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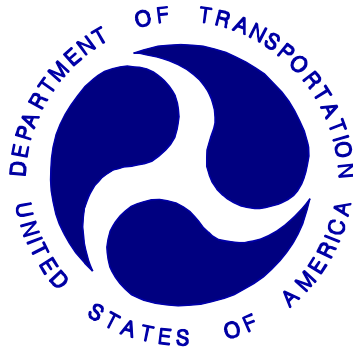
**NEW CAR ASSESSMENT PROGRAM (NCAP)
FRONTAL BARRIER IMPACT TEST**

**DAIMLERCHRYSLER CORPORATION
2001 CHRYSLER LHS
4-DOOR SEDAN**

NHTSA NUMBER: M10300

VERIDIAN TEST NUMBER: 8602-2

VERIDIAN ENGINEERING
TRANSPORTATION SCIENCES CENTER
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BUFFALO, NEW YORK 14225



November 15, 2000

FINAL REPORT

PREPARED FOR:

U. S. DEPARTMENT OF TRANSPORTATION
National Highway Traffic Safety Administration
Safety Performance Standards
Office of Crashworthiness Standards
Mail Code: NPS-10
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NHTSA, Office of Crashworthiness Standards

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15. <i>Supplementary Notes</i>					
16. <i>Abstract</i> A frontal load cell barrier test of a 2001 Chrysler LHS 4-Door Sedan was performed at Veridian Engineering crash test facility in Buffalo, New York, on November 15, 2000. The impact velocity was 56.32 kph and the temperature at the barrier face was 21°C. The maximum post-test vehicle crush was 658 mm. The test vehicle was equipped with 3-point restraint systems, knee bolsters, 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, and chest requirements. The passenger appeared to comply with femur requirements while the driver appeared to exceed the femur requirements .					
ATD Position	HIC	Clip (g's)	Chest Disp (mm)	Left Femur (N)	Right Femur (N)
Driver (061)	906.9	55.6	40.4	10080.6	5234.3
Passenger (245)	656.9	52.9	25.5	6200.0	4836.1
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 M10300

PURPOSE

This 56.32 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. DTNH22-96-D-02010. 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 56.32 kph frontal barrier impact test was conducted in accordance with the Office of Crashworthiness Standards Laboratory Indicant Test procedure.

SUMMARY

A load cell barrier consisting of 36 load cells was impacted by a 2001 Chrysler LHS 4-Door Sedan at a velocity of 56.32 kph. The test was performed at Veridian Engineering on November 15, 2000. Pre- and post-test photographs of the vehicle and dummies can be found in Appendix A.

The frontal barrier impact event was documented by 1 real-time camera and 16 high-speed cameras. 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 head, chest, and pelvis triaxial accelerometers, chest displacement potentiometers, upper neck transducers, right/left femur load cells, and lower leg instrumentation. Seat belt load cells were also on the driver's and passenger's lap and shoulder belts to measure dummy torso and pelvic section loading. The driver (position 1) ATD (Serial No. 061) and the right-front passenger (position 2) ATD (Serial No. 245) were used in one impact (M10102) previous to this test where they did not exceed FMVSS head, chest and femur requirements. Certification details, along with instrumentation calibration data, are found in Appendix C.

The 133 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.

The driver's HIC was 906.9. The maximum chest deceleration over 3 milliseconds was 55.6 g's and maximum chest deflection was 40.4 mm. Compressive femur loads were 10080.6 Newtons on the left and 5234.3 Newtons on the right.

The right front passenger's HIC was 656.9. Maximum chest deceleration over 3 milliseconds was 52.9 g's and maximum chest deflection was 25.5 mm. Compressive femur loads were 6200.0 Newtons on the left and 4836.1 Newtons on the right.

SECTION 2

GENERAL TEST AND VEHICLE PARAMETER DATA

DATA SHEET NO. 1 CRASH TEST SUMMARY

Vehicle NHTSA No. : M10300 Test Mode : 56.3 kph Frontal Barrier

Test Date : November 15, 2000 Time: 11:45 Temperature : 12 °C

Vehicle Make/Model/Body Style : 2001 Chrysler LHS 4-Door Sedan

Vehicle Test Weight : 1829 kg

Vehicle/Barrier Impact Angle : 0 °

Impact Velocity : 56.32 kph

Maximum Static Crush : 658 mm

Vehicle Rebound : 431 mm

DUMMIES:

DRIVER

PASSENGER

Type : 572E 572E

Restraint System : Seatbelt, Airbag, Knee Bolster Seatbelt, Airbag, Knee Bolster

Number of Data Channels : 133

Number of Cameras : 1 Real Time

16 High Speed

DOOR OPENING DATA : Closed/Operable - Left Front

Closed/Operable - Right Front

Front Seat(s) Data : DRIVER PASSENGER

Seat Track Failure :(mm of shift) 18 forward 16 forward

Seat Back Failure : None None

VISIBLE DUMMY CONTACT POINTS : DRIVER PASSENGER

Head : The face to the center of the airbag, The back of the head to the center of the headrest. The face to the center of the airbag, The back of the head to the right side of the headrest.

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 : 2001 Chrysler LHS 4-Door Sedan

NHTSA No. : M10300 ; VIN: 2C3HC56B11H510077 ; Color : White

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

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

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

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

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

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

Date Received : 11/7/00 ; Odometer Reading 111 km

Selling Dealer : McClurg West Herr Chrysler-Dodge

& Address: 125 N Center Street Perry, NY 14530

DATA FROM TIRE VEHICLE'S CERTIFICATION LABEL:

Vehicle Manufactured by : DaimlerChrysler Corporation

Date of Manufacture 8-00

GVWR : 2060 kg; GAWR: 1165 kg FRONT; 918 kg REAR

DATA FROM TIRE PLACARD:

Tire Pressure with Maximum Capacity Vehicle Load : kpa FRONT

 kpa REAR

Recommended Tire Size : P225/55R17

* Recommended Cold Tire Pressure : 300 kpa FRONT; 300 kpa REAR

Size of Tires on Test Vehicle: P225/55R17 ; Manufacturer: Michelin

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) = 392.0 kg

No. of Occupants x 68 kg = 340.2 kg

Rated Cargo/Luggage Weight (RCLW) = 51.8 kg

*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>508.5</u>	kg	Right Rear	=	<u>302.5</u>	kg
Left Front	=	<u>520.0</u>	kg	Left Rear	=	<u>301.0</u>	kg
TOTAL FRONT	=	<u>1028.5</u>	kg	TOTAL REAR	=	<u>603.5</u>	kg
TOTAL DELIVERED WEIGHT = <u>1632.0</u> kg							
% of Total Front of Vehicle Weight = <u>63.0</u>				% of Total Rear Weight = <u>37.0</u> %			

CALCULATION OF VEHICLE'S TARGET TEST WEIGHT :

Total Delivered Weight (UDW)	=	<u>1632.0</u>	kg
Rated Cargo/Luggage Weight (RCLW)	=	<u>51.8</u>	kg
Weight of 2 p.572 Dummies @ 76 each	=	<u>152.0</u>	kg
TARGET TEST WEIGHT	=	<u>1835.8</u>	kg

WEIGHT OF TEST VEHICLE WITH TWO DUMMIES AND 45 KG OF CARGO WEIGHT:

Right Front	=	<u>535.5</u>	kg	Right Rear	=	<u>370.0</u>	kg
Left Front	=	<u>552.0</u>	kg	Left Rear	=	<u>371.5</u>	kg
TOTAL FRONT	=	<u>1087.5</u>	kg	TOTAL REAR	=	<u>741.5</u>	kg
TOTAL TEST WEIGHT = <u>1829.0</u> kg							
% of Total Front Weight = <u>59.5</u> %				% of Total Rear Weight = <u>40.5</u> %			
Weight of Ballast Secured in Vehicle Trunk Area = <u>0</u> kg							
Vehicle Components Removed for Weight Reduction:				<u>Tail Lights</u>			

VEHICLE ATTITUDE (all dimension in millimeters):

AS DELIVERED :	RF	<u>749</u>	LF	<u>745</u>	RR	<u>760</u>	LR	<u>755</u>
FULLY LOADED :	RF	<u>740</u>	LF	<u>735</u>	RR	<u>735</u>	LR	<u>732</u>
AS TESTED :	RF	<u>742</u>	LF	<u>742</u>	RR	<u>736</u>	LR	<u>736</u>
Vehicle's Wheel Base : <u>2878</u> mm								
Location of Vehicle's C.G. : <u>1166.8</u> mm rearward of front wheel center.								

FUEL SYSTEM DATA :

Fuel System Capacity From Owner's Manual	=	<u>64.4</u>	liters
Usable Capacity Figure Furnished by COTR	=	<u>64.4</u>	liters
Test Volume Range (92 to 94% of Usable Capacity)	=	<u>59.2</u>	to <u>60.5</u> liters
ACTUAL TEST VOLUME= <u>59.4</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>
Details of Fuel System <u>Filler - Left side behind rear wheels; Lines - Inside left frame stiffener; Tank - Center ahead of rear wheels.</u>			

DATA SHEET NO. 3 POST IMPACT DATA

TYPE OF TEST:

Type of Test : Frontal Barrier Impact Angle : 0°

Test Date : November 15, 2000 Time: 11:45 Temperature: 12 °C

Vehicle NHTSA No. : M10300

Required Impact Velocity Range : 55.5 to 57.1 kph

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

Trap No. 1 = 56.32 kph; Trap No. 2 = 56.32 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 Right = 5100 ; C/L = 5283 ; Left = 5100

Post-Test Right = 4665 ; C/L = 4625 ; Left = 4645

Crush Right = 435.0 ; C/L = 658.0 ; Left = 455.0

AVERAGE = 516.0 mm

VEHICLE REBOUND: (From rigid barrier only.)

Distance from front of test vehicle to impact point :

Right = 421 ; C/L = 458 ; Left = 413

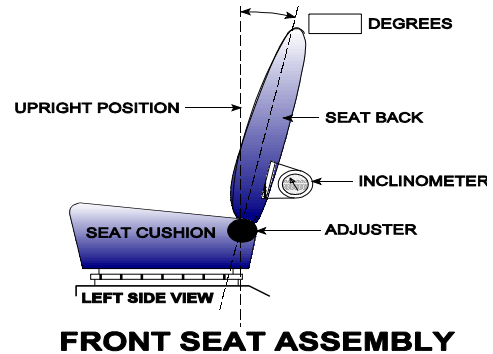
AVERAGE = 430.7 mm

DATA SHEET NO. 4 TEST VEHICLE INFORMATION

VEHICLE IDENTIFICATION:

Model Year : 2001 Vehicle Model: Chrysler LHS Body Style : 4-Door Sedan

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: 24

Measurement instructions: Recline seat rearward from test position to achieve 77 degrees on the head restraint post relative to the vehicle's longitudinal axis.

Seat back angle for passenger's seat: 24

Measurement instructions: Same as the driver's seat

2. Seat Fore and Aft Positioning

Positioning of the driver's seat: Electronic seat adjuster has 220 mm displacement, test position was mid track 110 mm

Positioning of the passenger's seat: Same as the driver's eat

3. Fuel Tank Capacity Data

3.1 A. "Usable Capacity" of the standard equipment fuel tank is 64.4 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 = 64.4 liters

3.2 Amount of Stoddard solvent added to vehicle(s) used for certification test(s) = 59.4 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.

When electrical system is activated

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

4. STEERING COLUMN ADJUSTMENTS :

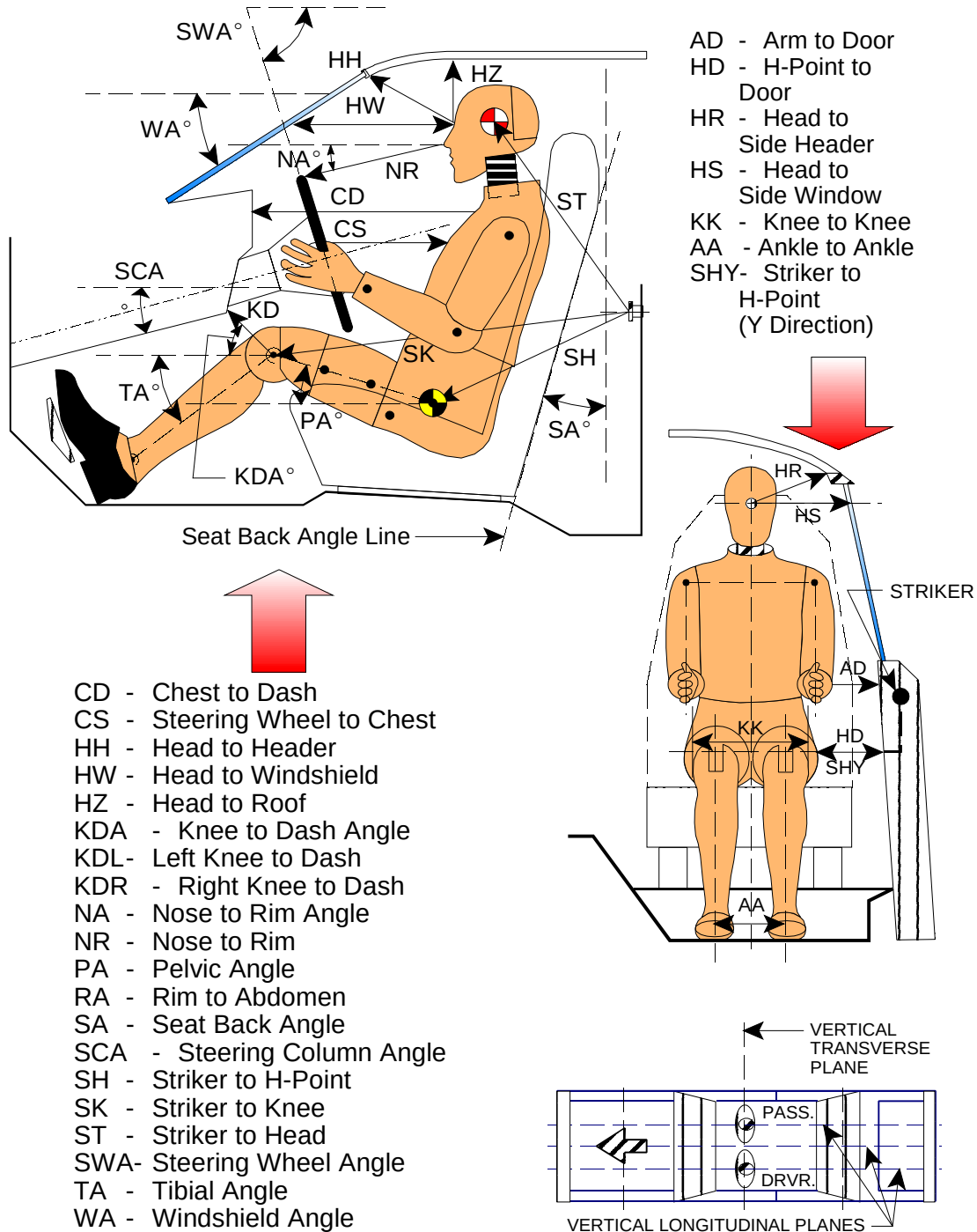
Steering wheel and column adjustments are made so that the steering wheel hub is at the geometric center of the locus it describes when it is moved through its full range of driving positions. If the tested vehicle has any of these adjustments, does your company use any specific procedures to determine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

Operational Instructions: Placed in mid-position of total detent range (5 total) at detent 3.

5. SEAT BELT UPPER ANCHORAGE

Nominal design riding position: Placed in mid-position 3 of 5 detents

DUMMY MEASUREMENT FOR FRONT SEAT PASSENGERS

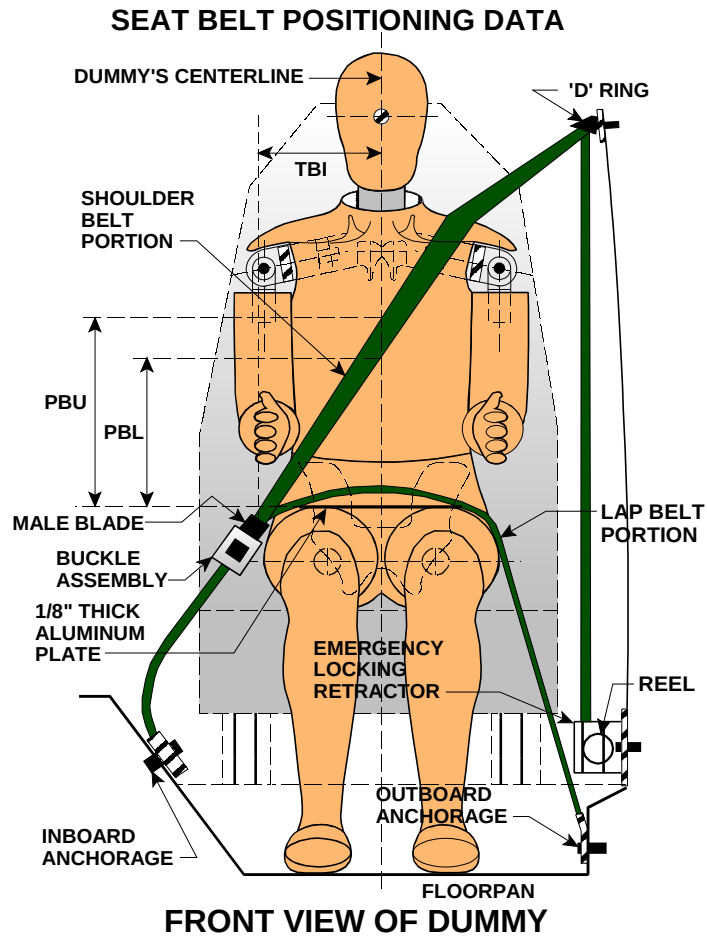


DATA SHEET NO. 5 FRONT SEAT DUMMY POSITIONING MEASUREMENTS IN VEHICLE (cont.)

	DRIVER (Serial #061)			PASS. (Serial # 245)		
WA ^o	20.7 deg.			N/A		
SWA ^o	70 deg.			N/A		
SCA ^o	20 deg.			N/A		
SA ^o	24 deg.			24 deg.		
HZ	160			164		
HH	342			340		
HW	688			680		
HR	183			226		
NR	372	Angle	-6 deg.	N/A		
CD	509			517		
CS	280			N/A		
RA	183			N/A		
KDL	159	Angle (KDA)	37 deg.	176		
KDR	170			163	Angle (KDA)	28 deg.
PA ^o	24.6 deg.			23.6 deg.		
TA ^o	37.5 deg.			43.4 deg.		
KK	283			270		
AA	207			235		
ST	512	Angle	2.0 deg.	520	Angle	4.0 deg.
SK	570	Angle	91.2 deg.	560	Angle	86.8 deg.
SH	230	Angle	132.6 deg.	235	Angle	126.7 deg.
SHY	283			290		
HS	316			326		
HD	208			199		
AD	115			117		

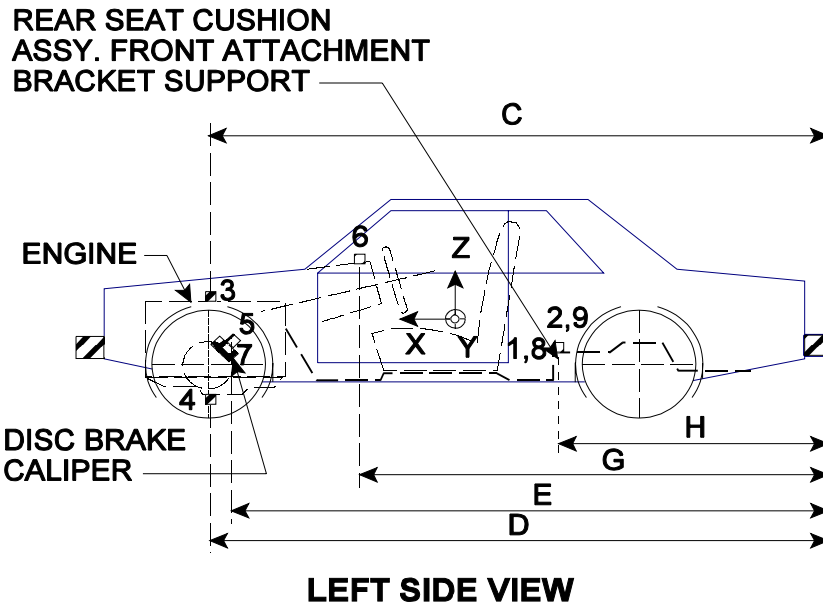
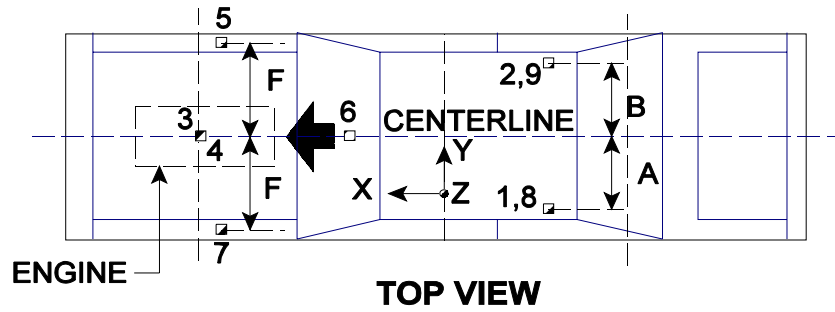
Dimensions in millimeters

DATA SHEET NO. 6 SEAT BELT POSITIONING DATA



	DRIVER DUMMY (mm)	PASSENGER DUMMY (mm)
PBU -- Top surface of alum. plate to upper edge	335	315
PBL-- Top surface of alum. plate to belt lower edge	250	230
<u>LAP BELT TENSION</u>	10 N	10 N
<u>SHOULDER BELT TENSION</u>	Retractor	Retractor

VEHICLE ACCELEROMETER LOCATION AND DATA SUMMARY



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

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

DIMENSION	PRE-TEST LENGTH (mm)
A Left Rear Seat Crossmember Y	-662
B Right Rear Seat Crossmember Y	660
C Top of Engine X	4537
D Bottom of Engine X	4171
E Disc Brake Calipers X	4706
F Disc Brake Calipers Y	812
G Instrument Panel X	3688
H Rear Seat Crossmembers X	2205

LOCATION NUMBER	DESCRIPTION	MAXIMUM VALUE (g's)			
		Pos.	msec.	Neg.	msec.
1	Rear Seat X-Member @ Left Side	3.3	140.3	-29.4	69.8
2	Rear Seat X-Member @ Right Side	3.0	139.8	-30.1	44.4
3	Top of Engine Block	48.7	41.9	-162.1	30.2
4	Bottom of Engine	*	*	*	*
5	Disc Brake Caliper @ Right Side	**	**	**	**
6	Instrument Panel	63.6	54.1	-89.6	66.6
7	Disc Brake Caliper @Left Side	**	**	**	**
8	Rear Seat X-Member @ Left-Redundant	3.2	140.3	-28.4	69.8
9	Rear Seat X-Member @ Right-Redundant	3.2	139.8	-30.3	51.3

* Cut wire at 52 ms.

** Data is clipped.

DATA SHEET NO. 8 DUMMY INJURY CRITERIA VALUES

Vehicle Year/Make/Model/Body Style: 2001 Chrysler LHS 4-Door Sedan

NHTSA Test No.: M10300 Test Date: November 15, 2000

		MAXIMUM VALUE							
		Driver				Passenger			
DESCRIPTION	Unit	Pos	msec	Neg	msec	Pos	msec	Neg	msec
Head X	g	10.1	267.5	-80.9	77.7	7.2	296.6	-66.2	84.8
Head Y	g	3.0	119.2	-25.2	82.0	4.4	61.0	-3.9	108.7
Head Z	g	20.2	58.1	-19.2	83.9	25.7	70.3	-11.4	97.5
Head Resultant	g	83.9	77.8	0.0	10.8	66.3	84.8	0.0	20.7
Redundant Head X	g	10.1	267.5	-81.3	78.6	7.2	299.8	-67.5	84.8
Redundant Head Y	g	2.9	126.6	-24.2	81.3	4.6	83.5	-3.9	128.0
Redundant Head Z	g	21.3	58.1	-18.9	83.9	25.6	70.4	-11.0	97.5
Redundant Head Resultant	g	84.3	78.7	0.0	-26.7	67.6	84.8	0.0	20.3
Upper Neck Fx	N	647.1	66.6	-165.9	53.4	701.2	77.7	-240.5	140.7
Upper Neck Fy	N	218.9	79.3	-43.5	186.8	235.4	93.6	-155.0	146.1
Upper Neck Fz	N	54.8	54.8	-42.8	53.5	1282.6	70.1	-215.6	100.3
Upper Neck F Resultant	N	658.3	66.6	0.3	19.1	1367.9	70.1	0.4	22.4
Upper Neck Mx	N-m	9.3	142.0	-11.5	64.9	17.4	105.1	-13.0	136.4
Upper Neck My	N-m	36.8	65.7	-30.7	79.1	35.3	73.9	-21.4	102.5
Upper Neck Mz	N-m	30.0	88.5	-13.0	156.5	11.6	121.1	-4.5	164.6
Upper Neck M Resultant	N-m	41.1	86.3	0.0	-21.7	35.6	73.9	0.0	-42.2
Chest X	g	4.7	186.7	-57.3	71.8	4.1	246.3	-54.2	76.3
Chest Y	g	2.7	95.8	-4.1	75.5	3.4	54.3	-8.2	102.9
Chest Z	g	9.2	59.7	-4.5	84.4	13.8	69.1	-5.4	98.2
Chest Resultant	g	57.4	71.8	0.0	-25.5	54.3	76.3	0.0	-24.8
Redundant Chest X	g	4.5	186.8	-55.9	72.6	4.3	246.3	-54.9	76.4
Redundant Chest Y	g	2.7	94.8	-4.4	75.6	3.0	54.5	-8.4	102.8
Redundant Chest Z	g	9.1	59.7	-4.7	84.4	14.1	57.6	-5.6	99.3
Redundant Chest Resultant	g	56.1	72.6	0.0	-24.2	55.0	76.4	0.0	-24.7
Chest Displacement	mm	0.0	9.2	-40.4	75.7	0.0	21.1	-25.5	95.4

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

Vehicle Year/Make/Model/Body Style: 2001 Chrysler LHS 4-Door Sedan

NHTSA Test No.: M10300 Test Date: November 15, 2000

		MAXIMUM VALUE							
		Driver				Passenger			
		Pos	msec	Neg	msec	Pos	msec	Neg	msec
DESCRIPTION	Unit	Pos	msec	Neg	msec	Pos	msec	Neg	msec
Pelvic X	g	3.9	235.8	-85.0	54.1	5.6	45.9	-69.2	54.8
Pelvic Y	g	12.9	54.3	-14.1	41.6	7.9	55.1	-7.8	52.7
Pelvic Z	g	6.7	41.6	-25.7	67.0	3.9	43.9	-27.0	75.5
Pelvic Resultant	g	86.6	54.1	0.0	-26.1	69.6	54.8	0.0	-26.0
Left Femur	N	99.0	169.7	-10080.6	54.5	830.8	46.4	-6200.0	54.8
Right Femur	N	81.9	136.1	-5234.3	55.2	562.2	46.4	-4836.1	52.5
Left Upper Tibia Mx	N-m	52.2	32.1	-129.7	58.2	49.5	45.9	-151.1	81.4
Left Upper Tibia My	N-m	18.3	140.8	-112.9	54.1	28.0	52.7	-226.1	43.9
Left Lower Tibia Fz	N	128.9	182.8	-3783.4	58.0	110.8	236.3	-8207.0	43.7
Left Lower Tibia Mx	N-m	*	*	*	*	205.9	45.2	-109.3	42.6
Left Lower Tibia My	N-m	395.2	59.5	-11.5	24.2	157.2	90.8	-83.5	41.5
Right Upper Tibia Mx	N-m	40.2	46.2	-54.2	40.6	27.1	47.0	-67.5	91.9
Right Upper Tibia My	N-m	*	*	*	*	17.3	211.6	-101.2	67.7
Right Lower Tibia Fz	N	3525.6	30.6	-9336.2	47.5	70.2	277.5	-1065.1	41.9
Right Lower Tibia Mx	N-m	2.2	32.8	-129.1	50.6	12.0	46.5	-40.2	51.7
Right Lower Tibia My	N-m	61.3	57.2	-78.2	45.9	41.1	74.6	-54.3	46.1
Left Foot Aft Ax	g	39.9	53.8	-48.2	45.7	43.4	50.7	-270.4	43.2
Left Foot Aft Az	g	31.9	34.7	-79.8	44.9	36.9	43.5	-254.6	42.3
Left Foot Fore Az	g	71.6	35.0	-112.3	43.7	375.2	44.4	-440.6	44.1
Right Foot Aft Ax	g	35.4	81.7	-230.5	47.0	22.2	53.1	-91.9	45.3
Right Foot Aft Az	g	34.6	63.7	-158.3	44.3	12.1	73.6	-53.2	48.4
Right Foot Fore Az	g	85.9	67.5	-310.8	44.2	39.5	73.4	-131.1	44.5
Lap Belt Load	N	3363.7	55.7	-6.1	225.1	6179.8	63.3	-6.0	233.5
Torso Belt	N	3258.1	65.8	-21.9	195.1	3409.9	90.6	-44.4	194.4

* Data is clipped

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

Vehicle Year/Make/Model/Body Style: 2001 Chrysler LHS 4-Door Sedan

NHTSA Test No.: M10300 Test Date: November 15, 2000

HEAD INJURY CRITERIA (HIC)				
	HIC**	t ₁ (msec)	t ₂ (msec)	Average Acceleration t ₁ to t ₂
Position #1 - Driver	906.9	66.1	92.9	64.9
Position #2 - Passenger	656.9	66.8	102.3	50.9

** HIC is as defined in FMVSS 208. The maximum time interval from t₁ to t₂ is 36 milliseconds.

CLIP SUMMARY*				
	CLIP (g's)	t ₁ (msec)	t ₂ (msec)	CSI
Position #1 - Driver	55.6	70.4	73.4	550.8
Position #2 - Passenger	52.9	74.7	77.7	527.4

* 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: 2001 Chrysler LHS 4-Door Sedan

NHTSA Test No.: M10300 Test Date: November 15, 2000

HEAD INJURY CRITERIA (HIC) REDUNDANT				
	HIC**	t ₁ (msec)	t ₂ (msec)	Average Acceleration t ₁ to t ₂
Position #1 - Driver	913.2	66.0	92.9	64.9
Position #2 - Passenger	654.9	66.8	102.2	50.9

** HIC is as defined in FMVSS 208. The maximum time interval from t₁ to t₂ is 36 milliseconds.

CLIP SUMMARY* REDUNDANT				
	CLIP (g's)	t ₁ (msec)	t ₂ (msec)	CSI
Position #1 - Driver	55.0	70.6	73.6	520.2
Position #2 - Passenger	53.7	74.7	77.7	554.6

* 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

BELT LENGTH DATA:

	<u>Driver</u>	<u>Passenger</u>
Belt length from trim panel exit to bolt hole anchor point for continuous webbing systems.	<u>1130</u>	<u>1155</u>
Shoulder belt length as measured on Part 572 Dummy.	<u>840</u>	<u>855</u>
Lap belt length as measured on Part 572 Dummy.	<u>830</u>	<u>840</u>

SHOULDER BELT SPOOL-OFF DATA:

As determined by film analysis.	<u>203.2</u>	<u>215.9</u>
As determined mechanically.	<u>188</u>	<u>223</u>
As determined electronically.	<u>181.3</u>	<u>232.2</u>

BELT STRETCH DATA:

Measured electronically between shoulder belt load cell and the "D" ring.	<u>5.3 mm/50 mm</u>	<u>0.2 mm/50 mm</u>
Measured mechanically.	<u>0 mm/50 mm</u>	<u>0 mm/50 mm</u>

Dimensions in millimeters

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 21 mm molding.

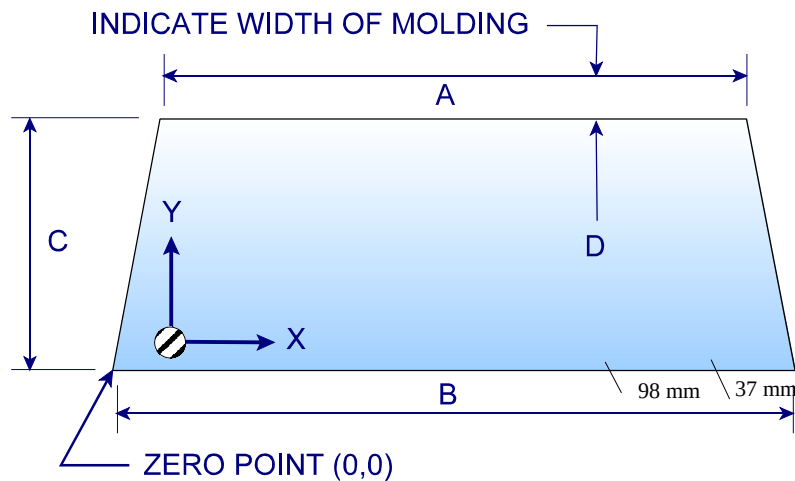
FMVSS 212 REQUIREMENTS:

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	2268.5	2268.5	100
LEFT SIDE	2268.5	2170.5	96
TOTAL	4537.0	4439.0	97.8

AREA OF RETENTION FAILURE:



DIMENSIONS (mm)	
A	1242
B	1635
C	830
D	21

FRONT VIEW OF WINDSHIELD

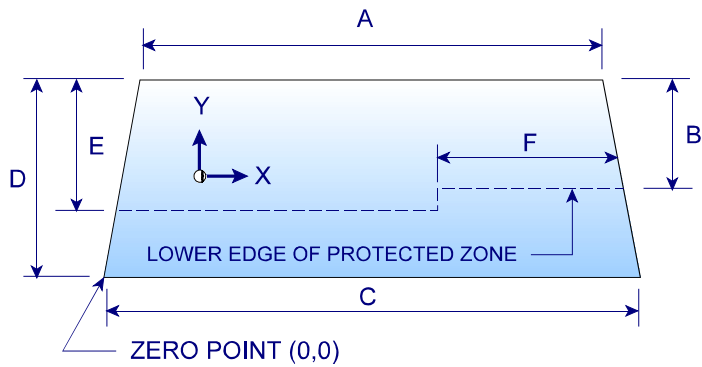
FAILURE DETAILS: A small section of window retention was lost for 98 mm along the lower edge of the windshield 37 mm from the bottom right corner.

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:



DIMENSIONS (mm)	
A	1242
B	510
C	1635
D	830
E	510
F	937

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

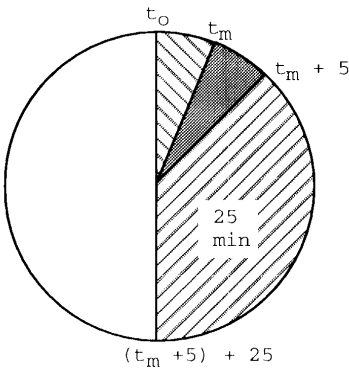
NHTSA TEST No.: M10300 TEST DATE: November 15, 2000
VEHICLE MAKE/MODEL: 2001 Chrysler LHS

The test vehicle was filled from 92% to 94% of the manufacture'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

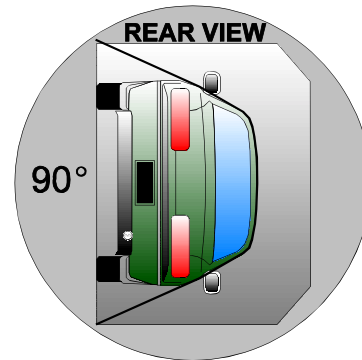
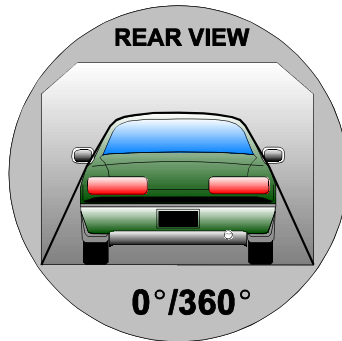
DATA SHEET 13

FMVSS NO. 301 STATIC ROLLOVER DATA SHEET

Vehicle: 2001 Chrysler LHS

NHTSA No. M10300

0 - 90 Degrees



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD :

Rollover Fixture 90° Rotation Time	<u>1</u>	minutes	<u>18</u>	seconds
(Spec. Range = 1 to 3 minutes)				
FMVSS 301 Position Hold Time +	<u>5</u>	minutes	<u>0</u>	seconds
TOTAL	<u>6</u>	minutes	<u>18</u>	seconds
Next whole minute interval	<u>7</u>	minutes		

II. FMVSS 301 REQUIREMENTS :

(1) Time Period

First 5 minutes FROM onset of rotation	6th min.	7th min.	8th min. (if required)
--	----------	----------	------------------------

(2) Maximum Allowable Solvent Spillage

142 g	28 g	28 g	28 g
-------	------	------	------

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

0 g	0 g	0 g	N/A
-----	-----	-----	-----

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

IV. SOLVENT SPILLAGE LOCATION(S) :

None

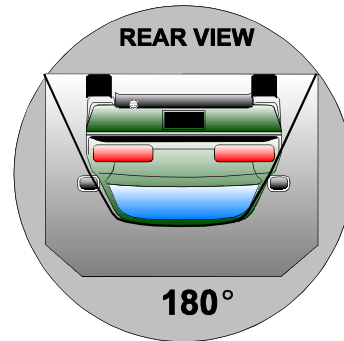
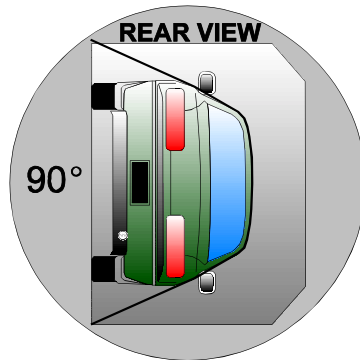
DATA SHEET 13

FMVSS NO. 301 STATIC ROLLOVER DATA SHEET (CONTINUED)

Vehicle: 2001 Chrysler LHS

NHTSA No. M10300

90 - 180 Degrees



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD :

Rollover Fixture 90° Rotation Time	<u>1</u>	minutes	<u>06</u>	seconds
(Spec. Range = 1 to 3 minutes)				
FMVSS 301 Position Hold Time +	<u>5</u>	minutes	<u>0</u>	seconds
TOTAL	<u>6</u>	minutes	<u>6</u>	seconds
Next whole minute interval	<u>7</u>	minutes		

II. FMVSS 301 REQUIREMENTS :

(1) Time Period

First 5 minutes FROM onset of rotation	6th min.	7th min.	8th min. (if required)
--	----------	----------	------------------------

(2) Maximum Allowable Solvent Spillage

142 g	28 g	28 g	28 g
-------	------	------	------

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

0 g	0 g	0 g	N/A
-----	-----	-----	-----

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

IV. SOLVENT SPILLAGE LOCATION(S) :

None

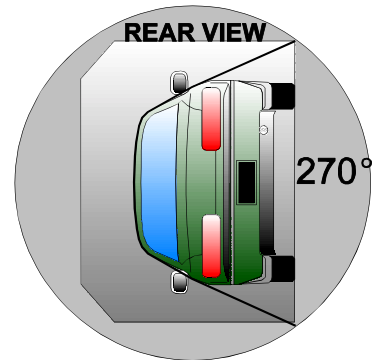
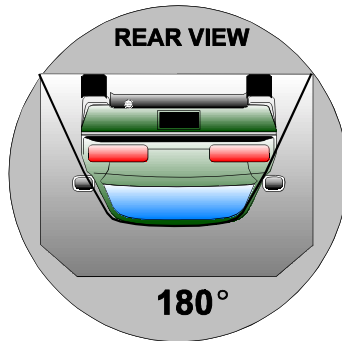
DATA SHEET 13

FMVSS NO. 301 STATIC ROLLOVER DATA SHEET (CONTINUED)

Vehicle: 2001 Chrysler LHS

NHTSA No. M10300

180 - 270 Degrees



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD :

Rollover Fixture 90° Rotation Time	<u>1</u>	minutes	<u>03</u>	seconds
(Spec. Range = 1 to 3 minutes)				
FMVSS 301 Position Hold Time +	<u>5</u>	minutes	<u>0</u>	seconds
TOTAL	<u>6</u>	minutes	<u>3</u>	seconds
Next whole minute interval	<u>7</u>	minutes		

II. FMVSS 301 REQUIREMENTS :

(1) Time Period

First 5 minutes FROM onset of rotation	6th min.	7th min.	8th min. (if required)
--	----------	----------	------------------------

(2) Maximum Allowable Solvent Spillage

142 g	28 g	28 g	28 g
-------	------	------	------

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

0 g	0 g	0 g	N/A
-----	-----	-----	-----

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

IV. SOLVENT SPILLAGE LOCATION(S) :

None

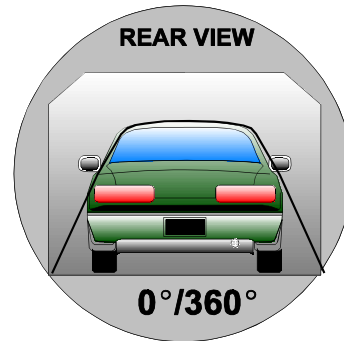
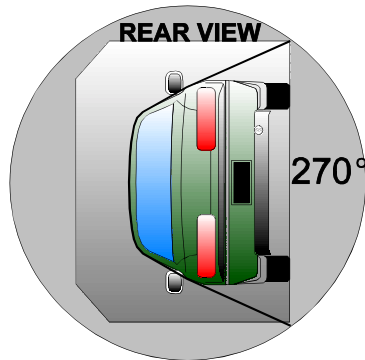
DATA SHEET 13

FMVSS NO. 301 STATIC ROLLOVER DATA SHEET (CONTINUED)

Vehicle: 2001 Chrysler LHS

NHTSA No. M10300

270 - 360 Degrees



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD :

Rollover Fixture 90° Rotation Time	<u>1</u>	minutes	<u>14</u>	seconds
(Spec. Range = 1 to 3 minutes)				
FMVSS 301 Position Hold Time +	<u>5</u>	minutes	<u>0</u>	seconds
TOTAL	<u>6</u>	minutes	<u>14</u>	seconds
Next whole minute interval	<u>7</u>	minutes		

II. FMVSS 301 REQUIREMENTS :

(1) Time Period

First 5 minutes FROM onset of rotation	6th min.	7th min.	8th min. (if required)
--	----------	----------	------------------------

(2) Maximum Allowable Solvent Spillage

142 g	28 g	28 g	28 g
-------	------	------	------

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

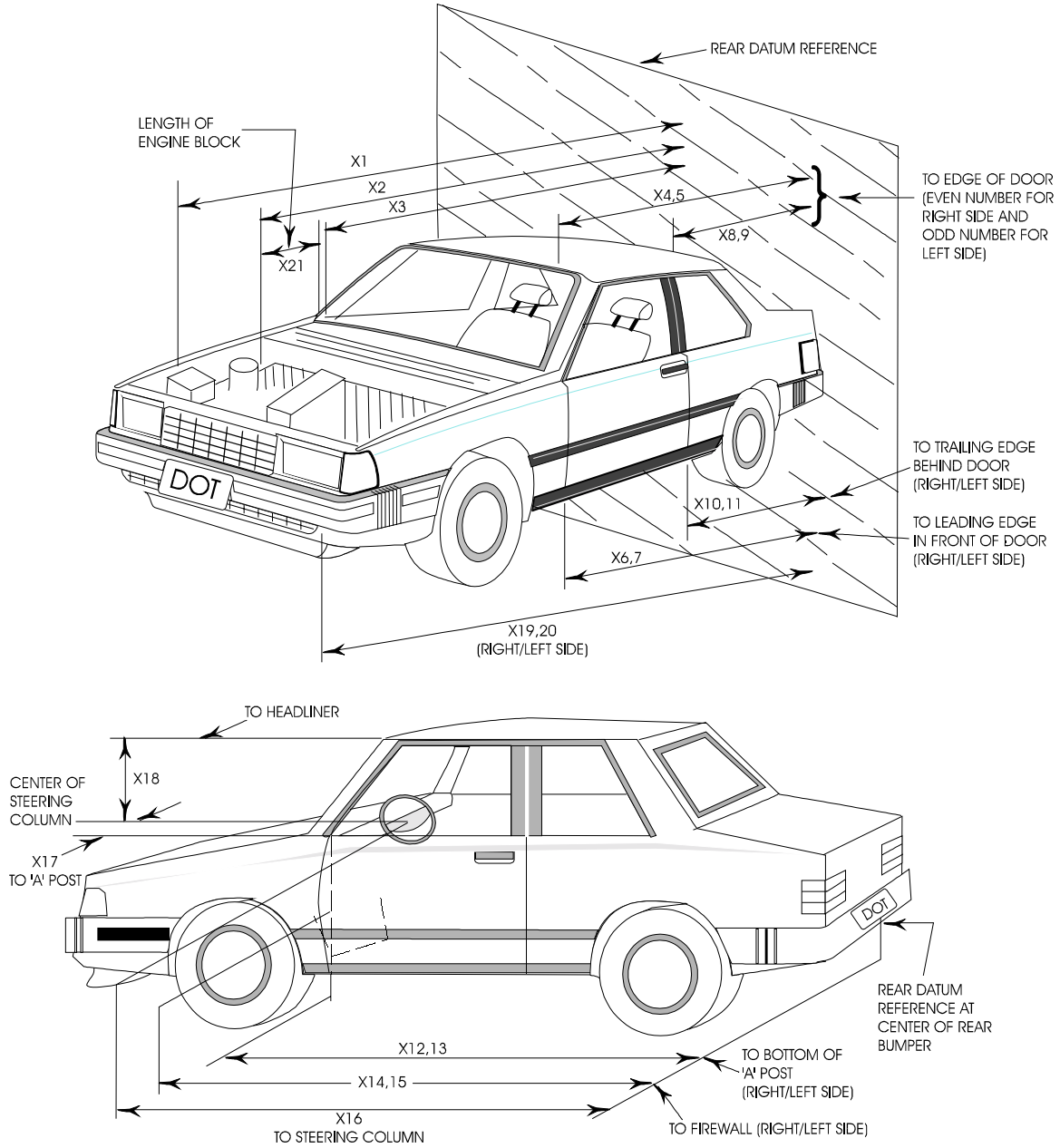
0 g	0 g	0 g	N/A
-----	-----	-----	-----

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

IV. SOLVENT SPILLAGE LOCATION(S) :

None

DATA SHEET NO. 14 TEST VEHICLE MEASUREMENTS

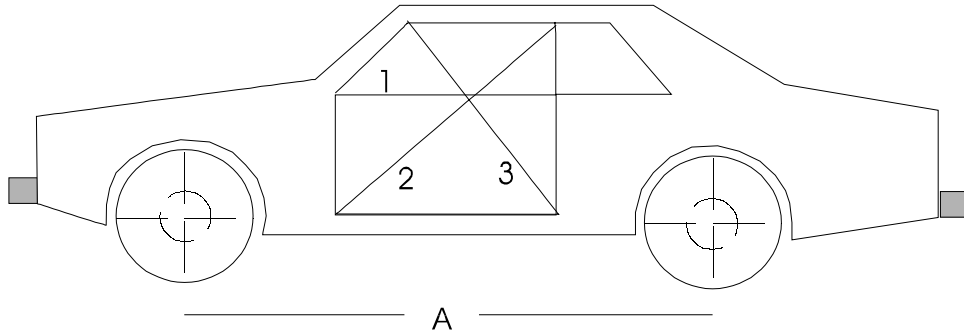


DATA SHEET NO.14 VEHICLE MEASUREMENTS (cont.)

No.		Pre-Test	Post-Test	Difference
X1	Total Length of Vehicle at Centerline	5283	4625	658
X2	Rear Surface of Vehicle to Front of Engine	4834	4447	387
X3	Rear Surface of Vehicle to Firewall	4260	4150	110
X4	Rear Surface of Vehicle to Upper Leading Edge of Right Door	3721	3726	-5
X5	Rear Surface of Vehicle to Upper Leading Edge of Left Door	3723	3714	9
X6	Rear Surface of Vehicle to Lower Leading Edge of Right Door	3688	3688	0
X7	Rear Surface of Vehicle to Lower Leading Edge of Left Door	3701	3689	12
X8	Rear Surface of Vehicle to Upper Trailing Edge of Right Door	2621	2629	-8
X9	Rear Surface of Vehicle to Upper Trailing Edge of Left Door	2619	2614	5
X10	Rear Surface of Vehicle to Lower Trailing Edge of Right Door	2619	2618	1
X11	Rear Surface of Vehicle to Lower Trailing Edge of Left Door	2628	2609	19
X12	Rear Surface of Vehicle to Bottom of "A" Post of Right Side	3814	3801	13
X13	Rear Surface of Vehicle to Bottom of "A" Post of Left Side	3818	3810	8
X14	Rear Surface of Vehicle to Firewall, Right Side	4236	4086	150
X15	Rear Surface of Vehicle to Firewall, Left Side	4241	4023	218
X16	Rear Surface of Vehicle to Steering Column	3201	3193	8
X17	Center of Steering Column to "A" Post	332	321	11
X18	Center of Steering Column to Headliner	379	360	19
X19	Rear Surface of Vehicle to Right Side of Front Bumper	5200	4657	543
X20	Rear Surface of Vehicle to Left Side of Front Bumper	5207	4684	523
X21	Length of Engine Block	456	456	0
RD	Rear Surface of Vehicle to Right Side of Dash Panel	3374	3365	9
CD	Rear Surface of Vehicle to Center of Dash Panel	3418	3401	17
LD	Rear Surface of Vehicle to Left Side of Dash Panel	3388	3352	36

All Dimensions in mm

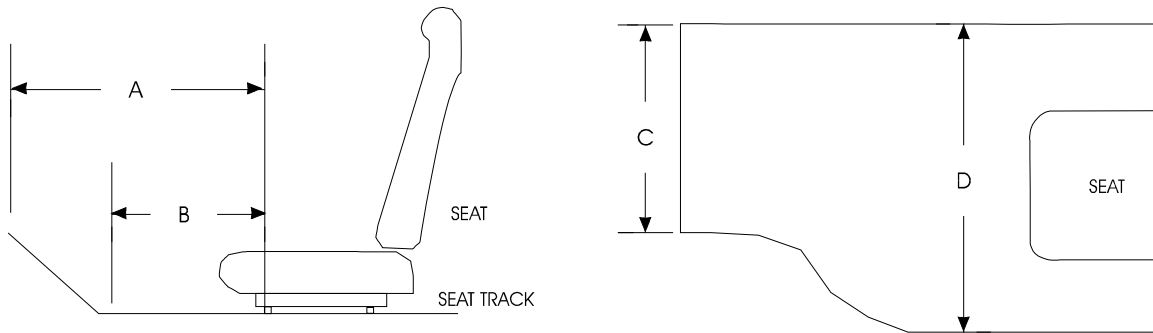
DATA SHEET NO.14 VEHICLE MEASUREMENTS (cont.)
 VEHICLE INTRUSION MEASUREMENTS
 DOOR OPENING WIDTH



UNITS (mm)	LEFT			RIGHT		
MEASUREMENT	1	2	3	1	2	3
BEFORE TEST	1011	1448	962	1023	1448	970
AFTER TEST	988	1447	963	1004	1445	973
DIFFERENCE	23	1	-1	19	3	-3

UNITS (mm)	A = WHEELBASE LEFT	A = WHEELBASE RIGHT
BEFORE TEST	2878	2874
AFTER TEST	2749	2727
DIFFERENCE	129	147

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



DRIVER

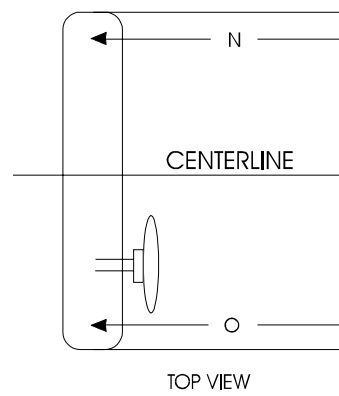
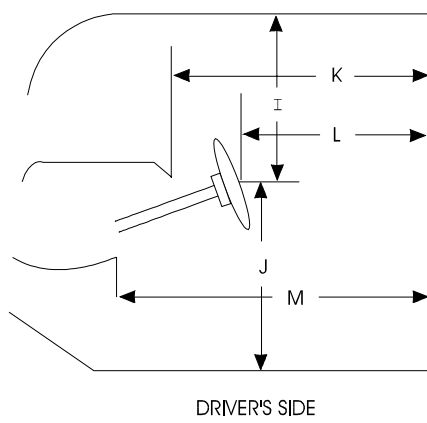
Measurement	Pre-Test	Post-Test	Difference
A	824	623	201
B	648	517	131
C	505	406	99
D	472	412	60

PASSENGER

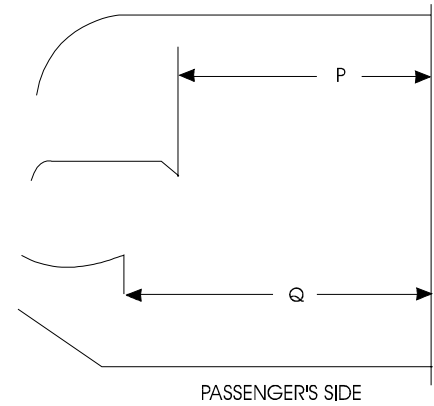
Measurement	Pre-Test	Post-Test	Difference
A	699	590	109
B	550	473	77
C	417	355	62
D	466	473	-7

Units = mm

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



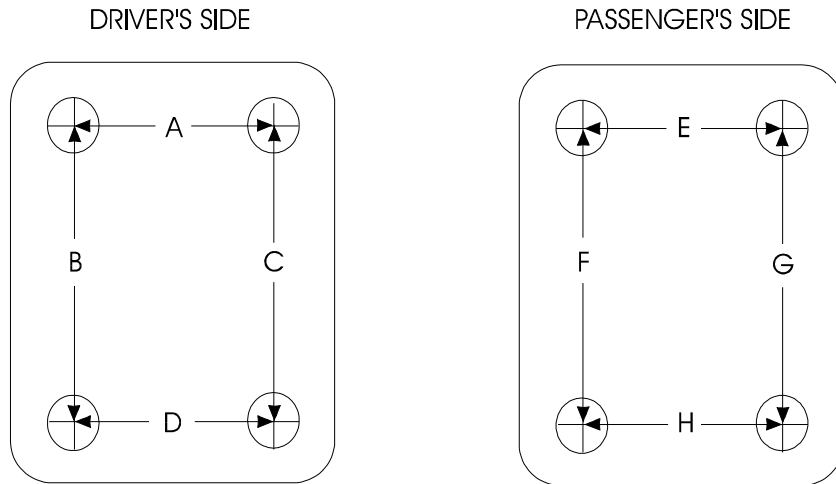
MEASUREMENTS
FROM C-PILLAR
BELT ANCHORAGE



Measurement	Pre-Test	Post-Test	Difference
I	379	360	19
J	657	781	-124
K	1804	1771	33
L	1595	1591	4
M	1792	1763	29
N	1772	1755	17
O	1781	204	1,577
P = K (PASS.)	1900	1874	26
Q = M (PASS.)	1841	1815	26

Units = mm

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

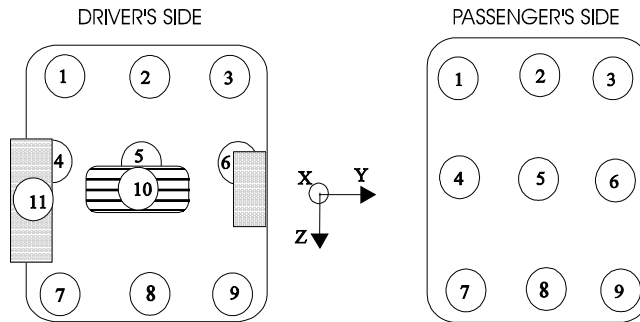


TOP VIEW THROUGH FLOOR PAN

Measurement	Pre-Test	Post-Test	Difference
A	300	309	-9
B	380	367	13
C	400	400	0
D	300	308	-8
E	300	312	-12
F	400	370	30
G	355	365	-10
H	295	298	-3

Units = mm

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



Driver Side Floorpan Measurements

Floorpan Location	X Deformation			Z Deformation		
	Pre-Test	Post-Test	Difference	Pre-Test	Post-Test	Difference
1	3878	3642	236	-447	-485	38
2	3904	3701	203	-395	-433	38
3	3907	3687	220	-402	-401	-1
4	3817	3650	167	-365	-408	43
5	3845	3639	206	-338	-352	14
6	3831	3634	197	-321	-335	14
7	3689	3627	62	-243	-255	12
8	3729	3594	135	-255	-242	-13
9	3734	3555	179	-237	-219	-18
10	3726	3672	54	-413	-498	85
11	3751	3654	97	-433	-403	-30

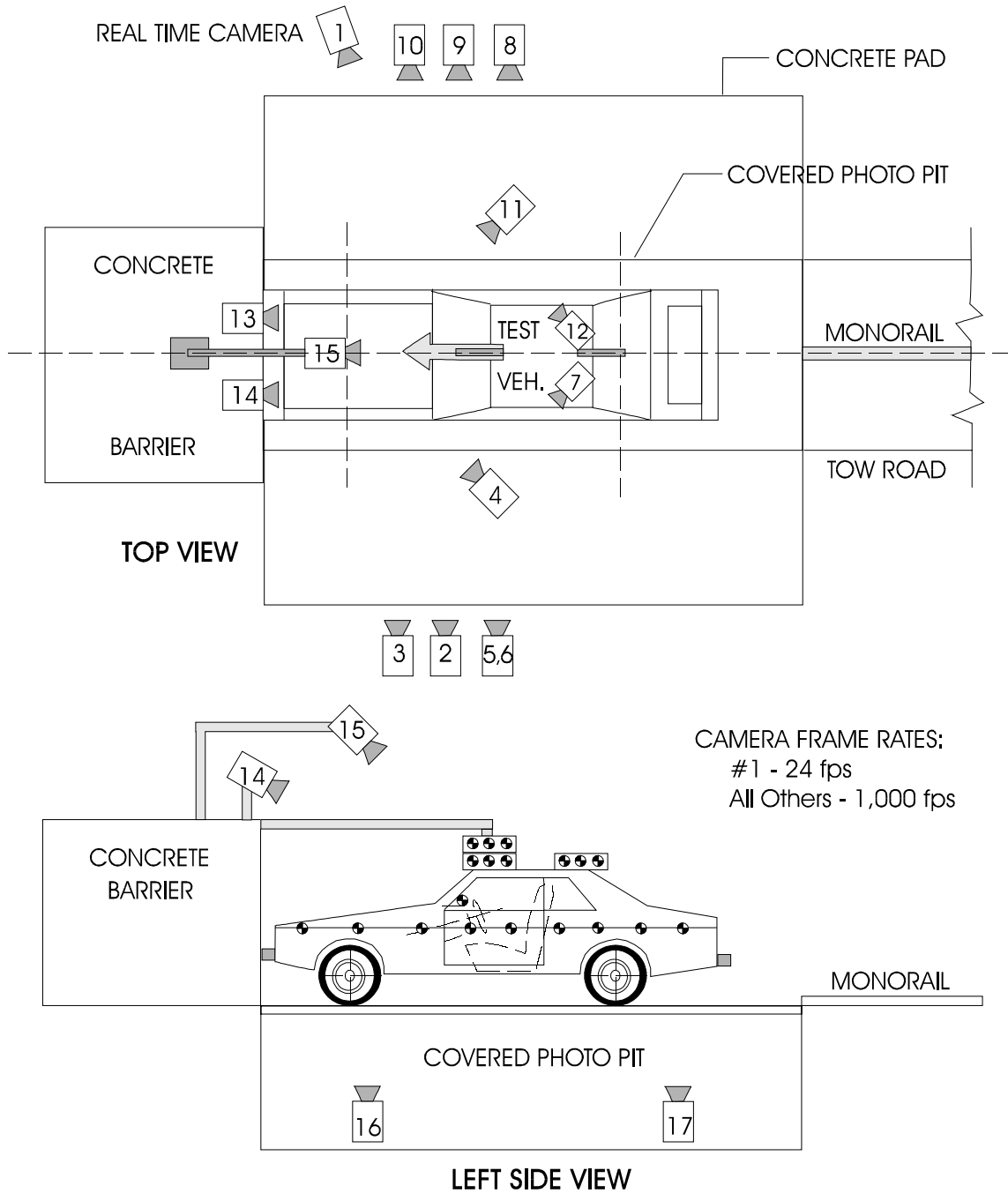
Passenger Side Floorpan Measurements

Floorpan Location	X Deformation			Z Deformation		
	Pre-Test	Post-Test	Difference	Pre-Test	Post-Test	Difference
1	3801	3659	142	-364	-450	86
2	3810	3668	142	-412	-449	37
3	3789	3700	89	-424	-450	26
4	3744	3574	170	-335	-387	52
5	3743	3602	141	-334	-391	57
6	3753	3705	48	-345	-372	27
7	3649	3469	180	-263	-312	49
8	3661	3551	110	-250	-290	40
9	3689	3656	33	-276	-284	8

Reference: X = Rear Bumper; Z = Ground

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.: M10300 Vehicle: 2001 Chrysler LHS 4-Door Sedan

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	6900	1691	1069	-2	6544	12.5	1000
3	Left Side View	8693	1182	1099	-2	8337	25	1030
4	Driver and Interior View	6973	2839	1945	-10	-	25	1050
5	Steering Column (Bottom)	7945	1940	1165	-2	7589	25	1000
6	Steering Column (Top)	7945	1940	1777	-9	7589	25	1000
7	Left Belt	-	-	-	-	-	8	1000
8	Overall Right Side	7167	2103	1091	-3	6811	12.5	1000
9	Right Side View	8170	1318	1081	-2	7814	25	1000
10	Right Passenger View	8382	1920	1400	-4	8026	35	1000
11	Passenger and Interior View	7211	2955	1970	-9	-	25	1000
12	Right Belt	-	-	-	-	-	8	1000
13	Passenger Front View	620	-92	1987	-41	-	13	1000
14	Driver Front View	620	-92	1987	-40	-	13	1000
15	Windshield View	0	-530	3374	-53	-	13	1000
16	Pit View of Engine	0	1138	-3048	90	-	13	1000
17	Pit View of Fuel Tank	0	3150	-3048	90	-	13	1050

*X = film plane to monorail centerline

** = referenced to horizontal plane

Y = film plane to impact location

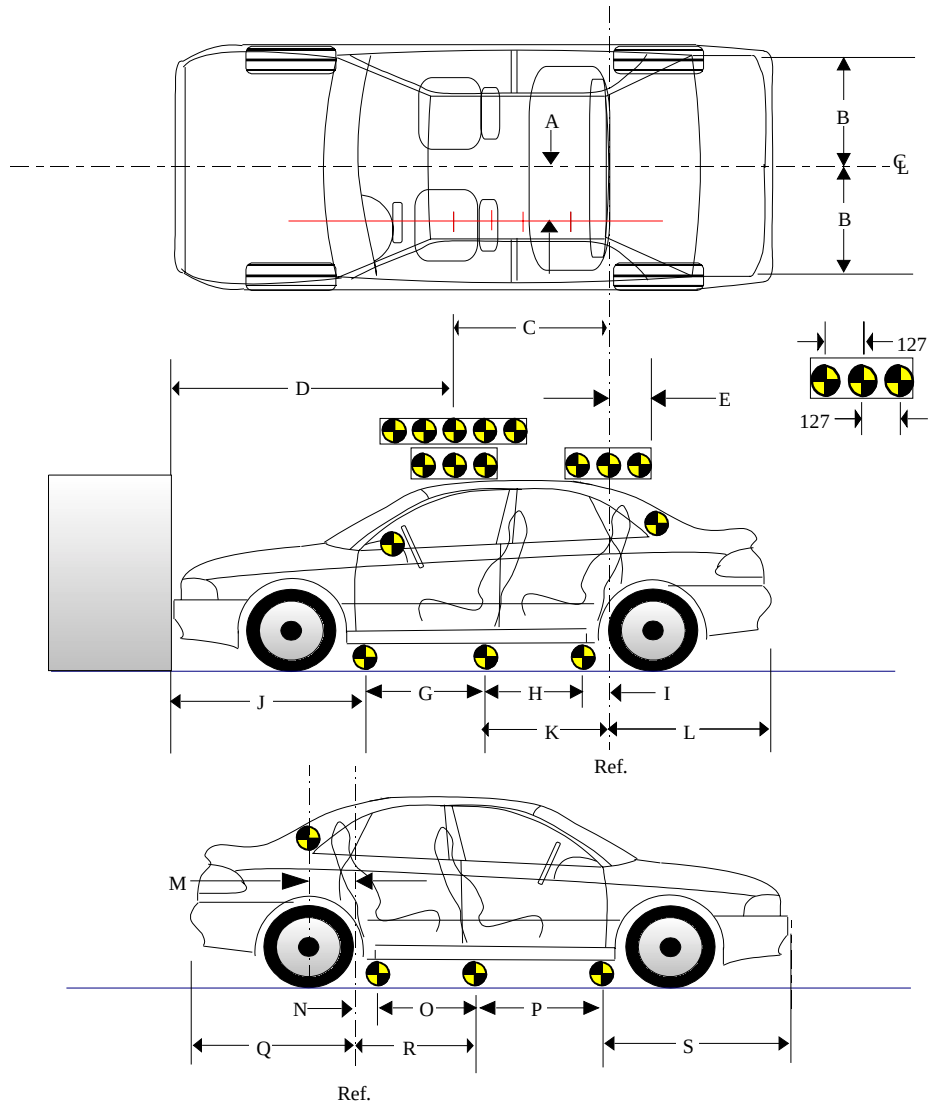
N.T. indicates No Timing

Z = film plane to ground

DATA SHEET NO. 16 VEHICLE REFERENCE PHOTO TARGET LOCATIONS

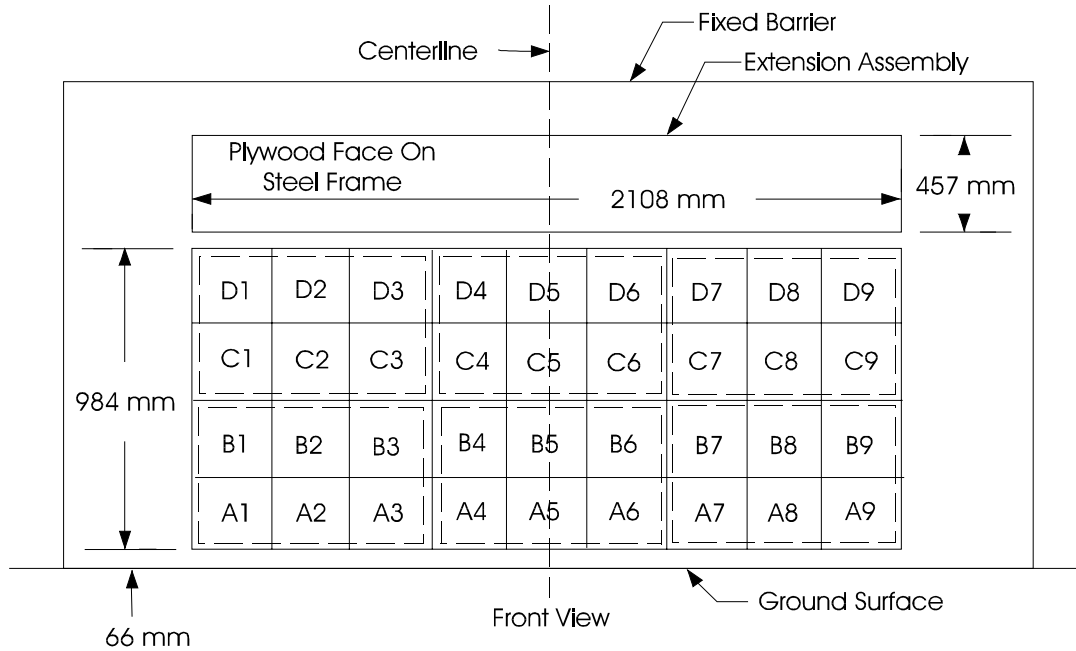
(Dimensions in millimeters)

A	280
B	557
C	906
D	2656
E	374
F	1627
G	953
H	962
I	150
J	1559
K	1112
L	5270
M	392
N	139
O	958
P	963
Q	1664
R	1097
S	1532



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. : M10300; Test Date: November 15, 2000; Technician: Patrick G. MacDiarmid

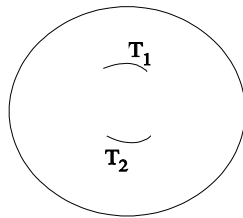
Vehicle Model Year/Make/Model: 2001 Chrysler LHS

- A. No. of vent holes: 0 -Driver 2 -Passenger
- B. Size of vent holes: (mm²) - -Driver 2376 -Passenger
- C. Total vent area: (mm²) - -Driver 4752 -Passenger
- D. Deflated air bag length and width dimensions or, if round, diameter. (mm)
- Driver: 500 -Height; 600 -Width; 230 -Depth
- Passenger: 625 -Height; 450 -Width; 550 -Depth
- E. Is the air bag tethered?
- Driver: X -Yes; - -No; If yes, record length of tether- 210
- Passenger: X -Yes; - -No; If yes, record length of tether- 350

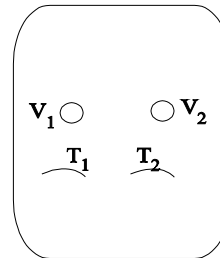
Sketch the air bag showing the location of the vent holes, how the bag is tethered, and where the bag is tethered. Also describe how the tethers are attached to the bag and the steering wheel.

(Note: Not to scale; V_n = Vent hole_n, T_n = Tether_n).

Driver



Passenger



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

Driver: Air bag: P120545-04K CUY6E8DCXE

Generator: CUG L6L SW AOK TUGDM1720W0384 P0MF50XDVB BB CAUL8D1JBSD

Passenger: Air bag: P5204270-00AA00 TML1778P0255

Generator: P04649116AA TEDPM179040760 CED L6U H4 BDH

DATA SHEET NO. 19 ACCIDENT INVESTIGATION DIVISION DATA
FOR 56.3 KPH FRONTAL BARRIER IMPACT

Vehicle Make/Model/Body Style: Chrysler LHS 4-Door Sedan

NHTSA Test No.: M10300 VIN: 2C3HC56B11H510077

Model Year: 2001 Build Date: 8-00 Test Date: November 15, 2000

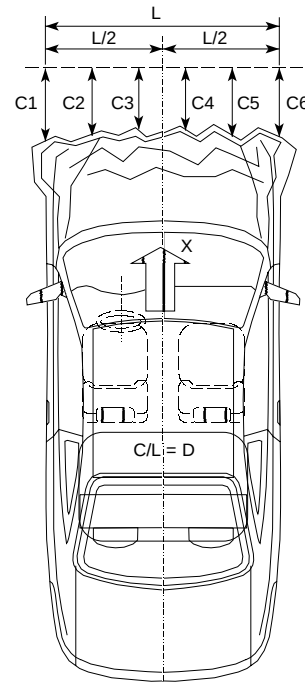
Vehicle Size Category: Large Test Weight: 1829 kg

Vehicle Wheelbase: 2878 mm; Front Overhang: mm; Overall Width: 1890 mm

Collision Deformation Classification (CDC) Code: 12FDEW4

Crush Depth Dimensions:

	PRE	POST	DIFF	
C1 =	5089	4675	414.0	mm
C2 =	5219	4676	543.0	mm
C3 =	5270	4619	651.0	mm
C4 =	5271	4619	652.0	mm
C5 =	5220	4650	570.0	mm
C6 =	5084	4659	425.0	mm



Midpoint of Damage: D = Vehicle Centerline
(Longitudinal)

Length of Damaged Region:

L1= 1500 mm
L2= 750.0 mm
L3= 500.0 mm

APPENDIX A
PHOTOGRAPHS

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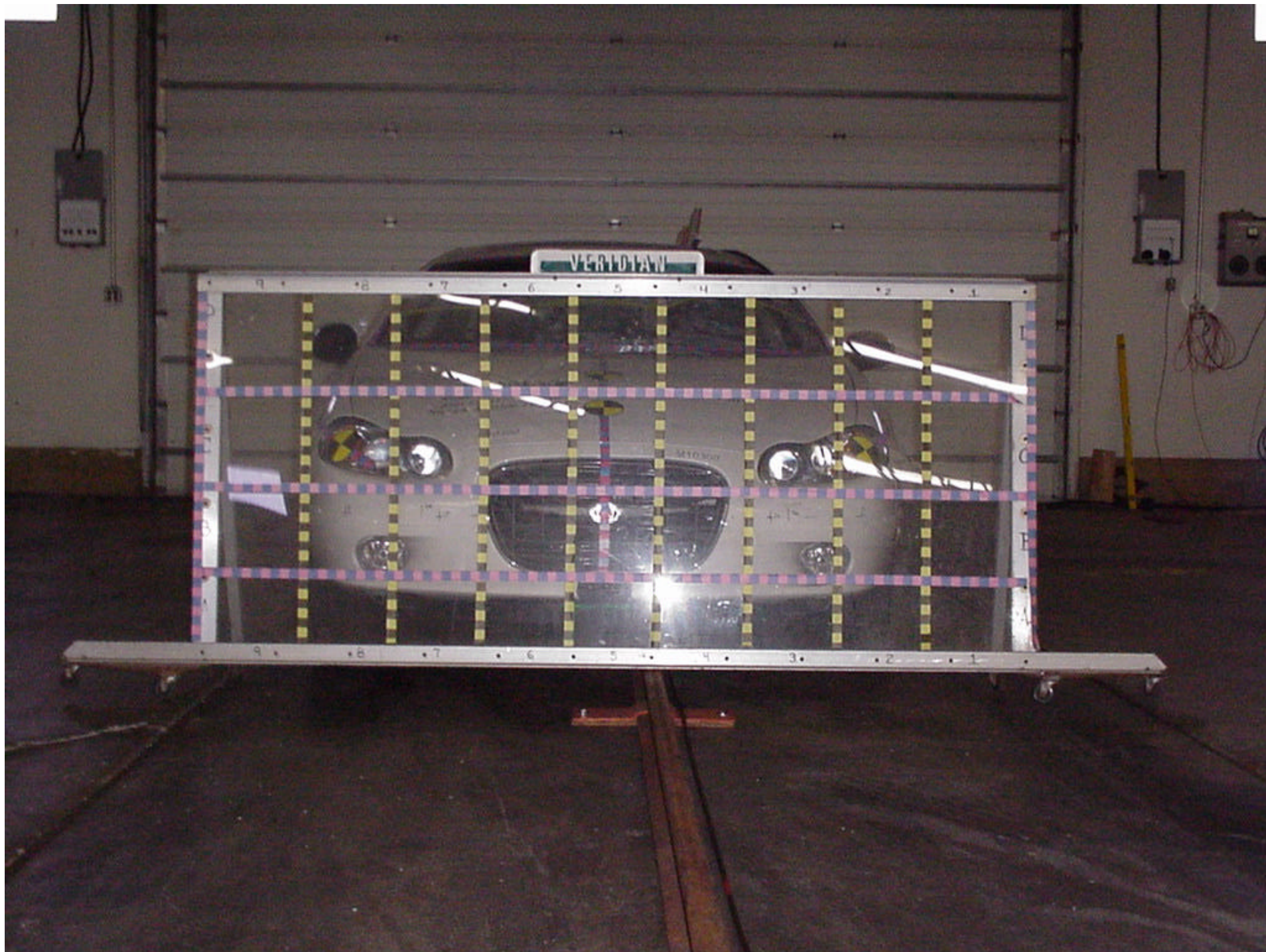


Figure A-1 LOAD CELL LOCATIONS



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



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



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



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



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

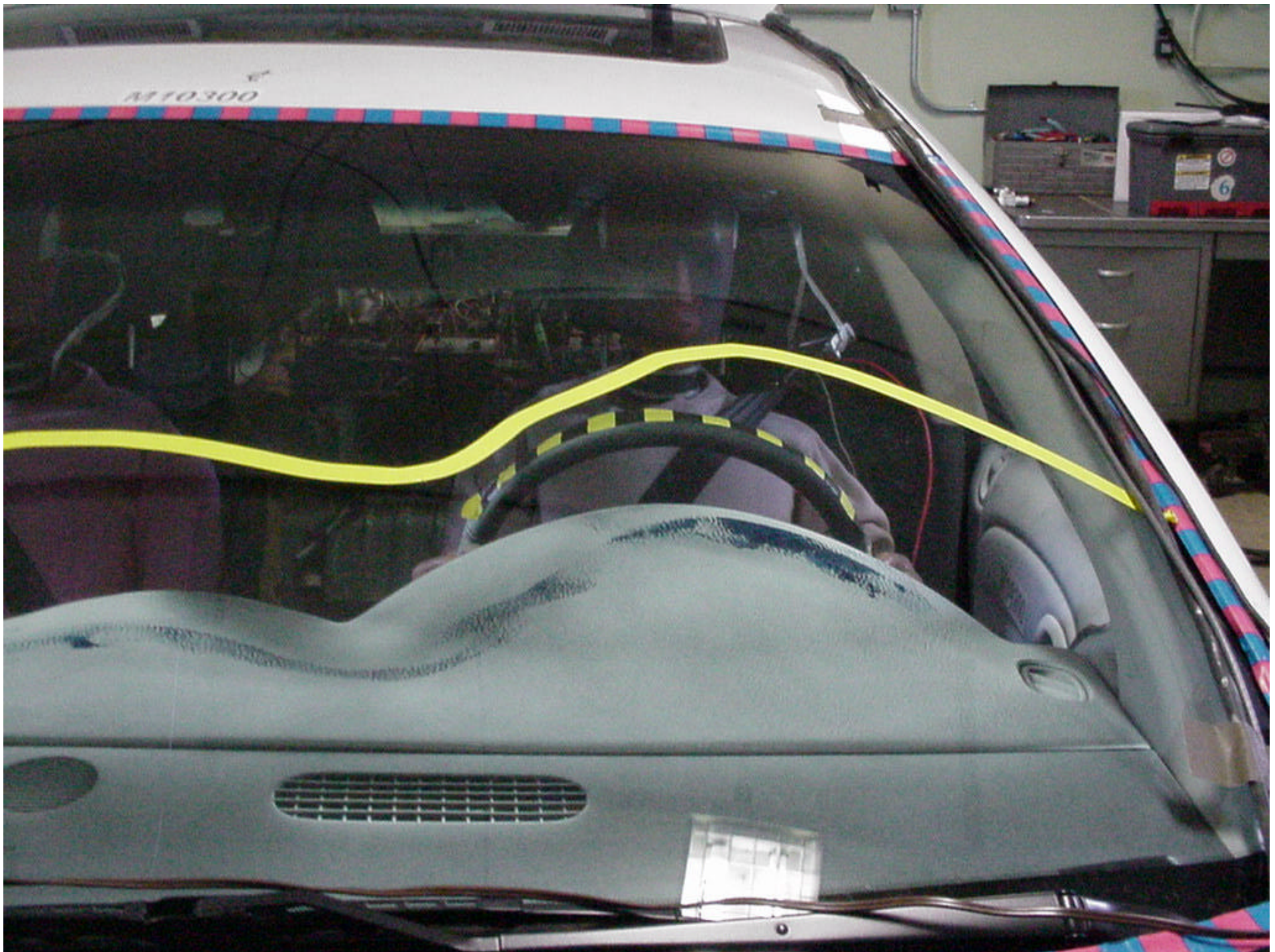


Figure A-30 PRE-TEST DRIVER HEAD LOCATION



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



Figure A-37 POST-TEST PASSENGER FLOOR PAN VIEW



Figure A-38 ROLLOVER VIEW



Figure A-39 IMPACT VIEW

APPENDIX B

DUMMY, VEHICLE AND LOAD CELL BARRIER RESPONSE DATA

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

Transducer	SAE Sign Convention (positive unless noted)
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. M10300

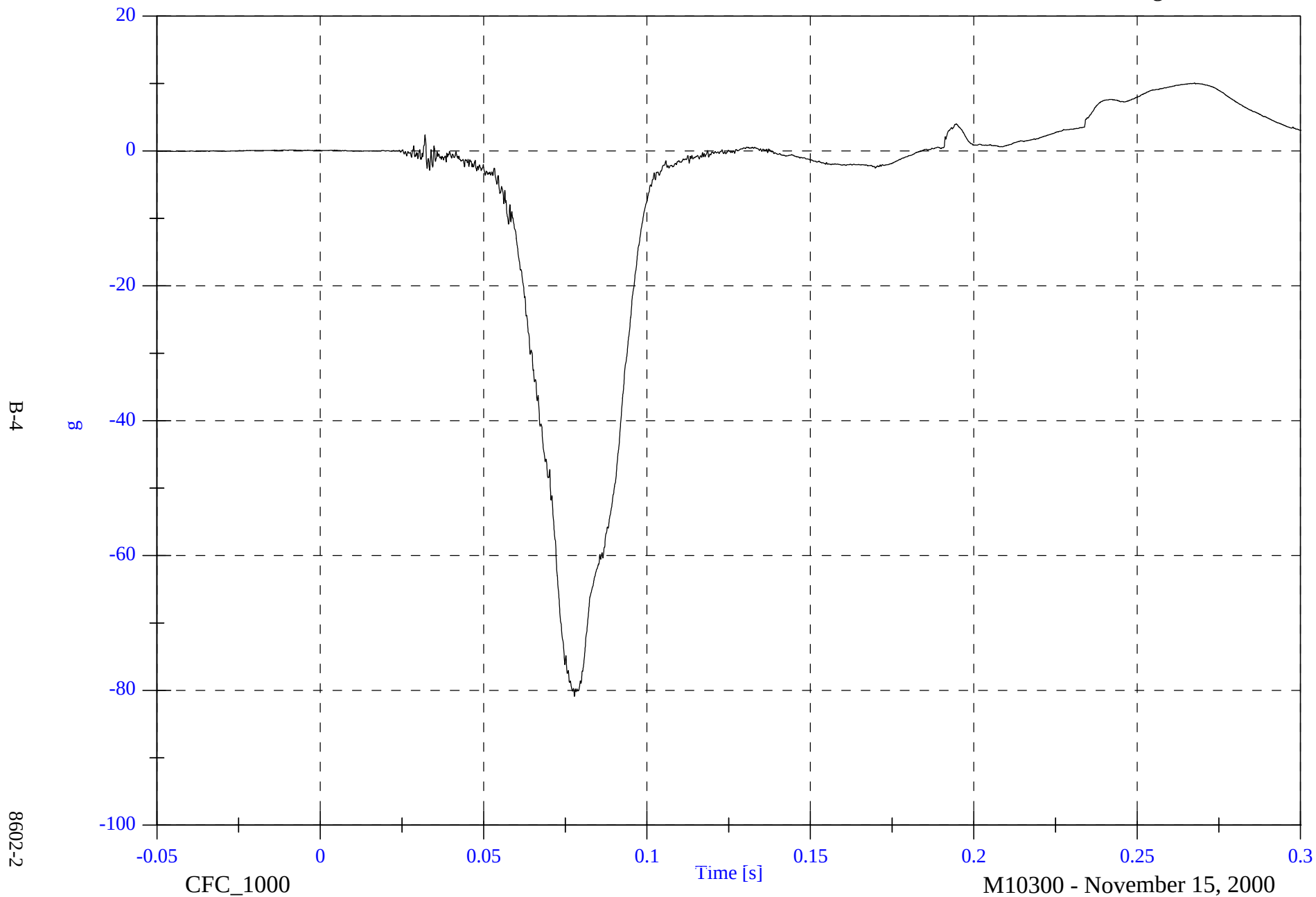
DATA TYPE	SAE FILTER CLASS (Hz)
Dummy Head Accelerations	1000
Dummy Chest Accelerations	180
Dummy Chest Displacements	60
Dummy Femur Forces	600
Dummy Belt Loads	60
Dummy Belt Displacements	180
Dummy Neck Forces	1000
Dummy Neck Moments	600
Vehicle Accelerations	60
Vehicle Velocity Integrations	180
Vehicle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

NCAP 2001 Test 2 - 2001 Chrysler LHS

P1 Head x

Max: 10.1 [g] at 0.268 [s]

Min: -80.9 [g] at 0.078 [s]

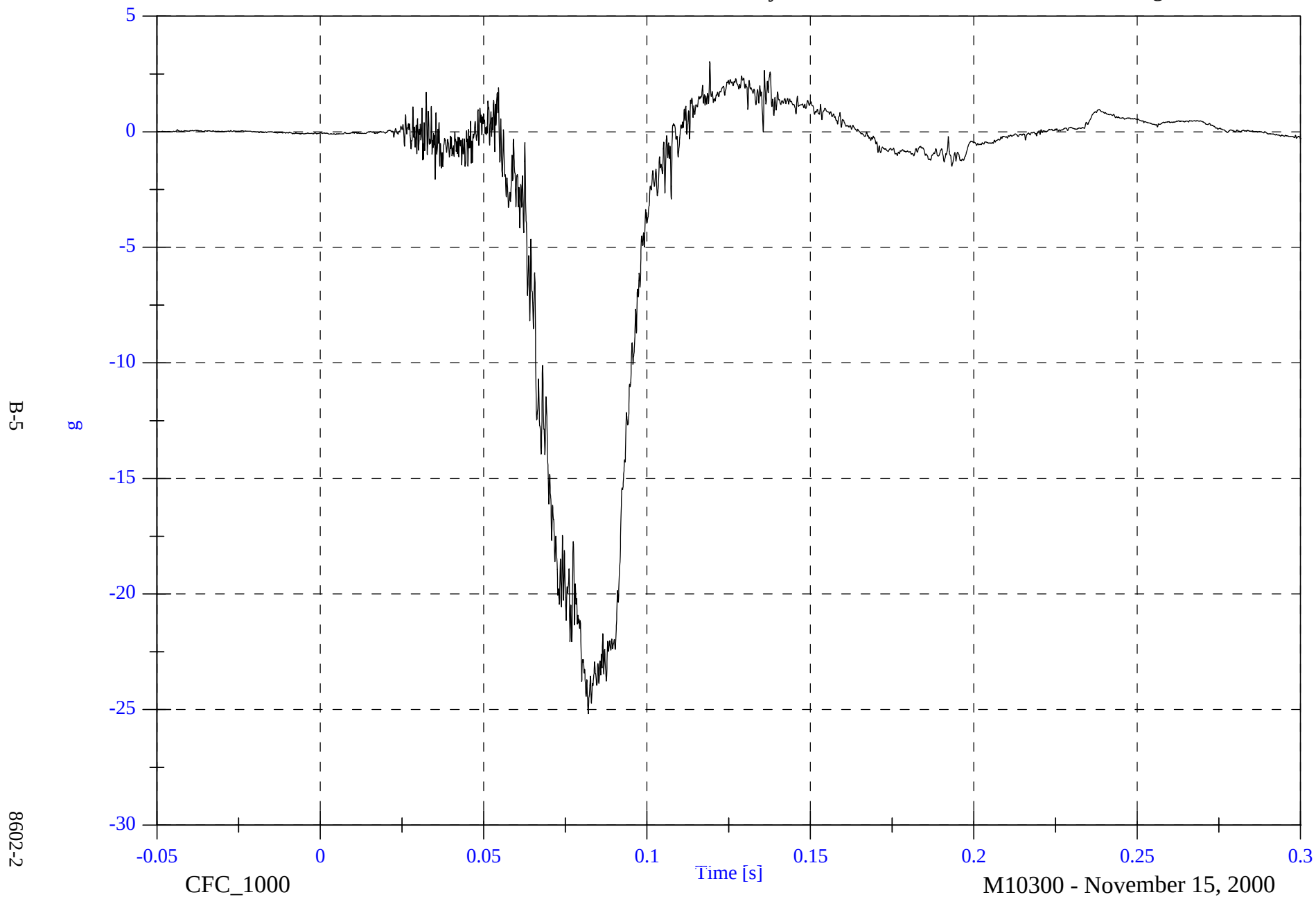


NCAP 2001 Test 2 - 2001 Chrysler LHS

P1 Head y

Max: 3.0 [g] at 0.119 [s]

Min: -25.2 [g] at 0.082 [s]

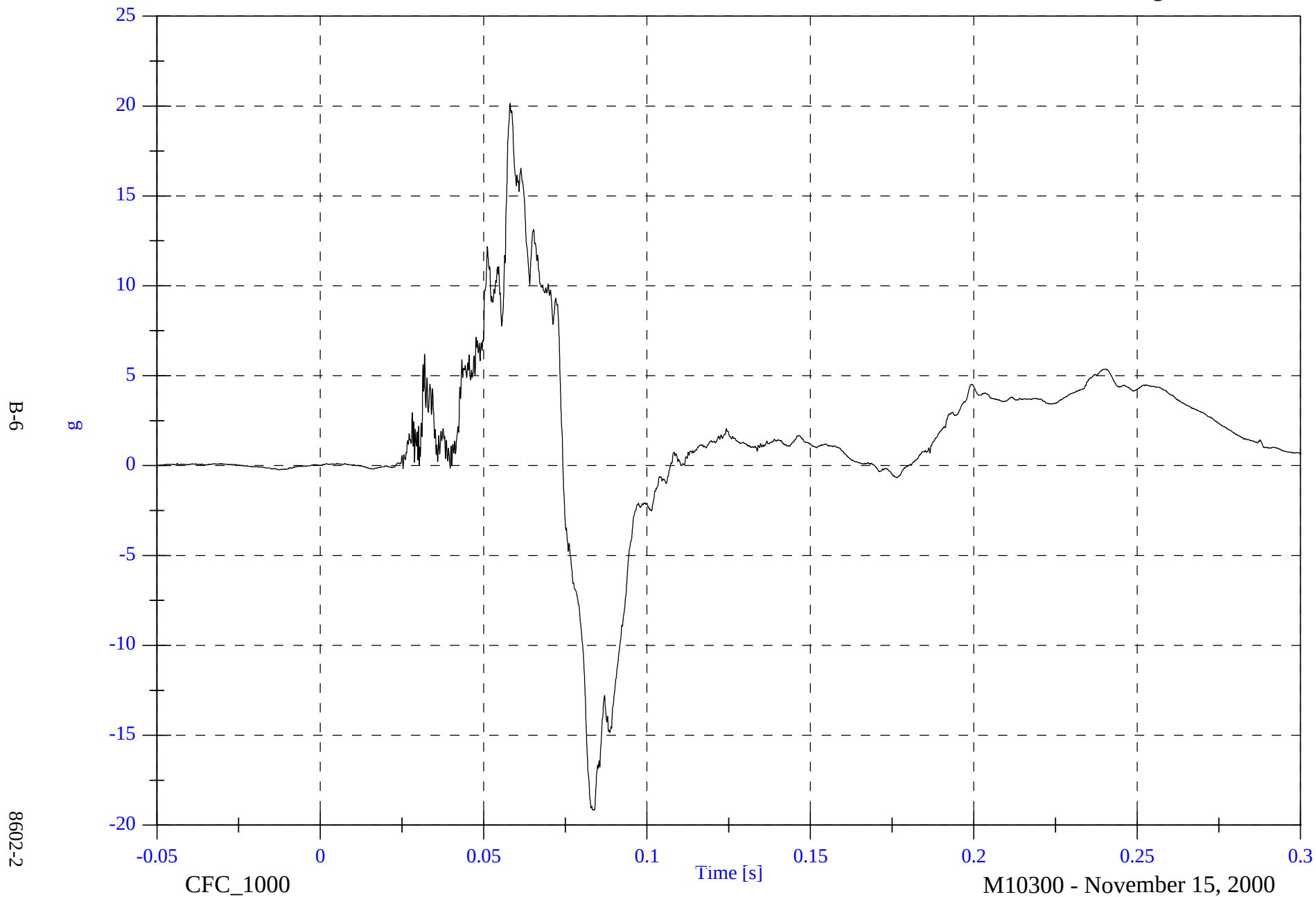


NCAP 2001 Test 2 - 2001 Chrysler LHS

P1 Head z

Max: 20.2 [g] at 0.058 [s]

Min: -19.2 [g] at 0.084 [s]

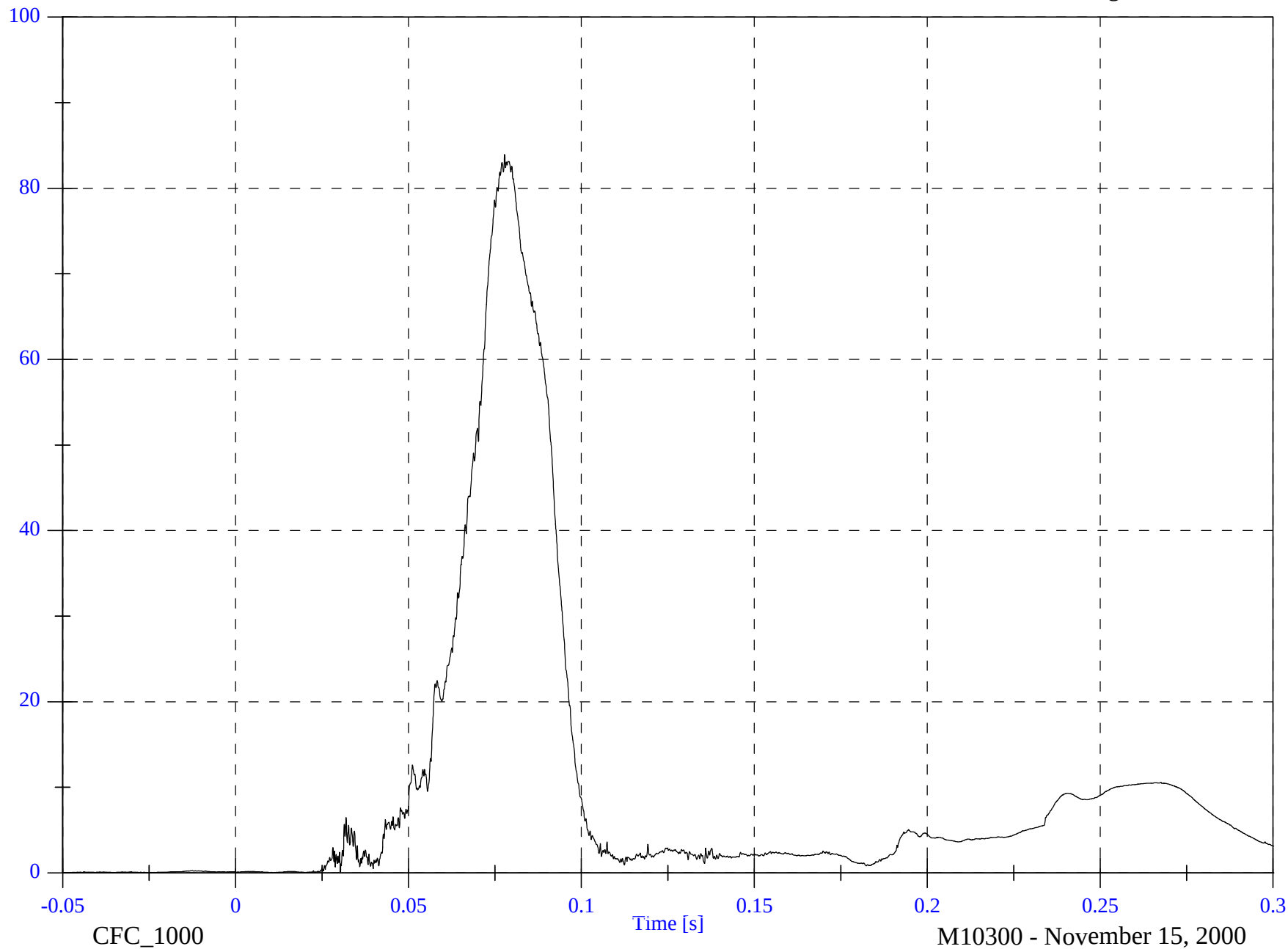


NCAP 2001 Test 2 - 2001 Chrysler LHS

P1 Head Resultant

Max: 83.9 [g] at 0.078 [s]

Min: 0.0 [g] at 0.011 [s]



