

REPORT NUMBER: 301-CAL-04-02

**NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION  
MODERATE-TO-HIGH SPEED REAR IMPACT TEST**

**PERFORMED IN CONJUNCTION WITH  
SAFETY COMPLIANCE TESTING FOR FMVSS 301R  
FUEL SYSTEM INTEGRITY**

MAZDA MOTOR CORPORATION  
2004 MAZDA 6  
4-DOOR SEDAN

NHTSA NUMBER: C45400

GDAIS TEST NUMBER: 8655-F301-19R

June 16, 2004

GENERAL DYNAMICS  
ADVANCED INFORMATION ENGINEERING SERVICES  
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FINAL REPORT

PREPARED FOR:

U. S. Department of Transportation  
National Highway Traffic Safety Administration  
Office of Vehicle Safety Research  
Crashworthiness Research Division  
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**TECHNICAL REPORT STANDARD TITLE PAGE**

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| 16. Abstract<br><p>This test was performed in conjunction with Compliance Testing for FMVSS 301R, Fuel System Integrity. The purpose of this test is to evaluate the seat and occupant performance in moderate-to-high speed rear impacts. The base FMVSS 301R test was modified as follows:</p> <ul style="list-style-type: none"> <li>- 2 fully instrumented Hybrid III ATDs were positioned in the vehicle (P1 and P3) in place of ballast ATDs.</li> <li>- The P2 seat was removed to improve film coverage and to help offset instrumentation weight.</li> <li>- 2 door mounted high speed cameras were installed (P2 and P4 doors).</li> <li>- 2 seatback frame and 2 front sill MHDs were installed.</li> <li>- 4 vehicle accelerometers were installed.</li> <li>- VRTC seatback translation device was installed on the inside of the roof (P1 seat only, there was not adequate room for the VRTC span bar. The string potentiometers were attached directly to the inside of the roof).</li> </ul> <p>The ATDs were positioned following TP208-12 with the following exceptions:</p> <ul style="list-style-type: none"> <li>- Seatbacks for positions that contained a 50<sup>th</sup> percentile male were set to 25 degrees <math>\pm</math> 1 degree as measured with the SAE J826 manikin.</li> </ul> |  |                                                      |                                                                                                                                                                                                                            |                                                                         |  |
| 17. Key Words<br>Seatback Rotation and Displacement Test<br>FMVSS 301R<br>Rear Impact Test                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |                                                      | 18. Distribution Statement<br><u>Copies of this report are available from:</u><br>NHTSA Technical Reference Division<br>Room 5108 (NPO-230), 400 Seventh , S.W.,<br>Washington, D.C. 20590<br>Telephone No. (202) 366-4946 |                                                                         |  |
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## SECTION 1

### PURPOSE OF TEST

This moderate-to-high speed rear impact test was performed in conjunction with a Federal Motor Vehicle Safety Standard (FMVSS) 301R 30 mph rear moving barrier impact test of a 2004 Mazda 6 4-Door Sedan. The purpose of this test is to evaluate the seat and occupant performance in moderate-to-high speed rear impacts.

## SECTION 2

### SUMMARY OF TEST

A 1590.5 kg 2004 Mazda 6 4-Door Sedan was impacted from the rear by a 1797 kg moving barrier at a velocity of 46.83 kph (29.1 mph). The test was performed by Advanced Information Engineering Services on June 16, 2004.

The test vehicle was prepared for the Federal Motor Vehicle Safety Standard (FMVSS) 301R Compliance Test Program conducted for the National Highway Traffic Safety Administration (NHTSA) following the OVSC Laboratory Test Procedure No. TP-301-03, dated February 28, 2003. For the purpose of acquiring information for Office of Vehicle Safety Research, the test was modified as follows:

- An instrumented 50<sup>th</sup> percentile male Part 572E Hybrid III ATD was positioned in the driver seat (P1) in place of a ballast ATD.
- An instrumented 50<sup>th</sup> percentile male Part 572E Hybrid III ATD was positioned in the right rear passenger seat (P3) in place of the right front passenger seat (P2) ballast ATD.
- The right front passenger seat (P2) was removed to improve film coverage and to help offset instrumentation weight.
- 2 high speed cameras were installed on the vehicle front doors (P2 and P4 doors).
- 2 front seatback frame MHDs and 2 front sill MHDs were installed to measure rotation about the Y-axis.
- 4 vehicle accelerometers were installed to measure acceleration along the X-axis.
- The VRTC seatback translation was installed on the inside of the roof (P1 seat only, there was not adequate room for the VRTC span bar. The string potentiometers were attached directly to the inside of the roof).

The crash event was recorded by ten high-speed cameras and one real-time camera. Camera locations and other pertinent camera information are found on pages 3-13 and 3-14 of this report. Pre- and post-test photographs of the ATDs can be found in Appendix A. Electronic data plots are presented in Appendix B.

The occupant data is summarized below.

|                   | Seatback Rotation |                | HIC<br>(36ms) | Nij  |      |      |      | Head<br>-to-<br>Torso Rotation |                    | CLIP<br>(g) | Chest<br>Disp.<br>(mm) | Femur       |              |
|-------------------|-------------------|----------------|---------------|------|------|------|------|--------------------------------|--------------------|-------------|------------------------|-------------|--------------|
|                   | Left<br>(deg)     | Right<br>(deg) |               | Ntf  | Nte  | Ncf  | Nce  | Flexion<br>(deg)               | Extension<br>(deg) |             |                        | Left<br>(N) | Right<br>(N) |
| <b>P1<br/>ATD</b> | 30.2              | 32.8           | 59.6          | 0.16 | 0.08 | 0.03 | 0.00 | 6.0                            | -5.6               | 11.2        | -0.8                   | -520.7      | -522.2       |
| <b>P3<br/>ATD</b> | -                 | -              | 149.6         | 0.11 | 0.57 | 0.07 | 0.02 | 18.1                           | -63.9              | 24.2*       | -3.0                   | -1018.5     | -941.4       |

\* Chest Ay data was questionable and was not used in the CLIP calculation.

The P1 seat pedestal front legs deformed upward and the seat back rotated rearward during the event. The seat back reclined 21.6 degrees statically from its pre-test position relative to the vehicle sill, of which approximately 5.5 degrees was a result of the seat pedestal deformation. The P1 seat back adjustment mechanism remained operable following the test. There was no measurable rotation of the P3 seat back.

## SECTION 3

### TEST DATA

# DATA SHEET 1

## TEST VEHICLE SPECIFICATIONS

### TEST VEHICLE INFORMATION:

Year/Make/Model/Body Style: 2004 Mazda 6 4-Door Sedan

NHTSA No.: C45400; Color:

Engine Data: 4 Cylinders; - CID; 2.3 Liters; - cc

Placement: - Longitudinal or In-Line; X Transverse or Lateral

Transmission Data: 4 Speeds; - Manual; X Automatic; X Overdrive

Final Drive: - Rear Wheel Drive; X Front Wheel Drive; - Four Wheel Drive

Major Options: X A/C; X Power Steering; X Power Brakes

X Power Windows; X Power Door Locks; X Tilt Wheel

Date Received: 10/22/2003; Odometer Reading 37 km

Selling Dealer: Jeff Wyler Mazda

& Address: Cincinnati, OH

### DATA FROM VEHICLE'S CERTIFICATION LABEL:

Vehicle Manufactured by: Mazda Motor Corporation

Date of Manufacture: 3-Sep

VIN: 1YVFP80C345N22817

GVWR: 1958 kg; GAWR-FRONT: 1070 kg; GAWR-REAR: 888 kg

### DATA FROM VEHICLE'S TIRE LABEL:

Location of Placard on Vehicle: Driver side lower B-pillar

Recommended Tire Size: P205/60R16 or P215/50R17

\* Recommended Cold Tire Pressure: FRONT: 220 kPa; REAR: 220 kPa

### DATA FROM TIRE SIDEWALL:

Size of Tires on Test Vehicle: P205/60R16 91H Manufacturer: Michelin MXV4

Tire Pressure with Maximum Capacity Vehicle Load: FRONT: 400 kPa; REAR: 400 kPa

Type of Spare Tire: Temporary

### VEHICLE CAPACITY DATA:

Type of Front Seats: - Bench; X Bucket; - Split Bench

Number of Occupants: 2 Front; 3 Rear; 5 Total

Vehicle Capacity Weight (VCW) = 385 kg

No. of Occupants x 68.04 kg = 340.2 kg

Rated Cargo/Luggage Weight (RCLW) = 44.8 kg

\*Tire pressure used for test

## DATA SHEET 2

### VEHICLE DATA

#### WEIGHT OF TEST VEHICLE AS RECEIVED FROM DEALER (with maximum fluids)= UDW:

|                                      |   |              |     |                        |              |              |
|--------------------------------------|---|--------------|-----|------------------------|--------------|--------------|
| Right Front                          | = | <u>419.0</u> | kg  | Right Rear =           | <u>275.0</u> | kg           |
| Left Front                           | = | <u>423.0</u> | kg. | Left Rear =            | <u>286.0</u> | kg           |
| TOTAL FRONT                          | = | <u>842</u>   | kg  | TOTAL REAR =           | <u>561</u>   | kg           |
| TOTAL DELIVERED WEIGHT =             |   | <u>1403</u>  | kg  |                        |              |              |
| % of Total Front of Vehicle Weight = |   | <u>60.0%</u> |     | of Total Rear Weight = |              | <u>40.0%</u> |

#### CALCULATION OF VEHICLE'S TARGET TEST WEIGHT:

|                                    |   |               |    |
|------------------------------------|---|---------------|----|
| Total Delivered Weight             | = | <u>1403</u>   | kg |
| Rated Cargo/Luggage Weight (RCLW)  | = | <u>44.8</u>   | kg |
| Weight of 2 p.572 Dummies, 74.4 kg | = | <u>148.8</u>  | kg |
| TARGET TEST WEIGHT                 | = | <u>1596.6</u> | kg |

#### WEIGHT OF TEST VEHICLE WITH TWO DUMMIES AND 38.2 KG OF CARGO WEIGHT:

|                                      |   |              |    |                        |              |              |
|--------------------------------------|---|--------------|----|------------------------|--------------|--------------|
| Right Front                          | = | <u>458.0</u> | kg | Right Rear =           | <u>323.0</u> | kg           |
| Left Front                           | = | <u>454.0</u> | kg | Left Rear =            | <u>355.0</u> | kg           |
| TOTAL FRONT                          | = | <u>912</u>   | kg | TOTAL REAR =           | <u>678</u>   | kg           |
| TOTAL TEST WEIGHT =                  |   | <u>1590</u>  | kg |                        |              |              |
| % of Total Front of Vehicle Weight = |   | <u>57.4%</u> |    | of Total Rear Weight = |              | <u>42.6%</u> |

\* Weight of Ballast Secured in Vehicle Trunk Area = 0 kg

Type of Ballast: None

Method of Securing Ballast: No Applicable

|                                                  |                                                                                                            |
|--------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| Vehicle Components Removed for Weight Reduction: | Right front door trim, headlights, front bumper cover, side mirrors, engine shroud, and engine air intake. |
|--------------------------------------------------|------------------------------------------------------------------------------------------------------------|

#### VEHICLE ATTITUDE (all dimension in millimeters):

|                                                                                     |               |               |               |               |
|-------------------------------------------------------------------------------------|---------------|---------------|---------------|---------------|
| AS DELIVERED:                                                                       | RF <u>710</u> | LF <u>718</u> | RR <u>719</u> | LR <u>704</u> |
| AS TESTED:                                                                          | RF <u>686</u> | LF <u>697</u> | RR <u>706</u> | LR <u>679</u> |
| Vehicle's Wheel Base: <u>2674</u> mm                                                |               |               |               |               |
| Location of Vehicle's C.G.: <u>1140</u> millimeters rearward of front wheel center. |               |               |               |               |

DATA SHEET 2 (continued)

VEHICLE DATA

TYPE OF TEST:

Type of Test: Rear Barrier Impact Angle: 0°  
Test Date: June 16, 2004 Time: 13:40 Temperature: 22.2 °C  
Vehicle NHTSA No.: C45400 VIN: 1YVFP80C345N22817  
Required Impact Velocity Range: 46.51 to 48.12 kph

BARRIER IMPACT VELOCITY: (Speed traps within 5 feet of impact plane.)

Trap No. 1 = 46.83 kph; Trap No. 2 = 46.83 kph  
Average Impact Speed = 46.83 kph

VEHICLE STATIC CRUSH:

Vehicle Length:

|           |        |             |             |             |         |             |
|-----------|--------|-------------|-------------|-------------|---------|-------------|
| Pre-Test  | Left = | <u>4555</u> | ; C/L =     | <u>4764</u> | Right = | <u>4555</u> |
| Post-Test | Left = | <u>4178</u> | ; C/L =     | <u>4376</u> | Right = | <u>4252</u> |
| Crush     | Left = | <u>377</u>  | ; C/L =     | <u>388</u>  | Right = | <u>303</u>  |
| AVERAGE   | =      | <u>356</u>  | millimeters |             |         |             |



# DATA SHEET 3

## MOVING BARRIER DATA

### WEIGHT OF MOVING BARRIER:

|                        |   |               |    |            |   |              |     |
|------------------------|---|---------------|----|------------|---|--------------|-----|
| Right Front            | = | <u>504.9</u>  | kg | Right Rear | = | <u>393.7</u> | kg. |
| Left Front             | = | <u>499.9</u>  | kg | Left Rear  | = | <u>398.3</u> | kg  |
| TOTAL FRONT            | = | <u>1004.8</u> | kg | TOTAL REAR | = | <u>792.0</u> | kg  |
| TOTAL BARRIER WEIGHT = |   | <u>1796.8</u> | kg |            |   |              |     |

### MOVING BARRIER DIMENSIONS:

Barrier Face Height: 1524 mm

Barrier Face Width: 1981 mm

Barrier Face Ground Clearance: 127 mm

Tread Width: 1511 mm

Wheel Base: 3048 mm

Location of C.G.: X: 1344 mm rearward of front wheel center.

Y: 0 mm from longitudinal-vertical plane of symmetry.

Z: 414 mm above ground.

### MOVING BARRIER TIRES:

Manufacturer: Dunlop

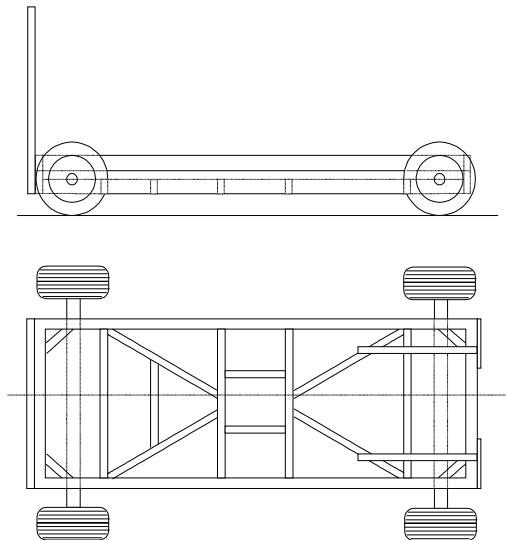
Model: AT Radial Rover

Size: P205/75R15

Recommended Max Pressure: 240 kPa:

### MOVING BARRIER ABORT SYSTEM:

Type: Trailing cable



# DATA SHEET 4

## SEAT DATA

### P1 DATA:

|                                                      |                                                                                                       |          |                                                                                       |                                 |
|------------------------------------------------------|-------------------------------------------------------------------------------------------------------|----------|---------------------------------------------------------------------------------------|---------------------------------|
| HEAD RESTRAINT                                       | YES                                                                                                   | NO       | DETAILS                                                                               |                                 |
| Fixed:                                               | <u>-</u>                                                                                              | <u>X</u> |                                                                                       |                                 |
| Vertical Adjustment:                                 | <u>X</u>                                                                                              | <u>-</u> |                                                                                       |                                 |
| Vertical Locks:                                      | <u>X</u>                                                                                              | <u>-</u> | Prevents head restraint from sliding downward.                                        |                                 |
| Fore-Aft Adjustment:                                 | <u>-</u>                                                                                              | <u>X</u> |                                                                                       |                                 |
| Fore-Aft Locks:                                      | <u>-</u>                                                                                              | <u>X</u> |                                                                                       |                                 |
| SEATBACK RECLINE TYPE                                | YES                                                                                                   | NO       | DETAILS                                                                               |                                 |
| Fixed:                                               | <u>-</u>                                                                                              | <u>X</u> |                                                                                       |                                 |
| Power:                                               | <u>-</u>                                                                                              | <u>X</u> |                                                                                       |                                 |
| Lever (with detents):                                | <u>X</u>                                                                                              | <u>-</u> |                                                                                       |                                 |
| Lever (infinite)                                     | <u>-</u>                                                                                              | <u>X</u> |                                                                                       |                                 |
| Lever (ratchet)                                      | <u>-</u>                                                                                              | <u>X</u> |                                                                                       |                                 |
| Rotary Knob:                                         | <u>-</u>                                                                                              | <u>X</u> |                                                                                       |                                 |
| Pivot locks on Both Sides:                           | <u>X</u>                                                                                              | <u>-</u> |                                                                                       |                                 |
| LUMBAR ADJUSTMENT                                    | YES                                                                                                   | NO       | DETAILS                                                                               |                                 |
| Fixed:                                               | <u>X</u>                                                                                              | <u>-</u> |                                                                                       |                                 |
| Adjustable:                                          | <u>-</u>                                                                                              | <u>X</u> | Placed in retracted position for ICBC measurements and test.                          |                                 |
| BOLSTER ADJUSTMENT                                   | YES                                                                                                   | NO       | DETAILS                                                                               |                                 |
| Fixed:                                               | <u>X</u>                                                                                              | <u>-</u> |                                                                                       |                                 |
| Adjustable:                                          | <u>-</u>                                                                                              | <u>X</u> | Placed in full open for ICBC measurements and test.                                   |                                 |
| SEAT CUSHION TYPE                                    | YES                                                                                                   | NO       | DETAILS                                                                               |                                 |
| Cushion moves vertically independently of seat back: | <u>-</u>                                                                                              | <u>X</u> |                                                                                       |                                 |
| SEAT CUSHION FORE-AFT                                | YES                                                                                                   | NO       | DETAILS                                                                               |                                 |
| Fixed:                                               | <u>-</u>                                                                                              | <u>X</u> |                                                                                       |                                 |
| Power:                                               | <u>-</u>                                                                                              | <u>X</u> | Travel:                                                                               | <u>-</u> mm                     |
| Manual-Detents:                                      | <u>X</u>                                                                                              | <u>-</u> | First Detent:                                                                         | <u>0</u> Last Detent: <u>24</u> |
| Manual-Infinite:                                     | <u>-</u>                                                                                              | <u>X</u> | Travel:                                                                               | <u>-</u> mm                     |
| SEAT CUSHION VERTICAL                                | YES                                                                                                   | NO       | DETAILS                                                                               |                                 |
| Fixed:                                               | <u>-</u>                                                                                              | <u>X</u> |                                                                                       |                                 |
| Power:                                               | <u>-</u>                                                                                              | <u>X</u> |                                                                                       |                                 |
| Manual-Detents                                       | <u>-</u>                                                                                              | <u>X</u> |                                                                                       |                                 |
| Manual-Infinite                                      | <u>X</u>                                                                                              | <u>-</u> | Side lever changes seat height and angle. Seat angle is dependent on the seat height. |                                 |
| SEAT TEST POSITION                                   |                                                                                                       |          |                                                                                       |                                 |
| Seat Cushion Fore-aft:                               | <u>Mid-position (detent 12) OR 120 mm forward of rearward-most position</u>                           |          |                                                                                       |                                 |
| Seat Cushion Vertical:                               | <u>Set to mid-angle, which can occurs at a specific vertical position (approximately mid-height).</u> |          |                                                                                       |                                 |
| Seat Back:                                           | <u>25 degree torso angle as set with the H-point machine.</u>                                         |          |                                                                                       |                                 |
| Head Restraint:                                      | <u>Full up</u>                                                                                        |          |                                                                                       |                                 |

# DATA SHEET 4 (continued)

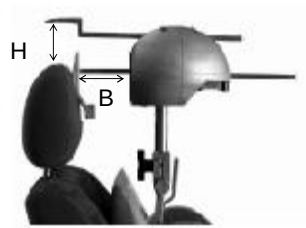
## SEAT DATA

### P3 DATA:

|                                                      |              |          |                                                              |                                                    |
|------------------------------------------------------|--------------|----------|--------------------------------------------------------------|----------------------------------------------------|
| HEAD RESTRAINT                                       | YES          | NO       | DETAILS                                                      |                                                    |
| Fixed:                                               | <u>X</u>     | <u>-</u> |                                                              |                                                    |
| Vertical Adjustment:                                 | <u>-</u>     | <u>X</u> |                                                              |                                                    |
| Vertical Locks:                                      | <u>-</u>     | <u>X</u> |                                                              |                                                    |
| Fore-Aft Adjustment:                                 | <u>-</u>     | <u>X</u> |                                                              |                                                    |
| Fore-Aft Locks:                                      | <u>-</u>     | <u>X</u> |                                                              |                                                    |
| SEATBACK RECLINE TYPE                                | YES          | NO       | DETAILS                                                      |                                                    |
| Fixed:                                               | <u>X</u>     | <u>-</u> | Seat back support is part of the vehicle body structure.     |                                                    |
| Power:                                               | <u>-</u>     | <u>X</u> |                                                              |                                                    |
| Lever (with detents):                                | <u>-</u>     | <u>X</u> |                                                              |                                                    |
| Lever (infinite)                                     | <u>-</u>     | <u>X</u> |                                                              |                                                    |
| Lever (ratchet)                                      | <u>-</u>     | <u>X</u> |                                                              |                                                    |
| Rotary Knob:                                         | <u>-</u>     | <u>X</u> |                                                              |                                                    |
| Pivot locks on Both Sides:                           | <u>-</u>     | <u>X</u> |                                                              |                                                    |
| LUMBAR ADJUSTMENT                                    | YES          | NO       | DETAILS                                                      |                                                    |
| Fixed:                                               | <u>X</u>     | <u>-</u> |                                                              |                                                    |
| Adjustable:                                          | <u>-</u>     | <u>X</u> | Placed in retracted position for ICBC measurements and test. |                                                    |
| BOLSTER ADJUSTMENT                                   | YES          | NO       | DETAILS                                                      |                                                    |
| Fixed:                                               | <u>X</u>     | <u>-</u> |                                                              |                                                    |
| Adjustable:                                          | <u>-</u>     | <u>X</u> | Placed in full open for ICBC measurements and test.          |                                                    |
| SEAT CUSHION TYPE                                    | YES          | NO       | DETAILS                                                      |                                                    |
| Cushion moves vertically independently of seat back: | <u>-</u>     | <u>X</u> |                                                              |                                                    |
| SEAT CUSHION FORE-AFT                                | YES          | NO       | DETAILS                                                      |                                                    |
| Fixed:                                               | <u>X</u>     | <u>-</u> |                                                              |                                                    |
| Power:                                               | <u>-</u>     | <u>X</u> | Travel:                                                      | <u>-</u> mm                                        |
| Manual-Detents:                                      | <u>-</u>     | <u>X</u> | First Detent:                                                | <u>-</u> Last Detent: <u>-</u> Travel: <u>-</u> mm |
| Manual-Infinite:                                     | <u>-</u>     | <u>X</u> | Travel:                                                      | <u>-</u> mm                                        |
| SEAT CUSHION VERTICAL                                | YES          | NO       | DETAILS                                                      |                                                    |
| Fixed:                                               | <u>X</u>     | <u>-</u> |                                                              |                                                    |
| Power:                                               | <u>-</u>     | <u>X</u> |                                                              |                                                    |
| Manual-Detents                                       | <u>-</u>     | <u>X</u> |                                                              |                                                    |
| Manual-Infinite                                      | <u>-</u>     | <u>X</u> |                                                              |                                                    |
| SEAT TEST POSITION                                   |              |          |                                                              |                                                    |
| Seat Cushion Fore-aft:                               | <u>Fixed</u> |          |                                                              |                                                    |
| Seat Cushion Vertical:                               | <u>Fixed</u> |          |                                                              |                                                    |
| Seat Back:                                           | <u>Fixed</u> |          |                                                              |                                                    |
| Head Restraint:                                      | <u>Fixed</u> |          |                                                              |                                                    |

## DATA SHEET 5

### ICBC MEASUREMENTS



#### P1 DATA:

##### ICBC MEASUREMENTS

| HEAD RESTRAINT POSITION<br>(vertical/fore-aft) | B<br>(mm, backset) | H<br>(mm, height) | Torso<br>Angle<br>(deg) | Height Along<br>Torso Line From<br>Pivot (mm) |
|------------------------------------------------|--------------------|-------------------|-------------------------|-----------------------------------------------|
| Full Up / Fixed:                               | 48                 | 7                 | 24.8                    | 840                                           |
| Full Down / Fixed:                             | 36                 | 68                | 24.8                    | 779                                           |

| HEAD RESTRAINT POSITION –<br>CONFIGURED FOR TEST<br>(vertical/fore-aft) | B<br>(mm, backset) | H<br>(mm, height) | Torso<br>Angle<br>(deg) | Height Along<br>Torso Line From<br>Pivot (mm) |
|-------------------------------------------------------------------------|--------------------|-------------------|-------------------------|-----------------------------------------------|
| Full Up / Fixed:                                                        | 48                 | 7                 | 24.8                    | 840                                           |

Head restraint positioning details: Head restraint was positioned full up.

#### P3 DATA:

##### ICBC MEASUREMENTS

| HEAD RESTRAINT POSITION<br>(vertical/fore-aft) | B<br>(mm, backset) | H<br>(mm, height) | Torso<br>Angle<br>(deg) | Height Along<br>Torso Line From<br>Pivot (mm) |
|------------------------------------------------|--------------------|-------------------|-------------------------|-----------------------------------------------|
| Fixed / Fixed:                                 | Not<br>Applicable  | 200               | 25.0                    | 672                                           |

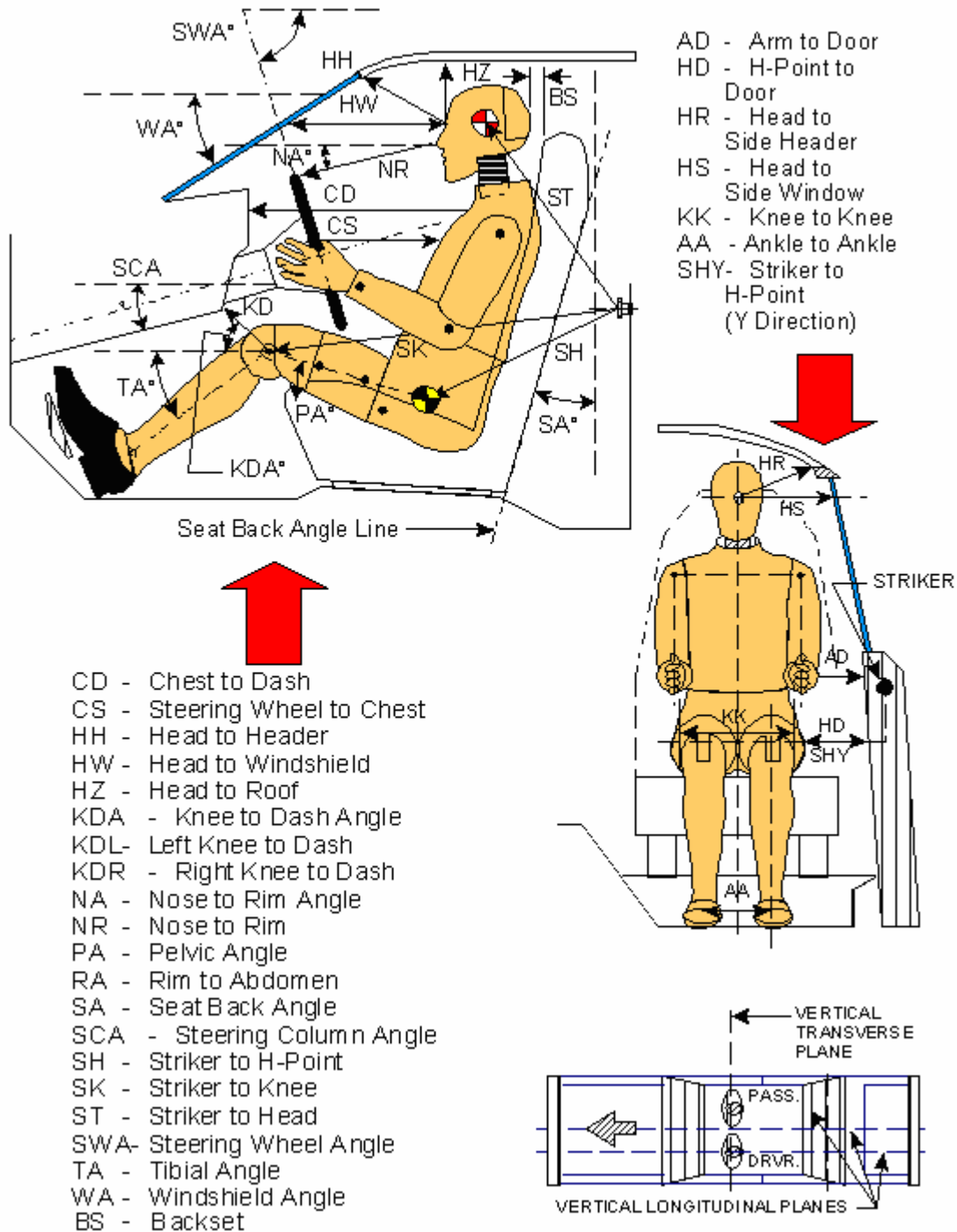
| HEAD RESTRAINT POSITION –<br>CONFIGURED FOR TEST<br>(vertical/fore-aft) | B<br>(mm, backset) | H<br>(mm, height) | Torso<br>Angle<br>(deg) | Height Along<br>Torso Line From<br>Pivot (mm) |
|-------------------------------------------------------------------------|--------------------|-------------------|-------------------------|-----------------------------------------------|
| Fixed / Fixed:                                                          | Not<br>Applicable  | 200               | 25.0                    | 672                                           |

Head restraint positioning details: The fixed head restraint is an integral part of the seat back. The top of the head restraint was too low to be measured with the ICBC backset probe.

# DATA SHEET 6

## DUMMY MEASUREMENTS

### DUMMY MEASUREMENT FOR FRONT SEAT PASSENGERS



DATA SHEET 6 (continued)

DUMMY MEASUREMENTS

|                  | DRIVER (Serial #202)      |             |          | PASS. (Serial #206.)                 |             |          |
|------------------|---------------------------|-------------|----------|--------------------------------------|-------------|----------|
| WA <sup>0</sup>  | 26.9 deg.                 |             |          | N/A                                  |             |          |
| SWA <sup>0</sup> | 66.8 deg.                 |             |          | N/A                                  |             |          |
| SCA <sup>0</sup> | 23.2 deg.                 |             |          | N/A                                  |             |          |
| SA <sup>0</sup>  | 16.5 deg. (on seat frame) |             |          | 25.0 deg. (H-point machine back pan) |             |          |
| HZ               | 176                       |             |          | 183                                  |             |          |
| HH               | 352                       |             |          | 1262                                 |             |          |
| HW               | 662                       |             |          | 1527                                 |             |          |
| HR               | 185                       |             |          | 220                                  |             |          |
| NR               | 417                       | Angle       | 11 deg.  | N/A                                  |             |          |
| CD               | 516                       |             |          | 1474                                 |             |          |
| CS               | 293                       |             |          | N/A                                  |             |          |
| RA               | 190                       |             |          | N/A                                  |             |          |
| KDL              | 163                       | Angle (KDA) | 27 deg.  | 1056                                 |             |          |
| KDR              | 152                       |             |          | 1060                                 | Angle (KDA) | 10 deg.  |
| PA <sup>0</sup>  | 24.8 deg.                 |             |          | 24.8 deg.                            |             |          |
| TA <sup>0</sup>  | 40.6 deg.                 |             |          | 54.5 deg.                            |             |          |
| KK               | 388                       |             |          | 320                                  |             |          |
| AA               | 345                       |             |          | 220                                  |             |          |
| ST               | 536                       | Angle       | 2 deg.   | 328                                  | Angle       | 32 deg.  |
| SK               | 579                       | Angle       | 88 deg.  | 717                                  | Angle       | 108 deg. |
| SH               | 229                       | Angle       | 107 deg. | 470                                  | Angle       | 138 deg. |
| SHY              | 242                       |             |          | 340                                  |             |          |
| HS               | 307                       |             |          | 338                                  |             |          |
| HD               | 157                       |             |          | 196                                  |             |          |
| AD               | 102                       |             |          | 138                                  |             |          |
| BS*              | 66                        |             |          | Not Applicable                       |             |          |

\*Note: Measured with ATD in final seating position  
Dimensions in millimeters

# DATA SHEET 7

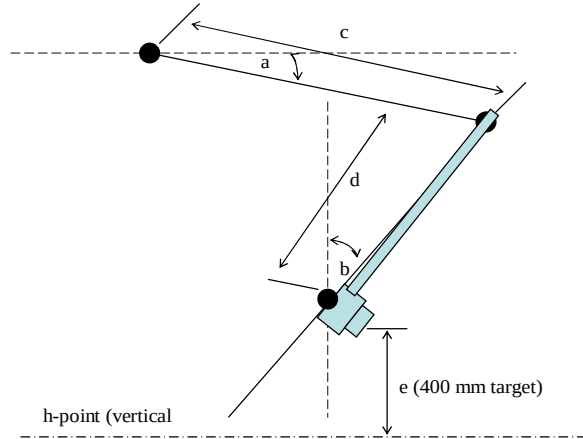
## VEHICLE AND SEAT INSTRUMENTATION MEASUREMENTS

| VEHICLE INSTRUMENTATION                |                 |                      |                            |      |     |
|----------------------------------------|-----------------|----------------------|----------------------------|------|-----|
| LOCATION                               | TRANSDUCER TYPE | DIRECTION OF MEASURE | PRE-TEST DIMENSIONS (mm) * |      |     |
|                                        |                 |                      | X                          | Y    | Z   |
| Left Rear Seat Cross Member            | Accelerometer   | X                    | 1912                       | -720 | 365 |
| Left Rear Seat Cross Member Redundant  | Accelerometer   | X                    | 1912                       | -720 | 365 |
| Right Rear Seat Cross Member Redundant | Accelerometer   | X                    | 1912                       | 720  | 365 |
| Right Rear Seat Cross Member           | Accelerometer   | X                    | 1912                       | 720  | 365 |
| Left Front Sill                        | MHD ARS-06      | About Y              | 2682                       | -962 | 315 |
| Right Front Sill                       | MHD ARS-06      | About Y              | 2682                       | 962  | 315 |

\* X: From rear bumper, positive forward; Y: From long. centerline, positive right; Z: From ground, positive down.

# DATA SHEET 7

## VEHICLE AND SEAT INSTRUMENTATION MEASUREMENTS



| DIMENSION             | P1 LEFT | P1 RIGHT | P3 LEFT | P3 RIGHT |
|-----------------------|---------|----------|---------|----------|
| a (deg from horiz.)   | 18.7    | 23.5     | -       | -        |
| b (deg from vertical) | 33.0    | 35.2     | -       | -        |
| c (mm)                | 399     | 426      | -       | -        |
| d (mm)                | 370     | 370      | -       | -        |
| e (mm, target=400)    | 342     | 342      | -       | -        |

| SEATBACK<br>ANGLE | P1           |               | P3           |               |
|-------------------|--------------|---------------|--------------|---------------|
|                   | PRE<br>(deg) | POST<br>(deg) | PRE<br>(deg) | POST<br>(deg) |
| Left MDH Bracket  | 29.8         | 50.0          | -            | -             |
| Right MHD Bracket | 31.5         | 52.5          | -            | -             |
| Front Sill        | 0.0          | -1.0          | 0.0          | -1.1          |

### POST TEST DETAILS

Seatback Deformation: The P1 seat back reclined statically 21.6 degrees from its pre-test position relative to the vehicle sill, of which approximately 5.5 degrees was a result of the seat pedestal deformation. The P3 seat back did not deform.

Seat/Floor Attachment Point Deformation: The P1 seat pedestal front legs deformed upward accounting for approximately 5.5 degrees of rearward seat rotation as measured statically.

Recliner Mechanism Deformation: The P1 seat back adjustment mechanism remained operable following the test.

Comments: None

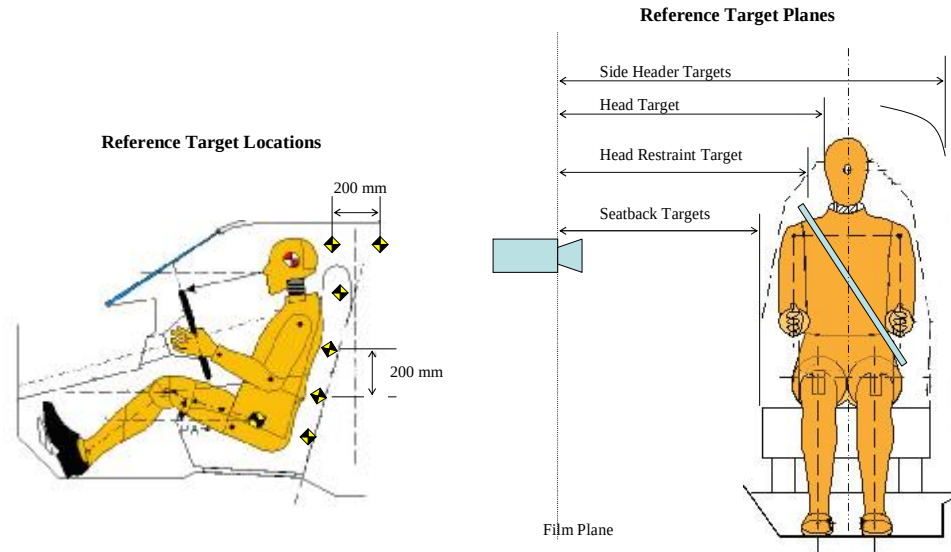


## DATA SHEET 8

### REFERENCE TARGET MEASUREMENTS

NHTSA No. : C45400

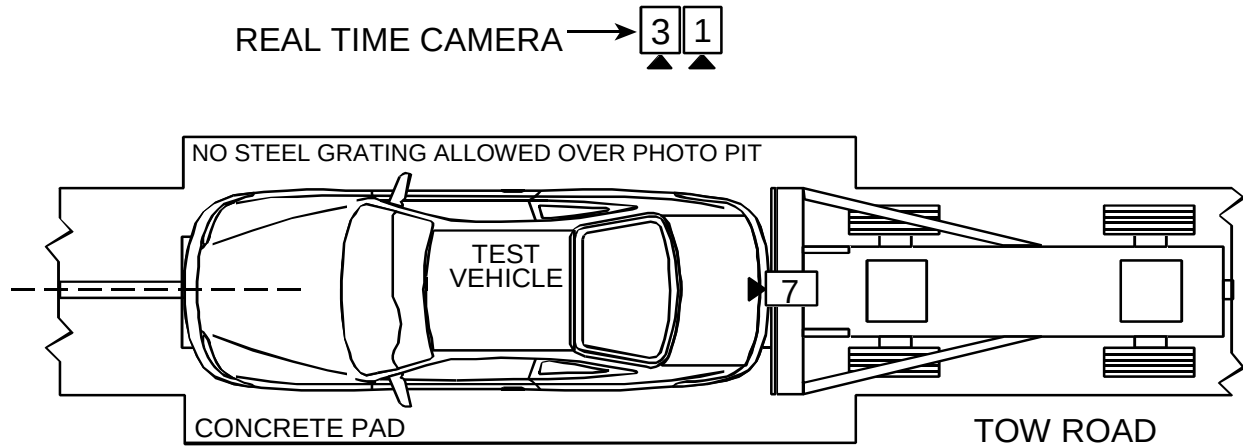
Vehicle : 2004 Mazda 6 4-Door Sedan



| Film Plane to Reference Plane Distance |                          |                         |
|----------------------------------------|--------------------------|-------------------------|
| Plane                                  | Front Occupant View (mm) | Rear Occupant View (mm) |
| Seatback                               | 1088                     | Not Applicable          |
| Head Restraint                         | 1188                     | Not Applicable          |
| Head Target                            | 1230                     | 1192                    |
| Side Header                            | 1430                     | 1445                    |

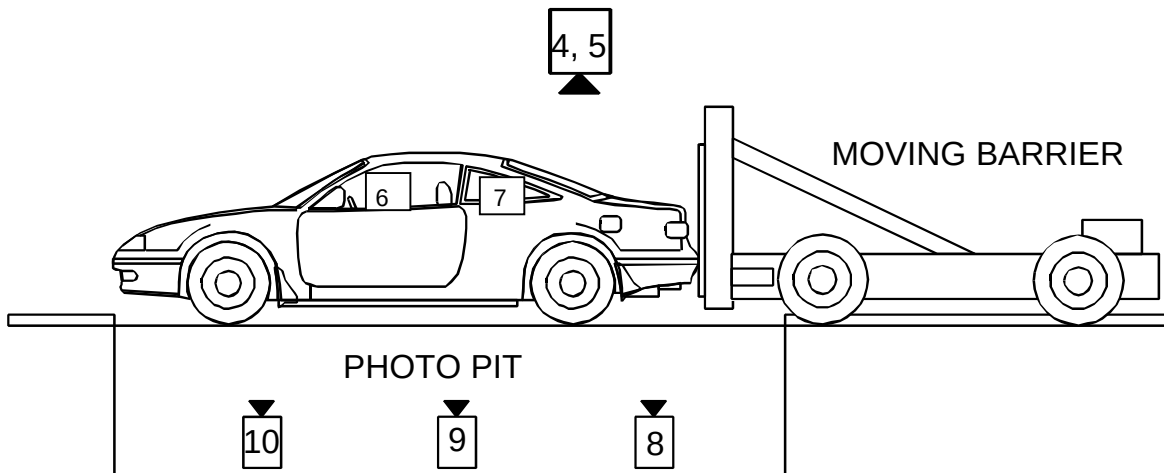
DATA SHEET 9

HIGH SPEED CAMERA LOCATIONS



2

TOP VIEW



LEFT SIDE VIEW

DATA SHEET 9 (continued)

HIGH SPEED CAMERA LOCATIONS

NHTSA No. : C45400

Vehicle : 2004 Mazda 6 4-Door Sedan

| CAMERA NO. | VIEW                               | CAMERA POSITIONS (mm)* |       |       | ANGLE** (degrees) | LENS (mm) | SPEED (fps) |
|------------|------------------------------------|------------------------|-------|-------|-------------------|-----------|-------------|
|            |                                    | X                      | Y     | Z     |                   |           |             |
| 1          | Real-Time Camera                   | -                      | -     | -     | -                 | -         | 24          |
| 2          | Left Side View                     | 2162                   | 16972 | 1065  | 0.0               | 35        | 1005        |
| 3          | Right Side View                    | 1165                   | 16560 | 1094  | -2.0              | 35        | 1005        |
| 4          | Overhead Overall View              | 0                      | 508   | 9804  | -90               | 13        | 1000        |
| 5          | Overhead Close View                | 0                      | 508   | 9804  | -105              | 13        | 1000        |
| 6†         | Onboard Driver View                | 2561                   | 960   | 1031  | -6.0              | 8         | 1000        |
| 7†         | Onboard Passenger View             | 1730                   | 988   | 1088  | -6.5              | 8         | 1000        |
| 8          | Vehicle Rear Underbody View        | 0                      | 700   | -1956 | 90                | 13        | 1025        |
| 9          | Vehicle Mid-Section Underbody View | 0                      | 2115  | -1956 | 90                | 13        | 1000        |
| 10         | Vehicle Front Underbody View       | 0                      | 3650  | -1956 | 90                | 13        | 1005        |

\* X = film plane to monorail centerline (+ to left of rail)  
Y = film plane to impact location (+ ahead of impact location)  
Z = film plane to ground (+ above ground)  
\*\* = referenced to horizontal plane

† Research cameras – X distance is measured to the reference target plane.

Appendix A  
PHOTOGRAPHS

## LIST OF PHOTOGRAPHS

| <u>Figure</u> | <u>Photograph Title</u>                     | <u>Page</u> |
|---------------|---------------------------------------------|-------------|
| A-1           | DRIVER SEAT ICBC BACKSET VIEW               | A-3         |
| A-2           | PASSENGER SEAT ICBC BACKSET VIEW            | A-4         |
| A-3           | PRE-TEST DRIVER BACKSET VIEW                | A-5         |
| A-4           | PRE-TEST PASSENGER BACKSET VIEW             | A-6         |
| A-5           | PRE-TEST DRIVER SEAT CLOSE-UP VIEW          | A-7         |
| A-6           | POST-TEST DRIVER SEAT CLOSE-UP VIEW         | A-8         |
| A-7           | PRE-TEST DRIVER SEAT PERPENDICULAR VIEW     | A-9         |
| A-8           | POST-TEST DRIVER SEAT PERPENDICULAR VIEW    | A-10        |
| A-9           | PRE-TEST PASSENGER SEAT CLOSE-UP VIEW       | A-11        |
| A-10          | POST-TEST PASSENGER SEAT CLOSE-UP VIEW      | A-12        |
| A-11          | PRE-TEST PASSENGER SEAT PERPENDICULAR VIEW  | A-13        |
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| A-13          | PRE-TEST DRIVER LEFT SIDE VIEW              | A-15        |
| A-14          | POST-TEST DRIVER LEFT SIDE VIEW             | A-16        |
| A-15          | PRE-TEST DRIVER RIGHT SIDE VIEW             | A-17        |
| A-16          | POST-TEST DRIVER RIGHT SIDE VIEW            | A-18        |
| A-17          | PRE-TEST DRIVER ISOMETRICAL VIEW            | A-19        |
| A-18          | POST-TEST DRIVER ISOMETRICAL VIEW           | A-20        |
| A-19          | PRE-TEST PASSENGER LEFT SIDE VIEW           | A-21        |
| A-20          | POST-TEST PASSENGER LEFT SIDE VIEW          | A-22        |
| A-21          | PRE-TEST PASSENGER RIGHT SIDE VIEW          | A-23        |
| A-22          | POST-TEST PASSENGER RIGHT SIDE VIEW         | A-24        |
| A-23          | PRE-TEST PASSENGER ISOMETRICAL VIEW         | A-25        |
| A-24          | POST-TEST PASSENGER ISOMETRICAL VIEW        | A-26        |



Figure A-1 DRIVER ICBC BACKSET VIEW



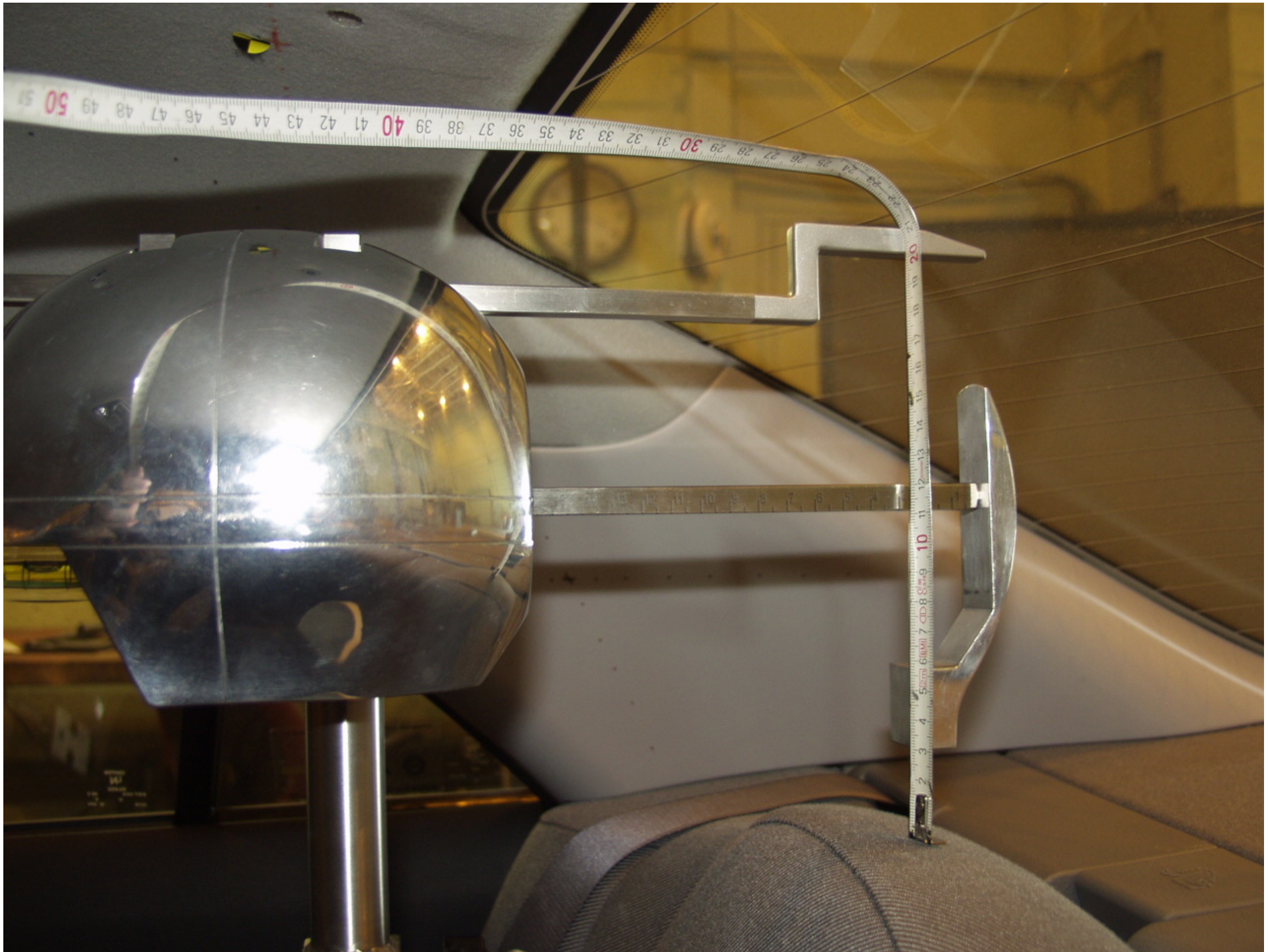


Figure A-2 PASSENGER ICBC BACKSET VIEW





Figure A-3 PRE-TEST DRIVER BACKSET VIEW



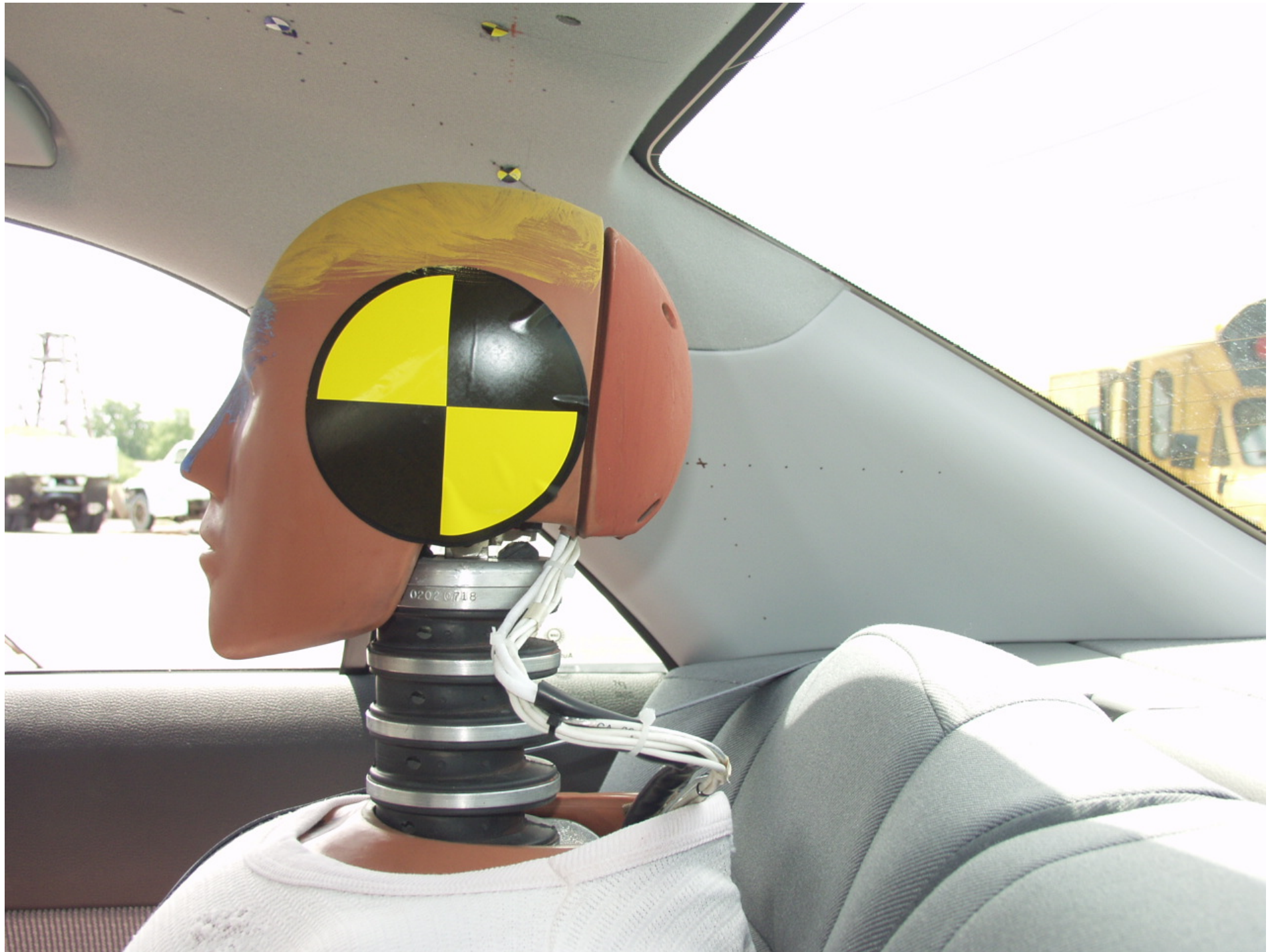


Figure A-4 PRE-TEST PASSENGER BACKSET VIEW





Figure A-5 PRE-TEST DRIVER SEAT CLOSE-UP VIEW





Figure A-6 POST-TEST DRIVER SEAT CLOSE-UP VIEW





Figure A-7 PRE-TEST DRIVER SEAT PERPENDICULAR VIEW









Figure A-9 PRE-TEST PASSENGER SEAT CLOSE-UP VIEW





Figure A-10 POST-TEST PASSENGER SEAT CLOSE-UP VIEW





Figure A-11 PRE-TEST PASSENGER SEAT PERPENDICULAR VIEW





Figure A-12 POST-TEST PASSENGER SEAT PERPENDICULAR VIEW





Figure A-13 PRE-TEST DRIVER LEFT SIDE VIEW





Figure A-14 POST-TEST DRIVER LEFT SIDE VIEW





Figure A-15 PRE-TEST DRIVER RIGHT SIDE VIEW





Figure A-16 POST-TEST DRIVER RIGHT SIDE VIEW





Figure A-17 PRE-TEST DRIVER ISOMETRICAL VIEW





Figure A-18 POST-TEST DRIVER ISOMETRICAL VIEW





Figure A-19 PRE-TEST PASSENGER LEFT SIDE VIEW





Figure A-20 POST-TEST PASSENGER LEFT SIDE VIEW









Figure A-22 POST-TEST PASSENGER RIGHT SIDE VIEW





A-25

8655-F301-19R

Figure A-23 PRE-TEST PASSENGER ISOMETRICAL VIEW





Figure A-24 POST-TEST PASSENGER ISOMETRICAL VIEW



Appendix B

VEHICLE AND DUMMY RESPONSE DATA

TEST NO. C45400

| DRIVER DUMMY (Pos. 1)    | SAE FILTER CHANNEL CLASS |
|--------------------------|--------------------------|
| Head Accelerations       | 1000                     |
| Head Angular Velocity    | 1000                     |
| Neck Forces              | 1000                     |
| Neck Moments             | 600                      |
| Chest Accelerations      | 180                      |
| Chest Angular Velocity   | 600                      |
| Chest Rotations          | 1000                     |
| Pelvic Accelerations     | 1000                     |
| Belt Forces              | 60                       |
| Belt Spoolout            | 180                      |
| Vehicle Accelerations    | 60                       |
| Vehicle Angular Velocity | 1000                     |

Note: Angular position is measured in degrees of rotation from the initial (design) position.



