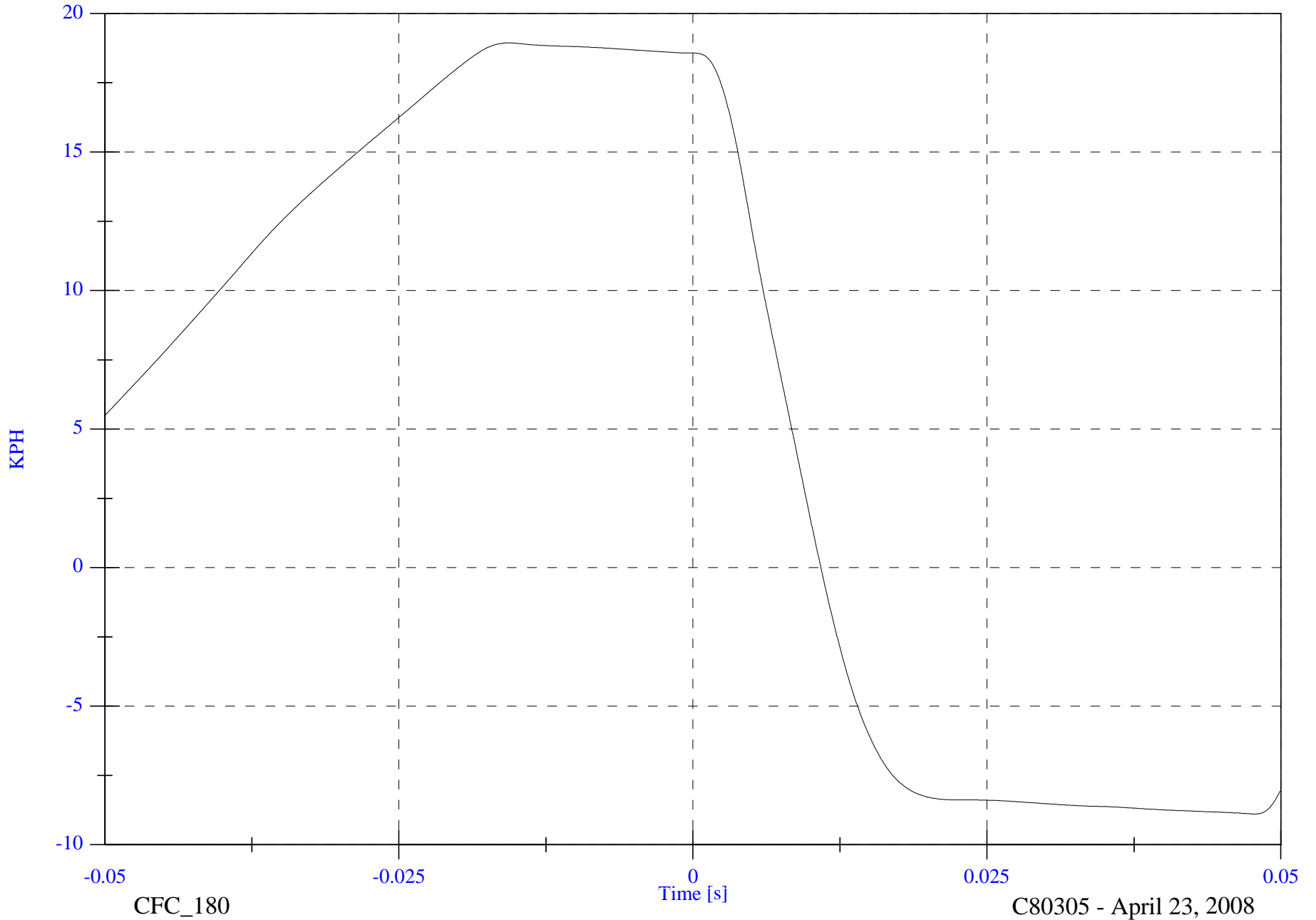
C80305 - April 23, 2008

FMVSS 201U 2008 Dodge Grand Caravan

Max: 18.9 [KPH] at -0.016 [s]

Min: -8.9 [KPH] at 0.048 [s]

Headform Velocity



C80305 DRIVER SIDE AP2 IMPACT PLOT #6

8851-06

CFC_180

C80305 - April 23, 2008



PRE-IMPACT AP2



POST-IMPACT AP2

APPENDIX A

PHOTOGRAPHS

PHOTOGRAPHS

FIGURE	VIEW	PAGE
A-1	LEFT SIDE VIEW OF VEHICLE	A-3
A-2	RIGHT SIDE VIEW OF VEHICLE	A-4
A-3	3/4 FRONTAL VIEW FROM RIGHT SIDE OF VEHICLE	A-5
A-4	3/4 REAR VIEW FROM LEFT SIDE OF VEHICLE	A-6
A-5	VEHICLE'S CERTIFICATION LABEL	A-7
A-6	VEHICLE'S TIRE INFORMATION LABEL	A-8
A-7	PRE-TEST DRIVER SIDE A-PILLAR	A-9
A-8	PRE-TEST DRIVER SIDE FRONT HEADER	A-10
A-9	PRE-TEST DRIVER SIDE SIDE RAIL	A-11
A-10	PRE-TEST DRIVER SIDE B-PILLAR	A-12
A-11	PRE-TEST DRIVER SIDE SLIDING DOOR	A-13
A-12	PRE-TEST DRIVER SIDE OTHER PILLAR	A-14
A-13	PRE-TEST DRIVER SIDE REAR PILLAR	A-15
A-14	PRE-TEST PASSENGER SIDE A-PILLAR	A-16
A-15	PRE-TEST PASSENGER SIDE FRONT HEADER	A-17
A-16	PRE-TEST PASSENGER SIDE SIDE RAIL	A-18
A-17	PRE-TEST PASSENGER SIDE B-PILLAR	A-19
A-18	PRE-TEST PASSENGER SIDE SLIDING DOOR	A-20
A-19	PRE-TEST PASSENGER SIDE OTHER PILLAR	A-21
A-20	PRE-TEST PASSENGER SIDE REAR PILLAR	A-22
A-21	POST-TEST DRIVER SIDE A-PILLAR	A-23
A-22	POST-TEST DRIVER SIDE FRONT HEADER	A-24
A-23	POST-TEST DRIVER SIDE SIDE RAIL	A-25
A-24	POST-TEST DRIVER SIDE B-PILLAR	A-26
A-25	POST-TEST DRIVER SIDE SLIDING DOOR	A-27
A-26	POST-TEST DRIVER SIDE OTHER PILLAR	A-28
A-27	POST-TEST DRIVER SIDE REAR PILLAR	A-29
A-28	POST-TEST PASSENGER SIDE A-PILLAR	A-30
A-29	POST-TEST PASSENGER SIDE FRONT HEADER	A-31
A-30	POST-TEST PASSENGER SIDE SIDE RAIL	A-32
A-31	POST-TEST PASSENGER SIDE B-PILLAR	A-33
A-32	POST-TEST PASSENGER SIDE SLIDING DOOR	A-34
A-33	POST-TEST PASSENGER SIDE OTHER PILLAR	A-35
A-34	POST-TEST PASSENGER SIDE REAR PILLAR	A-36



