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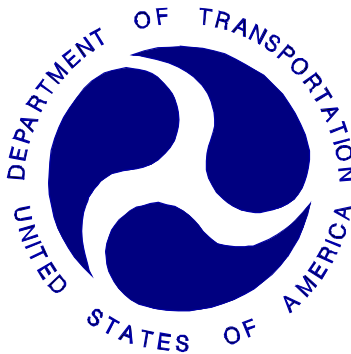
**NEW CAR ASSESSMENT PROGRAM (NCAP)  
FRONTAL BARRIER IMPACT TEST**

**NISSAN MOTORS LTD.  
2002 NISSAN PATHFINDER  
4-DOOR MPV**

NHTSA NUMBER: M25202

VERIDIAN TEST NUMBER: 8642-NCAP-20

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



June 07,2002

FINAL REPORT

PREPARED FOR:

U. S. DEPARTMENT OF TRANSPORTATION  
National Highway Traffic Safety Administration  
Safety Performance Standards  
Office of Crashworthiness Standards  
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FINAL REPORT ACCEPTANCE BY OCS:

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NHTSA, Office of Crashworthiness Standards

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Date of Report Acceptance

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COTR, New Car Assessment Program (NCAP)  
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**TECHNICAL REPORT STANDARD TITLE PAGE**

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15. <i>Supplementary Notes</i>					
16. <i>Abstract</i>  A frontal load cell barrier test of a 2002 Nissan Pathfinder 4-door MPV was performed at Veridian Engineering crash test facility in Buffalo, New York, on June 07,2002. The impact velocity was 56.16 kph and the temperature at the barrier face was 21°C. The maximum post-test vehicle crush was 625 mm. The test vehicle was equipped with 3-point restraint systems with torso belt pretensioners and load limiters, knee bolsters, adjustable head restraints and airbags at both the driver and right outboard passenger seating positions. With respect to FMVSS 208 "Occupant Crash Protection - Injury Criteria" both the driver and passenger appeared to comply with head, chest, and femur requirements.					
<b>ATD Position</b>	<b>HIC</b>	<b>Clip (g's)</b>	<b>Chest Disp (mm)</b>	<b>Left Femur (N)</b>	<b>Right Femur (N)</b>
<b>Driver (064)</b>	624.1	43.2	39.8	1039.5	2307.8
<b>Passenger (061)</b>	515.8	50.0	38.2	2605.8	880.1
17. <i>Key Words</i> 56 kph Frontal Barrier Impact test New Car Assessment Program (NCAP)				18. <i>Distribution Statement</i> <u>Copies of this report are available from:</u> NHTSA Technical Reference Division National Highway Traffic Safety Admin. 400 Seventh St., SW, Room 5108 Washington, DC 20590	
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## SECTION 1

### PURPOSE AND SUMMARY OF TEST

#### 1.1 PURPOSE

This 56.16 kph frontal barrier impact test is part of the Vehicle Barrier Impact Testing Program sponsored by the National Highway Traffic Safety Administration (NHTSA) under Contract No. DTNH22-01-D-32005. The purpose of this test was to obtain vehicle crashworthiness and occupant restraint system performance data for an impact speed in excess of the current 48.3 kph requirements.

The 56.16 kph frontal barrier impact test was conducted in accordance with the Office of Crashworthiness Standards Laboratory Indicant Test procedure.

#### 1.2 TEST PROCEDURE

This 56.16 kph frontal barrier impact test was conducted in accordance with the Office of Crashworthiness Standards (OCS) New Car Assessment Program (NCAP) Laboratory Indicant Test Procedure, dated December 1999. Data was obtained indicant of FMVSS 208, "Occupant Crash Protection"; FMVSS 212, "Windshield Retention"; FMVSS 219, "Windshield Zone Intrusion (Partial)"; and FMVSS 301 "Fuel System Integrity" performance. Procedures for receiving, inspection testing and reporting of test results are described in the test procedures and are not repeated in this report.

One real-time camera and 16 high-speed cameras were used to document the frontal barrier impact event. Camera locations and other pertinent camera information can be found in this report.

Two Part 572E, 50th percentile male anthropomorphic test devices (ATDs), were placed in the driver and right-front passenger seating positions according to dummy placement instructions specified in the Laboratory Indicant Test Procedure.

Both ATDs were fully instrumented with nine accelerometer array head, chest and pelvis triaxial accelerometers, chest displacement potentiometers, upper neck transducers, right/left femur load cells, left and right knee sliders, and lower leg instrumentation. The driver (position 1) ATD (Serial No. 064) and the right-front passenger (position 2) ATD (Serial No.061) were used in one test (M25800) previous to this test where they did not exceed FMVSS 208 head, chest and femur requirements. Certification details, along with instrumentation calibration data, are found in Appendix C.

The vehicle, occupant, camera and measurement data are presented in Section 2. Appendix A contains the still photograph prints. The 137 channels of data were recorded on an on-board data acquisition system. Appendix B contains the vehicle, load cell barrier and dummy response data traces. Appendix C contains the dummy calibration data and Appendix D contains the transducer calibration dates.

### 1.3 SUMMARY OF FRONTAL BARRIER IMPACT TEST

A load cell barrier consisting of 36 load cells was impacted by a 2002 Nissan Pathfinder 4-door MPV at a velocity of 56.16 kph. The test was performed at Veridian Engineering on June 07,2002. Pre- and post-test photographs of the vehicle and dummies can be found in Appendix A.

The occupant data is summarized below.

	HIC	Clip (g)	Chest Disp. (mm)	Left Femur (N)	Right Femur (N)	Belt Spool (mm)	Belt Stretch (mm/50 mm)
<b>Driver ATD</b>	624.1	43.2	39.8	1039.5	2307.8	-	-
<b>Passenger ATD</b>	515.8	50.0	38.2	2605.8	880.1	-	-

There was 100 percent windshield retention and no intrusion into the protected zone of the windshield during the event. There was no Stoddard solvent leakage after the event or during any phase of the static rollover.

The maximum vehicle static crush was 625 mm and both the driver and passenger side doors remained closed and latched during the impact event and were operable without the use of tools after the impact.

The driver's visible contact points were as follows: The face to the center of the airbag, the back of the head to the center of the headrest, and the chest to the airbag. The passenger's visible contact points were as follows: The face to the center of the airbag, the back of the head to the center of the headrest, the right side of head to side rail, the chest to the airbag and the left knee to the left quarter of the glove box door and right knee to the center of the glove box door.

The 2002 Nissan Pathfinder 4-door MPV did not exceed the requirements of FMVSS 208, FMVSS 212, FMVSS 219, and FMVSS 301. Data pertaining to these standards are presented in the data sheets.

**SECTION 2**

**GENERAL TEST AND VEHICLE PARAMETER DATA**

**DATA SHEET NO. 1 CRASH TEST SUMMARY**

Vehicle NHTSA No.: M25202 Test Mode: 56.3 kph Frontal Barrier

Test Date: June 07,2002 Time: 11:30 Temperature: 21 °C

Vehicle Make/Model/Body Style: 2002 Nissan Pathfinder 4-door MPV

Vehicle Test Weight: 2141 kg

Vehicle/Barrier Impact Angle: 0 °

Impact Velocity: 56.16 kph

Maximum Static Crush: 625 mm

Vehicle Rebound: 277 mm

**DUMMIES:**

**DRIVER**

**PASSENGER**

Type:	<u>DRIVER</u>	<u>PASSENGER</u>
Restraint System:	<u>572E</u>	<u>572E</u>
	<u>Seatbelt with torso belt pretensioners and load limiters, airbag, knee bolster and adjustable head restraint</u>	<u>Seatbelt with torso belt pretensioners and load limiters, airbag, knee bolster and adjustable head restraint</u>

Number of Data Channels: 137

Number of Cameras: 1 Real Time

16 High Speed

**DOOR OPENING DATA:** Closed, remained latched and operable without the use of tools - Left Front

Closed, remained latched and operable without the use of tools - Right Front

**Front Seat(s) Data:**

**DRIVER**

**PASSENGER**

Seat Track Failure: (mm of shift) 0 0

Seat Back Failure: None None

**VISIBLE DUMMY CONTACT POINTS:**

**DRIVER**

**PASSENGER**

Head: Airbag / Back of head to head rest Airbag / Back of head to head rest / Side of head to side rail

Abdomen: - -

Chest: Airbag Airbag

Knees: Knee Bolster Knee Bolster

DATA SHEET NO. 2 GENERAL TEST AND VEHICLE PARAMETER DATA

TEST VEHICLE INFORMATION:

Year/Make/Model/Body Style: 2002 Nissan Pathfinder 4-door MPV

NHTSA No. : M25202 ; VIN: JN8DR09Y92W731014 ; Color: Beige

Engine Data: 6 cylinders; - CID; 3.5 Liters; - cc

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

Transmission Data: 5 speeds; x Manual; - Automatic; - Overdrive

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

Safety Belt Features - Driver X Pretensioner (Shoulder); X Load Limiter; X Adj. Anchorage

Safety Belt Features - Passenger X Pretensioner (Shoulder); X Load Limiter; X Adj. Anchorage

Major Options: x A/C; x Pwr.Strg.; x Pwr. Brakes

x Pwr. Windows; x Pwr. Door Locks; x Tilt Wheel

Date Received: 5/30/02 ; Odometer Reading 79 km

Selling Dealer: West Herr Nissan

& Address: 3580 Southwestern Blvd. Orchard Park , N.Y. 14127

DATA FROM TIRE VEHICLE'S CERTIFICATION LABEL:

Vehicle Manufactured by: Nissan Motors LTD.

Date of Manufacture 02/02

GVWR: 2404 kg; GAWR: 1202 kg FRONT; 1293 kg REAR

DATA FROM TIRE PLACARD:

Tire Pressure with Maximum Capacity Vehicle Load: 207 kpa FRONT

207 kpa REAR

Recommended Tire Size: P255/65R16

\* Recommended Cold Tire Pressure: 207 kpa FRONT; 207 kpa REAR

Size of Tires on Test Vehicle: P255/65R16 ; Manufacturer: Bridgestone

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) = 545 kg

No. of Occupants x 68.04 kg = 340.2 kg

Rated Cargo/Luggage Weight (RCLW) = 204.8 Kg 136 kg maximum

\*Tire pressure used for test

DATA SHEET NO. 2 GENERAL TEST AND VEHICLE PARAMETER DATA ( cont. )

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

Right Front =	<u>500.0</u>	kg	Right Rear =	<u>413.0</u>	kg
Left Front =	<u>522.5</u>	kg	Left Rear =	<u>425.0</u>	kg
TOTAL FRONT =	<u>1022.5</u>	kg	TOTAL REAR =	<u>838.0</u>	kg
TOTAL DELIVERED WEIGHT =	<u>1860.5</u>	kg			
% of Total Front of Vehicle Weight =	<u>55.0%</u>		% of Total Rear Weight =	<u>45.0%</u>	%

CALCULATION OF VEHICLE'S TARGET TEST WEIGHT:

Total Delivered Weight (UDW) =	<u>1860.5</u>	kg
Rated Cargo/Luggage Weight (RCLW) =	<u>136</u>	kg (136 kg maximum)
Weight of 2 p.572 Dummies @ 76 each =	<u>152</u>	kg
TARGET TEST WEIGHT =	<u>2148.5</u>	kg

WEIGHT OF TEST VEHICLE WITH TWO DUMMIES AND 128.5 KG OF CARGO WEIGHT:

Right Front =	<u>539.0</u>	kg	Right Rear =	<u>521.0</u>	kg
Left Front =	<u>543.0</u>	kg	Left Rear =	<u>538.0</u>	kg
TOTAL FRONT =	<u>1082.0</u>	kg	TOTAL REAR =	<u>1059.0</u>	kg
TOTAL TEST WEIGHT =	<u>2141.0</u>	kg			
% of Total Front Weight =	<u>50.5%</u>	%	% of Total Rear Weight =	<u>49.5%</u>	%
Weight of Ballast Secured in Vehicle Trunk Area =	<u>36</u>	kg			
Vehicle Components Removed for Weight Reduction:	<u>None</u>				

VEHICLE ATTITUDE (all dimension in millimeters):

AS DELIVERED:	RF	<u>843</u>	LF	<u>838</u>	RR	<u>831</u>	LR	<u>824</u>
FULLY LOADED:	RF	<u>833</u>	LF	<u>827</u>	RR	<u>772</u>	LR	<u>765</u>
AS TESTED:	RF	<u>833</u>	LF	<u>833</u>	RR	<u>773</u>	LR	<u>774</u>
Vehicle's Wheel Base:	<u>2705</u>	mm						
Location of Vehicle's C.G.:	<u>1338</u>	mm rearward of front wheel center.						

FUEL SYSTEM DATA:

Fuel System Capacity From Owner's Manual =	<u>20.9</u>	liters
Usable Capacity Figure Furnished by COTR =	<u>20.9</u>	liters
Test Volume Range (92 to 94% of Usable Capacity) =	<u>19.23</u>	to <u>19.65</u> liters
ACTUAL TEST VOLUME=	<u>19.2</u>	liters (with entire fuel system filled)
Test Fluid Type:	<u>Stoddard Solution</u>	; Spec. Grav. = <u>0.764</u>
Kinematic Viscosity =	<u>0.96</u>	centistokes; Color = <u>Orange</u>
Type of Fuel Pump: Electric-	<u>x</u>	; Mechanical- <u>-</u>
Does Electric Pump operate with ignition switch "ON" & engine "OFF"	Yes- <u>x</u>	No- <u>-</u>
<u>Details of Fuel System: Fuel filler on left side aft of rear axle with fuel lines running along left frame rail and fuel tank is fore of rear axle and left of vehicle centerline.</u>		

DATA SHEET NO. 3 POST IMPACT DATA

TYPE OF TEST:

Type of Test: Frontal Barrier Impact Angle: 0°  
Test Date: June 07,2002 Time: 11:30 Temperature: 21 °C  
Vehicle NHTSA No.: M25202  
Required Impact Velocity Range: 55.5 to 57.1 kph

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

Trap No. 1 = 56.16 kph; Trap No. 2 = 56.16 kph  
Distance from vehicle to barrier: (1) entering trap = 813 mm  
(2) exiting trap = 305 mm

VEHICLE STATIC CRUSH: (mm) (For frontal and rear impacts only.)

Vehicle Length:

Pre-Test	Left = <u>4530</u> ; C/L = <u>4660</u> ; Right = <u>4530</u>
Post-Test	Left = <u>4019</u> ; C/L = <u>4062</u> ; Right = <u>4026</u>
Crush	Left = <u>511</u> ; C/L = <u>598</u> ; Right = <u>504</u>
AVERAGE	= <u>537.67</u> mm

VEHICLE REBOUND: (From rigid barrier only.)

Distance from front of test vehicle to impact point:

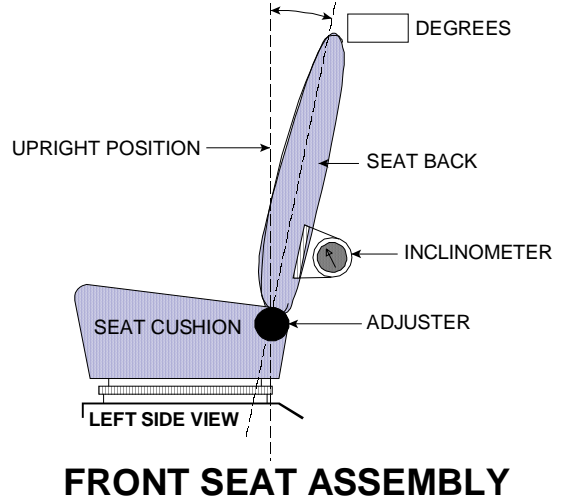
	Left = <u>277</u> ; C/L = <u>277</u> ; Right = <u>276</u>
AVERAGE	= <u>277</u> mm

DATA SHEET NO. 4 TEST VEHICLE INFORMATION

VEHICLE IDENTIFICATION:

Model Year :           2002    Vehicle Model:           Nissan Pathfinder    Body Style :           4-door MPV

1. Nominal Design Riding Position for adjustable driver and passenger seat backs. Please describe how to position the inclinometer to measure the seat back angle. Include description of the location of the adjustment latch detent, if applicable.



Seat back angle for driver's seat:                   25

Measurement instructions: 7<sup>th</sup> position rearward with 1<sup>st</sup> notch being called the "0" position

Seat back angle for passenger's seat:                   25

Measurement instructions: 7<sup>th</sup> position rearward with 1<sup>st</sup> notch being called the "0" position

2. Seat Fore and Aft Positioning

Positioning of the driver's seat:                   20 detents located, placed in mechanical middle which is the 10<sup>th</sup> detent

Positioning of the passenger's seat:                   20 detents located, placed in mechanical middle which is the 10<sup>th</sup> detent

3. Fuel Tank Capacity Data

3.1 A. "Usable Capacity" of the standard equipment fuel tank is                   20.9    liters

B. "Usable Capacity" of the optional equipment fuel tank is                   -        liters

C. "Usable Capacity" of the vehicle(s) used for certification testing to requirements of FMVSS 301 =                   20.9    liters

3.2 Amount of Stoddard solvent added to vehicle(s) used for certification test(s) =                   20.9    liters

3.3 Is vehicle equipped with electric fuel pump?   Yes- x ;   No- -

If YES, explain the vehicle operating conditions under which the fuel pump will pump fuel.

With vehicle ignition turned on

DATA SHEET NO. 4 TEST VEHICLE INFORMATION (cont.)

4. STEERING COLUMN ADJUSTMENTS:

Steering wheel and column adjustments are made so that the steering wheel hub is at the geometric center of the locus it describes when it is moved through its full range of driving positions. If the tested vehicle has any of these adjustments, does your company use any specific procedures to determine the geometric center.

Operational Instructions: Mechanical middle, bisected full range of steering column adjustment height

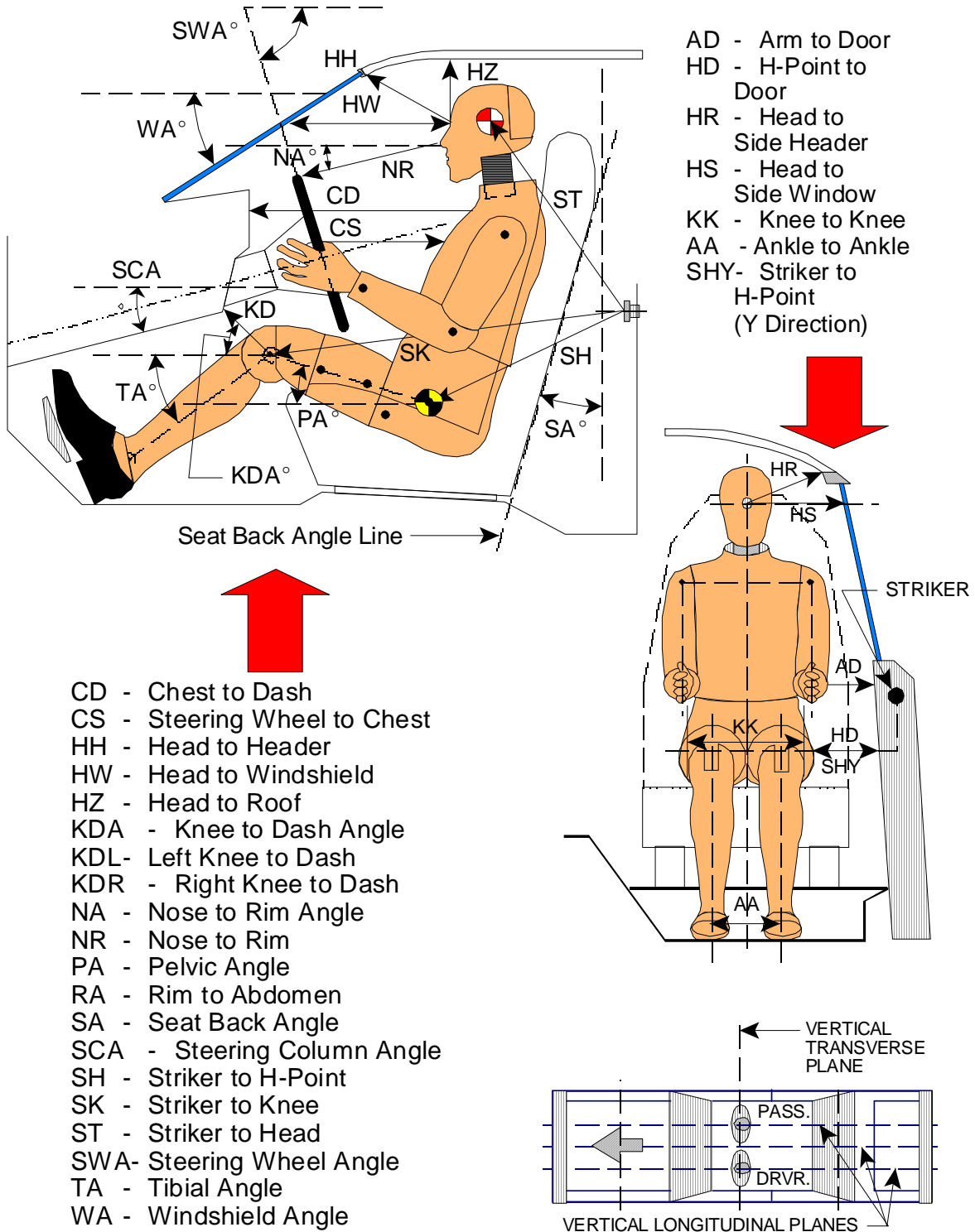
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5. SEAT BELT UPPER ANCHORAGE

Nominal design riding position: 4 detents located, placed in 2<sup>nd</sup> position from top with position being called position 1

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DATA SHEET NO. 5 FRONT SEAT DUMMY POSITIONING MEASUREMENTS IN VEHICLE  
**DUMMY MEASUREMENT FOR FRONT SEAT PASSENGERS**

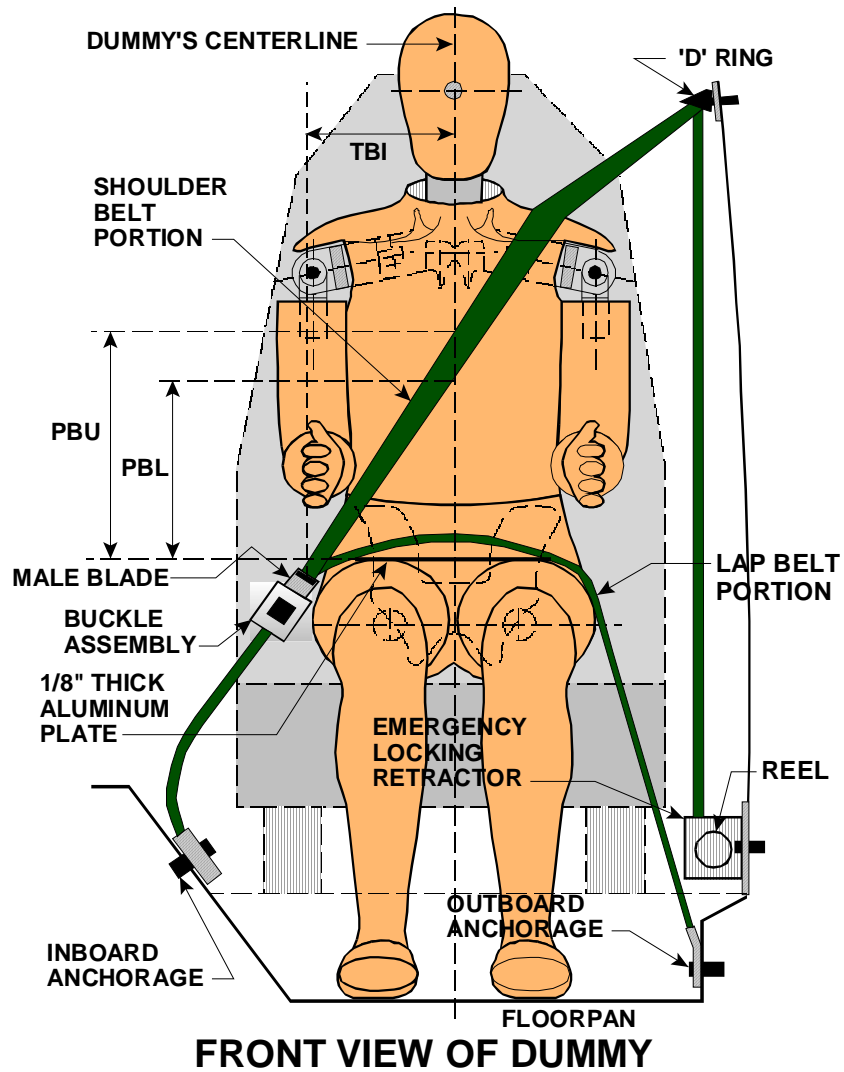


DATA SHEET NO. 5 FRONT SEAT DUMMY POSITIONING MEASUREMENTS IN VEHICLE (cont.)

	DRIVER (Serial #064)			PASS. (Serial #061)		
WA <sup>o</sup>	34 deg.			N/A		
SWA <sup>o</sup>	64.5 deg.			N/A		
SCA <sup>o</sup>	25.5 Deg.			N/A		
SA <sup>o</sup>	25 deg.			25 deg.		
HZ	161			171		
HH	375			405		
HW	574			586		
HR	205			200		
NR	394	Angle	15 deg.	N/A		
CD	561			573		
CS	293			N/A		
RA	166			N/A		
KDL	165	Angle (KDA)	15 deg.	161		
KDR	161			172	Angle (KDA)	21 deg.
PA <sup>o</sup>	22 deg.			23 deg.		
TA <sup>o</sup>	43 deg.			48 deg.		
KK	315			280		
AA	300			265		
ST	556	Angle	166 deg.	529	Angle	170 deg.
SK	629	Angle	92 deg.	589	Angle	92 deg.
SH	256	Angle	123 deg.	256	Angle	124 deg.
SHY	207			211		
HS	159			163		
HD	315			319		
AD	93			118		

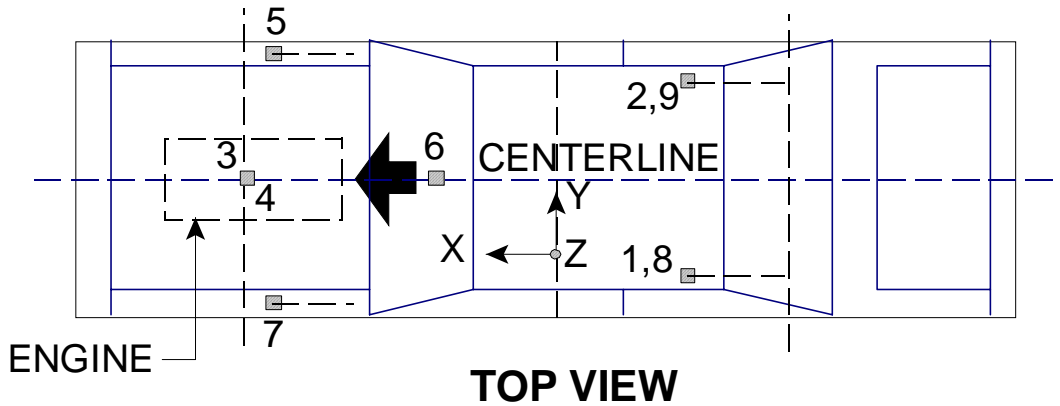
Dimensions in millimeters

**SEAT BELT POSITIONING DATA**

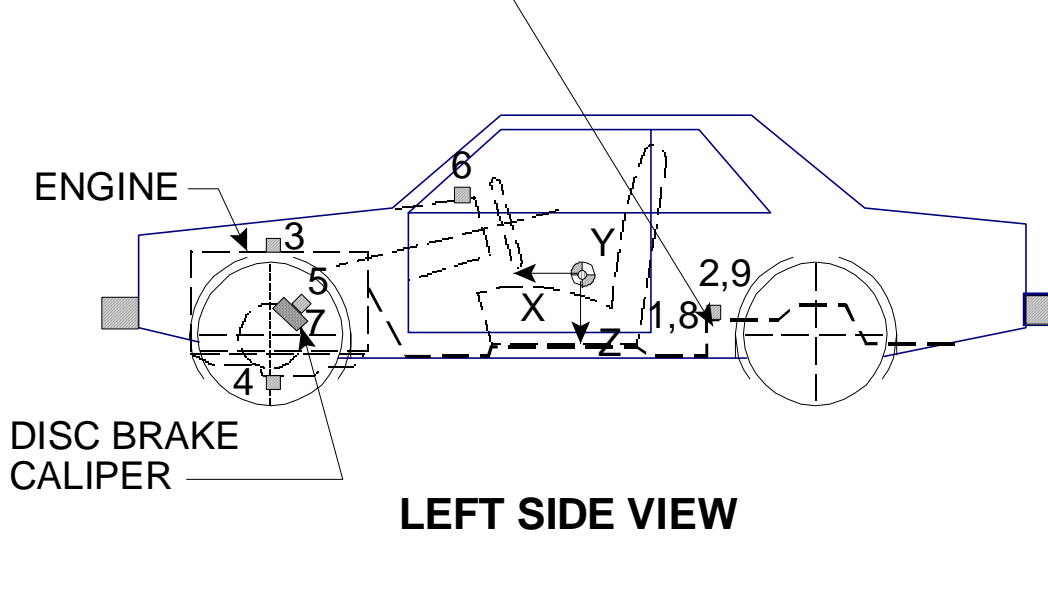


	DRIVER DUMMY (mm)	PASSENGER DUMMY (mm)
PBU -- Top surface of alum. plate to upper edge	320	310
PBL-- Top surface of alum. plate to belt lower edge	240	230
LAP BELT TENSION	10 N	10 N
SHOULDER BELT TENSION	Retractor	Retractor

## VEHICLE ACCELEROMETER LOCATION AND DATA SUMMARY



REAR SEAT CUSHION  
ASSY. FRONT ATTACHMENT  
BRACKET SUPPORT



Note: Vehicle accelerometer location and data summary shown in DATA SHEET NO. 7

DATA SHEET NO. 7 VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY (cont.)

LOCATION		PRE-TEST LENGTH (mm)		
		X	Y	Z
1	Left Rear Seat Cross Member X	1736	-415	-690
2	Right Rear Seat Cross Member X	1750	356	-684
3	Top of Engine Block	3615	-171	-1074
4	Bottom of Engine	3628	145	-357
5	Disc Brake Caliper @ Right Side	3632	791	-349
6	Instrument Panel	2901	-28	-974
7	Disc Brake Caliper @Left Side	3635	-801	-364
8	Left Rear Seat Cross Member Z	1736	-415	-690
9	Right Rear Seat Cross Member Z	1750	356	-684

LOCATION NUMBER	DESCRIPTION	MAXIMUM VALUE (g's)			
		Pos.	msec.	Neg.	msec.
1	Left Rear Seat Cross Member X	2.2	156.8	-32.9	51.3
2	Right Rear Seat Cross Member X	2.6	132.5	-36.8	51.8
3	Top of Engine Block	55.8	49.6	-163.8	40.9
4	Bottom of Engine	49.7	49.7	-142.1	41.3
5	Disc Brake Caliper @ Right Side	53.6	68.4	-86.1	38.8
6	Instrument Panel	405.6*	135.5*	-309.1*	84.1*
7	Disc Brake Caliper @Left Side	58.4	66.9	-84.2	49.0
8	Left Rear Seat Cross Member Z	9.6	13.5	-8.2	21.5
9	Right Rear Seat Cross Member Z	6.1	14.4	-10.8	23.6

\* Data not accurate

DATA SHEET NO. 8 DUMMY INJURY CRITERIA VALUES

Vehicle Year/Make/Model/Body Style: 2002 Nissan Pathfinder 4-door MPV

NHTSA Test No.: M25202 Test Date: June 07,2002

DESCRIPTION	Unit	MAXIMUM VALUE							
		Driver				Passenger			
		Pos	msec	Neg	msec	Pos	msec	Neg	msec
Head 9 Array X Arm Y	g	11.7	62.7	-9.8	92.4	13.7	59.5	-12.8	61.5
Head 9 Array X Arm Z	g	31.1	56.8	-11.7	101.5	41.3	61.2	-11.4	123.6
Head 9 Array Y Arm X	g	19.7	209.2	-65.7	83.8	15.0	217.1	-52.3	73.5
Head 9 Array Y Arm Z	g	26.2	54.7	-11.9	106.4	26.2	74.3	-11.3	110.2
Head 9 Array Z Arm X	g	28.7	202.8	-67.6	81.2	23.0	207.7	-62.6	81.3
Head 9 Array Z Arm Y	g	6.7	63.3	-13.0	87.3	5.8	78.2	-6.6	235.8
Head X	g	20.1	207.7	-62.8	82.9	15.3	213.4	-54.0	81.4
Head Y	g	4.5	62.2	-7.2	94.1	17.0	81.6	-11.1	81.4
Head Z	g	24.8	54.5	-13.2	106.3	28.4	74.7	-11.0	109.1
Head Resultant	g	63.4	82.9	0.0	-13.0	60.0	81.4	0.1	20.3
Redundant Head X	g	20.0	208.0	-61.9	82.8	18.5	216.1	-52.8	82.0
Redundant Head Y	g	5.0	62.5	-7.0	94.8	17.1	81.6	-10.9	81.4
Redundant Head Z	g	24.7	54.5	-13.1	106.2	31.6	80.9	-11.0	109.1
Redundant Head Resultant	g	62.3	82.8	0.1	-14.4	58.4	74.5	0.1	-49.9
Upper Neck Fx	N	294.0	79.2	-383.5	51.8	120.2	89.6	-453.6	59.7
Upper Neck Fy	N	99.9	51.9	-170.4	79.2	263.4	71.3	-124.6	154.3
Upper Neck Fz	N	1611.9	67.0	-485.7	107.1	1942.0	74.4	-772.7	231.0
Upper Neck F Resultant	N	1617.6	67.0	2.6	-48.3	1955.1	74.4	4.9	-49.6
Upper Neck Mx	N-m	10.1	70.1	-13.4	87.8	11.5	246.6	-10.5	155.3
Upper Neck My	N-m	37.1	152.2	-34.4	230.3	19.9	151.4	-41.9	235.4
Upper Neck Mz	N-m	14.7	113.4	-7.7	157.7	8.1	86.7	-6.0	123.0
Upper Neck M Resultant	N-m	38.0	153.2	0.2	-2.7	42.3	235.4	0.2	14.3
Chest X	g	3.7	180.4	-43.9	82.4	4.0	165.0	-50.7	73.7
Chest Y	g	3.3	84.2	-3.9	42.1	5.4	62.2	-4.8	85.2
Chest Z	g	13.6	53.7	-15.1	108.6	9.9	76.2	-14.3	113.2
Chest Resultant	g	44.1	82.4	0.1	-37.0	51.2	73.9	0.1	-27.2

DATA SHEET NO. 8 DUMMY INJURY CRITERIA VALUES (cont.)

Vehicle Year/Make/Model/Body Style: 2002 Nissan Pathfinder 4-door MPV

NHTSA Test No.: M25202 Test Date: June 07,2002

DESCRIPTION	Unit	MAXIMUM VALUE							
		Driver				Passenger			
		Pos	msec	Neg	msec	Pos	msec	Neg	msec
Redundant Chest X	g	3.7	180.4	-44.2	82.4	4.2	165.0	-50.6	73.8
Redundant Chest Y	g	3.0	84.2	-4.1	42.2	5.1	62.2	-4.8	105.7
Redundant Chest Z	g	13.1	53.8	-14.9	108.5	9.9	76.1	-14.1	110.6
Redundant Chest Resultant	g	44.3	82.5	0.1	-31.0	51.1	73.9	0.1	-27.2
Chest Displacement	mm	0.0	-21.1	-39.8	83.0	0.0	-20.5	-38.2	81.0
Pelvic X	g	10.2	101.0	-63.4	49.3	7.8	114.0	-58.6	64.8
Pelvic Y	g	11.3	69.1	-15.2	49.2	8.9	36.8	-9.6	92.1
Pelvic Z	g	8.9	49.2	-19.4	91.4	7.0	36.7	-22.2	70.4
Pelvic Resultant	g	65.7	49.3	0.1	-29.5	60.4	64.8	0.1	-49.2
Left Femur	N	628.8	53.1	-1039.5	45.8	615.0	38.8	-2605.8	64.6
Right Femur	N	695.4	31.9	-2307.8	49.6	1031.8	49.0	-880.1	79.9
Left Upper Tibia Mx	N-m	27.1	54.8	-16.0	103.9	32.0	40.3	-66.1	65.1
Left Upper Tibia My	N-m	50.2	64.5	-103.5	47.1	79.3	64.9	-97.7	38.2
Left Lower Tibia Fz	N	80.3	161.5	-3960.3	46.9	157.8	159.2	-3036.8	76.3
Left Lower Tibia Mx	N-m	21.8	54.8	-14.7	103.9	19.7	38.2	-101.4	64.7
Left Lower Tibia My	N-m	23.0	56.6	-50.4	46.6	181.4	64.6	-48.2	37.6
Right Upper Tibia Mx	N-m	1.1*	74.9*	-1.2*	74.3*	9.1	123.3	-54.1	71.1
Right Upper Tibia My	N-m	34.0	91.7	-145.8	49.0	18.3	160.7	-152.3	48.3
Right Lower Tibia Fz	N	217.1	130.7	-8372.7	49.0	129.7	182.4	-2113.6	48.3
Right Lower Tibia Mx	N-m	0.8**	50.2**	-1.3**	94.9**	20.4	92.3	-16.7	71.1
Right Lower Tibia My	N-m	123.7	52.0	-43.0	40.8	44.9	86.8	-72.8	47.8
Left Foot Aft Ax	g	15.8	97.6	-173.0	46.6	25.5	47.8	-99.6	36.0
Left Foot Aft Az	g	12.6	59.8	-114.7	46.4	27.3	63.5	-54.9	52.9
Left Foot Fore Az	g	44.1	59.4	-155.8	46.0	88.4	30.1	-126.3	43.9
Right Foot Aft Ax	g	38.0	51.3	-95.8	44.5	28.7	56.3	-174.9	46.1
Right Foot Aft Az	g	30.5	67.3	-182.7	48.2	13.9	30.9	-55.4	49.7
Right Foot Fore Az	g	143.6	46.5	-168.6	39.8	91.8	47.5	-204.6	39.9

\* Data is questionable

\*\* Data is questionable

DATA SHEET NO. 8 DUMMY INJURY CRITERIA VALUES (cont.)

Vehicle Year/Make/Model/Body Style: 2002 Nissan Pathfinder 4-door MPV

NHTSA Test No.: M25202 Test Date: June 07,2002

HEAD INJURY CRITERIA (HIC)				
	HIC**	t <sub>1</sub> (msec)	t <sub>2</sub> (msec)	Average Acceleration t <sub>1</sub> to t <sub>2</sub>
Position #1 - Driver	624.1	61.0	97.1	49.6
Position #2 - Passenger	515.8	60.1	96.1	46.0

\*\* HIC is as defined in FMVSS 208. The maximum time interval from t<sub>1</sub> to t<sub>2</sub> is 36 milliseconds.

CLIP SUMMARY*				
	CLIP (g's)	t <sub>1</sub> (msec)	t <sub>2</sub> (msec)	CSI
Position #1 - Driver	43.2	80.6	83.6	488.7
Position #2 - Passenger	50.0	72.7	75.7	471.3

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

DATA SHEET NO. 8 DUMMY INJURY CRITERIA VALUES (cont.)  
REDUNDANT DATA

Vehicle Year/Make/Model/Body Style: 2002 Nissan Pathfinder 4-door MPV  
 NHTSA Test No.: M25202 Test Date: June 07,2002

HEAD INJURY CRITERIA (HIC) <b>REDUNDANT</b>				
	HIC**	t <sub>1</sub> (msec)	t <sub>2</sub> (msec)	Average Acceleration t <sub>1</sub> to t <sub>2</sub>
Position #1 - Driver	605.0	61.0	97.1	49.0
Position #2 - Passenger	522.9	60.0	95.9	46.2

\*\* HIC is as defined in FMVSS 208. The maximum time interval from t<sub>1</sub> to t<sub>2</sub> is 36 milliseconds.

CLIP SUMMARY* <b>REDUNDANT</b>				
	CLIP (g's)	t <sub>1</sub> (msec)	t <sub>2</sub> (msec)	CSI
Position #1 - Driver	43.3	80.5	83.5	495.9
Position #2 - Passenger	50.0	72.6	75.6	474.3

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

DATA SHEET NO. 9 SEAT BELT PERFORMANCE ASSESSMENT TEST DATA

<u>BELT LENGTH DATA:</u>	<u>Driver</u>	<u>Passenger</u>
Belt length from trim panel exit to bolt hole anchor point for continuous webbing systems.	2020	2020
Shoulder belt length as measured on Part 572 Dummy.	855	860
Lap belt length as measured on Part 572 Dummy.	920	915
<u>SHOULDER BELT SPOOL-OFF DATA:</u>		
As determined by film analysis.	Spool On 44.5 Spool Off 101.6	Spool On 38.1 Spool Off 101.6
As determined mechanically.	*	*
As determined electronically.	*	*
<u>BELT STRETCH DATA:</u>		
Measured electronically between shoulder belt load cell and the "D" ring.	*	*
Measured mechanically.	*	*

\_\_\_\_\_ Dimensions in millimeters

\*Not used per request of Nissan Motors representative. Vehicle outboard three-point restraint were equipped with torso belt pretensioners.

DATA SHEET NO.10 SUMMARY OF FMVSS 212 DATA

FMVSS NO. 212 - "WINDSHIELD MOUNTING" DATA

DETAILS OF WINDSHIELD MOUNTING SUCH AS RETENTION METHOD, TRIM TYPE, ETC.:

Windshield is bonded in place and covered with a 20 mm molding.

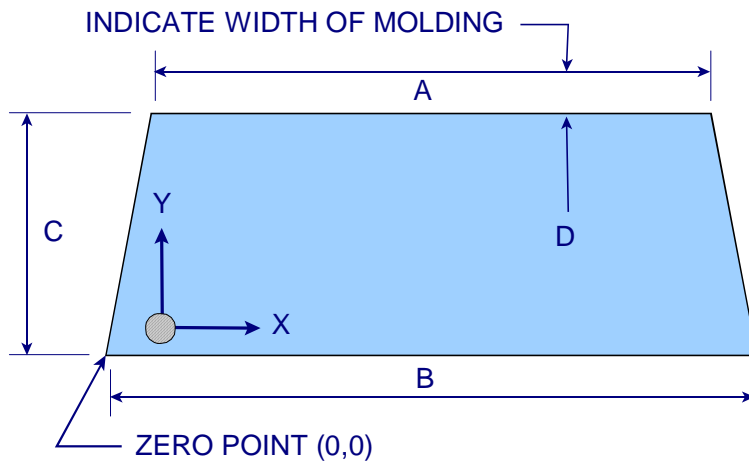
FMVSS 212 REQUIREMENTS:

The Post-Test periphery retention amount must be at least 75% of the Pre-Test periphery measurement for vehicles NOT equipped with automatic restraints, and 50% for each side of the windshield for vehicles equipped with automatic restraint systems for front occupants,

FMVSS 212 TEST DATA

	WINDSHIELD PERIPHERY		% OF RETENTION
	PRE-TEST (mm)	POST-TEST (mm)	
RIGHT SIDE	2017.5	2017.5	100.0%
LEFT SIDE	2017.5	2017.5	100.0%
TOTAL	4035	4035	100.0%

AREA OF RETENTION FAILURE:



DIMENSIONS (mm)	
A	1160
B	1465
C	705
D	20

**FRONT VIEW OF WINDSHIELD**

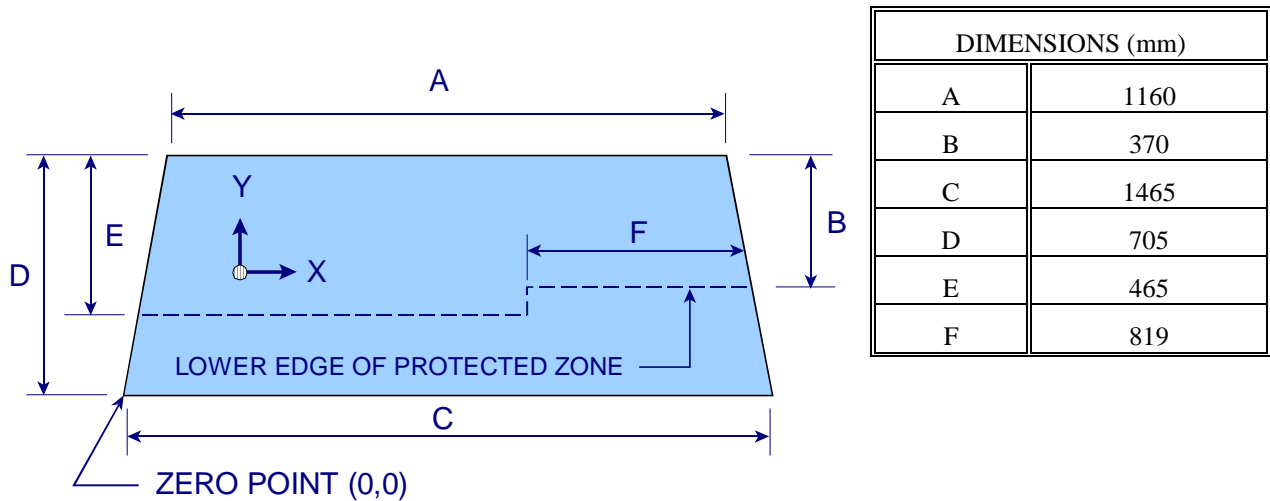
FAILURE DETAILS:     None

DATA SHEET NO. 11 FMVSS NO. 219 (PARTIAL) - "WINDSHIELD ZONE INTRUSION" DATA

PROTECTED ZONE LOWER EDGE REQUIREMENT:

The lower edge of the protected zone is determined by placing a 165 mm diameter rigid sphere weighing 6.8 kg in a position such that it simultaneously contacts the inner surface of the windshield and the top surface of the instrument panel including padding. The locus of points is drawn on the inner surface of the windshield contacted by the sphere across the width of the instrument panel. From the outermost contactable points extend the locus line horizontally to the edges of the windshield, then draw a line on the inner surface of the windshield below and 13 mm distant from the locus line. The LOWER EDGE OF THE PROTECTED ZONE is the longitudinal projection of this line onto the outer surface of the windshield.

FMVSS 219 TEST DATA:



**FRONT VIEW OF WINDSHIELD**

DETAILS OF WINDSHIELD GLASS PENETRATION GREATER THAN 6 mm: None

(Show location of penetration on the above sketch)

	COORDINATES	
	X	Y
1.	-	-
2.	-	-
3.	-	-
4.	-	-

DATA SHEET NO. 12 FMVSS NO. 301-75 "FUEL SYSTEM INTEGRITY" POST IMPACT TEST DATA

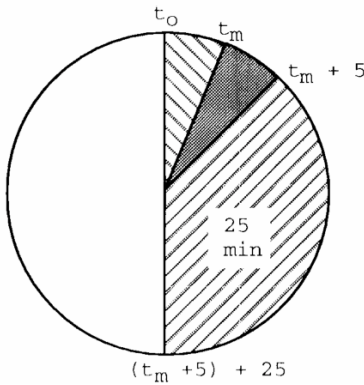
NHTSA TEST No.: M25202 TEST DATE: June 07,2002  
VEHICLE MAKE/MODEL: 2002 Nissan Pathfinder 4-door MPV

The test vehicle was filled from 92% to 94% of the manufacturer's "usable" capacity. The electric fuel pump was operating if it will operate without engine operation. Two Part 572 anthropomorphic test devices were located at each of the front designated seating positions.

=====

TEST VEHICLE IMPACT TYPE: X Frontal (56 kph)  
- Oblique (48 kph) with \_\_\_\_\_ deg. barrier face first contacting \_\_\_\_\_  
- (driver/passenger) side  
- Rear Moving Barrier (48 kph)  
- Lateral Moving Barrier (32 kph)

FUEL SPILLAGE MEASUREMENT:



1. From impact until vehicle motion ceases
2. For 5 minute period after vehicle motion ceases
3. For next 25 minutes

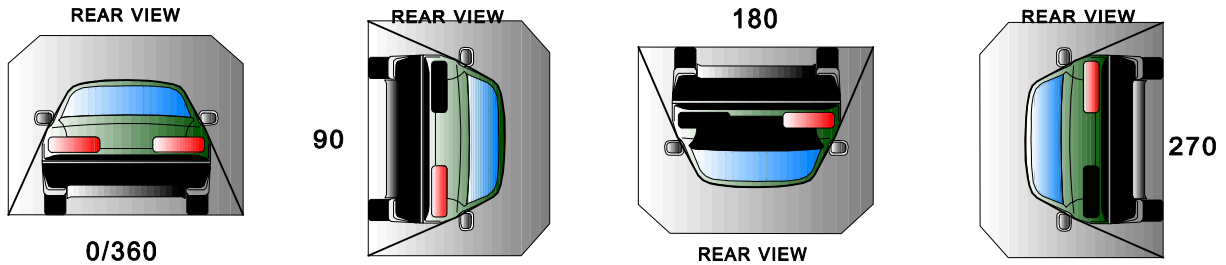
ACTUAL	MAX ALLOWED
0	28 g
0	141 g
0	28 g/min.

SOLVENT SPILLAGE DETAILS: None

**DATA SHEET NO. 13 - ROLLOVER DATA**

Vehicle: 2002 Nissan Pathfinder 4-door MPV

NHTSA No.: M25202



**I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:**

Rollover Stage	Rotation Time (spec. 1 -3 min)				FMVSS 301 Hold Time		Total Time				Next Whole Minute Interval	
	1	minutes	09	seconds	5	minutes	6	minutes	9	seconds	7	minutes
0° - 90°	1	minutes	09	seconds	5	minutes	6	minutes	9	seconds	7	minutes
90° - 180°	1	minutes	06	seconds	5	minutes	6	minutes	6	seconds	7	minutes
180°-270°	1	minutes	12	seconds	5	minutes	6	minutes	12	seconds	7	minutes
270°-360°	1	minutes	11	seconds	5	minutes	6	minutes	11	seconds	7	minutes

**II. FMVSS 301 REQUIREMENTS: (Maximum allowable solvent spillage):**

First 5 minutes from onset of rotation	6th min.	7th min.	8th min. (if required)
142 g	28 g	28 g	28 g

**III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:**

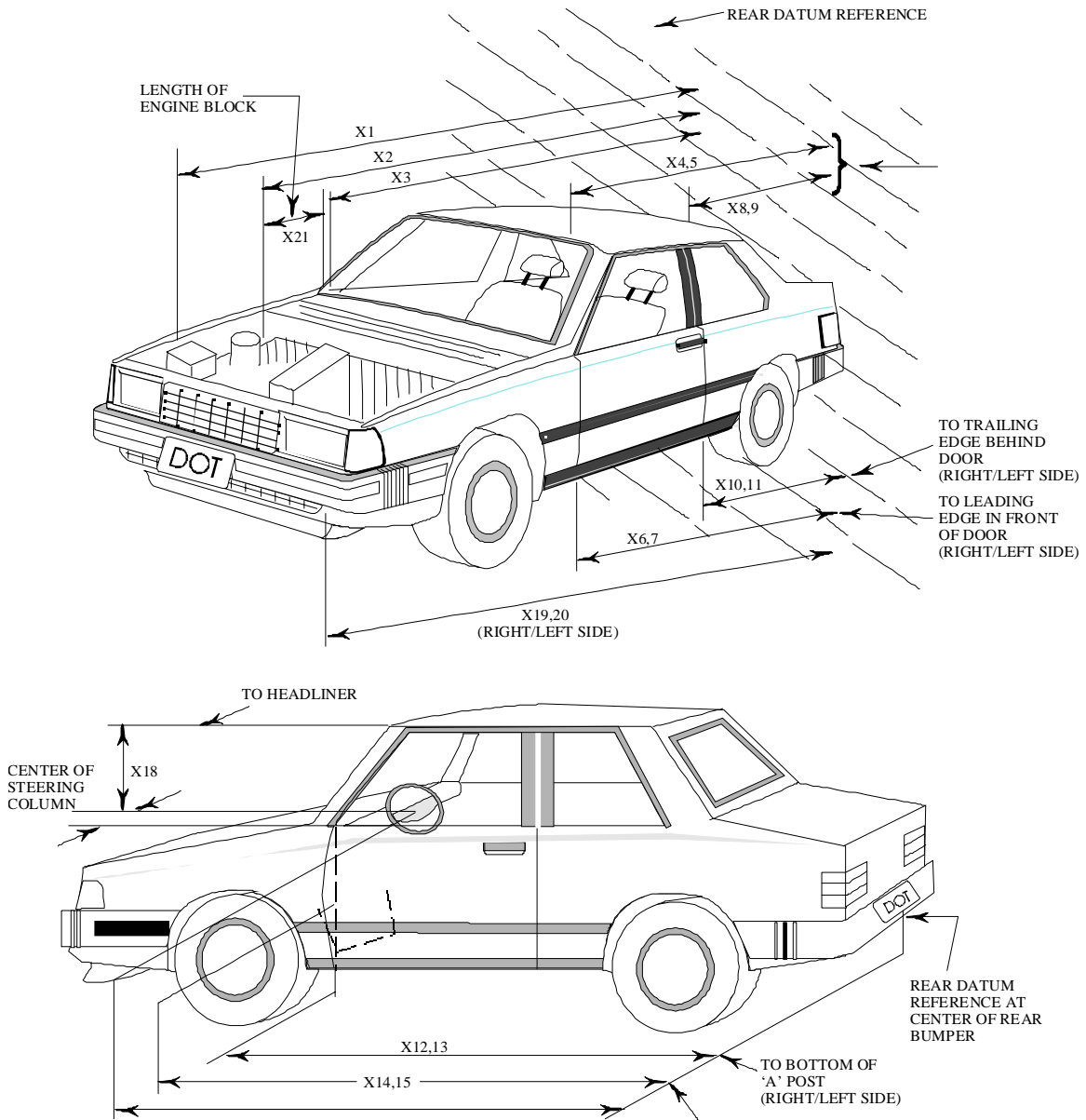
Rollover Stage	First 5 minutes from onset of rotation (g)	6th min. (g)	7th min. (g)	8th min. (if required) (g)
0° - 90°	0	0	0	n/a
90° - 180°	0	0	0	n/a
180°-270°	0	0	0	n/a
270°-360°	0	0	0	n/a

Note: Record spillage for whole minute intervals only as determined above.

**IV. SOLVENT SPILLAGE LOCATION(S):**

Rollover Stage	Spillage Location
0° - 90°	None
90° - 180°	None
180°-270°	None
270°-360°	None

**DATA SHEET NO. 14 TEST VEHICLE MEASUREMENTS**

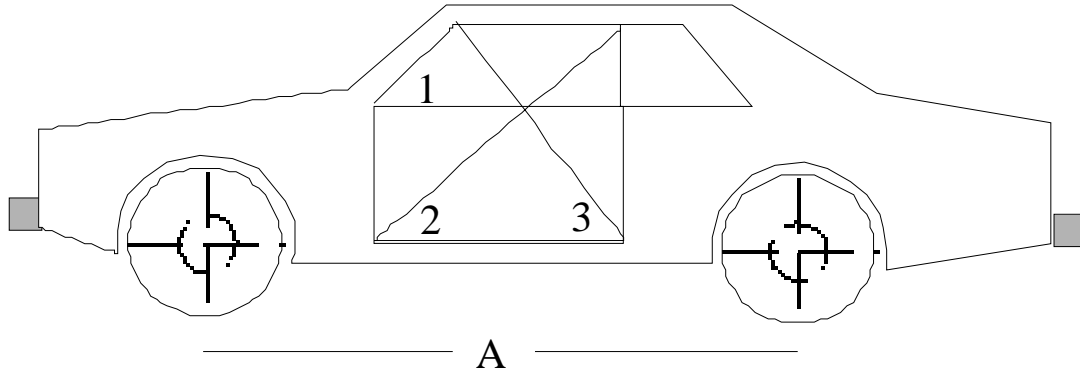


DATA SHEET NO.14 VEHICLE MEASUREMENTS (cont.)

No.		Pre-Test	Post-Test	Difference
X1	Total Length of Vehicle at Centerline	4634	4019	615
X2	Rear Surface of Vehicle to Front of Engine	4021	3791	230
X3	Rear Surface of Vehicle to Firewall	3493	3292	201
X4	Rear Surface of Vehicle to Upper Leading Edge of Right Door	3262	3259	3
X5	Rear Surface of Vehicle to Upper Leading Edge of Left Door	3269	3256	13
X6	Rear Surface of Vehicle to Lower Leading Edge of Right Door	3201	3185	16
X7	Rear Surface of Vehicle to Lower Leading Edge of Left Door	3206	3195	11
X8	Rear Surface of Vehicle to Upper Trailing Edge of Right Door	2120	2116	4
X9	Rear Surface of Vehicle to Upper Trailing Edge of Left Door	2124	2114	10
X10	Rear Surface of Vehicle to Lower Trailing Edge of Right Door	2103	2086	17
X11	Rear Surface of Vehicle to Lower Trailing Edge of Left Door	2106	2097	9
X12	Rear Surface of Vehicle to Bottom of "A" Post of Right Side	3251	3245	6
X13	Rear Surface of Vehicle to Bottom of "A" Post of Left Side	3273	3258	15
X14	Rear Surface of Vehicle to Firewall, Right Side	3463	3342	121
X15	Rear Surface of Vehicle to Firewall, Left Side	3453	3335	118
X16	Rear Surface of Vehicle to Steering Column	2741	2739	2
X17	Center of Steering Column to "A" Post	278	267	11
X18	Center of Steering Column to Headliner	425	369	56
X19	Rear Surface of Vehicle to Right Side of Front Bumper	4560	4043	517
X20	Rear Surface of Vehicle to Left Side of Front Bumper	4552	4014	538
X21	Length of Engine Block	453	440	13
RD	Rear Surface of Vehicle to Right Side of Dash Panel	2963	2939	24
CD	Rear Surface of Vehicle to Center of Dash Panel	2932	2913	19
LD	Rear Surface of Vehicle to Left Side of Dash Panel	2918	2894	24

All Dimensions in mm

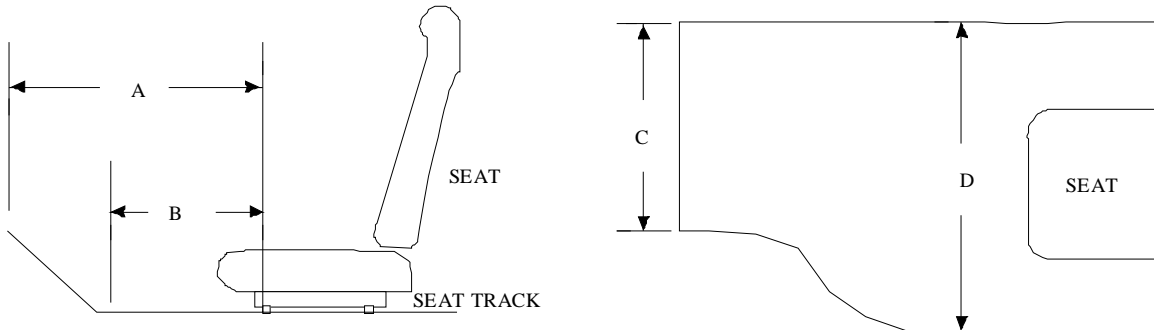
DATA SHEET NO.14 VEHICLE MEASUREMENTS (cont.)  
 VEHICLE INTRUSION MEASUREMENTS  
 DOOR OPENING WIDTH



UNITS (mm)	LEFT			RIGHT		
MEASUREMENT	1	2	3	1	2	3
BEFORE TEST	1040	1470	1098	1039	1479	1090
AFTER TEST	1019	1478	1107	1026	1483	1097
DIFFERENCE	21	-8	-9	13	-4	-7

UNITS (mm)	A = WHEELBASE LEFT	A = WHEELBASE RIGHT
BEFORE TEST	2704	2709
AFTER TEST	2595	2607
DIFFERENCE	109	102

DATA SHEET NO.14 VEHICLE MEASUREMENTS (cont.)  
 VEHICLE INTRUSION MEASUREMENTS  
 STATIC FOOTWELL DEFORMATION



DRIVER

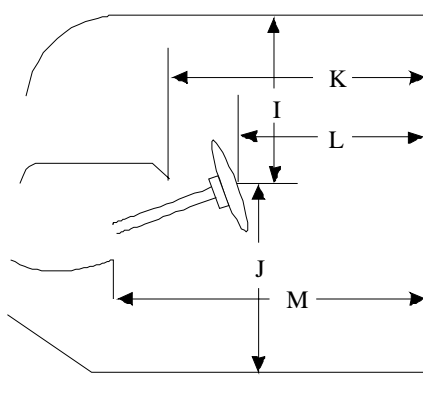
Measurement	Pre-Test	Post-Test	Difference
A	749	615	134
B	535	455	80
C	363	343	20
D	356	359	-3

PASSENGER

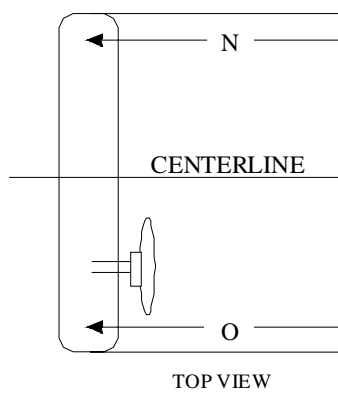
Measurement	Pre-Test	Post-Test	Difference
A	682	539	143
B	433	403	30
C	363	344	19
D	396	395	1

Units = mm

DATA SHEET NO.14 VEHICLE MEASUREMENTS (cont.)  
 VEHICLE INTRUSION MEASUREMENTS  
 STATIC PASSENGER COMPARTMENT INTRUSION

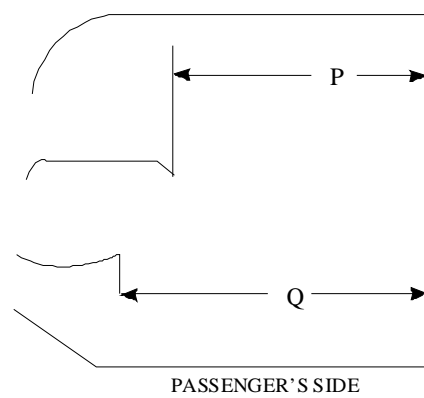


DRIVER'S SIDE



TOP VIEW

MEASUREMENTS  
 FROM C-PILLAR  
 BELT ANCHORAGE

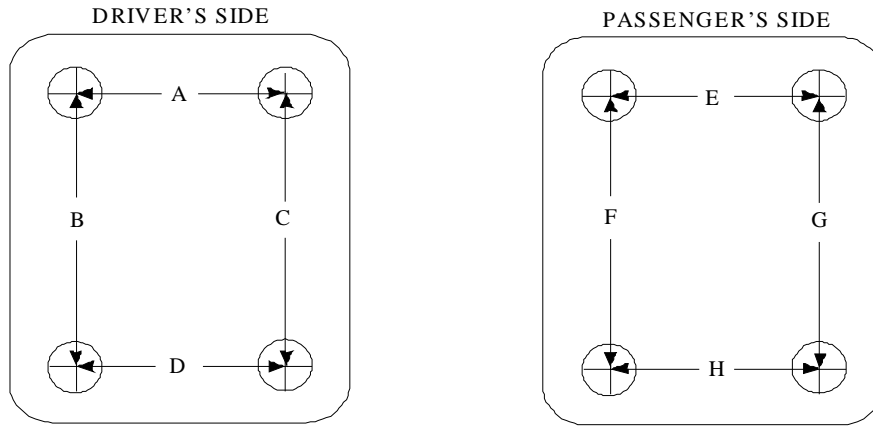


PASSENGER'S SIDE

Measurement	Pre-Test	Post-Test	Difference
I	425	369	56
J	628	715	-87
K	1936	1894	42
L	1678	1679	-1
M	1923	1888	35
N	1911	1888	23
O	1855	1835	20
P = K (PASS.)	2062	2044	18
Q = M (PASS.)	1973	1920	53

Units = mm

DATA SHEET NO.14 VEHICLE MEASUREMENTS (cont.)  
FLOORBOARD DEFORMATION

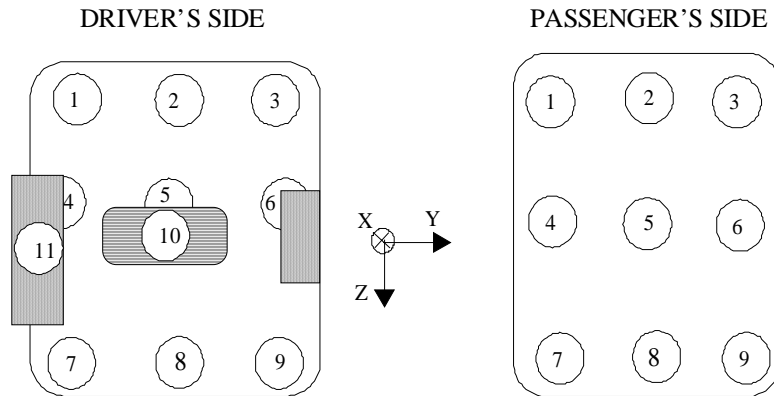


TOP VIEW THROUGH FLOOR PAN

Measurement	Pre-Test	Post-Test	Difference
A	363	343	20
B	446	398	48
C	421	303	118
D	356	359	-3
E	363	344	19
F	456	433	23
G	446	364	82
H	396	395	1

Units = mm

**DATA SHEET NO.14 VEHICLE MEASUREMENTS (cont.)**  
**TOE-PAN INTRUSION**



**Driver Side Toe-pan Measurements**

Toe-pan Location	X Deformation (mm)			Z Deformation (mm)		
	Pre-Test	Post-Test	Difference	Pre-Test	Post-Test	Difference
1	3453	3314	139	-721	-777	56
2	3463	3333	130	-711	-750	39
3	3428	3301	127	-713	-755	42
4	3377	3266	111	-586	-649	63
5	3385	3250	135	-586	-639	53
6	3354	3246	108	-628	-649	21
7	3247	3201	46	-501	-514	13
8	3249	3173	76	-508	-527	19
9	3236	3139	97	-514	-573	59
10	3253	3119	134	-671	-703	32
11	3329	3271	58	-619	-649	30

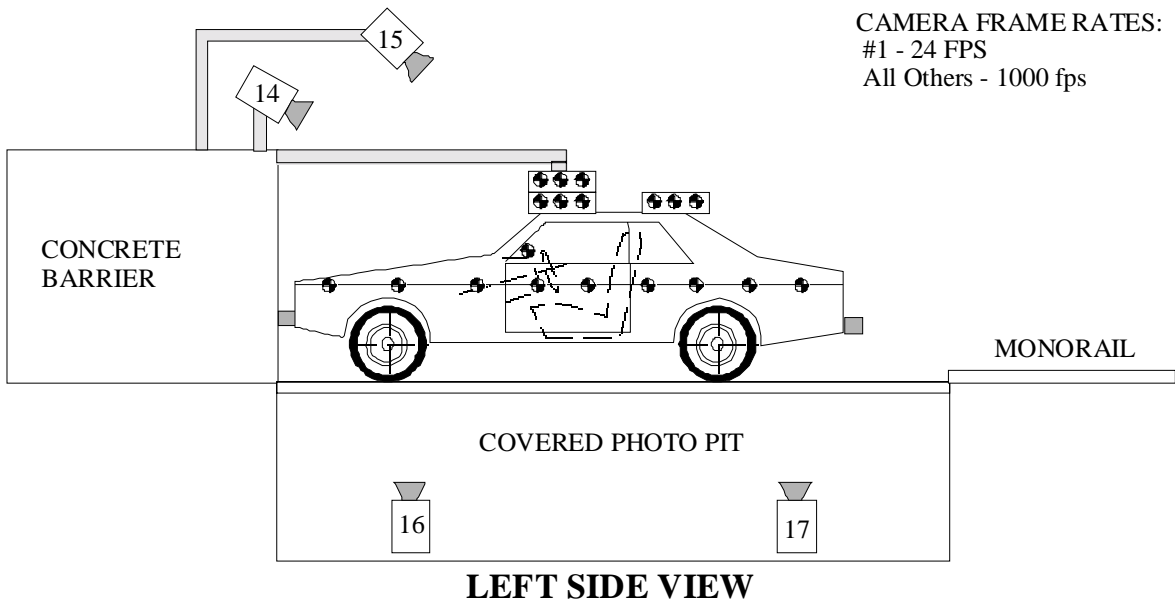
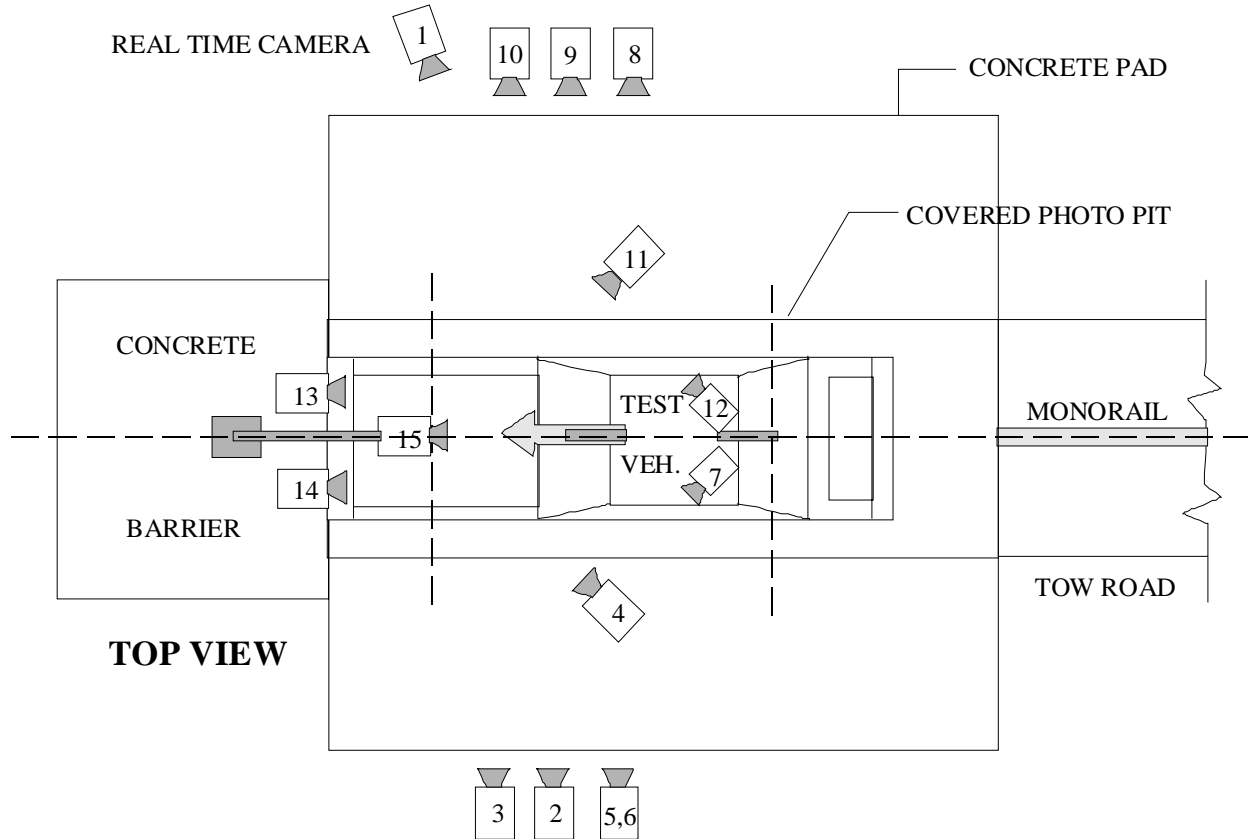
**Passenger Side Toe-pan Measurements**

Toe-pan Location	X Deformation (mm)			Z Deformation (mm)		
	Pre-Test	Post-Test	Difference	Pre-Test	Post-Test	Difference
1	3358	3242	116	-654	-628	-26
2	3392	3241	151	-641	-647	6
3	3391	3292	99	-640	-631	-9
4	3242	3152	90	-556	-505	-51
5	3294	3170	124	-537	-528	-9
6	3300	3218	82	-530	-515	-15
7	3089	3046	43	-556	-564	8
8	3143	3105	38	-504	-494	-10
9	3157	3129	28	-502	-461	-41

Reference: SAE: X = Rear Bumper (Positive: forward); Z = Ground (Positive: down)

DATA SHEET NO.15 HIGH-SPEED CAMERA LOCATIONS

NOTE: Camera information shown in DATA SHEET NO. 15.



DATA SHEET NO.15 HIGH-SPEED CAMERA LOCATIONS (cont.)

NHTSA Test No.:           M25202           Vehicle:           2002 Nissan Pathfinder 4-door MPV          

CAMERA NO.	VIEW	CAMERA POSITIONS (mm)*			ANGLE (deg)**	FILM PLANE TO HEAD TARGET	LENS (mm)	SPEED (fps)
		X	Y	Z				
1	Real-Time Camera	-	-	-	-	-	-	24
2	Overall Left Side	6801	1723	1071	1.8	6389	12.5	1005
3	Left Side View	8177	1169	1114	2.2	7765	25	950
4	Driver and Interior View	7645	2831	1984	9.9	-	25	1050
5	Steering Column (Bottom)	7509	1997	1191	1.9	7097	25	1010
6	Steering Column (Top)	7509	1997	1780	6.5	7097	25	1015
7	Left Belt	-	-	-	-	-	13	1005
8	Overall Right Side	6920	1875	1074	1.7	7208	12.5	1000
9	Right Side View	8184	1295	1141	1.8	8472	25	1005
10	Right Passenger View	8093	1683	1430	1.8	8381	35	1000
11	Passenger and Interior View	7620	1282	1969	7.2	-	25	1000
12	Right Belt	-	-	-	-	-	13	1005
13	Passenger Front View	620	-92	1987	26	-	13	1005
14	Driver Front View	620	-92	1987	26	-	13	1000
15	Windshield View	0	-530	3374	51	-	13	1000
16	Pit View of Engine	0	615	-3048	90	-	13	1010
17	Pit View of Fuel Tank	0		-3048	90	-	13	1000

\*X = film plane to monorail centerline                      \*\* = referenced to horizontal plane

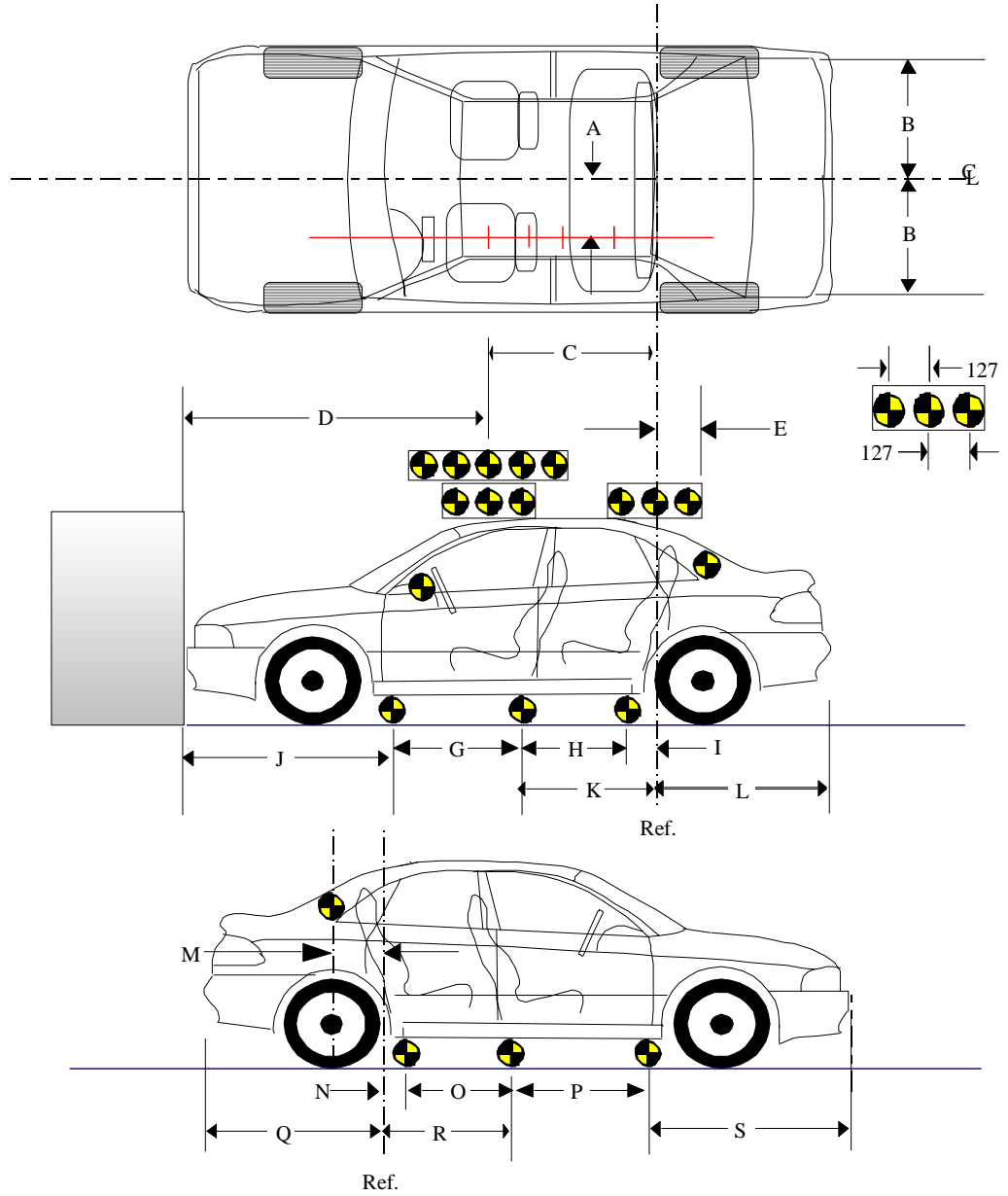
Y = film plane to impact location                      N.T. indicates No Timing

Z = film plane to ground

DATA SHEET NO. 16 VEHICLE REFERENCE PHOTO TARGET LOCATIONS

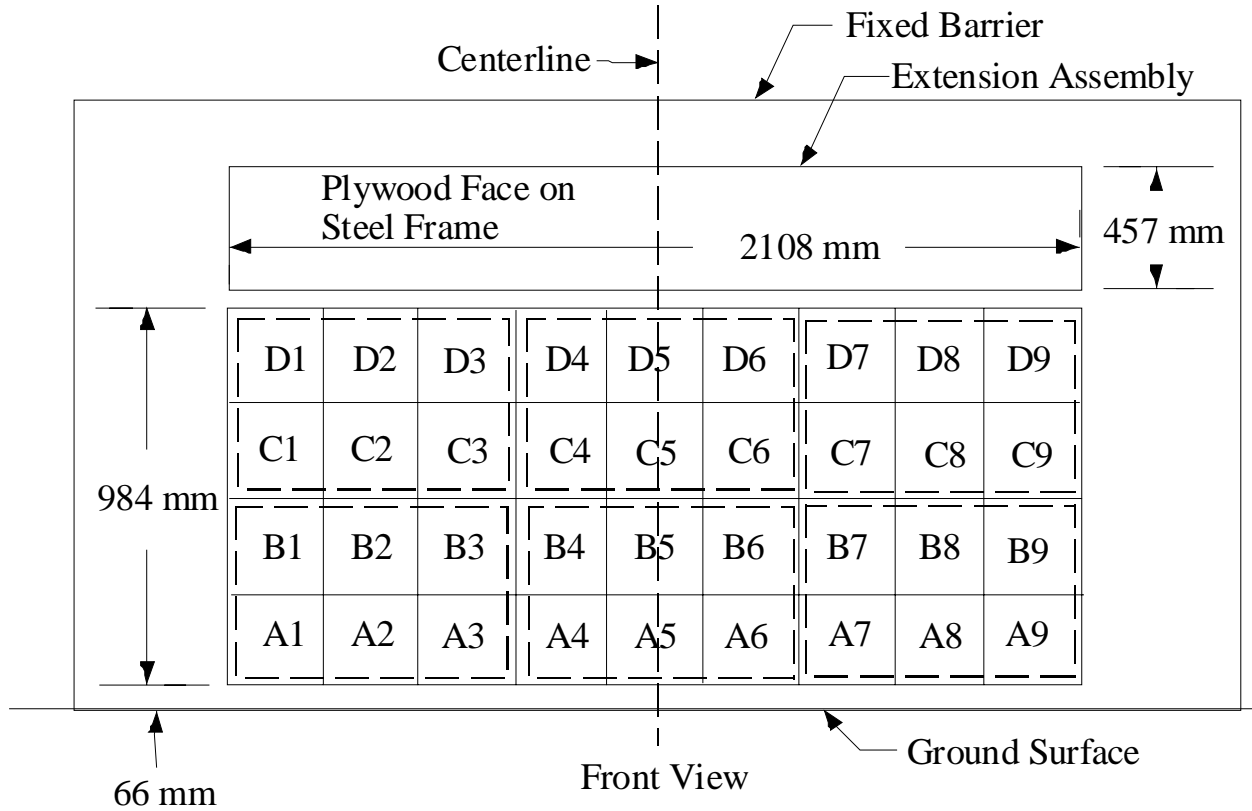
(Dimensions in millimeters)

A	364
B	700
C	1222
D	1980
E	370
F	1488
G	796
H	800
I	177
J	1419
K	977
L	1443
M	378
N	170
O	800
P	791
Q	1444
R	970
S	1429



DATA SHEET NO. 17 LOAD CELL LOCATIONS ON FIXED BARRIER

- 36 Load Cells
- 4 Rows
- 9 Columns
- 6 Groupings (6 cells/group)



6 GROUPS OF 6 LOAD CELLS EACH

Group 4 C1 thru D3	Group 5 C4 thru D6	Group 6 C7 thru D9
Group 1 A1 thru B3	Group 2 A4 thru B6	Group 3 A7 thru B9

The following data is presented in Appendix B:

- (1) Data from 36 individual load cells
- (2) Total or Sum of 36 individual load cells
- (3) Data from 6 Groupings shown above (6 cells/group)

DATA SHEET NO. 18 POST TEST AIR BAG DATA

NHTSA No.:   M25202;   Test Date:   June 07,2002;   Technician:   James Czarnecki  

Vehicle Model Year/Make/Model:   2002 Nissan Pathfinder 4-door MPV  

A. No. of vent holes:         2        -Driver         2        -Passenger

B. Size of vent holes: (mm<sup>2</sup>)         707        -Driver         1964        -Passenger

C. Total vent area: (mm<sup>2</sup>)         1414        -Driver         3928        -Passenger

D. Deflated air bag length and width dimensions or, if round, diameter. (mm)

Driver:         650        -Height;         650        -Width;         280        -Depth

Passenger:         800        -Height;         780        -Width;         310        -Depth

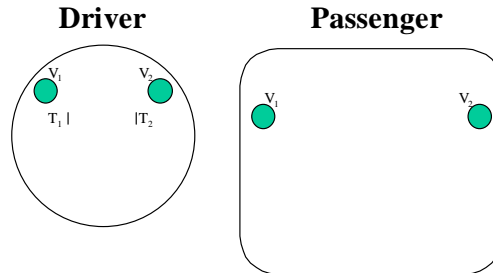
E. Is the air bag tethered?

Driver:         X        -Yes;         -        -No; If yes, record length of tether-         280        

Passenger:         -        -Yes;         X        -No; If yes, record length of tether-         -        

Sketch the air bag showing the location of the vent holes, how the bag is tethered, and where the bag is tethered. Also describe how the tethers are attached to the bag and the steering wheel.

(Note: Not to scale; V<sub>n</sub> = Vent hole<sub>n</sub>, T<sub>n</sub> = Tether<sub>n</sub>).



F. Record part numbers and manufacturer name of the air bag and gas generator.

Driver:   Air bag: N/A  

  Generator: N/A  

Passenger:   Air bag: BBN3007;PH1Z12B-2; 040102-P  

  Generator: G03 \* KP5W5022120158\*

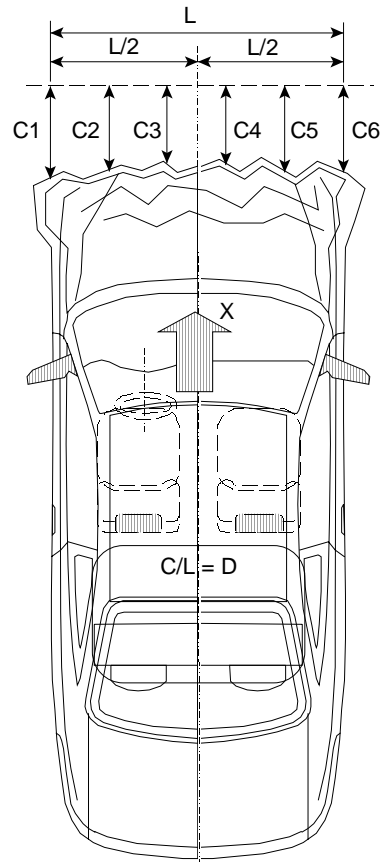
DATA SHEET NO. 19 ACCIDENT INVESTIGATION DIVISION DATA

FOR FRONTAL BARRIER IMPACT

Vehicle Make/Model/Body Style: Nissan Pathfinder 4-door MPV  
 NHTSA Test No.: M25202 VIN: JN8DR09Y92W731014  
 Model Year: 2002 Build Date: 02/02 Test Date: June 07,2002  
 Vehicle Size Category: MPV Test Weight: 2141 kg  
 Vehicle Wheelbase: 2705 mm; Front Overhang: 857 mm; Overall Width: 2700 mm  
 Collision Deformation Classification (CDC) Code: 12FDEW3

Crush Depth Dimensions

	PRE (mm)	POST (mm)	DIFF (mm)
C1 =	4423	4052	371
C2 =	4577	3996	581
C3 =	4632	4007	625
C4 =	4633	4025	608
C5 =	4586	4018	568
C6 =	4441	4100	341



Midpoint of Damage: D = Vehicle Centerline (Longitudinal)

Length of Damaged Region: L1= 1675 mm  
 L2= 837.5 mm  
 L5= 335 mm

**APPENDIX A**  
**PHOTOGRAPHS**

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Figure A-1: LOAD CELL LOCATIONS.



Figure A-2: PRE-TEST FRONT VIEW



Figure A-3: POST-TEST FRONT VIEW.



Figure A-4: PRE-TEST LEFT SIDE VIEW



Figure A-5: POST-TEST LEFT SIDE VIEW

Photograph taken after filming of door opening by technicians; Door remained closed and latched during the event and was operable without the use of tools after the event.



Figure A-6: PRE-TEST RIGHT SIDE VIEW



Figure A-7: POST-TEST RIGHT SIDE VIEW



Figure A-8: PRE-TEST RIGHT FRONT THREE-QUARTER VIEW



Figure A-9: POST-TEST RIGHT FRONT THREE-QUARTER VIEW

Photograph taken after filming of door opening by technicians; Door remained closed and latched during the event and was operable without the use of tools after the event.



Figure A-10: PRE-TEST LEFT REAR THREE-QUARTER VIEW



Figure A-11: POST-TEST LEFT REAR THREE-QUARTER VIEW

Photograph taken after filming of door opening by technicians; Door remained closed and latched during the event and was operable without the use of tools after the event.



