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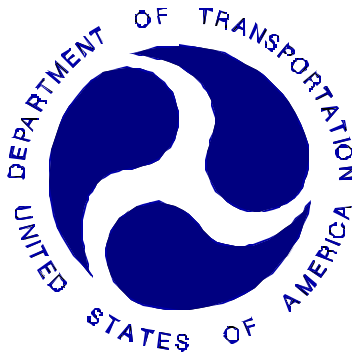
**NEW CAR ASSESSMENT PROGRAM (NCAP)  
FRONTAL BARRIER IMPACT TEST**

DAIMLERCHRYSLER  
2002 DODGE DAKOTA  
EXTENDED CAB PICKUP

NHTSA NUMBER: M20300

VERIDIAN TEST NUMBER: 8642-NCAP-17

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



May 24, 2002

FINAL REPORT

PREPARED FOR:

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

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NHTSA, Office of Crashworthiness Standards

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Date of Report Acceptance

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COTR, New Car Assessment Program (NCAP)  
NHTSA, Office of Crashworthiness Standards

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4. Title and Subtitle Final Report of NEW CAR ASSESSMENT PROGRAM (NCAP) Testing of a 2002 Dodge Dakota Extended Cab Pickup NHTSA No. M20300				5. Report Date May 24, 2002	
				6. Performing Organization Code CAL	
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12. Sponsoring Agency Name and Address U.S. Department of Transportation National Highway Traffic Safety Administration Office of Crashworthiness Standards Mail Code: NPS-10 400 Seventh, SW, Room 5313 Washington, D.C. 20590				13. Type of Report and Period Covered Final Report May – June 2002	
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15. Supplementary Notes					
16. Abstract  A frontal load cell barrier test of a 2002 Dodge Dakota Extended Cab Pickup was performed at Veridian Engineering crash test facility in Buffalo, New York, on May 24, 2002. The impact velocity was 56.17 kph and the temperature at the barrier face was 21°C. The maximum post-test vehicle crush was 611 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, chest, and femur requirements.					
<b>ATD Position</b>	<b>HIC</b>	<b>Clip (g's)</b>	<b>Chest Disp (mm)</b>	<b>Left Femur (N)</b>	<b>Right Femur (N)</b>
<b>Driver (150)</b>	969.6	58.7	48.3	3636.7	4382.2
<b>Passenger (245)</b>	485.0	41.0	26.2	6517.6	1832.3
17. Key Words 56 kph Frontal Barrier Impact test New Car Assessment Program (NCAP)				18. Distribution Statement Copies of this report are available from: NHTSA Technical Reference Division National Highway Traffic Safety Admin. 400 Seventh St., SW, Room 5108 Washington, DC 20590	
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## SECTION 1

### PURPOSE AND SUMMARY OF TEST

#### 1.1 PURPOSE

This 56.17 kph frontal barrier impact test is part of the Vehicle Barrier Impact Testing Program sponsored by the National Highway Traffic Safety Administration (NHTSA) under Contract No. DTNH22-01-D-32005. The purpose of this test was to obtain vehicle crashworthiness and occupant restraint system performance data for an impact speed in excess of the current 48.3 kph requirements.

The 56.17 kph frontal barrier impact test was conducted in accordance with the Office of Crashworthiness Standards Laboratory Indicant Test procedure.

#### 1.2 TEST PROCEDURE

This 56.17 kph frontal barrier impact test was conducted in accordance with the Office of Crashworthiness Standards (OCS) New Car Assessment Program (NCAP) Laboratory Indicant Test Procedure, dated December 1999. Data was obtained indicant of FMVSS 208, "Occupant Crash Protection"; FMVSS 212, "Windshield Retention"; FMVSS 219, "Windshield Zone Intrusion (Partial)"; and FMVSS 301 "Fuel System Integrity" performance. Procedures for receiving, inspection testing and reporting of test results are described in the test procedures and are not repeated in this report.

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

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

Both ATDs were fully instrumented with nine accelerometer array head, chest and pelvis triaxial accelerometers, chest displacement potentiometers, upper neck transducers, right/left femur load cells, and lower leg instrumentation. The driver (position 1) ATD (Serial No. 150) and the right-front passenger (position 2) ATD (Serial No.245) were used in one test (M25502) previous to this test where they did not exceed FMVSS 208 head, chest or femur injury criteria. Certification details, along with instrumentation calibration data, are found in Appendix C.

The vehicle, occupant, camera and measurement data are presented in Section 2. Appendix A contains the still photograph prints. The 198 channels of data were recorded on an on-board data acquisition system. Appendix B contains the vehicle, load cell barrier and dummy response data traces. Appendix C contains the dummy calibration data and Appendix D contains the transducer calibration dates.

### 1.3 SUMMARY OF FRONTAL BARRIER IMPACT TEST

A load cell barrier consisting of 36 load cells was impacted by a 2002 Dodge Dakota Extended Cab Pickup at a velocity of 56.17 kph. The test was performed at Veridian Engineering on May 24, 2002. Pre- and post-test photographs of the vehicle and dummies can be found in Appendix A.

The occupant data is summarized below.

	<b>HIC</b>	<b>Clip (g)</b>	<b>Chest Disp. (mm)</b>	<b>Left Femur (N)</b>	<b>Right Femur (N)</b>	<b>Belt Spool (mm)</b>	<b>Belt Stretch (mm/50 mm)</b>
<b>Driver ATD</b>	969.6	58.7	48.3	3636.7	4382.2	-	-
<b>Passenger ATD</b>	485.0	41.0	26.2	6517.6	1832.3	-	-

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

The maximum vehicle static crush was 611 mm and both the driver and passenger side doors remained closed and latched during the impact event and were operable without the use of tools after the impact.

The driver's visible contact points were as follows: The face to the center of the airbag, the back of the head to the center of the headrest, the top of the head to the visor, the chest to the airbag and the left and right knee to the knee bolster. The passenger's visible contact points were as follows: The face to the center of the airbag, the back of the head to the center of the headrest, the chest to the airbag and the left and right knee to the knee bolster.

The 2002 Dodge Dakota Extended Cab Pickup did not exceed the requirements of FMVSS 208, FMVSS 212, FMVSS 219, and FMVSS 301. Data pertaining to these standards are presented in the data sheets.



DATA SHEET NO. 2 GENERAL TEST AND VEHICLE PARAMETER DATA

TEST VEHICLE INFORMATION:

Year/Make/Model/Body Style: 2002 Dodge Dakota Extended Cab Pickup

NHTSA No. : M20300 ; VIN: 1B7GL12X72S660632 ; Color: Red

Engine Data: 6 cylinders; - CID; 3.9 Liters; - cc

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

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

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

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

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

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

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

Date Received: 5/16/02 ; Odometer Reading 180 km

Selling Dealer: Canandaigua Motors Inc.

& Address: 2591 Rochester Road Canandaigua, NY 14424

DATA FROM TIRE VEHICLE'S CERTIFICATION LABEL:

Vehicle Manufactured by: DaimlerChrysler

Date of Manufacture 4/02

GVWR: 2427 kg; GAWR: 1407 kg FRONT; 1437 kg REAR

DATA FROM TIRE PLACARD:

Tire Pressure with Maximum Capacity Vehicle Load: 241 kpa FRONT

241 kpa REAR

Recommended Tire Size: P215/75R15

\* Recommended Cold Tire Pressure: 241 kpa FRONT; 241 kpa REAR

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

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) = 669 kg

No. of Occupants x 68.04 kg = 340.2 kg

Rated Cargo/Luggage Weight (RCLW) = 328.8 kg (136.1 kg maximum)

\*Tire pressure used for test

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

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

Right Front =	<u>516.0</u>	kg	Right Rear =	<u>354.0</u>	kg
Left Front =	<u>519.5</u>	kg	Left Rear =	<u>368.5</u>	kg
TOTAL FRONT =	<u>1035.5</u>	kg	TOTAL REAR =	<u>722.5</u>	kg
TOTAL DELIVERED WEIGHT =	<u>1758.0</u>	kg			
% of Total Front of Vehicle Weight =	<u>58.9%</u>		% of Total Rear Weight =	<u>41.1%</u>	%

CALCULATION OF VEHICLE'S TARGET TEST WEIGHT:

Total Delivered Weight (UDW) =	<u>1758.0</u>	kg
Rated Cargo/Luggage Weight (RCLW) =	<u>136.1</u>	kg (136.1 kg maximum)
Weight of 2 p.572 Dummies @ 76 each =	<u>152</u>	kg
TARGET TEST WEIGHT =	<u>2046.1</u>	kg

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

Right Front =	<u>581.5</u>	kg	Right Rear =	<u>432.0</u>	kg
Left Front =	<u>575.5</u>	kg	Left Rear =	<u>449.5</u>	kg
TOTAL FRONT =	<u>1157.0</u>	kg	TOTAL REAR =	<u>881.5</u>	kg
TOTAL TEST WEIGHT =	<u>2038.5</u>	kg			
% of Total Front Weight =	<u>56.8%</u>	%	% of Total Rear Weight =	<u>43.2%</u>	%
Weight of Ballast Secured in Vehicle Trunk Area =	<u>0</u>	kg			
Vehicle Components Removed for Weight Reduction:	<u>Spare tire, jack assembly</u>				

VEHICLE ATTITUDE (all dimension in millimeters):

AS DELIVERED:	RF	<u>847</u>	LF	<u>850</u>	RR	<u>903</u>	LR	<u>894</u>
FULLY LOADED:	RF	<u>835</u>	LF	<u>838</u>	RR	<u>873</u>	LR	<u>864</u>
AS TESTED:	RF	<u>830*</u>	LF	<u>840</u>	RR	<u>875</u>	LR	<u>880</u>
Vehicle's Wheel Base:	<u>3325</u> mm							
Location of Vehicle's C.G.:	<u>1438</u> mm rearward of front wheel center.							

FUEL SYSTEM DATA:

Fuel System Capacity From Owner's Manual =	<u>83</u>	liters		
Usable Capacity Figure Furnished by COTR =	<u>83</u>	liters		
Test Volume Range (92 to 94% of Usable Capacity) =	<u>76.36</u>	to	<u>78.02</u>	liters
ACTUAL TEST VOLUME=	<u>76.84</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: Tank – Left side ahead of rear axle; Lines – Along the inside of the left frame rail;				
Filler neck – Left side forward of the rear axle.				

DATA SHEET NO. 3 POST IMPACT DATA

TYPE OF TEST:

Type of Test: Frontal Barrier Impact Angle: 0°  
Test Date: May 24, 2002 Time: 11:50 Temperature: 21 °C  
Vehicle NHTSA No.: M20300  
Required Impact Velocity Range: 55.5 to 57.1 kph

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

Trap No. 1 = 56.17 kph; Trap No. 2 = 56.17 kph  
Distance from vehicle to barrier: (1) entering trap = 813 mm  
(2) exiting trap = 305 mm

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

Vehicle Length:  
Pre-Test Left = 5389 ; C/L = 5447 ; Right = 5393  
Post-Test Left = 4834 ; C/L = 4836 ; Right = 4838  
Crush Left = 555 ; C/L = 611 ; Right = 555  
AVERAGE = 573.67 mm

VEHICLE REBOUND: (From rigid barrier only.)

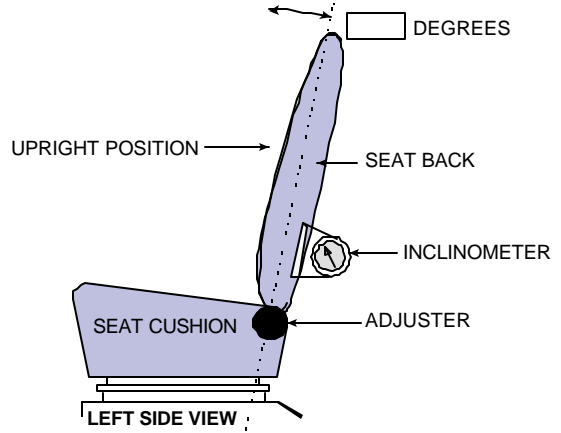
Distance from front of test vehicle to impact point:  
Left = 570 ; C/L = 578 ; Right = 553  
AVERAGE = 567 mm

DATA SHEET NO. 4 TEST VEHICLE INFORMATION

VEHICLE IDENTIFICATION:

Model Year : 2002    Vehicle Model: Dodge Dakota    Body Style : Extended Cab Pickup

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.



**FRONT SEAT ASSEMBLY**

Seat back angle for driver's seat: 14

Measurement instructions: Recline seat to measure 14 degrees from level sill on outboard frame

Seat back angle for passenger's seat: 14

Measurement instructions: Same as the driver's seat

2. Seat Fore and Aft Positioning

Positioning of the driver's seat: Seat is placed in mid-position (detent 11 from first detent 0 of 22 detents)

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

3. Fuel Tank Capacity Data

3.1 A. "Usable Capacity" of the standard equipment fuel tank is 83 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 = 83 liters

3.2 Amount of Stoddard solvent added to vehicle(s) used for certification test(s) = 78 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 ignition is turned to on position and while engine is running.

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: Not Adjustable

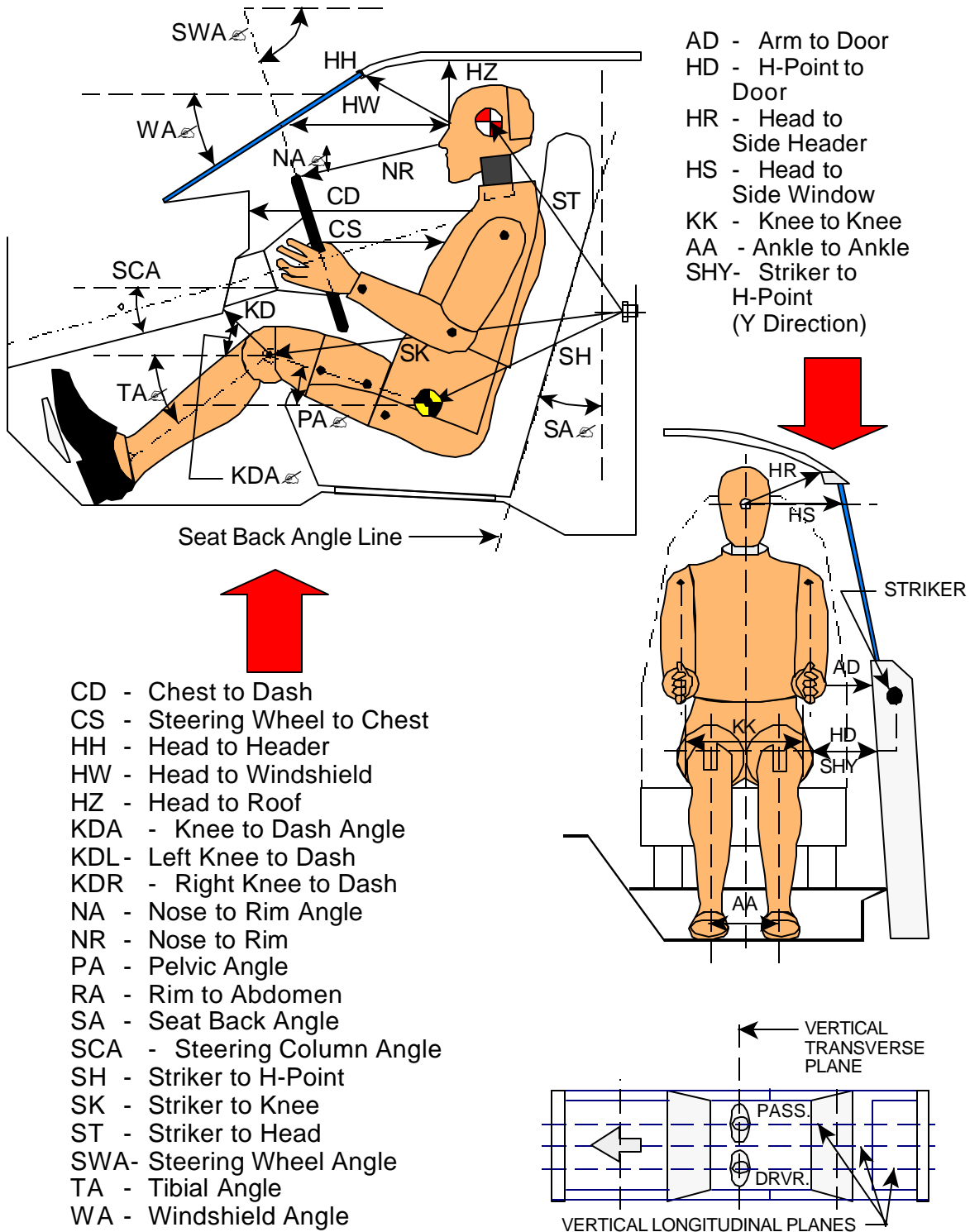
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5. SEAT BELT UPPER ANCHORAGE

Nominal design riding position: Two detents down from full up.

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

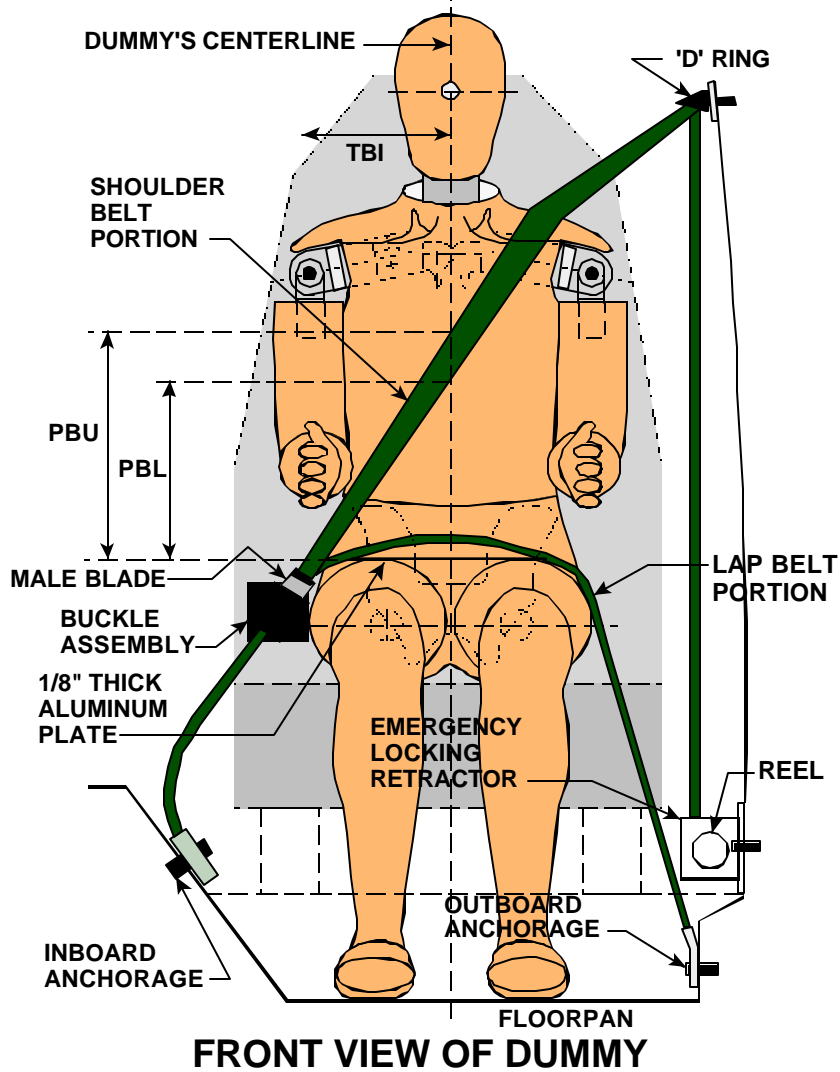


DATA SHEET NO. 5 FRONT SEAT DUMMY POSITIONING MEASUREMENTS IN VEHICLE (cont.)

	DRIVER (Serial #150)			PASS. (Serial #245)		
WA <sup>o</sup>	33 deg.			N/A		
SWA <sup>o</sup>	65 deg.			N/A		
SCA <sup>o</sup>	25 deg.			N/A		
SA <sup>o</sup>	13.7 deg.			13.7 deg.		
HZ	197			218		
HH	410			412		
HW	583			589		
HR	188			221		
NR	363	Angle	-19 deg.	N/A		
CD	482			515		
CS	253			N/A		
RA	160			N/A		
KDL	132	Angle (KDA)	27 deg.	127		
KDR	139			156	Angle (KDA)	38 deg.
PA <sup>o</sup>	21.4 deg.			24.3 deg.		
TA <sup>o</sup>	39.7 deg.			45.0 deg.		
KK	310			290		
AA	277			231		
ST	640	Angle	20 deg.	620	Angle	20 deg.
SK	720	Angle	90 deg.	713	Angle	90 deg.
SH	325	Angle	110 deg.	312	Angle	105 deg.
SHY	254			255		
HS	320			340		
HD	184			158		
AD	104			105		

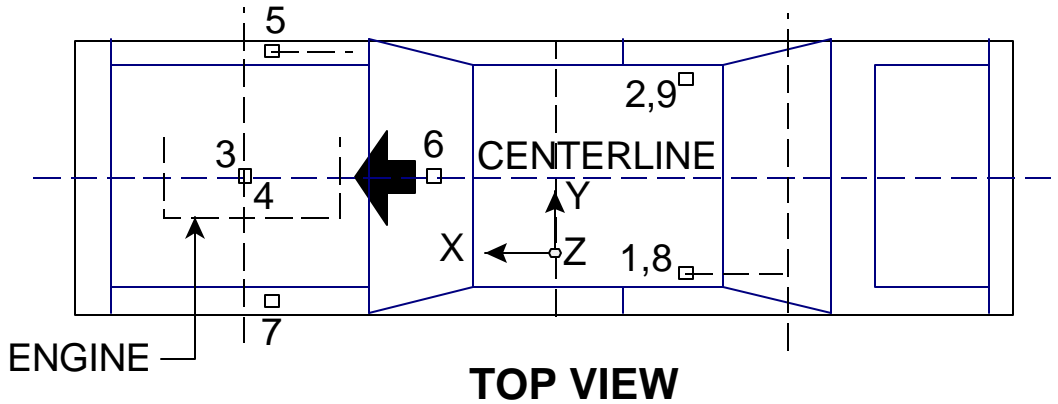
Dimensions in millimeters

**SEAT BELT POSITIONING DATA**

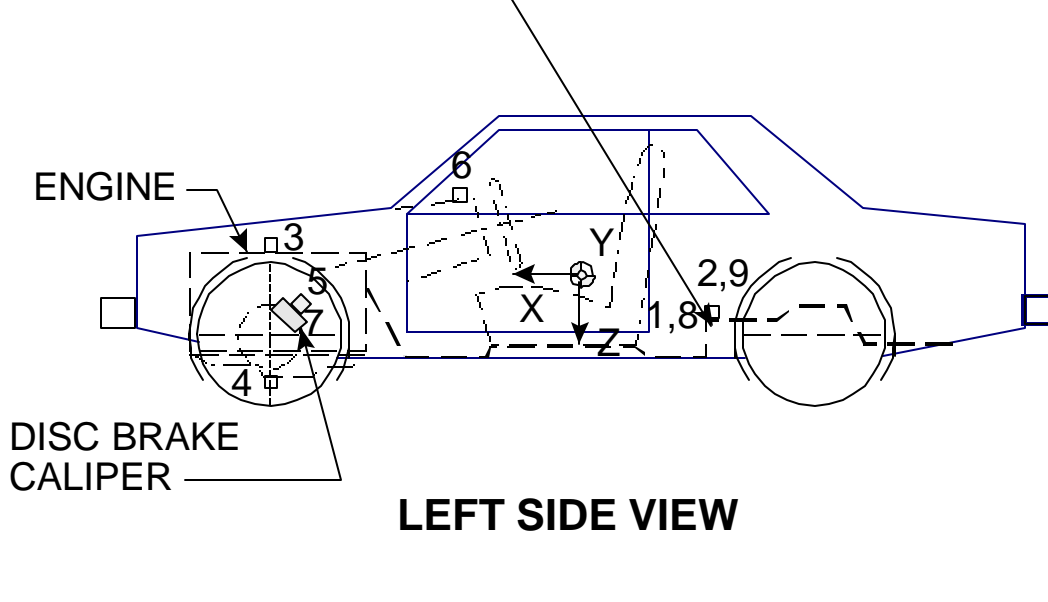


	DRIVER DUMMY (mm)	PASSENGER DUMMY (mm)
PBU -- Top surface of alum. plate to upper edge	330	330
PBL-- Top surface of alum. plate to belt lower edge	250	250
LAP BELT TENSION	10 N	10 N
SHOULDER BELT TENSION	Retractor	Retractor

## VEHICLE ACCELEROMETER LOCATION AND DATA SUMMARY



REAR SEAT CUSHION  
ASSY. FRONT ATTACHMENT  
BRACKET SUPPORT



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

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

LOCATION		PRE-TEST LENGTH (mm)		
		X	Y	Z
1	Left Rear Seat Cross Member X	2950	-614	-490
2	Right Rear Seat Cross Member X	2945	605	-485
3	Top of Engine Block	4782	-158	-914
4	Bottom of Engine	4298	-97	-310
5	Disc Brake Caliper @ Right Side	4460	807	-431
6	Instrument Panel	3707	23	-1023
7	Disc Brake Caliper @Left Side	4439	-820	-371
8	Left Rear Seat Cross Member Z	2950	-614	-490
9	Right Rear Seat Cross Member Z	2945	605	-485

LOCATION NUMBER	DESCRIPTION	MAXIMUM VALUE (g's)			
		Pos.	msec.	Neg.	msec.
1	Left Rear Seat Cross Member X	3.0	138.6	-41.7	18.7
2	Right Rear Seat Cross Member X	2.4	167.1	-36.4	18.1
3	Top of Engine Block	*	*	*	*
4	Bottom of Engine	18.5	50.4	-82.8	39.0
5	Disc Brake Caliper @ Right Side	39.6	67.7	-104.6	38.1
6	Instrument Panel	**	**	**	**
7	Disc Brake Caliper @Left Side	***	***	***	***
8	Left Rear Seat Cross Member Z	11.6	19.4	-16.9	93.6
9	Right Rear Seat Cross Member Z	13.1	21.2	-15.4	95.4

\*Wire Cut At 33 ms; \*\* Wire Cut at 93 ms; \*\*\*Data did not record

DATA SHEET NO. 8 DUMMY INJURY CRITERIA VALUES

Vehicle Year/Make/Model/Body Style: 2002 Dodge Dakota Extended Cab Pic up

NHTSA Test No.: M20300 Test Date: May 24, 2002

DESCRIPTION	Unit	MAXIMUM VALUE							
		Driver				Passenger			
		Pos	msec	Neg	msec	Pos	msec	Neg	msec
Head 9 Array X Arm Y	g	6.9	214.9	-15.7	87.1	1.5	38.4	-11.9	55.8
Head 9 Array X Arm Z	g	38.9	58.1	-22.3	98.0	37.4	61.8	-11.4	119.7
Head 9 Array Y Arm X	g	24.2	215.4	-71.4	86.8	2.5	272.4	-44.3	86.4
Head 9 Array Y Arm Z	g	41.9	77.2	-8.8	125.5	30.5	58.7	-9.2	117.4
Head 9 Array Z Arm X	g	31.3	209.6	-74.4	86.6	8.6	270.3	-53.6	86.9
Head 9 Array Z Arm Y	g	9.6	83.3	-17.6	94.2	2.4	71.6	-17.4	91.2
Head X	g	20.3	209.6	-71.2	86.4	3.6	274.8	-45.5	81.2
Head Y	g	4.4	77.3	-12.1	87.0	3.1	36.8	-13.4	96.3
Head Z	g	34.0	77.0	-9.6	126.0	25.2	58.7	-9.9	117.8
Head Resultant	g	75.0	86.4	0.1	-49.1	51.4	81.2	0.0	-50.0
Redundant Head X	g	21.5	209.6	-70.5	86.4	3.6	272.3	-44.1	86.0
Redundant Head Y	g	3.5	207.4	-13.1	87.0	4.3	39.0	-13.4	98.7
Redundant Head Z	g	33.9	77.2	-9.2	126.0	25.2	58.7	-9.6	117.5
Redundant Head Resultant	g	74.6	86.4	0.1	-49.2	50.1	84.0	0.0	-49.6
Upper Neck Fx	N	109.4	267.6	-489.2	82.0	123.2	274.6	-770.7	62.7
Upper Neck Fy	N	74.5	214.5	-347.3	86.4	337.7	88.2	-128.1	152.7
Upper Neck Fz	N	3135.7	76.8	-409.1	126.2	2040.7	71.3	-447.0	117.6
Upper Neck F Resultant	N	3153.1	76.9	4.0	-45.8	2114.1	71.3	2.0	-49.9
Upper Neck Mx	N-m	15.3	85.6	-21.3	95.1	4.3	263.9	-31.8	88.5
Upper Neck My	N-m	42.0	97.7	-38.6	235.7	39.5	163.2	-66.7	62.7
Upper Neck Mz	N-m	7.5	113.6	-10.9	160.0	13.8	97.2	-8.7	152.2
Upper Neck M Resultant	N-m	46.0	97.4	0.2	-49.9	70.1	62.5	0.1	-50.0
Chest X	g	5.8	194.0	-58.2	75.2	2.4	195.1	-39.5	71.0
Chest Y	g	3.9	74.8	-12.3	63.6	3.3	52.0	-6.8	74.7
Chest Z	g	20.4	60.7	-13.5	117.5	20.7	83.2	-15.7	117.2
Chest Resultant	g	61.2	75.2	0.1	-36.9	42.8	70.9	0.0	-50.0

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

Vehicle Year/Make/Model/Body Style: 2002 Dodge Dakota Extended Cab Pickup

NHTSA Test No.: M20300 Test Date: May 24, 2002

DESCRIPTION	Unit	MAXIMUM VALUE							
		Driver				Passenger			
		Pos	msec	Neg	msec	Pos	msec	Neg	msec
Redundant Chest X	g	5.8	194.0	-58.2	75.2	2.7	147.8	-39.9	70.9
Redundant Chest Y	g	4.1	74.8	-12.2	63.6	3.0	55.0	-7.0	74.6
Redundant Chest Z	g	20.0	60.6	-13.4	117.6	20.5	83.2	-15.9	119.2
Redundant Chest Resultant	g	61.0	75.2	0.1	-50.0	43.2	70.8	0.0	-42.6
Chest Displacement	mm	0.0	9.2	-48.3	80.9	0.0	8.0	-26.2	79.2
Pelvic X	g	5.5	141.5	-62.9	50.3	6.4	130.5	-67.3	47.2
Pelvic Y	g	7.5	117.9	-10.8	40.5	11.3	45.8	-9.0	89.0
Pelvic Z	g	6.0	75.5	-15.7	107.6	4.4	38.8	-20.1	108.5
Pelvic Resultant	g	63.6	50.3	0.0	-35.2	67.9	47.2	0.0	-47.4
Left Femur	N	584.5	37.8	-3636.7	47.6	707.0	37.7	-6517.6	53.0
Right Femur	N	225.6	33.5	-4382.2	51.8	693.7	40.5	-1832.3	52.8
Left Upper Tibia Mx	N-m	24.0	153.5	-20.1	44.8	44.3	47.3	-60.5	68.0
Left Upper Tibia My	N-m	37.4	47.8	-41.1	69.3	28.5	42.5	-144.8	56.7
Left Lower Tibia Fz	N	88.7	130.1	-2734.9	74.0	210.3	272.9	-4912.9	52.2
Left Lower Tibia Mx	N-m	59.8	83.0	-12.6	44.4	53.6	72.6	-26.7	64.0
Left Lower Tibia My	N-m	50.5	72.7	-38.4	51.0	44.6	82.7	-51.5	46.8
Right Upper Tibia Mx	N-m	98.4	51.1	-20.7	37.3	30.2	77.6	-27.9	53.1
Right Upper Tibia My	N-m	35.8	136.7	-220.1	51.7	17.6	138.2	-115.2	79.2
Right Lower Tibia Fz	N	148.1	110.8	-5524.3	52.0	155.1	135.4	-5396.2	78.7
Right Lower Tibia Mx	N-m	49.8	50.9	-90.5	57.0	51.9	77.8	-9.1	53.5
Right Lower Tibia My	N-m	74.9	82.9	-62.4	46.9	55.1	77.6	-46.1	55.7
Left Foot Aft Ax	g	47.7	72.2	-85.6	51.2	65.0	57.2	-233.3	47.0
Left Foot Aft Az	g	8.8	212.5	-40.4	74.5	43.2	41.7	-62.1	45.9
Left Foot Fore Az	g	48.8	32.3	-96.1	69.0	150.1	49.9	-438.9	45.2
Right Foot Aft Ax	g	30.0	83.4	-129.2	49.4	13.8	86.4	-72.2	36.8
Right Foot Aft Az	g	29.0	66.4	-127.4	50.0	13.2	42.5	-67.1	76.9
Right Foot Fore Az	g	57.7	60.2	-281.1	48.8	41.9	52.4	-52.1	59.8

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

Vehicle Year/Make/Model/Body Style: 2002 Dodge Dakota Extended Cab Pickup

NHTSA Test No.: M20300 Test Date: May 24, 2002

HEAD INJURY CRITERIA (HIC)				
	HIC**	t <sub>1</sub> (msec)	t <sub>2</sub> (msec)	Average Acceleration t <sub>1</sub> to t <sub>2</sub>
Position #1 - Driver	969.6	59.1	95.1	59.2
Position #2 - Passenger	485.0	62.0	97.9	44.9

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

CLIP SUMMARY*				
	CLIP (g's)	t <sub>1</sub> (msec)	t <sub>2</sub> (msec)	CSI
Position #1 - Driver	58.7	74.1	77.1	650.4
Position #2 - Passenger	41.0	67.8	71.9	442.3

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

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

Vehicle Year/Make/Model/Body Style: 2002 Dodge Dakota Extended Cab Pickup  
 NHTSA Test No.: M20300 Test Date: May 24, 2002

HEAD INJURY CRITERIA (HIC) <b>REDUNDANT</b>				
	HIC**	t <sub>1</sub> (msec)	t <sub>2</sub> (msec)	Average Acceleration t <sub>1</sub> to t <sub>2</sub>
Position #1 - Driver	955.0	59.1	95.1	58.8
Position #2 - Passenger	462.1	62.4	98.4	44.0

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

CLIP SUMMARY* <b>REDUNDANT</b>				
	CLIP (g's)	t <sub>1</sub> (msec)	t <sub>2</sub> (msec)	CSI
Position #1 - Driver	58.7	74.1	77.1	653.2
Position #2 - Passenger	41.5	67.9	71.8	448.1

\* 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:

Belt length from trim panel exit  
to bolt hole anchor point for  
continuous webbing systems.

Driver

Passenger

2350

2350

Shoulder belt length as measured  
on Part 572 Dummy.

830

830

Lap belt length as measured  
on Part 572 Dummy.

800

800

\_\_\_\_\_   
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.

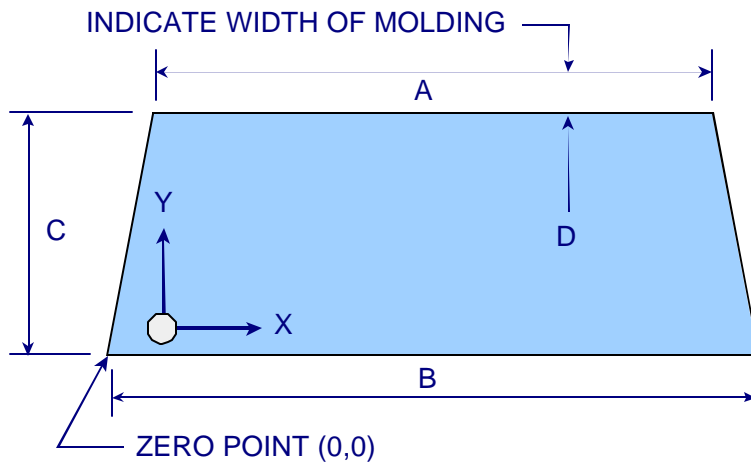
FMVSS 212 REQUIREMENTS:

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	2115	2115	100.0%
LEFT SIDE	2115	2115	100.0%
TOTAL	4230	4230	100.0%

AREA OF RETENTION FAILURE: None



DIMENSIONS (mm)	
A	1260
B	1650
C	660
D	21

**FRONT VIEW OF WINDSHIELD**

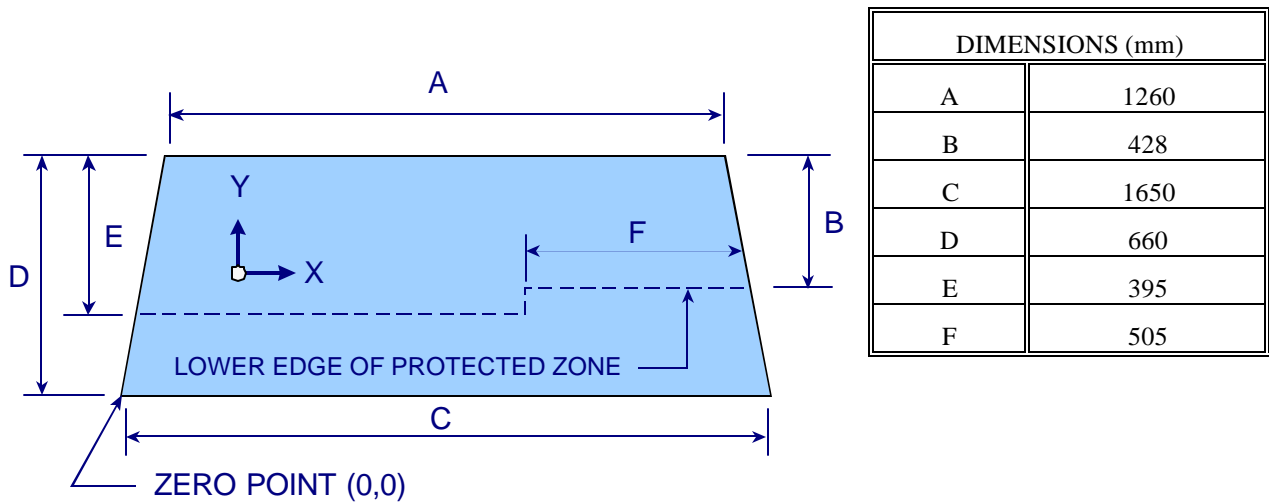
FAILURE DETAILS: None

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

PROTECTED ZONE LOWER EDGE REQUIREMENT:

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

FMVSS 219 TEST DATA:



**FRONT VIEW OF WINDSHIELD**

DETAILS OF WINDSHIELD GLASS PENETRATION GREATER THAN 6 mm: None

(Show location of penetration on the above sketch)

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

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

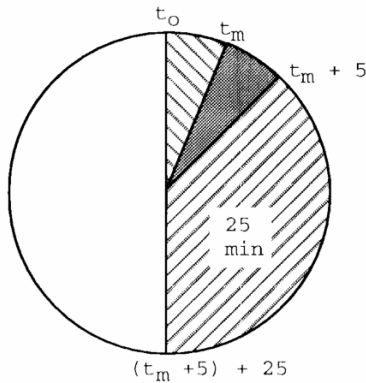
NHTSA TEST No.: M20300 TEST DATE: May 24, 2002  
VEHICLE MAKE/MODEL: 2002 Dodge Dakota Extended Cab Pickup

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

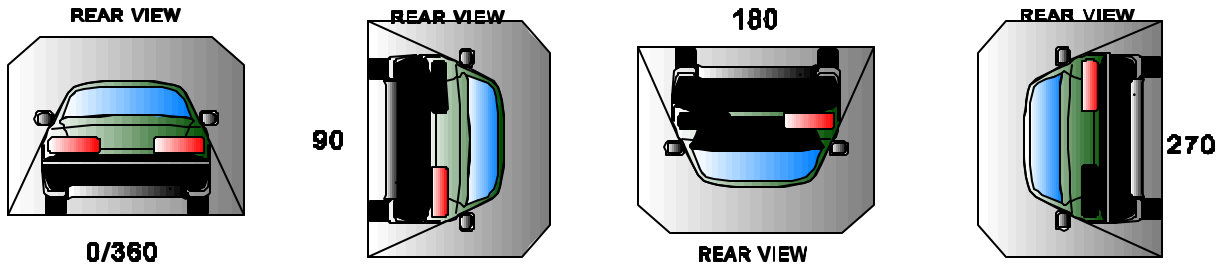
ACTUAL	MAX ALLOWED
0	28 g
0	141 g
0	28 g/min.

SOLVENT SPILLAGE DETAILS: None

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

Vehicle: 2002 Dodge Dakota Extended Cab Pickup

NHTSA No.: M20300



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

Rollover Stage	Rotation Time (spec. 1 -3 min)				FMVSS 301 Hold Time		Total Time				Next Whole Minute Interval	
	1	minutes	13	seconds	5	minutes	6	minutes	13	seconds	7	minutes
0° - 90°	1	minutes	13	seconds	5	minutes	6	minutes	13	seconds	7	minutes
90° - 180°	1	minutes	00	seconds	5	minutes	6	minutes	0	seconds	7	minutes
180°-270°	1	minutes	04	seconds	5	minutes	6	minutes	4	seconds	7	minutes
270°-360°	1	minutes	11	seconds	5	minutes	6	minutes	11	seconds	7	minutes

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

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

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

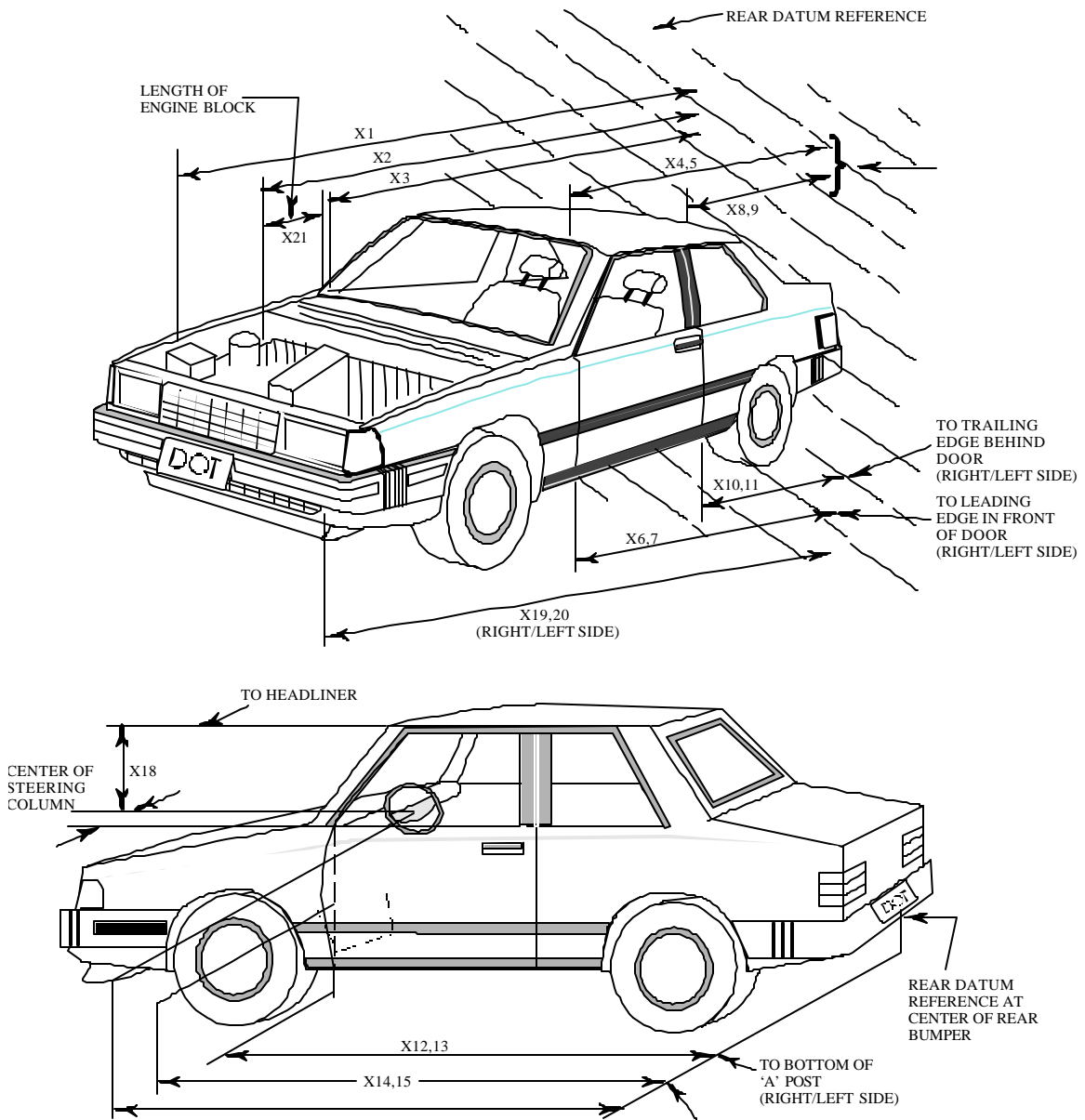
Rollover Stage	First 5 minutes from onset of rotation (g)	6th min. (g)	7th min. (g)	8th min. (if required) (g)
0° - 90°	0	0	0	N/A
90° - 180°	0	0	0	N/A
180°-270°	0	0	0	N/A
270°-360°	0	0	0	N/A

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

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

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

DATA SHEET NO. 14 TEST VEHICLE MEASUREMENTS

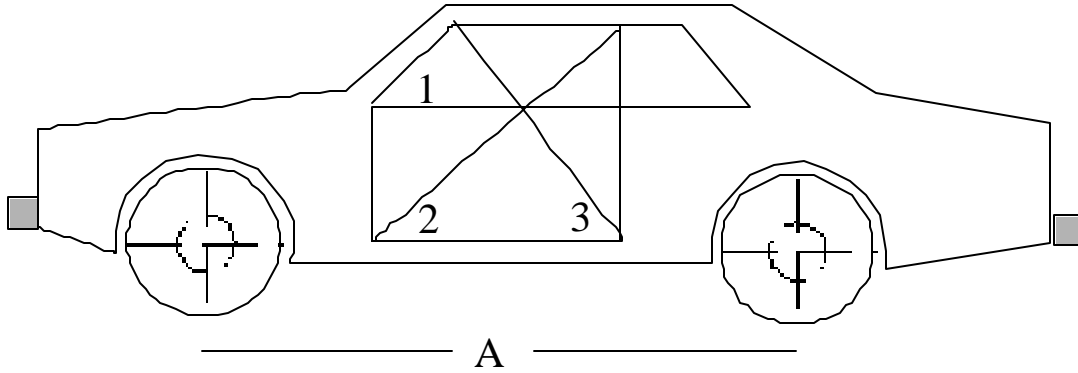


DATA SHEET NO.14 VEHICLE MEASUREMENTS (cont.)

No.		Pre-Test	Post-Test	Difference
X1	Total Length of Vehicle at Centerline	5447	4836	611
X2	Rear Surface of Vehicle to Front of Engine	4825	4556	269
X3	Rear Surface of Vehicle to Firewall	4375	4244	131
X4	Rear Surface of Vehicle to Upper Leading Edge of Right Door	4038	4024	14
X5	Rear Surface of Vehicle to Upper Leading Edge of Left Door	4044	4031	13
X6	Rear Surface of Vehicle to Lower Leading Edge of Right Door	4022	4001	21
X7	Rear Surface of Vehicle to Lower Leading Edge of Left Door	4022	4004	18
X8	Rear Surface of Vehicle to Upper Trailing Edge of Right Door	2831	2817	14
X9	Rear Surface of Vehicle to Upper Trailing Edge of Left Door	2836	2824	12
X10	Rear Surface of Vehicle to Lower Trailing Edge of Right Door	2822	2803	19
X11	Rear Surface of Vehicle to Lower Trailing Edge of Left Door	2829	2809	20
X12	Rear Surface of Vehicle to Bottom of "A" Post of Right Side	3979	3966	13
X13	Rear Surface of Vehicle to Bottom of "A" Post of Left Side	3991	4003	-12
X14	Rear Surface of Vehicle to Firewall, Right Side	4373	4290	83
X15	Rear Surface of Vehicle to Firewall, Left Side	4370	4322	48
X16	Rear Surface of Vehicle to Steering Column	3492	3457	35
X17	Center of Steering Column to "A" Post	285	282	3
X18	Center of Steering Column to Headliner	425	416	9
X19	Rear Surface of Vehicle to Right Side of Front Bumper	5393	4838	555
X20	Rear Surface of Vehicle to Left Side of Front Bumper	5389	4843	546
X21	Length of Engine Block	401	401	0
RD	Rear Surface of Vehicle to Right Side of Dash Panel	3716	3703	13
CD	Rear Surface of Vehicle to Center of Dash Panel	3744	3732	12
LD	Rear Surface of Vehicle to Left Side of Dash Panel	3711	3686	25

All Dimensions in mm

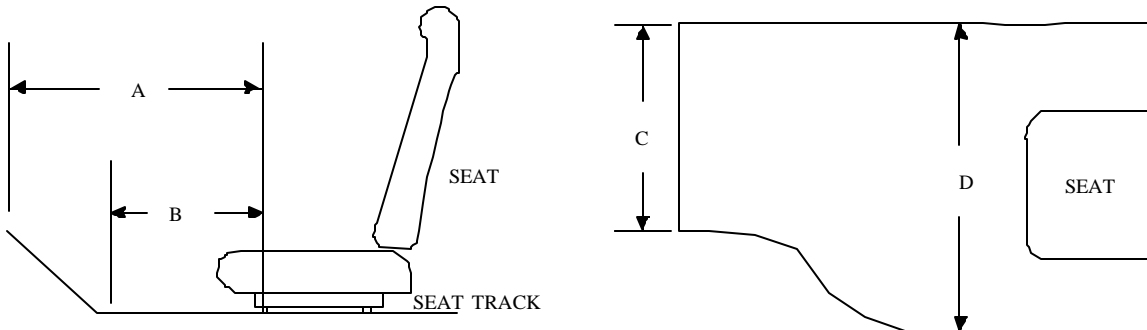
DATA SHEET NO.14 VEHICLE MEASUREMENTS (cont.)  
 VEHICLE INTRUSION MEASUREMENTS  
 DOOR OPENING WIDTH



UNITS (mm)	LEFT			RIGHT		
MEASUREMENT	1	2	3	1	2	3
BEFORE TEST	1137	1530	1199	1142	1521	1202
AFTER TEST	1120	1533	1210	1130	1517	1213
DIFFERENCE	17	-3	-11	12	4	-11

UNITS (mm)	A = WHEELBASE LEFT	A = WHEELBASE RIGHT
BEFORE TEST	3325	3325
AFTER TEST	3262	3260
DIFFERENCE	63	65

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



DRIVER

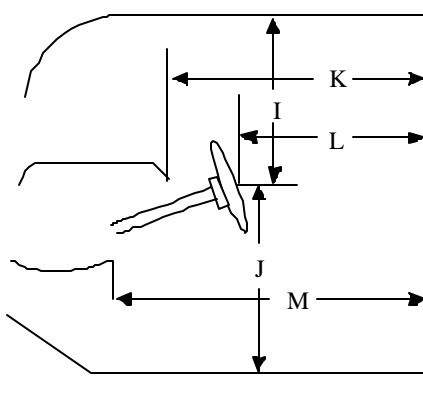
Measurement	Pre-Test	Post-Test	Difference
A	763	692	71
B	556	556	0
C	450	442	8
D	415	404	11

PASSENGER

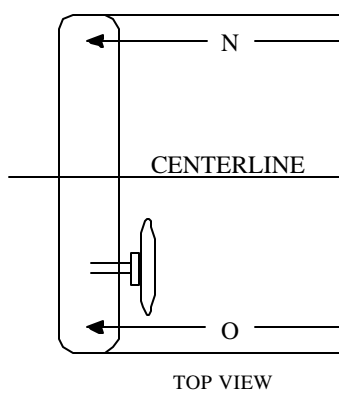
Measurement	Pre-Test	Post-Test	Difference
A	726	624	102
B	485	482	3
C	307	348	-41
D	384	387	-3

Units = mm

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

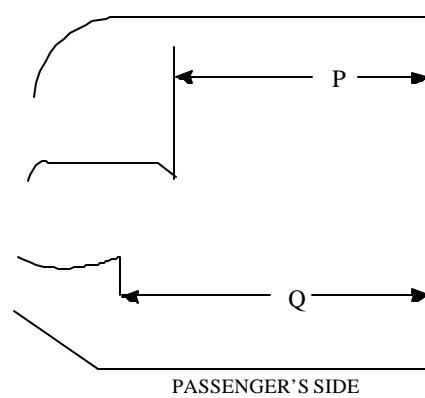


DRIVER'S SIDE



TOP VIEW

MEASUREMENTS  
 FROM C-PILLAR  
 BELT ANCHORAGE

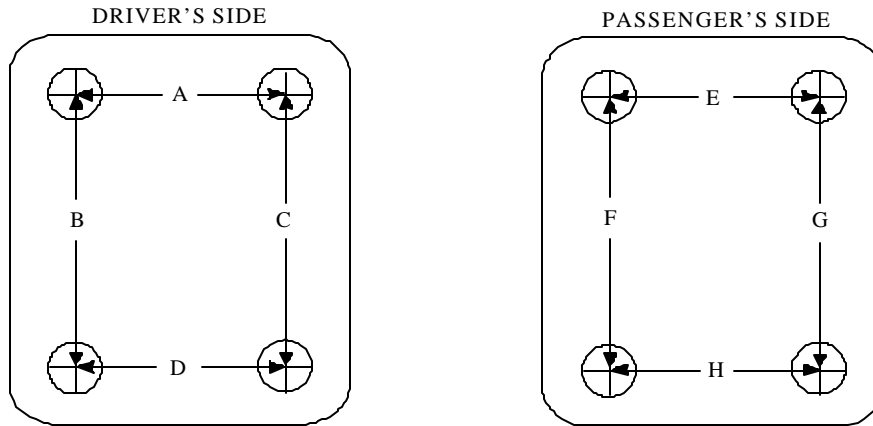


PASSENGER'S SIDE

Measurement	Pre-Test	Post-Test	Difference
I	425	416	9
J	636	695	-59
K	1349	1333	16
L	1145	1113	32
M	1434	1427	7
N	1379	1359	20
O	1364	1342	22
P = K (PASS.)	1392	1337	55
Q = M (PASS.)	1429	1398	31

Units = mm

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

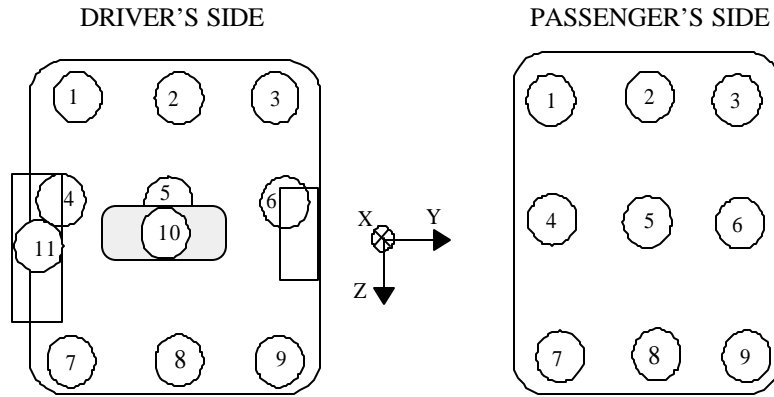


TOP VIEW THROUGH FLOOR PAN

Measurement	Pre-Test	Post-Test	Difference
A	450	442	8
B	438	442	-4
C	447	435	12
D	415	404	11
E	307	348	-41
F	478	472	6
G	456	431	25
H	384	387	-3