B-7

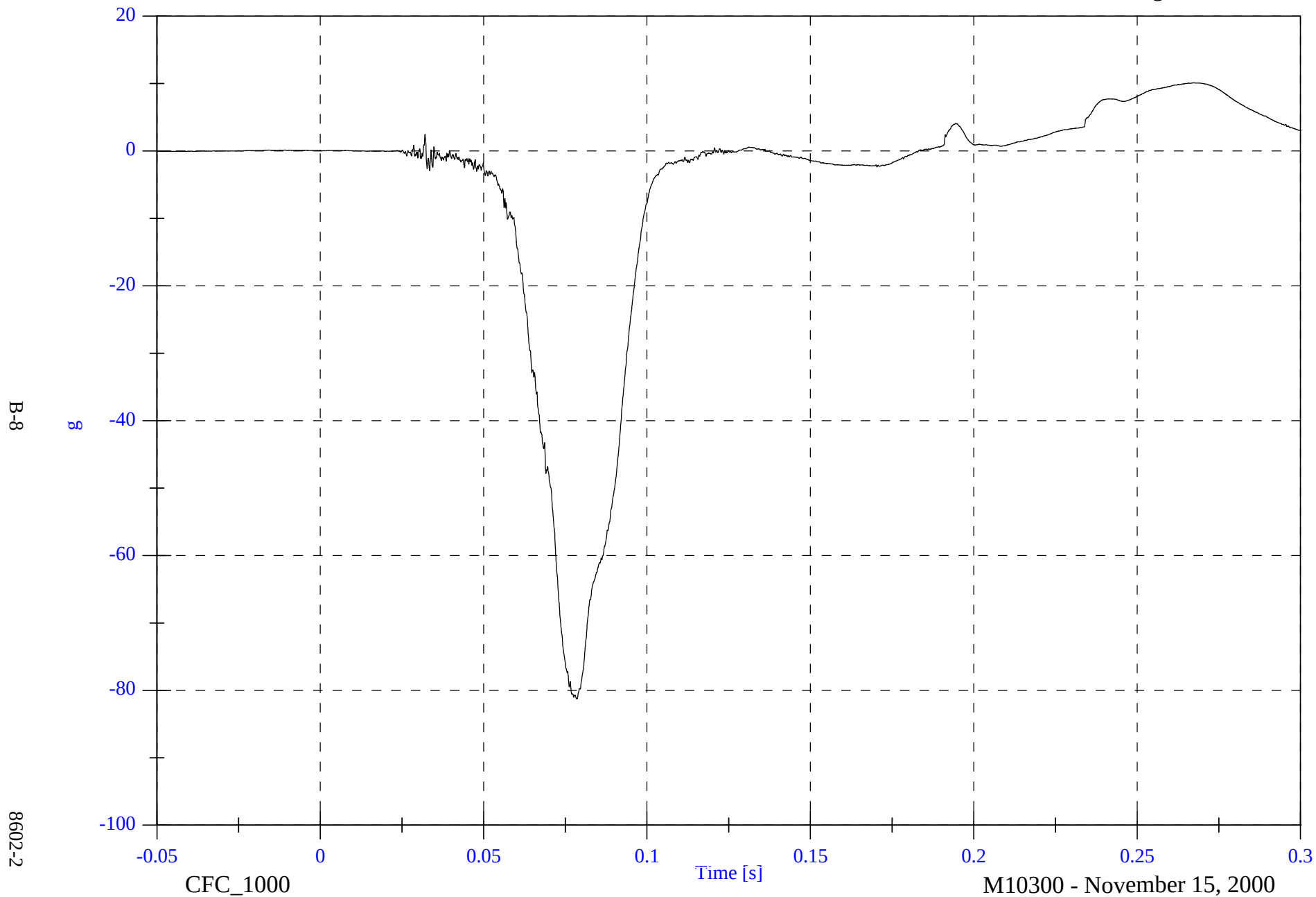
8602-2

NCAP 2001 Test 2 - 2001 Chrysler LHS

P1 Head Red x

Max: 10.1 [g] at 0.267 [s]

Min: -81.3 [g] at 0.079 [s]

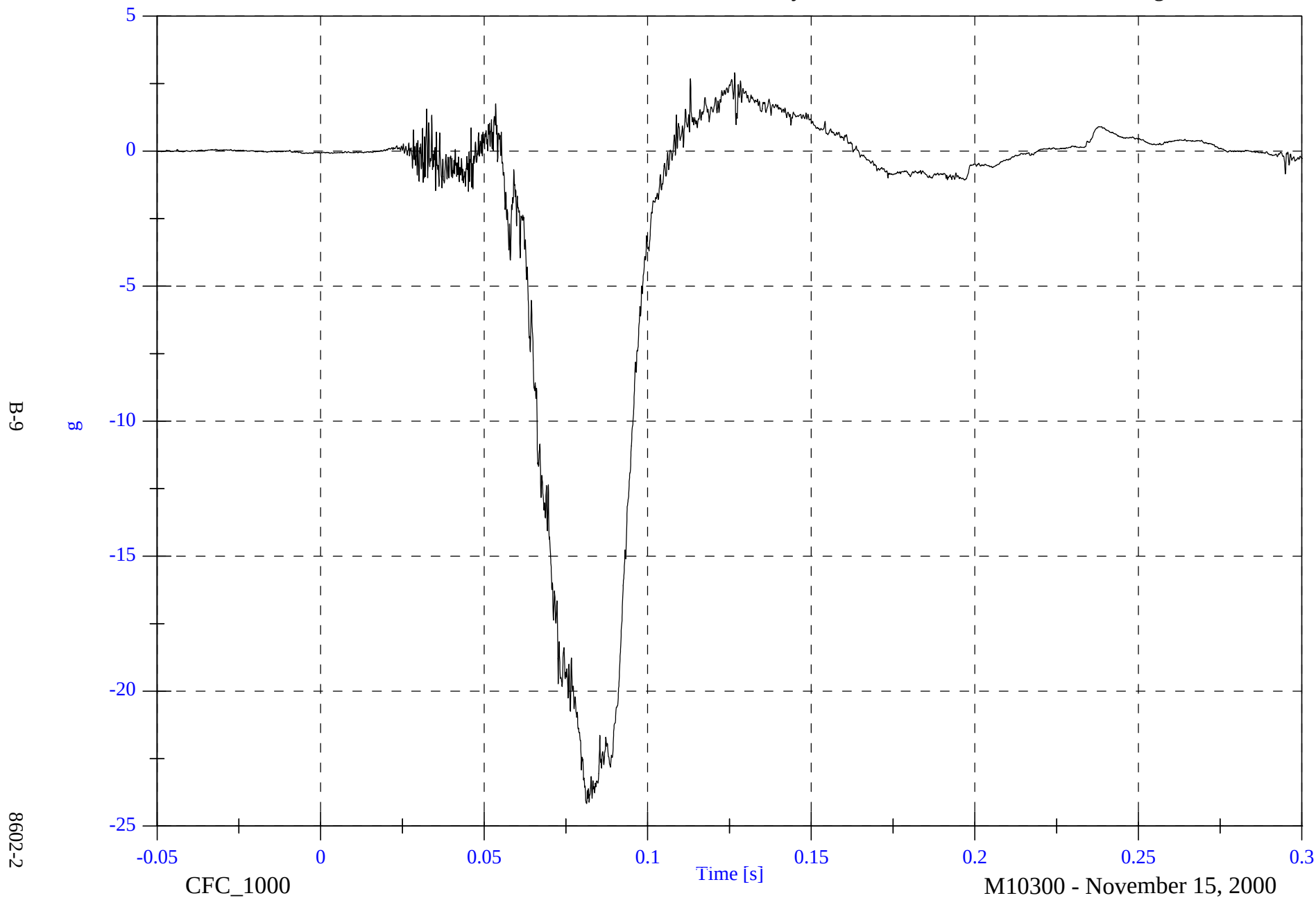


NCAP 2001 Test 2 - 2001 Chrysler LHS

P1 Head Red y

Max: 2.9 [g] at 0.127 [s]

Min: -24.2 [g] at 0.081 [s]

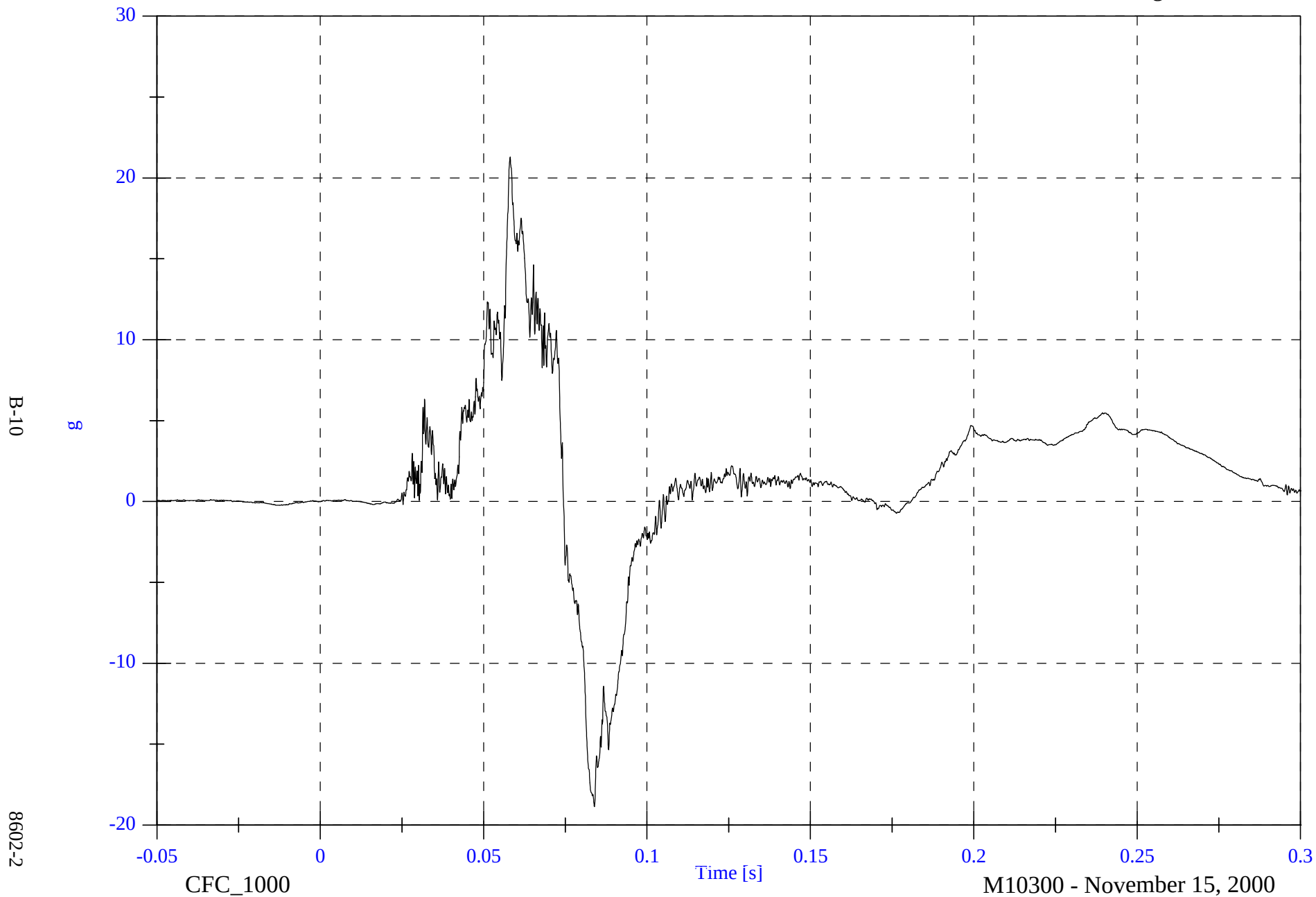


NCAP 2001 Test 2 - 2001 Chrysler LHS

P1 Head Red z

Max: 21.3 [g] at 0.058 [s]

Min: -18.9 [g] at 0.084 [s]



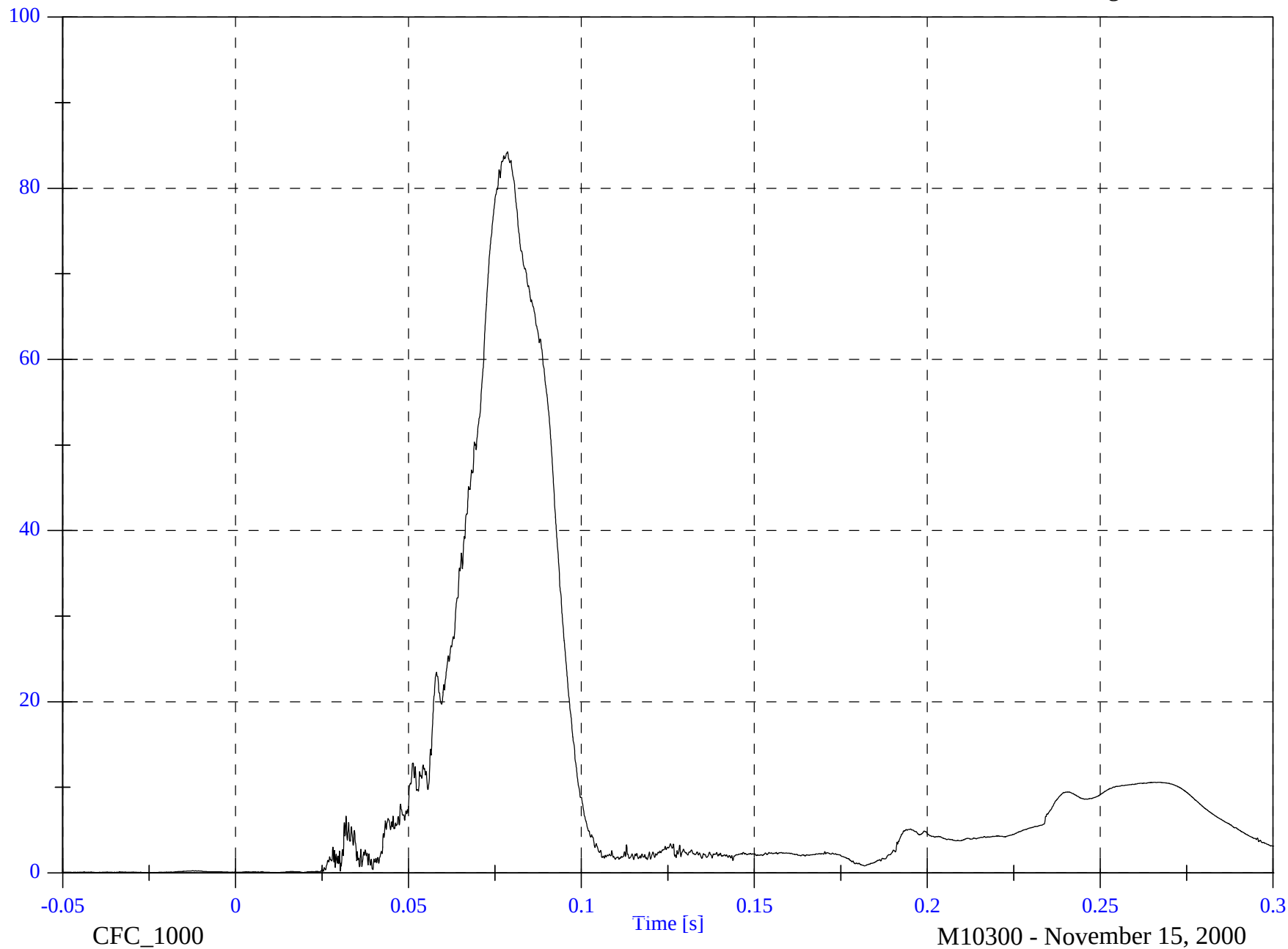
8602-2

NCAP 2001 Test 2 - 2001 Chrysler LHS

P1 Head Red Resultant

Max: 84.3 [g] at 0.079 [s]

Min: 0.0 [g] at -0.027 [s]



B-11

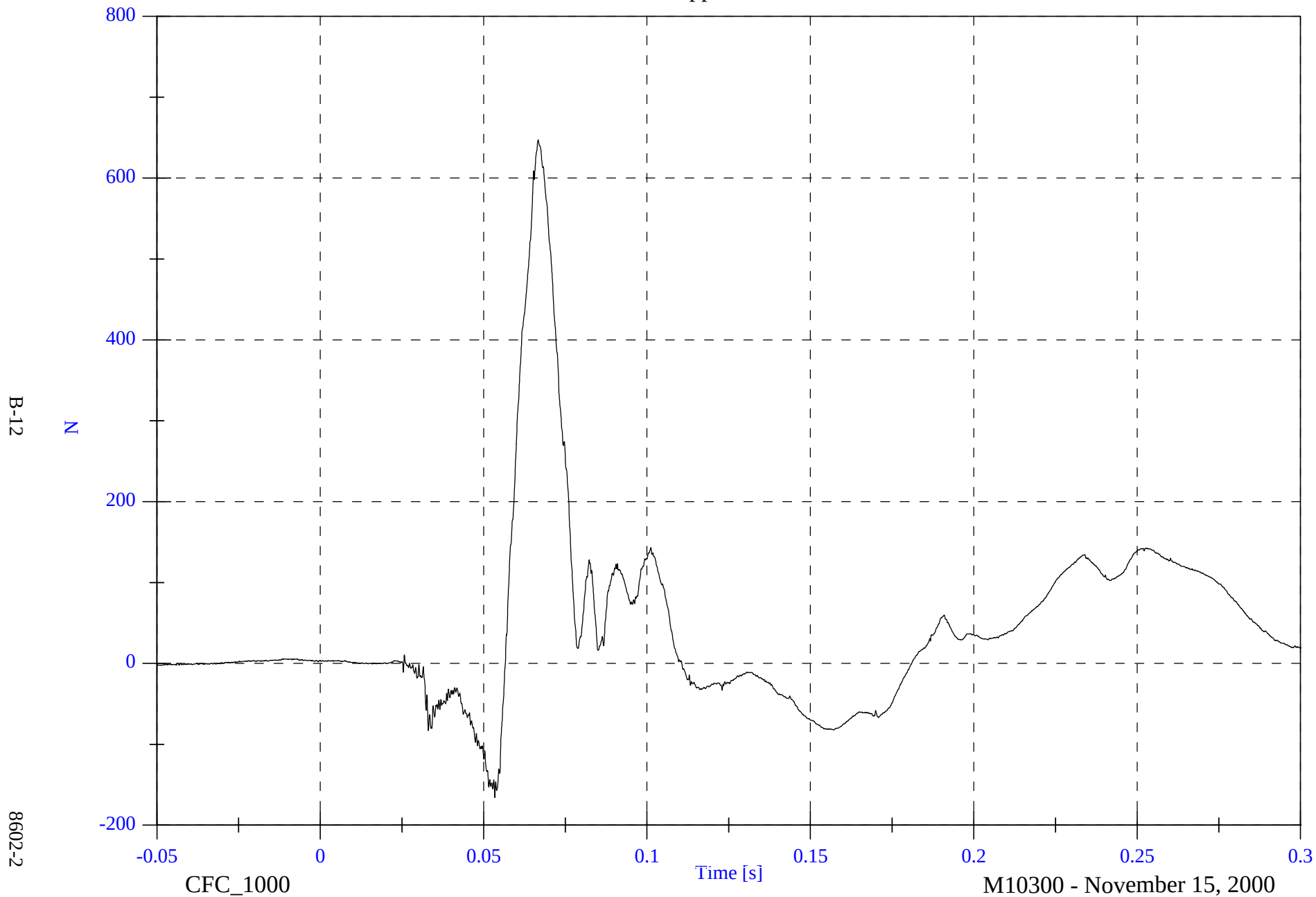
8602-2

NCAP 2001 Test 2 - 2001 Chrysler LHS

P1 Upper Neck Fx

Max: 647.1 [N] at 0.067 [s]

Min: -165.9 [N] at 0.053 [s]

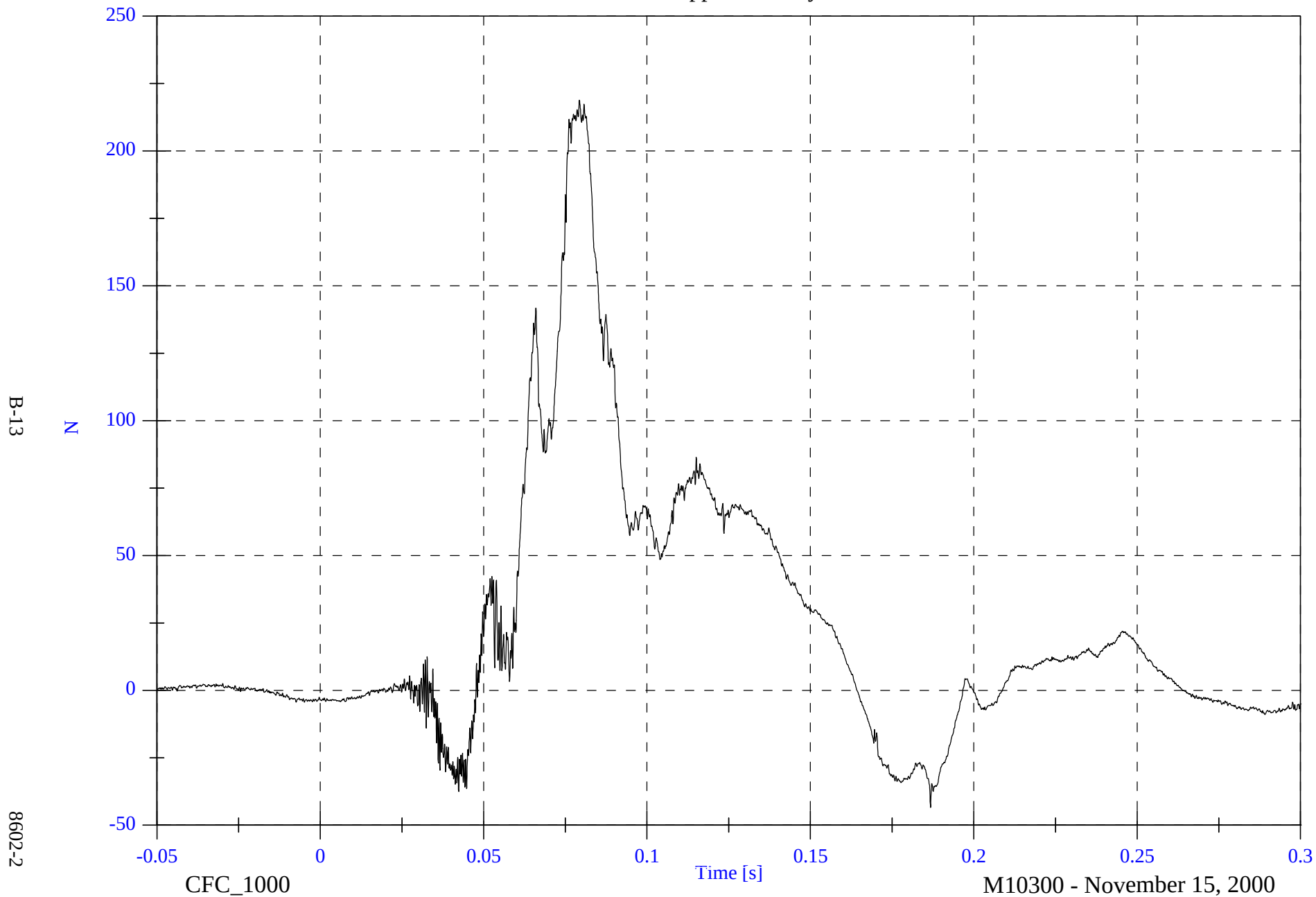


NCAP 2001 Test 2 - 2001 Chrysler LHS

P1 Upper Neck Fy

Max: 218.9 [N] at 0.079 [s]

Min: -43.5 [N] at 0.187 [s]



NCAP 2001 Test 2 - 2001 Chrysler LHS

P1 Upper Neck Fz

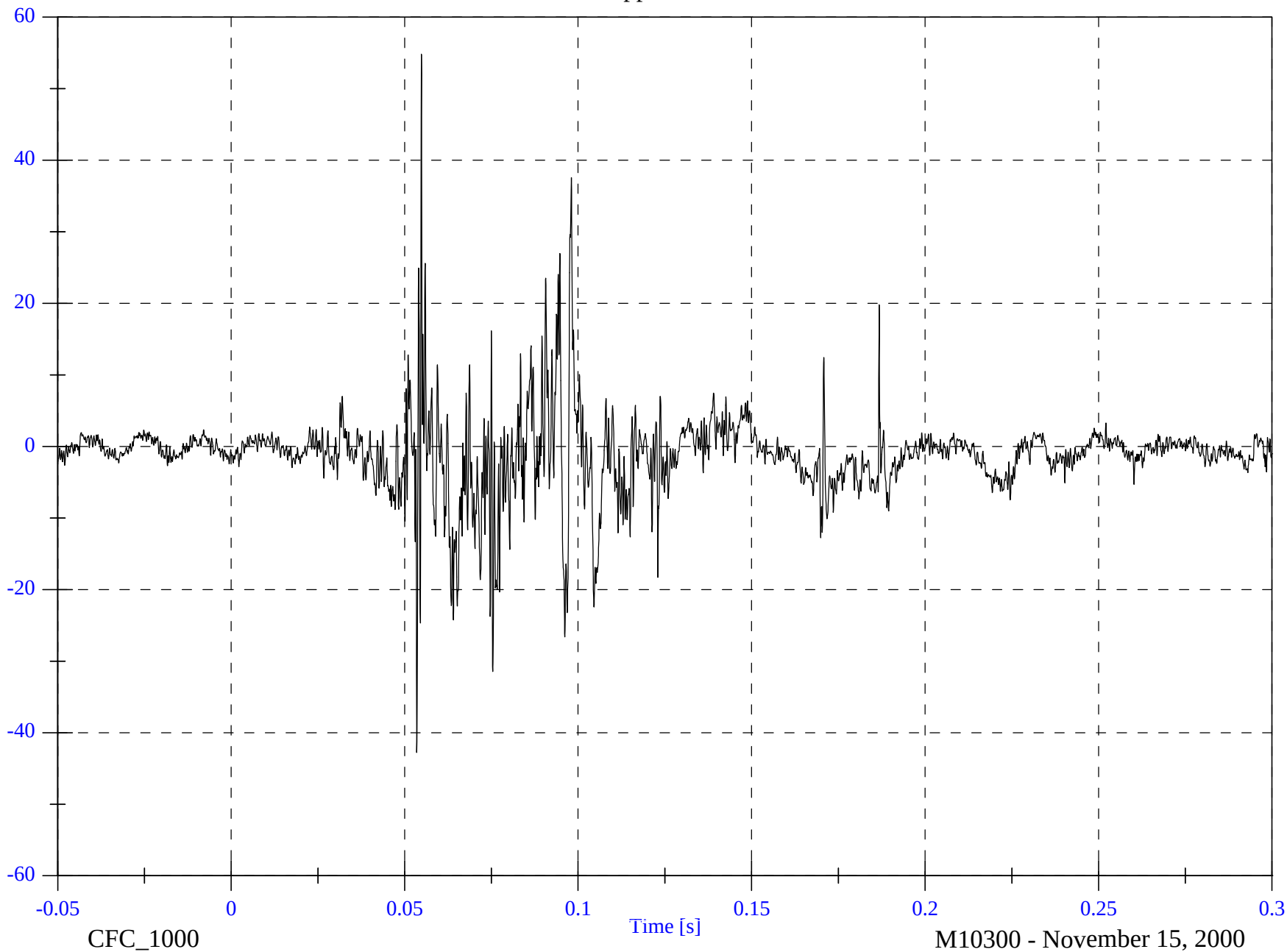
Max: 54.8 [N] at 0.055 [s]

Min: -42.8 [N] at 0.054 [s]

B-14

N

8602-2



NCAP 2001 Test 2 - 2001 Chrysler LHS

P1 Upper Neck F Resultant

Max: 658.3 [N] at 0.067 [s]

Min: 0.3 [N] at 0.019 [s]

B-15

N

8602-2

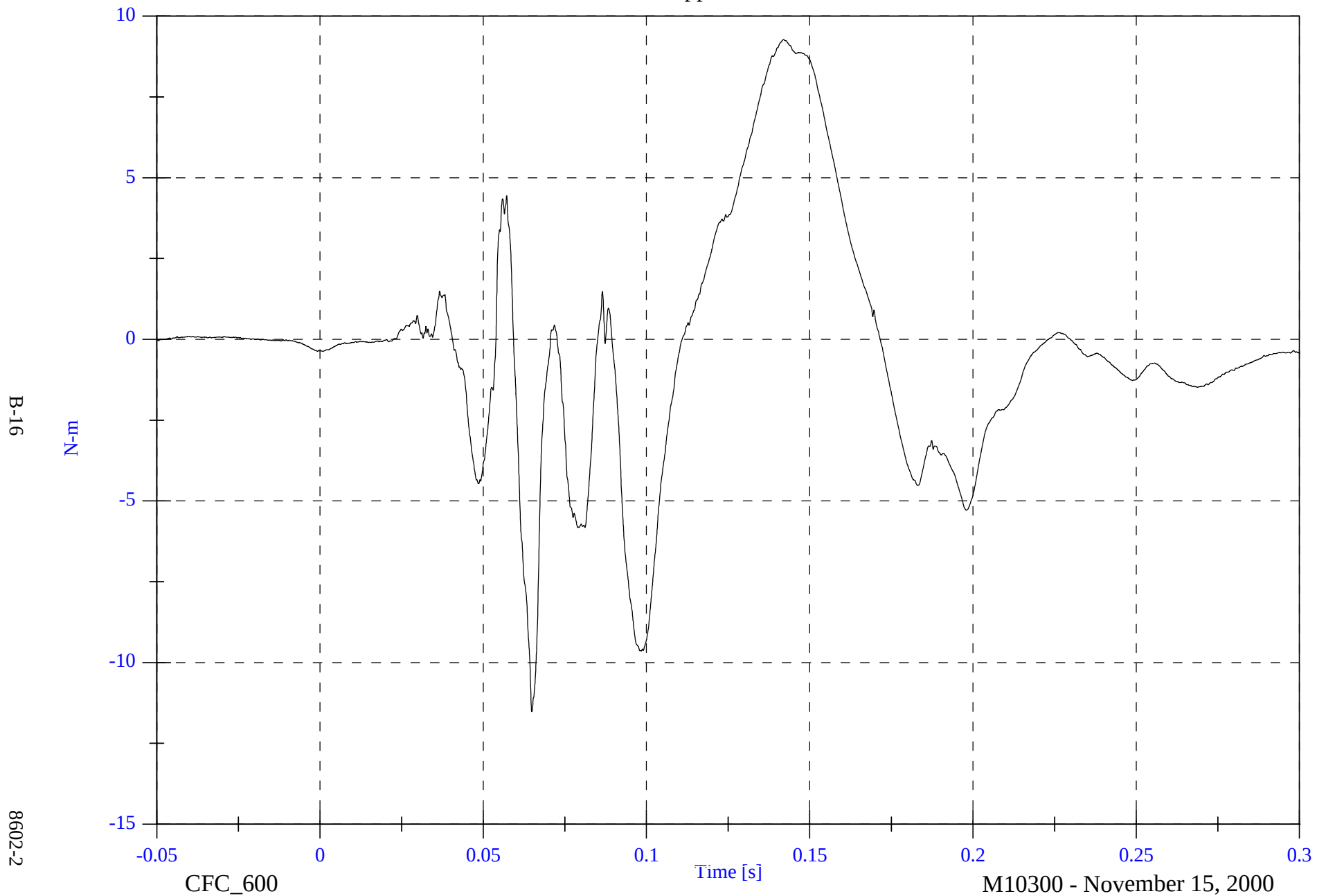


NCAP 2001 Test 2 - 2001 Chrysler LHS

P1 Upper Neck Mx

Max: 9.3 [N-m] at 0.142 [s]

Min: -11.5 [N-m] at 0.065 [s]



8602-2

NCAP 2001 Test 2 - 2001 Chrysler LHS

P1 Upper Neck My

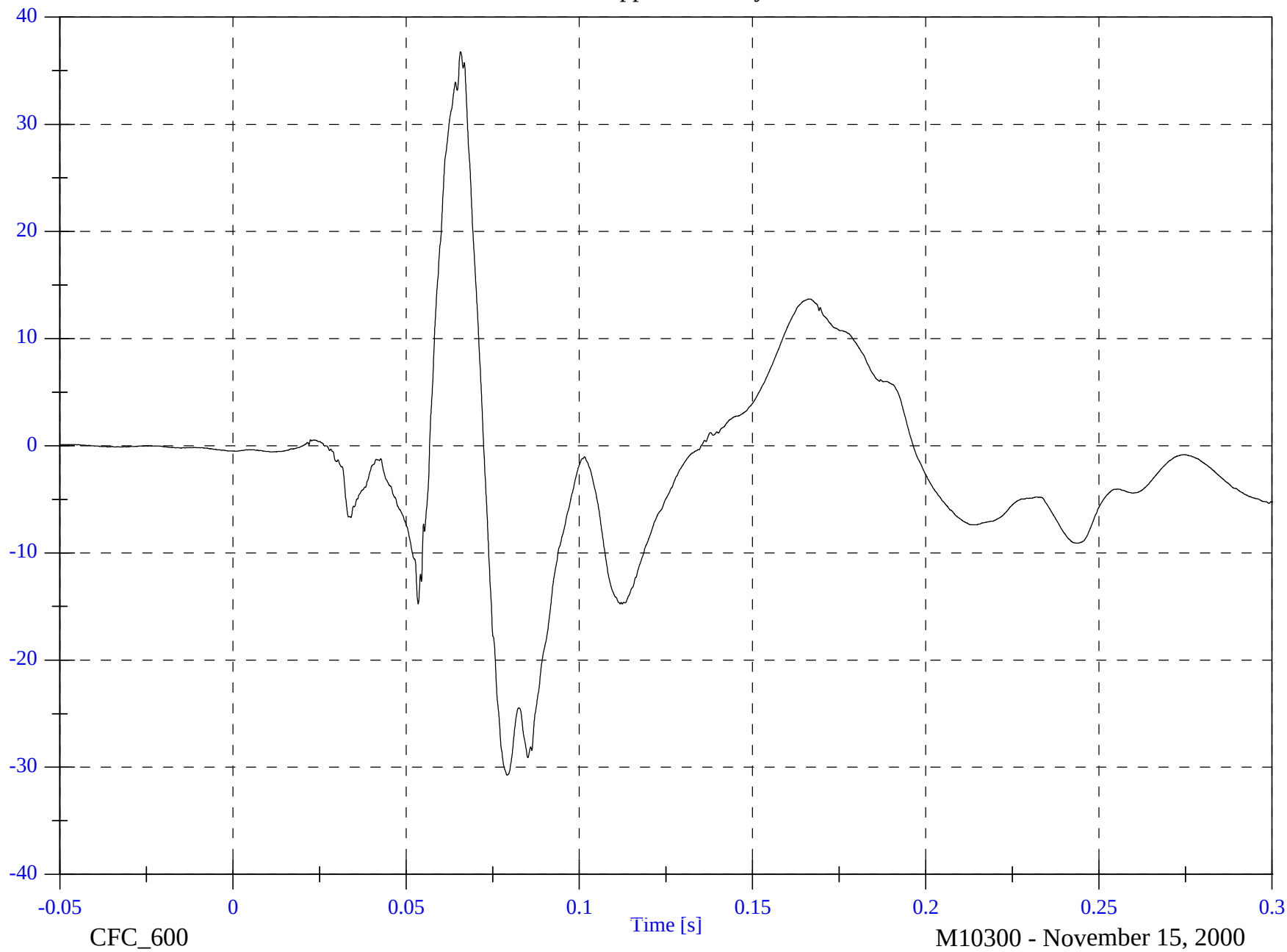
Max: 36.8 [N-m] at 0.066 [s]

Min: -30.7 [N-m] at 0.079 [s]

B-17

m-N

8602-2



NCAP 2001 Test 2 - 2001 Chrysler LHS

P1 Upper Neck Mz

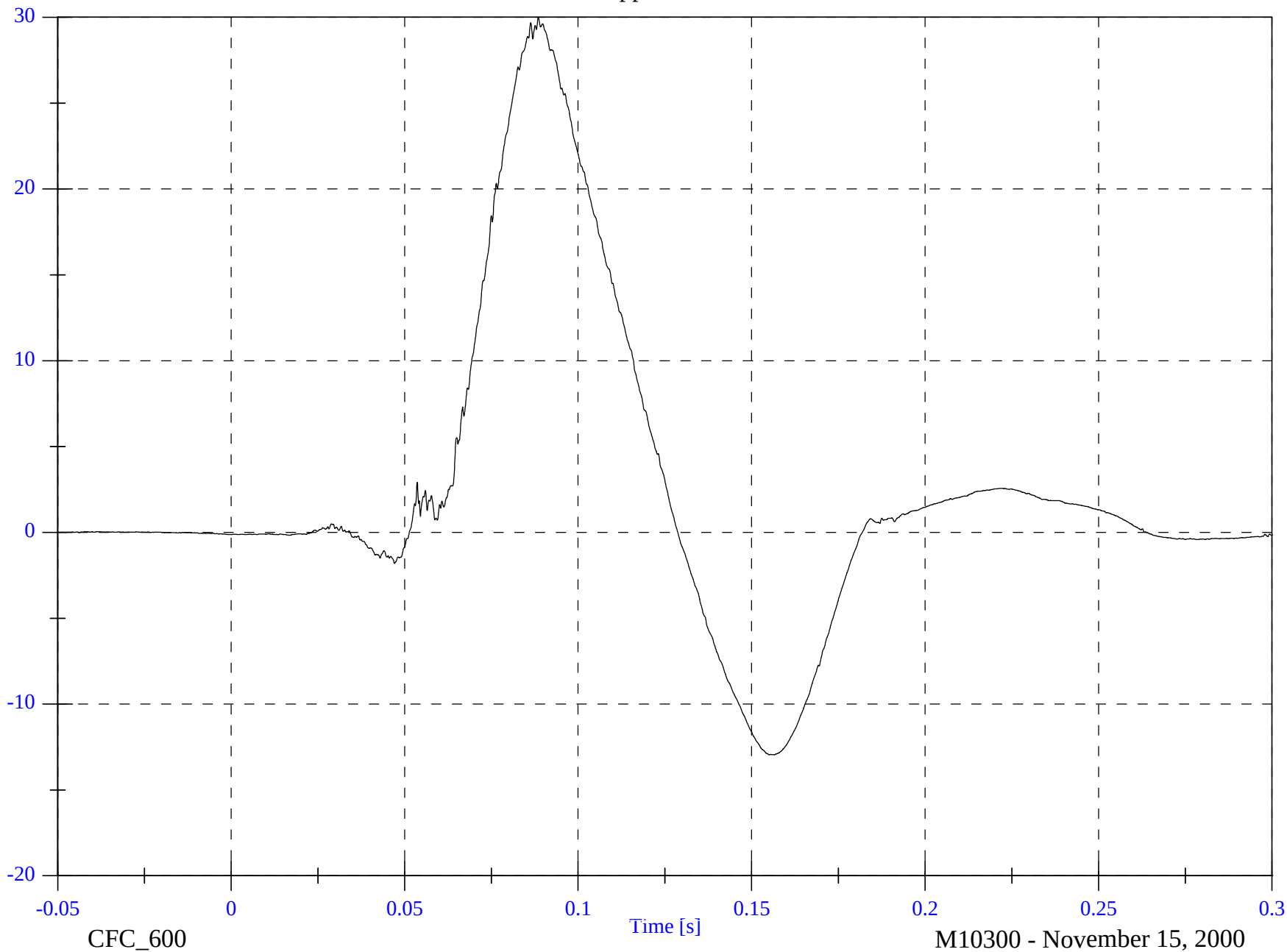
Max: 30.0 [N-m] at 0.089 [s]

Min: -13.0 [N-m] at 0.157 [s]

B-18

N-m

8602-2

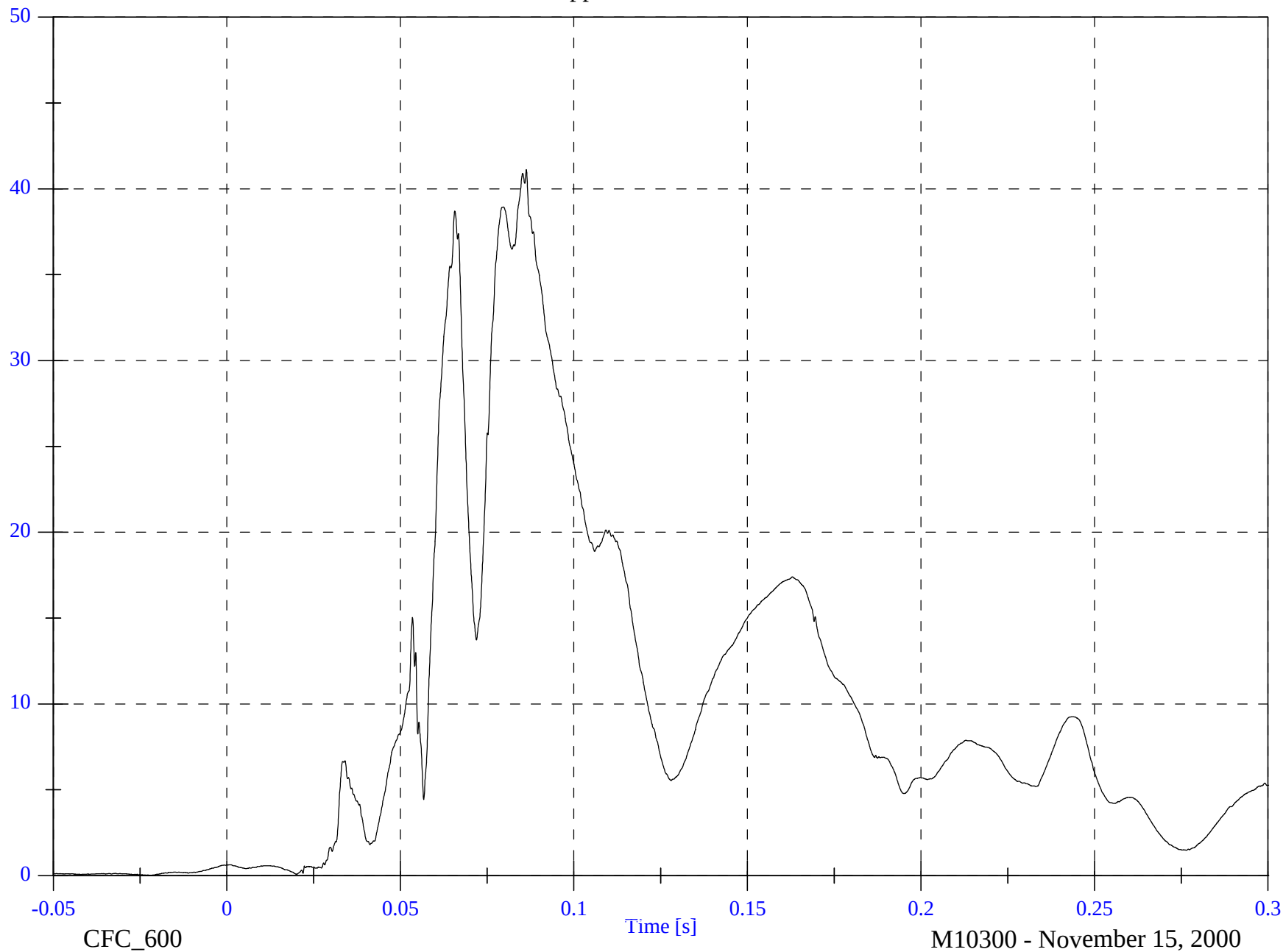


NCAP 2001 Test 2 - 2001 Chrysler LHS

P1 Upper Neck M Resultant

Max: 41.1 [N-m] at 0.086 [s]

Min: 0.0 [N-m] at -0.022 [s]



B-19

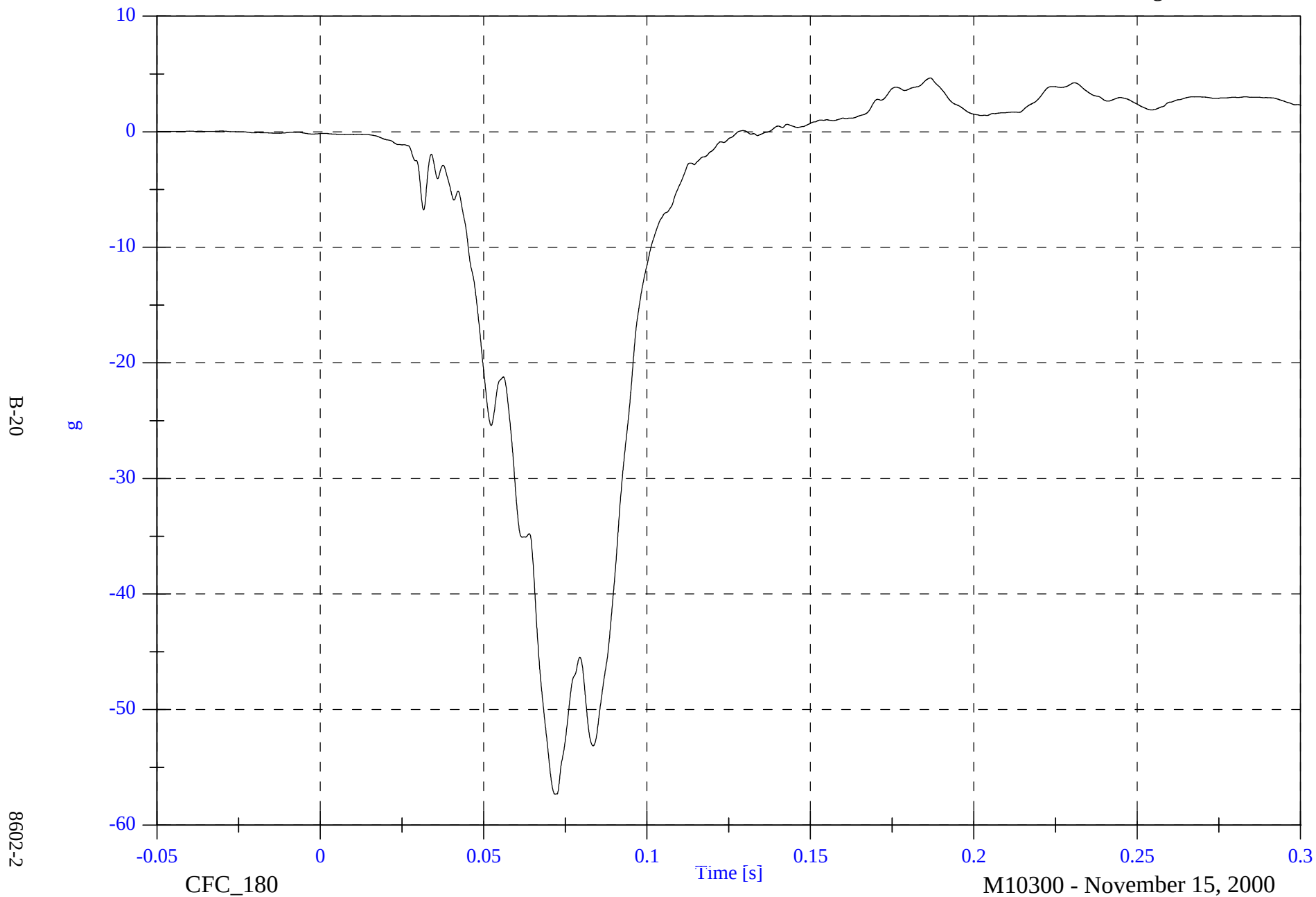
8602-2

NCAP 2001 Test 2 - 2001 Chrysler LHS

P1 Chest x

Max: 4.7 [g] at 0.187 [s]

Min: -57.3 [g] at 0.072 [s]

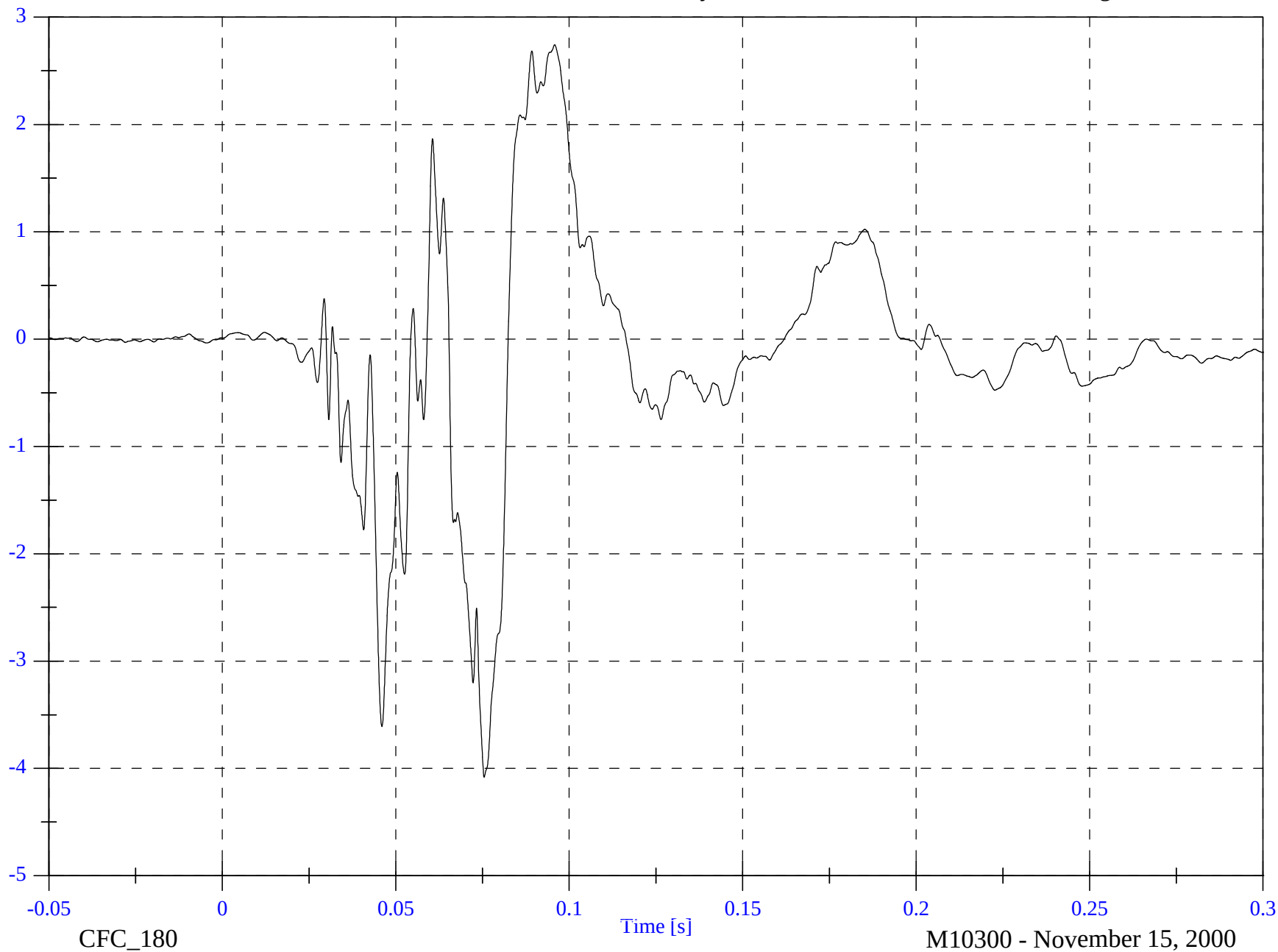


NCAP 2001 Test 2 - 2001 Chrysler LHS

P1 Chest y

Max: 2.7 [g] at 0.096 [s]

Min: -4.1 [g] at 0.075 [s]



B-21

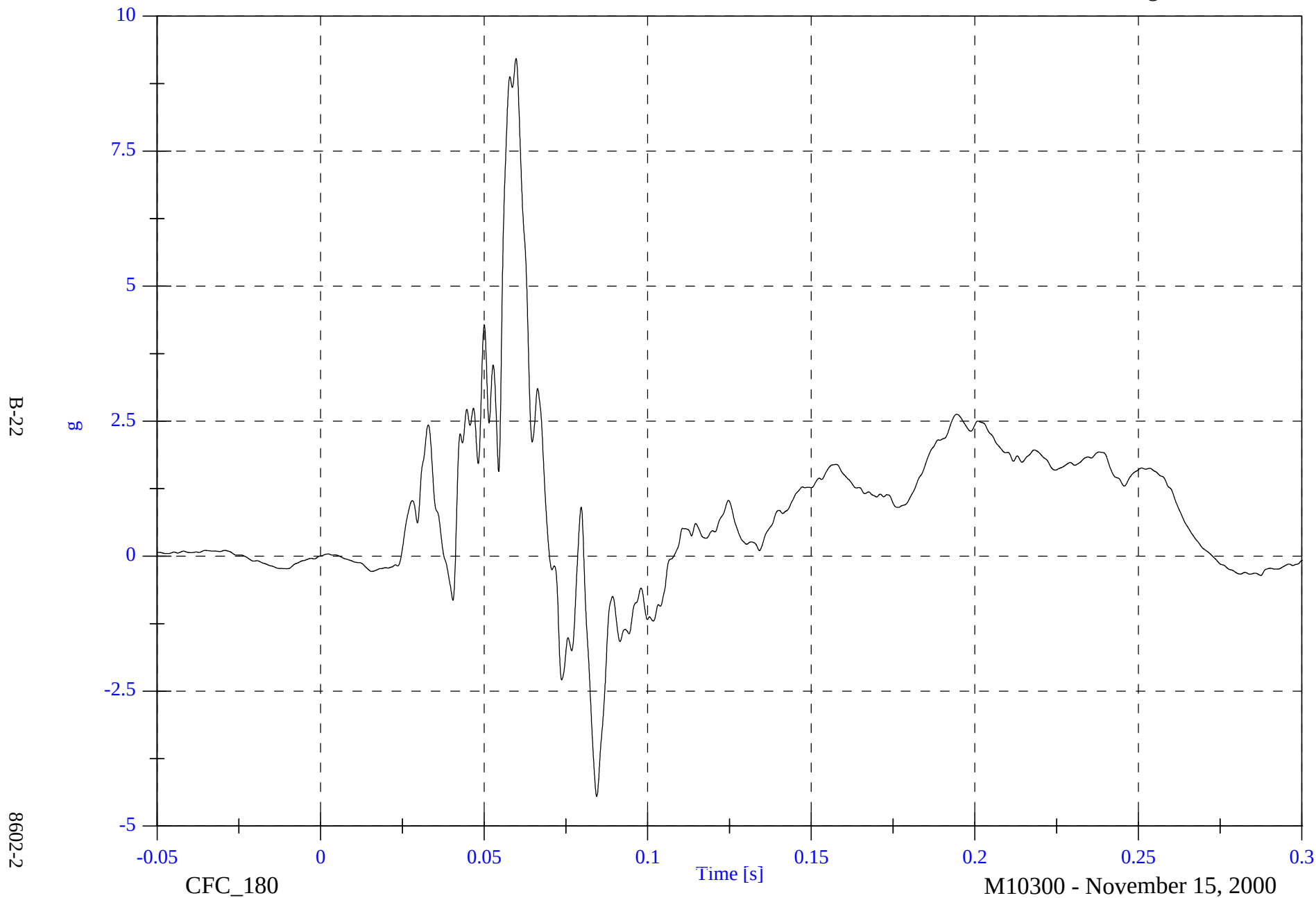
8602-2

NCAP 2001 Test 2 - 2001 Chrysler LHS

P1 Chest z

Max: 9.2 [g] at 0.060 [s]

Min: -4.5 [g] at 0.084 [s]



8602-2

NCAP 2001 Test 2 - 2001 Chrysler LHS

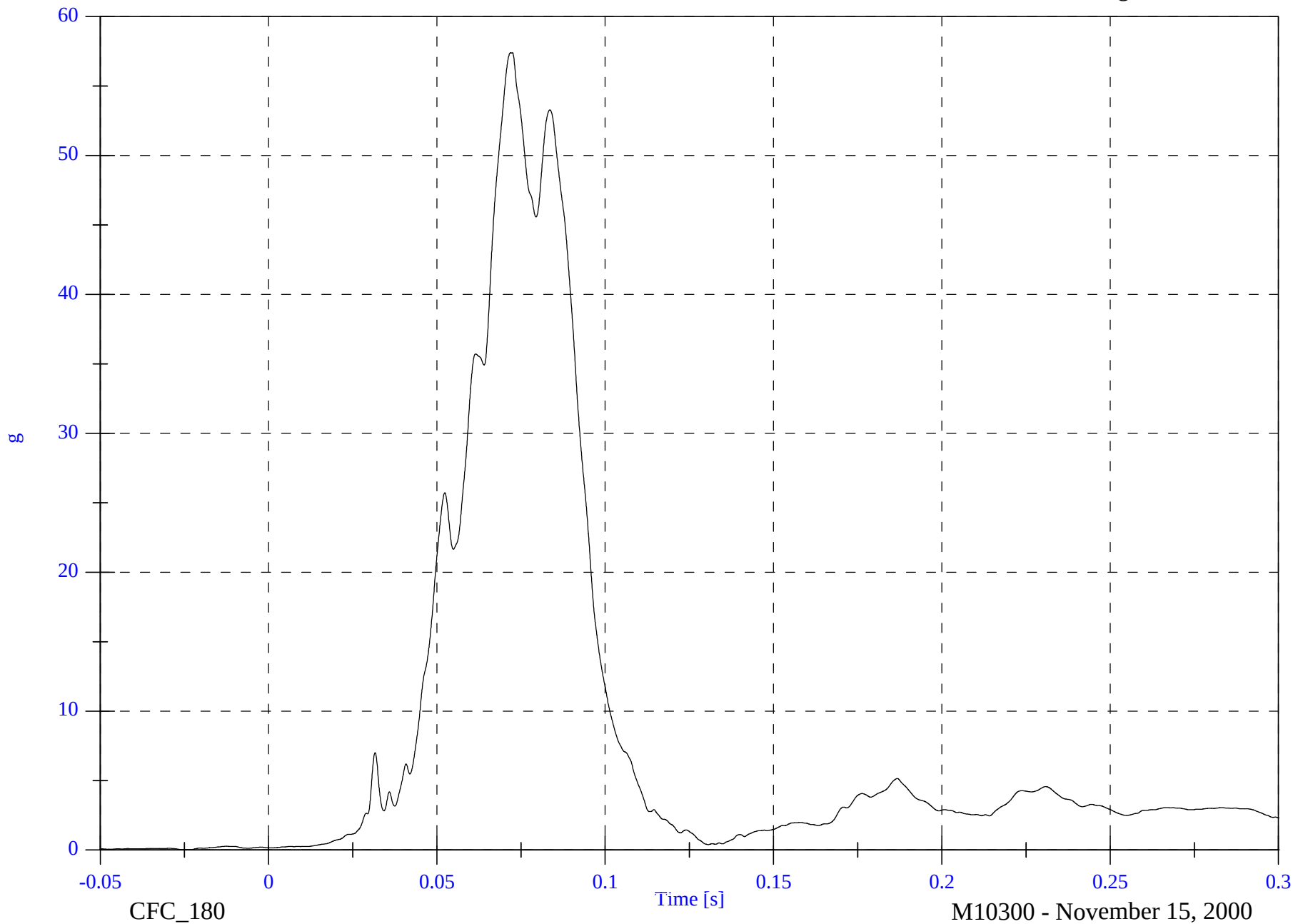
P1 Chest Resultant

Max: 57.4 [g] at 0.072 [s]

Min: 0.0 [g] at -0.026 [s]

B-23

8602-2

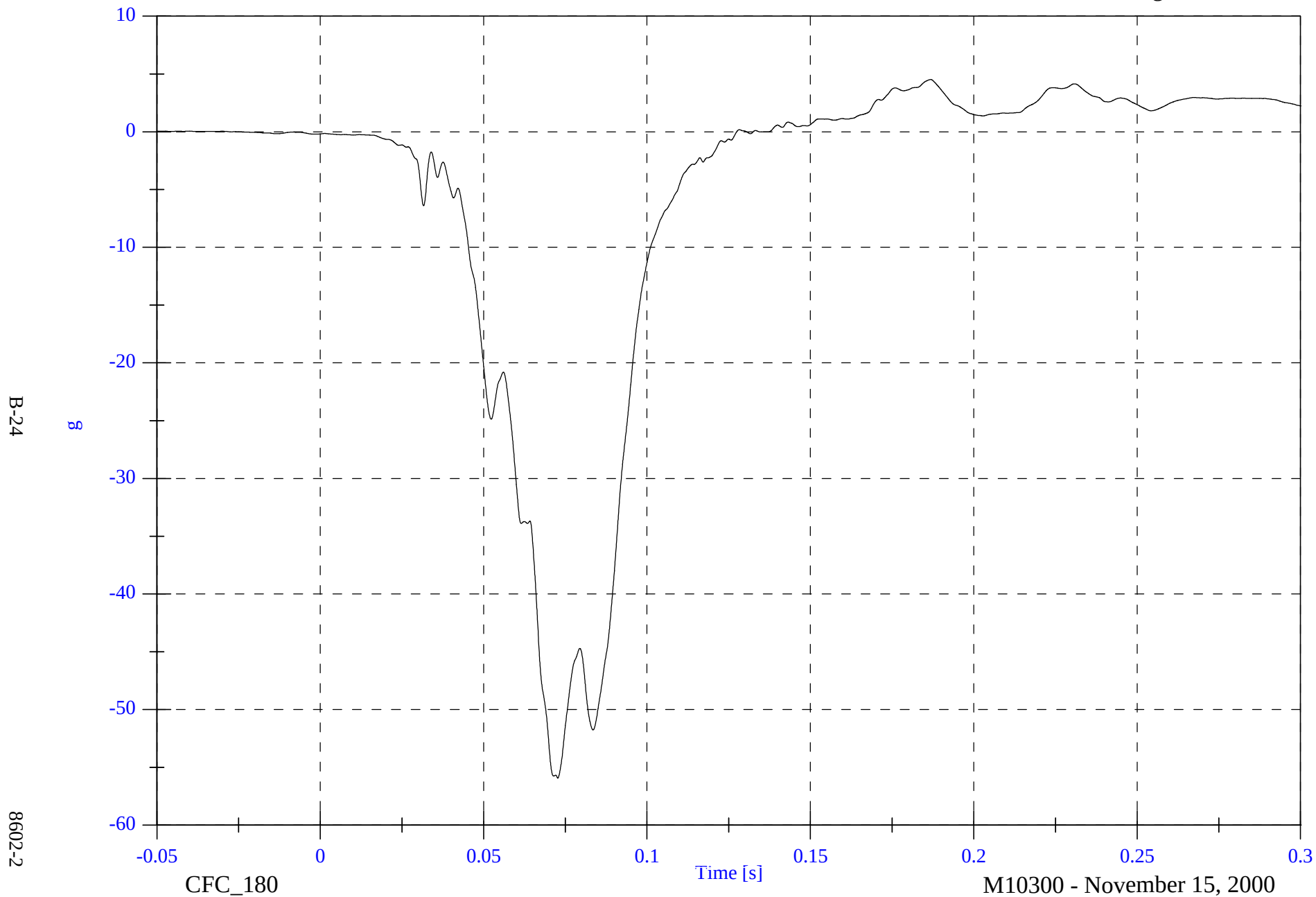


NCAP 2001 Test 2 - 2001 Chrysler LHS

P1 Chest Red x

Max: 4.5 [g] at 0.187 [s]

Min: -55.9 [g] at 0.073 [s]



NCAP 2001 Test 2 - 2001 Chrysler LHS

P1 Chest Red y

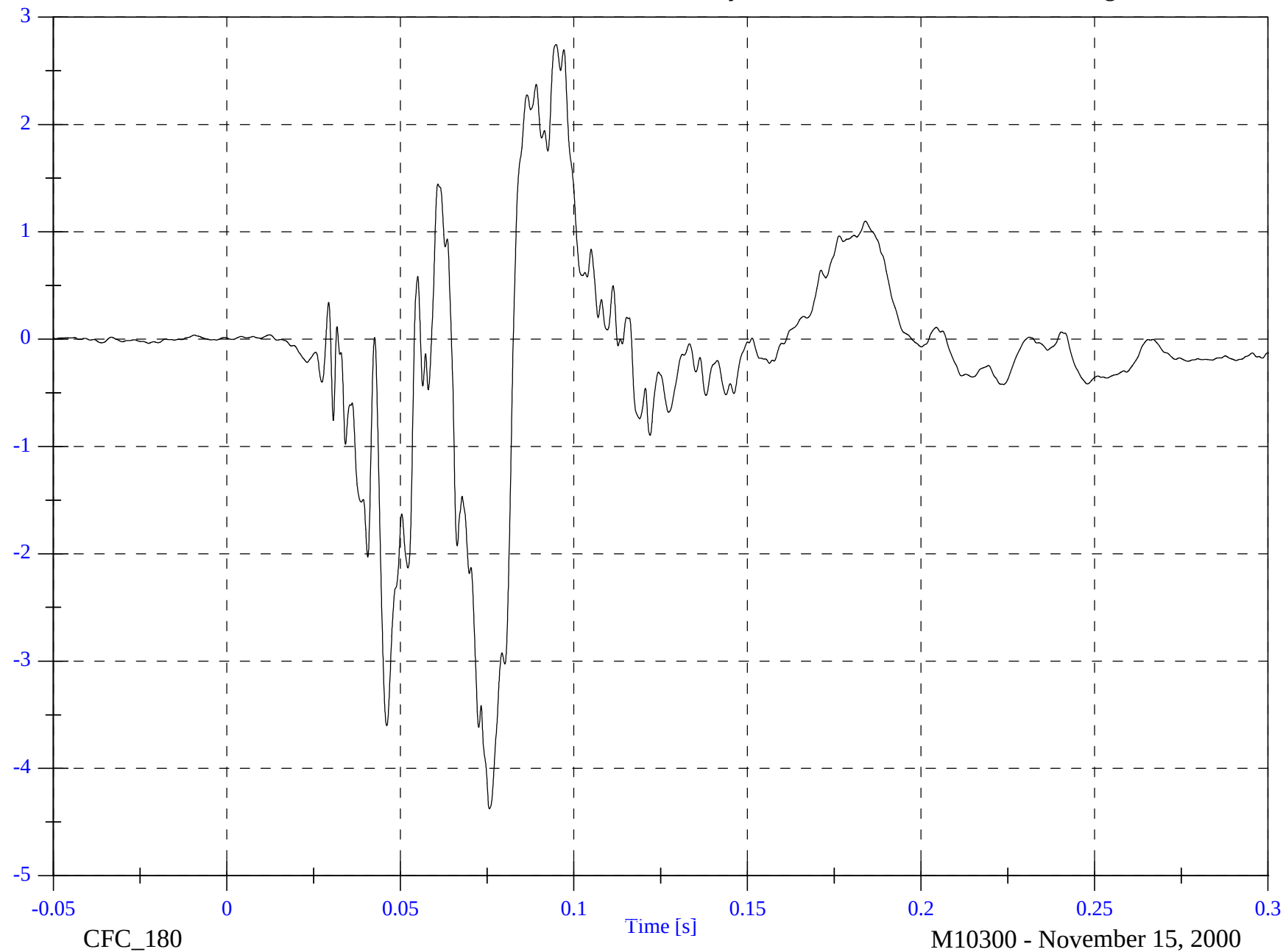
Max: 2.7 [g] at 0.095 [s]

Min: -4.4 [g] at 0.076 [s]

B-25

8602-2

g

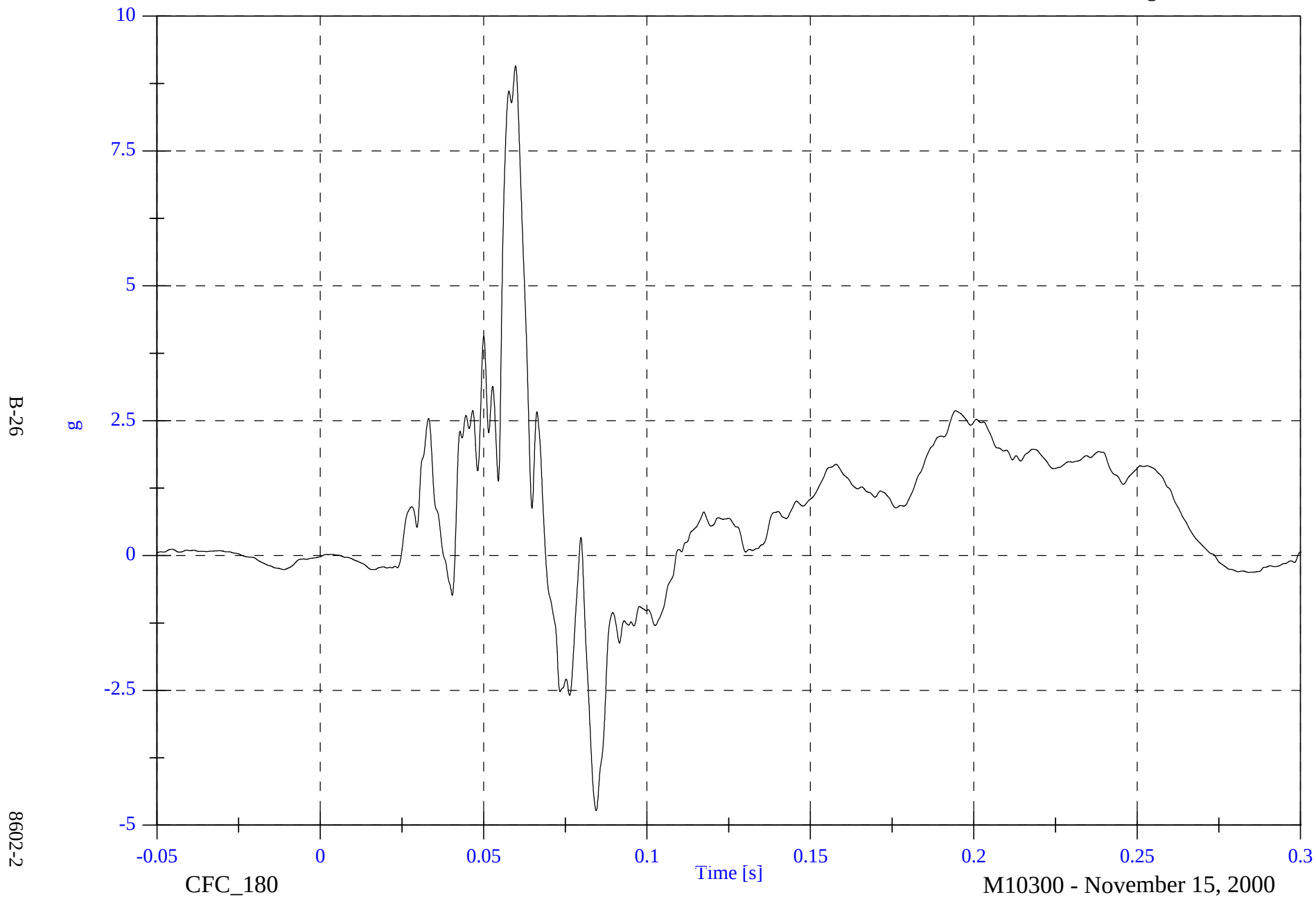


NCAP 2001 Test 2 - 2001 Chrysler LHS

P1 Chest Red z

Max: 9.1 [g] at 0.060 [s]

Min: -4.7 [g] at 0.084 [s]



NCAP 2001 Test 2 - 2001 Chrysler LHS

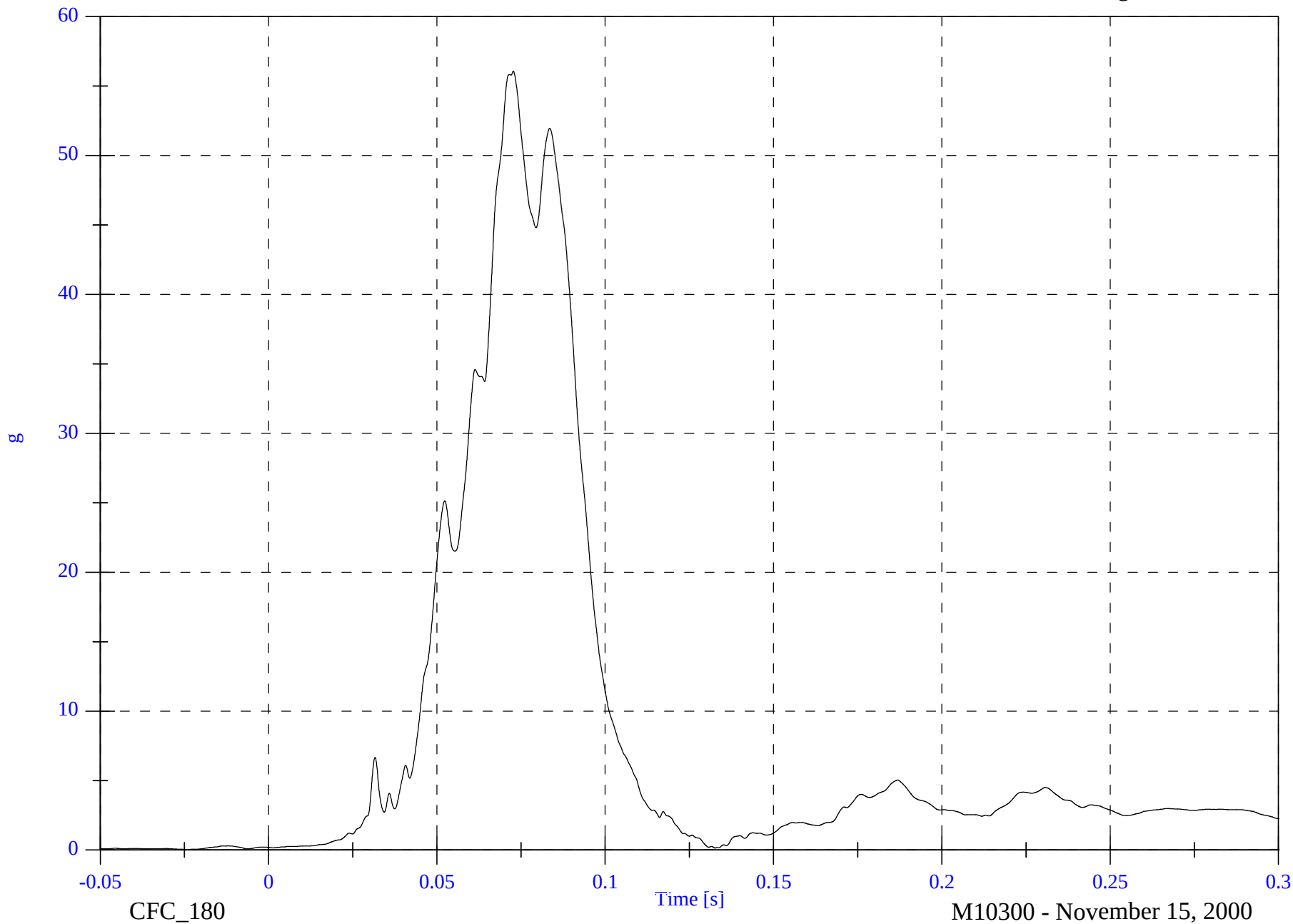
P1 Chest Red Resultant

Max: 56.1 [g] at 0.073 [s]

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

B-27

8602-2

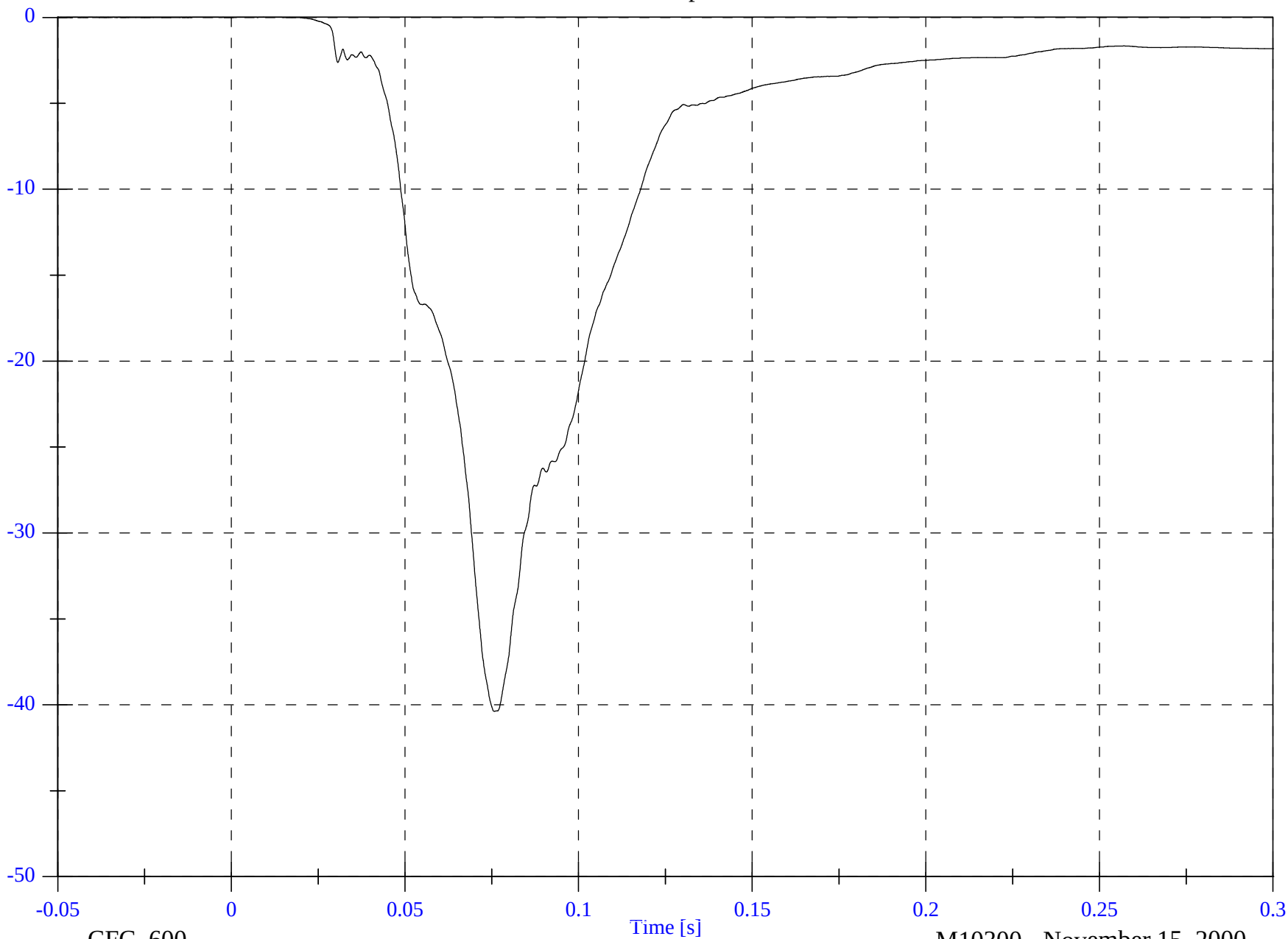


NCAP 2001 Test 2 - 2001 Chrysler LHS

P1 Chest Compression x

Max: 0.0 [mm] at 0.009 [s]

Min: -40.4 [mm] at 0.076 [s]



B-28

8602-2

CFC_600

M10300 - November 15, 2000

NCAP 2001 Test 2 - 2001 Chrysler LHS

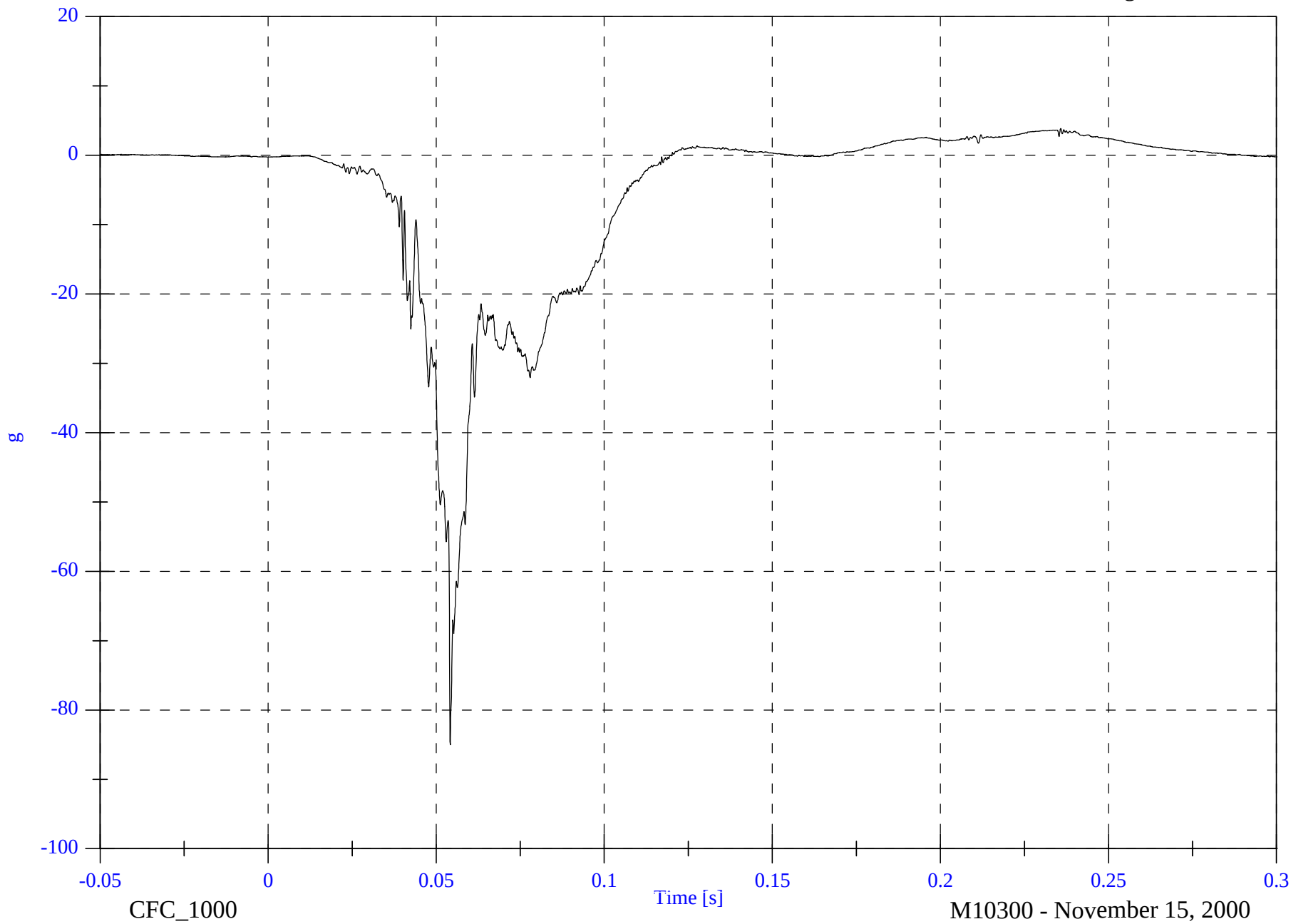
P1 Pelvic x

Max: 3.9 [g] at 0.236 [s]

Min: -85.0 [g] at 0.054 [s]

B-29

8602-2

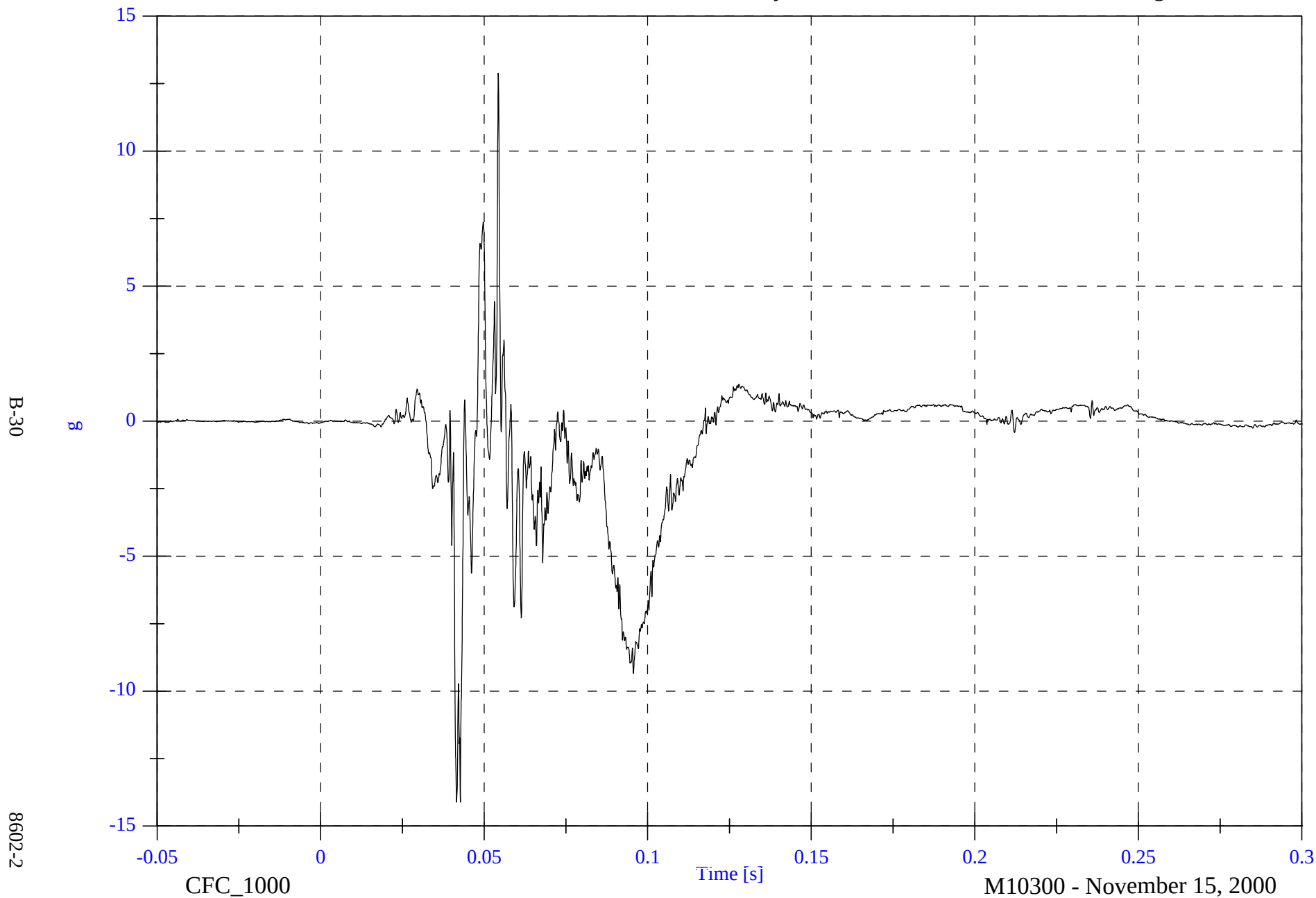


NCAP 2001 Test 2 - 2001 Chrysler LHS

P1 Pelvic y

Max: 12.9 [g] at 0.054 [s]

Min: -14.1 [g] at 0.042 [s]

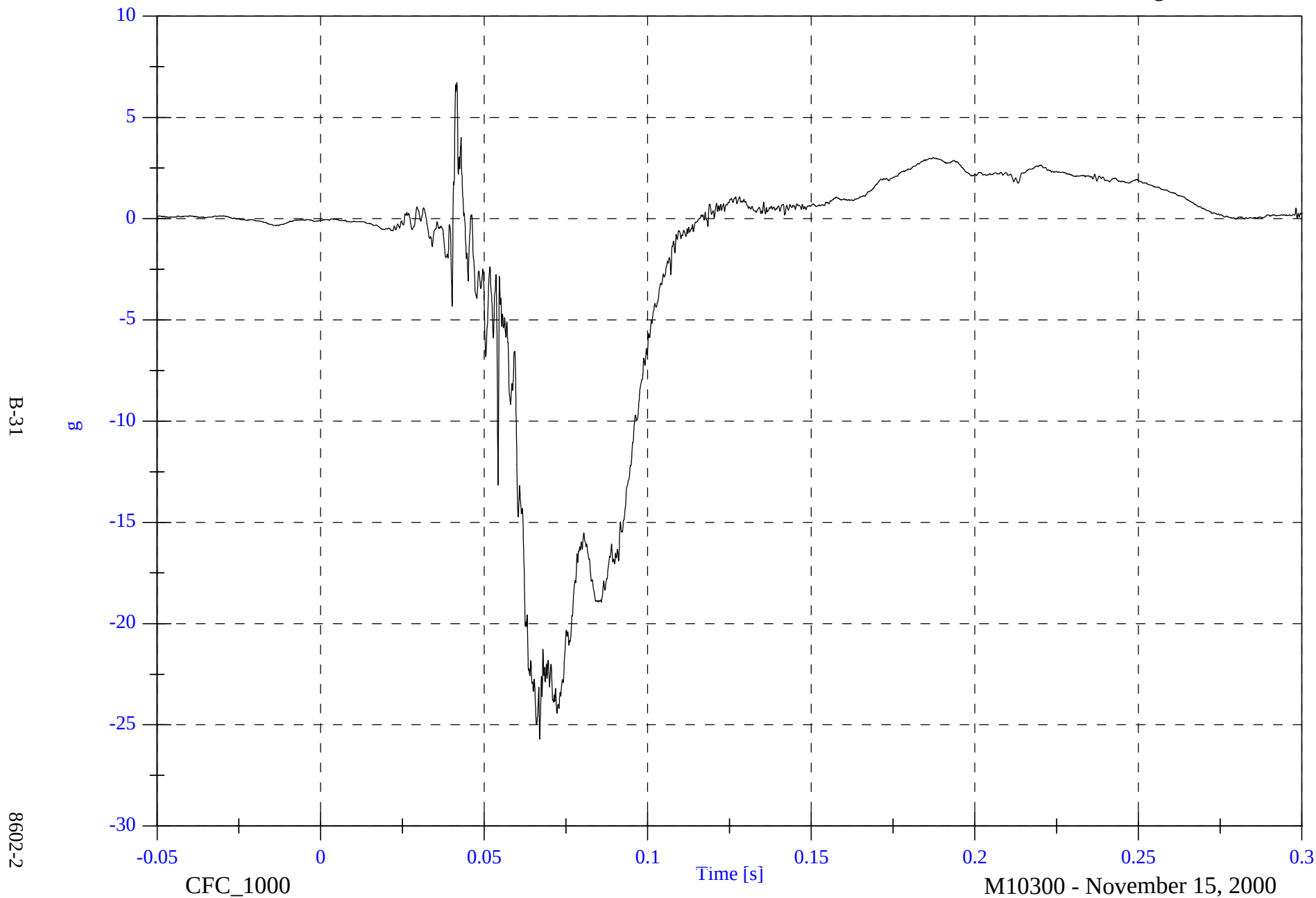


NCAP 2001 Test 2 - 2001 Chrysler LHS

P1 Pelvic z

Max: 6.7 [g] at 0.042 [s]

Min: -25.7 [g] at 0.067 [s]

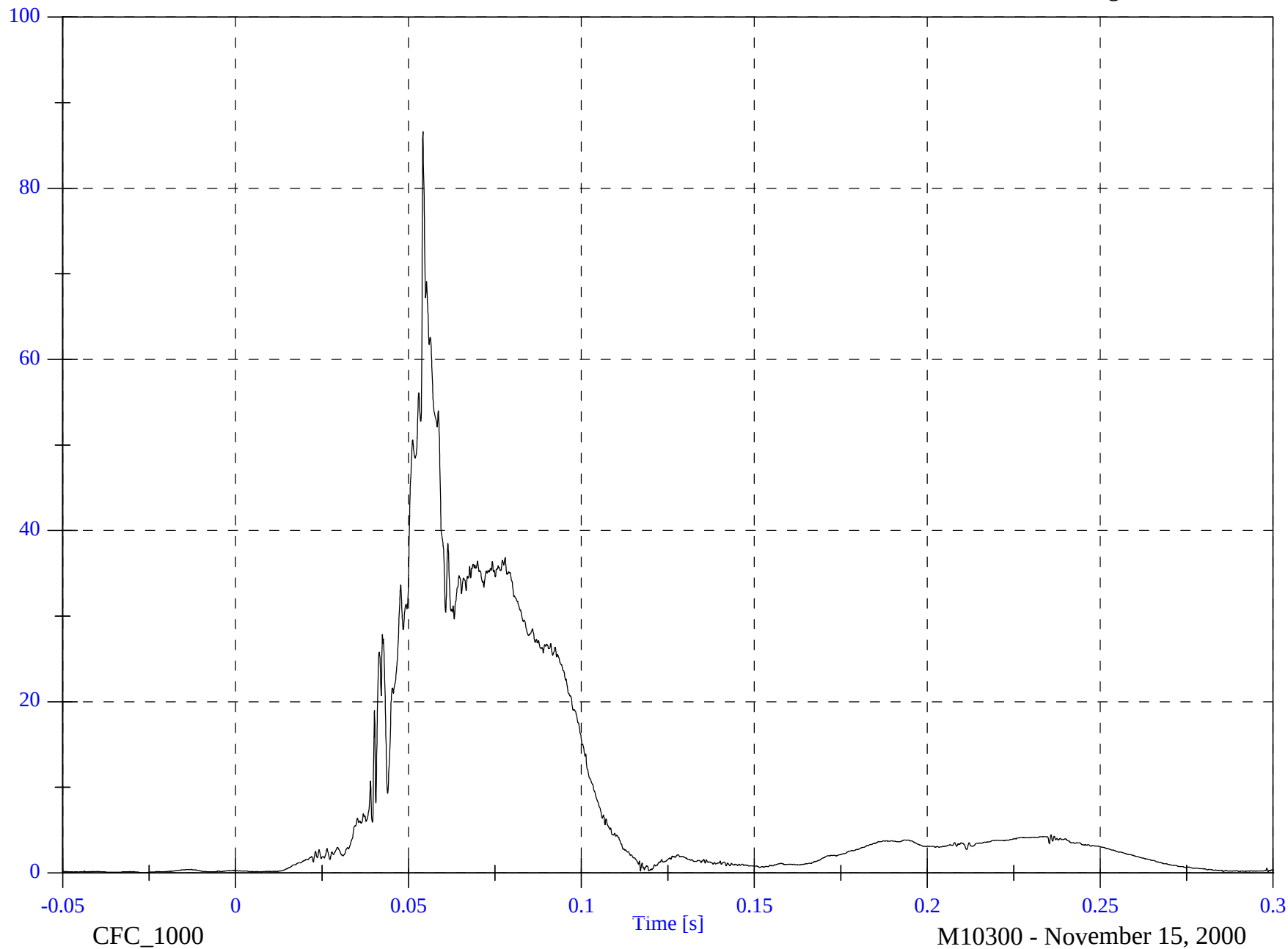


NCAP 2001 Test 2 - 2001 Chrysler LHS

P1 Pelvic Resultant

Max: 86.6 [g] at 0.054 [s]

Min: 0.0 [g] at -0.026 [s]



