

REPORT NUMBER: 201-CAL-05-01

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

**FORD MOTOR CO.  
2005 FORD ESCAPE, 4-DOOR**

NHTSA NUMBER: C50201

CALSPAN TEST NUMBER: 8754-FMH-01

CALSPAN  
TRANSPORTATION SCIENCES CENTER  
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FINAL REPORT

PREPARED FOR:

U. S. DEPARTMENT OF TRANSPORTATION  
National Highway Traffic Safety Administration  
Enforcement  
Office of Vehicle Safety Compliance  
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				14. <i>Sponsoring Agency Code</i> NVS-220																			
15. <i>Supplementary Notes</i>																							
16. <i>Abstract</i>  Compliance tests were conducted on the subject vehicle, a 2005 Ford Escape, 4-door, 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>AP1 Pass.</td> <td align="center"><b>112</b></td> <td align="center"><b>30</b></td> <td align="center"><b>23.81</b></td> <td align="center"><b>1658.3</b></td> <td align="center"><b>1417.5</b></td> </tr> <tr> <td>AP1 Driver</td> <td align="center">246</td> <td align="center">30</td> <td align="center">23.70</td> <td align="center">1207.2</td> <td align="center">1077.2</td> </tr> </tbody> </table>						Target Point	Horizontal	Vertical	Velocity	HIC	HICd	AP1 Pass.	<b>112</b>	<b>30</b>	<b>23.81</b>	<b>1658.3</b>	<b>1417.5</b>	AP1 Driver	246	30	23.70	1207.2	1077.2
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## **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 2005 Ford Escape, 4-door, NHTSA No. C50201, meets 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 2005 Ford Escape, 4-door, NHTSA No.C50201 , was impacted at various locations throughout its upper interior by a 4.54 kg 50<sup>th</sup> percentile headform. A total of eleven (11) impacts were performed in this test series. The target area impacts were chosen by the NHTSA Contracting Officers Technical Representative (COTR). A summary of test results can be found on data sheet 2-1. The eleven (11) areas chosen for testing were:

OP1	UROP	SR3	BP4	BP1
AP3	AP1 Passenger Side	BP2	URBP	SR2A
AP1 Driver Side				

The selected impact areas on the test vehicle appeared to comply with the performance requirements of FMVSS 201 with the exception of AP1 on the driver and passenger side.

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 is included in Appendix B. Each FMH weighed  $4.54 \pm 0.5$  kg and has an orthogonal tri-axis accelerometer pack mounted at the center of gravity (c.g.).

A total of three (3) channels of data for each target impact test are recorded on a Keyser-Threde data acquisition system. Data plots, along with still photographs, can be found in Section 3 of this report.

To document each target area impact test, one Weinberger high-speed video camera was placed 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:	2005 Ford Escape, 4-door
VIN:	1FMYU02Z25KB04029
DATE OF MANUFACTURE:	06/04 (SEE CERTIFICATION LABEL)
COLOR:	Black

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	2070.73	-541.97	1609.70	2067.31	545.63	1610.82	Relocated 1 circle		-	-	-
AP1_REL1	2084.03	-549.26	1596.87	2085.43	552.45	1598.08	112	30	23.81	1658.3	1417.5
							246	30	23.70	1207.2	1077.2
AP2	1996.89	-576.01	1519.55	1994.59	576.30	1520.48	-	-	-	-	-
AP3	1863.13	-606.80	1425.63	1860.59	608.64	1423.76	145	36	23.65	267.5	368.2
BP1	2623.32	-499.83	1675.46	2619.01	497.78	1677.18	Relocated 1 circle		-	-	-
BP1_REL1	2642.27	-489.33	1679.86	2636.08	482.96	1683.57	90	22	23.51	908.5	851.8
BP2	2598.39	-607.42	1455.89	2593.70	611.61	1449.11	270	6	23.47	872.7	824.8
BP3	2548.23	-642.36	1440.76	2546.69	644.82	1435.50	Relocated 3 circles		-	-	-
BP3_REL3	2560.40	-618.70	1506.86	2560.52	619.72	1504.52	-	-	-	-	-
BP4	2642.42	-673.56	1323.21	2641.66	676.21	1316.49	Relocated 3 circles		-	-	-
BP4_REL3	2647.85	-657.61	1392.17	2646.30	659.26	1388.02	140	-10	23.69	443.8	501.2
FH1	2007.67	-445.99	1645.37	2005.68	447.43	1646.31	-	-	-	-	-
FH2	1988.06	-299.40	1656.85	1984.96	299.52	1657.44	-	-	-	-	-
FH2_REL1	1989.29	-320.02	1654.78	1985.26	321.21	1654.89	Relocated 1 circle		-	-	-
OP1	3457.23	-594.26	1425.81	3450.74	599.21	1423.95	90	2	23.48	531.0	567.0
OP2	3473.81	-626.57	1463.38	3468.73	630.64	1462.92	-	-	-	-	-
OP2_REL2	3470.24	-595.35	1427.79	3446.78	597.24	1432.89	Relocated 2 circles		-	-	-
RP1	3980.44	-547.19	1577.94	3920.05	513.23	1645.81	-	-	-	-	-
SR1	2221.40	-506.87	1667.50	2218.04	507.02	1671.36	-	-	-	-	-
SR2A	2370.15	-504.12	1679.06	2366.16	503.29	1682.08	270	18	23.47	516.4	556
SR2B	2322.95	-503.76	1677.86	2320.70	504.38	1680.18	-	-	-	-	-

SR3	2951.39	-509.92	1647.03	2947.94	516.34	1642.90	90	50	23.73	537.5	491.9
URAP	2259.48	-414.50	1706.54	2253.06	410.48	1707.80	-	-	-	-	-
URBP	2622.63	-418.29	1698.17	2619.97	417.09	1700.31	270	47	23.34	962.7	892.7
URM	3009.12	-0.14	1738.26	3008.70	0.58	1738.19	-	-	-	-	-
UROP	3346.63	-418.96	1726.52	3345.16	422.03	1725.25	90	50	23.72	473.9	524.0
URRP	3754.57	-419.79	1721.70	3757.11	422.08	1719.78	-	-	-	-	-

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

**DATA SHEET 2-2**

**GENERAL TEST AND VEHICLE PARAMETER DATA**

<b>TEST VEHICLE INFORMATION:</b>									
Year/Make/Model/Body Style:				2005 Ford Escape, 4-door					
VIN:				1FMYU02Z25KB04029					
Month & Year of Manufacture:				06/04 (SEE CERTIFICATION LABEL)					
Vehicle Body Color:				Black					
Engine Data:	4	Cylinders;	-	CID;	2.3	Liters;	-	cc	
Engine Placement:		-	Longitudinal;	or		x	Lateral		
Transmission:	4	Speed;	-	Manual;	x	Automatic;	-	Overdrive	
Final Drive:	-	Rear Wheel Drive;	x	Front Wheel Drive;	-	Four Wheel Drive			
Odometer Reading:		36	km						
Options:	x	A/C;	x	Power Steering;	x	Pwr.Brakes;	x	Pwr. Windows	
Interior Trim Information :									
1. B-pillars have adjustable seat belt anchorages.									
2. O-pillars have non-adjustable seat belt anchorages.									
3. 2 <sup>nd</sup> row seat side rails have grab handles.									

<b>DATA FROM TIRE PLACARD:</b>									
Tire Pressure (at capacity);				220		kPa FRONT			
				220		kPa REAR			
Recommended Tire Size:				P225/75R15					
Tires on Test Vehicle:		P225/75R15		Manufacturer:			General		
Vehicle Capacity Data:									
Number of Occupants:	2	Front;	3	Rear;	-	3rd Seat;	5	Total	
Type of Front Seats:	x	Bucket;	-	Bench;	-	Split Bench			
Type of Front Seat Back:	-	Fixed;	x	Adjustable with	x	Lever or	-	Knob	
Vehicle Capacity Weight (VCW)=				456		kg (A)			
No. of Occupants x 68 kg. =				340		kg (B)			
Rated Cargo/Luggage Weight (RCLW) =				116		kg (A-B) Max. RCLW = 136 kg.			

**DATA SHEET 2-2**

**GENERAL TEST AND VEHICLE PARAMETER DATA (cont.)**

<b>TEST VEHICLE DELIVERED WEIGHT WITH MAXIMUM FLUIDS:</b>							
Left Front	=	<b>468</b>	<b>kg</b>	Left Rear	=	<b>286</b>	<b>kg</b>
Right Front	=	<b>416</b>	<b>kg</b>	Right Rear	=	<b>306</b>	<b>kg</b>
TOTAL FRONT	=	<b>884</b>	<b>kg</b>	TOTAL REAR	=	<b>592</b>	<b>kg</b>
% of Total Weight	=	<b>59.9</b>	<b>%</b>	% of Total Weight	=	<b>40.1</b>	<b>%</b>
TOTAL WEIGHT	=	<b>1476</b>				<b>kg</b>	

<b>CALCULATION OF VEHICLE'S TARGET TEST WEIGHT:</b>		
Total Test Vehicle Delivered Weight=	<b>1476</b>	<b>kg (A)</b>
+ Rated Cargo/Luggage Weight =	<b>116</b>	<b>kg (B)</b>
TEST VEHICLE TARGET WEIGHT =	<b>1592</b>	<b>kg (A+B)</b>

<b>WEIGHT OF TEST VEHICLE (FULLY LOADED):</b>							
Left Front	=	<b>454</b>	<b>kg</b>	Left Rear	=	<b>345</b>	<b>kg</b>
Right Front	=	<b>417</b>	<b>kg</b>	Right Rear	=	<b>368</b>	<b>kg</b>
TOTAL FRONT	=	<b>871</b>	<b>kg</b>	TOTAL REAR	=	<b>713</b>	<b>kg</b>
% of Total Weight	=	<b>55.0</b>	<b>%</b>	% of Total Weight	=	<b>45.0</b>	<b>%</b>
TOTAL TEST WEIGHT	=	<b>1584</b>					
Weight of vehicle secured in test vehicles cargo area	=	<b>108</b>				<b>kg</b>	

<b>TEST VEHICLE ATTITUDE (all dimensions in millimeters):</b>				
AS DELIVERED:	Left Front	<b>824</b>	Left Rear	<b>864</b>
	Right Front	<b>844</b>	Right Rear	<b>878</b>
FULLY LOADED:	Left Front	<b>825</b>	Left Rear	<b>844</b>
	Right Front	<b>844</b>	Right Rear	<b>860</b>
Test Vehicle Wheelbase:	<b>2610</b>		millimeters	

<b>TEST VEHICLE PITCH AND ROLL ANGLES:</b>				
AS DELIVERED:	PITCH ANGLES		ROLL ANGLES	
	Left Door Sill	↓1.4	Front Bumper	↓0.5
	Right Door Sill	↑1.4	Rear Bumper	↑0.3
FULLY LOADED:	PITCH ANGLES		ROLL ANGLES	
	Left Door Sill	↓1.0	Front Bumper	↓0.4
	Right Door Sill	↑1.0	Rear Bumper	↑0.2
AS TESTED:	PITCH ANGLES		ROLL ANGLES	
	Left Door Sill	↓1.0	Front Bumper	↓0.4
	Right Door Sill	↑1.0	Rear Bumper	↑0.3

DATA SHEET 2-3

APPROACH ANGLE LIMITS

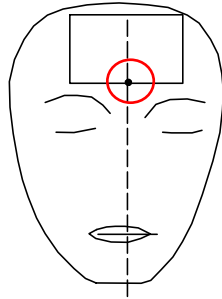
Target Code	Left Side				Target Code	Right Side			
	Horizontal Angles (deg.)		Vertical Angles (deg.)			Horizontal Angles (deg.)		Vertical Angles (deg.)	
	Minimum	Maximum	Minimum	Maximum		Minimum	Maximum	Minimum	Maximum
AP1	205	249	-5	33	AP1	111	155	-5	30
AP2	205	249	-5	22	AP2	111	155	-5	21
AP3	205	249	-5	35	AP3	111	155	-5	36
BP1	204	282	-10	21	BP1	78	156	-10	22
BP2	ANY		0	6	BP2	ANY		0	7
BP3	204	282	-10	-10	BP3	78	156	-10	-10
BP4	204	282	-10	-10	BP4	78	156	-10	-9
OP1	ANY		0	2	OP1	ANY		0	2
OP2	ANY		0	2	OP2	ANY		0	0
RP1	270	345	-10	-	RP1	15	90	-10	-
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	-	RH	0		0	-
SR1	270		0	15	SR1	90		0	15
SR2A	270		0	18	SR2A	90		0	17
SR2B	270		0	18	SR2B	90		0	16
SR3	270		0	45	SR3	90		0	50
URAP	ANY		0	50	URAP	ANY		0	50
URBP	ANY		0	47	URBP	ANY		0	47
UROP	ANY		0	37	UROP	ANY		0	50
URRP	ANY			37	URRP	ANY		0	50

Note : BP2, OP1 and OP2 are Seat Belt Anchorage locations

**DATA SHEET 2-4**

**SUMMARY TARGET IMPACT LOCATION ON FMH**

VEHICLE YEAR/MAKE/MODEL/STYLE:	2005 Ford Escape, 4-door
VIN:	1FMYU02Z25KB04029
DATE OF MANUFACTURE:	06/04 (SEE CERTIFICATION LABEL)
COLOR:	Black



ã RIGHT SIDE OF FACE

TARGET	Distance Above Point O (mm)	Distance Over From Pt. O (mm)
OP1	10	3 to the left
UROP	40	5 to the left
SR3	15	22 to the right
BP4	10	14 to the left
BP1	58	0
AP3	30	8 to the left
AP1 Passenger Side	14	36 to the right
BP2	15	3 to the left
URBP	39	9 to the left
SR2A	25	15 to the left
AP1 Driver Side	24	17 to the left

**SECTION 3**

**SUMMARY OF TEST RESULTS AND DATA PLOTS**



VEHICLE YEAR/MAKE/MODEL/STYLE:	2005 Ford Escape, 4-door
VIN:	1FMYU02Z25KB04029
DATE OF MANUFACTURE:	06/04 (SEE CERTIFICATION LABEL)
COLOR:	Black

Test Number:	01
Test Date:	11/10/04
Target Location:	Other Pillar
Target Code:	OP1
Horizontal Impact Angle:	90°
Vertical Impact Angle:	2°
Ambient Temperature:	23.8°C
Relative Humidity:	21.9
Time of Impact:	10:20
Headform Number:	805

Impact Point Description (from lower midpoint on midsagittal line)			
On Centerline	3	mm right	x mm left
On Centerline	10	mm up	



POST-IMPACT OP1 HEADFORM

Free Motion HIC	531.0
HIC(d)	567.0
Impact Velocity (kph)	23.48
HIC T1 (msec)	3.1
HIC T2 (msec)	12.3

# FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE C50201 - OP1

FMH Headform 805

Location: OP1

Test Date: November 10, 2004

Work File: OP1

## -----TEST RESULTS-----

Lab Temperature: 23.8 C

HICd: 567.0

Lab Humidity: 21.9 %

HIC (36ms): 531.0

Velocity at Impact: 23.48 KPH

t1: 3.1 msec

t2: 12.3 msec

Free Flight Distance: 218.91 mm

Duration: 9.2 msec

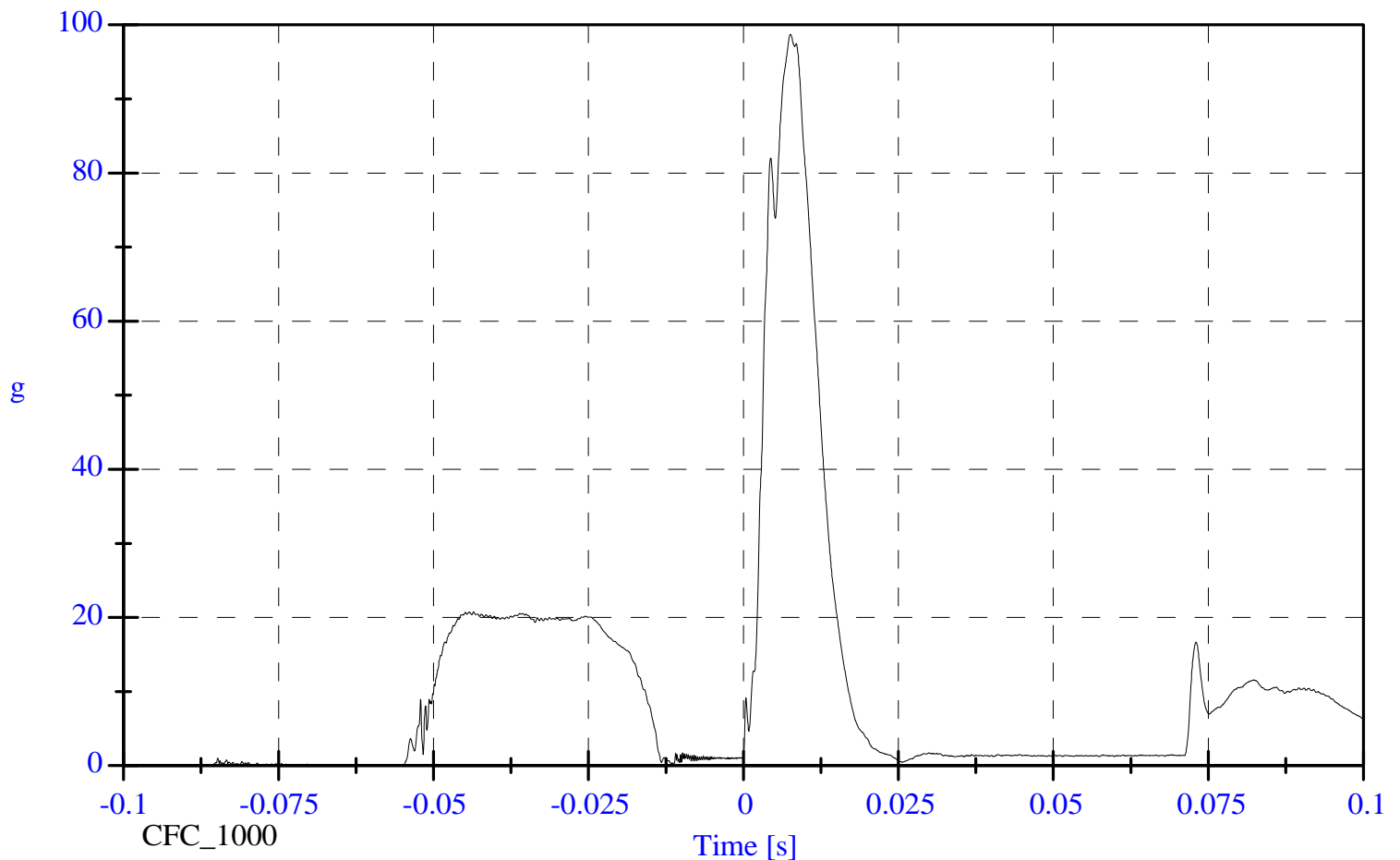
Average Acceleration: 9.8 g

FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

Max: 98.7 [g] at 0.008 [s]

Headform Resultant

Min: 0.0 [g] at -0.070 [s]



FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

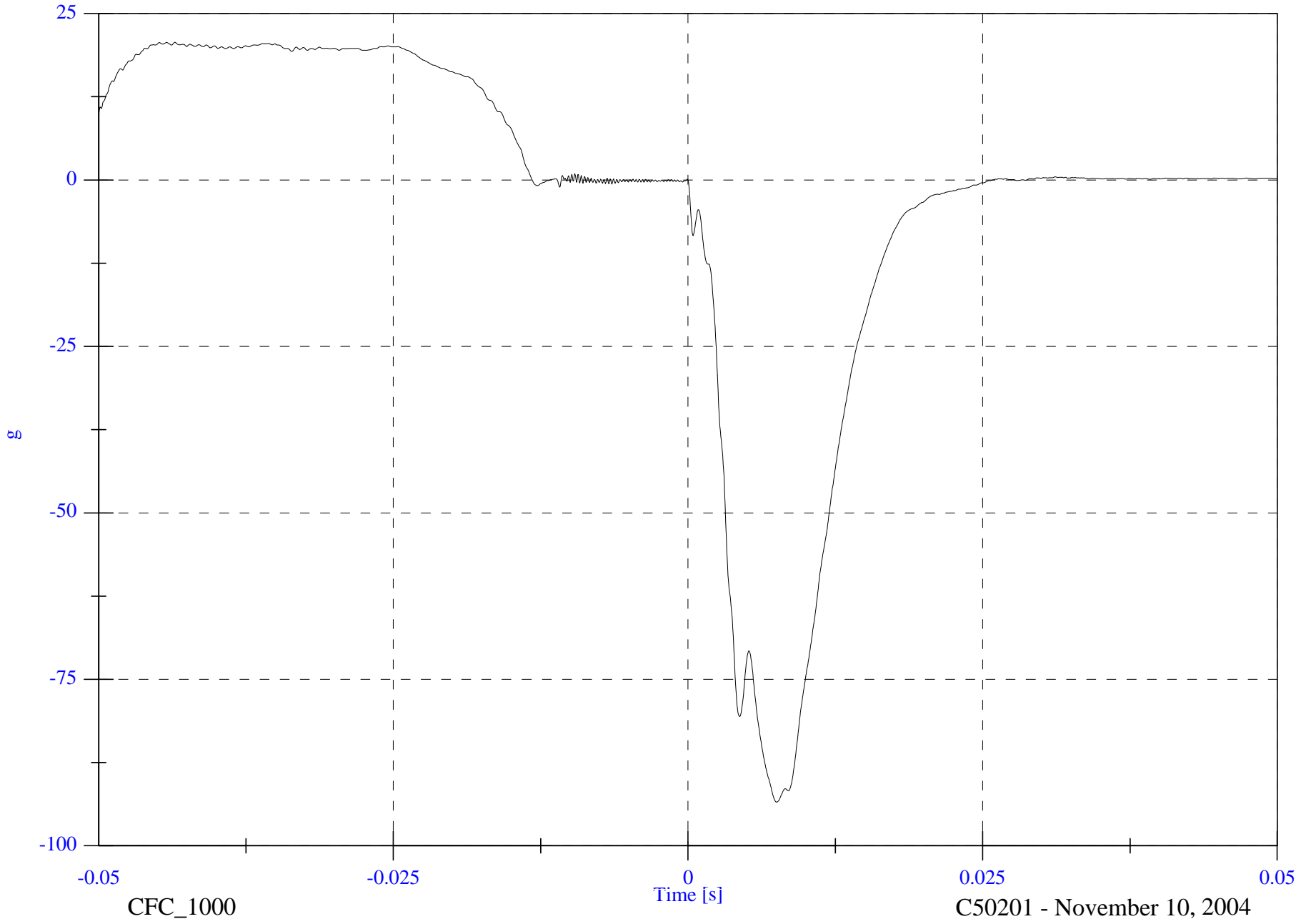
Headform X Acceleration

Max: 20.7 [g] at -0.044 [s]

Min: -93.4 [g] at 0.007 [s]

C50201 Passenger Side OP1 Impact Plot #1

8754+FMH-01



CFC\_1000

C50201 - November 10, 2004

FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

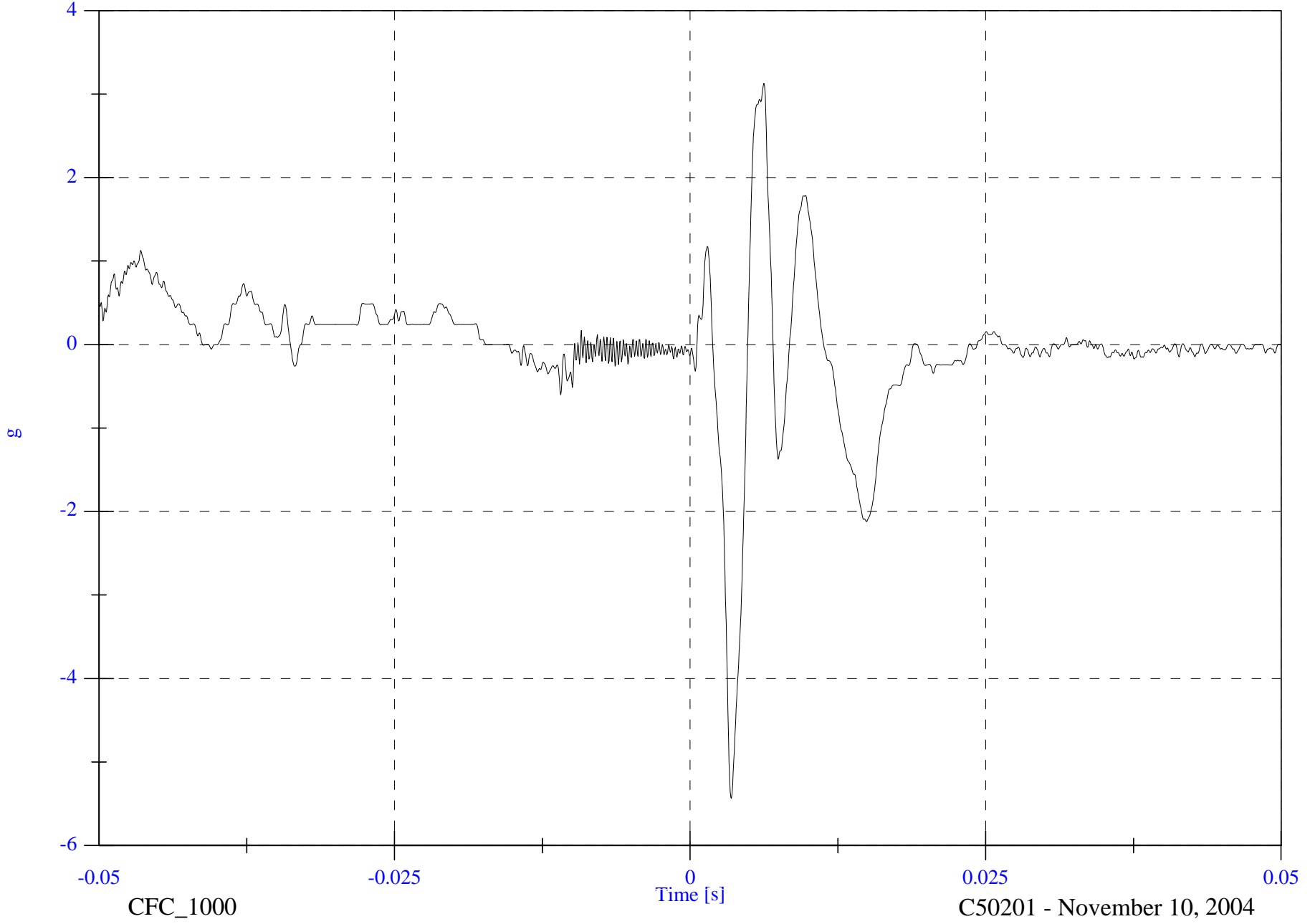
Headform Y Acceleration

Max: 3.1 [g] at 0.006 [s]

Min: -5.4 [g] at 0.004 [s]

C50201 Passenger Side OP1 Impact Plot #2

8754+FMH-01



CFC\_1000

Time [s]

C50201 - November 10, 2004

FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

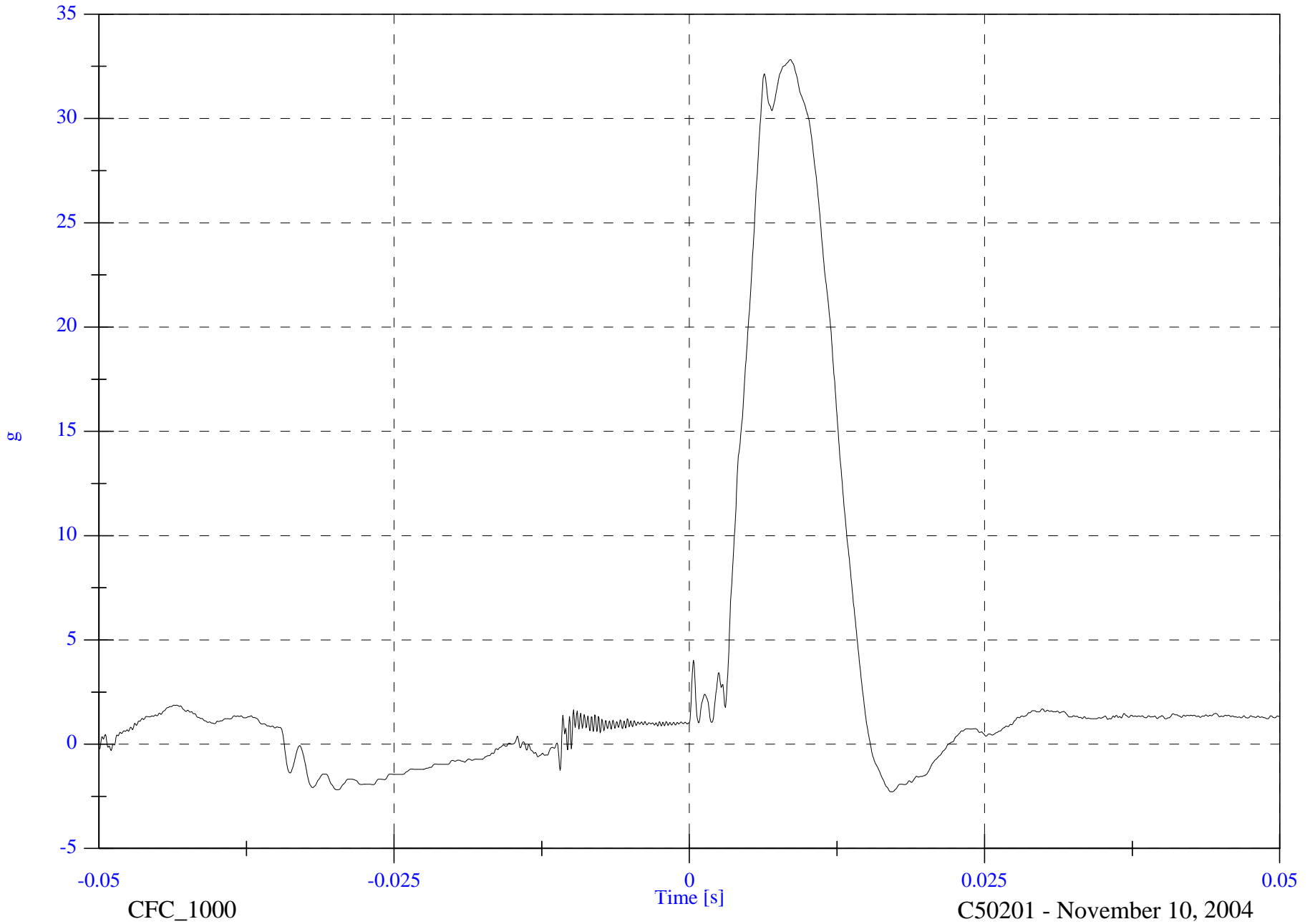
Headform Z Acceleration

Max: 32.8 [g] at 0.009 [s]

Min: -2.3 [g] at 0.017 [s]

C50201 Passenger Side OP1 Impact Plot #3

8754-FMH-01



CFC\_1000

C50201 - November 10, 2004

FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

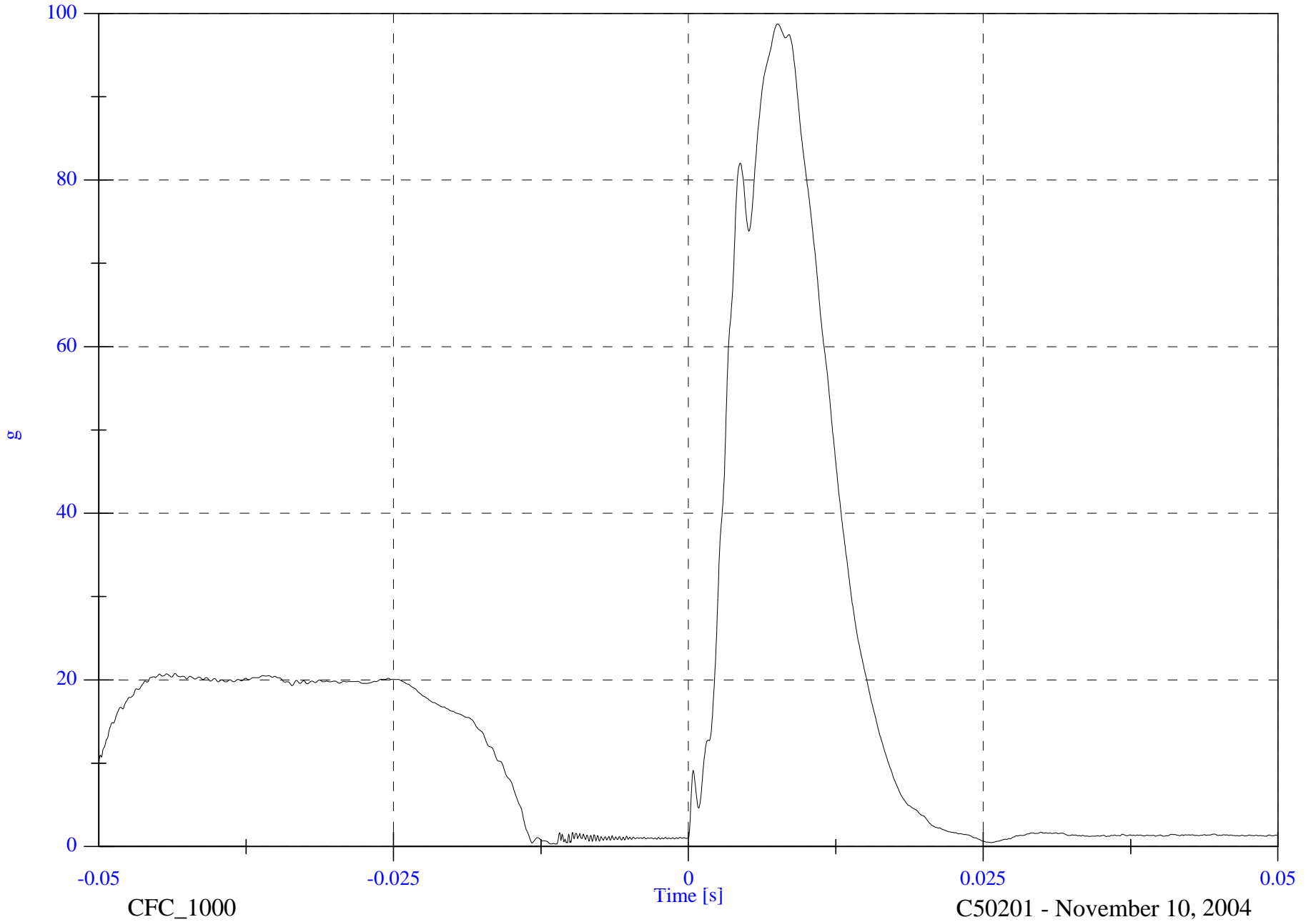
Headform Resultant

Max: 98.7 [g] at 0.008 [s]

Min: 0.3 [g] at -0.011 [s]

C50201 Passenger Side OP1 Impact Plot #4

8754+FMH-01



CFC\_1000

C50201 - November 10, 2004

FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

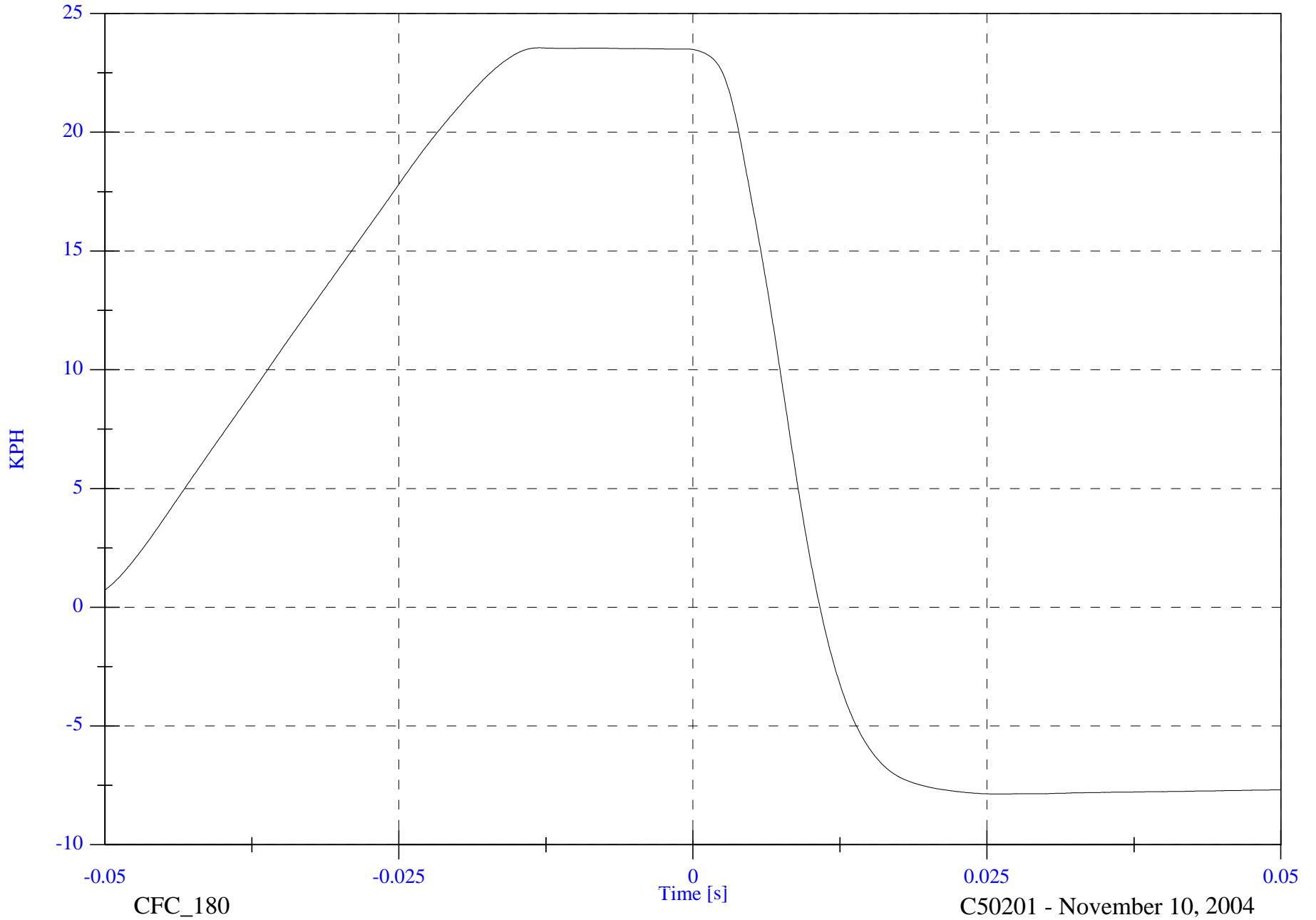
Headform Velocity

Max: 23.6 [KPH] at -0.013 [s]

Min: -7.9 [KPH] at 0.026 [s]

C50201 Passenger Side OP1 Impact Plot #5

8754+FMH-01



CFC\_180

C50201 - November 10, 2004



PRE-IMPACT OP1





POST-IMPACT OPI

VEHICLE YEAR/MAKE/MODEL/STYLE:	2005 Ford Escape, 4-door
VIN:	1FMYU02Z25KB04029
DATE OF MANUFACTURE:	06/04 (SEE CERTIFICATION LABEL)
COLOR:	Black

Test Number:	02
Test Date:	11/10/04
Target Location:	Upper Roof
Target Code:	UROP
Horizontal Impact Angle:	90°
Vertical Impact Angle:	50°
Ambient Temperature:	23.9°C
Relative Humidity:	21.9
Time of Impact:	10:50
Headform Number:	0062

Impact Point Description (from lower midpoint on midsagittal line)			
On Centerline	5	mm right	x mm left
On Centerline	40	mm up	



POST-IMPACT UROP HEADFORM

Free Motion HIC	473.9
HIC(d)	524.0
Impact Velocity (kph)	23.72
HIC T1 (msec)	4.0
HIC T2 (msec)	15.5

# FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE C50201 - UROP

FMH Headform 0062

Location: UROP

Test Date: November 10, 2004

Work File: UROP

## -----TEST RESULTS-----

Lab Temperature: 23.9 C

HICd: 524.0

Lab Humidity: 21.9 %

HIC (36ms): 473.9

Velocity at Impact: 23.72 KPH

t1: 4.0 msec

t2: 15.5 msec

Free Flight Distance: 217.17 mm

Duration: 11.5 msec

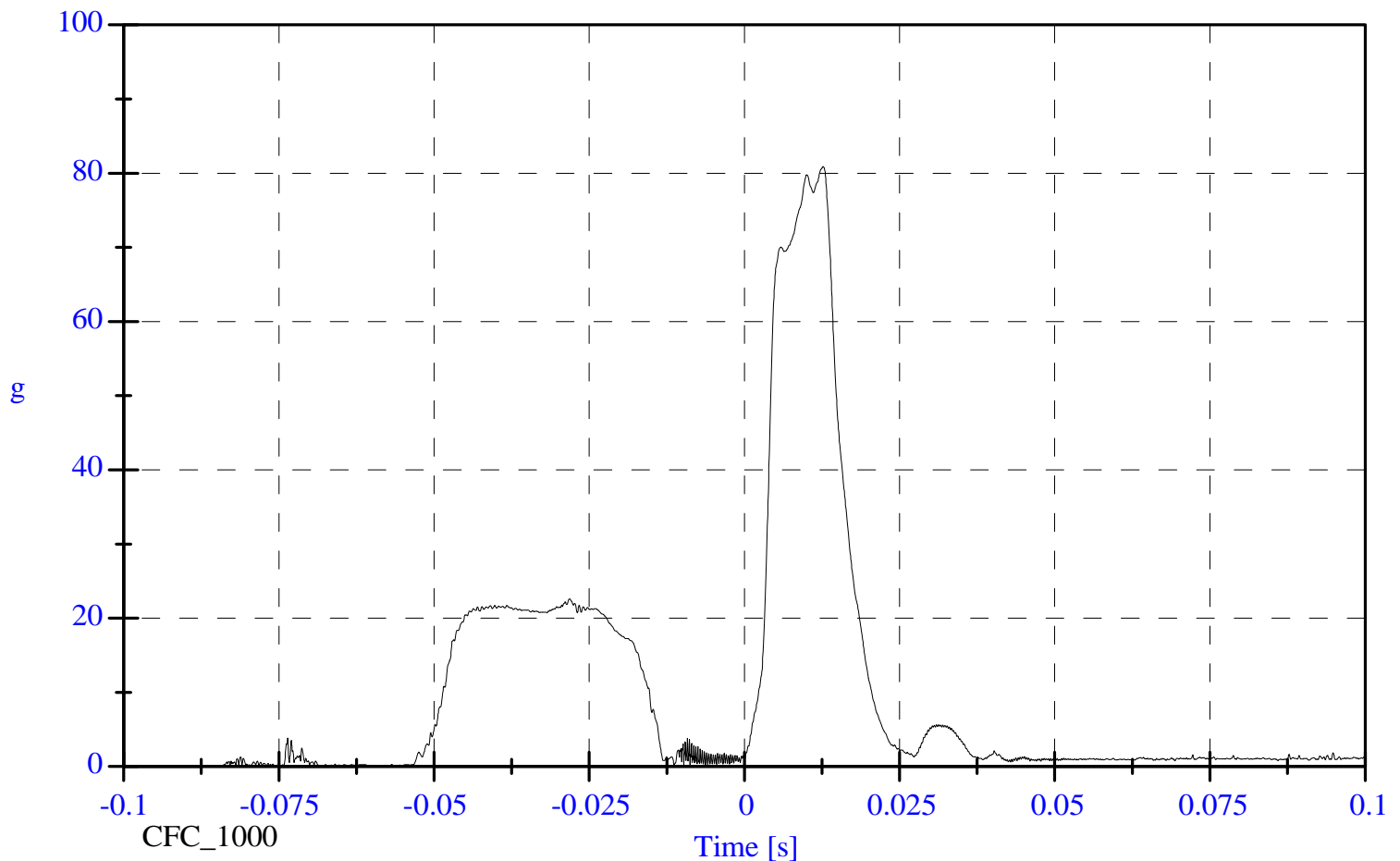
Average Acceleration: 9.1 g

FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

Max: 80.9 [g] at 0.013 [s]

Headform Resultant

Min: 0.0 [g] at -0.089 [s]



FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

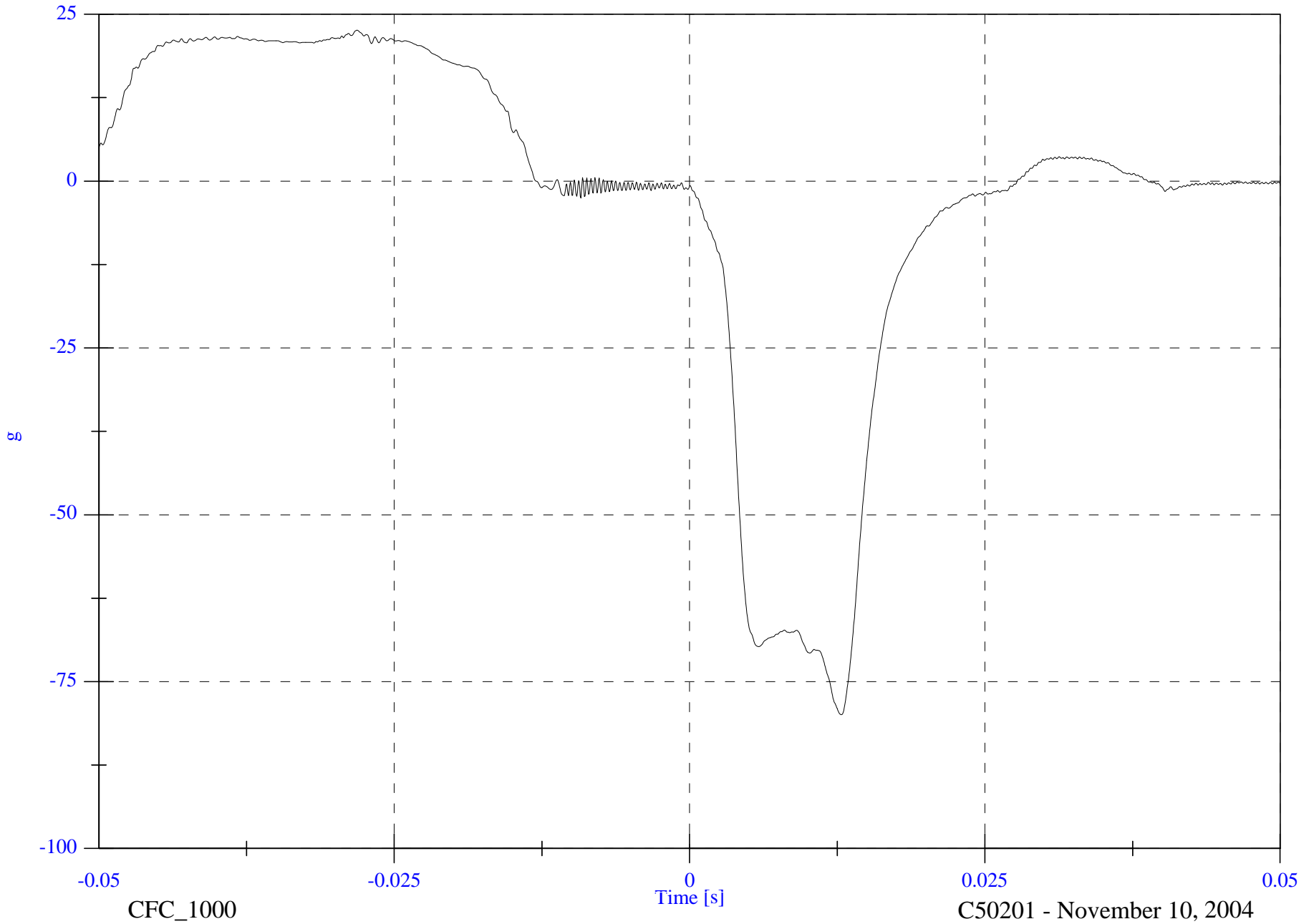
Headform X Acceleration

Max: 22.6 [g] at -0.028 [s]

Min: -80.0 [g] at 0.013 [s]

C50201 Passenger Side UROP Impact Plot #1

8754+FMH-01



CFC\_1000

C50201 - November 10, 2004

FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

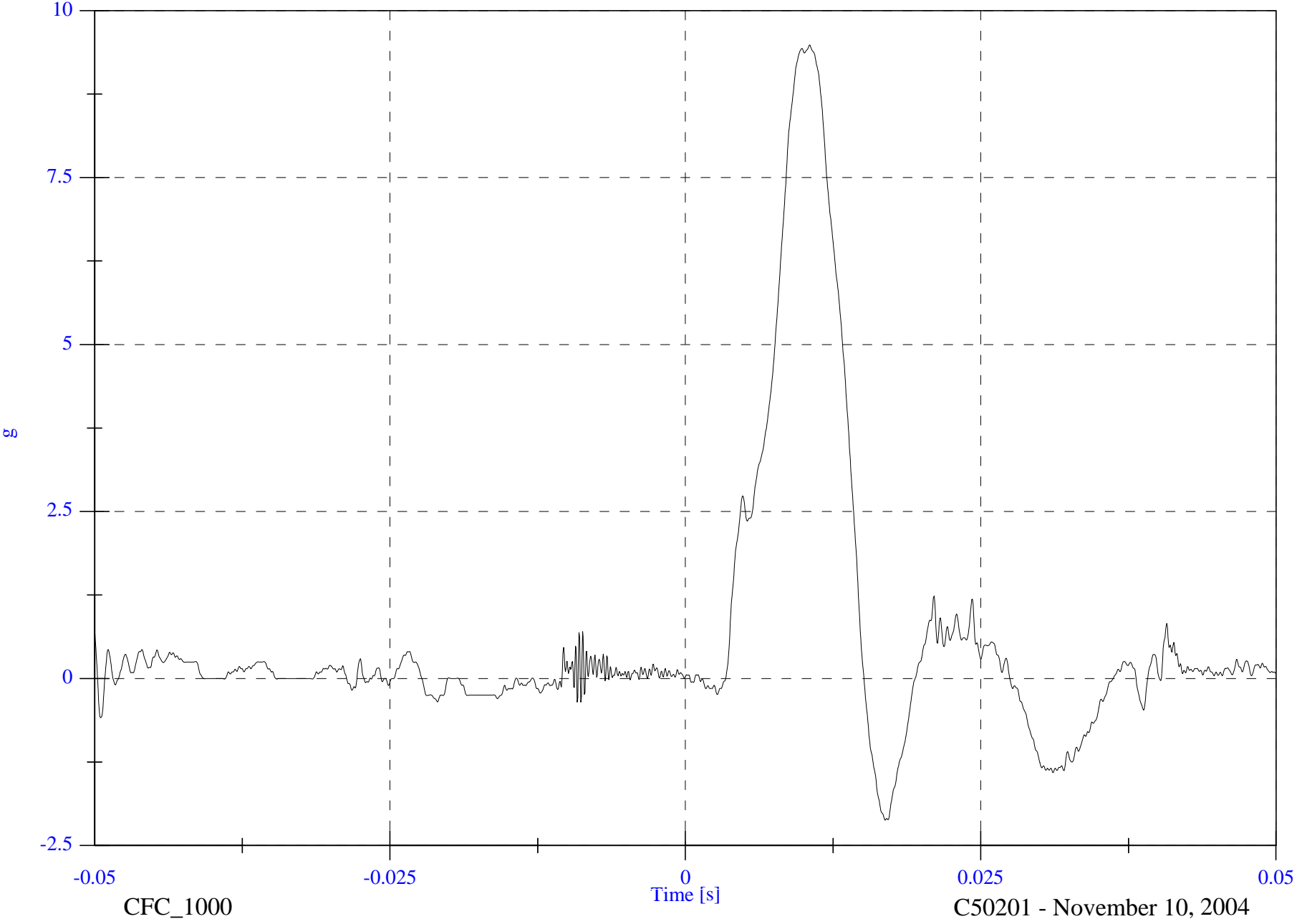
Headform Y Acceleration

Max: 9.5 [g] at 0.010 [s]

Min: -2.1 [g] at 0.017 [s]