Figure A-12: PRE-TEST WINDSHIELD VIEW



Figure A-13: POST-TEST WINDSHIELD VIEW



Figure A-14: PRE-TEST ENGINE COMPARTMENT VIEW



Figure A-15: FUEL CAP VIEW



Figure A-16: PRE-TEST FRONT UNDERBODY VIEW



Figure A-17: POST-TEST FRONT UNDERBODY VIEW



Figure A-18: PRE-TEST FRONT SIDE UNDERBODY VIEW



Figure A-19: POST-TEST FRONT SIDE UNDERBODY VIEW



Figure A-20: PRE-TEST REAR UNDERBODY VIEW



Figure A-21: POST-TEST REAR UNDERBODY VIEW



Figure A-22: PRE-TEST DRIVER POSITION VIEW



Figure A-23: POST-TEST DRIVER POSITION VIEW



Figure A-24: PRE-TEST PASSENGER POSITION VIEW



Figure A-25: POST-TEST PASSENGER POSITION VIEW



Figure A-26: PRE-TEST DRIVER AND INTERIOR VIEW



Figure A-27: POST-TEST DRIVER AND INTERIOR VIEW



Figure A-28: PRE-TEST PASSENGER AND INTERIOR VIEW



Figure A-29: POST-TEST PASSENGER AND INTERIOR VIEW



Figure A-30: PRE-TEST DRIVER HEAD LOCATION



Figure A-31: POST-TEST DRIVER HEAD LOCATION



Figure A-32: PRE-TEST PASSENGER HEAD LOCATION



Figure A-33: POST-TEST PASSENGER HEAD LOCATION



Figure A-34: PRE-TEST DRIVER FLOOR PAN VIEW



Figure A-35: POST-TEST DRIVER FLOOR PAN VIEW



Figure A-36: PRE-TEST PASSENGER FLOOR PAN VIEW



A-39

8642-NCAP-20

Figure A-37: POST-TEST PASSENGER FLOOR PAN VIEW



Figure A-38: ROLLOVER VIEW



Figure A-39: IMPACT VIEW



Figure A-40: VEHICLE PLACARD

**APPENDIX B**

**DUMMY, VEHICLE AND LOAD CELL BARRIER RESPONSE DATA**

**Hybrid III Dummy Sign Conventions  
Load Cells and Special Transducers**

<b>Transducer</b>	<b>SAE Sign Convention (positive unless noted)</b>
Upper Neck Load Cell	Fx    Head rearward Fy    Head left Fz    Neck in tension Mx    Left ear to left shoulder My    Chin to chest (flexion) Mz    Chin to left shoulder (look left)
Chest Displacement Potentiometer	Compression is negative
Pelvic Load Cell (Lower Lumbar)	Fx    Chest rearward Fy    Chest left Fz    Spine in tension
Femur Load Cell	Compression is negative
Upper Tibia Load Cell (right and left leg)	Mx    Support tibia at ends, load left side center My    Support tibia at ends, load front (shin) center
Lower Tibia Load Cell (right and left leg)	Fz    Tibia in tension Mx    Support tibia at ends, load left side center My    Support tibia at ends, load front (shin) center

## DATA CHANNEL FILTER CLASS SUMMARY

NHTSA TEST NO. M25202

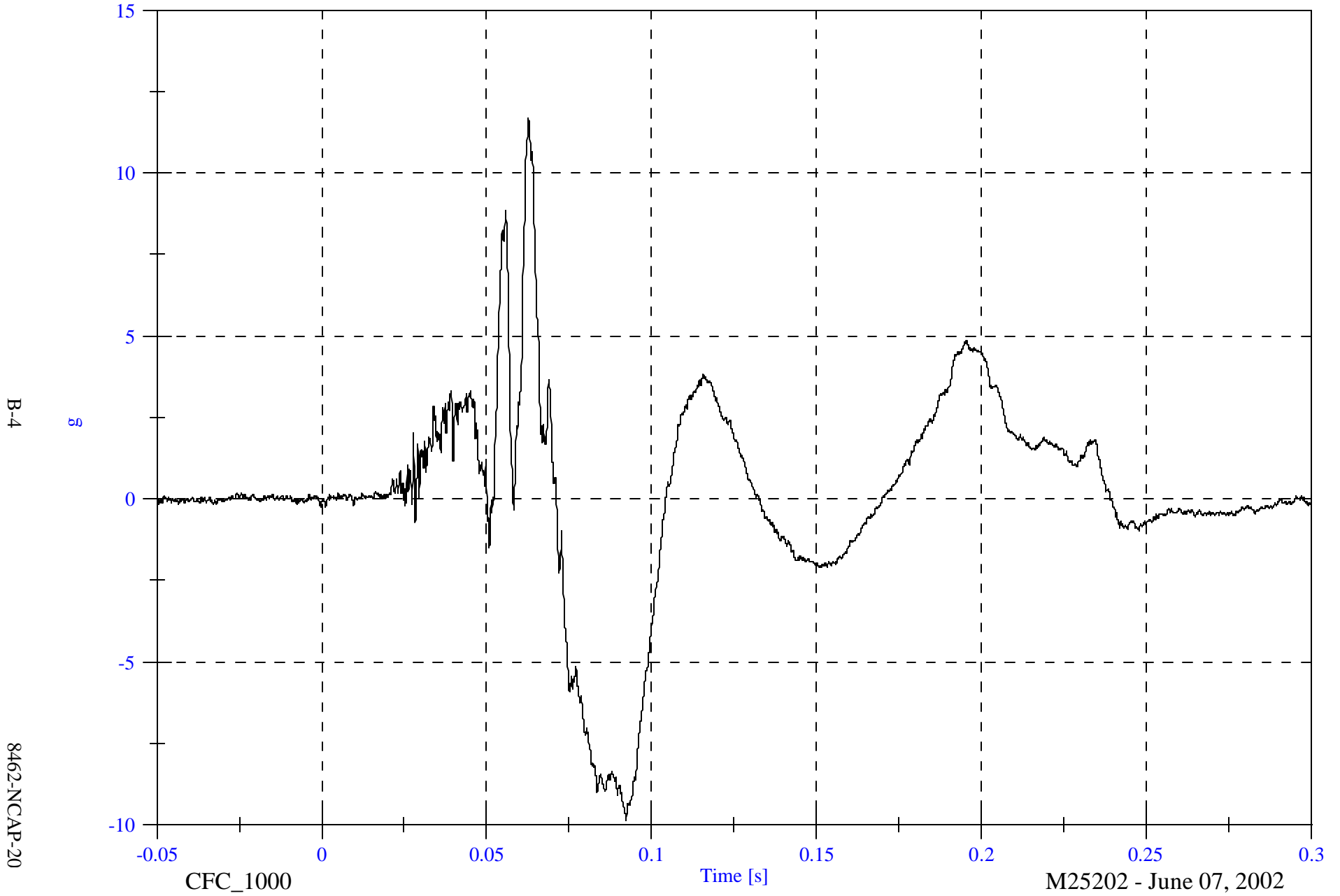
<b>DATA TYPE</b>	<b>SAE FILTER CLASS (Hz)</b>
Dummy Head Accelerations	1000
Dummy Chest Accelerations	180
Dummy Chest Displacements	600
Dummy Femur Forces	600
Dummy Belt Loads	60
Dummy Belt Displacements	180
Dummy Neck Forces	1000
Dummy Neck Moments	600
Vehicle Accelerations	60
Vehicle Velocity Integrations	180
Vehicle Displacement Integrations	180
Load Cell Barrier Forces	60

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 11.7 [g] at 0.063 [s]

P1 Head 9 Array X Arm Ay

Min: -9.8 [g] at 0.092 [s]

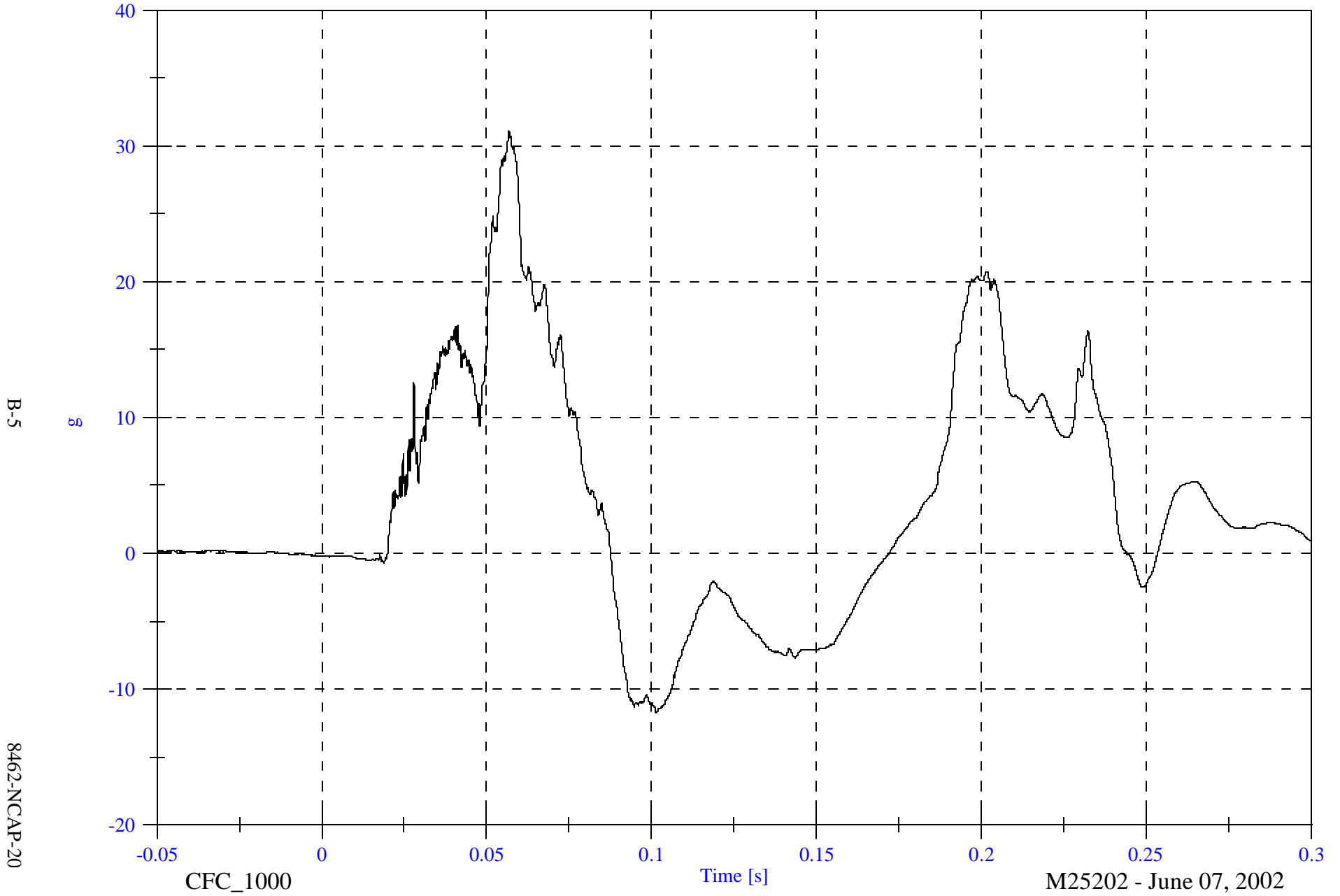


2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 31.1 [g] at 0.057 [s]

P1 Head 9 Array X Arm Az

Min: -11.7 [g] at 0.102 [s]



B-5

8462-NCAP-20

CFC\_1000

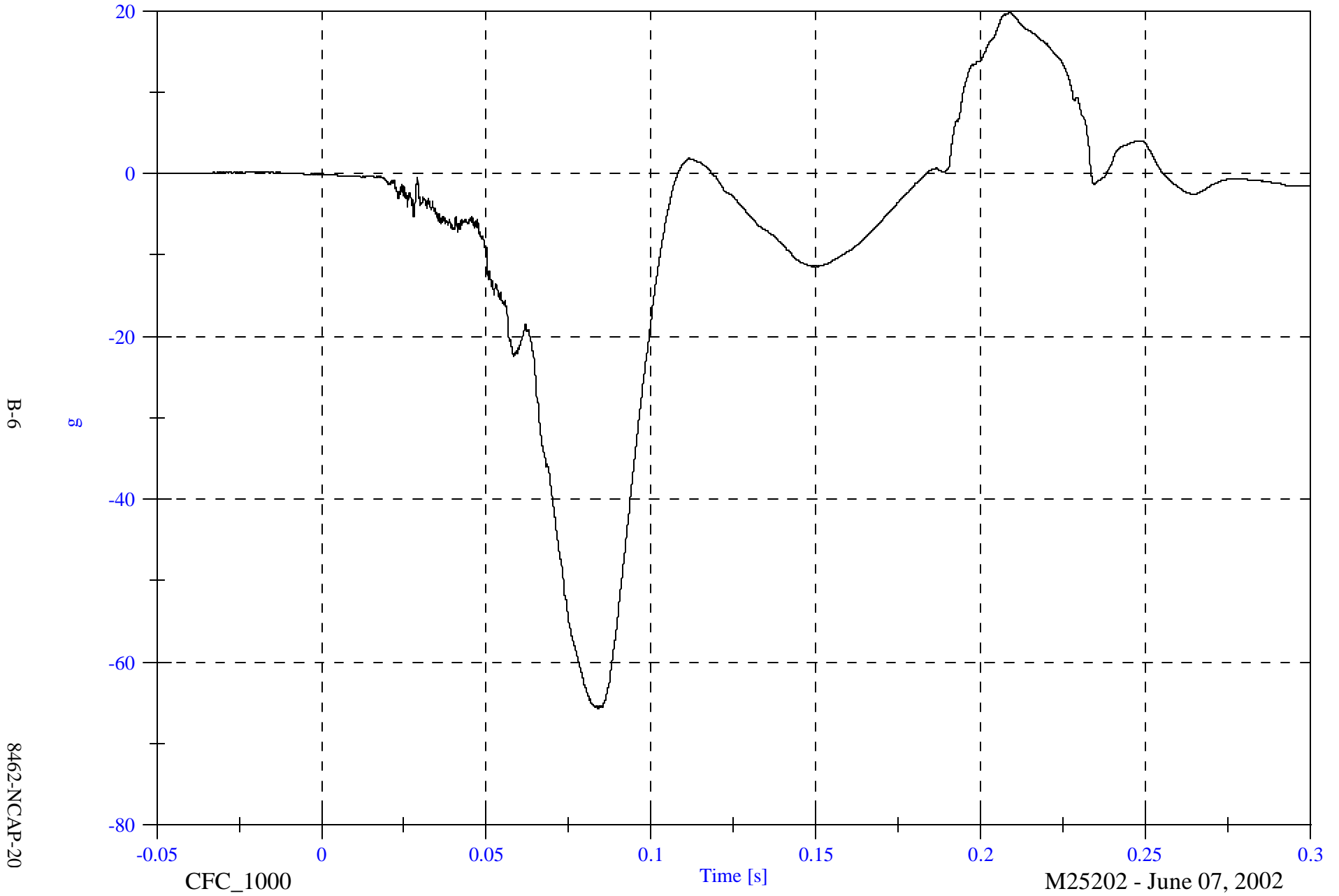
M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

P1 Head 9 Array Y Arm Ax

Max: 19.7 [g] at 0.209 [s]

Min: -65.7 [g] at 0.084 [s]



B-6

8462-NCAP-20

CFC\_1000

M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 26.2 [g] at 0.055 [s]

P1 Head 9 Array Y Arm Az

Min: -11.9 [g] at 0.106 [s]

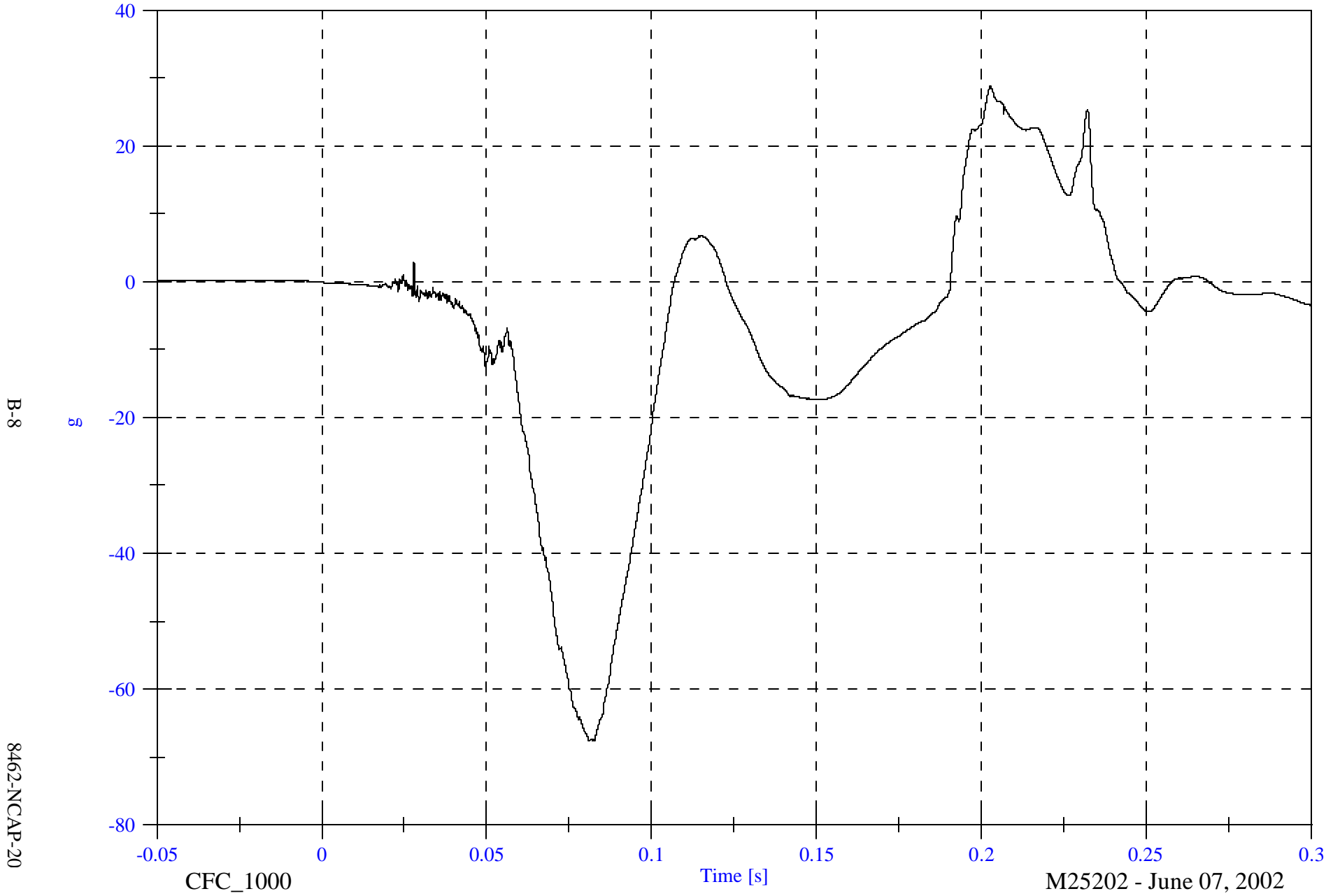


2002 NCAP Test 20 2002 Nissan Pathfinder

P1 Head 9 Array Z Arm Ax

Max: 28.7 [g] at 0.203 [s]

Min: -67.6 [g] at 0.081 [s]

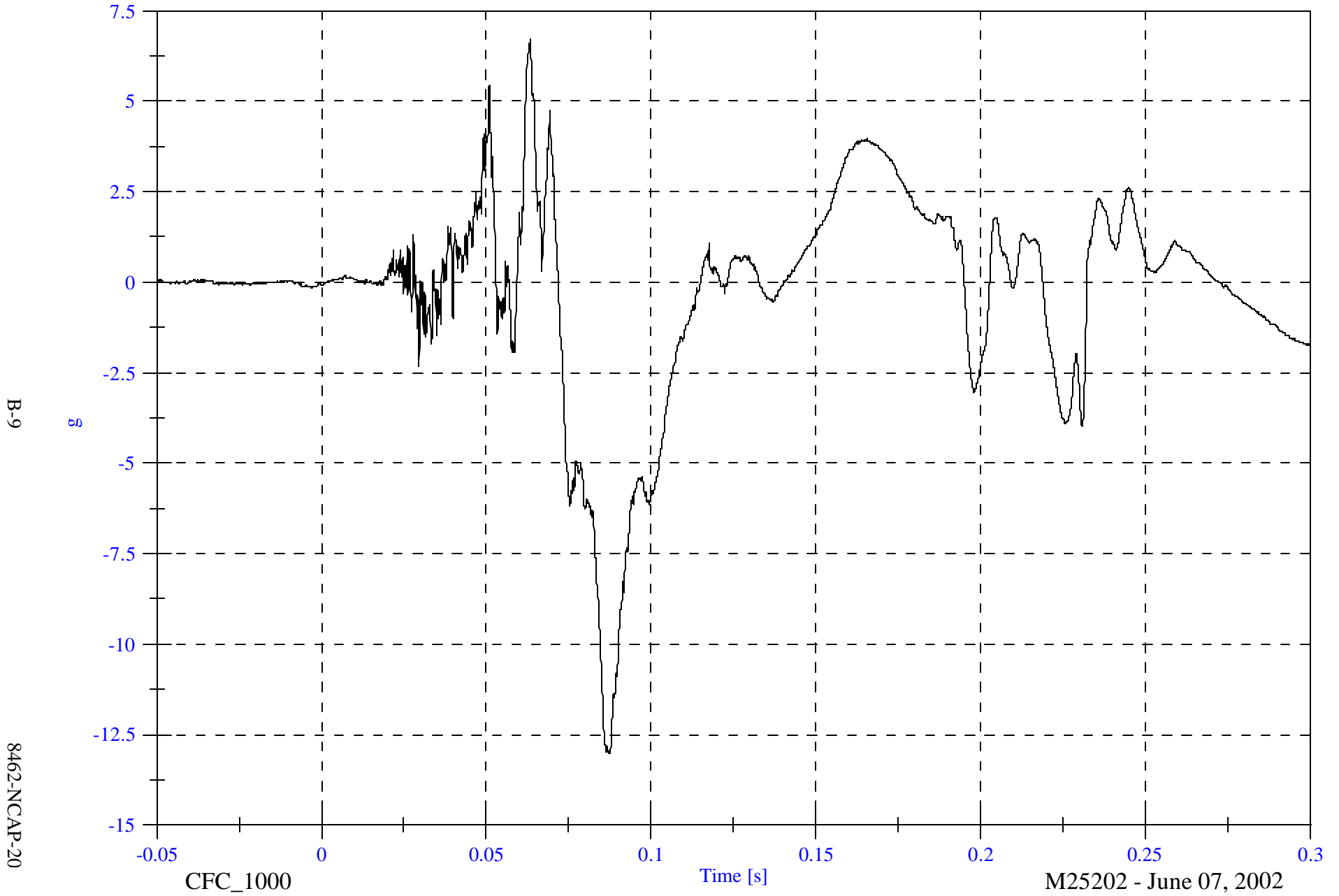


2002 NCAP Test 20 2002 Nissan Pathfinder

P1 Head 9 Array Z Arm Ay

Max: 6.7 [g] at 0.063 [s]

Min: -13.0 [g] at 0.087 [s]

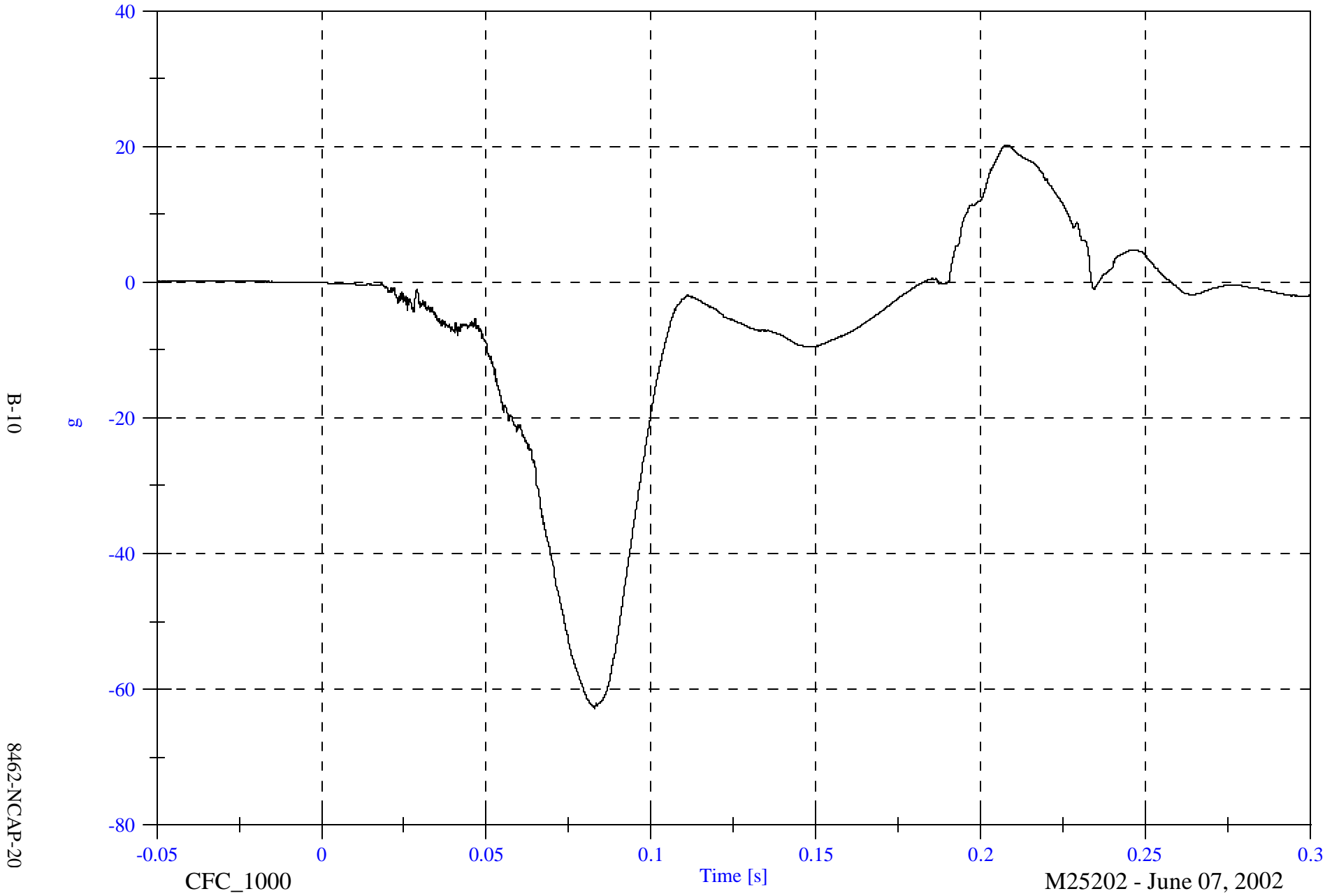


2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 20.1 [g] at 0.208 [s]

Min: -62.8 [g] at 0.083 [s]

P1 Head CG x



B-10

8462-NCAP-20

CFC\_1000

Time [s]

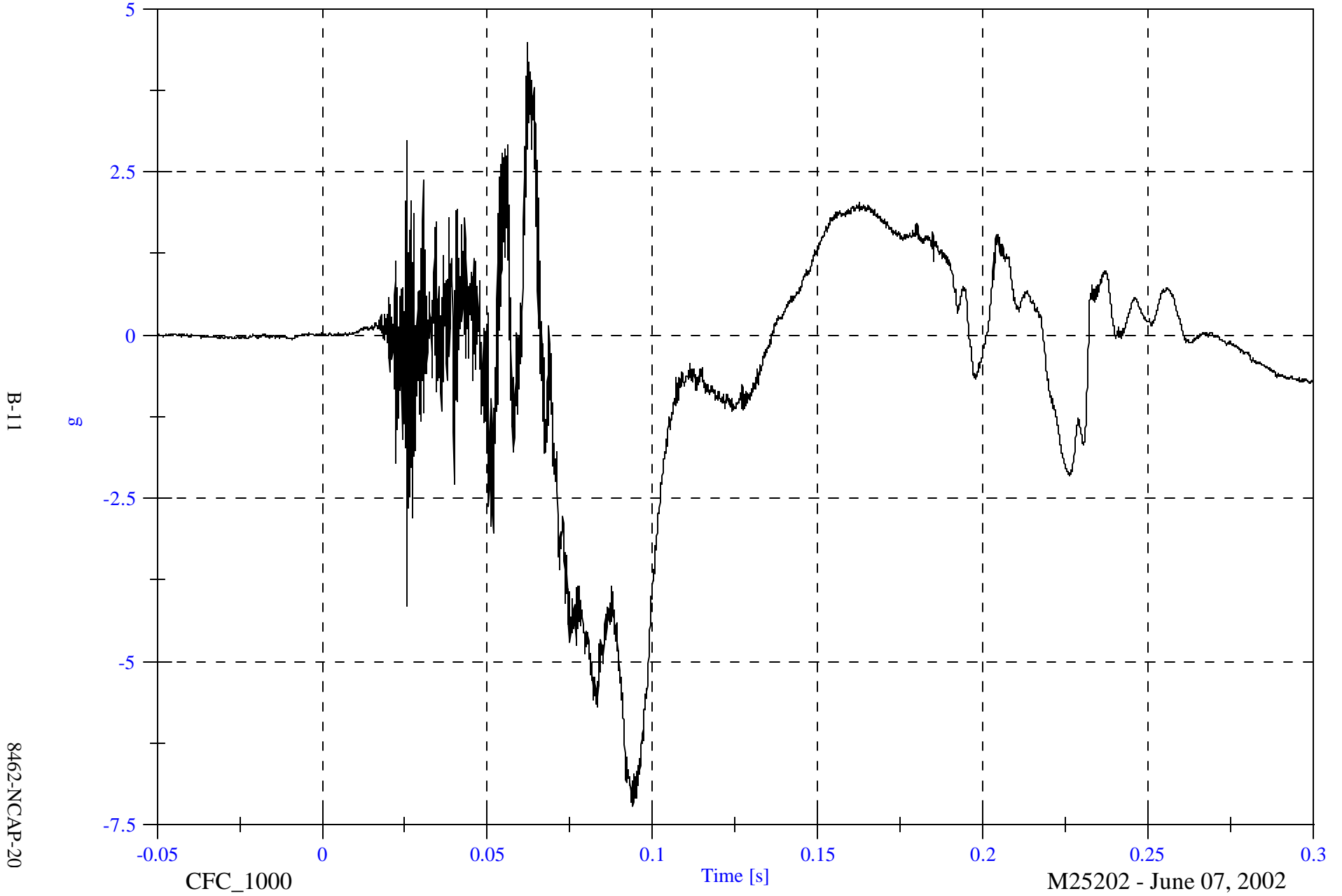
M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 4.5 [g] at 0.062 [s]

Min: -7.2 [g] at 0.094 [s]

P1 Head CG y



B-11

8462-NCAP-20

CFC\_1000

Time [s]

M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 24.8 [g] at 0.055 [s]

Min: -13.2 [g] at 0.106 [s]

P1 Head CG z



2002 NCAP Test 20 2002 Nissan Pathfinder

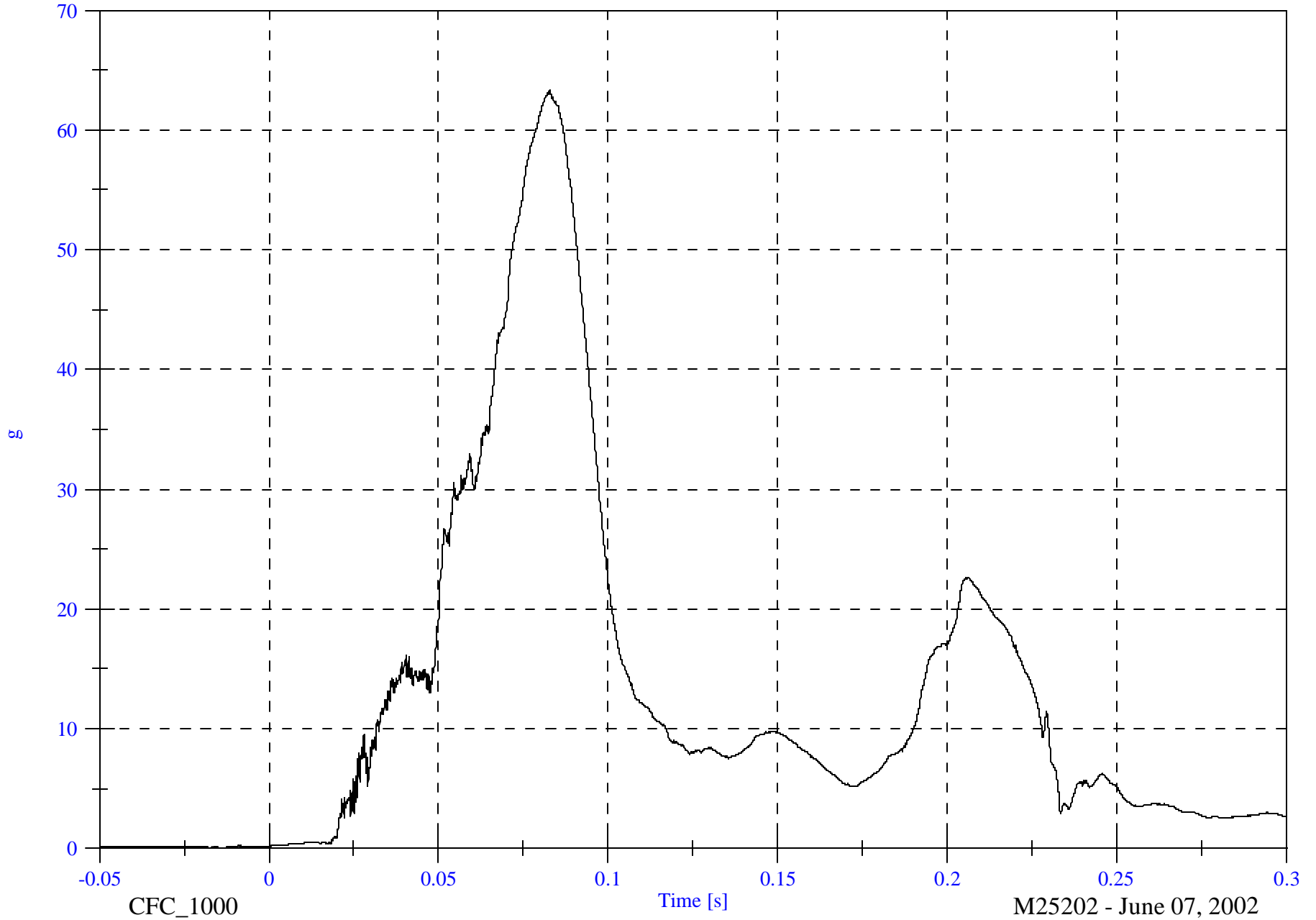
Max: 63.4 [g] at 0.083 [s]

Min: 0.0 [g] at -0.013 [s]

P1 Head CG Resultant

B-13

8462-NCAP-20



CFC\_1000

Time [s]

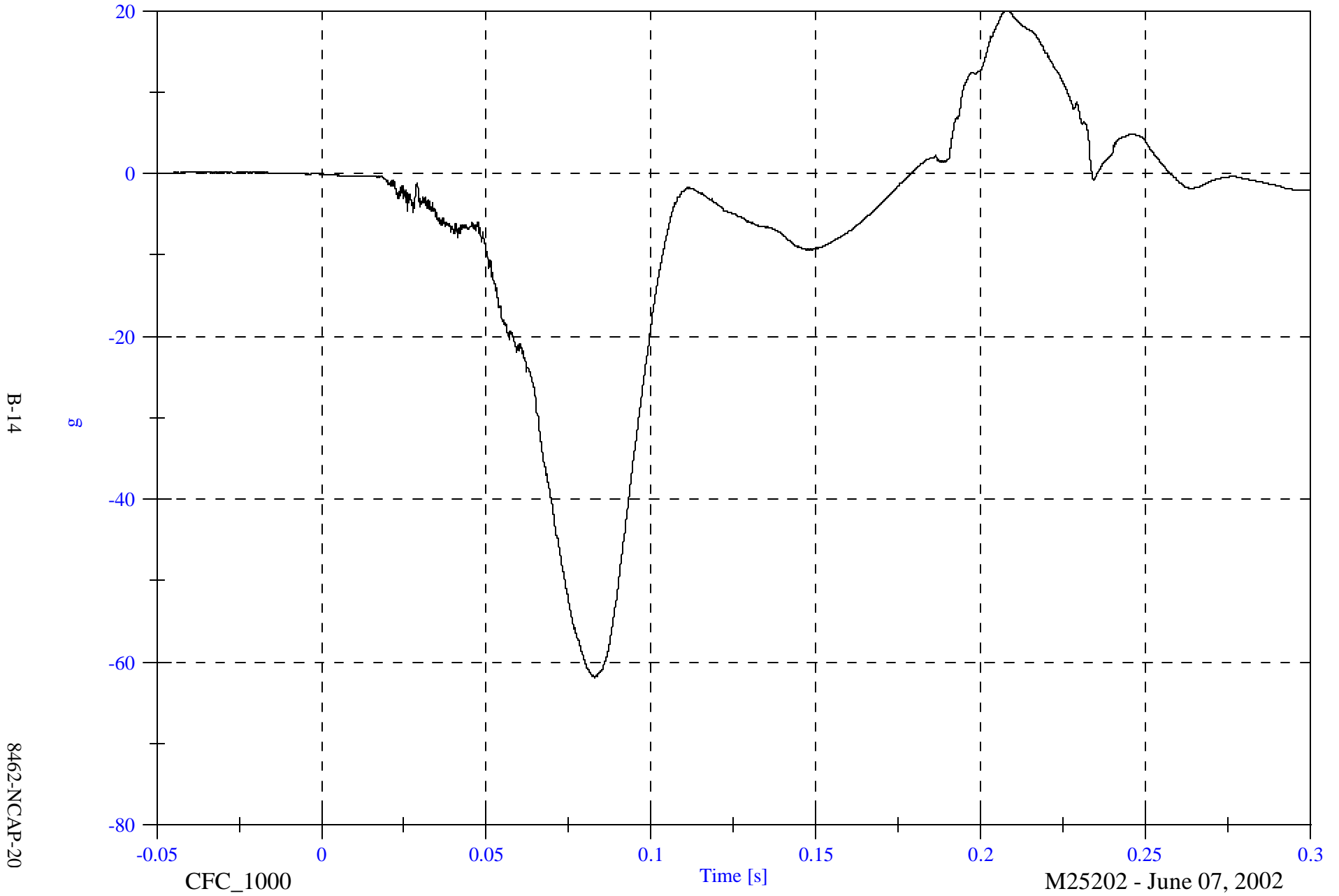
M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 20.0 [g] at 0.208 [s]

Min: -61.9 [g] at 0.083 [s]

P1 Head CG Red x



B-14

8462-NCAP-20

CFC\_1000

Time [s]

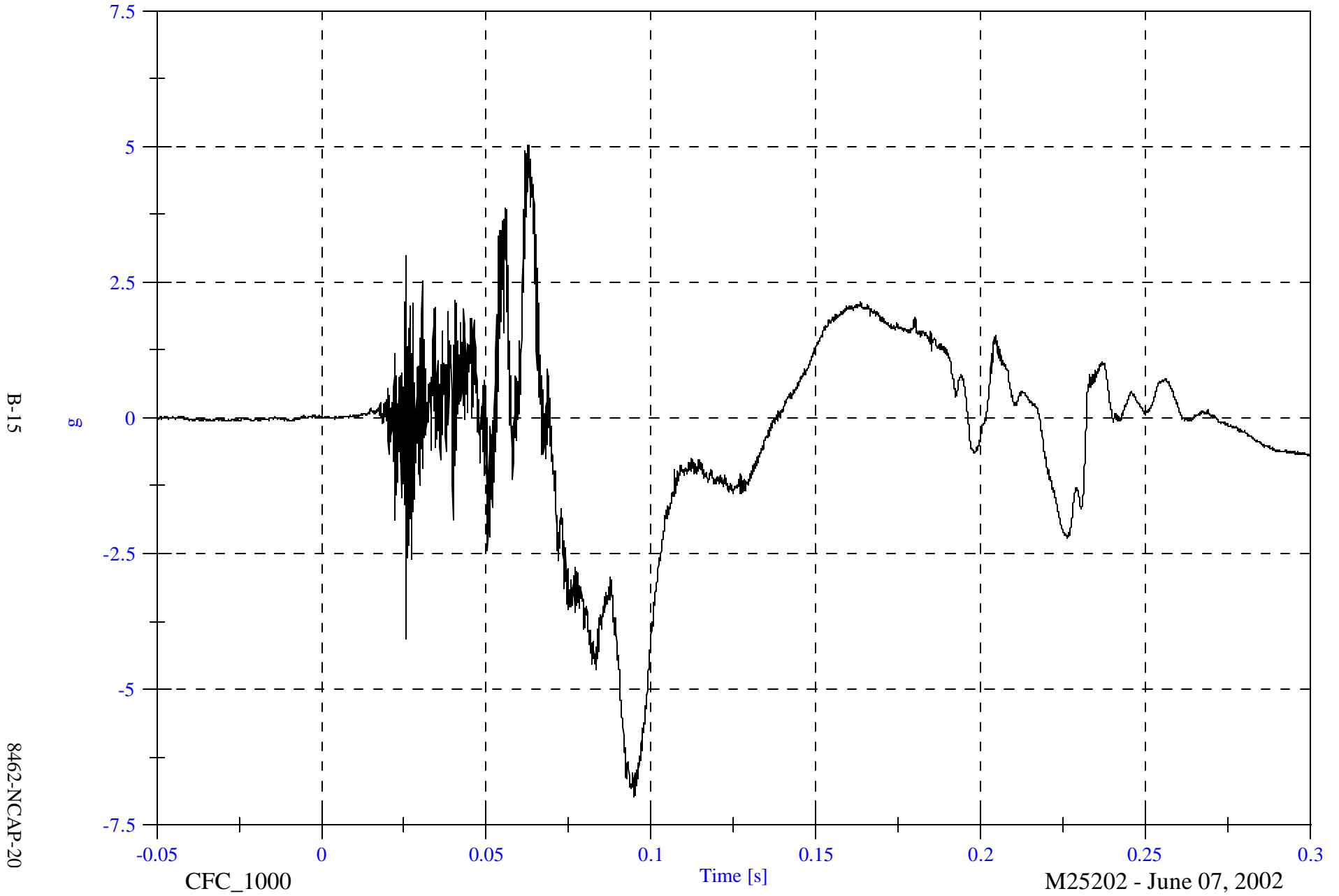
M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 5.0 [g] at 0.063 [s]

Min: -7.0 [g] at 0.095 [s]

P1 Head CG Red y

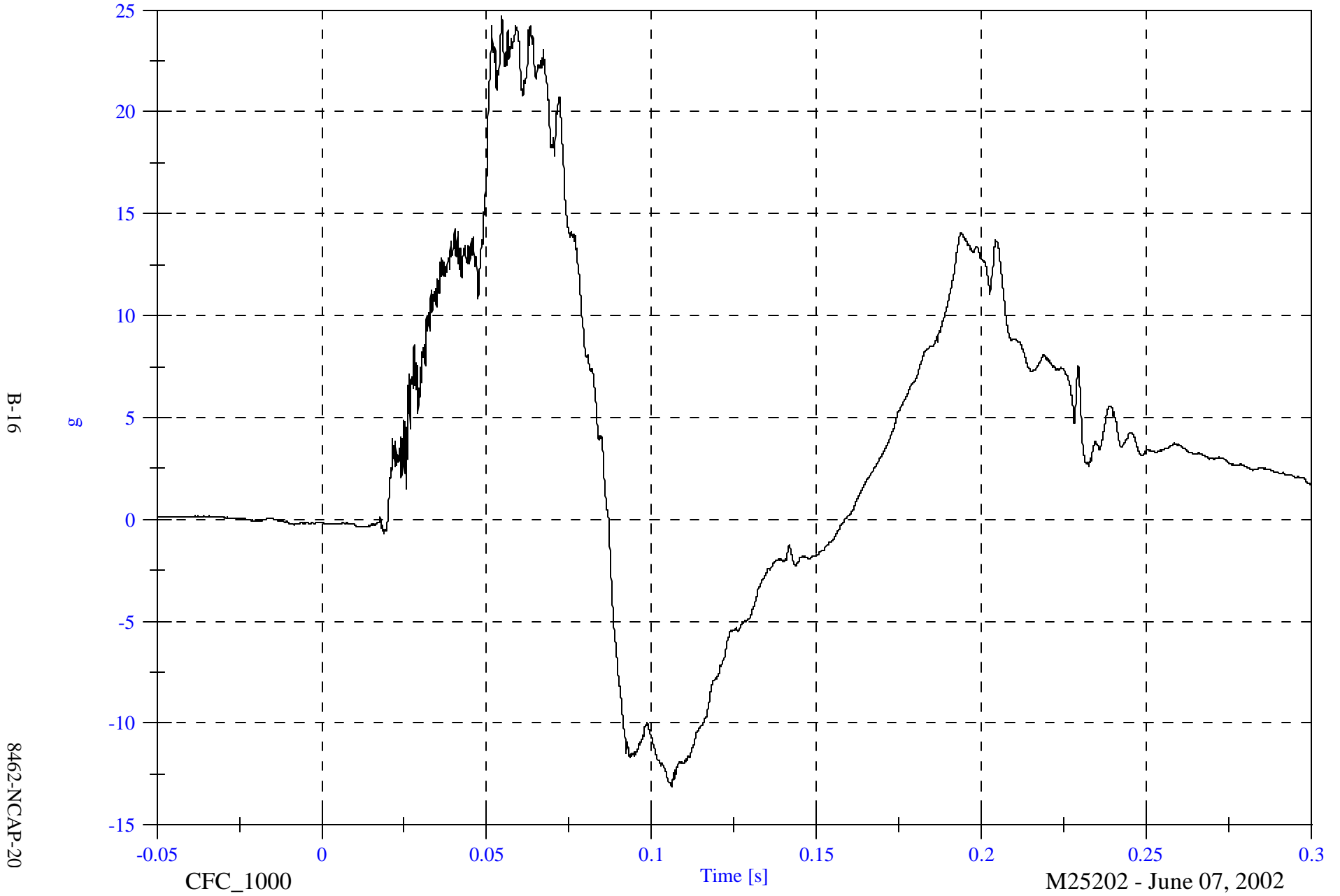


2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 24.7 [g] at 0.055 [s]

Min: -13.1 [g] at 0.106 [s]

P1 Head CG Red z



B-16

8462-NCAP-20

CFC\_1000

Time [s]

M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

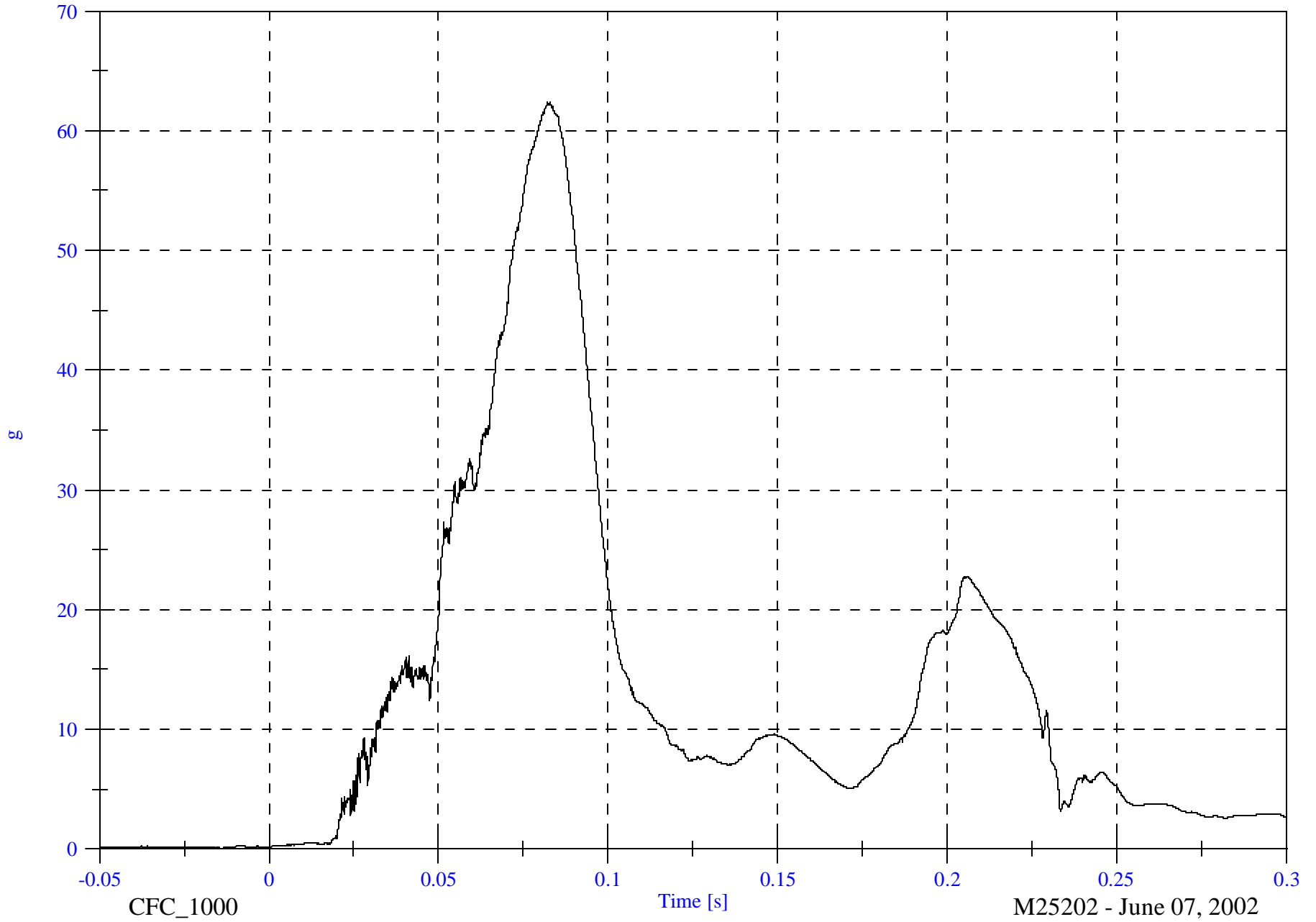
Max: 62.3 [g] at 0.083 [s]

P1 Head CG Red Resultant

Min: 0.1 [g] at -0.014 [s]

B-17

8462-NCAP-20



CFC\_1000

Time [s]

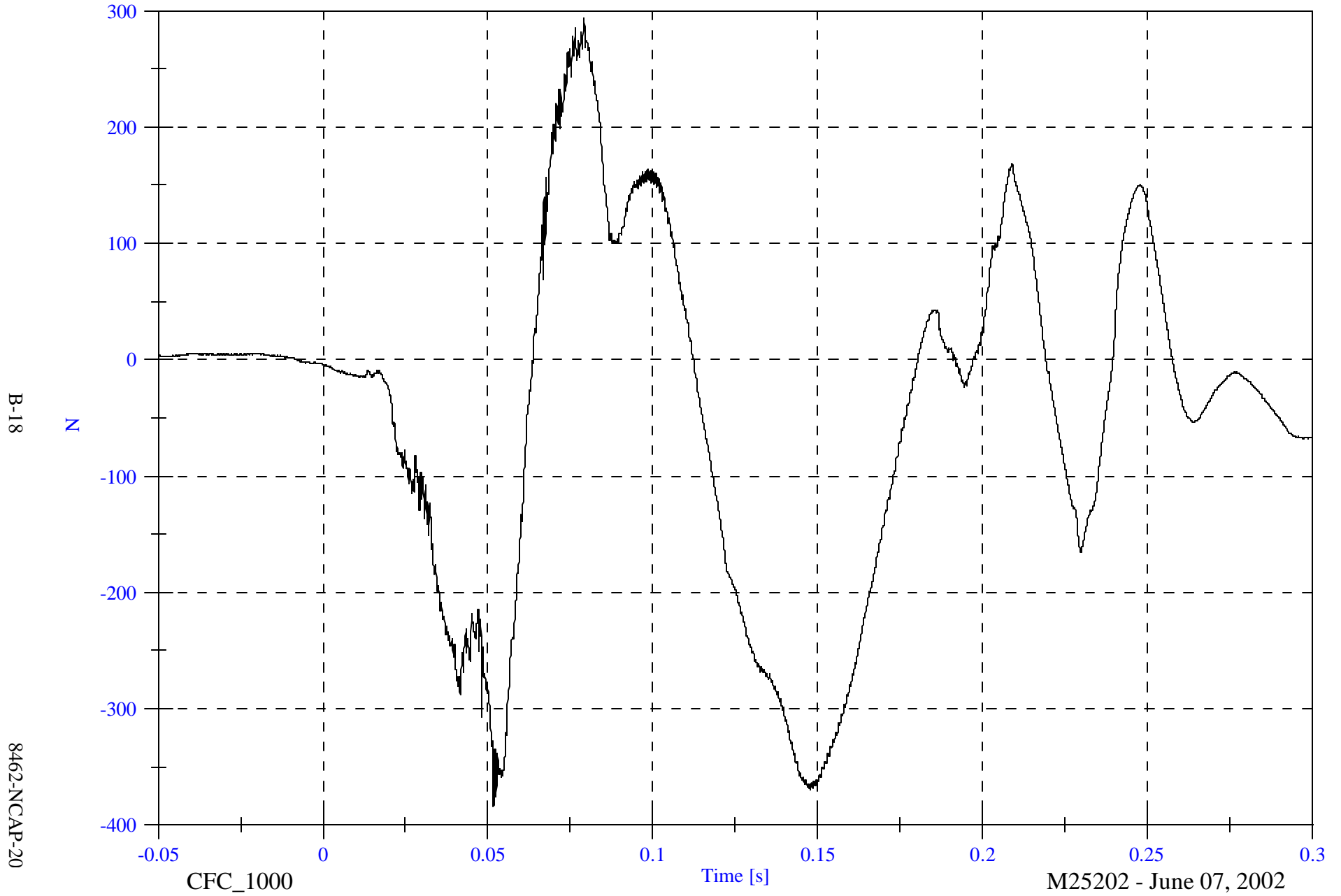
M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 294.0 [N] at 0.079 [s]

Min: -383.5 [N] at 0.052 [s]

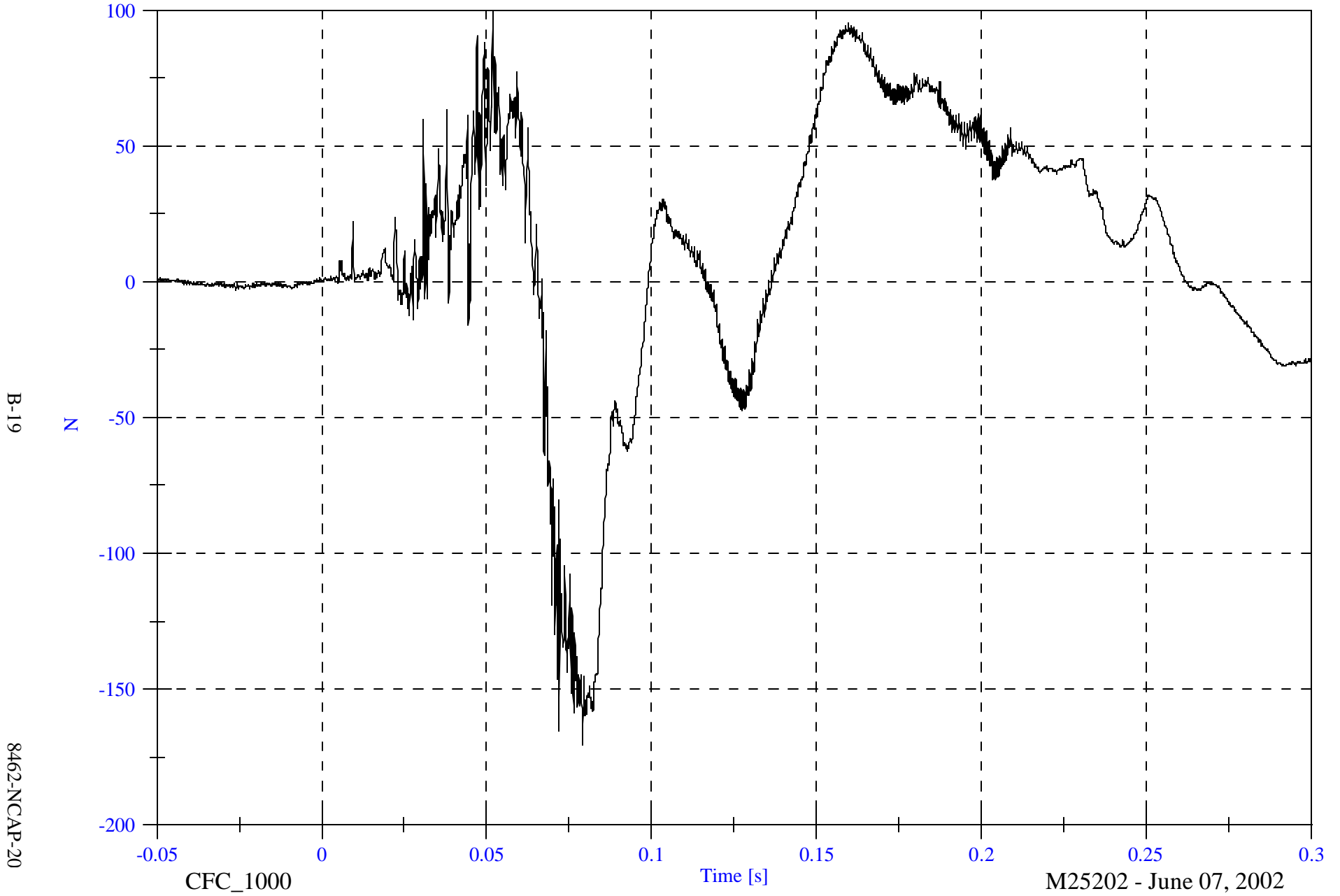
P1 Upper Neck Fx



2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 99.9 [N] at 0.052 [s]  
Min: -170.4 [N] at 0.079 [s]

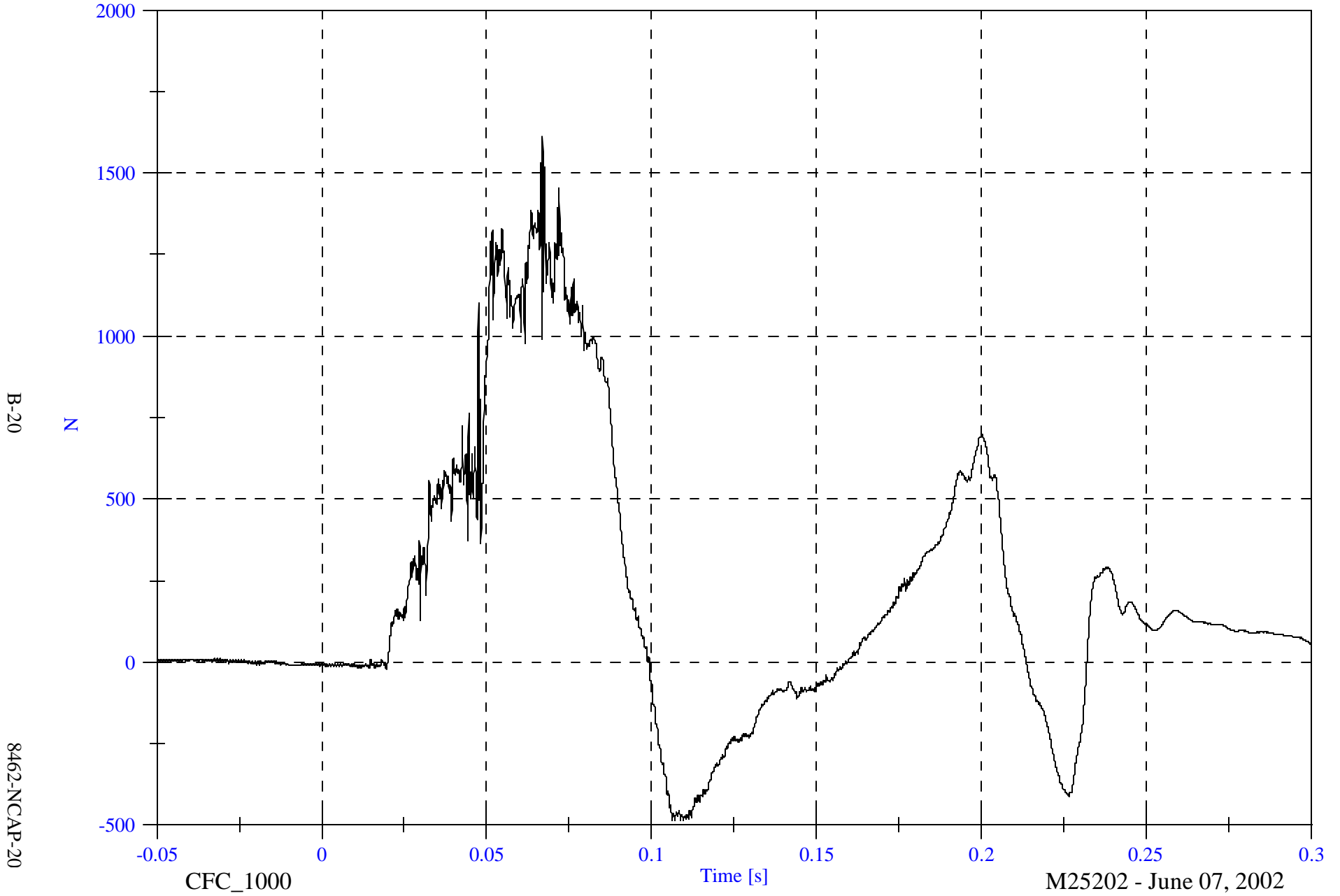
P1 Upper Neck Fy



2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 1611.9 [N] at 0.067 [s]  
Min: -485.7 [N] at 0.107 [s]

P1 Upper Neck Fz



2002 NCAP Test 20 2002 Nissan Pathfinder

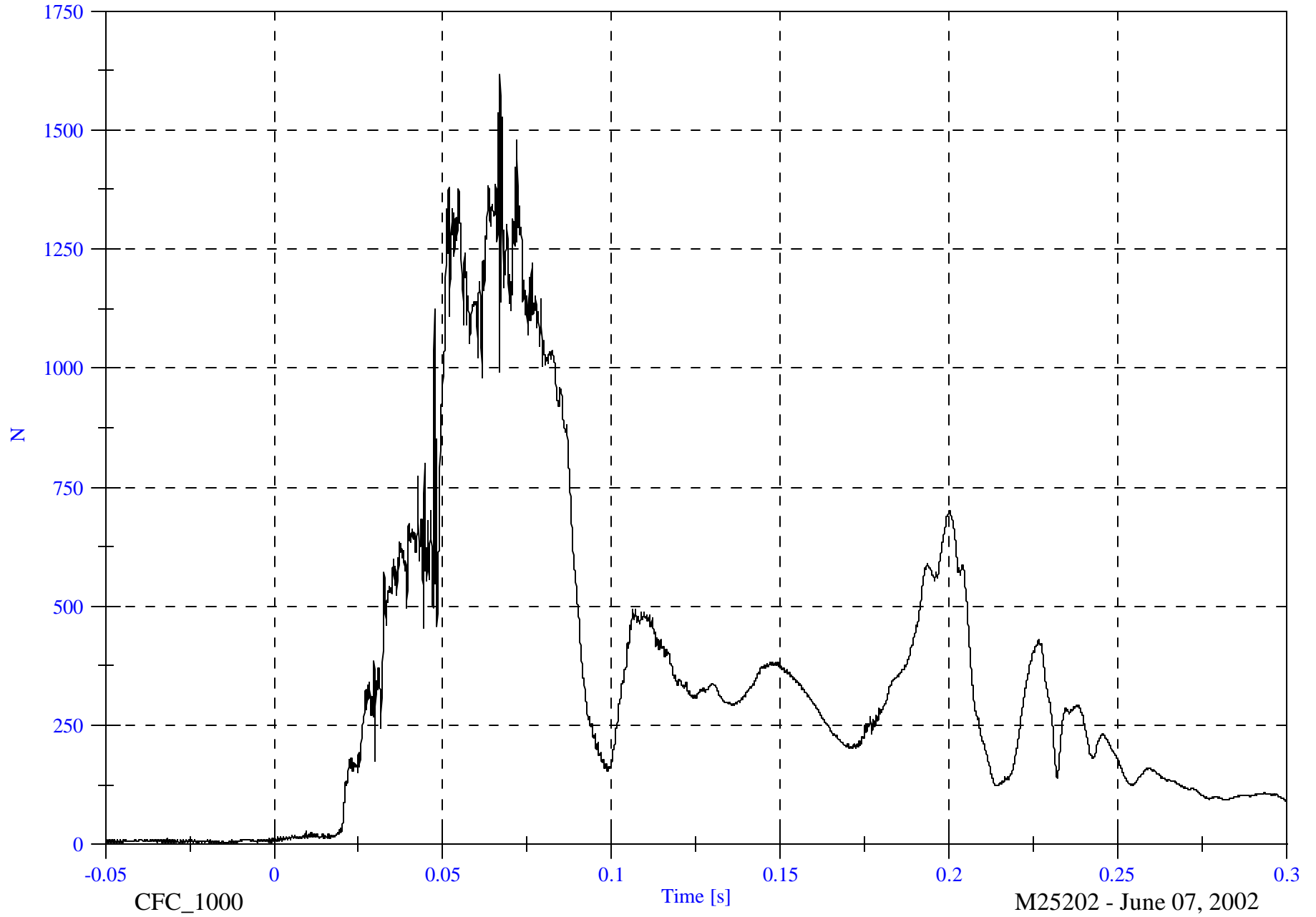
Max: 1617.6 [N] at 0.067 [s]

P1 Upper Neck F Resultant

Min: 2.6 [N] at -0.048 [s]

B-21

8462-NCAP-20



CFC\_1000

Time [s]

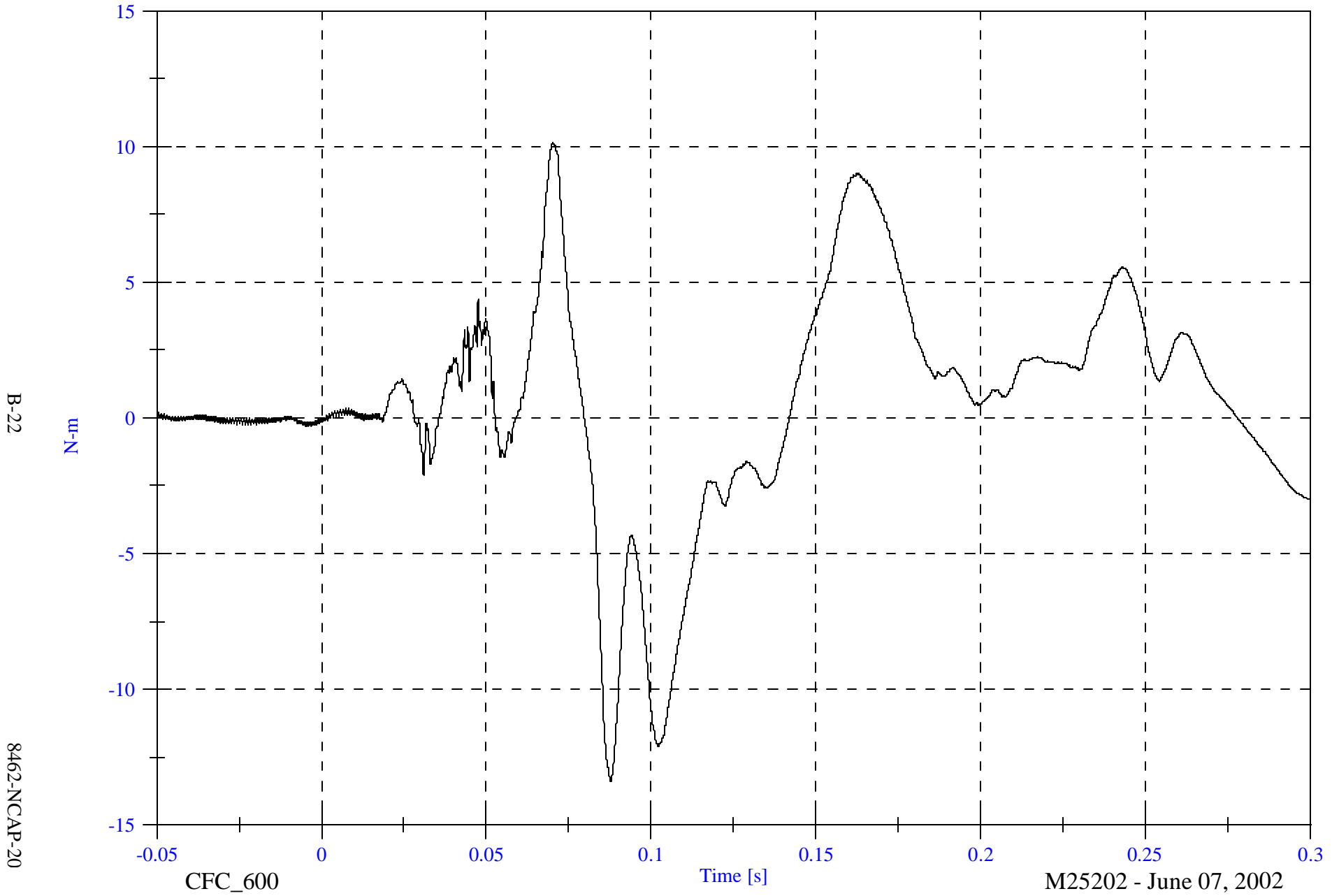
M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 10.1 [N-m] at 0.070 [s]

Min: -13.4 [N-m] at 0.088 [s]

P1 Upper Neck Mx



B-22

8462-NCAP-20

CFC\_600

Time [s]

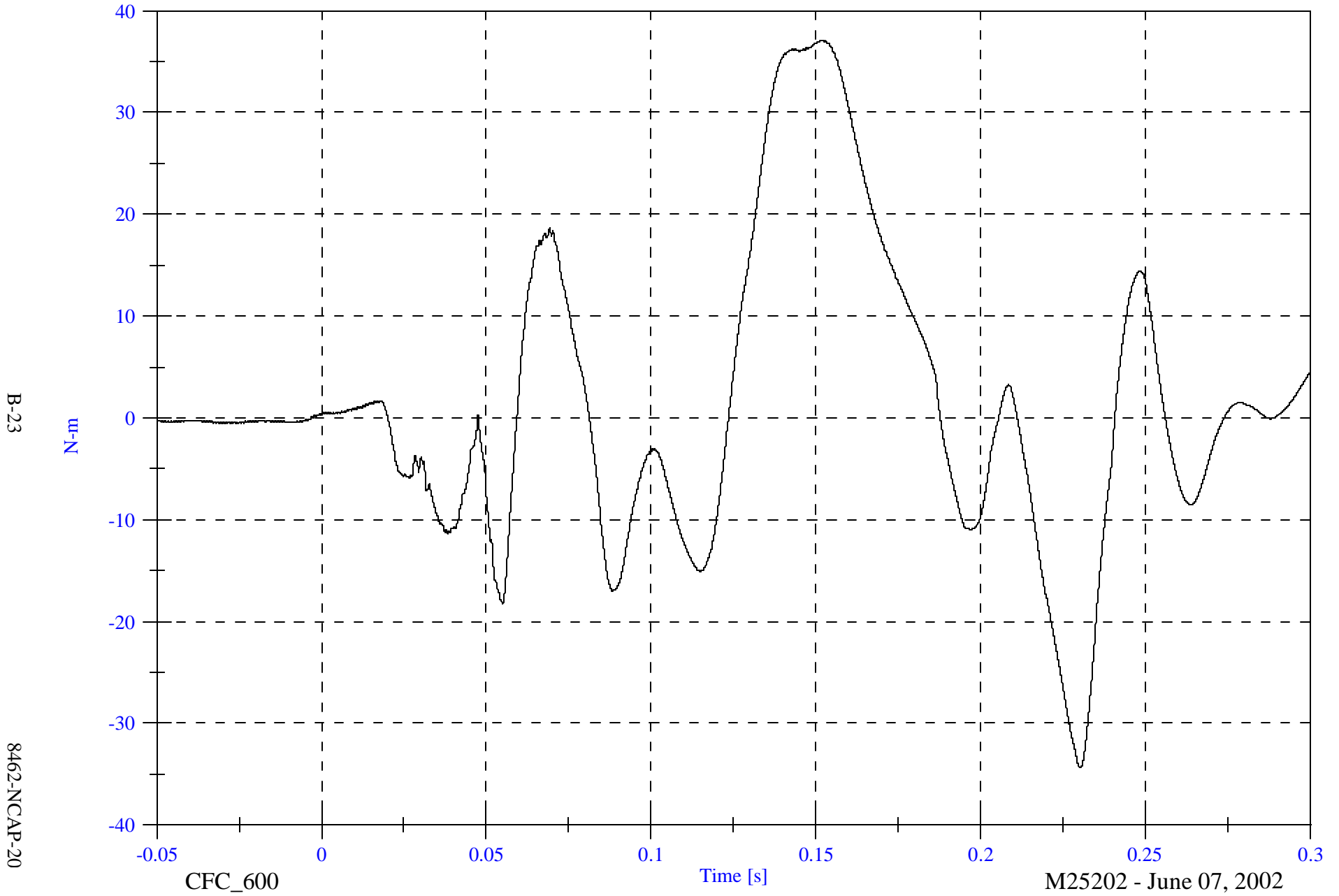
M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 37.1 [N-m] at 0.152 [s]

Min: -34.4 [N-m] at 0.230 [s]

P1 Upper Neck My



B-23

8462-NCAP-20

CFC\_600

Time [s]

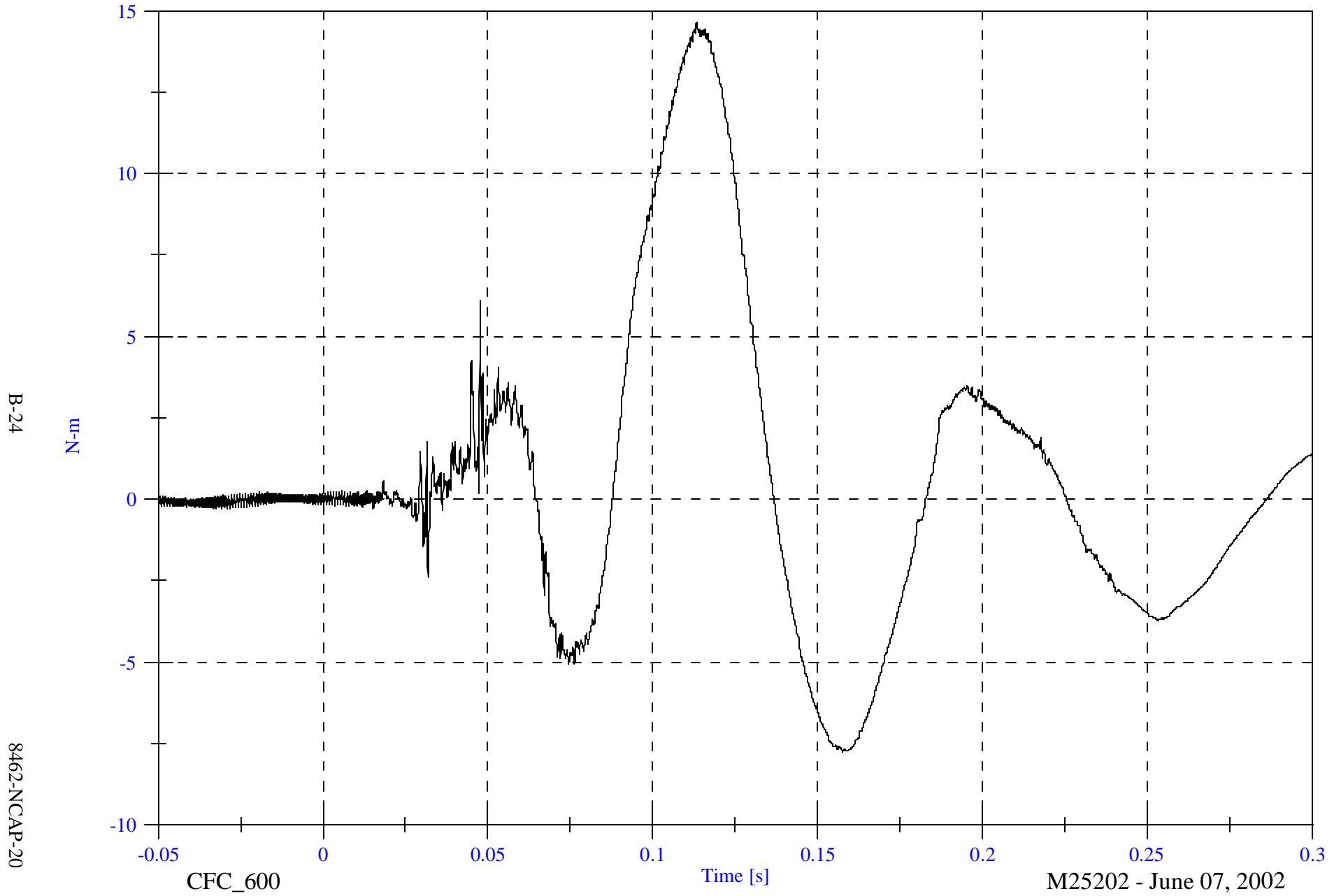
M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 14.7 [N-m] at 0.113 [s]

Min: -7.7 [N-m] at 0.158 [s]

P1 Upper Neck Mz



B-24

8462-NCAP-20

CFC\_600

M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

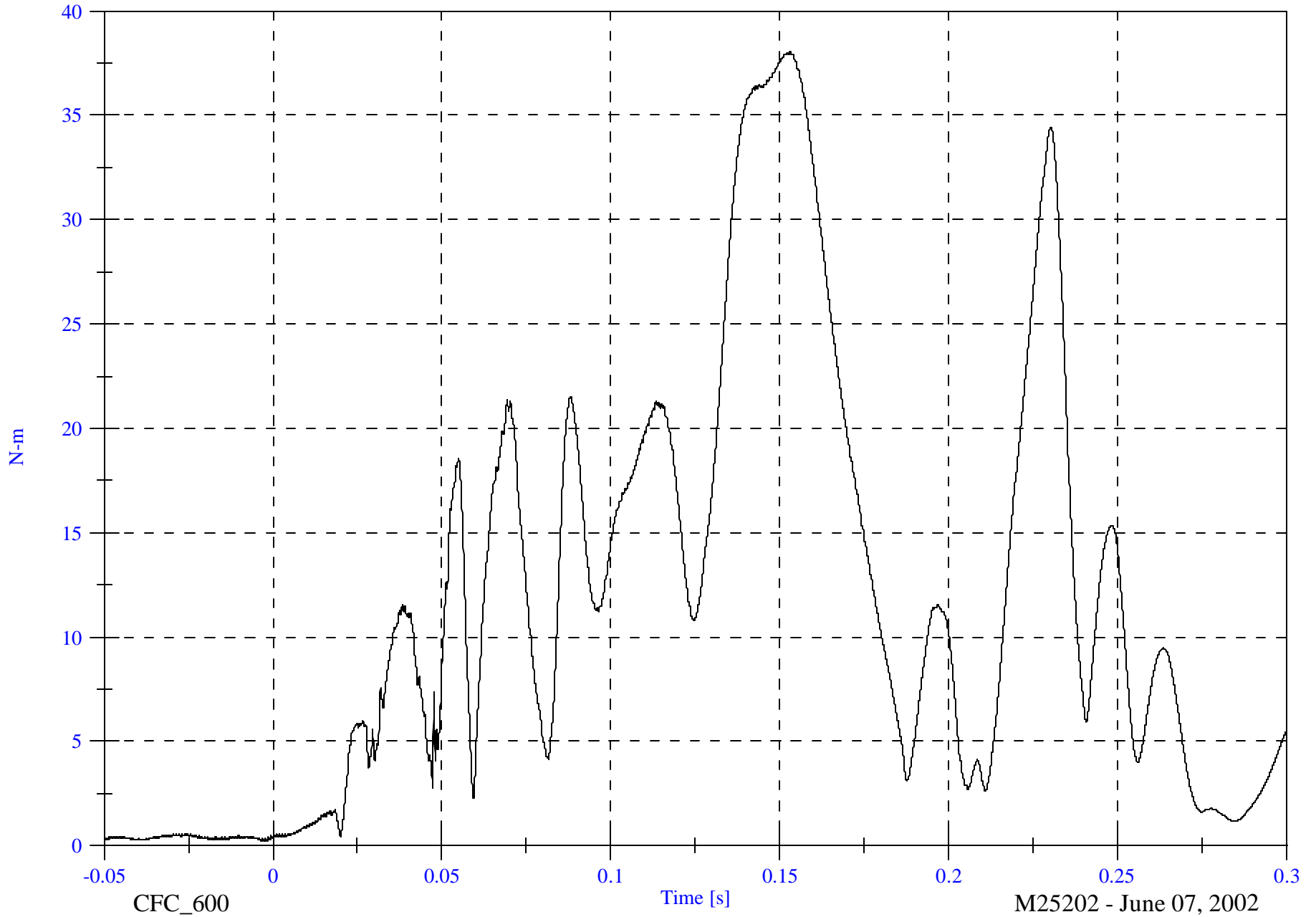
P1 Upper Neck M Resultant

Max: 38.0 [N-m] at 0.153 [s]

Min: 0.2 [N-m] at -0.003 [s]

B-25

8462-NCAP-20



CFC\_600

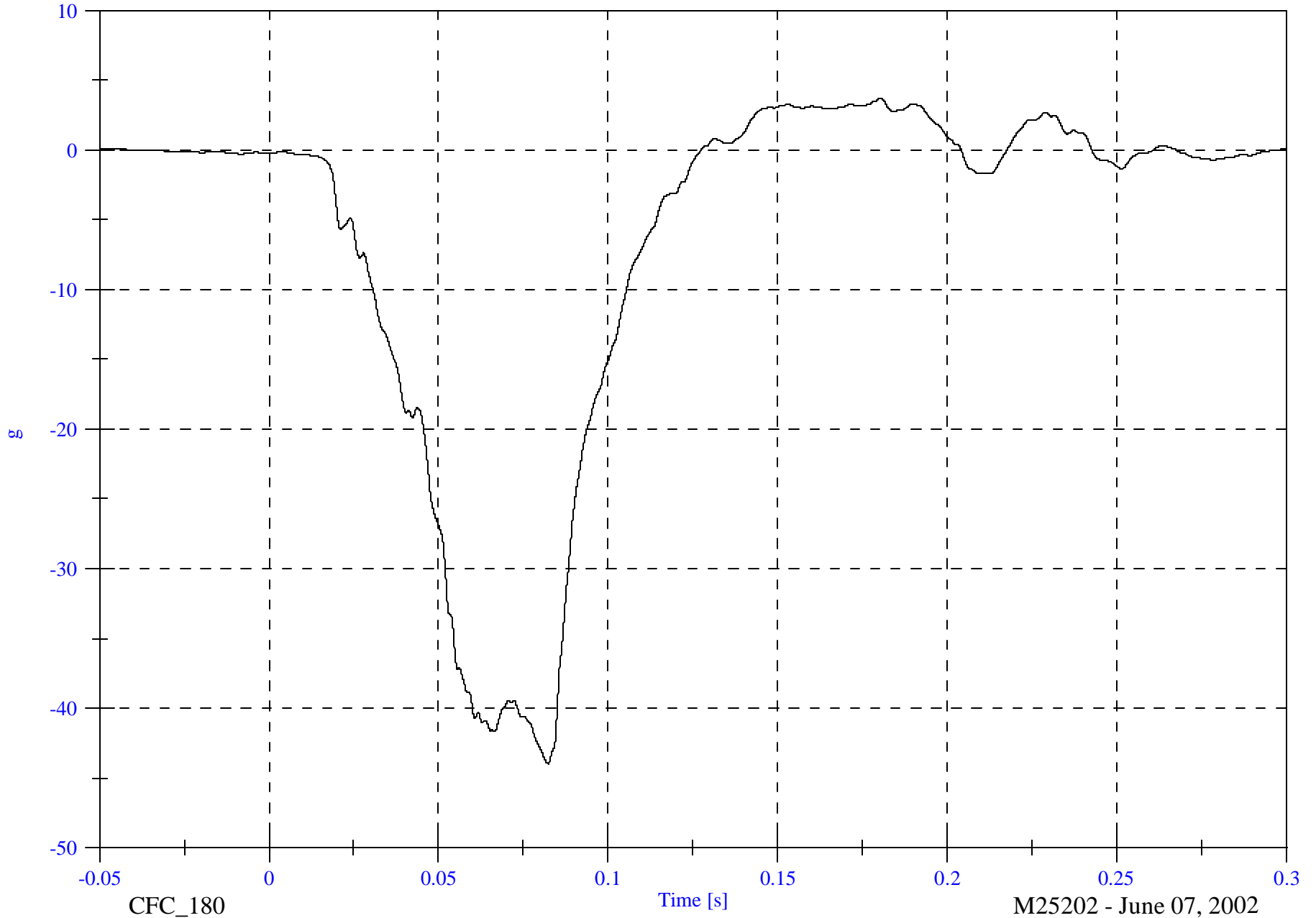
Time [s]

M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 3.7 [g] at 0.180 [s]  
Min: -43.9 [g] at 0.082 [s]

P1 Chest x



B-26

8462-NCAP-20

CFC\_180

Time [s]

M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

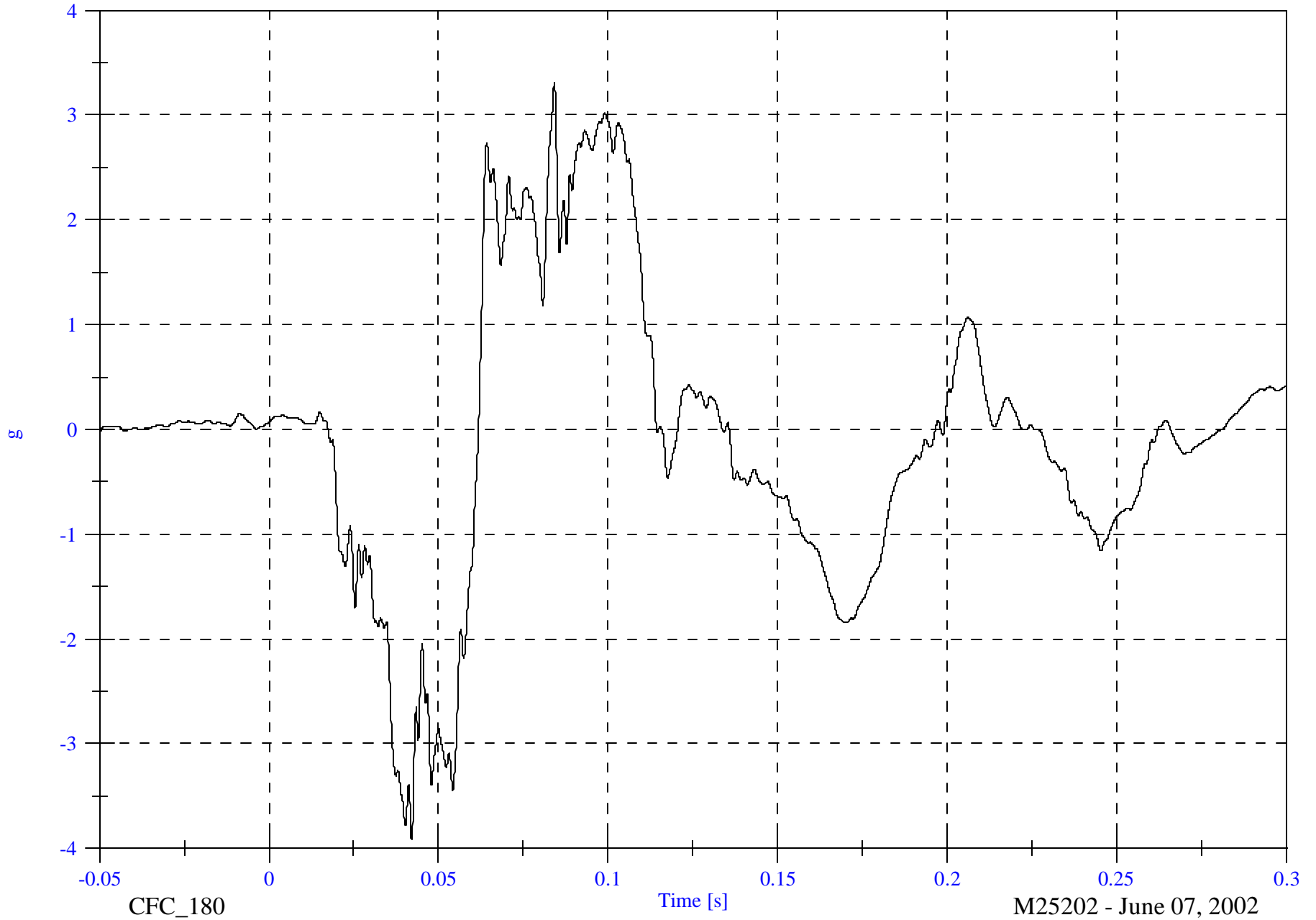
Max: 3.3 [g] at 0.084 [s]

Min: -3.9 [g] at 0.042 [s]

P1 Chest y

B-27

8462-NCAP-20



CFC\_180

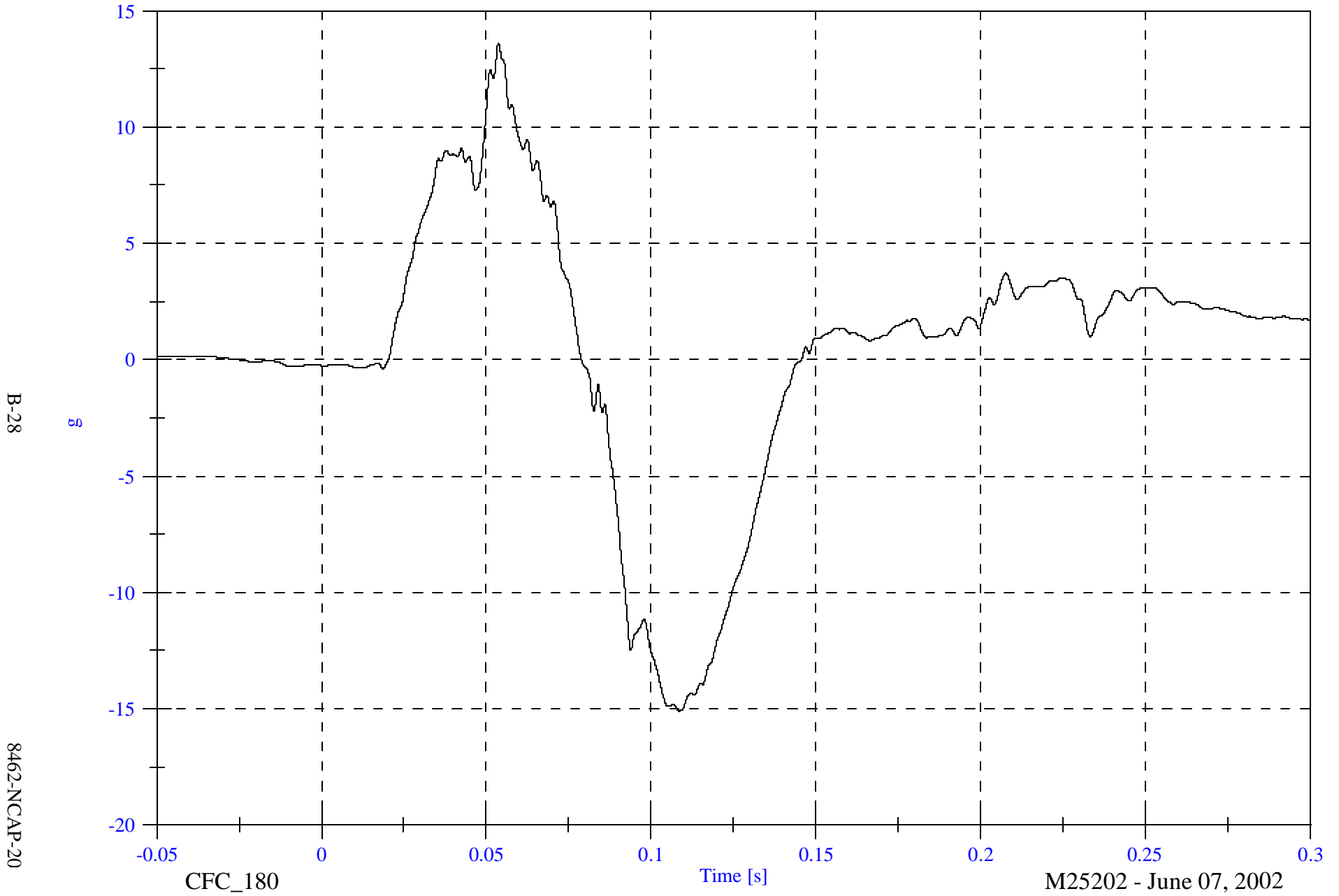
M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 13.6 [g] at 0.054 [s]

Min: -15.1 [g] at 0.109 [s]

P1 Chest z



B-28

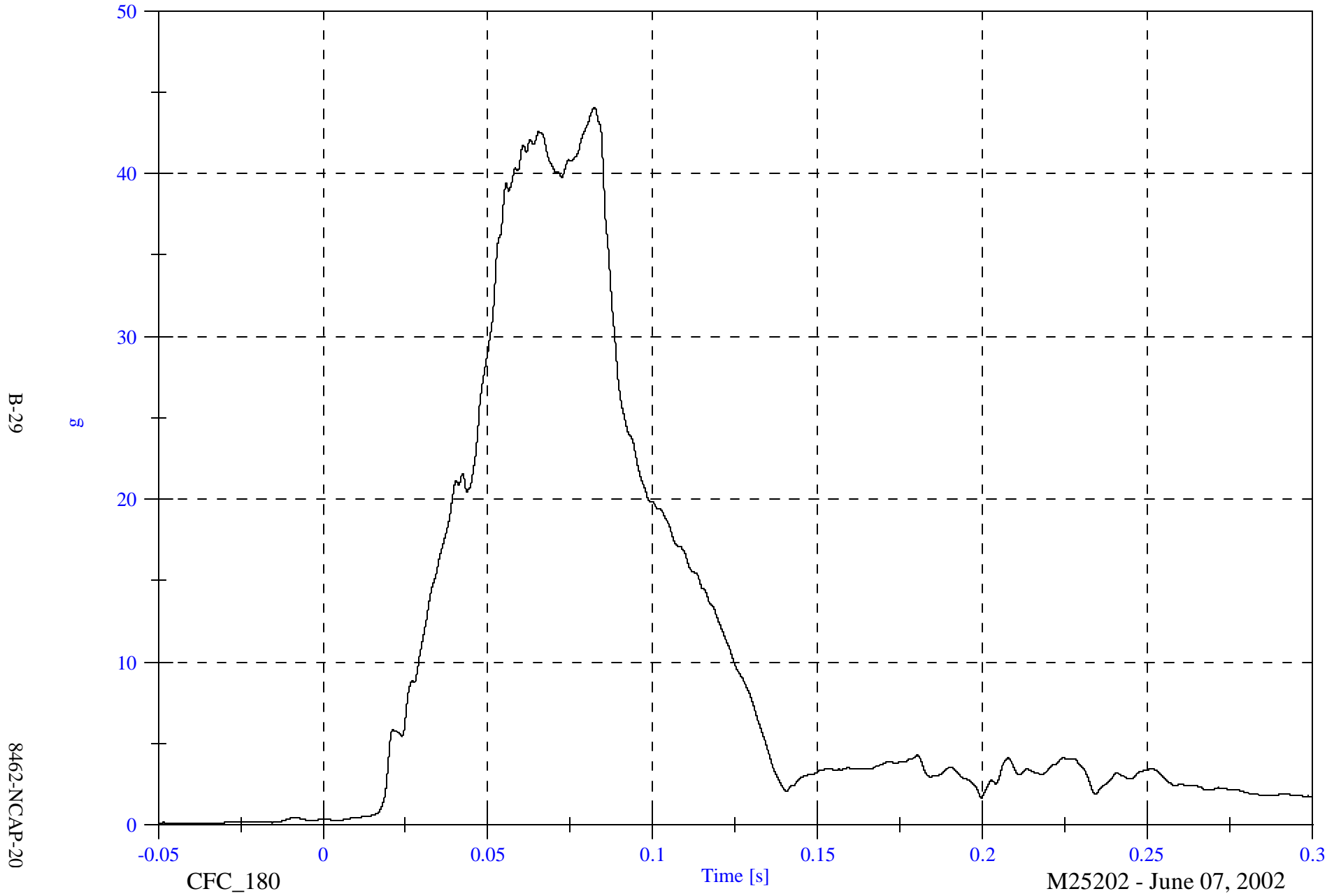
8462-NCAP-20

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 44.1 [g] at 0.082 [s]

Min: 0.1 [g] at -0.037 [s]

P1 Chest Resultant

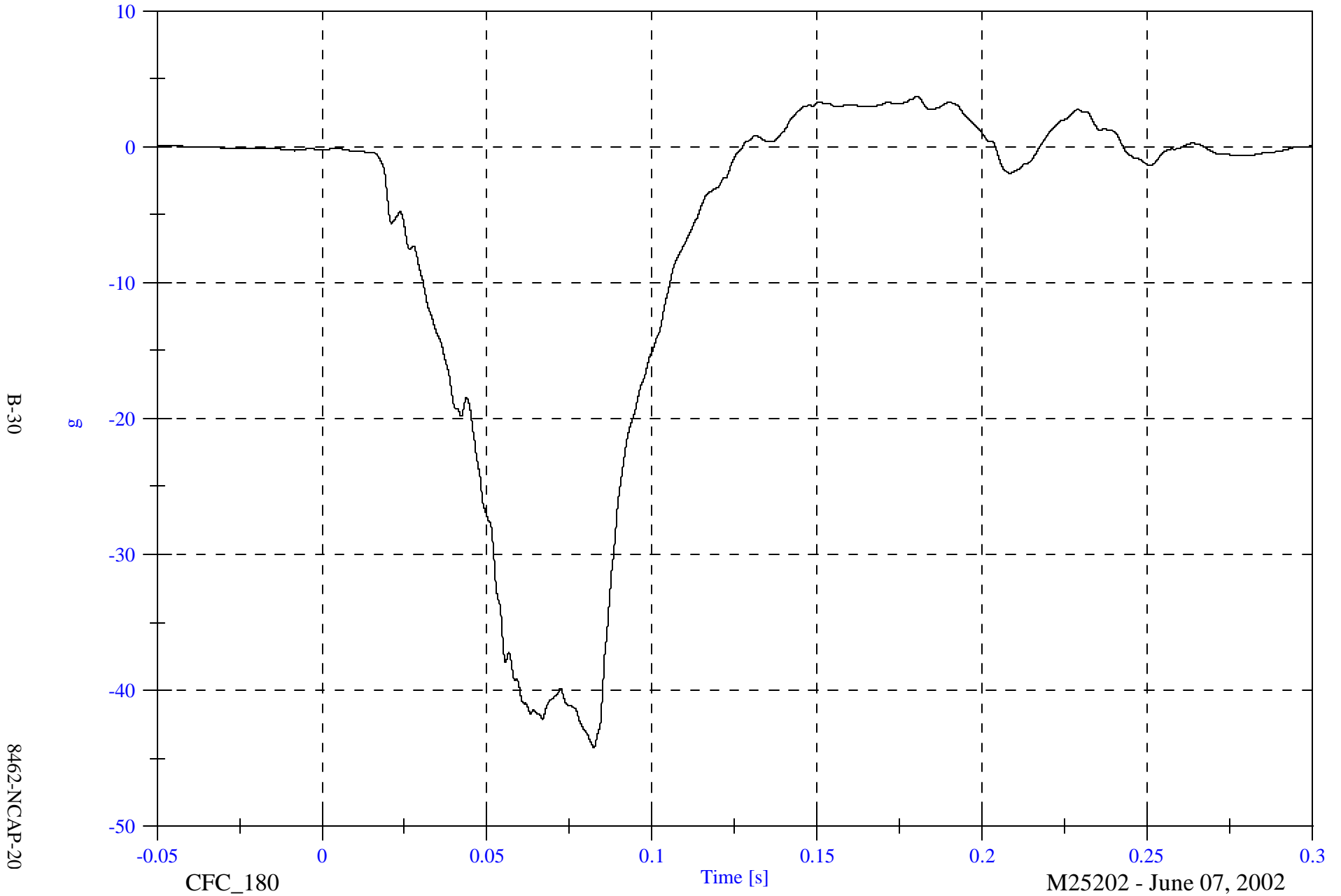


2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 3.7 [g] at 0.180 [s]

Min: -44.2 [g] at 0.082 [s]

P1 Chest Red x



B-30

8462-NCAP-20

CFC\_180

Time [s]

M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

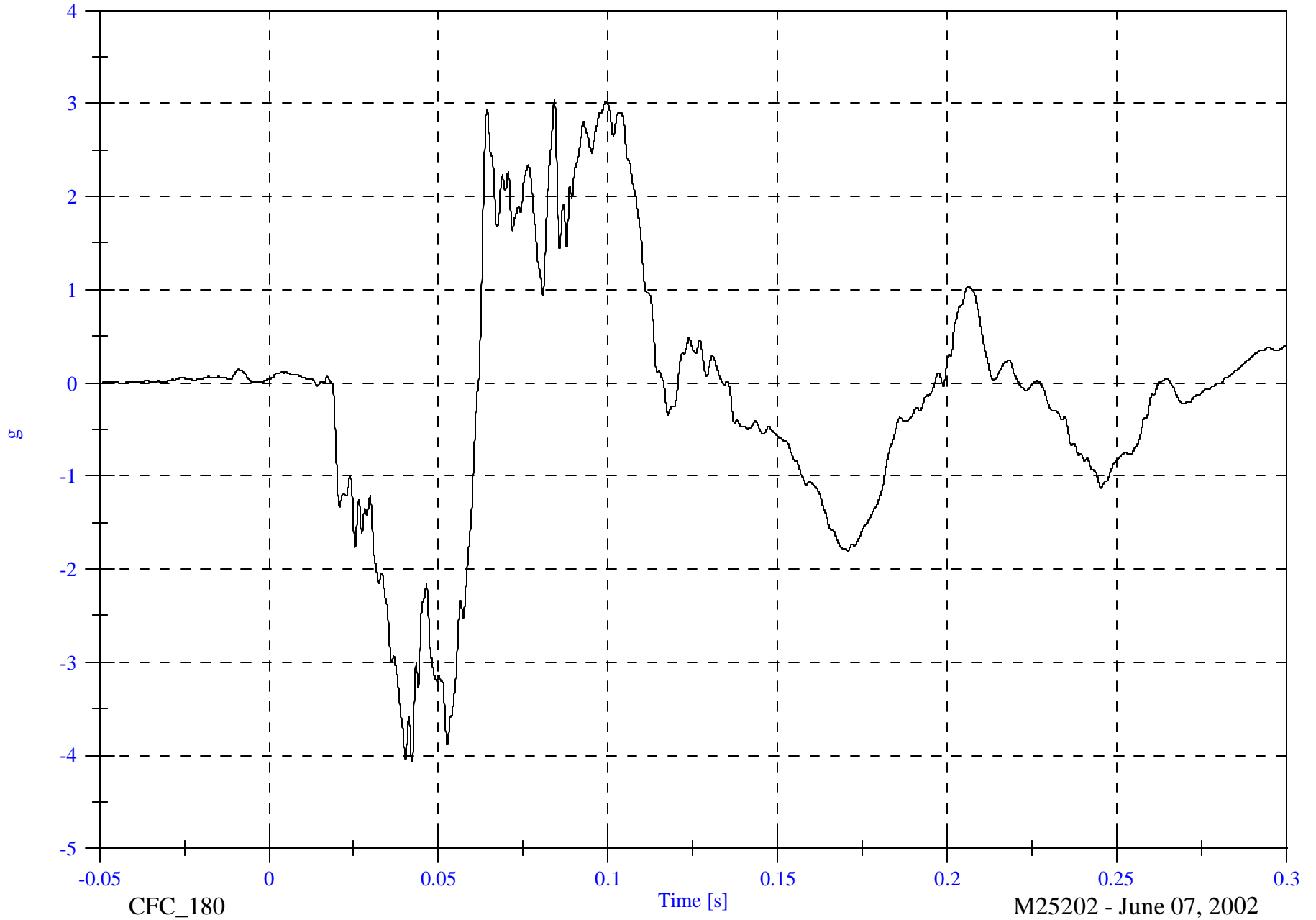
Max: 3.0 [g] at 0.084 [s]

Min: -4.1 [g] at 0.042 [s]

P1 Chest Red y

B-31

8462-NCAP-20



CFC\_180

M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

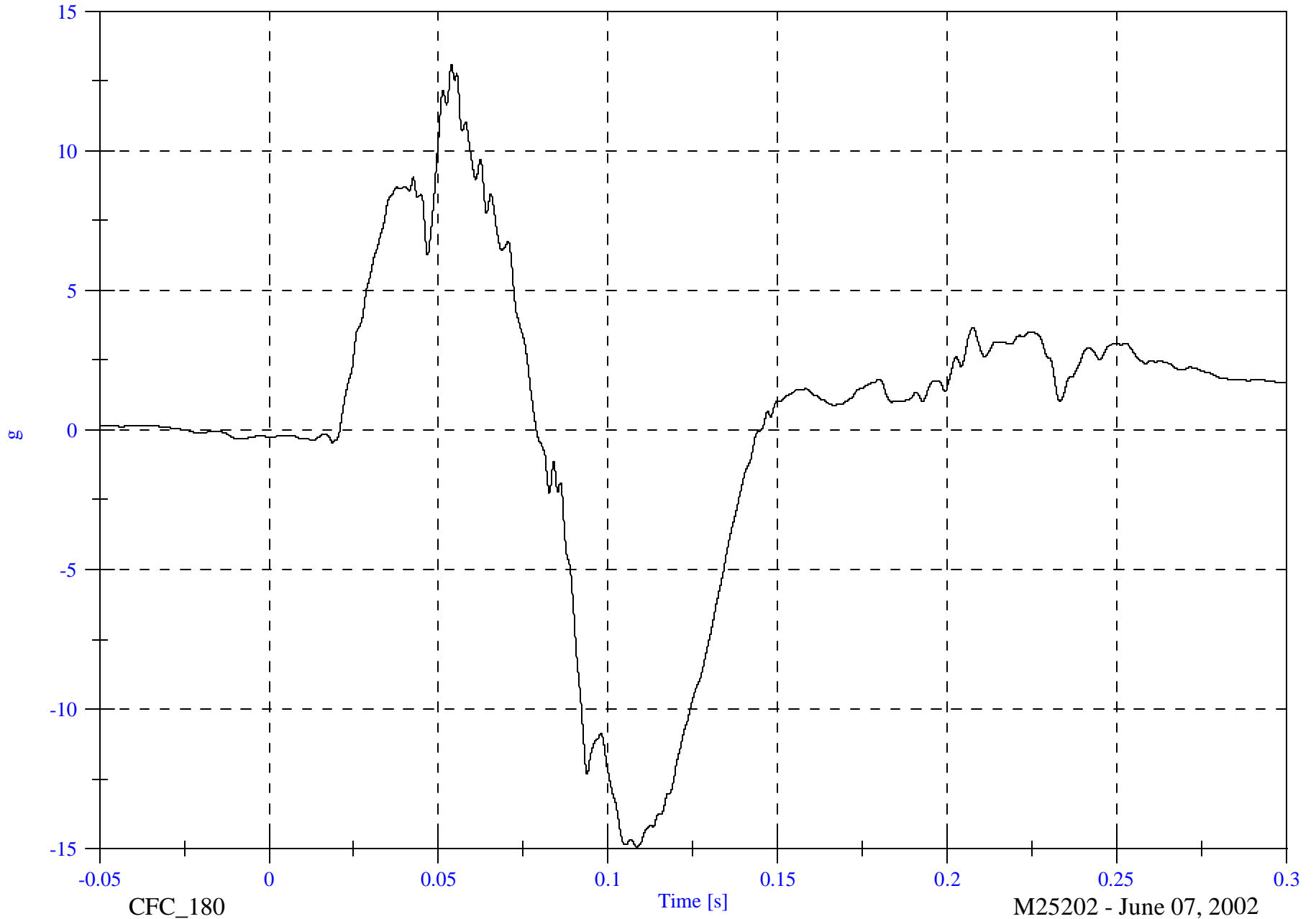
Max: 13.1 [g] at 0.054 [s]

Min: -14.9 [g] at 0.109 [s]

