

REPORT NUMBER: 201U-CAL-06-07

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

**FUJI HEAVY INDUSTRIES LTD.
2006 SUBARU B9 TRIBECA**

NHTSA NUMBER: C65501

CALSPAN TEST NUMBER: 8754-FMH-14

CALSPAN
TRANSPORTATION SCIENCES CENTER
P.O. BOX 400
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Test Date: May 17, 2006

FINAL REPORT

PREPARED FOR:

U. S. DEPARTMENT OF TRANSPORTATION
National Highway Traffic Safety Administration
Enforcement
Office of Vehicle Safety Compliance
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Approval Date:

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NHTSA, Office of Vehicle Safety Compliance

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 2006 Subaru B9 Tribeca, 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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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 2006 Subaru B9 Tribeca, NHTSA No.C65501, 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 2006 Subaru B9 Tribeca , NHTSA No.C65501 , was tested at various upper interior locations by a 4.54 kg 50th percentile headform. A total of twelve (12) impacts were performed in the test series with the target areas tested selected by the NHTSA Contracting Officers Technical Representative. A summary of test results can be found on Data Sheet 2-1, Summary of Upper Interior Head Impact Tests. The twelve (12) areas chosen for testing were:

| | | | | |
|------|------|------|-----|------|
| OP1 | UROP | URRP | BP4 | URBP |
| SR2A | AP3 | AP1 | BP2 | AP2 |
| SR1 | URAP | | | |

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: | 2006 Subaru B9 Tribeca |
| VIN: | 4S4WX82C764409296 |
| DATE OF MANUFACTURE: | 07/05 (SEE CERTIFICATION LABEL) |
| COLOR: | Silver |

| 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 | 1017.041 | -599.595 | 1150.610 | 1011.662 | 599.138 | 1152.049 | 137° | 28° | 18.52 | 243.9 | 425.1 |
| AP2 | 852.326 | -643.334 | 1062.075 | 857.985 | 640.519 | 1064.345 | 213° | 48° | 18.62 | 516.1 | 555.8 |
| AP3 | 710.372 | -663.994 | 995.382 | 713.662 | 663.084 | 996.949 | 136° | 44° | 18.61 | 291.0 | 385.9 |
| BP1 | 1538.272 | -527.203 | 1239.051 | 1539.956 | 529.901 | 1241.531 | Relocated 1 circle | | - | - | - |
| BP1_R1 | 1535.418 | -502.702 | 1241.863 | 1540.519 | 504.943 | 1242.288 | - | - | - | - | - |
| BP2 | 1511.153 | -626.720 | 1049.433 | 1510.646 | 629.387 | 1044.450 | 270° | 6° | 23.84 | 599.6 | 618.8 |
| BP3 | 1455.722 | -656.513 | 1018.332 | 1457.572 | 656.937 | 1025.894 | - | - | - | - | - |
| BP4 | 1556.977 | -687.372 | 908.175 | 1559.781 | 685.663 | 916.198 | 130° | (-10)° | 23.74 | 463.0 | 515.7 |
| FH1 | 938.944 | -502.936 | 1196.356 | 931.461 | 502.084 | 1194.483 | Relocated 2 circles | | - | - | - |
| FH1_R2 | 930.177 | -458.032 | 1201.118 | 923.576 | 457.994 | 1200.014 | - | - | - | - | - |
| FH2 | 913.228 | -356.014 | 1207.850 | 906.897 | 351.738 | 1207.160 | - | - | - | - | - |
| OP1-OP2 | 2444.389 | -631.591 | 1034.570 | 2439.647 | 629.535 | 1044.214 | 90° | 11° | 23.61 | 681.5 | 680.6 |
| RP1 | 2874.858 | -556.189 | 1133.298 | 2888.551 | 560.150 | 1134.598 | - | - | - | - | - |
| SR1 | 1165.244 | -547.298 | 1211.273 | 1162.853 | 548.782 | 1212.939 | 270° | 41° | 18.80 | 434.1 | 493.9 |
| SR2A | 1317.433 | -547.242 | 1241.237 | 1313.777 | 545.327 | 1244.953 | Relocated 2 circles | | - | - | - |
| SR2A_R2 | 1317.921 | -576.337 | 1210.247 | 1315.346 | 576.825 | 1212.728 | 90° | 42° | 18.76 | 278.9 | 376.8 |
| SR2B | 1237.810 | -551.644 | 1232.654 | 1241.104 | 550.866 | 1237.979 | Relocated 2 circles | | - | - | - |
| SR2B_R2 | 1212.263 | -537.270 | 1211.152 | 1219.445 | 538.113 | 1214.404 | - | - | - | - | - |
| SR3F | 1862.085 | -505.658 | 1235.142 | 1861.670 | 508.892 | 1234.691 | - | - | - | - | - |
| SR3R | 2020.221 | -500.974 | 1235.469 | 2020.602 | 506.151 | 1235.747 | - | - | - | - | - |
| URAP | 1222.185 | -398.671 | 1235.509 | 1206.391 | 419.644 | 1232.522 | 233° | 50° | 23.64 | 374.7 | 449.1 |
| URBP | 1537.106 | -402.496 | 1245.447 | 1555.185 | 402.602 | 1246.196 | 90° | 50° | 23.59 | 247.3 | 353.0 |
| UROP | 2378.564 | -406.644 | 1262.345 | 2395.785 | 405.648 | 1263.136 | 90° | 50° | 23.41 | 446.3 | 503.1 |
| URRP | 2539.104 | -410.352 | 1260.729 | 2598.129 | 289.547 | 1298.633 | 50° | 50° | 23.58 | 405.0 | 471.9 |
| URRSR | 2057.611 | -404.823 | 1260.636 | 2030.375 | 407.208 | 1254.771 | - | - | - | - | - |

*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: | | | | 2006 Subaru B9 Tribeca | | | | | |
| VIN: | | | | 4S4WX82C764409296 | | | | | |
| Month & Year of Manufacture: | | | | 07 / 05 (SEE CERTIFICATION LABEL) | | | | | |
| Vehicle Body Color: | | | | Silver | | | | | |
| Engine Data: | 6 | Cylinders; | - | CID; | 3.0 | Liters; | - | cc | |
| Engine Placement: | | x | Longitudinal; | or | | - | Lateral | | |
| Transmission: | 5 | Speed; | - | Manual; | x | Automatic; | - | Overdrive | |
| Final Drive: | - | Rear Wheel Drive; | - | Front Wheel Drive; | x | Four Wheel Drive | | | |
| Odometer Reading: | | 180 | km | | | | | | |
| Options: | x | A/C; | x | Power Steering; | x | Pwr.Brakes; | x | Pwr. Windows | |
| Interior Trim Information : | | | | | | | | | |
| 1. Upper roof contains a moonroof | | | | | | | | | |
| 2. Adjustable seat belt anchorages on both B-pillars and Other pillars | | | | | | | | | |
| 3. Grab handles on both front and 2 nd row side rail seating positions | | | | | | | | | |

| DATA FROM TIRE PLACARD: | | | | | | | | | |
|-------------------------------------|---|------------|---|-----------------|---|------------------------------|----------|-------|--|
| Tire Pressure (at capacity); | | | | 230 | | kPa FRONT | | | |
| | | | | 220 | | kPa REAR | | | |
| Recommended Tire Size: | | | | P255/55R18 | | | | | |
| Tires on Test Vehicle: | | P255/55R18 | | Manufacturer: | | | Goodyear | | |
| 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: | x | Fixed; | | Adjustable with | x | Lever or | - | Knob | |
| Vehicle Capacity Weight (VCW)= | | | | 408 | | kg (A) | | | |
| No. of Occupants x 68 kg. = | | | | 340 | | kg (B) | | | |
| Rated Cargo/Luggage Weight (RCLW) = | | | | 68 | | 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 | = | 536 | kg | Left Rear | = | 422 | kg |
| Right Front | = | 518 | kg | Right Rear | = | 416 | kg |
| TOTAL FRONT | = | 1054 | kg | TOTAL REAR | = | 838 | kg |
| % of Total Weight | = | 55.7 | % | % of Total Weight | = | 44.3 | % |
| TOTAL WEIGHT | = | 1892 | | | | kg | |

| CALCULATION OF VEHICLE'S TARGET TEST WEIGHT: | | |
|---|-------------|-----------------|
| Total Test Vehicle Delivered Weight= | 1892 | kg (A) |
| + Rated Cargo/Luggage Weight = | 68 | kg (B) |
| TEST VEHICLE TARGET WEIGHT = | 1960 | kg (A+B) |

| WEIGHT OF TEST VEHICLE (FULLY LOADED): | | | | | | | |
|---|---|-------------|-----------|-------------------|---|-------------|-----------|
| Left Front | = | 528 | kg | Left Rear | = | 455 | kg |
| Right Front | = | 521 | kg | Right Rear | = | 450 | kg |
| TOTAL FRONT | = | 1049 | kg | TOTAL REAR | = | 905 | kg |
| % of Total Weight | = | 53.7 | % | % of Total Weight | = | 46.3 | % |
| TOTAL TEST WEIGHT | = | 1954 | | | | | |
| Weight of vehicle secured in test vehicles cargo area | = | 63 | | | | kg | |

| TEST VEHICLE ATTITUDE (all dimensions in millimeters): | | | | |
|---|-------------|------------|------------|-------------|
| AS DELIVERED: | Left Front | 806 | Left Rear | 819 |
| | Right Front | 806 | Right Rear | 823 |
| FULLY LOADED: | Left Front | 805 | Left Rear | 810 |
| | Right Front | 806 | Right Rear | 814 |
| Test Vehicle Wheelbase: | | | | millimeters |

| TEST VEHICLE PITCH AND ROLL ANGLES: | | | | |
|--|-----------------|--------------|--------------|--------------|
| AS DELIVERED: | PITCH ANGLES | | ROLL ANGLES | |
| | Left Door Sill | ↑0.9↓ | Front Bumper | ↑0.1↓ |
| | Right Door Sill | ↓0.8↑ | Rear Bumper | 0.0 |
| FULLY LOADED: | PITCH ANGLES | | ROLL ANGLES | |
| | Left Door Sill | ↑0.6↓ | Front Bumper | 0.0 |
| | Right Door Sill | ↓1.0↑ | Rear Bumper | ↑0.2↓ |
| AS TESTED: | PITCH ANGLES | | ROLL ANGLES | |
| | Left Door Sill | ↑0.8↓ | Front Bumper | 0.0 |
| | Right Door Sill | ↓1.0↑ | Rear Bumper | ↑0.2↓ |

DATA SHEET 2-3

APPROACH ANGLE LIMITS

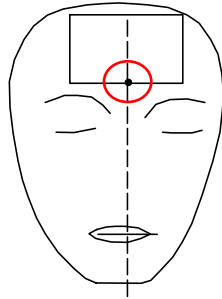
| Target Code | Left Side | | | | Target Code | Right Side | | | |
|-------------|--------------------------|---------|------------------------|---------|-------------|--------------------------|---------|------------------------|---------|
| | Horizontal Angles (deg.) | | Vertical Angles (deg.) | | | Horizontal Angles (deg.) | | Vertical Angles (deg.) | |
| | Minimum | Maximum | Minimum | Maximum | | Minimum | Maximum | Minimum | Maximum |
| AP1 | 208 | 250 | -5 | 28 | AP1 | 110 | 152 | -5 | 28 |
| AP2 | 208 | 250 | -5 | 48 | AP2 | 110 | 152 | -5 | 48 |
| AP3 | 208 | 250 | -5 | 44 | AP3 | 110 | 152 | -5 | 44 |
| BP1 | 212 | 271 | -10 | 21 | BP1 | 89 | 148 | -10 | 21 |
| BP2 | ANY | | 0 | 6 | BP2 | ANY | | 0 | 6 |
| BP3 | 212 | 271 | -10 | -10 | BP3 | 89 | 148 | -10 | -10 |
| BP4 | 212 | 271 | -10 | -10 | BP4 | 89 | 148 | -10 | -10 |
| OP1 | ANY | | 0 | 11 | OP1 | ANY | | 0 | 11 |
| OP2 | 270 | | -10 | 11 | OP2 | 90 | | -10 | 11 |
| 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 | 50 | RH | 0 | | 0 | 50 |
| SR1 | 270 | | 0 | 41 | SR1 | 90 | | 0 | 41 |
| SR2A | 270 | | 0 | 42 | SR2A | 90 | | 0 | 42 |
| SR2B | 270 | | 0 | 42 | SR2B | 90 | | 0 | 42 |
| SR3 | 270 | | 0 | 50 | SR3 | 90 | | 0 | 50 |
| URAP | ANY | | 0 | 50 | URAP | ANY | | 0 | 50 |
| URBP | ANY | | 0 | 50 | URBP | ANY | | 0 | 50 |
| UROP | ANY | | 0 | 50 | UROP | ANY | | 0 | 50 |
| URRP | ANY | | 0 | 50 | URRP | ANY | | 0 | 50 |

Note : BP2, OP1 target locations – Seat belt anchorage

DATA SHEET 2-4

SUMMARY TARGET IMPACT LOCATION ON FMH

| | |
|--------------------------------|---------------------------------|
| VEHICLE YEAR/MAKE/MODEL/STYLE: | 2006 Subaru B9 Tribeca |
| VIN: | 4S4WX82C764409296 |
| DATE OF MANUFACTURE: | 07/05 (SEE CERTIFICATION LABEL) |
| COLOR: | Silver |



ã RIGHT SIDE OF FACE

| TARGET | Distance Above Point O (mm) | Distance Over From Pt. O (mm) |
|--------|-----------------------------|-------------------------------|
| OP1 | 9 | 6L |
| UROP | 46 | 8L |
| URRP | 41 | 7R |
| BP4 | 25 | 13L |
| URBP | 21 | 2L |
| SR2A | 11 | 3R |
| AP3 | 16 | 1L |
| AP1 | 6 | 33R |
| BP2 | 5 | 2L |
| AP2 | 20 | 4R |
| SR1 | 35 | 13L |
| URAP | 24 | 0 |

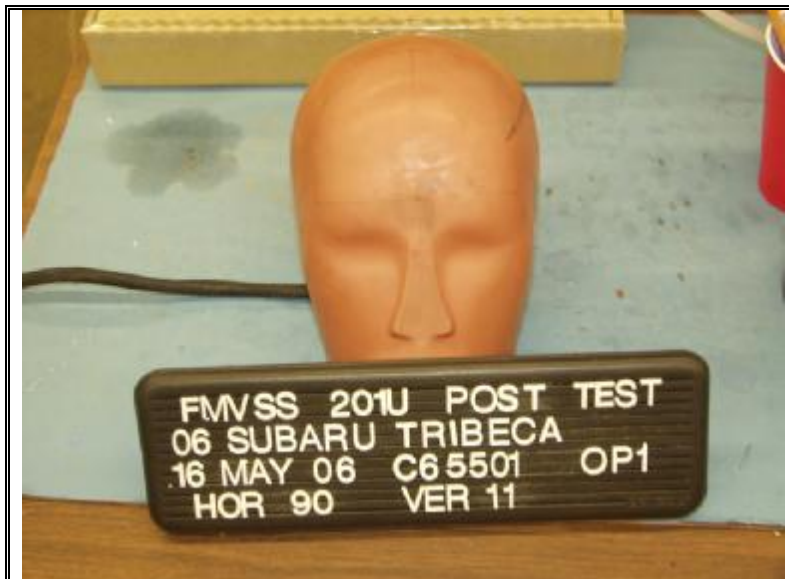
SECTION 3

SUMMARY OF TEST RESULTS AND DATA PLOTS

| | |
|--------------------------------|---------------------------------|
| VEHICLE YEAR/MAKE/MODEL/STYLE: | 2006 Subaru B9 Tribeca |
| VIN: | 4S4WX82C764409296 |
| DATE OF MANUFACTURE: | 07/05 (SEE CERTIFICATION LABEL) |
| COLOR: | Silver |

| | |
|--------------------------|--------------|
| Test Number: | 01 |
| Test Date: | 05/16/06 |
| Target Location: | OTHER PILLAR |
| Target Code: | OP1 |
| Horizontal Impact Angle: | 90° |
| Vertical Impact Angle: | 11° |
| Ambient Temperature: | 23.1°C |
| Relative Humidity: | 46.8 |
| Time of Impact: | 11:00 |
| Headform Number: | 0062 |

| | | | | | |
|--|---|--------------------------|----------|-------------------------------------|---------|
| Impact Point Description (from lower midpoint on midsagittal line) | | | | | |
| On Centerline | 6 | <input type="checkbox"/> | mm right | <input checked="" type="checkbox"/> | mm left |
| On Centerline | 9 | | | | mm up |



POST-IMPACT OP1 HEADFORM

| | |
|-----------------------|-------|
| Free Motion HIC | 681.5 |
| HIC(d) | 680.6 |
| Impact Velocity (kph) | 23.61 |
| HIC T1 (msec) | 1.0 |
| HIC T2 (msec) | 11.1 |

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA C65501 - OP1

FMH Headform 0062

Location: OP1

Test Date: May 16, 2006

Work File: OP1

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

Lab Temperature: 23.1 C

HICd: 680.6

Lab Humidity: 46.8 %

HIC (36ms): 681.5

Velocity at Impact: 23.61 KPH

t1: 1.0 msec

t2: 11.1 msec

Free Flight Distance: 218.32 mm

Duration: 10.1 msec

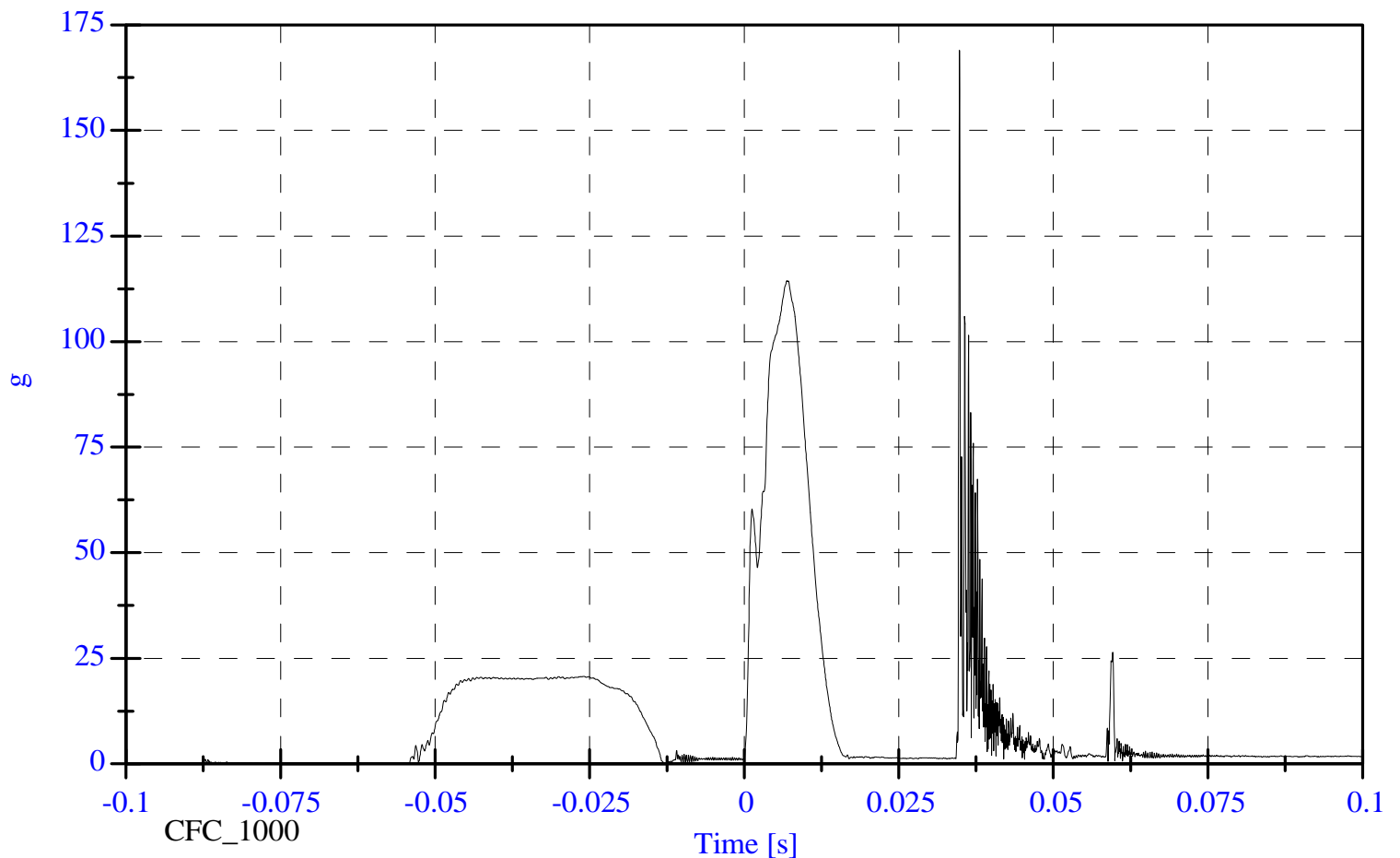
Maximum: 114.4 g

Average Acceleration: 10.4 g

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA
Headform Resultant

Max: 114.4 [g] at 0.007 [s]

Min: 0.0 [g] at -0.096 [s]



FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

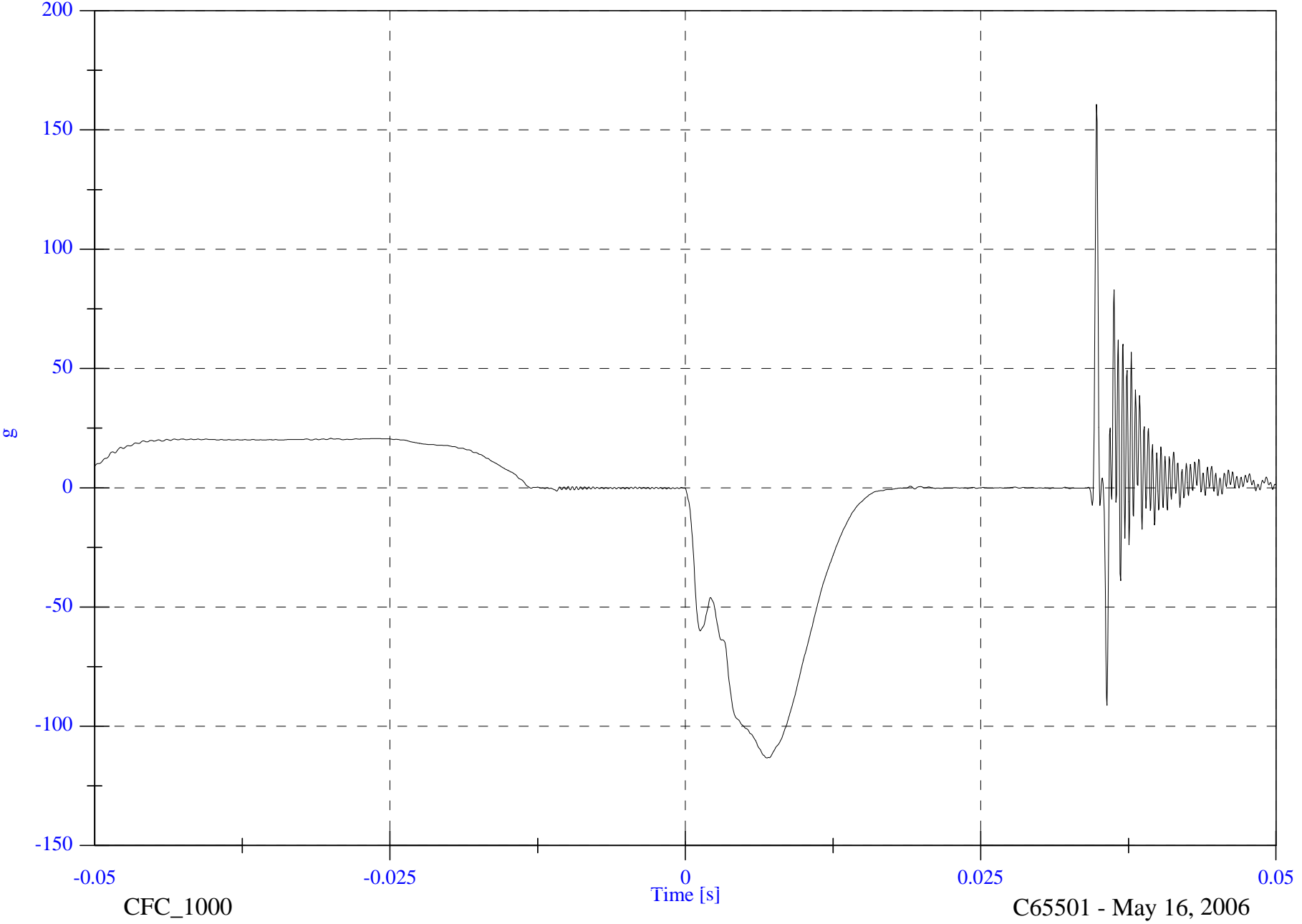
Headform X Acceleration

Max: 160.7 [g] at 0.035 [s]

Min: -113.3 [g] at 0.007 [s]

C65501 PASSENGER SIDE OP1 IMPACT PLOT #1

8754+FMH-14



CFC_1000

C65501 - May 16, 2006

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

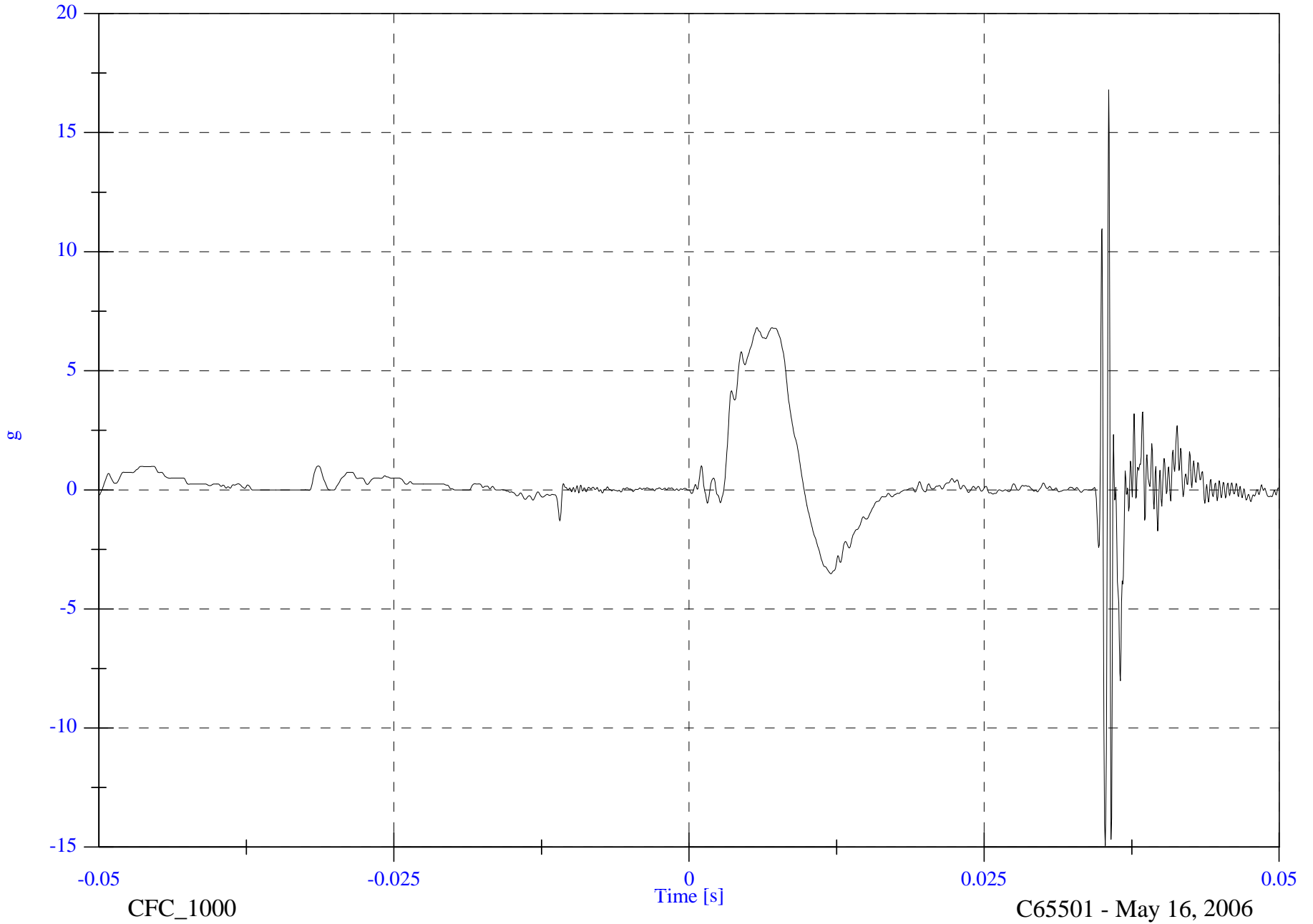
Headform Y Acceleration

Max: 16.8 [g] at 0.036 [s]

Min: -14.9 [g] at 0.035 [s]

C65501 PASSENGER SIDE OP1 IMPACT PLOT #2

8754+FMH-14



FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

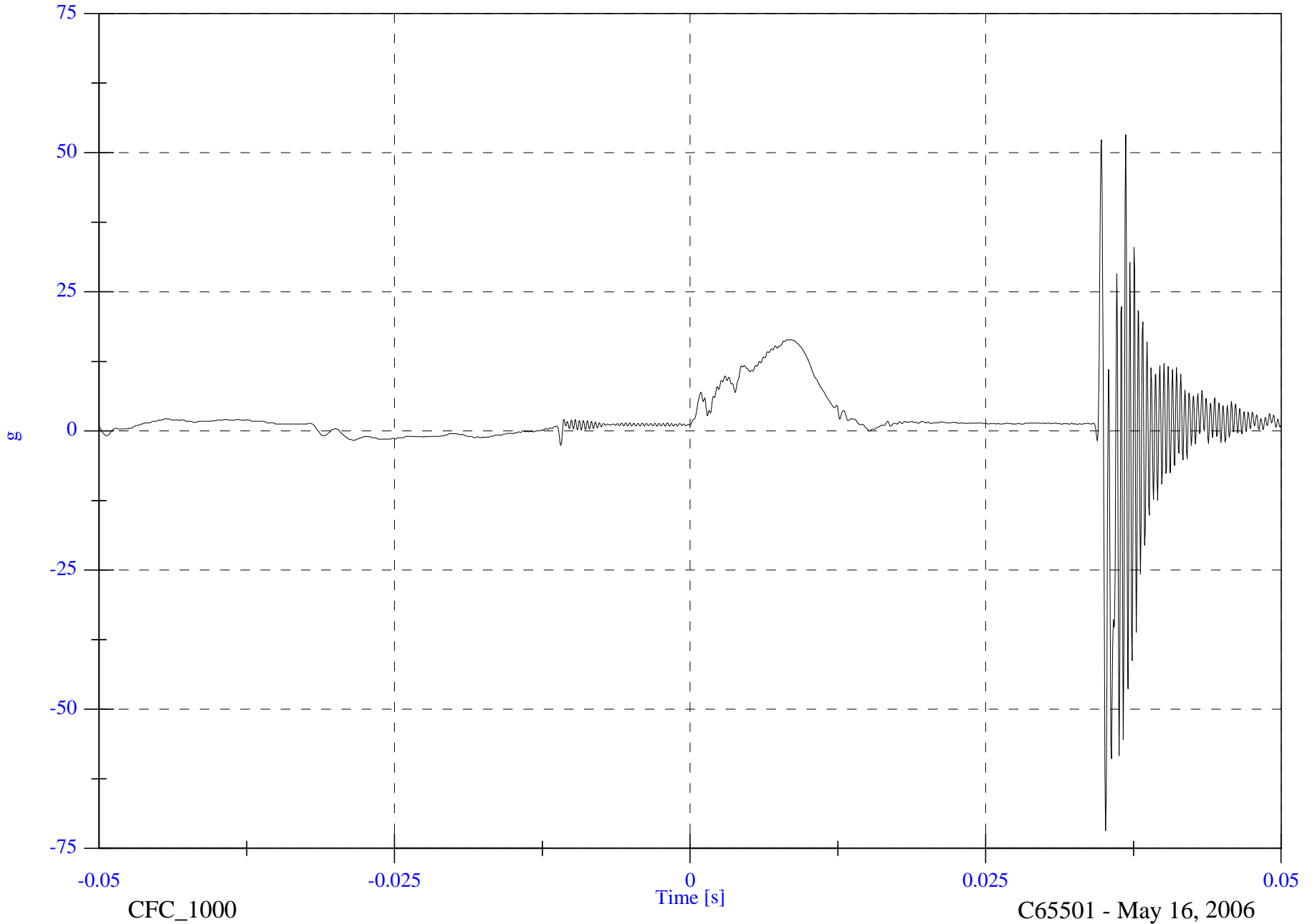
Headform Z Acceleration

Max: 53.3 [g] at 0.037 [s]

Min: -71.9 [g] at 0.035 [s]

C65501 PASSENGER SIDE OP1 IMPACT PLOT #3

8754+FMH-14



CFC_1000

C65501 - May 16, 2006

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

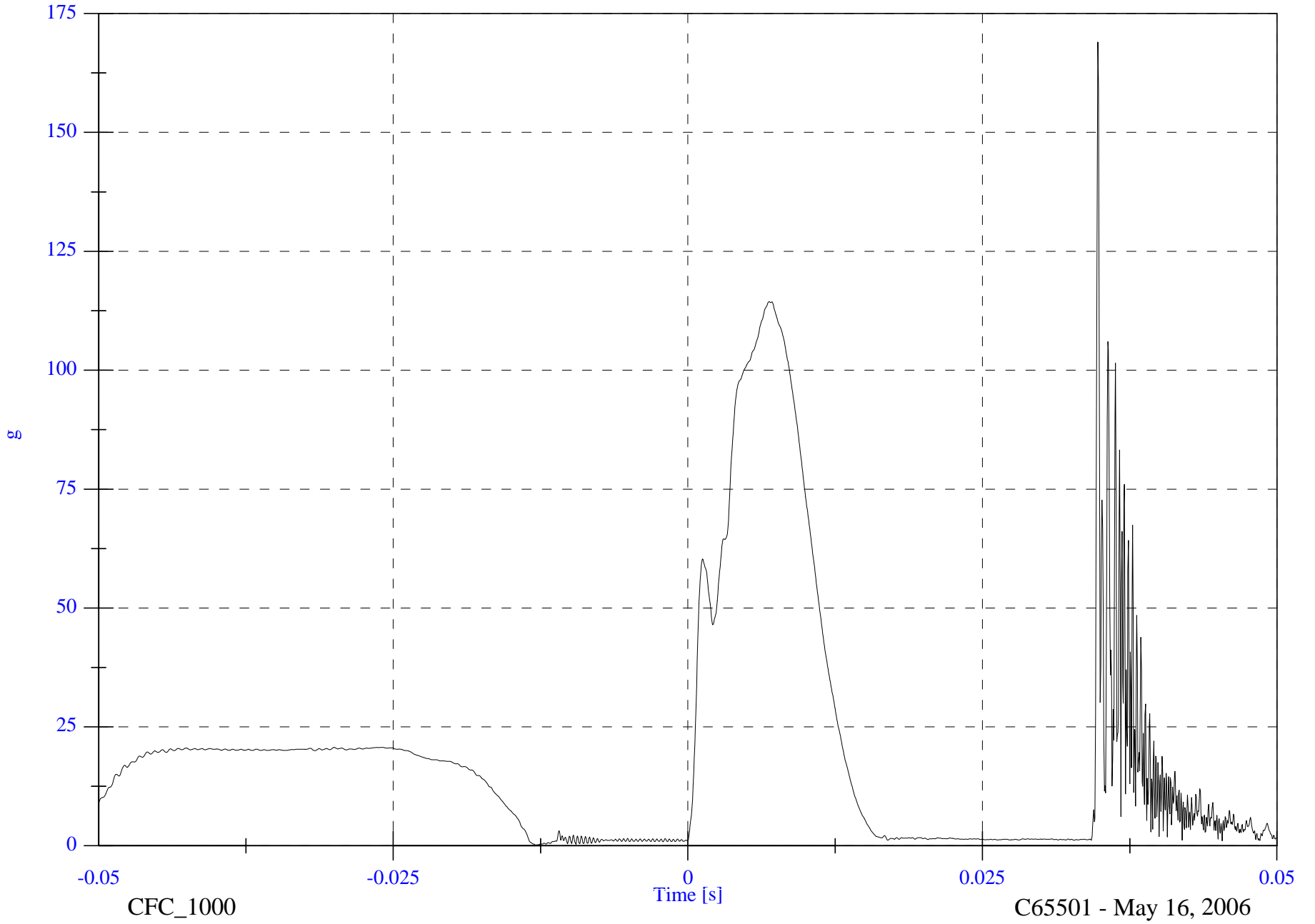
Headform Resultant

Max: 169.0 [g] at 0.035 [s]

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

C65501 PASSENGER SIDE OP1 IMPACT PLOT #4

8754+FMH-14



CFC_1000

C65501 - May 16, 2006

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

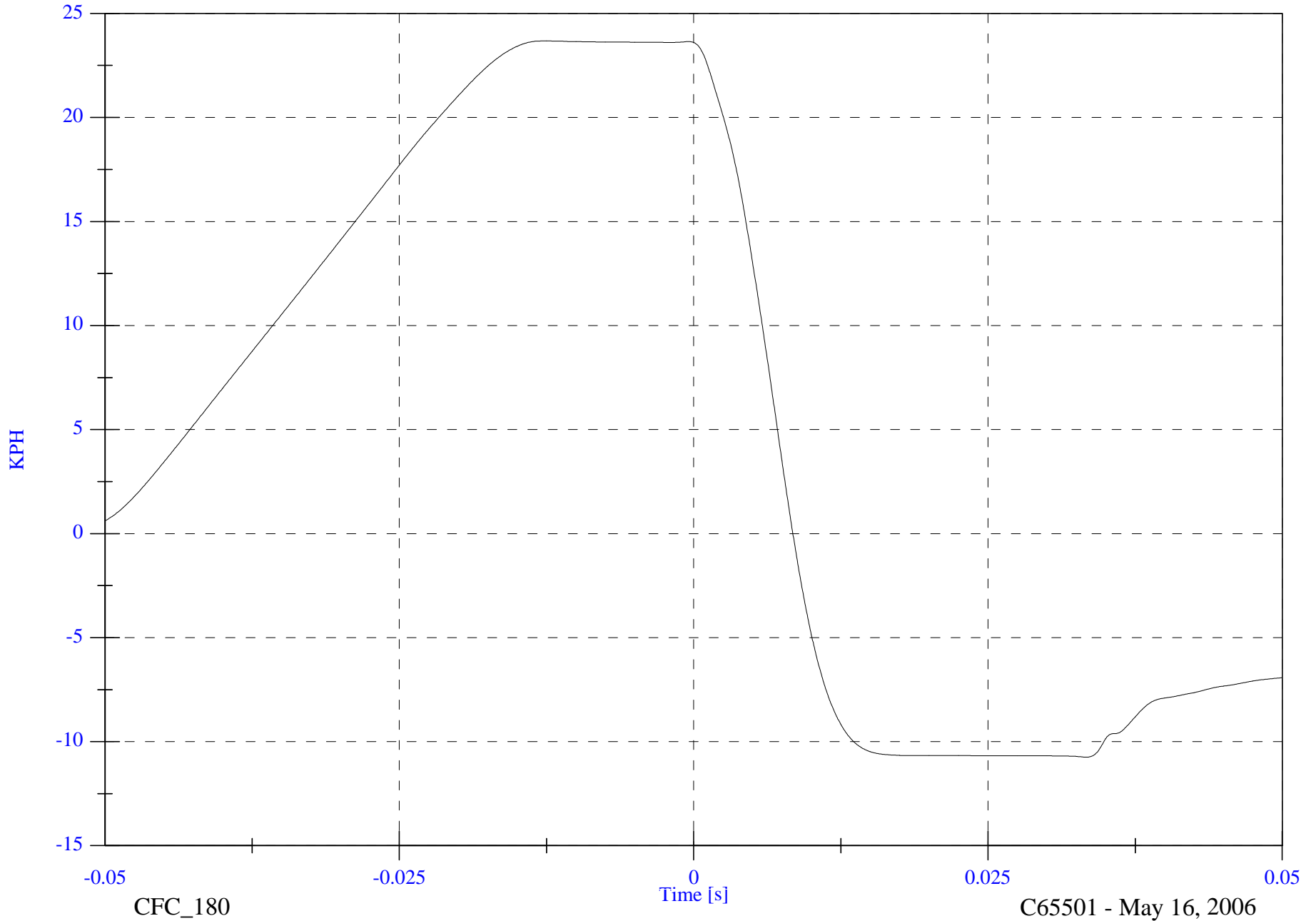
Headform Velocity

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

Min: -10.7 [KPH] at 0.033 [s]

C65501 PASSENGER SIDE OP1 IMPACT PLOT #5

8754+FMH-14



CFC_180

C65501 - May 16, 2006



PRE-IMPACT OPI



POST-IMPACT OPI

| | |
|--------------------------------|---------------------------------|
| VEHICLE YEAR/MAKE/MODEL/STYLE: | 2006 Subaru B9 Tribeca |
| VIN: | 4S4WX82C764409296 |
| DATE OF MANUFACTURE: | 07/05 (SEE CERTIFICATION LABEL) |
| COLOR: | Silver |

| | |
|--------------------------|-----------------|
| Test Number: | 02 |
| Test Date: | 05/16/06 |
| Target Location: | UPPER ROOF |
| Target Code: | UROP |
| Horizontal Impact Angle: | 90° |
| Vertical Impact Angle: | 50° |
| Ambient Temperature: | 23.1°C |
| Relative Humidity: | 46.7 |
| Time of Impact: | 11:30 |
| Headform Number: | 0355 |

| | | | | | |
|--|-----------|--------------------------|----------|-------------------------------------|---------|
| Impact Point Description (from lower midpoint on midsagittal line) | | | | | |
| On Centerline | 8 | <input type="checkbox"/> | mm right | <input checked="" type="checkbox"/> | mm left |
| On Centerline | 46 | | | | mm up |



POST-IMPACT UROP HEADFORM

| | |
|-----------------------|--------------|
| Free Motion HIC | 446.3 |
| HIC(d) | 503.1 |
| Impact Velocity (kph) | 23.41 |
| HIC T1 (msec) | 9.2 |
| HIC T2 (msec) | 16.2 |

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA C65501 - UROP

FMH Headform 0355

Location: UROP

Test Date: May 16, 2006

Work File: UROP

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

Lab Temperature: 23.1 C

HICd: 503.1

Lab Humidity: 46.7 %

HIC (36ms): 446.3

Velocity at Impact: 23.41 KPH

t1: 9.2 msec

t2: 16.2 msec

Free Flight Distance: 219.85 mm

Duration: 6.9 msec

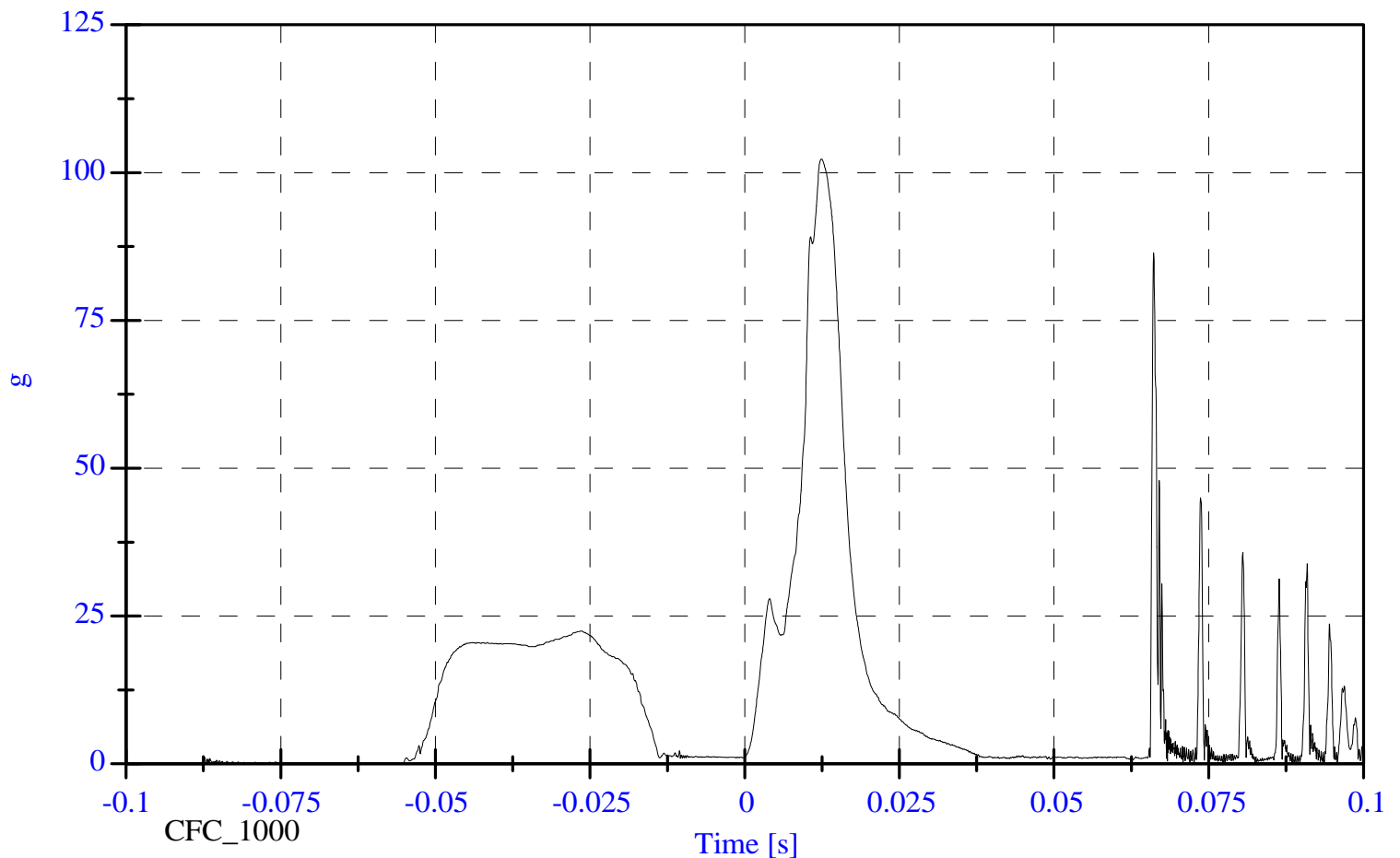
Maximum: 102.3 g

Average Acceleration: 10.0 g

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA
Headform Resultant

Max: 102.3 [g] at 0.012 [s]

Min: 0.0 [g] at -0.056 [s]



FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

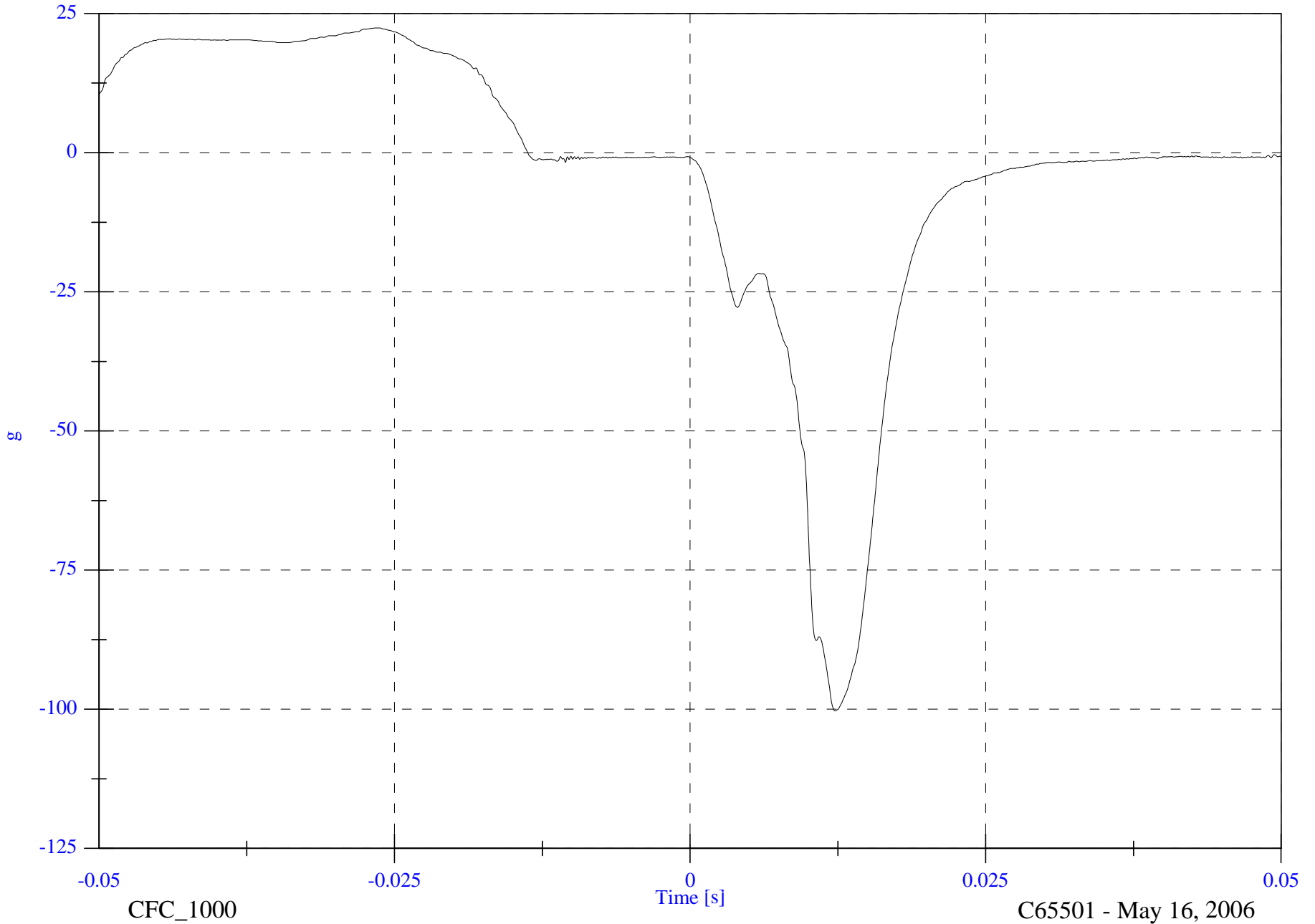
Headform X Acceleration

Max: 22.4 [g] at -0.026 [s]

Min: -100.3 [g] at 0.012 [s]

C65501 PASSENGER SIDE UROP IMPACT PLOT #1

8754+FMH-14



C65501 - May 16, 2006

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

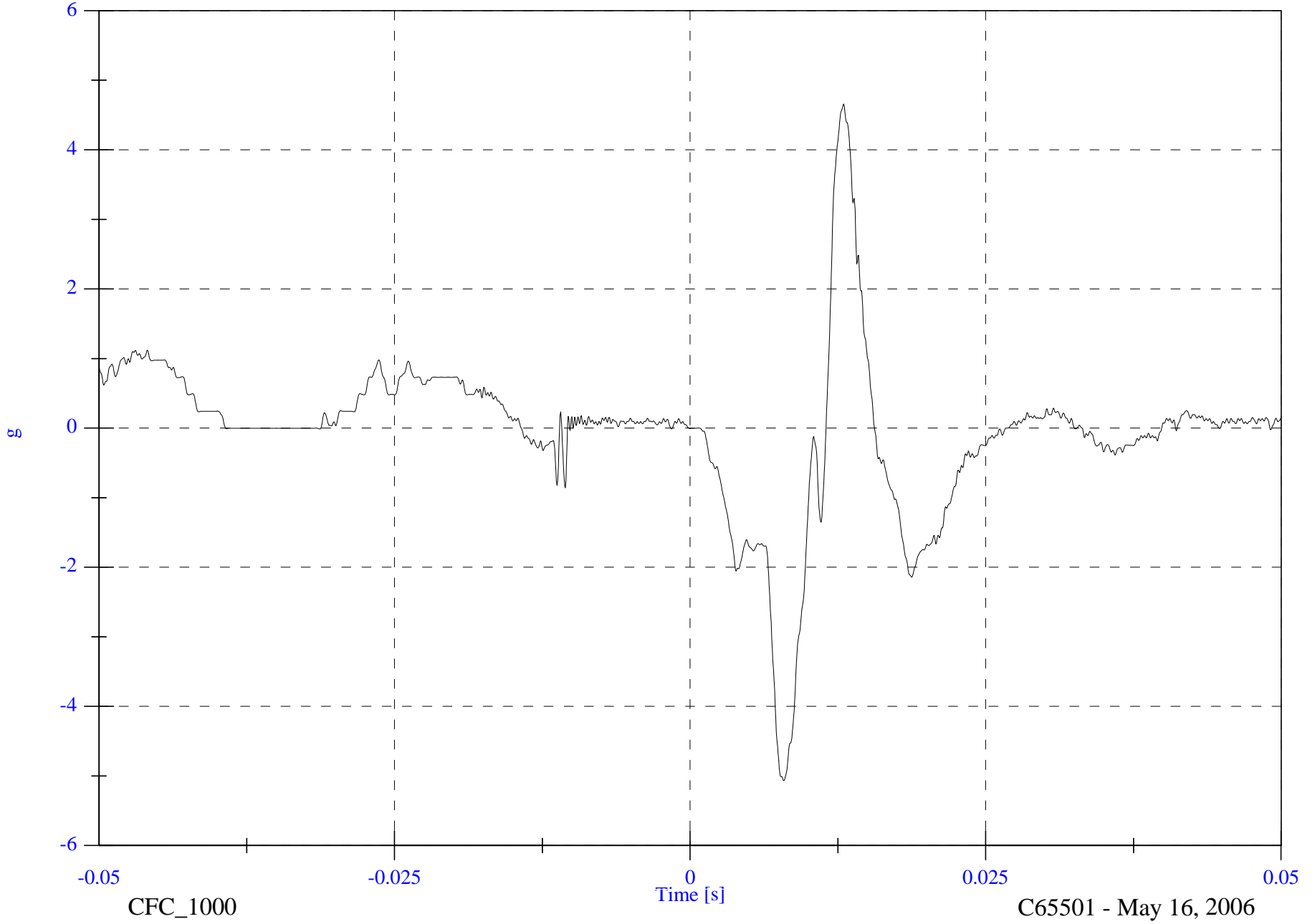
Headform Y Acceleration

Max: 4.7 [g] at 0.013 [s]