C50201 Passenger Side UROP Impact Plot #2

8754-FMH-01



CFC\_1000

C50201 - November 10, 2004

FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

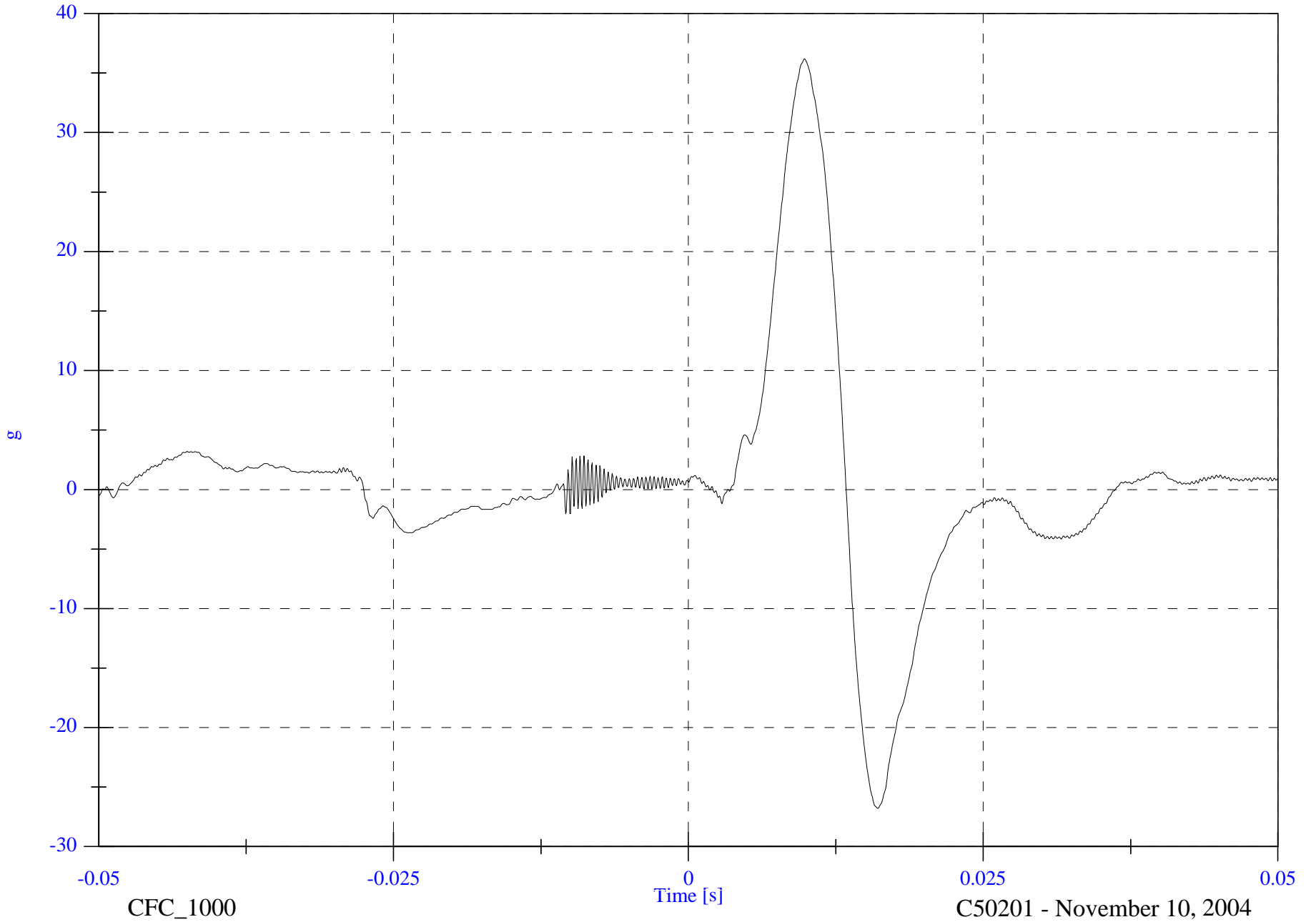
Headform Z Acceleration

Max: 36.2 [g] at 0.010 [s]

Min: -26.8 [g] at 0.016 [s]

C50201 Passenger Side UROP Impact Plot #3

8754+FMH-01



FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

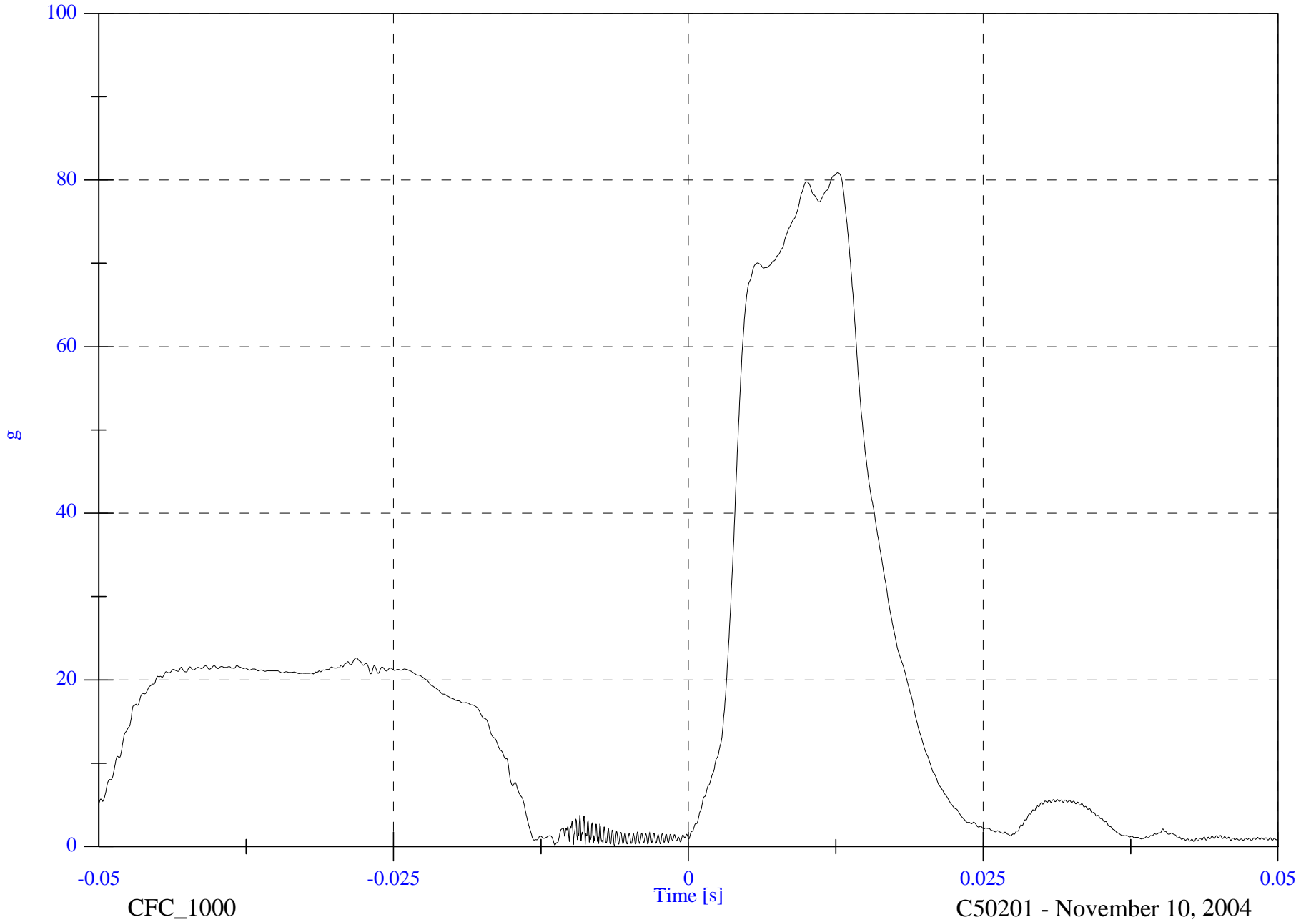
Headform Resultant

Max: 80.9 [g] at 0.013 [s]

Min: 0.1 [g] at -0.006 [s]

C50201 Passenger Side UROP Impact Plot #4

8754+FMH-01



CFC\_1000

C50201 - November 10, 2004

FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

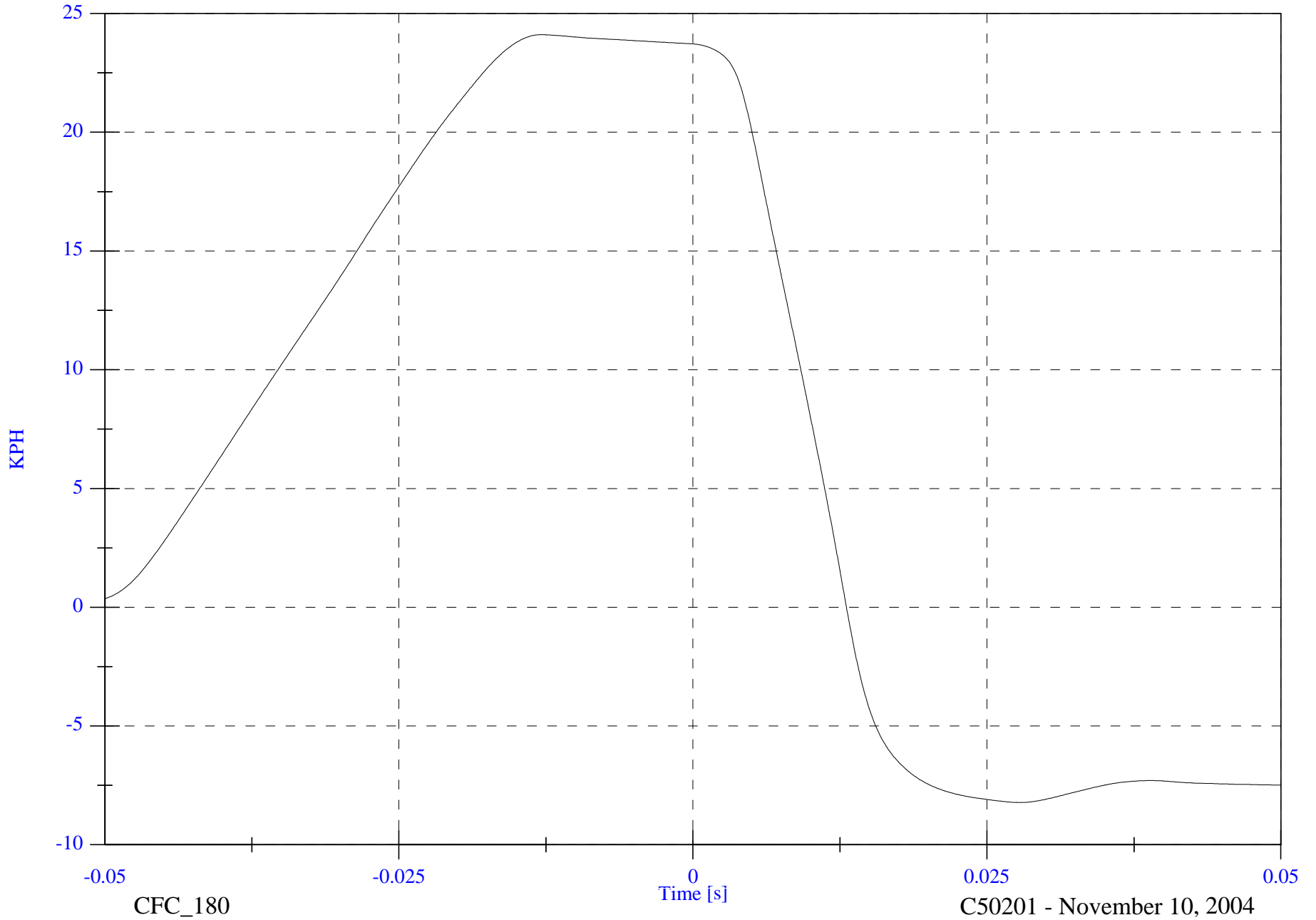
Headform Velocity

Max: 24.1 [KPH] at -0.013 [s]

Min: -8.2 [KPH] at 0.028 [s]

C50201 Passenger Side UROP Impact Plot #5

8754+FMH-01



CFC\_180

Time [s]

C50201 - November 10, 2004





**PRE-IMPACT UROP**



**POST-IMPACT UROP**

VEHICLE YEAR/MAKE/MODEL/STYLE:	2005 Ford Escape, 4-door
VIN:	1FMYU02Z25KB04029
DATE OF MANUFACTURE:	06/04 (SEE CERTIFICATION LABEL)
COLOR:	Black

Test Number:	03
Test Date:	11/10/04
Target Location:	Side Rail Grab Handle
Target Code:	SR3
Horizontal Impact Angle:	90°
Vertical Impact Angle:	50°
Ambient Temperature:	24.1°C
Relative Humidity:	22.1
Time of Impact:	11:15
Headform Number:	1255

Impact Point Description (from lower midpoint on midsagittal line)					
On Centerline	22	<input checked="" type="checkbox"/>	mm right	<input type="checkbox"/>	mm left
On Centerline	15				mm up



POST-IMPACT SR3 HEADFORM

Free Motion HIC	491.9
HIC(d)	537.5
Impact Velocity (kph)	23.73
HIC T1 (msec)	3.5
HIC T2 (msec)	13.6

# FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE C50201 - SR3

FMH Headform 1255

Location: SR3

Test Date: November 10, 2004

Work File: SR3

## -----TEST RESULTS-----

Lab Temperature: 24.1 C

HICd: 537.5

Lab Humidity: 22.1 %

HIC (36ms): 491.9

Velocity at Impact: 23.71 KPH

t1: 3.5 msec

t2: 13.6 msec

Free Flight Distance: 212.17 mm

Duration: 10.1 msec

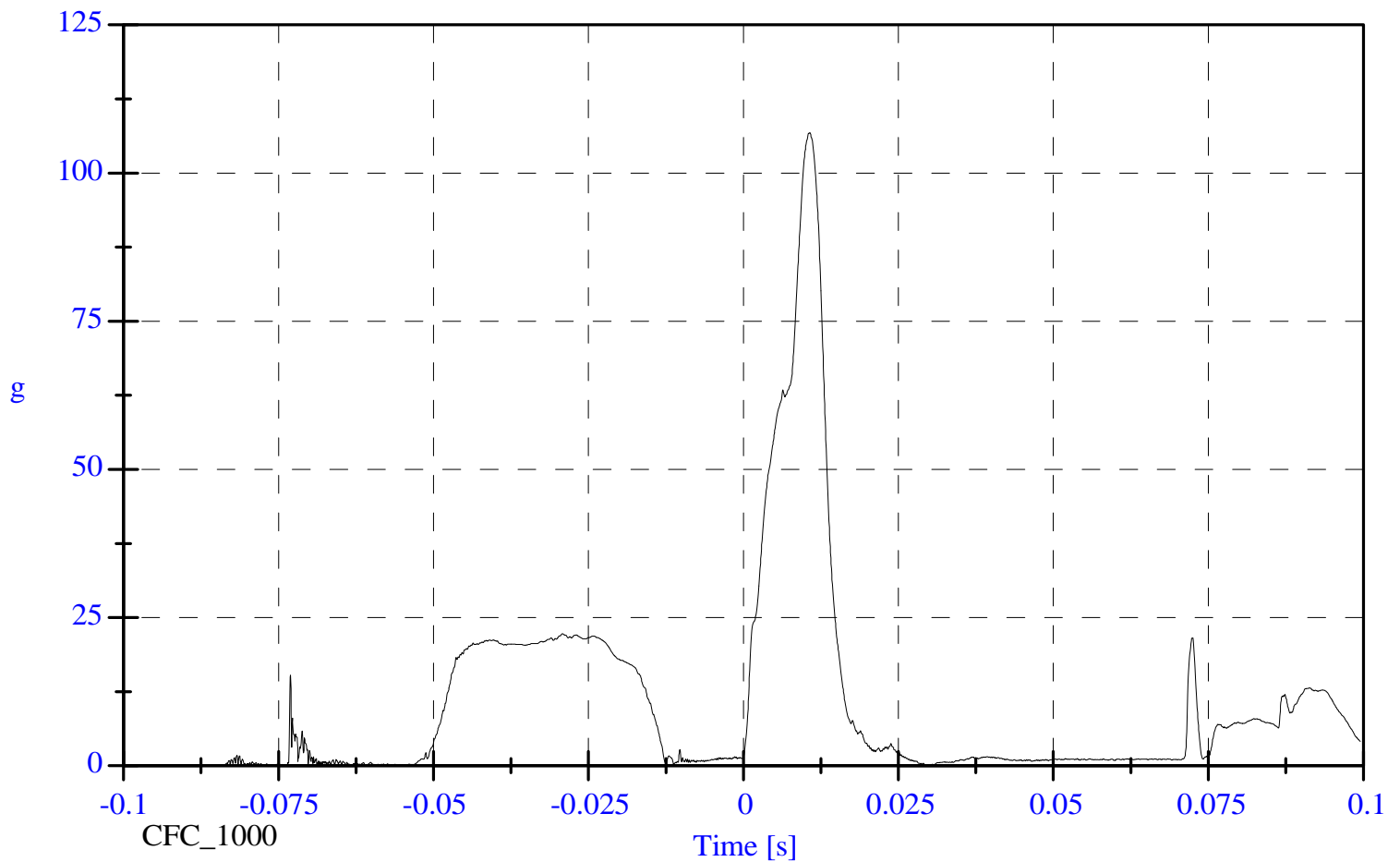
Average Acceleration: 9.8 g

FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

Max: 106.8 [g] at 0.011 [s]

Headform Resultant

Min: 0.0 [g] at -0.098 [s]



FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

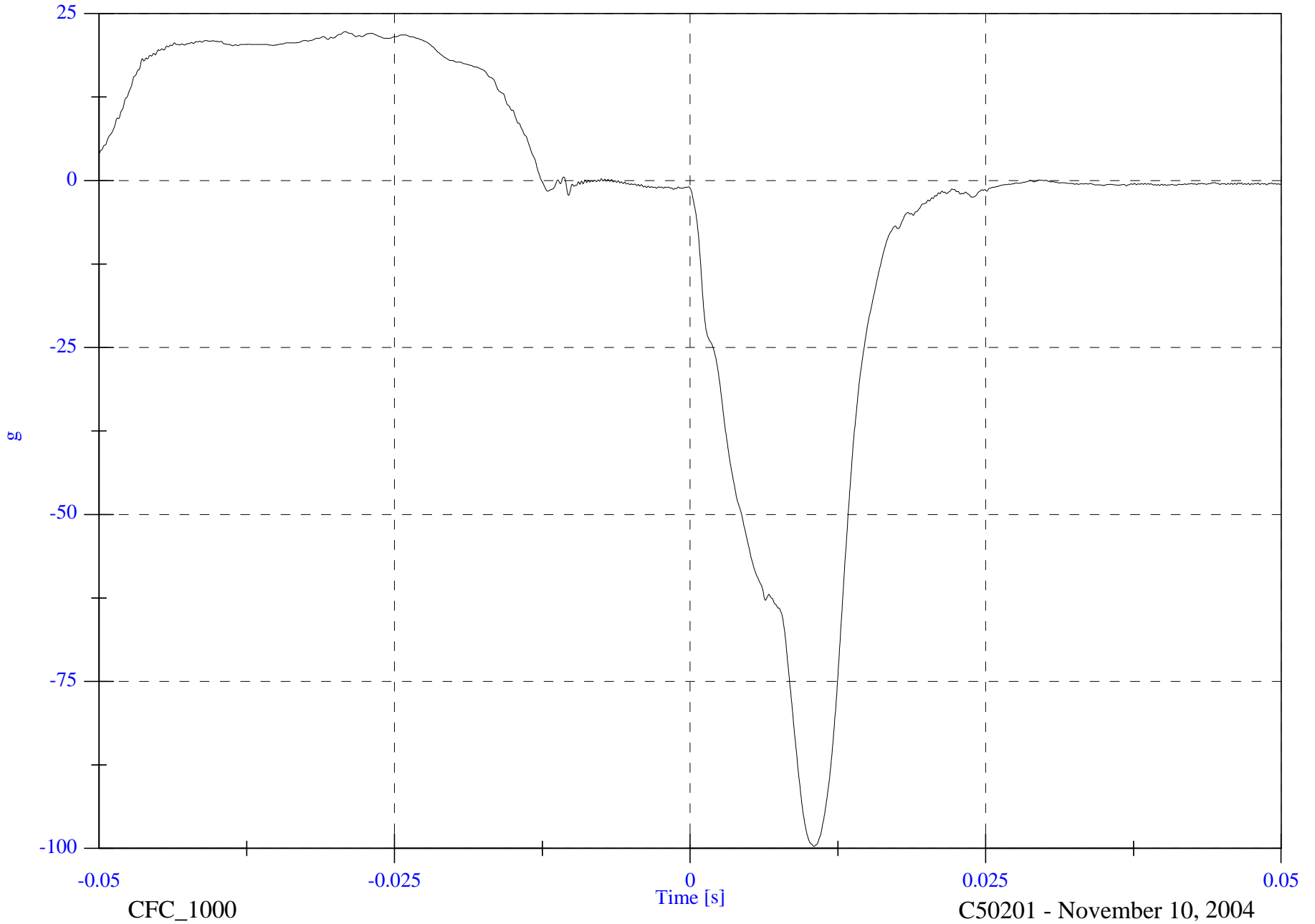
Headform X Acceleration

Max: 22.3 [g] at -0.029 [s]

Min: -99.7 [g] at 0.010 [s]

C50201 Passenger Side SR3 Impact Plot #1

8754+FMH-01



FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

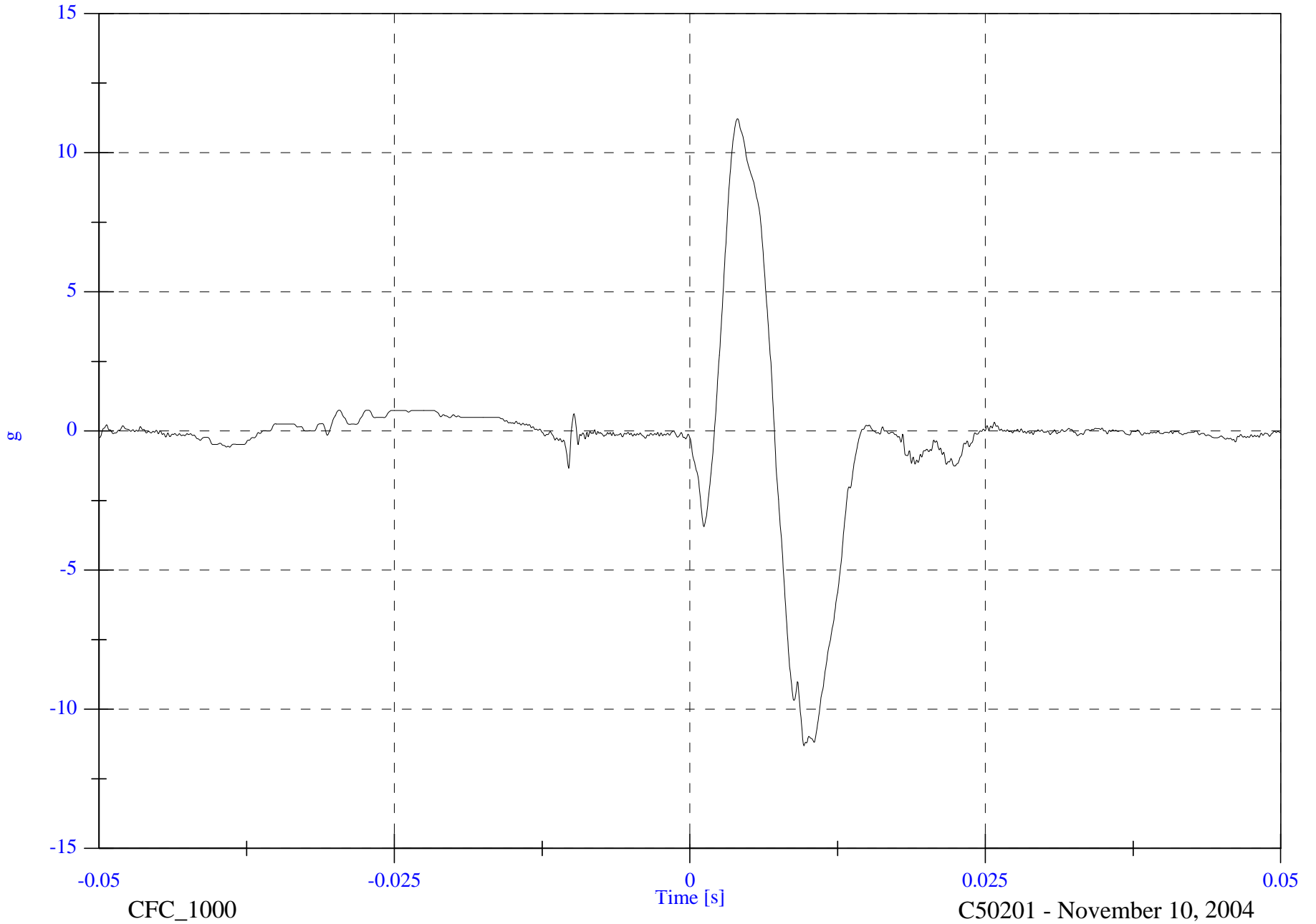
Headform Y Acceleration

Max: 11.2 [g] at 0.004 [s]

Min: -11.3 [g] at 0.010 [s]

C50201 Passenger Side SR3 Impact Plot #2

8754+FMH-01



CFC\_1000

C50201 - November 10, 2004

FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

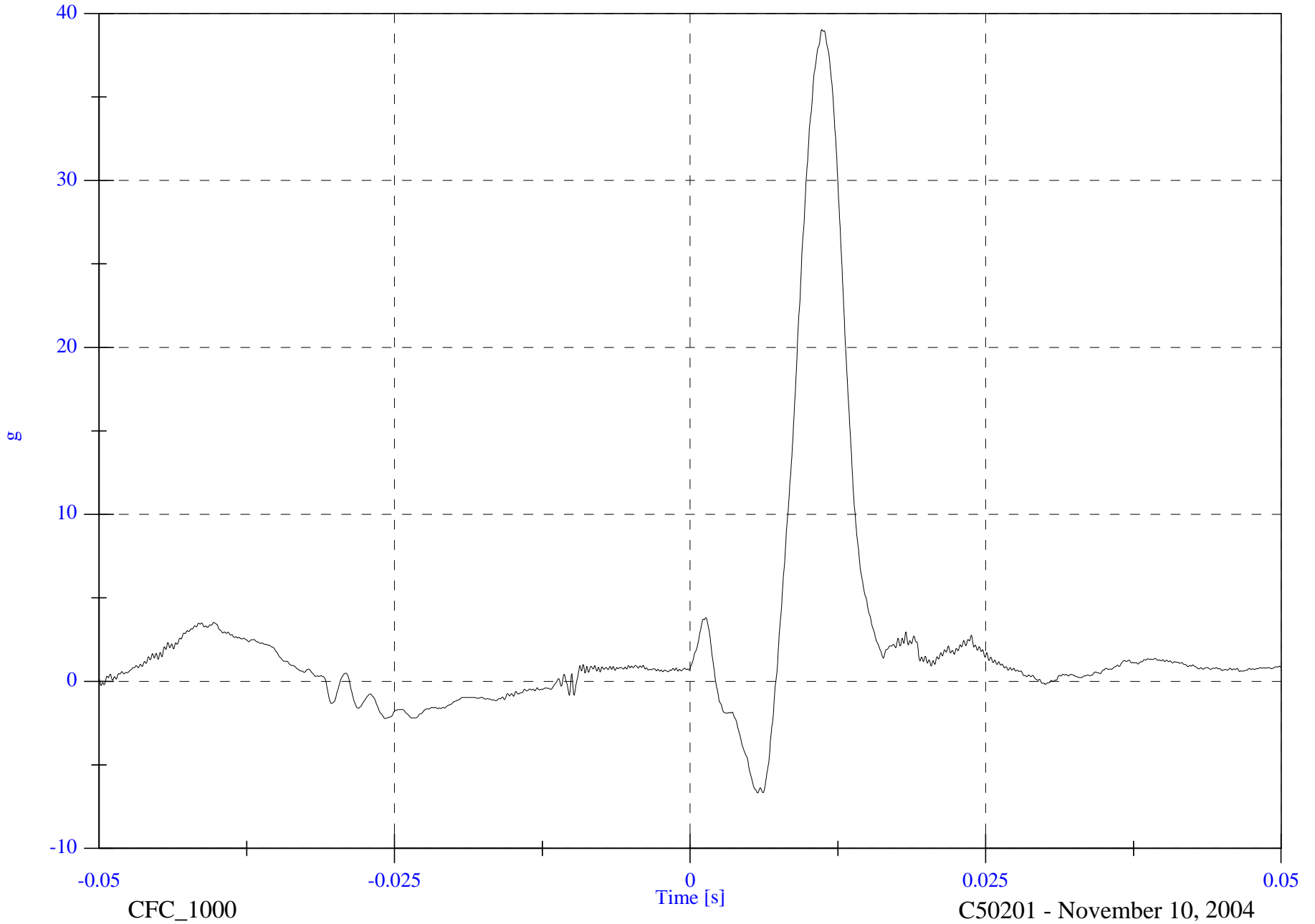
Headform Z Acceleration

Max: 39.0 [g] at 0.011 [s]

Min: -6.7 [g] at 0.006 [s]

C50201 Passenger Side SR3 Impact Plot #3

8754+FMH-01



FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

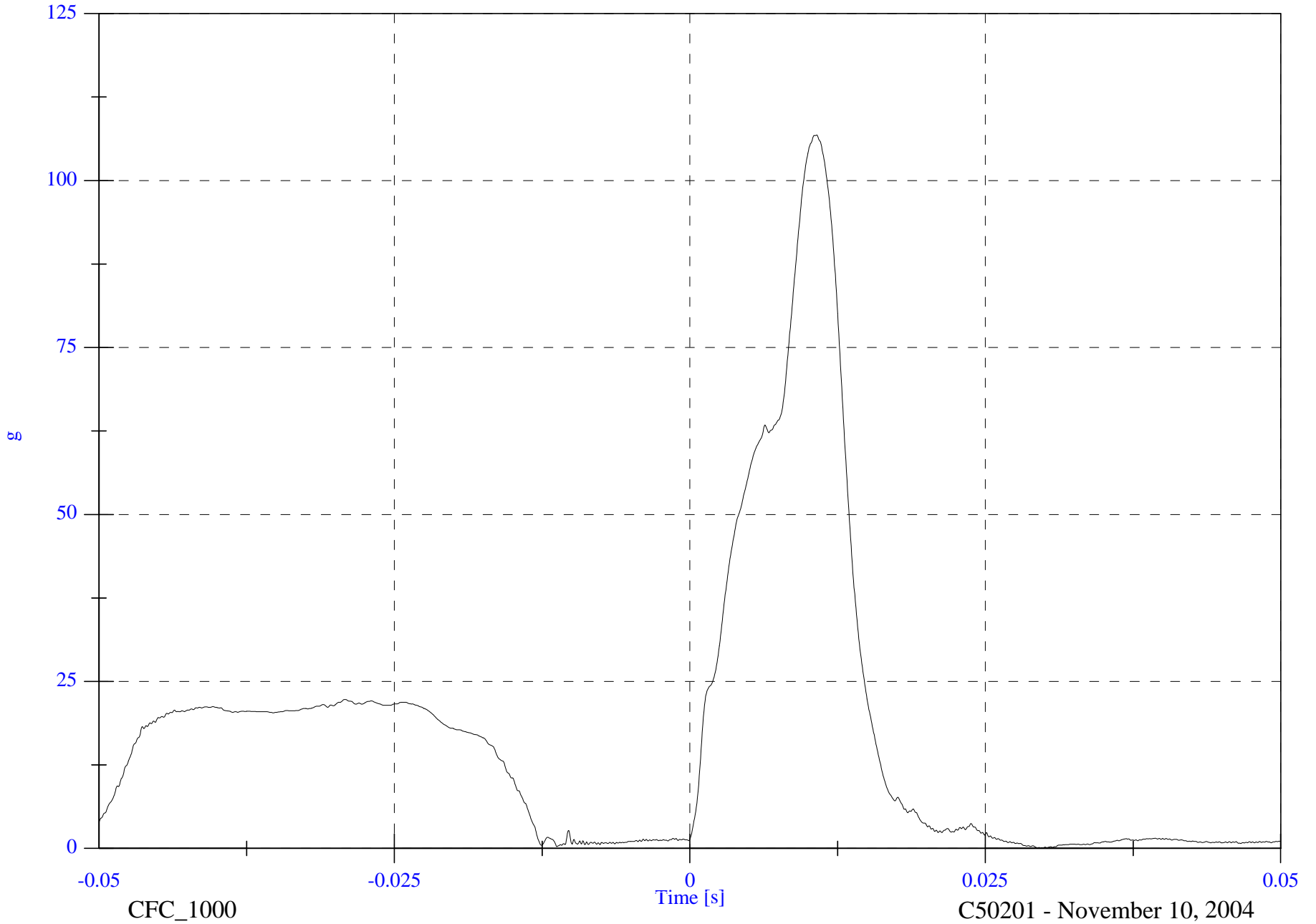
Headform Resultant

Max: 106.8 [g] at 0.011 [s]

Min: 0.0 [g] at 0.030 [s]

C50201 Passenger Side SR3 Impact Plot #4

8754+FMH-01



CFC\_1000

C50201 - November 10, 2004



FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

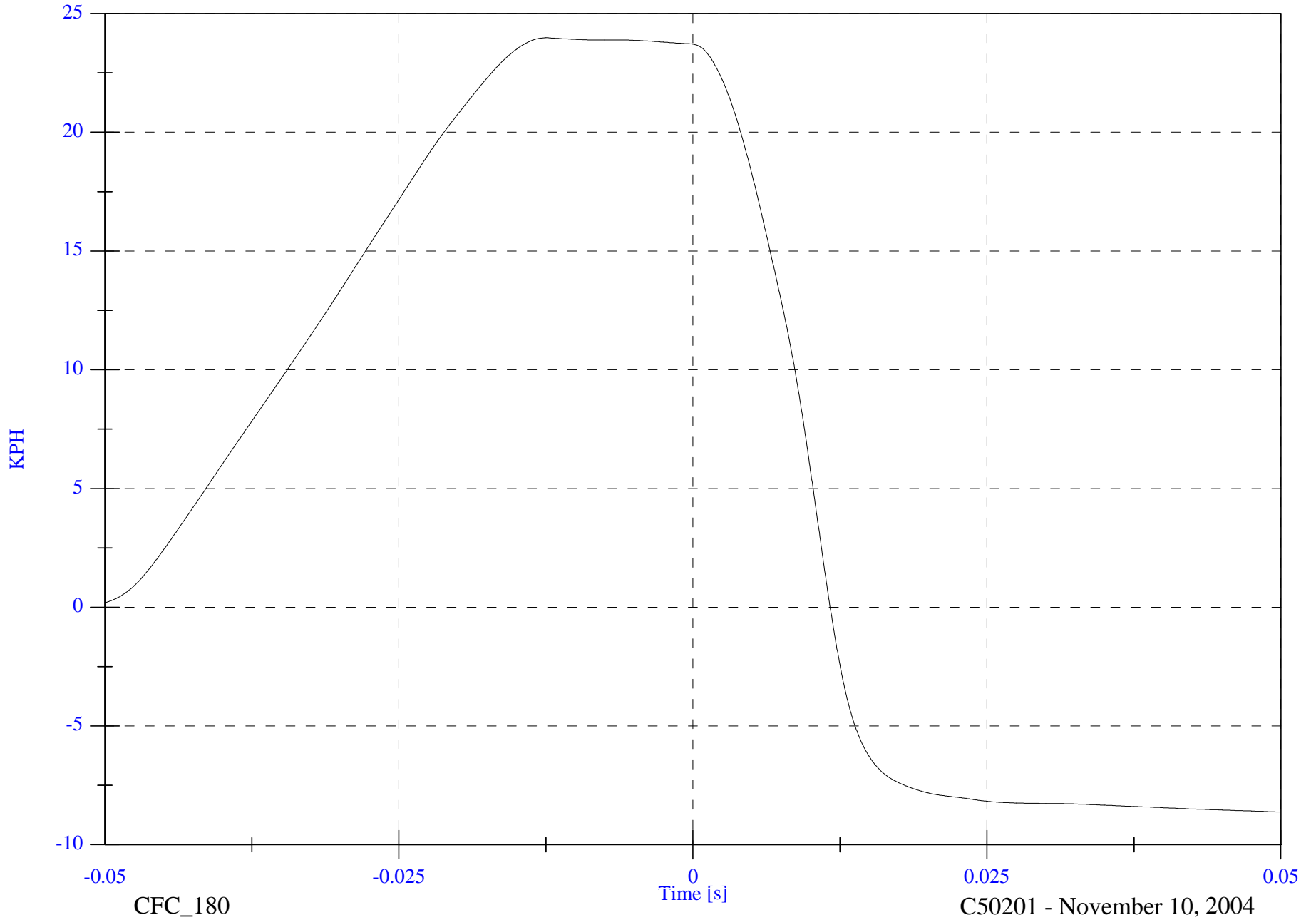
Headform Velocity

Max: 24.0 [KPH] at -0.012 [s]

Min: -8.6 [KPH] at 0.050 [s]

C50201 Passenger Side SR3 Impact Plot #5

8754+FMH-01





PRE-IMPACT SR3

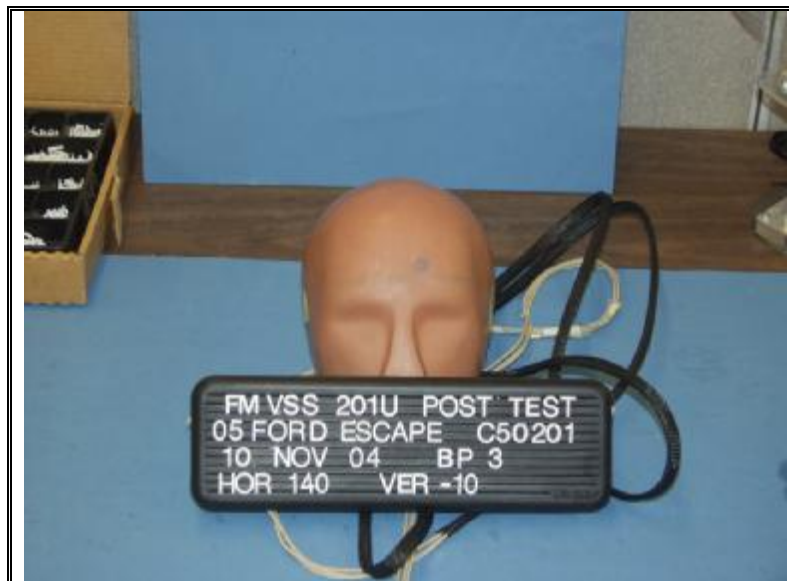


POST-IMPACT SR3

VEHICLE YEAR/MAKE/MODEL/STYLE:	2005 Ford Escape, 4-door
VIN:	1FMYU02Z25KB04029
DATE OF MANUFACTURE:	06/04 (SEE CERTIFICATION LABEL)
COLOR:	Black

Test Number:	04
Test Date:	11/10/04
Target Location:	B-Pillar
Target Code:	BP4
Horizontal Impact Angle:	140°
Vertical Impact Angle:	-10°
Ambient Temperature:	24.1°C
Relative Humidity:	22.2
Time of Impact:	11:40
Headform Number:	0642

Impact Point Description (from lower midpoint on midsagittal line)			
On Centerline	14	mm right	x mm left
On Centerline	10	mm up	



POST-IMPACT BP4 HEADFORM (PLACARD MISLABELED BP3)

Free Motion HIC	443.8
HIC(d)	501.2
Impact Velocity (kph)	23.69
HIC T1 (msec)	2.7
HIC T2 (msec)	10.4

# FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE C50201 - BP4

FMH Headform 0642

Location: BP4

Test Date: November 10, 2004

Work File: BP4

## -----TEST RESULTS-----

Lab Temperature: 24.1 C

HICd: 501.2

Lab Humidity: 22.2 %

HIC (36ms): 443.8

Velocity at Impact: 23.69 KPH

t1: 2.7 msec

t2: 10.4 msec

Free Flight Distance: 217.50 mm

Duration: 7.7 msec

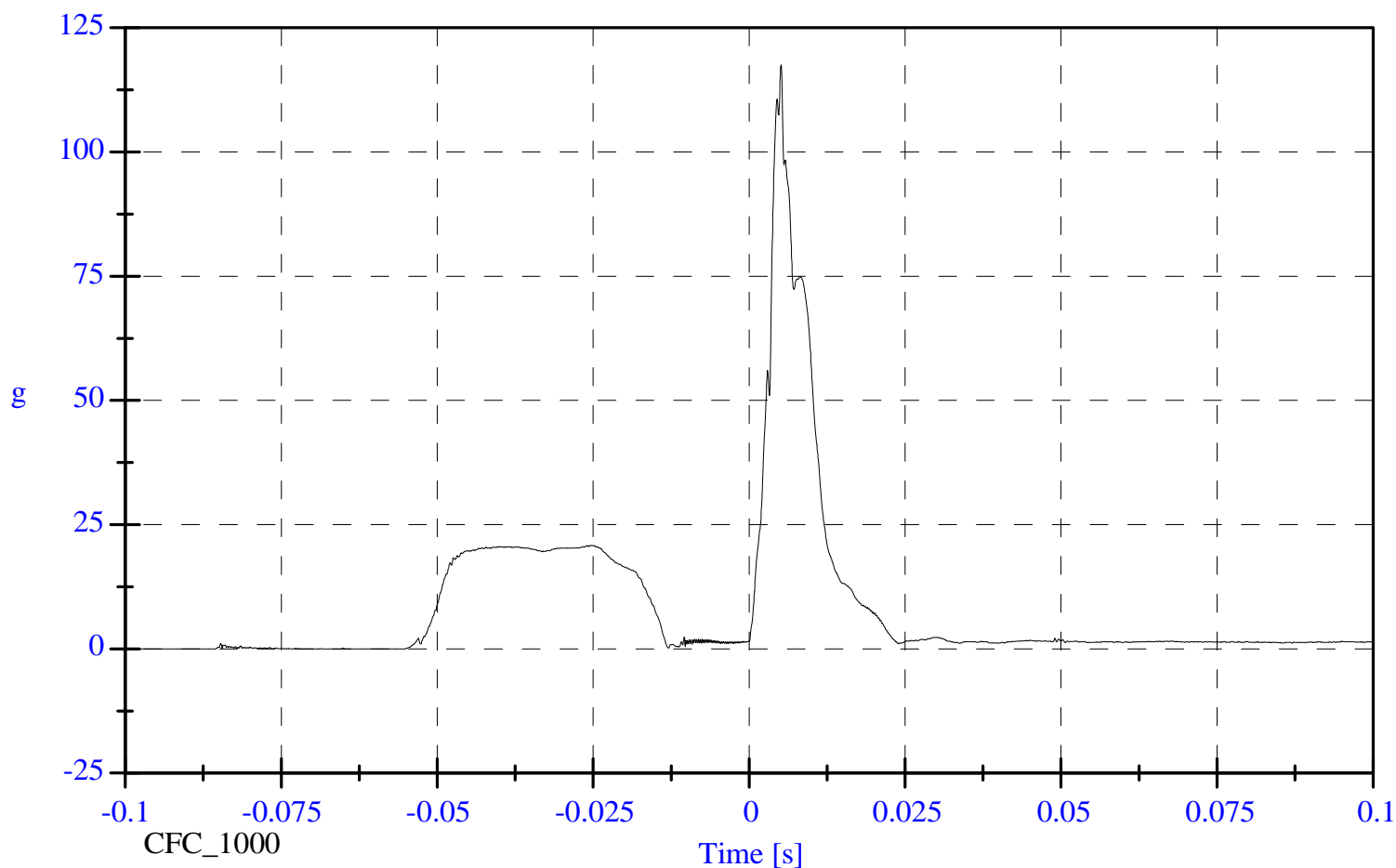
Average Acceleration: 8.3 g

FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

Max: 117.6 [g] at 0.005 [s]

Headform Resultant

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



FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

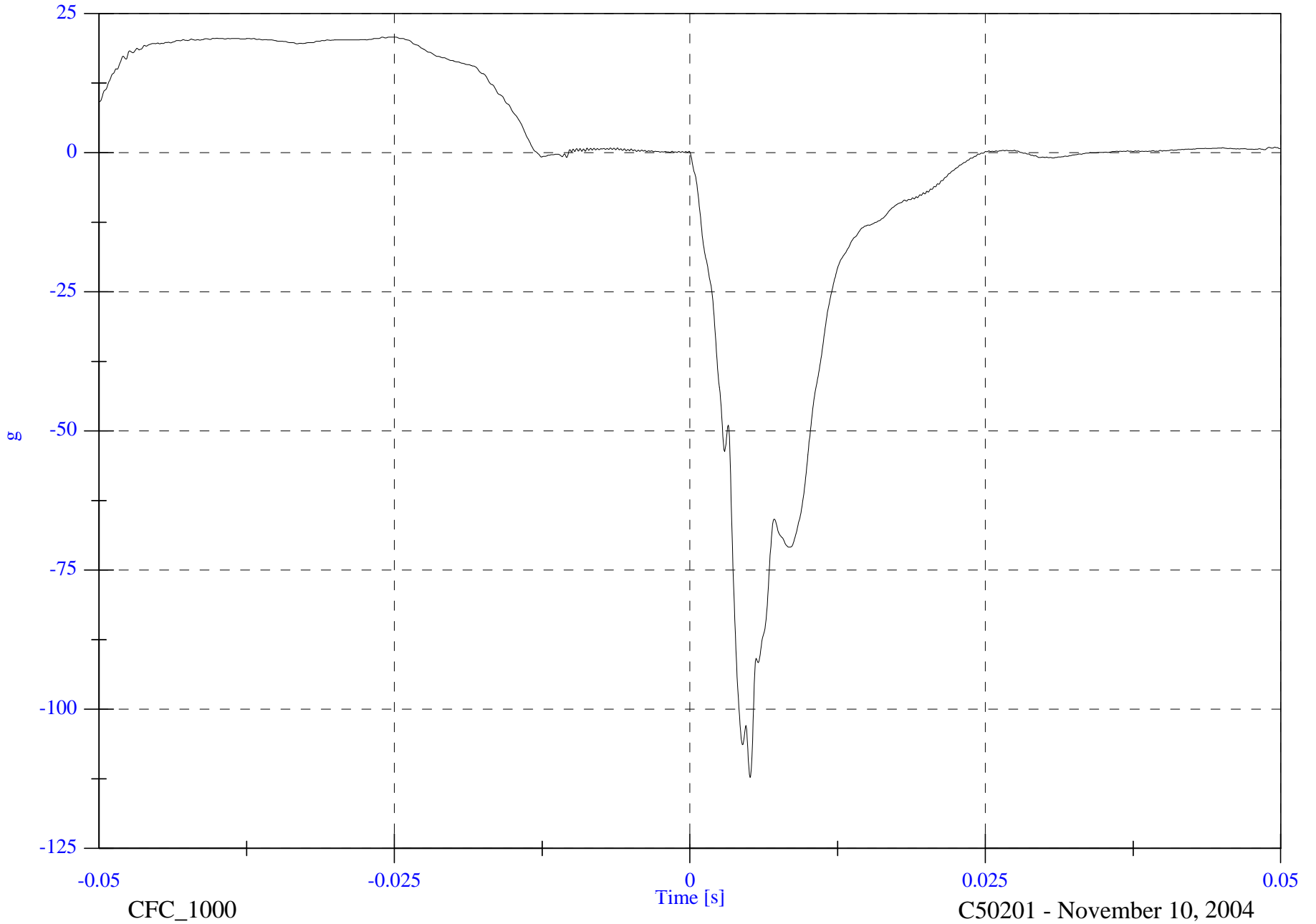
Headform X Acceleration

Max: 20.8 [g] at -0.025 [s]

Min: -112.3 [g] at 0.005 [s]

C50201 Passenger Side BP4 Impact Plot #1

8754+FMH-01



CFC\_1000

C50201 - November 10, 2004

FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

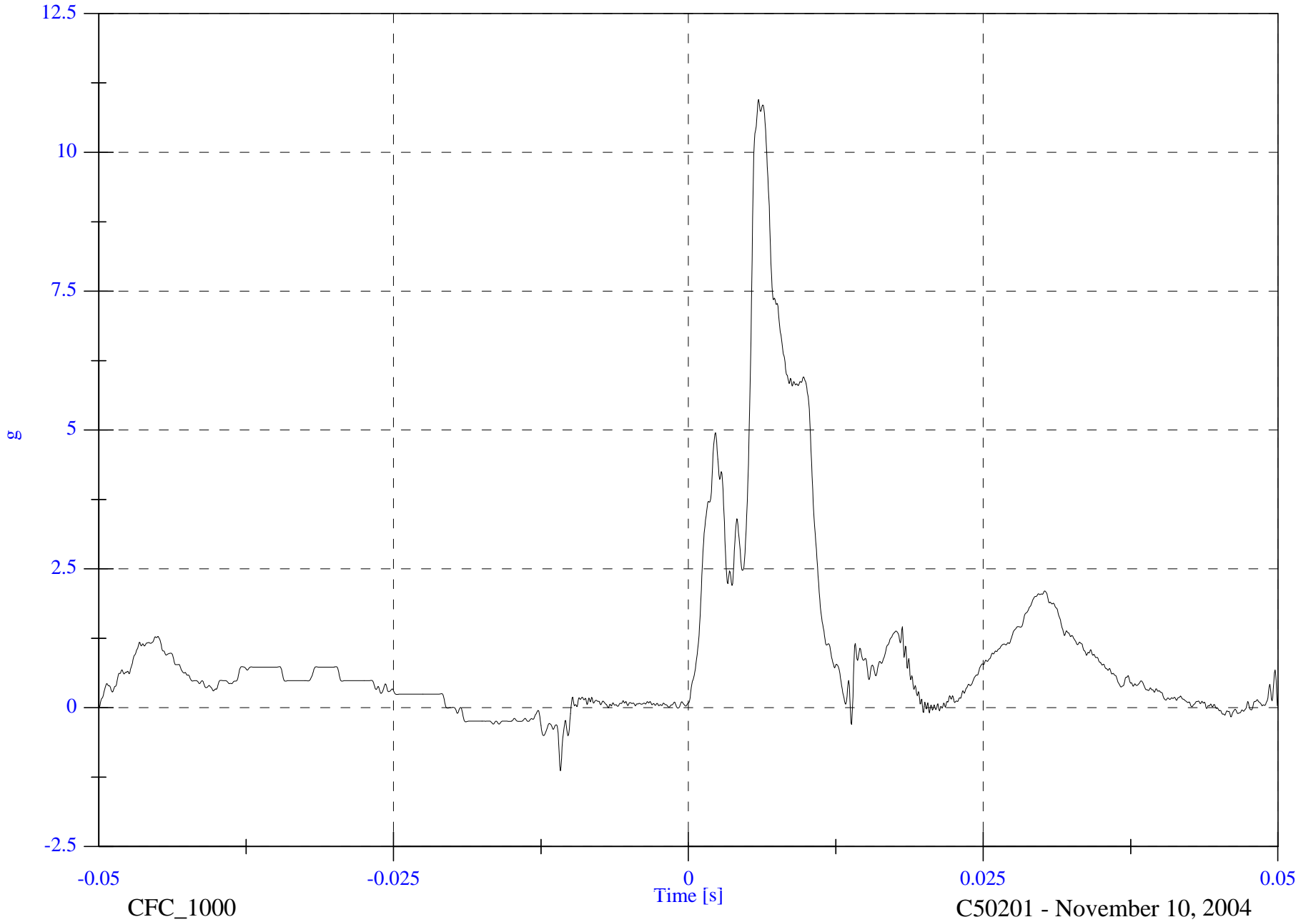
Headform Y Acceleration

Max: 11.0 [g] at 0.006 [s]

Min: -1.1 [g] at -0.011 [s]