Figure A-1 : LEFT SIDE VIEW OF VEHICLE



Figure A-2 : RIGHT SIDE VIEW OF VEHICLE



Figure A-3 : 3/4 FRONTAL VIEW FROM RIGHT SIDE OF VEHICLE



Figure A-4 : 3/4 REAR VIEW FROM LEFT SIDE OF VEHICLE

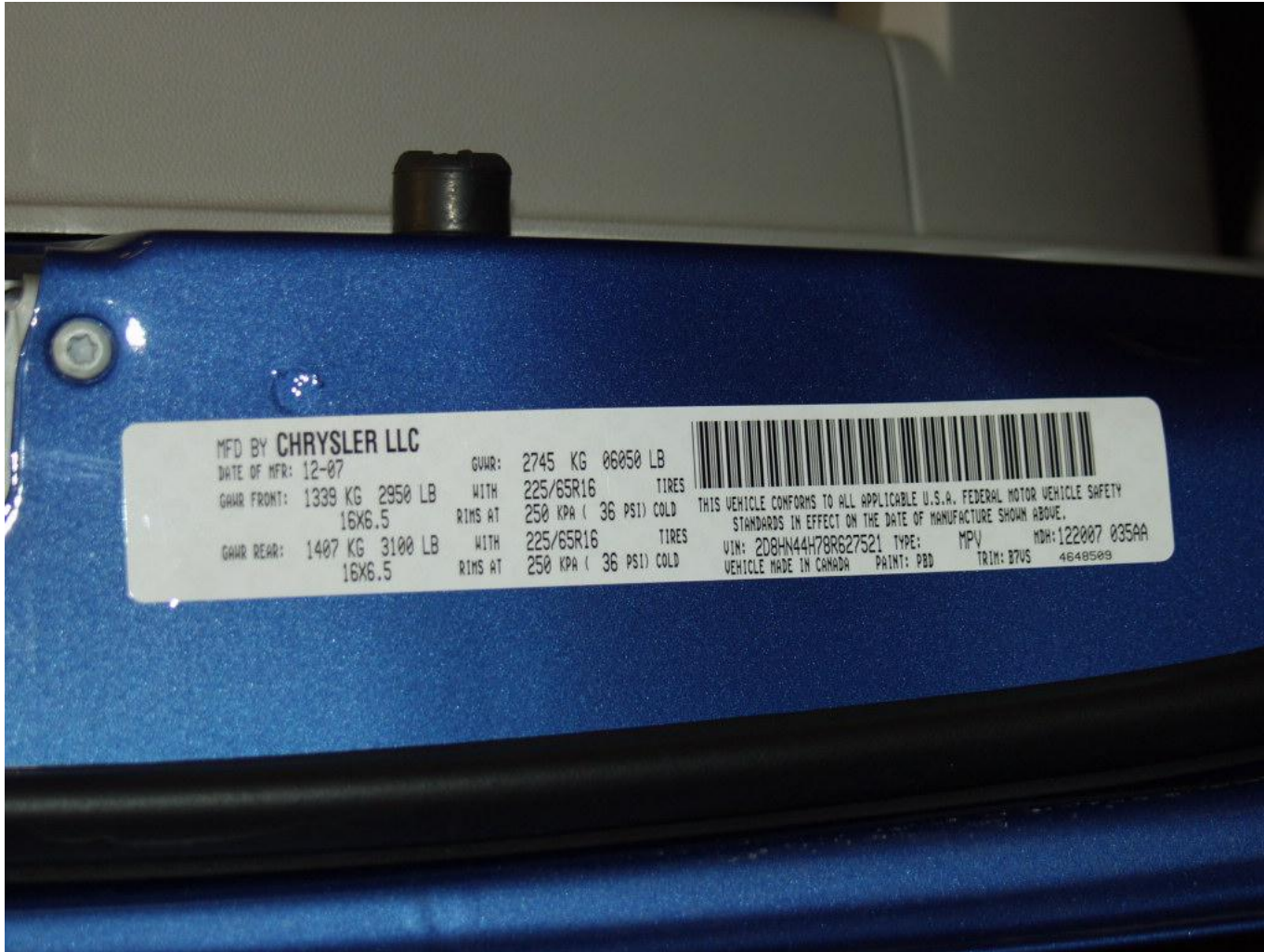


Figure A-5 : VEHICLE'S CERTIFICATION LABEL

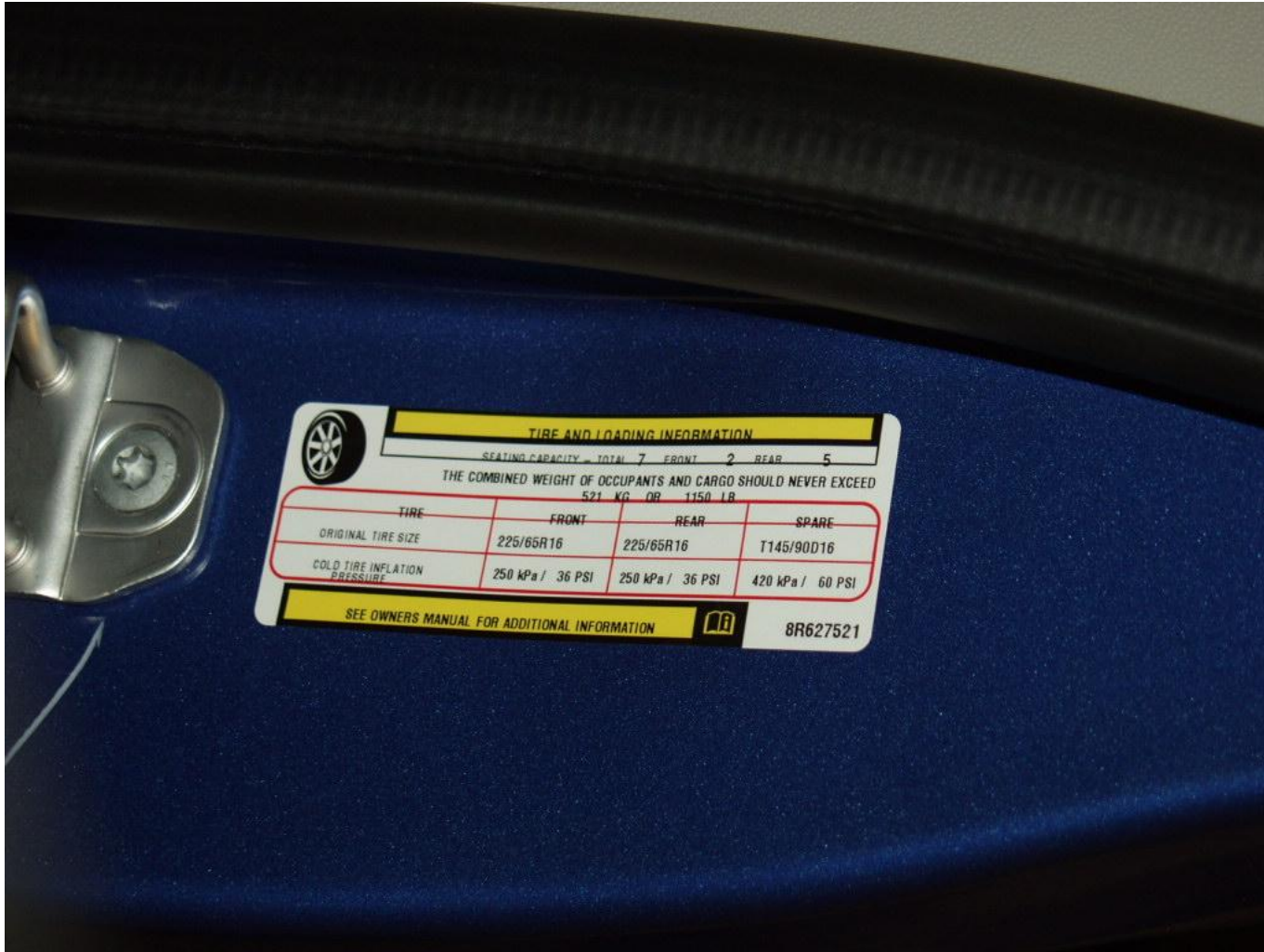


Figure A-6 : VEHICLE'S TIRE INFORMATION LABEL



Figure A-7 : PRE-TEST DRIVER SIDE A-PILLAR



Figure A-8 : PRE-TEST DRIVER SIDE FRONT HEADER



Figure A-9 : PRE-TEST DRIVER SIDE SIDE RAIL



Figure A-10 : PRE-TEST DRIVER SIDE B-PILLAR



Figure A-11 : PRE-TEST DRIVER SIDE SLIDING DOOR



Figure A-12 : PRE-TEST DRIVER SIDE OTHER PILLAR



Figure A-13 : PRE-TEST DRIVER SIDE REAR PILLAR



Figure A-14 : PRE-TEST PASSENGER SIDE A-PILLAR



Figure A-15 : PRE-TEST PASSENGER SIDE FRONT HEADER



Figure A-16 : PRE-TEST PASSENGER SIDE SIDE RAIL



Figure A-17 : PRE-TEST PASSENGER SIDE B-PILLAR



Figure A-18 : PRE-TEST PASSENGER SIDE SLIDING DOOR



Figure A-19 : PRE-TEST PASSENGER SIDE OTHER PILLAR



Figure A-20 : PRE-TEST PASSENGER SIDE REAR PILLAR



Figure A-21 : POST-TEST DRIVER SIDE A-PILLAR



Figure A-22 : POST-TEST DRIVER SIDE FRONT HEADER



Figure A-23 : POST-TEST DRIVER SIDE SIDE RAIL



Figure A-24 : POST-TEST DRIVER SIDE B-PILLAR



Figure A-25 : POST-TEST DRIVER SIDE SLIDING DOOR



Figure A-26 : POST-TEST DRIVER SIDE OTHER PILLAR



Figure A-27 : POST-TEST DRIVER SIDE REAR PILLAR



Figure A-28 : POST-TEST PASSENGER SIDE A-PILLAR



Figure A-29 : POST-TEST PASSENGER SIDE FRONT HEADER



Figure A-30 : POST-TEST PASSENGER SIDE SIDE RAIL



Figure A-31 : POST-TEST PASSENGER SIDE B-PILLAR



Figure A-32 : POST-TEST PASSENGER SIDE SLIDING DOOR



Figure A-33 : POST-TEST PASSENGER SIDE OTHER PILLAR



Figure A-34 : POST-TEST PASSENGER SIDE REAR PILLAR

APPENDIX B

PART 572L PERFORMANCE CALIBRATION IN SUPPORT OF VEHICLE SAFETY COMPLIANCE TESTING FOR OCCUPANT PROTECTION IN INTERIOR IMPACT

Appendix B contains the results from certification tests performed on the Free Motion Headforms utilized in this test program. The results indicate that the headforms meet all of the performance specifications given in 49 CFR Part 572 Subpart L.

The tests were conducted at the Dummy Certification Test Facility of Calspan Corporation. A summary of the test results are included in this Appendix.

**PART 572L
HEAD DROP PRE-TEST**

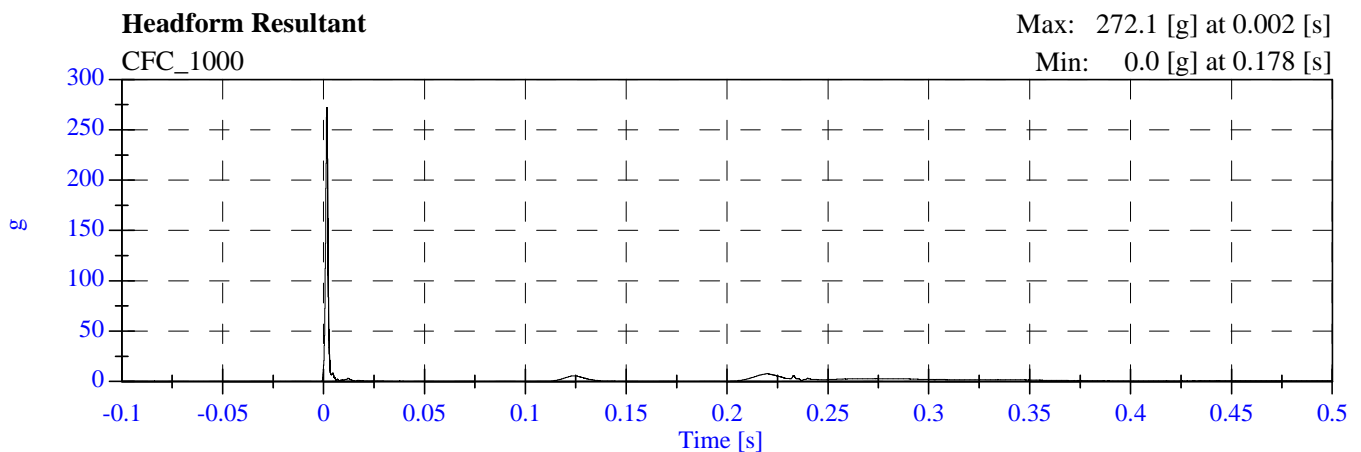
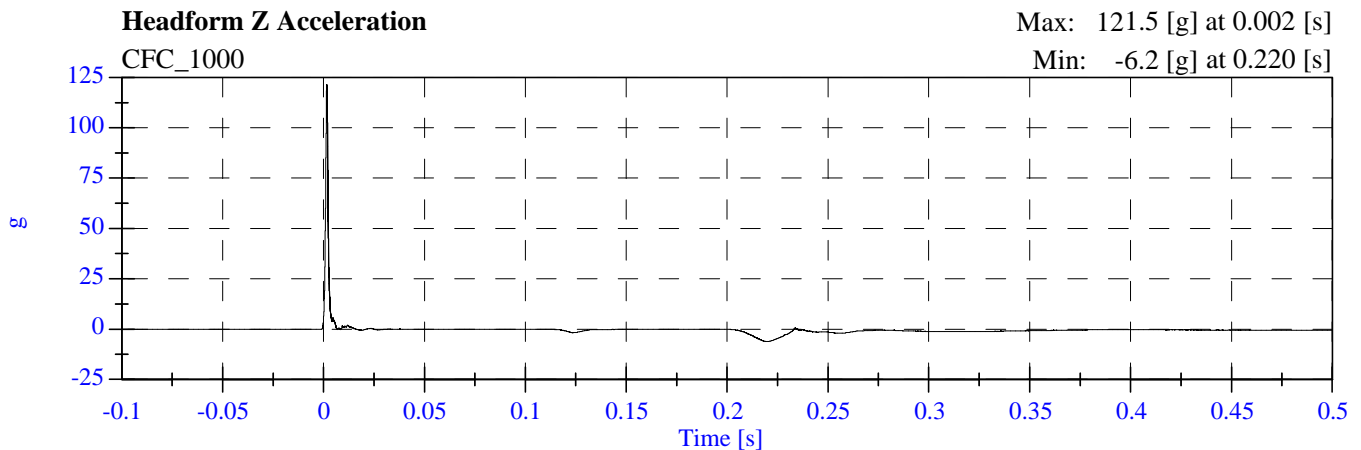
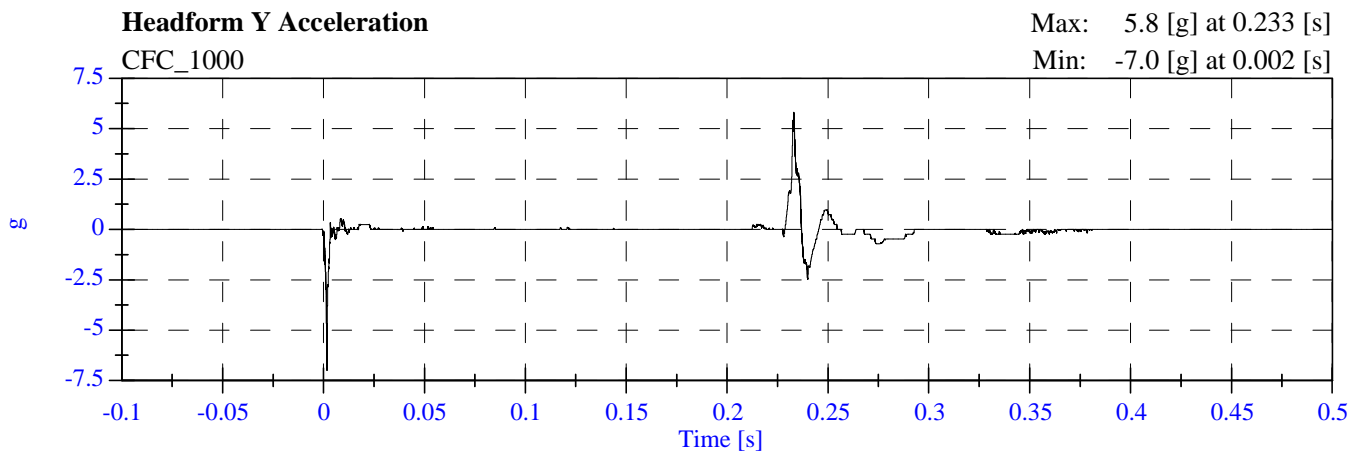
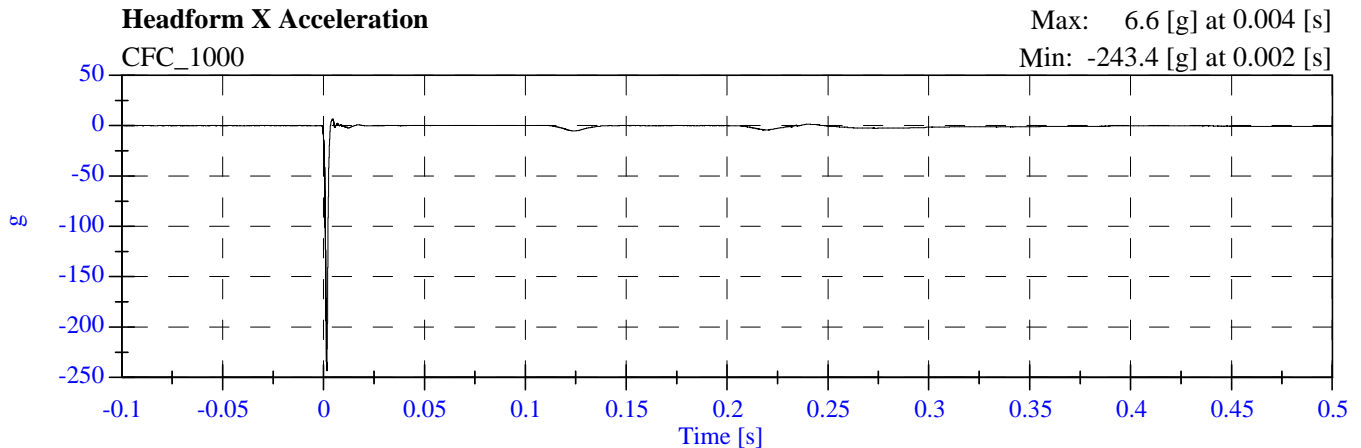
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SERIAL NUMBER:		1140	
CALIBRATION DATE:		APRIL 14, 2008	
TEST PARAMETER	SPECIFICATION	TEST RESULTS	
TEMPERATURE	19°C to 26°C	21.5	
RELATIVE HUMIDITY	10% to 70%	25	
PEAK RESULTANT ACCELERATION	225 Gs to 275 Gs	272.1	
PEAK LATERAL ACCELERATION	15 Gs Maximum	7.0	
IS ACCELERATION CURVE UNIMODAL?	YES	YES	