Min: -5.1 [g] at 0.008 [s]

C65501 PASSENGER SIDE UROP IMPACT PLOT #2

8754-FMH-14



CFC_1000

C65501 - May 16, 2006

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

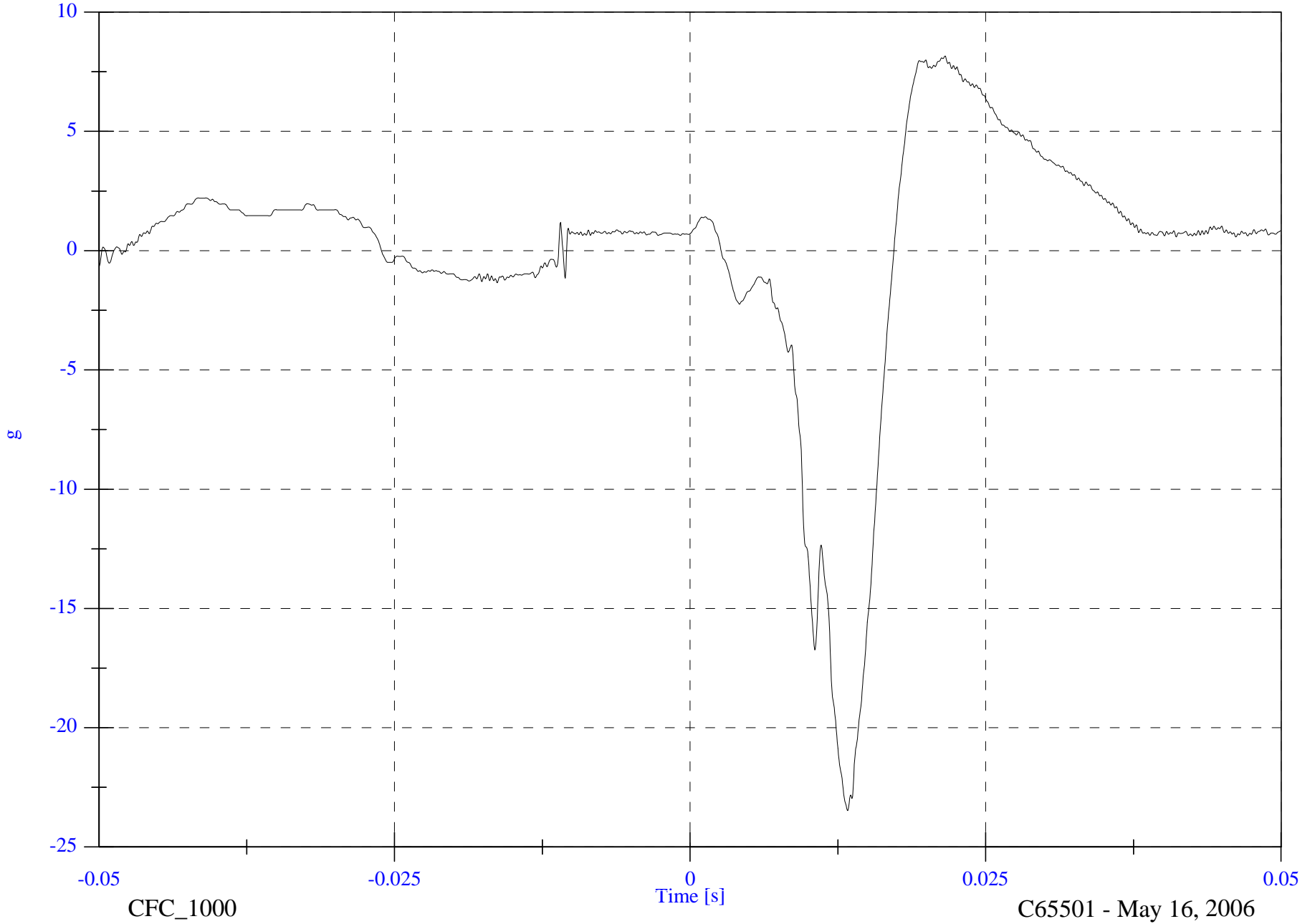
Headform Z Acceleration

Max: 8.2 [g] at 0.022 [s]

Min: -23.5 [g] at 0.013 [s]

C65501 PASSENGER SIDE UROP IMPACT PLOT #3

8754+FMH-14



CFC_1000

C65501 - May 16, 2006

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

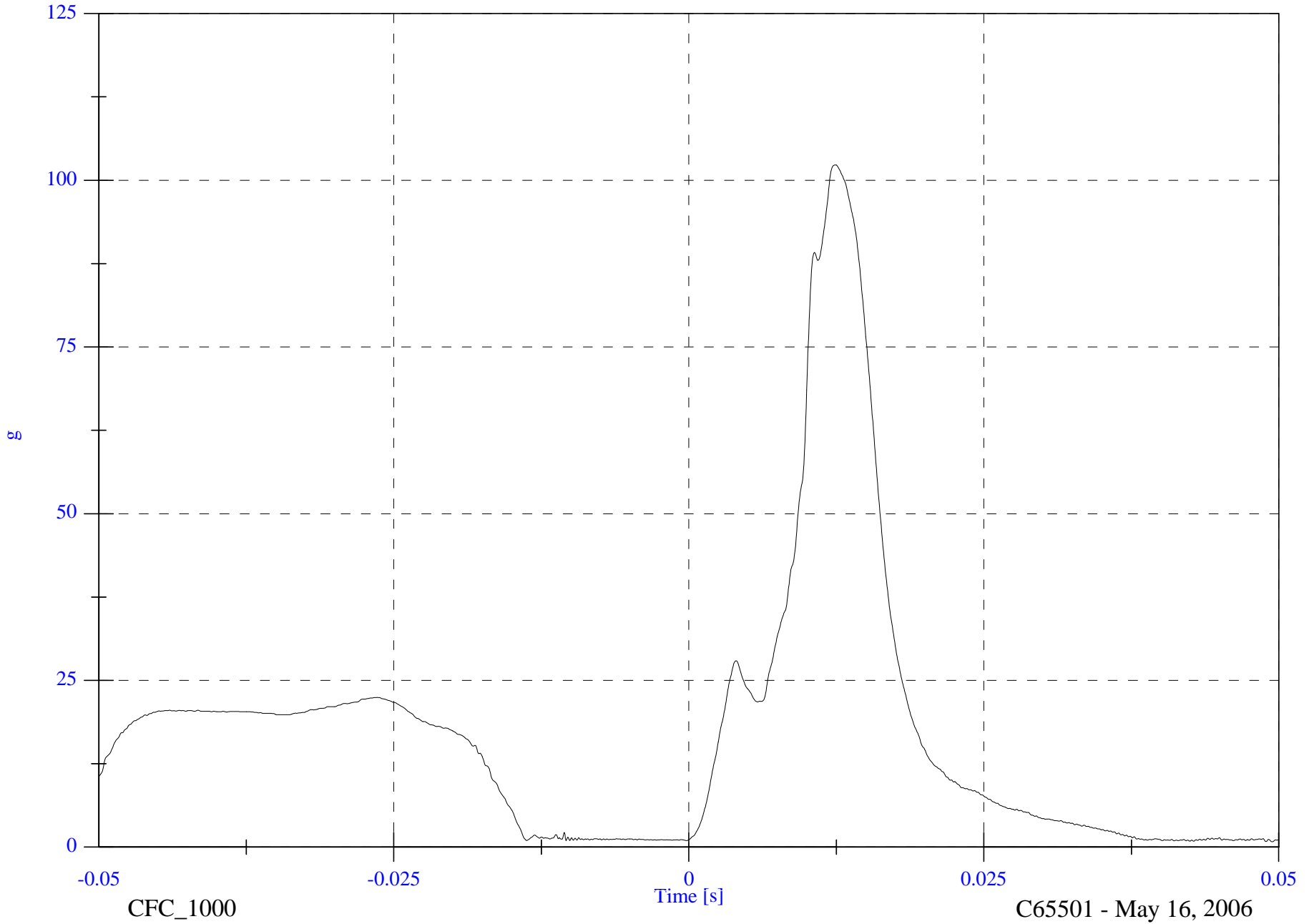
Headform Resultant

Max: 102.3 [g] at 0.012 [s]

Min: 0.8 [g] at 0.049 [s]

C65501 PASSENGER SIDE UROP IMPACT PLOT #4

8754+FMH-14



FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

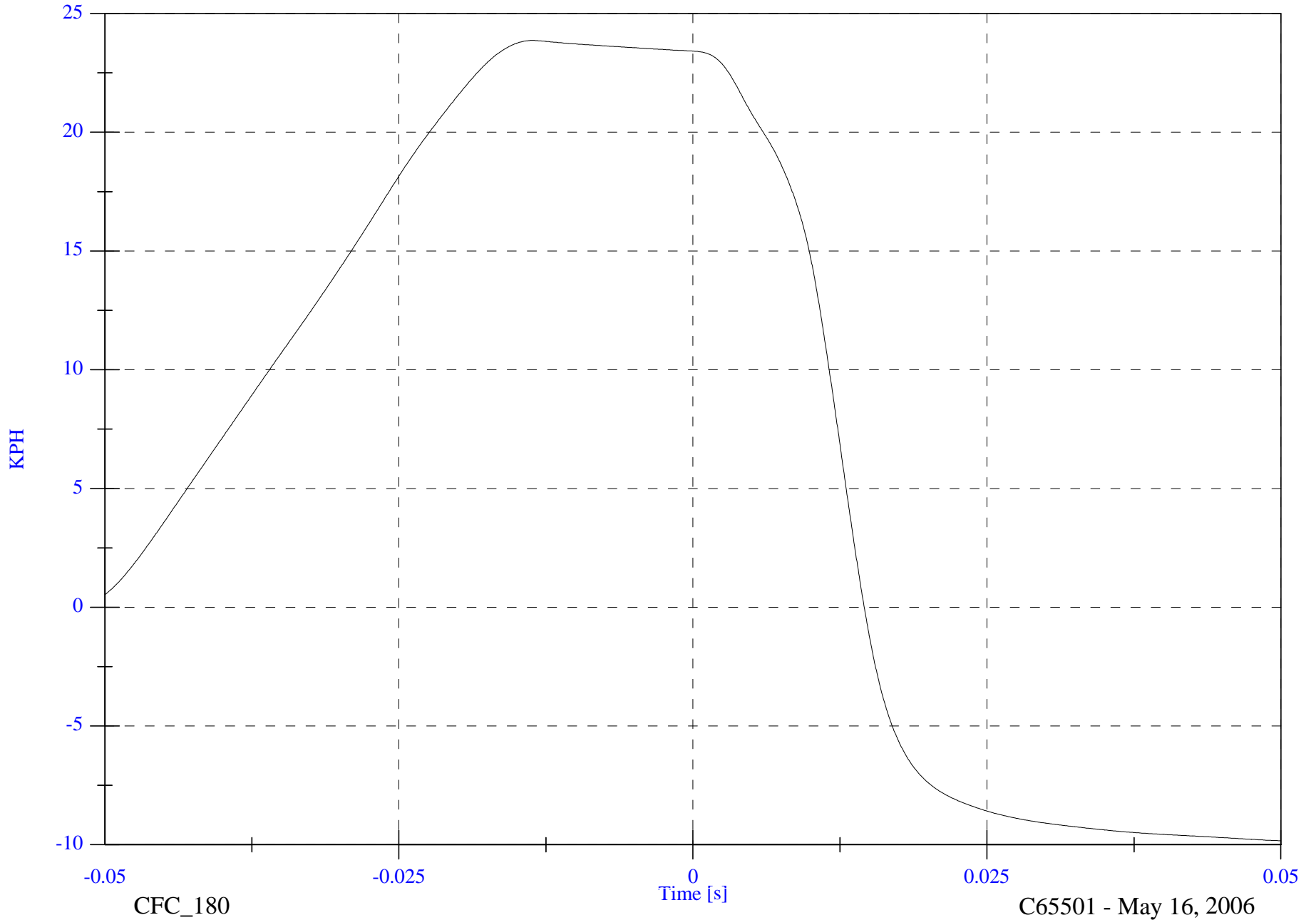
Headform Velocity

Max: 23.9 [KPH] at -0.014 [s]

Min: -9.8 [KPH] at 0.050 [s]

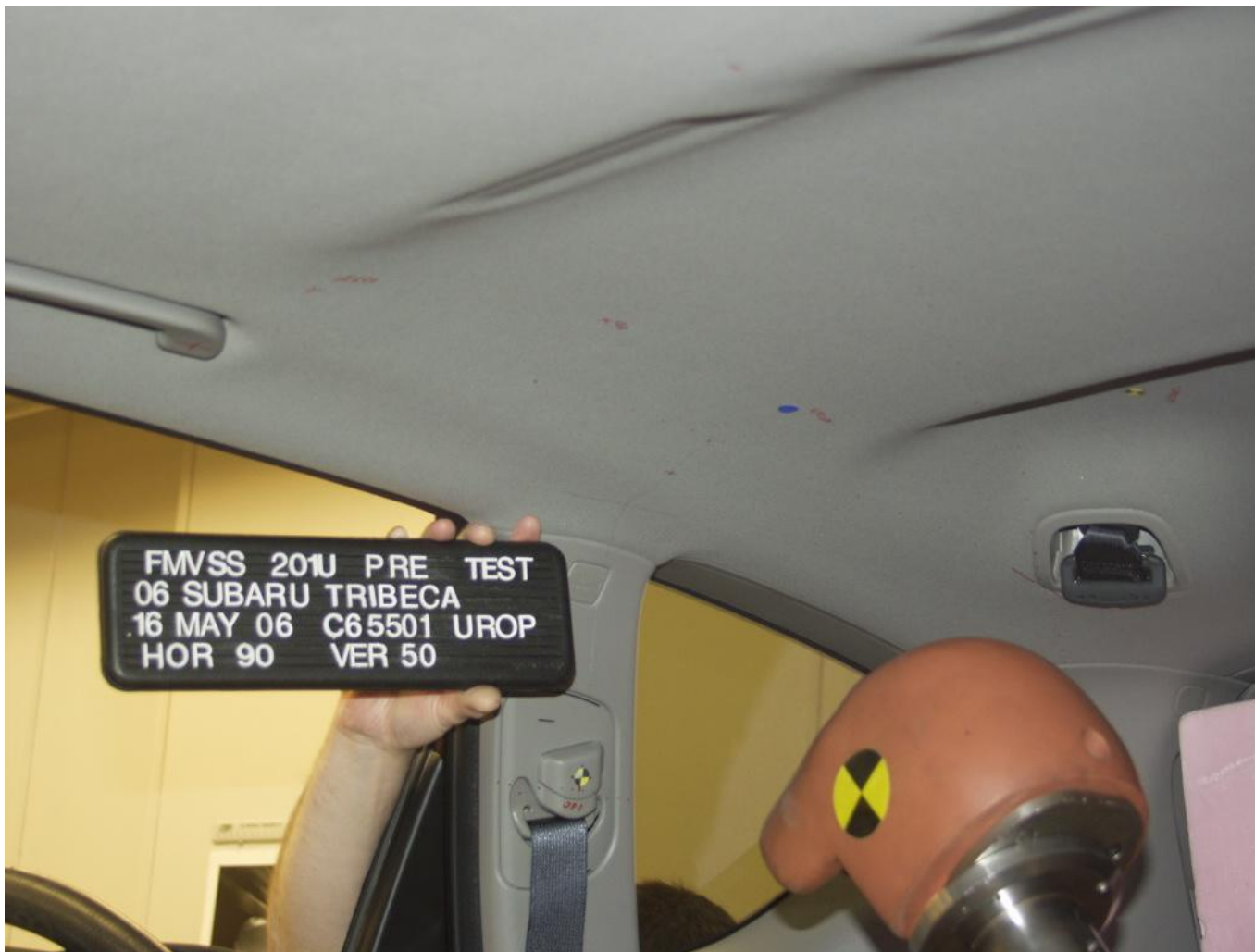
C65501 PASSENGER SIDE UROP IMPACT PLOT #5

8754+FMH-14



CFC_180

C65501 - May 16, 2006



PRE-IMPACT UROP



POST-IMPACT UROP

| | |
|--------------------------------|---------------------------------|
| VEHICLE YEAR/MAKE/MODEL/STYLE: | 2006 Subaru B9 Tribeca |
| VIN: | 4S4WX82C764409296 |
| DATE OF MANUFACTURE: | 07/05 (SEE CERTIFICATION LABEL) |
| COLOR: | Silver |

| | |
|--------------------------|-----------------|
| Test Number: | 03 |
| Test Date: | 05/16/06 |
| Target Location: | UPPER ROOF |
| Target Code: | URRP |
| Horizontal Impact Angle: | 50° |
| Vertical Impact Angle: | 50° |
| Ambient Temperature: | 23.1°C |
| Relative Humidity: | 46.3 |
| Time of Impact: | 11:53 |
| Headform Number: | 0642 |

| Impact Point Description (from lower midpoint on midsagittal line) | | | | | |
|--|----|-------------------------------------|----------|--------------------------|---------|
| On Centerline | 7 | <input checked="" type="checkbox"/> | mm right | <input type="checkbox"/> | mm left |
| On Centerline | 41 | | | | mm up |



POST-IMPACT URRP HEADFORM

| | |
|-----------------------|-------|
| Free Motion HIC | 405.0 |
| HIC(d) | 471.9 |
| Impact Velocity (kph) | 23.58 |
| HIC T1 (msec) | 3.0 |
| HIC T2 (msec) | 12.6 |

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA C65501 - URRP

FMH Headform 0642

Location: URRP

Test Date: May 16, 2006

Work File: URRP

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

Lab Temperature: 23.1 C

HICd: 471.9

Lab Humidity: 46.3 %

HIC (36ms): 405.0

Velocity at Impact: 23.58 KPH

t1: 3.0 msec

t2: 12.6 msec

Free Flight Distance: 222.09 mm

Duration: 9.6 msec

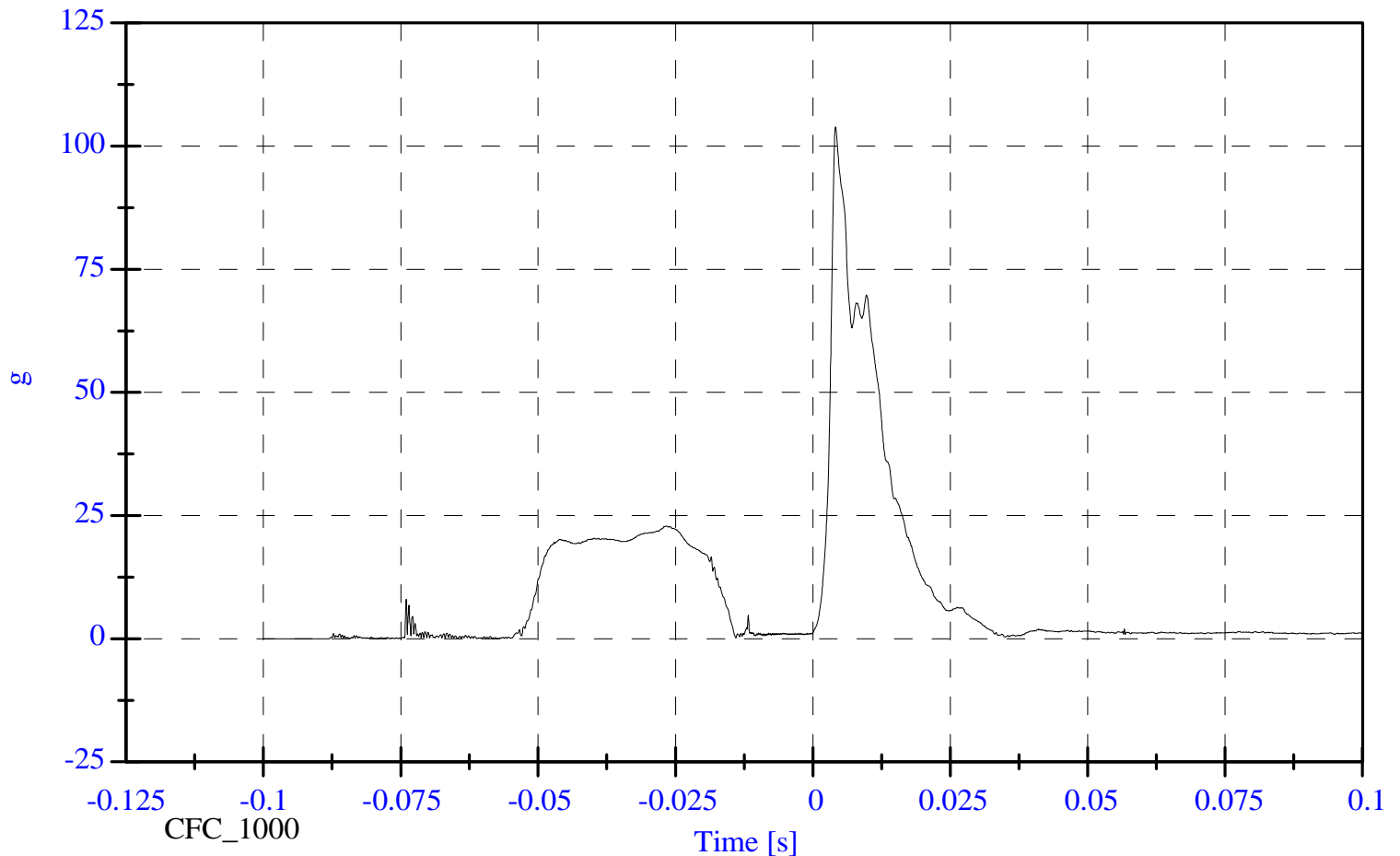
Maximum: 103.9 g

Average Acceleration: 8.8 g

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA
Headform Resultant

Max: 103.9 [g] at 0.004 [s]

Min: -0.0 [g] at -0.100 [s]



FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

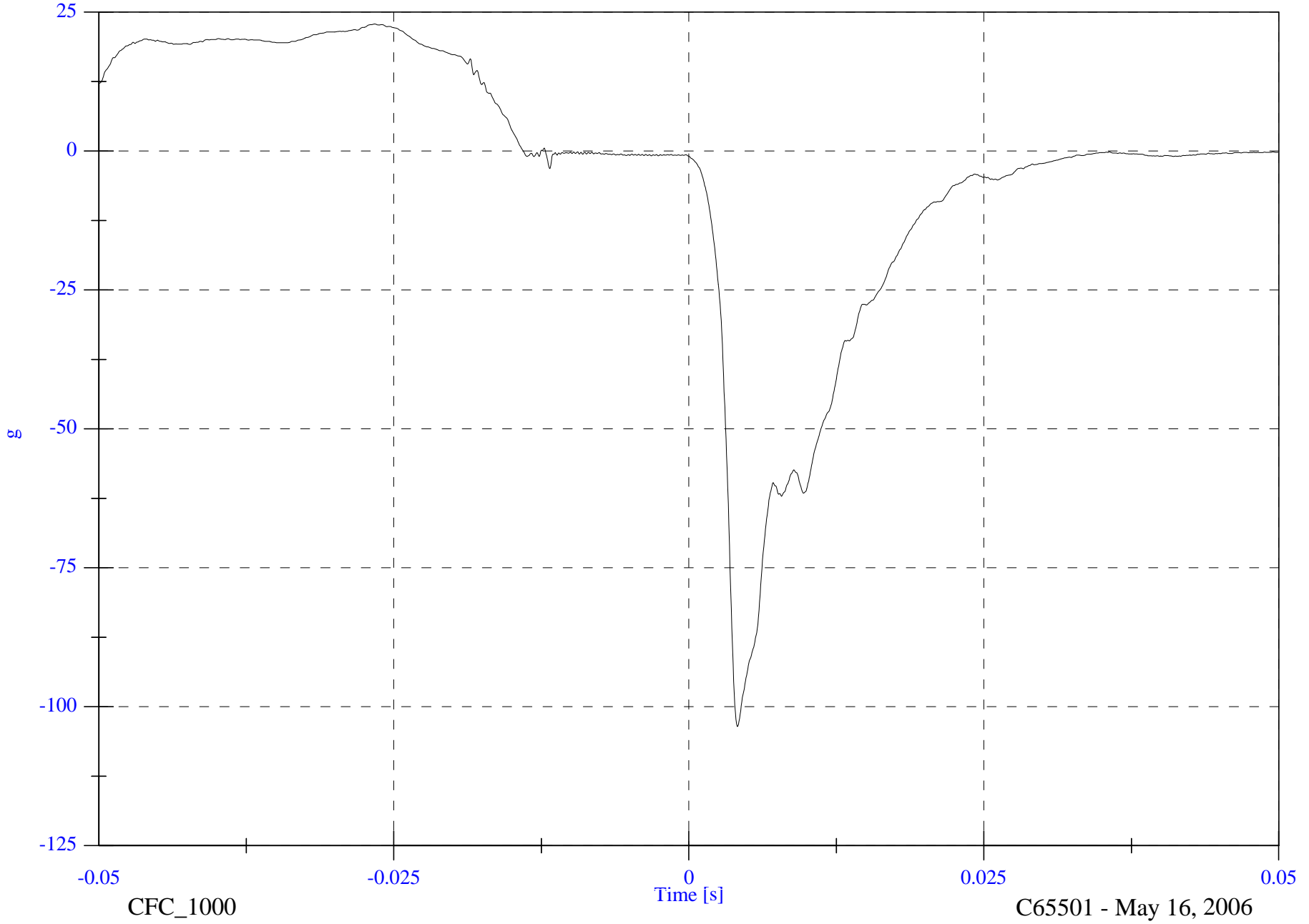
Headform X Acceleration

Max: 22.8 [g] at -0.027 [s]

Min: -103.6 [g] at 0.004 [s]

C65501 PASSENGER SIDE URRP IMPACT PLOT #1

8754+FMH-14



CFC_1000

C65501 - May 16, 2006

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

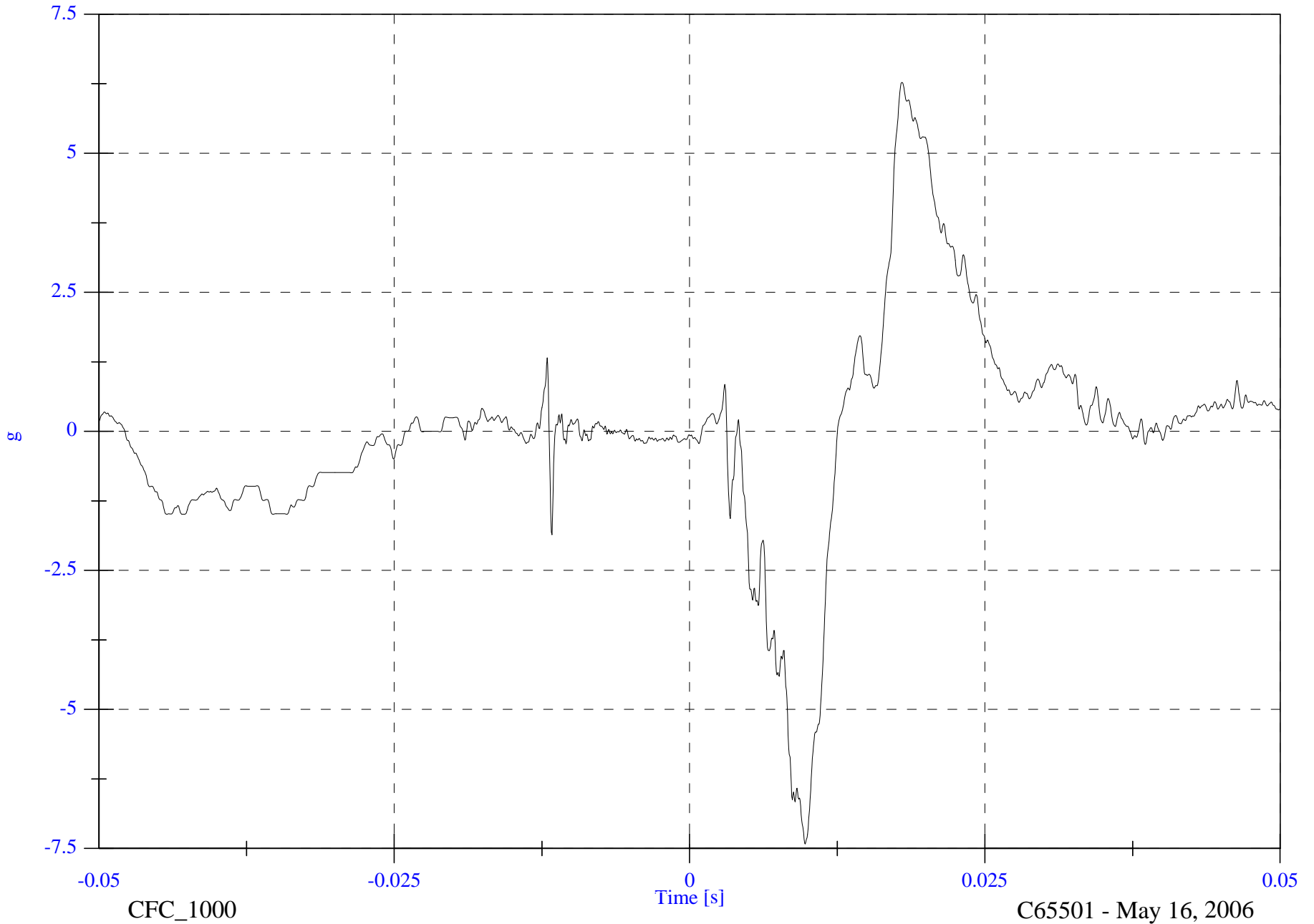
Headform Y Acceleration

Max: 6.3 [g] at 0.018 [s]

Min: -7.4 [g] at 0.010 [s]

C65501 PASSENGER SIDE URRP IMPACT PLOT #2

8754-FMH-14



C65501 - May 16, 2006

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

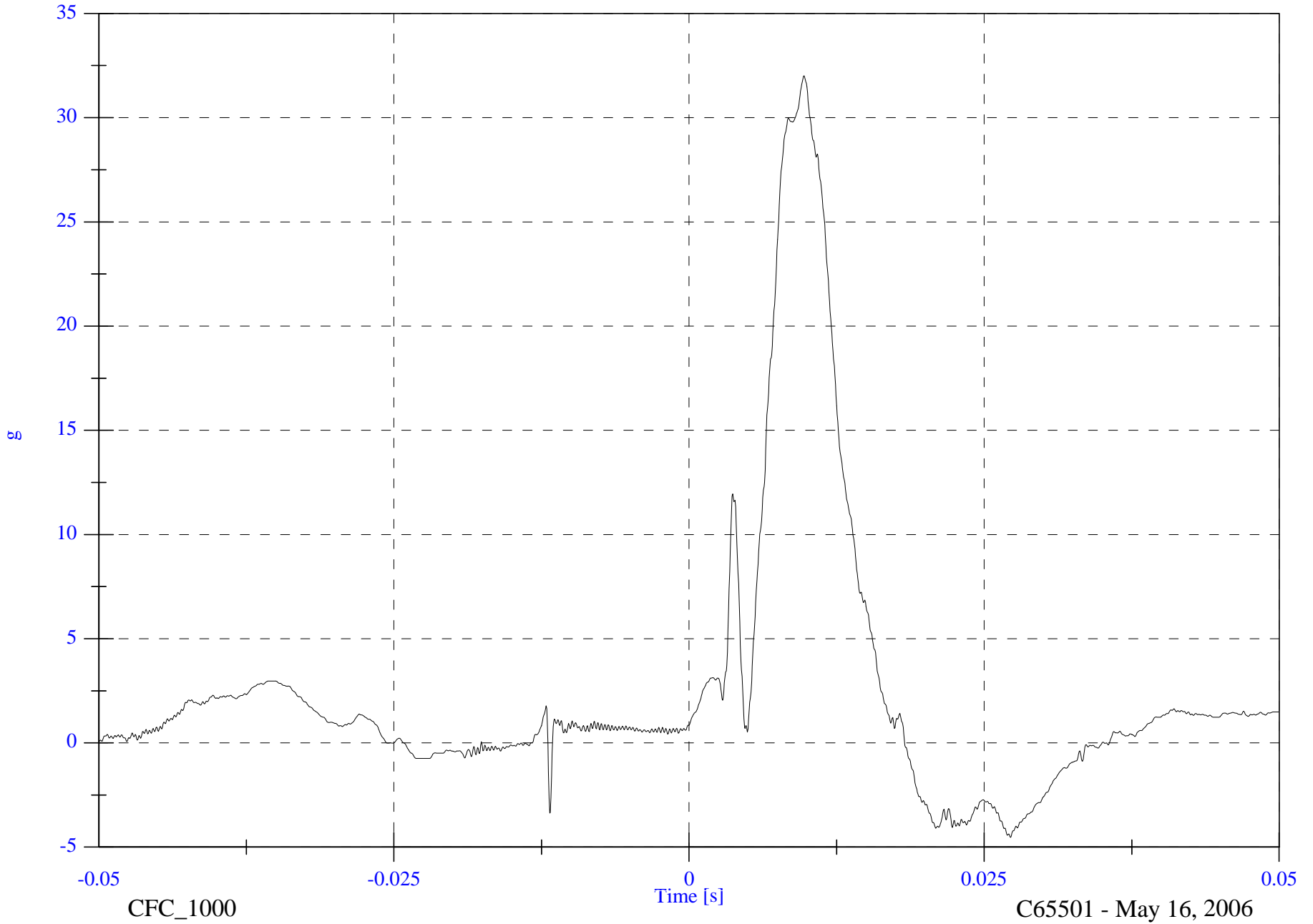
Headform Z Acceleration

Max: 32.0 [g] at 0.010 [s]

Min: -4.5 [g] at 0.027 [s]

C65501 PASSENGER SIDE URRP IMPACT PLOT #3

8754-FMH-14



CFC_1000

C65501 - May 16, 2006

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

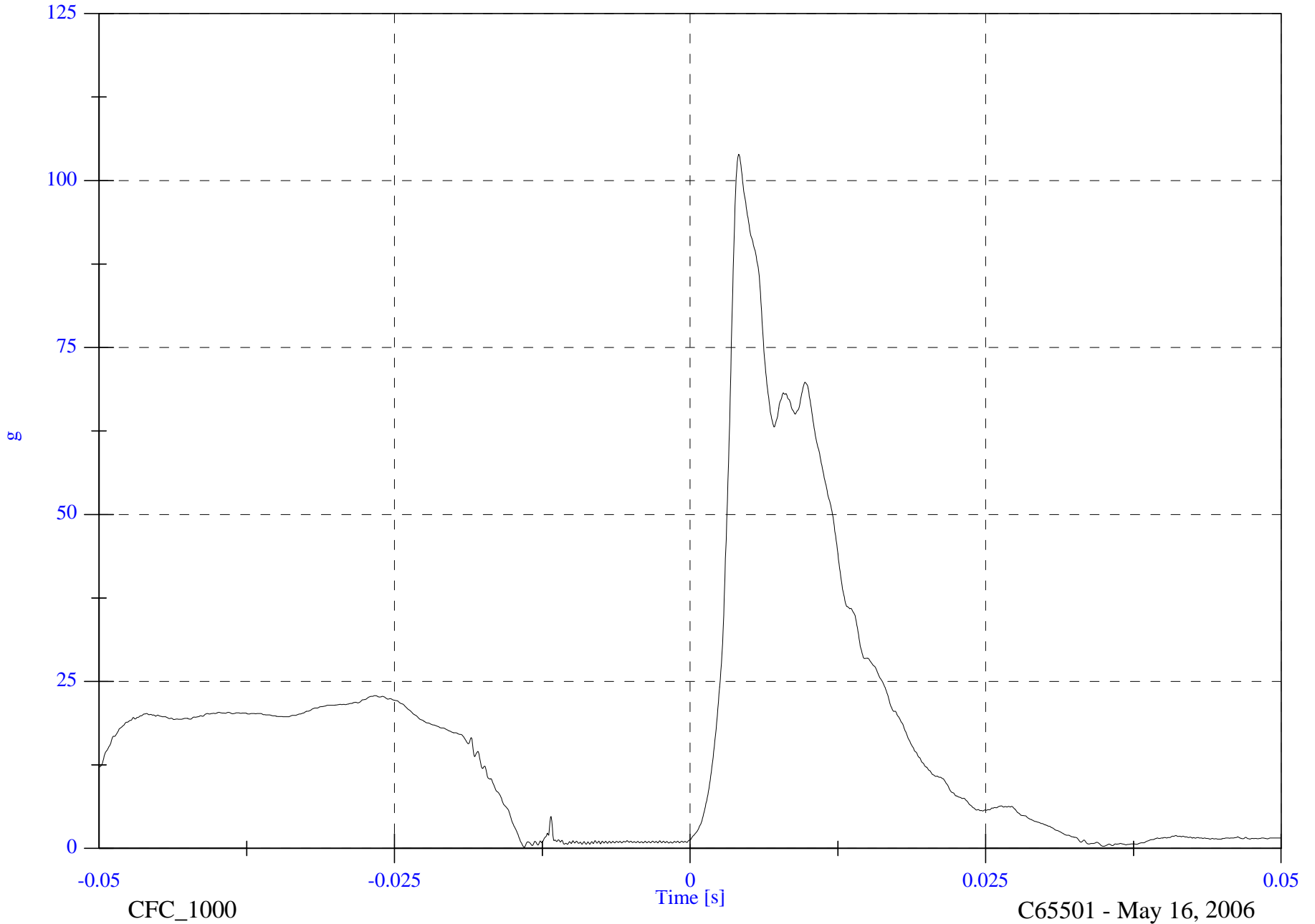
Headform Resultant

Max: 103.9 [g] at 0.004 [s]

Min: 0.2 [g] at -0.014 [s]

C65501 PASSENGER SIDE URRP IMPACT PLOT #4

8754+FMH-14



CFC_1000

C65501 - May 16, 2006

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

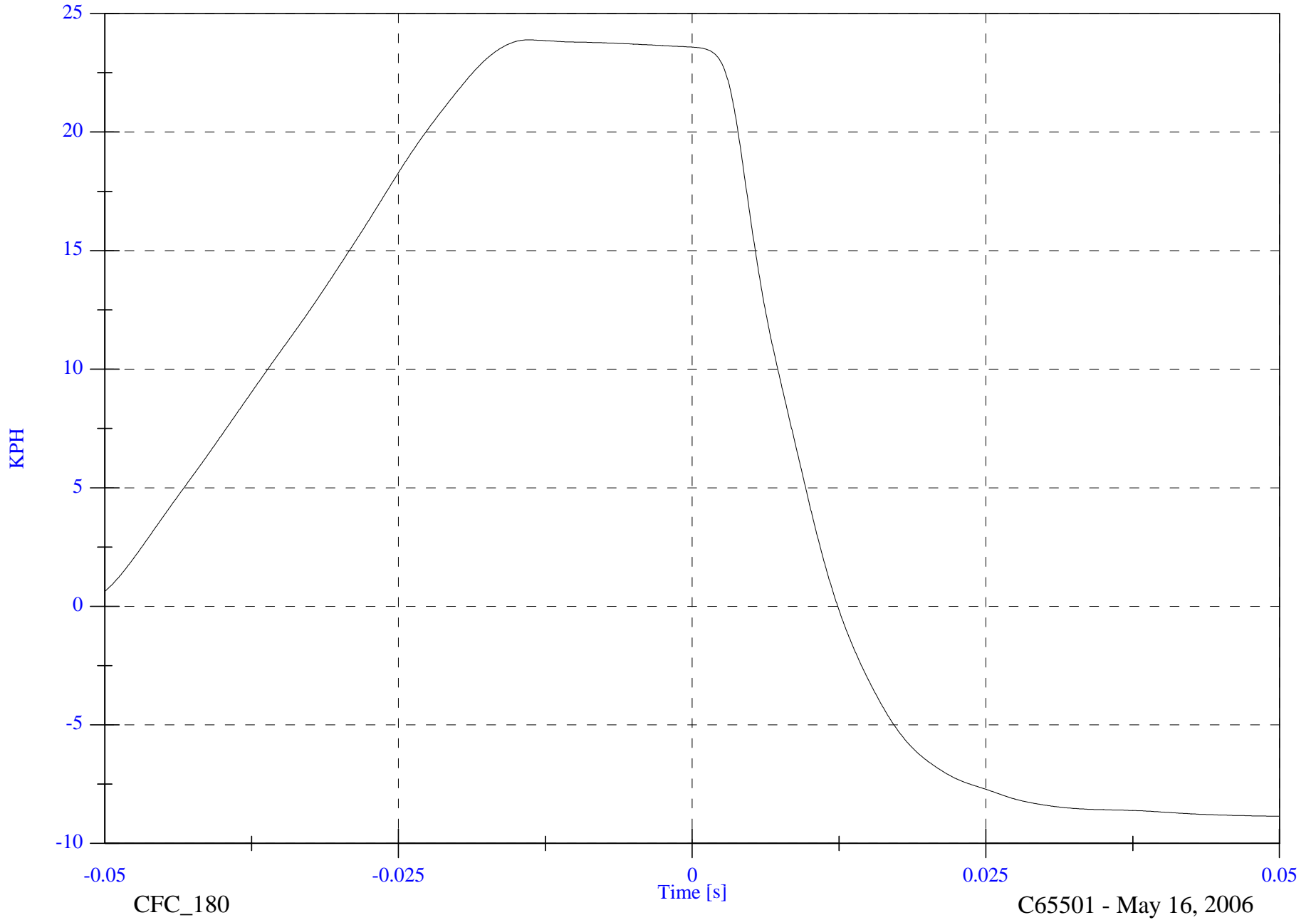
Headform Velocity

Max: 23.9 [KPH] at -0.014 [s]

Min: -8.9 [KPH] at 0.050 [s]

C65501 PASSENGER SIDE URRP IMPACT PLOT #5

8754+FMH-14



CFC_180

C65501 - May 16, 2006



PRE-IMPACT URRP



POST-IMPACT URRP

| | |
|--------------------------------|---------------------------------|
| VEHICLE YEAR/MAKE/MODEL/STYLE: | 2006 Subaru B9 Tribeca |
| VIN: | 4S4WX82C764409296 |
| DATE OF MANUFACTURE: | 07/05 (SEE CERTIFICATION LABEL) |
| COLOR: | Silver |

| | |
|--------------------------|-----------------|
| Test Number: | 04 |
| Test Date: | 05/16/06 |
| Target Location: | B-PILLAR |
| Target Code: | BP4 |
| Horizontal Impact Angle: | 130° |
| Vertical Impact Angle: | (-10)° |
| Ambient Temperature: | 23.2°C |
| Relative Humidity: | 45.4 |
| Time of Impact: | 13:25 |
| Headform Number: | 0805 |

| | | | | | |
|--|----|--------------------------|----------|-------------------------------------|---------|
| Impact Point Description (from lower midpoint on midsagittal line) | | | | | |
| On Centerline | 13 | <input type="checkbox"/> | mm right | <input checked="" type="checkbox"/> | mm left |
| On Centerline | 25 | | | | mm up |



POST-IMPACT BP4 HEADFORM

| | |
|-----------------------|--------------|
| Free Motion HIC | 463.0 |
| HIC(d) | 515.7 |
| Impact Velocity (kph) | 23.74 |
| HIC T1 (msec) | 1.9 |
| HIC T2 (msec) | 10.1 |

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA C65501 - BP4

FMH Headform 0805

Location: BP4

Test Date: May 16, 2006

Work File: BP4

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

Lab Temperature: 23.2 C

HICd: 515.7

Lab Humidity: 45.4 %

HIC (36ms): 463.0

Velocity at Impact: 23.74 KPH

t1: 1.9 msec

t2: 10.1 msec

Free Flight Distance: 222.54 mm

Duration: 8.2 msec

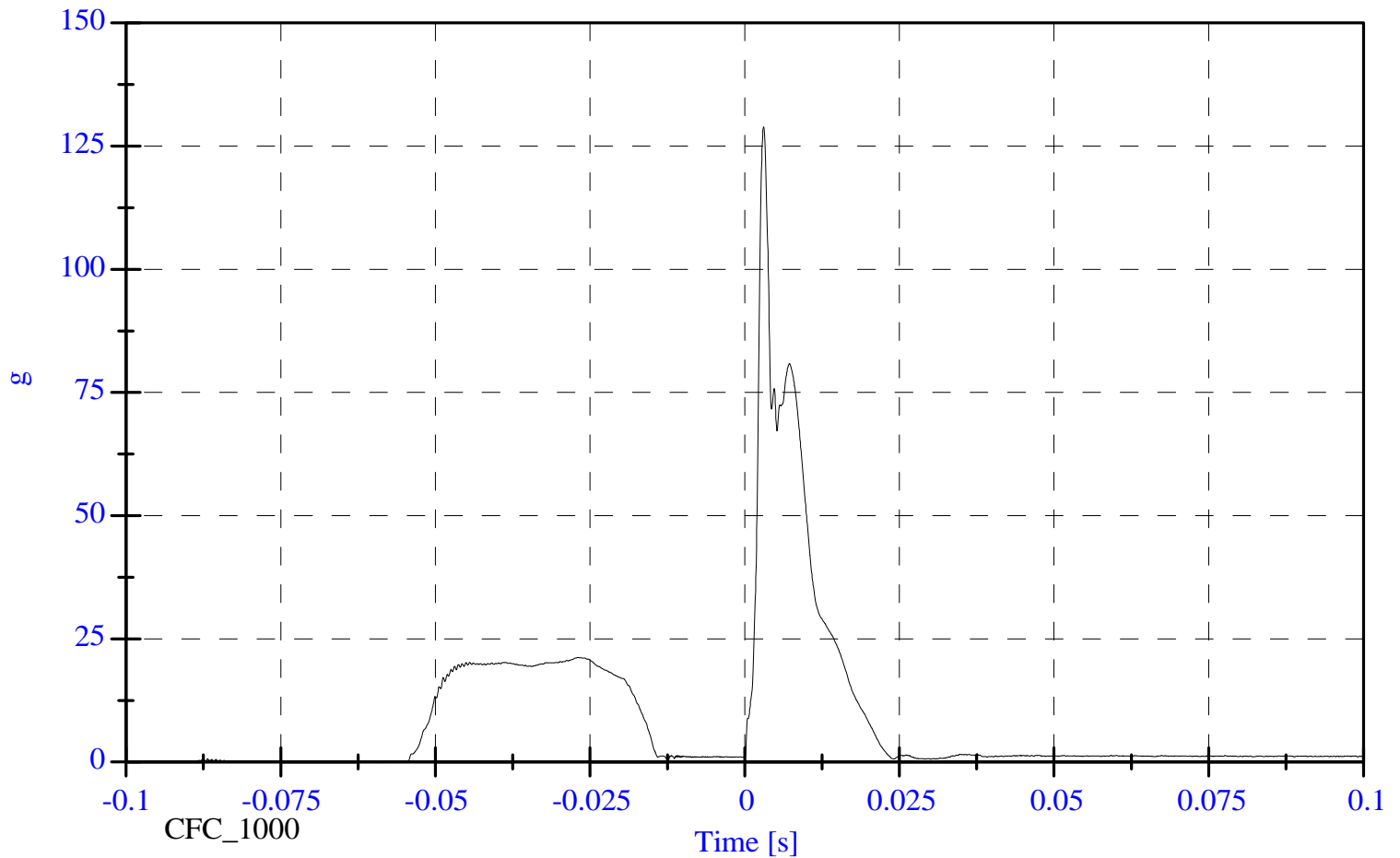
Maximum: 128.9 g

Average Acceleration: 8.5 g

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA
Headform Resultant

Max: 128.9 [g] at 0.003 [s]

Min: 0.0 [g] at -0.073 [s]



FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

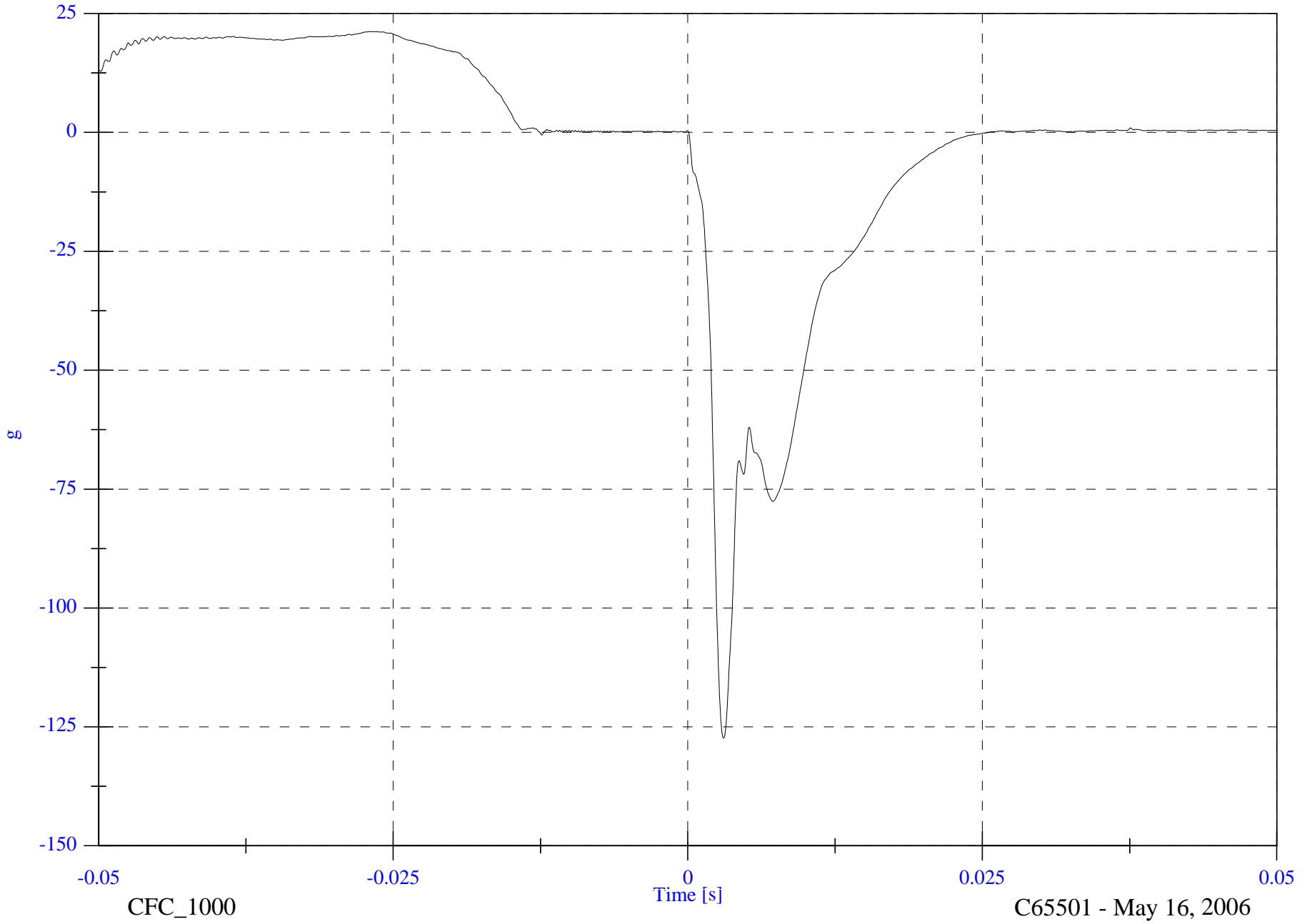
Headform X Acceleration

Max: 21.2 [g] at -0.027 [s]

Min: -127.4 [g] at 0.003 [s]