C50201 Passenger Side BP4 Impact Plot #2

8754+FMH-01



FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

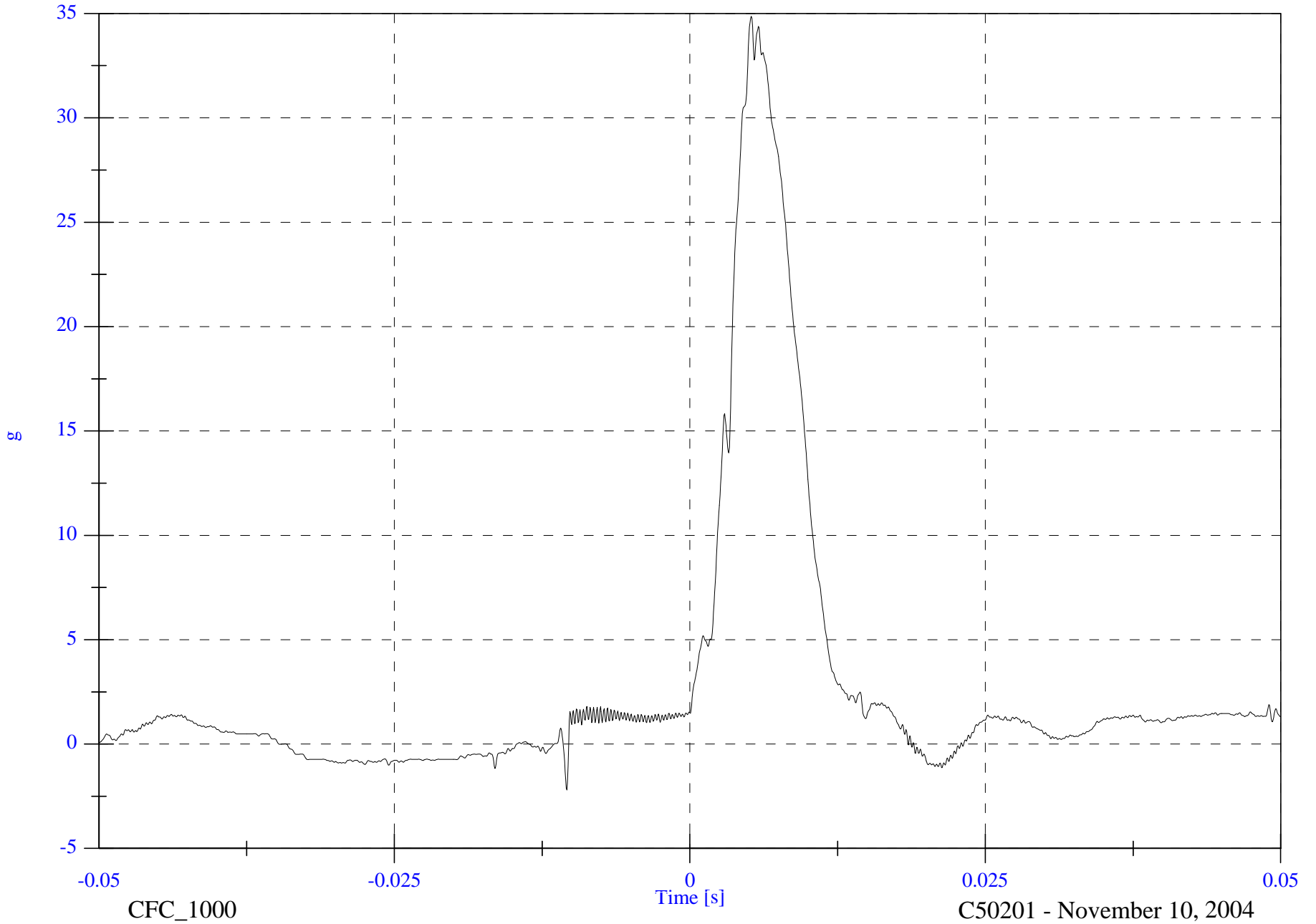
Headform Z Acceleration

Max: 34.9 [g] at 0.005 [s]

Min: -2.2 [g] at -0.010 [s]

C50201 Passenger Side BP4 Impact Plot #3

8754+FMH-01





FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

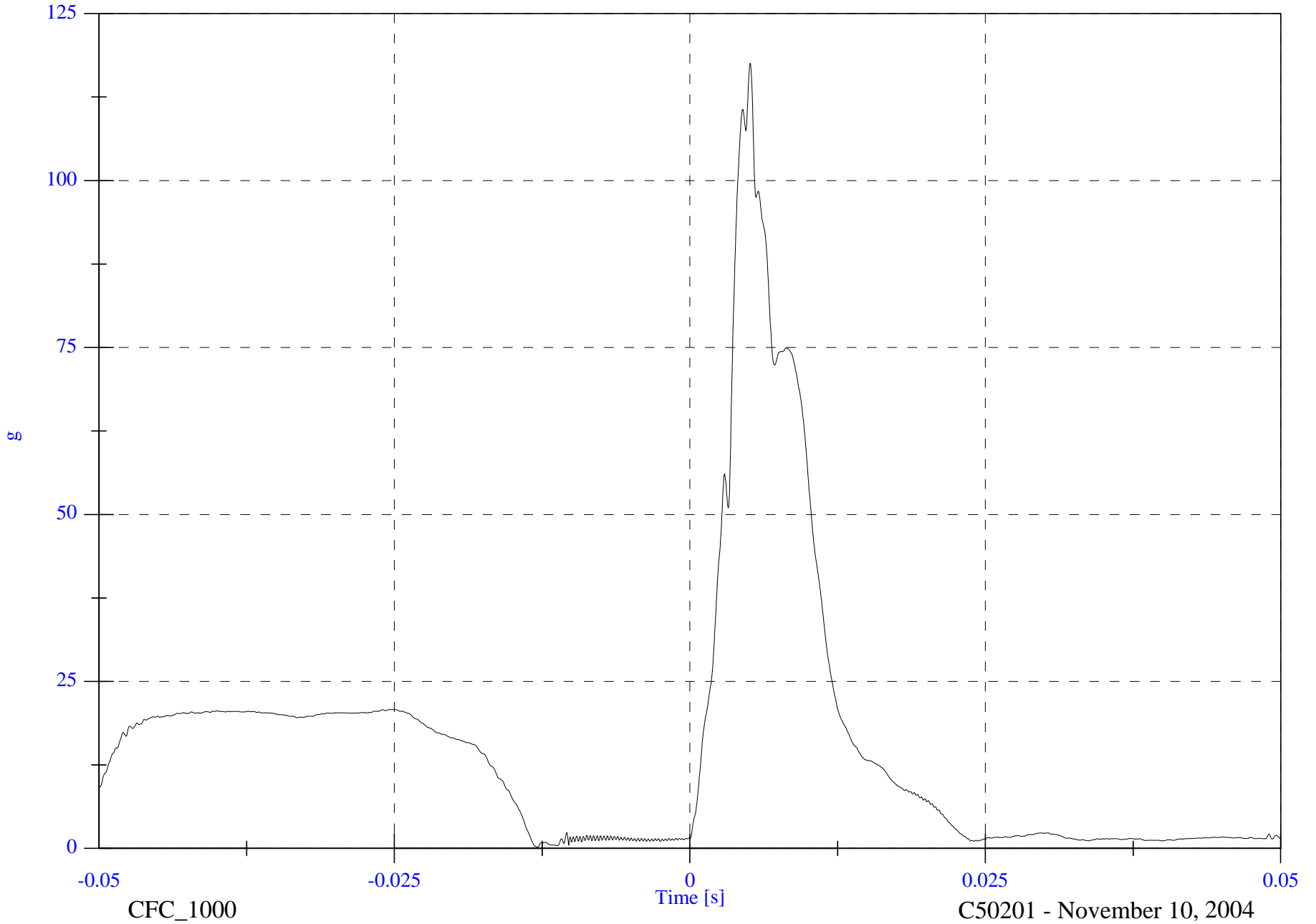
Headform Resultant

Max: 117.6 [g] at 0.005 [s]

Min: 0.2 [g] at -0.013 [s]

C50201 Passenger Side BP4 Impact Plot #4

8754+FMH-01



CFC\_1000

C50201 - November 10, 2004

FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

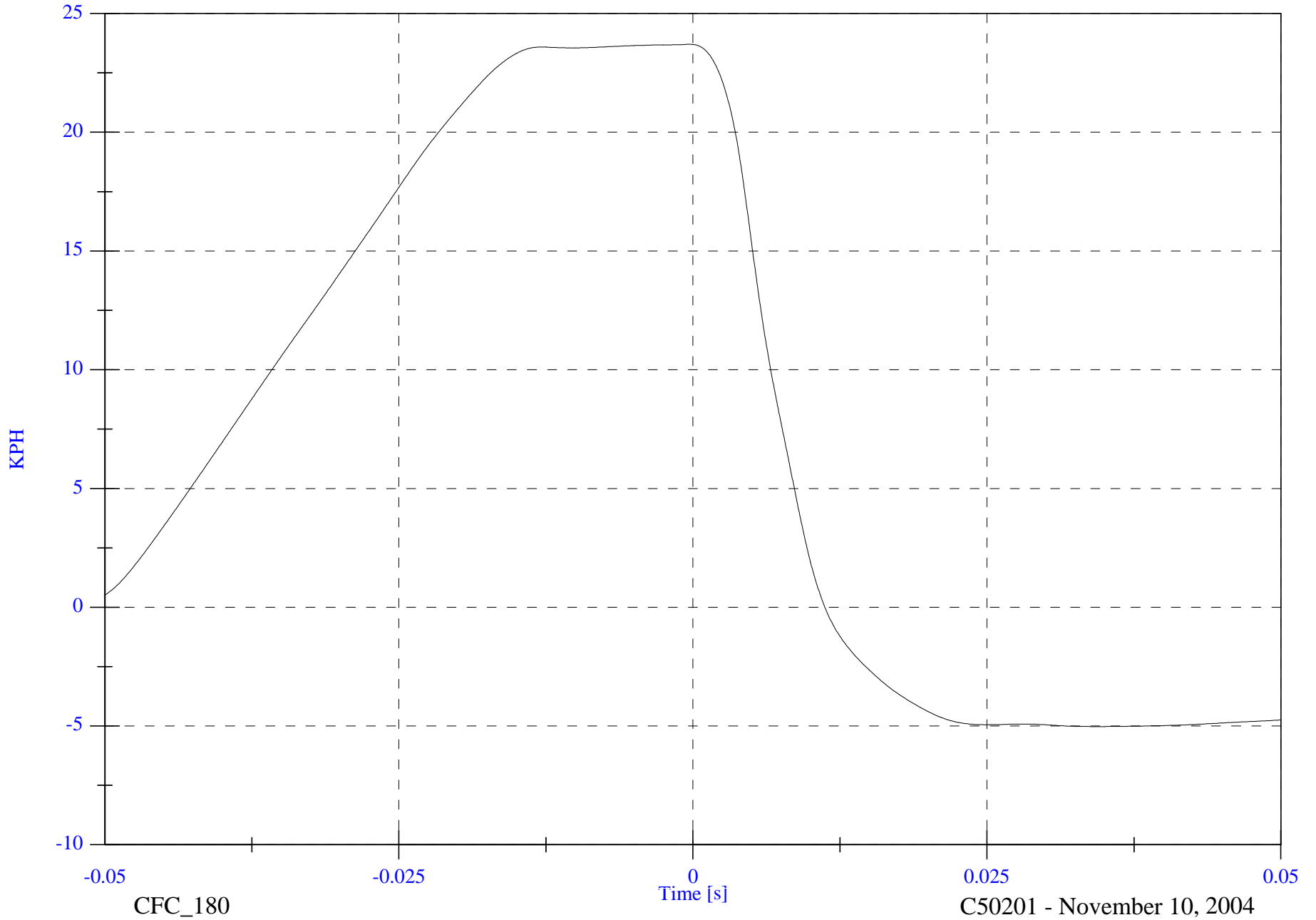
Headform Velocity

Max: 23.7 [KPH] at -0.000 [s]

Min: -5.0 [KPH] at 0.034 [s]

C50201 Passenger Side BP4 Impact Plot #5

8754+FMH-01





**PRE-IMPACT BP4 (PLACARD MISLABELED BP3)**

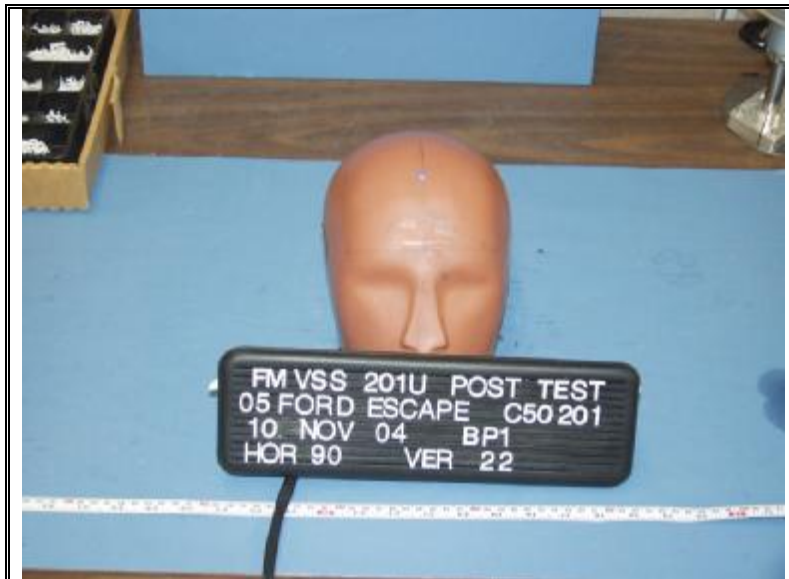


**POST-IMPACT BP4 (PLACARD MISLABELED BP3)**

VEHICLE YEAR/MAKE/MODEL/STYLE:	2005 Ford Escape, 4-door
VIN:	1FMYU02Z25KB04029
DATE OF MANUFACTURE:	06/04 (SEE CERTIFICATION LABEL)
COLOR:	Black

Test Number:	05
Test Date:	11/10/04
Target Location:	B-Pillar
Target Code:	BP1
Horizontal Impact Angle:	90°
Vertical Impact Angle:	22°
Ambient Temperature:	24.7°C
Relative Humidity:	22.8
Time of Impact:	13:45
Headform Number:	0355

Impact Point Description (from lower midpoint on midsagittal line)			
On Centerline	0	mm right	mm left
On Centerline	58	mm up	



POST-IMPACT BP1 HEADFORM

Free Motion HIC	908.5
HIC(d)	851.8
Impact Velocity (kph)	23.51
HIC T1 (msec)	3.9
HIC T2 (msec)	9.8

# FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE C50201 - BP1

FMH Headform 0355

Location: BP1

Test Date: November 10, 2004

Work File: BP1

## -----TEST RESULTS-----

Lab Temperature: 24.7 C

HICd: 851.8

Lab Humidity: 22.8 %

HIC (36ms): 908.5

Velocity at Impact: 23.51 KPH

t1: 3.9 msec

t2: 9.8 msec

Free Flight Distance: 225.07 mm

Duration: 5.9 msec

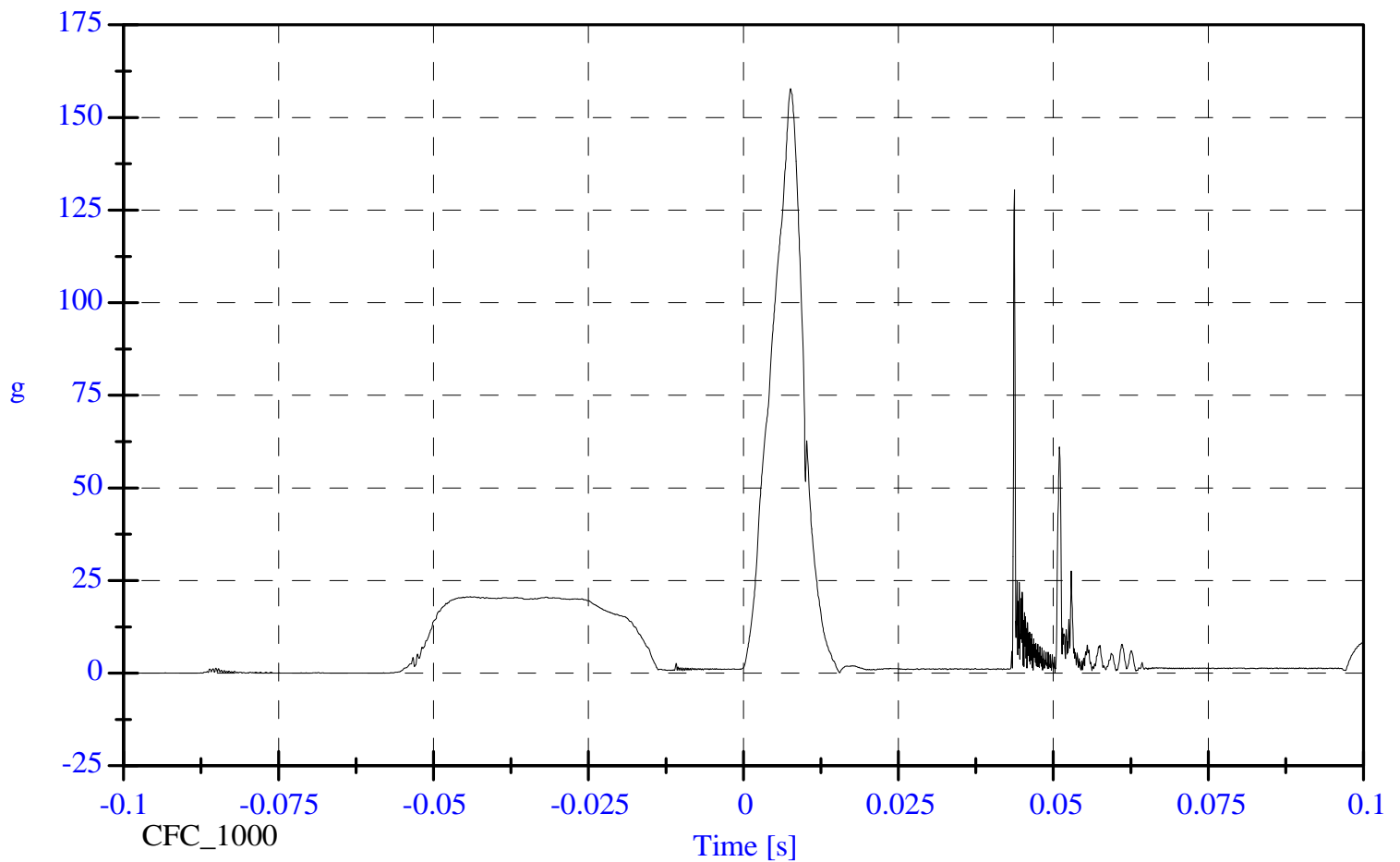
Average Acceleration: 9.5 g

FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

Max: 157.8 [g] at 0.008 [s]

Headform Resultant

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



FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

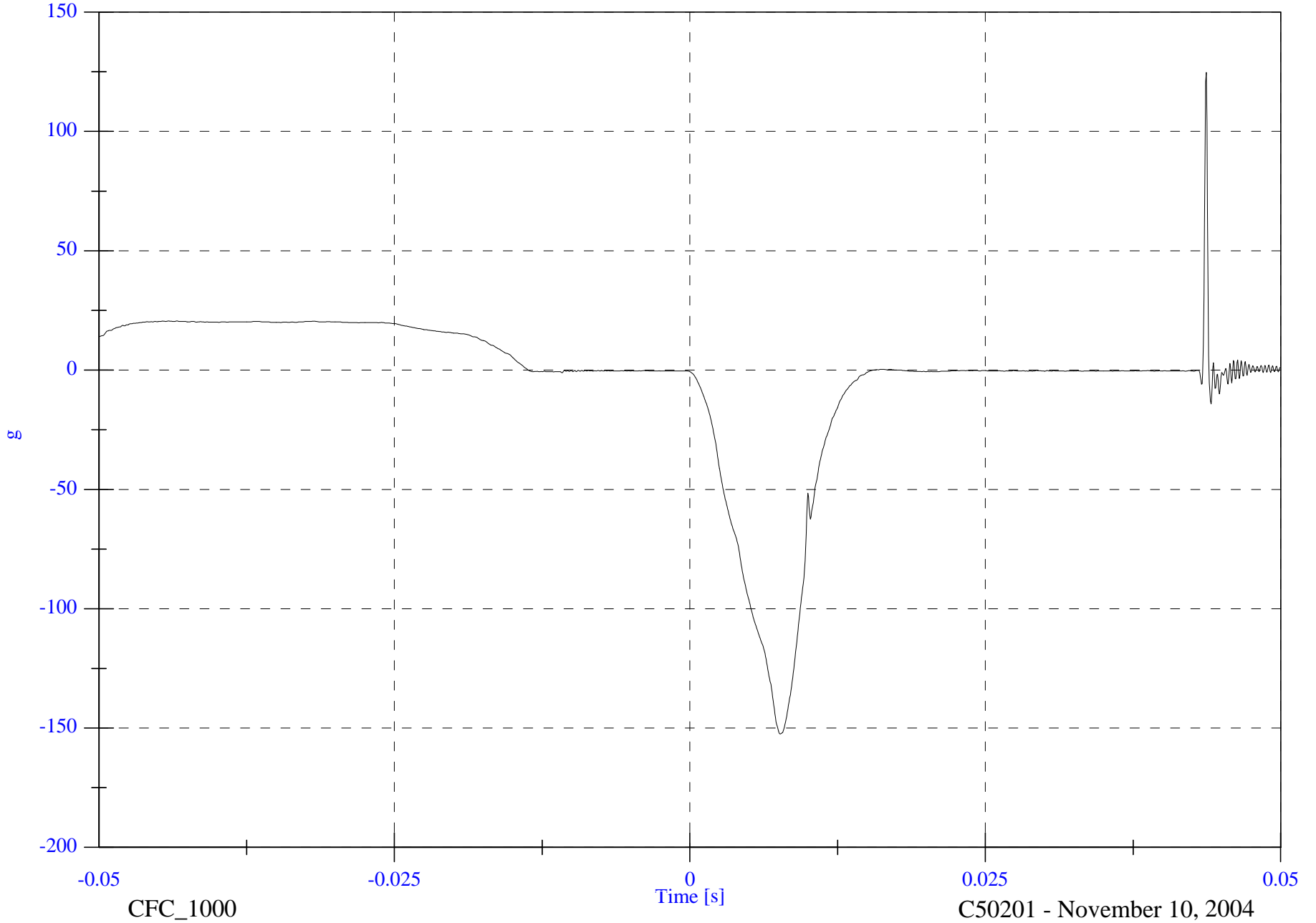
Headform X Acceleration

Max: 124.7 [g] at 0.044 [s]

Min: -152.5 [g] at 0.008 [s]

C50201 Passenger Side BP1 Impact Plot #1

8754+FMH-01



FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

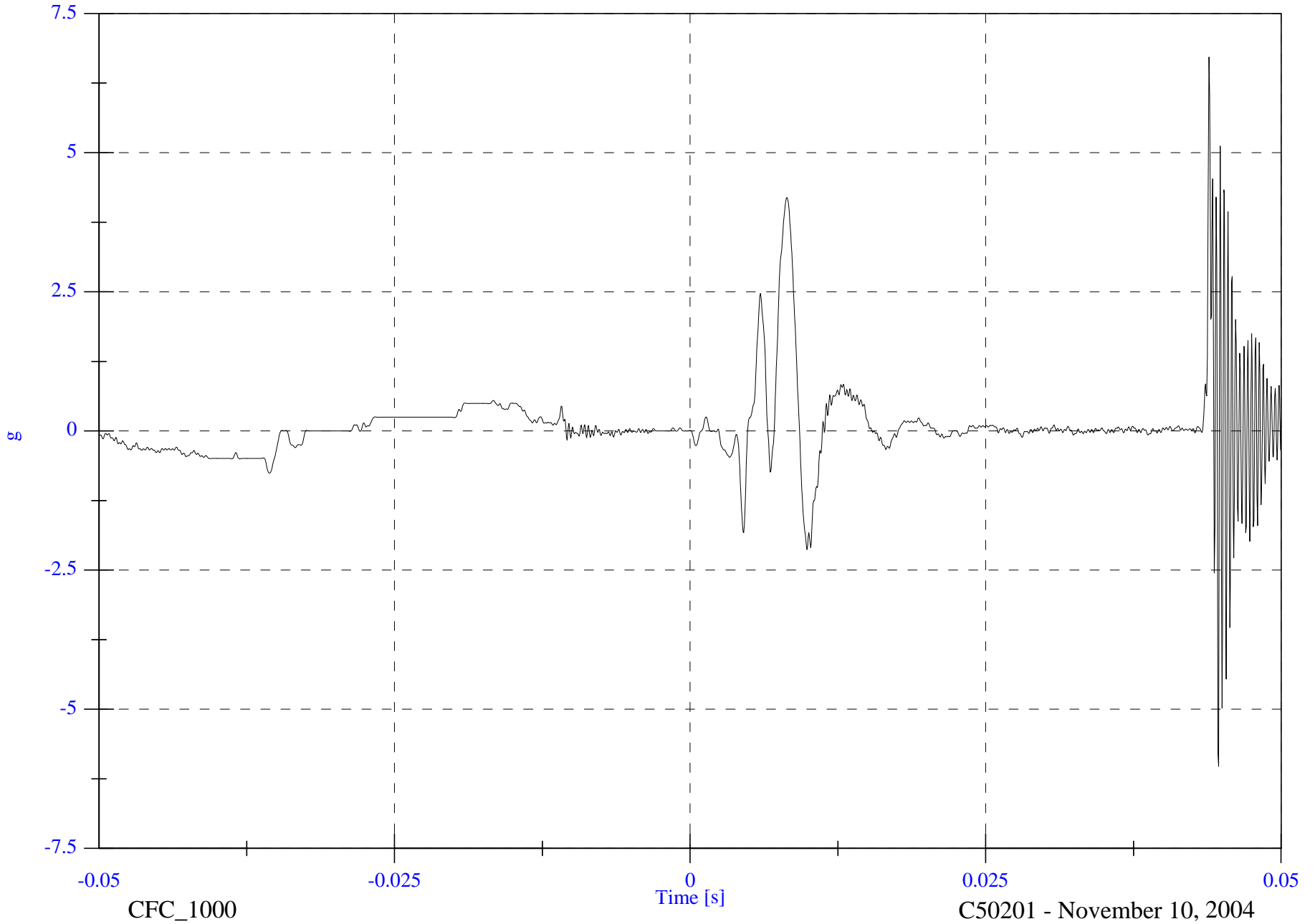
Headform Y Acceleration

Max: 6.7 [g] at 0.044 [s]

Min: -6.0 [g] at 0.045 [s]

C50201 Passenger Side BP1 Impact Plot #2

8754-FMH-01





FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

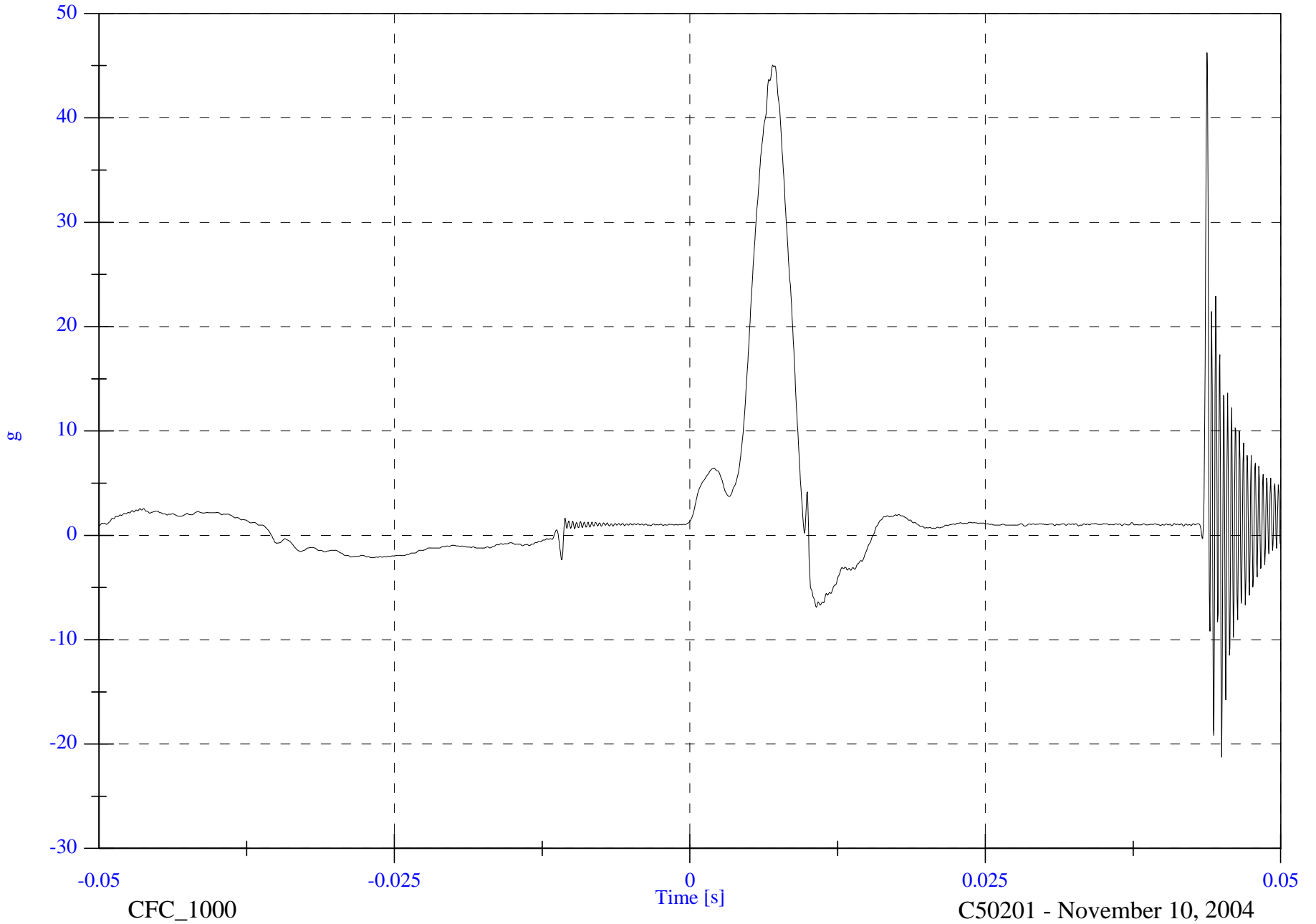
Headform Z Acceleration

Max: 46.2 [g] at 0.044 [s]

Min: -21.2 [g] at 0.045 [s]

C50201 Passenger Side BP1 Impact Plot #3

8754+FMH-01



FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

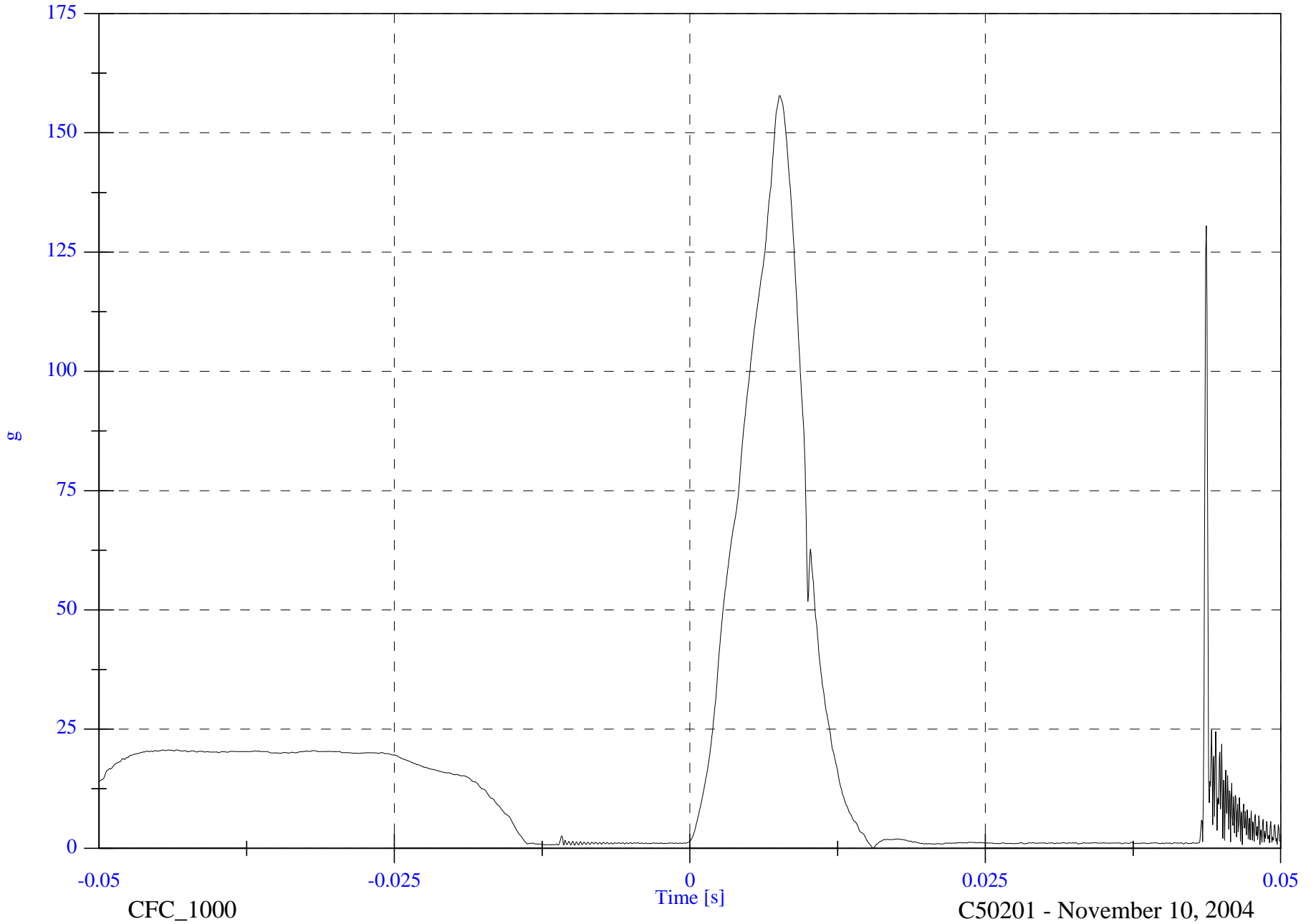
Headform Resultant

Max: 157.8 [g] at 0.008 [s]

Min: 0.0 [g] at 0.016 [s]

C50201 Passenger Side BP1 Impact Plot #4

8754+FMH-01



CFC\_1000

C50201 - November 10, 2004

FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

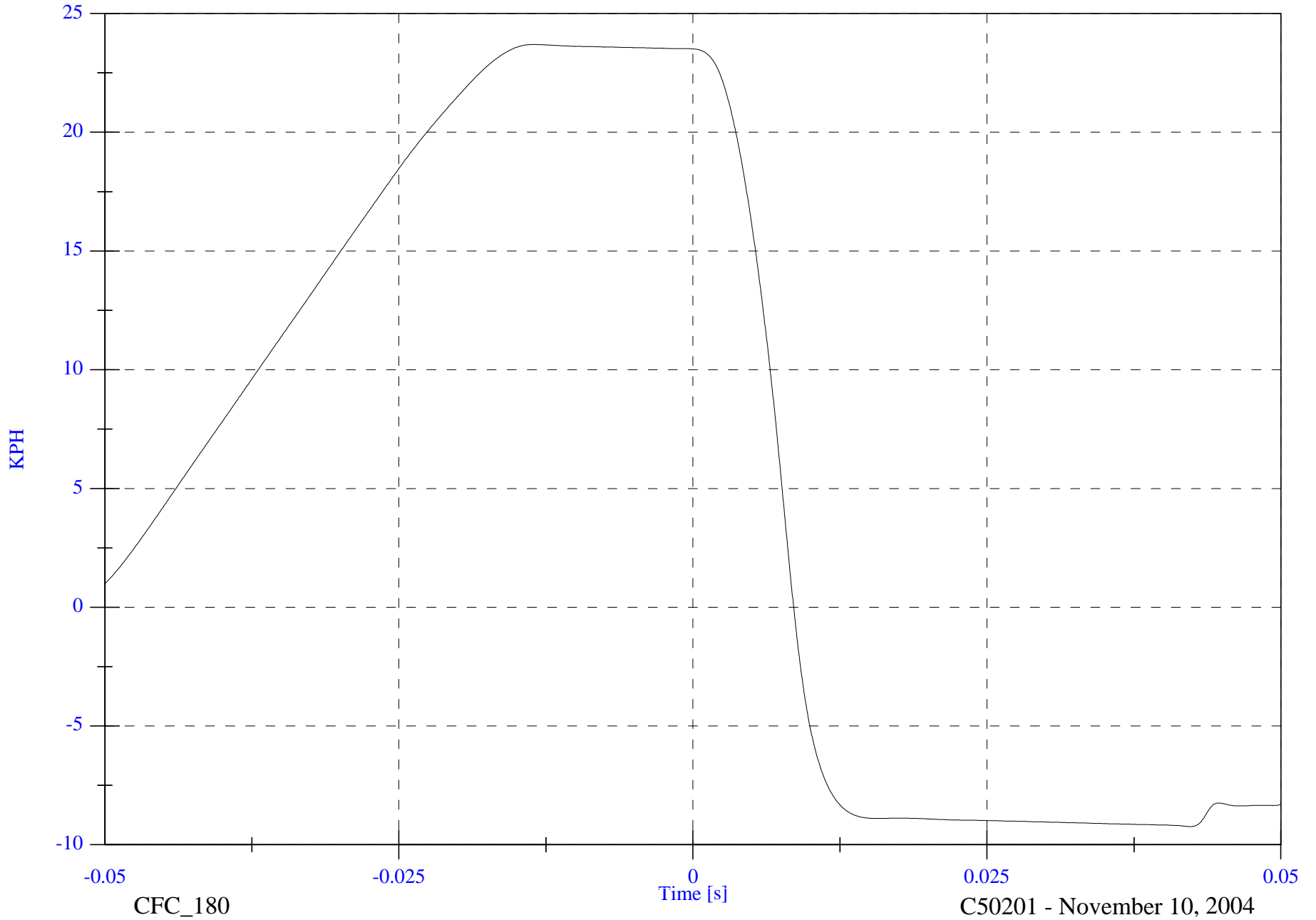
Headform Velocity

Max: 23.7 [KPH] at -0.014 [s]

Min: -9.2 [KPH] at 0.042 [s]

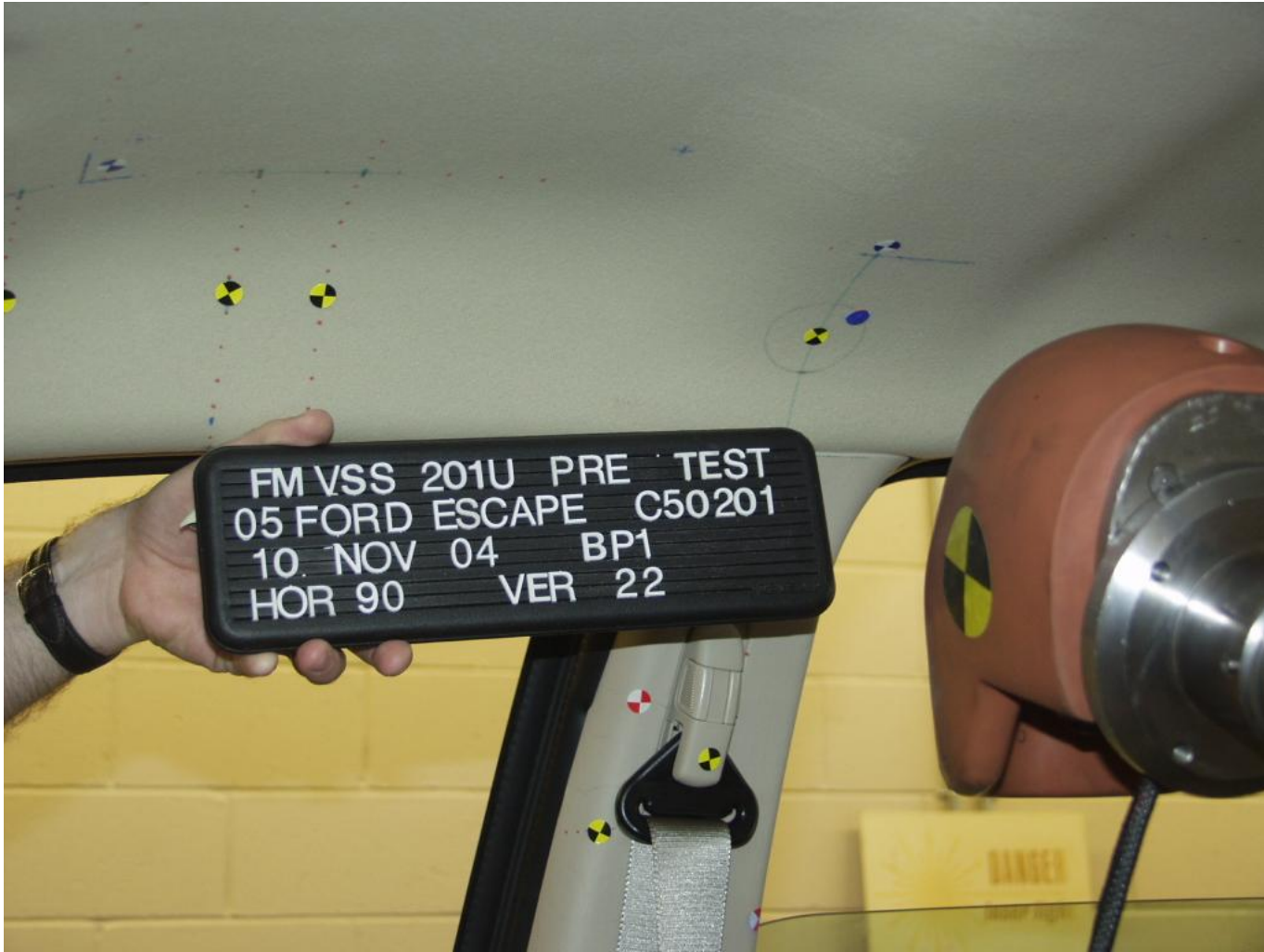
C50201 Passenger Side BP1 Impact Plot #5

8754+FMH-01



CFC\_180

C50201 - November 10, 2004



PRE-IMPACT BP1



POST-IMPACT BP1

VEHICLE YEAR/MAKE/MODEL/STYLE:	2005 Ford Escape, 4-door
VIN:	1FMYU02Z25KB04029
DATE OF MANUFACTURE:	06/04 (SEE CERTIFICATION LABEL)
COLOR:	Black

Test Number:	06
Test Date:	11/10/04
Target Location:	A-Pillar
Target Code:	AP3
Horizontal Impact Angle:	145°
Vertical Impact Angle:	36°
Ambient Temperature:	24.7°C
Relative Humidity:	22.8
Time of Impact:	14:25
Headform Number:	805

Impact Point Description (from lower midpoint on midsagittal line)			
On Centerline	8	mm right	mm left
On Centerline	30	mm up	



POST-IMPACT AP3 HEADFORM

Free Motion HIC	267.5
HIC(d)	368.2
Impact Velocity (kph)	23.65
HIC T1 (msec)	1.0
HIC T2 (msec)	4.3

# FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE C50201 - AP3

FMH Headform 0805

Location: AP3

Test Date: November 10, 2004

Work File: AP3

## -----TEST RESULTS-----

Lab Temperature: 24.7 C

HICd: 368.2

Lab Humidity: 22.8 %

HIC (36ms): 267.5

Velocity at Impact: 23.65 KPH

t1: 1.0 msec

t2: 4.3 msec

Free Flight Distance: 224.59 mm

Duration: 3.3 msec

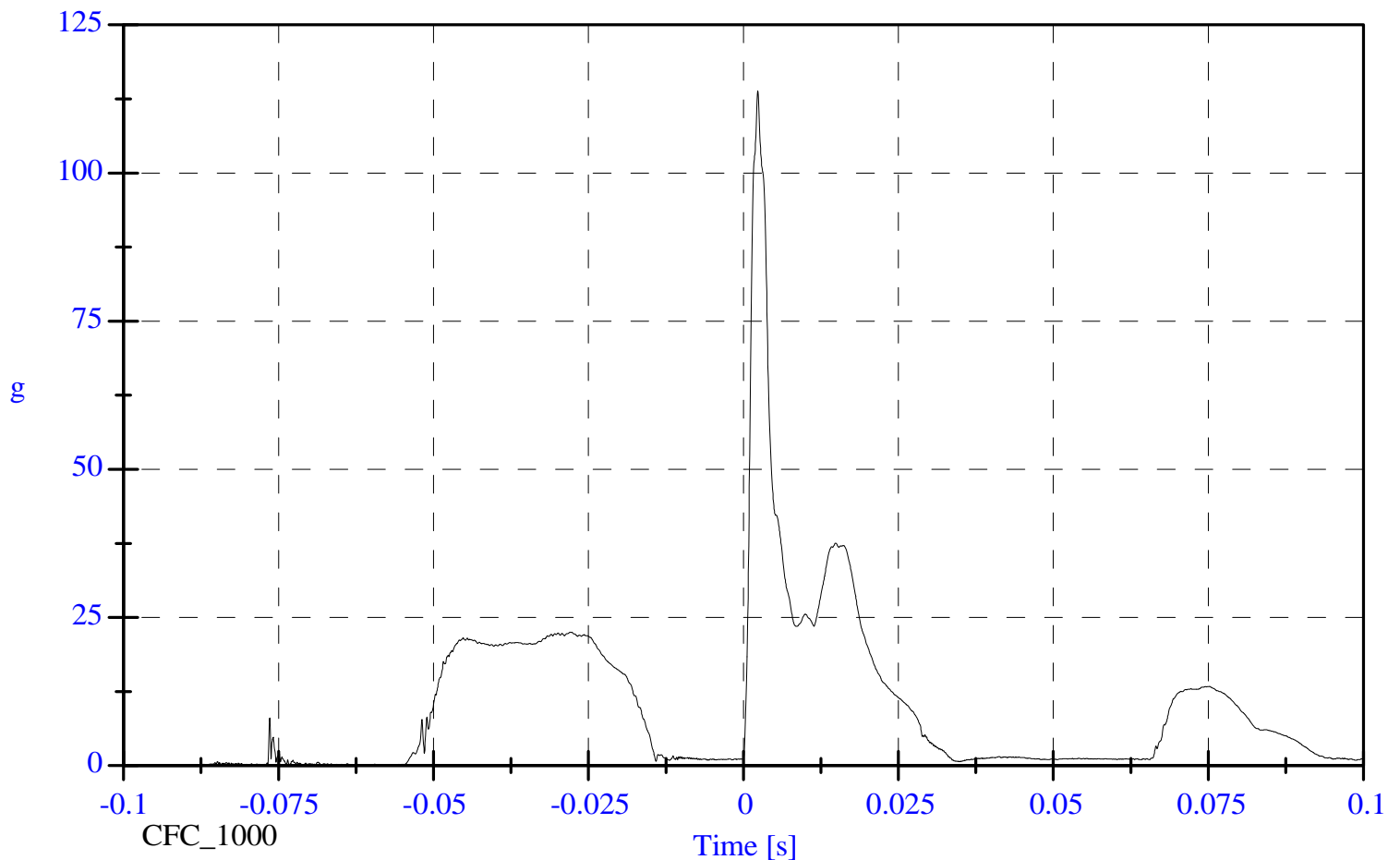
Average Acceleration: 9.6 g

FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

Max: 113.8 [g] at 0.002 [s]

Headform Resultant

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



FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

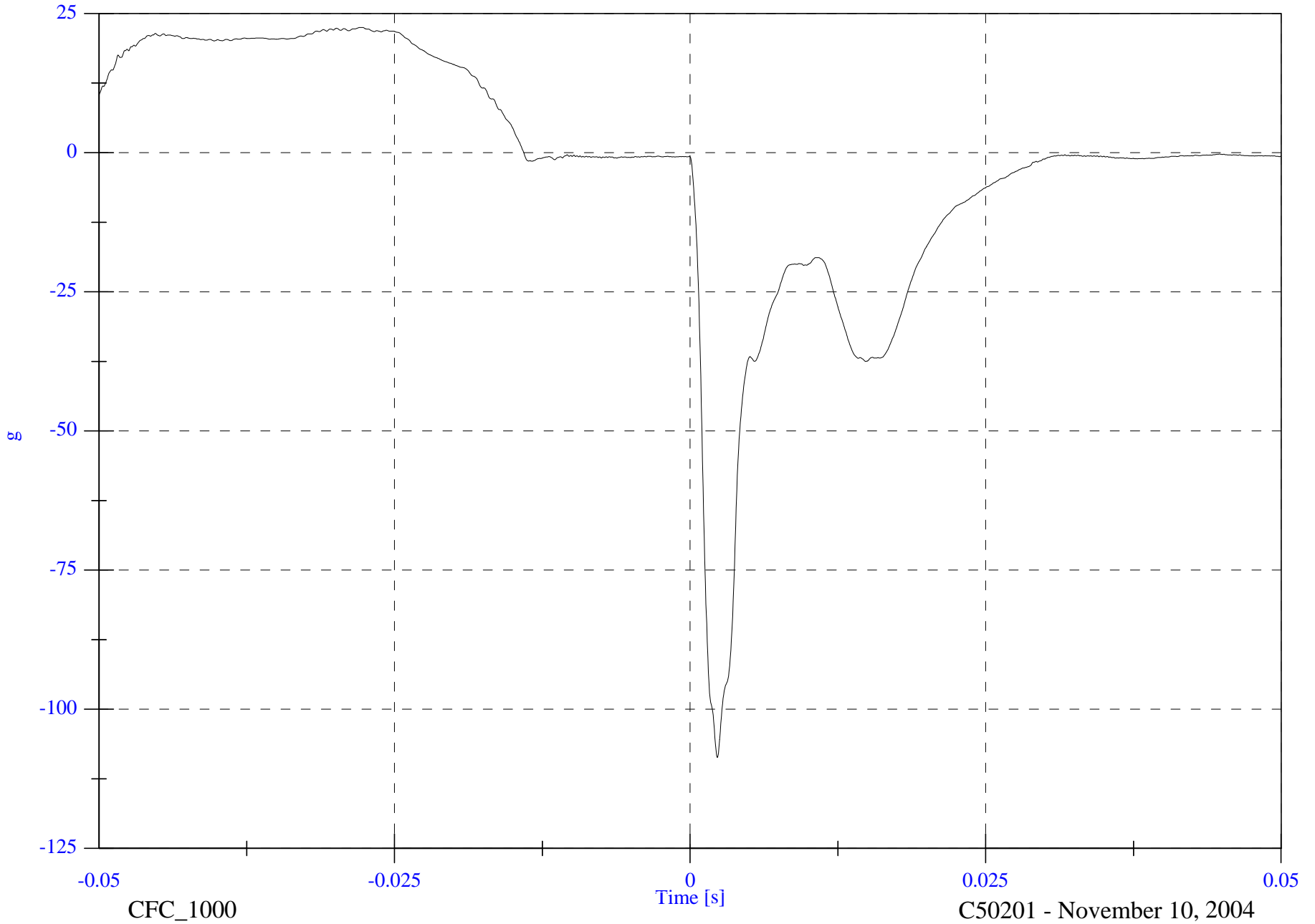
Headform X Acceleration

Max: 22.5 [g] at -0.028 [s]

Min: -108.7 [g] at 0.002 [s]

C50201 Passenger Side AP3 Impact Plot #1

8754+FMH-01



CFC\_1000

C50201 - November 10, 2004



FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

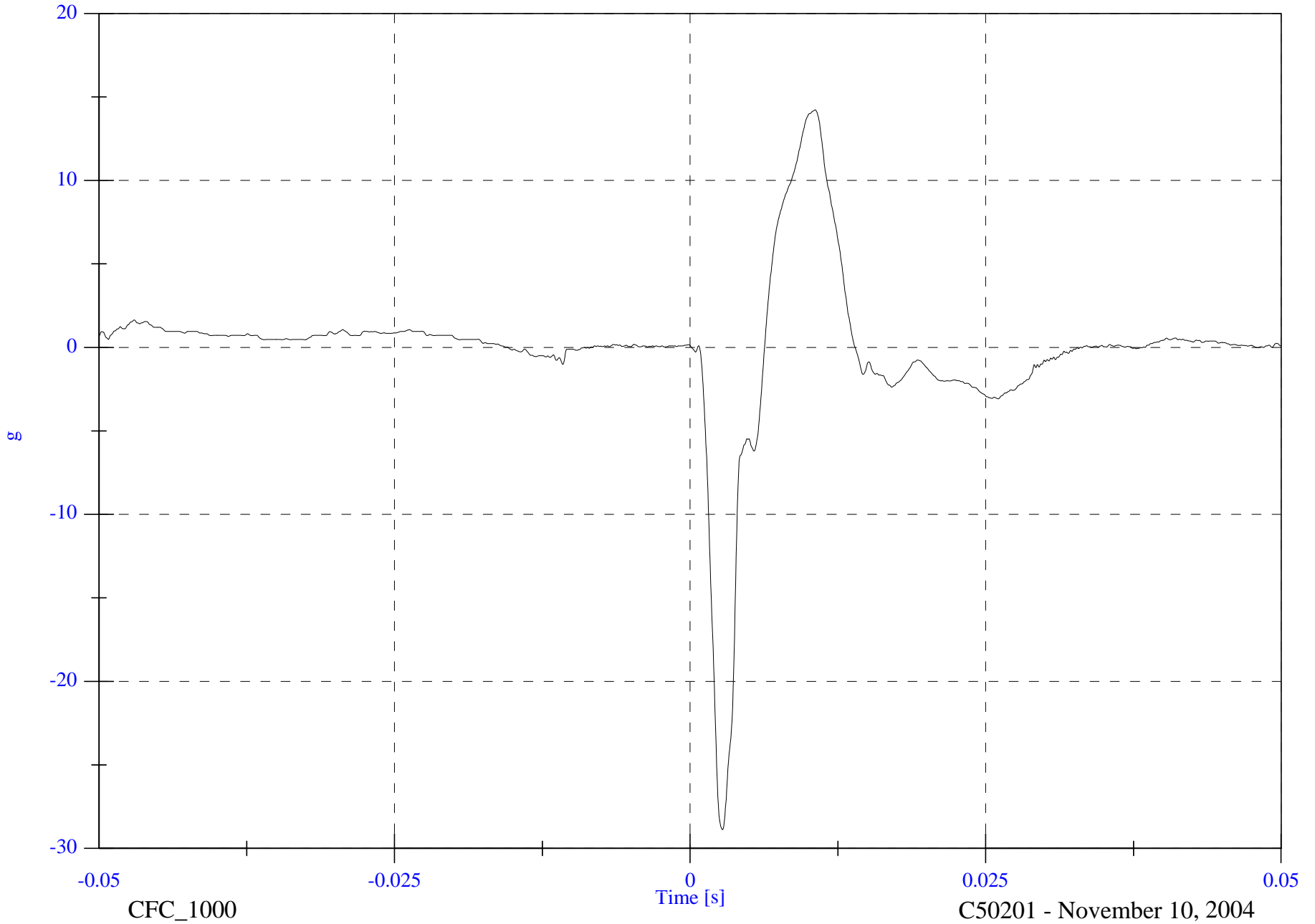
Headform Y Acceleration

Max: 14.2 [g] at 0.011 [s]