Units = mm

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



**Driver Side Toe-pan Measurements**

Toe-pan Location	X Deformation (mm)			Z Deformation (mm)		
	Pre-Test	Post-Test	Difference	Pre-Test	Post-Test	Difference
1	4242	4182	60	-680	-685	5
2	4237	4154	83	-655	-679	24
3	4227	4048	179	-677	-629	-48
4	4164	4124	40	-548	-544	-4
5	4157	4094	63	-531	-526	-5
6	4153	4098	55	-532	-527	-5
7	4025	4009	16	-493	-449	-44
8	4029	4017	12	-468	-413	-55
9	4009	3978	31	-472	-446	-26
10	4018	3949	69	-628	-617	-11
11	4111	4079	32	-553	-537	-16

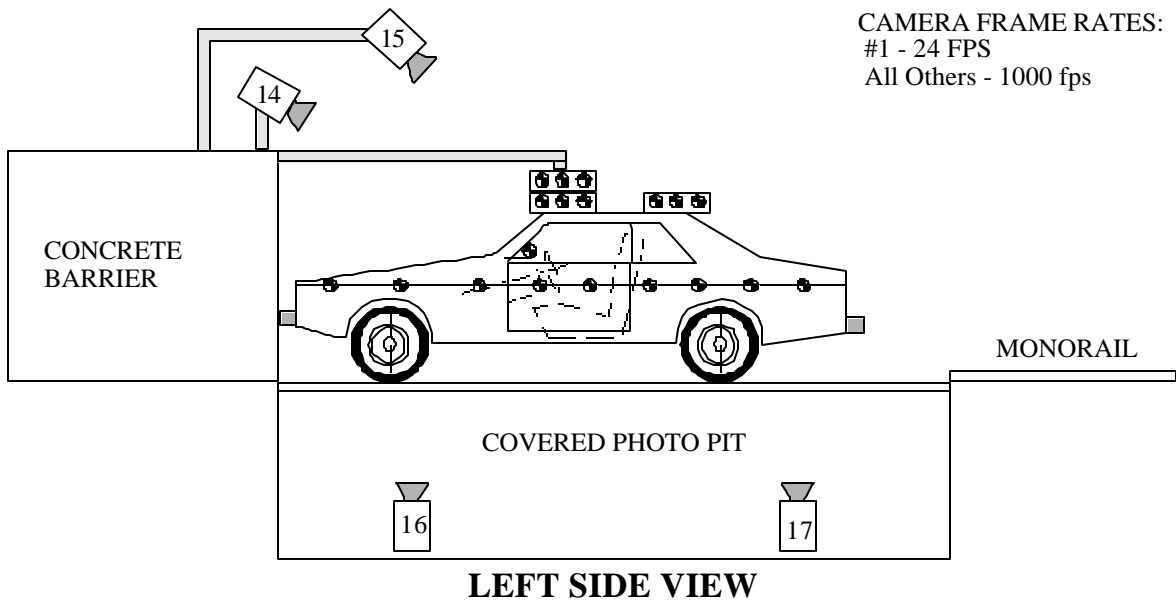
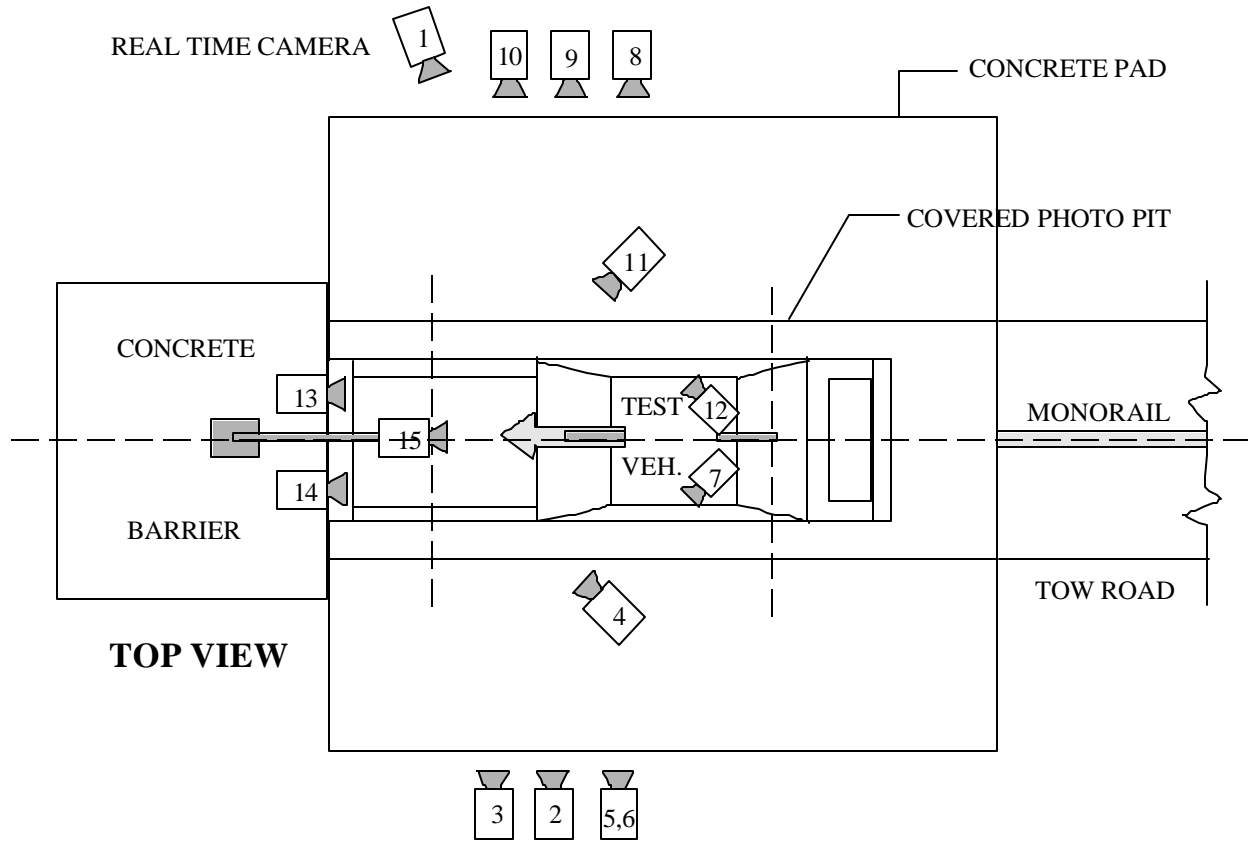
**Passenger Side Toe-pan Measurements**

Toe-pan Location	X Deformation (mm)			Z Deformation (mm)		
	Pre-Test	Post-Test	Difference	Pre-Test	Post-Test	Difference
1	4177	4063	114	-625	-586	-39
2	4194	4077	117	-640	-604	-36
3	4165	4127	38	-657	-618	-39
4	4056	4005	51	-541	-515	-26
5	4086	4048	38	-519	-502	-17
6	4095	4066	29	-523	-479	-44
7	3925	3910	15	-468	-407	-61
8	3954	3934	20	-456	-388	-68
9	3962	3938	24	-459	-396	-63

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

DATA SHEET NO.15 HIGH-SPEED CAMERA LOCATIONS

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



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

NHTSA Test No.:                   M20300                   Vehicle:                   2002 Dodge Dakota Extended Cab Pickup                  

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	7224	1817	1068	-2	6803	12.5	1005
3	Left Side View	6952	1050	1113	-2	6531	25	945
4	Driver and Interior View	7817	2717	2000	-9	-	25	1010
5	Steering Column (Bottom)	8047	2054	1170	-3	7626	25	1010
6	Steering Column (Top)	8047	2054	1777	-7	7626	25	1010
7	Left Belt	-	-	-	-	-	-	-
8	Overall Right Side	7390	1998	1070	-3	7701	12.5	1005
9	Right Side View	8316	1174	1080	-2	8627	25	1010
10	Right Passenger View	7855	1717	1435	-2	8166	35	1000
11	Passenger and Interior View	7730	2807	1982	-5	-	25	1005
12	Right Belt	-	-	-	-	-	-	-
13	Passenger Front View	620	-92	1987	-30	-	13	1000
14	Driver Front View	620	-92	1987	-30	-	13	1000
15	Windshield View	0	-530	3374	-50	-	13	1000
16	Pit View of Engine	0	615	-3048	90	-	13	980
17	Pit View of Fuel Tank	0	2940	-3048	90	-	13	1000

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

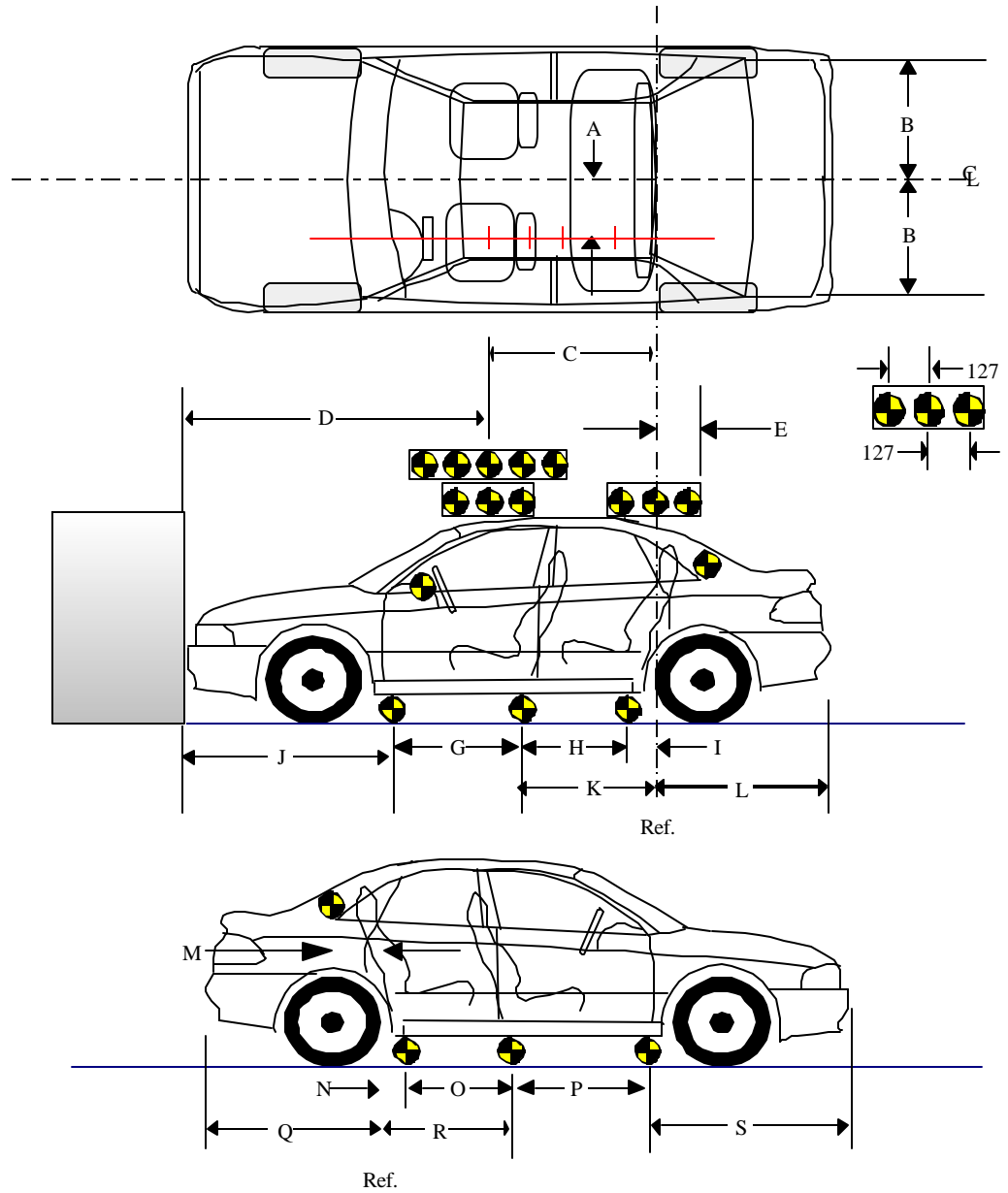
Y = film plane to impact location                      N.T. indicates No Timing

Z = film plane to ground

DATA SHEET NO. 16 VEHICLE REFERENCE PHOTO TARGET LOCATIONS

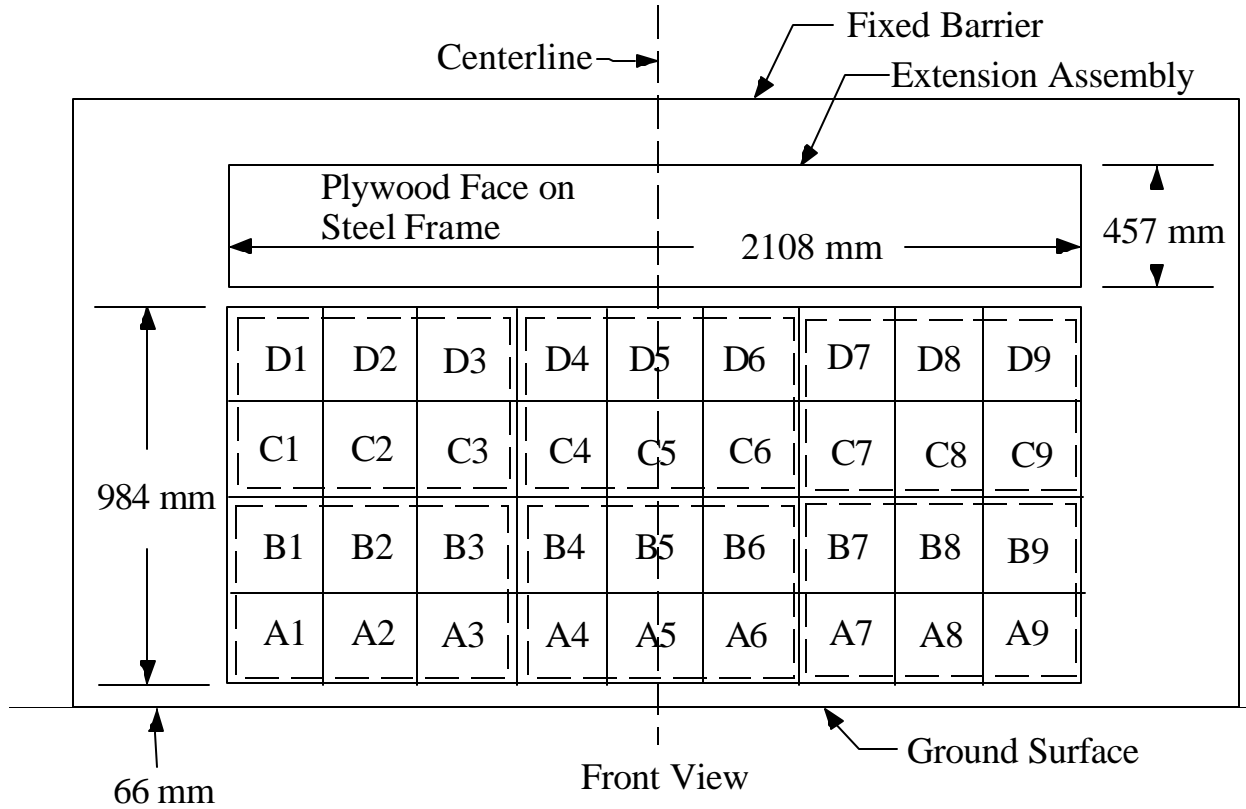
(Dimensions in millimeters)

A	387
B	732
C	914
D	2095
E	1188
F	1206
G	1087
H	1092
I	205
J	1443
K	1297
L	1621
M	1197
N	202
O	1087
P	1090
Q	1613
R	1289
S	1455



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.:   M20300;   Test Date:   May 24, 2002;   Technician:   Patrick MacDiarmid  

Vehicle Model Year/Make/Model:   2002 Dodge Dakota Extended Cab Pickup  

A. No. of vent holes:           0           -Driver           2           -Passenger

B. Size of vent holes: (mm<sup>2</sup>)           N/A           -Driver           1963.5           -Passenger

C. Total vent area: (mm<sup>2</sup>)           N/A           -Driver           3927           -Passenger

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

Driver:           500           -Height;           560           -Width;           350           -Depth

Passenger:           650           -Height;           520           -Width;           610           -Depth

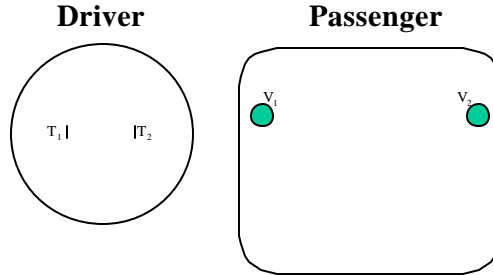
E. Is the air bag tethered?

Driver:           X           -Yes;           -           -No; If yes, record length of tether-           225          

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

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

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



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

Driver:   Air bag: P5204597-00GG10     CVHN3JSABFK  

  Generator: TUVDM1062X1101     P5GK53DX9AD  

Passenger:   Air bag: P5202877-00EE13     CX2N2DSBEEV  

  Generator: P5GT03XDVAA     TRFPM1022S0610     CRFN4C4SAXM

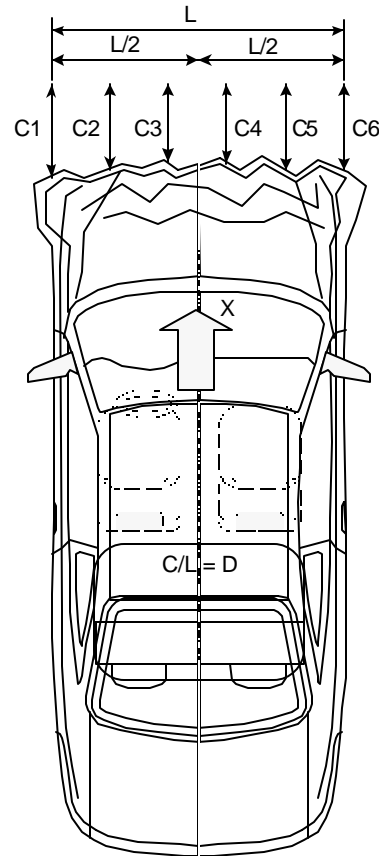
DATA SHEET NO. 19 ACCIDENT INVESTIGATION DIVISION DATA

FOR FRONTAL BARRIER IMPACT

Vehicle Make/Model/Body Style: Dodge Dakota Extended Cab Pickup  
 NHTSA Test No.: M20300 VIN: 1B7GL12X72S660632  
 Model Year: 2002 Build Date: 4/02 Test Date: May 24, 2002  
 Vehicle Size Category: Pick-Up Test Weight: 2038.5 kg  
 Vehicle Wheelbase: 3325 mm; Front Overhang: 876 mm; Overall Width: 1819 mm  
 Collision Deformation Classification (CDC) Code: 12FDEW 3

Crush Depth Dimensions

	PRE (mm)	POST (mm)	DIFF (mm)
C1 =	5295	4892	403
C2 =	5412	4854	558
C3 =	5442	4848	594
C4 =	5443	4851	592
C5 =	5414	4840	574
C6 =	5296	4858	438



Midpoint of Damage: D = Vehicle Centerline (Longitudinal)

Length of Damaged Region: L1= 1616 mm  
 L2= 808.0 mm  
 L5= 323.2 mm

**APPENDIX A**  
**PHOTOGRAPHS**

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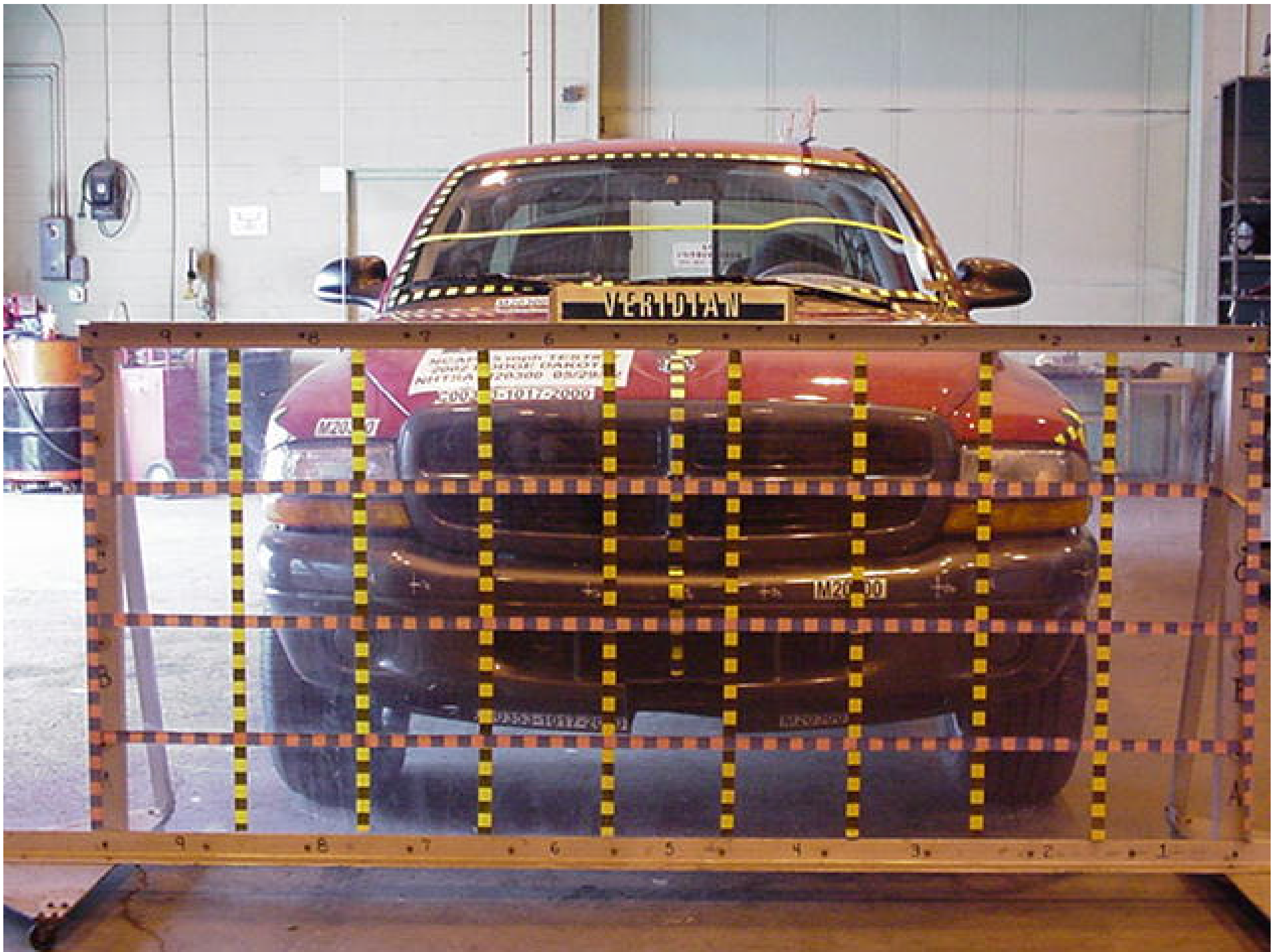


Figure A-1 LOAD CELL LOCATIONS



Figure A-2 PRE-TEST FRONT VIEW



Figure A-3 POST-TEST FRONT VIEW



Figure A-4 PRE-TEST LEFT SIDE VIEW



Figure A-5 POST-TEST LEFT SIDE VIEW

Photograph taken after technicians filmed door opening. The doors remained closed and latched during the event and were operable without the use of tools after the event.



Figure A-6 PRE-TEST RIGHT SIDE VIEW



Figure A-7 POST-TEST RIGHT SIDE VIEW



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



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

Photograph taken after technicians filmed door opening. The doors remained closed and latched during the event and were operable without the use of tools after the event.



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



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

Photograph taken after technicians filmed door opening. The doors remained closed and latched during the event and were operable without the use of tools after the event.



Figure A-12 PRE-TEST WINDSHIELD VIEW



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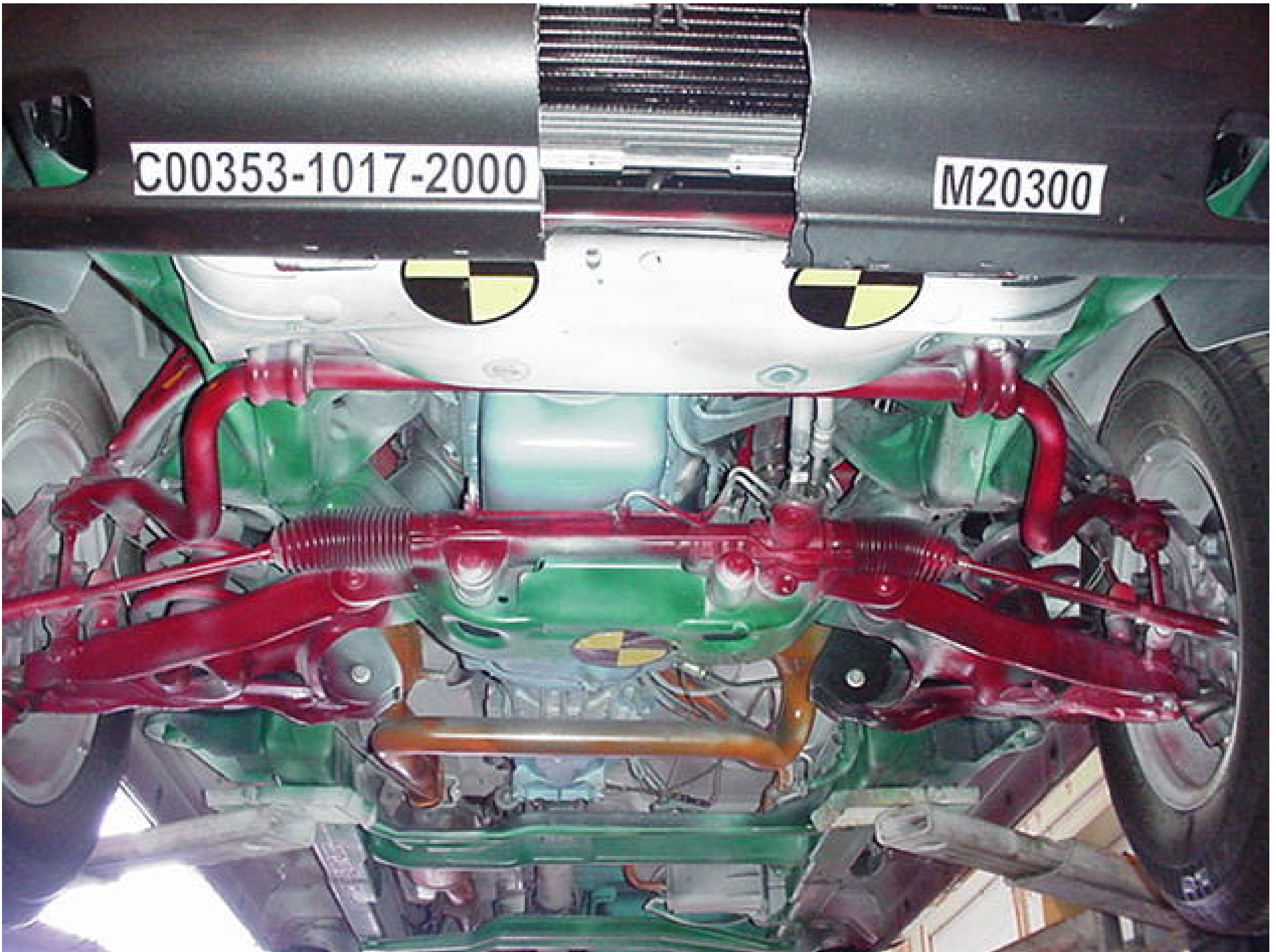
Figure A-13 POST-TEST WINDSHIELD VIEW



Figure A-14 PRE-TEST ENGINE COMPARTMENT VIEW



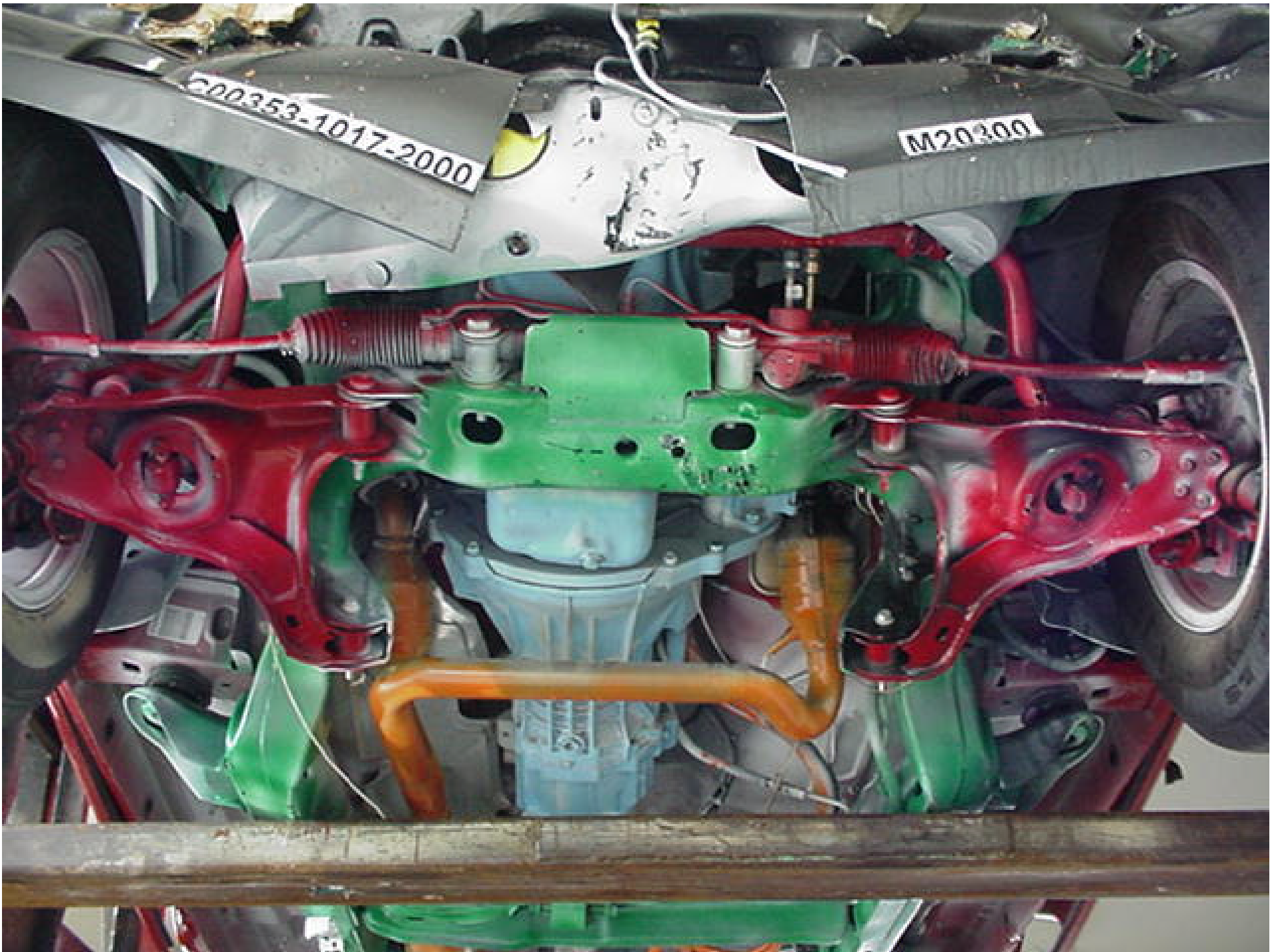
Figure A-15 FUEL CAP VIEW



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Figure A-16 PRE-TEST FRONT UNDERBODY VIEW



A-19

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Figure A-17 POST-TEST FRONT UNDERBODY VIEW

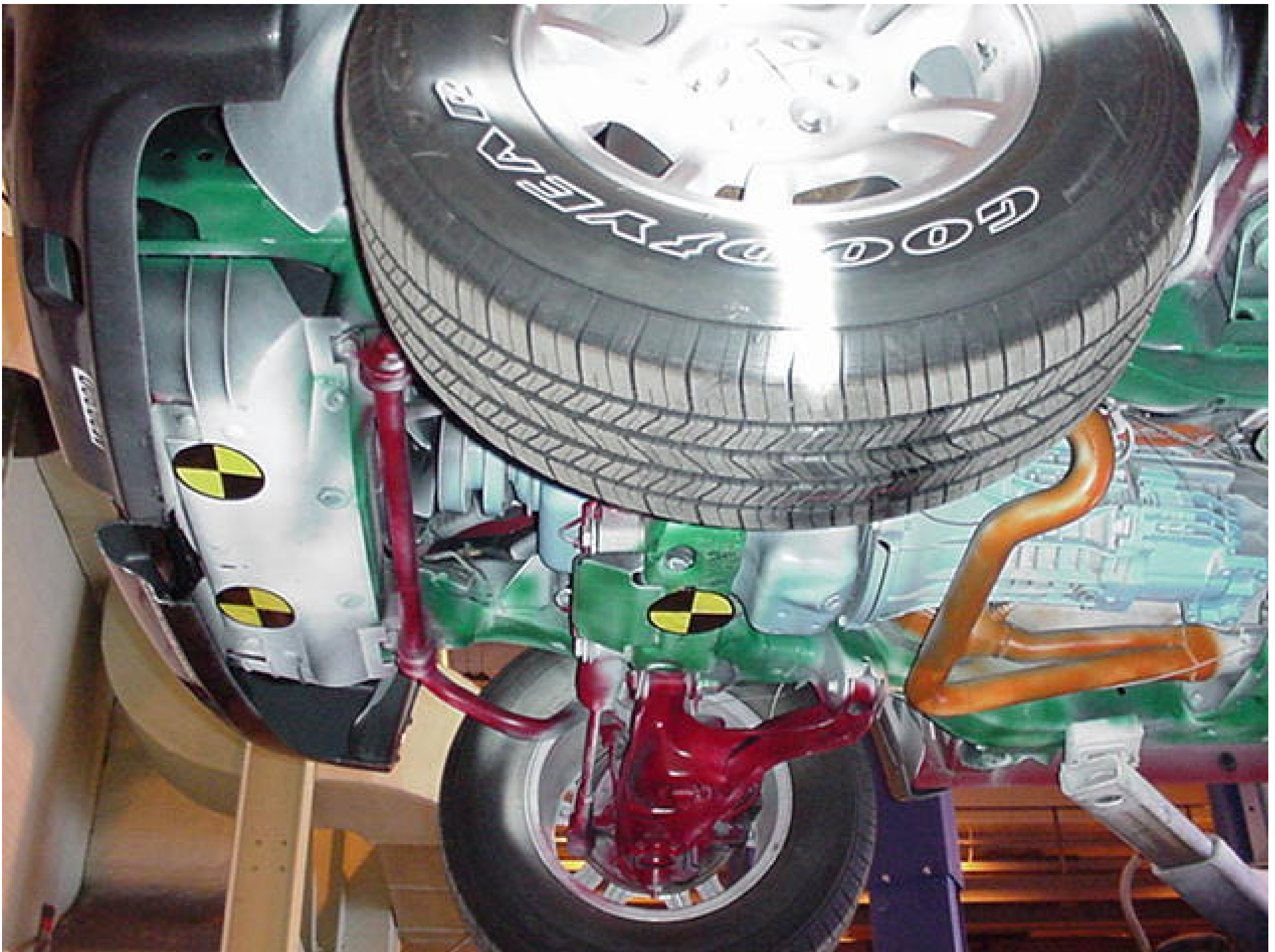


Figure A-18 PRE-TEST FRONT SIDE UNDERBODY VIEW

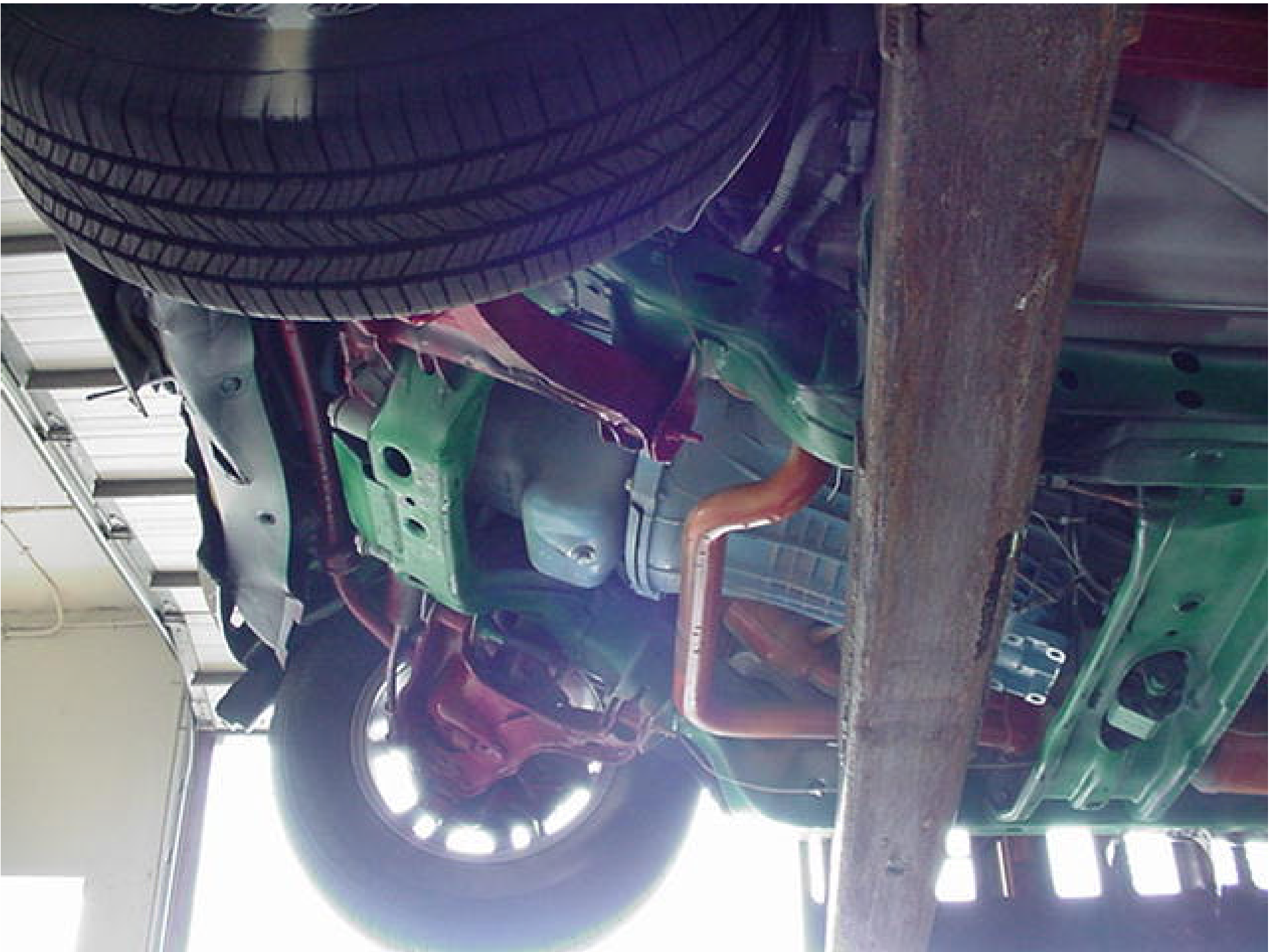


Figure A-19 POST-TEST FRONT SIDE UNDERBODY VIEW

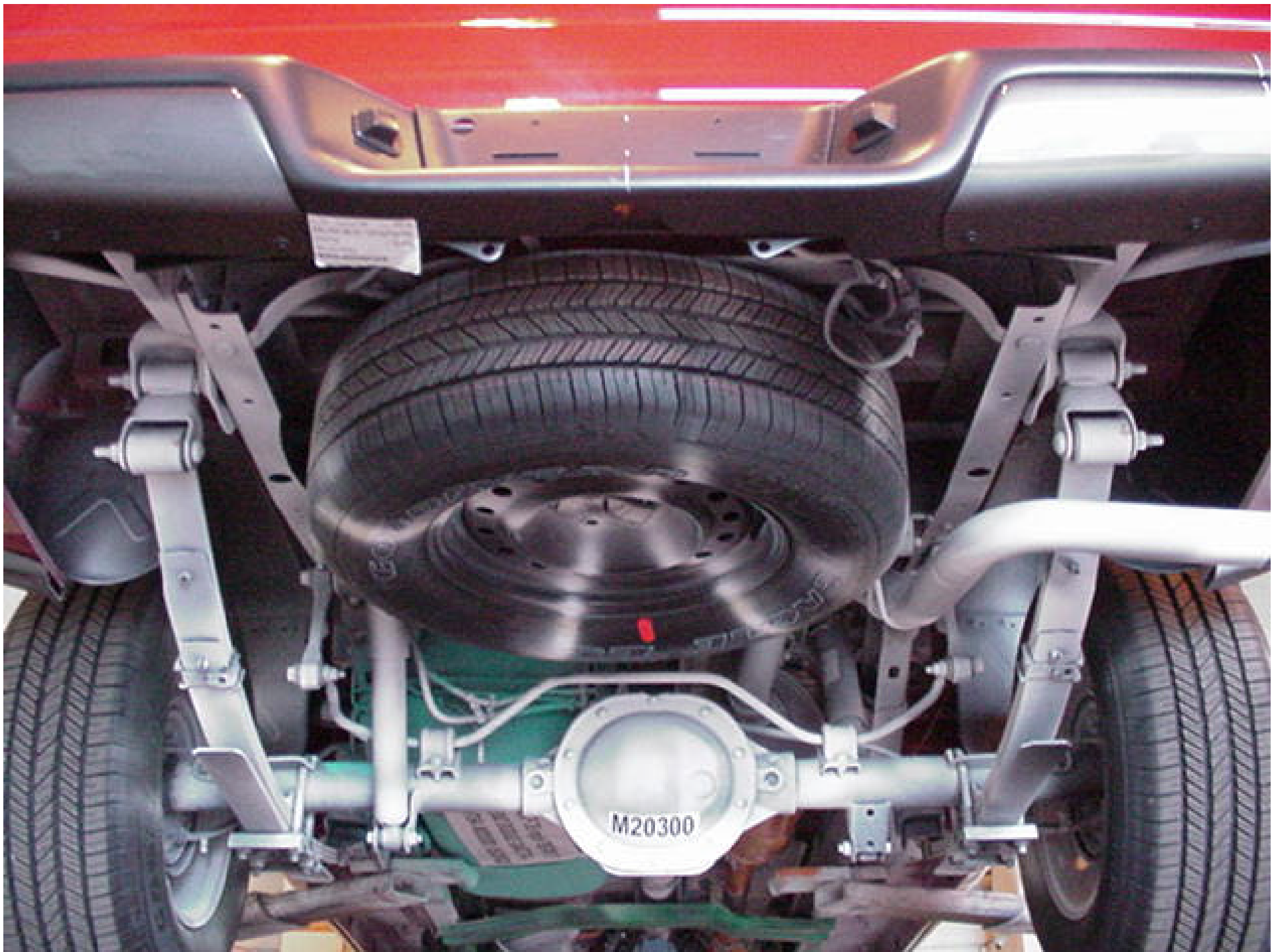


Figure A-20 PRE-TEST REAR UNDERBODY VIEW

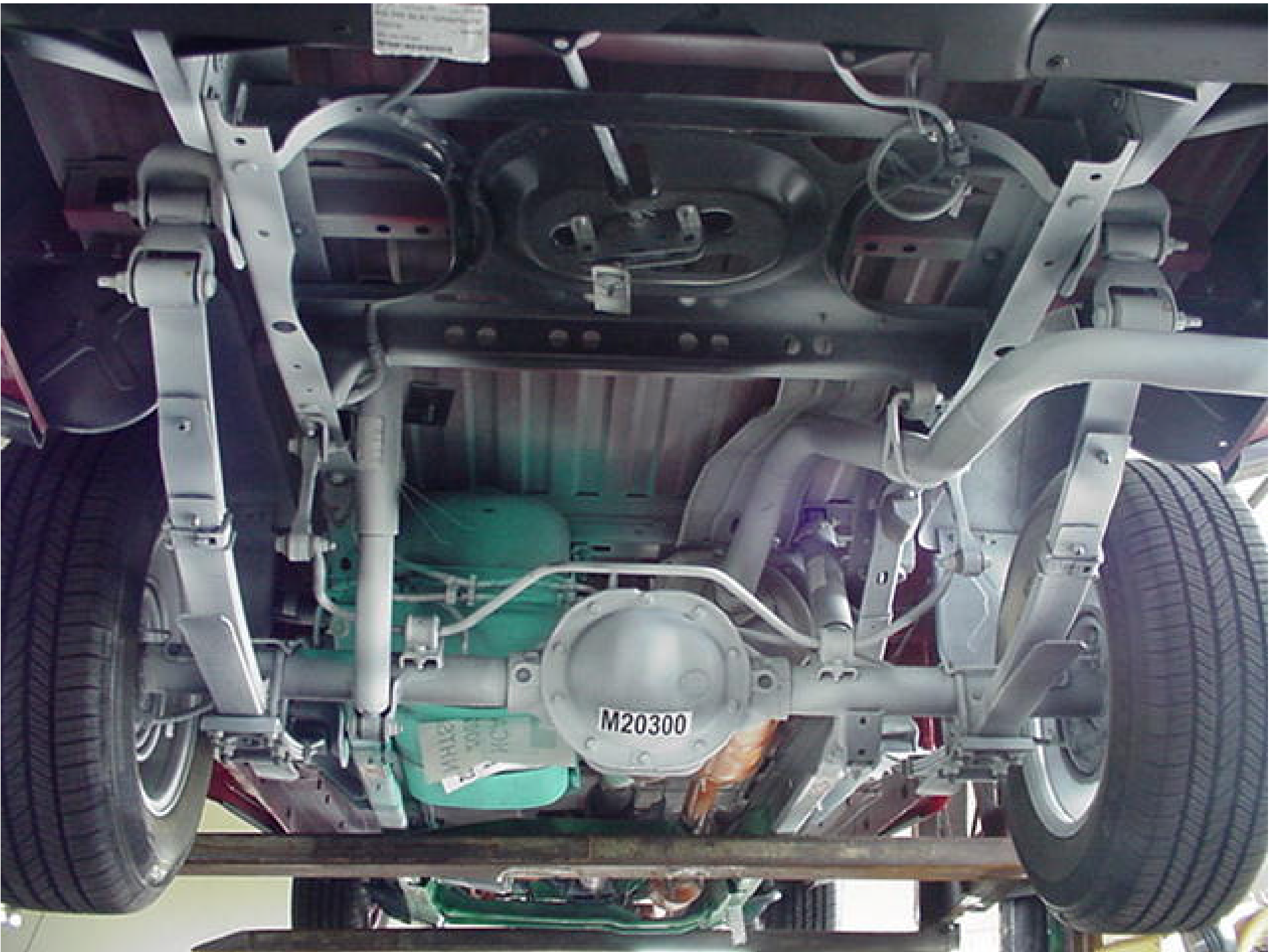


Figure A-21 POST-TEST REAR UNDERBODY VIEW



Figure A-22 PRE-TEST DRIVER POSITION VIEW



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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



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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



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Figure A-33 POST-TEST PASSENGER HEAD LOCATION



A-36

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Figure A-34 PRE-TEST DRIVER FLOOR PAN VIEW



A-37

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Figure A-35 POST-TEST DRIVER FLOOR PAN VIEW



A-38

8642-NCAP-17

Figure A-36 PRE-TEST PASSENGER FLOOR PAN VIEW



A-39

8642-NCAP-17

Figure A-37 POST-TEST PASSENGER FLOOR PAN VIEW



Figure A-38 ROLLOVER VIEW

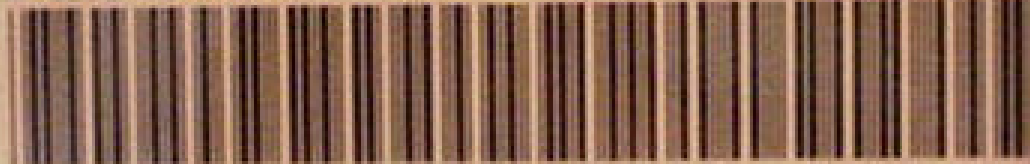


Figure A-39 IMPACT VIEW

MFD BY	DAIMLERCHRYSLER CORPORATION	DATE OF MFR	4-82	GWR	2427 KG(05350 LB)
GWR FRONT	WITH TIRES	RIMS AT	COLD		
1407 KG(3100 LB)	P215/75R15	15X7	241 KPA(35 PSI)		
GWR REAR	WITH TIRES	RIMS AT	COLD		
1437 KG(3166 LB)	P215/75R15	15X7	241 KPA(35 PSI)		

THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDERAL MOTOR VEHICLE SAFETY AND THEFT PREVENTION STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE.

VIN: 1B7GL12X72S660632    TYPE: TRUCK    SINGLE X DUAL



MDH: 042316 756AB PHT:PR4    VEHICLE MADE IN U.S.A.    TRM:KSDU 4648503

A-42

8642-NCAP-17

Figure A-40 VEHICLE PLACARD

**APPENDIX B**

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

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

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

## DATA CHANNEL FILTER CLASS SUMMARY

NHTSA TEST NO.