C65501 PASSENGER SIDE BP4 IMPACT PLOT #1

8754+FMH-14



CFC_1000

C65501 - May 16, 2006

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

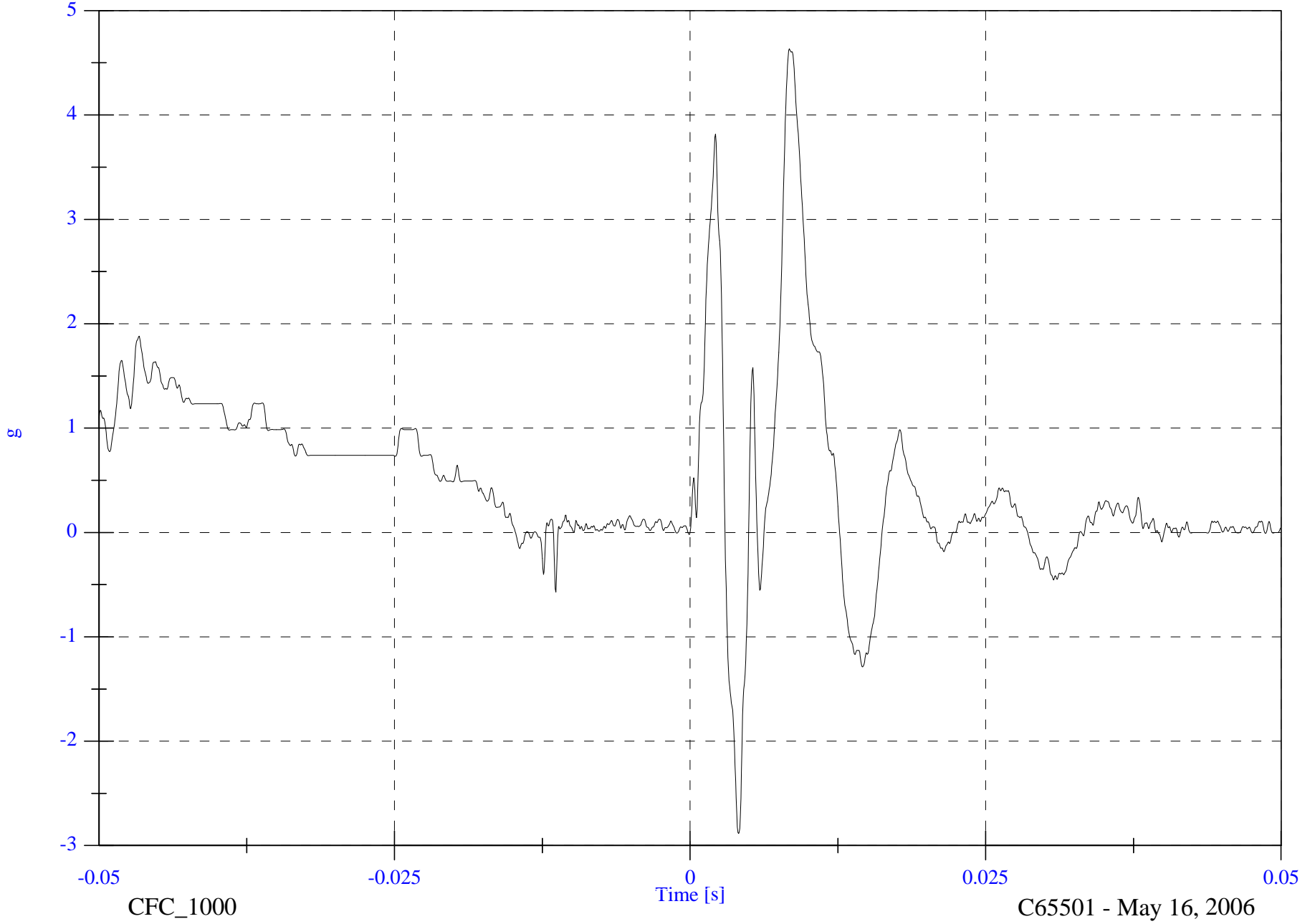
Headform Y Acceleration

Max: 4.6 [g] at 0.008 [s]

Min: -2.9 [g] at 0.004 [s]

C65501 PASSENGER SIDE BP4 IMPACT PLOT #2

8754-FMH-14



CFC_1000

C65501 - May 16, 2006

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

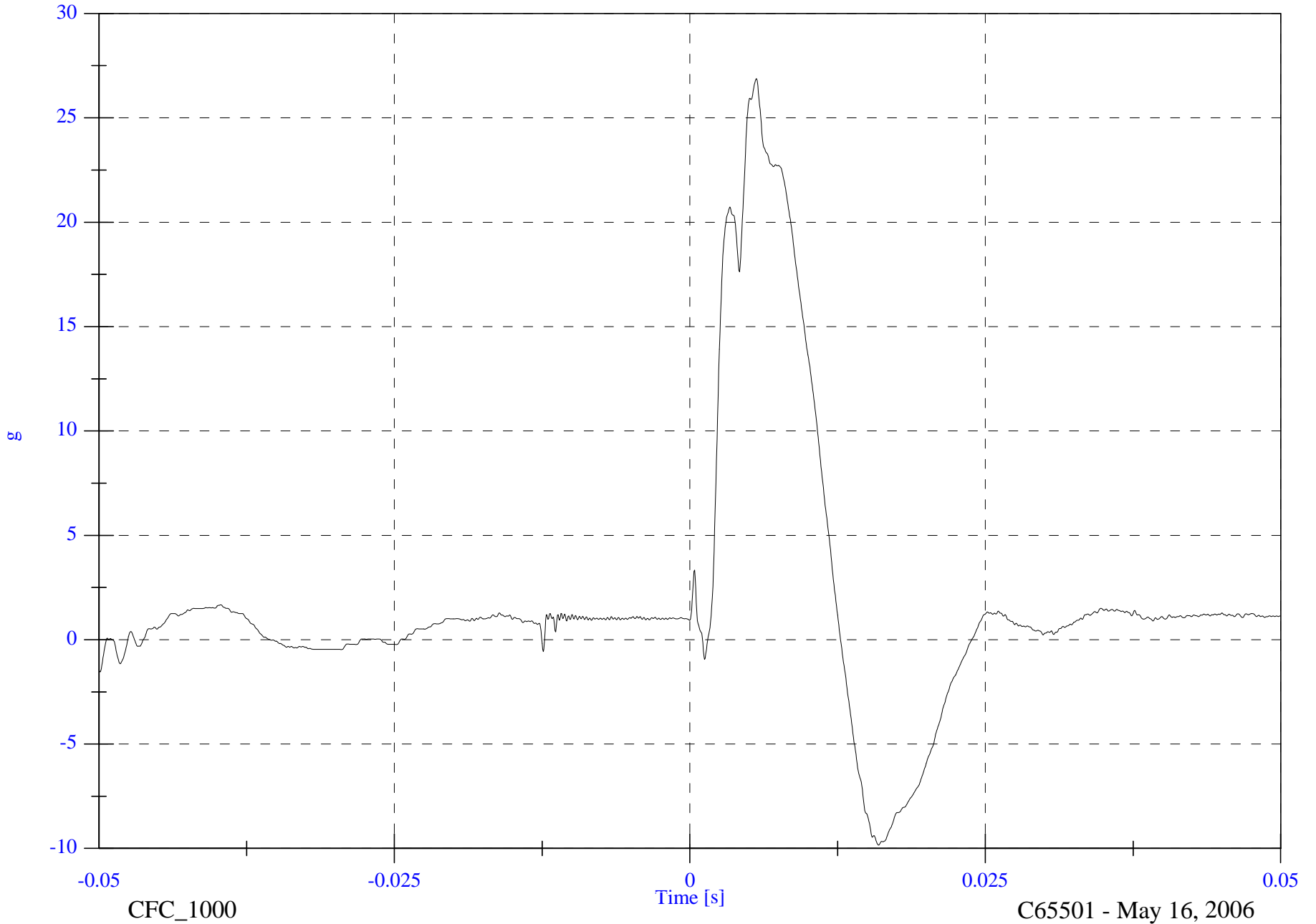
Headform Z Acceleration

Max: 26.9 [g] at 0.006 [s]

Min: -9.8 [g] at 0.016 [s]

C65501 PASSENGER SIDE BP4 IMPACT PLOT #3

8754+FMH-14



CFC_1000

C65501 - May 16, 2006

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

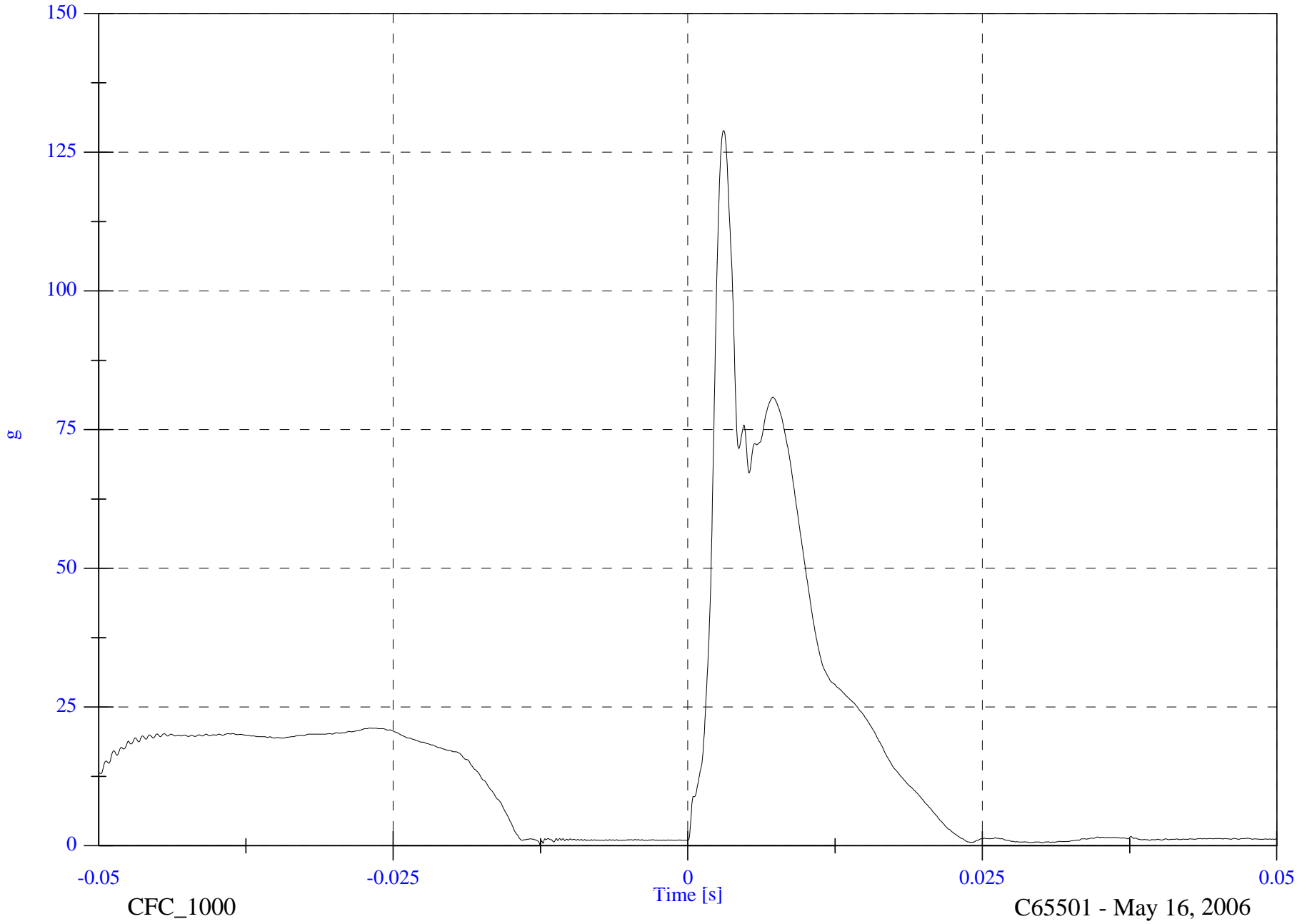
Headform Resultant

Max: 128.9 [g] at 0.003 [s]

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

C65501 PASSENGER SIDE BP4 IMPACT PLOT #4

8754+FMH-14



CFC_1000

C65501 - May 16, 2006

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

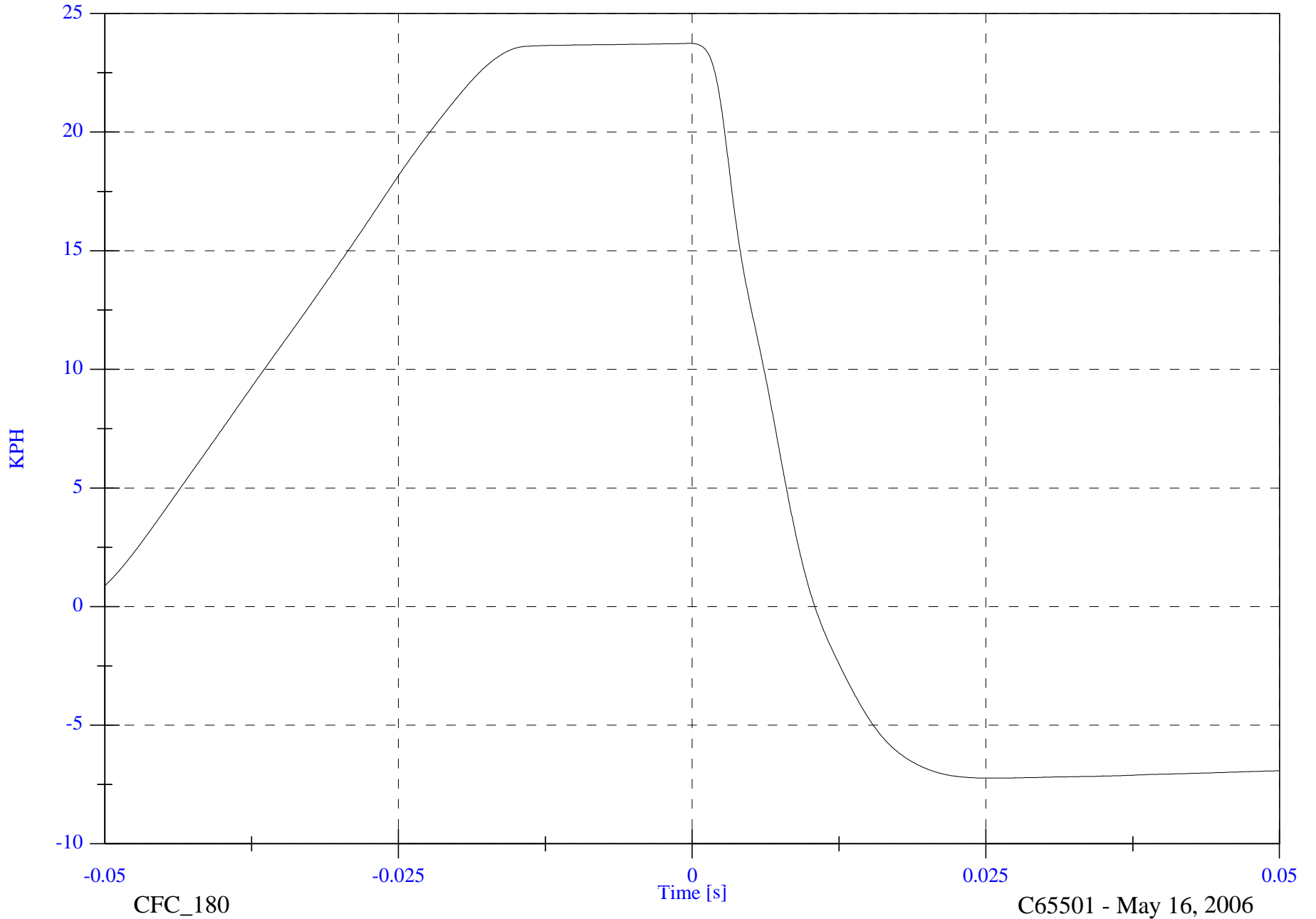
Headform Velocity

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

Min: -7.2 [KPH] at 0.026 [s]

C65501 PASSENGER SIDE BP4 IMPACT PLOT #5

8754+FMH-14



CFC_180

C65501 - May 16, 2006



PRE-IMPACT BP4

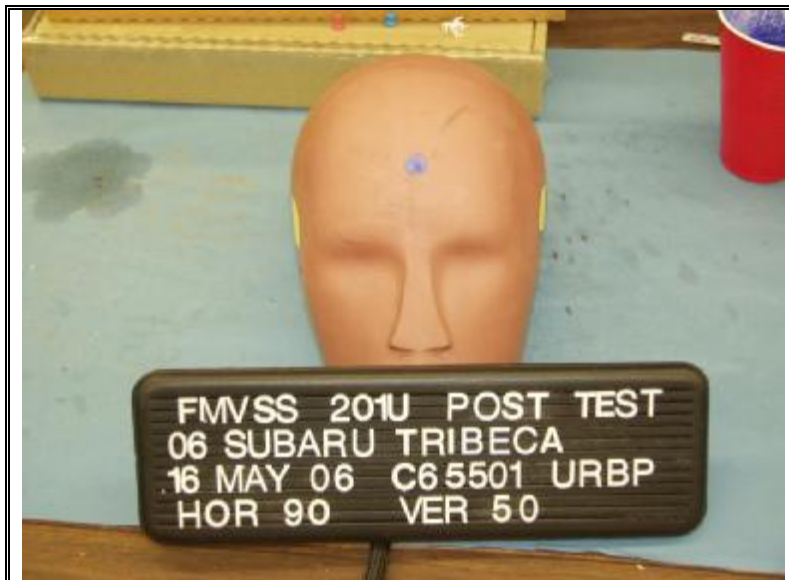


POST-IMPACT BP4

| | |
|--------------------------------|---------------------------------|
| VEHICLE YEAR/MAKE/MODEL/STYLE: | 2006 Subaru B9 Tribeca |
| VIN: | 4S4WX82C764409296 |
| DATE OF MANUFACTURE: | 07/05 (SEE CERTIFICATION LABEL) |
| COLOR: | Silver |

| | |
|--------------------------|------------|
| Test Number: | 05 |
| Test Date: | 05/16/06 |
| Target Location: | UPPER ROOF |
| Target Code: | URBP |
| Horizontal Impact Angle: | 90° |
| Vertical Impact Angle: | 50° |
| Ambient Temperature: | 23.5°C |
| Relative Humidity: | 45.7 |
| Time of Impact: | 14:05 |
| Headform Number: | 1255 |

| | | | | | |
|--|----|--------------------------|----------|-------------------------------------|---------|
| 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 | 21 | | | | mm up |



POST-IMPACT URBP HEADFORM

| | |
|-----------------------|-------|
| Free Motion HIC | 247.3 |
| HIC(d) | 353.0 |
| Impact Velocity (kph) | 23.59 |
| HIC T1 (msec) | 4.2 |
| HIC T2 (msec) | 24.6 |

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA C65501 - URBP

FMH Headform 1255

Location: URBP

Test Date: May 16, 2006

Work File: URBP

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

Lab Temperature: 23.5 C

HICd: 353.0

Lab Humidity: 45.7 %

HIC (36ms): 247.3

Velocity at Impact: 23.59 KPH

t1: 4.2 msec

t2: 24.6 msec

Free Flight Distance: 219.55 mm

Duration: 20.3 msec

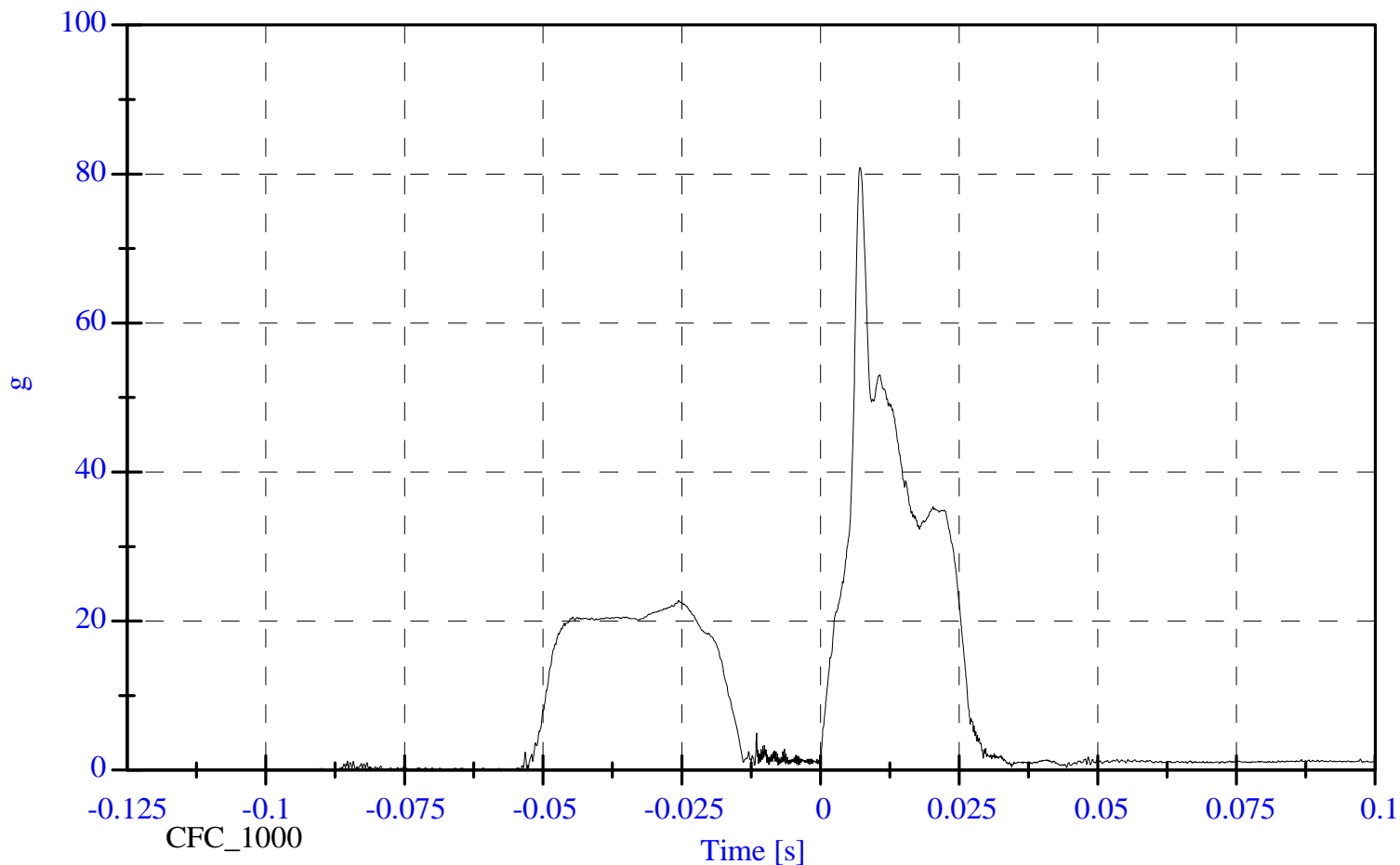
Maximum: 80.9 g

Average Acceleration: 8.9 g

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA
Headform Resultant

Max: 80.9 [g] at 0.007 [s]

Min: 0.0 [g] at -0.062 [s]



FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

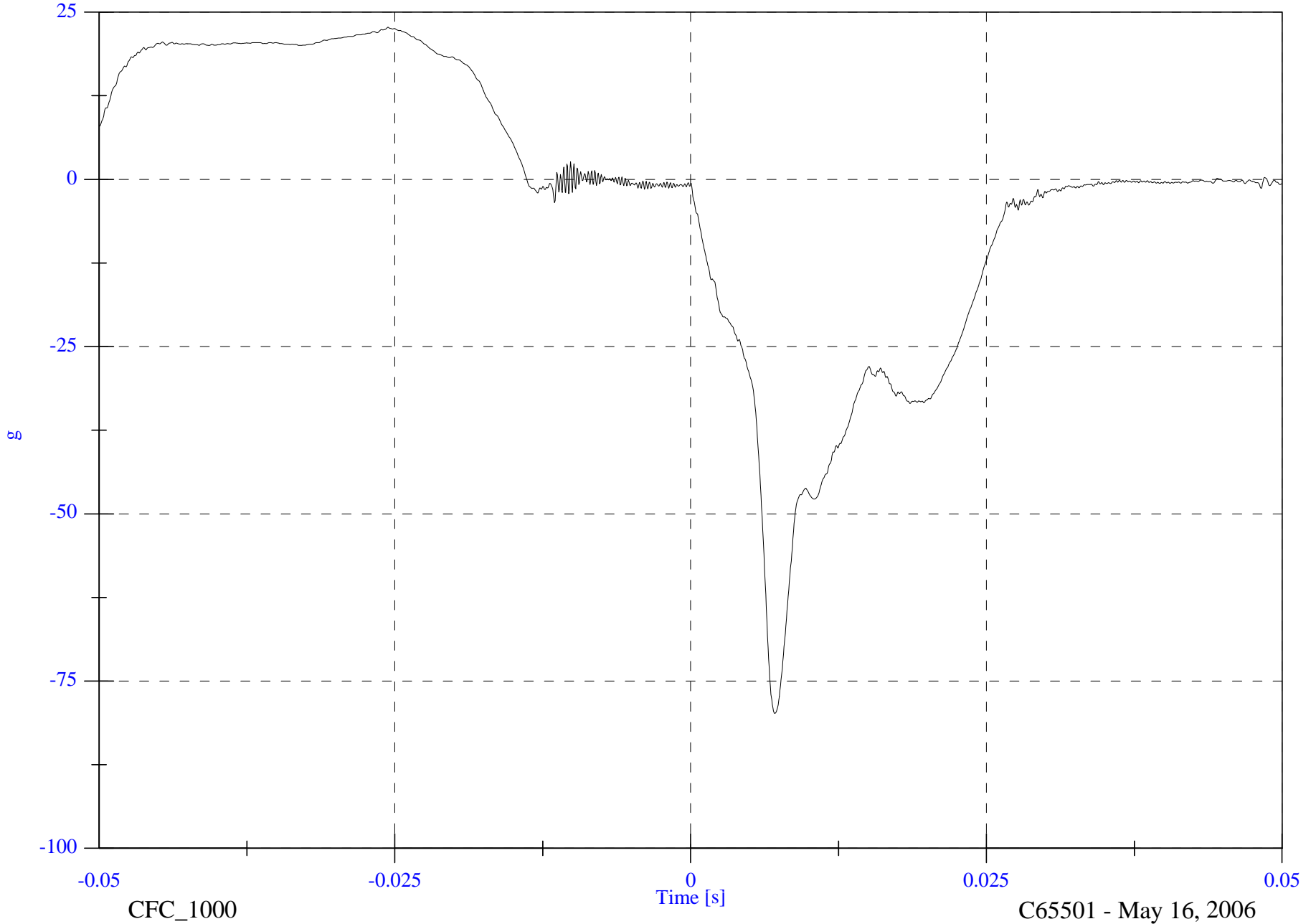
Headform X Acceleration

Max: 22.7 [g] at -0.026 [s]

Min: -79.8 [g] at 0.007 [s]

C65501 PASSENGER SIDE URBP IMPACT PLOT #1

8754+FMH-14



CFC_1000

C65501 - May 16, 2006

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

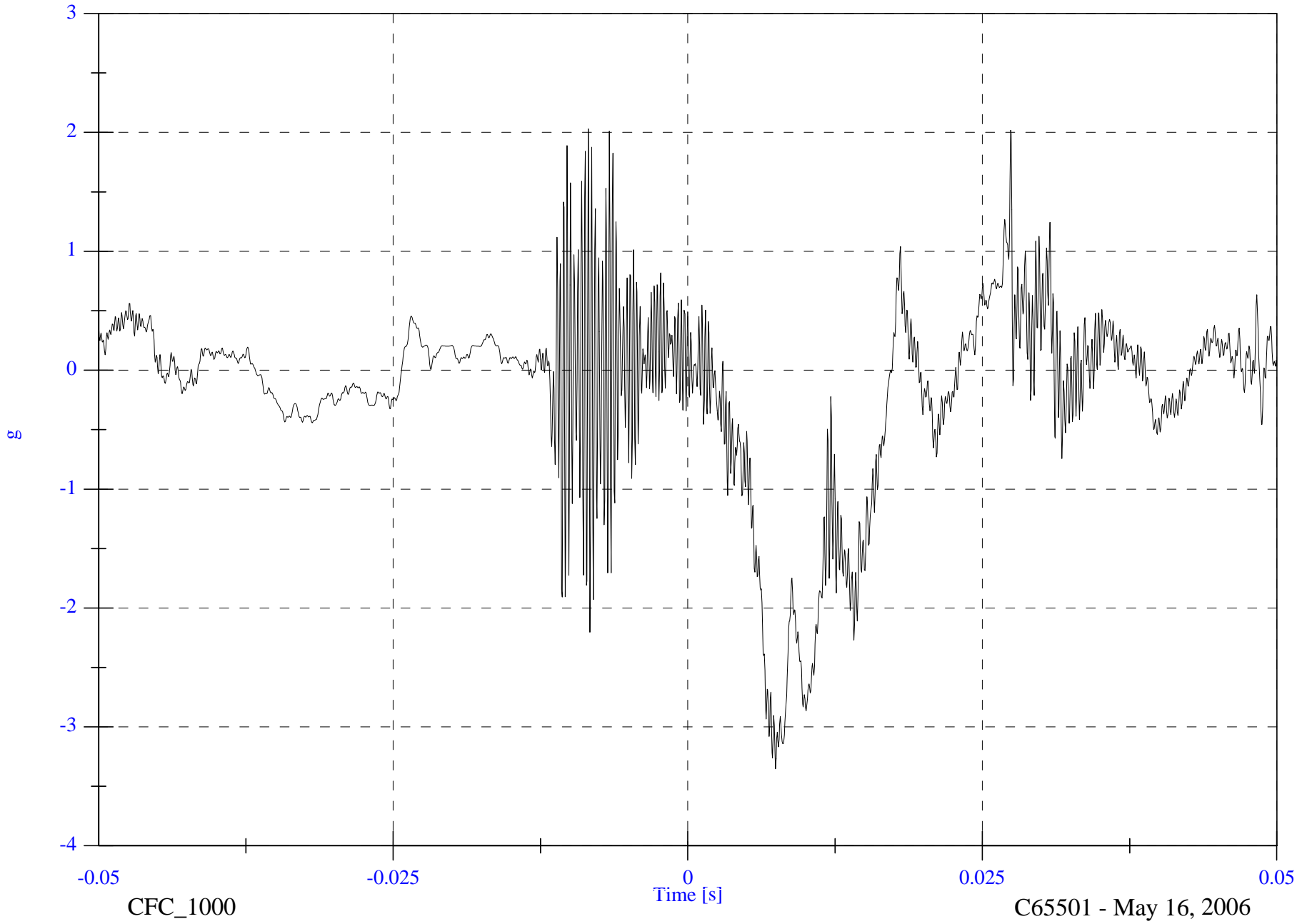
Headform Y Acceleration

Max: 2.0 [g] at -0.008 [s]

Min: -3.4 [g] at 0.007 [s]

C65501 PASSENGER SIDE URBP IMPACT PLOT #2

8754-FMH-14



FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

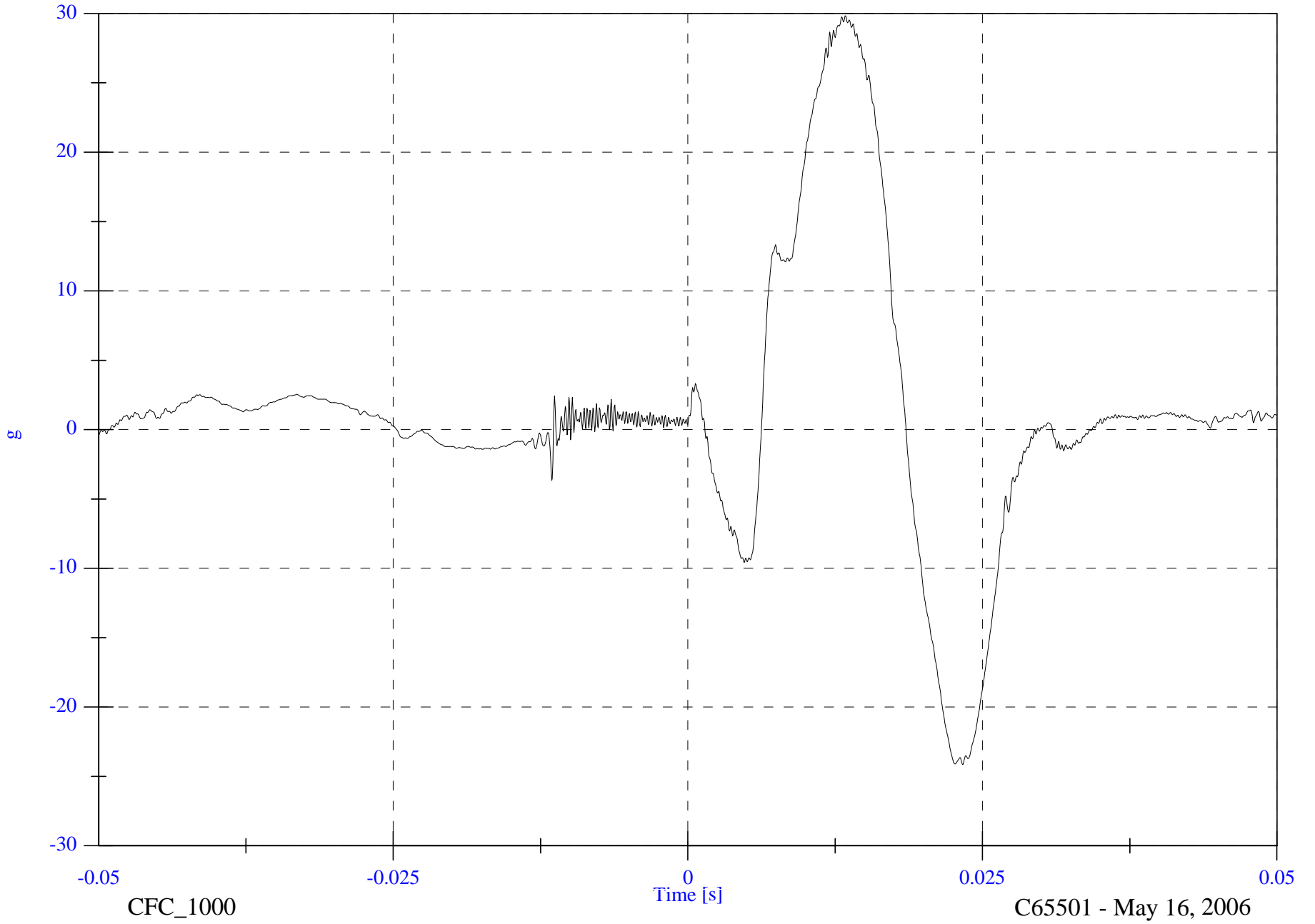
Headform Z Acceleration

Max: 29.8 [g] at 0.013 [s]

Min: -24.2 [g] at 0.023 [s]

C65501 PASSENGER SIDE URBP IMPACT PLOT #3

8754+FMH-14



CFC_1000

C65501 - May 16, 2006

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

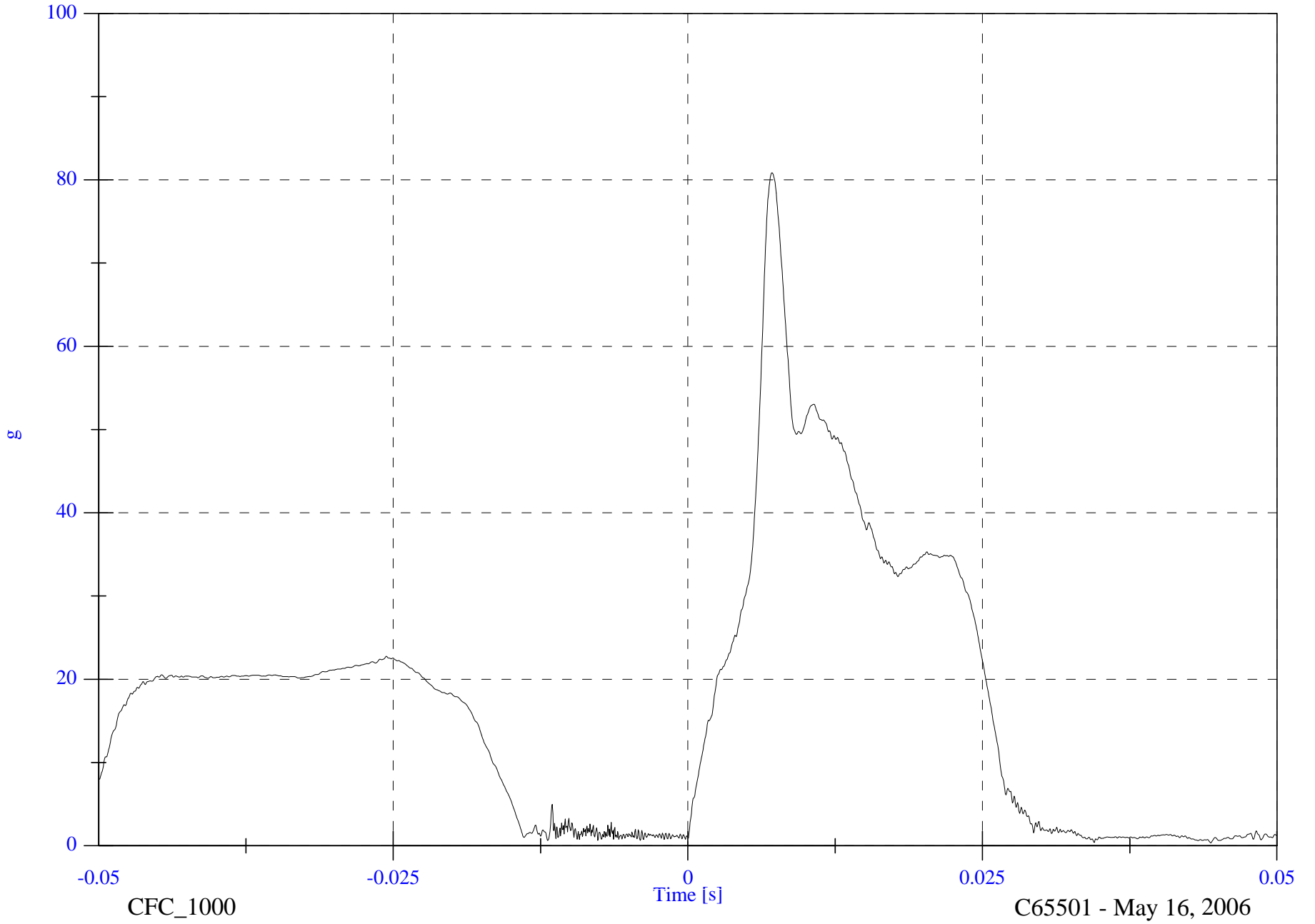
Headform Resultant

Max: 80.9 [g] at 0.007 [s]

Min: 0.3 [g] at 0.044 [s]

C65501 PASSENGER SIDE URBP IMPACT PLOT #4

8754+FMH-14



FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

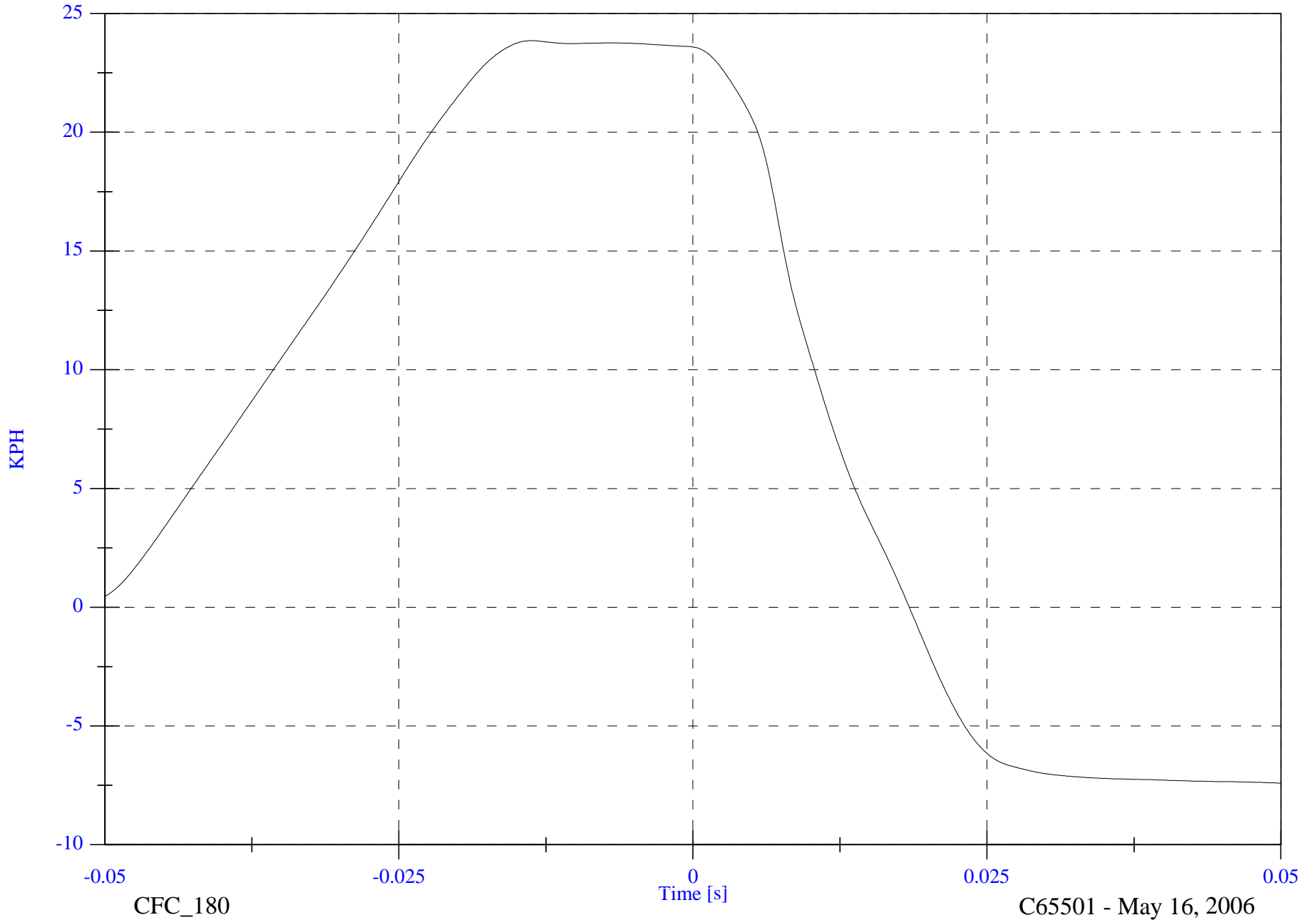
Headform Velocity

Max: 23.9 [KPH] at -0.014 [s]

Min: -7.4 [KPH] at 0.050 [s]

C65501 PASSENGER SIDE URBP IMPACT PLOT #5

8754+FMH-14



CFC_180

C65501 - May 16, 2006



PRE-IMPACT URBP



POST-IMPACT URBP

| | |
|--------------------------------|---------------------------------|
| VEHICLE YEAR/MAKE/MODEL/STYLE: | 2006 Subaru B9 Tribeca |
| VIN: | 4S4WX82C764409296 |
| DATE OF MANUFACTURE: | 07/05 (SEE CERTIFICATION LABEL) |
| COLOR: | Silver |

| | |
|--------------------------|-----------------|
| Test Number: | 06 |
| Test Date: | 05/16/06 |
| Target Location: | SIDE RAIL |
| Target Code: | SR2A |
| Horizontal Impact Angle: | 90° |
| Vertical Impact Angle: | 42° |
| Ambient Temperature: | 23.5°C |
| Relative Humidity: | 46.1 |
| Time of Impact: | 14:30 |
| Headform Number: | 0062 |

| | | | | | |
|--|----|-------------------------------------|----------|--------------------------|---------|
| Impact Point Description (from lower midpoint on midsagittal line) | | | | | |
| On Centerline | 3 | <input checked="" type="checkbox"/> | mm right | <input type="checkbox"/> | mm left |
| On Centerline | 11 | | | | mm up |



POST-IMPACT SR2A HEADFORM

| | |
|-----------------------|-------|
| Free Motion HIC | 278.9 |
| HIC(d) | 376.8 |
| Impact Velocity (kph) | 18.76 |
| HIC T1 (msec) | 2.7 |
| HIC T2 (msec) | 11.0 |

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA C65501 - SR2A

FMH Headform 0062

Location: SR2A

Test Date: May 16, 2006

Work File: SR2A

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

Lab Temperature: 23.5 C

HICd: 376.8

Lab Humidity: 46.1 %

HIC (36ms): 278.9

Velocity at Impact: 18.76 KPH

t1: 2.7 msec

t2: 11.0 msec

Free Flight Distance: 215.90 mm

Duration: 8.3 msec

Maximum: 76.3 g

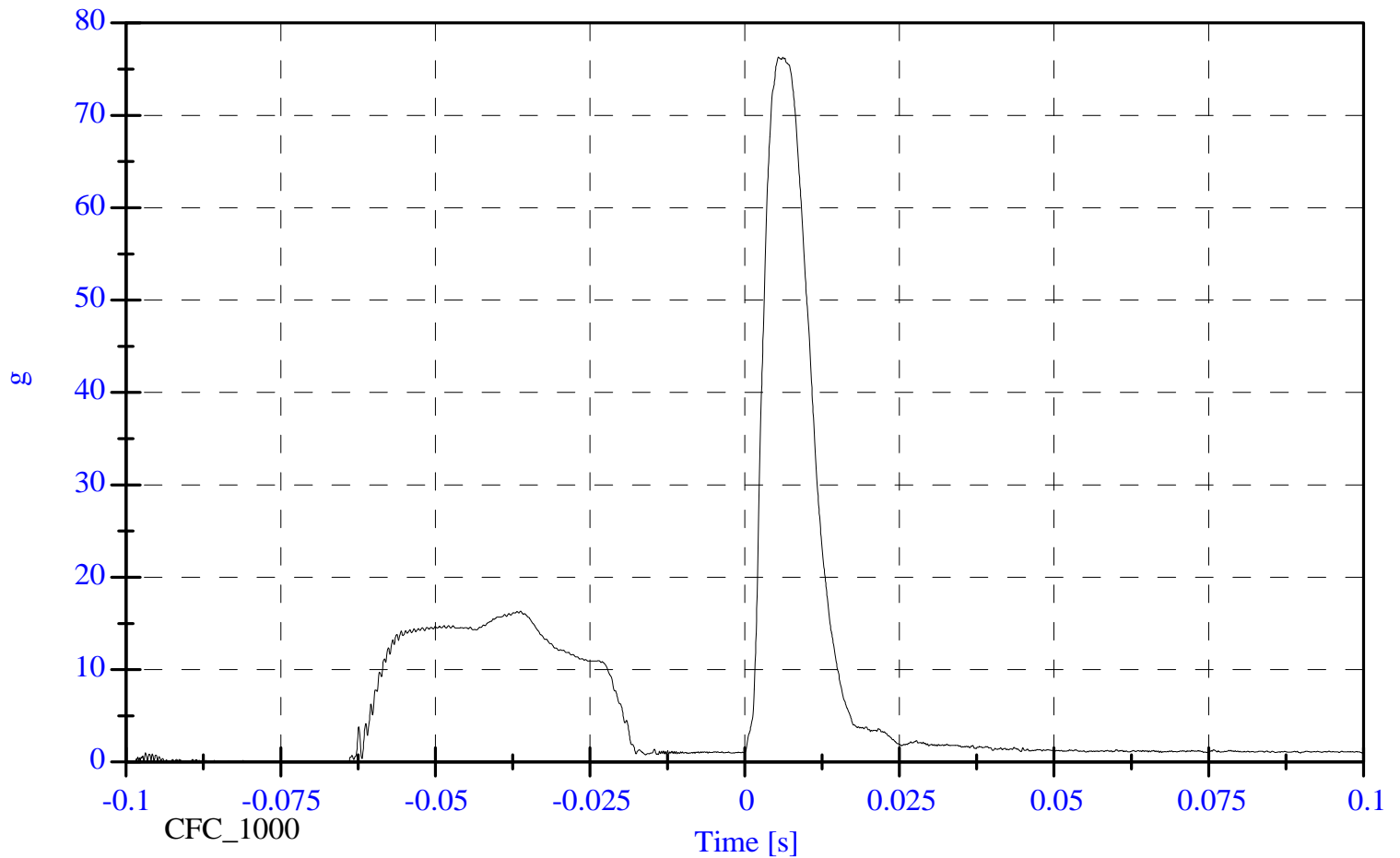
Average Acceleration: 6.9 g

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

Max: 76.3 [g] at 0.005 [s]

Headform Resultant

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



FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

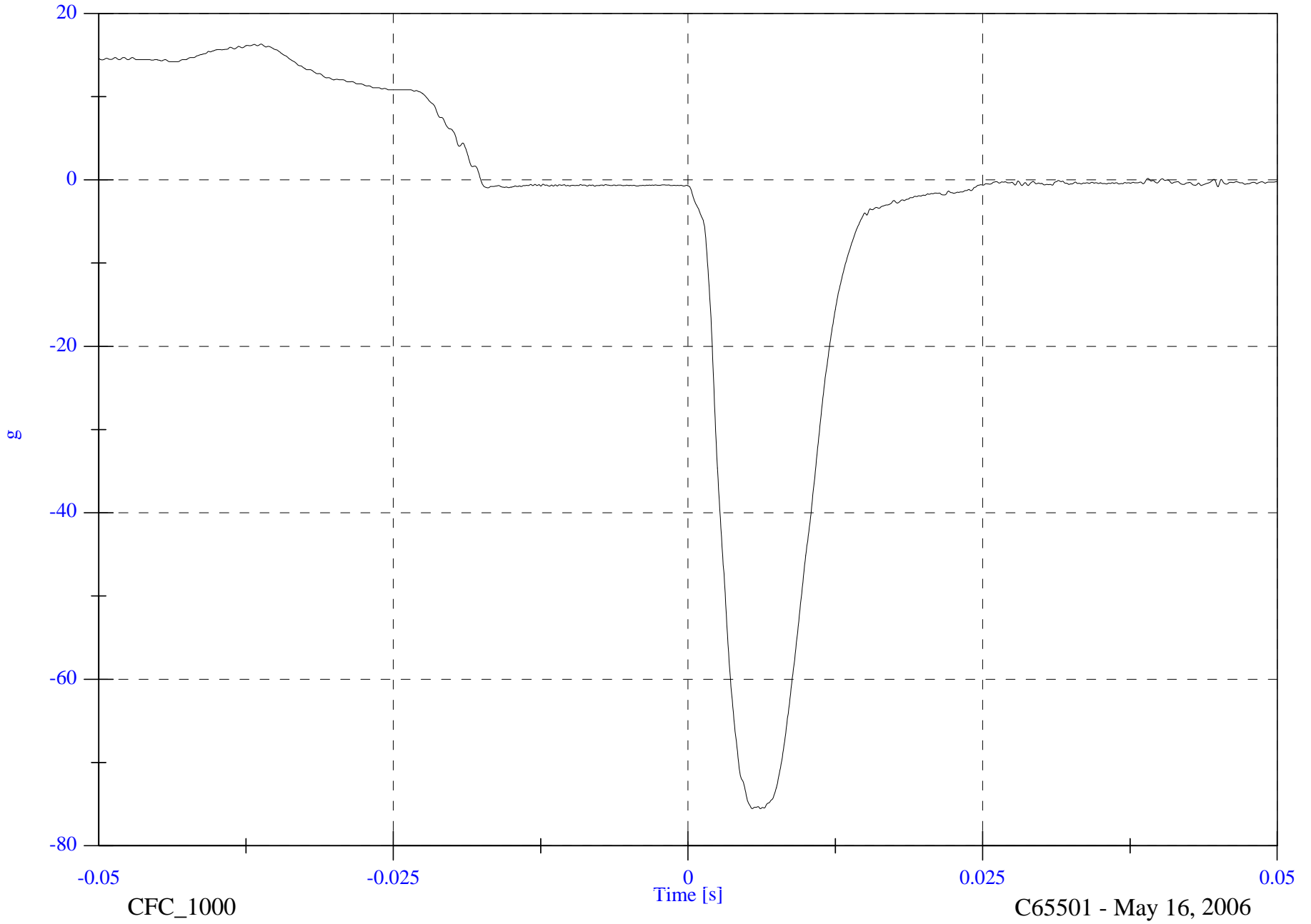
Headform X Acceleration

Max: 16.3 [g] at -0.036 [s]

Min: -75.5 [g] at 0.006 [s]

C65501 PASSENGER SIDE SR2A IMPACT PLOT #1

8754+FMH-14



CFC_1000

C65501 - May 16, 2006

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

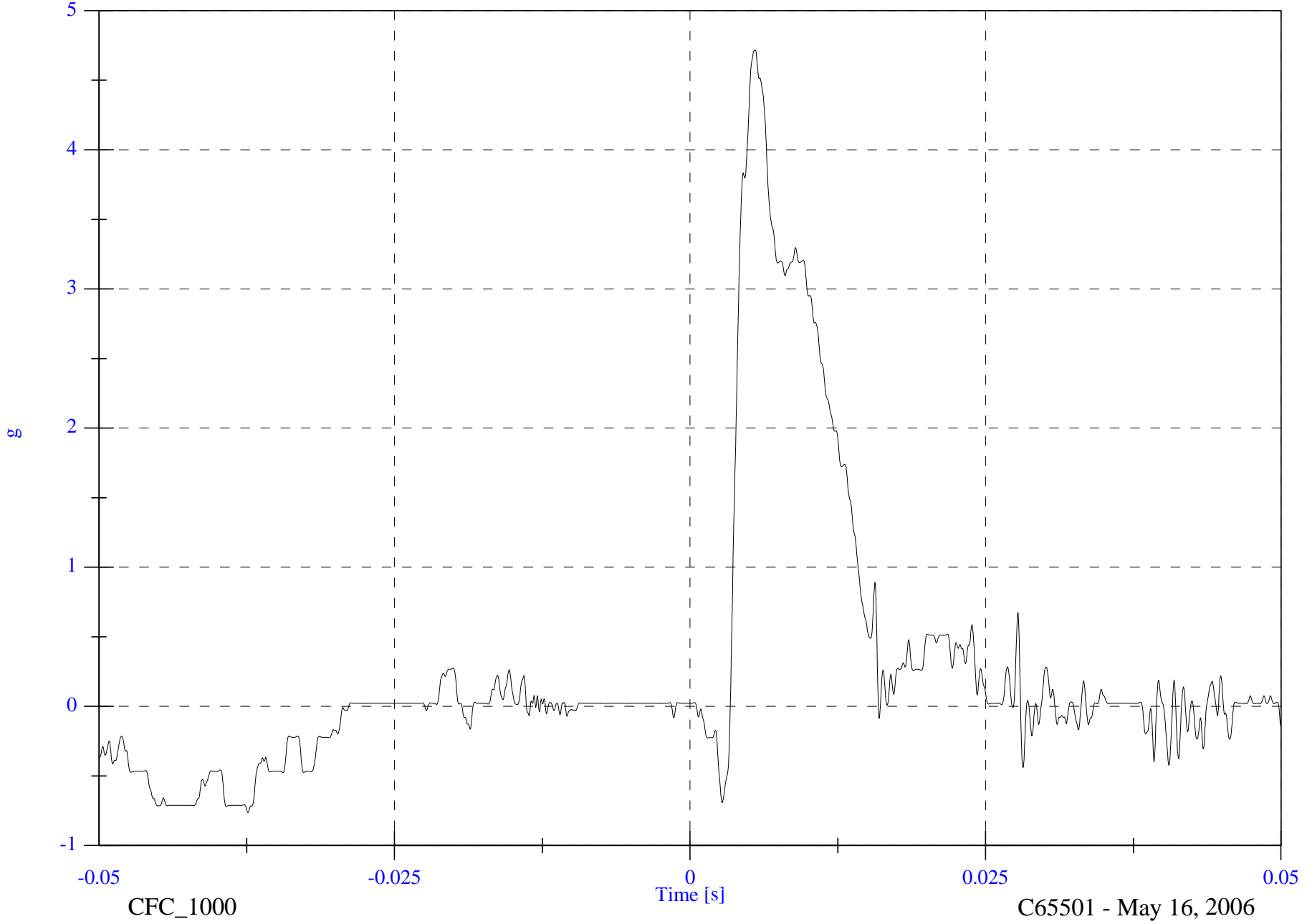
Headform Y Acceleration

Max: 4.7 [g] at 0.005 [s]