Min: -28.9 [g] at 0.003 [s]

C50201 Passenger Side AP3 Impact Plot #2

8754+FMH-01



CFC\_1000

C50201 - November 10, 2004

FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

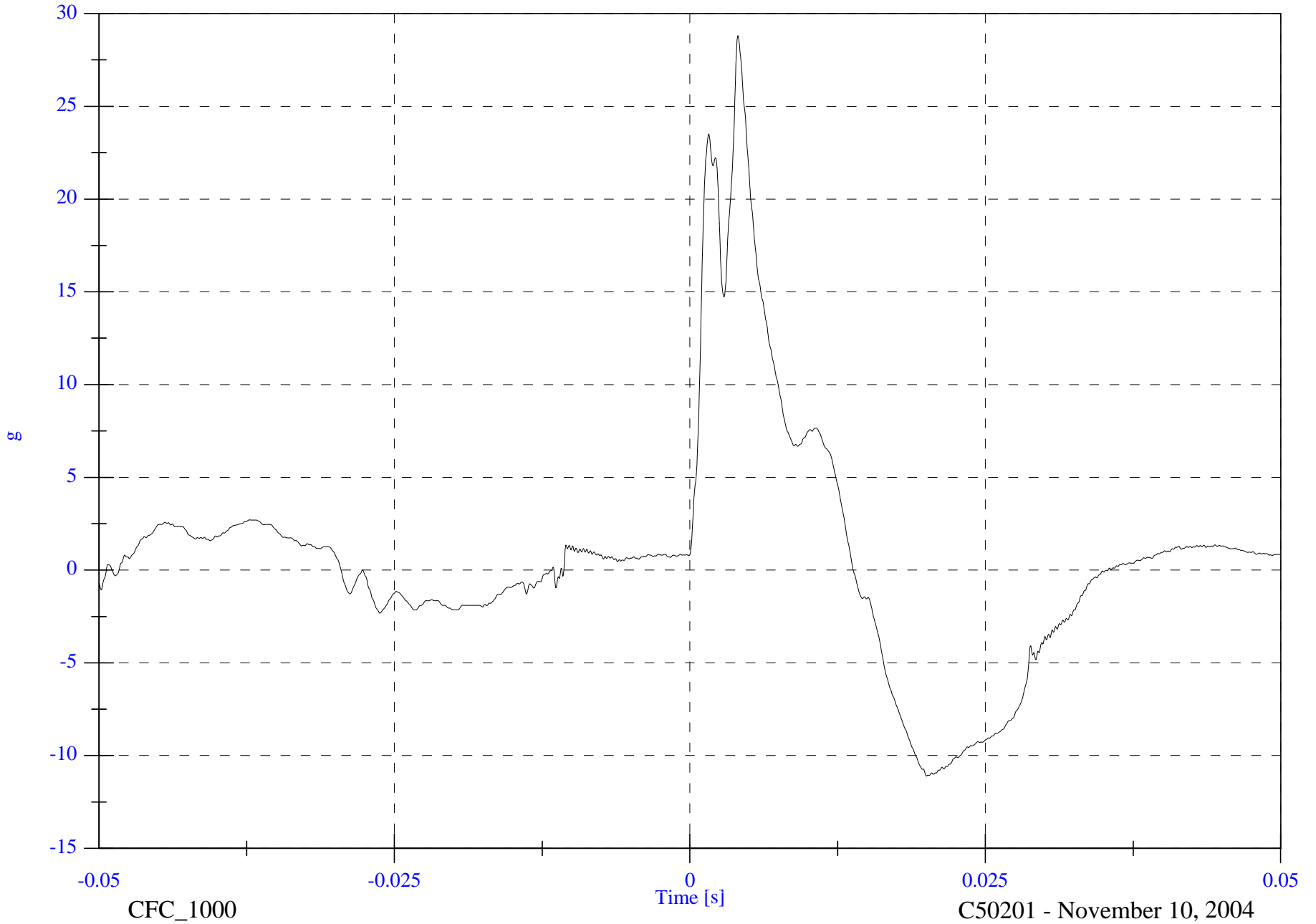
Headform Z Acceleration

Max: 28.8 [g] at 0.004 [s]

Min: -11.1 [g] at 0.020 [s]

C50201 Passenger Side AP3 Impact Plot #3

8754+FMH-01



CFC\_1000

C50201 - November 10, 2004

FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

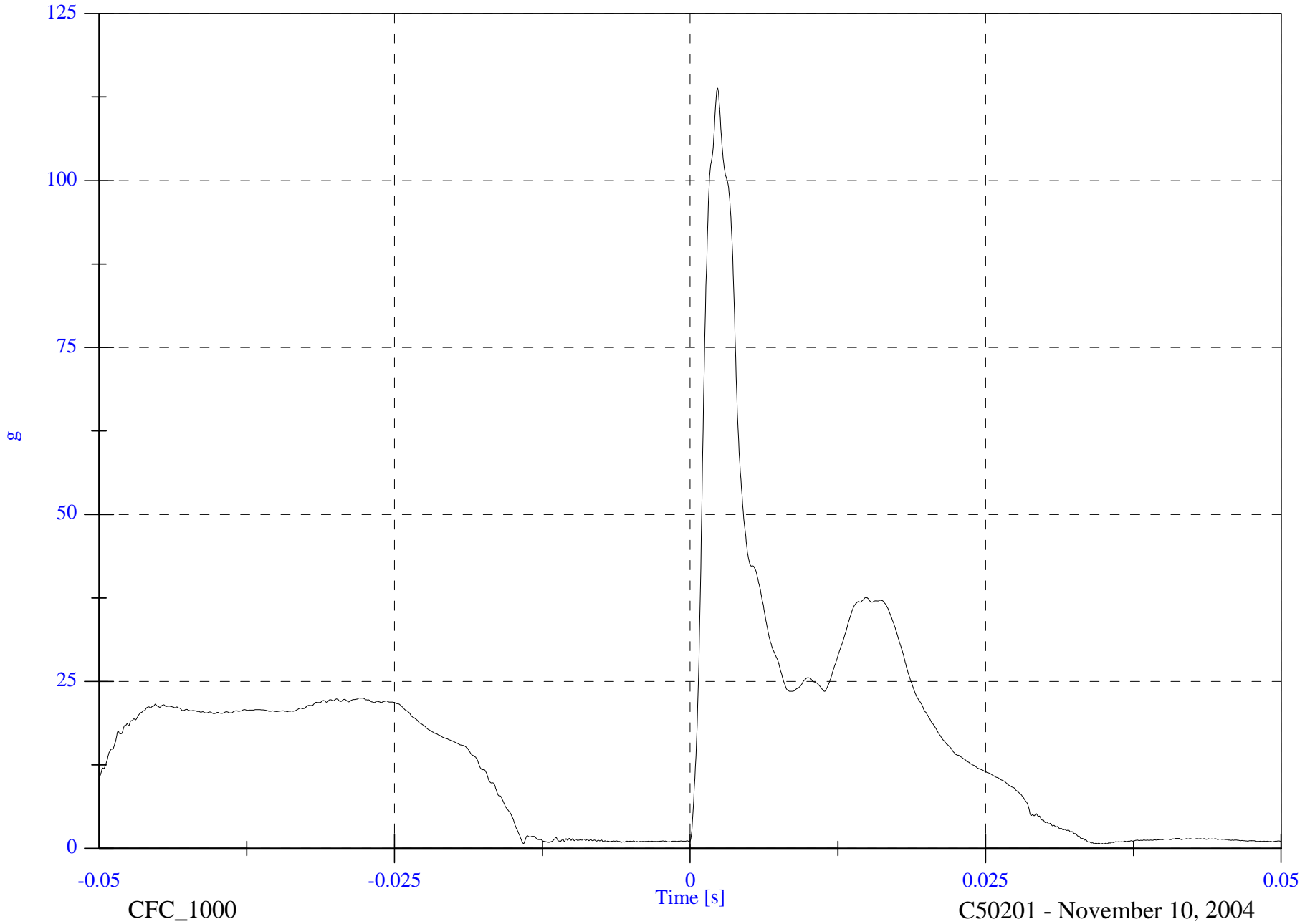
Headform Resultant

Max: 113.8 [g] at 0.002 [s]

Min: 0.6 [g] at 0.035 [s]

C50201 Passenger Side AP3 Impact Plot #4

8754+FMH-01



FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

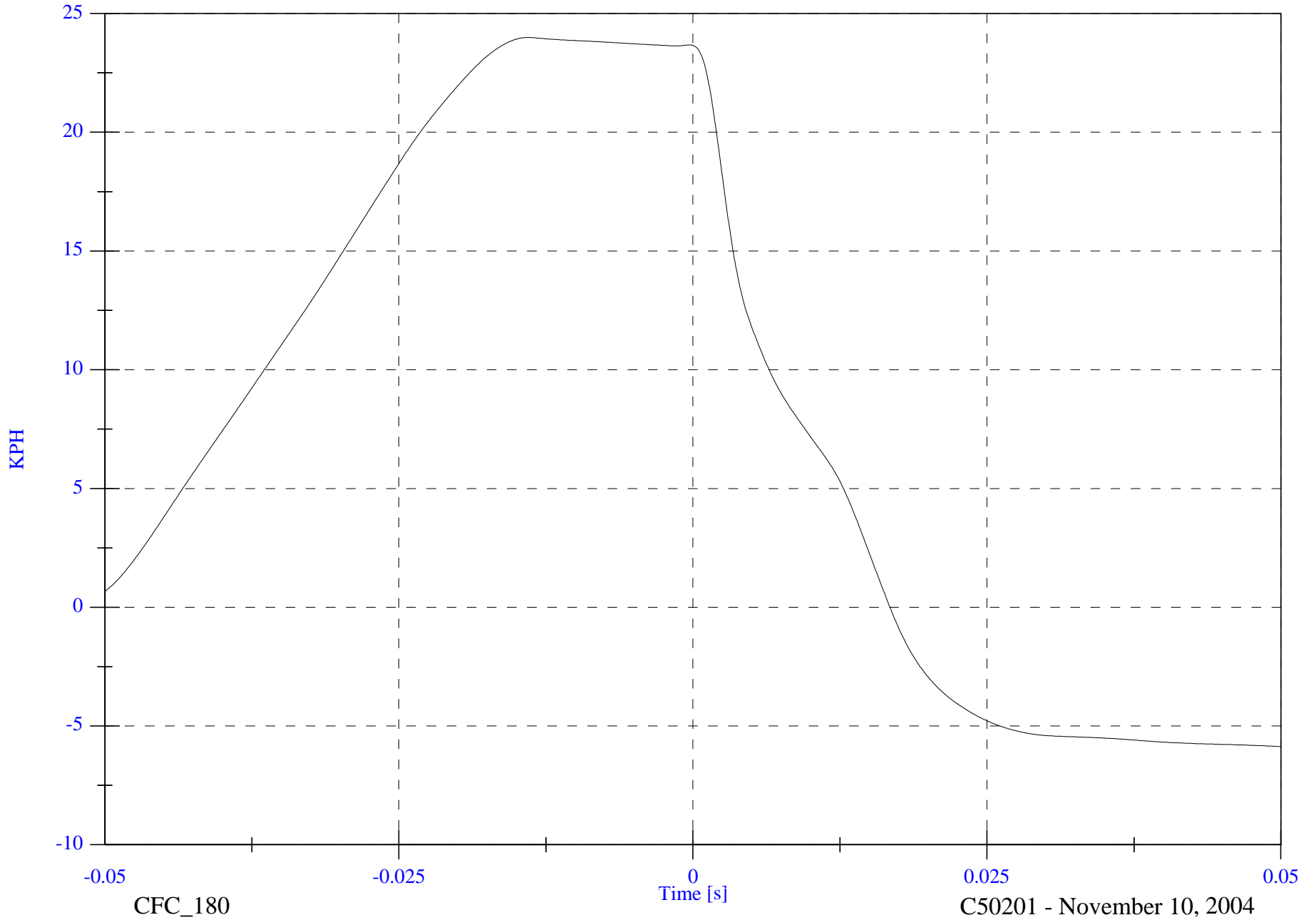
Headform Velocity

Max: 24.0 [KPH] at -0.014 [s]

Min: -5.9 [KPH] at 0.050 [s]

C50201 Passenger Side AP3 Impact Plot #5

8754+FMH-01



CFC\_180

C50201 - November 10, 2004



PRE-IMPACT AP3

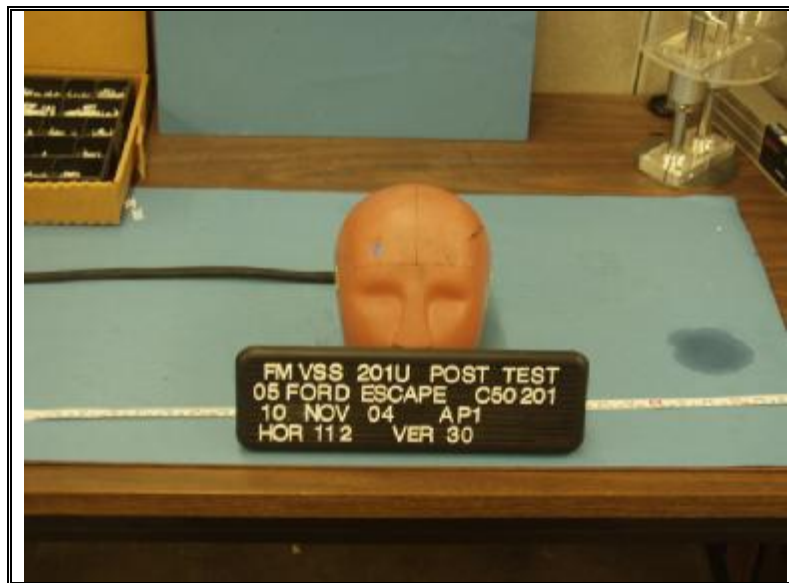


POST-IMPACT AP3

VEHICLE YEAR/MAKE/MODEL/STYLE:	2005 Ford Escape, 4-door
VIN:	1FMYU02Z25KB04029
DATE OF MANUFACTURE:	06/04 (SEE CERTIFICATION LABEL)
COLOR:	Black

Test Number:	07
Test Date:	11/10/04
Target Location:	A-Pillar Passenger Side
Target Code:	AP1
Horizontal Impact Angle:	112°
Vertical Impact Angle:	30°
Ambient Temperature:	25.2°C
Relative Humidity:	23.0
Time of Impact:	15:10
Headform Number:	0062

Impact Point Description (from lower midpoint on midsagittal line)				
On Centerline	36	x	mm right	mm left
On Centerline	14		mm up	



POST-IMPACT AP1 PASSENGER SIDE HEADFORM

Free Motion HIC	1658.3
HIC(d)	1417.5
Impact Velocity (kph)	23.81
HIC T1 (msec)	2.8
HIC T2 (msec)	7.2

# FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE C50201 - AP1

FMH Headform 0062

Location: AP1

Test Date: November 10, 2004

Work File: AP1

## -----TEST RESULTS-----

Lab Temperature: 25.2 C

HICd: 1417.5

Lab Humidity: 23.0 %

HIC (36ms): 1658.3

Velocity at Impact: 23.81 KPH

t1: 2.8 msec

t2: 7.2 msec

Free Flight Distance: 217.77 mm

Duration: 4.4 msec

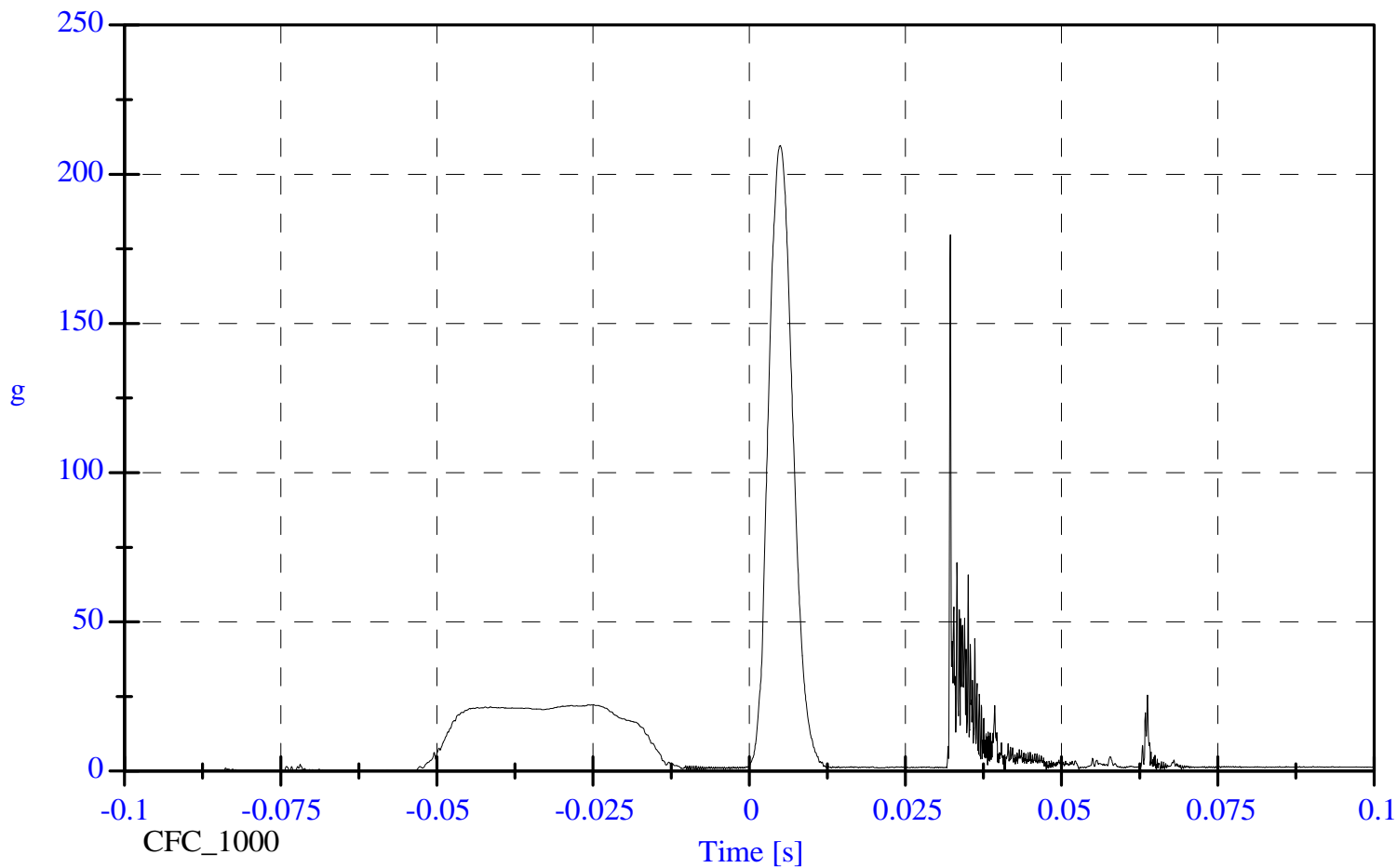
Average Acceleration: 10.3 g

FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

Max: 209.7 [g] at 0.005 [s]

Headform Resultant

Min: 0.0 [g] at -0.095 [s]





FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

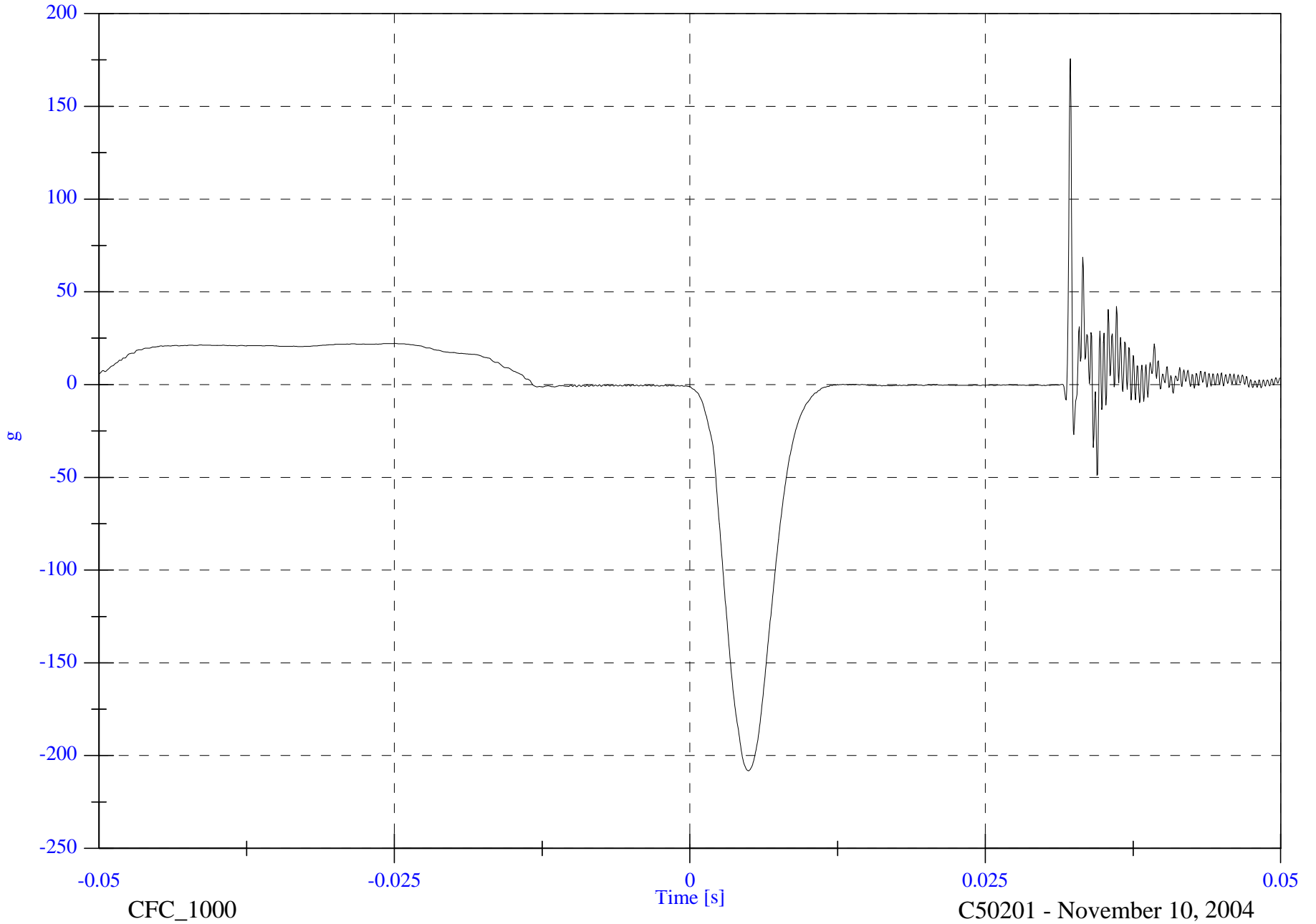
Headform X Acceleration

Max: 175.7 [g] at 0.032 [s]

Min: -208.1 [g] at 0.005 [s]

C50201 Passenger Side AP1 Impact Plot #1

8754+FMH-01



C50201 - November 10, 2004

FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

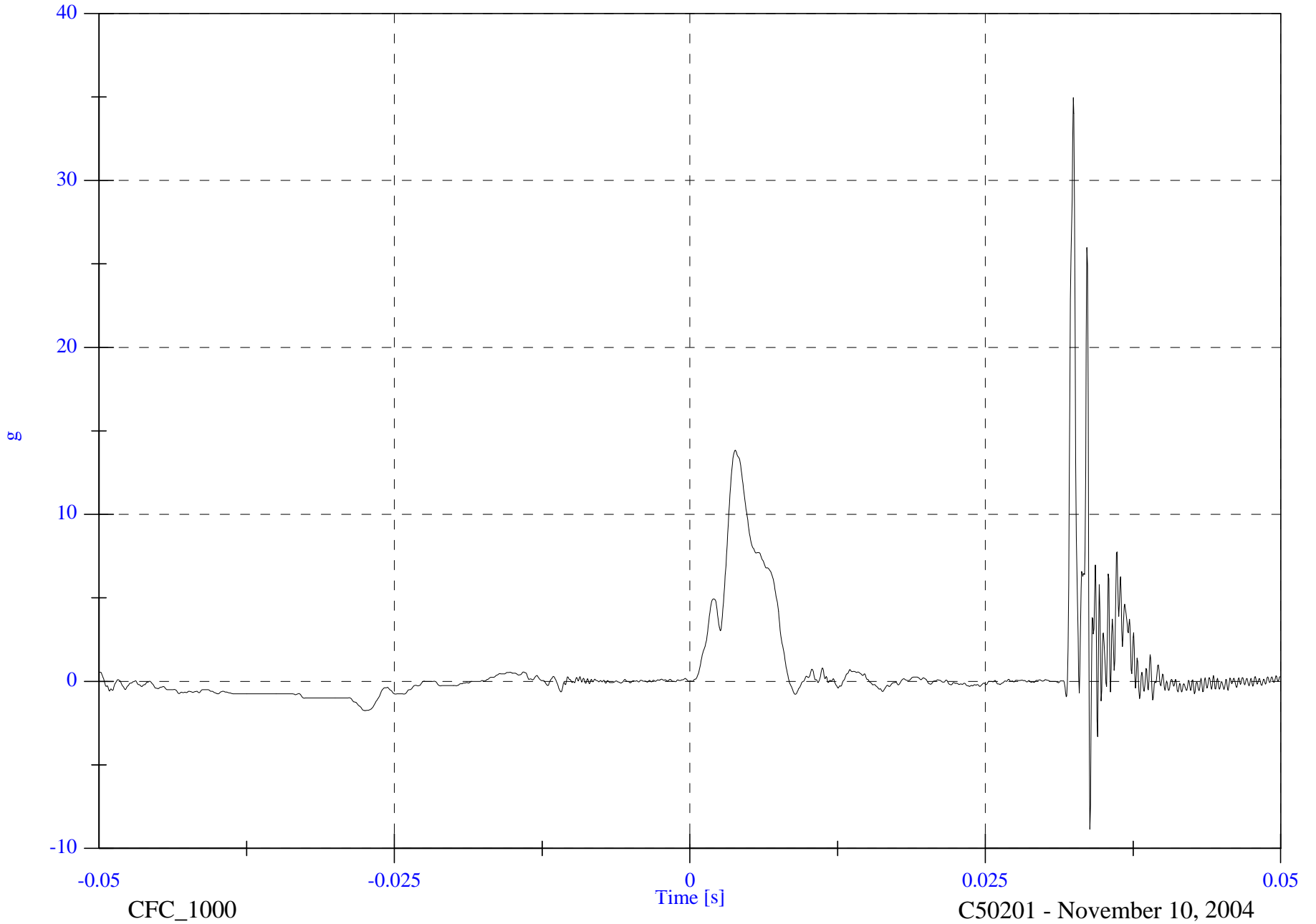
Headform Y Acceleration

Max: 35.0 [g] at 0.032 [s]

Min: -8.8 [g] at 0.034 [s]

C50201 Passenger Side AP1 Impact Plot #2

8754+FMH-01



CFC\_1000

C50201 - November 10, 2004

FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

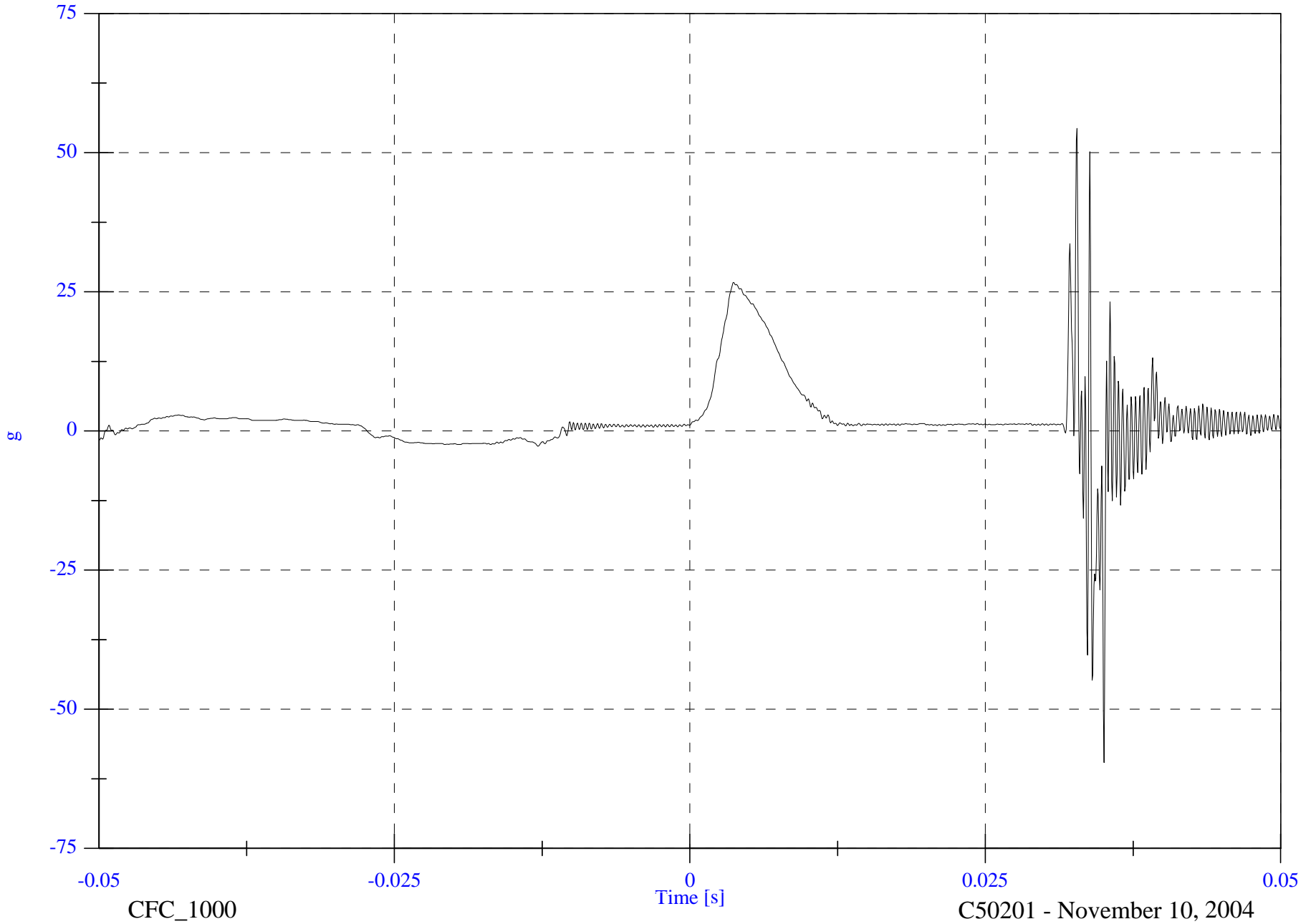
Headform Z Acceleration

Max: 54.4 [g] at 0.033 [s]

Min: -59.6 [g] at 0.035 [s]

C50201 Passenger Side AP1 Impact Plot #3

8754+FMH-01



FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

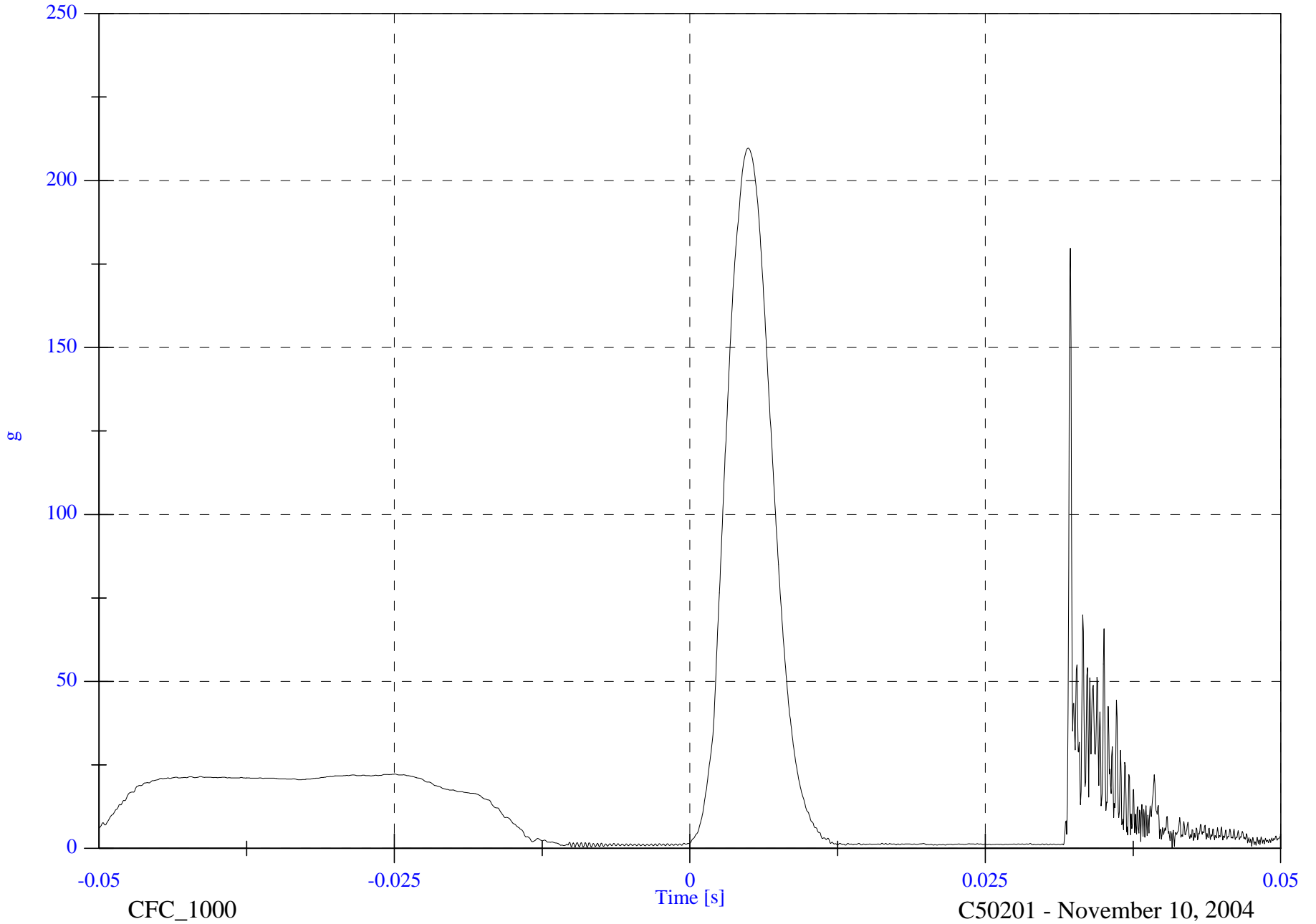
Headform Resultant

Max: 209.7 [g] at 0.005 [s]

Min: 0.1 [g] at 0.041 [s]

C50201 Passenger Side AP1 Impact Plot #4

8754+FMH-01



FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

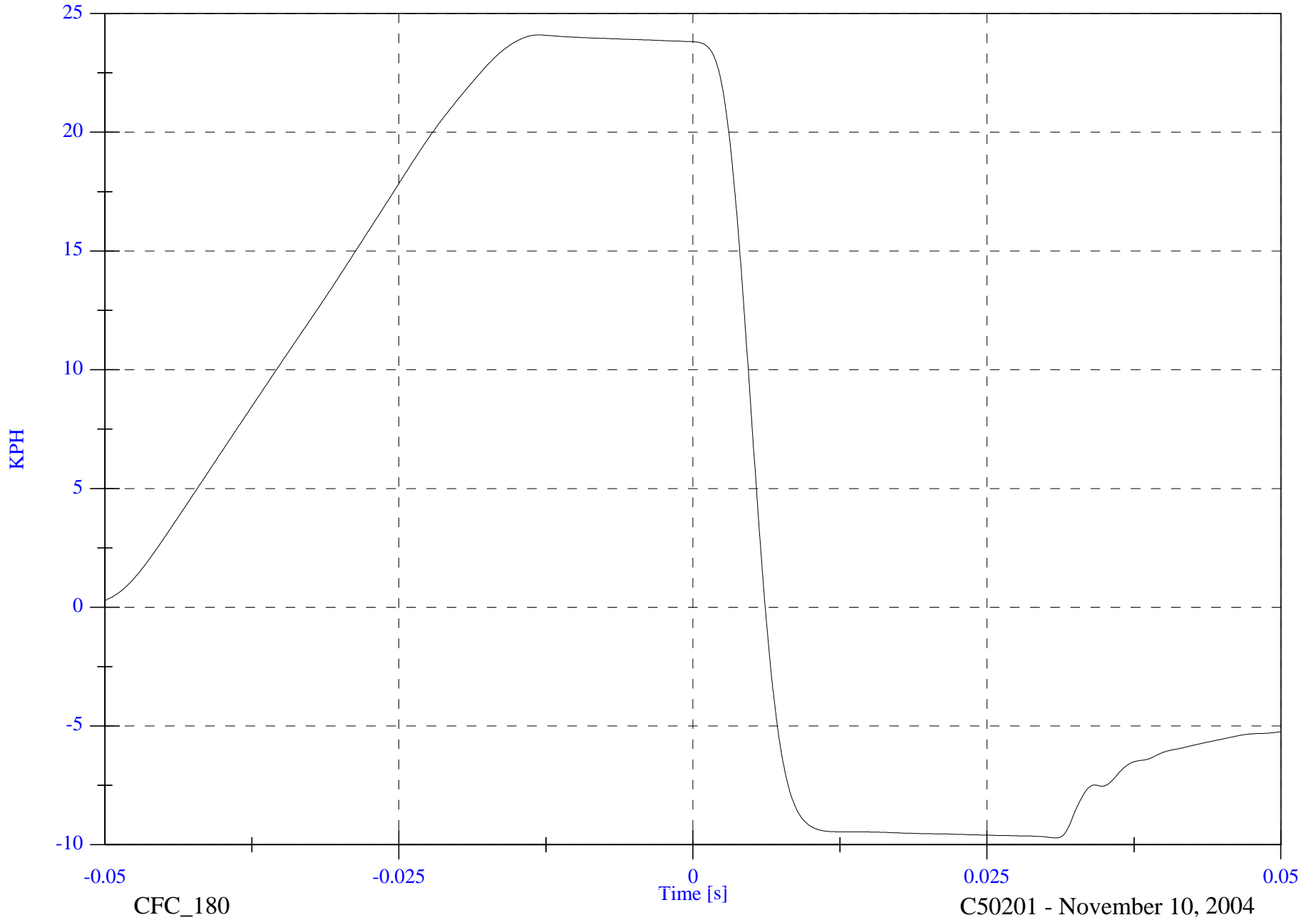
Headform Velocity

Max: 24.1 [KPH] at -0.013 [s]

Min: -9.7 [KPH] at 0.031 [s]

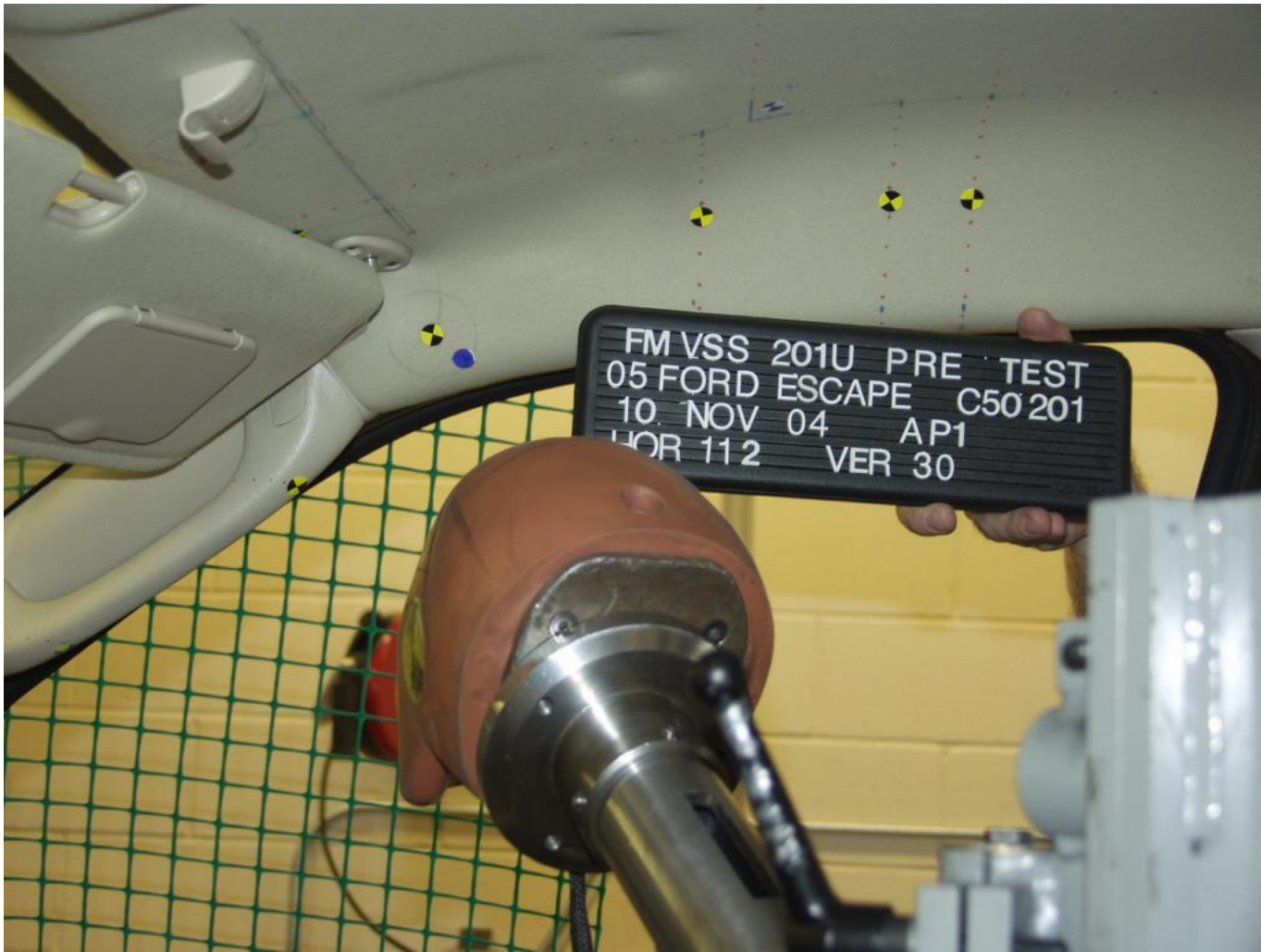
C50201 Passenger Side AP1 Impact Plot #5

8754+FMH-01



CFC\_180

C50201 - November 10, 2004



**PRE-IMPACT AP1 PASSENGER SIDE**

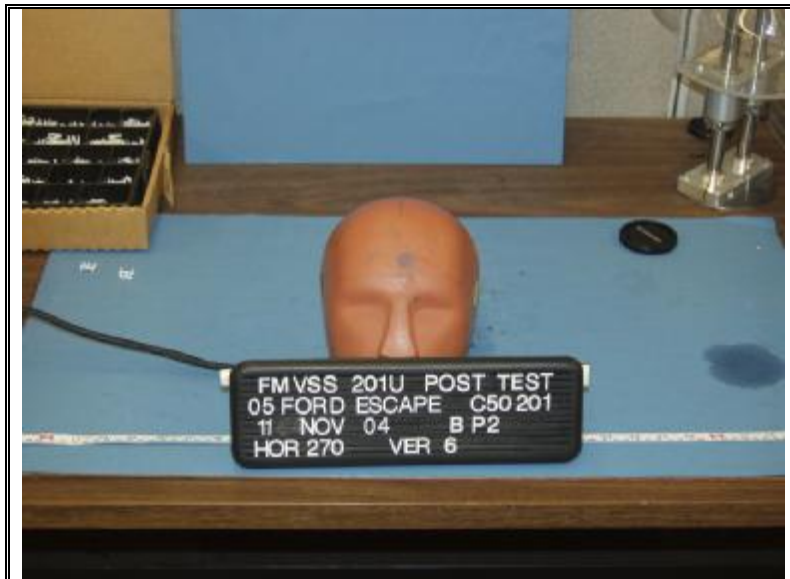


POST-IMPACT AP1 PASSENGER SIDE

VEHICLE YEAR/MAKE/MODEL/STYLE:	2005 Ford Escape, 4-door
VIN:	1FMYU02Z25KB04029
DATE OF MANUFACTURE:	06/04 (SEE CERTIFICATION LABEL)
COLOR:	Black

Test Number:	08
Test Date:	11/11/04
Target Location:	B-Pillar Seat Belt Anchorage
Target Code:	BP2
Horizontal Impact Angle:	270°
Vertical Impact Angle:	6°
Ambient Temperature:	23.3°C
Relative Humidity:	28.0
Time of Impact:	10:30
Headform Number:	0355

Impact Point Description (from lower midpoint on midsagittal line)			
On Centerline	3	mm right	x mm left
On Centerline	15	mm up	



POST-IMPACT BP2 HEADFORM

Free Motion HIC	872.7
HIC(d)	824.8
Impact Velocity (kph)	23.47
HIC T1 (msec)	1.2
HIC T2 (msec)	7.5



# FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE C50201 - BP2

FMH Headform 0355

Location: BP2

Test Date: November 11, 2004

Work File: BP2

## -----TEST RESULTS-----

Lab Temperature: 23.3 C

HICd: 824.8

Lab Humidity: 28.0 %

HIC (36ms): 872.7

Velocity at Impact: 23.47 KPH

t1: 1.2 msec

t2: 7.5 msec

Free Flight Distance: 223.63 mm

Duration: 6.3 msec

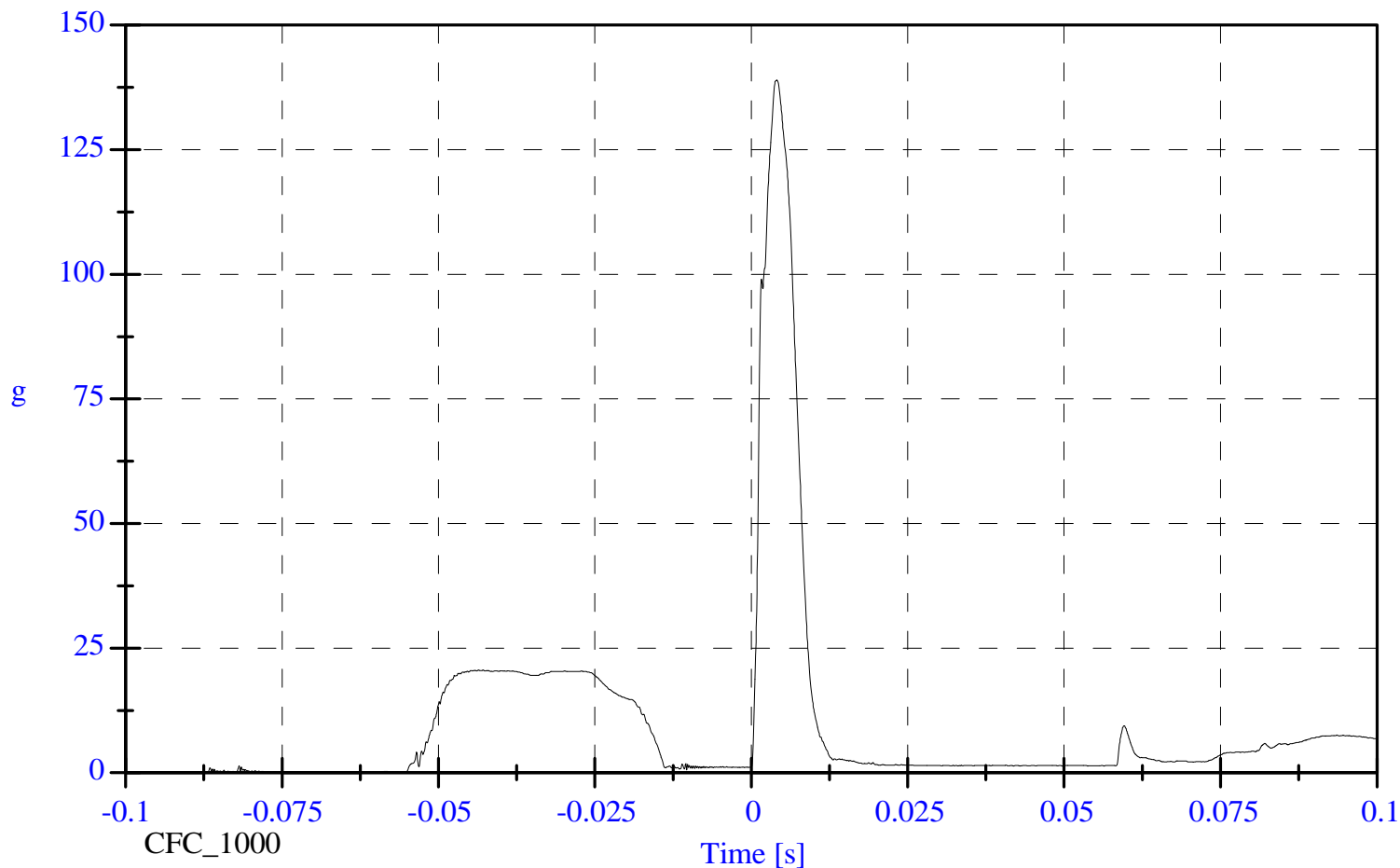
Average Acceleration: 9.1 g

FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

Max: 139.0 [g] at 0.004 [s]

Headform Resultant

Min: 0.0 [g] at -0.088 [s]

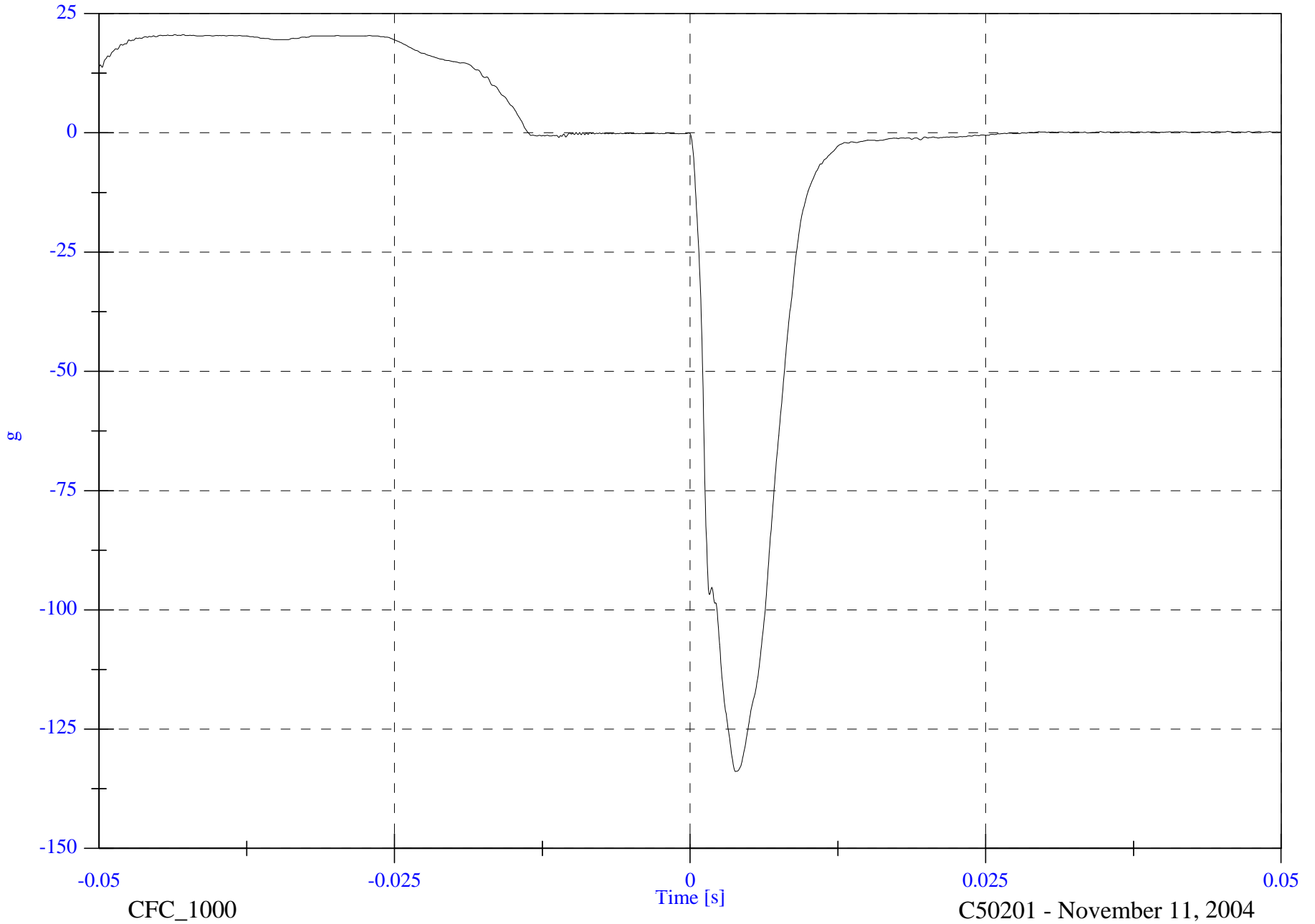


FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

Headform X Acceleration

Max: 20.6 [g] at -0.044 [s]