B-32

8602-2

CFC_1000

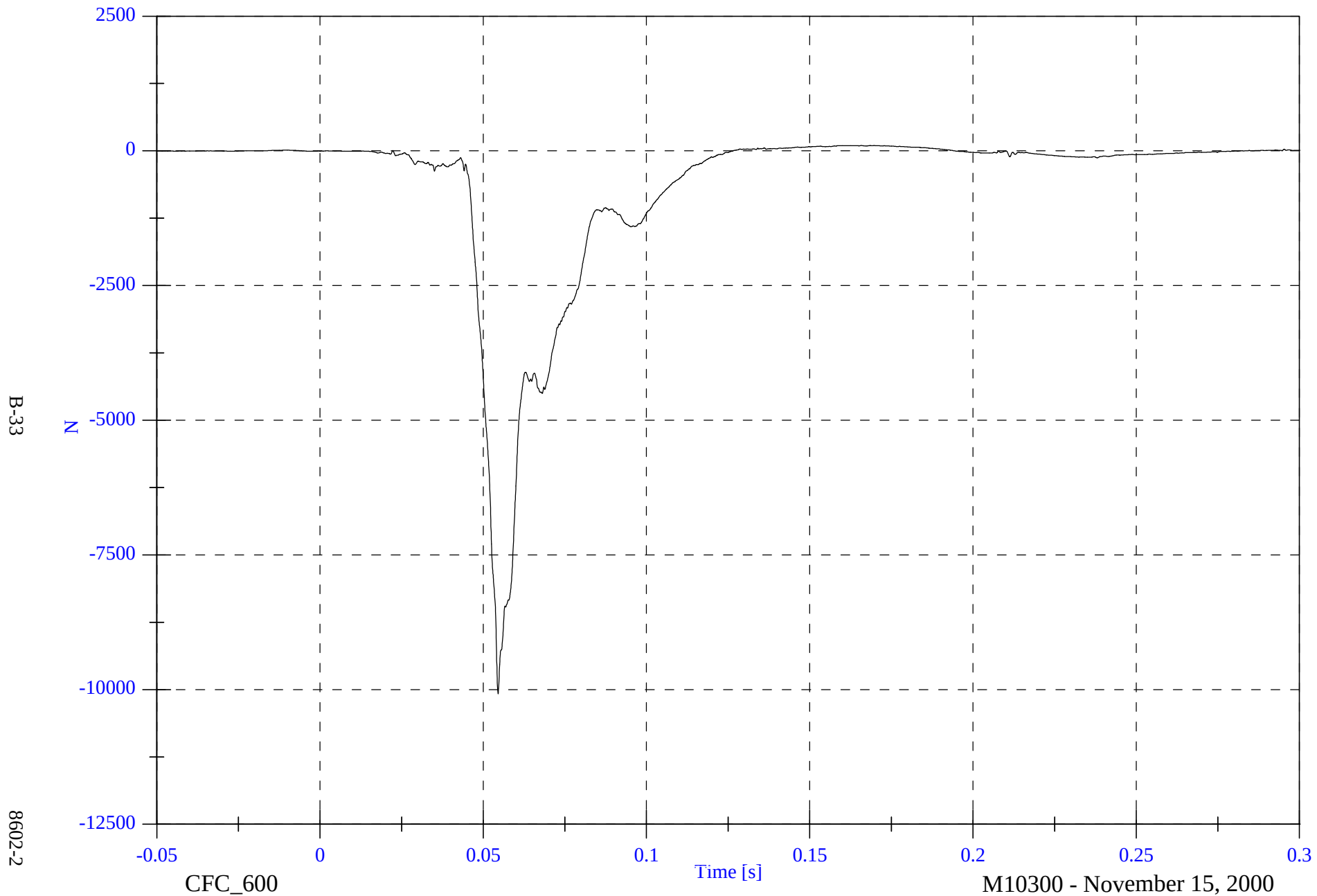
M10300 - November 15, 2000

NCAP 2001 Test 2 - 2001 Chrysler LHS

P1 Left Femur z

Max: 99.0 [N] at 0.170 [s]

Min: -10080.6 [N] at 0.055 [s]



B-33

8602-2

CFC_600

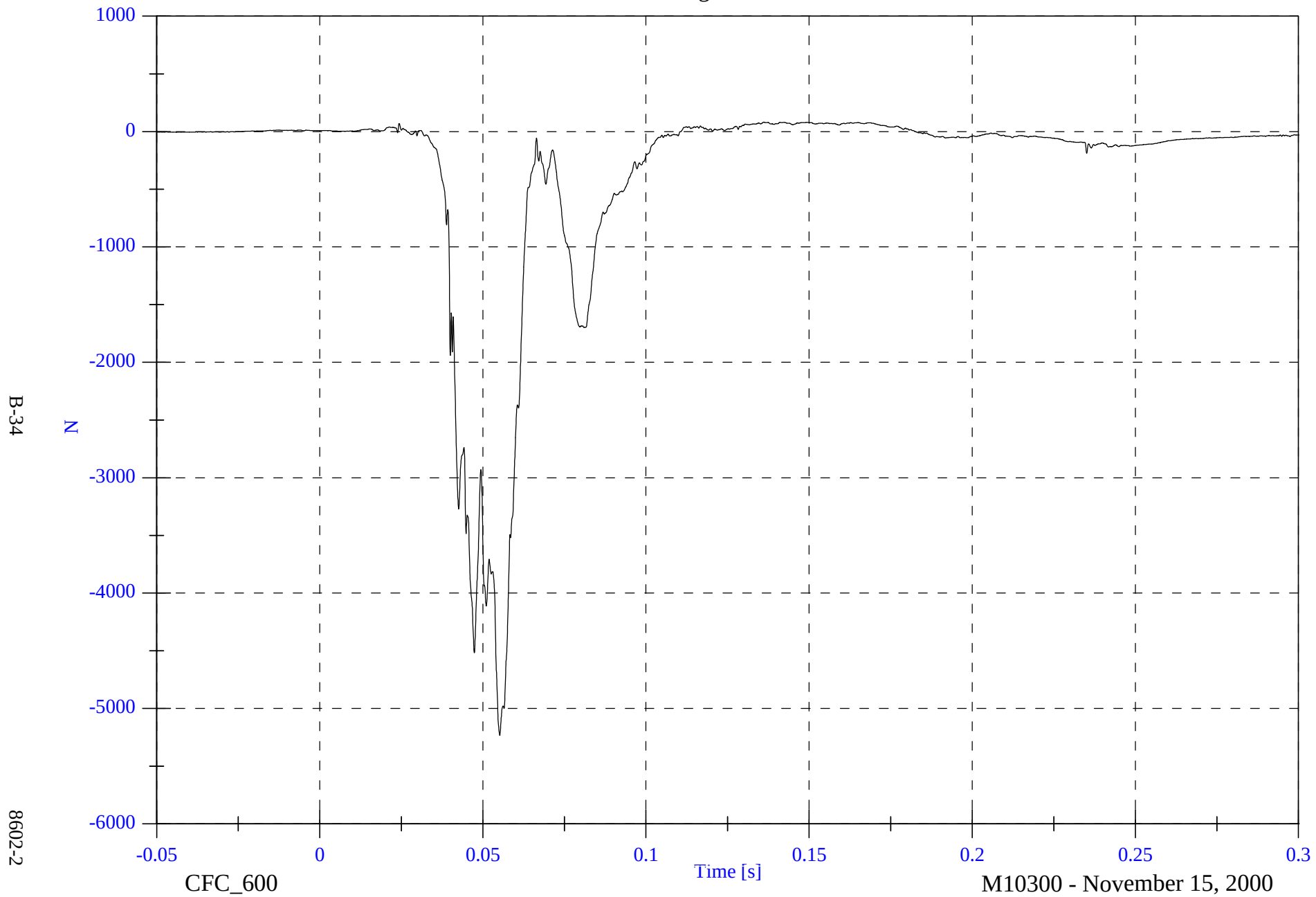
M10300 - November 15, 2000

NCAP 2001 Test 2 - 2001 Chrysler LHS

P1 Right Femur z

Max: 81.9 [N] at 0.136 [s]

Min: -5234.3 [N] at 0.055 [s]

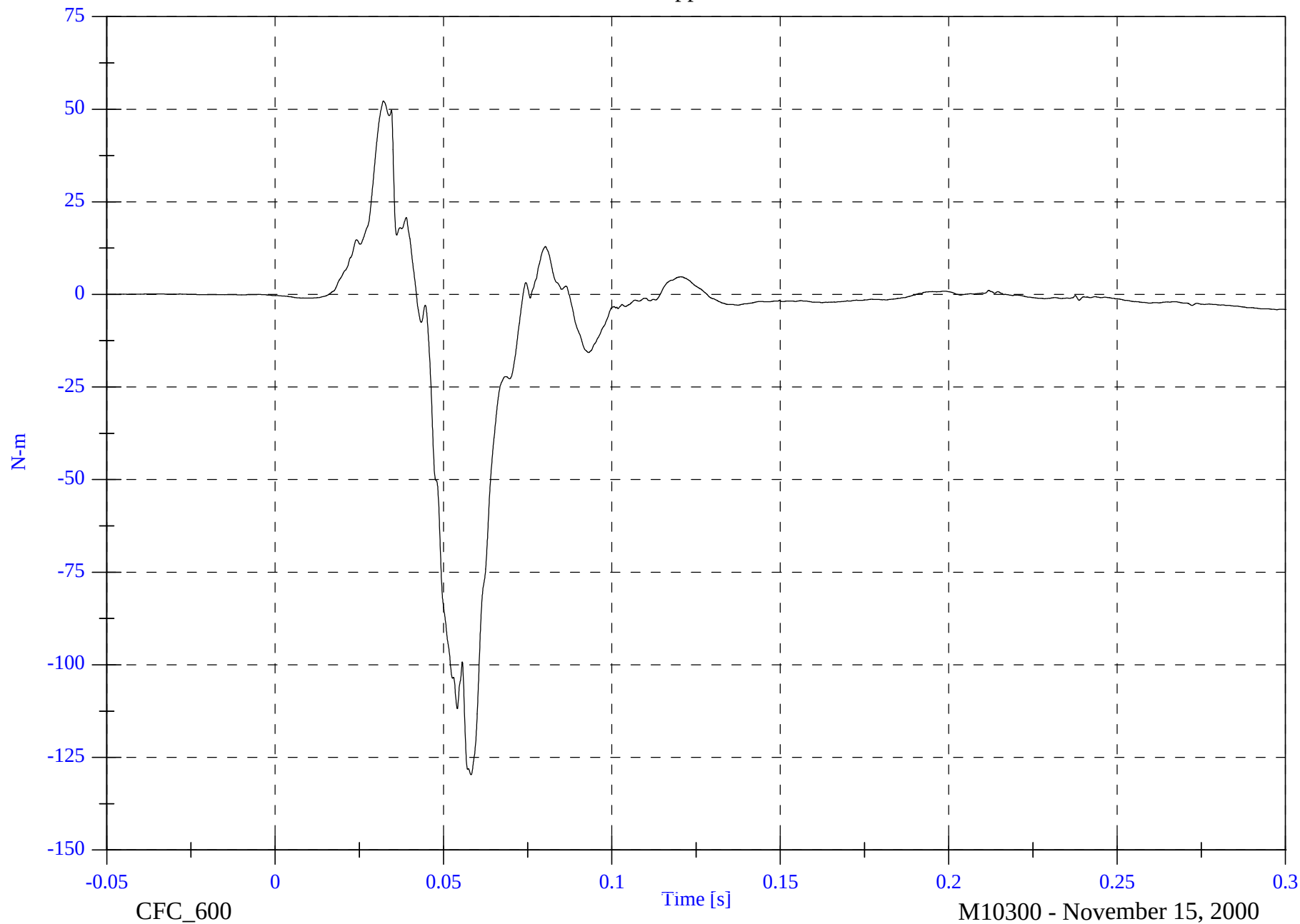


NCAP 2001 Test 2 - 2001 Chrysler LHS

P1 Left Upper Tibia Mx

Max: 52.2 [N-m] at 0.032 [s]

Min: -129.7 [N-m] at 0.058 [s]



B-35

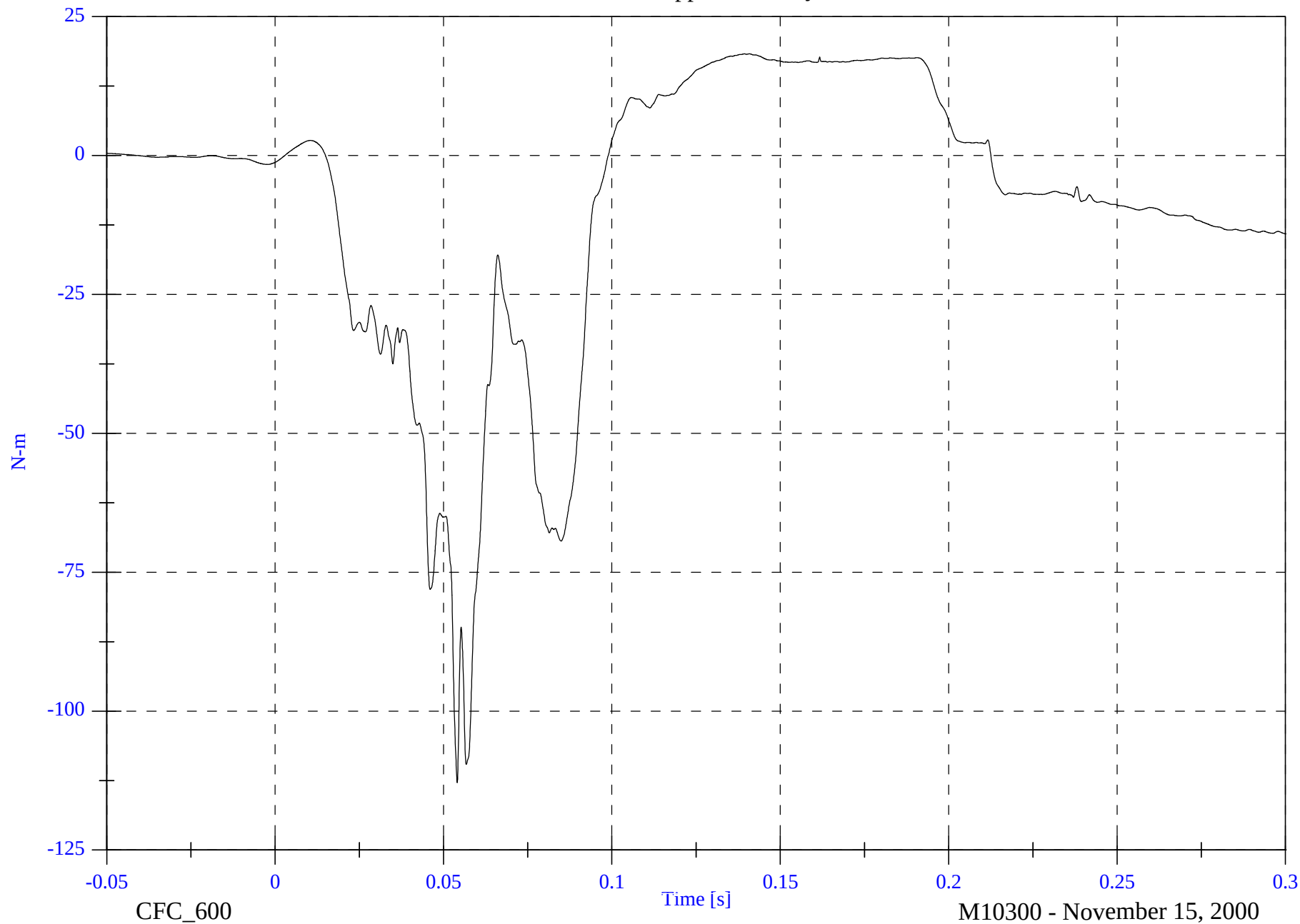
8602-2

NCAP 2001 Test 2 - 2001 Chrysler LHS

P1 Left Upper Tibia My

Max: 18.3 [N-m] at 0.141 [s]

Min: -112.9 [N-m] at 0.054 [s]



B-36

8602-2

CFC_600

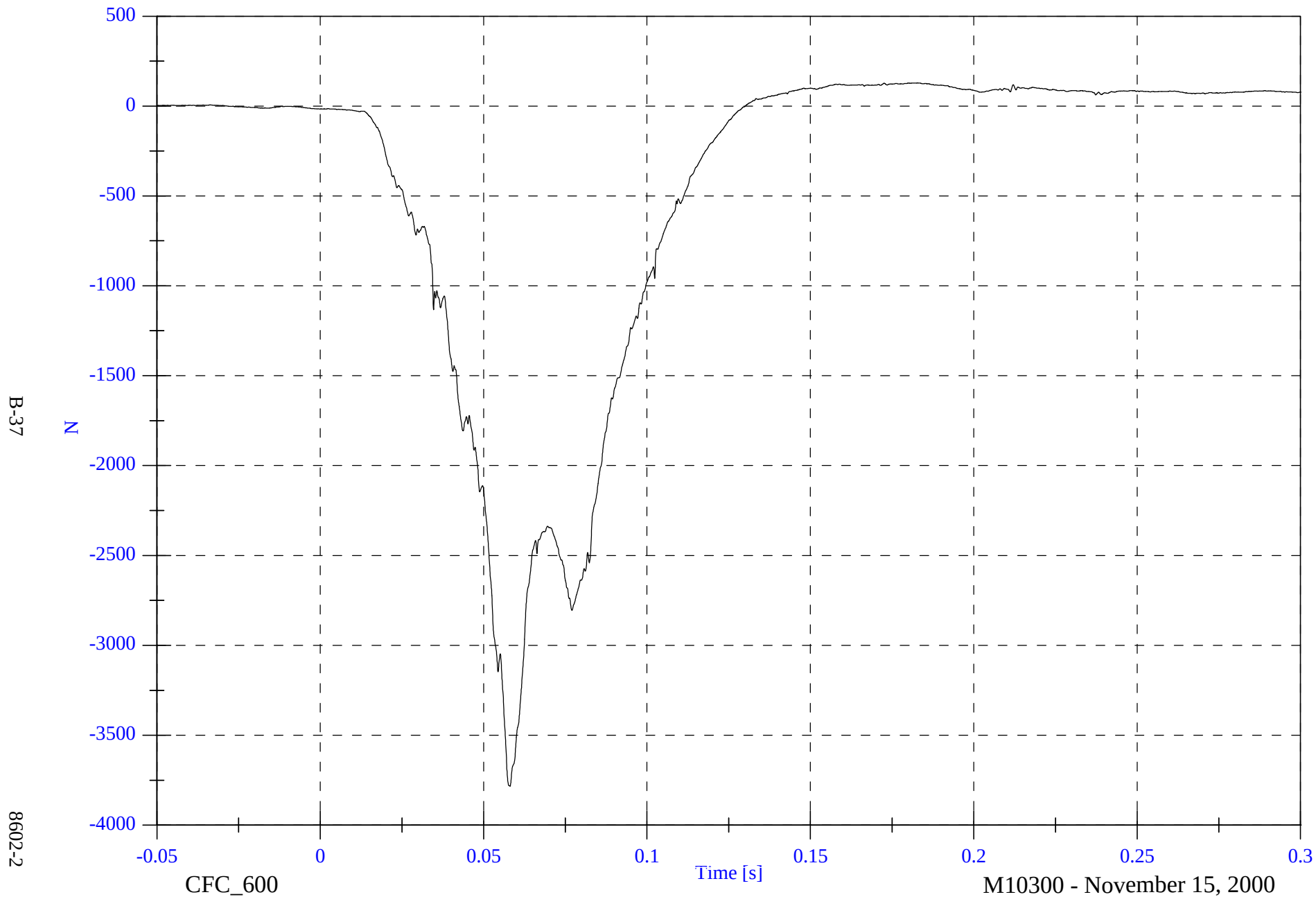
M10300 - November 15, 2000

NCAP 2001 Test 2 - 2001 Chrysler LHS

P1 Left Lower Tibia Fz

Max: 128.9 [N] at 0.183 [s]

Min: -3783.4 [N] at 0.058 [s]



NCAP 2001 Test 2 - 2001 Chrysler LHS

P1 Left Lower Tibia Mx

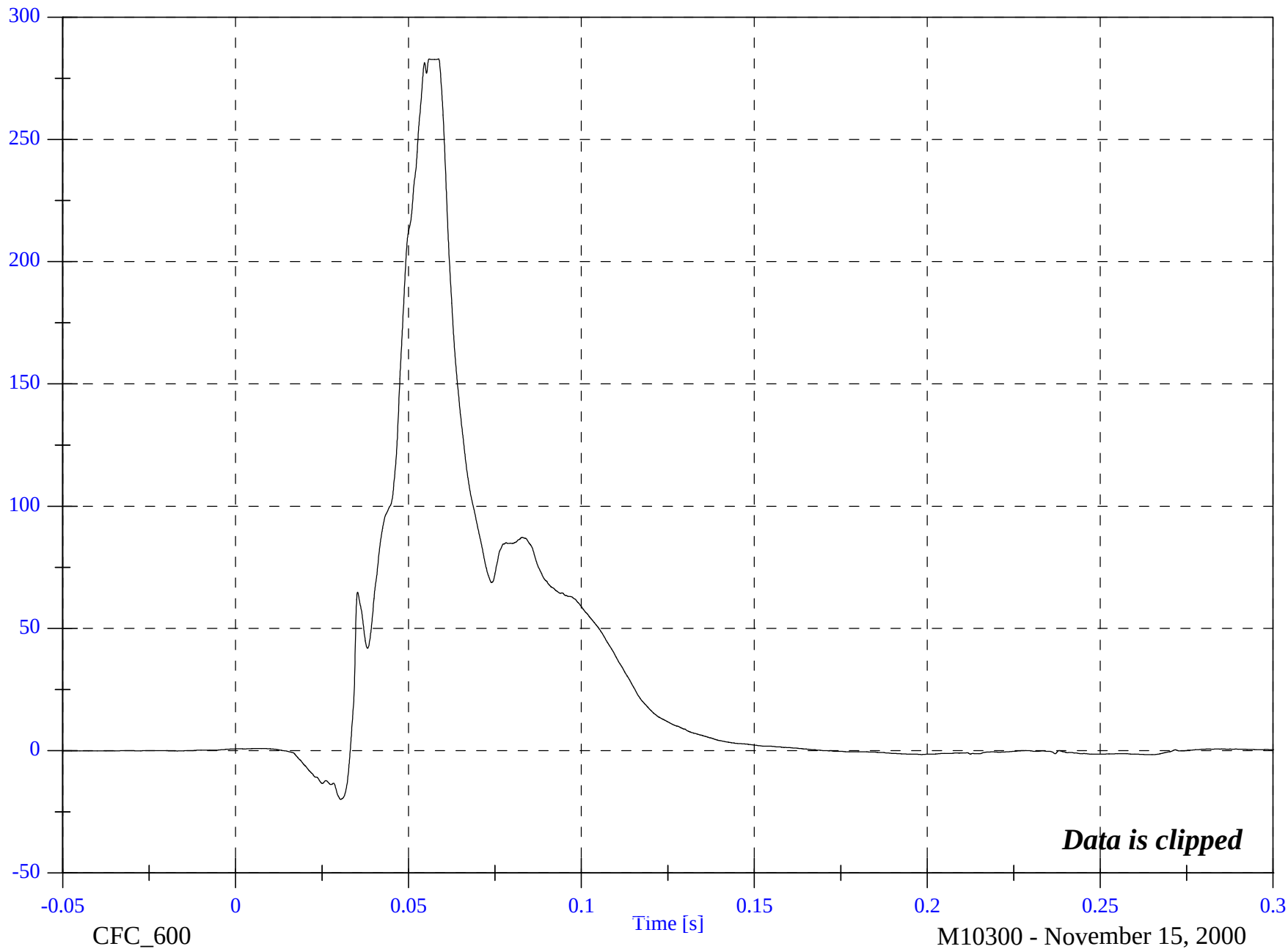
Max: 282.9 [N-m] at 0.059 [s]

Min: -19.9 [N-m] at 0.030 [s]

B-38

N-m

8602-2

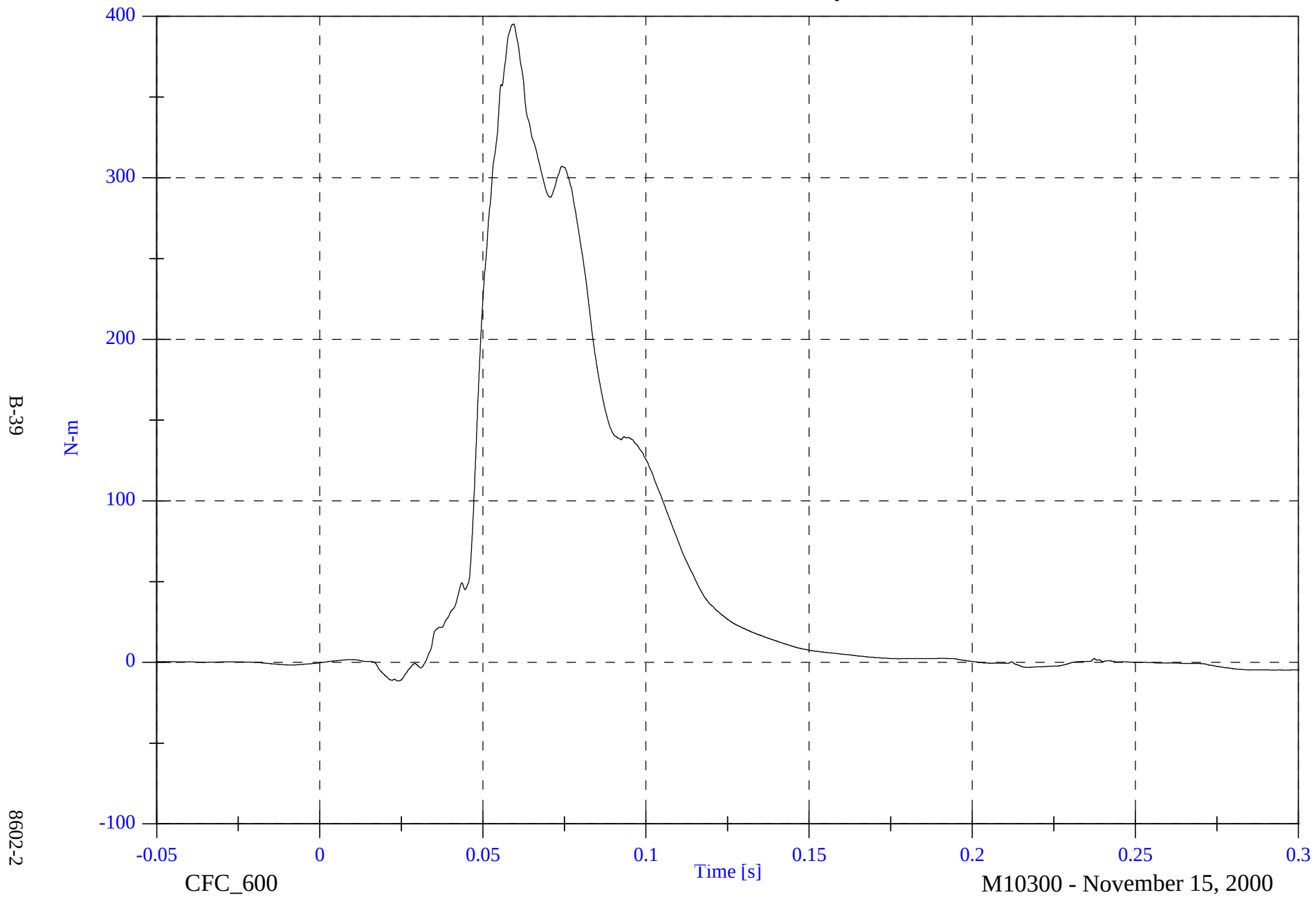


NCAP 2001 Test 2 - 2001 Chrysler LHS

P1 Left Lower Tibia My

Max: 395.2 [N-m] at 0.059 [s]

Min: -11.5 [N-m] at 0.024 [s]

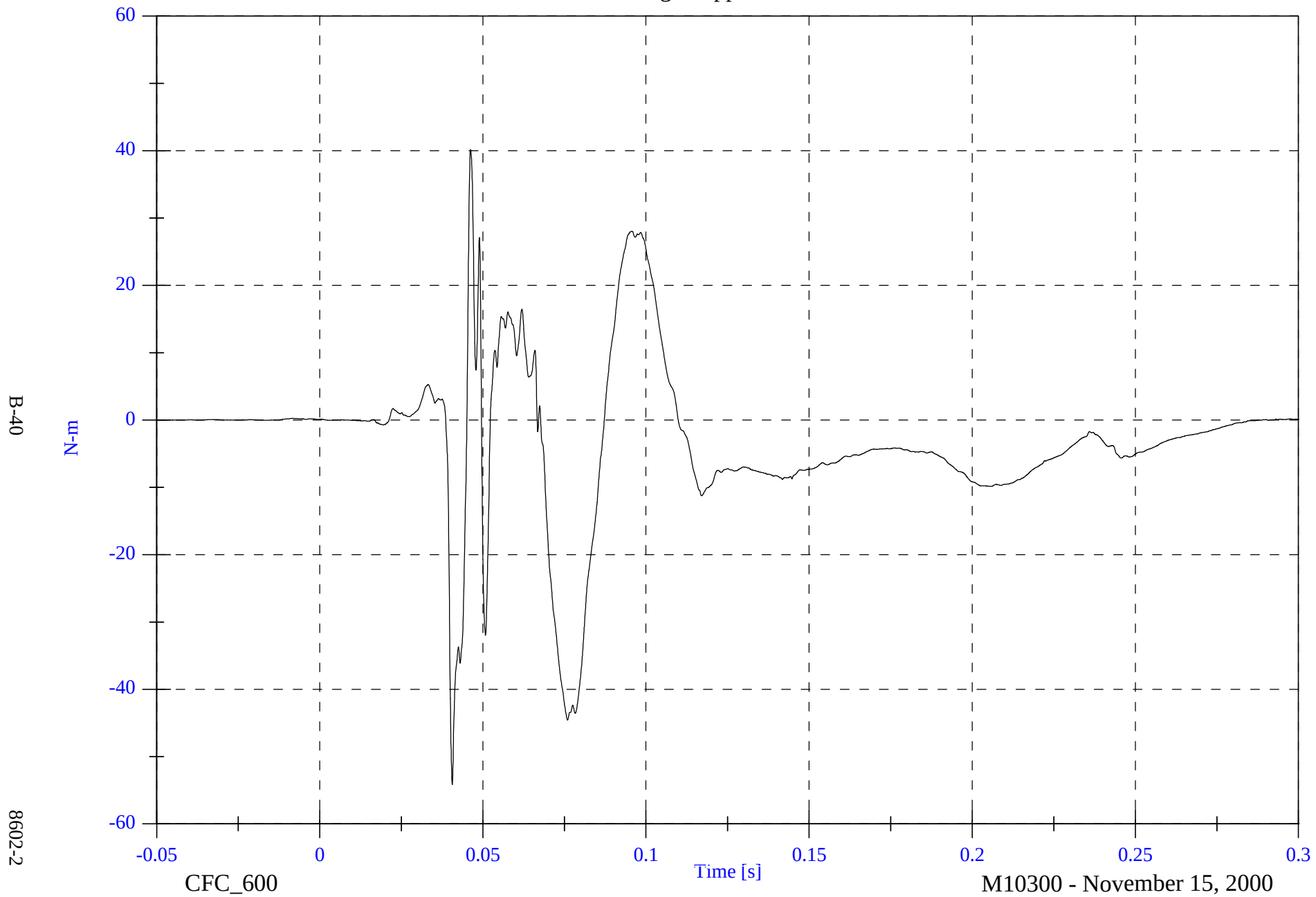


NCAP 2001 Test 2 - 2001 Chrysler LHS

P1 Right Upper Tibia Mx

Max: 40.2 [N-m] at 0.046 [s]

Min: -54.2 [N-m] at 0.041 [s]



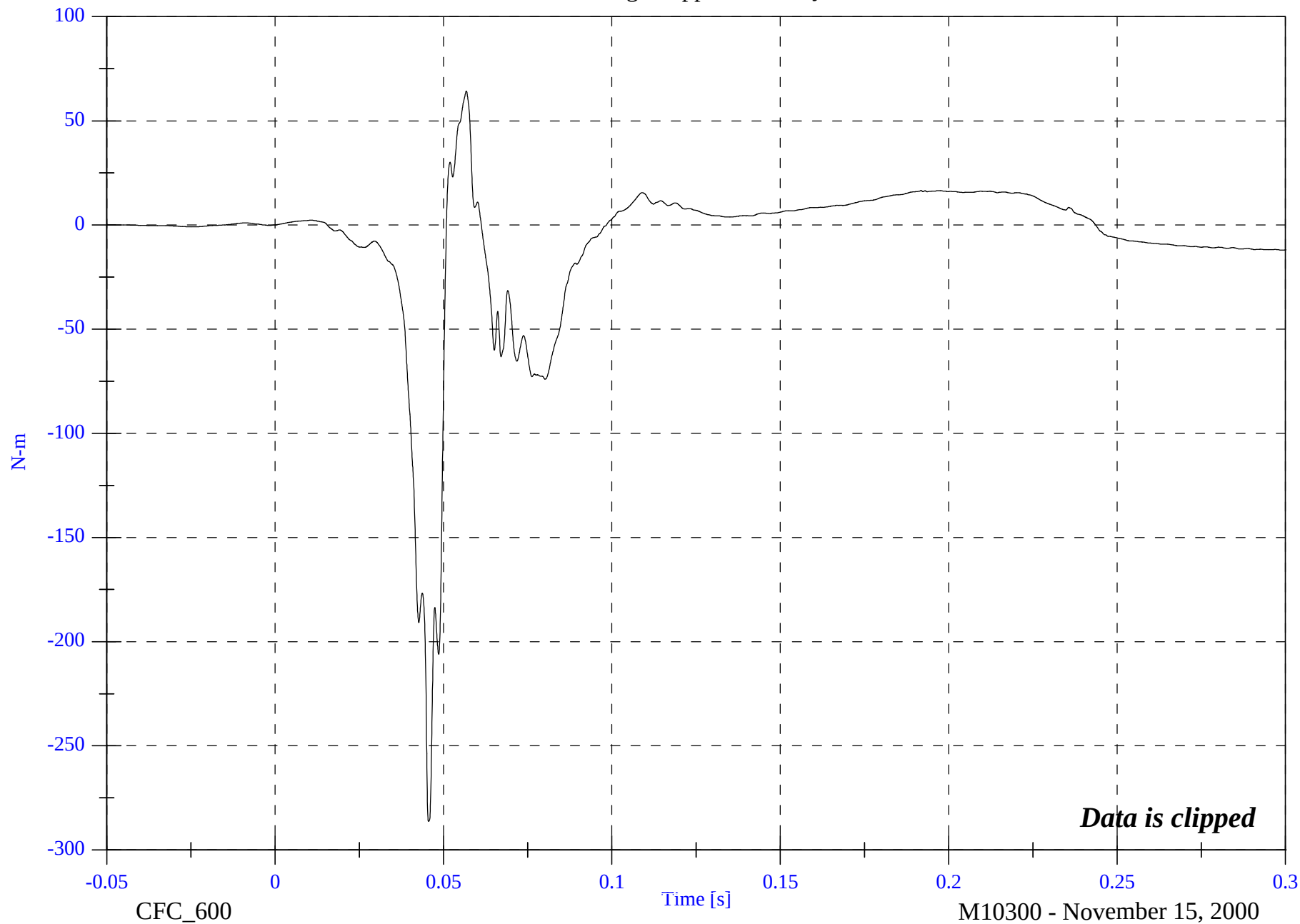
NCAP 2001 Test 2 - 2001 Chrysler LHS

P1 Right Upper Tibia My

Max: 64.4 [N-m] at 0.057 [s]

Min: -286.3 [N-m] at 0.046 [s]

B-41



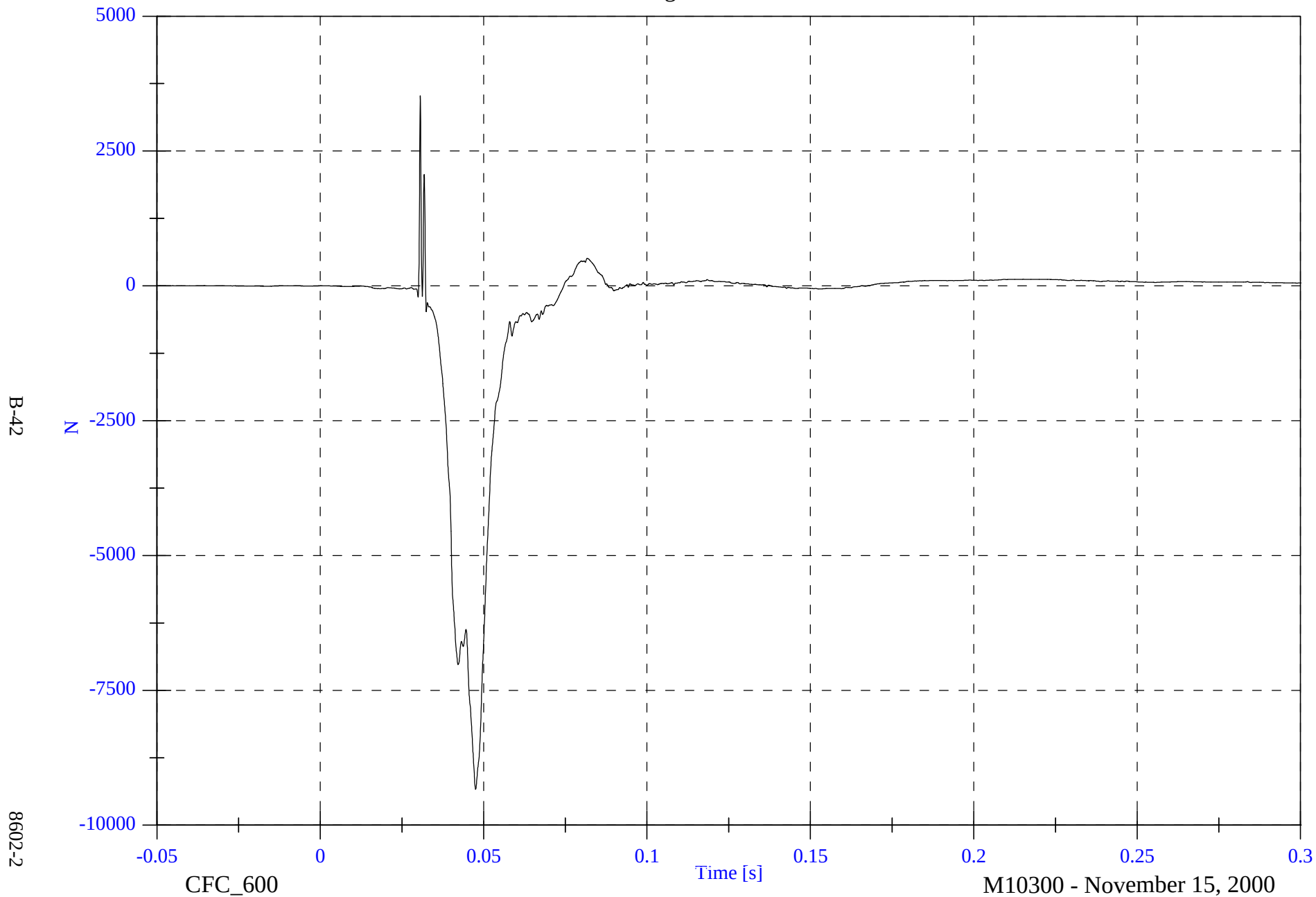
8602-2

NCAP 2001 Test 2 - 2001 Chrysler LHS

Max: 3525.6 [N] at 0.031 [s]

Min: -9336.2 [N] at 0.048 [s]

P1 Right Lower Tibia Fz

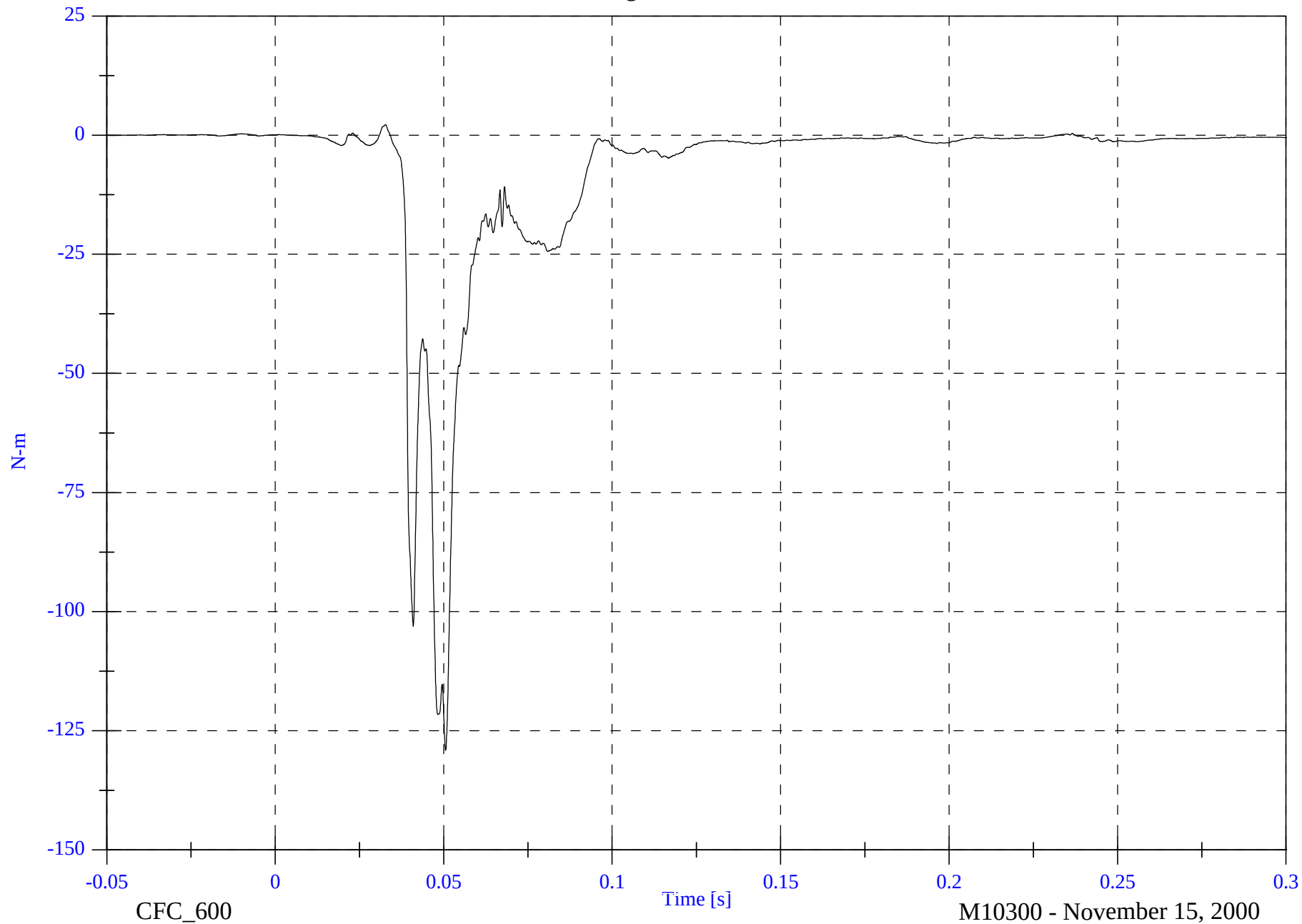


NCAP 2001 Test 2 - 2001 Chrysler LHS

P1 Right Lower Tibia Mx

Max: 2.2 [N-m] at 0.033 [s]

Min: -129.1 [N-m] at 0.051 [s]



B-43

8602-2

NCAP 2001 Test 2 - 2001 Chrysler LHS

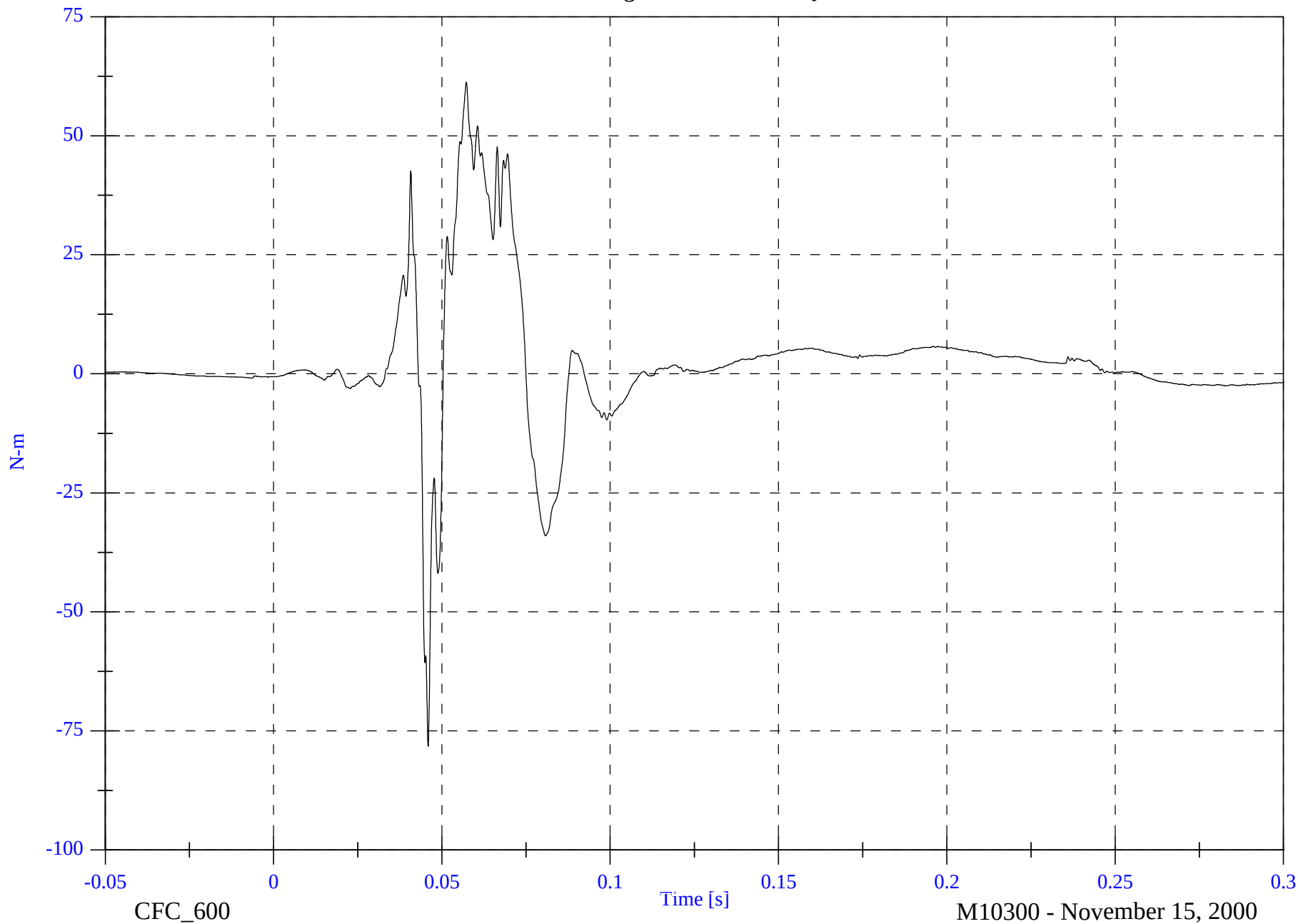
P1 Right Lower Tibia My

Max: 61.3 [N-m] at 0.057 [s]

Min: -78.2 [N-m] at 0.046 [s]

B-44

8602-2

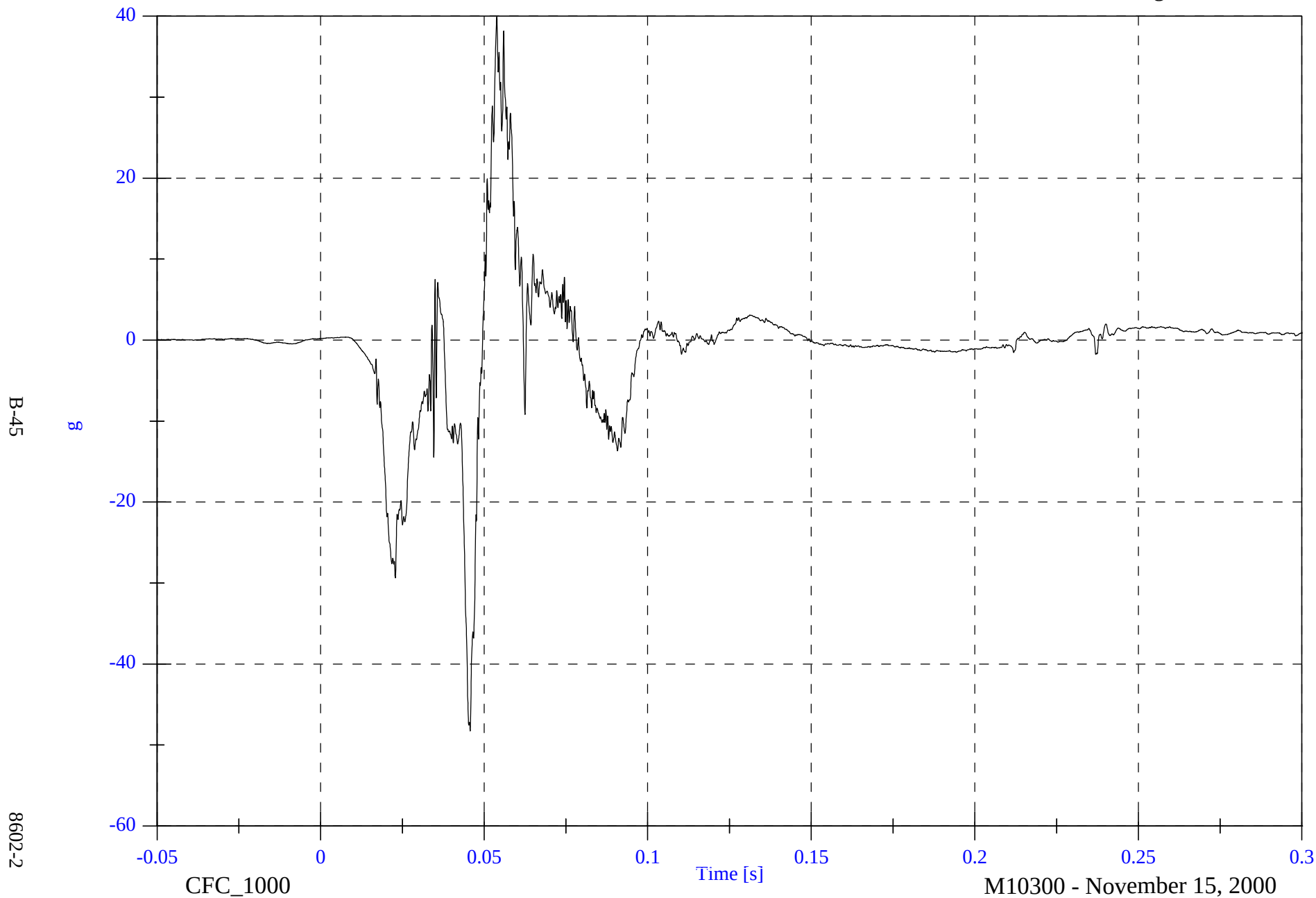


NCAP 2001 Test 2 - 2001 Chrysler LHS

P1 Left Foot Aft x

Max: 39.9 [g] at 0.054 [s]

Min: -48.2 [g] at 0.046 [s]

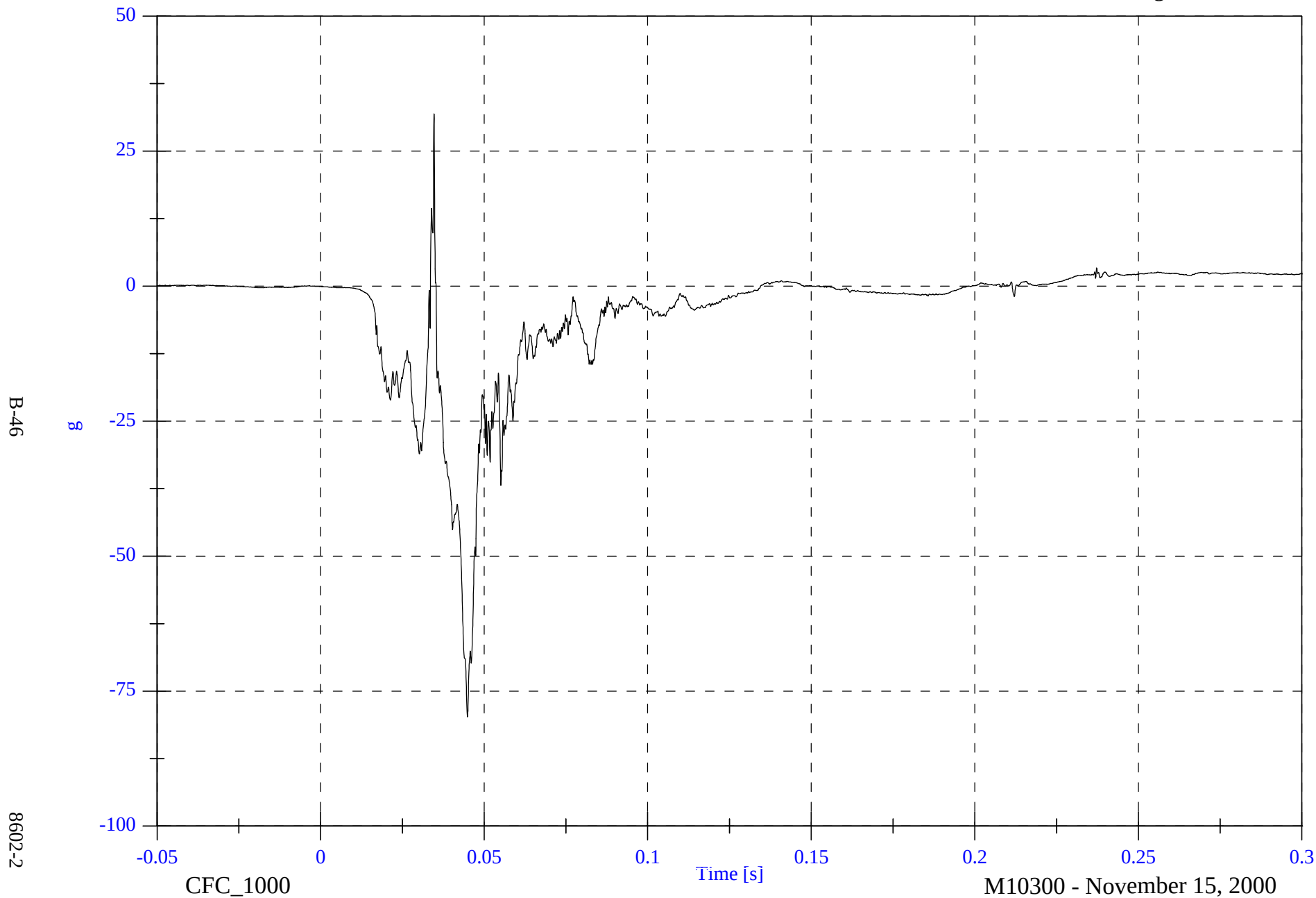


NCAP 2001 Test 2 - 2001 Chrysler LHS

P1 Left Foot Aft z

Max: 31.9 [g] at 0.035 [s]

Min: -79.8 [g] at 0.045 [s]

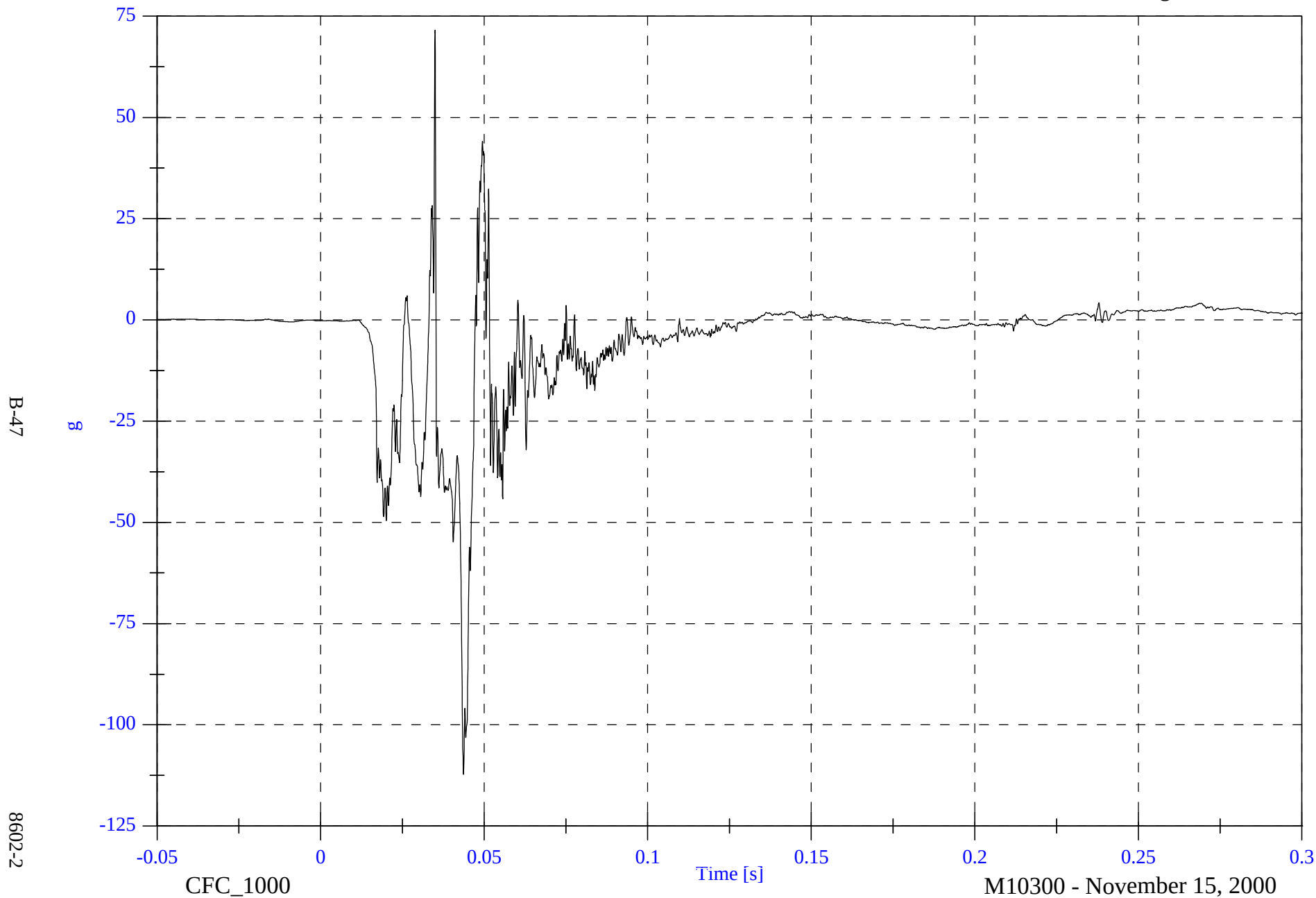


NCAP 2001 Test 2 - 2001 Chrysler LHS

P1 Left Foot Fore z

Max: 71.6 [g] at 0.035 [s]

Min: -112.3 [g] at 0.044 [s]



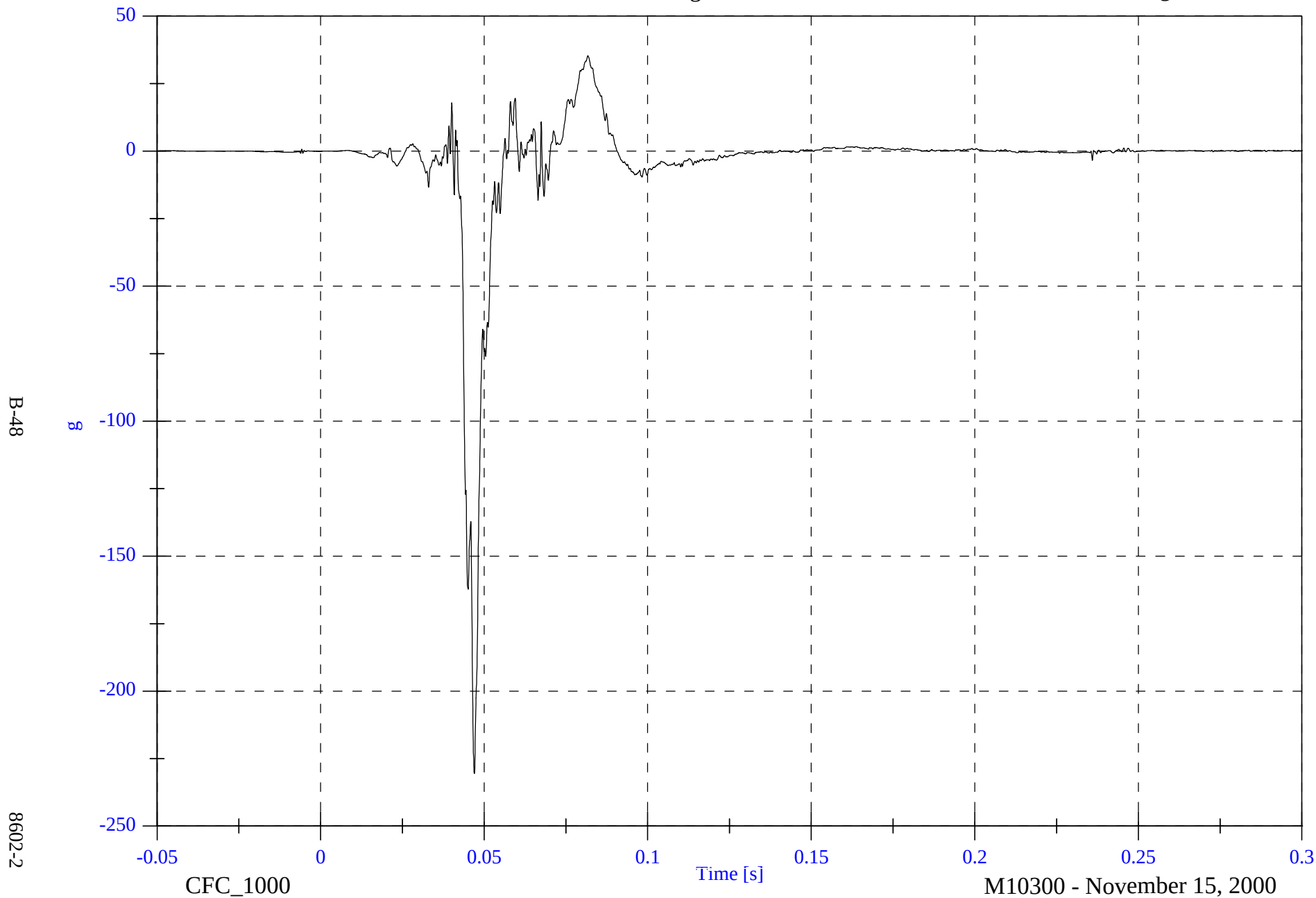
8602-2

NCAP 2001 Test 2 - 2001 Chrysler LHS

P1 Right Foot Aft x

Max: 35.4 [g] at 0.082 [s]

Min: -230.5 [g] at 0.047 [s]



NCAP 2001 Test 2 - 2001 Chrysler LHS

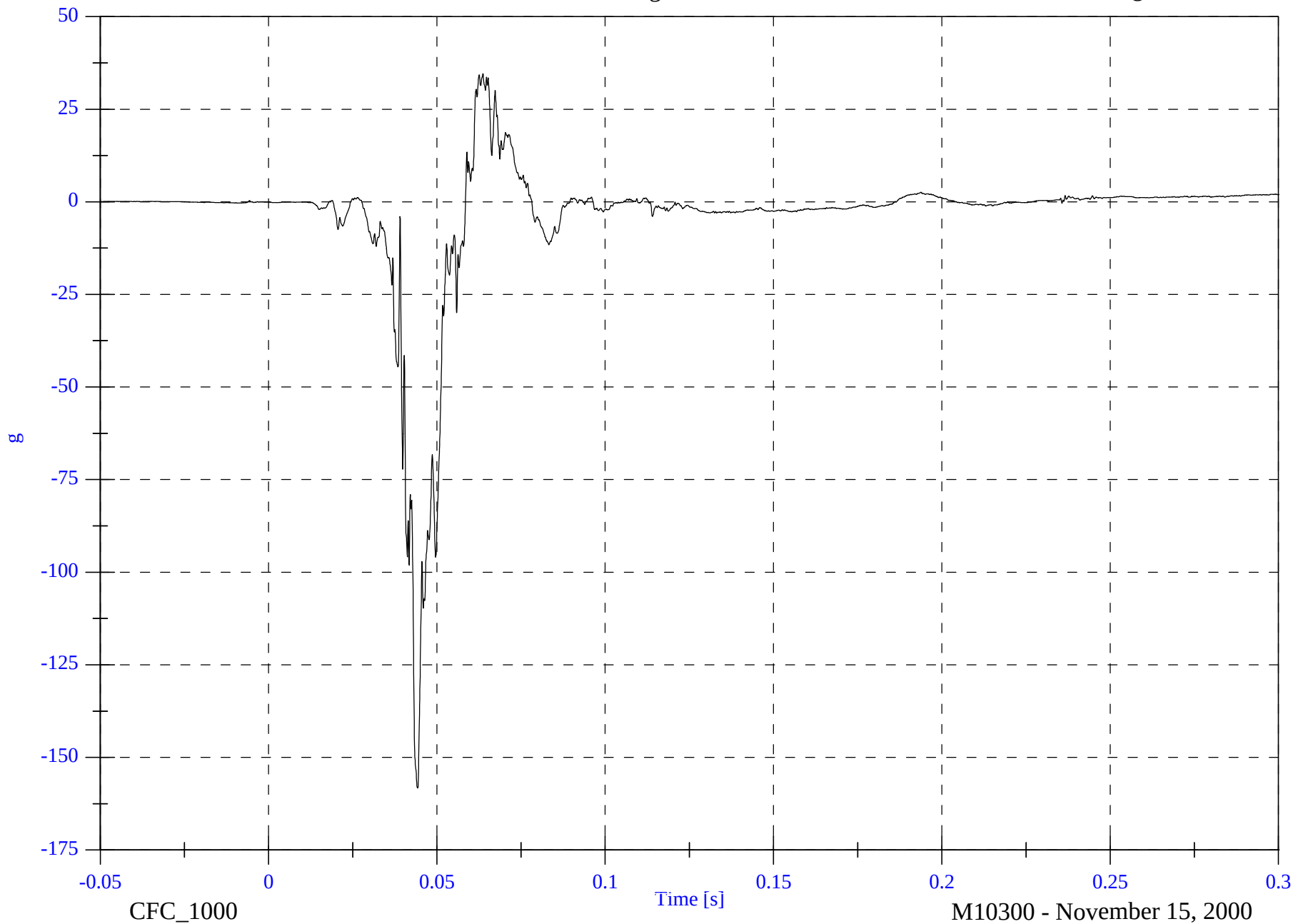
P1 Right Foot Aft z

Max: 34.6 [g] at 0.064 [s]

Min: -158.3 [g] at 0.044 [s]

B-49

8602-2

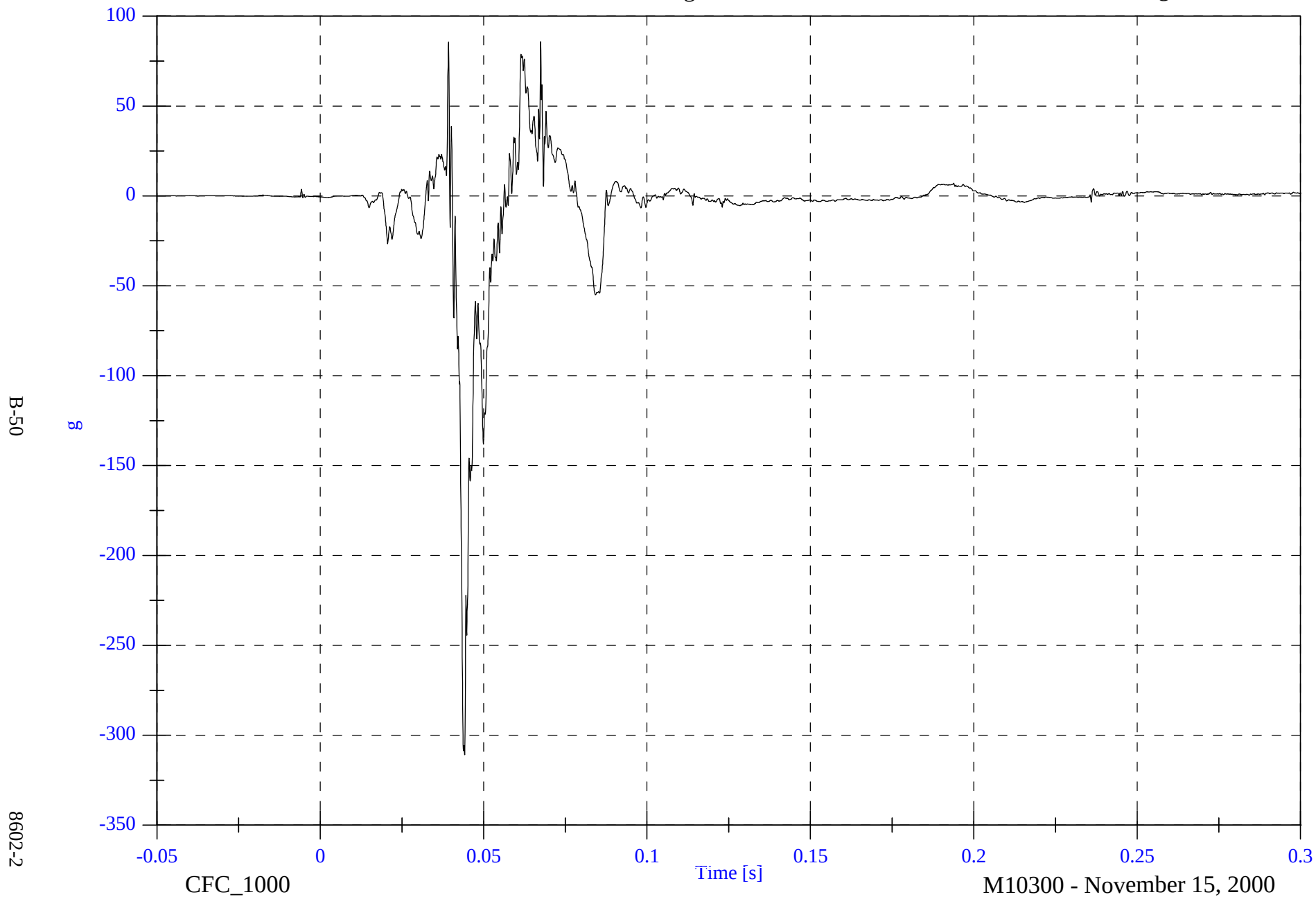


NCAP 2001 Test 2 - 2001 Chrysler LHS

P1 Right Foot Fore z

Max: 85.9 [g] at 0.067 [s]

Min: -310.8 [g] at 0.044 [s]

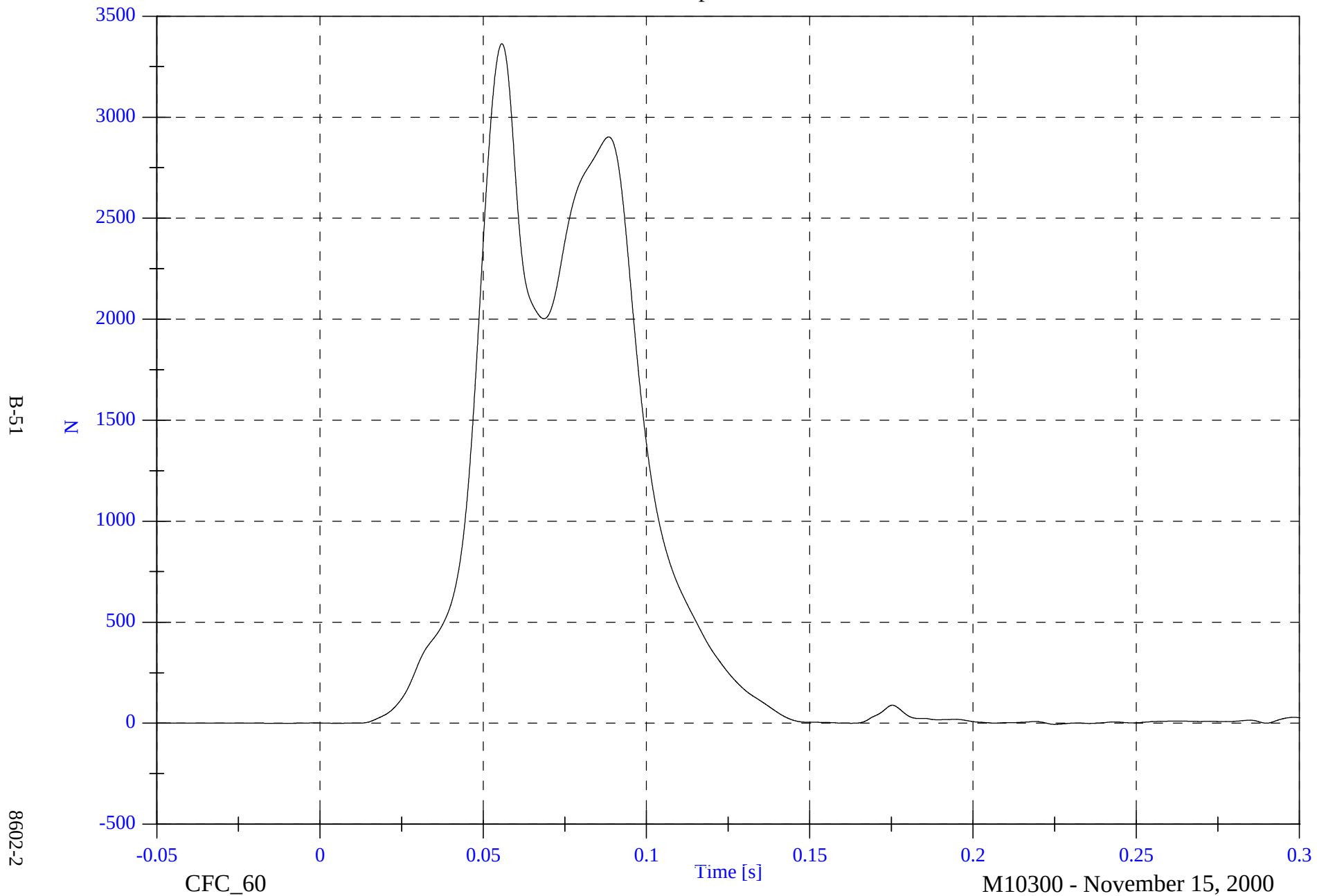


NCAP 2001 Test 2 - 2001 Chrysler LHS

P1 Lap Belt Force

Max: 3363.7 [N] at 0.056 [s]

Min: -6.1 [N] at 0.225 [s]

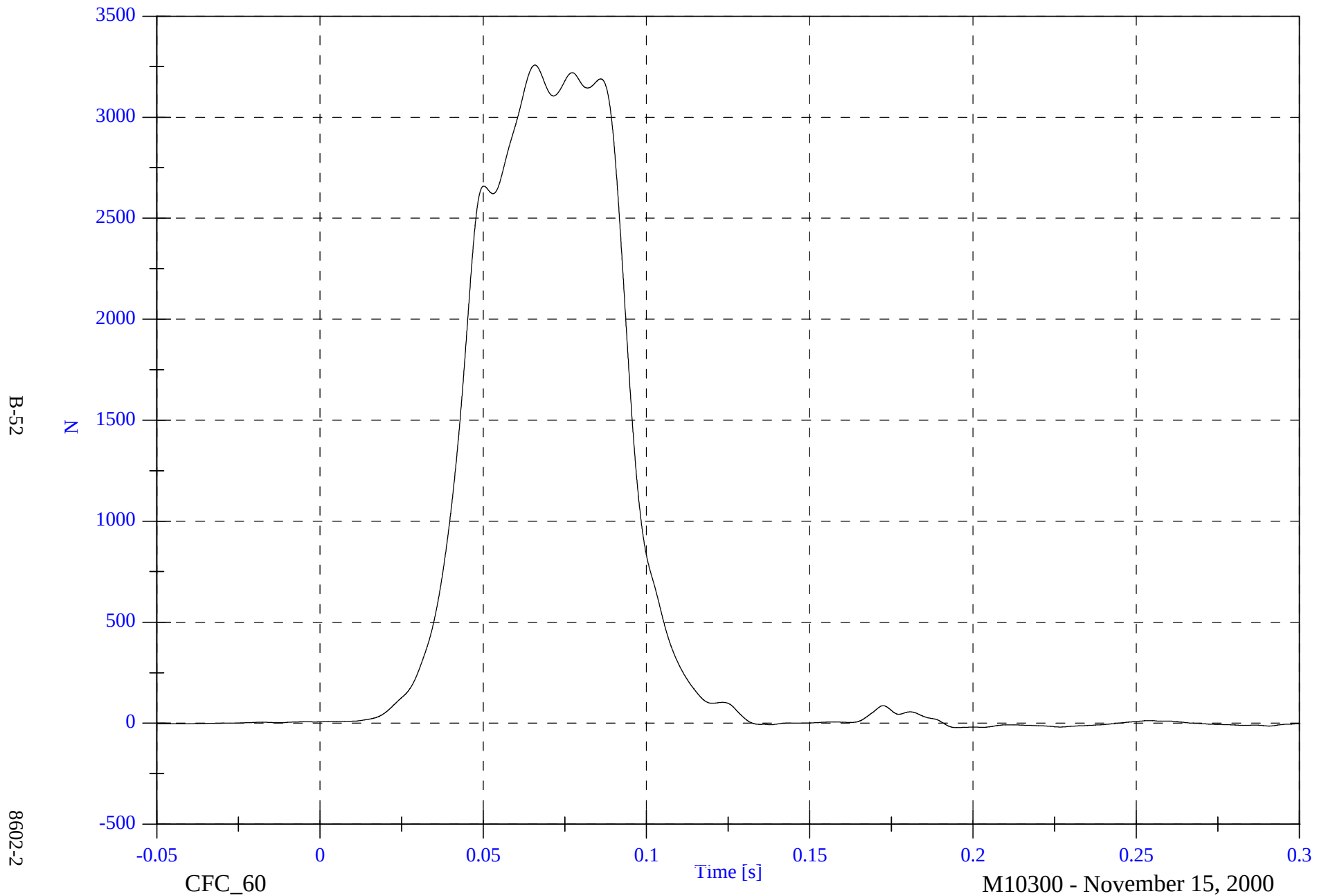


NCAP 2001 Test 2 - 2001 Chrysler LHS

P1 Shoulder Belt Force

Max: 3258.1 [N] at 0.066 [s]

Min: -21.9 [N] at 0.195 [s]



NCAP 2001 Test 2 - 2001 Chrysler LHS

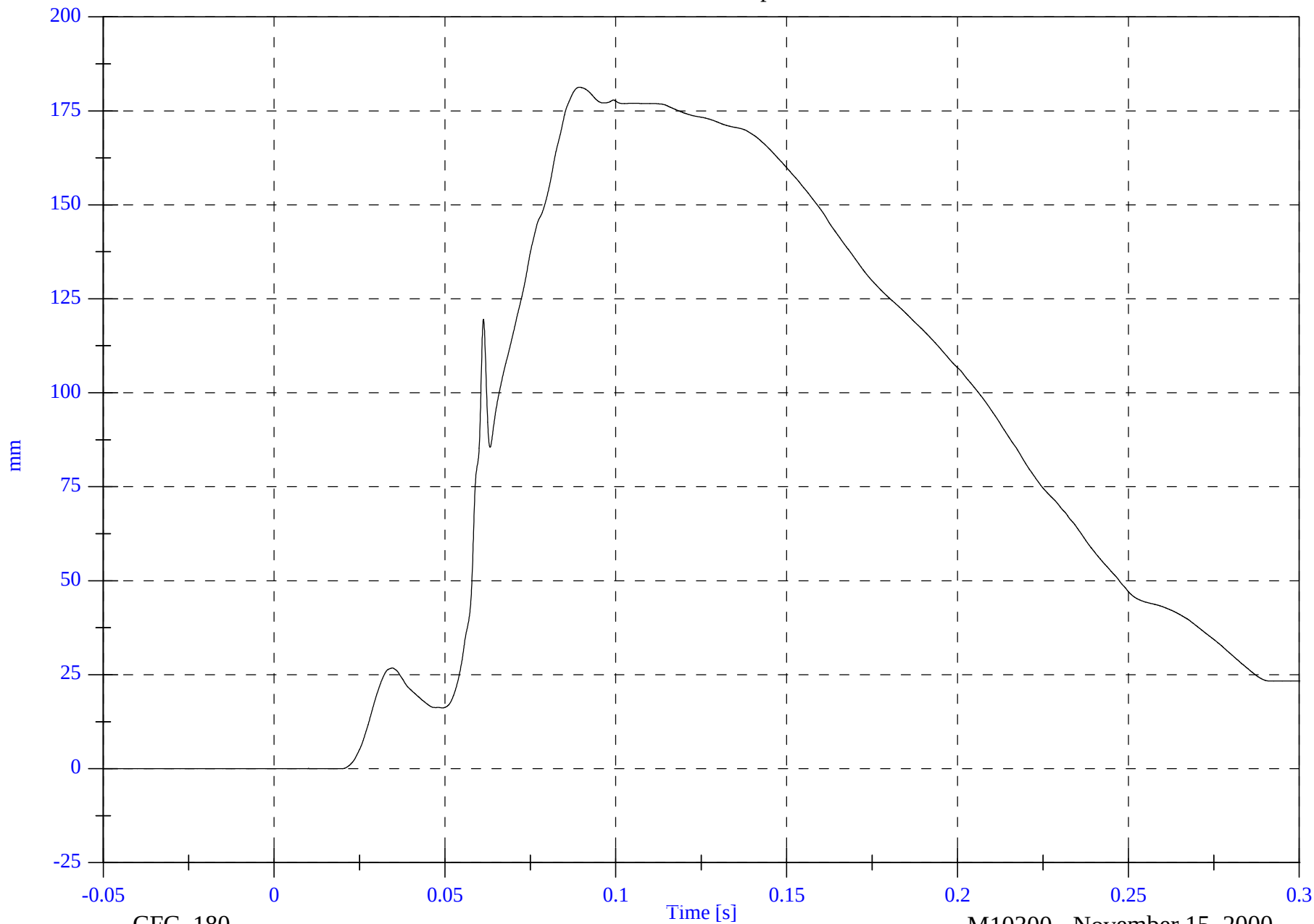
P1 Shoulder Belt Spoolout

Max: 181.3 [mm] at 0.089 [s]

Min: -0.0 [mm] at 0.014 [s]

B-53

8602-2



NCAP 2001 Test 2 - 2001 Chrysler LHS

P1 Shoulder Belt Elongation

Max: 5.3 [mm] at 0.137 [s]

Min: -0.0 [mm] at -0.019 [s]



B-54

8602-2

CFC_180

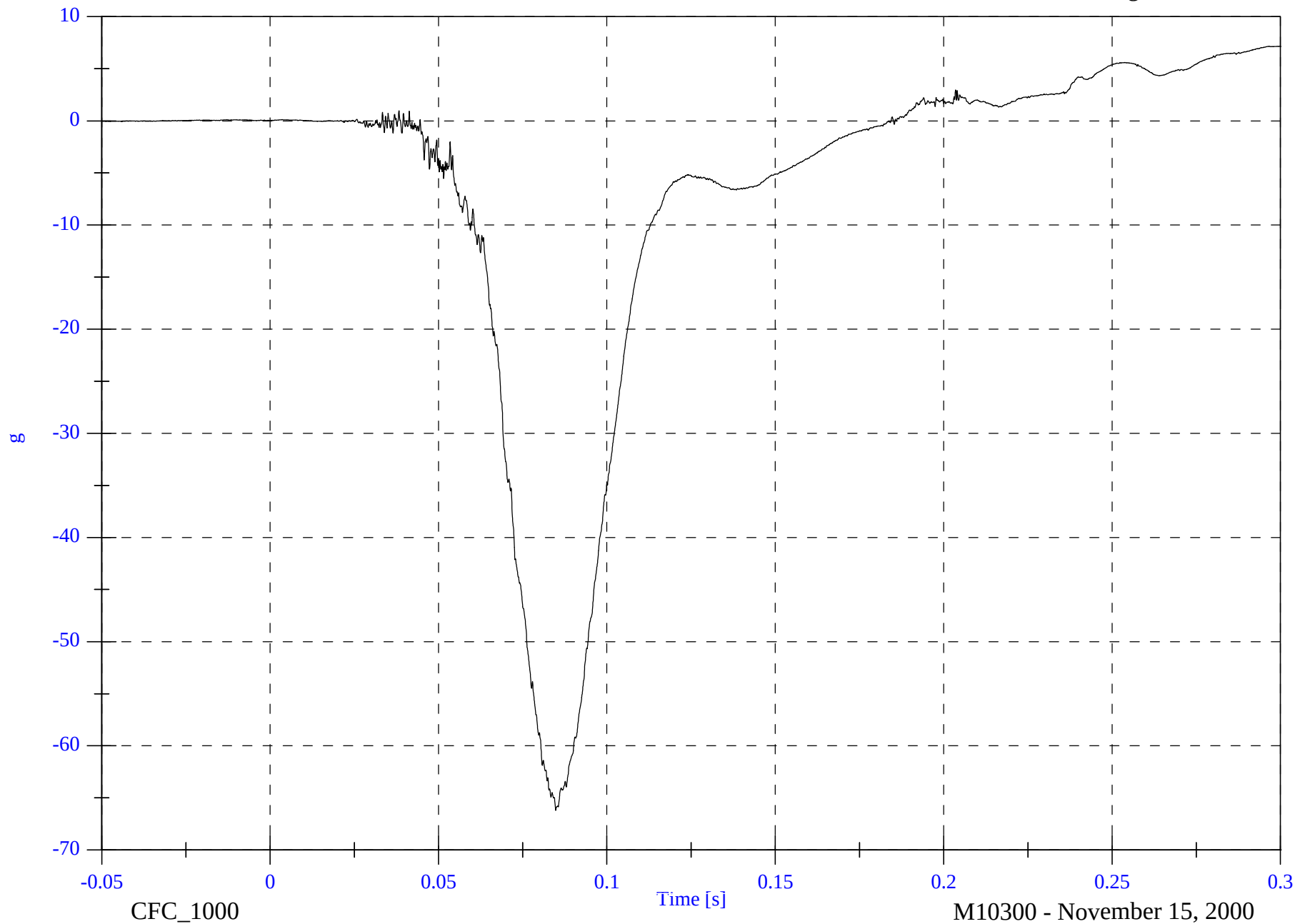
M10300 - November 15, 2000

NCAP 2001 Test 2 - 2001 Chrysler LHS

P2 Head x

Max: 7.2 [g] at 0.297 [s]

Min: -66.2 [g] at 0.085 [s]



B-55

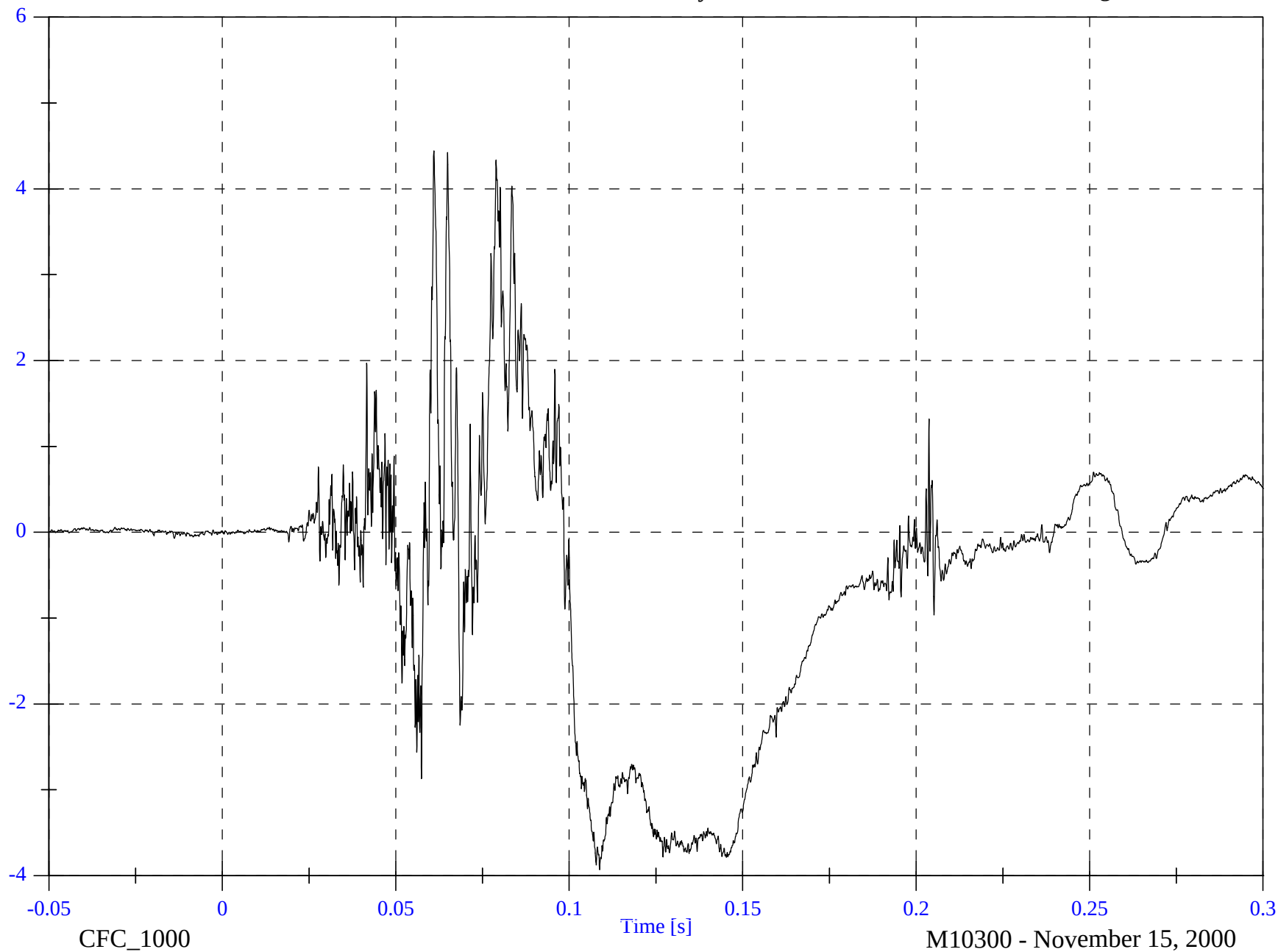
8602-2

NCAP 2001 Test 2 - 2001 Chrysler LHS

P2 Head y

Max: 4.4 [g] at 0.061 [s]

Min: -3.9 [g] at 0.109 [s]



B-56

8602-2

NCAP 2001 Test 2 - 2001 Chrysler LHS

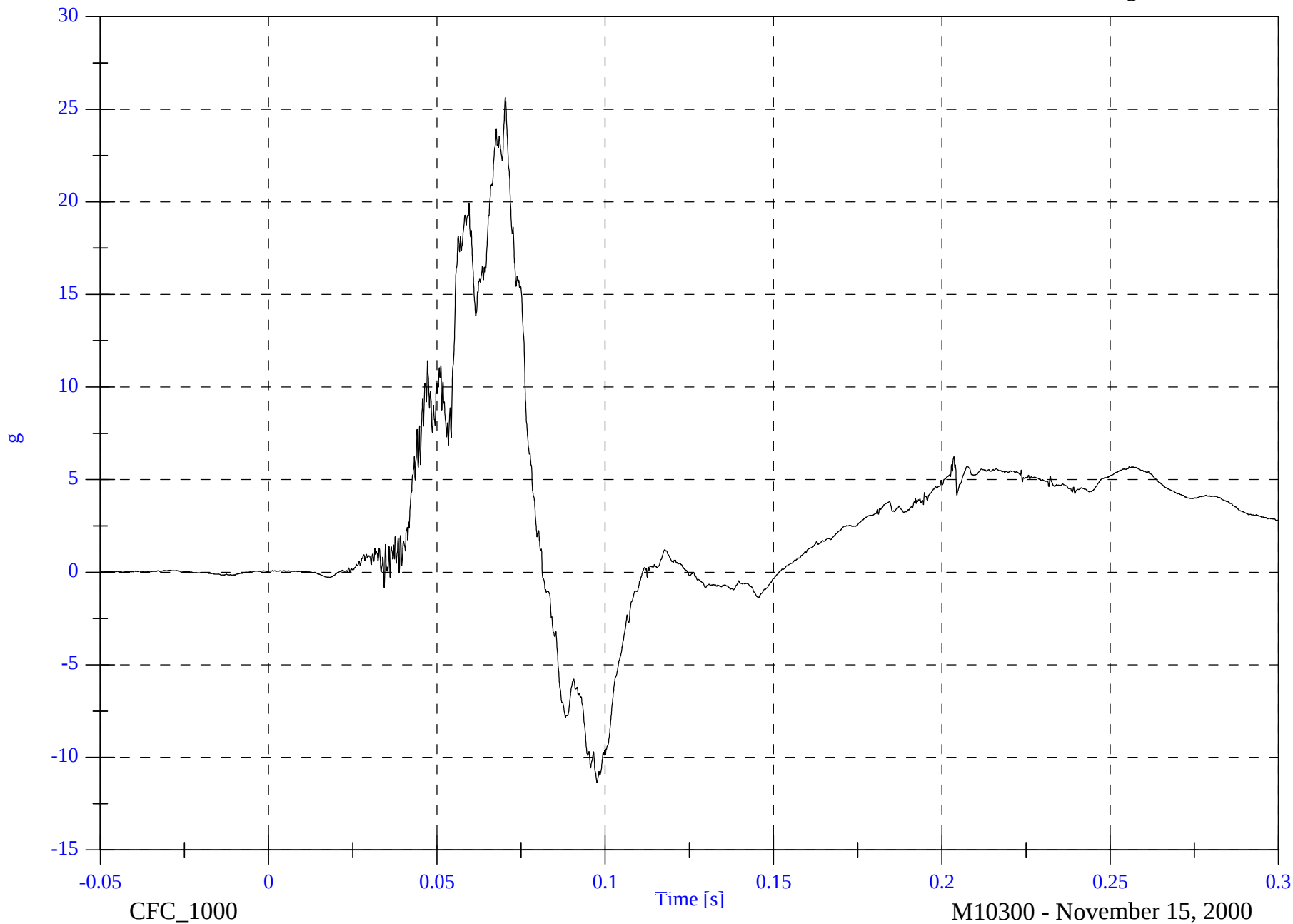
P2 Head z

Max: 25.7 [g] at 0.070 [s]

Min: -11.4 [g] at 0.098 [s]

B-57

8602-2

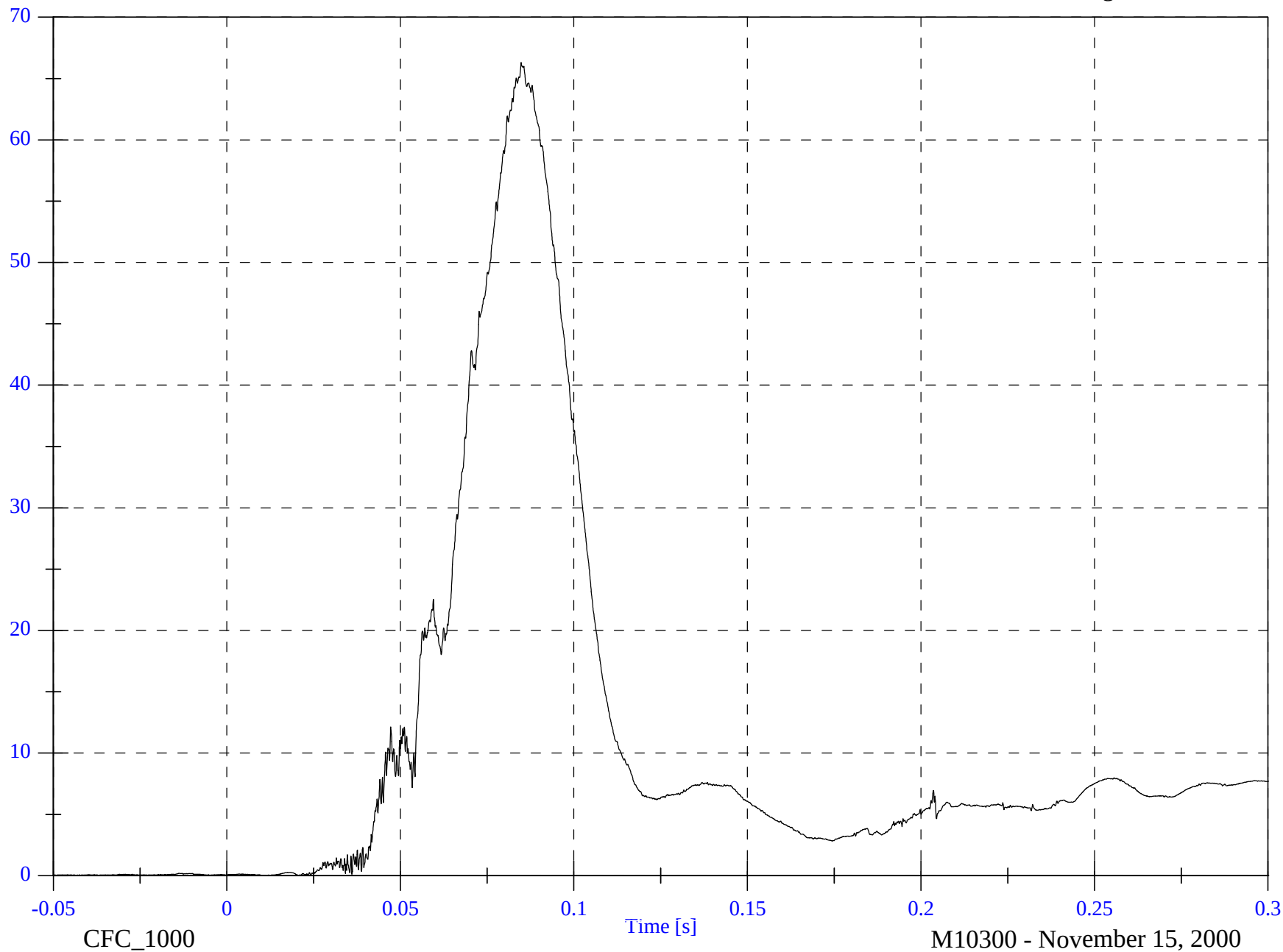


NCAP 2001 Test 2 - 2001 Chrysler LHS

P2 Head Resultant

Max: 66.3 [g] at 0.085 [s]