Min: -0.8 [g] at -0.037 [s]

C65501 PASSENGER SIDE SR2A IMPACT PLOT #2

8754-FMH-14



CFC_1000

C65501 - May 16, 2006

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

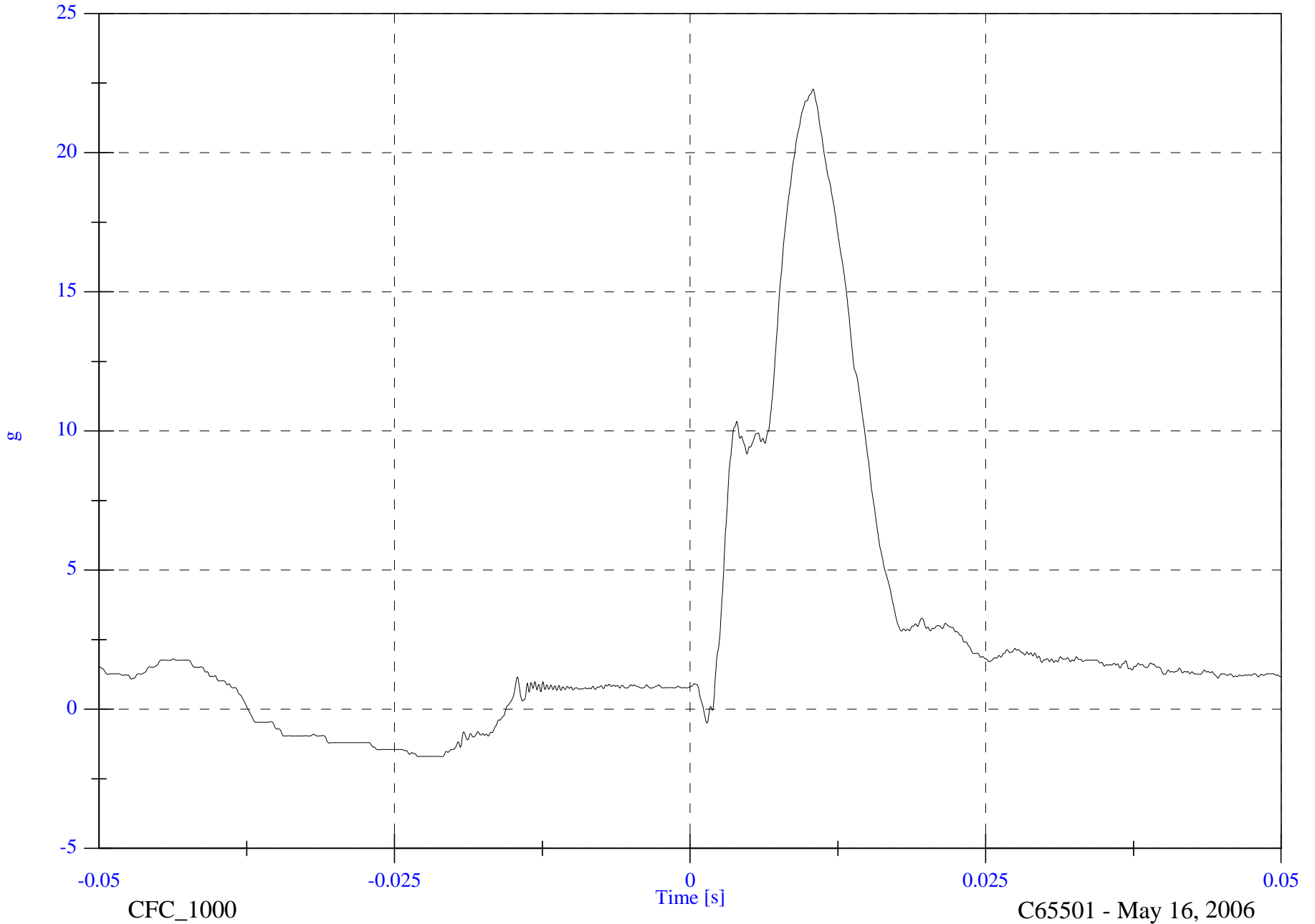
Headform Z Acceleration

Max: 22.3 [g] at 0.010 [s]

Min: -1.7 [g] at -0.021 [s]

C65501 PASSENGER SIDE SR2A IMPACT PLOT #3

8754-FMH-14



FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

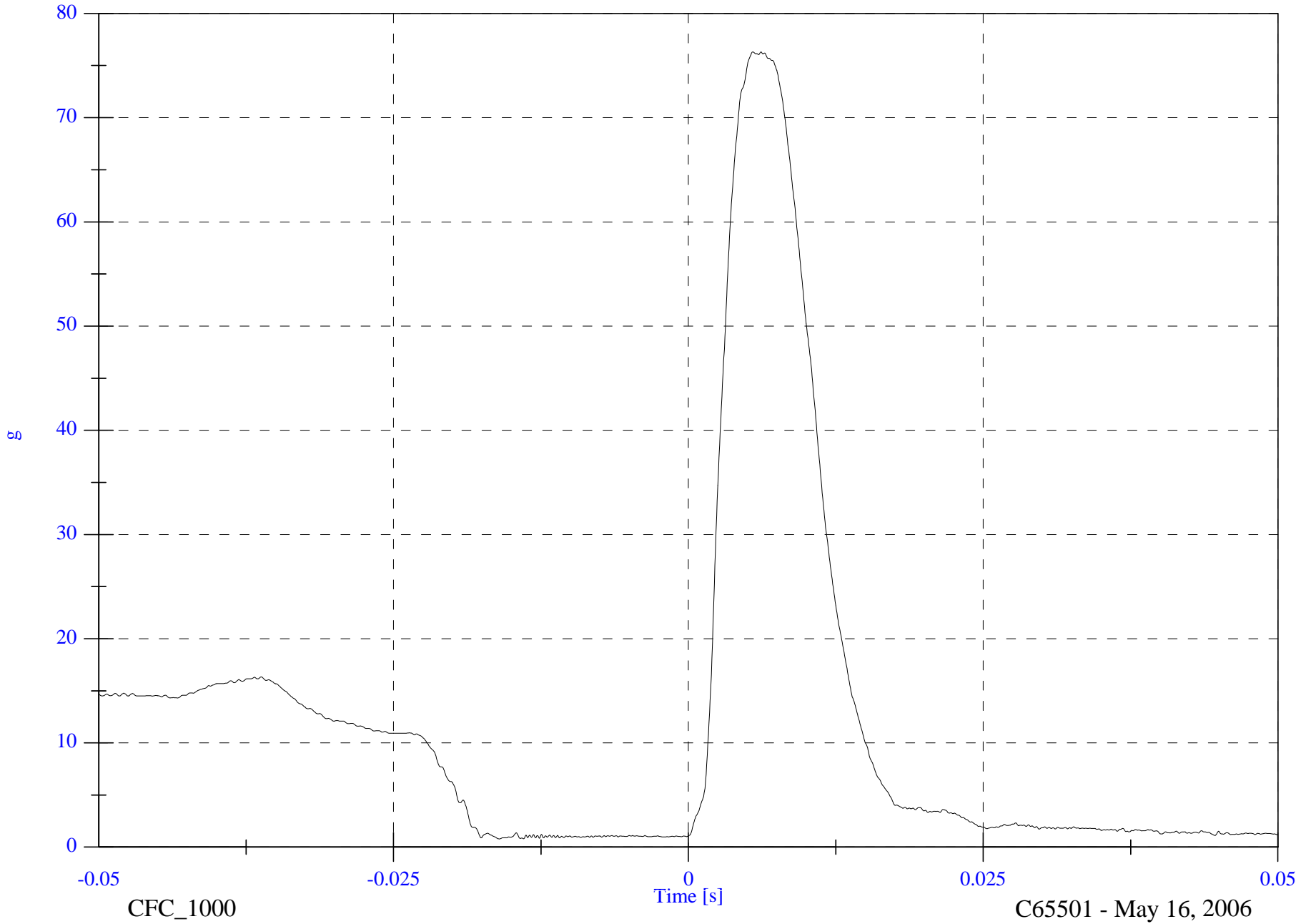
Headform Resultant

Max: 76.3 [g] at 0.005 [s]

Min: 0.8 [g] at -0.016 [s]

C65501 PASSENGER SIDE SR2A IMPACT PLOT #4

8754+FMH-14



CFC_1000

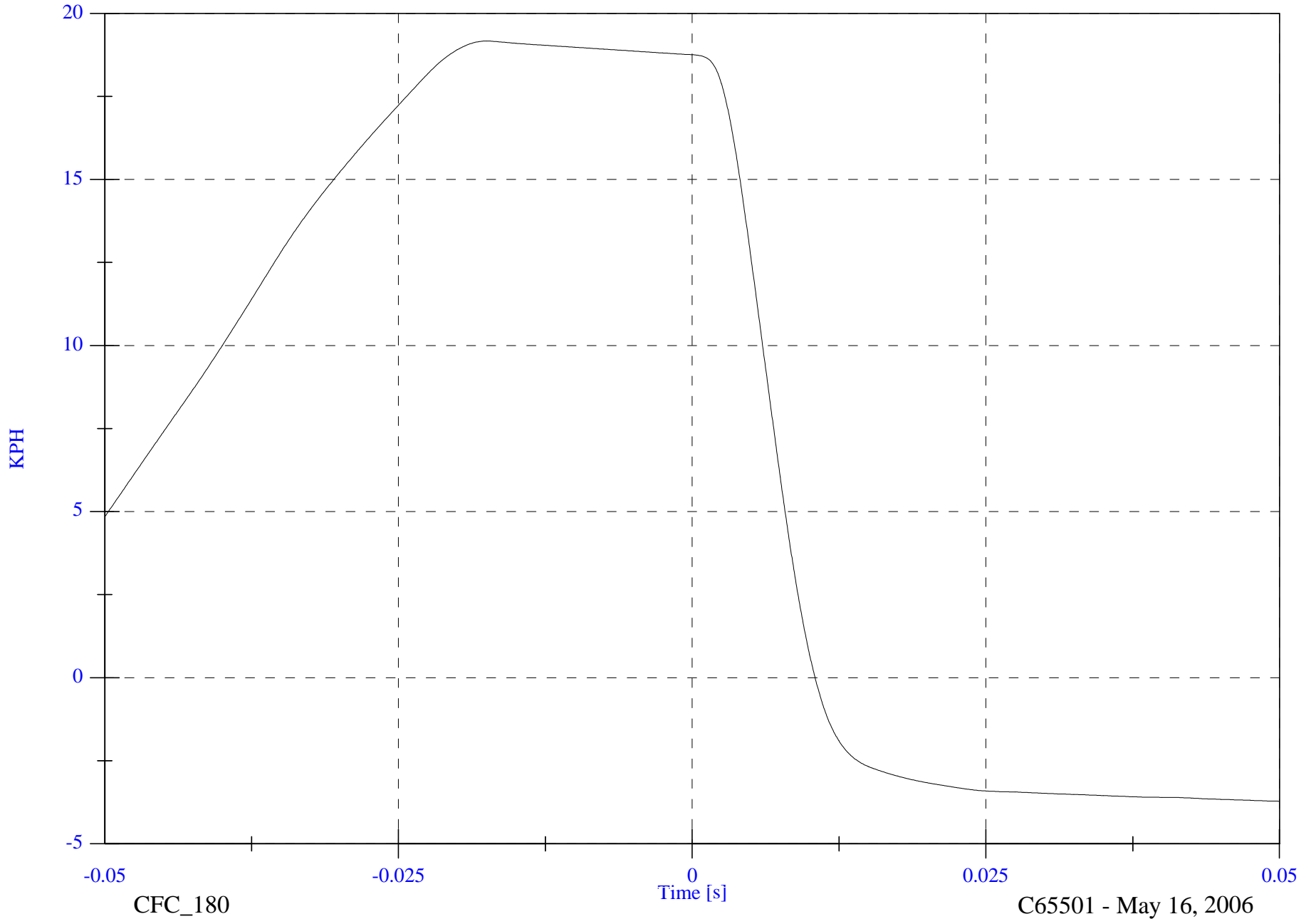
C65501 - May 16, 2006

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

Headform Velocity

Max: 19.2 [KPH] at -0.018 [s]

Min: -3.7 [KPH] at 0.050 [s]



C65501 PASSENGER SIDE SR2A IMPACT PLOT #5

8754+FMH-14

CFC_180

C65501 - May 16, 2006



PRE-IMPACT SR2A



POST-IMPACT SR2A

| | |
|--------------------------------|---------------------------------|
| VEHICLE YEAR/MAKE/MODEL/STYLE: | 2006 Subaru B9 Tribeca |
| VIN: | 4S4WX82C764409296 |
| DATE OF MANUFACTURE: | 07/05 (SEE CERTIFICATION LABEL) |
| COLOR: | Silver |

| | |
|--------------------------|----------|
| Test Number: | 07 |
| Test Date: | 05/16/06 |
| Target Location: | A-PILLAR |
| Target Code: | AP3 |
| Horizontal Impact Angle: | 136° |
| Vertical Impact Angle: | 44° |
| Ambient Temperature: | 22.7°C |
| Relative Humidity: | 43.4 |
| Time of Impact: | 15:05 |
| Headform Number: | 0355 |

| | | | | | |
|--|----|--------------------------|----------|-------------------------------------|---------|
| Impact Point Description (from lower midpoint on midsagittal line) | | | | | |
| On Centerline | 1 | <input type="checkbox"/> | mm right | <input checked="" type="checkbox"/> | mm left |
| On Centerline | 16 | | | | mm up |



POST-IMPACT AP3 HEADFORM

| | |
|-----------------------|-------|
| Free Motion HIC | 291.0 |
| HIC(d) | 385.9 |
| Impact Velocity (kph) | 18.61 |
| HIC T1 (msec) | 2.9 |
| HIC T2 (msec) | 12.5 |

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA C65501 - AP3

FMH Headform 0355

Location: AP3

Test Date: May 16, 2006

Work File: AP3

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

Lab Temperature: 22.7 C

HICd: 385.9

Lab Humidity: 43.4 %

HIC (36ms): 291.0

Velocity at Impact: 18.61 KPH

t1: 2.9 msec

t2: 12.5 msec

Free Flight Distance: 221.87 mm

Duration: 9.6 msec

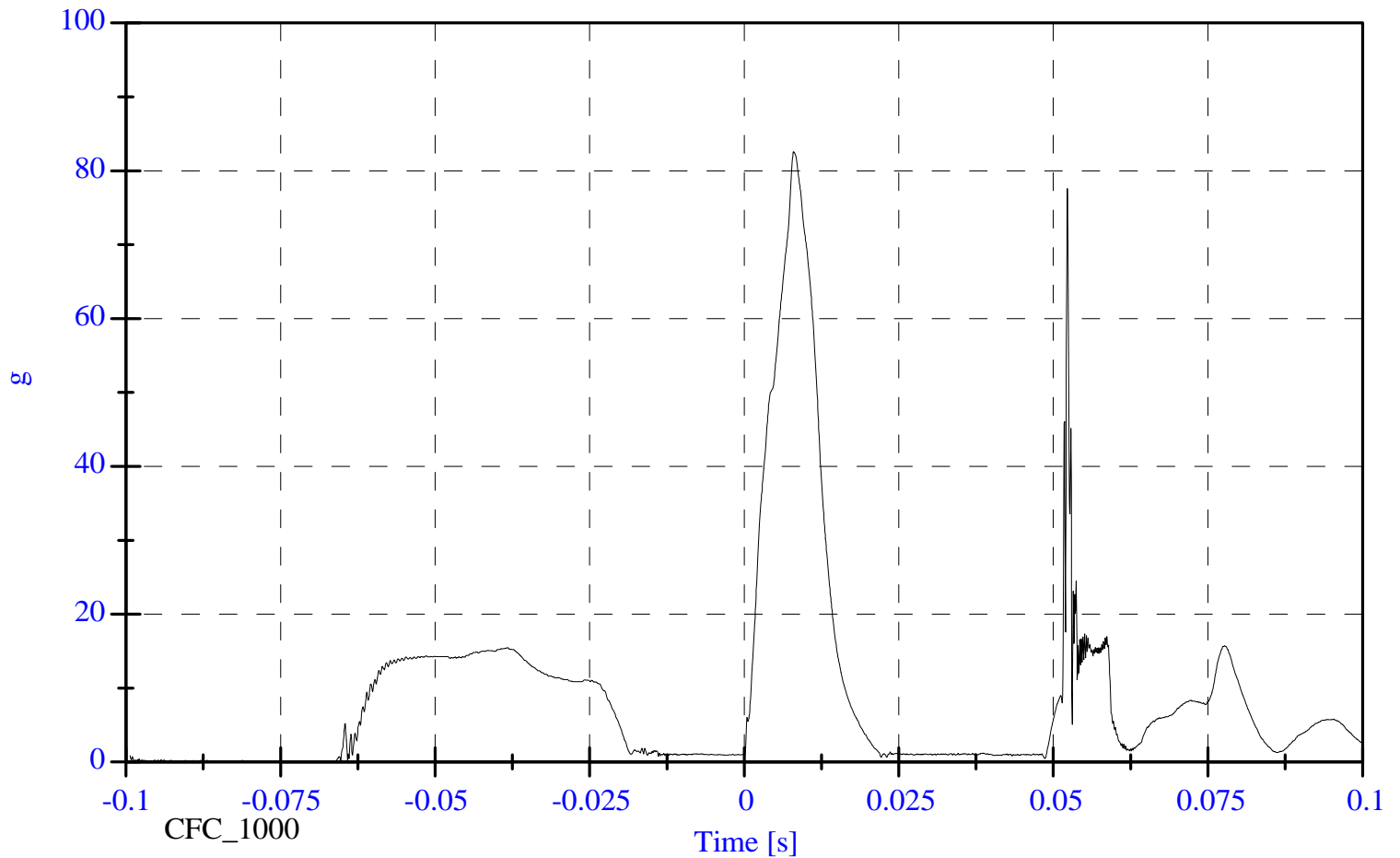
Maximum: 82.6 g

Average Acceleration: 8.8 g

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA
Headform Resultant

Max: 82.6 [g] at 0.008 [s]

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



FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

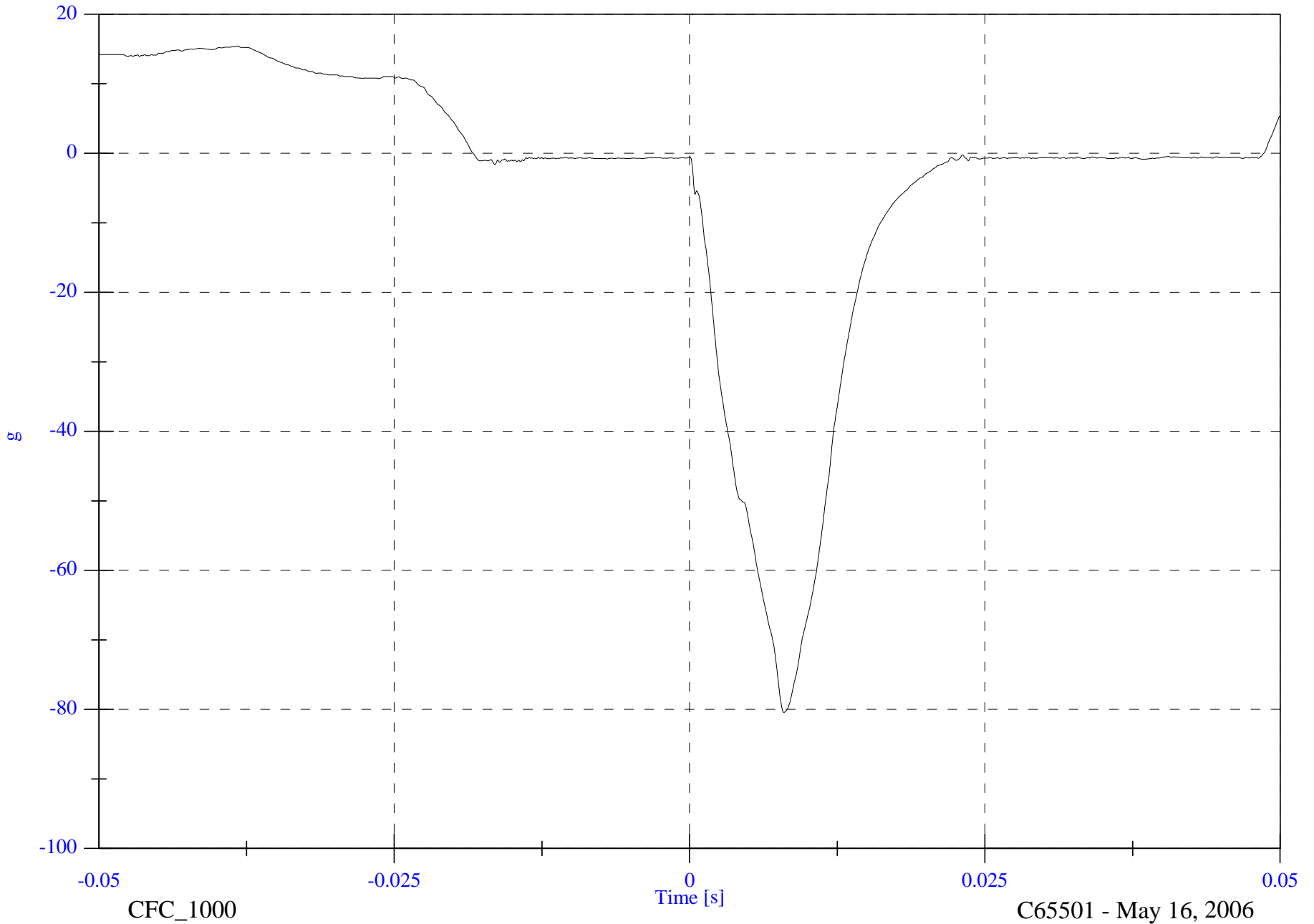
Headform X Acceleration

Max: 15.4 [g] at -0.038 [s]

Min: -80.5 [g] at 0.008 [s]

C65501 PASSENGER SIDE AP3 IMPACT PLOT #1

8754+FMH-14



CFC_1000

C65501 - May 16, 2006

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

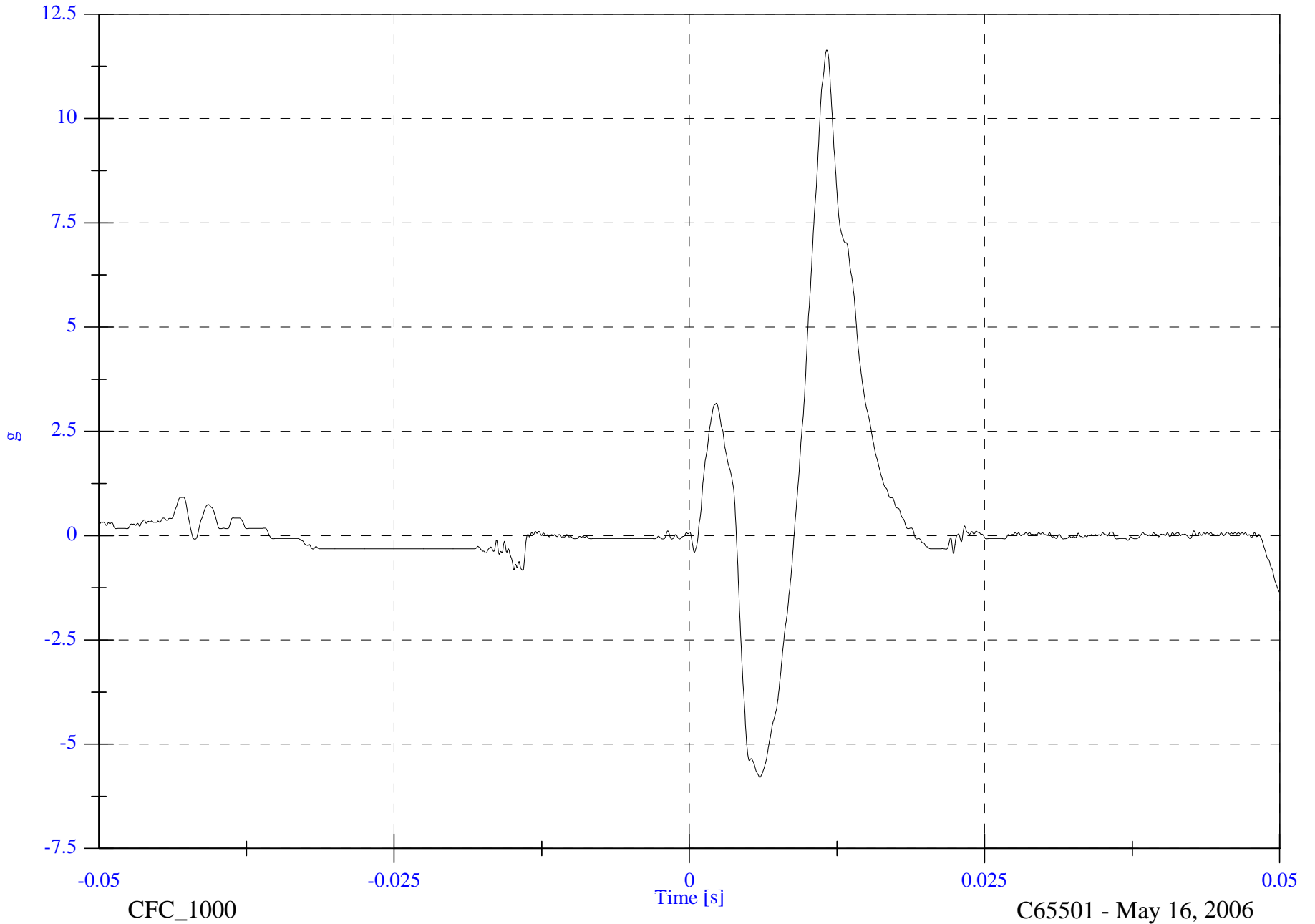
Headform Y Acceleration

Max: 11.6 [g] at 0.012 [s]

Min: -5.8 [g] at 0.006 [s]

C65501 PASSENGER SIDE AP3 IMPACT PLOT #2

8754+FMH-14



CFC_1000

C65501 - May 16, 2006

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

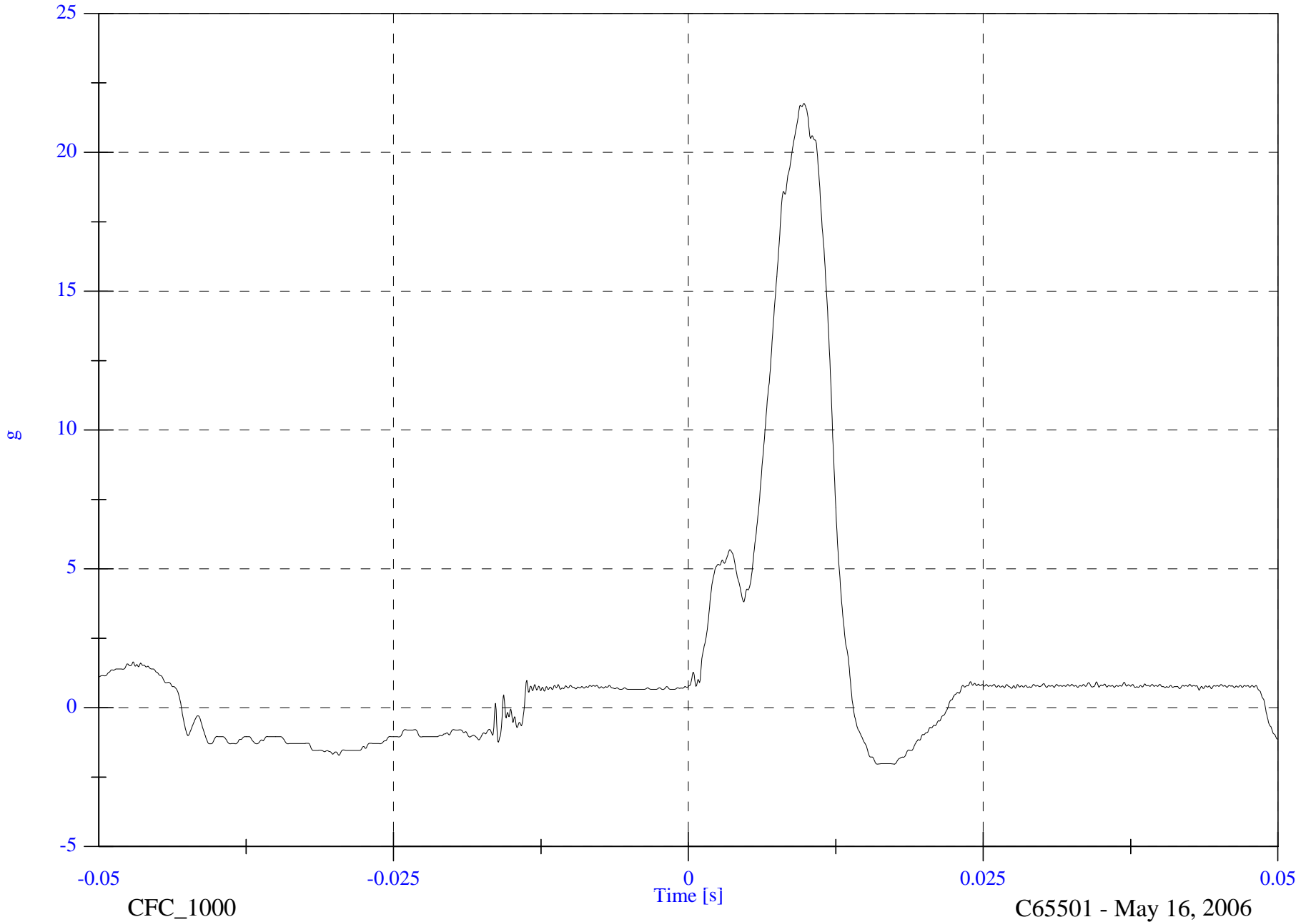
Headform Z Acceleration

Max: 21.8 [g] at 0.010 [s]

Min: -2.0 [g] at 0.016 [s]

C65501 PASSENGER SIDE AP3 IMPACT PLOT #3

8754-FMH-14



CFC_1000

C65501 - May 16, 2006

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

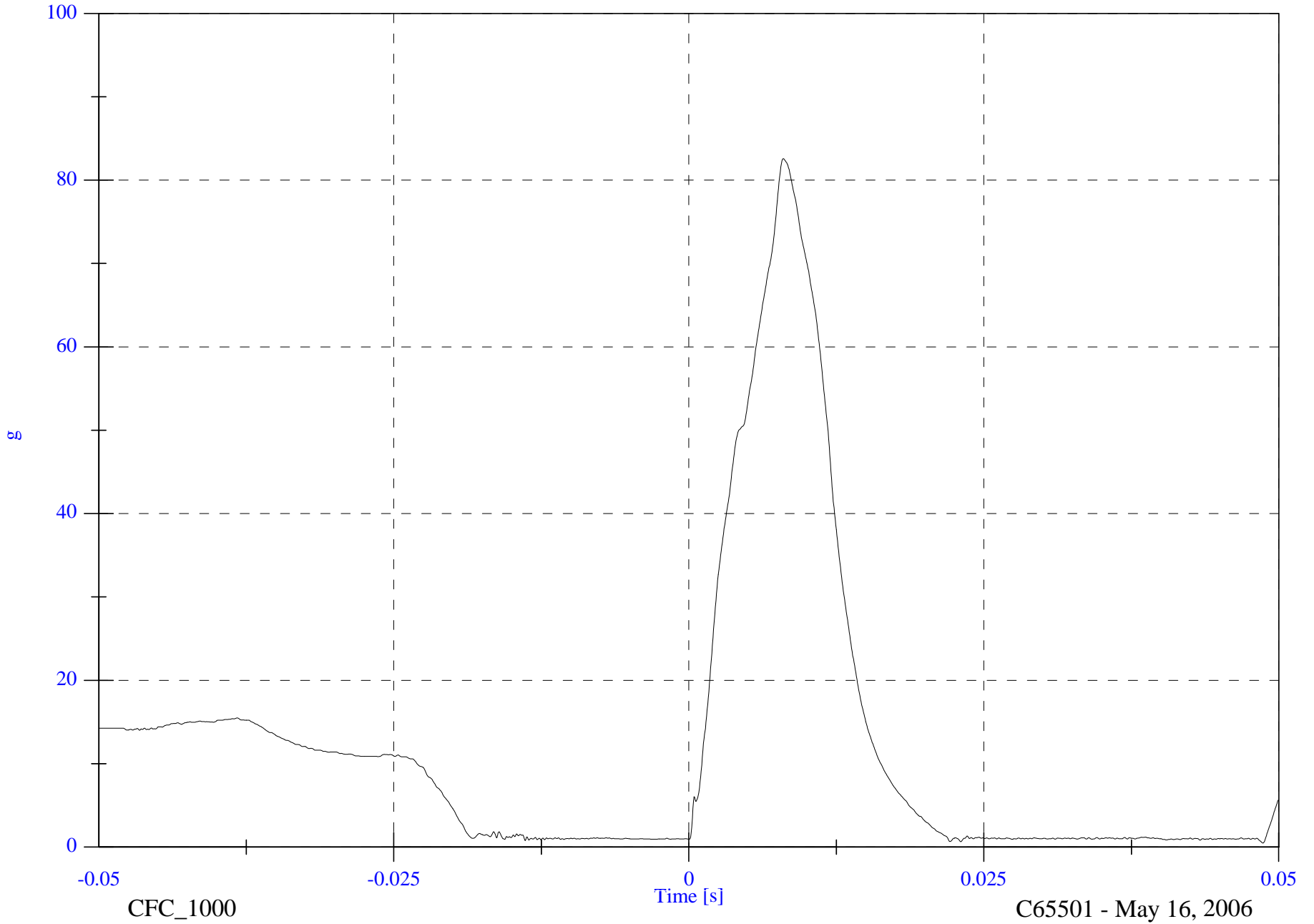
Headform Resultant

Max: 82.6 [g] at 0.008 [s]

Min: 0.5 [g] at 0.049 [s]

C65501 PASSENGER SIDE AP3 IMPACT PLOT #4

8754+FMH-14



CFC_1000

C65501 - May 16, 2006

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

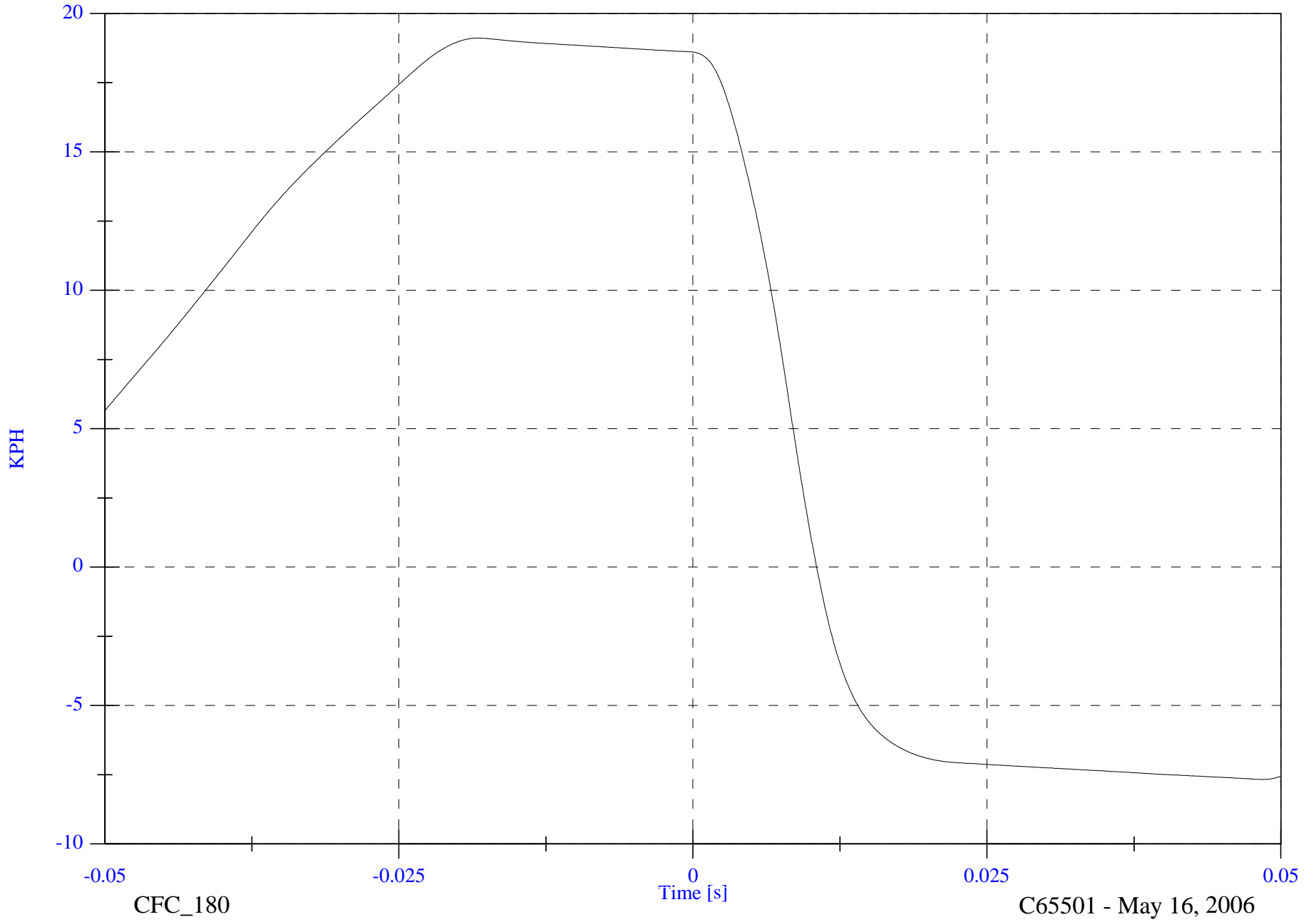
Headform Velocity

Max: 19.1 [KPH] at -0.018 [s]

Min: -7.7 [KPH] at 0.048 [s]

C65501 PASSENGER SIDE AP3 IMPACT PLOT #5

8754+FMH-14



CFC_180

C65501 - May 16, 2006



PRE-IMPACT AP3

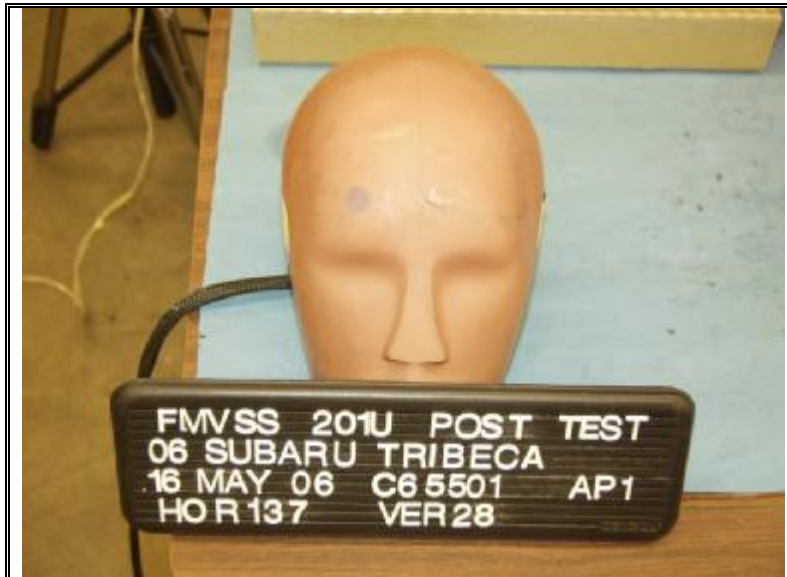


POST-IMPACT AP3

| | |
|--------------------------------|---------------------------------|
| VEHICLE YEAR/MAKE/MODEL/STYLE: | 2006 Subaru B9 Tribeca |
| VIN: | 4S4WX82C764409296 |
| DATE OF MANUFACTURE: | 07/05 (SEE CERTIFICATION LABEL) |
| COLOR: | Silver |

| | |
|--------------------------|----------|
| Test Number: | 08 |
| Test Date: | 05/16/06 |
| Target Location: | A-PILLAR |
| Target Code: | AP1 |
| Horizontal Impact Angle: | 137° |
| Vertical Impact Angle: | 28° |
| Ambient Temperature: | 20.1°C |
| Relative Humidity: | 47.5 |
| Time of Impact: | 15:40 |
| Headform Number: | 0642 |

| | | | | | |
|--|----|-------------------------------------|----------|--------------------------|---------|
| Impact Point Description (from lower midpoint on midsagittal line) | | | | | |
| On Centerline | 33 | <input checked="" type="checkbox"/> | mm right | <input type="checkbox"/> | mm left |
| On Centerline | 6 | | | | mm up |



POST-IMPACT AP1 HEADFORM

| | |
|-----------------------|-------|
| Free Motion HIC | 342.9 |
| HIC(d) | 425.1 |
| Impact Velocity (kph) | 18.52 |
| HIC T1 (msec) | 4.2 |
| HIC T2 (msec) | 11.8 |

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA C65501 - AP1

FMH Headform 0642

Location: AP1

Test Date: May 16, 2006

Work File: AP1

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

Lab Temperature: 20.1 C

HICd: 425.1

Lab Humidity: 47.5 %

HIC (36ms): 342.9

Velocity at Impact: 18.52 KPH

t1: 4.2 msec

t2: 11.8 msec

Free Flight Distance: 211.99 mm

Duration: 7.6 msec

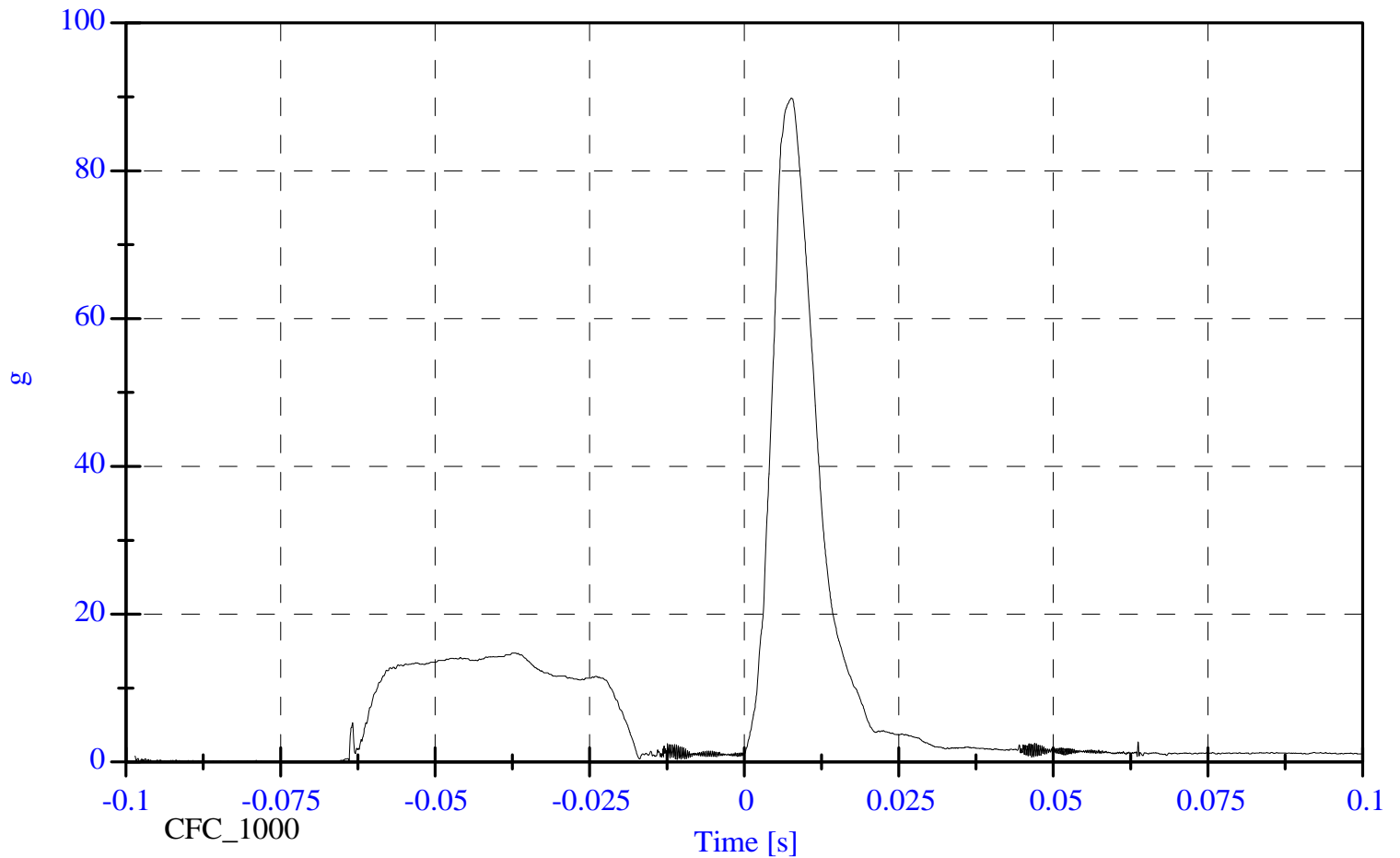
Maximum: 89.9 g

Average Acceleration: 7.3 g

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA
Headform Resultant

Max: 89.9 [g] at 0.008 [s]

Min: 0.0 [g] at -0.076 [s]



FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

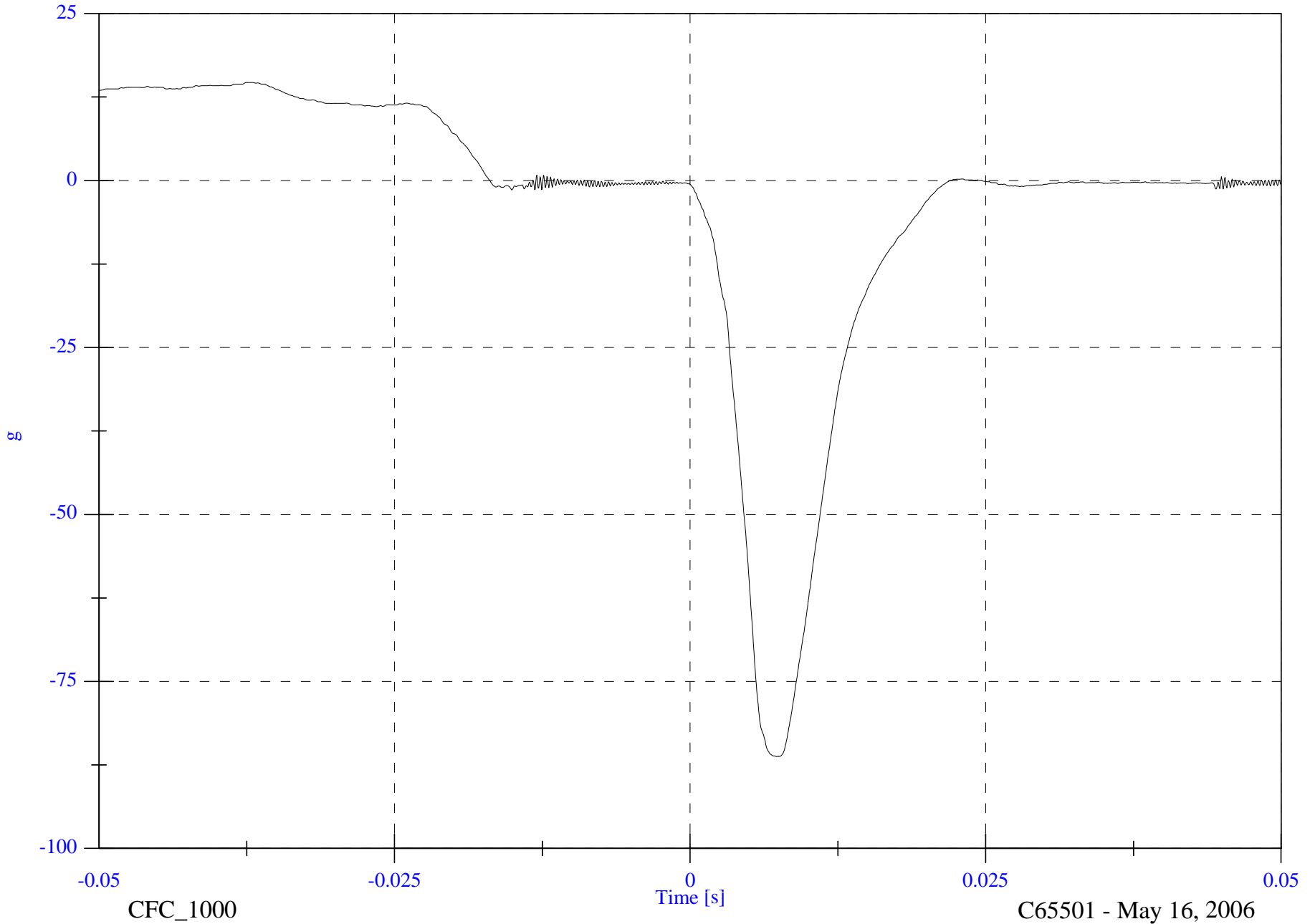
Headform X Acceleration

Max: 14.7 [g] at -0.037 [s]

Min: -86.3 [g] at 0.007 [s]

C65501 PASSENGER SIDE AP1 IMPACT PLOT #1

8754+FMH-14



CFC_1000

C65501 - May 16, 2006

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

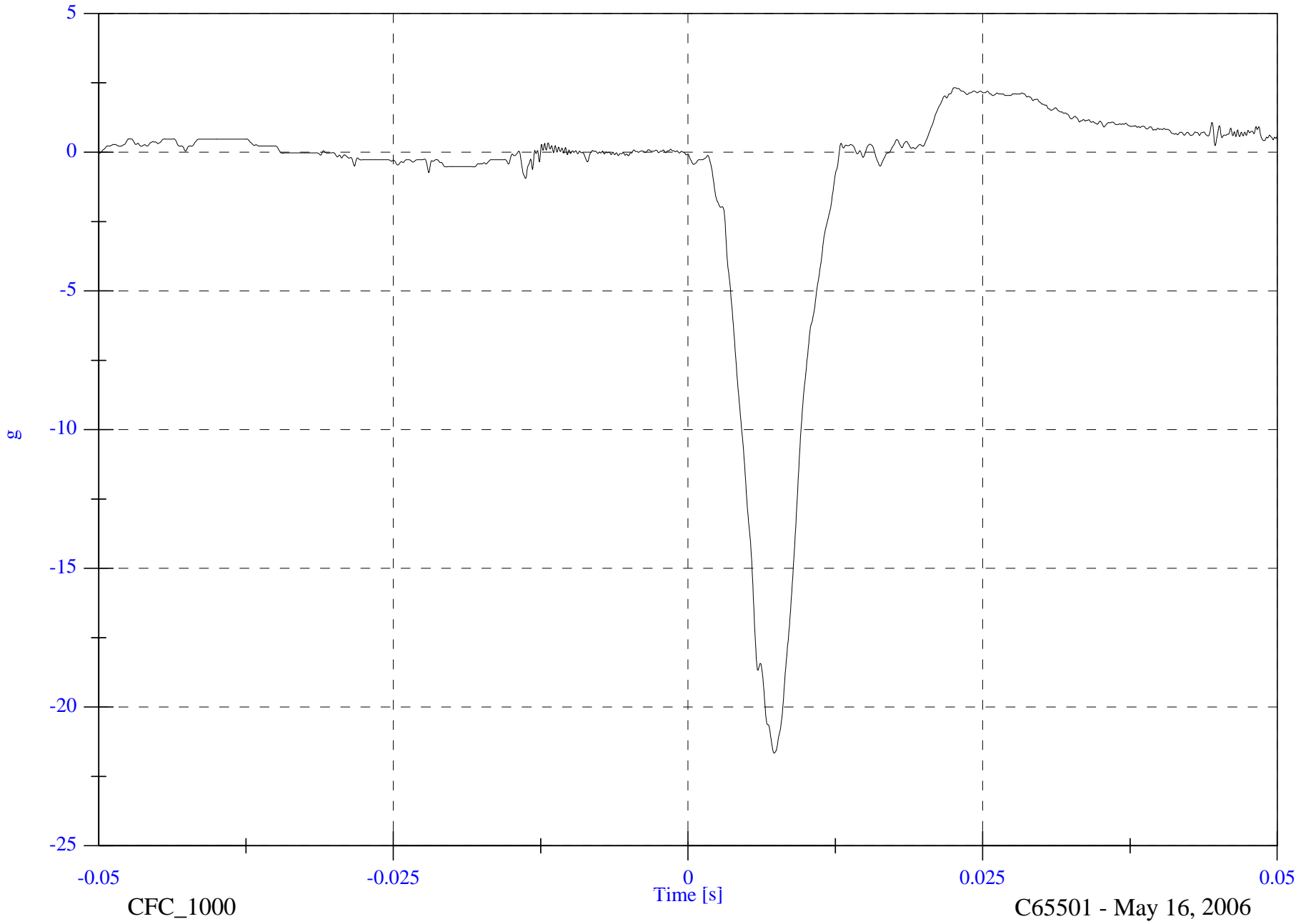
Headform Y Acceleration

Max: 2.3 [g] at 0.023 [s]