P1 Chest Red z

B-32

8462-NCAP-20



CFC\_180

M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

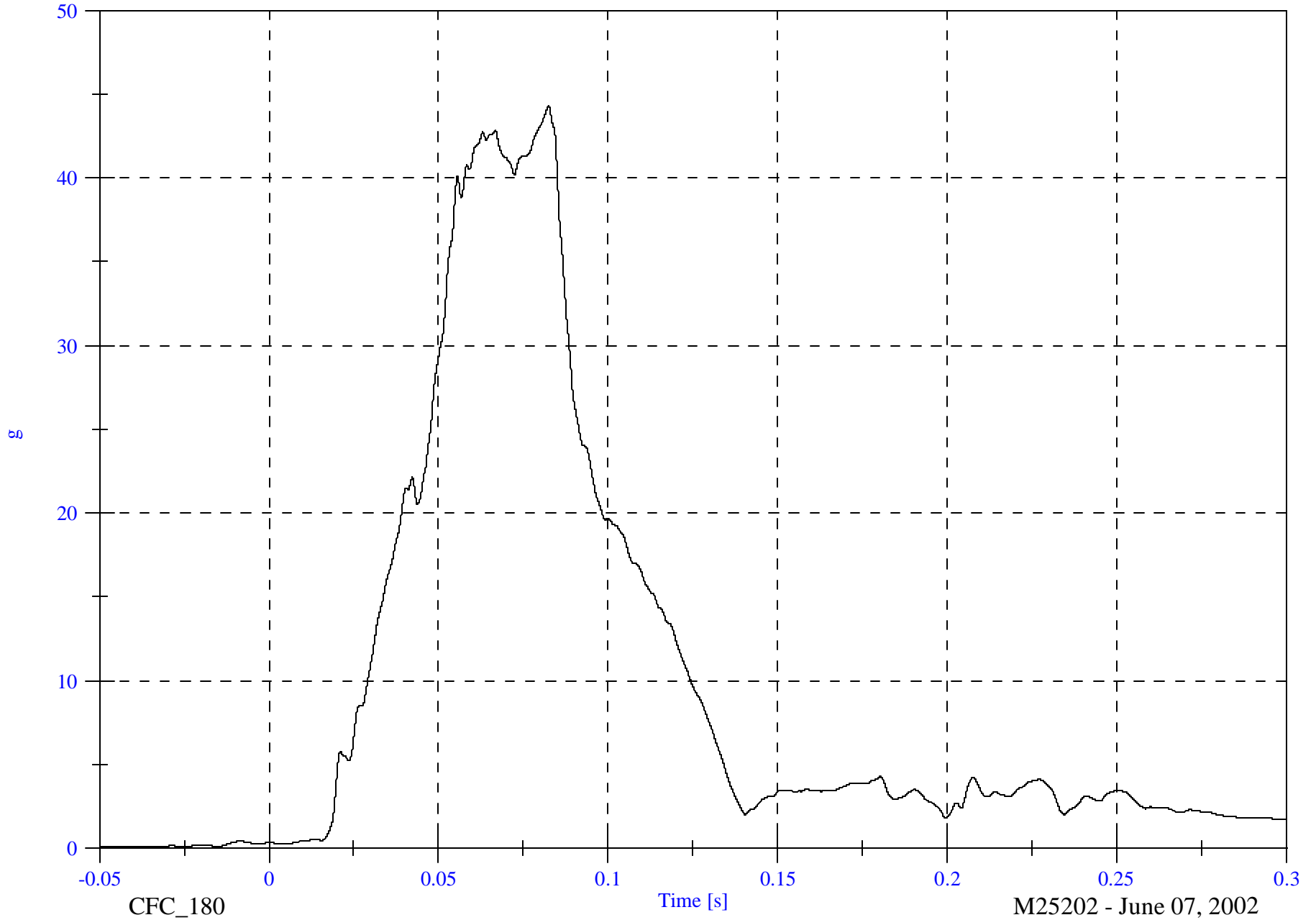
Max: 44.3 [g] at 0.083 [s]

Min: 0.1 [g] at -0.031 [s]

P1 Chest Red Resultant

B-33

8462-NCAP-20



CFC\_180

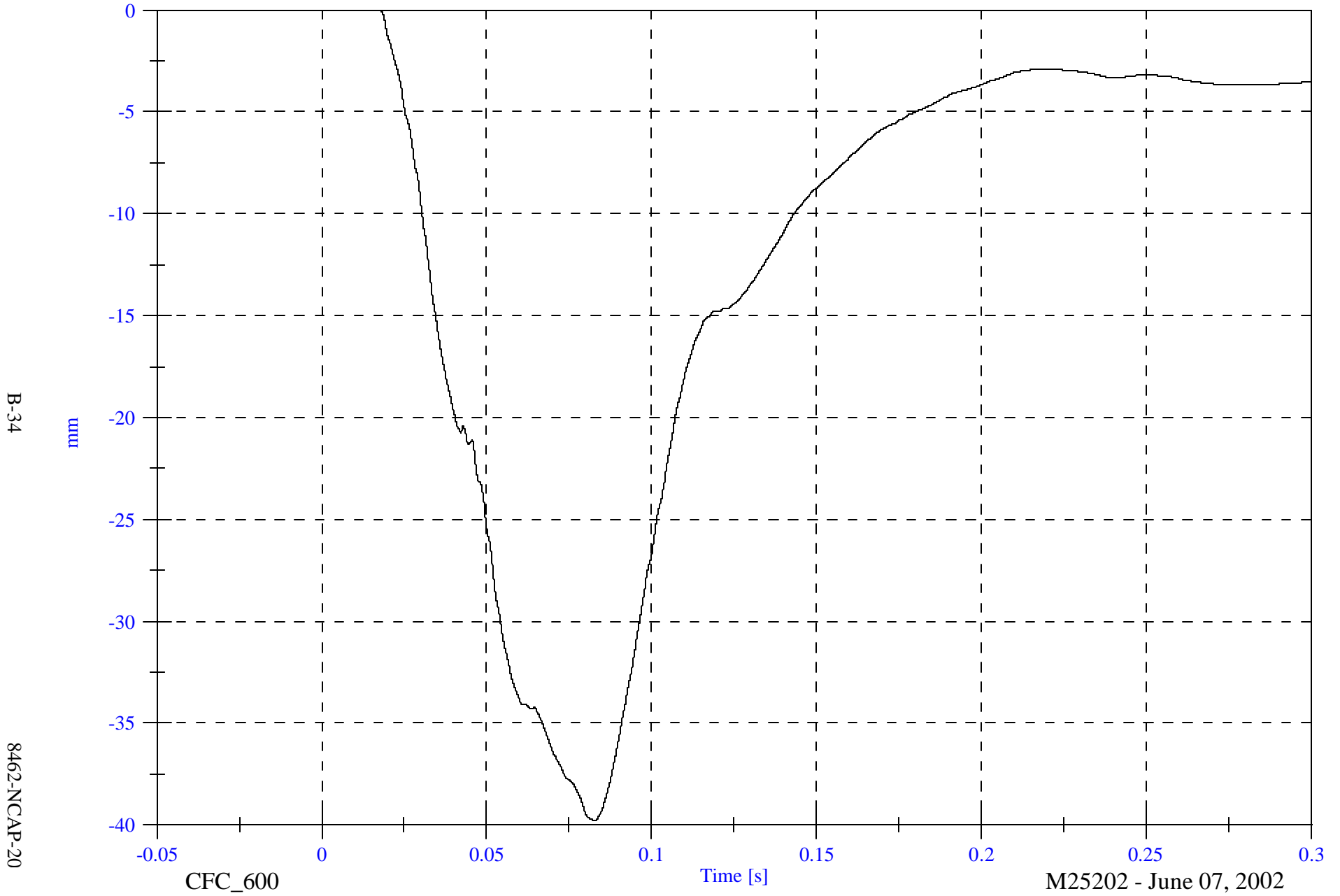
M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 0.0 [mm] at -0.021 [s]

Min: -39.8 [mm] at 0.083 [s]

P1 Chest Compression x



B-34

8462-NCAP-20

CFC\_600

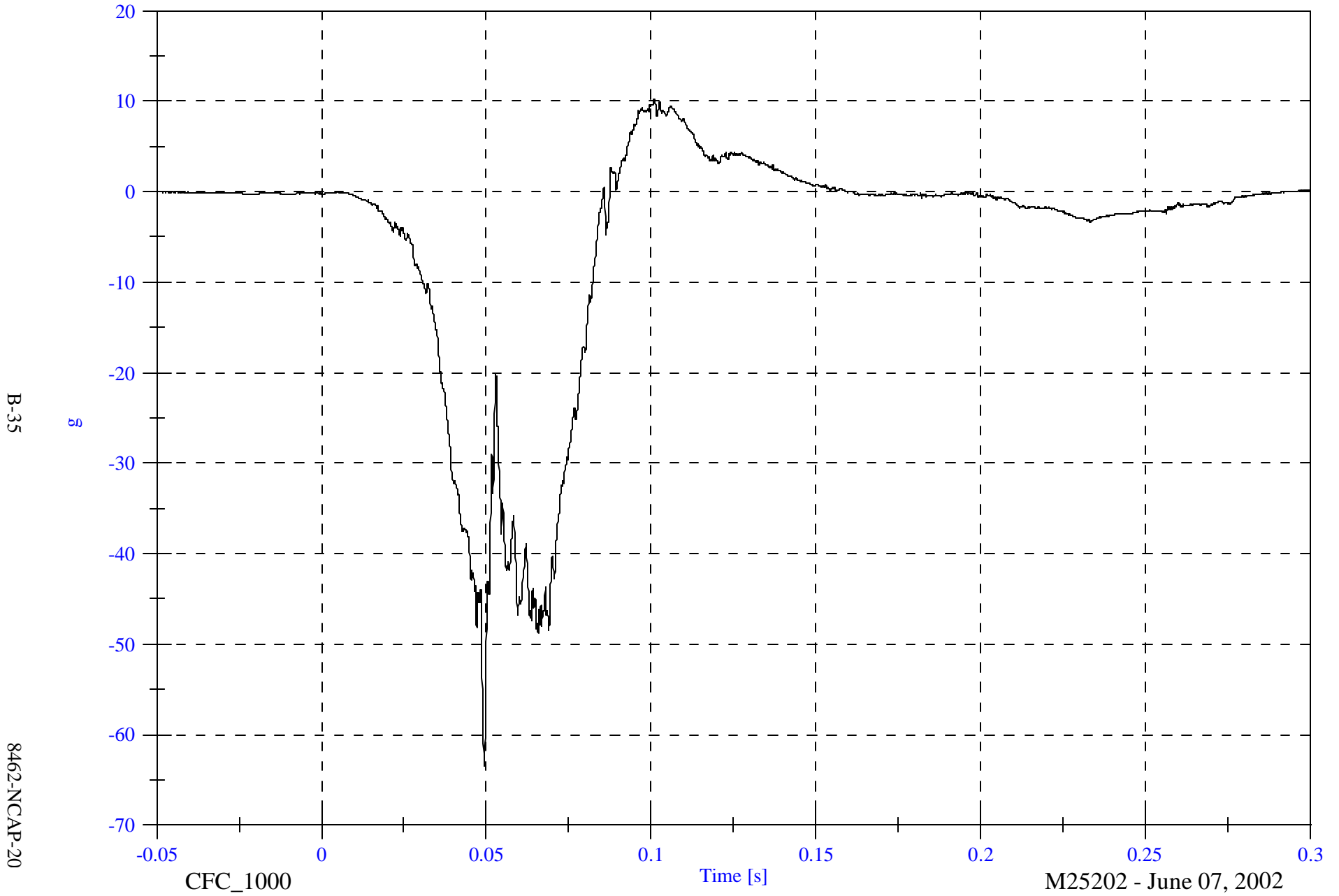
Time [s]

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2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 10.2 [g] at 0.101 [s]  
Min: -63.4 [g] at 0.049 [s]

P1 Pelvic x

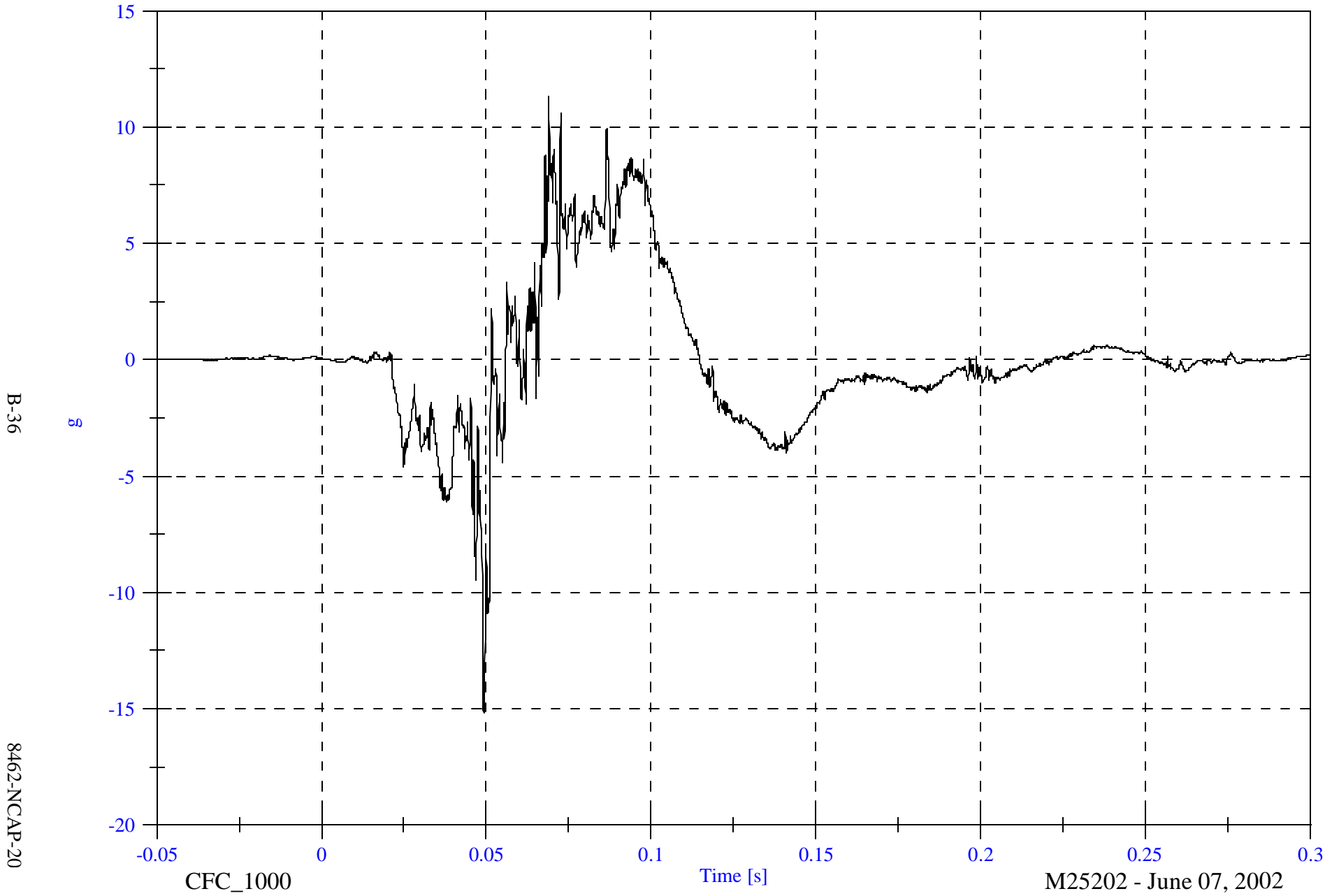


2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 11.3 [g] at 0.069 [s]

Min: -15.2 [g] at 0.049 [s]

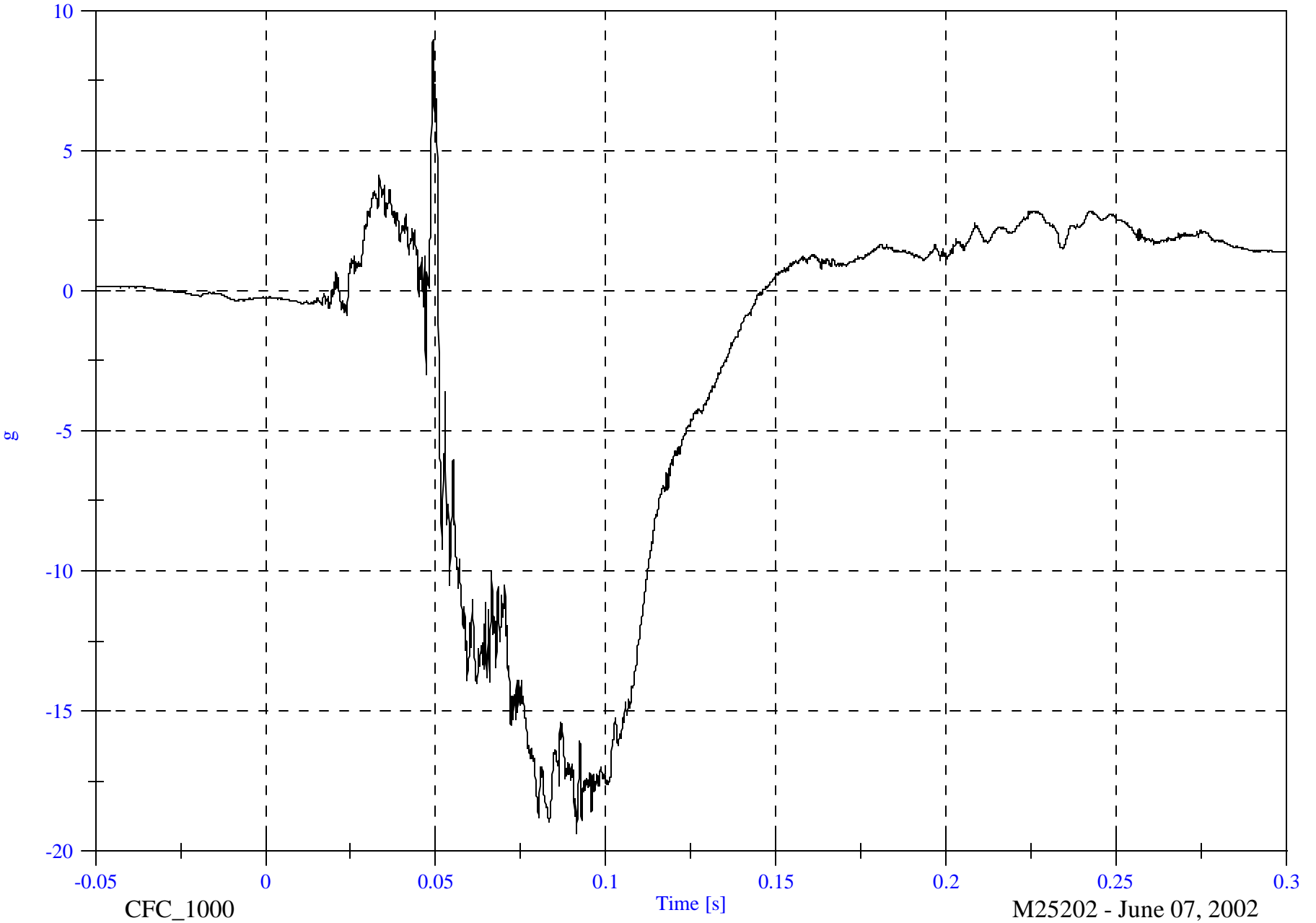
P1 Pelvic y



2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 8.9 [g] at 0.049 [s]  
Min: -19.4 [g] at 0.091 [s]

P1 Pelvic z



B-37

8462-NCAP-20

CFC\_1000

Time [s]

M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

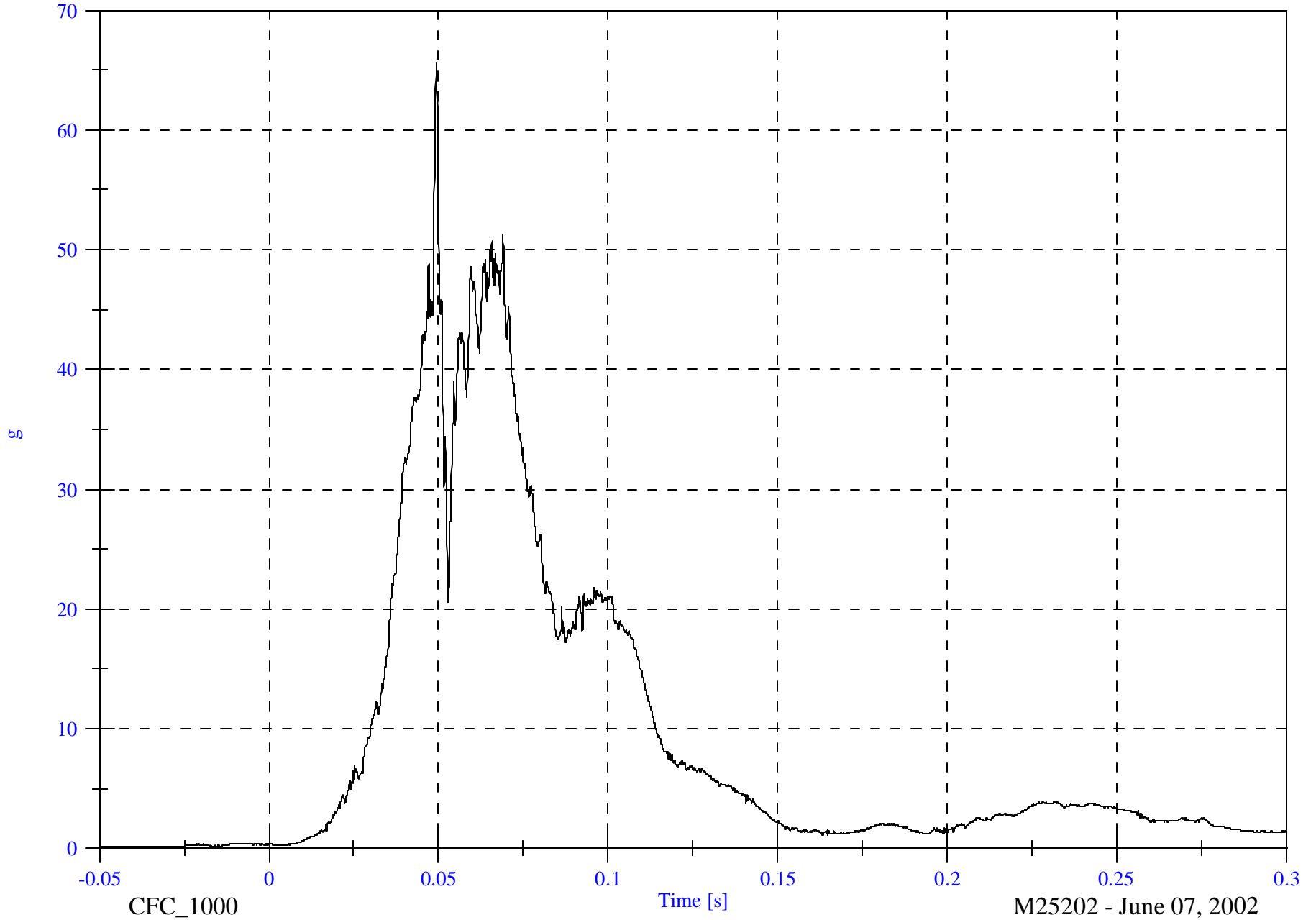
P1 Pelvic Resultant

Max: 65.7 [g] at 0.049 [s]

Min: 0.1 [g] at -0.030 [s]

B-38

8462-NCAP-20



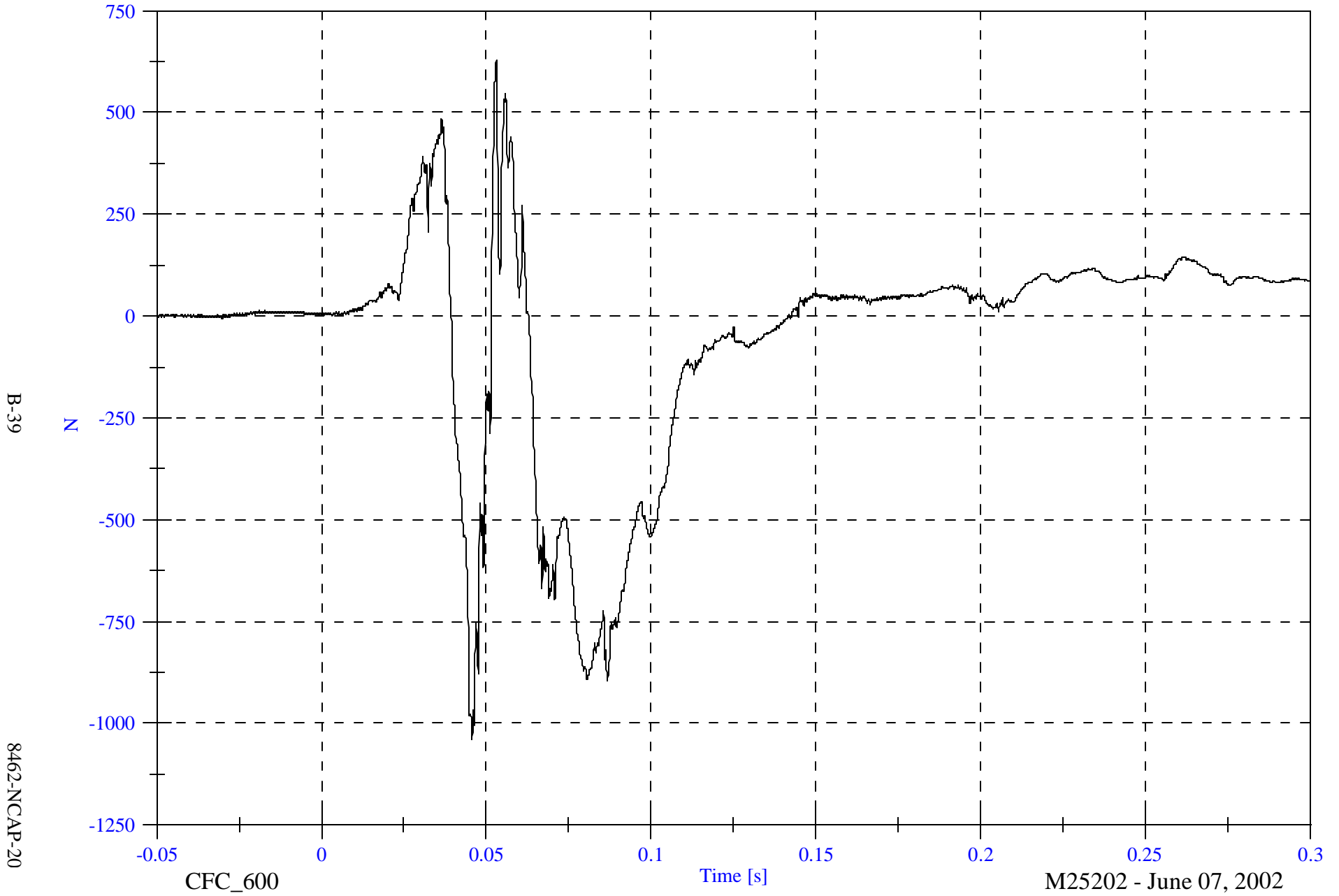
CFC\_1000

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2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 628.8 [N] at 0.053 [s]  
Min: -1039.5 [N] at 0.046 [s]

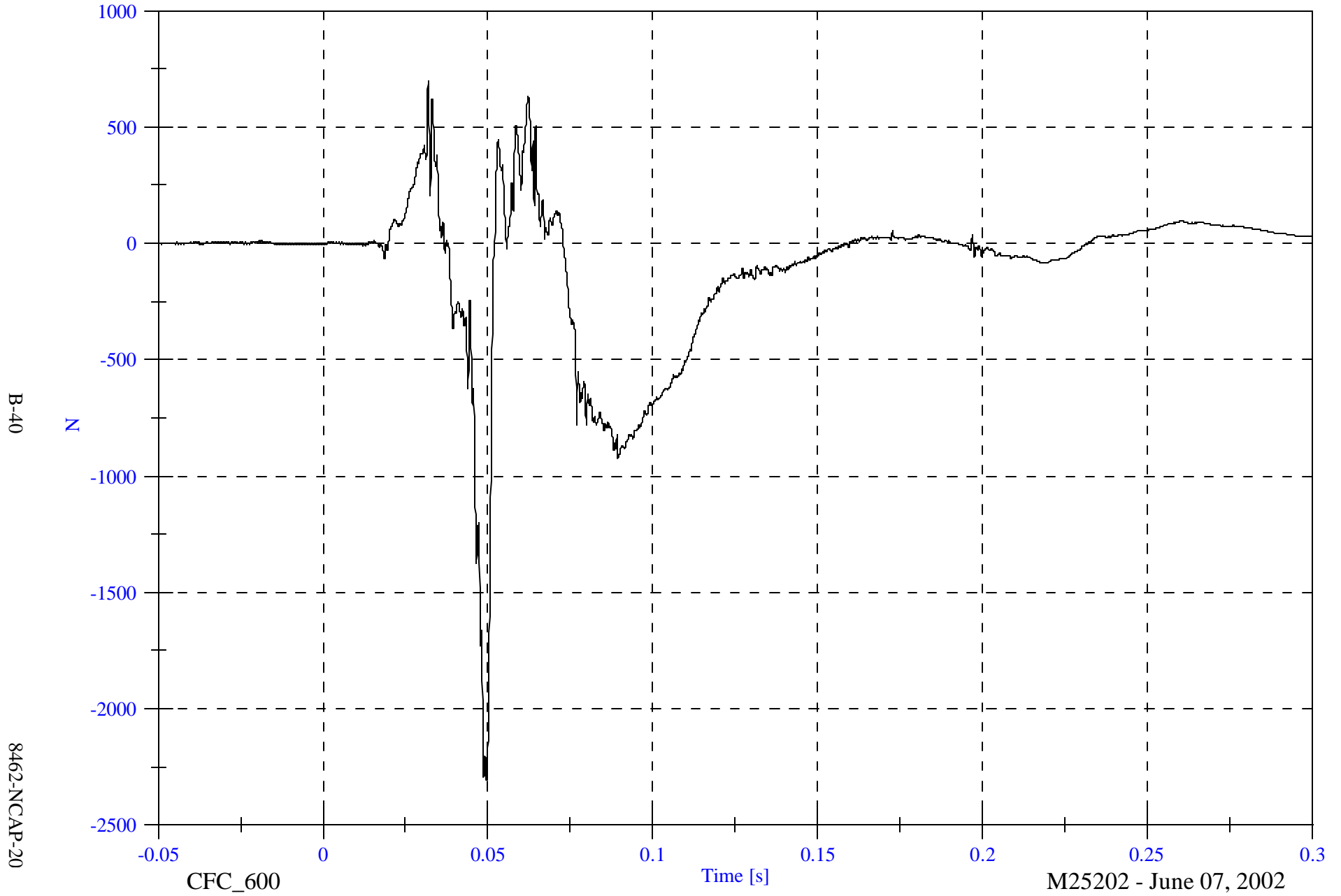
P1 Left Femur z



2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 695.4 [N] at 0.032 [s]  
Min: -2307.8 [N] at 0.050 [s]

P1 Right Femur z



B-40

8462-NCAP-20

CFC\_600

Time [s]

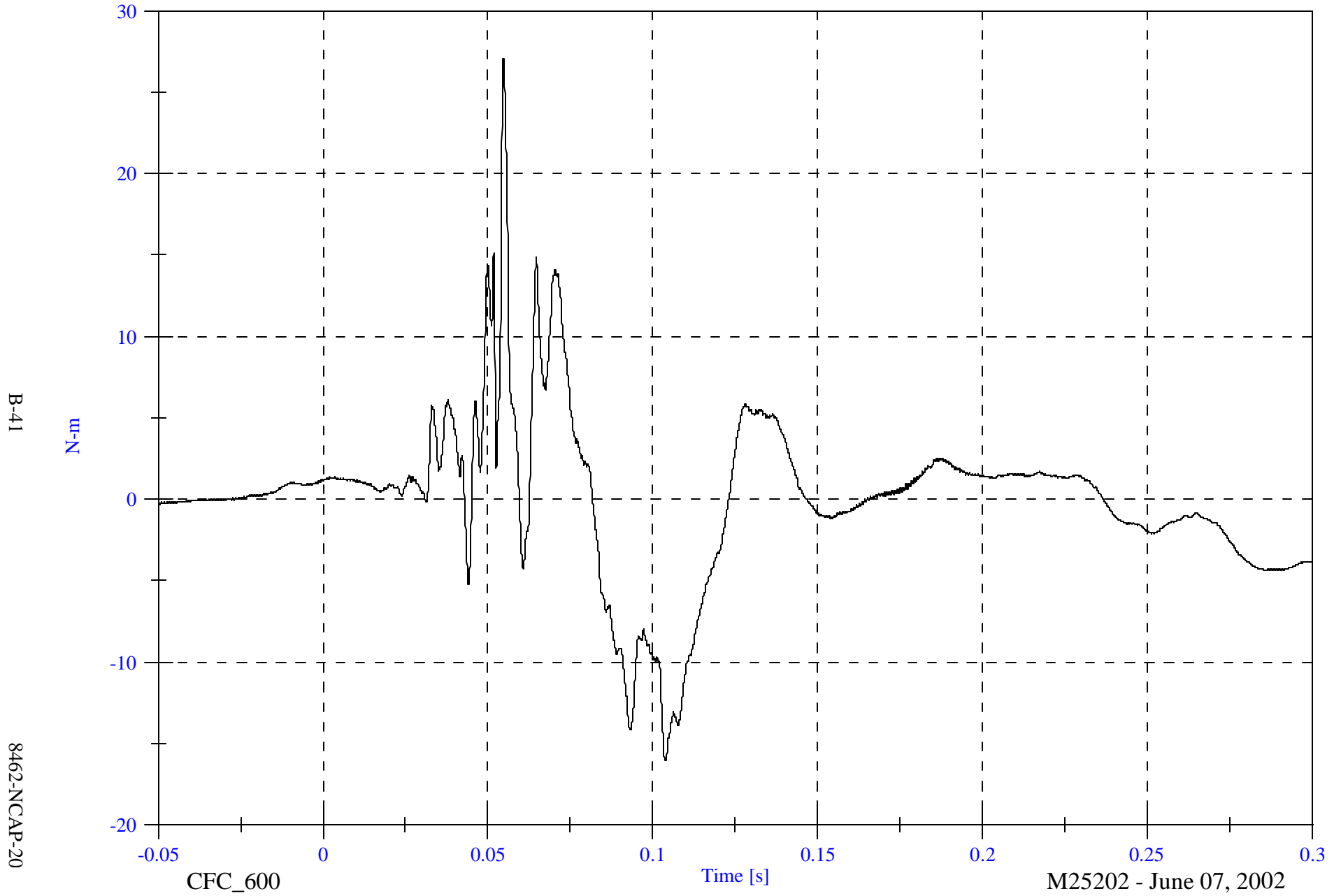
M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 27.1 [N-m] at 0.055 [s]

Min: -16.0 [N-m] at 0.104 [s]

P1 Left Upper Tibia Mx



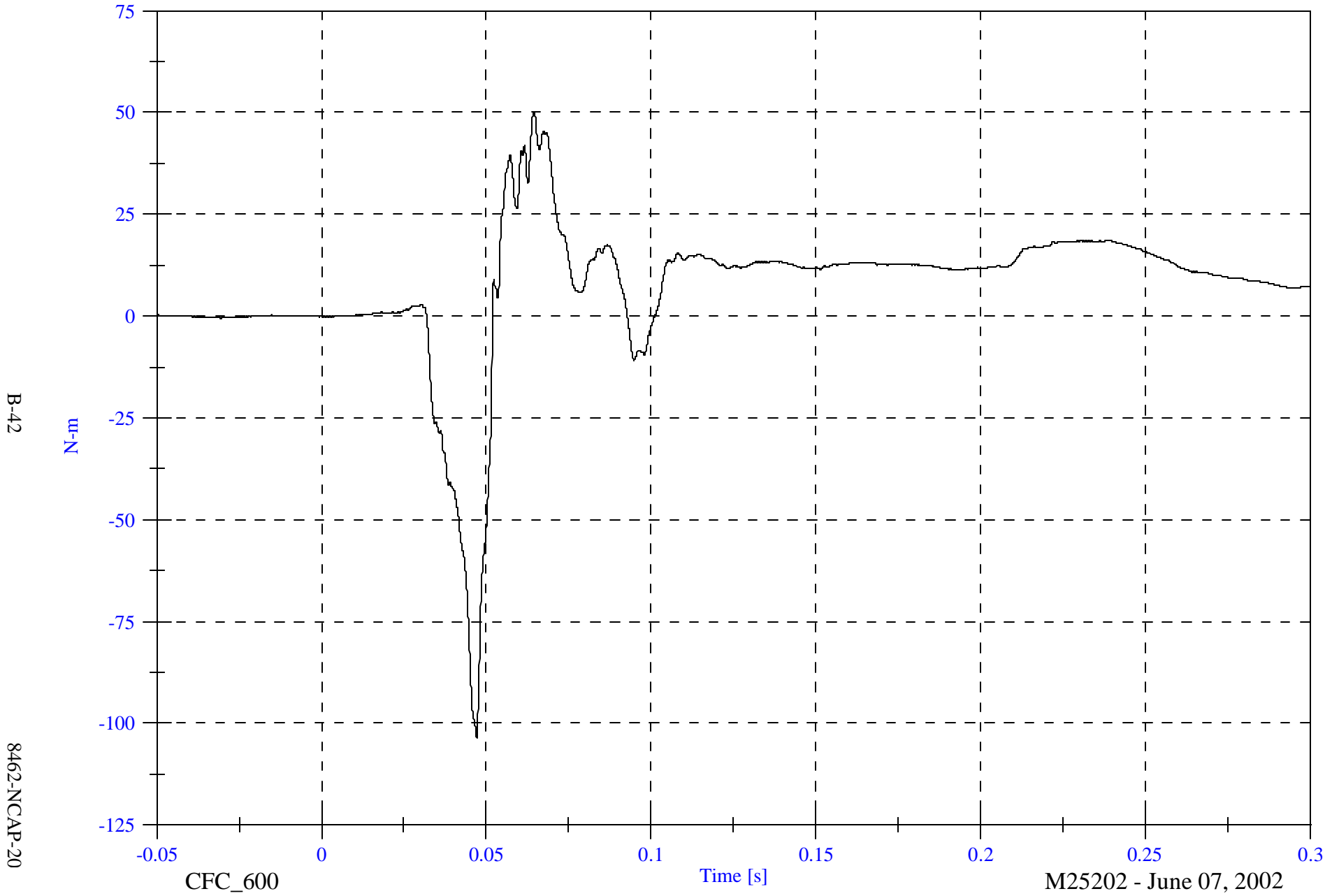
B-41

8462-NCAP-20

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 50.2 [N-m] at 0.064 [s]  
Min: -103.5 [N-m] at 0.047 [s]

P1 Left Upper Tibia My



B-42

8462-NCAP-20

CFC\_600

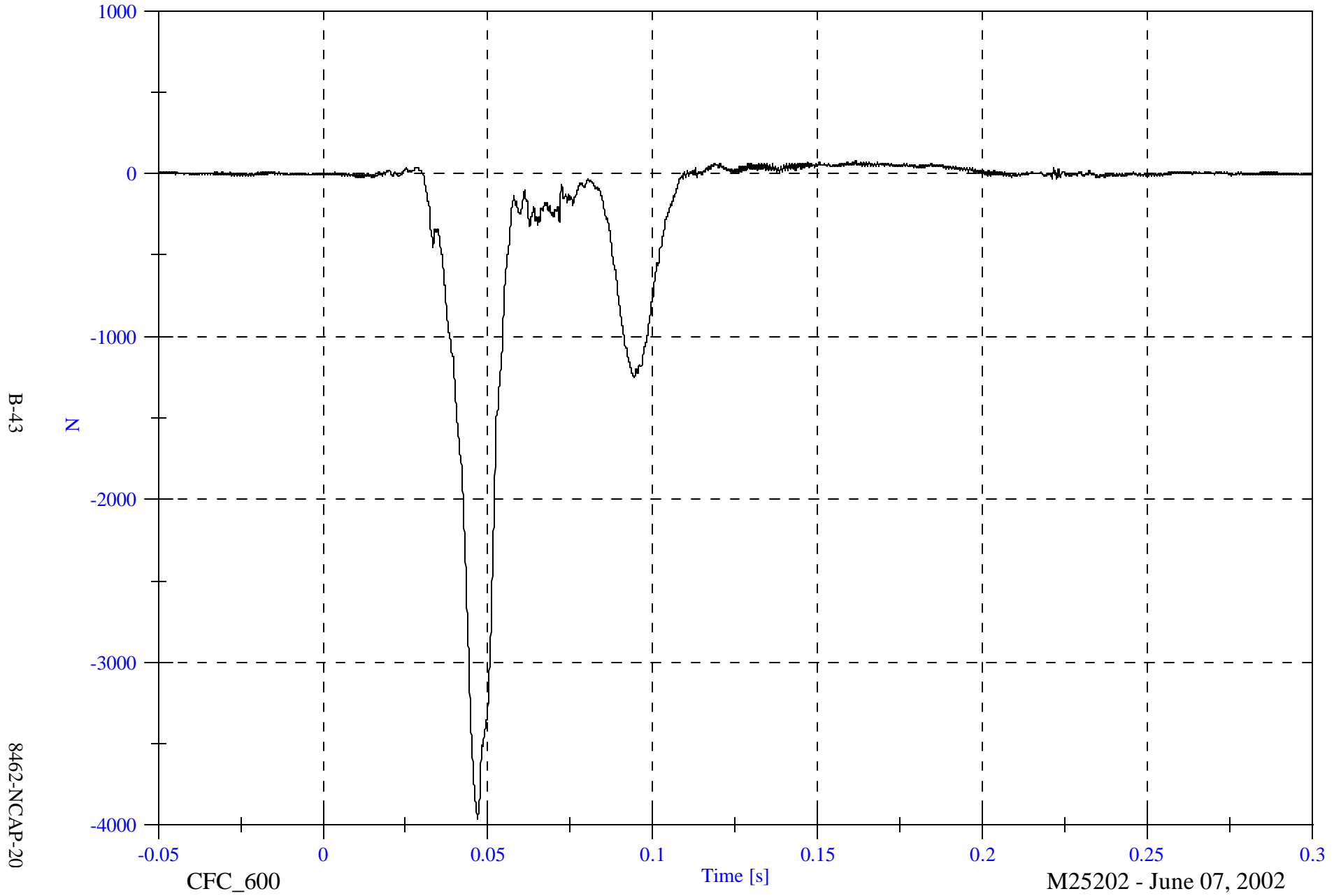
Time [s]

M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 80.3 [N] at 0.162 [s]  
Min: -3960.3 [N] at 0.047 [s]

P1 Left Lower Tibia Fz



B-43

8462-NCAP-20

CFC\_600

Time [s]

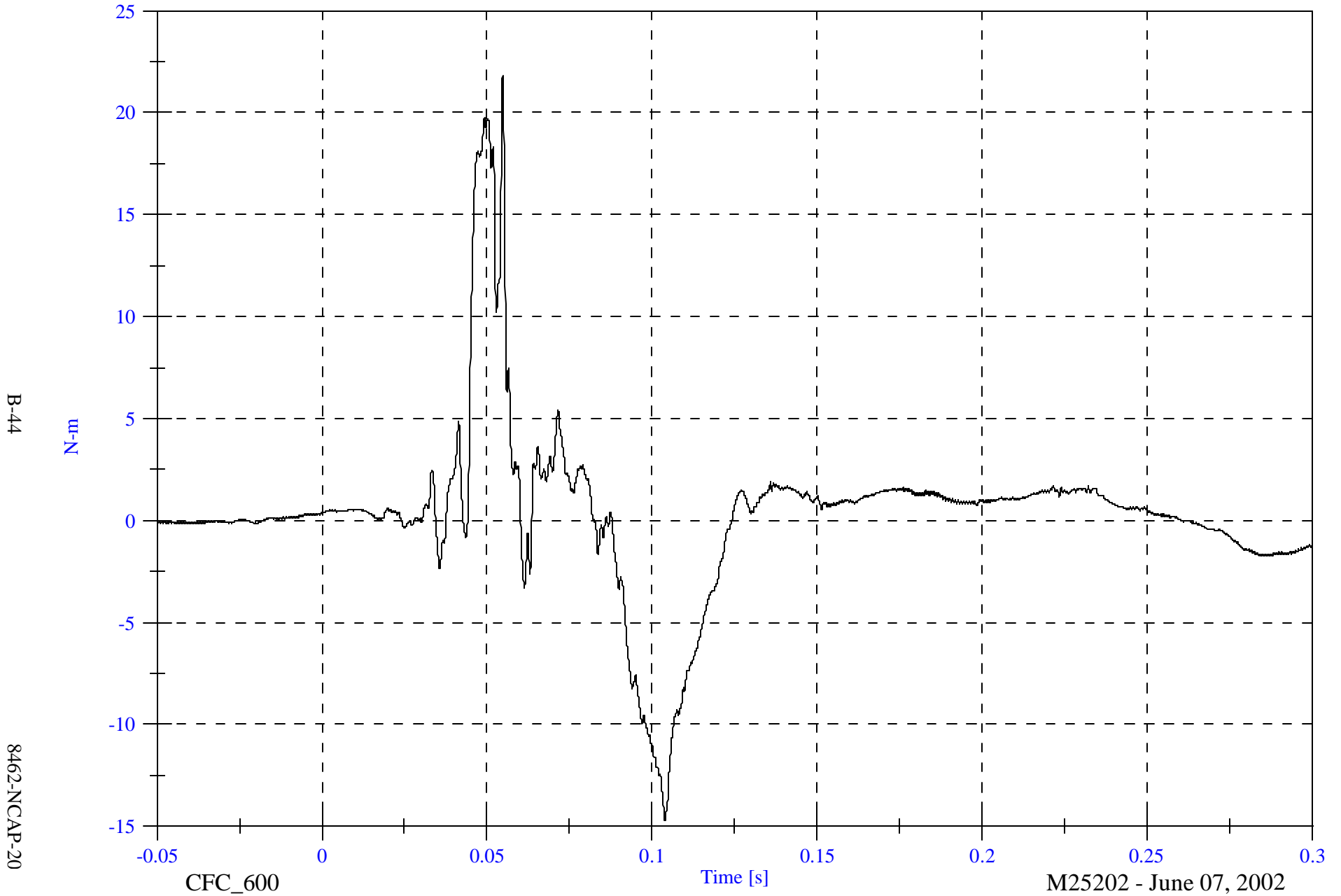
M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 21.8 [N-m] at 0.055 [s]

Min: -14.7 [N-m] at 0.104 [s]

P1 Left Lower Tibia Mx



B-44

8462-NCAP-20

CFC\_600

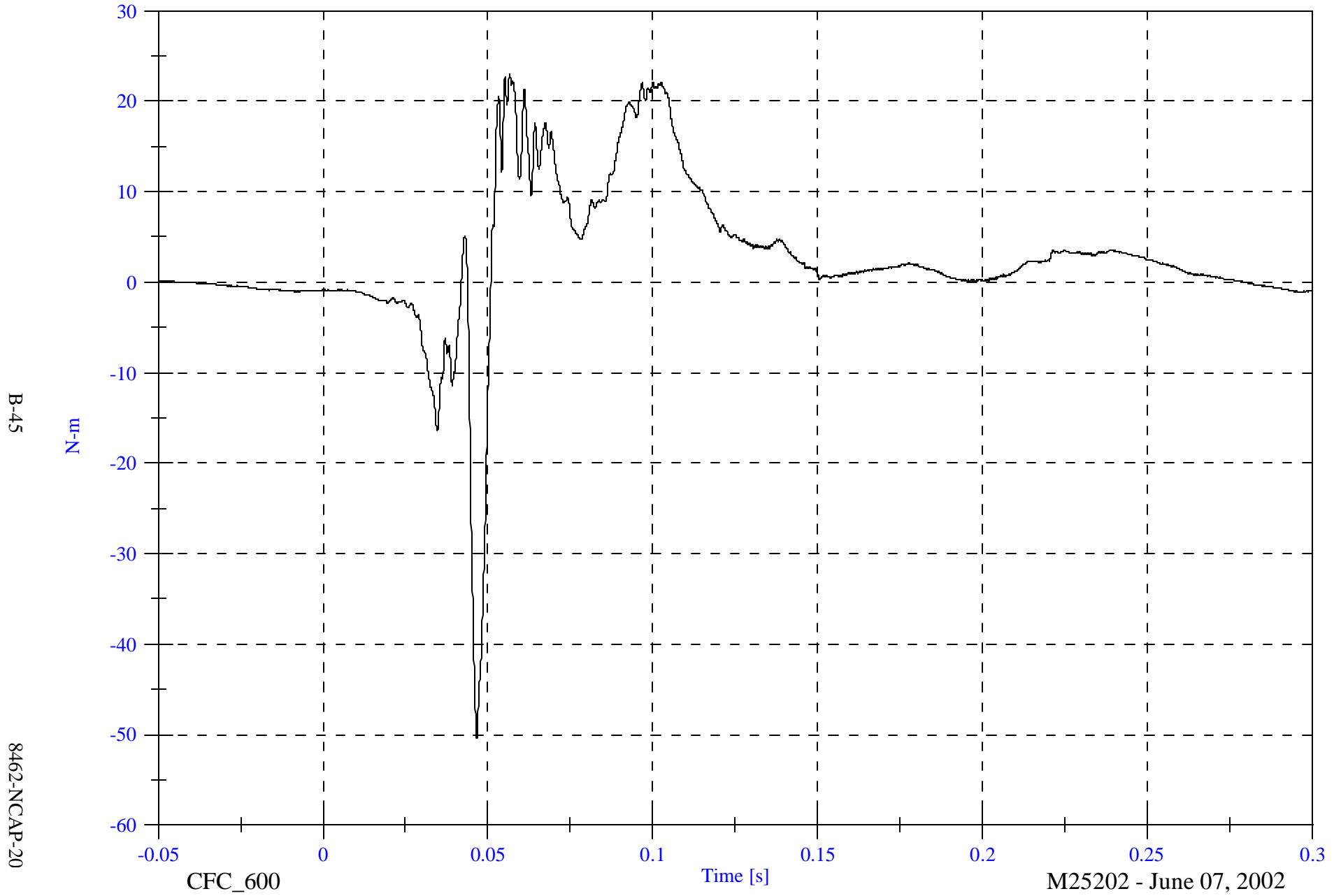
M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 23.0 [N-m] at 0.057 [s]

Min: -50.4 [N-m] at 0.047 [s]

P1 Left Lower Tibia My



B-45

8462-NCAP-20

CFC\_600

Time [s]

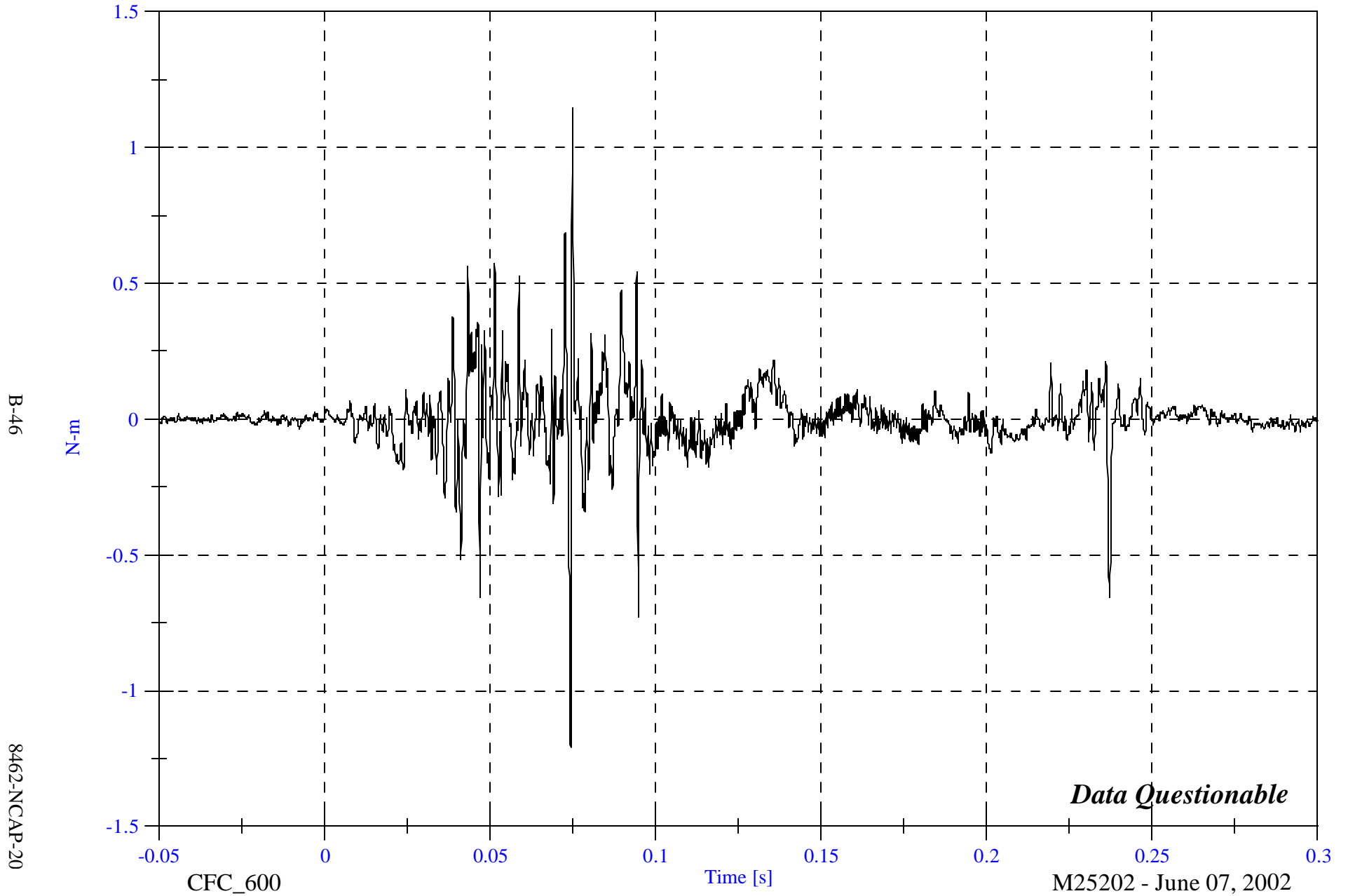
M25202 - June 07, 2002

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Max: 1.1 [N-m] at 0.075 [s]

P1 Right Upper Tibia Mx

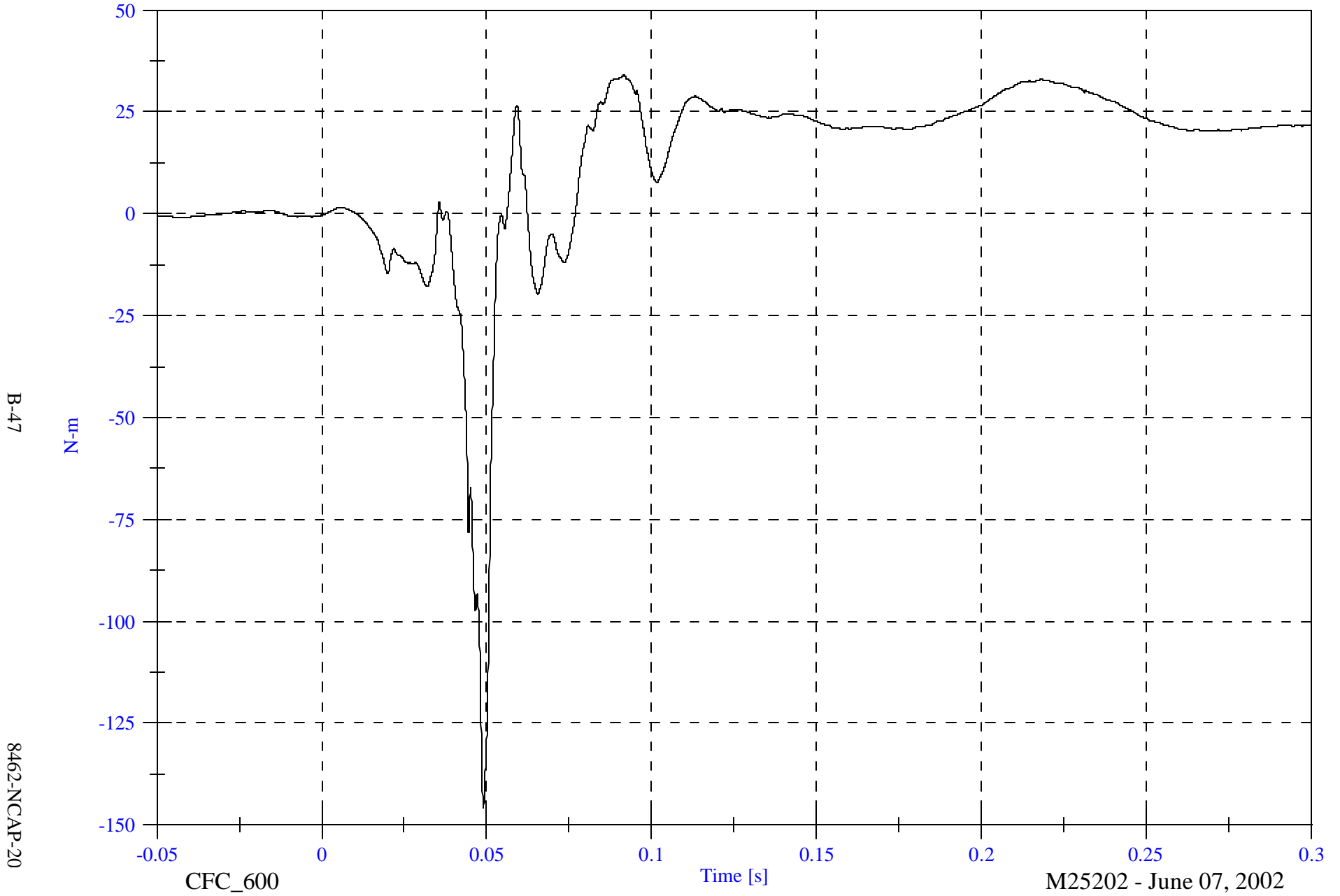
Min: -1.2 [N-m] at 0.074 [s]



2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 34.0 [N-m] at 0.092 [s]  
Min: -145.8 [N-m] at 0.049 [s]

P1 Right Upper Tibia My



B-47

8462-NCAP-20

CFC\_600

Time [s]

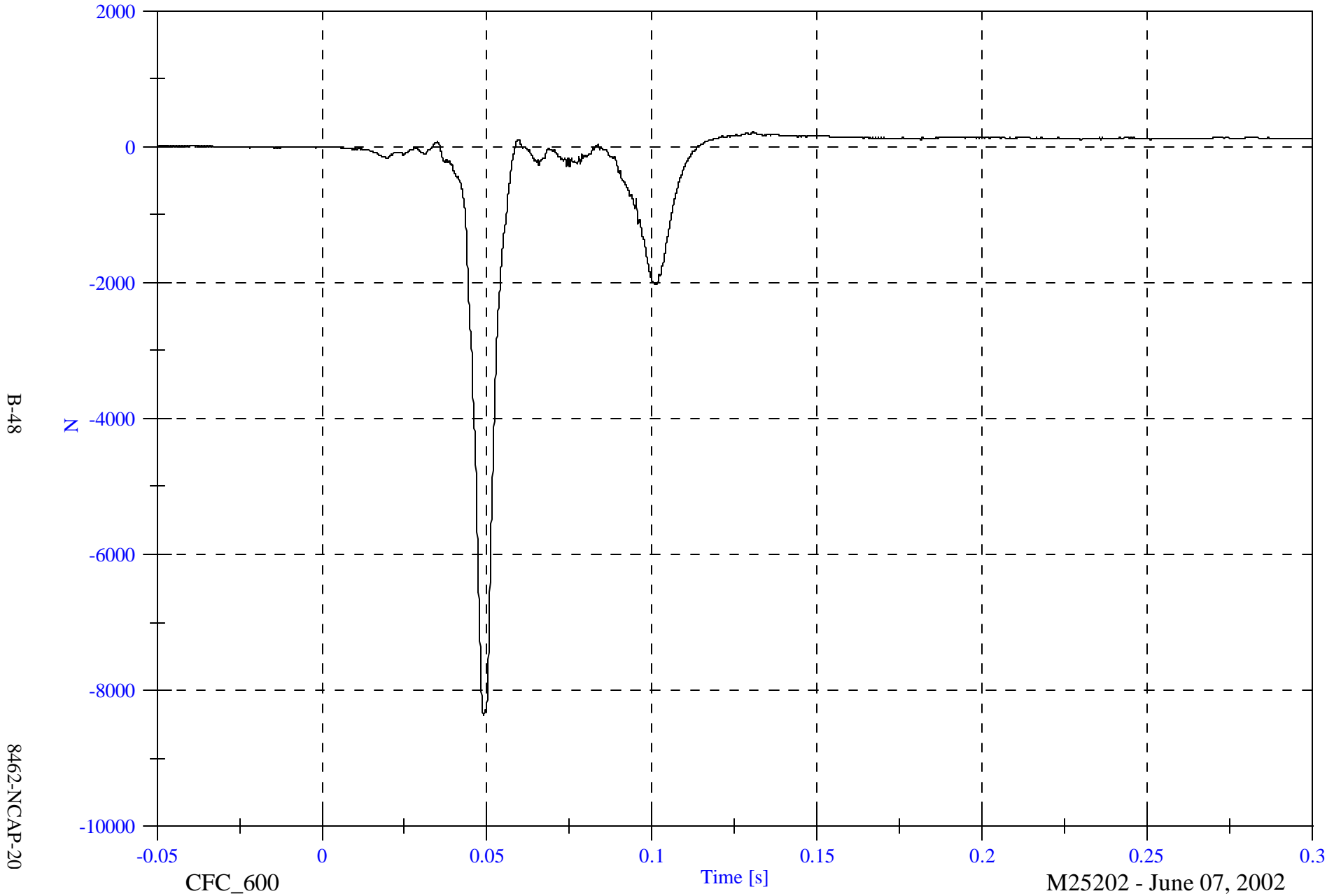
M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 217.1 [N] at 0.131 [s]

Min: -8372.7 [N] at 0.049 [s]

P1 Right Lower Tibia Fz



B-48

8462-NCAP-20

CFC\_600

Time [s]

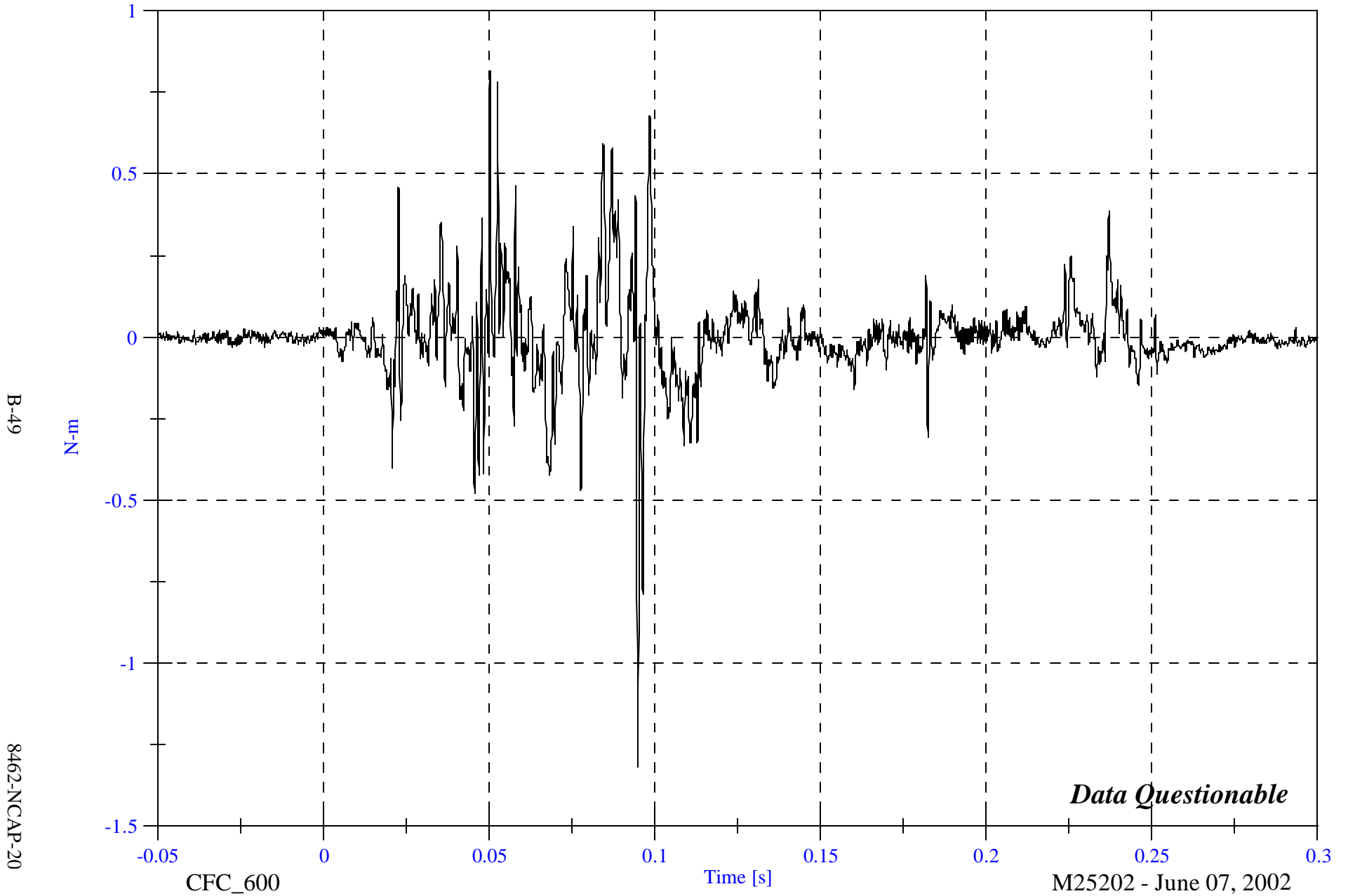
M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 0.8 [N-m] at 0.050 [s]

P1 Right Lower Tibia Mx

Min: -1.3 [N-m] at 0.095 [s]



B-49

8462-NCAP-20

CFC\_600

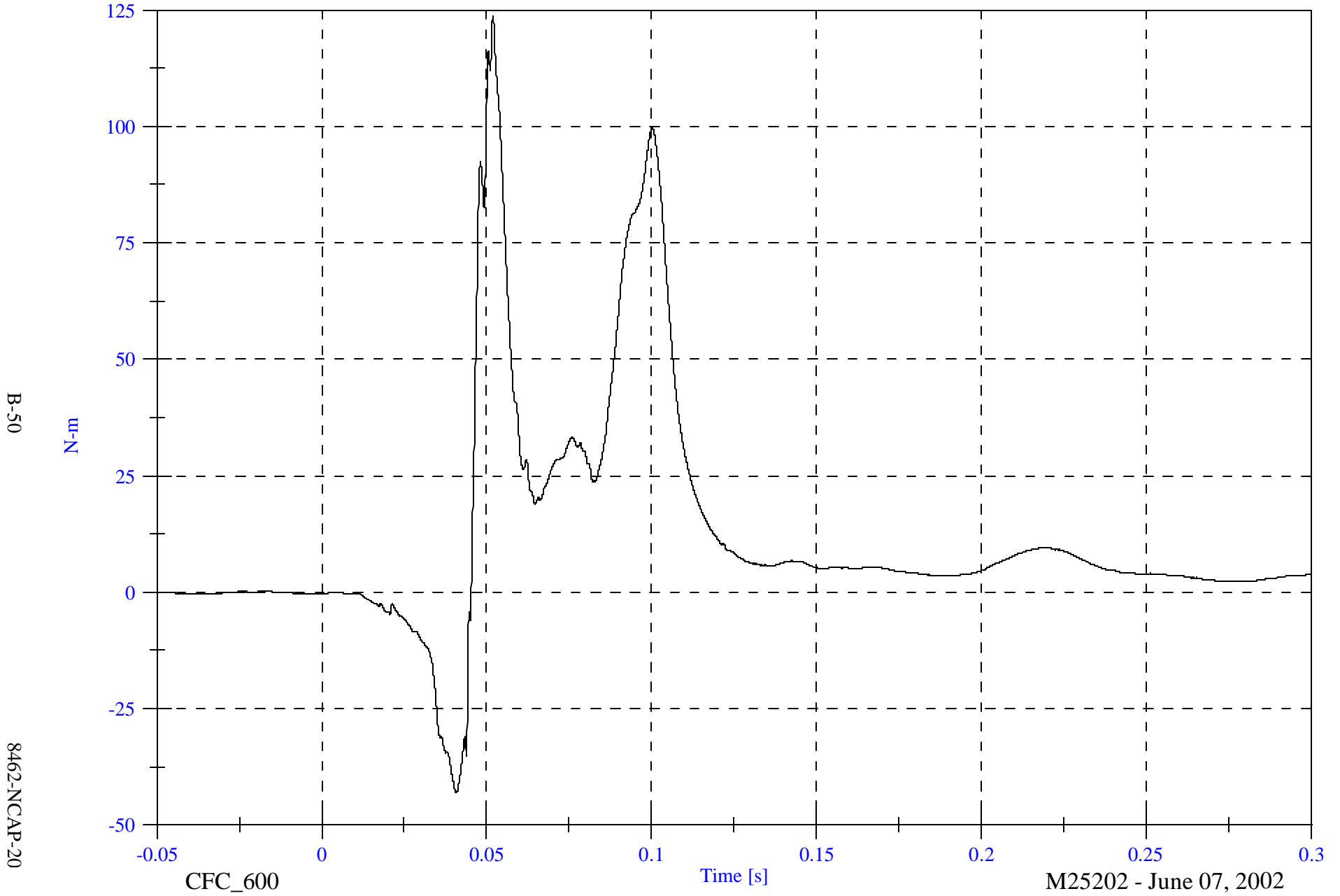
M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 123.7 [N-m] at 0.052 [s]

Min: -43.0 [N-m] at 0.041 [s]

P1 Right Lower Tibia My



B-50

8462-NCAP-20

CFC\_600

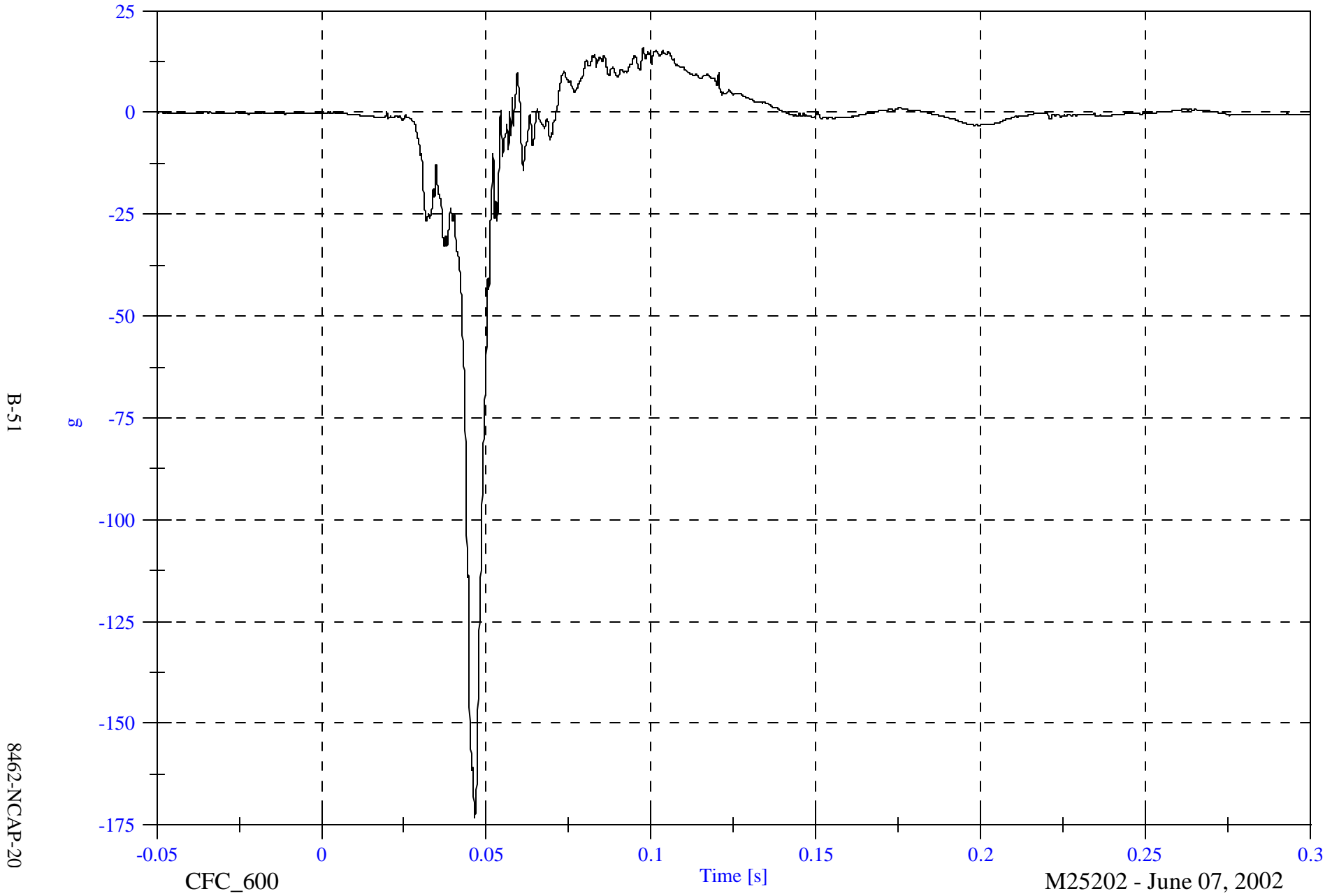
Time [s]

M25202 - June 07, 2002

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Max: 15.8 [g] at 0.098 [s]  
Min: -173.0 [g] at 0.047 [s]

P1 Left Foot Aft x



B-51

8462-NCAP-20

CFC\_600

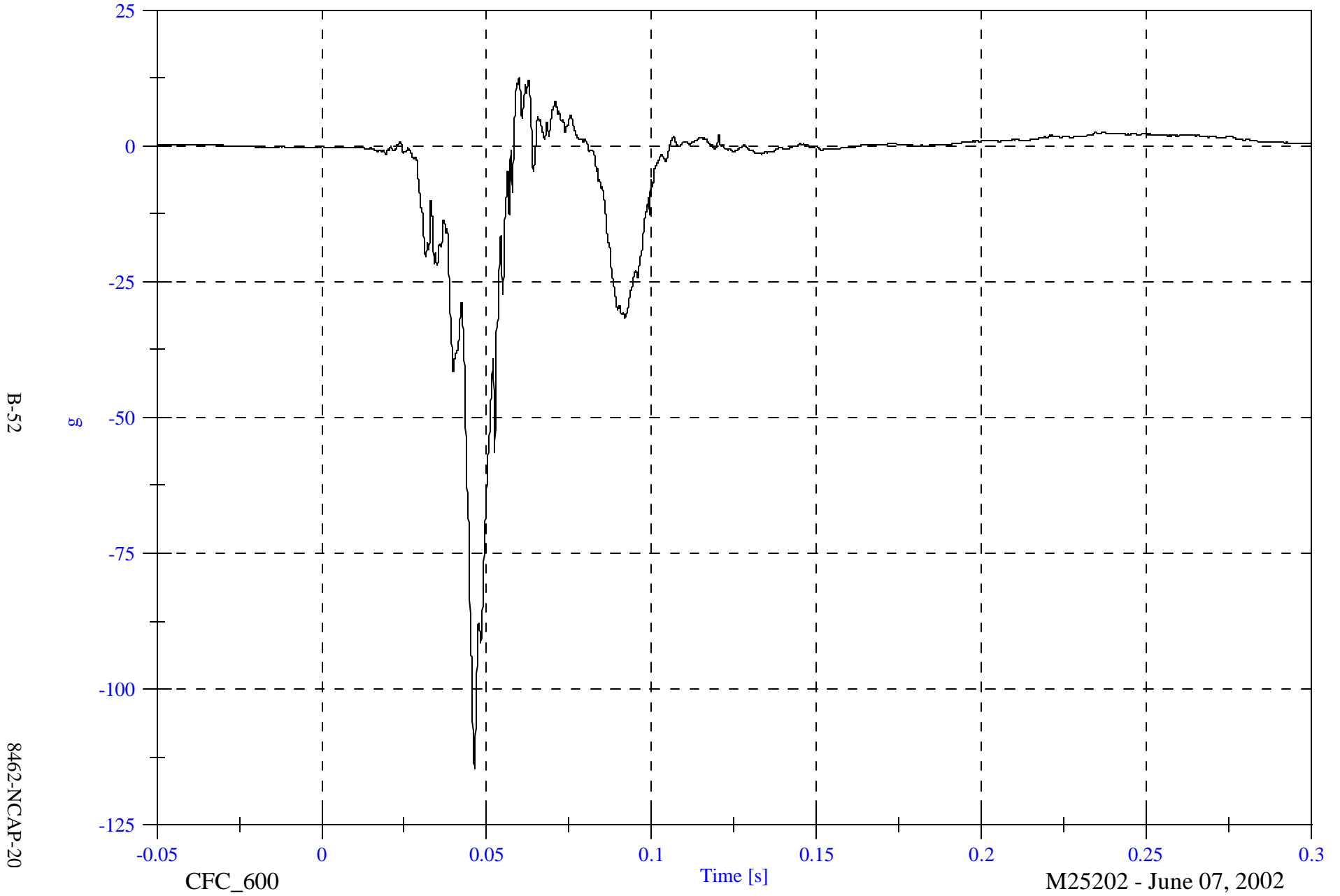
Time [s]

M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 12.6 [g] at 0.060 [s]  
Min: -114.7 [g] at 0.046 [s]

P1 Left Foot Aft z

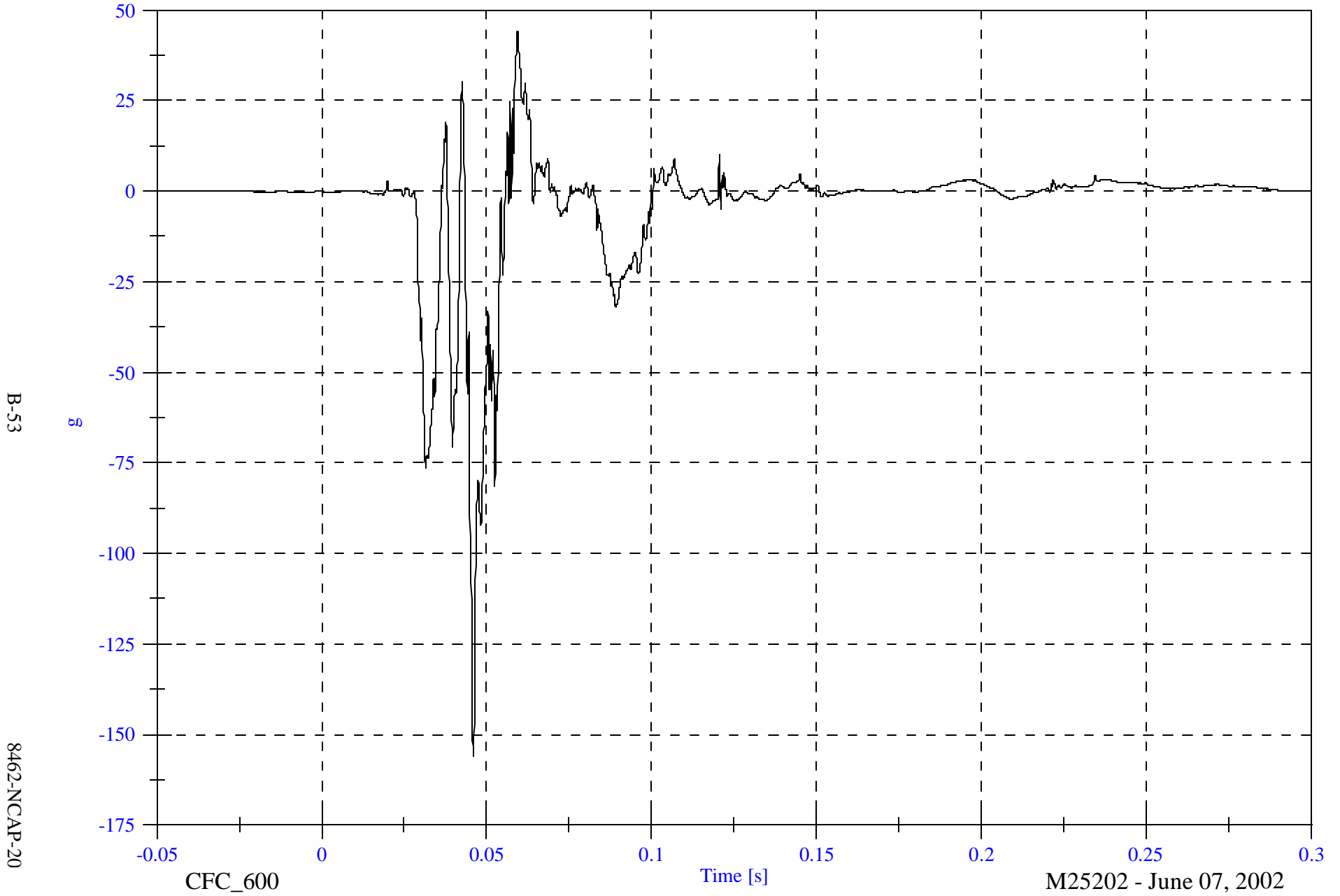


2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 44.1 [g] at 0.059 [s]

Min: -155.8 [g] at 0.046 [s]

P1 Left Foot Fore z

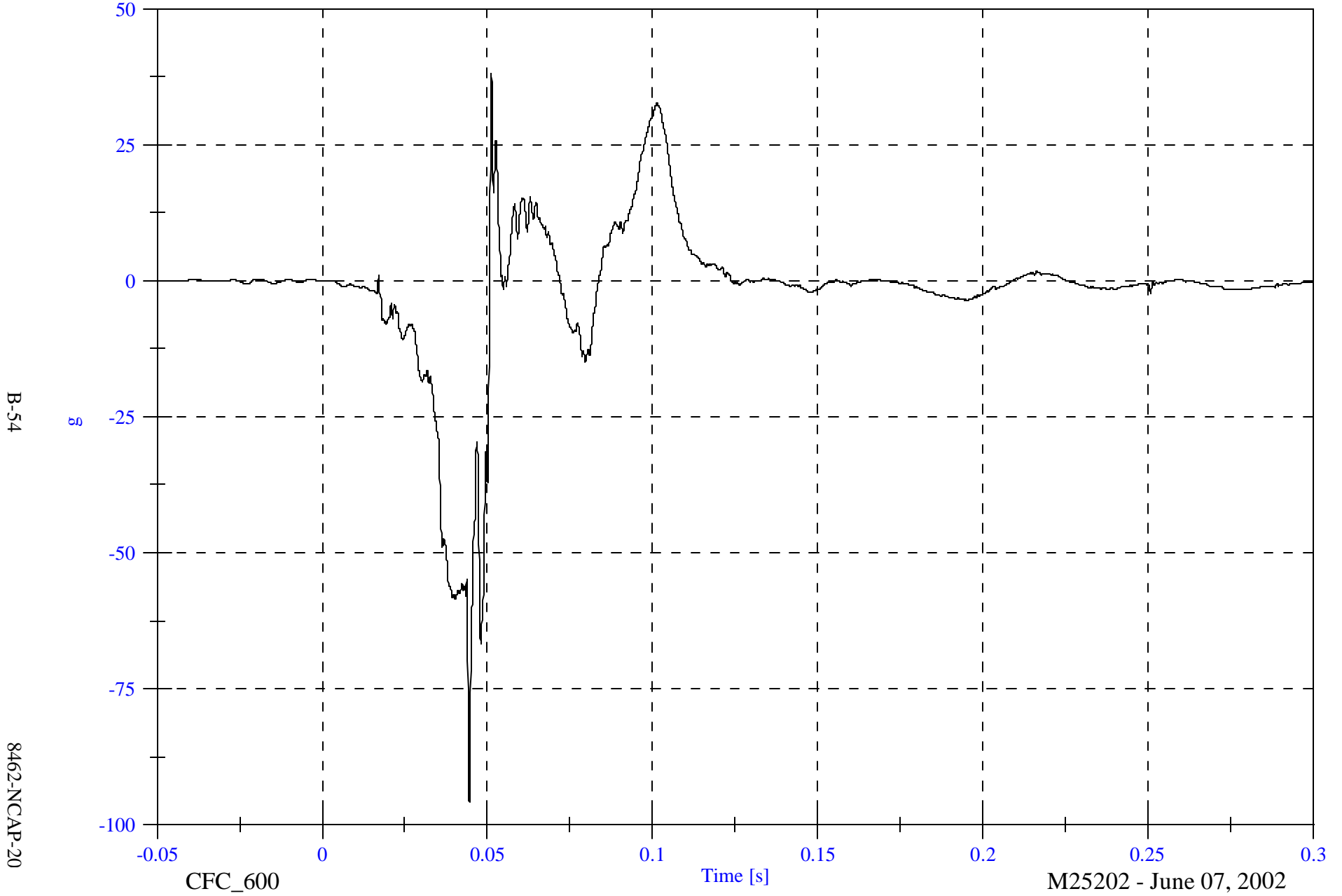


2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 38.0 [g] at 0.051 [s]

Min: -95.8 [g] at 0.045 [s]

P1 Right Foot Aft x

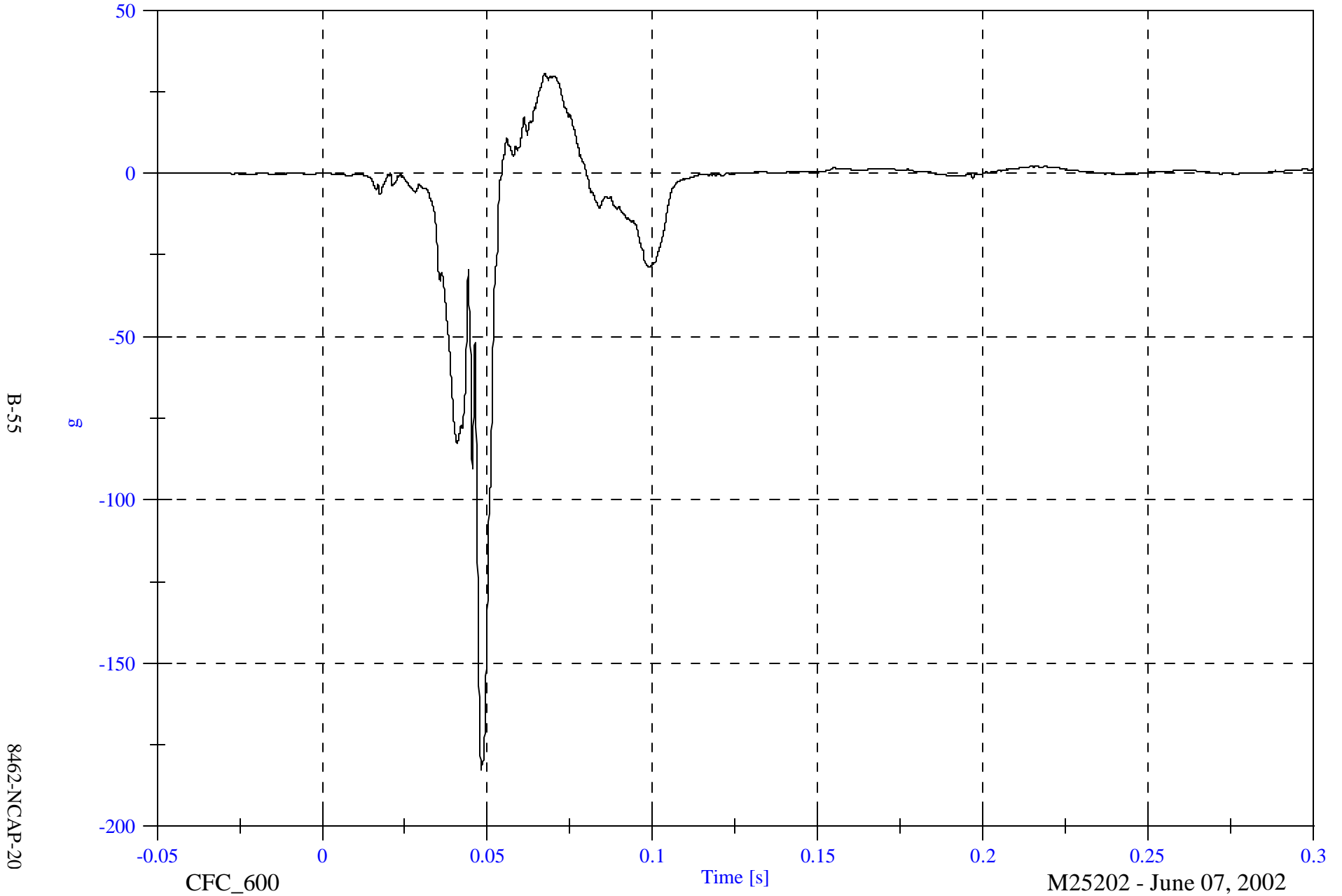


2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 30.5 [g] at 0.067 [s]

Min: -182.7 [g] at 0.048 [s]

P1 Right Foot Aft z

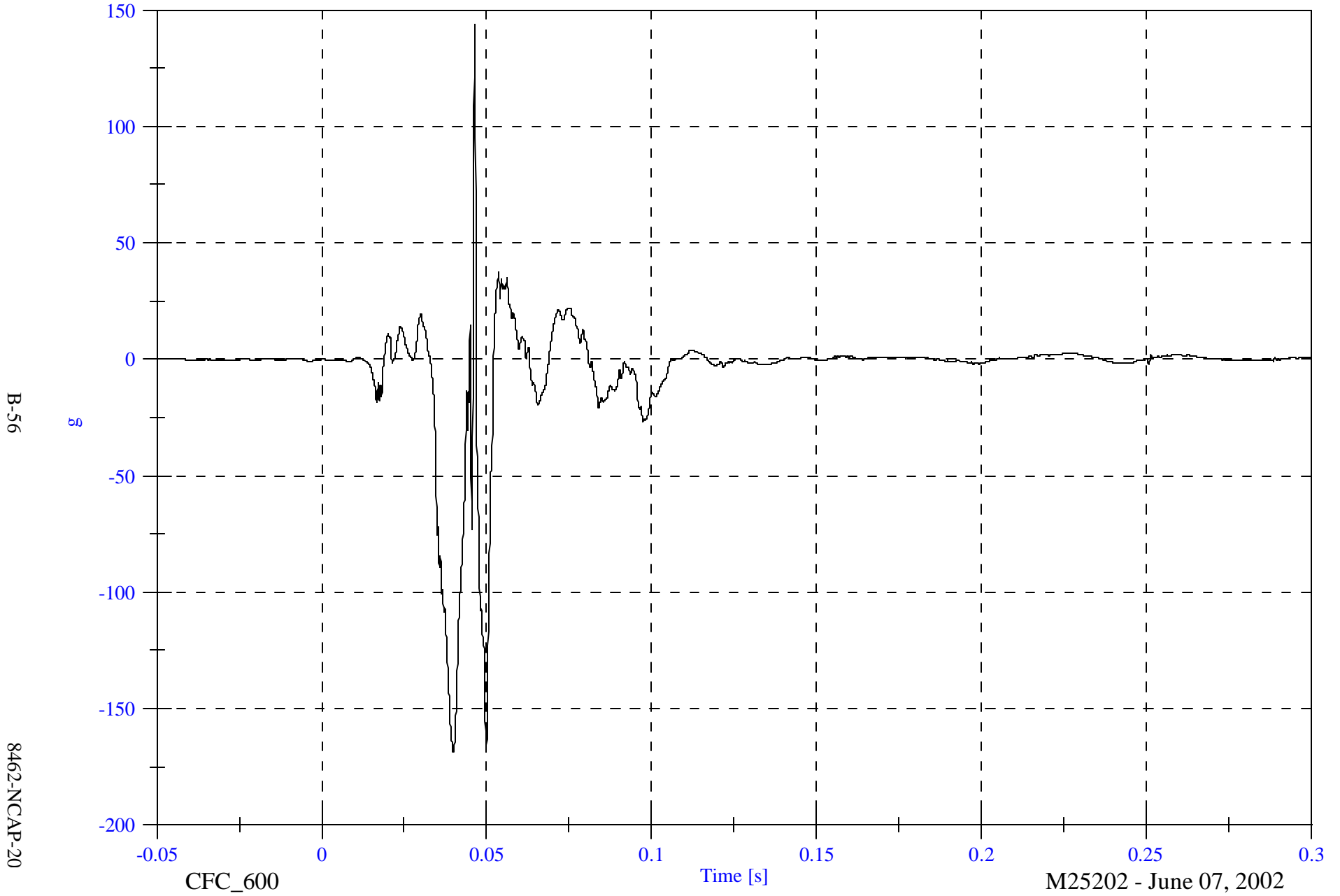


2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 143.6 [g] at 0.046 [s]

Min: -168.6 [g] at 0.040 [s]

P1 Right Foot Fore z



B-56

8462-NCAP-20

CFC\_600

Time [s]

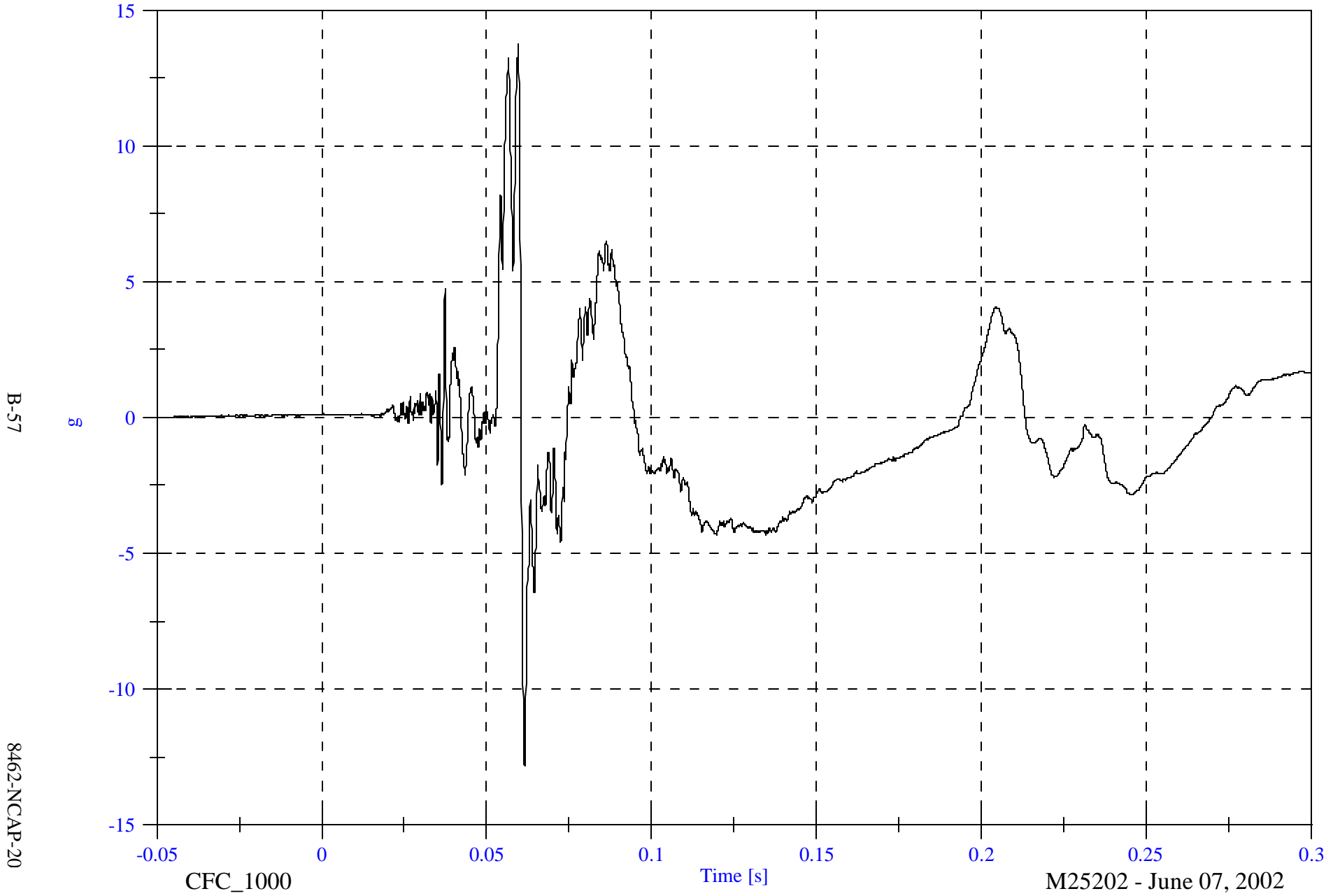
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Max: 13.7 [g] at 0.060 [s]

P2 Head 9 Array X Arm Ay

Min: -12.8 [g] at 0.062 [s]



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Max: 41.3 [g] at 0.061 [s]

P2 Head 9 Array X Arm Az

Min: -11.4 [g] at 0.124 [s]

B-58

g

8462-NCAP-20



CFC\_1000

M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

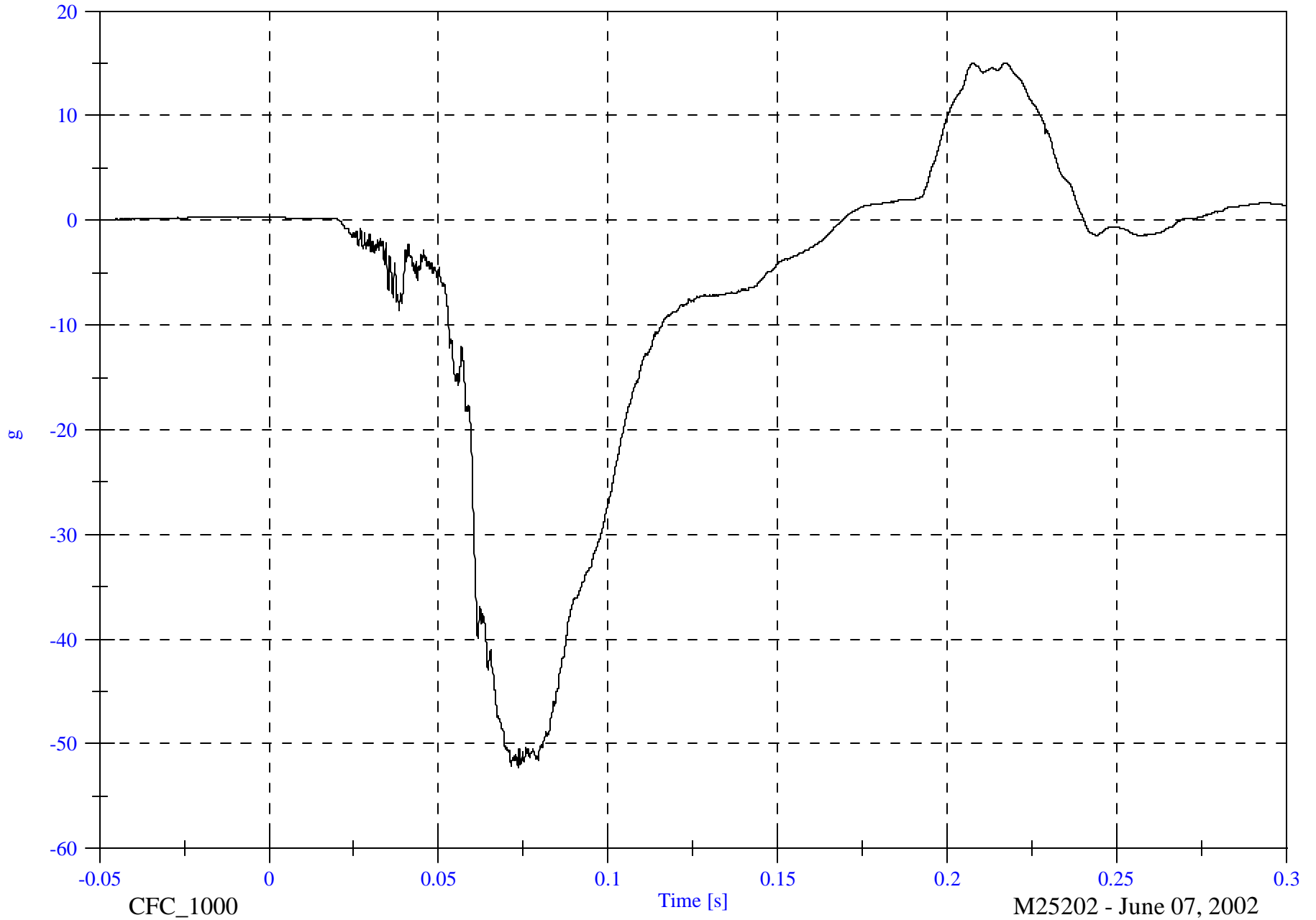
P2 Head 9 Array Y Arm Ax

Max: 15.0 [g] at 0.217 [s]