FACILITY: VERF  
TEST#: 42057-2002  
TITLE: 2004 301 Test 2 2004 Mazda 6 C45400  
Version 5.00

DATE: June 16, 2004

**P1 Head**

P1 HIC(15 ms): 34.5  
t1: 121.3 msec  
t2: 136.3 msec  
Duration: 15.0 msec  
Average Acceleration: 22.1 g

P1 HIC(36 ms): 59.6  
t1: 114.0 msec  
t2: 150.0 msec  
Duration: 36.0 msec  
Average Acceleration: 19.4 g

**P1 Upper Neck**

P1 UP NECK Fx: Max: 186.3 N 127.6 msec  
Min: -89.1 N 287.3 msec

P1 UP NECK Fz: Max: 803.0 N 118.0 msec  
Min: -72.6 N 281.8 msec

**P1 UP NECK Mocy (50th Male)**

Max: 21.4 N-m 131.4 msec  
Min: -3.6 N-m 80.8 msec

**P1 UP NECK Nij (50th Male)**

Ntf: 0.16 Nij 123.7 msec CVt: 6806; CVf: 310  
Fz: 768.2 N  
Fx: 152.7 N  
Mocy: 16.0 N-m

Nte: 0.08 Nij 80.3 msec CVt: 6806; CVe: 135  
Fz: 382.9 N  
Fx: -25.9 N  
Mocy: -3.5 N-m

Ncf: 0.03 Nij 492.1 msec CVc: 6160; CVf: 310  
Fz: -50.8 N  
Fx: -60.3 N  
Mocy: 5.5 N-m

Nce: 0.00 Nij -14.1 msec CVc: 6160; CVe: 135  
Fz: -2.4 N  
Fx: 0.7 N  
Mocy: -0.0 N-m

**P1 Chest**

P1 CLIP(3 ms): 11.2 g  
t1: 92.3 msec  
t2: 95.3 msec  
Duration: 3.0 msec  
P1 CSI: 24.7

P1 CHEST DISP: Max: 1.7 mm 74.3 msec  
Min: -0.8 mm 155.1 msec

**P1 Femur**

P1 LEFT FEMUR: Max: 637.7 N 98.3 msec  
Min: -520.7 N 69.9 msec

P1 RIGHT FEMUR: Max: 1196.1 N 94.9 msec  
Min: -522.2 N 70.2 msec

FACILITY: VERF  
TEST#: 42057-2002  
TITLE: 2004 301 Test 2 2004 Mazda 6 C45400  
Version 5.00

DATE: June 16, 2004

### P3 Head

P3 HIC(15 ms): 149.6  
t1: 78.9 msec  
t2: 84.8 msec  
Duration: 6.0 msec  
Average Acceleration: 57.6 g

P3 HIC(36 ms): 149.6  
t1: 78.9 msec  
t2: 84.8 msec  
Duration: 6.0 msec  
Average Acceleration: 57.6 g

### P3 Upper Neck

P3 UP NECK Fx: Max: 268.2 N 64.7 msec  
Min: -825.7 N 82.4 msec

P3 UP NECK Fz: Max: 1967.9 N 82.0 msec  
Min: -156.6 N 192.8 msec

P3 UP NECK Mocy (50th Male)  
Max: 15.2 N-m 188.1 msec  
Min: -39.3 N-m 82.8 msec

### P3 UP NECK Nij (50th Male)

Ntf: 0.11 Nij 62.5 msec CVt: 6806; CVf: 310  
Fz: 632.5 N  
Fx: 256.2 N  
Mocy: 5.6 N-m

Nte: 0.57 Nij 82.1 msec CVt: 6806; CVe: 135  
Fz: 1955.3 N  
Fx: -818.0 N  
Mocy: -38.7 N-m

Ncf: 0.07 Nij 192.7 msec CVc: 6160; CVf: 310  
Fz: -156.4 N  
Fx: -174.3 N  
Mocy: 14.9 N-m

Nce: 0.02 Nij 440.6 msec CVc: 6160; CVe: 135  
Fz: -8.9 N  
Fx: 29.1 N  
Mocy: -3.0 N-m

### P3 Chest

P3 CLIP(3 ms): 24.2 g (Chest Ay data was questionable  
and was not used in the calculation)  
t1: 57.3 msec  
t2: 60.3 msec  
Duration: 3.0 msec  
P3 CSI: 55.0

P3 CHEST DISP: Max: 1.5 mm 86.2 msec  
Min: -3.0 mm 183.2 msec

### P3 Femur

P3 LEFT FEMUR: Max: 130.3 N 142.1 msec  
Min: -1018.5 N 62.9 msec

P3 RIGHT FEMUR: Max: 128.7 N 155.3 msec  
Min: -941.4 N 65.2 msec



### Maximum and Minimum Data

| NAME                        | Unit  | Max    | msec  | Min    | msec  | Comment                  |
|-----------------------------|-------|--------|-------|--------|-------|--------------------------|
| V2P1 Head x                 | g     | 22.4   | 130.6 | -2.5   | 288.1 |                          |
| V2P1 Head y                 | g     | 1.3    | 230.3 | -2.9   | 150.0 |                          |
| V2P1 Head z                 | g     | 10.4   | 66.8  | -1.6   | 281.7 |                          |
| V2P1 Head Resultant         | g     | 22.8   | 130.6 | 0.0    | -95.0 |                          |
| V2P1 Head Comp AVy          | deg/s | 824.8  | 109.0 | -393.1 | 227.7 | f2=0.283 Hz; f4=0.001 Hz |
| V2P1 Head Comp ADy          | deg   | 41.2   | 139.8 | -12.2  | 487.1 | f2=0.283 Hz; f4=0.001 Hz |
| V2P1 Upper Neck Fx          | N     | 186.3  | 127.6 | -89.1  | 287.3 |                          |
| V2P1 Upper Neck Fy          | N     | 58.1   | 228.7 | -74.5  | 159.6 |                          |
| V2P1 Upper Neck Fz          | N     | 803.0  | 118.0 | -72.6  | 281.8 |                          |
| V2P1 Upper Neck F Resultant | N     | 807.6  | 118.0 | 0.1    | -15.7 |                          |
| V2P1 Upper Neck Mx          | N-m   | 2.6    | 238.9 | -3.6   | 110.0 |                          |
| V2P1 Upper Neck My          | N-m   | 24.4   | 130.8 | -4.0   | 80.3  |                          |
| V2P1 Upper Neck Mz          | N-m   | 3.2    | 215.8 | -4.2   | 141.2 |                          |
| V2P1 Upper Neck M Resultant | N-m   | 24.7   | 130.8 | 0.0    | -31.7 |                          |
| V2P1 Lower Neck Fx          | N     | 331.5  | 130.0 | -99.4  | 259.5 |                          |
| V2P1 Lower Neck Fy          | N     | 74.0   | 247.6 | -103.6 | 127.6 |                          |
| V2P1 Lower Neck Fz          | N     | 843.2  | 117.5 | -81.3  | 493.5 |                          |
| V2P1 Lower Neck F Resultant | N     | 873.2  | 117.5 | 0.1    | -93.4 |                          |
| V2P1 Lower Neck Mx          | N-m   | 13.0   | 231.9 | -17.2  | 132.3 |                          |
| V2P1 Lower Neck My          | N-m   | 20.2   | 490.4 | -89.5  | 123.3 |                          |
| V2P1 Lower Neck Mz          | N-m   | 8.3    | 492.5 | -48.9  | 123.3 |                          |
| V2P1 Lower Neck M Resultant | N-m   | 103.1  | 123.3 | 0.0    | -86.4 |                          |
| V2P1 Lower Neck x           | g     | 10.8   | 106.4 | -2.8   | 278.2 |                          |
| V2P1 Chest x                | g     | 10.0   | 97.9  | -1.3   | 281.7 |                          |
| V2P1 Chest y                | g     | 1.1    | 195.8 | -2.2   | 95.4  |                          |
| V2P1 Chest z                | g     | 6.7    | 77.0  | -1.2   | 492.9 |                          |
| V2P1 Chest Resultant        | g     | 11.4   | 93.6  | 0.0    | -51.7 |                          |
| V2P1 Chest Displacement     | mm    | 1.7    | 74.3  | -0.8   | 155.1 |                          |
| V2P1 Chest Comp AVy         | deg/s | 710.4  | 103.8 | -373.6 | 192.8 | f2=0.298 Hz; f4=0.001 Hz |
| V2P1 Chest Comp ADy         | deg   | 43.3   | 152.6 | -7.1   | 438.9 | f2=0.298 Hz; f4=0.001 Hz |
| V2P1 Pelvic x               | g     | 17.3   | 93.5  | -2.4   | 166.2 |                          |
| V2P1 Pelvic y               | g     | 3.6    | 88.7  | -1.6   | 102.5 |                          |
| V2P1 Pelvic z               | g     | 8.2    | 76.8  | -1.4   | 116.9 |                          |
| V2P1 Pelvic Resultant       | g     | 18.0   | 88.6  | 0.0    | -68.7 |                          |
| V2P1 Left Femur             | N     | 637.7  | 98.3  | -520.7 | 69.9  |                          |
| V2P1 Right Femur            | N     | 1196.1 | 94.9  | -522.2 | 70.2  |                          |
| V2P1 Head to Chest          | deg   | 6.3    | 495.8 | -5.6   | 117.3 |                          |
| V2 Driver Lap Belt          | N     | 247.0  | 302.9 | -255.5 | 87.9  |                          |
| V2 Driver Belt Spoolout     | mm    | 0.0    | 1.2   | -128.2 | 82.0  |                          |

**Maximum and Minimum Data (Continued)**

| NAME                        | Unit  | Max    | msec  | Min     | msec  | Comment                  |
|-----------------------------|-------|--------|-------|---------|-------|--------------------------|
| V2P3 Head x                 | g     | 75.9   | 81.1  | -4.3    | 193.6 |                          |
| V2P3 Head y                 | g     | 1.4    | 193.0 | -5.5    | 82.4  |                          |
| V2P3 Head z                 | g     | 34.4   | 83.0  | -3.9    | 192.6 |                          |
| V2P3 Head Resultant         | g     | 79.3   | 81.3  | 0.0     | -23.5 |                          |
| V2P3 Head Comp AVy          | deg/s | 2301.8 | 71.7  | -890.2  | 125.8 | f2=0.287 Hz; f4=0.001 Hz |
| V2P3 Head Comp ADy          | deg   | 63.0   | 82.9  | -11.3   | 206.5 | f2=0.287 Hz; f4=0.001 Hz |
| V2P3 Upper Neck Fx          | N     | 268.2  | 64.7  | -825.7  | 82.4  |                          |
| V2P3 Upper Neck Fy          | N     | 58.3   | 245.6 | -69.7   | 92.1  |                          |
| V2P3 Upper Neck Fz          | N     | 1967.9 | 82.0  | -156.6  | 192.8 |                          |
| V2P3 Upper Neck F Resultant | N     | 2127.0 | 82.0  | 0.1     | -89.5 |                          |
| V2P3 Upper Neck Mx          | N-m   | 2.7    | 188.6 | -6.0    | 85.7  |                          |
| V2P3 Upper Neck My          | N-m   | 15.8   | 53.9  | -53.9   | 82.6  |                          |
| V2P3 Upper Neck Mz          | N-m   | 1.8    | 165.9 | -3.1    | 88.0  |                          |
| V2P3 Upper Neck M Resultant | N-m   | 54.1   | 82.7  | 0.0     | -67.5 |                          |
| V2P3 Lower Neck Fx          | N     | 1146.9 | 82.8  | -401.6  | 60.5  |                          |
| V2P3 Lower Neck Fy          | N     | 61.7   | 235.3 | -134.4  | 62.5  |                          |
| V2P3 Lower Neck Fz          | N     | 937.1  | 82.4  | -233.0  | 48.5  |                          |
| V2P3 Lower Neck F Resultant | N     | 1481.4 | 82.7  | 0.1     | -40.3 |                          |
| V2P3 Lower Neck Mx          | N-m   | 13.8   | 194.5 | -16.4   | 82.4  |                          |
| V2P3 Lower Neck My          | N-m   | 48.4   | 192.8 | -205.9  | 82.6  |                          |
| V2P3 Lower Neck Mz          | N-m   | 5.4    | 62.4  | -3.7    | 83.2  |                          |
| V2P3 Lower Neck M Resultant | N-m   | 206.6  | 82.6  | 0.0     | -97.6 |                          |
| V2P3 Lower Neck x           | g     | 26.7   | 57.7  | -8.6    | 82.3  |                          |
| V2P3 Chest x                | g     | 24.7   | 59.1  | -2.8    | 82.5  |                          |
| V2P3 Chest y                | g     | 5.9    | 322.3 | -57.8   | 161.1 | Questionable Data        |
| V2P3 Chest z                | g     | 7.9    | 85.8  | -2.3    | 49.8  |                          |
| V2P3 Chest Resultant        | g     | 57.8   | 161.1 | 0.0     | -45.0 |                          |
| V2P3 Chest Compression      | mm    | 1.5    | 86.2  | -3.0    | 183.2 |                          |
| V2P3 Chest Comp AVy         | deg/s | 284.7  | 84.3  | -137.2  | 60.4  | f2=0.308 Hz; f4=0.001 Hz |
| V2P3 Chest Comp ADy         | deg   | 8.9    | 161.2 | -2.2    | 69.5  | f2=0.308 Hz; f4=0.001 Hz |
| V2P3 Pelvic x               | g     | 23.6   | 61.3  | -2.9    | 161.9 |                          |
| V2P3 Pelvic y               | g     | 1.2    | 141.1 | -2.8    | 52.8  |                          |
| V2P3 Pelvic z               | g     | 6.9    | 65.6  | -1.9    | 236.5 |                          |
| V2P3 Pelvic Resultant       | g     | 24.5   | 61.3  | 0.0     | -66.3 |                          |
| V2P3 Left Femur             | N     | 130.3  | 142.1 | -1018.5 | 62.9  |                          |
| V2P3 Right Femur            | N     | 128.7  | 155.3 | -941.4  | 65.2  |                          |
| V2P3 Head to Chest          | deg   | 18.1   | 200.3 | -63.9   | 82.2  |                          |
| V2 RRP Lap Belt             | N     | 788.7  | 157.7 | -42.2   | 54.8  |                          |

**Maximum and Minimum Data (Continued)**

| NAME                                 | Unit  | Max   | msec  | Min    | msec  | Comment                  |
|--------------------------------------|-------|-------|-------|--------|-------|--------------------------|
| V2 Left X Member x                   | g     | 22.1  | 27.2  | -2.2   | 20.6  |                          |
| V2 Left X Member RED x               | g     | 23.0  | 27.3  | -1.8   | 20.9  |                          |
| V2 Right X Member x                  | g     | 20.6  | 5.3   | -1.5   | 133.9 |                          |
| V2 Right X Member RED x              | g     | 16.9  | 5.1   | -5.2   | 16.1  |                          |
| V2 Left Sill Comp AVy                | deg/s | 25.9  | 46.6  | -34.3  | 21.2  | f2=0.3 Hz; f4=0.001 Hz   |
| V2 Left Sill Comp ADy                | deg   | 2.6   | 499.9 | -0.5   | 39.6  | f2=0.3 Hz; f4=0.001 Hz   |
| V2 Right Sill Comp AVy               | deg/s | 17.9  | 210.0 | -35.8  | 17.3  | f2=0.283 Hz; f4=0.001 Hz |
| V2 Right Sill Comp ADy               | deg   | 1.8   | 499.9 | -0.8   | 104.5 | f2=0.283 Hz; f4=0.001 Hz |
| V2P1 Left Seat Comp AVy              | deg/s | 474.6 | 103.1 | -159.2 | 201.6 | f2=0.374 Hz; f4=0.001 Hz |
| V2P1 Left Seat Comp ADy              | deg   | 30.1  | 149.2 | 0.0    | 6.8   | f2=0.374 Hz; f4=0.001 Hz |
| V2P1 Right Seat Comp AVy             | deg/s | 523.2 | 90.0  | -180.4 | 191.3 | f2=0.396 Hz; f4=0.001 Hz |
| V2P1 Right Seat Comp ADy             | deg   | 32.7  | 151.0 | 0.0    | 8.0   | f2=0.396 Hz; f4=0.001 Hz |
| V2P1 Left Link ADy                   | deg   | 17.2  | 132.4 | -2.8   | 28.2  |                          |
| V2P1 Right Link ADy                  | deg   | 22.8  | 143.9 | -1.6   | 26.1  |                          |
| V2P1 Left Span Bar D                 | mm    | 476.7 | 150.4 | -0.1   | 8.3   |                          |
| V2P1 Right Span Bar D                | mm    | 516.7 | 151.1 | 0.0    | -72.2 |                          |
| P1 Left Change in Seat Back Angle WR | deg   | 30.2  | 149.6 | 0.0    | 6.3   |                          |
| P1 Left Change in String Angle       | deg   | 1.0   | 19.6  | -17.6  | 138.4 |                          |
| P1 Left Seat X Displacement          | mm    | 236.9 | 167.4 | -4.5   | 11.1  |                          |
| P1 Right Change in Seat Back Angle W | deg   | 32.8  | 151.1 | 0.0    | 2.2   |                          |
| P1 Right Change in String Angle      | deg   | 0.9   | 19.6  | -13.0  | 149.9 |                          |
| P1 Right Seat X Displacement         | mm    | 266.1 | 143.9 | -4.4   | 10.1  |                          |



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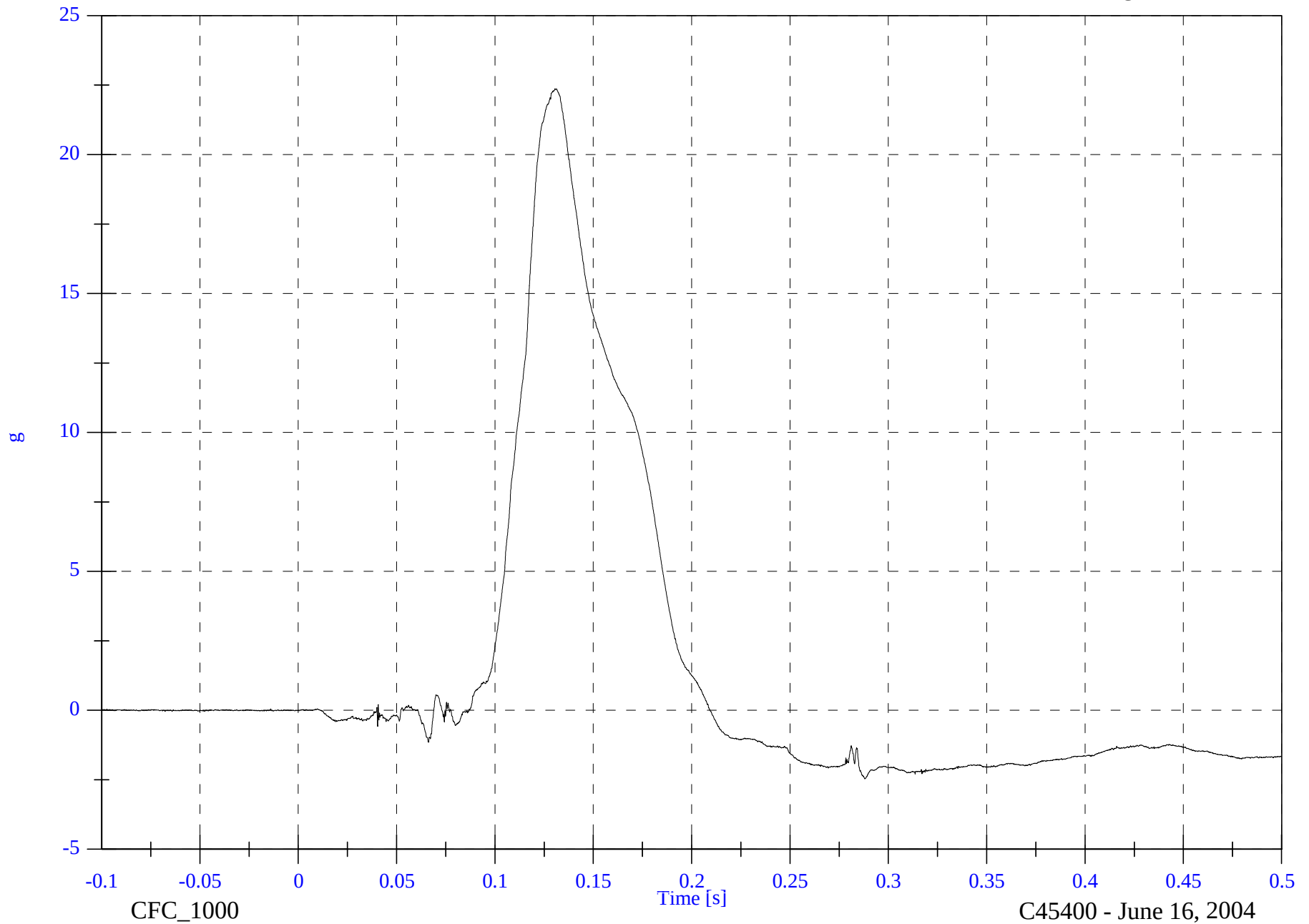
V2P1 Head x

Max: 22.4 [g] at 0.131 [s]

Min: -2.5 [g] at 0.288 [s]

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8655-F301-19R



2004 FMVSS301 Test 2 - 2004 Mazda 6

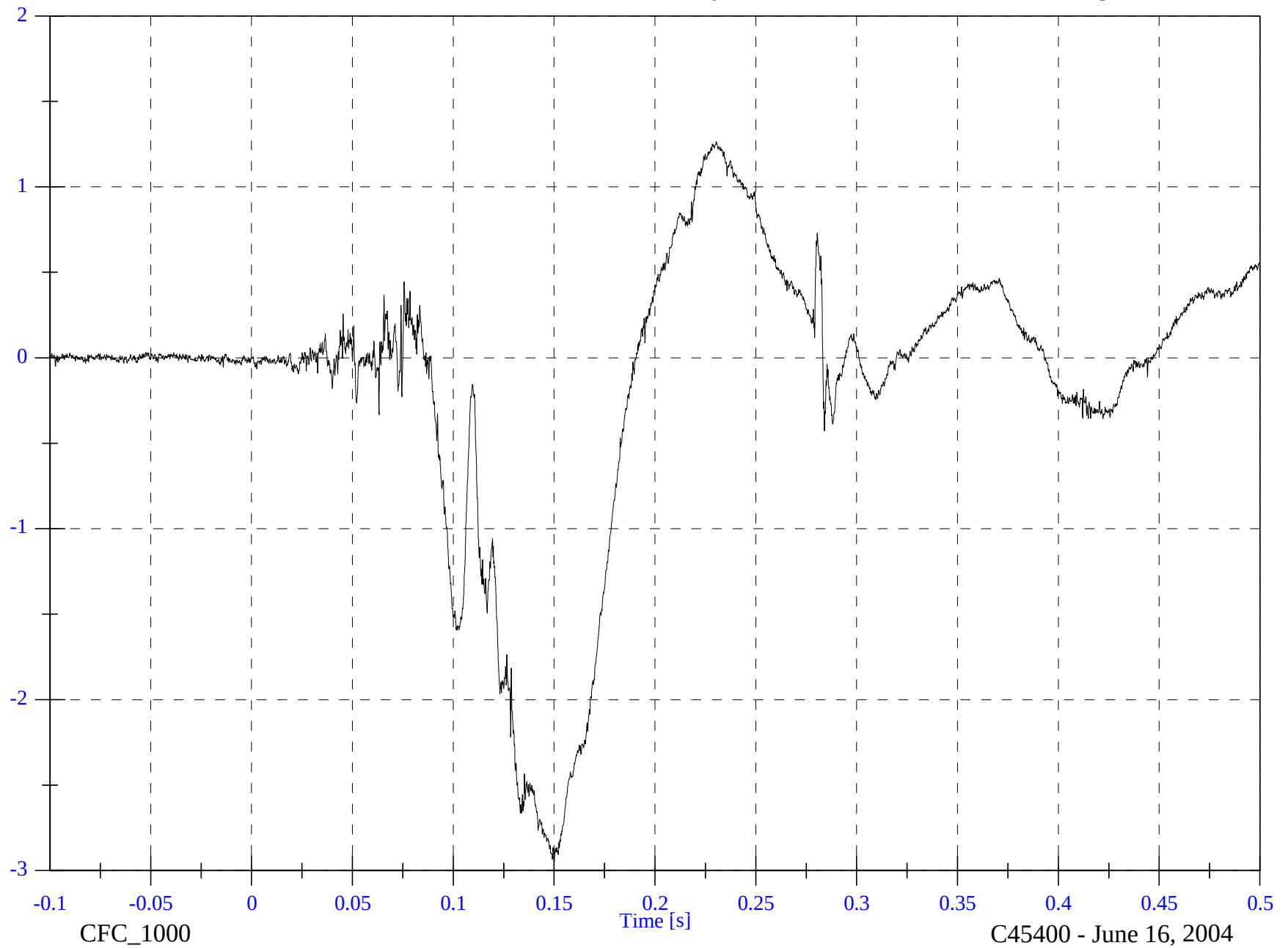
V2P1 Head y

Max: 1.3 [g] at 0.230 [s]

Min: -2.9 [g] at 0.150 [s]

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8655-F301-19R



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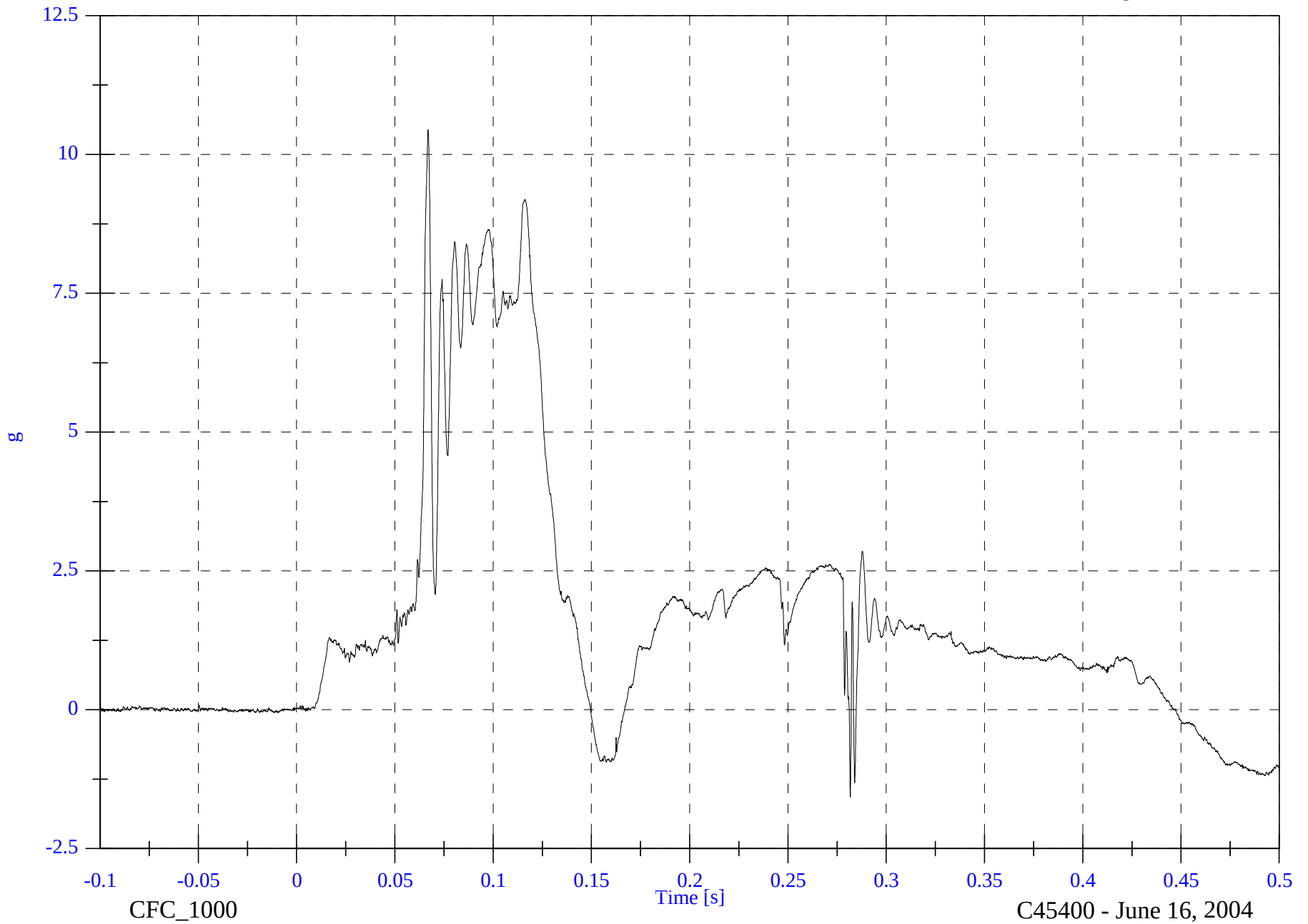
V2P1 Head z

Max: 10.4 [g] at 0.067 [s]

Min: -1.6 [g] at 0.282 [s]

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8655-F301-19R





2004 FMVSS301 Test 2 - 2004 Mazda 6

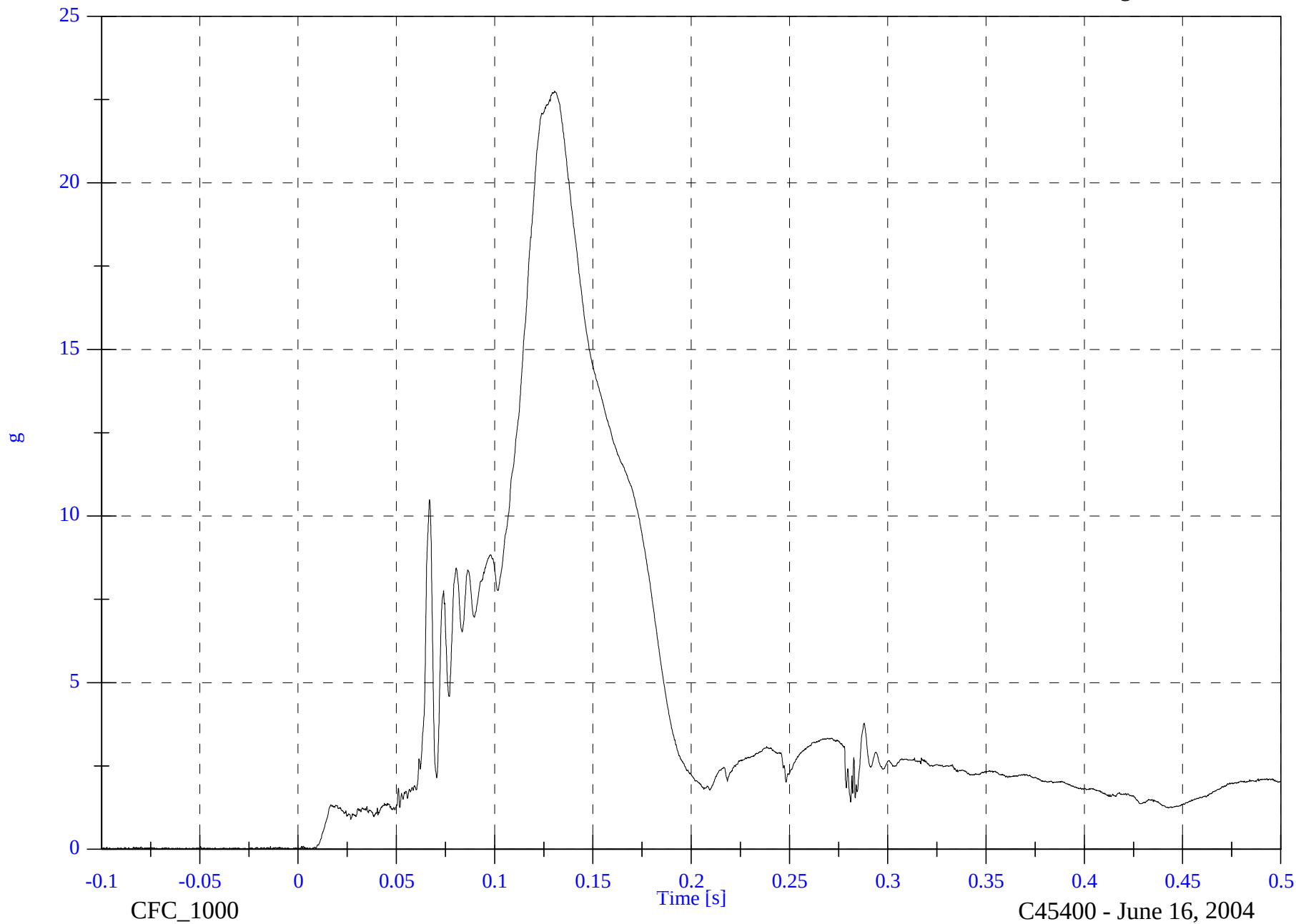
V2P1 Head Resultant

Max: 22.8 [g] at 0.131 [s]

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

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8655-F301-19R



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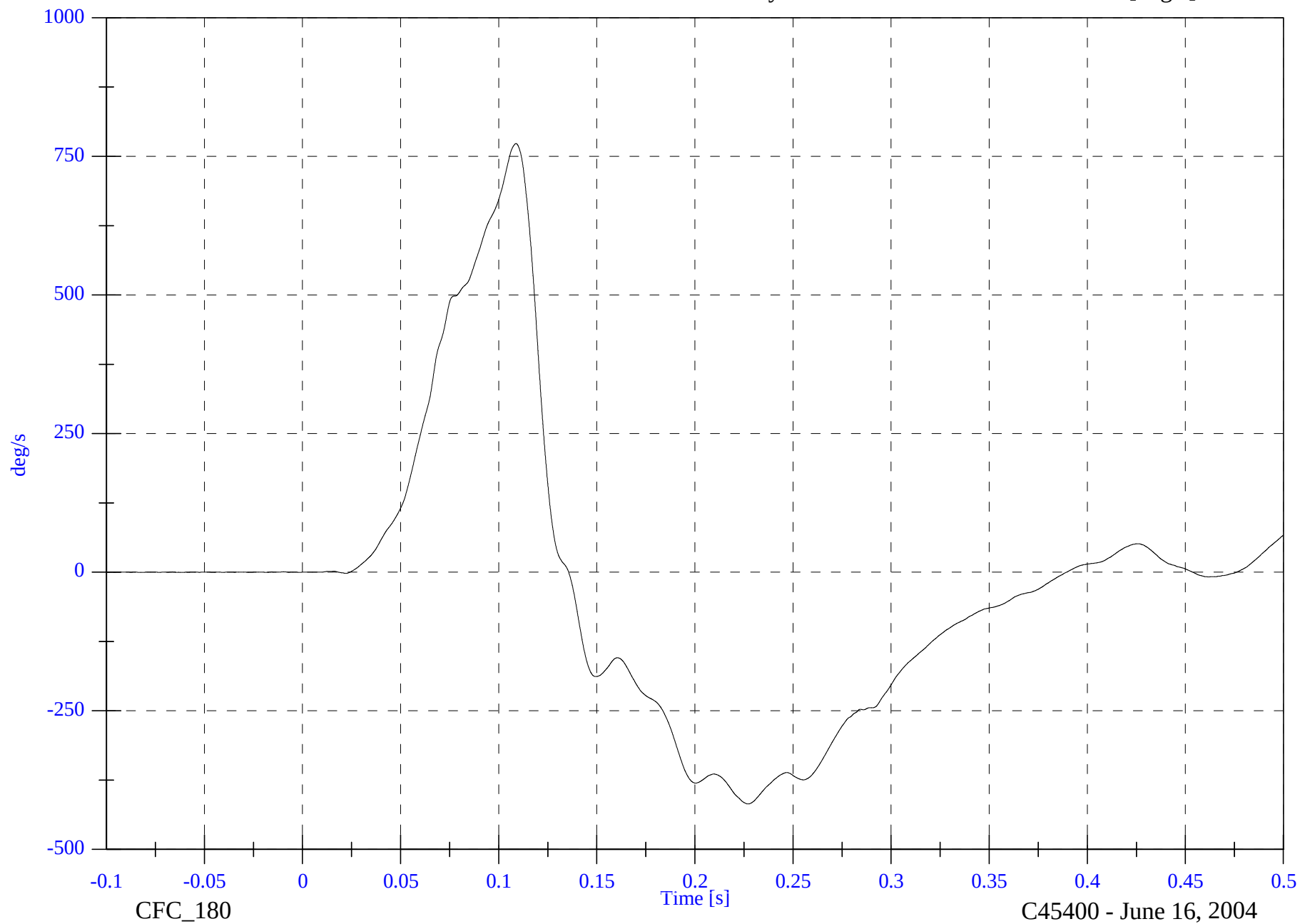
V2P1 Head AVy

Max: 773.1 [deg/s] at 0.109 [s]

Min: -418.0 [deg/s] at 0.227 [s]

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8655-F301-19R



2004 FMVSS301 Test 2 - 2004 Mazda 6

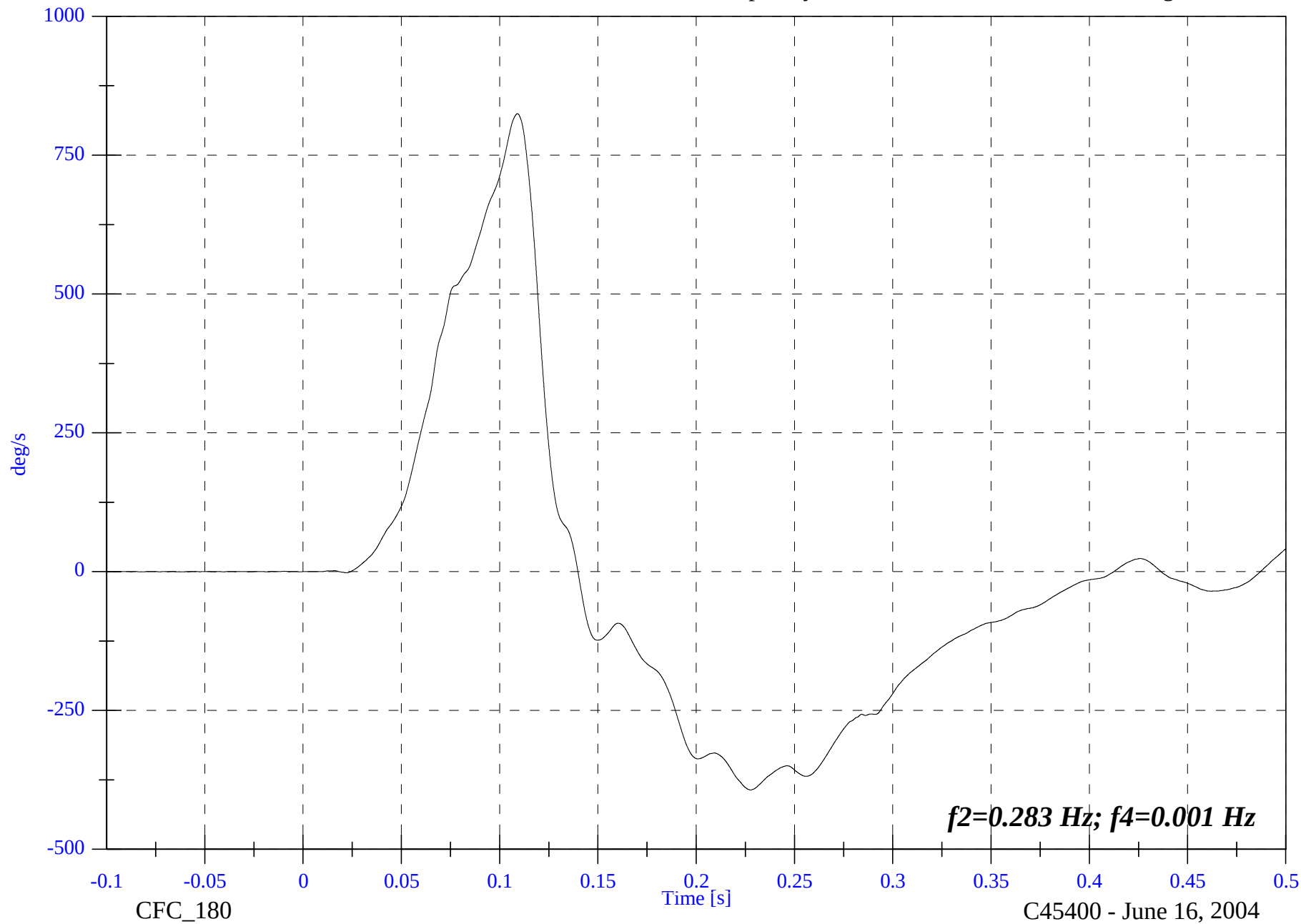
V2P1 Head Comp AVy

Max: 824.8 [deg/s] at 0.109 [s]

Min: -393.1 [deg/s] at 0.228 [s]

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8655-F301-19R





2004 FMVSS301 Test 2 - 2004 Mazda 6

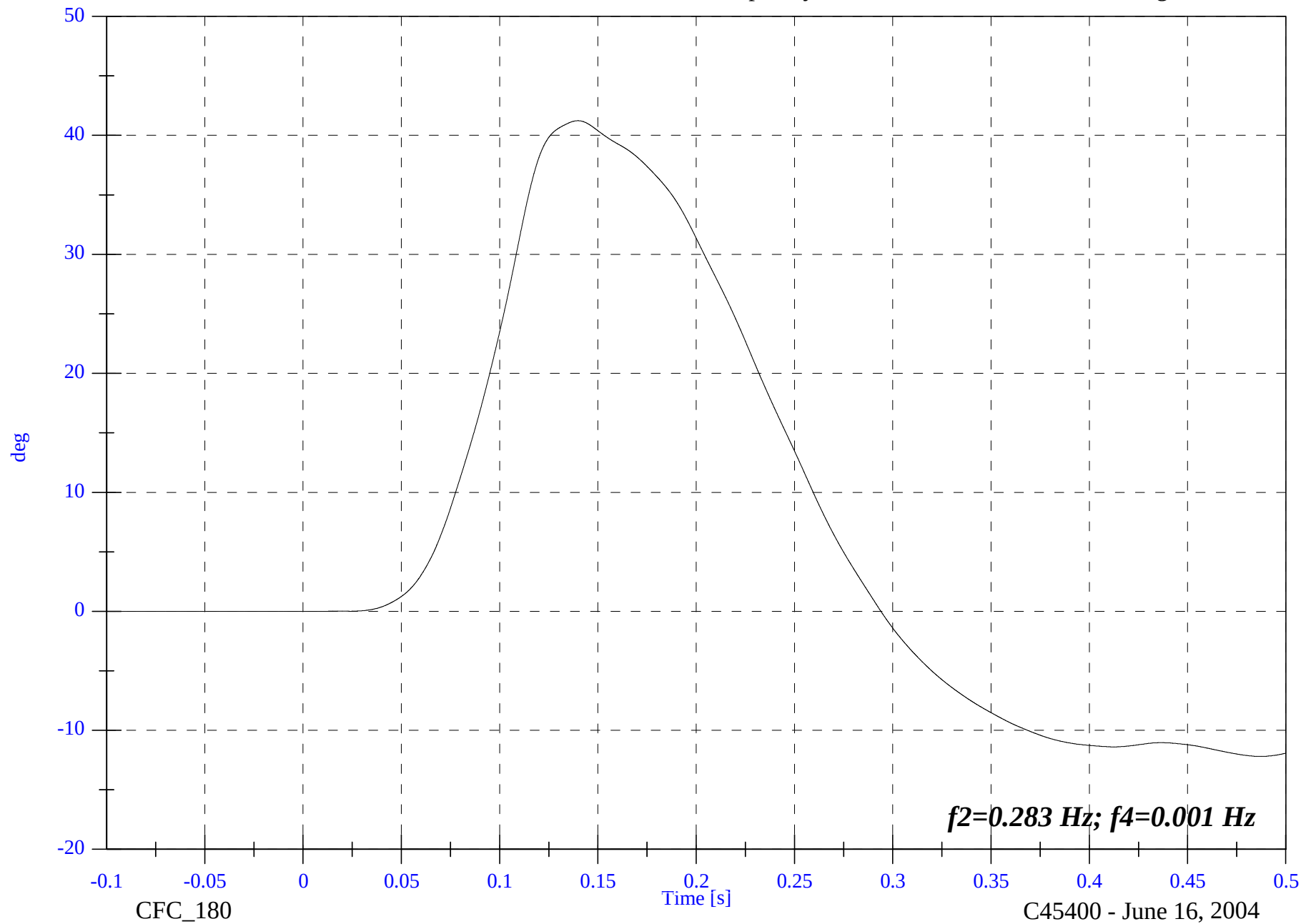
V2P1 Head Comp ADy

Max: 41.2 [deg] at 0.140 [s]

Min: -12.2 [deg] at 0.487 [s]

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8655-F301-19R

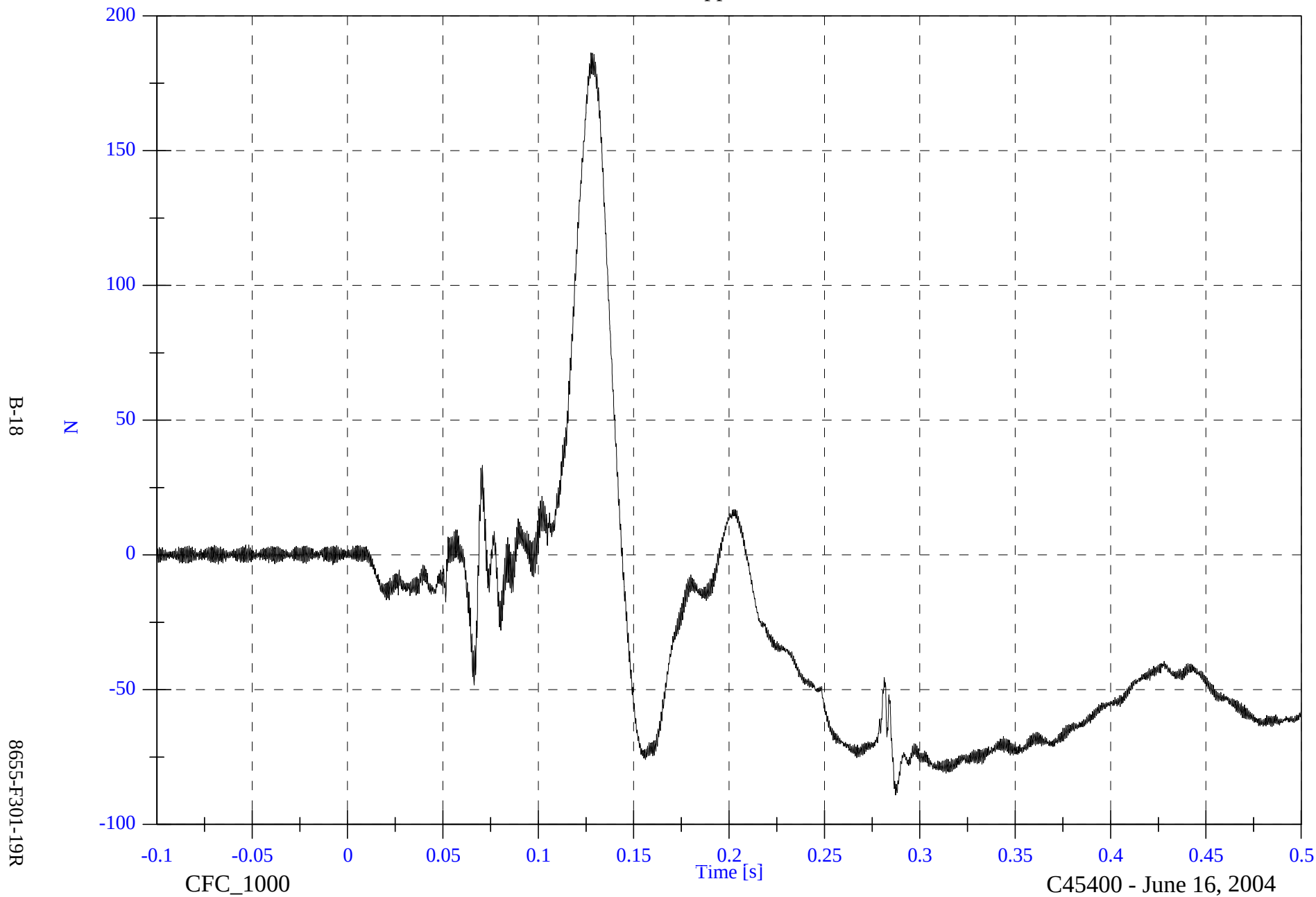


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Max: 186.3 [N] at 0.128 [s]

V2P1 Upper Neck Fx

Min: -89.1 [N] at 0.287 [s]

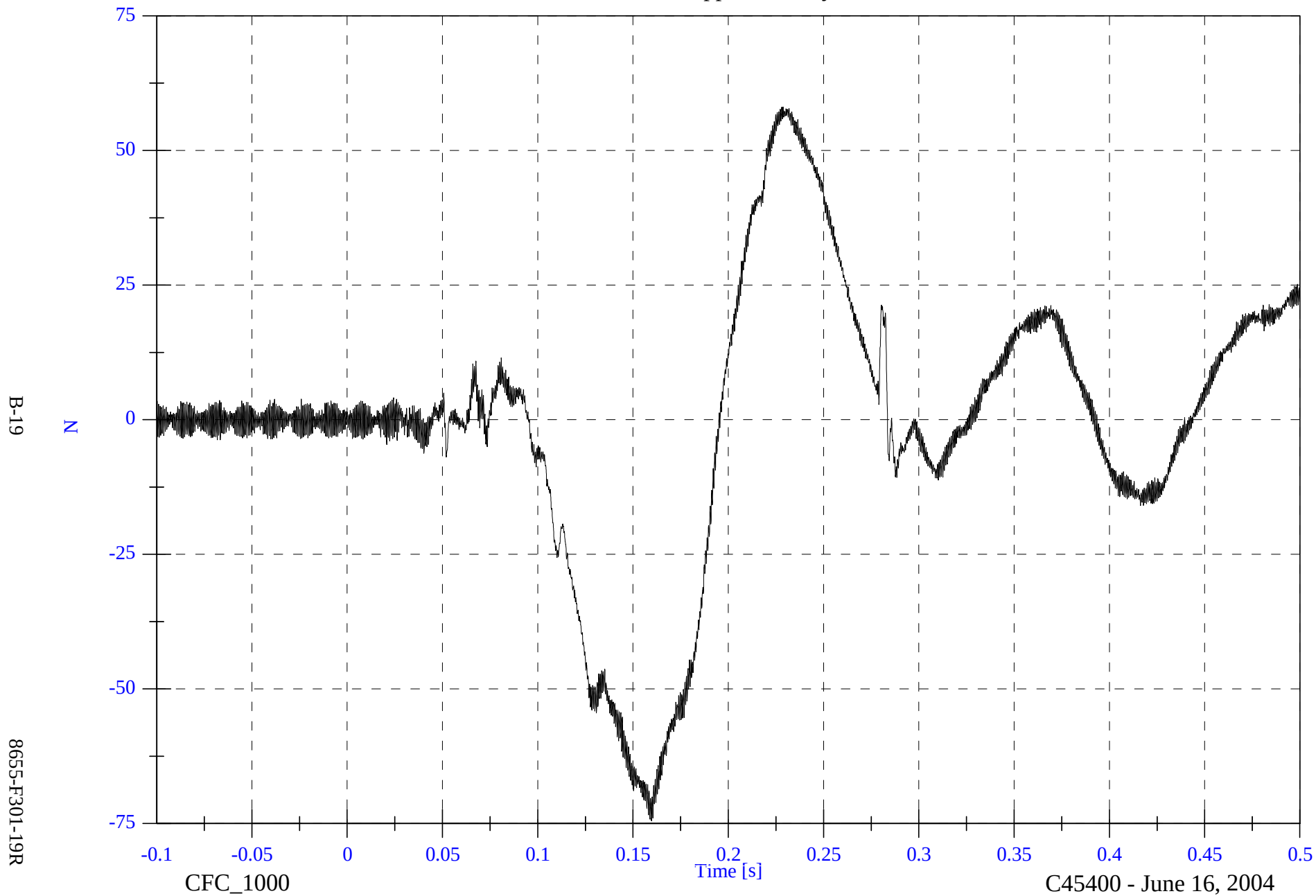


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V2P1 Upper Neck Fy

Max: 58.1 [N] at 0.229 [s]

Min: -74.5 [N] at 0.160 [s]



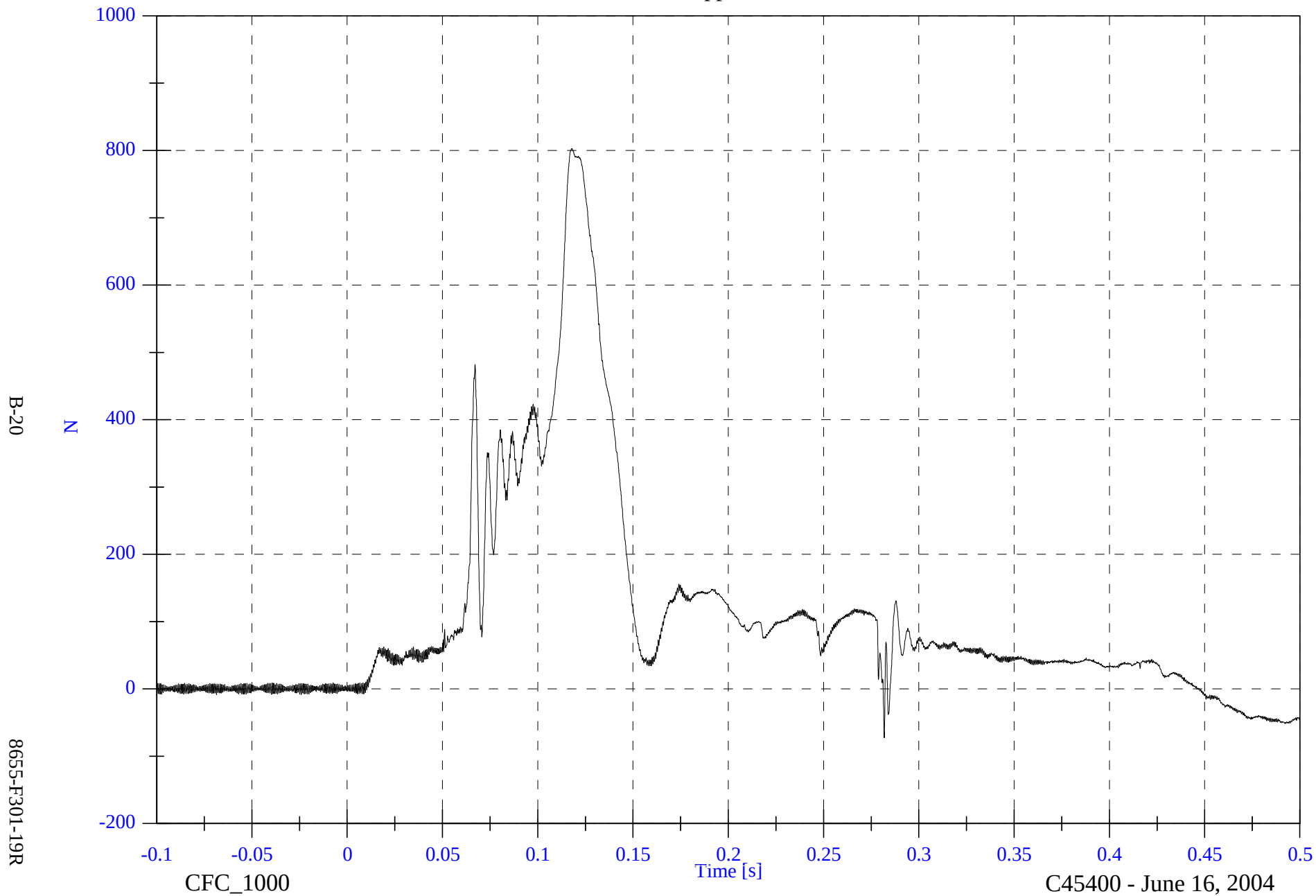


2004 FMVSS301 Test 2 - 2004 Mazda 6

Max: 803.0 [N] at 0.118 [s]

Min: -72.6 [N] at 0.282 [s]

V2P1 Upper Neck Fz



2004 FMVSS301 Test 2 - 2004 Mazda 6

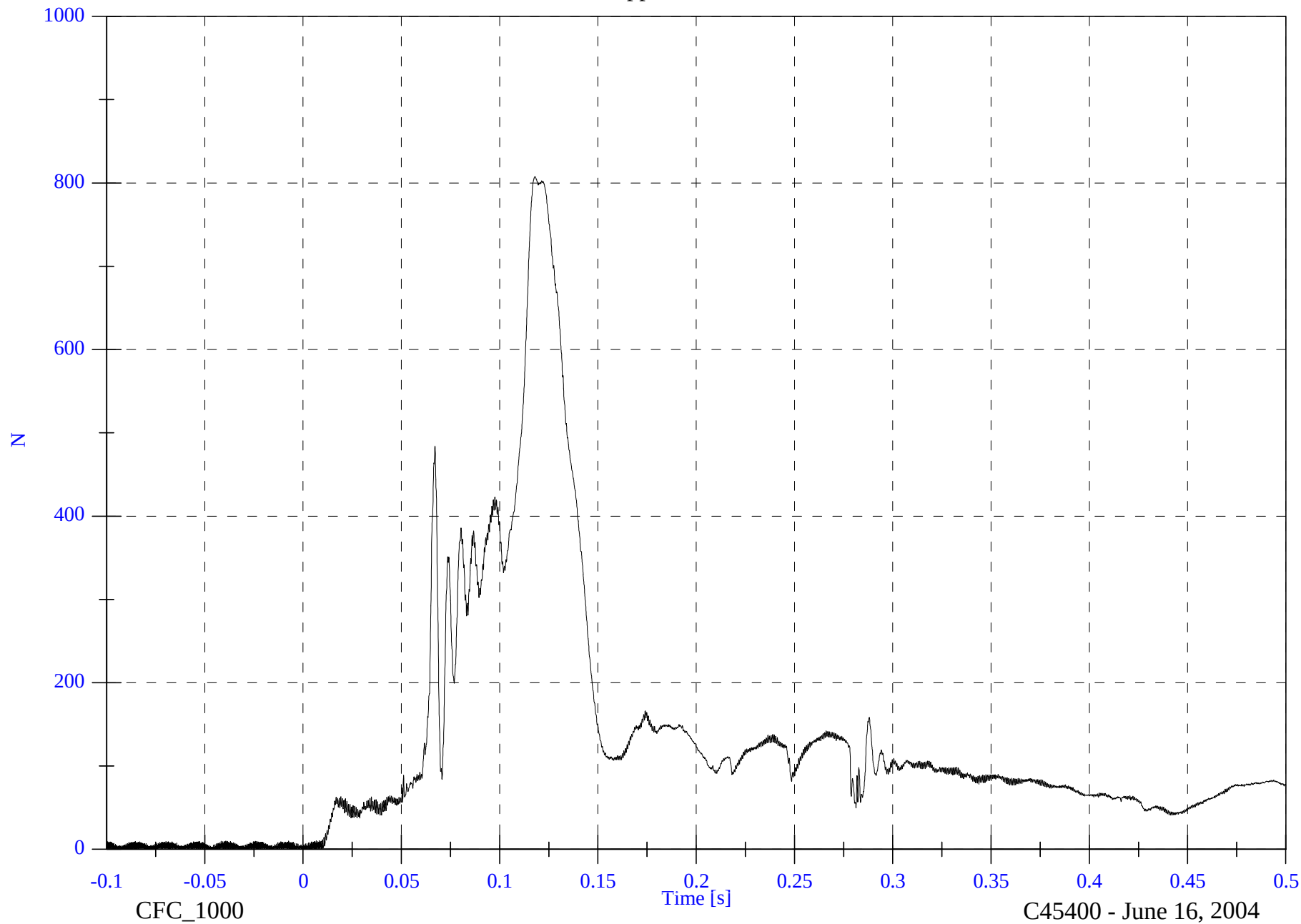
V2P1 Upper Neck F Resultant

Max: 807.6 [N] at 0.118 [s]

Min: 0.1 [N] at -0.016 [s]

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2004 FMVSS301 Test 2 - 2004 Mazda 6

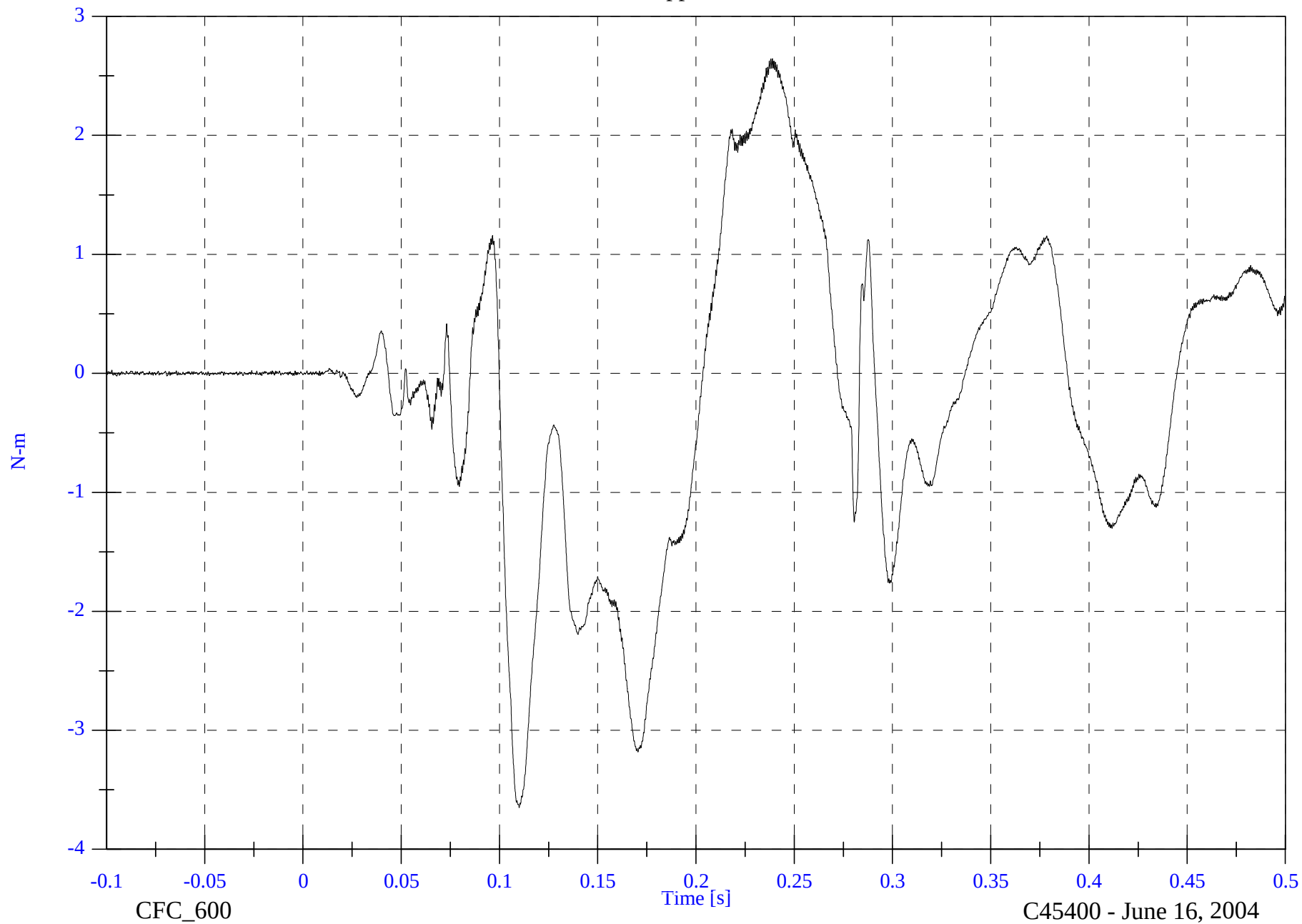
V2P1 Upper Neck Mx

Max: 2.6 [N-m] at 0.239 [s]

Min: -3.6 [N-m] at 0.110 [s]

B-22

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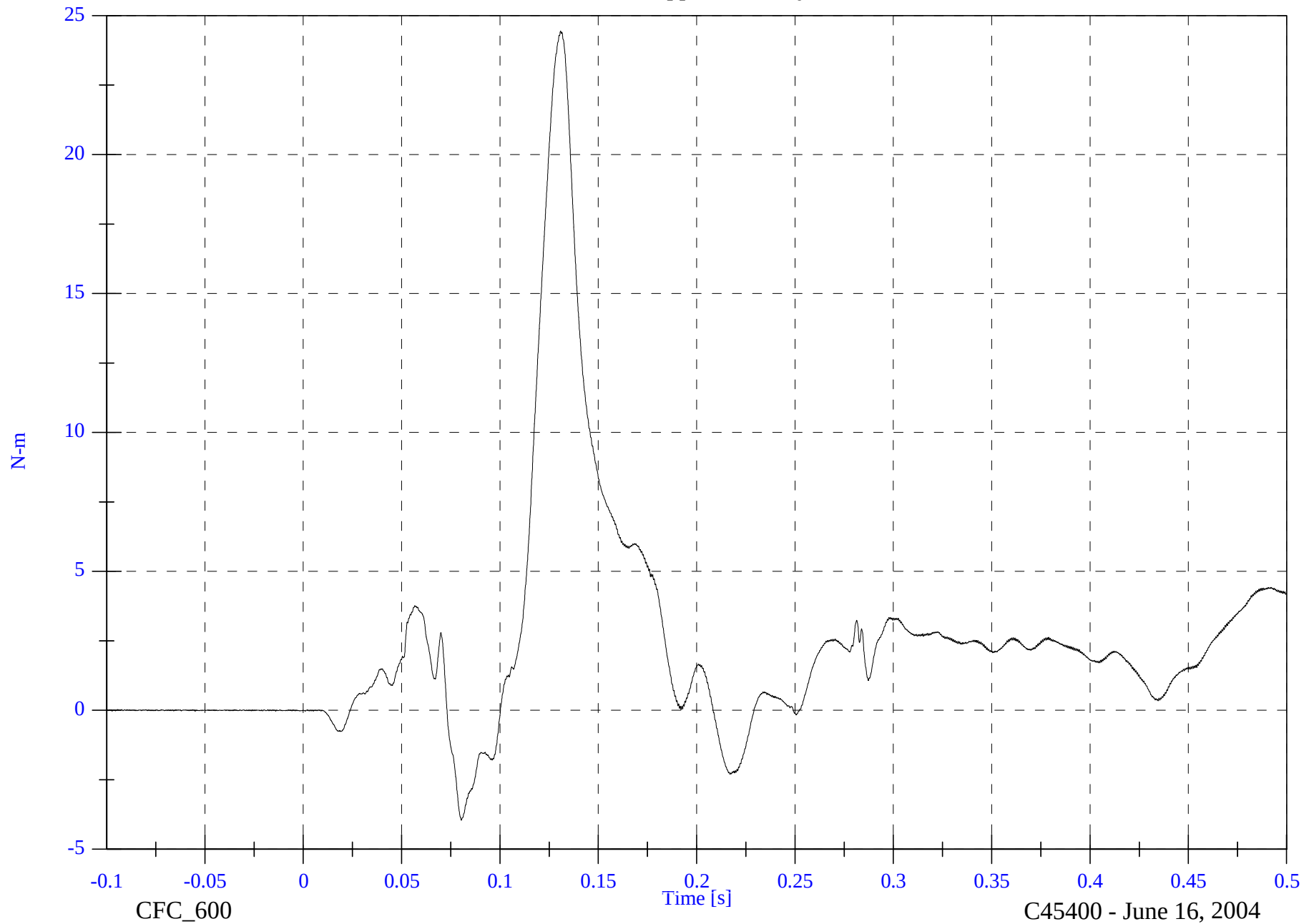


2004 FMVSS301 Test 2 - 2004 Mazda 6

V2P1 Upper Neck My

Max: 24.4 [N-m] at 0.131 [s]

Min: -4.0 [N-m] at 0.080 [s]



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CFC\_600

C45400 - June 16, 2004

2004 FMVSS301 Test 2 - 2004 Mazda 6

V2P1 Upper Neck Mz

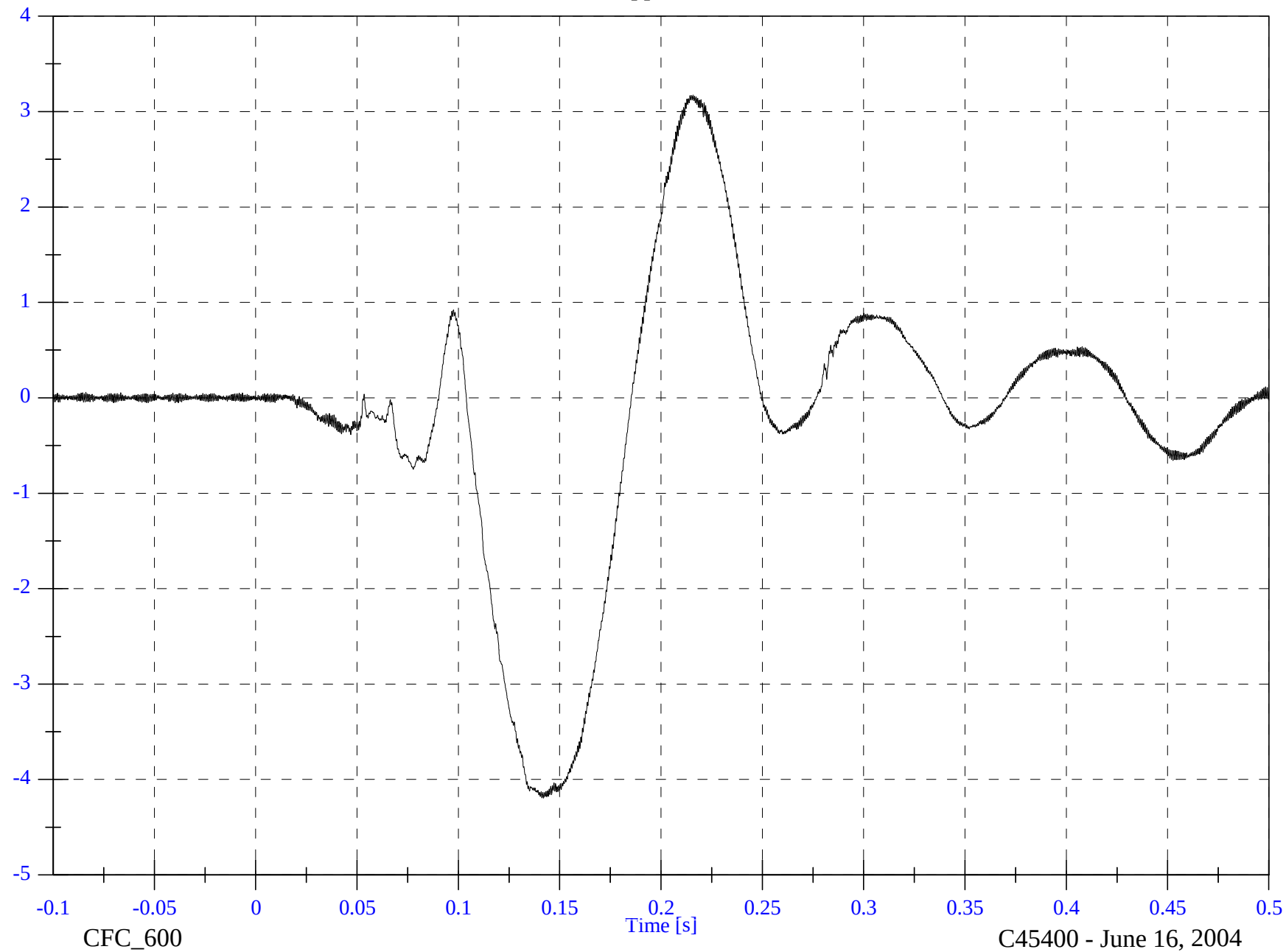
Max: 3.2 [N-m] at 0.216 [s]

Min: -4.2 [N-m] at 0.141 [s]