Min: 0.0 [g] at 0.021 [s]



B-58

8602-2

NCAP 2001 Test 2 - 2001 Chrysler LHS

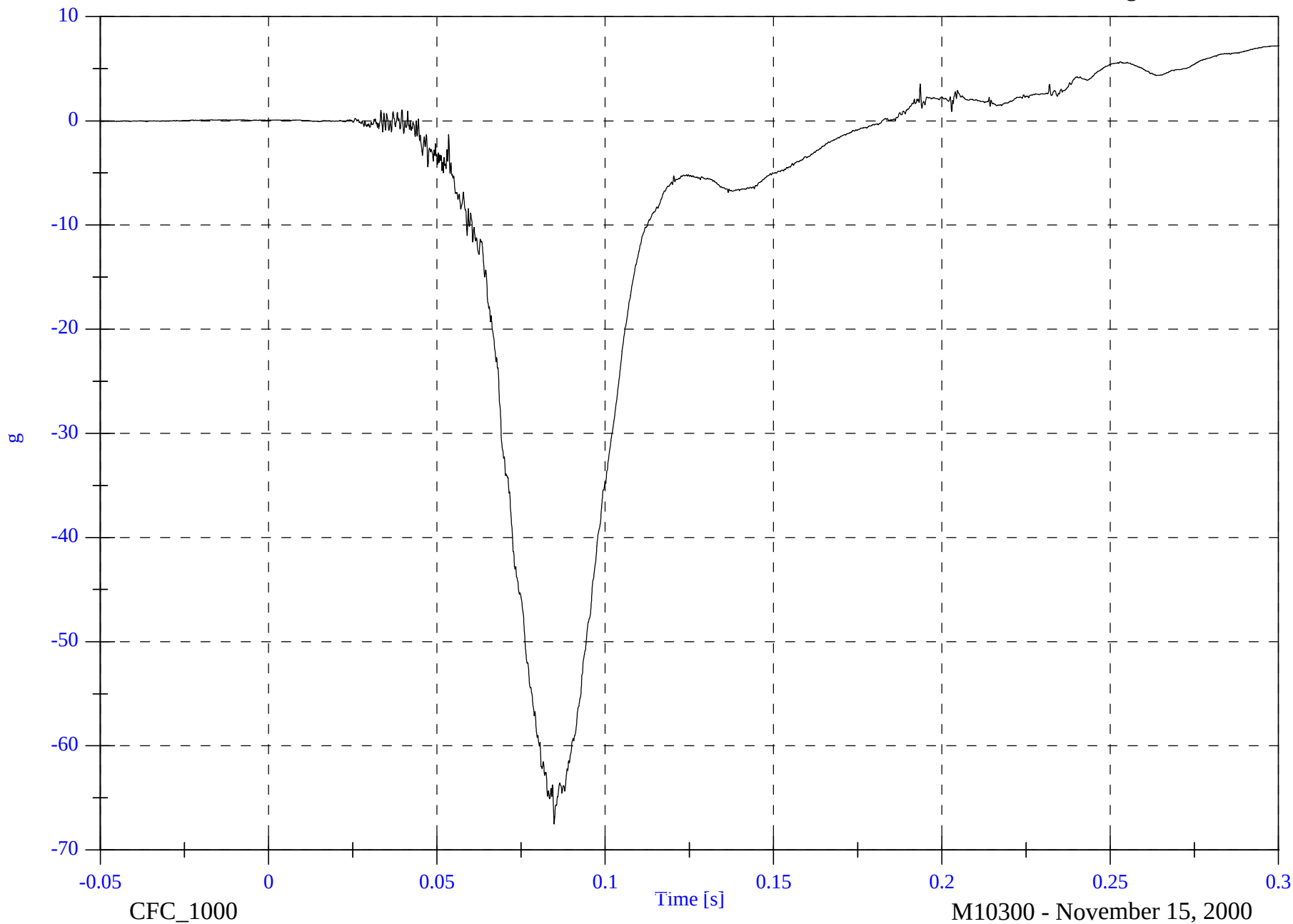
P2 Head Red x

Max: 7.2 [g] at 0.300 [s]

Min: -67.5 [g] at 0.085 [s]

B-59

8602-2

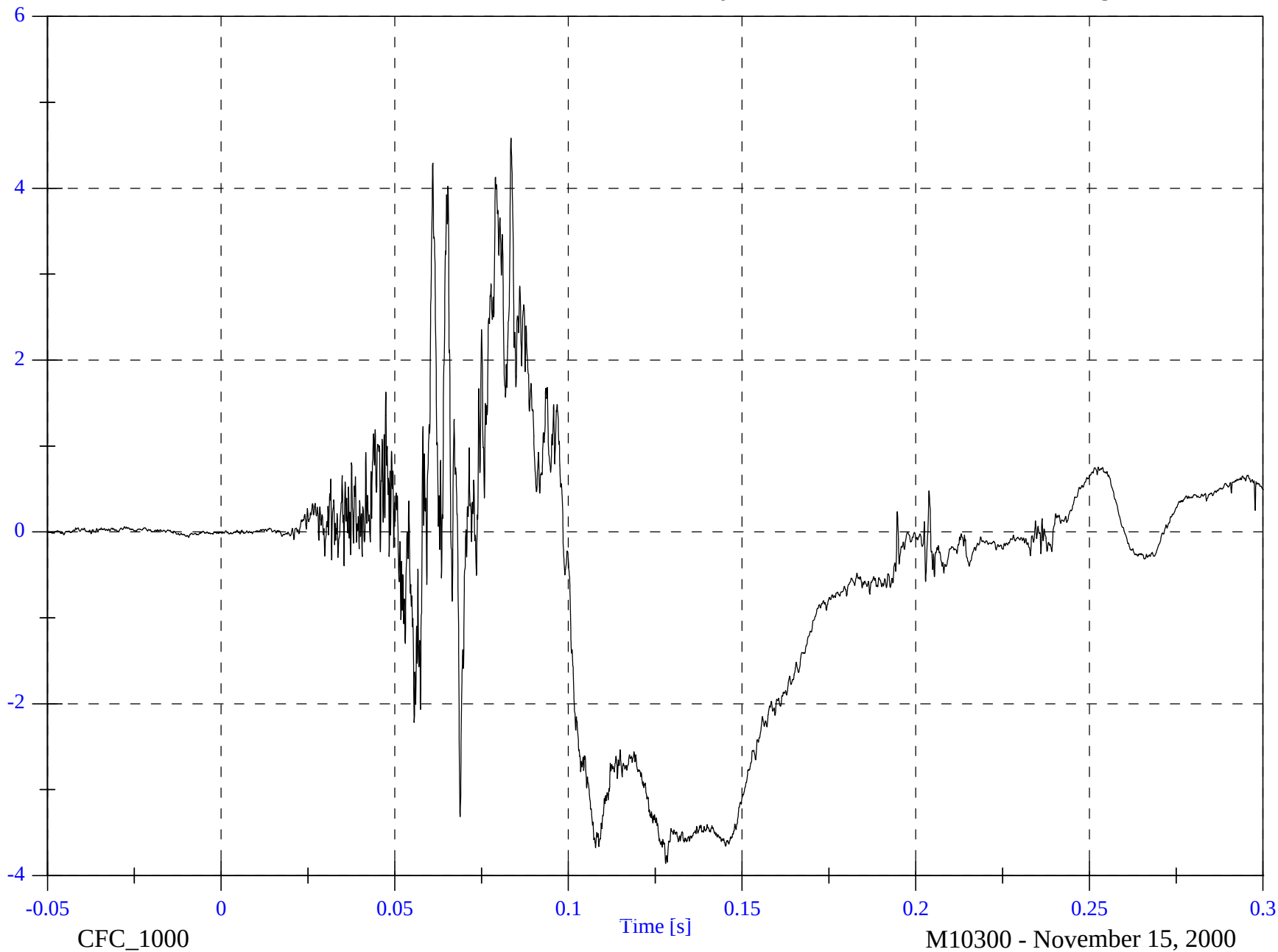


NCAP 2001 Test 2 - 2001 Chrysler LHS

P2 Head Red y

Max: 4.6 [g] at 0.083 [s]

Min: -3.9 [g] at 0.128 [s]



NCAP 2001 Test 2 - 2001 Chrysler LHS

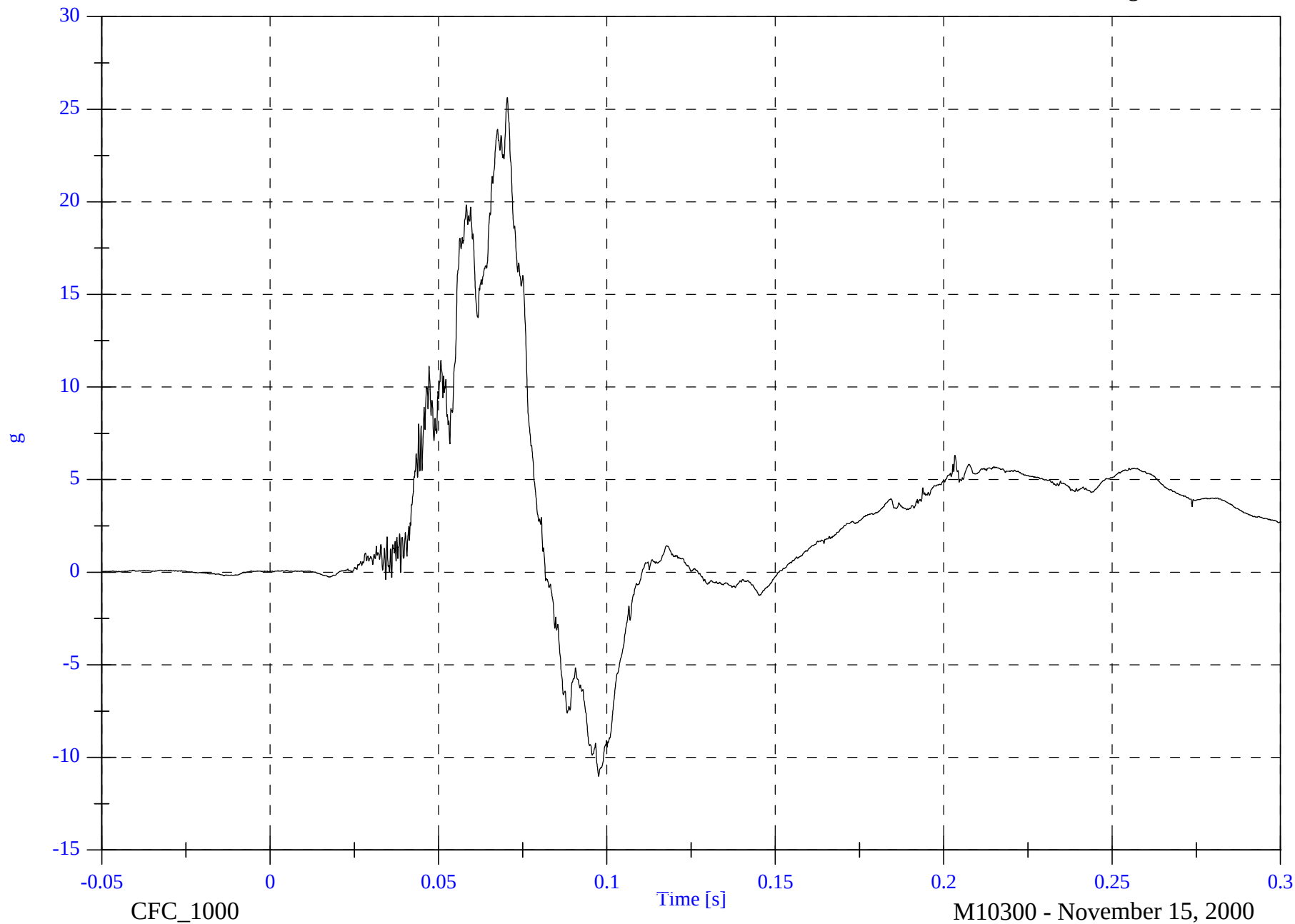
P2 Head Red z

Max: 25.6 [g] at 0.070 [s]

Min: -11.0 [g] at 0.098 [s]

B-61

8602-2



NCAP 2001 Test 2 - 2001 Chrysler LHS

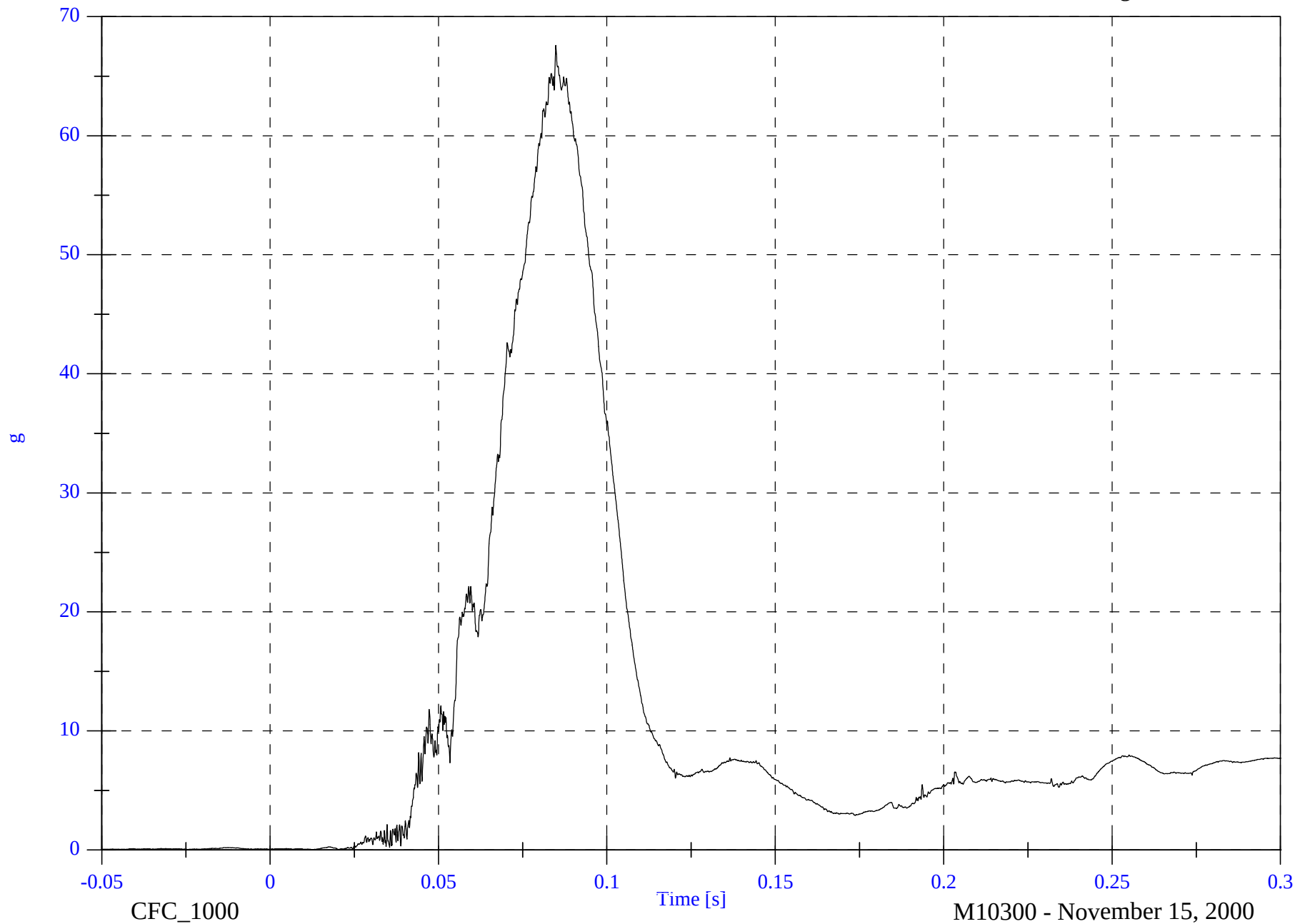
P2 Head Red Resultant

Max: 67.6 [g] at 0.085 [s]

Min: 0.0 [g] at 0.020 [s]

B-62

8602-2

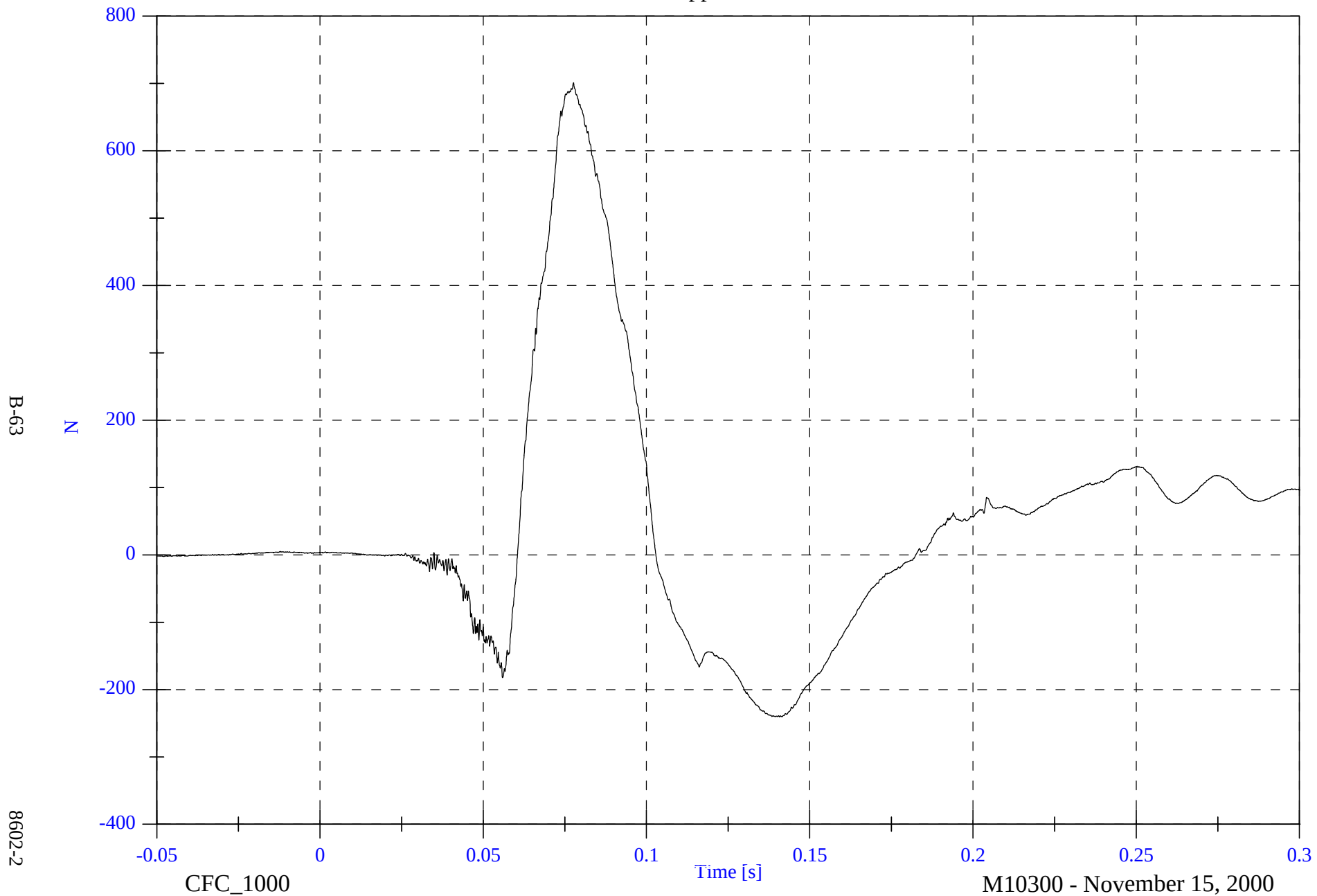


NCAP 2001 Test 2 - 2001 Chrysler LHS

P2 Upper Neck Fx

Max: 701.2 [N] at 0.078 [s]

Min: -240.5 [N] at 0.141 [s]

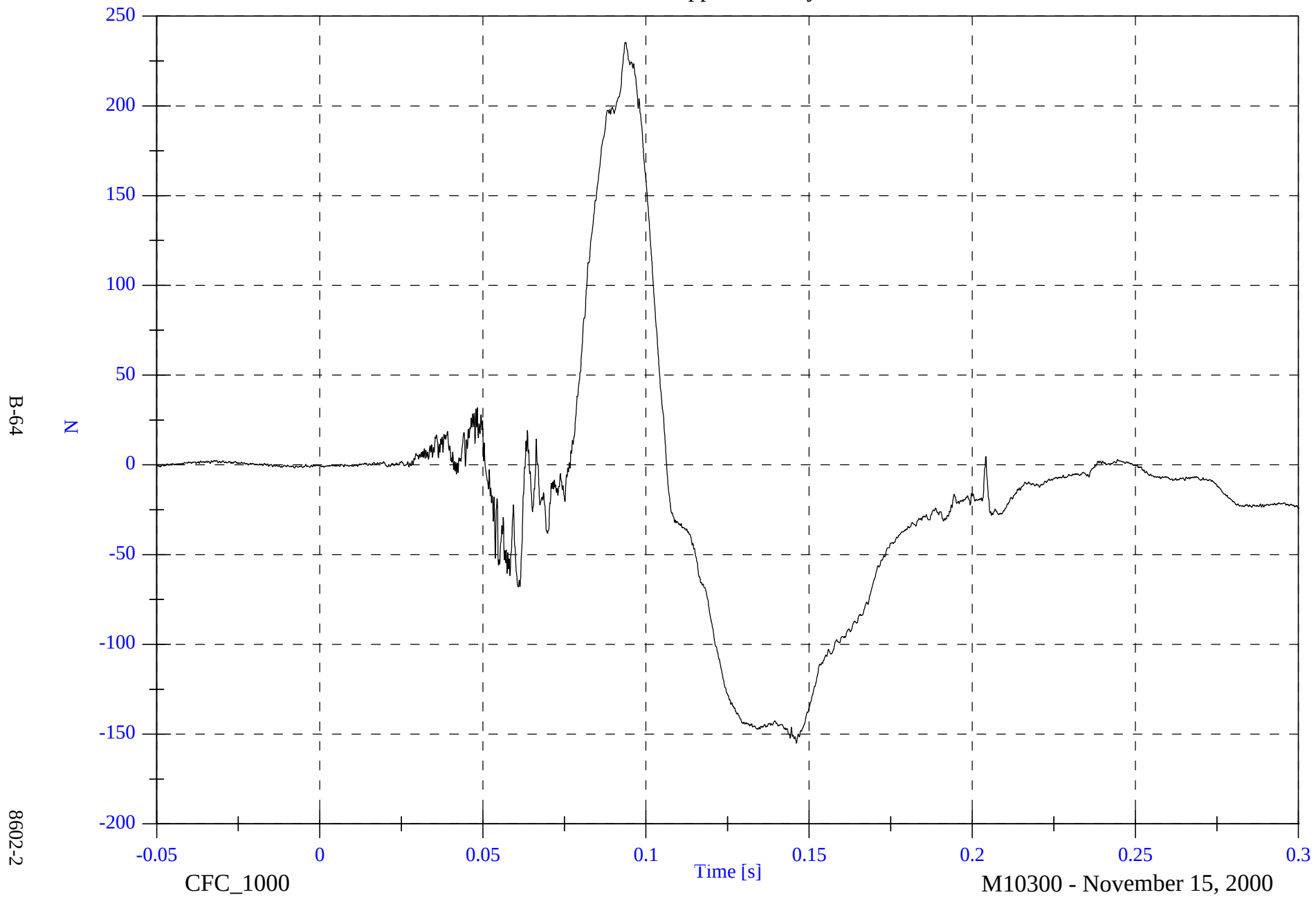


NCAP 2001 Test 2 - 2001 Chrysler LHS

P2 Upper Neck Fy

Max: 235.4 [N] at 0.094 [s]

Min: -155.0 [N] at 0.146 [s]

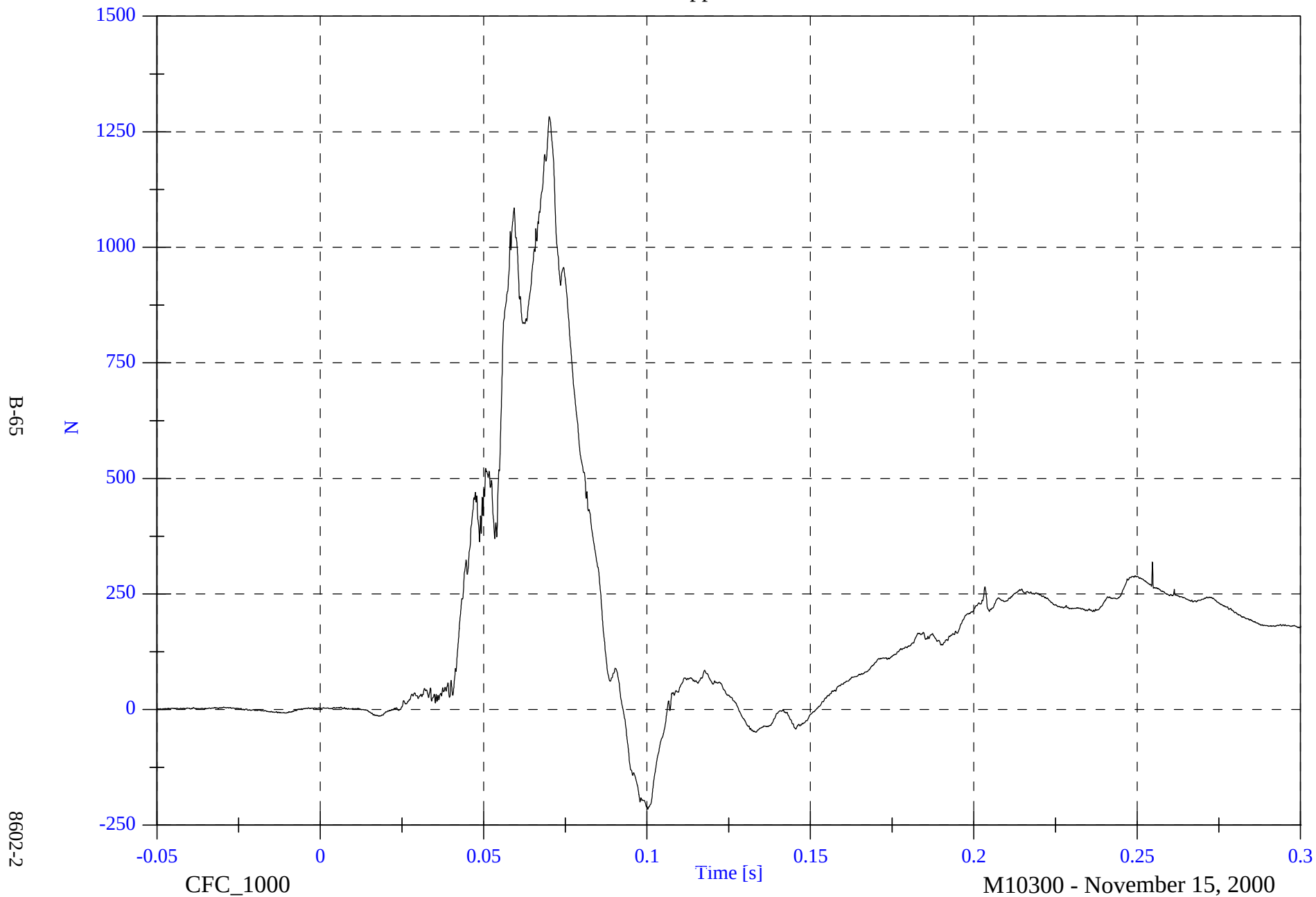


NCAP 2001 Test 2 - 2001 Chrysler LHS

P2 Upper Neck Fz

Max: 1282.6 [N] at 0.070 [s]

Min: -215.6 [N] at 0.100 [s]



NCAP 2001 Test 2 - 2001 Chrysler LHS

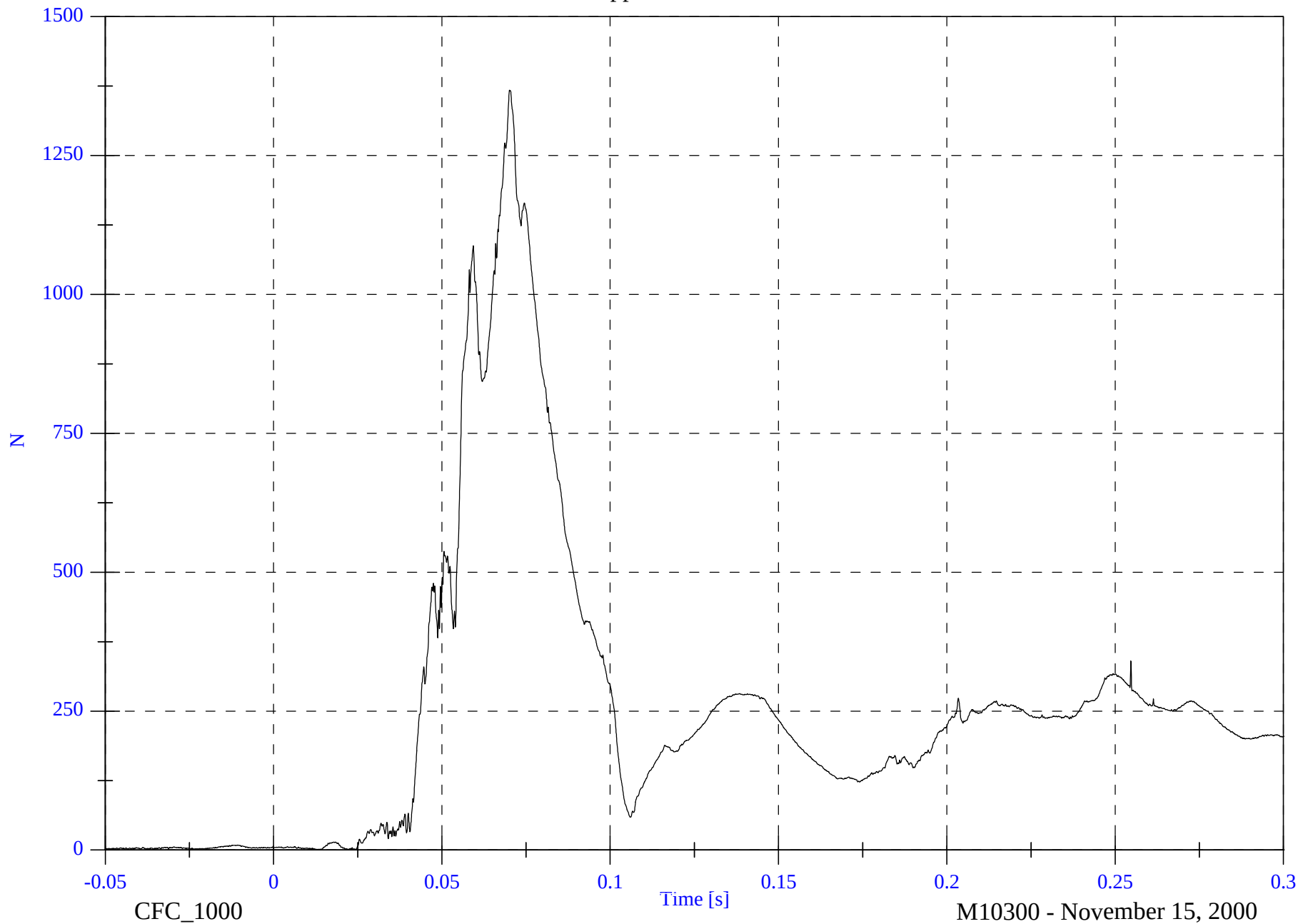
P2 Upper Neck F Resultant

Max: 1367.9 [N] at 0.070 [s]

Min: 0.4 [N] at 0.022 [s]

B-66

8602-2

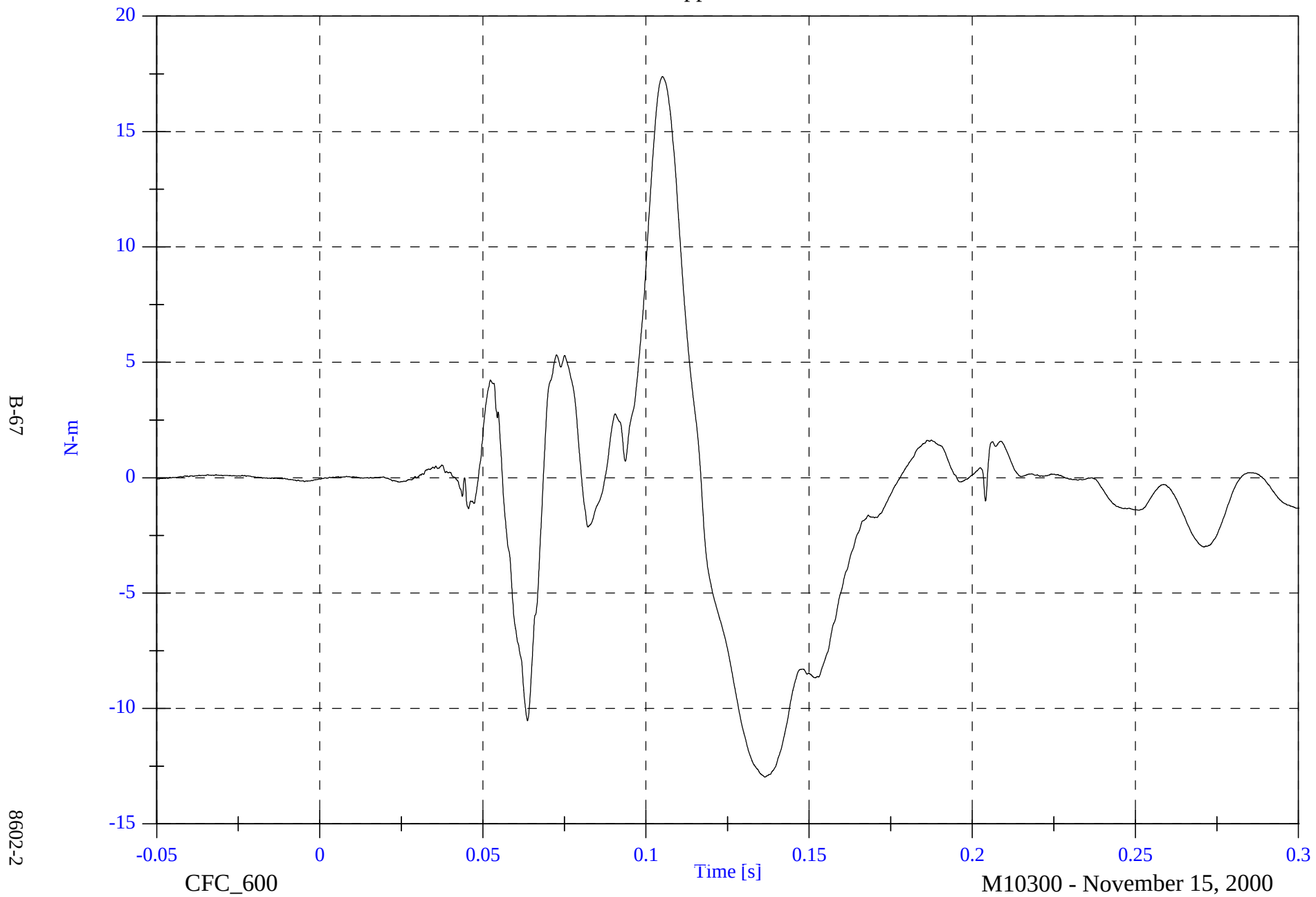


NCAP 2001 Test 2 - 2001 Chrysler LHS

P2 Upper Neck Mx

Max: 17.4 [N-m] at 0.105 [s]

Min: -13.0 [N-m] at 0.136 [s]



NCAP 2001 Test 2 - 2001 Chrysler LHS

P2 Upper Neck My

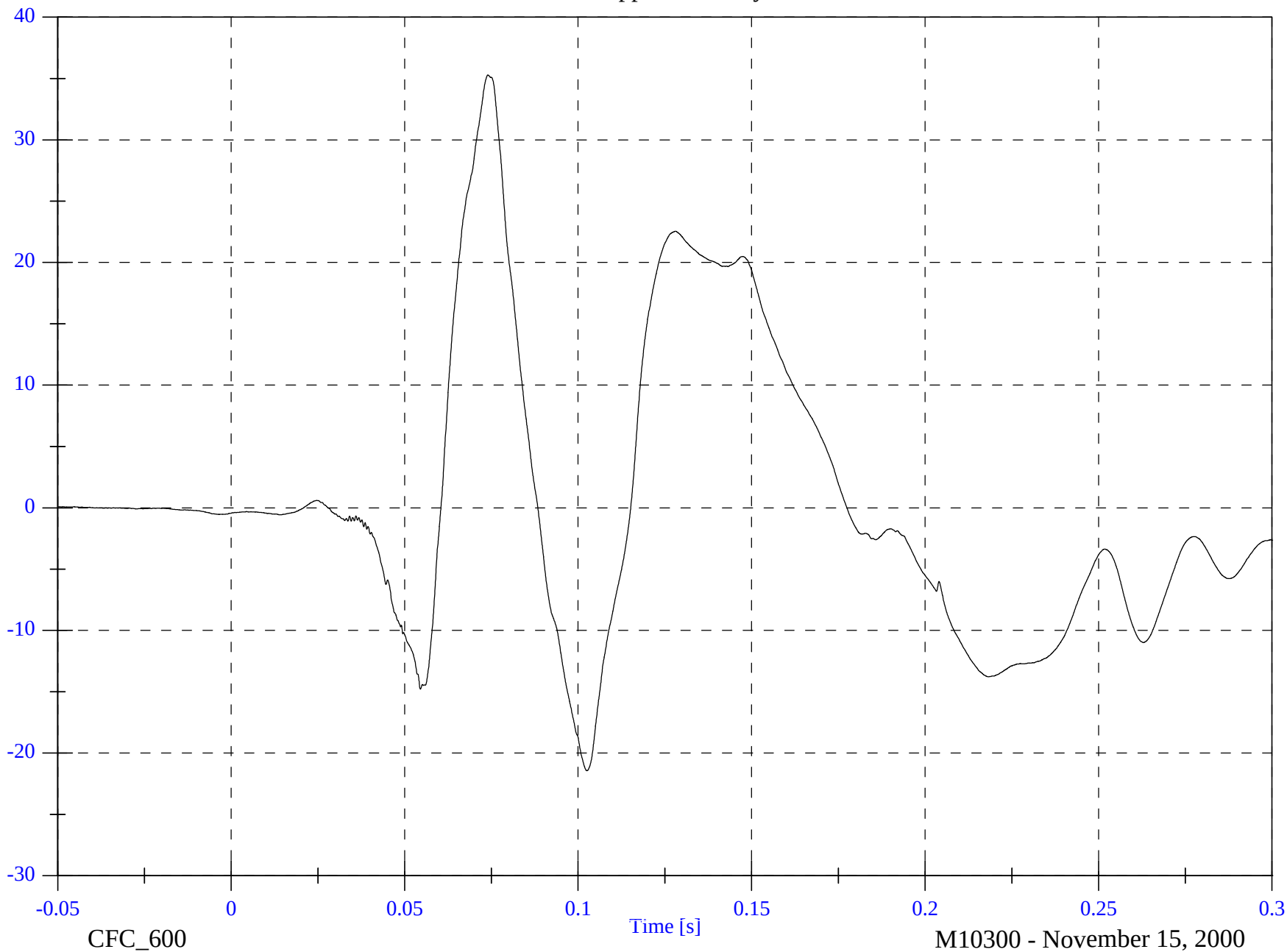
Max: 35.3 [N-m] at 0.074 [s]

Min: -21.4 [N-m] at 0.103 [s]

B-68

N-m

8602-2

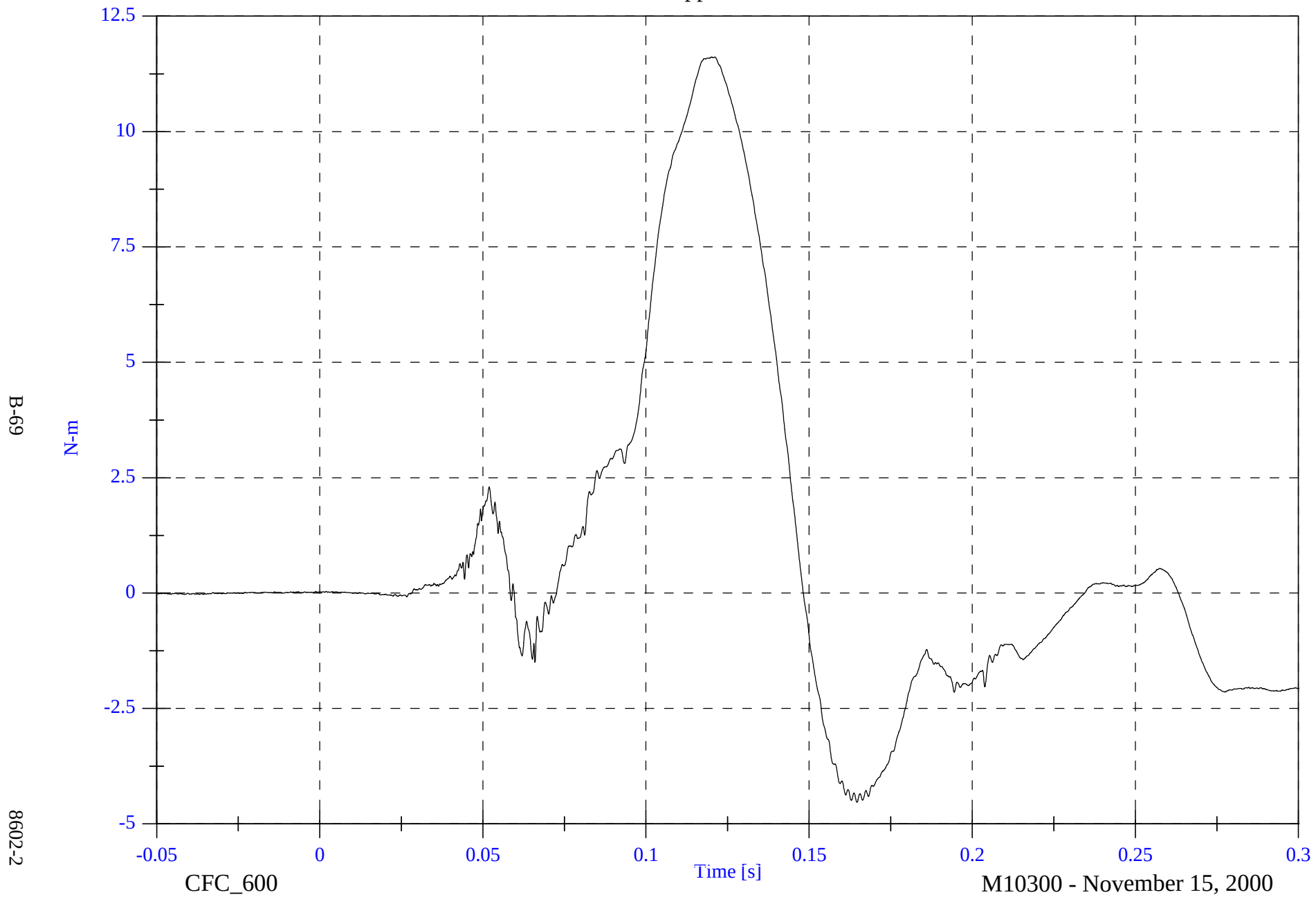


NCAP 2001 Test 2 - 2001 Chrysler LHS

P2 Upper Neck Mz

Max: 11.6 [N-m] at 0.121 [s]

Min: -4.5 [N-m] at 0.165 [s]

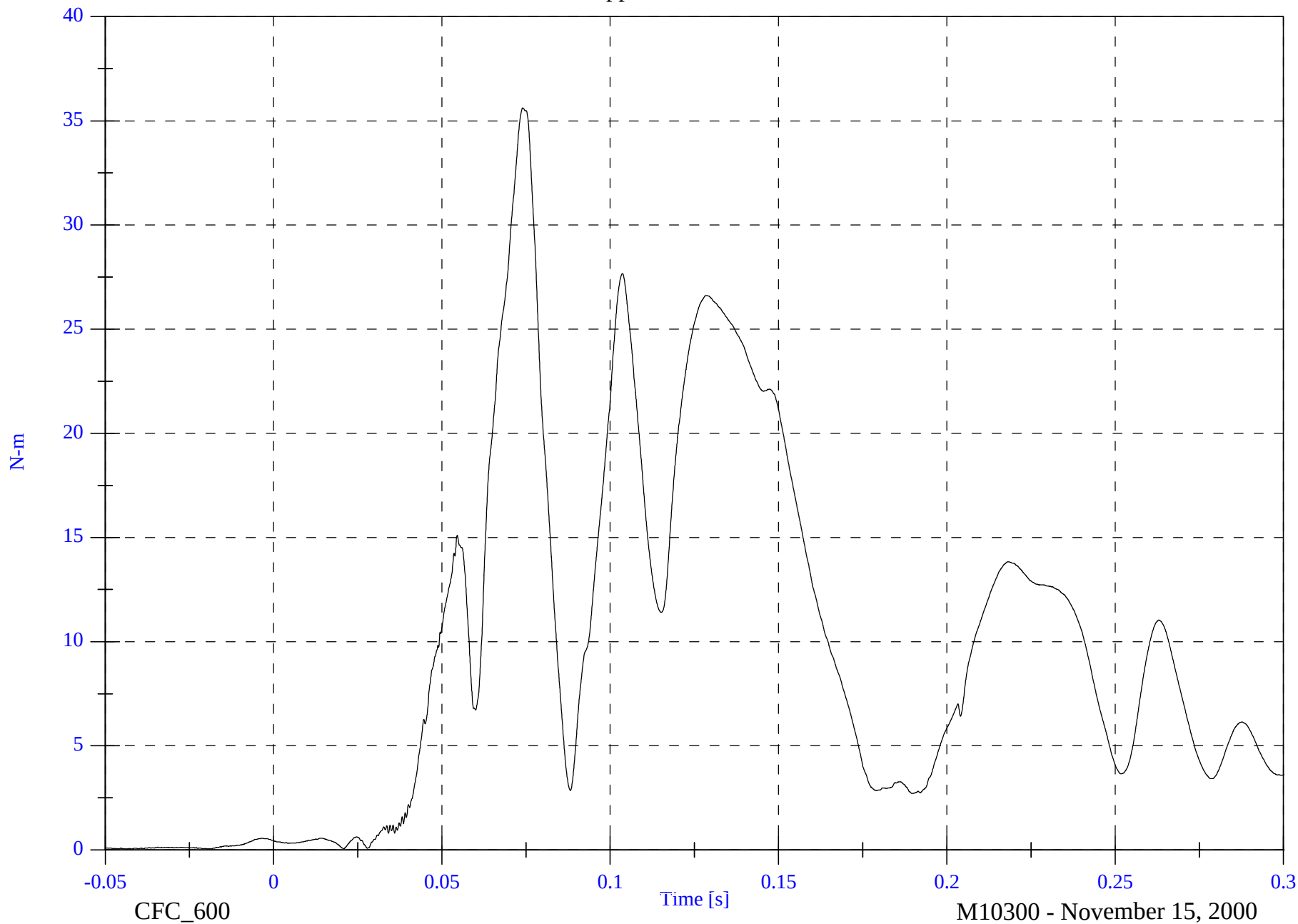


NCAP 2001 Test 2 - 2001 Chrysler LHS

P2 Upper Neck M Resultant

Max: 35.6 [N-m] at 0.074 [s]

Min: 0.0 [N-m] at -0.042 [s]



B-70

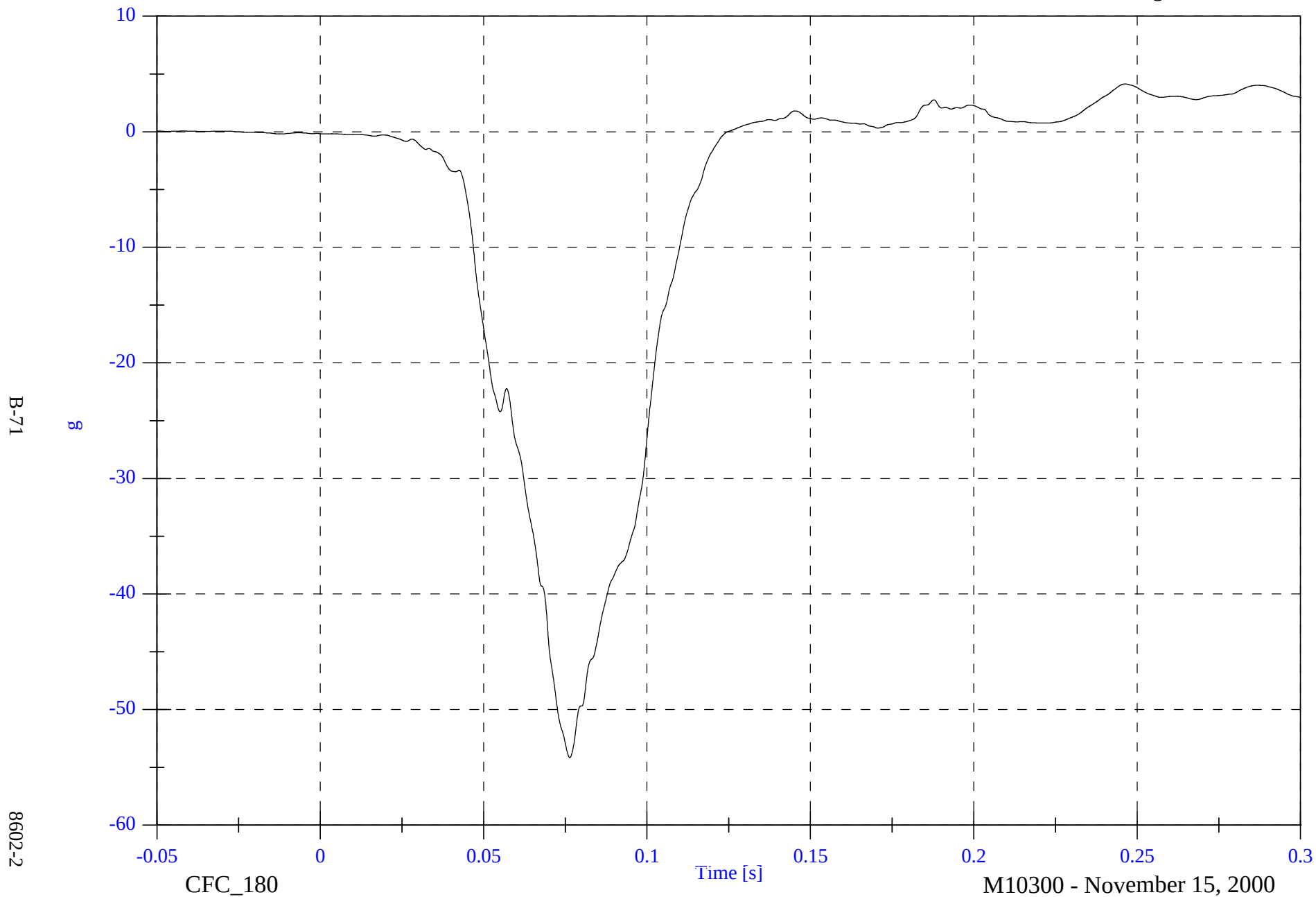
8602-2

NCAP 2001 Test 2 - 2001 Chrysler LHS

P2 Chest x

Max: 4.1 [g] at 0.246 [s]

Min: -54.2 [g] at 0.076 [s]

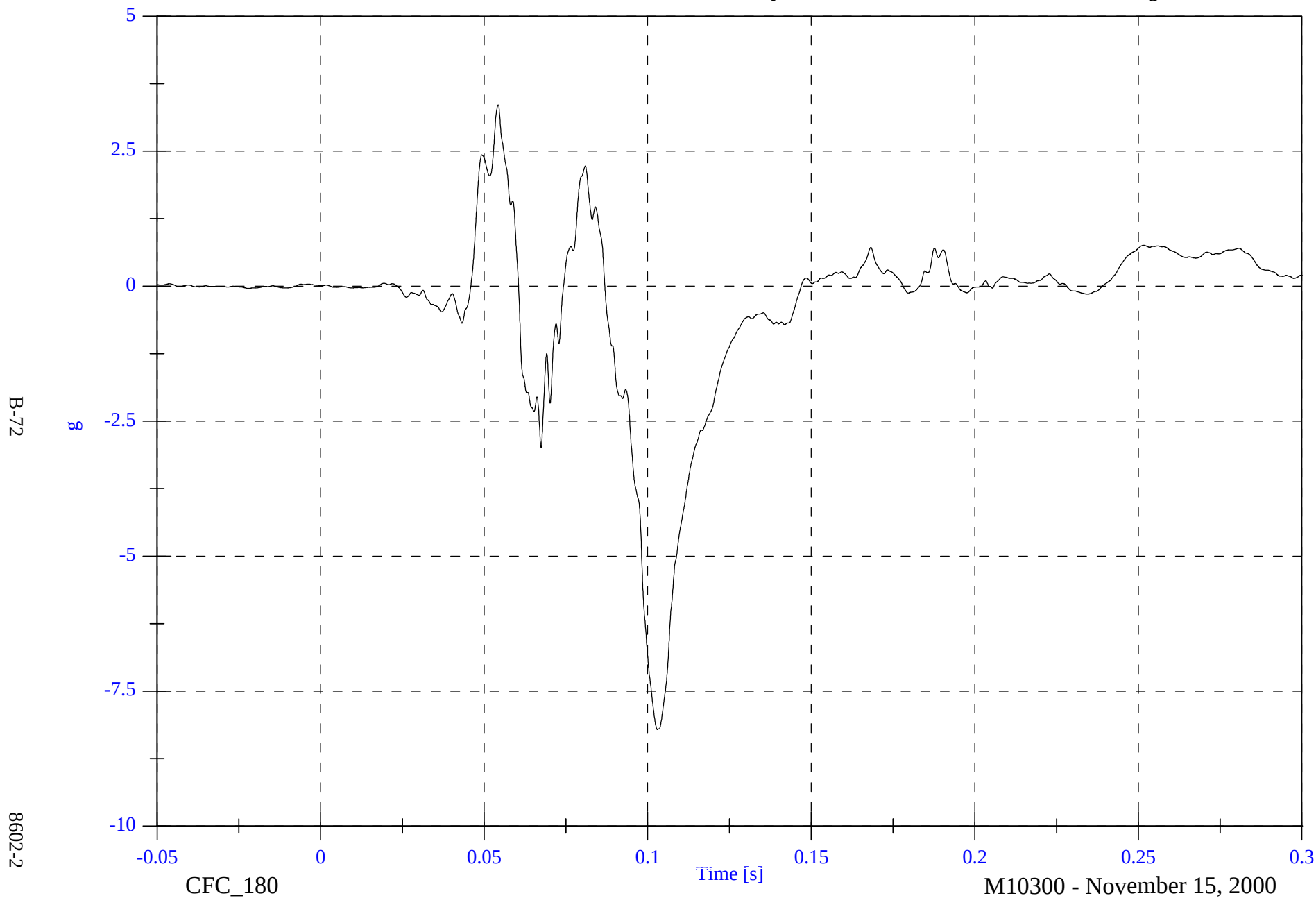


NCAP 2001 Test 2 - 2001 Chrysler LHS

P2 Chest y

Max: 3.4 [g] at 0.054 [s]

Min: -8.2 [g] at 0.103 [s]

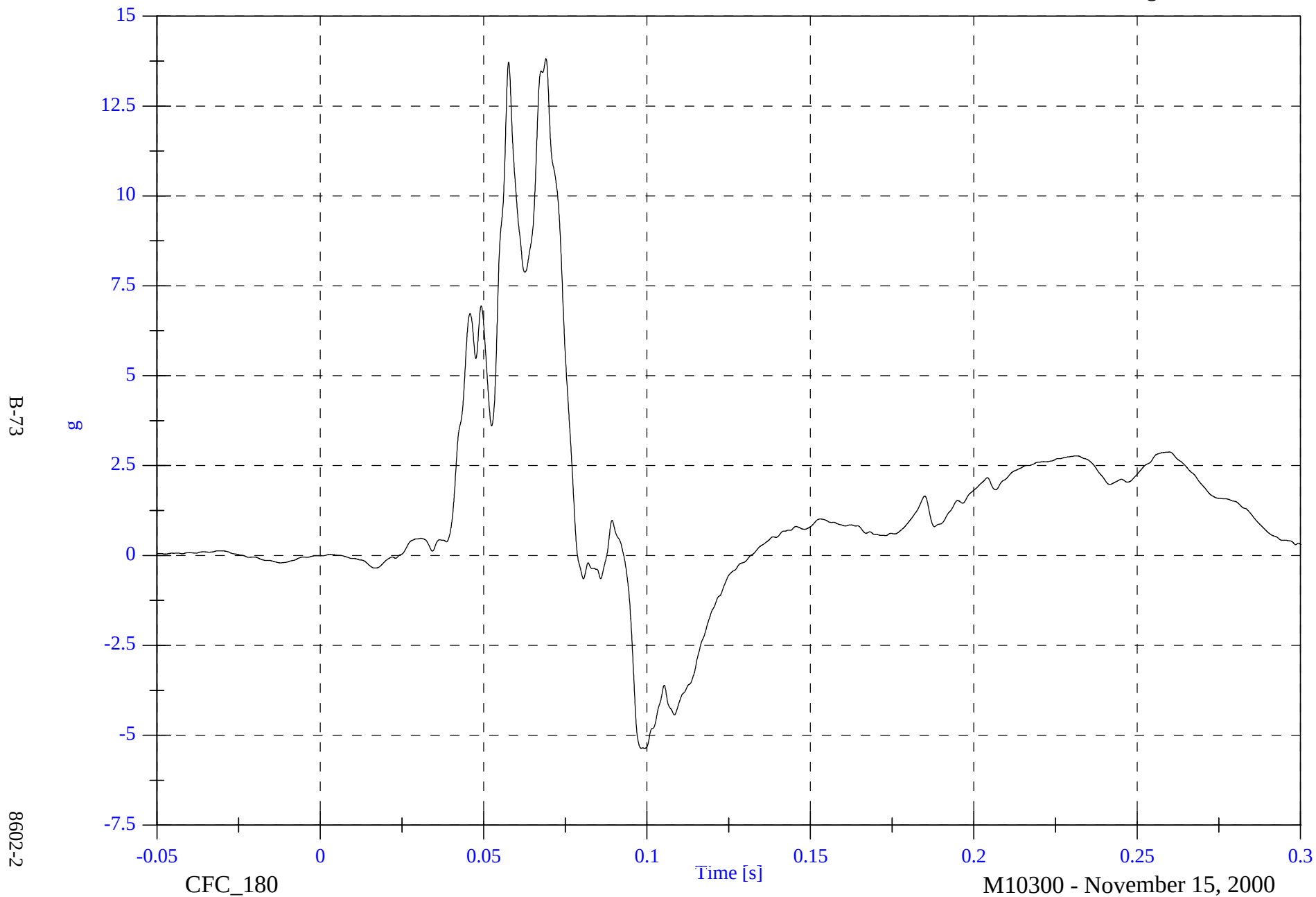


NCAP 2001 Test 2 - 2001 Chrysler LHS

P2 Chest z

Max: 13.8 [g] at 0.069 [s]

Min: -5.4 [g] at 0.098 [s]



NCAP 2001 Test 2 - 2001 Chrysler LHS

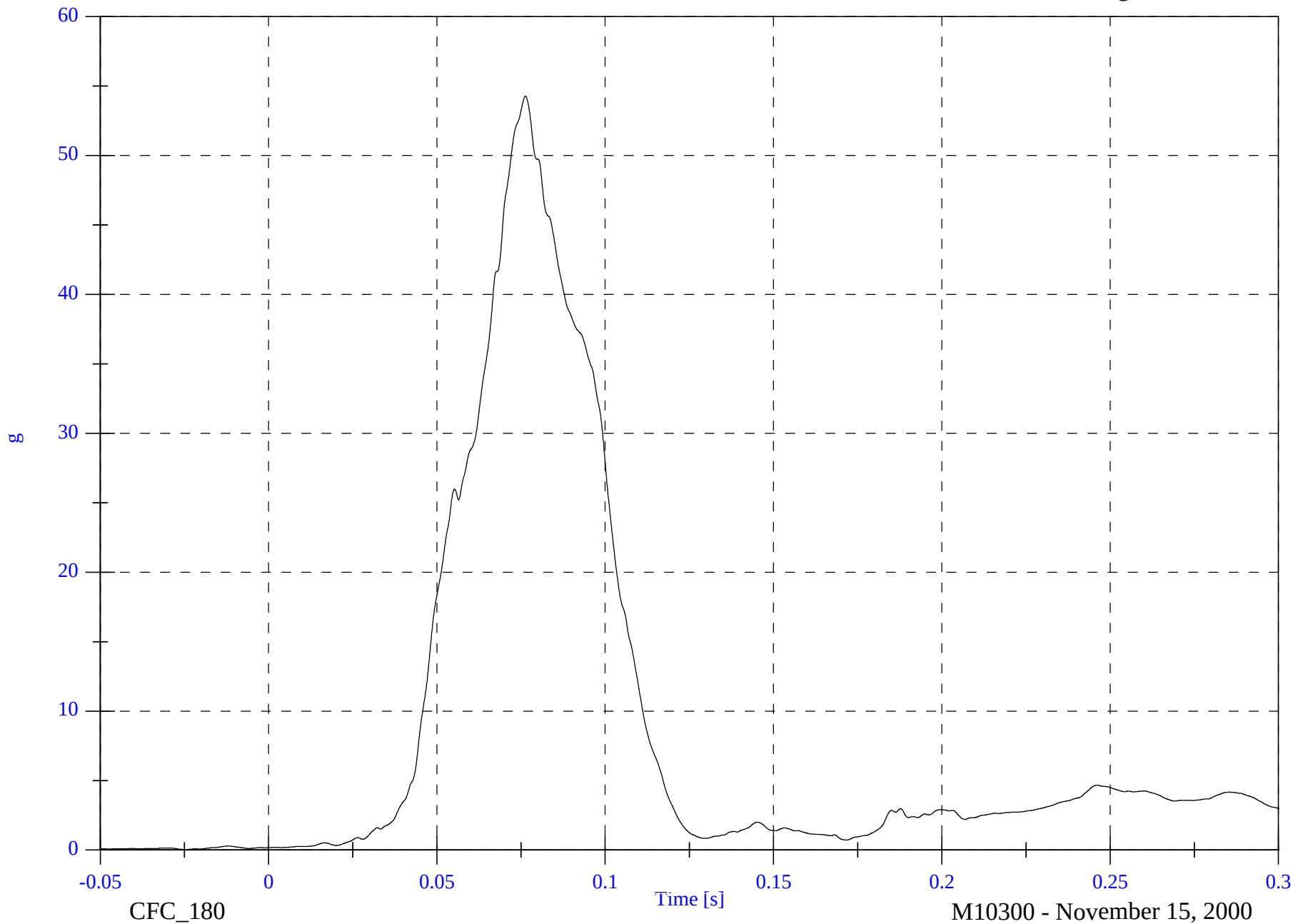
P2 Chest Resultant

Max: 54.3 [g] at 0.076 [s]

Min: 0.0 [g] at -0.025 [s]

B-74

8602-2

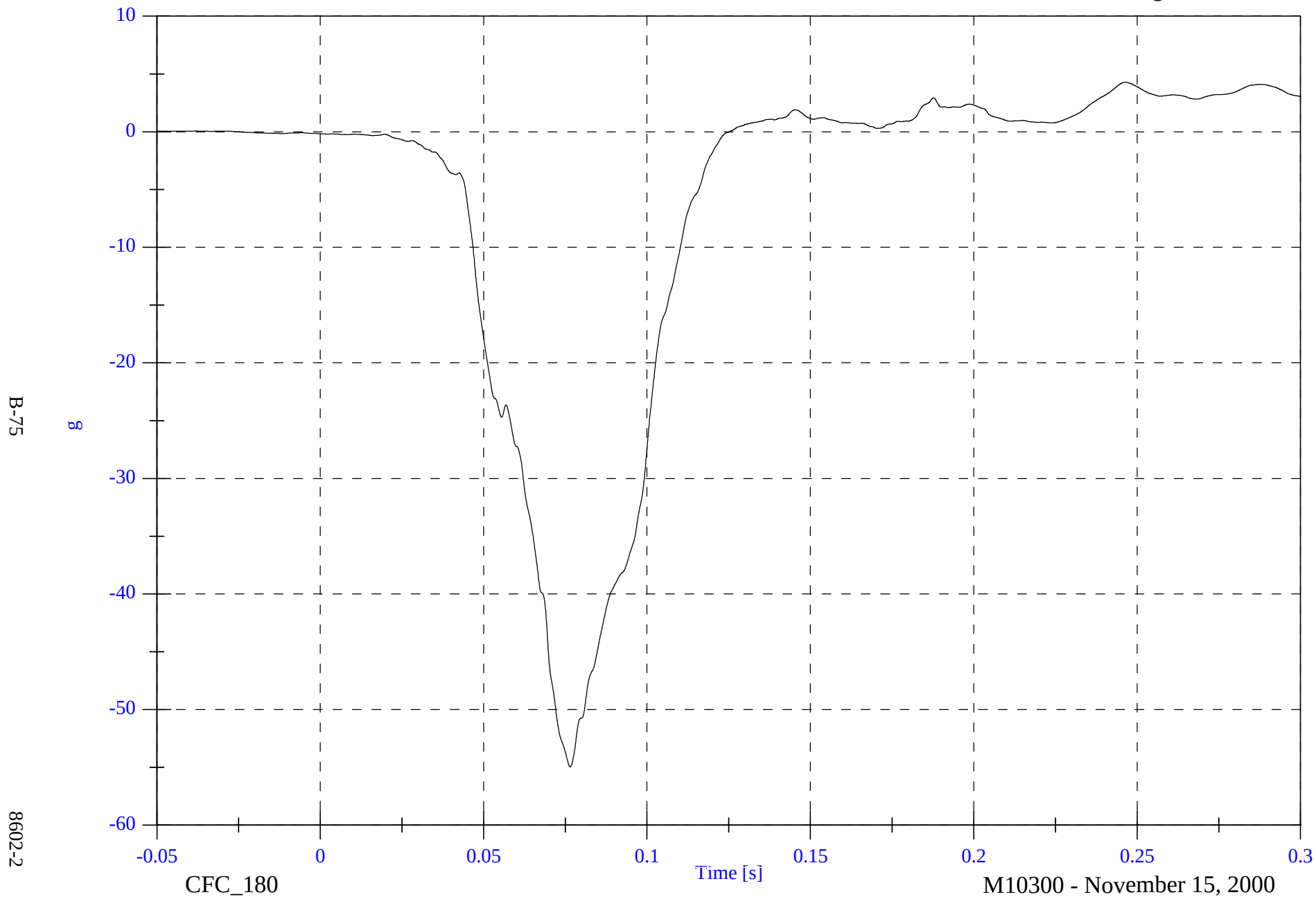


NCAP 2001 Test 2 - 2001 Chrysler LHS

P2 Chest Red x

Max: 4.3 [g] at 0.246 [s]

Min: -54.9 [g] at 0.076 [s]

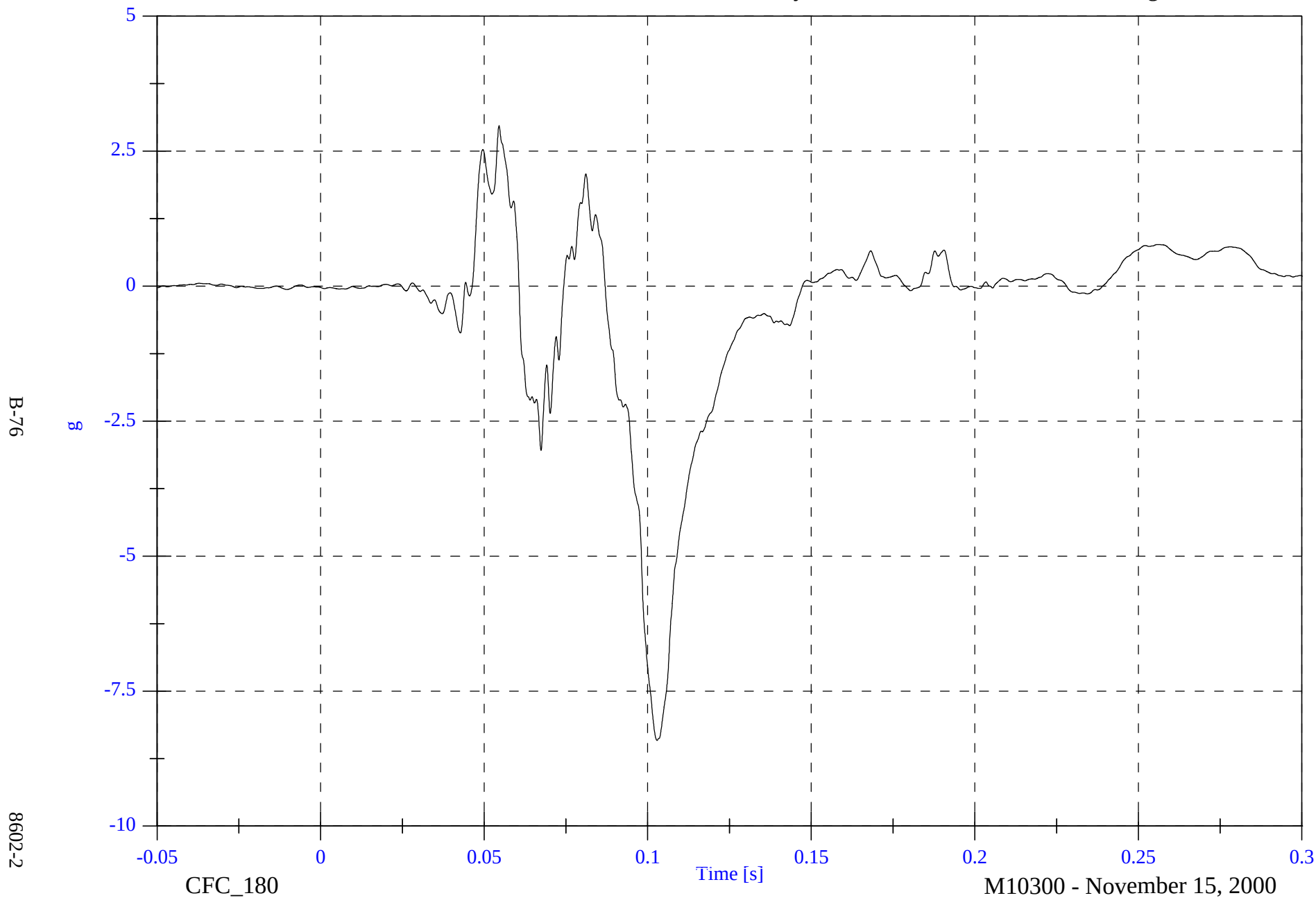


NCAP 2001 Test 2 - 2001 Chrysler LHS

P2 Chest Red y

Max: 3.0 [g] at 0.055 [s]

Min: -8.4 [g] at 0.103 [s]

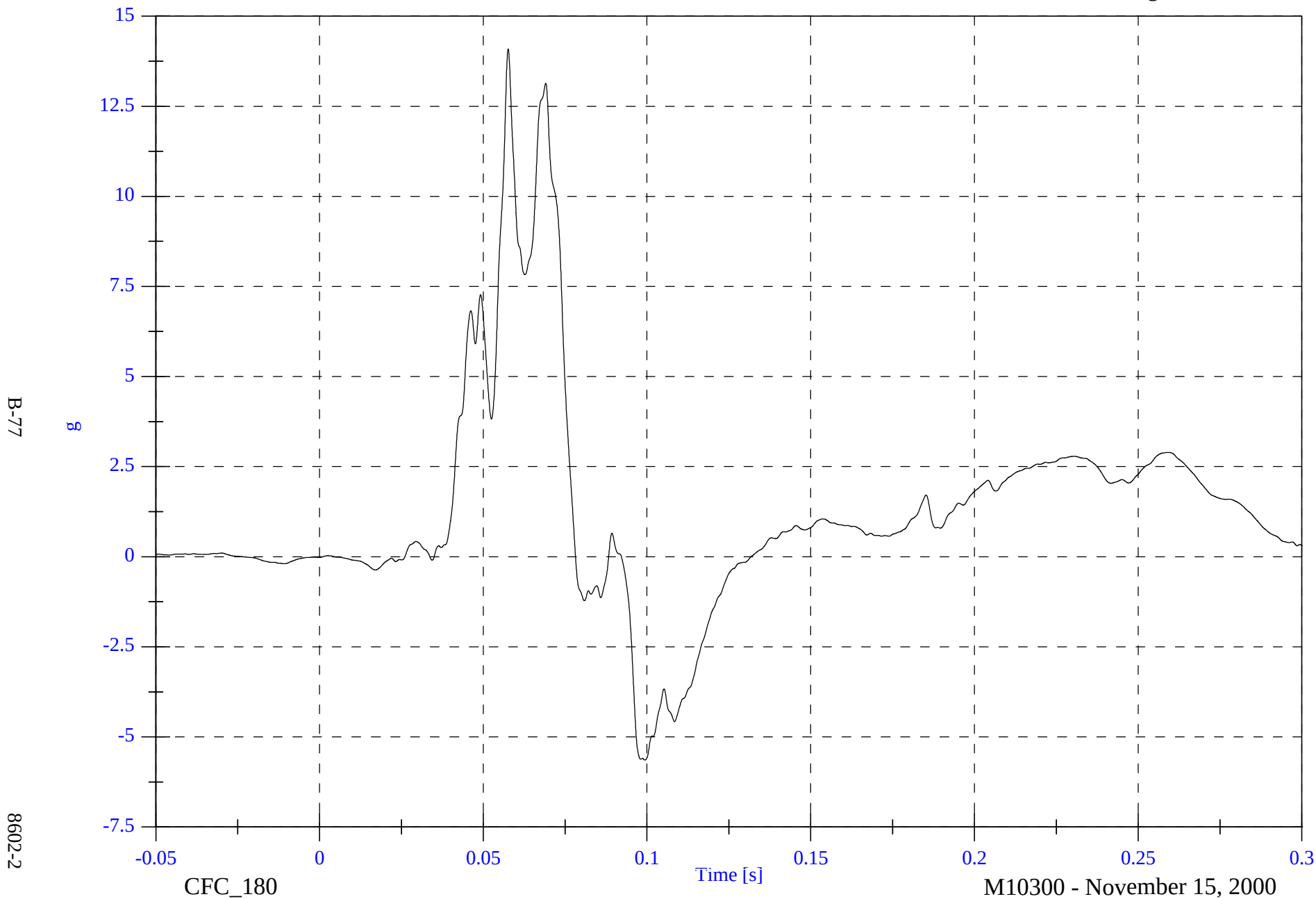


NCAP 2001 Test 2 - 2001 Chrysler LHS

P2 Chest Red z

Max: 14.1 [g] at 0.058 [s]

Min: -5.6 [g] at 0.099 [s]



NCAP 2001 Test 2 - 2001 Chrysler LHS

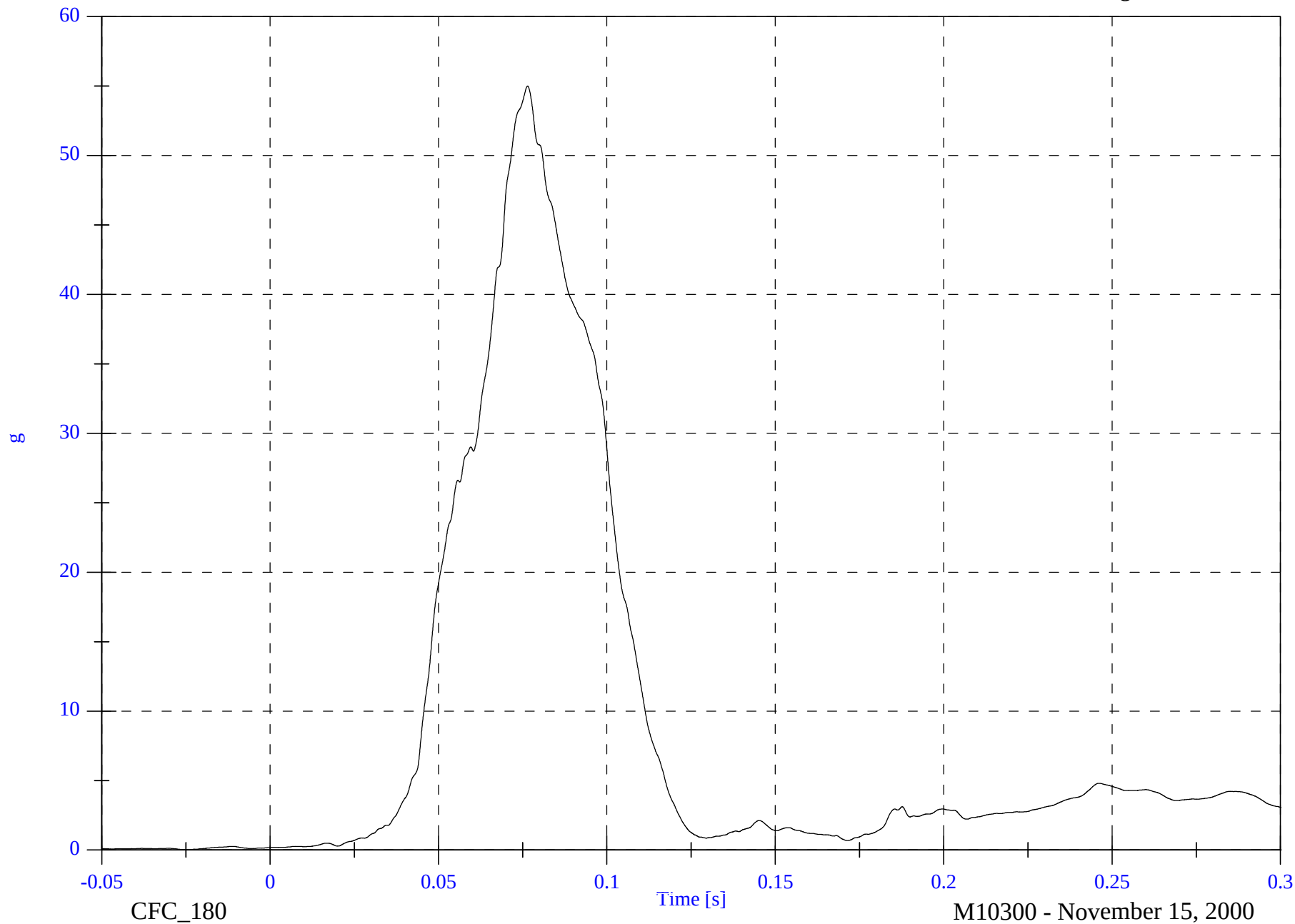
P2 Chest Red Resultant

Max: 55.0 [g] at 0.076 [s]

Min: 0.0 [g] at -0.025 [s]

B-78

8602-2

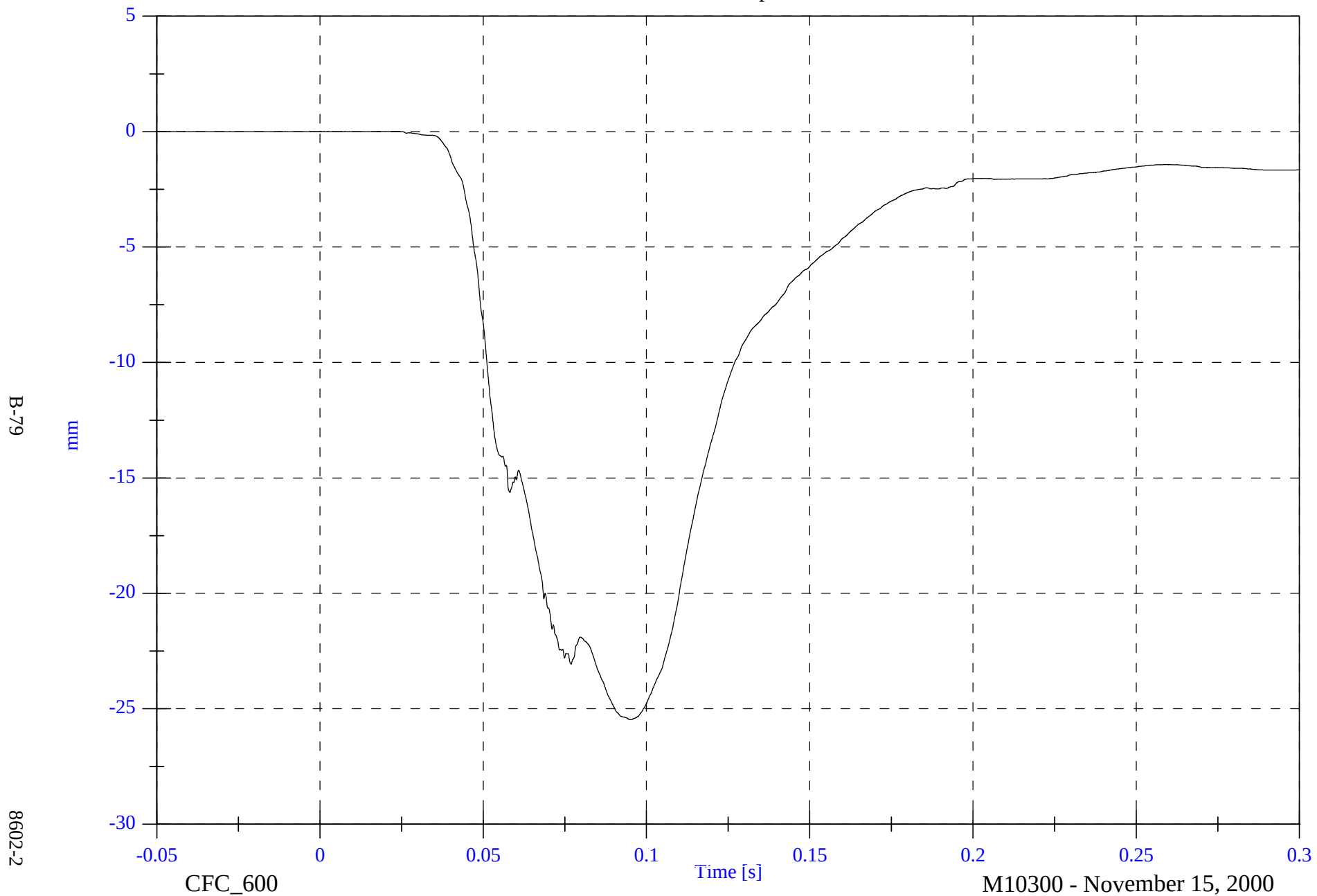


NCAP 2001 Test 2 - 2001 Chrysler LHS

P2 Chest Compression

Max: 0.0 [mm] at 0.021 [s]

Min: -25.5 [mm] at 0.095 [s]

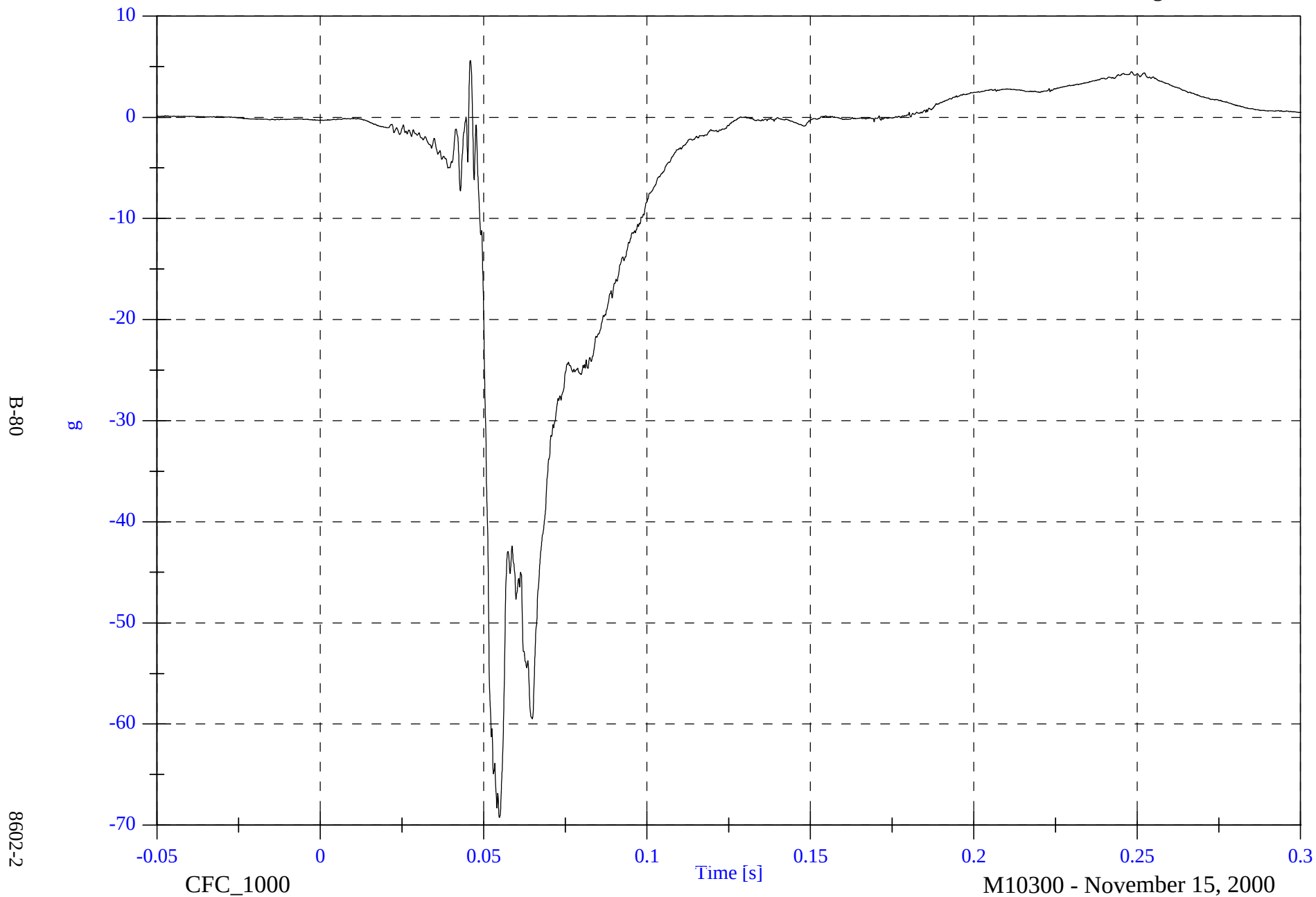


NCAP 2001 Test 2 - 2001 Chrysler LHS

P2 Pelvic x

Max: 5.6 [g] at 0.046 [s]

Min: -69.2 [g] at 0.055 [s]

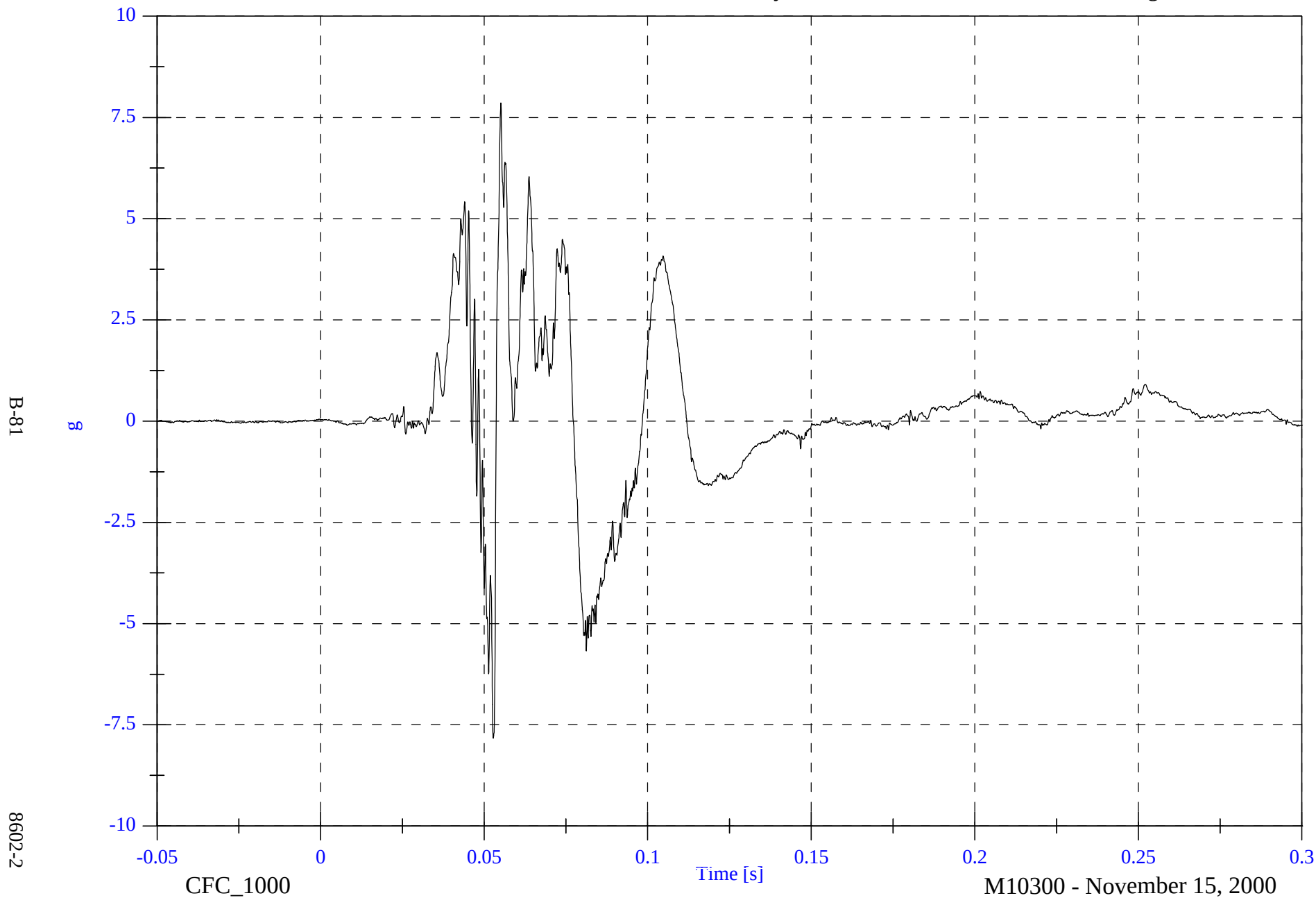


NCAP 2001 Test 2 - 2001 Chrysler LHS

P2 Pelvic y

Max: 7.9 [g] at 0.055 [s]

Min: -7.8 [g] at 0.053 [s]

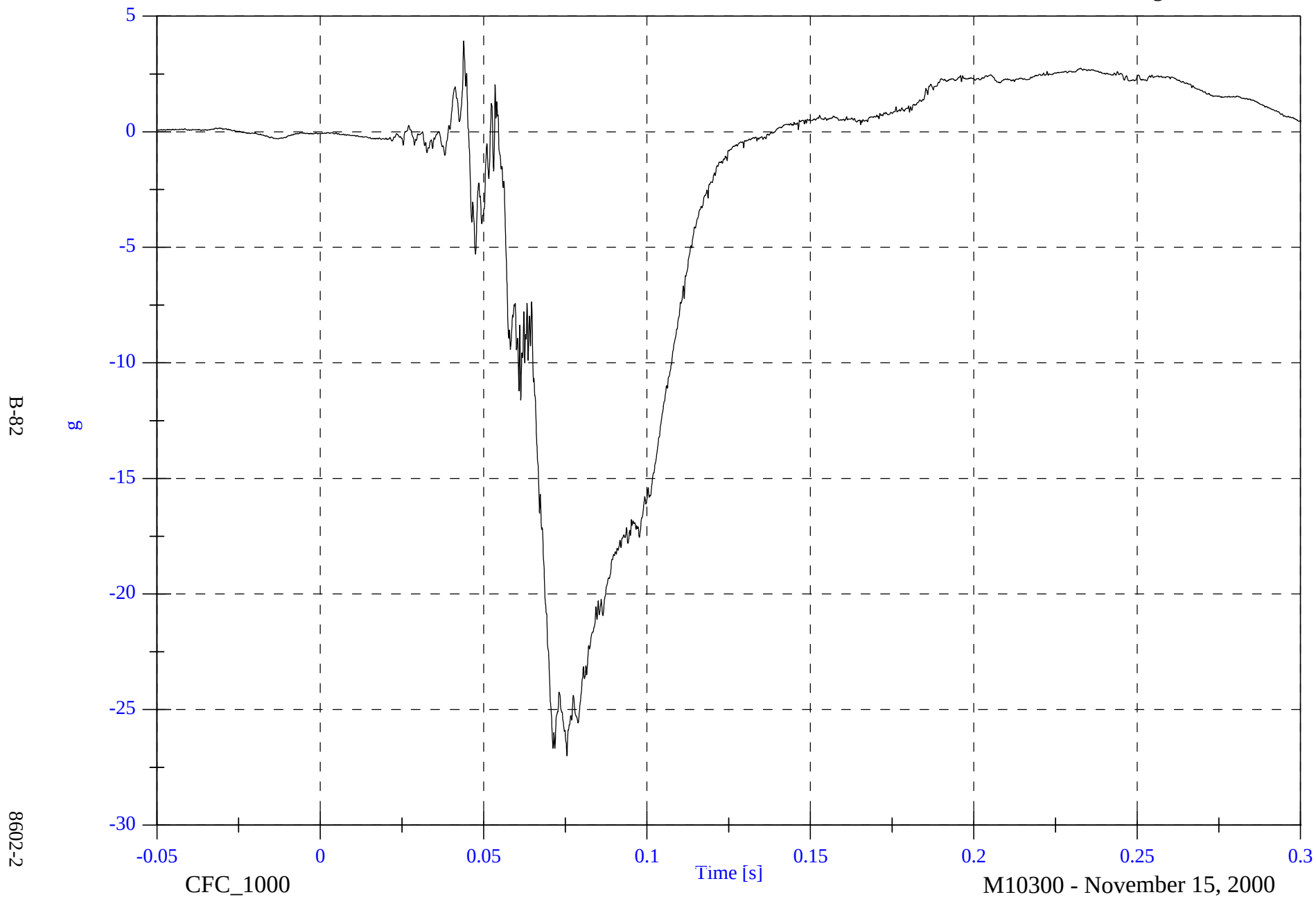


NCAP 2001 Test 2 - 2001 Chrysler LHS

P2 Pelvic z

Max: 3.9 [g] at 0.044 [s]