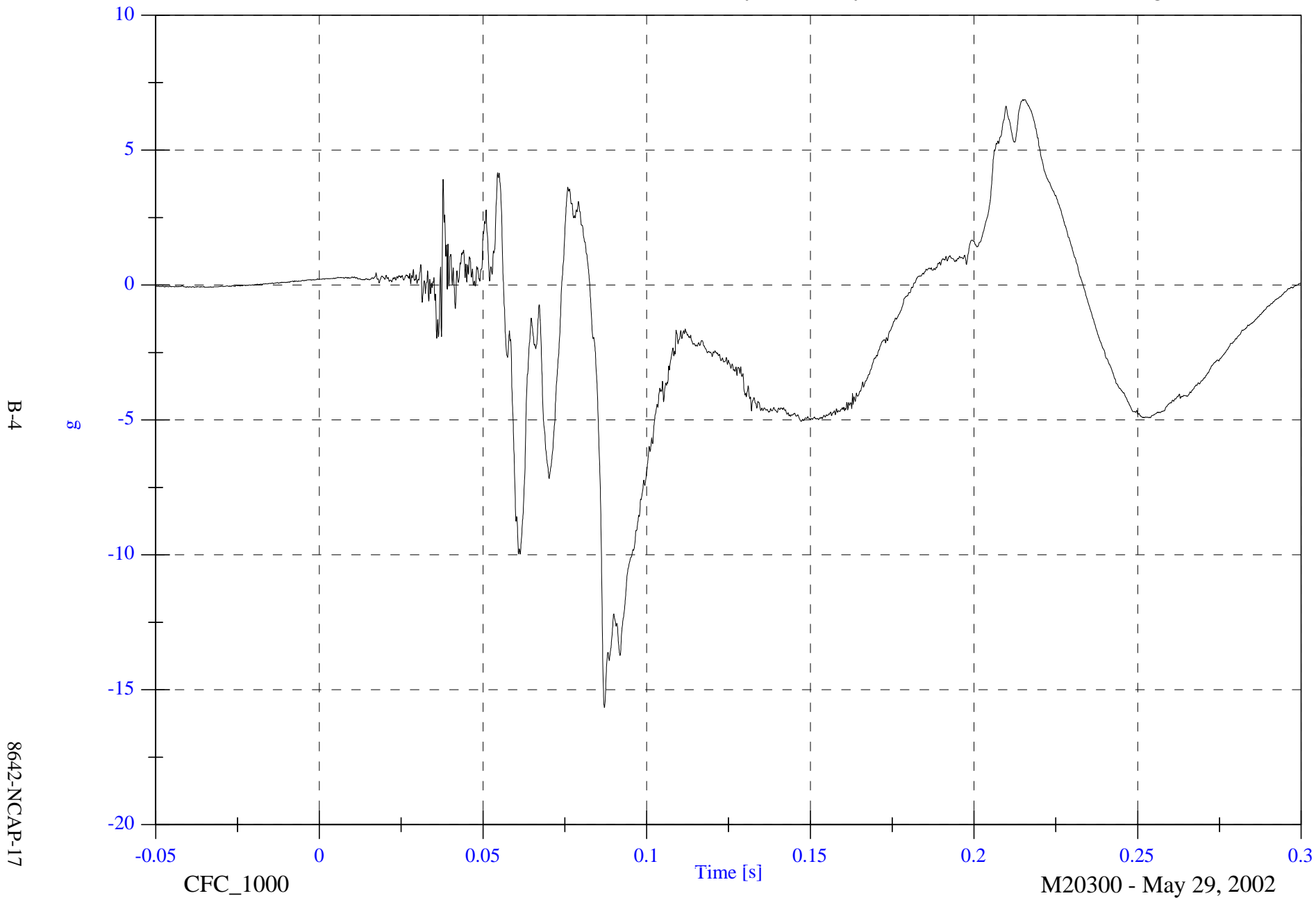
<b>DATA TYPE</b>	<b>SAE FILTER CLASS (Hz)</b>
Dummy Head Accelerations	1000
Dummy Chest Accelerations	180
Dummy Chest Displacements	600
Dummy Femur Forces	600
Dummy Belt Loads	60
Dummy Belt Displacements	180
Dummy Neck Forces	1000
Dummy Neck Moments	600
Vehicle Accelerations	60
Vehicle Velocity Integrations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

2002 NCAP Test 17 2002 Dodge Dakota

P1 Head 9 Array X Arm Ay

Max: 6.9 [g] at 0.215 [s]

Min: -15.7 [g] at 0.087 [s]



B-4

8642-NCAP-17

CFC\_1000

Time [s]

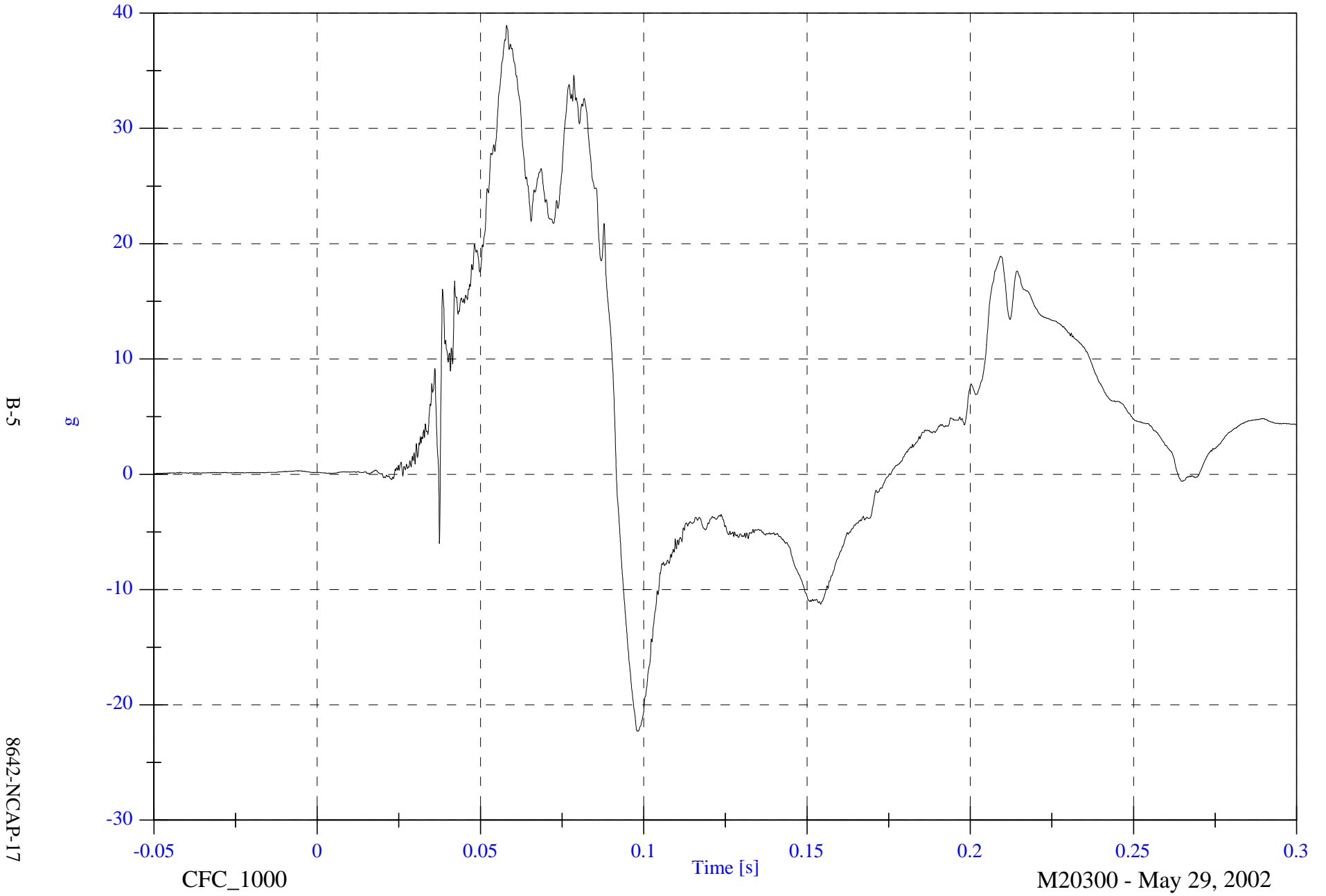
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

P1 Head 9 Array X Arm Az

Max: 38.9 [g] at 0.058 [s]

Min: -22.3 [g] at 0.098 [s]

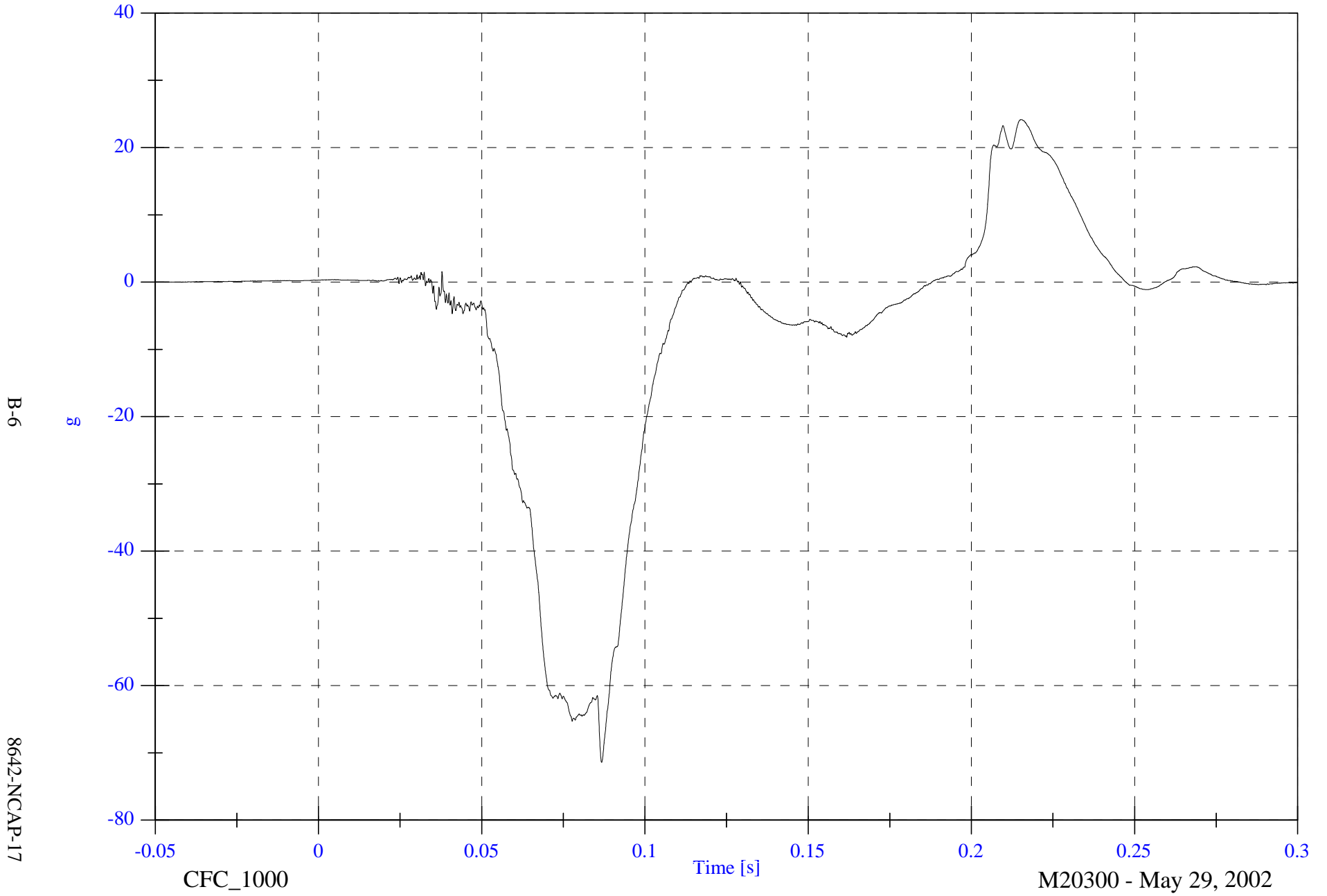


2002 NCAP Test 17 2002 Dodge Dakota

P1 Head 9 Array Y Arm Ax

Max: 24.2 [g] at 0.215 [s]

Min: -71.4 [g] at 0.087 [s]



B-6

8642-NCAP-17

CFC\_1000

Time [s]

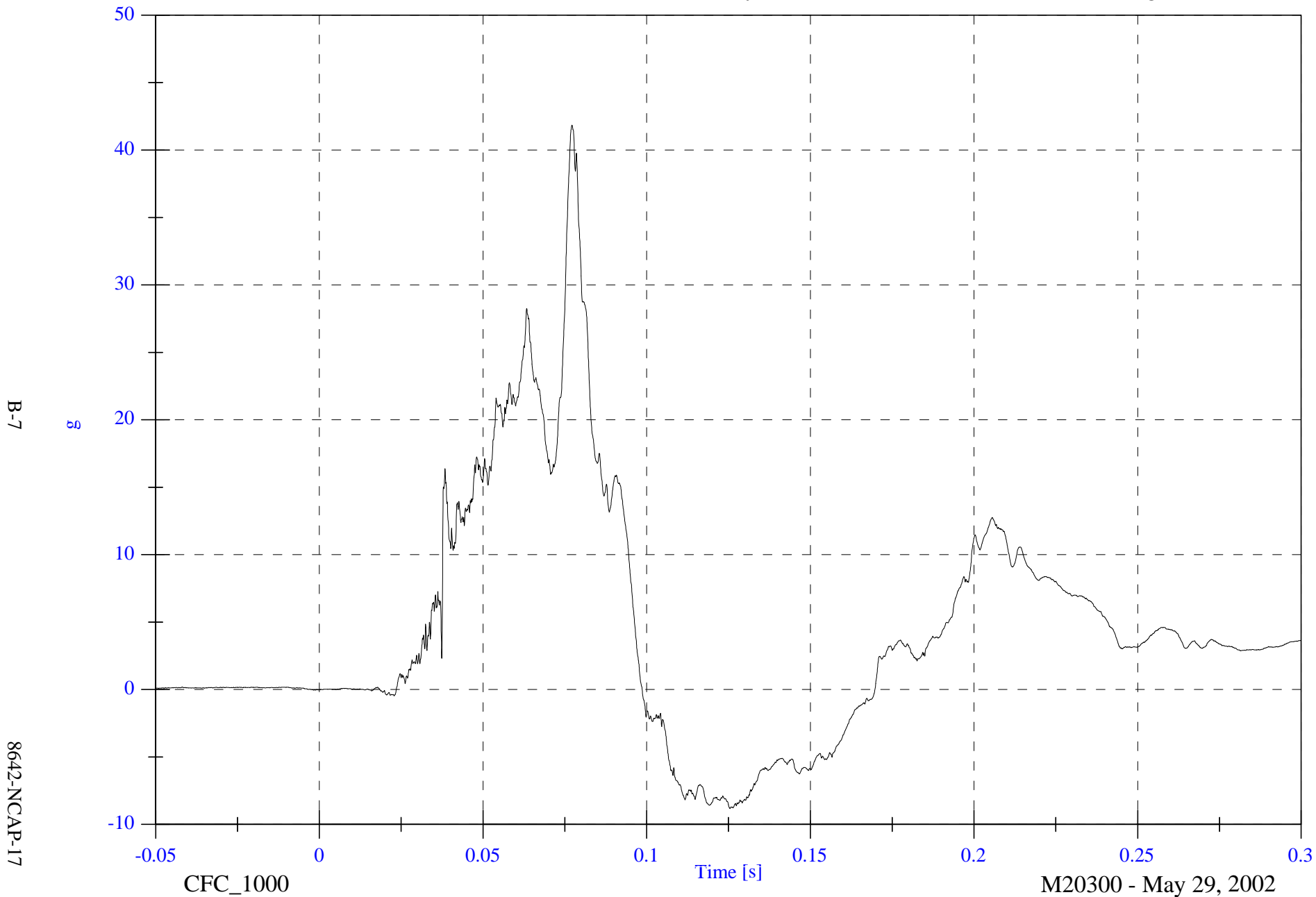
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 41.9 [g] at 0.077 [s]

P1 Head 9 Array Y Arm Az

Min: -8.8 [g] at 0.125 [s]



B-7

8642-NCAP-17

CFC\_1000

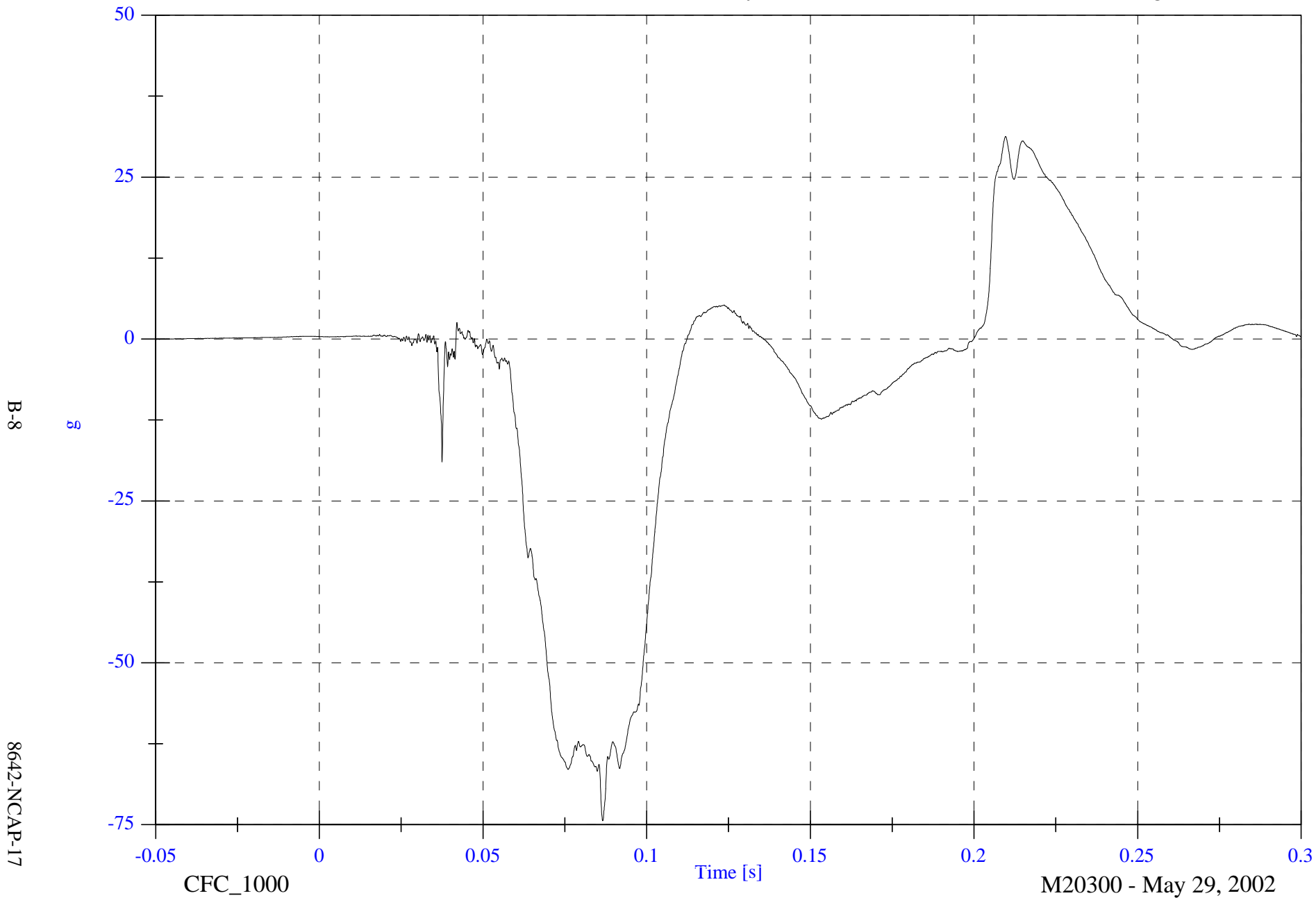
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

P1 Head 9 Array Z Arm Ax

Max: 31.3 [g] at 0.210 [s]

Min: -74.4 [g] at 0.087 [s]



B-8

8642-NCAP-17

CFC\_1000

Time [s]

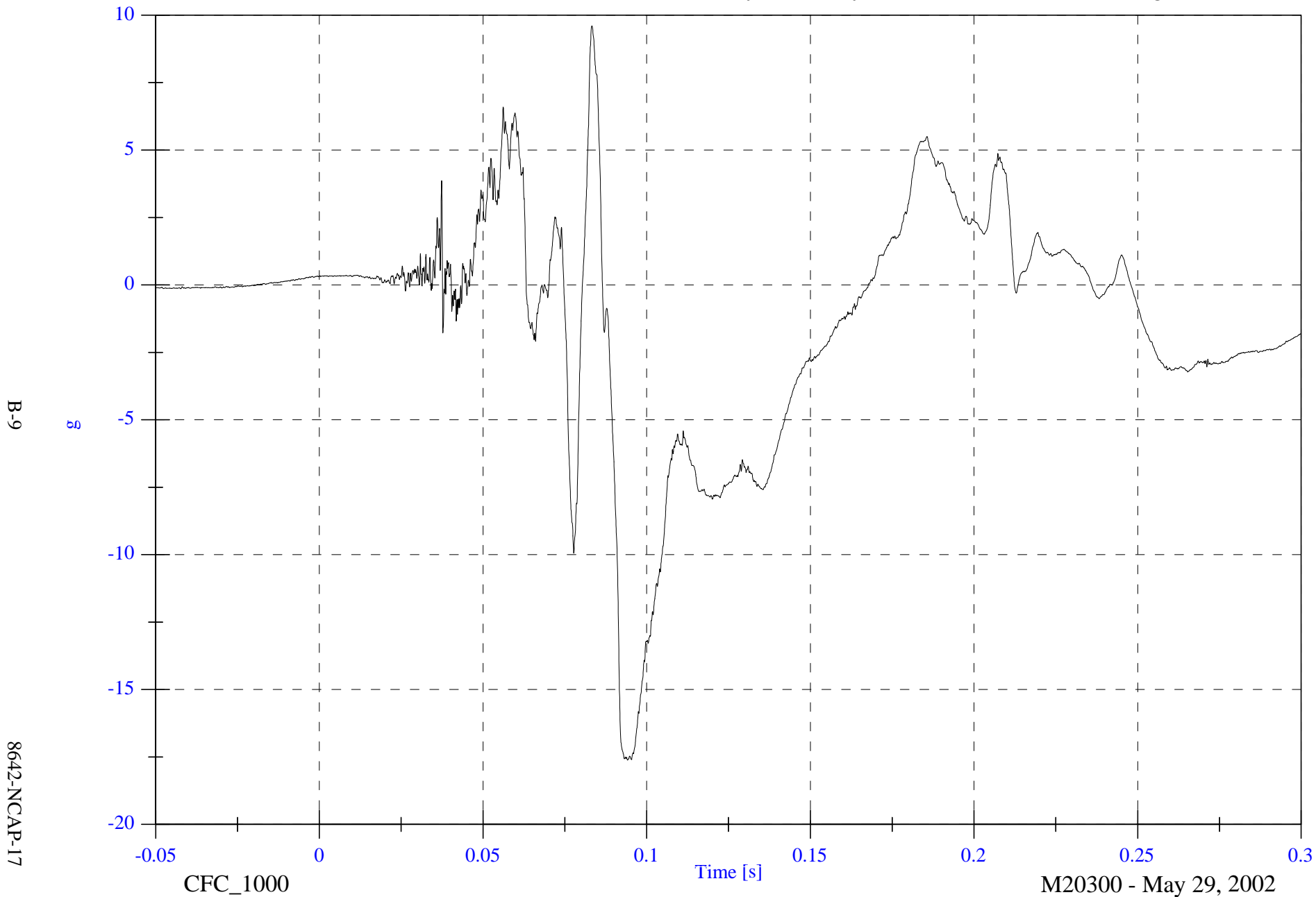
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 9.6 [g] at 0.083 [s]

P1 Head 9 Array Z Arm Ay

Min: -17.6 [g] at 0.094 [s]



B-9

8642-NCAP-17

CFC\_1000

Time [s]

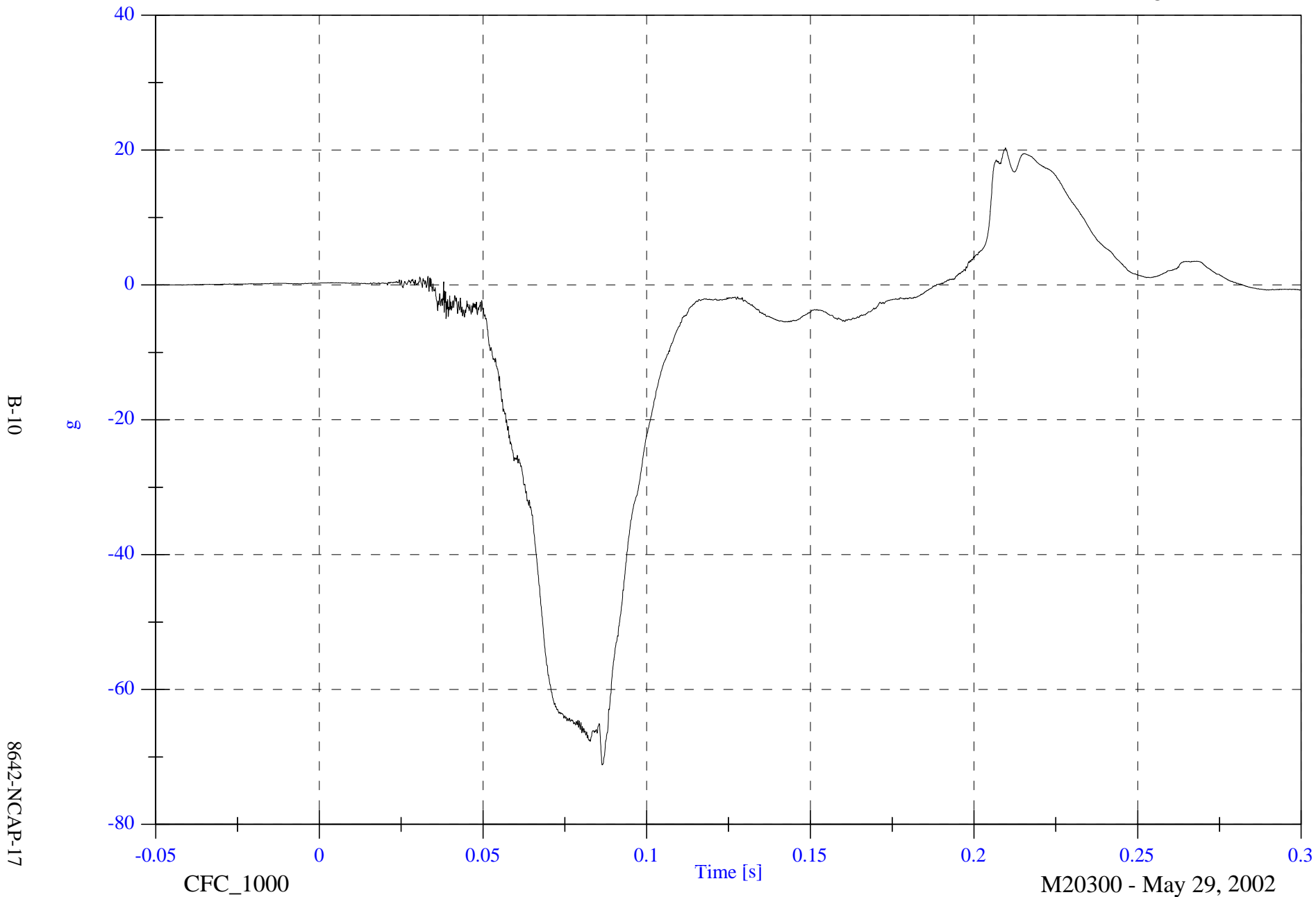
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 20.3 [g] at 0.210 [s]

Min: -71.2 [g] at 0.086 [s]

P1 Head CG x



B-10

8642-NCAP-17

CFC\_1000

Time [s]

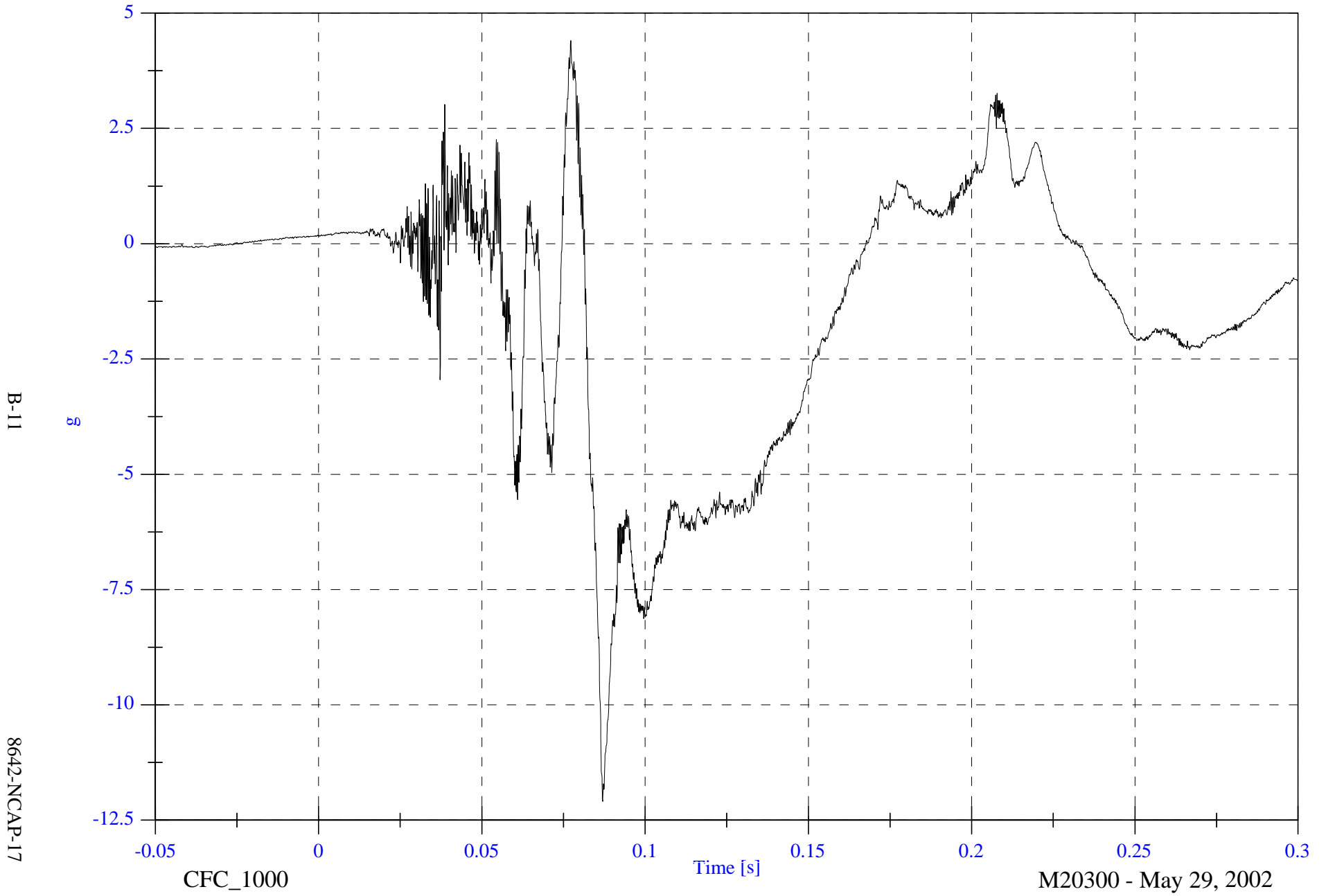
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 4.4 [g] at 0.077 [s]

Min: -12.1 [g] at 0.087 [s]

P1 Head CG y

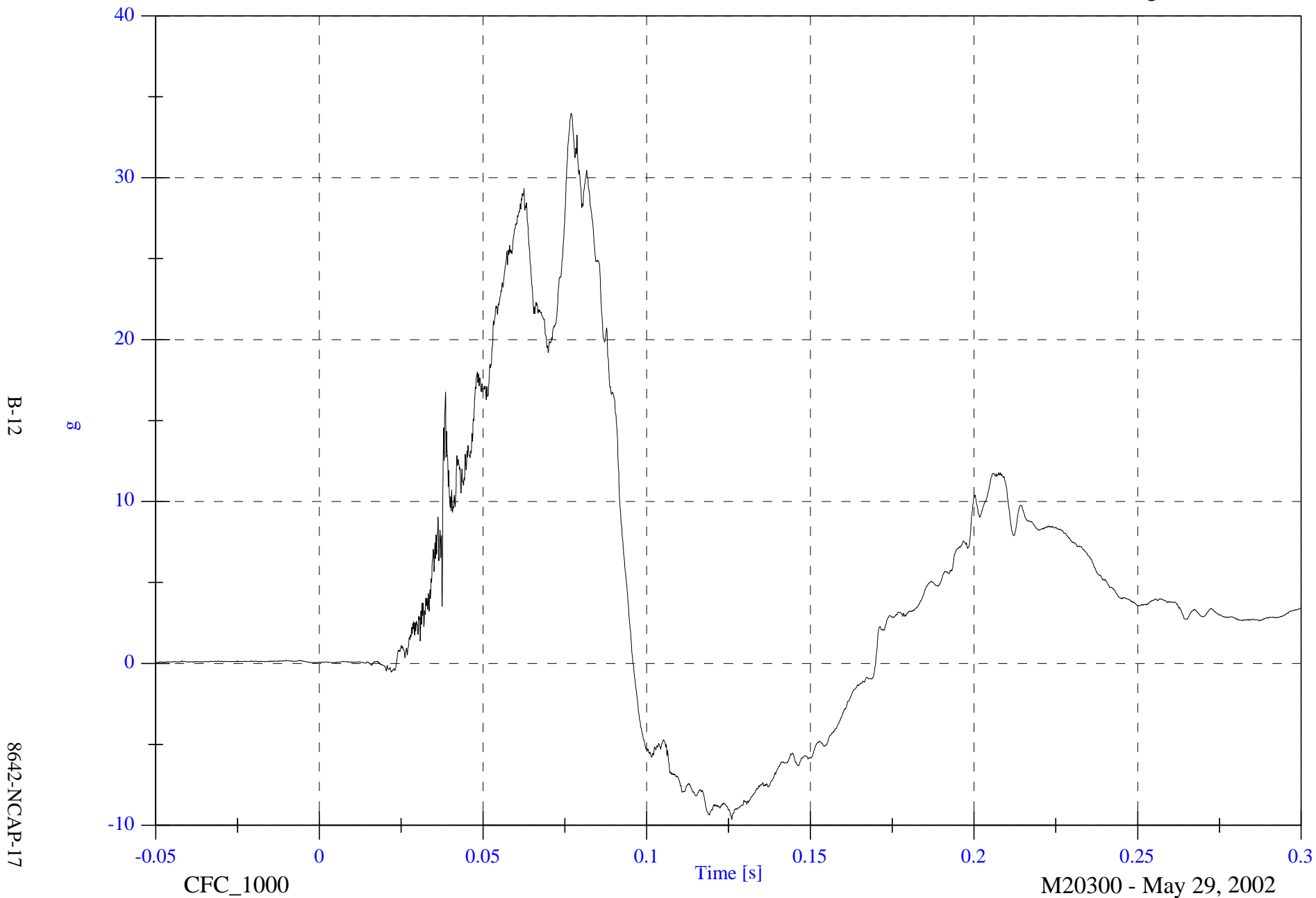


2002 NCAP Test 17 2002 Dodge Dakota

Max: 34.0 [g] at 0.077 [s]

Min: -9.6 [g] at 0.126 [s]

P1 Head CG z



B-12

8642-NCAP-17

CFC\_1000

M20300 - May 29, 2002

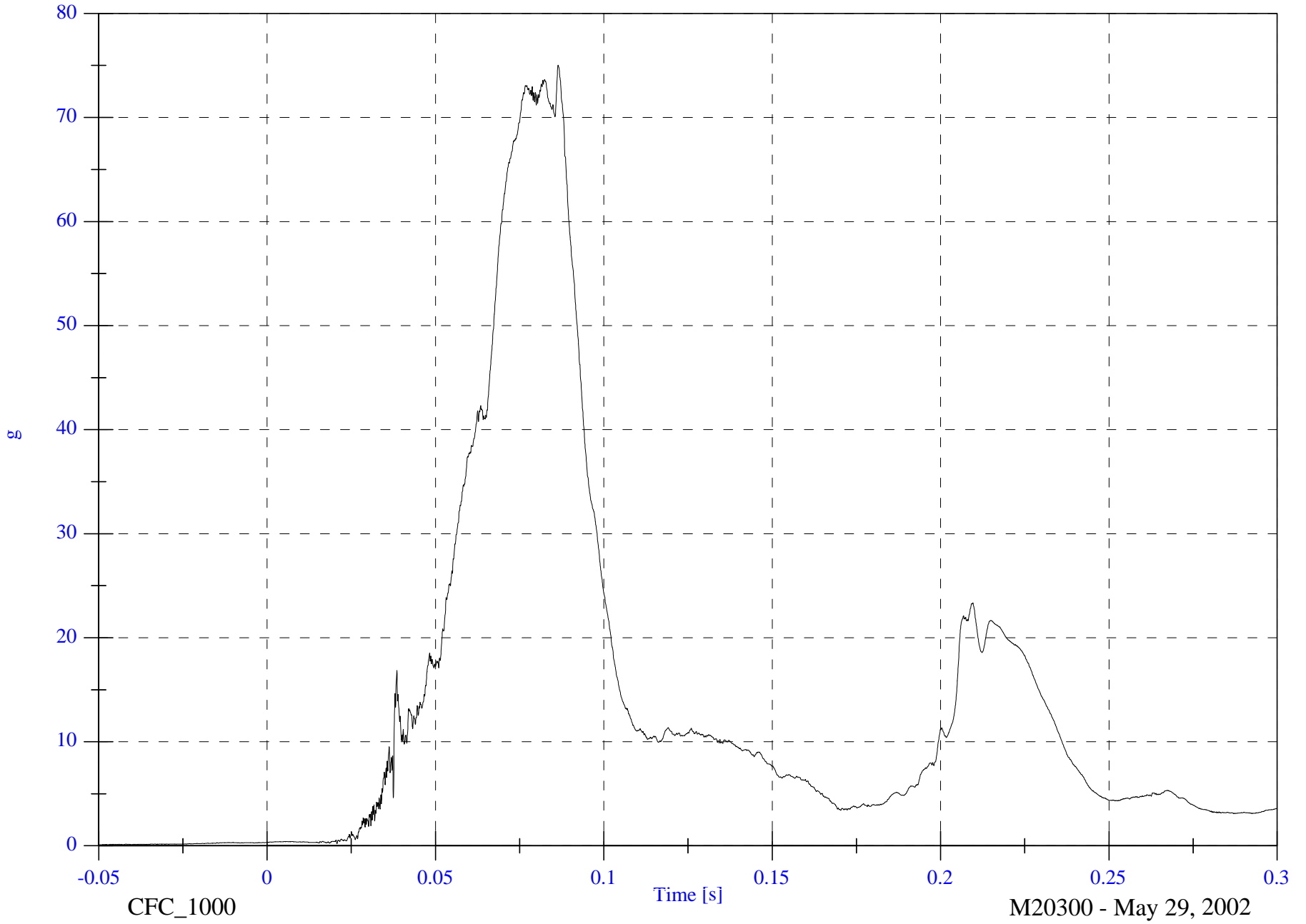
2002 NCAP Test 17 2002 Dodge Dakota

Max: 75.0 [g] at 0.086 [s]  
Min: 0.1 [g] at -0.049 [s]

P1 Head CG Resultant

B-13

8642-NCAP-17



CFC\_1000

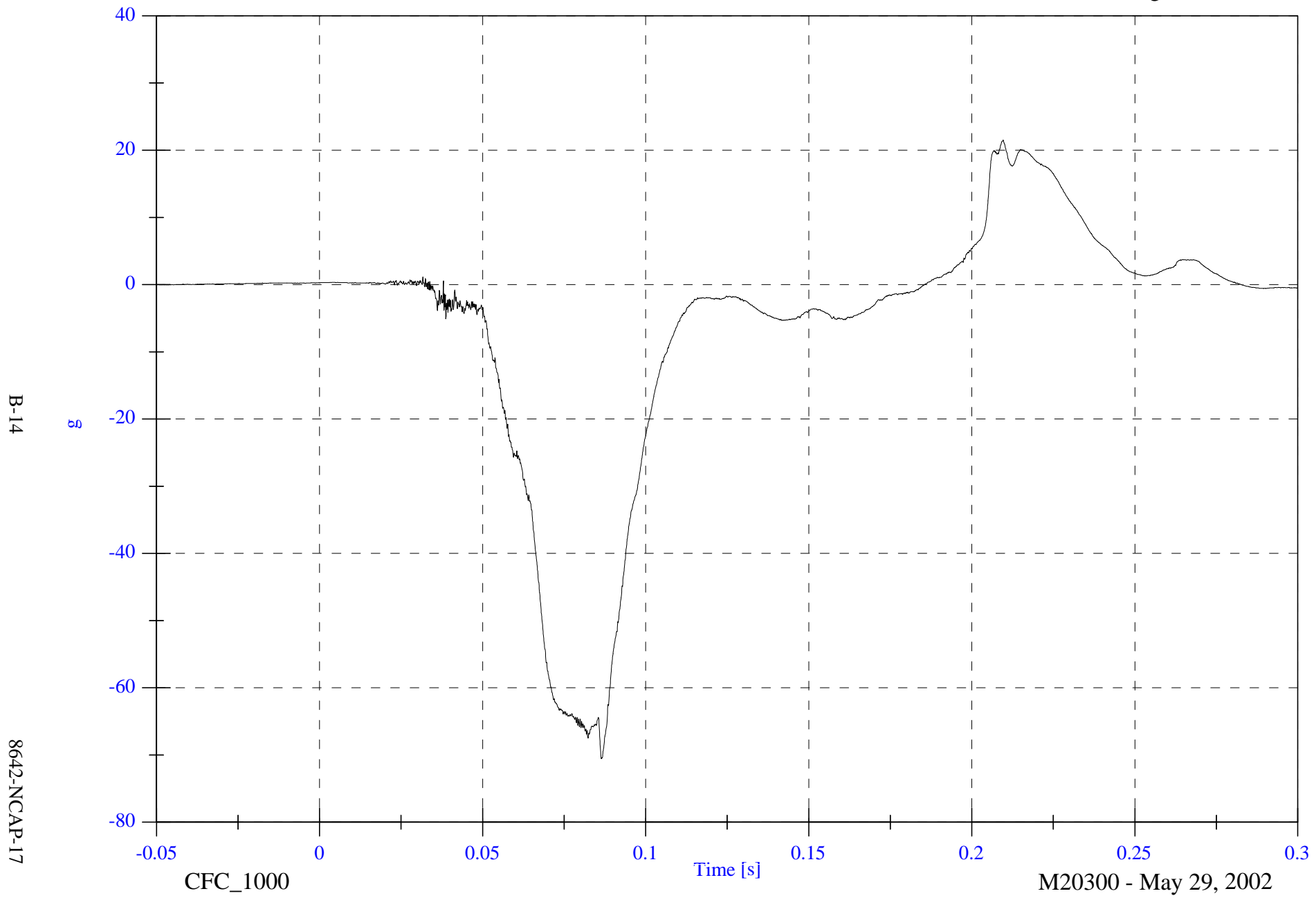
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

P1 Head CG Red x

Max: 21.5 [g] at 0.210 [s]

Min: -70.5 [g] at 0.086 [s]



B-14

8642-NCAP-17

CFC\_1000

Time [s]

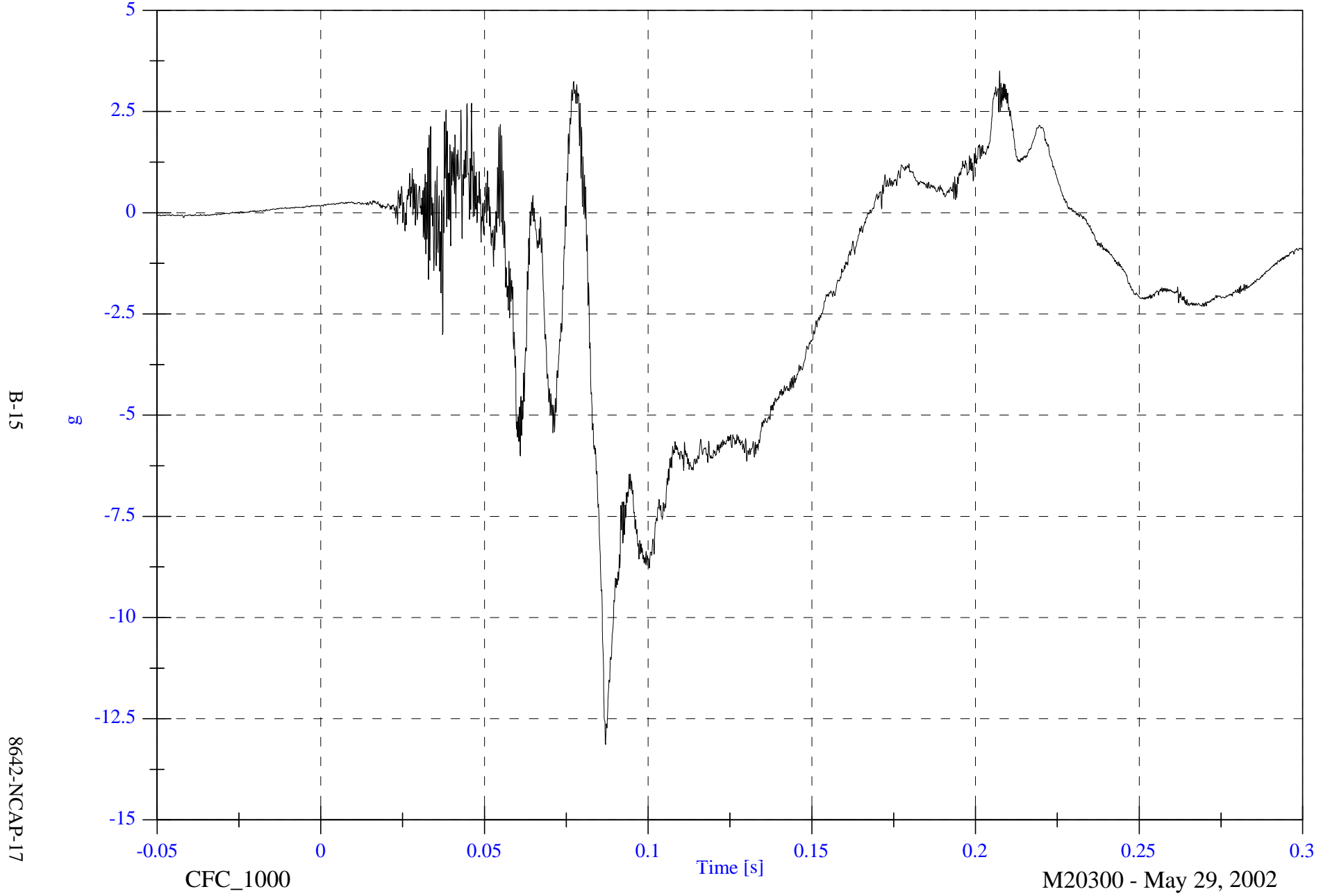
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 3.5 [g] at 0.207 [s]

Min: -13.1 [g] at 0.087 [s]

P1 Head CG Red y

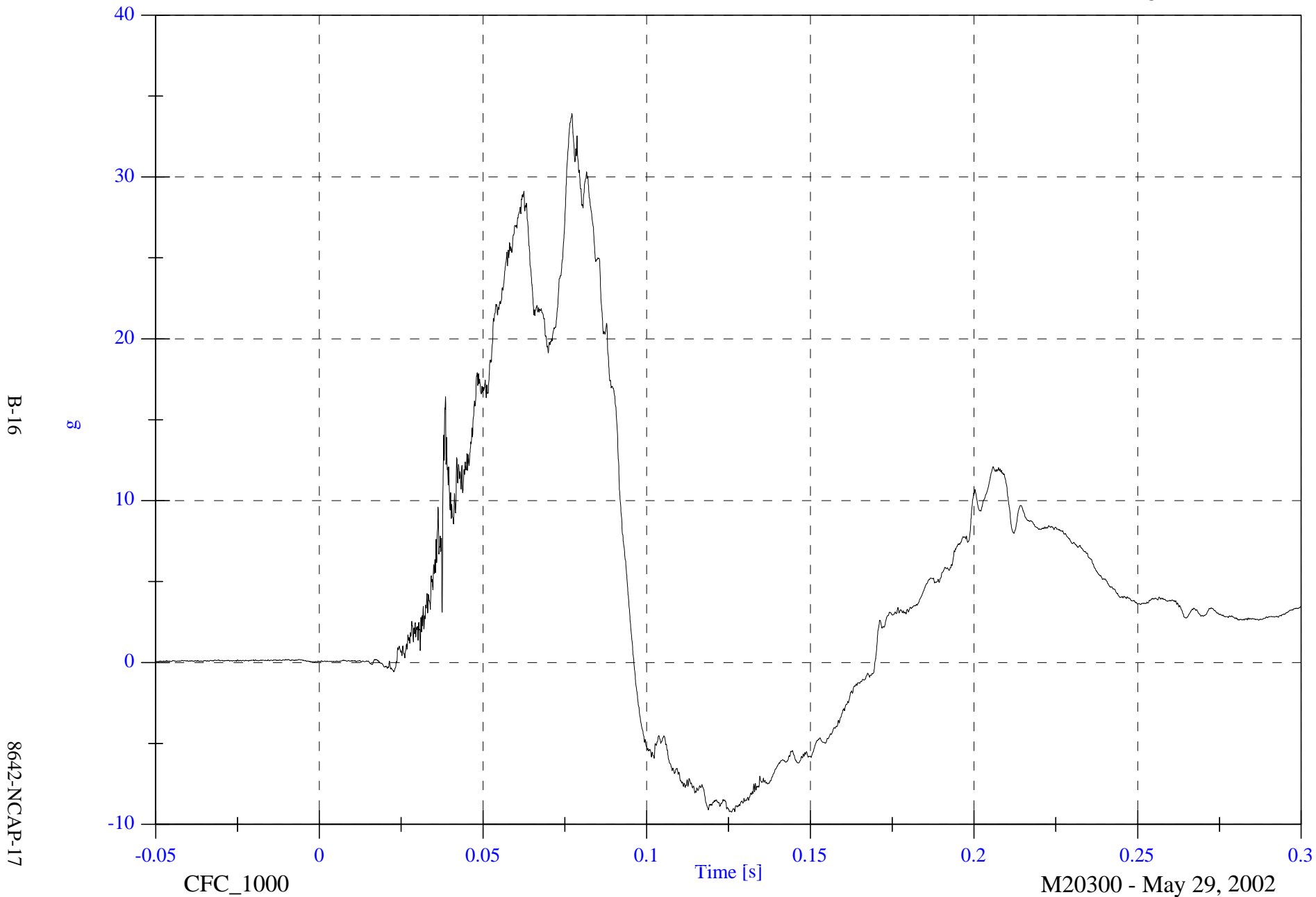


2002 NCAP Test 17 2002 Dodge Dakota

Max: 33.9 [g] at 0.077 [s]

Min: -9.2 [g] at 0.126 [s]

P1 Head CG Red z



B-16

8642-NCAP-17

CFC\_1000

M20300 - May 29, 2002

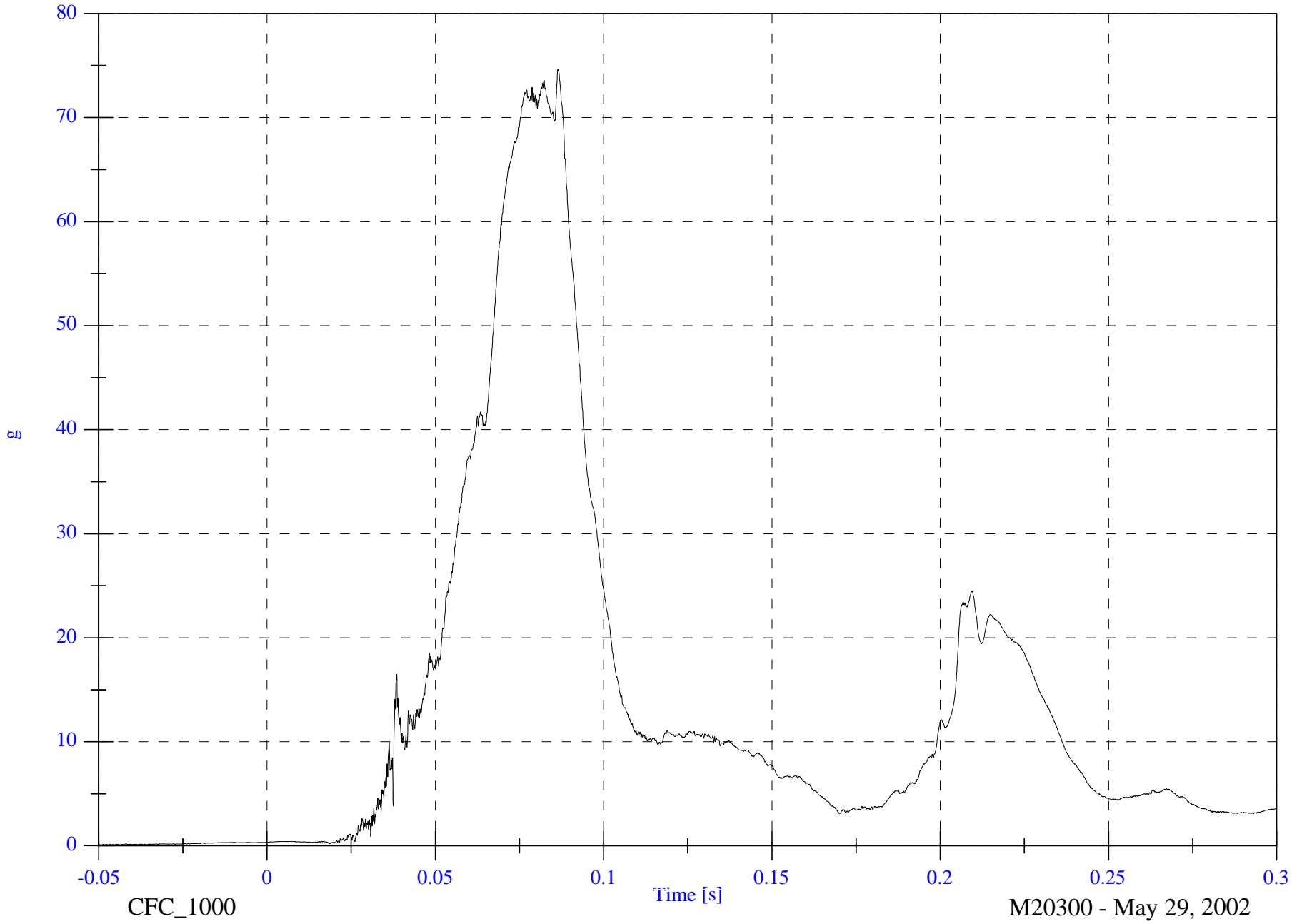
2002 NCAP Test 17 2002 Dodge Dakota

Max: 74.6 [g] at 0.086 [s]  
Min: 0.1 [g] at -0.049 [s]

P1 Head CG Red Resultant

B-17

8642-NCAP-17



CFC\_1000

Time [s]

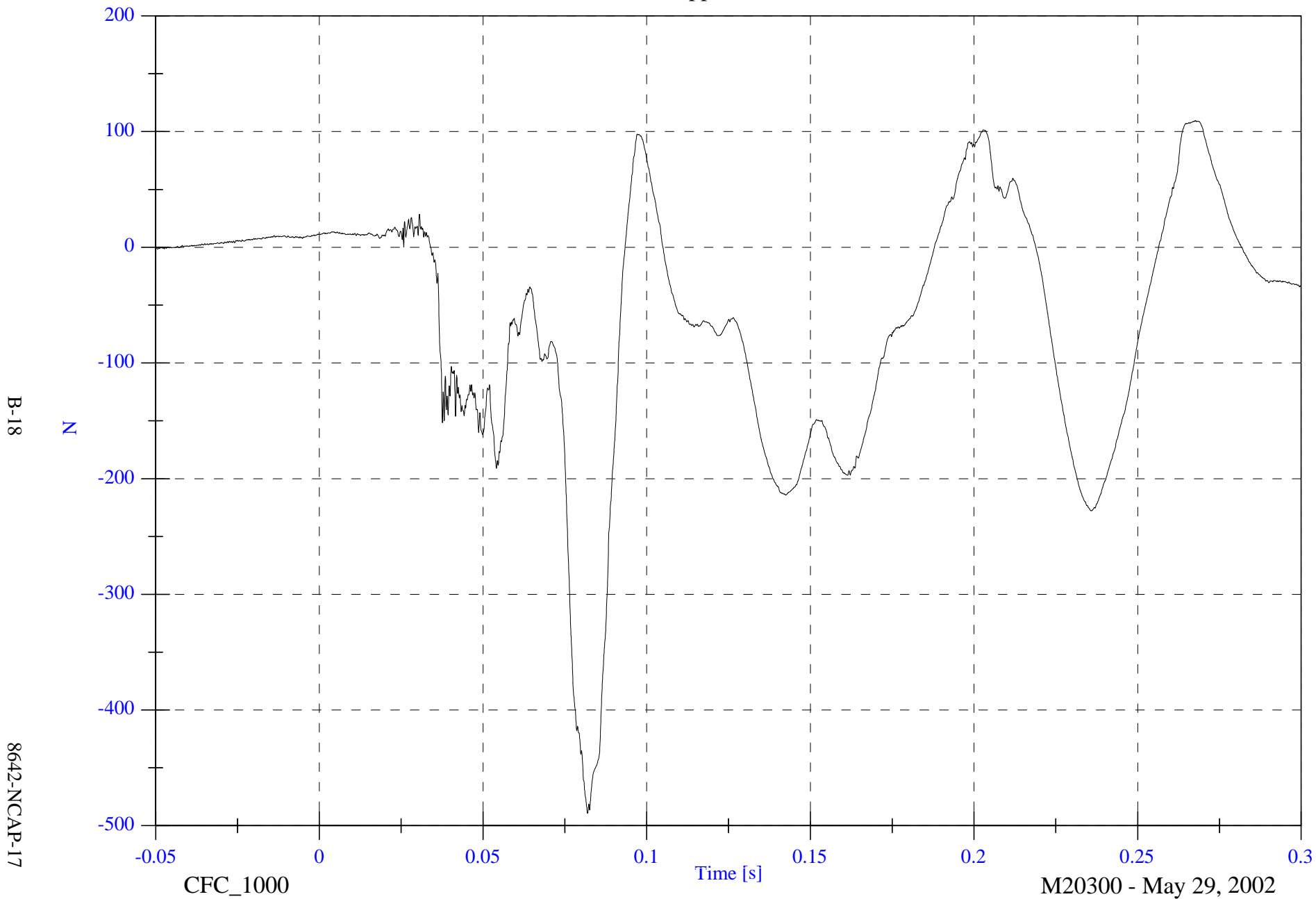
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 109.4 [N] at 0.268 [s]

Min: -489.2 [N] at 0.082 [s]

P1 Upper Neck Fx

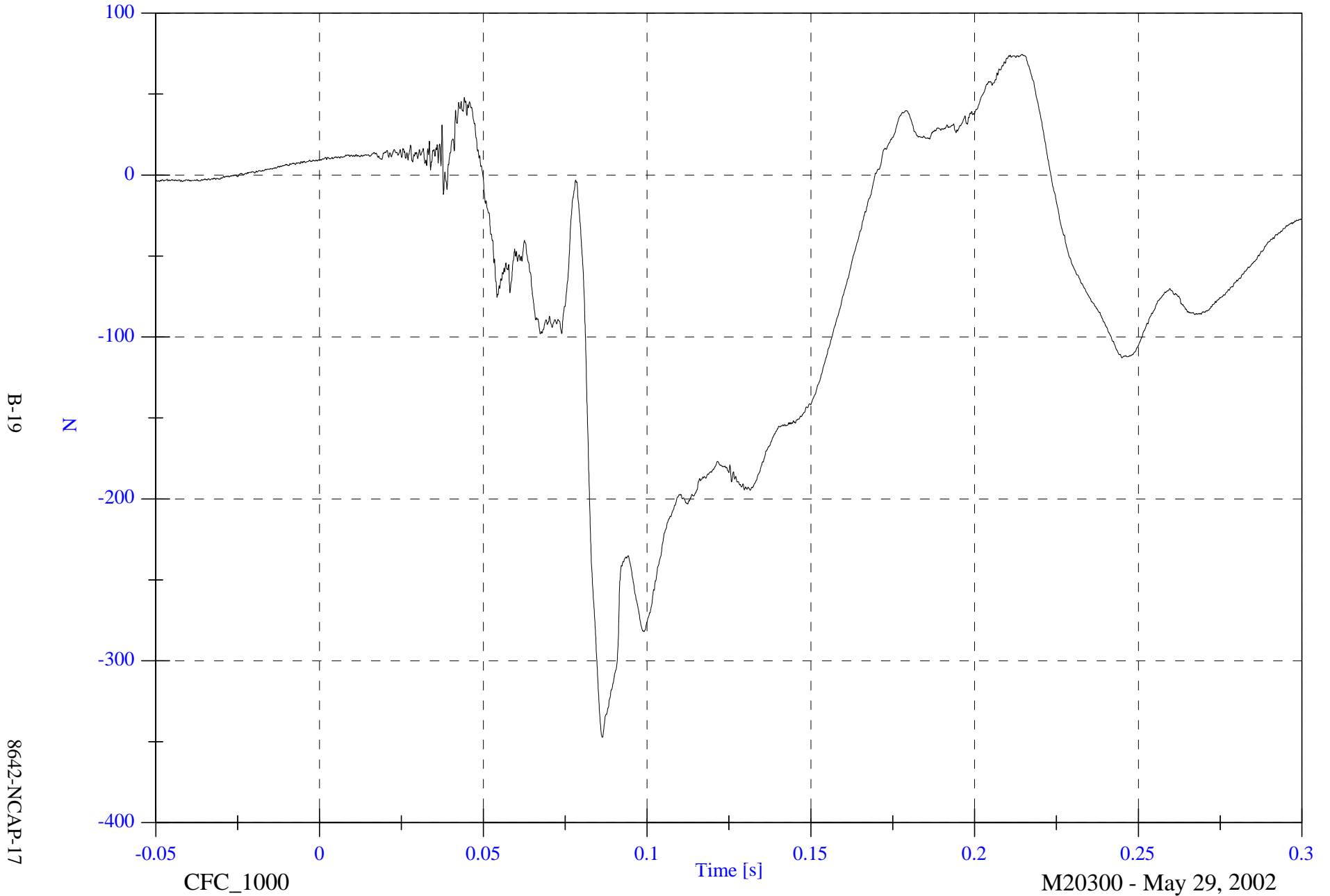


2002 NCAP Test 17 2002 Dodge Dakota

P1 Upper Neck Fy

Max: 74.5 [N] at 0.214 [s]