B-24

N-m

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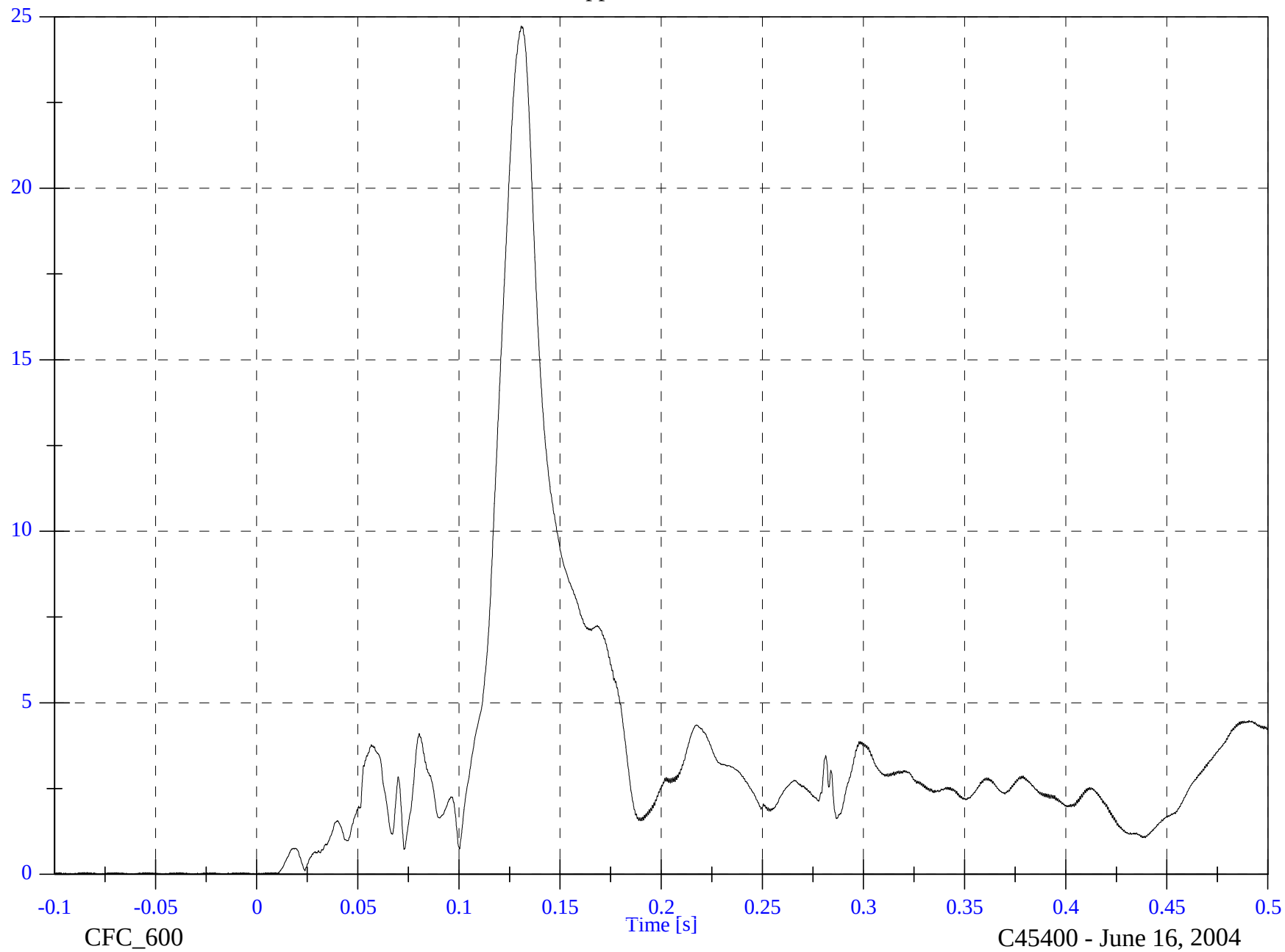


2004 FMVSS301 Test 2 - 2004 Mazda 6

V2P1 Upper Neck M Resultant

Max: 24.7 [N-m] at 0.131 [s]

Min: 0.0 [N-m] at -0.032 [s]



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8655-F301-19R

CFC\_600

C45400 - June 16, 2004



2004 FMVSS301 Test 2 - 2004 Mazda 6

V2P1 Lower Neck Fx

Max: 331.5 [N] at 0.130 [s]

Min: -99.4 [N] at 0.260 [s]

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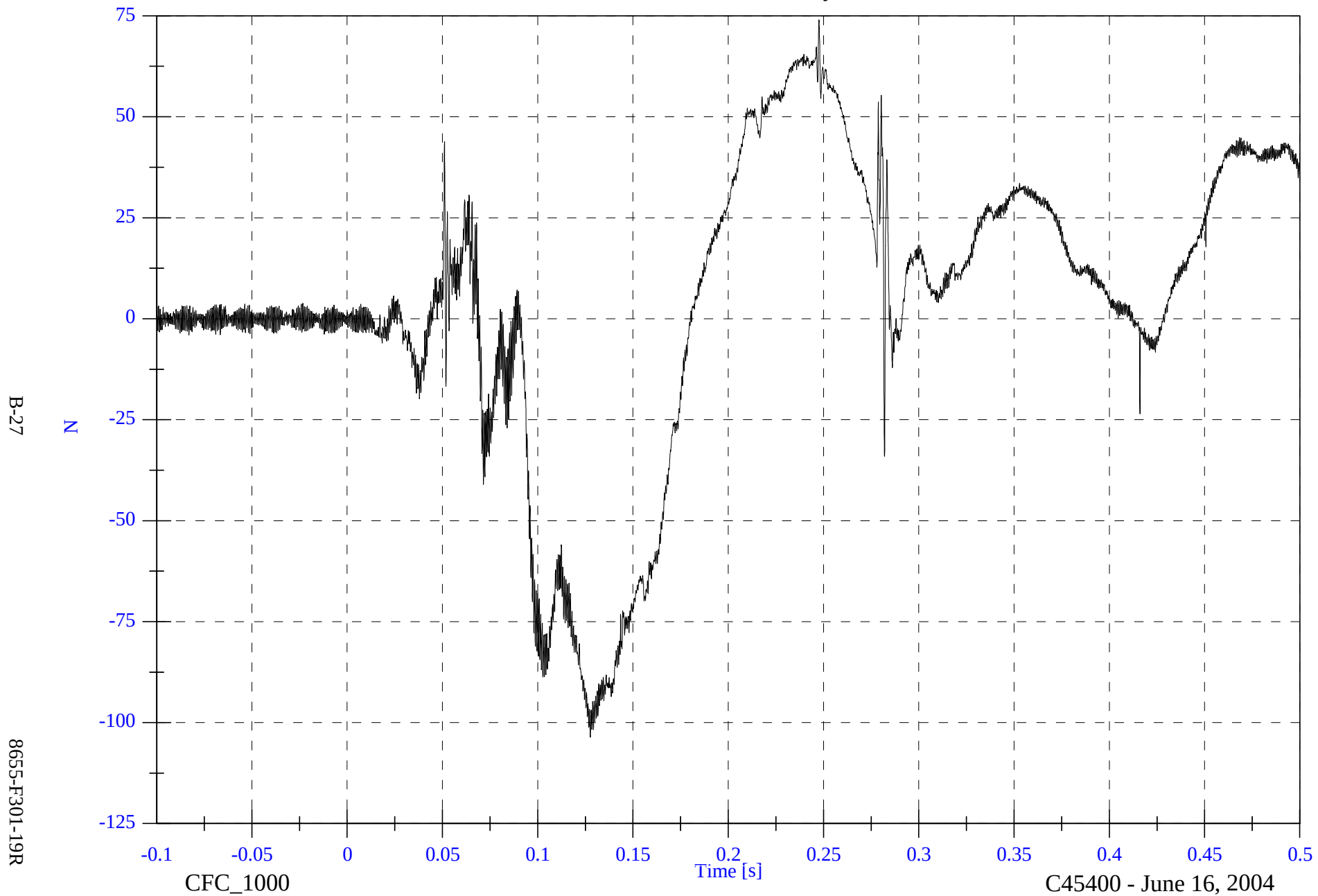


2004 FMVSS301 Test 2 - 2004 Mazda 6

V2P1 Lower Neck Fy

Max: 74.0 [N] at 0.248 [s]

Min: -103.6 [N] at 0.128 [s]



2004 FMVSS301 Test 2 - 2004 Mazda 6

V2P1 Lower Neck Fz

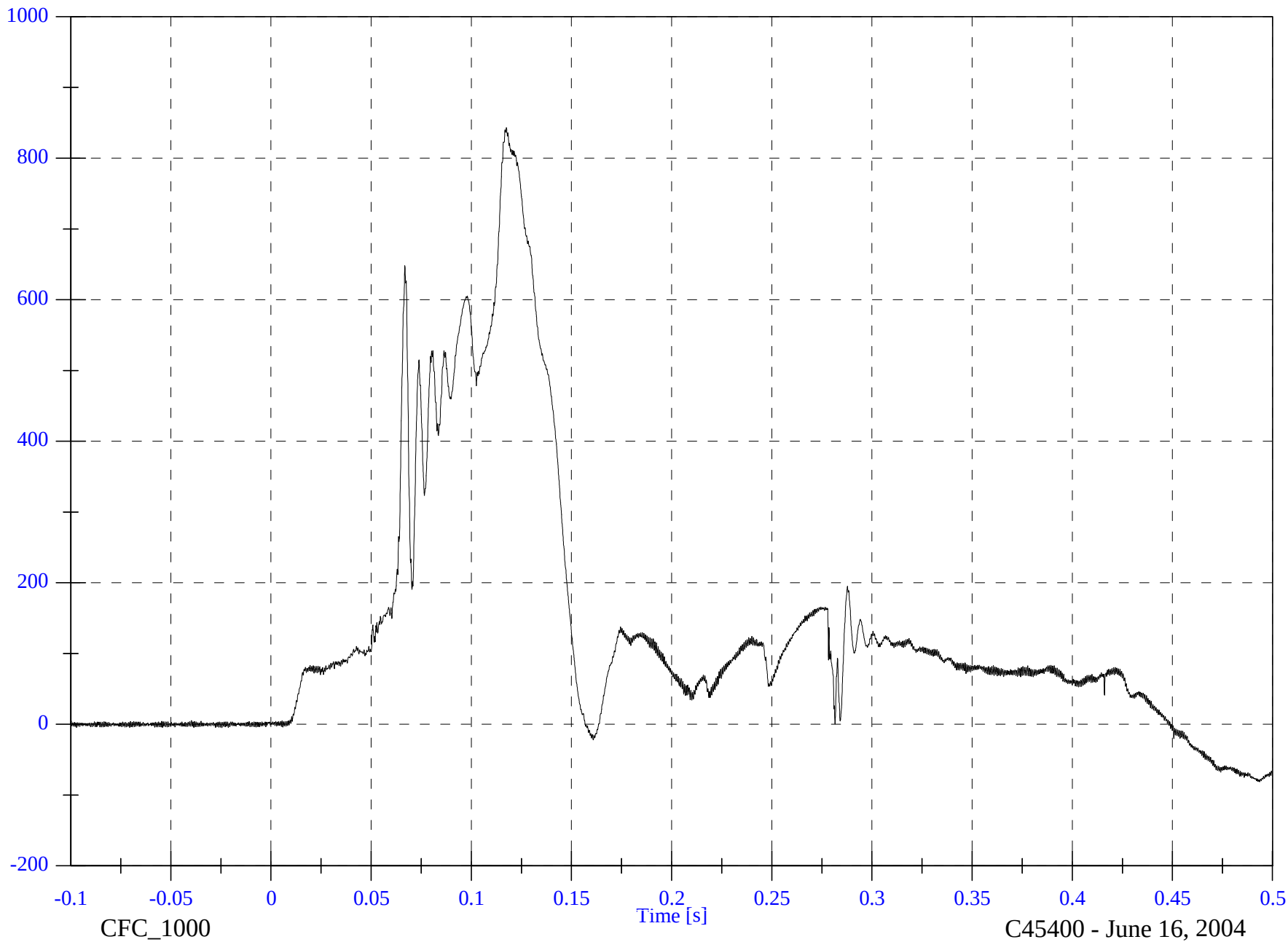
Max: 843.2 [N] at 0.117 [s]

Min: -81.3 [N] at 0.494 [s]

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N

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2004 FMVSS301 Test 2 - 2004 Mazda 6

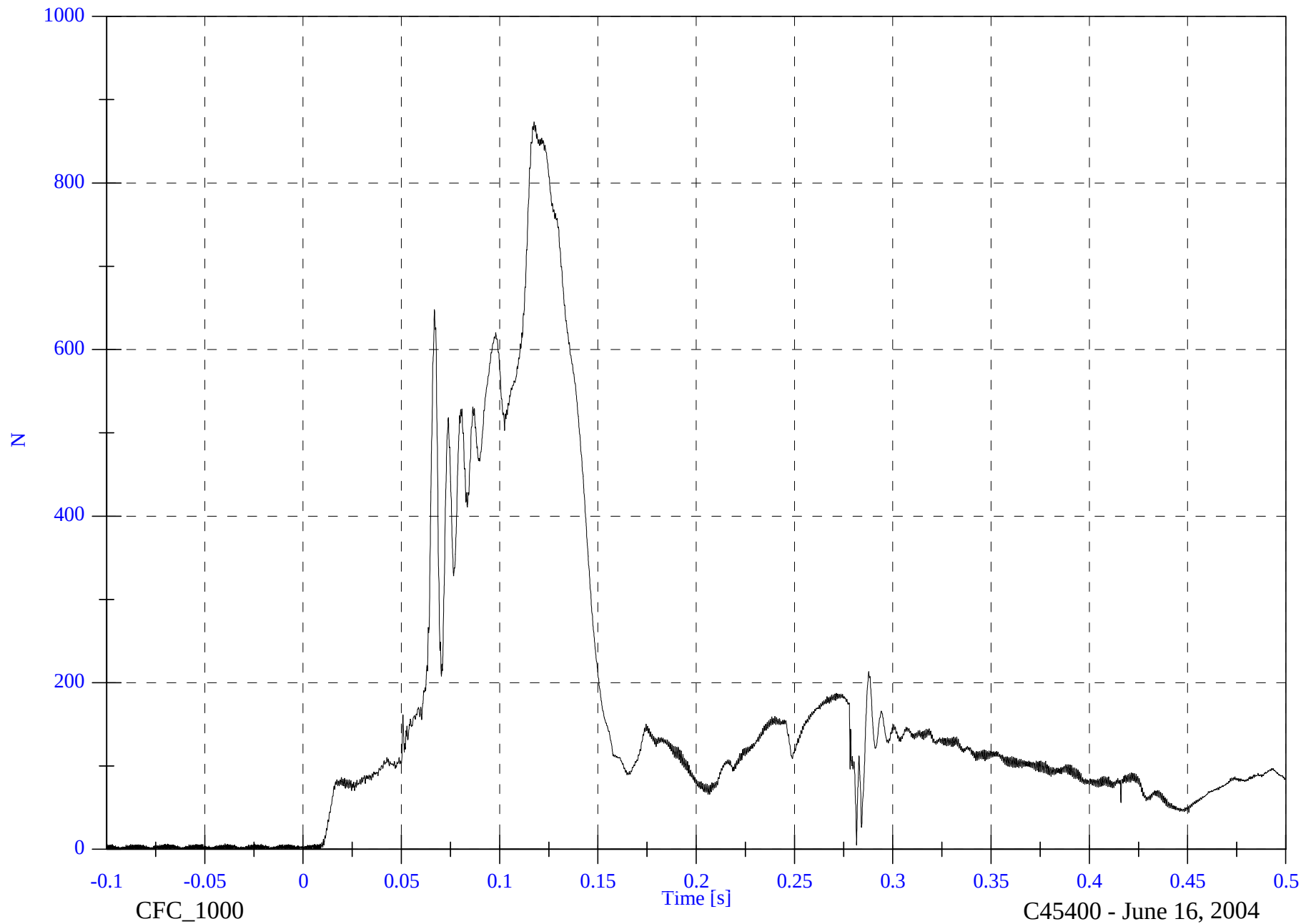
V2P1 Lower Neck F Resultant

Max: 873.2 [N] at 0.117 [s]

Min: 0.1 [N] at -0.093 [s]

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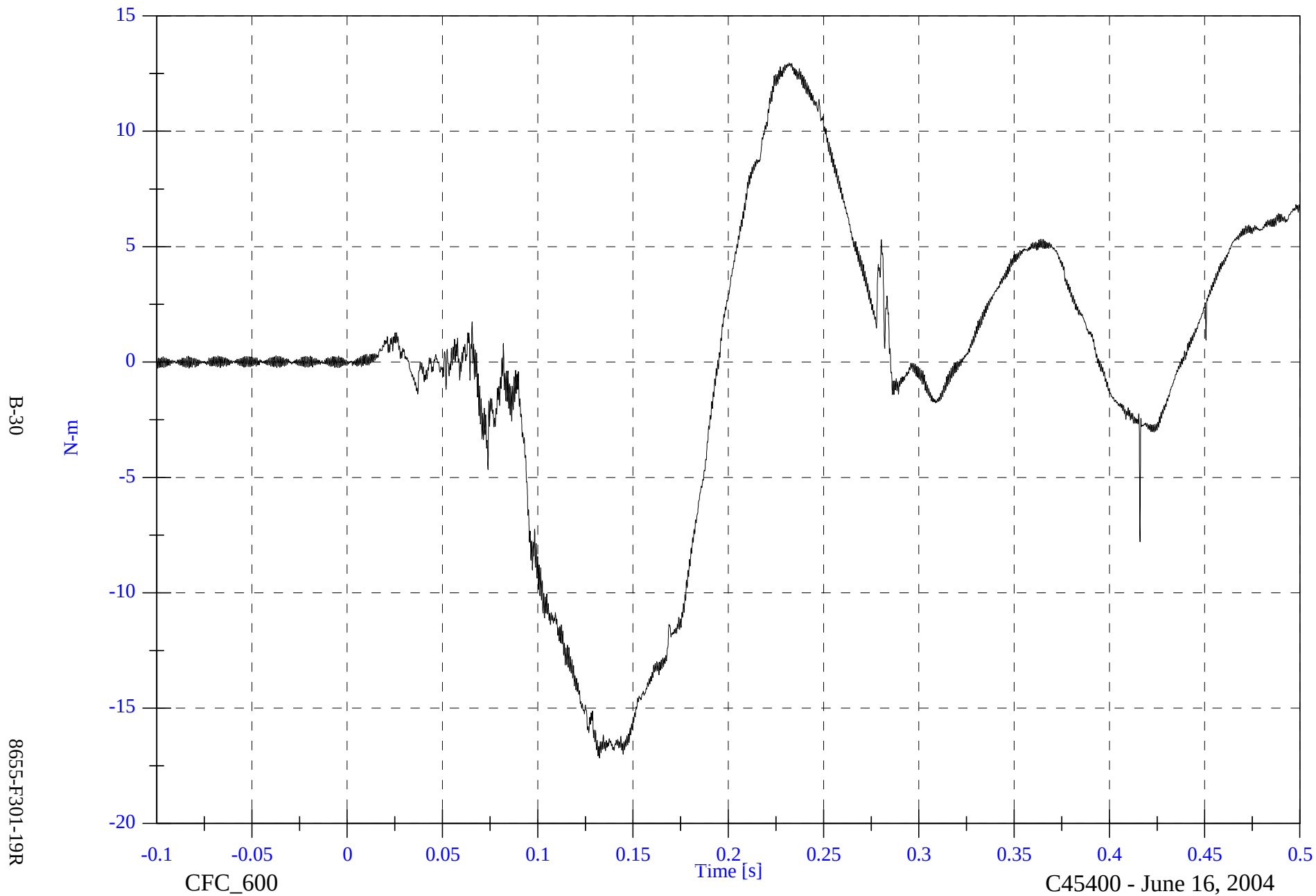


2004 FMVSS301 Test 2 - 2004 Mazda 6

V2P1 Lower Neck Mx

Max: 13.0 [N-m] at 0.232 [s]

Min: -17.2 [N-m] at 0.132 [s]



2004 FMVSS301 Test 2 - 2004 Mazda 6

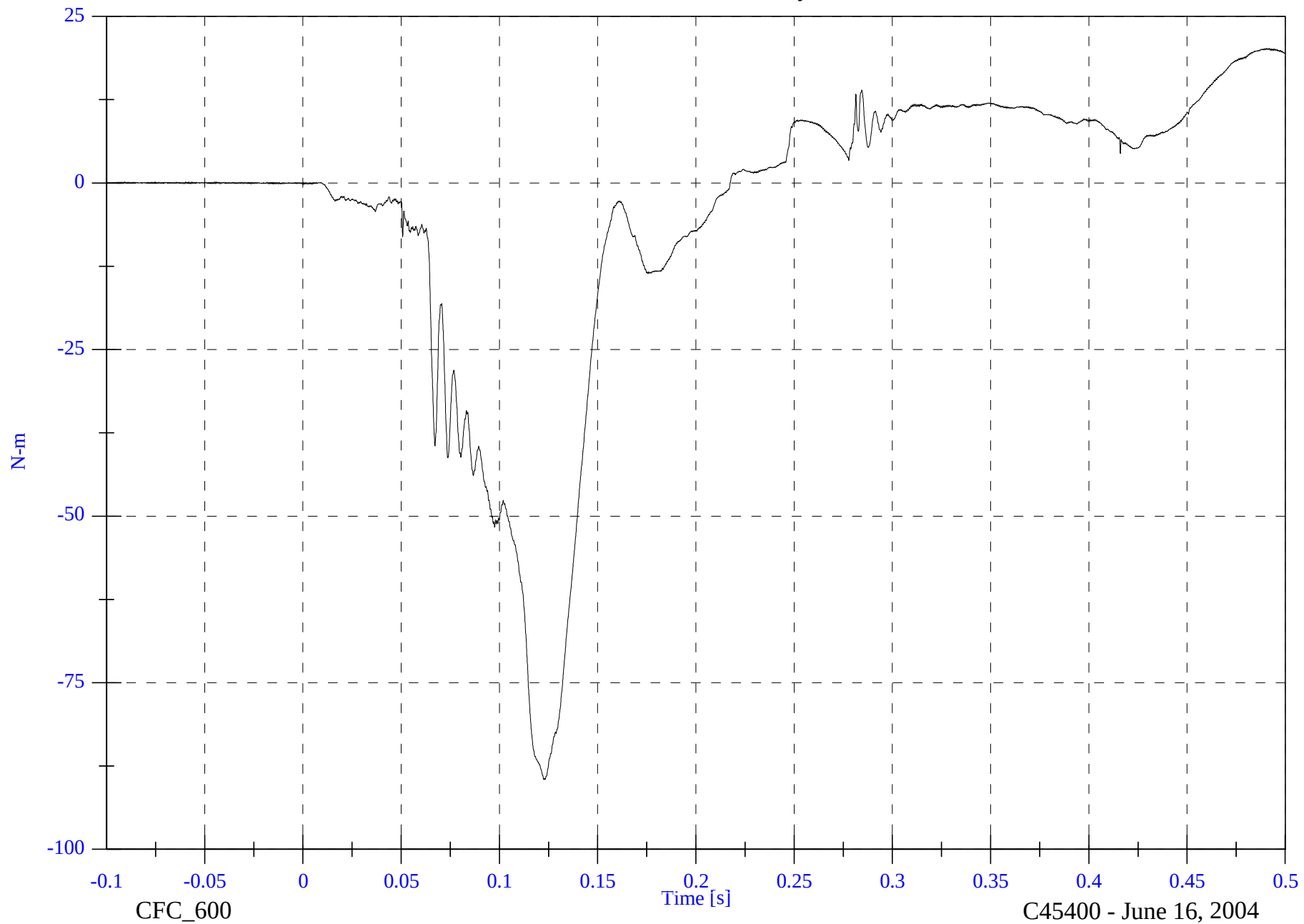
V2P1 Lower Neck My

Max: 20.2 [N-m] at 0.490 [s]

Min: -89.5 [N-m] at 0.123 [s]

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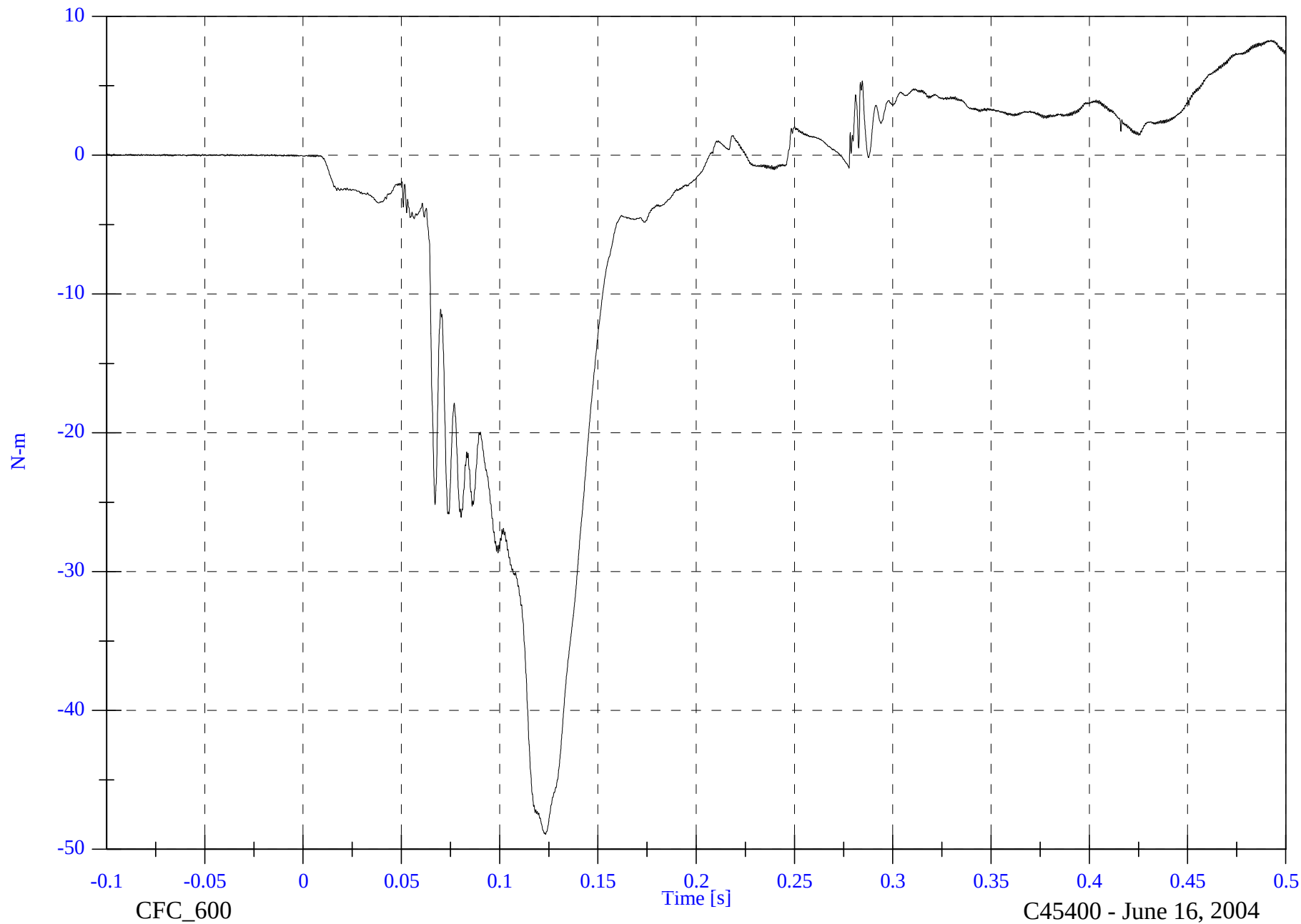


2004 FMVSS301 Test 2 - 2004 Mazda 6

V2P1 Lower Neck Mz

Max: 8.3 [N-m] at 0.492 [s]

Min: -48.9 [N-m] at 0.123 [s]



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CFC\_600

C45400 - June 16, 2004

2004 FMVSS301 Test 2 - 2004 Mazda 6

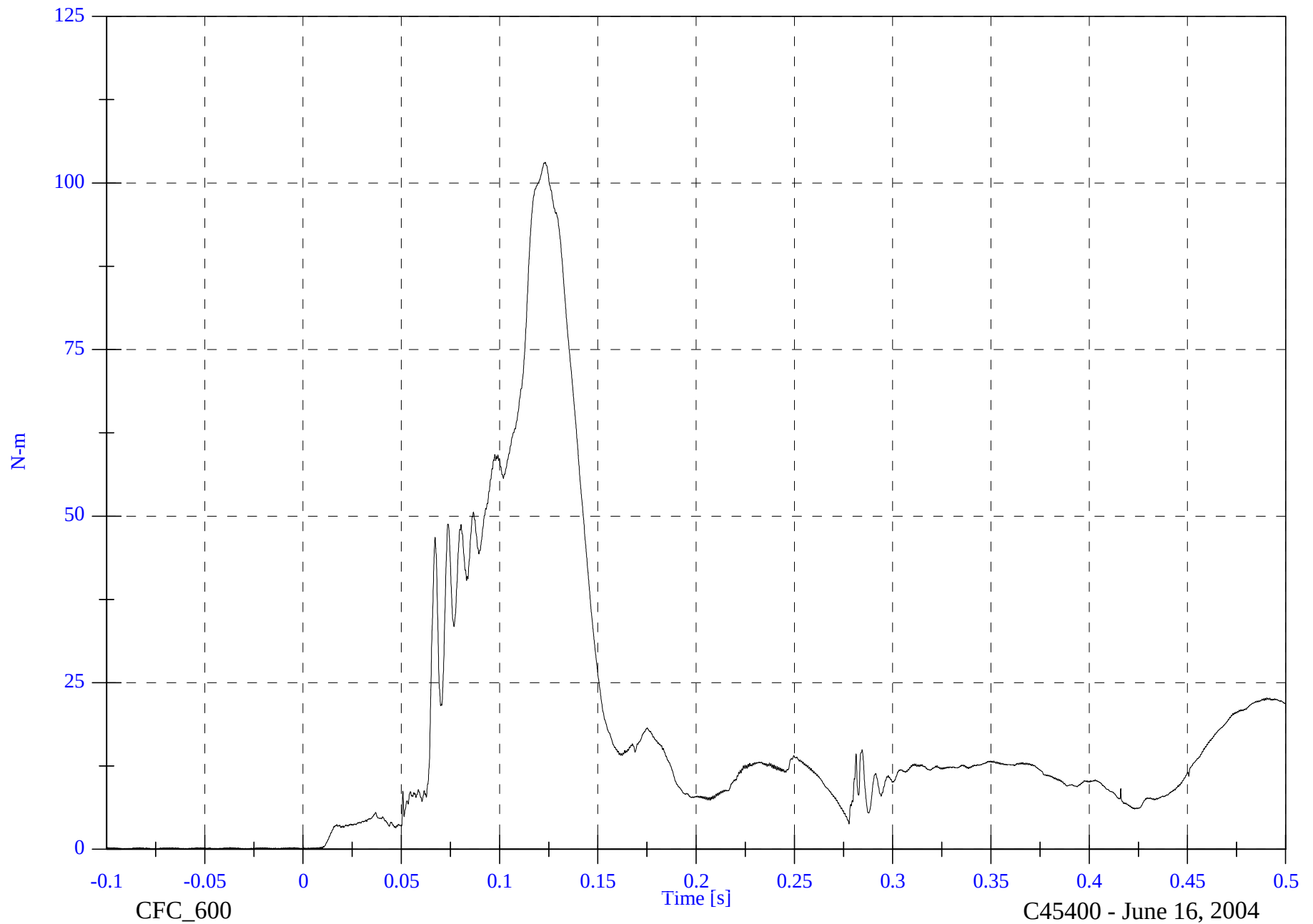
V2P1 Lower Neck M Resultant

Max: 103.1 [N-m] at 0.123 [s]

Min: 0.0 [N-m] at -0.086 [s]

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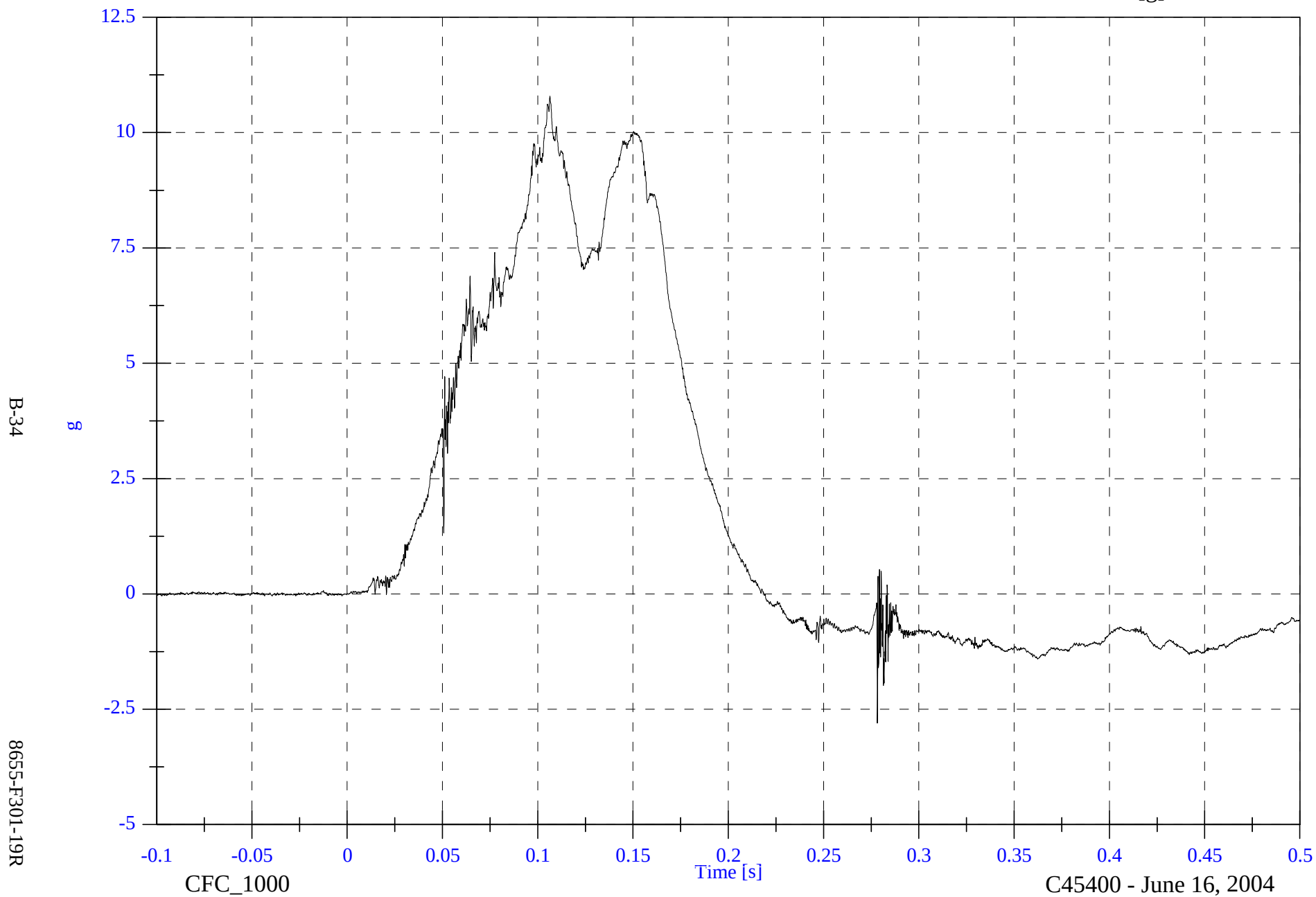


2004 FMVSS301 Test 2 - 2004 Mazda 6

Max: 10.8 [g] at 0.106 [s]

Min: -2.8 [g] at 0.278 [s]

V2P1 Lower Neck x



2004 FMVSS301 Test 2 - 2004 Mazda 6

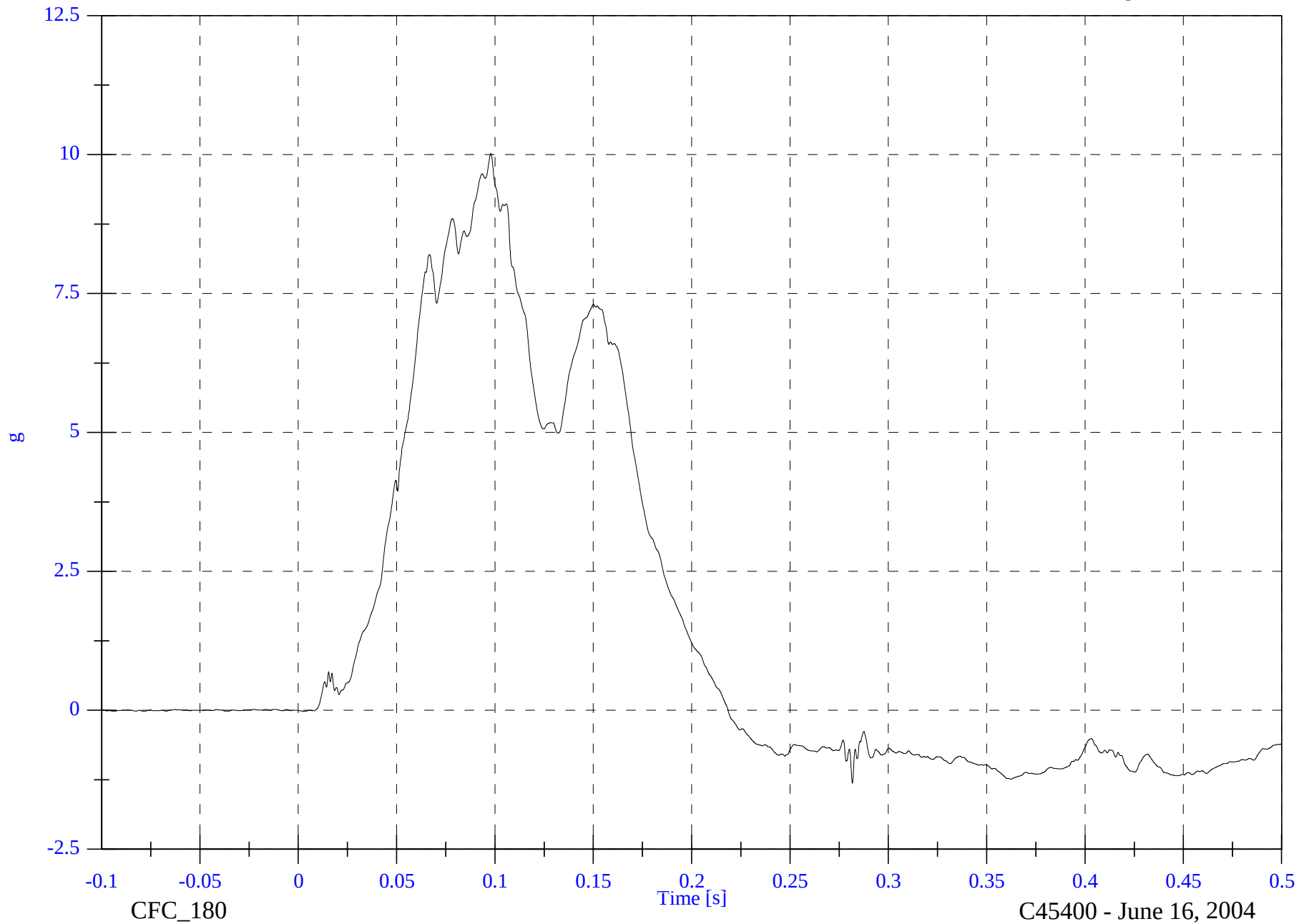
V2P1 Chest x

Max: 10.0 [g] at 0.098 [s]

Min: -1.3 [g] at 0.282 [s]

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2004 FMVSS301 Test 2 - 2004 Mazda 6

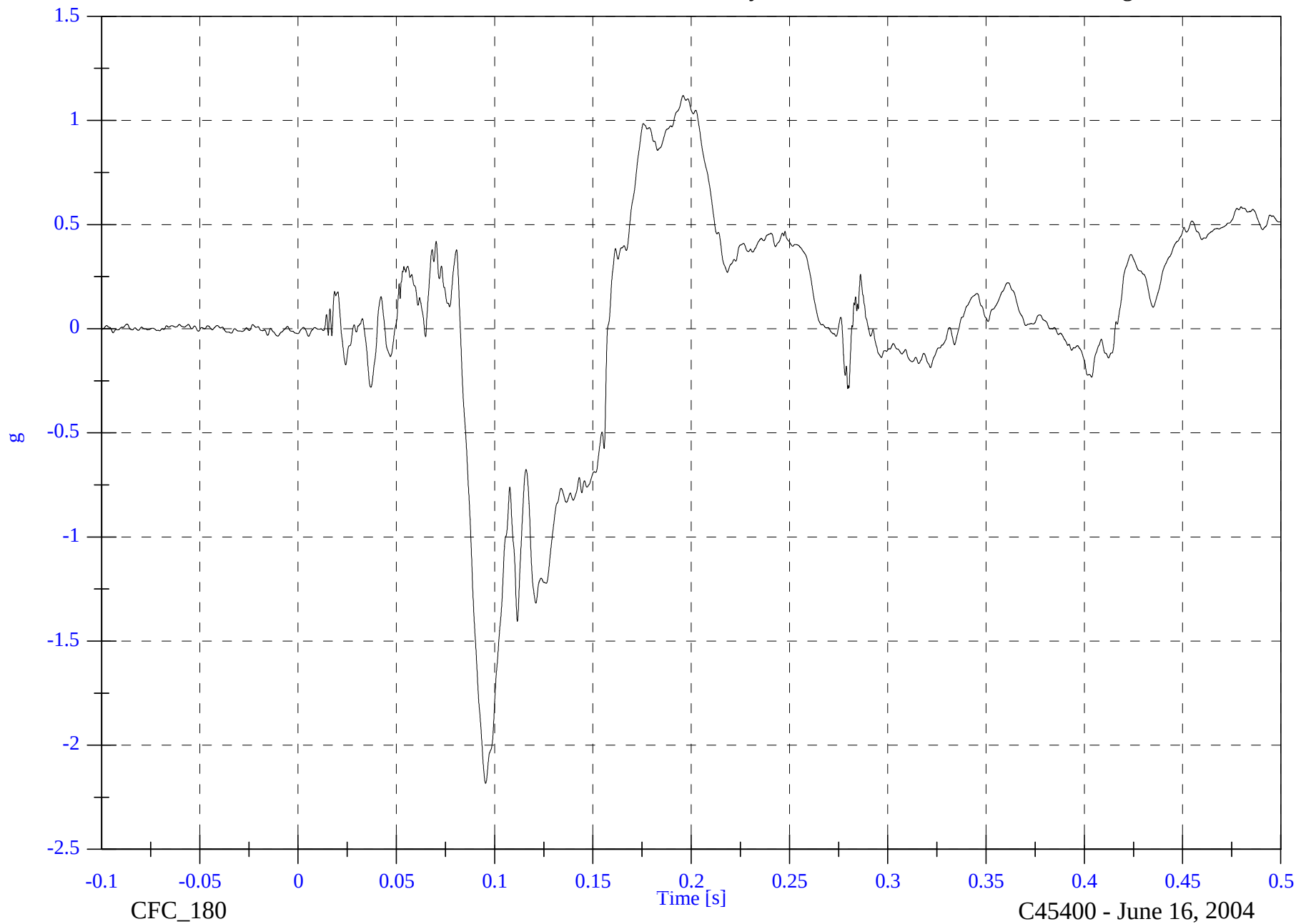
V2P1 Chest y

Max: 1.1 [g] at 0.196 [s]

Min: -2.2 [g] at 0.095 [s]

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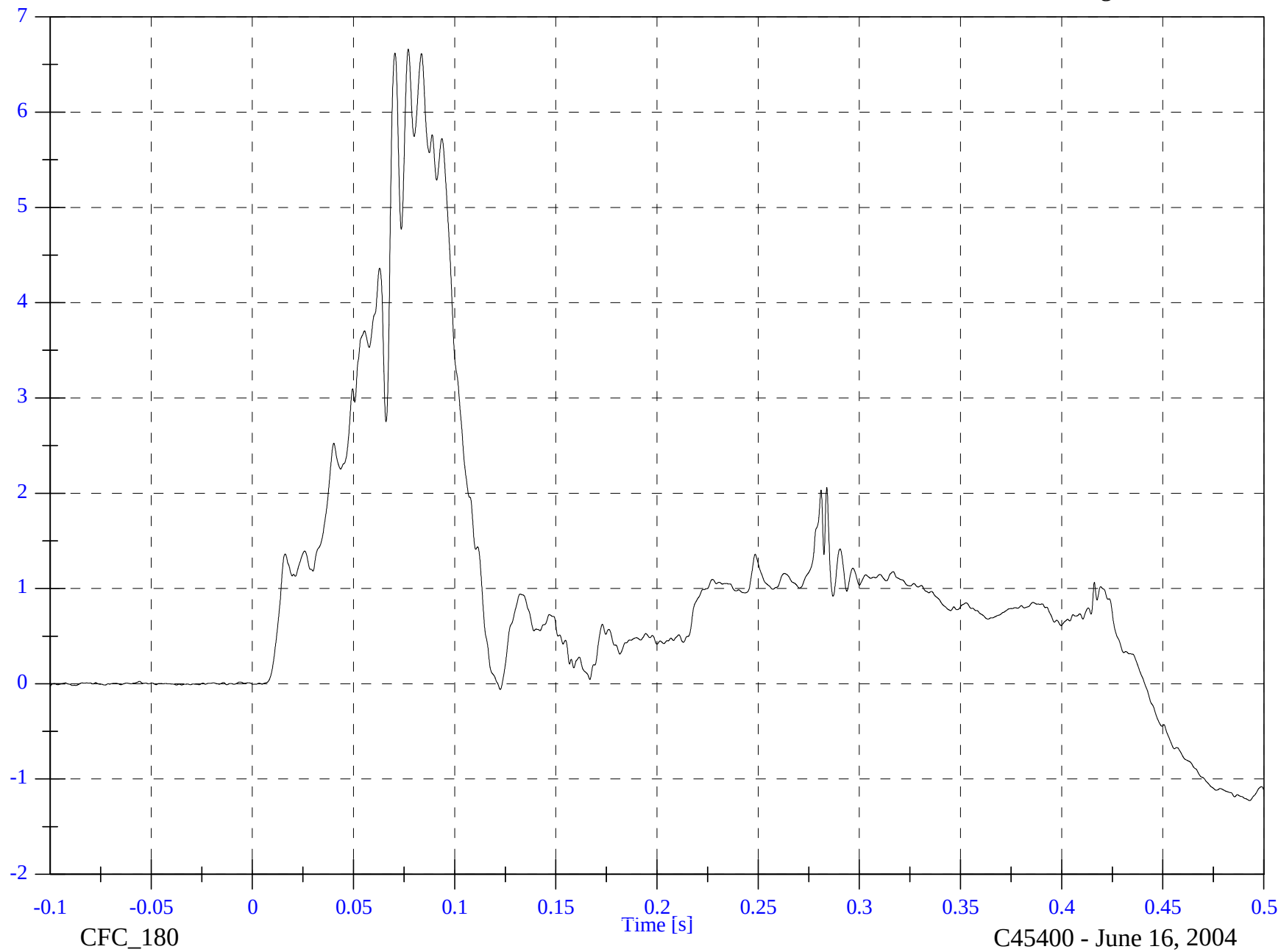


2004 FMVSS301 Test 2 - 2004 Mazda 6

V2P1 Chest z

Max: 6.7 [g] at 0.077 [s]

Min: -1.2 [g] at 0.493 [s]



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2004 FMVSS301 Test 2 - 2004 Mazda 6

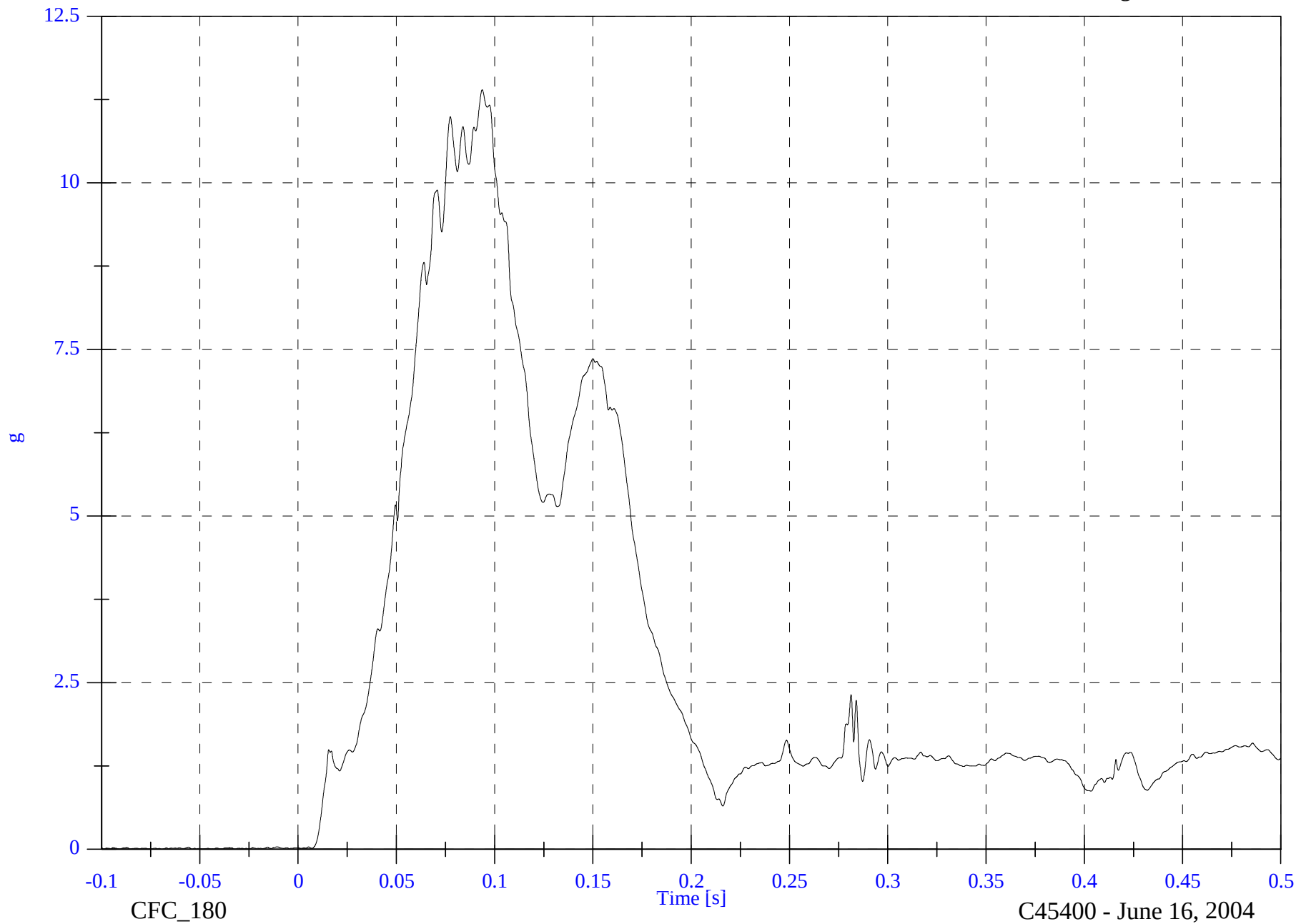
V2P1 Chest Resultant

Max: 11.4 [g] at 0.094 [s]

Min: 0.0 [g] at -0.052 [s]

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2004 FMVSS301 Test 2 - 2004 Mazda 6

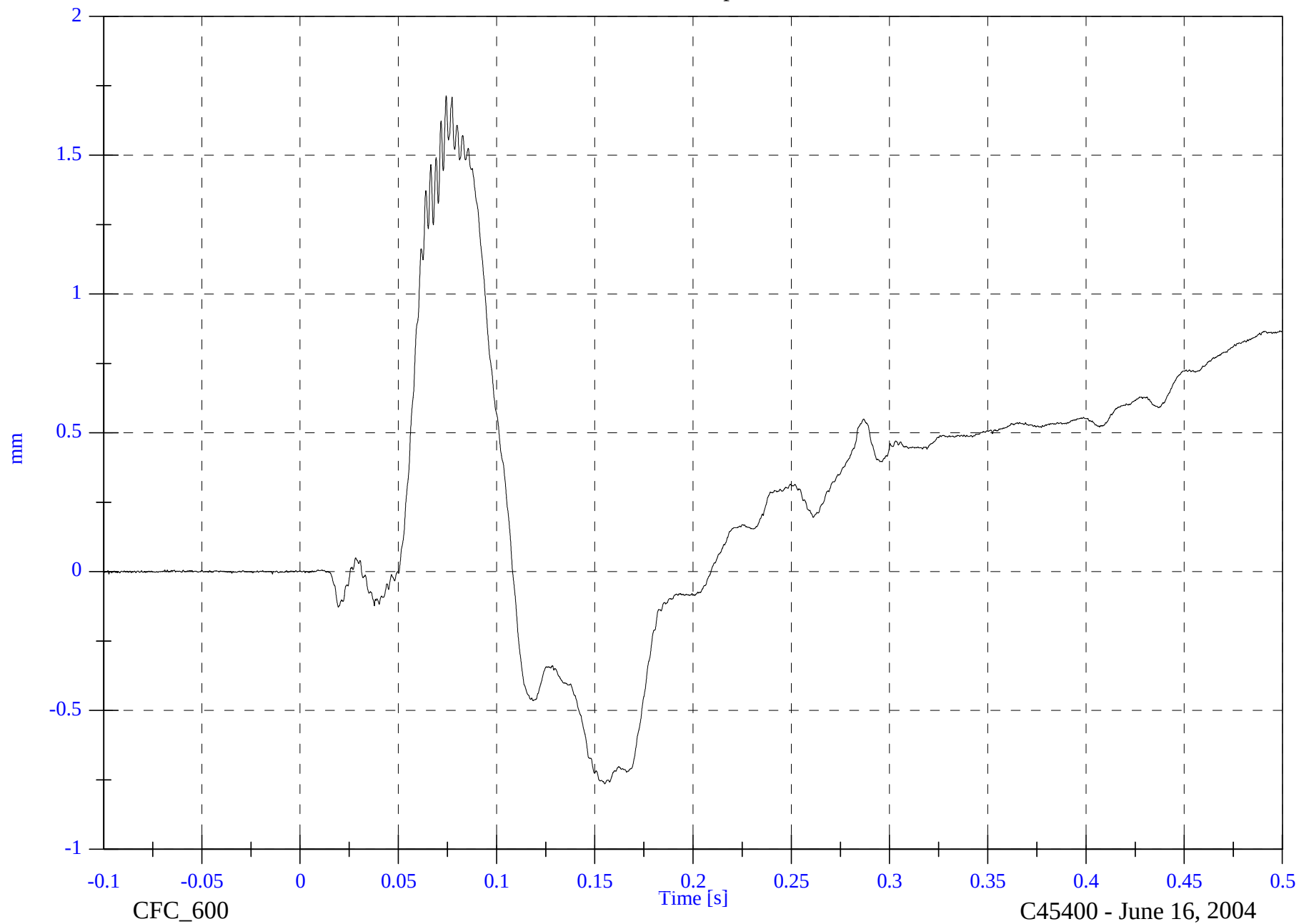
V2P1 Chest Displacement

Max: 1.7 [mm] at 0.074 [s]

Min: -0.8 [mm] at 0.155 [s]

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8655-F301-19R

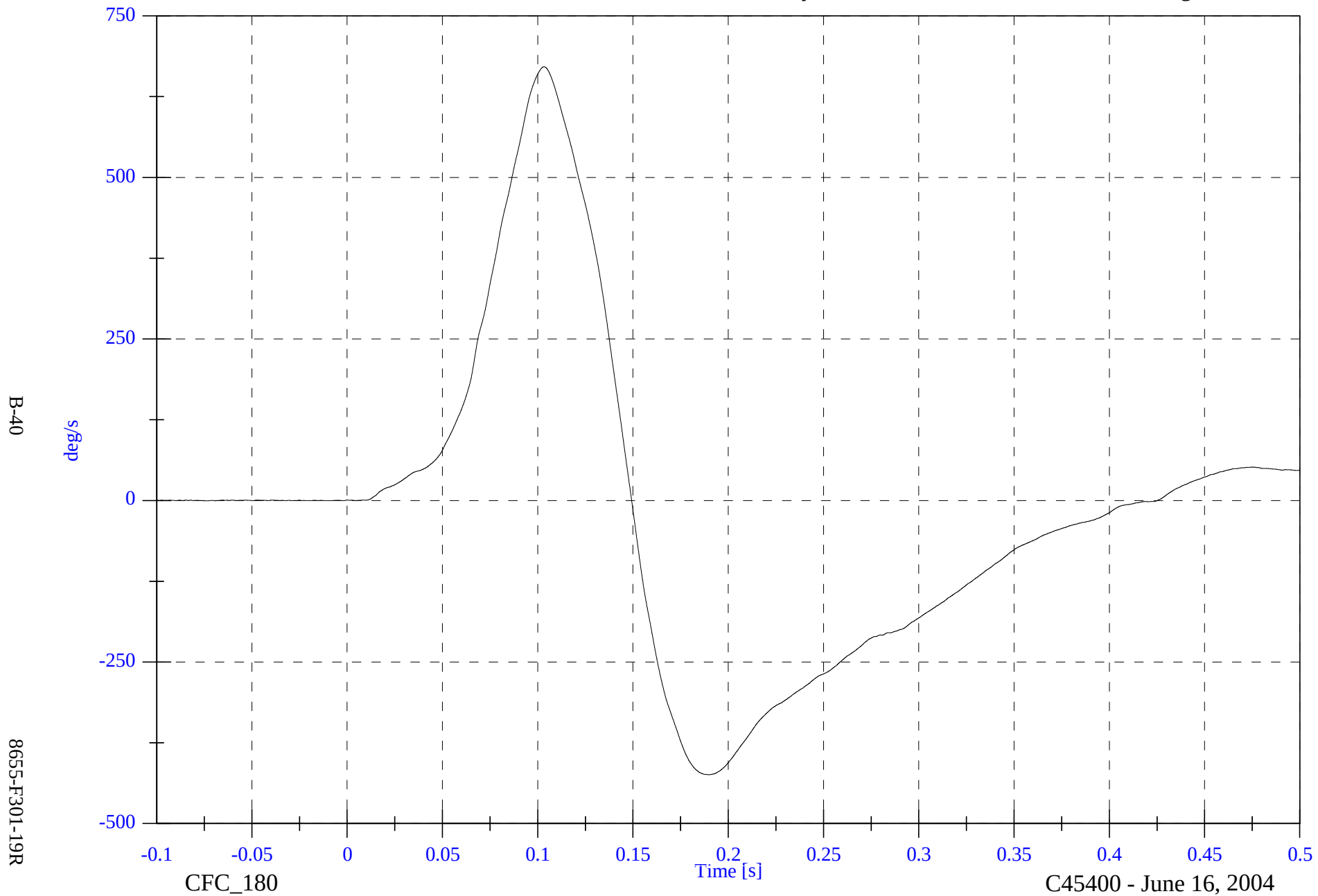


2004 FMVSS301 Test 2 - 2004 Mazda 6

V2P1 Chest AVy

Max: 671.1 [deg/s] at 0.103 [s]

Min: -424.2 [deg/s] at 0.189 [s]

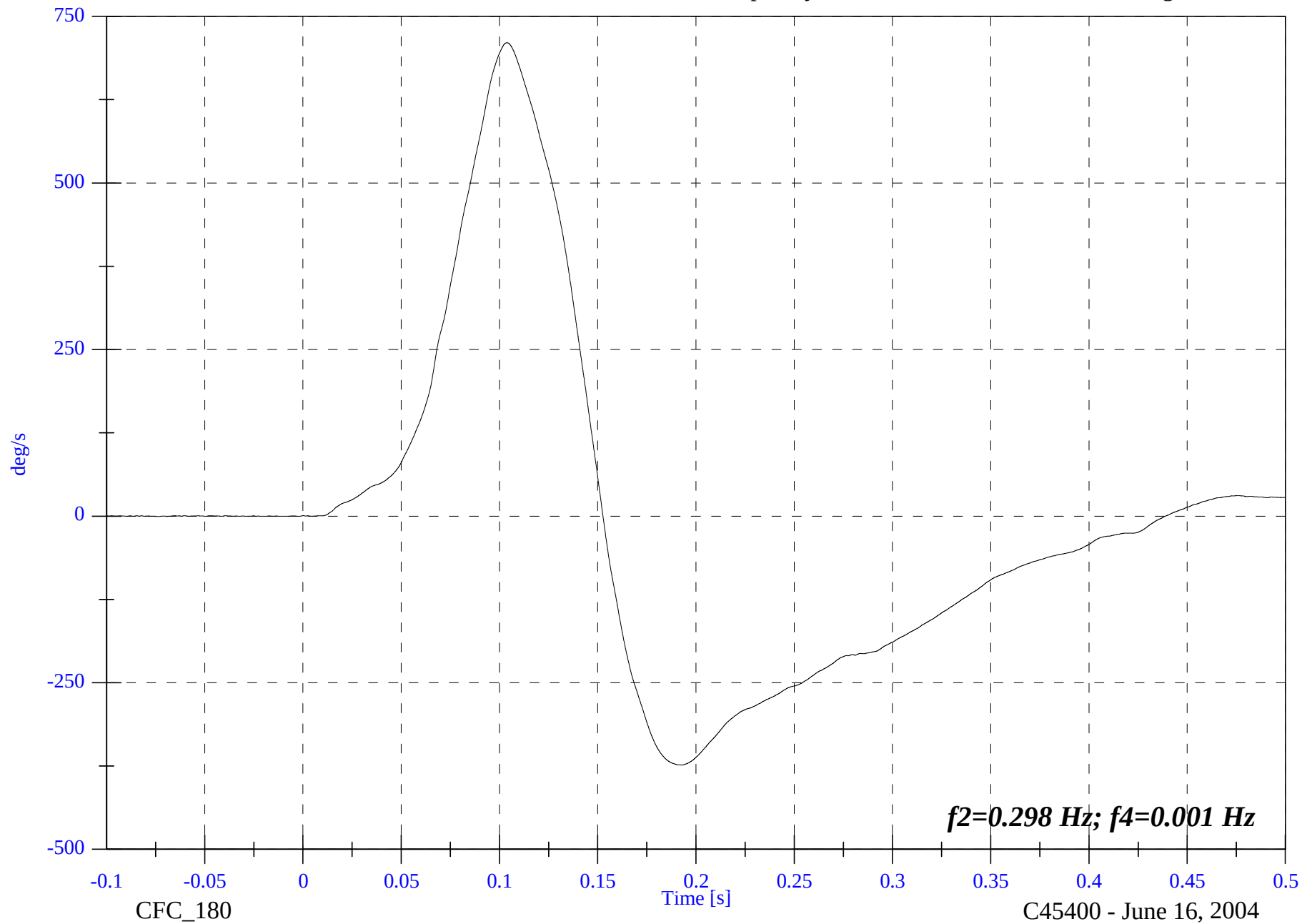


2004 FMVSS301 Test 2 - 2004 Mazda 6

V2P1 Chest Comp AVy

Max: 710.4 [deg/s] at 0.104 [s]

Min: -373.6 [deg/s] at 0.193 [s]



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2004 FMVSS301 Test 2 - 2004 Mazda 6

V2P1 Chest Comp ADy

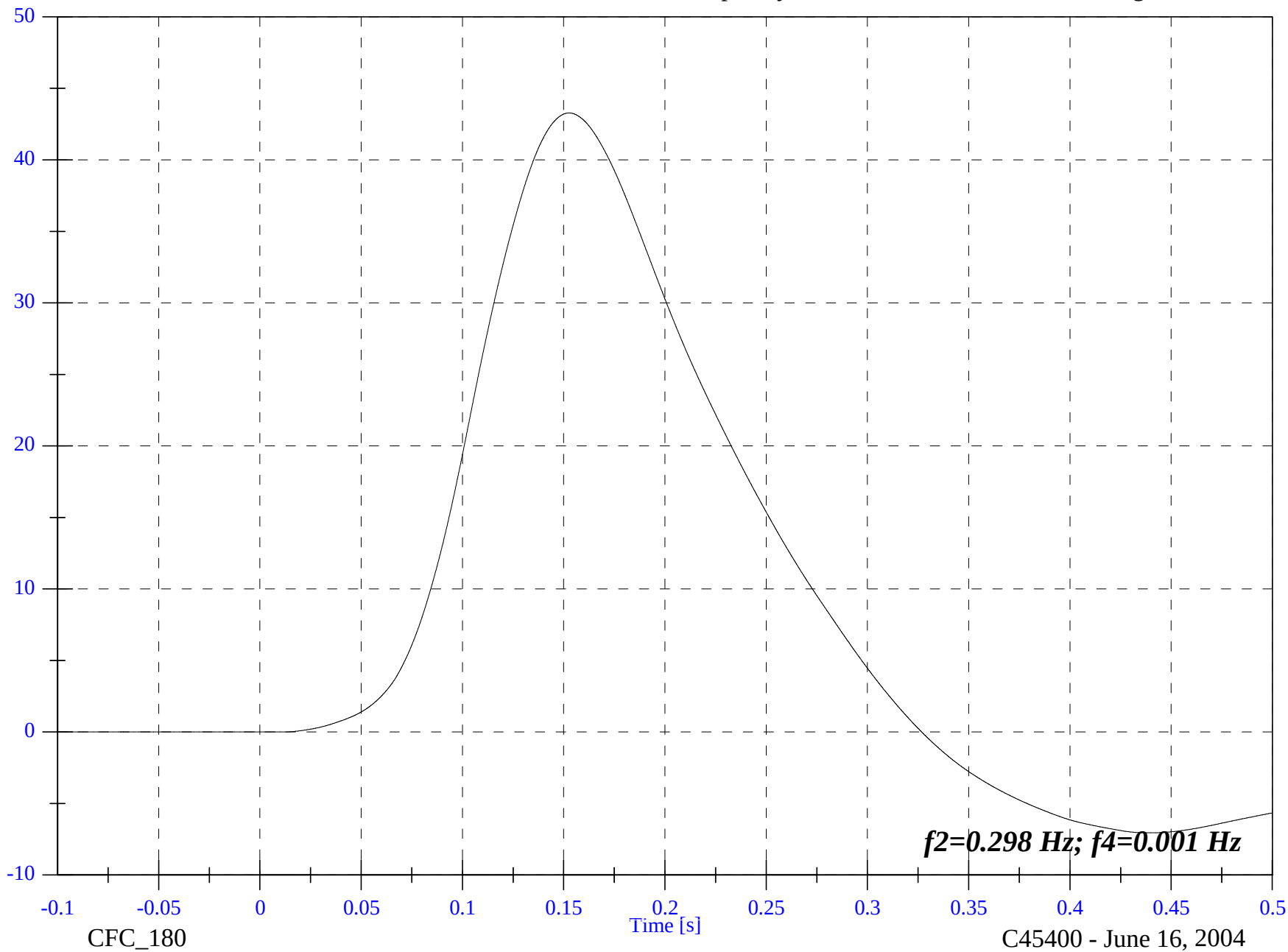
Max: 43.3 [deg] at 0.153 [s]