Min: -27.0 [g] at 0.076 [s]

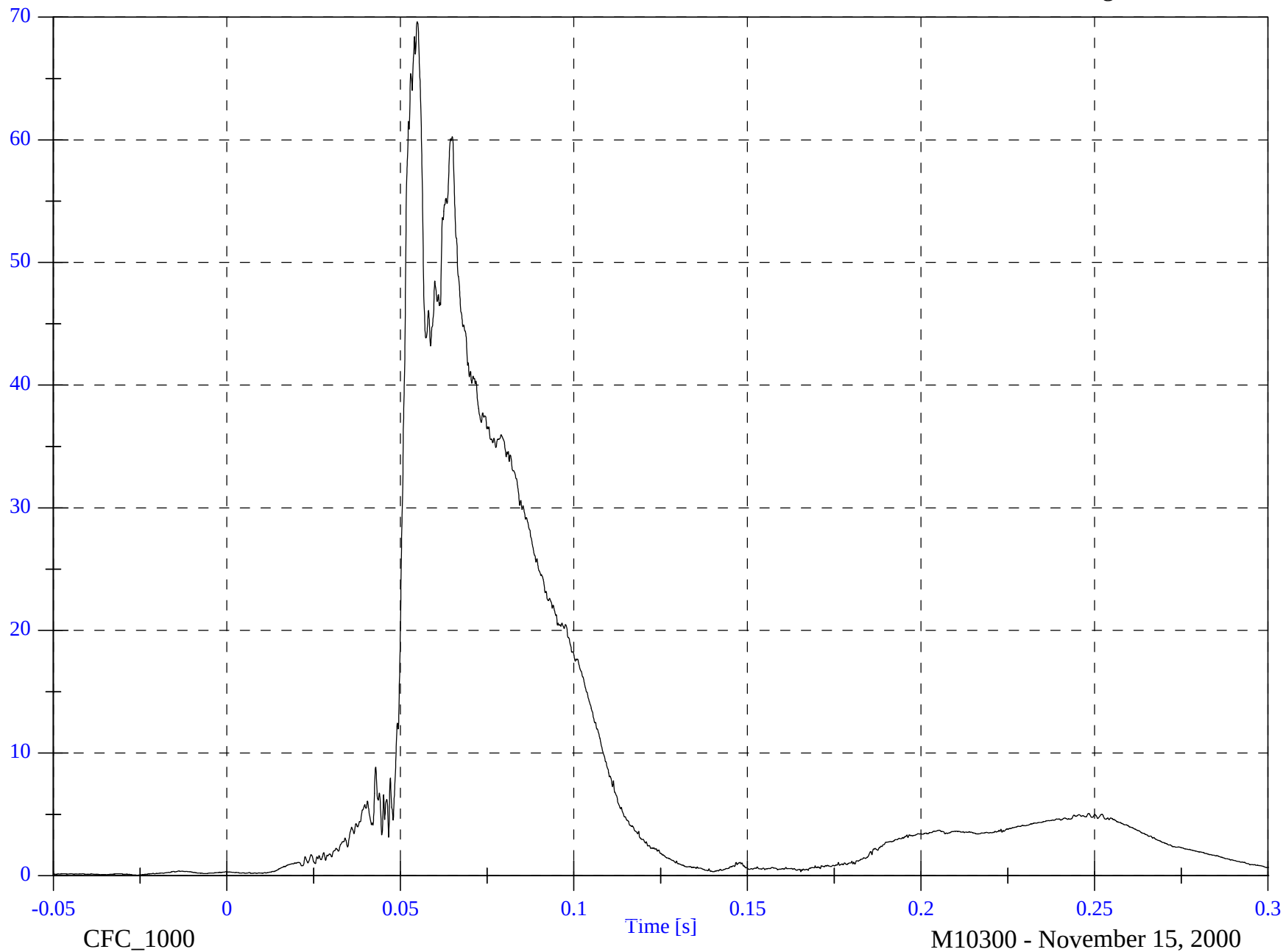


NCAP 2001 Test 2 - 2001 Chrysler LHS

P2 Pelvic Resultant

Max: 69.6 [g] at 0.055 [s]

Min: 0.0 [g] at -0.026 [s]



B-83

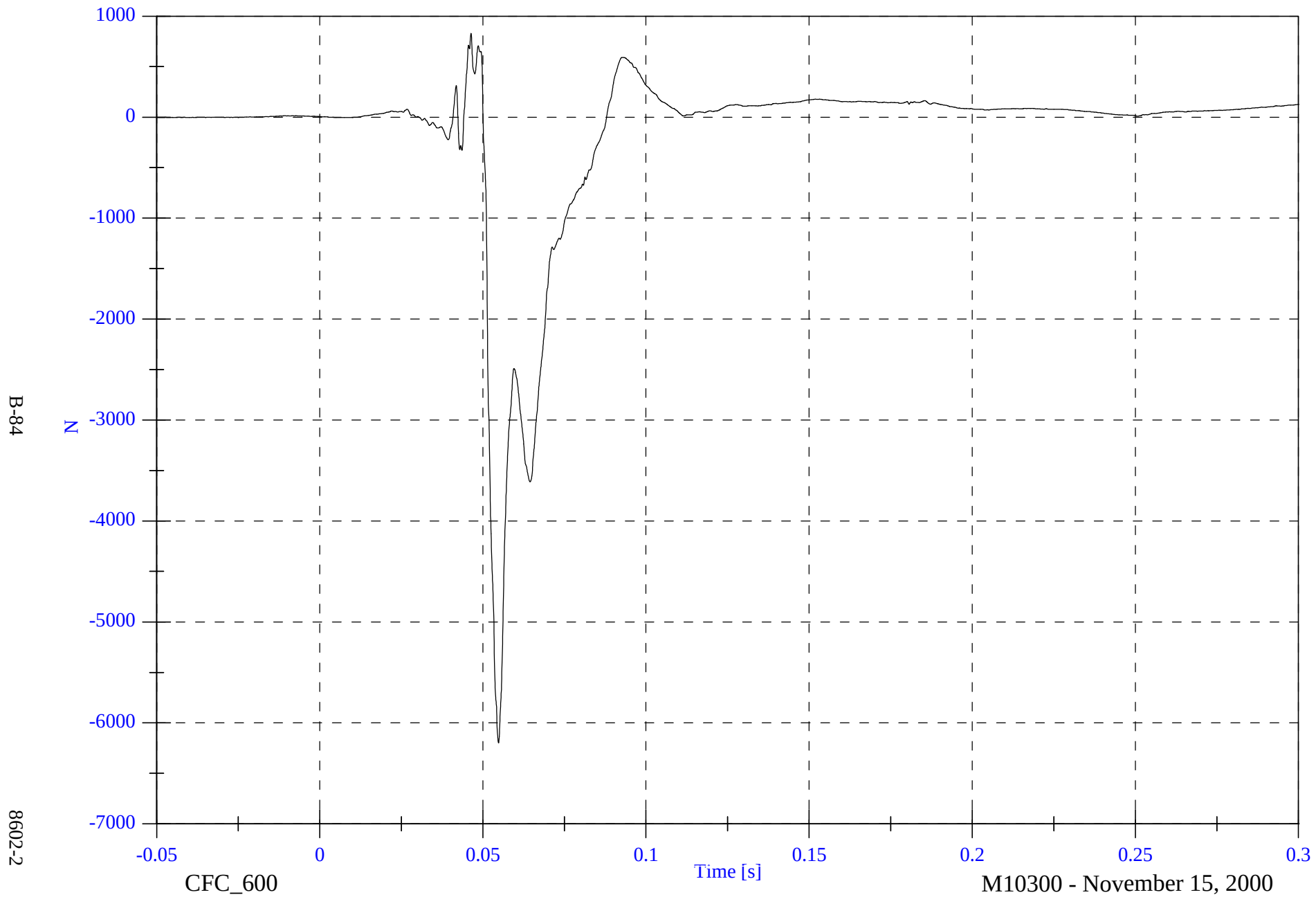
8602-2

NCAP 2001 Test 2 - 2001 Chrysler LHS

P2 Left Femur

Max: 830.8 [N] at 0.046 [s]

Min: -6200.0 [N] at 0.055 [s]

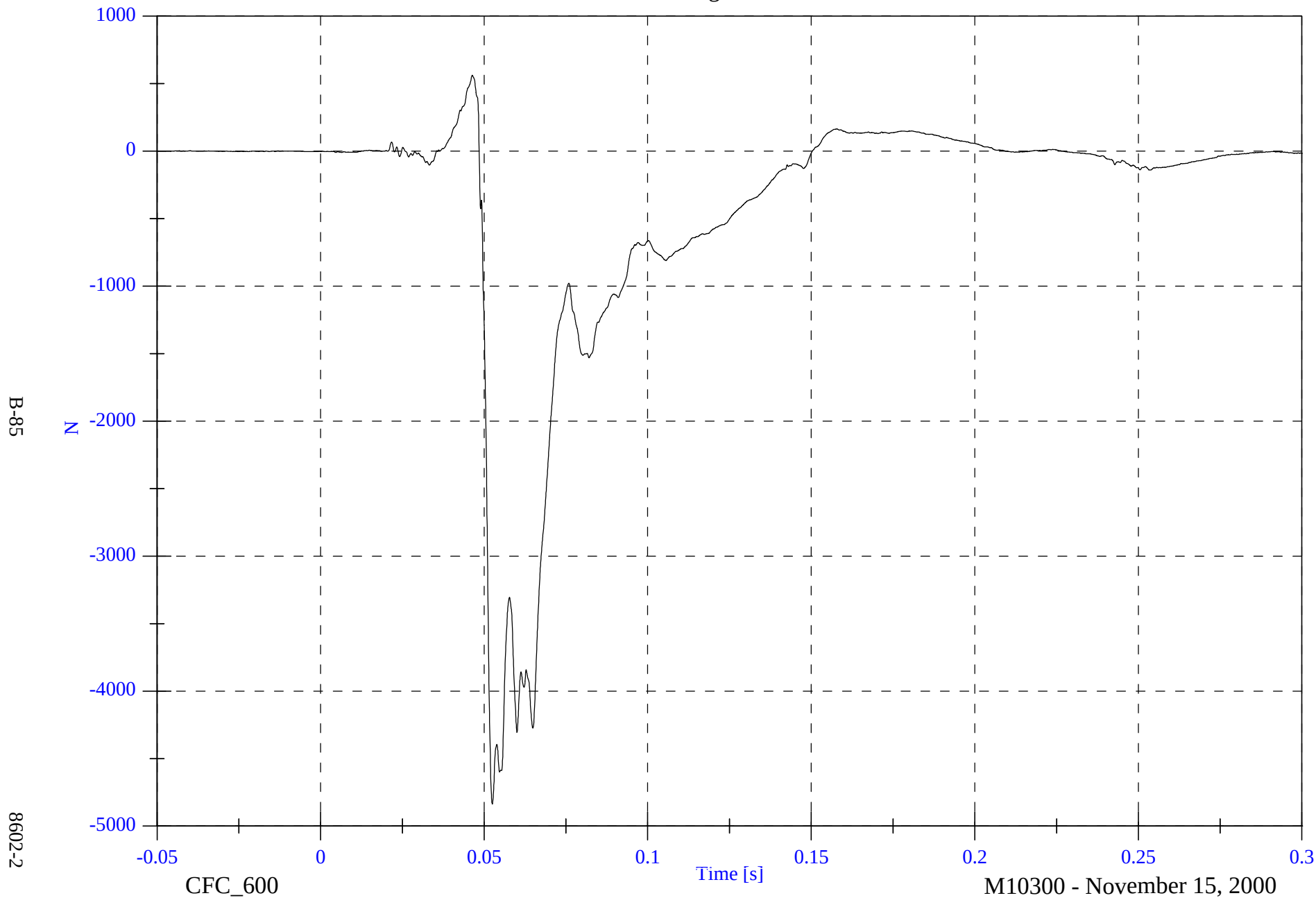


NCAP 2001 Test 2 - 2001 Chrysler LHS

P2 Right Femur

Max: 562.2 [N] at 0.046 [s]

Min: -4836.1 [N] at 0.053 [s]

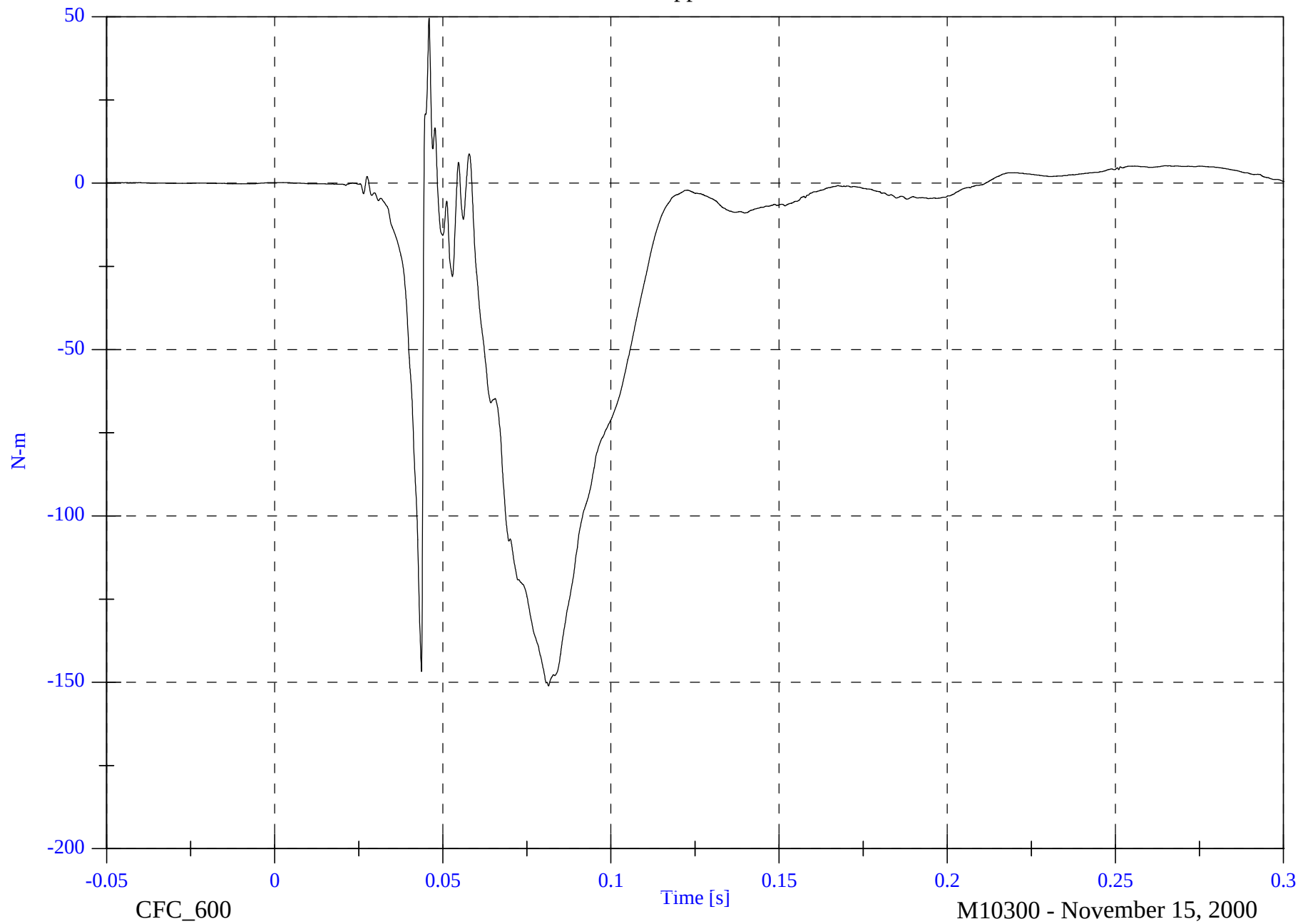


NCAP 2001 Test 2 - 2001 Chrysler LHS

P2 Left Upper Tibia Mx

Max: 49.5 [N-m] at 0.046 [s]

Min: -151.1 [N-m] at 0.081 [s]



B-86

8602-2

CFC_600

Time [s]

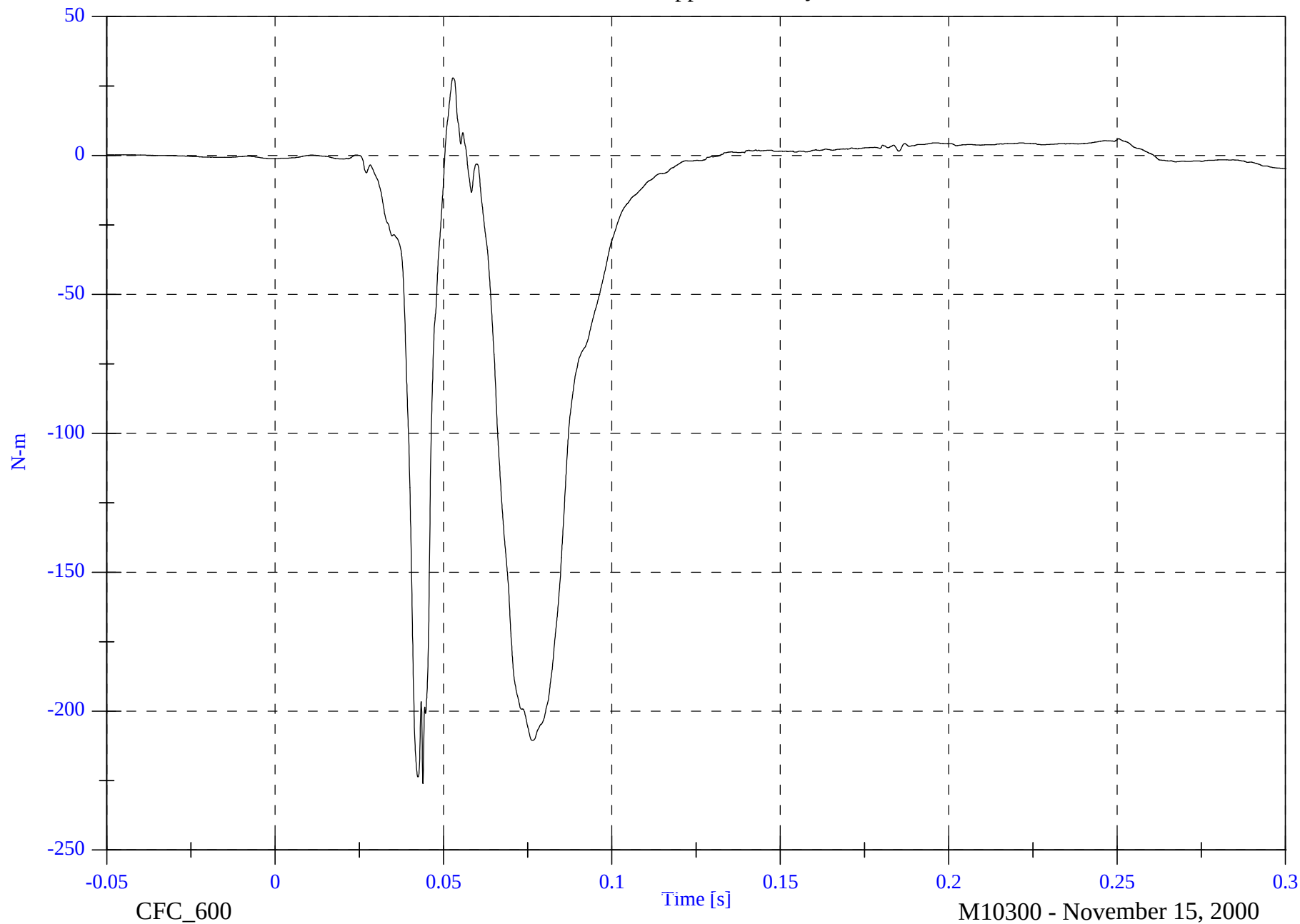
M10300 - November 15, 2000

NCAP 2001 Test 2 - 2001 Chrysler LHS

P2 Left Upper Tibia My

Max: 28.0 [N-m] at 0.053 [s]

Min: -226.1 [N-m] at 0.044 [s]



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8602-2

CFC_600

Time [s]

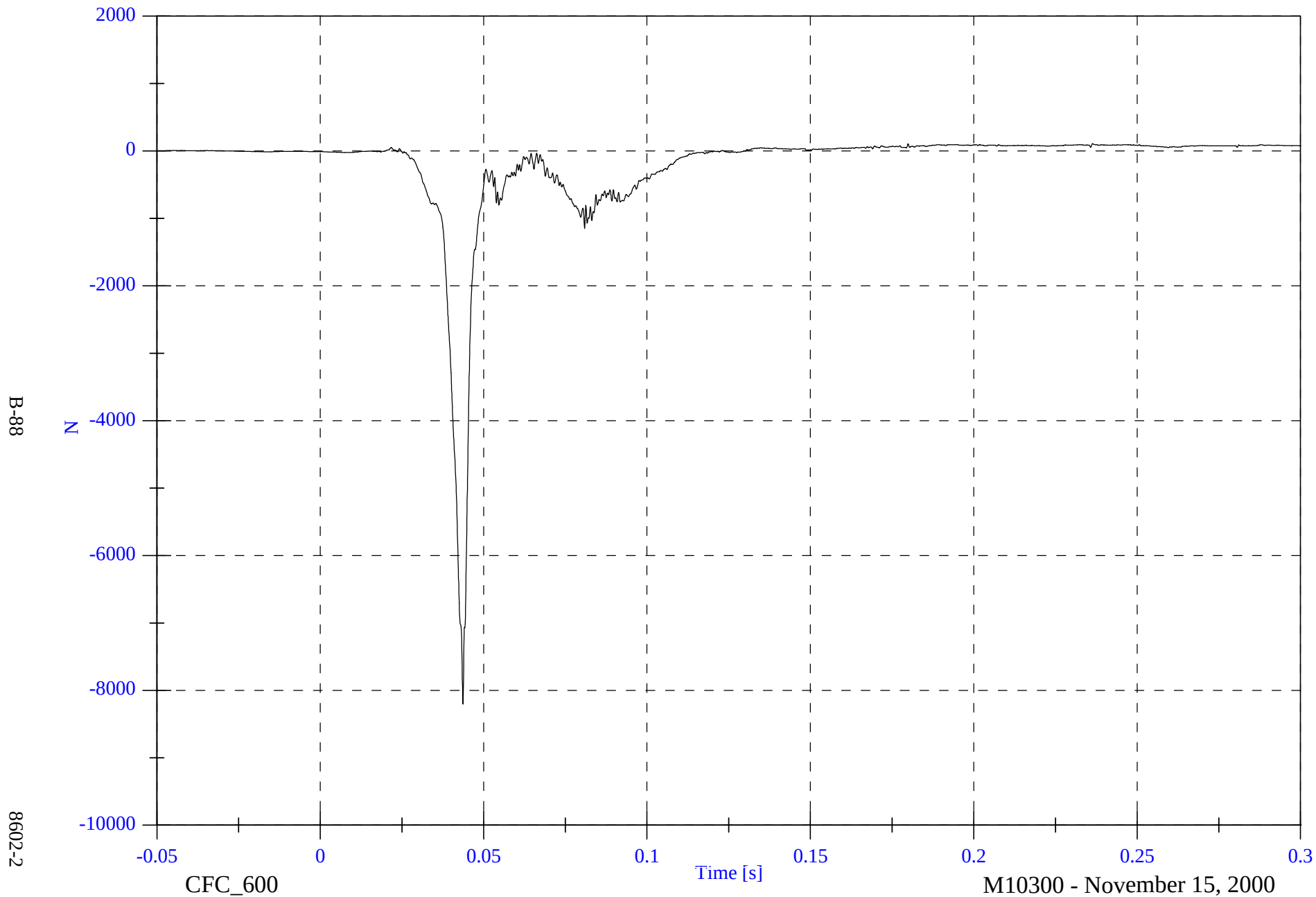
M10300 - November 15, 2000

NCAP 2001 Test 2 - 2001 Chrysler LHS

P2 Left Lower Tibia Fz

Max: 110.8 [N] at 0.236 [s]

Min: -8207.0 [N] at 0.044 [s]

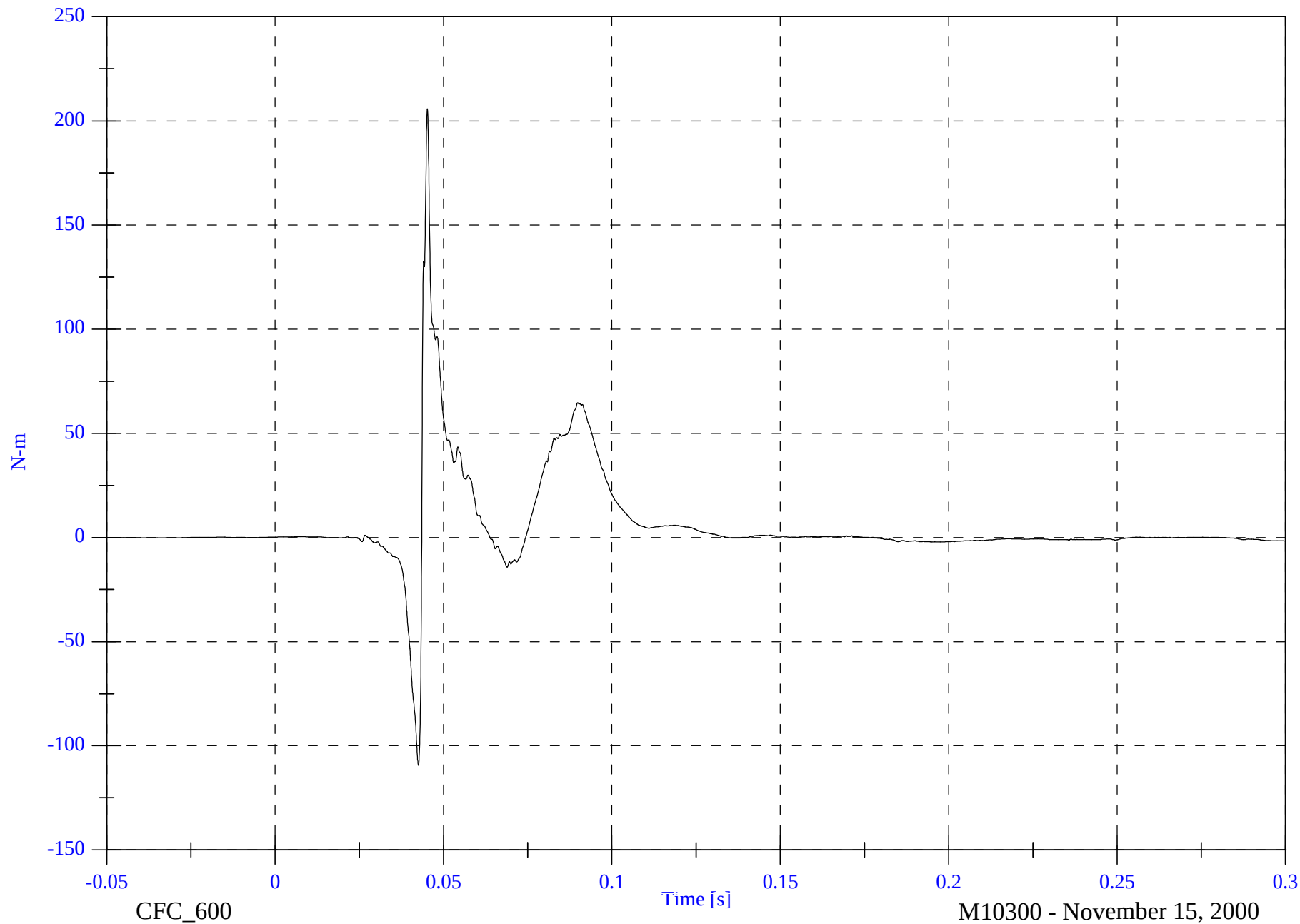


NCAP 2001 Test 2 - 2001 Chrysler LHS

P2 Left Lower Tibia Mx

Max: 205.9 [N-m] at 0.045 [s]

Min: -109.3 [N-m] at 0.043 [s]



B-89

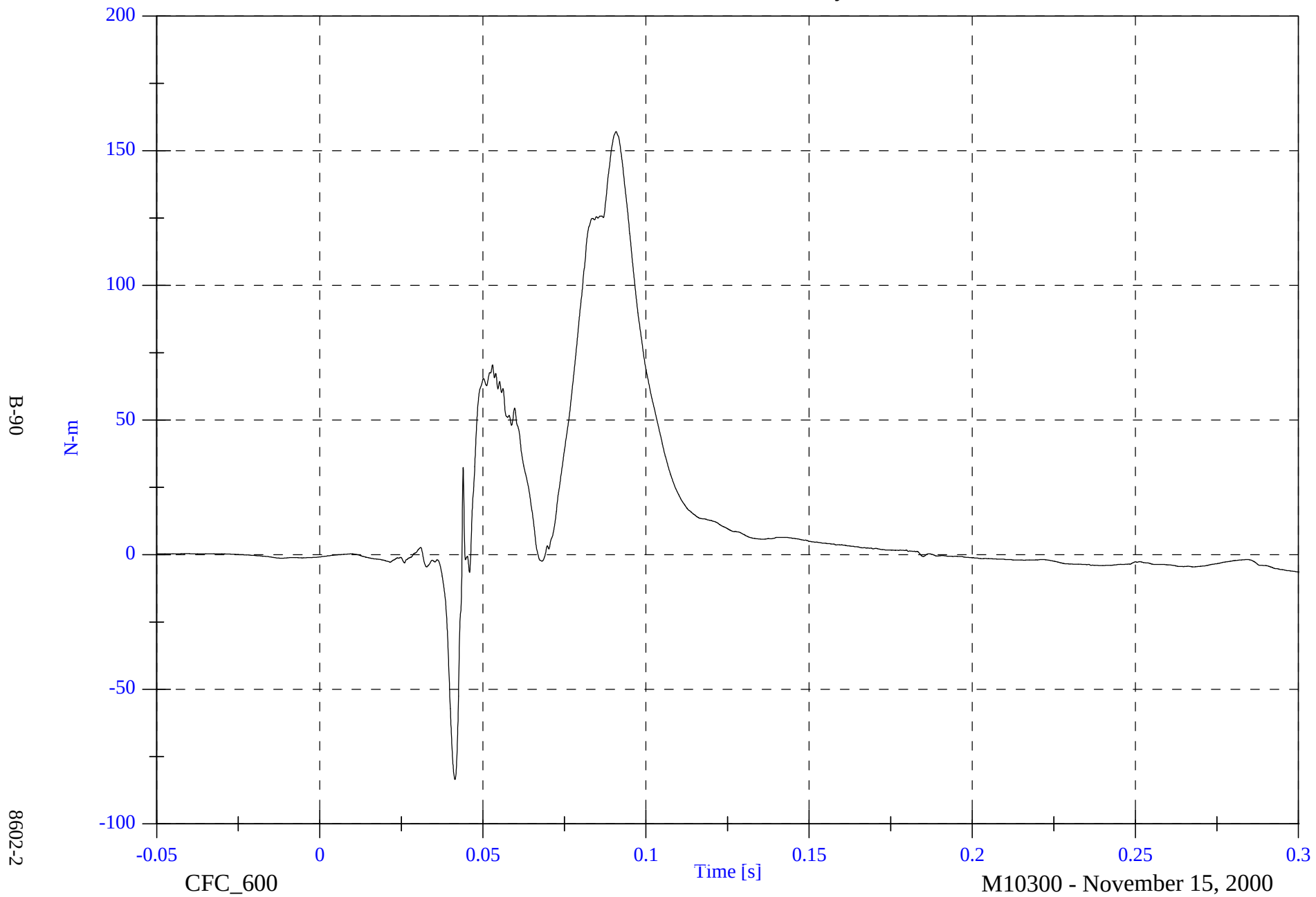
8602-2

NCAP 2001 Test 2 - 2001 Chrysler LHS

P2 Left Lower Tibia My

Max: 157.2 [N-m] at 0.091 [s]

Min: -83.5 [N-m] at 0.041 [s]

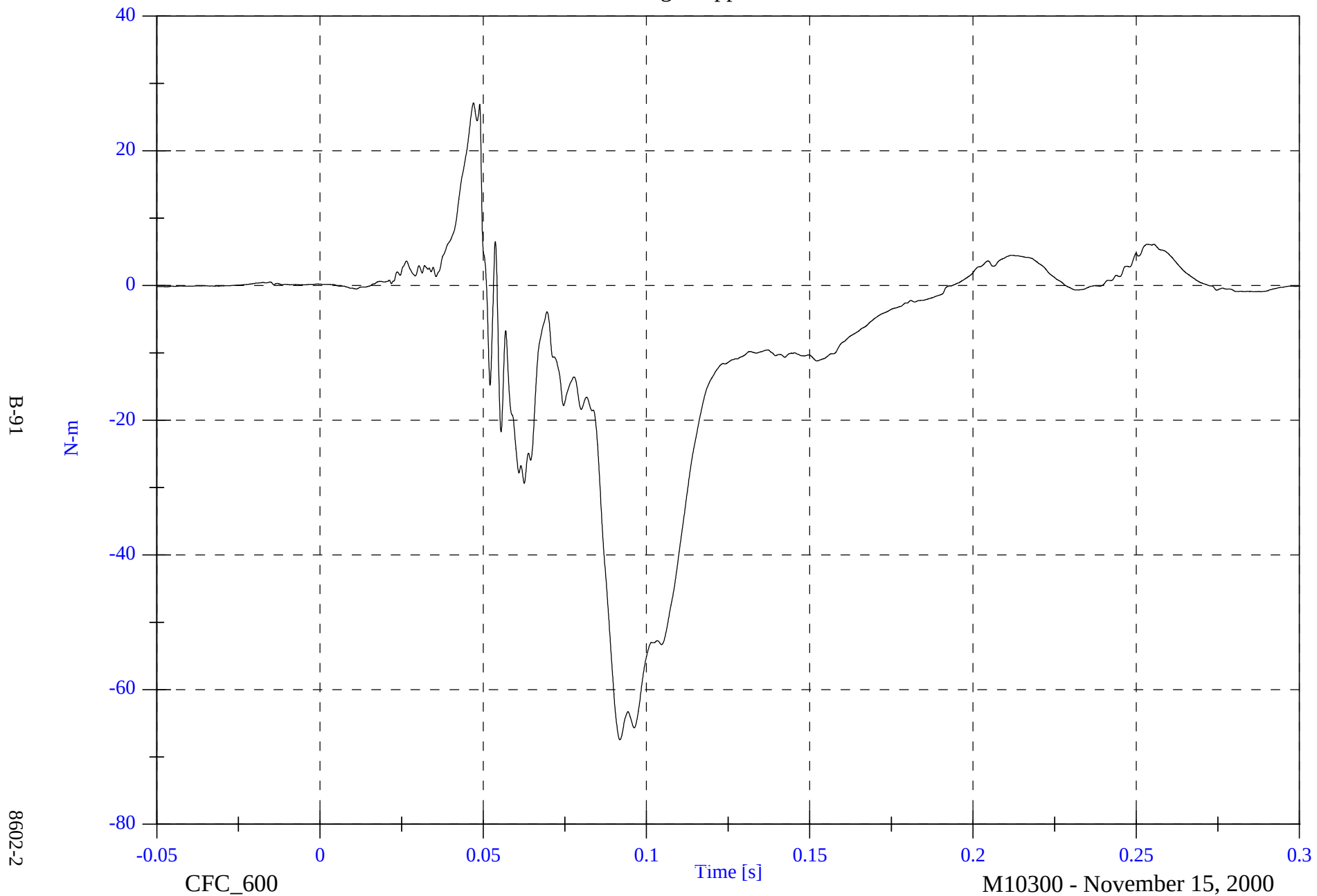


NCAP 2001 Test 2 - 2001 Chrysler LHS

P2 Right Upper Tibia Mx

Max: 27.1 [N-m] at 0.047 [s]

Min: -67.5 [N-m] at 0.092 [s]

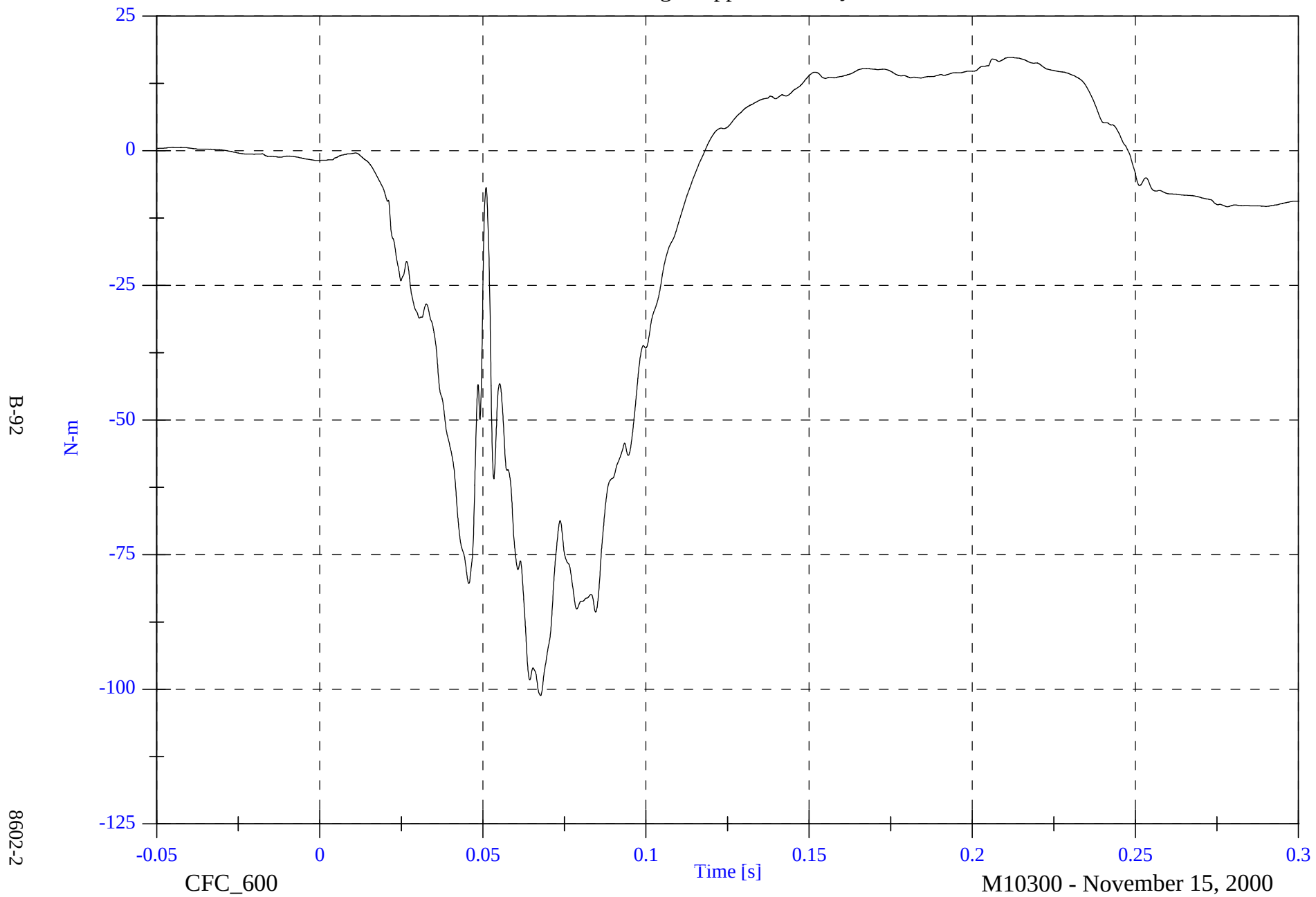


NCAP 2001 Test 2 - 2001 Chrysler LHS

P2 Right Upper Tibia My

Max: 17.3 [N-m] at 0.212 [s]

Min: -101.2 [N-m] at 0.068 [s]

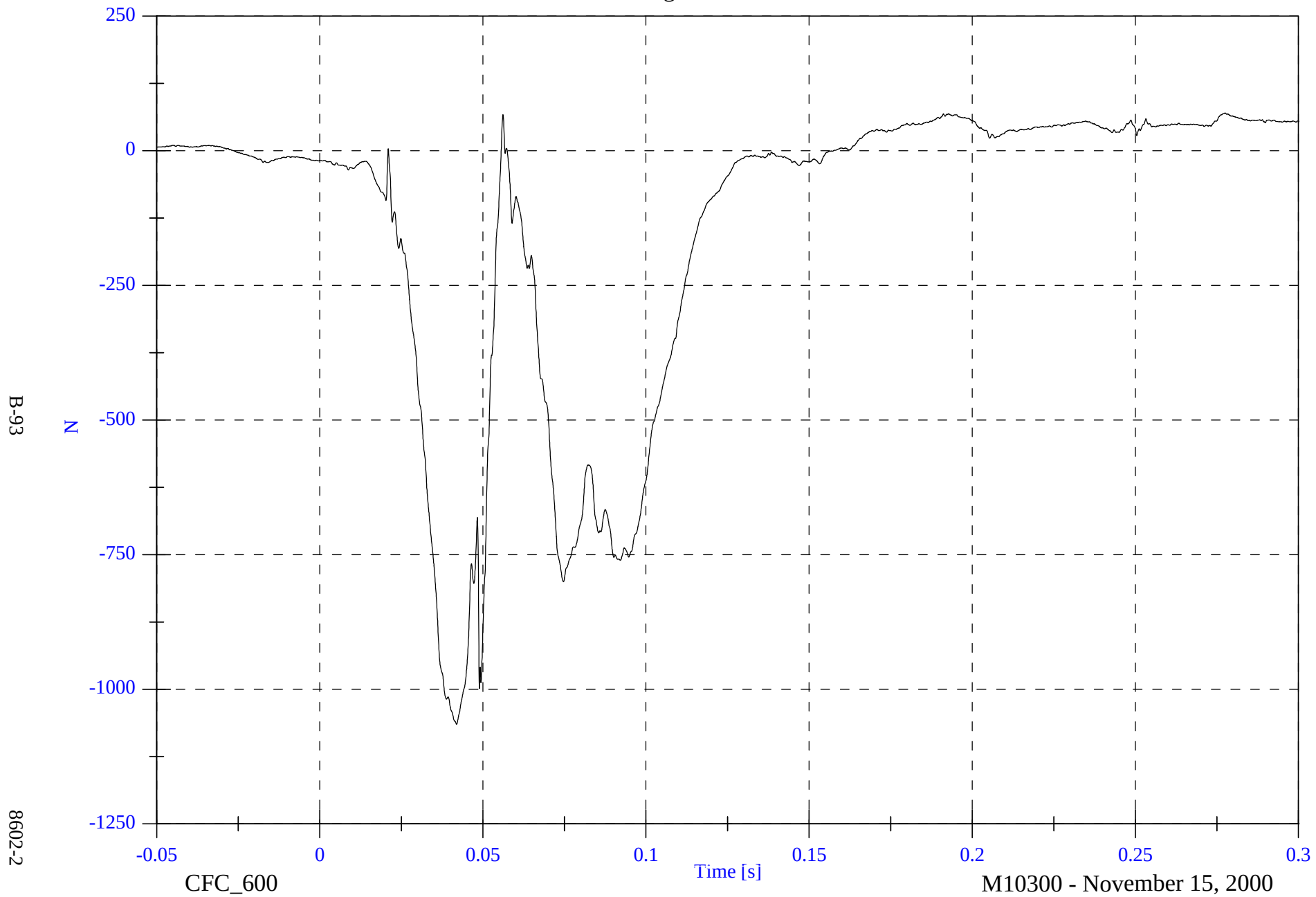


NCAP 2001 Test 2 - 2001 Chrysler LHS

P2 Right Lower Tibia Fz

Max: 70.2 [N] at 0.277 [s]

Min: -1065.1 [N] at 0.042 [s]



NCAP 2001 Test 2 - 2001 Chrysler LHS

P2 Right Lower Tibia Mx

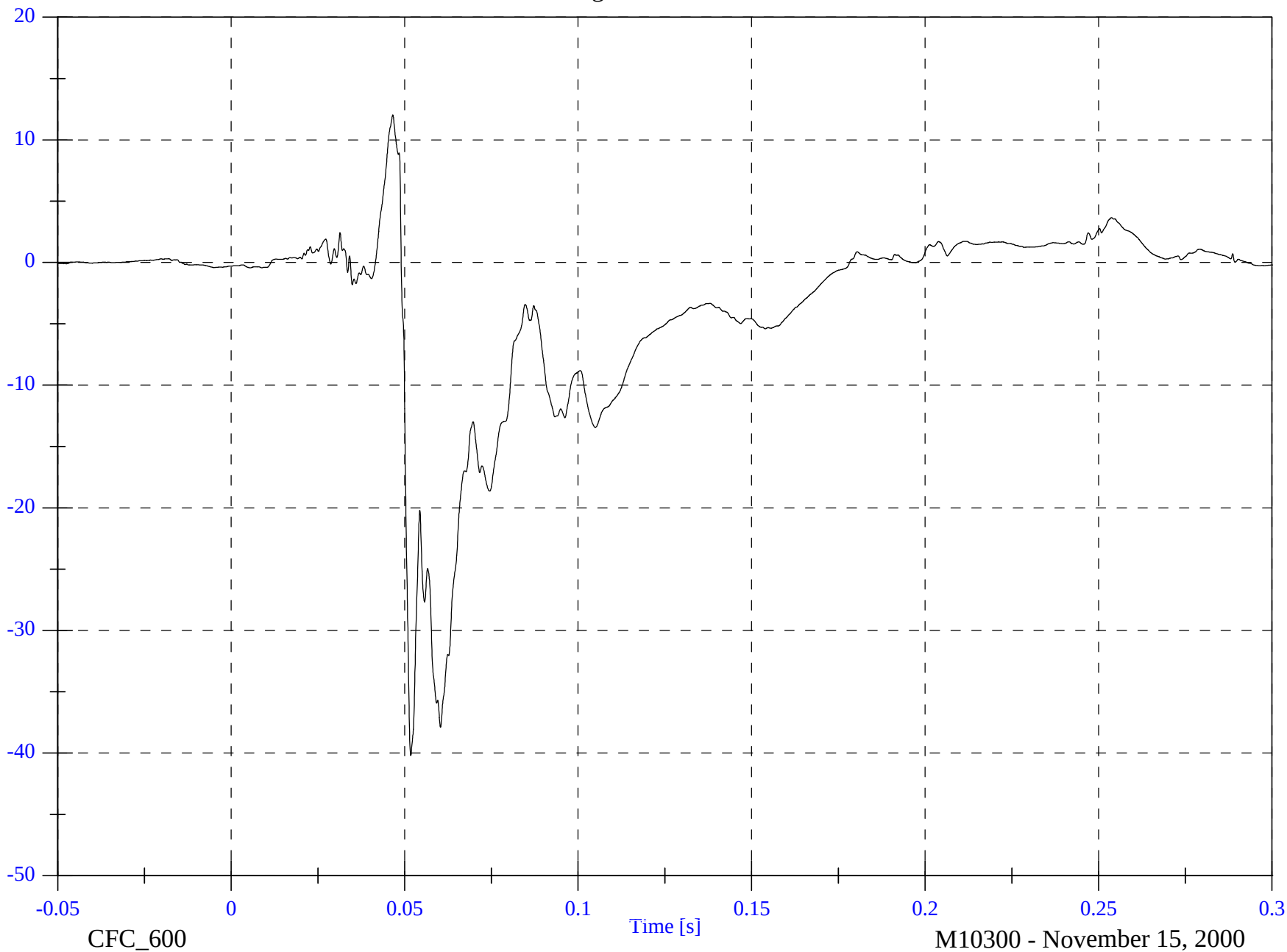
Max: 12.0 [N-m] at 0.047 [s]

Min: -40.2 [N-m] at 0.052 [s]

B-94

N-m

8602-2



NCAP 2001 Test 2 - 2001 Chrysler LHS

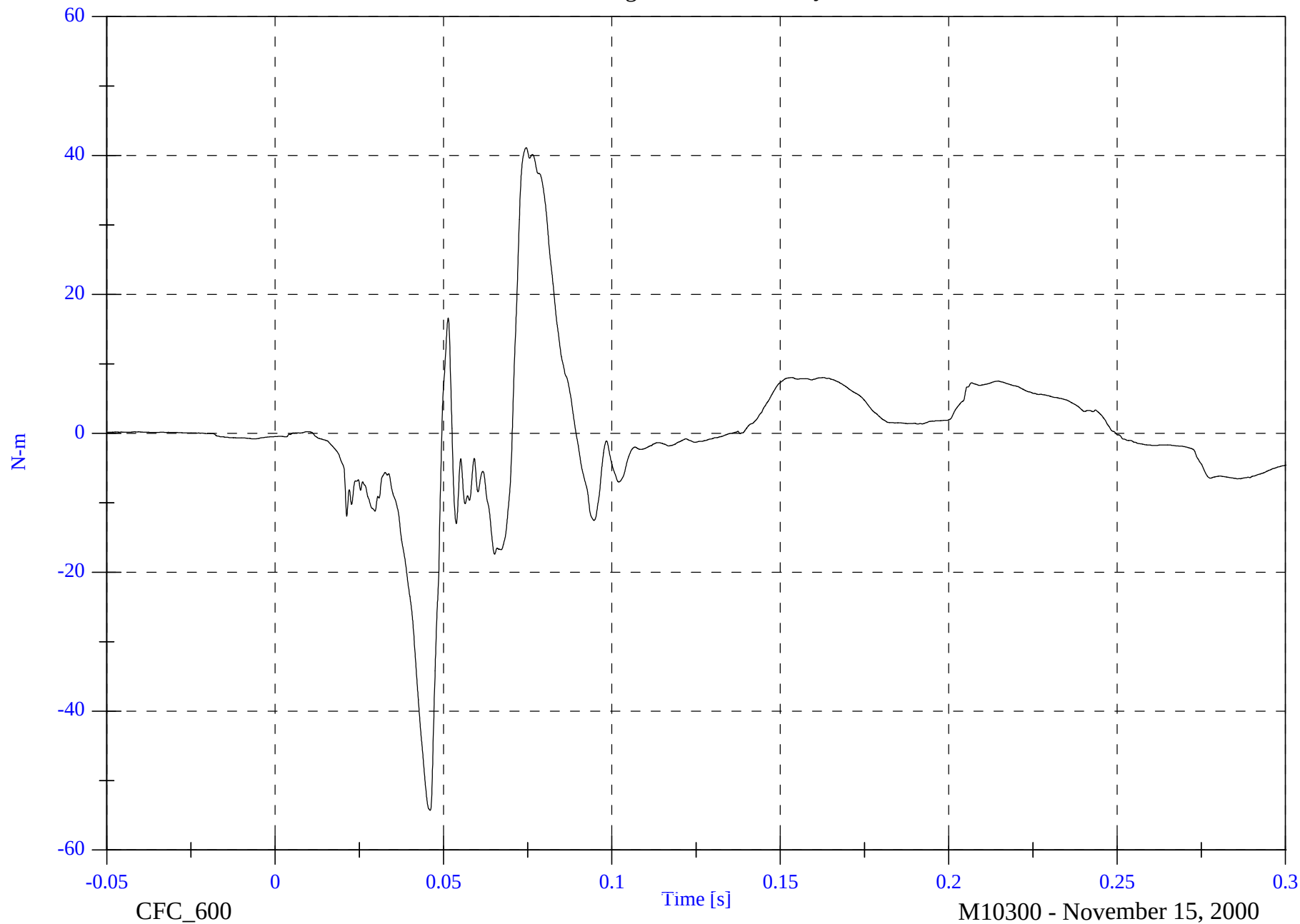
P2 Right Lower Tibia My

Max: 41.1 [N-m] at 0.075 [s]

Min: -54.3 [N-m] at 0.046 [s]

B-95

8602-2

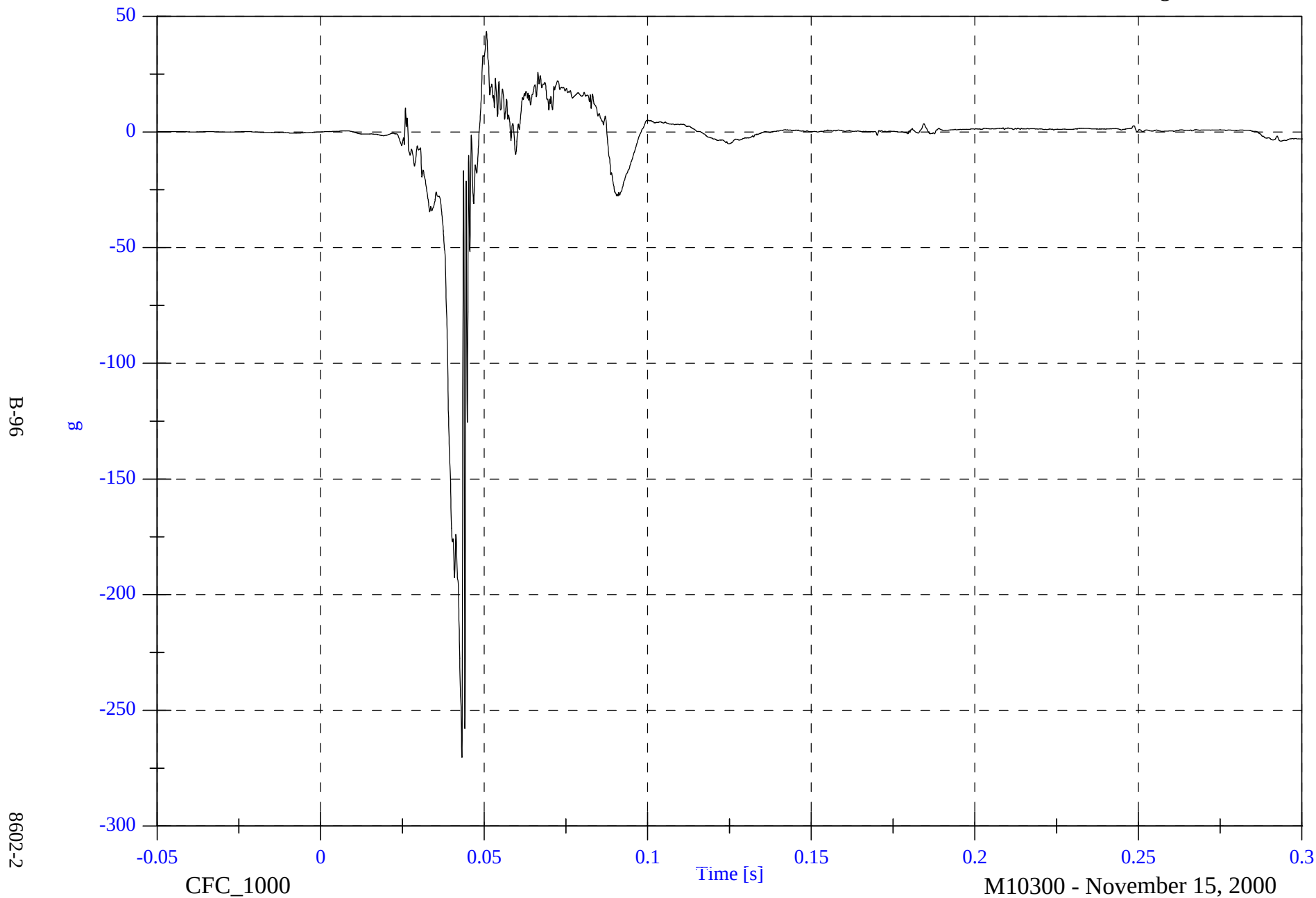


NCAP 2001 Test 2 - 2001 Chrysler LHS

P2 Left Foot Aft x

Max: 43.4 [g] at 0.051 [s]

Min: -270.4 [g] at 0.043 [s]

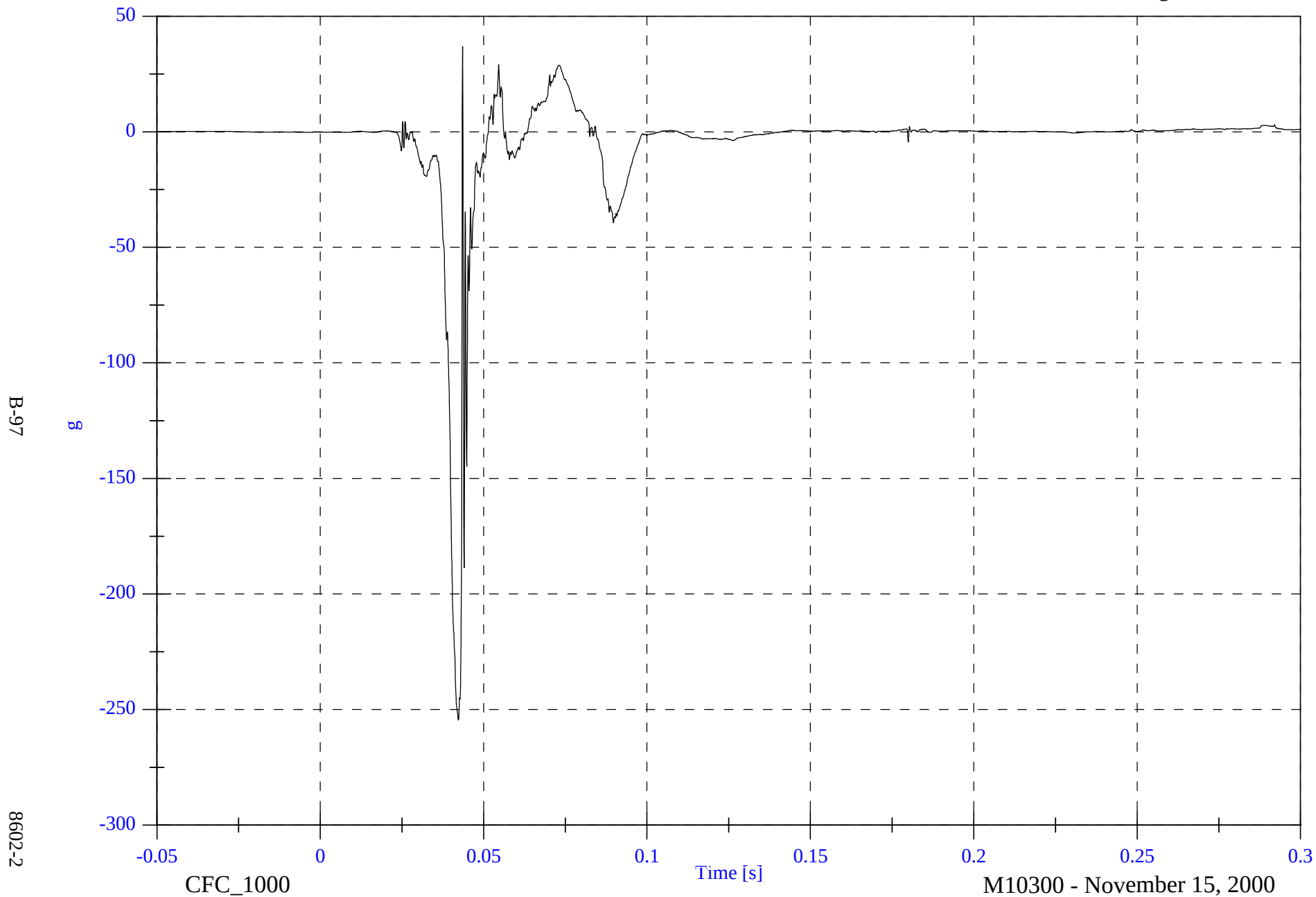


NCAP 2001 Test 2 - 2001 Chrysler LHS

P2 Left Foot Aft z

Max: 36.9 [g] at 0.044 [s]

Min: -254.6 [g] at 0.042 [s]

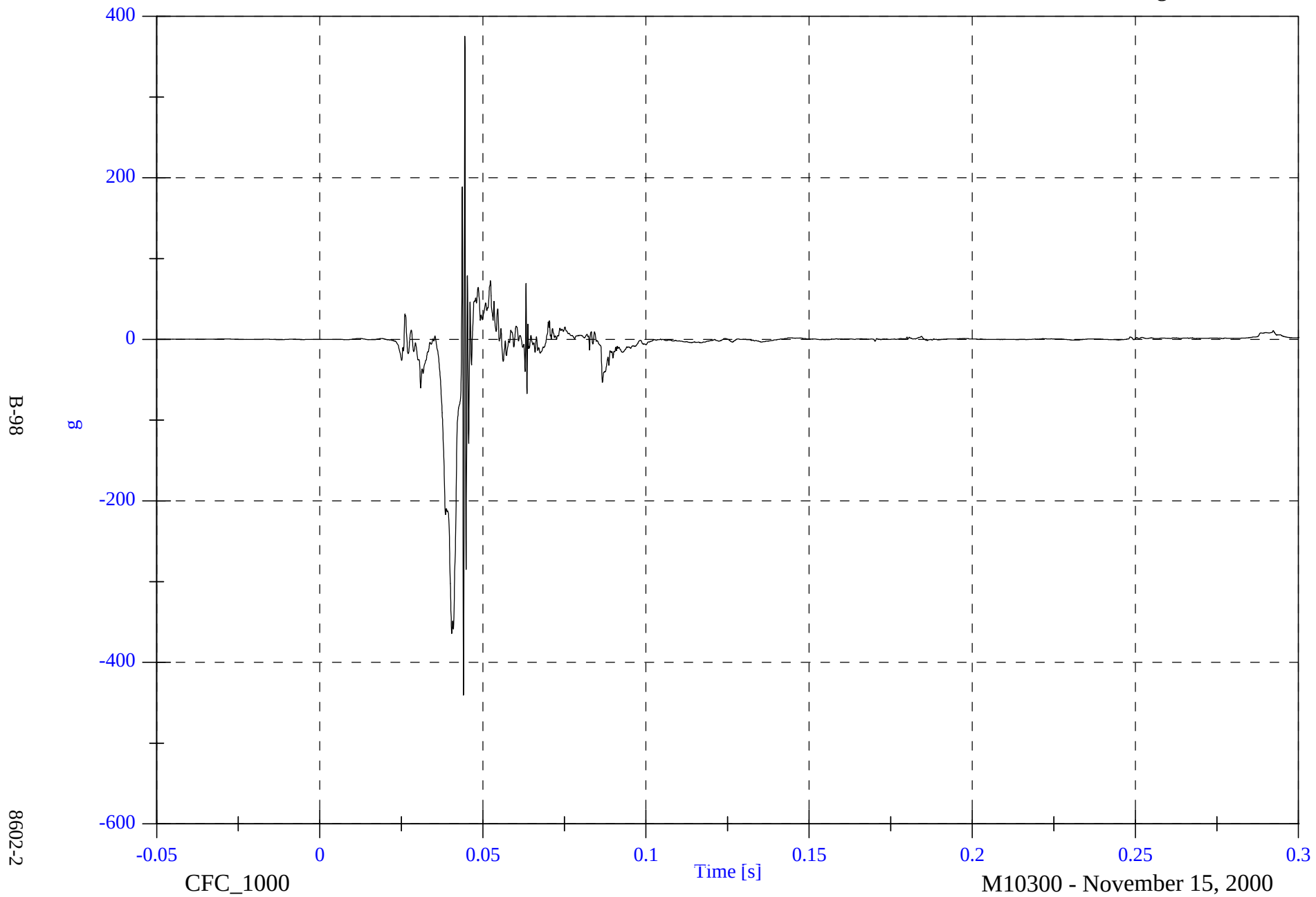


NCAP 2001 Test 2 - 2001 Chrysler LHS

P2 Left Foot Fore z

Max: 375.2 [g] at 0.044 [s]

Min: -440.6 [g] at 0.044 [s]

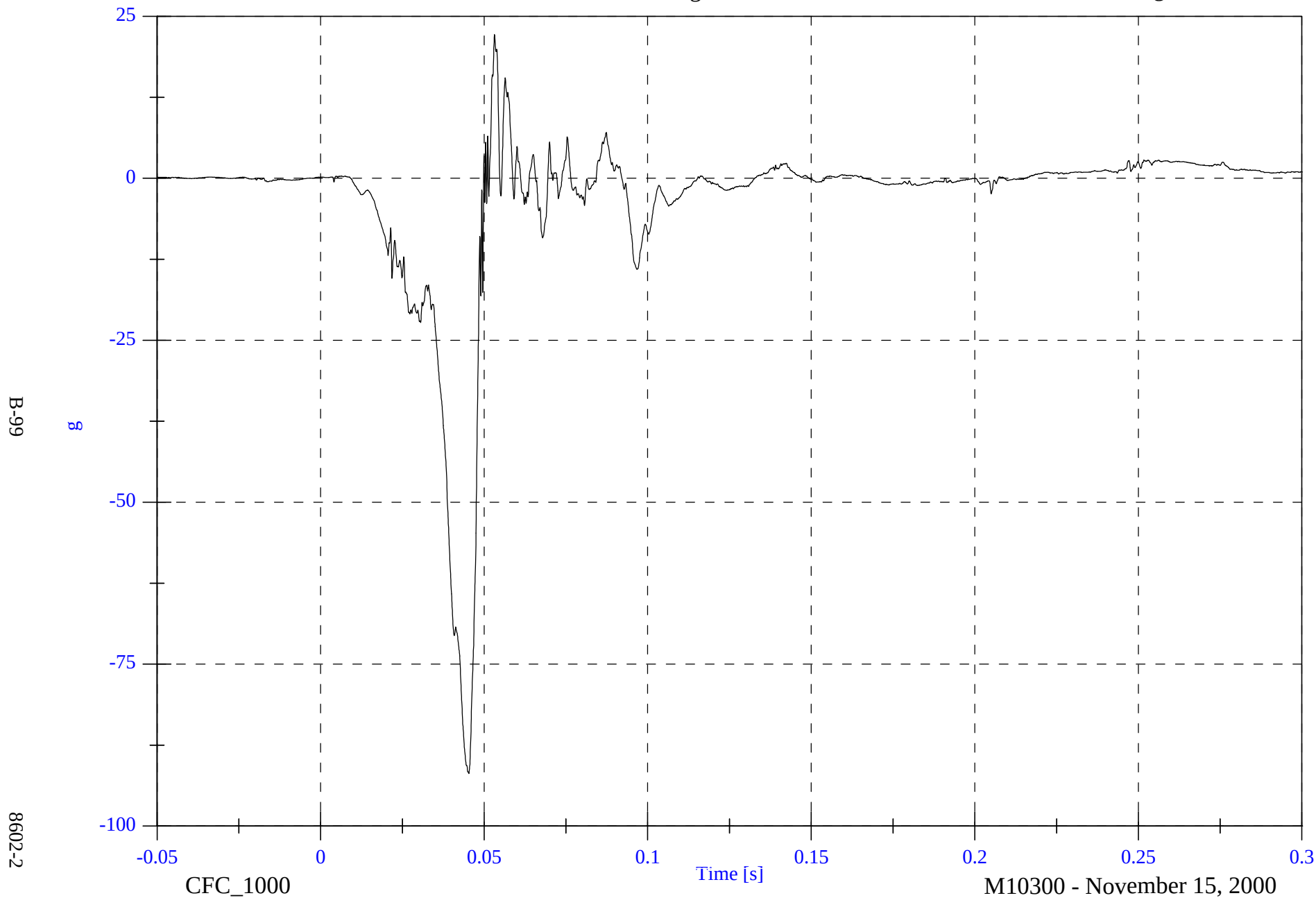


NCAP 2001 Test 2 - 2001 Chrysler LHS

P2 Right Foot Aft x

Max: 22.2 [g] at 0.053 [s]

Min: -91.9 [g] at 0.045 [s]

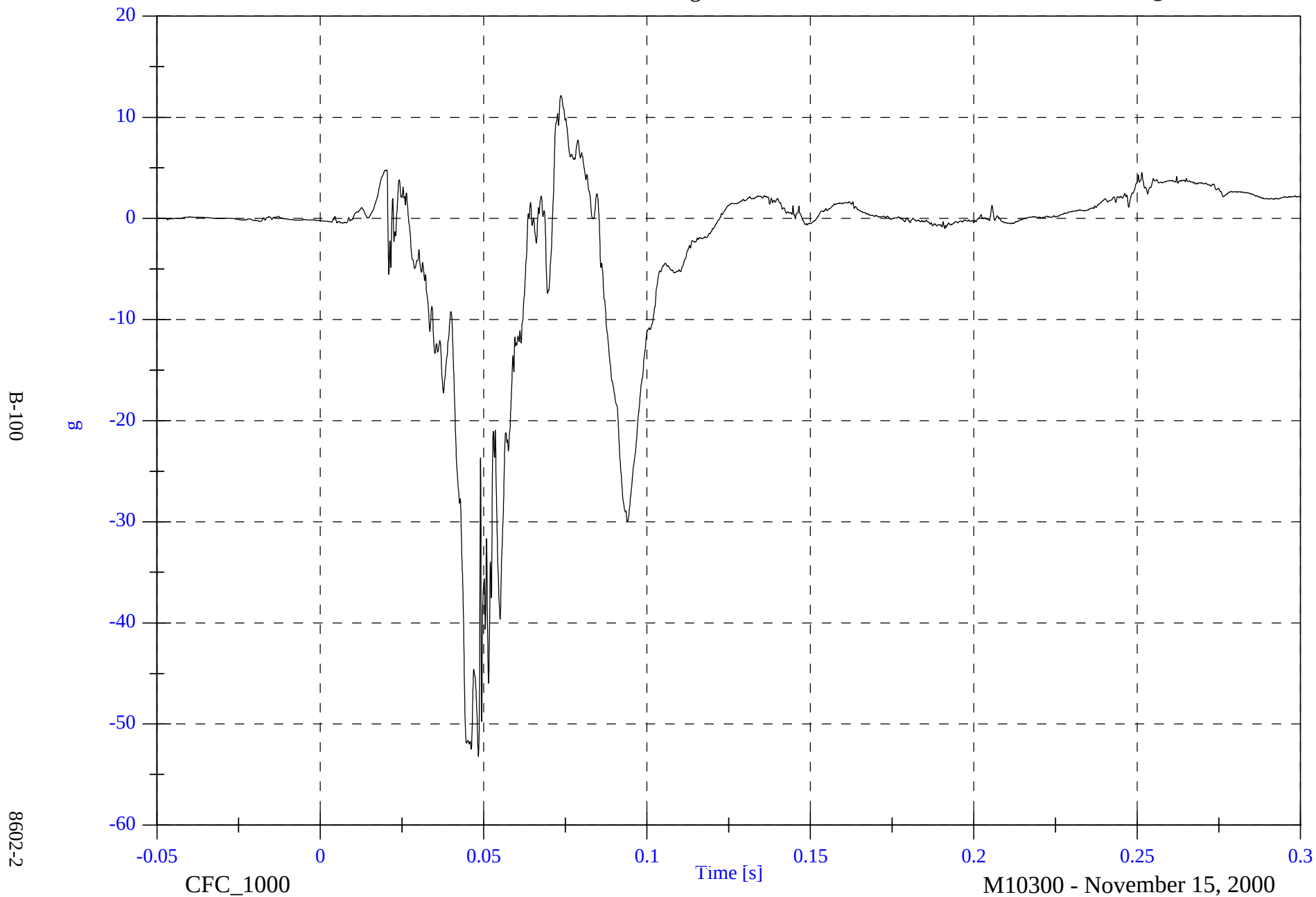


NCAP 2001 Test 2 - 2001 Chrysler LHS

P2 Right Foot Aft z

Max: 12.1 [g] at 0.074 [s]

Min: -53.2 [g] at 0.048 [s]



NCAP 2001 Test 2 - 2001 Chrysler LHS

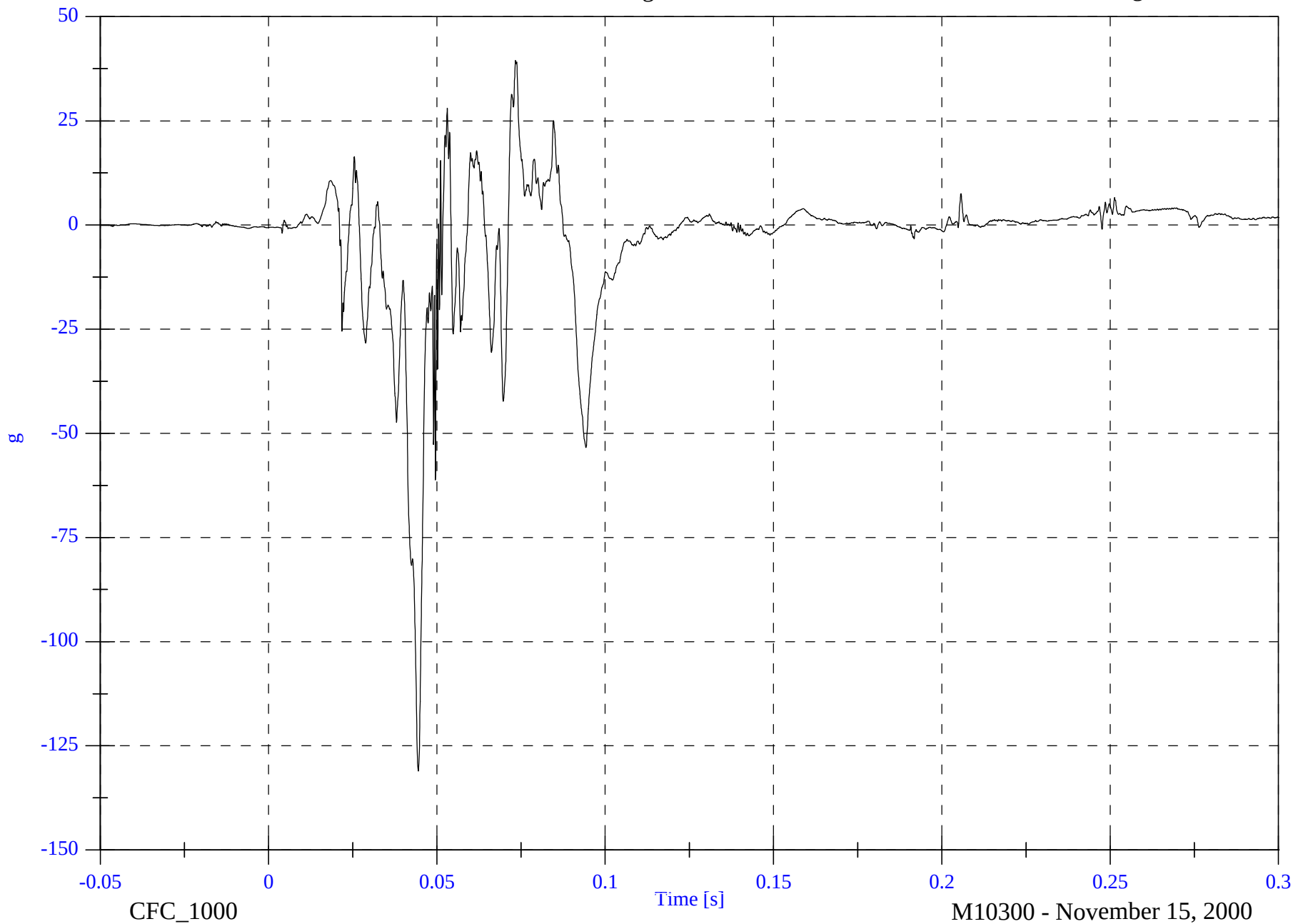
P2 Right Foot Fore x

Max: 39.5 [g] at 0.073 [s]

Min: -131.1 [g] at 0.045 [s]

B-101

8602-2

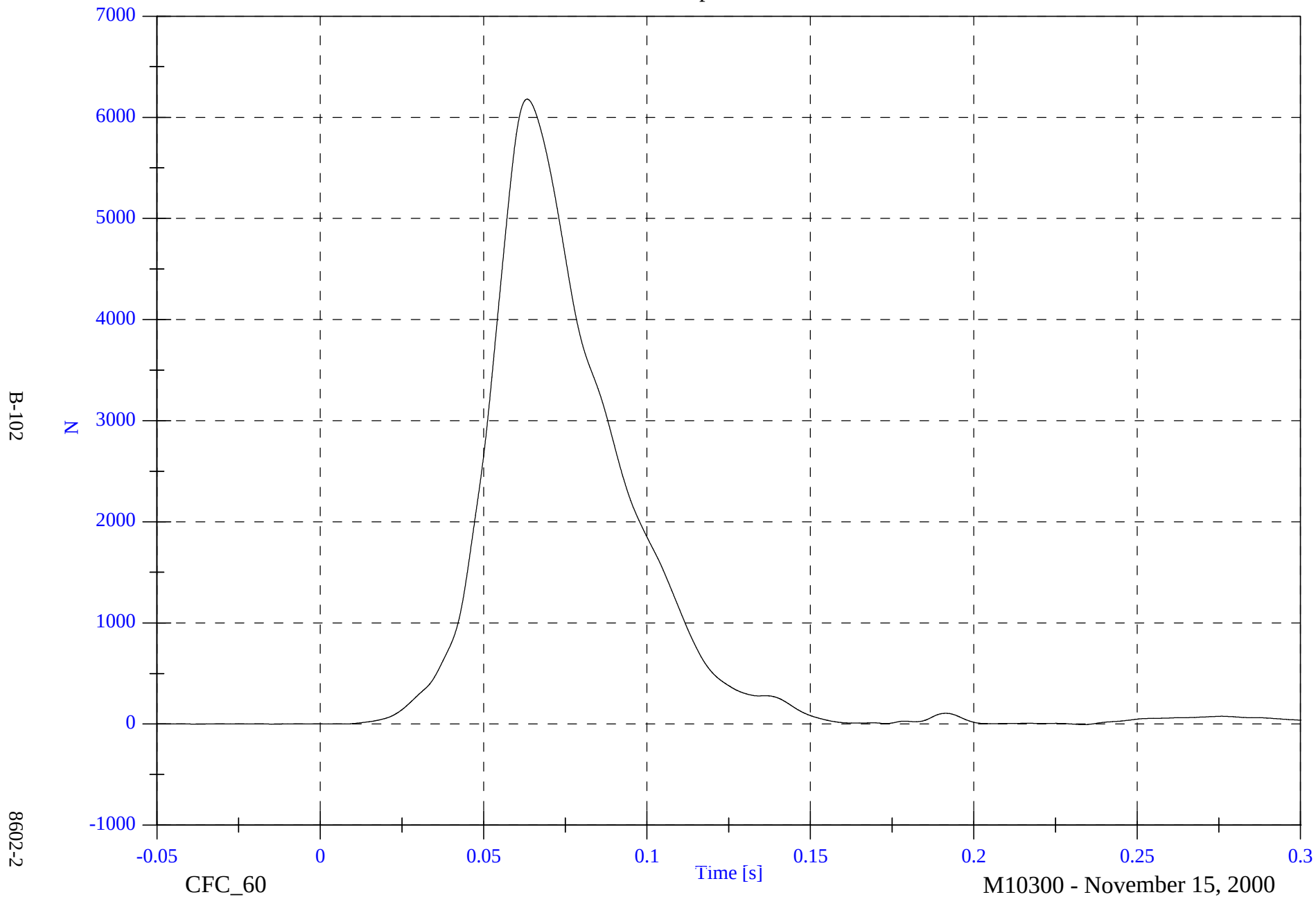


NCAP 2001 Test 2 - 2001 Chrysler LHS

P2 Lap Belt Force

Max: 6179.8 [N] at 0.063 [s]

Min: -6.0 [N] at 0.234 [s]

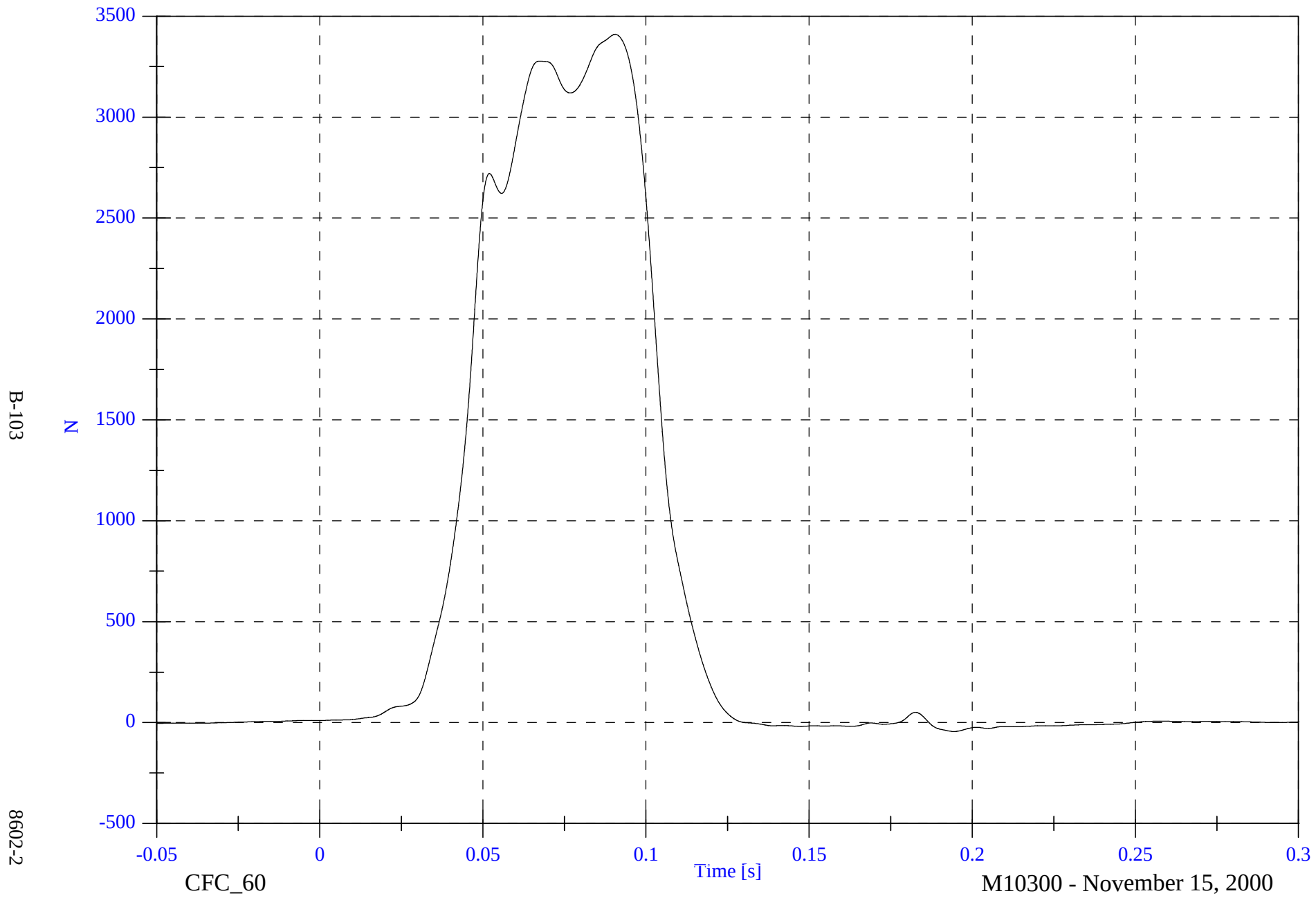


NCAP 2001 Test 2 - 2001 Chrysler LHS

P2 Shoulder Belt Force

Max: 3409.9 [N] at 0.091 [s]

Min: -44.4 [N] at 0.194 [s]



NCAP 2001 Test 2 - 2001 Chrysler LHS

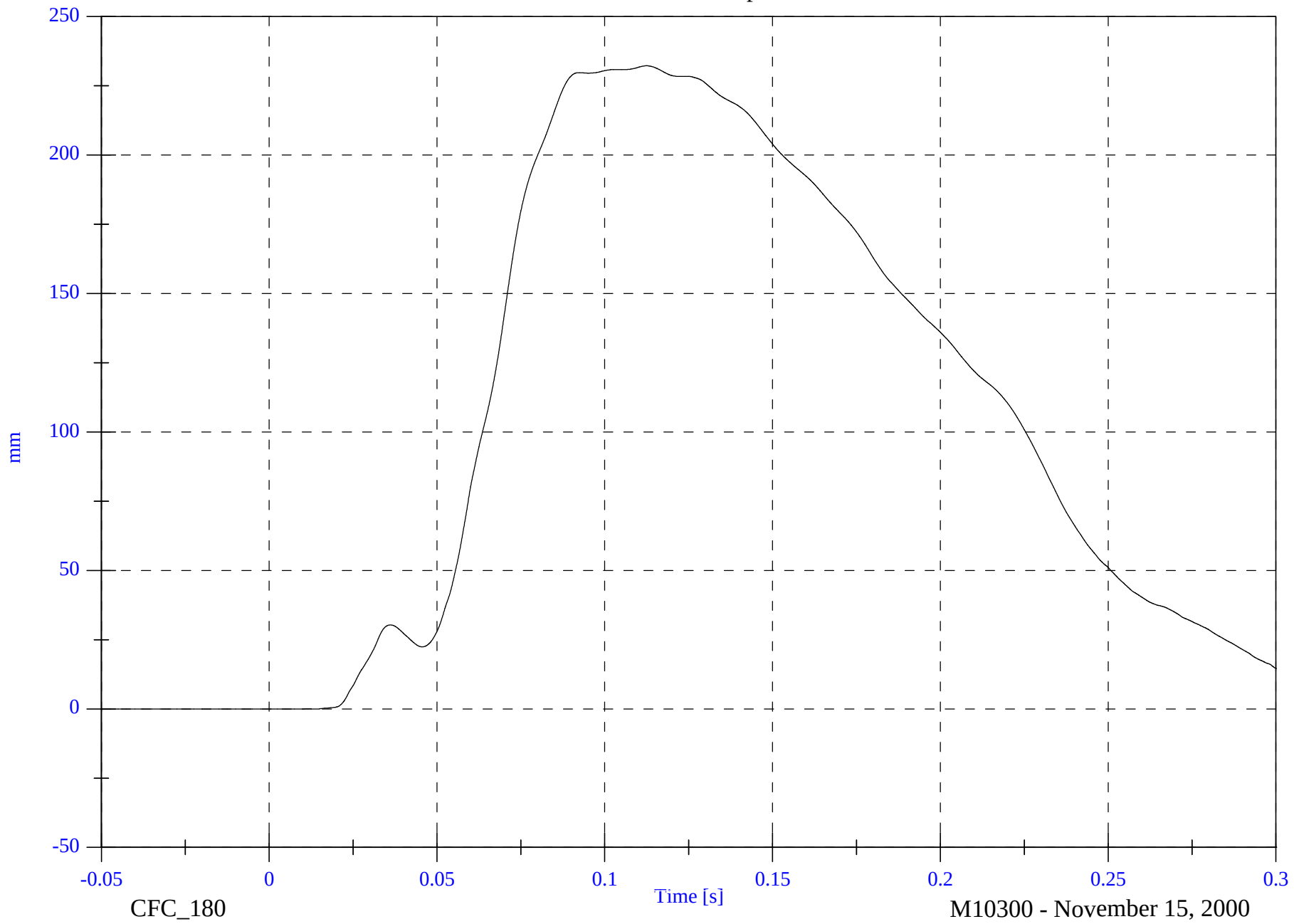
P2 Shoulder Belt Spoolout

Max: 232.2 [mm] at 0.112 [s]

Min: -0.0 [mm] at 0.014 [s]

B-104

8602-2



CFC_180

Time [s]

M10300 - November 15, 2000

NCAP 2001 Test 2 - 2001 Chrysler LHS

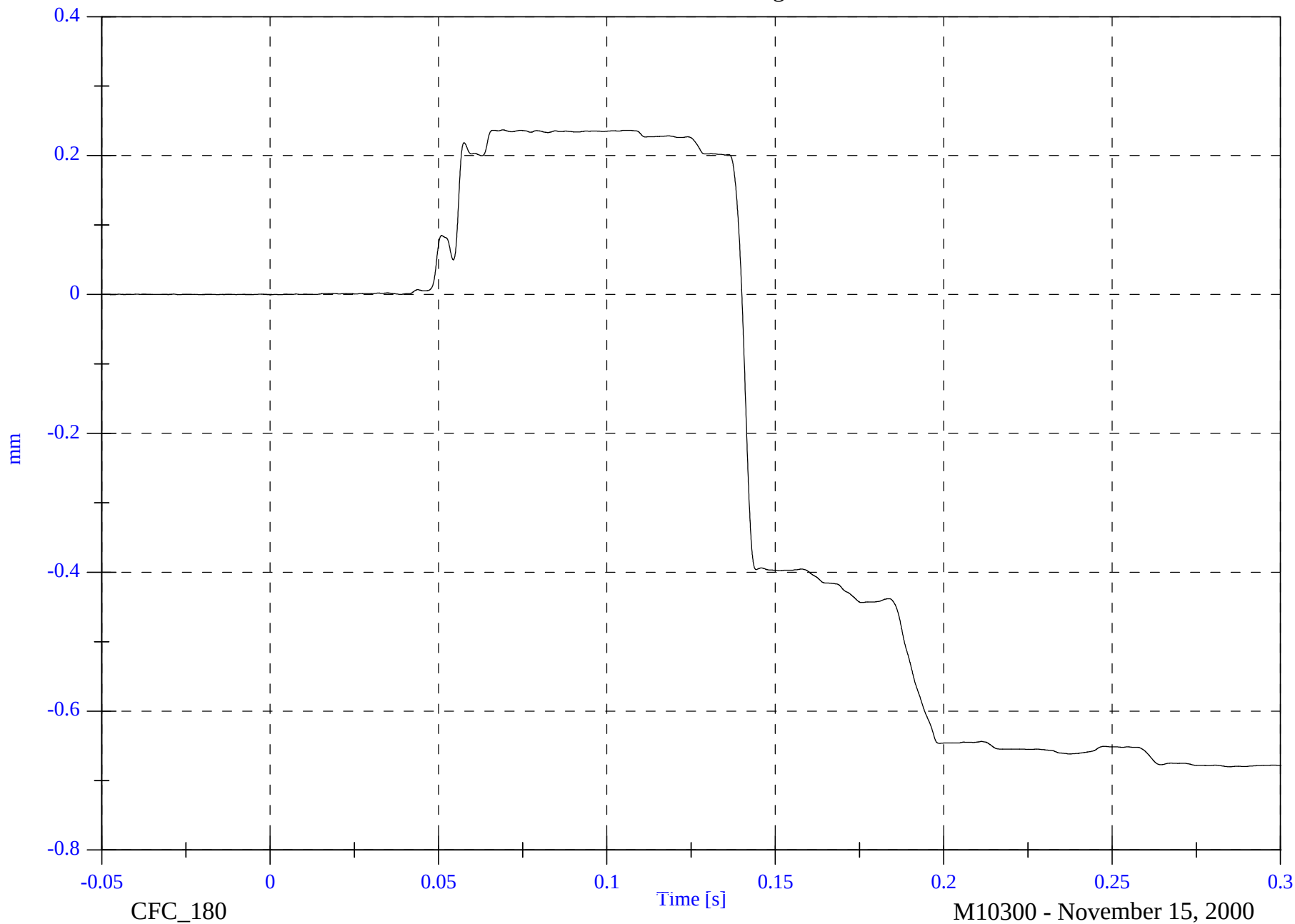
P2 Shoulder Belt Elongation

Max: 0.2 [mm] at 0.069 [s]

Min: -0.7 [mm] at 0.284 [s]

B-105

8602-2



NCAP 2001 Test 2 - 2001 Chrysler LHS

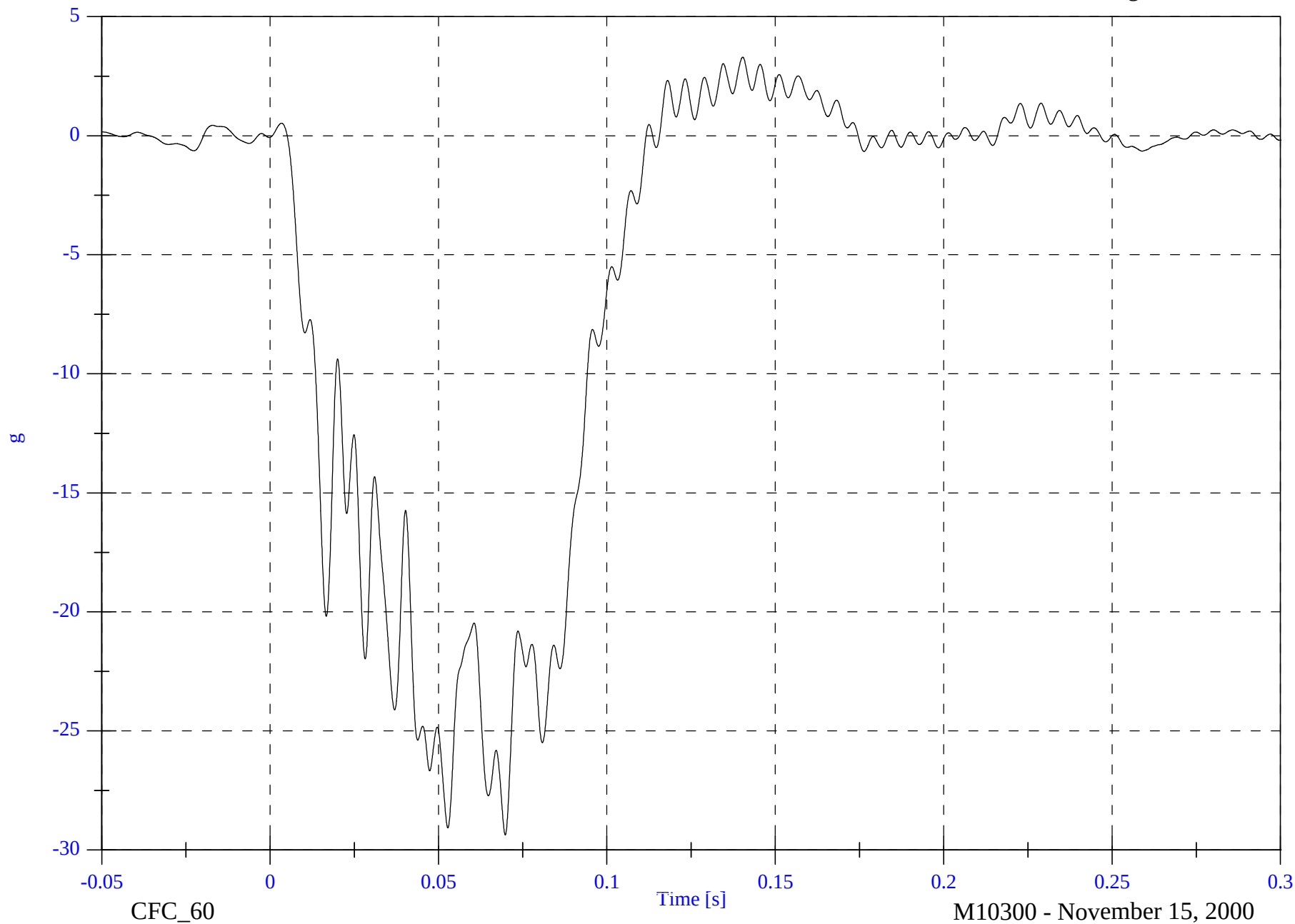
Left Rear #1x

Max: 3.3 [g] at 0.140 [s]

Min: -29.4 [g] at 0.070 [s]