Min: -21.7 [g] at 0.007 [s]

C65501 PASSENGER SIDE AP1 IMPACT PLOT #2

8754+FMH-14



CFC_1000

C65501 - May 16, 2006

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

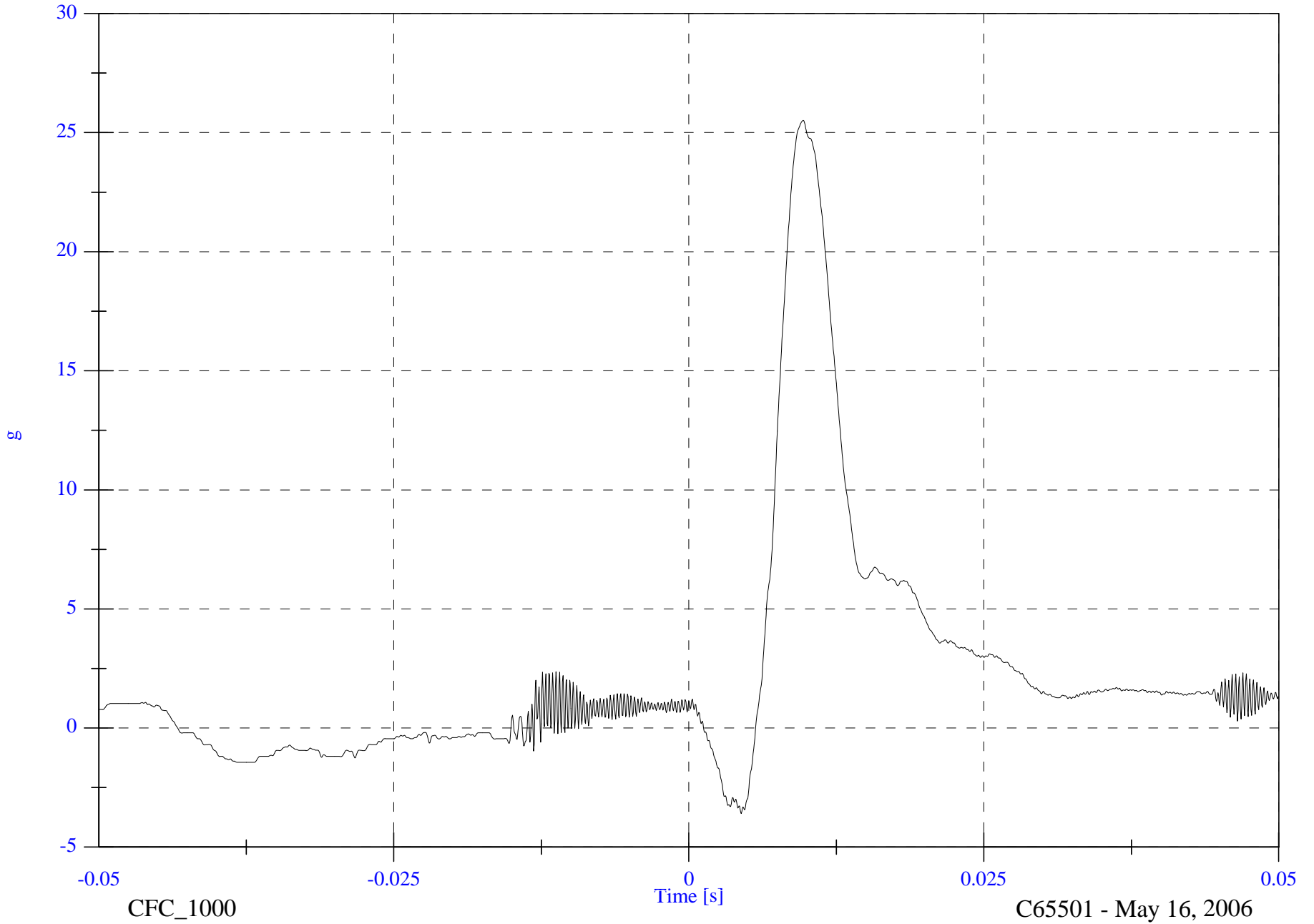
Headform Z Acceleration

Max: 25.5 [g] at 0.010 [s]

Min: -3.6 [g] at 0.004 [s]

C65501 PASSENGER SIDE AP1 IMPACT PLOT #3

8754+FMH-14



FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

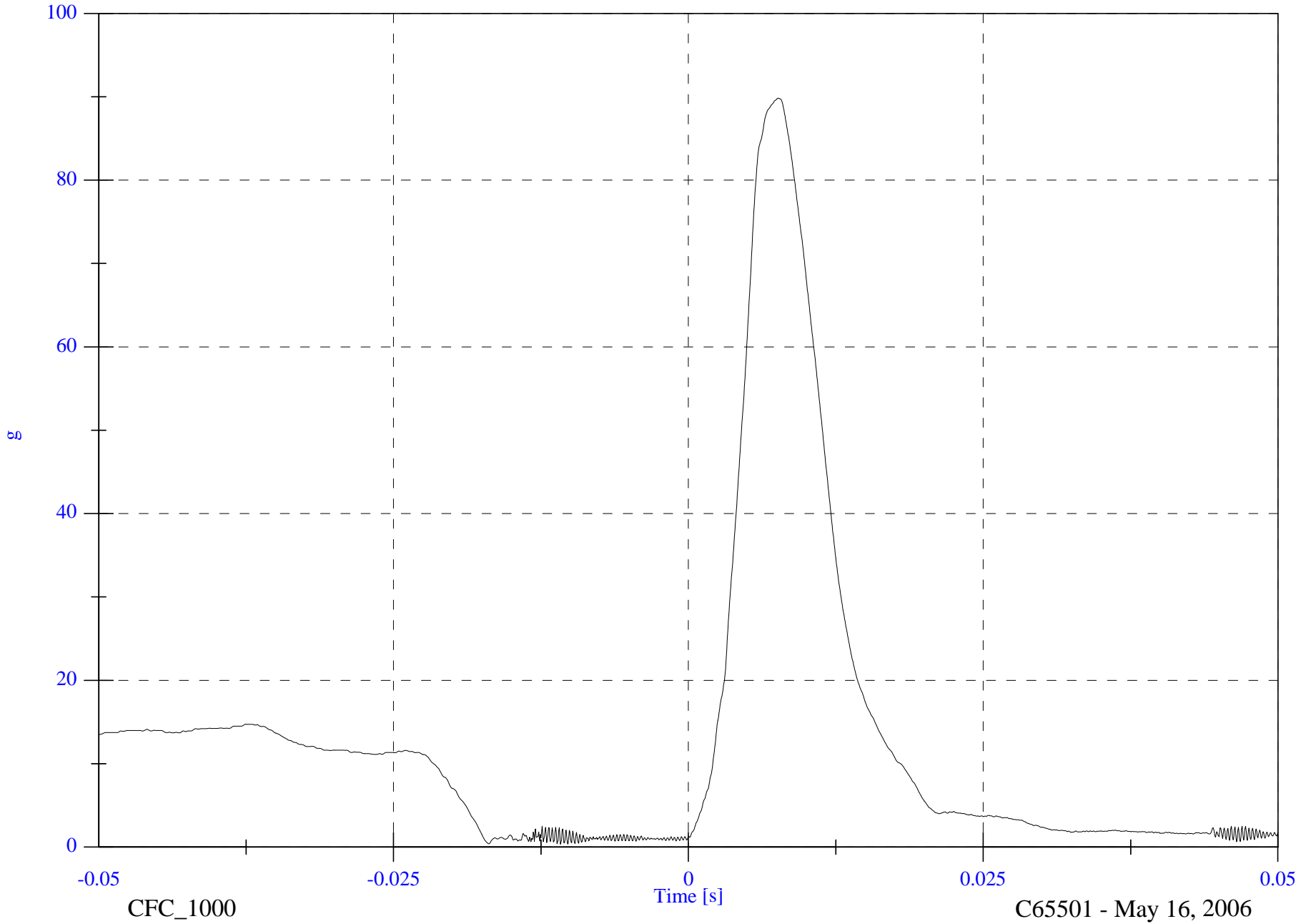
Headform Resultant

Max: 89.9 [g] at 0.008 [s]

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

C65501 PASSENGER SIDE AP1 IMPACT PLOT #4

8754+FMH-14



CFC_1000

C65501 - May 16, 2006

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

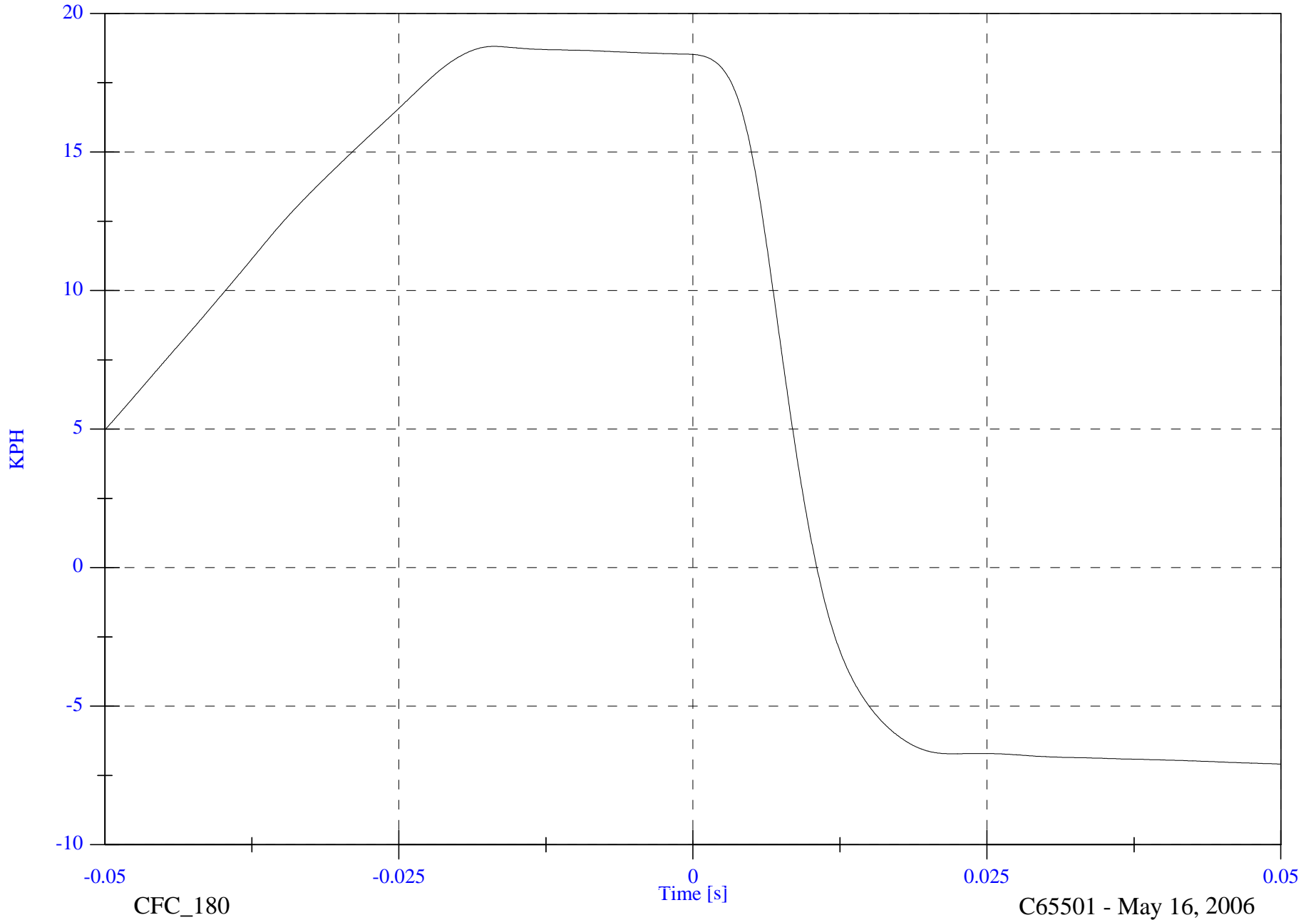
Headform Velocity

Max: 18.8 [KPH] at -0.017 [s]

Min: -7.1 [KPH] at 0.050 [s]

C65501 PASSENGER SIDE AP1 IMPACT PLOT #5

8754+FMH-14



CFC_180

C65501 - May 16, 2006



PRE-IMPACT AP1

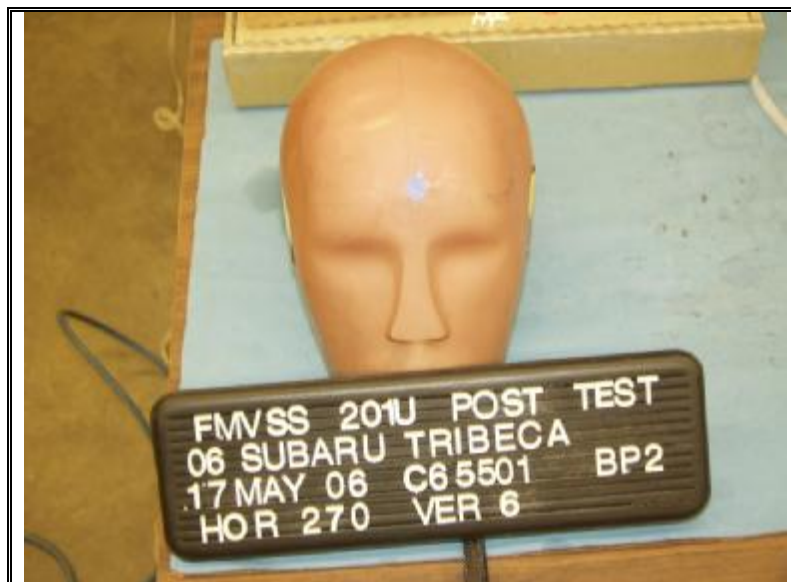


POST-IMPACT API

| | |
|--------------------------------|---------------------------------|
| VEHICLE YEAR/MAKE/MODEL/STYLE: | 2006 Subaru B9 Tribeca |
| VIN: | 4S4WX82C764409296 |
| DATE OF MANUFACTURE: | 07/05 (SEE CERTIFICATION LABEL) |
| COLOR: | Silver |

| | |
|--------------------------|----------|
| Test Number: | 09 |
| Test Date: | 05/17/06 |
| Target Location: | B-PILLAR |
| Target Code: | BP2 |
| Horizontal Impact Angle: | 270° |
| Vertical Impact Angle: | 6° |
| Ambient Temperature: | 22.1°C |
| Relative Humidity: | 46.6 |
| Time of Impact: | 9:00 |
| Headform Number: | 0642 |

| 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 | 5 | | mm up |



POST-IMPACT BP2 HEADFORM

| | |
|-----------------------|-------|
| Free Motion HIC | 599.6 |
| HIC(d) | 618.8 |
| Impact Velocity (kph) | 23.84 |
| HIC T1 (msec) | 1.5 |
| HIC T2 (msec) | 10.8 |

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA C65501 - BP2

FMH Headform 0642

Location: BP2

Test Date: May 17, 2006

Work File: BP2

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

Lab Temperature: 22.1 C

HICd: 618.8

Lab Humidity: 46.6 %

HIC (36ms): 599.6

Velocity at Impact: 23.84 KPH

t1: 1.5 msec

t2: 10.8 msec

Free Flight Distance: 217.86 mm

Duration: 9.3 msec

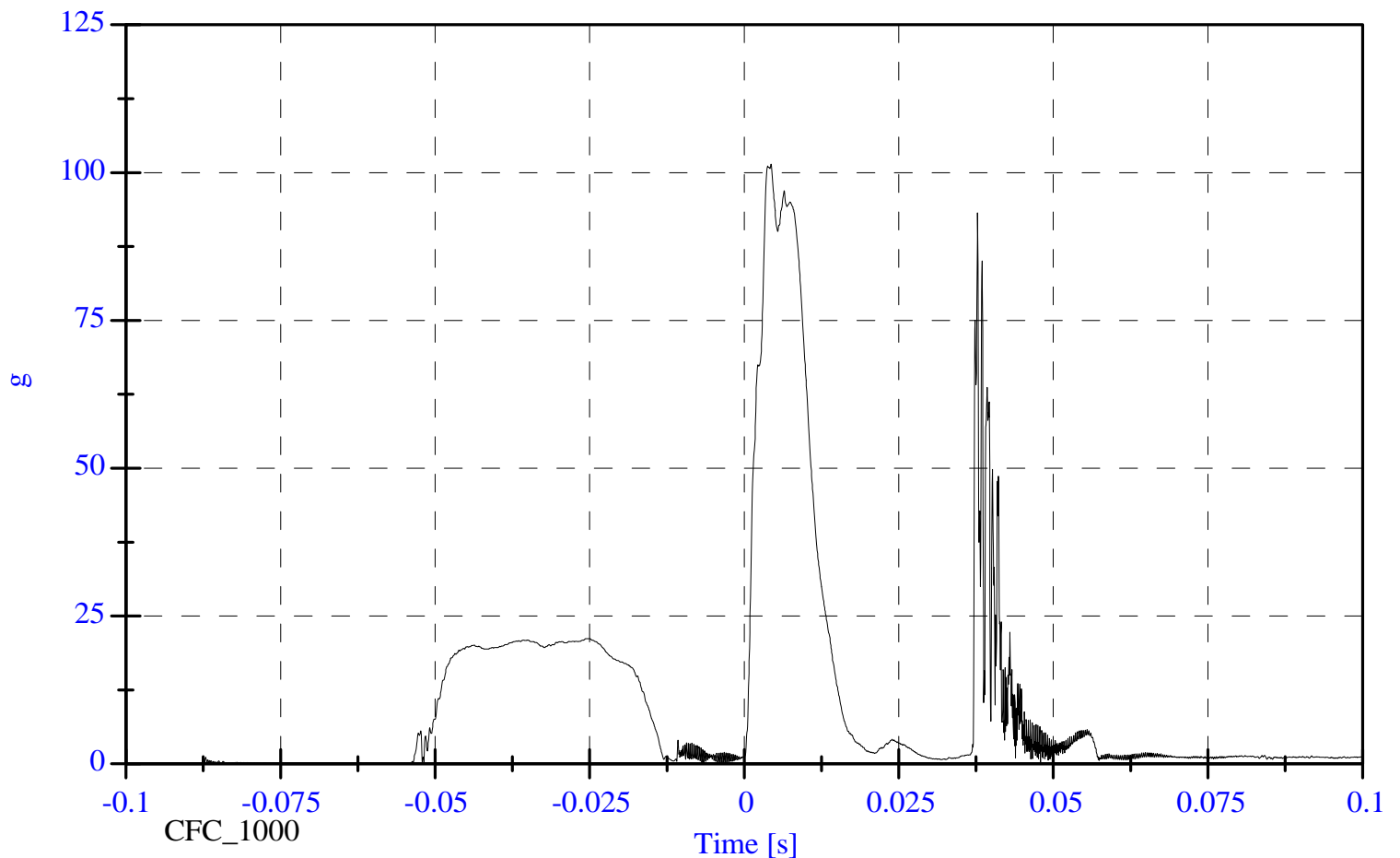
Maximum: 101.4 g

Average Acceleration: 10.1 g

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA
Headform Resultant

Max: 101.4 [g] at 0.004 [s]

Min: 0.0 [g] at -0.057 [s]



FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

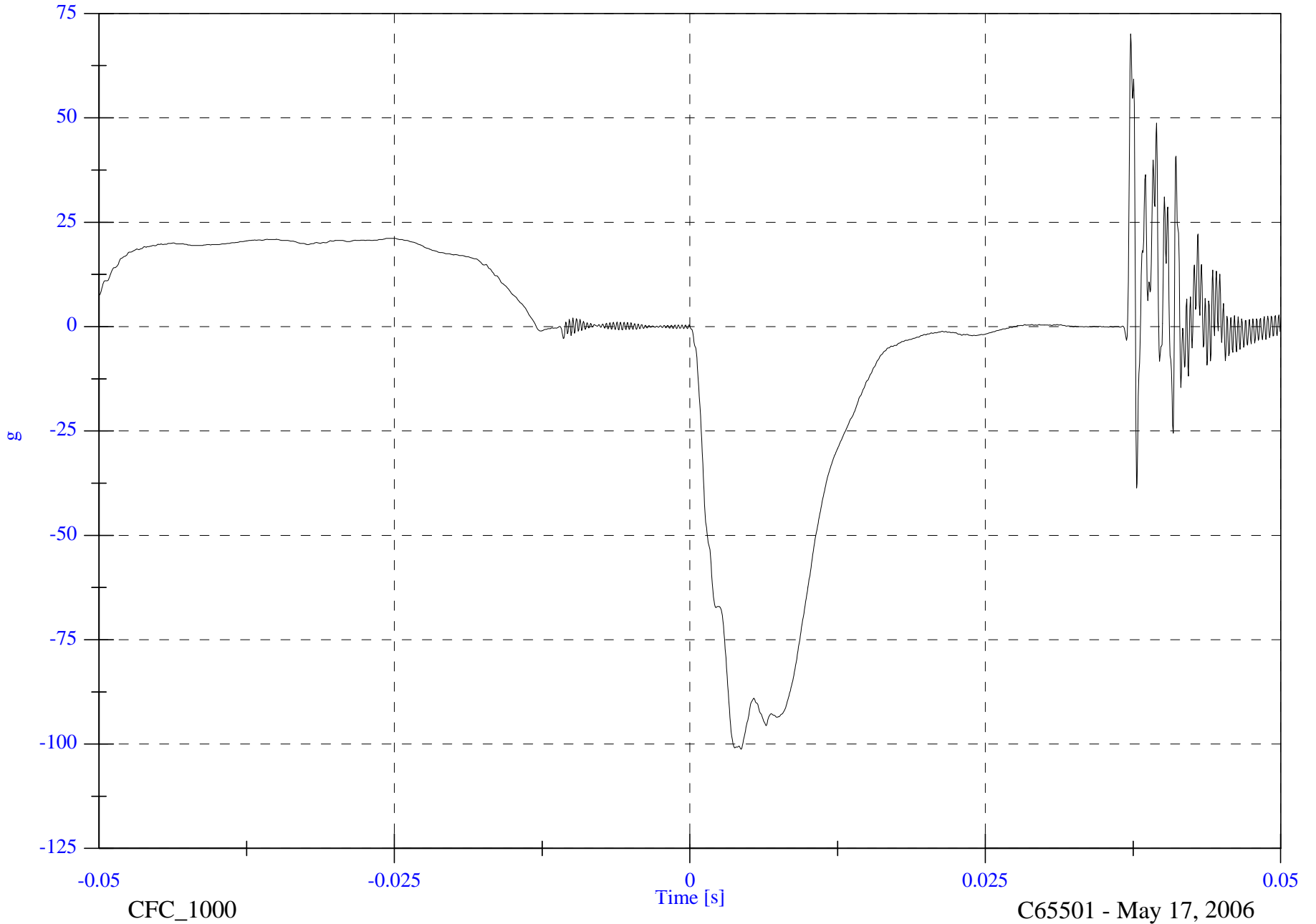
Headform X Acceleration

Max: 70.1 [g] at 0.037 [s]

Min: -101.3 [g] at 0.004 [s]

C65501 DRIVER SIDE BP2 IMPACT PLOT #1

8754+FMH-14



CFC_1000

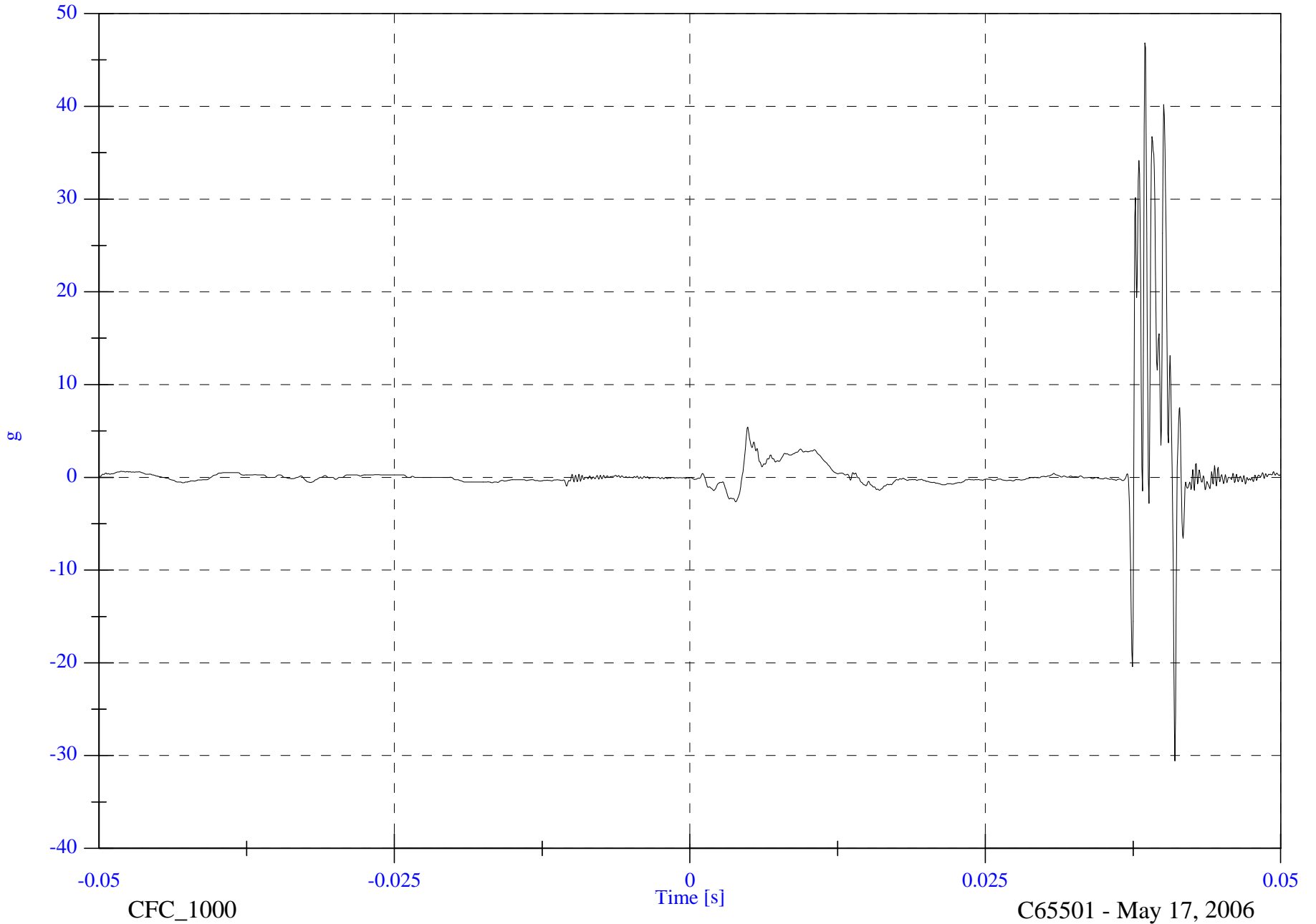
C65501 - May 17, 2006

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

Headform Y Acceleration

Max: 46.8 [g] at 0.039 [s]

Min: -30.6 [g] at 0.041 [s]



C65501 DRIVER SIDE BP2 IMPACT PLOT #2

8754+FMH-14

CFC_1000

C65501 - May 17, 2006

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

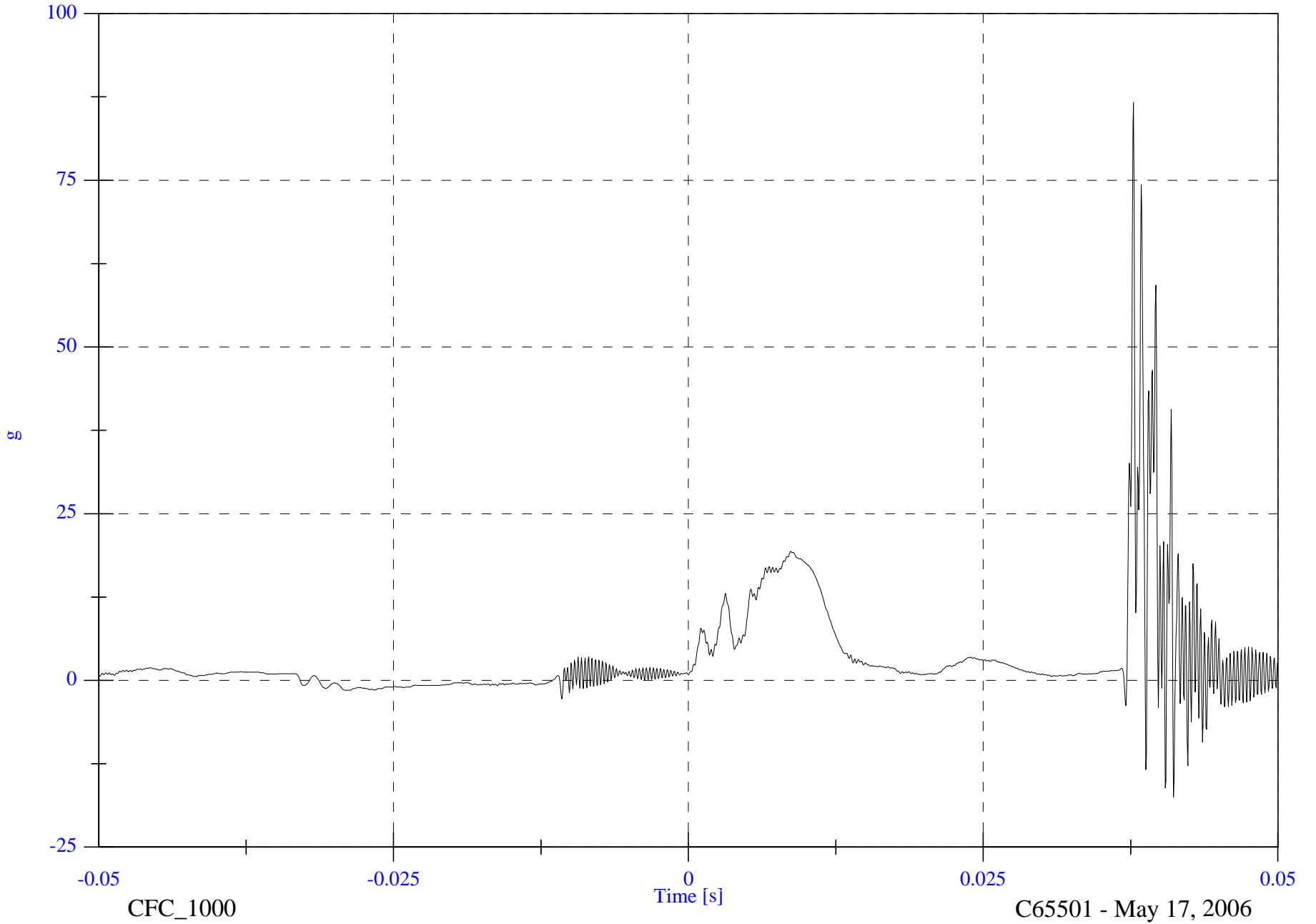
Headform Z Acceleration

Max: 86.6 [g] at 0.038 [s]

Min: -17.5 [g] at 0.041 [s]

C65501 DRIVER SIDE BP2 IMPACT PLOT #3

8754+FMH-14



CFC_1000

C65501 - May 17, 2006

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

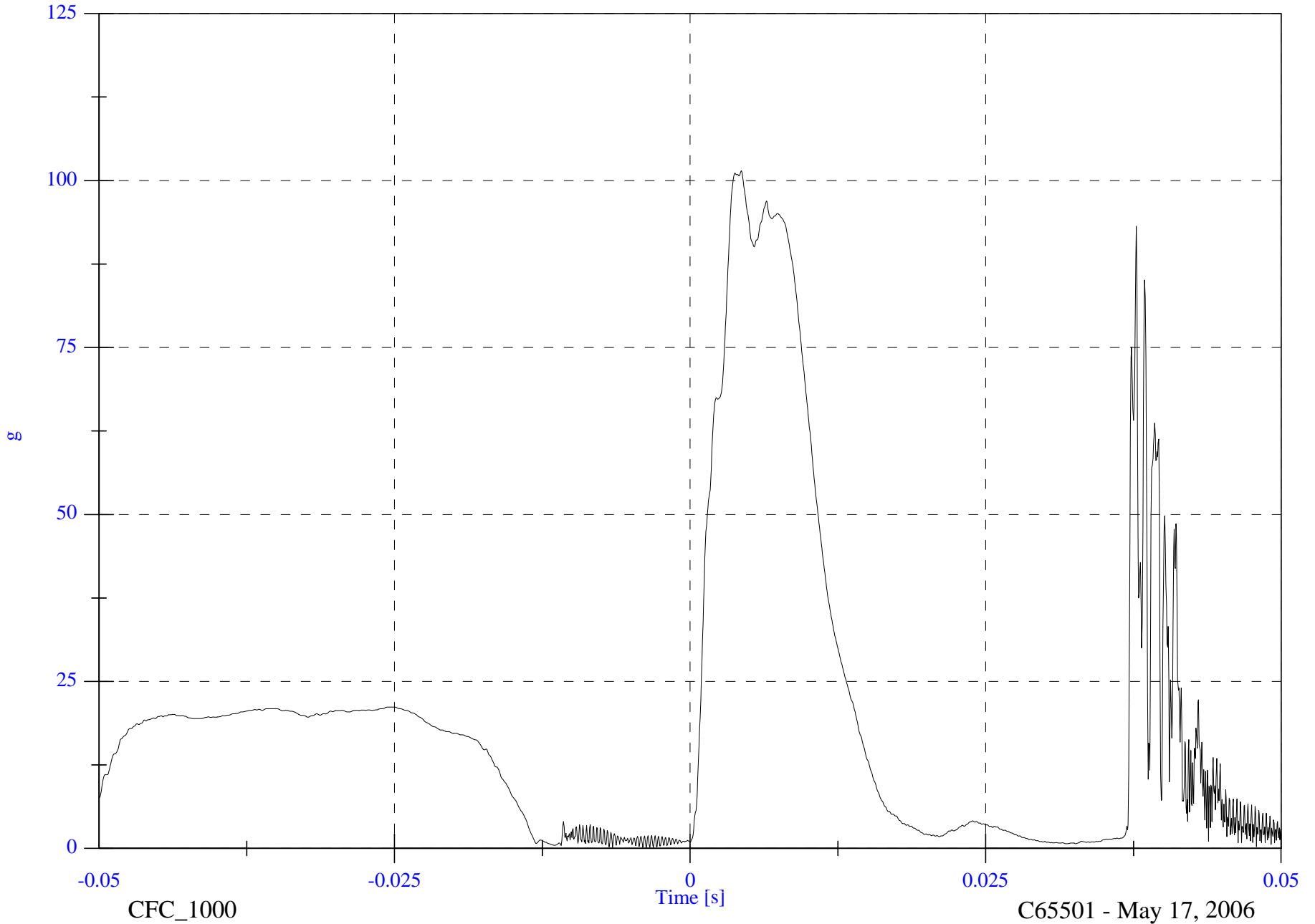
Headform Resultant

Max: 101.4 [g] at 0.004 [s]

Min: 0.1 [g] at -0.004 [s]

C65501 DRIVER SIDE BP2 IMPACT PLOT #4

8754-FMH-14



CFC_1000

C65501 - May 17, 2006

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

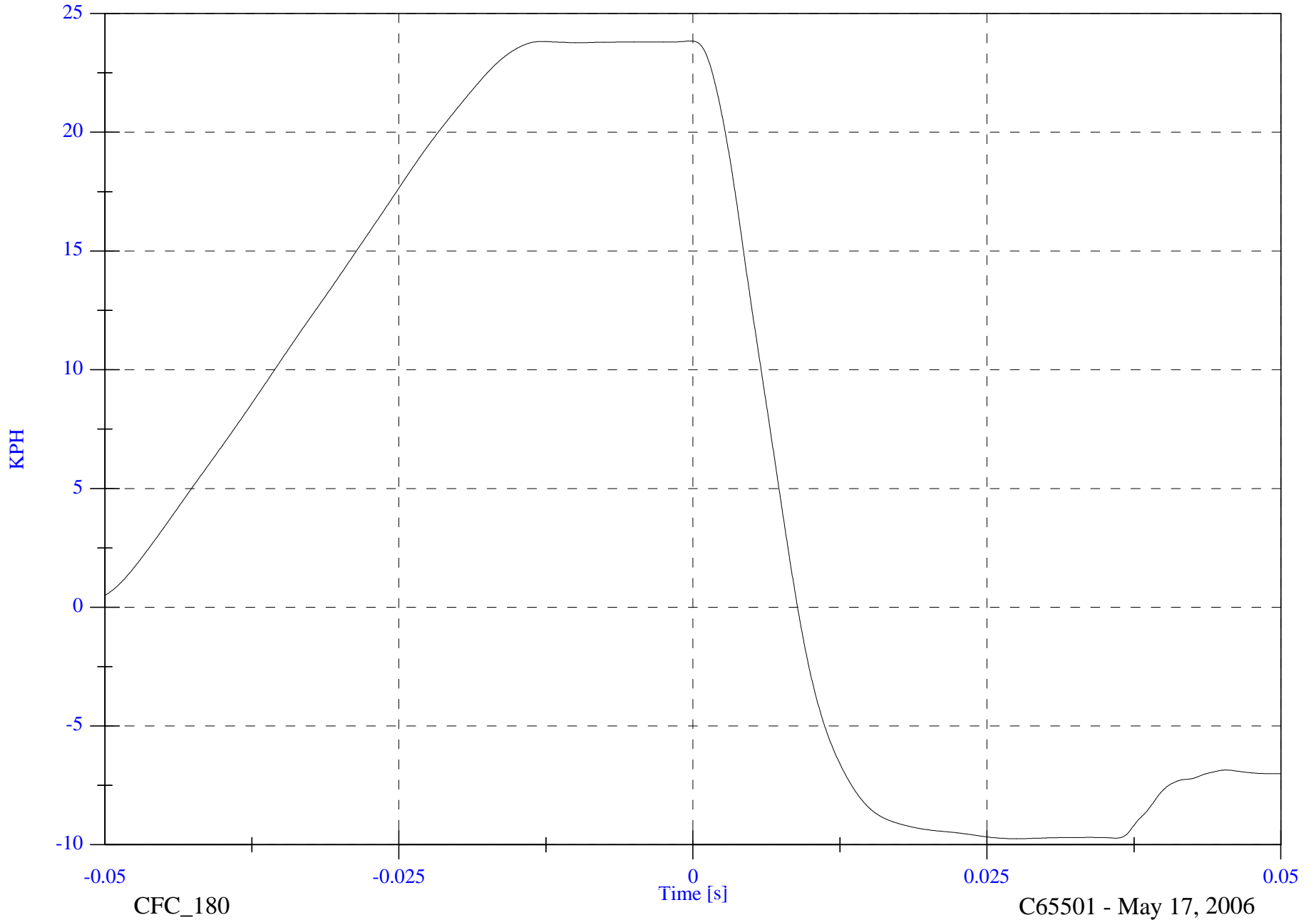
Headform Velocity

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

Min: -9.7 [KPH] at 0.027 [s]

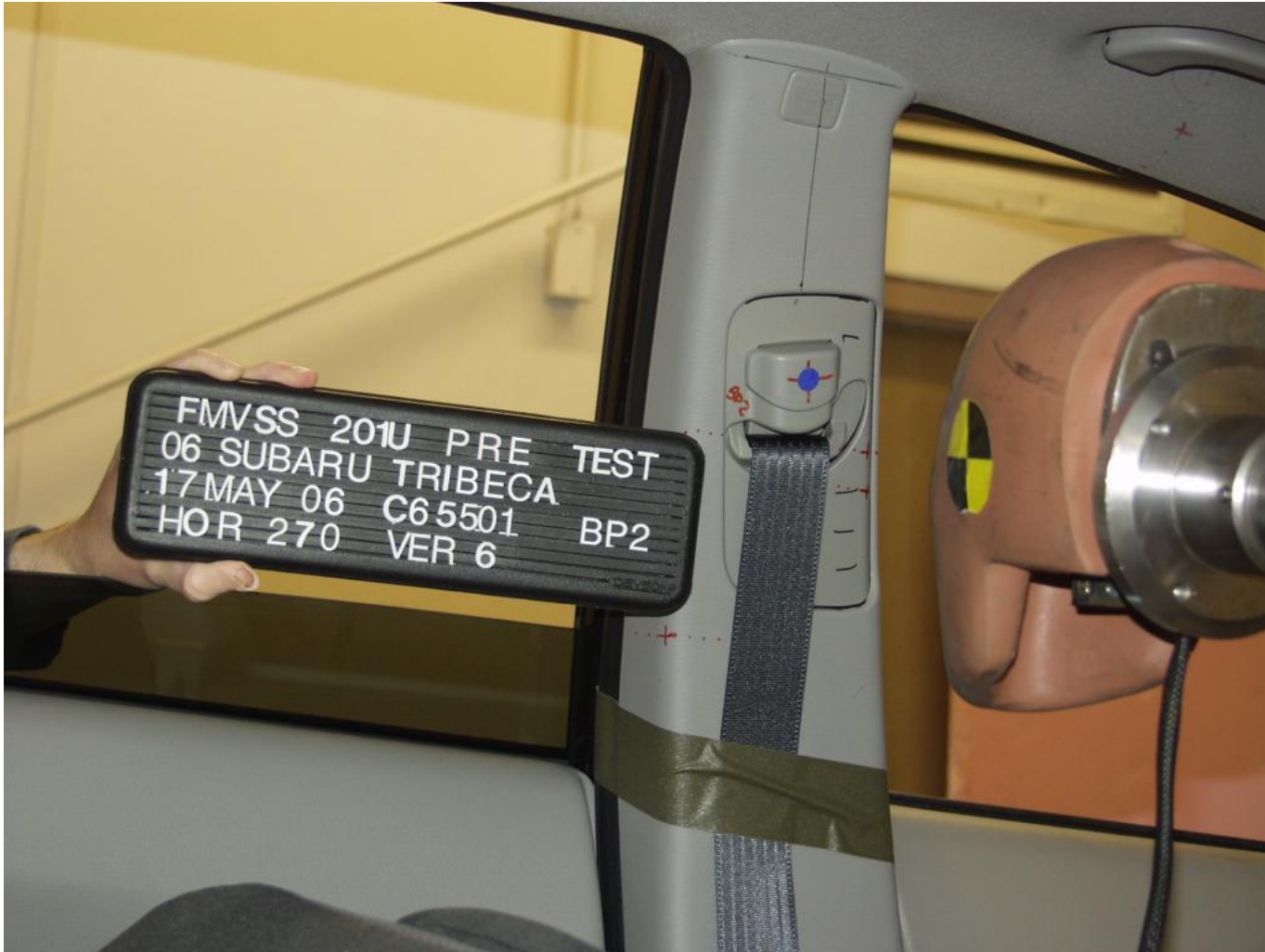
C65501 DRIVER SIDE BP2 IMPACT PLOT #5

8754+FMH-14



CFC_180

C65501 - May 17, 2006



PRE-IMPACT BP2



POST-IMPACT BP2

| | |
|--------------------------------|---------------------------------|
| VEHICLE YEAR/MAKE/MODEL/STYLE: | 2006 Subaru B9 Tribeca |
| VIN: | 4S4WX82C764409296 |
| DATE OF MANUFACTURE: | 07/05 (SEE CERTIFICATION LABEL) |
| COLOR: | Silver |

| | |
|--------------------------|----------|
| Test Number: | 10 |
| Test Date: | 05/17/06 |
| Target Location: | A-PILLAR |
| Target Code: | AP2 |
| Horizontal Impact Angle: | 213° |
| Vertical Impact Angle: | 48° |
| Ambient Temperature: | 22.3°C |
| Relative Humidity: | 46.3 |
| Time of Impact: | 9:40 |
| Headform Number: | 0805 |

| Impact Point Description (from lower midpoint on midsagittal line) | | | | | |
|--|----|-------------------------------------|----------|--------------------------|---------|
| On Centerline | 4 | <input checked="" type="checkbox"/> | mm right | <input type="checkbox"/> | mm left |
| On Centerline | 20 | | | | mm up |



POST-IMPACT AP2 HEADFORM

| | |
|-----------------------|-------|
| Free Motion HIC | 516.1 |
| HIC(d) | 555.8 |
| Impact Velocity (kph) | 18.62 |
| HIC T1 (msec) | 5.3 |
| HIC T2 (msec) | 9.8 |

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA C65501 - AP2

FMH Headform 0805

Location: AP2

Test Date: May 17, 2006

Work File: AP2

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

Lab Temperature: 22.3 C

HICd: 555.8

Lab Humidity: 46.3 %

HIC (36ms): 516.1

Velocity at Impact: 18.62 KPH

t1: 5.3 msec

t2: 9.8 msec

Free Flight Distance: 216.42 mm

Duration: 4.5 msec

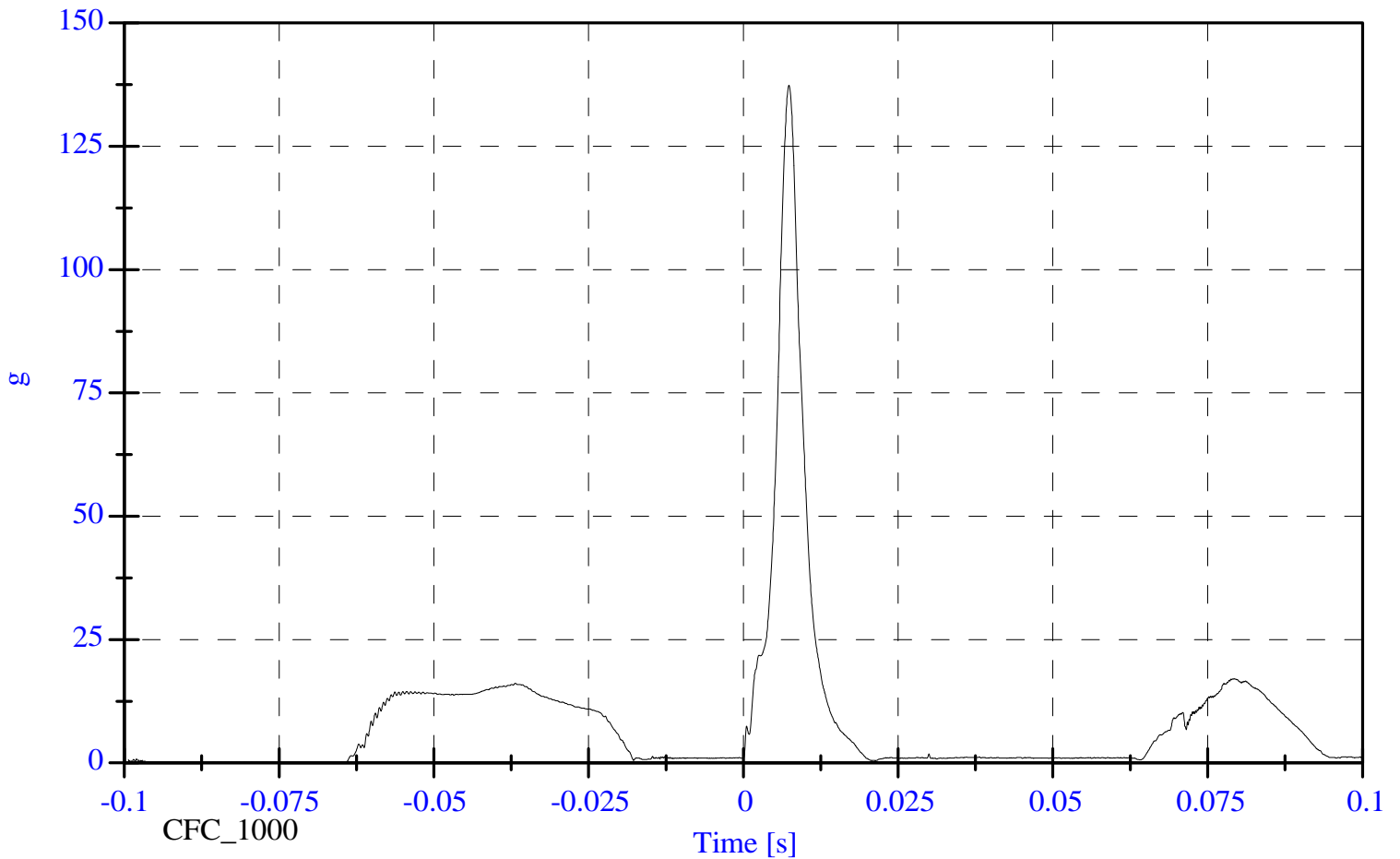
Maximum: 137.4 g

Average Acceleration: 8.3 g

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA
Headform Resultant

Max: 137.4 [g] at 0.007 [s]

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

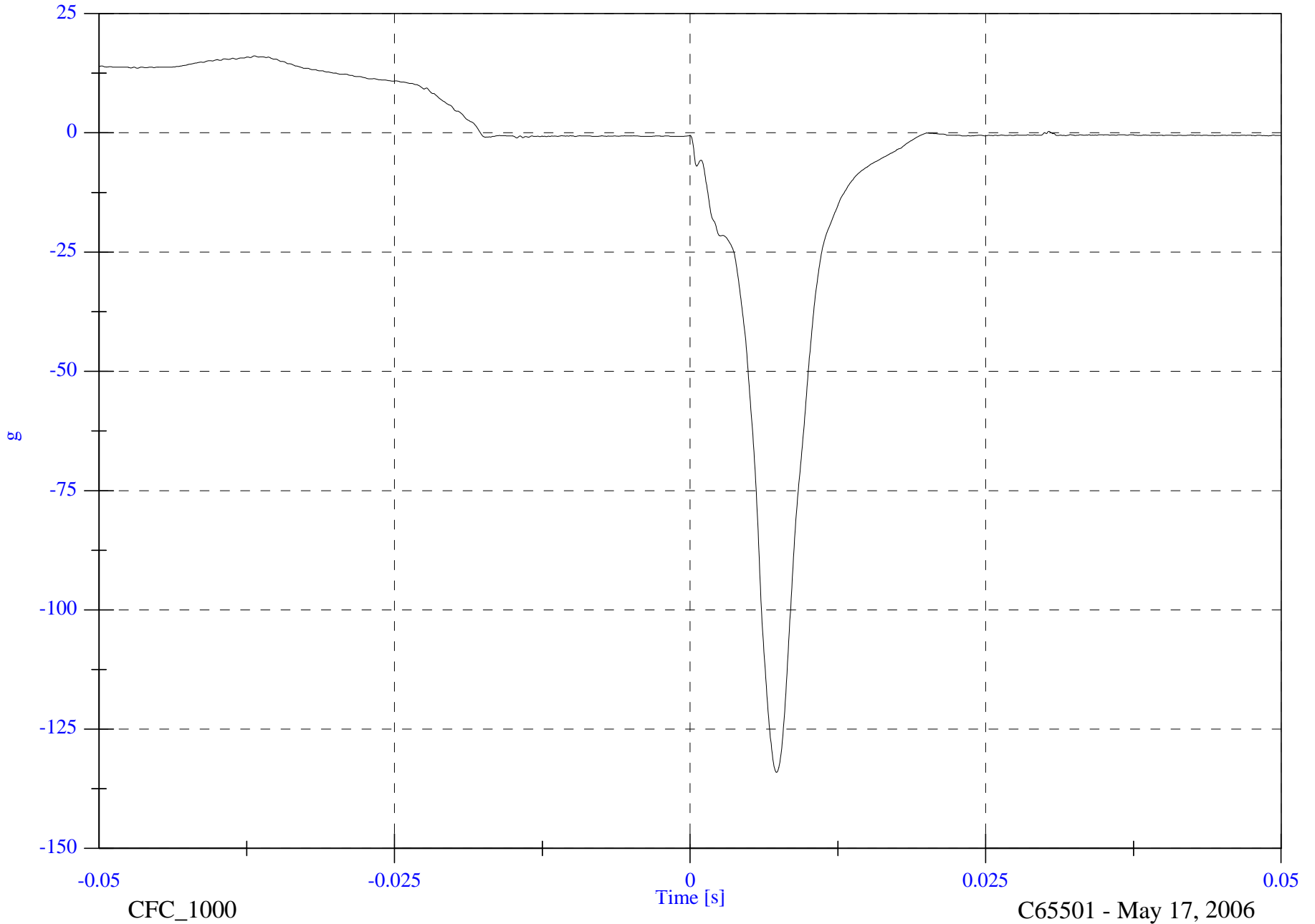


FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

Headform X Acceleration

Max: 16.1 [g] at -0.037 [s]

Min: -134.0 [g] at 0.007 [s]