Min: -52.3 [g] at 0.073 [s]

B-59

8462-NCAP-20



CFC\_1000

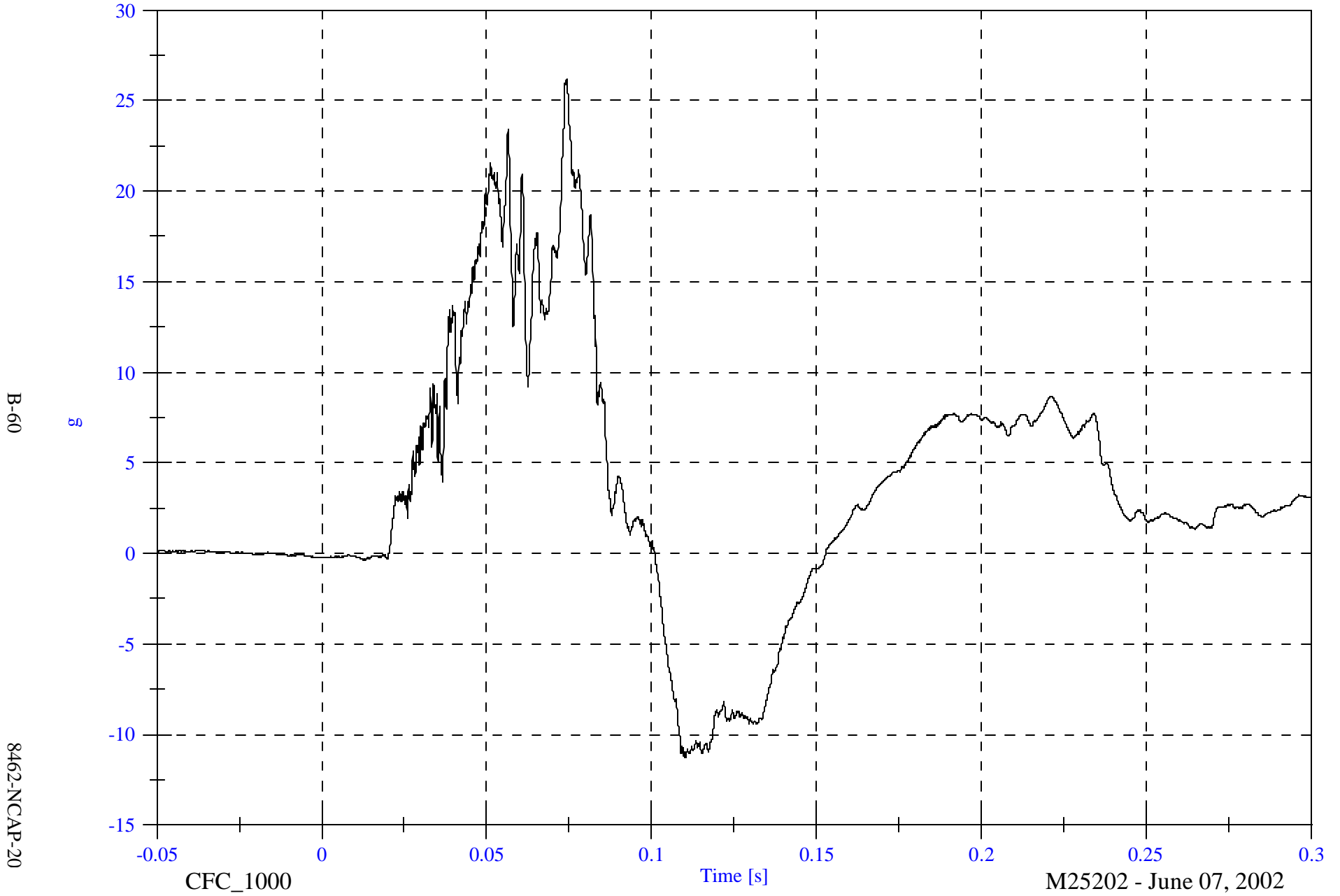
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Max: 26.2 [g] at 0.074 [s]

P2 Head 9 Array Y Arm Az

Min: -11.3 [g] at 0.110 [s]



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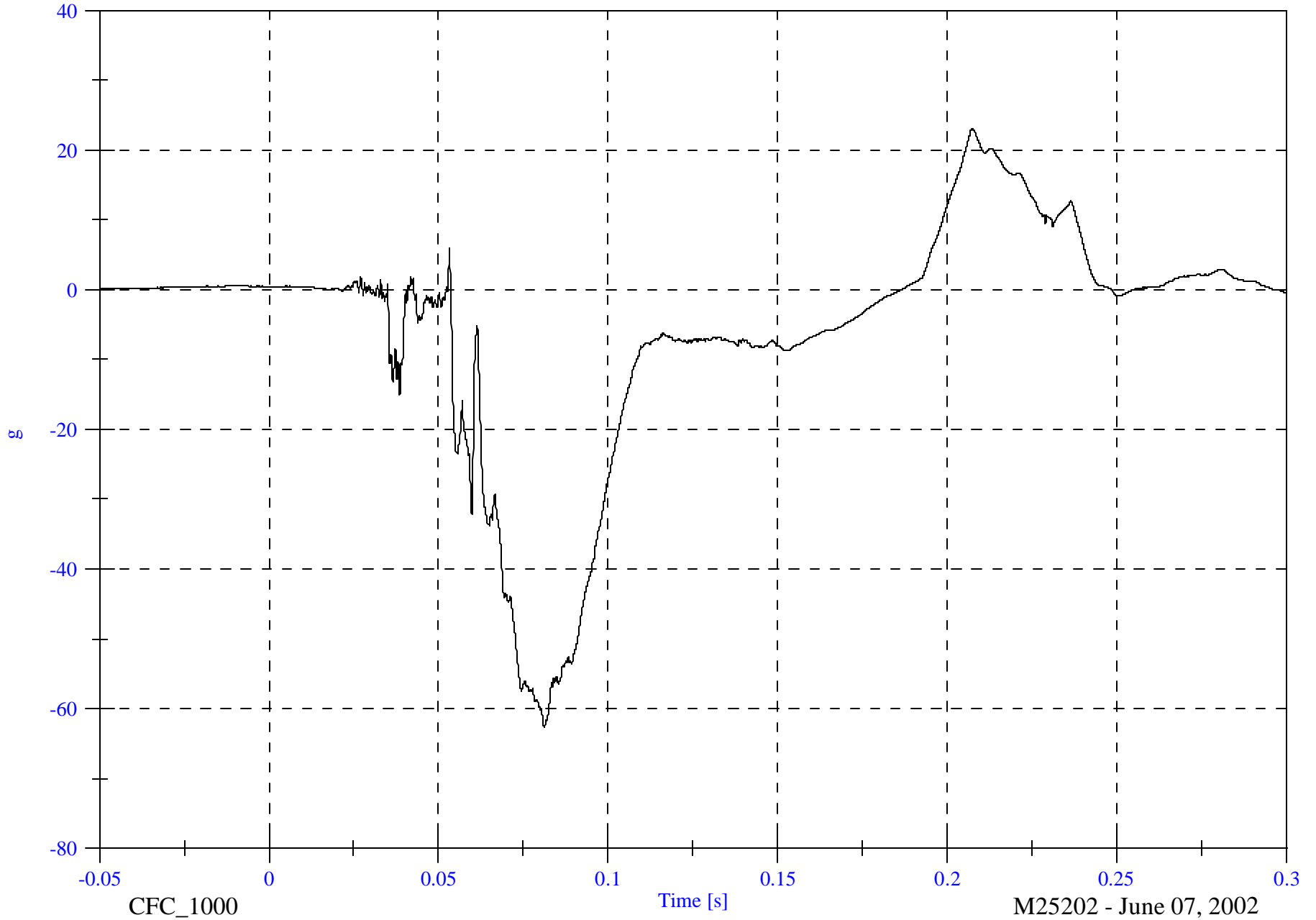
P2 Head 9 Array Z Arm Ax

Max: 23.0 [g] at 0.208 [s]

Min: -62.6 [g] at 0.081 [s]

B-61

8462-NCAP-20



CFC\_1000

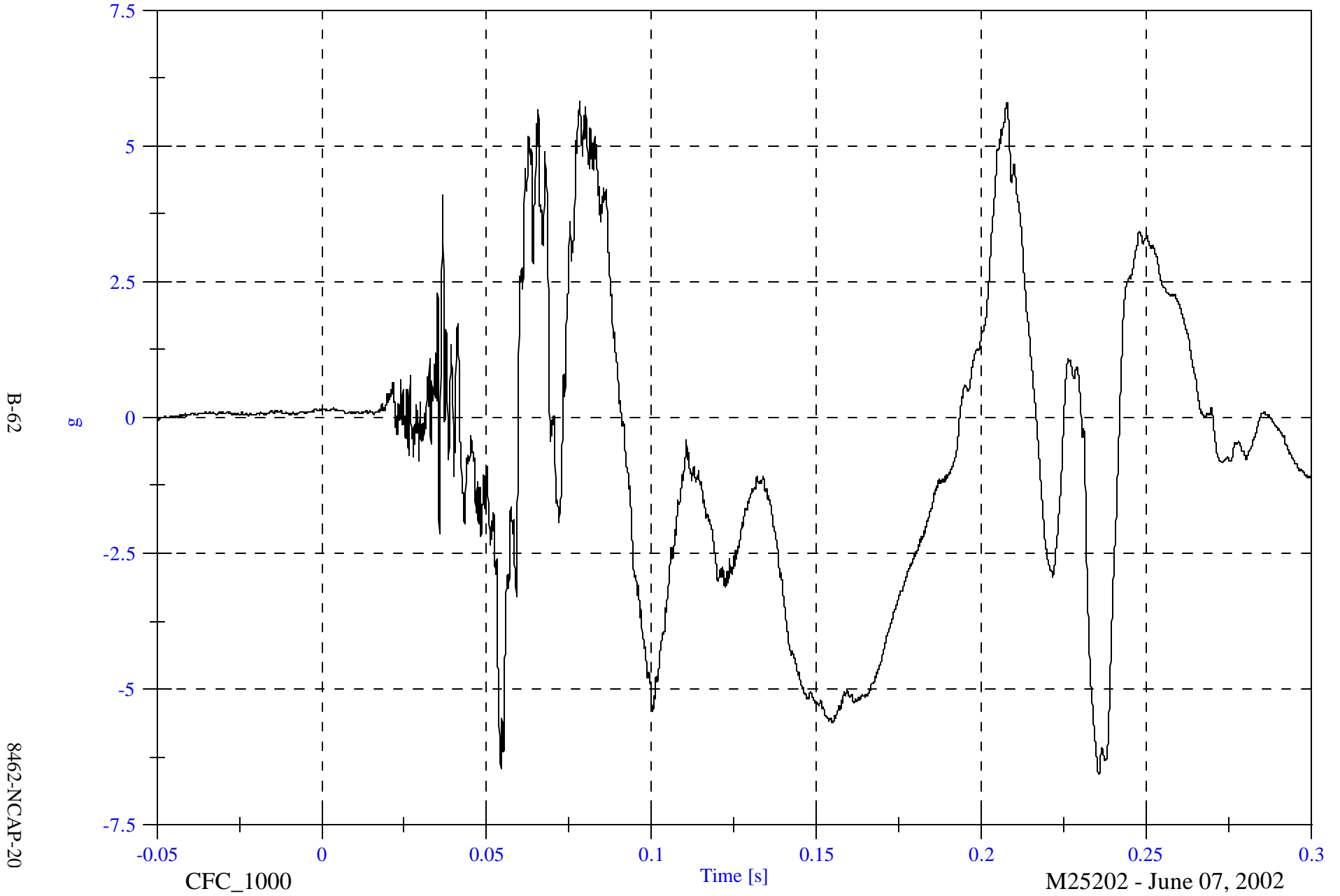
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P2 Head 9 Array Z Arm Ay

Max: 5.8 [g] at 0.078 [s]

Min: -6.6 [g] at 0.236 [s]

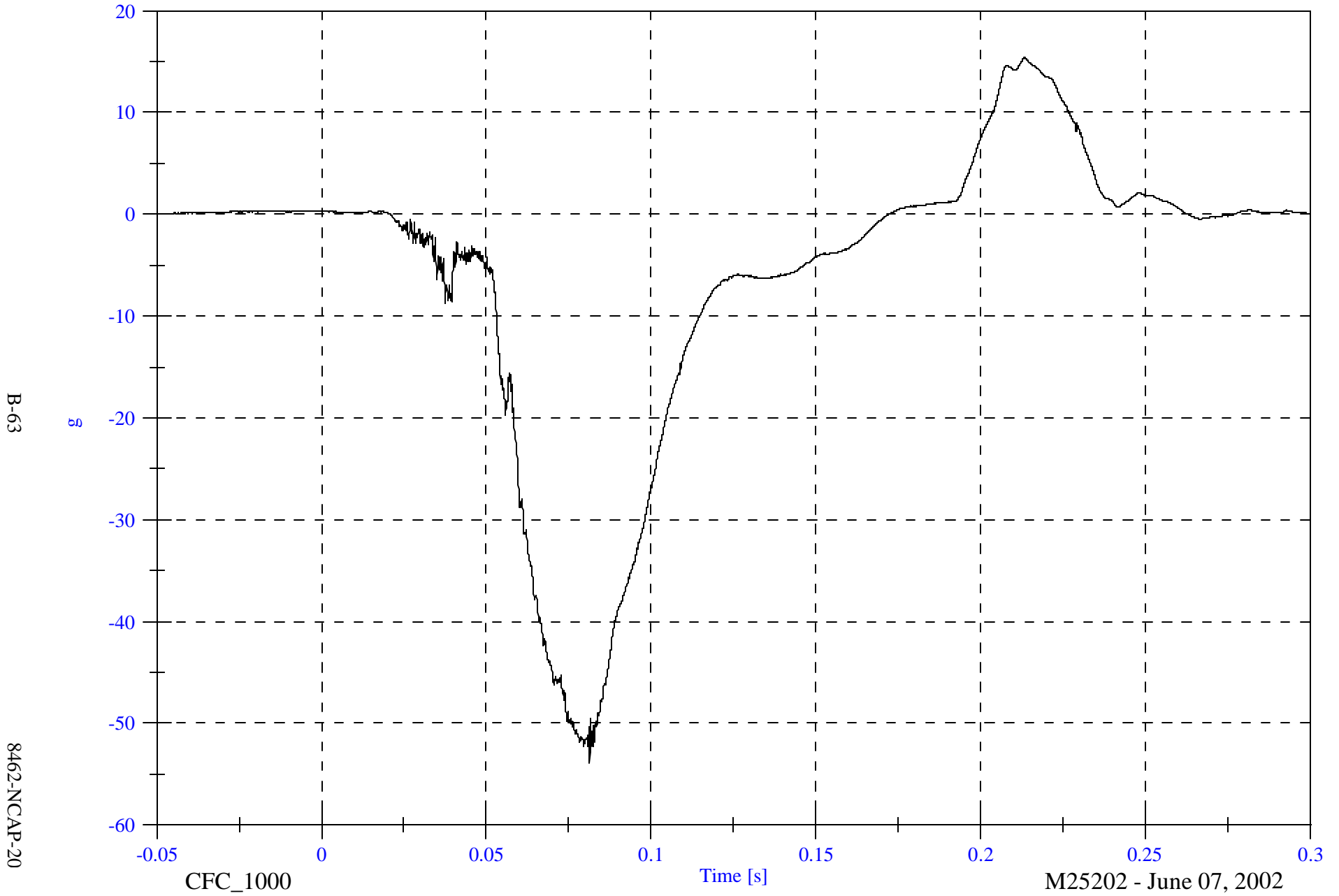


2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 15.3 [g] at 0.213 [s]

Min: -54.0 [g] at 0.081 [s]

P2 Head CG x



B-63

8462-NCAP-20

CFC\_1000

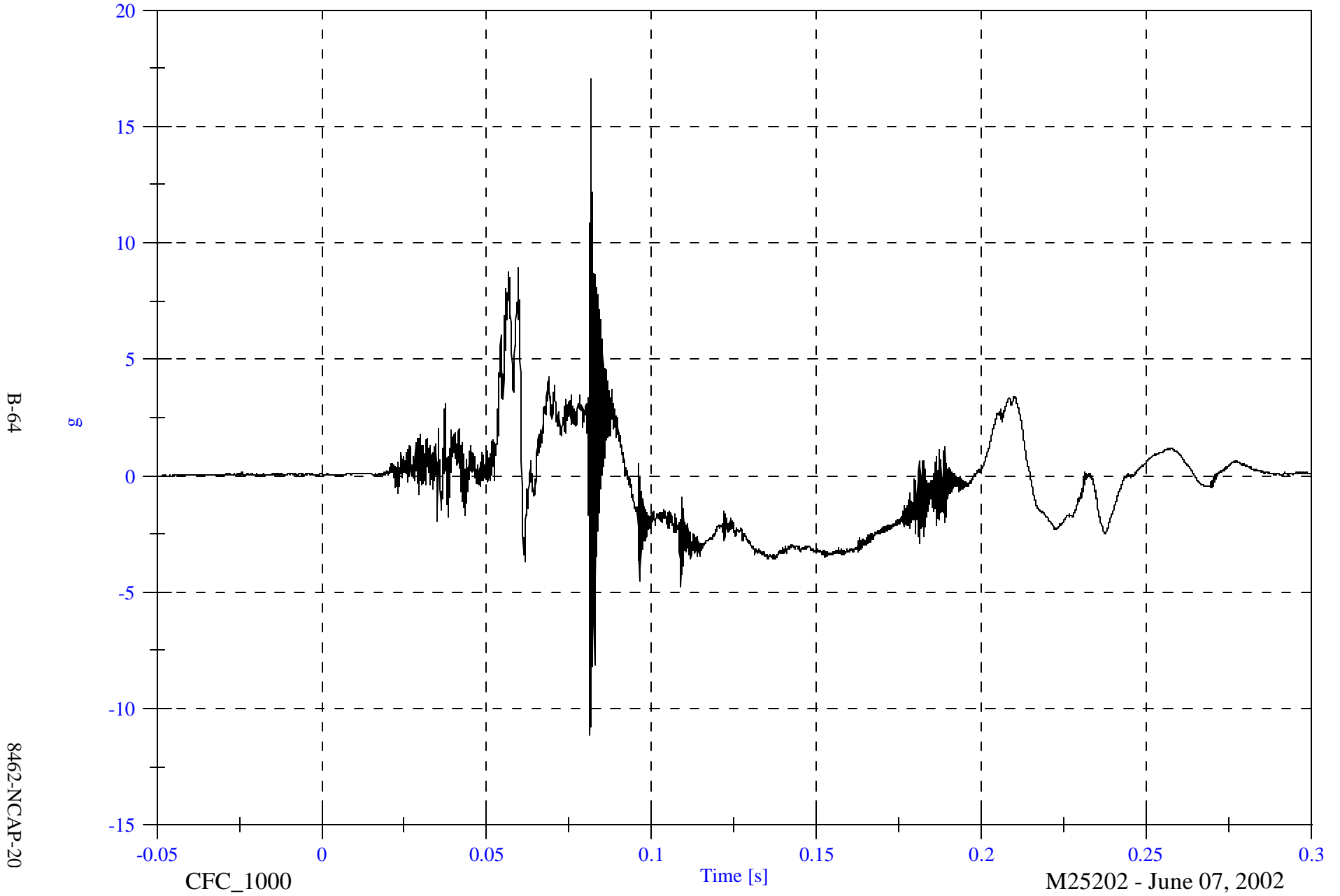
Time [s]

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Max: 17.0 [g] at 0.082 [s]  
Min: -11.1 [g] at 0.081 [s]

P2 Head CG y

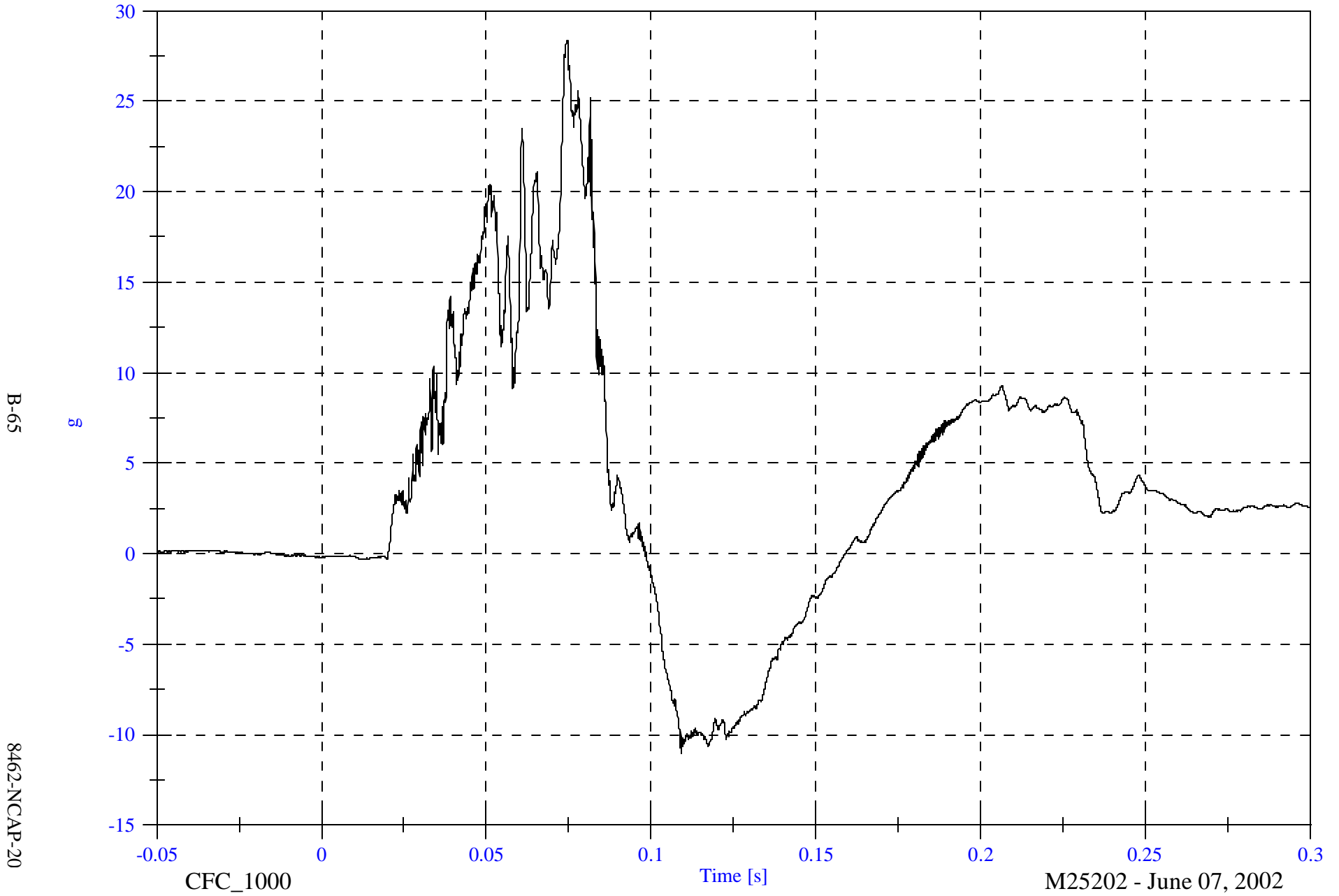


2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 28.4 [g] at 0.075 [s]

Min: -11.0 [g] at 0.109 [s]

P2 Head CG z



2002 NCAP Test 20 2002 Nissan Pathfinder

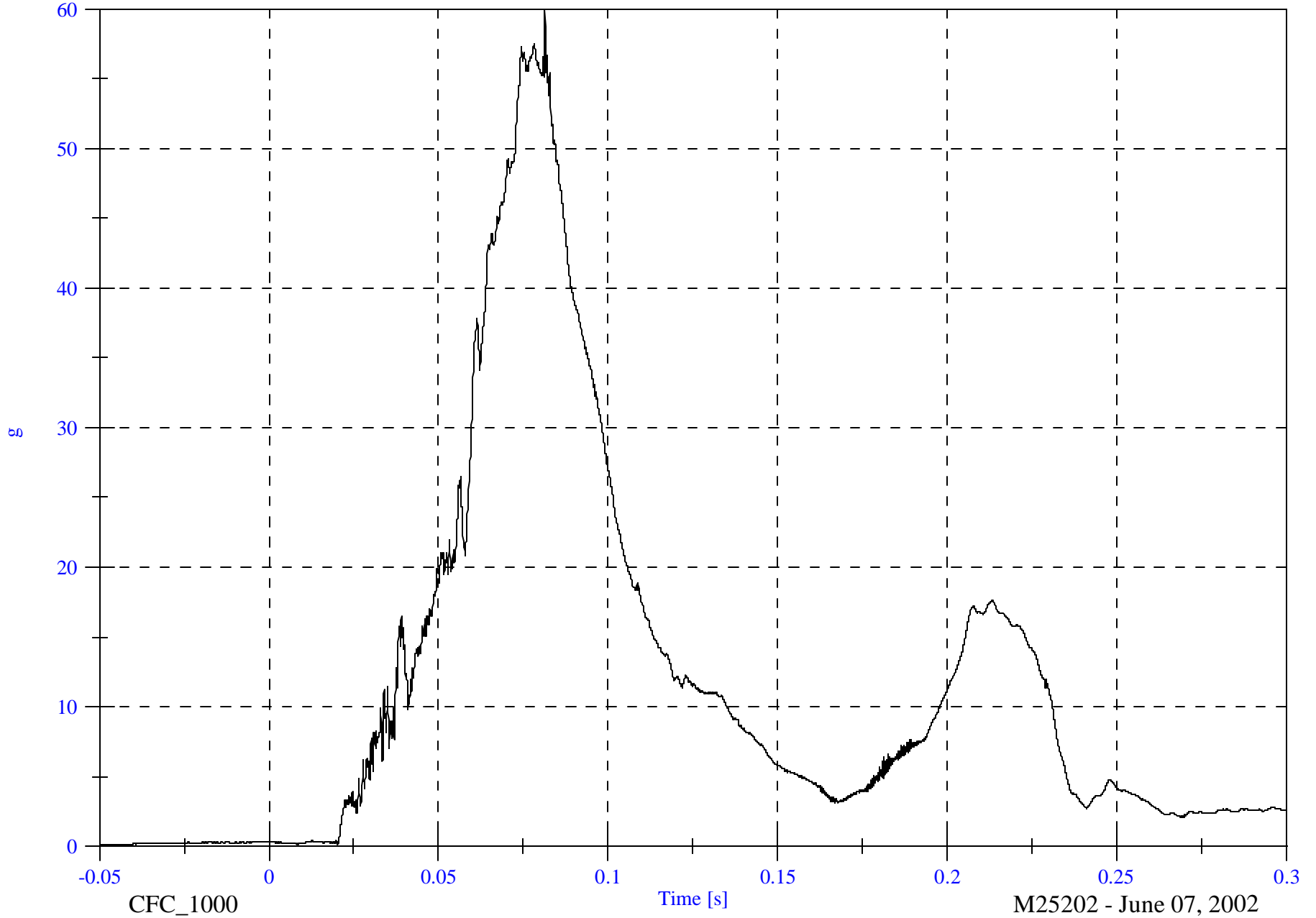
Max: 60.0 [g] at 0.081 [s]

Min: 0.1 [g] at 0.020 [s]

P2 Head CG Resultant

B-66

8462-NCAP-20

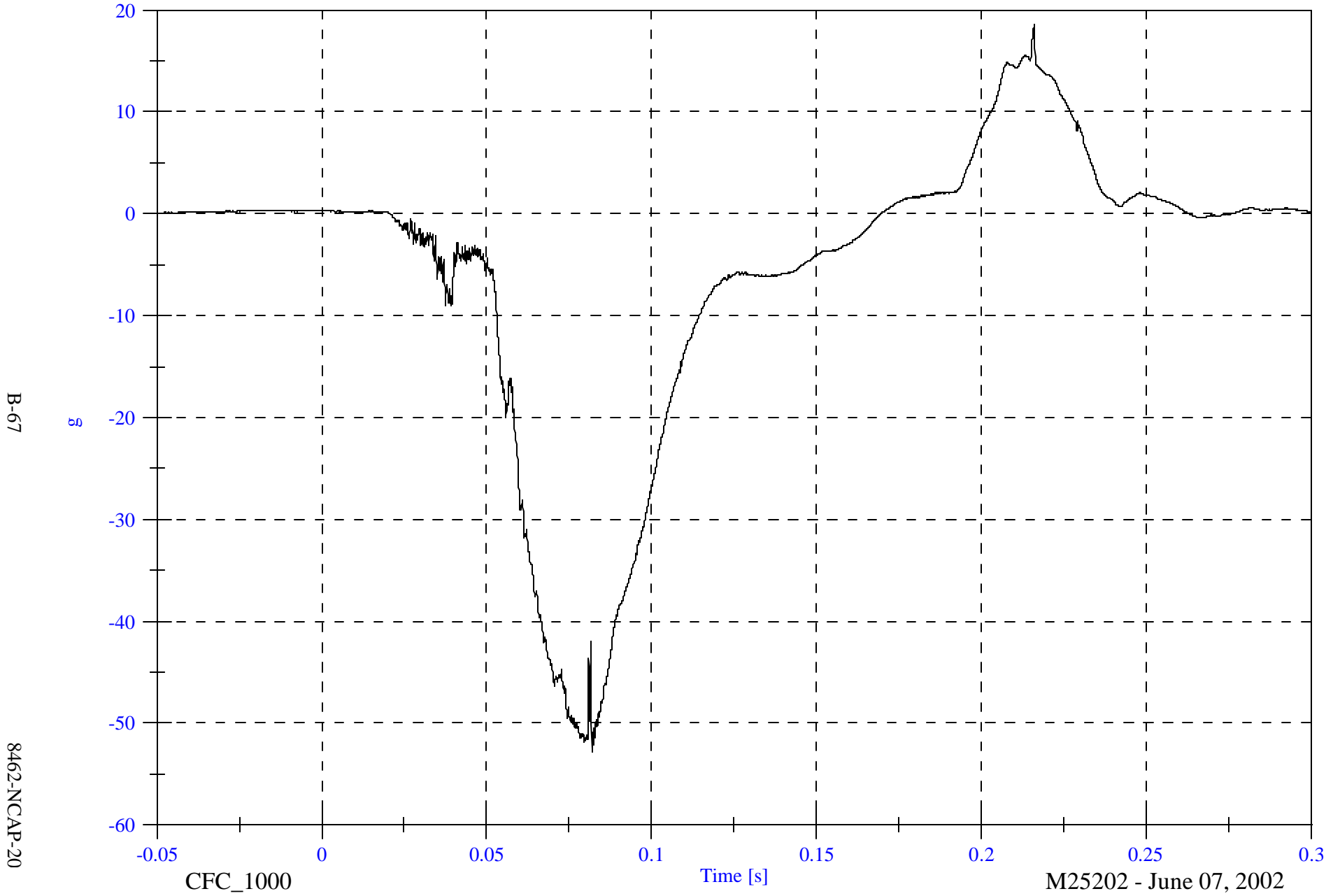


2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 18.5 [g] at 0.216 [s]

Min: -52.8 [g] at 0.082 [s]

P2 Head CG Red x



B-67

8462-NCAP-20

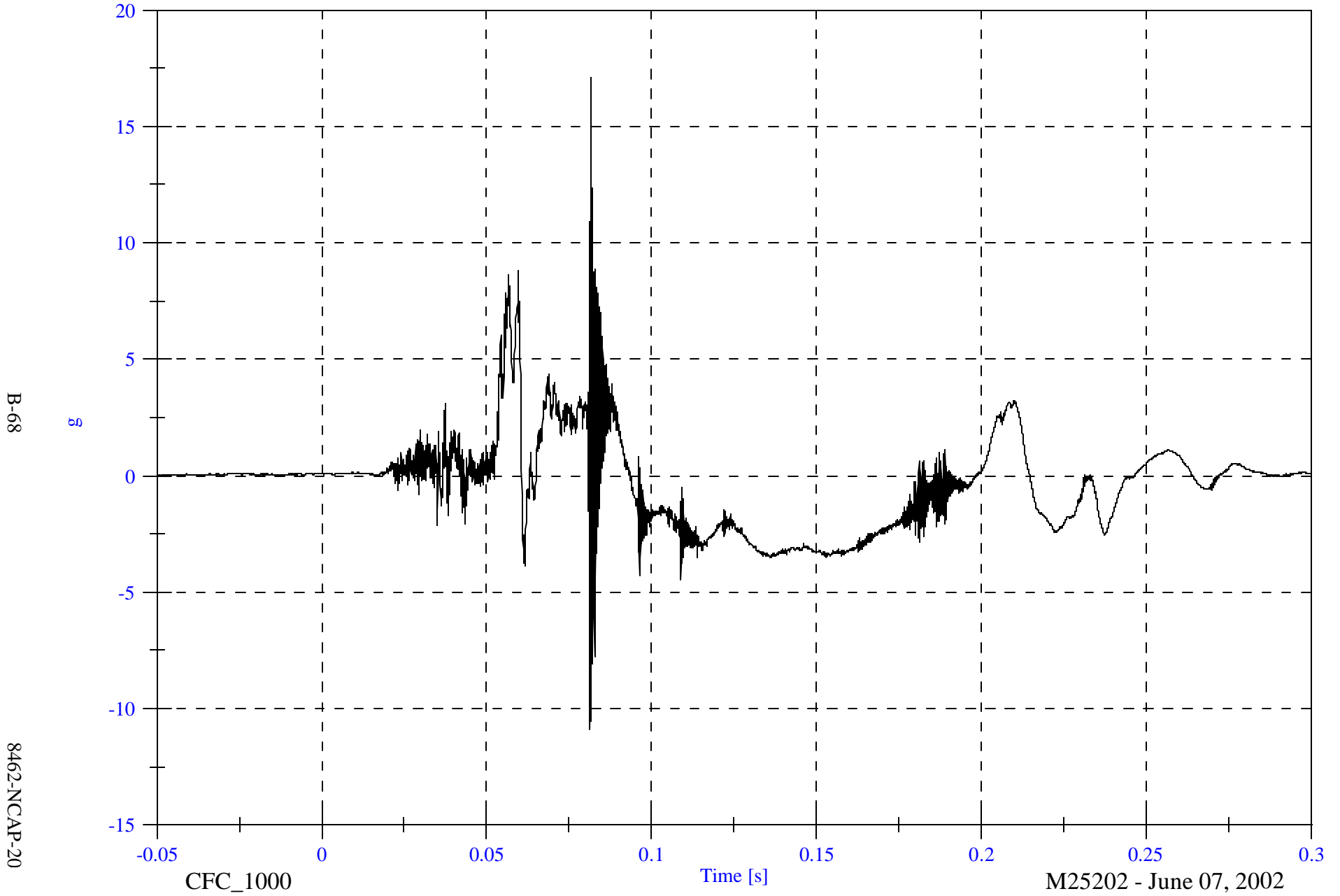
M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 17.1 [g] at 0.082 [s]

Min: -10.9 [g] at 0.081 [s]

P2 Head CG Red y



B-68

8462-NCAP-20

CFC\_1000

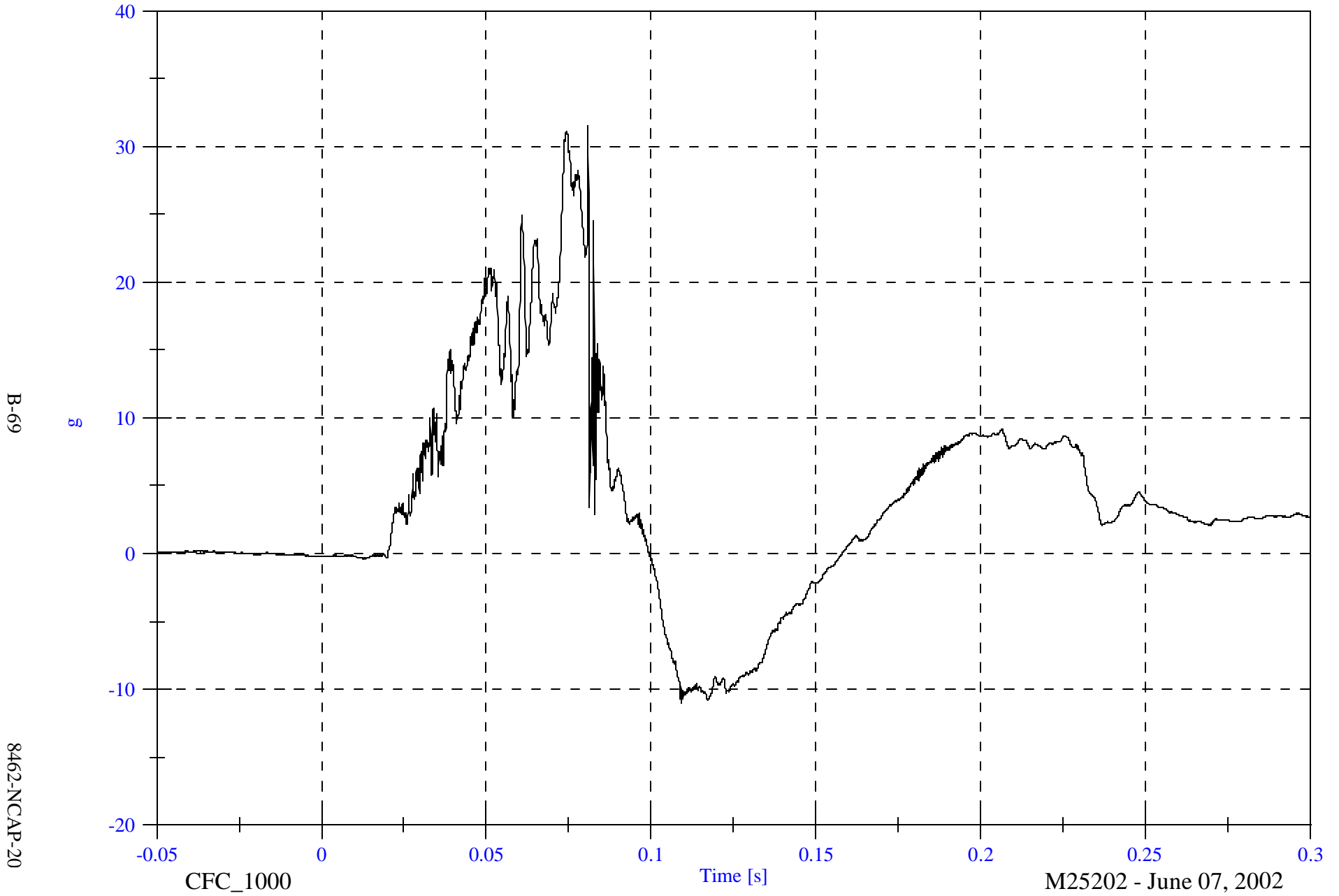
M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 31.6 [g] at 0.081 [s]

Min: -11.0 [g] at 0.109 [s]

P2 Head CG Red z



B-69

8462-NCAP-20

CFC\_1000

Time [s]

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2002 NCAP Test 20 2002 Nissan Pathfinder

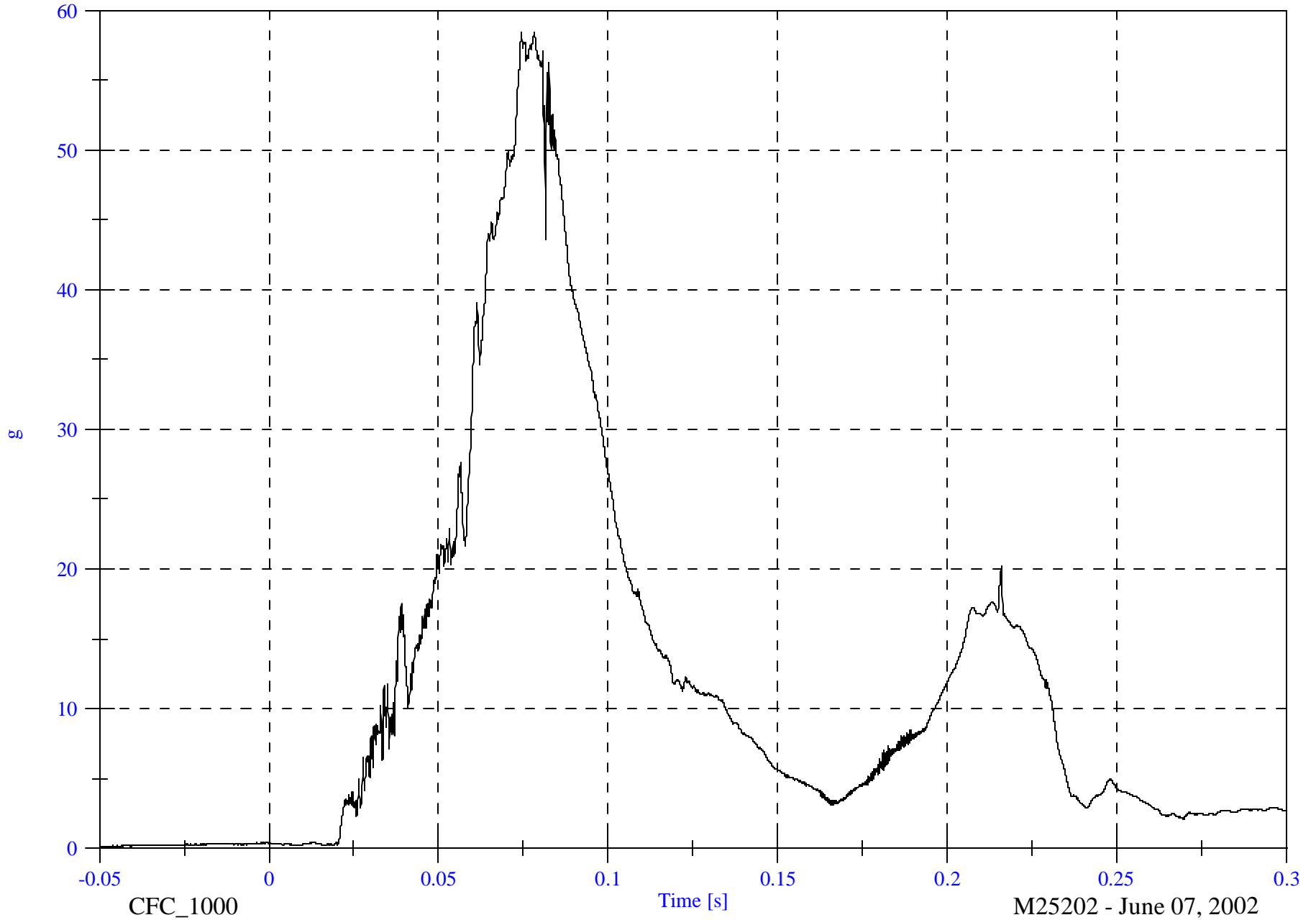
P2 Head CG Red Resultant

Max: 58.4 [g] at 0.075 [s]

Min: 0.1 [g] at -0.050 [s]

B-70

8462-NCAP-20



CFC\_1000

Time [s]

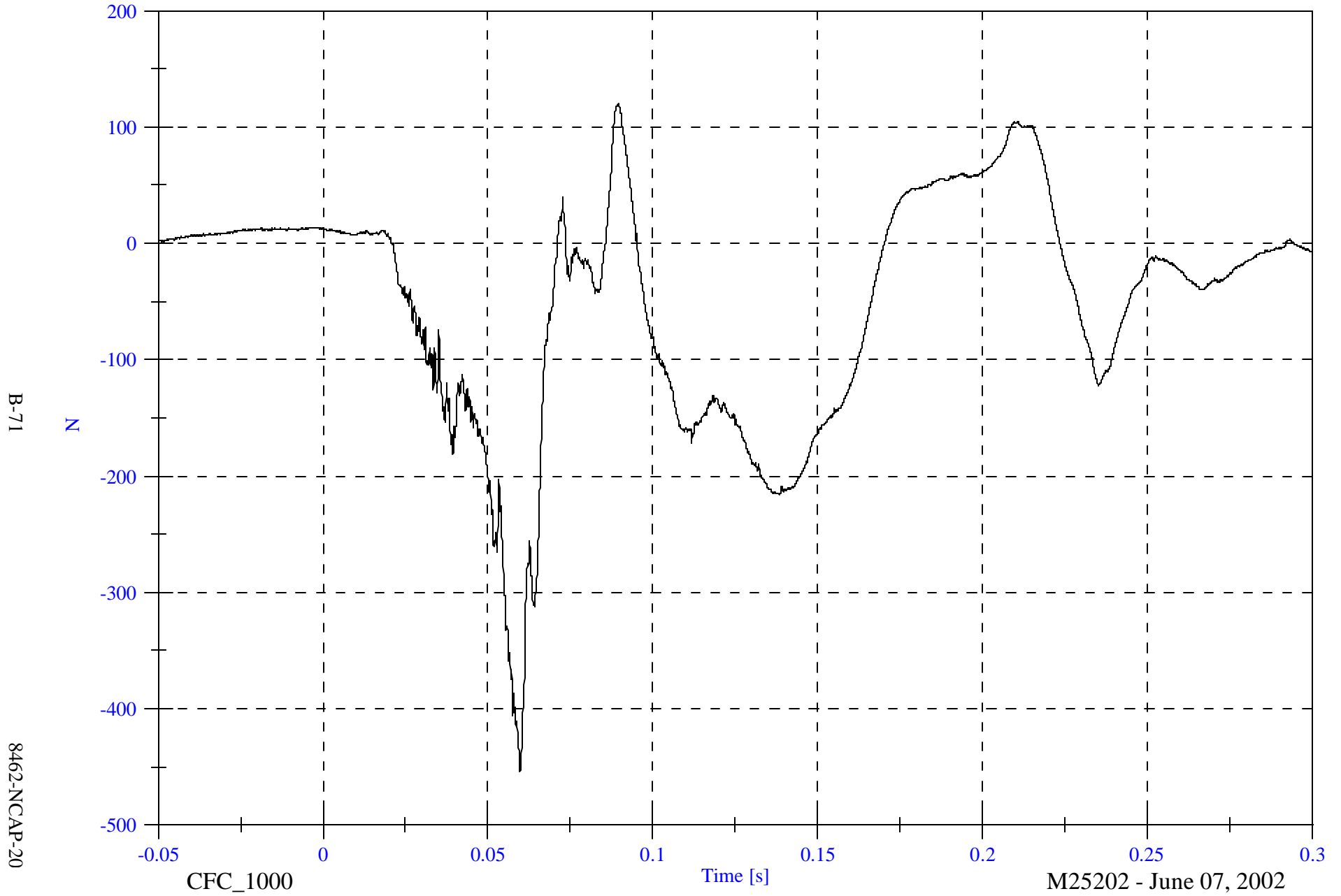
M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 120.2 [N] at 0.090 [s]

Min: -453.6 [N] at 0.060 [s]

P2 Upper Neck Fx

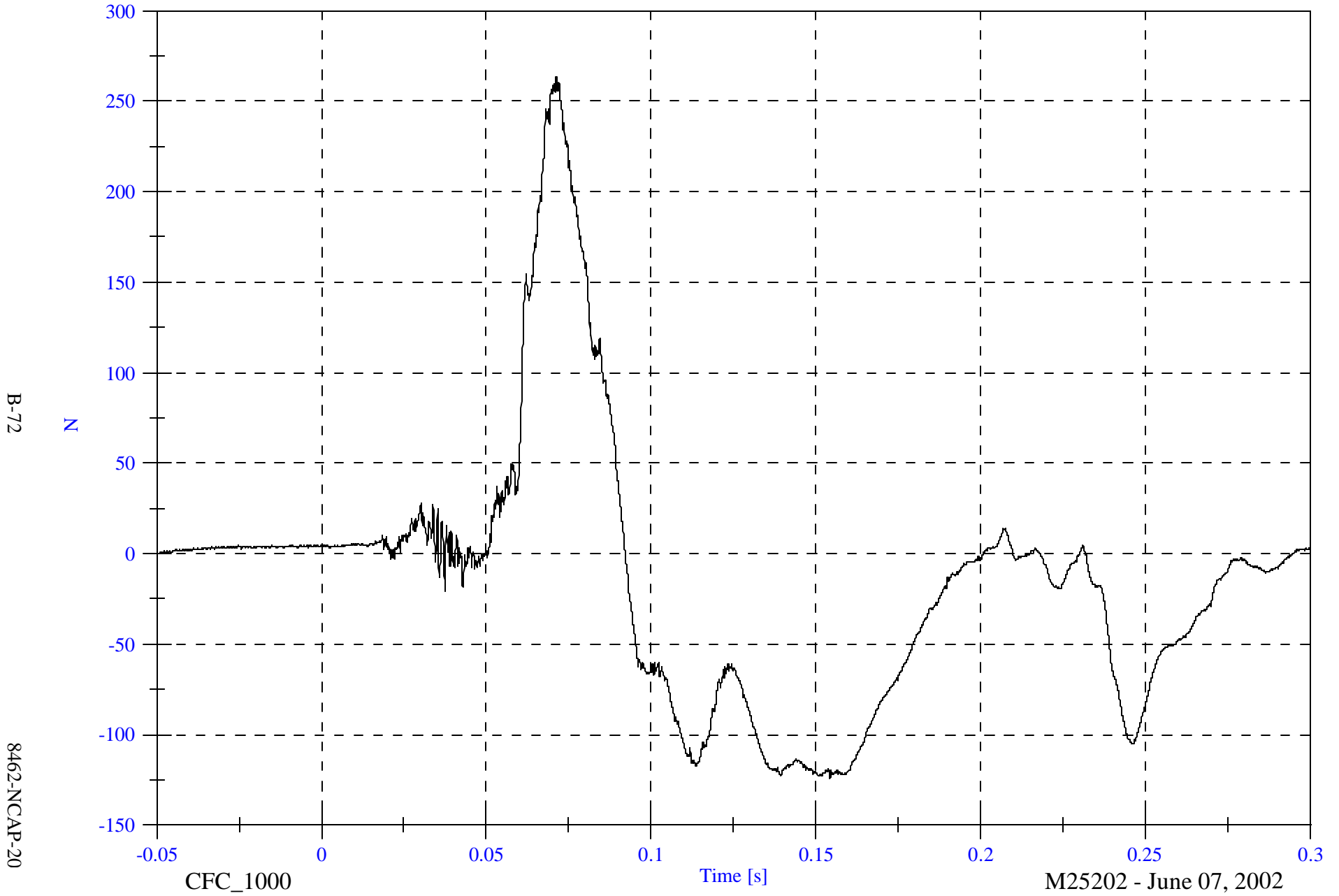


2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 263.4 [N] at 0.071 [s]

Min: -124.6 [N] at 0.154 [s]

P2 Upper Neck Fy



B-72

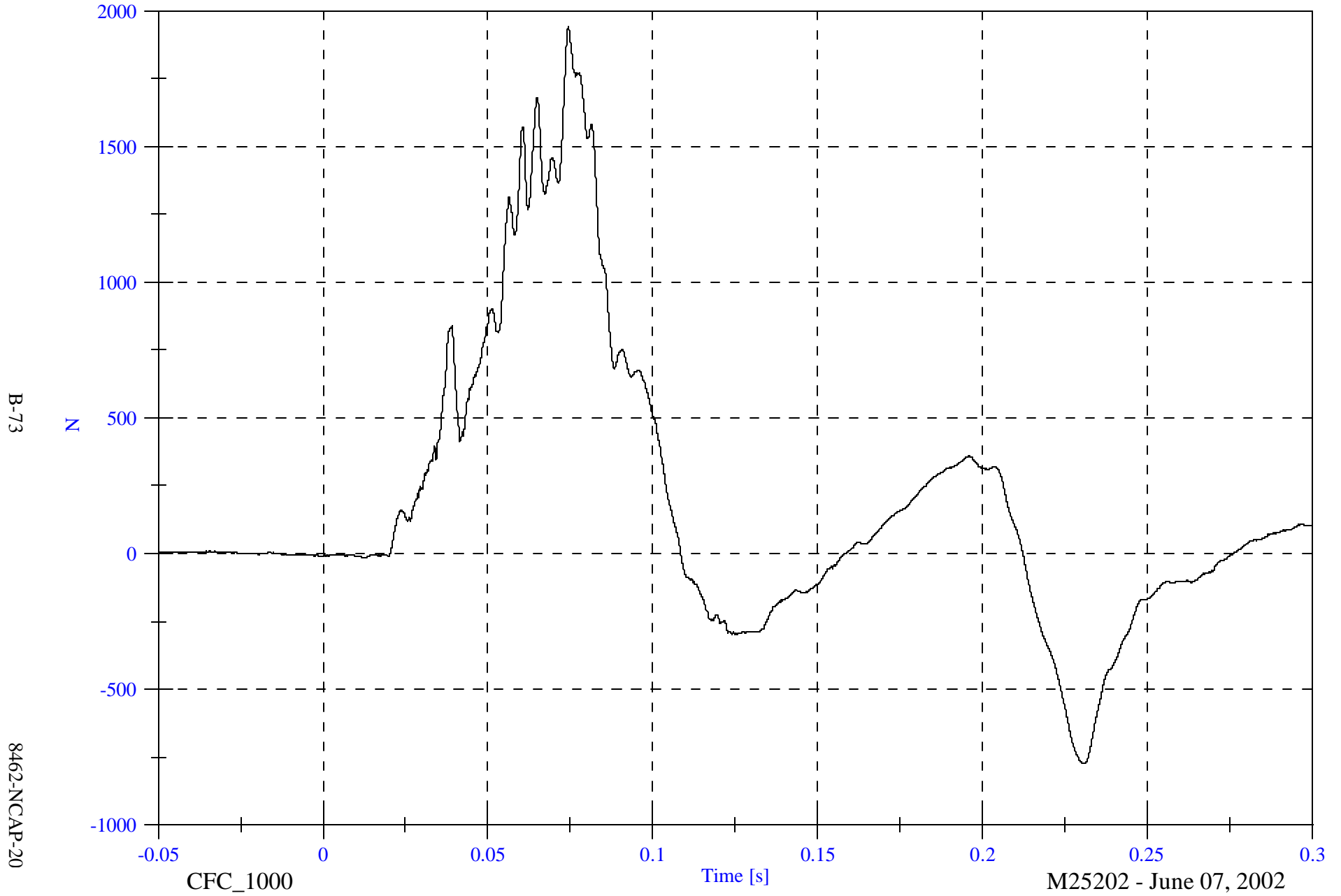
8462-NCAP-20

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Max: 1942.0 [N] at 0.074 [s]

Min: -772.7 [N] at 0.231 [s]

P2 Upper Neck Fz



2002 NCAP Test 20 2002 Nissan Pathfinder

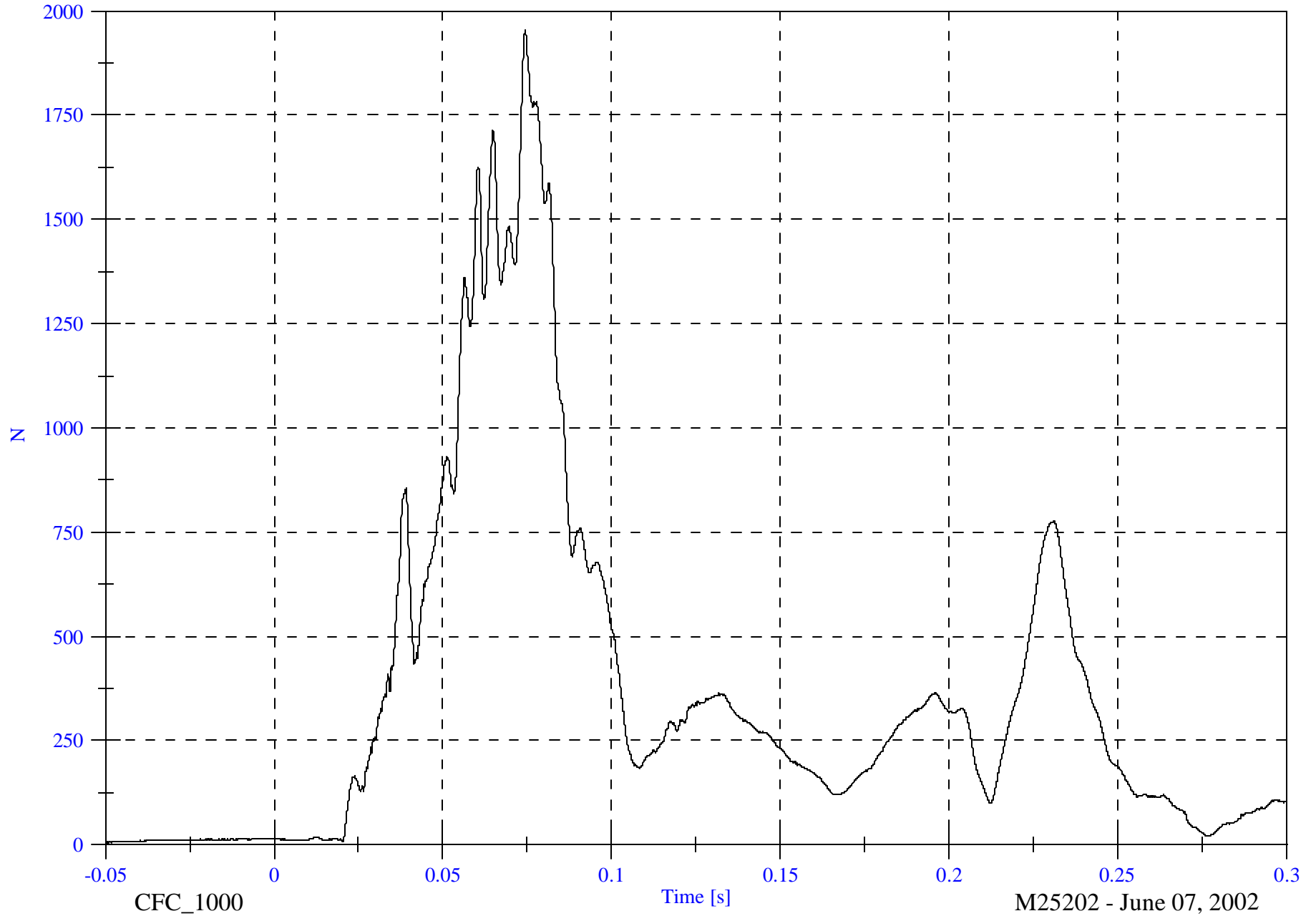
Max: 1955.1 [N] at 0.074 [s]

P2 Upper Neck F Resultant

Min: 4.9 [N] at -0.050 [s]

B-74

8462-NCAP-20

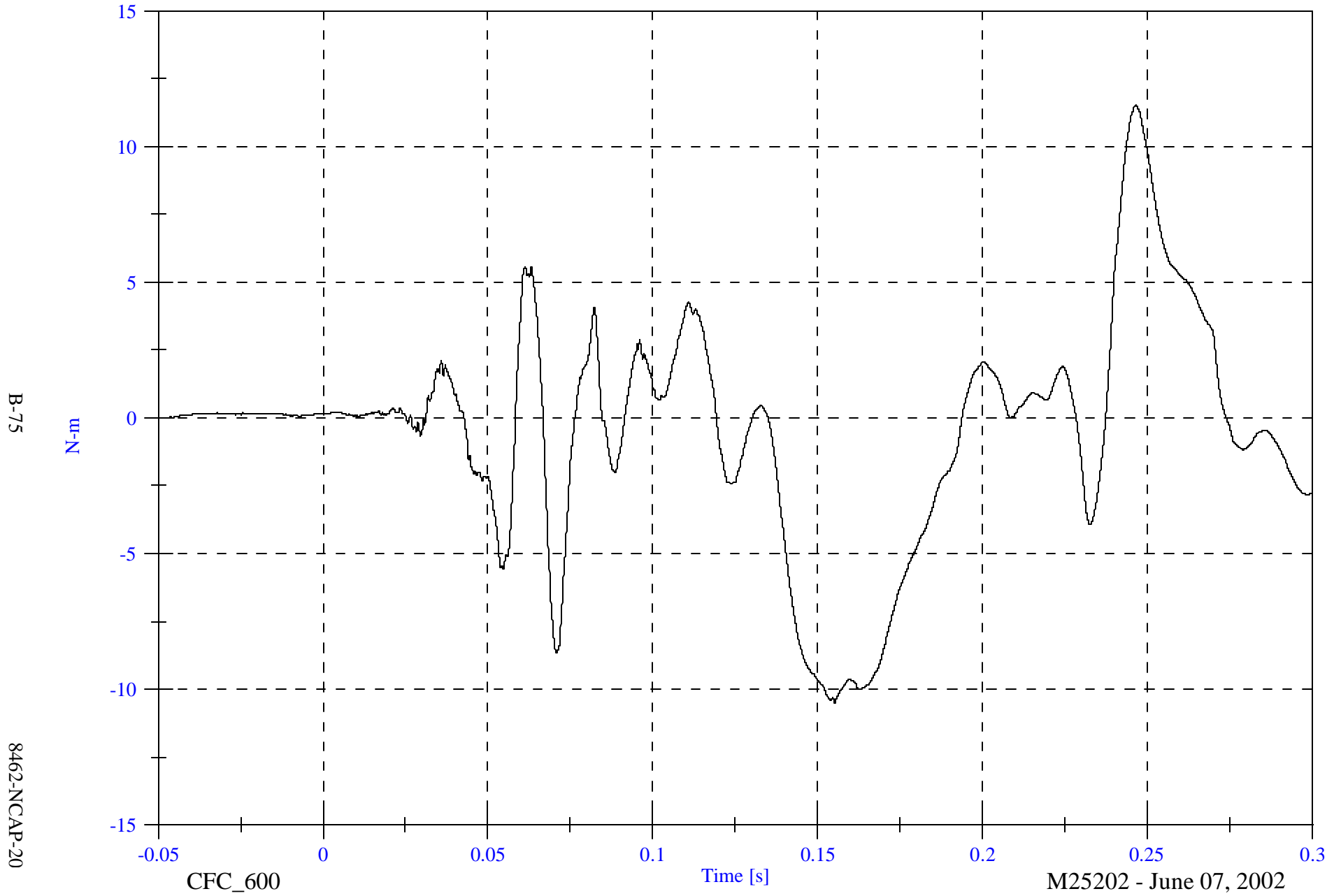


2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 11.5 [N-m] at 0.247 [s]

Min: -10.5 [N-m] at 0.155 [s]

P2 Upper Neck Mx



B-75

N-m

8462-NCAP-20

CFC\_600

Time [s]

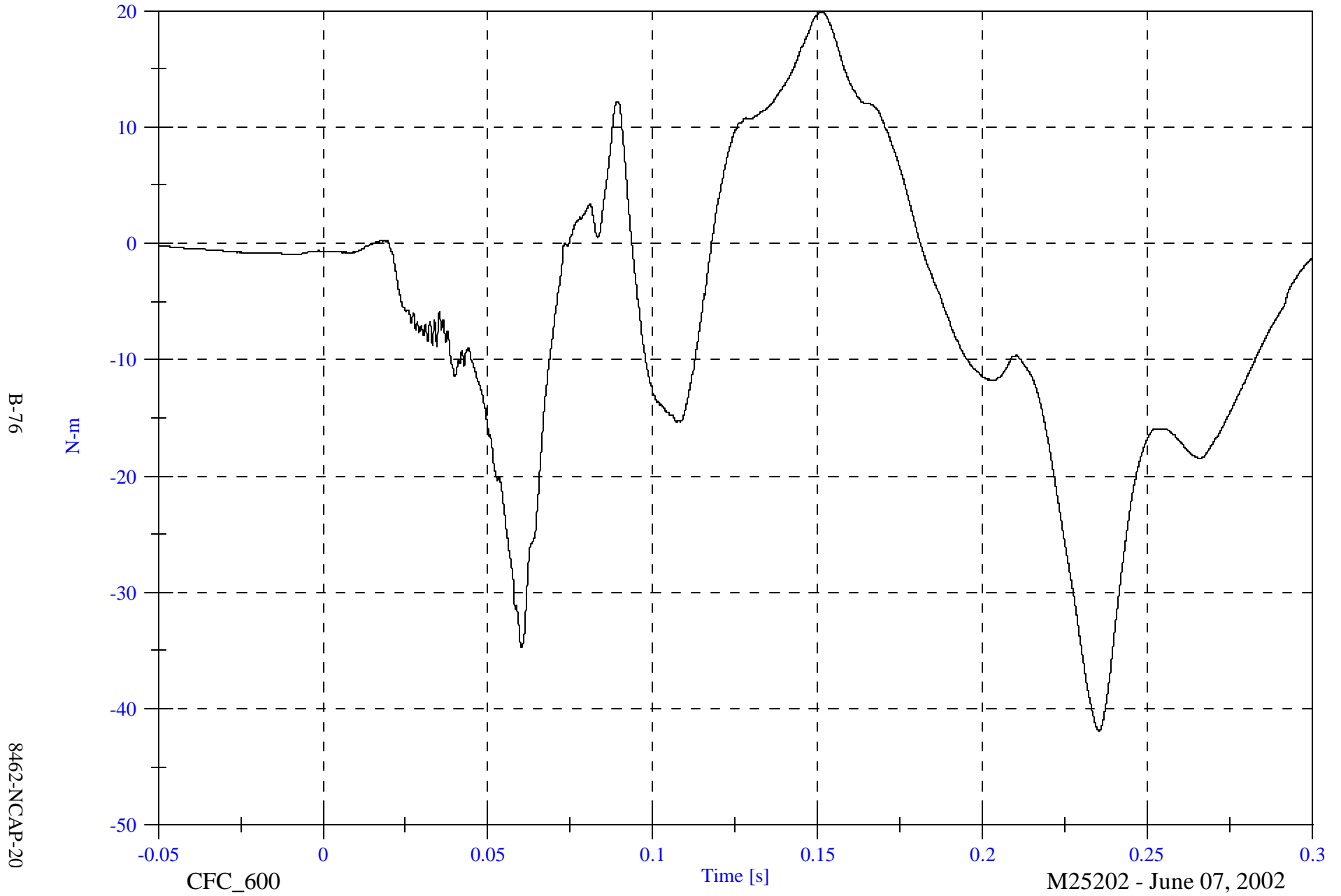
M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 19.9 [N-m] at 0.151 [s]

Min: -41.9 [N-m] at 0.235 [s]

P2 Upper Neck My



B-76

8462-NCAP-20

CFC\_600

Time [s]

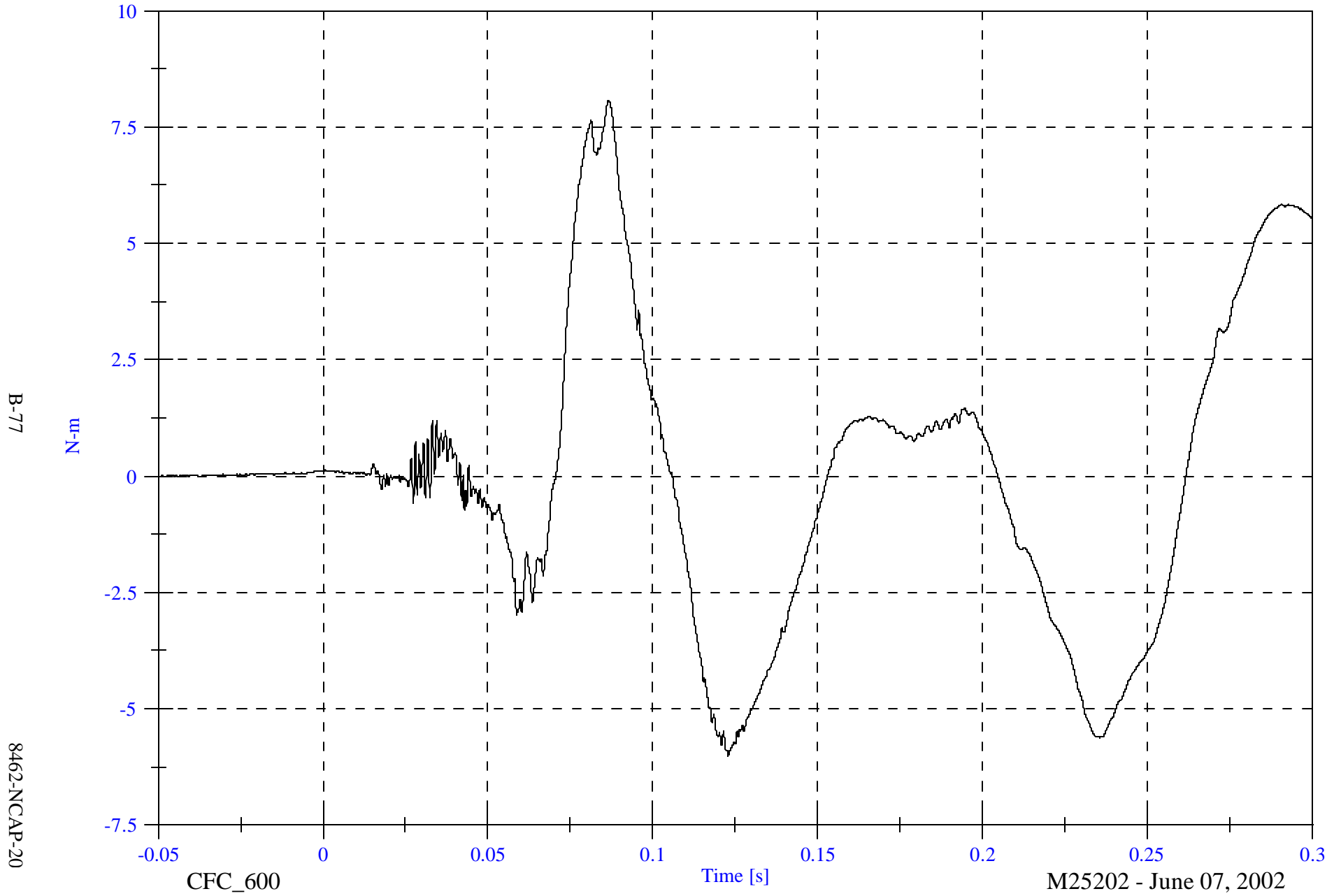
M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 8.1 [N-m] at 0.087 [s]

Min: -6.0 [N-m] at 0.123 [s]

P2 Upper Neck Mz



B-77

8462-NCAP-20

CFC\_600

M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

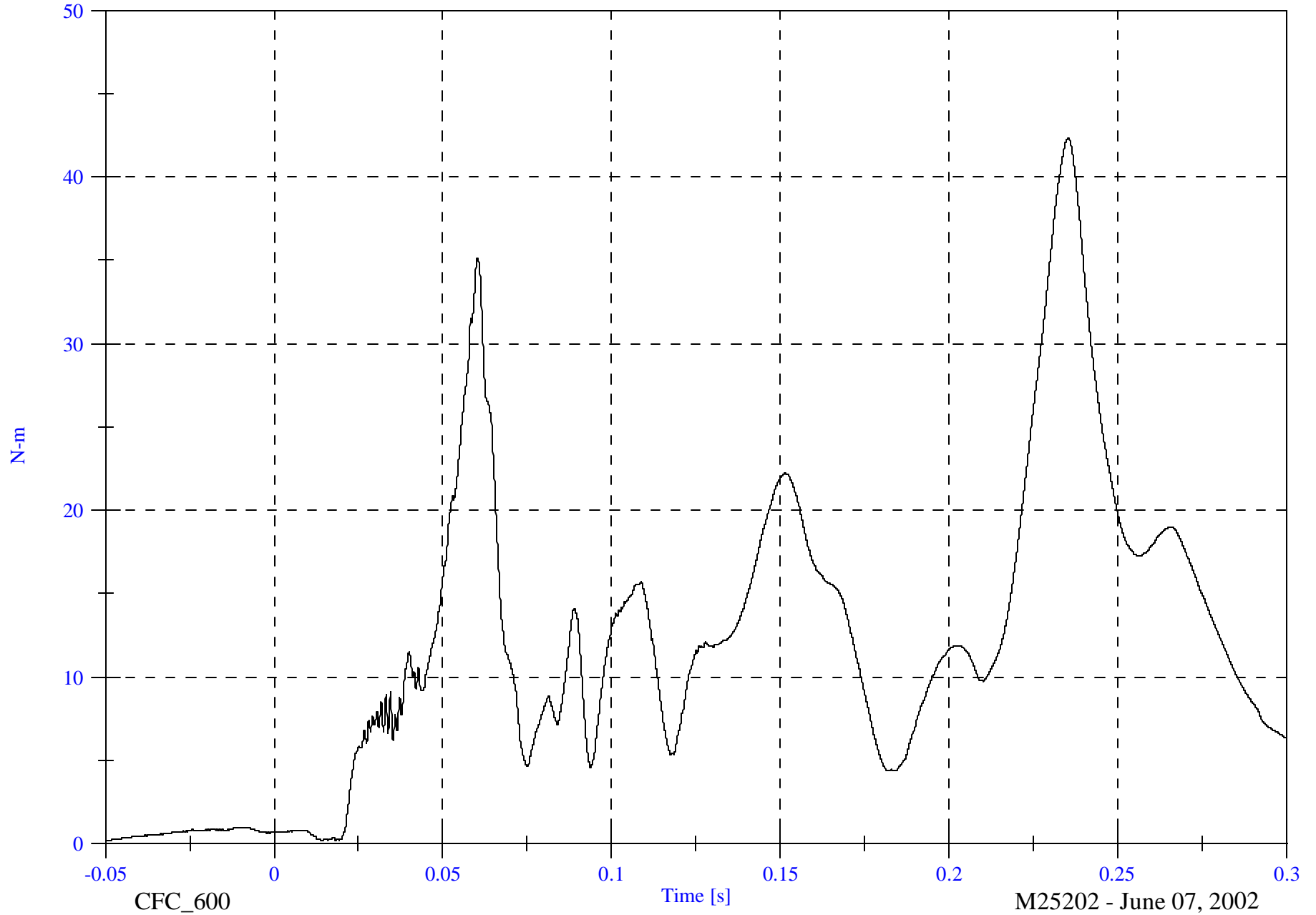
P2 Upper Neck M Resultant

Max: 42.3 [N-m] at 0.235 [s]

Min: 0.2 [N-m] at 0.014 [s]

B-78

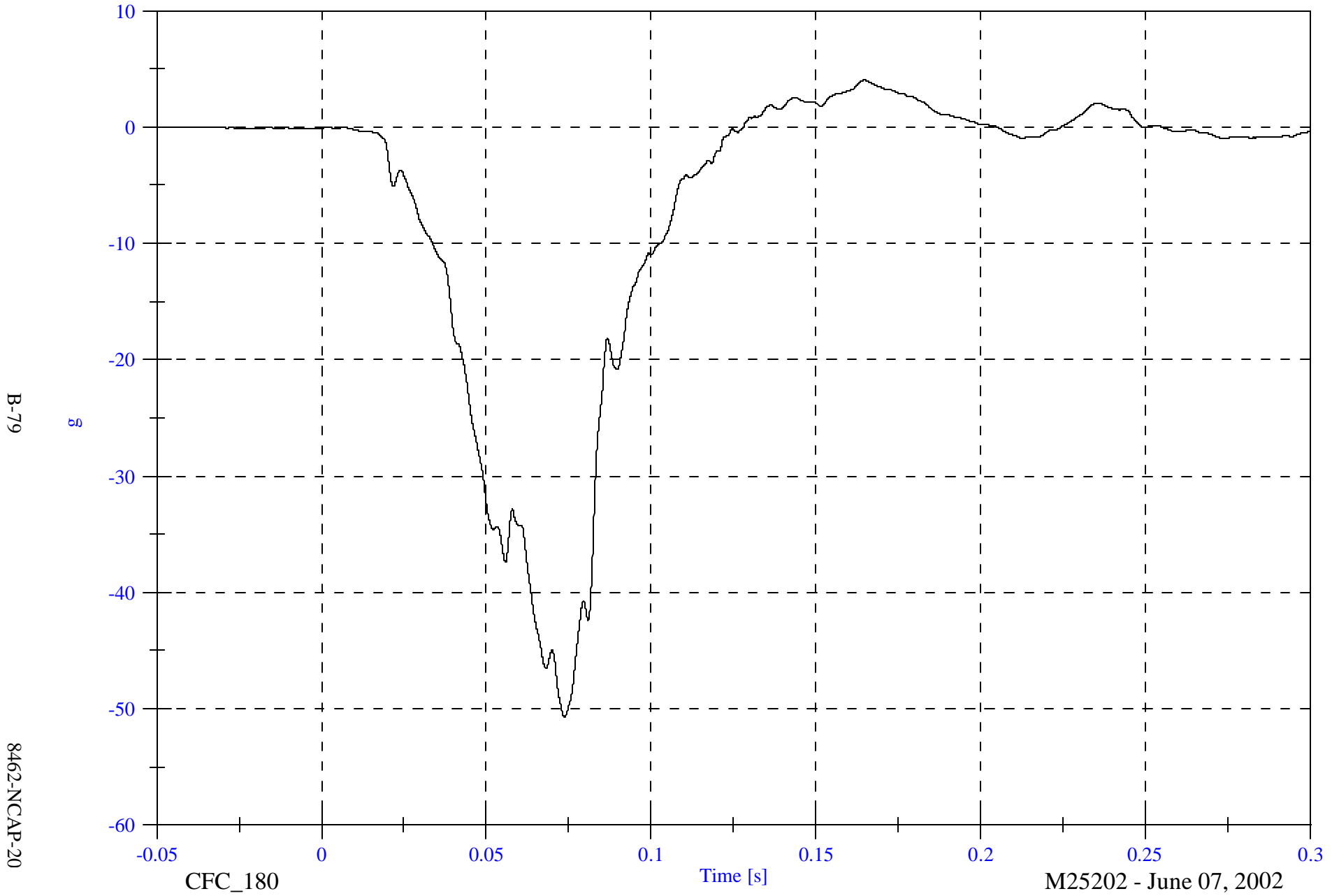
8462-NCAP-20



2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 4.0 [g] at 0.165 [s]  
Min: -50.7 [g] at 0.074 [s]

P2 Chest x



B-79

8462-NCAP-20

CFC\_180

Time [s]

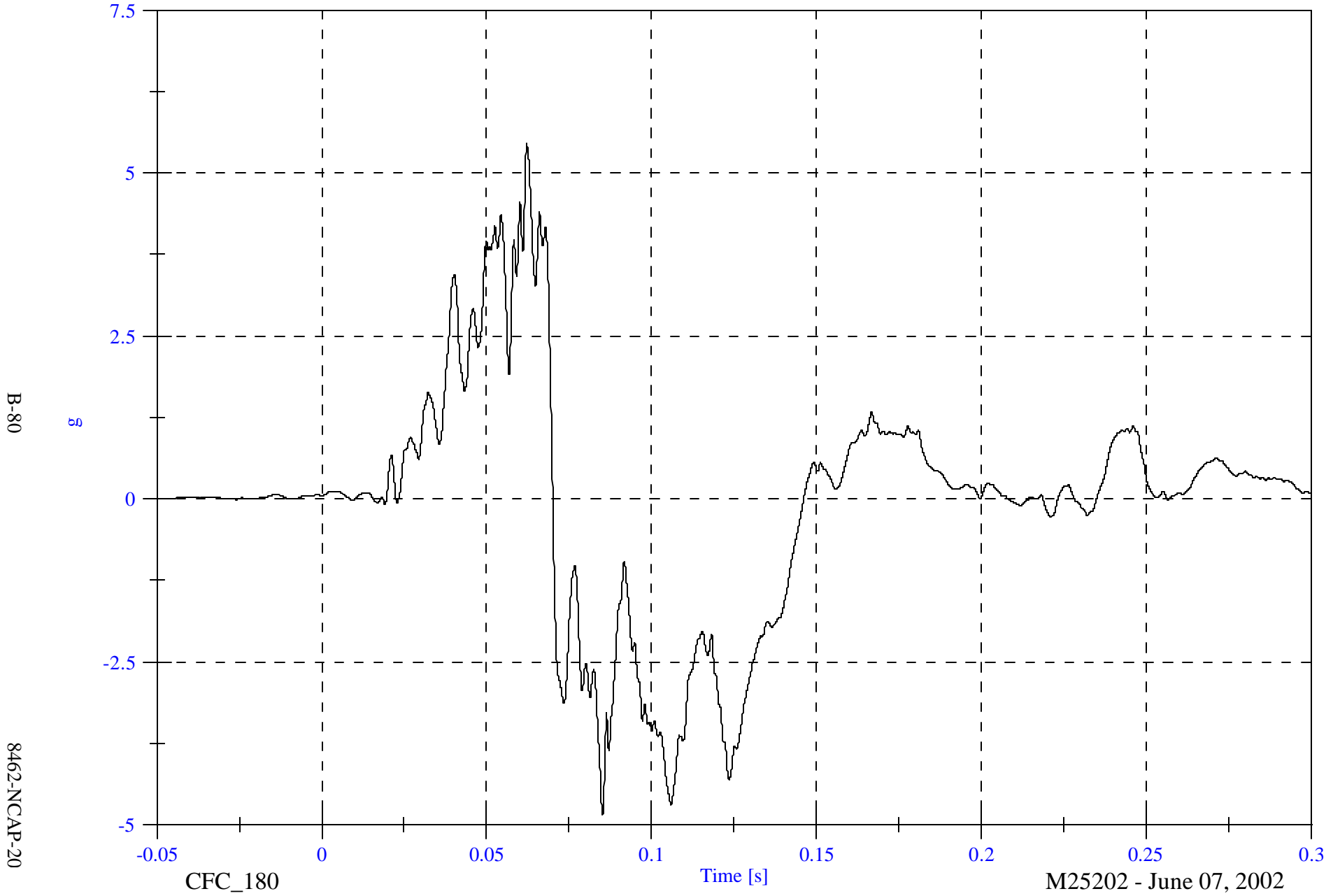
M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 5.4 [g] at 0.062 [s]

Min: -4.8 [g] at 0.085 [s]

P2 Chest y



2002 NCAP Test 20 2002 Nissan Pathfinder

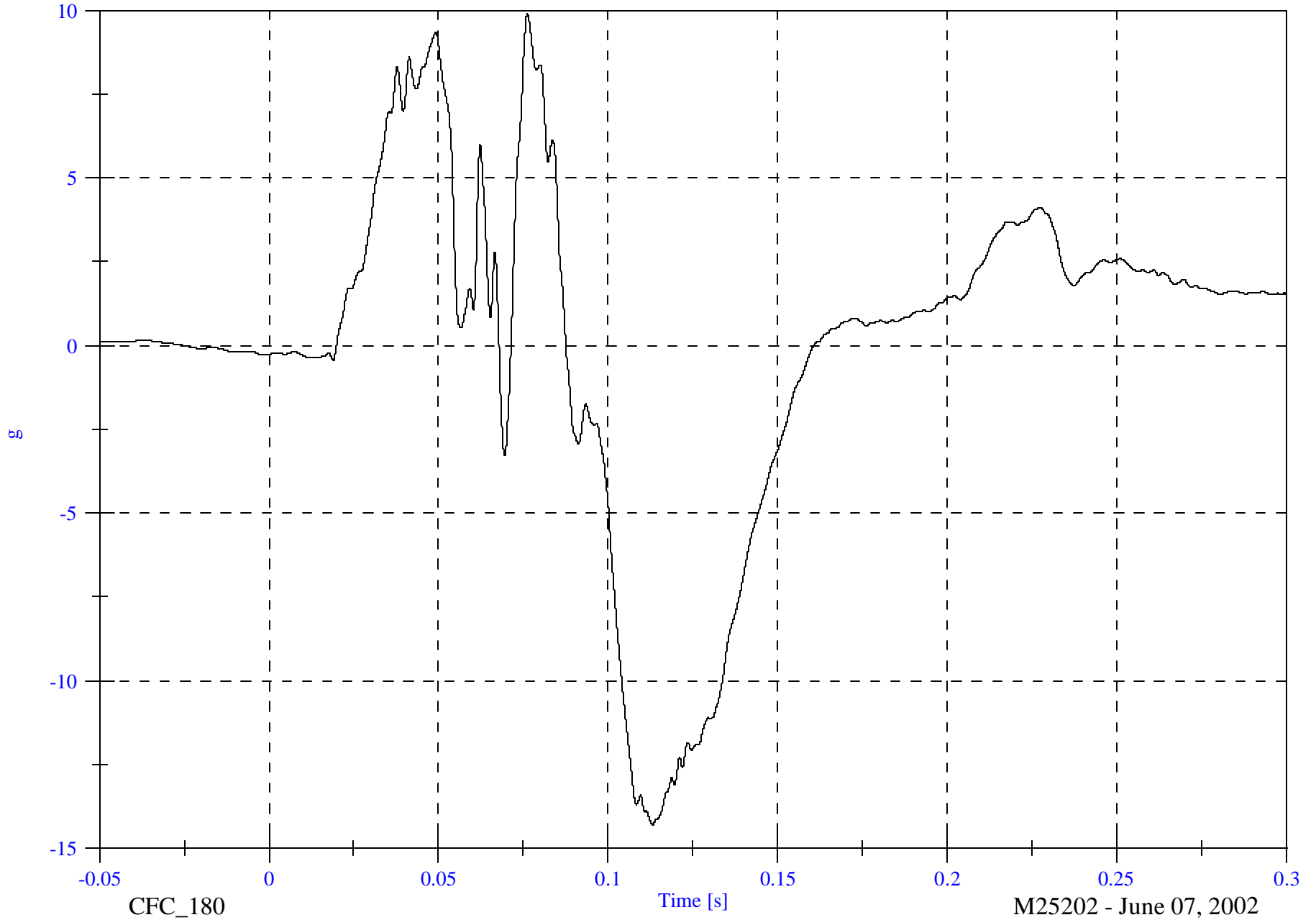
Max: 9.9 [g] at 0.076 [s]

Min: -14.3 [g] at 0.113 [s]

P2 Chest z

B-81

8462-NCAP-20



CFC\_180

M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

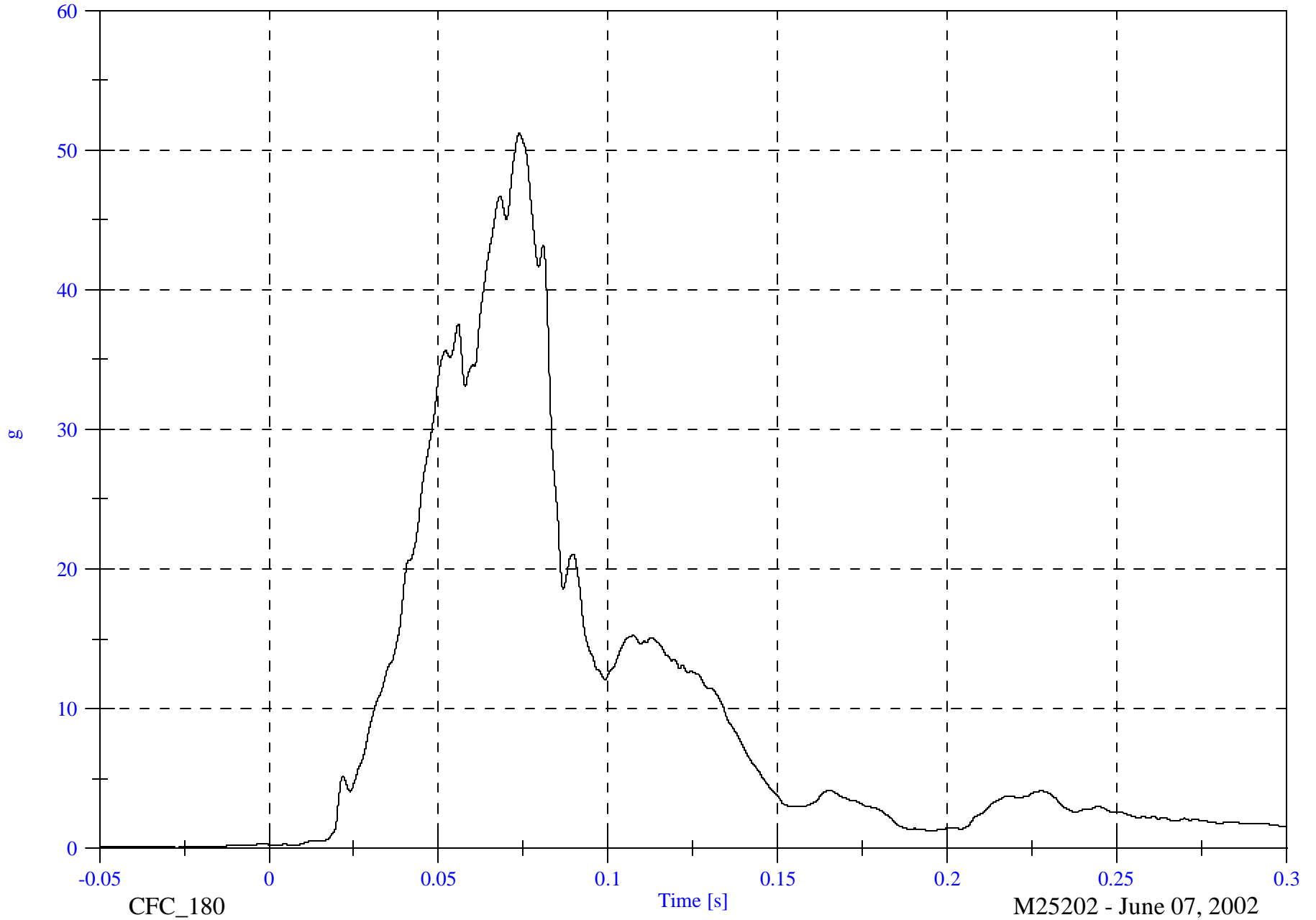
P2 Chest Resultant

Max: 51.2 [g] at 0.074 [s]

Min: 0.1 [g] at -0.027 [s]

B-82

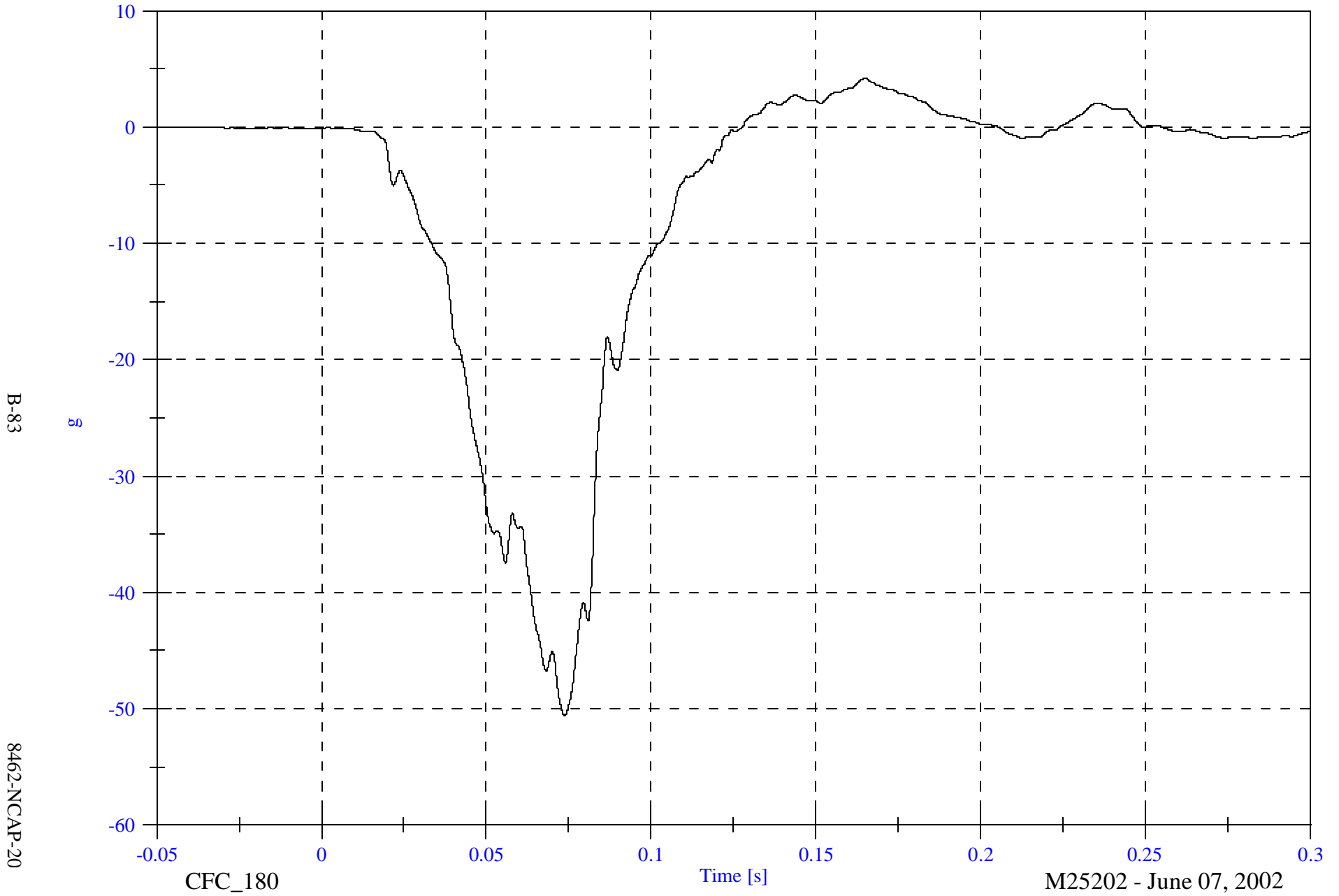
8462-NCAP-20



2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 4.2 [g] at 0.165 [s]  
Min: -50.6 [g] at 0.074 [s]

P2 Chest Red x



B-83

8462-NCAP-20

CFC\_180

Time [s]

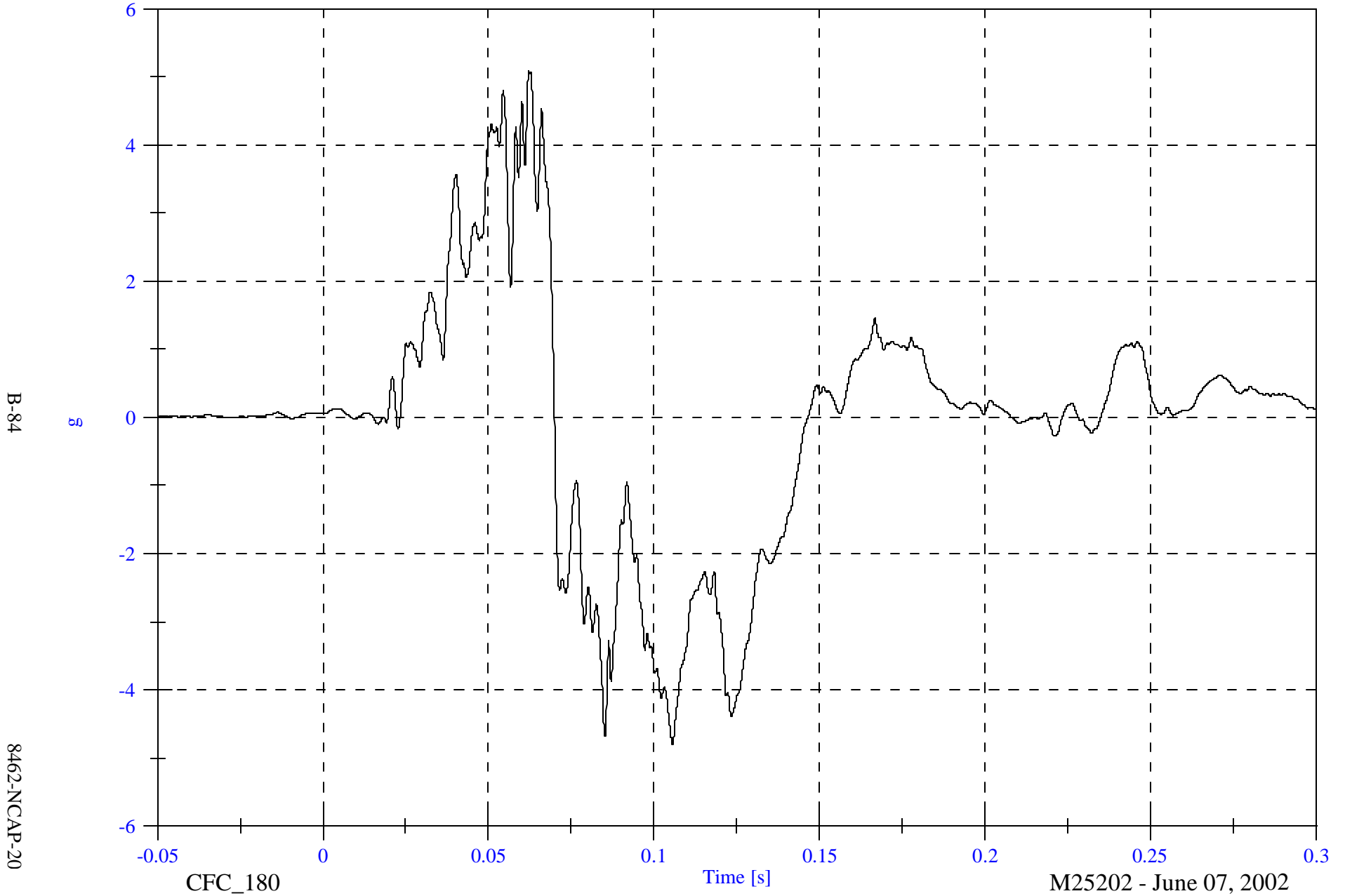
M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 5.1 [g] at 0.062 [s]

Min: -4.8 [g] at 0.106 [s]

P2 Chest Red y



B-84

8462-NCAP-20

CFC\_180

Time [s]