Min: -7.1 [deg] at 0.439 [s]

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deg



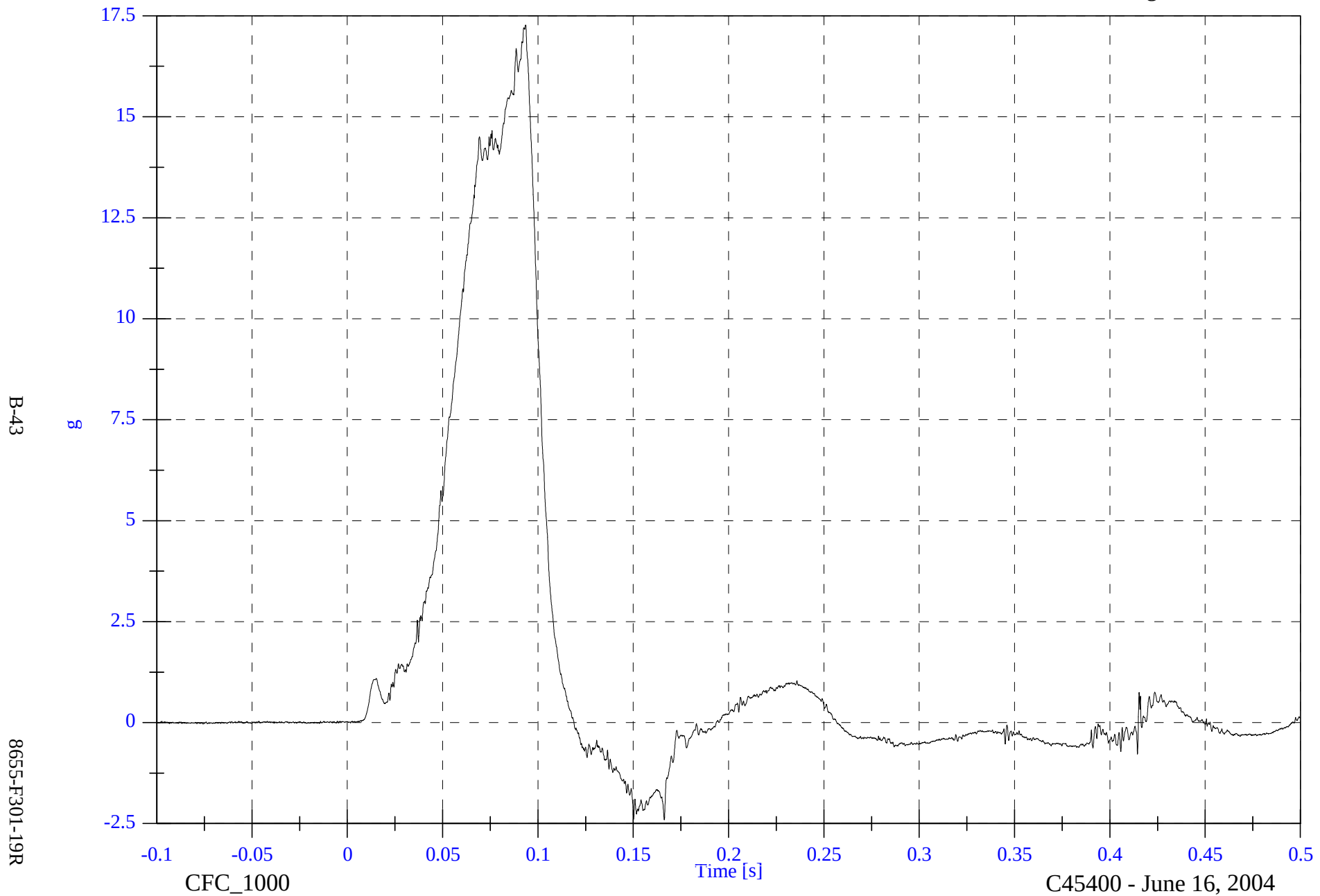
C45400 - June 16, 2004

2004 FMVSS301 Test 2 - 2004 Mazda 6

V2P1 Pelvic x

Max: 17.3 [g] at 0.093 [s]

Min: -2.4 [g] at 0.166 [s]

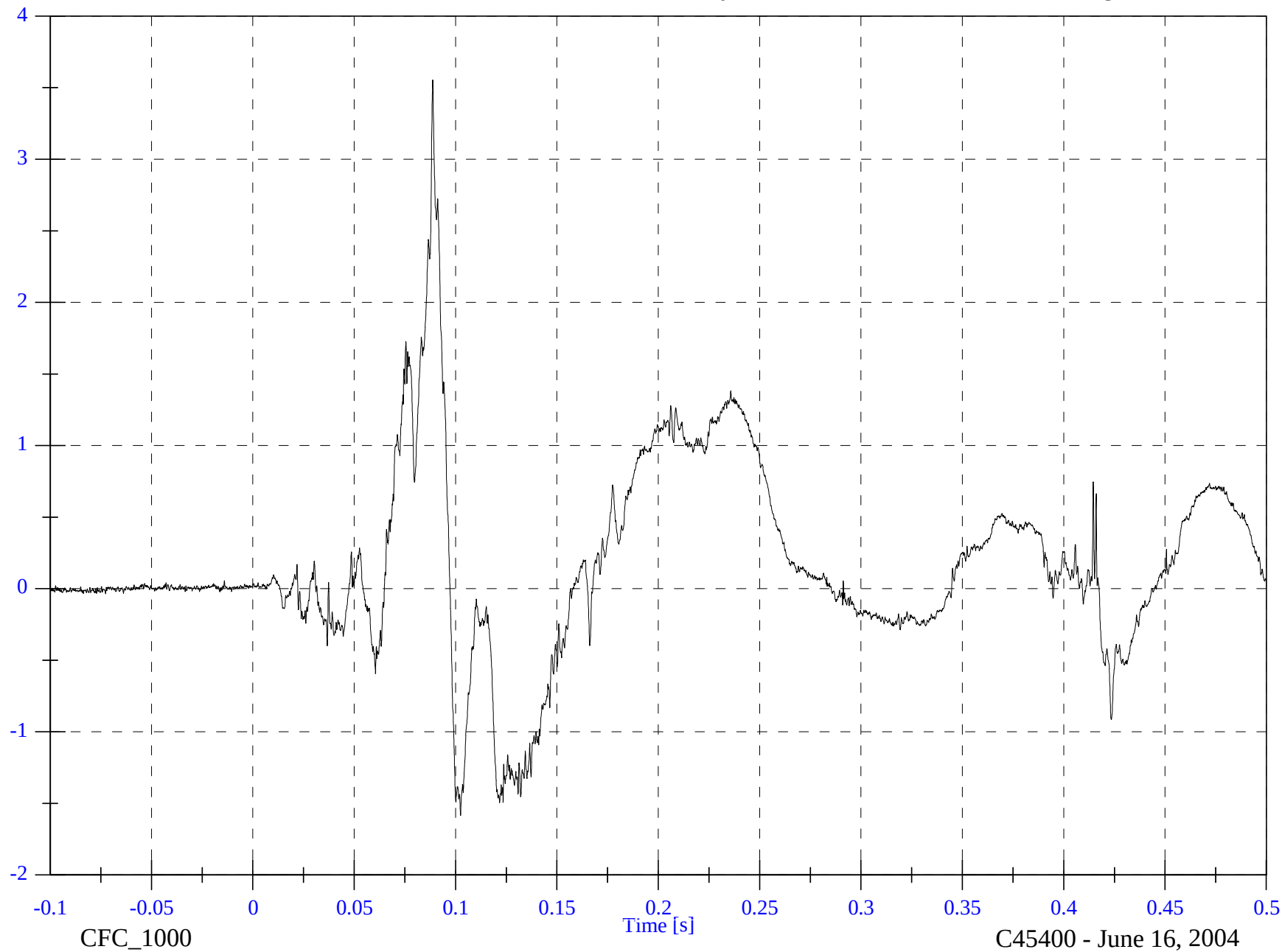


2004 FMVSS301 Test 2 - 2004 Mazda 6

V2P1 Pelvic y

Max: 3.6 [g] at 0.089 [s]

Min: -1.6 [g] at 0.102 [s]



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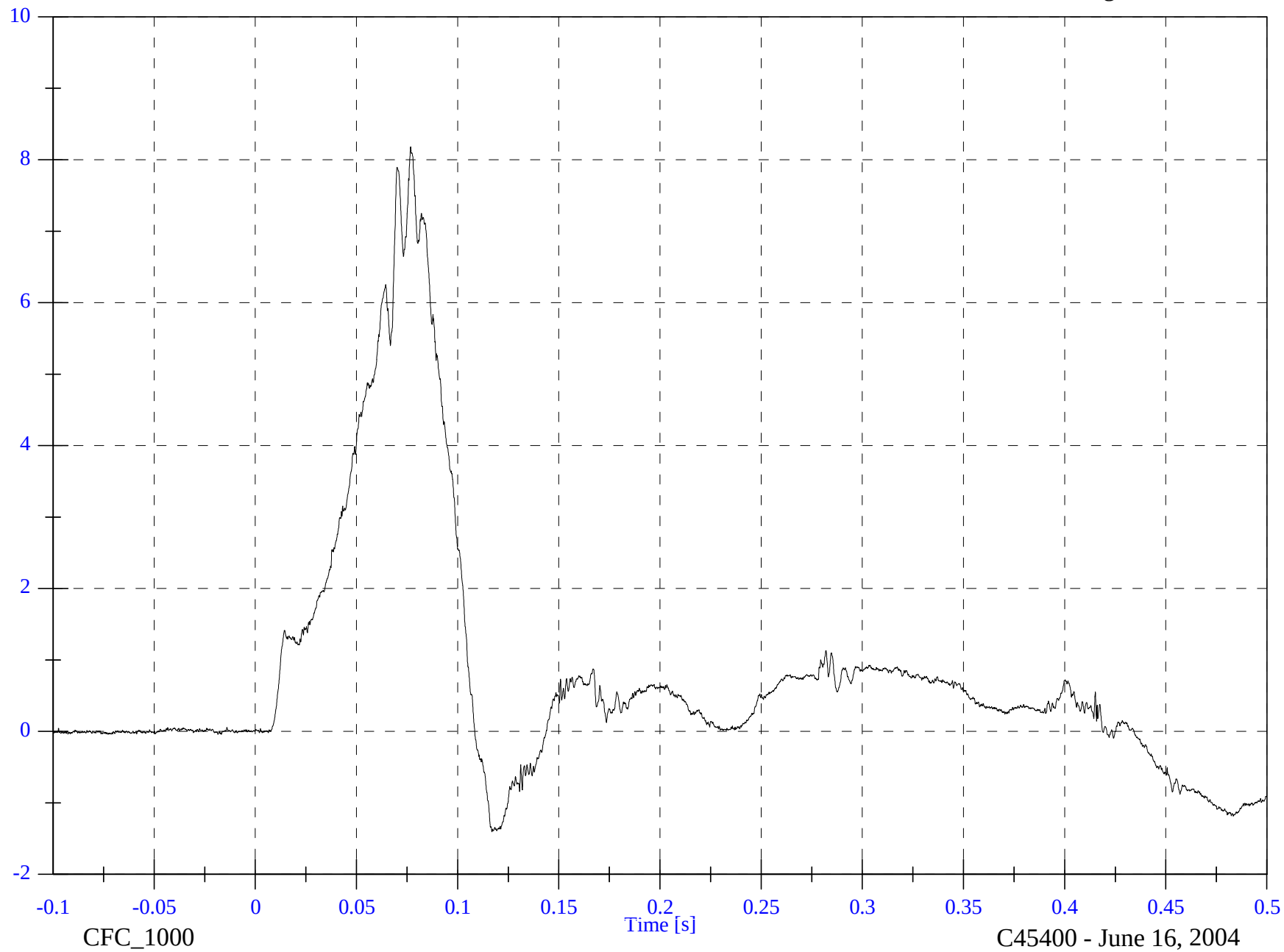
8655-F301-19R

2004 FMVSS301 Test 2 - 2004 Mazda 6

V2P1 Pelvic z

Max: 8.2 [g] at 0.077 [s]

Min: -1.4 [g] at 0.117 [s]



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2004 FMVSS301 Test 2 - 2004 Mazda 6

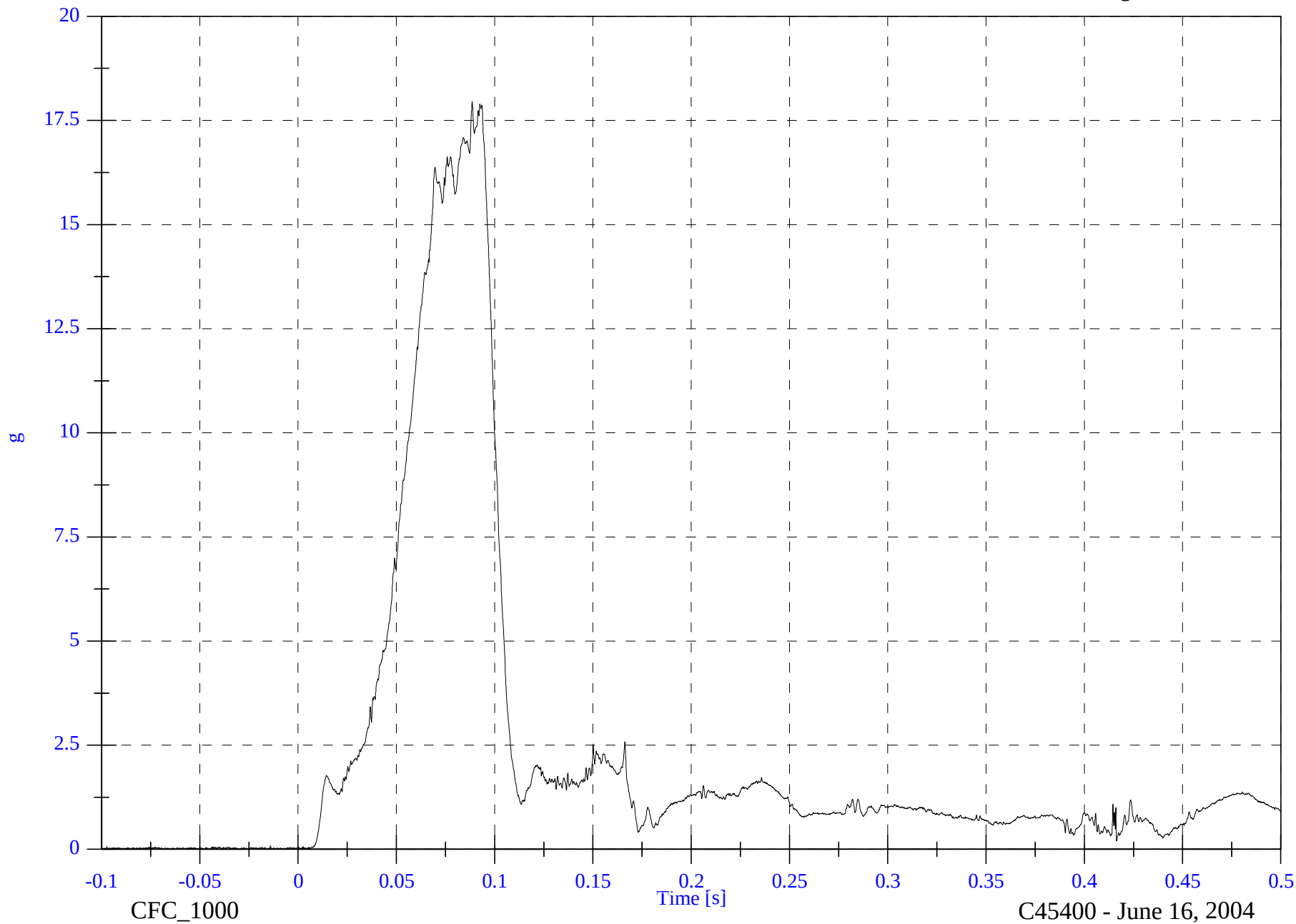
V2P1 Pelvic Resultant

Max: 18.0 [g] at 0.089 [s]

Min: 0.0 [g] at -0.069 [s]

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8655-F301-19R

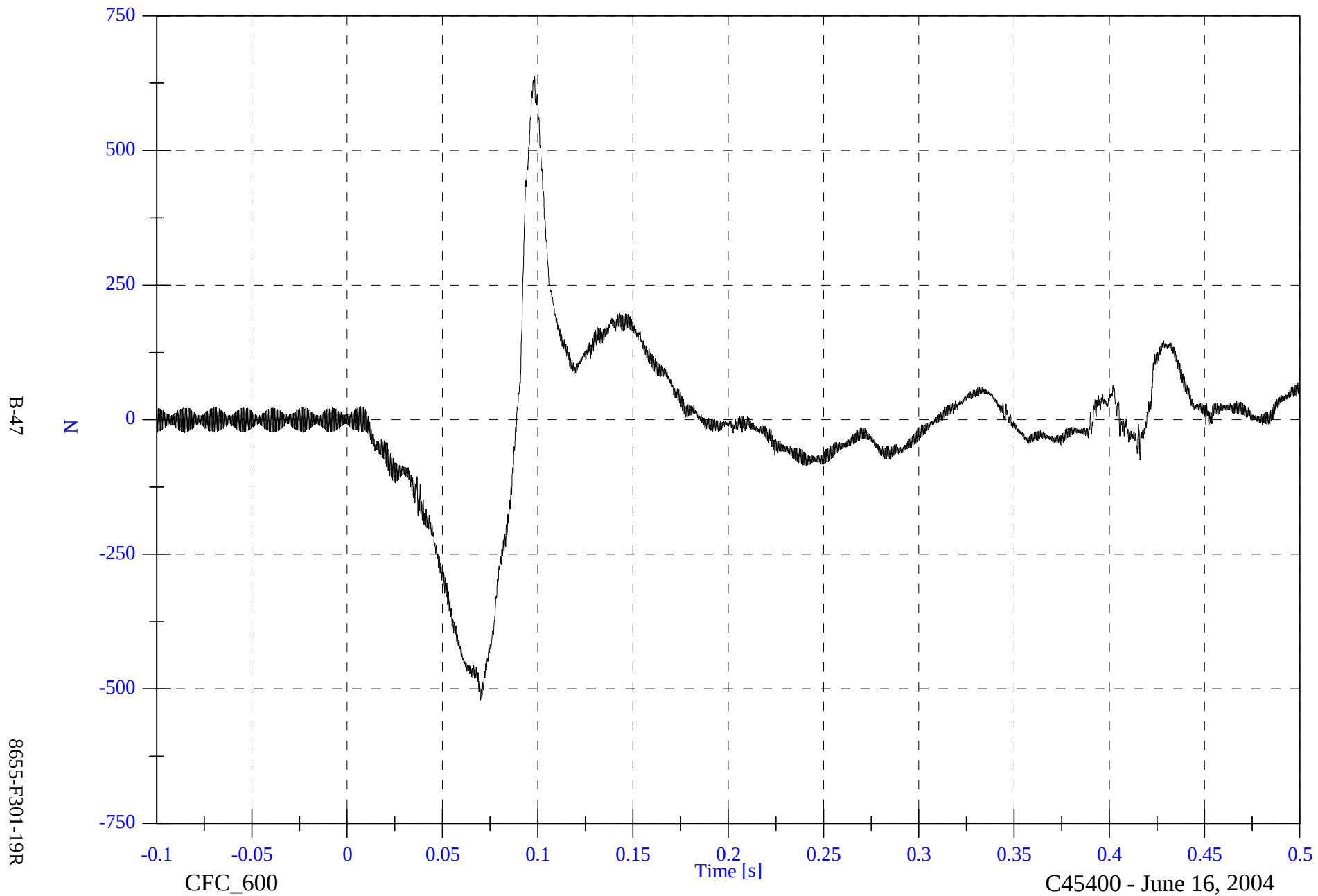


2004 FMVSS301 Test 2 - 2004 Mazda 6

V2P1 Left Femur

Max: 637.7 [N] at 0.098 [s]

Min: -520.7 [N] at 0.070 [s]

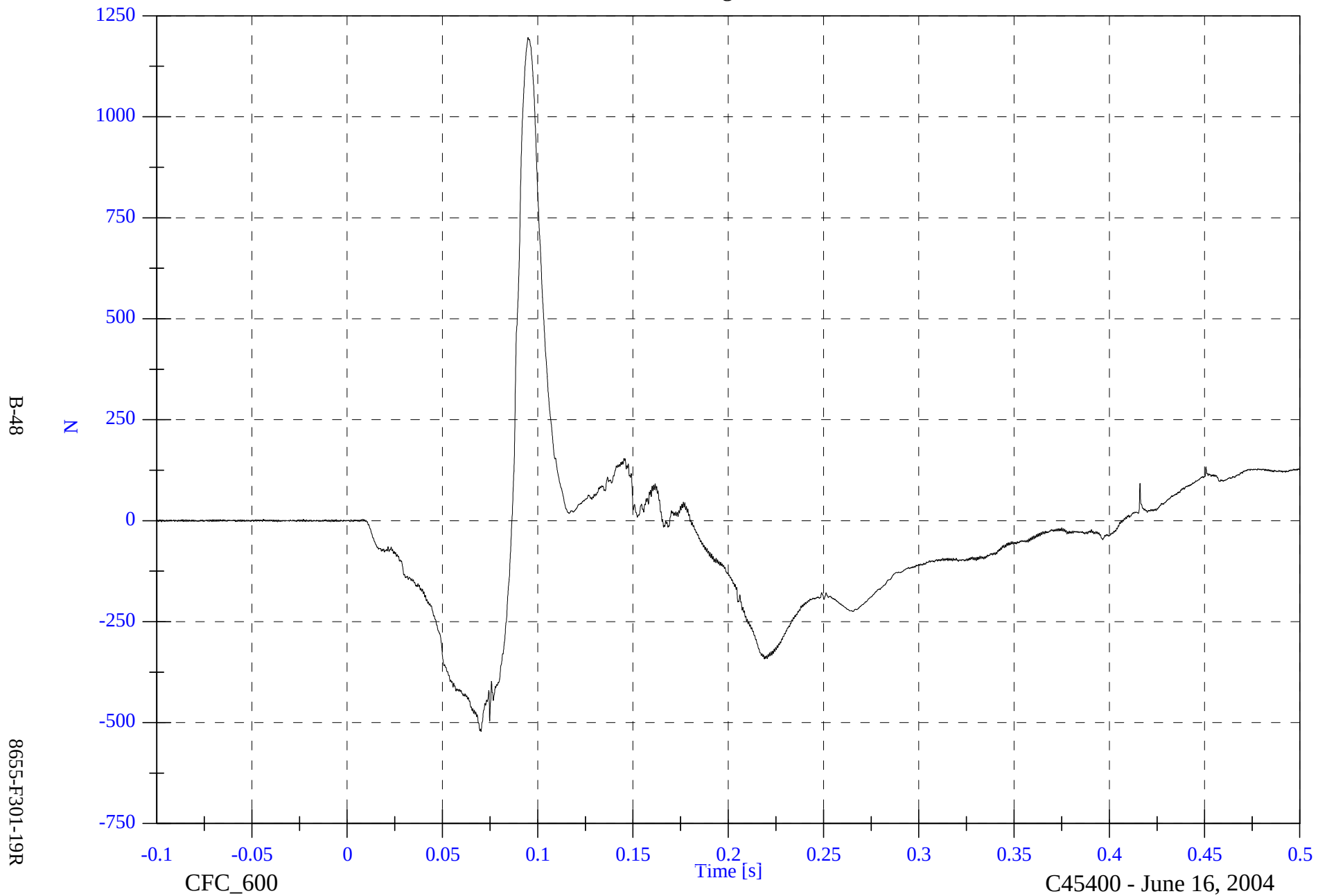


2004 FMVSS301 Test 2 - 2004 Mazda 6

V2P1 Right Femur

Max: 1196.1 [N] at 0.095 [s]

Min: -522.2 [N] at 0.070 [s]

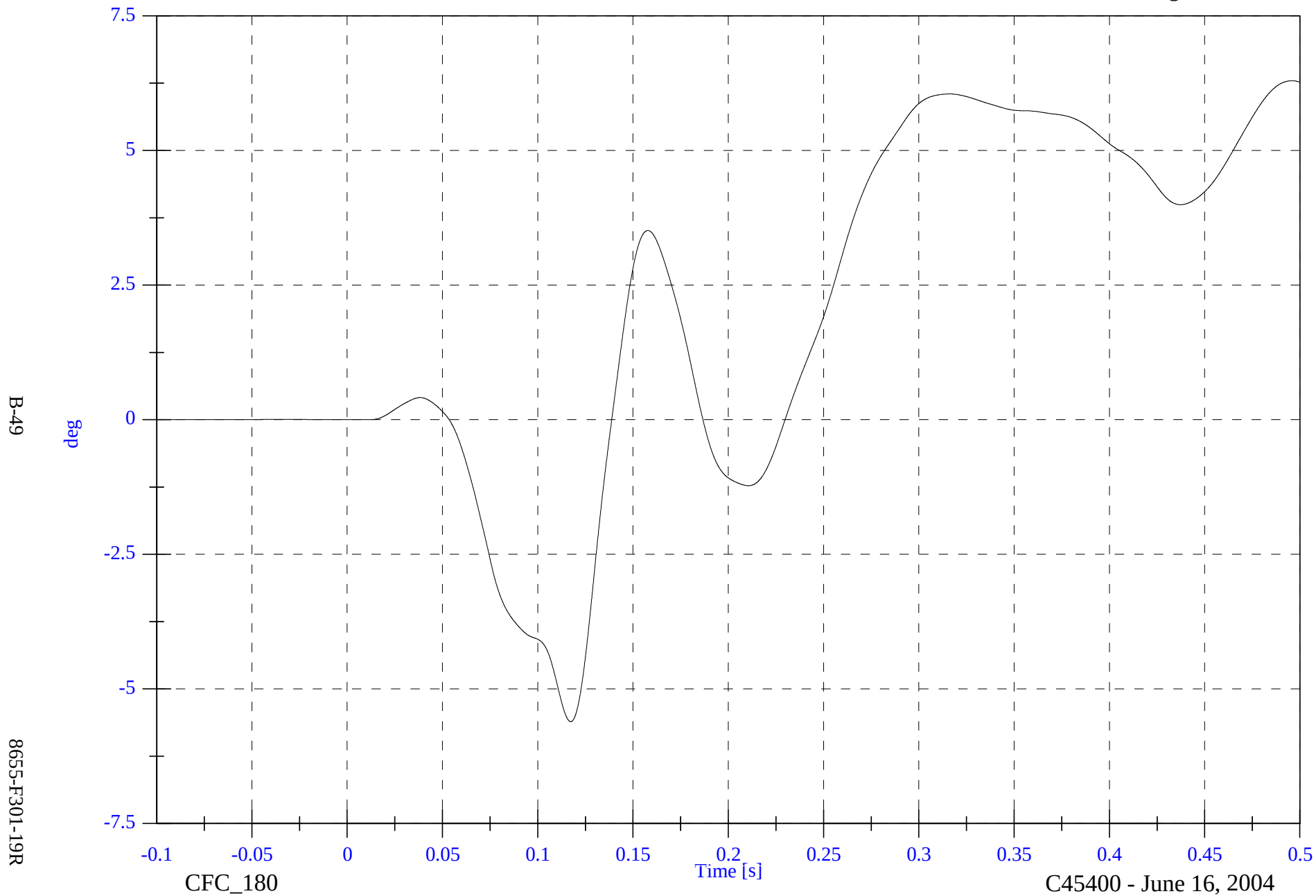


2004 FMVSS301 Test 2 - 2004 Mazda 6

V2P1 Head to Chest

Max: 6.3 [deg] at 0.496 [s]

Min: -5.6 [deg] at 0.117 [s]

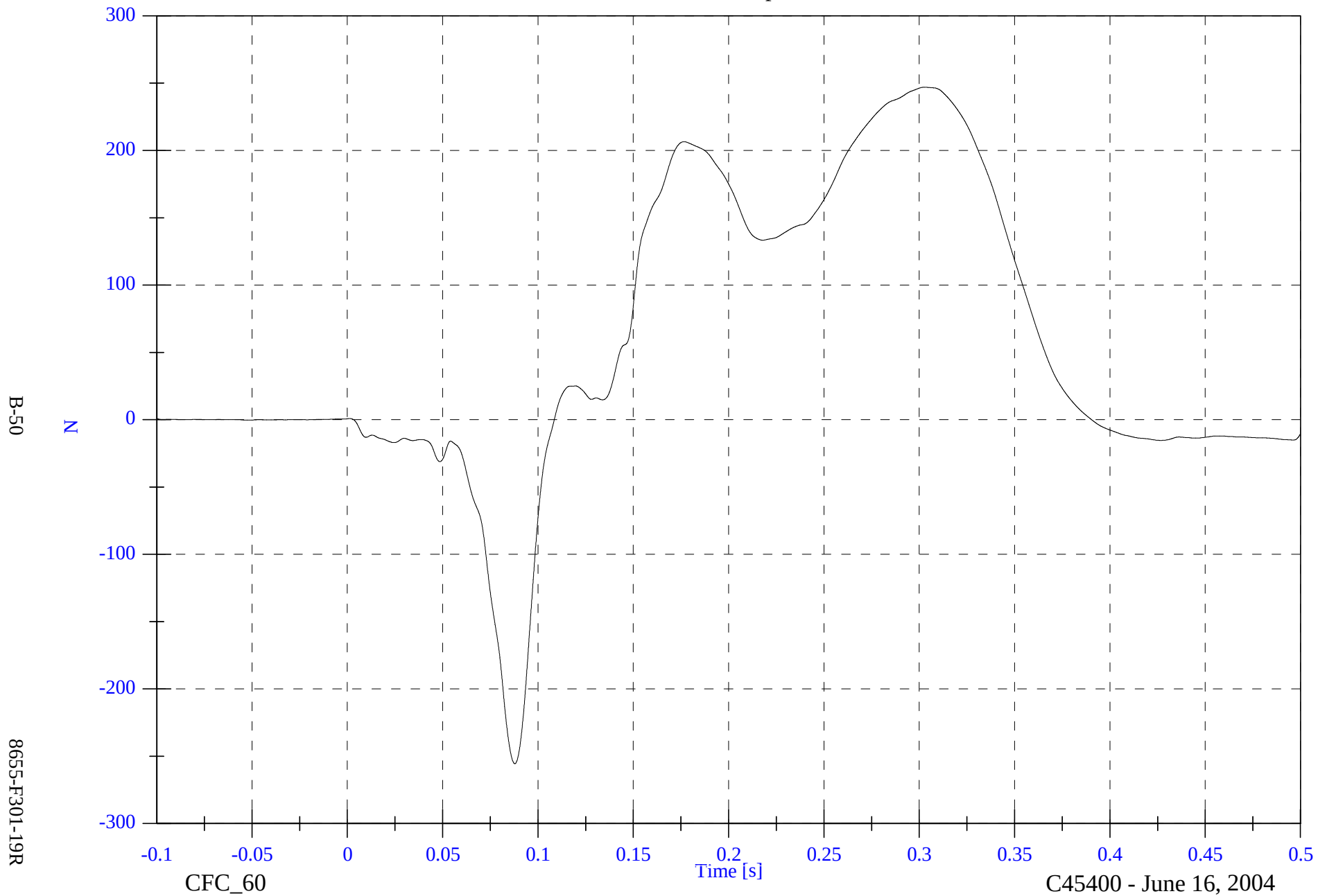


2004 FMVSS301 Test 2 - 2004 Mazda 6

V2 Driver Lap Belt

Max: 247.0 [N] at 0.303 [s]

Min: -255.5 [N] at 0.088 [s]





2004 FMVSS301 Test 2 - 2004 Mazda 6

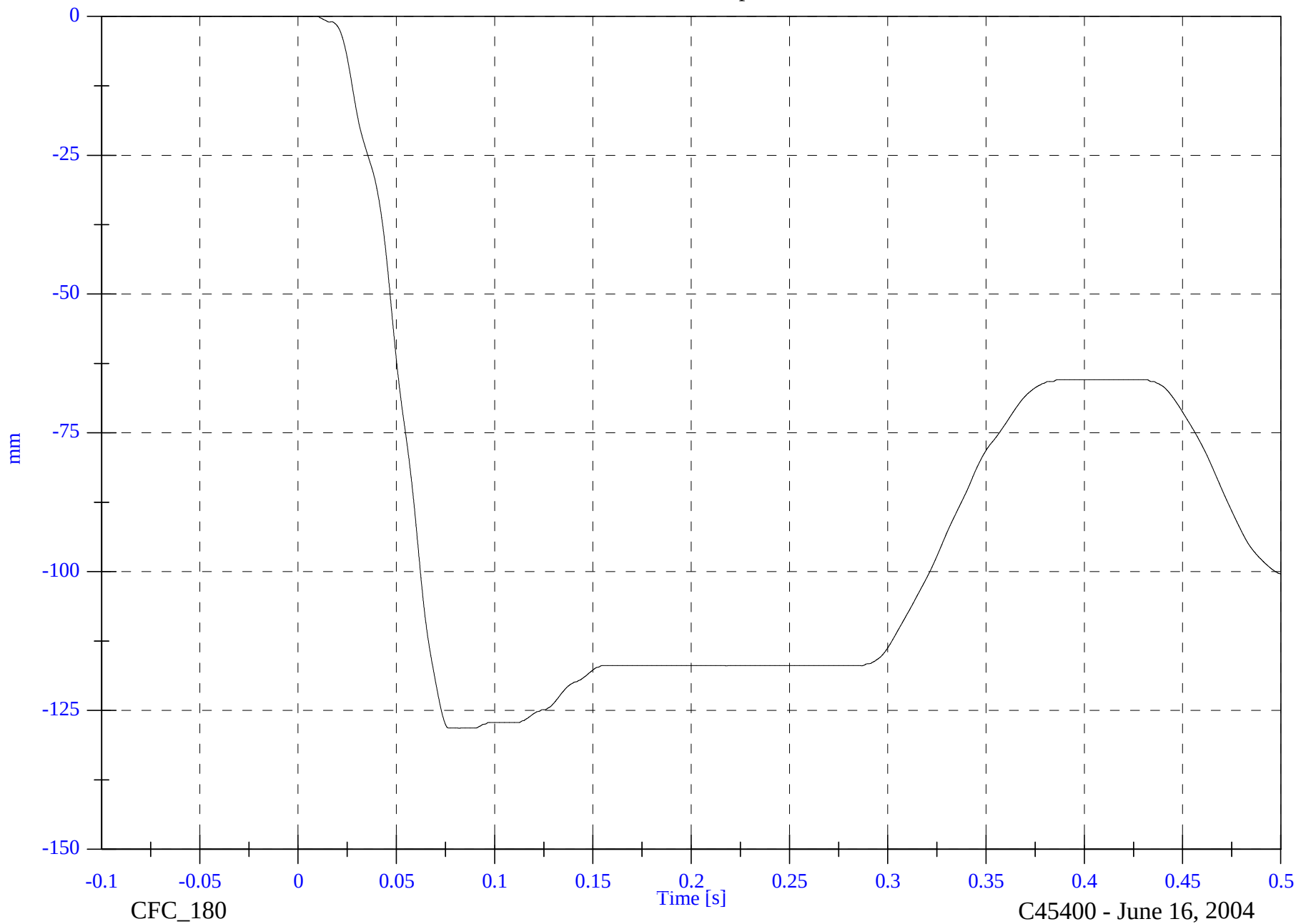
V2 Driver Belt Spoolout

Max: 0.0 [mm] at 0.001 [s]

Min: -128.2 [mm] at 0.082 [s]

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CFC\_180

Time [s]

C45400 - June 16, 2004

2004 FMVSS301 Test 2 - 2004 Mazda 6

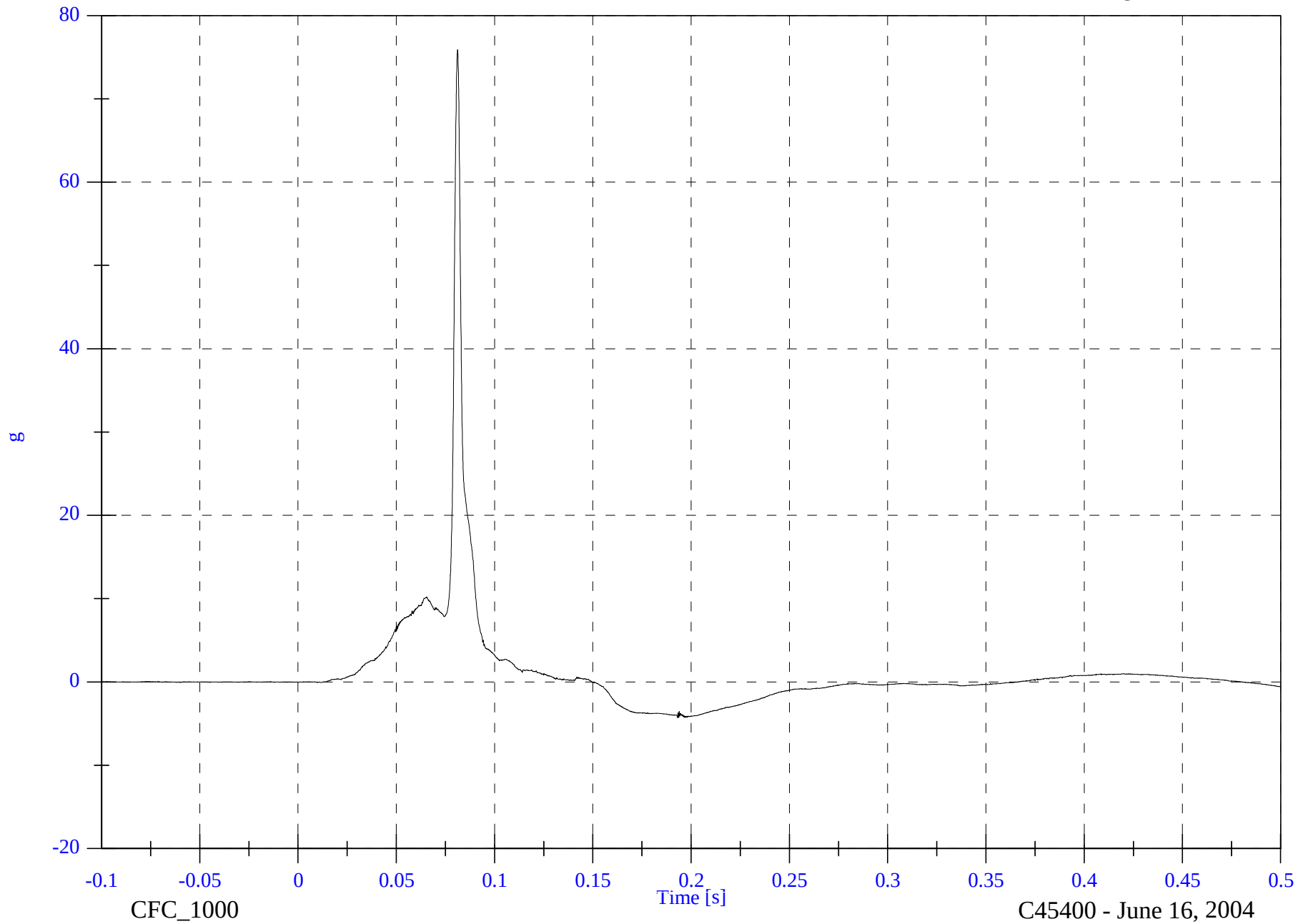
V2P3 Head x

Max: 75.9 [g] at 0.081 [s]

Min: -4.3 [g] at 0.194 [s]

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2004 FMVSS301 Test 2 - 2004 Mazda 6

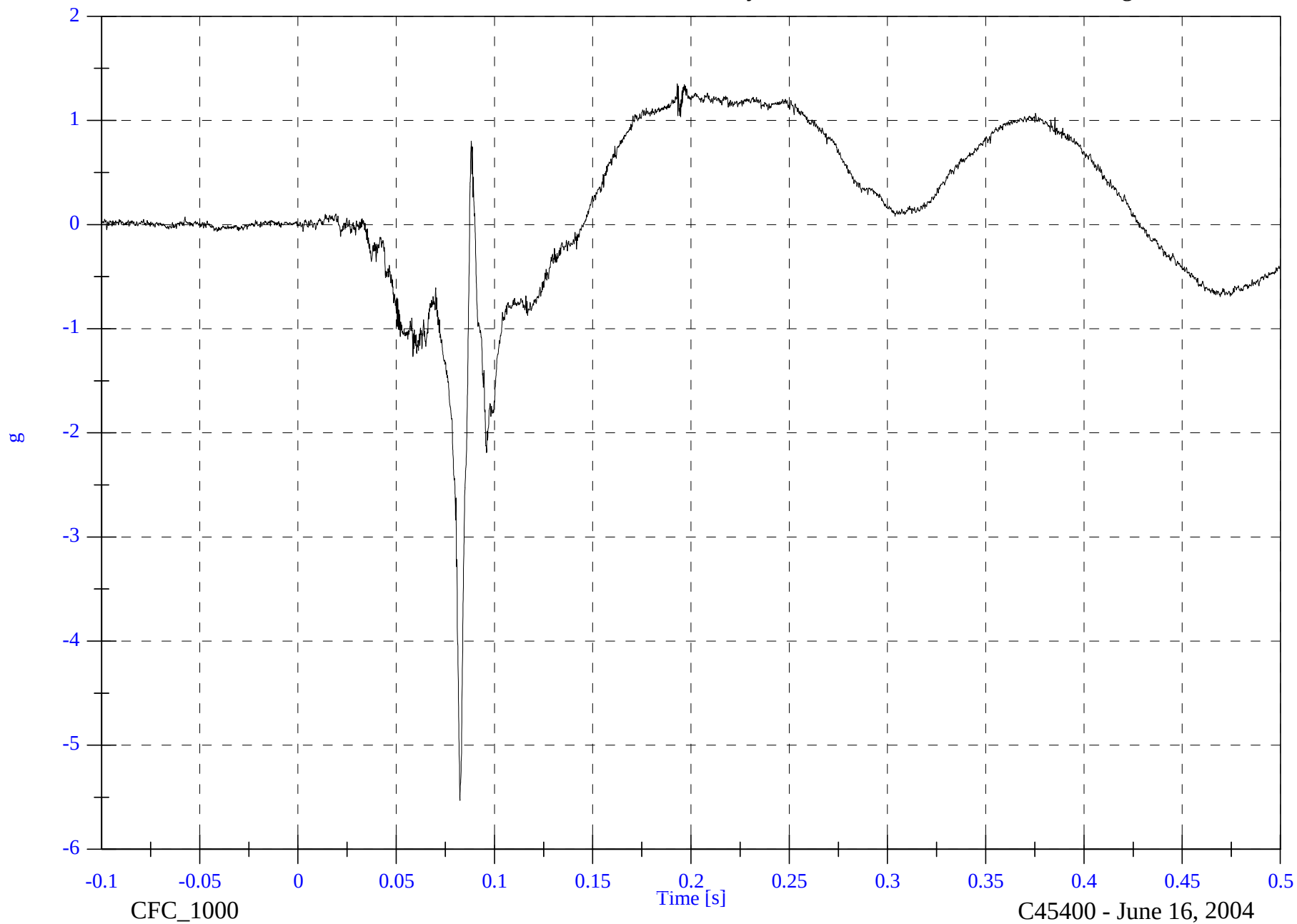
V2P3 Head y

Max: 1.4 [g] at 0.193 [s]

Min: -5.5 [g] at 0.082 [s]

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2004 FMVSS301 Test 2 - 2004 Mazda 6

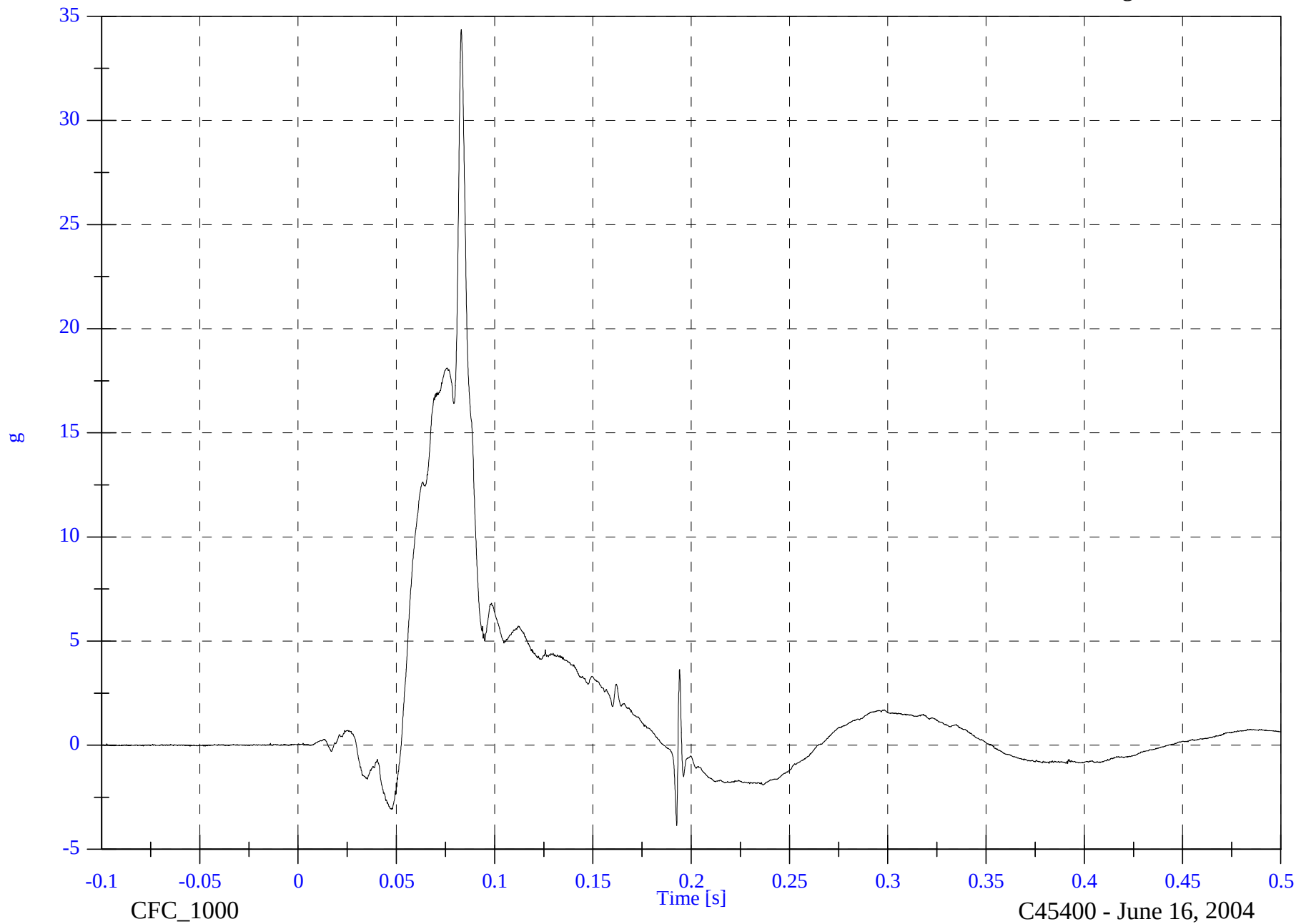
V2P3 Head z

Max: 34.4 [g] at 0.083 [s]

Min: -3.9 [g] at 0.193 [s]

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2004 FMVSS301 Test 2 - 2004 Mazda 6

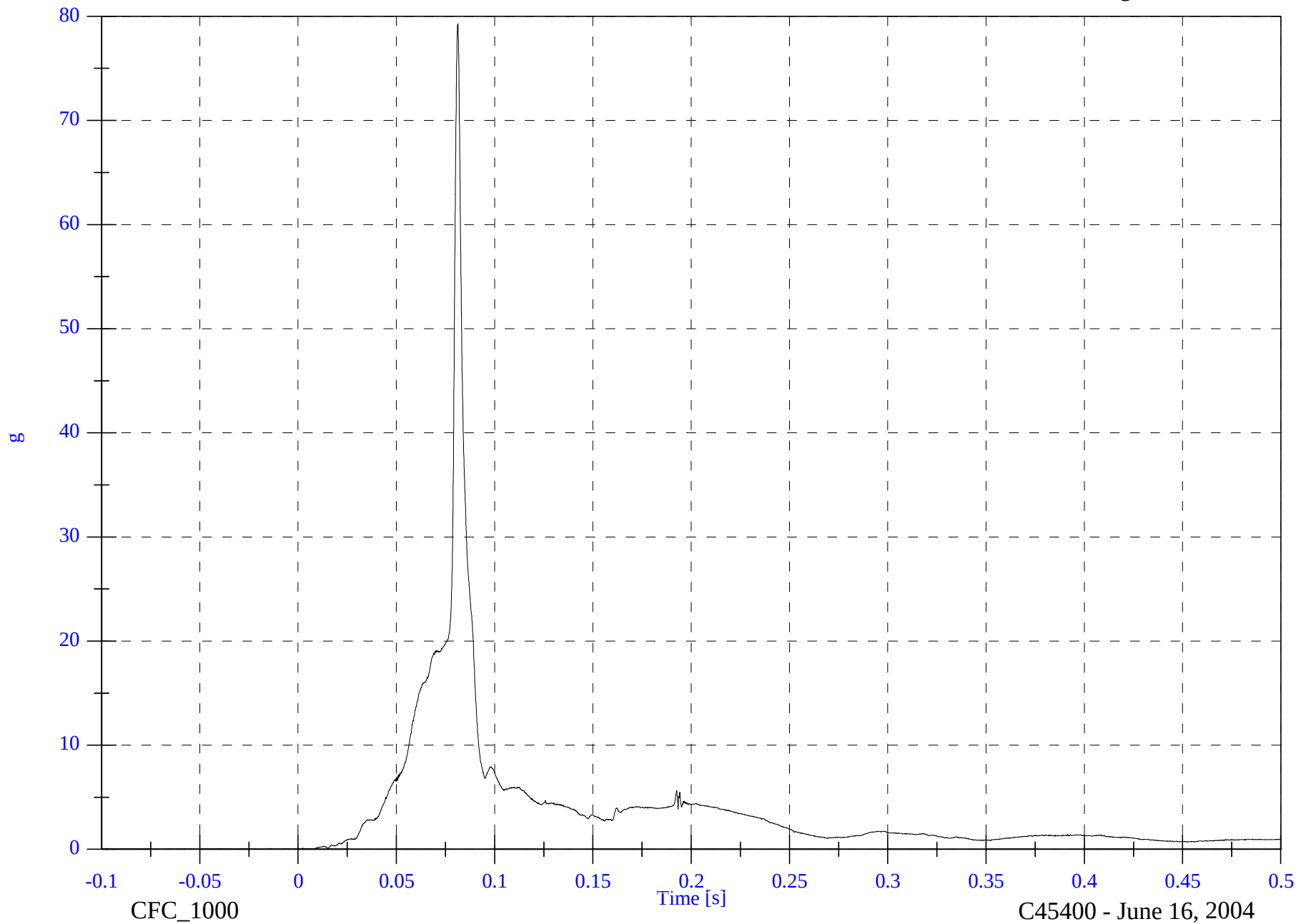
V2P3 Head Resultant

Max: 79.3 [g] at 0.081 [s]

Min: 0.0 [g] at -0.024 [s]

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2004 FMVSS301 Test 2 - 2004 Mazda 6

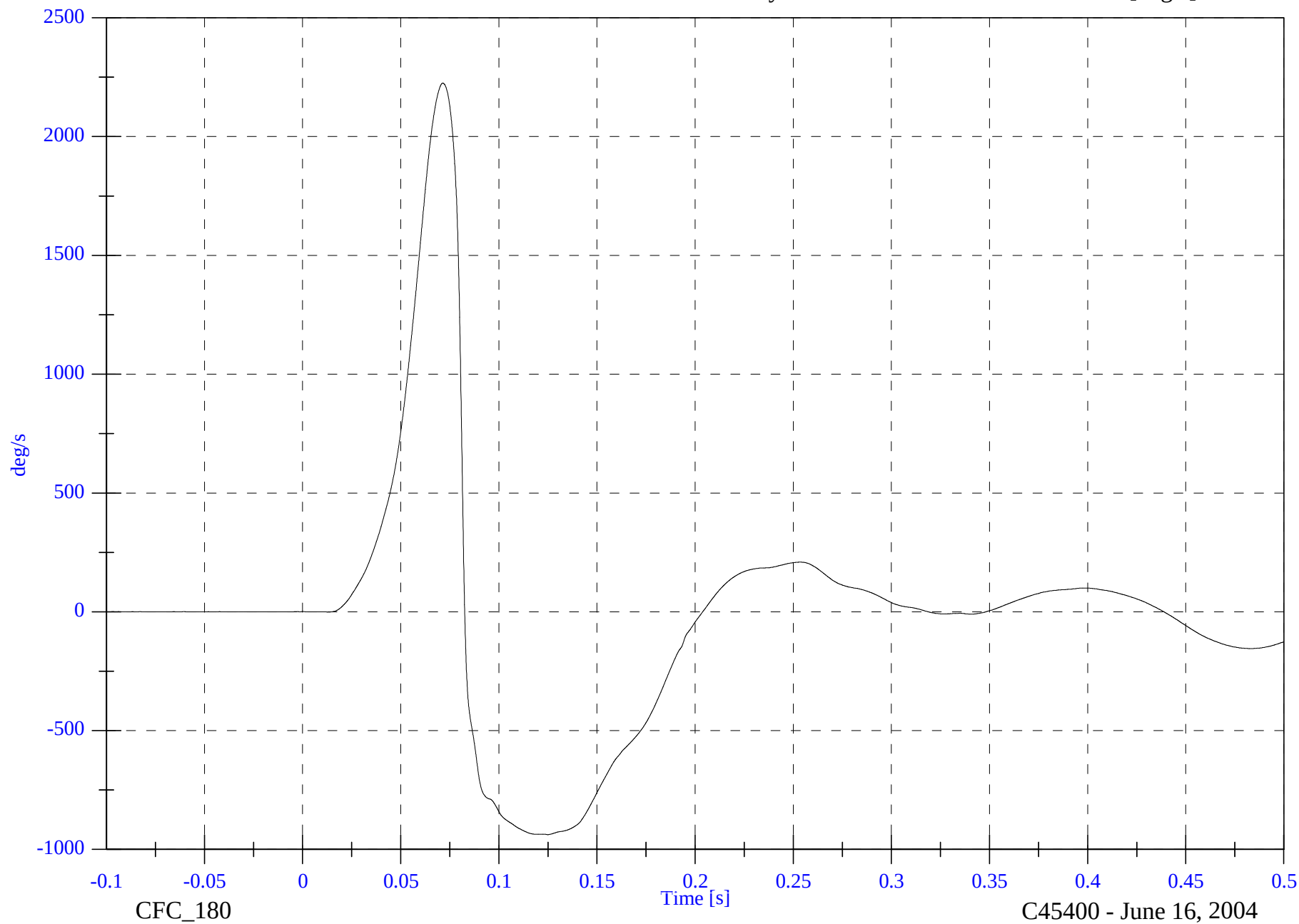
V2P3 Head AVy

Max: 2224.9 [deg/s] at 0.071 [s]

Min: -937.7 [deg/s] at 0.125 [s]

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2004 FMVSS301 Test 2 - 2004 Mazda 6

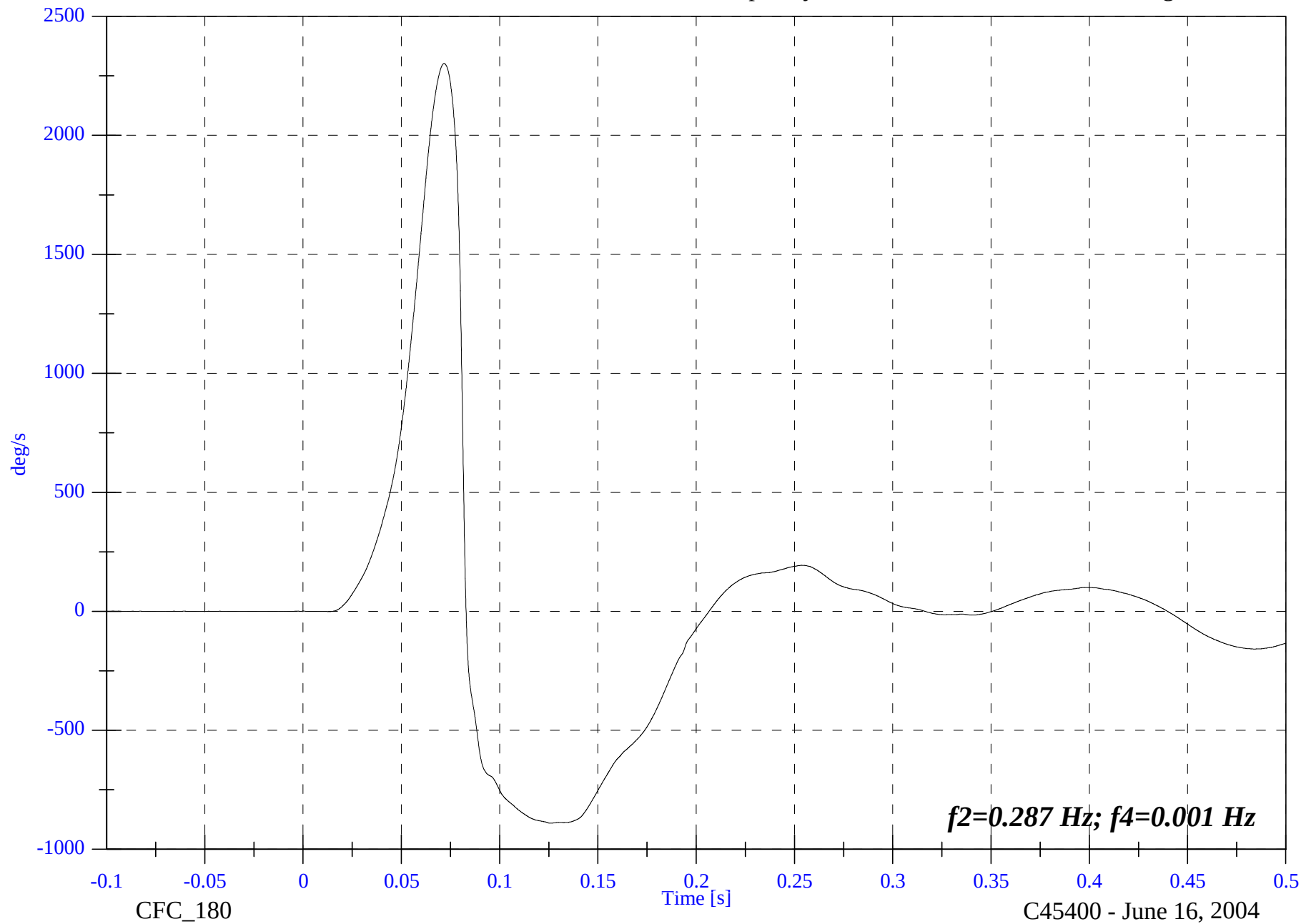
V2P3 Head Comp AVy

Max: 2301.8 [deg/s] at 0.072 [s]

Min: -890.2 [deg/s] at 0.126 [s]

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2004 FMVSS301 Test 2 - 2004 Mazda 6

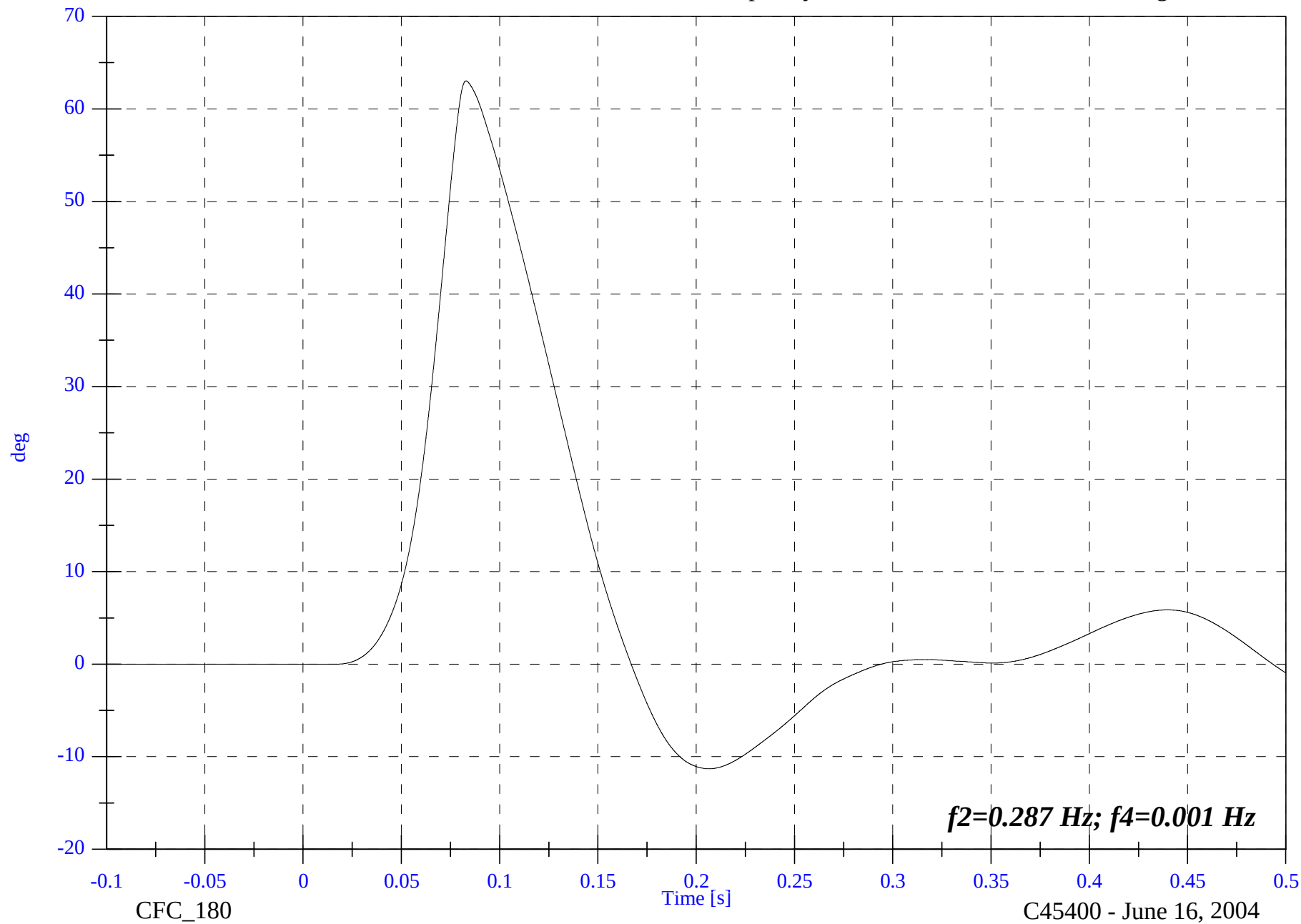
V2P3 Head Comp ADy

Max: 63.0 [deg] at 0.083 [s]

Min: -11.3 [deg] at 0.207 [s]