C65501 DRIVER SIDE AP2 IMPACT PLOT #1

8754+FMH-14

CFC_1000

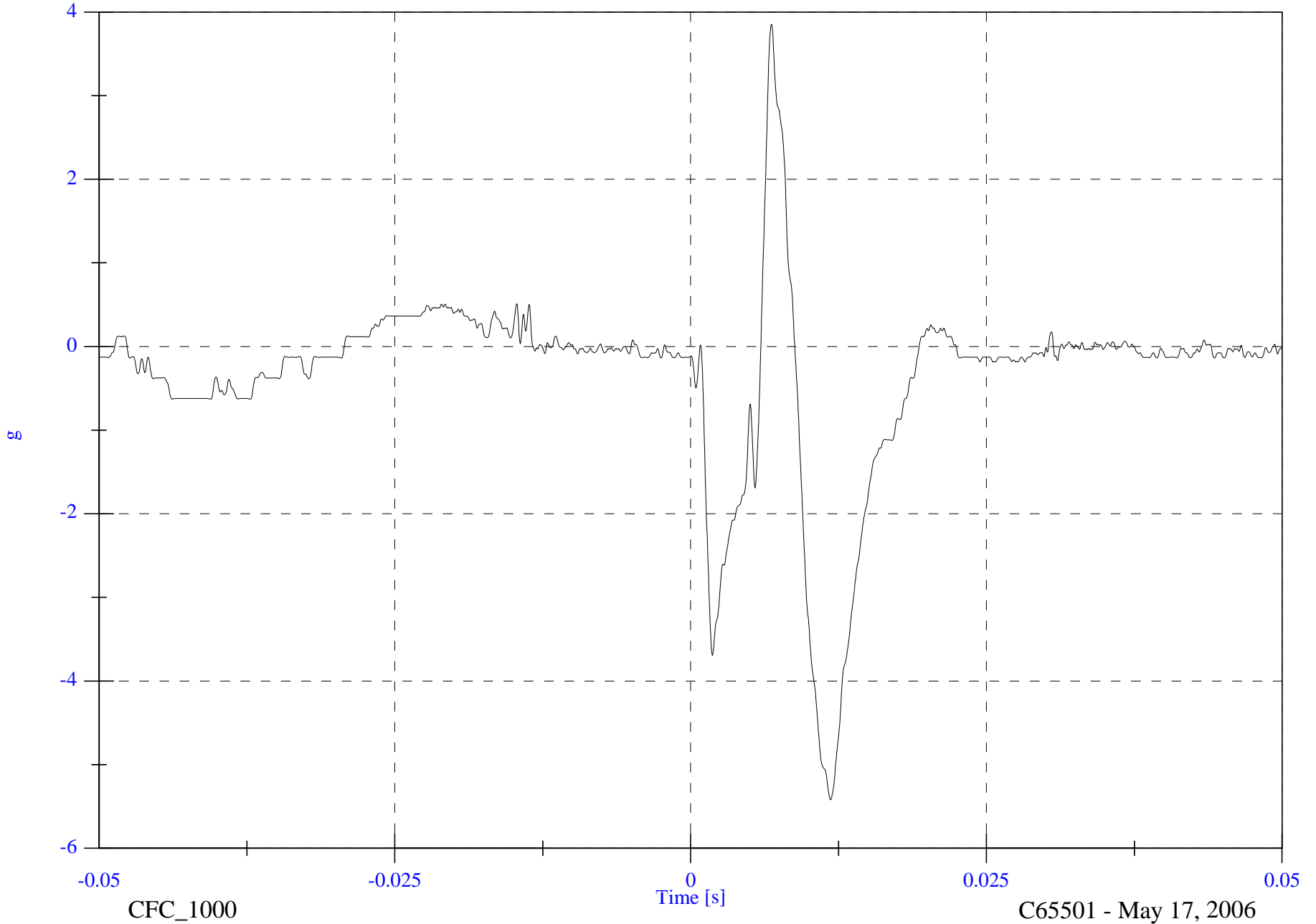
C65501 - May 17, 2006

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

Headform Y Acceleration

Max: 3.9 [g] at 0.007 [s]

Min: -5.4 [g] at 0.012 [s]



C65501 DRIVER SIDE AP2 IMPACT PLOT #2

8754+FMH-14

CFC_1000

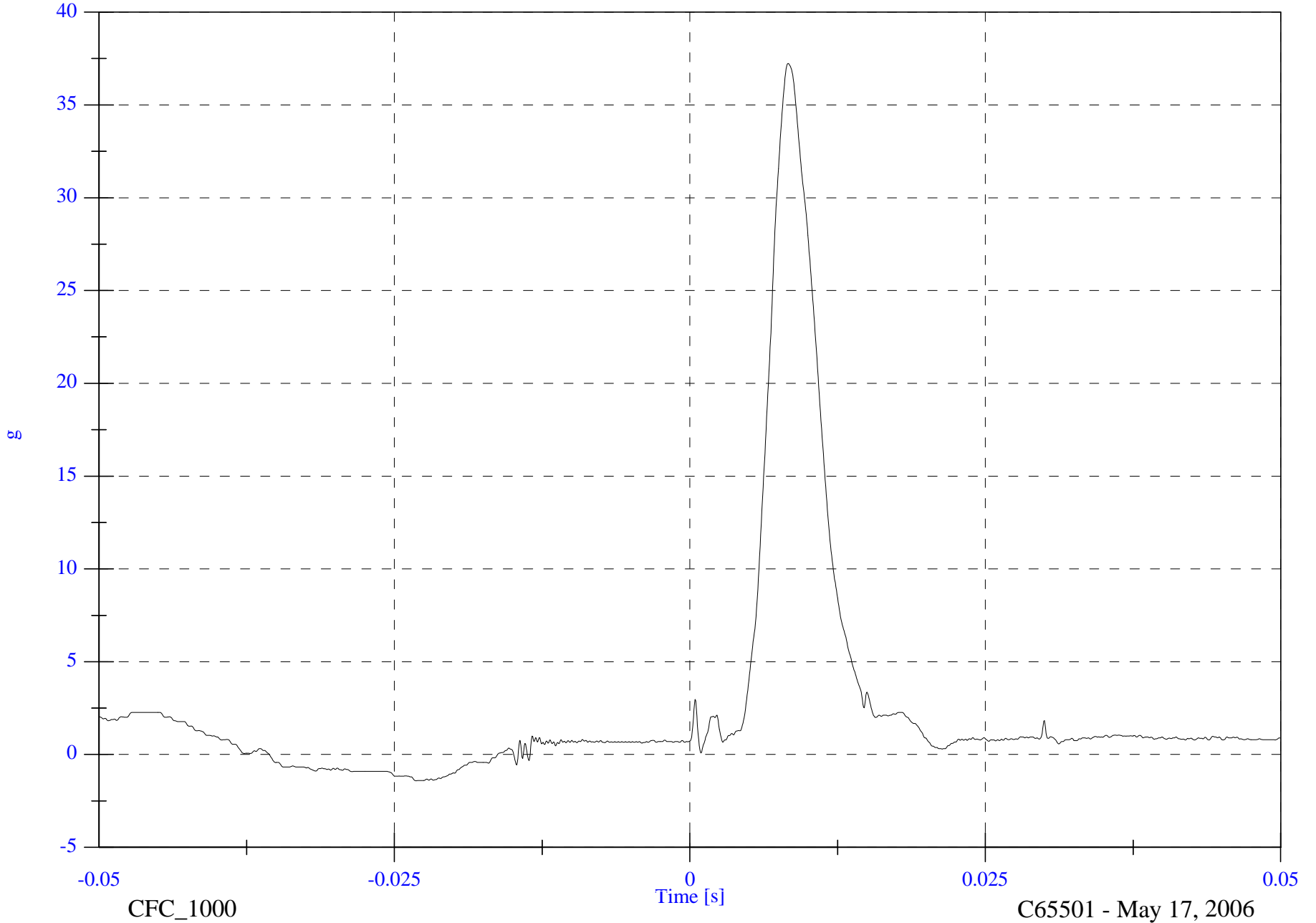
C65501 - May 17, 2006

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

Headform Z Acceleration

Max: 37.2 [g] at 0.008 [s]

Min: -1.4 [g] at -0.023 [s]



C65501 DRIVER SIDE AP2 IMPACT PLOT #3

8754+FMH-14

CFC_1000

C65501 - May 17, 2006

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

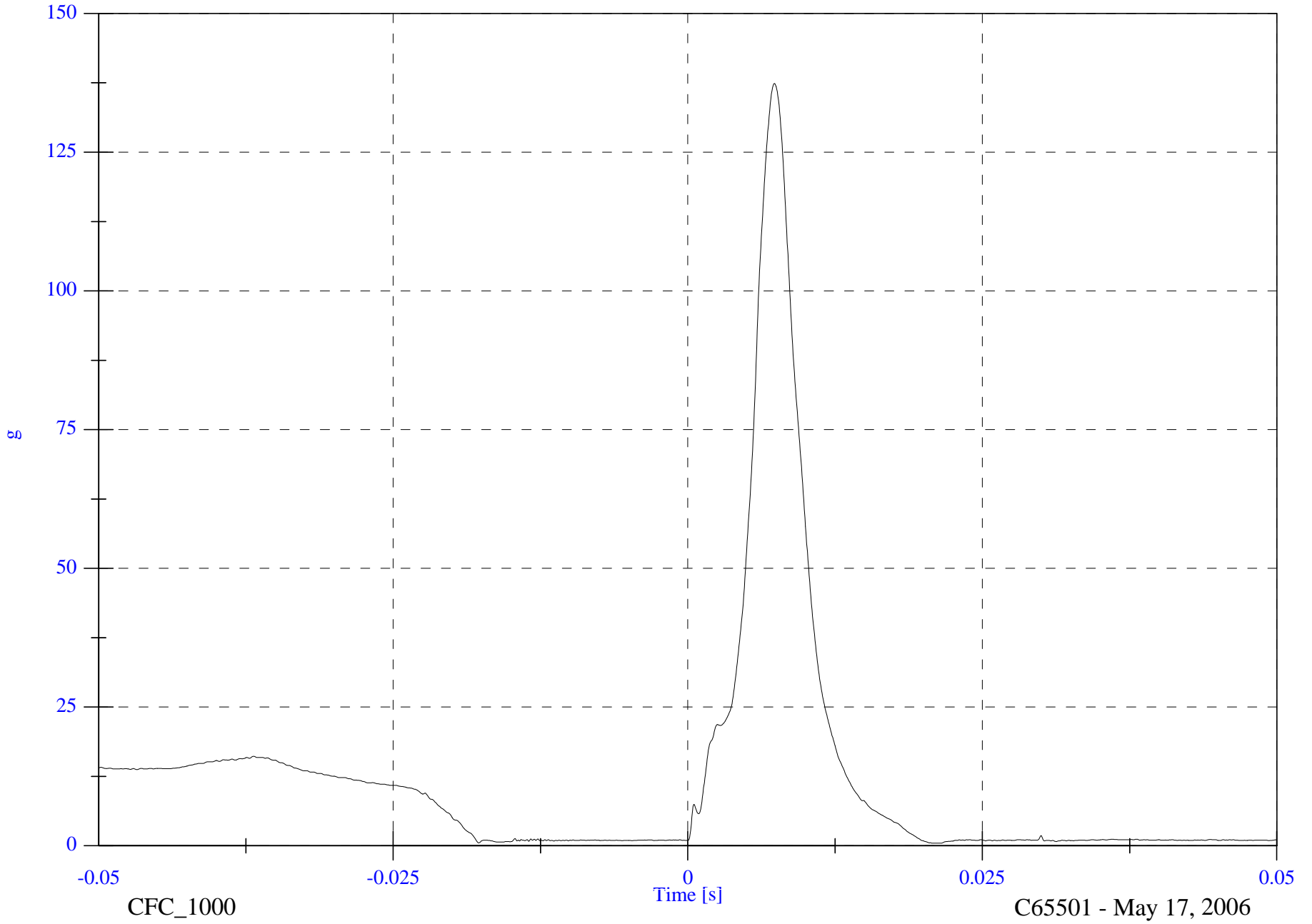
Headform Resultant

Max: 137.4 [g] at 0.007 [s]

Min: 0.4 [g] at 0.021 [s]

C65501 DRIVER SIDE AP2 IMPACT PLOT #4

8754+FMH-14



FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

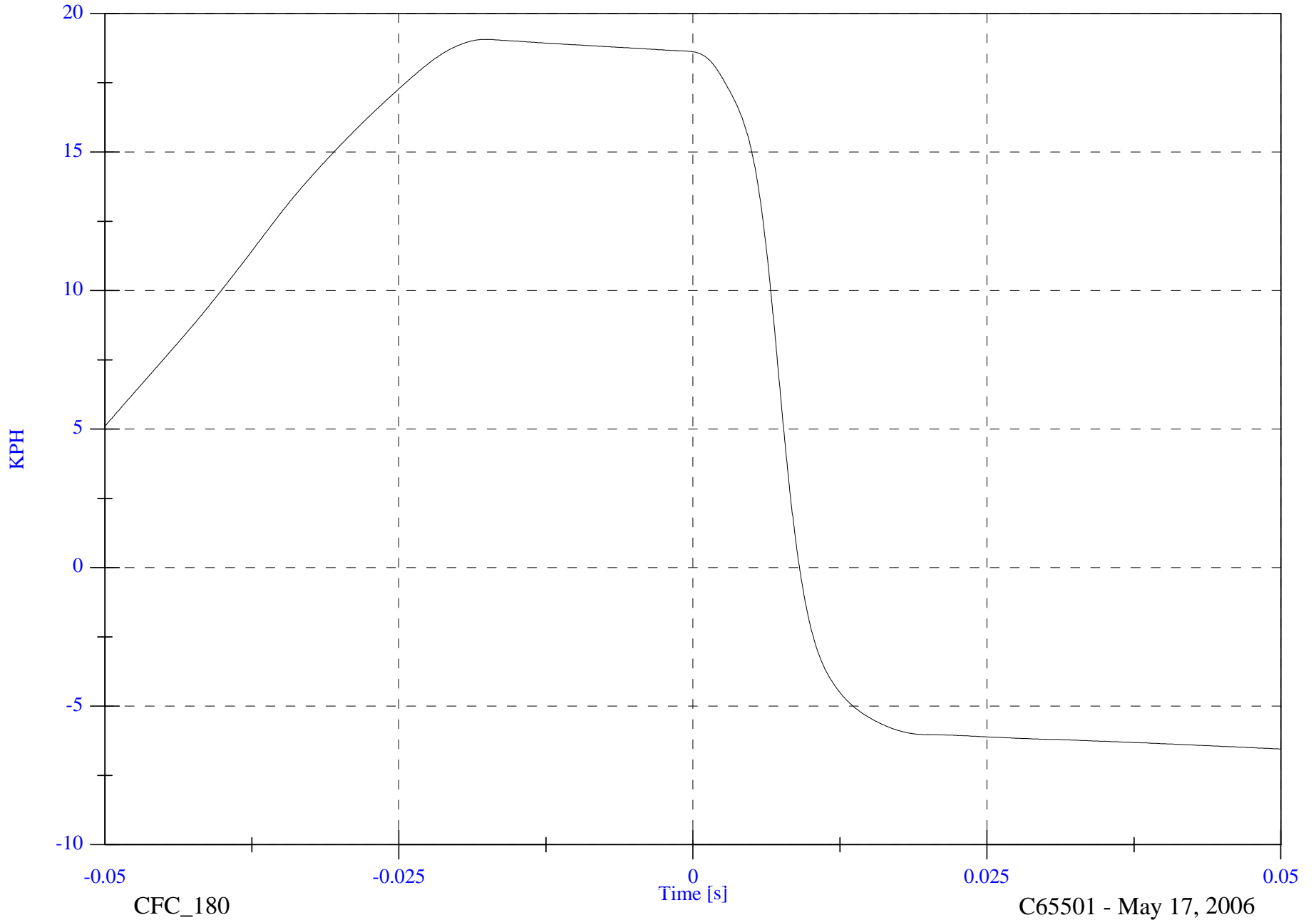
Headform Velocity

Max: 19.1 [KPH] at -0.018 [s]

Min: -6.5 [KPH] at 0.050 [s]

C65501 DRIVER SIDE AP2 IMPACT PLOT #5

8754+FMH-14



CFC_180

C65501 - May 17, 2006



PRE-IMPACT AP2



POST-IMPACT AP2

| | |
|--------------------------------|---------------------------------|
| VEHICLE YEAR/MAKE/MODEL/STYLE: | 2006 Subaru B9 Tribeca |
| VIN: | 4S4WX82C764409296 |
| DATE OF MANUFACTURE: | 07/05 (SEE CERTIFICATION LABEL) |
| COLOR: | Silver |

| | |
|--------------------------|-----------|
| Test Number: | 11 |
| Test Date: | 05/17/06 |
| Target Location: | SIDE RAIL |
| Target Code: | SR1 |
| Horizontal Impact Angle: | 270° |
| Vertical Impact Angle: | 41° |
| Ambient Temperature: | 22.2°C |
| Relative Humidity: | 45.9 |
| Time of Impact: | 10:35 |
| Headform Number: | 1255 |

| | | | | | |
|--|----|--------------------------|----------|-------------------------------------|---------|
| Impact Point Description (from lower midpoint on midsagittal line) | | | | | |
| On Centerline | 13 | <input type="checkbox"/> | mm right | <input checked="" type="checkbox"/> | mm left |
| On Centerline | 35 | | | | mm up |



POST-IMPACT SR1 HEADFORM

| | |
|-----------------------|-------|
| Free Motion HIC | 434.1 |
| HIC(d) | 493.9 |
| Impact Velocity (kph) | 18.8 |
| HIC T1 (msec) | 4.3 |
| HIC T2 (msec) | 11.8 |

FMVSS 201U IMPACT TEST - 2006 Subaru Tribeca C65501 - SR1

FMH Headform 1255

Location: SR1

Test Date: MAY 17, 2006

Work File: SR1

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

Lab Temperature: 22.2 C

HICd: 493.9

Lab Humidity: 45.9 %

HIC (36ms): 434.1

Velocity at Impact: 18.80 KPH

t1: 4.3 msec

t2: 11.8 msec

Free Flight Distance: 214.88 mm

Duration: 7.5 msec

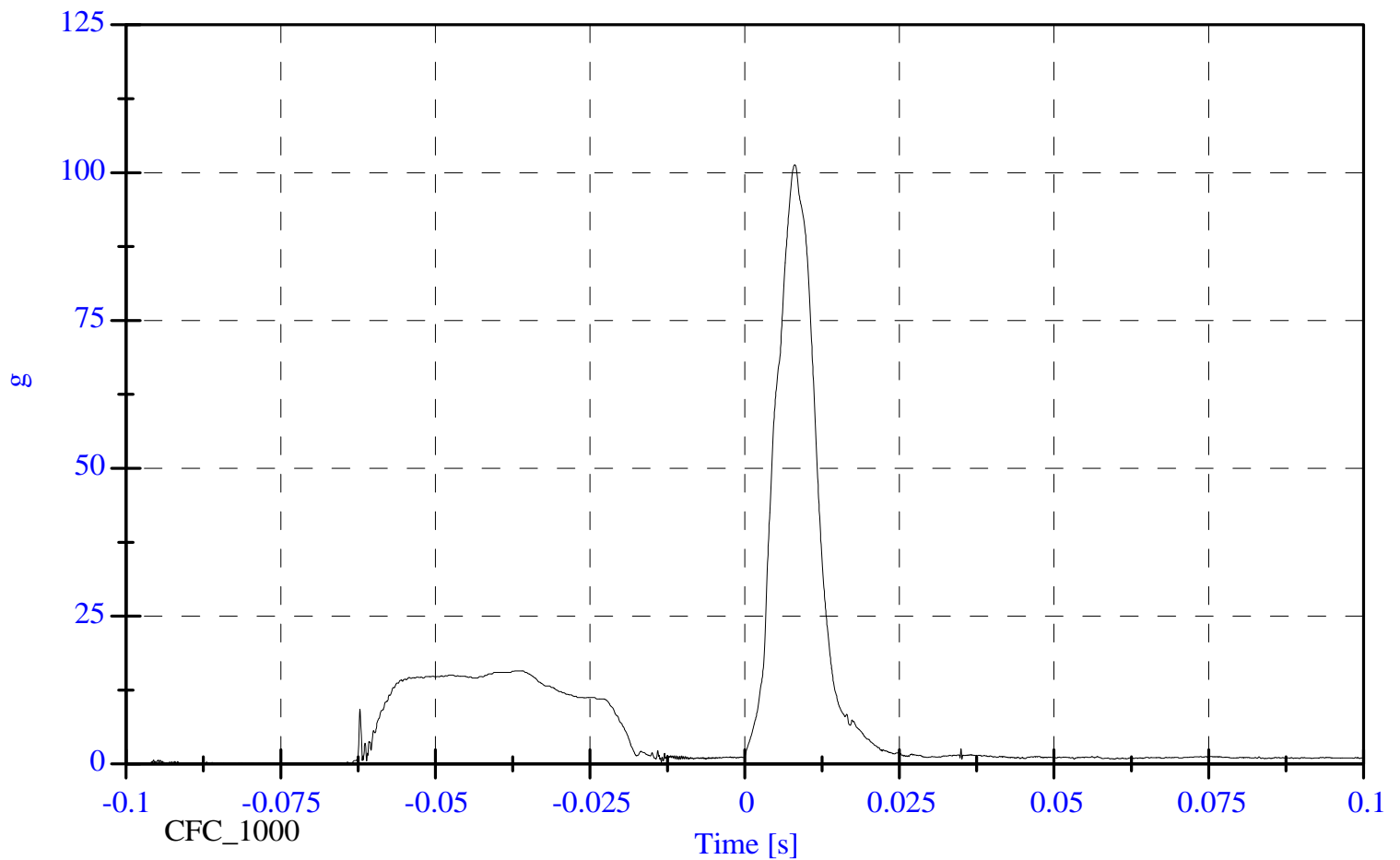
Maximum: 101.3 g

Average Acceleration: 7.3 g

FMVSS 201U IMPACT TEST - 2006 Subaru Tribeca
Headform Resultant

Max: 101.3 [g] at 0.008 [s]

Min: 0.0 [g] at -0.097 [s]



FMVSS 201U IMPACT TEST - 2006 Subaru Tribeca

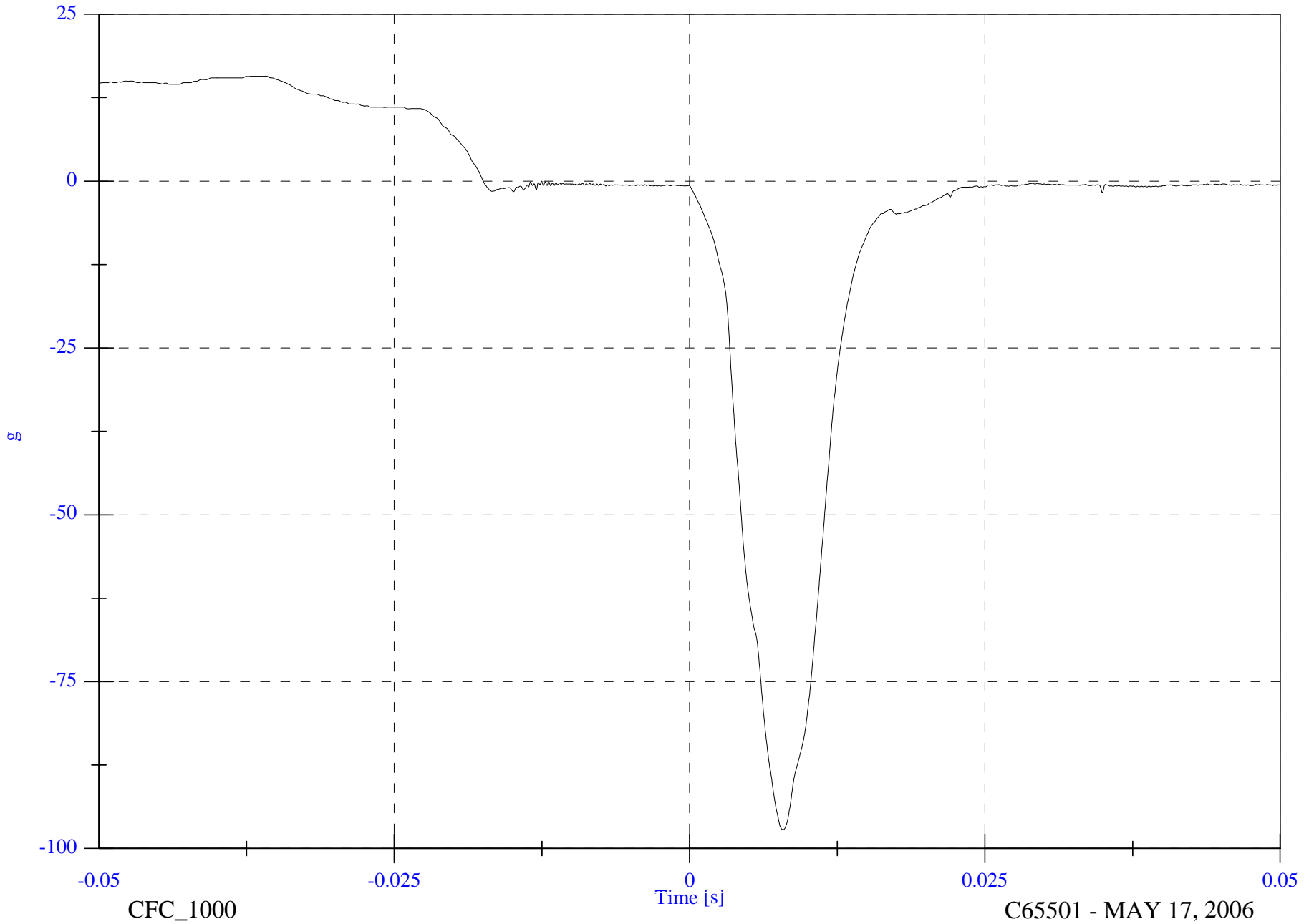
Headform X Acceleration

Max: 15.7 [g] at -0.036 [s]

Min: -97.2 [g] at 0.008 [s]

C65501 DRIVER SIDE SR1 IMPACT PLOT #1

8754+FMH-14



CFC_1000

C65501 - MAY 17, 2006

FMVSS 201U IMPACT TEST - 2006 Subaru Tribeca

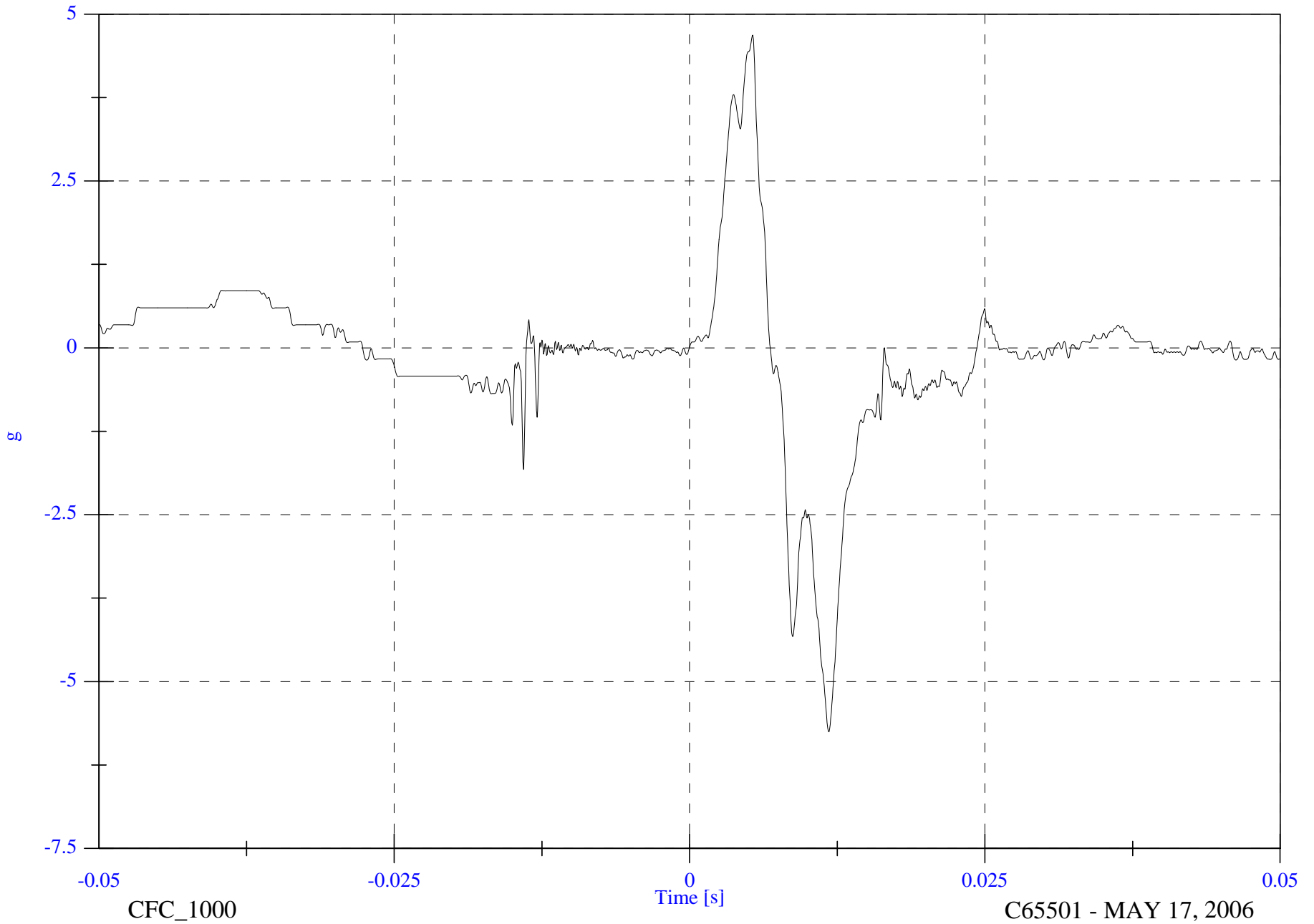
Headform Y Acceleration

Max: 4.7 [g] at 0.005 [s]

Min: -5.8 [g] at 0.012 [s]

C65501 DRIVER SIDE SR1 IMPACT PLOT #2

8754+FMH-14



CFC_1000

Time [s]

C65501 - MAY 17, 2006

FMVSS 201U IMPACT TEST - 2006 Subaru Tribeca

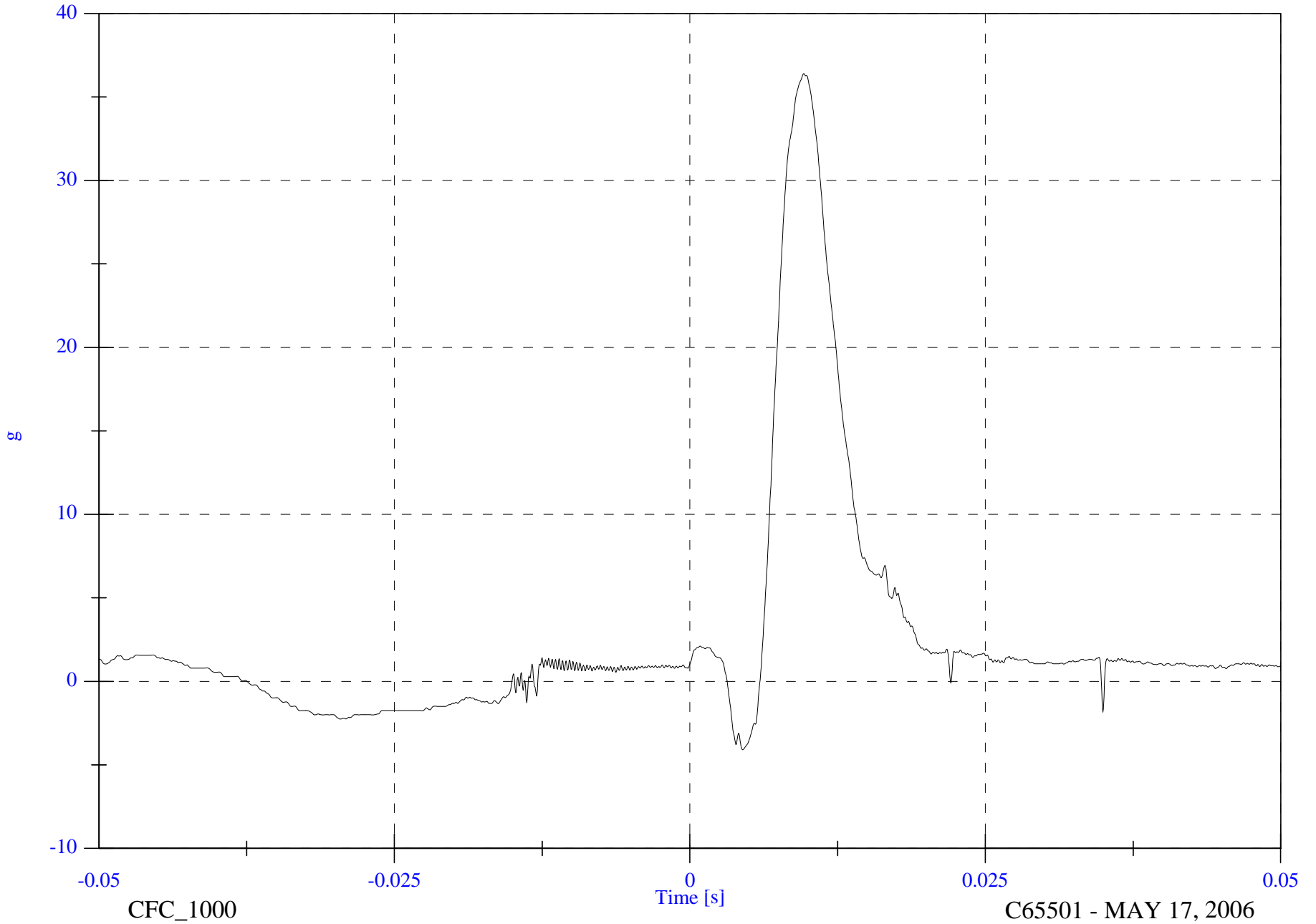
Headform Z Acceleration

Max: 36.4 [g] at 0.010 [s]

Min: -4.1 [g] at 0.005 [s]

C65501 DRIVER SIDE SR1 IMPACT PLOT #3

8754+FMH-14



CFC_1000

C65501 - MAY 17, 2006

FMVSS 201U IMPACT TEST - 2006 Subaru Tribeca

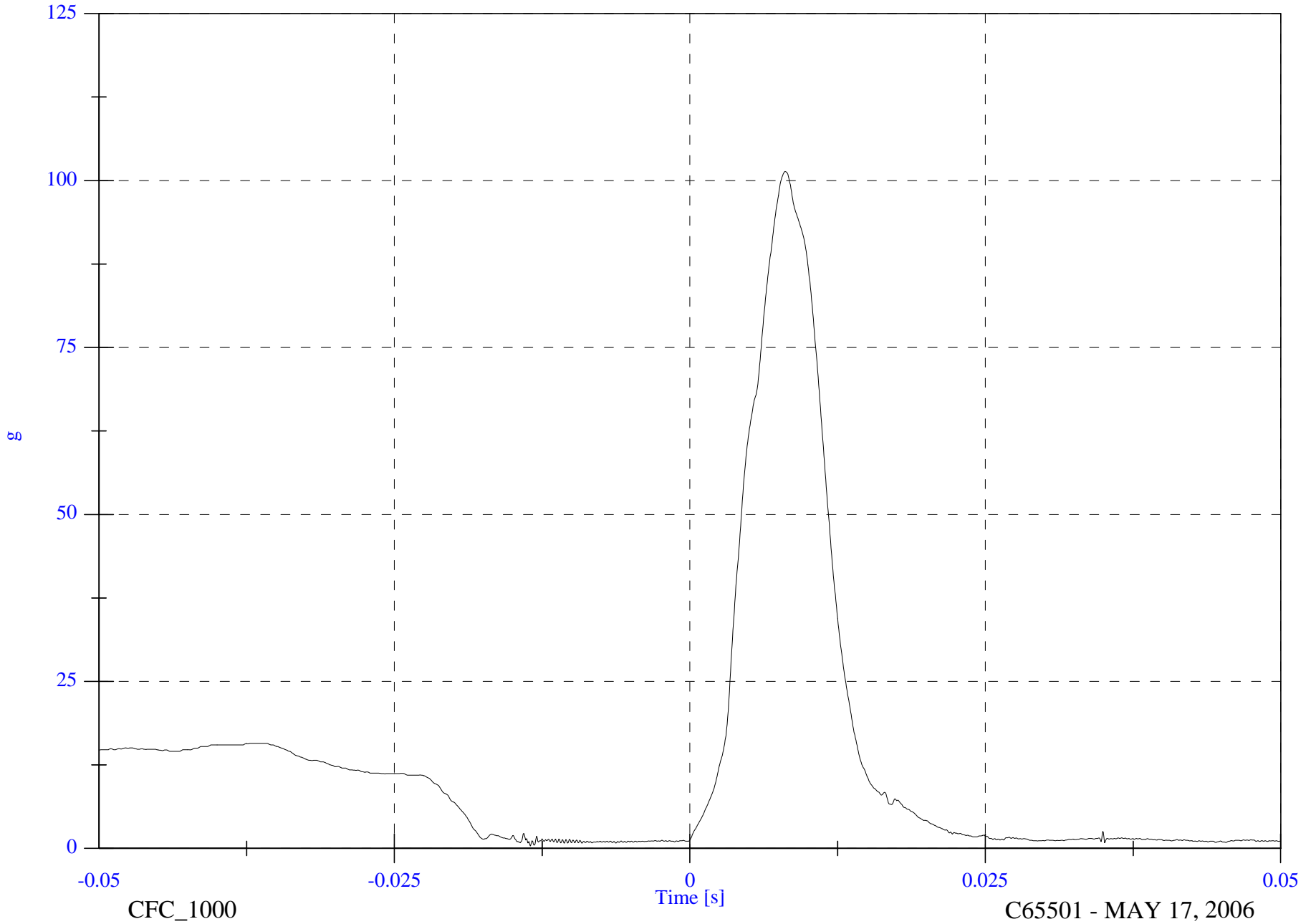
Headform Resultant

Max: 101.3 [g] at 0.008 [s]

Min: 0.4 [g] at -0.013 [s]

C65501 DRIVER SIDE SR1 IMPACT PLOT #4

8754+FMH-14



FMVSS 201U IMPACT TEST - 2006 Subaru Tribeca

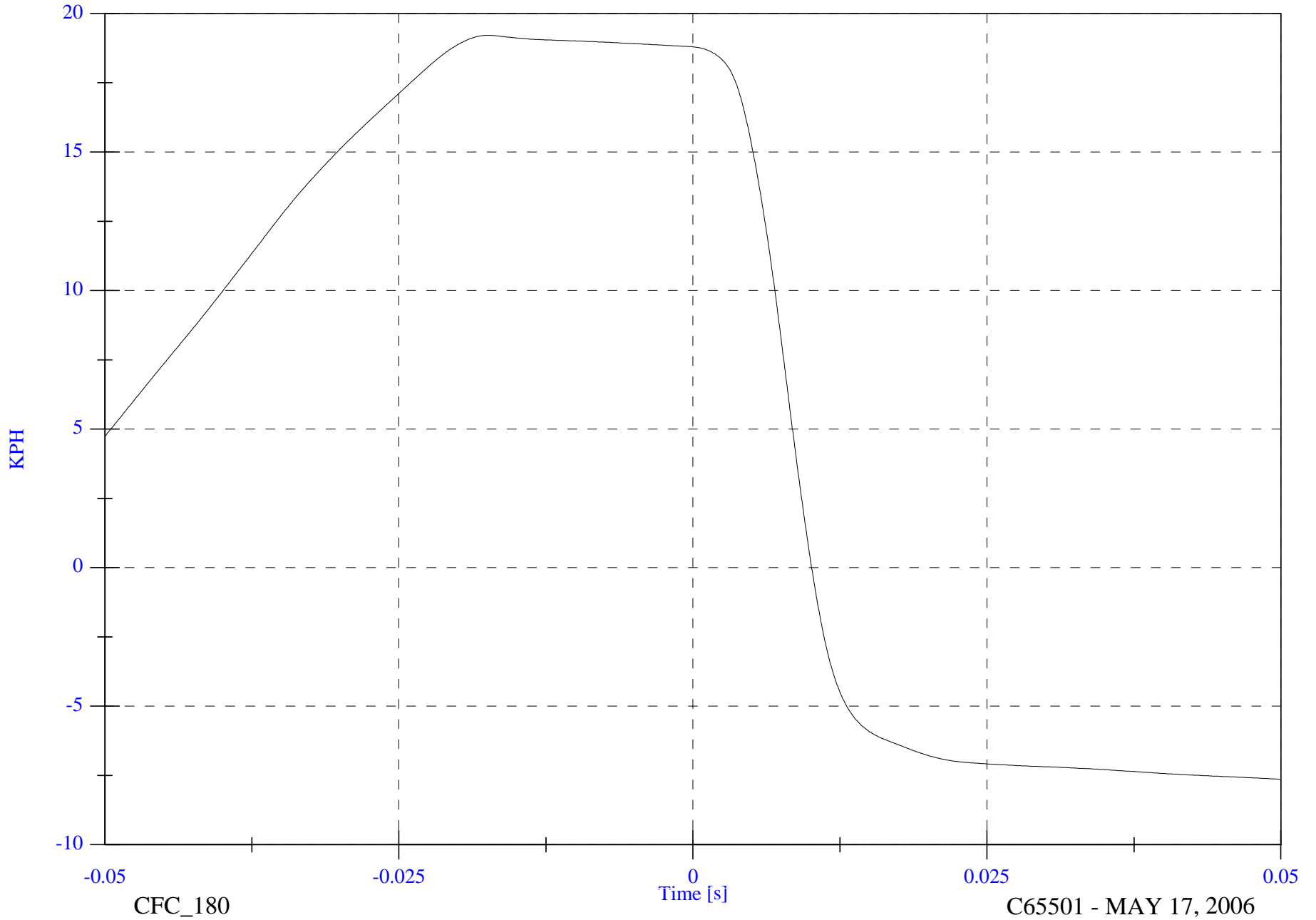
Headform Velocity

Max: 19.2 [KPH] at -0.017 [s]

Min: -7.6 [KPH] at 0.050 [s]

C65501 DRIVER SIDE SR1 IMPACT PLOT #5

8754+FMH-14



CFC_180

Time [s]

C65501 - MAY 17, 2006



PRE-IMPACT SR1



POST-IMPACT SR1

| | |
|--------------------------------|---------------------------------|
| VEHICLE YEAR/MAKE/MODEL/STYLE: | 2006 Subaru B9 Tribeca |
| VIN: | 4S4WX82C764409296 |
| DATE OF MANUFACTURE: | 07/05 (SEE CERTIFICATION LABEL) |
| COLOR: | Silver |

| | |
|--------------------------|------------|
| Test Number: | 12 |
| Test Date: | 05/17/06 |
| Target Location: | UPPER ROOF |
| Target Code: | URAP |
| Horizontal Impact Angle: | 233° |
| Vertical Impact Angle: | 50° |
| Ambient Temperature: | 22.5°C |
| Relative Humidity: | 45.9 |
| Time of Impact: | 10:55 |
| 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 | 24 | | mm up |



POST-IMPACT URAP HEADFORM

| | |
|-----------------------|-------|
| Free Motion HIC | 374.7 |
| HIC(d) | 449.1 |
| Impact Velocity (kph) | 23.64 |
| HIC T1 (msec) | 4.9 |
| HIC T2 (msec) | 15.9 |

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA C65501 - URAP

FMH Headform 0062

Location: URAP

Test Date: May 17, 2006

Work File: URAP

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

Lab Temperature: 22.5 C

HICd: 449.1

Lab Humidity: 45.9 %

HIC (36ms): 374.7

Velocity at Impact: 23.64 KPH

t1: 4.9 msec

t2: 15.9 msec

Free Flight Distance: 221.13 mm

Duration: 11.0 msec

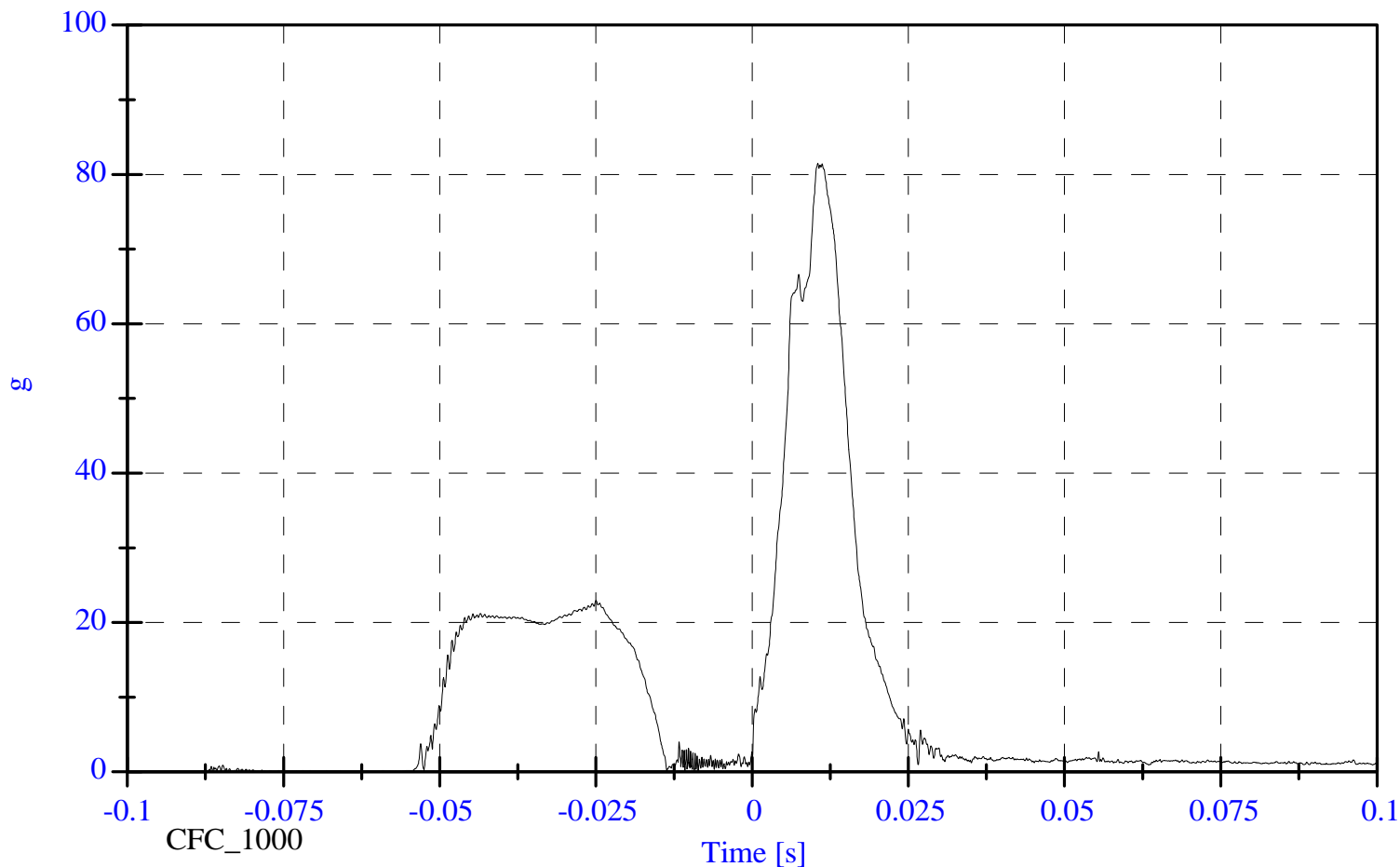
Maximum: 81.5 g

Average Acceleration: 8.9 g

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA
Headform Resultant

Max: 81.5 [g] at 0.011 [s]

Min: 0.0 [g] at -0.058 [s]



FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

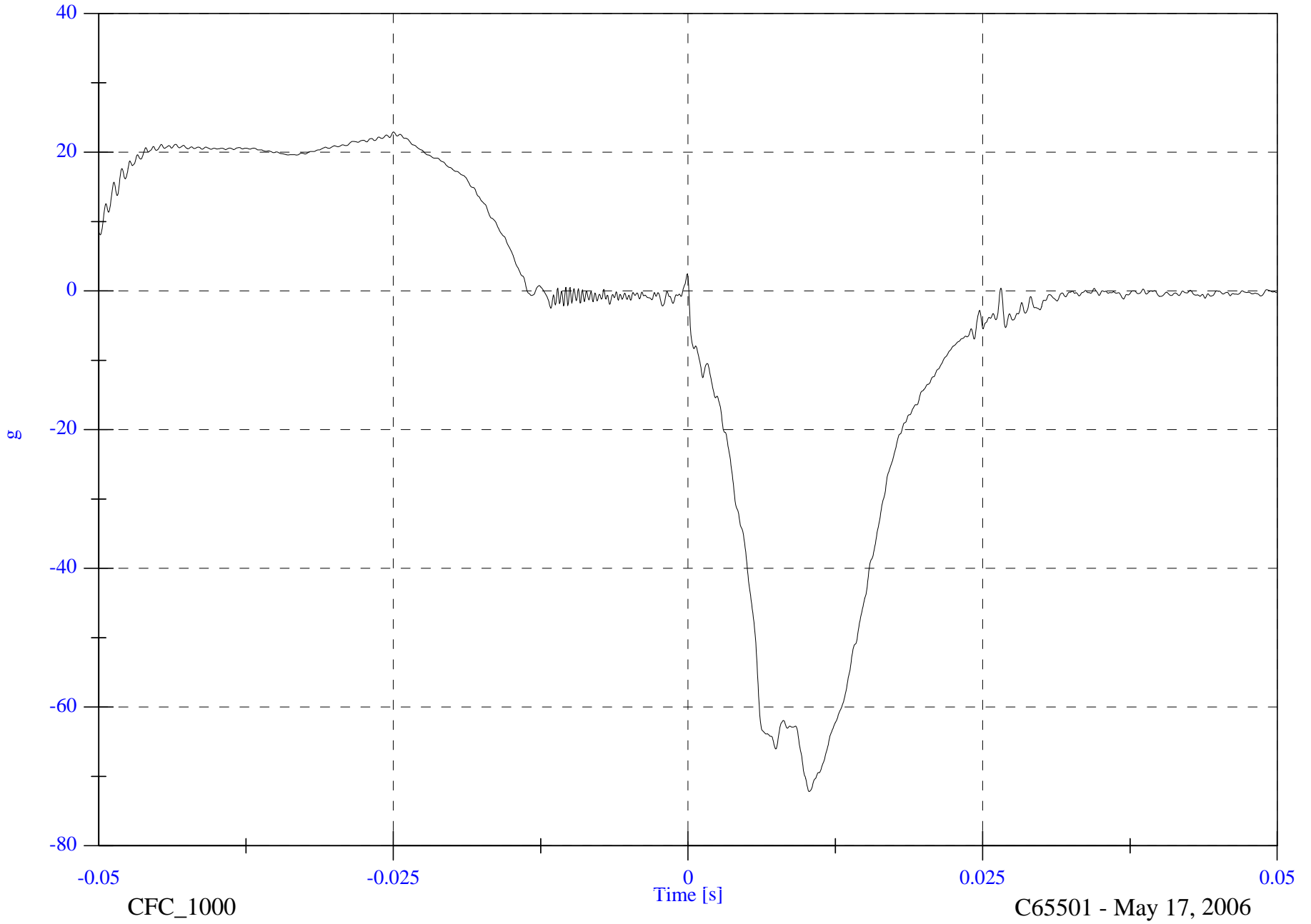
Headform X Acceleration

Max: 22.9 [g] at -0.025 [s]

Min: -72.2 [g] at 0.010 [s]

C65501 DRIVER SIDE URAP IMPACT PLOT #1

8754+FMH-14



CFC_1000

C65501 - May 17, 2006

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

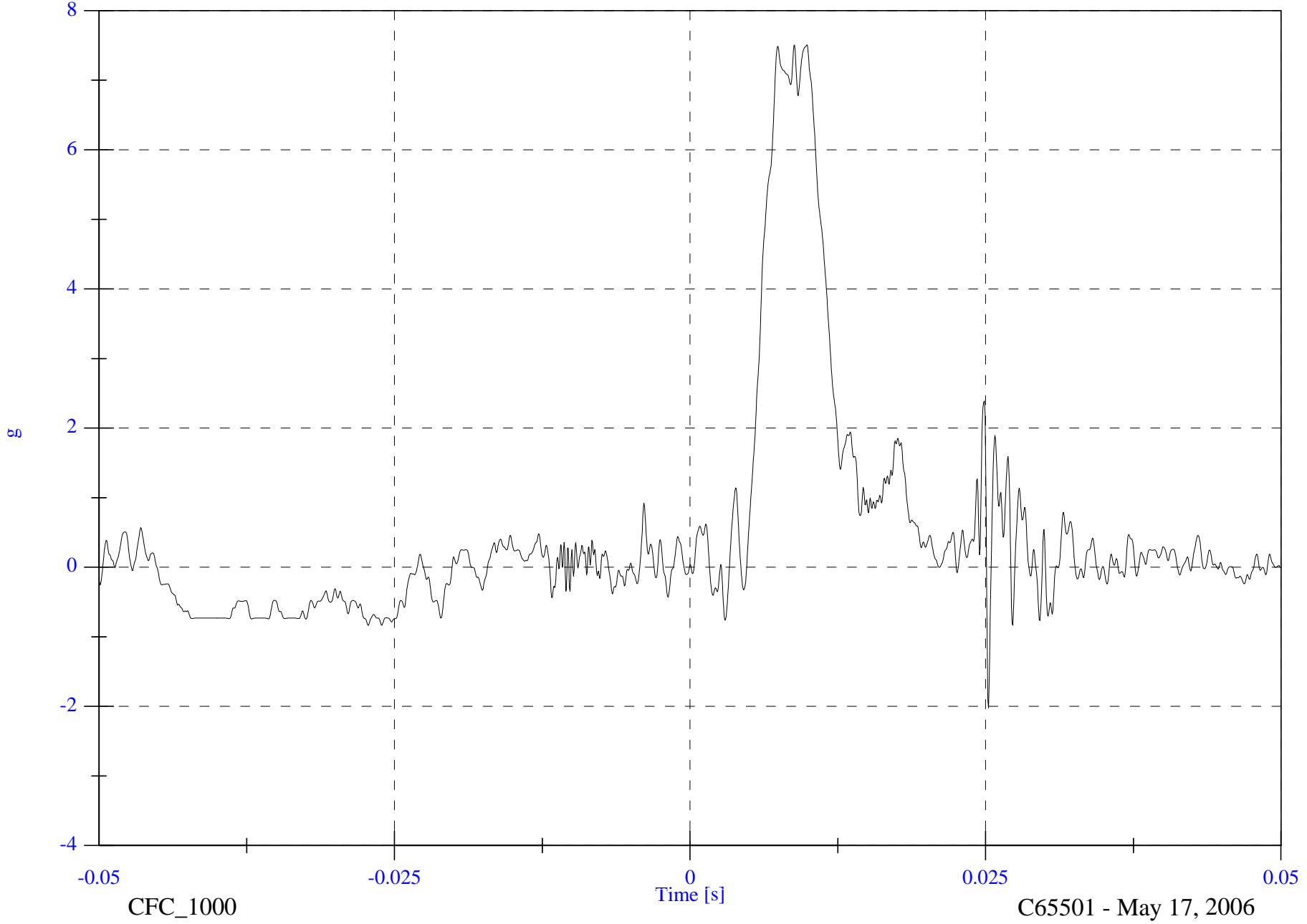
Headform Y Acceleration

Max: 7.5 [g] at 0.010 [s]