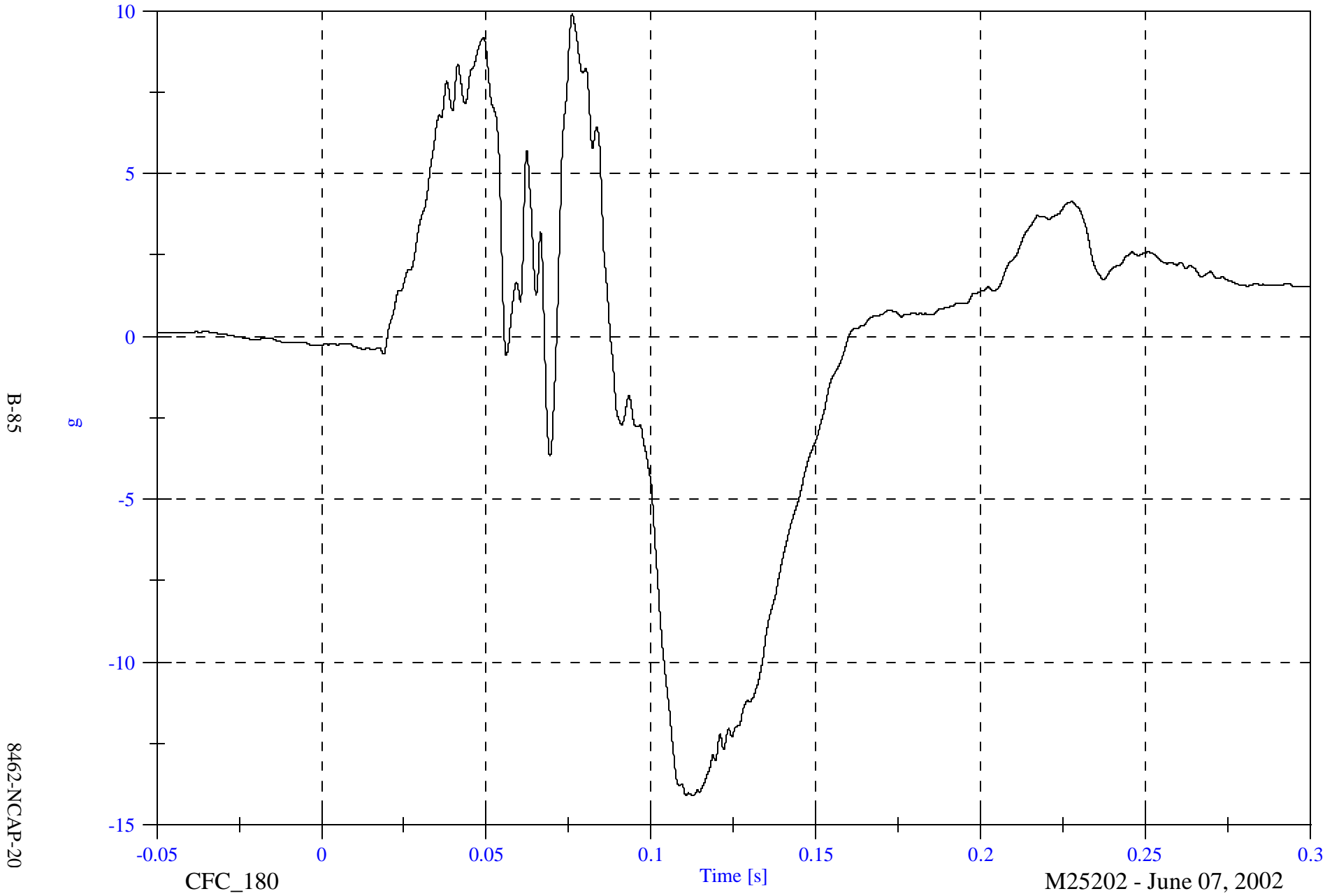
M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 9.9 [g] at 0.076 [s]

Min: -14.1 [g] at 0.111 [s]

P2 Chest Red z



B-85

8462-NCAP-20

CFC\_180

Time [s]

M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

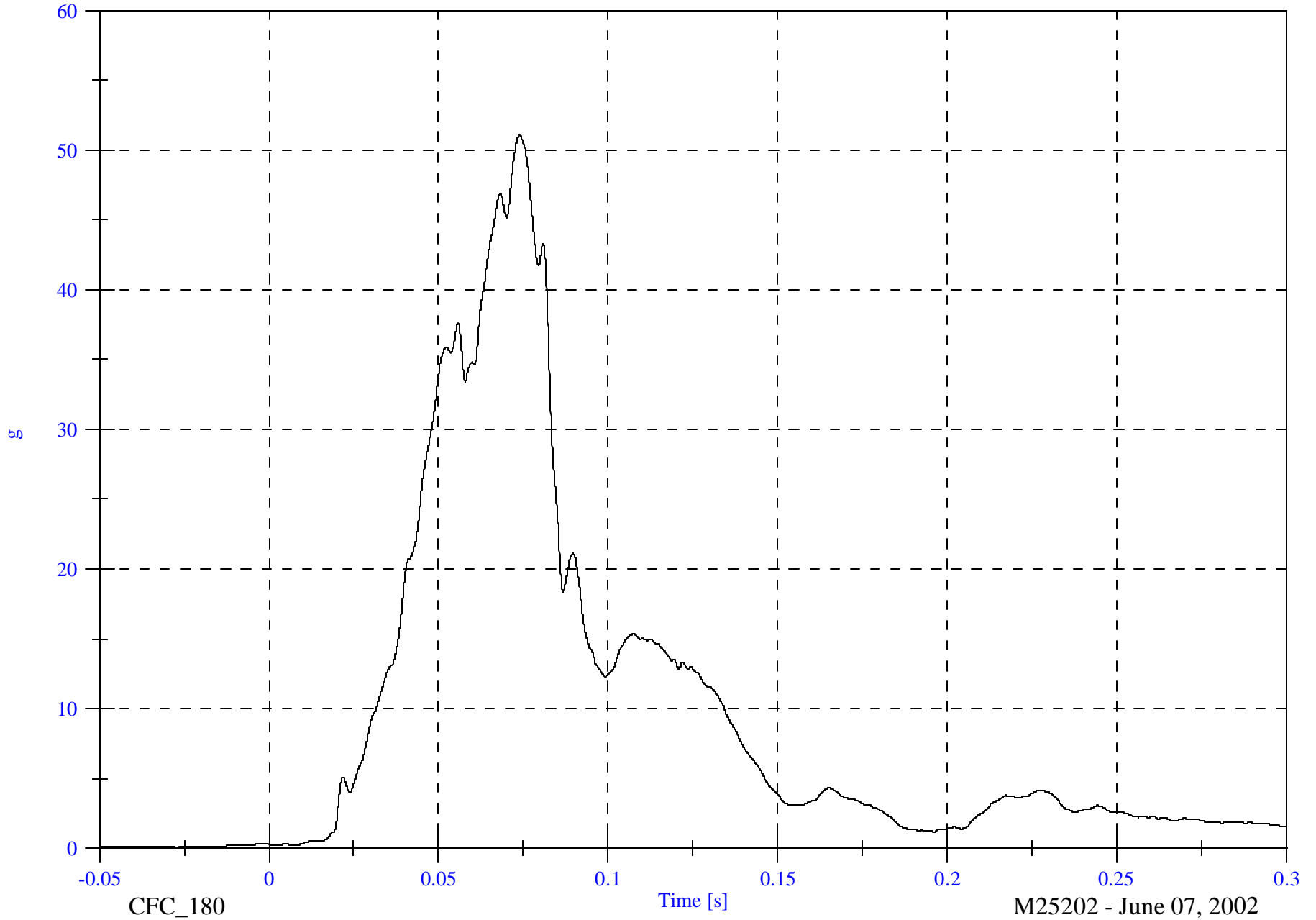
Max: 51.1 [g] at 0.074 [s]

P2 Chest Red Resultant

Min: 0.1 [g] at -0.027 [s]

B-86

8462-NCAP-20



CFC\_180

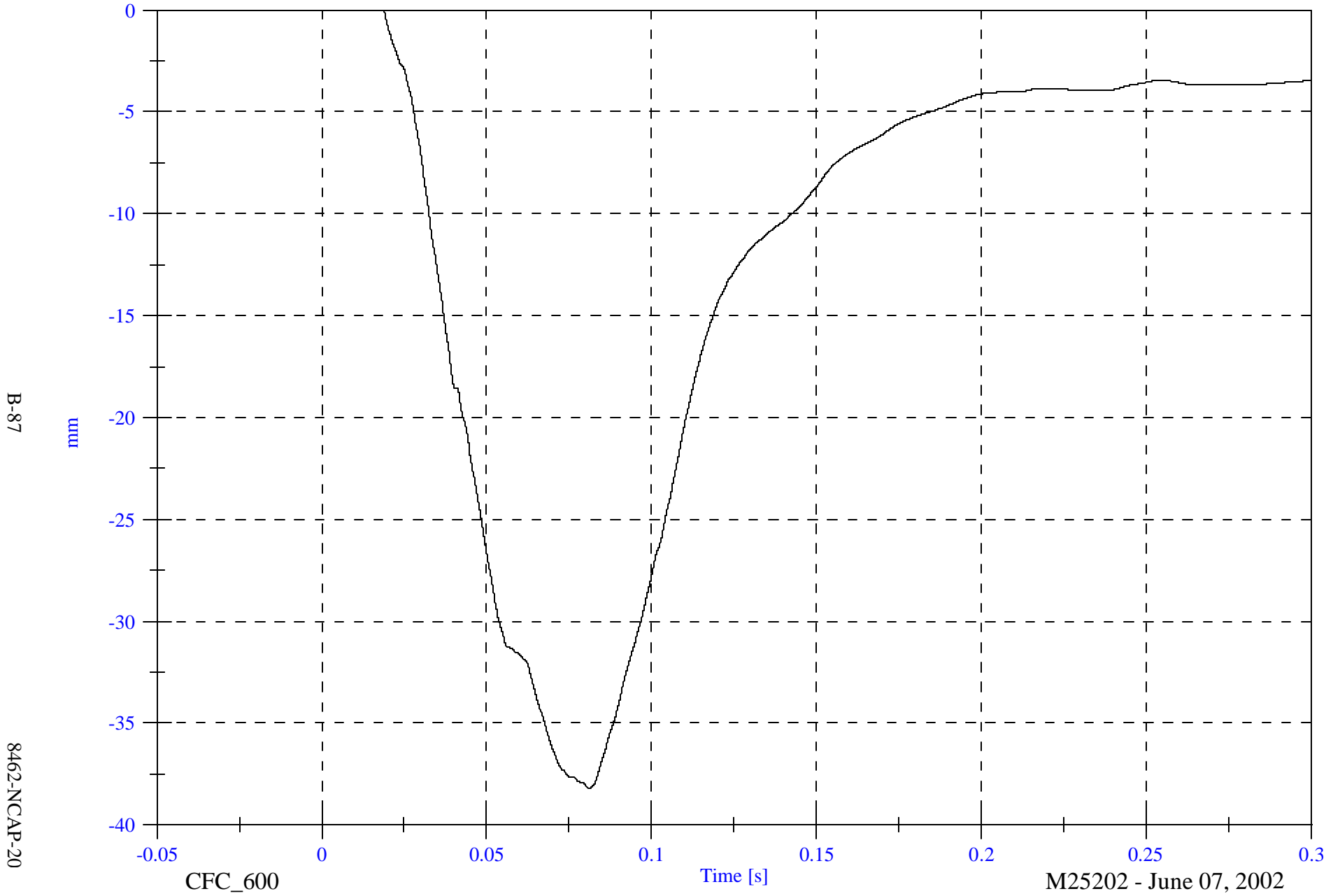
M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 0.0 [mm] at -0.021 [s]

Min: -38.2 [mm] at 0.081 [s]

P2 Chest Compression x



B-87

8462-NCAP-20

CFC\_600

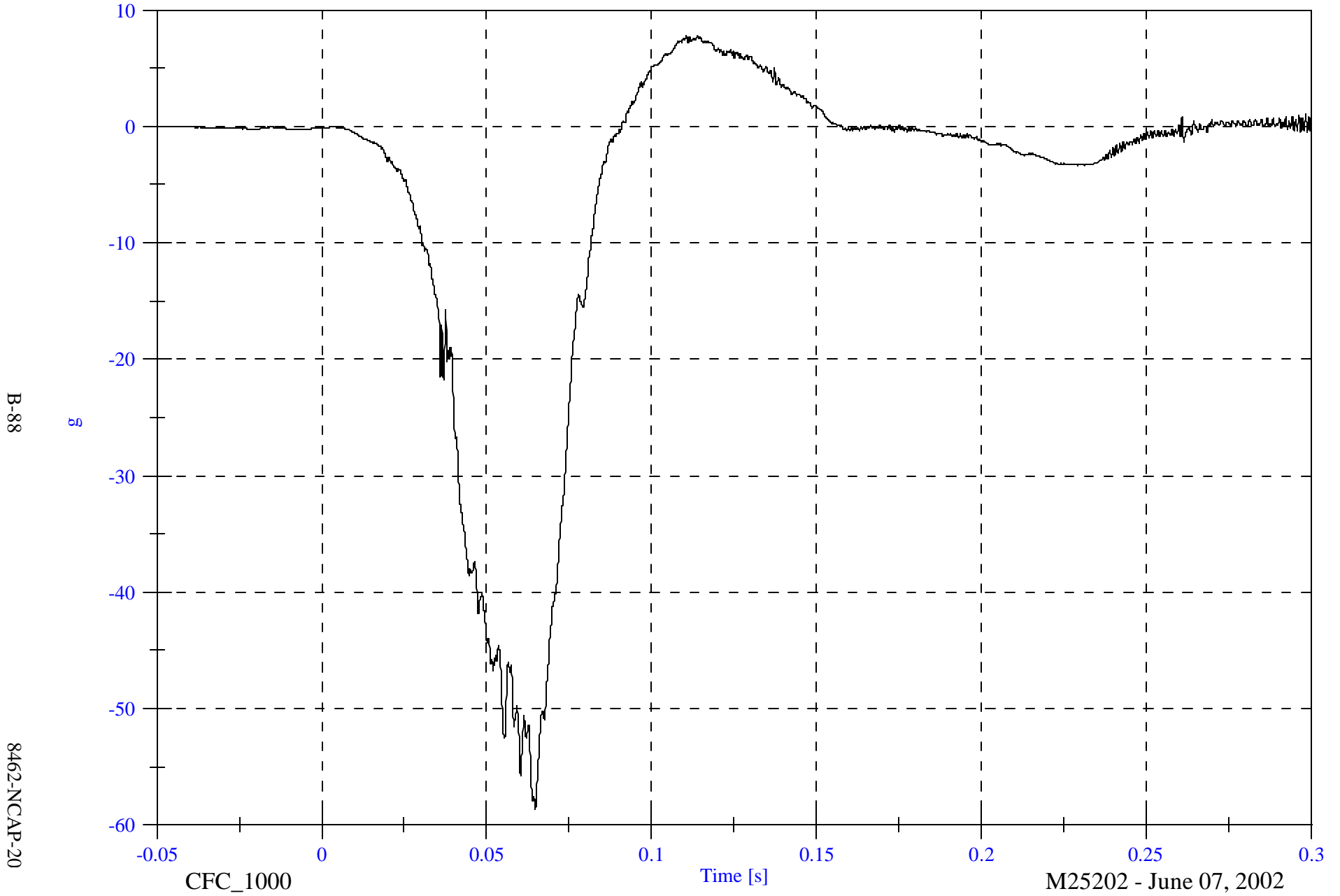
Time [s]

M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 7.8 [g] at 0.114 [s]  
Min: -58.6 [g] at 0.065 [s]

P2 Pelvic x



B-88

8462-NCAP-20

CFC\_1000

Time [s]

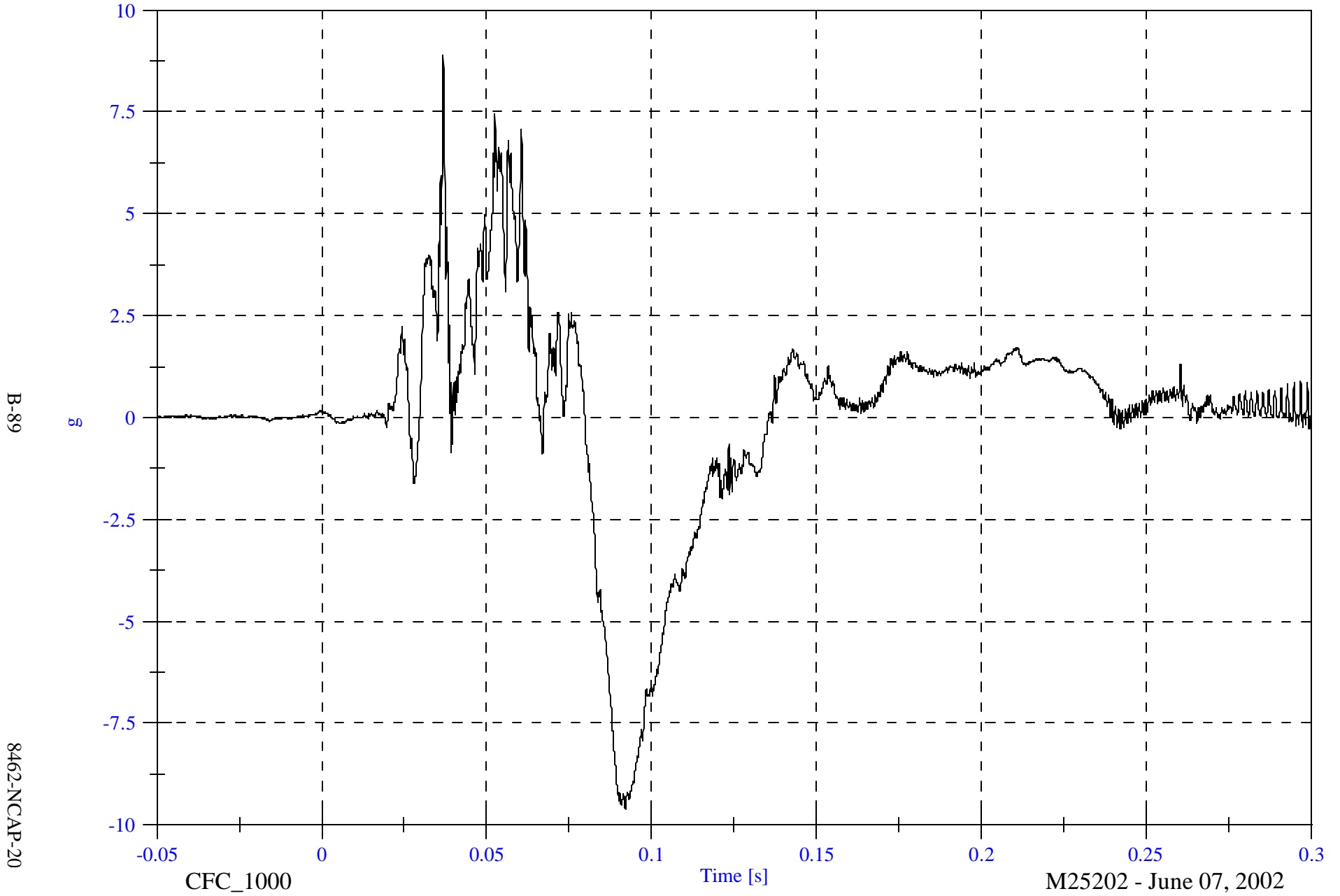
M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 8.9 [g] at 0.037 [s]

Min: -9.6 [g] at 0.092 [s]

P2 Pelvic y

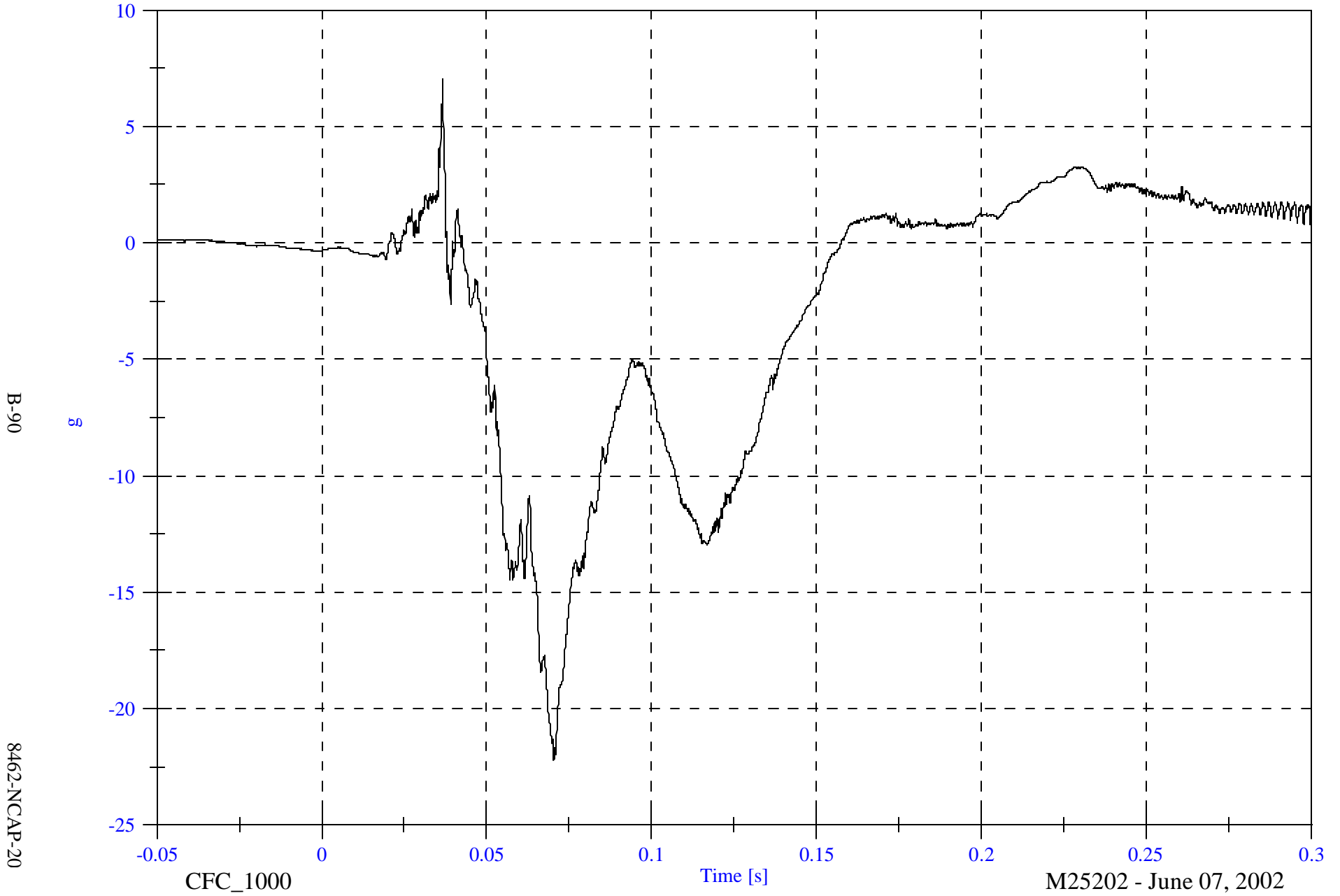


2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 7.0 [g] at 0.037 [s]

Min: -22.2 [g] at 0.070 [s]

P2 Pelvic z



2002 NCAP Test 20 2002 Nissan Pathfinder

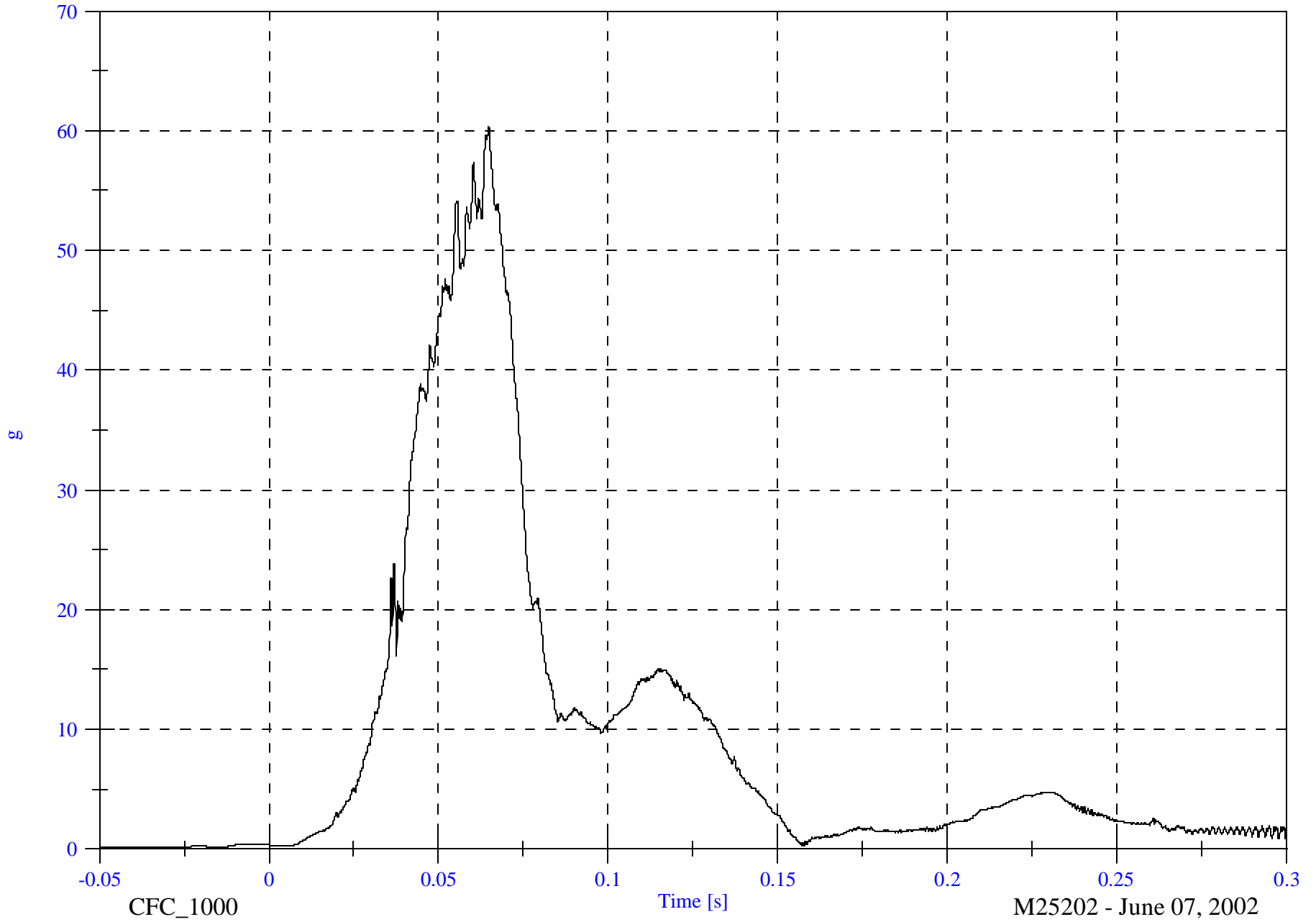
P2 Pelvic Resultant

Max: 60.4 [g] at 0.065 [s]

Min: 0.1 [g] at -0.049 [s]

B-91

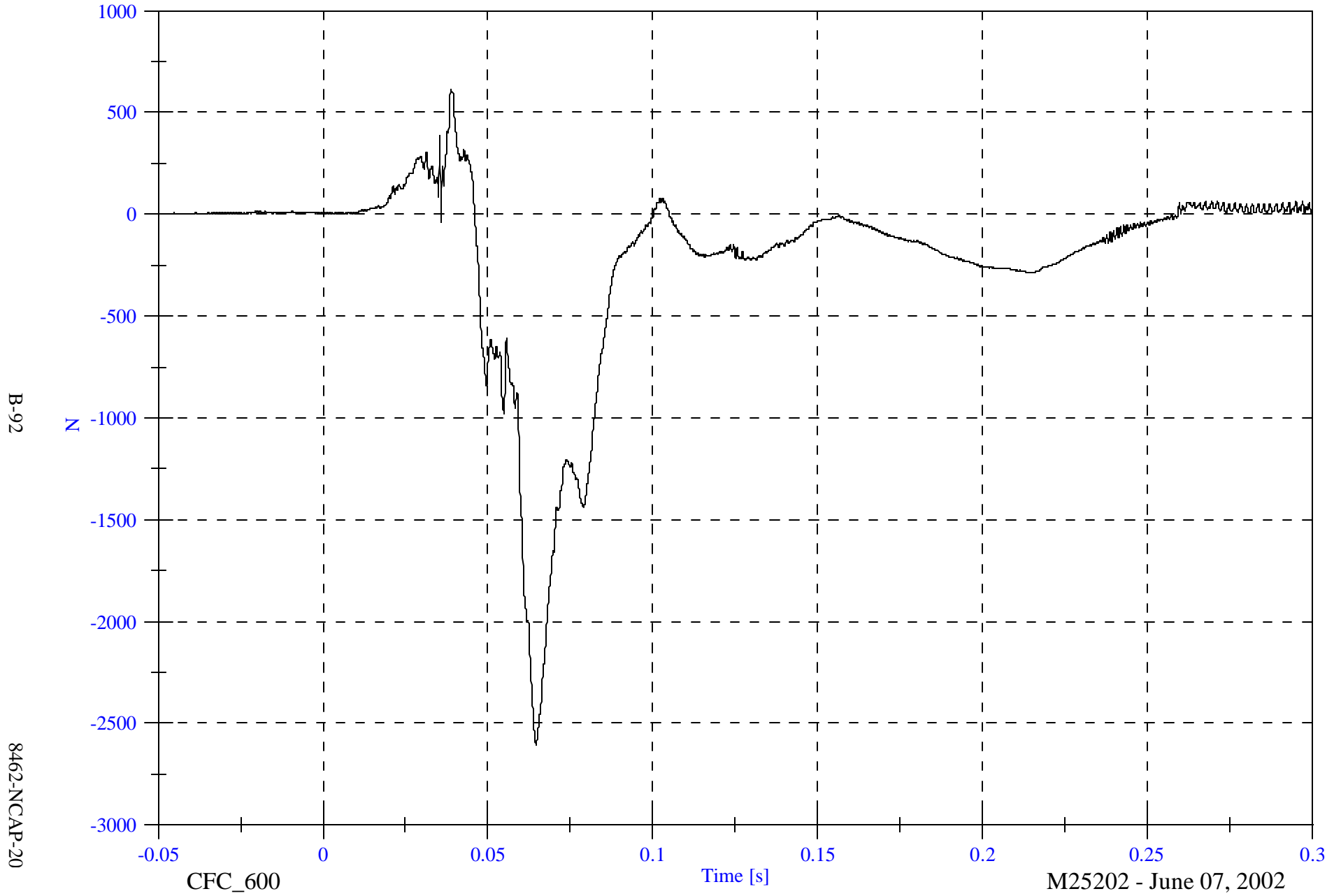
8462-NCAP-20



2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 615.0 [N] at 0.039 [s]  
Min: -2605.8 [N] at 0.065 [s]

P2 Left Femur z



B-92

8462-NCAP-20

CFC\_600

Time [s]

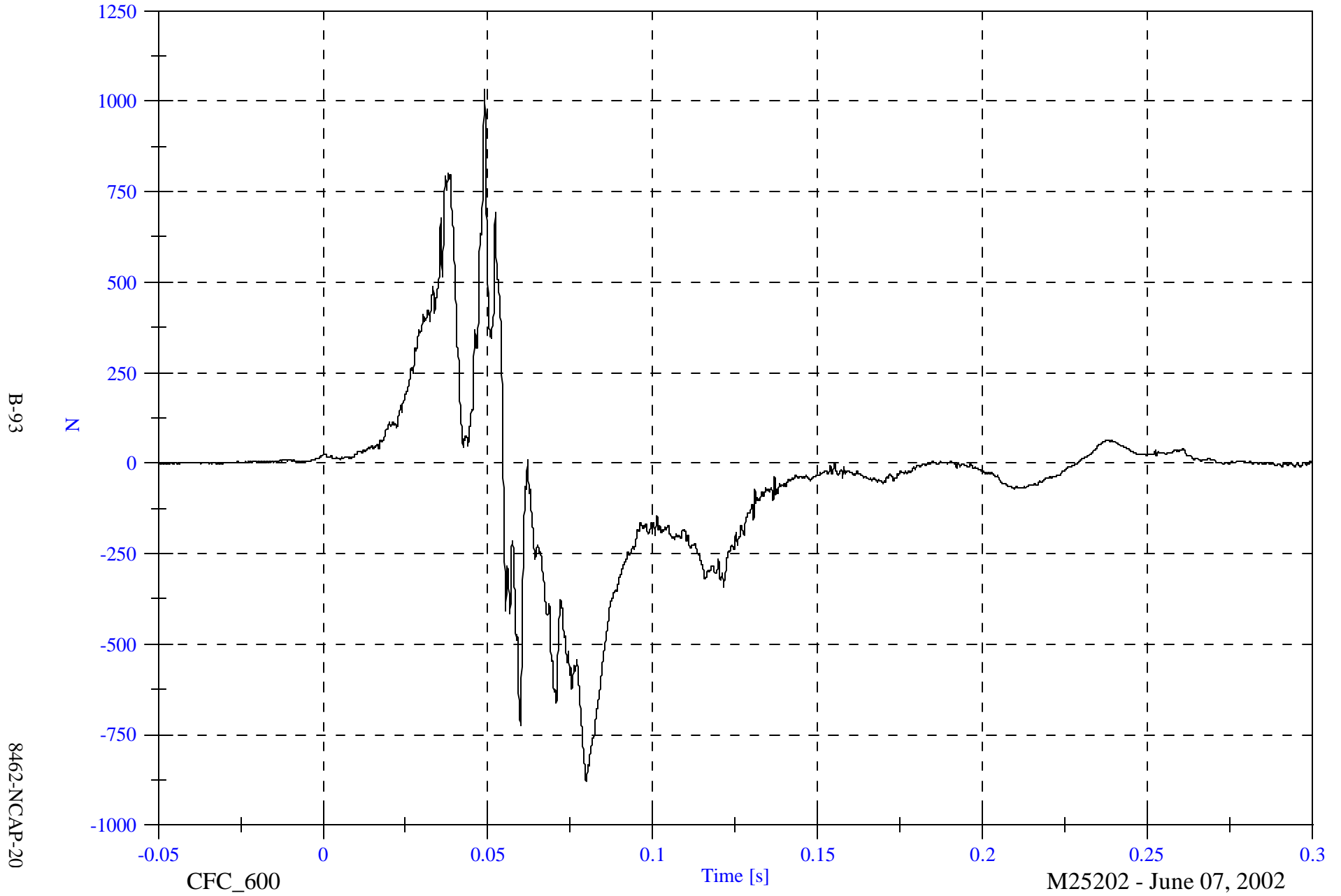
M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 1031.8 [N] at 0.049 [s]

Min: -880.1 [N] at 0.080 [s]

P2 Right Femur z

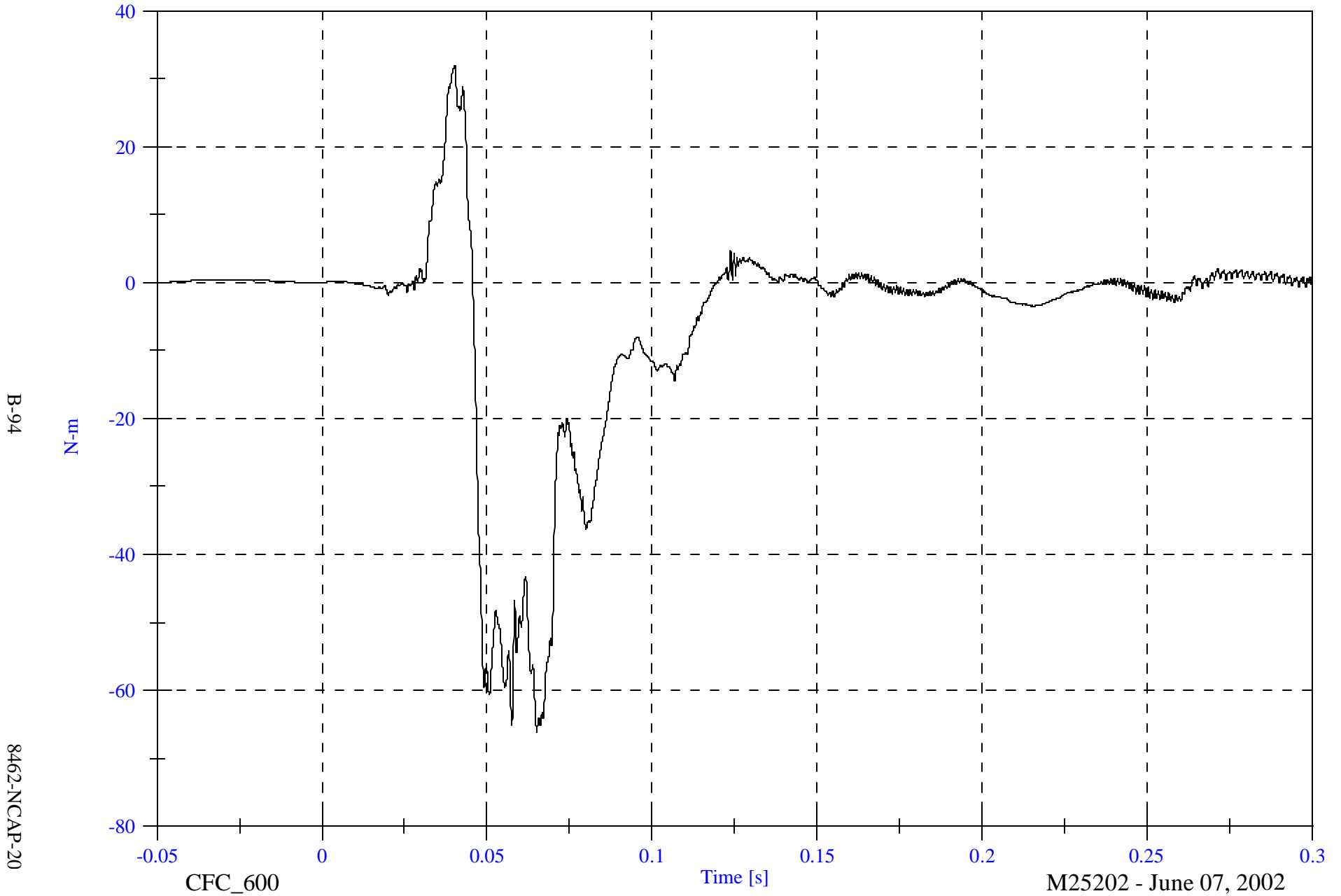


2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 32.0 [N-m] at 0.040 [s]

Min: -66.1 [N-m] at 0.065 [s]

P2 Left Upper Tibia Mx

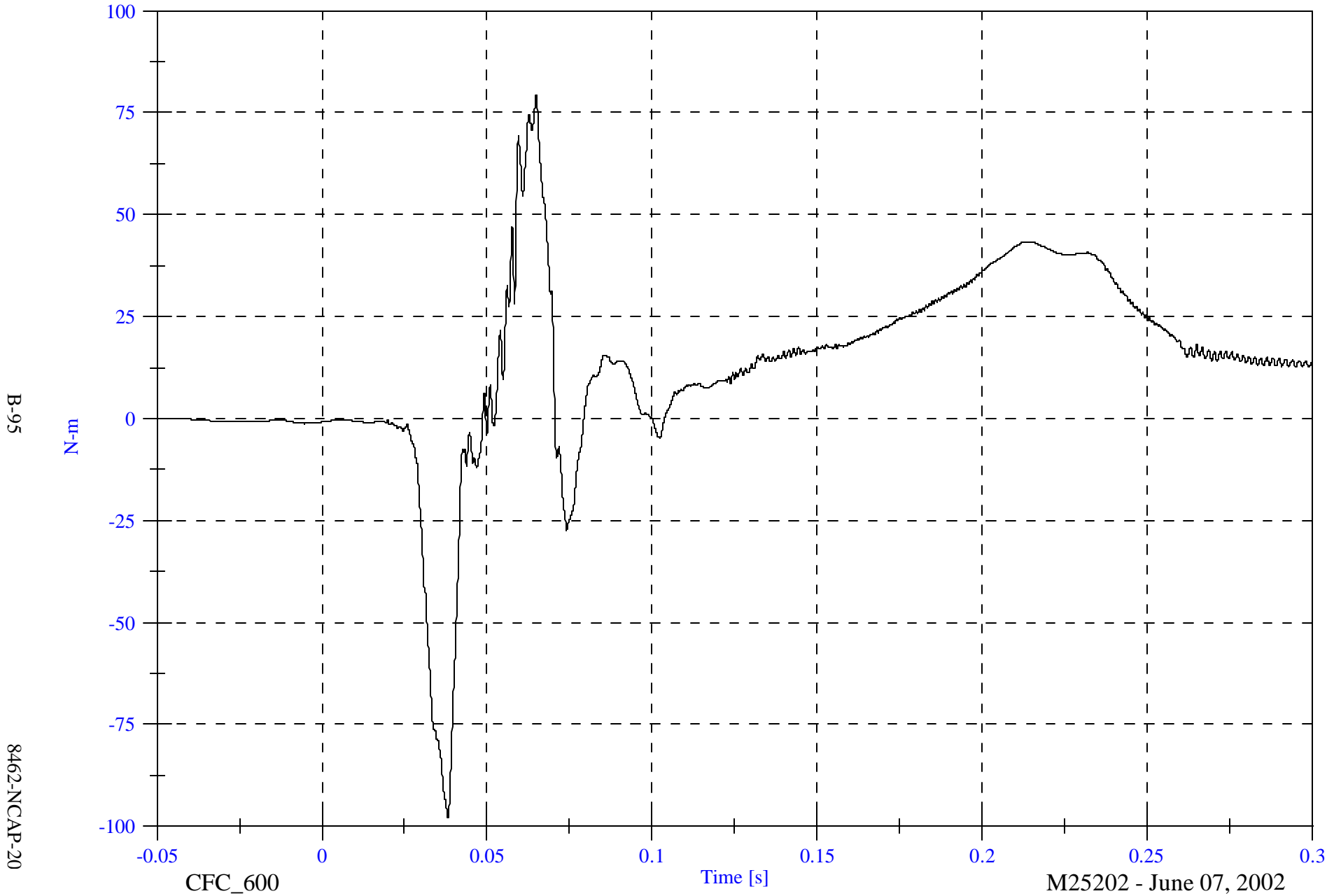


2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 79.3 [N-m] at 0.065 [s]

Min: -97.7 [N-m] at 0.038 [s]

P2 Left Upper Tibia My



B-95

8462-NCAP-20

CFC\_600

Time [s]

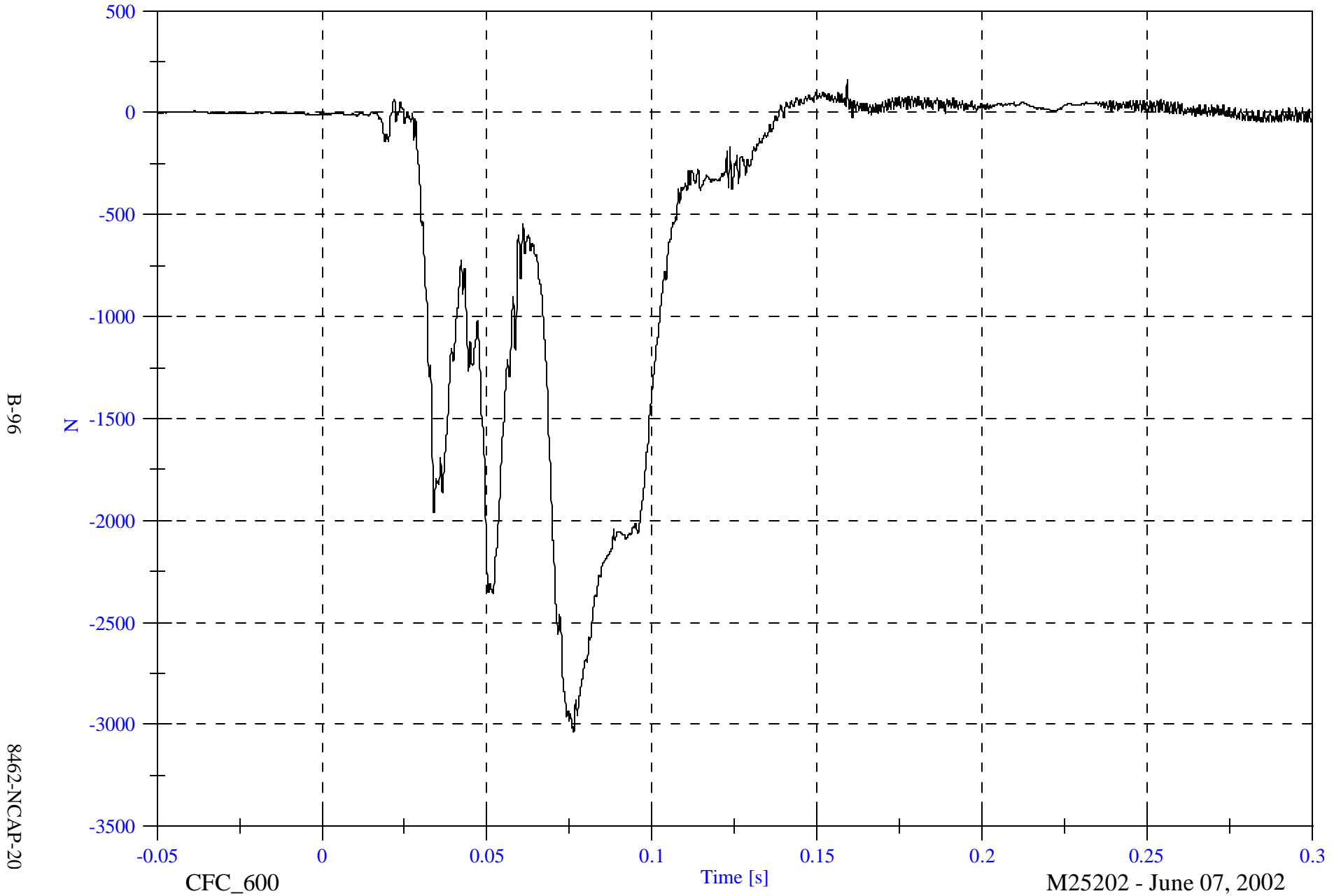
M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 157.8 [N] at 0.159 [s]

Min: -3036.8 [N] at 0.076 [s]

P2 Left Lower Tibia Fz



B-96

8462-NCAP-20

CFC\_600

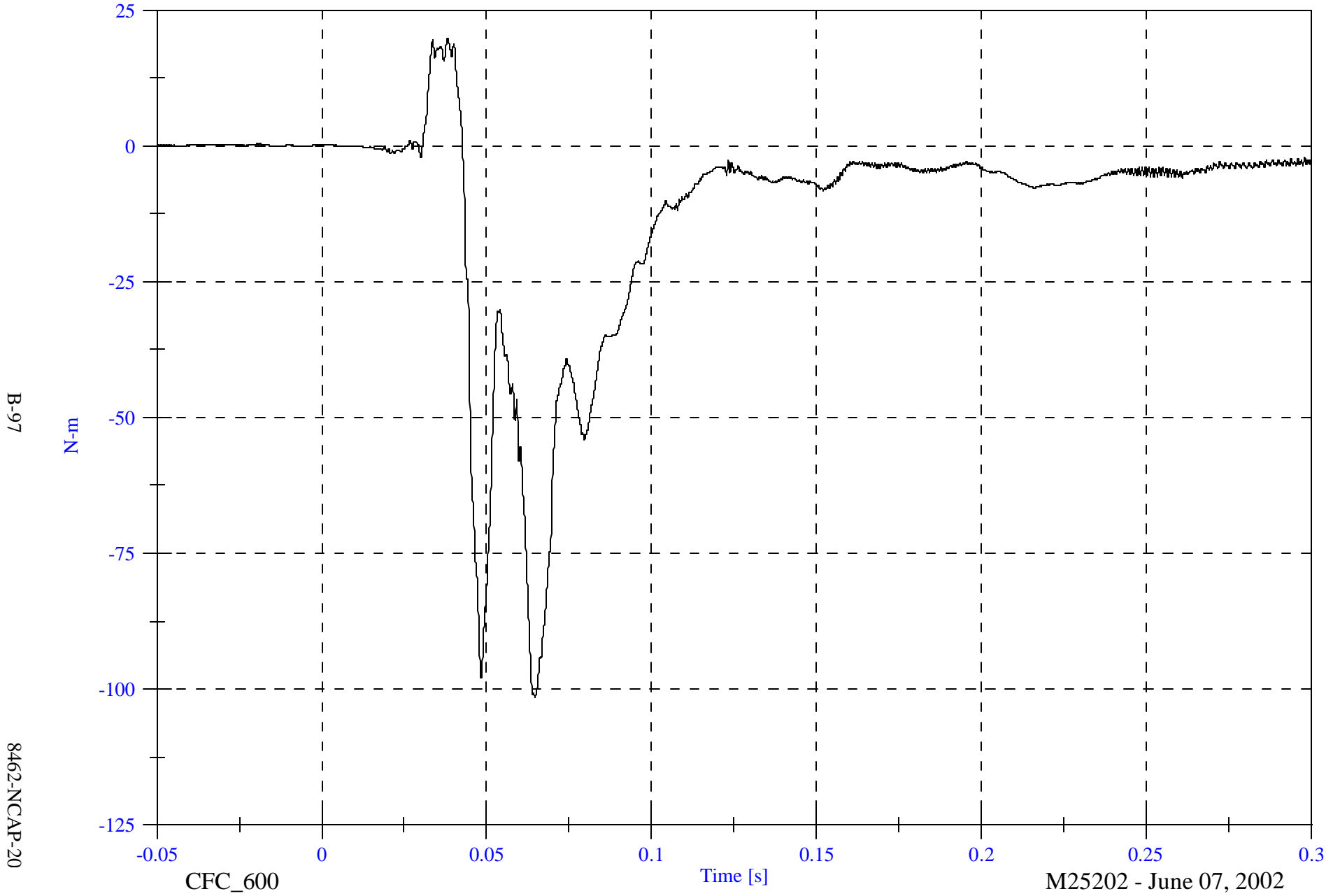
Time [s]

M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 19.7 [N-m] at 0.038 [s]  
Min: -101.4 [N-m] at 0.065 [s]

P2 Left Lower Tibia Mx



B-97

8462-NCAP-20

CFC\_600

Time [s]

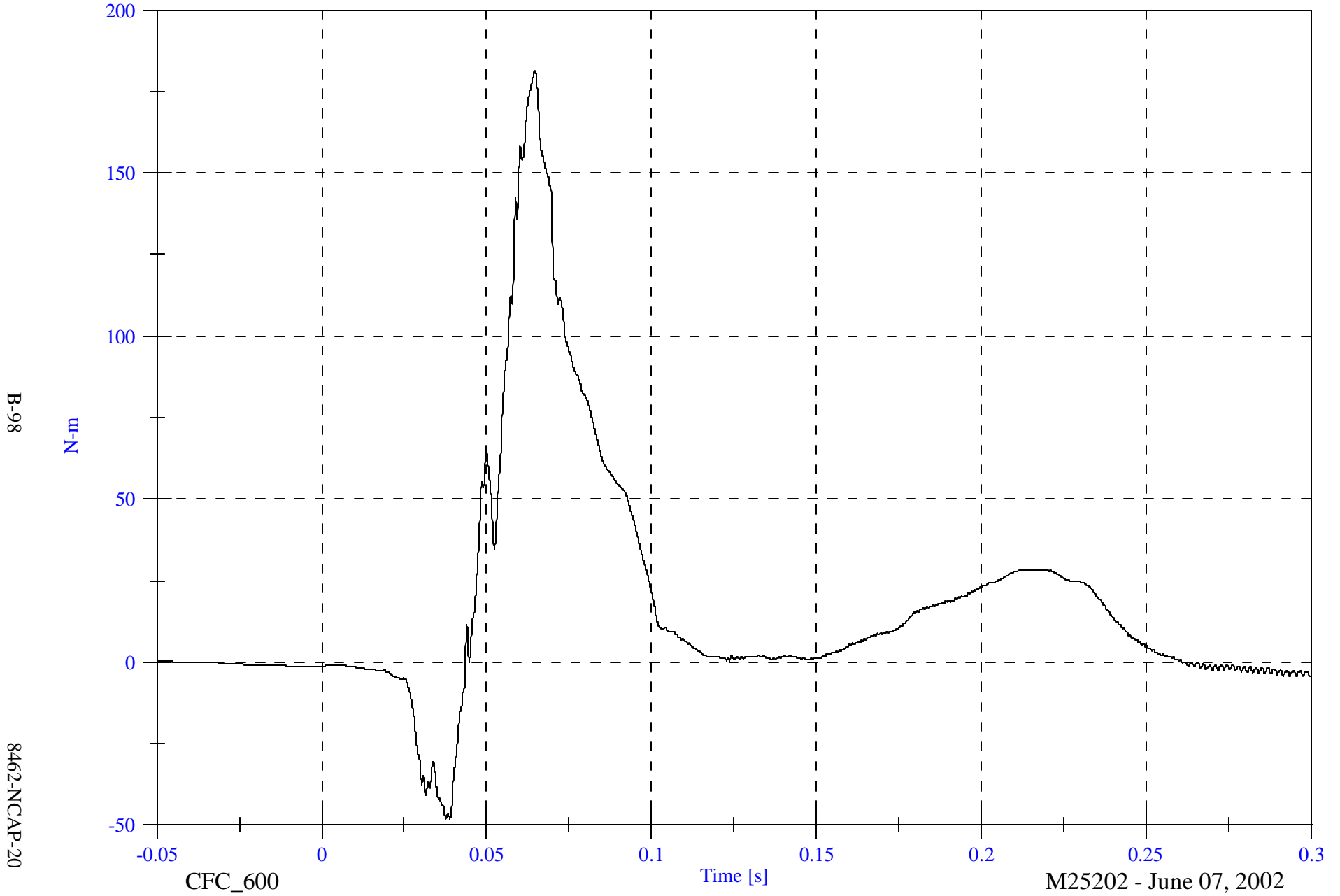
M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 181.4 [N-m] at 0.065 [s]

Min: -48.2 [N-m] at 0.038 [s]

P2 Left Lower Tibia My



B-98

8462-NCAP-20

CFC\_600

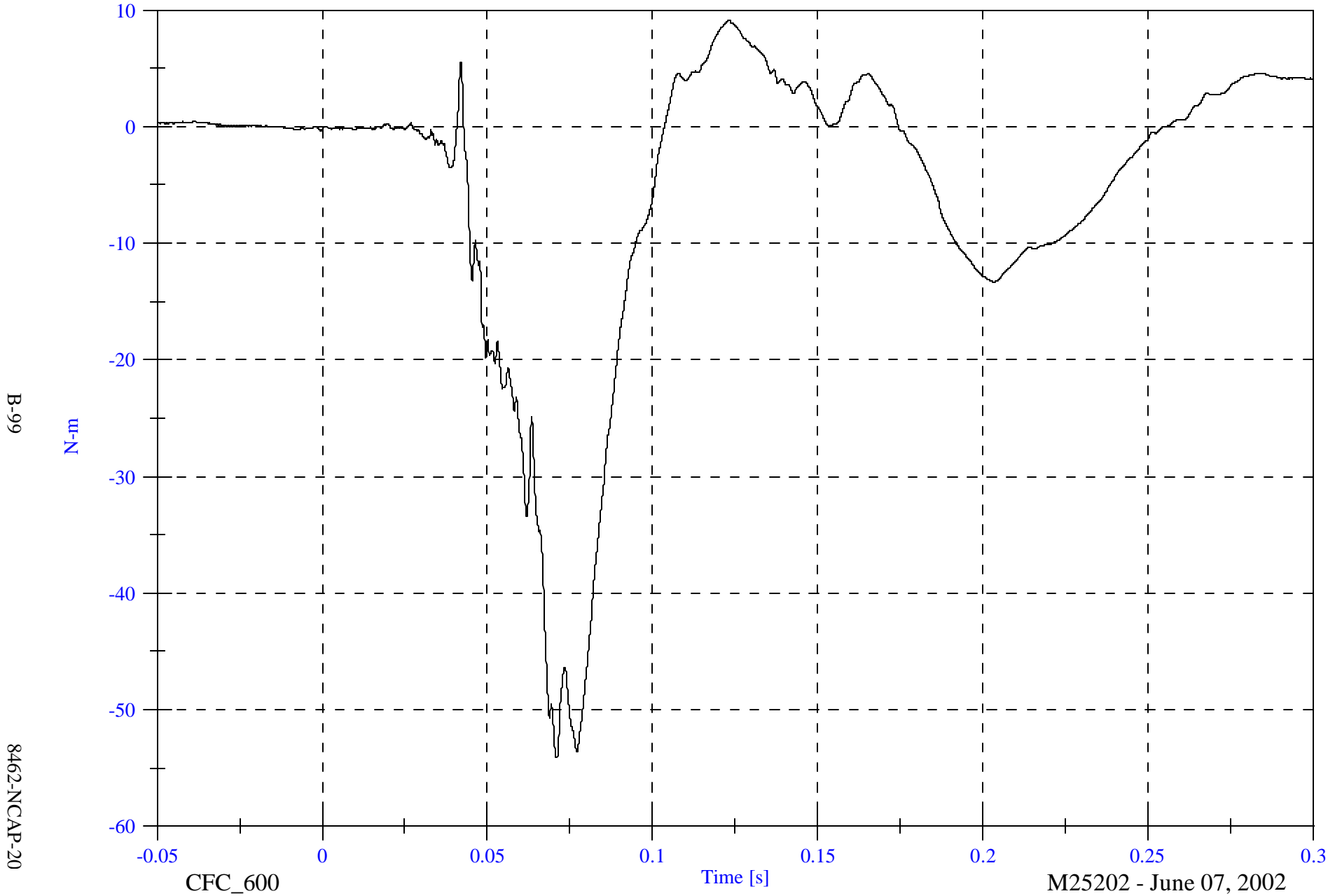
Time [s]

M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 9.1 [N-m] at 0.123 [s]  
Min: -54.1 [N-m] at 0.071 [s]

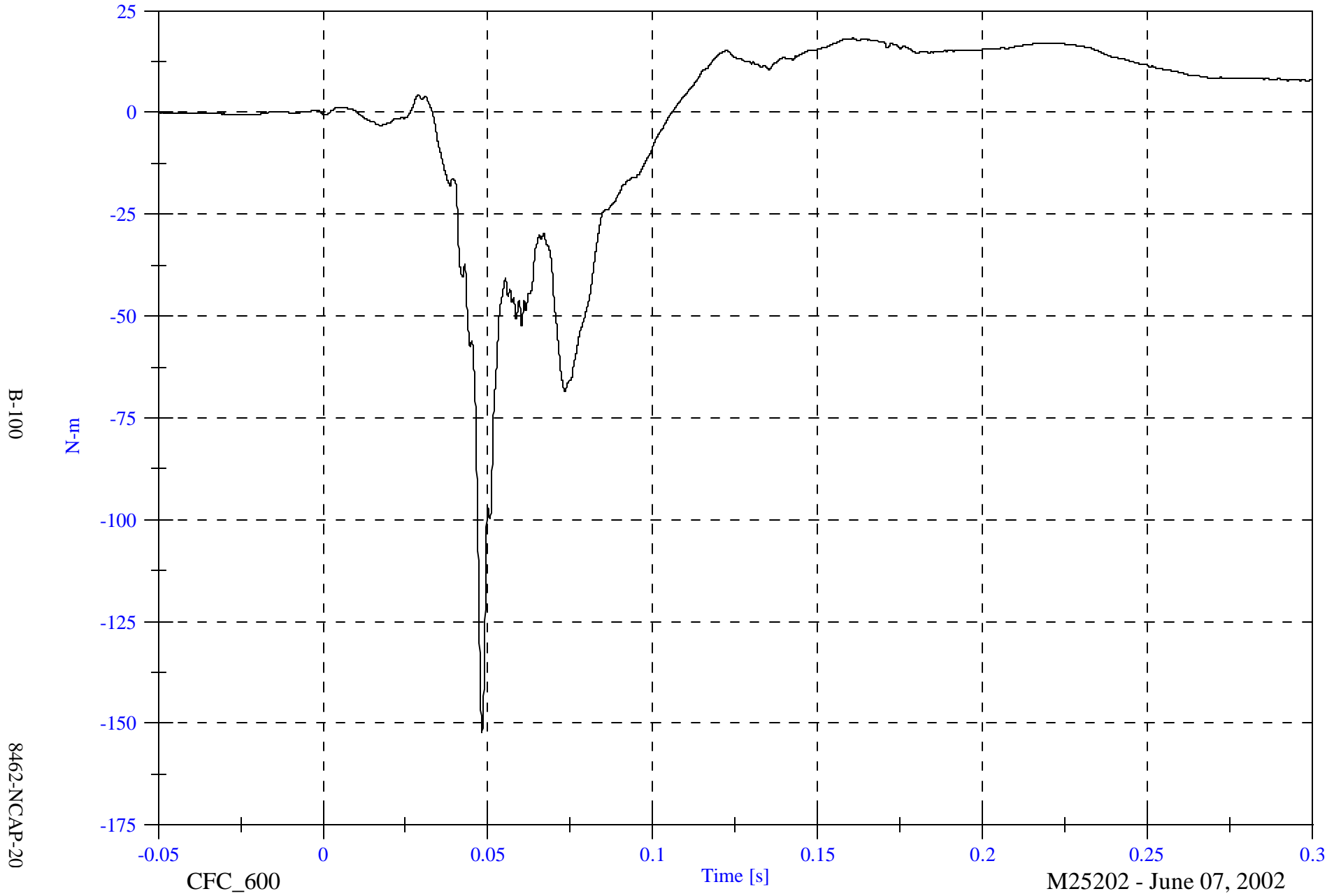
P2 Right upper Tibia Mx



2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 18.3 [N-m] at 0.161 [s]  
Min: -152.3 [N-m] at 0.048 [s]

P2 Right upper Tibia My



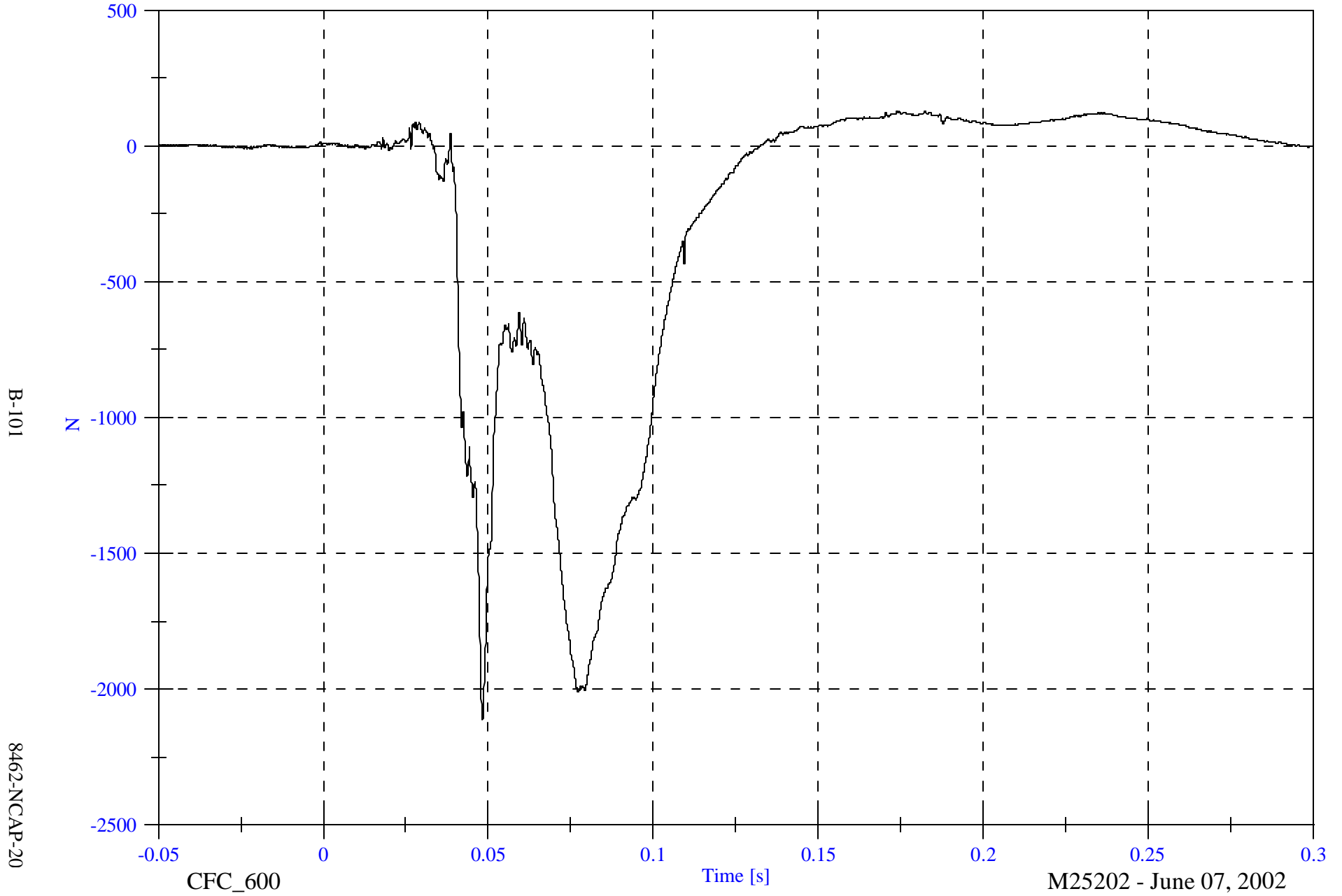
B-100

8462-NCAP-20

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 129.7 [N] at 0.182 [s]  
Min: -2113.6 [N] at 0.048 [s]

P2 Right Lower Tibia Fz



B-101

8462-NCAP-20

CFC\_600

Time [s]

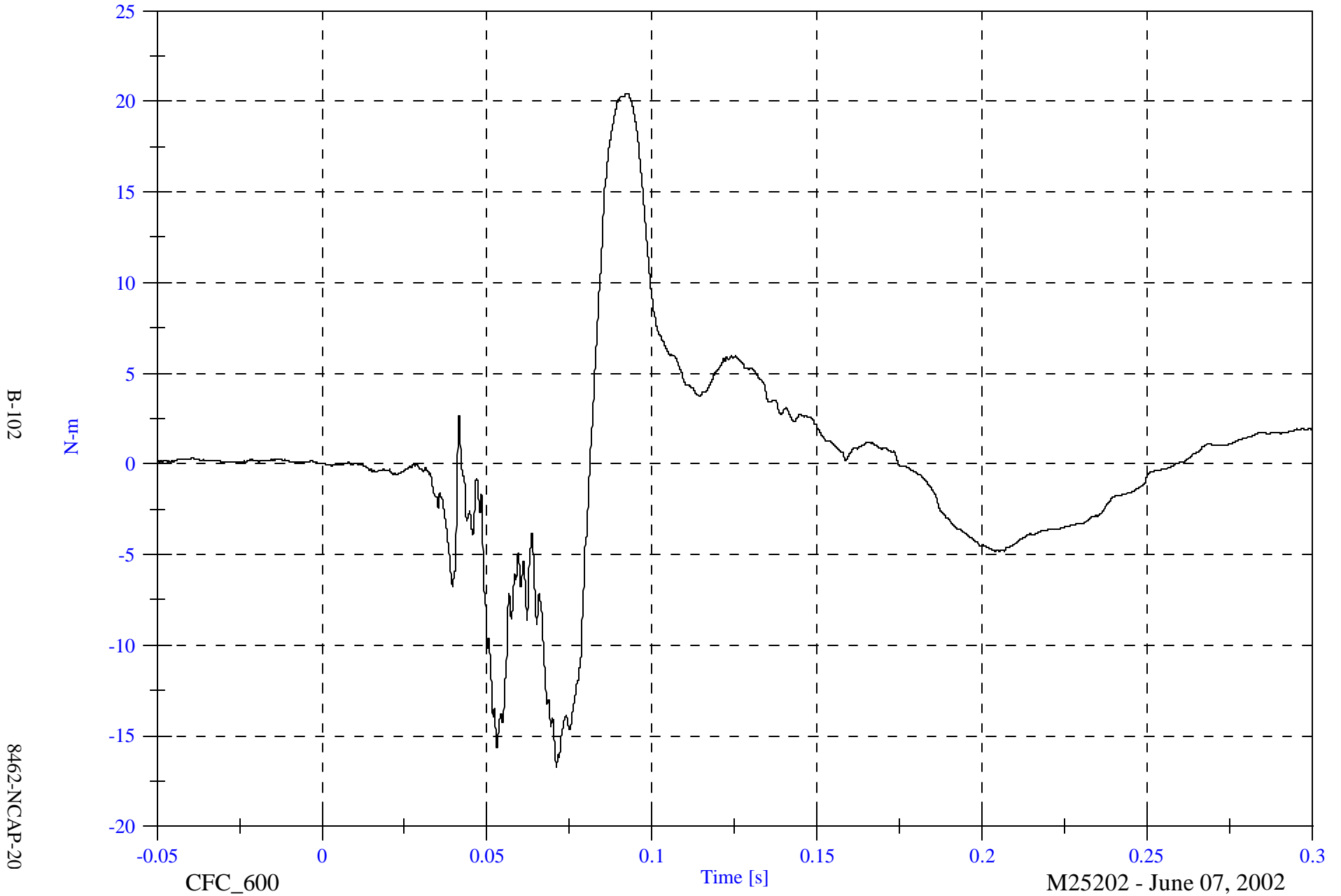
M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 20.4 [N-m] at 0.092 [s]

Min: -16.7 [N-m] at 0.071 [s]

P2 Right Lower Tibia Mx



B-102

8462-NCAP-20

CFC\_600

Time [s]

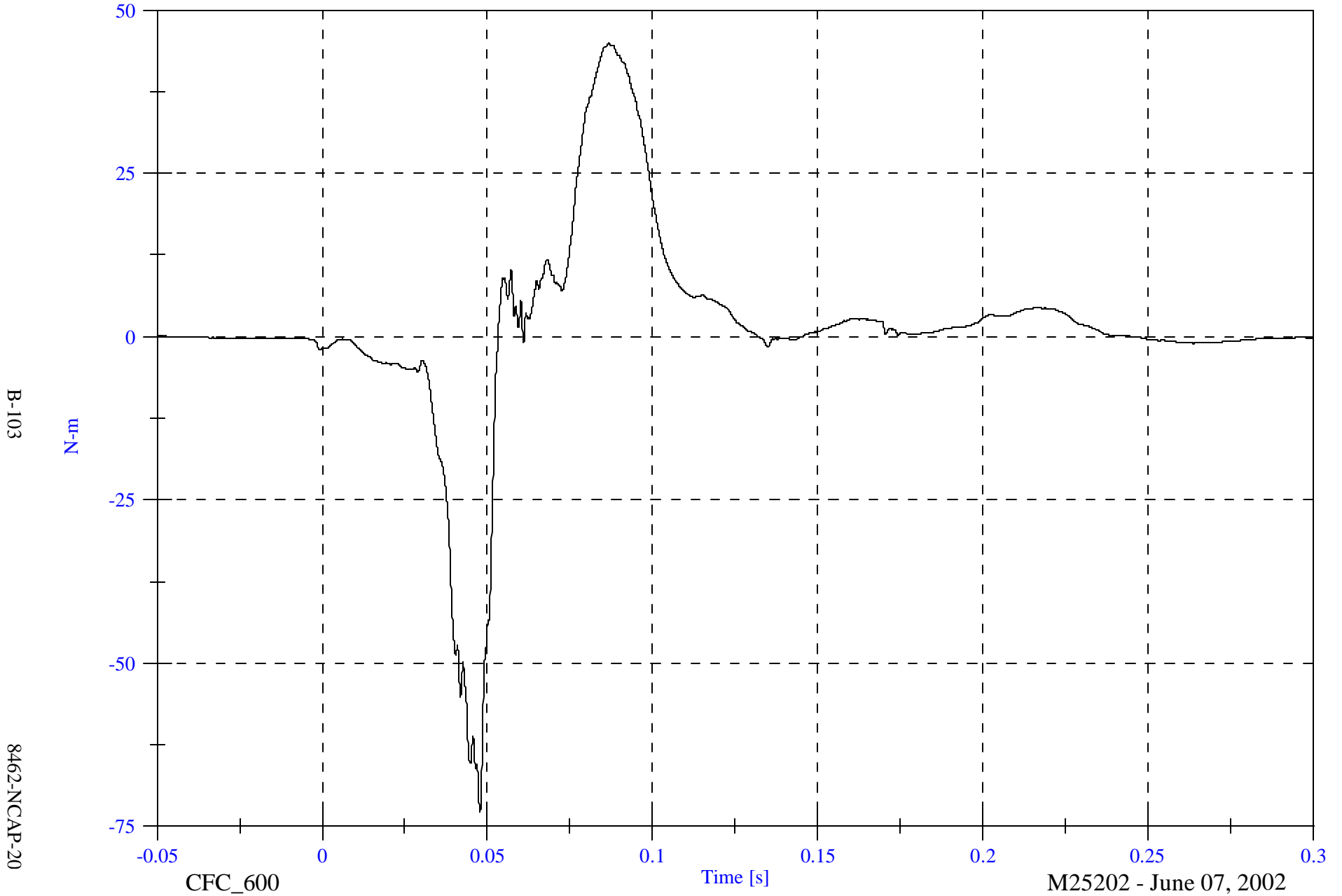
M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 44.9 [N-m] at 0.087 [s]

Min: -72.8 [N-m] at 0.048 [s]

P2 Right Lower Tibia My



B-103

8462-NCAP-20

CFC\_600

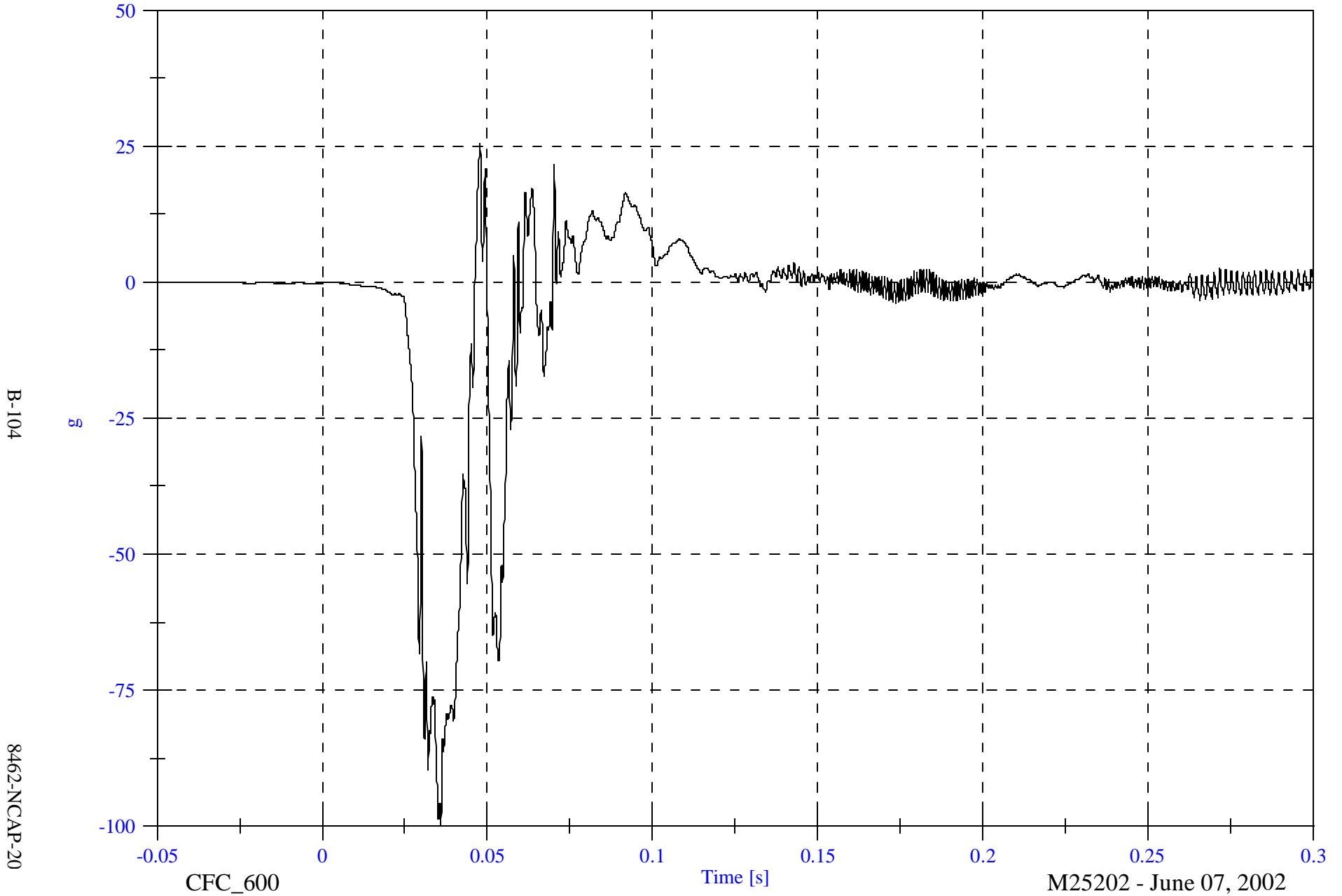
M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 25.5 [g] at 0.048 [s]

Min: -99.6 [g] at 0.036 [s]

P2 Left Foot Aft x



B-104

8462-NCAP-20

CFC\_600

Time [s]

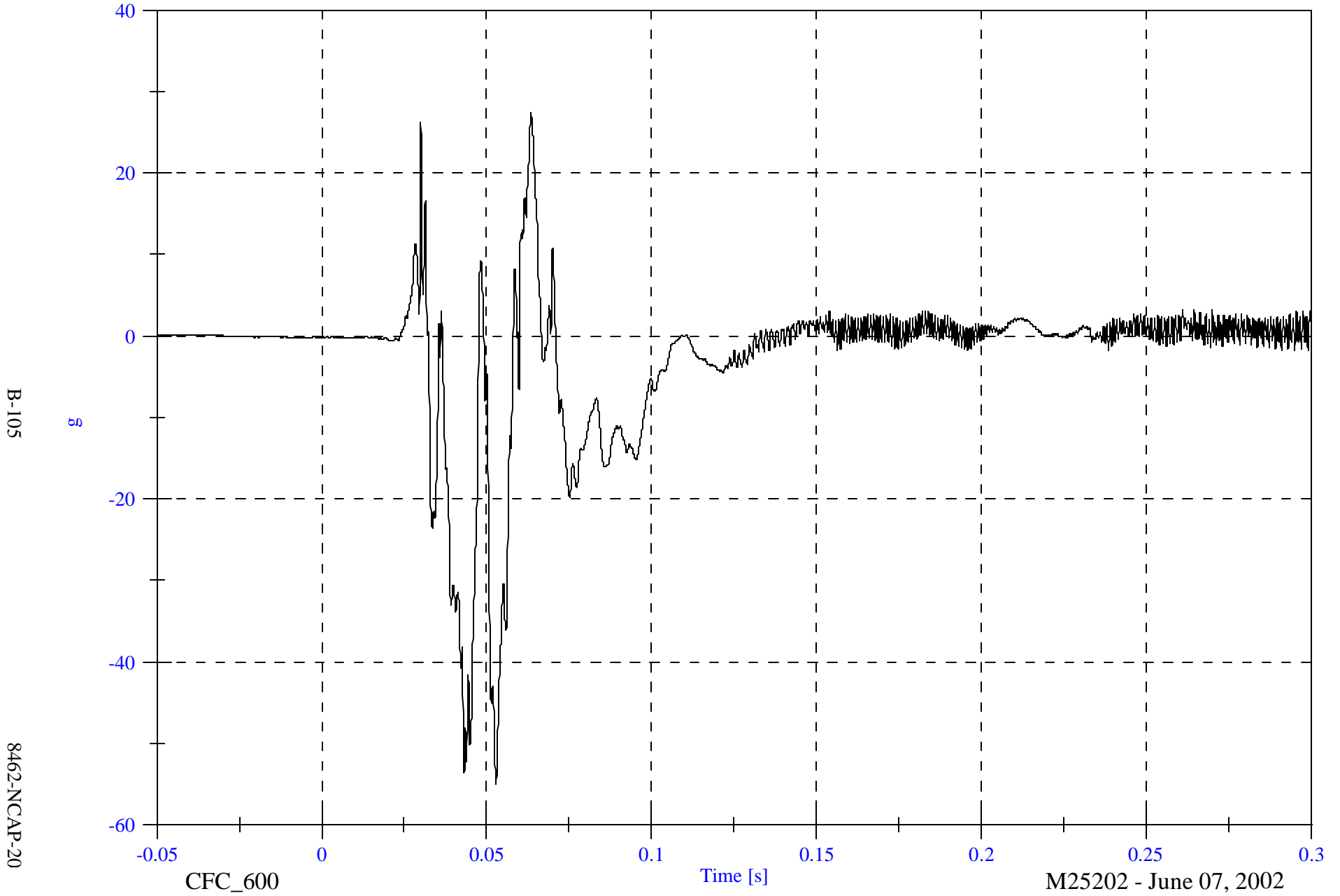
M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 27.3 [g] at 0.063 [s]

Min: -54.9 [g] at 0.053 [s]

P2 Left Foot Aft z



B-105

8462-NCAP-20

CFC\_600

Time [s]

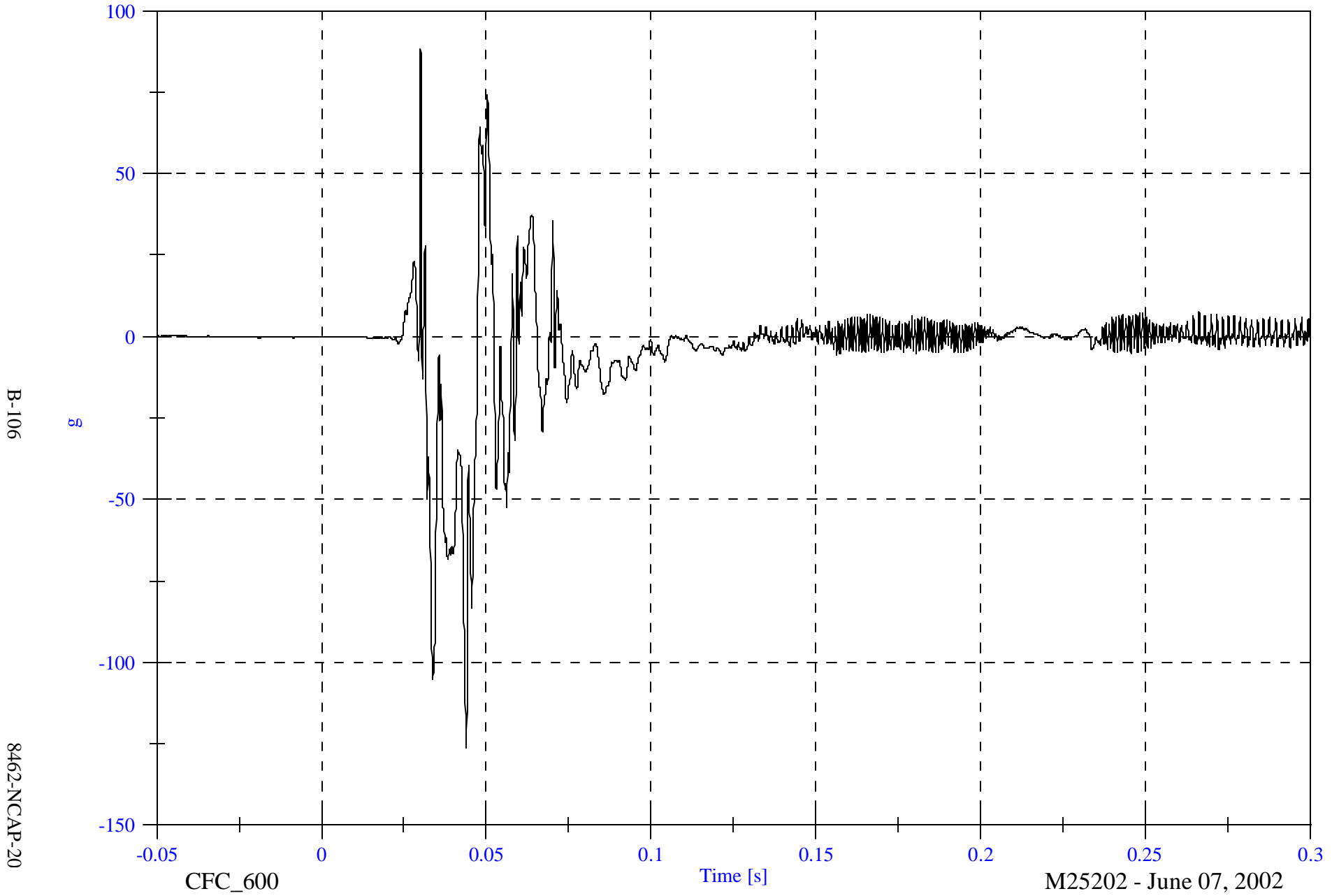
M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 88.4 [g] at 0.030 [s]

Min: -126.3 [g] at 0.044 [s]

P2 Left Foot Fore z

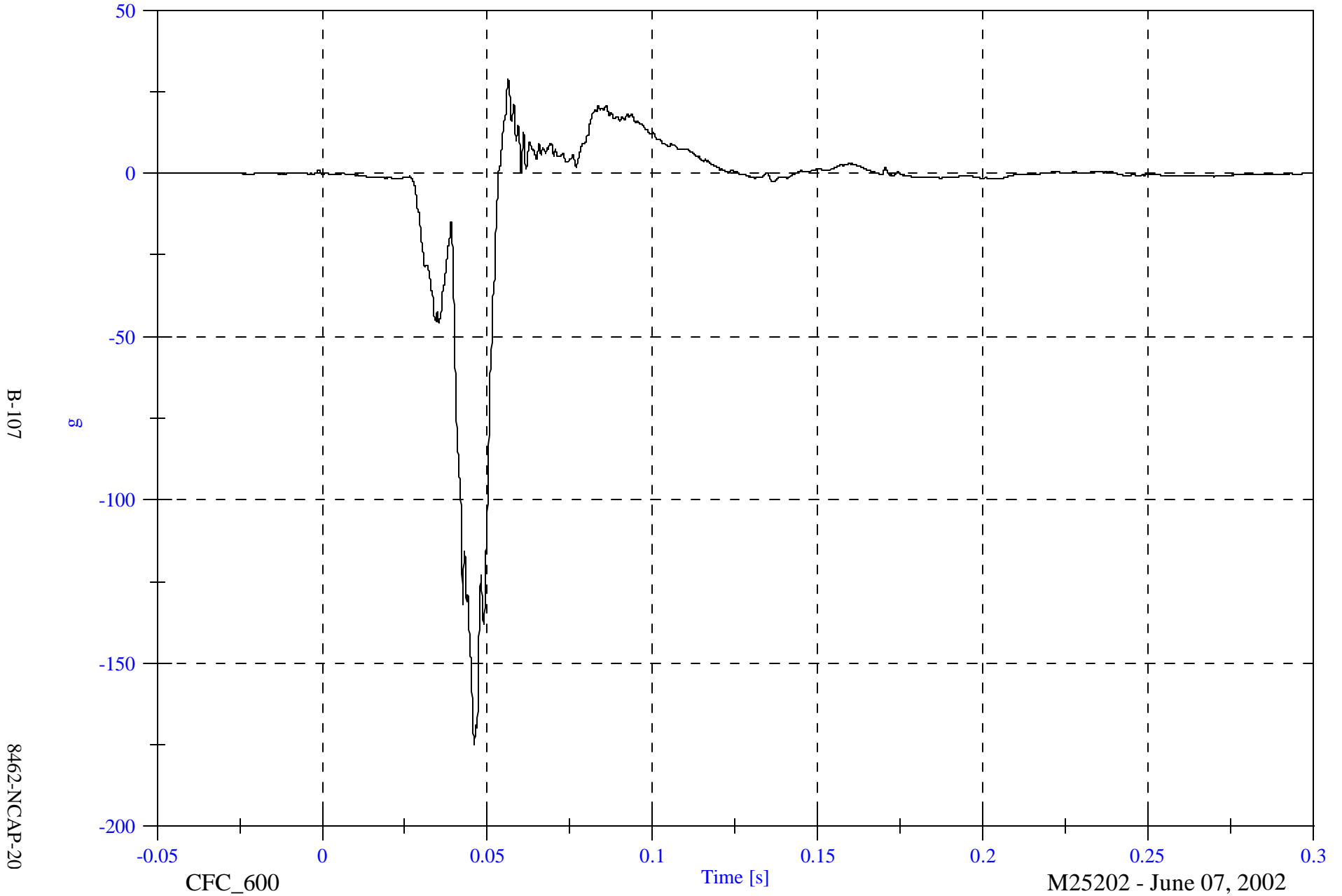


2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 28.7 [g] at 0.056 [s]

Min: -174.9 [g] at 0.046 [s]

P2 Right Foot Aft x

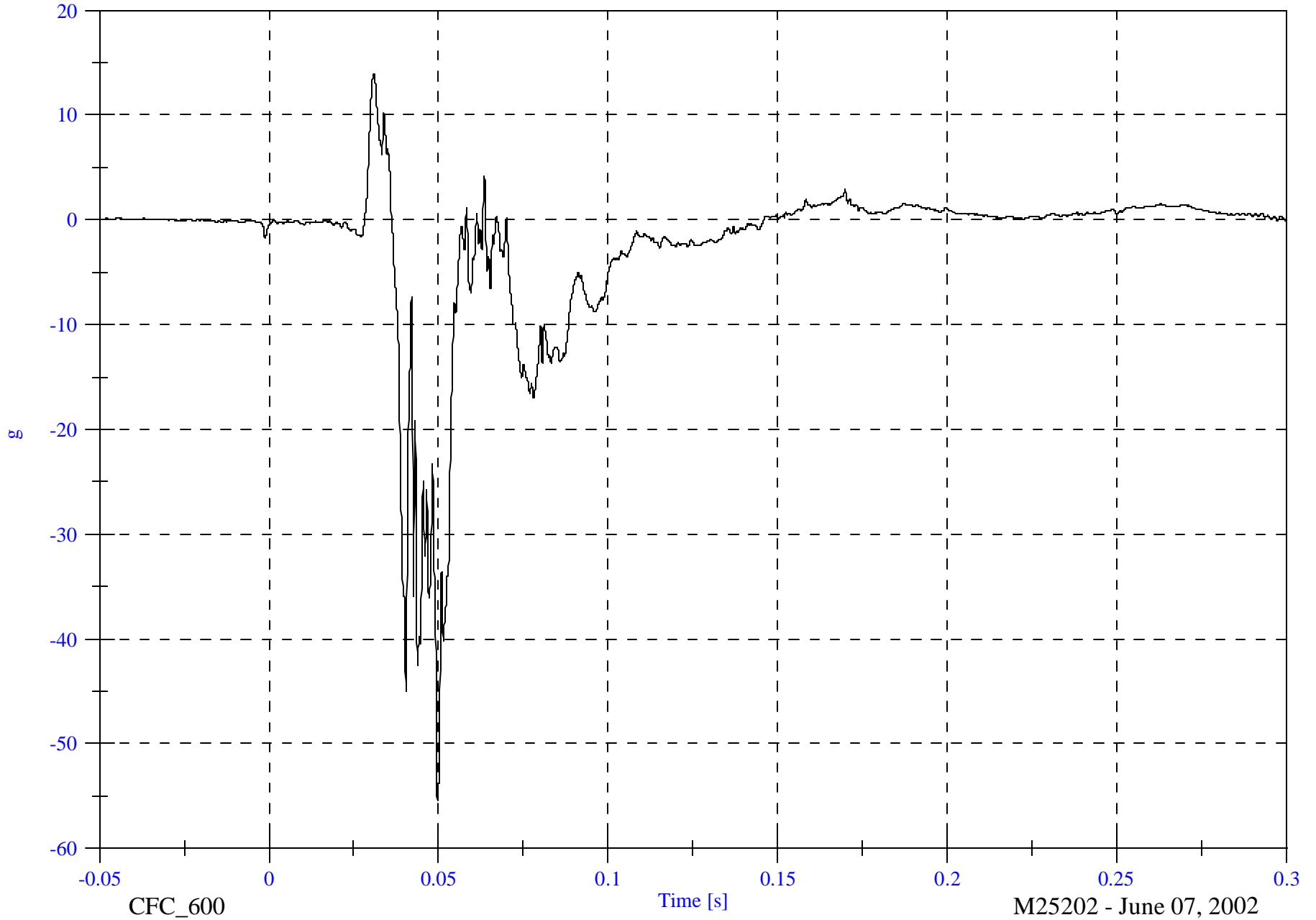


2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 13.9 [g] at 0.031 [s]

Min: -55.4 [g] at 0.050 [s]

P2 Right foot Aft z



B-108

8462-NCAP-20

CFC\_600

Time [s]

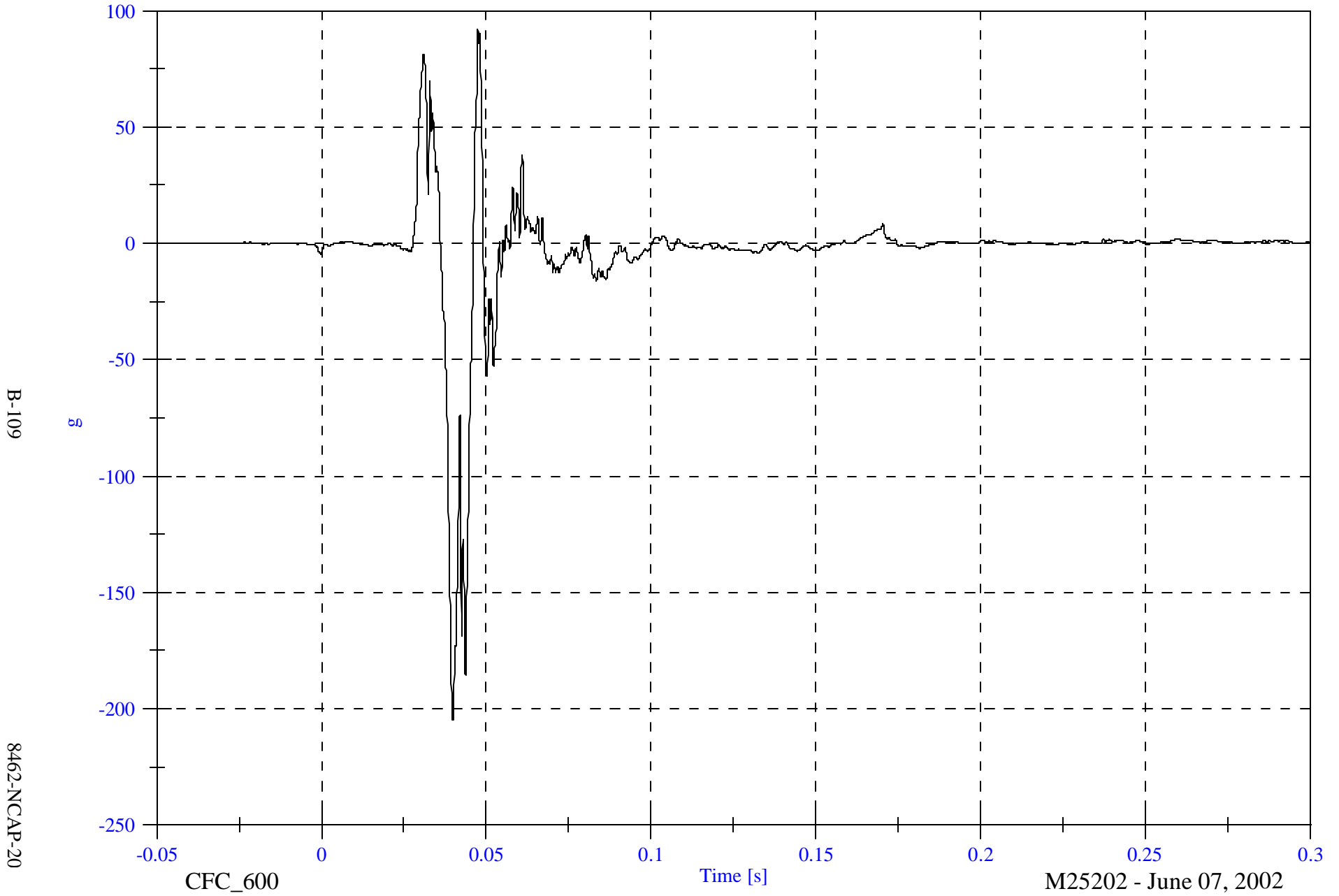
M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 91.8 [g] at 0.047 [s]

Min: -204.6 [g] at 0.040 [s]

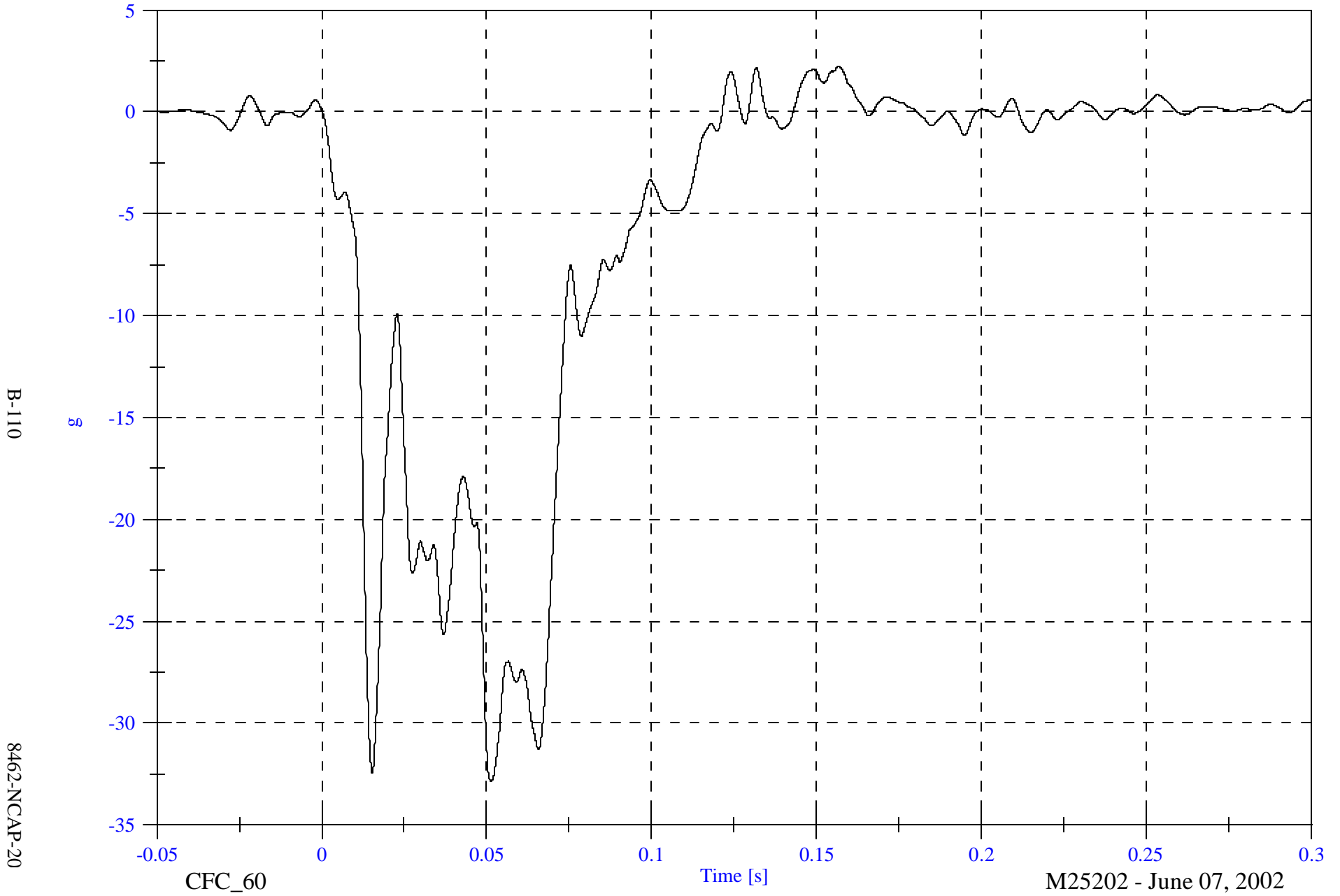
P2 Right Foot Fore z



2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 2.2 [g] at 0.157 [s]  
Min: -32.9 [g] at 0.051 [s]