HEAD ACCELEROMETER CALIBRATION INFORMATION

I.D. NUMBER	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	DATE OF LAST CALIBRATION	DATE OF NEXT CALIBRATION
1 - LONGITUDINAL	ENDEVCO	7264-2000T	J24876	Jan. 18, 2008	June 18, 2008
2 - LATERAL	ENDEVCO	7264-2000T	J33030	Jan. 18, 2008	June 18, 2008
3 - VERTICAL	ENDEVCO	7264-2000T	J31009	Jan. 18, 2008	June 18, 2008

REMARKS:

FMVSS 201U - Headform Calibration Drops C80305 - April 14, 2008



**PART 572L
HEAD DROP PRE-TEST**

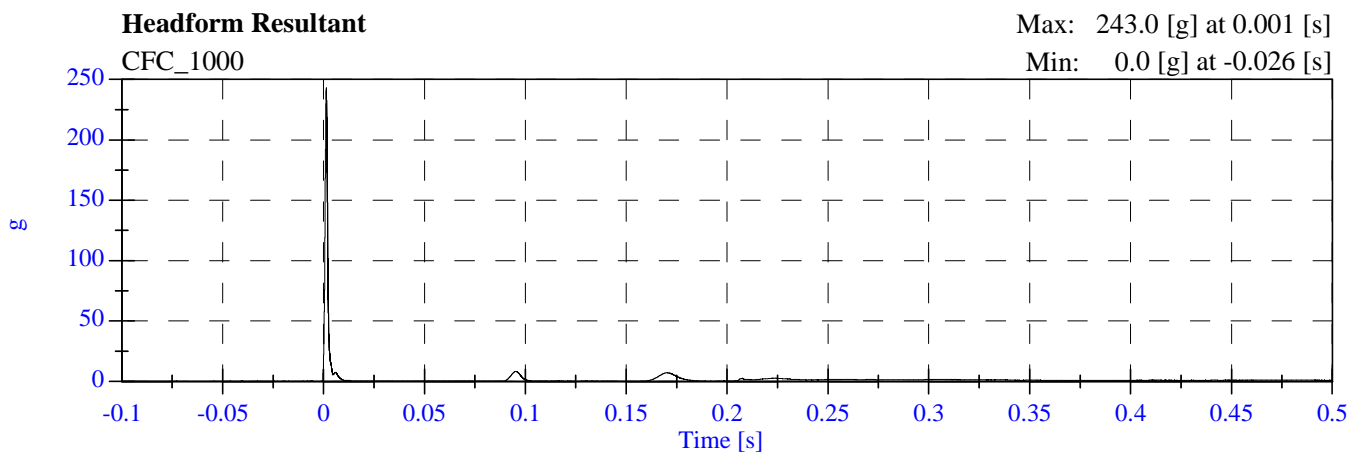
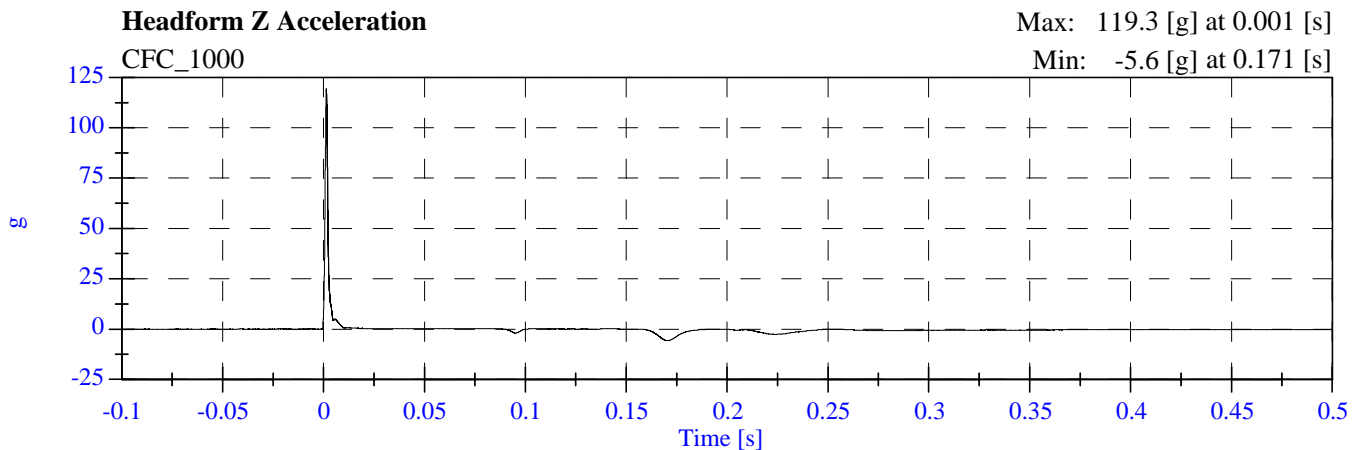
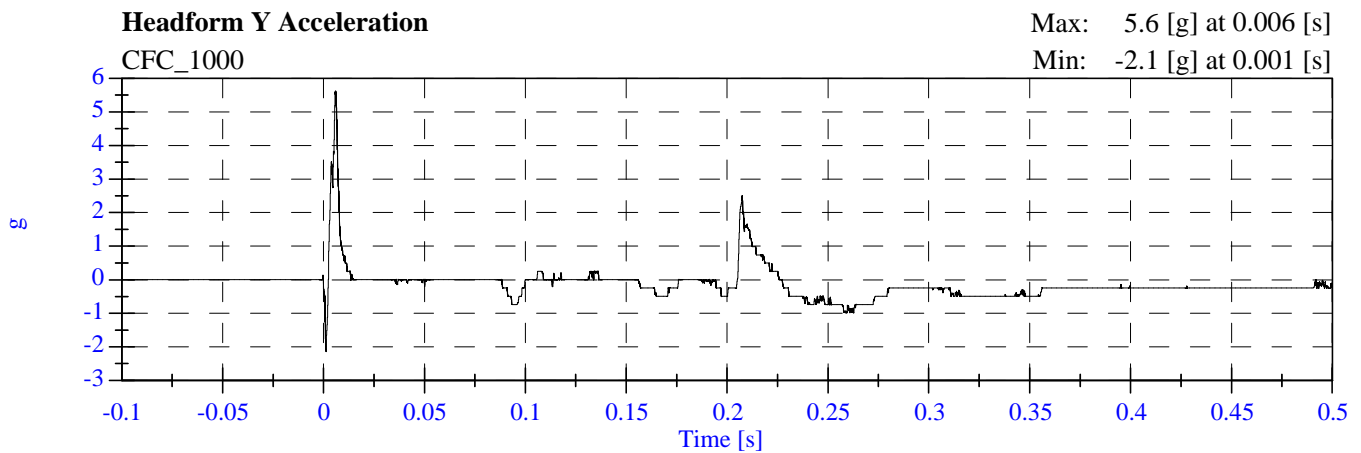
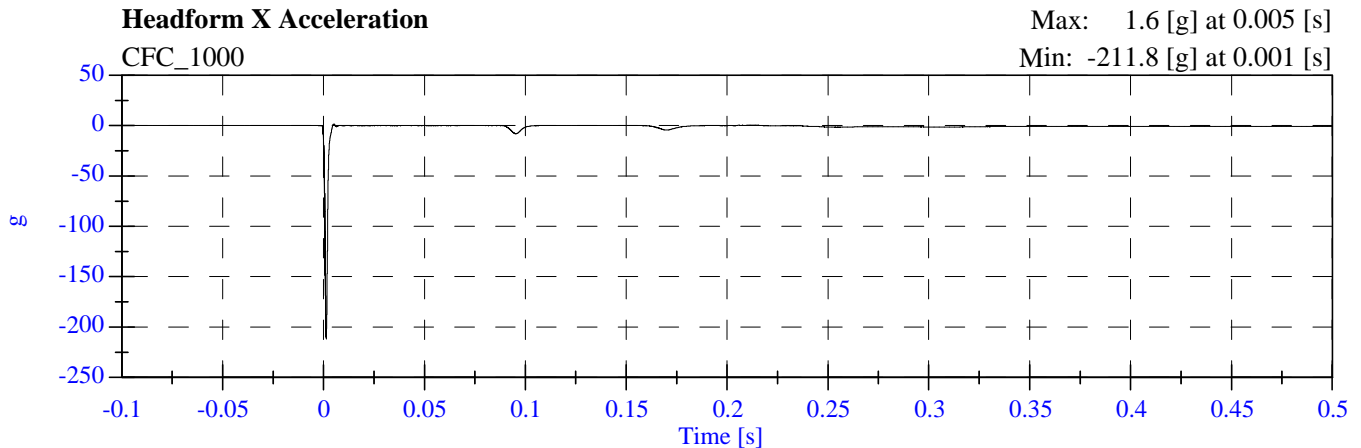
MANUFACTURER:		DENTON ATD INC.	
SERIAL NUMBER:		0062	
CALIBRATION DATE:		APRIL 14, 2008	
TEST PARAMETER	SPECIFICATION	TEST RESULTS	
TEMPERATURE	19°C to 26°C	21.5	
RELATIVE HUMIDITY	10% to 70%	25	
PEAK RESULTANT ACCELERATION	225 Gs to 275 Gs	243.0	
PEAK LATERAL ACCELERATION	15 Gs Maximum	5.6	
IS ACCELERATION CURVE UNIMODAL?	YES	YES	

HEAD ACCELEROMETER CALIBRATION INFORMATION

I.D. NUMBER	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	DATE OF LAST CALIBRATION	DATE OF NEXT CALIBRATION
1 - LONGITUDINAL	ENDEVCO	7264-2000T	J33127	Jan. 18, 2008	June 18, 2008
2 - LATERAL	ENDEVCO	7264-2000T	J33019	Jan. 18, 2008	June 18, 2008
3 - VERTICAL	ENDEVCO	7264-2000T	J32782	Jan. 18, 2008	June 18, 2008

REMARKS:

FMVSS 201U - Headform Calibration Drops C80305 - April 14, 2008



**PART 572L
HEAD DROP PRE-TEST**

MANUFACTURER:		FIRST TECHNOLOGY SAFETY SYSTEMS	
SERIAL NUMBER:		805	
CALIBRATION DATE:		APRIL 14, 2008	
TEST PARAMETER	SPECIFICATION	TEST RESULTS	
TEMPERATURE	19°C to 26°C	21.5	
RELATIVE HUMIDITY	10% to 70%	25	
PEAK RESULTANT ACCELERATION	225 Gs to 275 Gs	260.6	
PEAK LATERAL ACCELERATION	15 Gs Maximum	11.4	
IS ACCELERATION CURVE UNIMODAL?	YES	YES	