Min: -133.9 [g] at 0.004 [s]



C50201 Driver Side BP2 Impact Plot #1

8754-FMH-01

CFC\_1000

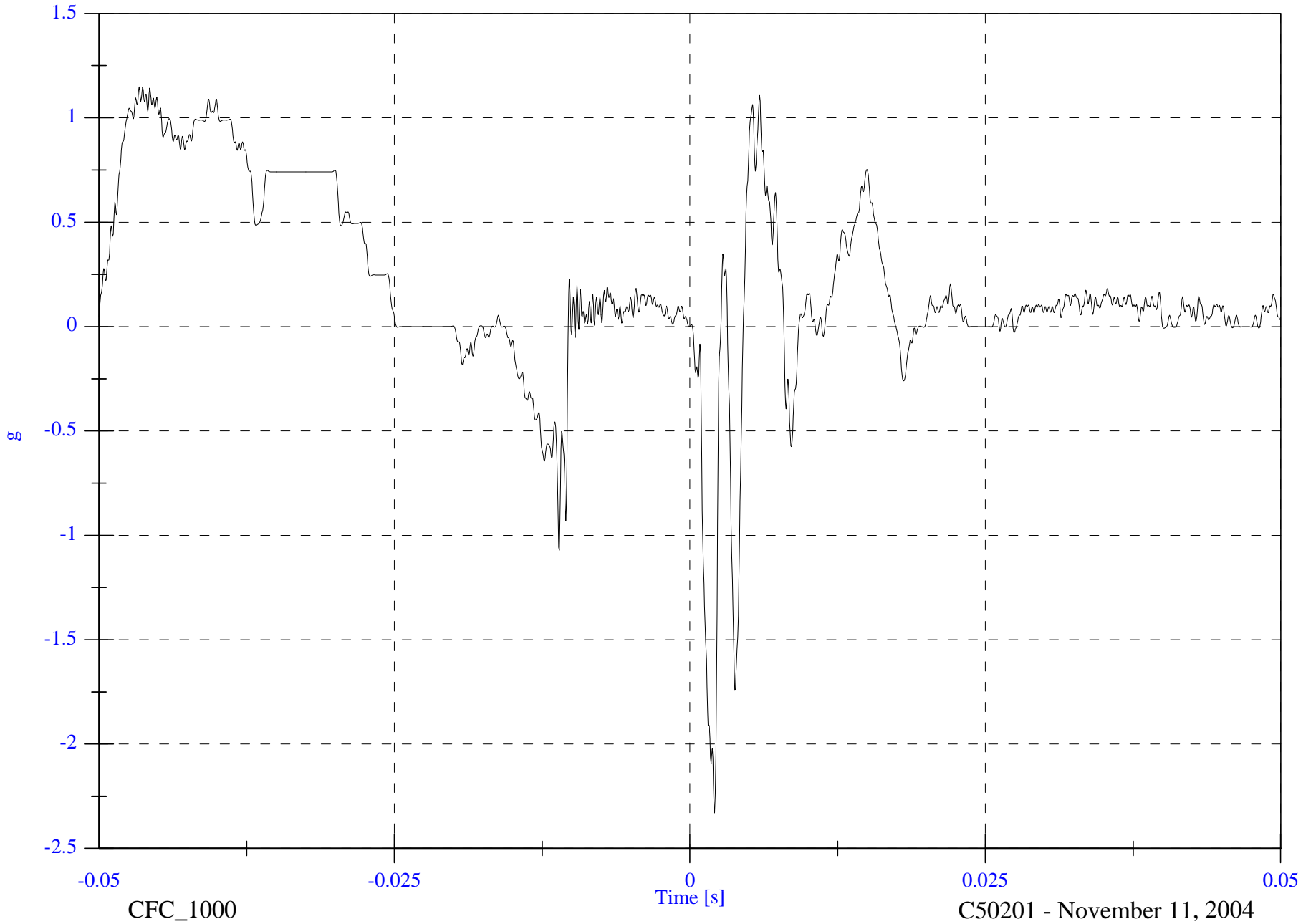
C50201 - November 11, 2004

FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

Headform Y Acceleration

Max: 1.1 [g] at -0.047 [s]

Min: -2.3 [g] at 0.002 [s]



C50201 Driver Side BP2 Impact Plot #2

8754+FMH-01

CFC\_1000

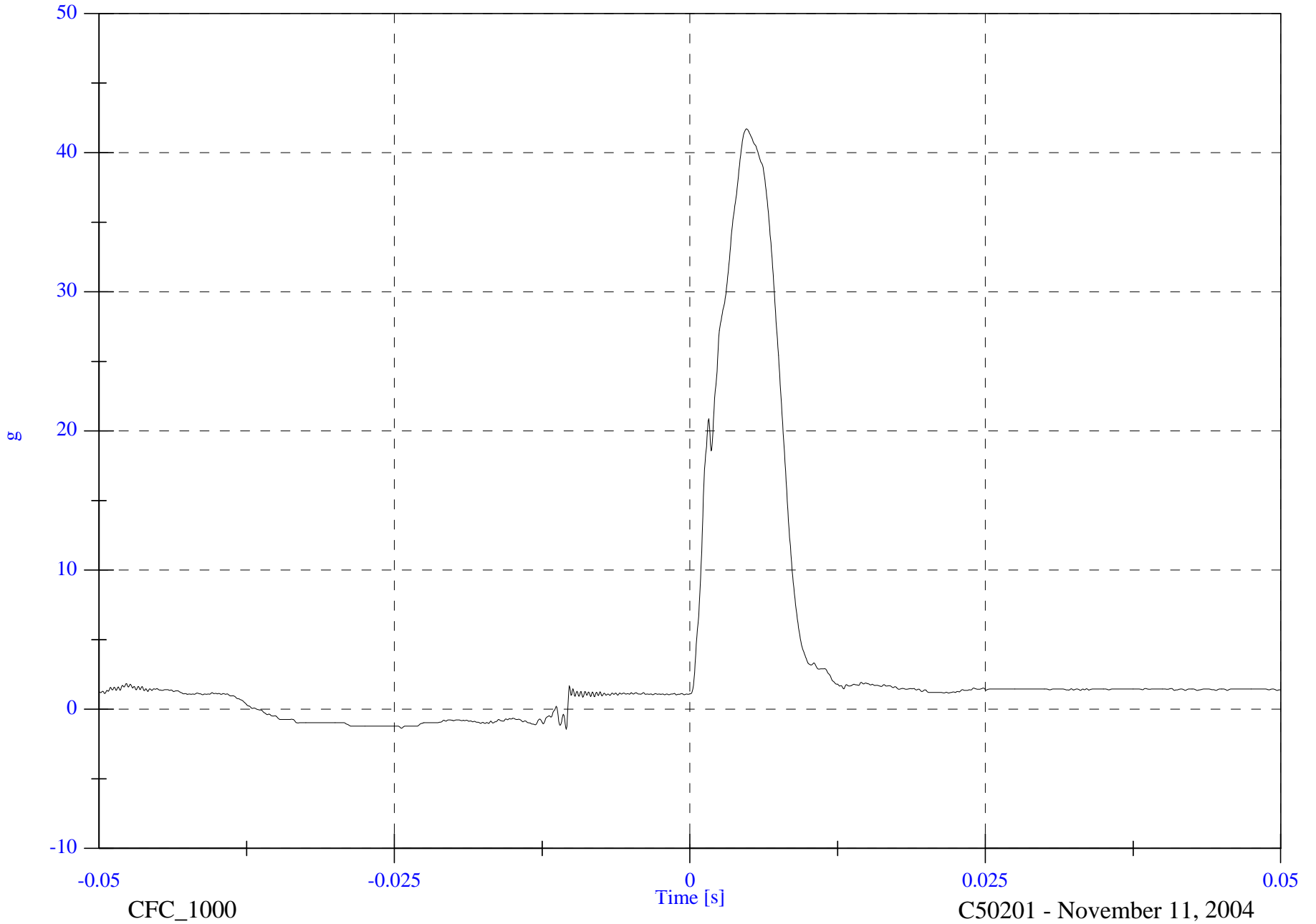
C50201 - November 11, 2004

FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

Headform Z Acceleration

Max: 41.7 [g] at 0.005 [s]

Min: -1.4 [g] at -0.010 [s]



C50201 Driver Side BP2 Impact Plot #3

8754+FMH-01

FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

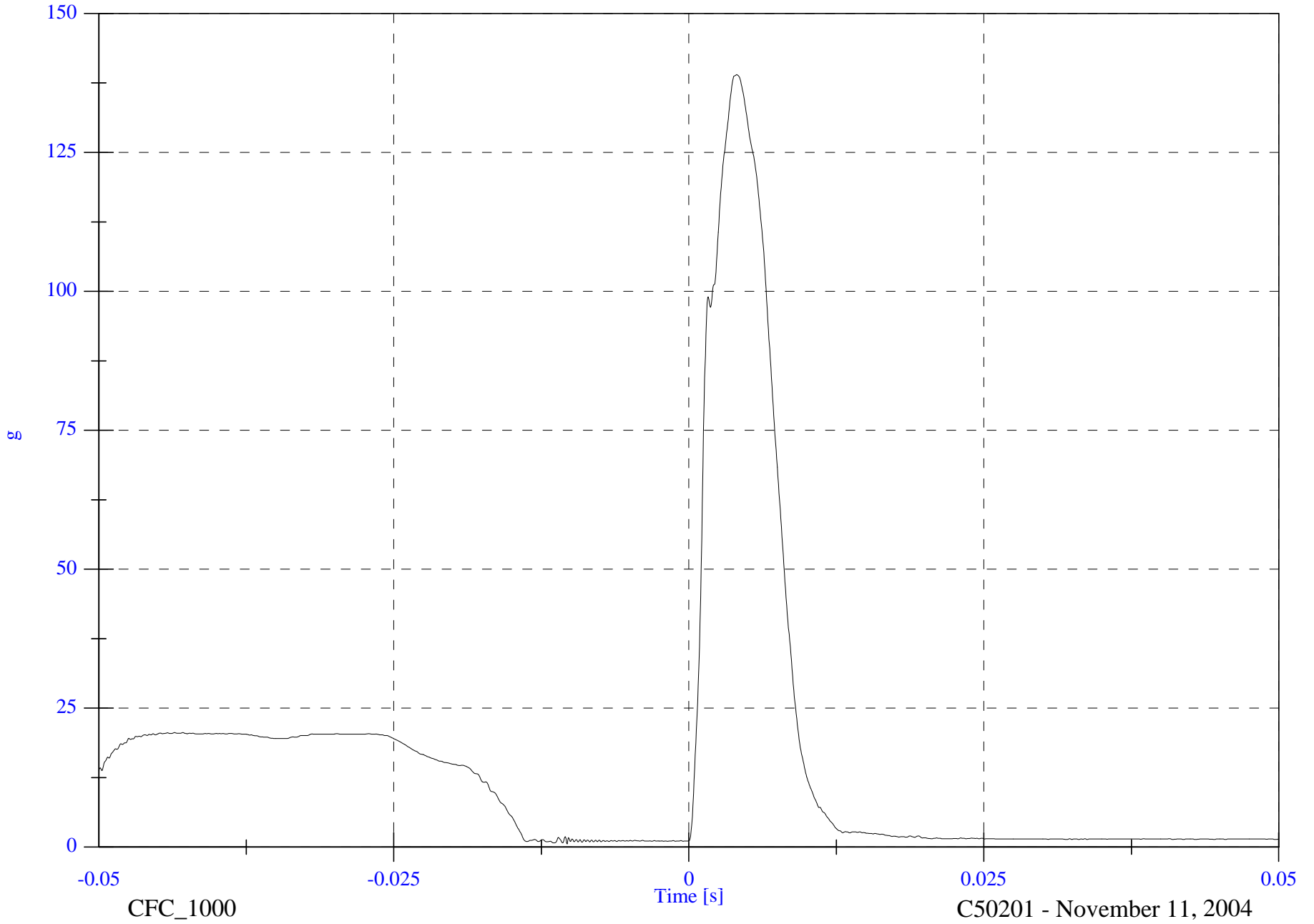
Headform Resultant

Max: 139.0 [g] at 0.004 [s]

Min: 0.5 [g] at -0.010 [s]

C50201 Driver Side BP2 Impact Plot #4

8754-FMH-01



FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

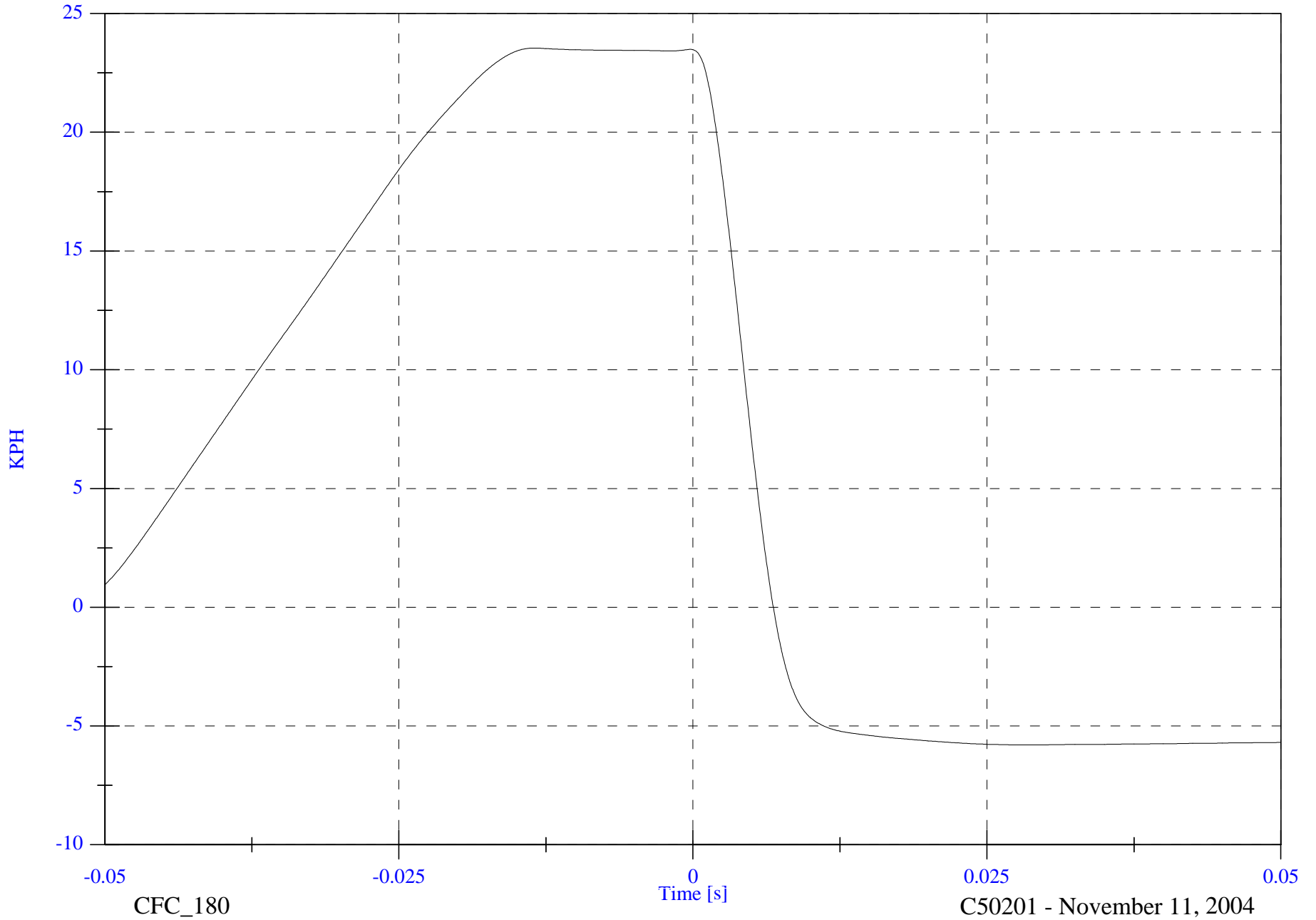
Headform Velocity

Max: 23.5 [KPH] at -0.014 [s]

Min: -5.8 [KPH] at 0.029 [s]

C50201 Driver Side BP2 Impact Plot #5

8754+FMH-01



CFC\_180

C50201 - November 11, 2004



PRE-IMPACT BP2



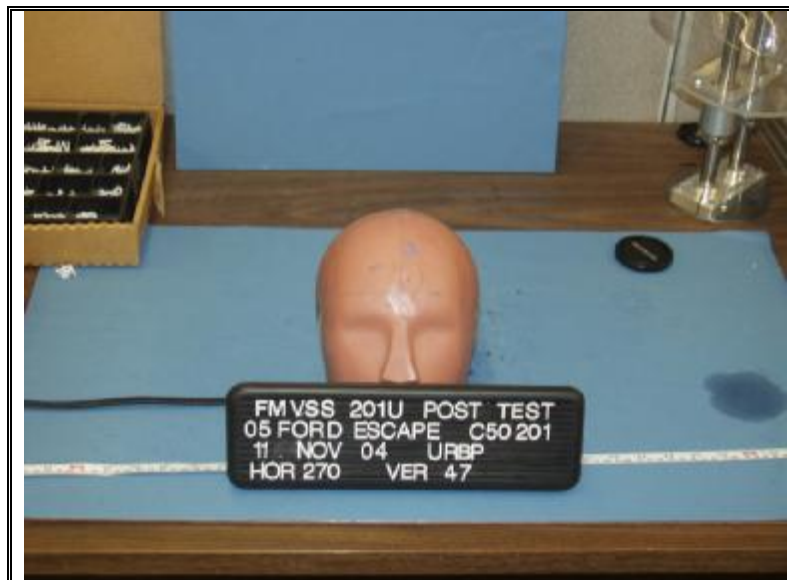
POST-IMPACT BP2



VEHICLE YEAR/MAKE/MODEL/STYLE:	2005 Ford Escape, 4-door
VIN:	1FMYU02Z25KB04029
DATE OF MANUFACTURE:	06/04 (SEE CERTIFICATION LABEL)
COLOR:	Black

Test Number:	09
Test Date:	11/11/04
Target Location:	Upper Roof
Target Code:	URBP
Horizontal Impact Angle:	270°
Vertical Impact Angle:	47°
Ambient Temperature:	23.6°C
Relative Humidity:	26.4
Time of Impact:	11:00
Headform Number:	805

Impact Point Description (from lower midpoint on midsagittal line)			
On Centerline	9	mm right	x mm left
On Centerline	39	mm up	



POST-IMPACT URBP HEADFORM

Free Motion HIC	962.7
HIC(d)	892.7
Impact Velocity (kph)	23.34
HIC T1 (msec)	4.0
HIC T2 (msec)	10.5

# FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE C50201 - URBP

FMH Headform 0805

Location: URBP

Test Date: November 11, 2004

Work File: URBP

## -----TEST RESULTS-----

Lab Temperature: 23.6 C

HICd: 892.7

Lab Humidity: 26.4 %

HIC (36ms): 962.7

Velocity at Impact: 23.34 KPH

t1: 4.0 msec

t2: 10.5 msec

Free Flight Distance: 216.23 mm

Duration: 6.5 msec

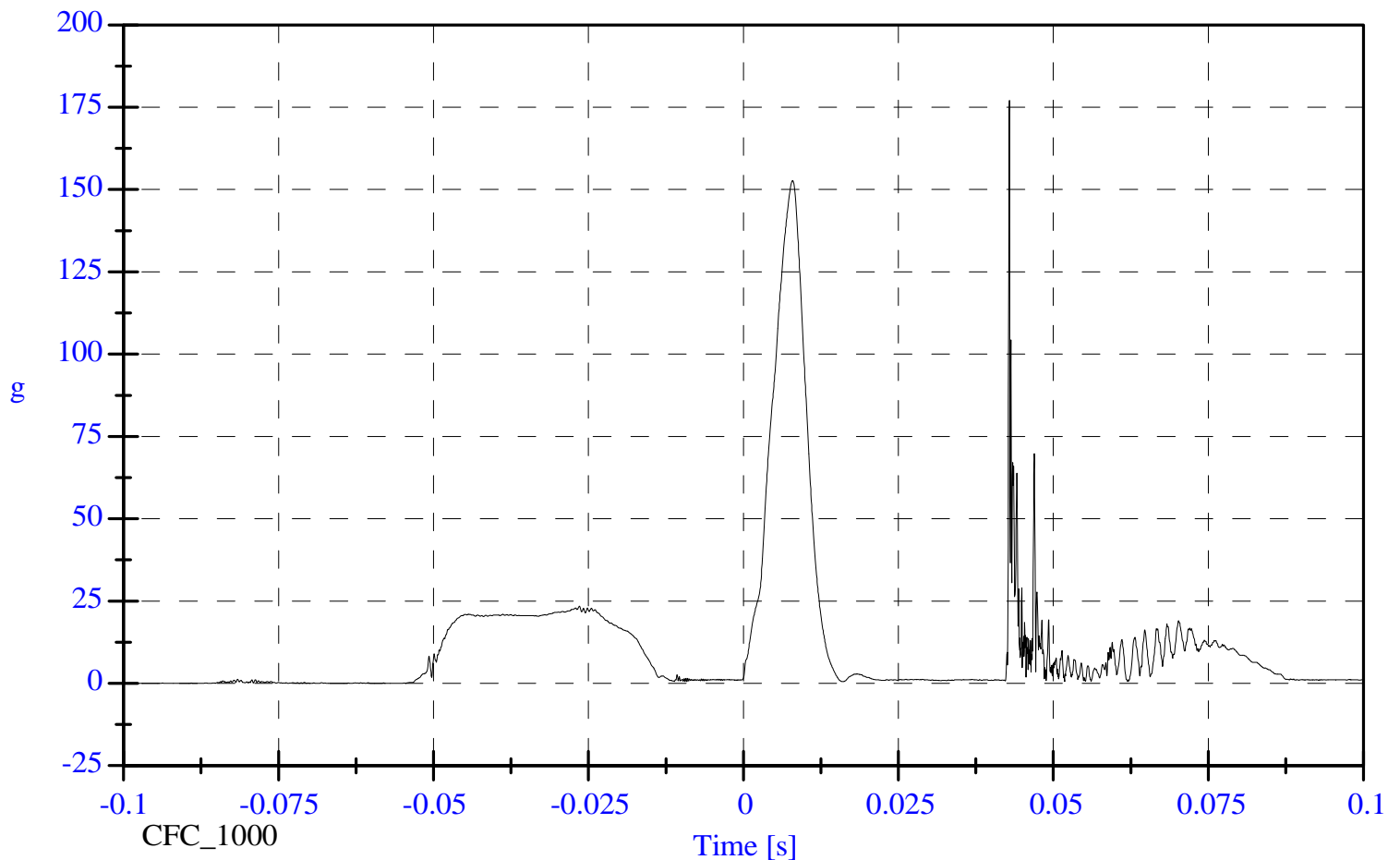
Average Acceleration: 11.0 g

FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

Max: 177.1 [g] at 0.043 [s]

Headform Resultant

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



FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

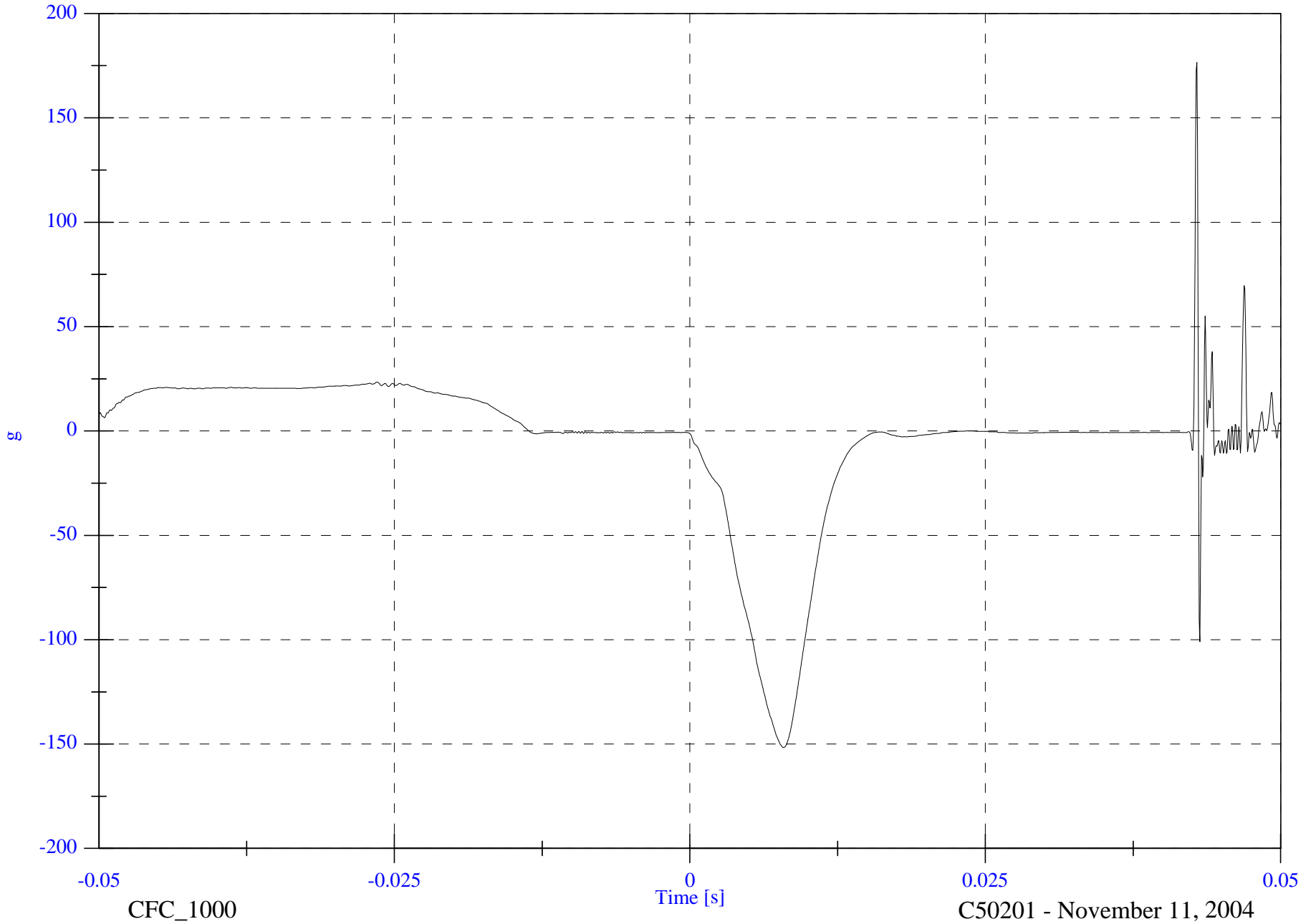
Headform X Acceleration

Max: 176.6 [g] at 0.043 [s]

Min: -151.7 [g] at 0.008 [s]

C50201 Driver Side URBP Impact Plot #1

8754-FMH-01



CFC\_1000

C50201 - November 11, 2004

FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

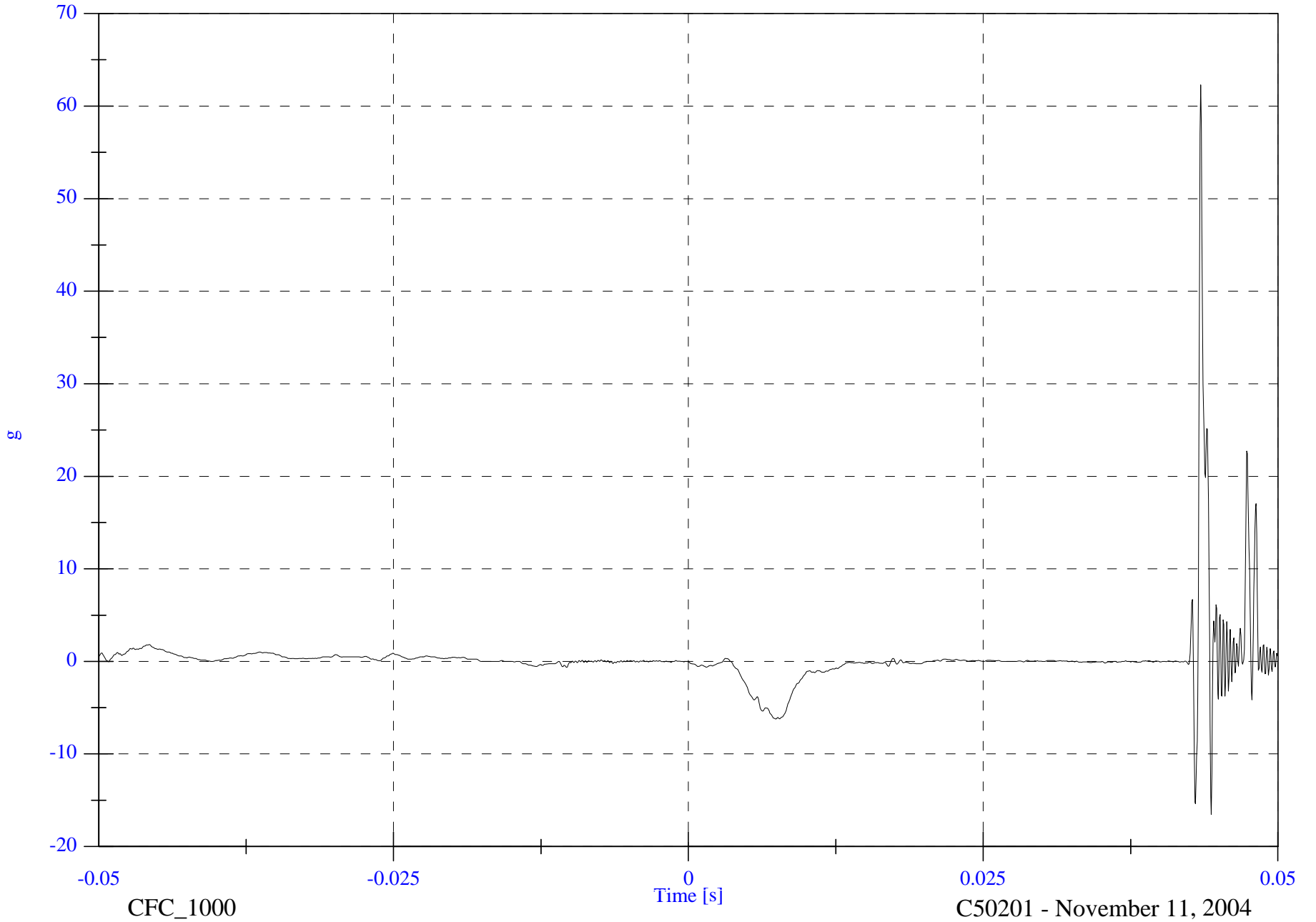
Headform Y Acceleration

Max: 62.3 [g] at 0.043 [s]

Min: -16.5 [g] at 0.044 [s]

C50201 Driver Side URBP Impact Plot #2

8754-FMH-01



CFC\_1000

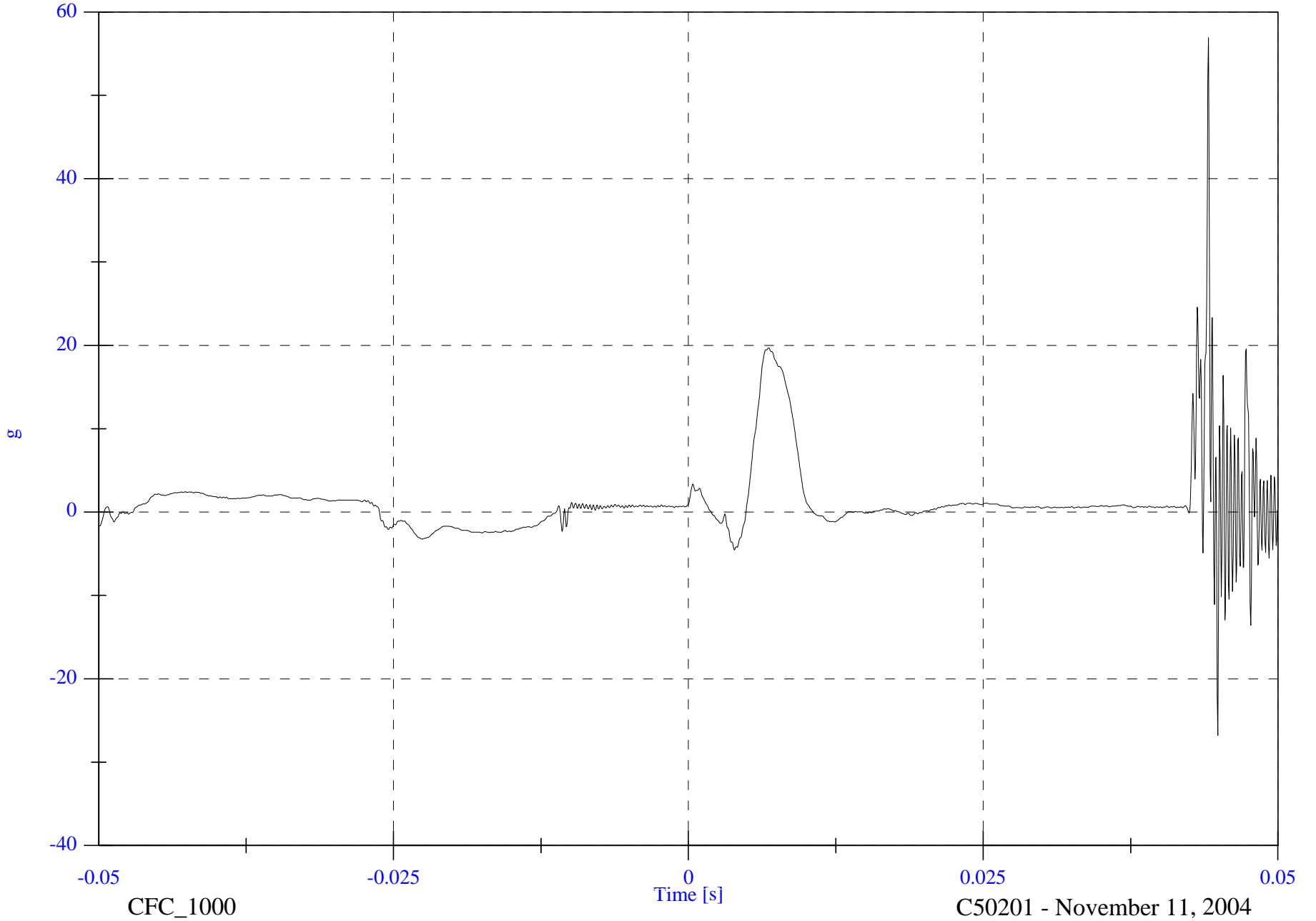
C50201 - November 11, 2004

FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

Headform Z Acceleration

Max: 56.9 [g] at 0.044 [s]

Min: -26.8 [g] at 0.045 [s]



C50201 Driver Side URBP Impact Plot #3

8754-FMH-01

CFC\_1000

C50201 - November 11, 2004

FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

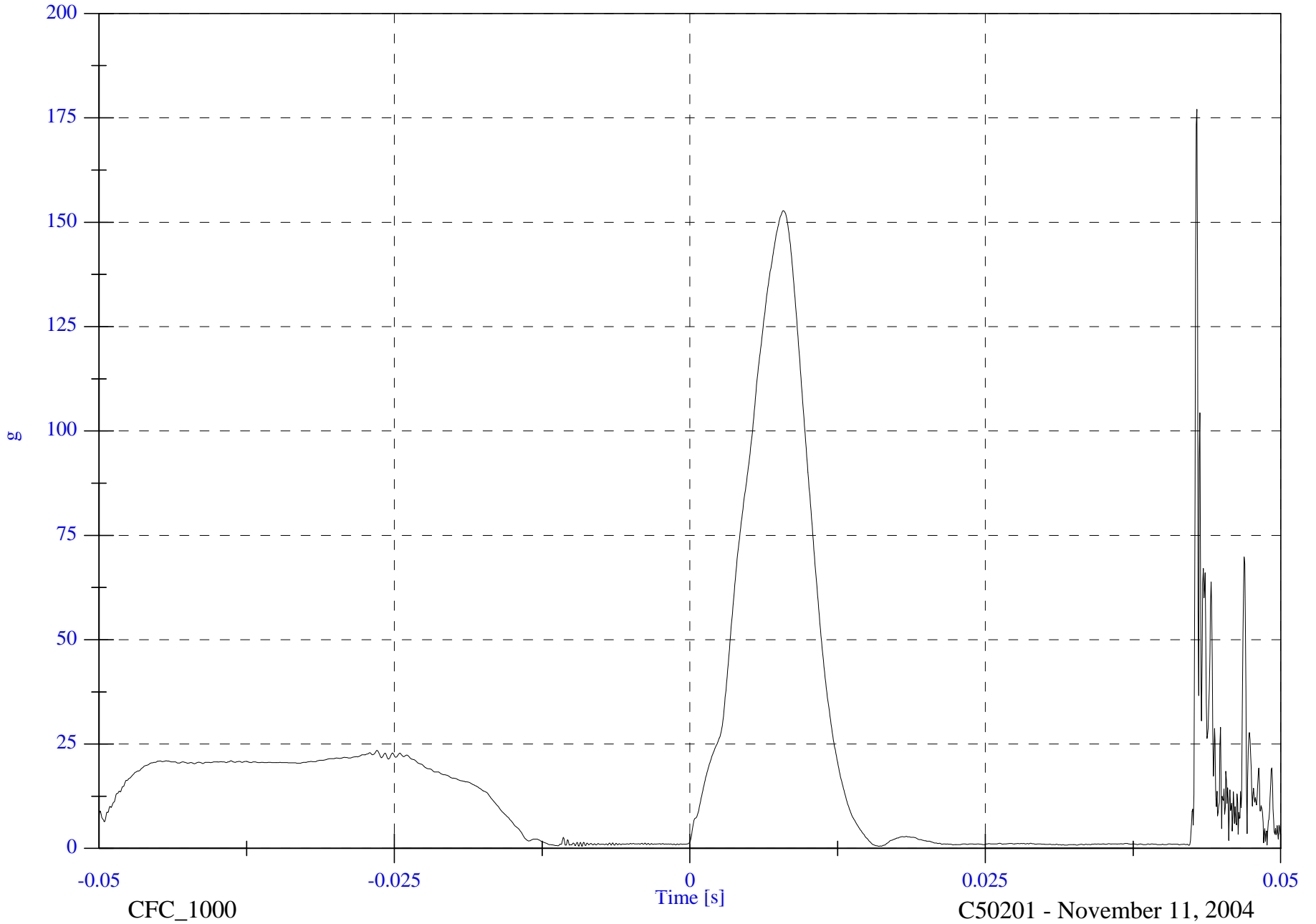
Headform Resultant

Max: 177.1 [g] at 0.043 [s]

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

C50201 Driver Side URBP Impact Plot #4

8754-FMH-01



CFC\_1000

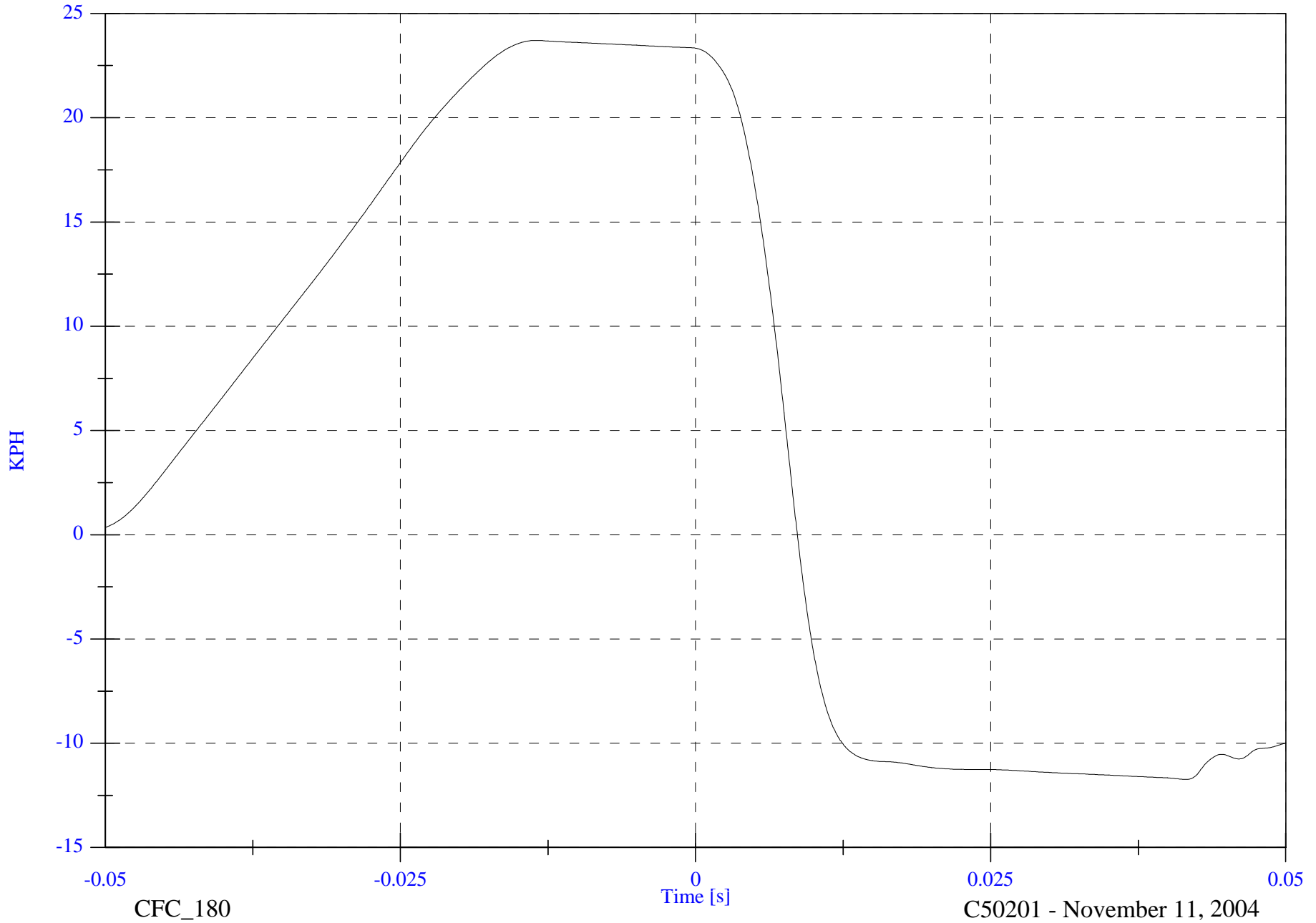
C50201 - November 11, 2004

FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

Headform Velocity

Max: 23.7 [KPH] at -0.013 [s]

Min: -11.7 [KPH] at 0.042 [s]

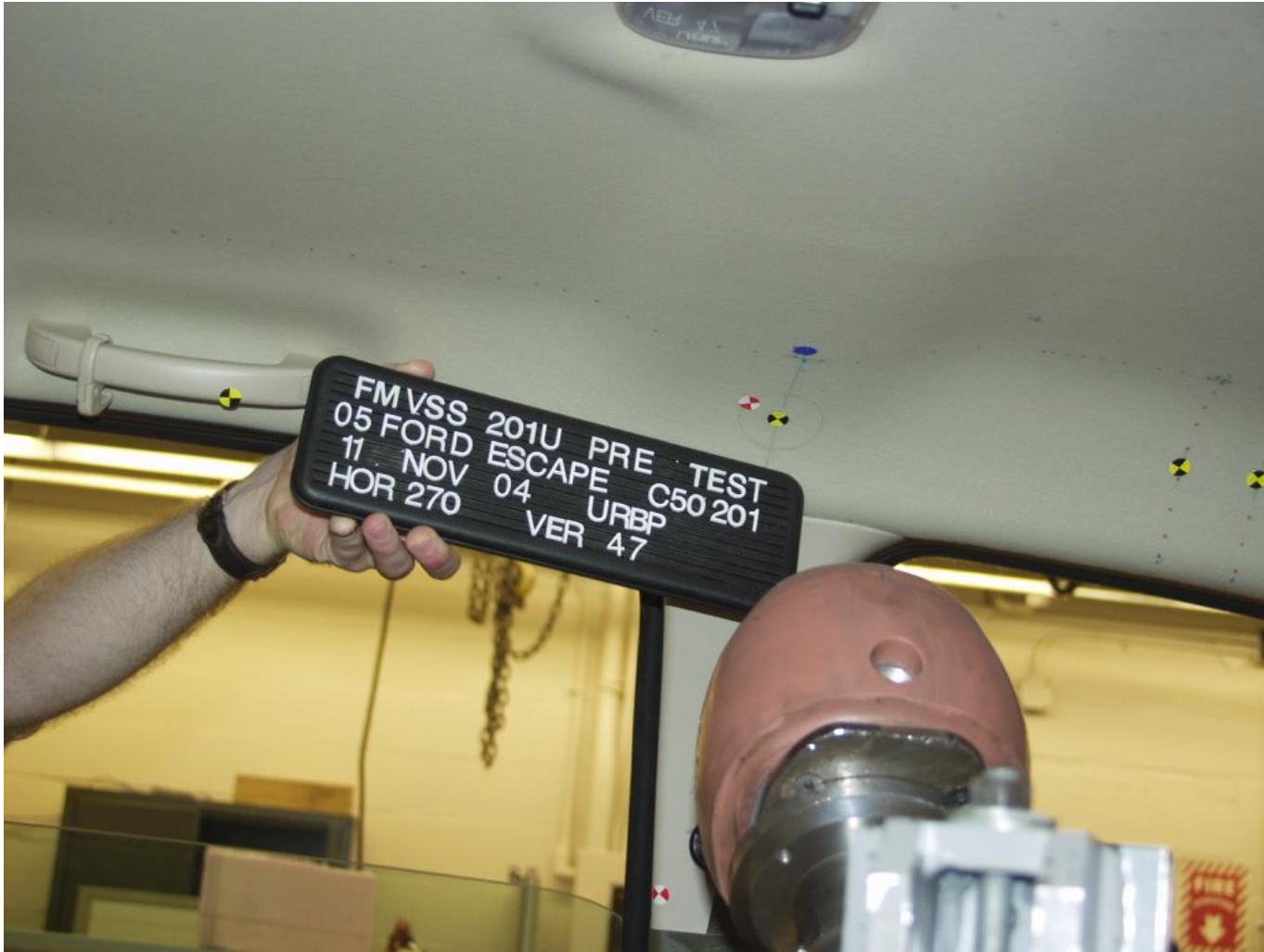


C50201 Driver Side URBP Impact Plot #5

8754-FMH-01

CFC\_180

C50201 - November 11, 2004



PRE-IMPACT URBP



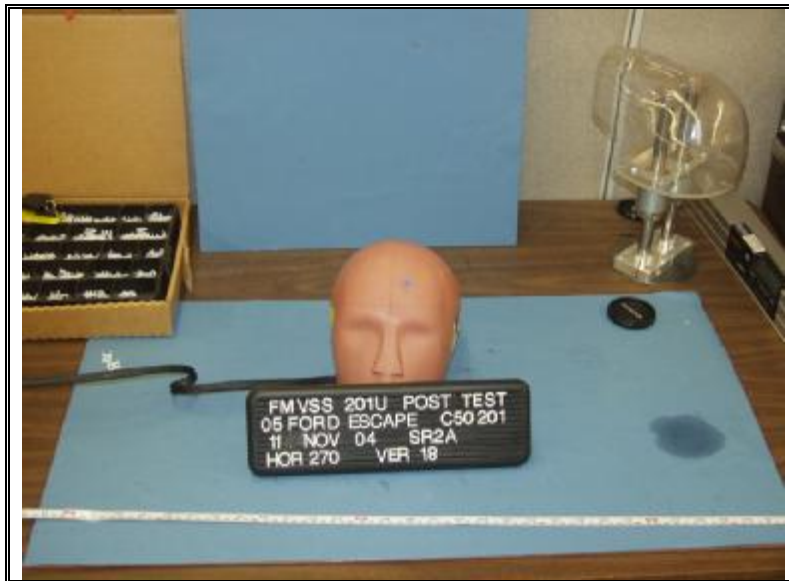


POST-IMPACT URBP

VEHICLE YEAR/MAKE/MODEL/STYLE:	2005 Ford Escape, 4-door
VIN:	1FMYU02Z25KB04029
DATE OF MANUFACTURE:	06/04 (SEE CERTIFICATION LABEL)
COLOR:	Black

Test Number:	10
Test Date:	11/11/04
Target Location:	Side Rail
Target Code:	SR2A
Horizontal Impact Angle:	270°
Vertical Impact Angle:	18°
Ambient Temperature:	22.8°C
Relative Humidity:	24.5
Time of Impact:	11:30
Headform Number:	1255

Impact Point Description (from lower midpoint on midsagittal line)			
On Centerline	15	mm right	x mm left
On Centerline	25	mm up	



POST-IMPACT SR2A HEADFORM

Free Motion HIC	516.4
HIC(d)	556.0
Impact Velocity (kph)	23.47
HIC T1 (msec)	3.8
HIC T2 (msec)	10.8

# FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE C50201 - SR2A

FMH Headform 1255

Location: SR2A

Test Date: November 11, 2004

Work File: SR2A

## -----TEST RESULTS-----

Lab Temperature: 22.8 C

HICd: 556.0

Lab Humidity: 24.5 %

HIC (36ms): 516.4

Velocity at Impact: 23.47 KPH

t1: 3.8 msec

t2: 10.8 msec

Free Flight Distance: 219.68 mm

Duration: 6.9 msec

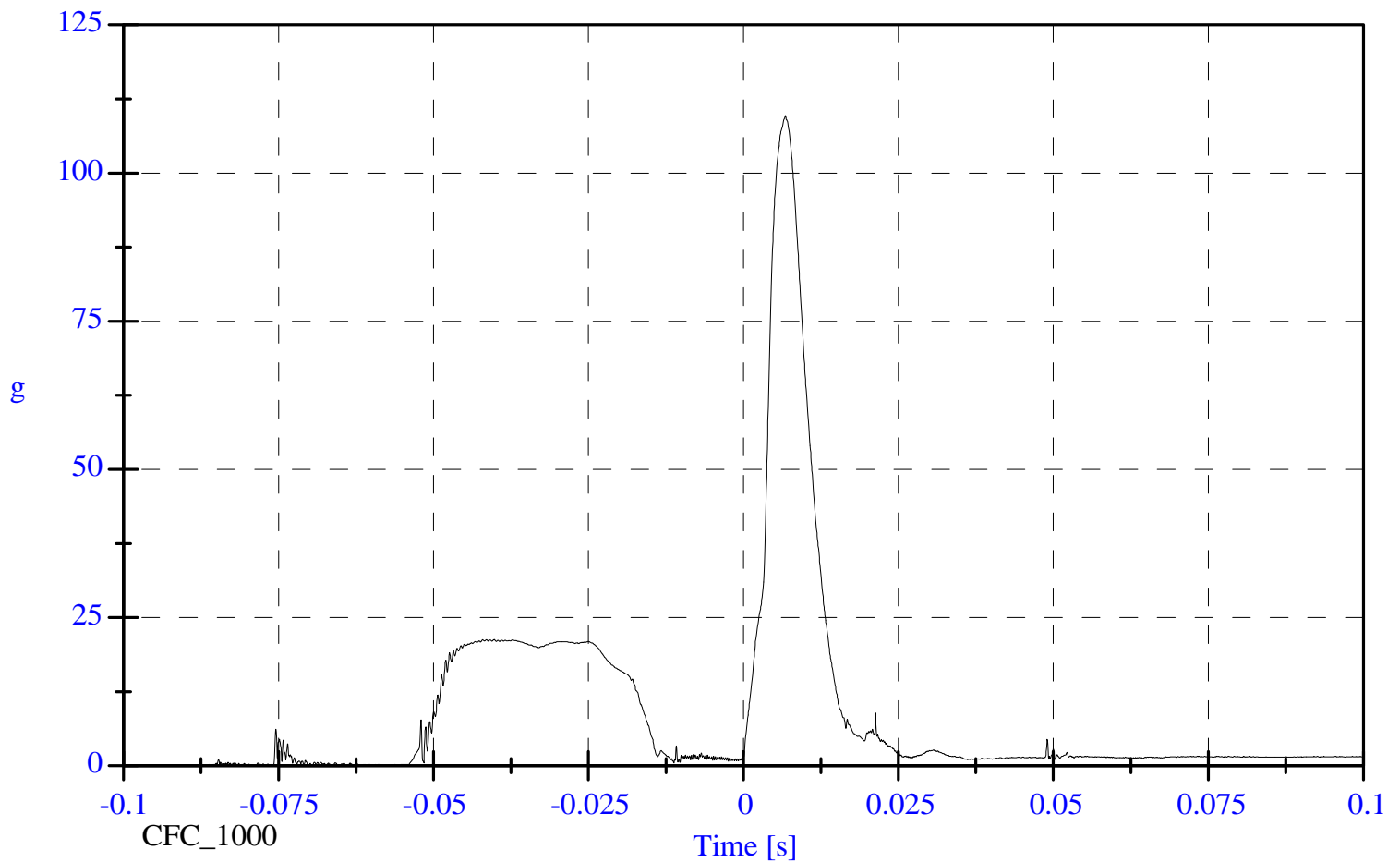
Average Acceleration: 8.5 g

FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

Max: 109.6 [g] at 0.007 [s]