Left Rear #1x



B-110

8462-NCAP-20

2002 NCAP Test 20 2002 Nissan Pathfinder

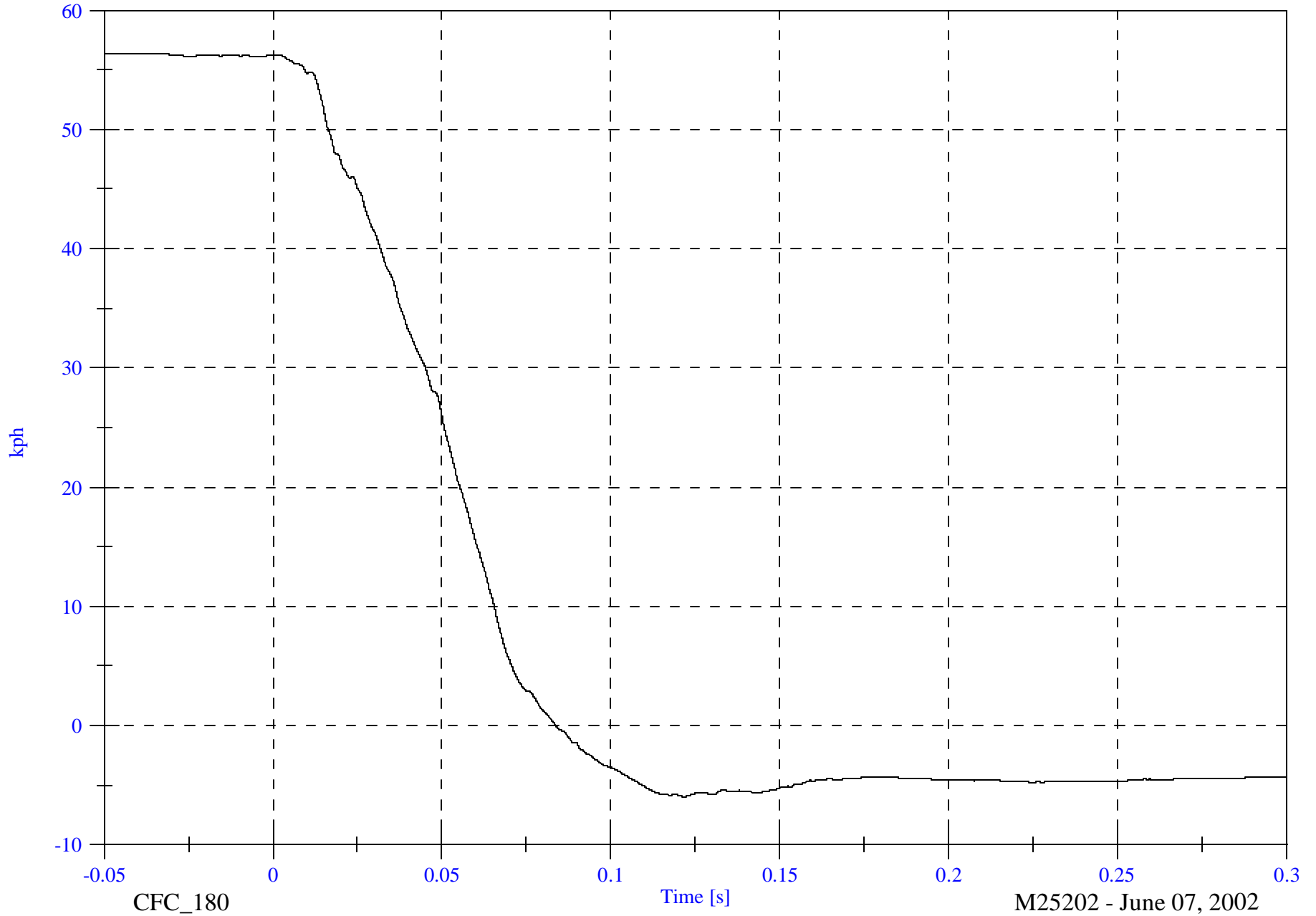
Max: 56.3 [kph] at -0.038 [s]

Left Rear #1x Velocity

Min: -6.0 [kph] at 0.122 [s]

B-111

8462-NCAP-20



CFC\_180

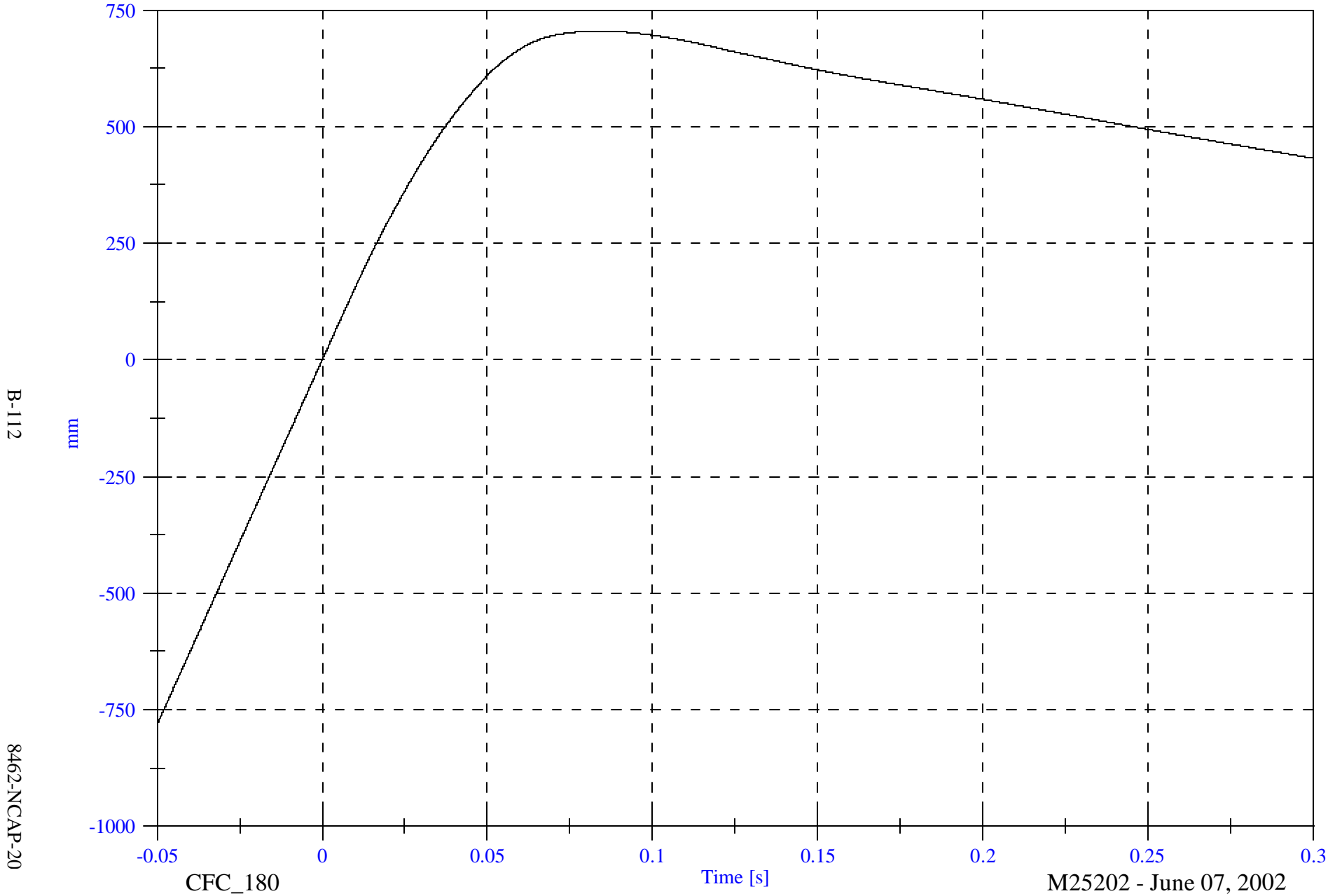
M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 704.6 [mm] at 0.084 [s]

Min: -781.1 [mm] at -0.050 [s]

Left Rear #1x Displacement



B-112

8462-NCAP-20

CFC\_180

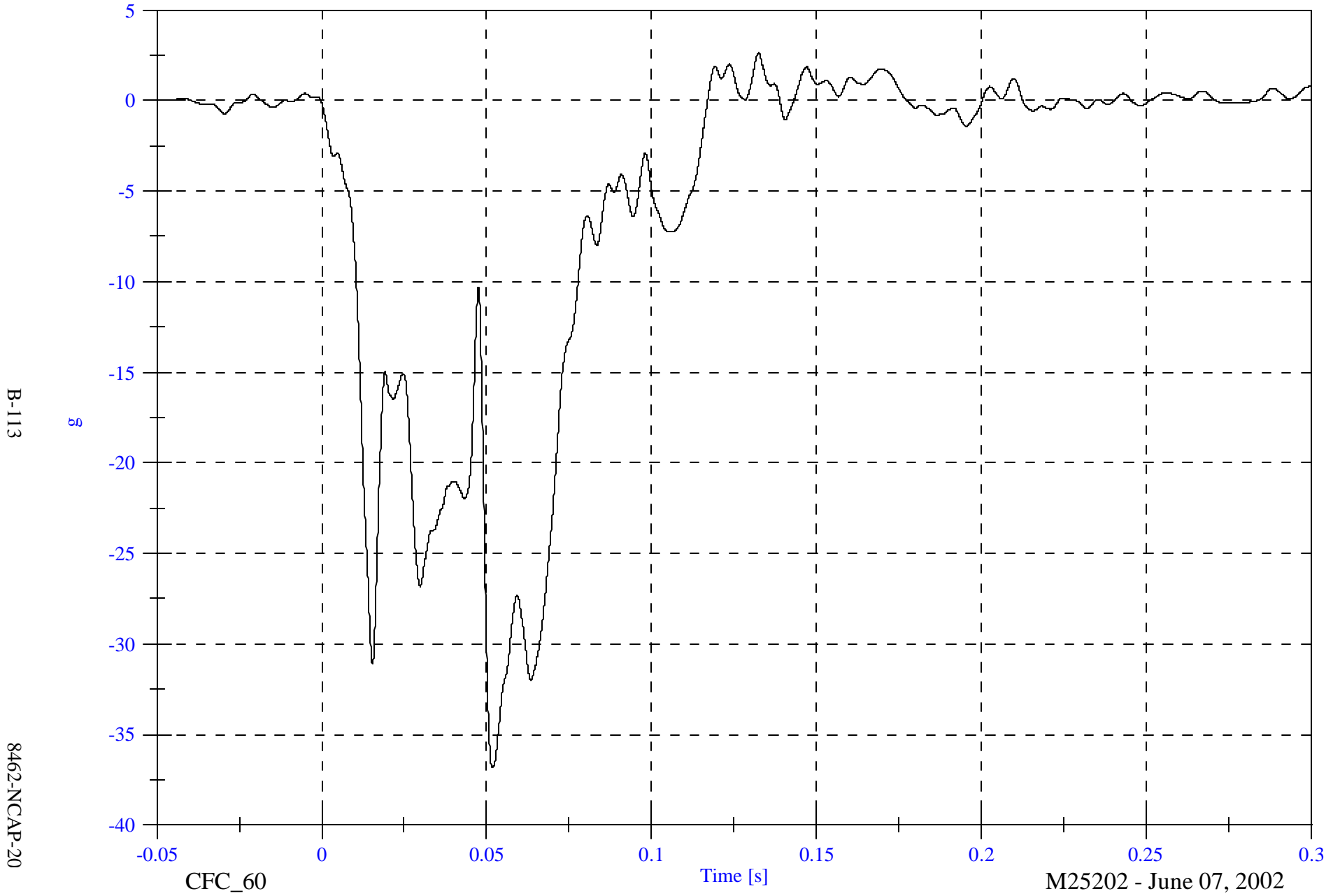
Time [s]

M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 2.6 [g] at 0.133 [s]  
Min: -36.8 [g] at 0.052 [s]

Right Rear #2x



B-113

8462-NCAP-20

CFC\_60

Time [s]

M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

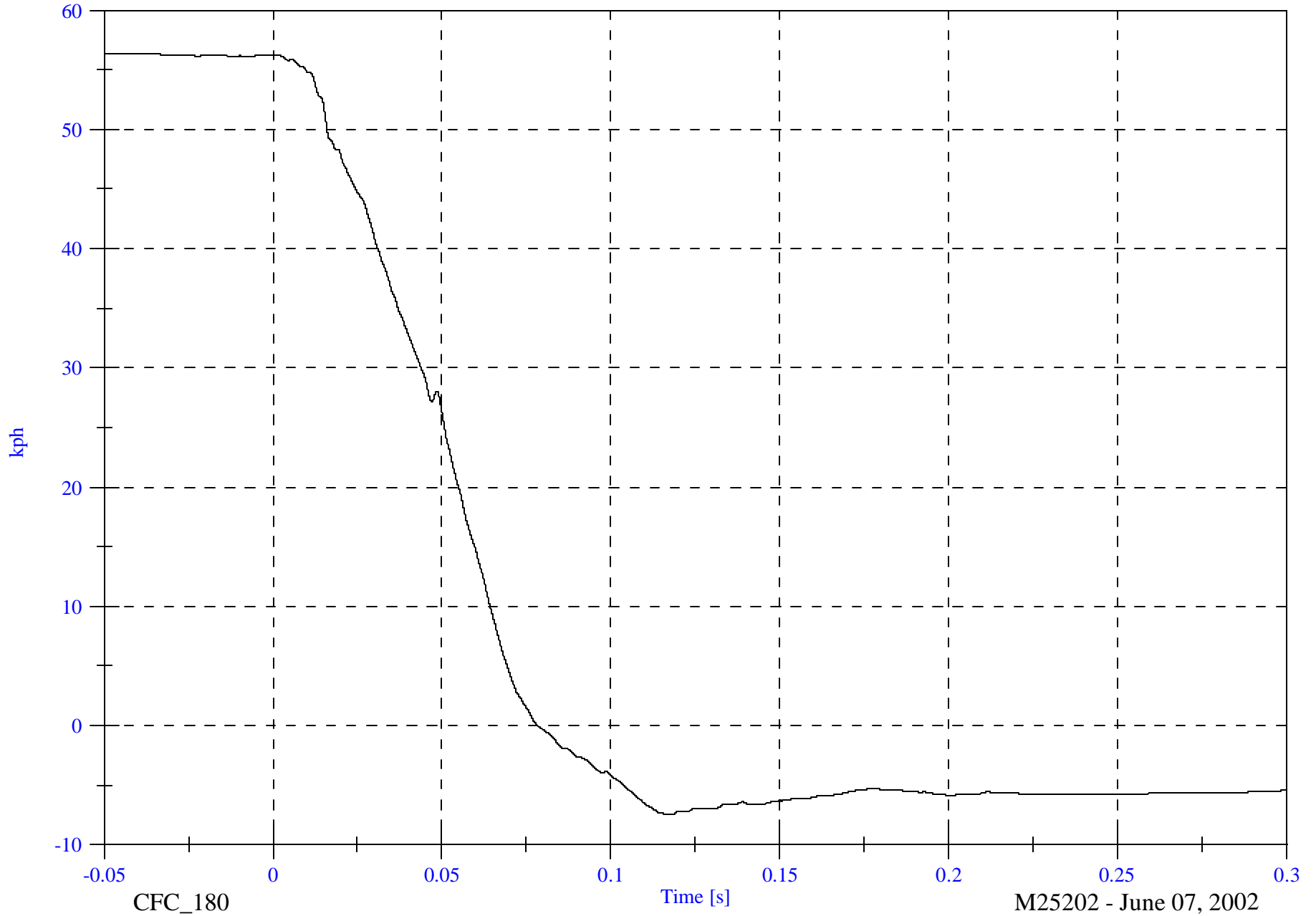
Max: 56.3 [kph] at -0.040 [s]

Right Rear #2x Velocity

Min: -7.5 [kph] at 0.118 [s]

B-114

8462-NCAP-20



CFC\_180

Time [s]

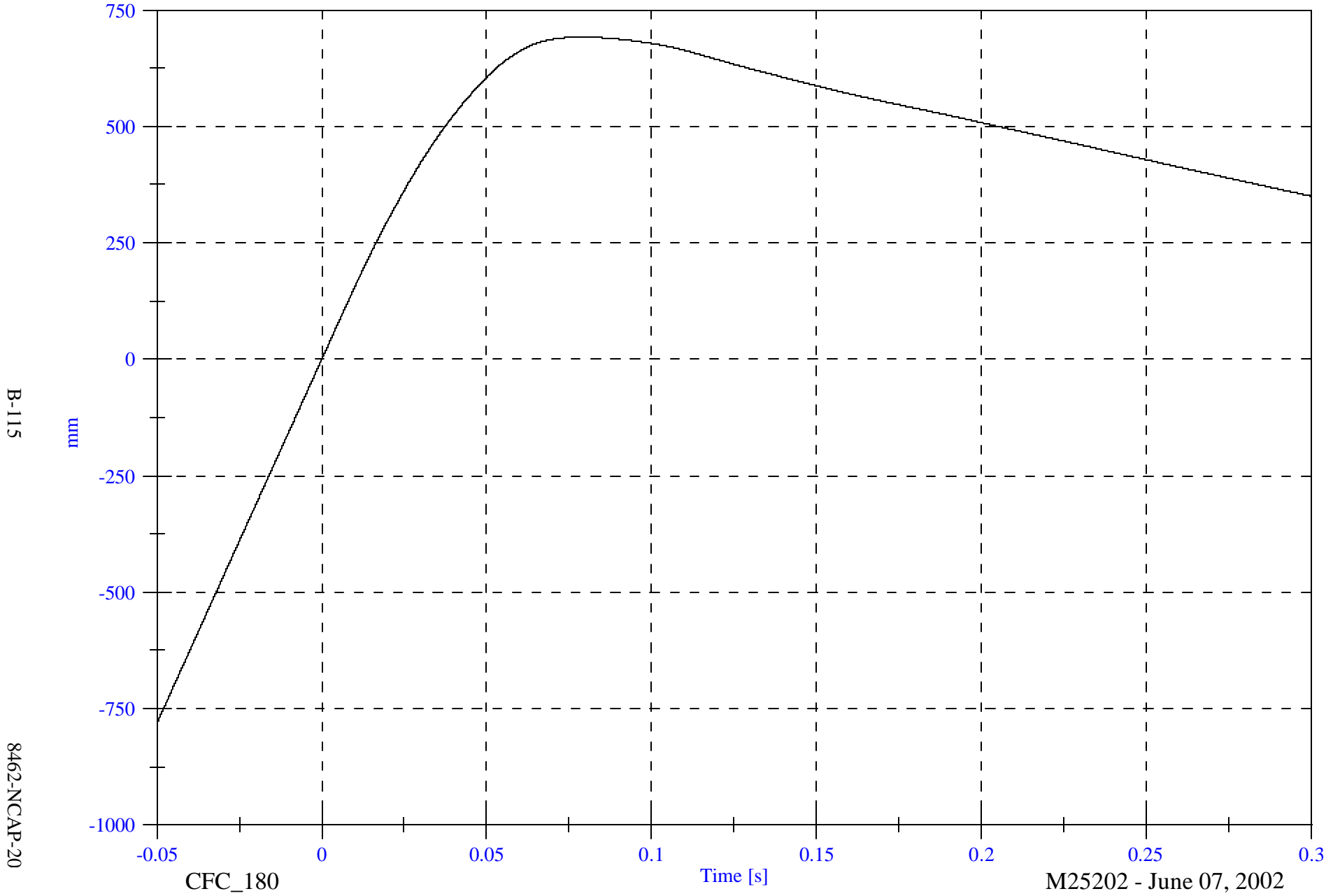
M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 691.7 [mm] at 0.078 [s]

Min: -781.0 [mm] at -0.050 [s]

Right Rear #2x Displacement



B-115

8462-NCAP-20

CFC\_180

Time [s]

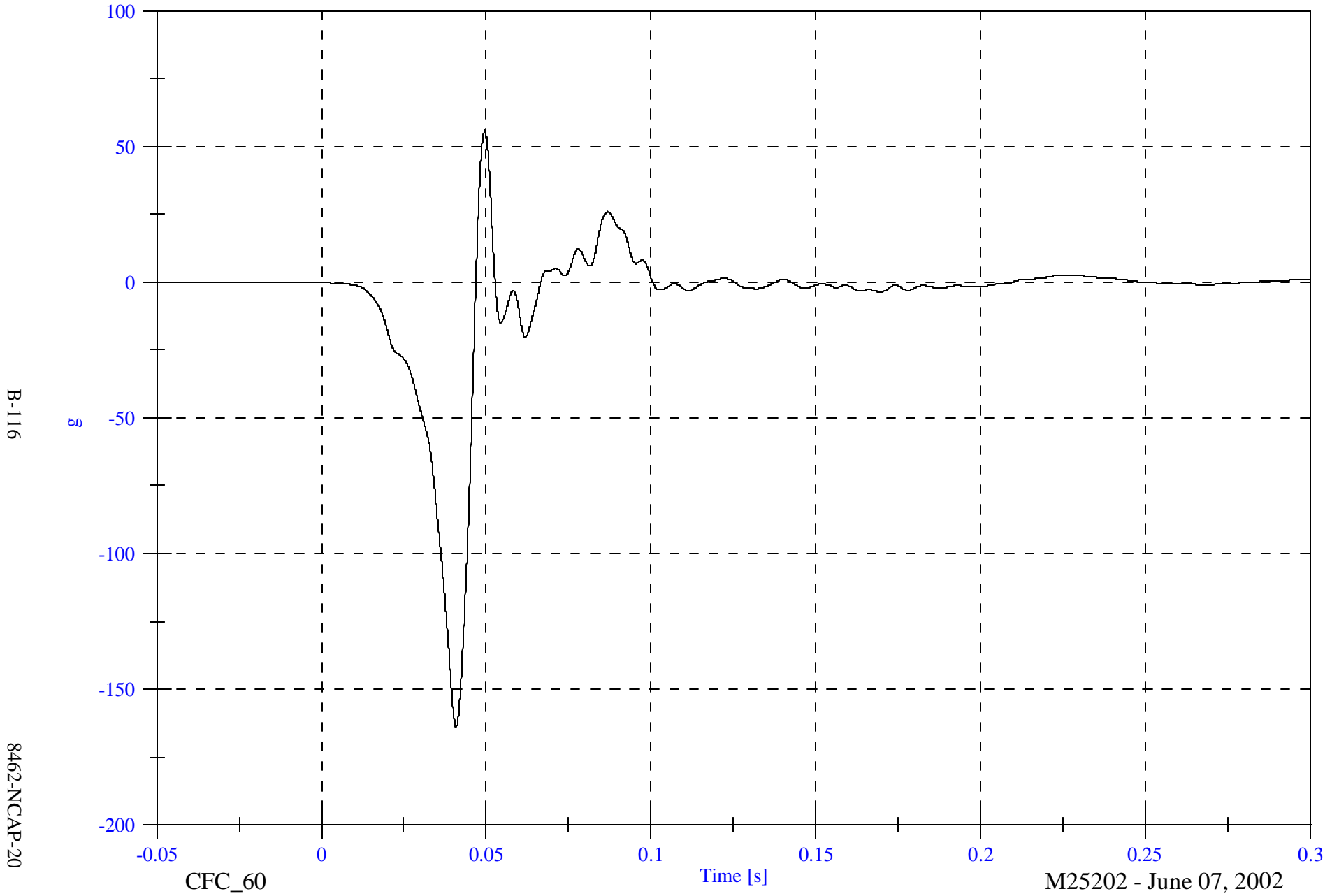
M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 55.8 [g] at 0.050 [s]

Min: -163.8 [g] at 0.041 [s]

Engine Top #3x



2002 NCAP Test 20 2002 Nissan Pathfinder

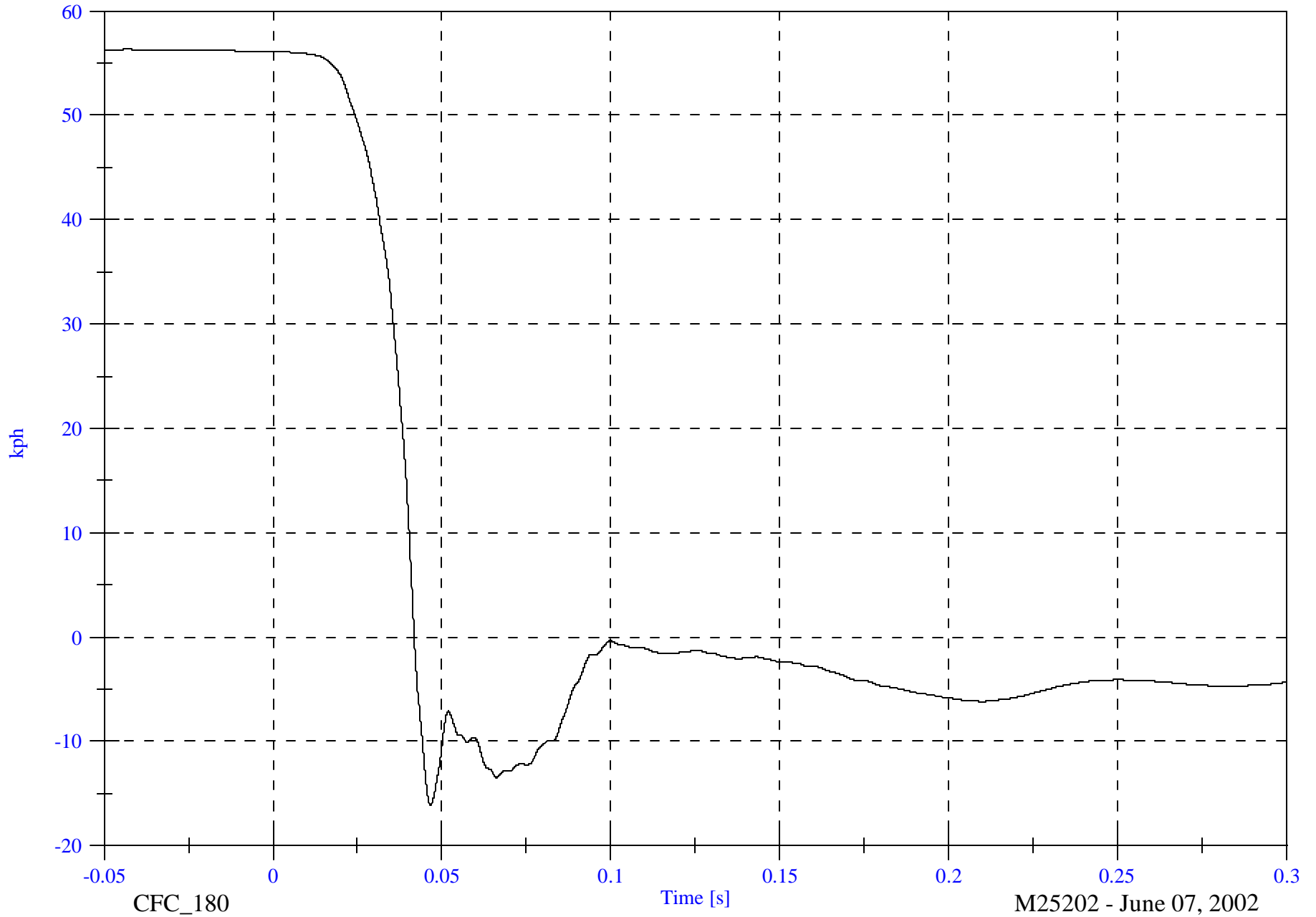
Max: 56.3 [kph] at -0.043 [s]

Engine Top #3x Velocity

Min: -16.1 [kph] at 0.047 [s]

B-117

8462-NCAP-20



CFC\_180

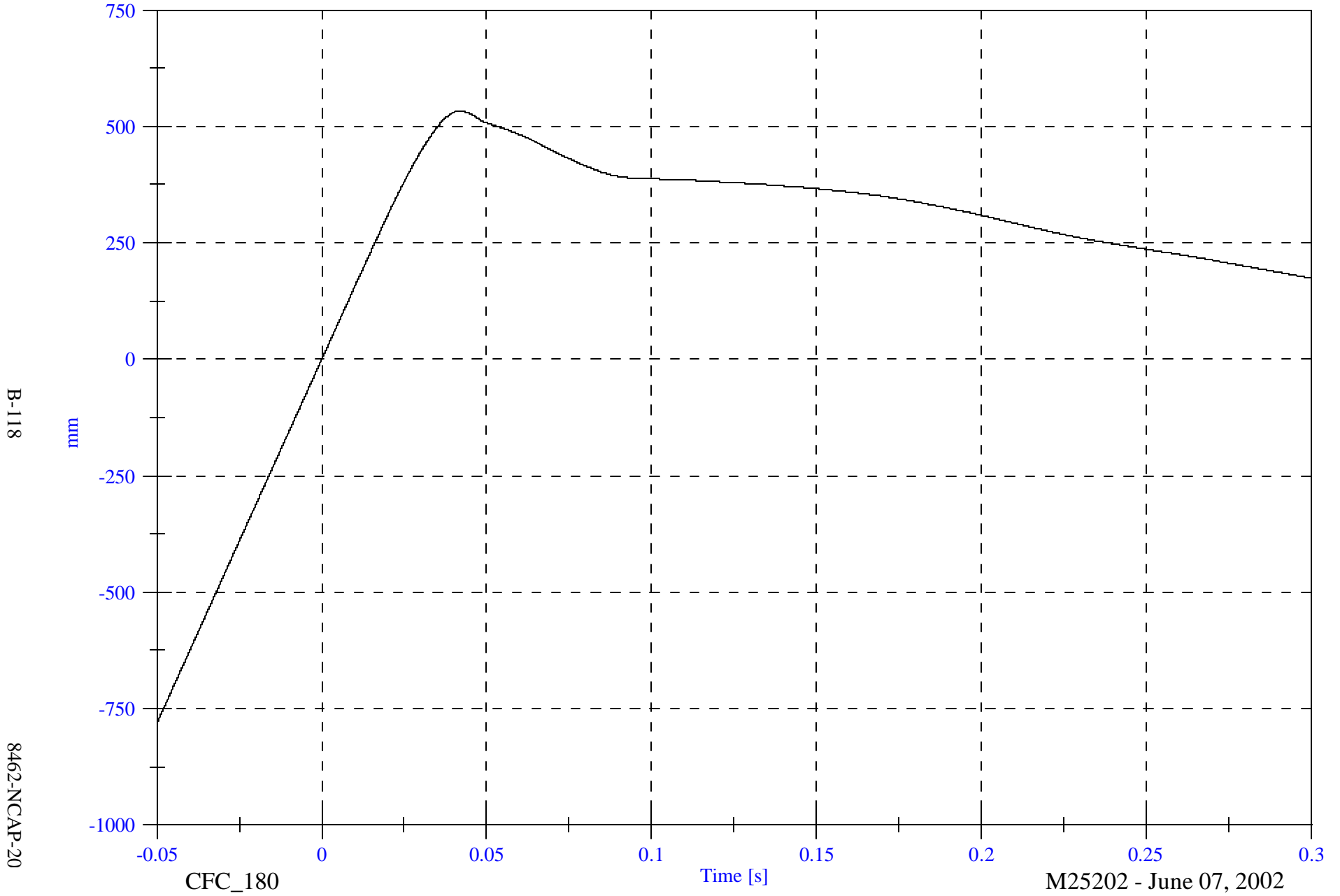
M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 533.3 [mm] at 0.042 [s]

Engine Top #3x Displacement

Min: -781.0 [mm] at -0.050 [s]



B-118

8462-NCAP-20

CFC\_180

Time [s]

M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

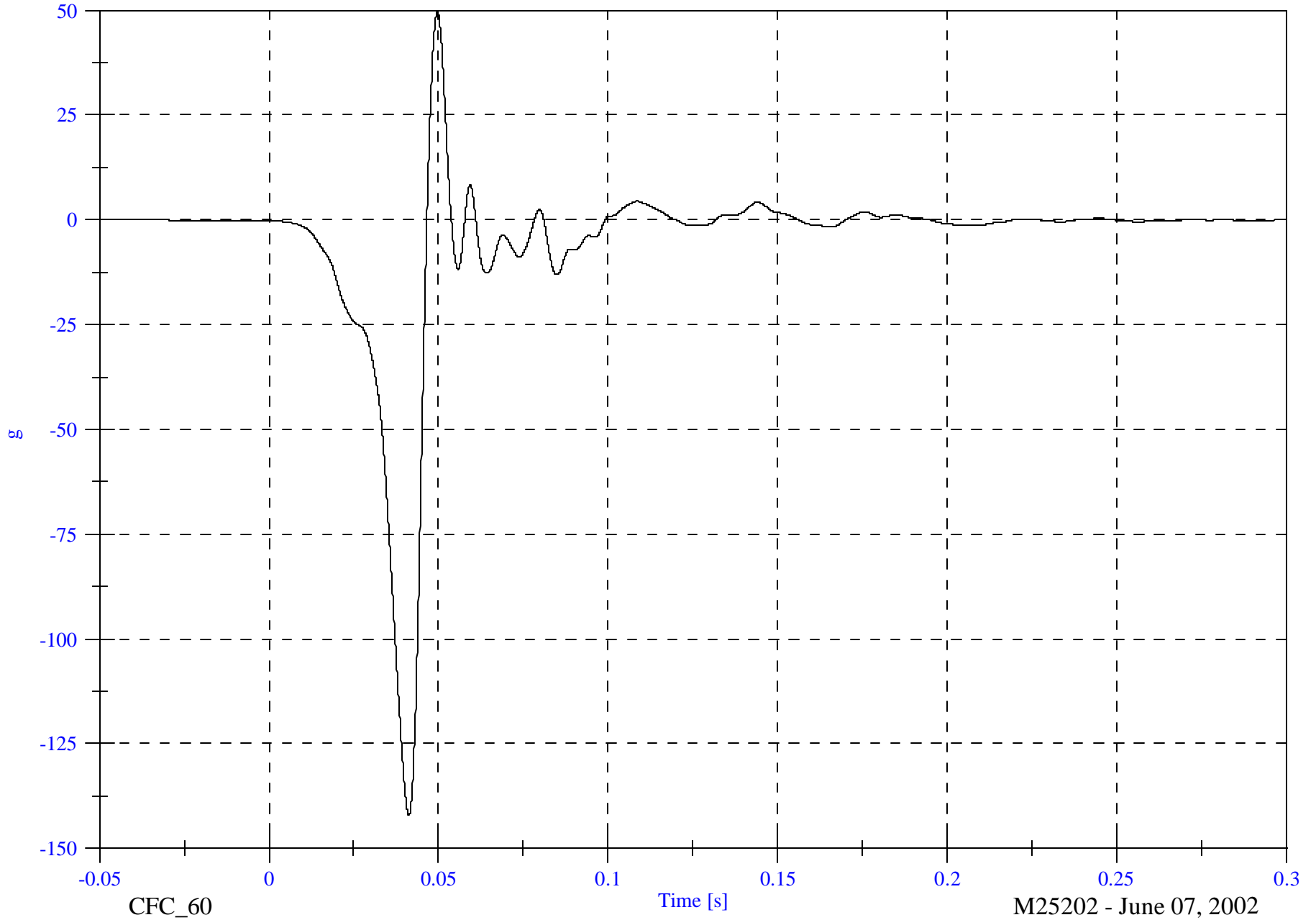
Max: 49.7 [g] at 0.050 [s]

Min: -142.1 [g] at 0.041 [s]

Engine Bottom #4x

B-119

8462-NCAP-20



CFC\_60

Time [s]

M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

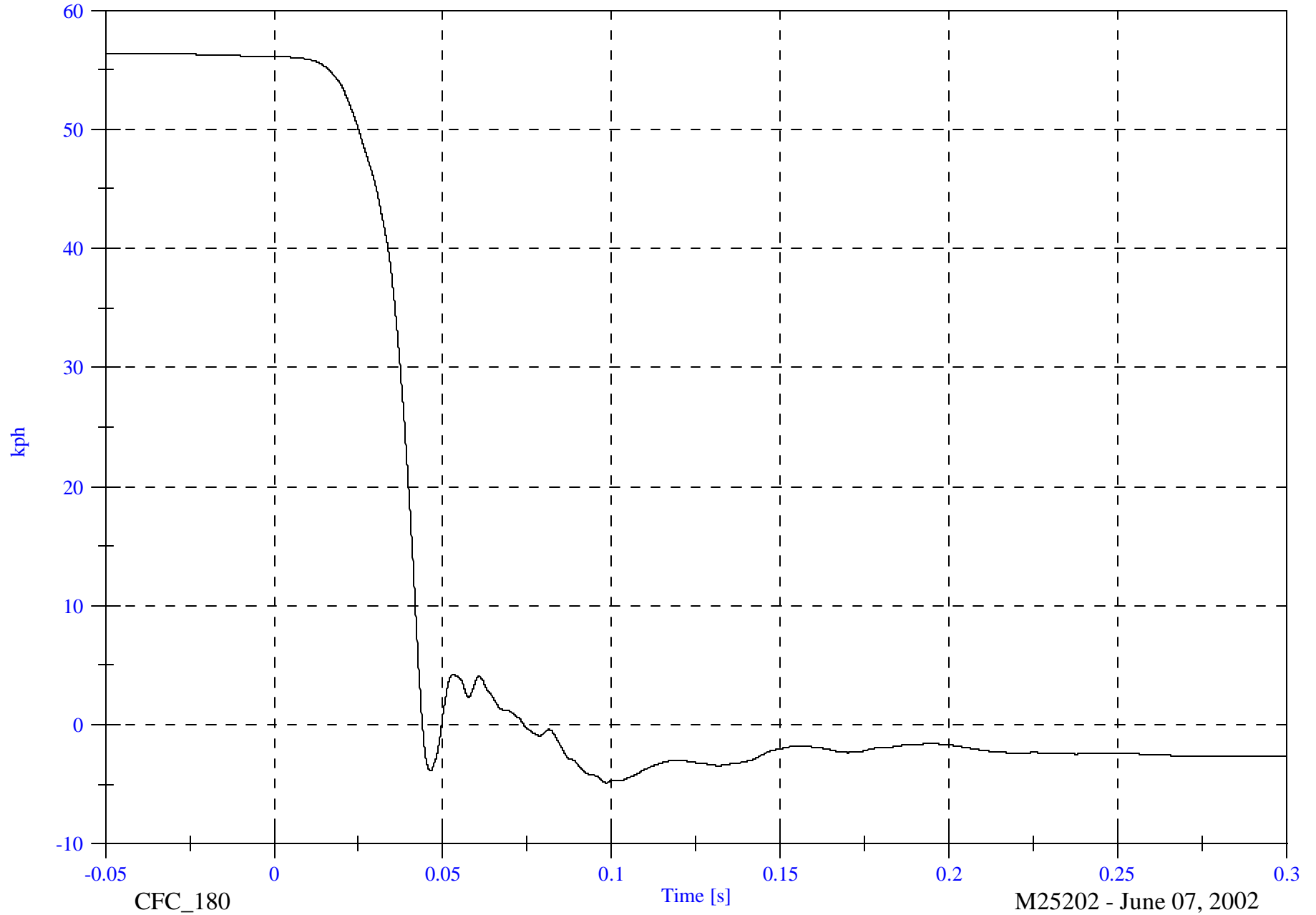
Max: 56.4 [kph] at -0.047 [s]

Engine Bottom #4x Velocity

Min: -4.9 [kph] at 0.098 [s]

B-120

8462-NCAP-20



CFC\_180

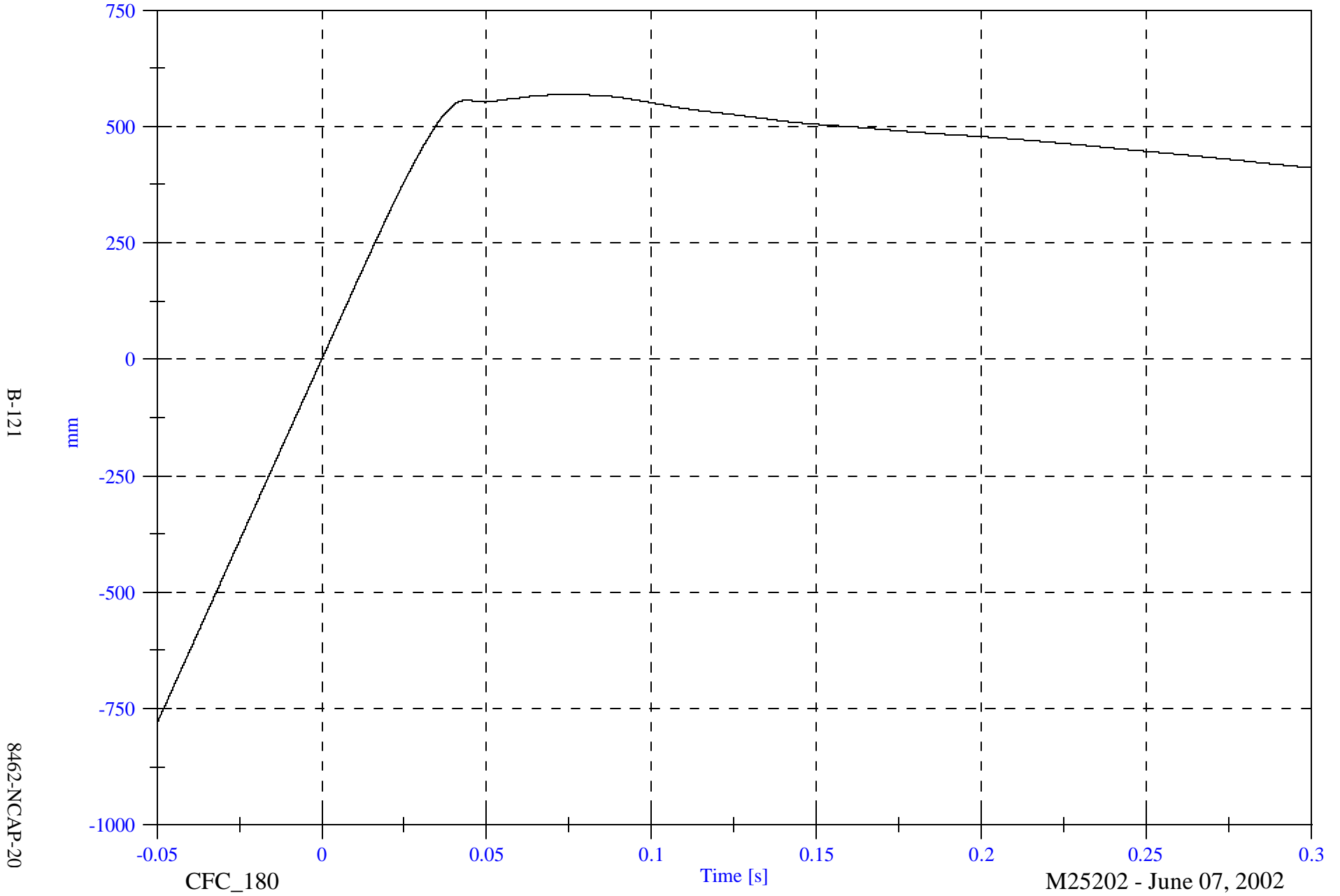
M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 568.3 [mm] at 0.074 [s]

Engine Bottom #4x Displacement

Min: -781.6 [mm] at -0.050 [s]



B-121

8462-NCAP-20

CFC\_180

Time [s]

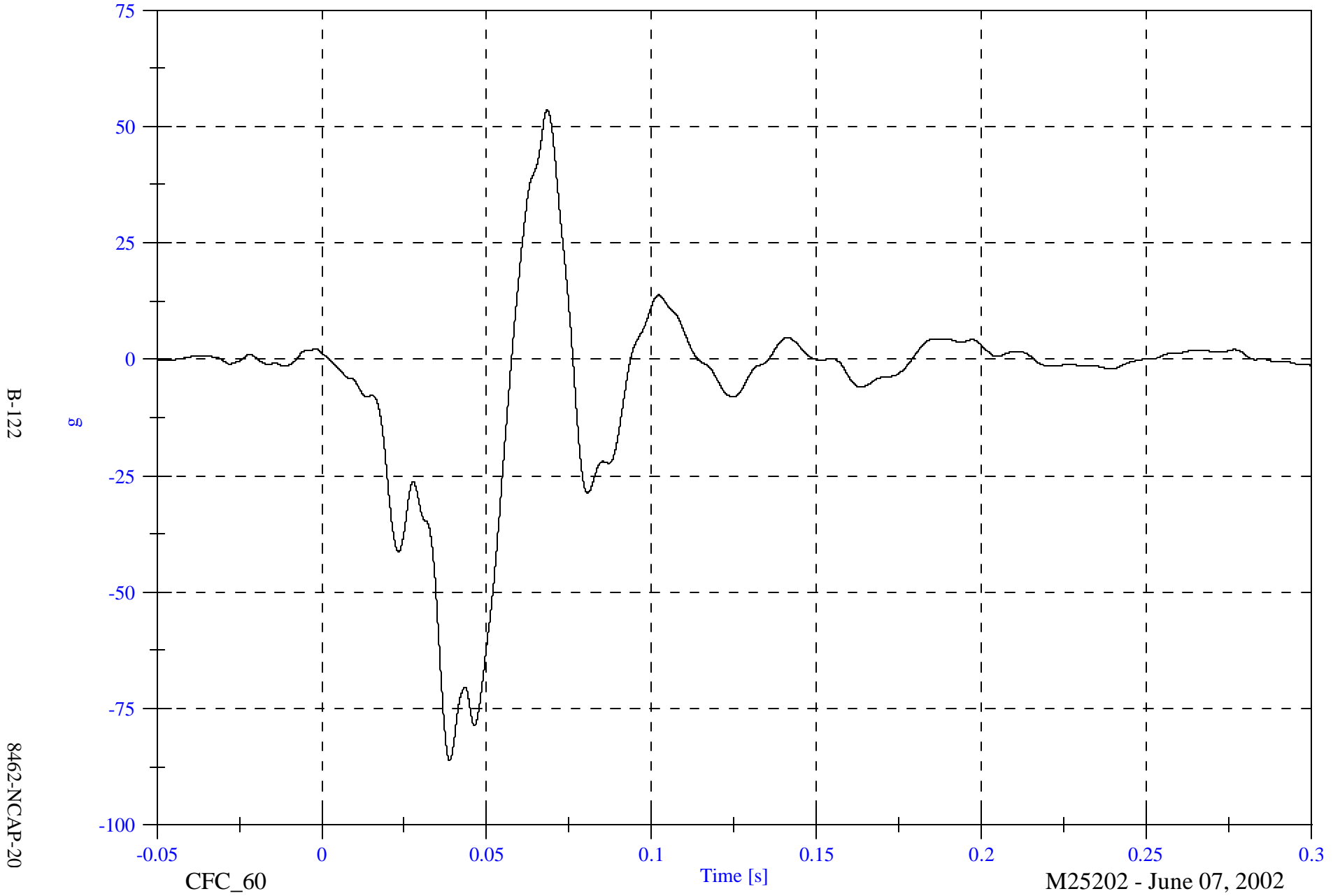
M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 53.6 [g] at 0.068 [s]

Min: -86.1 [g] at 0.039 [s]

Right Caliper #5x



2002 NCAP Test 20 2002 Nissan Pathfinder

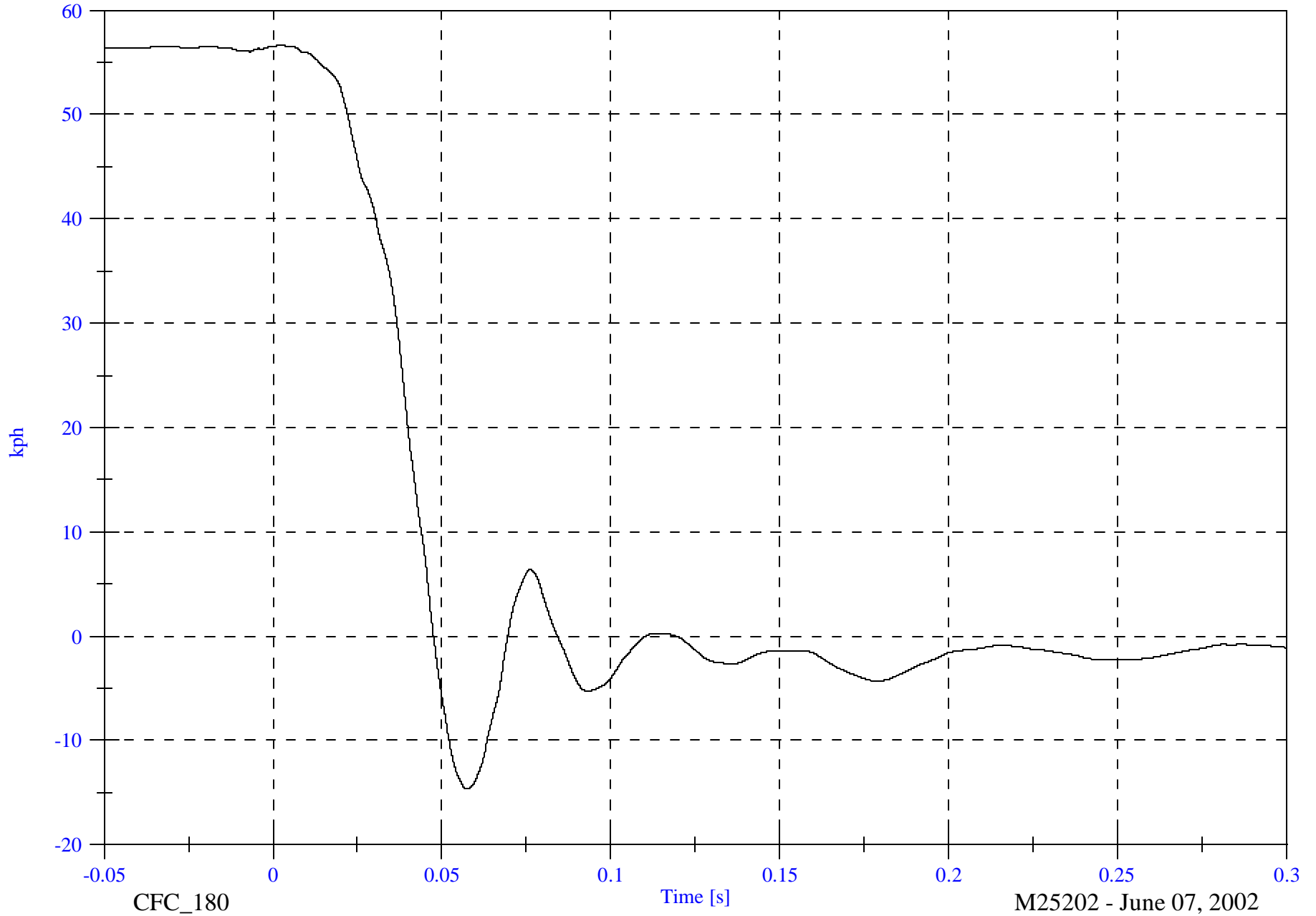
Max: 56.6 [kph] at 0.002 [s]

Right Caliper #5x Velocity

Min: -14.7 [kph] at 0.057 [s]

B-123

8462-NCAP-20



CFC\_180

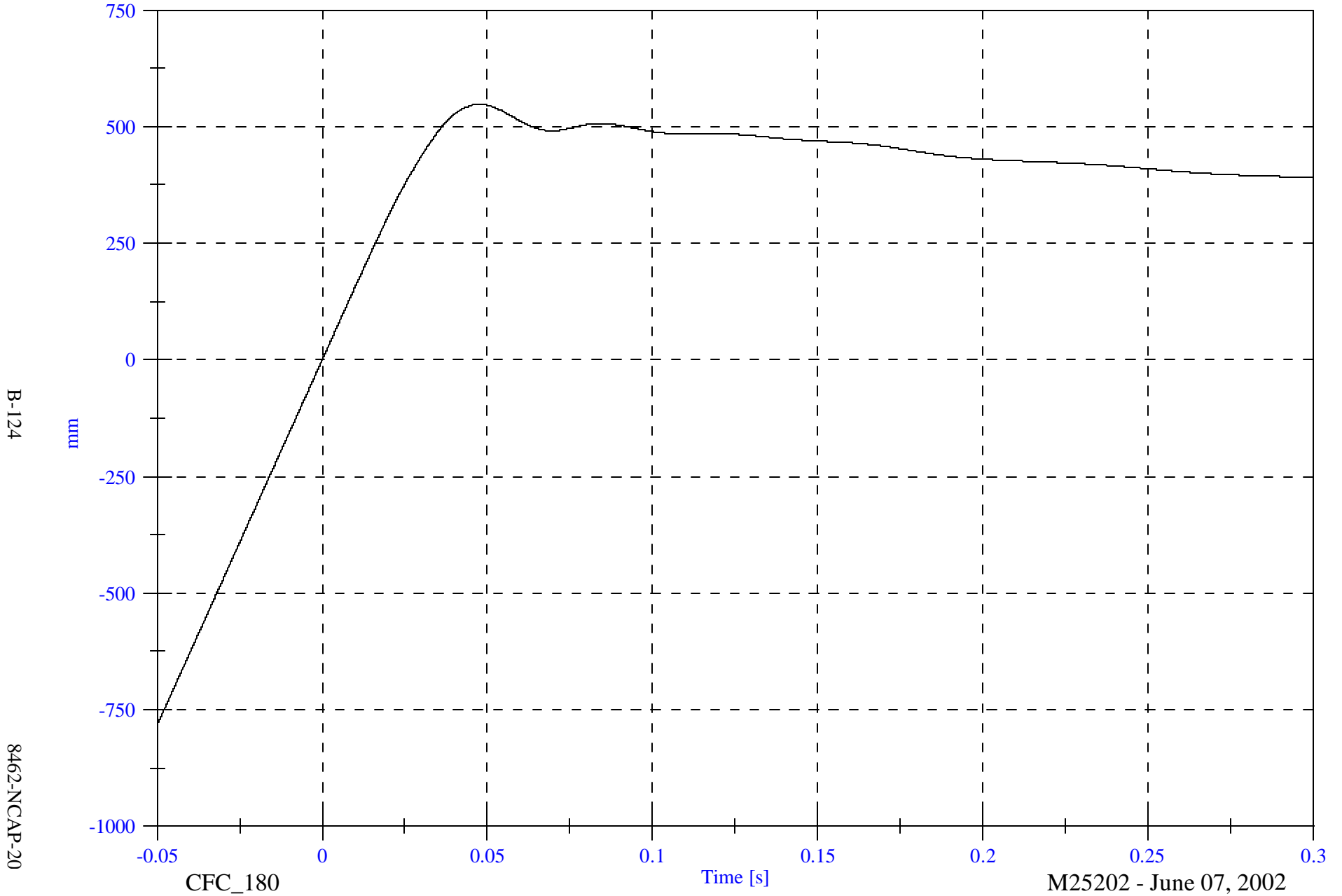
M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 547.8 [mm] at 0.048 [s]

Min: -782.9 [mm] at -0.050 [s]

Right Caliper #5x Displacement



B-124

8462-NCAP-20

CFC\_180

Time [s]

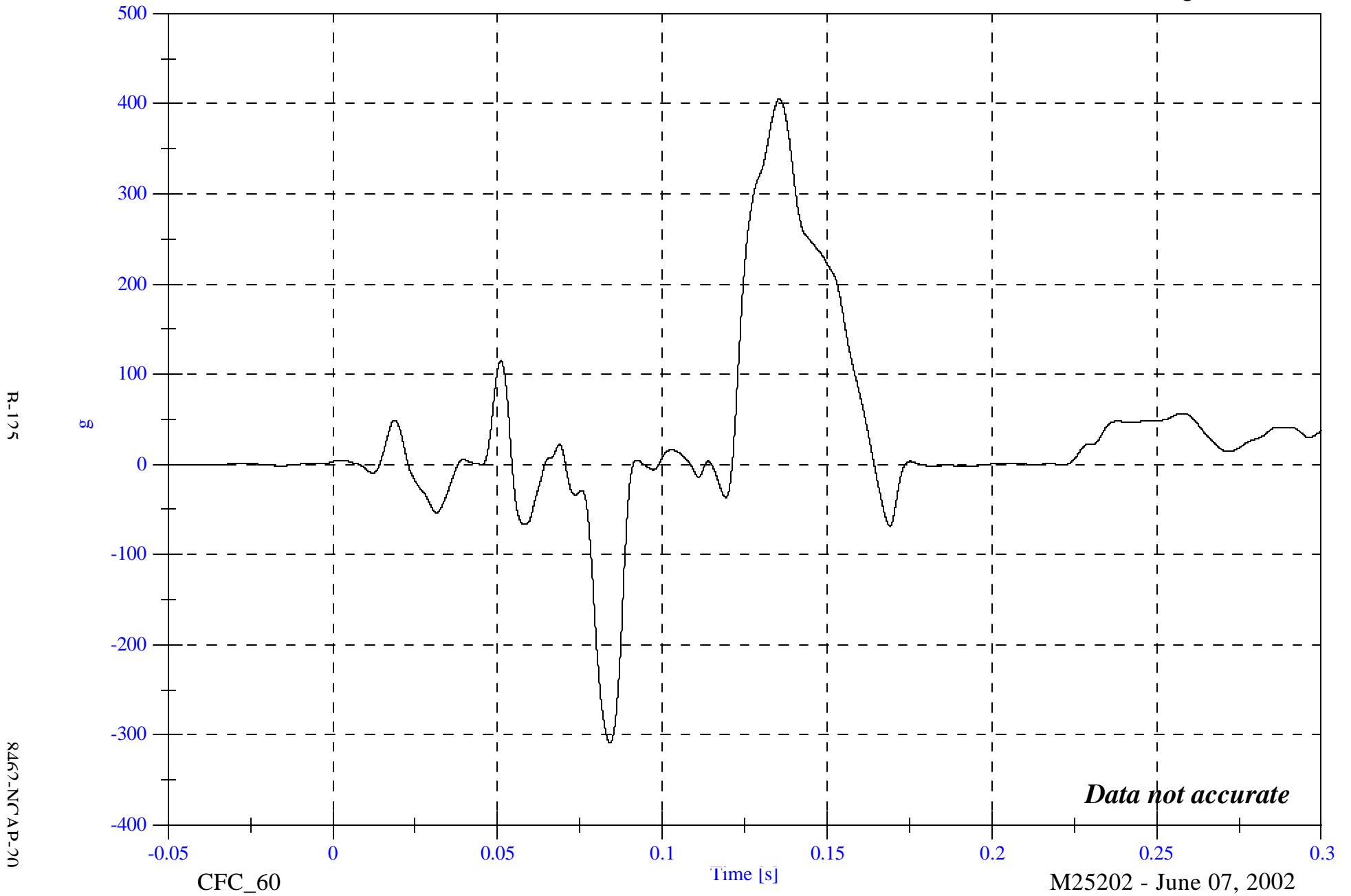
M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 405.6 [g] at 0.136 [s]

Instrument Panel #6x

Min: -309.1 [g] at 0.084 [s]



R-125

R462-NCAP-20

CFC\_60

Time [s]

M25202 - June 07, 2002

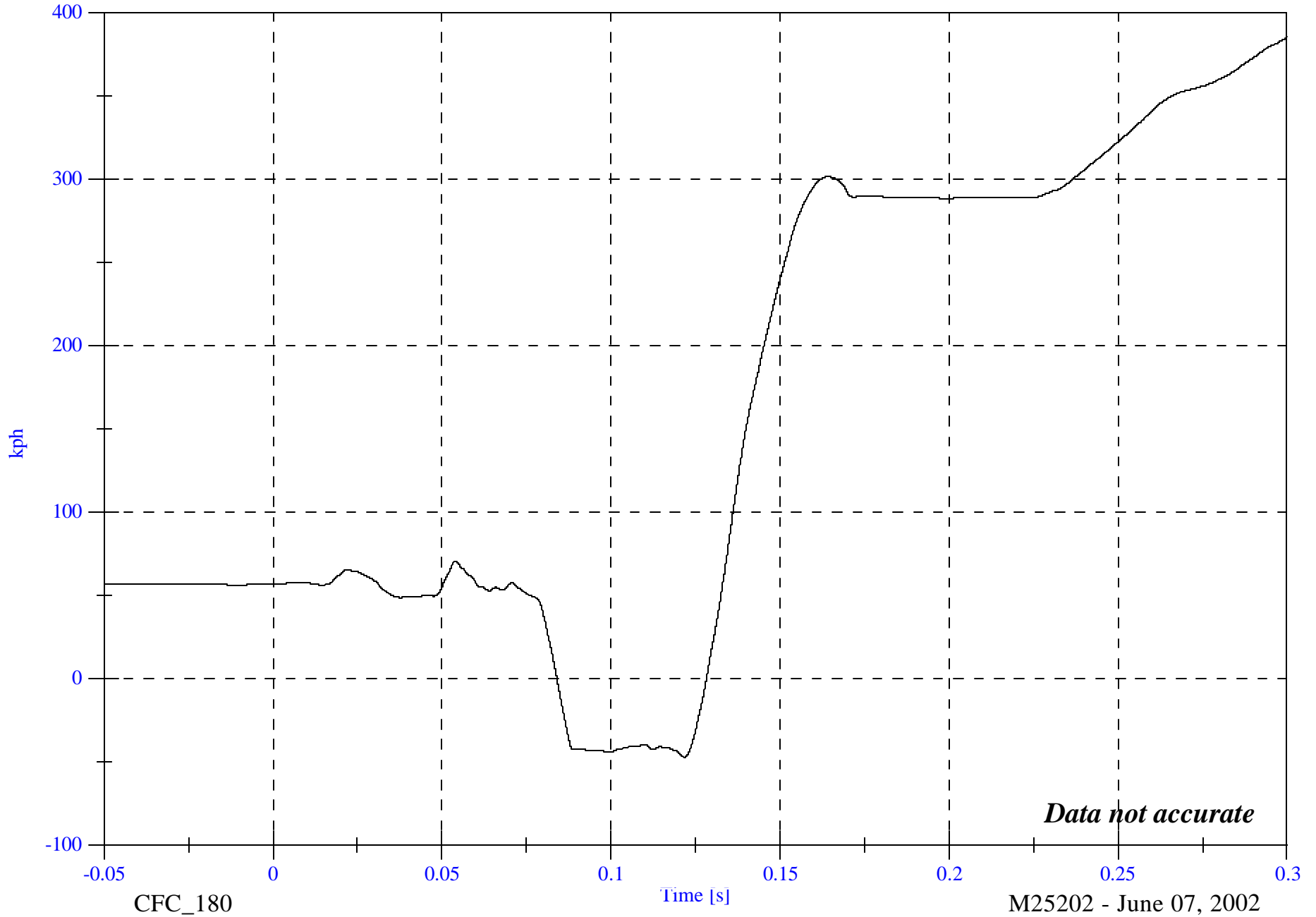
*Data not accurate*

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 385.1 [kph] at 0.300 [s]

Instrument Panel #6x Velocity

Min: -47.3 [kph] at 0.122 [s]



R-126

R462-NCAP-20

CFC\_180

Time [s]

M25202 - June 07, 2002

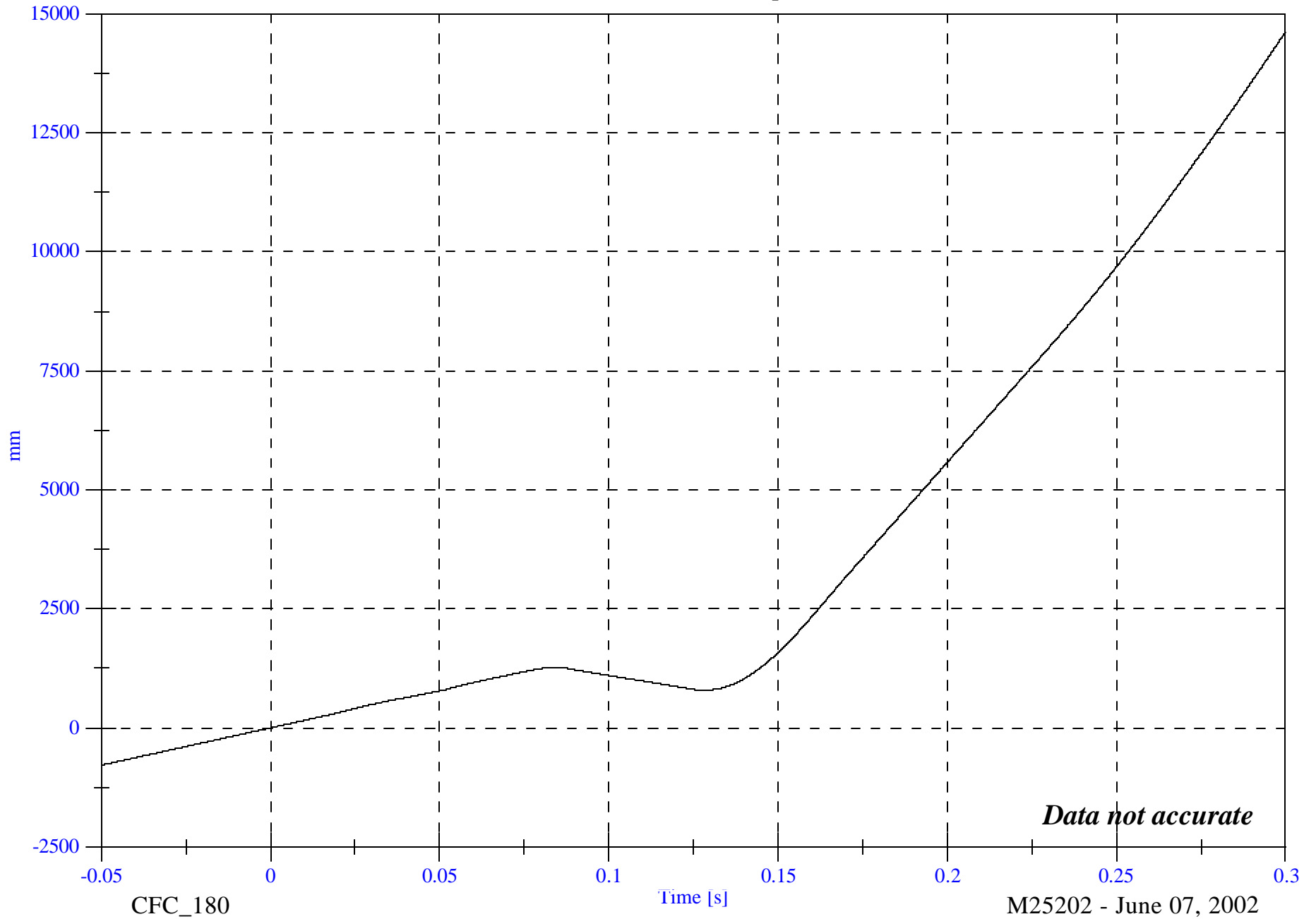
*Data not accurate*

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 14623.3 [mm] at 0.300 [s]

Instrument Panel #6x Displacement

Min: -783.0 [mm] at -0.050 [s]



R-127

R462-NCAP-20

CFC\_180

Time [s]

M25202 - June 07, 2002

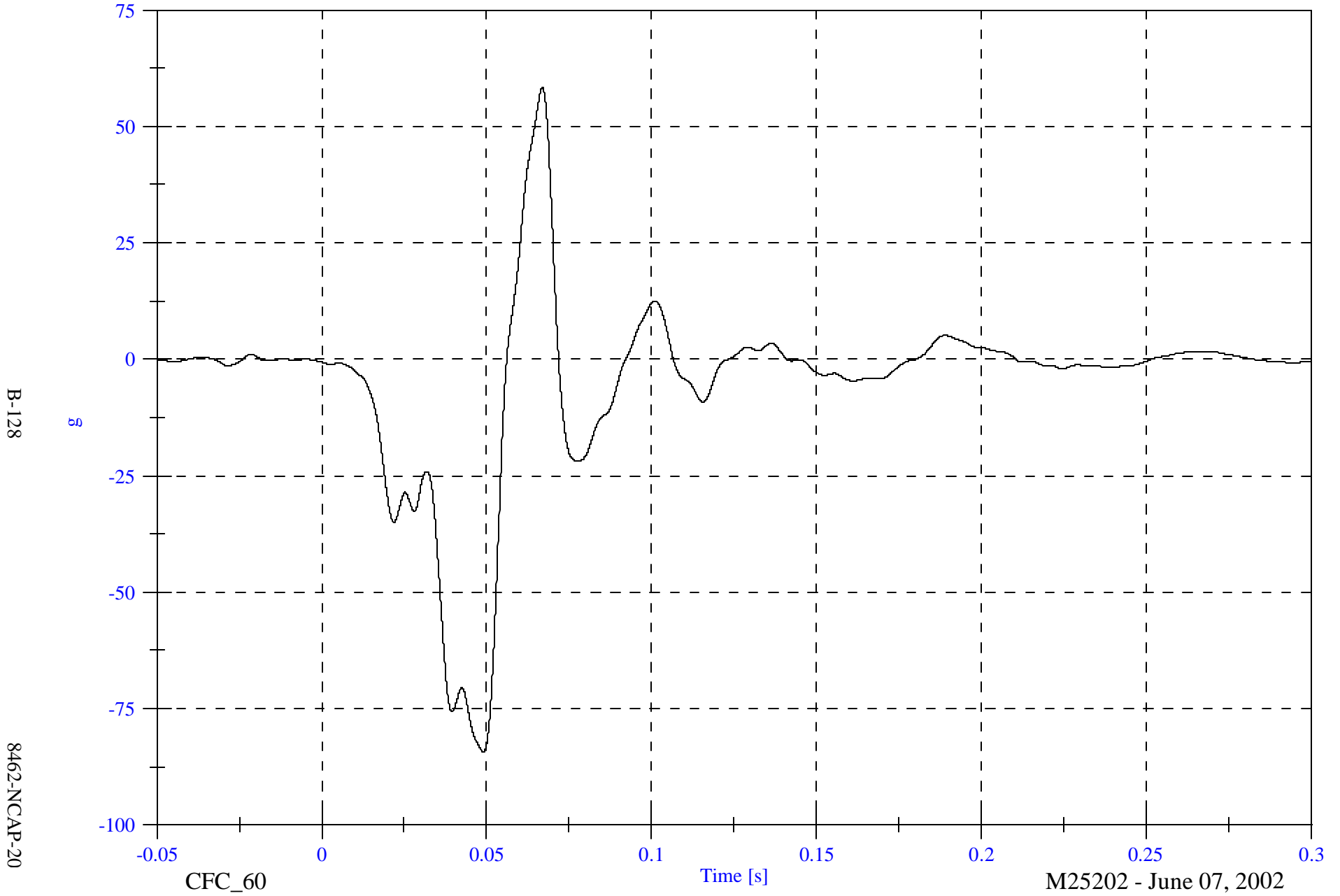
*Data not accurate*

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 58.4 [g] at 0.067 [s]

Min: -84.2 [g] at 0.049 [s]

Left Caliper #7x



2002 NCAP Test 20 2002 Nissan Pathfinder

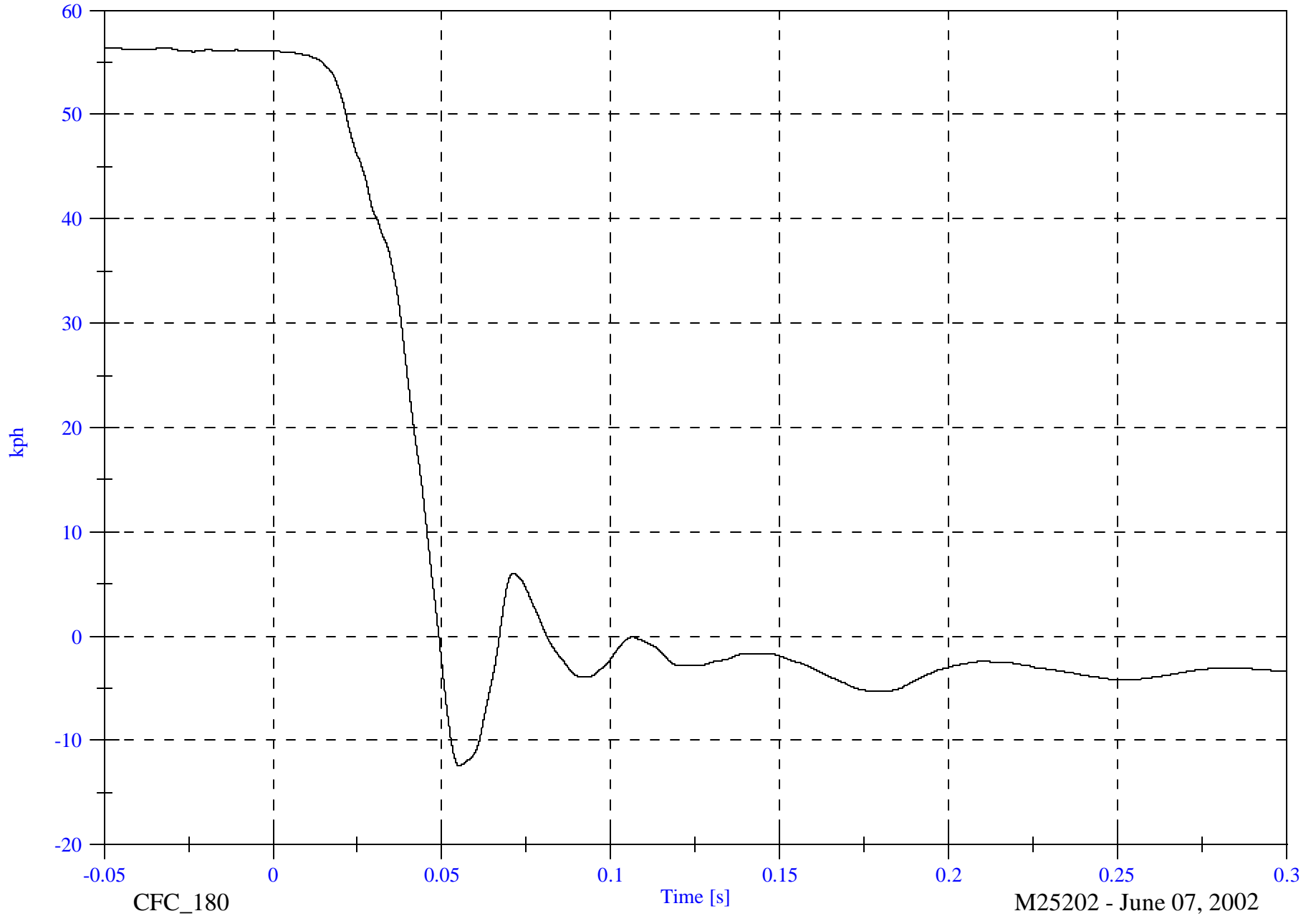
Max: 56.4 [kph] at -0.050 [s]

Left Caliper #7x Velocity

Min: -12.4 [kph] at 0.055 [s]

B-129

8462-NCAP-20



CFC\_180

Time [s]

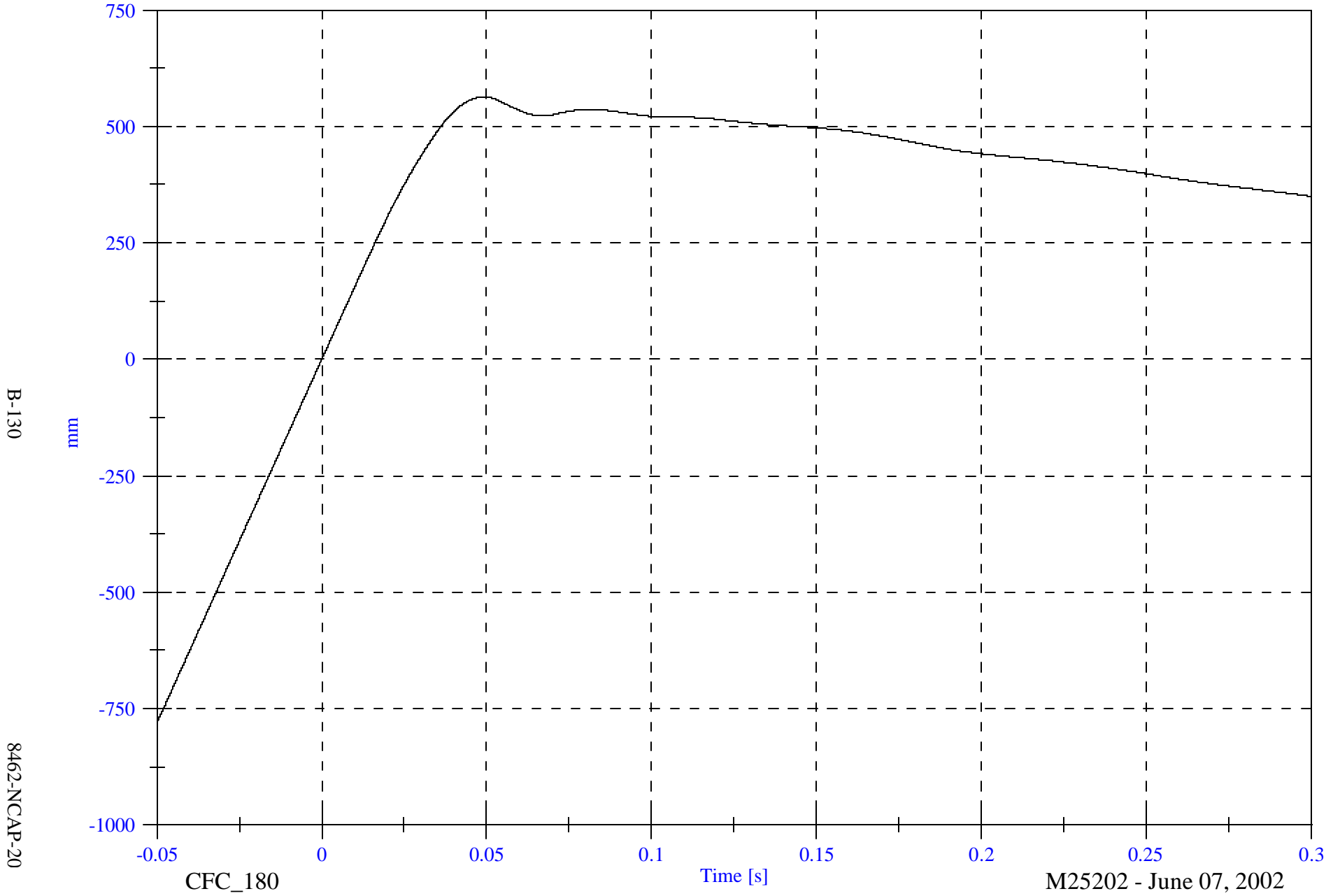
M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 563.3 [mm] at 0.049 [s]

Min: -780.6 [mm] at -0.050 [s]

Left Caliper #7x Displacement



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8462-NCAP-20

CFC\_180

Time [s]

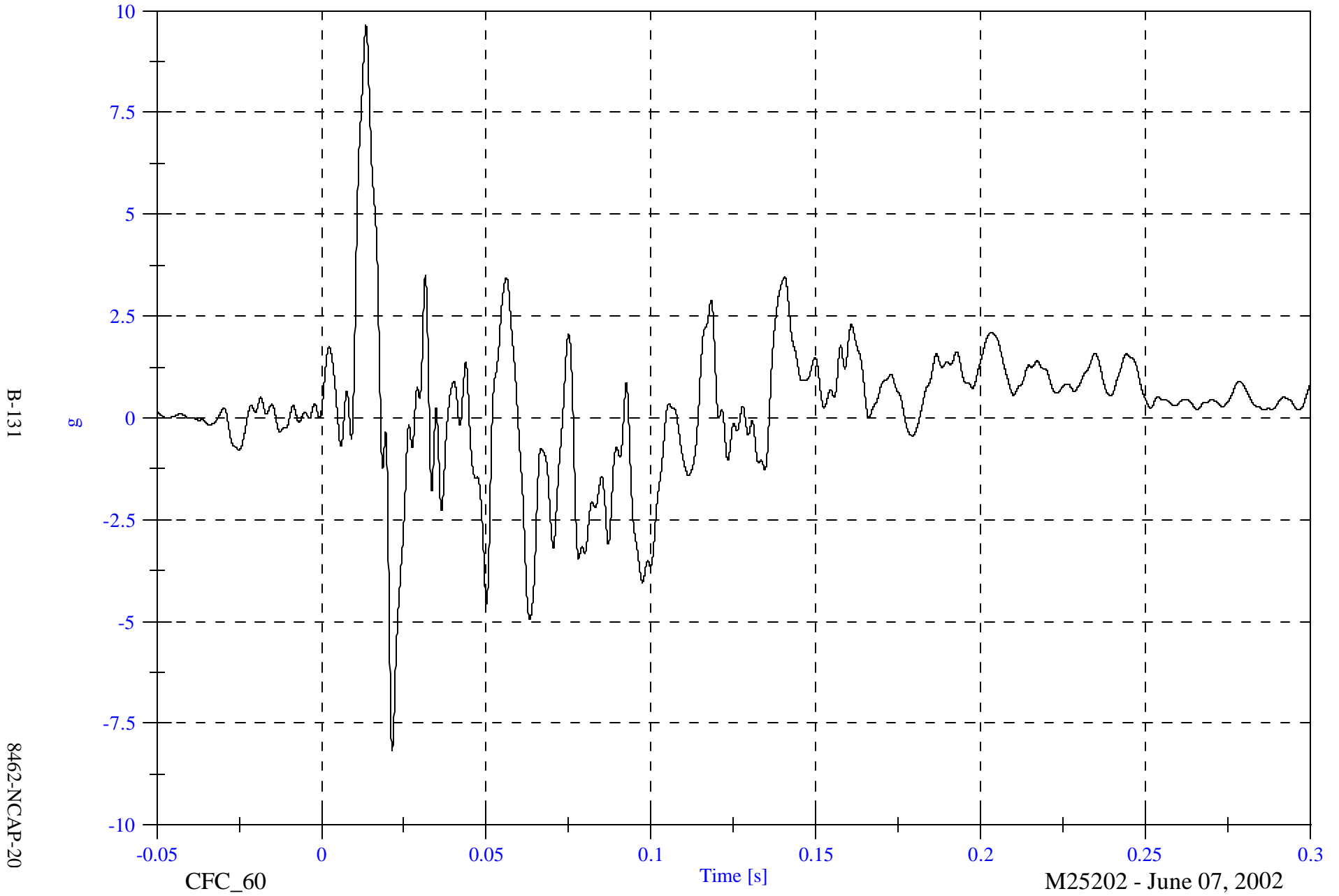
M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Left Rear #8z

Max: 9.6 [g] at 0.014 [s]

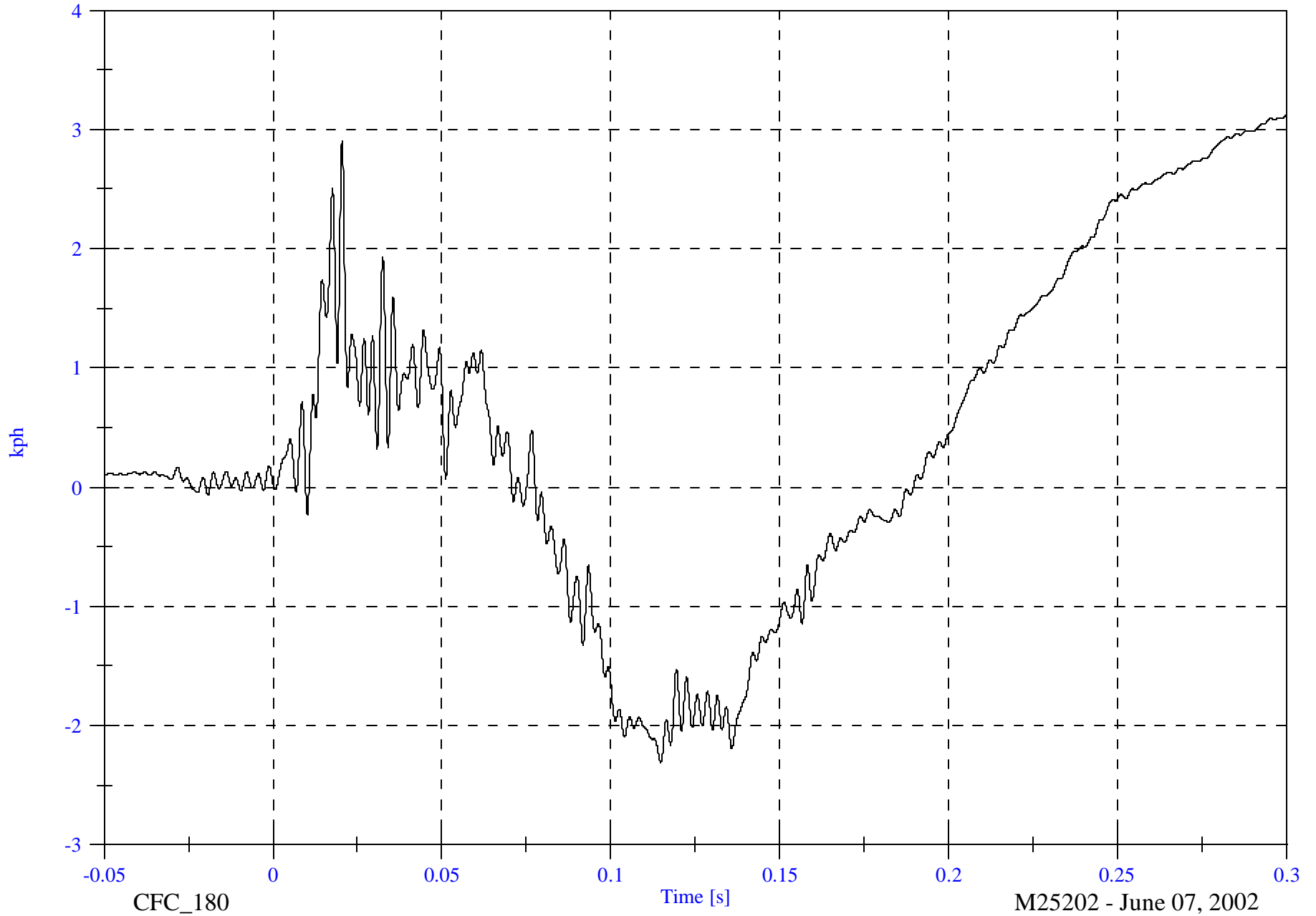
Min: -8.2 [g] at 0.021 [s]



Left Rear #8z Velocity

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8462-NCAP-20



CFC\_180

Time [s]

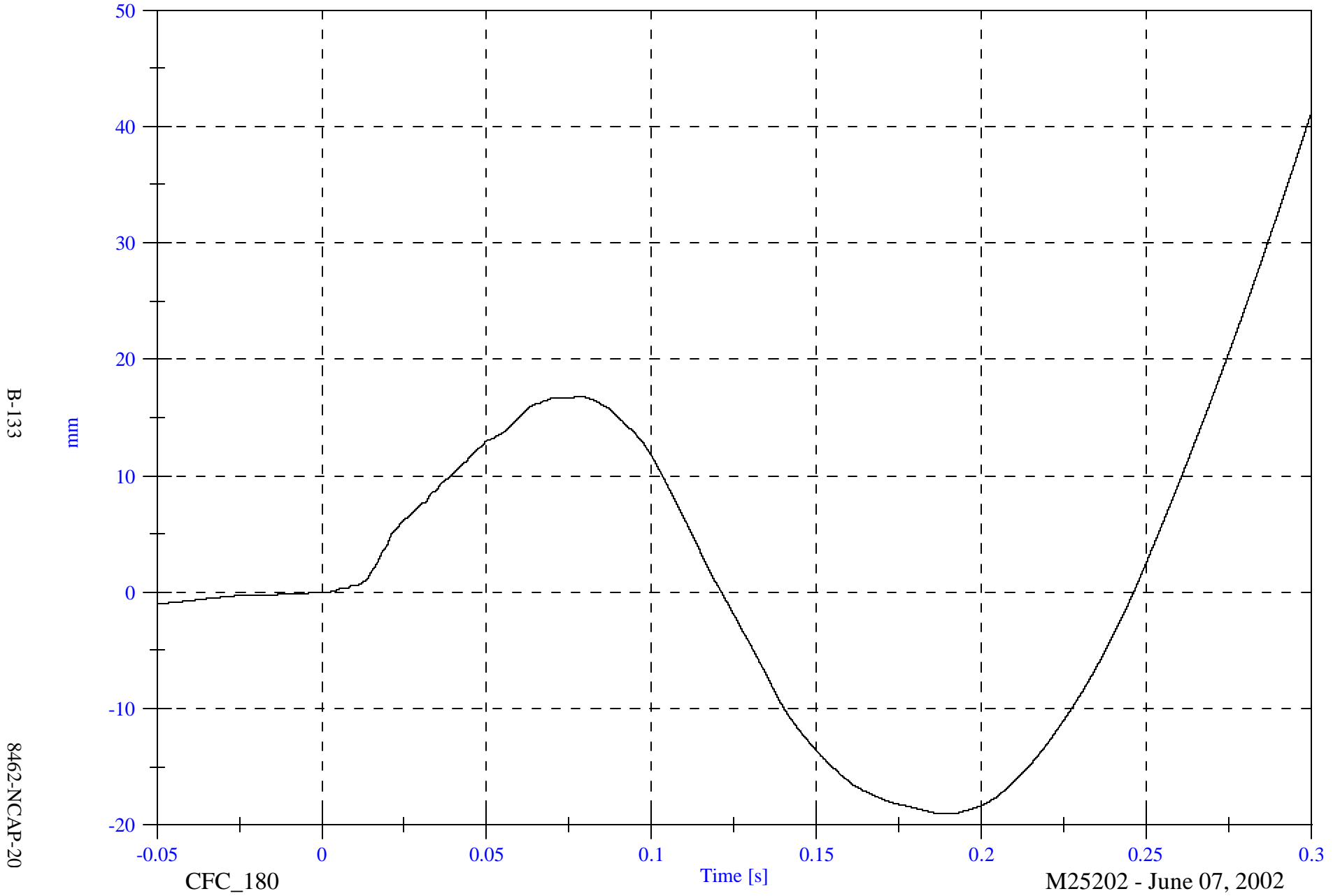
M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 41.0 [mm] at 0.300 [s]

Left Rear #8z Displacement

Min: -19.0 [mm] at 0.190 [s]



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8462-NCAP-20

CFC\_180

Time [s]

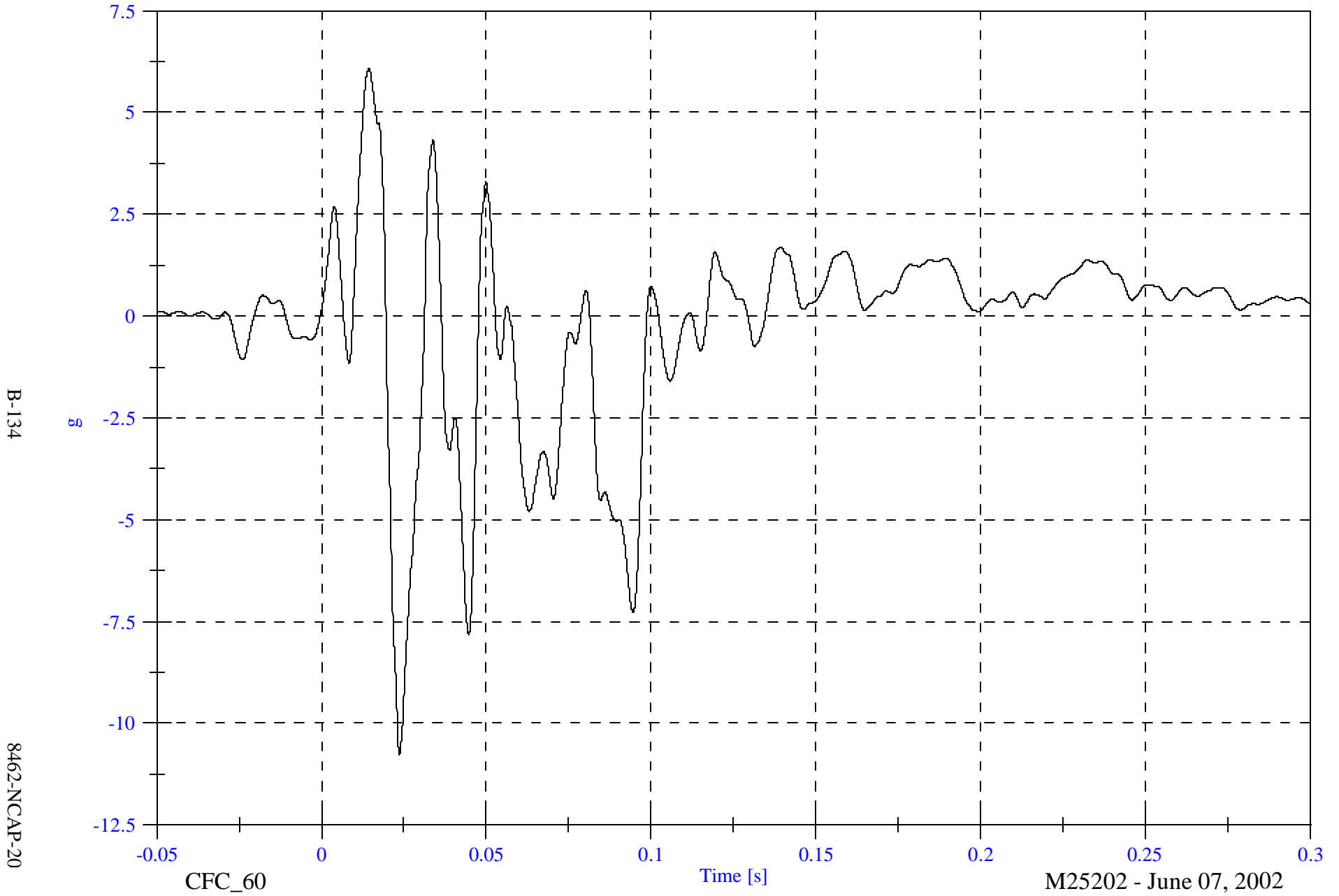
M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 6.1 [g] at 0.014 [s]

Min: -10.8 [g] at 0.024 [s]

Right Rear #9z



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2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 2.0 [kph] at 0.020 [s]

Right Rear #9z Velocity

Min: -6.9 [kph] at 0.117 [s]



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8462-NCAP-20

CFC\_180

Time [s]

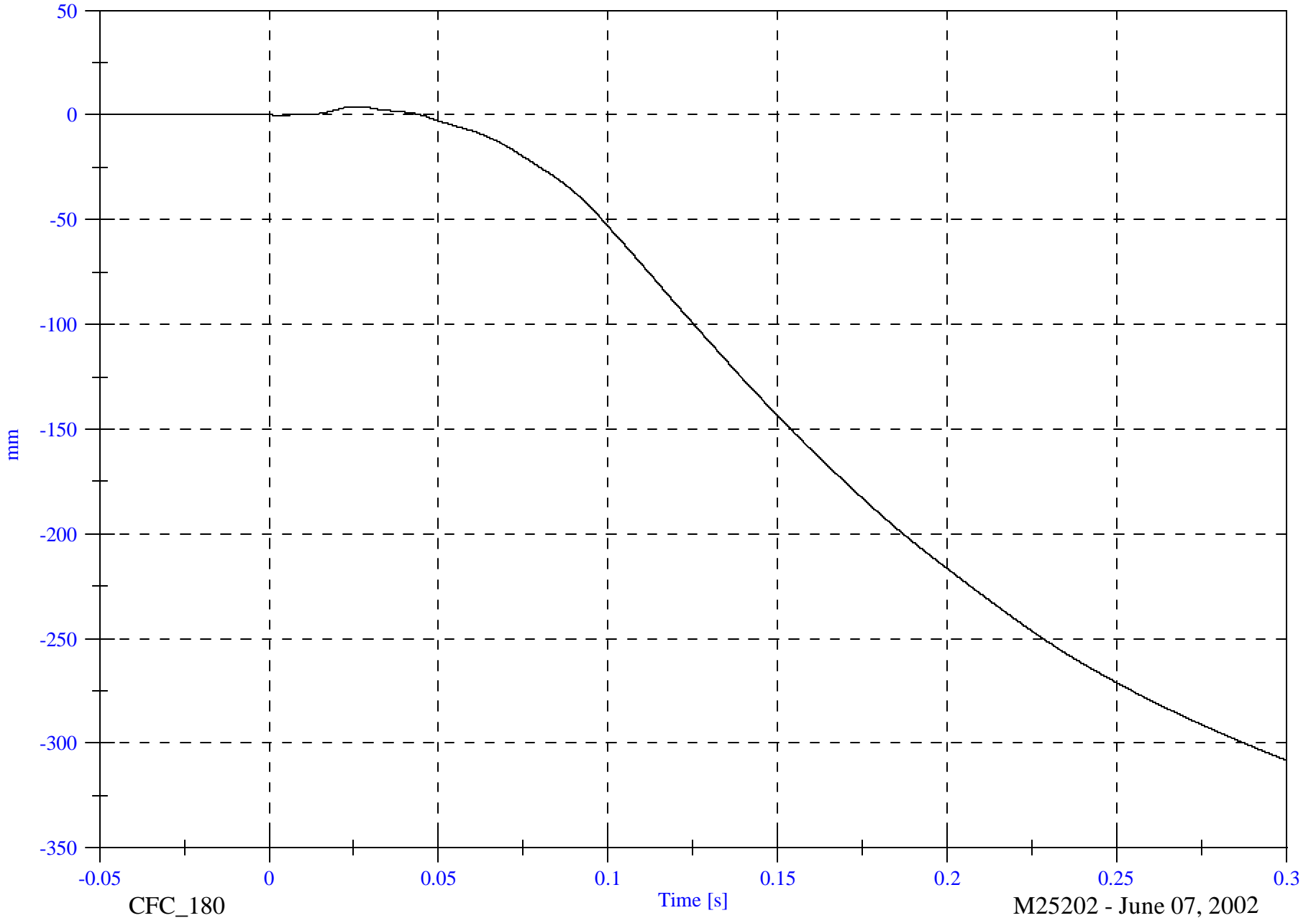
M25202 - June 07, 2002

2002 NCAP Test 20 2002 Nissan Pathfinder

Max: 3.9 [mm] at 0.025 [s]