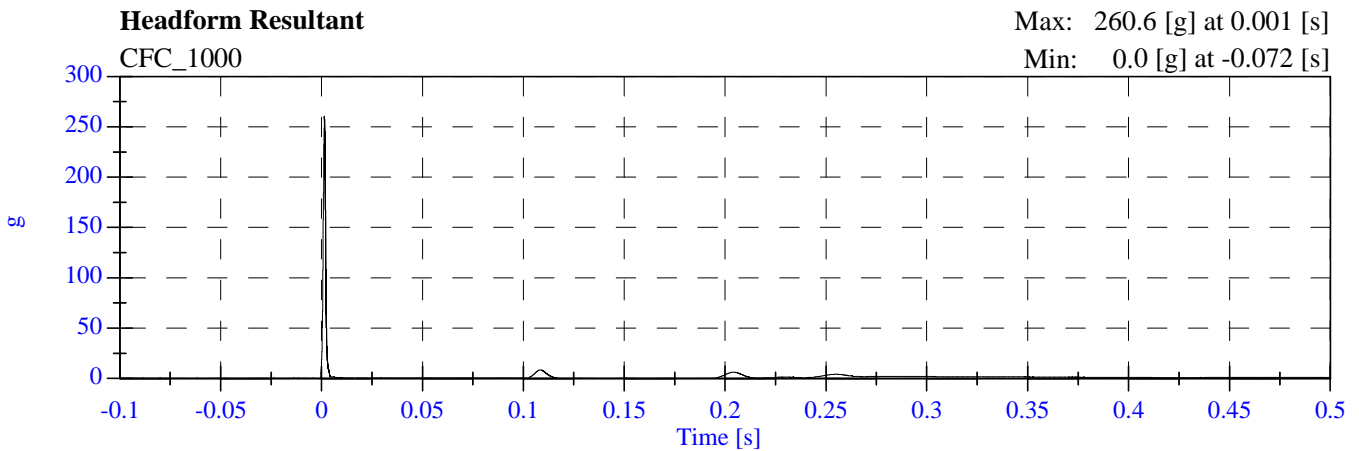
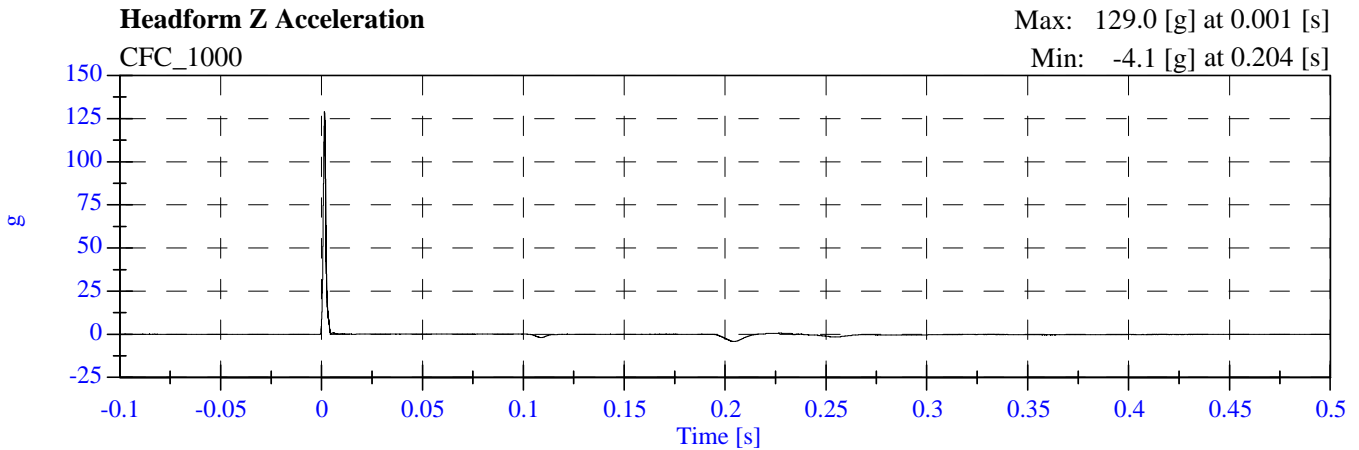
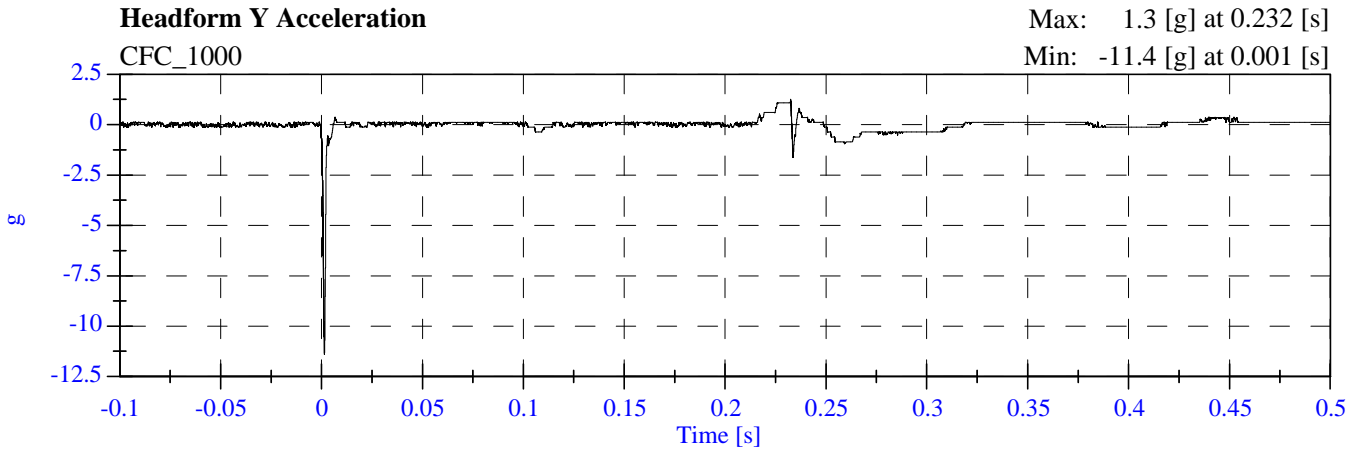
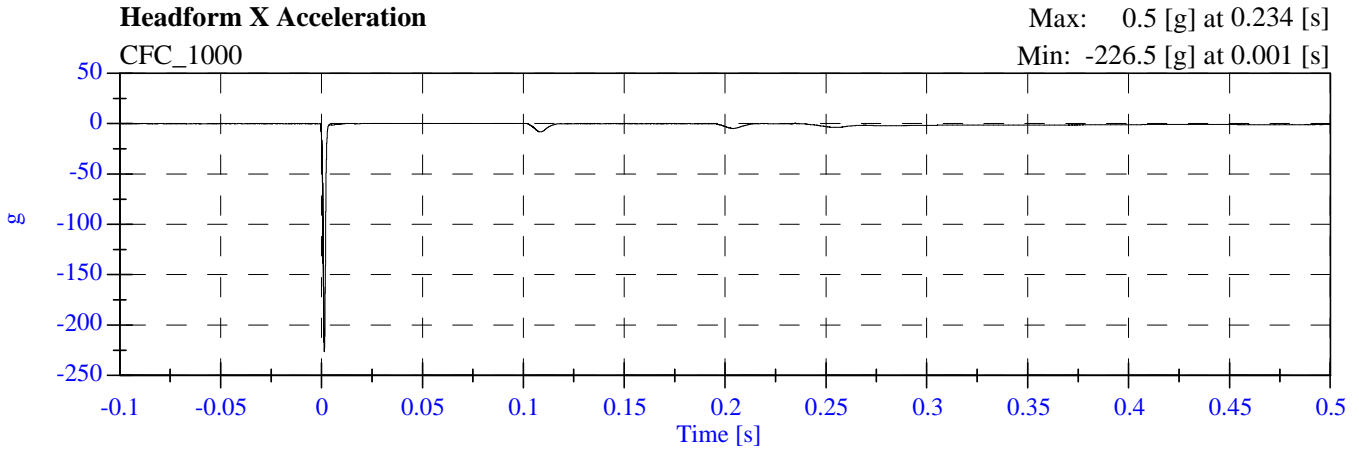
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I.D. NUMBER	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	DATE OF LAST CALIBRATION	DATE OF NEXT CALIBRATION
1 - LONGITUDINAL	ENDEVCO	7264-2000T	J41004	Jan. 18, 2008	June 18, 2008
2 - LATERAL	ENDEVCO	7264-2000T	J37496	Jan. 18, 2008	June 18, 2008
3 - VERTICAL	ENDEVCO	7264-2000T	J41016	Jan. 18, 2008	June 18, 2008

REMARKS:

FMVSS 201U - Headform Calibration Drops

C80305 - April 14, 2008



**PART 572L
HEAD DROP PRE-TEST**

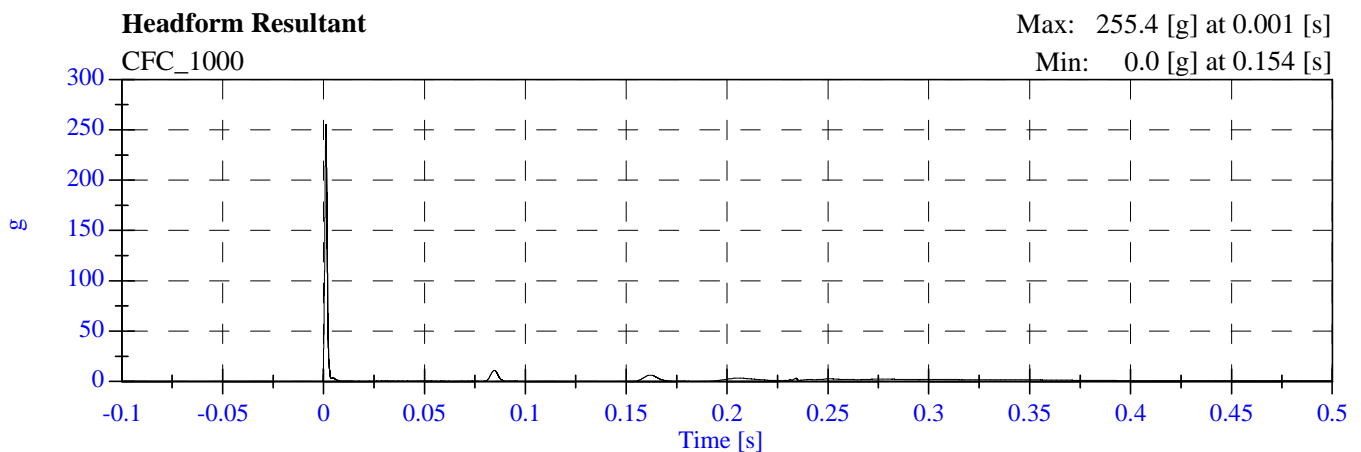
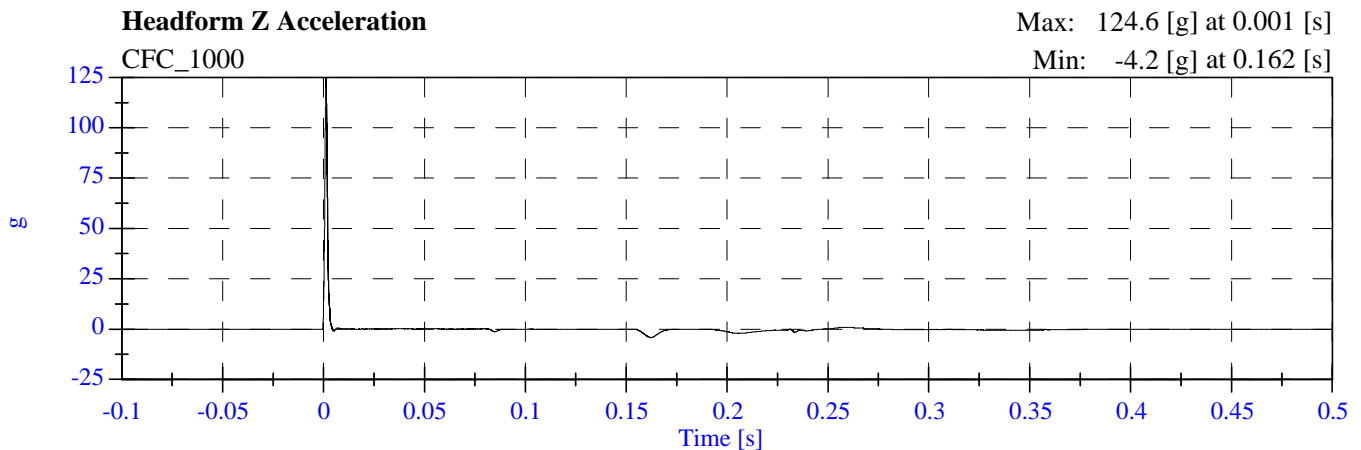
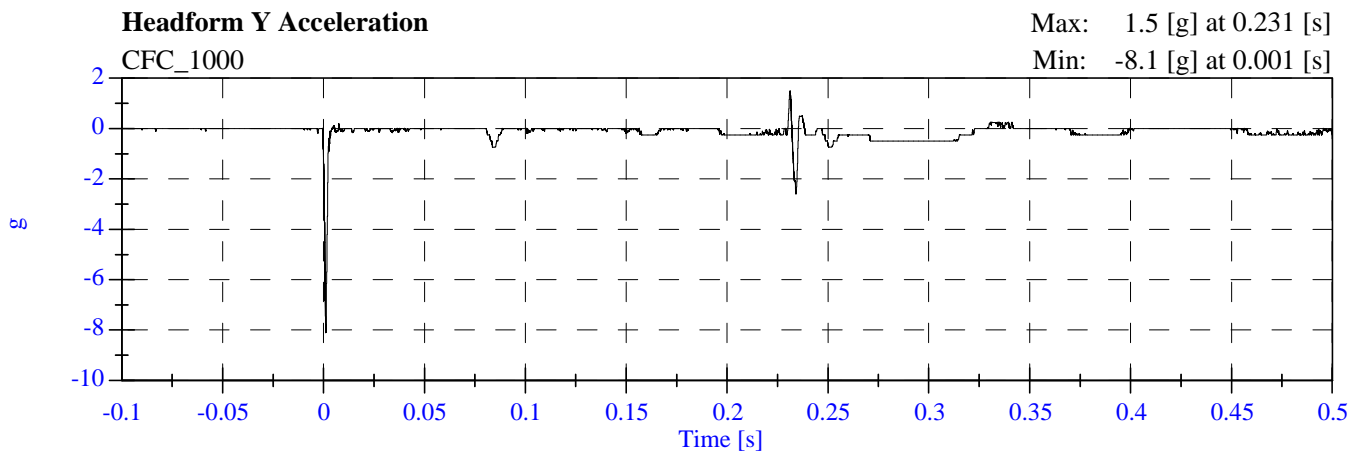
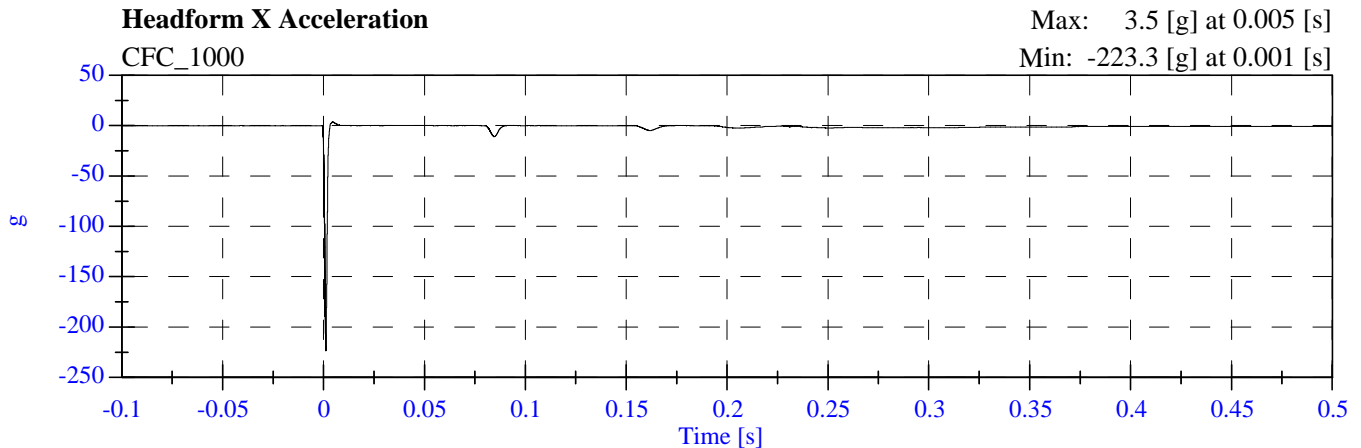
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SERIAL NUMBER:		0355	
CALIBRATION DATE:		APRIL 14, 2008	
TEST PARAMETER	SPECIFICATION	TEST RESULTS	
TEMPERATURE	19°C to 26°C	21.5	
RELATIVE HUMIDITY	10% to 70%	25	
PEAK RESULTANT ACCELERATION	225 Gs to 275 Gs	255.4	
PEAK LATERAL ACCELERATION	15 Gs Maximum	8.1	
IS ACCELERATION CURVE UNIMODAL?	YES	YES	