B-106

8602-2

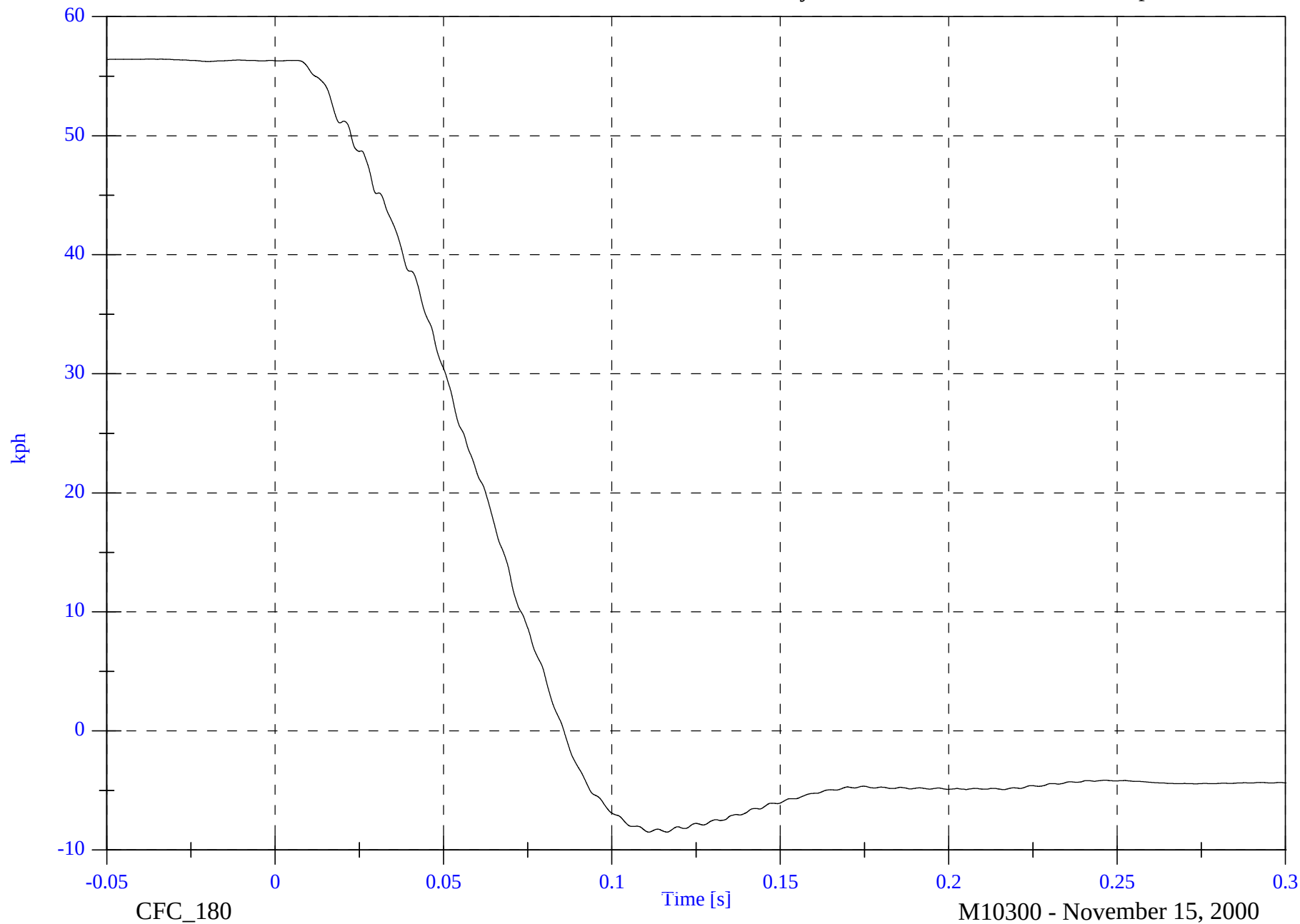


NCAP 2001 Test 2 - 2001 Chrysler LHS

Left Rear #1x Velocity

Max: 56.4 [kph] at -0.038 [s]

Min: -8.5 [kph] at 0.111 [s]



B-107

8602-2

CFC_180

Time [s]

M10300 - November 15, 2000

NCAP 2001 Test 2 - 2001 Chrysler LHS

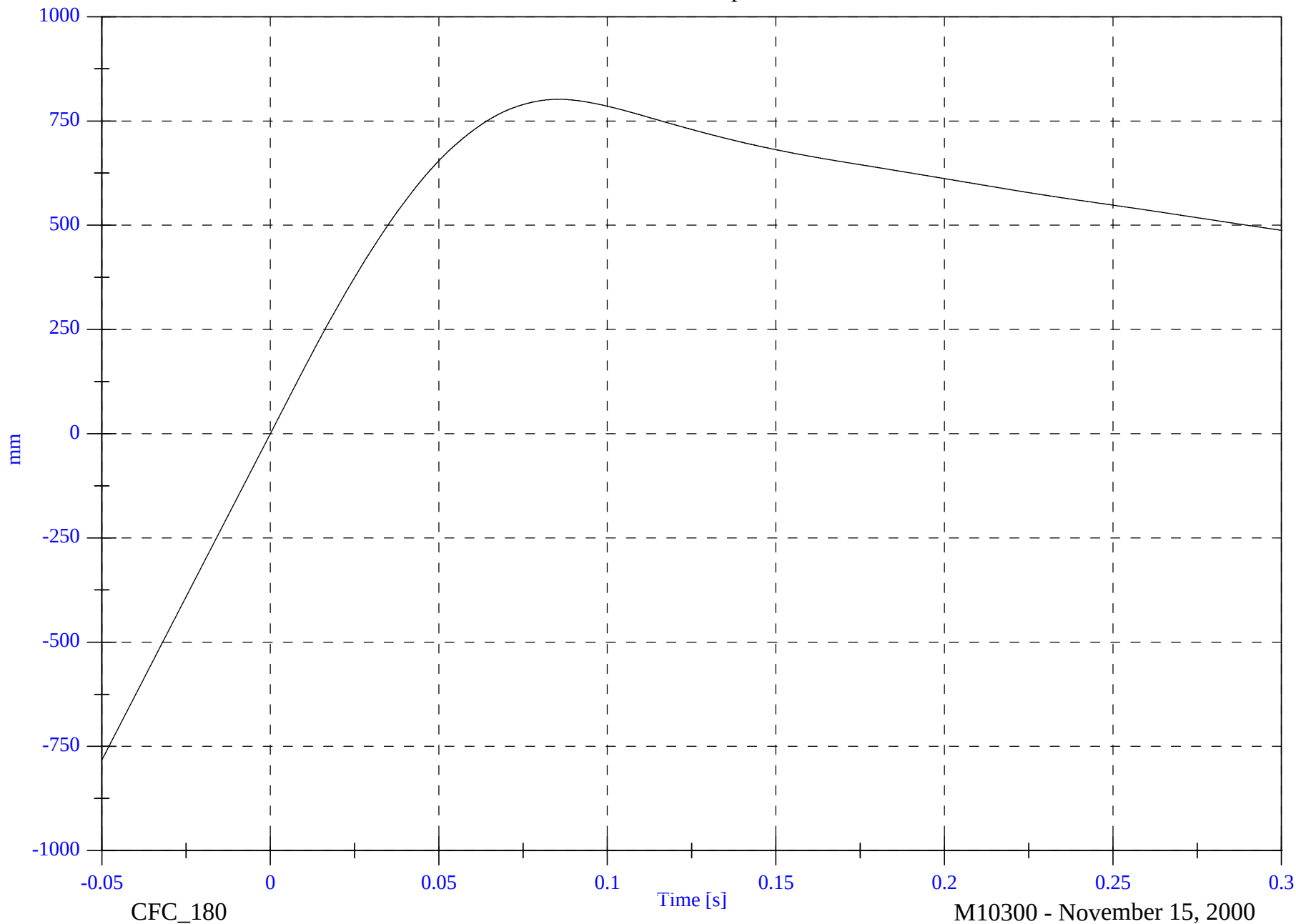
Left Rear #1x Displacement

Max: 801.9 [mm] at 0.086 [s]

Min: -782.7 [mm] at -0.050 [s]

B-108

8602-2



NCAP 2001 Test 2 - 2001 Chrysler LHS

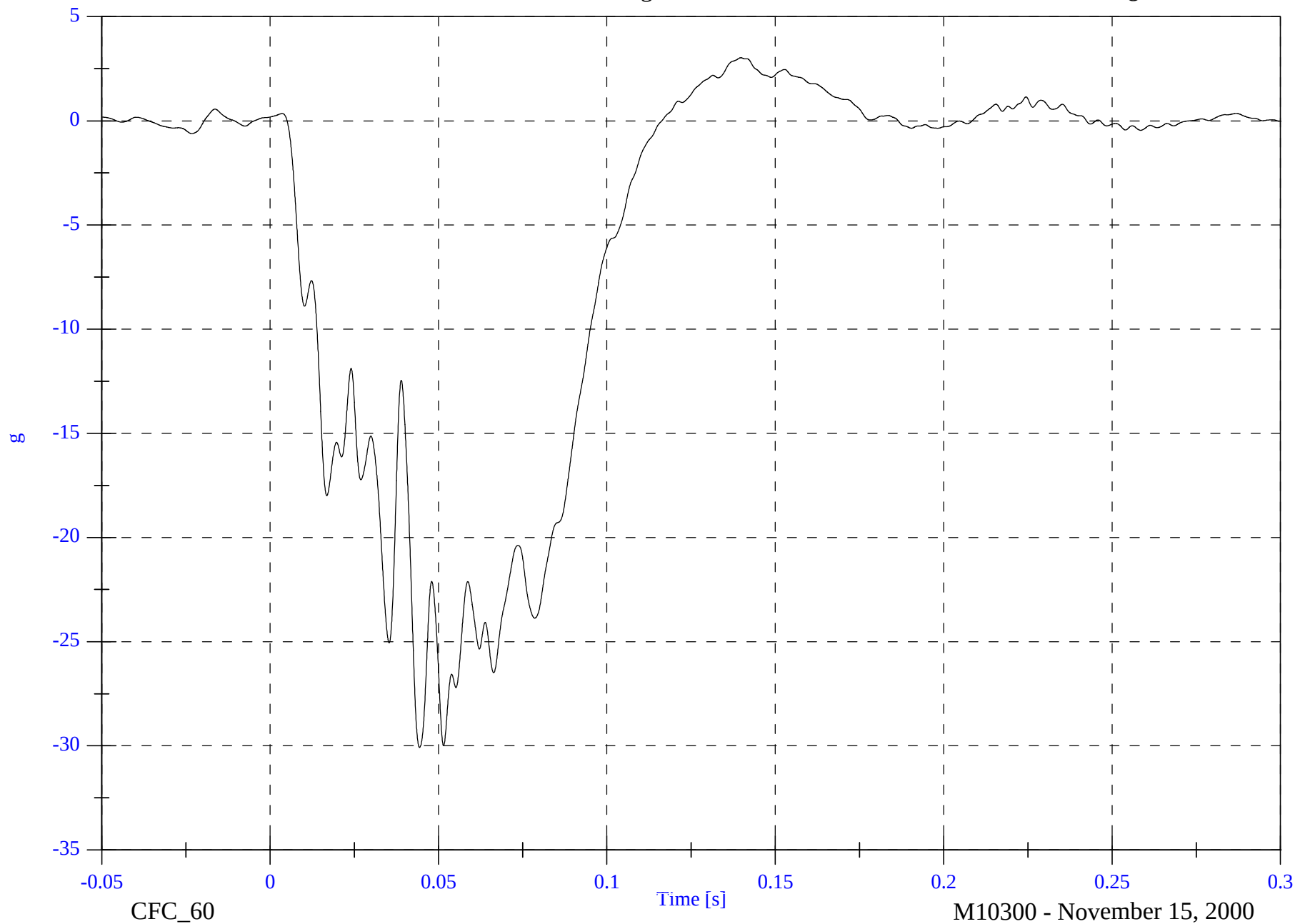
Right Rear #2x

Max: 3.0 [g] at 0.140 [s]

Min: -30.1 [g] at 0.044 [s]

B-109

8602-2



NCAP 2001 Test 2 - 2001 Chrysler LHS

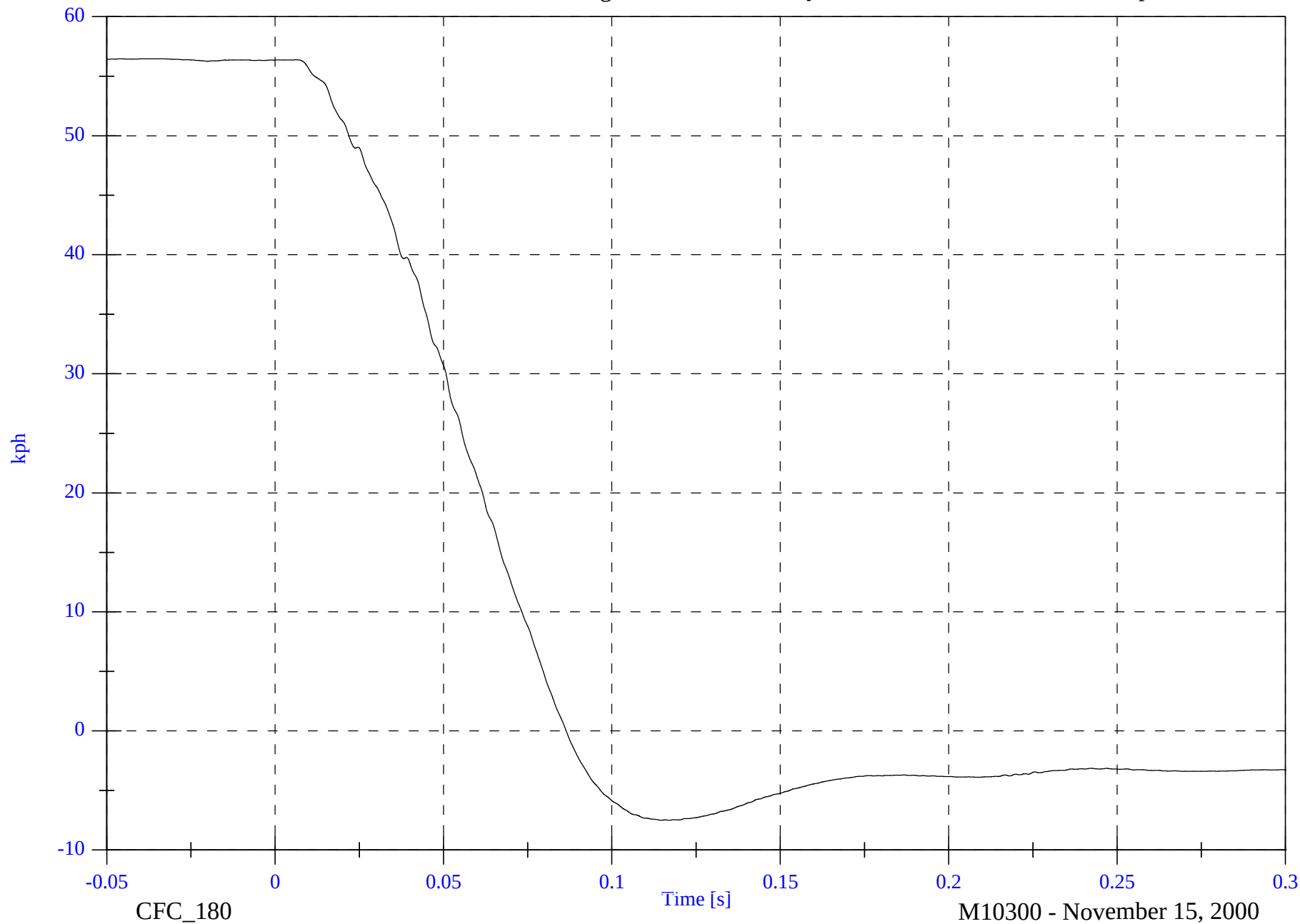
Right Rear #2x Velocity

Max: 56.5 [kph] at -0.037 [s]

Min: -7.5 [kph] at 0.115 [s]

B-110

8602-2



NCAP 2001 Test 2 - 2001 Chrysler LHS

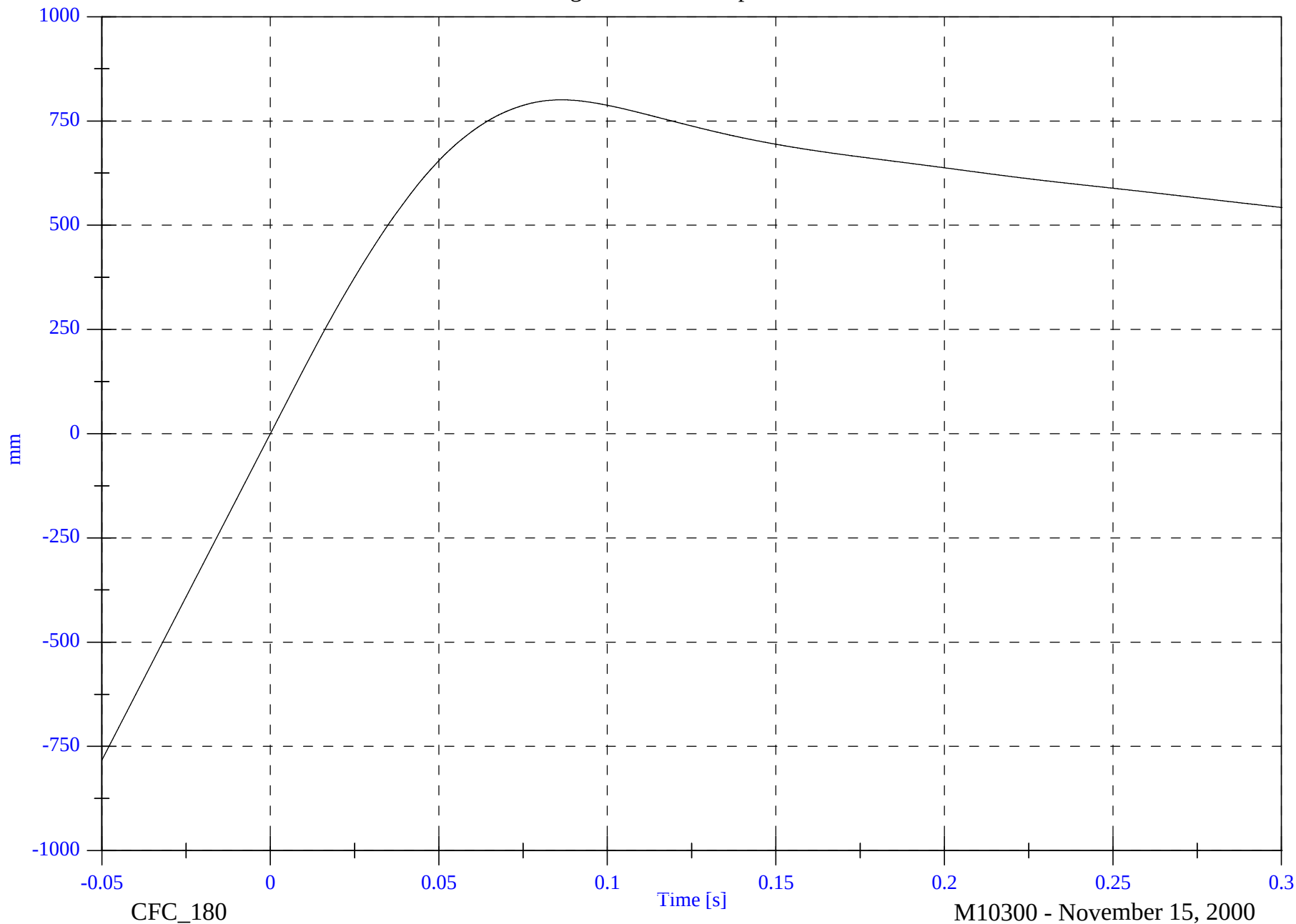
Right Rear #2x Displacement

Max: 800.7 [mm] at 0.086 [s]

Min: -783.1 [mm] at -0.050 [s]

B-111

8602-2

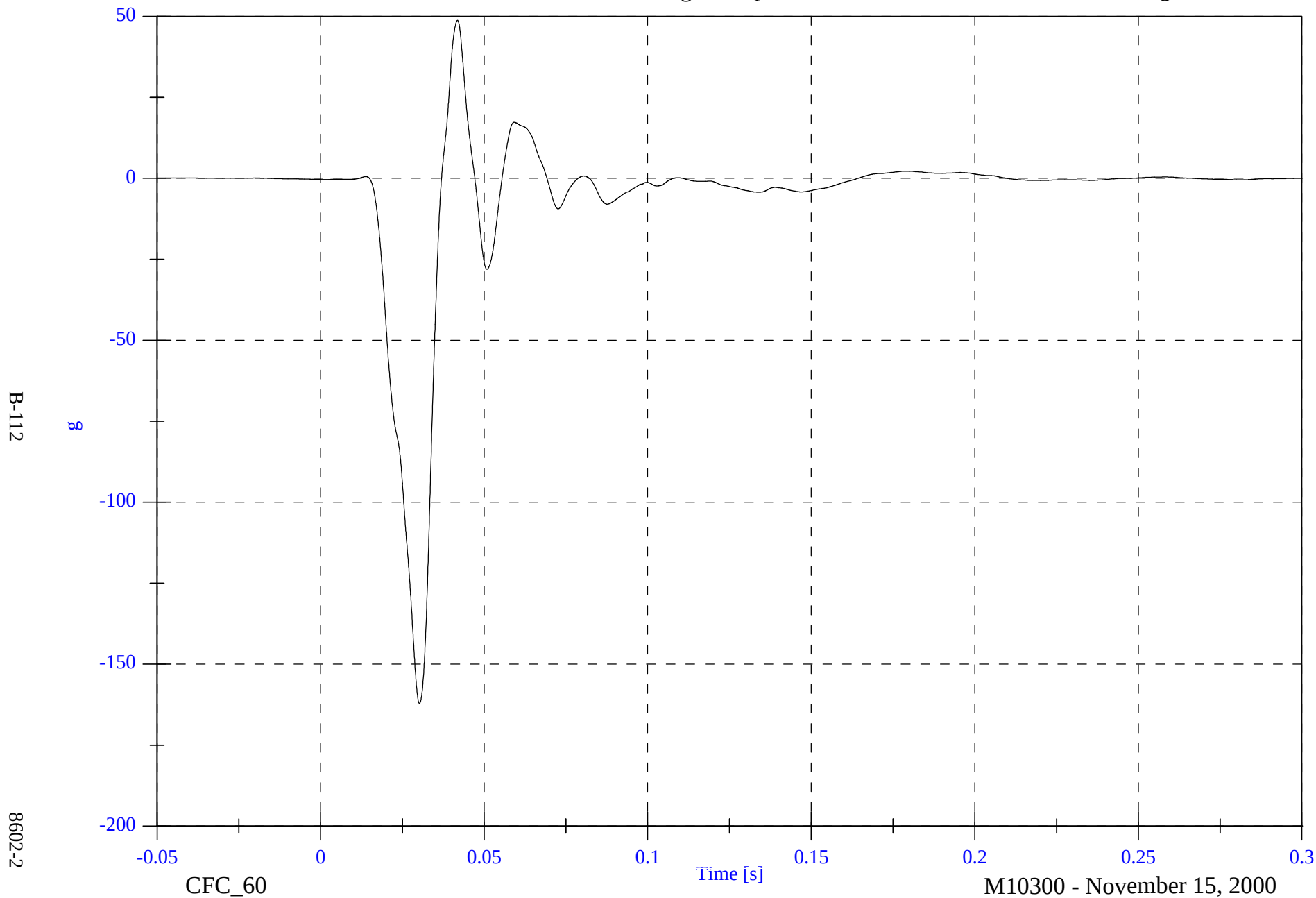


NCAP 2001 Test 2 - 2001 Chrysler LHS

Engine Top #3x

Max: 48.7 [g] at 0.042 [s]

Min: -162.1 [g] at 0.030 [s]

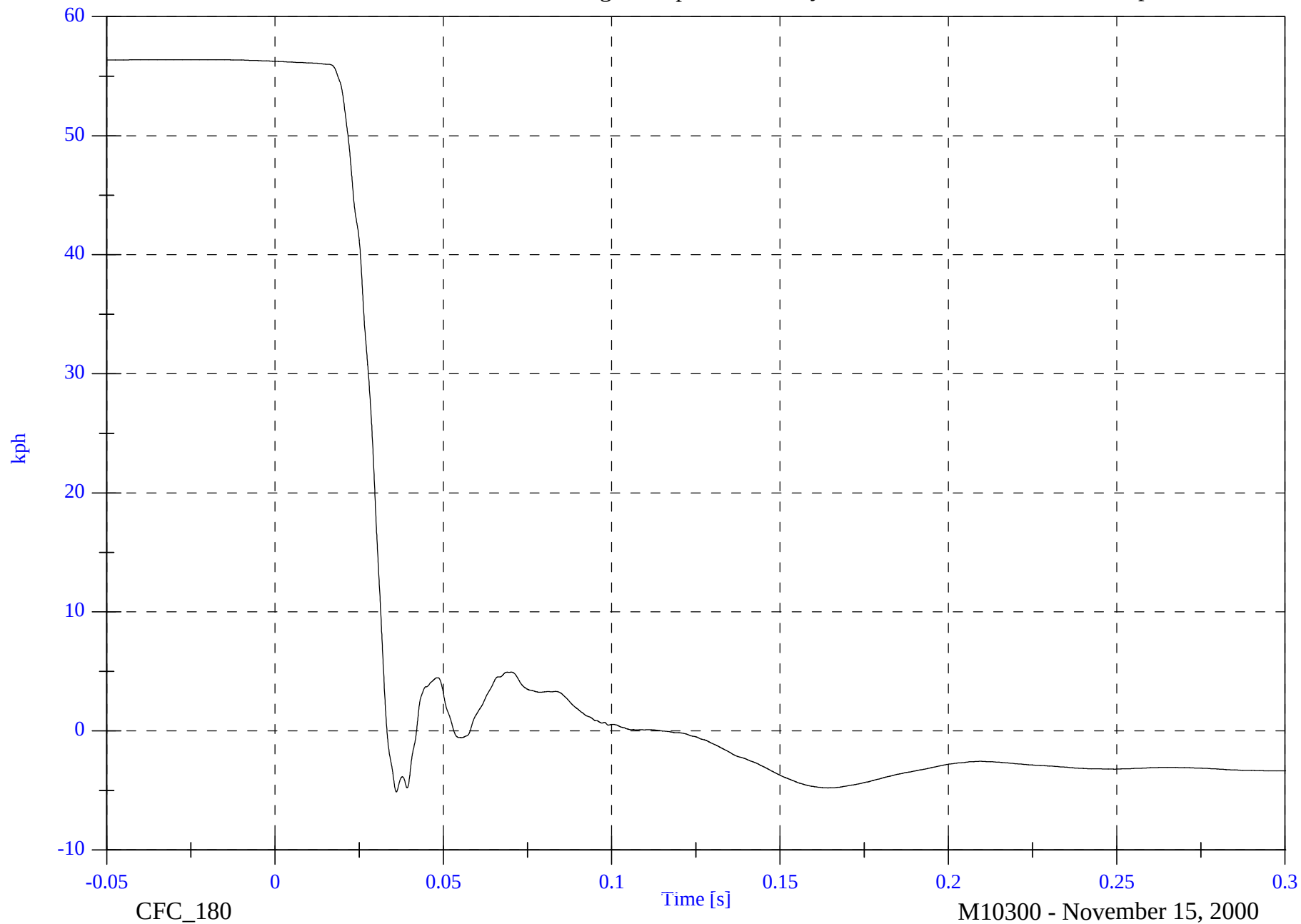


NCAP 2001 Test 2 - 2001 Chrysler LHS

Engine Top #3x Velocity

Max: 56.4 [kph] at -0.018 [s]

Min: -5.1 [kph] at 0.036 [s]



B-113

8602-2

CFC_180

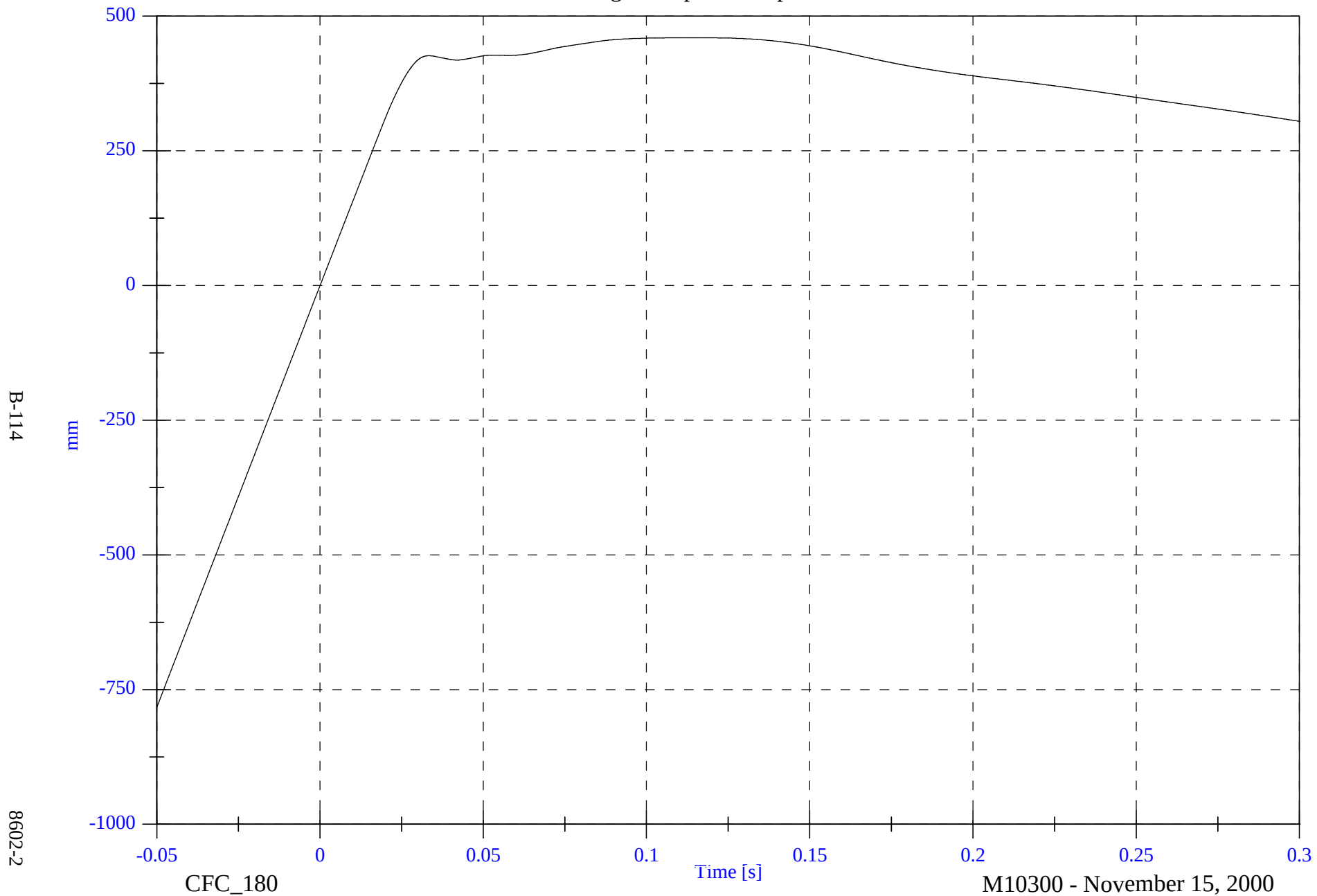
M10300 - November 15, 2000

NCAP 2001 Test 2 - 2001 Chrysler LHS

Engine Top #3x Displacement

Max: 459.9 [mm] at 0.115 [s]

Min: -782.8 [mm] at -0.050 [s]



B-114

8602-2

CFC_180

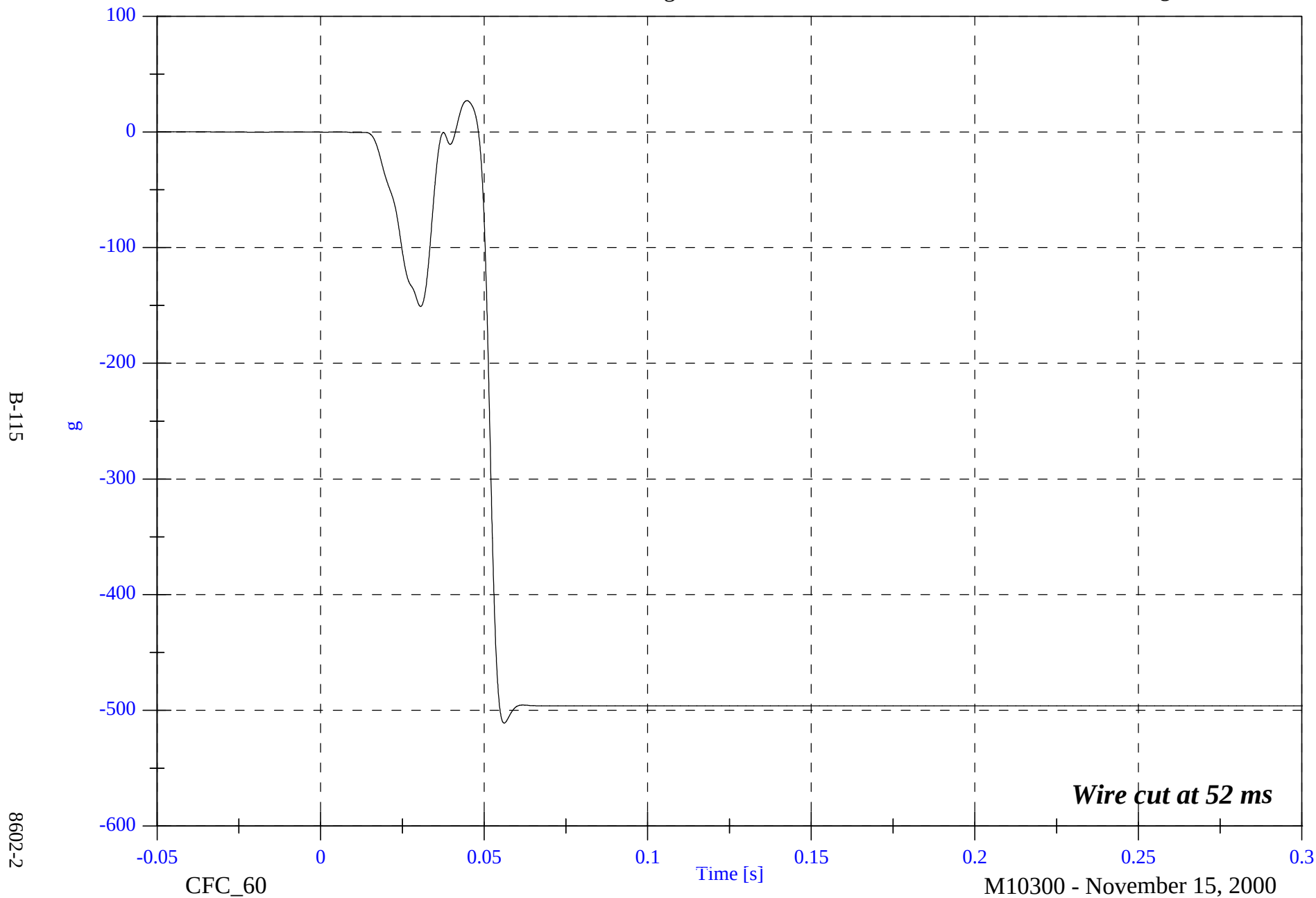
M10300 - November 15, 2000

NCAP 2001 Test 2 - 2001 Chrysler LHS

Engine Bottom #4x

Max: 27.0 [g] at 0.045 [s]

Min: -511.0 [g] at 0.056 [s]

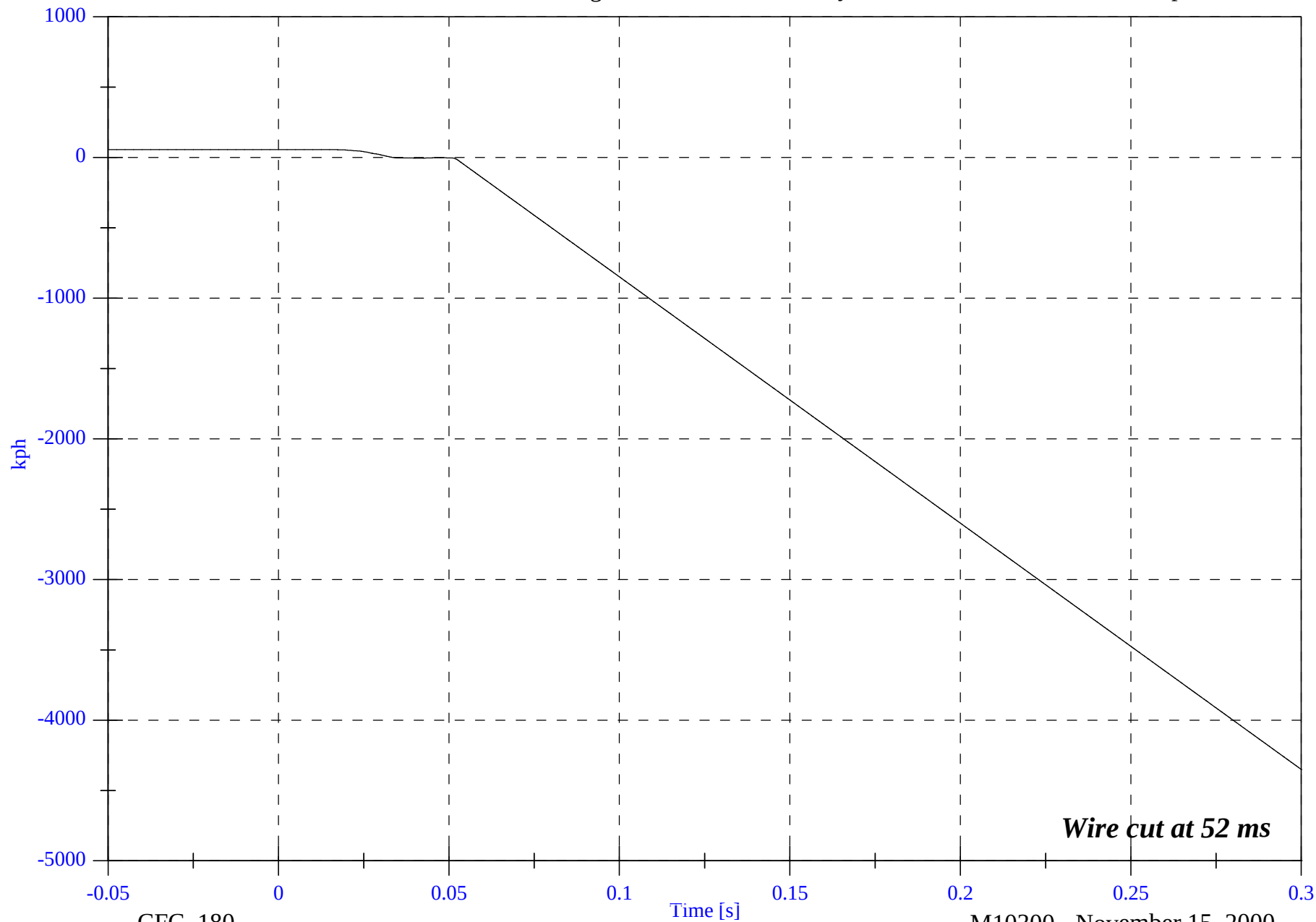


NCAP 2001 Test 2 - 2001 Chrysler LHS

Engine Bottom #4x Velocity

Max: 56.4 [kph] at -0.029 [s]

Min: -4350.1 [kph] at 0.300 [s]



B-116

8602-2

CFC_180

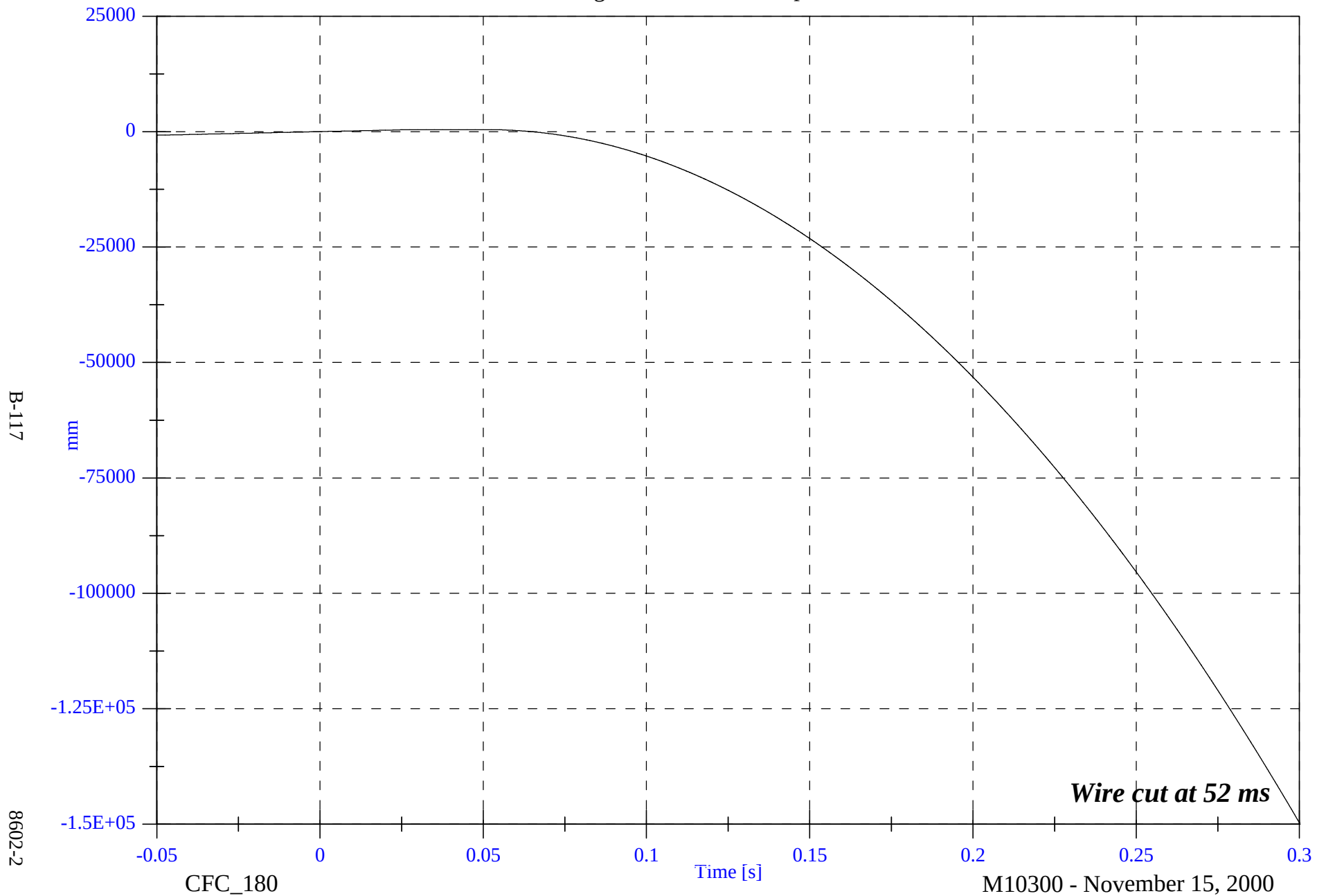
M10300 - November 15, 2000

NCAP 2001 Test 2 - 2001 Chrysler LHS

Engine Bottom #4x Displacement

Max: 430.0 [mm] at 0.034 [s]

Min: -149663.9 [mm] at 0.300 [s]



NCAP 2001 Test 2 - 2001 Chrysler LHS

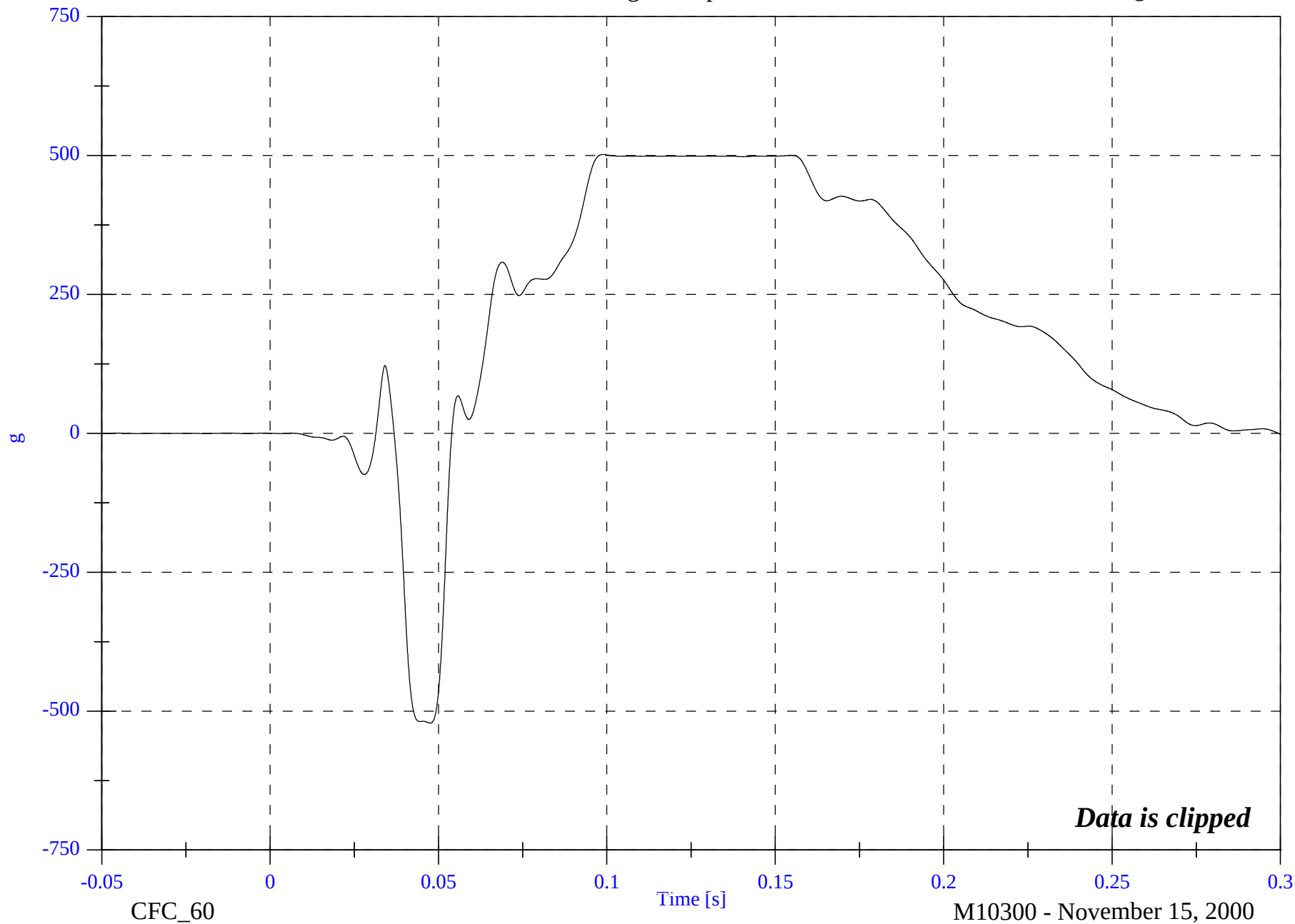
Right Caliper #5x

Max: 501.9 [g] at 0.099 [s]

Min: -521.6 [g] at 0.048 [s]

B-118

8602-2

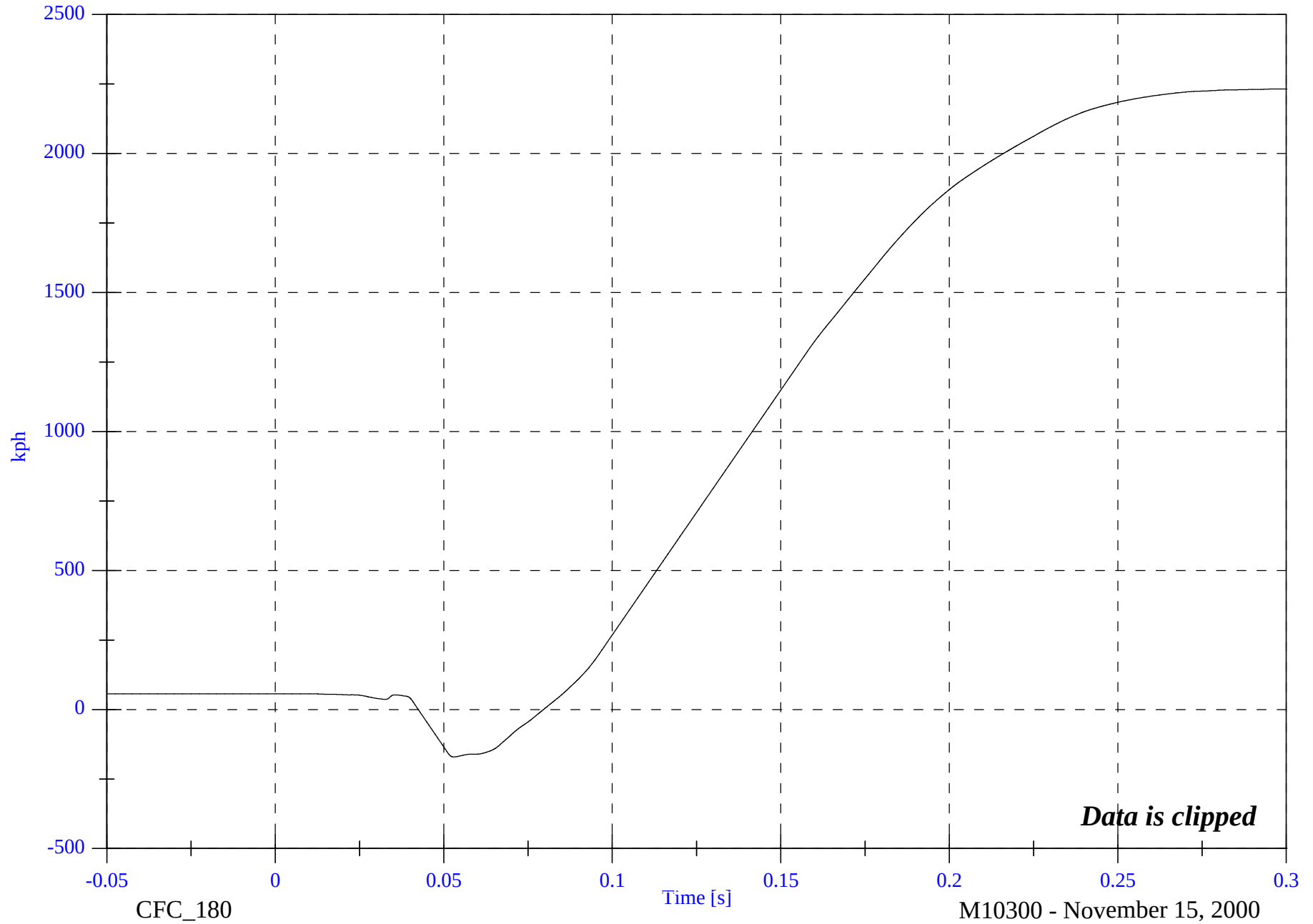


NCAP 2001 Test 2 - 2001 Chrysler LHS

Right Caliper #5x Velocity

Max: 2232.5 [kph] at 0.299 [s]

Min: -170.6 [kph] at 0.053 [s]



B-119

8602-2

CFC_180

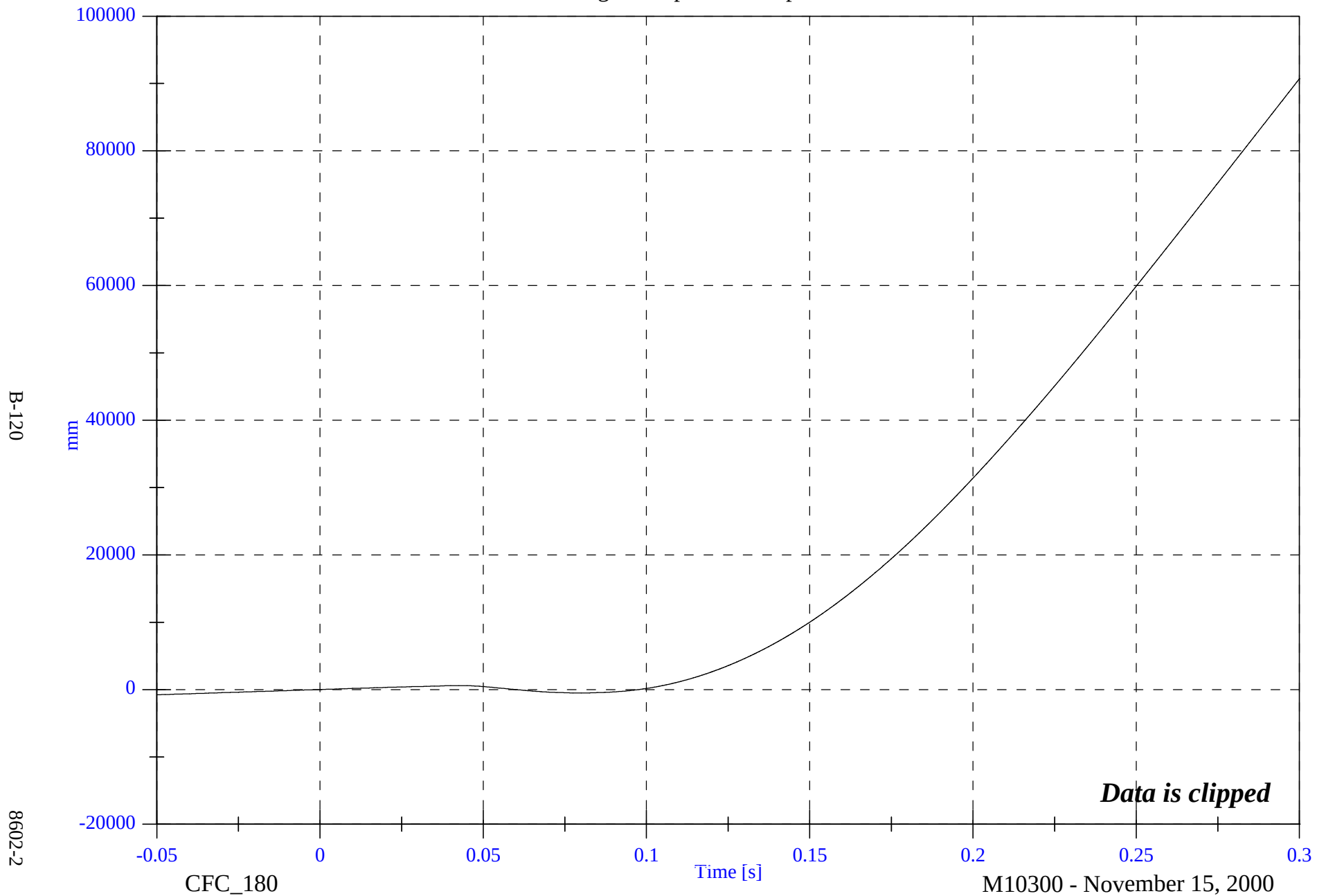
M10300 - November 15, 2000

NCAP 2001 Test 2 - 2001 Chrysler LHS

Right Caliper #5x Displacement

Max: 90692.4 [mm] at 0.300 [s]

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

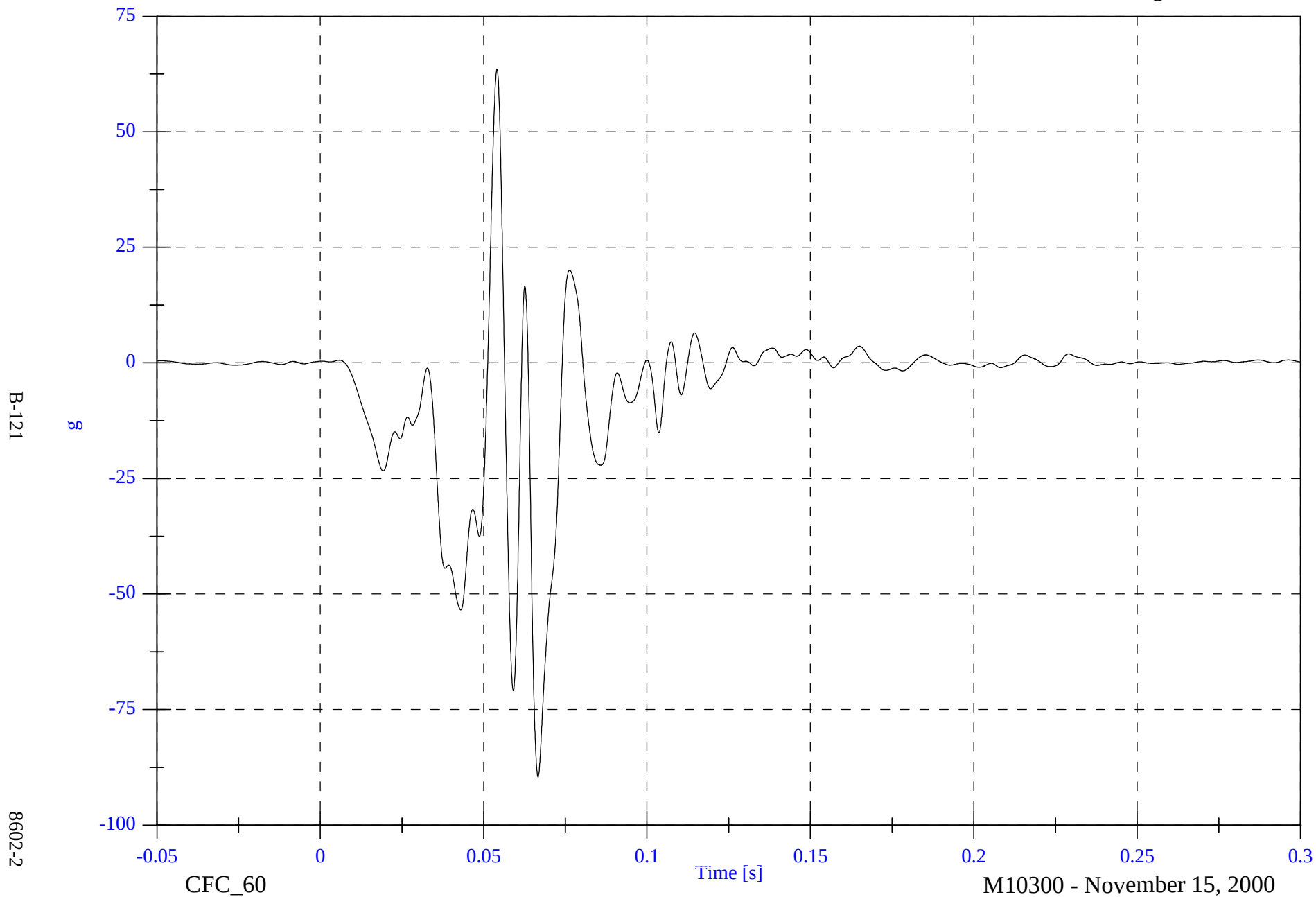


NCAP 2001 Test 2 - 2001 Chrysler LHS

Instrument Panel #6x

Max: 63.6 [g] at 0.054 [s]

Min: -89.6 [g] at 0.067 [s]

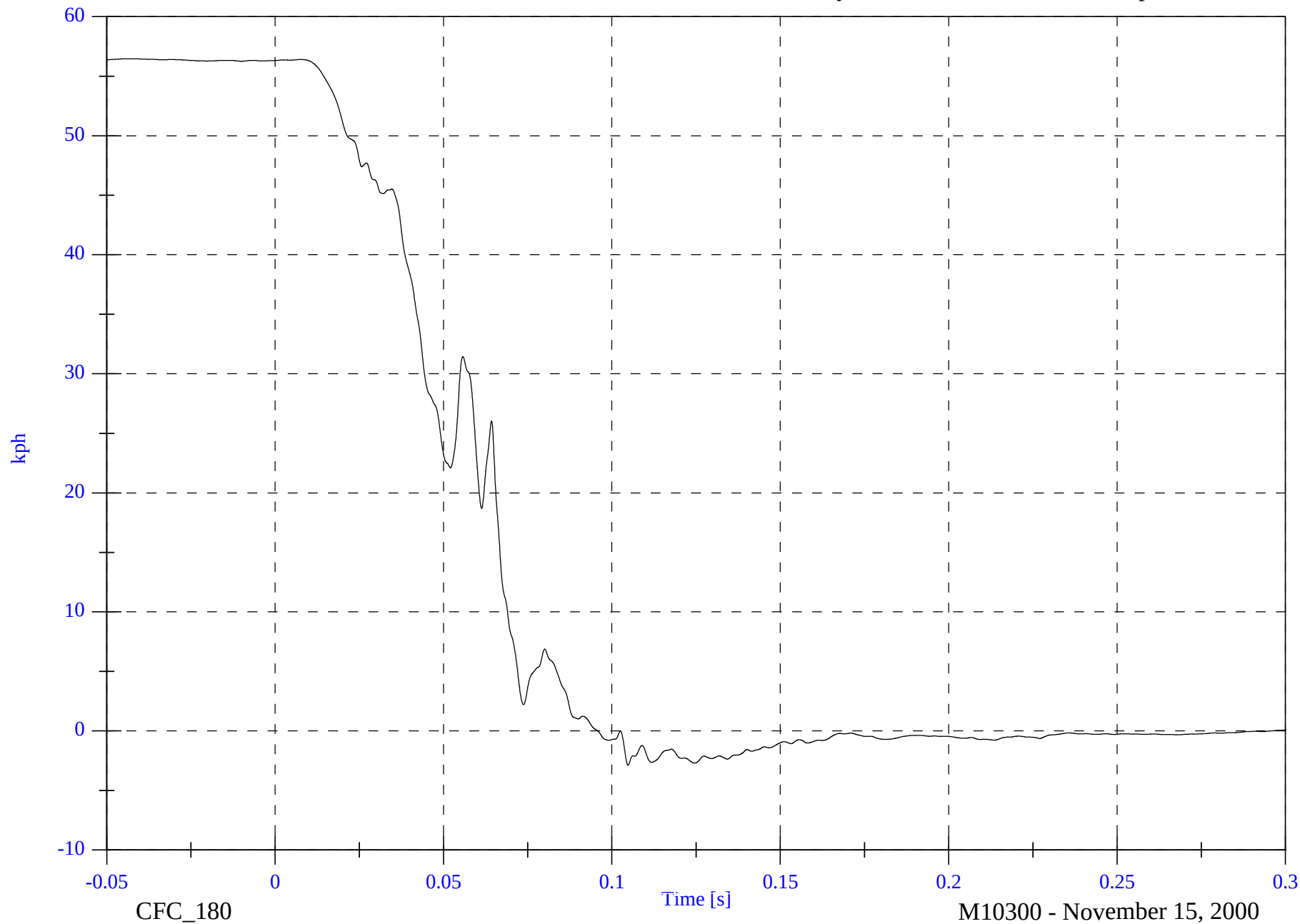


NCAP 2001 Test 2 - 2001 Chrysler LHS

Instrument Panel #6x Velocity

Max: 56.5 [kph] at -0.043 [s]

Min: -2.9 [kph] at 0.105 [s]



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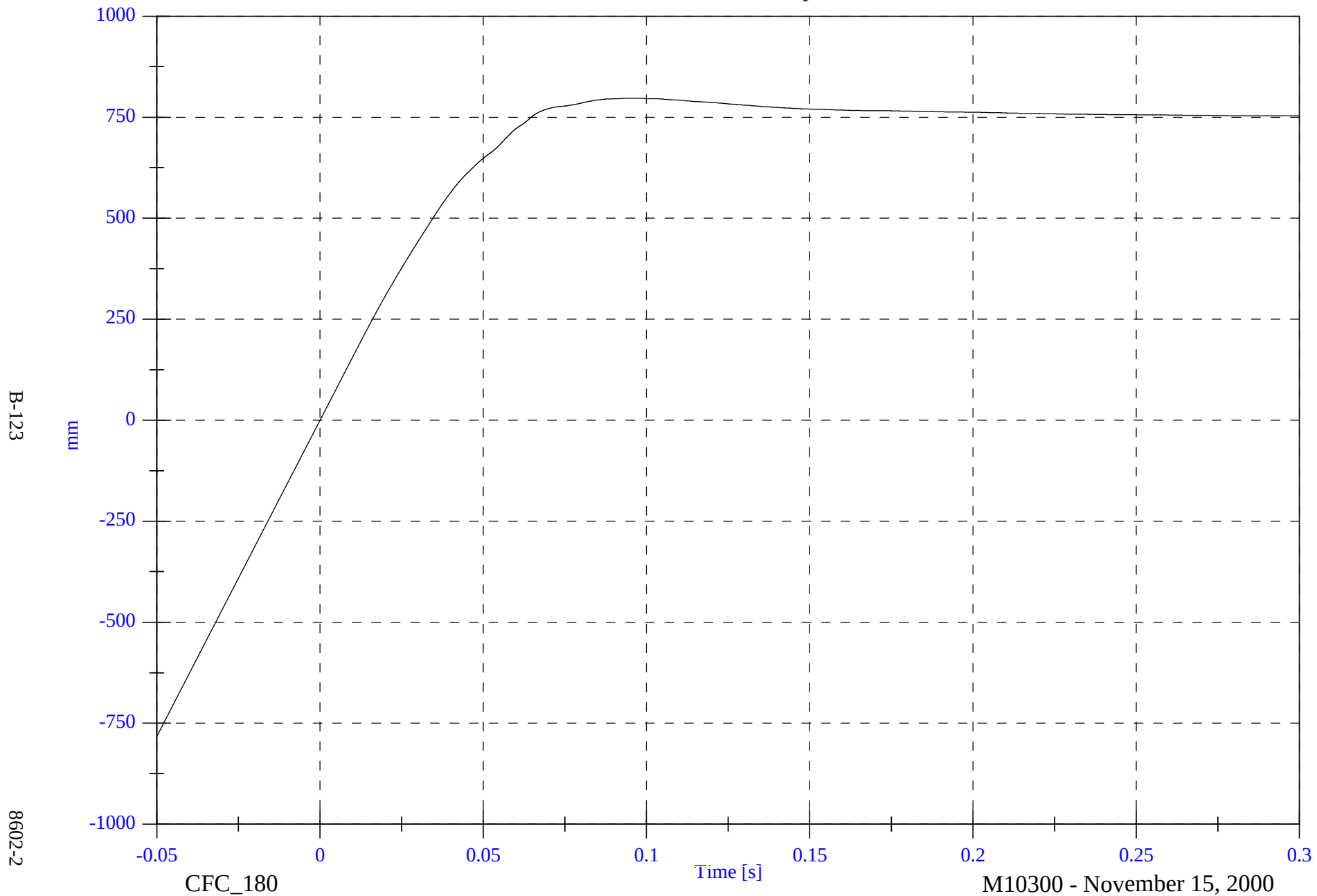
8602-2

NCAP 2001 Test 2 - 2001 Chrysler LHS

Instrument Panel #6x Displacement

Max: 796.8 [mm] at 0.096 [s]

Min: -782.7 [mm] at -0.050 [s]



B-123

8602-2

CFC_180

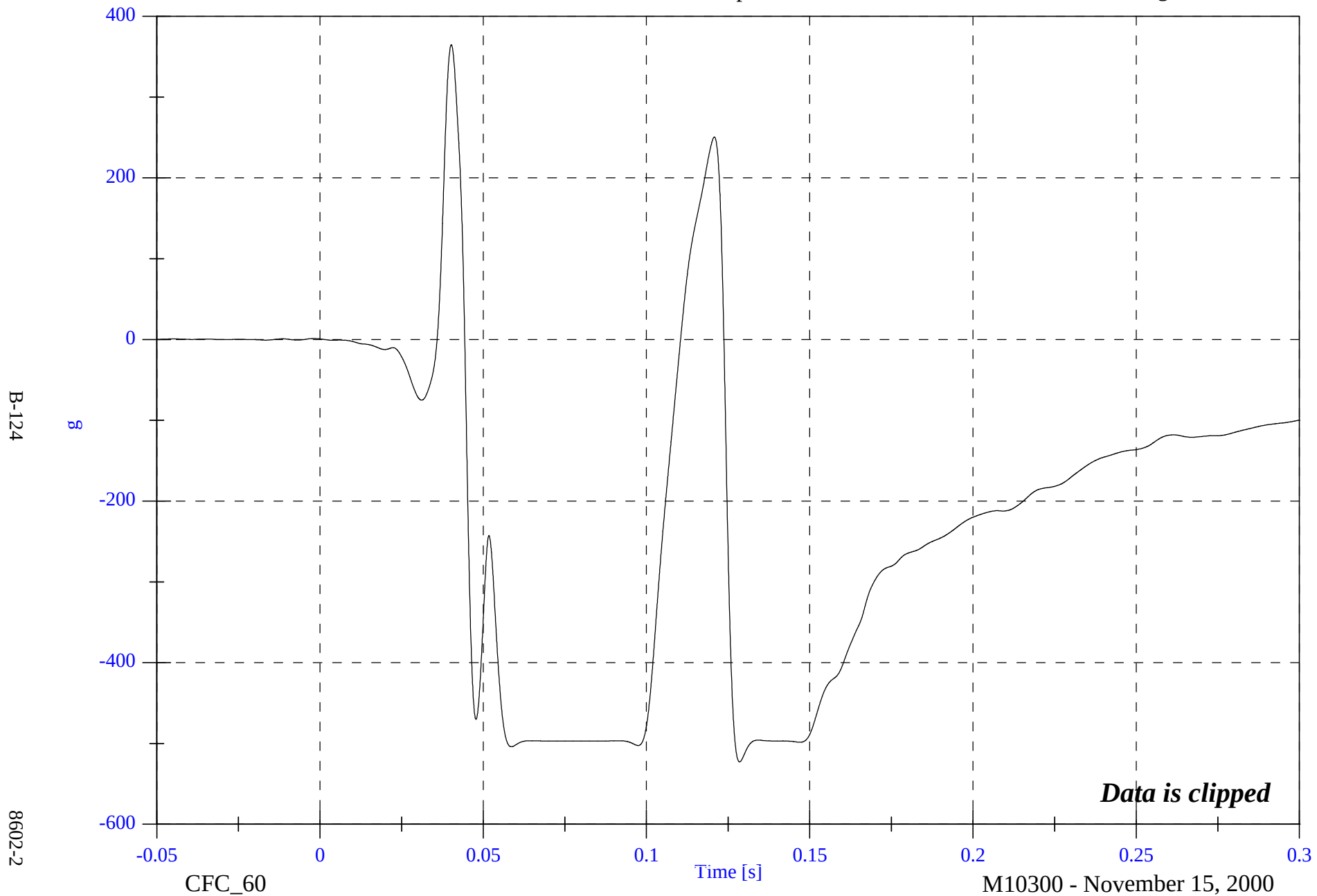
M10300 - November 15, 2000

NCAP 2001 Test 2 - 2001 Chrysler LHS

Left Caliper #7x

Max: 364.7 [g] at 0.040 [s]

Min: -522.8 [g] at 0.129 [s]

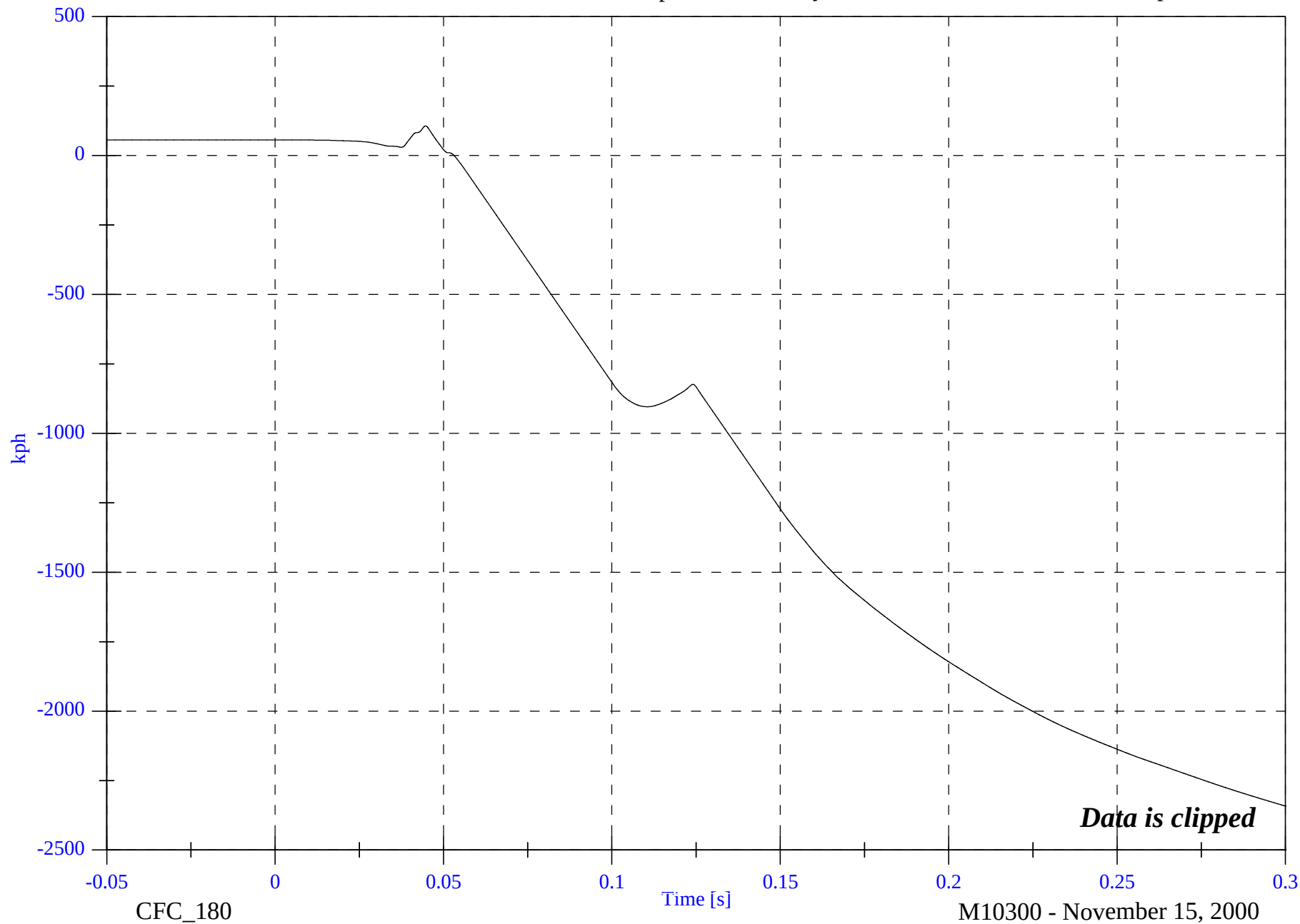


NCAP 2001 Test 2 - 2001 Chrysler LHS

Left Caliper #7x Velocity

Max: 106.7 [kph] at 0.045 [s]

Min: -2341.9 [kph] at 0.300 [s]



B-125

8602-2

CFC_180

Time [s]

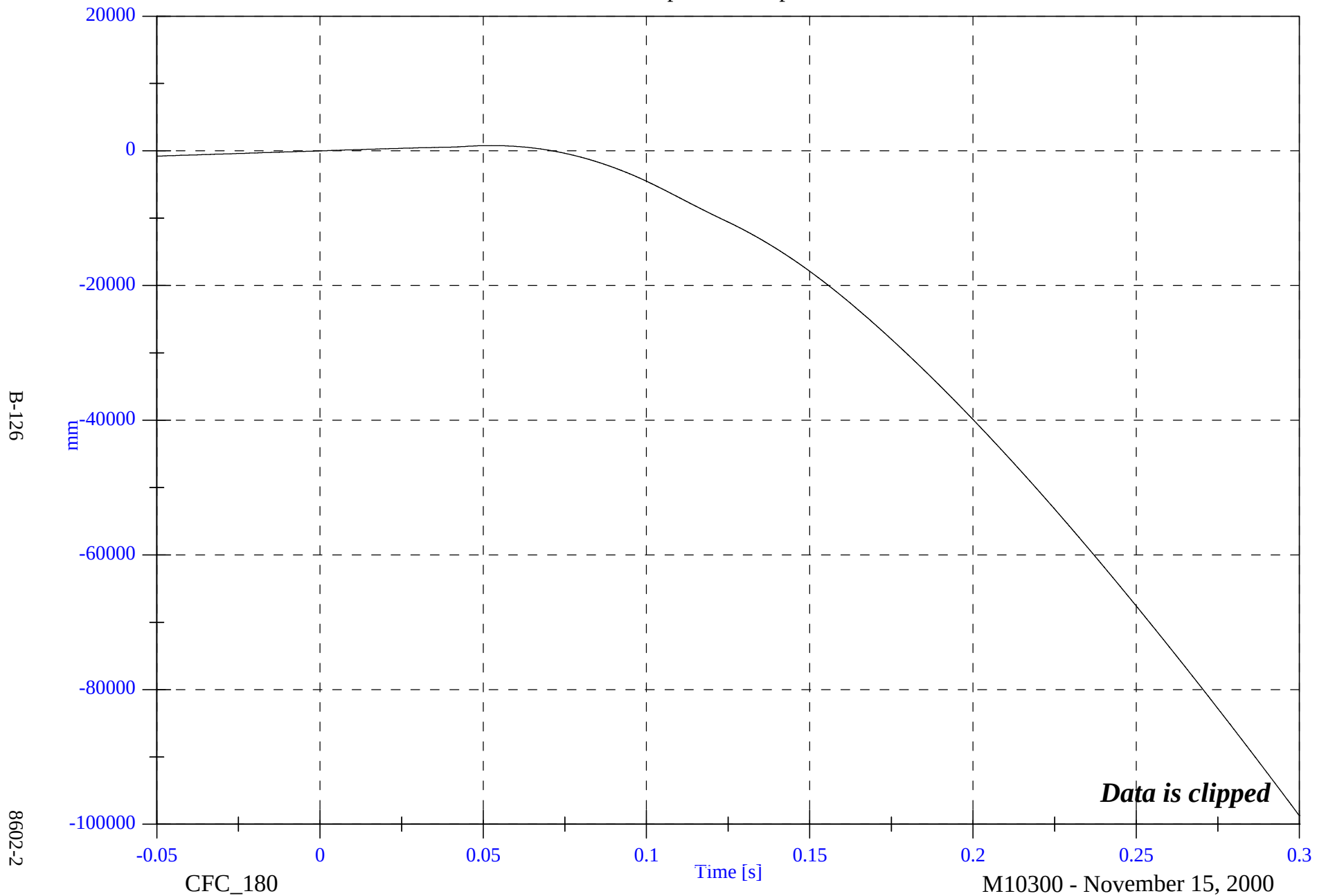
M10300 - November 15, 2000

NCAP 2001 Test 2 - 2001 Chrysler LHS

Left Caliper #7x Displacement

Max: 767.7 [mm] at 0.053 [s]

Min: -98730.3 [mm] at 0.300 [s]



NCAP 2001 Test 2 - 2001 Chrysler LHS

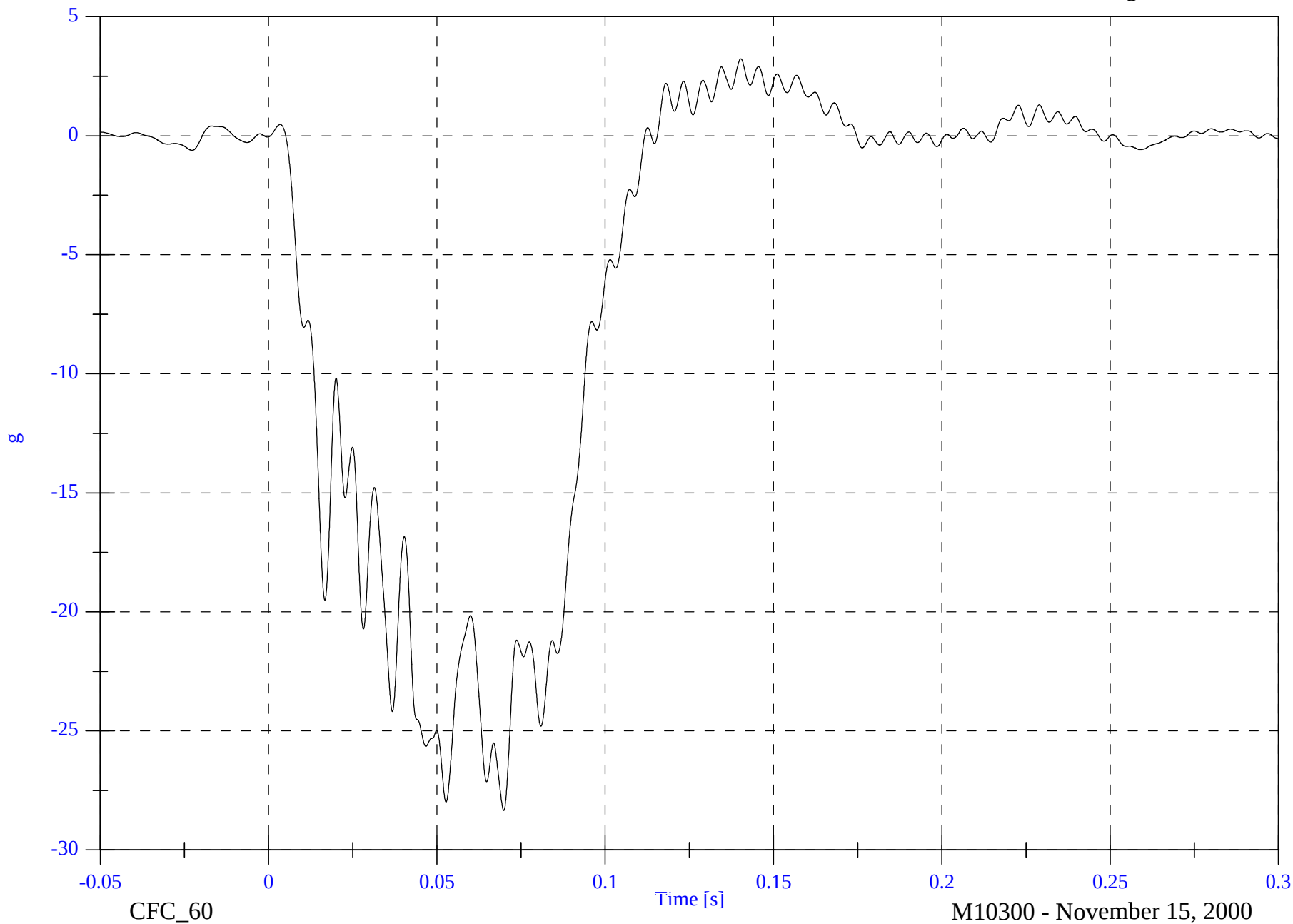
Left Rear Red #8x

Max: 3.2 [g] at 0.140 [s]

Min: -28.4 [g] at 0.070 [s]

B-127

8602-2

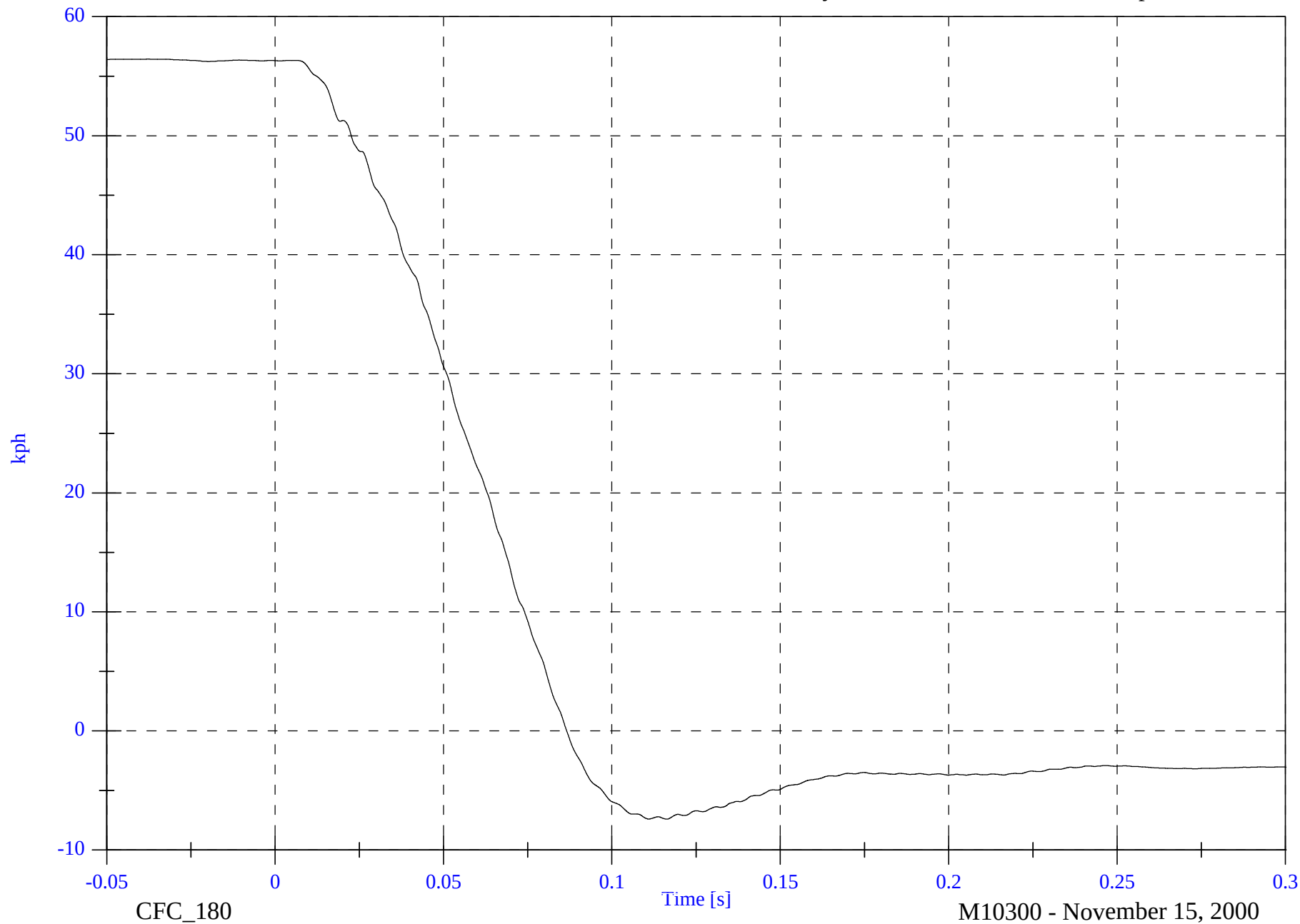


NCAP 2001 Test 2 - 2001 Chrysler LHS

Left Rear Red #8x Velocity

Max: 56.4 [kph] at -0.038 [s]

Min: -7.4 [kph] at 0.116 [s]



B-128

8602-2

CFC_180

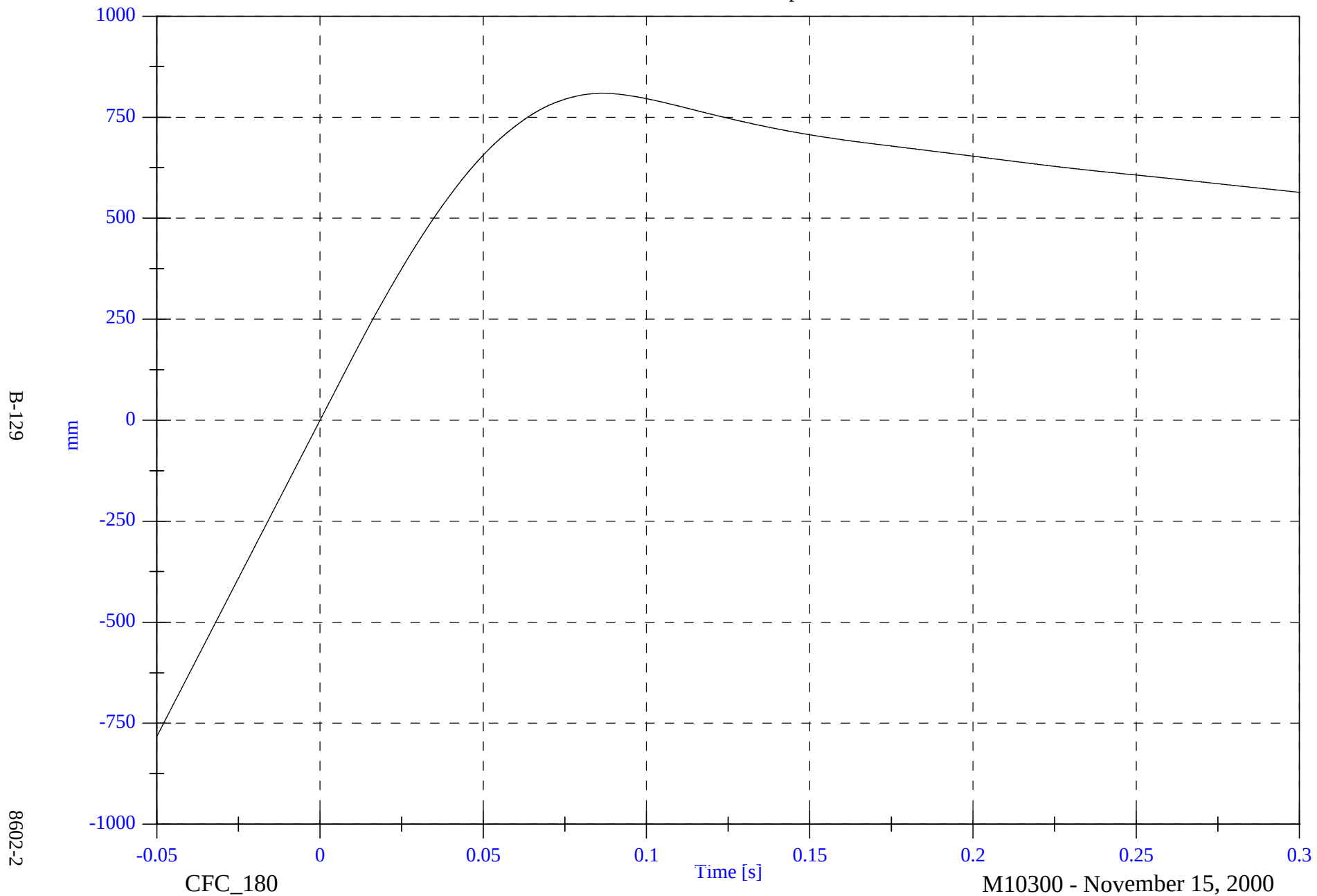
M10300 - November 15, 2000

NCAP 2001 Test 2 - 2001 Chrysler LHS

Left Rear Red #8x Displacement

Max: 809.1 [mm] at 0.087 [s]

Min: -782.7 [mm] at -0.050 [s]



B-129

8602-2

CFC_180

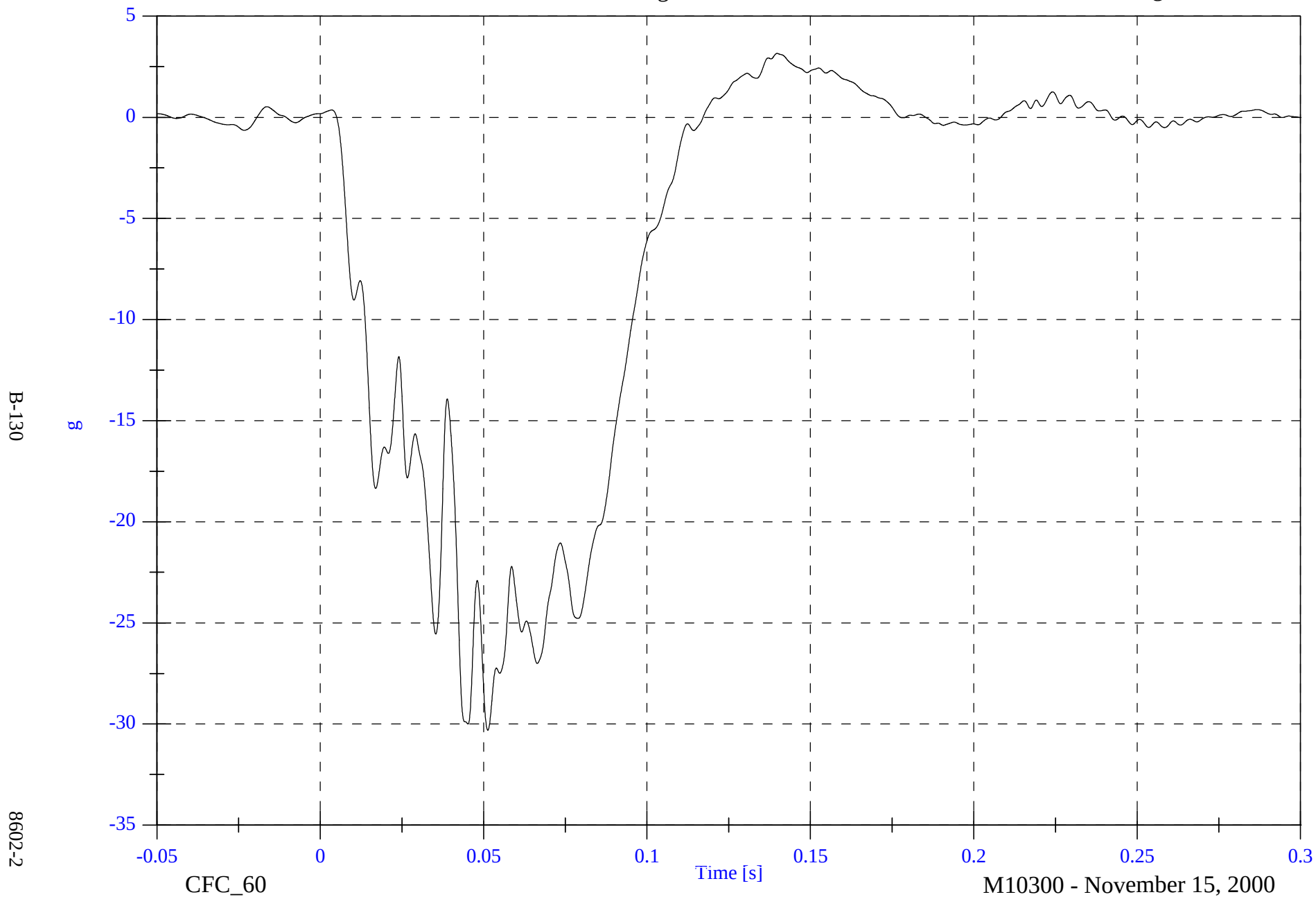
M10300 - November 15, 2000

NCAP 2001 Test 2 - 2001 Chrysler LHS

Right Rear Red #9x

Max: 3.2 [g] at 0.140 [s]

Min: -30.3 [g] at 0.051 [s]