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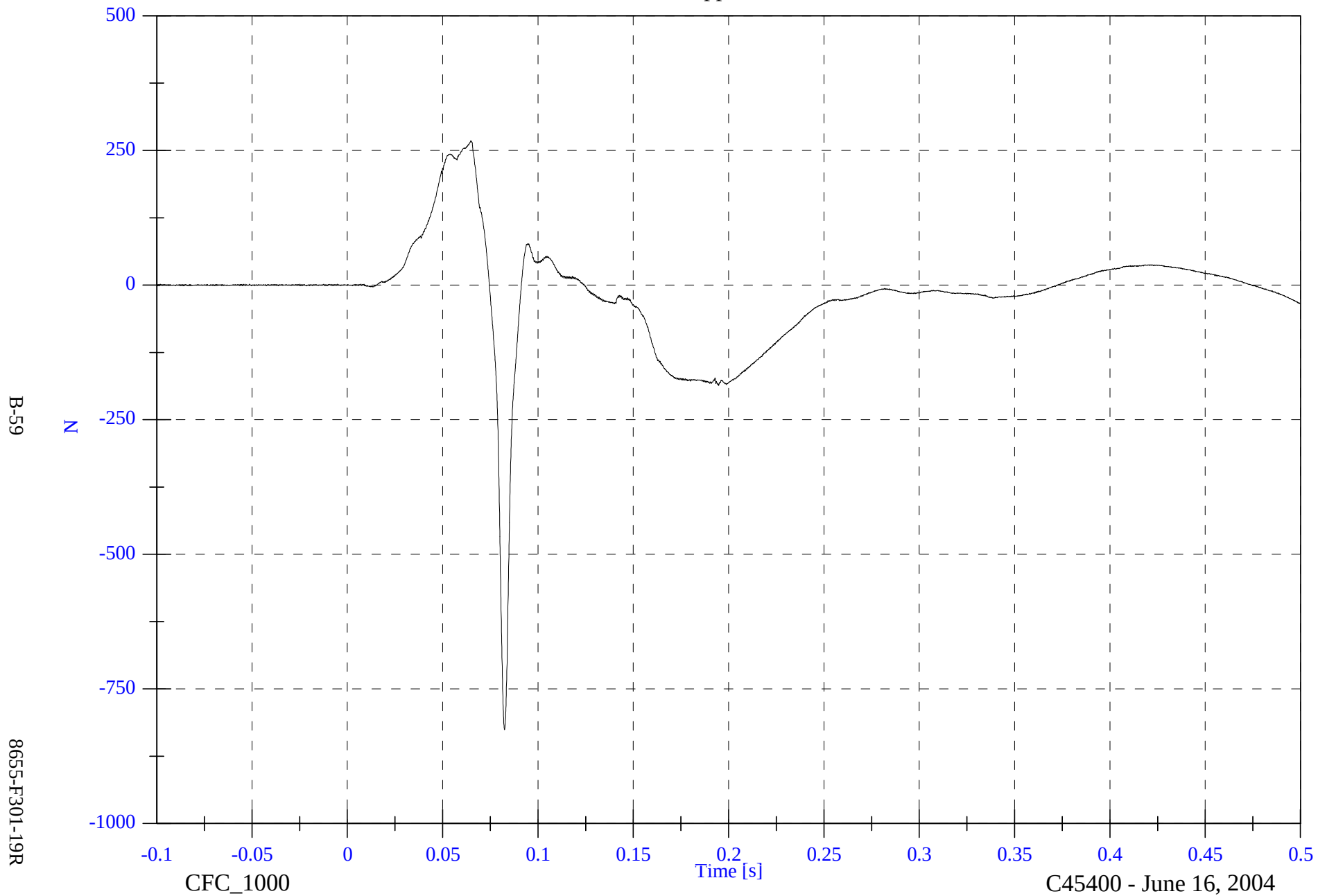


2004 FMVSS301 Test 2 - 2004 Mazda 6

V2P3 Upper Neck Fx

Max: 268.2 [N] at 0.065 [s]

Min: -825.7 [N] at 0.082 [s]

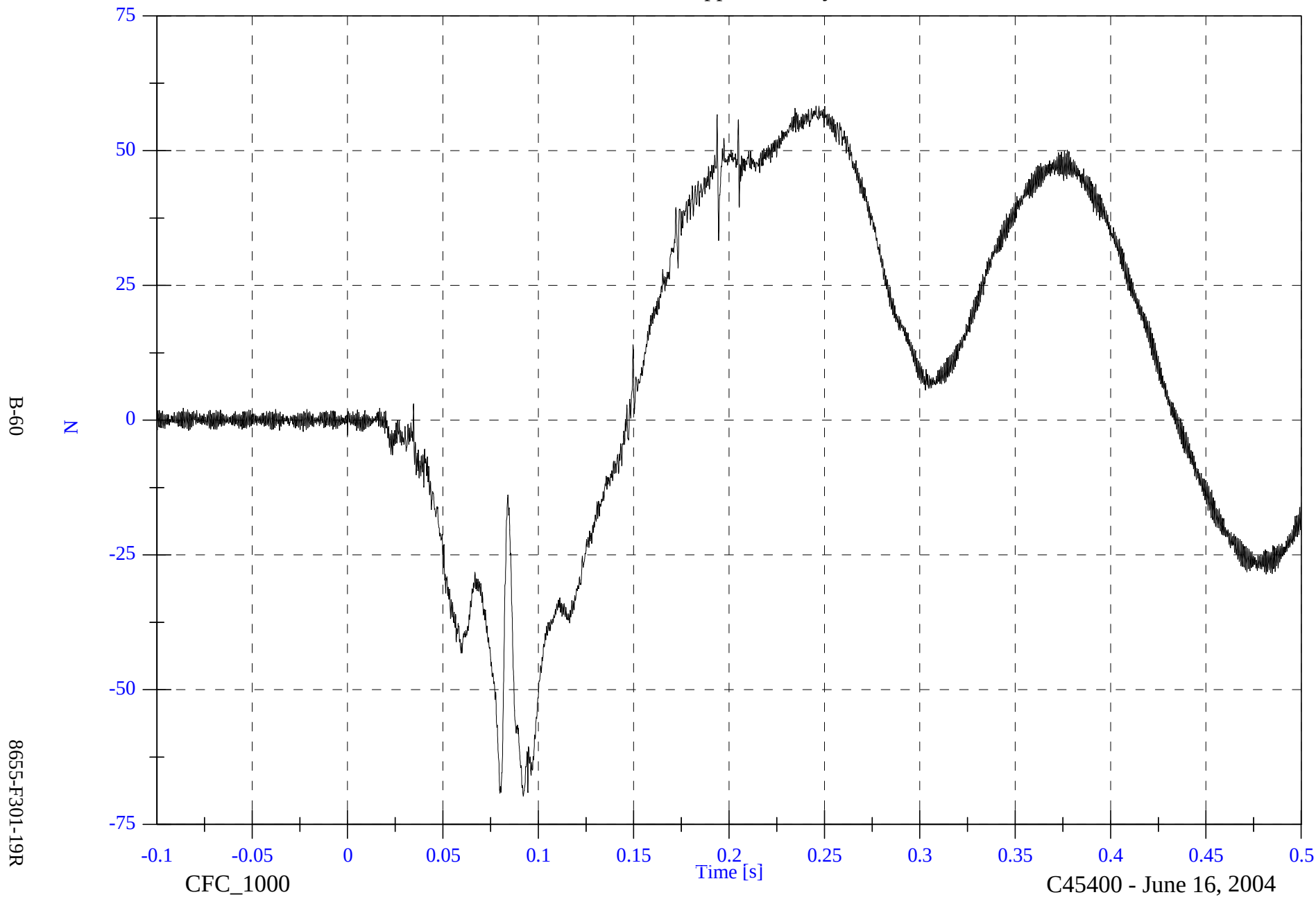


2004 FMVSS301 Test 2 - 2004 Mazda 6

V2P3 Upper Neck Fy

Max: 58.3 [N] at 0.246 [s]

Min: -69.7 [N] at 0.092 [s]



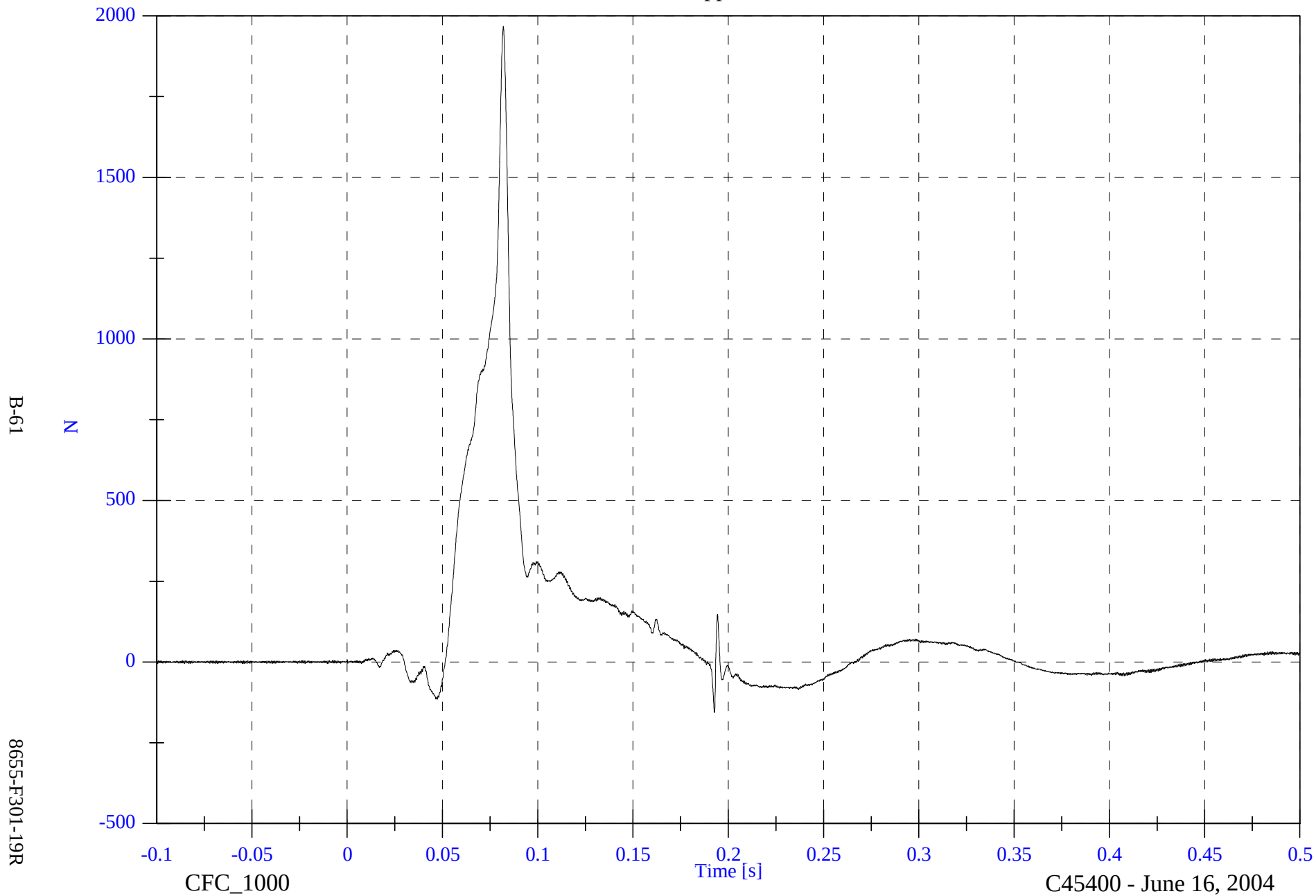


2004 FMVSS301 Test 2 - 2004 Mazda 6

Max: 1967.9 [N] at 0.082 [s]

V2P3 Upper Neck Fz

Min: -156.6 [N] at 0.193 [s]



2004 FMVSS301 Test 2 - 2004 Mazda 6

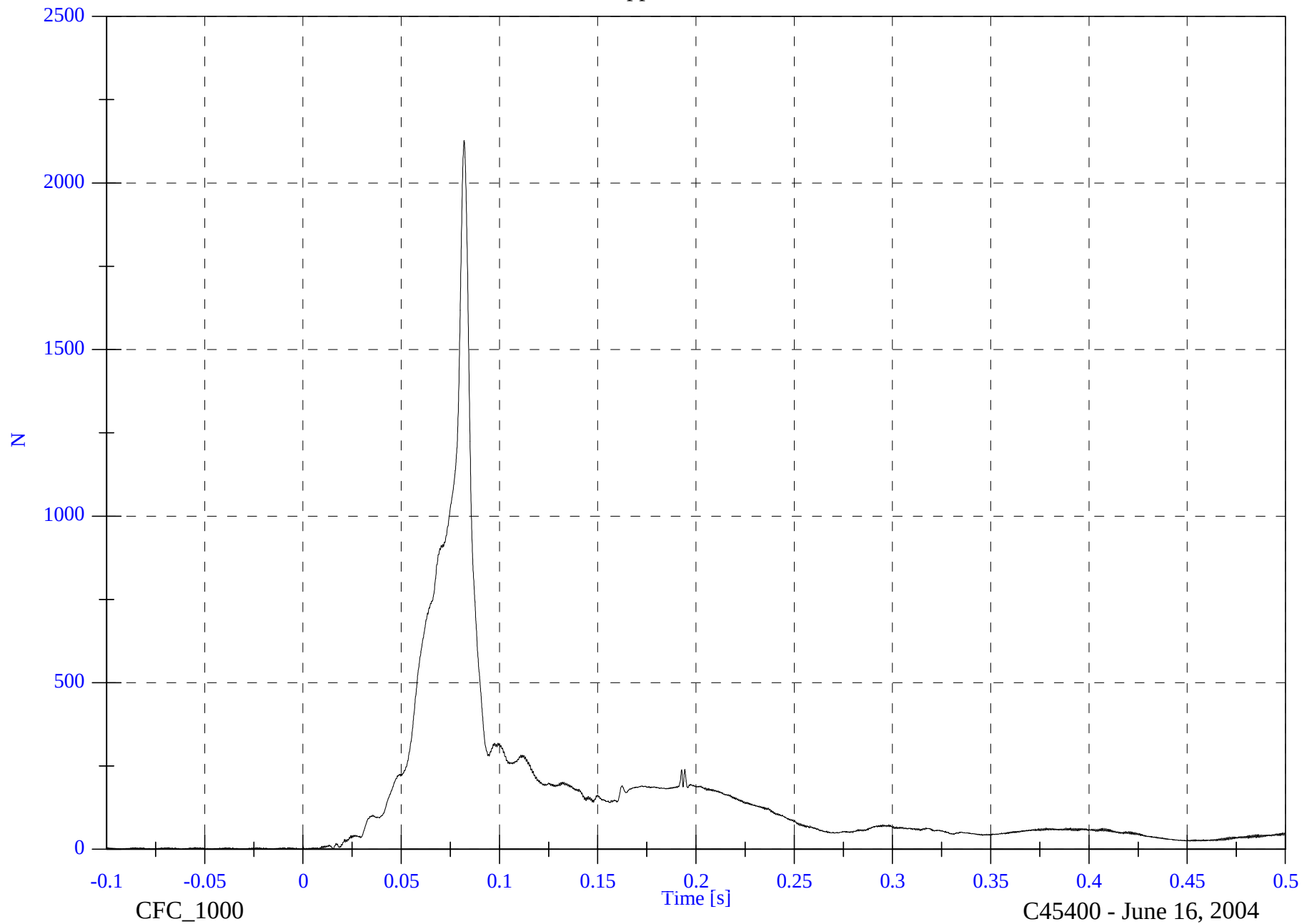
V2P3 Upper Neck F Resultant

Max: 2127.0 [N] at 0.082 [s]

Min: 0.1 [N] at -0.089 [s]

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V2P3 Upper Neck Mx

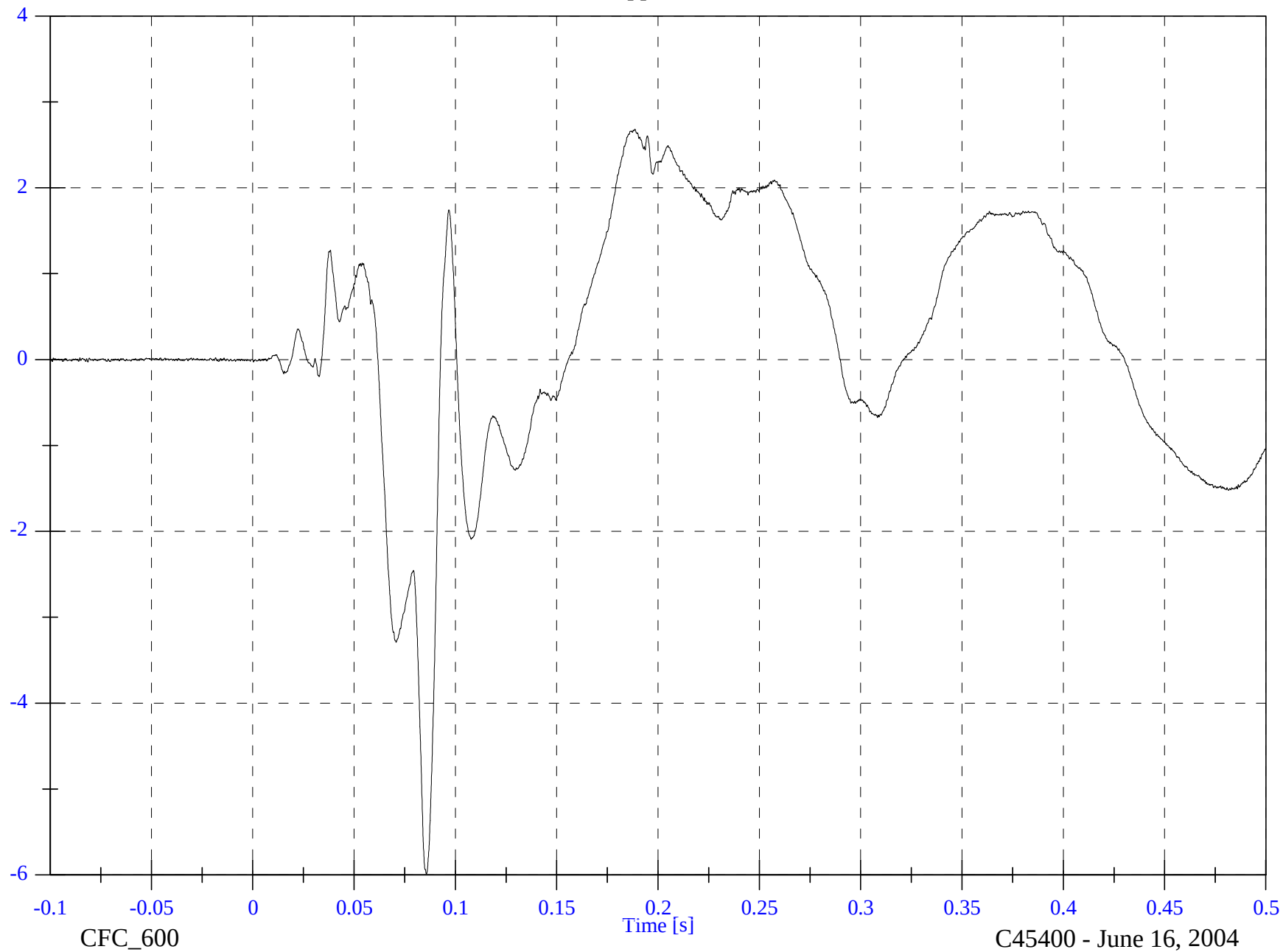
Max: 2.7 [N-m] at 0.189 [s]

Min: -6.0 [N-m] at 0.086 [s]

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N-m

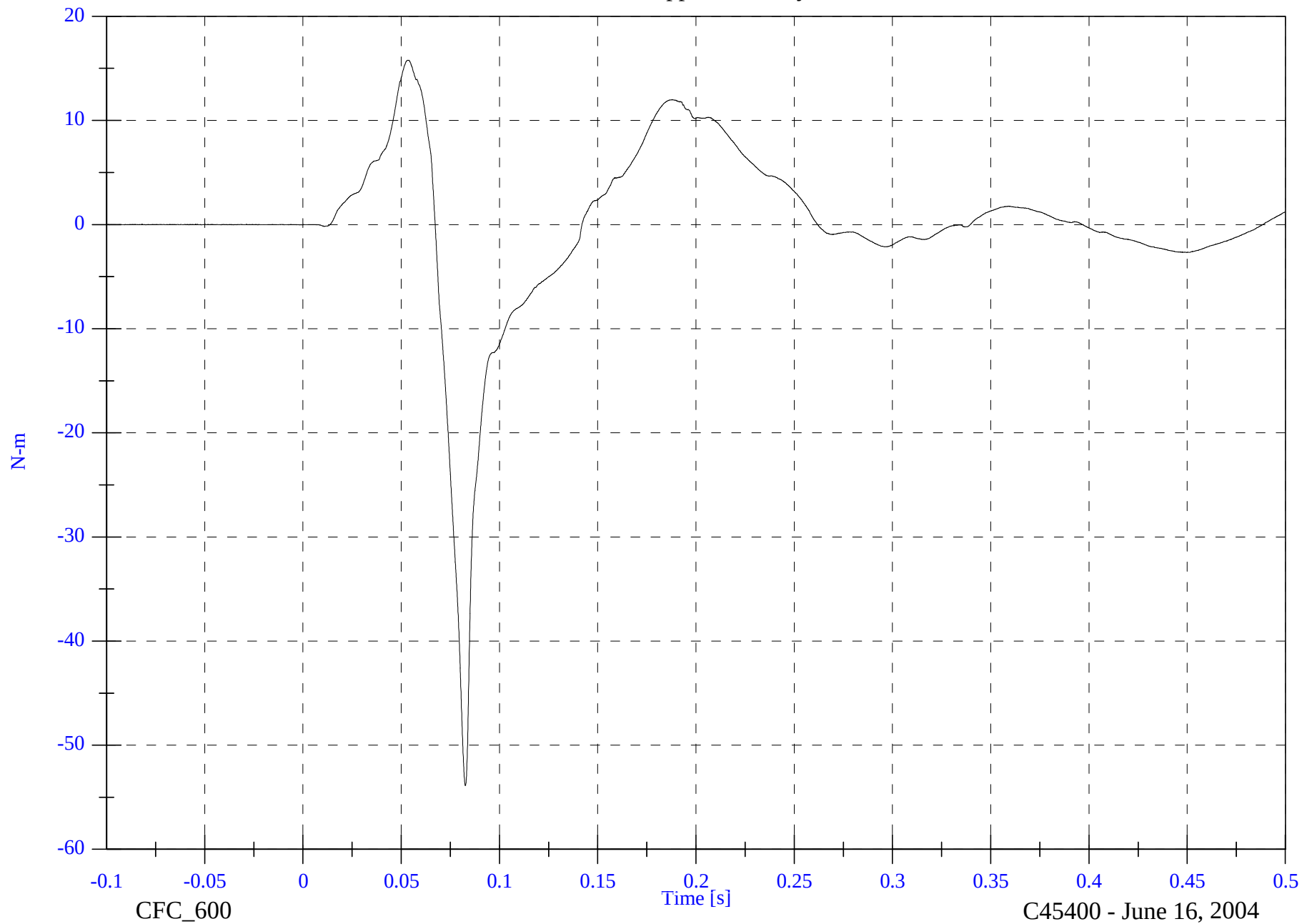


2004 FMVSS301 Test 2 - 2004 Mazda 6

V2P3 Upper Neck My

Max: 15.8 [N-m] at 0.054 [s]

Min: -53.9 [N-m] at 0.083 [s]



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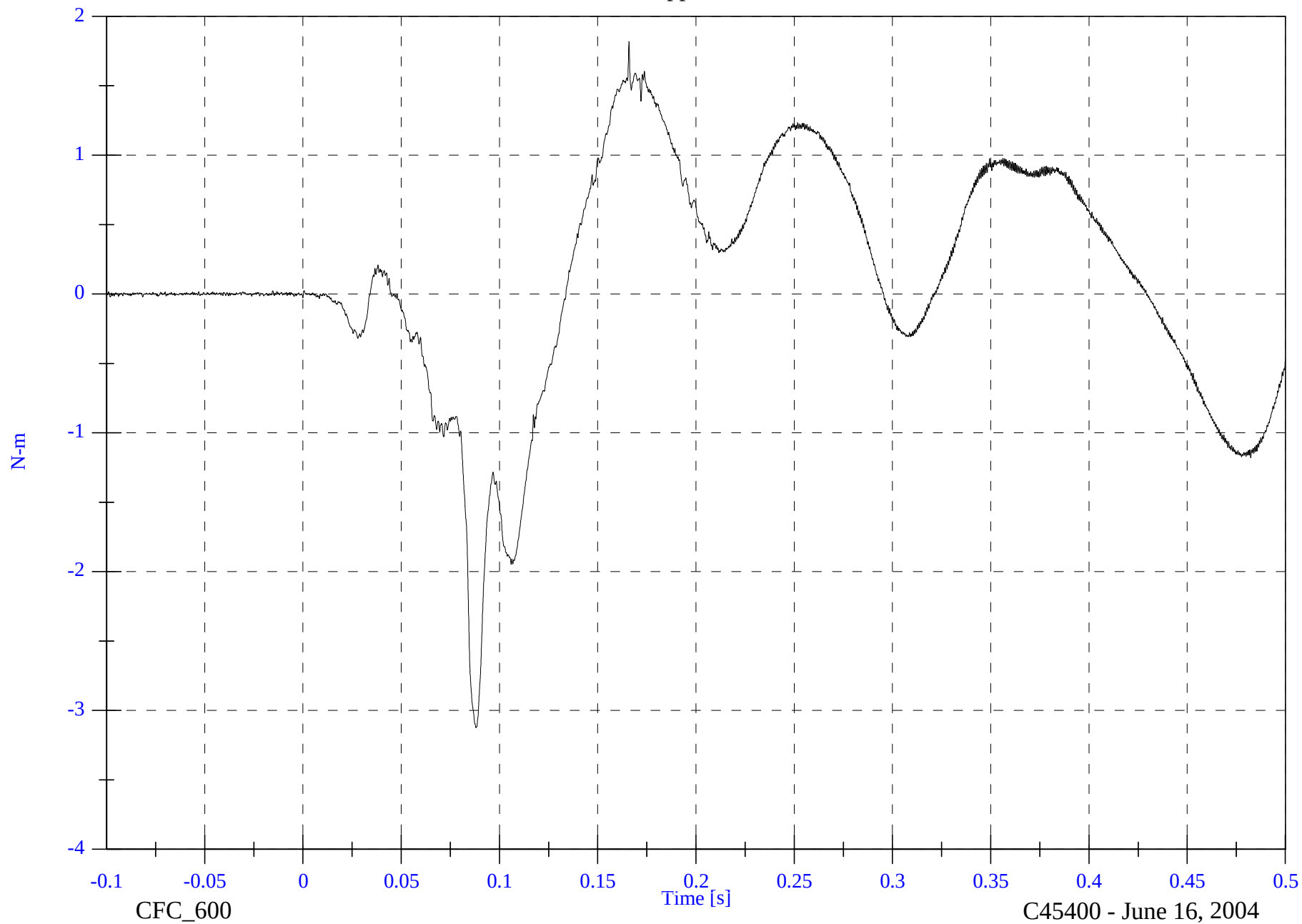
8655-F301-19R

2004 FMVSS301 Test 2 - 2004 Mazda 6

V2P3 Upper Neck Mz

Max: 1.8 [N-m] at 0.166 [s]

Min: -3.1 [N-m] at 0.088 [s]



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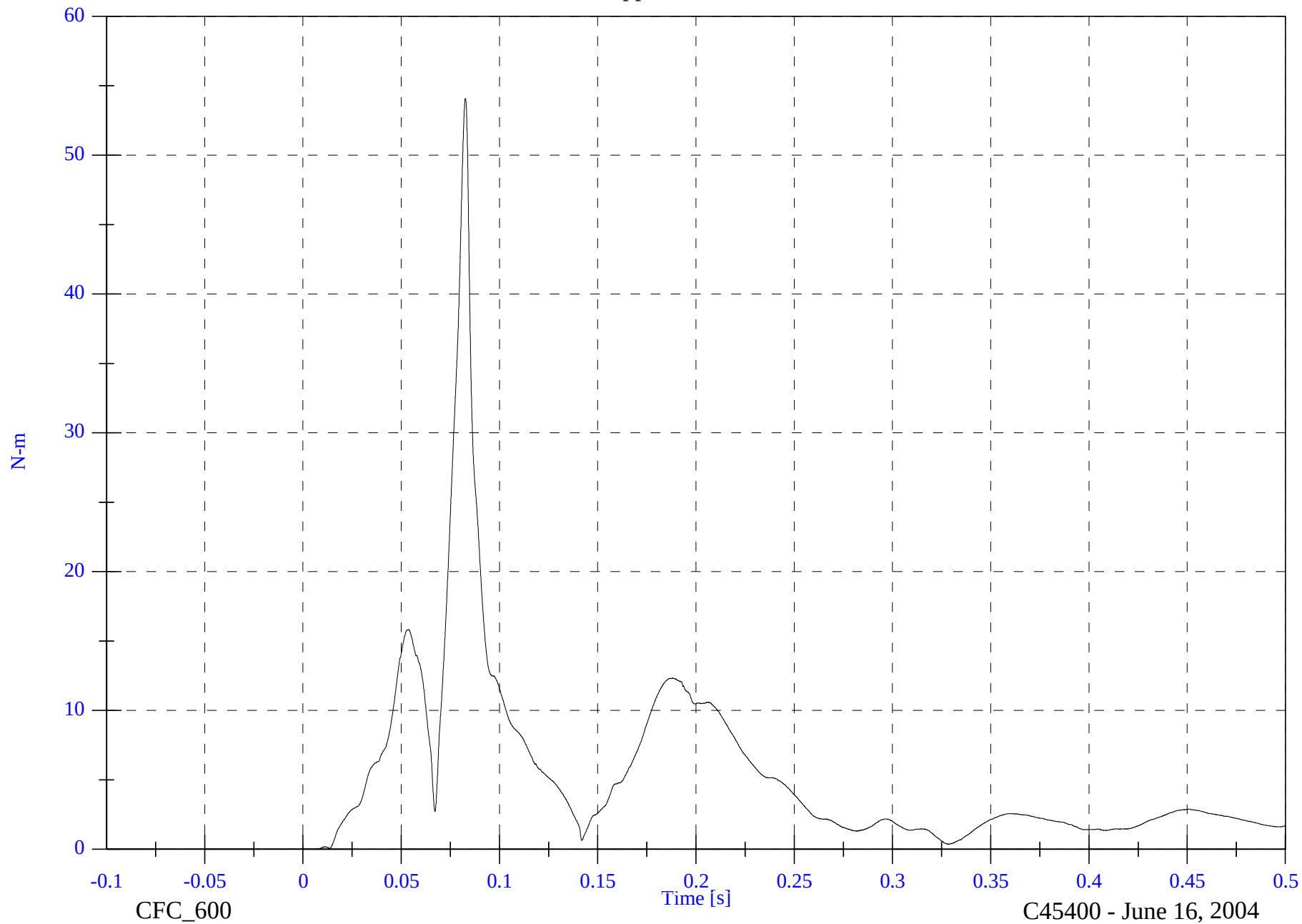


2004 FMVSS301 Test 2 - 2004 Mazda 6

V2P3 Upper Neck M Resultant

Max: 54.1 [N-m] at 0.083 [s]

Min: 0.0 [N-m] at -0.068 [s]



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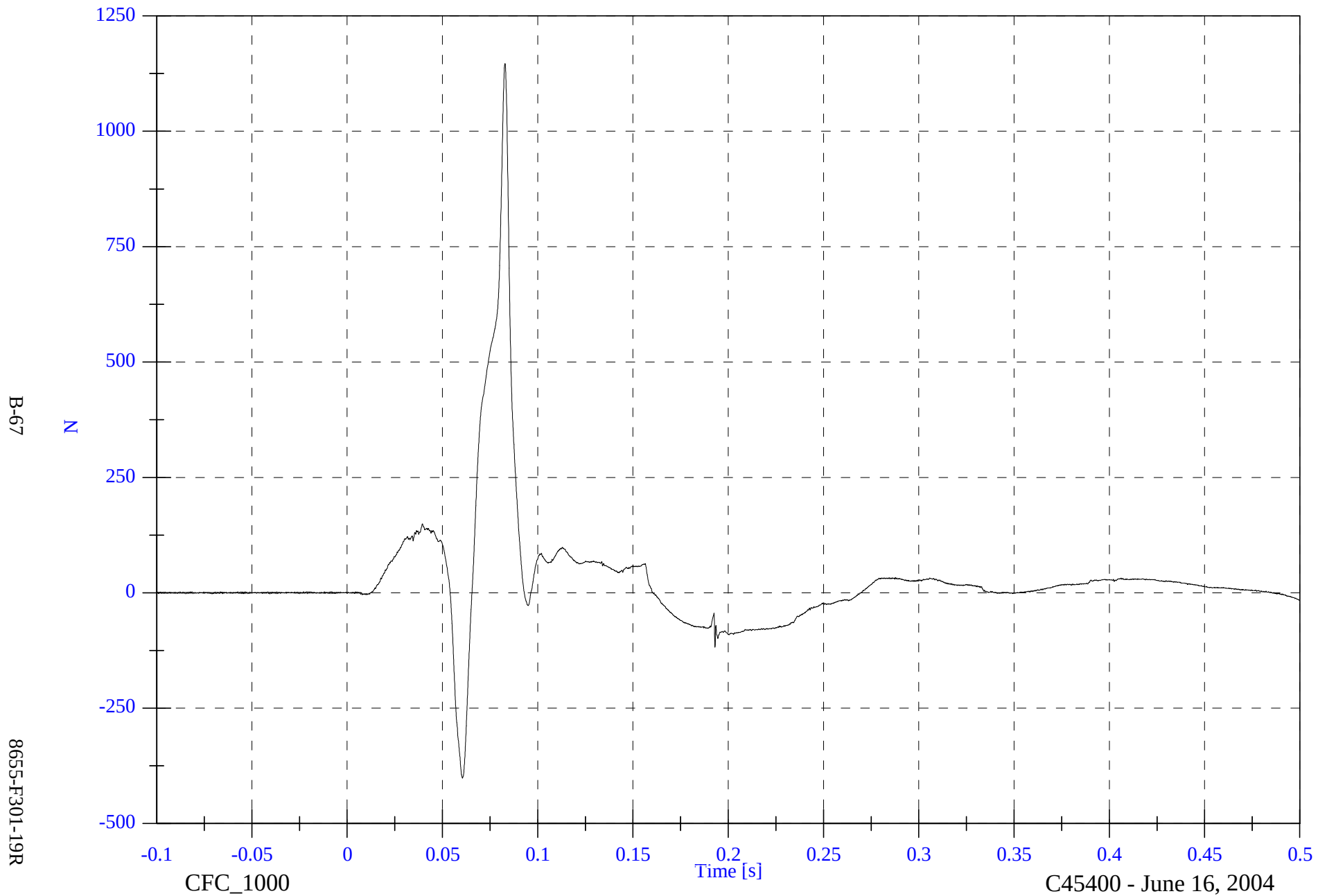
8655-F301-19R

2004 FMVSS301 Test 2 - 2004 Mazda 6

V2P3 Lower Neck Fx

Max: 1146.9 [N] at 0.083 [s]

Min: -401.6 [N] at 0.060 [s]

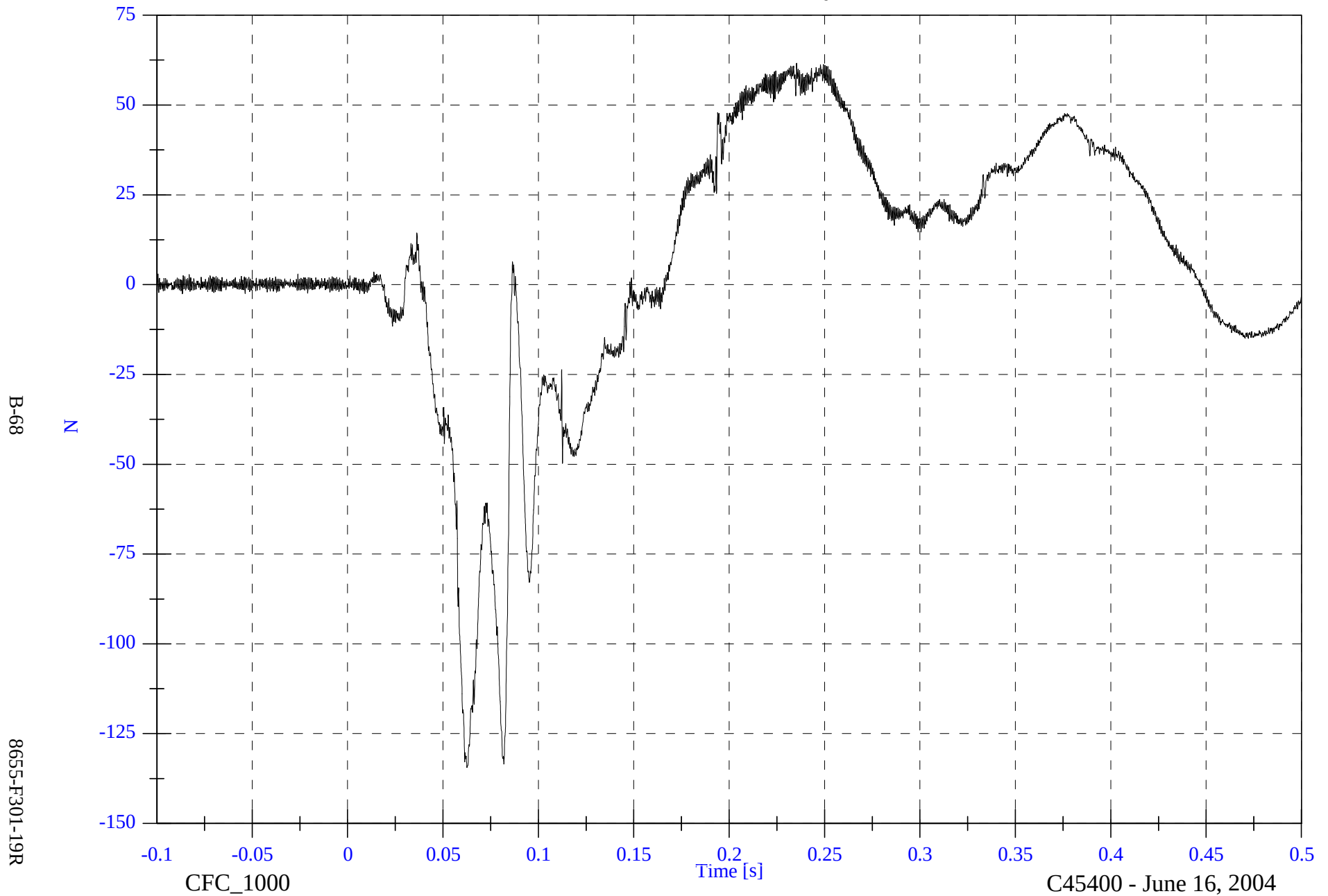


2004 FMVSS301 Test 2 - 2004 Mazda 6

V2P3 Lower Neck Fy

Max: 61.7 [N] at 0.235 [s]

Min: -134.4 [N] at 0.063 [s]

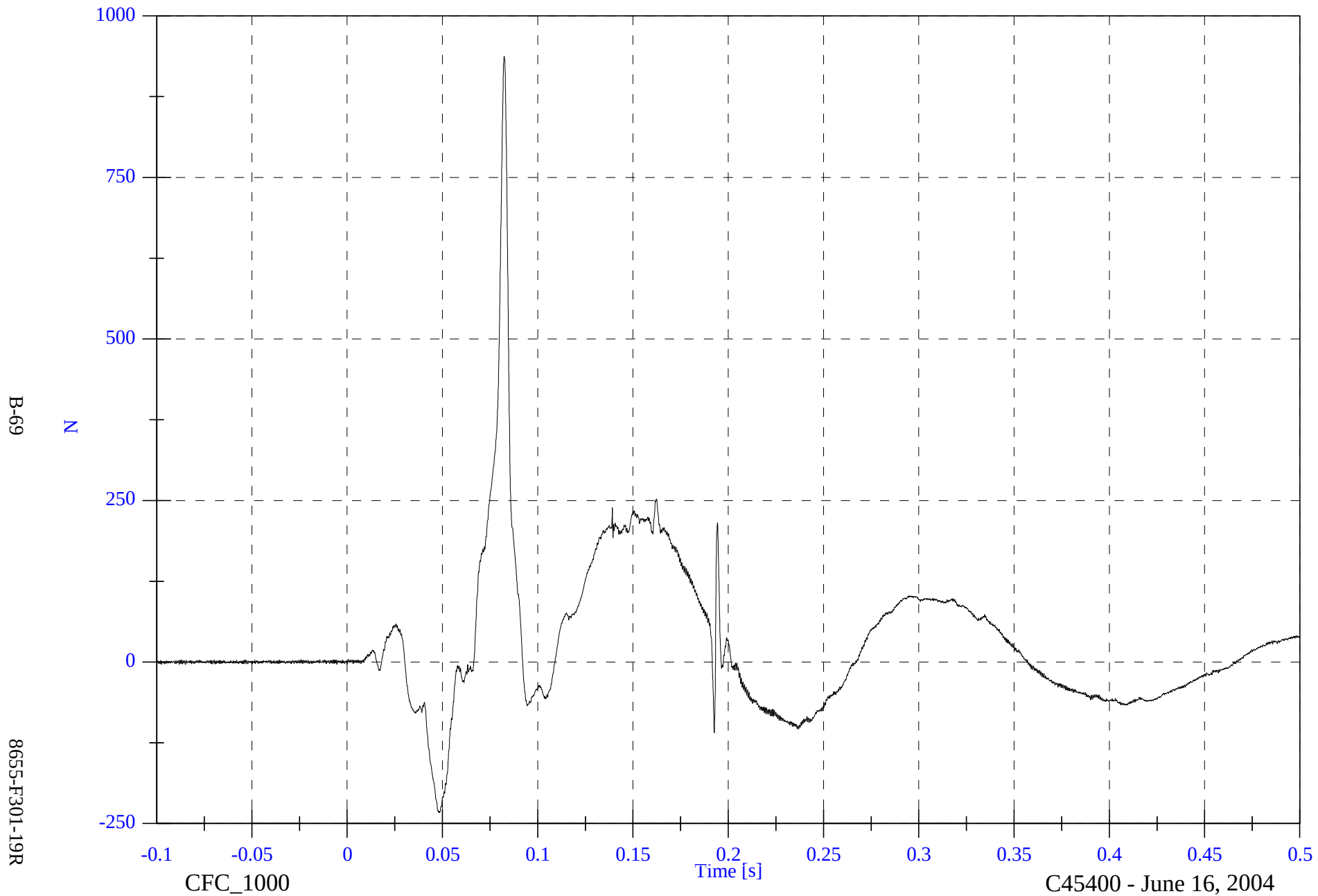


2004 FMVSS301 Test 2 - 2004 Mazda 6

V2P3 Lower Neck Fz

Max: 937.1 [N] at 0.082 [s]

Min: -233.0 [N] at 0.048 [s]

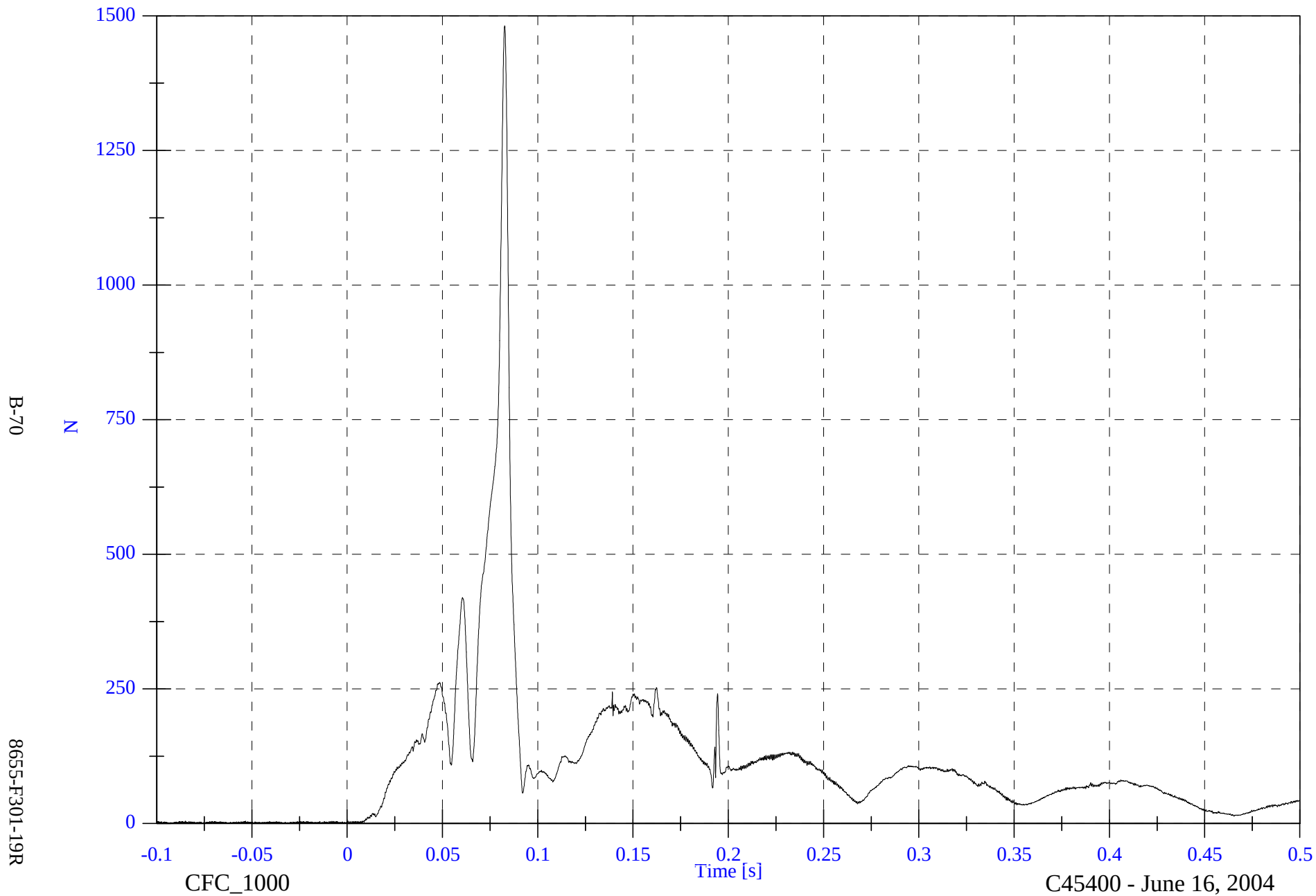


2004 FMVSS301 Test 2 - 2004 Mazda 6

V2P3 Lower Neck F Resultant

Max: 1481.4 [N] at 0.083 [s]

Min: 0.1 [N] at -0.040 [s]



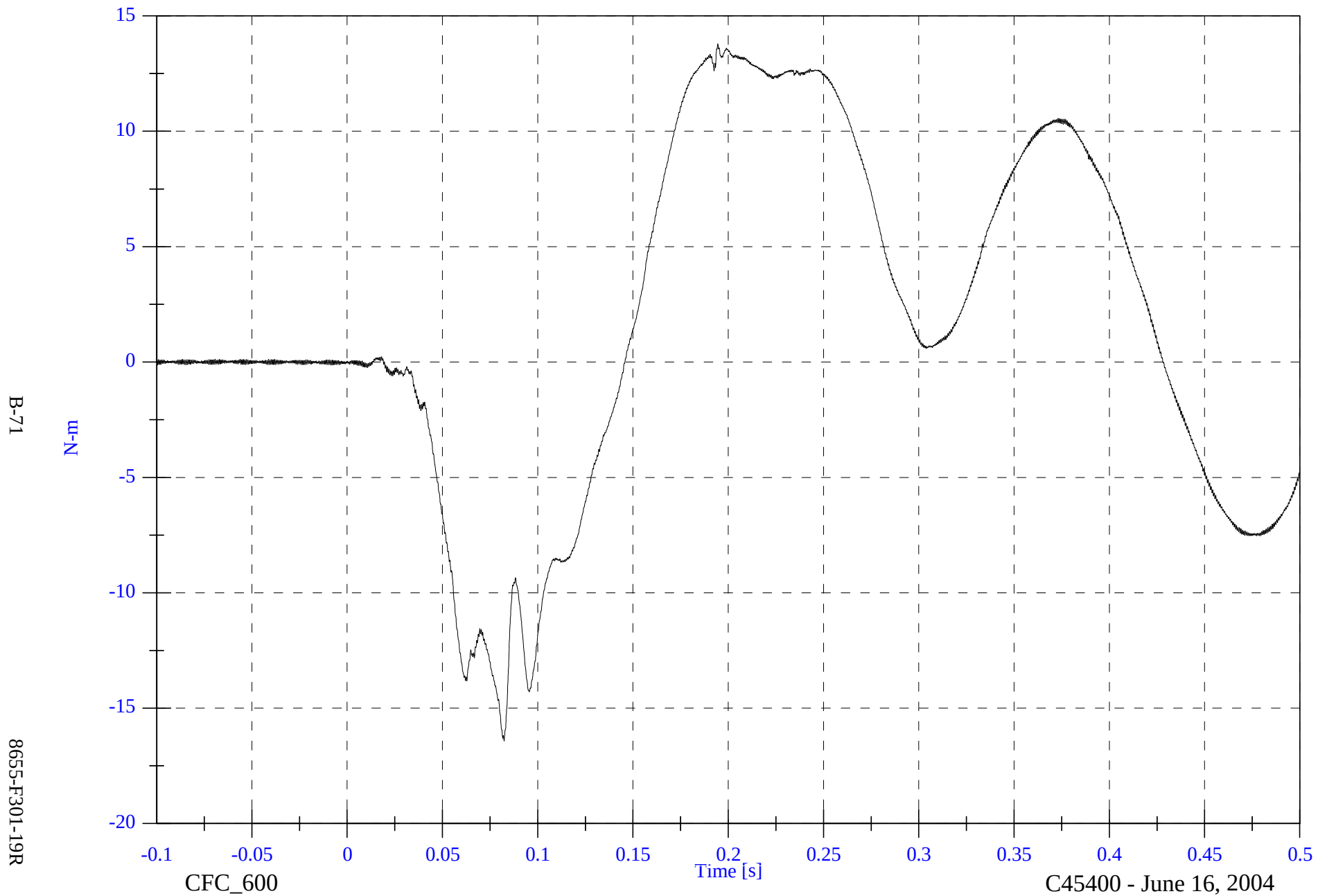


2004 FMVSS301 Test 2 - 2004 Mazda 6

V2P3 Lower Neck Mx

Max: 13.8 [N-m] at 0.194 [s]

Min: -16.4 [N-m] at 0.082 [s]

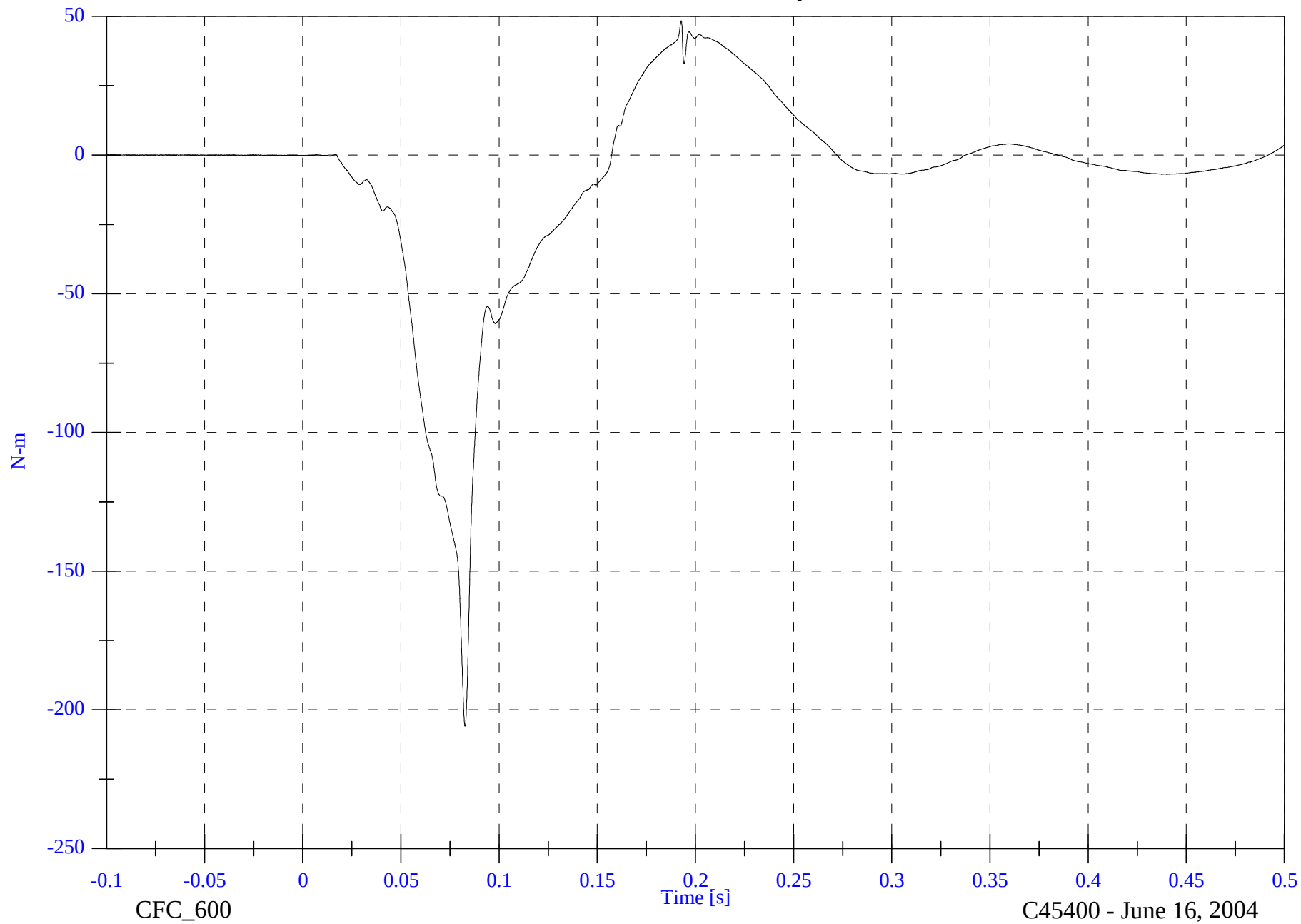


2004 FMVSS301 Test 2 - 2004 Mazda 6

V2P3 Lower Neck My

Max: 48.4 [N-m] at 0.193 [s]

Min: -205.9 [N-m] at 0.083 [s]



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CFC\_600

C45400 - June 16, 2004

2004 FMVSS301 Test 2 - 2004 Mazda 6

V2P3 Lower Neck Mz

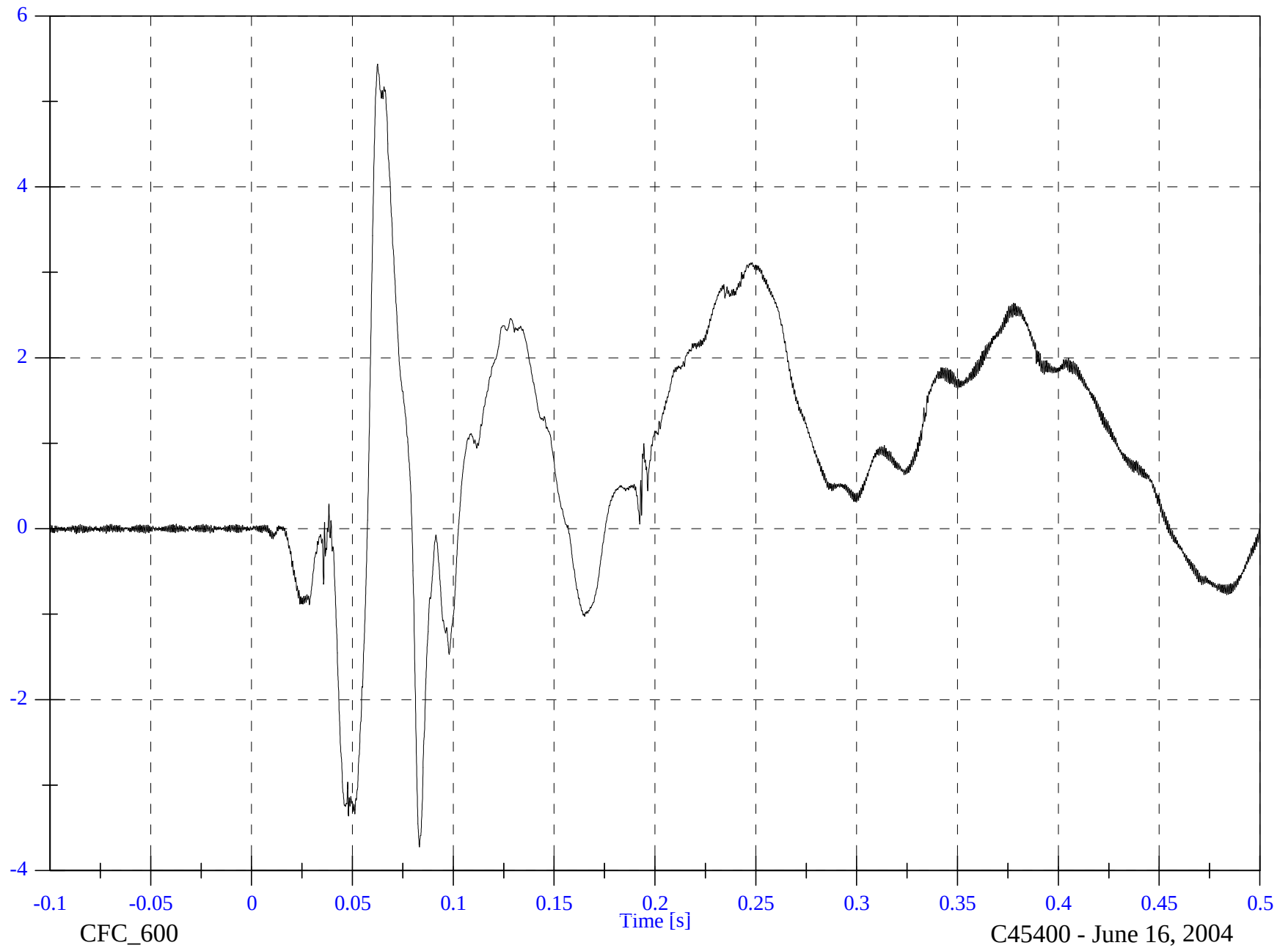
Max: 5.4 [N-m] at 0.062 [s]

Min: -3.7 [N-m] at 0.083 [s]

B-73

N-m

8655-F301-19R



2004 FMVSS301 Test 2 - 2004 Mazda 6

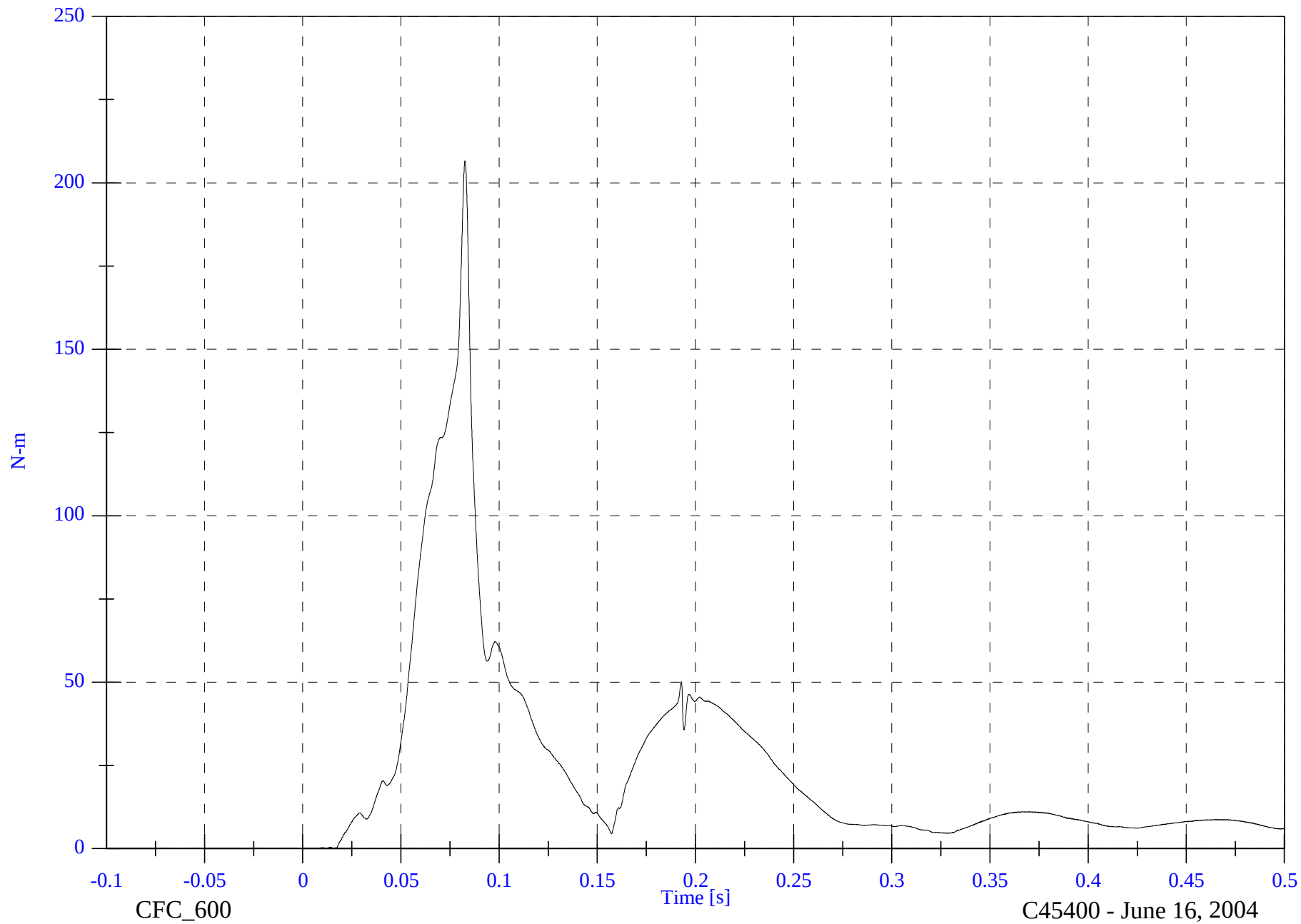
V2P3 Lower Neck M Resultant

Max: 206.6 [N-m] at 0.083 [s]

Min: 0.0 [N-m] at -0.098 [s]

B-74

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2004 FMVSS301 Test 2 - 2004 Mazda 6

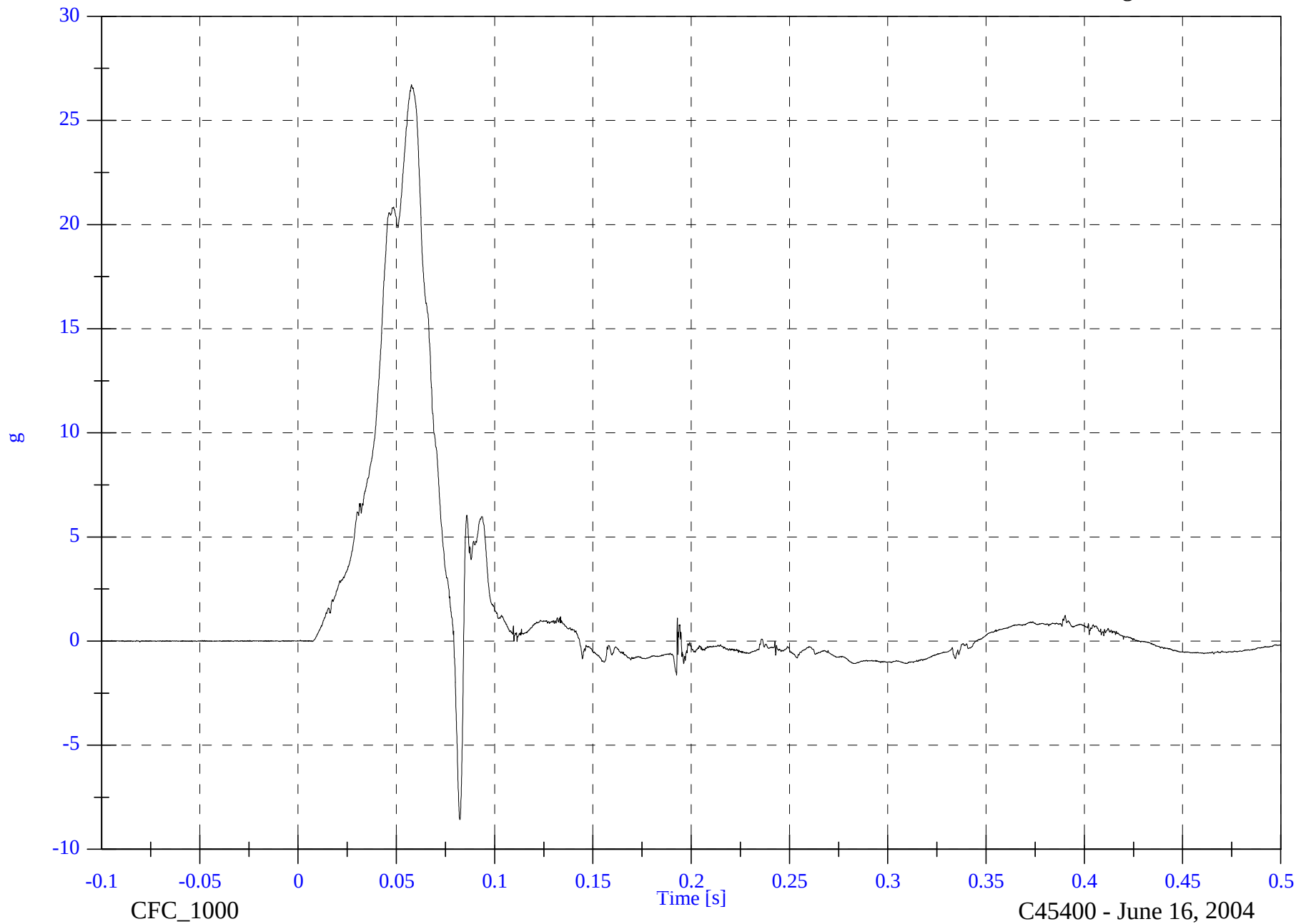
V2P3 Lower Neck x

Max: 26.7 [g] at 0.058 [s]