Min: -347.3 [N] at 0.086 [s]



B-19

8642-NCAP-17

CFC\_1000

Time [s]

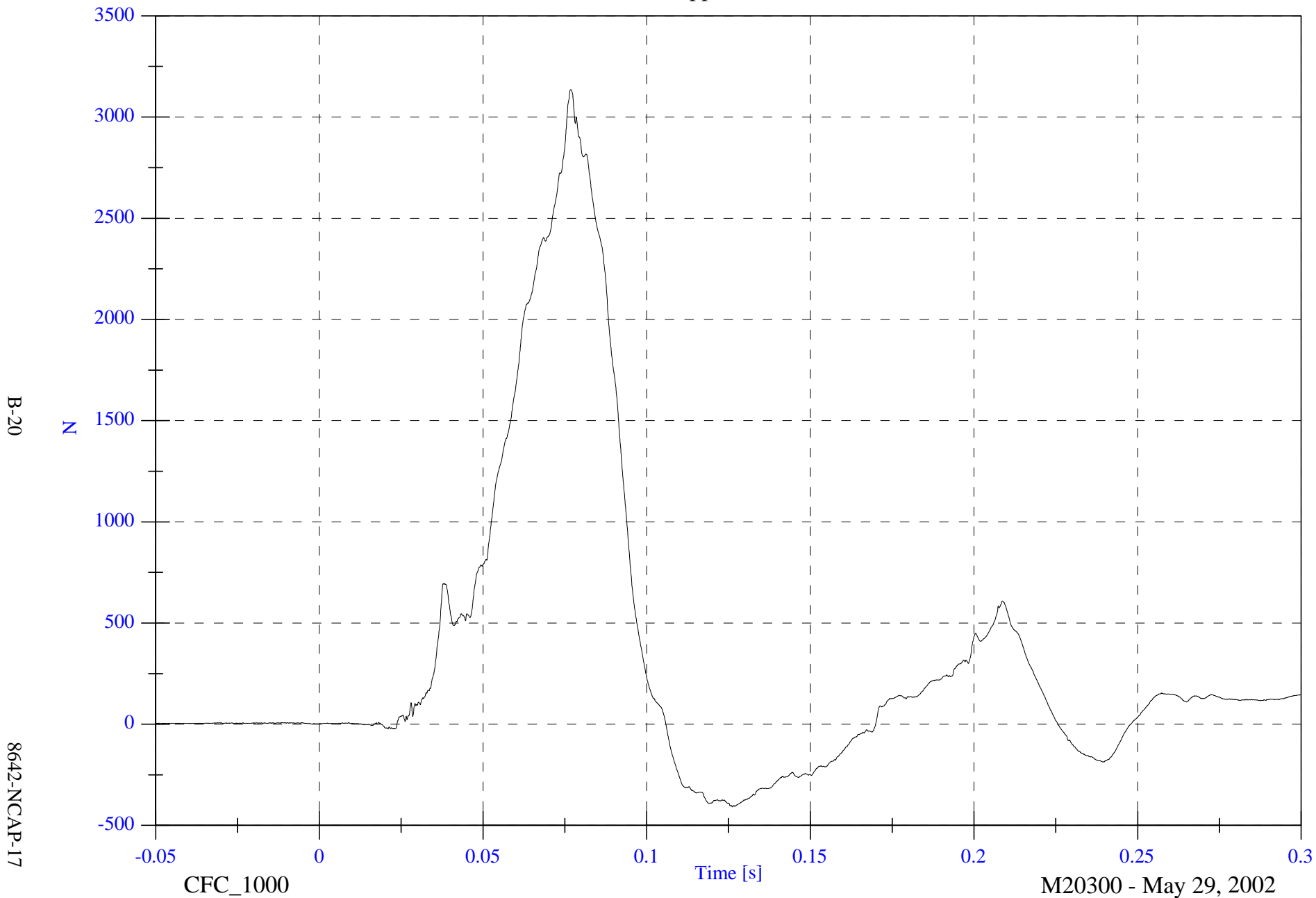
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 3135.7 [N] at 0.077 [s]

Min: -409.1 [N] at 0.126 [s]

P1 Upper Neck Fz



B-20

8642-NCAP-17

CFC\_1000

Time [s]

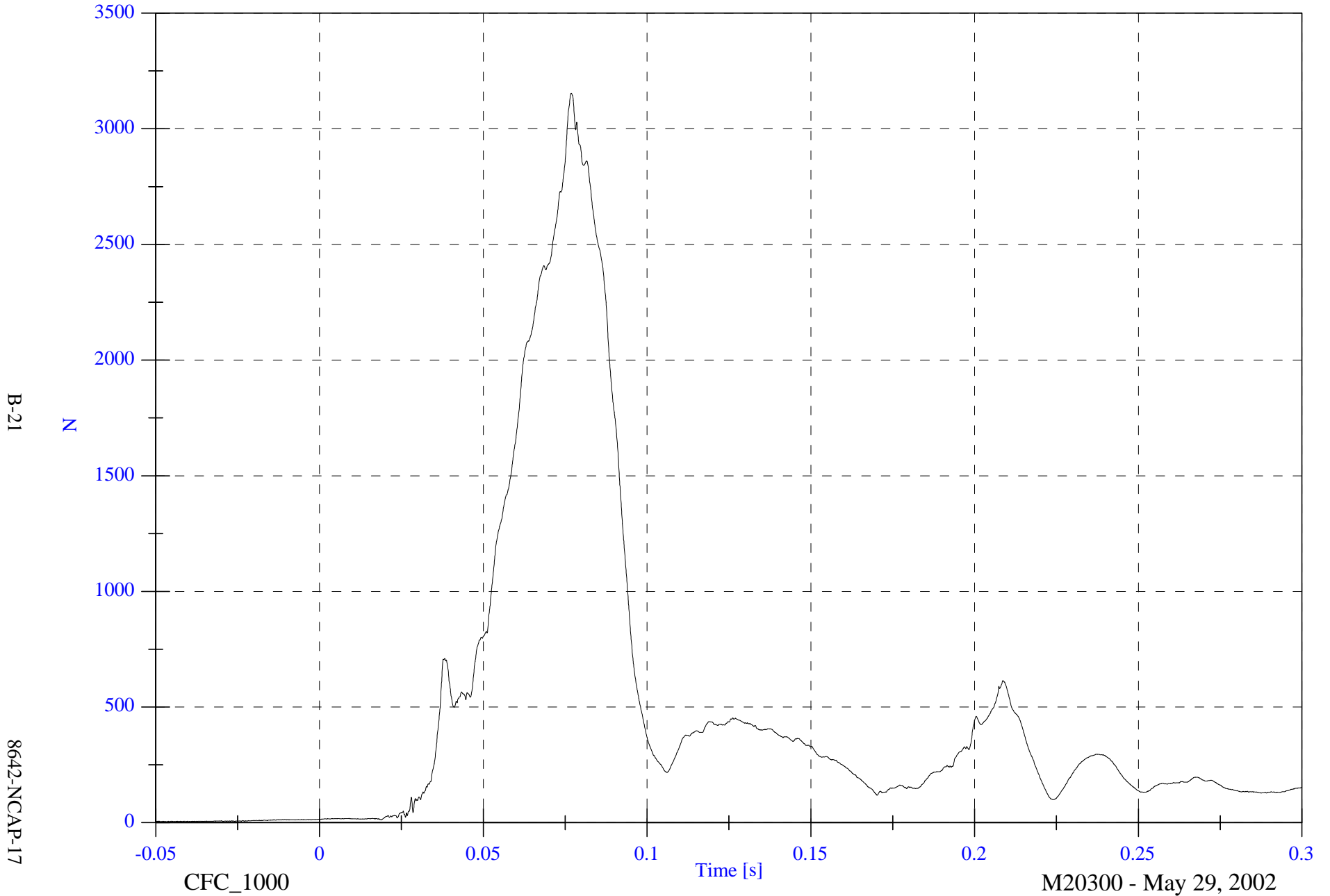
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 3153.1 [N] at 0.077 [s]

P1 Upper Neck F Resultant

Min: 4.0 [N] at -0.046 [s]



B-21

8642-NCAP-17

CFC\_1000

Time [s]

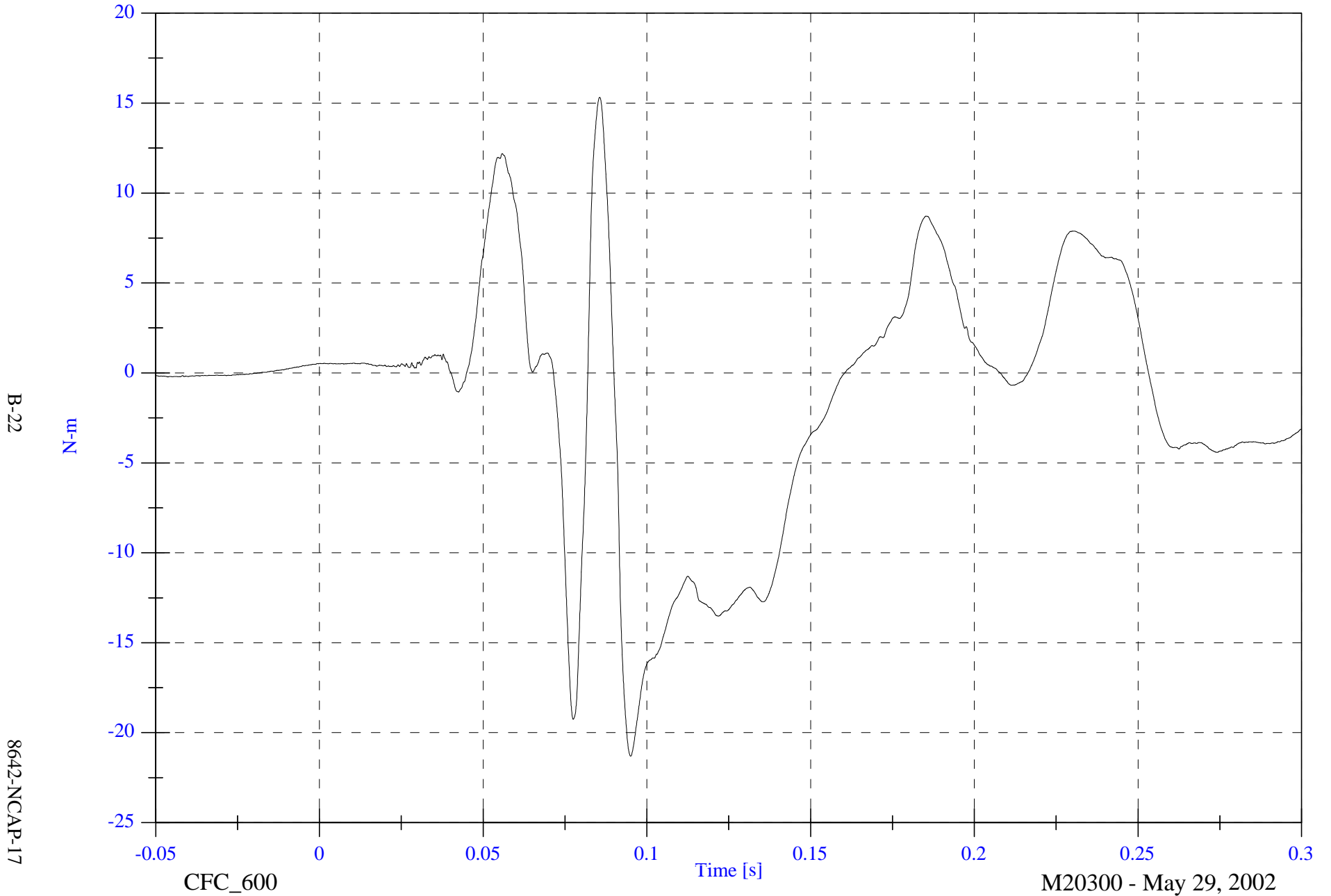
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 15.3 [N-m] at 0.086 [s]

Min: -21.3 [N-m] at 0.095 [s]

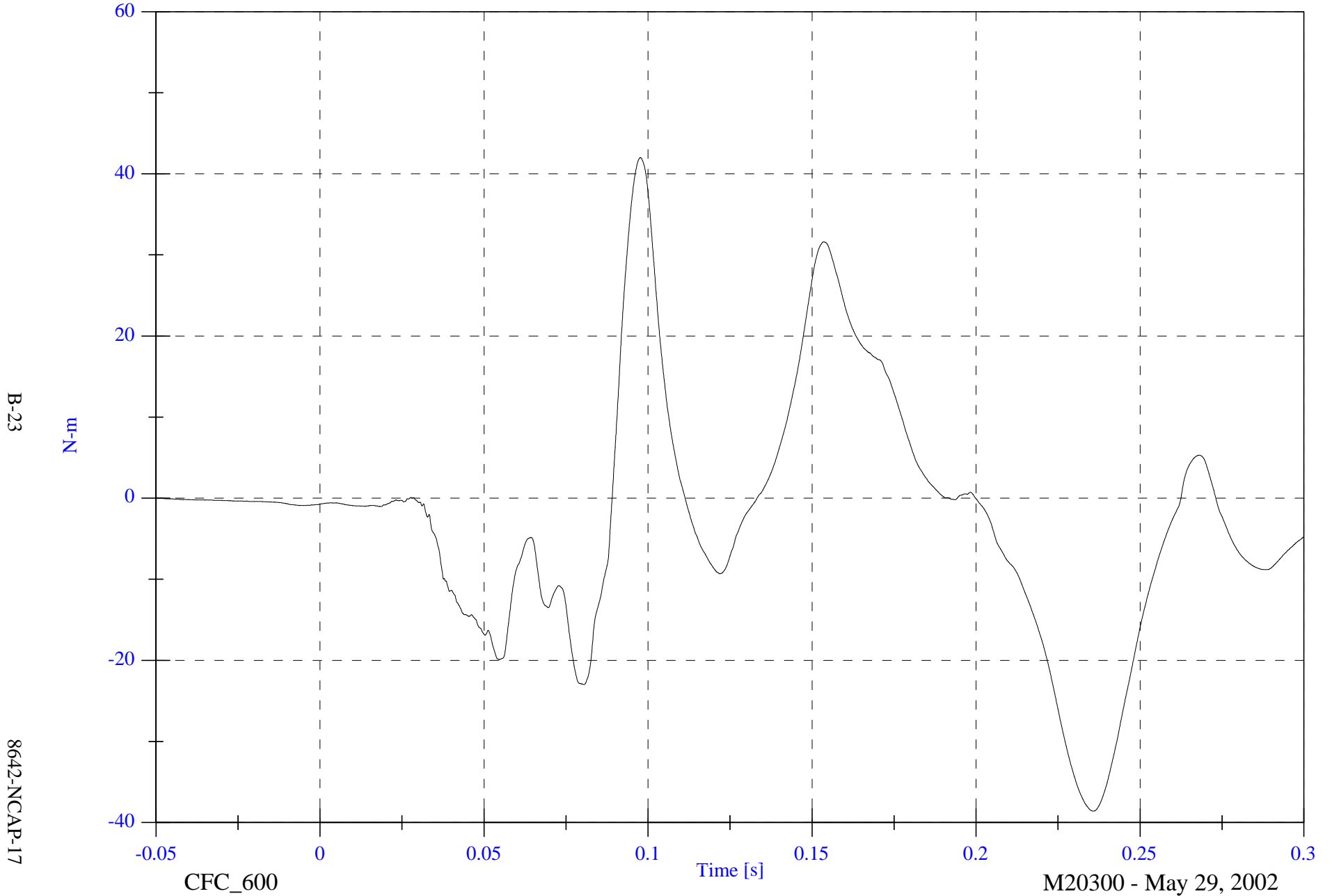
P1 Upper Neck Mx



2002 NCAP Test 17 2002 Dodge Dakota

Max: 42.0 [N-m] at 0.098 [s]  
Min: -38.6 [N-m] at 0.236 [s]

P1 Upper Neck My



B-23

8642-NCAP-17

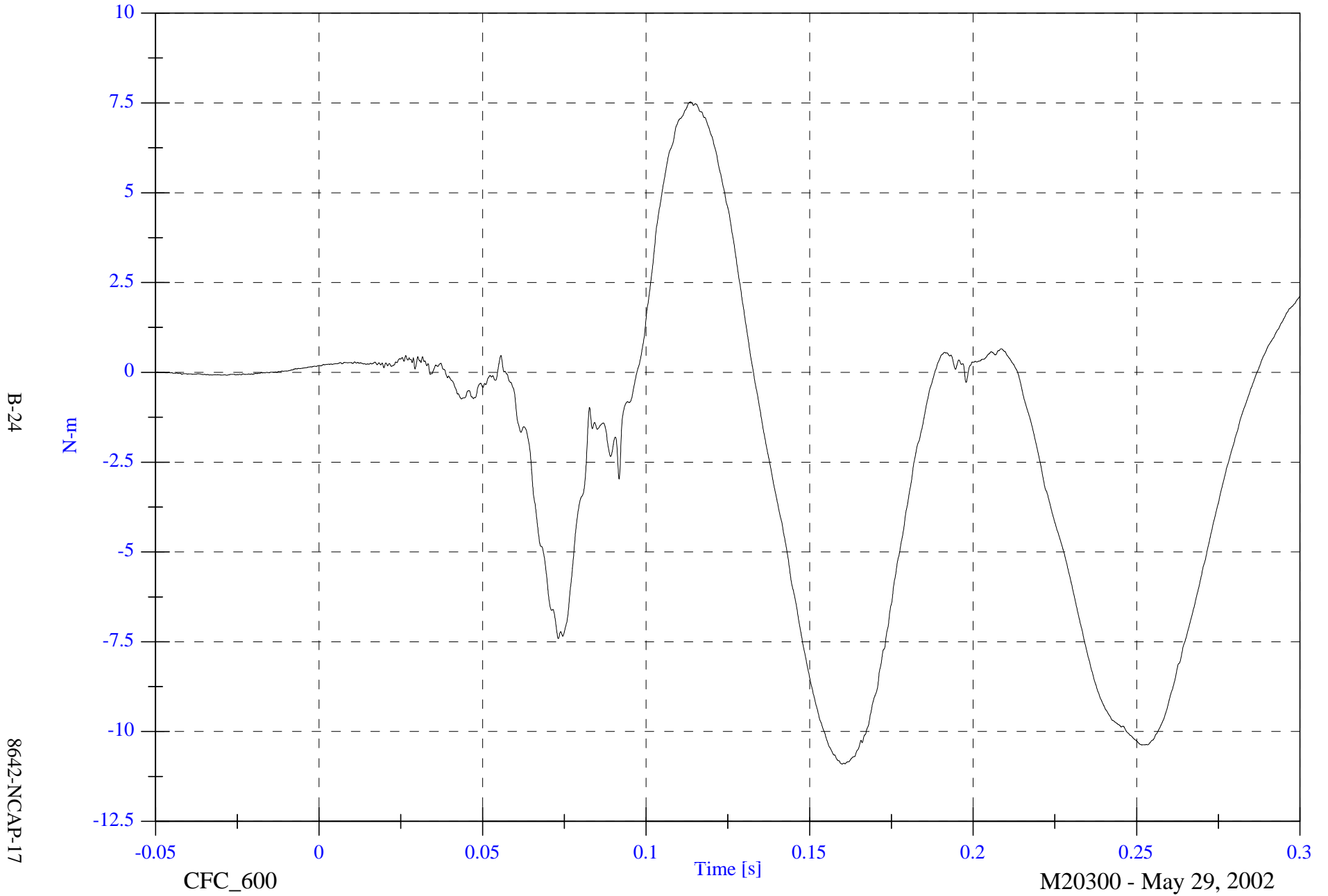
CFC\_600

M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 7.5 [N-m] at 0.114 [s]  
Min: -10.9 [N-m] at 0.160 [s]

P1 Upper Neck Mz



B-24

8642-NCAP-17

CFC\_600

M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

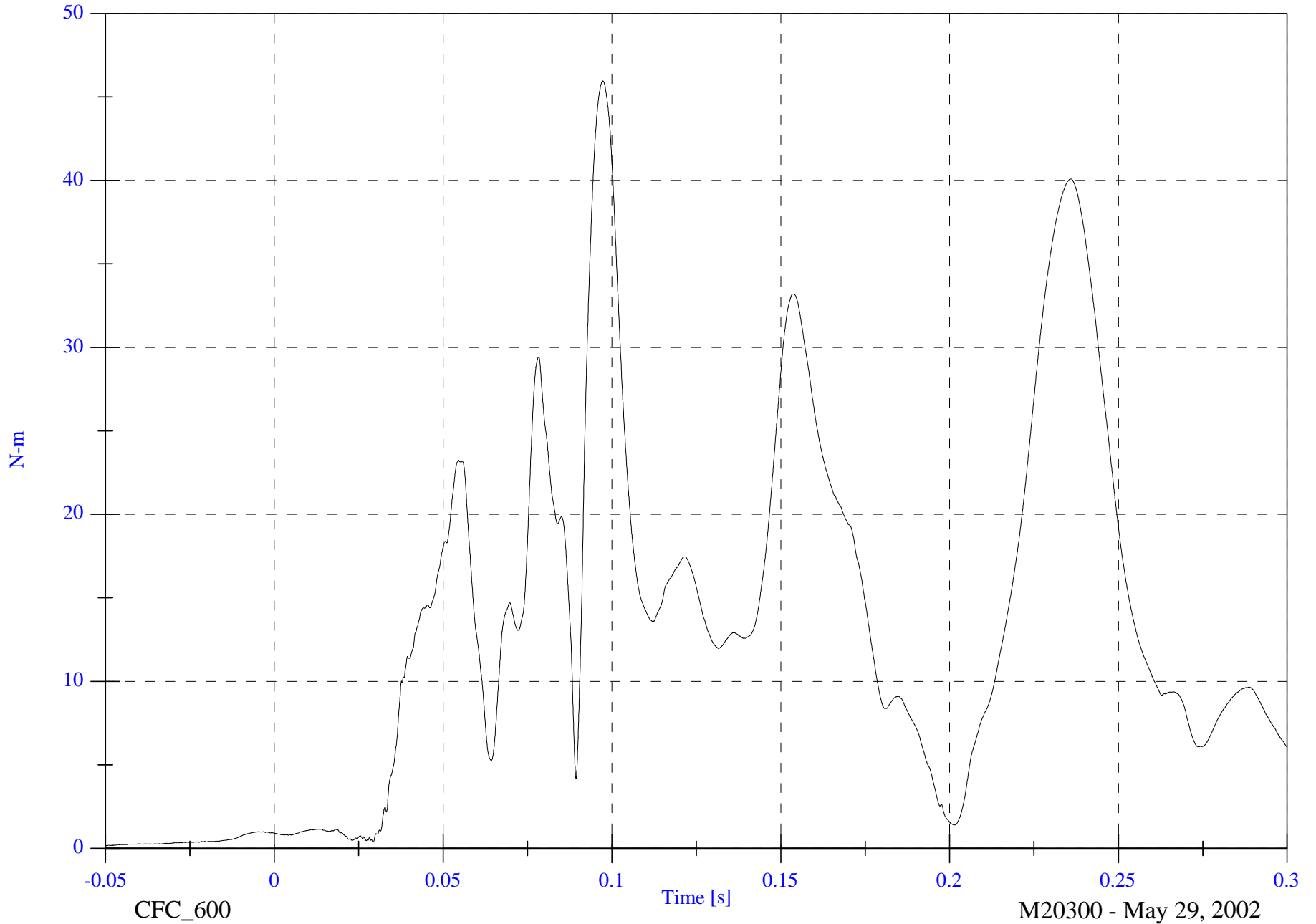
Max: 46.0 [N-m] at 0.097 [s]

P1 Upper Neck M Resultant

Min: 0.2 [N-m] at -0.050 [s]

B-25

8642-NCAP-17



CFC\_600

Time [s]

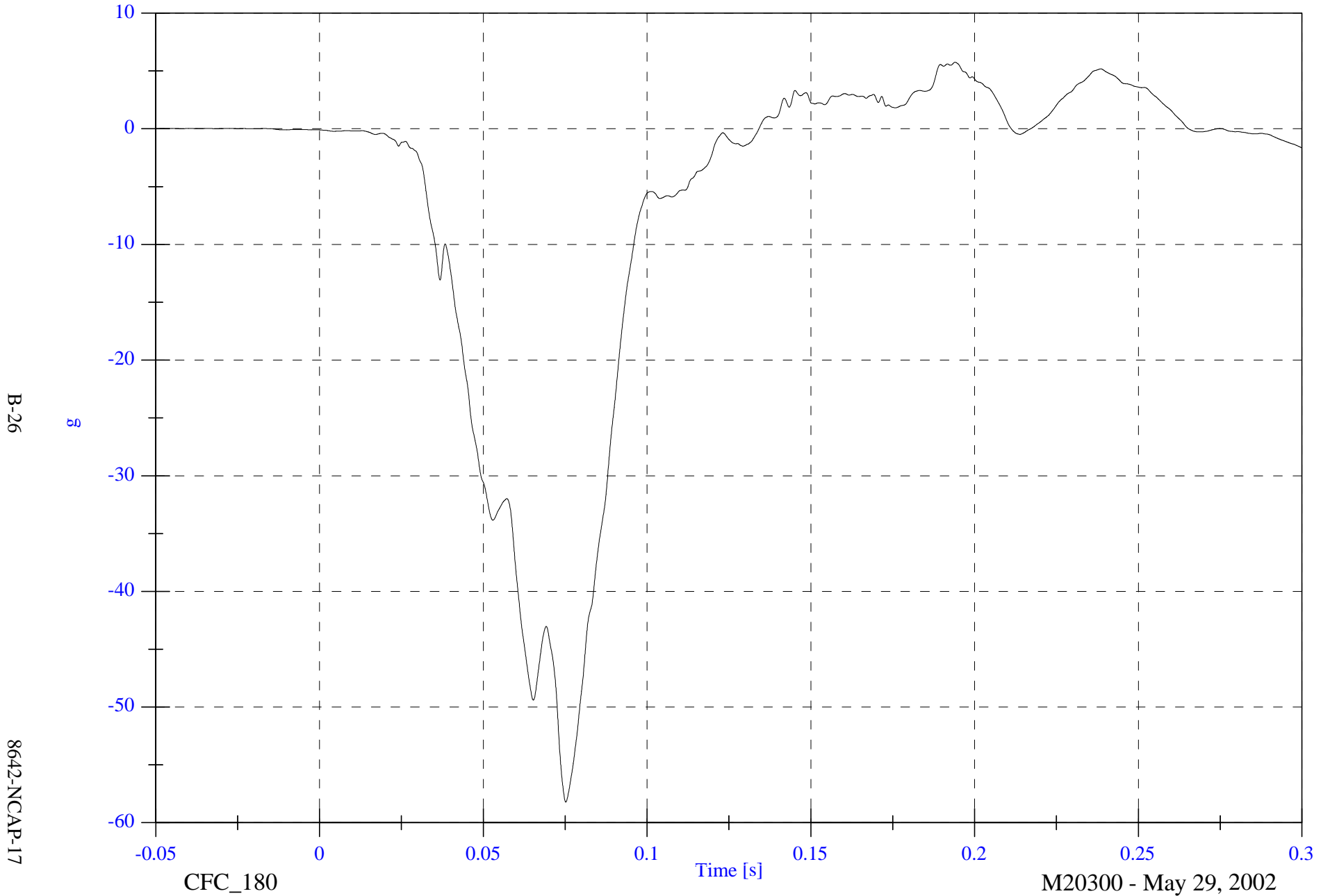
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 5.8 [g] at 0.194 [s]

Min: -58.2 [g] at 0.075 [s]

P1 Chest x



2002 NCAP Test 17 2002 Dodge Dakota

Max: 3.9 [g] at 0.075 [s]

Min: -12.3 [g] at 0.064 [s]

P1 Chest y



B-27

8642-NCAP-17

CFC\_180

Time [s]

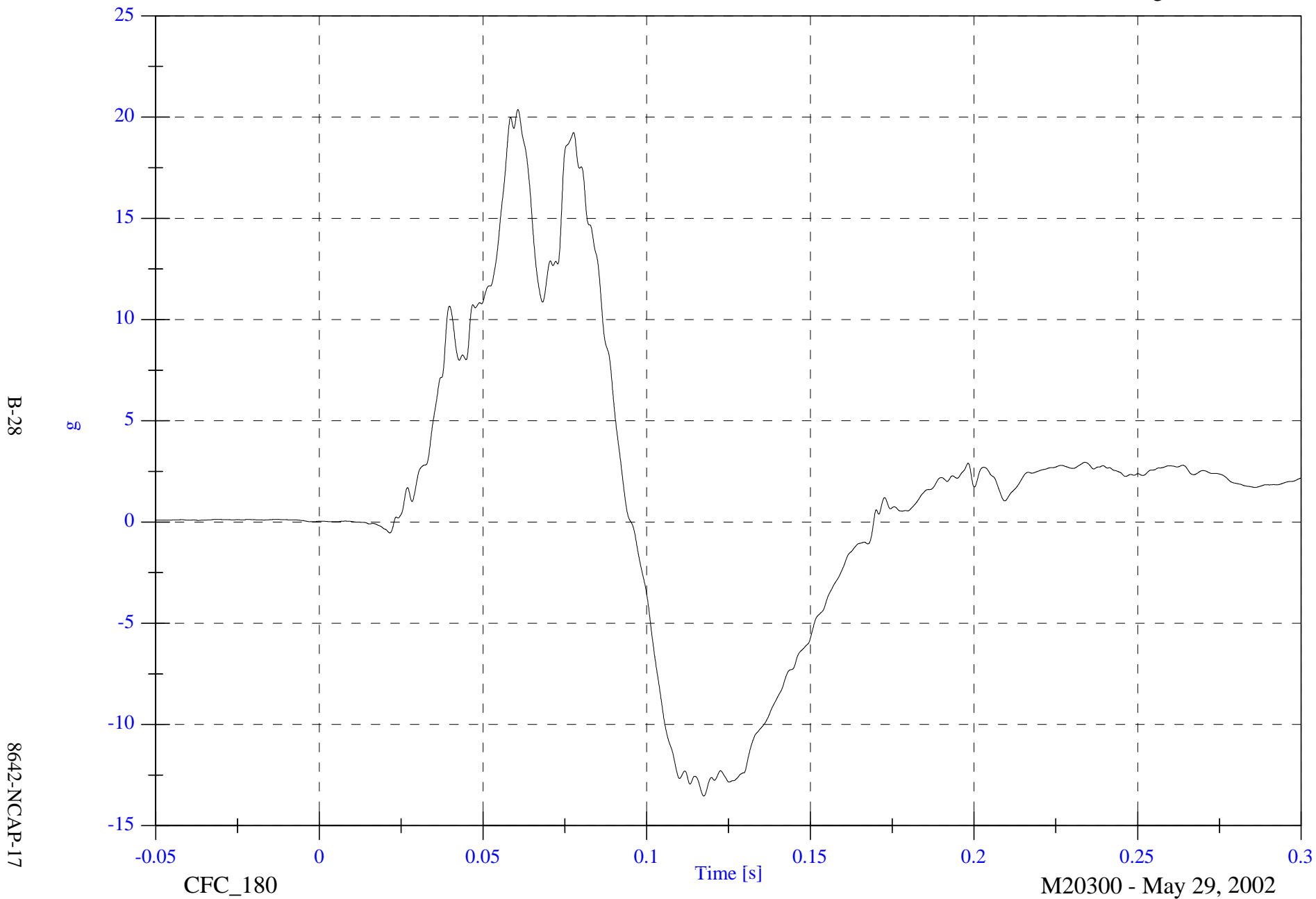
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 20.4 [g] at 0.061 [s]

Min: -13.5 [g] at 0.117 [s]

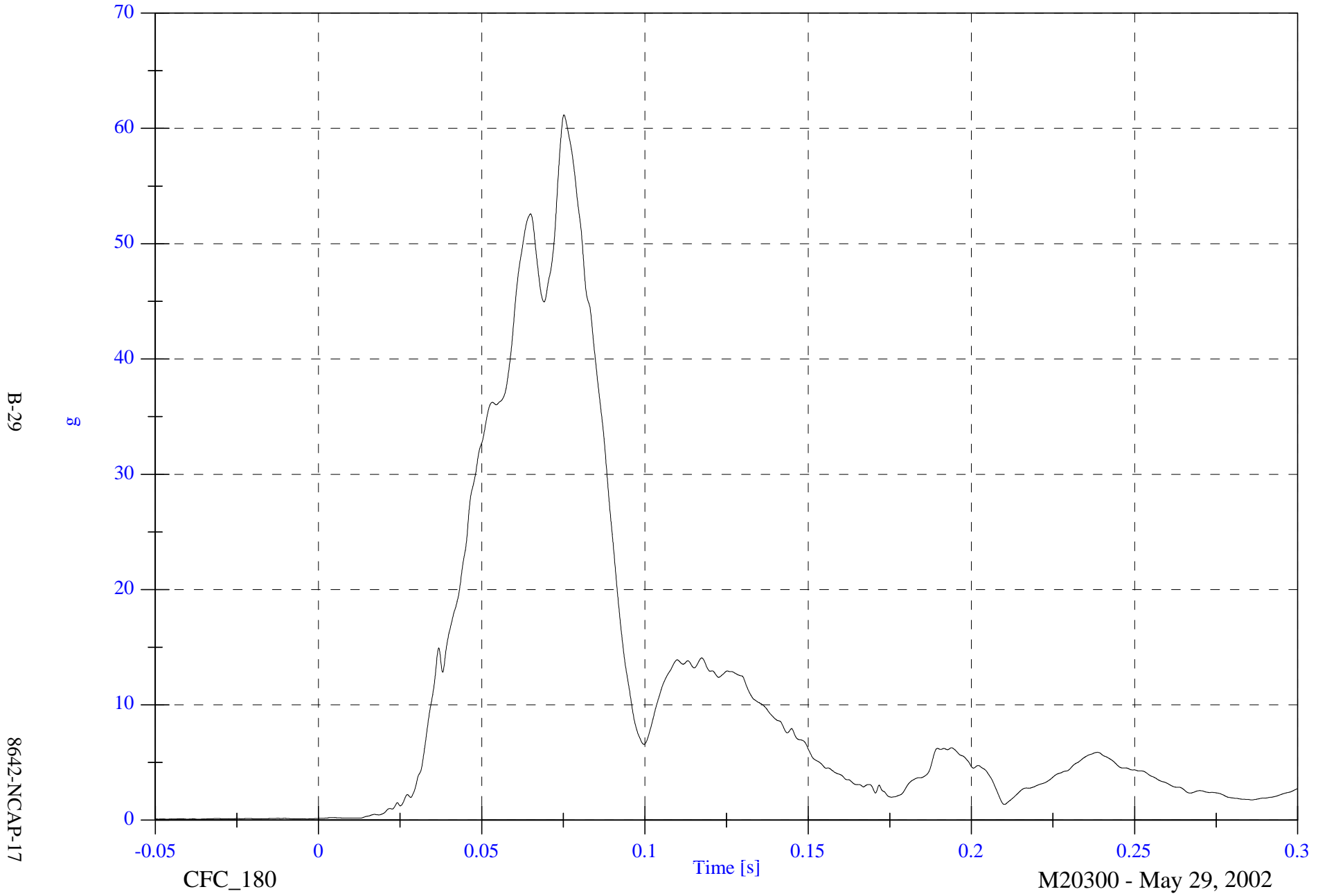
P1 Chest z



2002 NCAP Test 17 2002 Dodge Dakota

Max: 61.2 [g] at 0.075 [s]  
Min: 0.1 [g] at -0.037 [s]

P1 Chest Resultant



B-29

8642-NCAP-17

CFC\_180

Time [s]

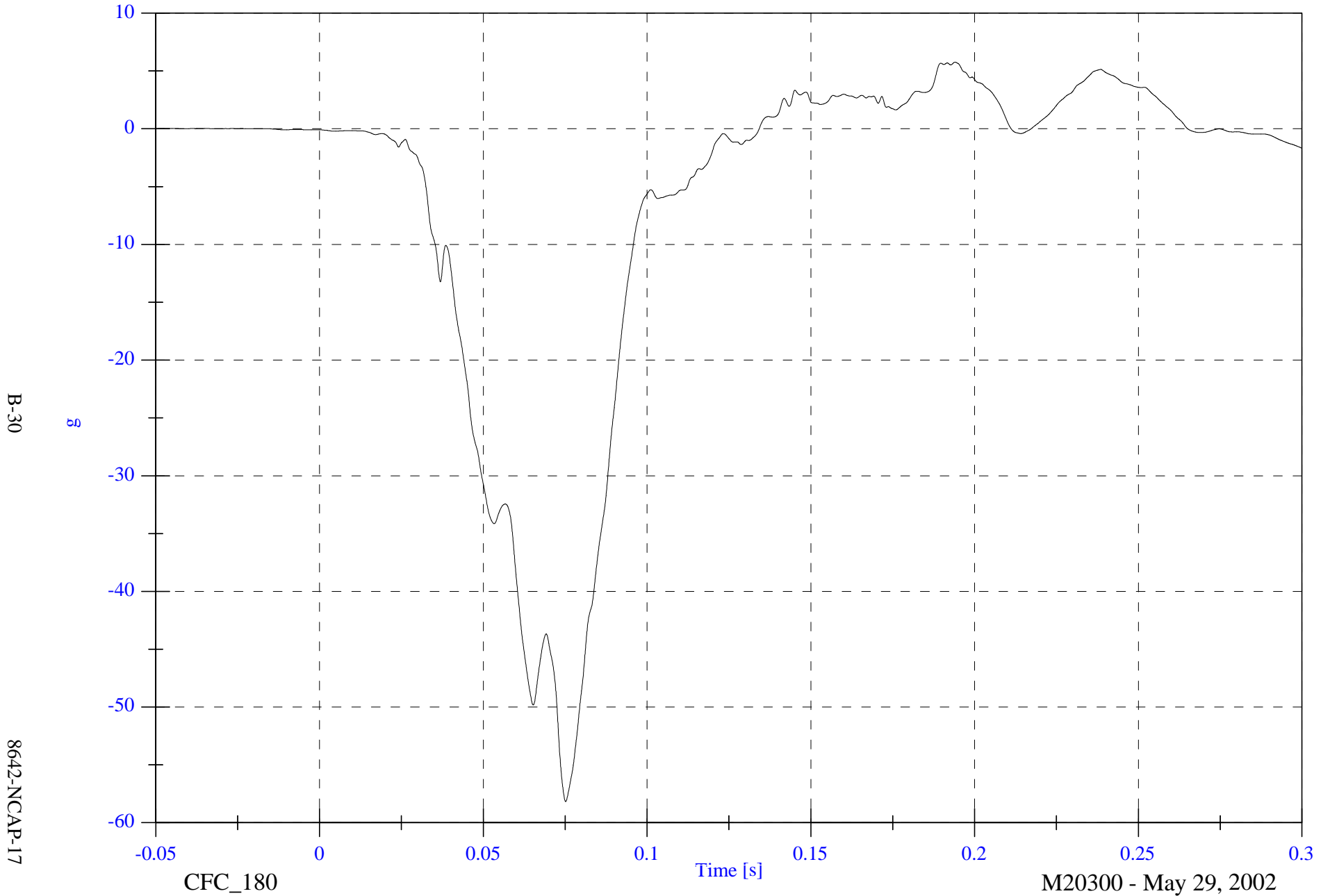
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 5.8 [g] at 0.194 [s]

Min: -58.2 [g] at 0.075 [s]

P1 Chest Red x

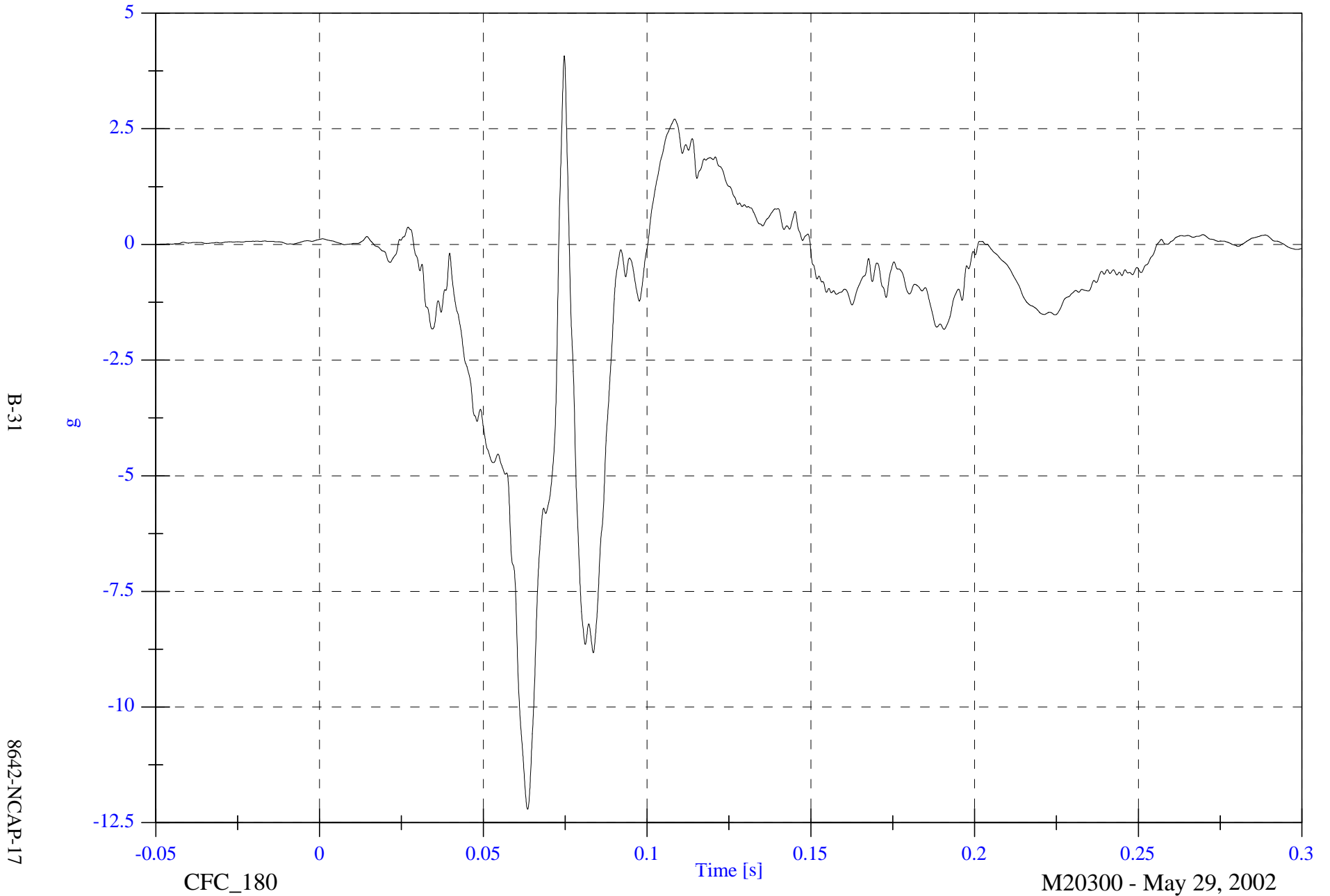


2002 NCAP Test 17 2002 Dodge Dakota

Max: 4.1 [g] at 0.075 [s]

Min: -12.2 [g] at 0.064 [s]

P1 Chest Red y



2002 NCAP Test 17 2002 Dodge Dakota

Max: 20.0 [g] at 0.061 [s]

Min: -13.4 [g] at 0.118 [s]

P1 Chest Red z

B-32

8642-NCAP-17



2002 NCAP Test 17 2002 Dodge Dakota

P1 Chest Red Resultant

Max: 61.0 [g] at 0.075 [s]

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

B-33

8642-NCAP-17

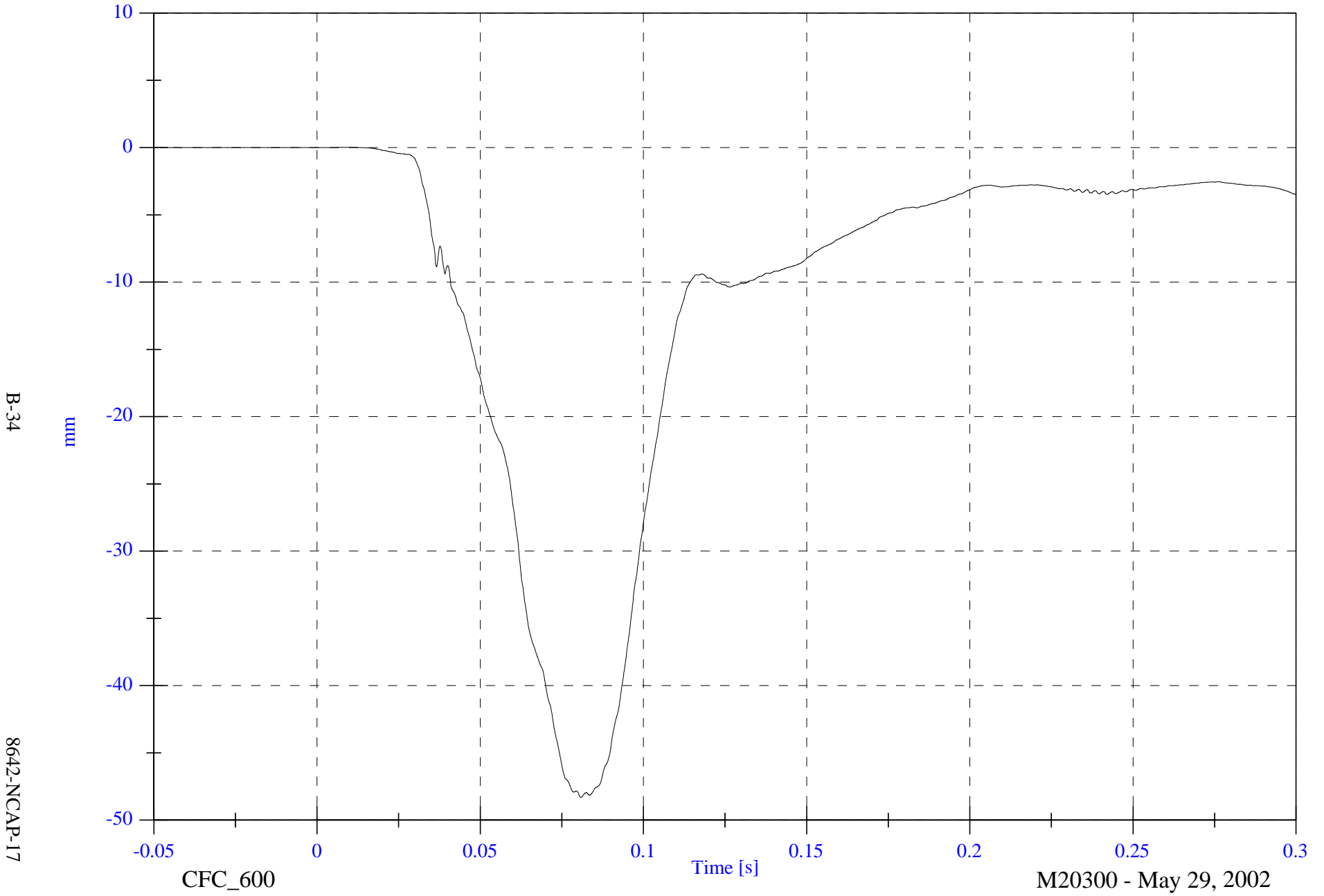


2002 NCAP Test 17 2002 Dodge Dakota

Max: 0.0 [mm] at 0.009 [s]

P1 Chest Compression

Min: -48.3 [mm] at 0.081 [s]



B-34

8642-NCAP-17

CFC\_600

Time [s]

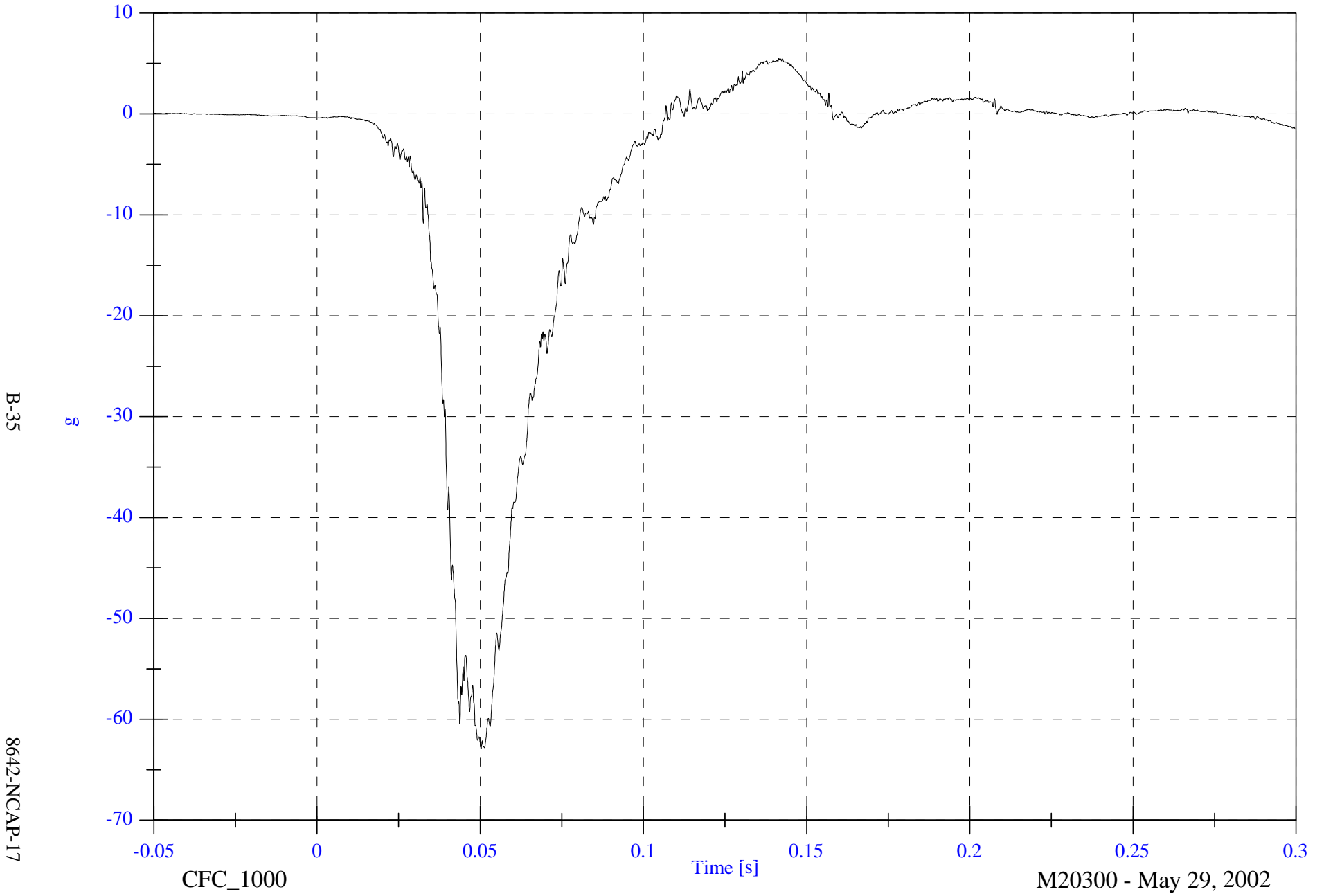
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 5.5 [g] at 0.141 [s]

Min: -62.9 [g] at 0.050 [s]

P1 Pelvic x



B-35

8642-NCAP-17

CFC\_1000

Time [s]

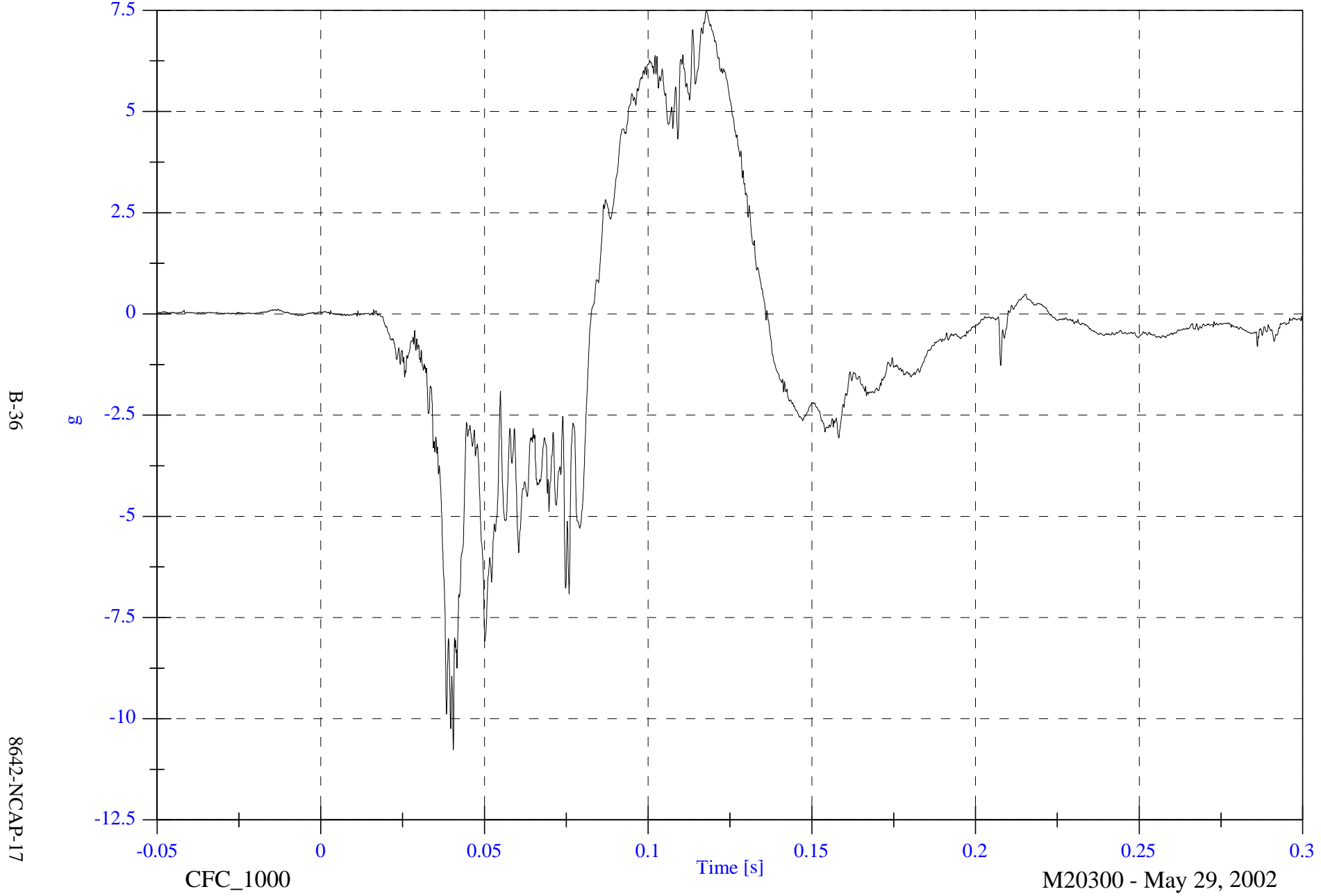
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 7.5 [g] at 0.118 [s]

Min: -10.8 [g] at 0.041 [s]