Min: -2.0 [g] at 0.025 [s]

C65501 DRIVER SIDE URAP IMPACT PLOT #2

8754-FMH-14



CFC_1000

C65501 - May 17, 2006

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

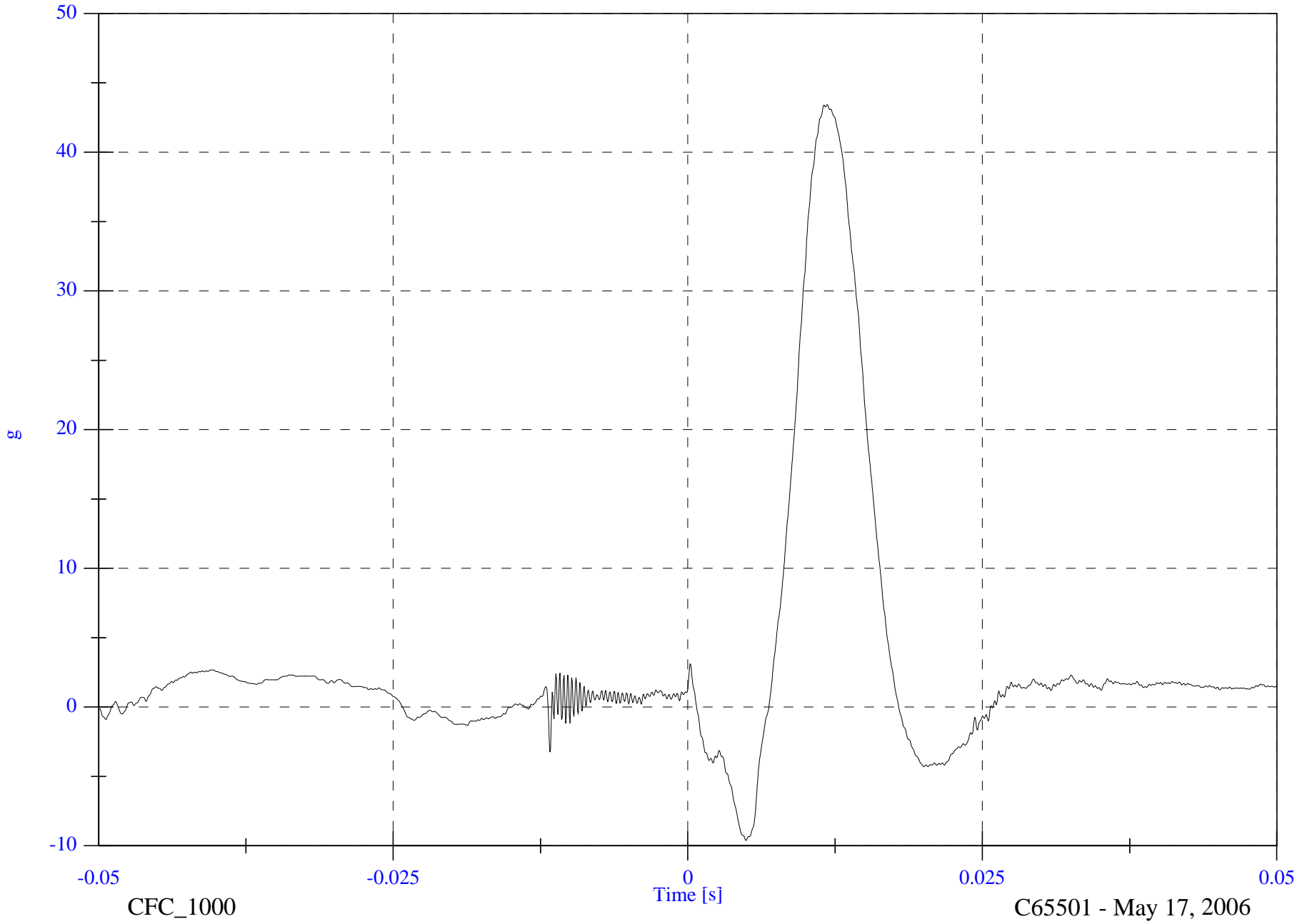
Headform Z Acceleration

Max: 43.4 [g] at 0.012 [s]

Min: -9.6 [g] at 0.005 [s]

C65501 DRIVER SIDE URAP IMPACT PLOT #3

8754+FMH-14



CFC_1000

C65501 - May 17, 2006

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

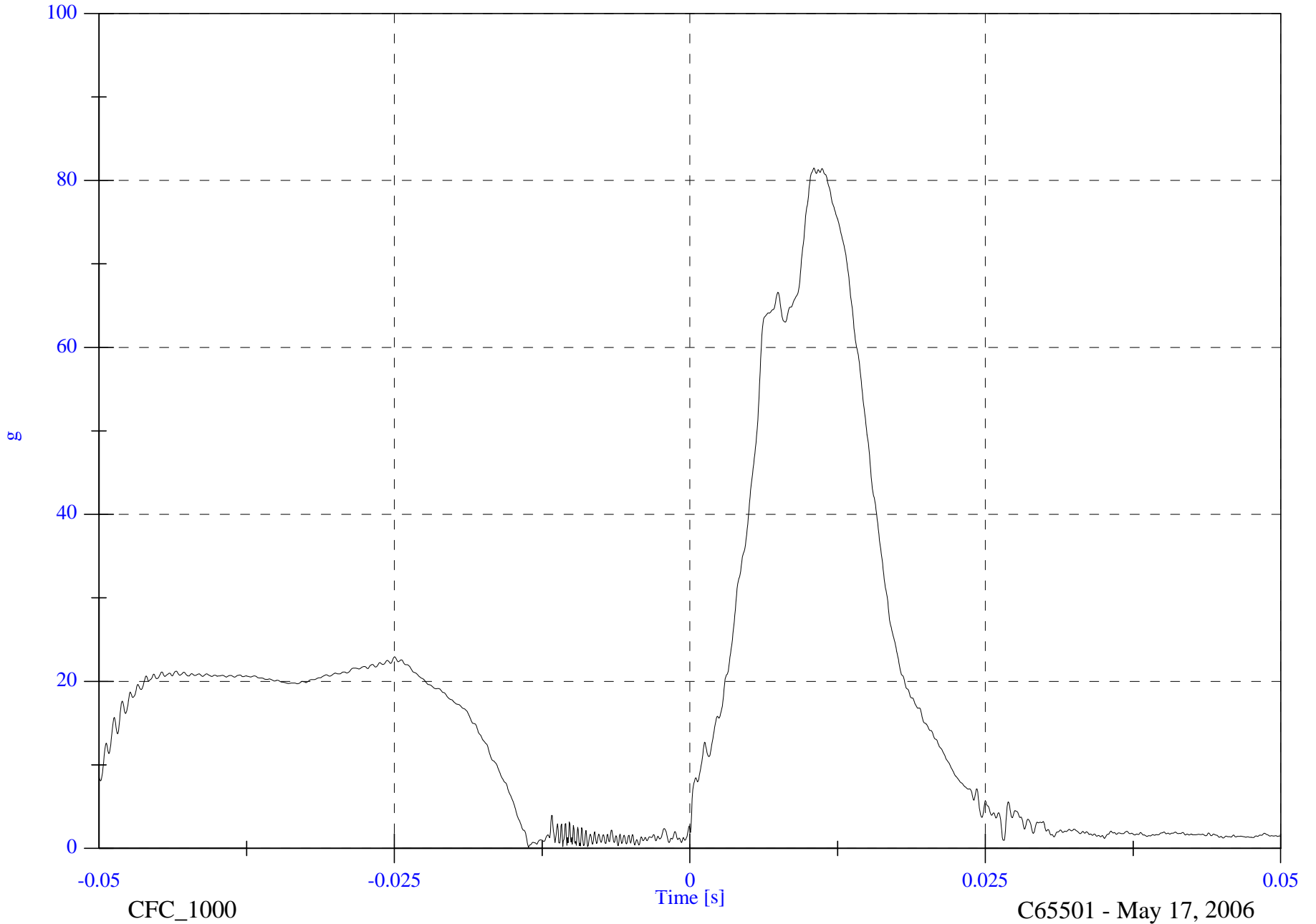
Headform Resultant

Max: 81.5 [g] at 0.011 [s]

Min: 0.2 [g] at -0.014 [s]

C65501 DRIVER SIDE URAP IMPACT PLOT #4

8754+FMH-14



CFC_1000

C65501 - May 17, 2006

FMVSS 201U IMPACT TEST - 2006 SUBARU TRIBECA

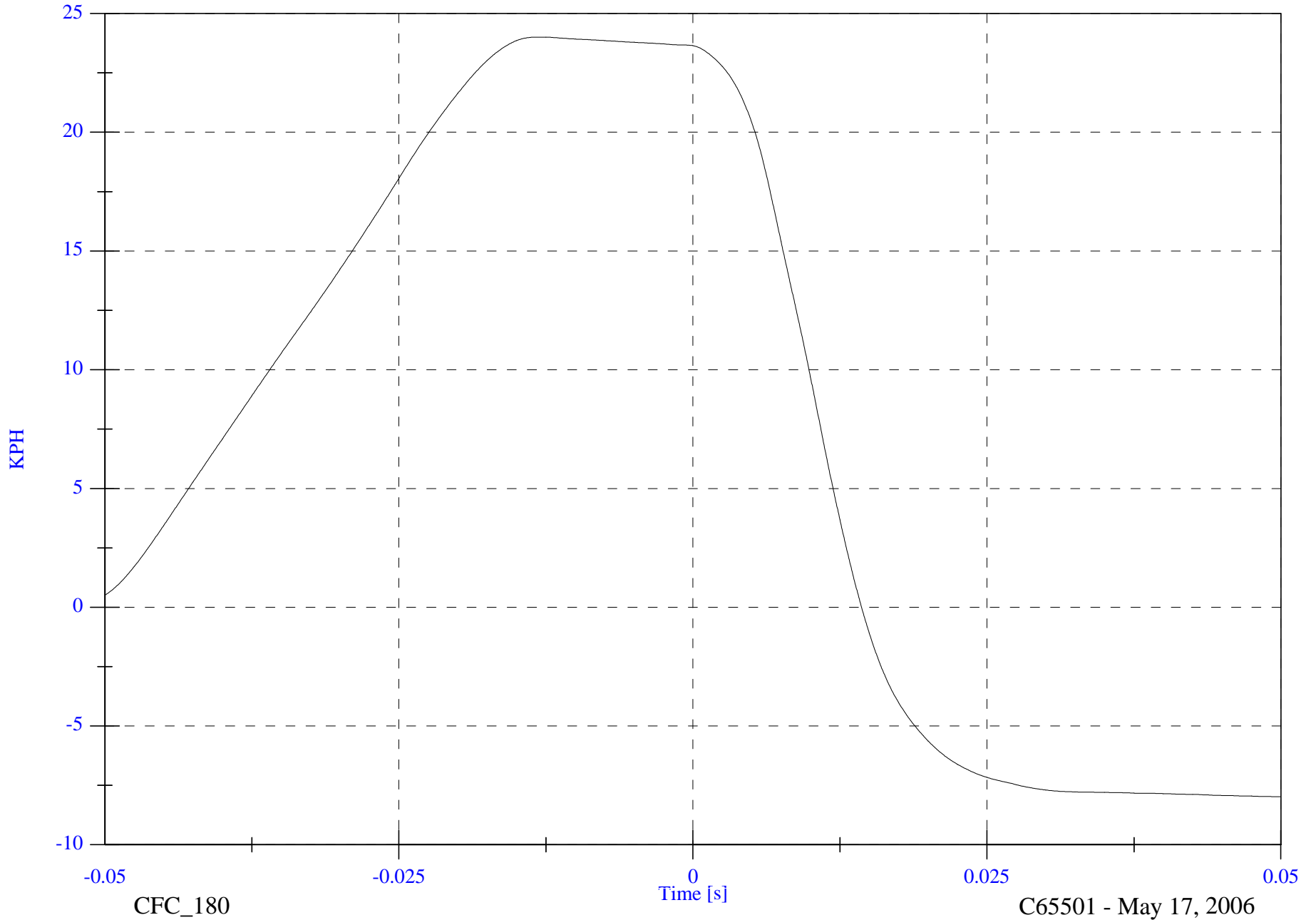
Headform Velocity

Max: 24.0 [KPH] at -0.013 [s]

Min: -8.0 [KPH] at 0.050 [s]

C65501 DRIVER SIDE URAP IMPACT PLOT #5

8754+FMH-14





PRE-IMPACT URAP



POST-IMPACT URAP

APPENDIX A

PHOTOGRAPHS

PHOTOGRAPHS

| FIGURE | VIEW |
|---------------|---|
| A-1 | LEFT SIDE VIEW OF VEHICLE |
| A-2 | RIGHT SIDE VIEW OF VEHICLE |
| A-3 | 3/4 FRONTAL VIEW FROM RIGHT SIDE OF VEHICLE |
| A-4 | 3/4 REAR VIEW FROM LEFT 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 REAR SIDE RAIL |
| A-12 | PRE-TEST DRIVER SIDE OTHER 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 REAR SIDE RAIL |
| A-18 | PRE-TEST PASSENGER SIDE OTHER PILLAR |
| A-19 | POST-TEST DRIVER SIDE A-PILLAR |
| A-20 | POST-TEST DRIVER FRONT HEADER |
| A-21 | POST-TEST DRIVER SIDE SIDE RAIL |
| A-22 | POST-TEST DRIVER SIDE B-PILLAR |
| A-23 | POST-TEST DRIVER SIDE REAR SIDE RAIL |
| A-24 | POST-TEST DRIVER SIDE OTHER PILLAR |
| A-25 | POST-TEST PASSENGER SIDE A-PILLAR |
| A-26 | POST-TEST PASSENGER FRONT HEADER |
| A-27 | POST-TEST PASSENGER SIDE SIDE RAIL |
| A-28 | POST-TEST PASSENGER SIDE B-PILLAR |
| A-29 | POST-TEST PASSENGER SIDE REAR SIDE RAIL |
| A-30 | POST-TEST PASSENGER SIDE OTHER PILLAR |



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

PHOTO NOT AVAILABLE

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 REAR SIDE RAIL



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



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



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

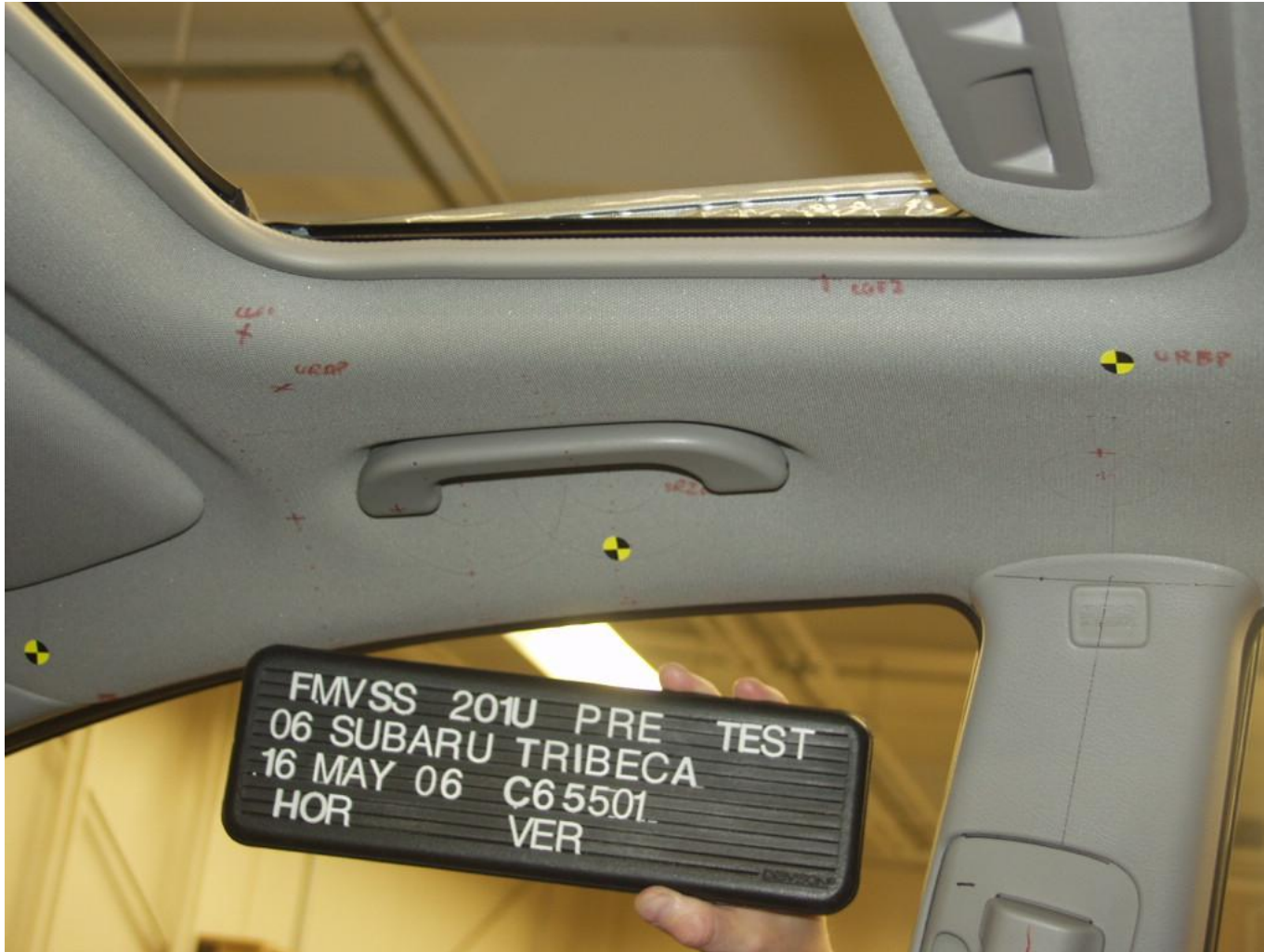


Figure A-15 : PRE-TEST PASSENGER SIDE SIDE RAIL



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



Figure A-17 : PRE-TEST PASSENGER SIDE REAR SIDE RAIL



Figure A-18 : PRE-TEST PASSENGER SIDE OTHER 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 REAR SIDE RAIL



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



Figure A-25 : POST-TEST PASSENGER SIDE A-PILLAR



Figure A-26 : POST-TEST PASSENGER SIDE FRONT HEADER



Figure A-27 : POST-TEST PASSENGER SIDE SIDE RAIL



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



Figure A-29 : POST-TEST PASSENGER SIDE REAR SIDE RAIL



Figure A-30 : POST-TEST PASSENGER SIDE OTHER 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**

| | | | |
|--|-------------------------|--|--|
| MANUFACTURER: | | FIRST TECHNOLOGY SAFETY SYSTEMS | |
| SERIAL NUMBER: | | 0642 | |
| CALIBRATION DATE: | | MAY 9, 2006 | |
| TEST PARAMETER | SPECIFICATION | TEST RESULTS | |
| TEMPERATURE | 19°C to 26°C | 23 | |
| RELATIVE HUMIDITY | 10% to 70% | 27 | |
| PEAK RESULTANT ACCELERATION | 225 Gs to 275 Gs | 270.5 | |
| PEAK LATERAL ACCELERATION | 15 Gs Maximum | 9.1 | |
| IS ACCELERATION CURVE UNIMODAL? | YES | YES | |

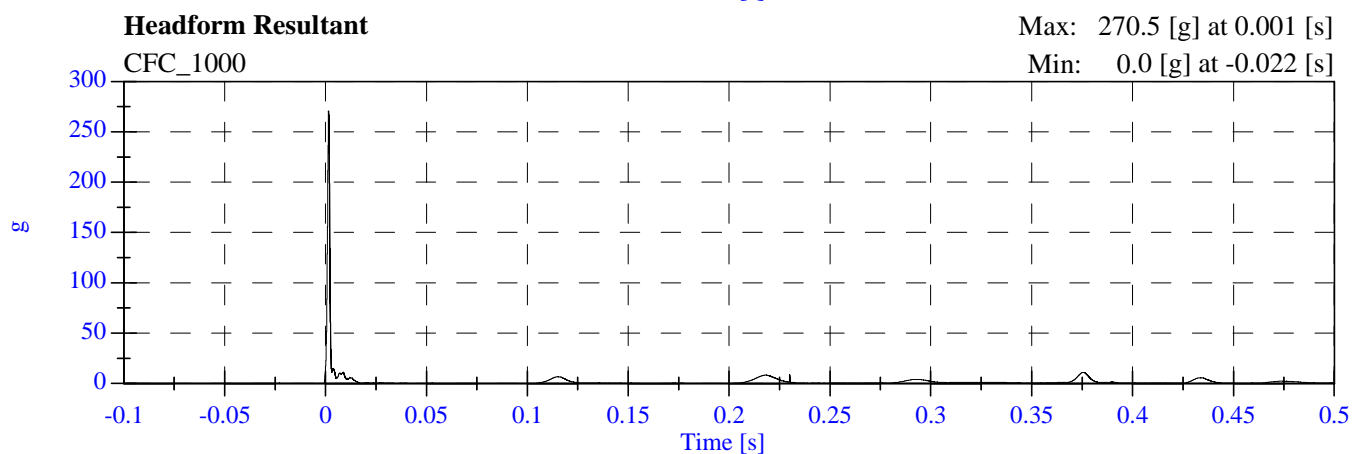
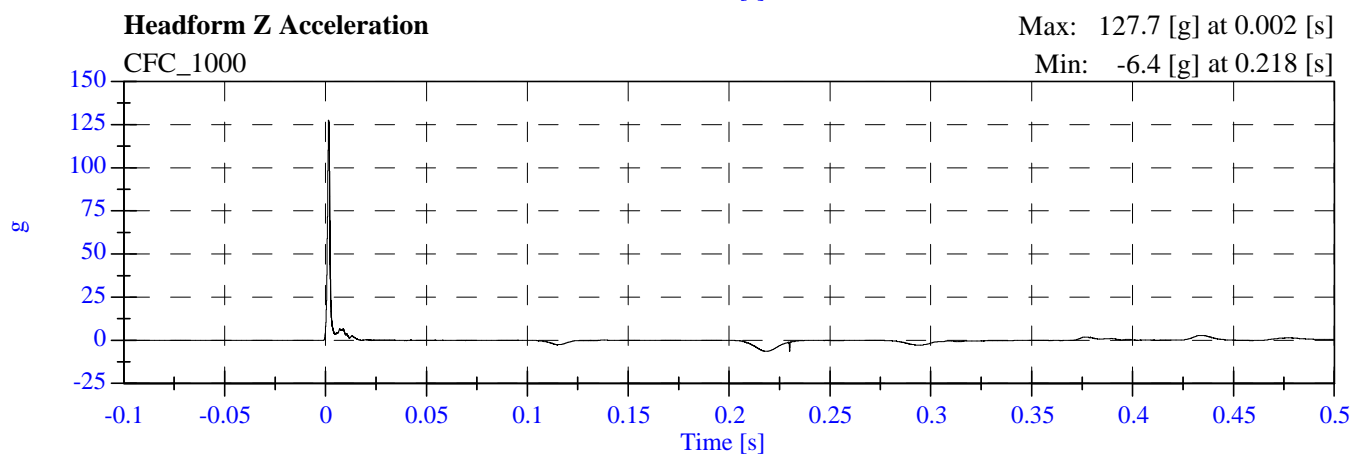
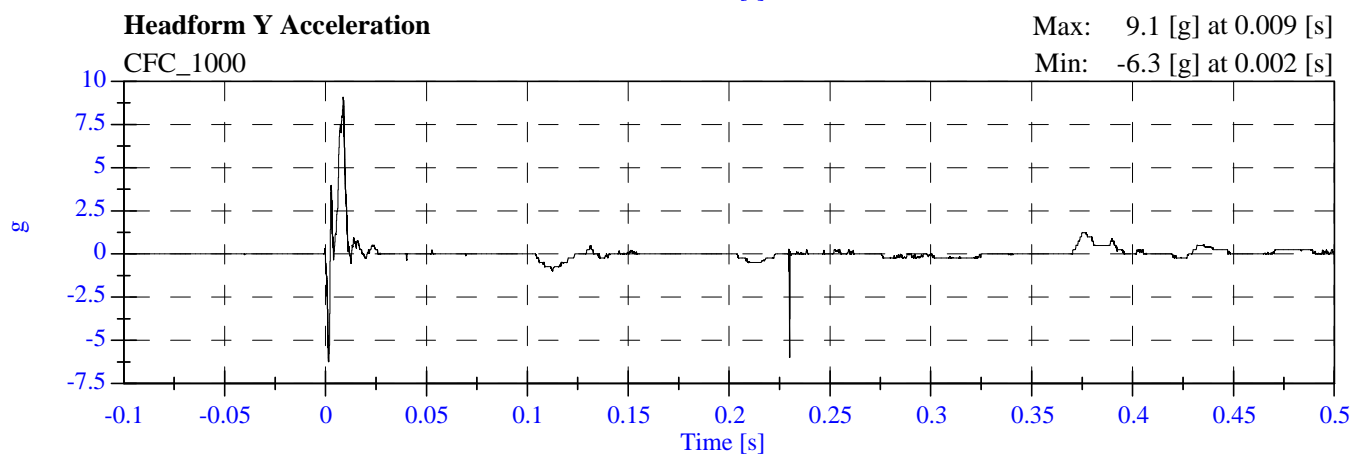
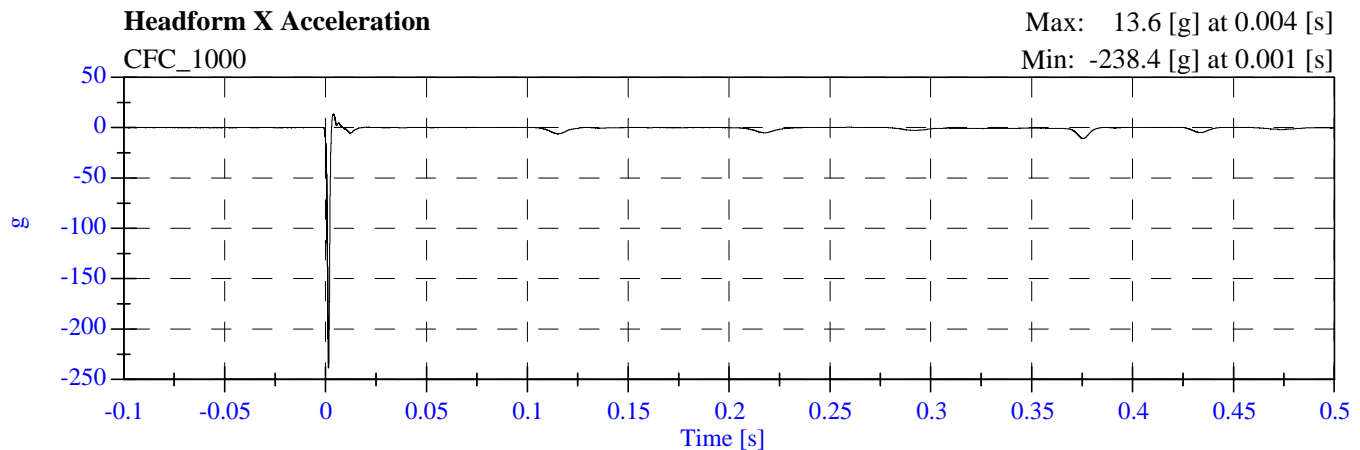
HEAD ACCELEROMETER CALIBRATION INFORMATION

| I.D. NUMBER | MANUFACTURER | MODEL NUMBER | SERIAL NUMBER | DATE OF LAST CALIBRATION | DATE OF NEXT CALIBRATION |
|-------------------------|---------------------|---------------------|----------------------|---------------------------------|---------------------------------|
| 1 - LONGITUDINAL | ENDEVCO | 7264-2000T | J24876 | 3/9/2006 | 9/9/2006 |
| 2 - LATERAL | ENDEVCO | 7264-2000T | J33030 | 3/9/2006 | 9/9/2006 |
| 3 - VERTICAL | ENDEVCO | 7264-2000T | J31009 | 3/9/2006 | 9/9/2006 |

REMARKS:

FMVSS 201U - Headform Calibration Drops

FMH 0642 - May 09, 2006



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

| | | | |
|--|-------------------------|------------------------|--|
| MANUFACTURER: | | DENTON ATD INC. | |
| SERIAL NUMBER: | | 0062 | |
| CALIBRATION DATE: | | MAY 9, 2006 | |
| TEST PARAMETER | SPECIFICATION | TEST RESULTS | |
| TEMPERATURE | 19°C to 26°C | 23 | |
| RELATIVE HUMIDITY | 10% to 70% | 27 | |
| PEAK RESULTANT ACCELERATION | 225 Gs to 275 Gs | 262.6 | |
| PEAK LATERAL ACCELERATION | 15 Gs Maximum | 5.4 | |
| IS ACCELERATION CURVE UNIMODAL? | YES | YES | |

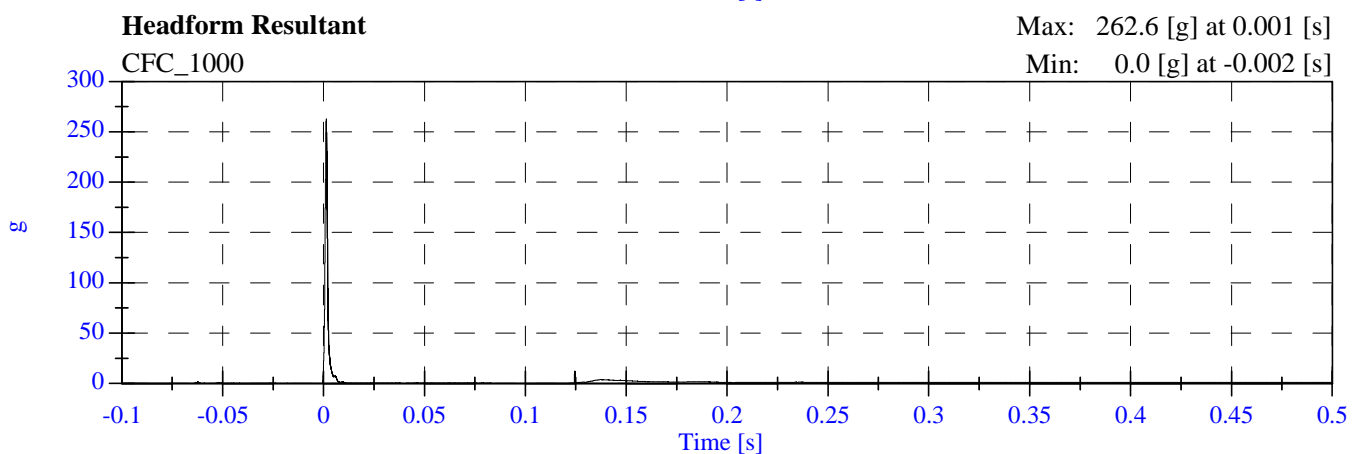
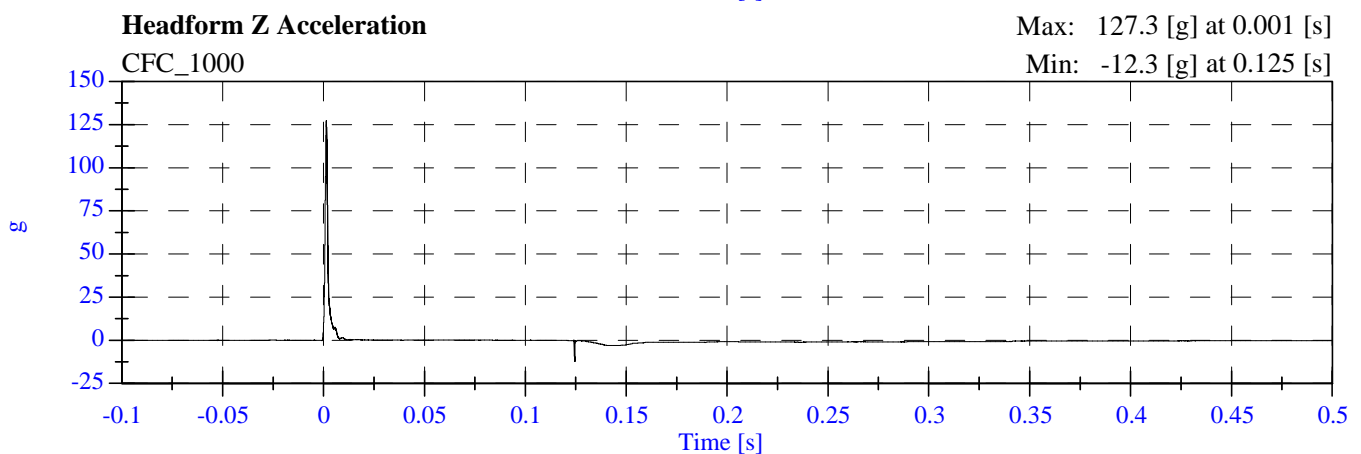
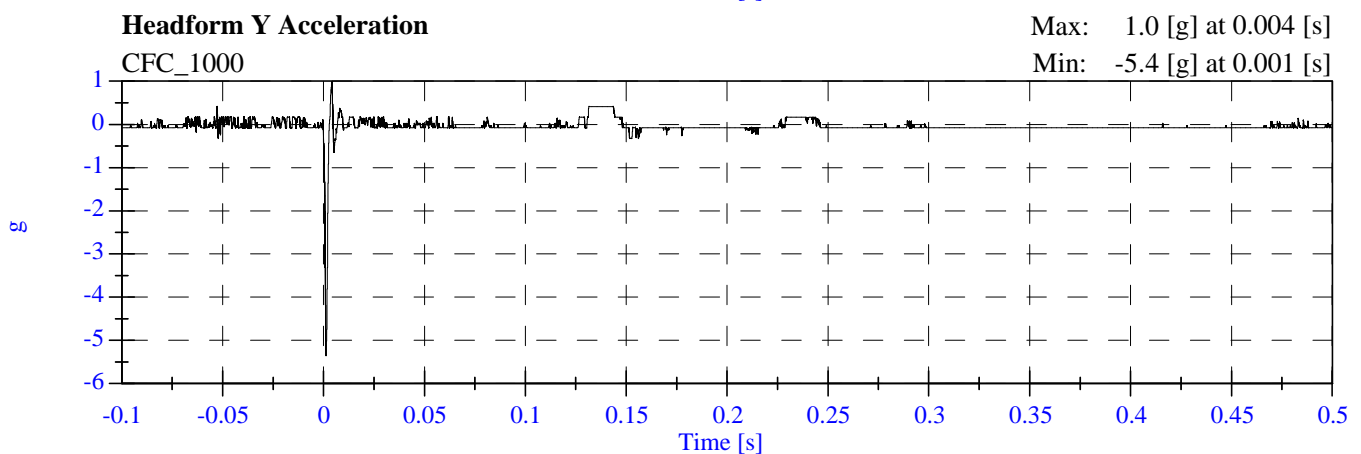
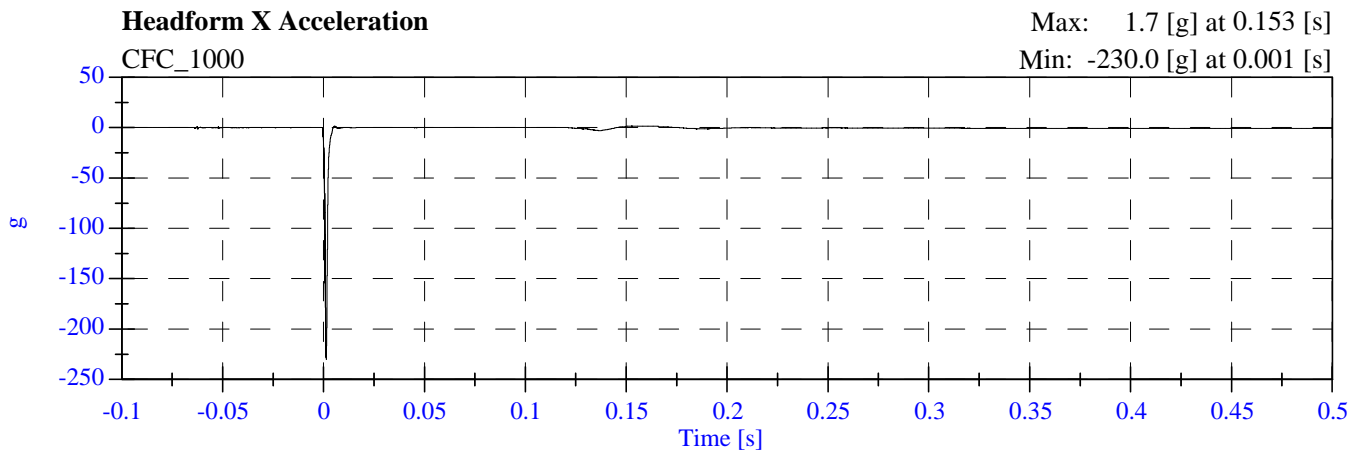
HEAD ACCELEROMETER CALIBRATION INFORMATION

| I.D. NUMBER | MANUFACTURER | MODEL NUMBER | SERIAL NUMBER | DATE OF LAST CALIBRATION | DATE OF NEXT CALIBRATION |
|-------------------------|---------------------|---------------------|----------------------|---------------------------------|---------------------------------|
| 1 - LONGITUDINAL | ENDEVCO | 7264-2000T | J33127 | 3/9/2006 | 9/9/2006 |
| 2 - LATERAL | ENDEVCO | 7264-2000T | J33019 | 3/9/2006 | 9/9/2006 |
| 3 - VERTICAL | ENDEVCO | 7264-2000T | J32782 | 3/9/2006 | 9/9/2006 |

REMARKS:

FMVSS 201U - Headform Calibration Drops

FMH 0062 - May 09, 2006



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

| | | | |
|--|-------------------------|--|--|
| MANUFACTURER: | | FIRST TECHNOLOGY SAFETY SYSTEMS | |
| SERIAL NUMBER: | | 805 | |
| CALIBRATION DATE: | | MAY 9, 2006 | |
| TEST PARAMETER | SPECIFICATION | TEST RESULTS | |
| TEMPERATURE | 19°C to 26°C | 23 | |
| RELATIVE HUMIDITY | 10% to 70% | 27 | |
| PEAK RESULTANT ACCELERATION | 225 Gs to 275 Gs | 269.2 | |
| PEAK LATERAL ACCELERATION | 15 Gs Maximum | 6.2 | |
| IS ACCELERATION CURVE UNIMODAL? | YES | YES | |

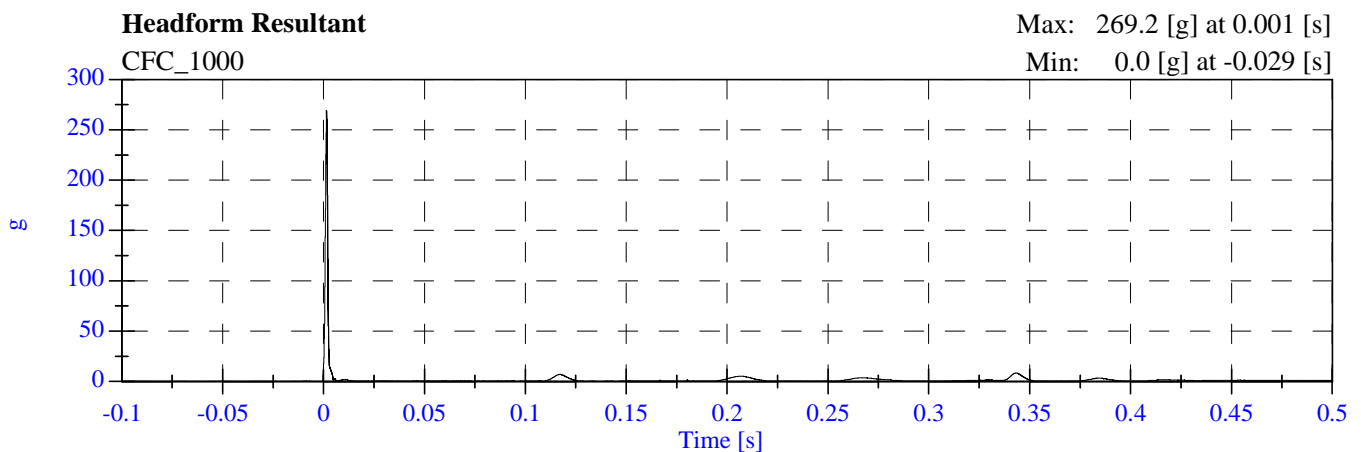
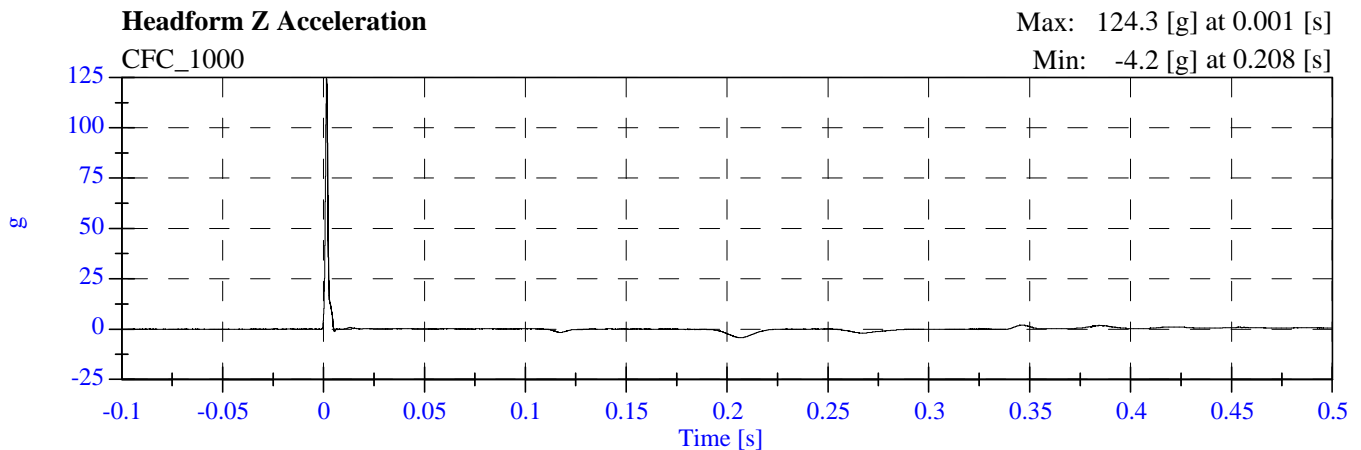
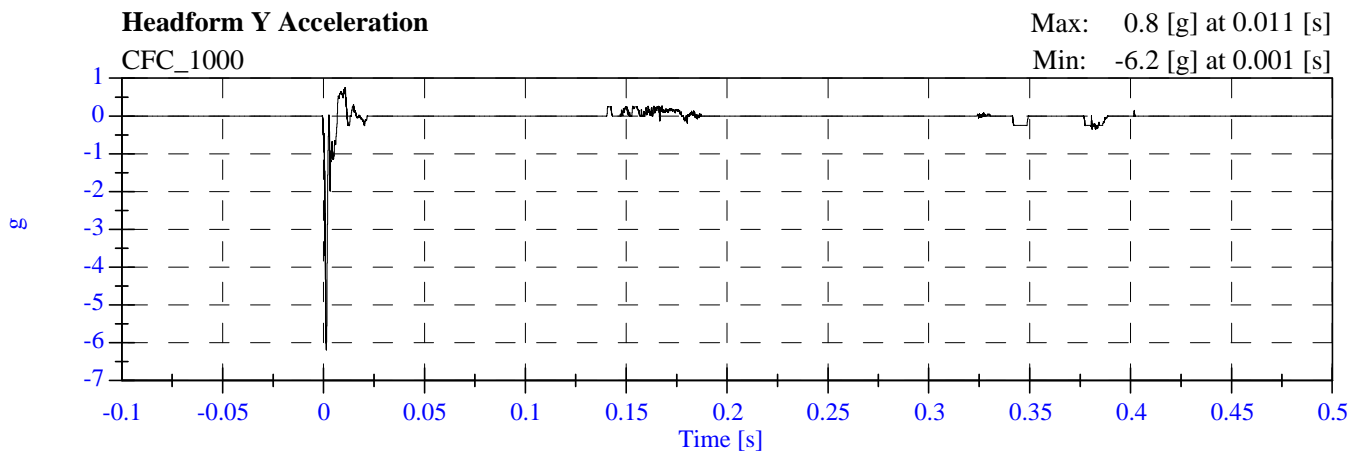
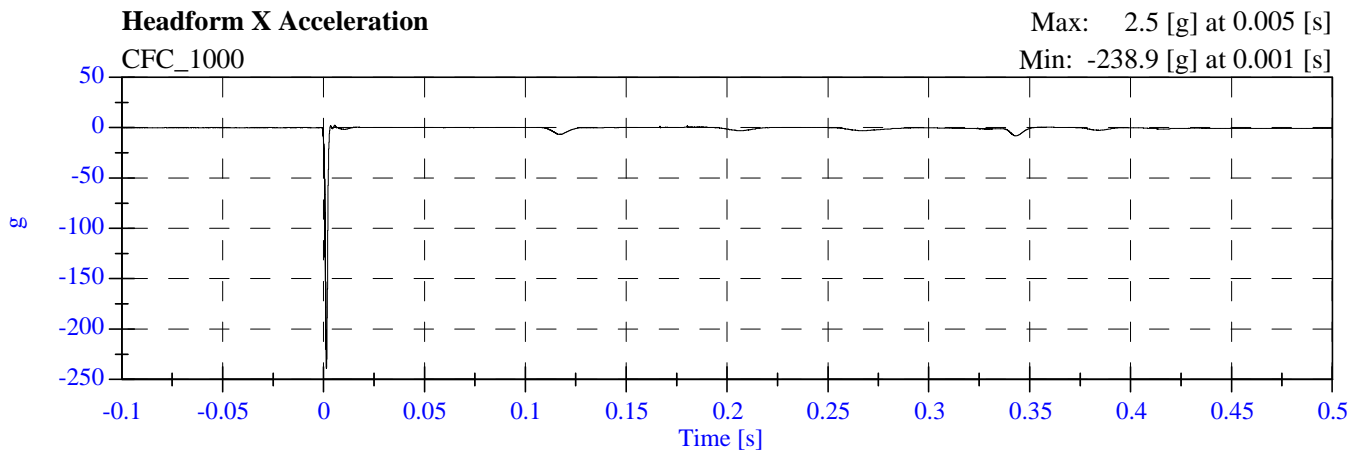
HEAD ACCELEROMETER CALIBRATION INFORMATION

| I.D. NUMBER | MANUFACTURER | MODEL NUMBER | SERIAL NUMBER | DATE OF LAST CALIBRATION | DATE OF NEXT CALIBRATION |
|-------------------------|---------------------|---------------------|----------------------|---------------------------------|---------------------------------|
| 1 - LONGITUDINAL | ENDEVCO | 7264-2000T | J38127 | 3/9/2006 | 9/9/2006 |
| 2 - LATERAL | ENDEVCO | 7264-2000T | J37980 | 3/9/2006 | 9/9/2006 |
| 3 - VERTICAL | ENDEVCO | 7264-2000T | J37854 | 3/9/2006 | 9/9/2006 |

REMARKS:

FMVSS 201U - Headform Calibration Drops

FMH 0805 - May 09, 2006



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

| | | | |
|--|-------------------------|------------------------|--|
| MANUFACTURER: | | DENTON ATD INC. | |
| SERIAL NUMBER: | | 0355 | |
| CALIBRATION DATE: | | MAY 9, 2006 | |
| TEST PARAMETER | SPECIFICATION | TEST RESULTS | |
| TEMPERATURE | 19°C to 26°C | 23 | |
| RELATIVE HUMIDITY | 10% to 70% | 27 | |
| PEAK RESULTANT ACCELERATION | 225 Gs to 275 Gs | 266.6 | |
| PEAK LATERAL ACCELERATION | 15 Gs Maximum | 4.2 | |
| IS ACCELERATION CURVE UNIMODAL? | YES | YES | |