Headform Resultant

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

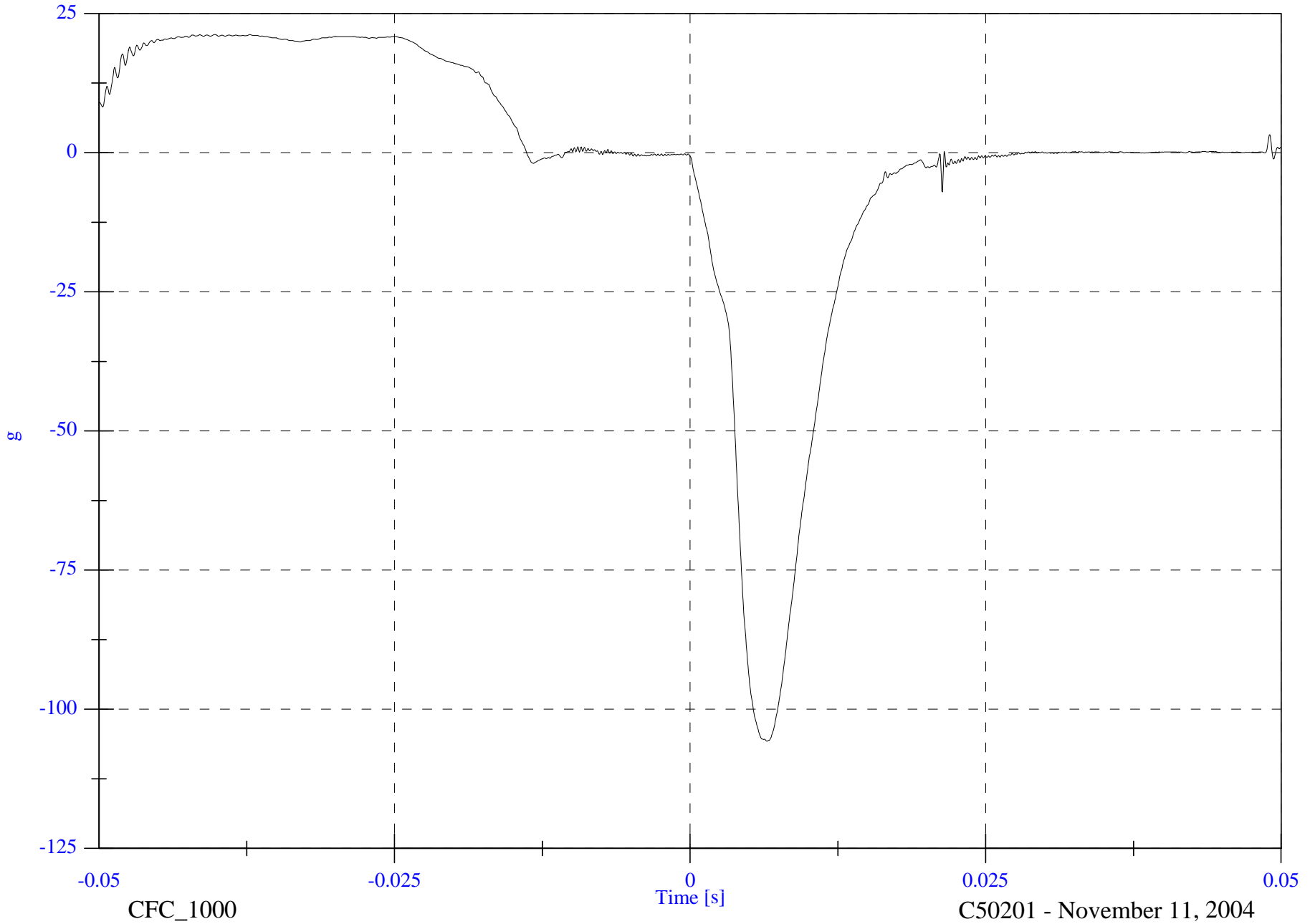


FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

Headform X Acceleration

Max: 21.2 [g] at -0.040 [s]

Min: -105.8 [g] at 0.006 [s]



C50201 Driver Side SR2A Impact Plot #1

8754-FMH-01

CFC\_1000

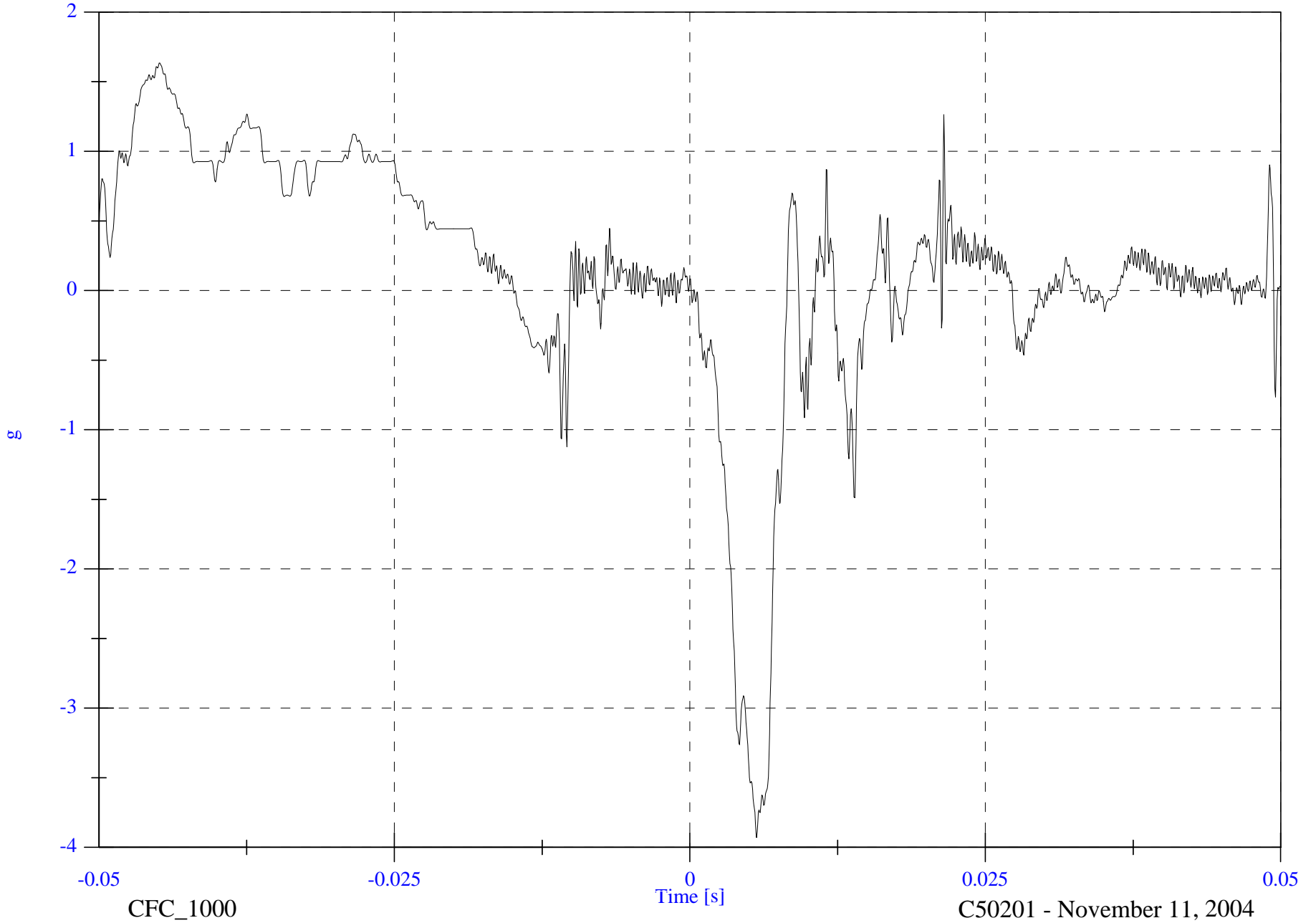
C50201 - November 11, 2004

FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

Headform Y Acceleration

Max: 1.6 [g] at -0.045 [s]

Min: -3.9 [g] at 0.006 [s]



C50201 Driver Side SR2A Impact Plot #2

8754-FMH-01

CFC\_1000

Time [s]

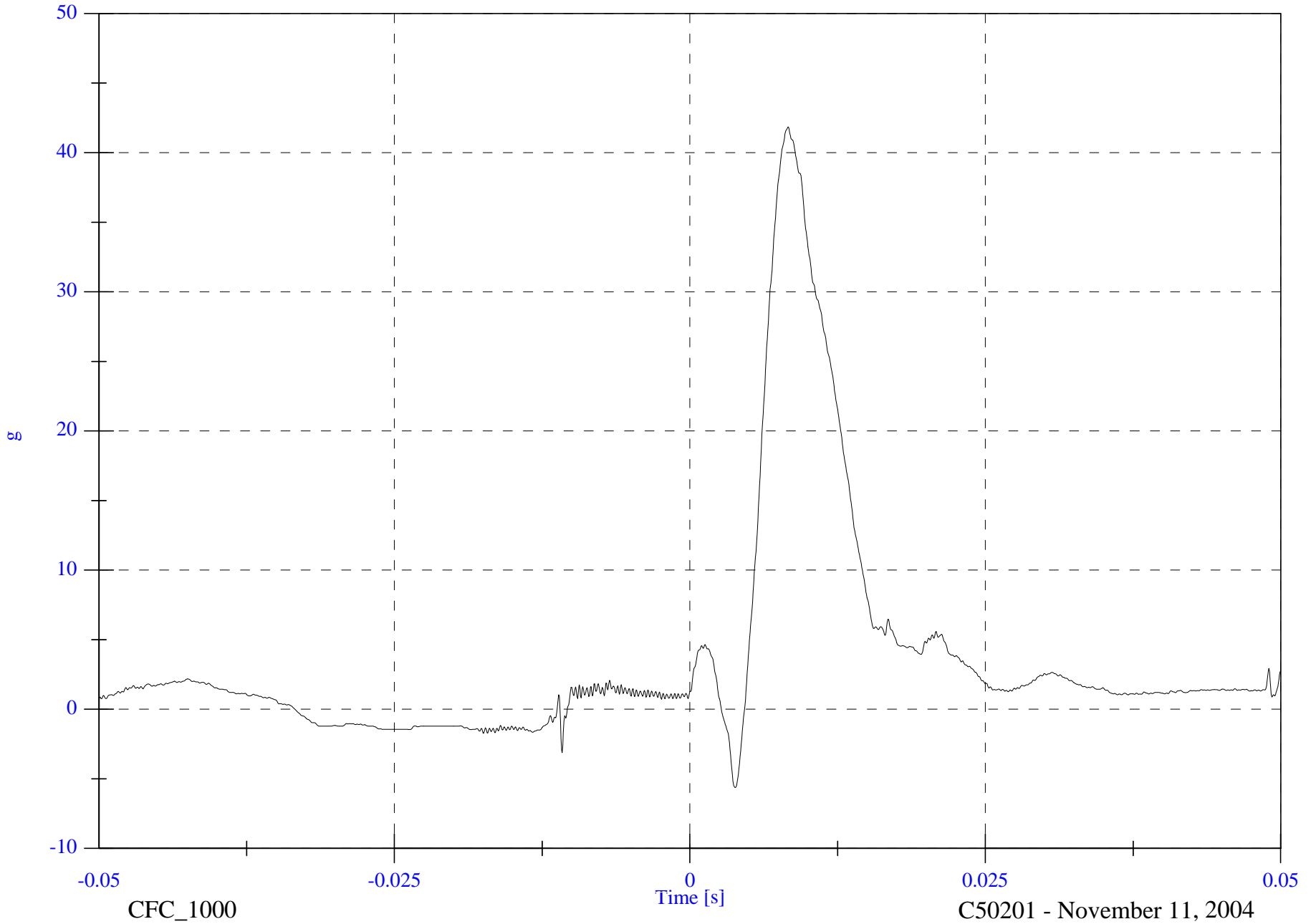
C50201 - November 11, 2004

FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

Headform Z Acceleration

Max: 41.9 [g] at 0.008 [s]

Min: -5.6 [g] at 0.004 [s]



C50201 Driver Side SR2A Impact Plot #3

8754-FMH-01

CFC\_1000

C50201 - November 11, 2004

FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

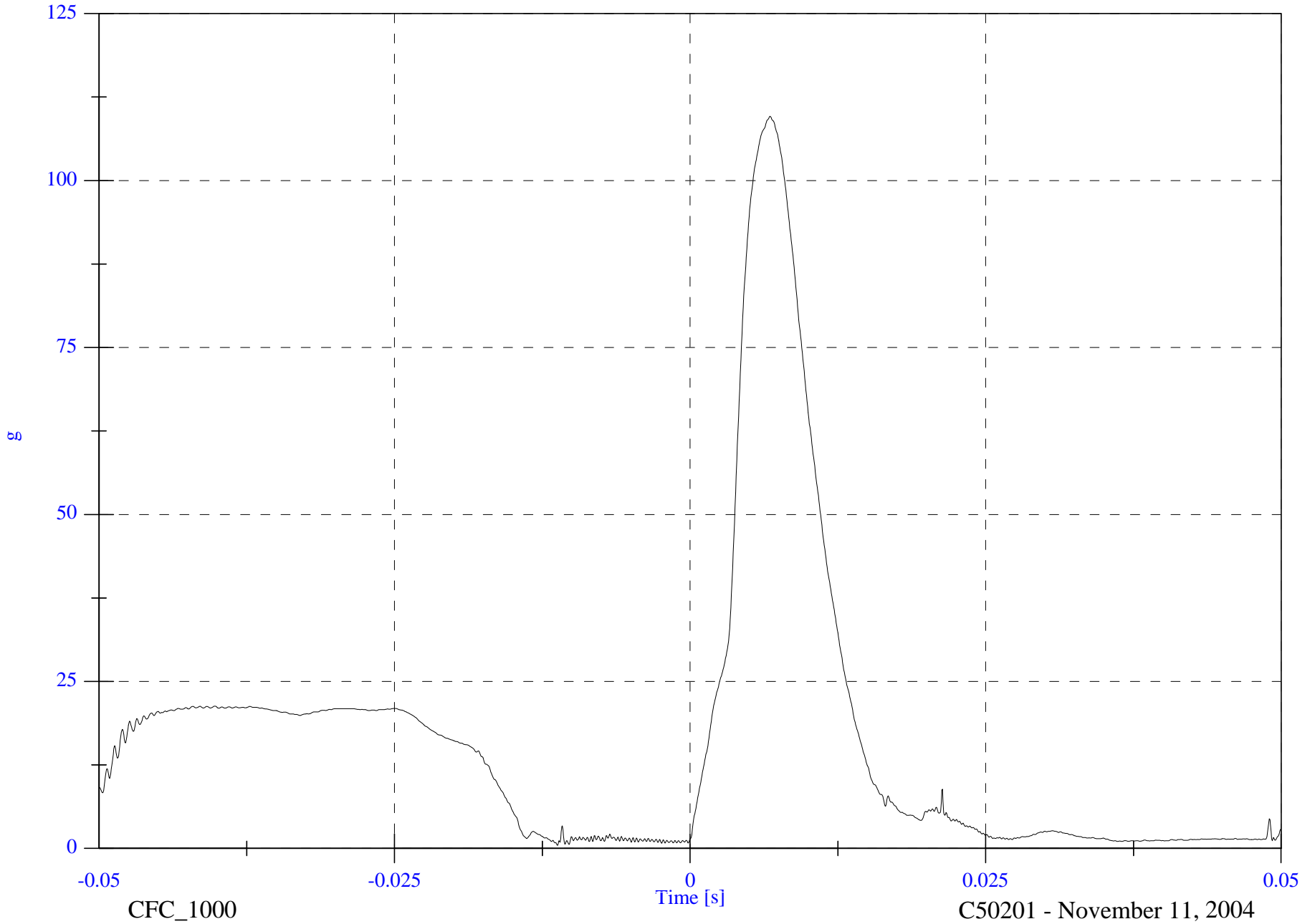
Headform Resultant

Max: 109.6 [g] at 0.007 [s]

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

C50201 Driver Side SR2A Impact Plot #4

8754-FMH-01

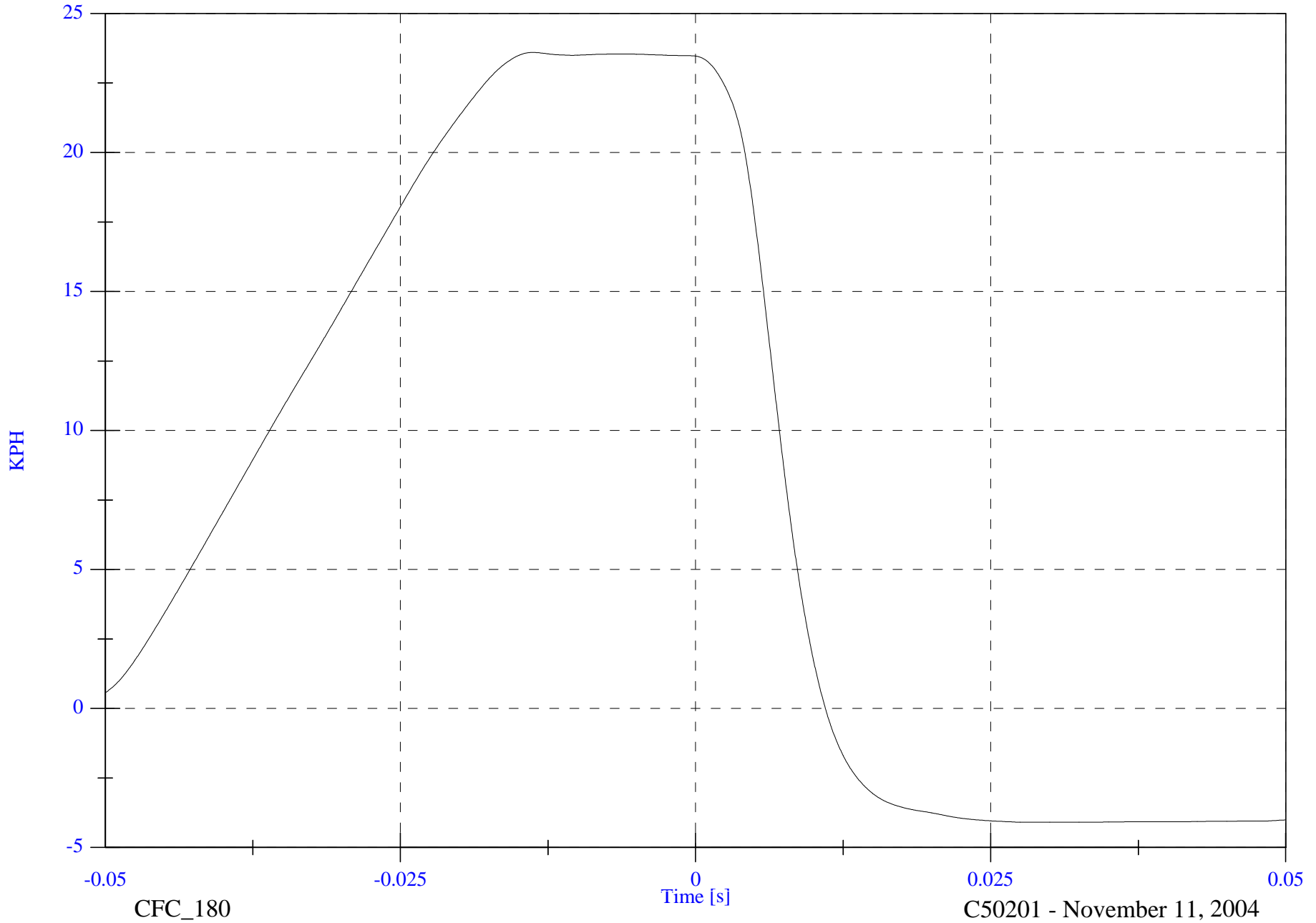


FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

Headform Velocity

Max: 23.6 [KPH] at -0.014 [s]

Min: -4.1 [KPH] at 0.031 [s]



C50201 Driver Side SR2A Impact Plot #5

8754-FMH-01

CFC\_180

C50201 - November 11, 2004





PRE-IMPACT SR2A



POST-IMPACT SR2A

VEHICLE YEAR/MAKE/MODEL/STYLE:	2005 Ford Escape, 4-door
VIN:	1FMYU02Z25KB04029
DATE OF MANUFACTURE:	06/04 (SEE CERTIFICATION LABEL)
COLOR:	Black

Test Number:	11
Test Date:	11/15/05
Target Location:	A-Pillar
Target Code:	AP1 Driver
Horizontal Impact Angle:	246°
Vertical Impact Angle:	30°
Ambient Temperature:	22.3°C
Relative Humidity:	45.1
Time of Impact:	13:28
Headform Number:	0355

Impact Point Description (from lower midpoint on midsagittal line)			
On Centerline	17	mm right	x mm left
On Centerline	24	mm up	



POST-IMPACT AP1 Driver HEADFORM

Free Motion HIC	1207.2
HIC(d)	1077.2
Impact Velocity (kph)	23.70
HIC T1 (msec)	3.1
HIC T2 (msec)	8.1

# FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE C50201 - AP1

FMH Headform 355

Location: AP1

Test Date: November 15, 2005

Work File: AP1 D

## -----TEST RESULTS-----

Lab Temperature: 22.3 C

HICd: 1077.2

Lab Humidity: 45.1 %

HIC (36ms): 1207.2

Velocity at Impact: 23.70 KPH

t1: 3.1 msec

t2: 8.1 msec

Free Flight Distance: 225.14 mm

Duration: 4.9 msec

Maximum: 180.4 g

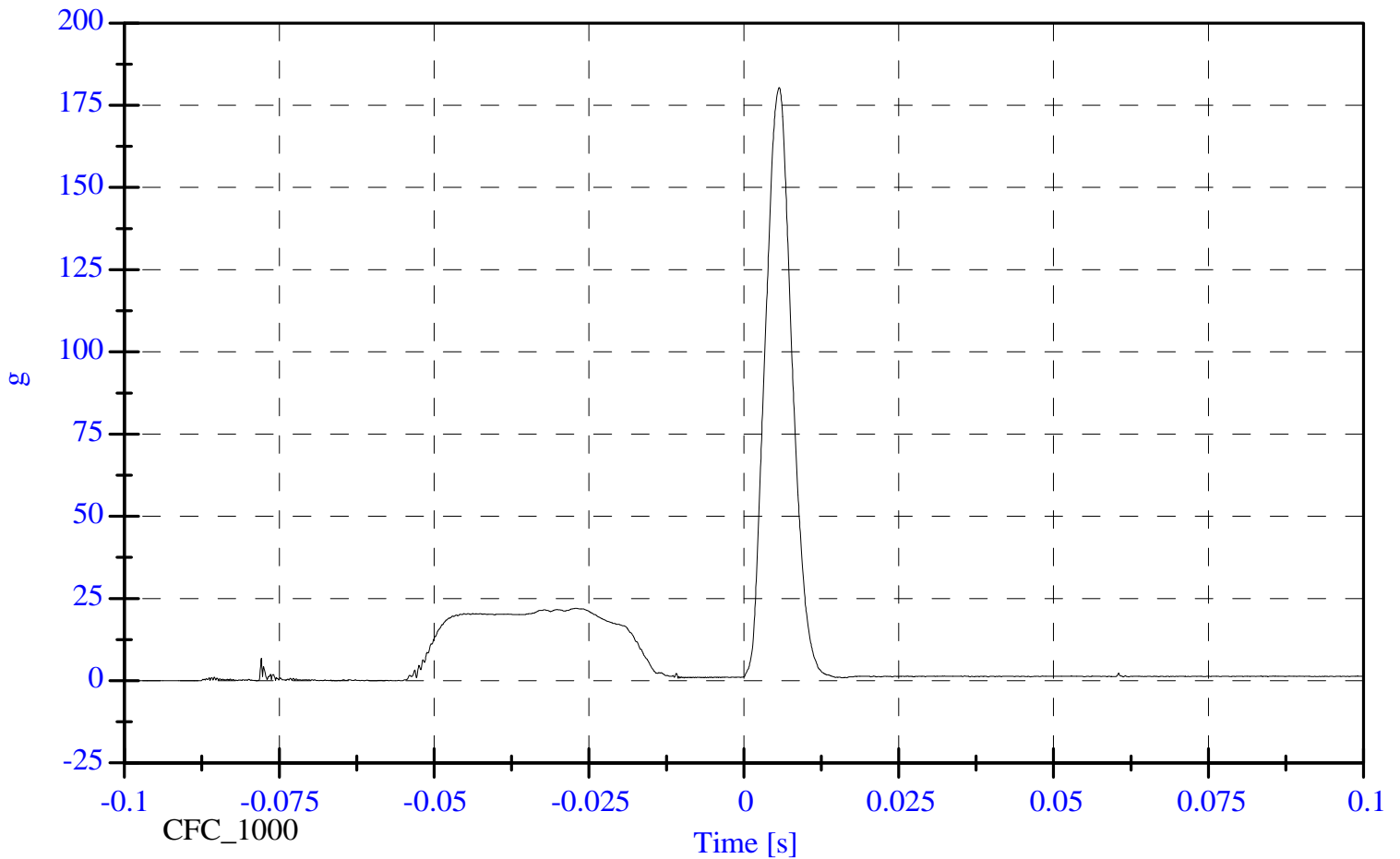
Average Acceleration: 8.7 g

FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

Max: 180.4 [g] at 0.006 [s]

Headform Resultant

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



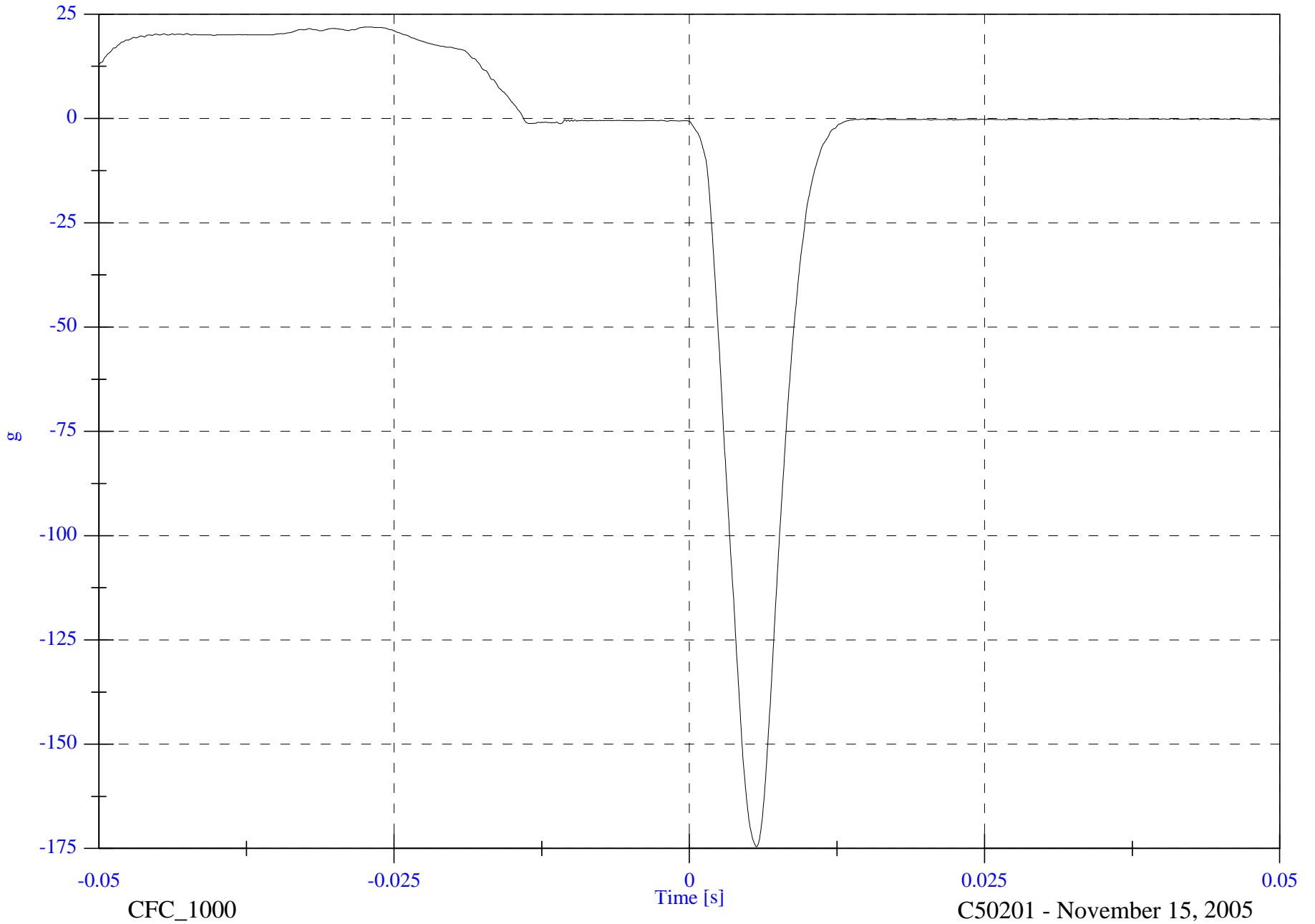
FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

Headform X Acceleration

Max: 21.9 [g] at -0.027 [s]

Min: -174.6 [g] at 0.006 [s]

C50201 Driver Side API Impact Plot #1



CFC\_1000

C50201 - November 15, 2005

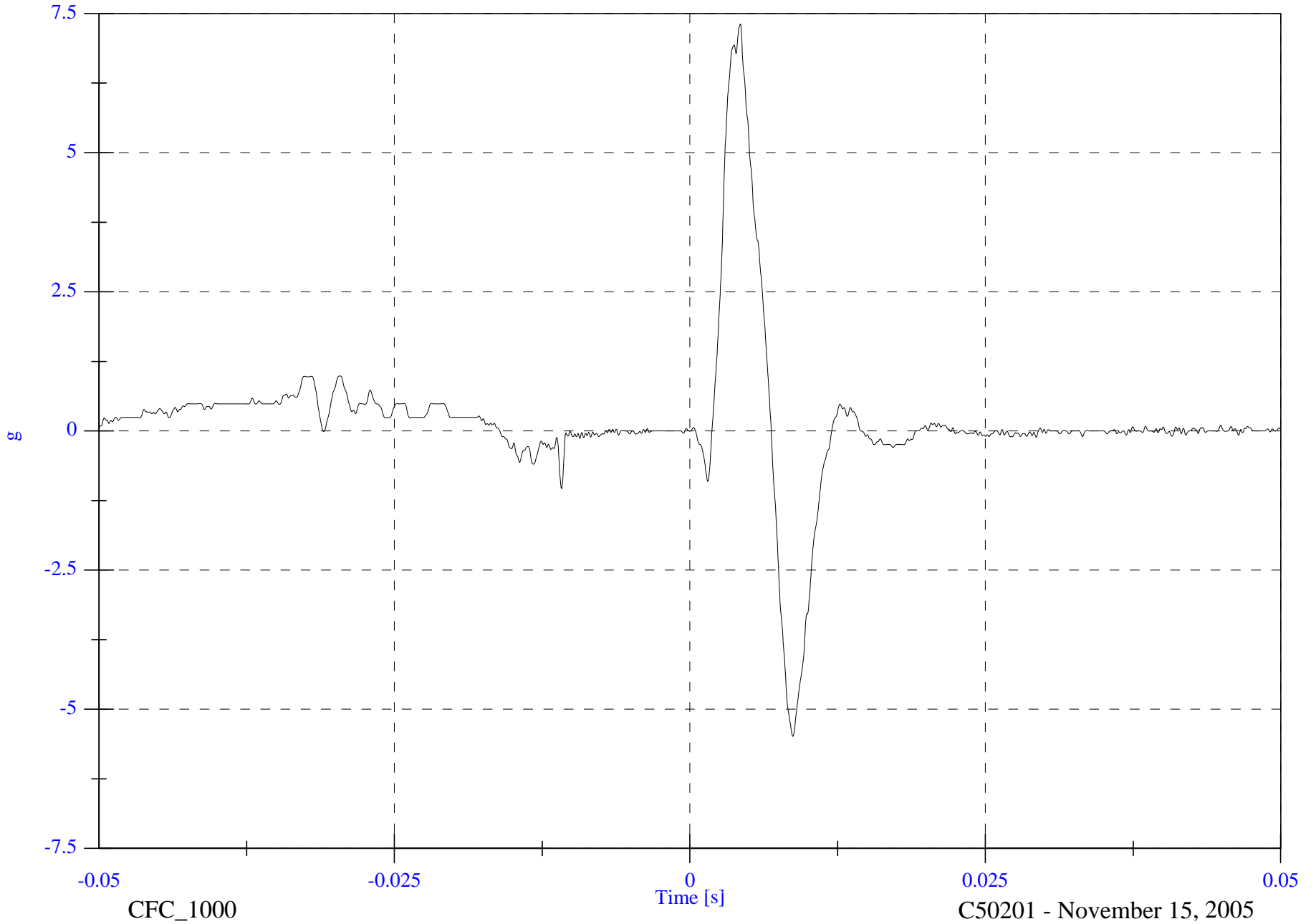
FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

Headform Y Acceleration

Max: 7.3 [g] at 0.004 [s]

Min: -5.5 [g] at 0.009 [s]

C50201 Driver Side API Impact Plot #2



CFC\_1000

C50201 - November 15, 2005

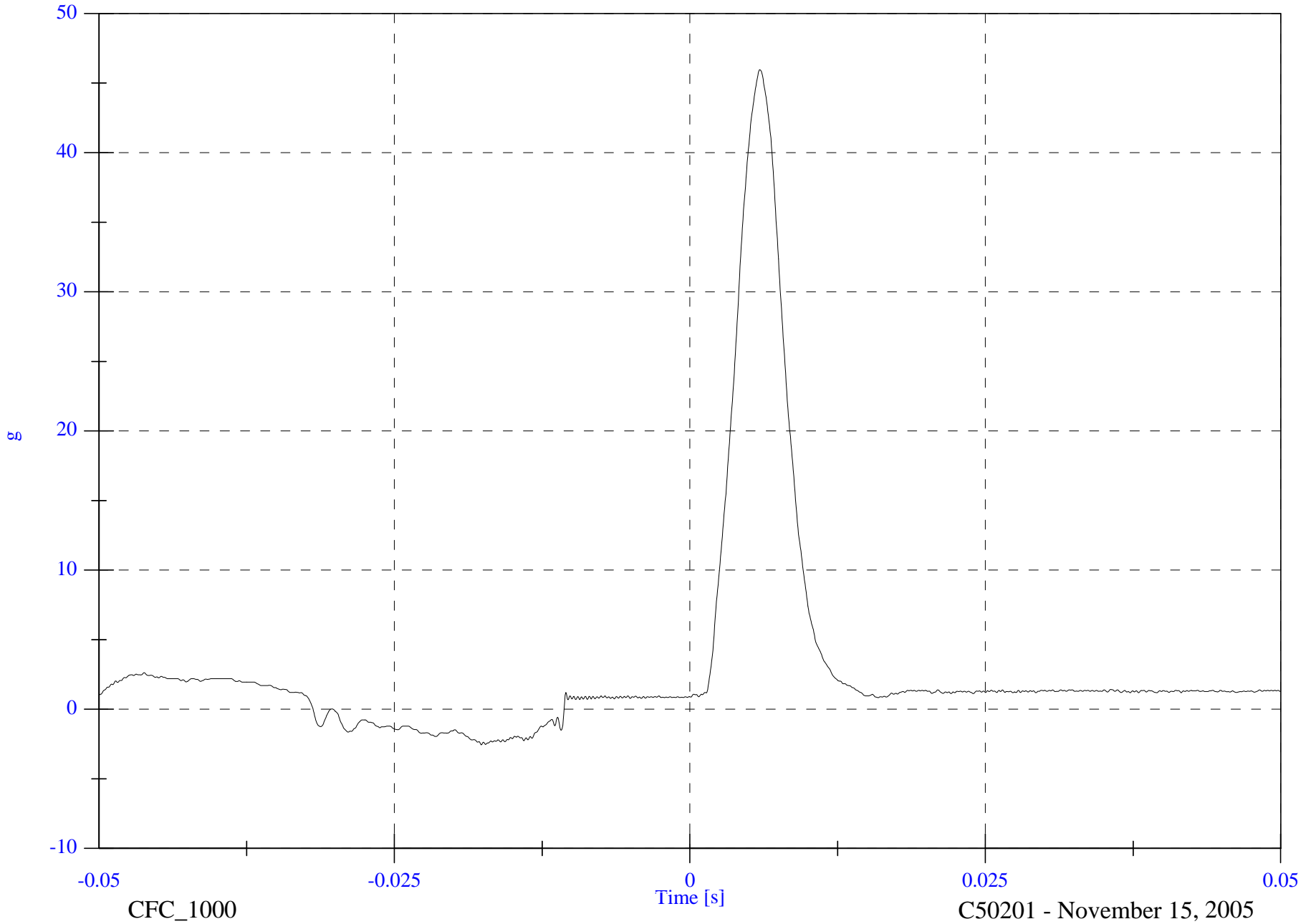
FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

Headform Z Acceleration

Max: 46.0 [g] at 0.006 [s]

Min: -2.6 [g] at -0.018 [s]

C50201 Driver Side API Impact Plot #3



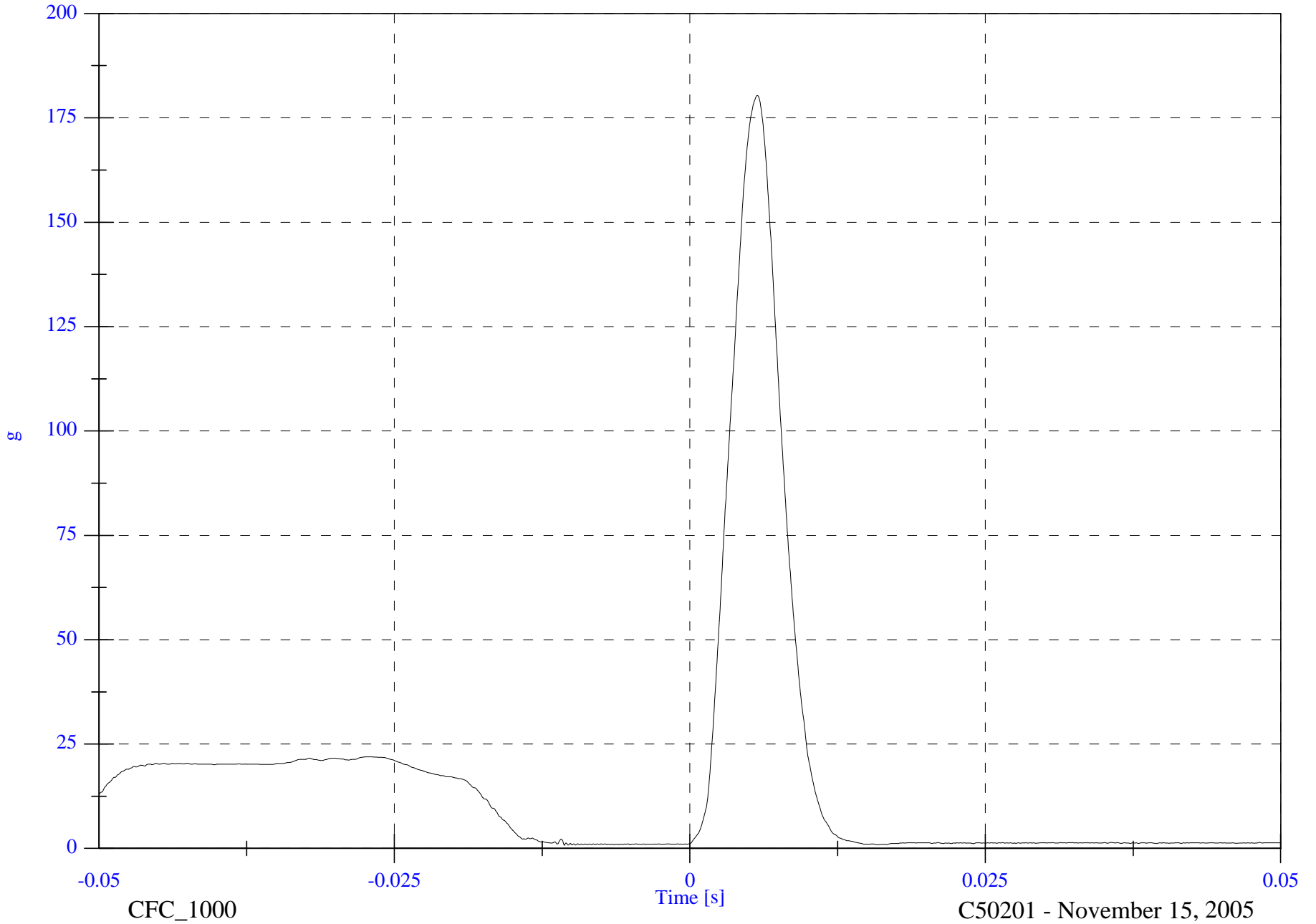
FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

Headform Resultant

Max: 180.4 [g] at 0.006 [s]

Min: 0.7 [g] at -0.011 [s]

C50201 Driver Side API Impact Plot #4



CFC\_1000

C50201 - November 15, 2005



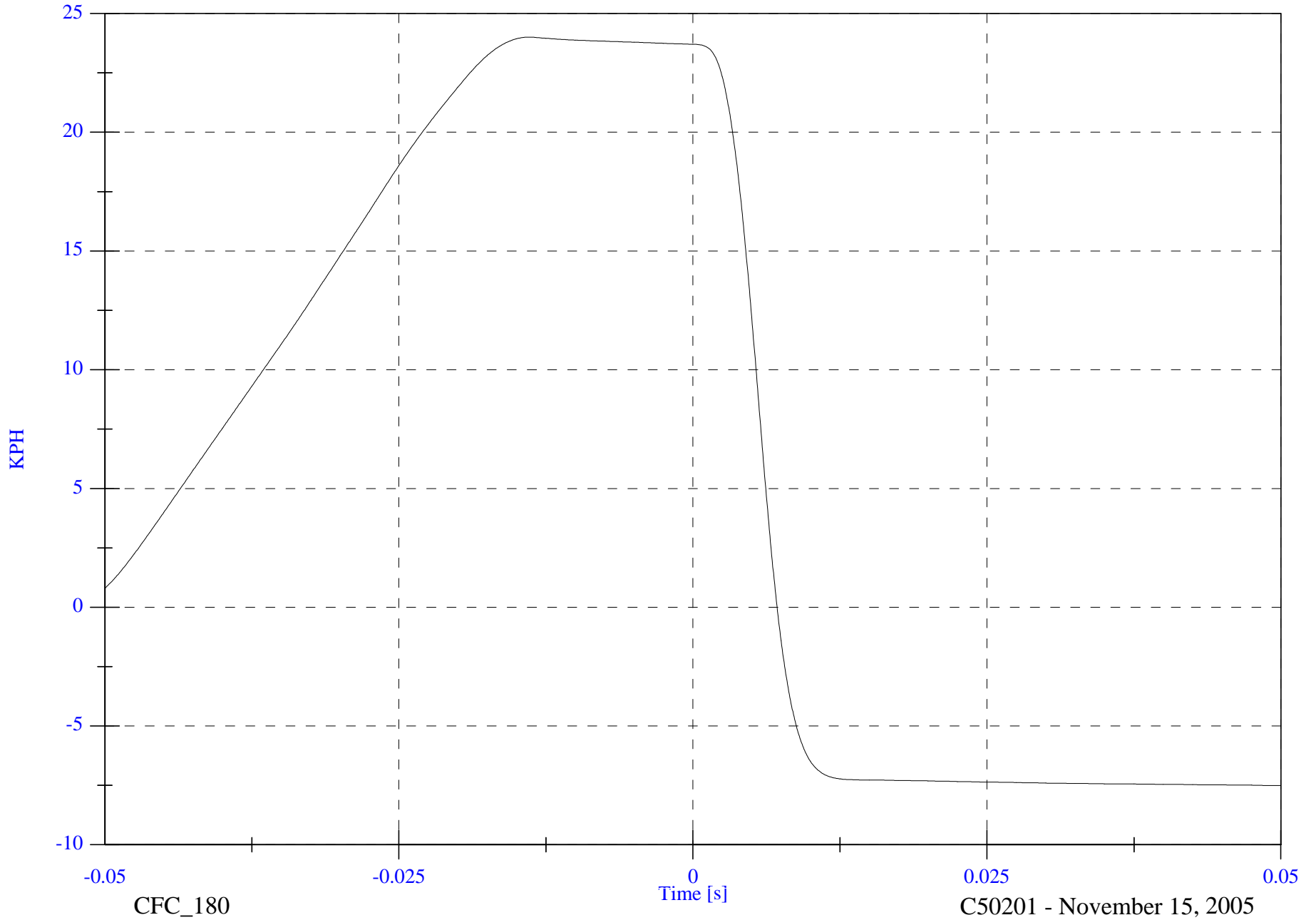
FMVSS 201U IMPACT TEST - 2005 FORD ESCAPE

Headform Velocity

Max: 24.0 [KPH] at -0.014 [s]

Min: -7.5 [KPH] at 0.050 [s]

C50201 Driver Side AP1 Impact Plot #5



CFC\_180

C50201 - November 15, 2005



**PRE-IMPACT AP1 DRIVER**



**POST-IMPACT AP1 DRIVER**



**APPENDIX A**

**PHOTOGRAPHS**

## PHOTOGRAPHS

<b>FIGURE</b>	<b>VIEW</b>
A-1	LEFT SIDE VIEW OF VEHICLE
A-2	RIGHT SIDE VIEW OF VEHICLE
A-3	3/4 FRONTAL VIEW FROM LEFT SIDE OF VEHICLE
A-4	3/4 REAR VIEW FROM RIGHT SIDE OF VEHICLE
A-5	VEHICLE'S CERTIFICATION LABEL
A-6	VEHICLE'S TIRE INFORMATION LABEL
A-7	PRE-TEST DRIVER SIDE A-PILLAR
A-8	PRE-TEST DRIVER SIDE FRONT HEADER
A-9	PRE-TEST DRIVER SIDE SIDE RAIL
A-10	PRE-TEST DRIVER SIDE B-PILLAR
A-11	PRE-TEST DRIVER SIDE OTHER PILLAR
A-12	PRE-TEST DRIVER SIDE REAR PILLAR
A-13	PRE-TEST PASSENGER SIDE A-PILLAR
A-14	PRE-TEST PASSENGER SIDE FRONT HEADER
A-15	PRE-TEST PASSENGER SIDE SIDE RAIL
A-16	PRE-TEST PASSENGER SIDE B-PILLAR
A-17	PRE-TEST PASSENGER SIDE OTHER PILLAR
A-18	PRE-TEST PASSENGER SIDE REAR PILLAR
A-19	POST-TEST DRIVER SIDE A-PILLAR
A-20	POST-TEST DRIVER SIDE FRONT HEADER
A-21	POST-TEST DRIVER SIDE SIDE RAIL
A-22	POST-TEST DRIVER SIDE B-PILLAR
A-23	POST-TEST DRIVER SIDE OTHER PILLAR
A-24	POST-TEST PASSENGER SIDE A-PILLAR
A-25	POST-TEST PASSENGER FRONT HEADER
A-26	POST-TEST PASSENGER SIDE SIDE RAIL
A-27	POST-TEST PASSENGER SIDE B-PILLAR
A-28	POST-TEST PASSENGER SIDE OTHER PILLAR
A-29	POST-TEST DRIVER SIDE A-PILLAR NOVEMBER 2005 IMPACT



Figure A-1 : LEFT SIDE VIEW OF VEHICLE





Figure A-2 : RIGHT SIDE VIEW OF VEHICLE





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



Figure A-4 : 3/4 REAR VIEW FROM RIGHT 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 OTHER PILLER



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



Figure A-13 : PRE-TEST PASSENGER SIDE A-PILLAR



Figure A-14 : PRE-TEST PASSENGER SIDE FRONT HEADER





Figure A-15 : PRE-TEST PASSENGER SIDE SIDE RAIL



Figure A-16 : PRE-TEST PASSENGER SIDE B-PILLAR



Figure A-17 : PRE-TEST PASSNGER SIDE OTHER PILLAR



Figure A-18 : PRE-TEST PASSENGER SIDE REAR PILLAR





Figure A-19 : POST-TEST DRIVER SIDE A-PILLAR



Figure A-20 : POST-TEST DRIVER SIDE FRONT HEADER



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



Figure A-22 : POST-TEST DRIVER SIDE B-PILLAR





Figure A-23 : POST-TEST DRIVER SIDE OTHER PILLER



Figure A-24 : POST-TEST PASSENGER SIDE A-PILLAR



Figure A-25 : POST-TEST PASSENGER SIDE FRONT HEADER



Figure A-26 : POST-TEST PASSENGER SIDE SIDE RAIL





Figure A-27 : POST-TEST PASSENGER SIDE B-PILLAR



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



Figure A-29 : POST-TEST DRIVER SIDE A-PILLAR NOVEMBER 2005 IMPACT

## **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**

<b>MANUFACTURER:</b>		<b>FIRST TECHNOLOGY SAFETY SYSTEMS</b>	
<b>SERIAL NUMBER:</b>		<b>0642</b>	
<b>CALIBRATION DATE:</b>		<b>October 28, 2004</b>	
<b>TEST PARAMETER</b>	<b>SPECIFICATION</b>	<b>TEST RESULTS</b>	
<b>TEMPERATURE</b>	<b>19°C to 26°C</b>	<b>22.4</b>	
<b>RELATIVE HUMIDITY</b>	<b>10% to 70%</b>	<b>38.6</b>	
<b>PEAK RESULTANT ACCELERATION</b>	<b>225 Gs to 275 Gs</b>	<b>260.1</b>	
<b>PEAK LATERAL ACCELERATION</b>	<b>15 Gs Maximum</b>	<b>6.5</b>	
<b>IS ACCELERATION CURVE UNIMODAL?</b>	<b>YES</b>	<b>YES</b>	