HEAD ACCELEROMETER CALIBRATION INFORMATION

I.D. NUMBER	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	DATE OF LAST CALIBRATION	DATE OF NEXT CALIBRATION
1 - LONGITUDINAL	ENDEVCO	7264-2000T	J28671	Jan. 18, 2008	June 18, 2008
2 - LATERAL	ENDEVCO	7264-2000T	J32779	Jan. 18, 2008	June 18, 2008
3 - VERTICAL	ENDEVCO	7264-2000T	J25854	Jan. 18, 2008	June 18, 2008

REMARKS:

FMVSS 201U - Headform Calibration Drops C80305 - April 14, 2008



**PART 572L
HEAD DROP PRE-TEST**

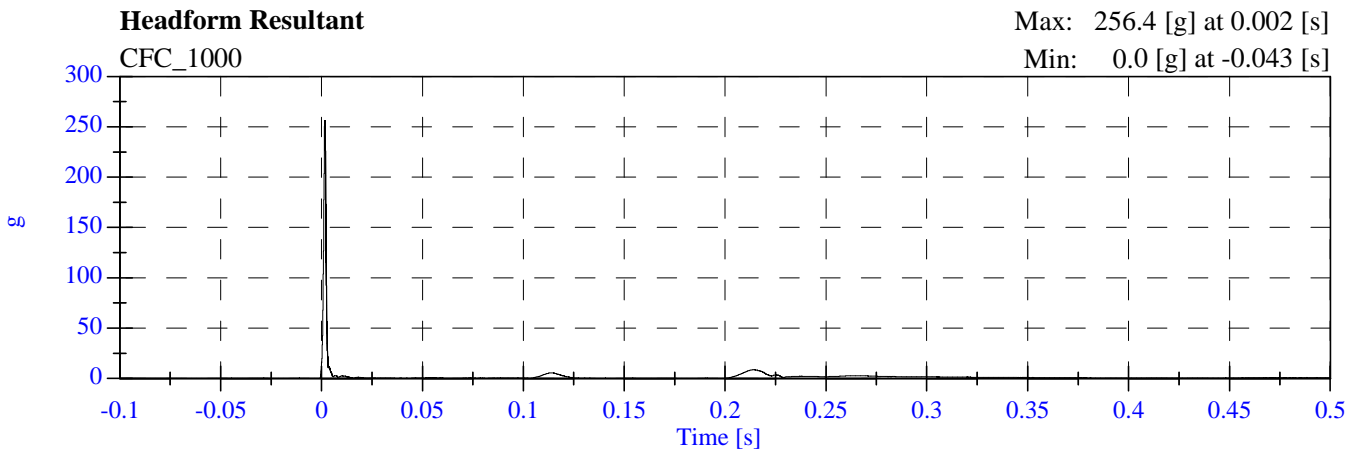
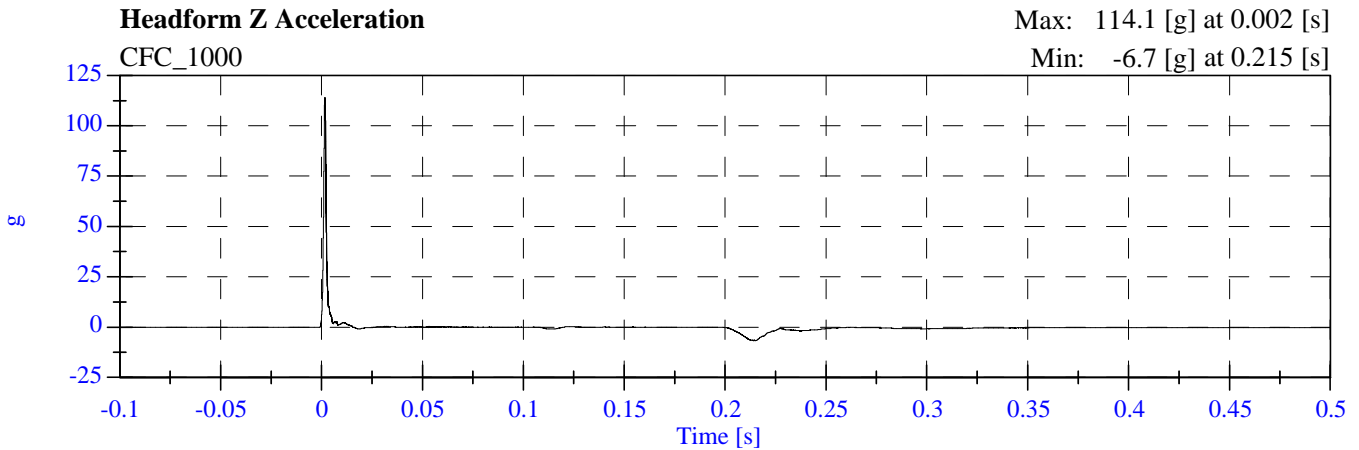
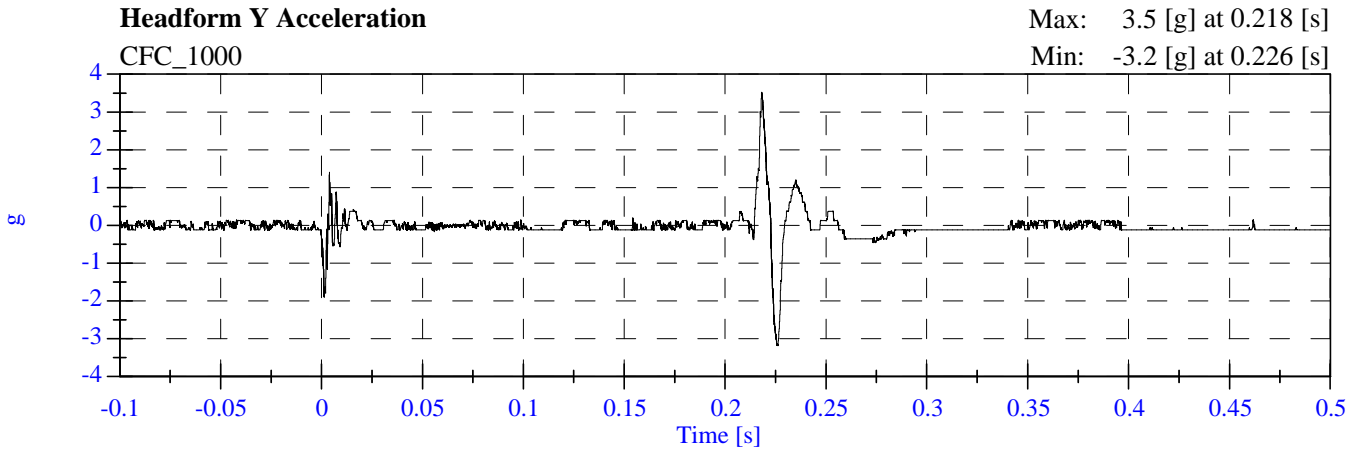
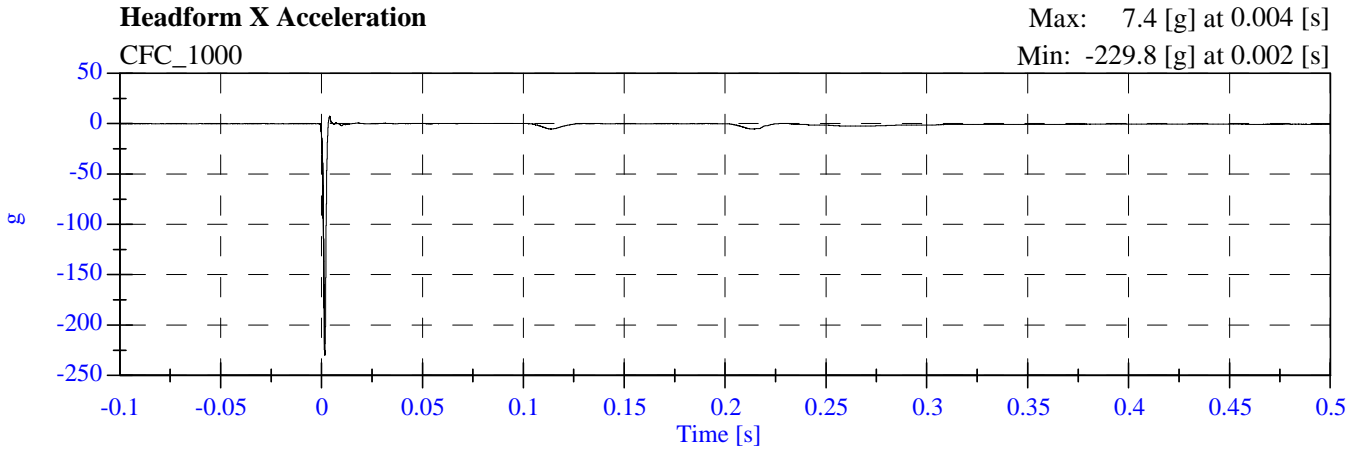
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SERIAL NUMBER:		1142	
CALIBRATION DATE:		APRIL 14, 2008	
TEST PARAMETER	SPECIFICATION	TEST RESULTS	
TEMPERATURE	19°C to 26°C	21.5	
RELATIVE HUMIDITY	10% to 70%	25	
PEAK RESULTANT ACCELERATION	225 Gs to 275 Gs	256.4	
PEAK LATERAL ACCELERATION	15 Gs Maximum	3.5	
IS ACCELERATION CURVE UNIMODAL?	YES	YES	

HEAD ACCELEROMETER CALIBRATION INFORMATION

I.D. NUMBER	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	DATE OF LAST CALIBRATION	DATE OF NEXT CALIBRATION
1 - LONGITUDINAL	ENDEVCO	7264-2000T	J41006	Jan. 18, 2008	June 18, 2008
2 - LATERAL	ENDEVCO	7264-2000T	J40994	Jan. 18, 2008	June 18, 2008
3 - VERTICAL	ENDEVCO	7264-2000T	J41007	Jan. 18, 2008	June 18, 2008

REMARKS:

FMVSS 201U - Headform Calibration Drops C80305 - April 14, 2008



**PART 572L
HEAD DROP POST-TEST**

MANUFACTURER:		FIRST TECHNOLOGY SAFETY SYSTEMS	
SERIAL NUMBER:		1140	
CALIBRATION DATE:		APRIL 28, 2008	
TEST PARAMETER	SPECIFICATION	TEST RESULTS	
TEMPERATURE	19°C to 26°C	21.1	
RELATIVE HUMIDITY	10% to 70%	25	
PEAK RESULTANT ACCELERATION	225 Gs to 275 Gs	254.3	
PEAK LATERAL ACCELERATION	15 Gs Maximum	7.1	
IS ACCELERATION CURVE UNIMODAL?	YES	YES	

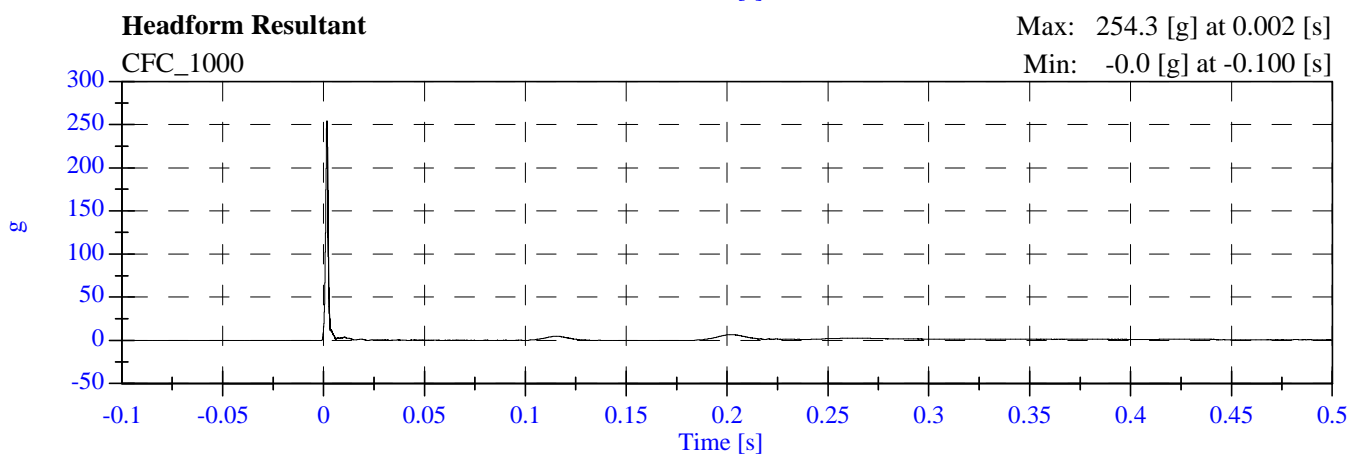
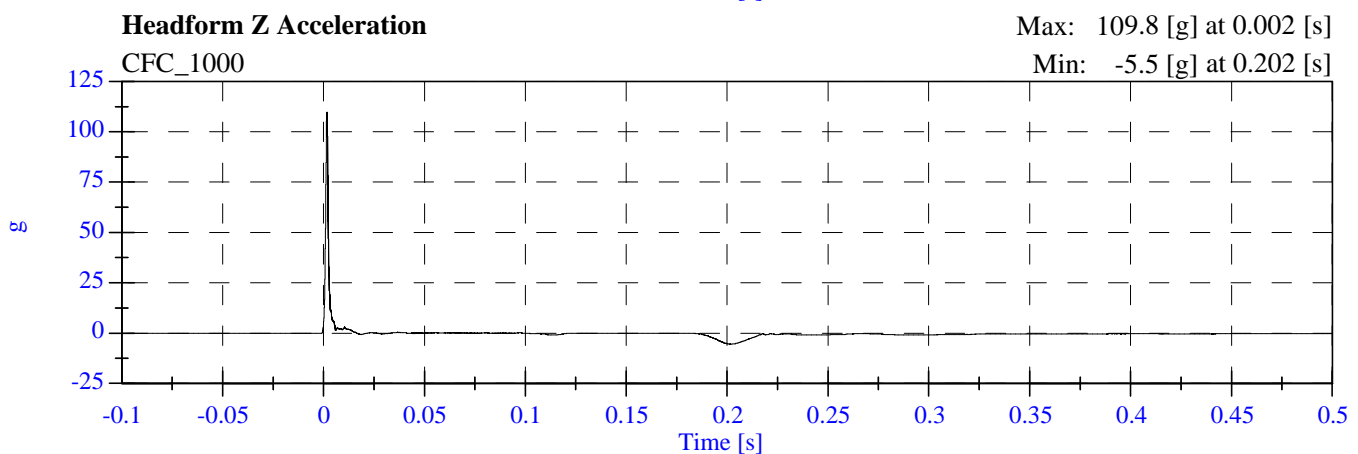
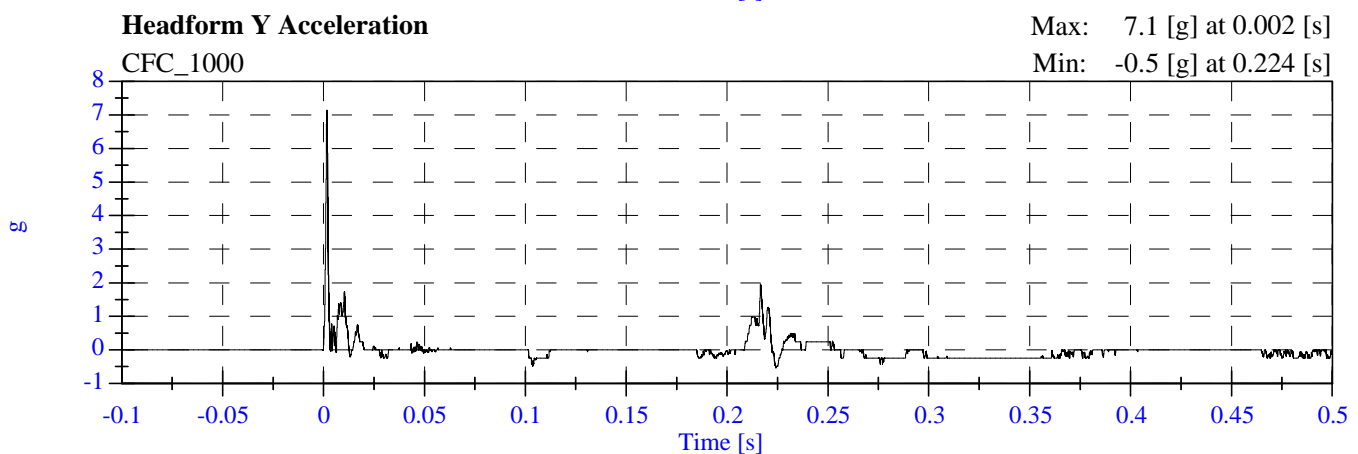
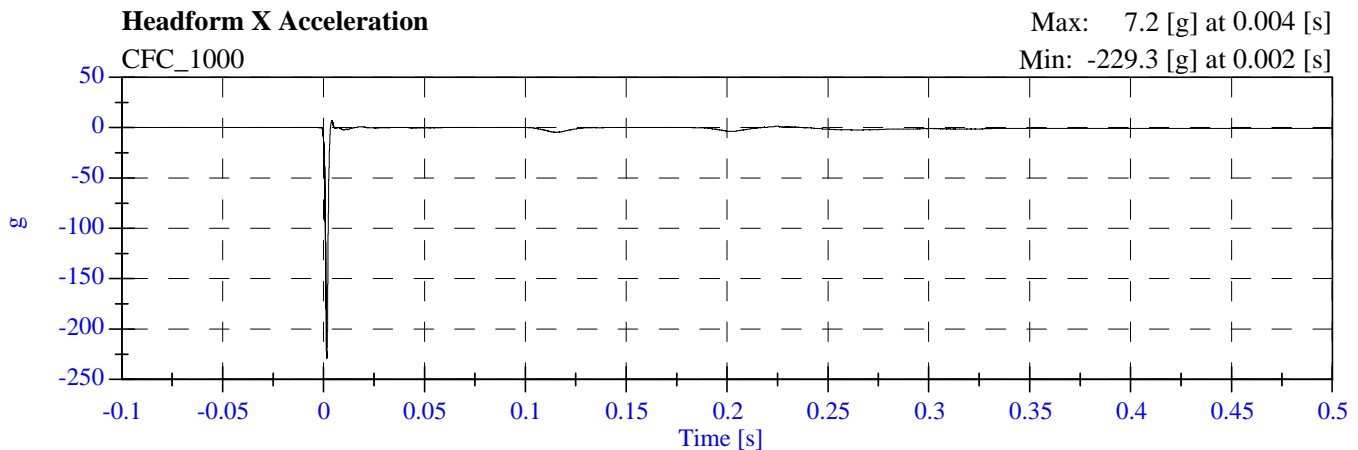
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I.D. NUMBER	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	DATE OF LAST CALIBRATION	DATE OF NEXT CALIBRATION
1 - LONGITUDINAL	ENDEVCO	7264-2000T	J24876	Jan. 18, 2008	June 18, 2008
2 - LATERAL	ENDEVCO	7264-2000T	J33030	Jan. 18, 2008	June 18, 2008
3 - VERTICAL	ENDEVCO	7264-2000T	J31009	Jan. 18, 2008	June 18, 2008

REMARKS:

FMVSS 201U - Headform Calibration Drops

C80305 - April 28, 2008



**PART 572L
HEAD DROP POST-TEST**

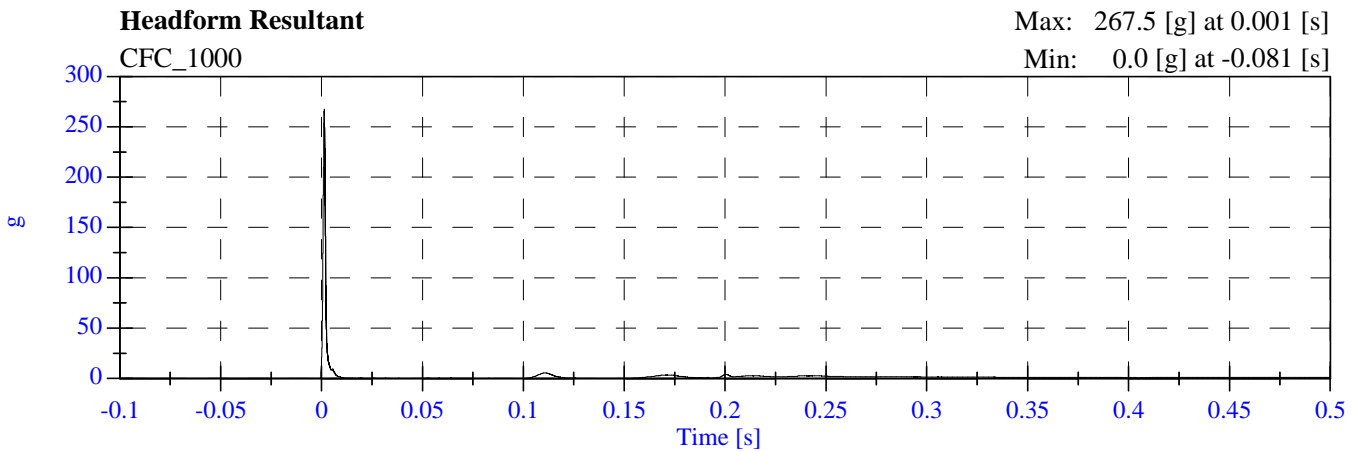
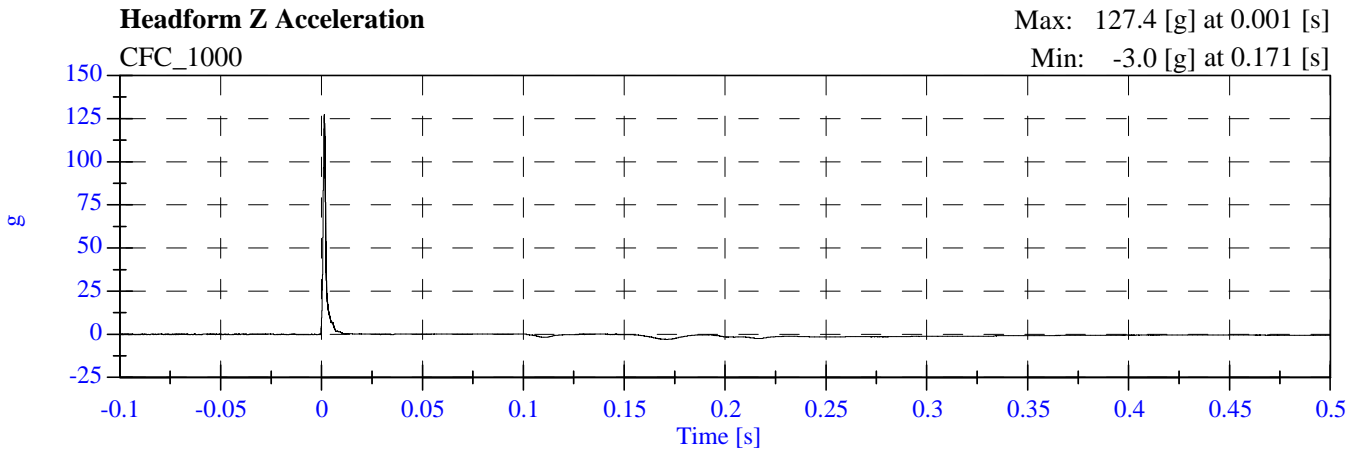
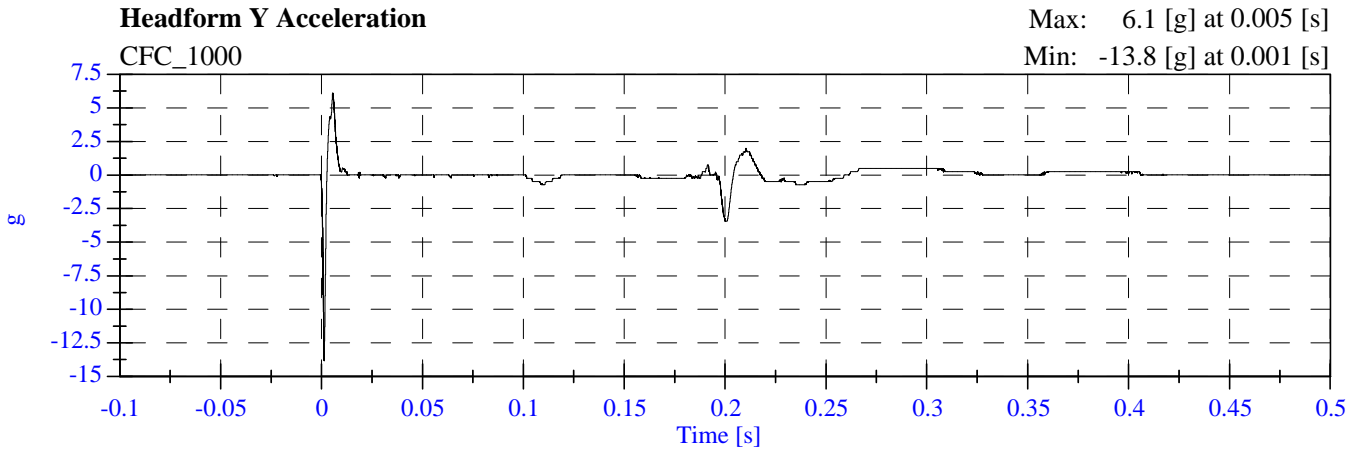
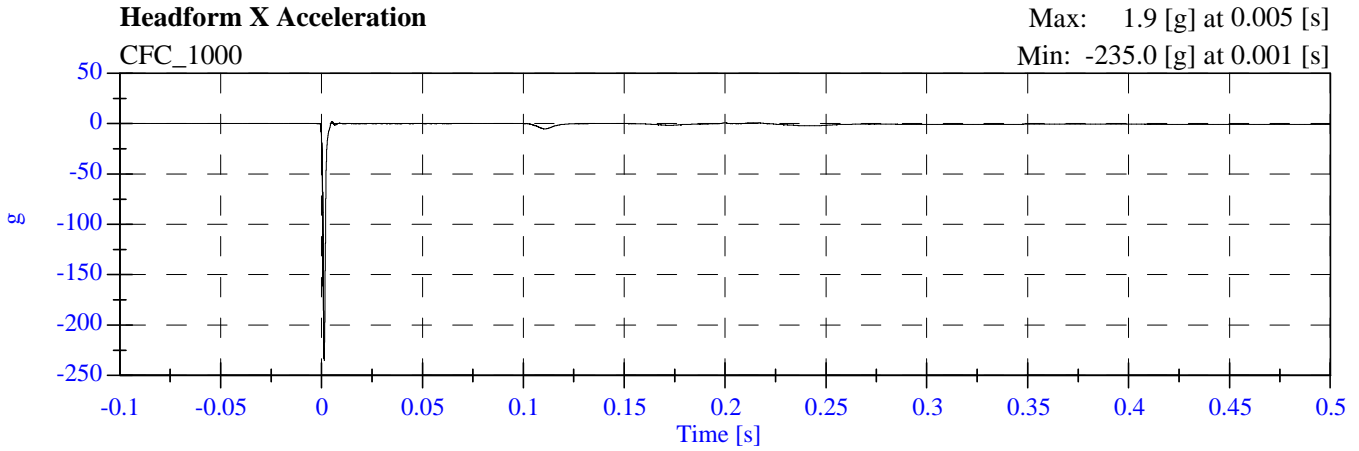
MANUFACTURER:		DENTON ATD INC.	
SERIAL NUMBER:		0062	
CALIBRATION DATE:		APRIL 28, 2008	
TEST PARAMETER	SPECIFICATION	TEST RESULTS	
TEMPERATURE	19°C to 26°C	21.1	
RELATIVE HUMIDITY	10% to 70%	25	
PEAK RESULTANT ACCELERATION	225 Gs to 275 Gs	267.5	
PEAK LATERAL ACCELERATION	15 Gs Maximum	13.8	
IS ACCELERATION CURVE UNIMODAL?	YES	YES	

HEAD ACCELEROMETER CALIBRATION INFORMATION

I.D. NUMBER	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	DATE OF LAST CALIBRATION	DATE OF NEXT CALIBRATION
1 - LONGITUDINAL	ENDEVCO	7264-2000T	J33127	Jan. 18, 2008	June 18, 2008
2 - LATERAL	ENDEVCO	7264-2000T	J33019	Jan. 18, 2008	June 18, 2008
3 - VERTICAL	ENDEVCO	7264-2000T	J32782	Jan. 18, 2008	June 18, 2008

REMARKS:

FMVSS 201U - Headform Calibration Drops C80305 - April 28, 2008



**PART 572L
HEAD DROP POST-TEST**

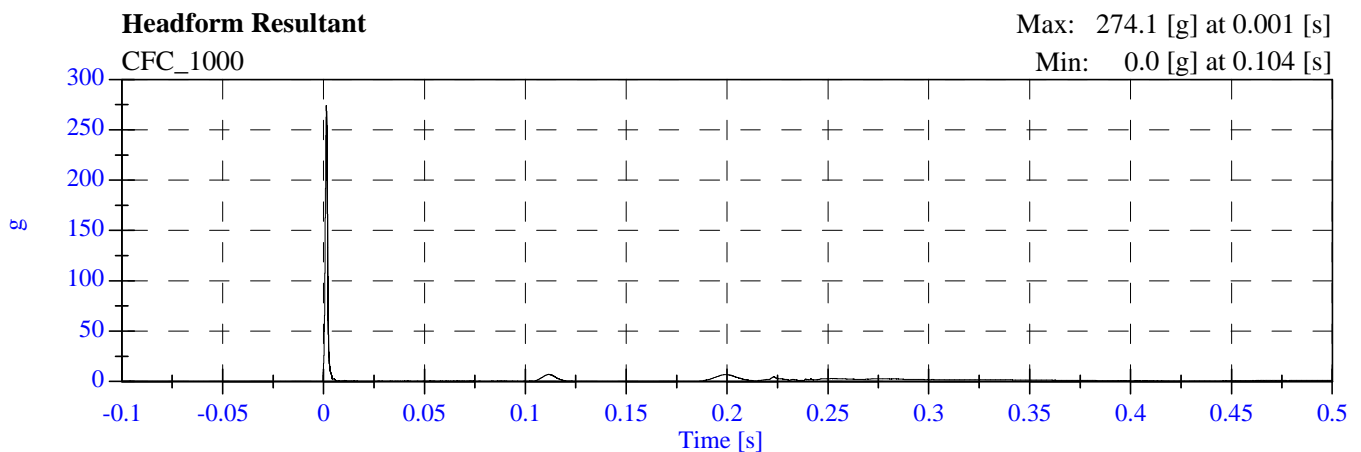
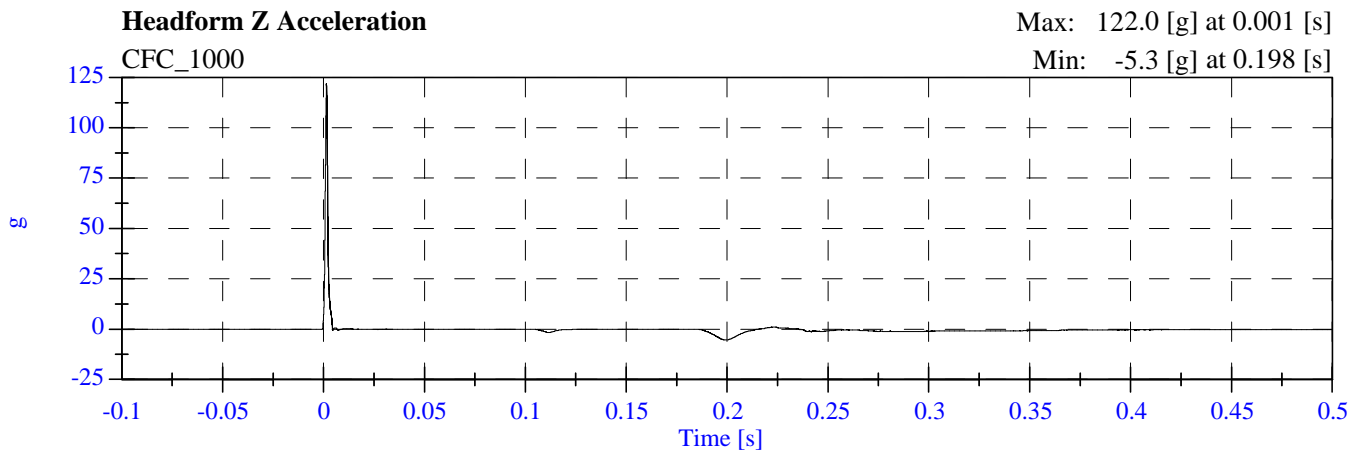
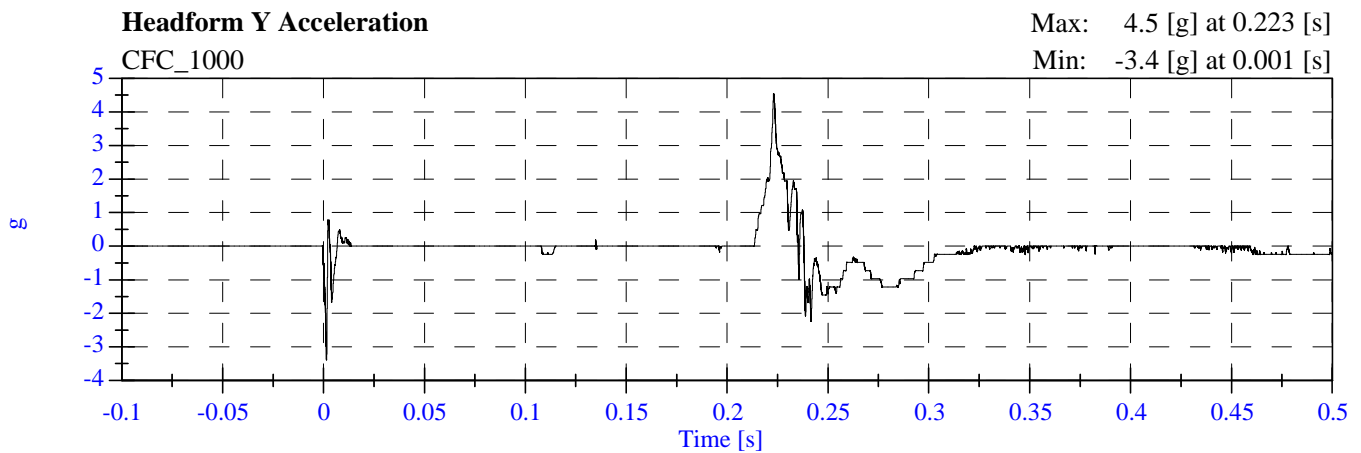
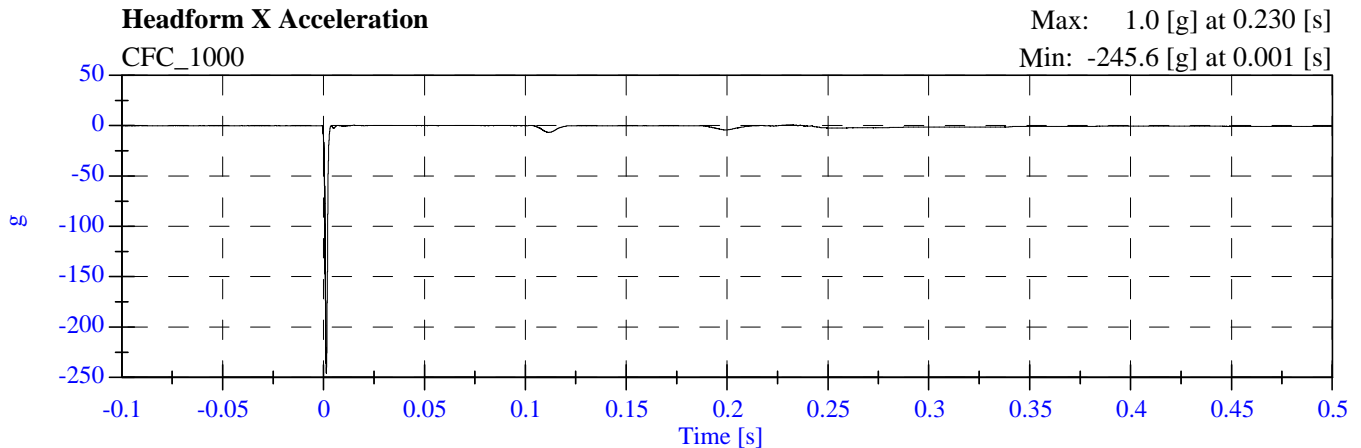
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SERIAL NUMBER:		805	
CALIBRATION DATE:		APRIL 28, 2008	
TEST PARAMETER	SPECIFICATION	TEST RESULTS	
TEMPERATURE	19°C to 26°C	21.1	
RELATIVE HUMIDITY	10% to 70%	25	
PEAK RESULTANT ACCELERATION	225 Gs to 275 Gs	274.1	
PEAK LATERAL ACCELERATION	15 Gs Maximum	4.5	
IS ACCELERATION CURVE UNIMODAL?	YES	YES	