P1 Pelvic y

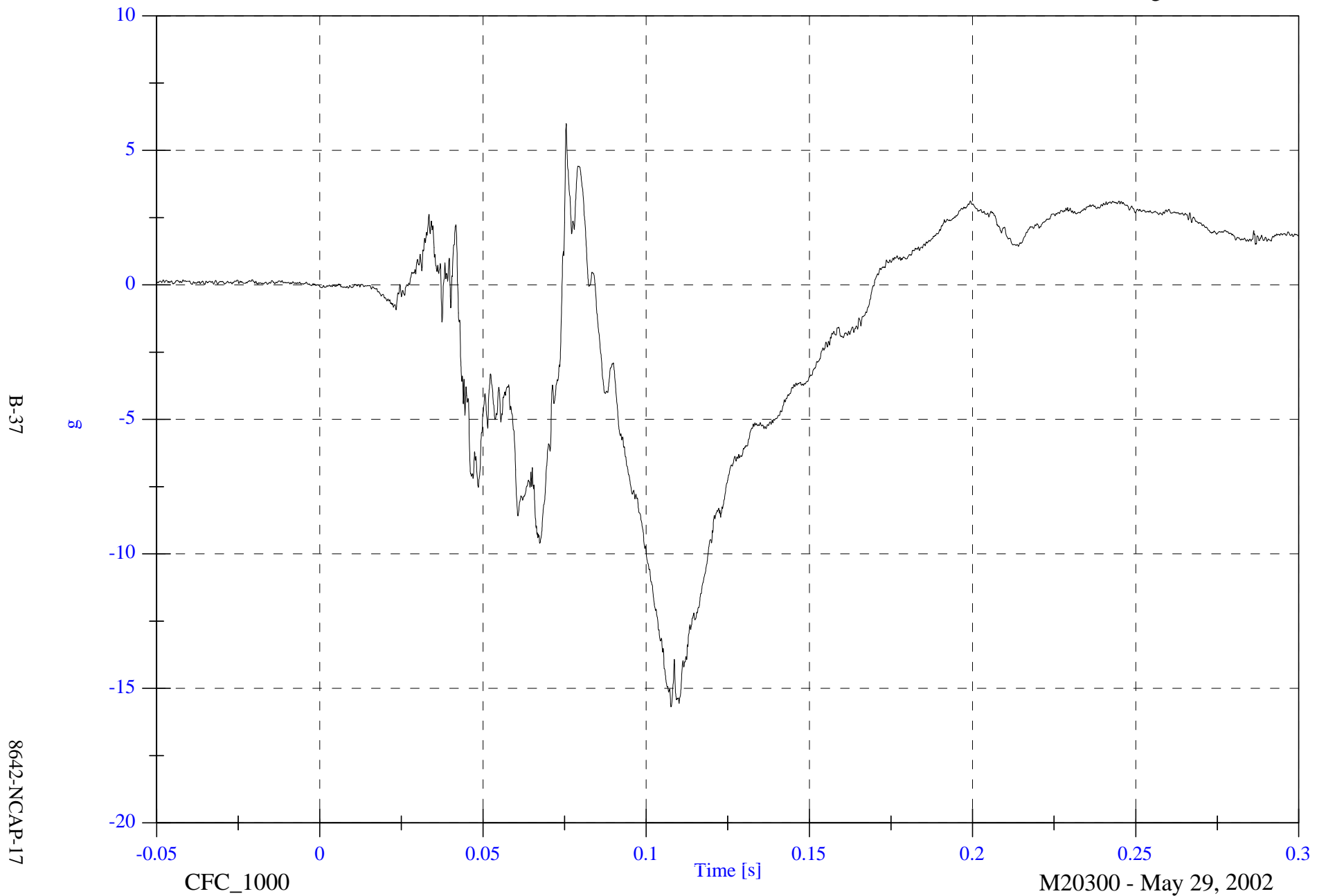


2002 NCAP Test 17 2002 Dodge Dakota

Max: 6.0 [g] at 0.076 [s]

Min: -15.7 [g] at 0.108 [s]

P1 Pelvic z



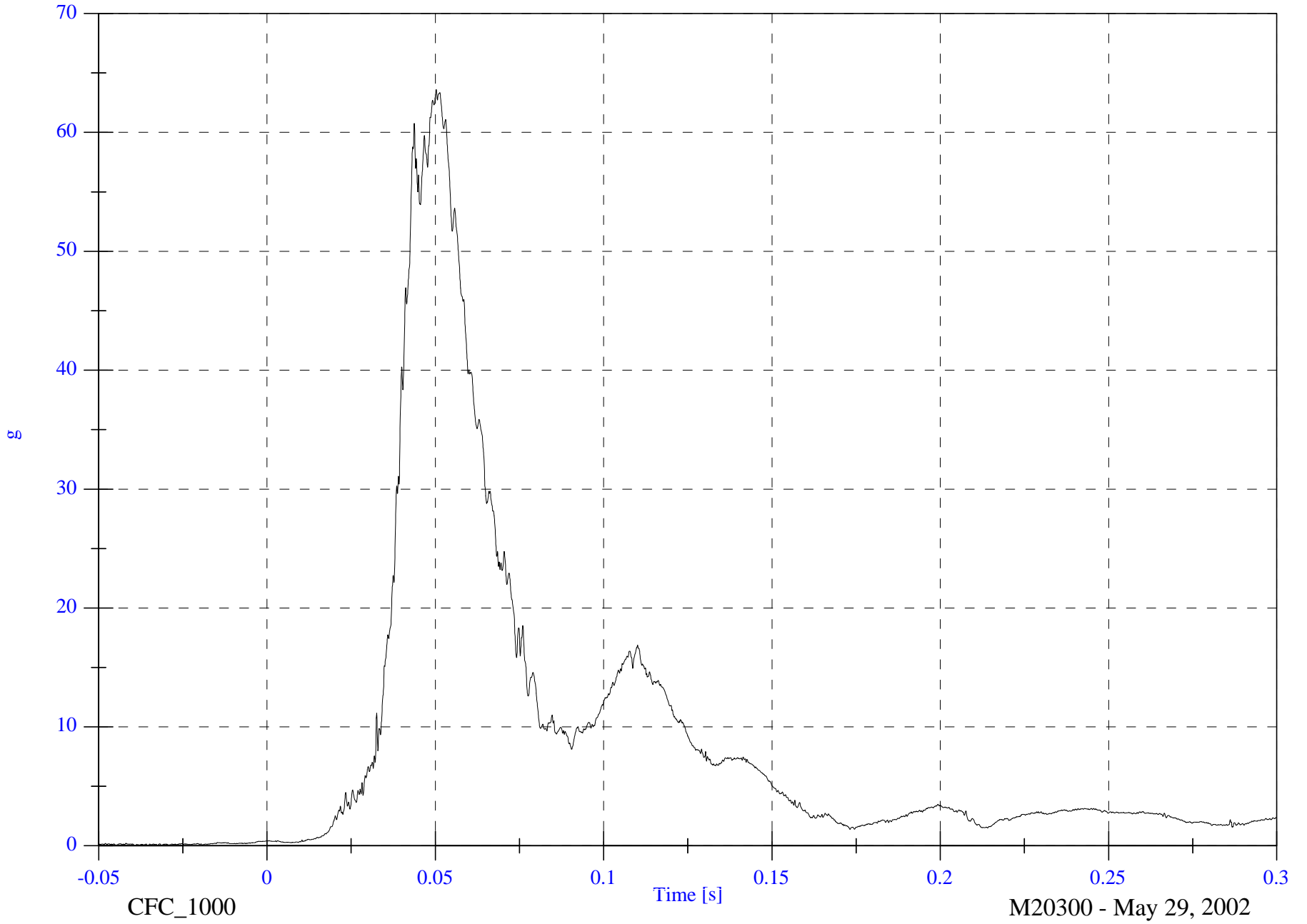
2002 NCAP Test 17 2002 Dodge Dakota

Max: 63.6 [g] at 0.050 [s]  
Min: 0.0 [g] at -0.035 [s]

P1 Pelvic Resultant

B-38

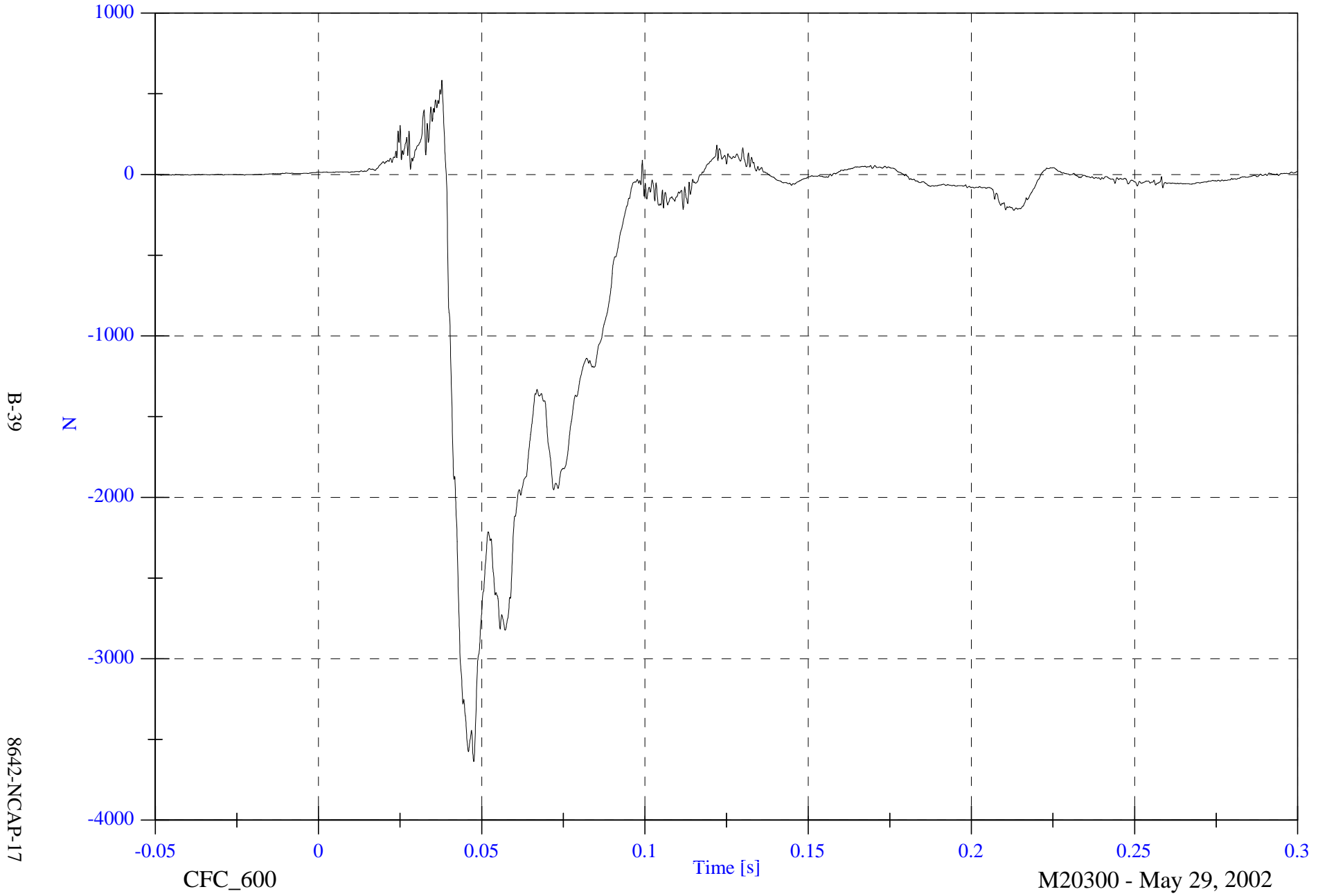
8642-NCAP-17



2002 NCAP Test 17 2002 Dodge Dakota

Max: 584.5 [N] at 0.038 [s]  
Min: -3636.7 [N] at 0.048 [s]

P1 Left Femur



B-39

8642-NCAP-17

CFC\_600

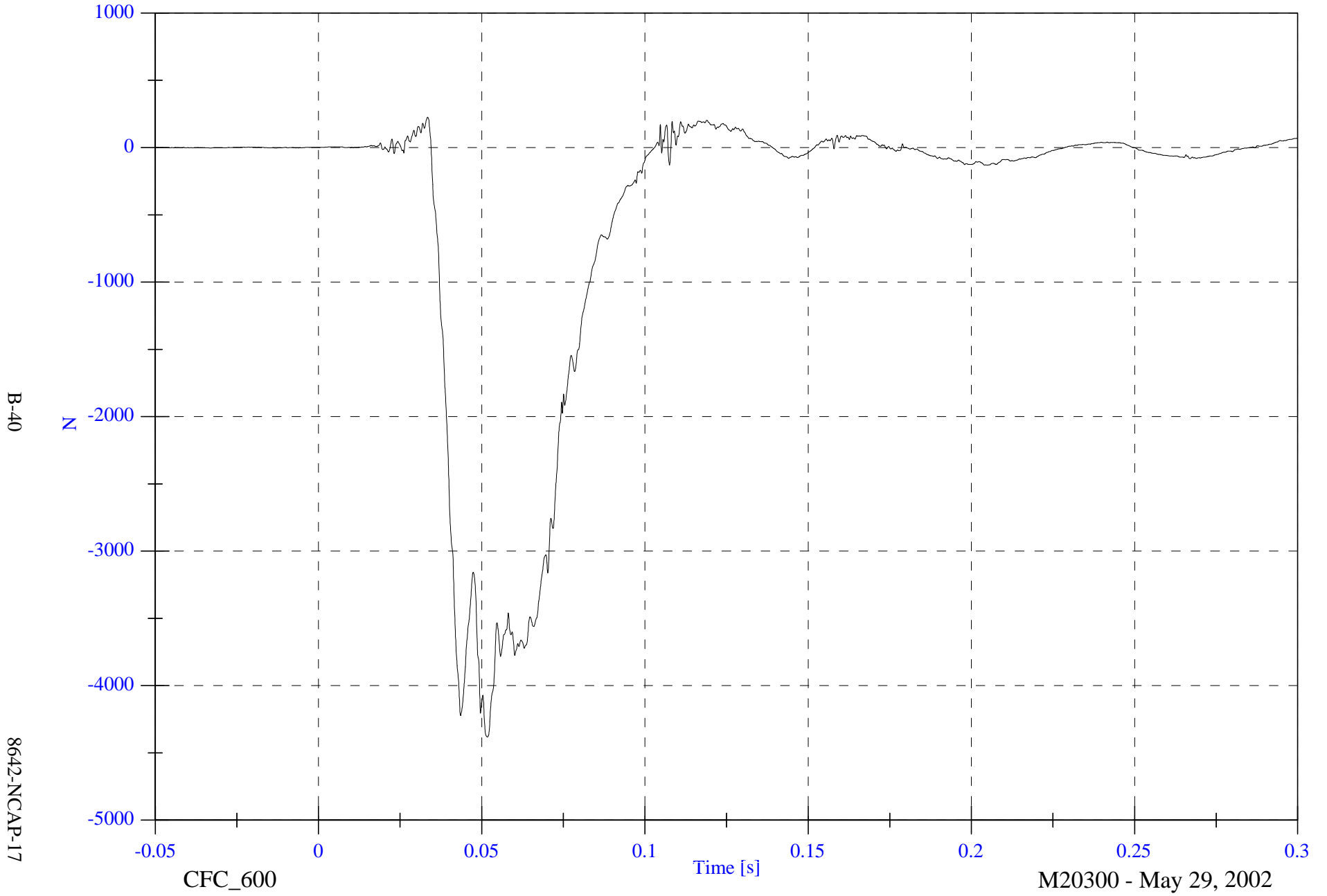
Time [s]

M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

P1 Right Femur

Max: 225.6 [N] at 0.033 [s]  
Min: -4382.2 [N] at 0.052 [s]



B-40

8642-NCAP-17

CFC\_600

Time [s]

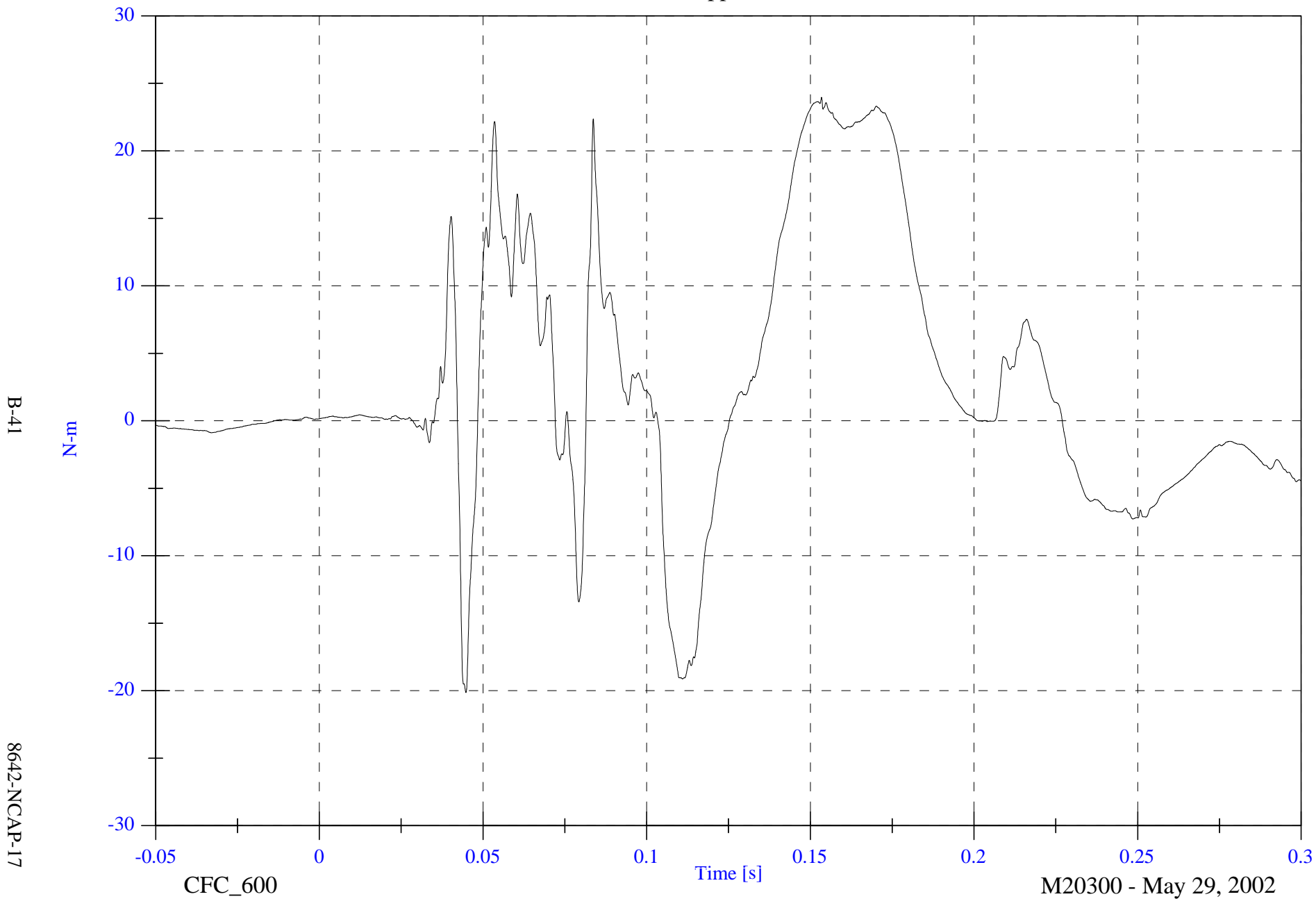
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 24.0 [N-m] at 0.153 [s]

Min: -20.1 [N-m] at 0.045 [s]

P1 Left Upper Tibia Mx



B-41

8642-NCAP-17

CFC\_600

Time [s]

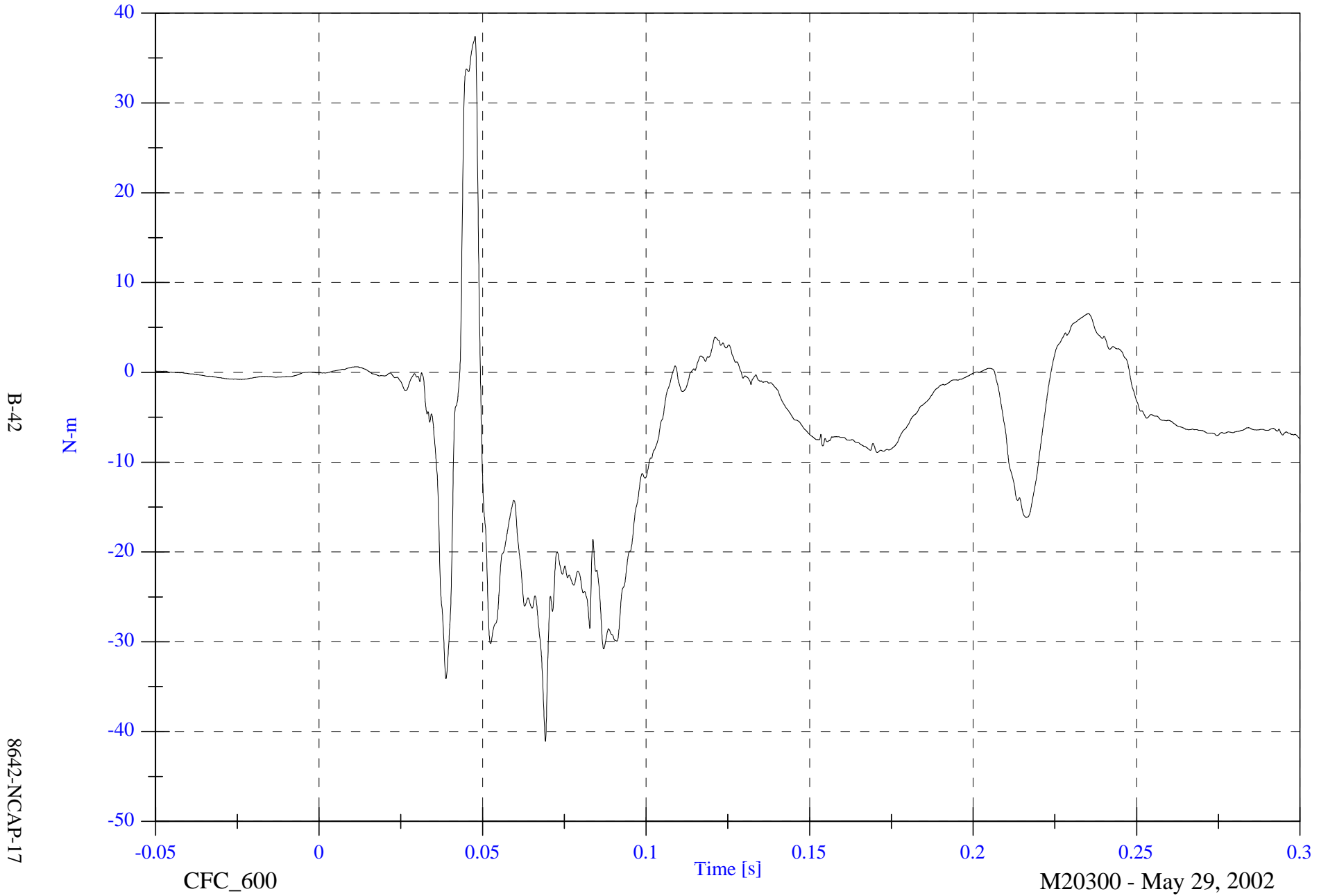
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 37.4 [N-m] at 0.048 [s]

Min: -41.1 [N-m] at 0.069 [s]

P1 Left upper Tibia My

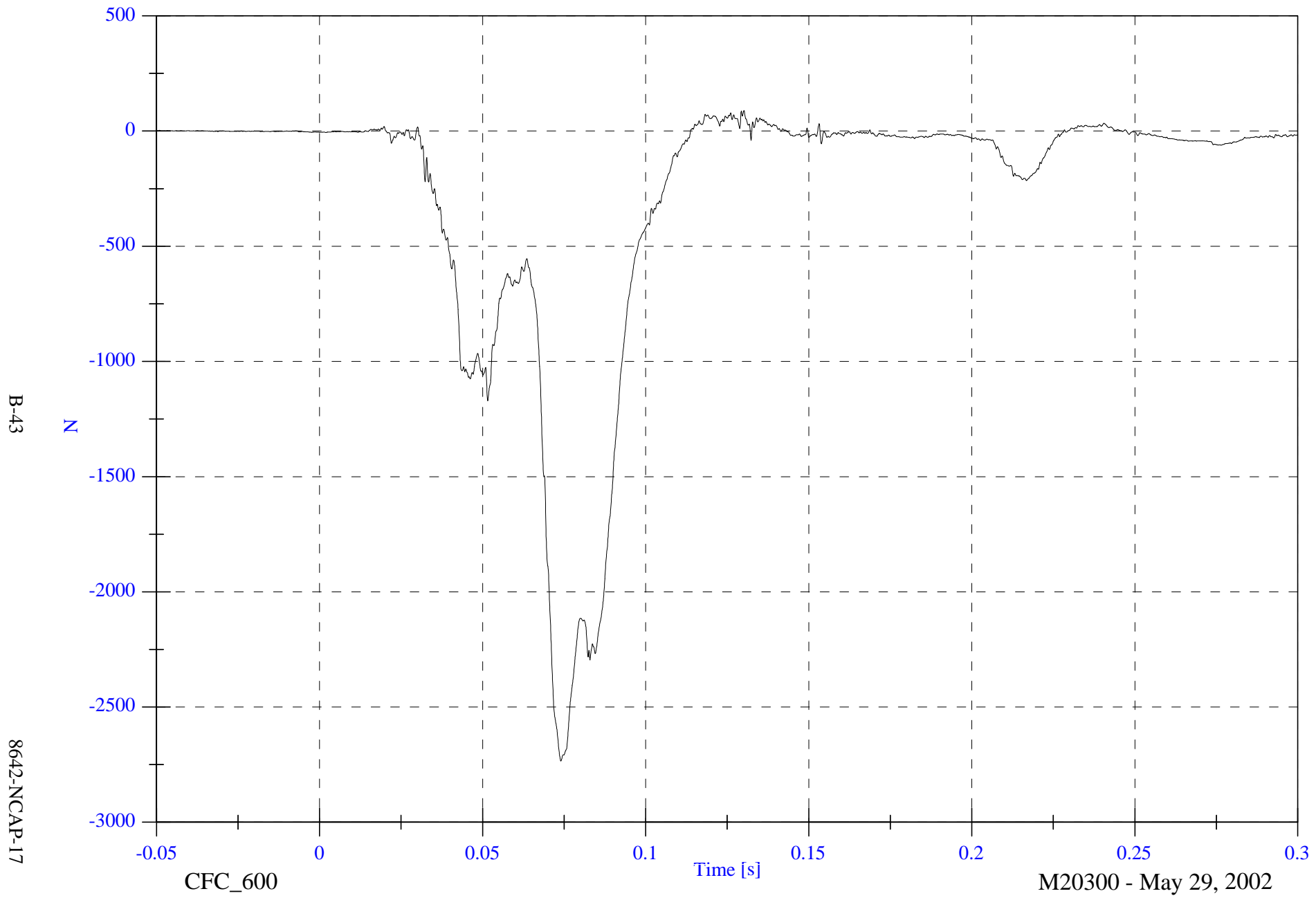


2002 NCAP Test 17 2002 Dodge Dakota

Max: 88.7 [N] at 0.130 [s]

Min: -2734.9 [N] at 0.074 [s]

P1 Left Lower Tibia Fz



2002 NCAP Test 17 2002 Dodge Dakota

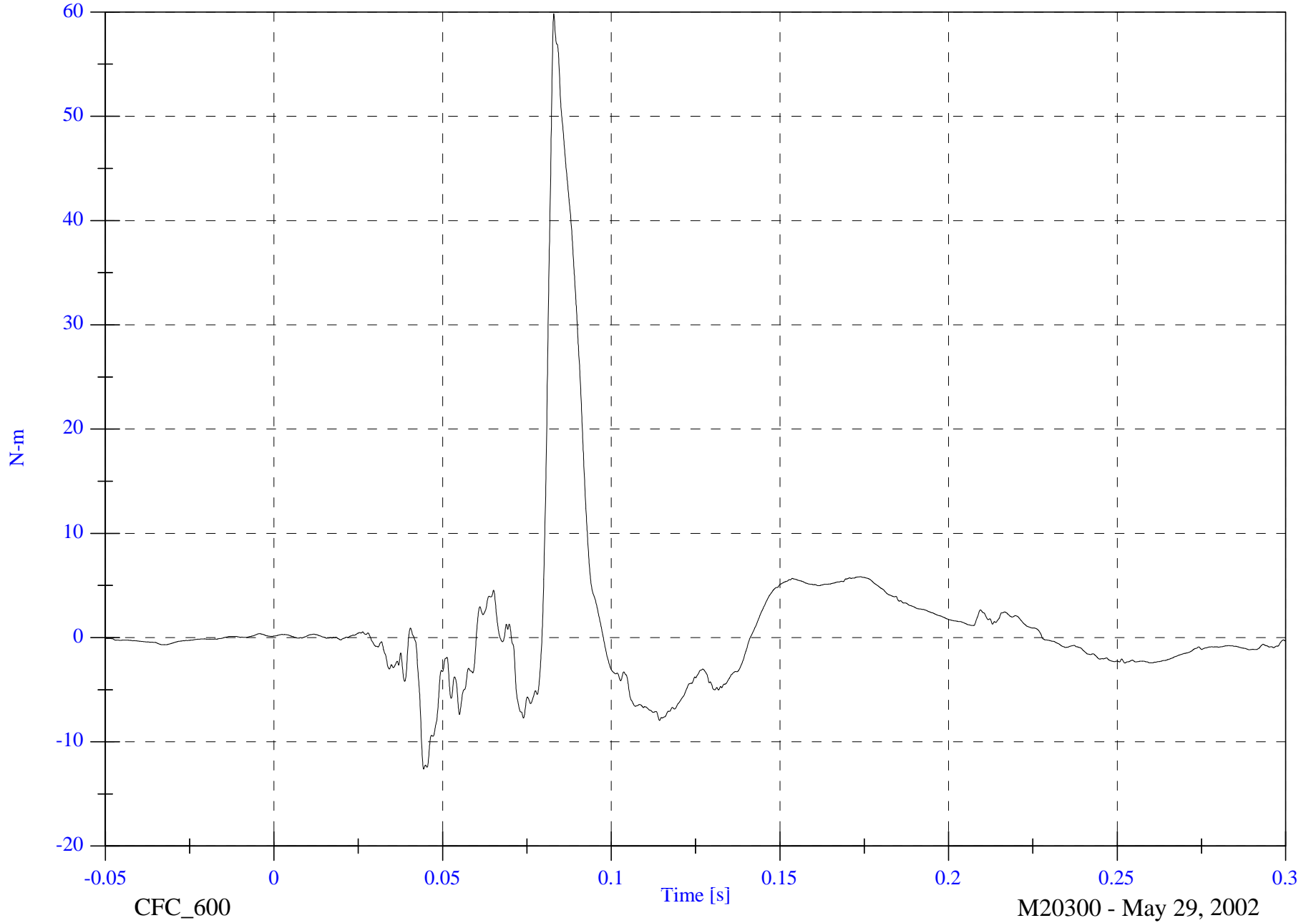
Max: 59.8 [N-m] at 0.083 [s]

Min: -12.6 [N-m] at 0.044 [s]

P1 Left Lower Tibia Mx

B-44

8642-NCAP-17



CFC\_600

Time [s]

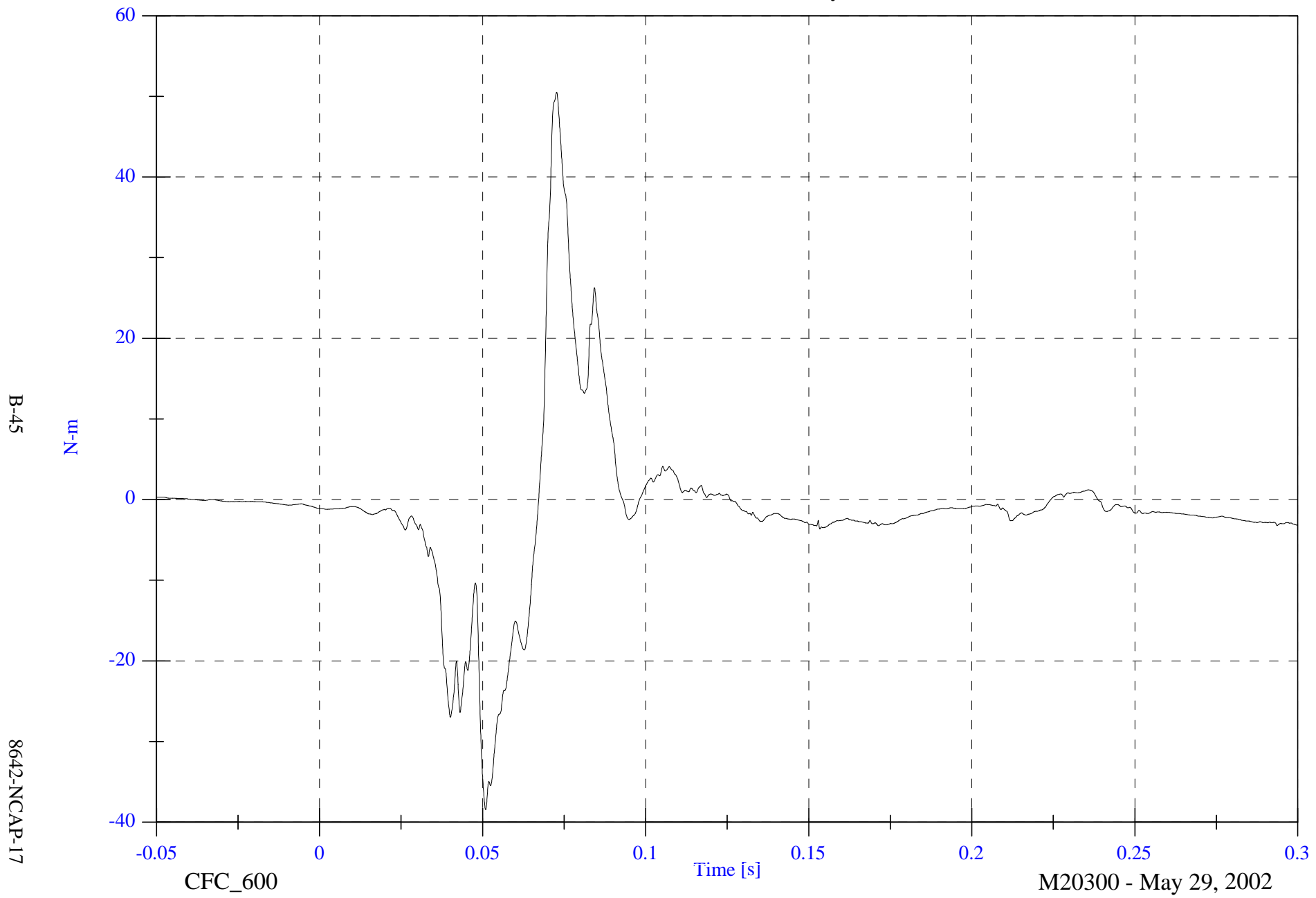
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 50.5 [N-m] at 0.073 [s]

Min: -38.4 [N-m] at 0.051 [s]

P1 Left Lower tibia My



B-45

8642-NCAP-17

CFC\_600

Time [s]

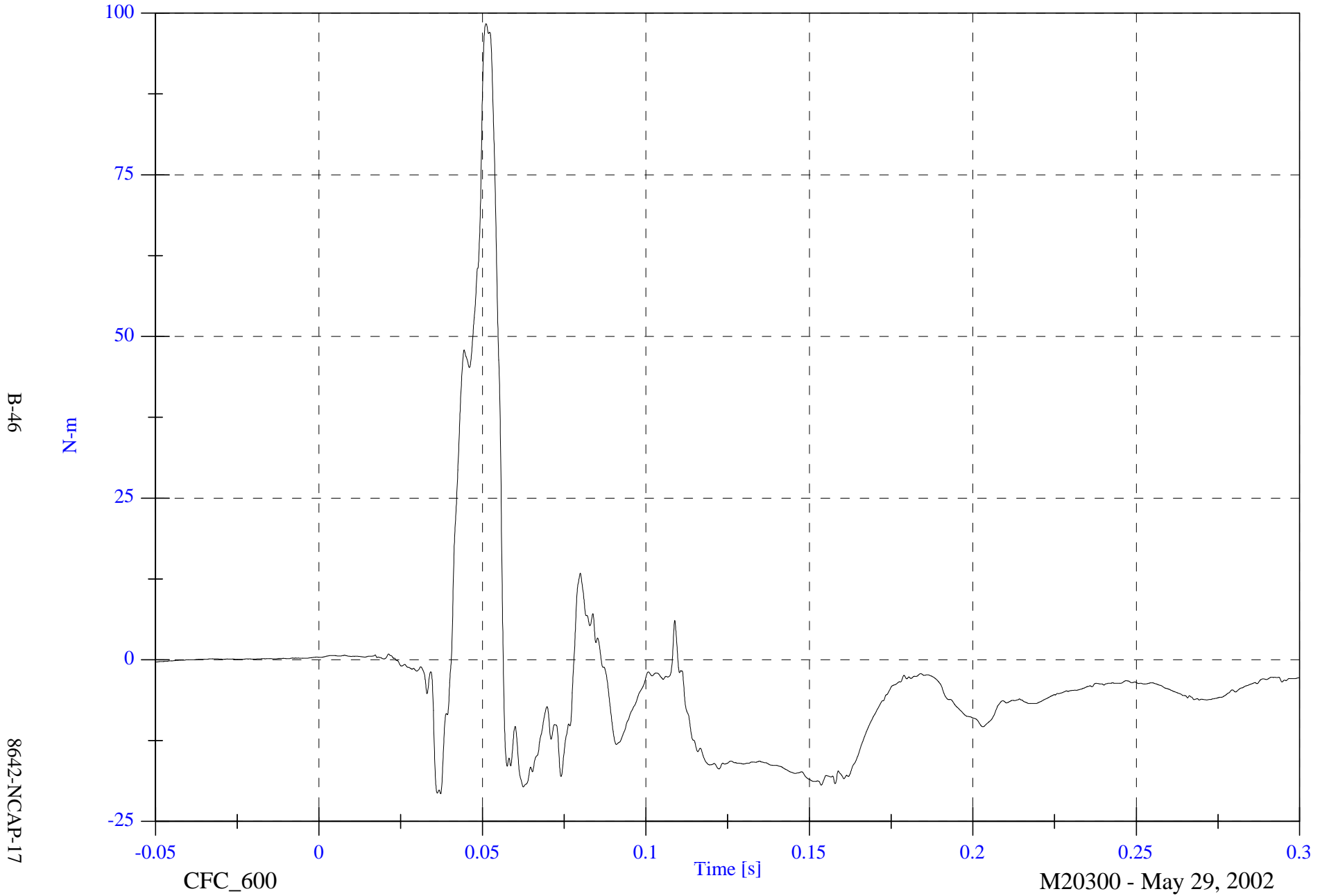
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 98.4 [N-m] at 0.051 [s]

Min: -20.7 [N-m] at 0.037 [s]

P1 Right Upper Tibia Mx

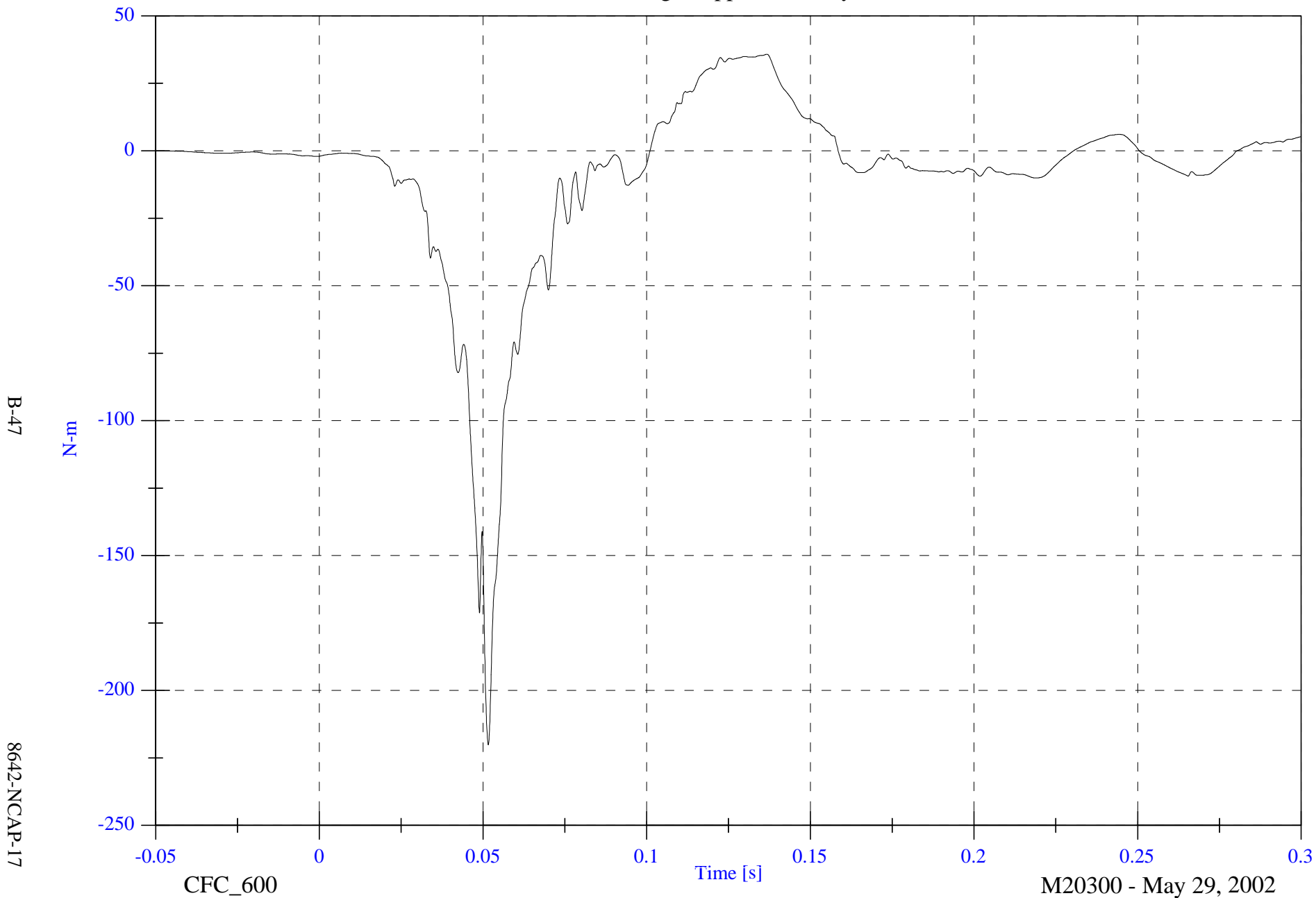


2002 NCAP Test 17 2002 Dodge Dakota

Max: 35.8 [N-m] at 0.137 [s]

Min: -220.1 [N-m] at 0.052 [s]

P1 Right Upper Tibia My



B-47

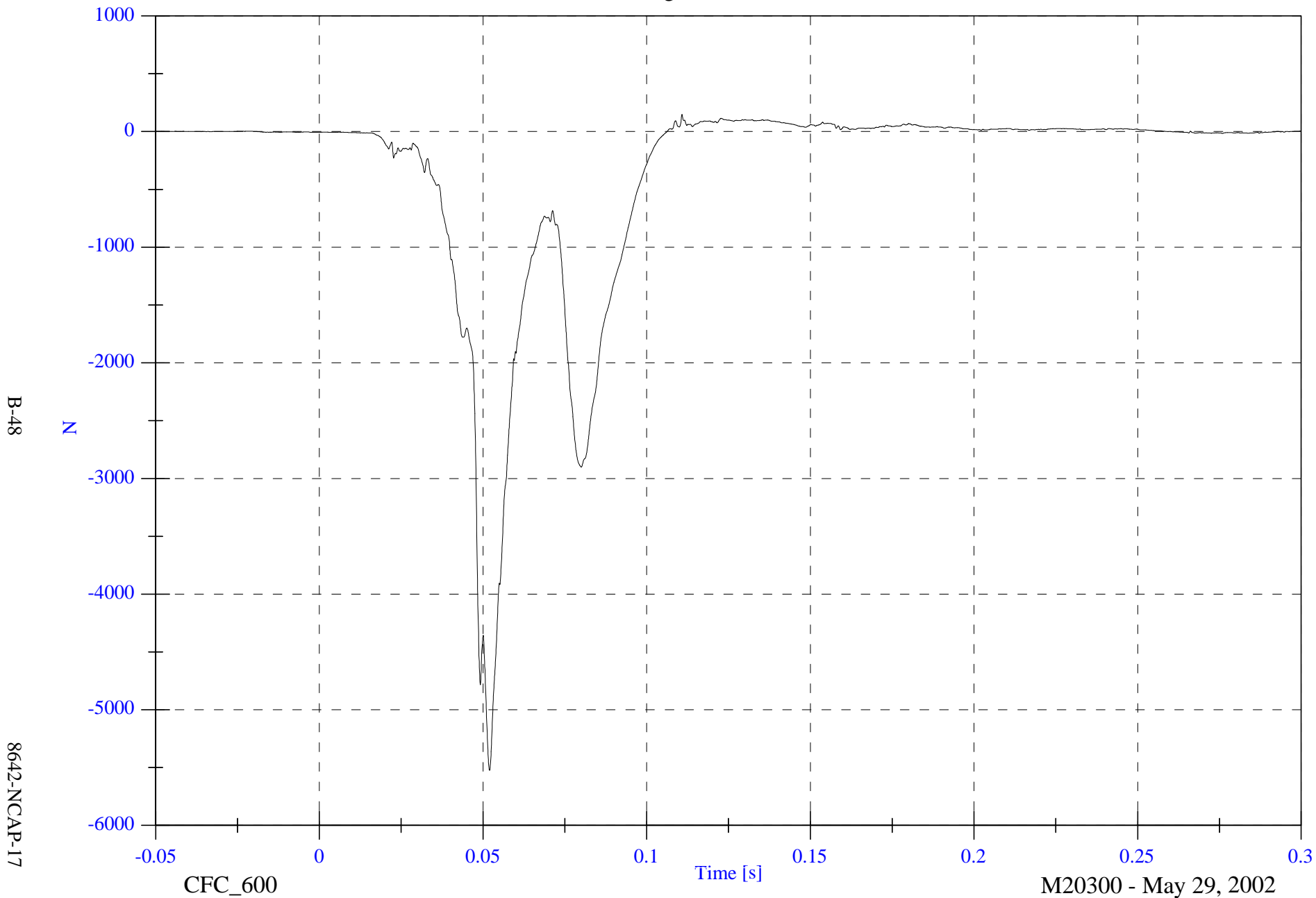
8642-NCAP-17

2002 NCAP Test 17 2002 Dodge Dakota

Max: 148.1 [N] at 0.111 [s]

Min: -5524.3 [N] at 0.052 [s]

P1 Right Lower Tibia Fz



B-48

8642-NCAP-17

CFC\_600

Time [s]

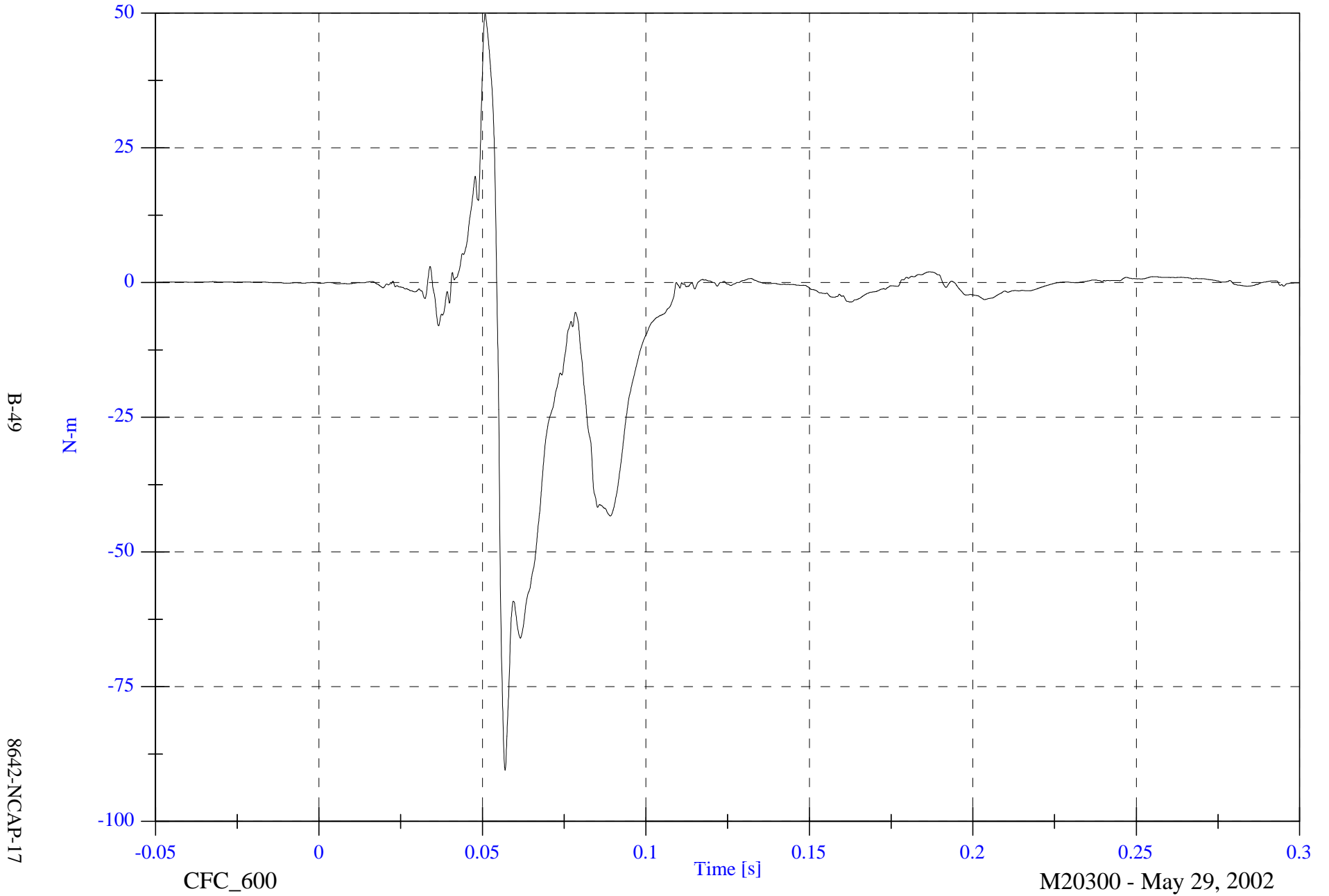
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 49.8 [N-m] at 0.051 [s]

Min: -90.5 [N-m] at 0.057 [s]

P1 Right Lower tibia Mx



B-49

8642-NCAP-17

CFC\_600

Time [s]

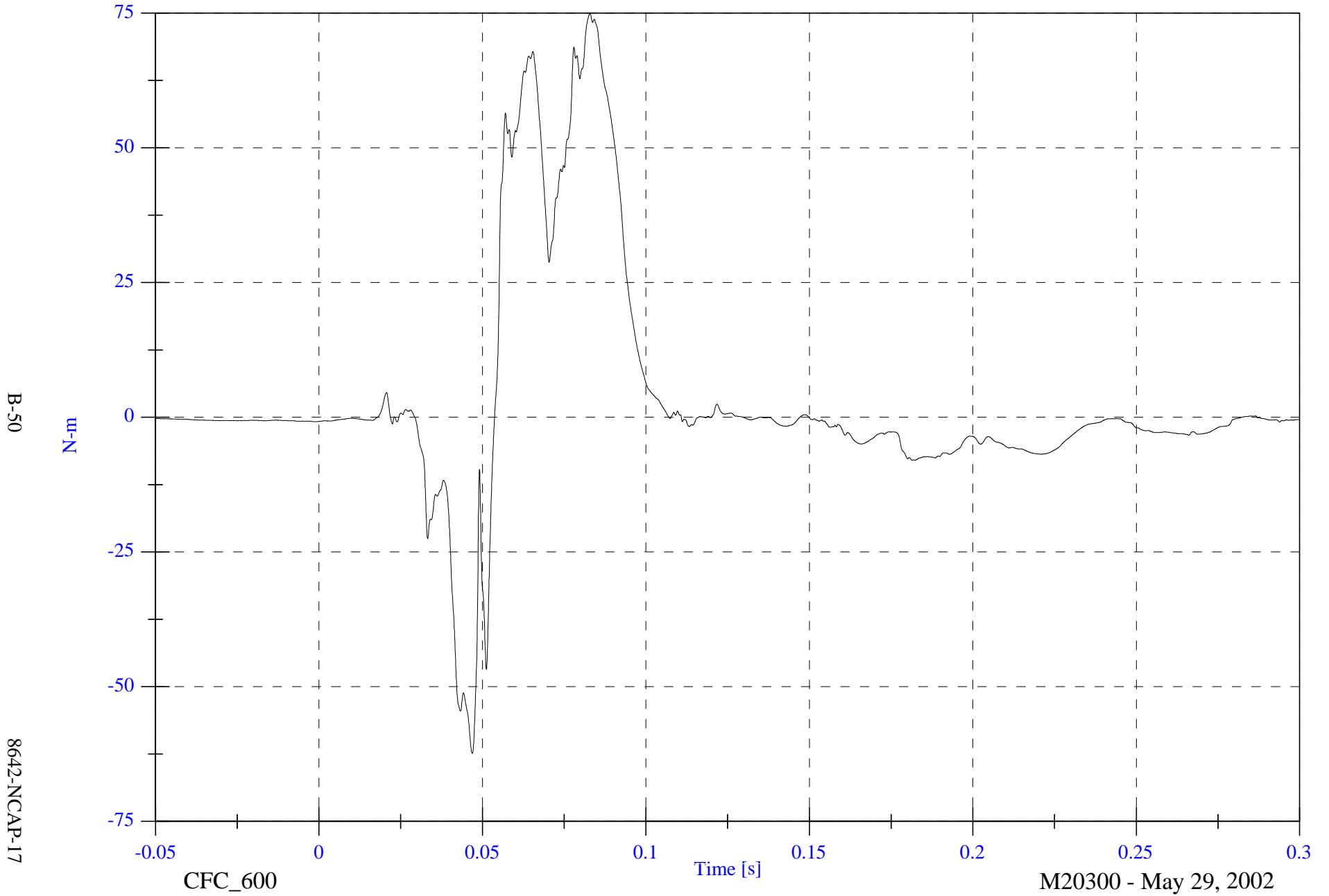
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 74.9 [N-m] at 0.083 [s]

Min: -62.4 [N-m] at 0.047 [s]

P1 Right Lower Tibia My



B-50

8642-NCAP-17

CFC\_600

Time [s]