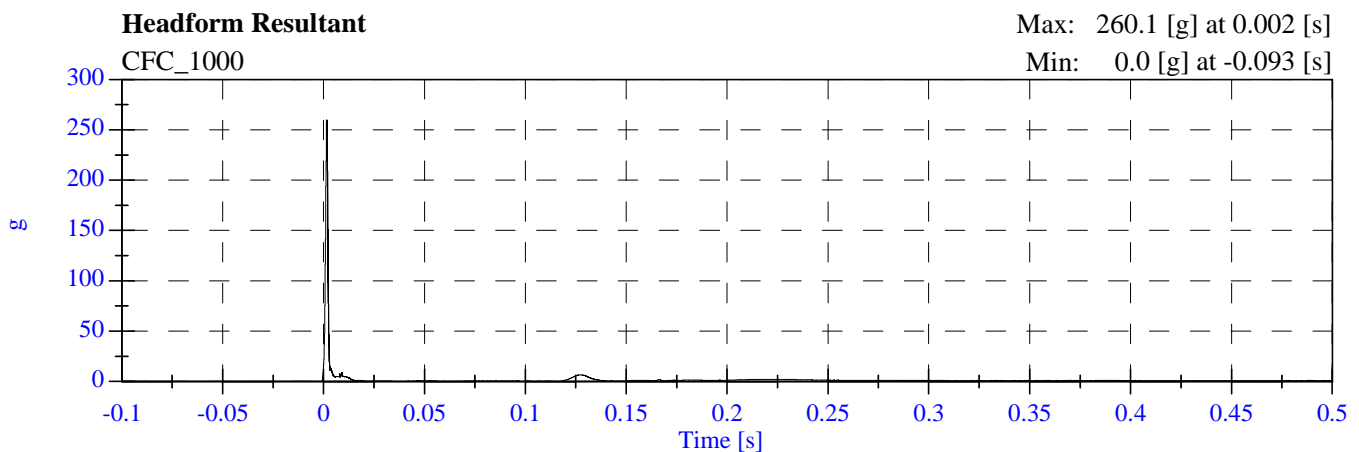
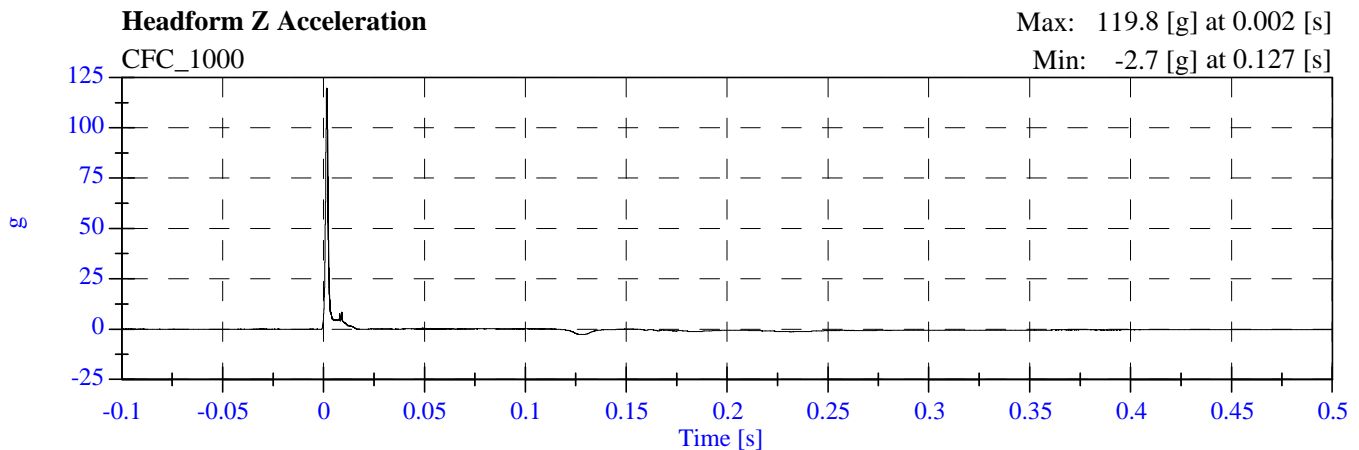
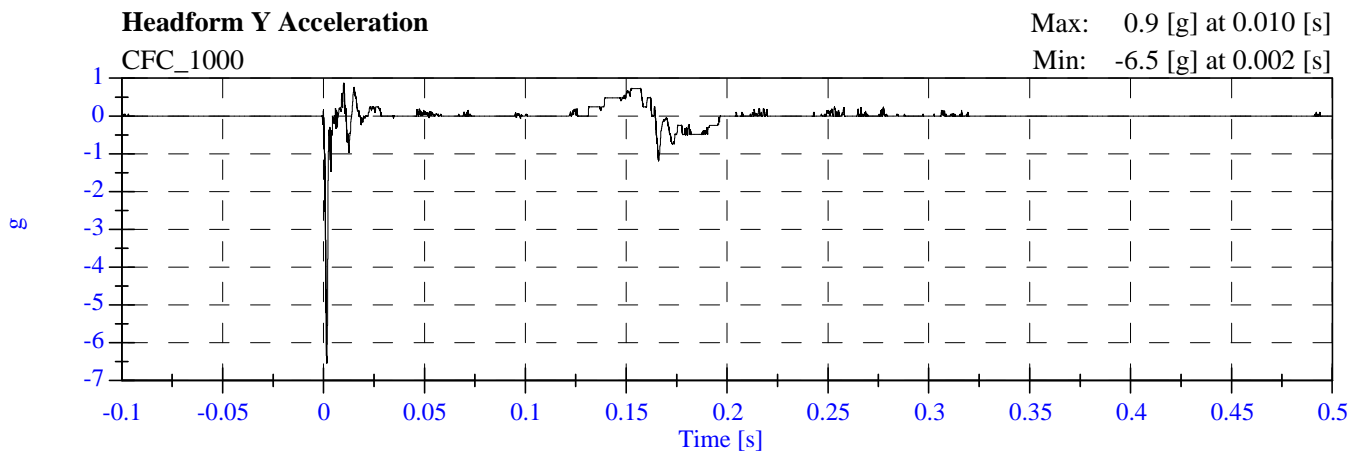
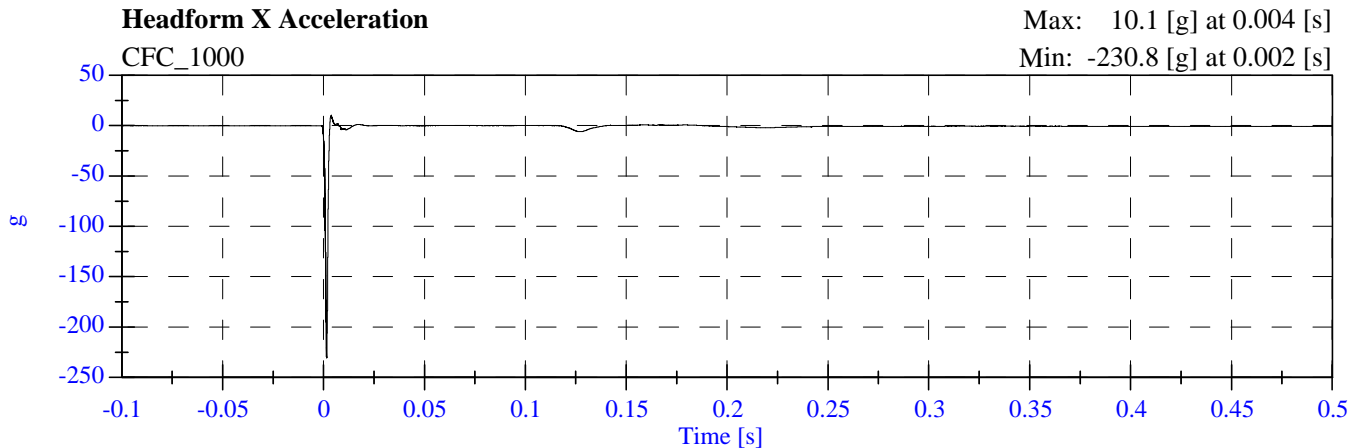
**HEAD ACCELEROMETER CALIBRATION INFORMATION**

<b>I.D. NUMBER</b>	<b>MANUFACTURER</b>	<b>MODEL NUMBER</b>	<b>SERIAL NUMBER</b>	<b>DATE OF LAST CALIBRATION</b>	<b>DATE OF NEXT CALIBRATION</b>
<b>1 - LONGITUDINAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J24876</b>	<b>10/06/2004</b>	<b>04/06/2005</b>
<b>2 - LATERAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J33030</b>	<b>10/06/2004</b>	<b>04/06/2005</b>
<b>3 - VERTICAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J31009</b>	<b>10/06/2004</b>	<b>04/06/2005</b>

**REMARKS:**

# FMVSS 201U - HeadForm Calibration Drops

## FMH 0642 - October 28, 2004



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

<b>MANUFACTURER:</b>		<b>DENTON ATD INC.</b>	
<b>SERIAL NUMBER:</b>		<b>0062</b>	
<b>CALIBRATION DATE:</b>		<b>October 28, 2004</b>	
<b>TEST PARAMETER</b>	<b>SPECIFICATION</b>	<b>TEST RESULTS</b>	
<b>TEMPERATURE</b>	<b>19°C to 26°C</b>	<b>22.4</b>	
<b>RELATIVE HUMIDITY</b>	<b>10% to 70%</b>	<b>38.6</b>	
<b>PEAK RESULTANT ACCELERATION</b>	<b>225 Gs to 275 Gs</b>	<b>230.8</b>	
<b>PEAK LATERAL ACCELERATION</b>	<b>15 Gs Maximum</b>	<b>9.4</b>	
<b>IS ACCELERATION CURVE UNIMODAL?</b>	<b>YES</b>	<b>YES</b>	

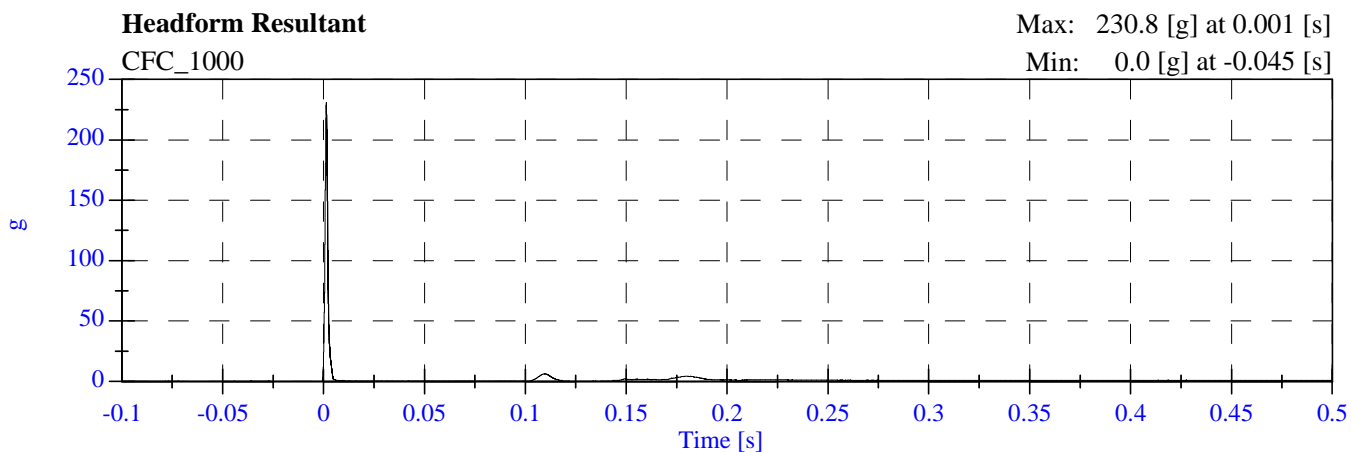
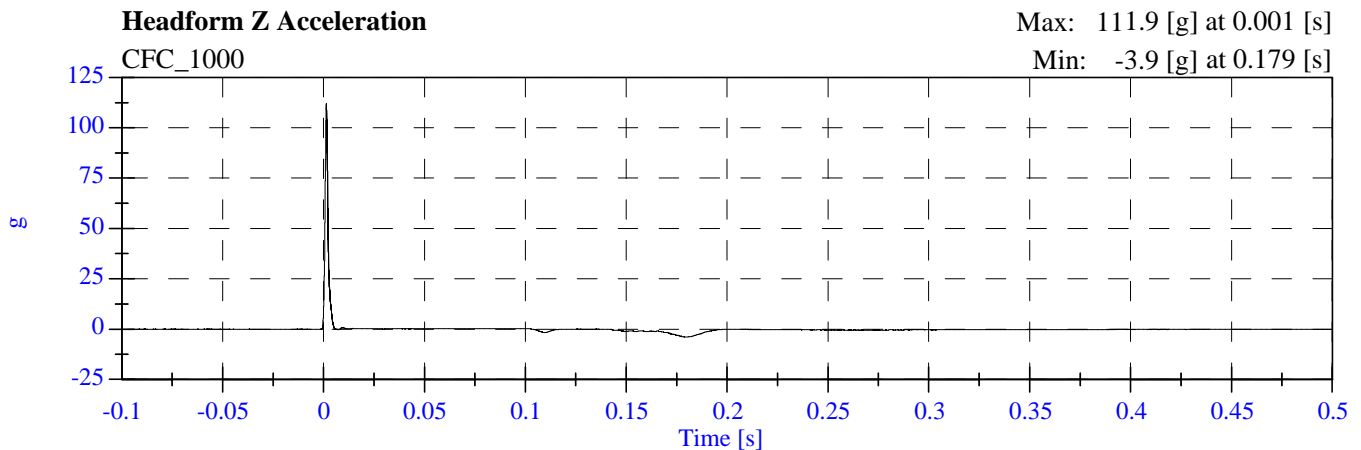
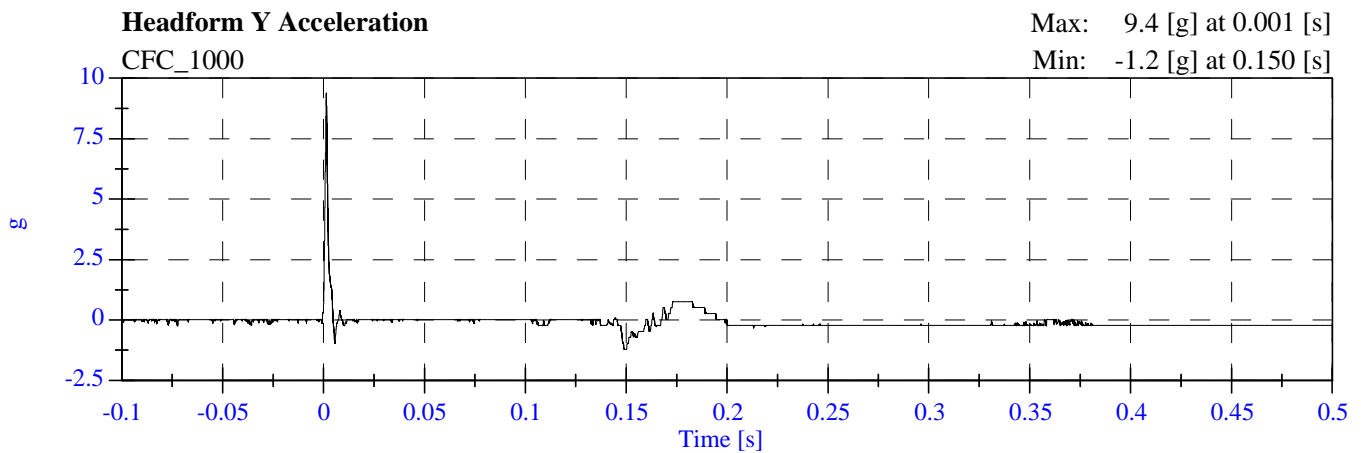
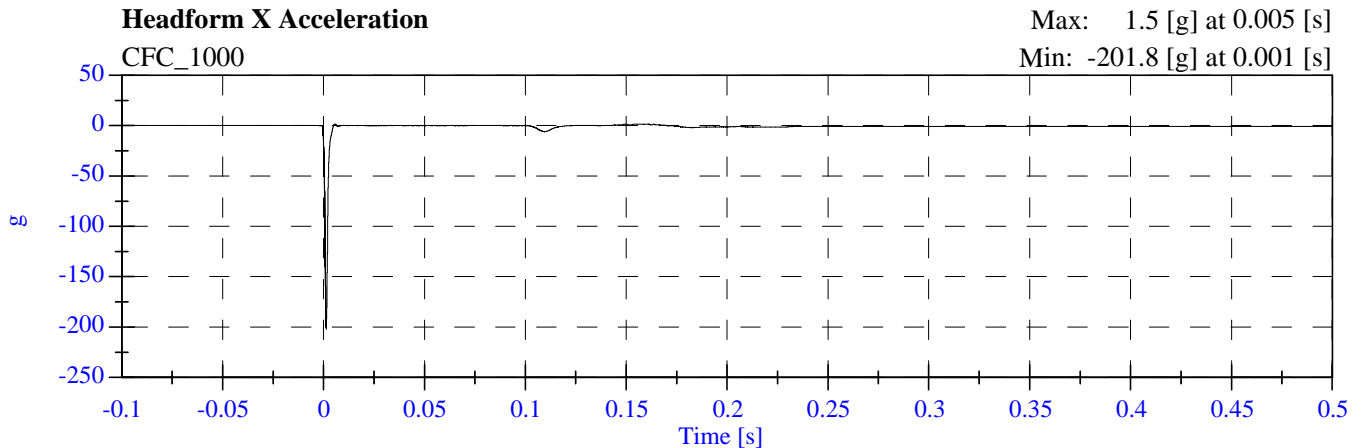
**HEAD ACCELEROMETER CALIBRATION INFORMATION**

<b>I.D. NUMBER</b>	<b>MANUFACTURER</b>	<b>MODEL NUMBER</b>	<b>SERIAL NUMBER</b>	<b>DATE OF LAST CALIBRATION</b>	<b>DATE OF NEXT CALIBRATION</b>
<b>1 - LONGITUDINAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J33127</b>	<b>10/06/2004</b>	<b>04/06/2005</b>
<b>2 - LATERAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J33019</b>	<b>10/06/2004</b>	<b>04/06/2005</b>
<b>3 - VERTICAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J32782</b>	<b>10/06/2004</b>	<b>04/06/2005</b>

**REMARKS:**

# FMVSS 201U - HeadForm Calibration Drops

## FMH 0062 - October 28, 2004





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

<b>MANUFACTURER:</b>		<b>FIRST TECHNOLOGY SAFETY SYSTEMS</b>	
<b>SERIAL NUMBER:</b>		<b>805</b>	
<b>CALIBRATION DATE:</b>		<b>October 28, 2004</b>	
<b>TEST PARAMETER</b>	<b>SPECIFICATION</b>	<b>TEST RESULTS</b>	
<b>TEMPERATURE</b>	<b>19°C to 26°C</b>	<b>22.4</b>	
<b>RELATIVE HUMIDITY</b>	<b>10% to 70%</b>	<b>38.6</b>	
<b>PEAK RESULTANT ACCELERATION</b>	<b>225 Gs to 275 Gs</b>	<b>246.6</b>	
<b>PEAK LATERAL ACCELERATION</b>	<b>15 Gs Maximum</b>	<b>9.3</b>	
<b>IS ACCELERATION CURVE UNIMODAL?</b>	<b>YES</b>	<b>YES</b>	

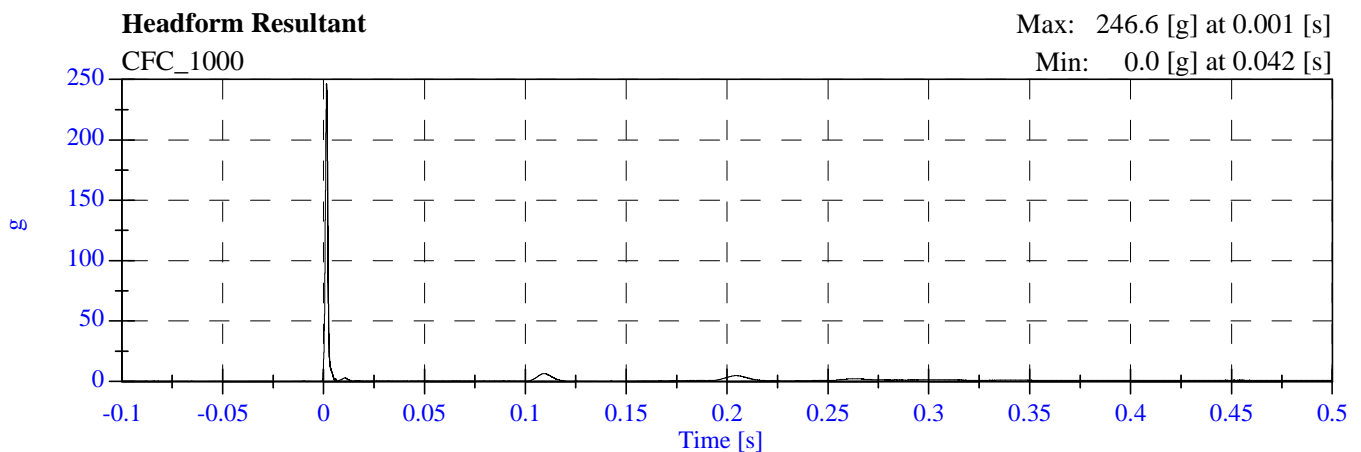
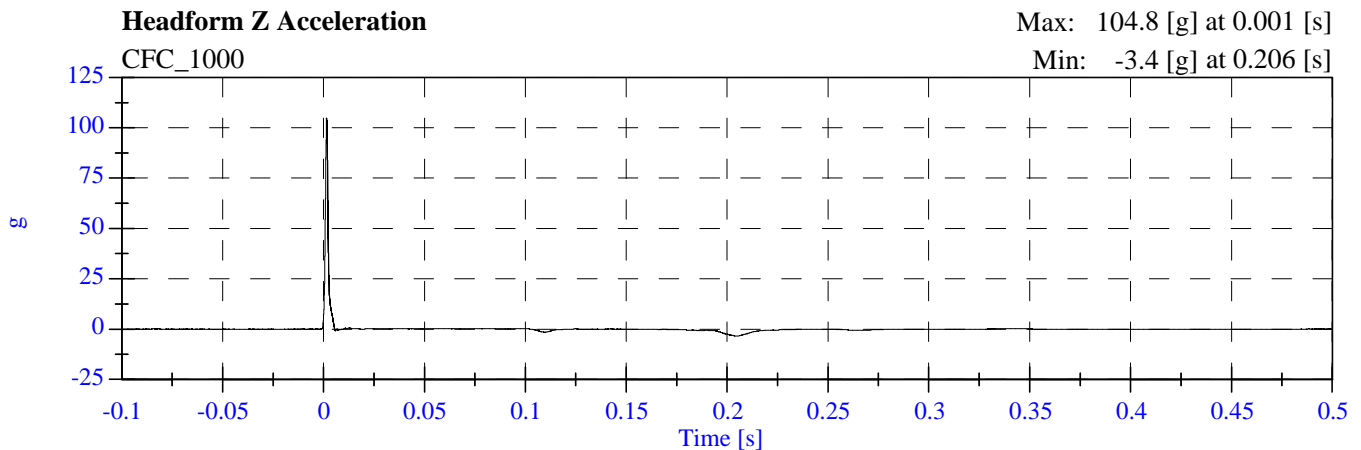
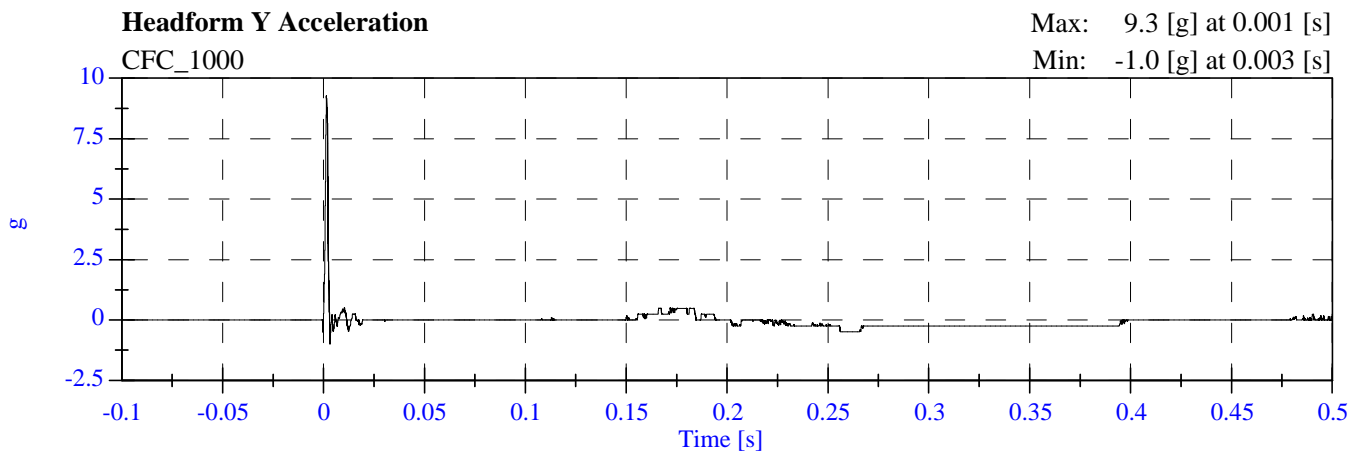
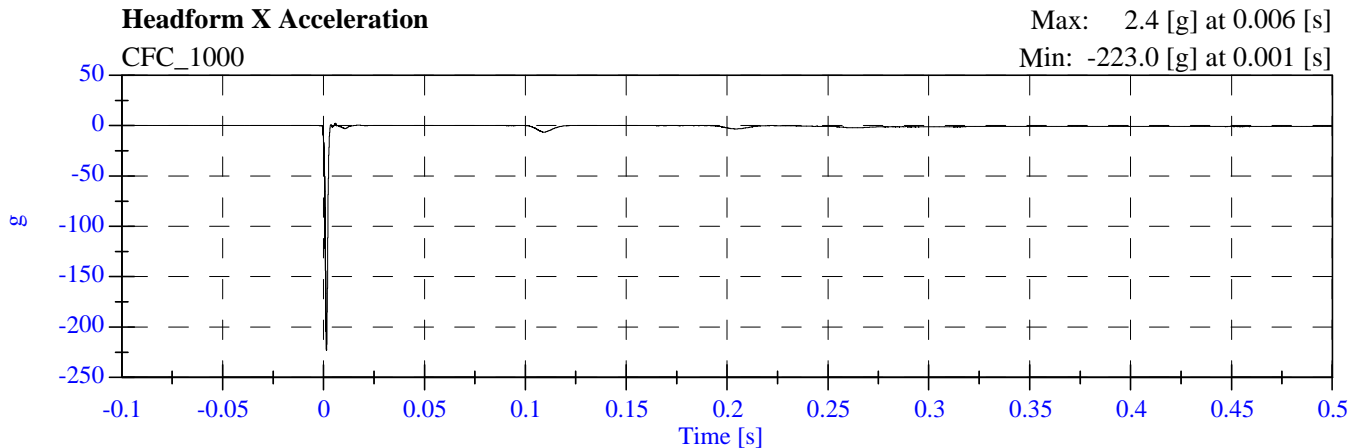
**HEAD ACCELEROMETER CALIBRATION INFORMATION**

<b>I.D. NUMBER</b>	<b>MANUFACTURER</b>	<b>MODEL NUMBER</b>	<b>SERIAL NUMBER</b>	<b>DATE OF LAST CALIBRATION</b>	<b>DATE OF NEXT CALIBRATION</b>
<b>1 - LONGITUDINAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J38127</b>	<b>10/07/2004</b>	<b>04/07/2005</b>
<b>2 - LATERAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J37980</b>	<b>10/07/2004</b>	<b>04/07/2005</b>
<b>3 - VERTICAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J37854</b>	<b>10/07/2004</b>	<b>04/07/2005</b>

**REMARKS:**

# FMVSS 201U - HeadForm Calibration Drops

## FMH 0805 - October 28, 2004



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

<b>MANUFACTURER:</b>		<b>DENTON ATD INC.</b>	
<b>SERIAL NUMBER:</b>		<b>0355</b>	
<b>CALIBRATION DATE:</b>		<b>October 28, 2004</b>	
<b>TEST PARAMETER</b>	<b>SPECIFICATION</b>	<b>TEST RESULTS</b>	
<b>TEMPERATURE</b>	<b>19°C to 26°C</b>	<b>22.4</b>	
<b>RELATIVE HUMIDITY</b>	<b>10% to 70%</b>	<b>38.6</b>	
<b>PEAK RESULTANT ACCELERATION</b>	<b>225 Gs to 275 Gs</b>	<b>232.1</b>	
<b>PEAK LATERAL ACCELERATION</b>	<b>15 Gs Maximum</b>	<b>3.5</b>	
<b>IS ACCELERATION CURVE UNIMODAL?</b>	<b>YES</b>	<b>YES</b>	

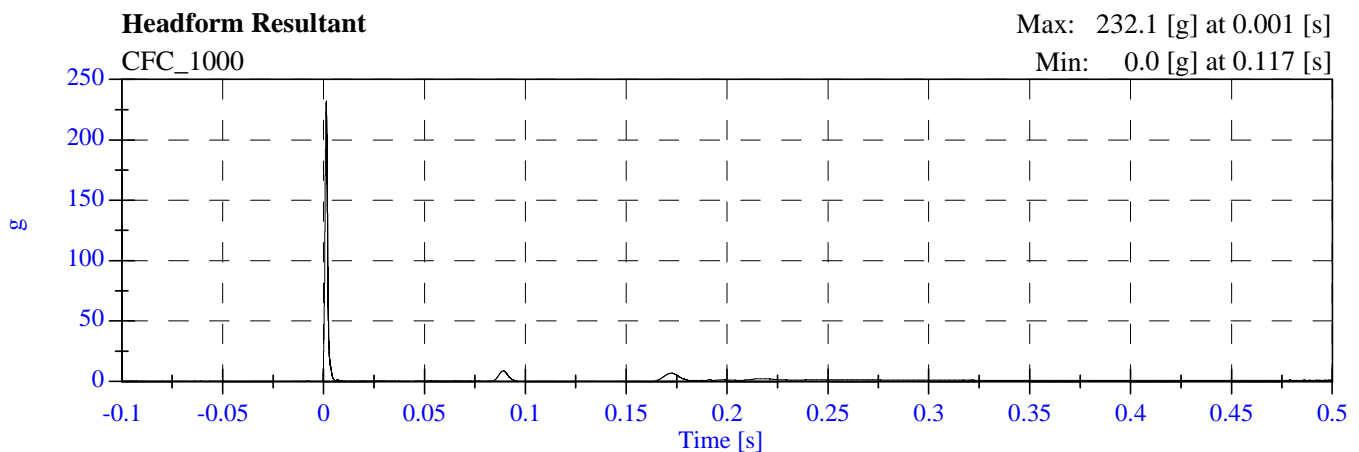
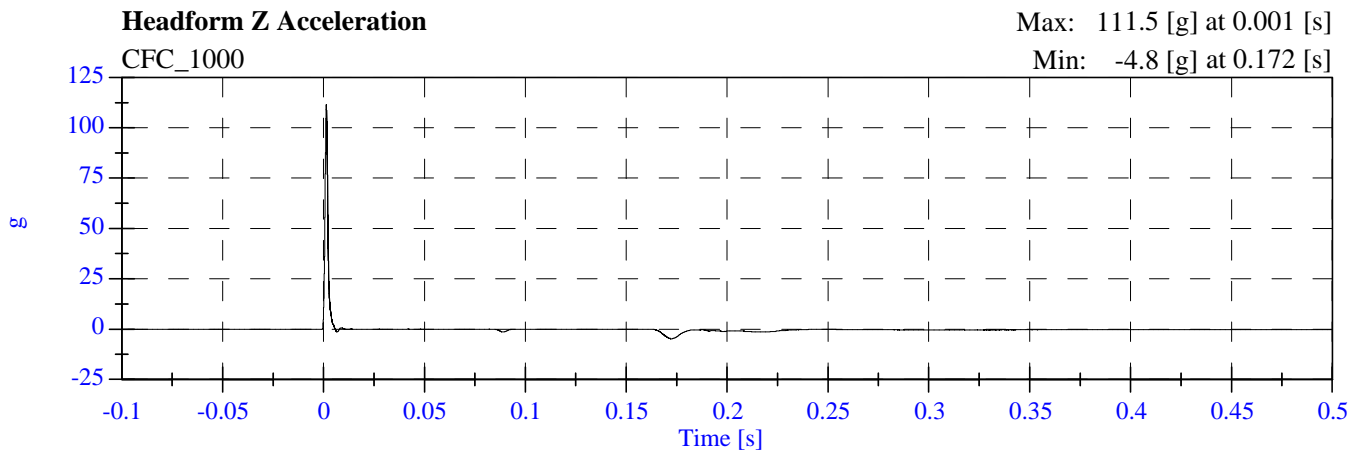
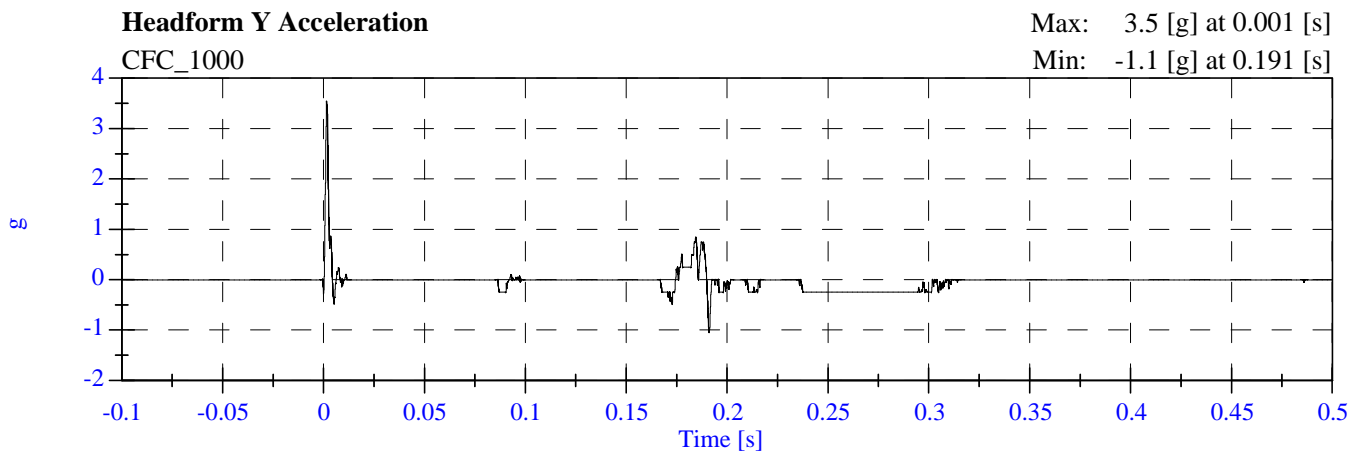
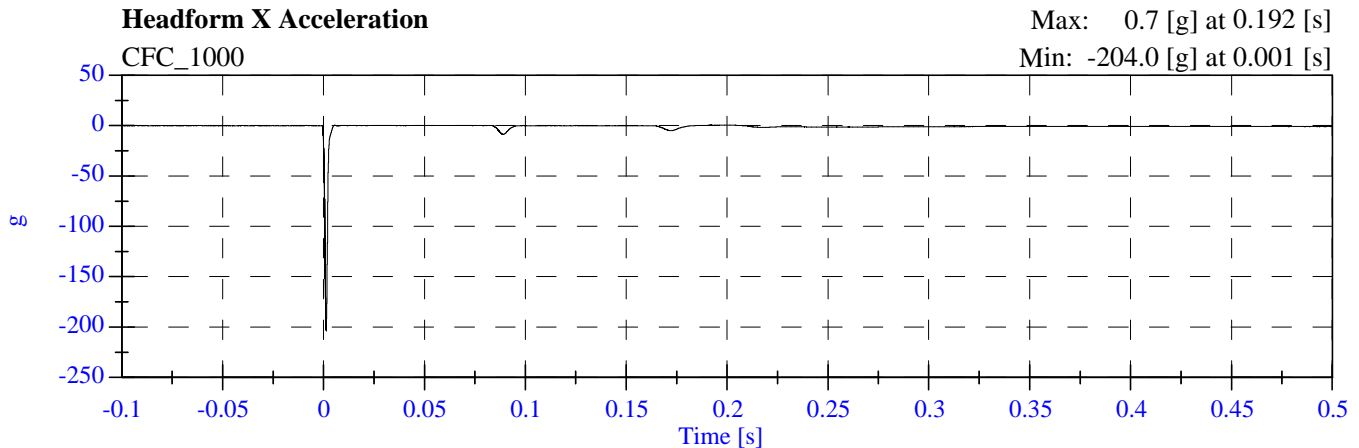
**HEAD ACCELEROMETER CALIBRATION INFORMATION**

<b>I.D. NUMBER</b>	<b>MANUFACTURER</b>	<b>MODEL NUMBER</b>	<b>SERIAL NUMBER</b>	<b>DATE OF LAST CALIBRATION</b>	<b>DATE OF NEXT CALIBRATION</b>
<b>1 - LONGITUDINAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J28671</b>	<b>10/07/2004</b>	<b>04/07/2005</b>
<b>2 - LATERAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J32779</b>	<b>10/07/2004</b>	<b>04/07/2005</b>
<b>3 - VERTICAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J25854</b>	<b>10/07/2004</b>	<b>04/07/2005</b>

**REMARKS:**

# FMVSS 201U - HeadForm Calibration Drops

## FMH0355 - October 28, 2004



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

<b>MANUFACTURER:</b>		<b>FIRST TECHNOLOGY SAFETY SYSTEMS</b>	
<b>SERIAL NUMBER:</b>		<b>1255</b>	
<b>CALIBRATION DATE:</b>		<b>October 28, 2004</b>	
<b>TEST PARAMETER</b>	<b>SPECIFICATION</b>	<b>TEST RESULTS</b>	
<b>TEMPERATURE</b>	<b>19°C to 26°C</b>	<b>22.4</b>	
<b>RELATIVE HUMIDITY</b>	<b>10% to 70%</b>	<b>38.6</b>	
<b>PEAK RESULTANT ACCELERATION</b>	<b>225 Gs to 275 Gs</b>	<b>246.0</b>	
<b>PEAK LATERAL ACCELERATION</b>	<b>15 Gs Maximum</b>	<b>1.7</b>	
<b>IS ACCELERATION CURVE UNIMODAL?</b>	<b>YES</b>	<b>YES</b>	

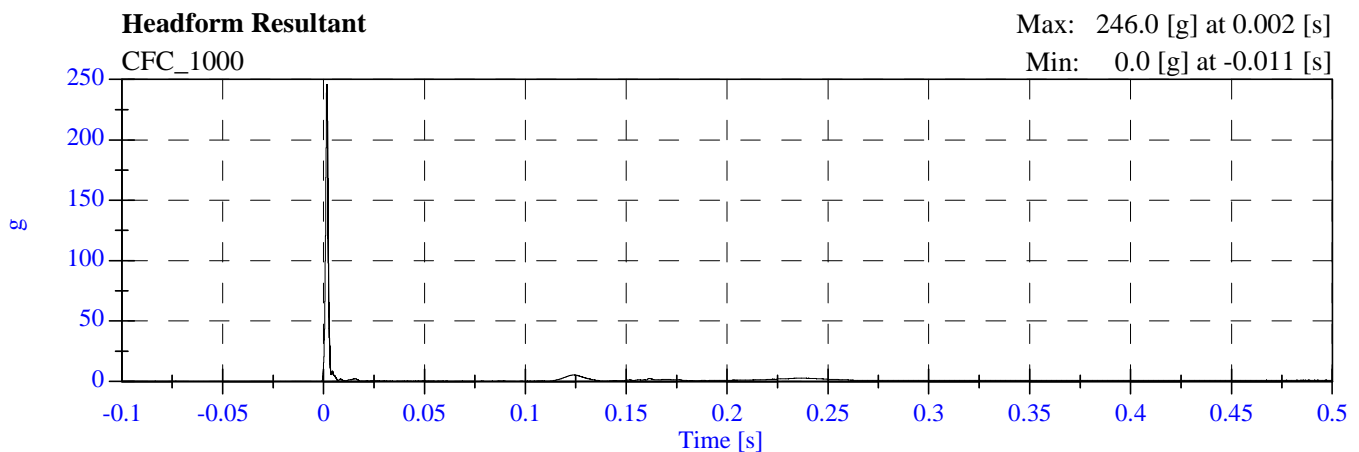
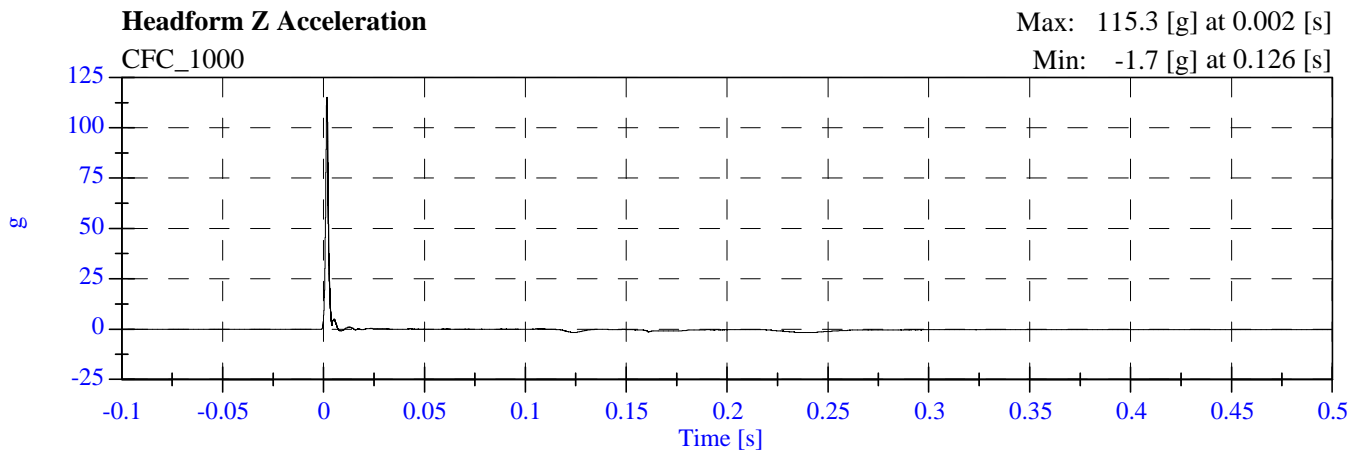
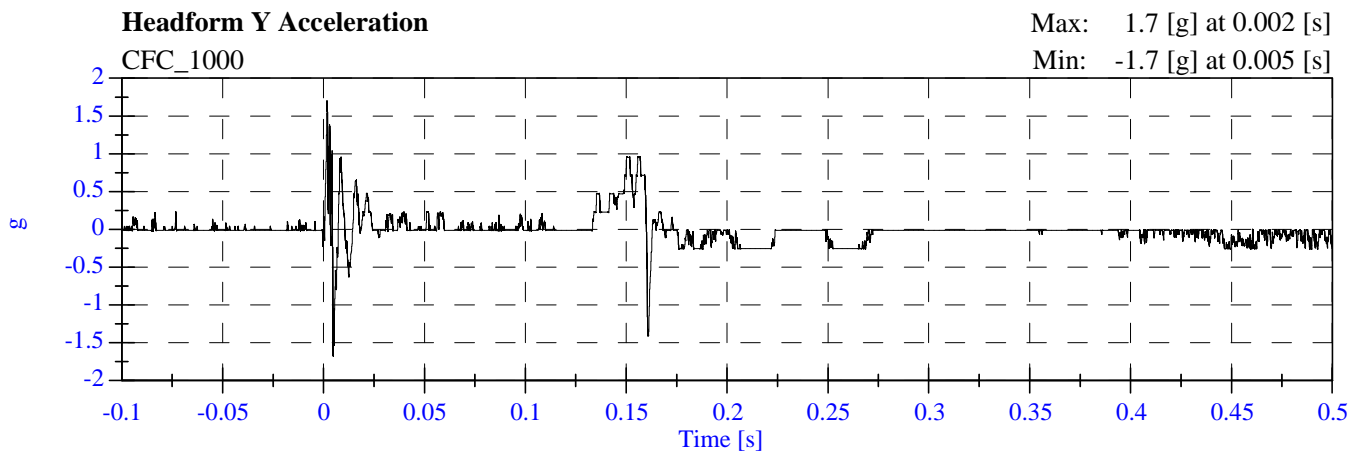
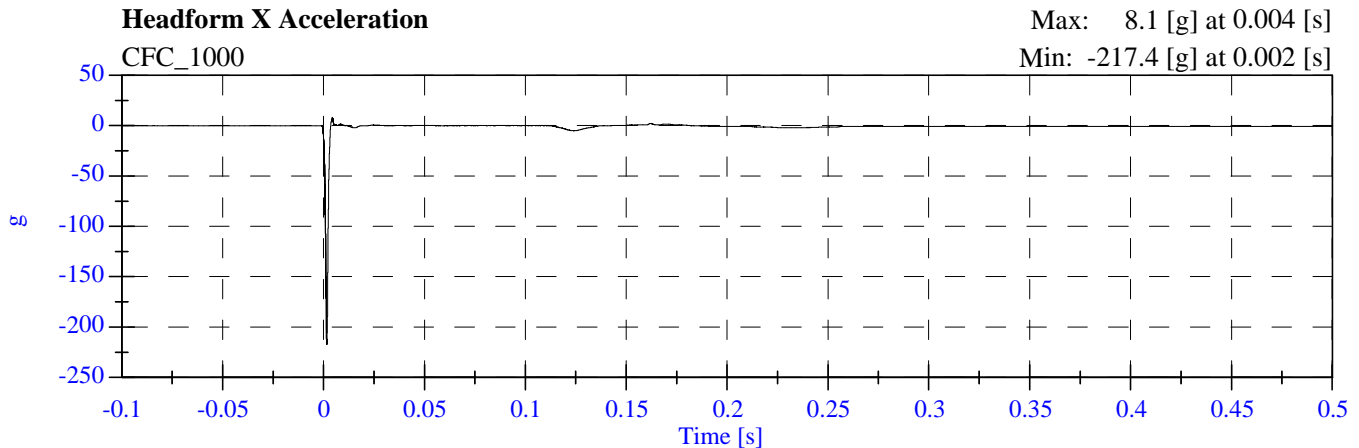
**HEAD ACCELEROMETER CALIBRATION INFORMATION**

<b>I.D. NUMBER</b>	<b>MANUFACTURER</b>	<b>MODEL NUMBER</b>	<b>SERIAL NUMBER</b>	<b>DATE OF LAST CALIBRATION</b>	<b>DATE OF NEXT CALIBRATION</b>
<b>1 - LONGITUDINAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J41006</b>	<b>10/06/2004</b>	<b>04/06/2005</b>
<b>2 - LATERAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J40994</b>	<b>10/06/2004</b>	<b>04/06/2005</b>
<b>3 - VERTICAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J41007</b>	<b>10/06/2004</b>	<b>04/06/2005</b>

**REMARKS:**

# FMVSS 201U - HeadForm Calibration Drops

## FMH 1255 - October 28, 2004



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

<b>MANUFACTURER:</b>		<b>FIRST TECHNOLOGY SAFETY SYSTEMS</b>	
<b>SERIAL NUMBER:</b>		<b>0642</b>	
<b>CALIBRATION DATE:</b>		<b>November 17, 2004</b>	
<b>TEST PARAMETER</b>	<b>SPECIFICATION</b>	<b>TEST RESULTS</b>	
<b>TEMPERATURE</b>	<b>19°C to 26°C</b>	<b>22.6</b>	
<b>RELATIVE HUMIDITY</b>	<b>10% to 70%</b>	<b>38.1</b>	
<b>PEAK RESULTANT ACCELERATION</b>	<b>225 Gs to 275 Gs</b>	<b>274.1</b>	
<b>PEAK LATERAL ACCELERATION</b>	<b>15 Gs Maximum</b>	<b>13.8</b>	
<b>IS ACCELERATION CURVE UNIMODAL?</b>	<b>YES</b>	<b>YES</b>	

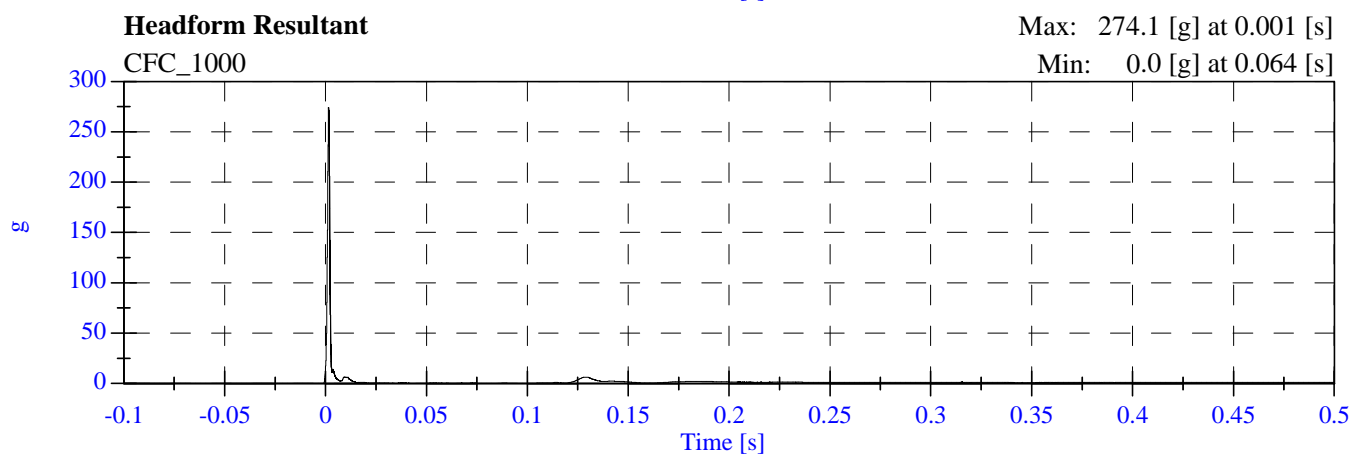
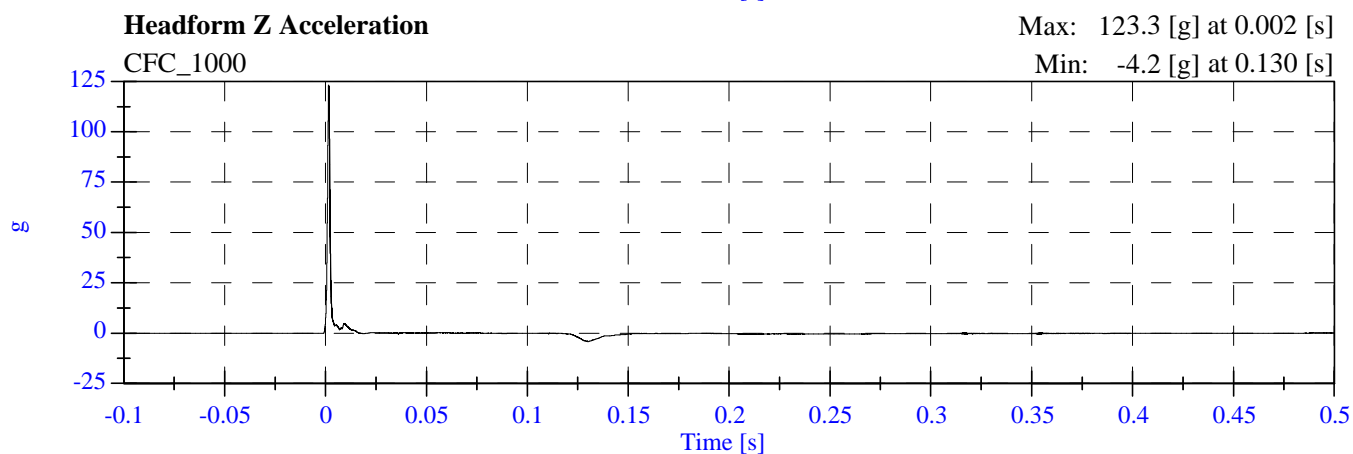
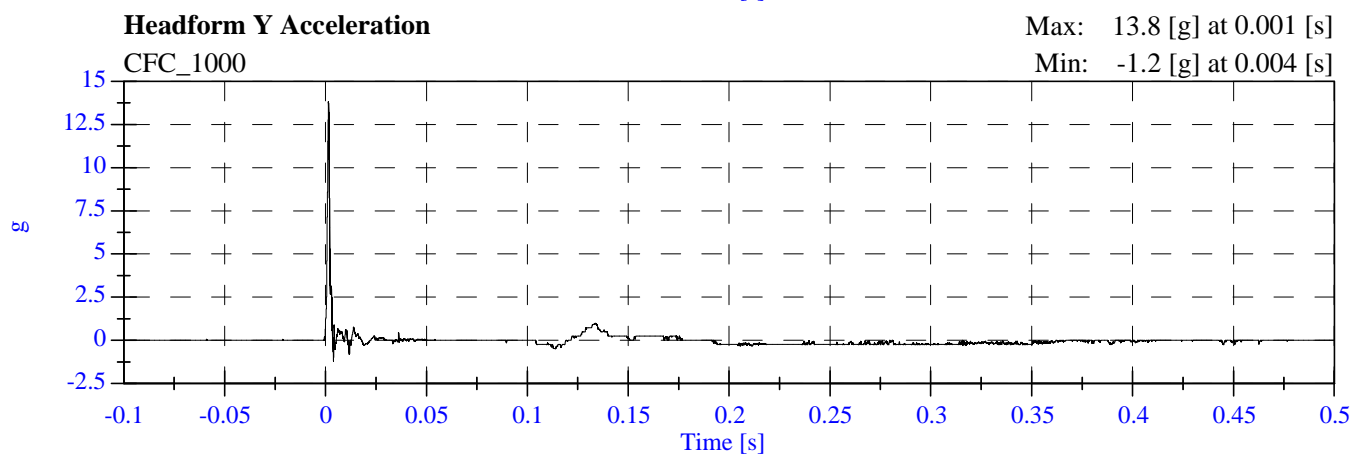
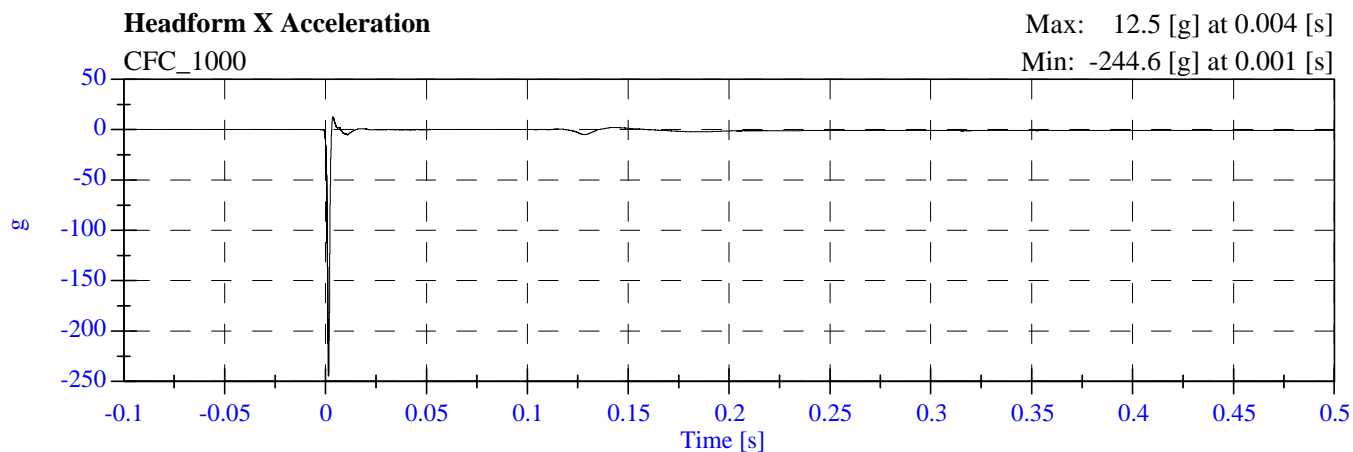
**HEAD ACCELEROMETER CALIBRATION INFORMATION**