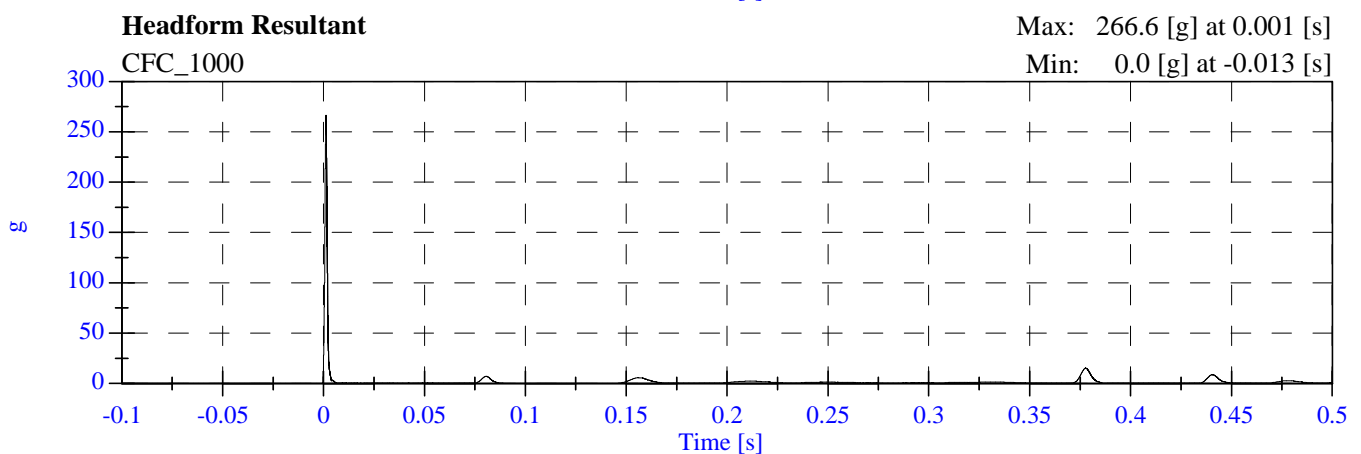
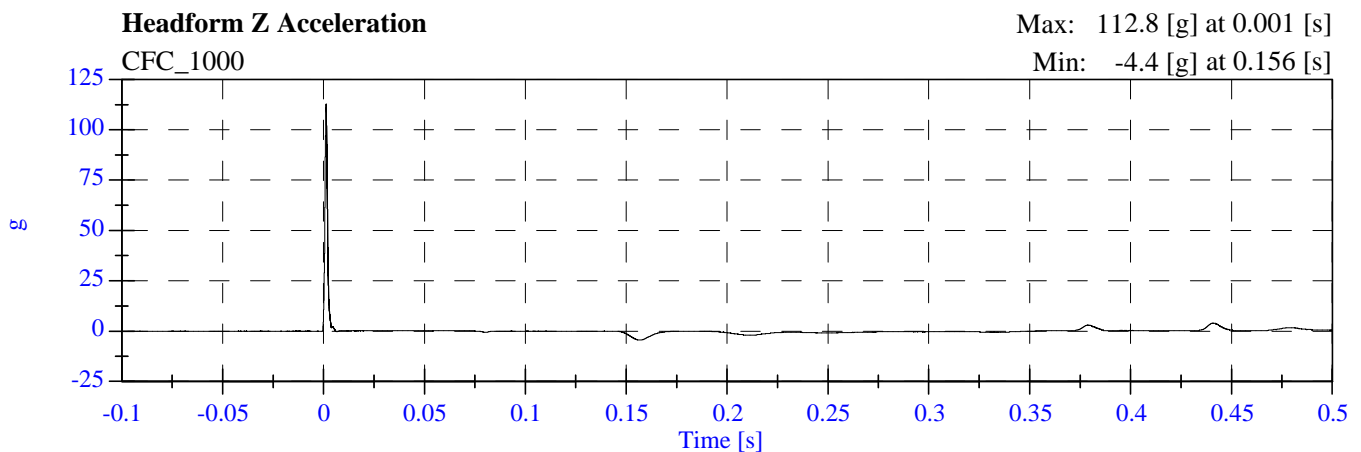
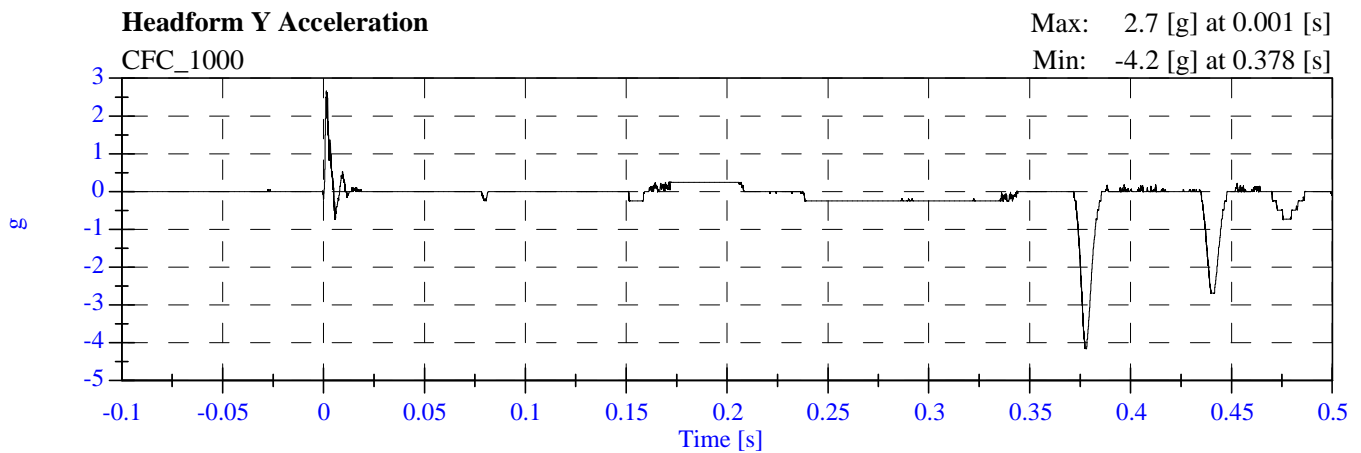
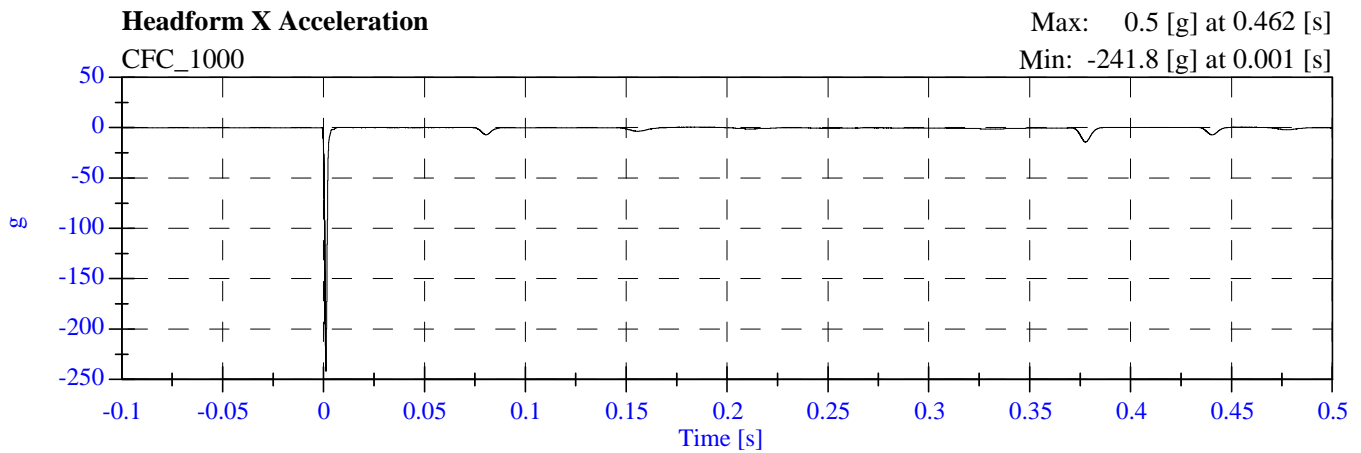
HEAD ACCELEROMETER CALIBRATION INFORMATION

| I.D. NUMBER | MANUFACTURER | MODEL NUMBER | SERIAL NUMBER | DATE OF LAST CALIBRATION | DATE OF NEXT CALIBRATION |
|-------------------------|---------------------|---------------------|----------------------|---------------------------------|---------------------------------|
| 1 - LONGITUDINAL | ENDEVCO | 7264-2000T | J28671 | 3/9/2006 | 9/9/2006 |
| 2 - LATERAL | ENDEVCO | 7264-2000T | J32779 | 3/9/2006 | 9/9/2006 |
| 3 - VERTICAL | ENDEVCO | 7264-2000T | J25854 | 3/9/2006 | 9/9/2006 |

REMARKS:

FMVSS 201U - Headform Calibration Drops

FMH 0355 - May 09, 2006



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

| | | | |
|--|-------------------------|--|--|
| MANUFACTURER: | | FIRST TECHNOLOGY SAFETY SYSTEMS | |
| SERIAL NUMBER: | | 1255 | |
| CALIBRATION DATE: | | MAY 9, 2006 | |
| TEST PARAMETER | SPECIFICATION | TEST RESULTS | |
| TEMPERATURE | 19°C to 26°C | 23 | |
| RELATIVE HUMIDITY | 10% to 70% | 27 | |
| PEAK RESULTANT ACCELERATION | 225 Gs to 275 Gs | 270.5 | |
| PEAK LATERAL ACCELERATION | 15 Gs Maximum | 7.9 | |
| IS ACCELERATION CURVE UNIMODAL? | YES | YES | |

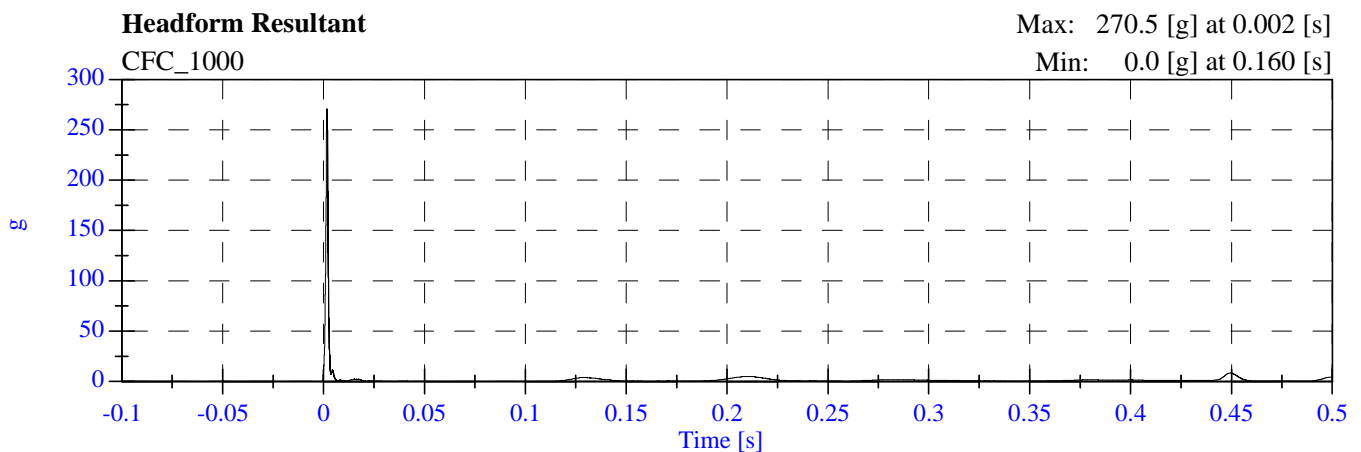
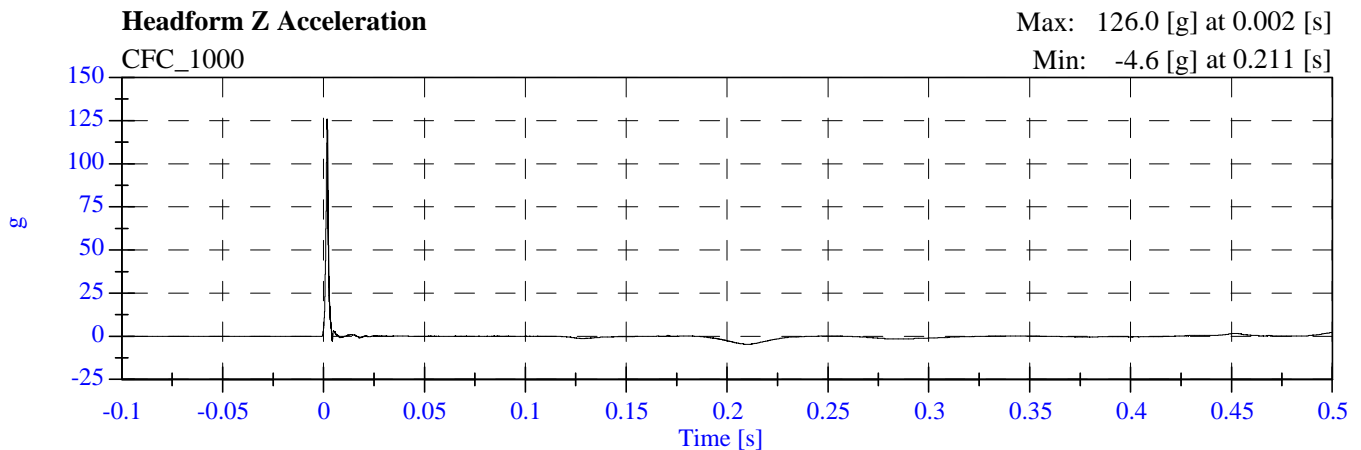
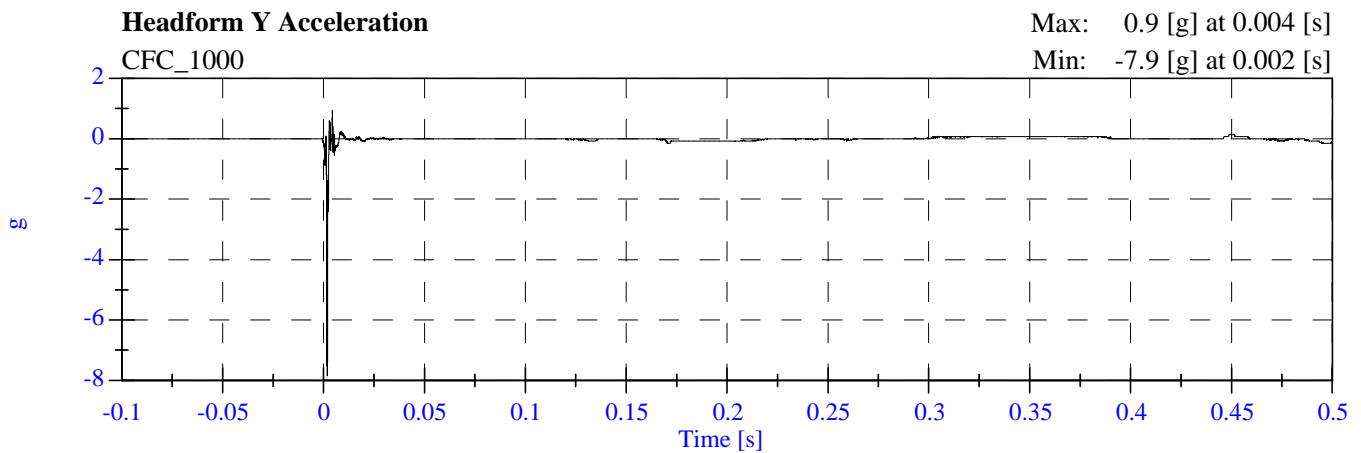
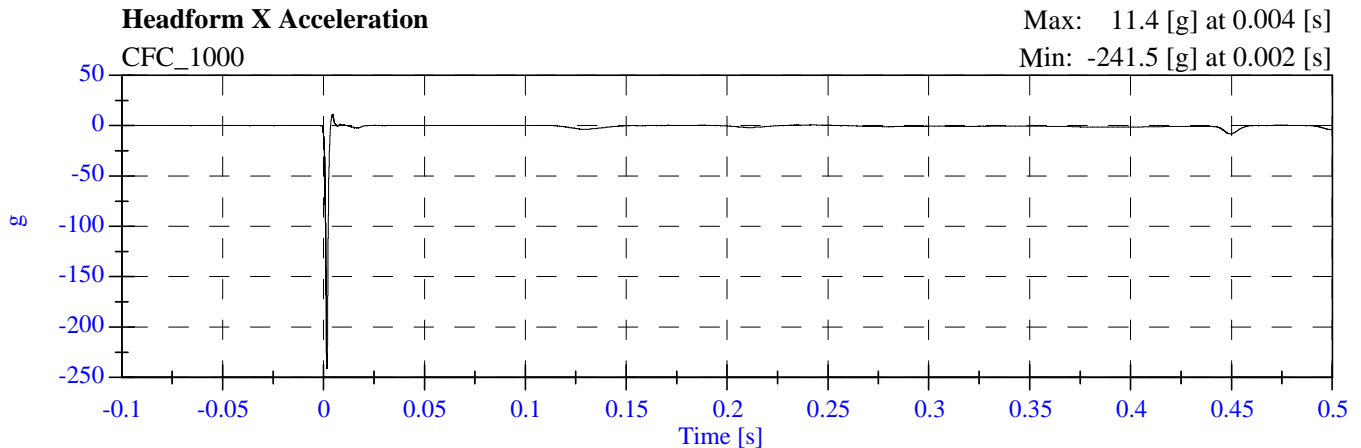
HEAD ACCELEROMETER CALIBRATION INFORMATION

| I.D. NUMBER | MANUFACTURER | MODEL NUMBER | SERIAL NUMBER | DATE OF LAST CALIBRATION | DATE OF NEXT CALIBRATION |
|-------------------------|---------------------|---------------------|----------------------|---------------------------------|---------------------------------|
| 1 - LONGITUDINAL | ENDEVCO | 7264-2000T | J41006 | 3/9/2006 | 9/9/2006 |
| 2 - LATERAL | ENDEVCO | 7264-2000T | J40994 | 3/9/2006 | 9/9/2006 |
| 3 - VERTICAL | ENDEVCO | 7264-2000T | J41007 | 3/9/2006 | 9/9/2006 |

REMARKS:

FMVSS 201U - Headform Calibration Drops

FMH 1255 - May 09, 2006



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

| | | | |
|--|-------------------------|--|--|
| MANUFACTURER: | | FIRST TECHNOLOGY SAFETY SYSTEMS | |
| SERIAL NUMBER: | | 0642 | |
| CALIBRATION DATE: | | MAY18,2006 | |
| TEST PARAMETER | SPECIFICATION | TEST RESULTS | |
| TEMPERATURE | 19°C to 26°C | 23 | |
| RELATIVE HUMIDITY | 10% to 70% | 48 | |
| PEAK RESULTANT ACCELERATION | 225 Gs to 275 Gs | 268.0 | |
| PEAK LATERAL ACCELERATION | 15 Gs Maximum | 3.9 | |
| IS ACCELERATION CURVE UNIMODAL? | YES | YES | |

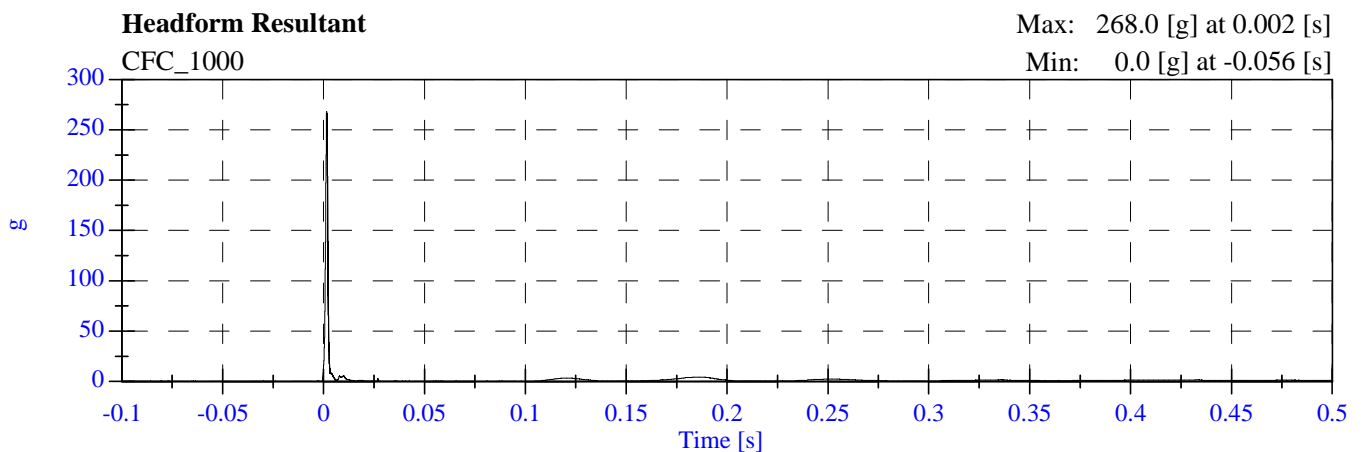
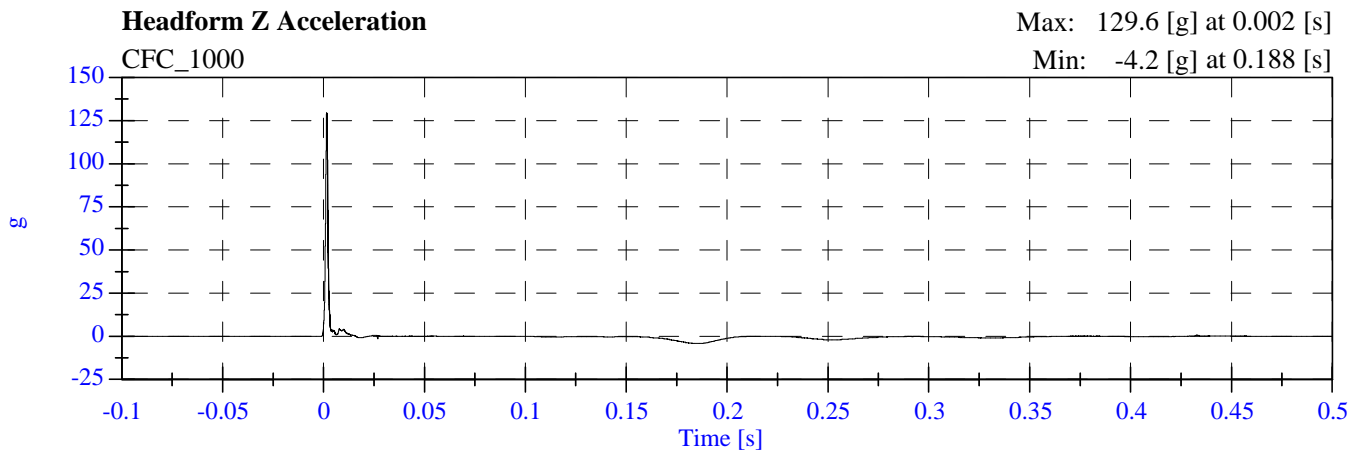
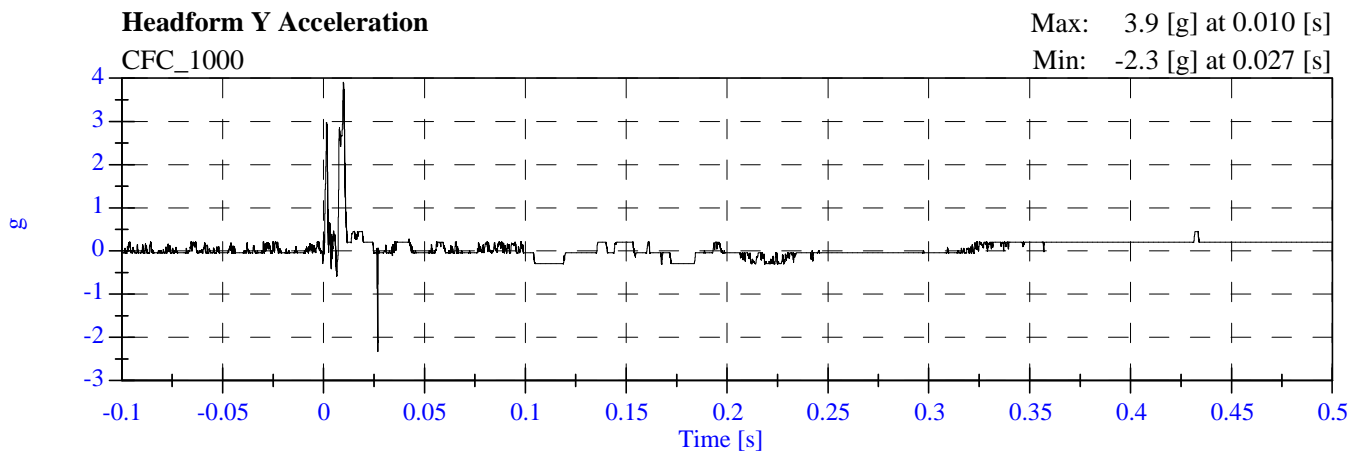
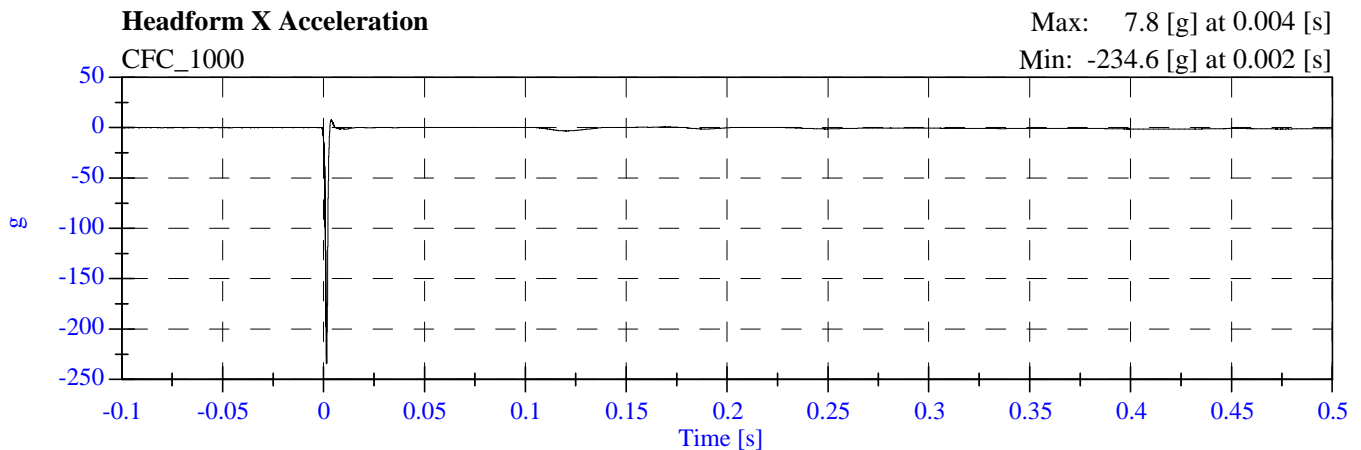
HEAD ACCELEROMETER CALIBRATION INFORMATION

| I.D. NUMBER | MANUFACTURER | MODEL NUMBER | SERIAL NUMBER | DATE OF LAST CALIBRATION | DATE OF NEXT CALIBRATION |
|-------------------------|---------------------|---------------------|----------------------|---------------------------------|---------------------------------|
| 1 - LONGITUDINAL | ENDEVCO | 7264-2000T | J24876 | 3/9/2006 | 9/9/2006 |
| 2 - LATERAL | ENDEVCO | 7264-2000T | J33030 | 3/9/2006 | 9/9/2006 |
| 3 - VERTICAL | ENDEVCO | 7264-2000T | J31009 | 3/9/2006 | 9/9/2006 |

REMARKS:

FMVSS 201U - Headform Calibration Drops

FMH 0642 - May 18, 2006



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

| | | | |
|--|-------------------------|------------------------|--|
| MANUFACTURER: | | DENTON ATD INC. | |
| SERIAL NUMBER: | | 0062 | |
| CALIBRATION DATE: | | MAY18,2006 | |
| TEST PARAMETER | SPECIFICATION | TEST RESULTS | |
| TEMPERATURE | 19°C to 26°C | 23 | |
| RELATIVE HUMIDITY | 10% to 70% | 48 | |
| PEAK RESULTANT ACCELERATION | 225 Gs to 275 Gs | 265.4 | |
| PEAK LATERAL ACCELERATION | 15 Gs Maximum | 6.6 | |
| IS ACCELERATION CURVE UNIMODAL? | YES | YES | |

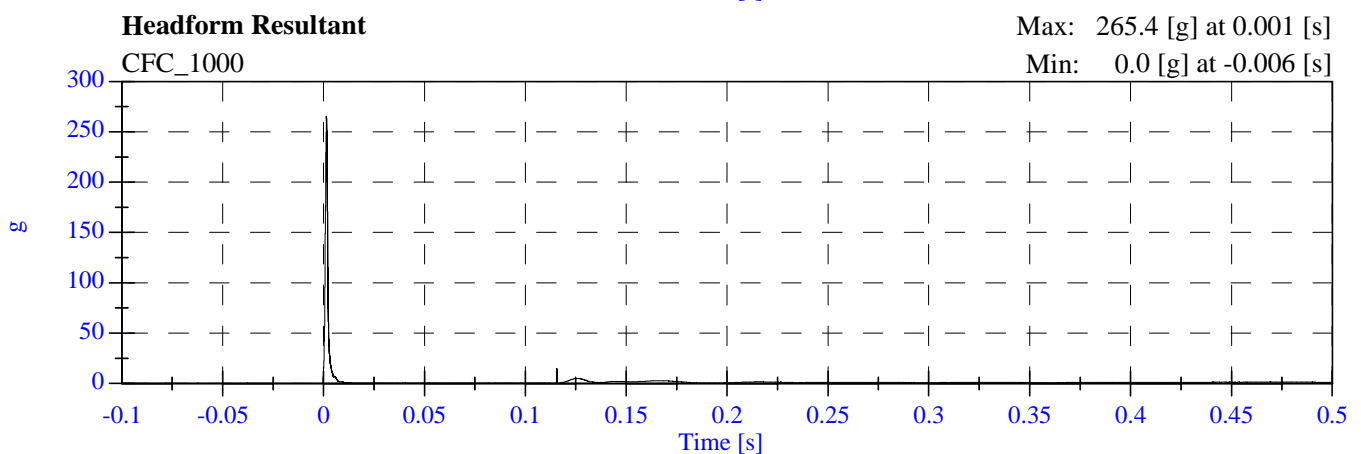
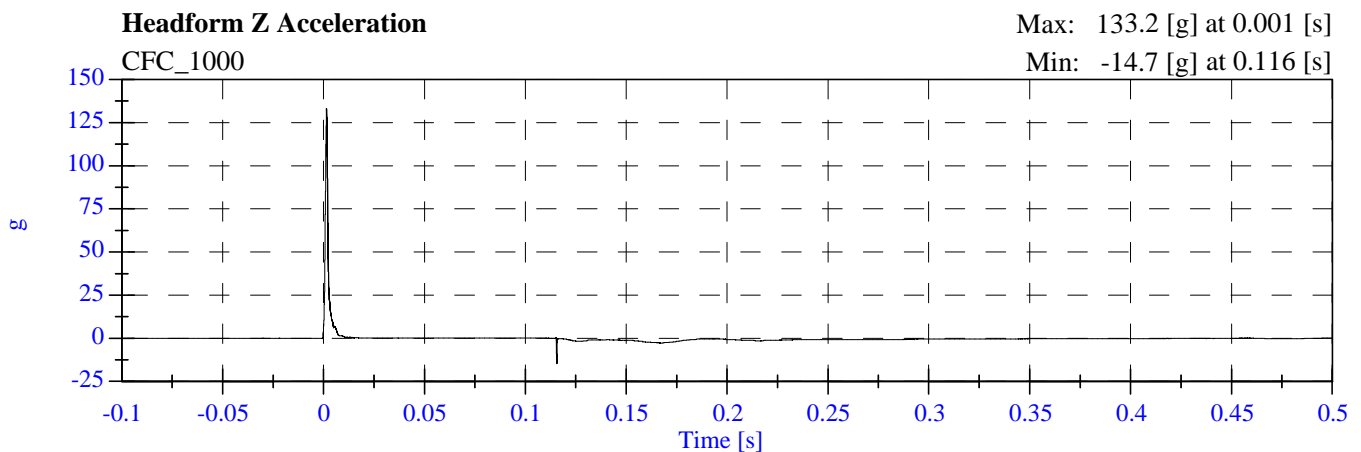
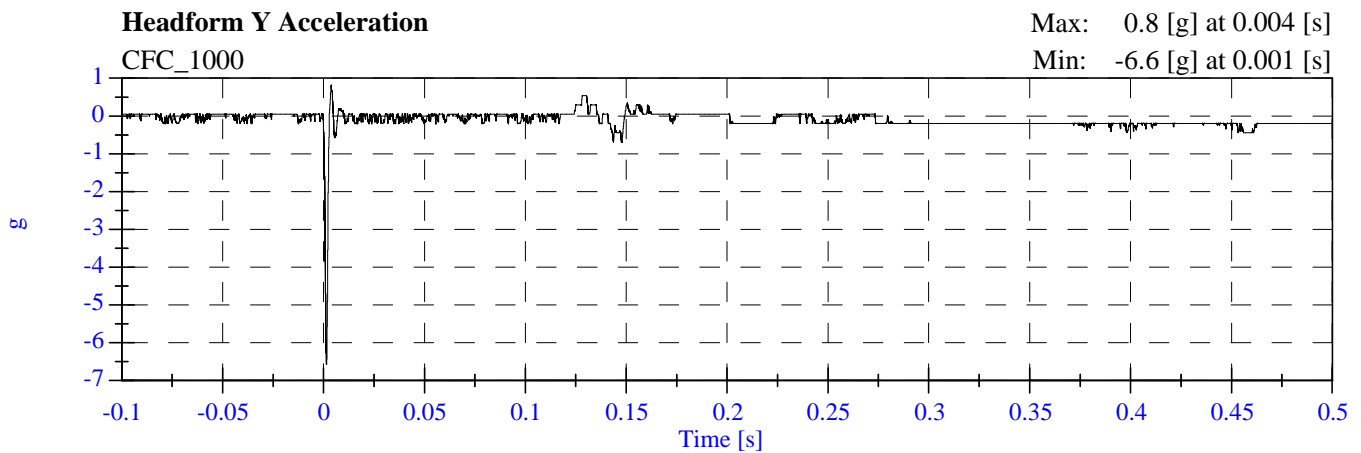
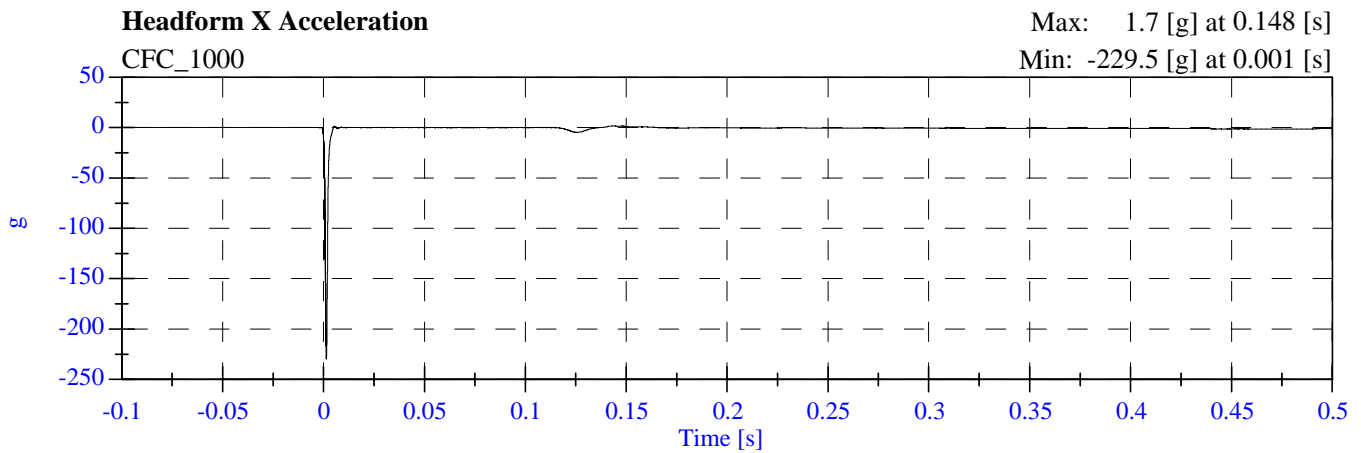
HEAD ACCELEROMETER CALIBRATION INFORMATION

| I.D. NUMBER | MANUFACTURER | MODEL NUMBER | SERIAL NUMBER | DATE OF LAST CALIBRATION | DATE OF NEXT CALIBRATION |
|-------------------------|---------------------|---------------------|----------------------|---------------------------------|---------------------------------|
| 1 - LONGITUDINAL | ENDEVCO | 7264-2000T | J33127 | 3/9/2006 | 9/9/2006 |
| 2 - LATERAL | ENDEVCO | 7264-2000T | J33019 | 3/9/2006 | 9/9/2006 |
| 3 - VERTICAL | ENDEVCO | 7264-2000T | J32782 | 3/9/2006 | 9/9/2006 |

REMARKS:

FMVSS 201U - Headform Calibration Drops

FMH 0062 - May 18, 2006



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

| | | | |
|--|-------------------------|--|--|
| MANUFACTURER: | | FIRST TECHNOLOGY SAFETY SYSTEMS | |
| SERIAL NUMBER: | | 805 | |
| CALIBRATION DATE: | | MAY18,2006 | |
| TEST PARAMETER | SPECIFICATION | TEST RESULTS | |
| TEMPERATURE | 19°C to 26°C | 23 | |
| RELATIVE HUMIDITY | 10% to 70% | 48 | |
| PEAK RESULTANT ACCELERATION | 225 Gs to 275 Gs | 270.1 | |
| PEAK LATERAL ACCELERATION | 15 Gs Maximum | 11.0 | |
| IS ACCELERATION CURVE UNIMODAL? | YES | YES | |

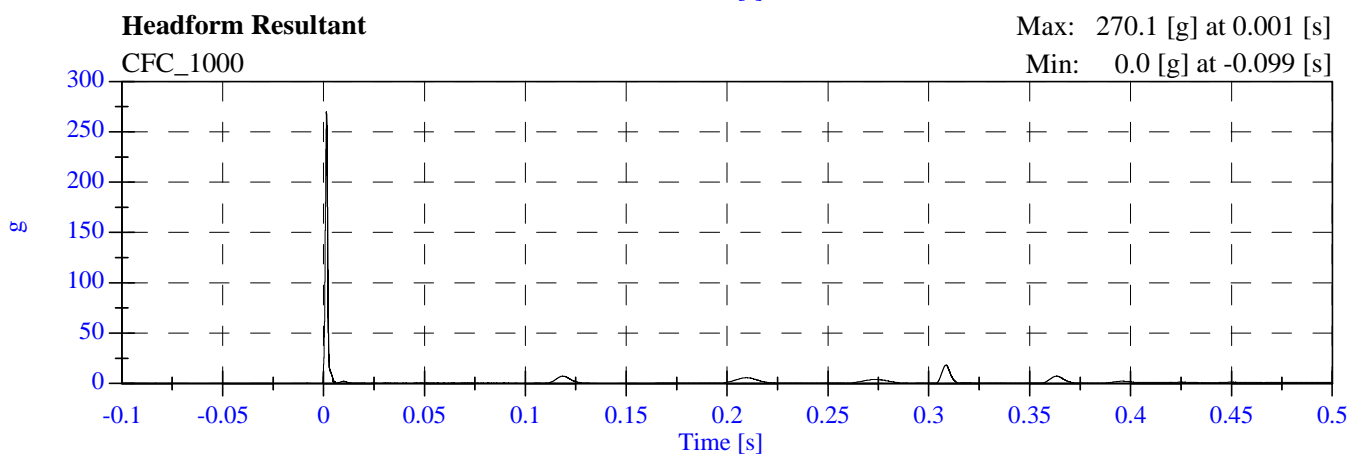
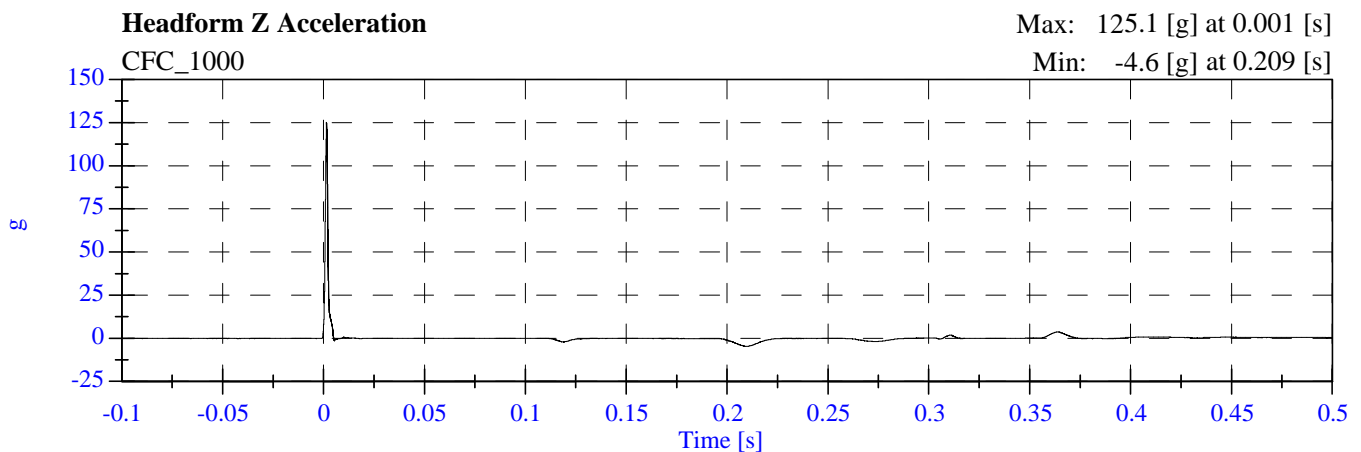
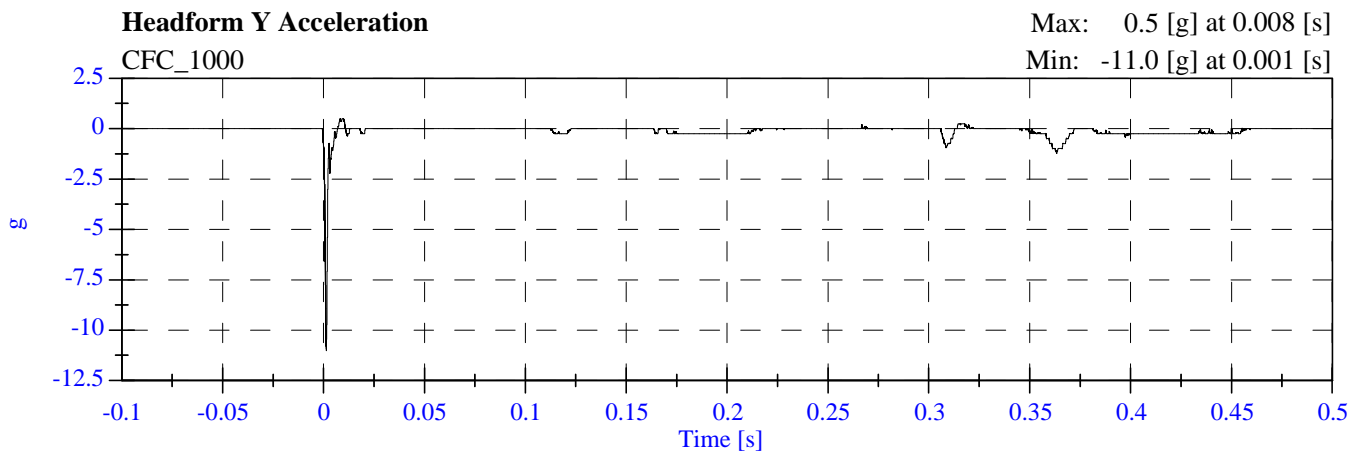
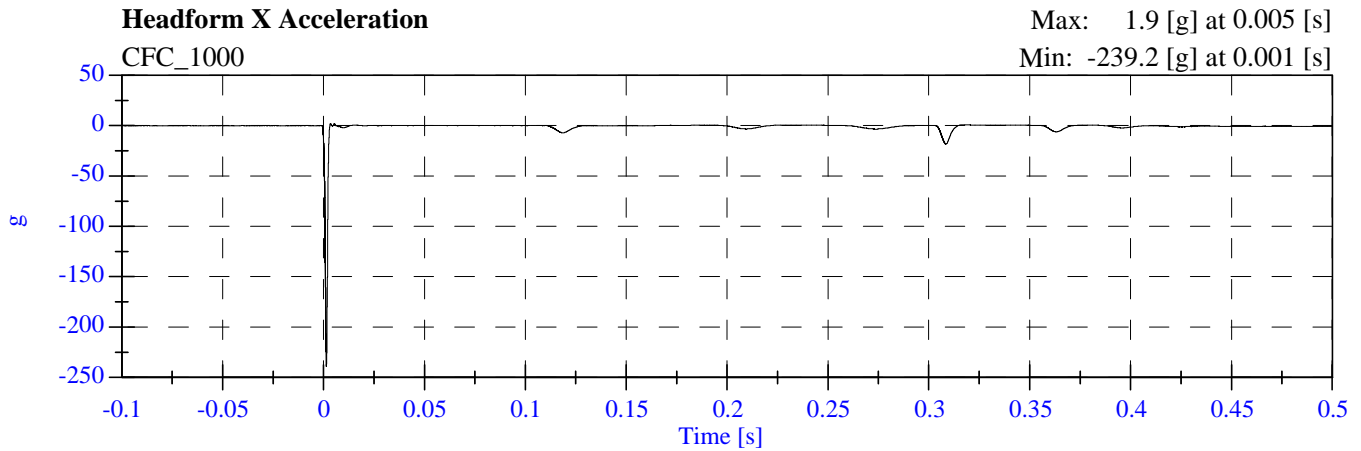
HEAD ACCELEROMETER CALIBRATION INFORMATION

| I.D. NUMBER | MANUFACTURER | MODEL NUMBER | SERIAL NUMBER | DATE OF LAST CALIBRATION | DATE OF NEXT CALIBRATION |
|-------------------------|---------------------|---------------------|----------------------|---------------------------------|---------------------------------|
| 1 - LONGITUDINAL | ENDEVCO | 7264-2000T | J38127 | 3/9/2006 | 9/9/2006 |
| 2 - LATERAL | ENDEVCO | 7264-2000T | J37980 | 3/9/2006 | 9/9/2006 |
| 3 - VERTICAL | ENDEVCO | 7264-2000T | J37854 | 3/9/2006 | 9/9/2006 |

REMARKS:

FMVSS 201U - Headform Calibration Drops

FMH 0805 - May 18, 2006



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

| | | | |
|--|-------------------------|------------------------|--|
| MANUFACTURER: | | DENTON ATD INC. | |
| SERIAL NUMBER: | | 0355 | |
| CALIBRATION DATE: | | MAY18,2006 | |
| TEST PARAMETER | SPECIFICATION | TEST RESULTS | |
| TEMPERATURE | 19°C to 26°C | 23 | |
| RELATIVE HUMIDITY | 10% to 70% | 48 | |
| PEAK RESULTANT ACCELERATION | 225 Gs to 275 Gs | 247.6 | |
| PEAK LATERAL ACCELERATION | 15 Gs Maximum | 2.0 | |
| IS ACCELERATION CURVE UNIMODAL? | YES | YES | |

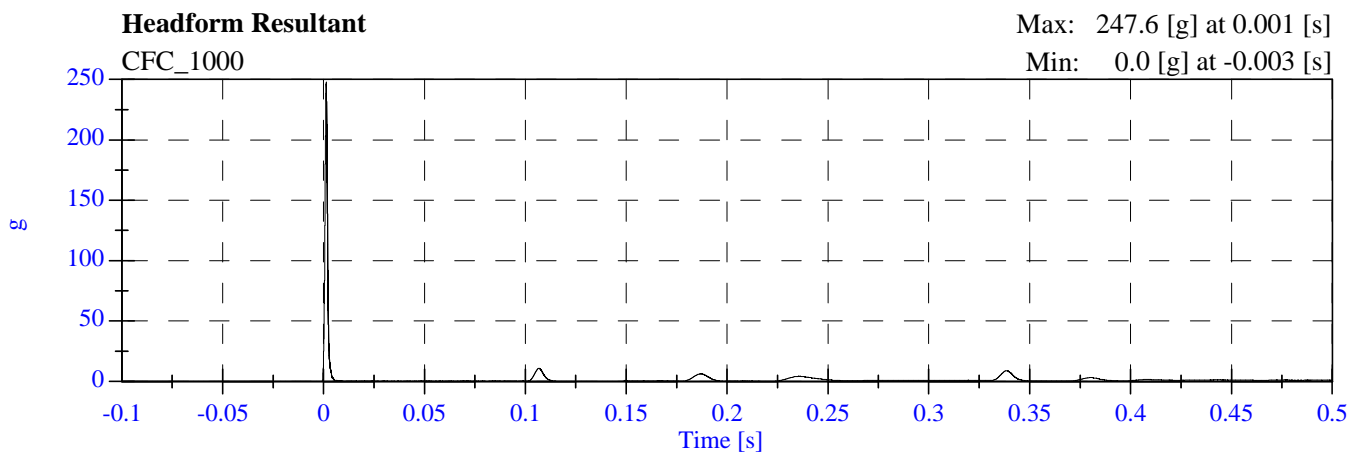
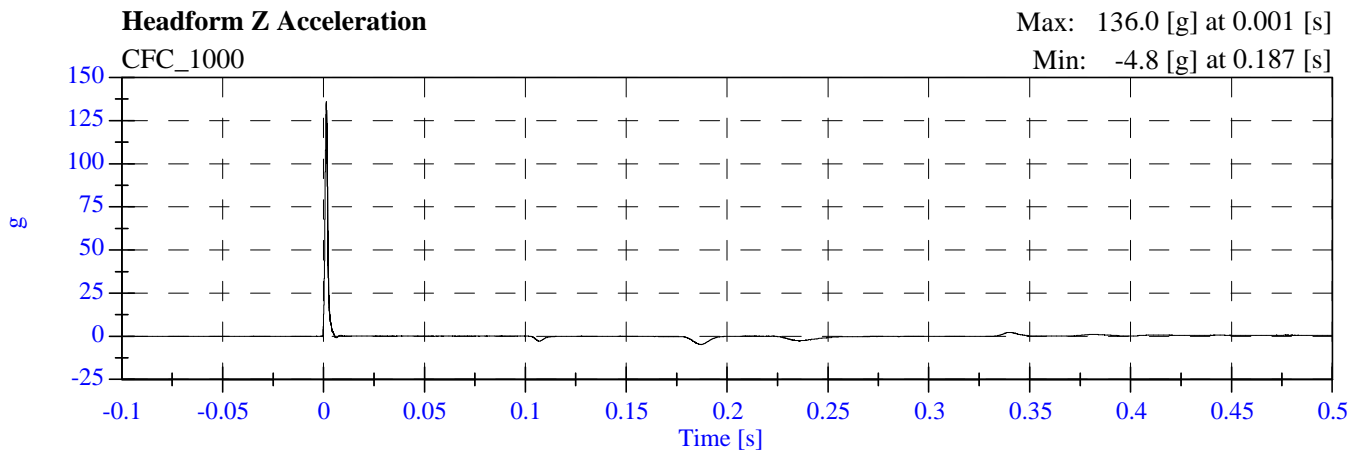
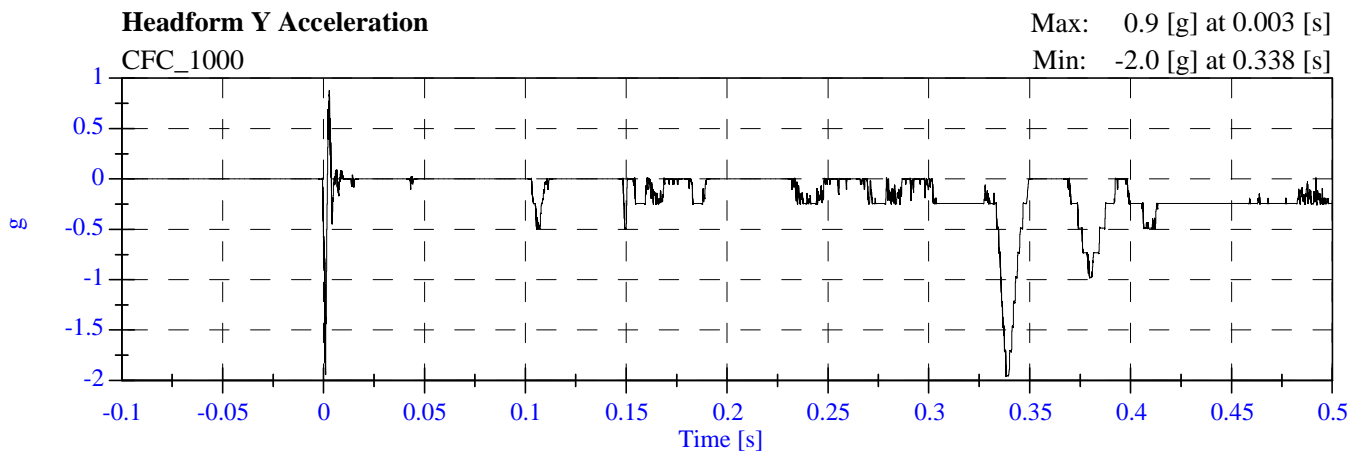
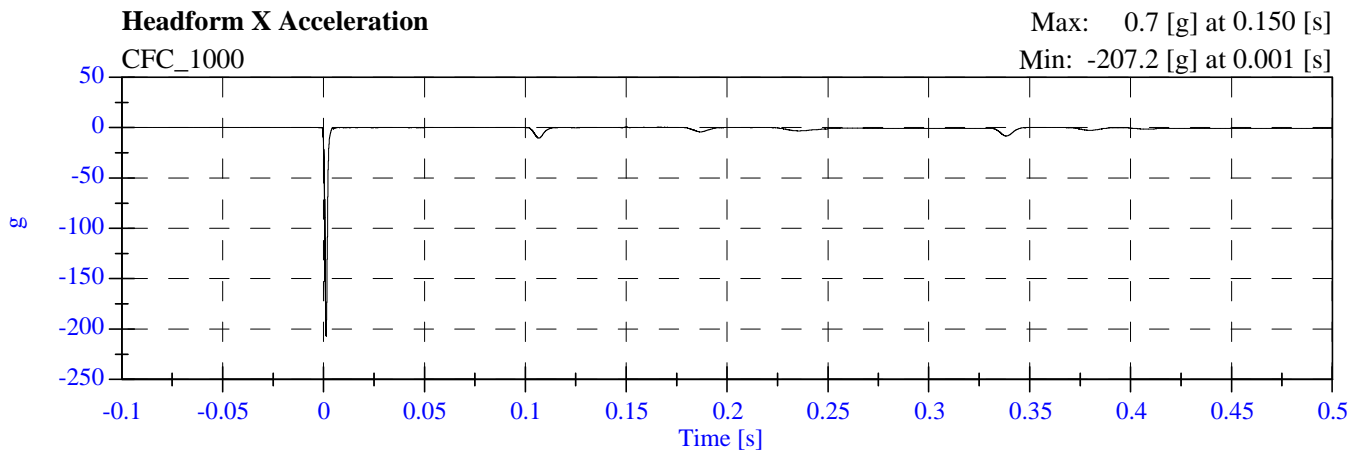
HEAD ACCELEROMETER CALIBRATION INFORMATION

| I.D. NUMBER | MANUFACTURER | MODEL NUMBER | SERIAL NUMBER | DATE OF LAST CALIBRATION | DATE OF NEXT CALIBRATION |
|-------------------------|---------------------|---------------------|----------------------|---------------------------------|---------------------------------|
| 1 - LONGITUDINAL | ENDEVCO | 7264-2000T | J28671 | 3/9/2006 | 9/9/2006 |
| 2 - LATERAL | ENDEVCO | 7264-2000T | J32779 | 3/9/2006 | 9/9/2006 |
| 3 - VERTICAL | ENDEVCO | 7264-2000T | J25854 | 3/9/2006 | 9/9/2006 |

REMARKS:

FMVSS 201U - Headform Calibration Drops

FMH 0355 - May 18, 2006



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

| | | | |
|---------------------------------|----------------------|--|--|
| MANUFACTURER: | | FIRST TECHNOLOGY SAFETY SYSTEMS | |
| SERIAL NUMBER: | | 1255 | |
| CALIBRATION DATE: | | MAY18,2006 | |
| TEST PARAMETER | SPECIFICATION | TEST RESULTS | |
| TEMPERATURE | 19°C to 26°C | 23 | |
| RELATIVE HUMIDITY | 10% to 70% | 48 | |
| PEAK RESULTANT ACCELERATION | 225 Gs to 275 Gs | 270.8 | |
| PEAK LATERAL ACCELERATION | 15 Gs Maximum | 11.0 | |
| 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 | J41006 | 3/9/2006 | 9/9/2006 |
| 2 - LATERAL | ENDEVCO | 7264-2000T | J40994 | 3/9/2006 | 9/9/2006 |
| 3 - VERTICAL | ENDEVCO | 7264-2000T | J41007 | 3/9/2006 | 9/9/2006 |

REMARKS:

FMVSS 201U - Headform Calibration Drops

FMH 1255 - May 18, 2006