Min: -8.6 [g] at 0.082 [s]

B-75

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2004 FMVSS301 Test 2 - 2004 Mazda 6

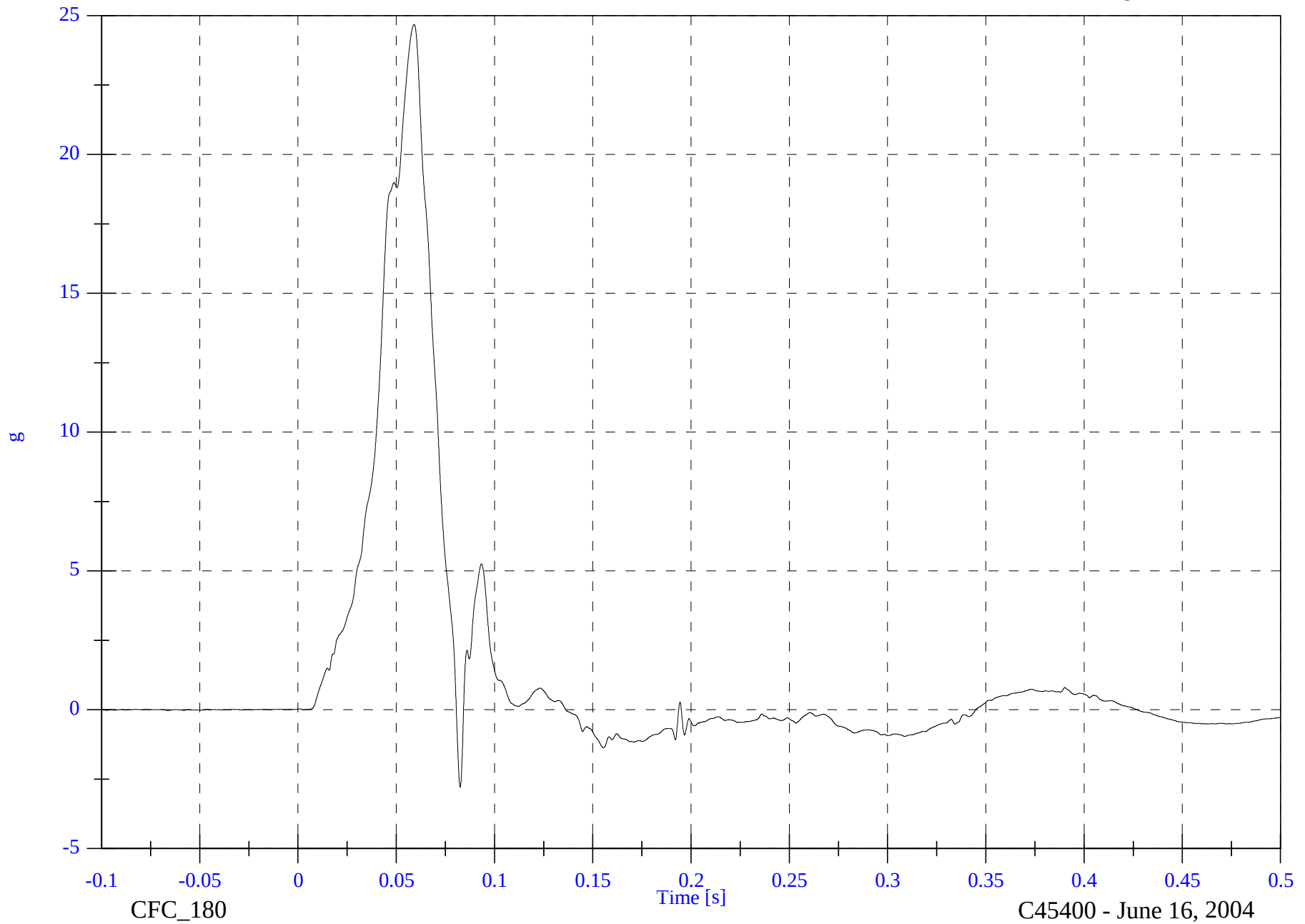
V2P3 Chest x

Max: 24.7 [g] at 0.059 [s]

Min: -2.8 [g] at 0.083 [s]

B-76

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2004 FMVSS301 Test 2 - 2004 Mazda 6

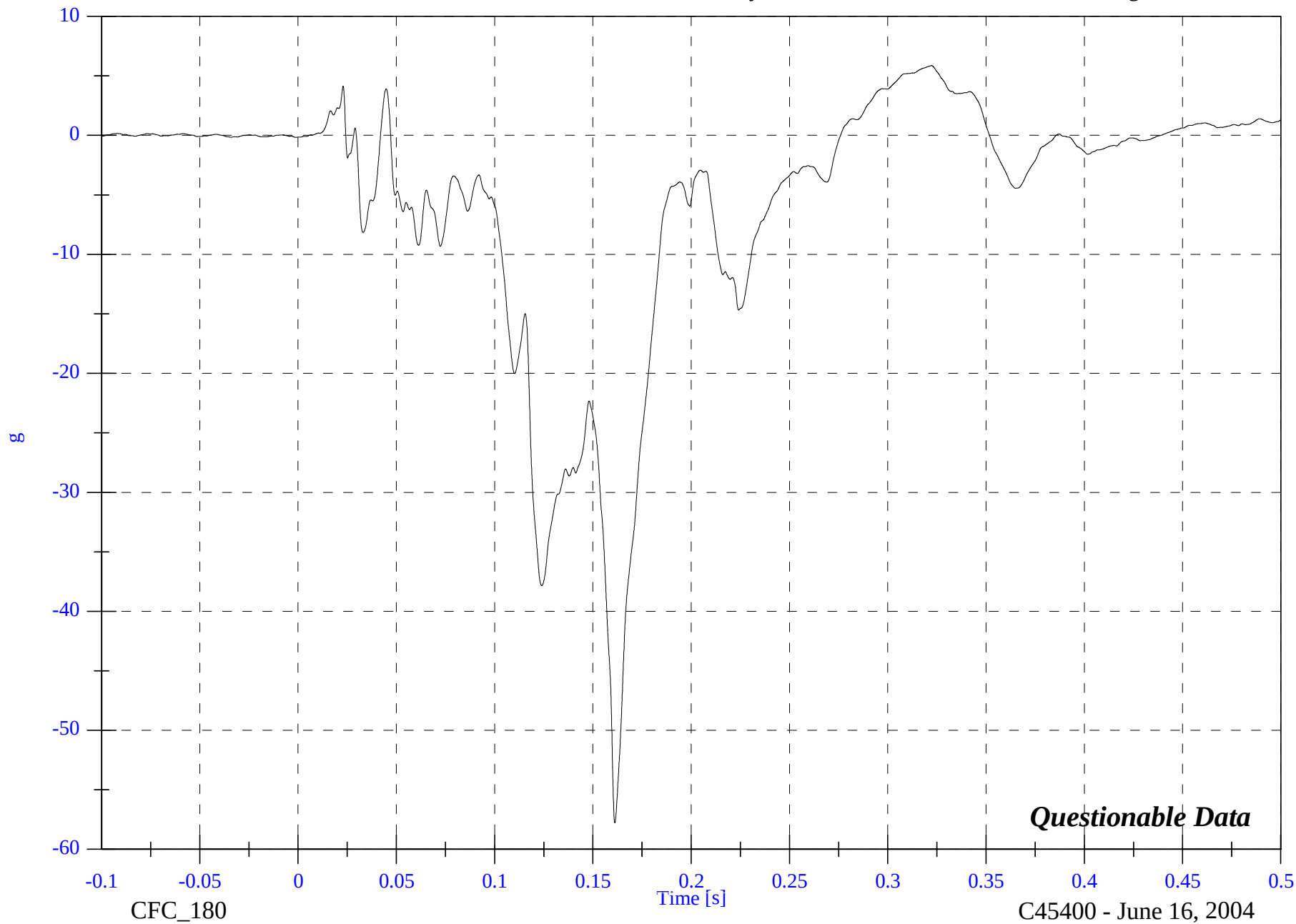
V2P3 Chest y

Max: 5.9 [g] at 0.322 [s]

Min: -57.8 [g] at 0.161 [s]

B-77

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**Questionable Data**

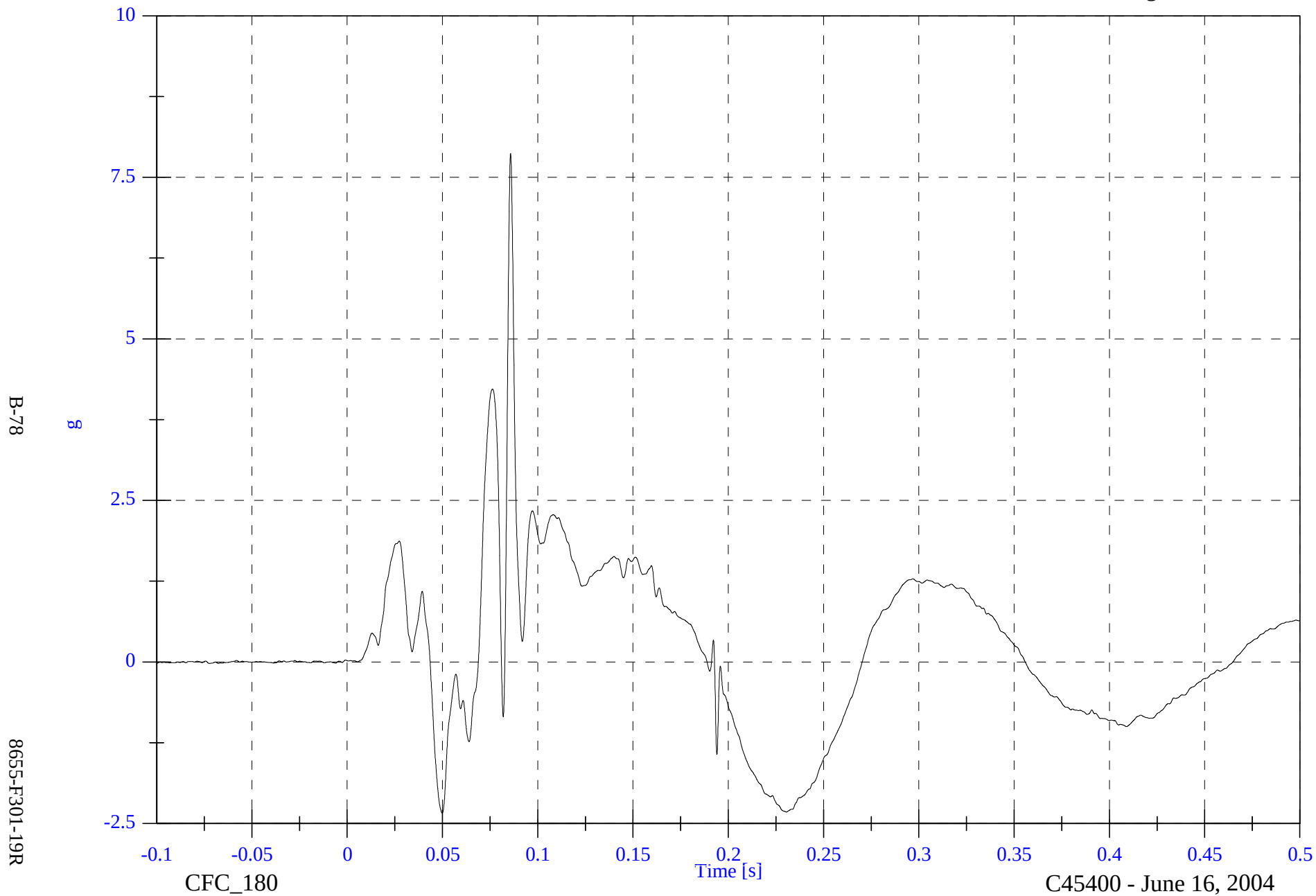
C45400 - June 16, 2004

2004 FMVSS301 Test 2 - 2004 Mazda 6

V2P3 Chest z

Max: 7.9 [g] at 0.086 [s]

Min: -2.3 [g] at 0.050 [s]



2004 FMVSS301 Test 2 - 2004 Mazda 6

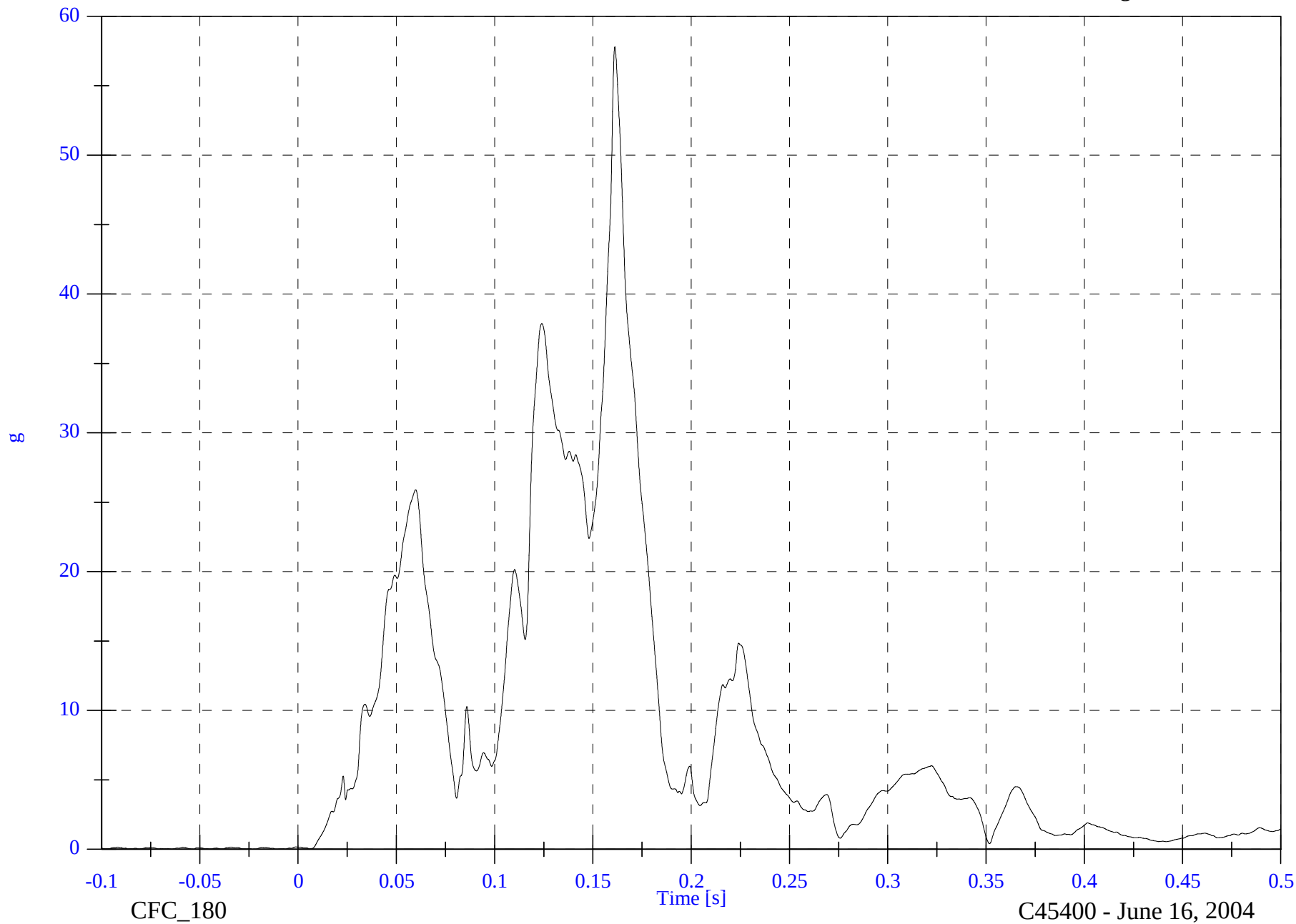
V2P3 Chest Resultant

Max: 57.8 [g] at 0.161 [s]

Min: 0.0 [g] at -0.045 [s]

B-79

8655-F301-19R

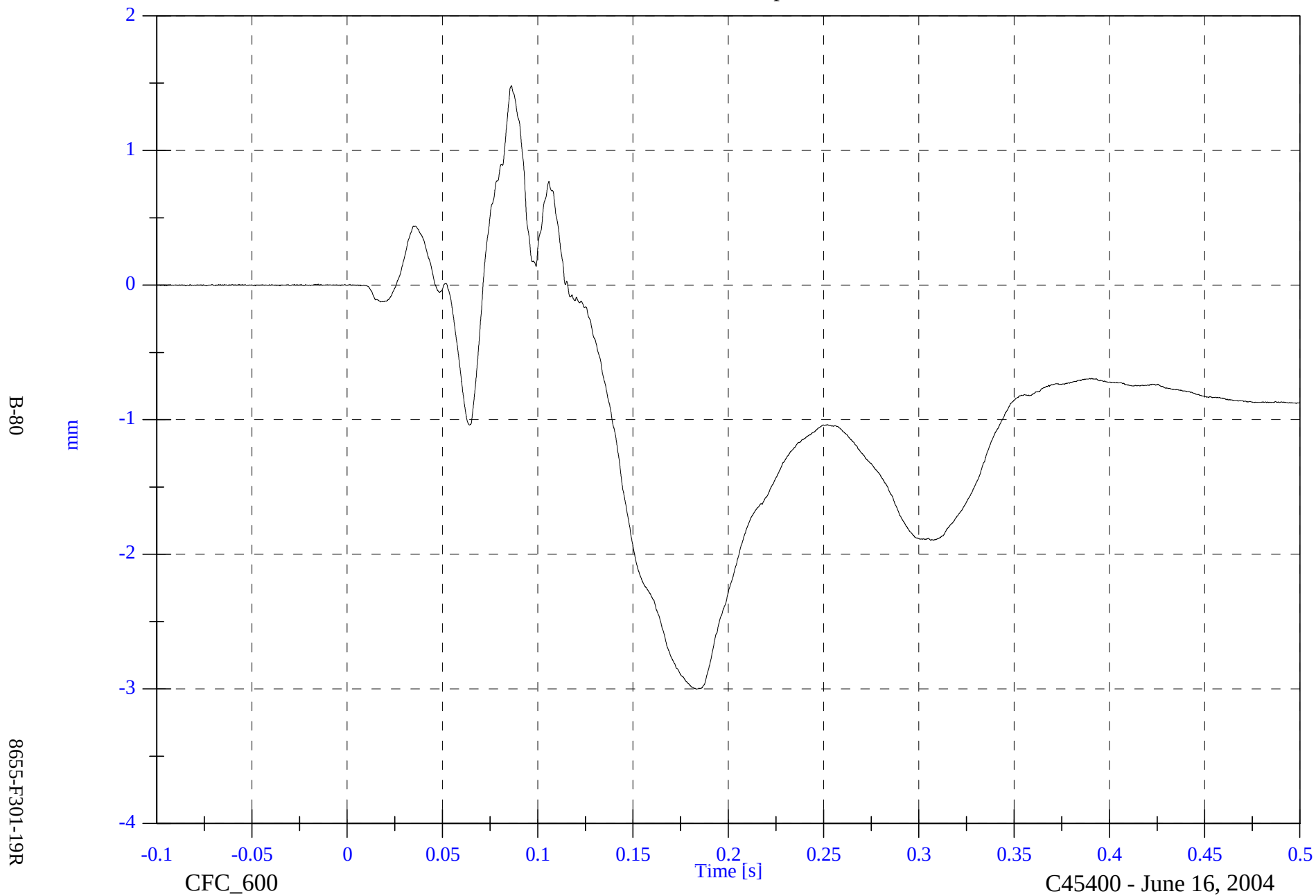


2004 FMVSS301 Test 2 - 2004 Mazda 6

V2P3 Chest Compression

Max: 1.5 [mm] at 0.086 [s]

Min: -3.0 [mm] at 0.183 [s]



2004 FMVSS301 Test 2 - 2004 Mazda 6

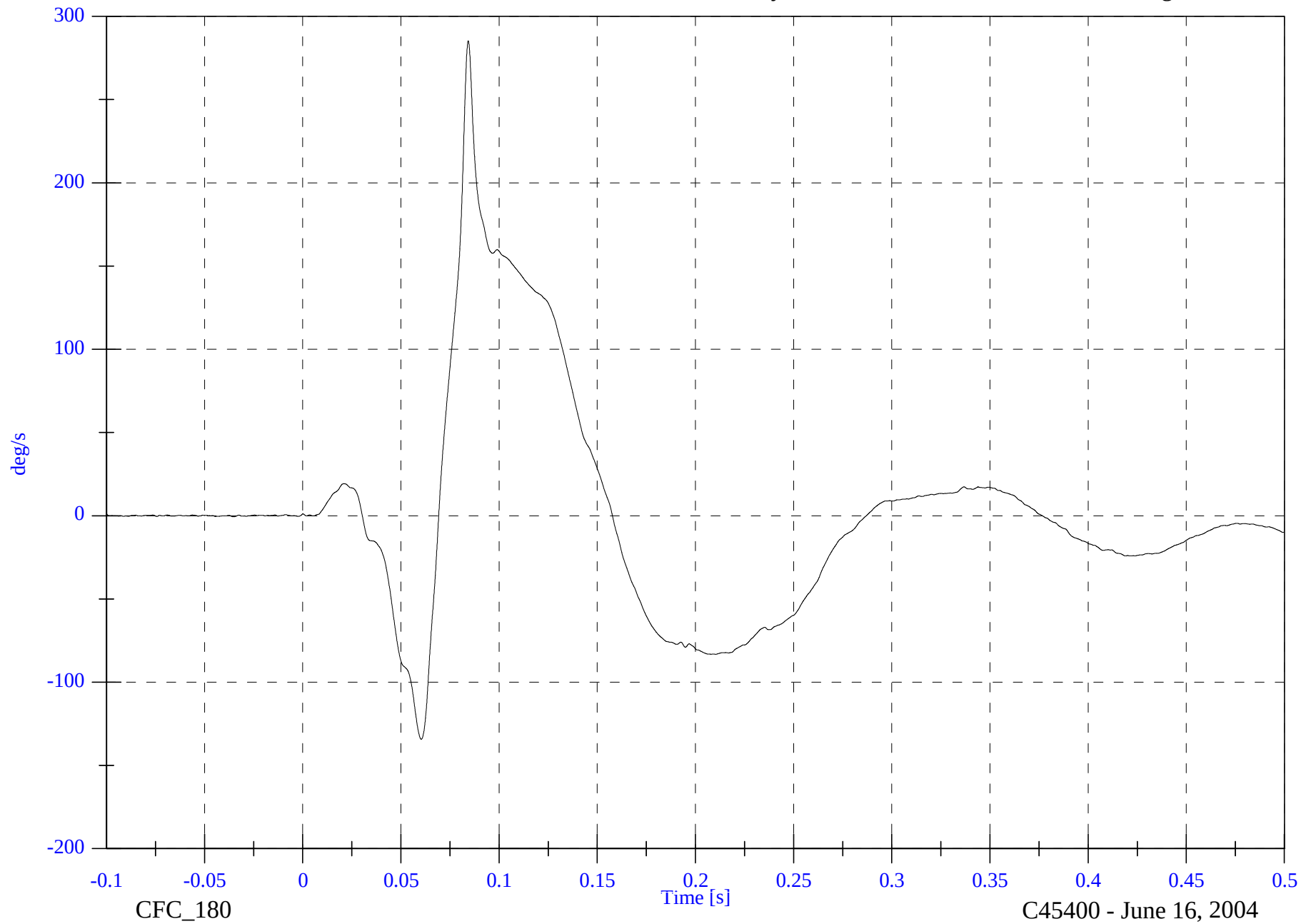
V2P3 Chest AVy

Max: 285.3 [deg/s] at 0.084 [s]

Min: -134.3 [deg/s] at 0.060 [s]

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2004 FMVSS301 Test 2 - 2004 Mazda 6

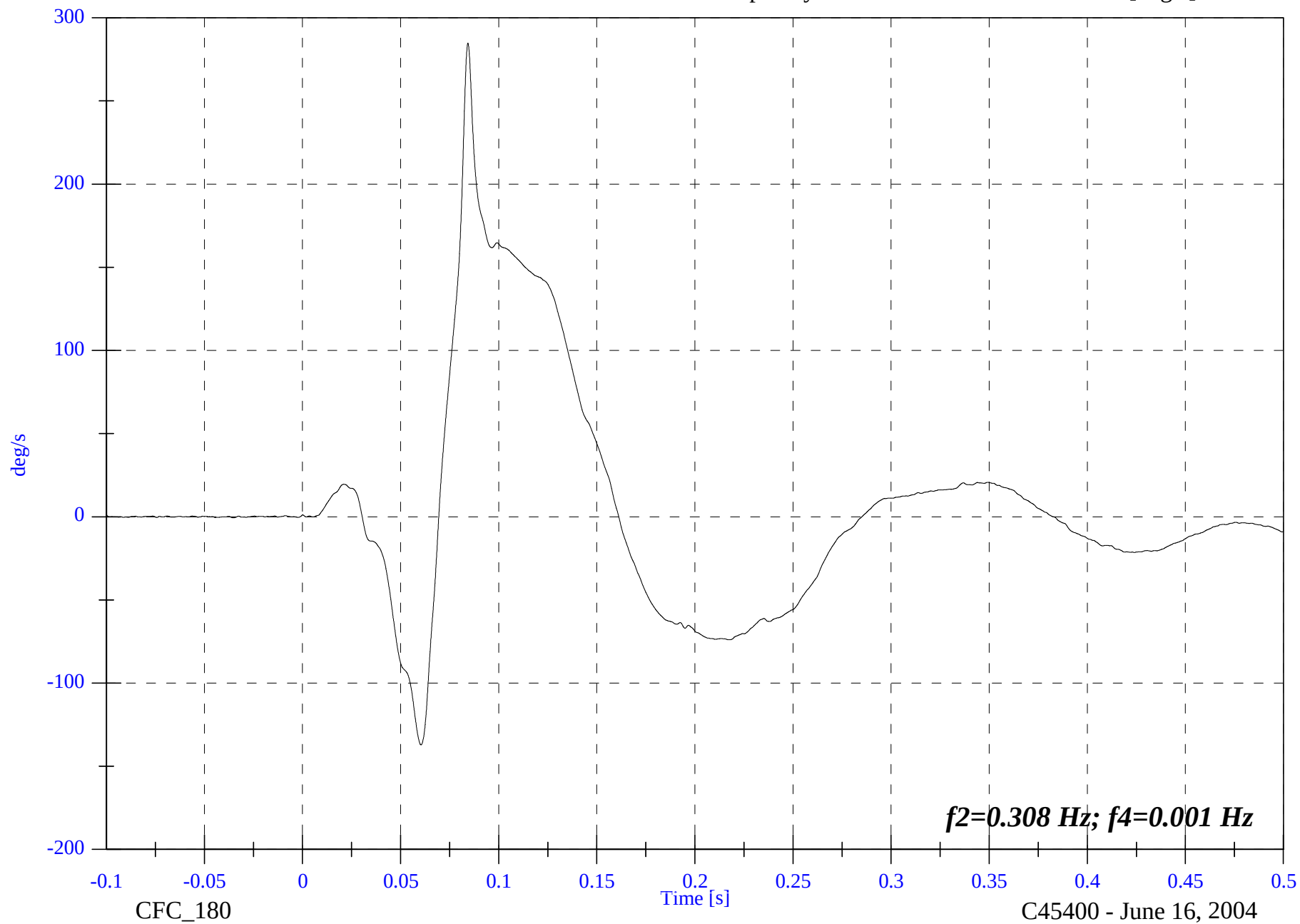
V2P3 Chest Comp AVy

Max: 284.7 [deg/s] at 0.084 [s]

Min: -137.2 [deg/s] at 0.060 [s]

B-82

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2004 FMVSS301 Test 2 - 2004 Mazda 6

V2P3 Chest Comp ADy

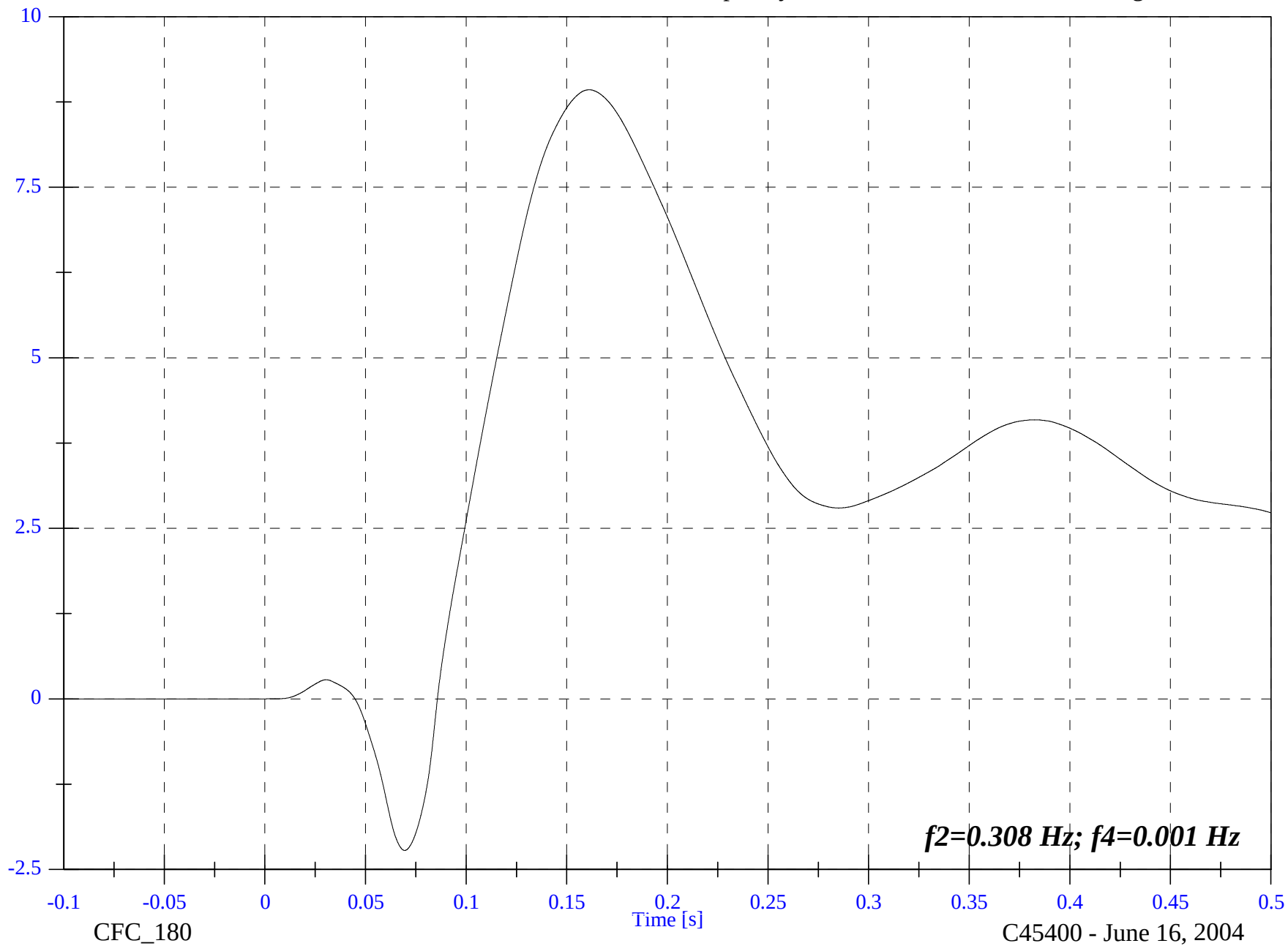
Max: 8.9 [deg] at 0.161 [s]

Min: -2.2 [deg] at 0.069 [s]

B-83

deg

8655-F301-19R



2004 FMVSS301 Test 2 - 2004 Mazda 6

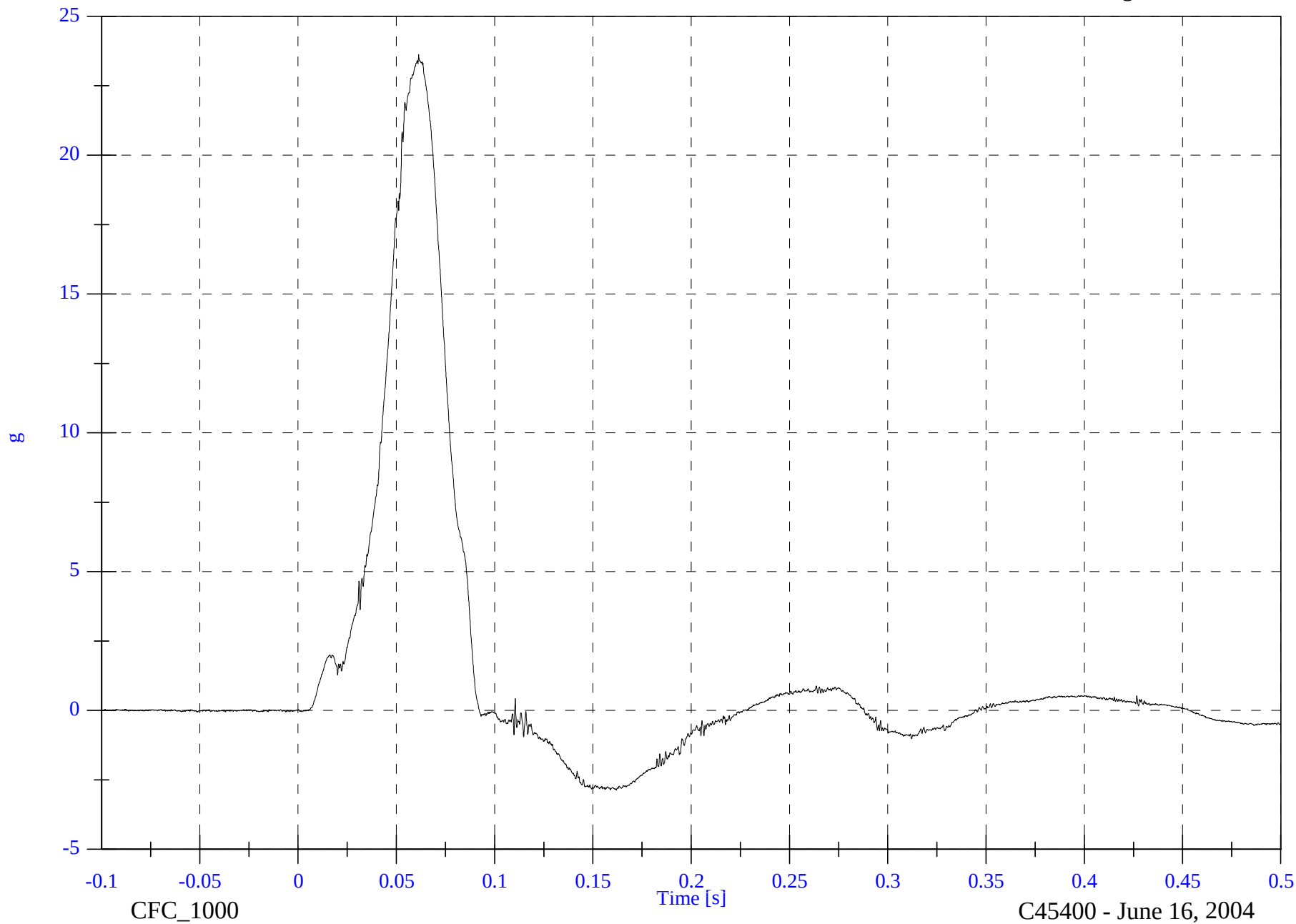
V2P3 Pelvic x

Max: 23.6 [g] at 0.061 [s]

Min: -2.9 [g] at 0.162 [s]

B-84

8655-F301-19R

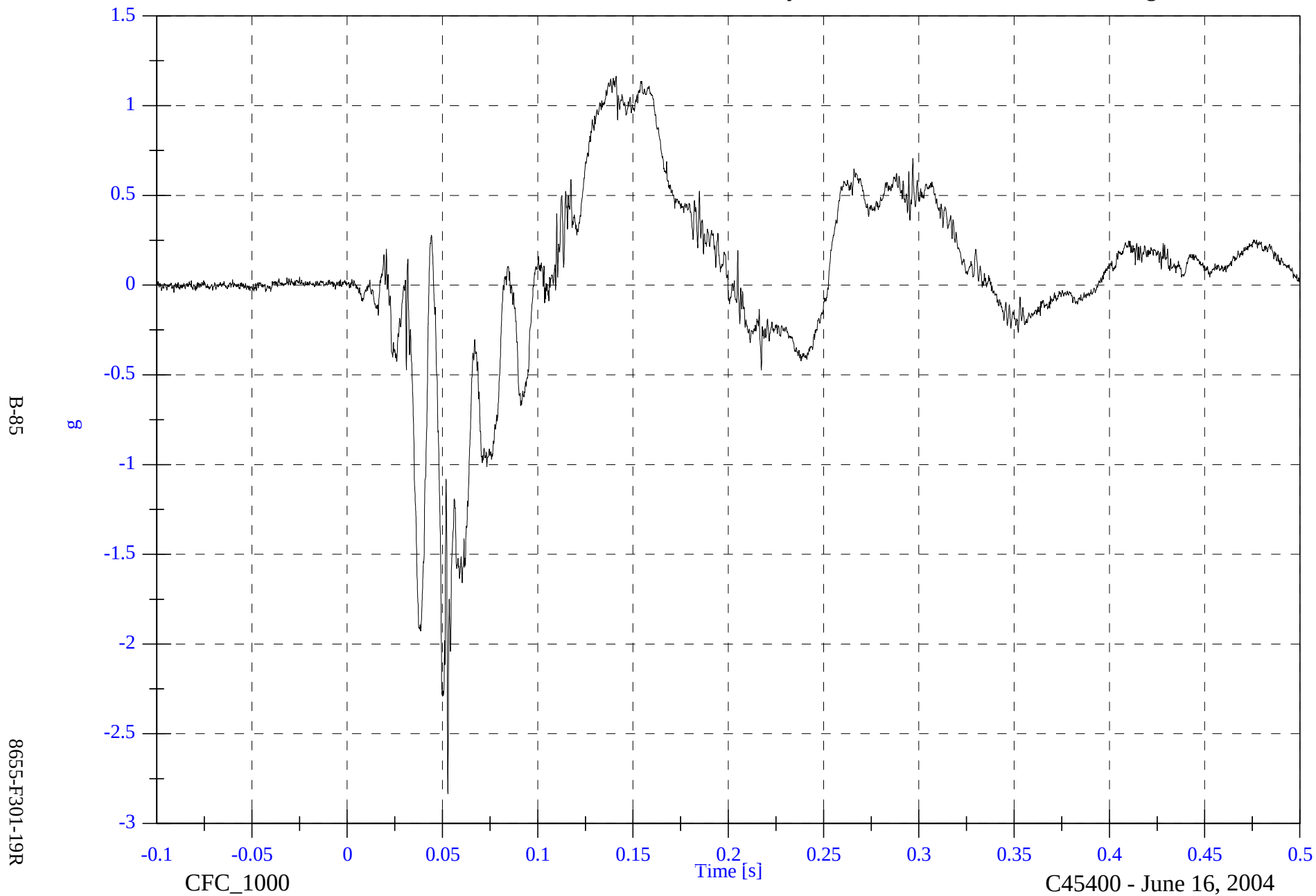


2004 FMVSS301 Test 2 - 2004 Mazda 6

V2P3 Pelvic y

Max: 1.2 [g] at 0.141 [s]

Min: -2.8 [g] at 0.053 [s]

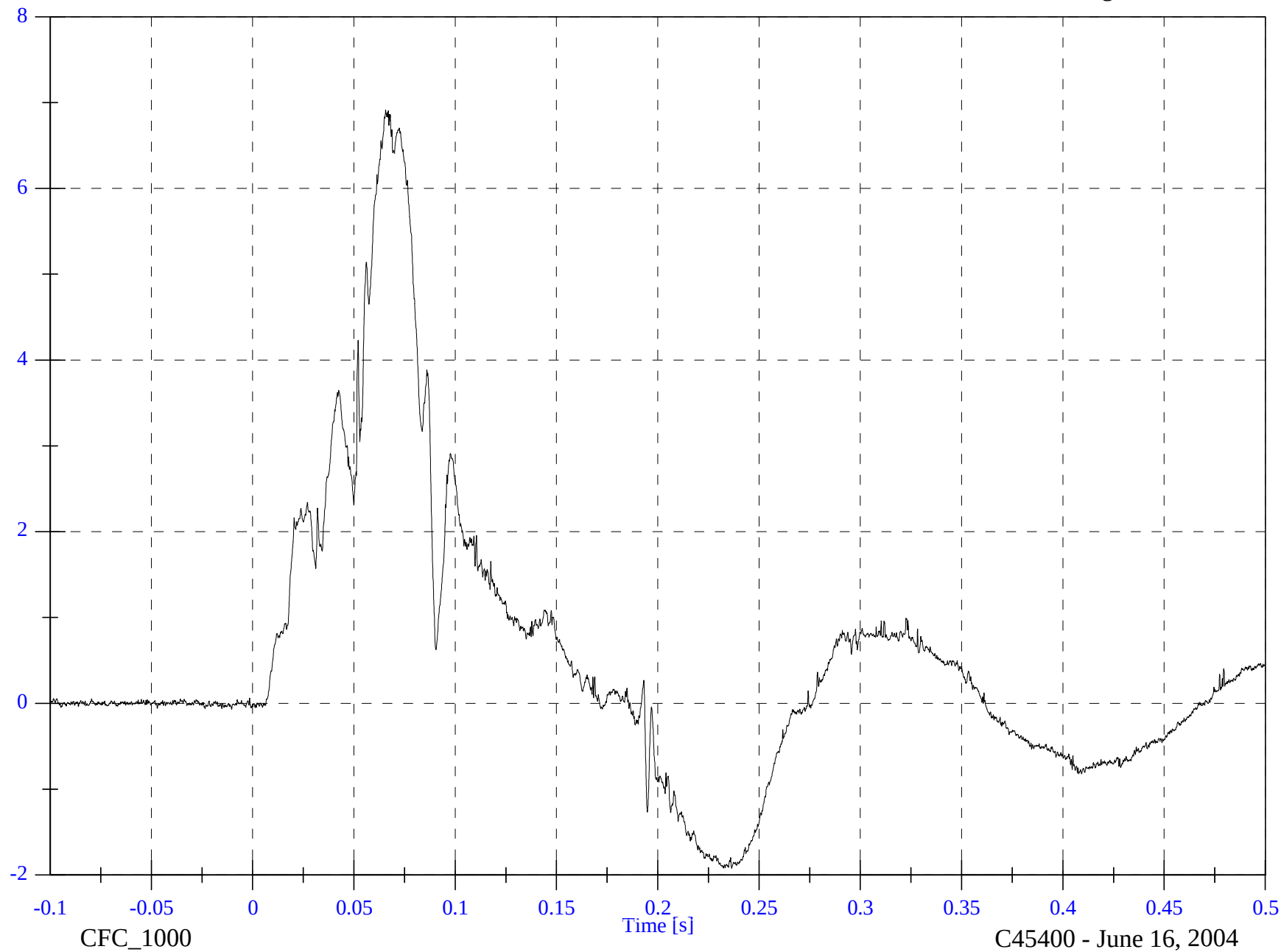


2004 FMVSS301 Test 2 - 2004 Mazda 6

V2P3 Pelvic z

Max: 6.9 [g] at 0.066 [s]

Min: -1.9 [g] at 0.236 [s]



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2004 FMVSS301 Test 2 - 2004 Mazda 6

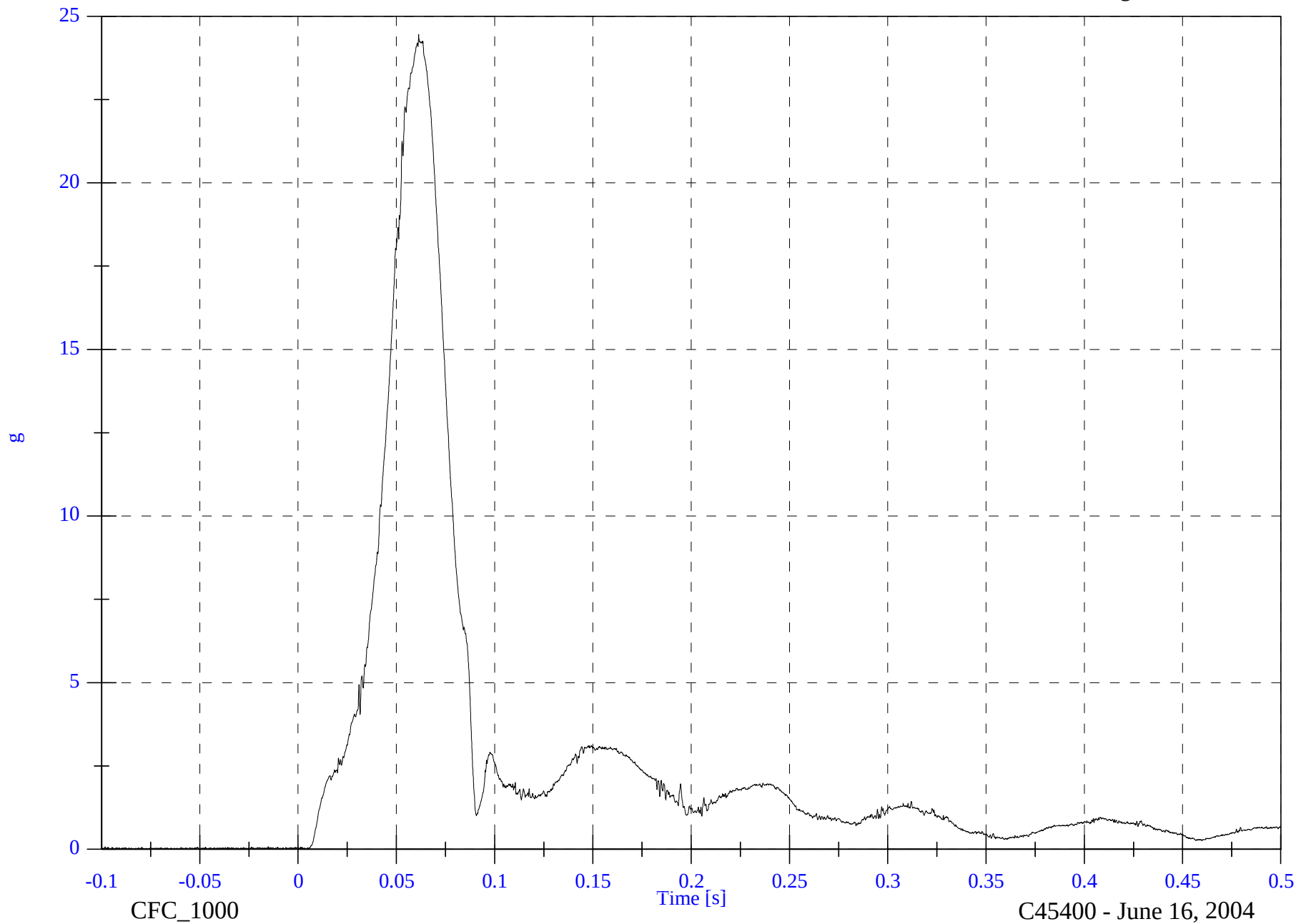
V2P3 Pelvic Resultant

Max: 24.5 [g] at 0.061 [s]

Min: 0.0 [g] at -0.066 [s]

B-87

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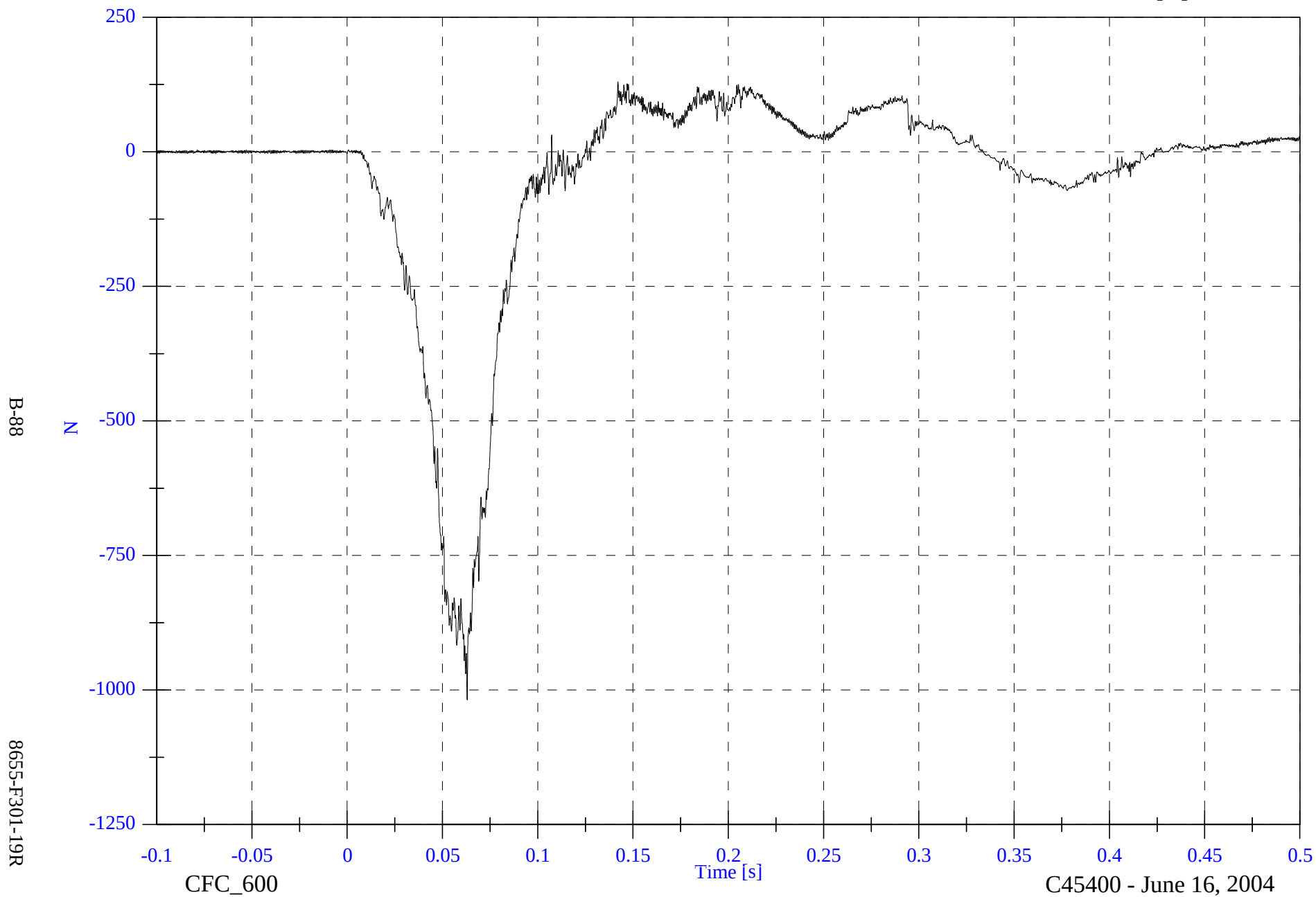


2004 FMVSS301 Test 2 - 2004 Mazda 6

V2P3 Left Femur

Max: 130.3 [N] at 0.142 [s]

Min: -1018.5 [N] at 0.063 [s]



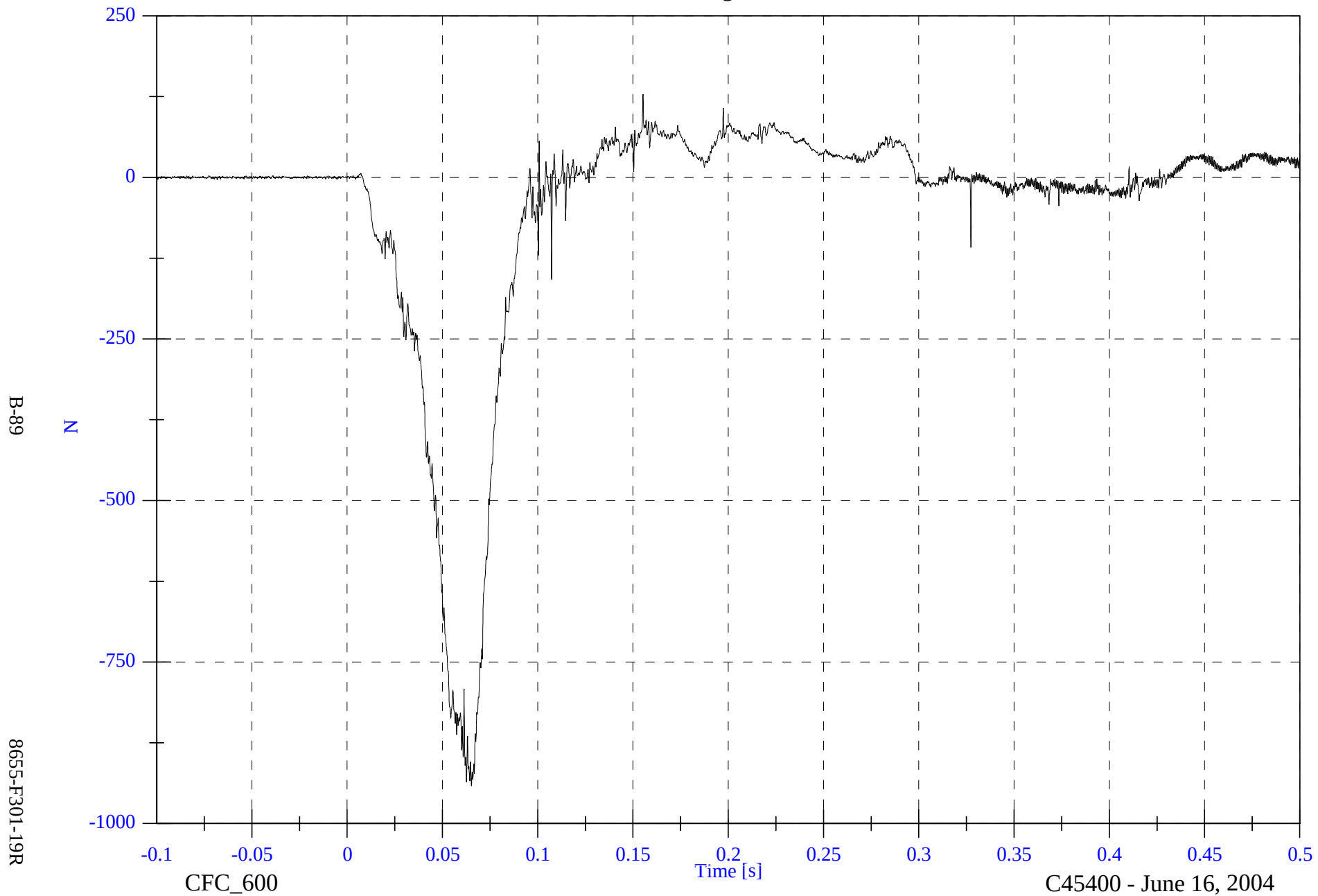


2004 FMVSS301 Test 2 - 2004 Mazda 6

V2P3 Right Femur

Max: 128.7 [N] at 0.155 [s]

Min: -941.4 [N] at 0.065 [s]

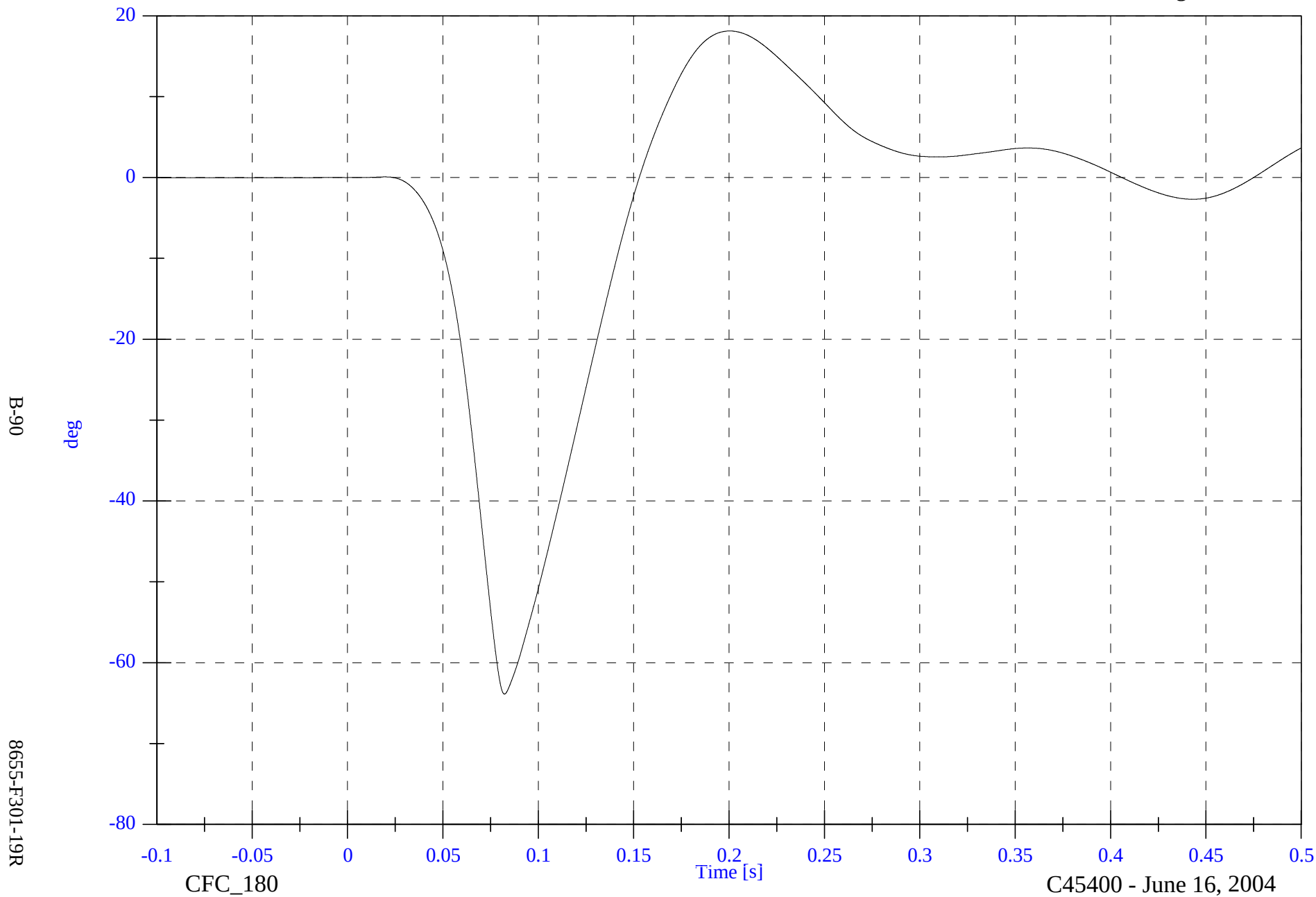


2004 FMVSS301 Test 2 - 2004 Mazda 6

V2P3 Head to Chest

Max: 18.1 [deg] at 0.200 [s]

Min: -63.9 [deg] at 0.082 [s]

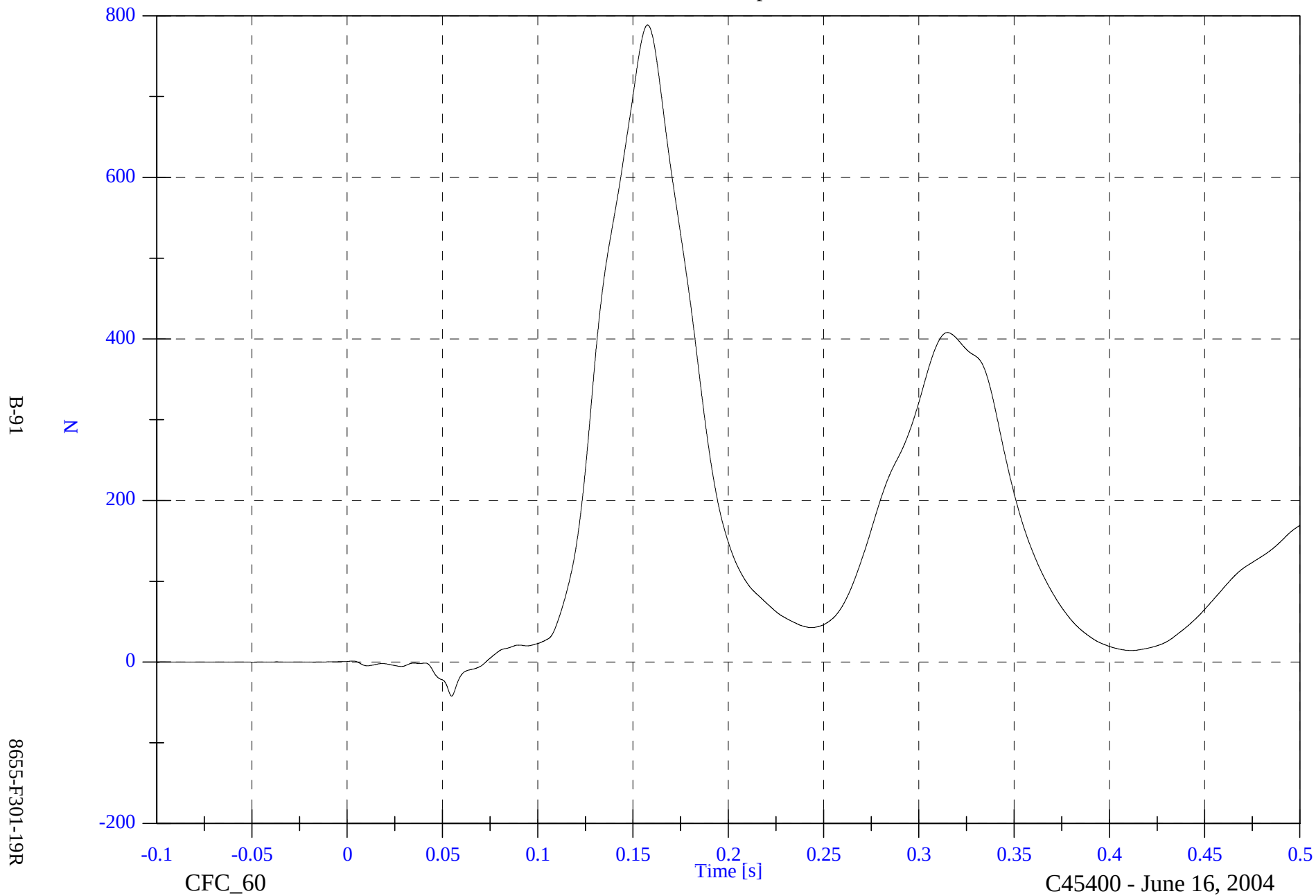


2004 FMVSS301 Test 2 - 2004 Mazda 6

V2 RRP Lap Belt

Max: 788.7 [N] at 0.158 [s]

Min: -42.2 [N] at 0.055 [s]