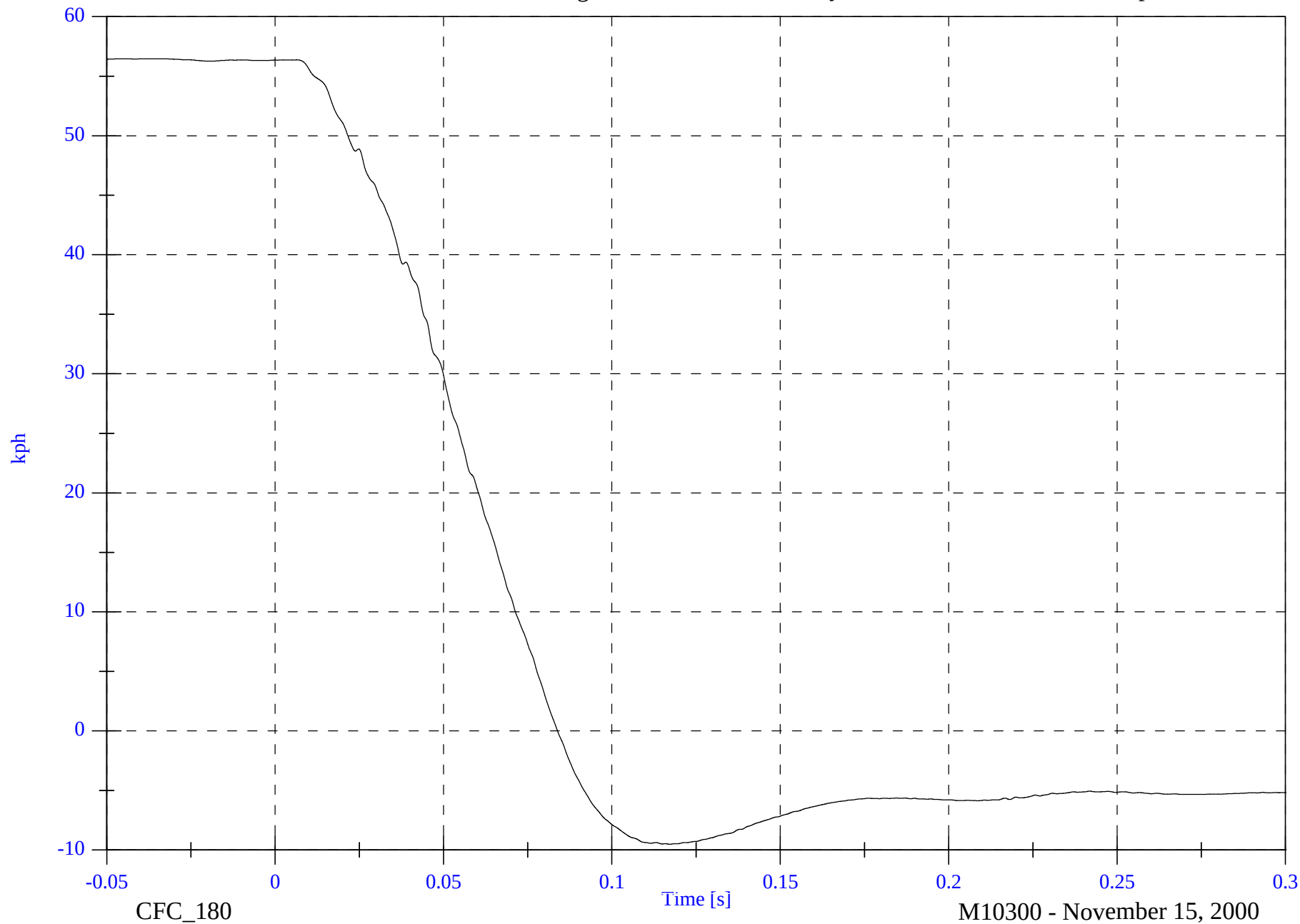


NCAP 2001 Test 2 - 2001 Chrysler LHS

Right Rear Red #9x Velocity

Max: 56.5 [kph] at -0.037 [s]

Min: -9.5 [kph] at 0.117 [s]



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8602-2

NCAP 2001 Test 2 - 2001 Chrysler LHS

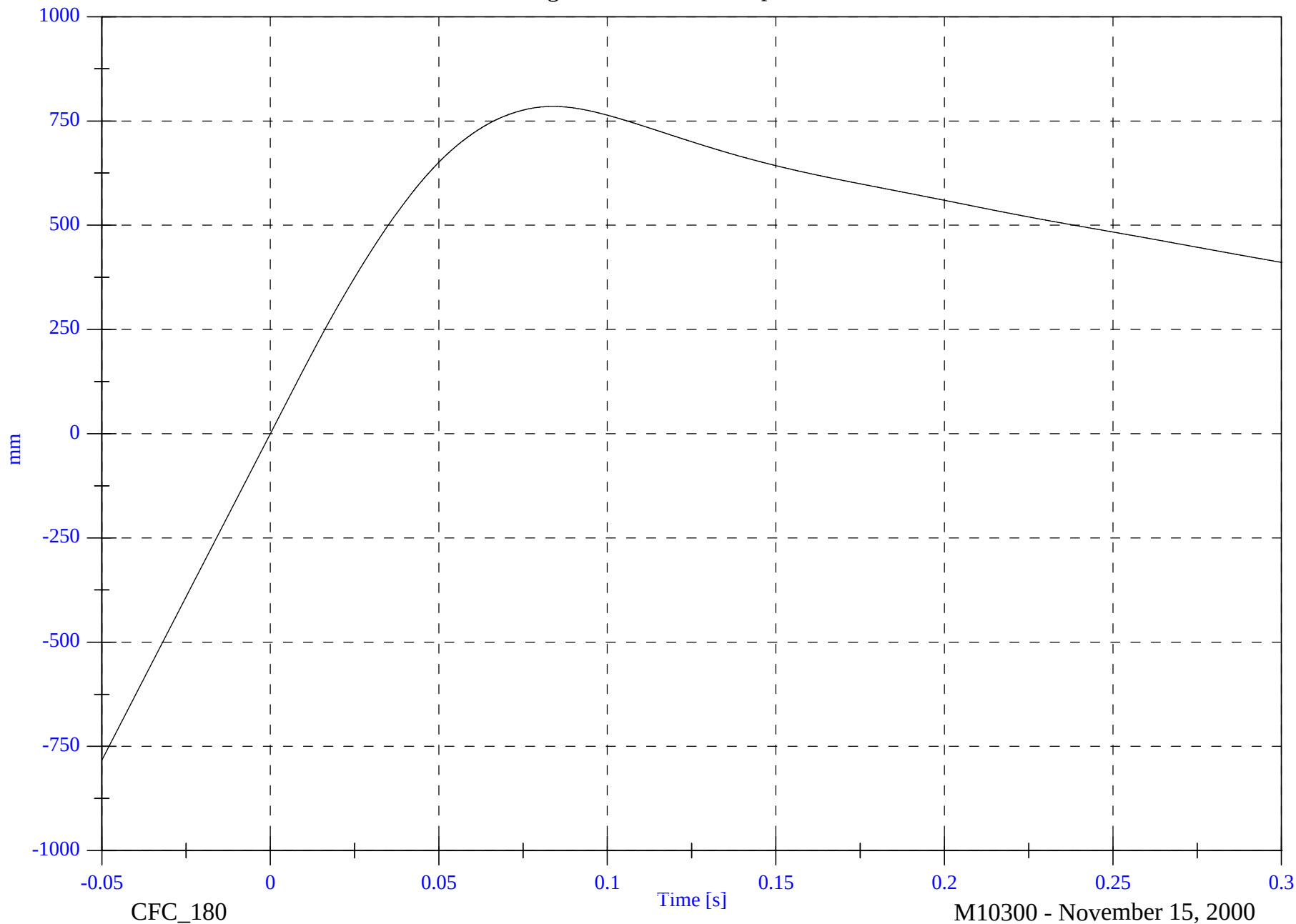
Right Rear Red #9x Displacement

Max: 784.8 [mm] at 0.084 [s]

Min: -783.1 [mm] at -0.050 [s]

B-132

8602-2



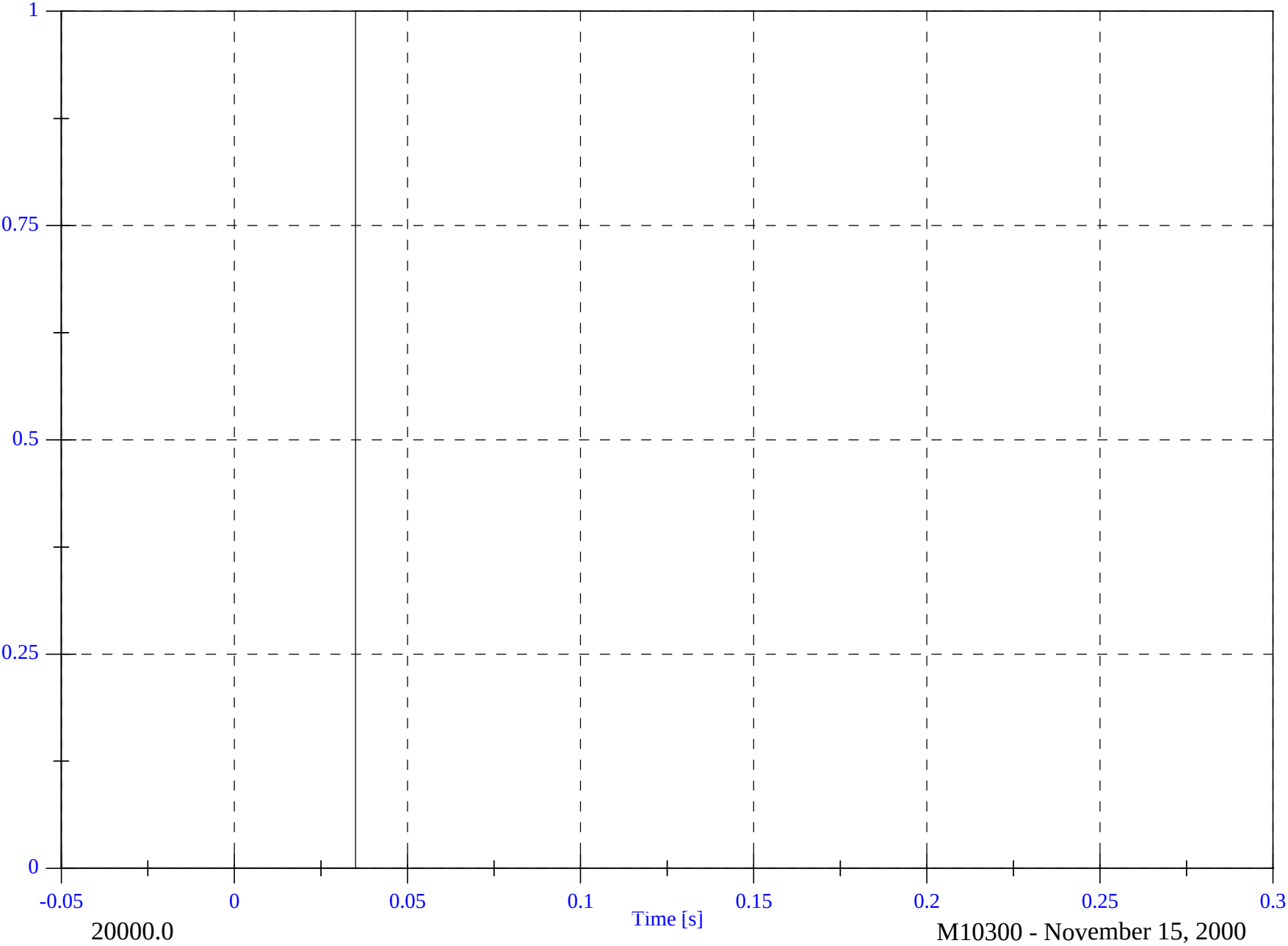
CFC_180

M10300 - November 15, 2000

Contact Time

B-133

8602-2

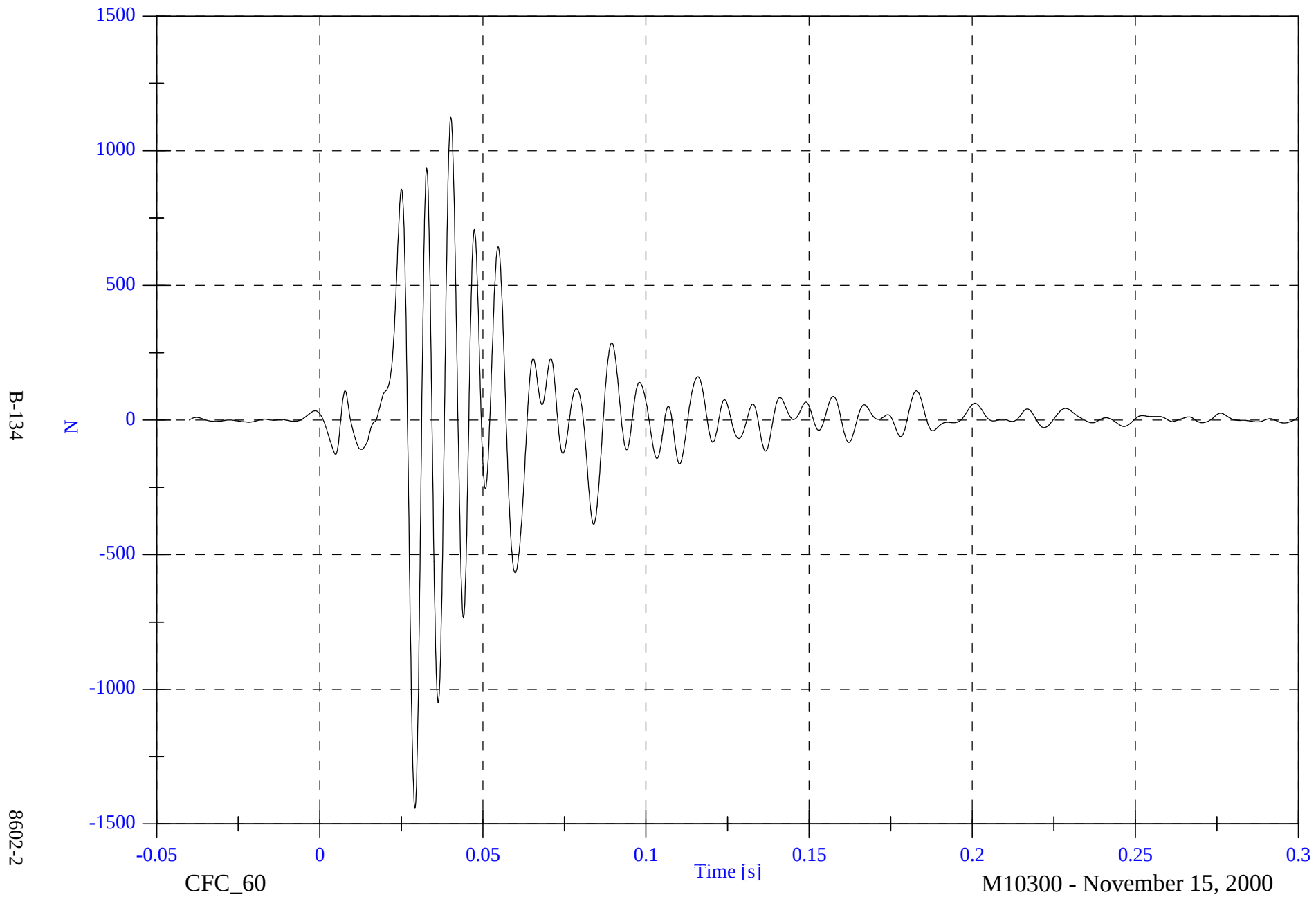


NCAP 2001 Test 2 - 2001 Chrysler LHS

Barrier Load Cell A1 Fx

Max: 1125.2 [N] at 0.040 [s]

Min: -1442.2 [N] at 0.029 [s]

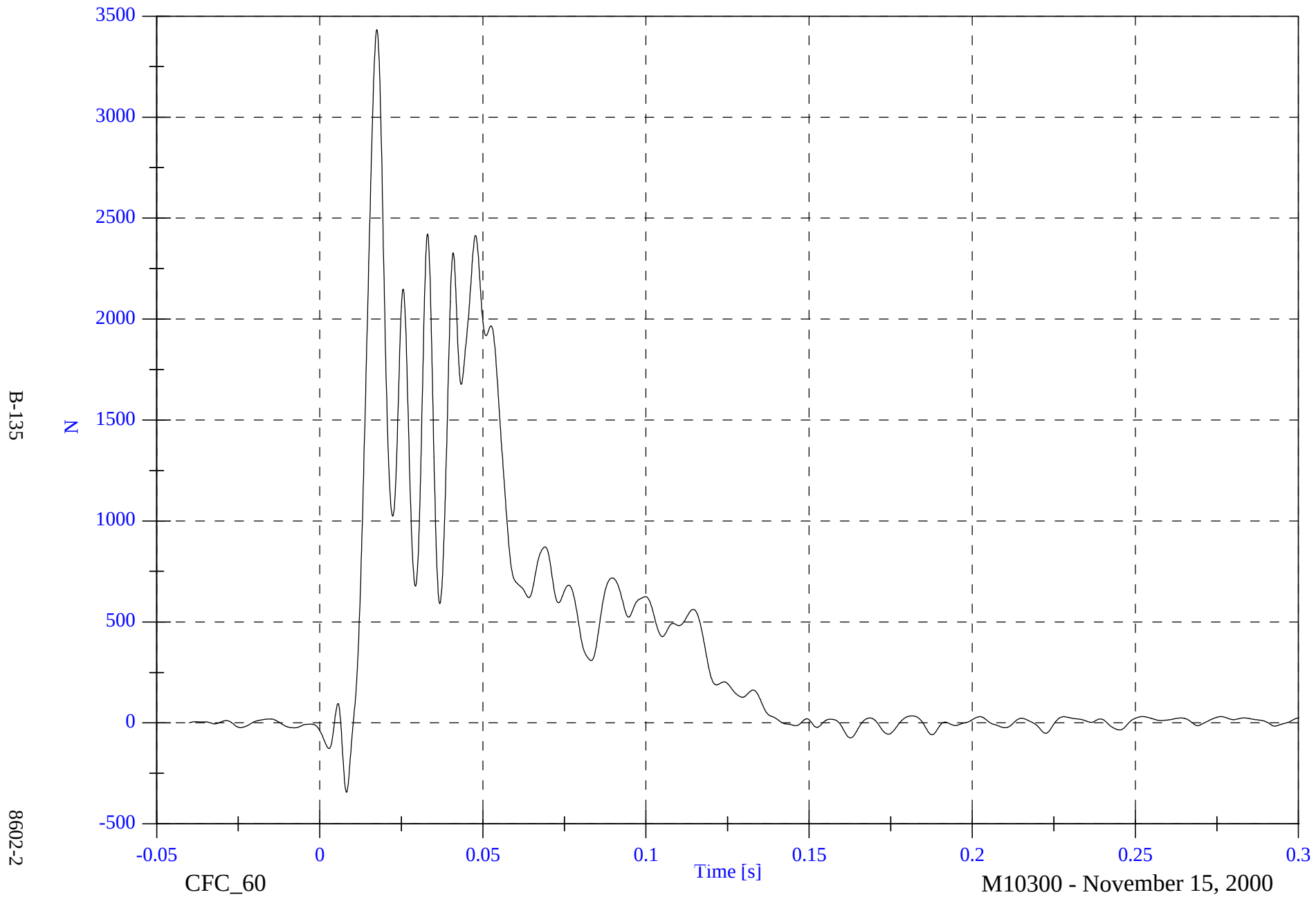


NCAP 2001 Test 2 - 2001 Chrysler LHS

Barrier Load Cell A2 Fx

Max: 3434.0 [N] at 0.017 [s]

Min: -344.1 [N] at 0.008 [s]

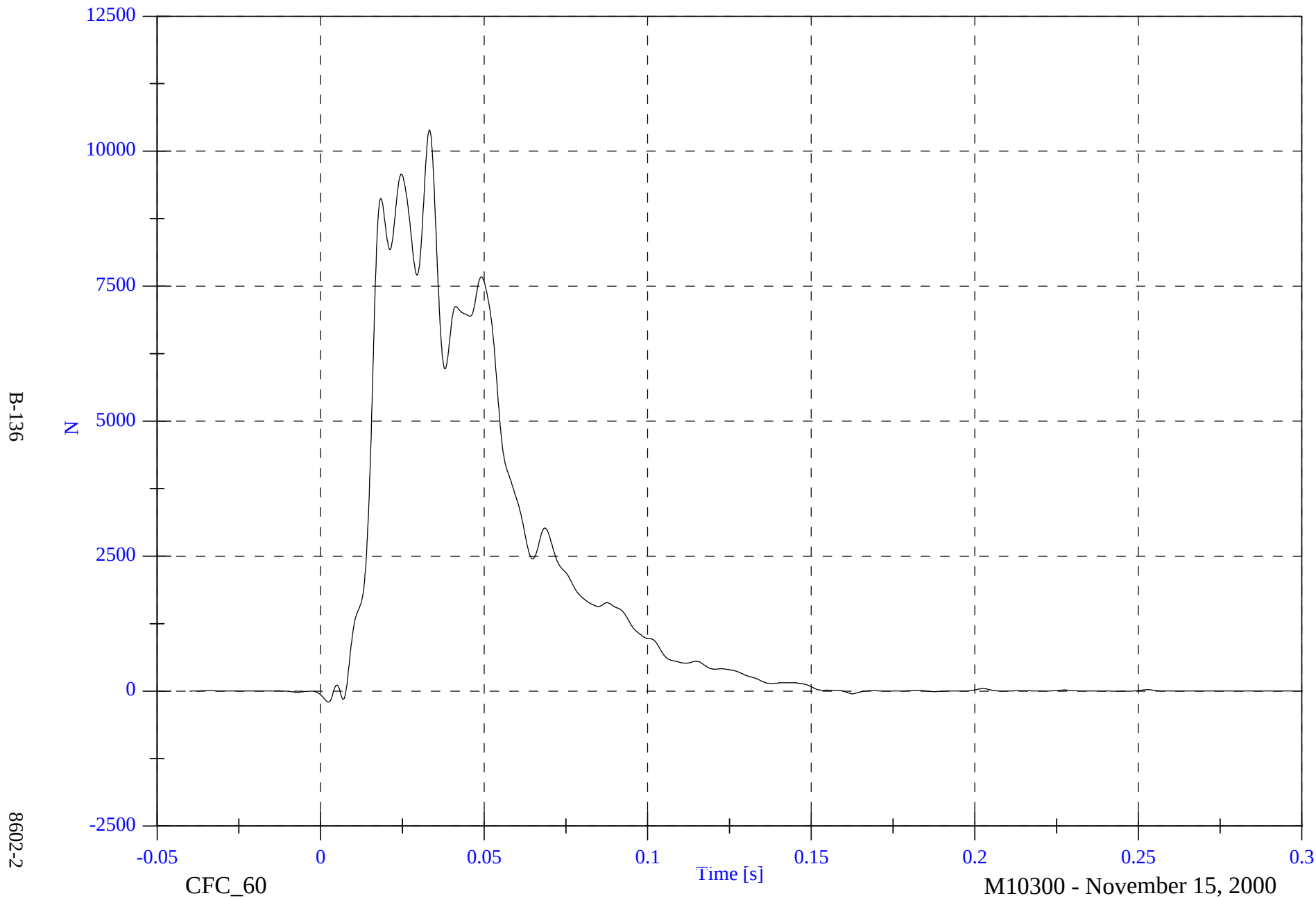


NCAP 2001 Test 2 - 2001 Chrysler LHS

Barrier Load Cell A3 Fx

Max: 10395.8 [N] at 0.033 [s]

Min: -202.5 [N] at 0.002 [s]

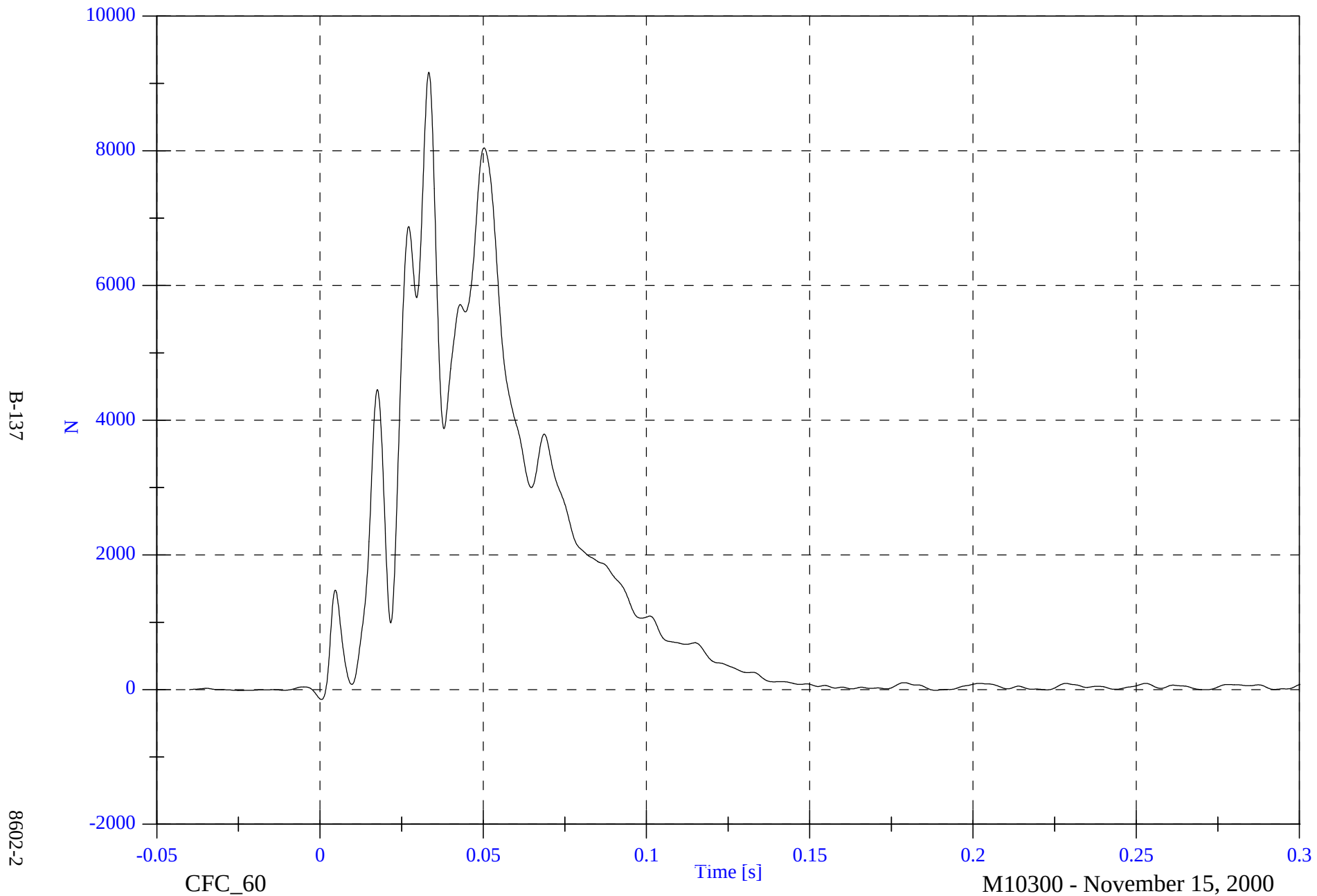


NCAP 2001 Test 2 - 2001 Chrysler LHS

Barrier Load Cell A4 Fx

Max: 9168.2 [N] at 0.033 [s]

Min: -148.6 [N] at 0.000 [s]

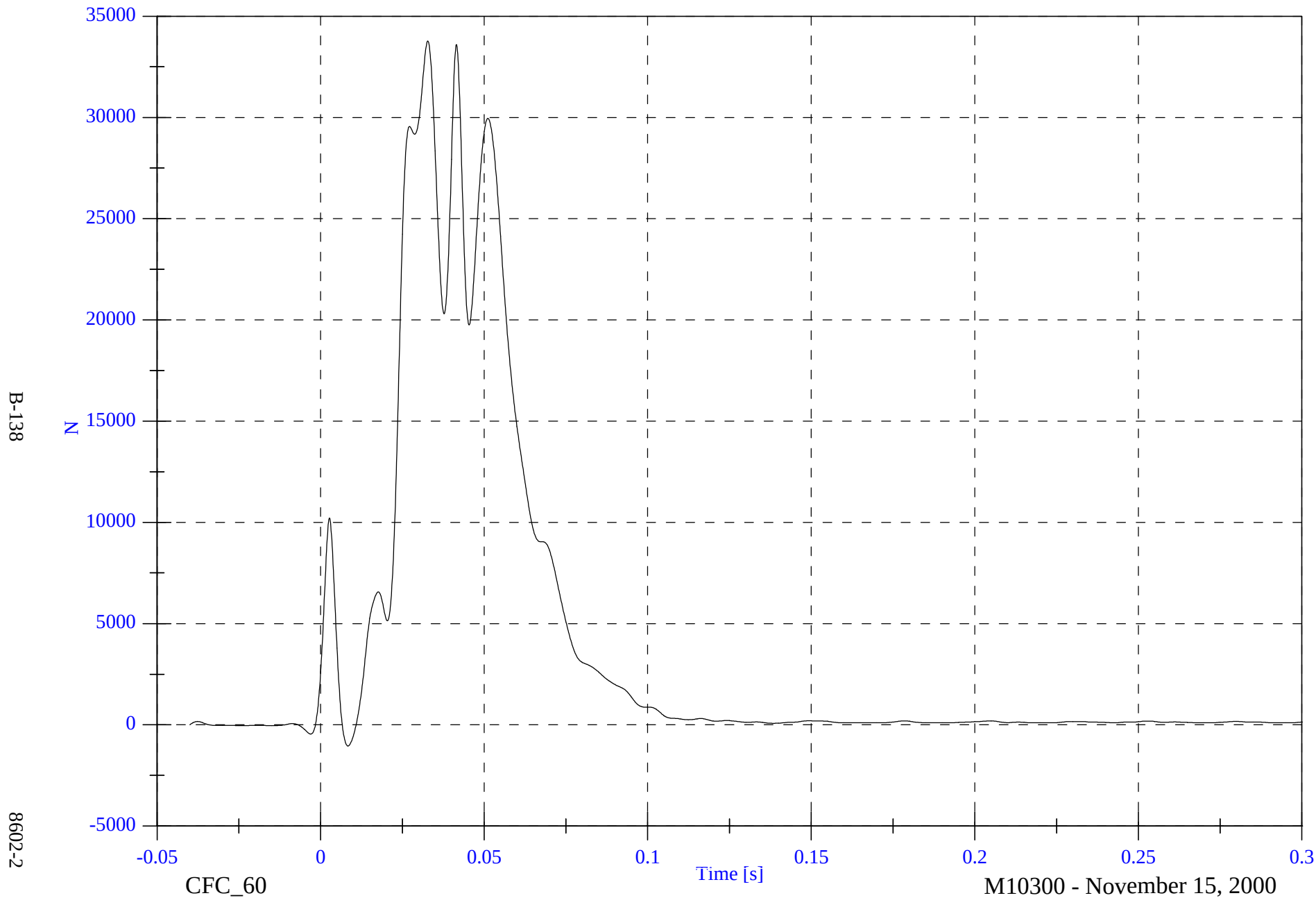


NCAP 2001 Test 2 - 2001 Chrysler LHS

Barrier Load Cell A5 Fx

Max: 33775.1 [N] at 0.033 [s]

Min: -1048.6 [N] at 0.008 [s]

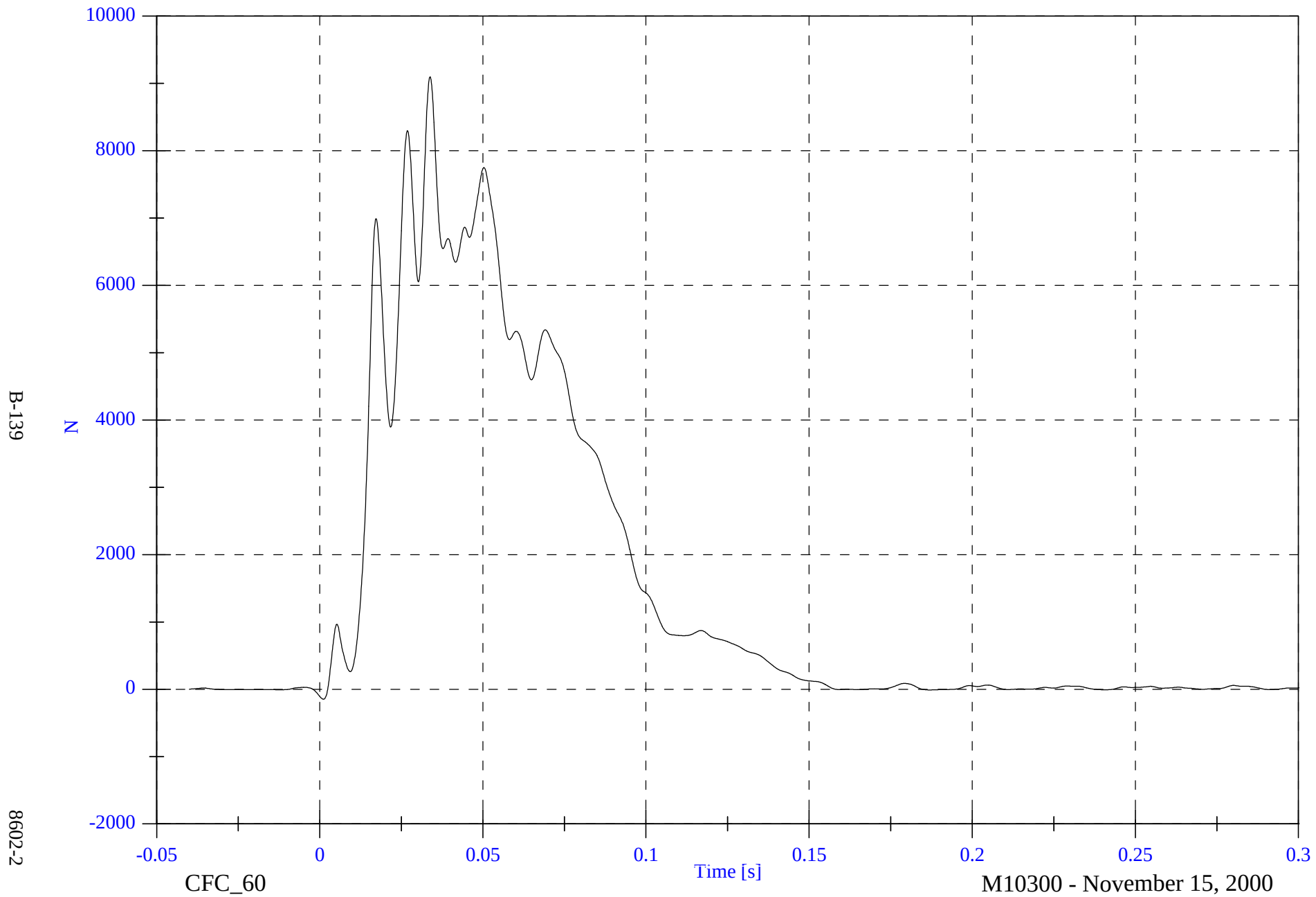


NCAP 2001 Test 2 - 2001 Chrysler LHS

Barrier Load Cell A6 Fx

Max: 9099.8 [N] at 0.034 [s]

Min: -149.4 [N] at 0.001 [s]

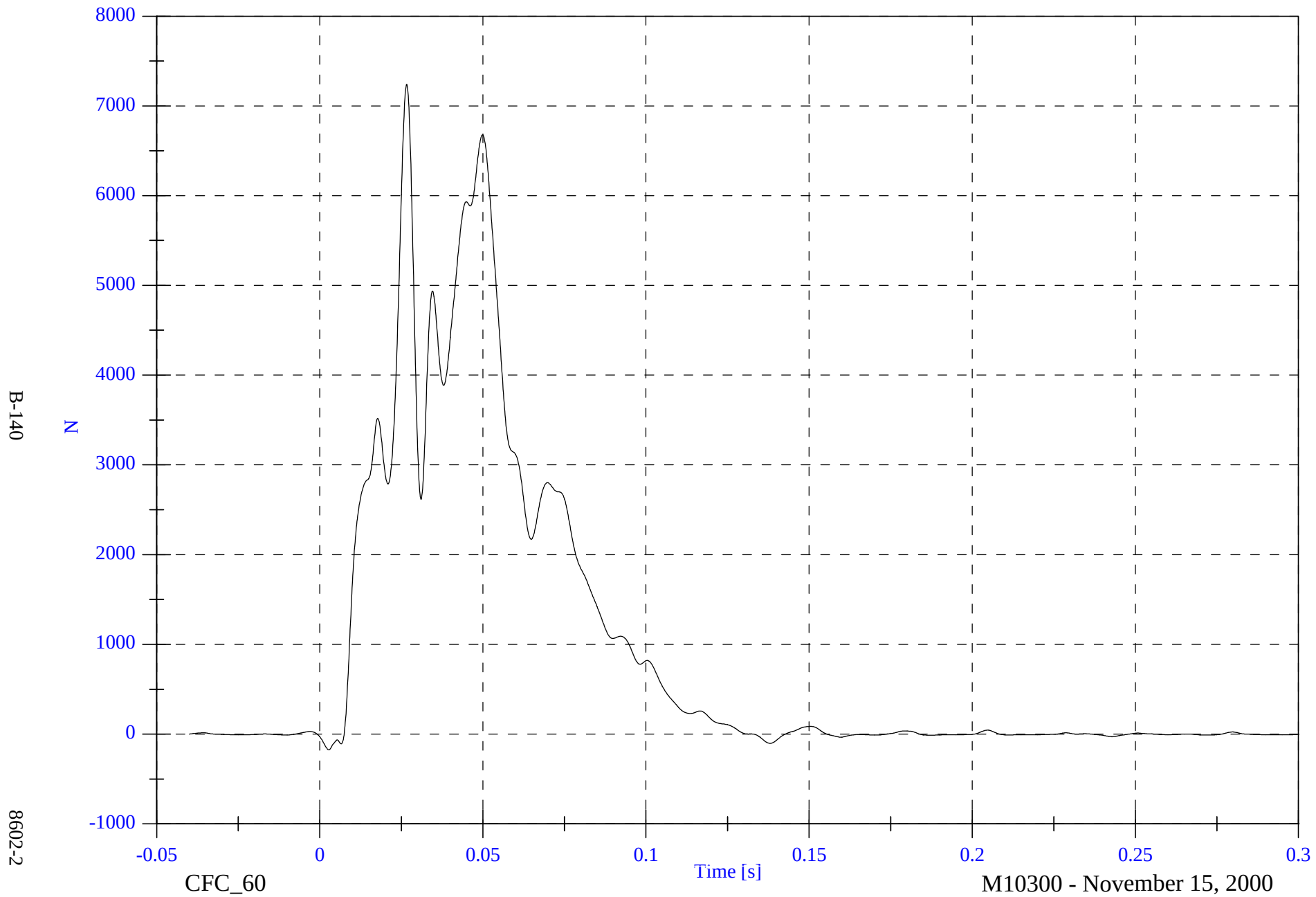


NCAP 2001 Test 2 - 2001 Chrysler LHS

Barrier Load Cell A7 Fx

Max: 7241.7 [N] at 0.027 [s]

Min: -175.4 [N] at 0.003 [s]

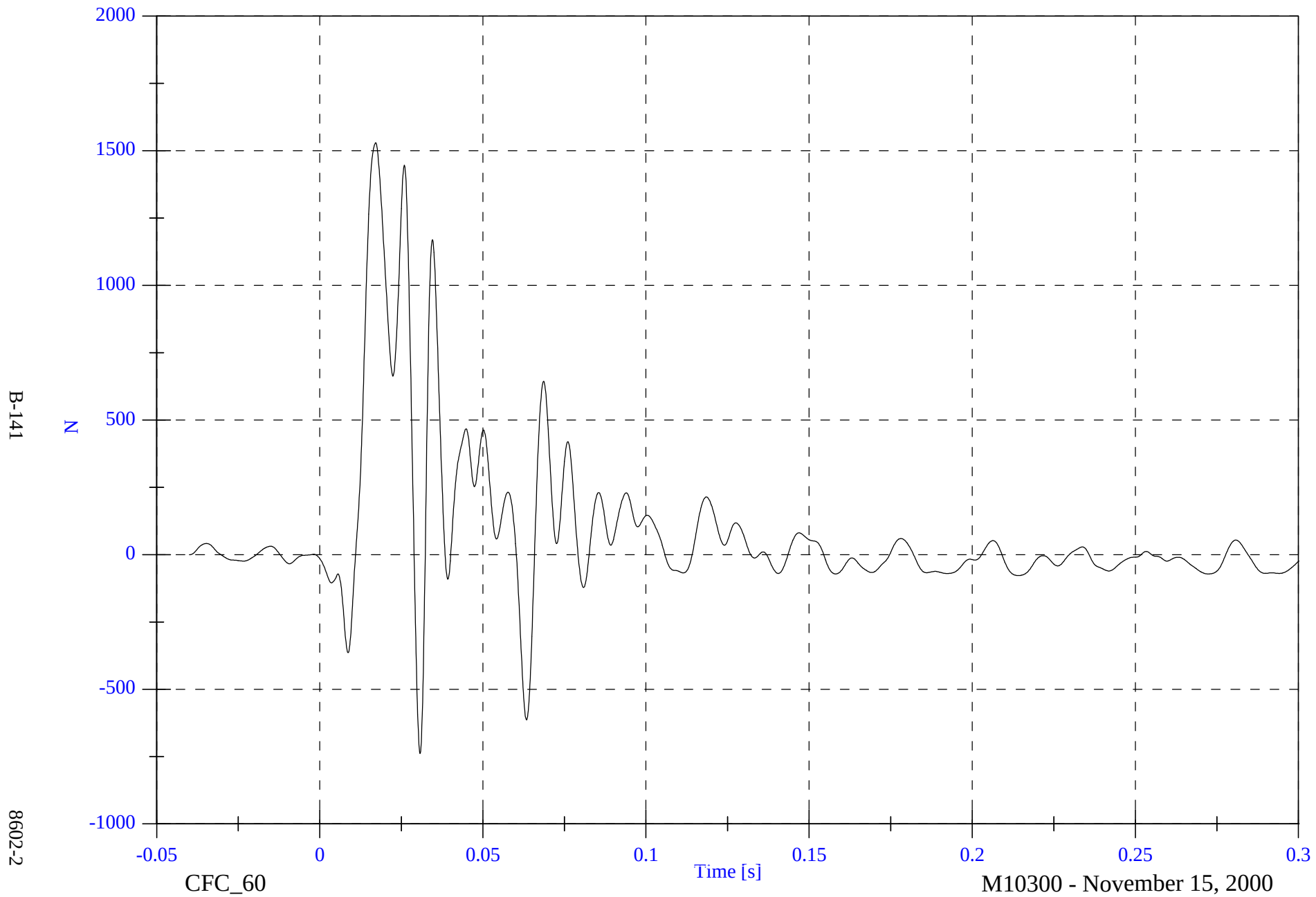


NCAP 2001 Test 2 - 2001 Chrysler LHS

Barrier Load Cell A8 Fx

Max: 1530.1 [N] at 0.017 [s]

Min: -738.9 [N] at 0.031 [s]

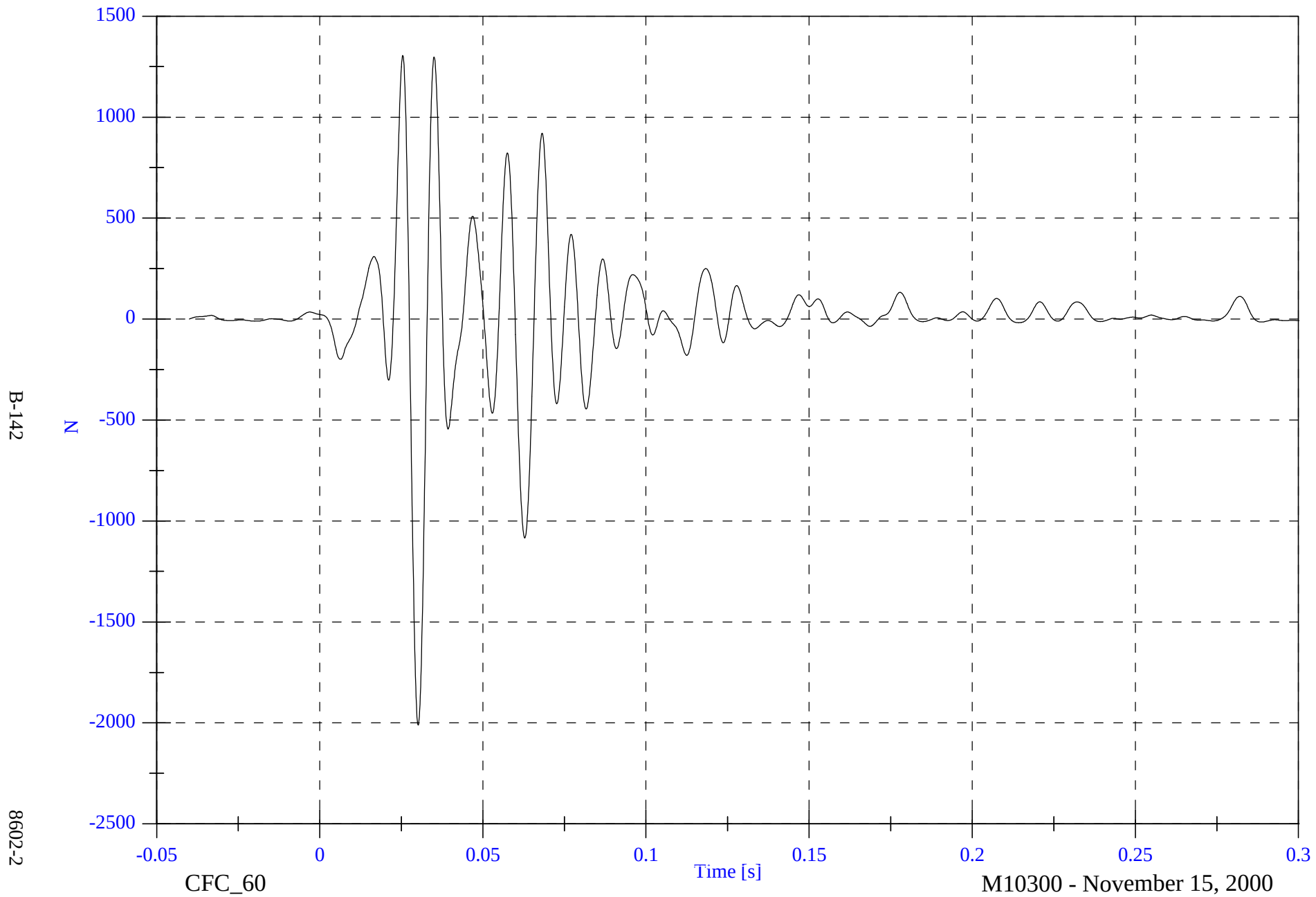


NCAP 2001 Test 2 - 2001 Chrysler LHS

Barrier Load Cell A9 Fx

Max: 1305.3 [N] at 0.025 [s]

Min: -2010.6 [N] at 0.030 [s]

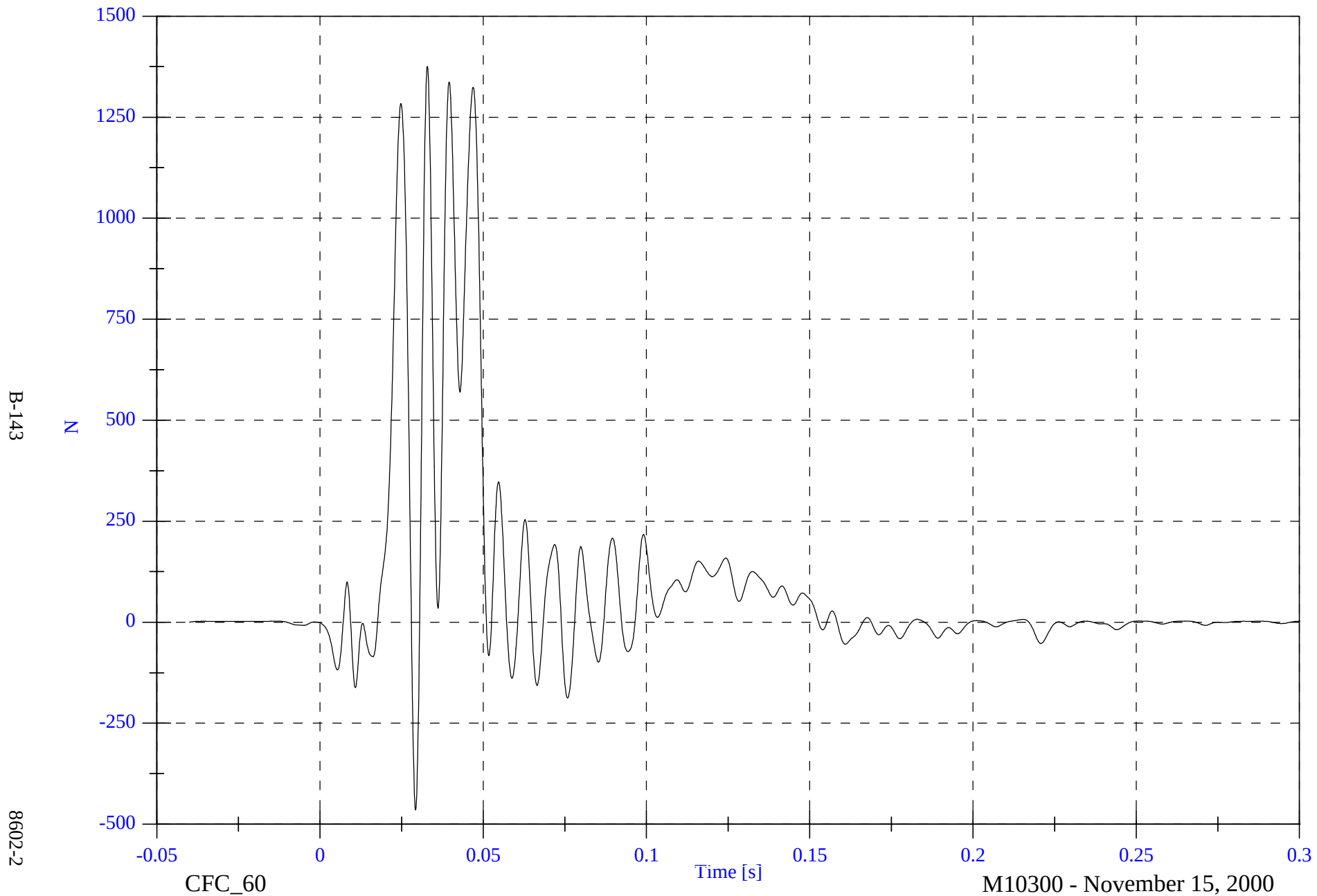


NCAP 2001 Test 2 - 2001 Chrysler LHS

Barrier Load Cell B1 Fx

Max: 1375.9 [N] at 0.033 [s]

Min: -464.7 [N] at 0.029 [s]

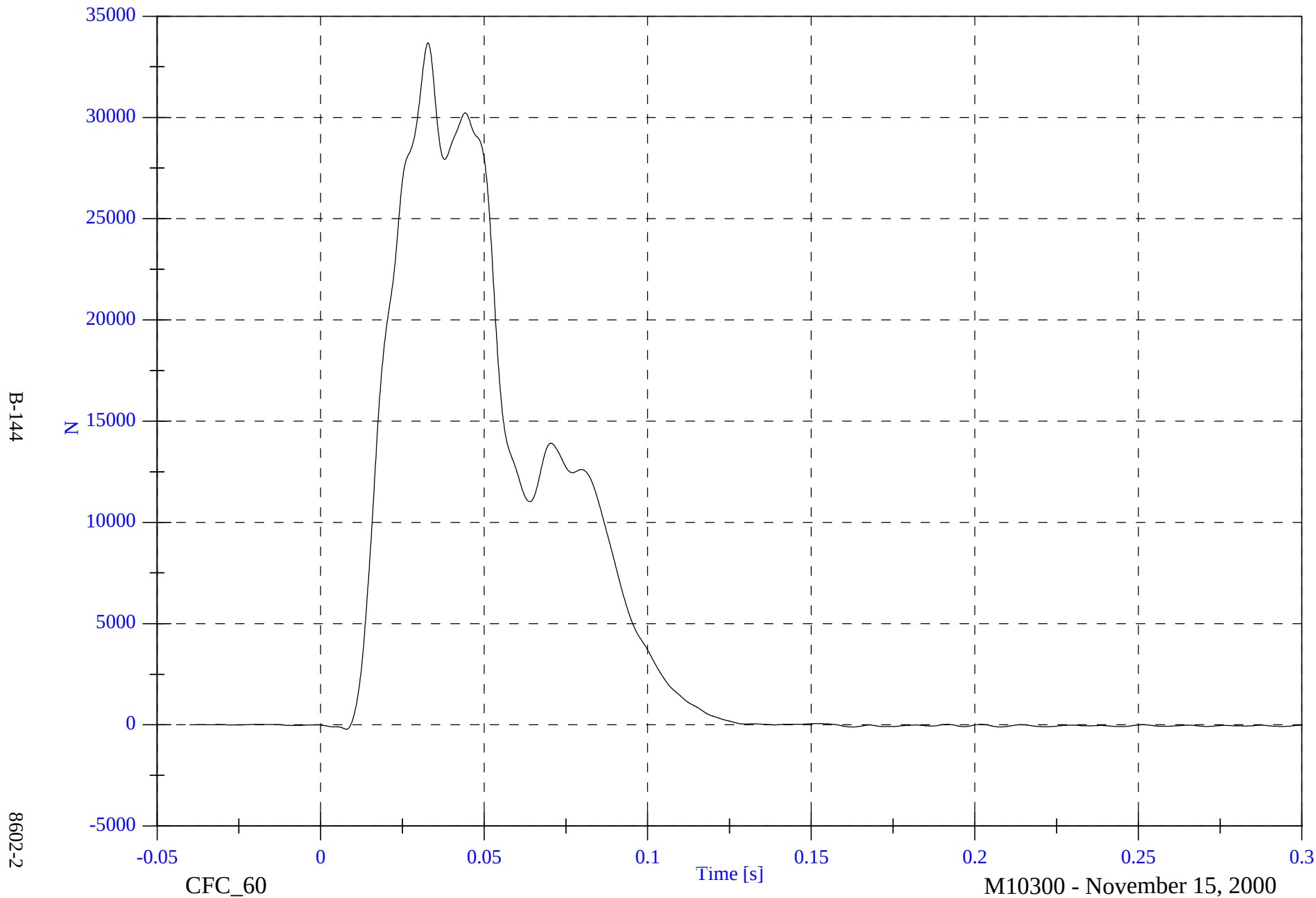


NCAP 2001 Test 2 - 2001 Chrysler LHS

Barrier Load Cell B2 Fx

Max: 33683.6 [N] at 0.033 [s]

Min: -215.4 [N] at 0.008 [s]

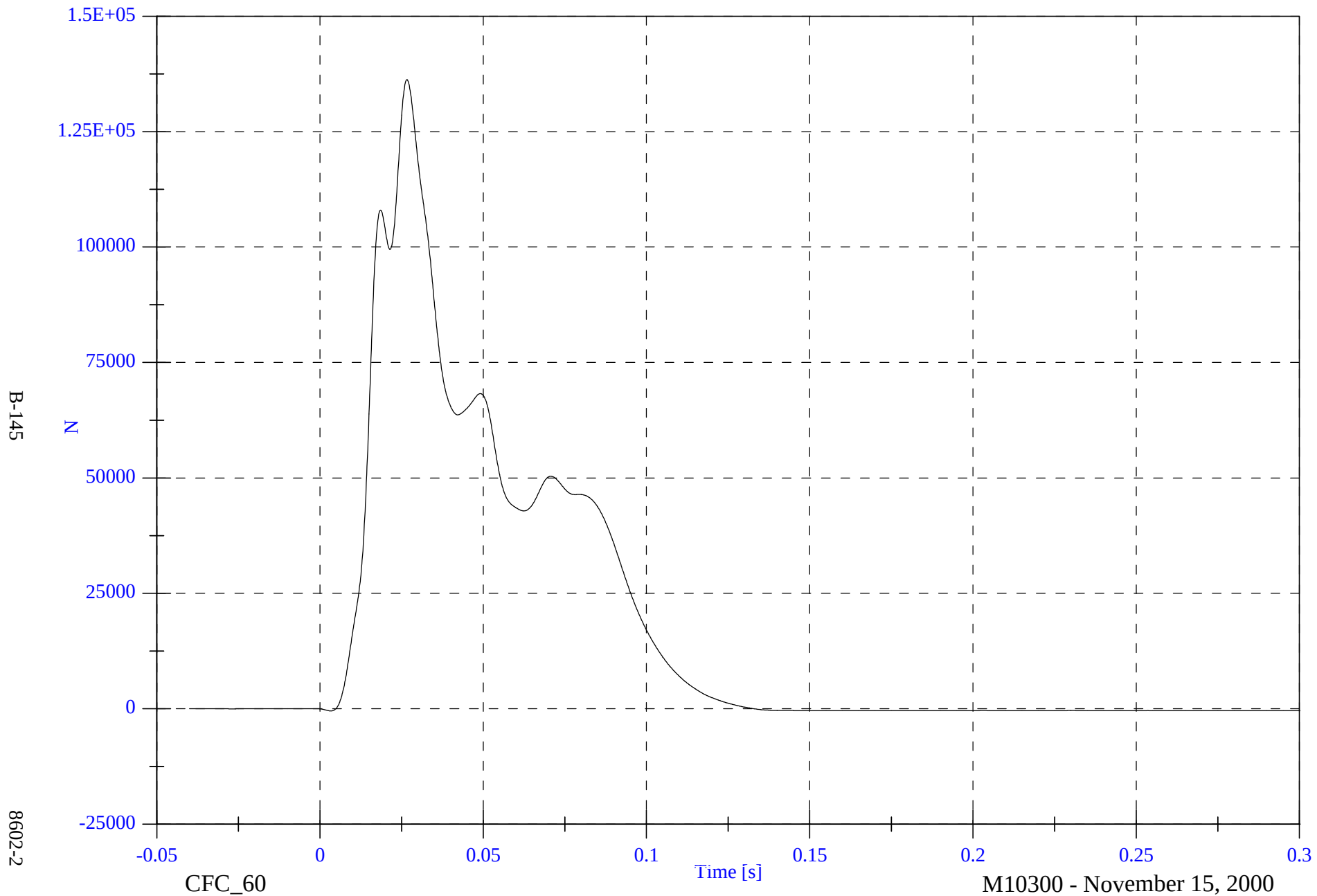


NCAP 2001 Test 2 - 2001 Chrysler LHS

Barrier Load Cell B3 Fx

Max: 136288.0 [N] at 0.027 [s]

Min: -468.6 [N] at 0.003 [s]

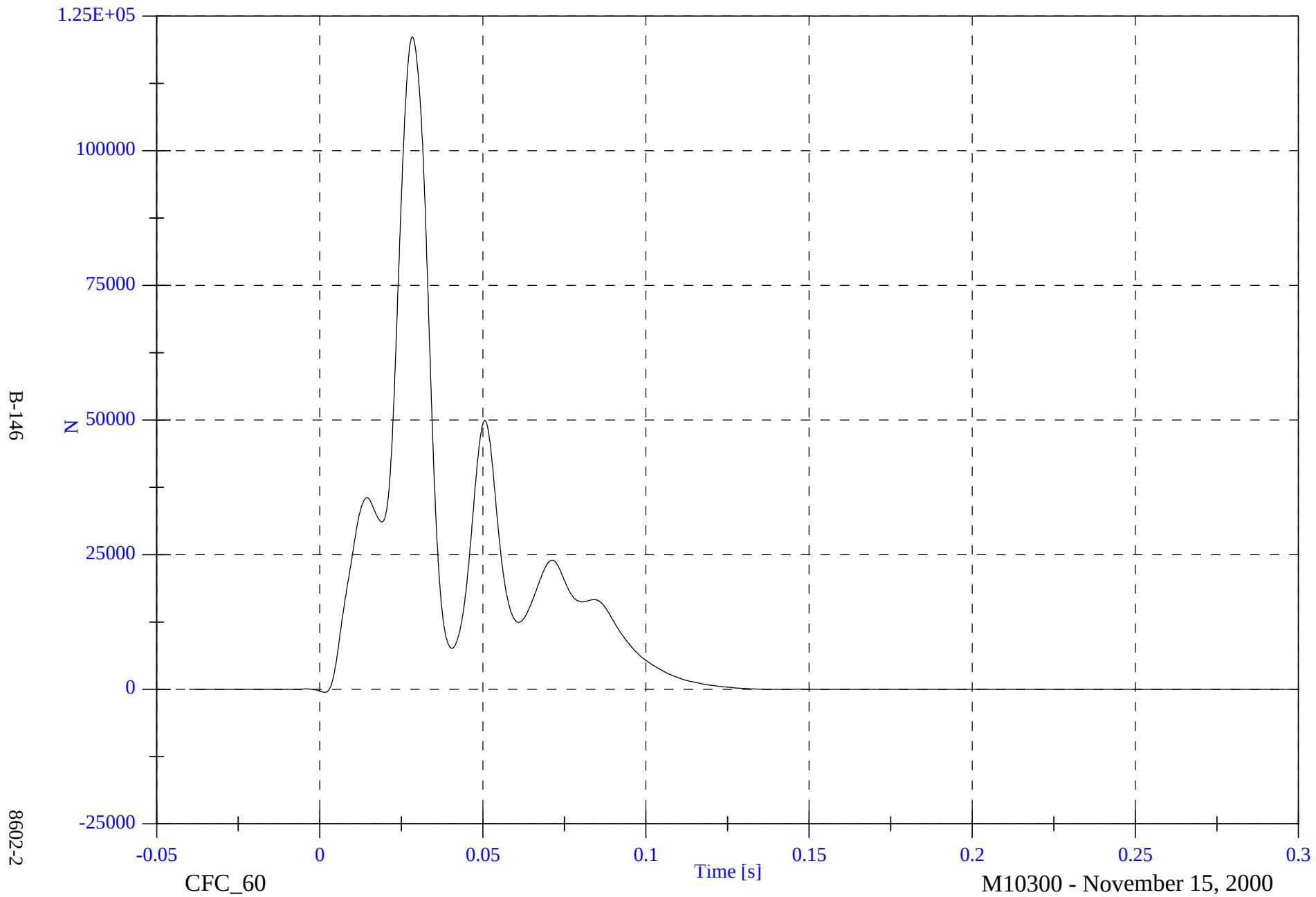


NCAP 2001 Test 2 - 2001 Chrysler LHS

Barrier Load Cell B4 Fx

Max: 121158.6 [N] at 0.028 [s]

Min: -578.7 [N] at 0.001 [s]

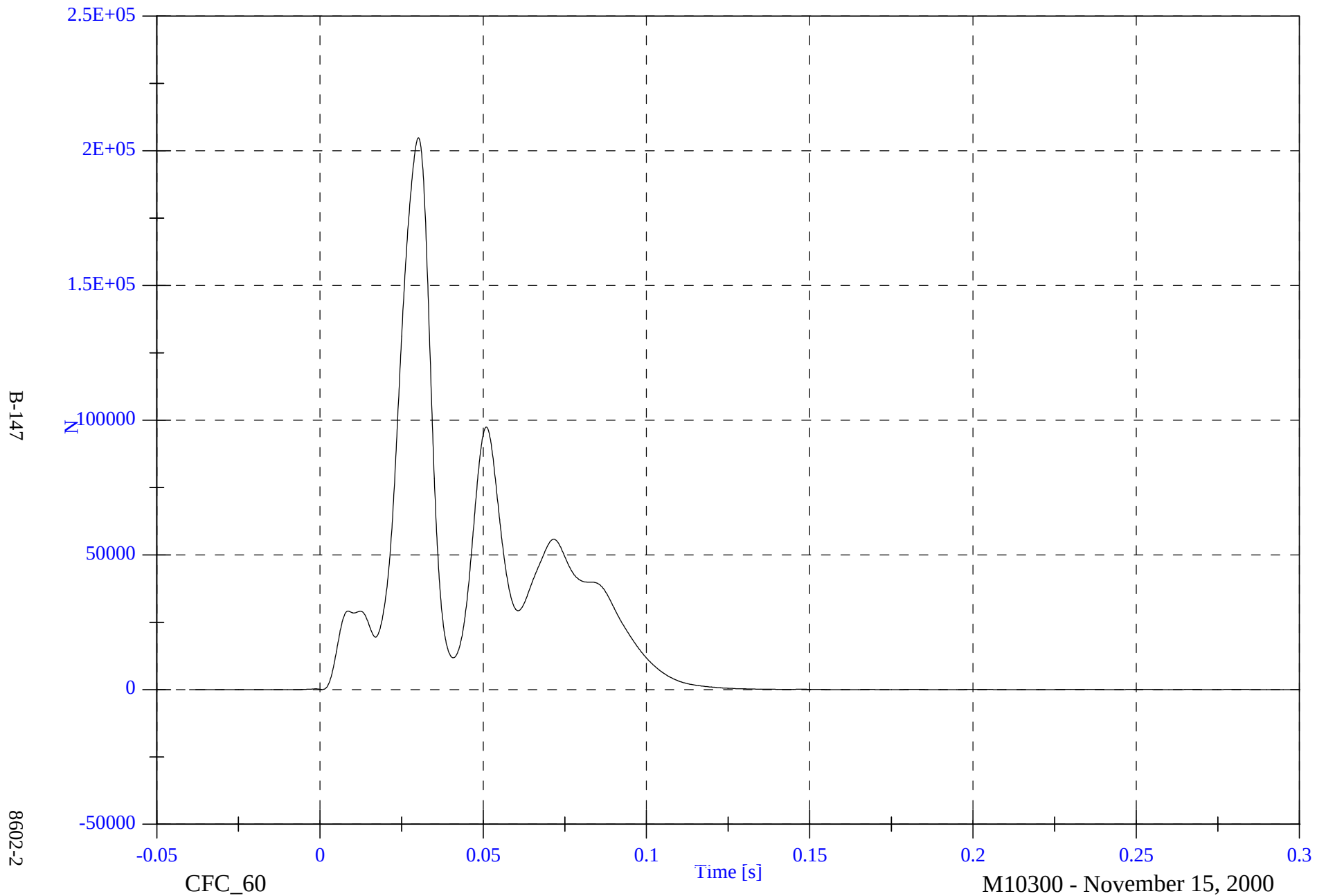


NCAP 2001 Test 2 - 2001 Chrysler LHS

Barrier Load Cell B5 Fx

Max: 204842.6 [N] at 0.030 [s]

Min: -17.7 [N] at 0.175 [s]

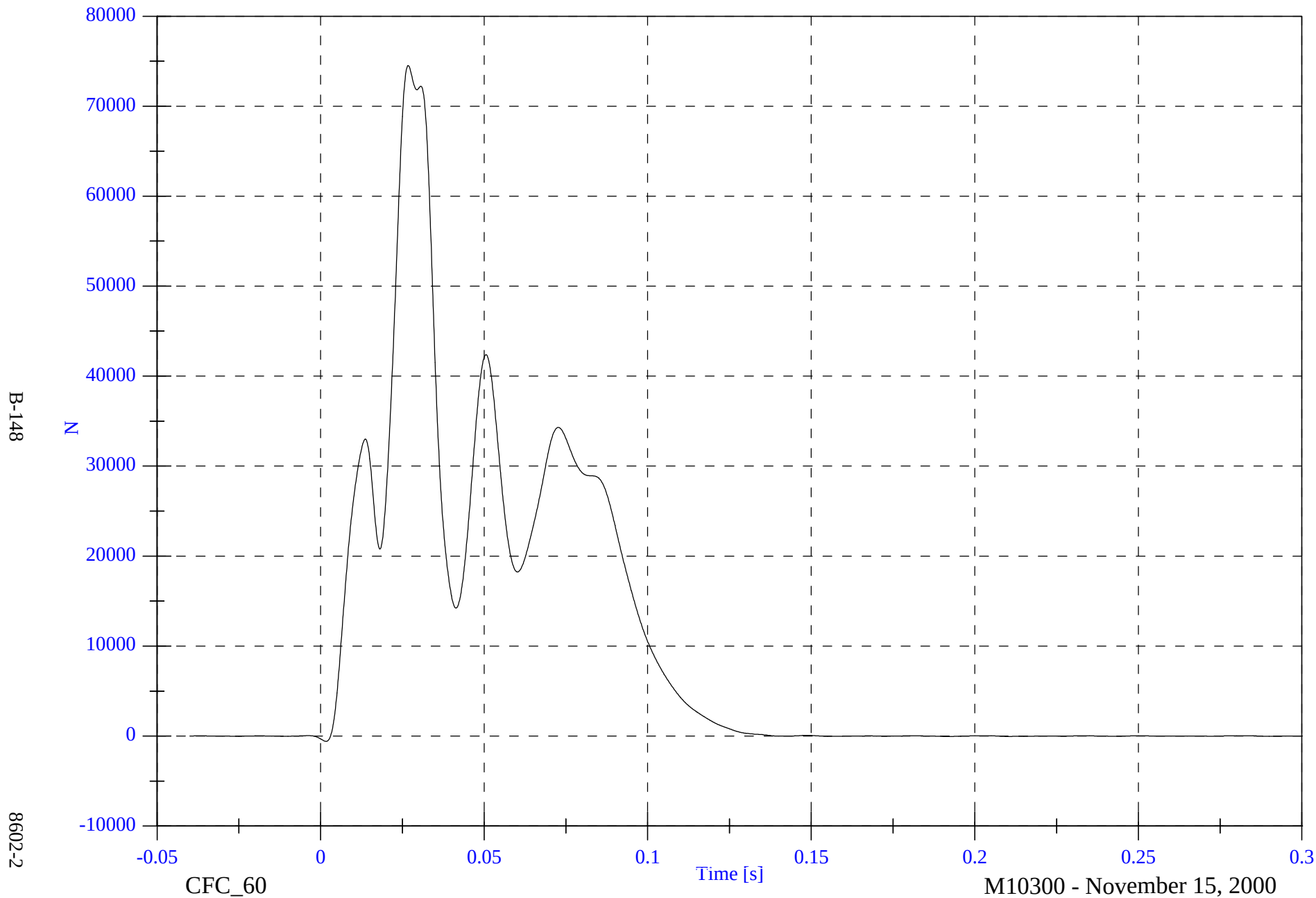


NCAP 2001 Test 2 - 2001 Chrysler LHS

Barrier Load Cell B6 Fx

Max: 74522.3 [N] at 0.027 [s]

Min: -587.1 [N] at 0.002 [s]

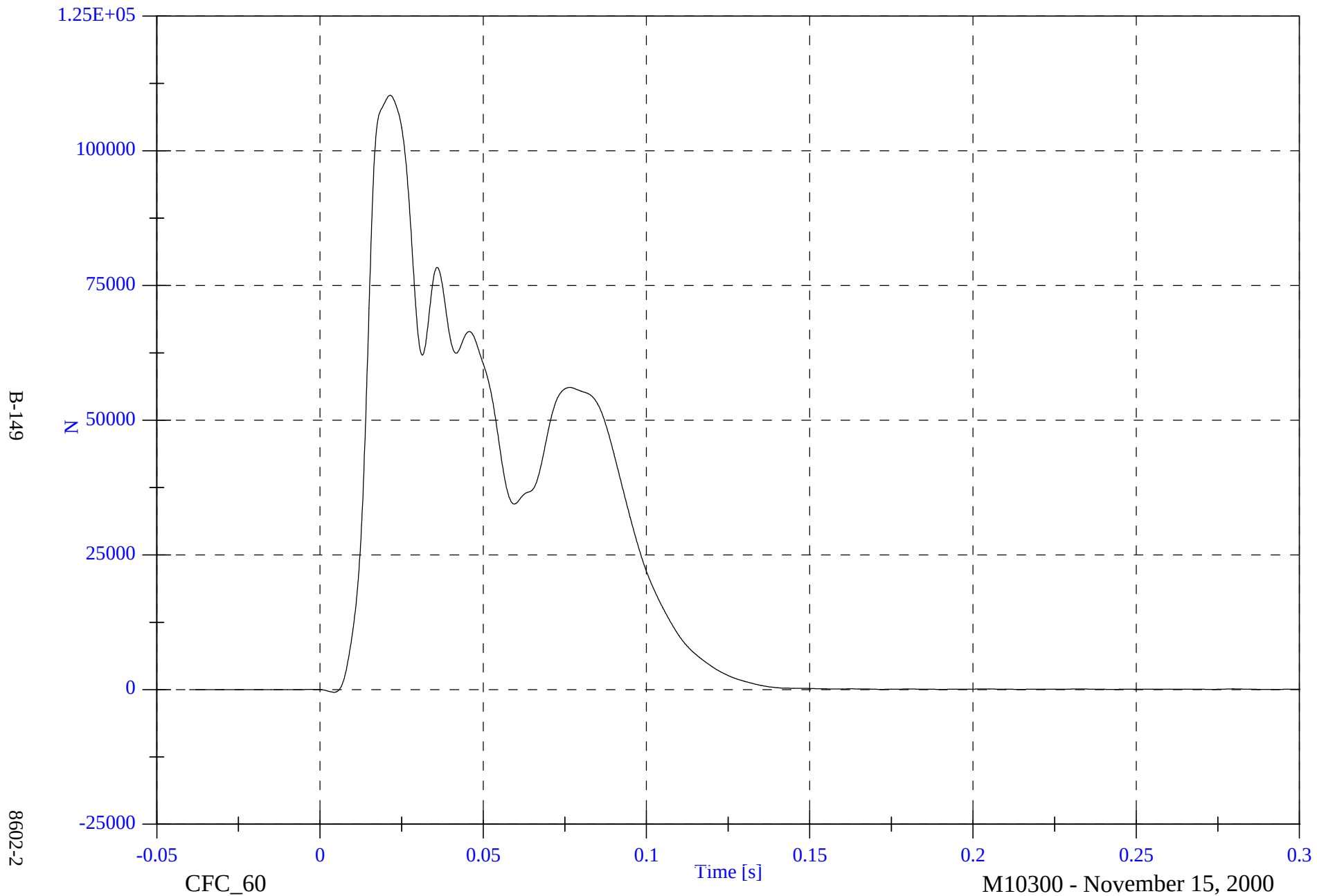


NCAP 2001 Test 2 - 2001 Chrysler LHS

Barrier Load Cell B7 Fx

Max: 110319.3 [N] at 0.021 [s]

Min: -500.1 [N] at 0.004 [s]

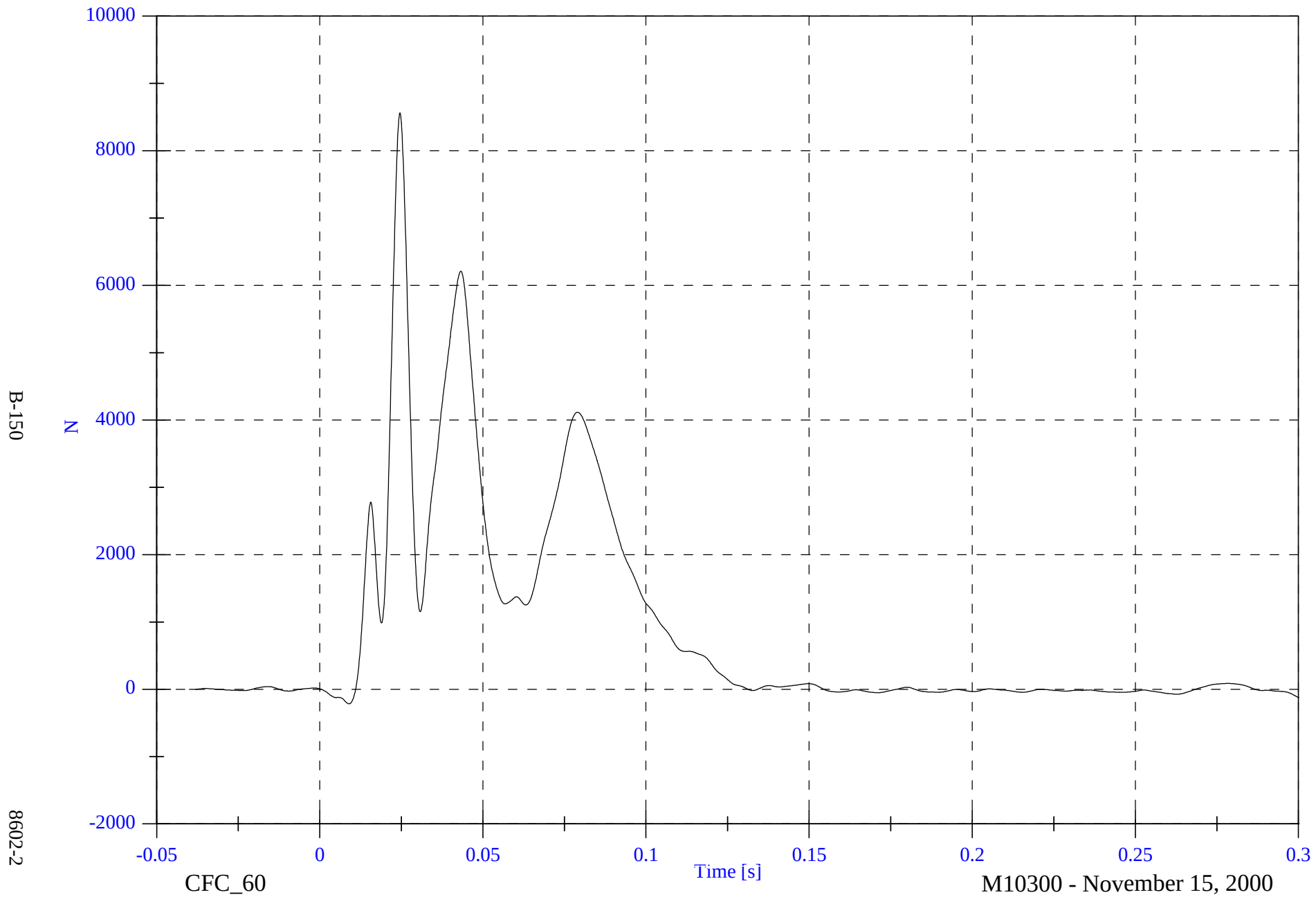


NCAP 2001 Test 2 - 2001 Chrysler LHS

Barrier Load Cell B8 Fx

Max: 8564.2 [N] at 0.025 [s]

Min: -216.8 [N] at 0.009 [s]

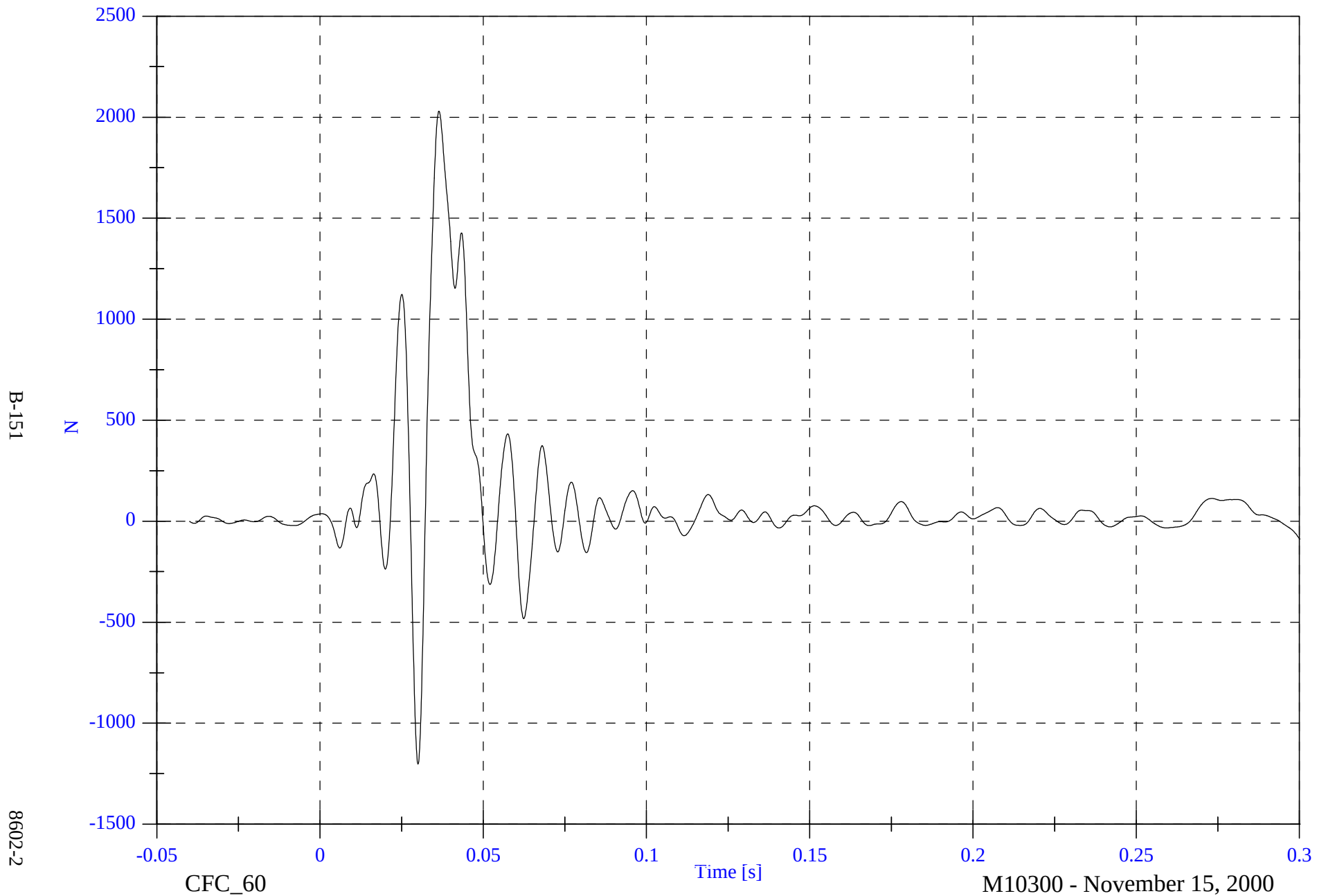


NCAP 2001 Test 2 - 2001 Chrysler LHS

Barrier Load Cell B9 Fx

Max: 2030.3 [N] at 0.036 [s]

Min: -1202.4 [N] at 0.030 [s]

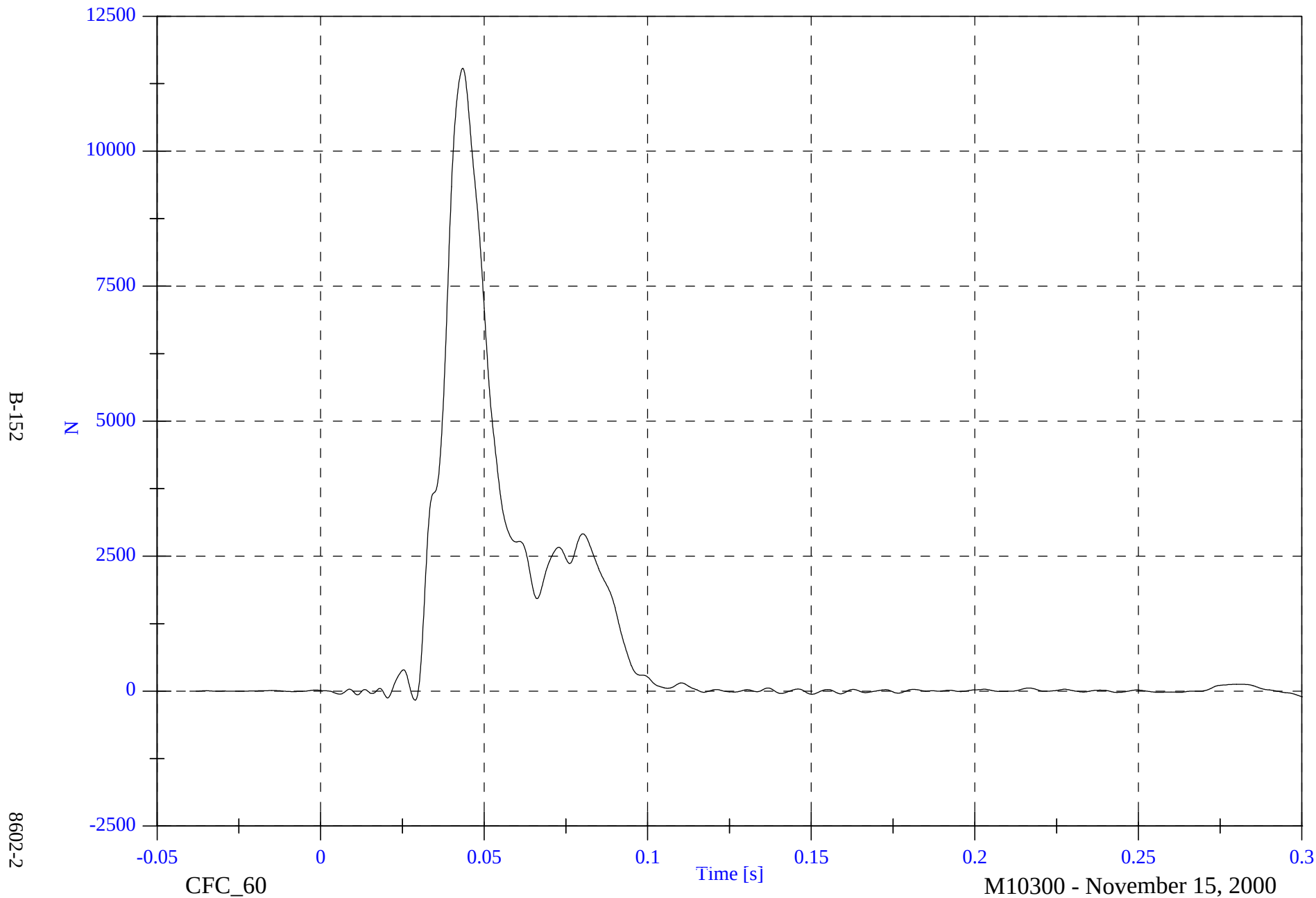


NCAP 2001 Test 2 - 2001 Chrysler LHS

Barrier Load Cell C1 Fx

Max: 11534.3 [N] at 0.043 [s]

Min: -168.5 [N] at 0.029 [s]

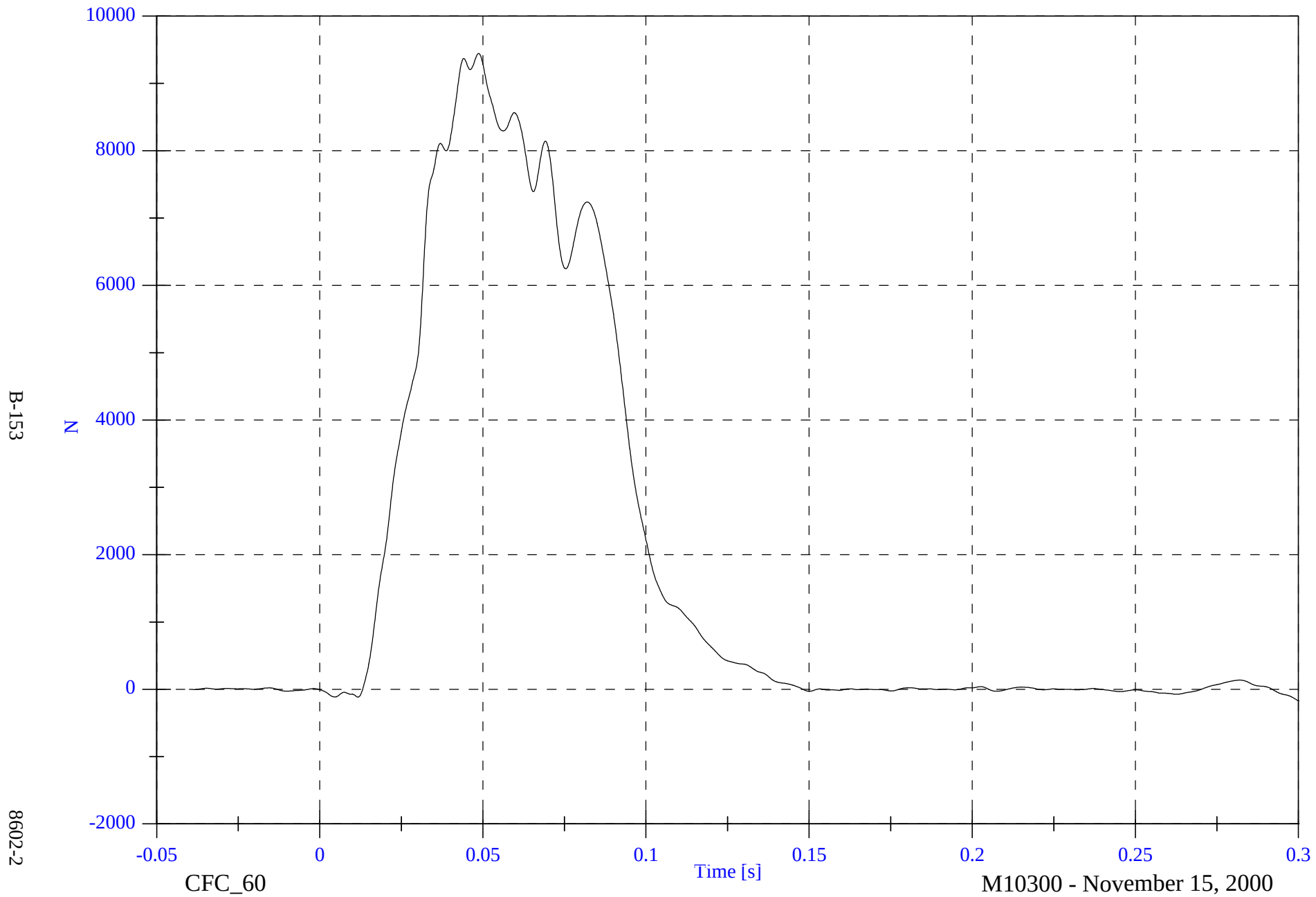


NCAP 2001 Test 2 - 2001 Chrysler LHS

Barrier Load Cell C2 Fx

Max: 9446.0 [N] at 0.049 [s]

Min: -232.8 [N] at 0.305 [s]

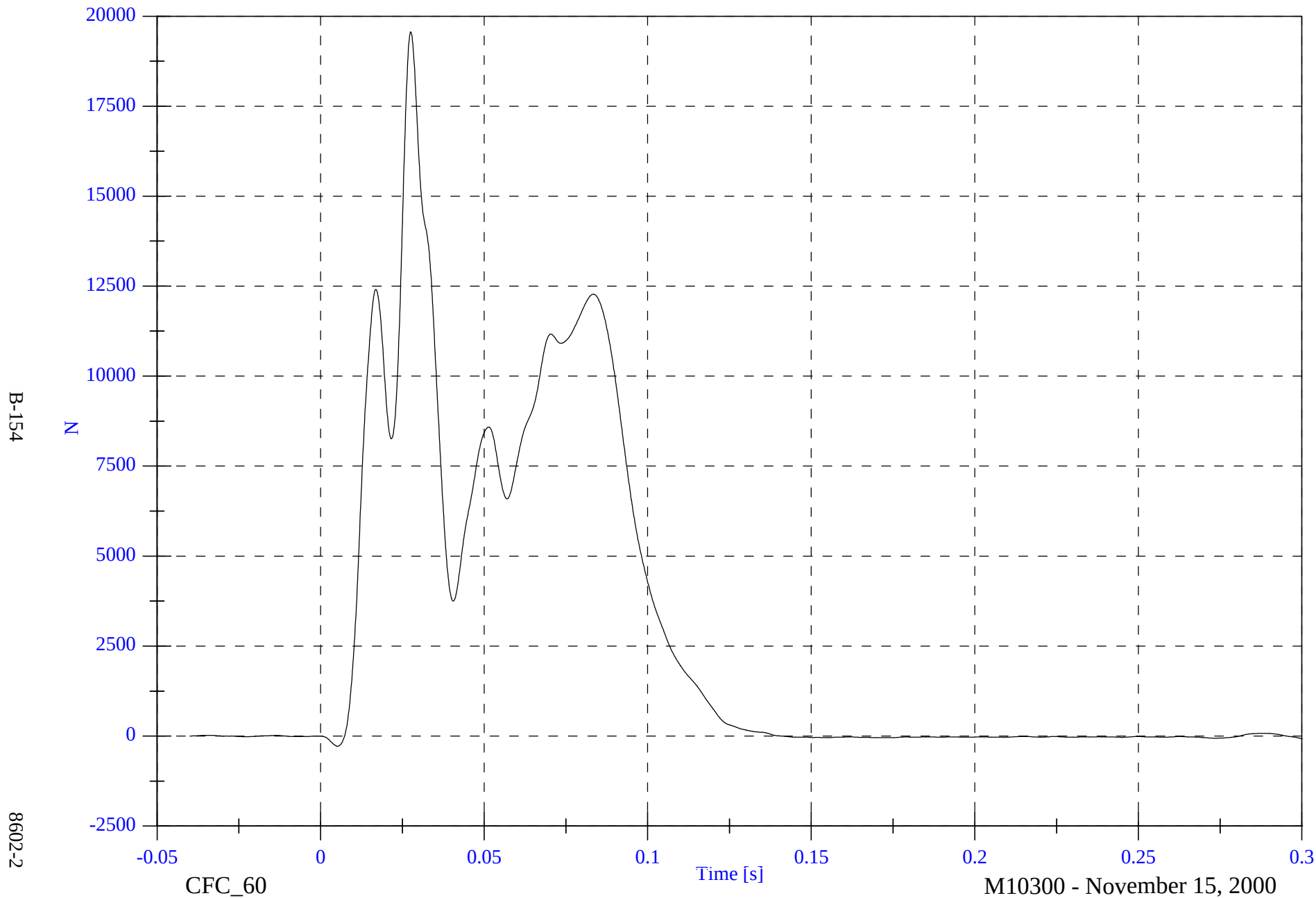


NCAP 2001 Test 2 - 2001 Chrysler LHS

Barrier Load Cell C3 Fx

Max: 19564.1 [N] at 0.027 [s]

Min: -283.6 [N] at 0.005 [s]

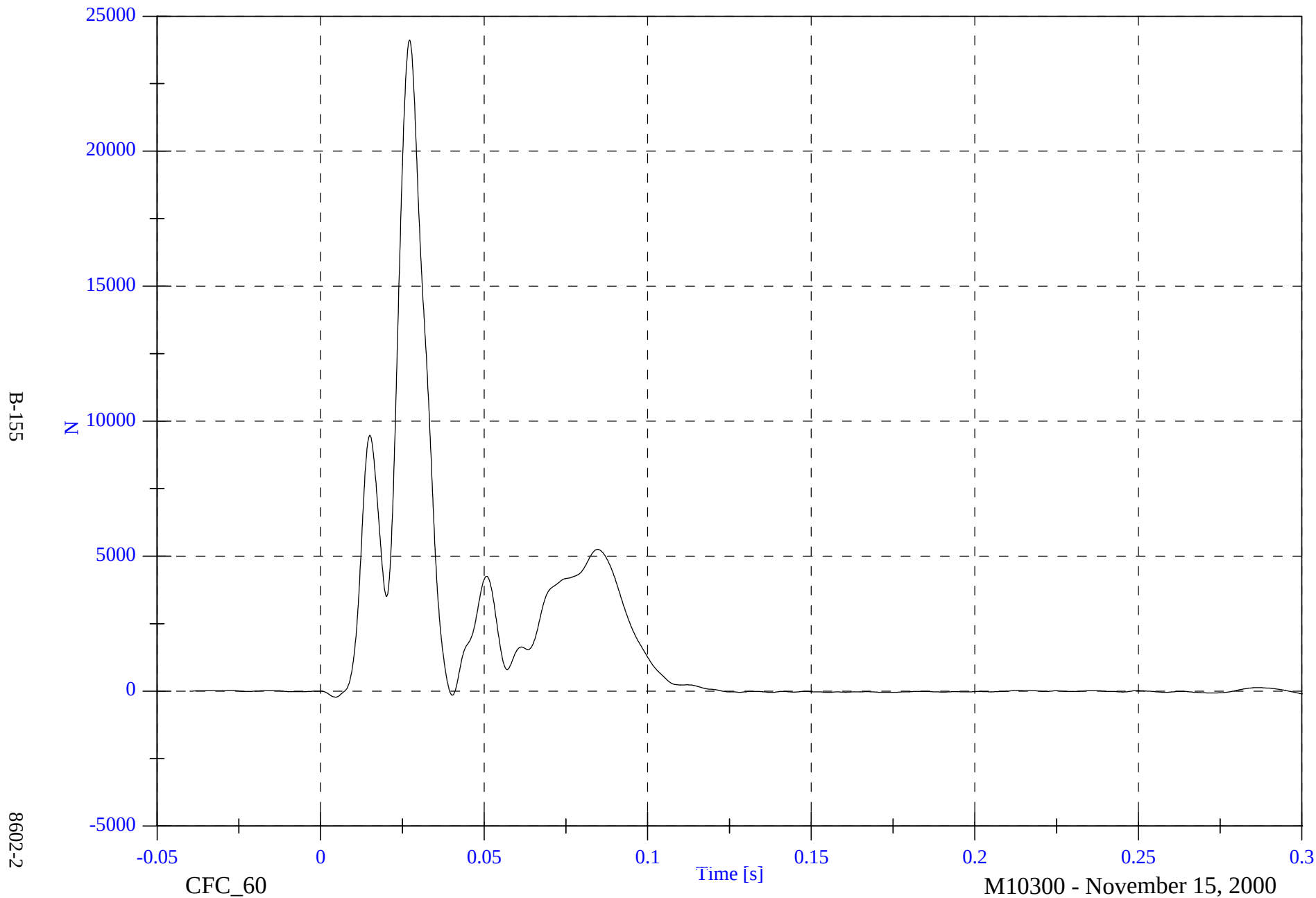


NCAP 2001 Test 2 - 2001 Chrysler LHS

Barrier Load Cell C4 Fx

Max: 24116.5 [N] at 0.027 [s]