Right Rear #9z Displacement

Min: -308.0 [mm] at 0.300 [s]



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8462-NCAP-20

CFC\_180

Time [s]

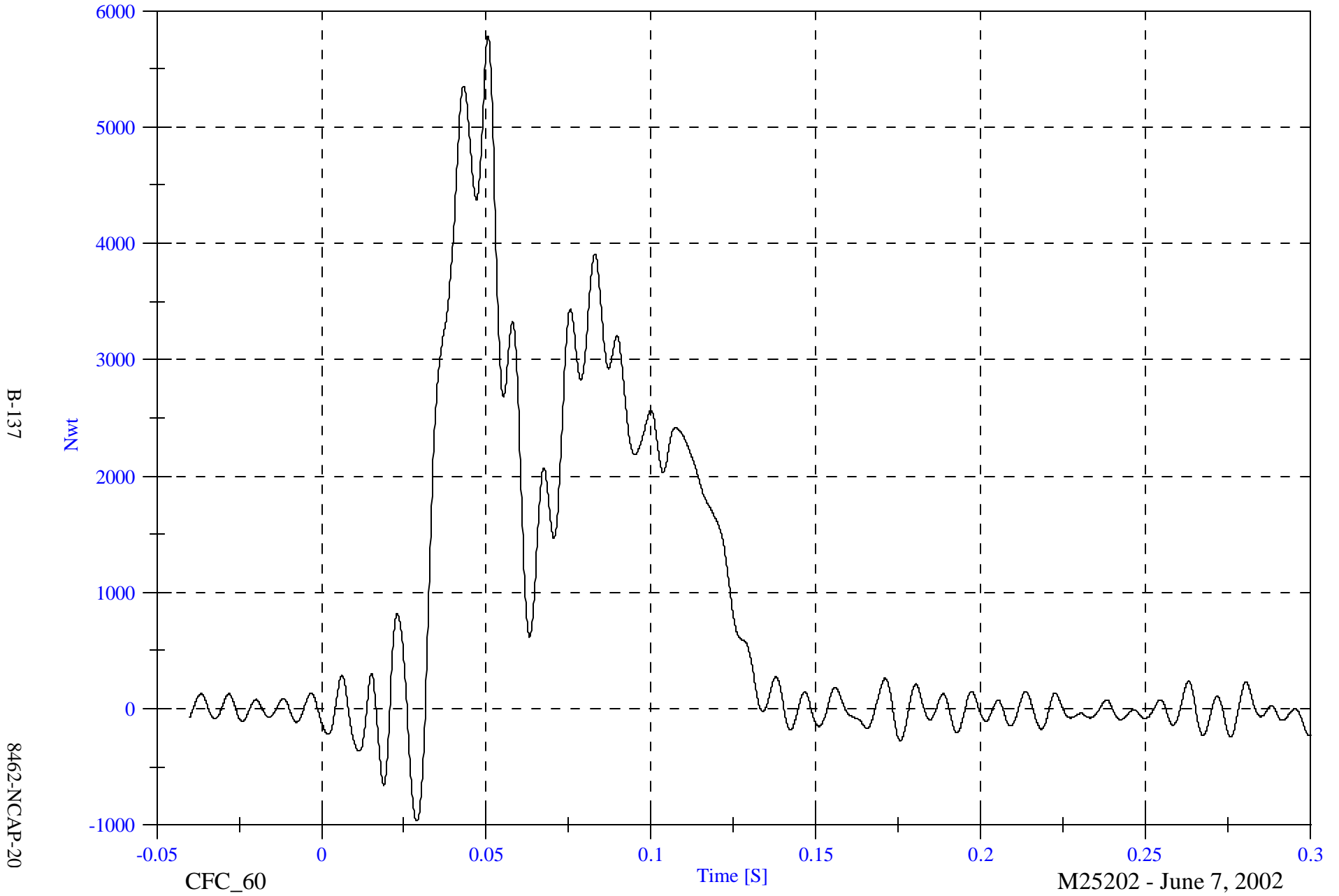
M25202 - June 07, 2002

NCAP TEST #20- 2002 Nissan Pathfinder

Max: 5782.3 [Nwt] at 0.050 [S]

Min: -965.8 [Nwt] at 0.029 [S]

BLC A1 Fx



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8462-NCAP-20

CFC\_60

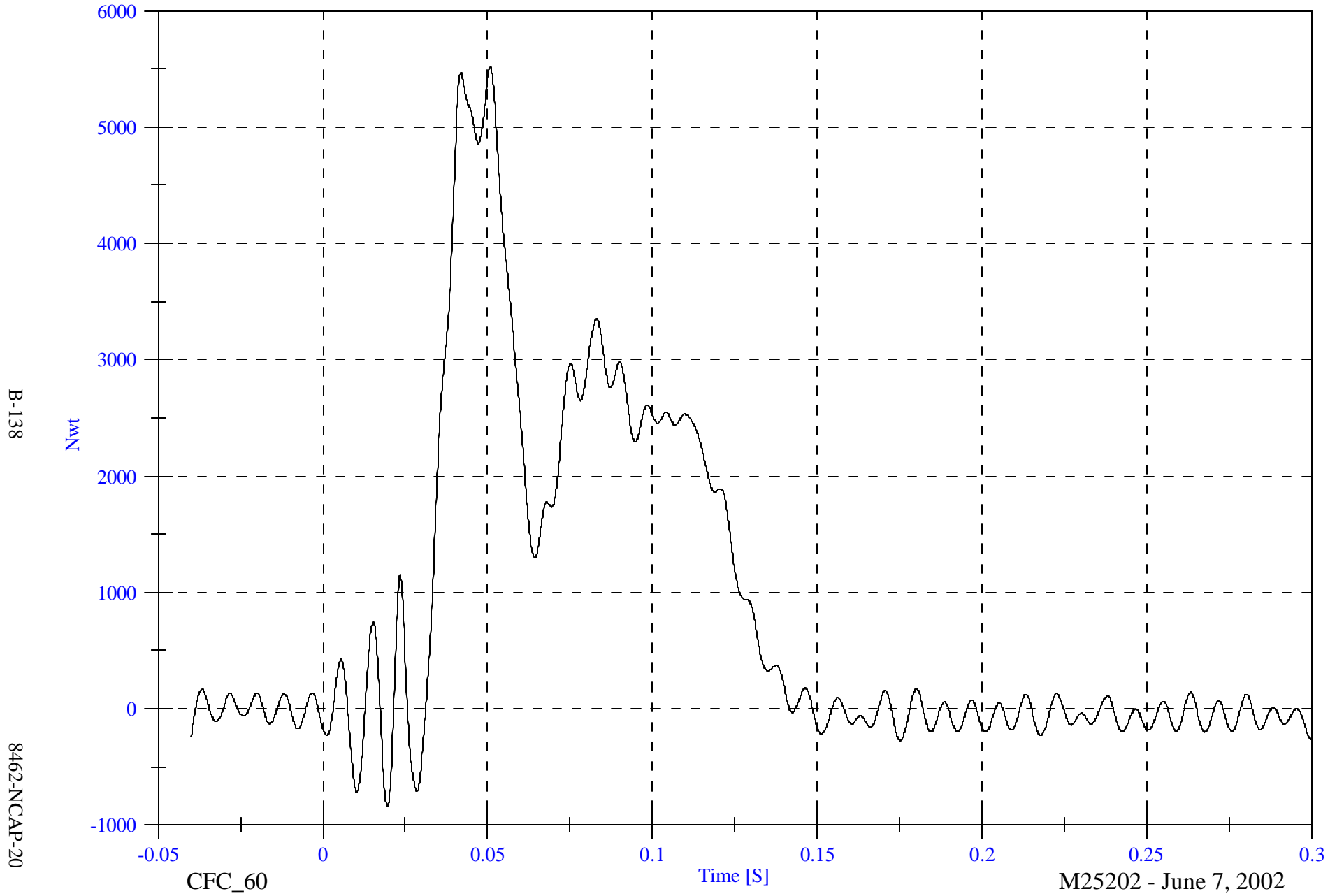
M25202 - June 7, 2002

NCAP TEST #20- 2002 Nissan Pathfinder

Max: 5515.2 [Nwt] at 0.051 [S]

BLC A2 Fx

Min: -840.4 [Nwt] at 0.020 [S]



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8462-NCAP-20

CFC\_60

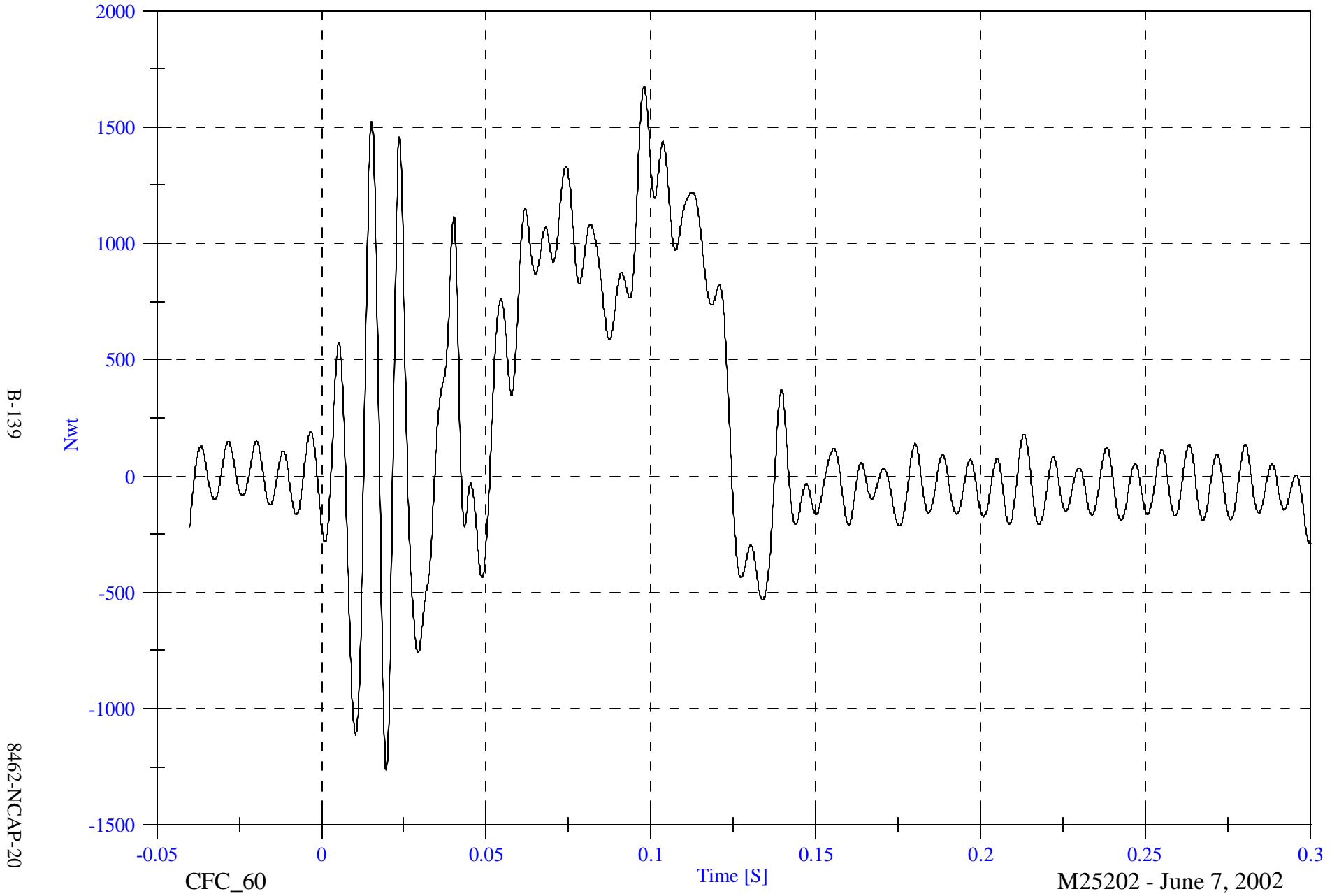
M25202 - June 7, 2002

NCAP TEST #20- 2002 Nissan Pathfinder

Max: 1675.7 [Nwt] at 0.098 [S]

Min: -1266.4 [Nwt] at 0.020 [S]

BLC A3 Fx



B-139

8462-NCAP-20

CFC\_60

Time [S]

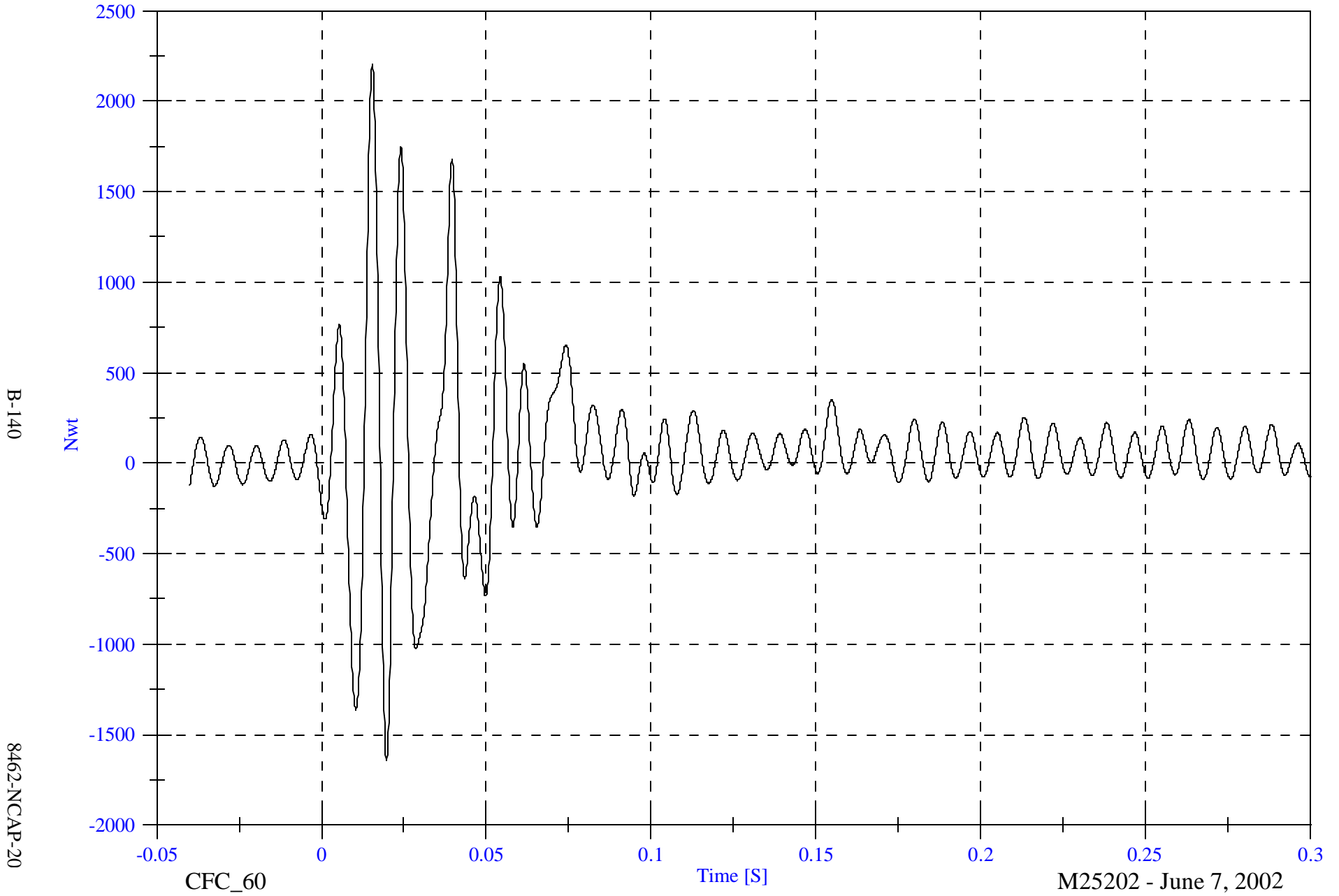
M25202 - June 7, 2002

NCAP TEST #20- 2002 Nissan Pathfinder

BLC A4 Fx

Max: 2200.3 [Nwt] at 0.015 [S]

Min: -1641.7 [Nwt] at 0.020 [S]



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8462-NCAP-20

CFC\_60

Time [S]

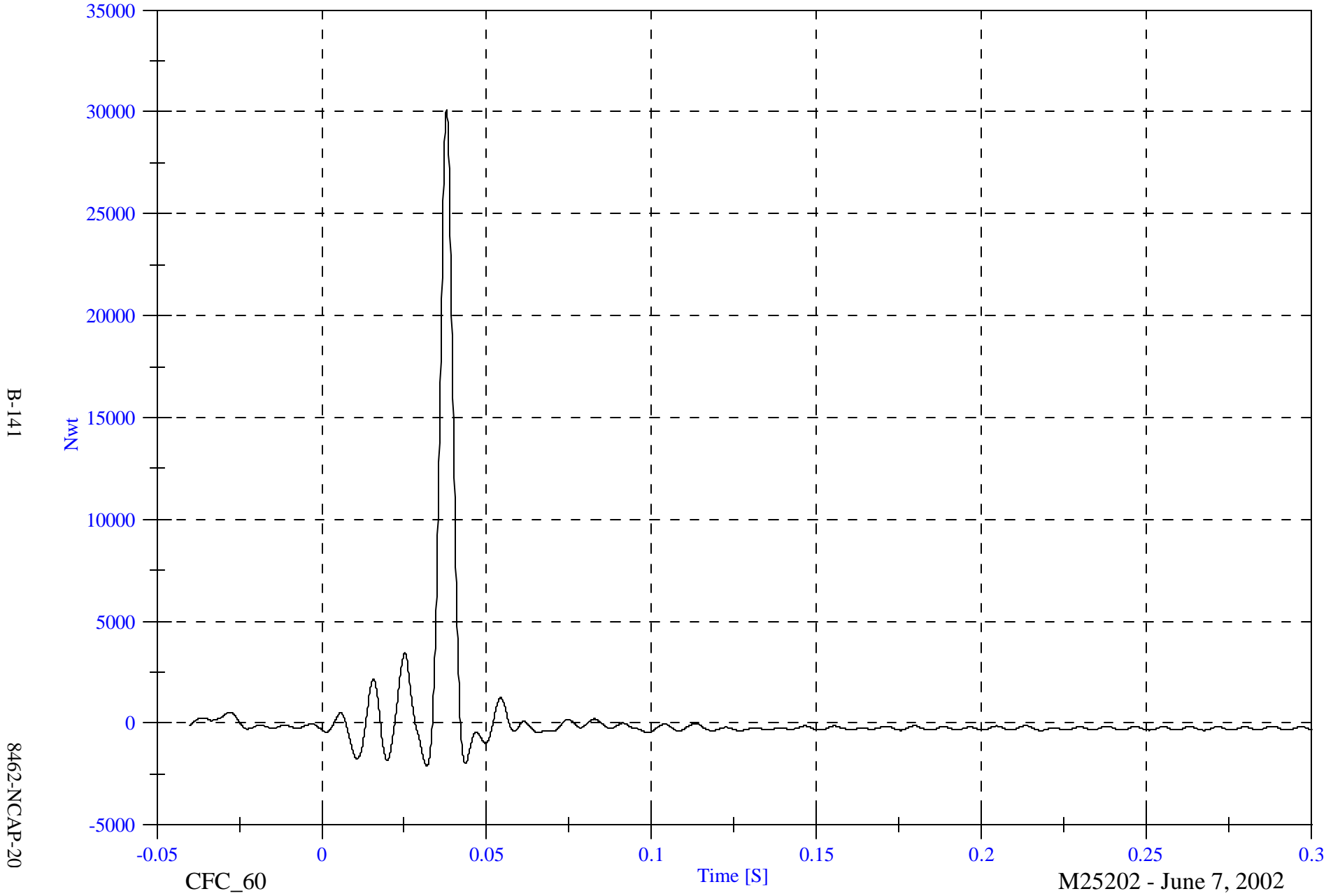
M25202 - June 7, 2002

NCAP TEST #20- 2002 Nissan Pathfinder

BLC A5 Fx

Max: 30099.1 [Nwt] at 0.038 [S]

Min: -2109.7 [Nwt] at 0.032 [S]



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8462-NCAP-20

M25202 - June 7, 2002

NCAP TEST #20- 2002 Nissan Pathfinder

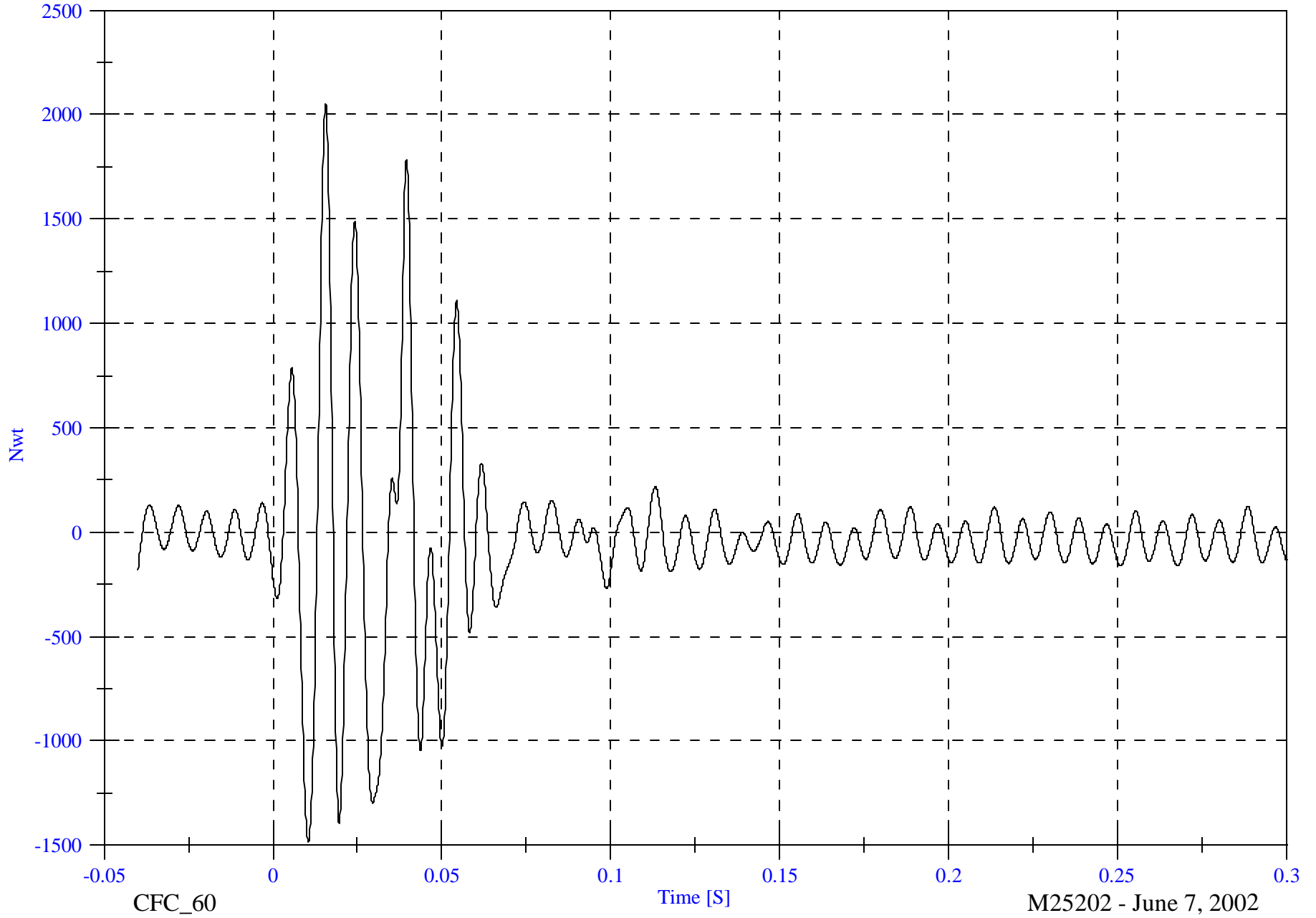
BLC A6 Fx

Max: 2051.0 [Nwt] at 0.016 [S]

Min: -1485.7 [Nwt] at 0.010 [S]

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8462-NCAP-20



CFC\_60

Time [S]

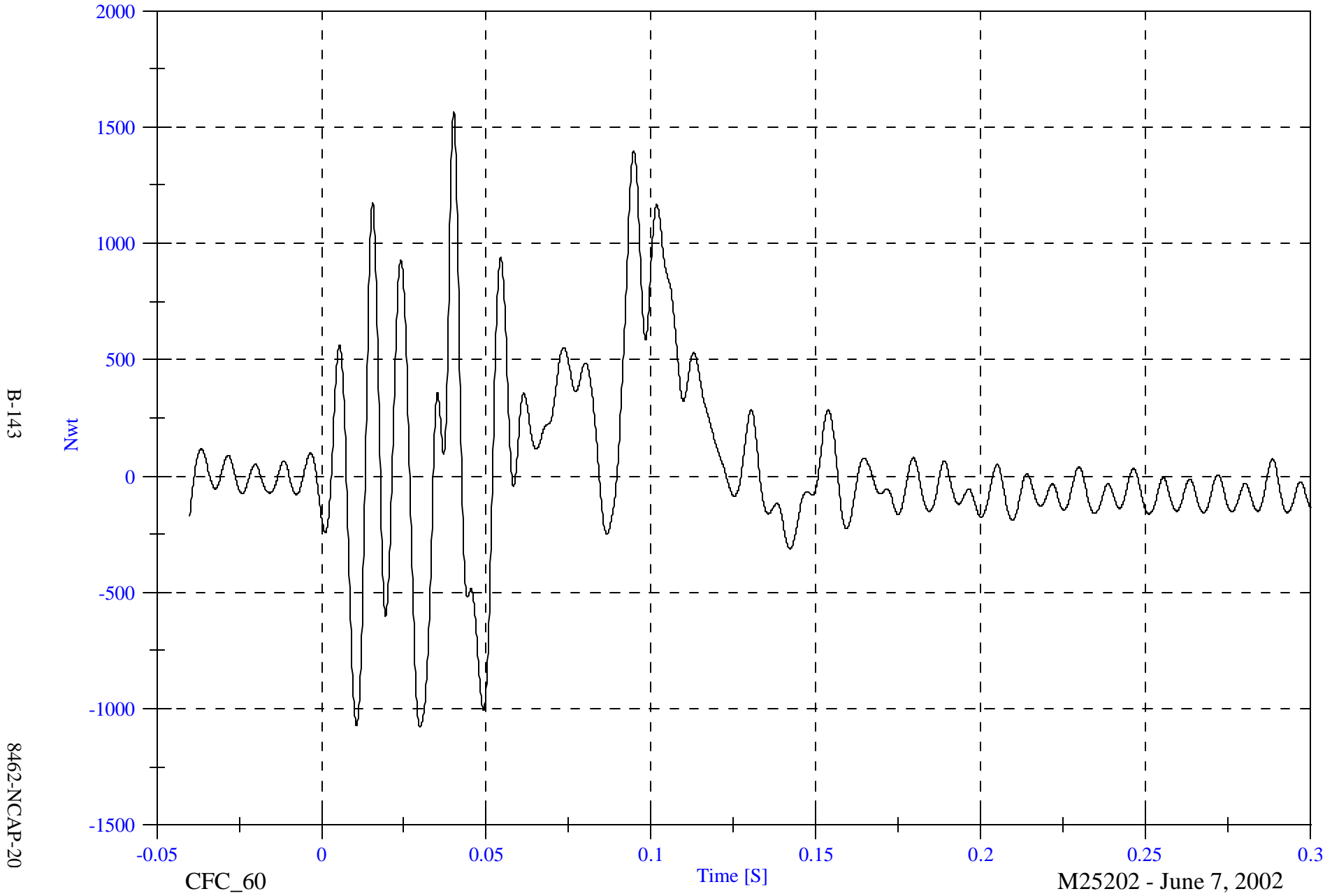
M25202 - June 7, 2002

NCAP TEST #20- 2002 Nissan Pathfinder

Max: 1567.2 [Nwt] at 0.040 [S]

BLC A7 Fx

Min: -1078.6 [Nwt] at 0.030 [S]

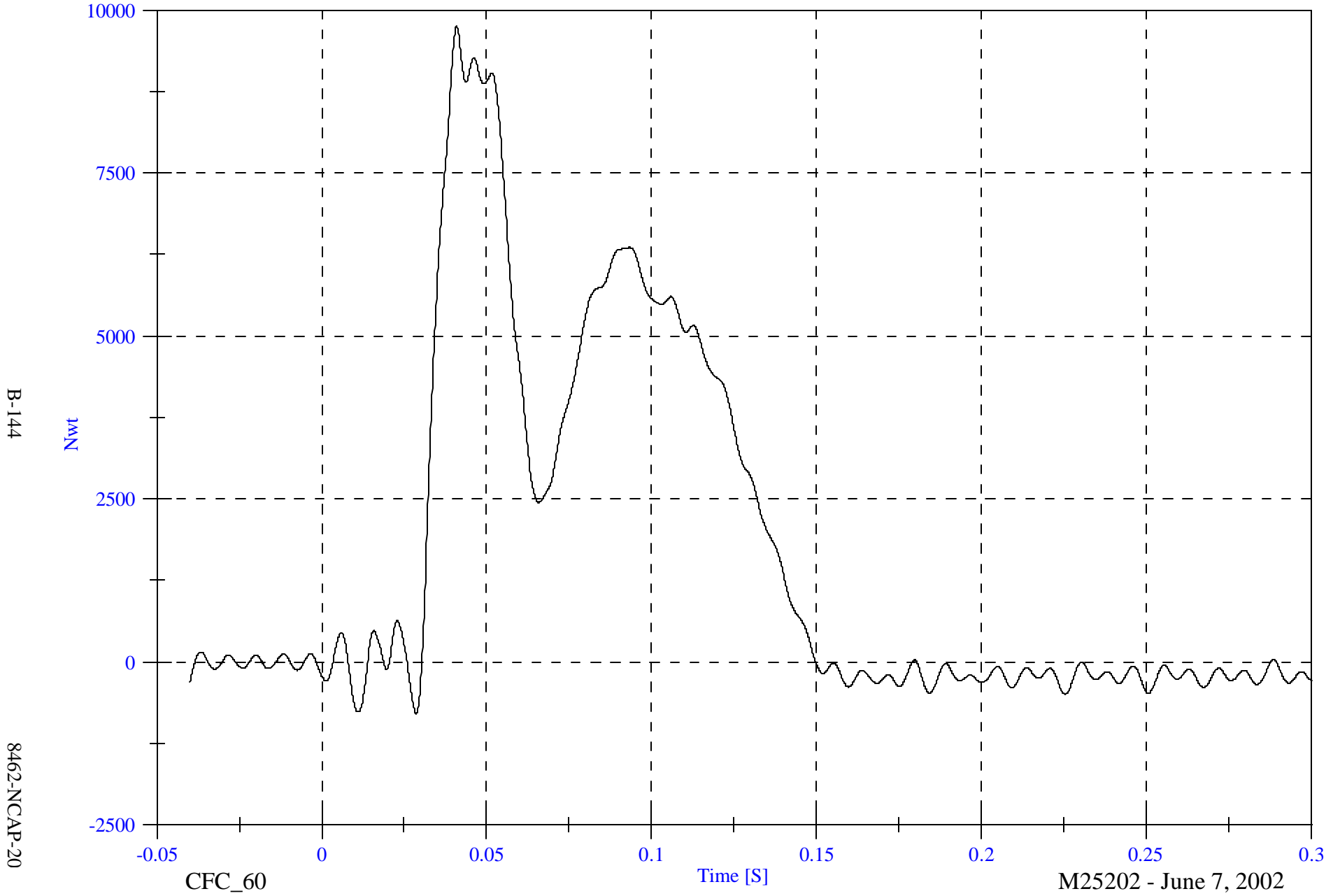


NCAP TEST #20- 2002 Nissan Pathfinder

BLC A8 Fx

Max: 9749.2 [Nwt] at 0.041 [S]

Min: -790.2 [Nwt] at 0.029 [S]



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8462-NCAP-20

CFC\_60

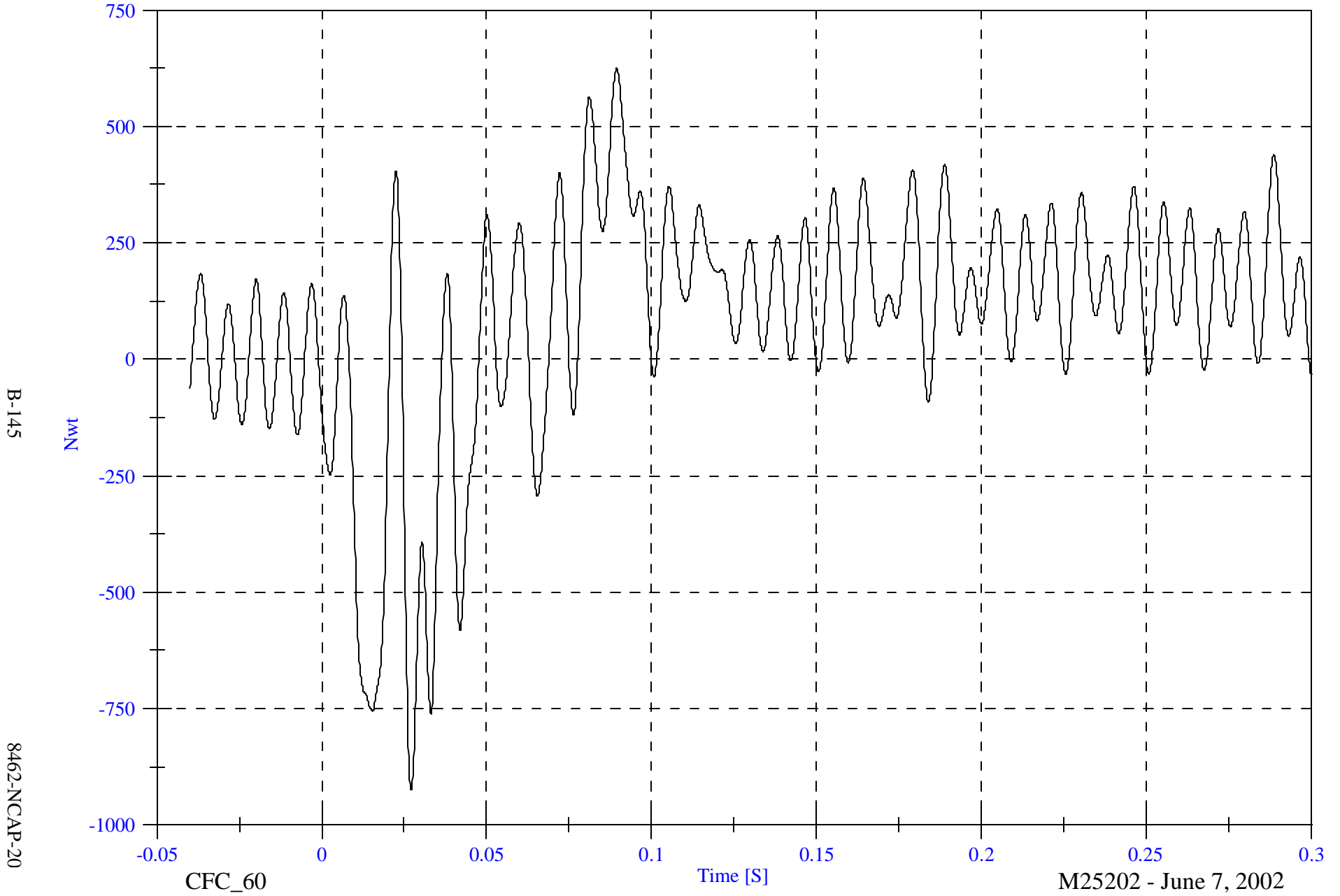
M25202 - June 7, 2002

NCAP TEST #20- 2002 Nissan Pathfinder

Max: 624.2 [Nwt] at 0.089 [S]

Min: -924.9 [Nwt] at 0.027 [S]

BLC A9 Fx



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8462-NCAP-20

CFC\_60

Time [S]

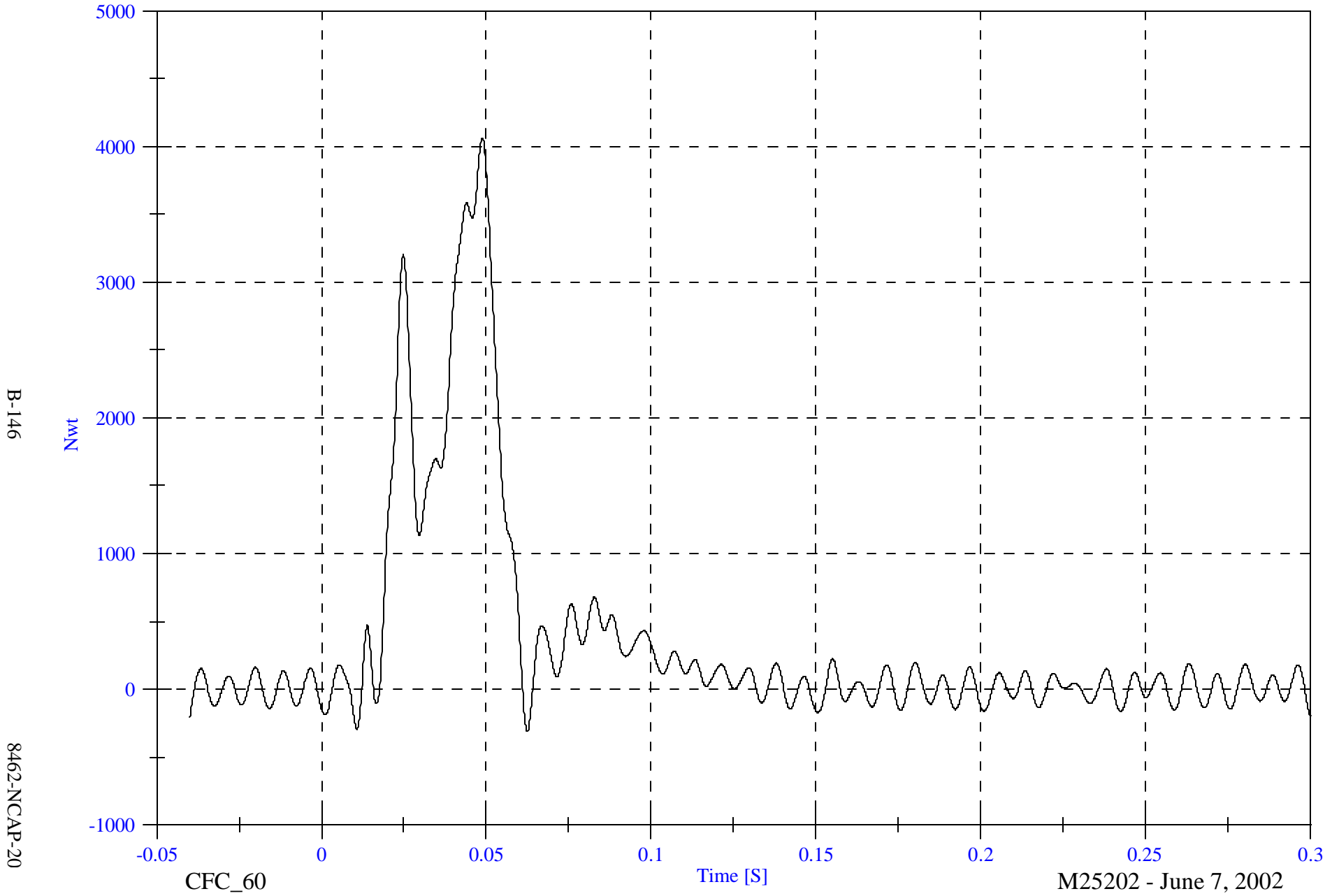
M25202 - June 7, 2002

NCAP TEST #20- 2002 Nissan Pathfinder

Max: 4064.0 [Nwt] at 0.049 [S]

Min: -307.6 [Nwt] at 0.062 [S]

BLC B1 Fx



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8462-NCAP-20

CFC\_60

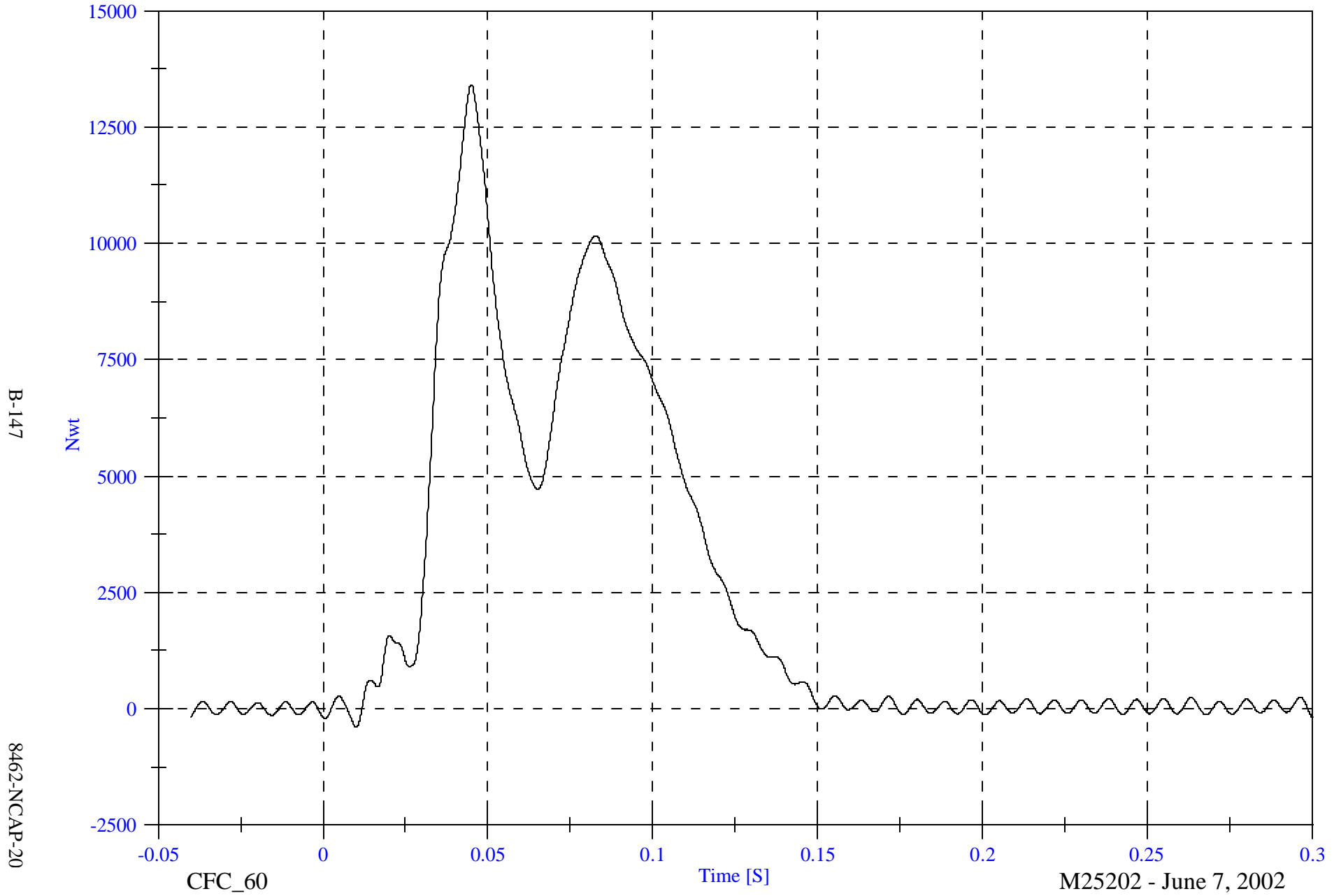
M25202 - June 7, 2002

NCAP TEST #20- 2002 Nissan Pathfinder

BLC B2 Fx

Max: 13410.6 [Nwt] at 0.045 [S]

Min: -400.1 [Nwt] at 0.010 [S]



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8462-NCAP-20

CFC\_60

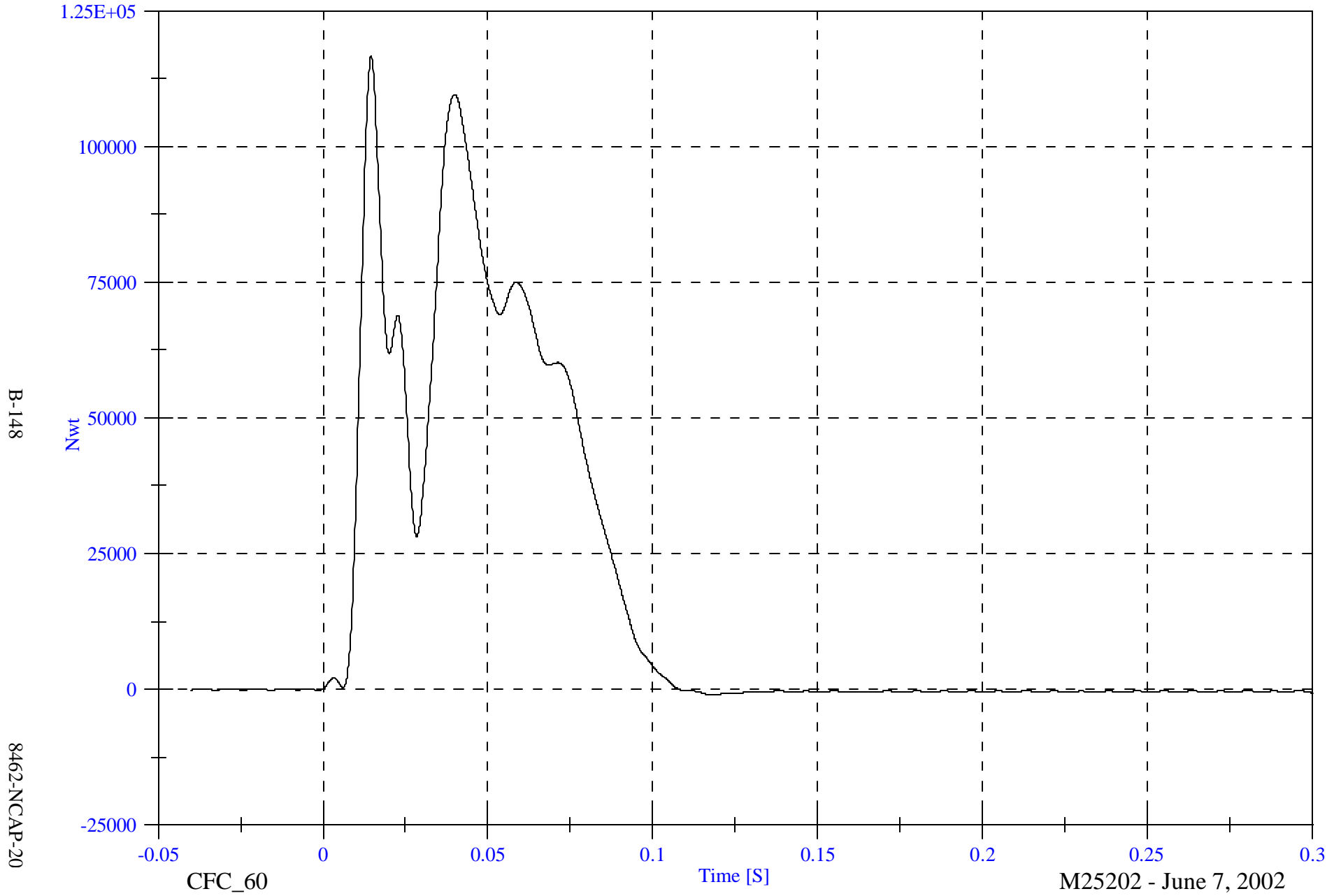
M25202 - June 7, 2002

NCAP TEST #20- 2002 Nissan Pathfinder

BLC B3 Fx

Max: 116591.0 [Nwt] at 0.015 [S]

Min: -1053.0 [Nwt] at 0.118 [S]



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8462-NCAP-20

CFC\_60

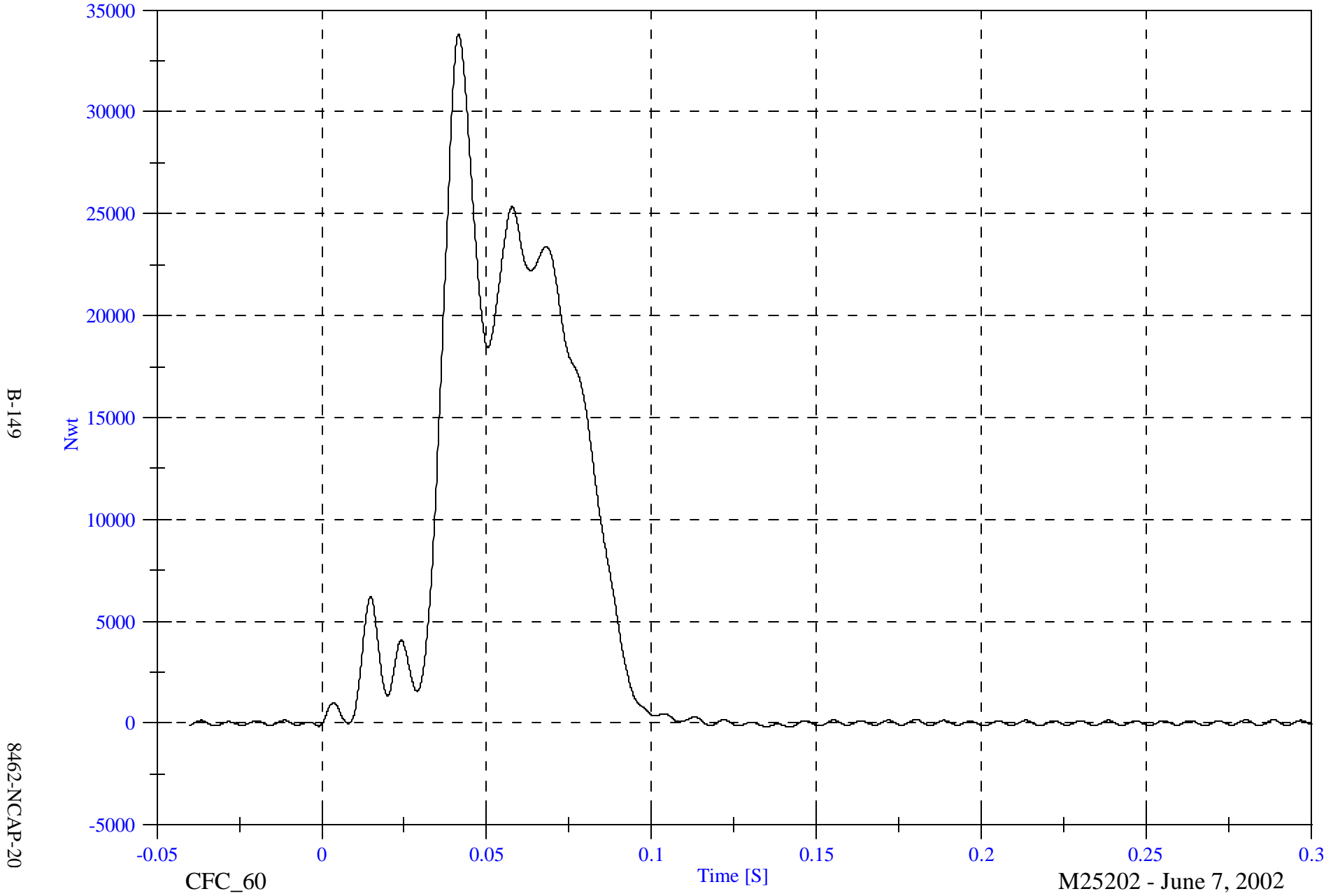
M25202 - June 7, 2002

NCAP TEST #20- 2002 Nissan Pathfinder

BLC B4 Fx

Max: 33821.3 [Nwt] at 0.041 [S]

Min: -184.8 [Nwt] at 0.142 [S]



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8462-NCAP-20

CFC\_60

Time [S]

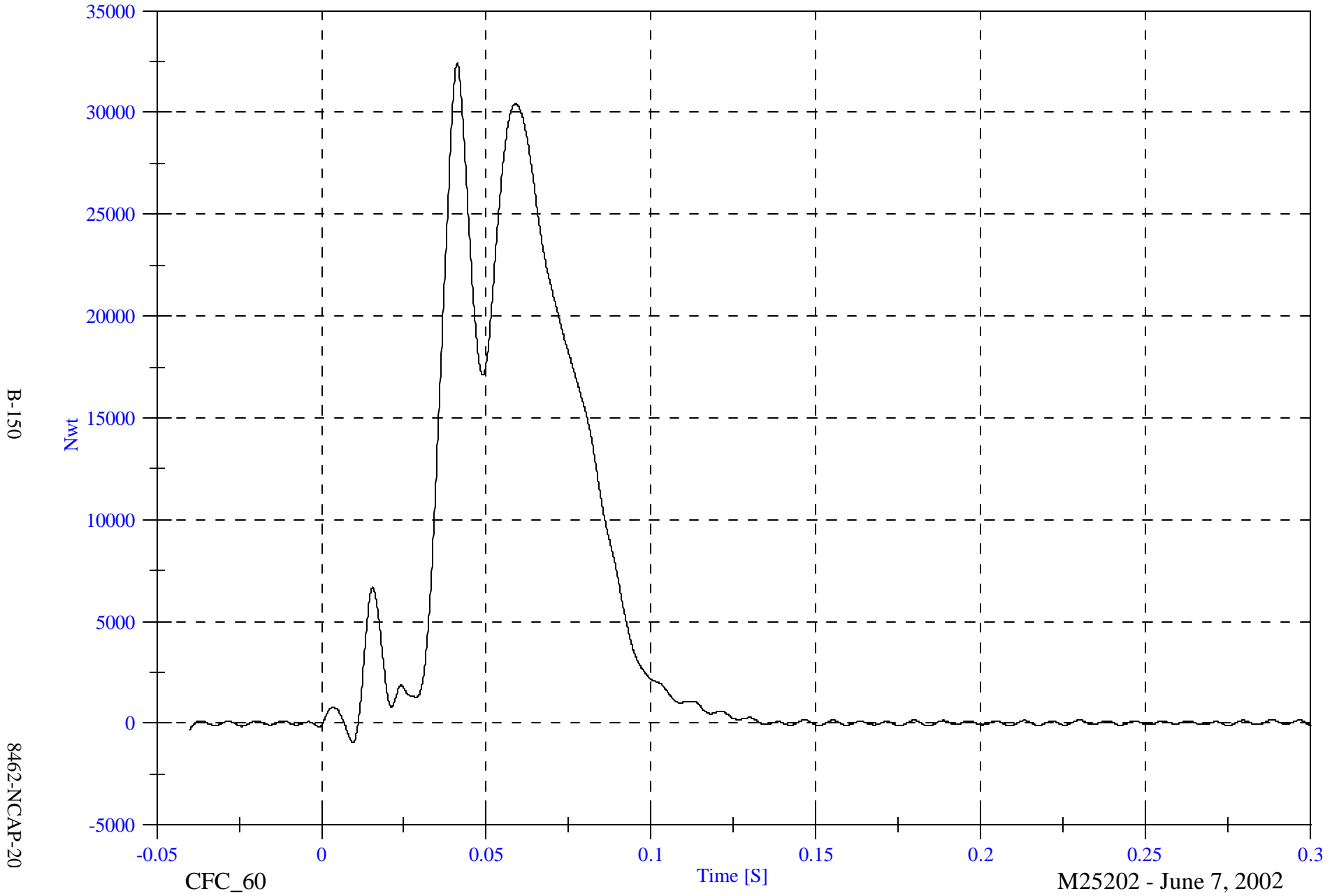
M25202 - June 7, 2002

NCAP TEST #20- 2002 Nissan Pathfinder

Max: 32408.0 [Nwt] at 0.041 [S]

BLC B5 Fx

Min: -935.7 [Nwt] at 0.009 [S]

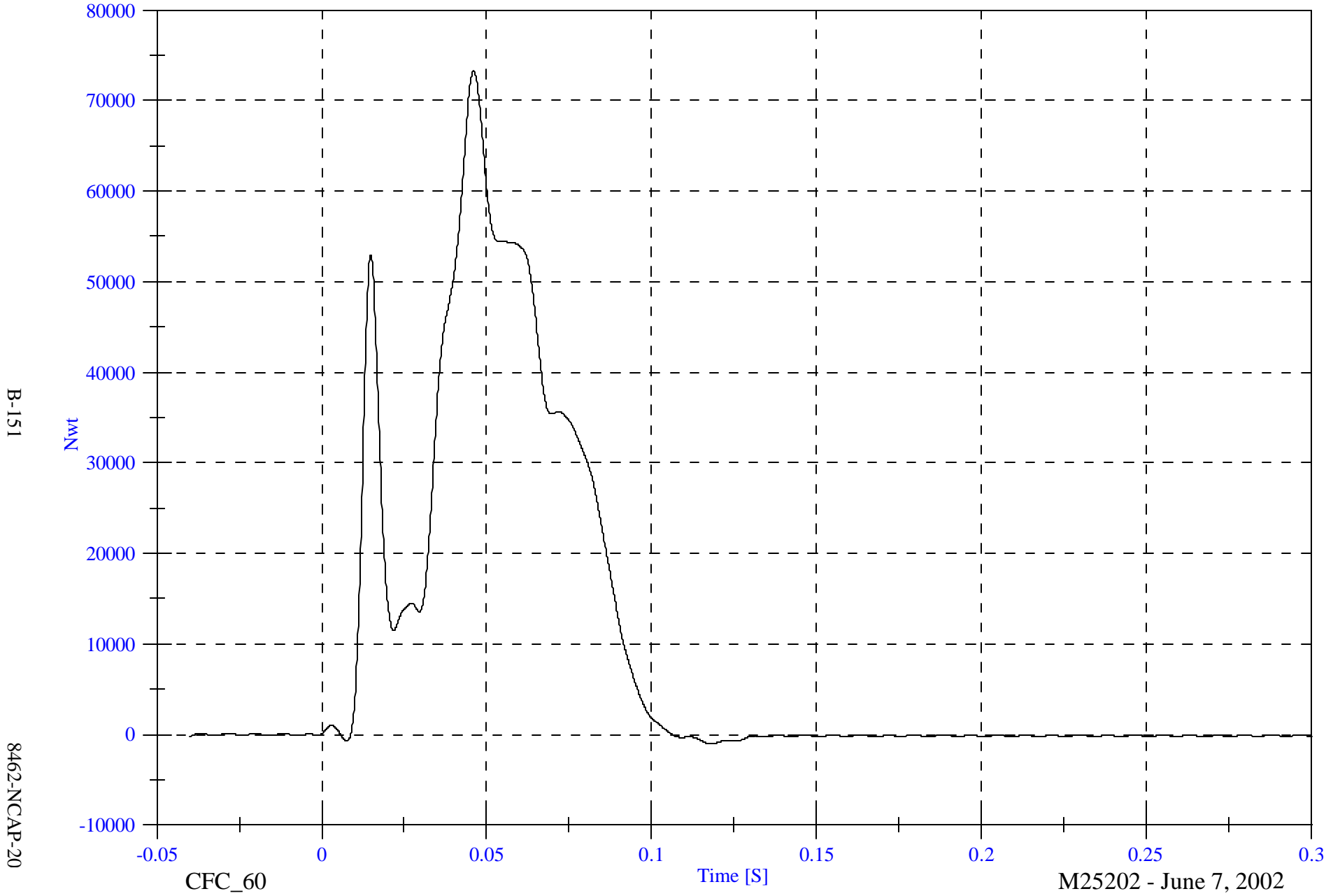


NCAP TEST #20- 2002 Nissan Pathfinder

Max: 73248.1 [Nwt] at 0.046 [S]

BLC B6 Fx

Min: -1018.1 [Nwt] at 0.118 [S]



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8462-NCAP-20

CFC\_60

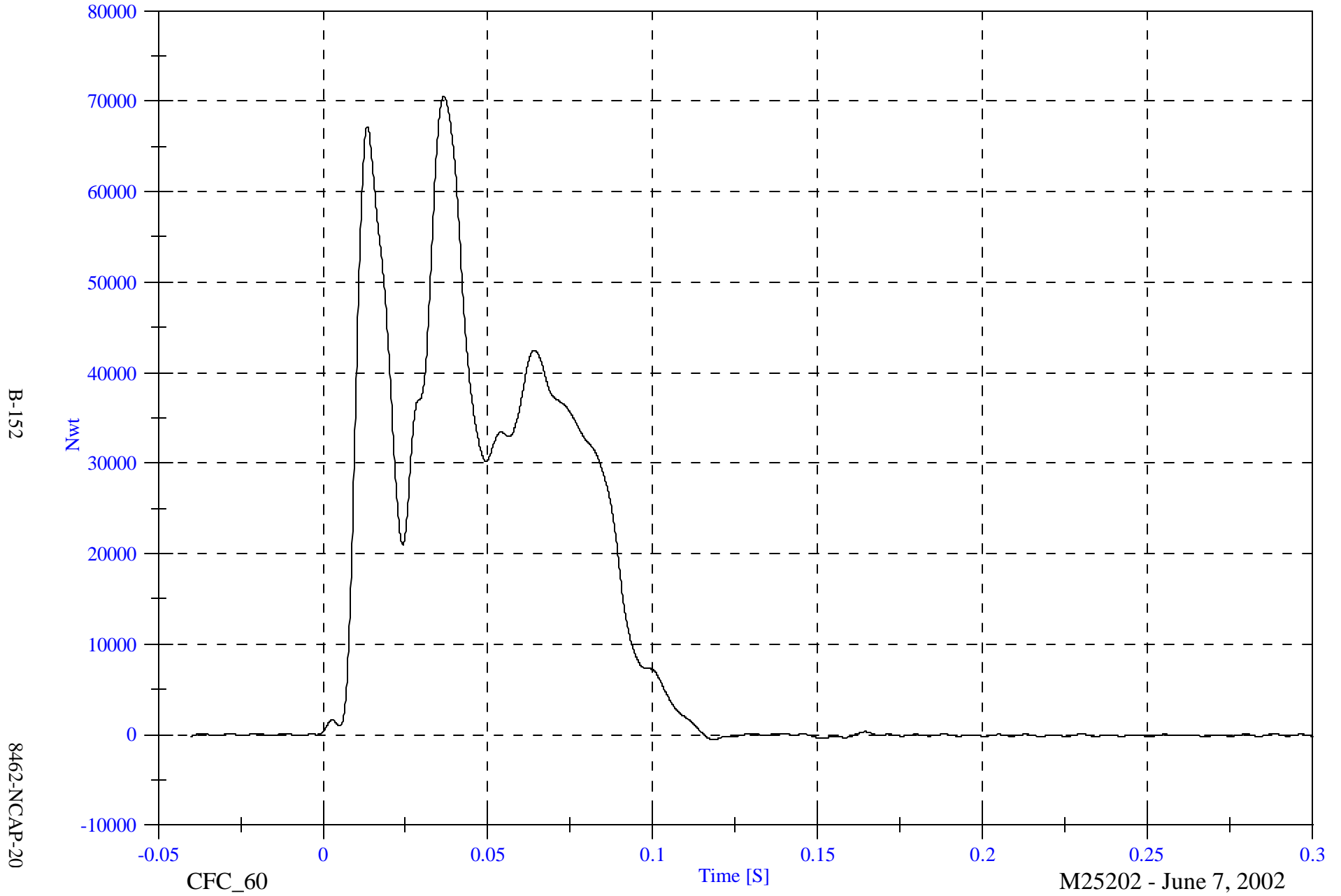
M25202 - June 7, 2002

NCAP TEST #20- 2002 Nissan Pathfinder

BLC B7 Fx

Max: 70564.3 [Nwt] at 0.037 [S]

Min: -531.5 [Nwt] at 0.118 [S]



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CFC\_60

Time [S]

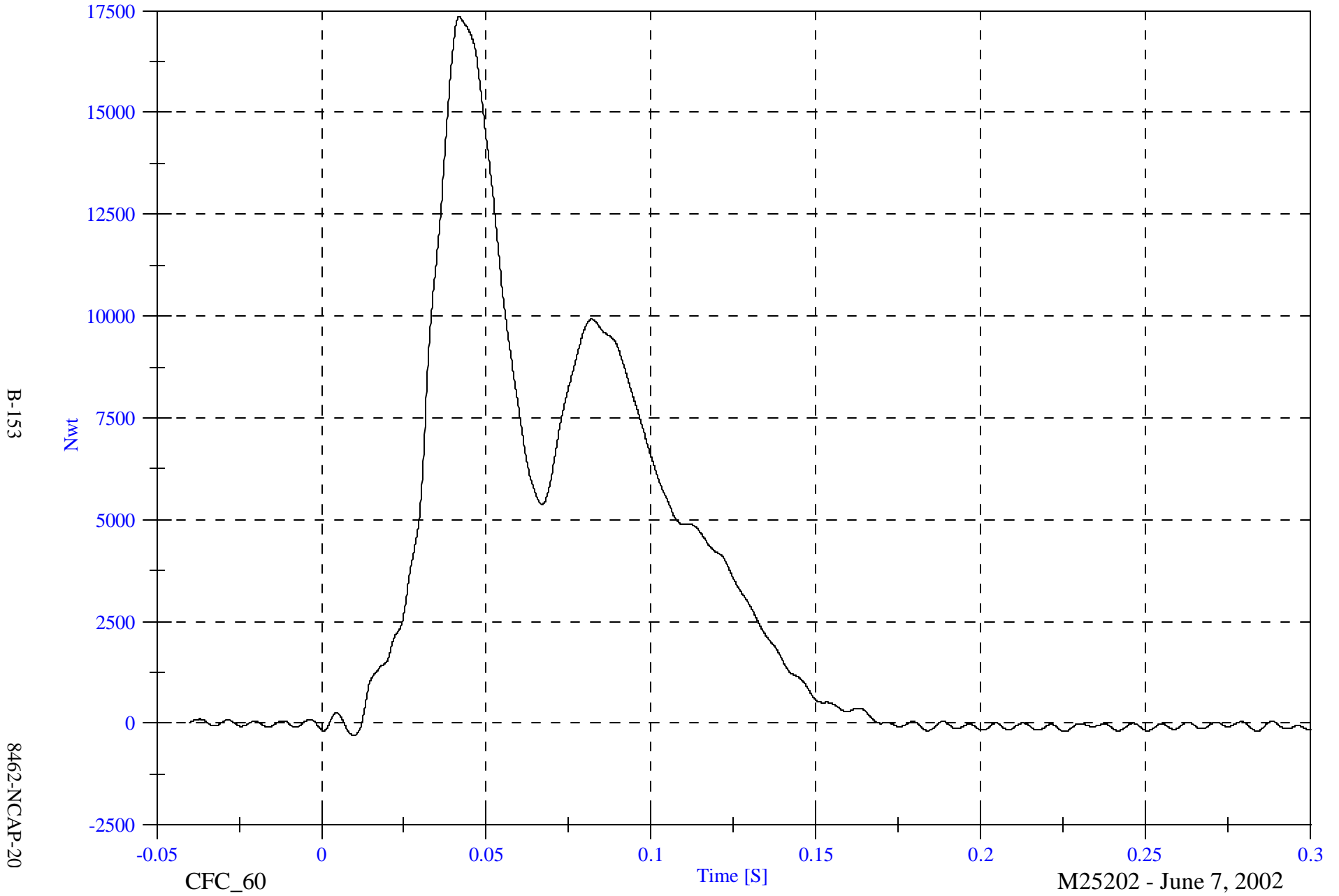
M25202 - June 7, 2002

NCAP TEST #20- 2002 Nissan Pathfinder

BLC B8 Fx

Max: 17348.1 [Nwt] at 0.042 [S]

Min: -304.1 [Nwt] at 0.010 [S]

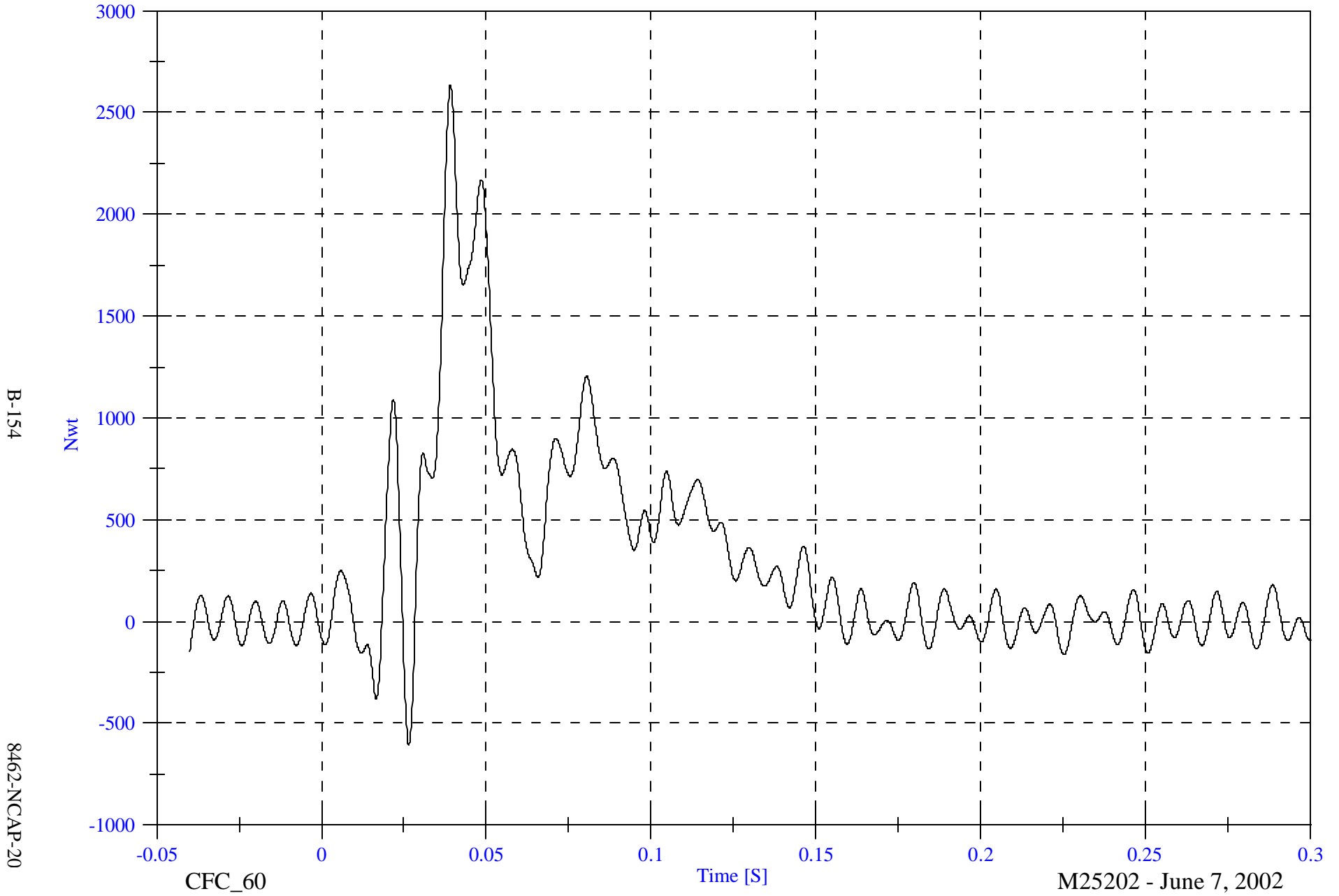


NCAP TEST #20- 2002 Nissan Pathfinder

Max: 2635.3 [Nwt] at 0.039 [S]

BLC B9 Fx

Min: -606.3 [Nwt] at 0.026 [S]

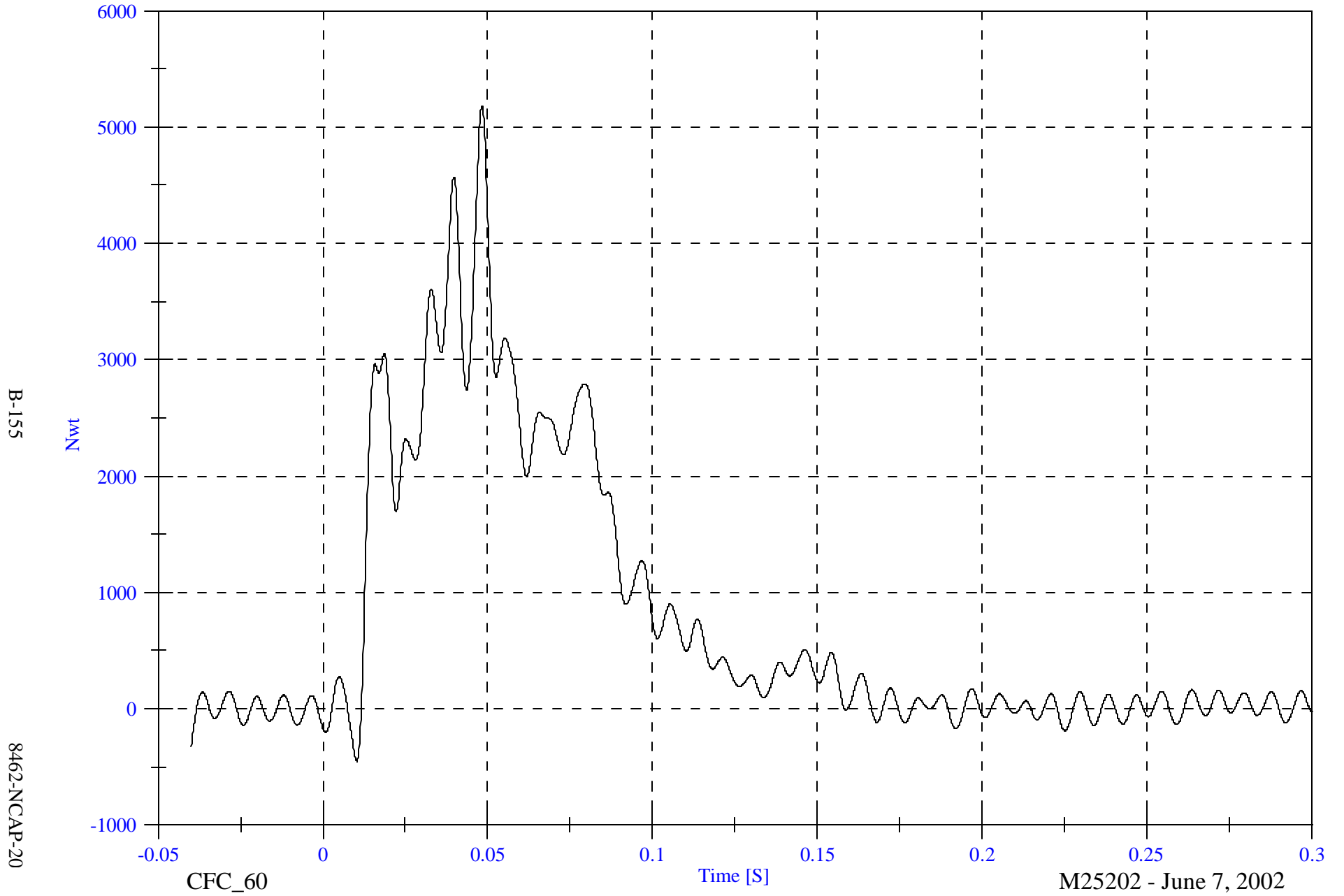


NCAP TEST #20- 2002 Nissan Pathfinder

Max: 5183.5 [Nwt] at 0.048 [S]

Min: -450.4 [Nwt] at 0.010 [S]

BLC C1 Fx



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CFC\_60

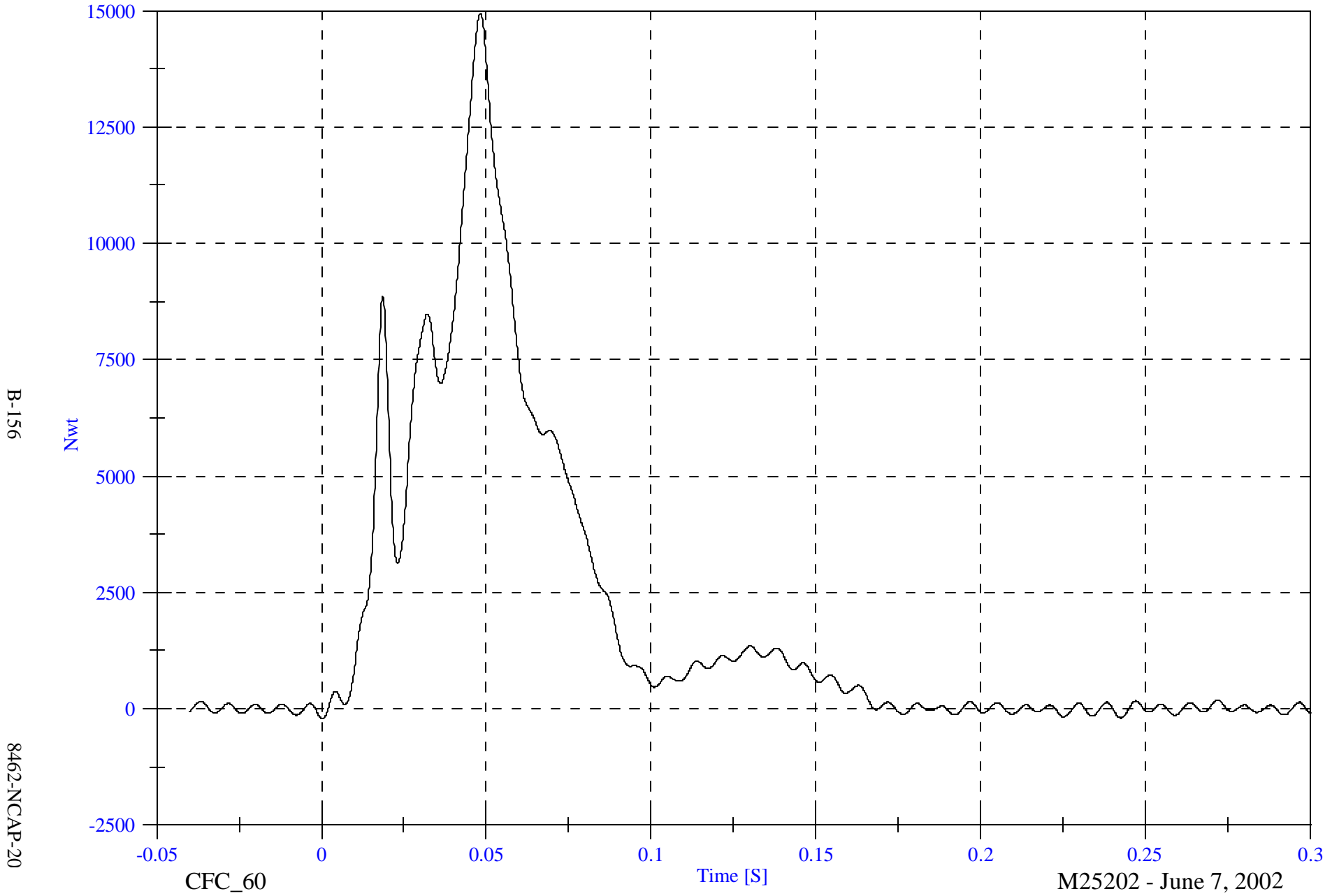
M25202 - June 7, 2002

NCAP TEST #20- 2002 Nissan Pathfinder

BLC C2 Fx

Max: 14939.0 [Nwt] at 0.048 [S]

Min: -217.1 [Nwt] at 0.000 [S]



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8462-NCAP-20

CFC\_60

Time [S]

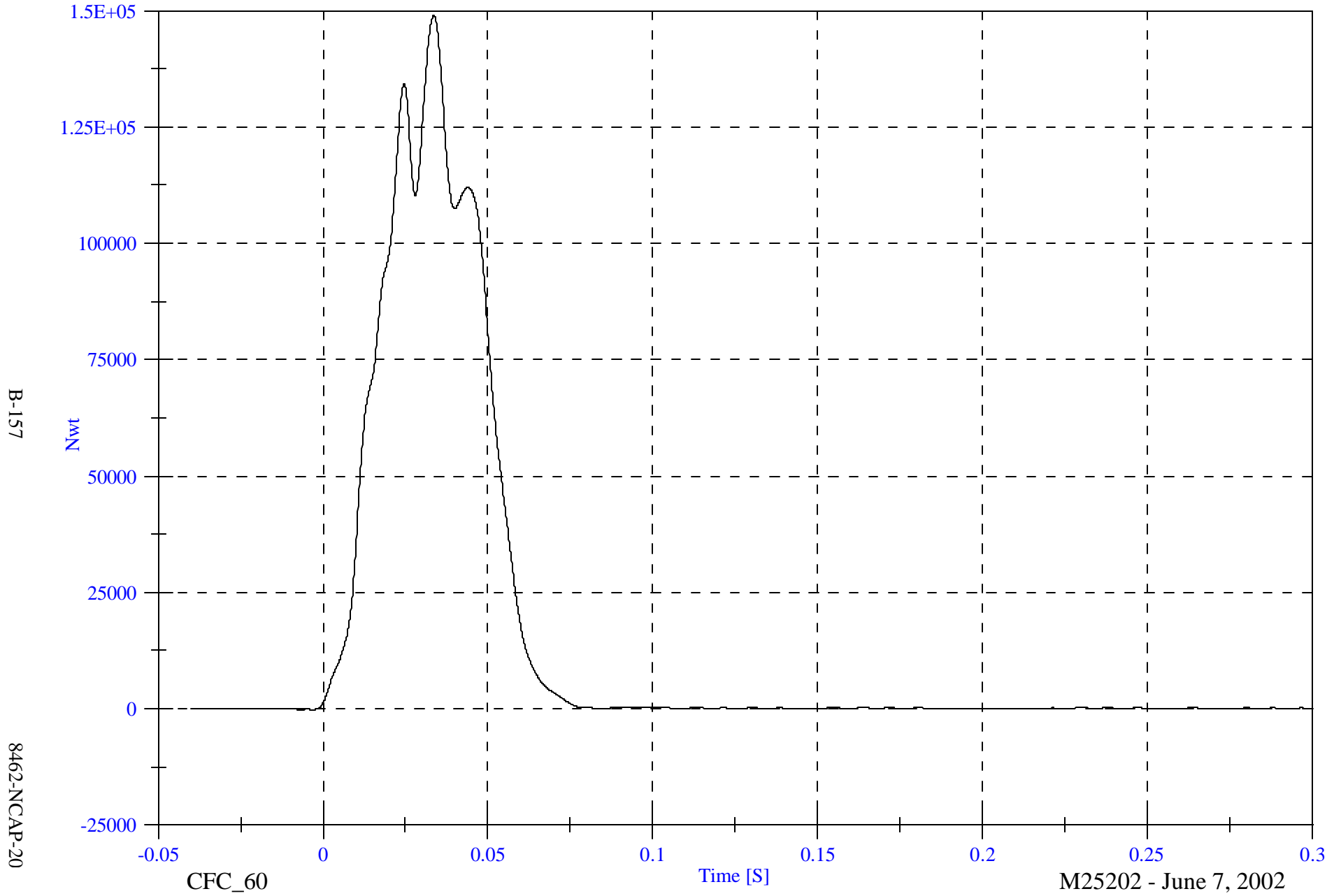
M25202 - June 7, 2002

NCAP TEST #20- 2002 Nissan Pathfinder

BLC C3 Fx

Max: 148996.6 [Nwt] at 0.034 [S]

Min: -149.8 [Nwt] at -0.003 [S]



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8462-NCAP-20

CFC\_60

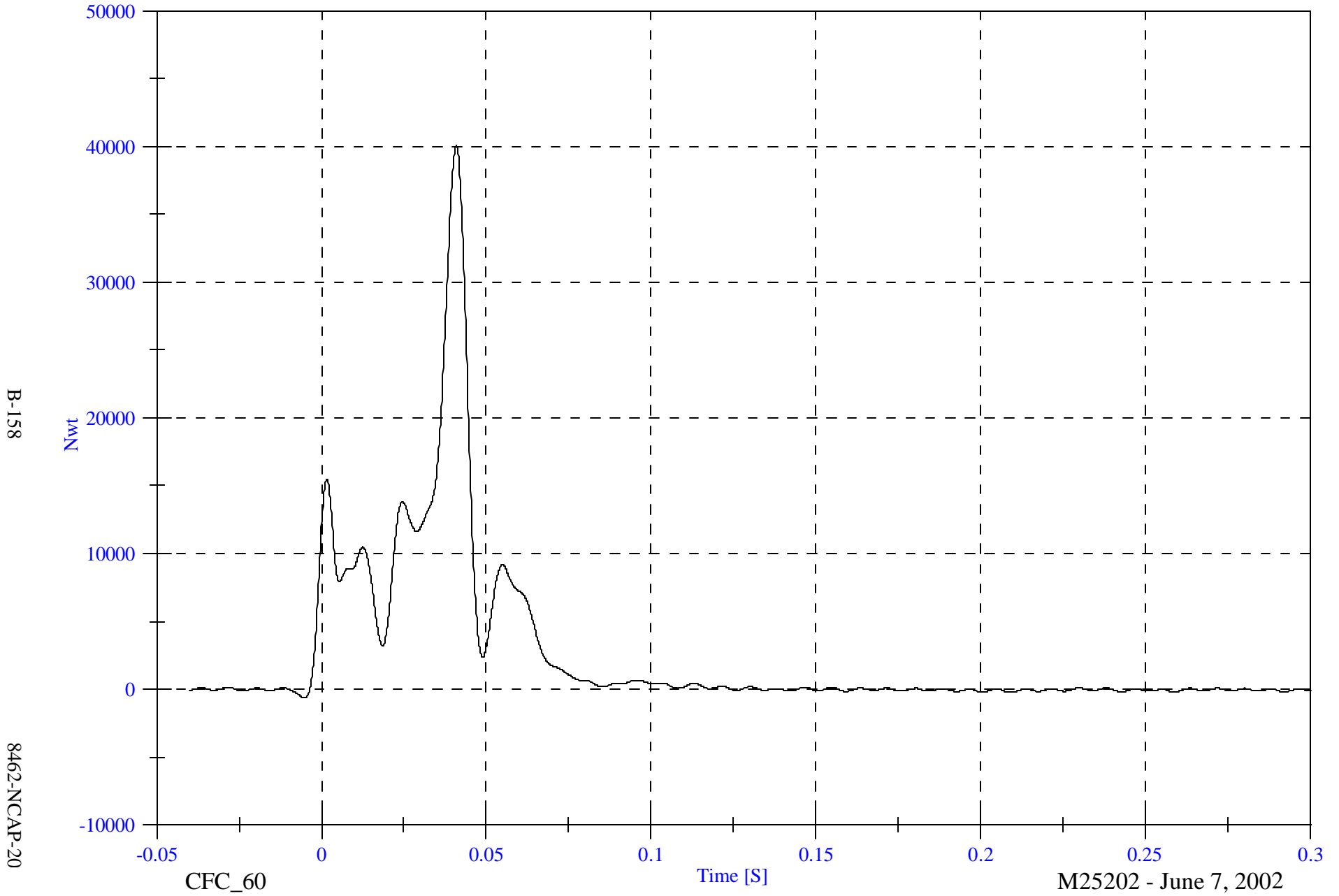
M25202 - June 7, 2002

NCAP TEST #20- 2002 Nissan Pathfinder

BLC C4 Fx

Max: 40031.4 [Nwt] at 0.041 [S]

Min: -616.0 [Nwt] at -0.005 [S]



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8462-NCAP-20

CFC\_60

Time [S]

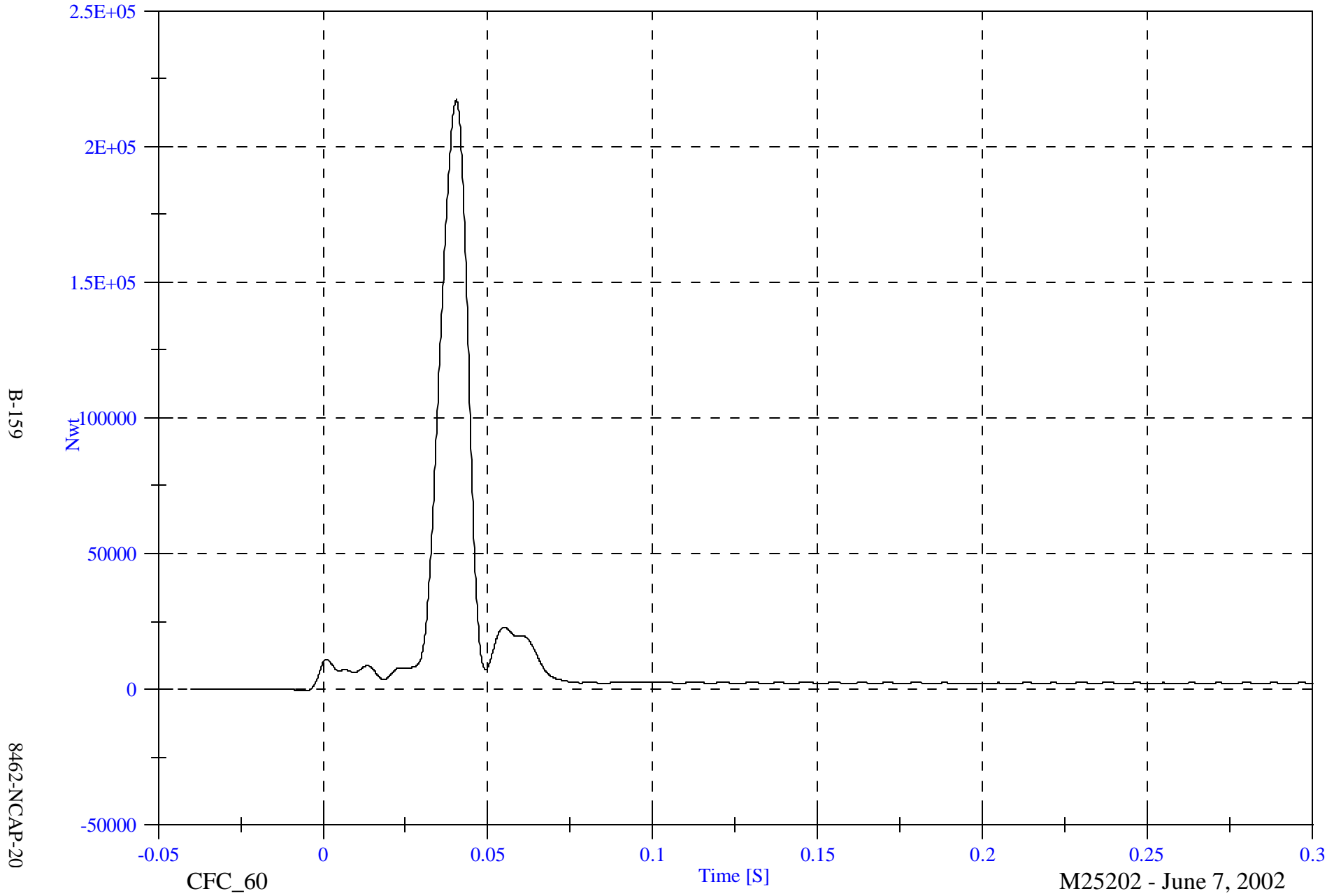
M25202 - June 7, 2002

NCAP TEST #20- 2002 Nissan Pathfinder

BLC C5 Fx

Max: 217098.4 [Nwt] at 0.040 [S]

Min: -527.1 [Nwt] at -0.006 [S]



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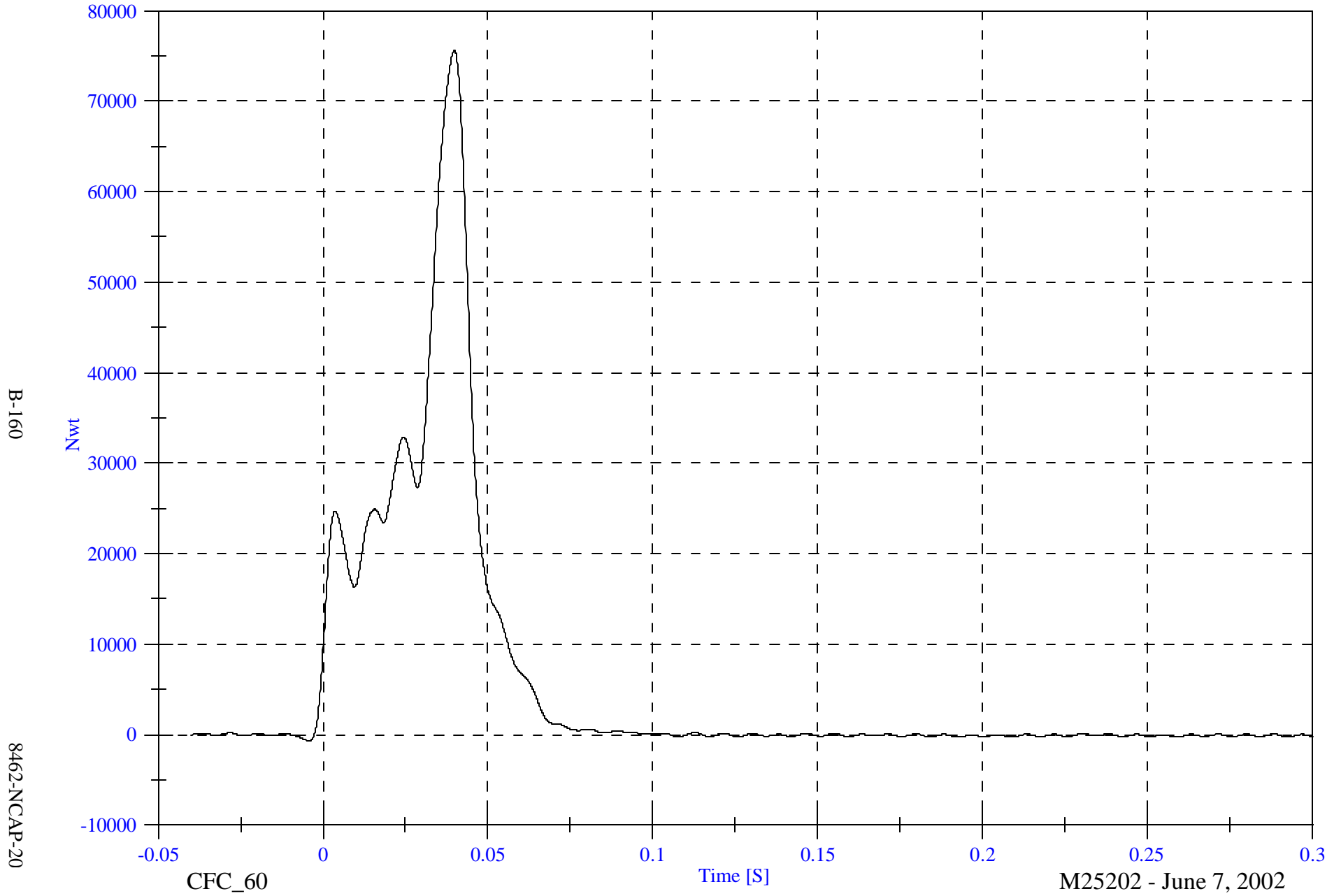
8462-NCAP-20

NCAP TEST #20- 2002 Nissan Pathfinder

BLC C6 Fx

Max: 75570.3 [Nwt] at 0.040 [S]

Min: -695.5 [Nwt] at -0.004 [S]



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CFC\_60

Time [S]

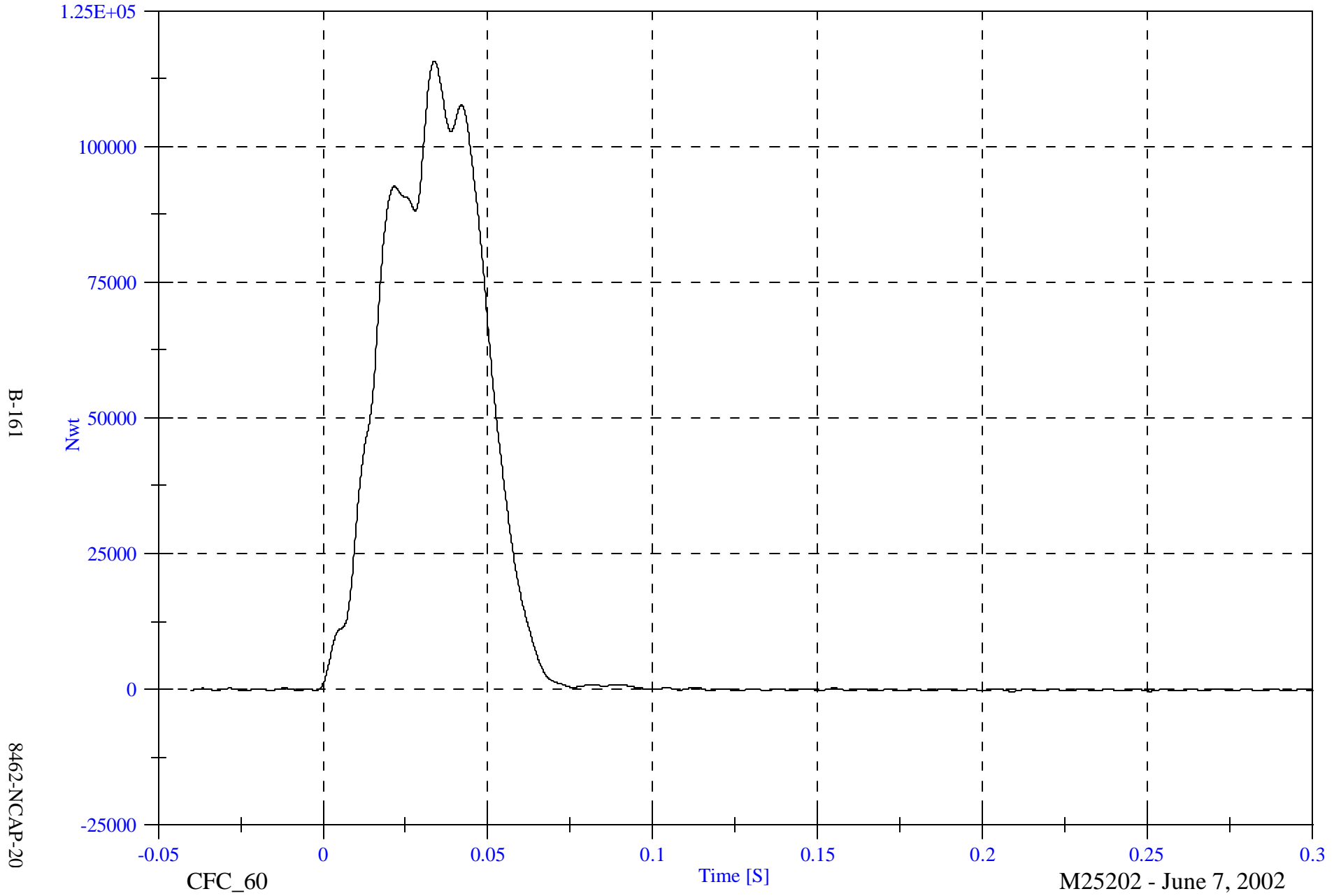
M25202 - June 7, 2002

NCAP TEST #20- 2002 Nissan Pathfinder

BLC C7 Fx

Max: 115713.1 [Nwt] at 0.034 [S]