<b>I.D. NUMBER</b>	<b>MANUFACTURER</b>	<b>MODEL NUMBER</b>	<b>SERIAL NUMBER</b>	<b>DATE OF LAST CALIBRATION</b>	<b>DATE OF NEXT CALIBRATION</b>
<b>1 - LONGITUDINAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J24876</b>	<b>10/06/2004</b>	<b>04/06/2005</b>
<b>2 - LATERAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J33030</b>	<b>10/06/2004</b>	<b>04/06/2005</b>
<b>3 - VERTICAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J31009</b>	<b>10/06/2004</b>	<b>04/06/2005</b>

**REMARKS:**

# FMVSS 201U - HeadForm Calibration Drops

## FMH0642 - November 17, 2004





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

<b>MANUFACTURER:</b>		<b>DENTON ATD INC.</b>	
<b>SERIAL NUMBER:</b>		<b>0062</b>	
<b>CALIBRATION DATE:</b>		<b>November 11, 2004</b>	
<b>TEST PARAMETER</b>	<b>SPECIFICATION</b>	<b>TEST RESULTS</b>	
<b>TEMPERATURE</b>	<b>19°C to 26°C</b>	<b>23.4</b>	
<b>RELATIVE HUMIDITY</b>	<b>10% to 70%</b>	<b>44.4</b>	
<b>PEAK RESULTANT ACCELERATION</b>	<b>225 Gs to 275 Gs</b>	<b>231.2</b>	
<b>PEAK LATERAL ACCELERATION</b>	<b>15 Gs Maximum</b>	<b>1.0</b>	
<b>IS ACCELERATION CURVE UNIMODAL?</b>	<b>YES</b>	<b>YES</b>	

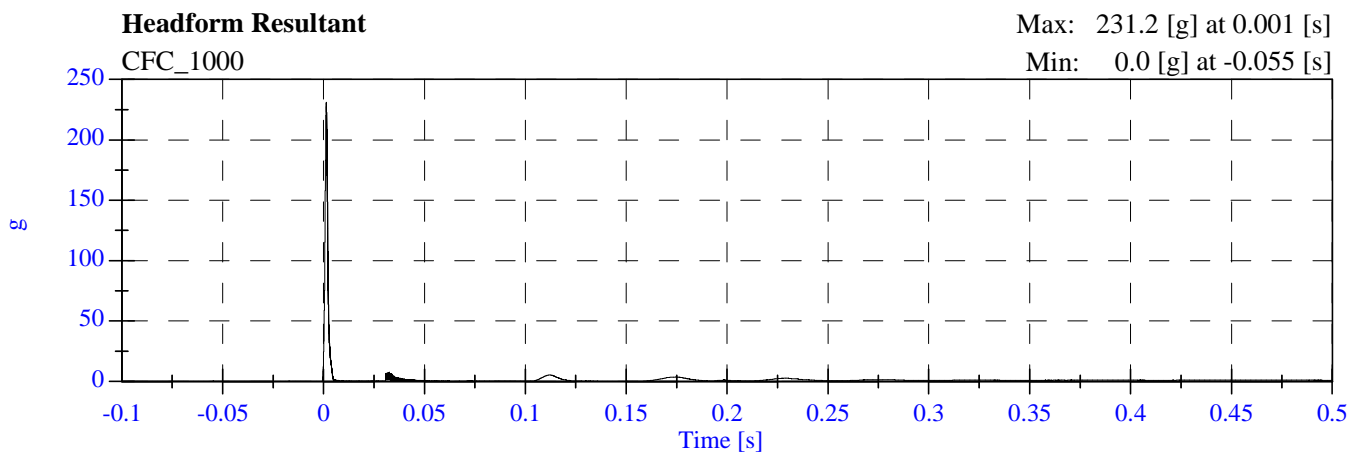
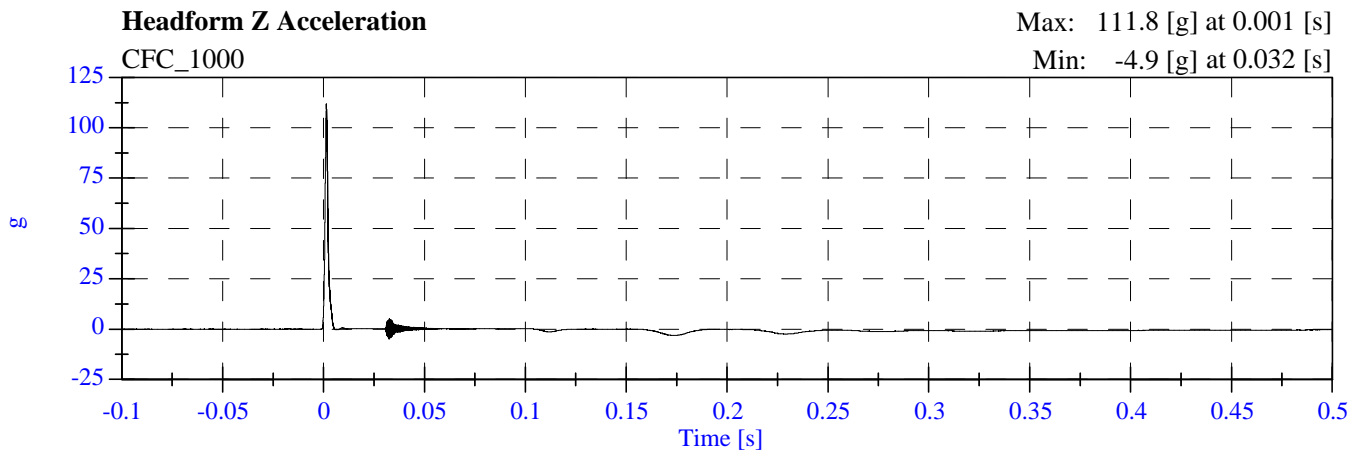
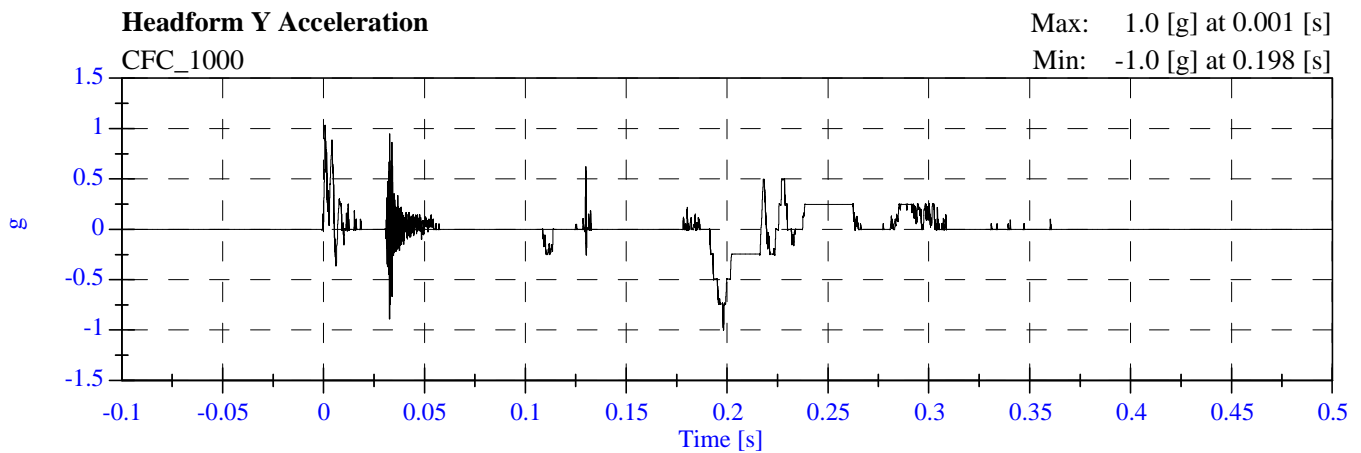
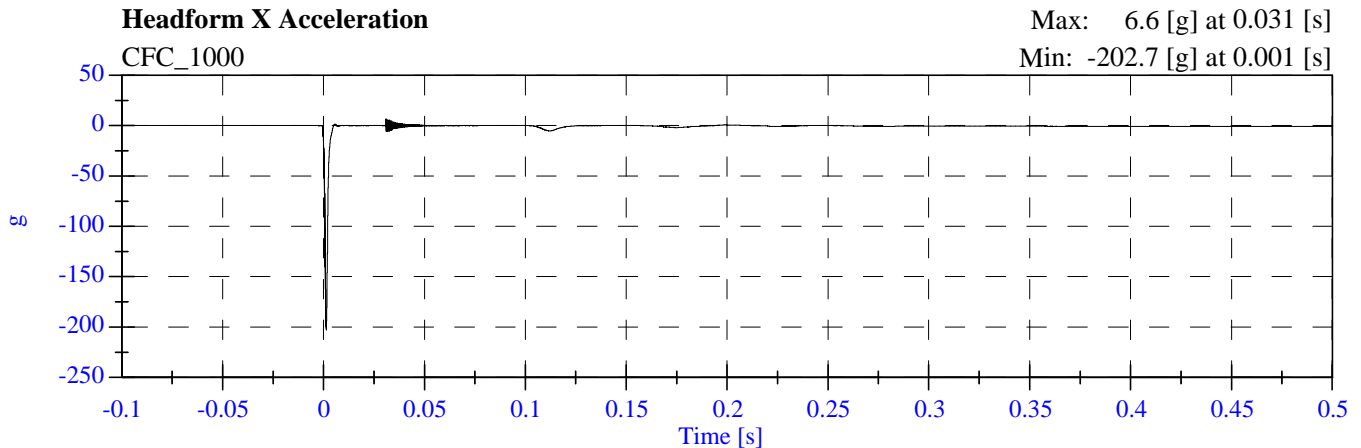
**HEAD ACCELEROMETER CALIBRATION INFORMATION**

<b>I.D. NUMBER</b>	<b>MANUFACTURER</b>	<b>MODEL NUMBER</b>	<b>SERIAL NUMBER</b>	<b>DATE OF LAST CALIBRATION</b>	<b>DATE OF NEXT CALIBRATION</b>
<b>1 - LONGITUDINAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J33127</b>	<b>10/06/2004</b>	<b>04/06/2005</b>
<b>2 - LATERAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J33019</b>	<b>10/06/2004</b>	<b>04/06/2005</b>
<b>3 - VERTICAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J32782</b>	<b>10/06/2004</b>	<b>04/06/2005</b>

**REMARKS:**

# FMVSS 201U - HeadForm Calibration Drops

## FMH 0062 - November 11, 2004



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

<b>MANUFACTURER:</b>		<b>FIRST TECHNOLOGY SAFETY SYSTEMS</b>	
<b>SERIAL NUMBER:</b>		<b>805</b>	
<b>CALIBRATION DATE:</b>		<b>November 17, 2004</b>	
<b>TEST PARAMETER</b>	<b>SPECIFICATION</b>	<b>TEST RESULTS</b>	
<b>TEMPERATURE</b>	<b>19°C to 26°C</b>	<b>22.6</b>	
<b>RELATIVE HUMIDITY</b>	<b>10% to 70%</b>	<b>38.1</b>	
<b>PEAK RESULTANT ACCELERATION</b>	<b>225 Gs to 275 Gs</b>	<b>262.5</b>	
<b>PEAK LATERAL ACCELERATION</b>	<b>15 Gs Maximum</b>	<b>1.7</b>	
<b>IS ACCELERATION CURVE UNIMODAL?</b>	<b>YES</b>	<b>YES</b>	

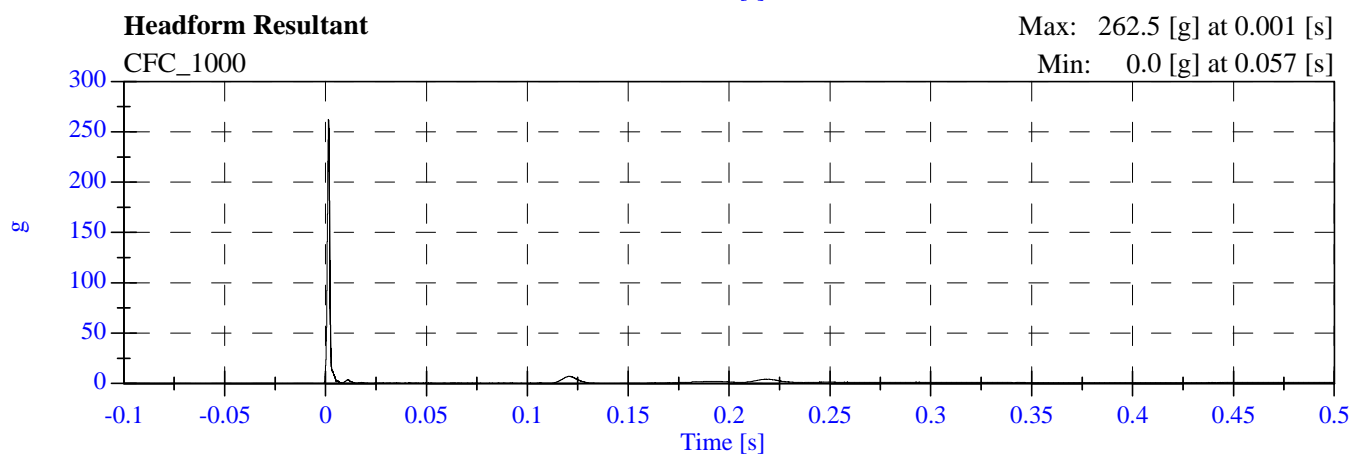
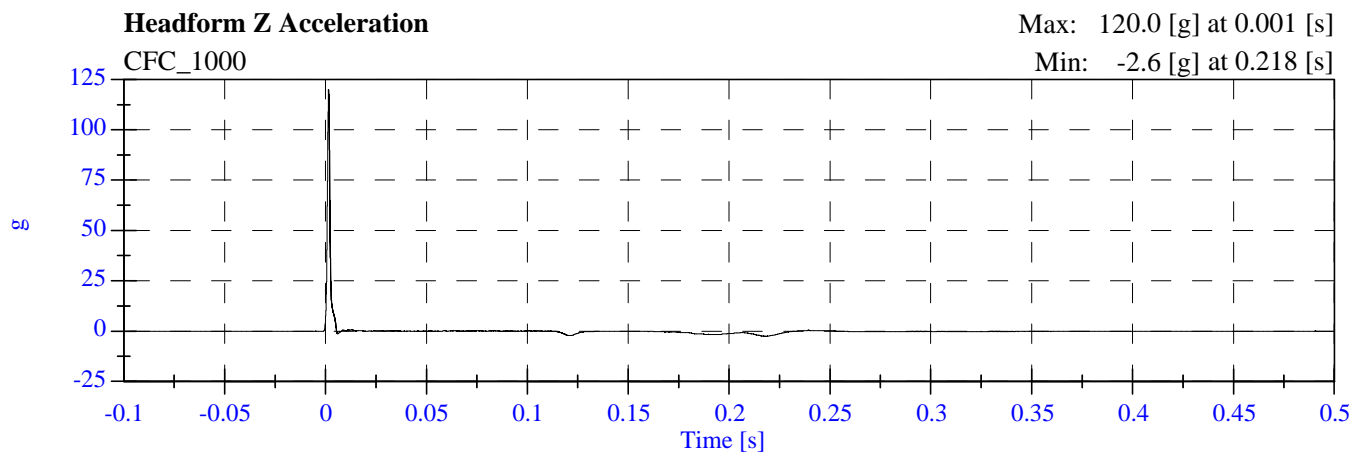
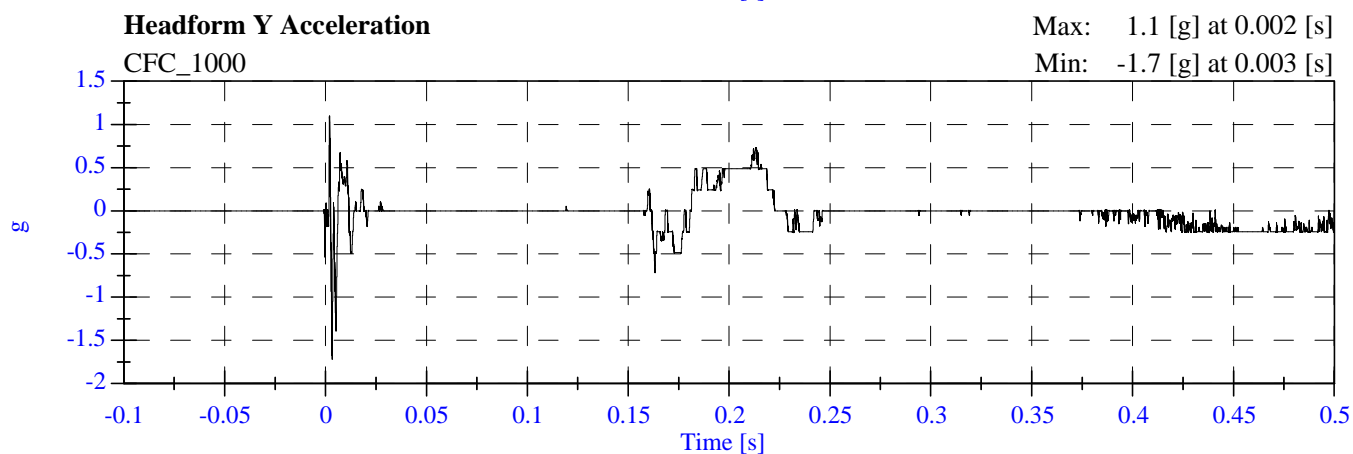
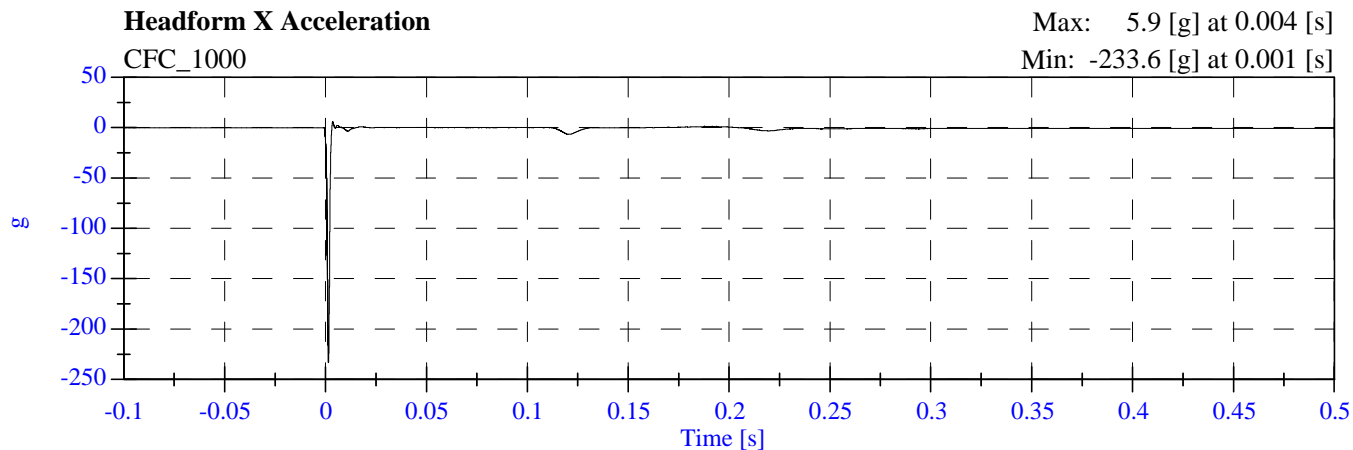
**HEAD ACCELEROMETER CALIBRATION INFORMATION**

<b>I.D. NUMBER</b>	<b>MANUFACTURER</b>	<b>MODEL NUMBER</b>	<b>SERIAL NUMBER</b>	<b>DATE OF LAST CALIBRATION</b>	<b>DATE OF NEXT CALIBRATION</b>
<b>1 - LONGITUDINAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J38127</b>	<b>10/07/2004</b>	<b>04/07/2005</b>
<b>2 - LATERAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J37980</b>	<b>10/07/2004</b>	<b>04/07/2005</b>
<b>3 - VERTICAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J37854</b>	<b>10/07/2004</b>	<b>04/07/2005</b>

**REMARKS:**

# FMVSS 201U - HeadForm Calibration Drops

## FMH 0805 - November 17, 2004



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

<b>MANUFACTURER:</b>		<b>DENTON ATD INC.</b>	
<b>SERIAL NUMBER:</b>		<b>0355</b>	
<b>CALIBRATION DATE:</b>		<b>November 17, 2004</b>	
<b>TEST PARAMETER</b>	<b>SPECIFICATION</b>	<b>TEST RESULTS</b>	
<b>TEMPERATURE</b>	<b>19°C to 26°C</b>	<b>22.6</b>	
<b>RELATIVE HUMIDITY</b>	<b>10% to 70%</b>	<b>38.1</b>	
<b>PEAK RESULTANT ACCELERATION</b>	<b>225 Gs to 275 Gs</b>	<b>246.9</b>	
<b>PEAK LATERAL ACCELERATION</b>	<b>15 Gs Maximum</b>	<b>3.7</b>	
<b>IS ACCELERATION CURVE UNIMODAL?</b>	<b>YES</b>	<b>YES</b>	

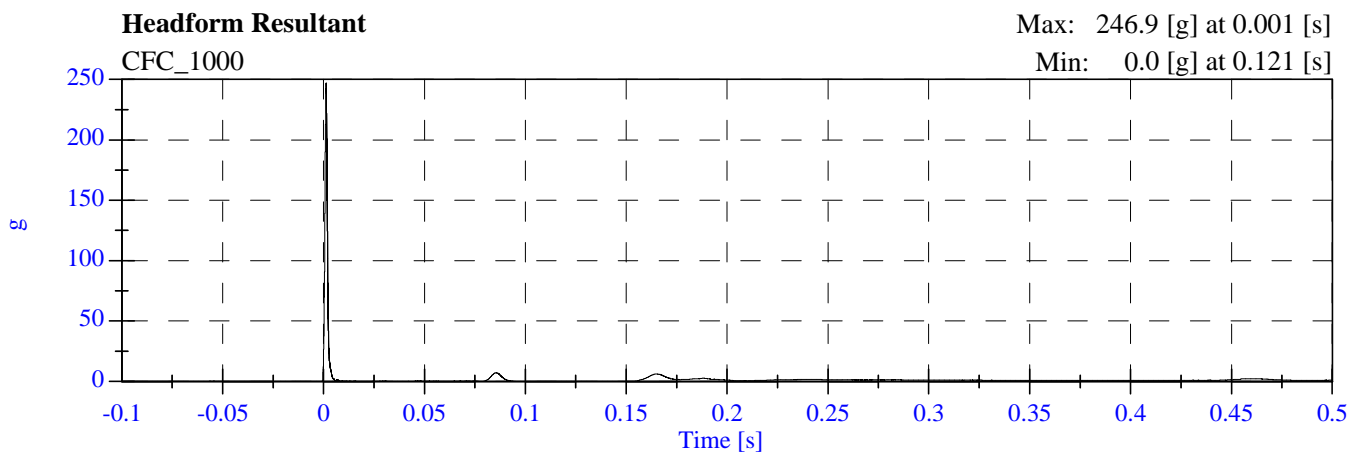
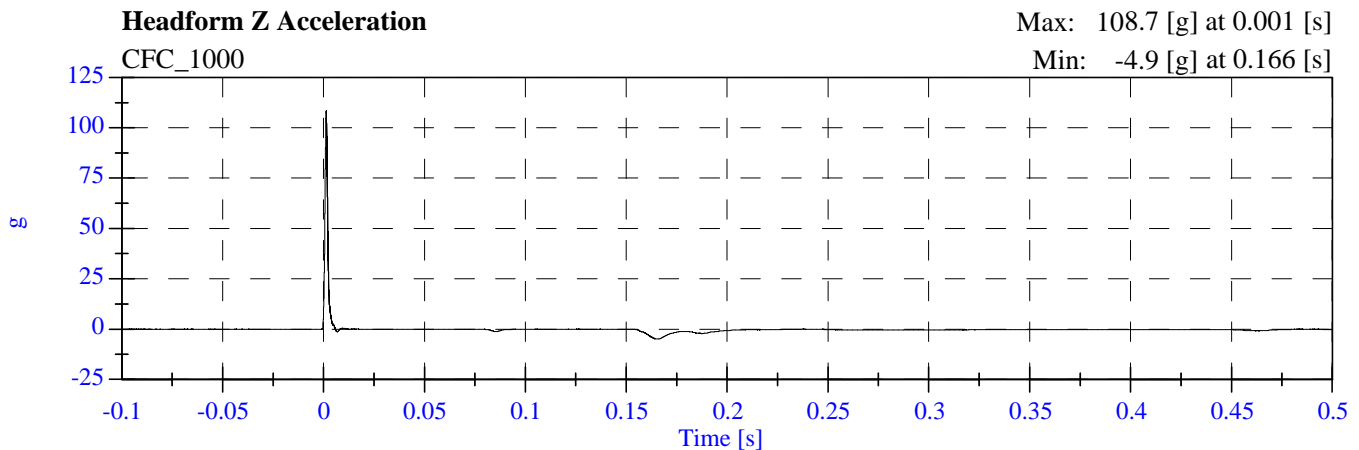
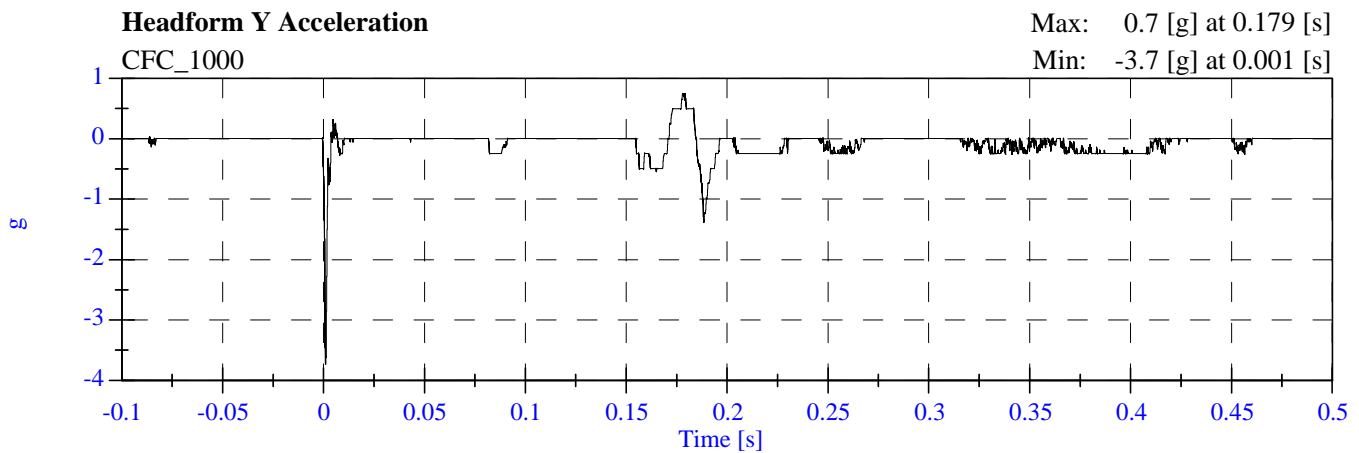
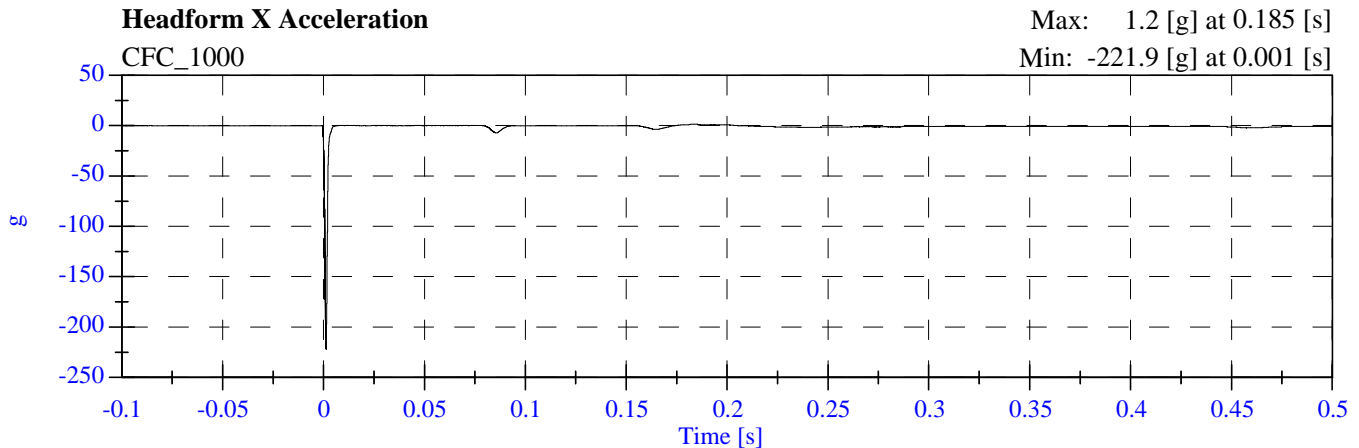
**HEAD ACCELEROMETER CALIBRATION INFORMATION**

<b>I.D. NUMBER</b>	<b>MANUFACTURER</b>	<b>MODEL NUMBER</b>	<b>SERIAL NUMBER</b>	<b>DATE OF LAST CALIBRATION</b>	<b>DATE OF NEXT CALIBRATION</b>
<b>1 - LONGITUDINAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J28671</b>	<b>10/07/2004</b>	<b>04/07/2005</b>
<b>2 - LATERAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J32779</b>	<b>10/07/2004</b>	<b>04/07/2005</b>
<b>3 - VERTICAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J25854</b>	<b>10/07/2004</b>	<b>04/07/2005</b>

**REMARKS:**

# FMVSS 201U - HeadForm Calibration Drops

## FMH 0355 - November 17, 2004



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

<b>MANUFACTURER:</b>		<b>FIRST TECHNOLOGY SAFETY SYSTEMS</b>	
<b>SERIAL NUMBER:</b>		<b>1255</b>	
<b>CALIBRATION DATE:</b>		<b>November 17, 2004</b>	
<b>TEST PARAMETER</b>	<b>SPECIFICATION</b>	<b>TEST RESULTS</b>	
<b>TEMPERATURE</b>	<b>19°C to 26°C</b>	<b>22.6</b>	
<b>RELATIVE HUMIDITY</b>	<b>10% to 70%</b>	<b>38.1</b>	
<b>PEAK RESULTANT ACCELERATION</b>	<b>225 Gs to 275 Gs</b>	<b>249.6</b>	
<b>PEAK LATERAL ACCELERATION</b>	<b>15 Gs Maximum</b>	<b>6.1</b>	
<b>IS ACCELERATION CURVE UNIMODAL?</b>	<b>YES</b>	<b>YES</b>	

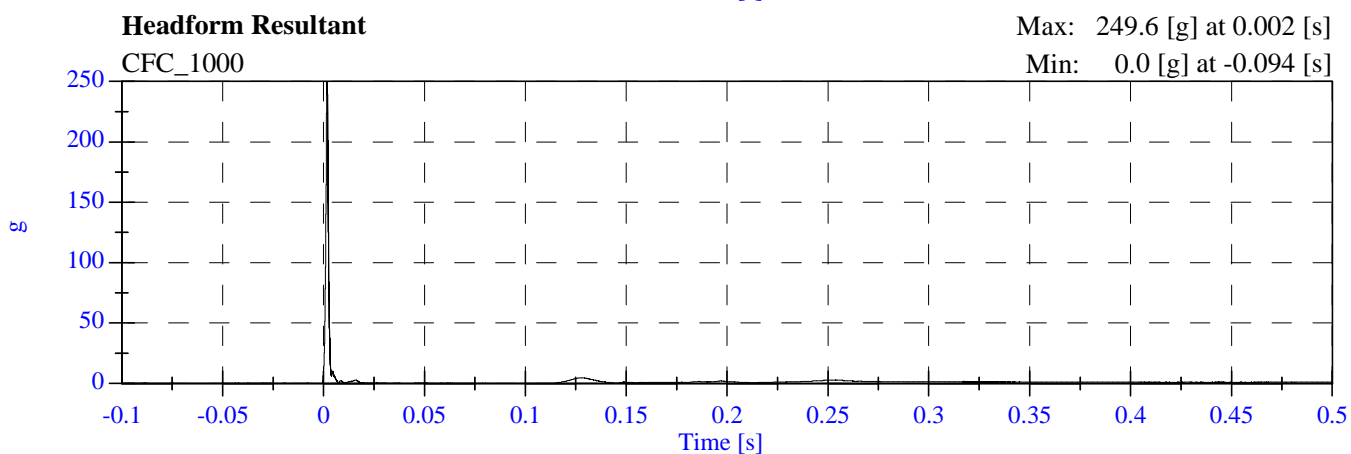
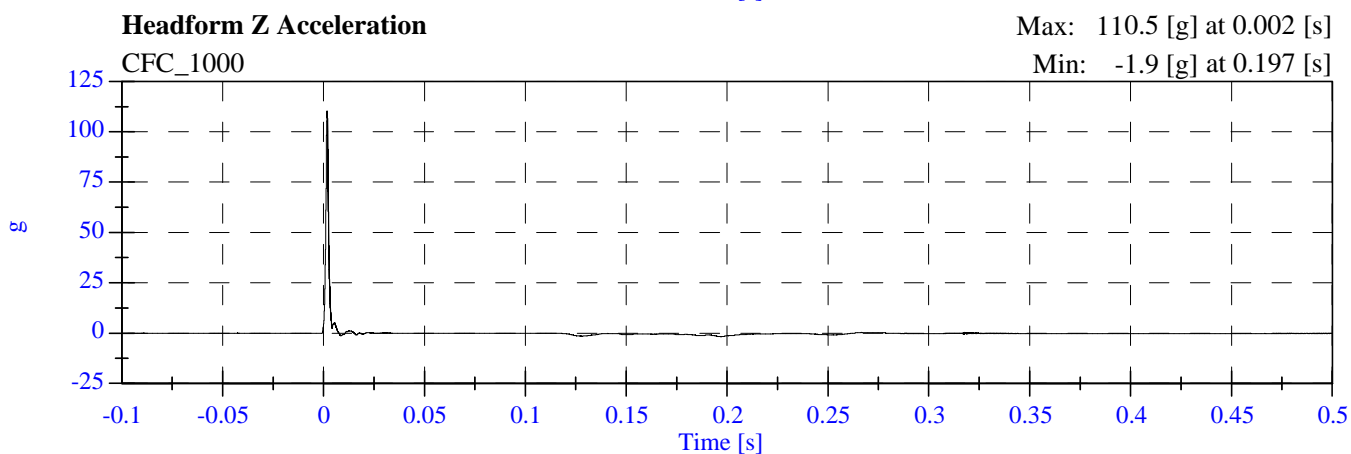
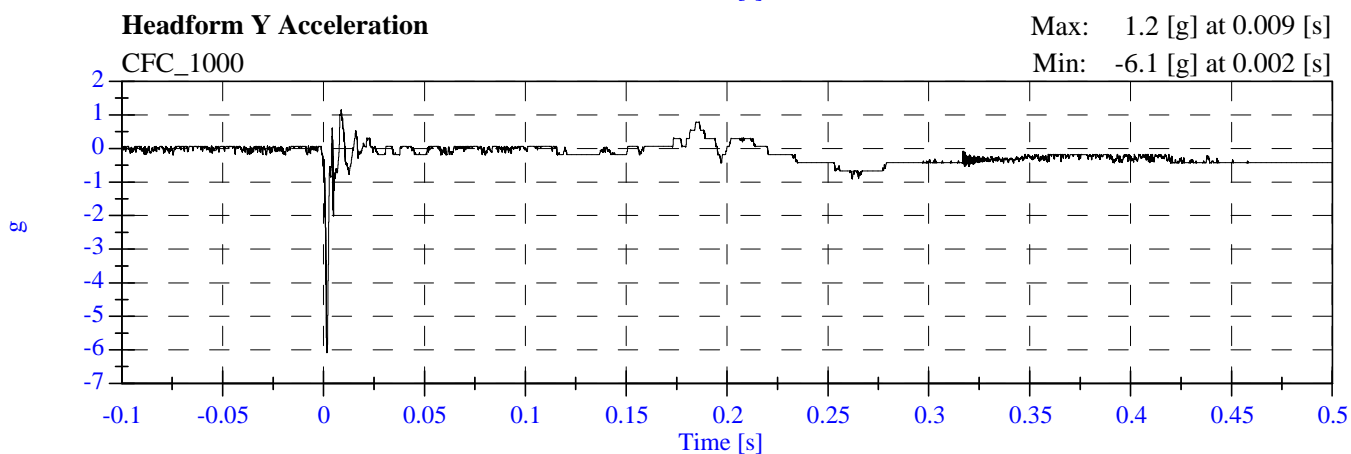
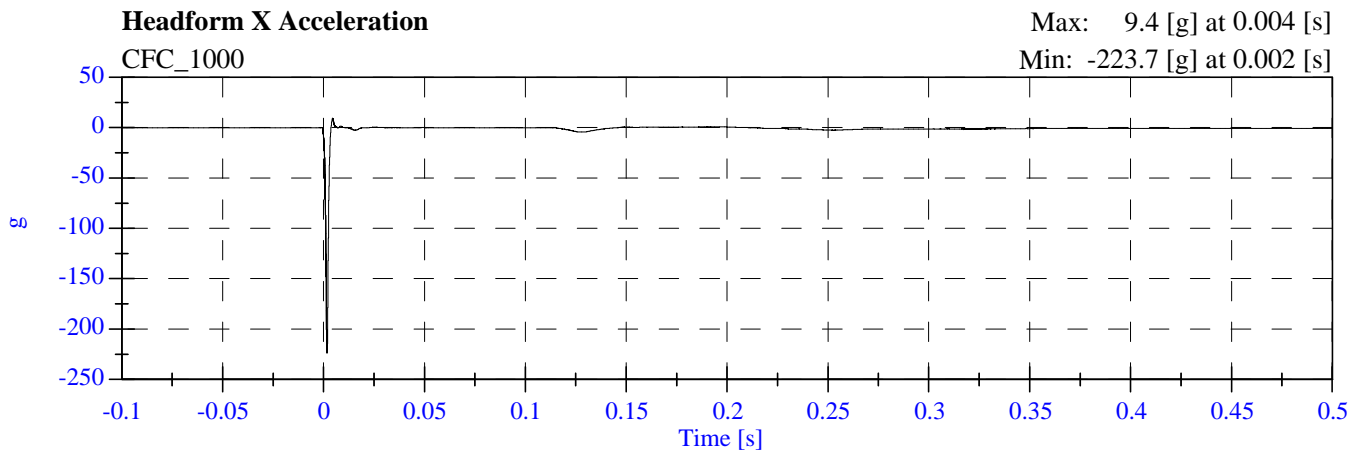
**HEAD ACCELEROMETER CALIBRATION INFORMATION**

<b>I.D. NUMBER</b>	<b>MANUFACTURER</b>	<b>MODEL NUMBER</b>	<b>SERIAL NUMBER</b>	<b>DATE OF LAST CALIBRATION</b>	<b>DATE OF NEXT CALIBRATION</b>
<b>1 - LONGITUDINAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J41006</b>	<b>10/06/2004</b>	<b>04/06/2005</b>
<b>2 - LATERAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J40994</b>	<b>10/06/2004</b>	<b>04/06/2005</b>
<b>3 - VERTICAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J41007</b>	<b>10/06/2004</b>	<b>04/06/2005</b>

**REMARKS:**

# FMVSS 201U - HeadForm Calibration Drops

## FMH 1255 - November 17, 2004





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

<b>MANUFACTURER:</b>		<b>DENTON ATD INC.</b>	
<b>SERIAL NUMBER:</b>		<b>0355</b>	
<b>CALIBRATION DATE:</b>		<b>November 11, 2005</b>	
<b>TEST PARAMETER</b>	<b>SPECIFICATION</b>	<b>TEST RESULTS</b>	
<b>TEMPERATURE</b>	<b>19°C to 26°C</b>	<b>21.1</b>	
<b>RELATIVE HUMIDITY</b>	<b>10% to 70%</b>	<b>32.0</b>	
<b>PEAK RESULTANT ACCELERATION</b>	<b>225 Gs to 275 Gs</b>	<b>234.6</b>	
<b>PEAK LATERAL ACCELERATION</b>	<b>15 Gs Maximum</b>	<b>6.58</b>	
<b>IS ACCELERATION CURVE UNIMODAL?</b>	<b>YES</b>	<b>YES</b>	

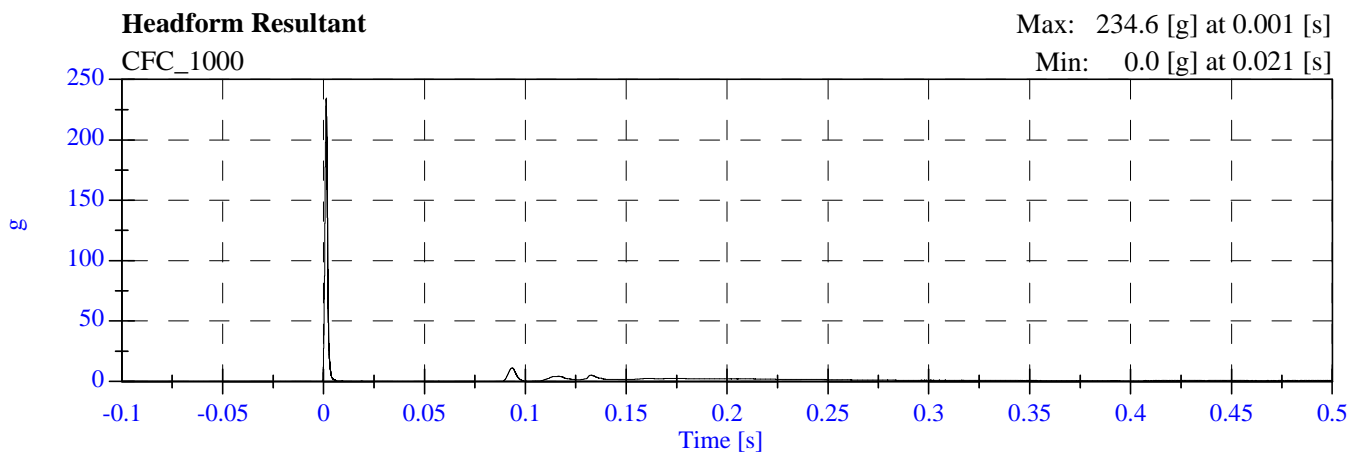
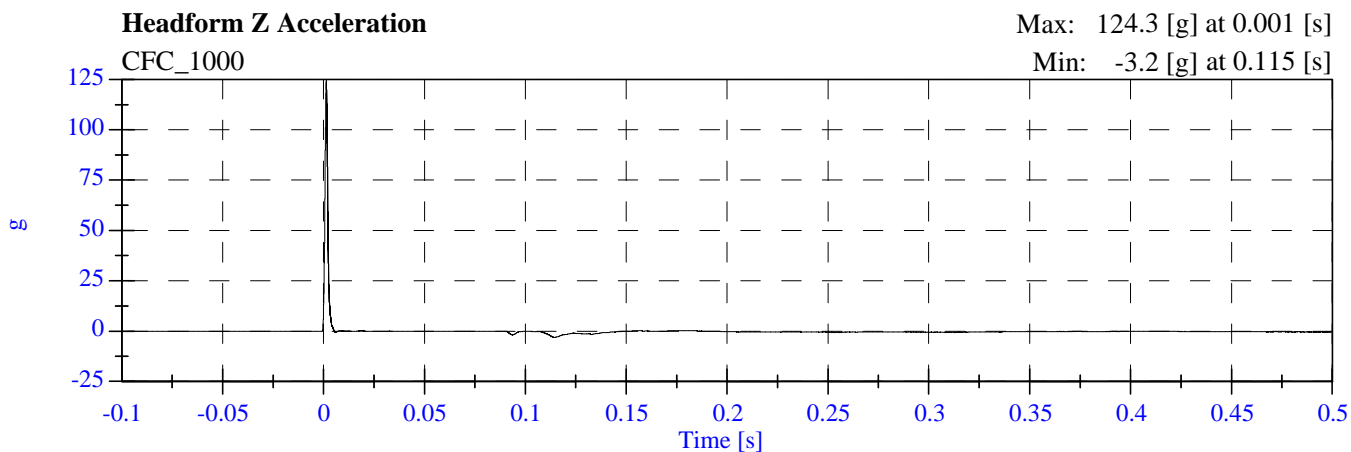
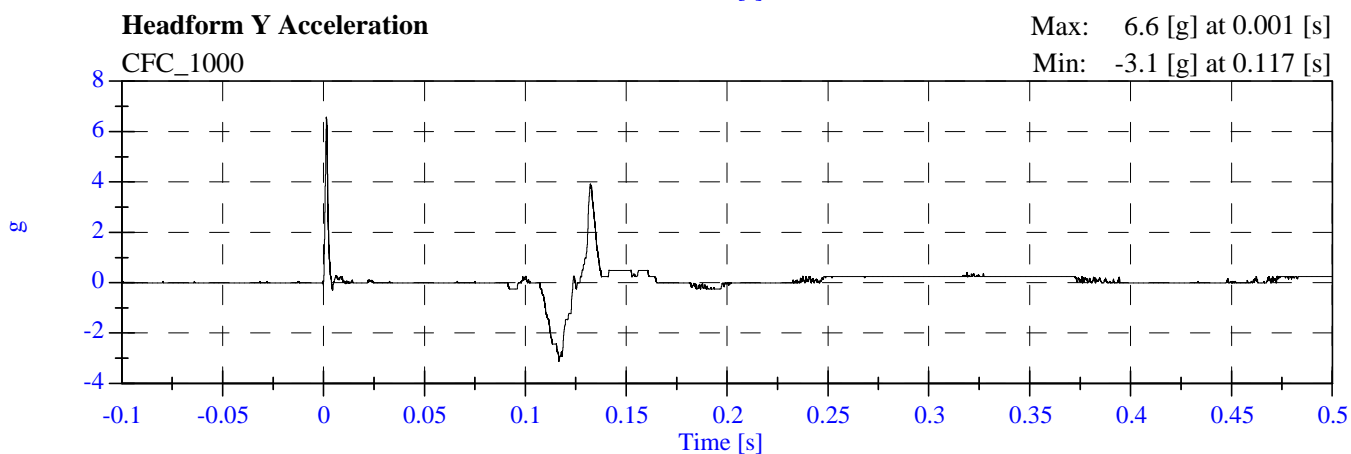
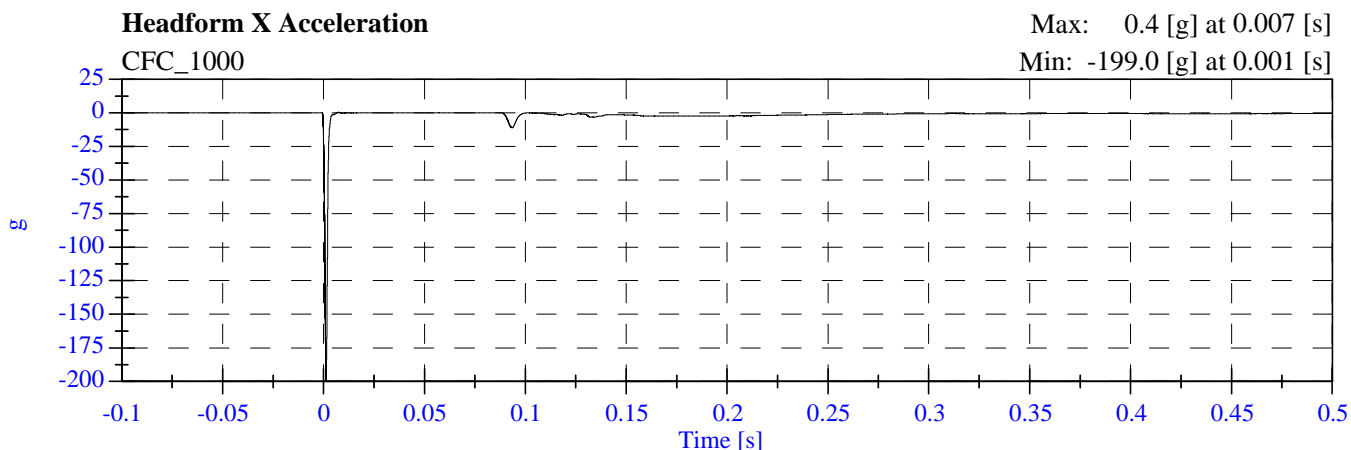
**HEAD ACCELEROMETER CALIBRATION INFORMATION**

<b>I.D. NUMBER</b>	<b>MANUFACTURER</b>	<b>MODEL NUMBER</b>	<b>SERIAL NUMBER</b>	<b>DATE OF LAST CALIBRATION</b>	<b>DATE OF NEXT CALIBRATION</b>
<b>1 - LONGITUDINAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J41006</b>	<b>9/19/05</b>	<b>3/19/06</b>
<b>2 - LATERAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J40994</b>	<b>9/19/05</b>	<b>3/19/06</b>
<b>3 - VERTICAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J41007</b>	<b>9/19/05</b>	<b>3/19/06</b>

**REMARKS:**

# FMVSS 201U - Headform Calibration Drops

## FMH 0355 - November 11, 2005



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

<b>MANUFACTURER:</b>		<b>DENTON ATD INC.</b>	
<b>SERIAL NUMBER:</b>		<b>0355</b>	
<b>CALIBRATION DATE:</b>		<b>November 22, 2005</b>	
<b>TEST PARAMETER</b>	<b>SPECIFICATION</b>	<b>TEST RESULTS</b>	
<b>TEMPERATURE</b>	<b>19°C to 26°C</b>	<b>21.1</b>	
<b>RELATIVE HUMIDITY</b>	<b>10% to 70%</b>	<b>29.0</b>	
<b>PEAK RESULTANT ACCELERATION</b>	<b>225 Gs to 275 Gs</b>	<b>249.0</b>	
<b>PEAK LATERAL ACCELERATION</b>	<b>15 Gs Maximum</b>	<b>0.69</b>	
<b>IS ACCELERATION CURVE UNIMODAL?</b>	<b>YES</b>	<b>YES</b>	

**HEAD ACCELEROMETER CALIBRATION INFORMATION**

<b>I.D. NUMBER</b>	<b>MANUFACTURER</b>	<b>MODEL NUMBER</b>	<b>SERIAL NUMBER</b>	<b>DATE OF LAST CALIBRATION</b>	<b>DATE OF NEXT CALIBRATION</b>
<b>1 - LONGITUDINAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J41006</b>	<b>9/19/05</b>	<b>3/19/06</b>
<b>2 - LATERAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J40994</b>	<b>9/19/05</b>	<b>3/19/06</b>
<b>3 - VERTICAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J41007</b>	<b>9/19/05</b>	<b>3/19/06</b>

**REMARKS:**

# FMVSS 201U - Headform Calibration Drops

## FMH 0355 - November 22, 2005