Min: -358.2 [N] at 0.310 [s]

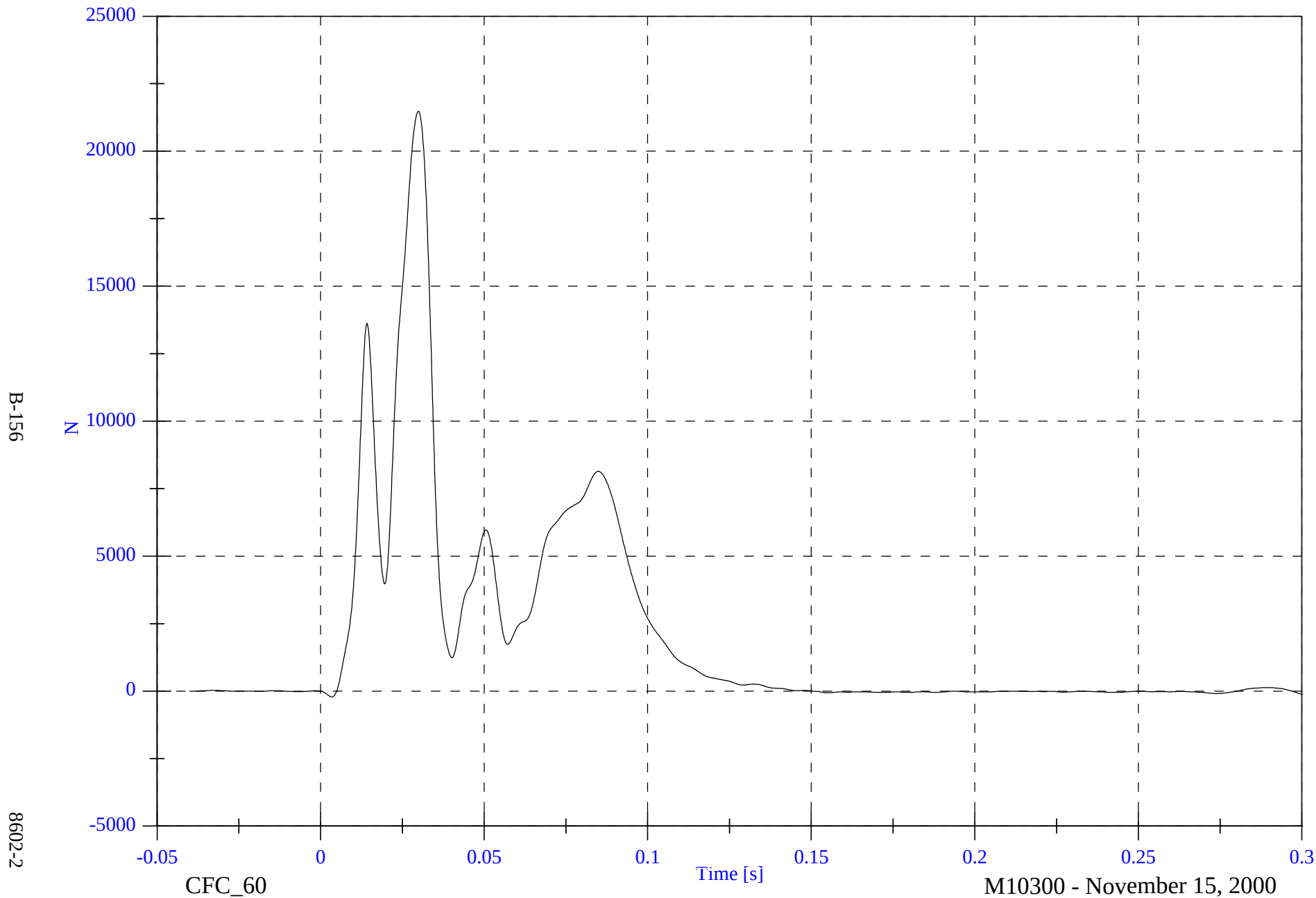


NCAP 2001 Test 2 - 2001 Chrysler LHS

Barrier Load Cell C5 Fx

Max: 21479.5 [N] at 0.030 [s]

Min: -312.9 [N] at 0.309 [s]

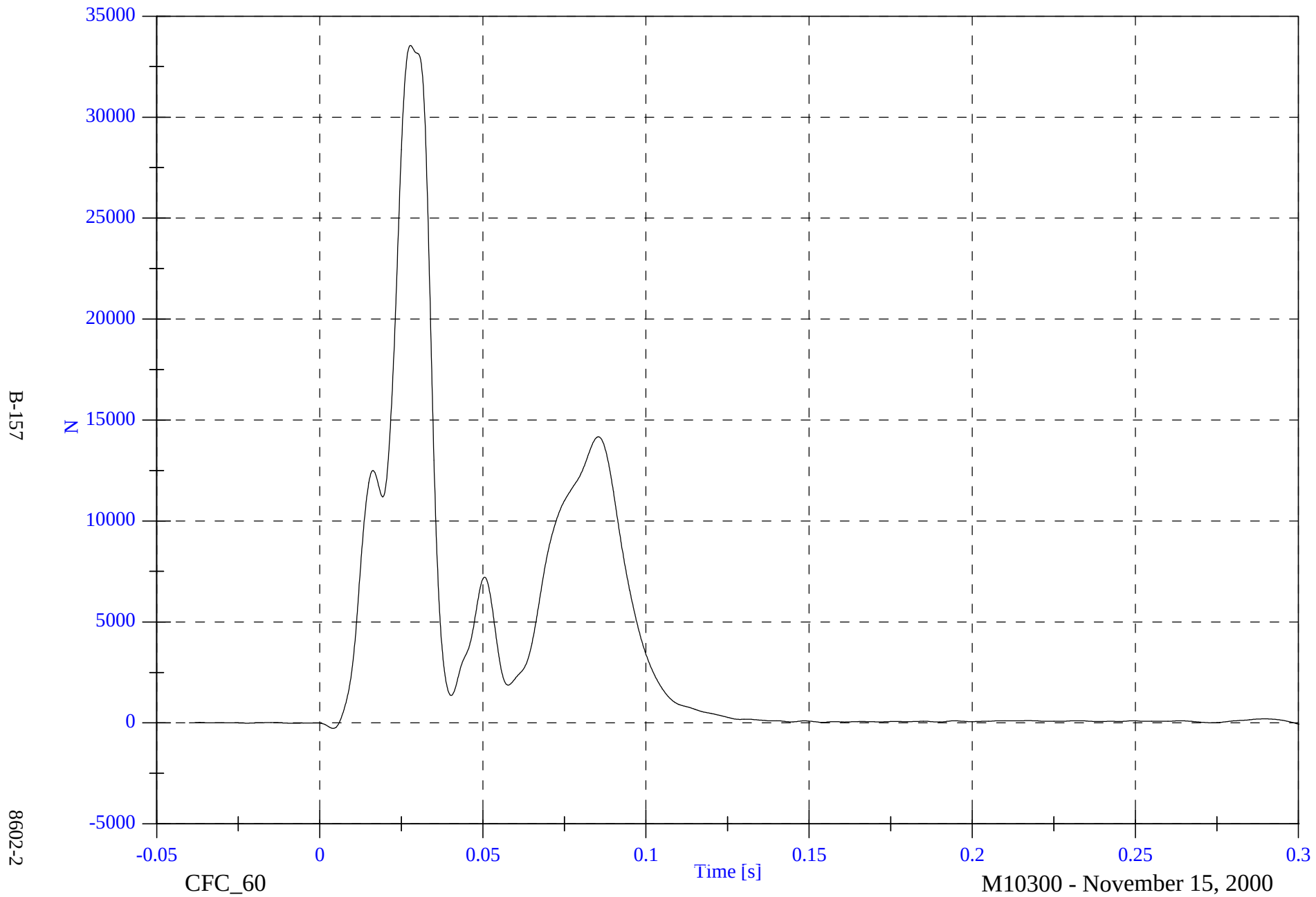


NCAP 2001 Test 2 - 2001 Chrysler LHS

Barrier Load Cell C6 Fx

Max: 33550.6 [N] at 0.028 [s]

Min: -293.2 [N] at 0.309 [s]

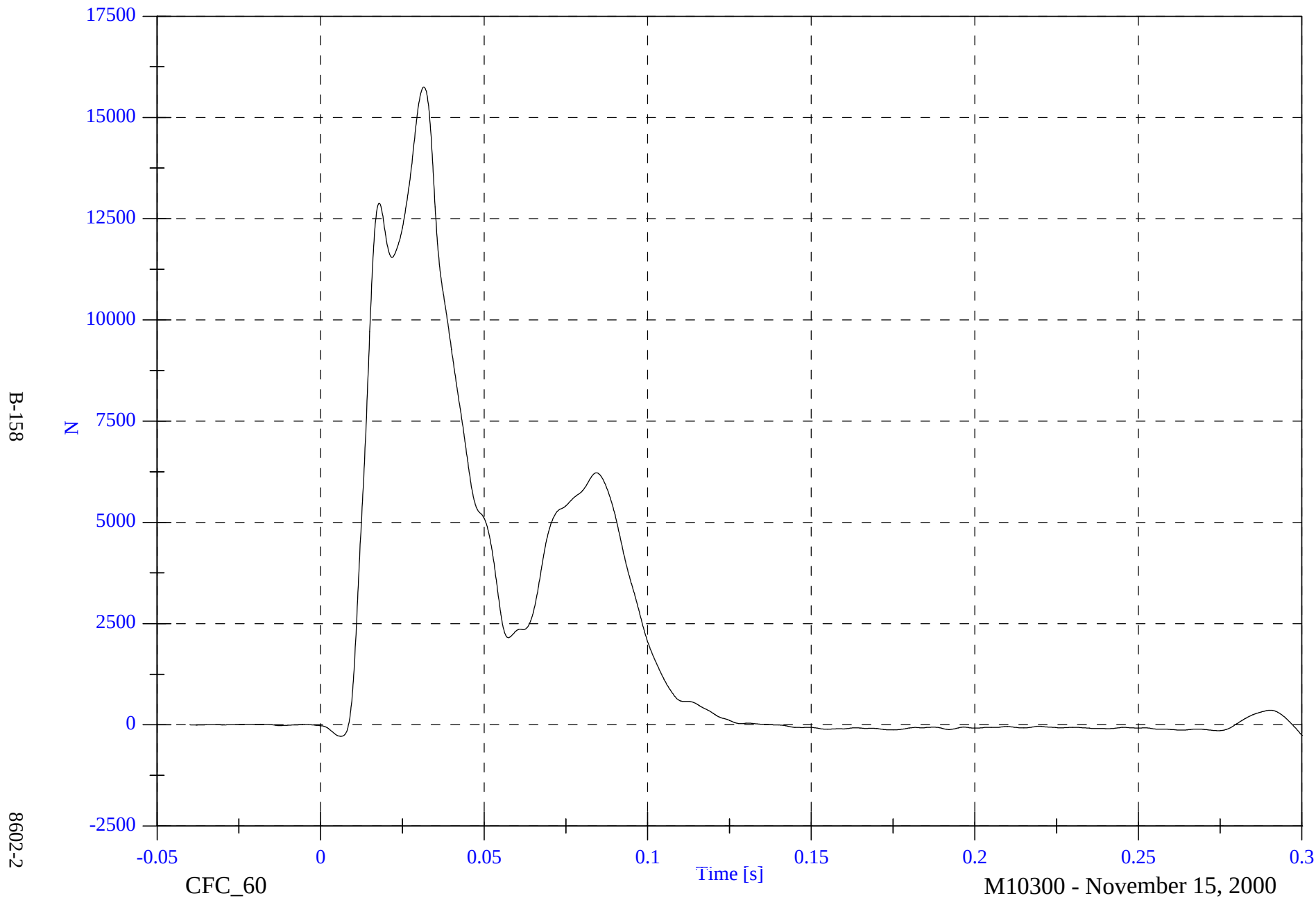


NCAP 2001 Test 2 - 2001 Chrysler LHS

Barrier Load Cell C7 Fx

Max: 15750.0 [N] at 0.031 [s]

Min: -804.7 [N] at 0.309 [s]

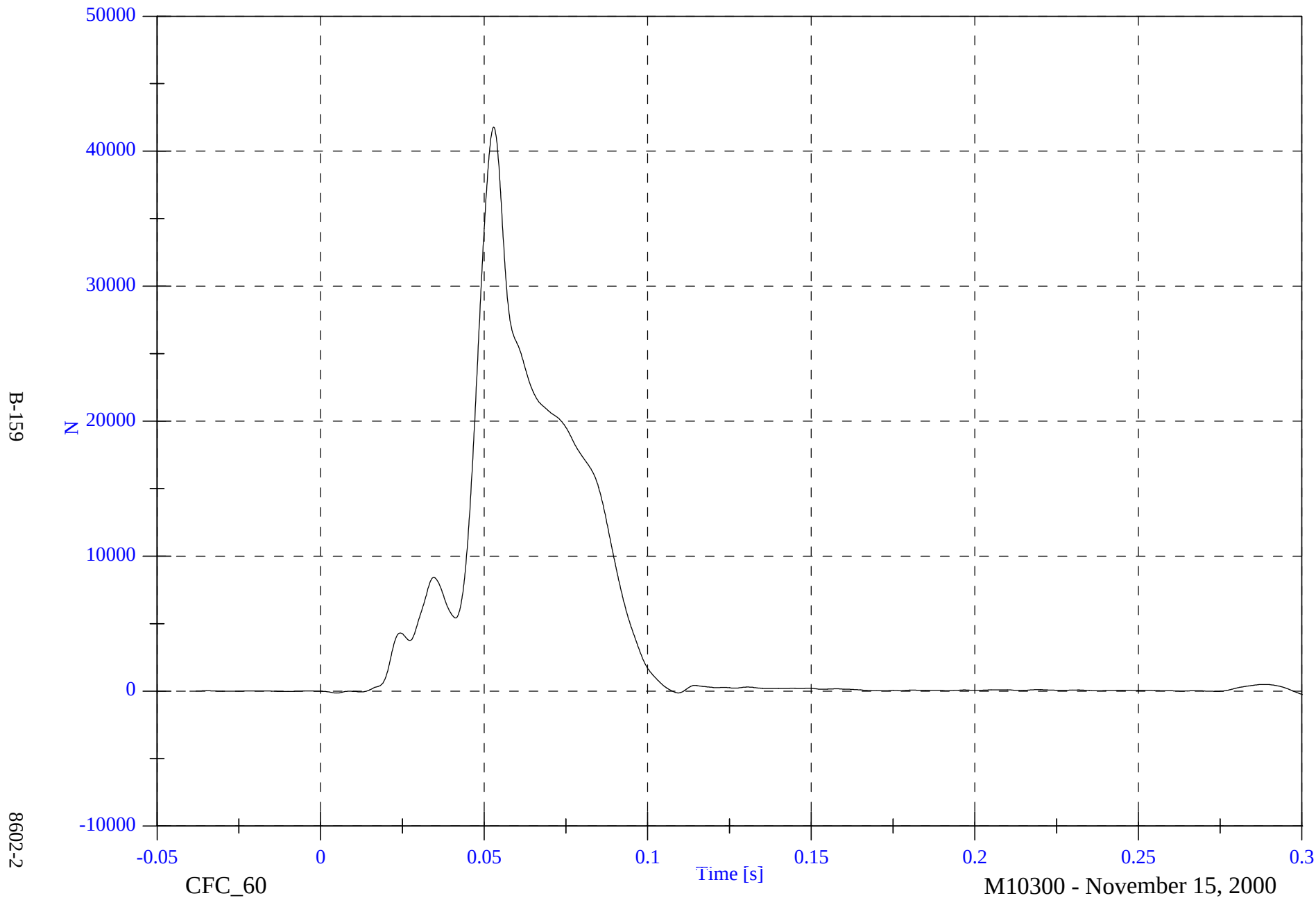


NCAP 2001 Test 2 - 2001 Chrysler LHS

Barrier Load Cell C8 Fx

Max: 41786.7 [N] at 0.053 [s]

Min: -668.7 [N] at 0.307 [s]

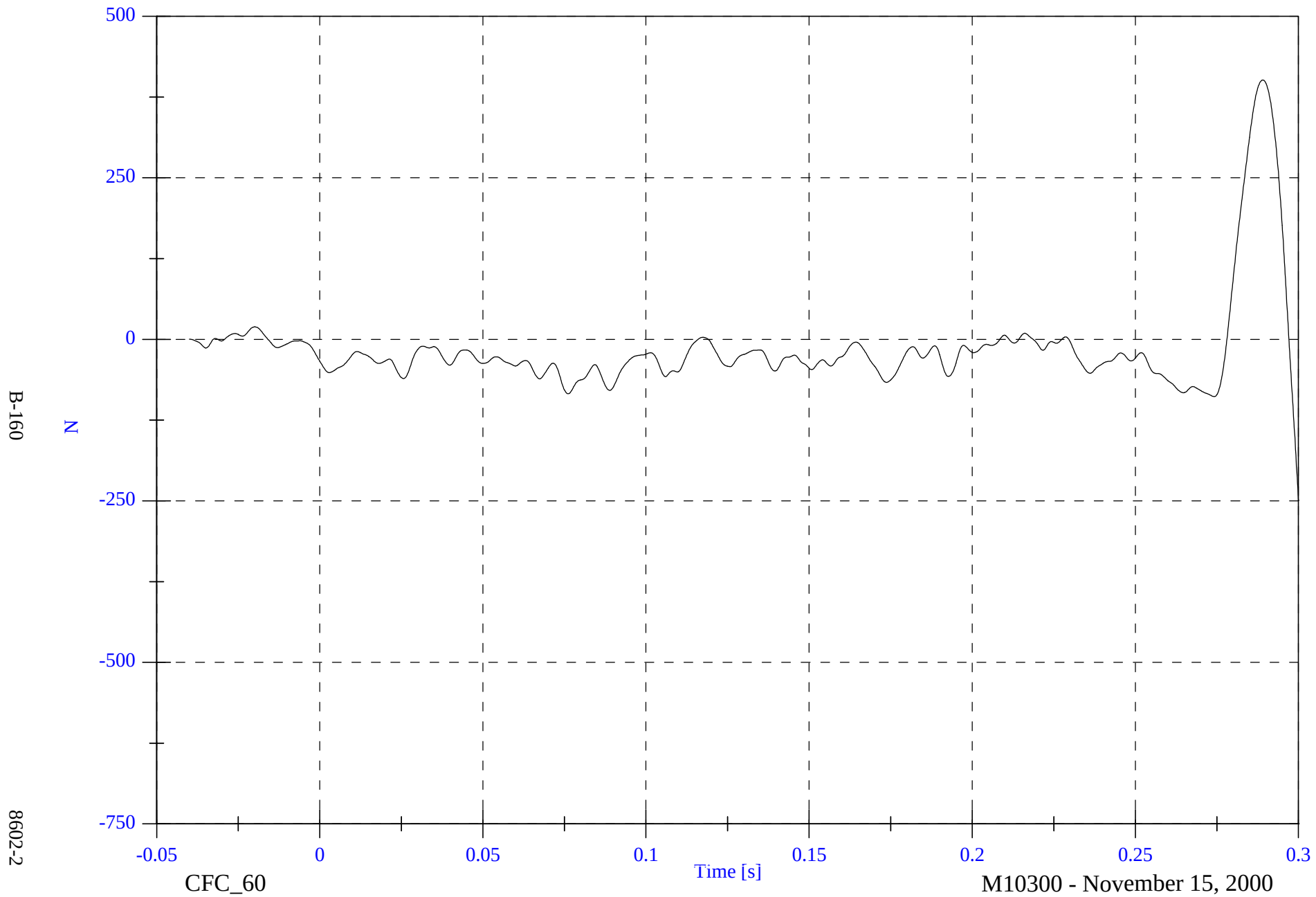


NCAP 2001 Test 2 - 2001 Chrysler LHS

Barrier Load Cell C9 Fx

Max: 401.2 [N] at 0.289 [s]

Min: -745.5 [N] at 0.309 [s]

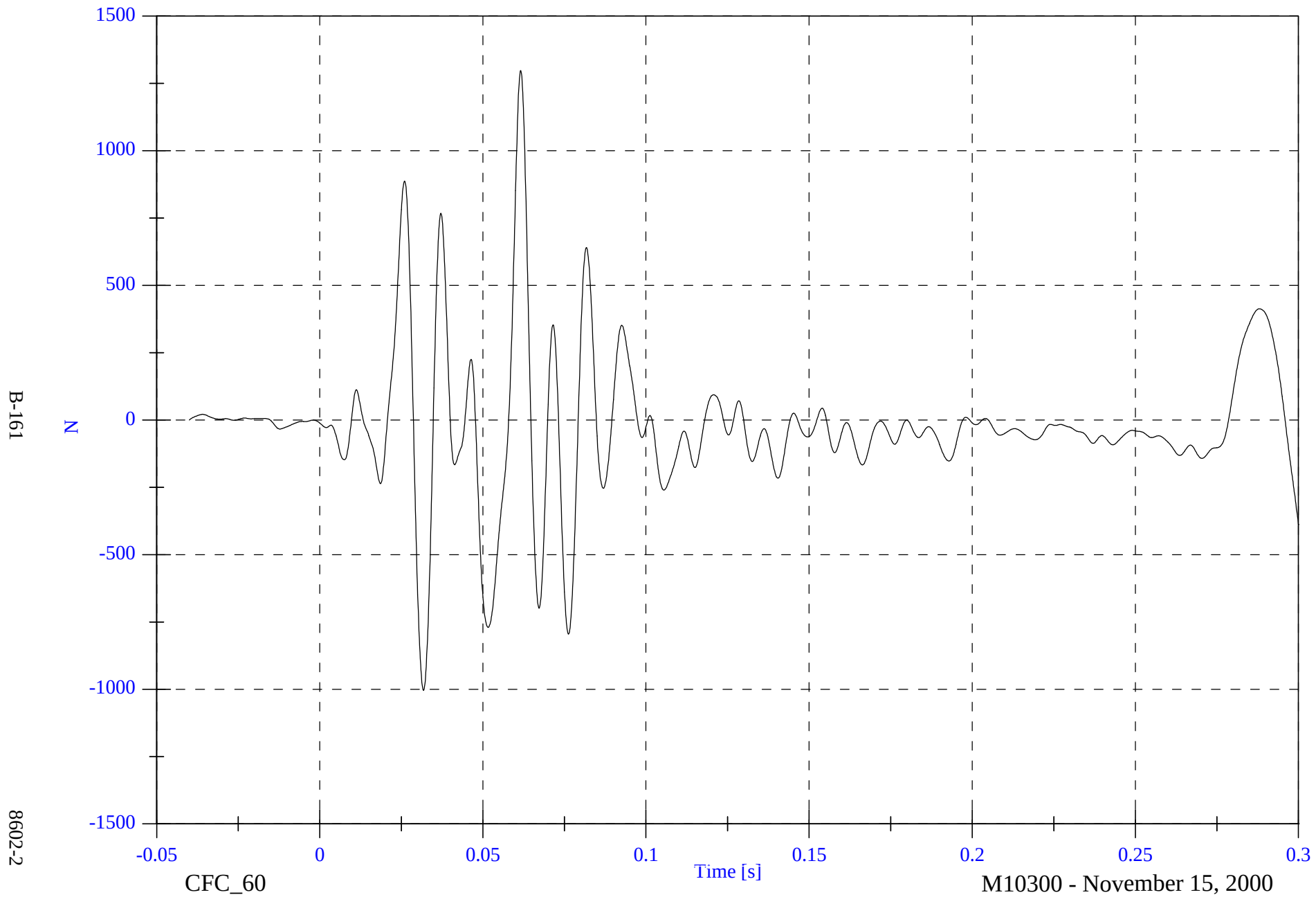


NCAP 2001 Test 2 - 2001 Chrysler LHS

Barrier Load Cell D1 Fx

Max: 1298.0 [N] at 0.062 [s]

Min: -1004.6 [N] at 0.032 [s]

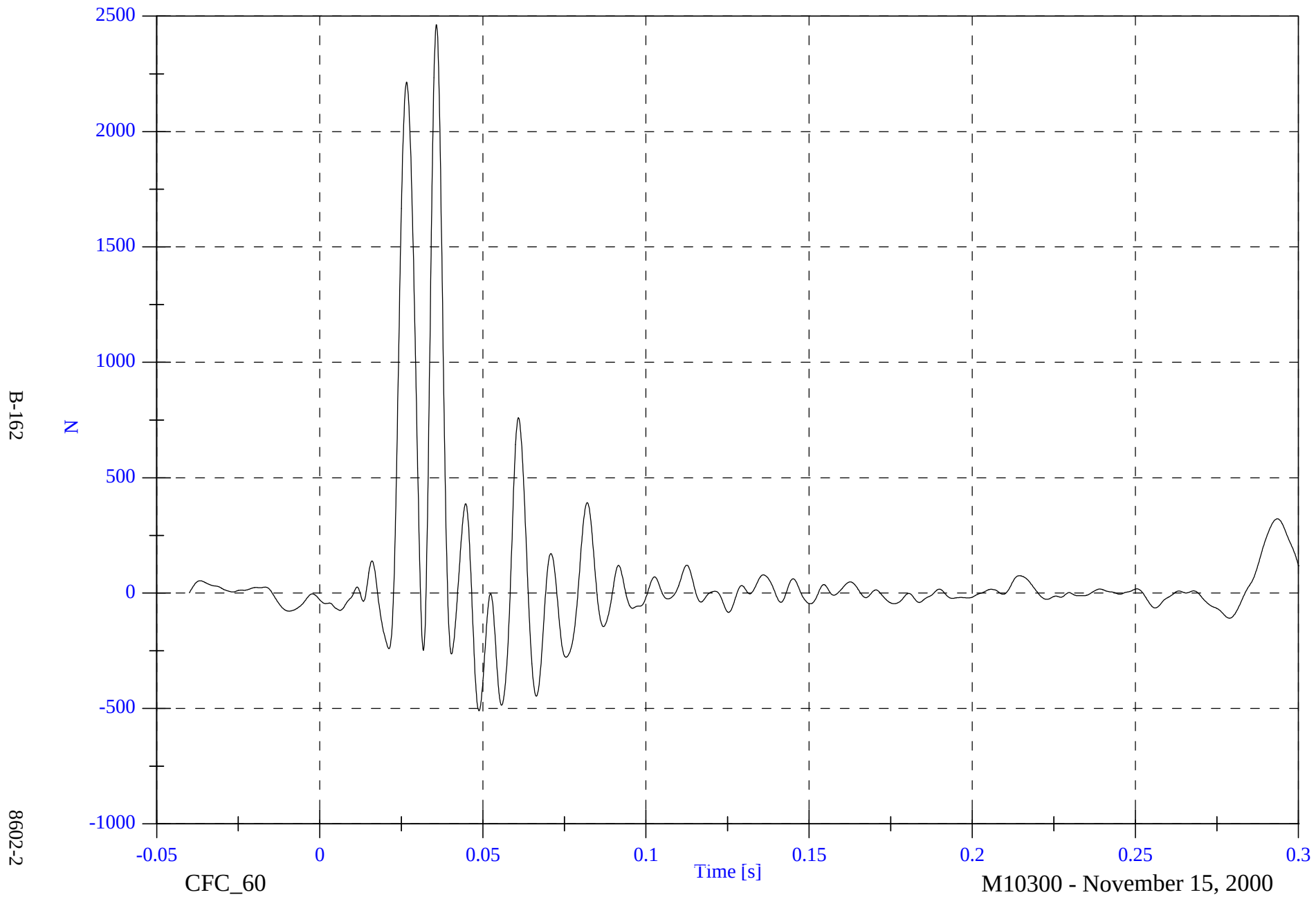


NCAP 2001 Test 2 - 2001 Chrysler LHS

Barrier Load Cell D2 Fx

Max: 2463.2 [N] at 0.036 [s]

Min: -510.1 [N] at 0.049 [s]

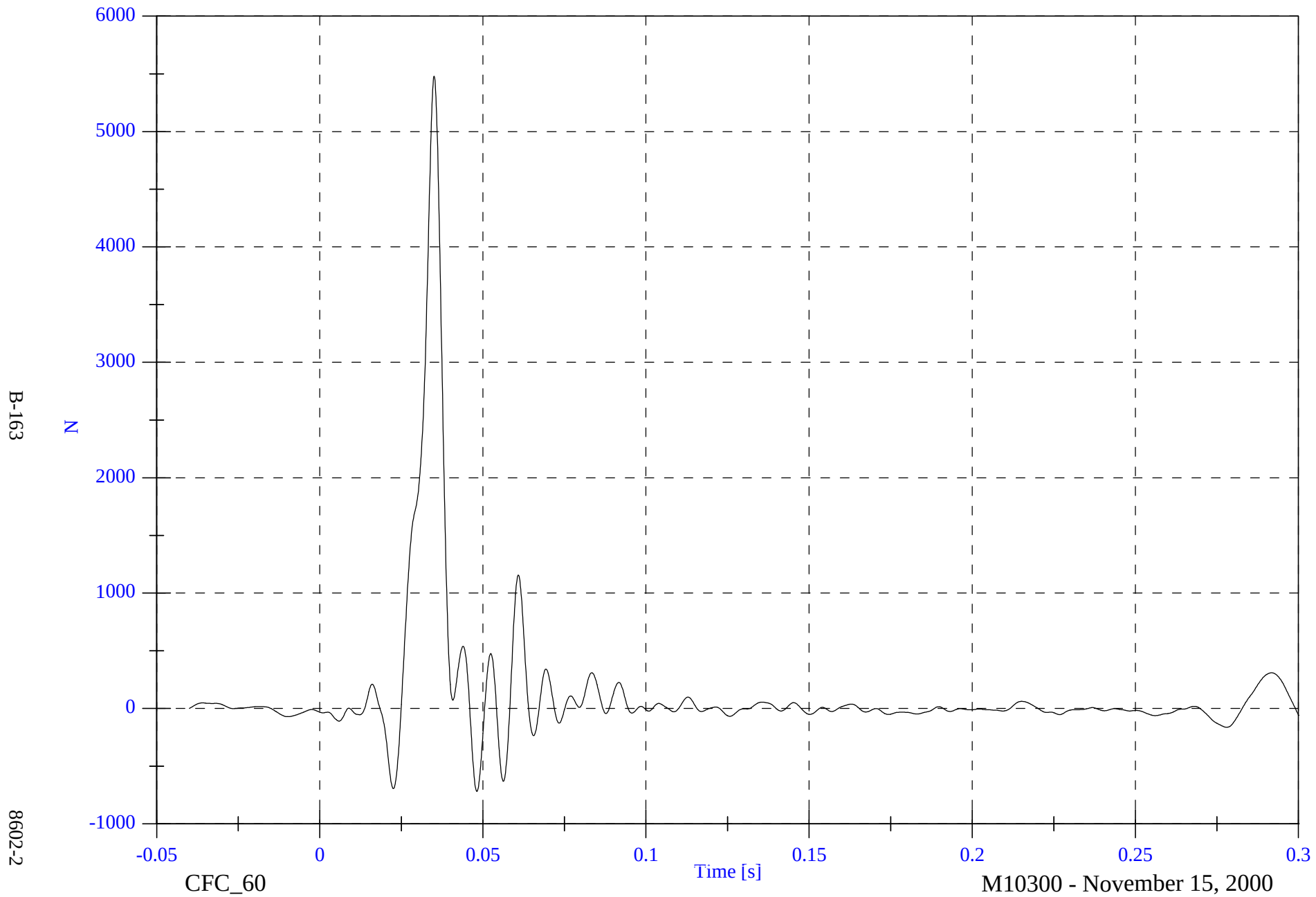


NCAP 2001 Test 2 - 2001 Chrysler LHS

Barrier Load Cell D3 Fx

Max: 5478.8 [N] at 0.035 [s]

Min: -719.3 [N] at 0.048 [s]

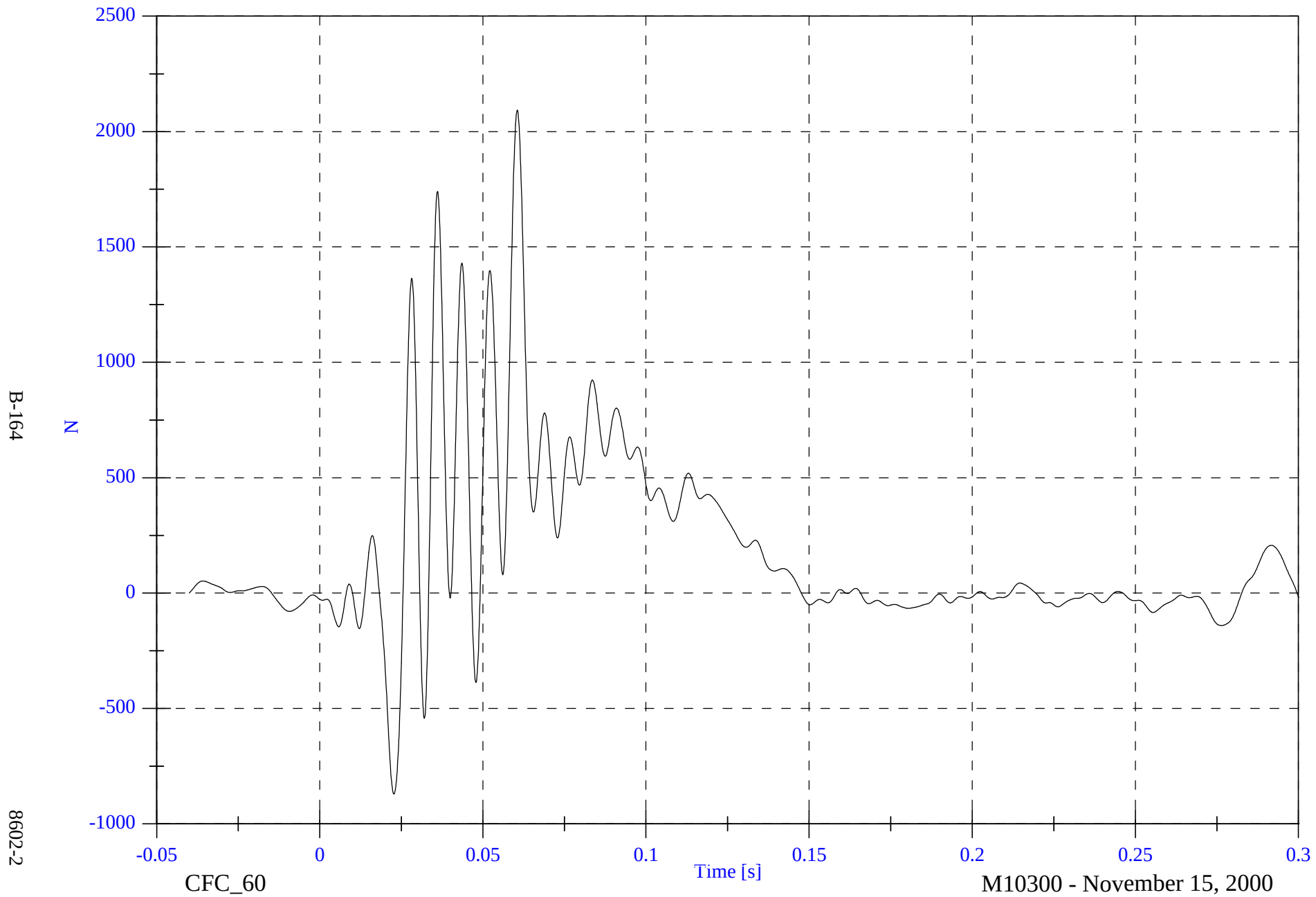


NCAP 2001 Test 2 - 2001 Chrysler LHS

Barrier Load Cell D4 Fx

Max: 2093.5 [N] at 0.060 [s]

Min: -870.8 [N] at 0.023 [s]

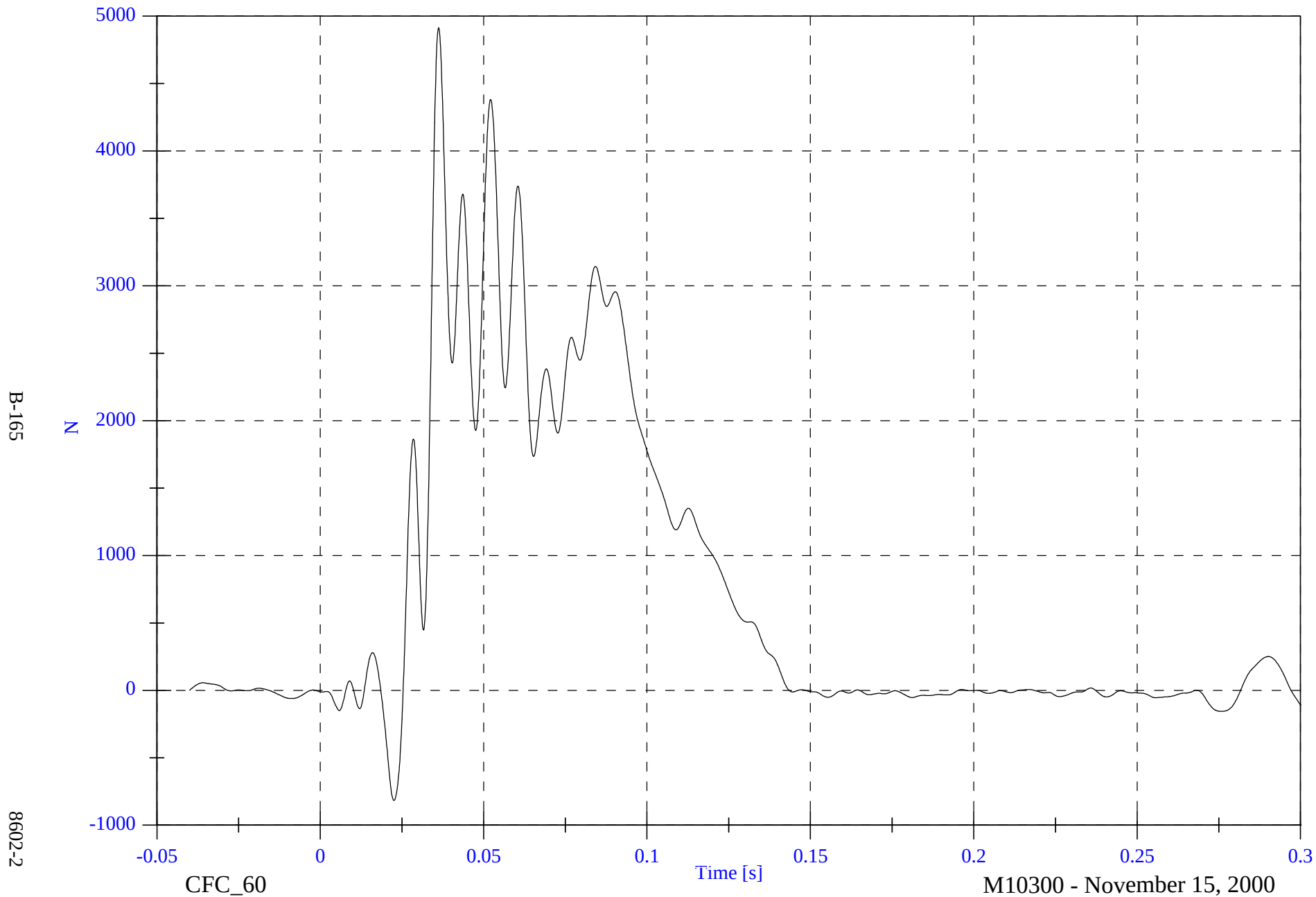


NCAP 2001 Test 2 - 2001 Chrysler LHS

Barrier Load Cell D5 Fx

Max: 4915.4 [N] at 0.036 [s]

Min: -816.7 [N] at 0.022 [s]

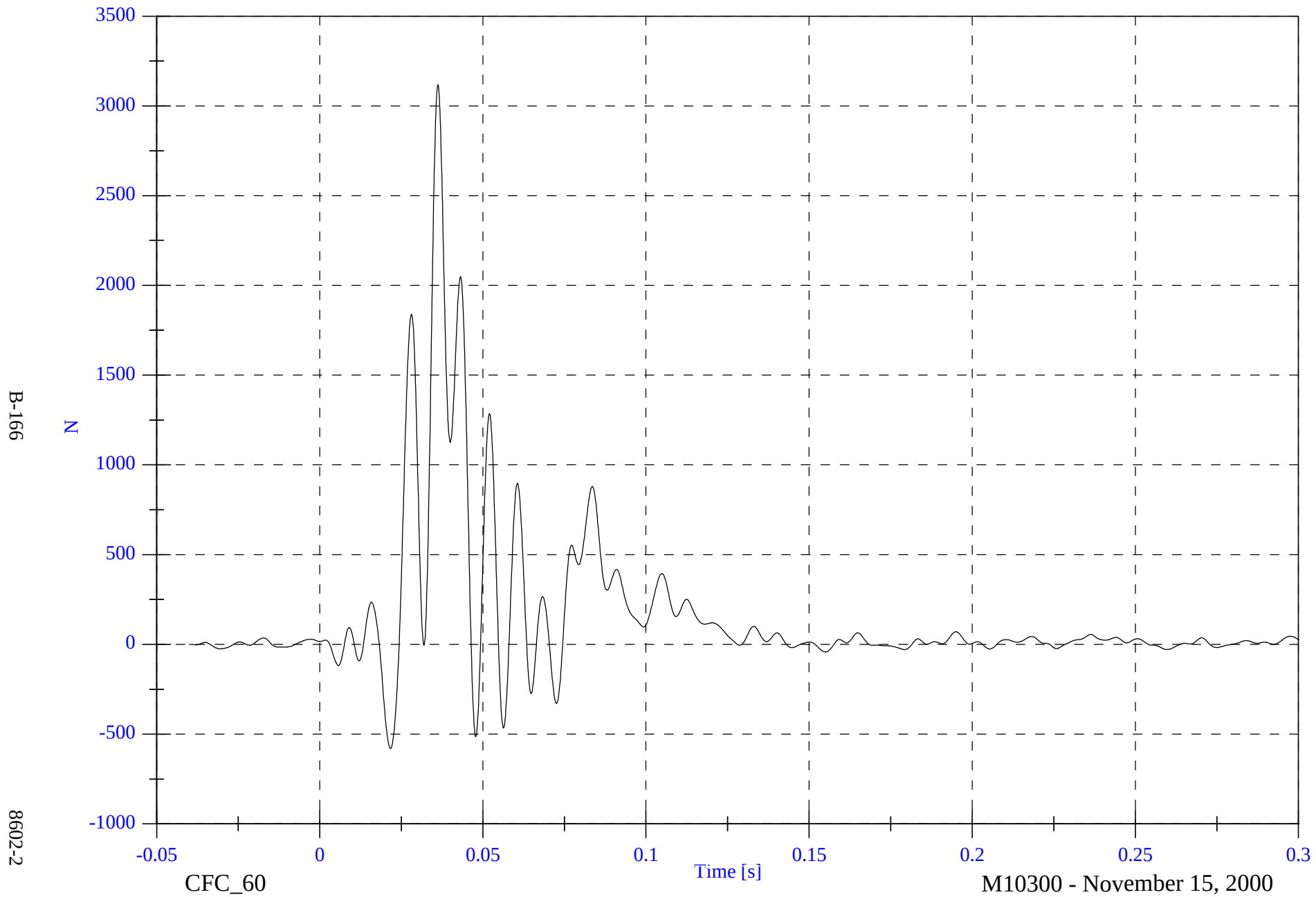


NCAP 2001 Test 2 - 2001 Chrysler LHS

Barrier Load Cell D6 Fx

Max: 3119.6 [N] at 0.036 [s]

Min: -580.7 [N] at 0.022 [s]

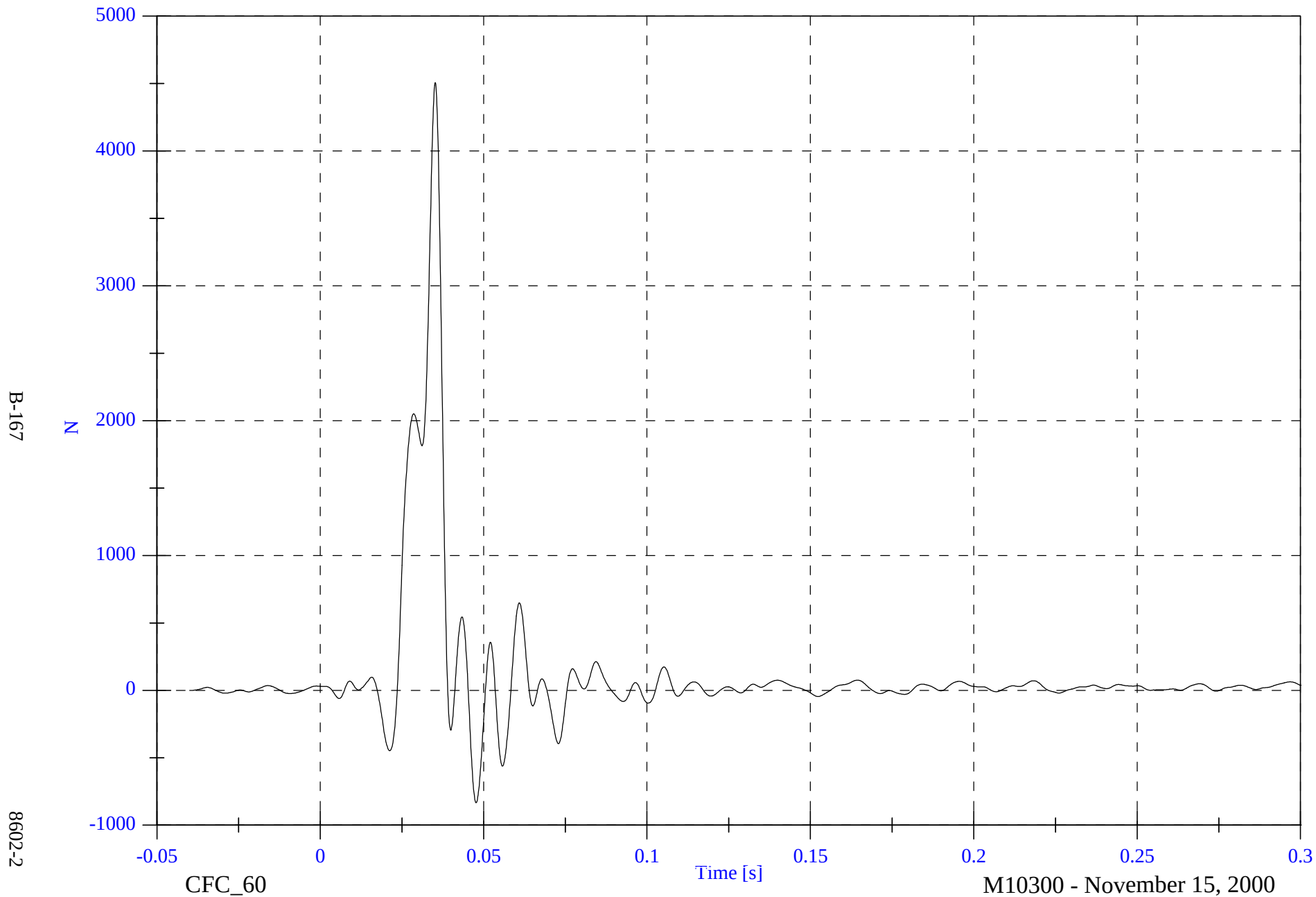


NCAP 2001 Test 2 - 2001 Chrysler LHS

Barrier Load Cell D7 Fx

Max: 4507.2 [N] at 0.035 [s]

Min: -834.6 [N] at 0.048 [s]

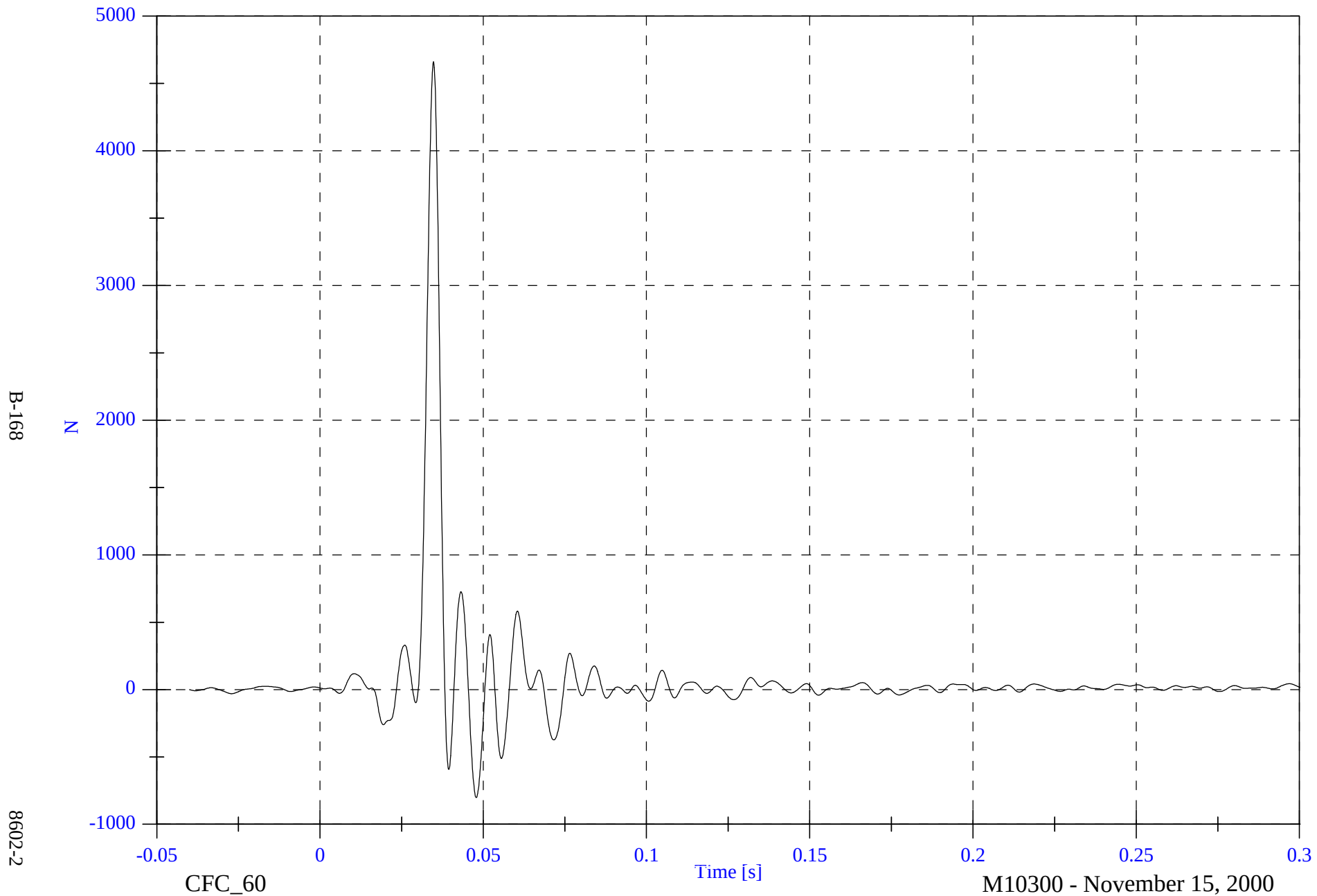


NCAP 2001 Test 2 - 2001 Chrysler LHS

Barrier Load Cell D8 Fx

Max: 4661.6 [N] at 0.035 [s]

Min: -802.0 [N] at 0.048 [s]

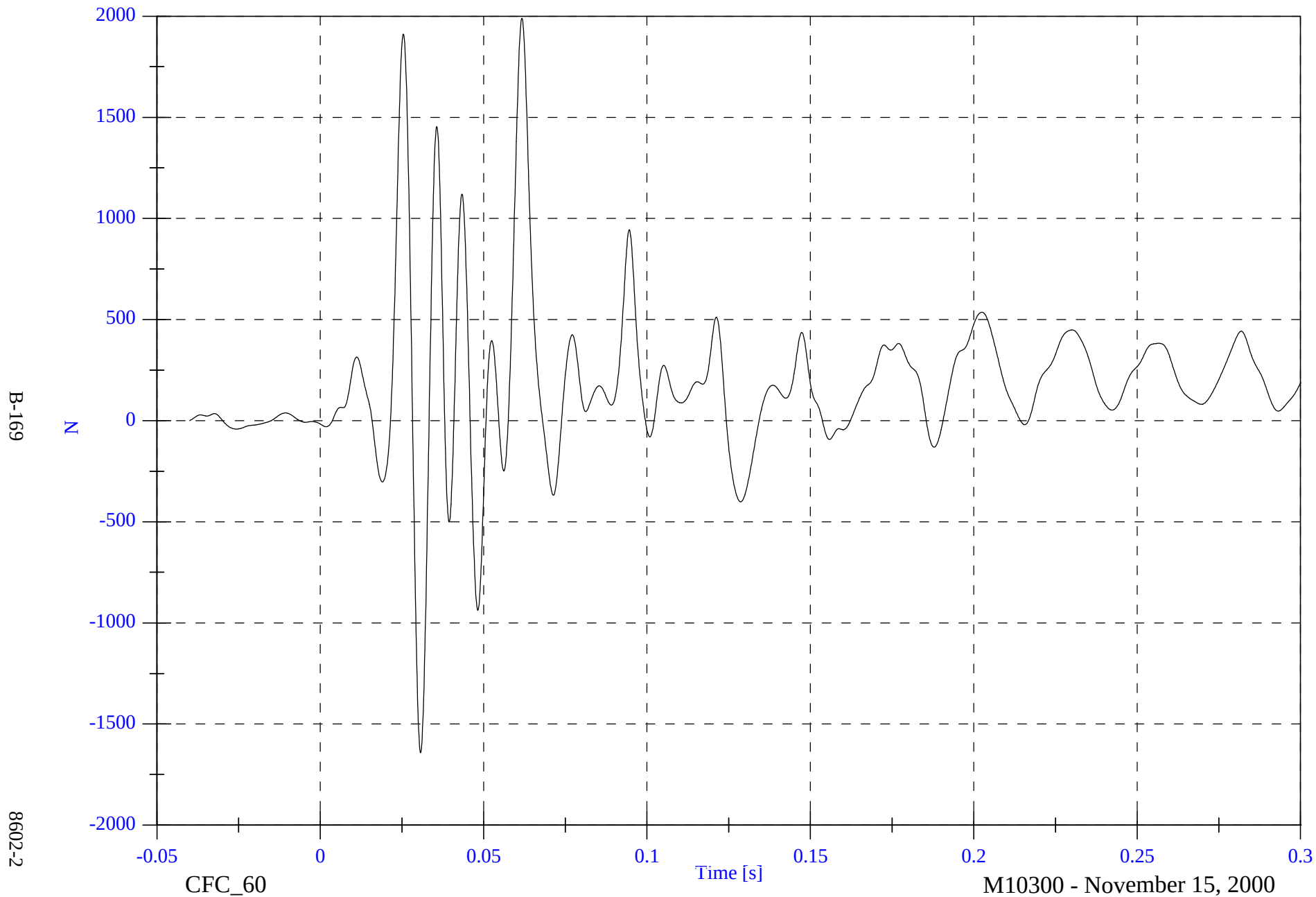


NCAP 2001 Test 2 - 2001 Chrysler LHS

Barrier Load Cell D9 Fx

Max: 1990.2 [N] at 0.062 [s]

Min: -1642.7 [N] at 0.031 [s]

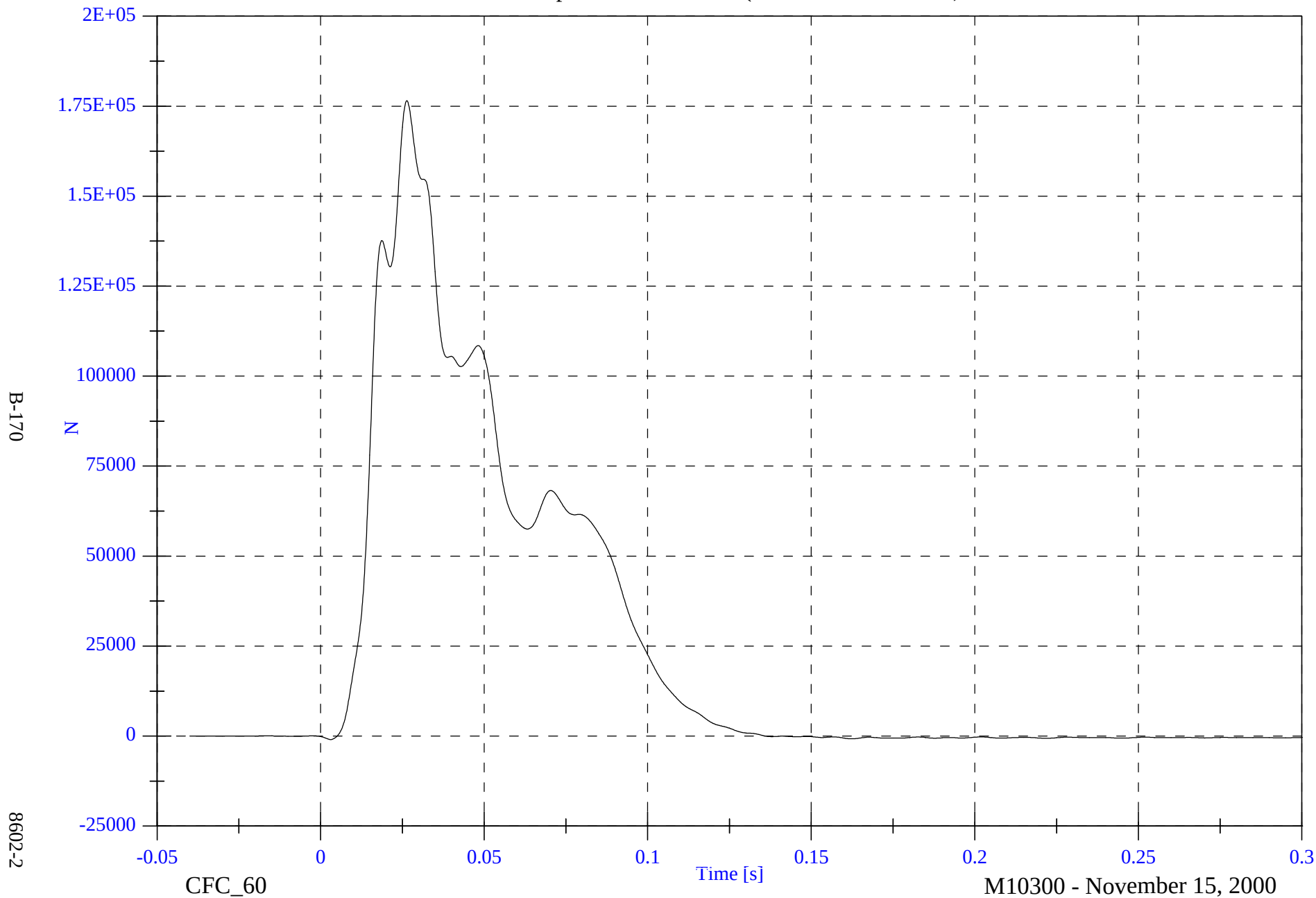


NCAP 2001 Test 2 - 2001 Chrysler LHS

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

Max: 176517.8 [N] at 0.026 [s]

Min: -961.5 [N] at 0.003 [s]

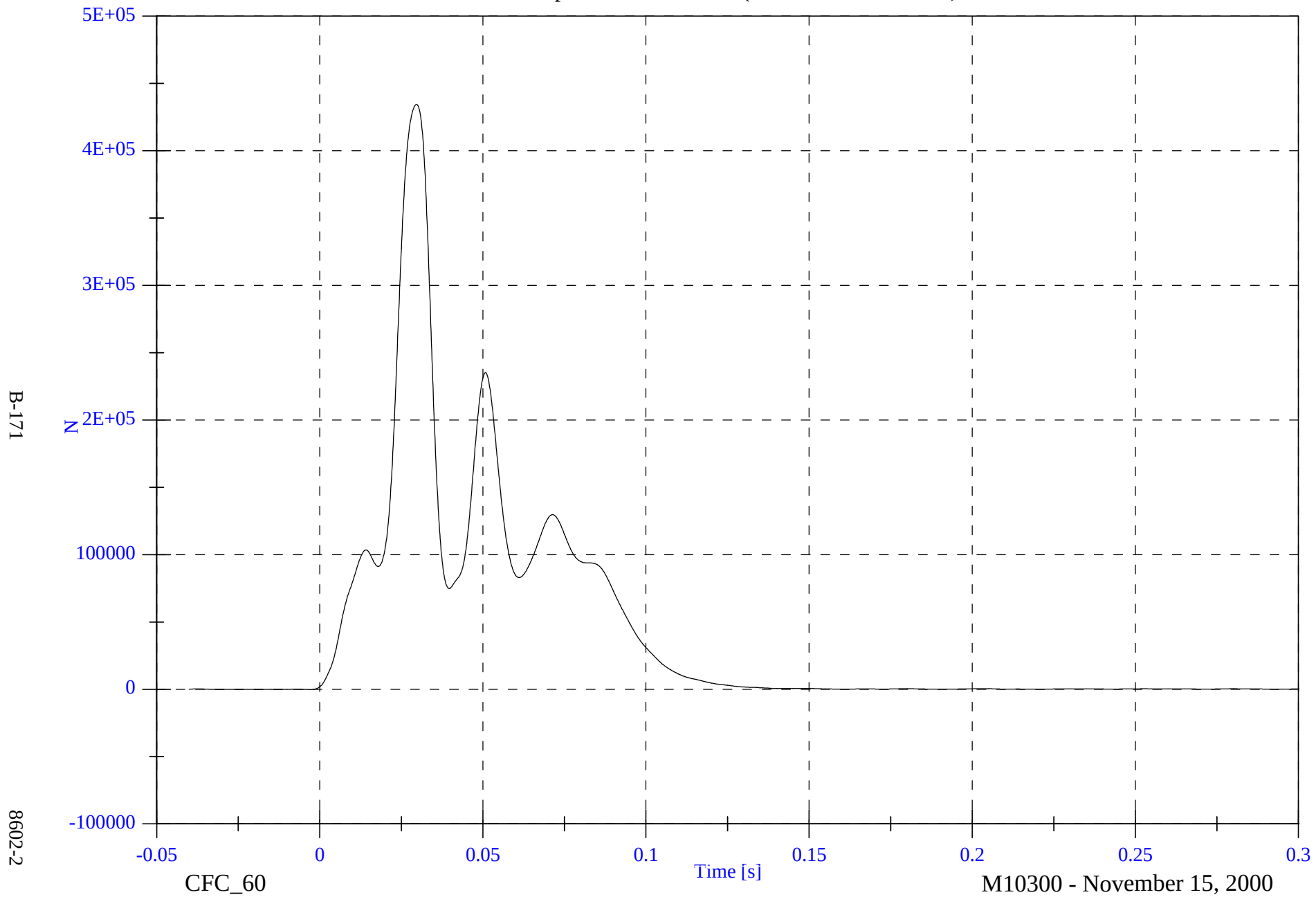


NCAP 2001 Test 2 - 2001 Chrysler LHS

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

Max: 434446.8 [N] at 0.030 [s]

Min: -210.0 [N] at -0.003 [s]

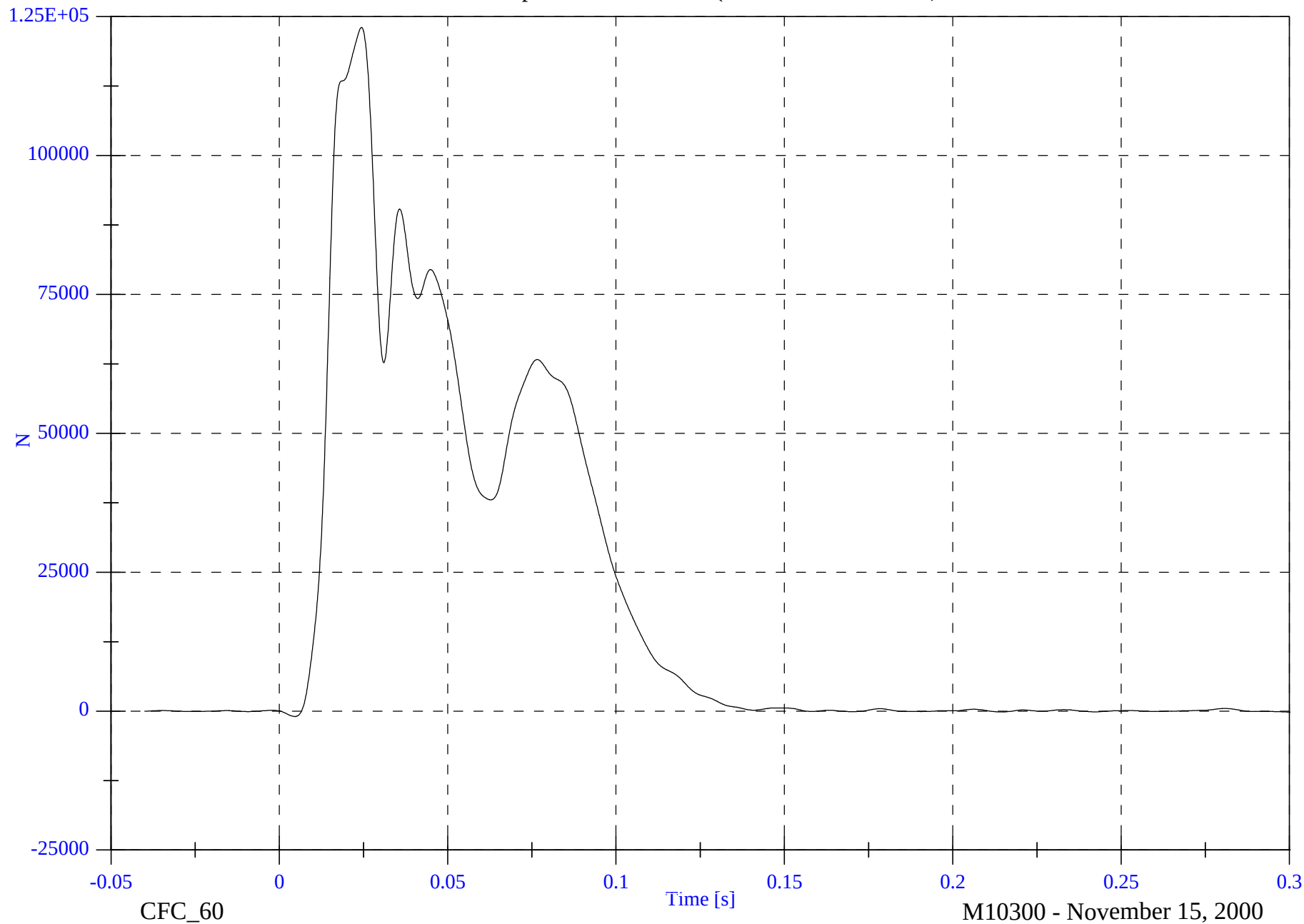


NCAP 2001 Test 2 - 2001 Chrysler LHS

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

Max: 123082.3 [N] at 0.024 [s]

Min: -980.2 [N] at 0.005 [s]

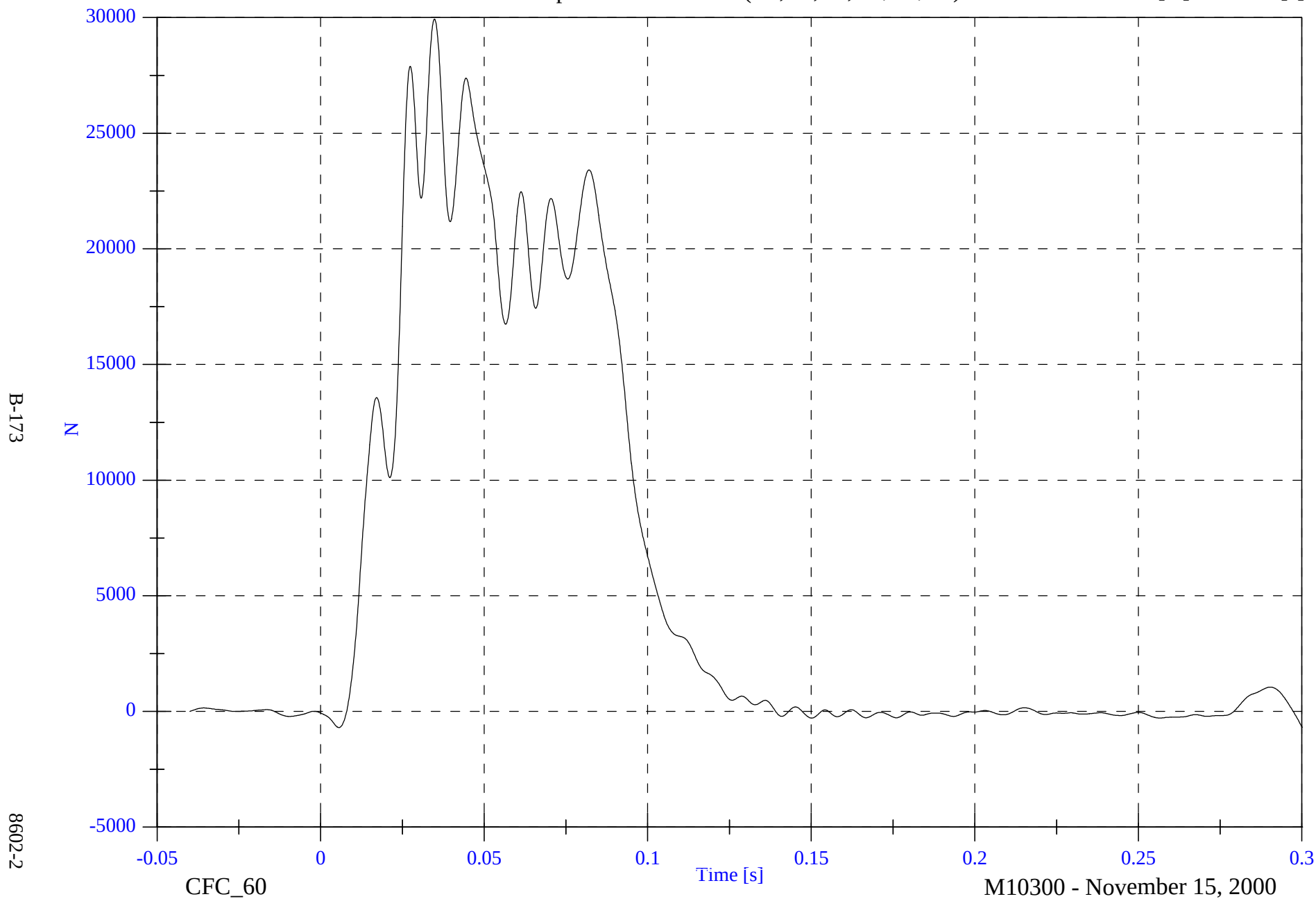


NCAP 2001 Test 2 - 2001 Chrysler LHS

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

Max: 29938.6 [N] at 0.035 [s]

Min: -2067.3 [N] at 0.309 [s]

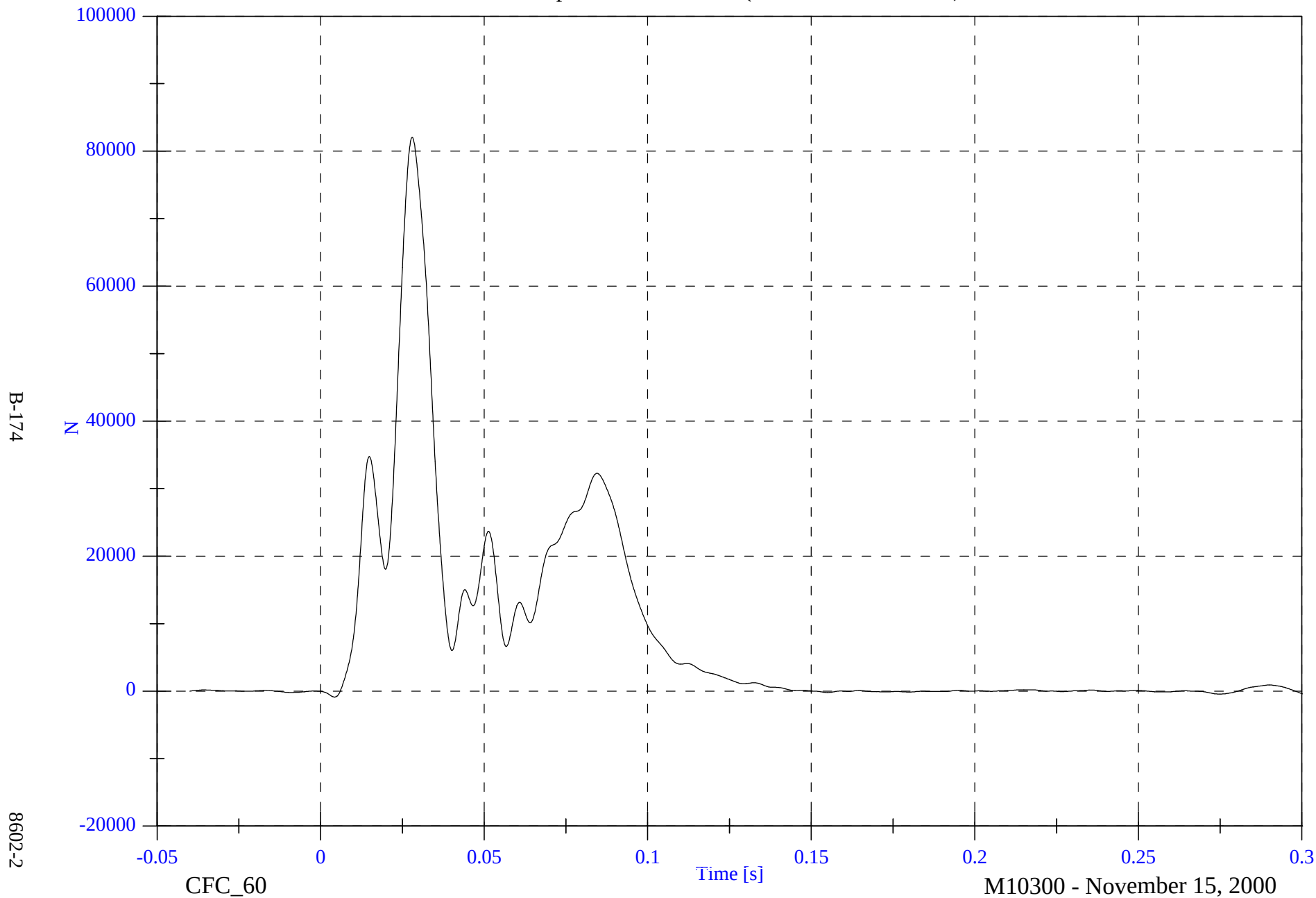


NCAP 2001 Test 2 - 2001 Chrysler LHS

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

Max: 82066.0 [N] at 0.028 [s]

Min: -1622.7 [N] at 0.310 [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:

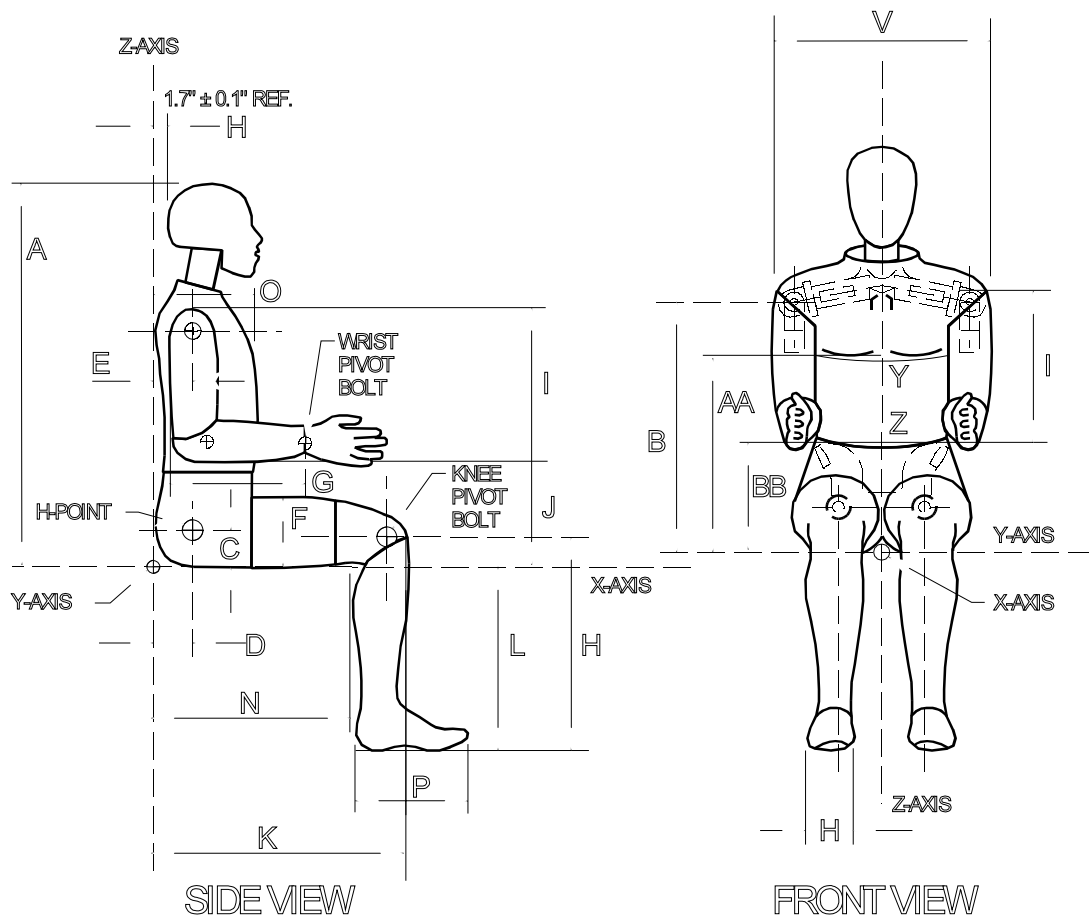
<u>Position No./Location</u>	<u>Serial No.</u>	<u>Completion Date</u>
#1/Driver	061	11/9/2000
#2/Right Front Passenger	245	11/9/2000

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 Inducant 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 061
Sequential Test Number 2
Date October 22, 2000
Workfile 061200.hdp

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	66-78 Deg F	71.0
Relative Humidity	10% - 70%	31.0
Peak Resultant Acceleration	225-275 G's	242.84
Peak Lateral Acceleration	15 G's Max	3.64
Is Acceleration Curve Unimodal?	YES	YES

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
NECK FLEXION TEST

Dummy Serial Number	061	
Sequential Test Number	2	
Date	October 22, 2000	6 Axis Neck Transducer
Workfile	061200.nfl	

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature		69-72 Deg F	70.0
Relative Humidity		10% - 70%	31.0
Impact Velocity		22.60 - 23.40 Ft/s	23.19
Pendulum Deceleration	10 ms	22.50 - 27.50 G's	22.76
	20 ms	17.60 - 22.60 G's	20.41
	30 ms	12.50 - 18.50 G's	16.37
Max Pendulum G's Above 30 ms		29 G's Max	16.37
Deceleration - Time Curve Decay Time to 5 G's		34 - 42 ms	39.00
D Plane Rotation	Max	64 - 78 Deg	70.65
	Time	57 - 64 ms	57.38
Moment About Occipital Condyle	Max	65 - 80 Ft-Lbs	74.01
	Time	47 - 58 ms	52.62
Rotation Angle - Time Curve Decay Time to Zero		113 - 128 ms	124.12
Positive Moment - Time Curve Decay Time to Zero		97 - 107 ms	99.75

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
NECK EXTENSION TEST

Dummy Serial Number	061	
Sequential Test Number	2	
Date	October 22, 2000	6 Axis Neck Transducer
Workfile	061200.nex	

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature		69-72 Deg F	70.0
Relative Humidity		10% - 70%	31.0
Impact Velocity		19.50 - 20.30 Ft/s	19.90
Pendulum Deceleration	10 ms	17.20 - 21.20 G's	17.92
	20 ms	14.00 - 19.00 G's	16.46
	30 ms	11.00 - 16.00 G's	14.16
Max Pendulum G's Above 30 ms		22 G's Max	14.16
Deceleration - Time Curve Decay Time to 5 G's		38 - 46 ms	41.38
D Plane Rotation	Max	81 - 106 Deg	96.35
	Time	72 - 82 ms	74.12
Moment About Occipital Condyle	Max	-59.0 - -39.0 Ft-Lbs	-49.61
	Time	65 - 79 ms	69.75
Rotation Angle - Time Curve Decay Time to Zero		147 - 174 ms	149.12
Positive Moment - Time Curve Decay Time to Zero		120 - 148 ms	137.38

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
THORAX IMPACT TEST

Dummy Serial Number 061
Sequential Test Number 2
Date October 23, 2000
Workfile 061200.th3

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	69-72 Deg F	70.0
Relative Humidity	10% - 70%	32.0
Pendulum Velocity	21.6 - 22.4 Ft/s	21.8
Maximum Deflection	2.50 - 2.86 in	2.59
Maximum Resistive Force	1160 - 1325 Lbs	1197.66
Internal Hysteresis	69 - 85 %	74.34

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
KNEE IMPACT TEST

Dummy Serial Number 061
Sequential Test Number 2
Date November 9, 2000
Workfile 061200.lf/061200.rf

TEST PARAMETER	SPECIFICATION	TEST RESULTS
LEFT KNEE		
Temperature	66 - 78 Deg F	71.0
Relative Humidity	10% - 70%	32.0
Probe Velocity	6.8 - 7.0 Ft/s	6.9
Peak Knee Impact Force	1060 - 1300 Lbs	1236.73
RIGHT KNEE		
Temperature	66 - 78 Deg F	71.0
Relative Humidity	10% - 70%	32.0
Probe Velocity	6.8 - 7.0 Ft/s	6.9
Peak Knee Impact Force	1060 - 1300 Lbs	1245.82

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
EXTERNAL DIMENSIONS

Dummy Serial Number 061
Sequential Test Number 2
Date 11/09/2000

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature			70
Relative Humidity			32
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	8.5
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	6.1
Buttock Knee Length	K	22.8 - 23.8 in	23.4
Buttock Popliteal Length	N	17.8 - 18.8 in	18.3
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	20.2
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

PART 572E
HEAD DROP TEST

Dummy Serial Number 245
Sequential Test Number 4
Date October 22, 2000
Workfile 245400.hdp

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	66-78 Deg F	71.0
Relative Humidity	10% - 70%	31.0
Peak Resultant Acceleration	225-275 G's	250.99
Peak Lateral Acceleration	15 G's Max	9.16
Is Acceleration Curve Unimodal?	YES	YES

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
NECK FLEXION TEST

Dummy Serial Number	245	
Sequential Test Number	4	
Date	October 22, 2000	6 Axis Neck Transducer
Workfile	245400.nfl	

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature		69-72 Deg F	70.0
Relative Humidity		10% - 70%	30.0
Impact Velocity		22.60 - 23.40 Ft/s	22.80
Pendulum Deceleration	10 ms	22.50 - 27.50 G's	22.99
	20 ms	17.60 - 22.60 G's	20.58
	30 ms	12.50 - 18.50 G's	15.75
Max Pendulum G's Above 30 ms		29 G's Max	15.75
Deceleration - Time Curve Decay Time to 5 G's		34 - 42 ms	37.88
D Plane Rotation	Max	64 - 78 Deg	72.70
	Time	57 - 64 ms	62.88
Moment About Occipital Condyle	Max	65 - 80 Ft-Lbs	79.87
	Time	47 - 58 ms	53.12
Rotation Angle - Time Curve Decay Time to Zero		113 - 128 ms	125.38
Positive Moment - Time Curve Decay Time to Zero		97 - 107 ms	99.38

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
NECK EXTENSION TEST

Dummy Serial Number	245	
Sequential Test Number	4	
Date	October 22, 2000	6 Axis Neck Transducer
Workfile	245400.nex	

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature		69-72 Deg F	70.0
Relative Humidity		10% - 70%	30.0
Impact Velocity		19.50 - 20.30 Ft/s	19.90
Pendulum Deceleration	10 ms	17.20 - 21.20 G's	18.46
	20 ms	14.00 - 19.00 G's	17.29
	30 ms	11.00 - 16.00 G's	13.38
Max Pendulum G's Above 30 ms		22 G's Max	13.38
Deceleration - Time Curve Decay Time to 5 G's		38 - 46 ms	44.75
D Plane Rotation	Max	81 - 106 Deg	98.28
	Time	72 - 82 ms	74.38
Moment About Occipital Condyle	Max	-59.0 - -39.0 Ft-Lbs	-54.89
	Time	65 - 79 ms	67.00
Rotation Angle - Time Curve Decay Time to Zero		147 - 174 ms	151.38
Positive Moment - Time Curve Decay Time to Zero		120 - 148 ms	133.00

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
THORAX IMPACT TEST

Dummy Serial Number 245
Sequential Test Number 4
Date October 23, 2000
Workfile 245400.th3

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	69-72 Deg F	70.0
Relative Humidity	10% - 70%	32.0
Pendulum Velocity	21.6 - 22.4 Ft/s	21.7
Maximum Deflection	2.50 - 2.86 in	2.59
Maximum Resistive Force	1160 - 1325 Lbs	1203.30
Internal Hysteresis	69 - 85 %	72.12

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
KNEE IMPACT TEST

Dummy Serial Number 245
Sequential Test Number 4
Date November 9, 2000
Workfile 245400.lf/245400.rf

TEST PARAMETER	SPECIFICATION	TEST RESULTS
LEFT KNEE		
Temperature	66 - 78 Deg F	71.0
Relative Humidity	10% - 70%	32.0
Probe Velocity	6.8 - 7.0 Ft/s	7.0
Peak Knee Impact Force	1060 - 1300 Lbs	1293.26
RIGHT KNEE		
Temperature	66 - 78 Deg F	71.0
Relative Humidity	10% - 70%	32.0
Probe Velocity	6.8 - 7.0 Ft/s	7.0
Peak Knee Impact Force	1060 - 1300 Lbs	1270.77

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
EXTERNAL DIMENSIONS

Dummy Serial Number 245
Sequential Test Number 4
Date 11/9/2000

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature			70
Relative Humidity			32
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	39.0
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	3.2
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	23.4
Buttock Popliteal Length	N	17.8 - 18.8 in	18.3
Popliteal Height	L	16.9 - 17.9 in	17.5
Knee Pivot Height	M	19.1 - 19.7 in	19.2
Foot Length	P	9.9 - 10.5 in	10.2
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	20.2
Elbow Rest Height	J	7.5 - 8.3 in	8.0
Shoulder - Elbow Length	I	13.0 - 13.6 in	13.2
Back of Elbow to Wrist Pivot	G	11.4 - 12.0 in	11.6

Remarks:

Laboratory Technician: B. Swiecicki

APPENDIX D

DUMMY, VEHICLE AND LABORATORY INSTRUMENT CALIBRATION

INSTRUMENT CALIBRATION FOR DRIVER DUMMY

(6 Month Calibration Minimum)

DRIVER DUMMY (S/N 061)		Manufacturer	Serial #	Calibration	
				Last	Next
Head	X	ENDEVCO	AC-J33019	06/19/00	12/19/00
	Y	ENDEVCO	AC-J33127	06/14/00	12/14/00
	Z	ENDEVCO	AC-J32782	06/21/00	12/21/00
Head	X (R)	ENDEVCO	AC-J31060	06/05/00	12/05/00
	Y (R)	ENDEVCO	AC-J31050	06/05/00	12/05/00
	Z (R)	ENDEVCO	AC-J32143	06/05/00	12/05/00
Neck Load Cell	X	DENTON	LC-205Fx	08/28/00	02/28/01
	Y	DENTON	LC-205Fy	08/28/00	02/28/01
	Z	DENTON	LC-205Fz	08/28/00	02/28/01
Neck Moment	X	DENTON	LC-205Mx	08/28/00	02/28/01
	Y	DENTON	LC-205My	08/28/00	02/28/01
	Z	DENTON	LC-205Mz	08/28/00	02/28/01
Chest	X	ENDEVCO	AC-J33351	06/14/00	12/14/00
	Y	ENDEVCO	AC-J32787	06/14/00	12/14/00
	Z	ENDEVCO	AC-J32838	06/14/00	12/14/00
Chest	X (R)	ENDEVCO	AC-J32791	06/14/00	12/14/00
	Y (R)	ENDEVCO	AC-J33156	06/14/00	12/14/00
	Z (R)	ENDEVCO	AC-J33020	06/15/00	12/15/00
Chest Deflection Gauge Hybrid III Use Only		SERVO	DS-061	11/10/00	05/10/01
Pelvic	X	ENDEVCO	AC-J32383	08/04/00	02/04/01
	Y	ENDEVCO	AC-J32186	08/04/00	02/04/01
	Z	ENDEVCO	AC-J32098	08/04/00	02/04/01

INSTRUMENT CALIBRATION FOR DRIVER DUMMY

(6 Month Calibration Minimum)

DRIVER DUMMY (S/N 061)		Manufacturer	Serial #	Calibration	
				Last	Next
Left Femur Load Cell		GSE	LC-954	06/01/00	12/01/00
Right Femur Load Cell		GSE	LC-955	06/01/00	12/01/00
Left Upper Tibia	Mx	DENTON	LC-045Mx	11/04/00	05/04/01
	My	DENTON	LC-045My	11/04/00	05/04/01
Left Lower Tibia	Fz	DENTON	LC-125Fz	11/04/00	05/04/01
	Mx	DENTON	LC-125Mx	11/04/00	05/04/01
	My	DENTON	LC-125My	11/04/00	05/04/01
Right Upper Tibia	Mx	DENTON	LC-038Mx	11/09/00	05/09/01
	My	DENTON	LC-038My	11/09/00	05/09/01
Right Lower Tibia	Fz	DENTON	LC-124Fz	11/09/00	05/09/01
	Mx	DENTON	LC-124Mx	11/09/00	05/09/01
	My	DENTON	LC-124My	11/09/00	05/09/01
Left Foot Rear	X	ENDEVCO	AC-P16951	10/02/00	04/02/01
	Z	ENDEVCO	AC-P17152	10/02/00	04/02/01
Left Foot Front	Z	ENDEVCO	AC-P16975	10/02/00	04/02/01
Right Foot Rear	X	ENDEVCO	AC-J31042	11/07/00	05/07/01
	Z	ENDEVCO	AC-J32176	11/07/00	05/07/01
Right Foot Front	Z	ENDEVCO	AC-J31009	11/08/00	05/08/01
Lap Belt Load Cells		LEBOW	LC-706	06/01/00	12/01/00
Shoulder Belt Load Cells		LEBOW	LC-707	06/01/00	12/01/00
Spool-Out Potentiometer		MAGNETEK	DS-M5	06/20/00	12/20/00
Belt Stretch Transducer		CAL	DS-E5	08/07/00	02/07/01

INSTRUMENT CALIBRATION FOR PASSENGER DUMMY

(6 Month Calibration Minimum)

PASSENGER DUMMY (S/N 245)		Manufacturer	Serial #	Calibration	
				Last	Next
Head	X	ENDEVCO	AC-J32184	06/05/00	12/05/00
	Y	ENDEVCO	AC-J32185	06/05/00	12/05/00
	Z	ENDEVCO	AC-J31011	06/05/00	12/05/00
Head	X (R)	ENDEVCO	AC-J31020	06/05/00	12/05/00
	Y (R)	ENDEVCO	AC-J31101	06/05/00	12/05/00
	Z (R)	ENDEVCO	AC-J31059	06/05/00	12/05/00
Neck Load Cell	X	DENTON	LC-076Fx	08/28/00	02/28/01
	Y	DENTON	LC-076Fy	08/28/00	02/28/01
	Z	DENTON	LC-076Fz	08/28/00	02/28/01
Neck Moment	X	DENTON	LC-076Mx	08/28/00	02/28/01
	Y	DENTON	LC-076My	08/28/00	02/28/01
	Z	DENTON	LC-076Mz	08/28/00	02/28/01
Chest	X	ENDEVCO	AC-J34019	06/19/00	12/19/00
	Y	ENDEVCO	AC-J33018	06/19/00	12/19/00
	Z	ENDEVCO	AC-J32783	06/19/00	12/19/00
Chest	X (R)	ENDEVCO	AC-J31066	08/04/00	12/04/00
	Y (R)	ENDEVCO	AC-J31021	08/04/00	12/04/00
	Z (R)	ENDEVCO	AC-J31022	08/04/00	12/04/00
Chest Deflection Gauge		SERVO	DS-245	06/06/00	12/06/00
Hybrid III Use Only					
Pelvic	X	ENDEVCO	AC-J31034	05/26/00	11/26/00
	Y	ENDEVCO	AC-J31058	05/26/00	11/26/00
	Z	ENDEVCO	AC-J31010	05/26/00	11/26/00

INSTRUMENT CALIBRATION FOR PASSENGER DUMMY

(6 Month Calibration Minimum)

PASSENGER DUMMY (S/N 245)		Manufacturer	Serial #	Calibration	
				Last	Next
Left Femur Load Cell		GSE	LC-723	06/01/00	12/01/00
Right Femur Load Cell		GSE	LC-419	06/01/00	12/01/00
Left Upper Tibia	Mx	DENTON	LC-016Mx	11/09/00	05/09/01
	My	DENTON	LC-016My	11/09/00	05/09/01
Left Lower Tibia	Fz	DENTON	LC-123Fz	11/09/00	05/09/01
	Mx	DENTON	LC-123Mx	11/09/00	05/09/01
	My	DENTON	LC-123My	11/09/00	05/09/01
Right Upper Tibia	Mx	DENTON	LC-023Mx	11/09/00	05/09/01
	My	DENTON	LC-023My	11/09/00	05/09/01
Right Lower Tibia	Fz	DENTON	LC-111Fz	11/09/00	05/09/01
	Mx	DENTON	LC-111Mx	11/09/00	05/09/01
	My	DENTON	LC-111My	11/09/00	05/09/01
Left Foot Rear	X	ENDEVCO	AC-APA30	07/06/00	01/06/01
	Z	ENDEVCO	AC-J31026	09/21/00	03/21/01
Left Foot Front	Z	ENDEVCO	AC-J32831	07/06/00	01/06/01
Right Foot Rear	X	ENDEVCO	AC-J32832	06/14/00	12/14/00
	Z	ENDEVCO	AC-J33376	07/06/00	01/06/01
Right Foot Front	Z	ENDEVCO	AC-J18400	09/28/00	03/28/01
Lap Belt Load Cells		LEBOW	LC-711	06/01/00	12/01/00
Shoulder Belt Load Cells		LEBOW	LC-712	06/01/00	12/01/00
Spool-Out Potentiometer		PATRIOT	DS-M97	07/17/00	01/17/01
Belt Stretch Transducer		CAL	DS-E6	08/08/00	02/08/01

INSTRUMENT CALIBRATION FOR VEHICLE ACCELEROMETERS

(6 Month Calibration Minimum)

	Manufacturer	Serial #	Calibration	
			Last	Next
Left Seat Rear Crossmember	ICS	AC-D30	08/11/00	02/11/01
Right Rear Seat Crossmember	ICS	AC-X88	08/14/00	02/14/01
Top of Engine	ICS	AC-D32	08/25/00	02/25/01
Bottom of Engine	ENDEVCO	AC-BA80	09/28/00	03/28/01
Right Disc Brake Caliper	ENDEVCO	AC-APBF4	06/12/00	12/12/00
Instrument Panel	ENDEVCO	AC-A14077	08/07/00	02/07/01
Left Disc Brake Caliper	ENDEVCO	AC-BA65	08/31/00	02/31/01
Left Seat Rear Crossmember (R)	ICS	AC-D88	08/14/00	02/14/01
Right Seat Rear Crossmember (R)	ICS	AC-X33	08/25/00	02/25/01