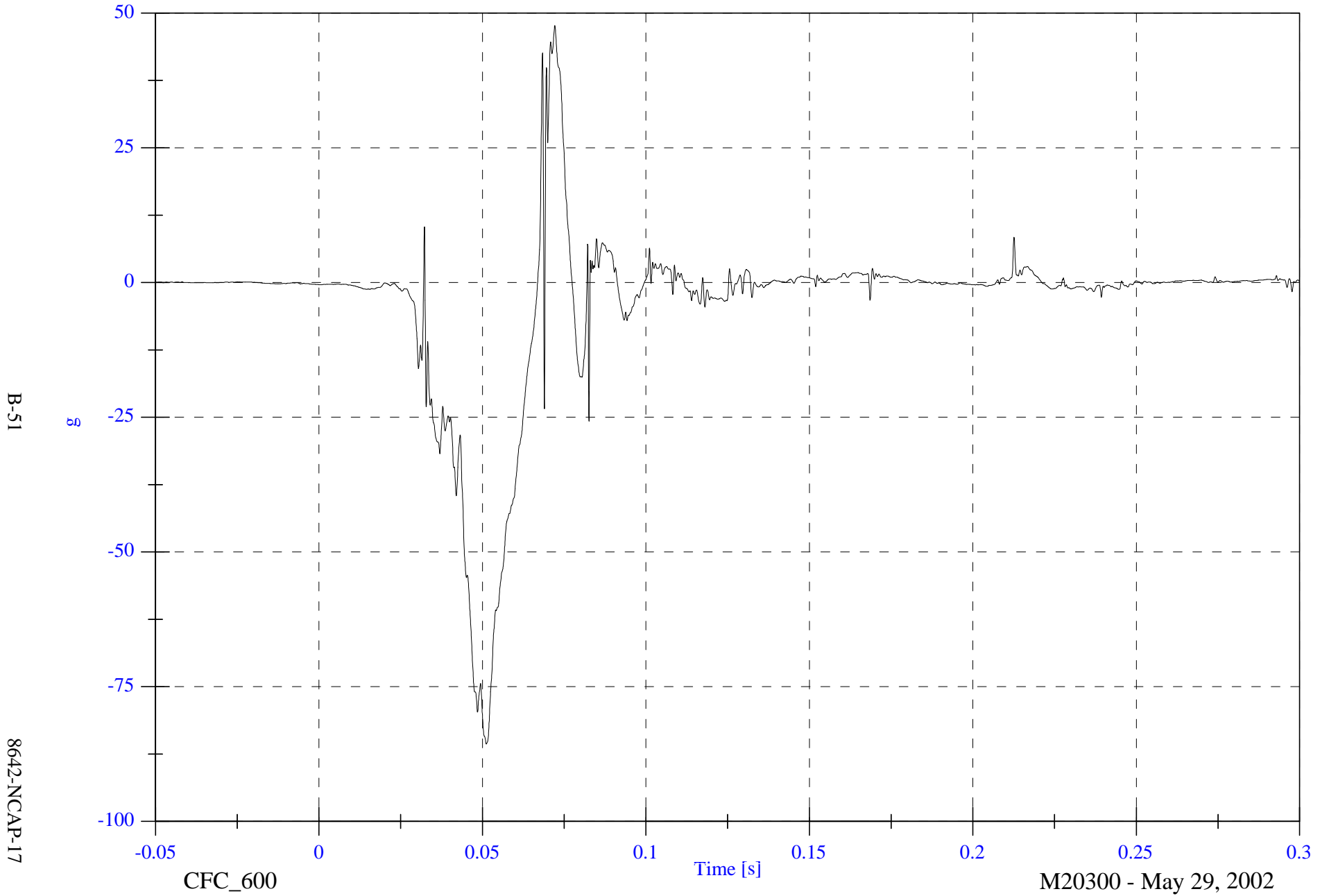
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

P1 Left Foot Aft Ax

Max: 47.7 [g] at 0.072 [s]

Min: -85.6 [g] at 0.051 [s]

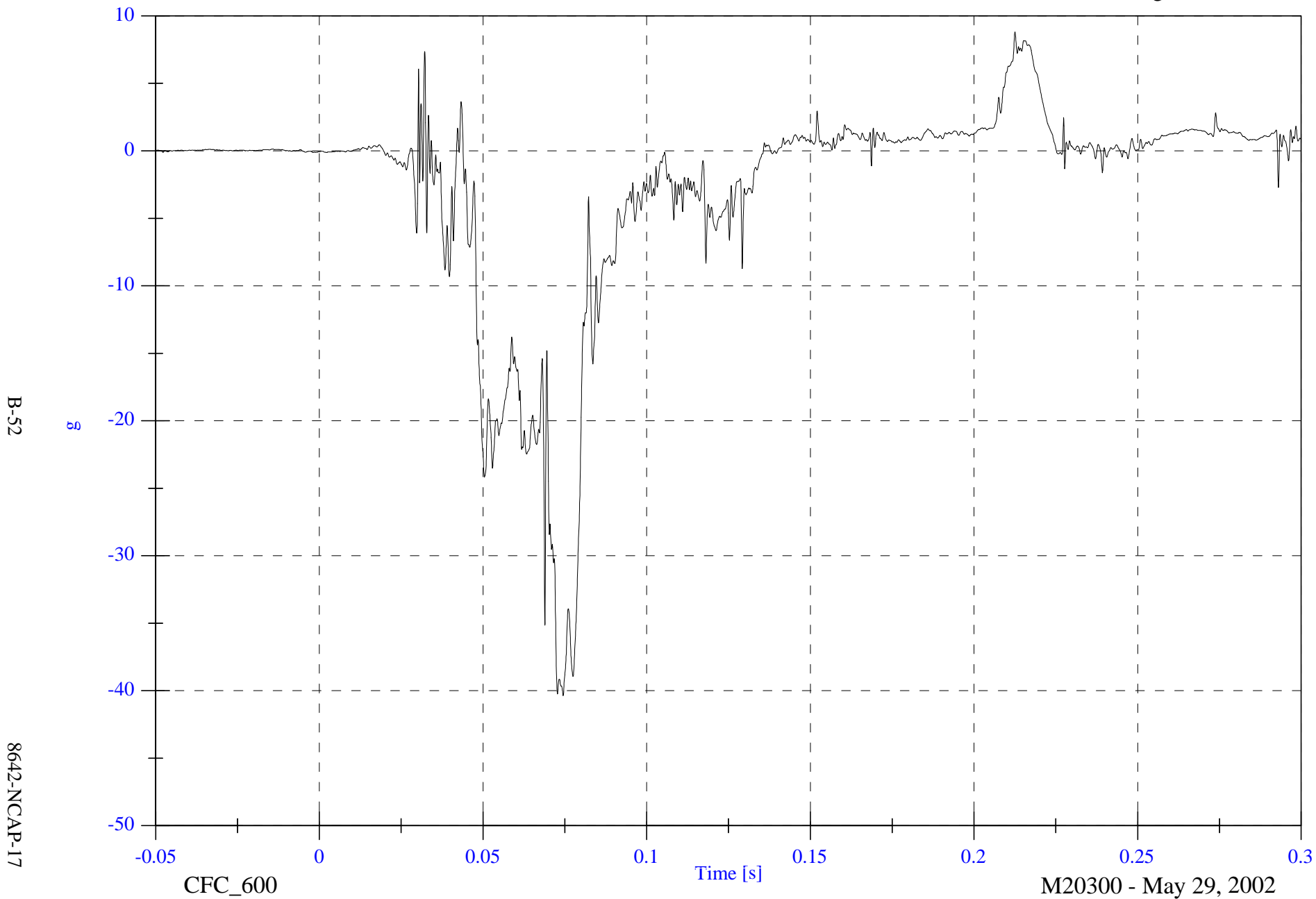


2002 NCAP Test 17 2002 Dodge Dakota

Max: 8.8 [g] at 0.213 [s]

Min: -40.4 [g] at 0.075 [s]

P1 Left Foot Aft Az

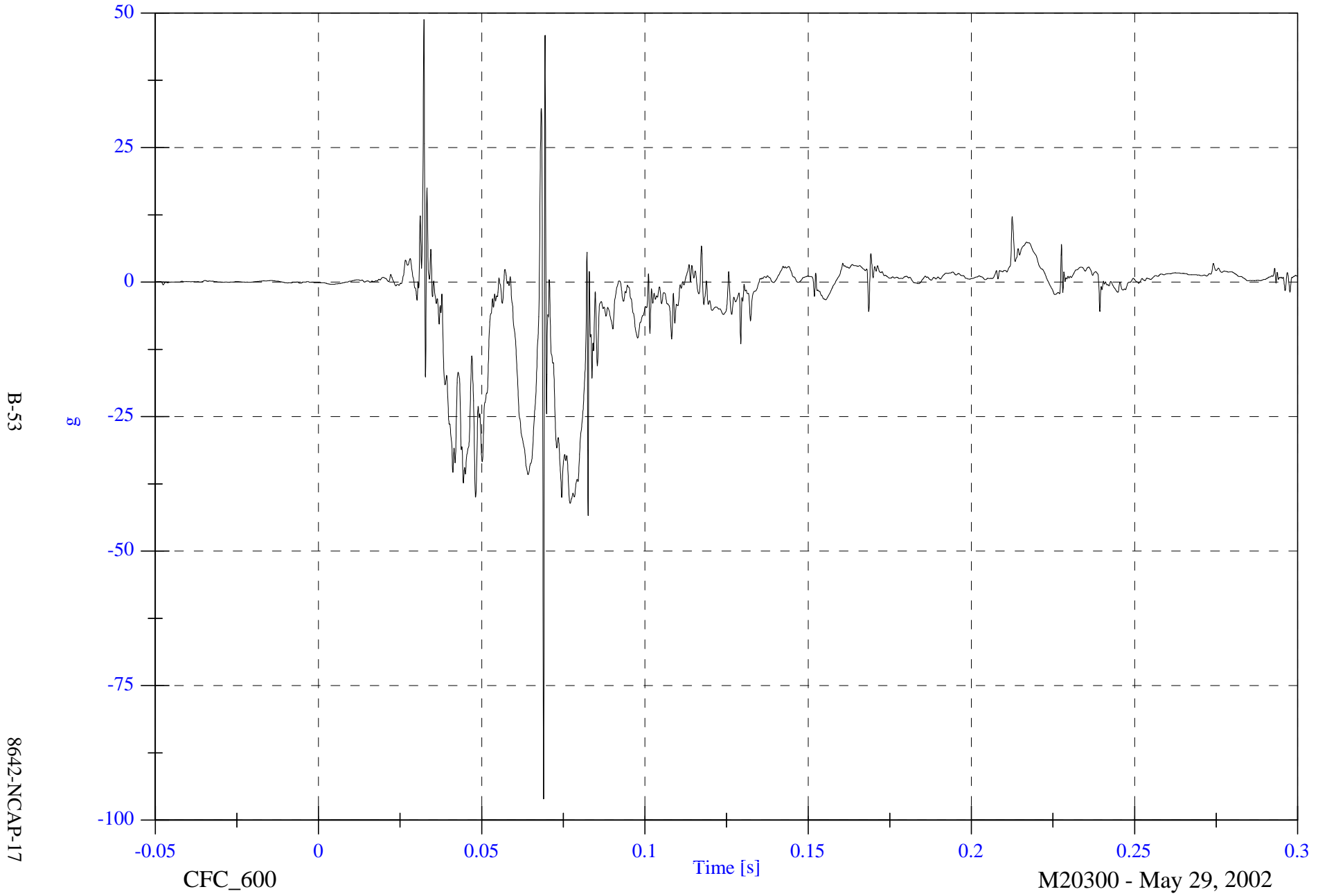


2002 NCAP Test 17 2002 Dodge Dakota

Max: 48.8 [g] at 0.032 [s]

Min: -96.1 [g] at 0.069 [s]

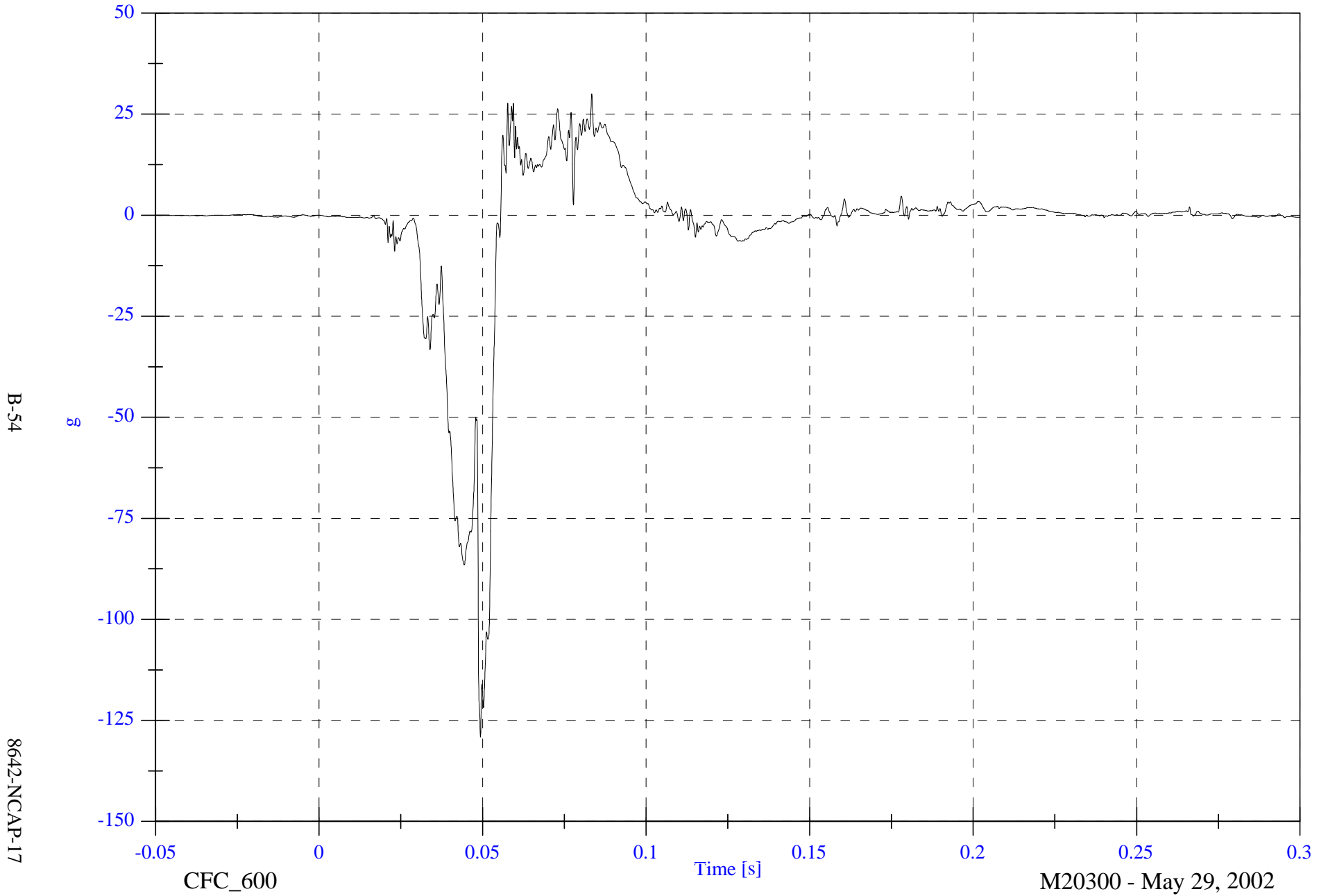
P1 Left Foot Fore Az



2002 NCAP Test 17 2002 Dodge Dakota

Max: 30.0 [g] at 0.083 [s]  
Min: -129.2 [g] at 0.049 [s]

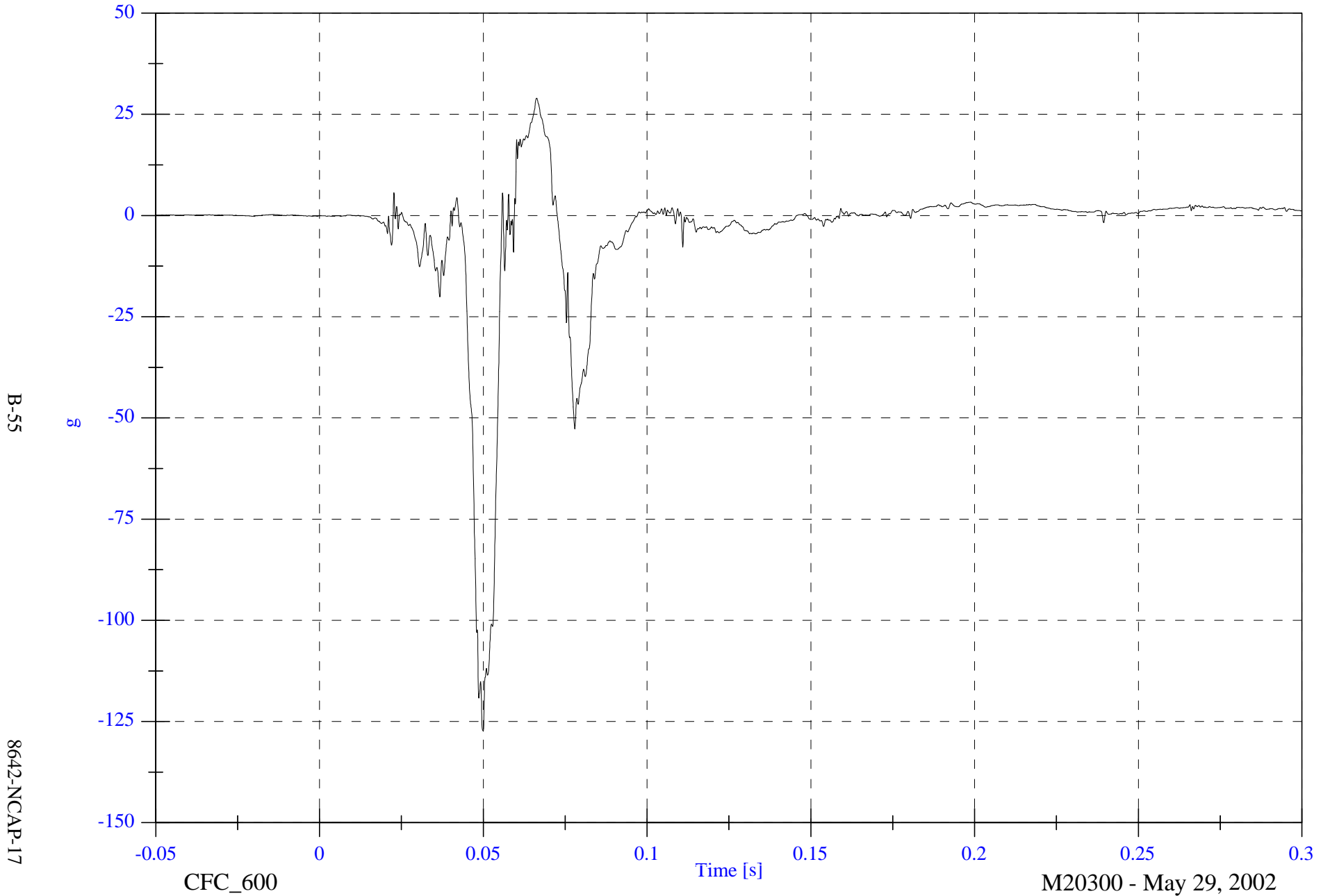
P1 Right Foot Aft x



2002 NCAP Test 17 2002 Dodge Dakota

Max: 29.0 [g] at 0.066 [s]  
Min: -127.4 [g] at 0.050 [s]

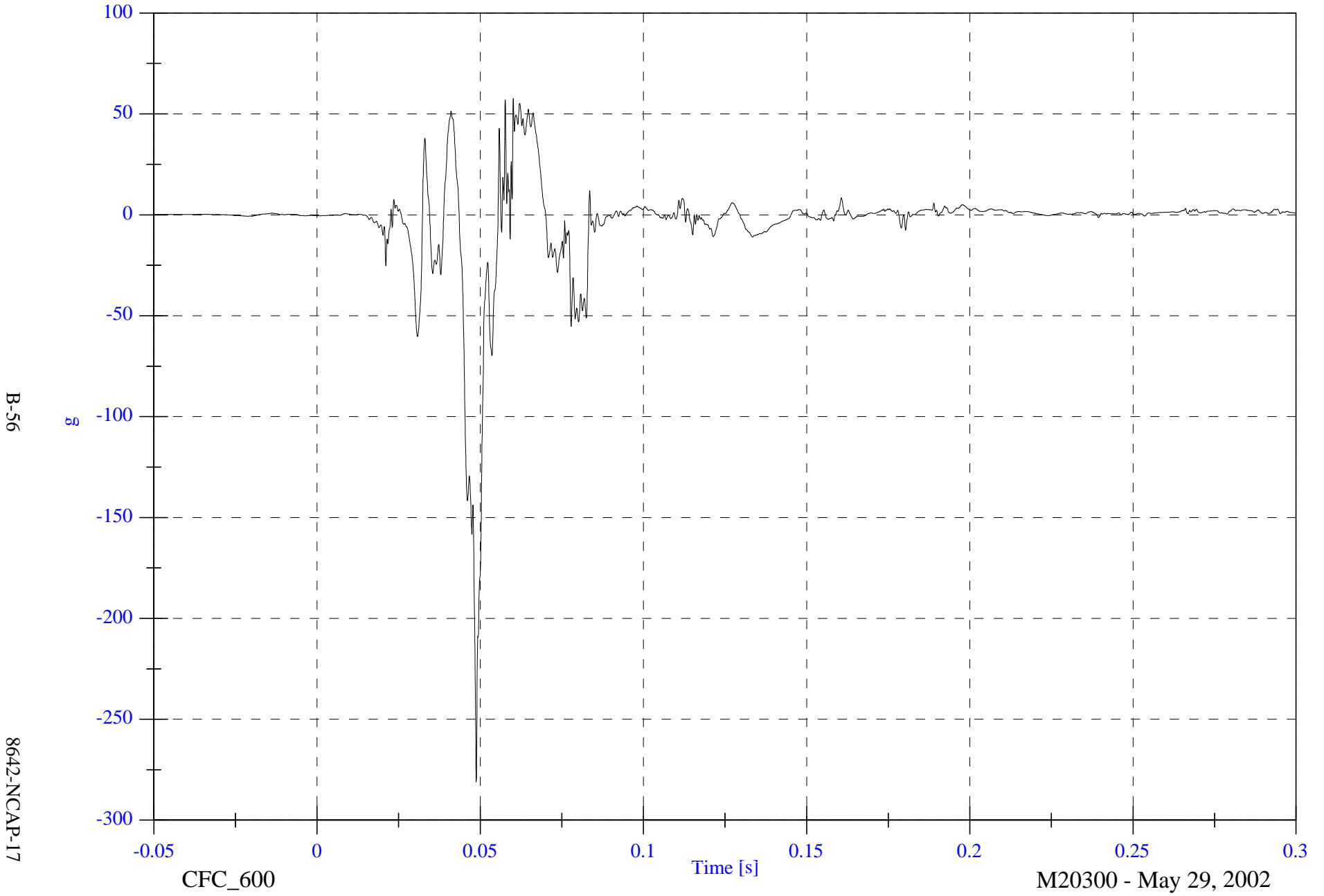
P1 Right Foot Aft z



2002 NCAP Test 17 2002 Dodge Dakota

Max: 57.7 [g] at 0.060 [s]  
Min: -281.1 [g] at 0.049 [s]

P1 Right Foot Fore z

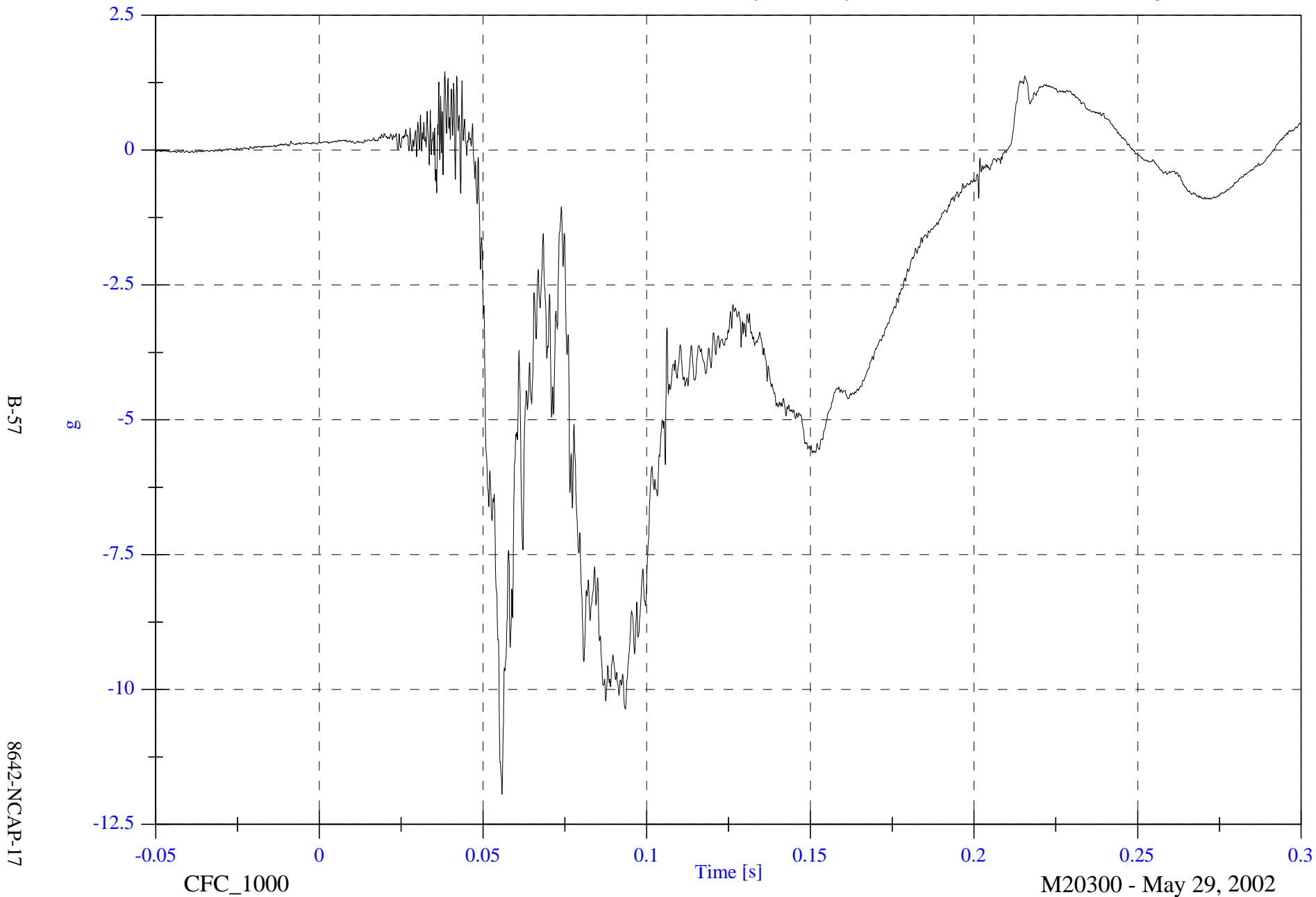


2002 NCAP Test 17 2002 Dodge Dakota

Max: 1.5 [g] at 0.038 [s]

P2 Head 9 Array X Arm y

Min: -11.9 [g] at 0.056 [s]



B-57

8642-NCAP-17

CFC\_1000

Time [s]

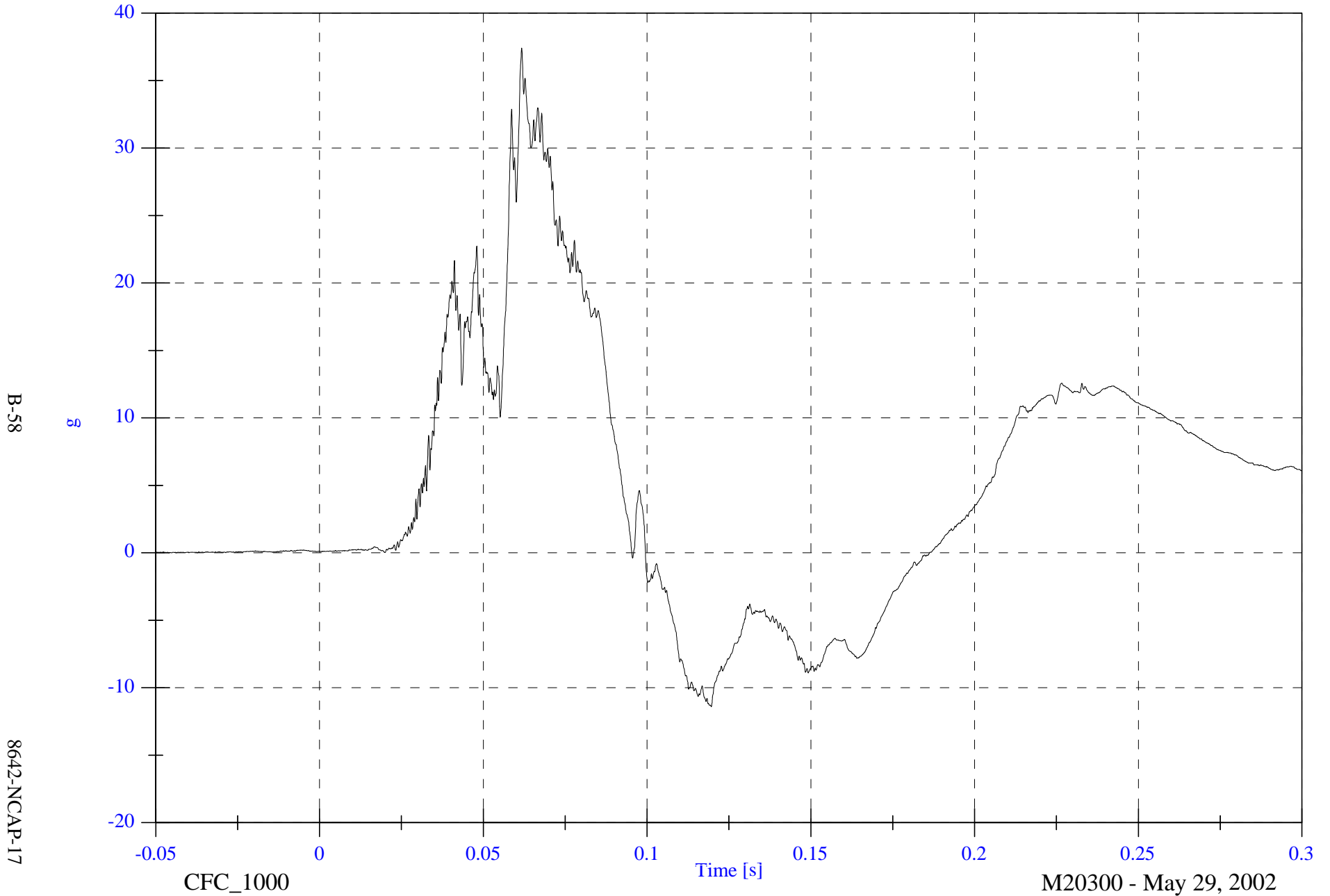
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 37.4 [g] at 0.062 [s]

Min: -11.4 [g] at 0.120 [s]

P2 Head 9 Array X Arm z



B-58

8642-NCAP-17

CFC\_1000

Time [s]

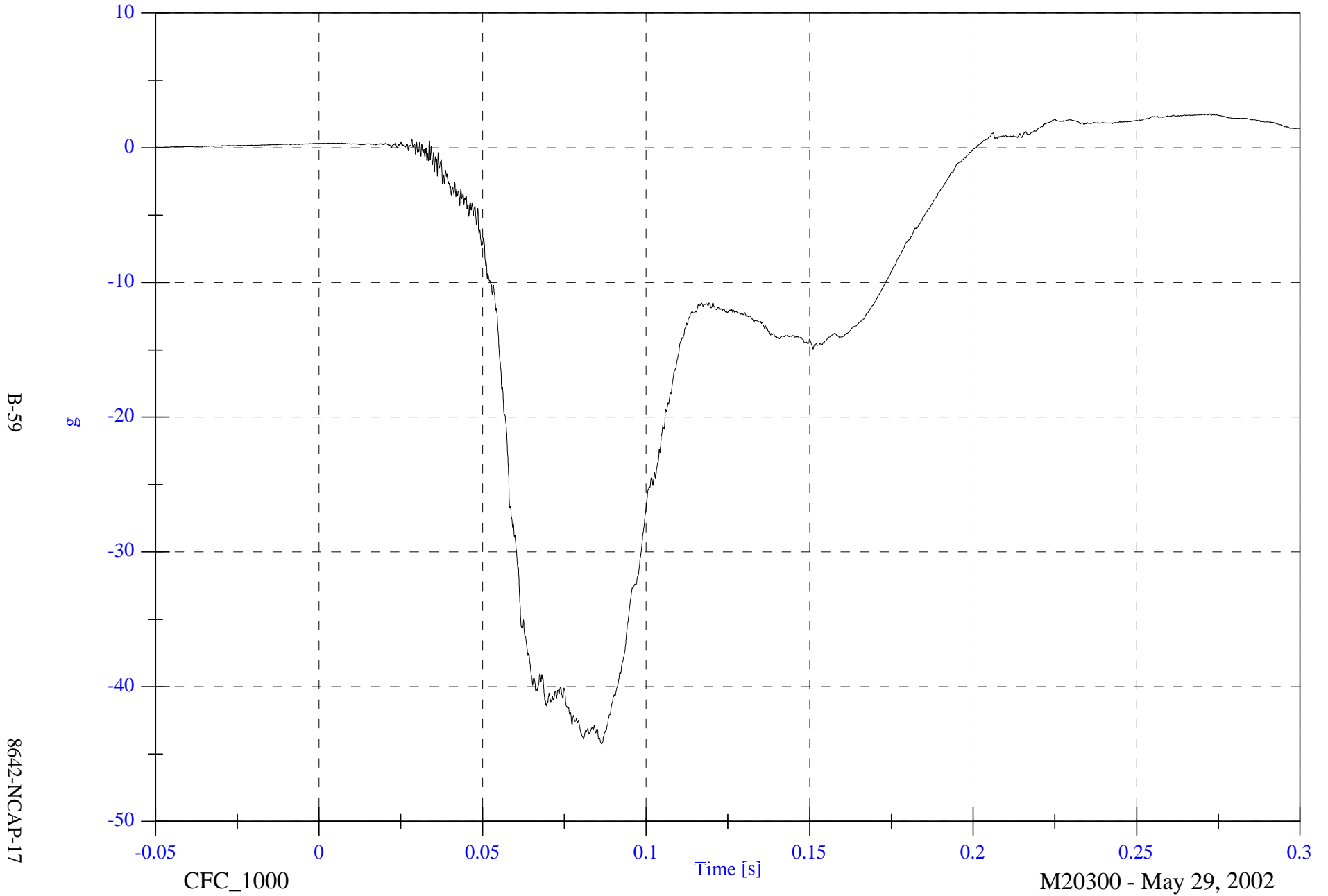
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 2.5 [g] at 0.272 [s]

Min: -44.3 [g] at 0.086 [s]

P2 Head 9 Array Y Arm x



B-59

8642-NCAP-17

CFC\_1000

Time [s]

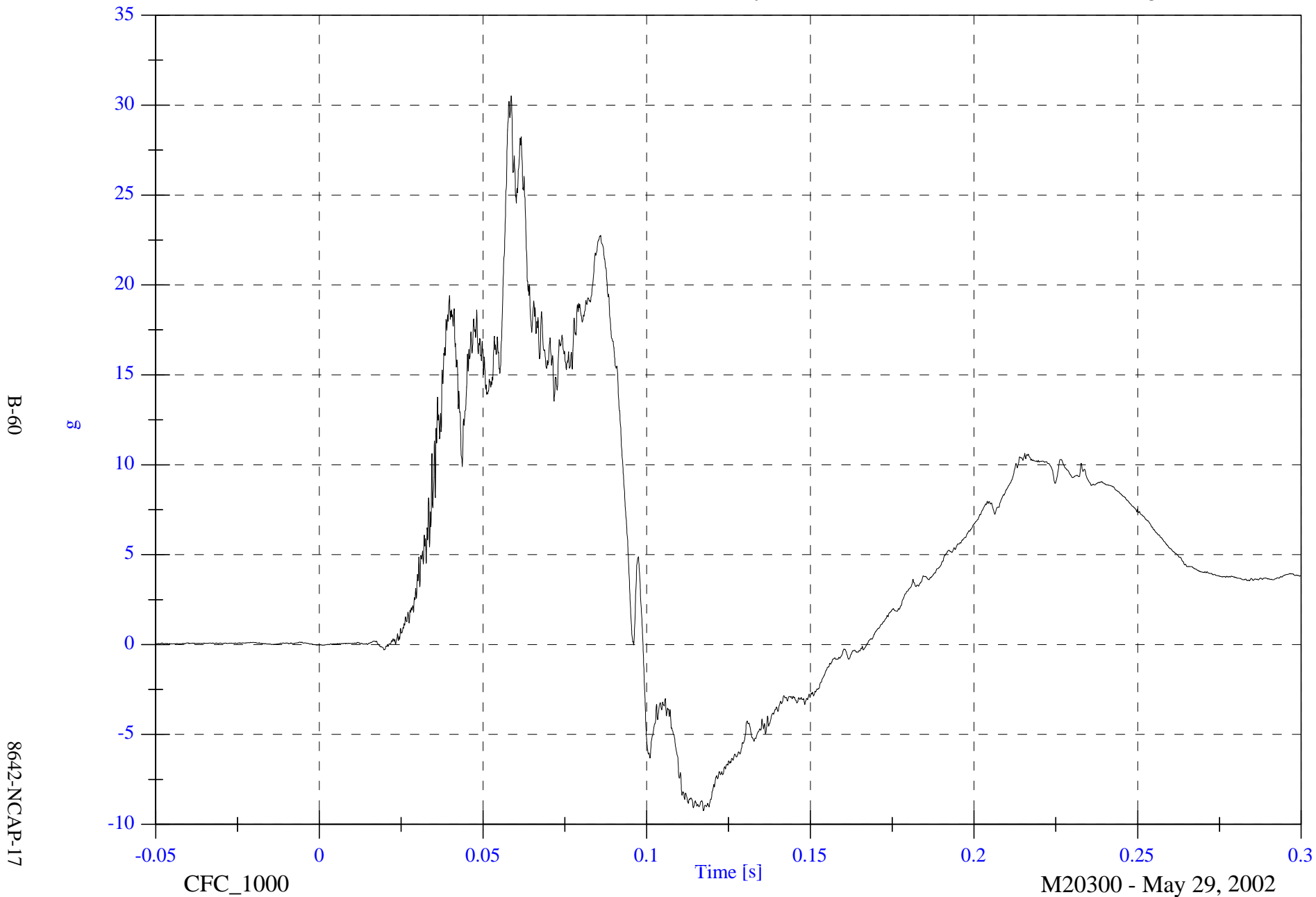
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 30.5 [g] at 0.059 [s]

P2 Head 9 Array Y Arm z

Min: -9.2 [g] at 0.117 [s]



B-60

8642-NCAP-17

CFC\_1000

Time [s]

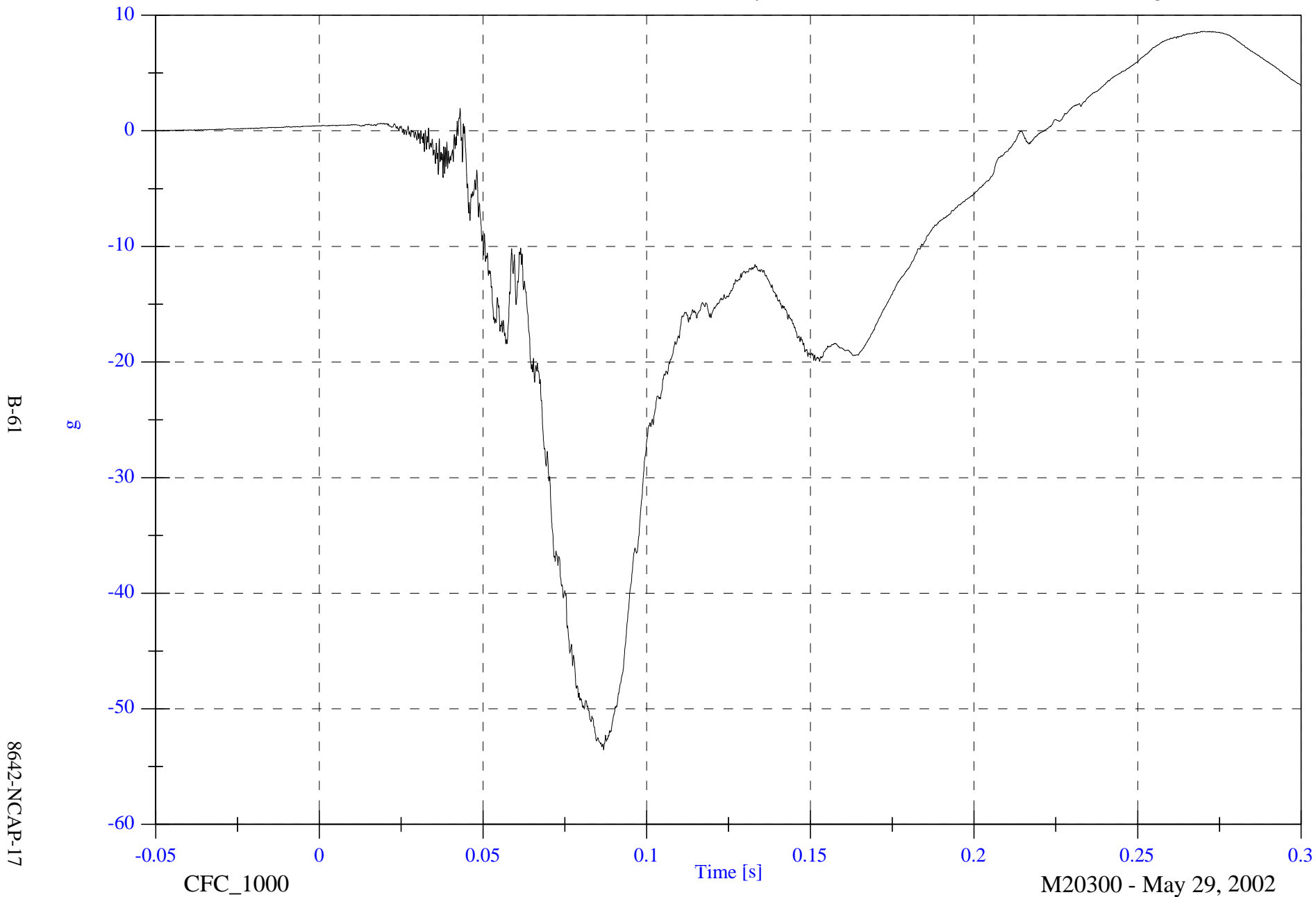
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 8.6 [g] at 0.270 [s]

P2 Head 9 Array Z Arm x

Min: -53.6 [g] at 0.087 [s]



B-61

8642-NCAP-17

CFC\_1000

Time [s]

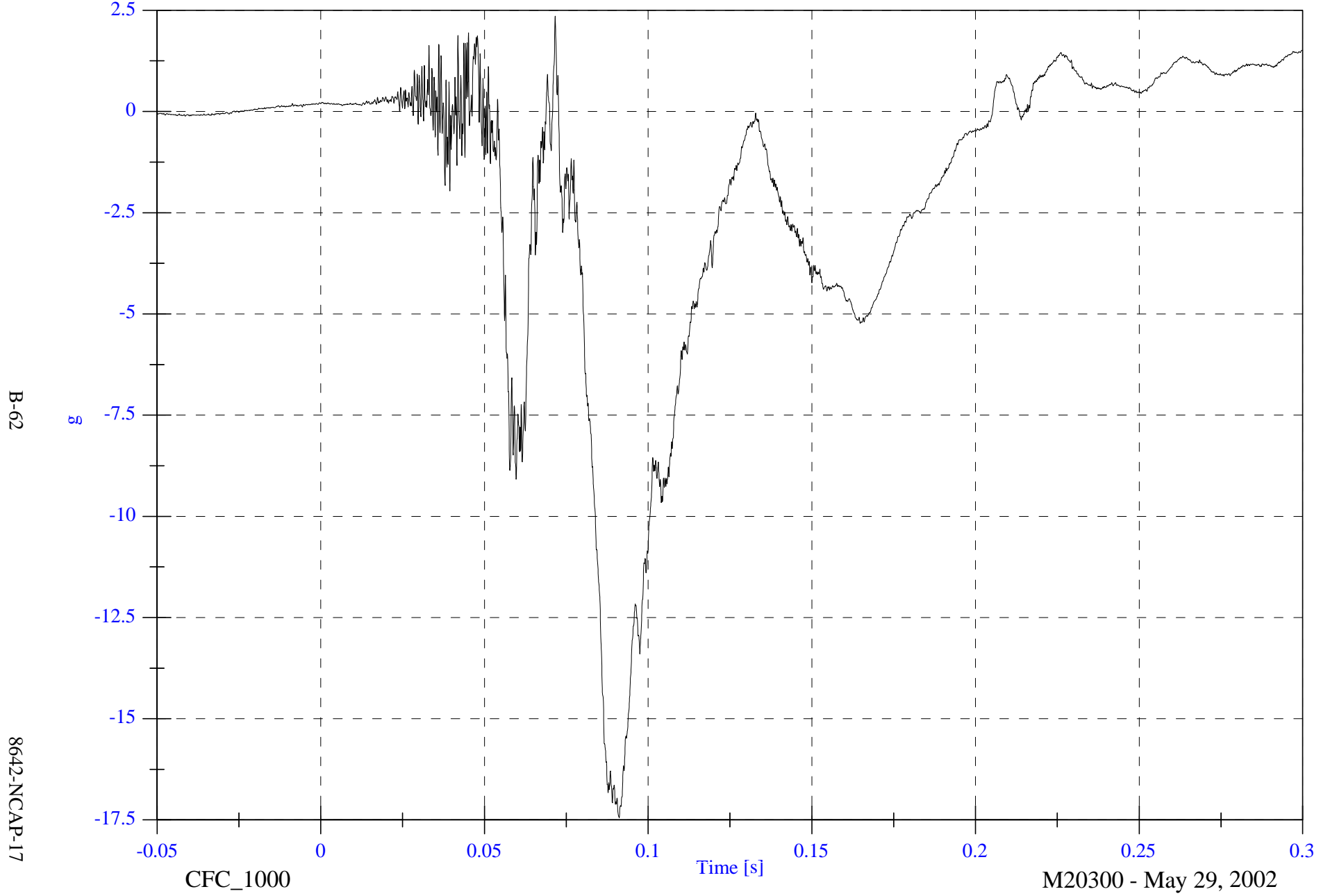
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 2.4 [g] at 0.072 [s]

Min: -17.4 [g] at 0.091 [s]

P2 Head 9 Array Z Arm y



B-62

8642-NCAP-17

CFC\_1000

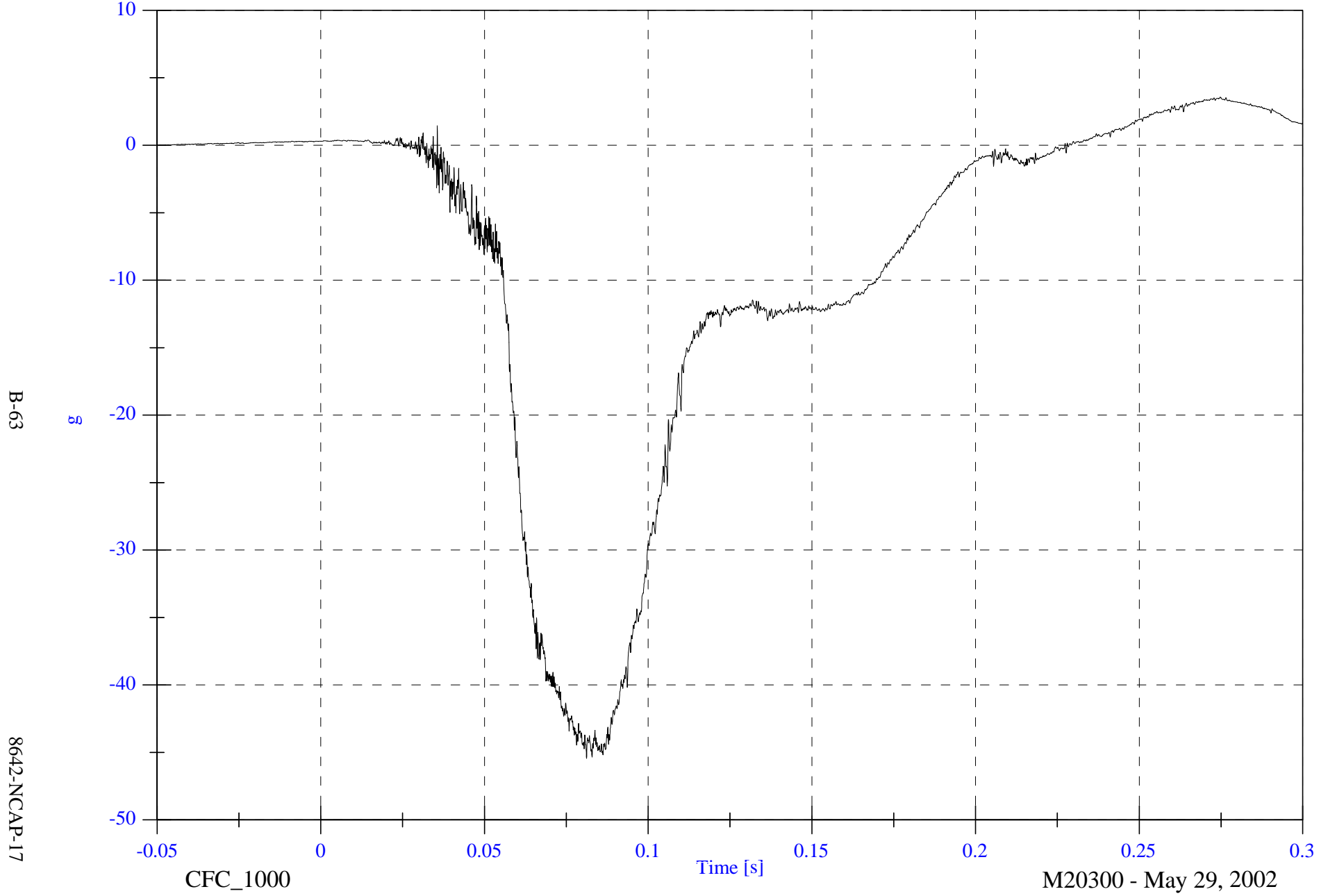
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 3.6 [g] at 0.275 [s]

Min: -45.5 [g] at 0.081 [s]

P2 Head CG x



B-63

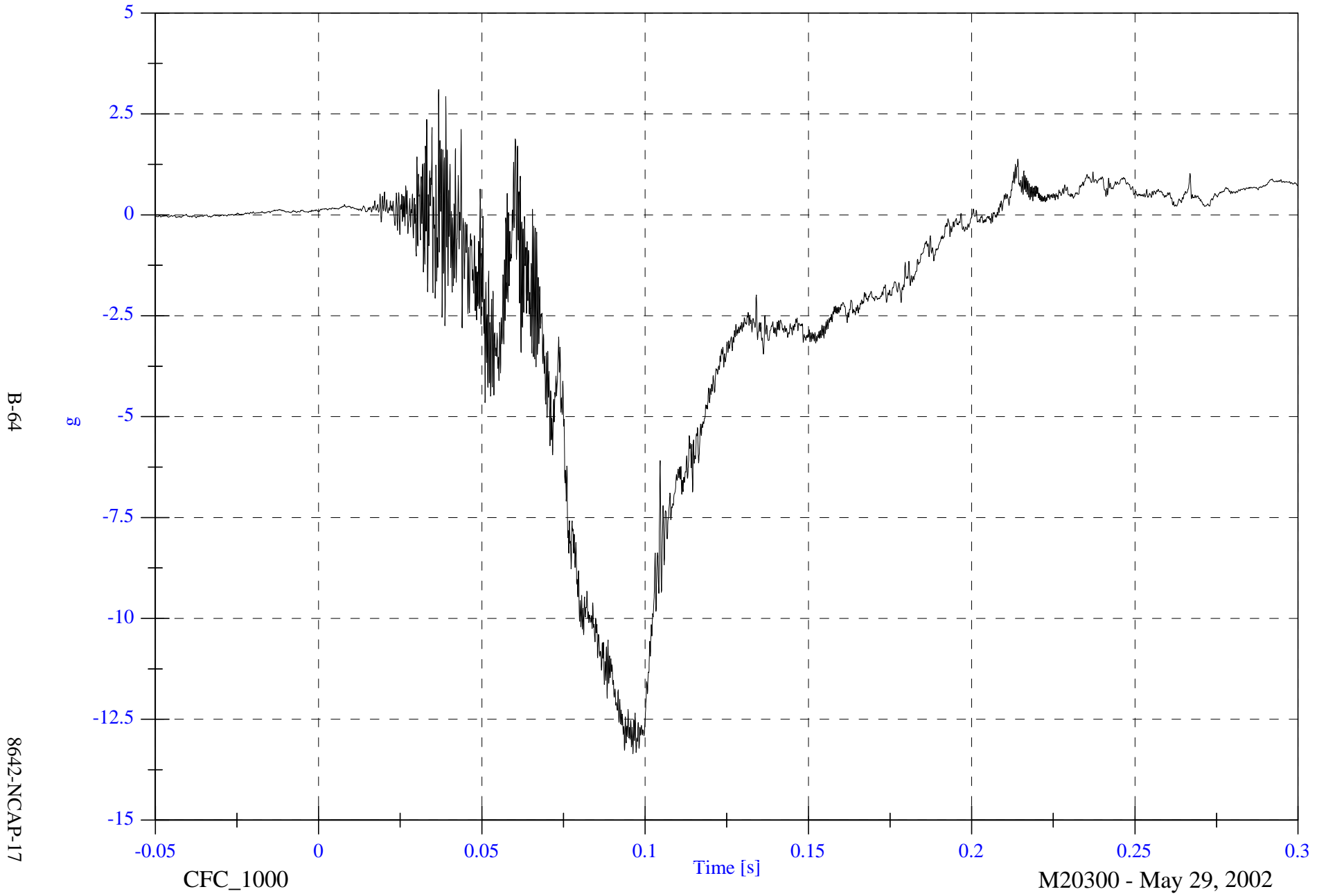
8642-NCAP-17

2002 NCAP Test 17 2002 Dodge Dakota

Max: 3.1 [g] at 0.037 [s]

Min: -13.4 [g] at 0.096 [s]

P2 Head CG y

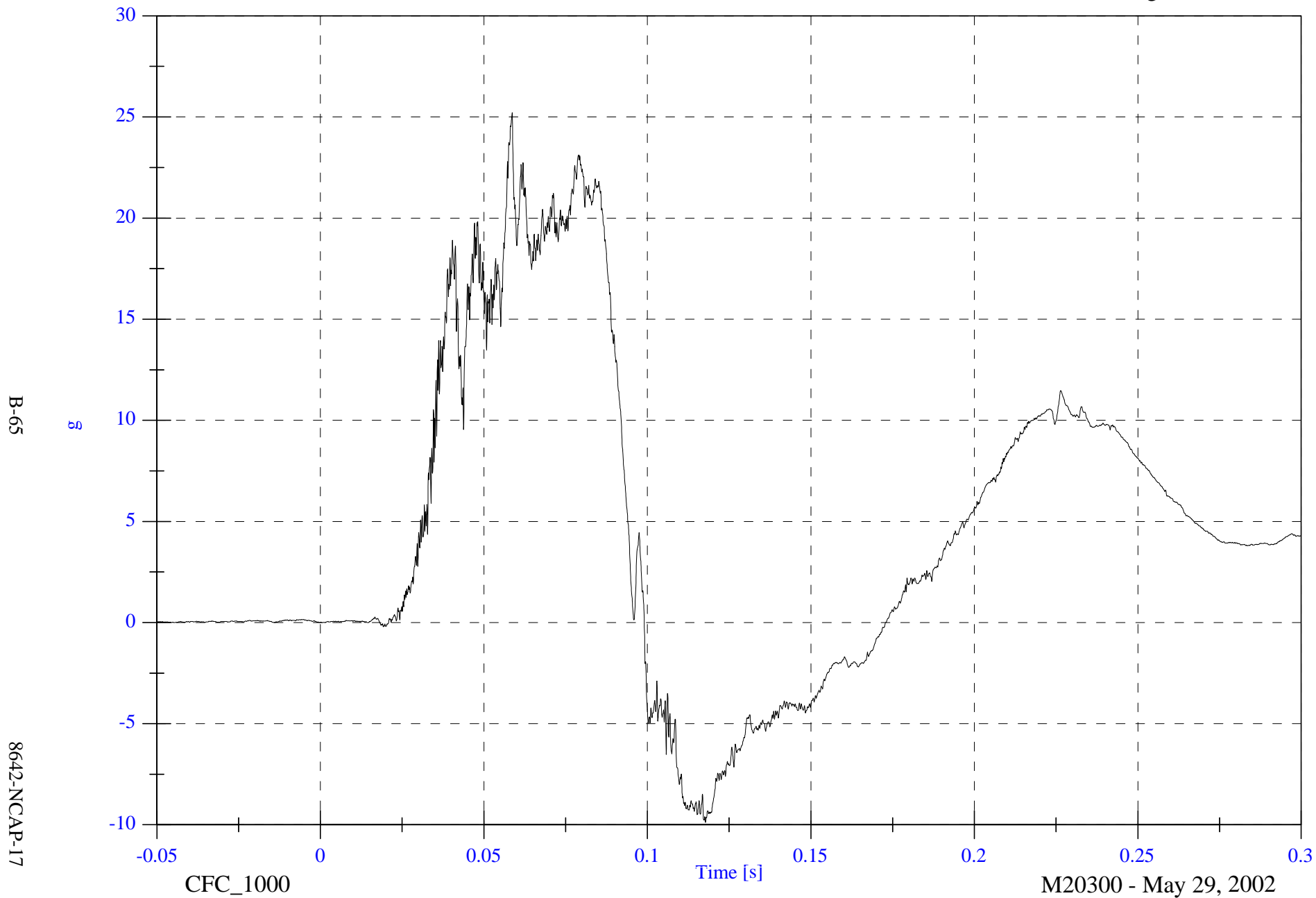


2002 NCAP Test 17 2002 Dodge Dakota

Max: 25.2 [g] at 0.059 [s]