HEAD ACCELEROMETER CALIBRATION INFORMATION

I.D. NUMBER	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	DATE OF LAST CALIBRATION	DATE OF NEXT CALIBRATION
1 - LONGITUDINAL	ENDEVCO	7264-2000T	J41004	Jan. 18, 2008	June 18, 2008
2 - LATERAL	ENDEVCO	7264-2000T	J37496	Jan. 18, 2008	June 18, 2008
3 - VERTICAL	ENDEVCO	7264-2000T	J41016	Jan. 18, 2008	June 18, 2008

REMARKS:

FMVSS 201U - Headform Calibration Drops C80305 - April 28, 2008



**PART 572L
HEAD DROP POST-TEST**

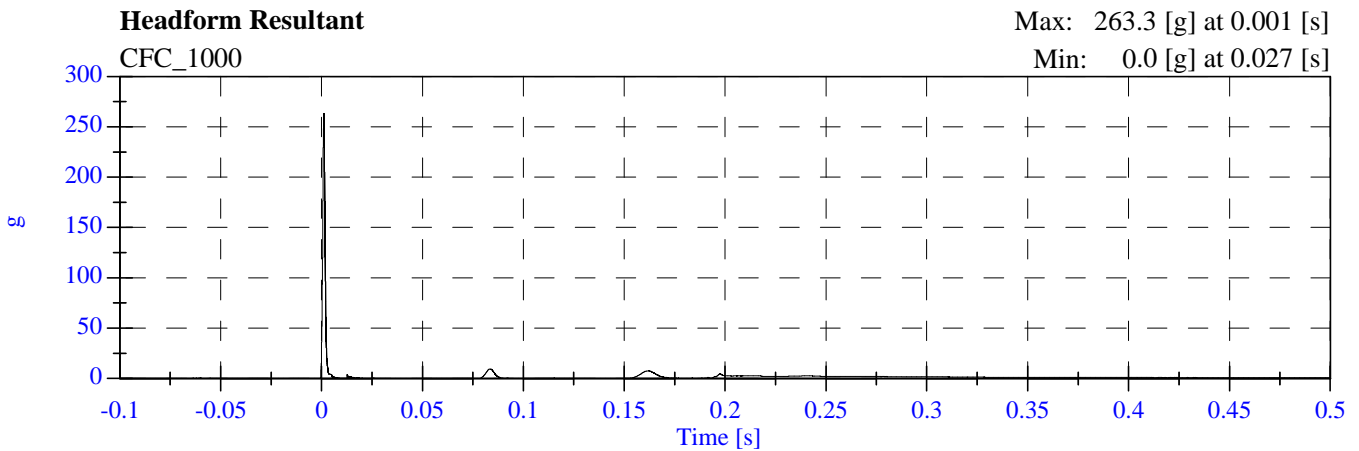
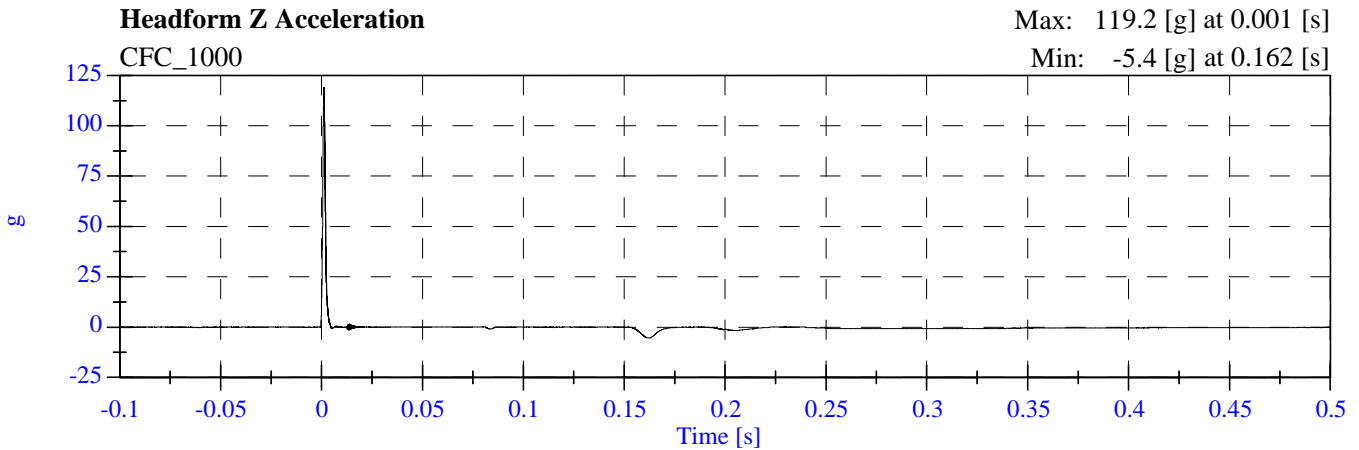
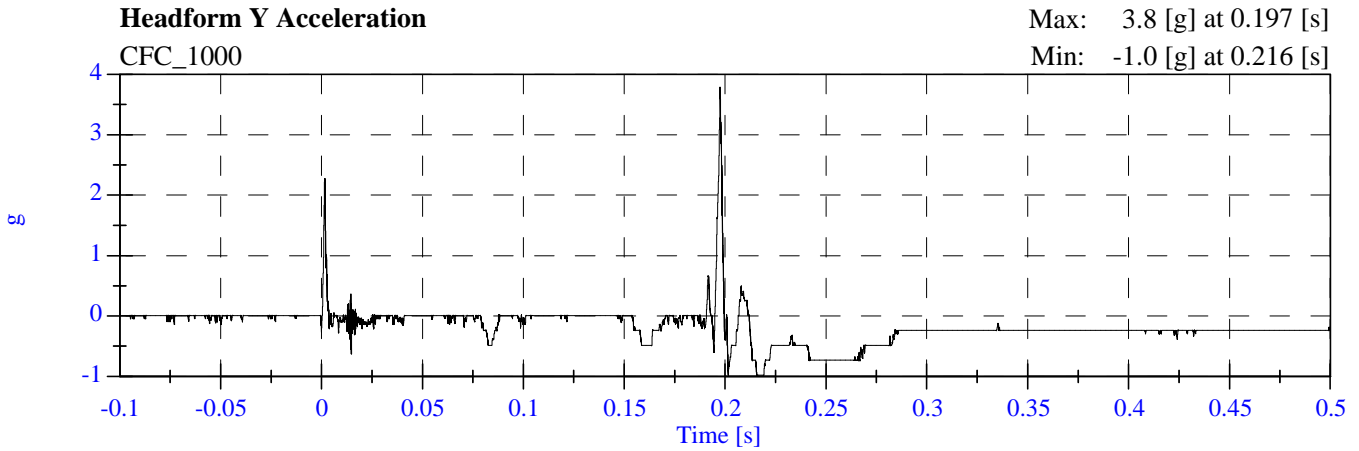
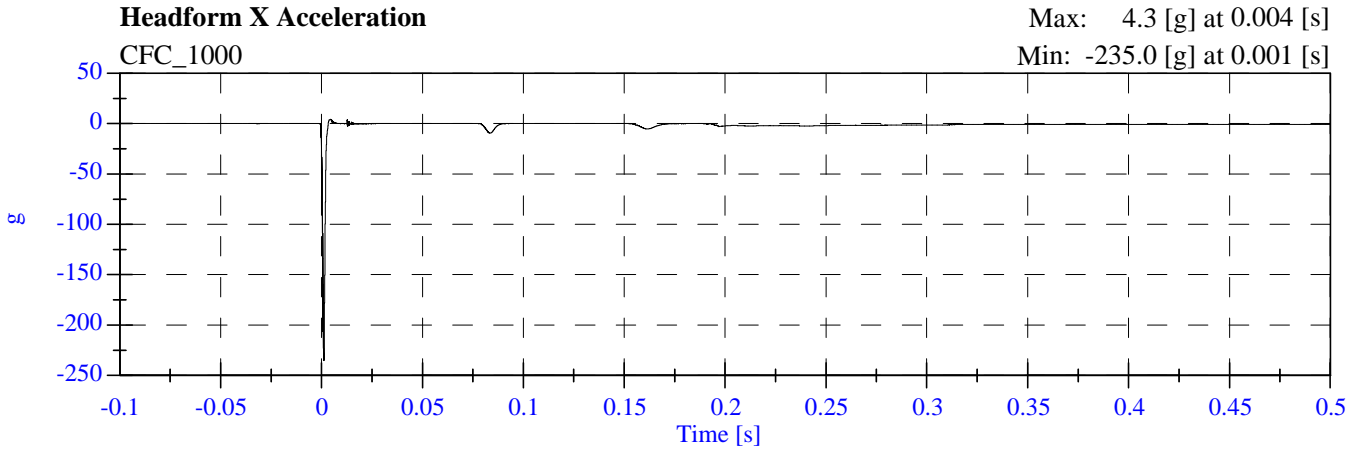
MANUFACTURER:		DENTON ATD INC.	
SERIAL NUMBER:		0355	
CALIBRATION DATE:		APRIL 28, 2008	
TEST PARAMETER	SPECIFICATION	TEST RESULTS	
TEMPERATURE	19°C to 26°C	21.1	
RELATIVE HUMIDITY	10% to 70%	25	
PEAK RESULTANT ACCELERATION	225 Gs to 275 Gs	263.3	
PEAK LATERAL ACCELERATION	15 Gs Maximum	3.8	
IS ACCELERATION CURVE UNIMODAL?	YES	YES	

HEAD ACCELEROMETER CALIBRATION INFORMATION

I.D. NUMBER	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	DATE OF LAST CALIBRATION	DATE OF NEXT CALIBRATION
1 - LONGITUDINAL	ENDEVCO	7264-2000T	J28671	Jan. 18, 2008	June 18, 2008
2 - LATERAL	ENDEVCO	7264-2000T	J32779	Jan. 18, 2008	June 18, 2008
3 - VERTICAL	ENDEVCO	7264-2000T	J25854	Jan. 18, 2008	June 18, 2008

REMARKS:

FMVSS 201U - Headform Calibration Drops C80305 - April 28, 2008



**PART 572L
HEAD DROP POST-TEST**

MANUFACTURER:		FIRST TECHNOLOGY SAFETY SYSTEMS	
SERIAL NUMBER:		1142	
CALIBRATION DATE:		APRIL 28, 2008	
TEST PARAMETER	SPECIFICATION	TEST RESULTS	
TEMPERATURE	19°C to 26°C	21.1	
RELATIVE HUMIDITY	10% to 70%	25	
PEAK RESULTANT ACCELERATION	225 Gs to 275 Gs	258.6	
PEAK LATERAL ACCELERATION	15 Gs Maximum	6.2	
IS ACCELERATION CURVE UNIMODAL?	YES	YES	

HEAD ACCELEROMETER CALIBRATION INFORMATION

I.D. NUMBER	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	DATE OF LAST CALIBRATION	DATE OF NEXT CALIBRATION
1 - LONGITUDINAL	ENDEVCO	7264-2000T	J41006	Jan. 18, 2008	June 18, 2008
2 - LATERAL	ENDEVCO	7264-2000T	J40994	Jan. 18, 2008	June 18, 2008
3 - VERTICAL	ENDEVCO	7264-2000T	J41007	Jan. 18, 2008	June 18, 2008

REMARKS:

FMVSS 201U - Headform Calibration Drops

C80305 - April 28, 2008