2004 FMVSS301 Test 2 - 2004 Mazda 6

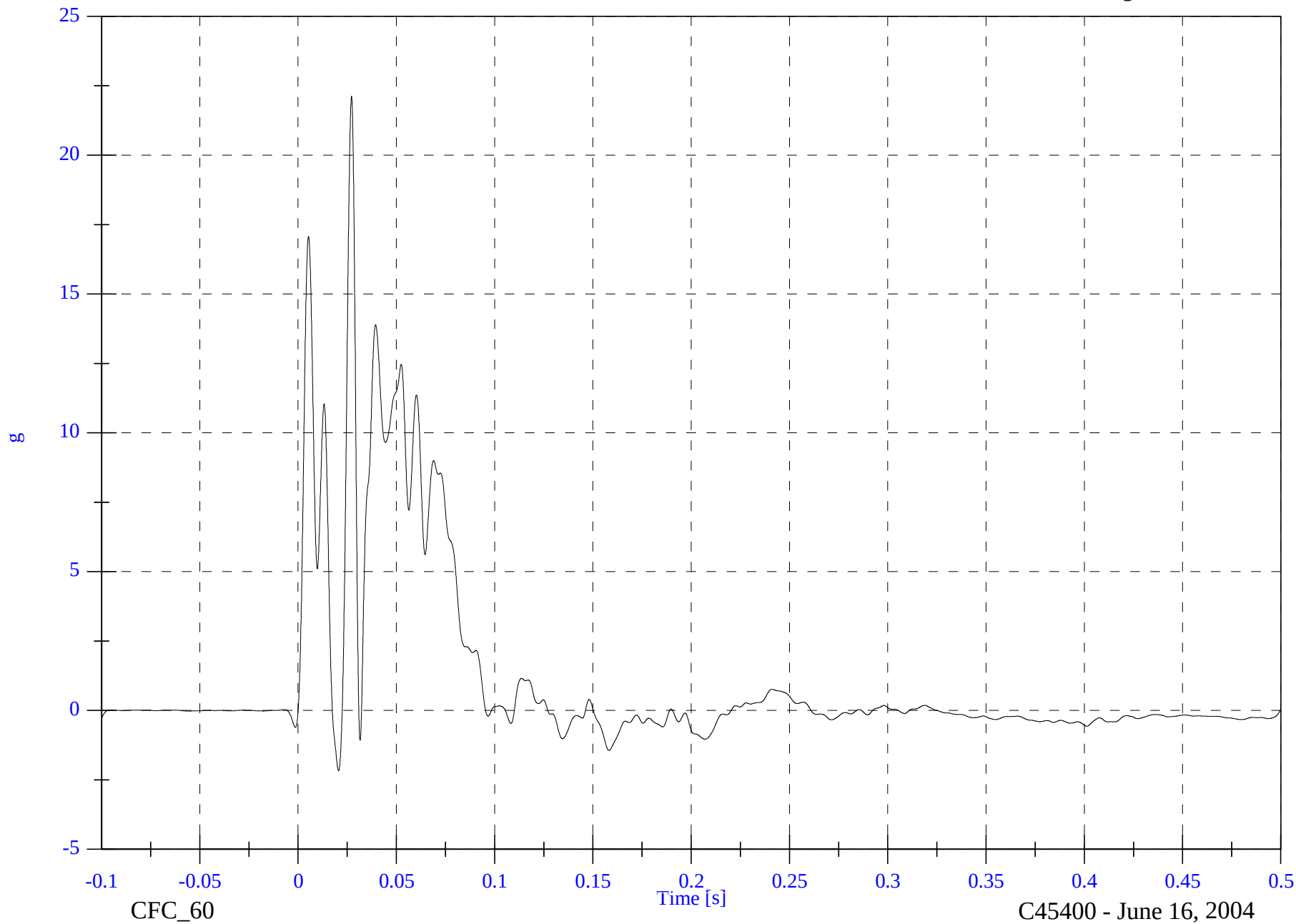
V2 Left X Member x

Max: 22.1 [g] at 0.027 [s]

Min: -2.2 [g] at 0.021 [s]

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2004 FMVSS301 Test 2 - 2004 Mazda 6

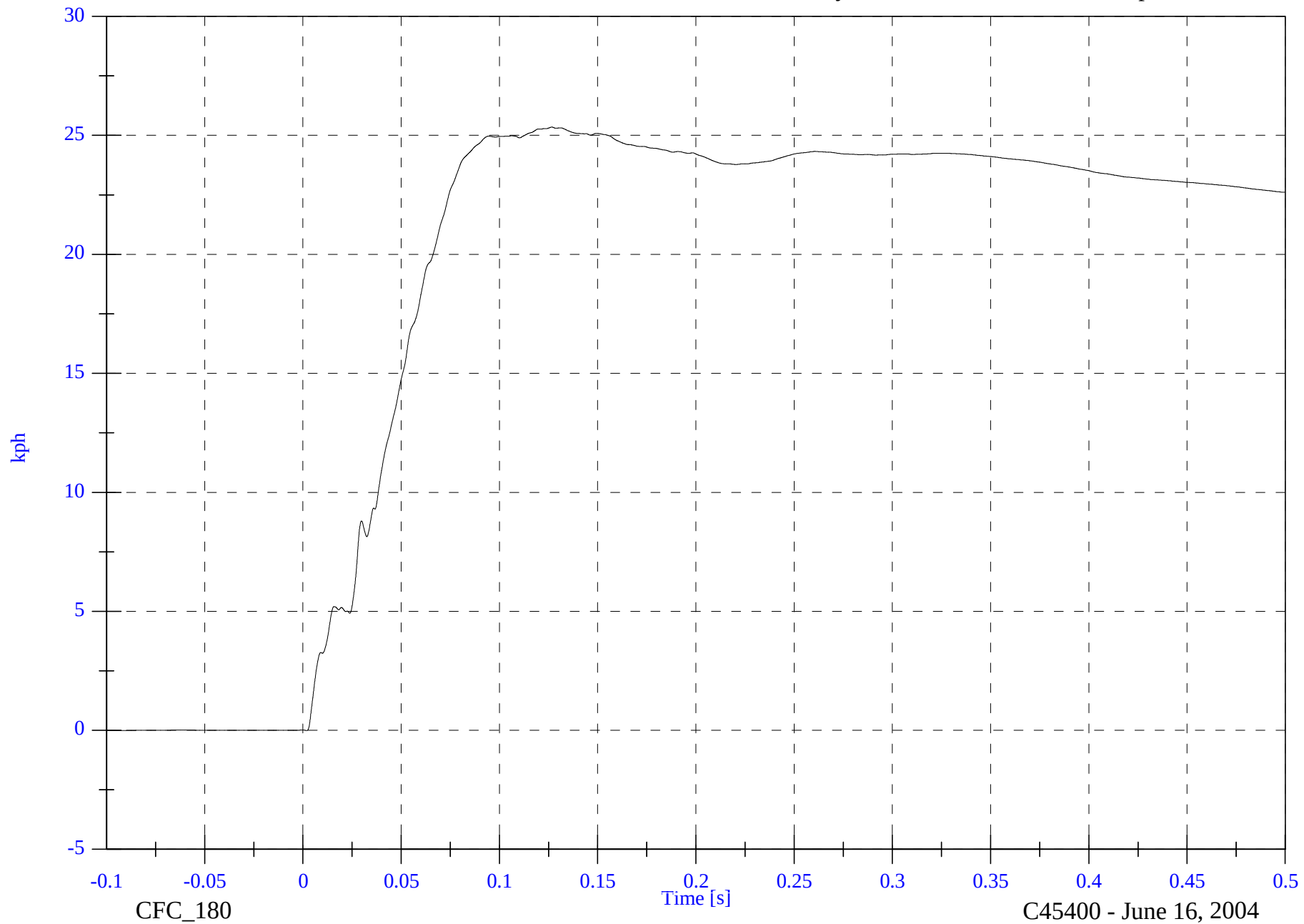
V2 Left X Member x Velocity

Max: 25.3 [kph] at 0.127 [s]

Min: -0.0 [kph] at 0.002 [s]

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8655-F301-19R



2004 FMVSS301 Test 2 - 2004 Mazda 6

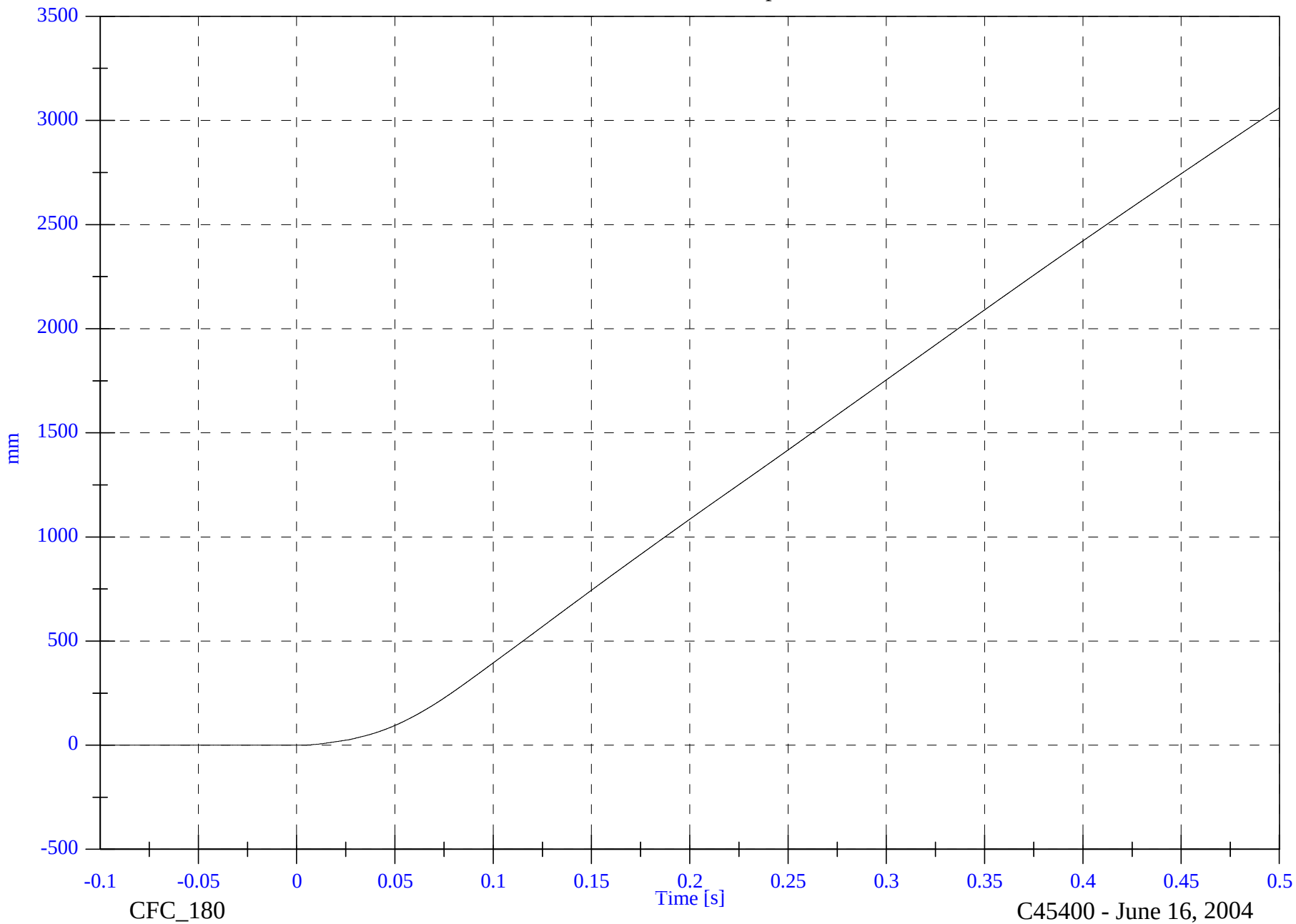
V2 Left X Member x Displacement

Max: 3060.7 [mm] at 0.500 [s]

Min: -0.1 [mm] at -0.082 [s]

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8655-F301-19R





2004 FMVSS301 Test 2 - 2004 Mazda 6

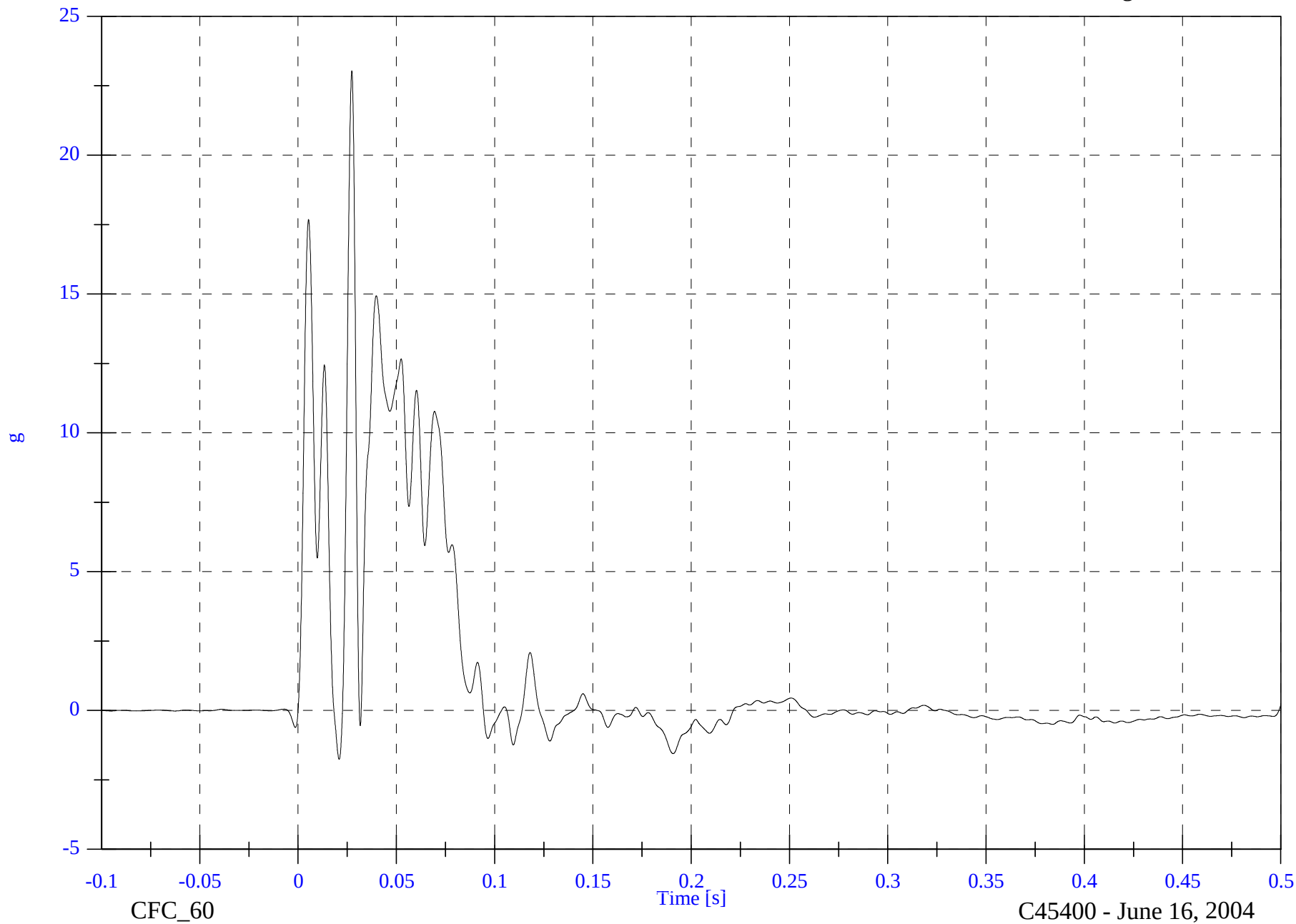
V2 Left X Member RED x

Max: 23.0 [g] at 0.027 [s]

Min: -1.8 [g] at 0.021 [s]

B-95

8655-F301-19R



2004 FMVSS301 Test 2 - 2004 Mazda 6

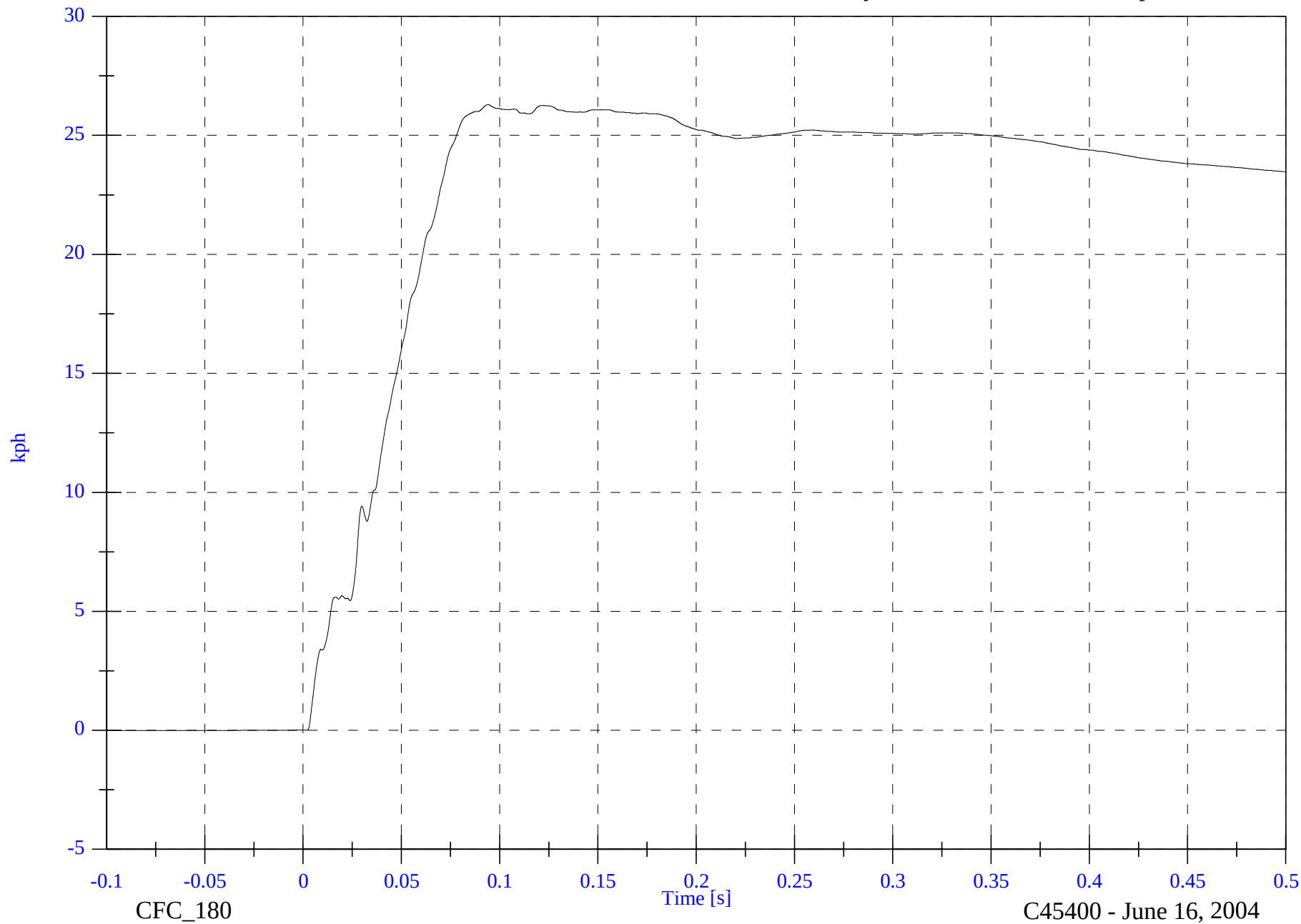
V2 Left X Member RED x Velocity

Max: 26.3 [kph] at 0.094 [s]

Min: -0.0 [kph] at -0.043 [s]

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8655-F301-19R



2004 FMVSS301 Test 2 - 2004 Mazda 6

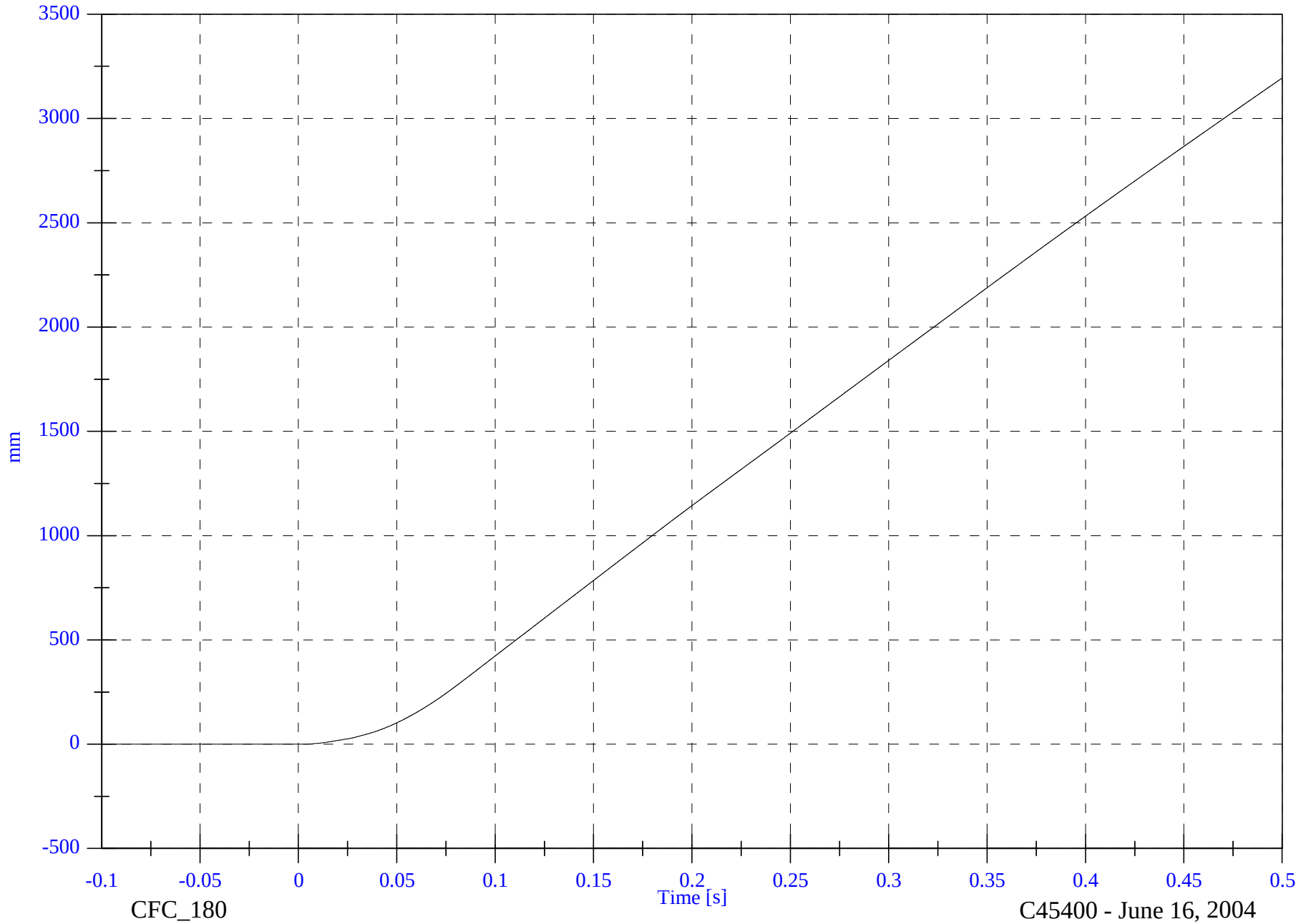
V2 Left X Member RED x Displacement

Max: 3194.0 [mm] at 0.500 [s]

Min: -0.0 [mm] at -0.023 [s]

B-97

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2004 FMVSS301 Test 2 - 2004 Mazda 6

V2 Right X Member x

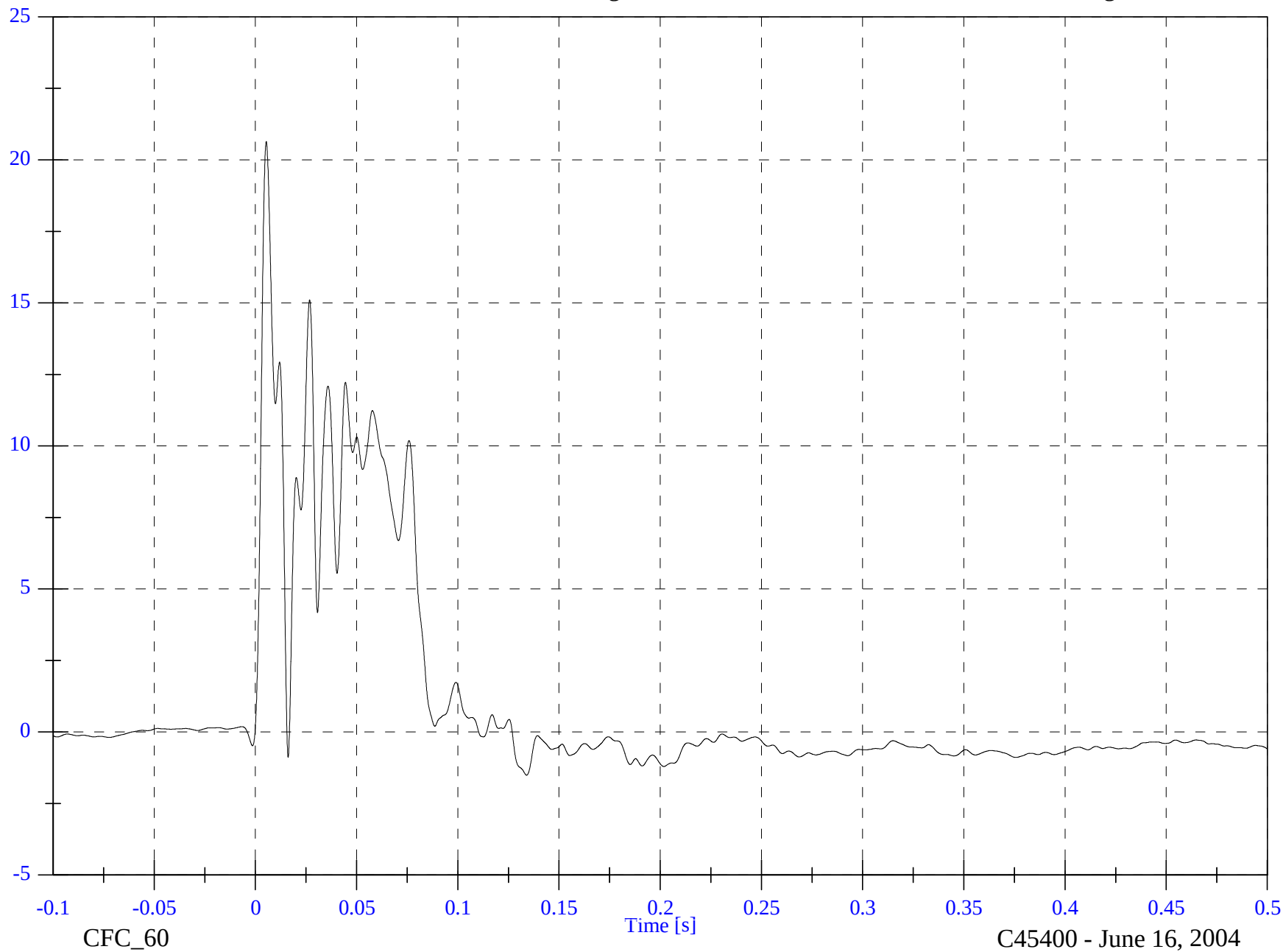
Max: 20.6 [g] at 0.005 [s]

Min: -1.5 [g] at 0.134 [s]

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8655-F301-19R

g



2004 FMVSS301 Test 2 - 2004 Mazda 6

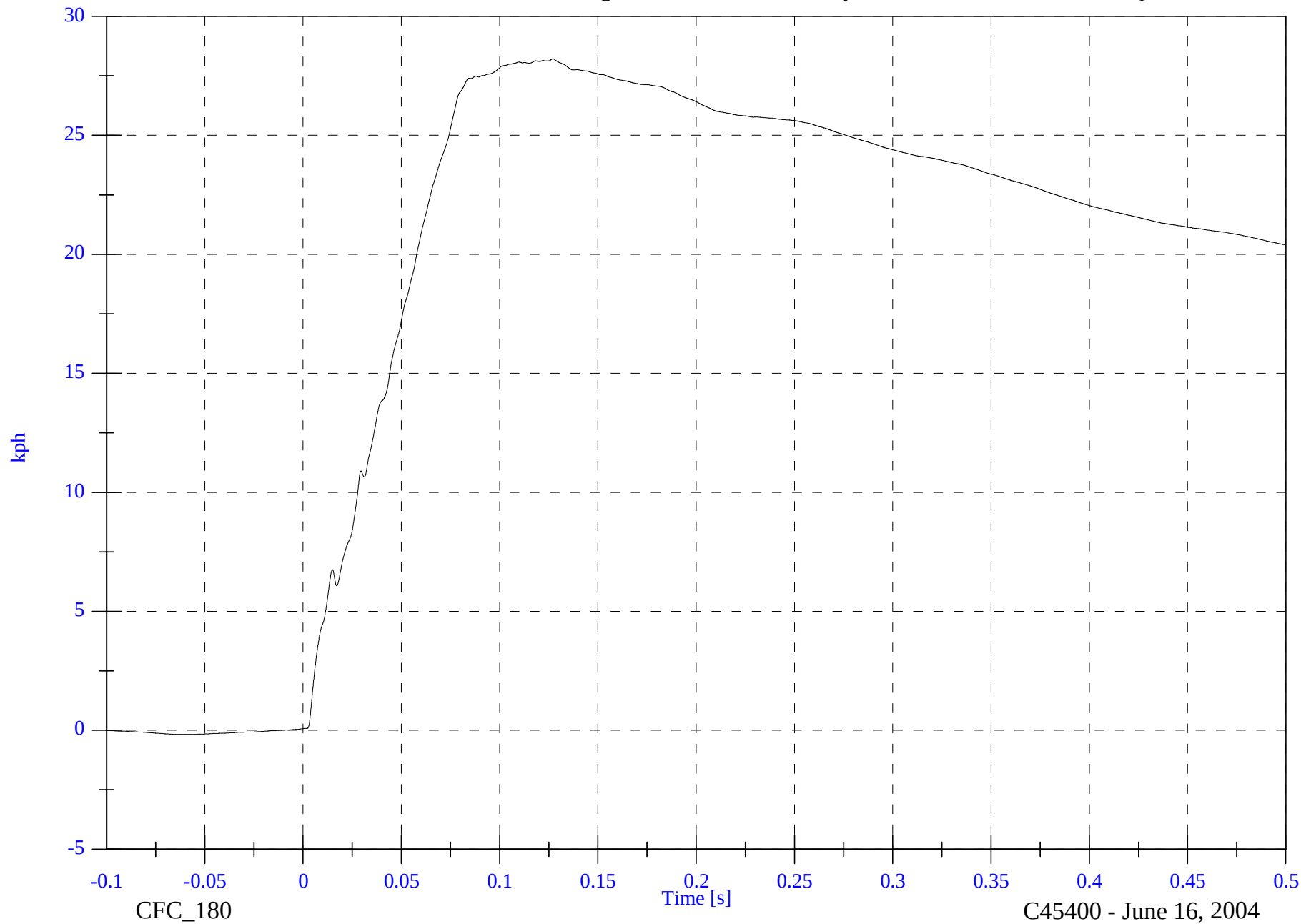
V2 Right X Member x Velocity

Max: 28.2 [kph] at 0.127 [s]

Min: -0.2 [kph] at -0.061 [s]

B-99

8655-F301-19R

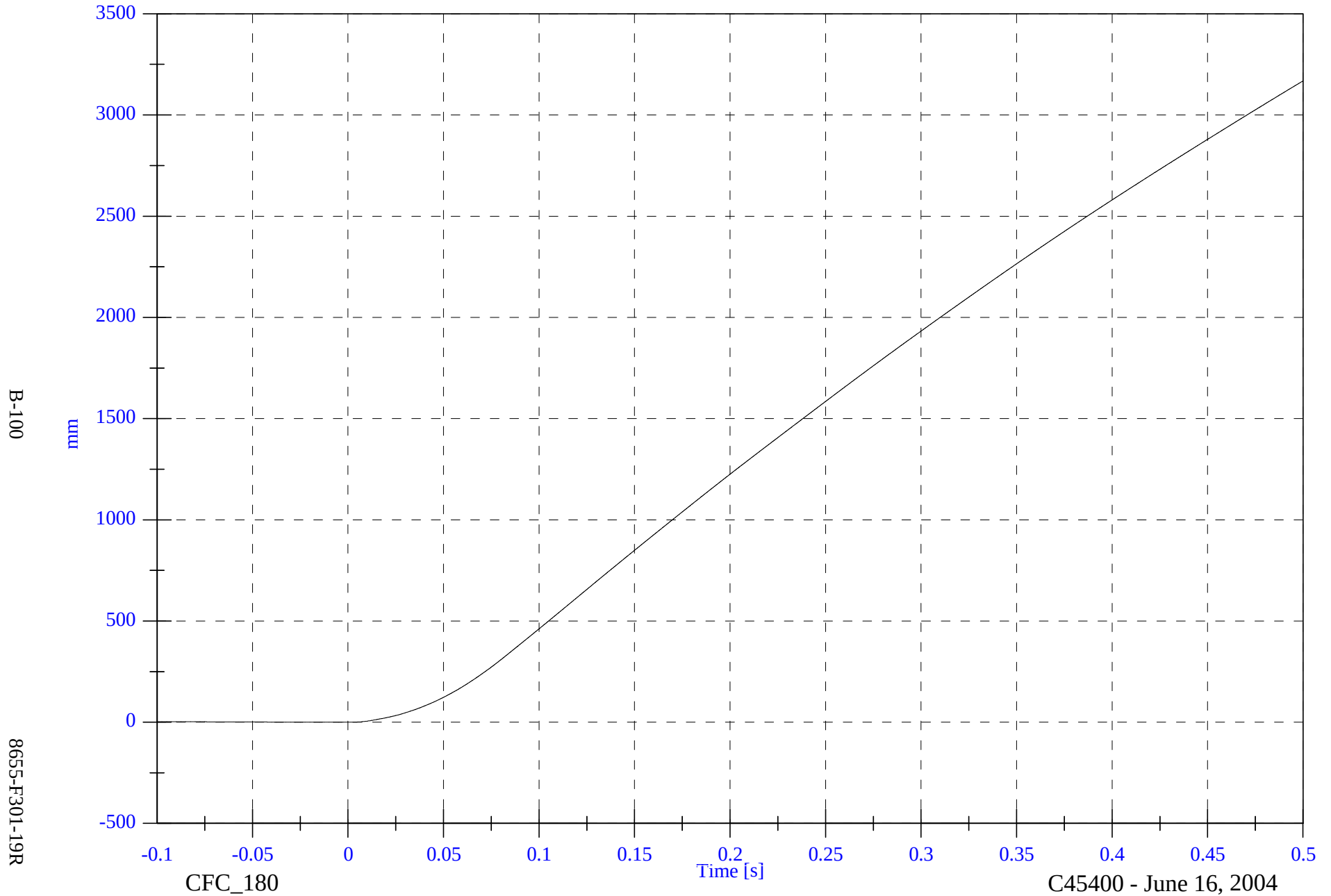


2004 FMVSS301 Test 2 - 2004 Mazda 6

V2 Right X Member x Displacement

Max: 3168.3 [mm] at 0.500 [s]

Min: -0.1 [mm] at -0.010 [s]



2004 FMVSS301 Test 2 - 2004 Mazda 6

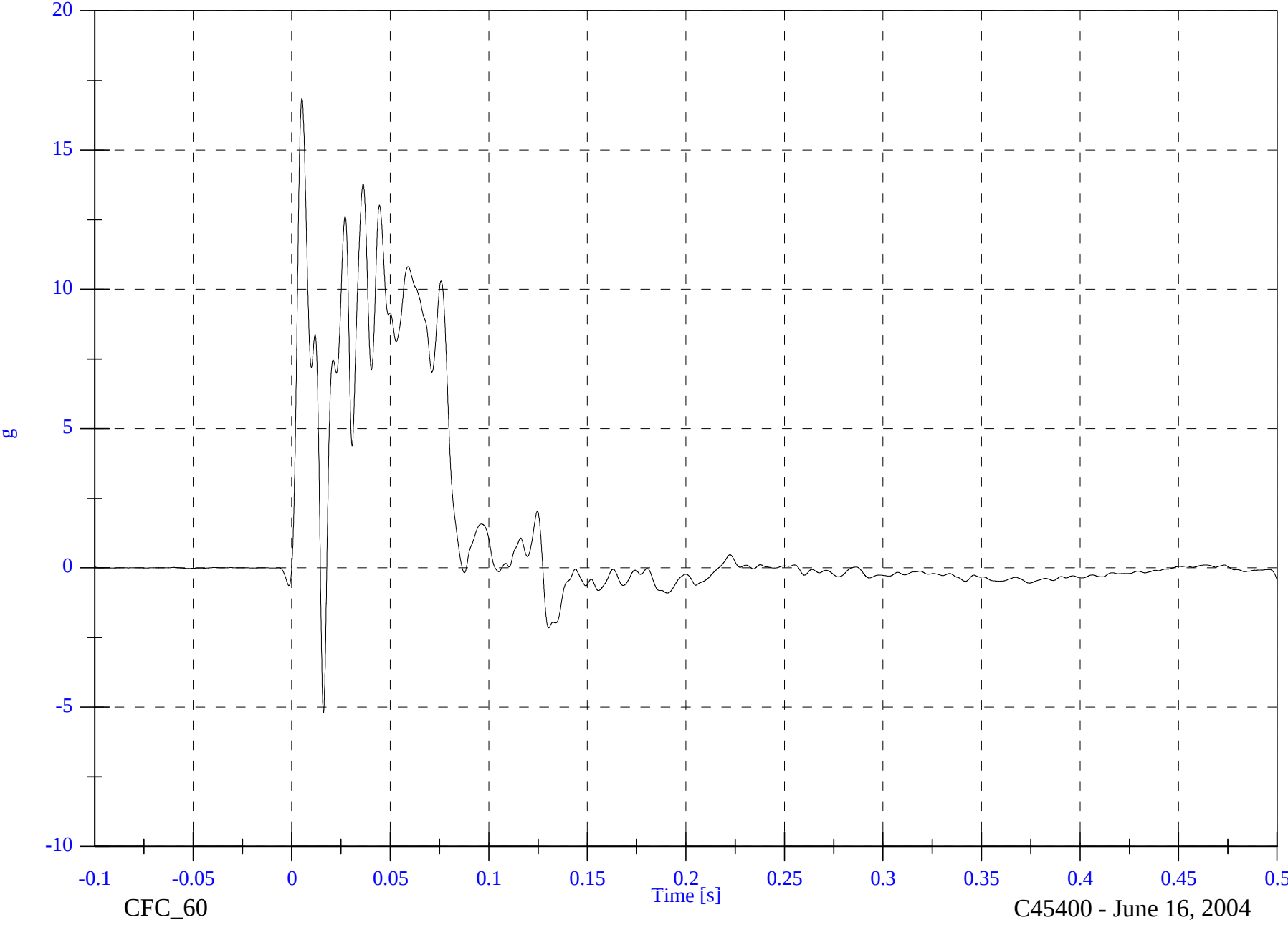
V2 Right X Member RED x

Max: 16.9 [g] at 0.005 [s]

Min: -5.2 [g] at 0.016 [s]

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2004 FMVSS301 Test 2 - 2004 Mazda 6

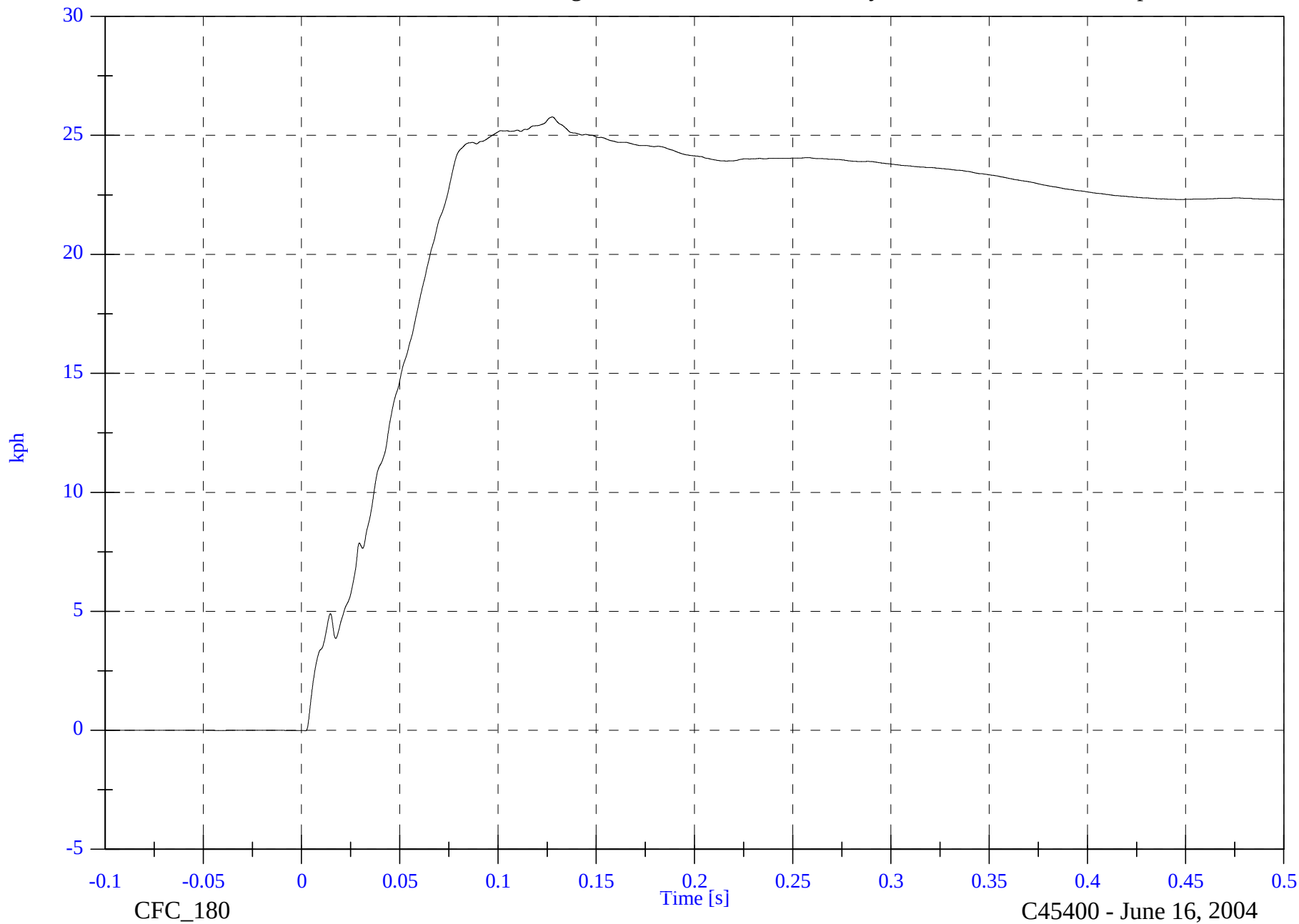
Max: 25.8 [kph] at 0.128 [s]

V2 Right X Member RED x Velocity

Min: -0.0 [kph] at 0.002 [s]

B-102

8655-F301-19R



2004 FMVSS301 Test 2 - 2004 Mazda 6

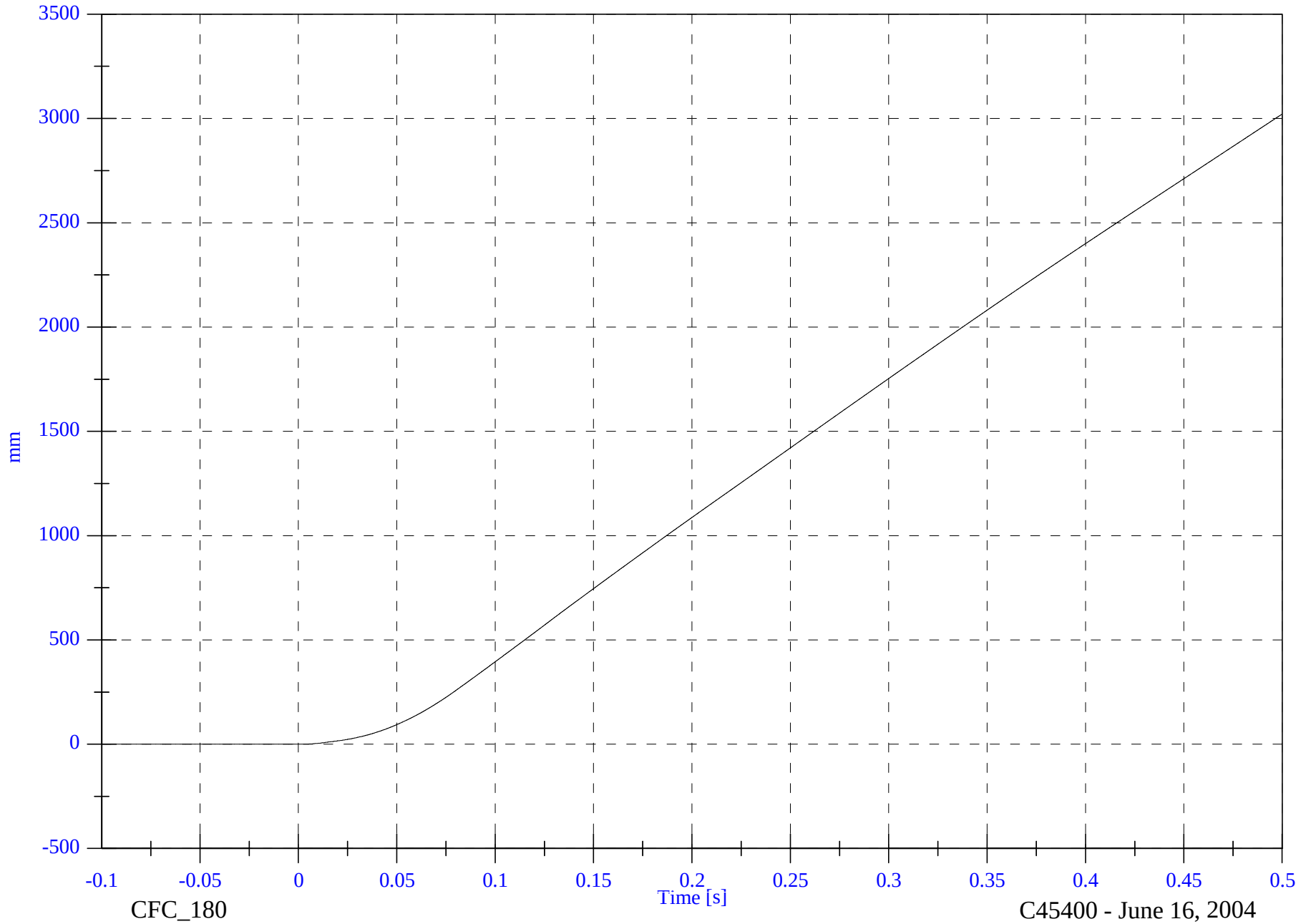
V2 Right X Member RED x Displacement

Max: 3021.1 [mm] at 0.500 [s]

Min: -0.0 [mm] at 0.002 [s]

B-103

8655-F301-19R

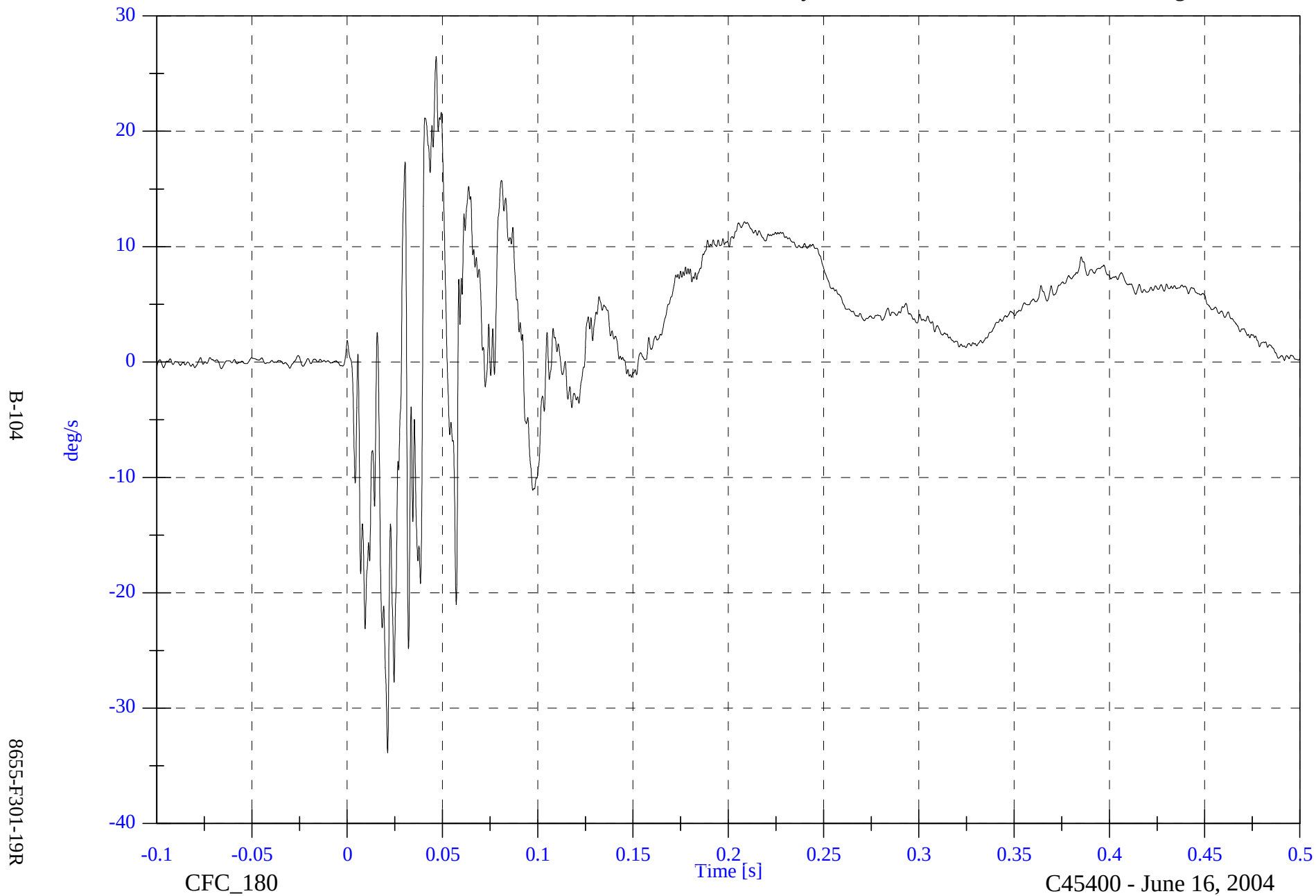


2004 FMVSS301 Test 2 - 2004 Mazda 6

V2 Left Sill AVy

Max: 26.5 [deg/s] at 0.047 [s]

Min: -33.9 [deg/s] at 0.021 [s]



2004 FMVSS301 Test 2 - 2004 Mazda 6

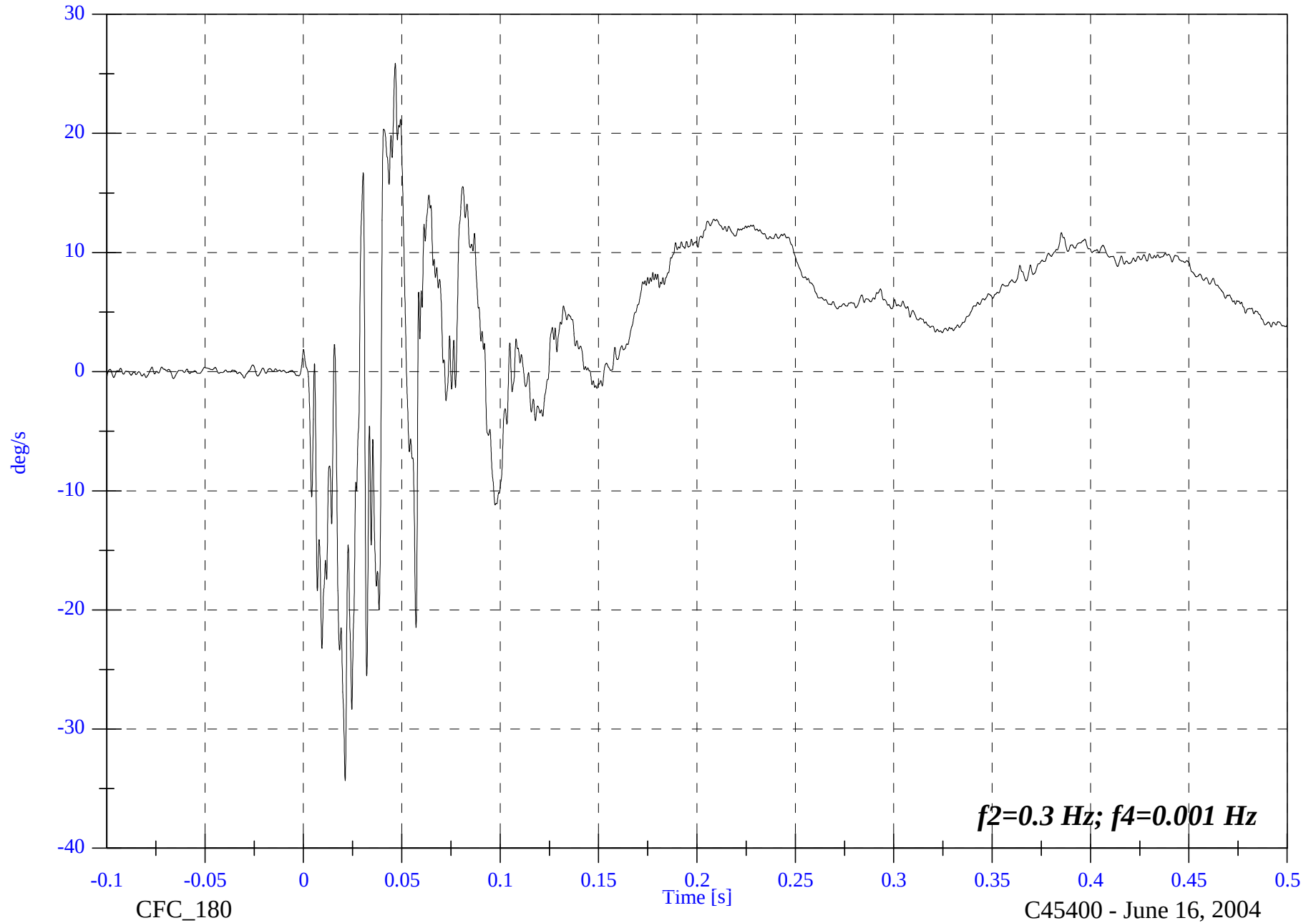
V2 Left Sill Comp AVy

Max: 25.9 [deg/s] at 0.047 [s]

Min: -34.3 [deg/s] at 0.021 [s]

B-105

8655-F301-19R



2004 FMVSS301 Test 2 - 2004 Mazda 6

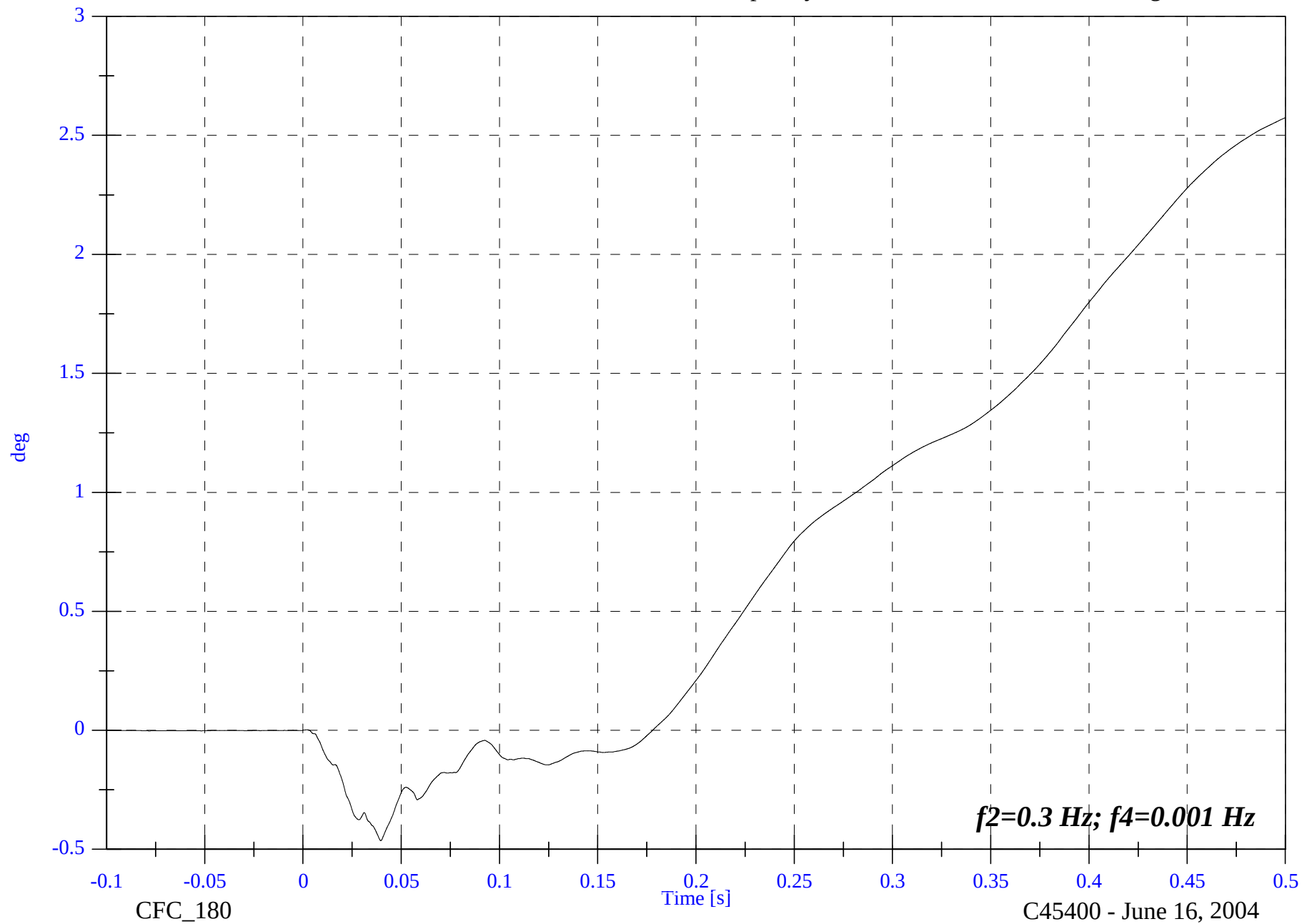
V2 Left Sill Comp ADy

Max: 2.6 [deg] at 0.500 [s]

Min: -0.5 [deg] at 0.040 [s]

B-106

8655-F301-19R

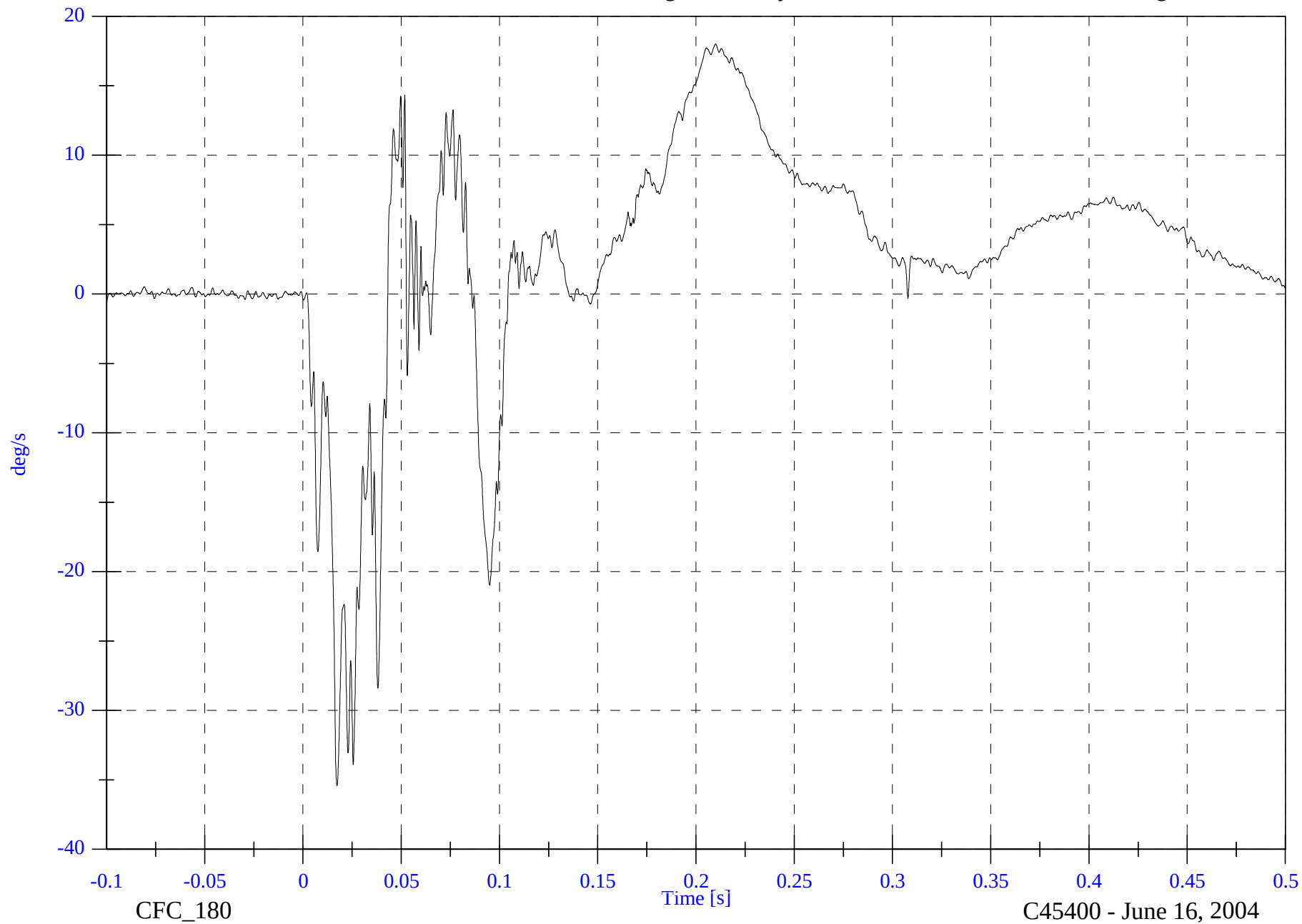


2004 FMVSS301 Test 2 - 2004 Mazda 6

V2 Right Sill AVy

Max: 18.0 [deg/s] at 0.210 [s]

Min: -35.4 [deg/s] at 0.017 [s]



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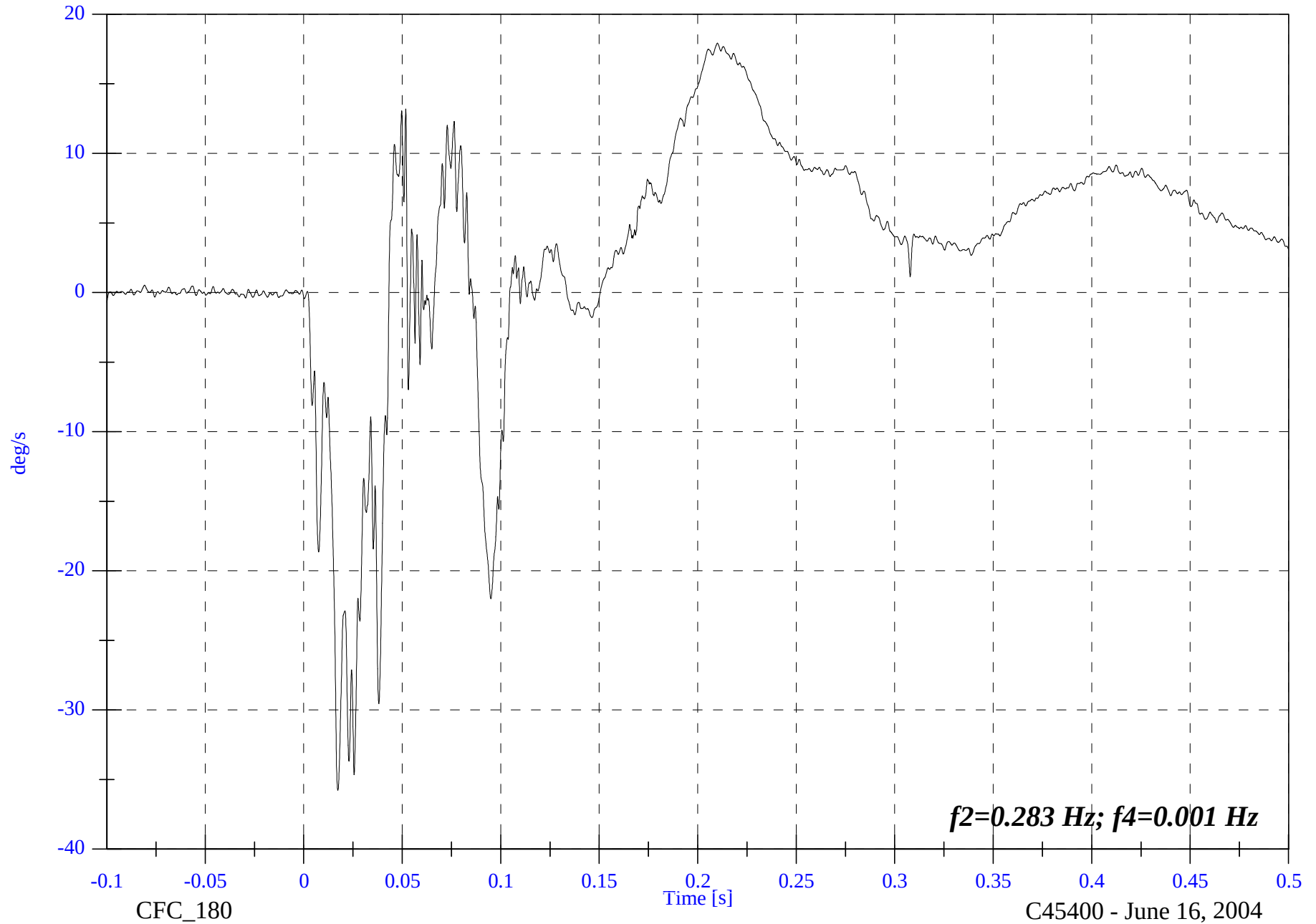
8655-F301-19R