Min: -9.9 [g] at 0.118 [s]

P2 Head CG z



B-65

8642-NCAP-17

CFC\_1000

M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

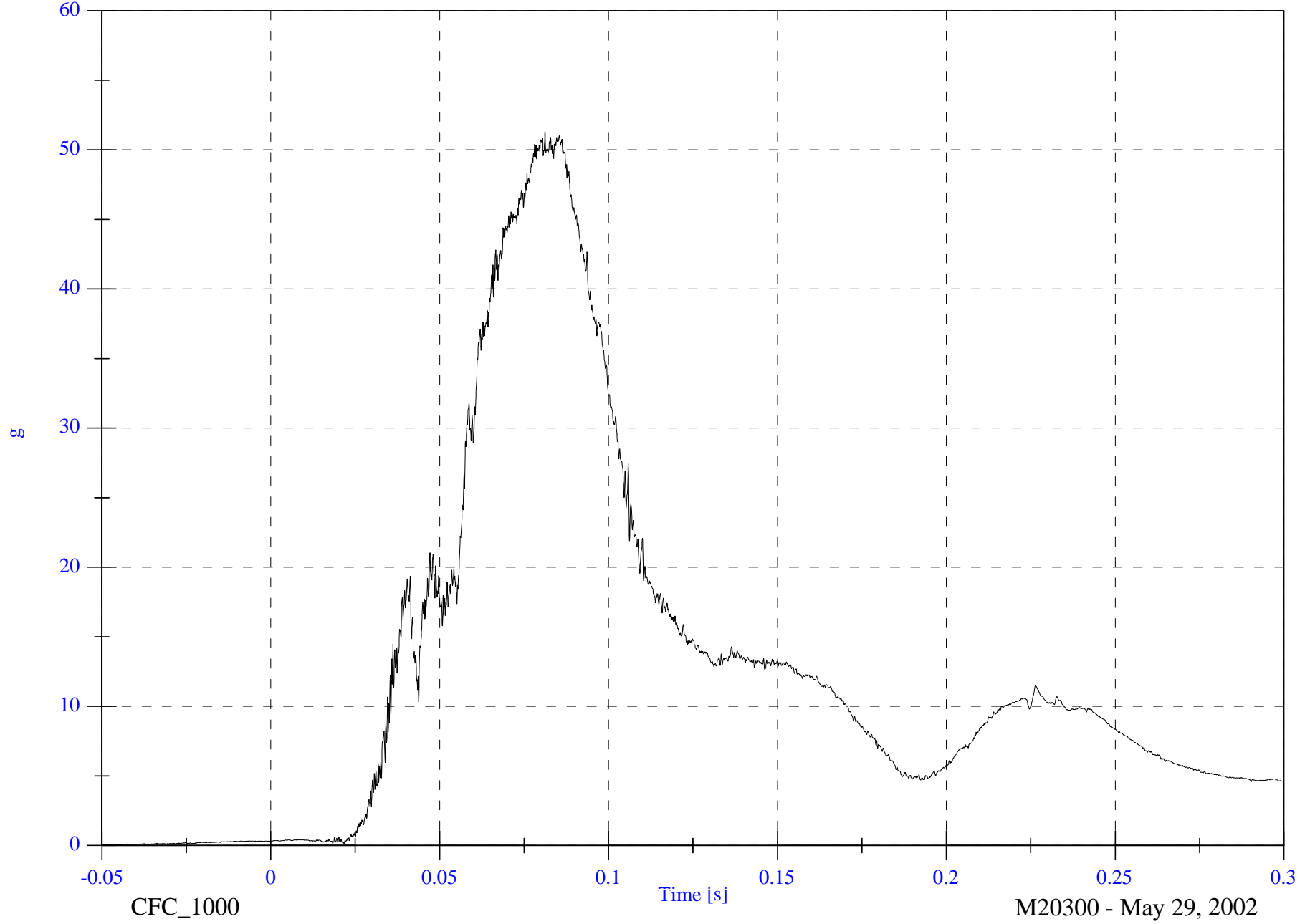
Max: 51.4 [g] at 0.081 [s]

P2 Head CG Resultant

Min: 0.0 [g] at -0.050 [s]

B-66

8642-NCAP-17

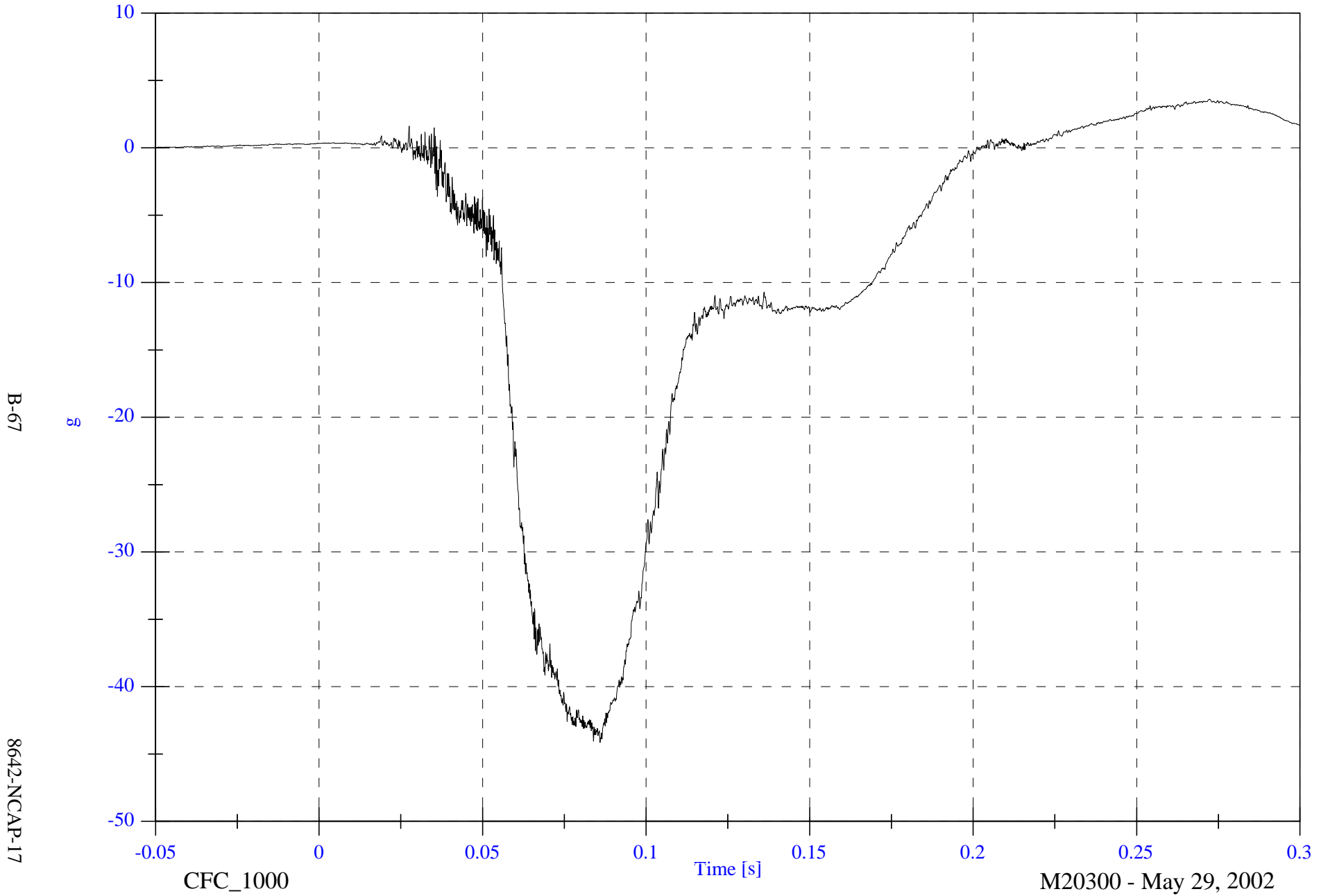


2002 NCAP Test 17 2002 Dodge Dakota

P2 Head CG Red x

Max: 3.6 [g] at 0.272 [s]

Min: -44.1 [g] at 0.086 [s]

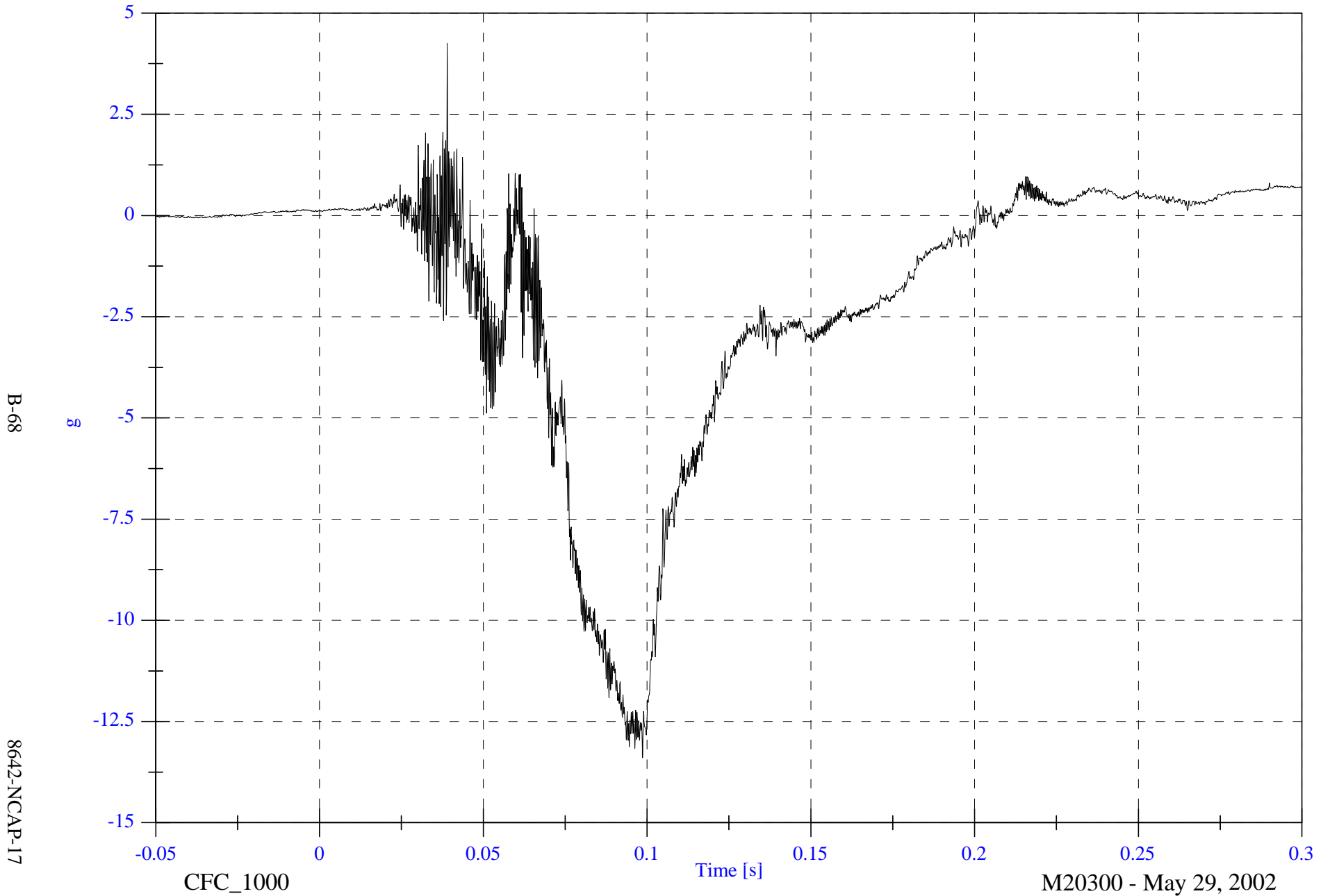


2002 NCAP Test 17 2002 Dodge Dakota

P2 Head CG Red y

Max: 4.3 [g] at 0.039 [s]

Min: -13.4 [g] at 0.099 [s]



2002 NCAP Test 17 2002 Dodge Dakota

Max: 25.2 [g] at 0.059 [s]

Min: -9.6 [g] at 0.117 [s]

P2 Head CG Red z



B-69

8642-NCAP-17

CFC\_1000

Time [s]

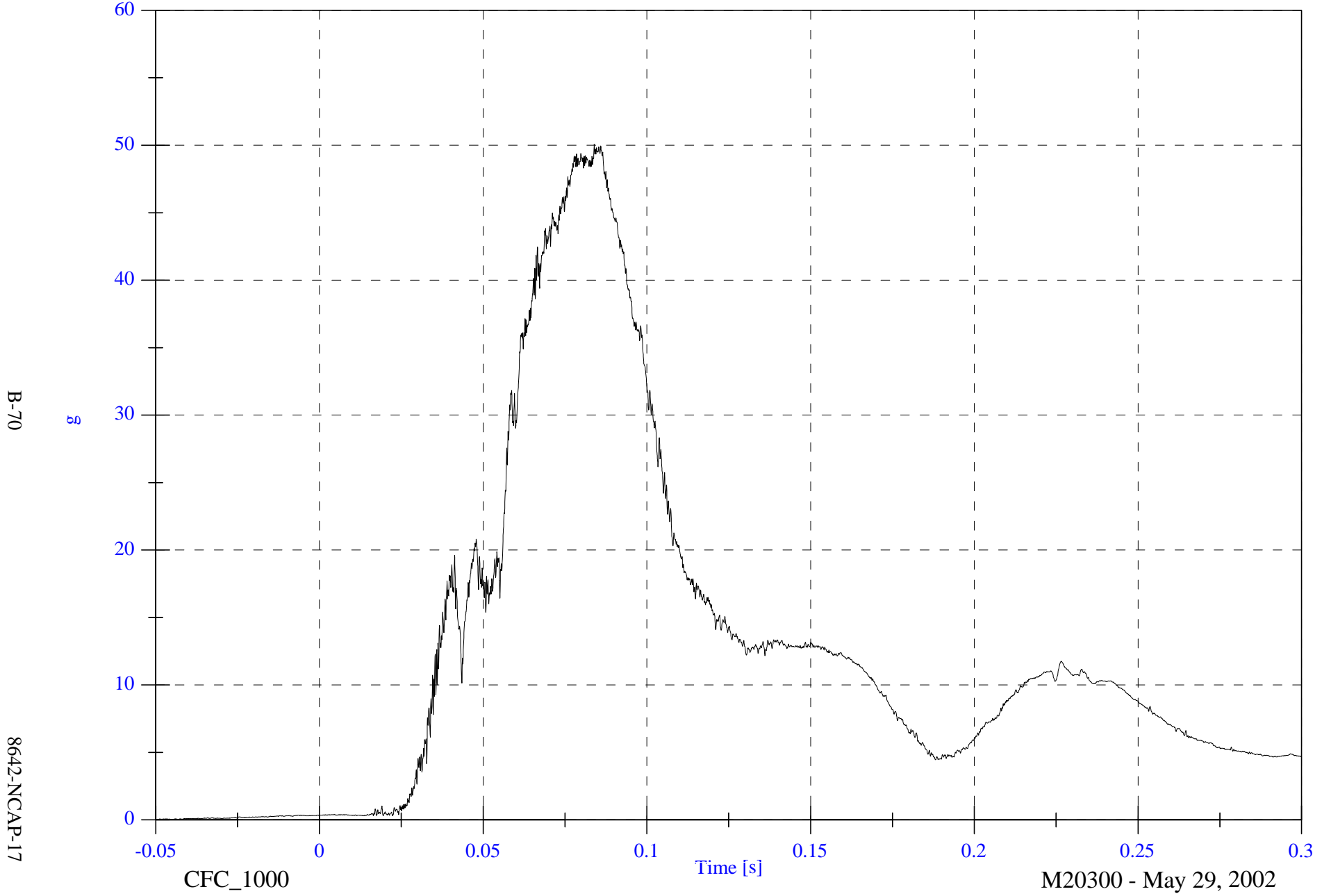
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

P2 Head CG Red Resultant

Max: 50.1 [g] at 0.084 [s]

Min: 0.0 [g] at -0.050 [s]



B-70

8642-NCAP-17

CFC\_1000

Time [s]

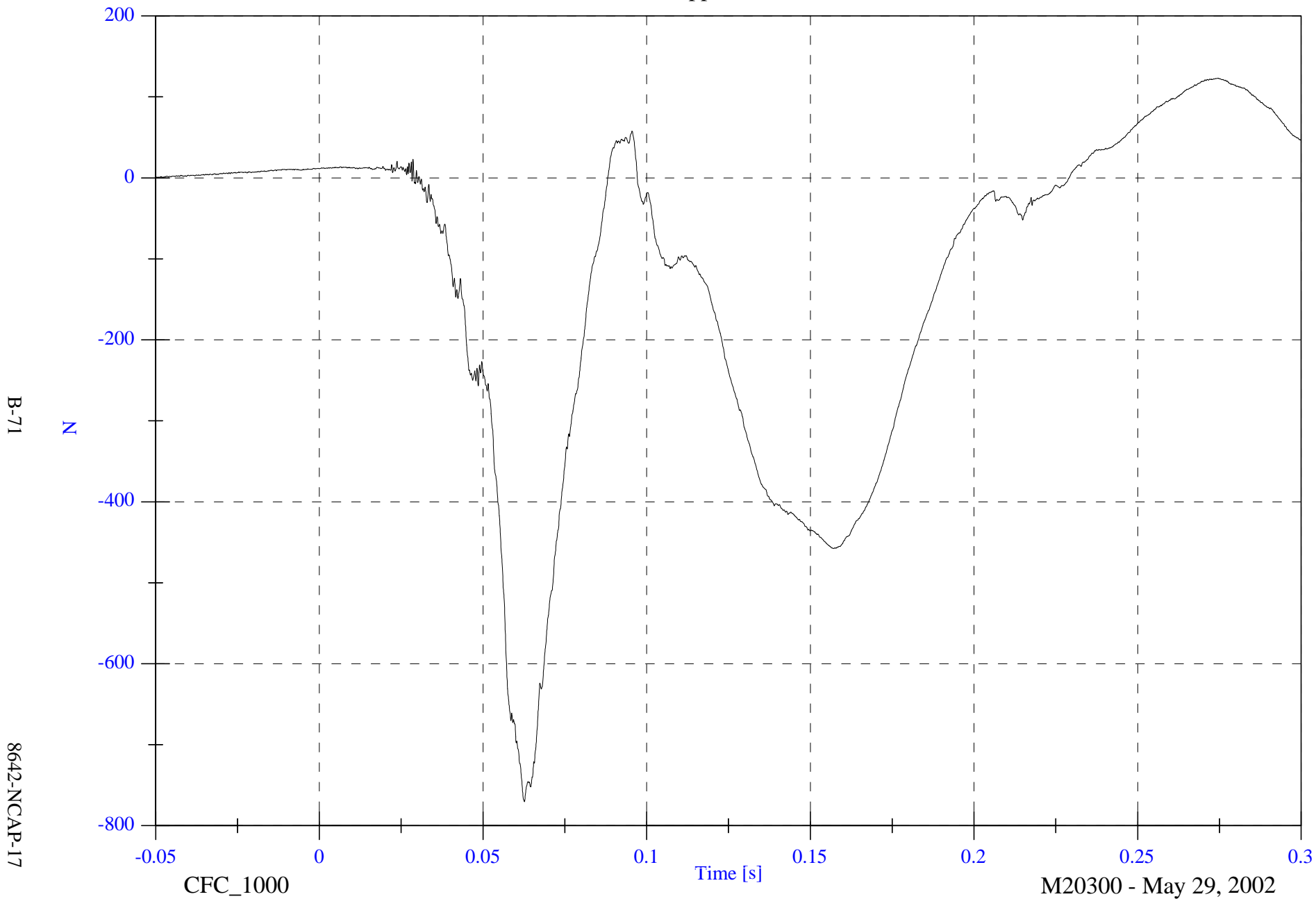
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 123.2 [N] at 0.275 [s]

Min: -770.7 [N] at 0.063 [s]

P2 Upper Neck Fx



B-71

8642-NCAP-17

CFC\_1000

Time [s]

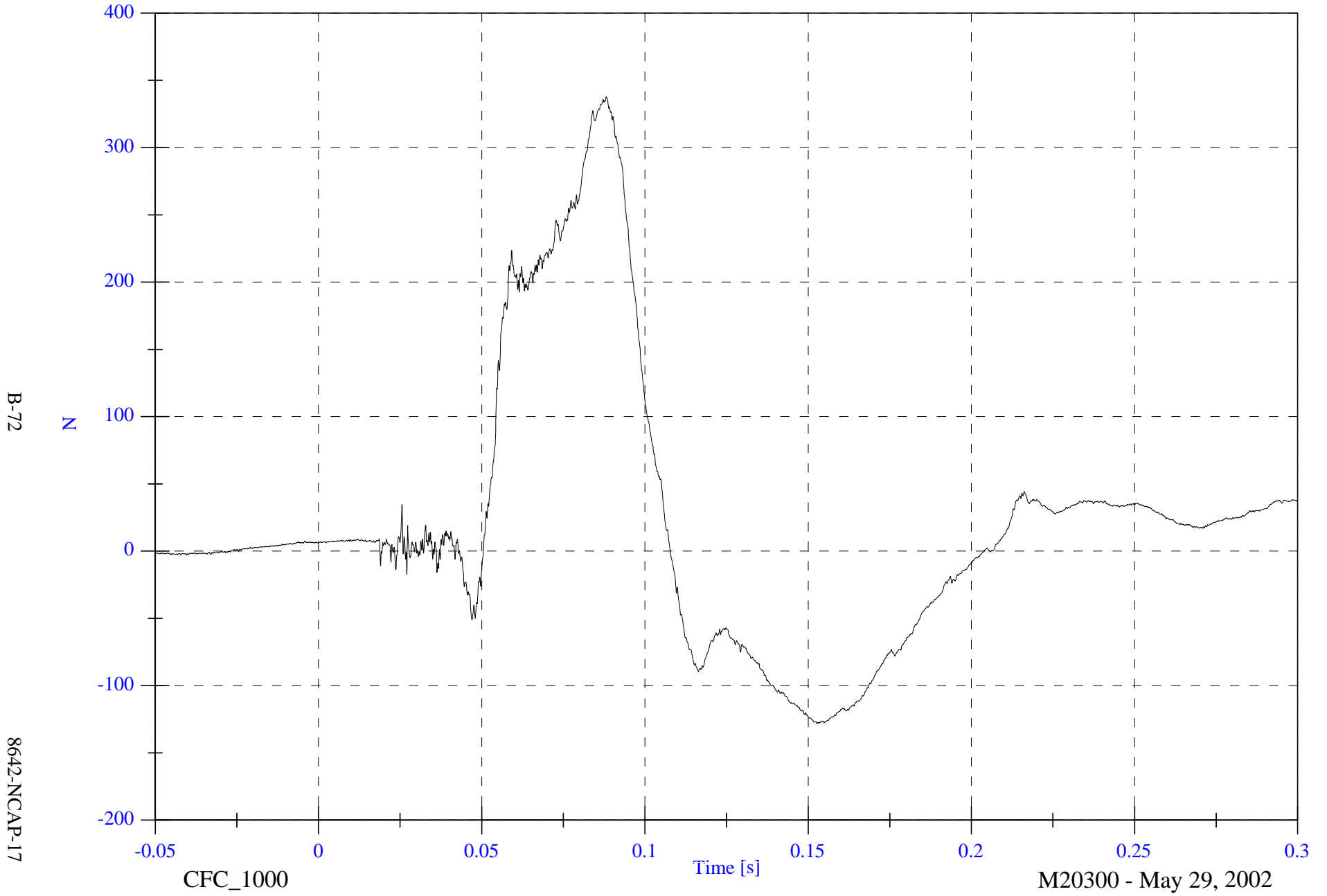
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 337.7 [N] at 0.088 [s]

Min: -128.1 [N] at 0.153 [s]

P2 Upper Neck Fy



B-72

8642-NCAP-17

CFC\_1000

Time [s]

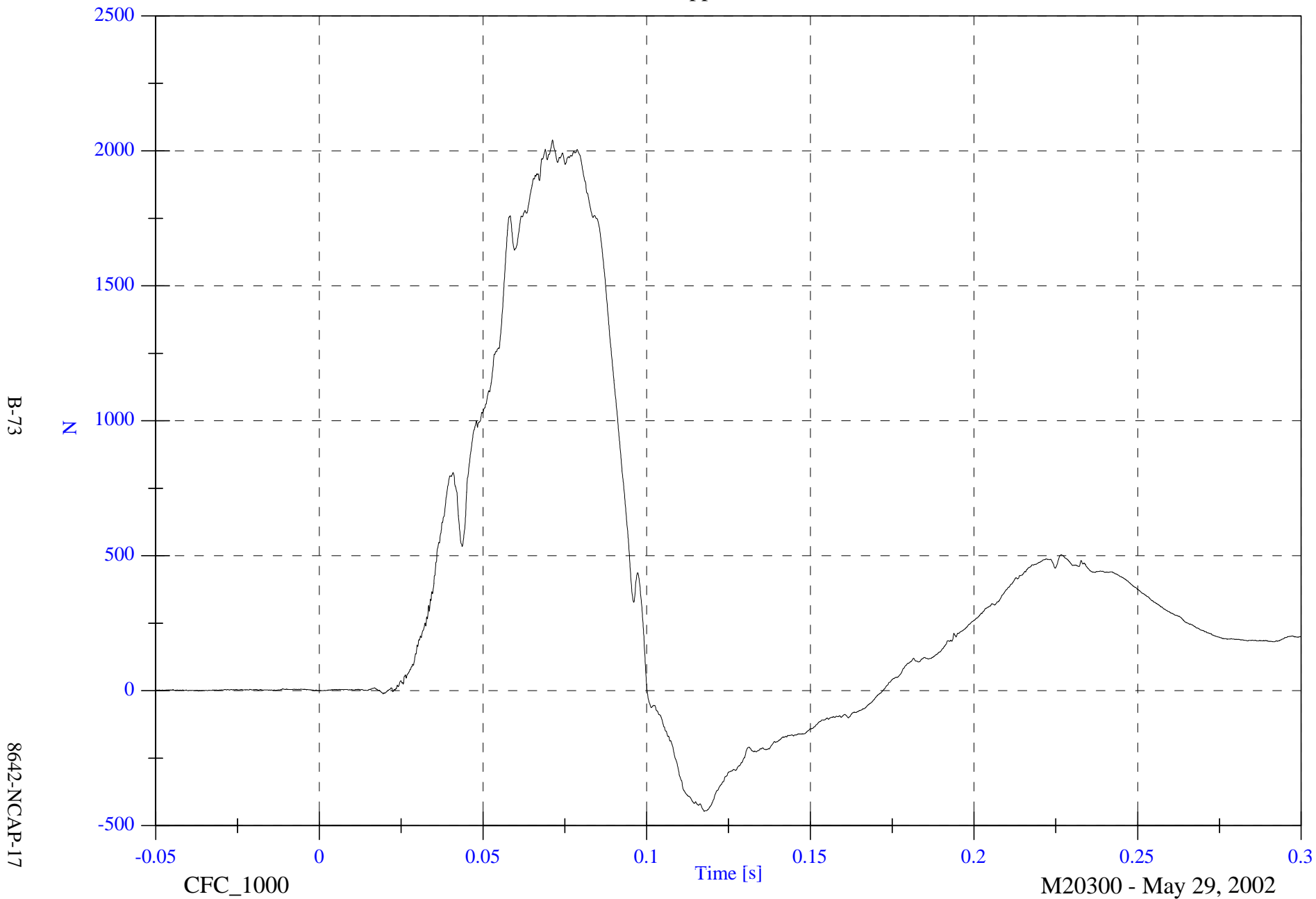
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 2040.7 [N] at 0.071 [s]

Min: -447.0 [N] at 0.118 [s]

P2 Upper Neck Fz

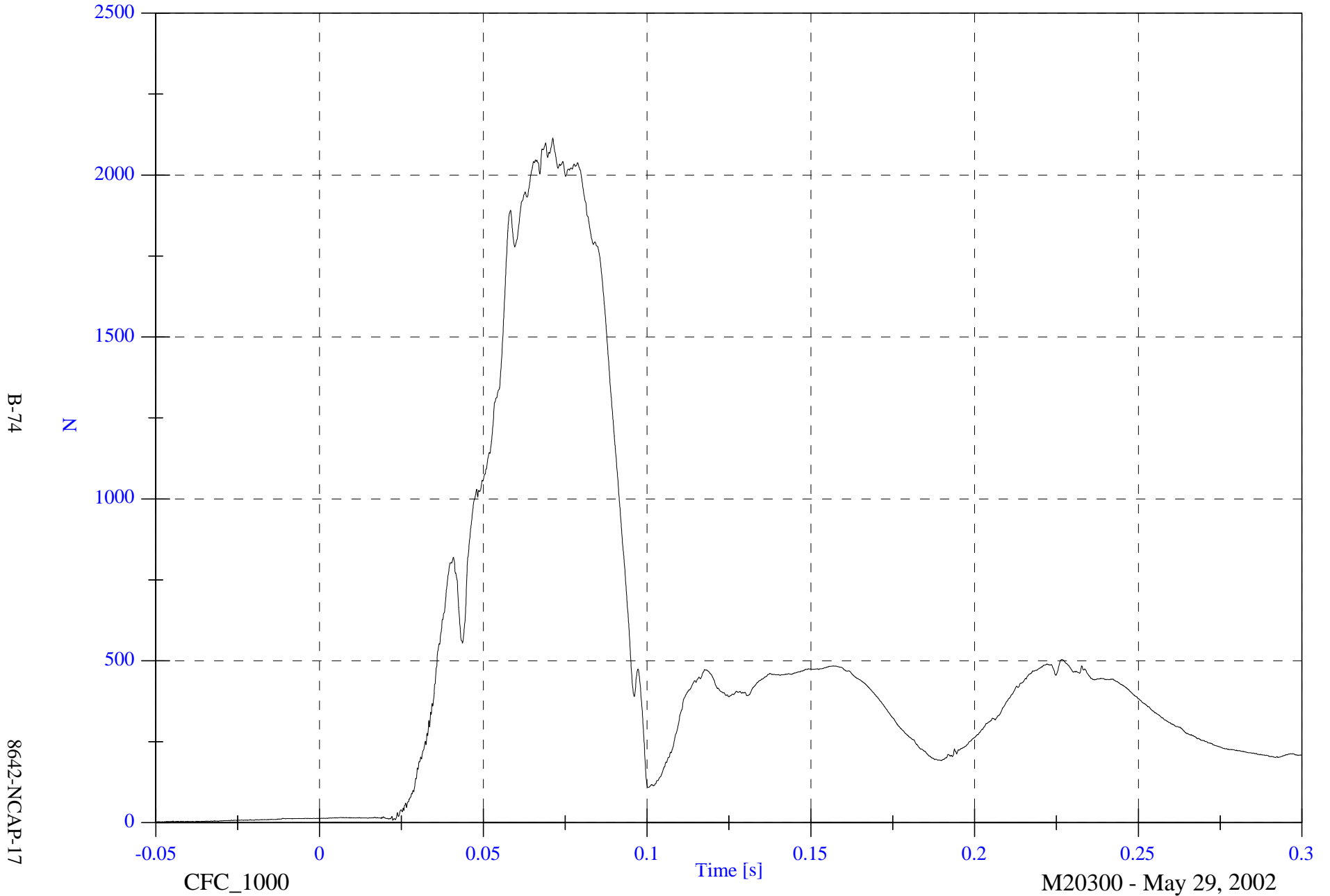


2002 NCAP Test 17 2002 Dodge Dakota

Max: 2114.1 [N] at 0.071 [s]

P2 Upper Neck F Resultant

Min: 2.0 [N] at -0.050 [s]



B-74

8642-NCAP-17

CFC\_1000

Time [s]

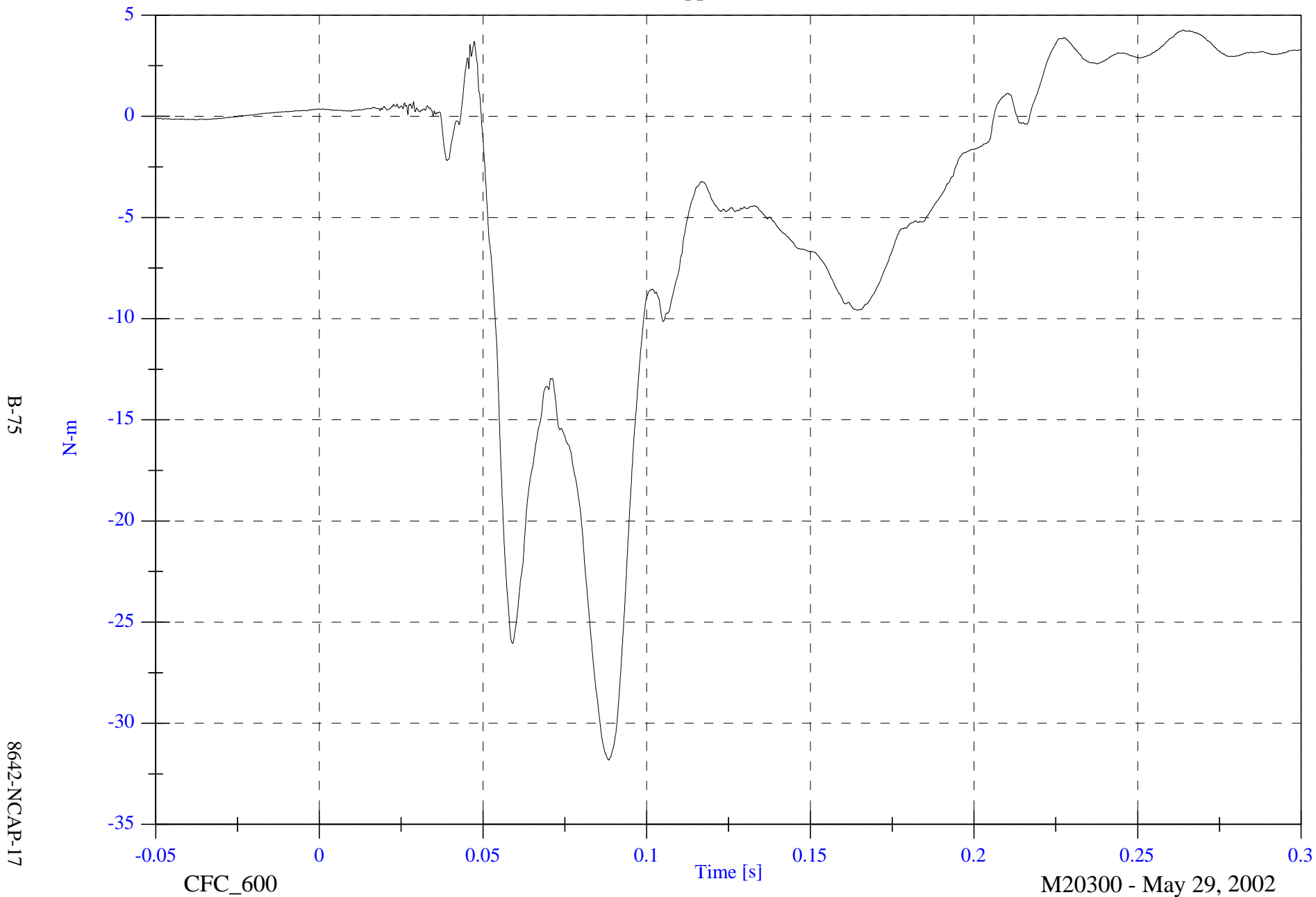
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 4.3 [N-m] at 0.264 [s]

Min: -31.8 [N-m] at 0.088 [s]

P2 Upper Neck Mx



B-75

8642-NCAP-17

CFC\_600

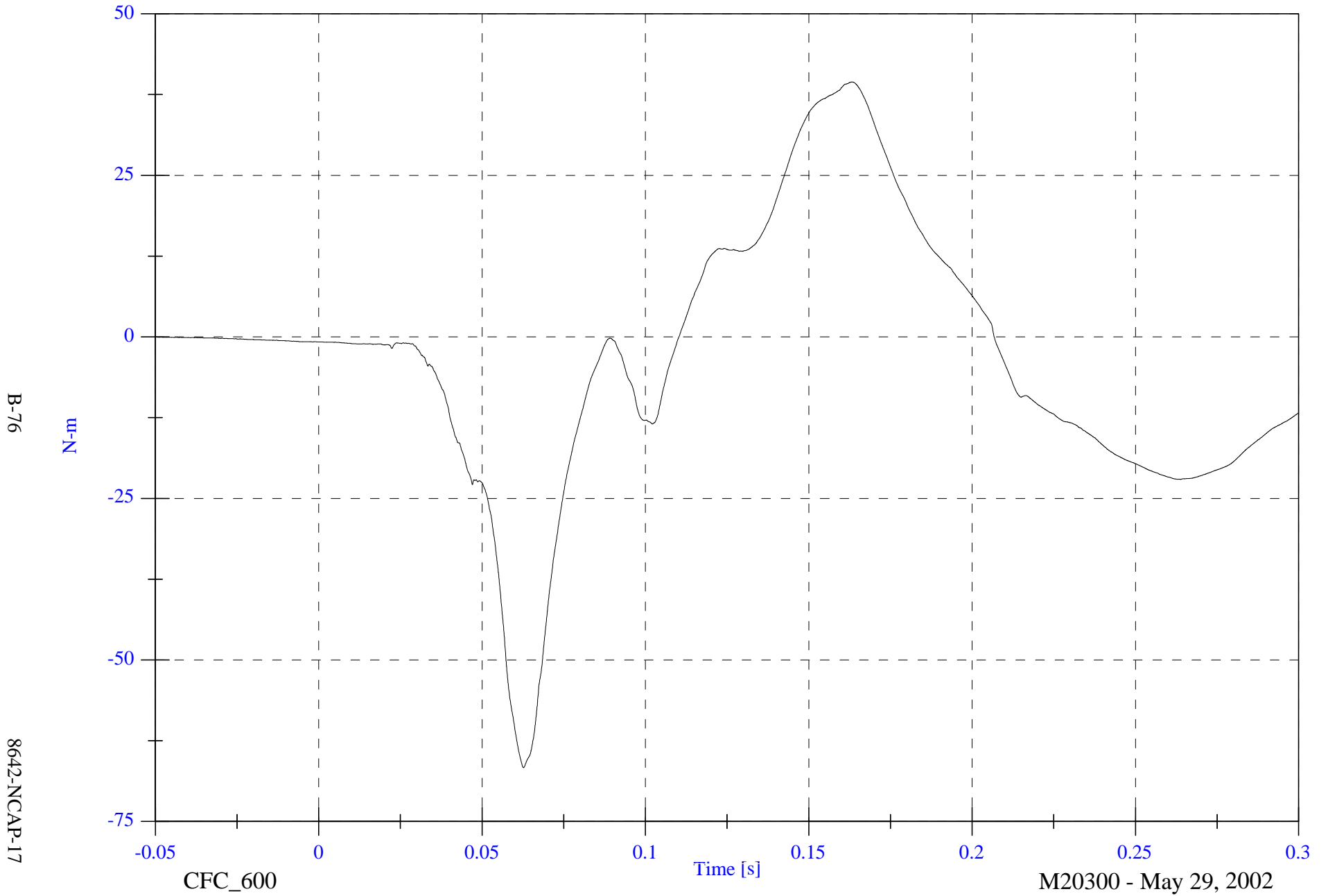
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 39.5 [N-m] at 0.163 [s]

Min: -66.7 [N-m] at 0.063 [s]

P2 Upper Neck My



B-76

8642-NCAP-17

CFC\_600

Time [s]

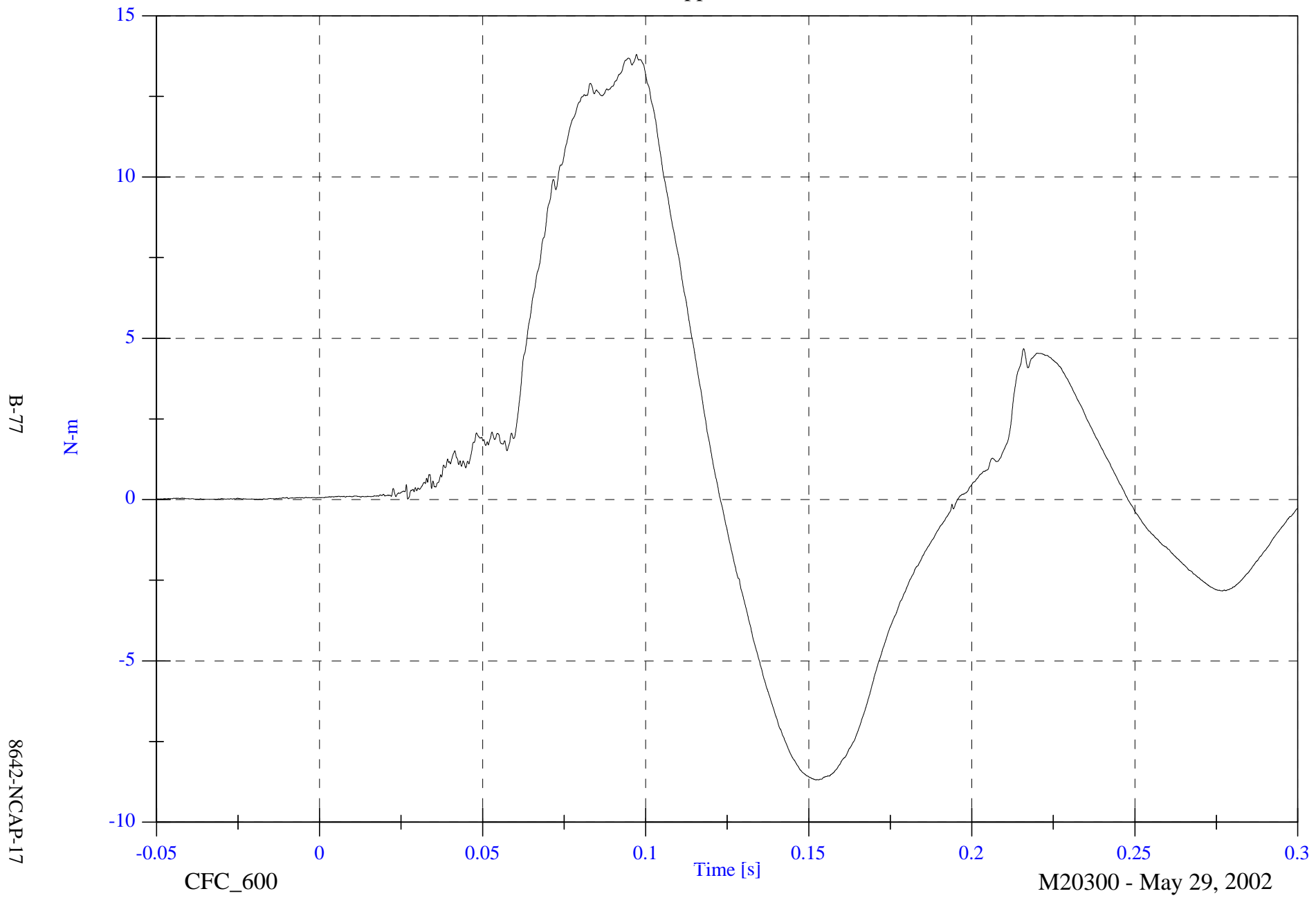
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 13.8 [N-m] at 0.097 [s]

Min: -8.7 [N-m] at 0.152 [s]

P2 Upper Neck Mz



2002 NCAP Test 17 2002 Dodge Dakota

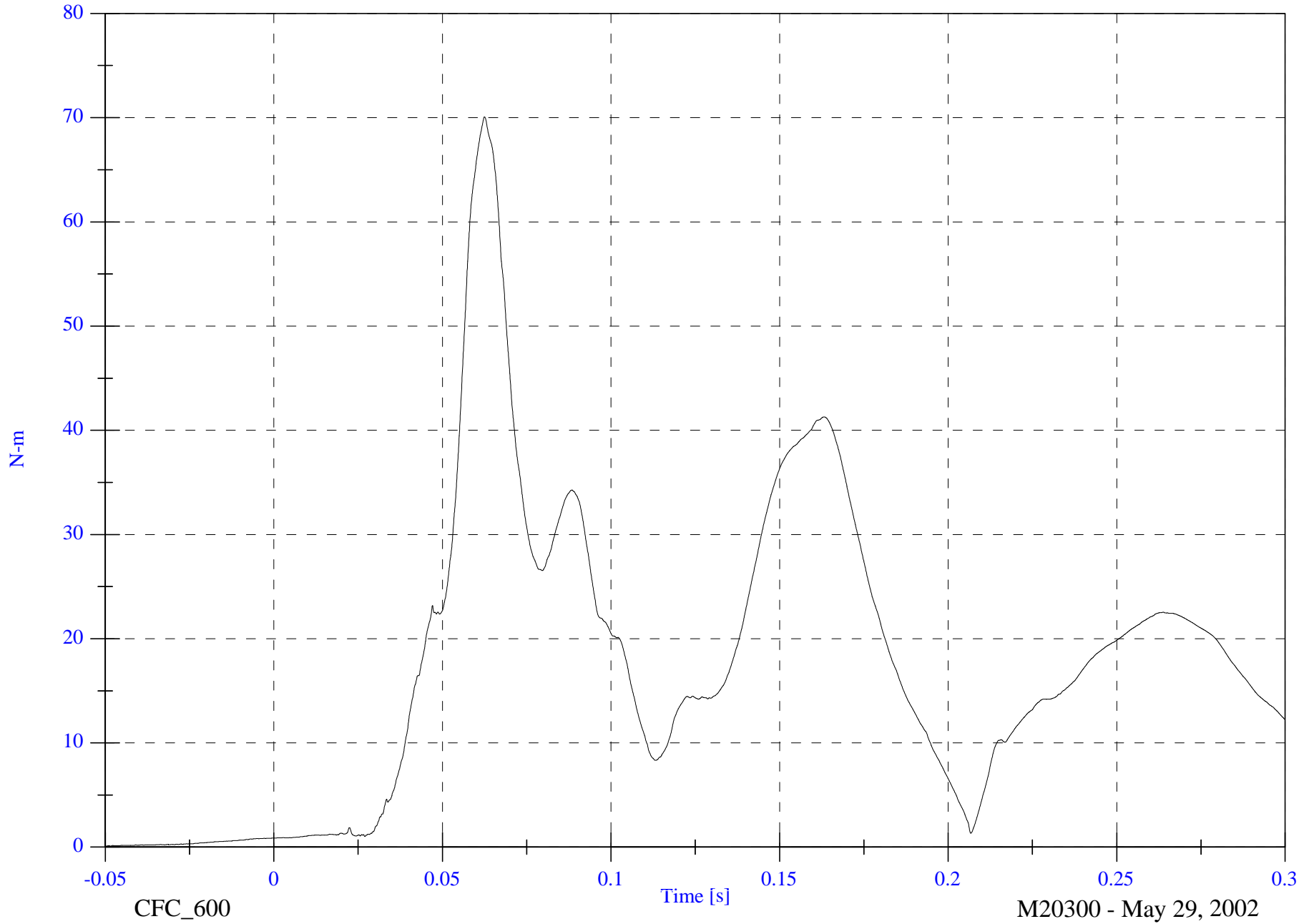
P2 Upper Neck M Resultant

Max: 70.1 [N-m] at 0.063 [s]

Min: 0.1 [N-m] at -0.050 [s]

B-78

8642-NCAP-17



CFC\_600

Time [s]

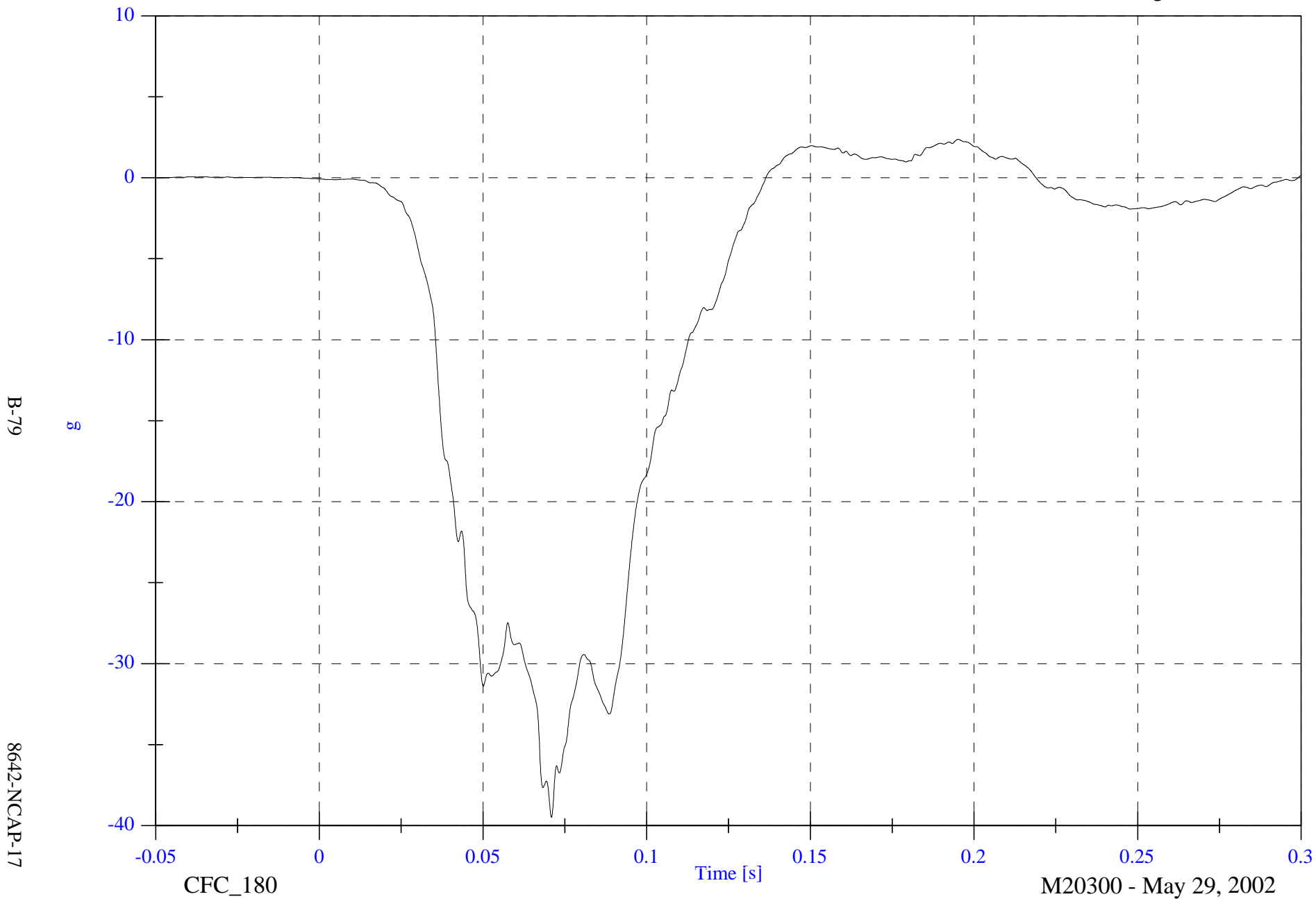
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 2.4 [g] at 0.195 [s]

Min: -39.5 [g] at 0.071 [s]

P2 Chest x

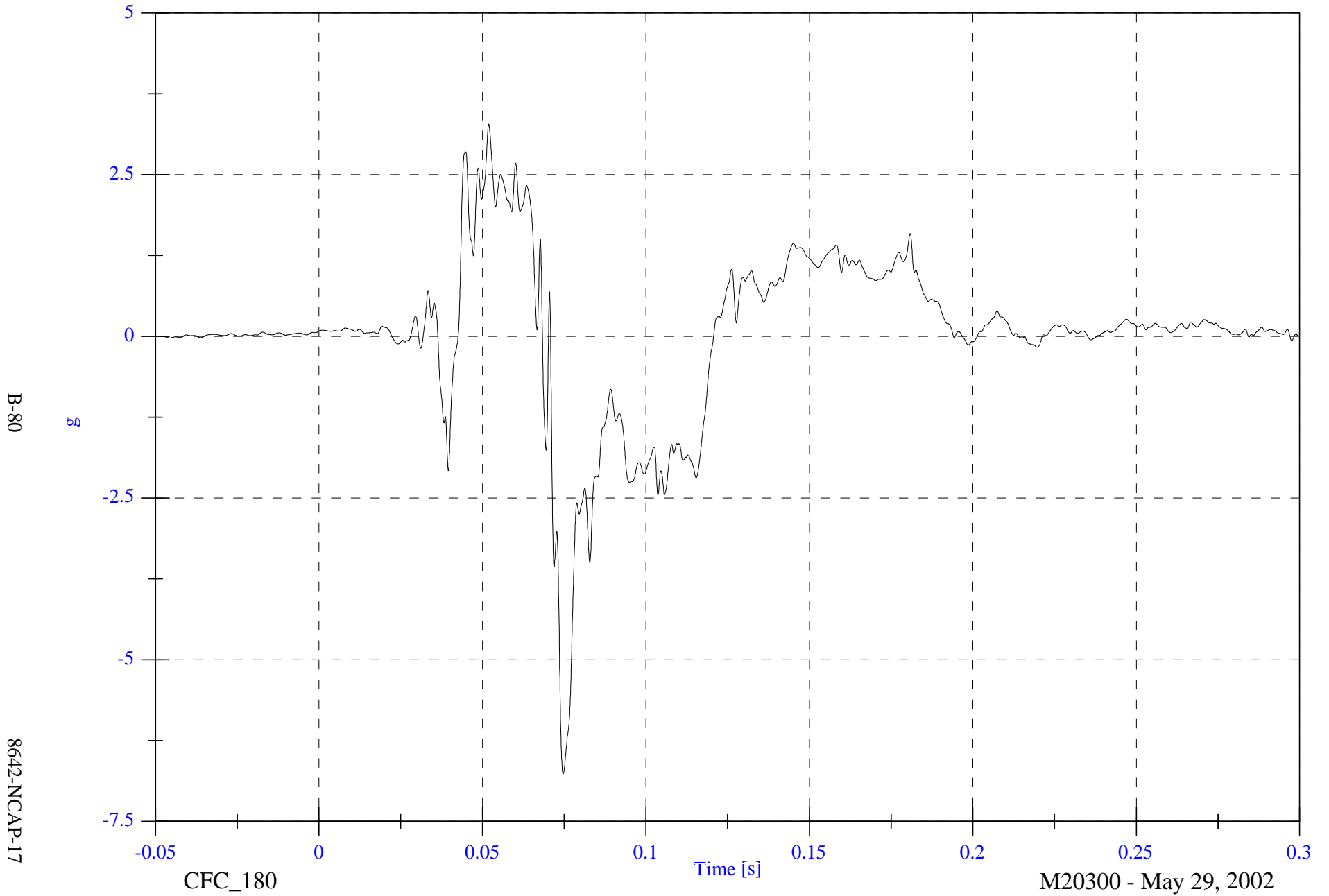


2002 NCAP Test 17 2002 Dodge Dakota

Max: 3.3 [g] at 0.052 [s]