Min: -382.8 [Nwt] at 0.209 [S]



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CFC\_60

Time [S]

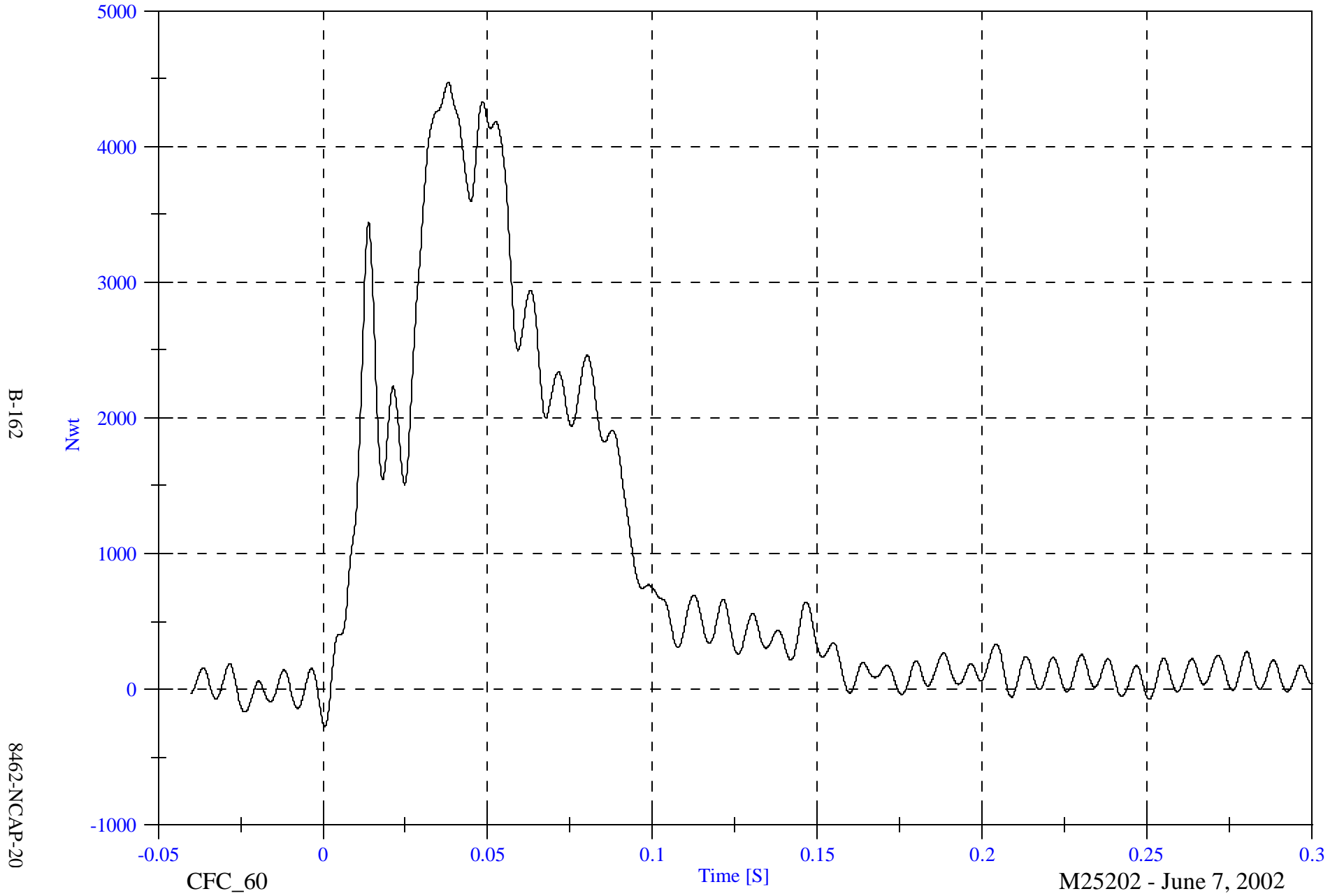
M25202 - June 7, 2002

NCAP TEST #20- 2002 Nissan Pathfinder

BLC C8 Fx

Max: 4472.8 [Nwt] at 0.038 [S]

Min: -274.5 [Nwt] at 0.001 [S]



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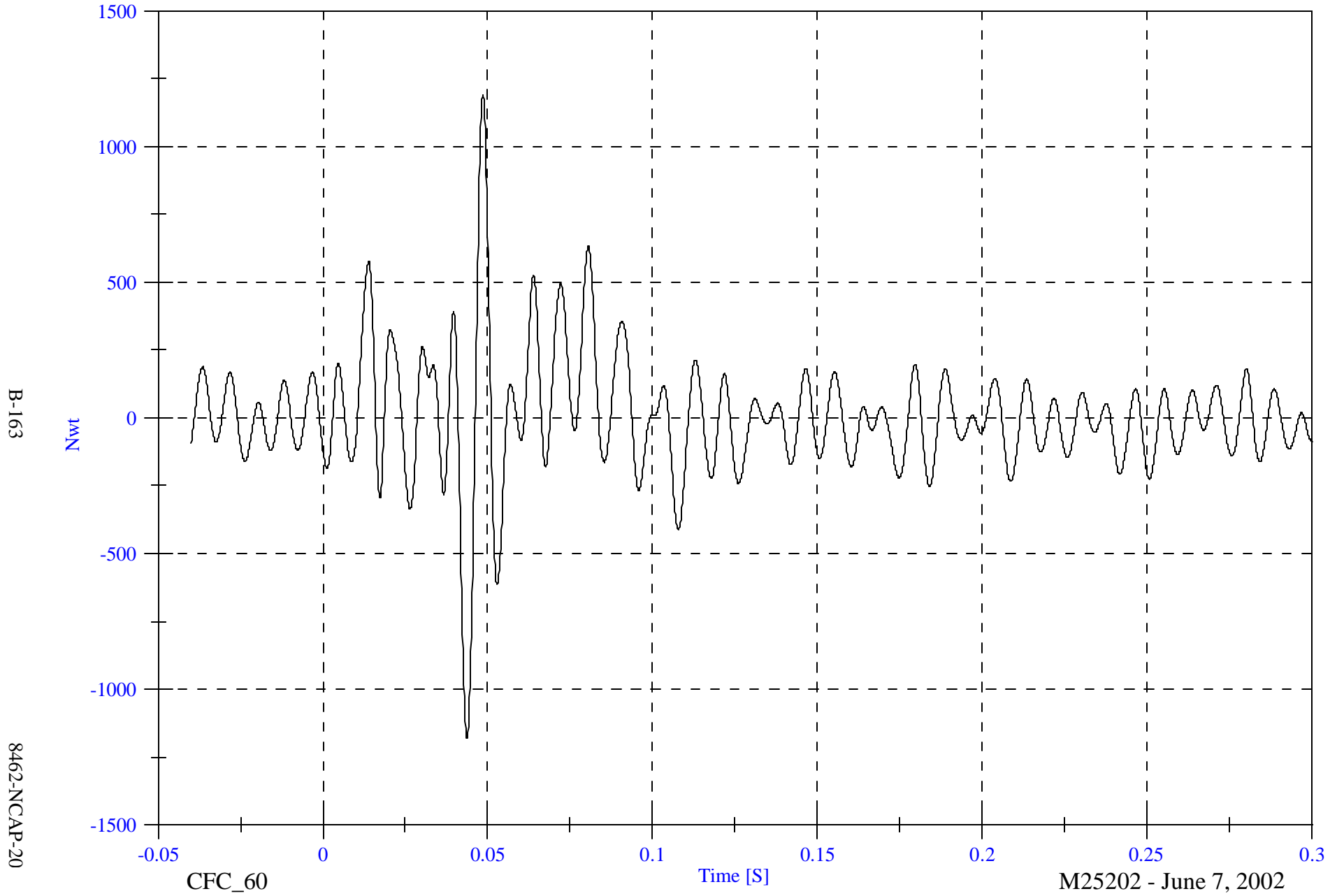
8462-NCAP-20

NCAP TEST #20- 2002 Nissan Pathfinder

Max: 1190.1 [Nwt] at 0.048 [S]

Min: -1180.0 [Nwt] at 0.044 [S]

BLC C9 Fx



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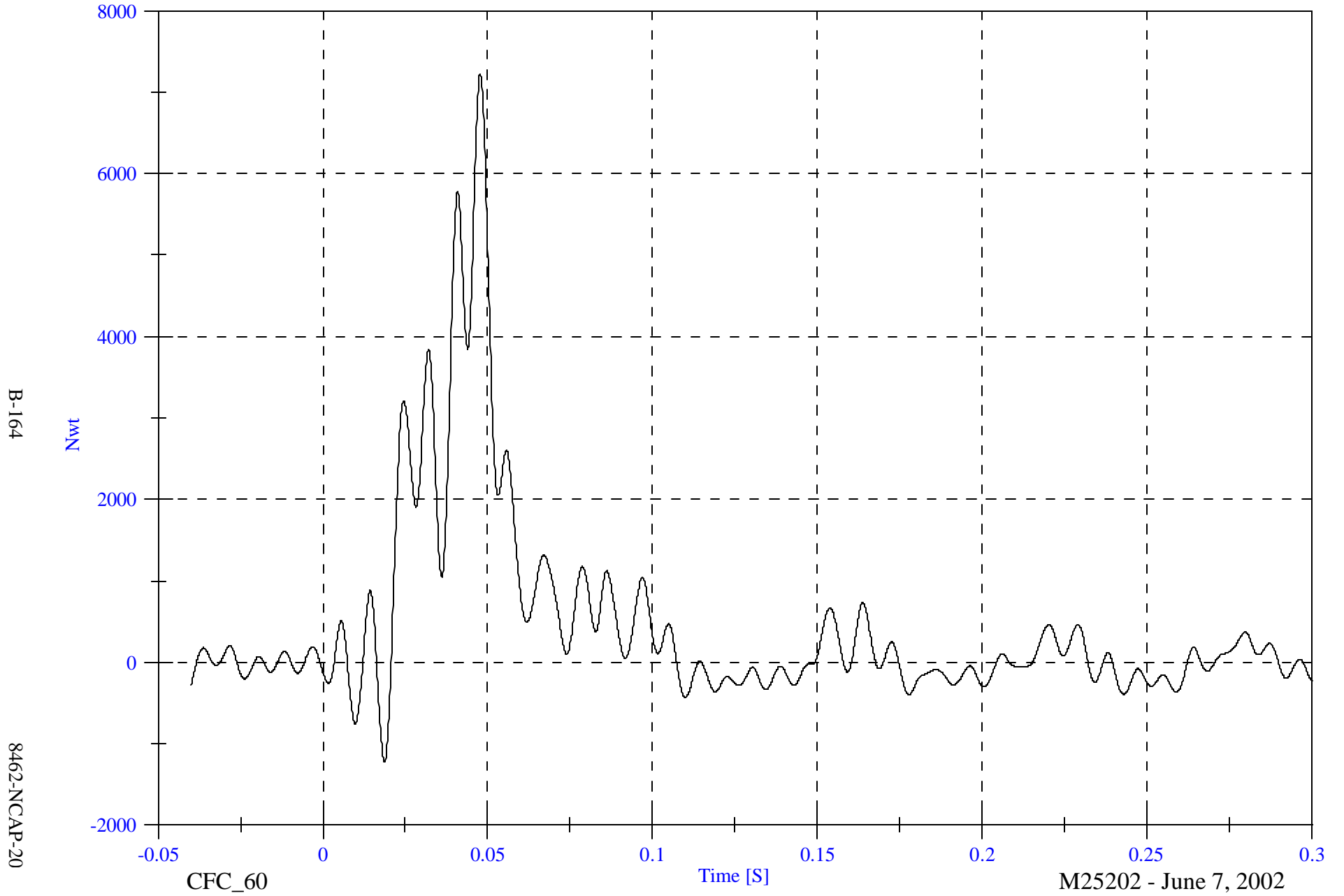
8462-NCAP-20

NCAP TEST #20- 2002 Nissan Pathfinder

Max: 7226.0 [Nwt] at 0.048 [S]

Min: -1225.1 [Nwt] at 0.019 [S]

BLC D1 Fx



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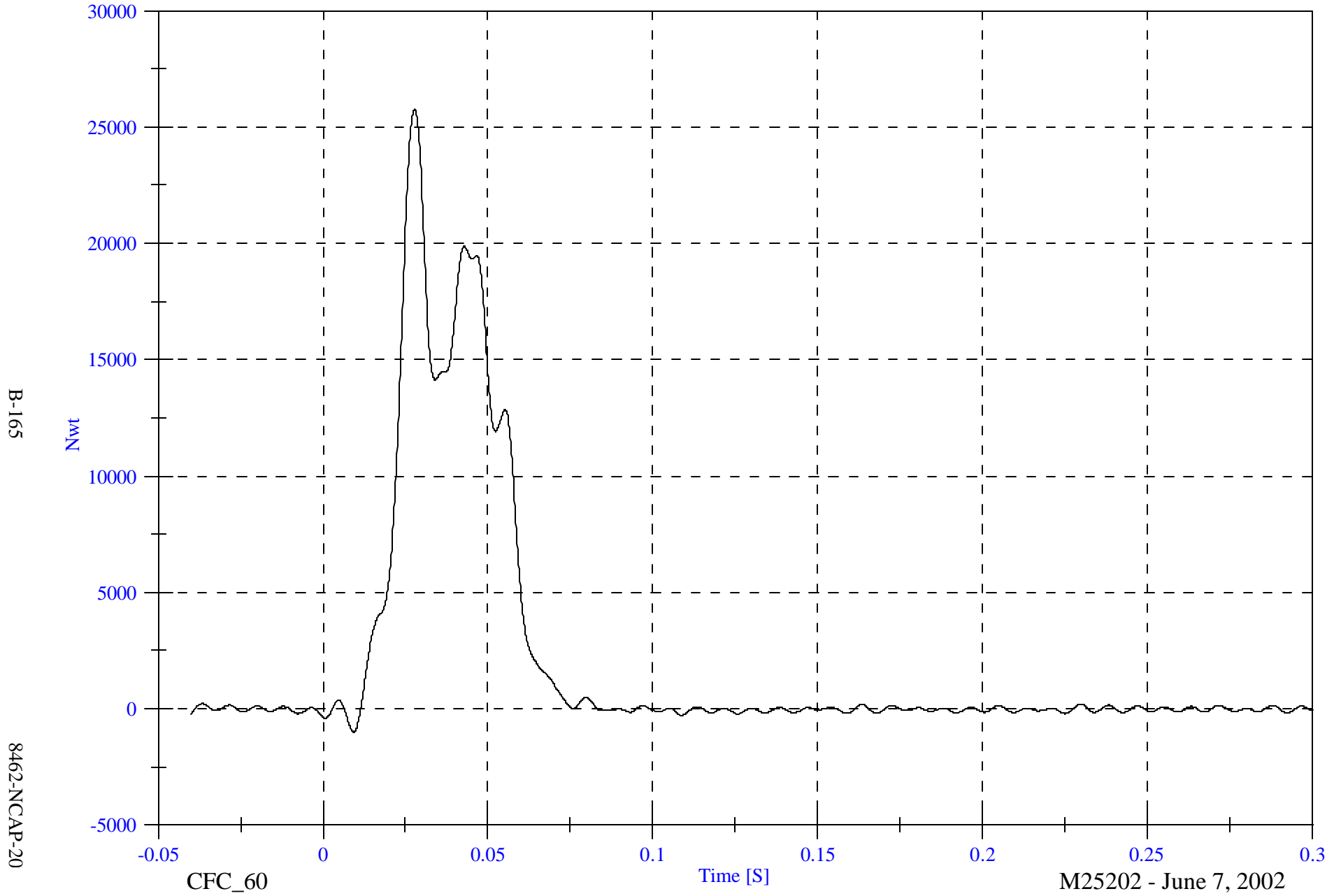
M25202 - June 7, 2002

NCAP TEST #20- 2002 Nissan Pathfinder

BLC D2 Fx

Max: 25766.2 [Nwt] at 0.028 [S]

Min: -990.4 [Nwt] at 0.009 [S]



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8462-NCAP-20

CFC\_60

Time [S]

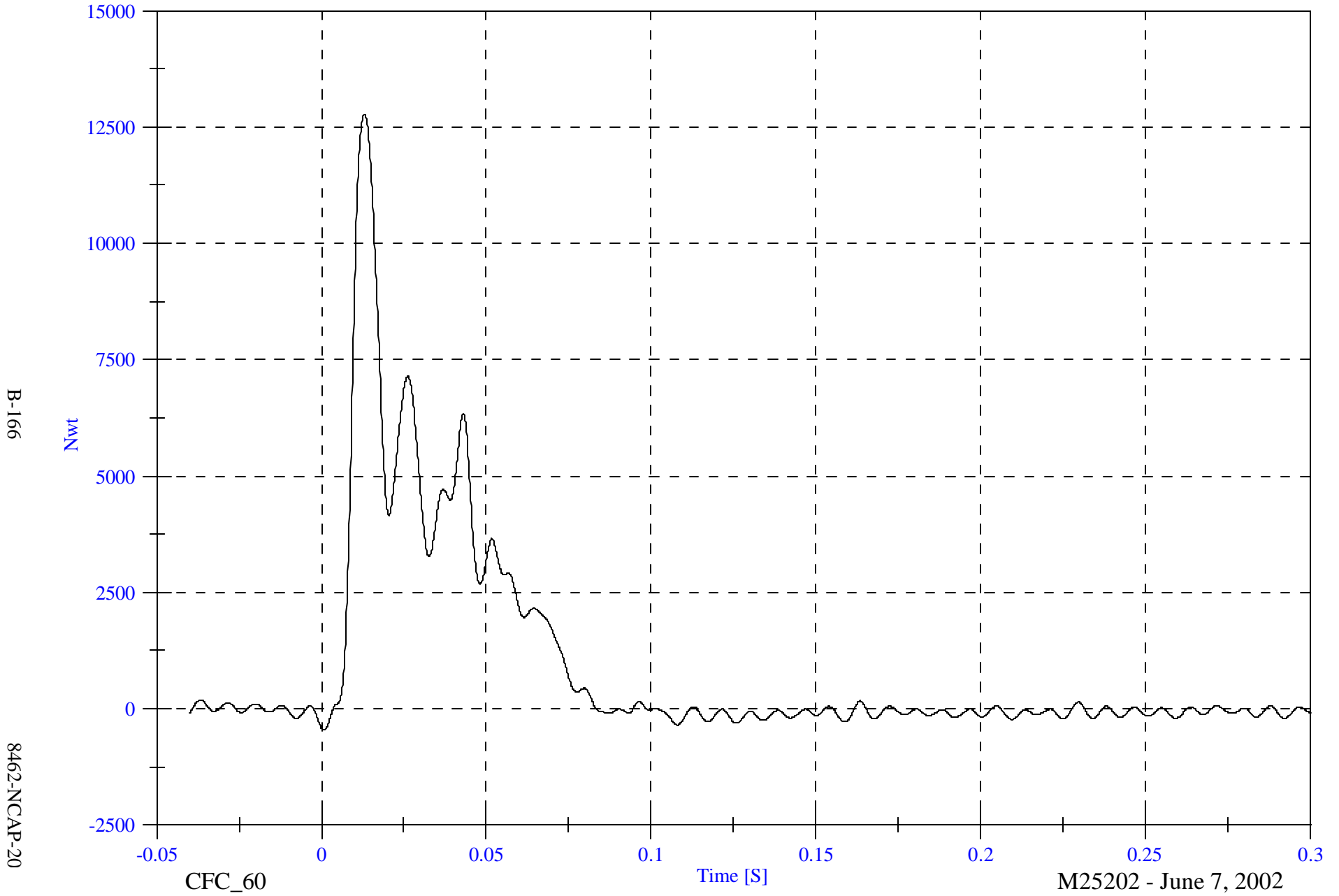
M25202 - June 7, 2002

NCAP TEST #20- 2002 Nissan Pathfinder

BLC D3 Fx

Max: 12767.6 [Nwt] at 0.013 [S]

Min: -458.6 [Nwt] at 0.001 [S]



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8462-NCAP-20

CFC\_60

Time [S]

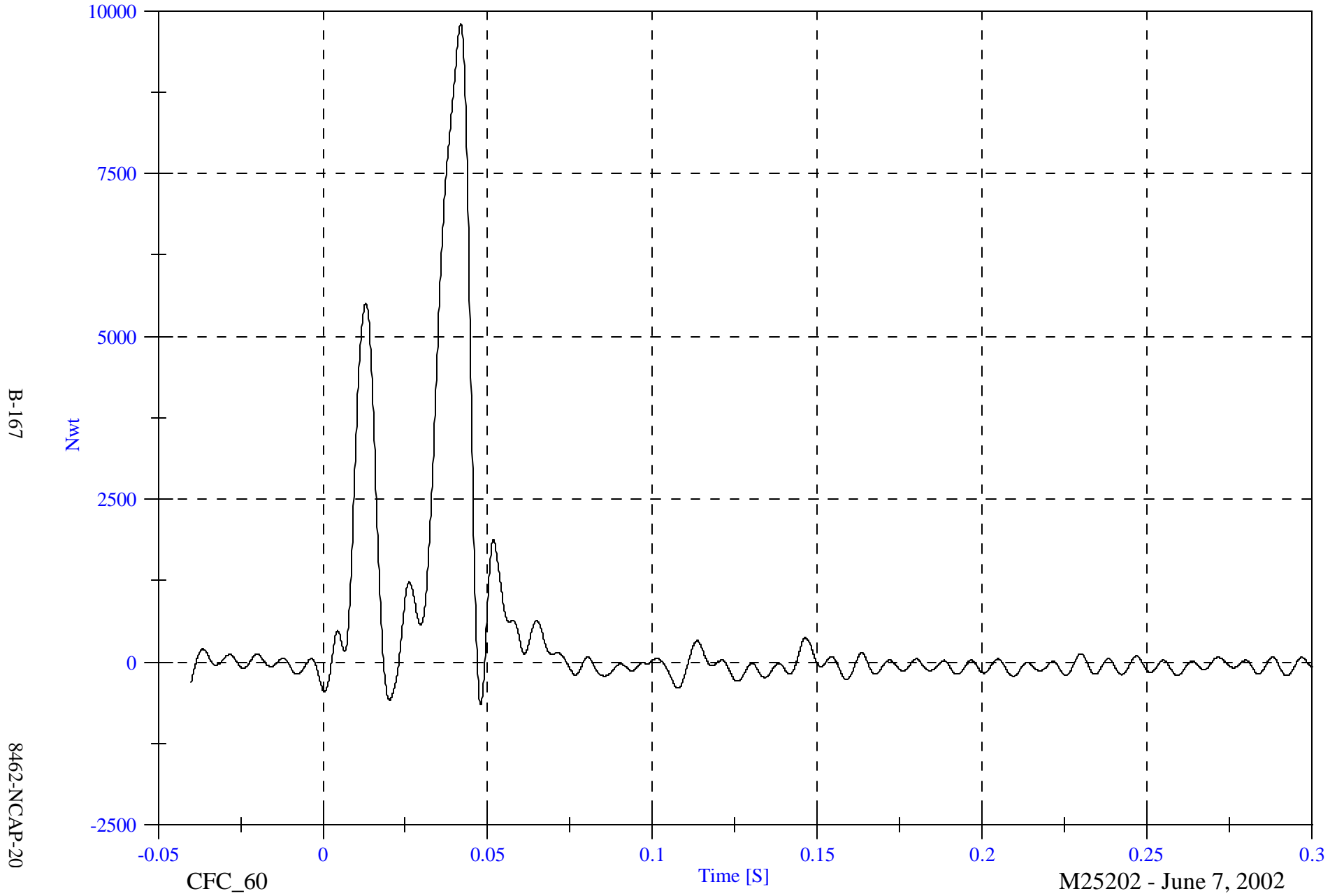
M25202 - June 7, 2002

NCAP TEST #20- 2002 Nissan Pathfinder

BLC D4 Fx

Max: 9799.5 [Nwt] at 0.042 [S]

Min: -645.5 [Nwt] at 0.048 [S]



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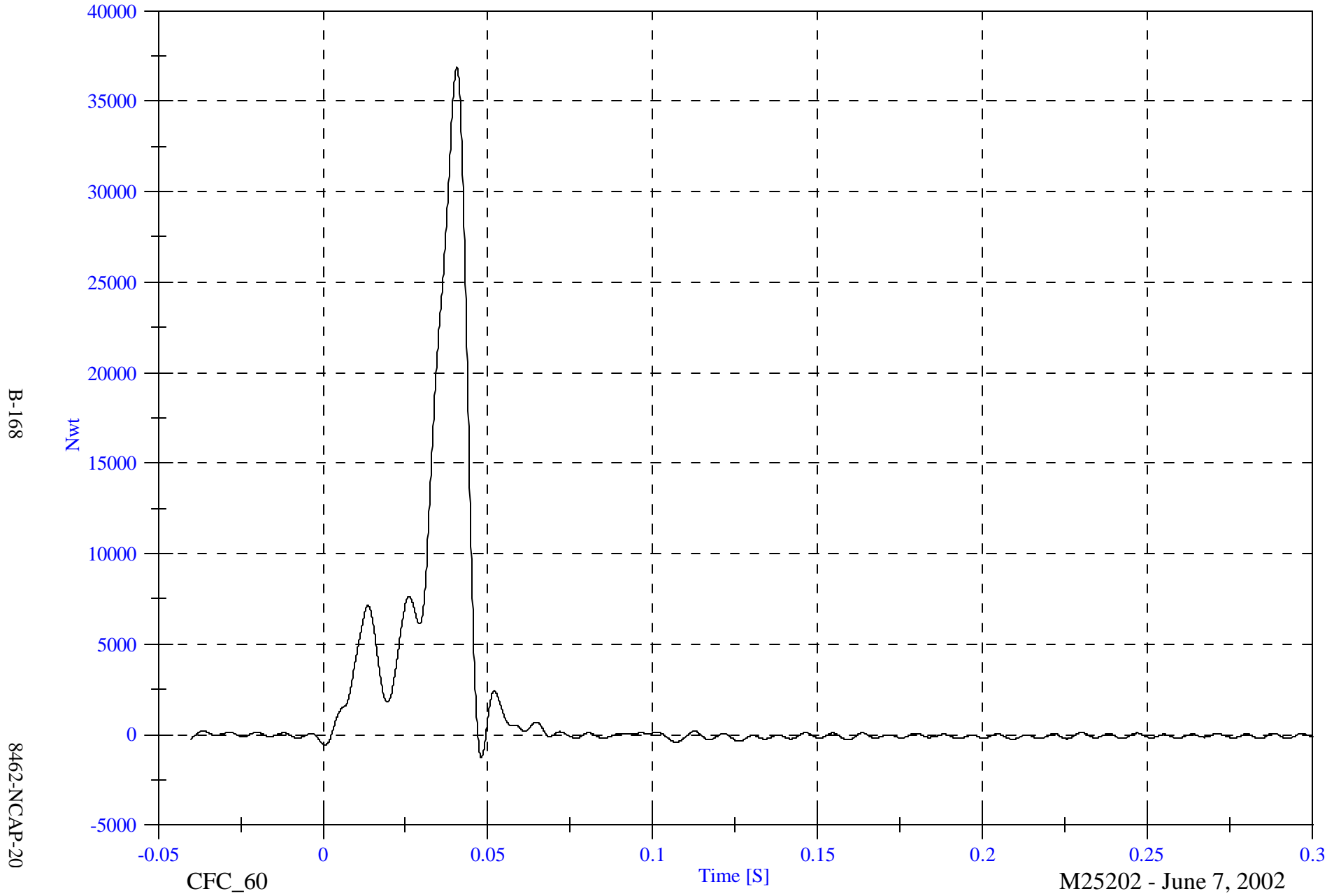
8462-NCAP-20

NCAP TEST #20- 2002 Nissan Pathfinder

BLC D5 Fx

Max: 36888.5 [Nwt] at 0.041 [S]

Min: -1247.8 [Nwt] at 0.048 [S]



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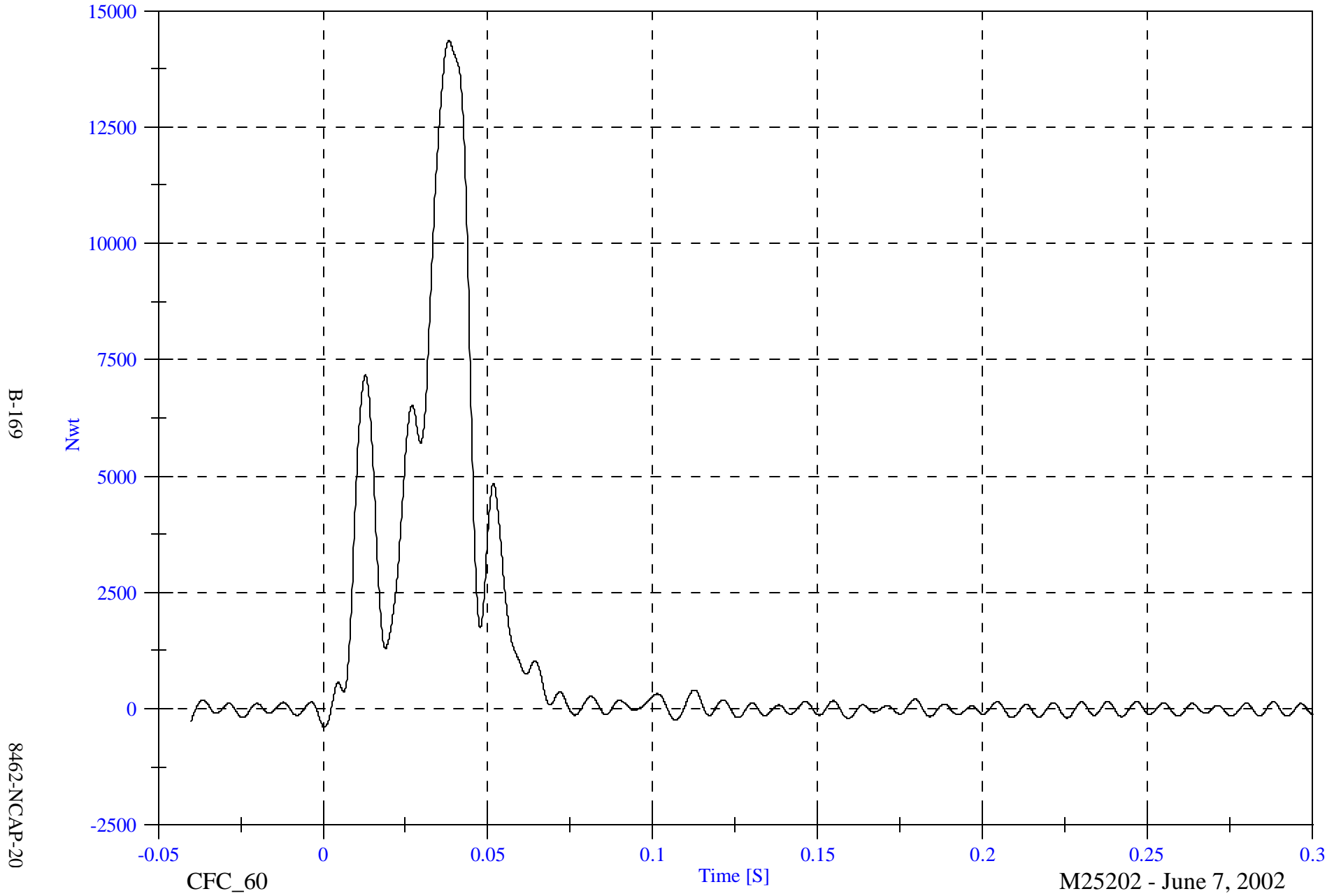
8462-NCAP-20

NCAP TEST #20- 2002 Nissan Pathfinder

BLC D6 Fx

Max: 14350.6 [Nwt] at 0.038 [S]

Min: -398.1 [Nwt] at 0.000 [S]



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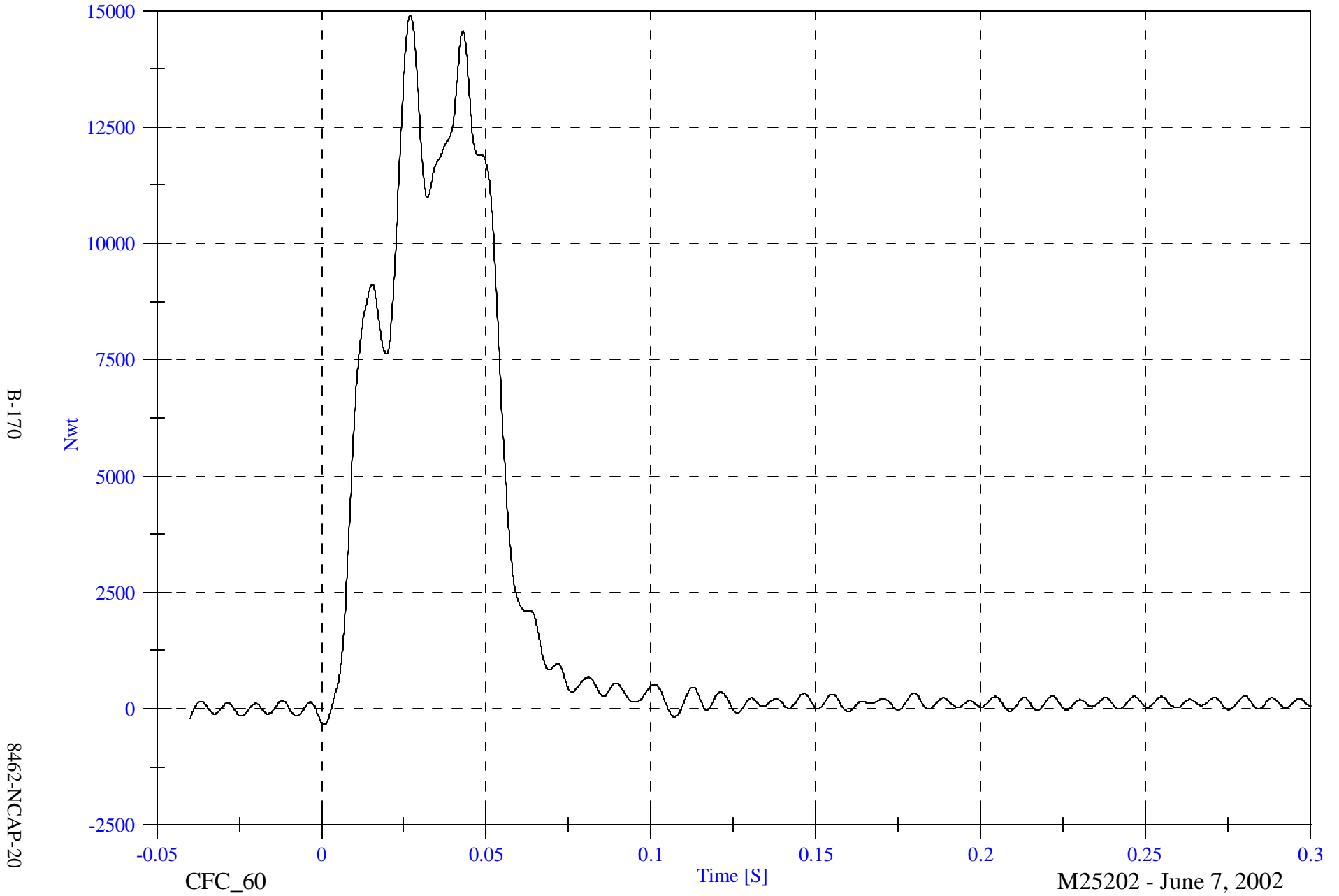
8462-NCAP-20

NCAP TEST #20- 2002 Nissan Pathfinder

BLC D7 Fx

Max: 14900.5 [Nwt] at 0.027 [S]

Min: -340.8 [Nwt] at 0.001 [S]



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8462-NCAP-20

CFC\_60

Time [S]

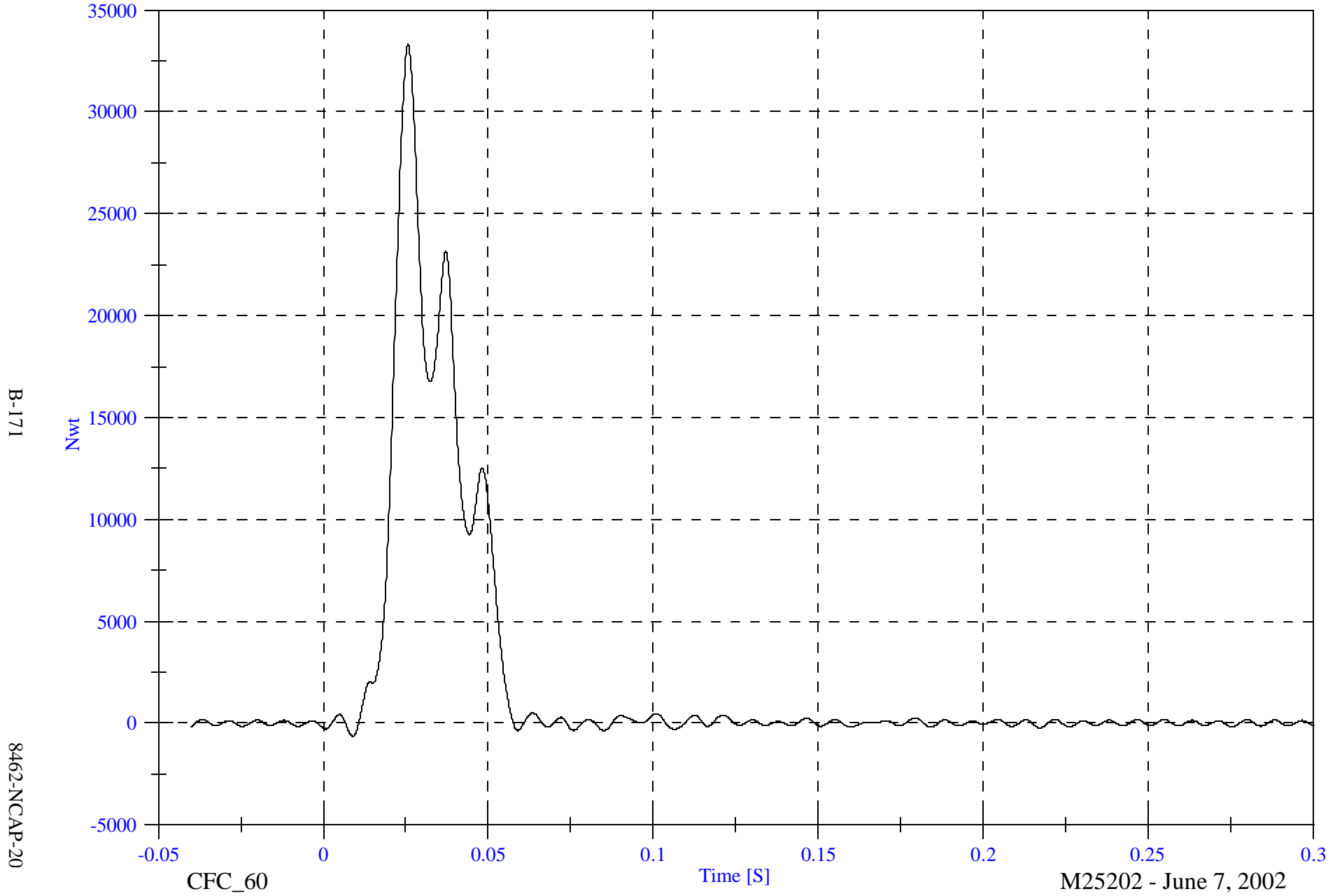
M25202 - June 7, 2002

NCAP TEST #20- 2002 Nissan Pathfinder

BLC D8 Fx

Max: 33295.0 [Nwt] at 0.026 [S]

Min: -648.4 [Nwt] at 0.009 [S]



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8462-NCAP-20

CFC\_60

Time [S]

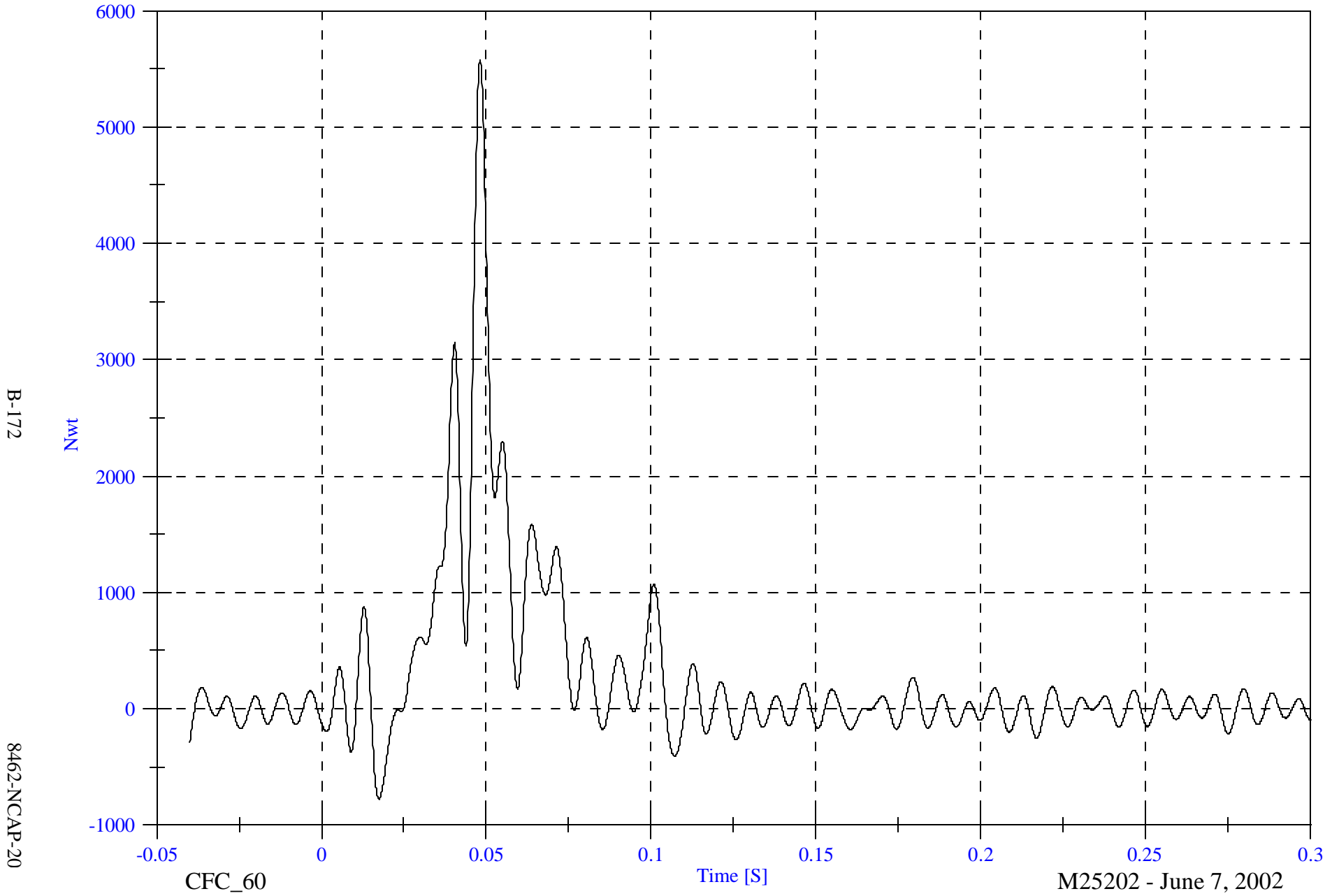
M25202 - June 7, 2002

NCAP TEST #20- 2002 Nissan Pathfinder

Max: 5573.9 [Nwt] at 0.048 [S]

BLC D9 Fx

Min: -774.2 [Nwt] at 0.017 [S]

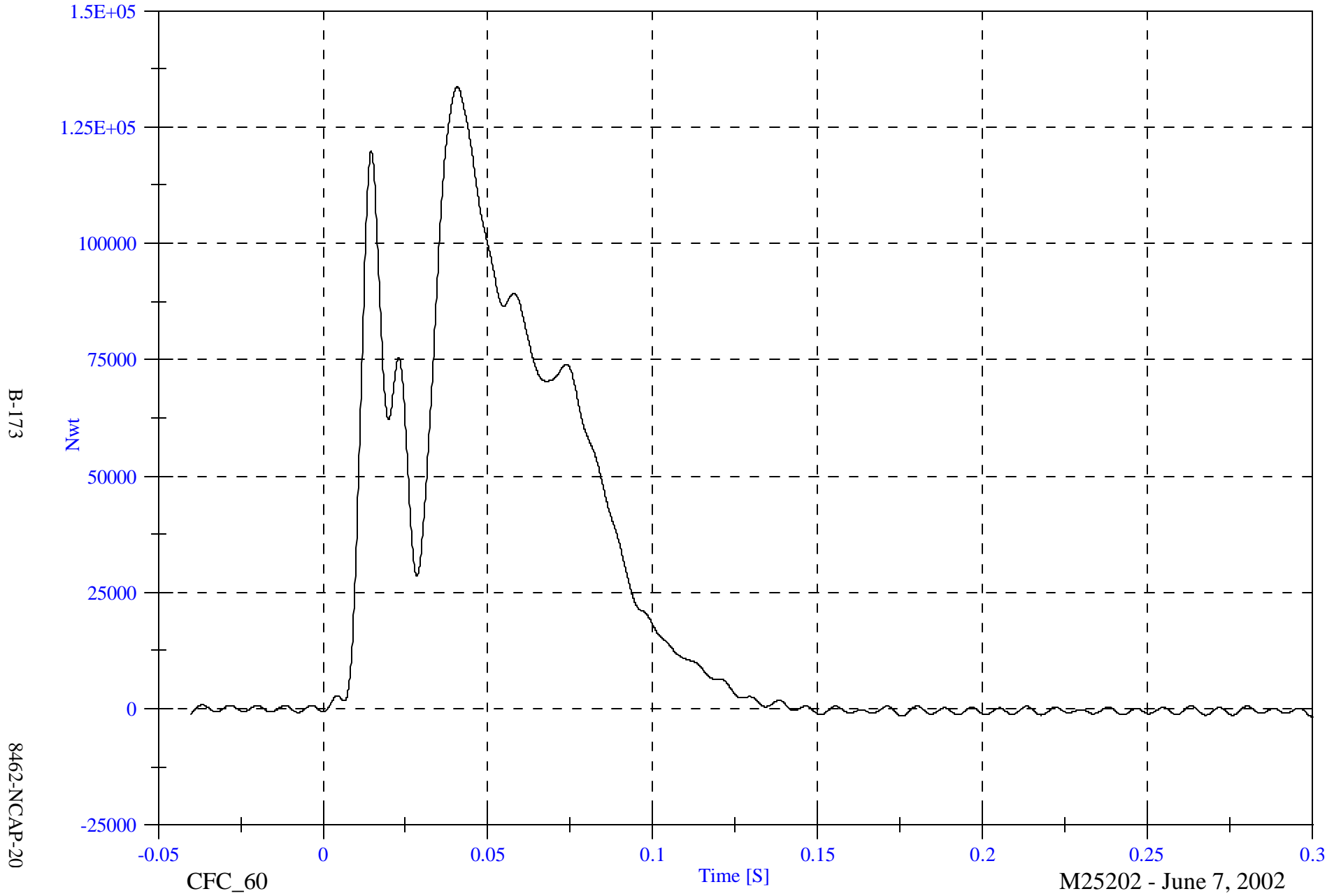


NCAP TEST #20- 2002 Nissan Pathfinder

Max: 133695.3 [Nwt] at 0.041 [S]

Group 1 Load Cell Sum (A1,A2,A3,B1,B2,B3)

Min: -1857.6 [Nwt] at 0.301 [S]



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8462-NCAP-20

CFC\_60

Time [S]

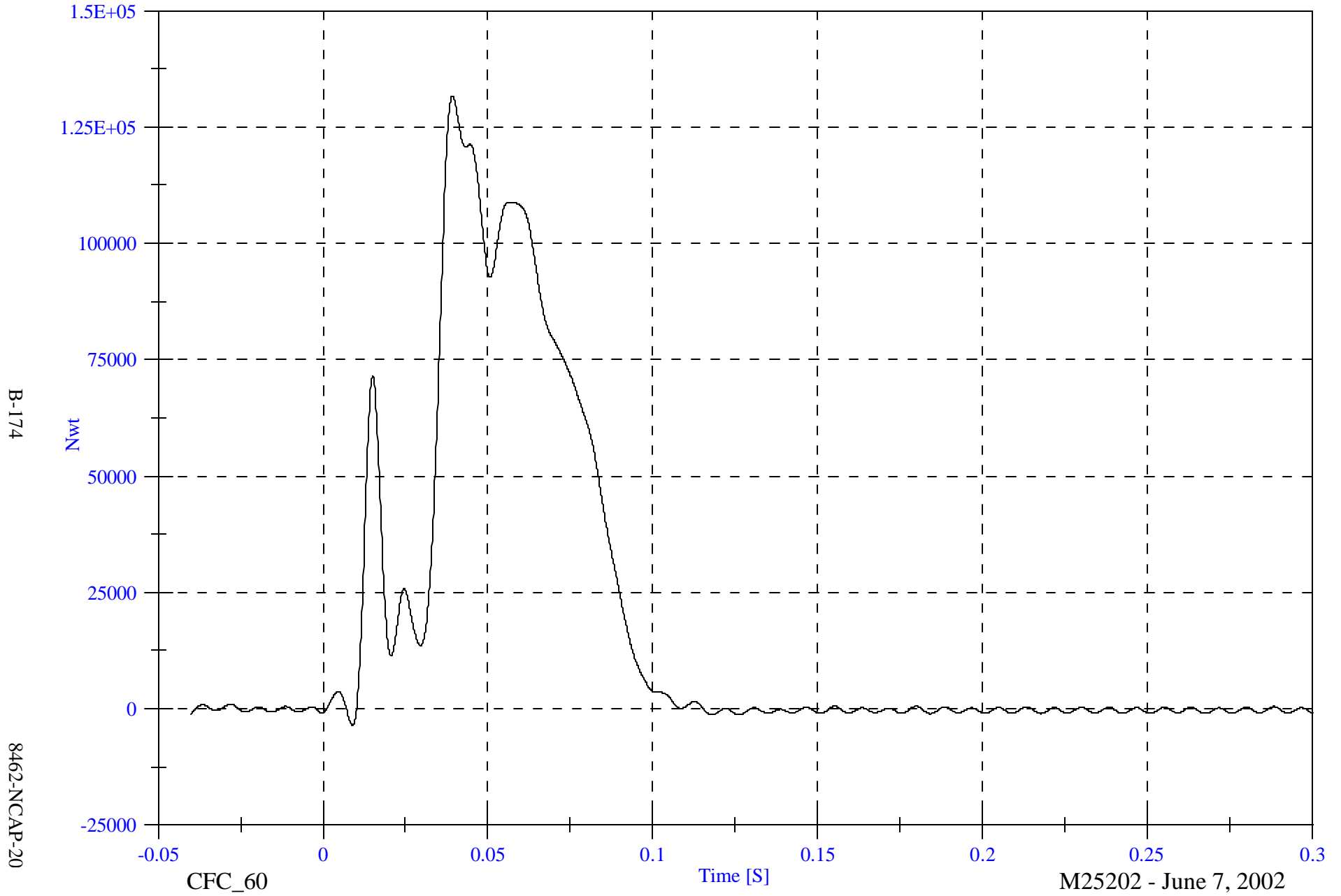
M25202 - June 7, 2002

NCAP TEST #20- 2002 Nissan Pathfinder

Max: 131597.0 [Nwt] at 0.039 [S]

Group 2 Load Cell Sum (A4,A5,A6,B4,B5,B6)

Min: -3574.9 [Nwt] at 0.009 [S]



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8462-NCAP-20

CFC\_60

Time [S]

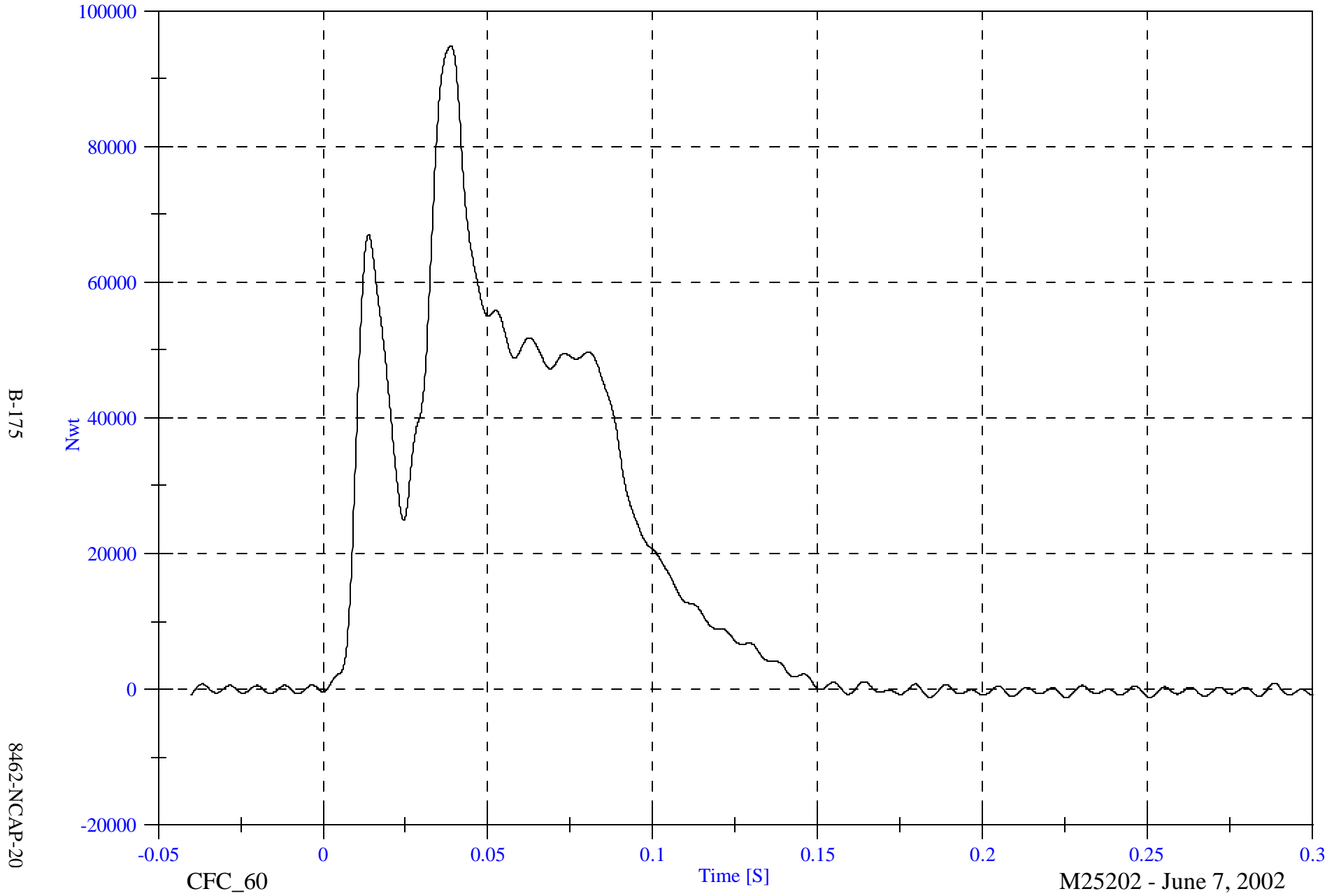
M25202 - June 7, 2002

NCAP TEST #20- 2002 Nissan Pathfinder

Group 3 Load Cell Sum (A7,A8,A9,B7,B8,B9)

Max: 94841.1 [Nwt] at 0.039 [S]

Min: -1202.1 [Nwt] at 0.225 [S]



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8462-NCAP-20

CFC\_60

Time [S]

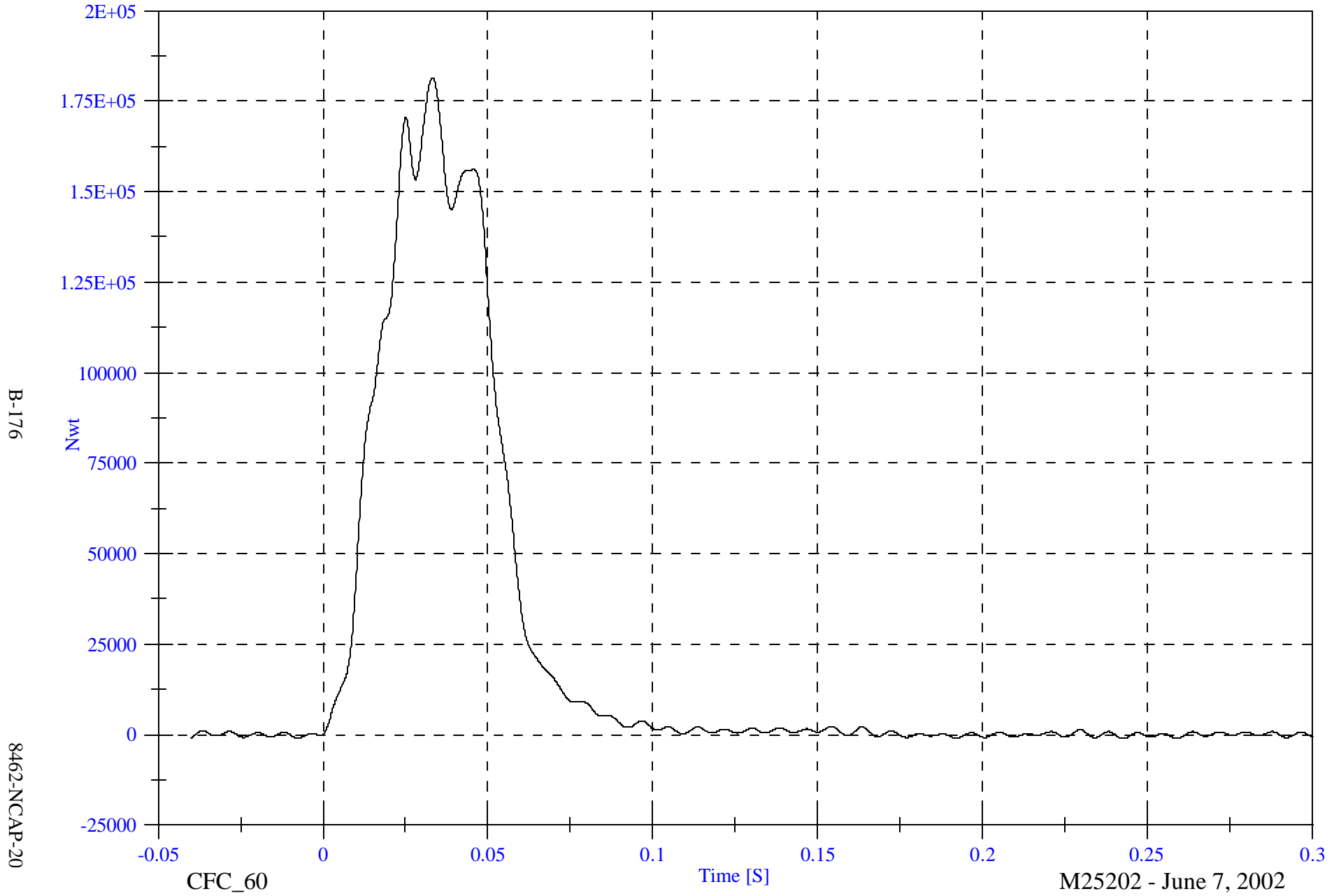
M25202 - June 7, 2002

NCAP TEST #20- 2002 Nissan Pathfinder

Group 4 Load Cell Sum (C1,C2,C3,D1,D2,D3)

Max: 181496.1 [Nwt] at 0.033 [S]

Min: -1085.5 [Nwt] at 0.243 [S]



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8462-NCAP-20

CFC\_60

Time [S]

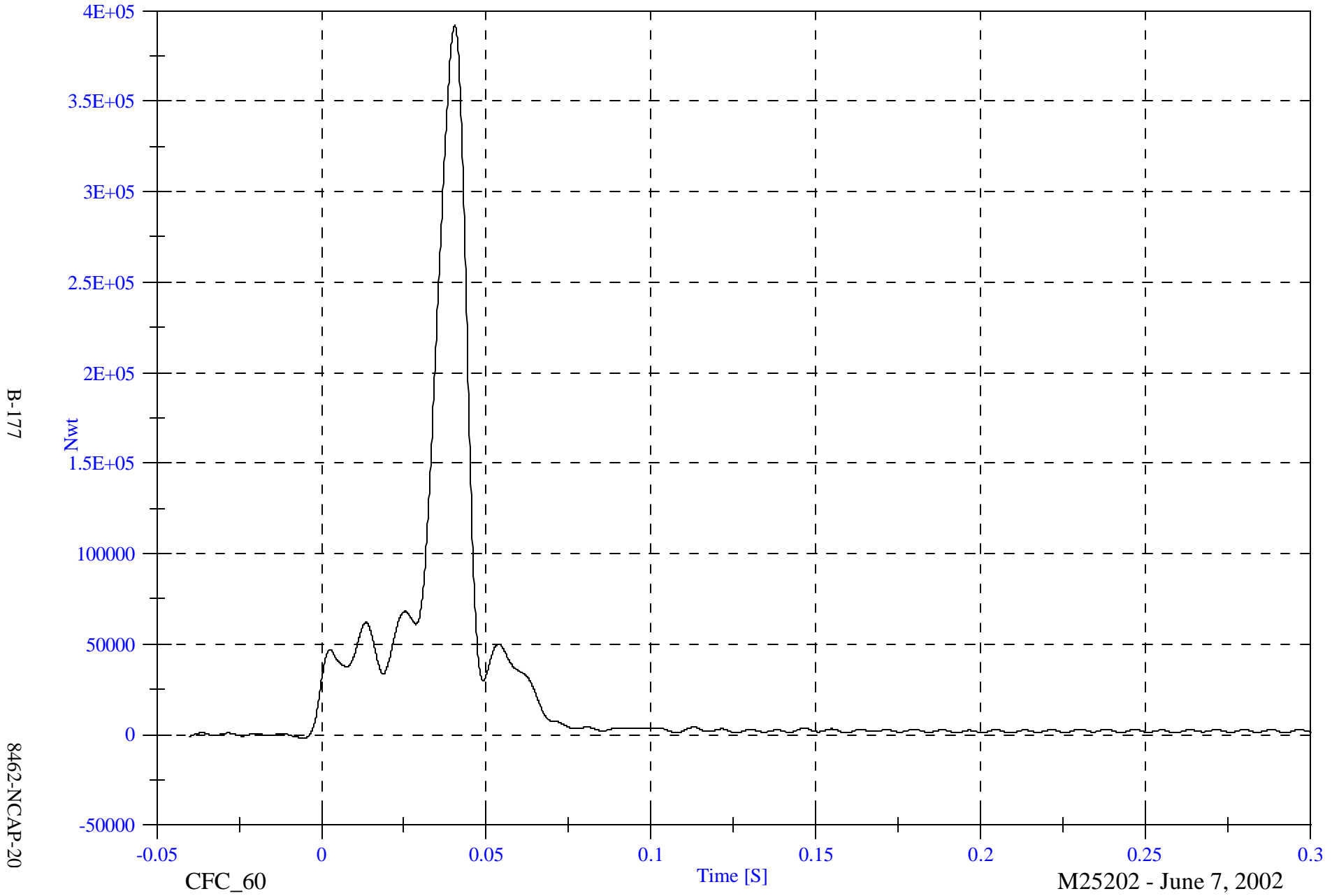
M25202 - June 7, 2002

NCAP TEST #20- 2002 Nissan Pathfinder

Group 5 Load Cell Sum (C4,C5,C6,D4,D5,D6)

Max: 391777.8 [Nwt] at 0.040 [S]

Min: -1789.1 [Nwt] at -0.006 [S]



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8462-NCAP-20

CFC\_60

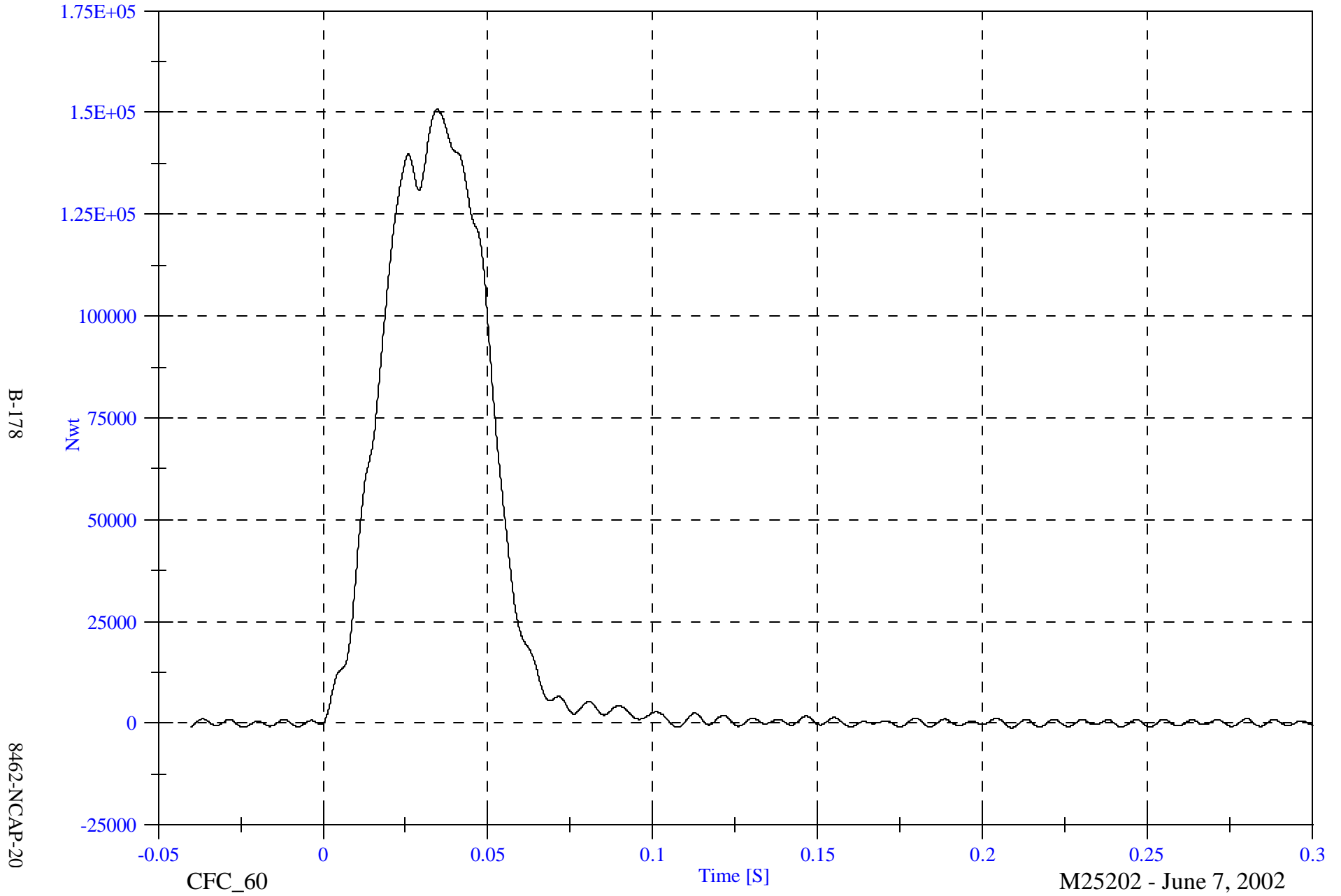
M25202 - June 7, 2002

NCAP TEST #20- 2002 Nissan Pathfinder

Group 6 Load Cell Sum (C7,C8,C9,D7,D8,D9)

Max: 150714.7 [Nwt] at 0.035 [S]

Min: -1075.3 [Nwt] at 0.209 [S]



B-178

8462-NCAP-20

CFC\_60

Time [S]

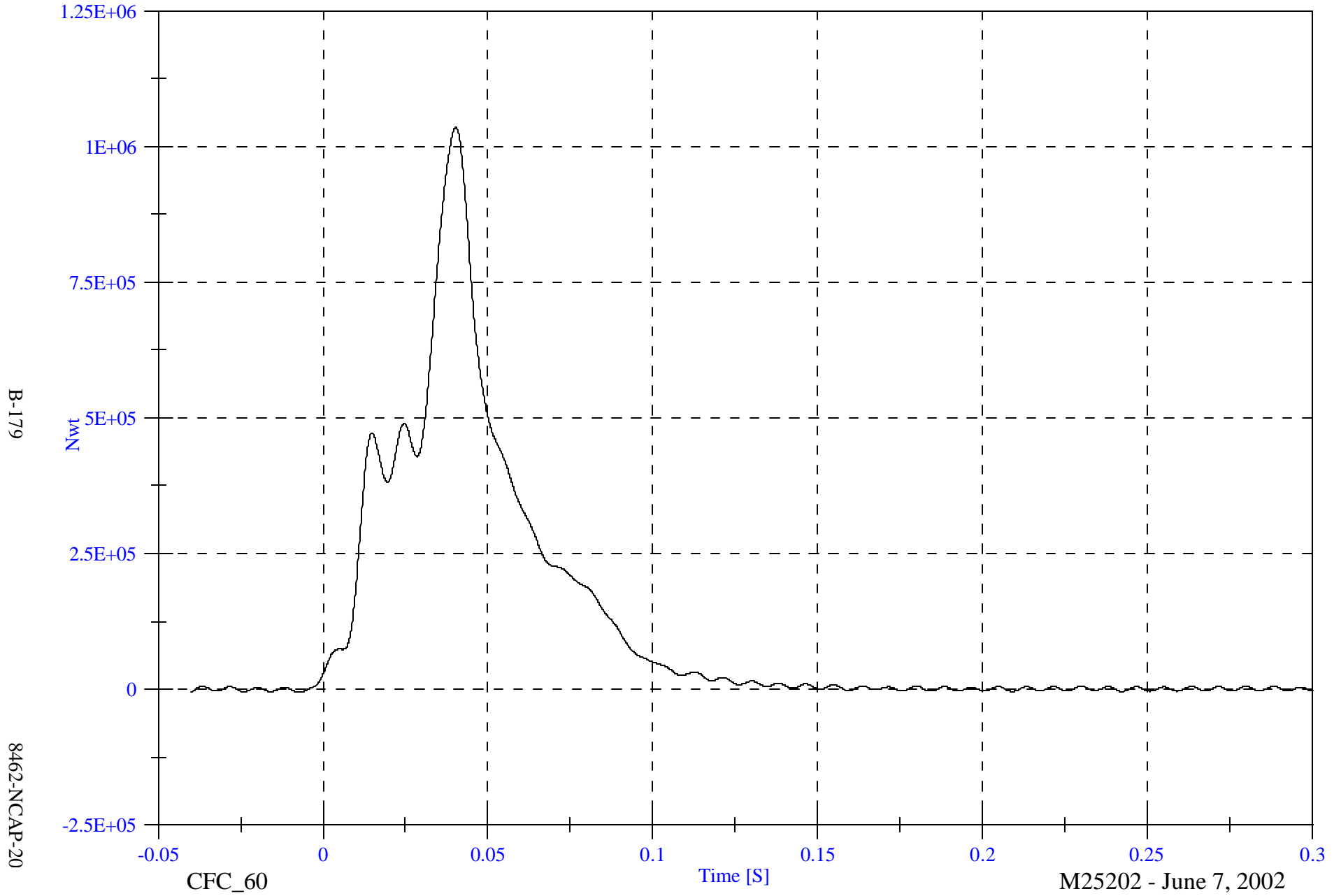
M25202 - June 7, 2002

NCAP TEST #20- 2002 Nissan Pathfinder

Max: 1034786.3 [Nwt] at 0.040 [S]

Total Load Cell Sum (All 6 Groups)

Min: -5877.3 [Nwt] at -0.040 [S]



**APPENDIX C**

**PART 572B/E DUMMY CONFIGURATION  
AND PERFORMANCE VERIFICATION DATA SHEETS**

Appendix C contains the results from certification tests performed on the 50th percentile male anthropomorphic test devices utilized for this crash test. The results indicate that the dummies meet all of the performance requirements of the six standard tests as specified in 49 CFR Part 572, Federal Register, Volume 42, No. 25, dated February 7, 1977.

The tests were conducted at the Dummy Certification Test Facility of Veridian Engineering. A summary of the test results, and Part 572 specifications are included in this Appendix.

Dummy serial numbers and certification dates are:

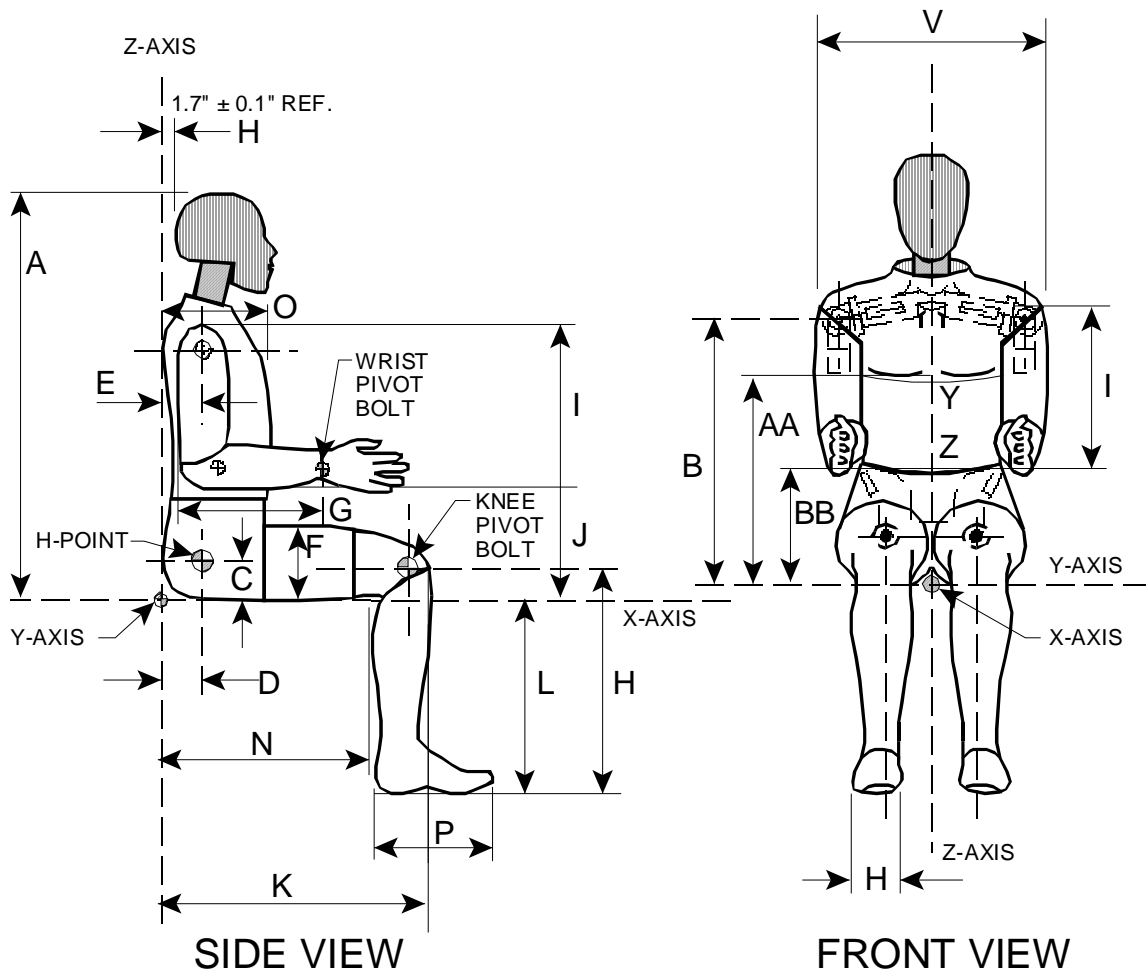
<u>Position No./Location</u>	<u>Serial No.</u>	<u>Completion Date</u>
#1/Driver	064	May 31, 2002
#2/Right Front Passenger	061	May 31, 2002

#### Electronic Test Equipment

The complement of signal conditioning, recording and display equipment, in conjunction with dummy certification testing, can be found in New Car Assessment and Standards Indicant Testing Final Report No. 6525-V-1.

DUMMY CONFIGURATION DIMENSIONS

EXTERNAL DIMENSIONS SPECIFICATIONS



NOTE: Figure is referenced to the erect seated position. The curved lumbar does not allow the Hybrid III to be positioned in a perfect erect attitude. (REF: S572.31(A)(6))

PART 572E  
HEAD DROP TEST

Dummy Serial Number 064  
Sequential Test Number 1  
Date May 28, 2002  
Workfile 064H

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	66-78 Deg F	71.0
Relative Humidity	10% - 70%	34.0
Peak Resultant Acceleration	225-275 G's	261.34
Peak Lateral Acceleration	15 G's Max	9.05
Is Acceleration Curve Unimodal?	YES	YES

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572E  
NECK FLEXION TEST

Dummy Serial Number	064	
Sequential Test Number	1	
Date	May 29, 2002	6 Axis Neck Transducer
Workfile	064Flx	

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	69-72 Deg F	70.0
Relative Humidity	10% - 70%	45.0
Impact Velocity	22.60 - 23.40 Ft/s	23.05
Pendulum Deceleration	10 ms	22.50 - 27.50 G's
	20 ms	17.60 - 22.60 G's
	30 ms	12.50 - 18.50 G's
Max Pendulum G's Above 30 ms	29 G's Max	16.83
Deceleration - Time Curve Decay Time to 5 G's	34 - 42 ms	38.60
D Plane Rotation	Max	64 - 78 Deg
	Time	57 - 64 ms
Moment About Occipital Condyle	Max	65 - 80 Ft-Lbs
	Time	47 - 58 ms
Rotation Angle - Time Curve Decay Time to Zero	113 - 128 ms	114.10
Positive Moment - Time Curve Decay Time to Zero	97 - 107 ms	98.60

Remarks:

Laboratory Technician:

B. Swiecicki

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PART 572E  
NECK EXTENSION TEST

Dummy Serial Number	064	
Sequential Test Number	1	
Date	May 29, 2002	6 Axis Neck Transducer
Workfile	064Ext	

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature		69-72 Deg F	70.0
Relative Humidity		10% - 70%	45.0
Impact Velocity		19.50 - 20.30 Ft/s	19.68
Pendulum Deceleration	10 ms	17.20 - 21.20 G's	17.78
	20 ms	14.00 - 19.00 G's	14.85
	30 ms	11.00 - 16.00 G's	12.62
Max Pendulum G's Above 30 ms		22 G's Max	12.90
Deceleration - Time Curve Decay Time to 5 G's		38 - 46 ms	43.00
D Plane Rotation	Max	81 - 106 Deg	92.56
	Time	72 - 82 ms	77.30
Moment About Occipital Condyle	Max	-59.0 - -39.0 Ft-Lbs	-41.78
	Time	65 - 79 ms	73.90
Rotation Angle - Time Curve Decay Time to Zero		147 - 174 ms	157.00
Positive Moment - Time Curve Decay Time to Zero		120 - 148 ms	146.50

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572E  
THORAX IMPACT TEST

Dummy Serial Number 064  
Sequential Test Number 1  
Date May 30, 2002  
Workfile 064T

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	69-72 Deg F	70.0
Relative Humidity	10% - 70%	35.0
Pendulum Velocity	21.6 - 22.4 Ft/s	22.28
Maximum Deflection	2.50 - 2.86 in	2.61
Maximum Resistive Force	1160 - 1325 Lbs	1257.46
Internal Hysteresis	69 - 85 %	73.56

Remarks:

Laboratory Technician:

\_\_\_\_\_ B. Swiecicki

PART 572E  
KNEE IMPACT TEST

Dummy Serial Number           064  
 Sequential Test Number        1  
 Date                                May 31, 2002  
 Workfile                         064LF/064RF

TEST PARAMETER	SPECIFICATION	TEST RESULTS
<b>LEFT KNEE</b>		
Temperature	66 - 78 Deg F	71.0
Relative Humidity	10% - 70%	45.0
Probe Velocity	6.8 - 7.0 Ft/s	7.00
Peak Knee Impact Force	1060 - 1300 Lbs	1128.57
<b>RIGHT KNEE</b>		
Temperature	66 - 78 Deg F	71.0
Relative Humidity	10% - 70%	45.0
Probe Velocity	6.8 - 7.0 Ft/s	7.00
Peak Knee Impact Force	1060 - 1300 Lbs	1180.53

Remarks:

Laboratory Technician:

\_\_\_\_\_  
B. Swiecicki

PART 572E  
EXTERNAL DIMENSIONS

Dummy Serial Number           064  
Sequential Test Number        1  
Date                                May 31, 2002

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature			71
Relative Humidity			44
Location for Chest Circumference	AA	16.9 - 17.1 in	17.0
Location for Waist Circumference	BB	8.9 - 9.1 in	9.0
Chest Circumference (With Jacket)	Y	38.2 - 39.4 in	39.2
Waist Circumference	Z	32.9 - 34.1 in	33.6
Chest Depth	O	8.4 - 9.0 in	8.4
H-Point Height	C	3.3 - 3.5 in	3.4
H-Point from Backline	D	5.3 - 5.5 in	5.4
Skull Cap to Backline	H	1.6 - 1.8 in	1.7
Total Sitting Height	A	34.6 - 35.0 in	34.8
Thigh Clearance	F	5.5 - 6.1 in	6.0
Buttock Knee Length	K	22.8 - 23.8 in	23.6
Buttock Popliteal Length	N	17.8 - 18.8 in	18.4
Popliteal Height	L	16.9 - 17.9 in	17.3
Knee Pivot Height	M	19.1 - 19.7 in	19.4
Foot Length	P	9.9 - 10.5 in	10.1
Foot Breadth	W	3.6 - 4.2 in	3.8
Shoulder Pivot from Backline	E	3.3 - 3.7 in	3.6
Shoulder Breadth	V	16.6 - 17.2 in	16.8
Shoulder Pivot Height	B	19.9 - 20.5 in	20.4
Elbow Rest Height	J	7.5 - 8.3 in	8.0
Shoulder - Elbow Length	I	13.0 - 13.6 in	13.4
Back of Elbow to Wrist Pivot	G	11.4 - 12.0 in	11.6

Remarks:

Laboratory Technician:

B. Swiecicki

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PART 572E  
HEAD DROP TEST

Dummy Serial Number 061  
Sequential Test Number 1  
Date May 28, 2002  
Workfile 061H1

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	66-78 Deg F	72.0
Relative Humidity	10% - 70%	35.0
Peak Resultant Acceleration	225-275 G's	252.24
Peak Lateral Acceleration	15 G's Max	1.09
Is Acceleration Curve Unimodal?	YES	YES

Remarks:

Laboratory Technician:

B. Swiecicki



PART 572E  
NECK EXTENSION TEST

Dummy Serial Number	061	
Sequential Test Number	1	
Date	May 30, 2002	6 Axis Neck Transducer
Workfile	061Ext	

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	69-72 Deg F	70.0
Relative Humidity	10% - 70%	36.0
Impact Velocity	19.50 - 20.30 Ft/s	19.8
Pendulum Deceleration	10 ms	17.20 - 21.20 G's
	20 ms	14.00 - 19.00 G's
	30 ms	11.00 - 16.00 G's
Max Pendulum G's Above 30 ms	22 G's Max	13.87
Deceleration - Time Curve Decay Time to 5 G's	38 - 46 ms	40.7
D Plane Rotation	Max	81 - 106 Deg
	Time	72 - 82 ms
Moment About Occipital Condyle	Max	-59.0 - -39.0 Ft-Lbs
	Time	65 - 79 ms
Rotation Angle - Time Curve Decay Time to Zero	147 - 174 ms	154.0
Positive Moment - Time Curve Decay Time to Zero	120 - 148 ms	143.0

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572E  
THORAX IMPACT TEST

Dummy Serial Number 061  
Sequential Test Number 1  
Date May 31, 2002  
Workfile 061T

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	69-72 Deg F	71.0
Relative Humidity	10% - 70%	46.0
Pendulum Velocity	21.6 - 22.4 Ft/s	21.89
Maximum Deflection	2.50 - 2.86 in	2.75
Maximum Resistive Force	1160 - 1325 Lbs	1236.27
Internal Hysteresis	69 - 85 %	73.92

Remarks:

Laboratory Technician:

\_\_\_\_\_ B. Swiecicki

PART 572E  
KNEE IMPACT TEST

Dummy Serial Number           061  
 Sequential Test Number        1  
 Date                                May 31, 2002  
 Workfile                         061LF/061RF

TEST PARAMETER	SPECIFICATION	TEST RESULTS
<b>LEFT KNEE</b>		
Temperature	66 - 78 Deg F	71.0
Relative Humidity	10% - 70%	45.0
Probe Velocity	6.8 - 7.0 Ft/s	7.00
Peak Knee Impact Force	1060 - 1300 Lbs	1197.05
<b>RIGHT KNEE</b>		
Temperature	66 - 78 Deg F	71.0
Relative Humidity	10% - 70%	45.0
Probe Velocity	6.8 - 7.0 Ft/s	7.00
Peak Knee Impact Force	1060 - 1300 Lbs	1198.25

Remarks:

Laboratory Technician:

\_\_\_\_\_  
B. Swiecicki

PART 572E  
EXTERNAL DIMENSIONS

Dummy Serial Number           061  
Sequential Test Number        1  
Date                                May 31, 2002

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature			71
Relative Humidity			44
Location for Chest Circumference	AA	16.9 - 17.1 in	17.0
Location for Waist Circumference	BB	8.9 - 9.1 in	9.0
Chest Circumference (With Jacket)	Y	38.2 - 39.4 in	39.2
Waist Circumference	Z	32.9 - 34.1 in	33.5
Chest Depth	O	8.4 - 9.0 in	8.4
H-Point Height	C	3.3 - 3.5 in	3.4
H-Point from Backline	D	5.3 - 5.5 in	5.4
Skull Cap to Backline	H	1.6 - 1.8 in	1.7
Total Sitting Height	A	34.6 - 35.0 in	34.9
Thigh Clearance	F	5.5 - 6.1 in	6.1
Buttock Knee Length	K	22.8 - 23.8 in	23.6
Buttock Popliteal Length	N	17.8 - 18.8 in	18.4
Popliteal Height	L	16.9 - 17.9 in	17.7
Knee Pivot Height	M	19.1 - 19.7 in	19.4
Foot Length	P	9.9 - 10.5 in	10.1
Foot Breadth	W	3.6 - 4.2 in	3.8
Shoulder Pivot from Backline	E	3.3 - 3.7 in	3.5
Shoulder Breadth	V	16.6 - 17.2 in	16.8
Shoulder Pivot Height	B	19.9 - 20.5 in	20.1
Elbow Rest Height	J	7.5 - 8.3 in	7.7
Shoulder - Elbow Length	I	13.0 - 13.6 in	13.4
Back of Elbow to Wrist Pivot	G	11.4 - 12.0 in	11.6

Remarks:

Laboratory Technician:

B. Swiecicki

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## **APPENDIX D**

### **DUMMY, VEHICLE AND LABORATORY INSTRUMENT CALIBRATION**

INSTRUMENT CALIBRATION FOR DRIVER DUMMY  
(Six Month Calibration Minimum)

DRIVER DUMMY (S/N 064)		Manufacturer	Serial #	Calibration	
				Last	Next
Head 9 Array	X Arm Y	AC-01G18-F08	ENTRAN	22-Jan-02	22-Jul-02
	X Arm Z	AC-00L20-A13	ENTRAN	22-Jan-02	22-Jul-02
	Y Arm X	AC-00L20-A08	ENTRAN	21-Jan-02	21-Jul-02
	Y Arm Z	AC-01G18-F13	ENTRAN	22-Jan-02	22-Jul-02
	Z Arm X	AC-01J02-F18	ENTRAN	22-Jan-02	22-Jul-02
	Z Arm Y	AC-01G25-N11	ENTRAN	21-Jan-02	21-Jul-02
Head	X	AC-01G18-F18	ENTRAN	22-Jan-02	22-Jul-02
	Y	AC-01G18-F07	ENTRAN	21-Jan-02	21-Jul-02
	Z	AC-01G18-F10	ENTRAN	21-Jan-02	21-Jul-02
Head	X (R)	AC-01J02-F09	ENTRAN	21-Jan-02	21-Jul-02
	Y (R)	AC-01G18-F03	ENTRAN	22-Jan-02	22-Jul-02
	Z (R)	AC-01G18-F09	ENTRAN	22-Jan-02	22-Jul-02
Neck Load Cell	X	LC-440Fx	DENTON	22-Jan-02	22-Jul-02
	Y	LC-440Fy	DENTON	22-Jan-02	22-Jul-02
	Z	LC-440Fz	DENTON	22-Jan-02	22-Jul-02
Neck Moment	X	LC-440Mx	DENTON	22-Jan-02	22-Jul-02
	Y	LC-440My	DENTON	22-Jan-02	22-Jul-02
	Z	LC-440Mz	DENTON	22-Jan-02	22-Jul-02
Chest	X	AC-P23155	ENDEVCO	15-Mar-02	15-Sep-02
	Y	AC-P23358	ENDEVCO	15-Mar-02	15-Sep-02
	Z	AC-P23282	ENDEVCO	15-Mar-02	15-Sep-02
Chest	X (R)	AC-P21484	ENDEVCO	15-Mar-02	15-Sep-02
	Y (R)	AC-P16951	ENDEVCO	15-Mar-02	15-Sep-02
	Z (R)	AC-P21399	ENDEVCO	15-Mar-02	15-Sep-02
Chest Deflection	X	DS-064	SERVO	20-Mar-02	20-Sep-02
Pelvic	X	AC-P23174	ENDEVCO	15-Mar-02	15-Sep-02
	Y	AC-P23164	ENDEVCO	15-Mar-02	15-Sep-02
	Z	AC-P23137	ENDEVCO	15-Mar-02	15-Sep-02

INSTRUMENT CALIBRATION FOR DRIVER DUMMY  
(Six Month Calibration Minimum)

DRIVER DUMMY (S/N 064)	Manufacturer	Serial #	Calibration		
			Last	Next	
Left Femur Load Cell	Fz	LC-954	GSE	12-Feb-02	12-Aug-02
Right Femur Load Cell	Fz	LC-955	GSE	12-Feb-02	12-Aug-02
Left Knee Shear	Dx	-	-	-	-
Right Knee Shear	Dx	-	-	-	-
Left Upper Tibia	Mx	LC-045Mx	DENTON	08-Apr-02	08-Oct-02
	My	LC-045My	DENTON	08-Apr-02	08-Oct-02
Left Lower Tibia	Fz	LC-125Fz	DENTON	08-Apr-02	08-Oct-02
	Mx	LC-125Mx	DENTON	08-Apr-02	08-Oct-02
	My	LC-125My	DENTON	08-Apr-02	08-Oct-02
Right Upper Tibia	Mx	LC-038Mx	DENTON	08-Apr-02	08-Oct-02
	My	LC-038My	DENTON	08-Apr-02	08-Oct-02
Right Lower Tibia	Fz	LC-124Fz	DENTON	08-Apr-02	08-Oct-02
	Mx	LC-124Mx	DENTON	08-Apr-02	08-Oct-02
	My	LC-124My	DENTON	08-Apr-02	08-Oct-02
Left Foot Rear	X	AC-J30491	ENDEVCO	21-Mar-02	21-Sep-02
	Z	AC-J31026	ENDEVCO	21-Mar-02	21-Sep-02
Left Foot Front	Z	AC-J32831	ENDEVCO	21-Mar-02	21-Sep-02
Right Foot Rear	X	AC-J33376	ENDEVCO	21-Mar-02	21-Sep-02
	Z	AC-J32832	ENDEVCO	21-Mar-02	21-Sep-02
Right Foot Front	Z	AC-J31095	ENDEVCO	21-Mar-02	21-Sep-02

INSTRUMENT CALIBRATION FOR PASSENGER DUMMY  
(Six Month Calibration Minimum)

PASSENGER DUMMY (S/N 061)	Manufacturer	Serial #	Calibration		
			Last	Next	
Head 9 Array	X Arm Y	AC-01G18-F06	ENTRAN	21-Jan-02	21-Jul-02
	X Arm Z	AC-00L13-F39	ENTRAN	22-Jan-02	22-Jul-02
	Y Arm X	AC-00L13-F14	ENTRAN	21-Jan-02	21-Jul-02
	Y Arm Z	AC-01G18-F16	ENTRAN	22-Jan-02	22-Jul-02
	Z Arm X	AC-00L13-F72	ENTRAN	21-Jan-02	21-Jul-02
	Z Arm Y	AC-01G18-F12	ENTRAN	21-Jan-02	21-Jul-02
Head	X	AC-00L13-F04	ENTRAN	22-Jan-02	22-Jul-02
	Y	AC-01G18-F15	ENTRAN	21-Jan-02	21-Jul-02
	Z	AC-01G18-F14	ENTRAN	22-Jan-02	22-Jul-02
Head	X (R)	AC-01G18-F20	ENTRAN	21-Jan-02	21-Jul-02
	Y (R)	AC-01G18-F05	ENTRAN	22-Jan-02	22-Jul-02
	Z (R)	AC-P18532	ENDEVCO	27-Feb-02	27-Aug-02
Neck Load Cell	X	LC-205Fx	DENTON	22-Jan-02	22-Jul-02
	Y	LC-205Fy	DENTON	22-Jan-02	22-Jul-02
	Z	LC-205Fz	DENTON	22-Jan-02	22-Jul-02
Neck Moment	X	LC-205Mx	DENTON	22-Jan-02	22-Jul-02
	Y	LC-205My	DENTON	22-Jan-02	22-Jul-02
	Z	LC-205Mz	DENTON	22-Jan-02	22-Jul-02
Chest	X	AC-P21373	ENDEVCO	14-Mar-02	14-Sep-02
	Y	AC-P22639	ENDEVCO	14-Mar-02	14-Sep-02
	Z	AC-P21297	ENDEVCO	14-Mar-02	14-Sep-02
Chest	X (R)	AC-P21171	ENDEVCO	14-Mar-02	14-Sep-02
	Y (R)	AC-P23136	ENDEVCO	14-Mar-02	14-Sep-02
	Z (R)	AC-P23128	ENDEVCO	14-Mar-02	14-Sep-02
Chest Deflection	X	DS-061	SERVO	14-Mar-02	14-Sep-02
Pelvic	X	AC-P21441	ENDEVCO	14-Mar-02	14-Sep-02
	Y	AC-P19246	ENDEVCO	14-Mar-02	14-Sep-02
	Z	AC-P21516	ENDEVCO	14-Mar-02	14-Sep-02

INSTRUMENT CALIBRATION FOR PASSENGER DUMMY  
(Six Month Calibration Minimum)

PASSENGER DUMMY (S/N 061)	Manufacturer	Serial #	Calibration		
			Last	Next	
Left Femur Load Cell	Fz	LC-659	GSE	12-Feb-02	12-Aug-02
Right Femur Load Cell	Fz	LC-723	GSE	12-Feb-02	12-Aug-02
Left Knee Shear	Dx	-	-	-	-
Right Knee Shear	Dx	-	-	-	-
Left Upper Tibia	Mx	LC-016Mx	DENTON	08-Apr-02	08-Oct-02
	My	LC-016My	DENTON	08-Apr-02	08-Oct-02
Left Lower Tibia	Fz	LC-123Fz	DENTON	08-Apr-02	08-Oct-02
	Mx	LC-123Mx	DENTON	08-Apr-02	08-Oct-02
	My	LC-123My	DENTON	08-Apr-02	08-Oct-02
Right Upper Tibia	Mx	LC-023Mx	DENTON	08-Apr-02	08-Oct-02
	My	LC-023My	DENTON	08-Apr-02	08-Oct-02
Right Lower Tibia	Fz	LC-111Fz	DENTON	08-Apr-02	08-Oct-02
	Mx	LC-111Mx	DENTON	08-Apr-02	08-Oct-02
	My	LC-111My	DENTON	08-Apr-02	08-Oct-02
Left Foot Rear	X	AC-P19343	ENDEVCO	04-Apr-02	04-Oct-02
	Z	AC-P16583	ENDEVCO	04-Apr-02	04-Oct-02
Left Foot Front	Z	AC-P18525	ENDEVCO	27-Feb-02	27-Aug-02
Right Foot Rear	X	AC-P18628	ENDEVCO	04-Apr-02	04-Oct-02
	Z	AC-P18741	ENDEVCO	04-Apr-02	04-Oct-02
Right Foot Front	Z	AC-P23276	ENDEVCO	25-Apr-02	25-Oct-02

INSTRUMENT CALIBRATION FOR VEHICLE ACCELEROMETERS  
(Six Month Calibration Minimum)

	Manufacturer	Serial #	Calibration	
			Last	Next
Left Seat Rear Crossmember X	ICS	AC-X83	15-Jan-02	16-July-02
Right Rear Seat Crossmember X	ICS	AC-D84	15-Jan-02	16-July-02
Top of Engine	ENDEVCO	AC-J26604	25-Apr-02	26-October-02
Bottom of Engine	ENDEVCO	AC-A13883	11-Feb-02	12-August-02
Right Disc Brake Caliper	ENDEVCO	AC-P16665	15-Jan-02	16-July-02
Instrument Panel	ENDEVCO	AC-P18792	27-Feb-02	28-August -02
Left Disc Brake Caliper	ENDEVCO	AC-P18536	27-Feb-02	28- August -02
Left Seat Rear Crossmember Z	ICS	AC-D82	4-Apr-02	5-October-02
Right Seat Rear Crossmember Z	ICS	AC-Y13	11-Feb-02	12-August-02