2004 FMVSS301 Test 2 - 2004 Mazda 6

V2 Right Sill Comp AVy

Max: 17.9 [deg/s] at 0.210 [s]

Min: -35.8 [deg/s] at 0.017 [s]





2004 FMVSS301 Test 2 - 2004 Mazda 6

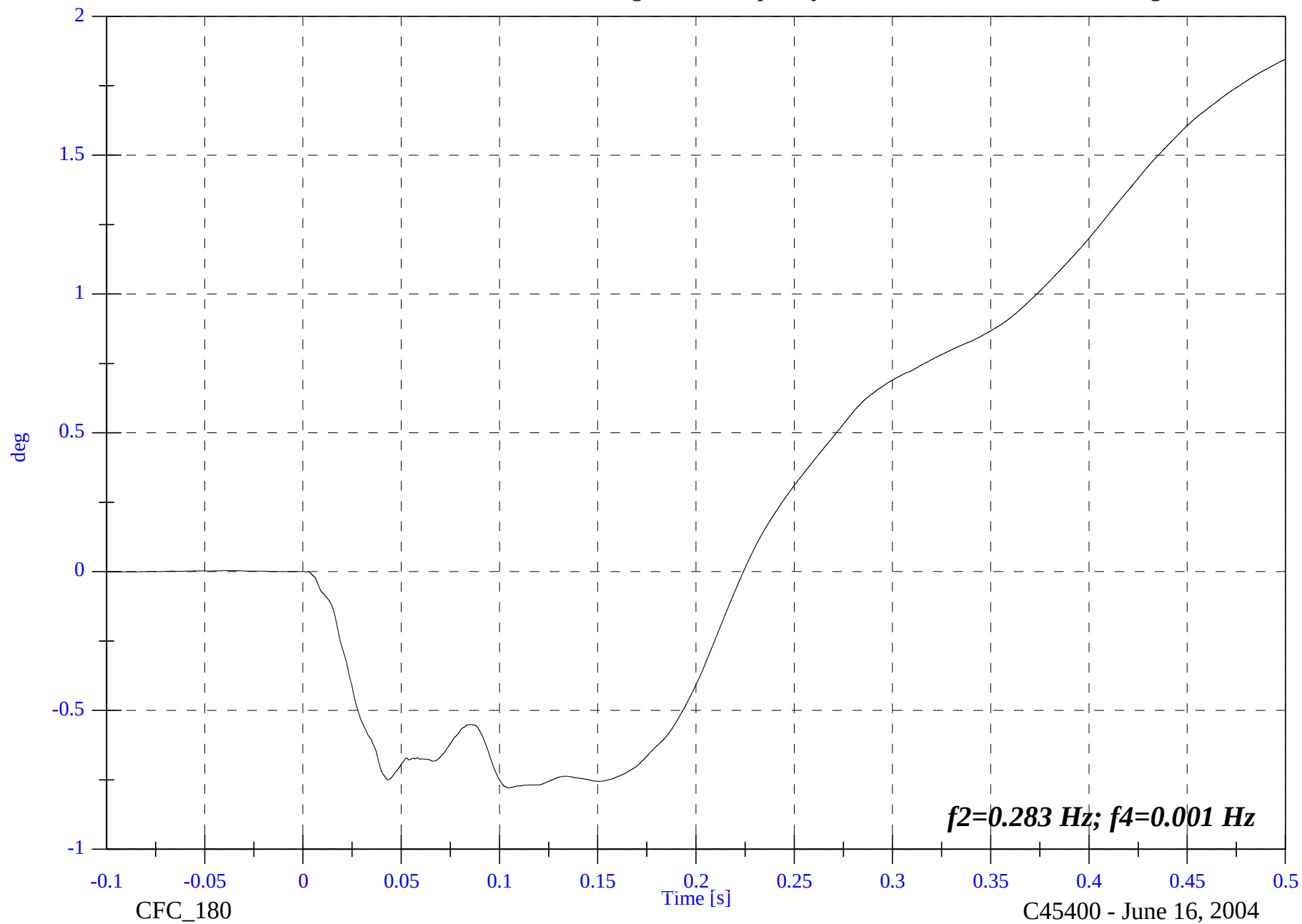
V2 Right Sill Comp ADy

Max: 1.8 [deg] at 0.500 [s]

Min: -0.8 [deg] at 0.105 [s]

B-109

8655-F301-19R

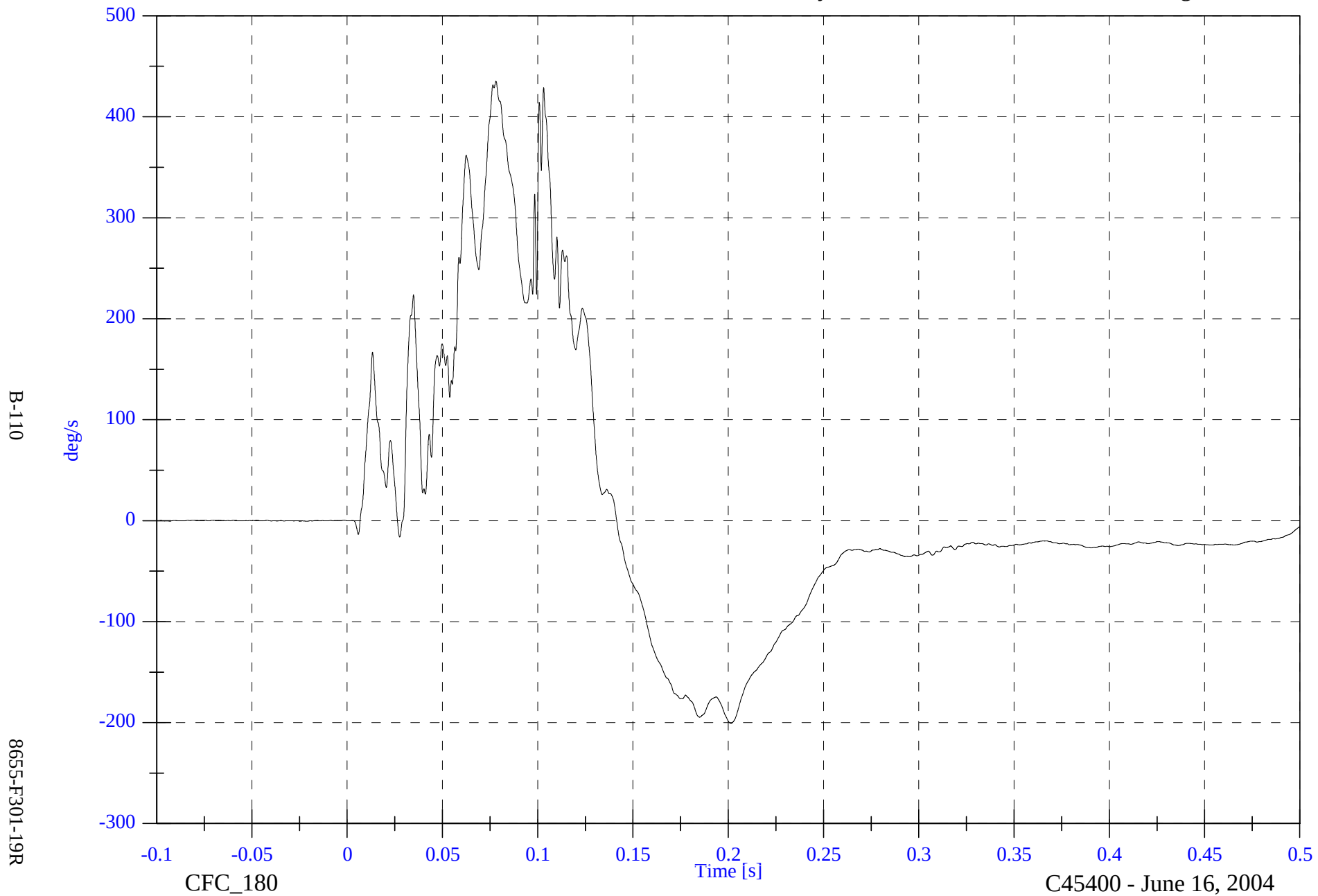


2004 FMVSS301 Test 2 - 2004 Mazda 6

V2P1 Left Seat AVy

Max: 435.3 [deg/s] at 0.078 [s]

Min: -200.8 [deg/s] at 0.201 [s]



2004 FMVSS301 Test 2 - 2004 Mazda 6

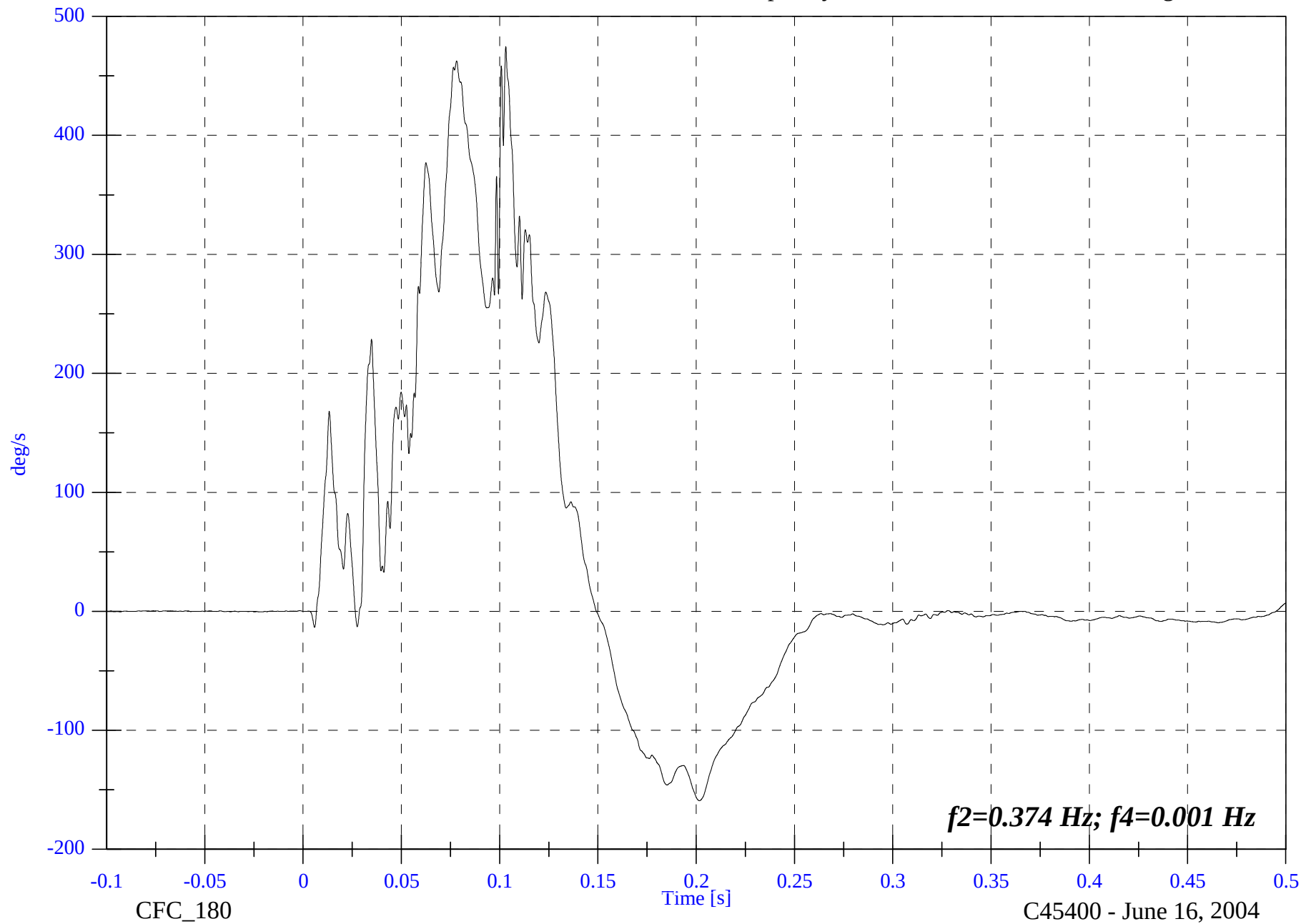
V2P1 Left Seat Comp AVy

Max: 474.6 [deg/s] at 0.103 [s]

Min: -159.2 [deg/s] at 0.202 [s]

B-111

8655-F301-19R

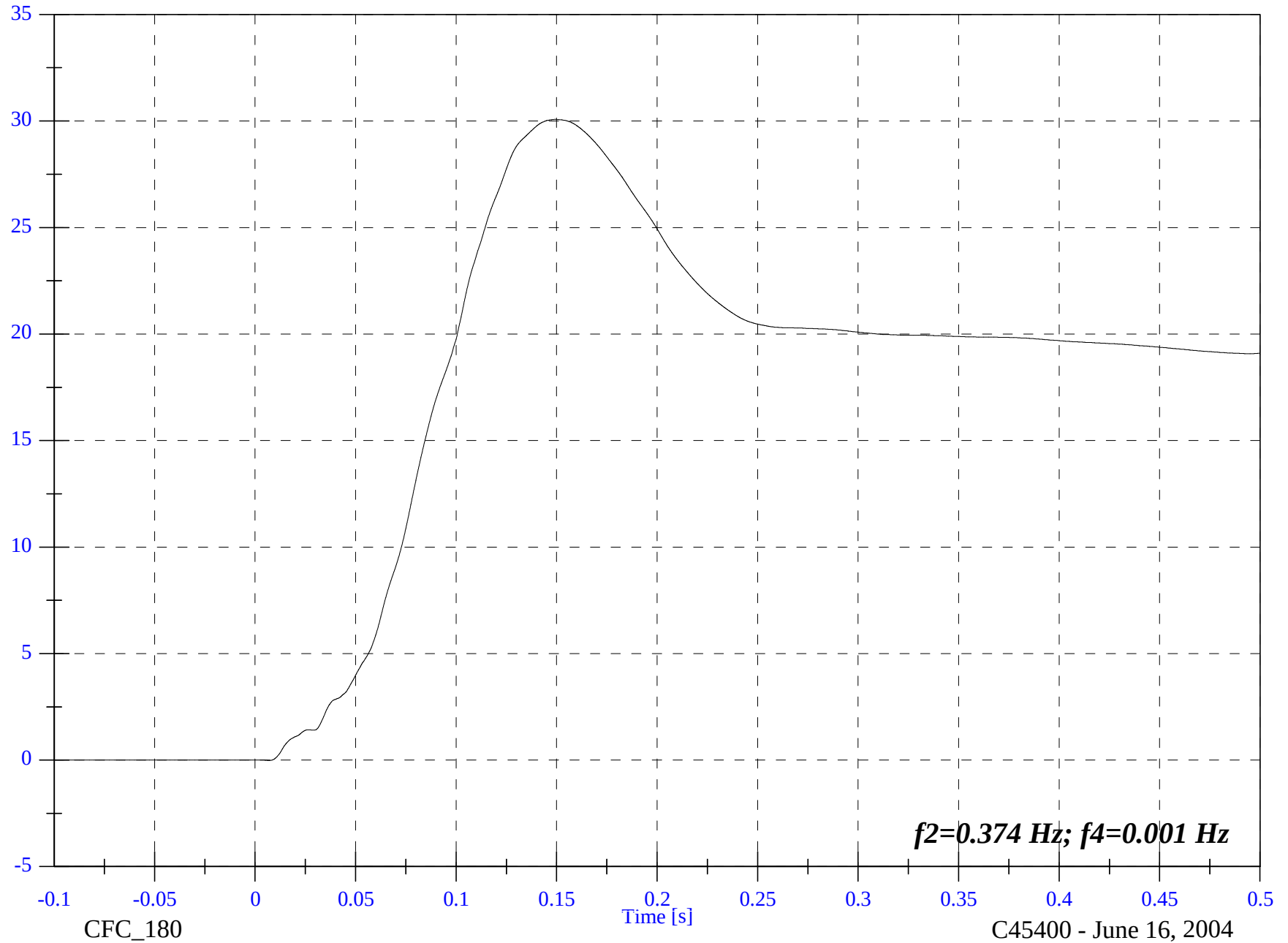


2004 FMVSS301 Test 2 - 2004 Mazda 6

V2P1 Left Seat Comp ADy

Max: 30.1 [deg] at 0.149 [s]

Min: -0.0 [deg] at 0.007 [s]



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2004 FMVSS301 Test 2 - 2004 Mazda 6

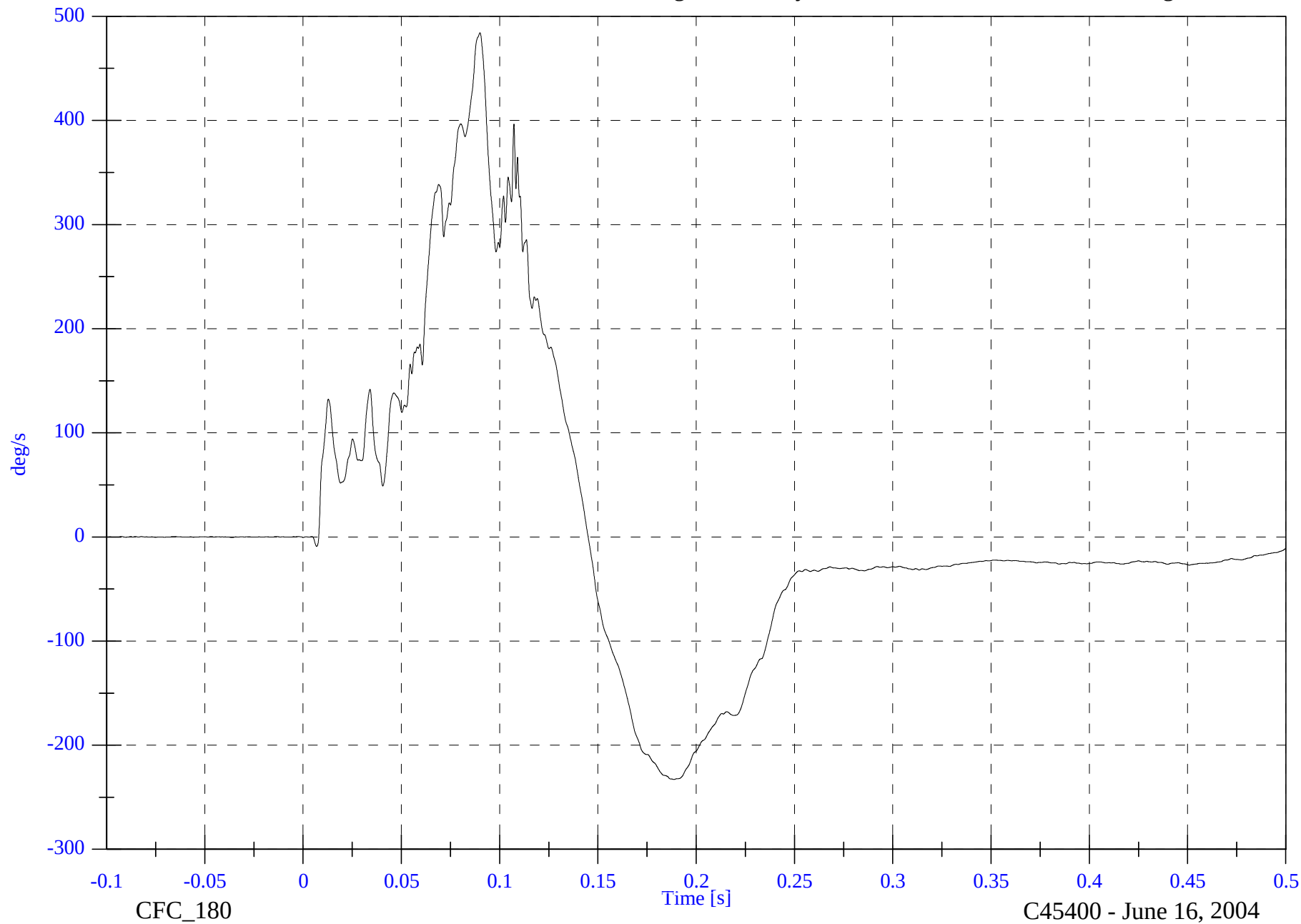
V2P1 Right Seat AVy

Max: 484.1 [deg/s] at 0.090 [s]

Min: -233.0 [deg/s] at 0.189 [s]

B-113

8655-F301-19R



2004 FMVSS301 Test 2 - 2004 Mazda 6

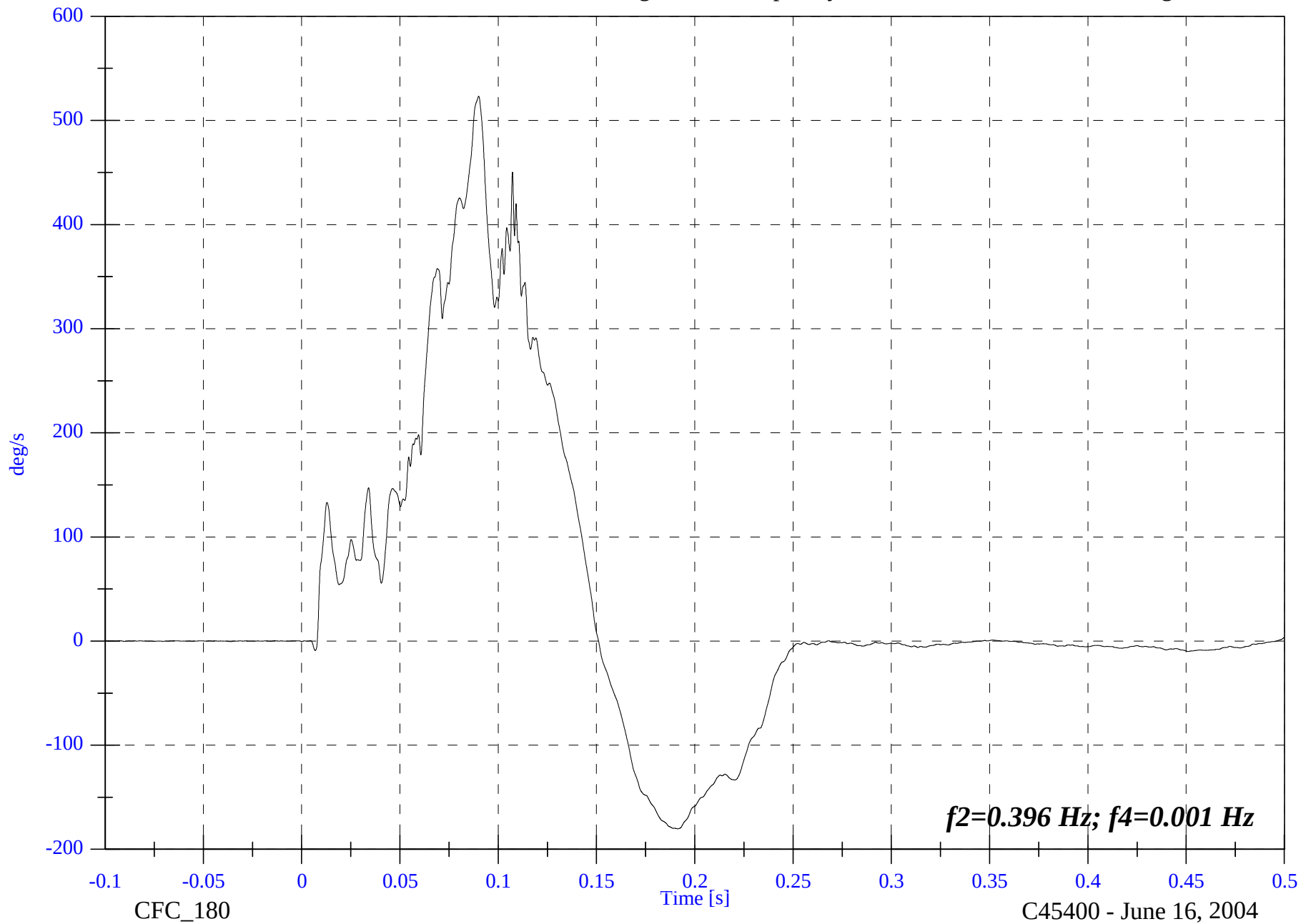
V2P1 Right Seat Comp AVy

Max: 523.2 [deg/s] at 0.090 [s]

Min: -180.4 [deg/s] at 0.191 [s]

B-114

8655-F301-19R



2004 FMVSS301 Test 2 - 2004 Mazda 6

V2P1 Right Seat Comp ADy

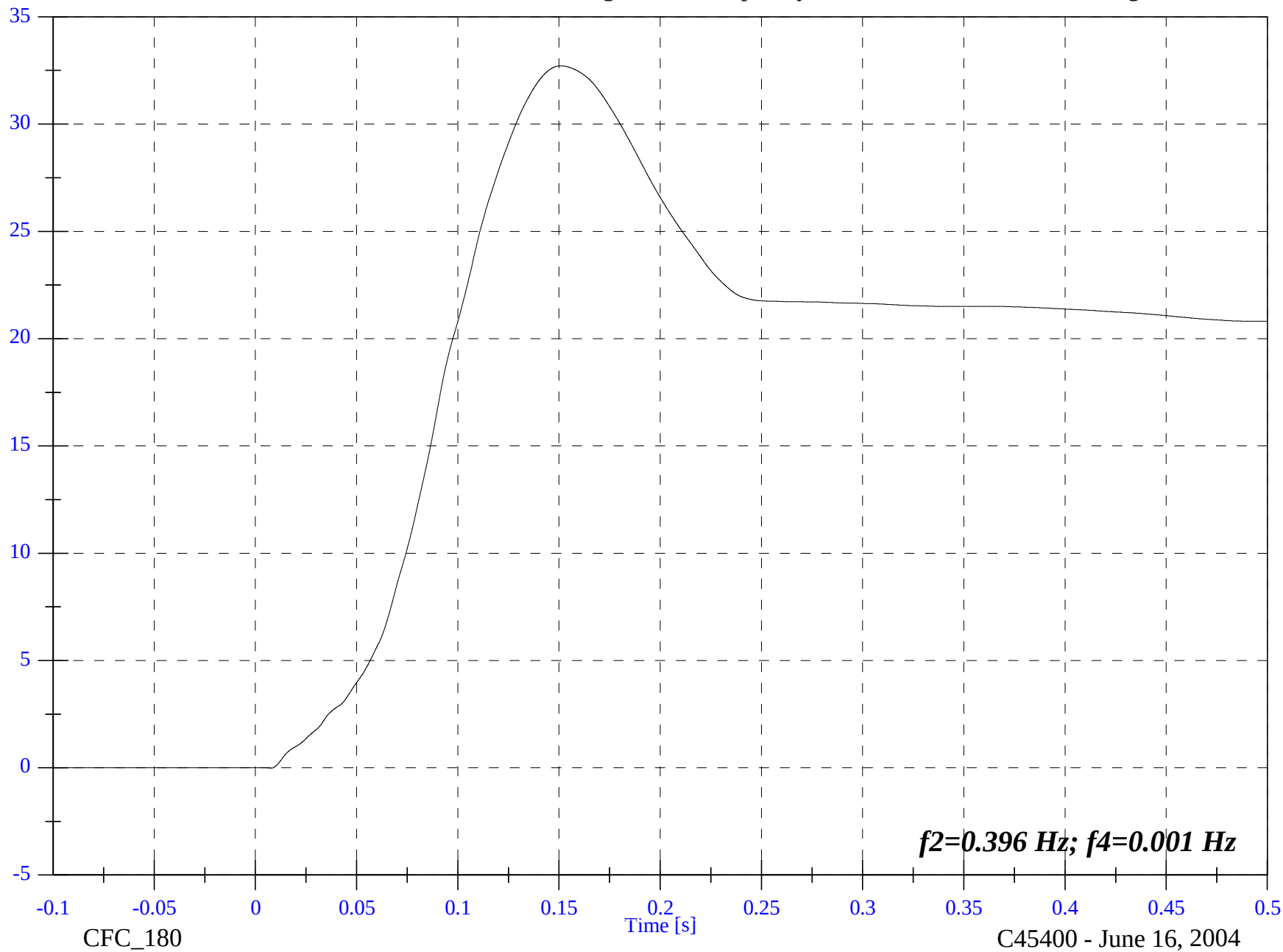
Max: 32.7 [deg] at 0.151 [s]

Min: -0.0 [deg] at 0.008 [s]

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8655-F301-19R

deg





2004 FMVSS301 Test 2 - 2004 Mazda 6

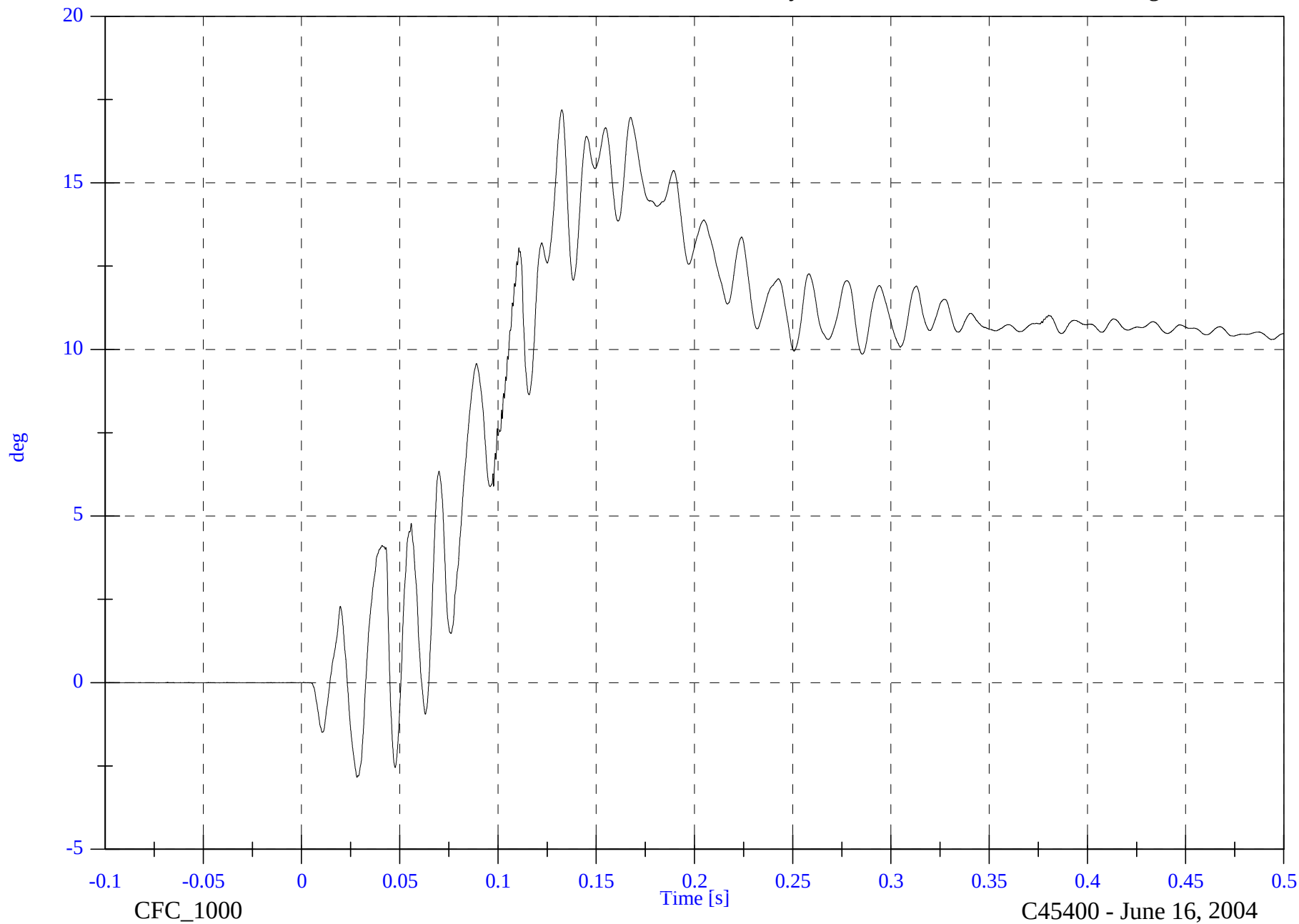
V2P1 Left Link ADy

Max: 17.2 [deg] at 0.132 [s]

Min: -2.8 [deg] at 0.028 [s]

B-116

8655-F301-19R



2004 FMVSS301 Test 2 - 2004 Mazda 6

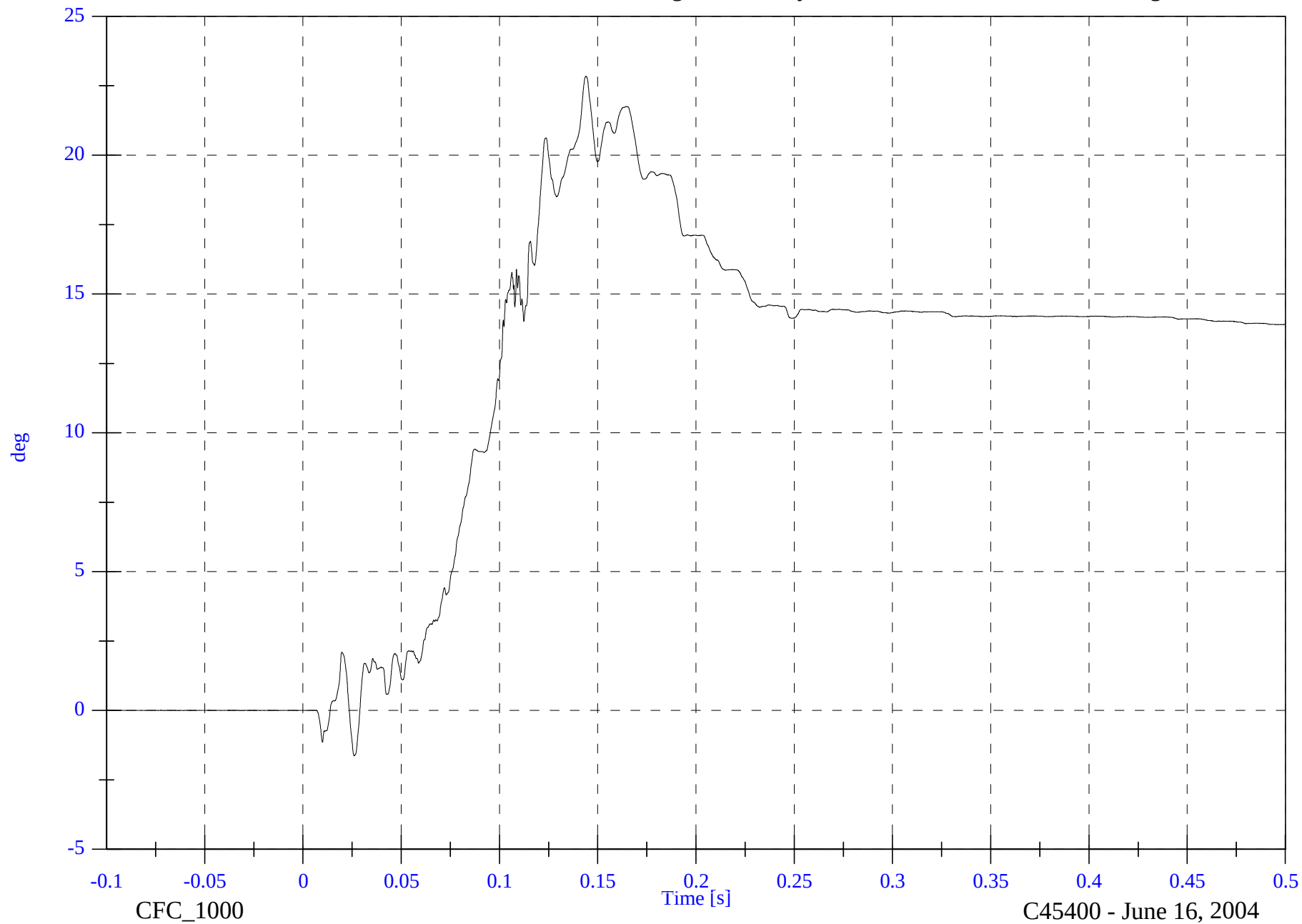
V2P1 Right Link ADy

Max: 22.8 [deg] at 0.144 [s]

Min: -1.6 [deg] at 0.026 [s]

B-117

8655-F301-19R



2004 FMVSS301 Test 2 - 2004 Mazda 6

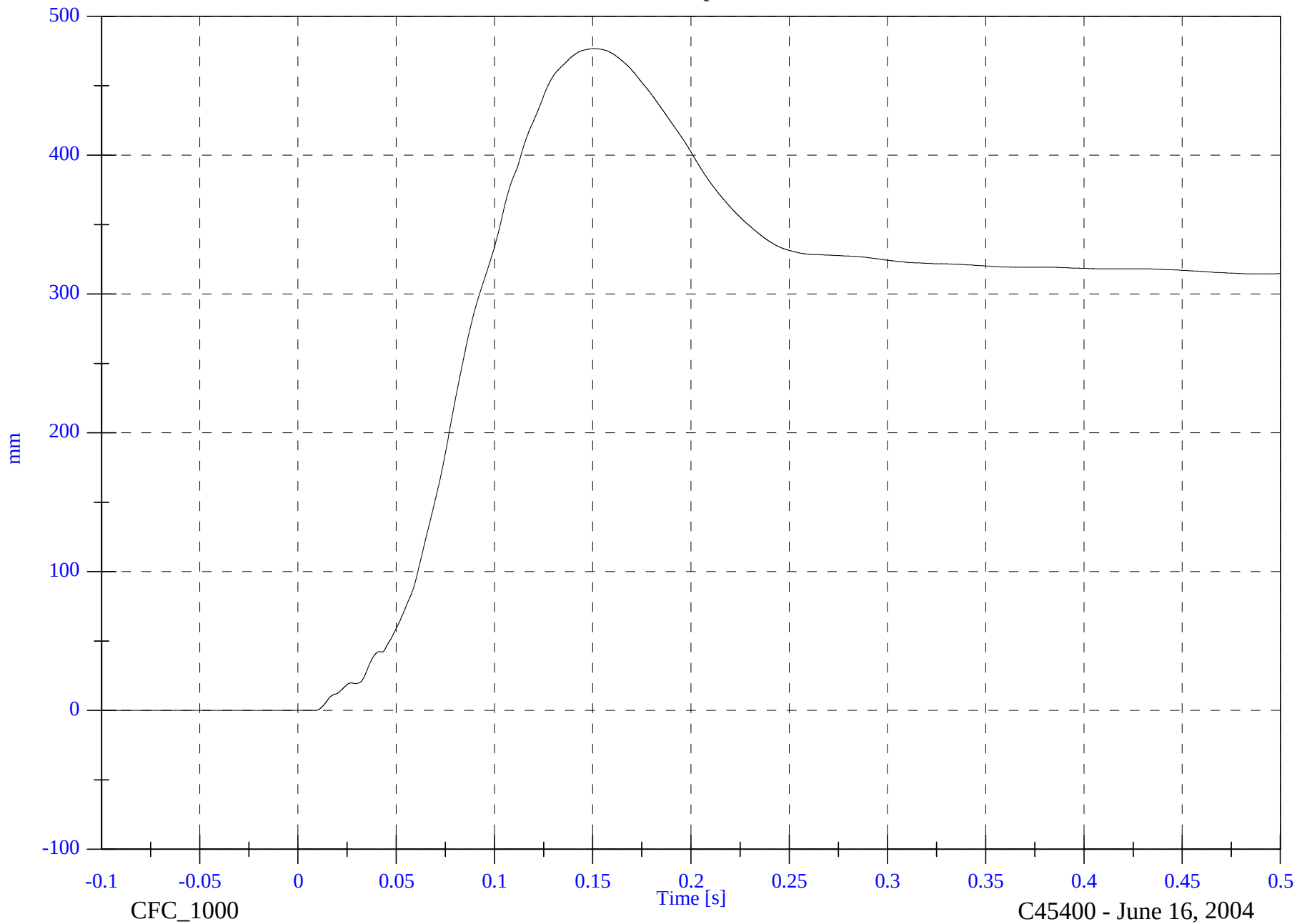
V2P1 Left Span Bar D

Max: 476.7 [mm] at 0.150 [s]

Min: -0.1 [mm] at 0.008 [s]

B-118

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2004 FMVSS301 Test 2 - 2004 Mazda 6

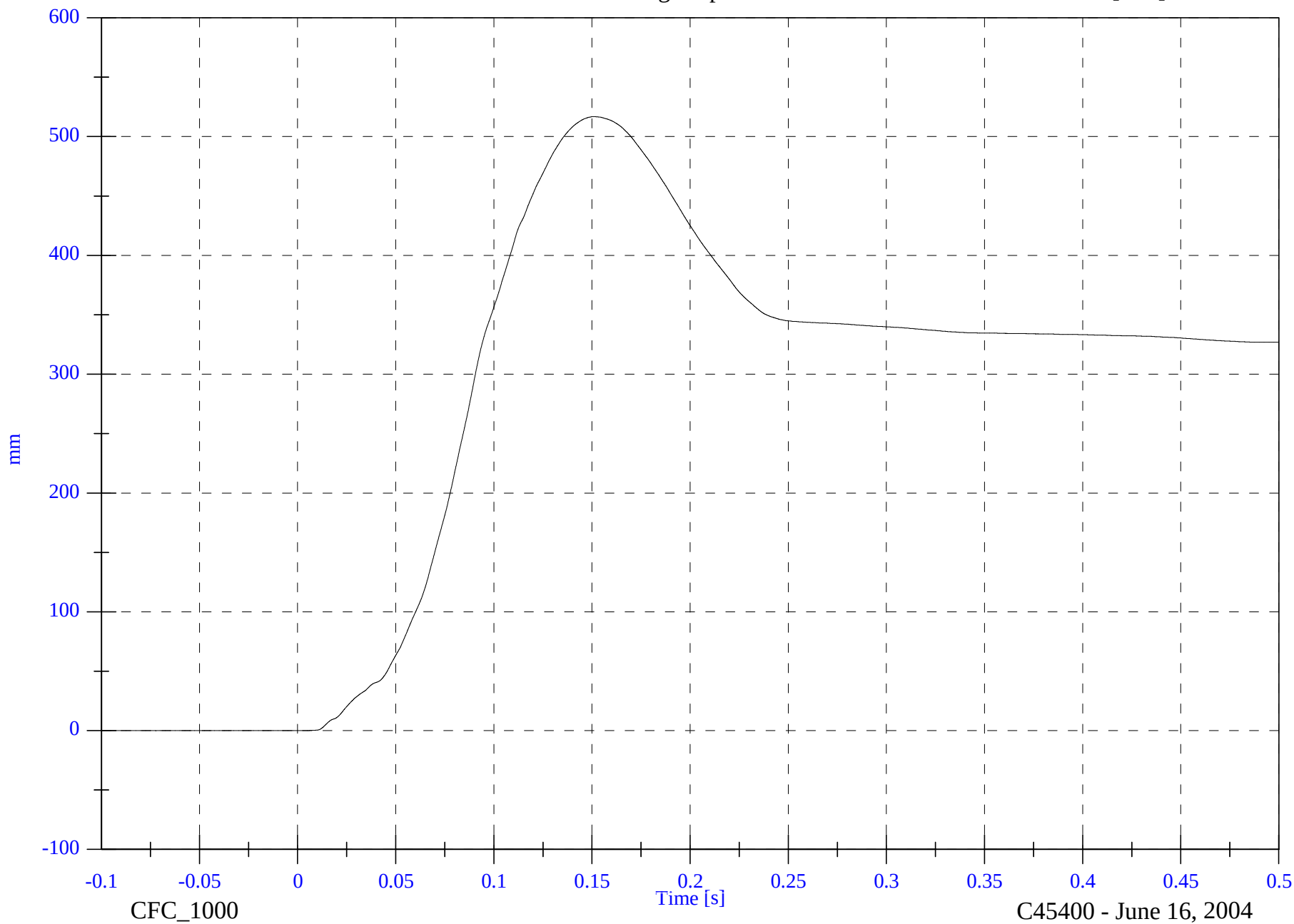
Max: 516.7 [mm] at 0.151 [s]

Min: -0.0 [mm] at -0.072 [s]

V2P1 Right Span Bar D

B-119

8655-F301-19R



2004 FMVSS301 Test 2 - 2004 Mazda 6

P1 Left Change in Seat Back Angle WRT Sill

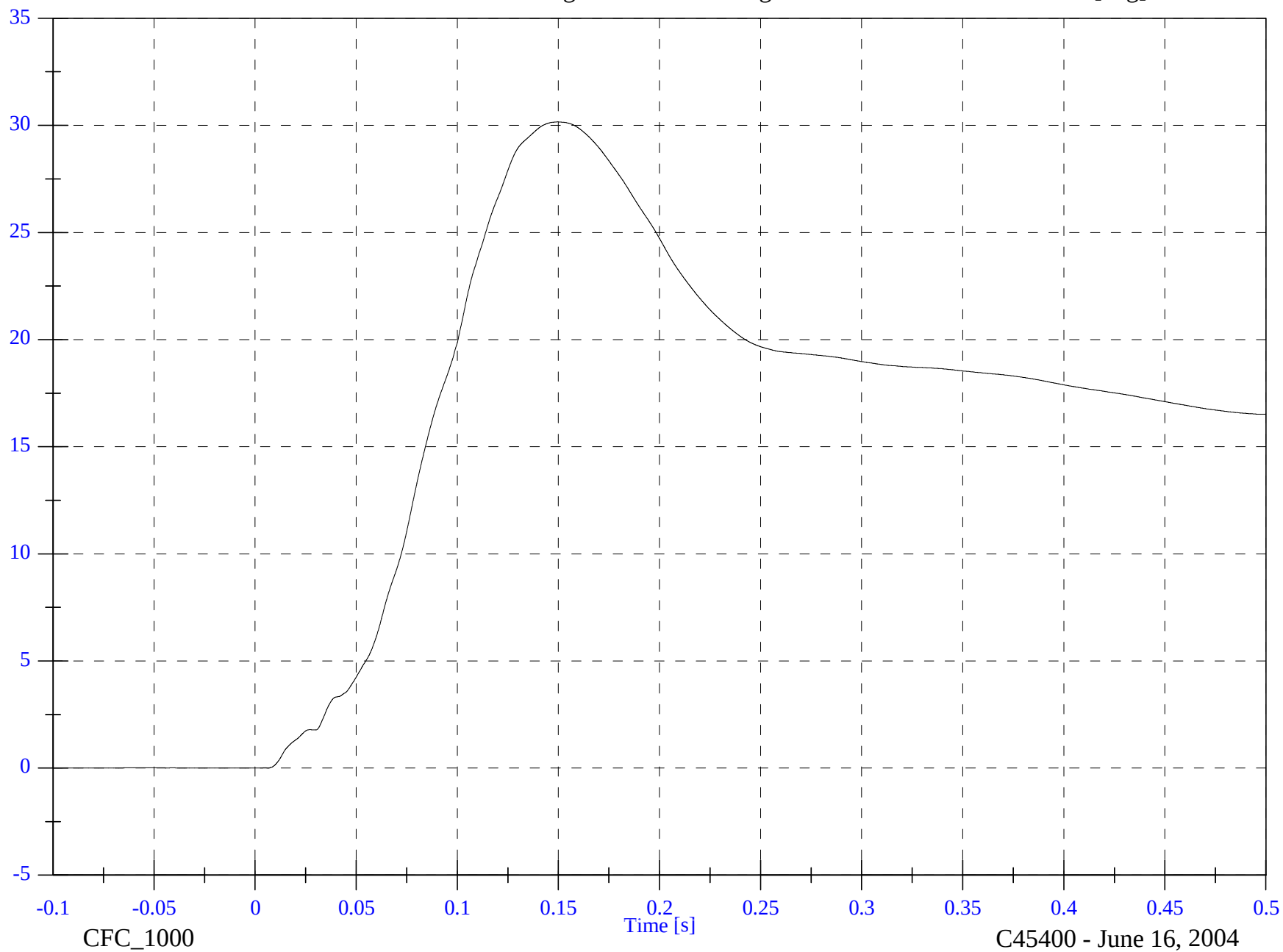
Max: 30.2 [deg] at 0.150 [s]

Min: -0.0 [deg] at 0.006 [s]

B-120

deg

8655-F301-19R

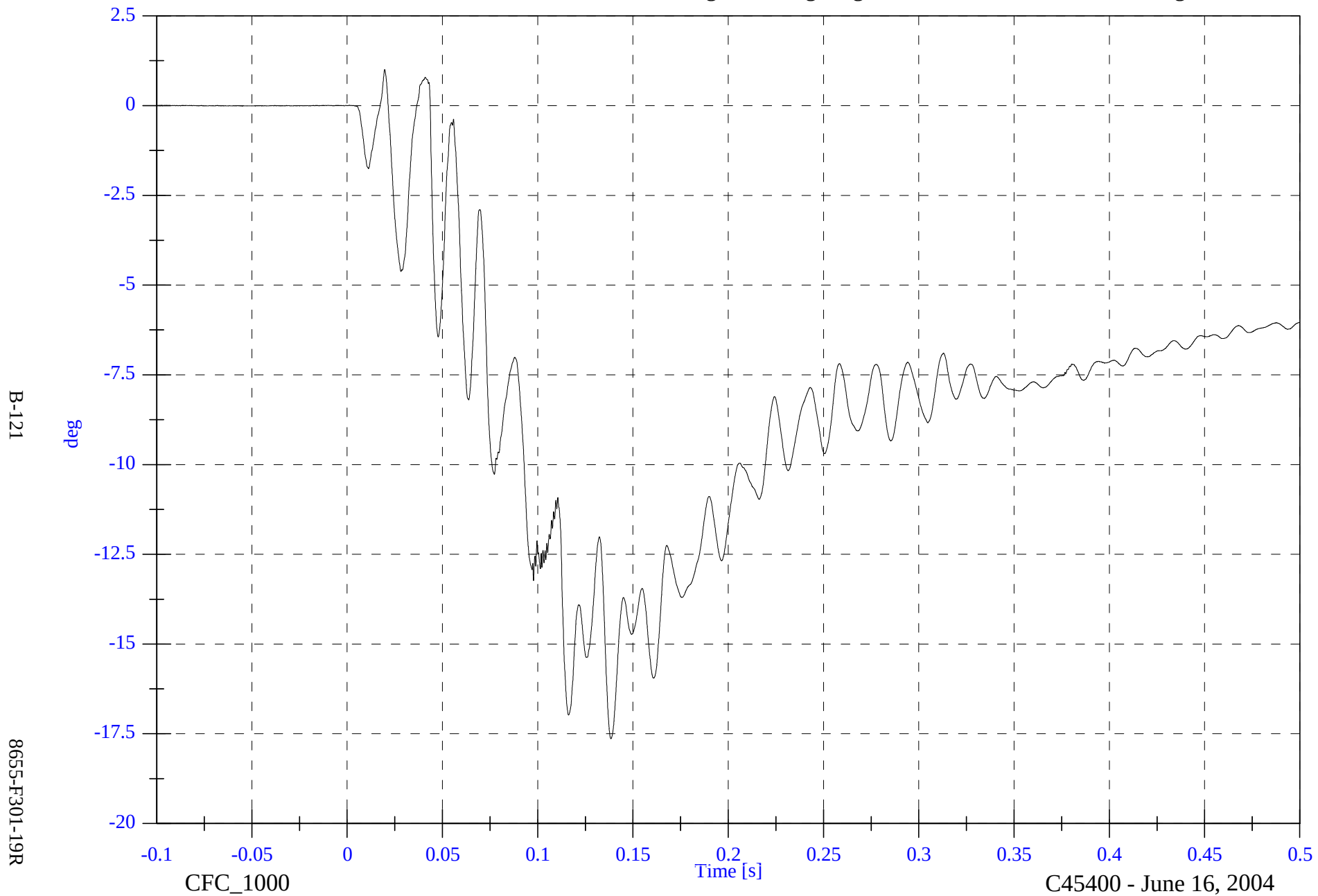


2004 FMVSS301 Test 2 - 2004 Mazda 6

P1 Left Change in String Angle

Max: 1.0 [deg] at 0.020 [s]

Min: -17.6 [deg] at 0.138 [s]



2004 FMVSS301 Test 2 - 2004 Mazda 6

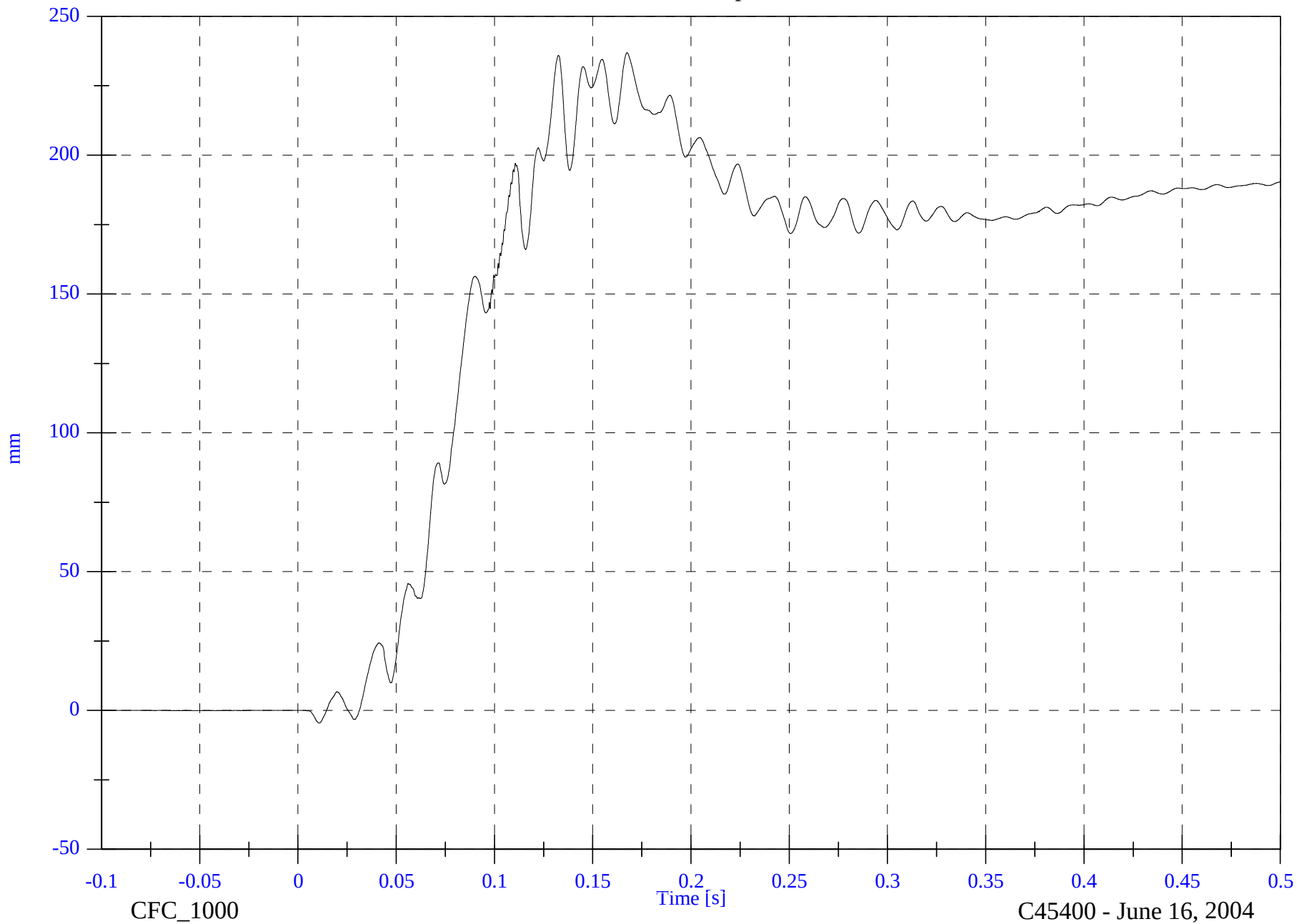
P1 Left Seat X Displacement

Max: 236.9 [mm] at 0.167 [s]

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

B-122

8655-F301-19R





2004 FMVSS301 Test 2 - 2004 Mazda 6

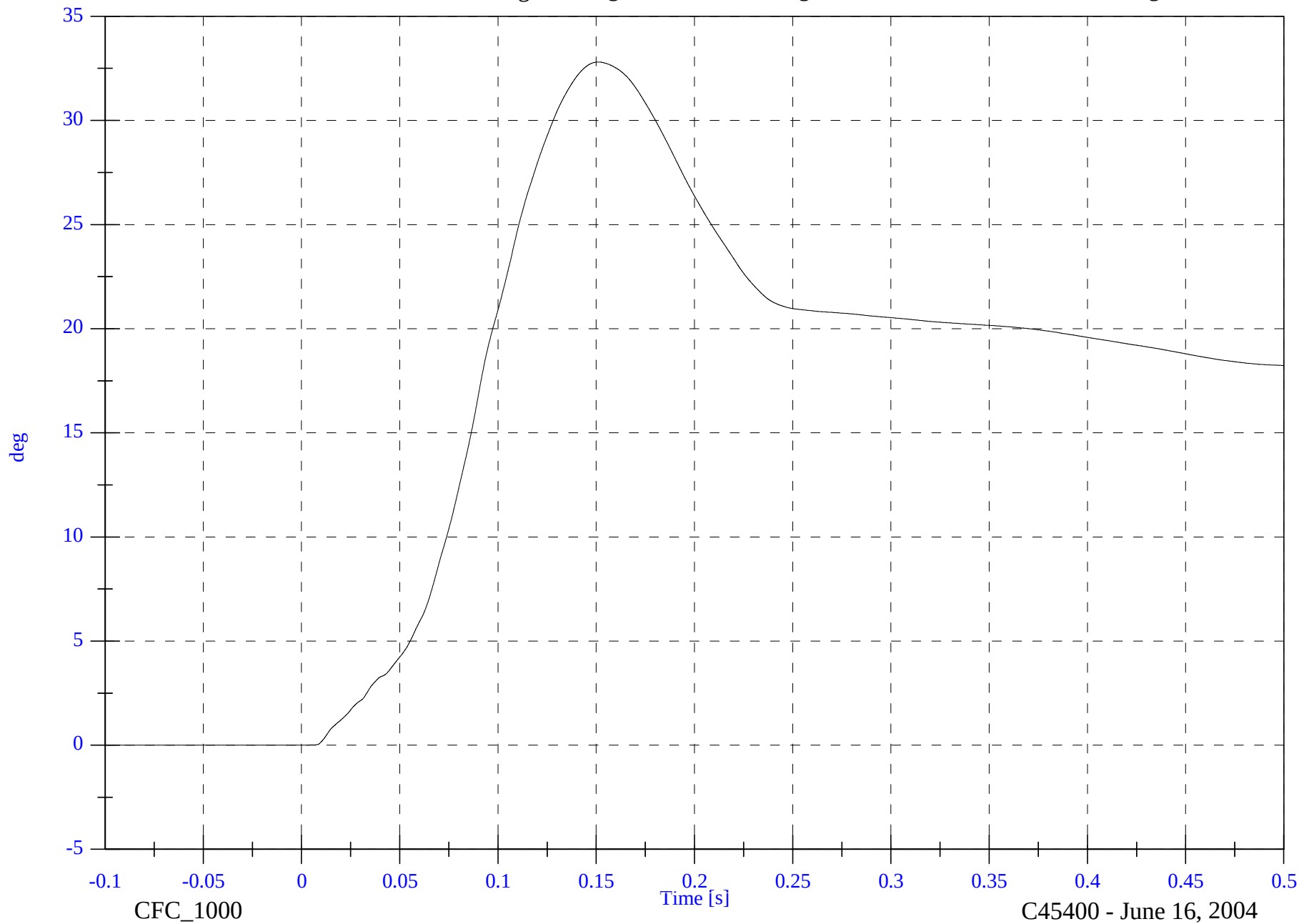
P1 Right Change in Seat Back Angle WRT Sill

Max: 32.8 [deg] at 0.151 [s]

Min: -0.0 [deg] at 0.002 [s]

B-123

8655-F301-19R

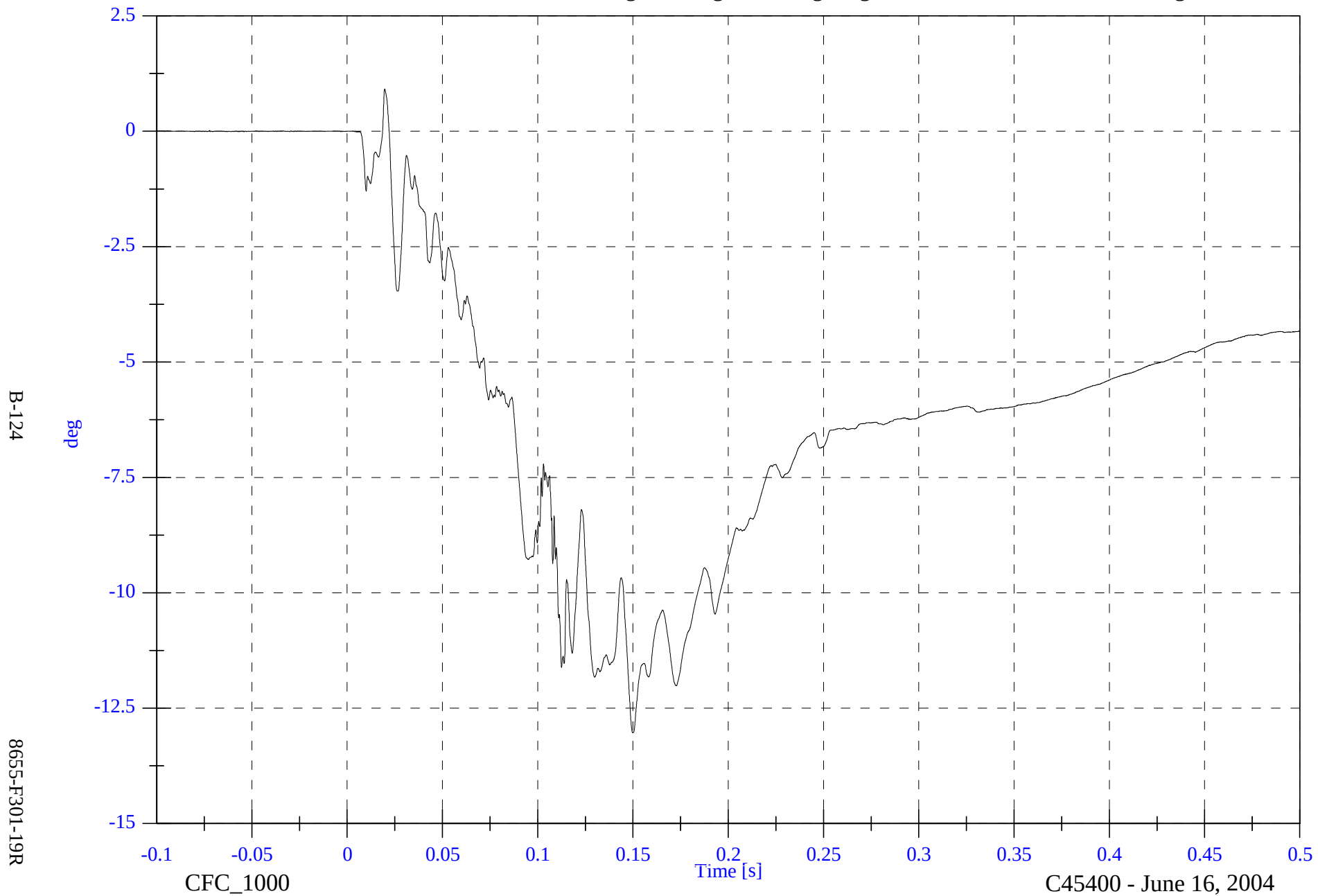


2004 FMVSS301 Test 2 - 2004 Mazda 6

P1 Right Change in String Angle

Max: 0.9 [deg] at 0.020 [s]

Min: -13.0 [deg] at 0.150 [s]



2004 FMVSS301 Test 2 - 2004 Mazda 6

Max: 266.1 [mm] at 0.144 [s]

P1 Right Seat X Displacement

Min: -4.4 [mm] at 0.010 [s]