Min: -6.8 [g] at 0.075 [s]

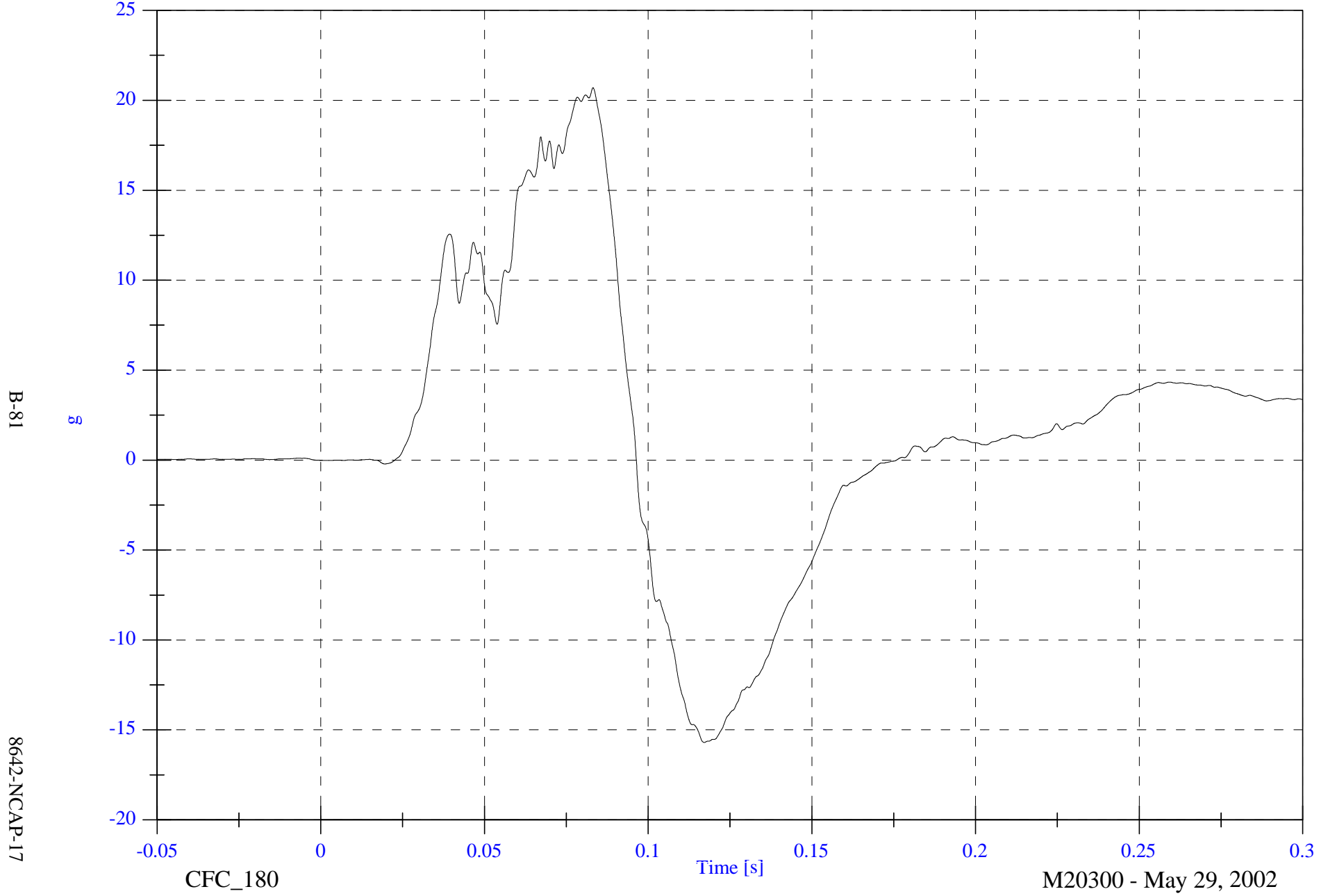
P2 Chest y



2002 NCAP Test 17 2002 Dodge Dakota

Max: 20.7 [g] at 0.083 [s]  
Min: -15.7 [g] at 0.117 [s]

P2 Chest z



2002 NCAP Test 17 2002 Dodge Dakota

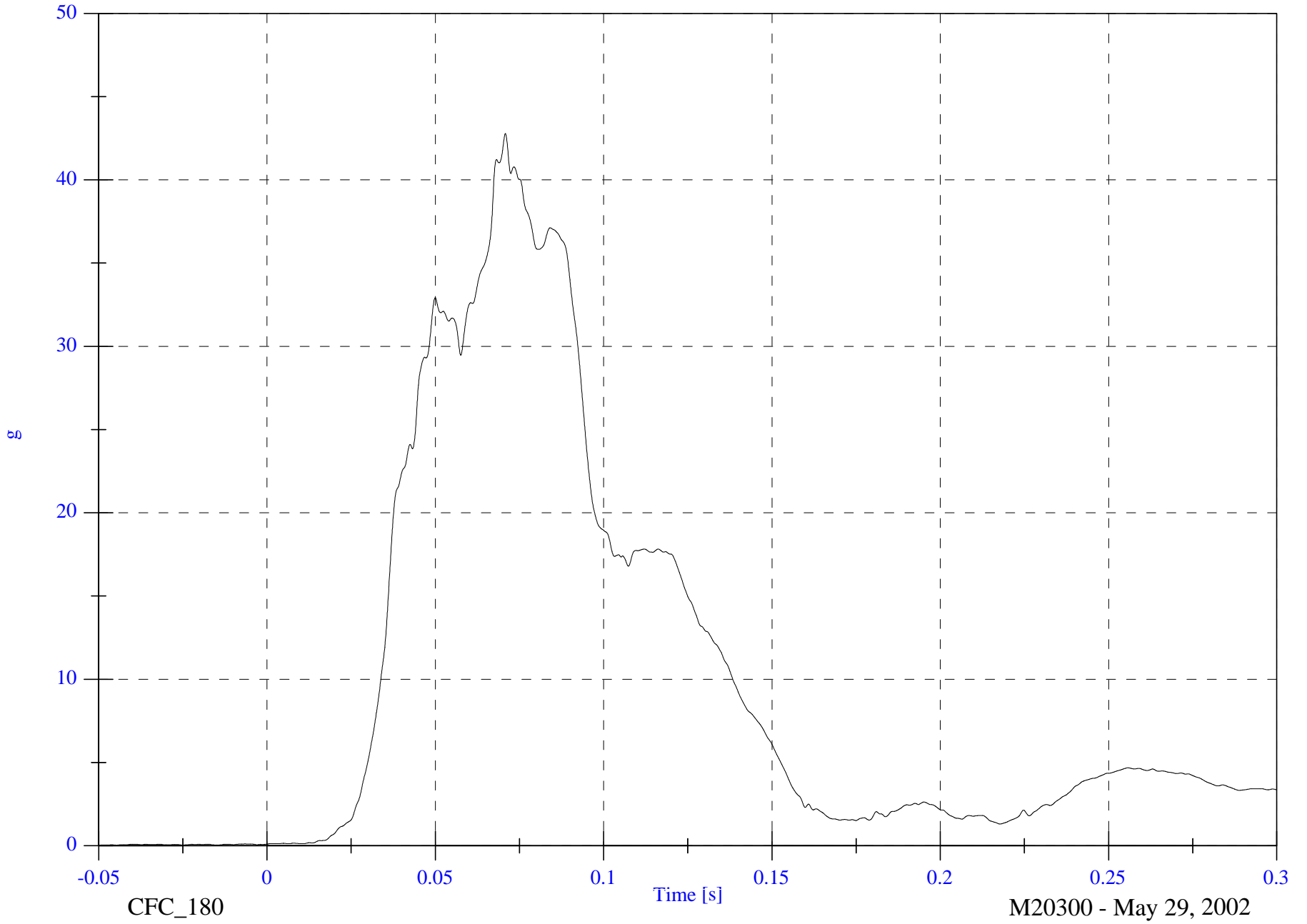
Max: 42.8 [g] at 0.071 [s]

P2 Chest Resultant

Min: 0.0 [g] at -0.050 [s]

B-82

8642-NCAP-17

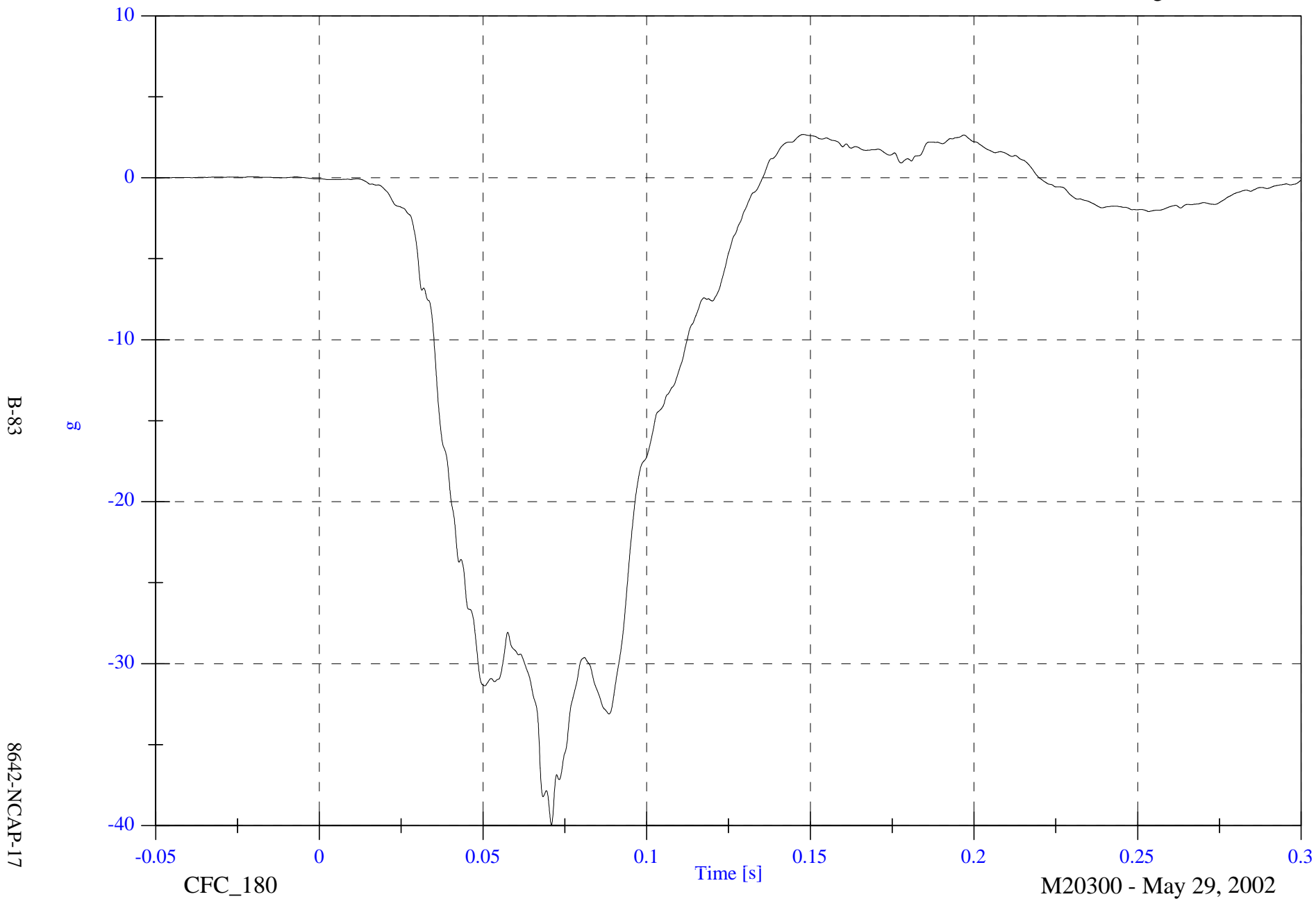


2002 NCAP Test 17 2002 Dodge Dakota

Max: 2.7 [g] at 0.148 [s]

Min: -39.9 [g] at 0.071 [s]

P2 Chest Red x

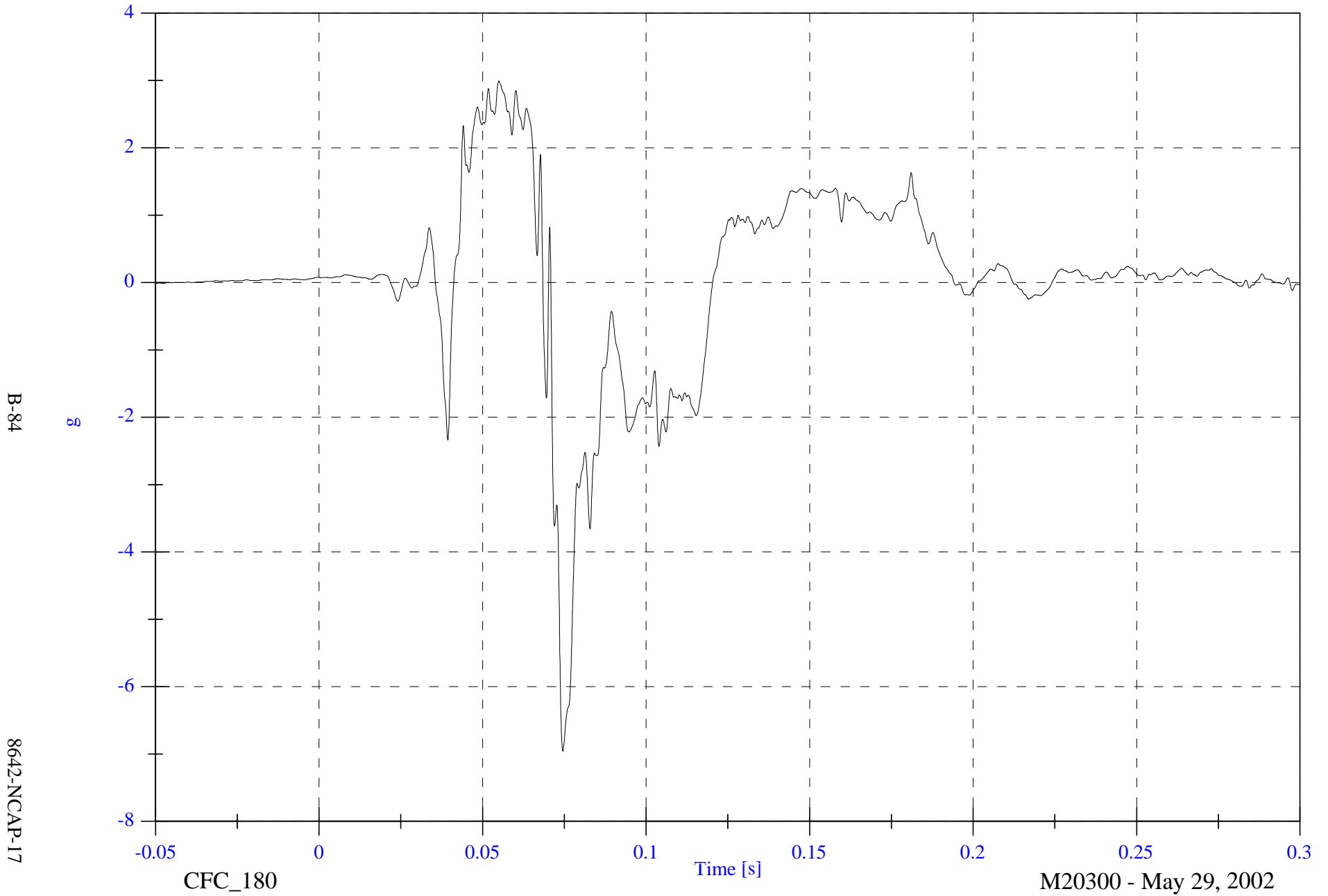


2002 NCAP Test 17 2002 Dodge Dakota

Max: 3.0 [g] at 0.055 [s]

Min: -7.0 [g] at 0.075 [s]

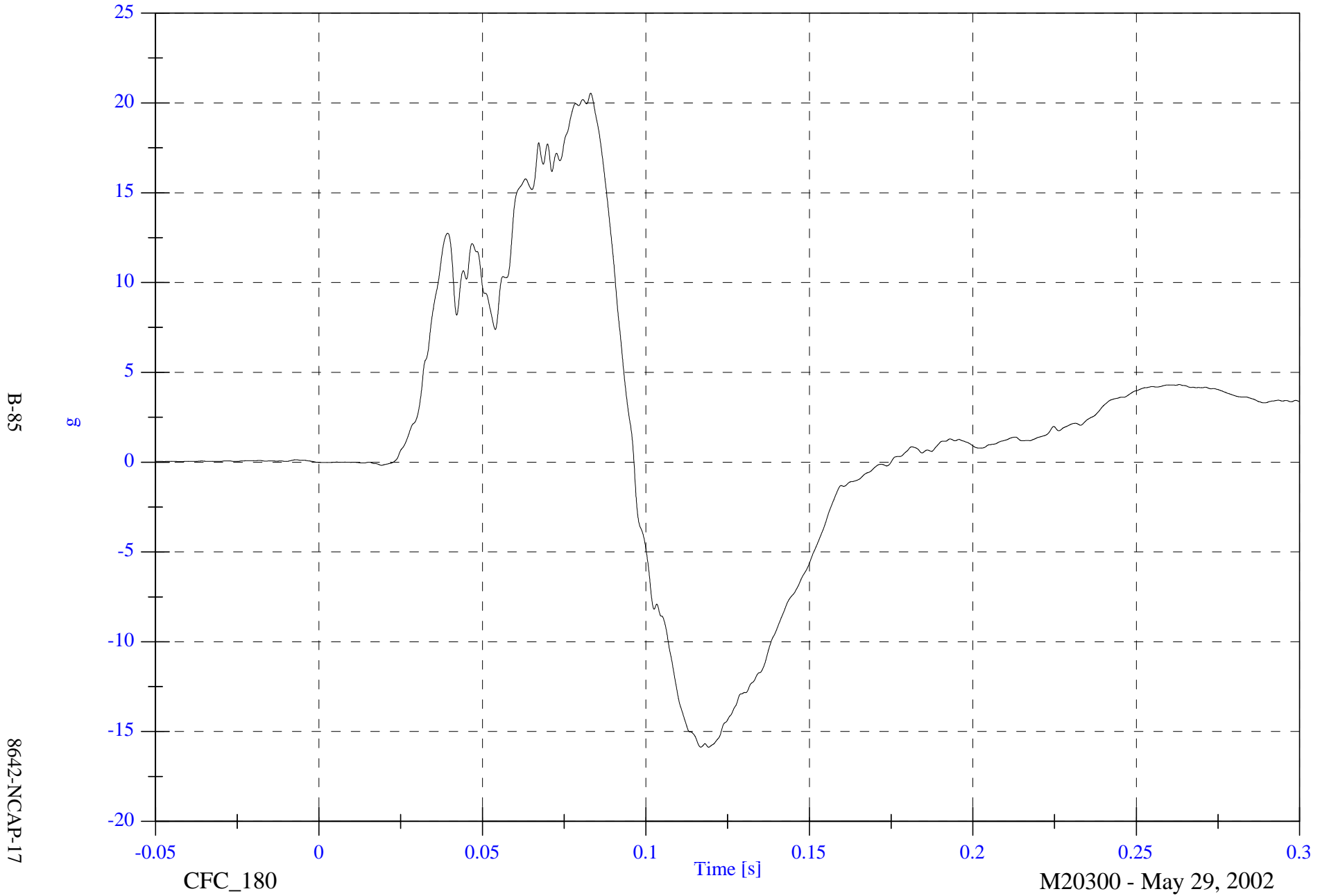
P2 Chest Red y



2002 NCAP Test 17 2002 Dodge Dakota

Max: 20.5 [g] at 0.083 [s]  
Min: -15.9 [g] at 0.119 [s]

P2 Chest Red z



2002 NCAP Test 17 2002 Dodge Dakota

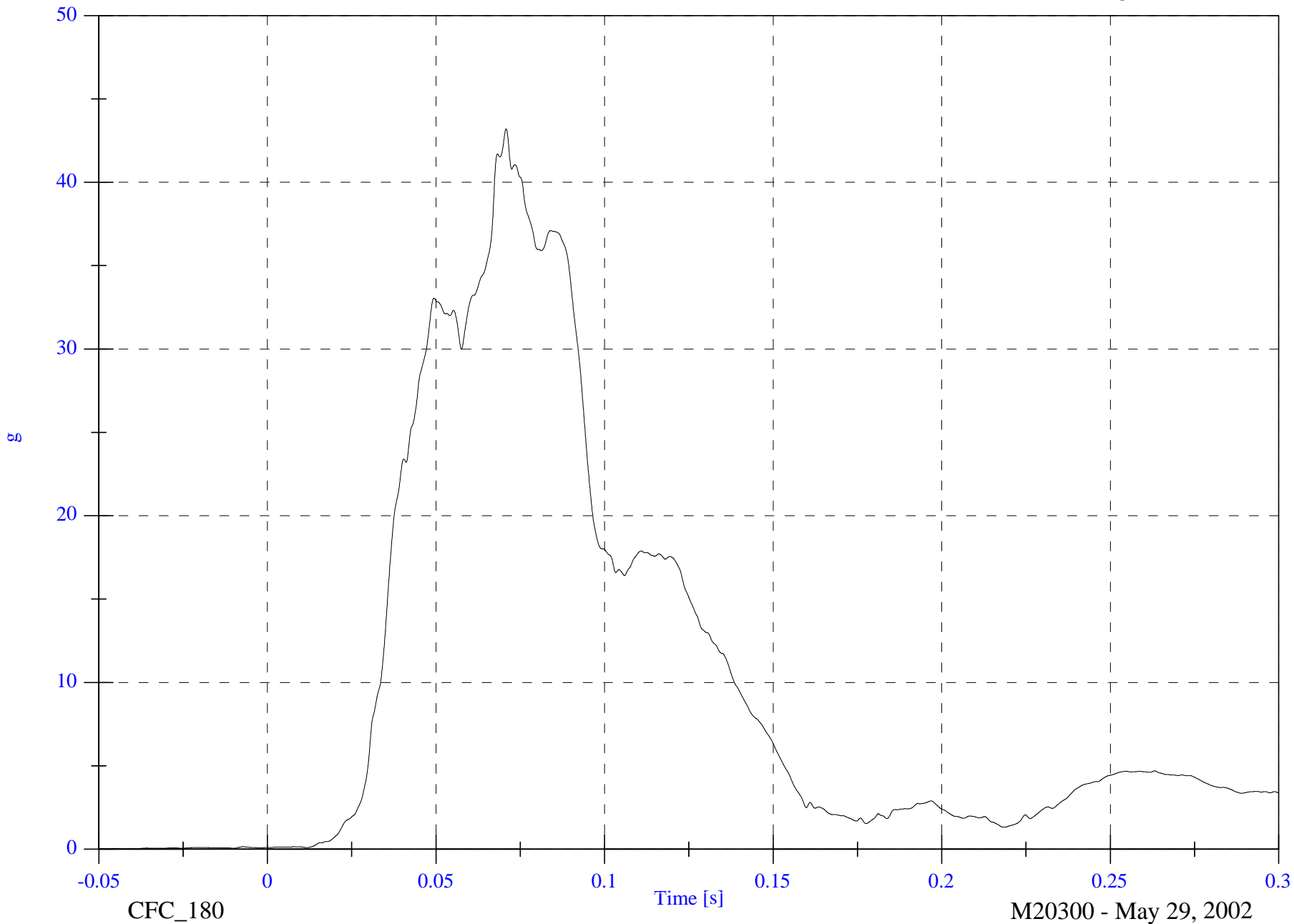
P2 Chest Red Resultant

Max: 43.2 [g] at 0.071 [s]

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

B-86

8642-NCAP-17



2002 NCAP Test 17 2002 Dodge Dakota

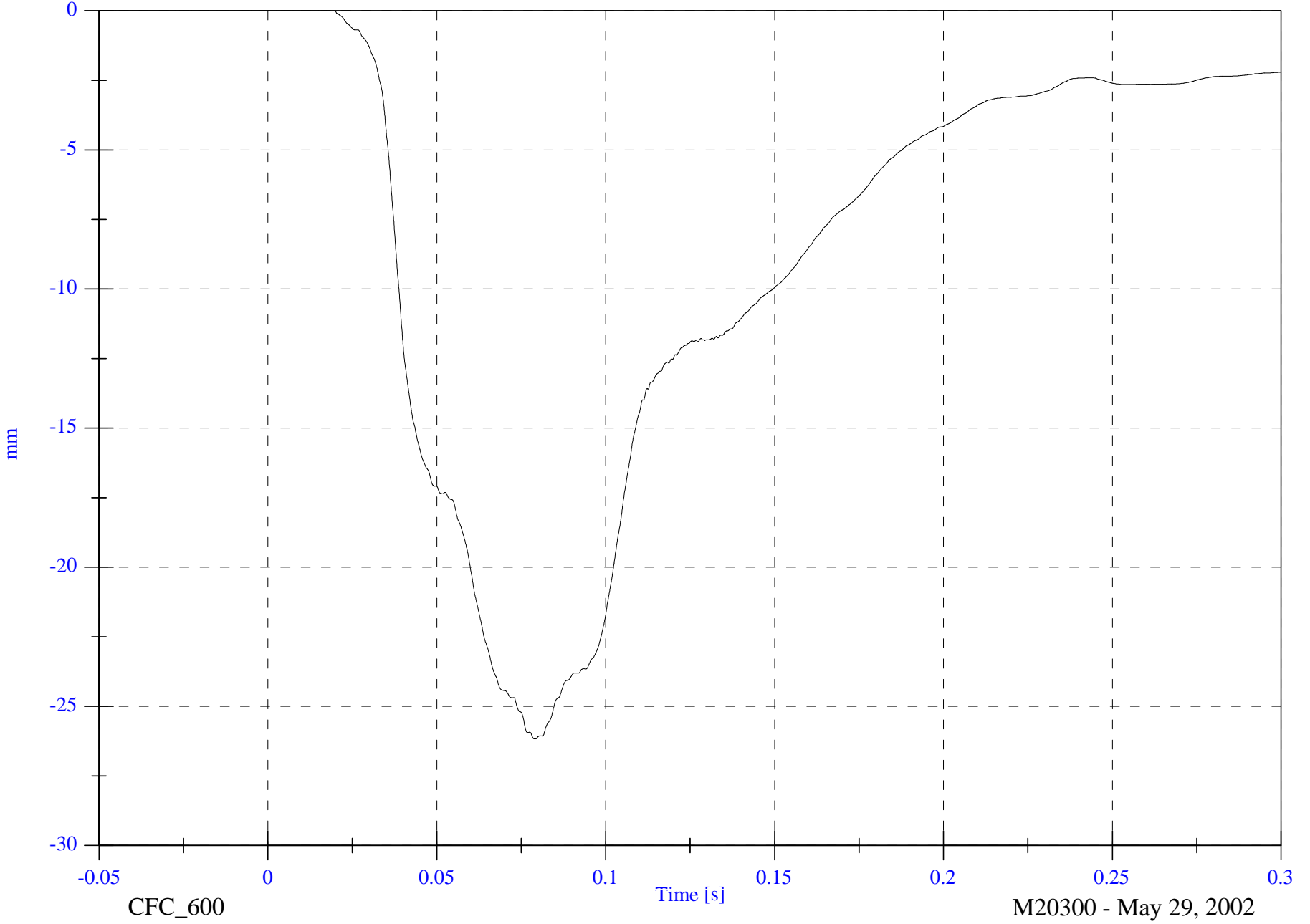
P2 Chest Compression

Max: 0.0 [mm] at 0.008 [s]

Min: -26.2 [mm] at 0.079 [s]

B-87

8642-NCAP-17

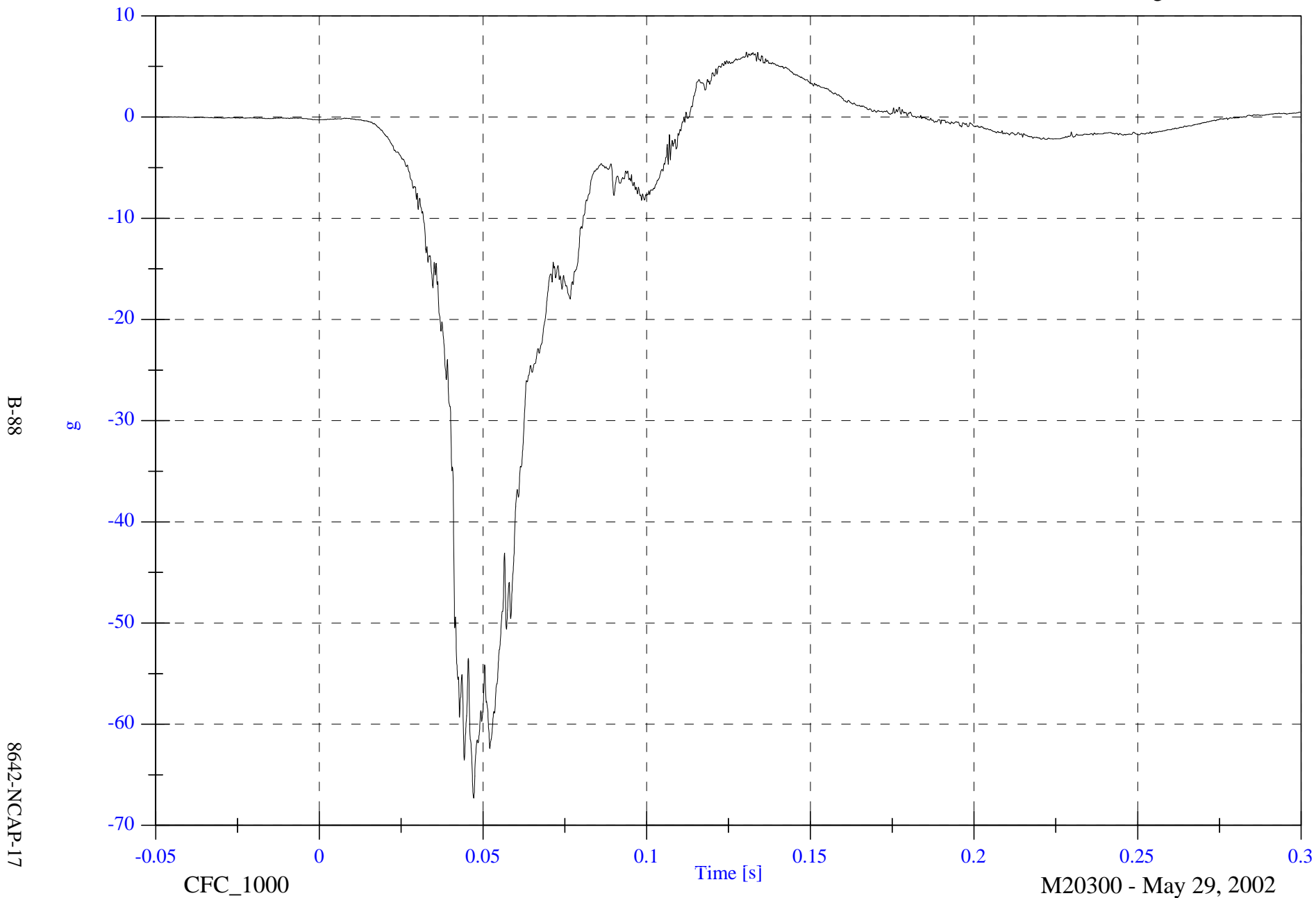


2002 NCAP Test 17 2002 Dodge Dakota

Max: 6.4 [g] at 0.131 [s]

Min: -67.3 [g] at 0.047 [s]

P2 Pelvic x



B-88

8642-NCAP-17

CFC\_1000

Time [s]

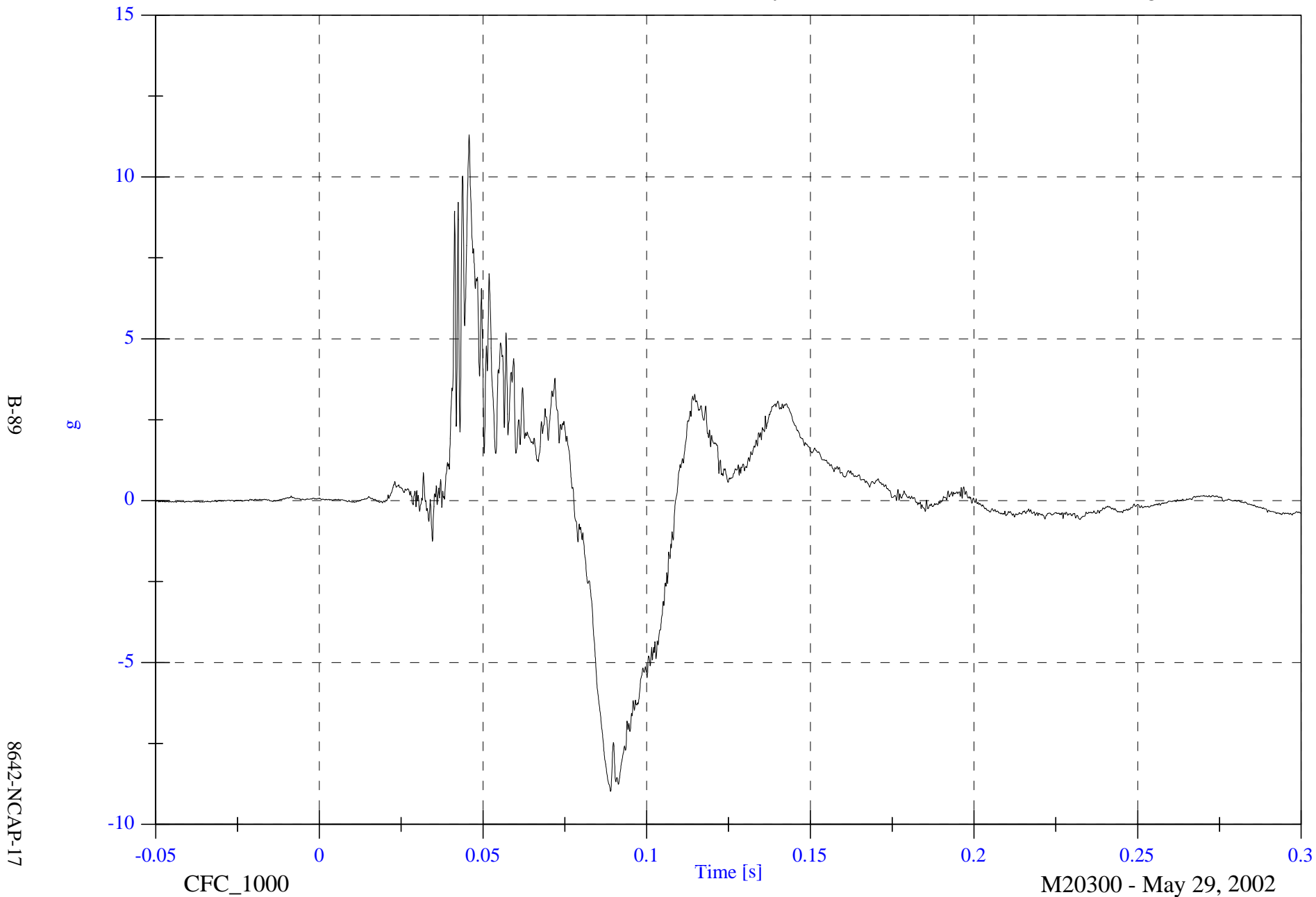
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 11.3 [g] at 0.046 [s]

Min: -9.0 [g] at 0.089 [s]

P2 Pelvic y



B-89

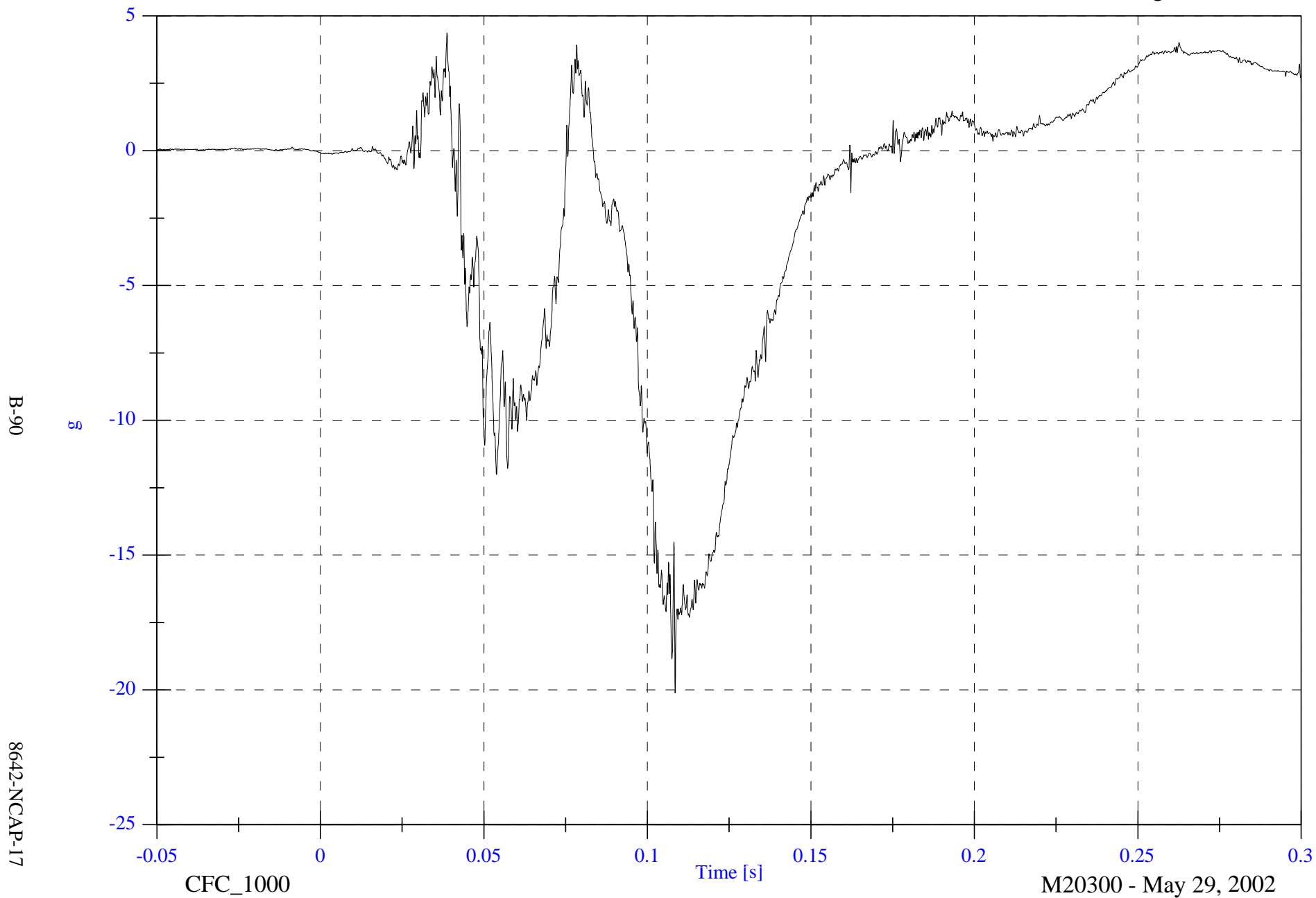
8642-NCAP-17

2002 NCAP Test 17 2002 Dodge Dakota

Max: 4.4 [g] at 0.039 [s]

Min: -20.1 [g] at 0.109 [s]

P2 Pelvic z



2002 NCAP Test 17 2002 Dodge Dakota

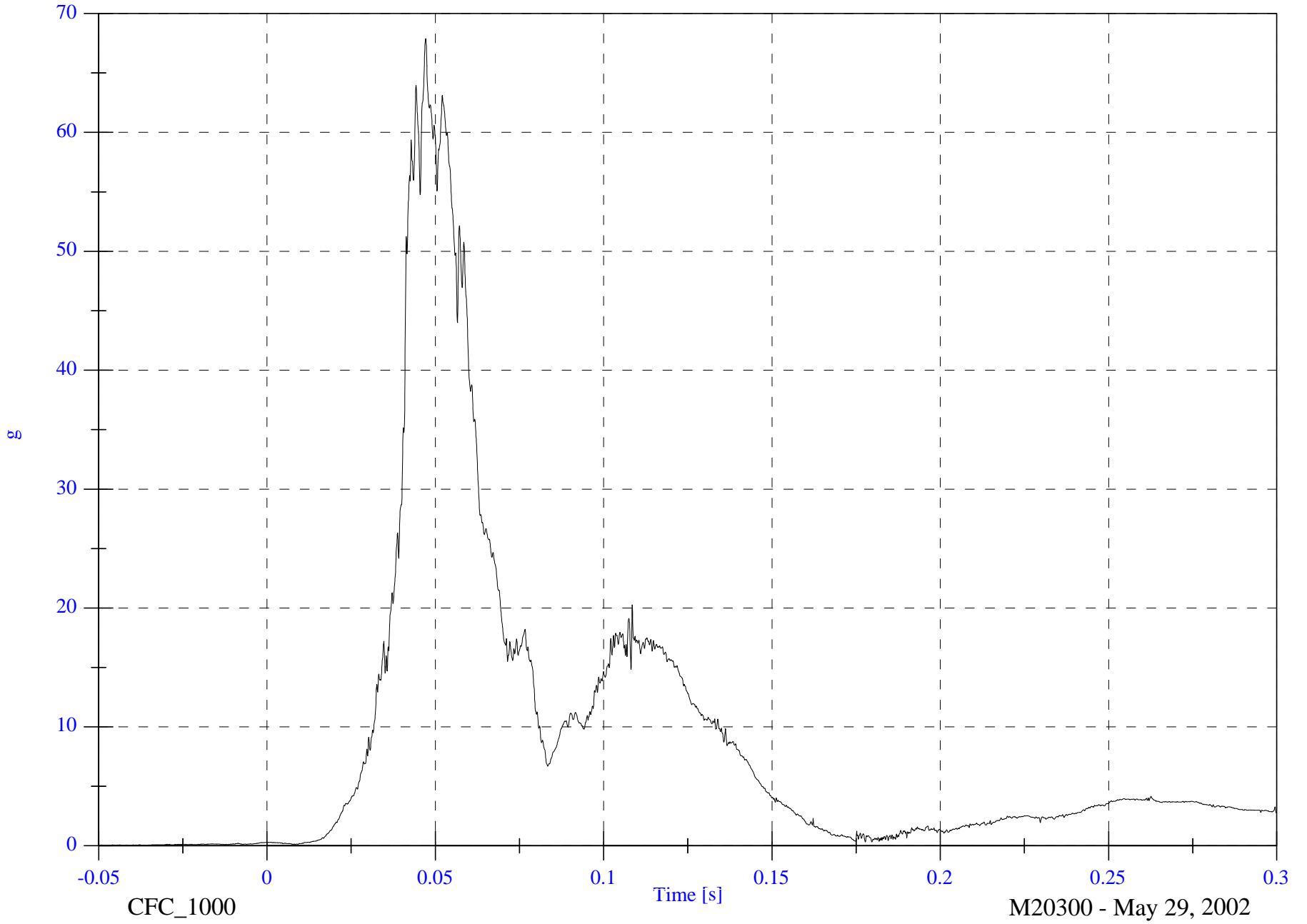
P2 Pelvic Resultant

Max: 67.9 [g] at 0.047 [s]

Min: 0.0 [g] at -0.047 [s]

B-91

8642-NCAP-17



CFC\_1000

Time [s]

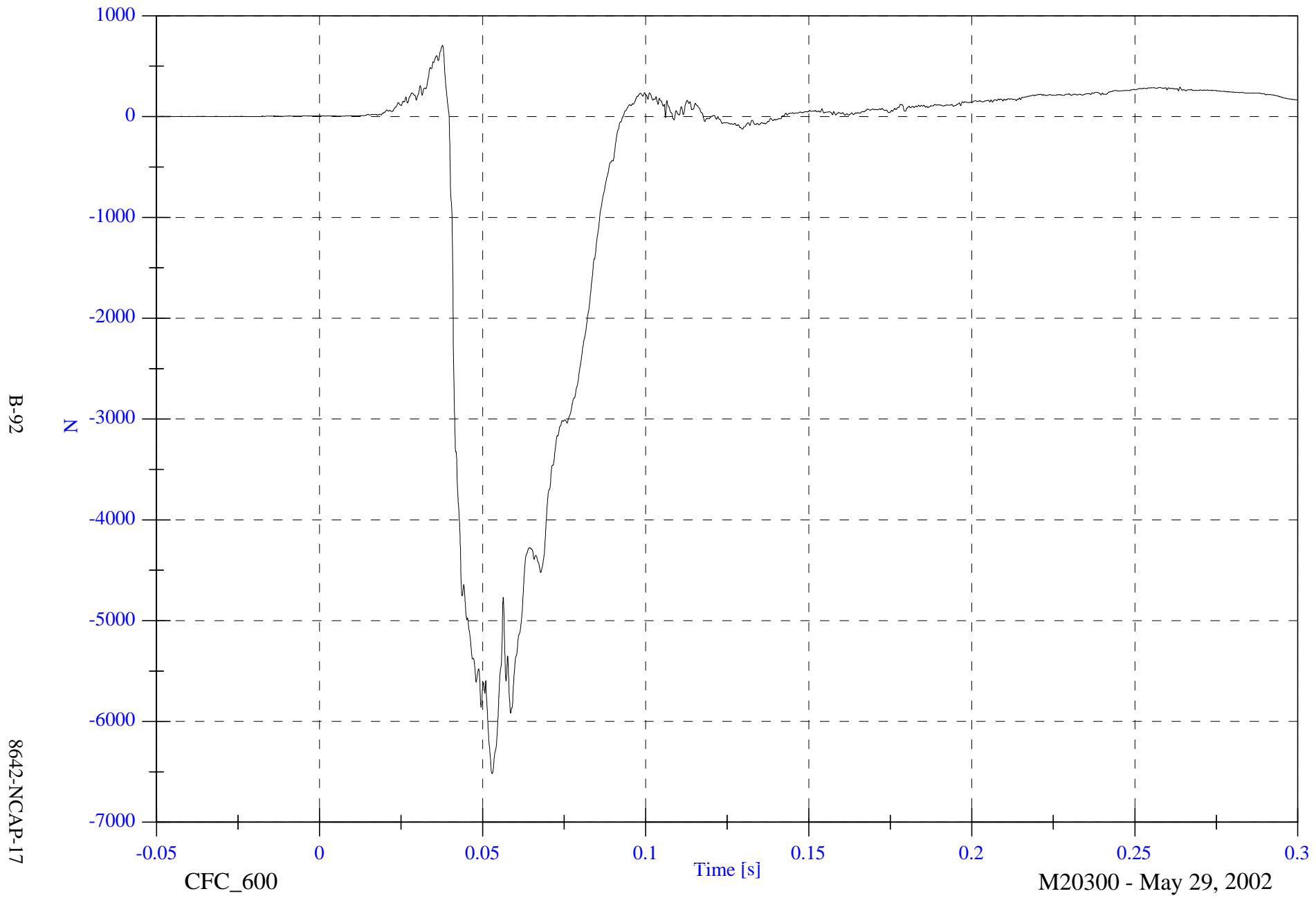
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 707.0 [N] at 0.038 [s]

Min: -6517.6 [N] at 0.053 [s]

P2 Left Femur



B-92

8642-NCAP-17

CFC\_600

Time [s]

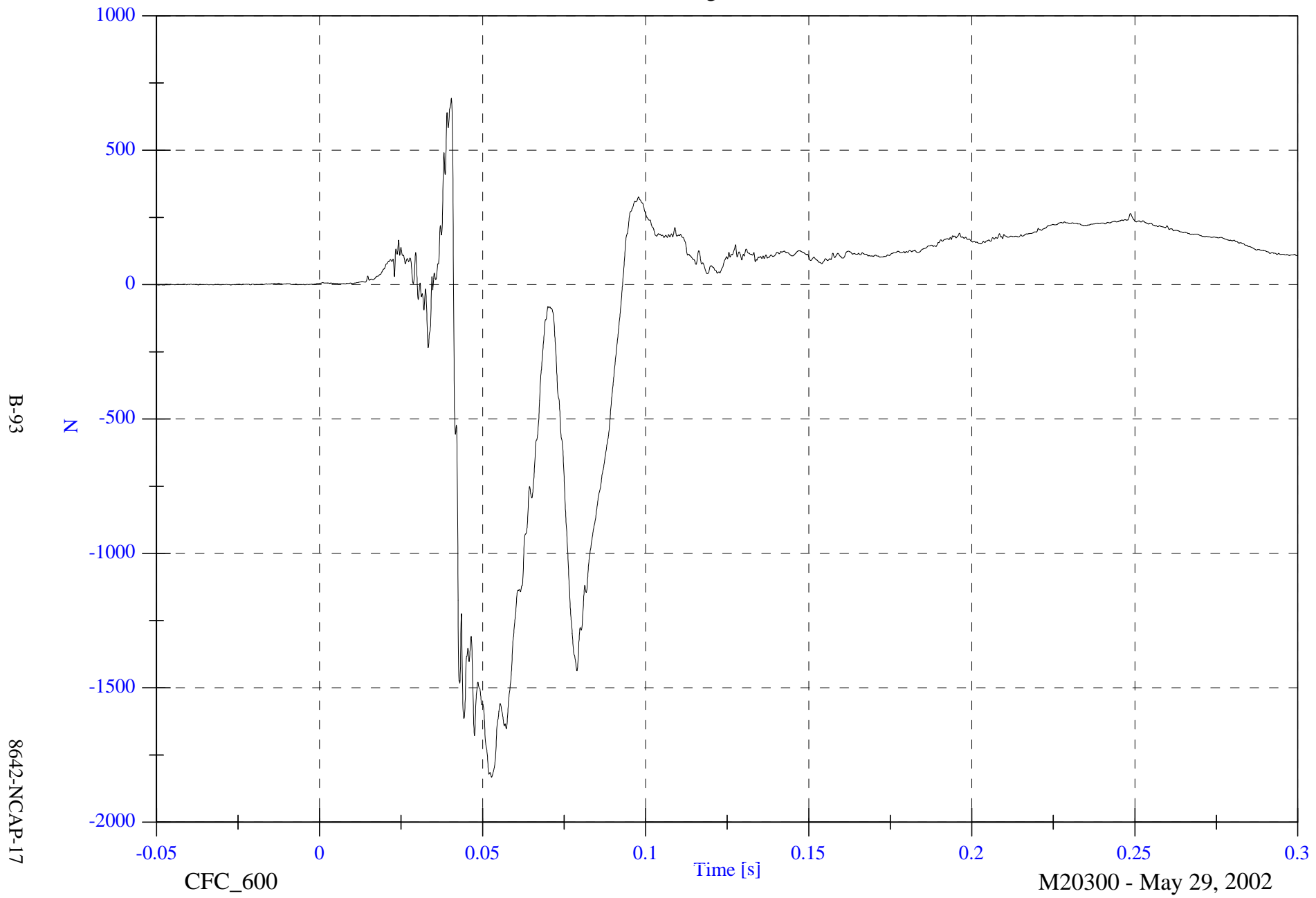
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

P2 Right Femur

Max: 693.7 [N] at 0.040 [s]

Min: -1832.3 [N] at 0.053 [s]



B-93

8642-NCAP-17

CFC\_600

Time [s]

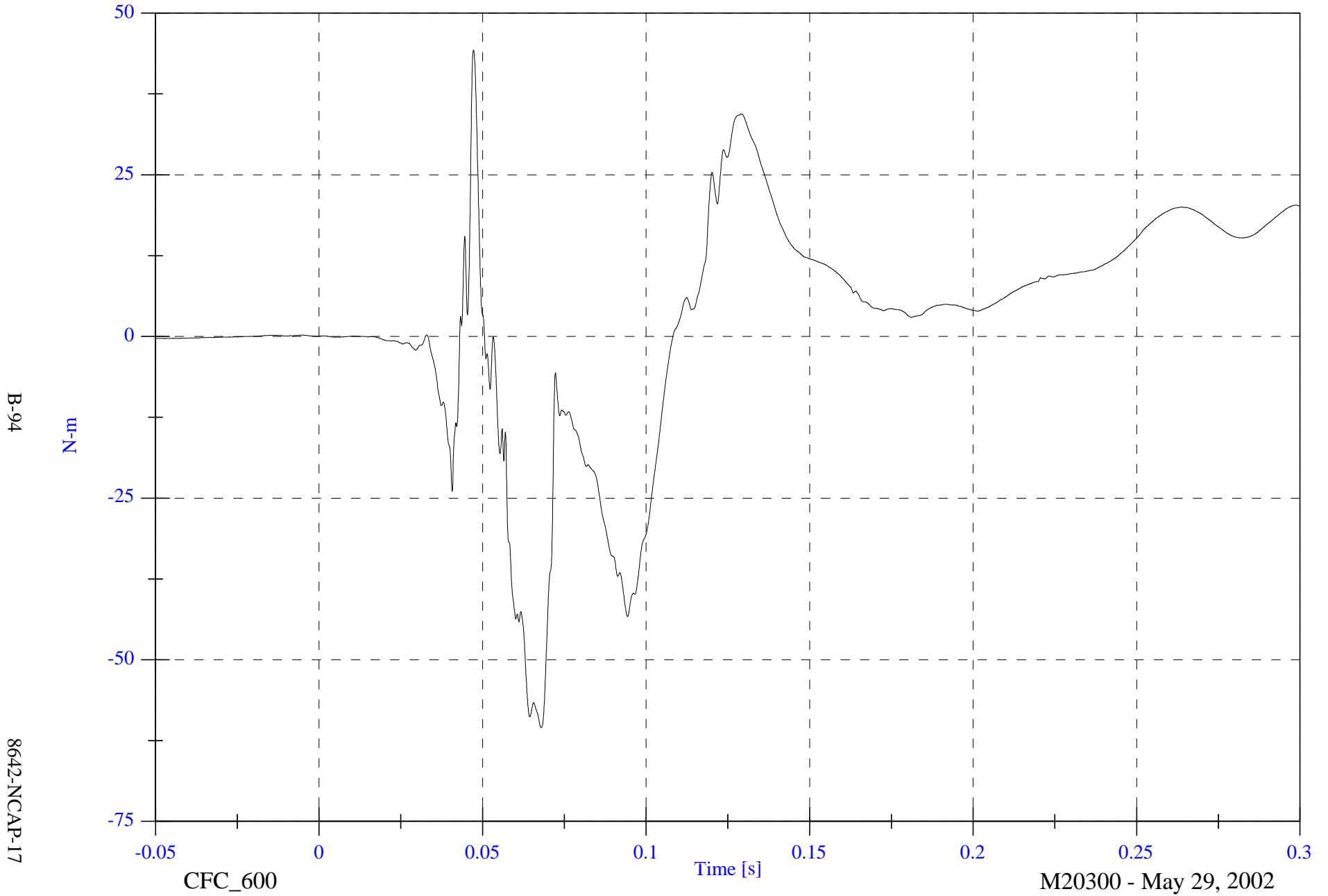
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 44.3 [N-m] at 0.047 [s]

Min: -60.5 [N-m] at 0.068 [s]

P2 Left Upper Tibia Mx

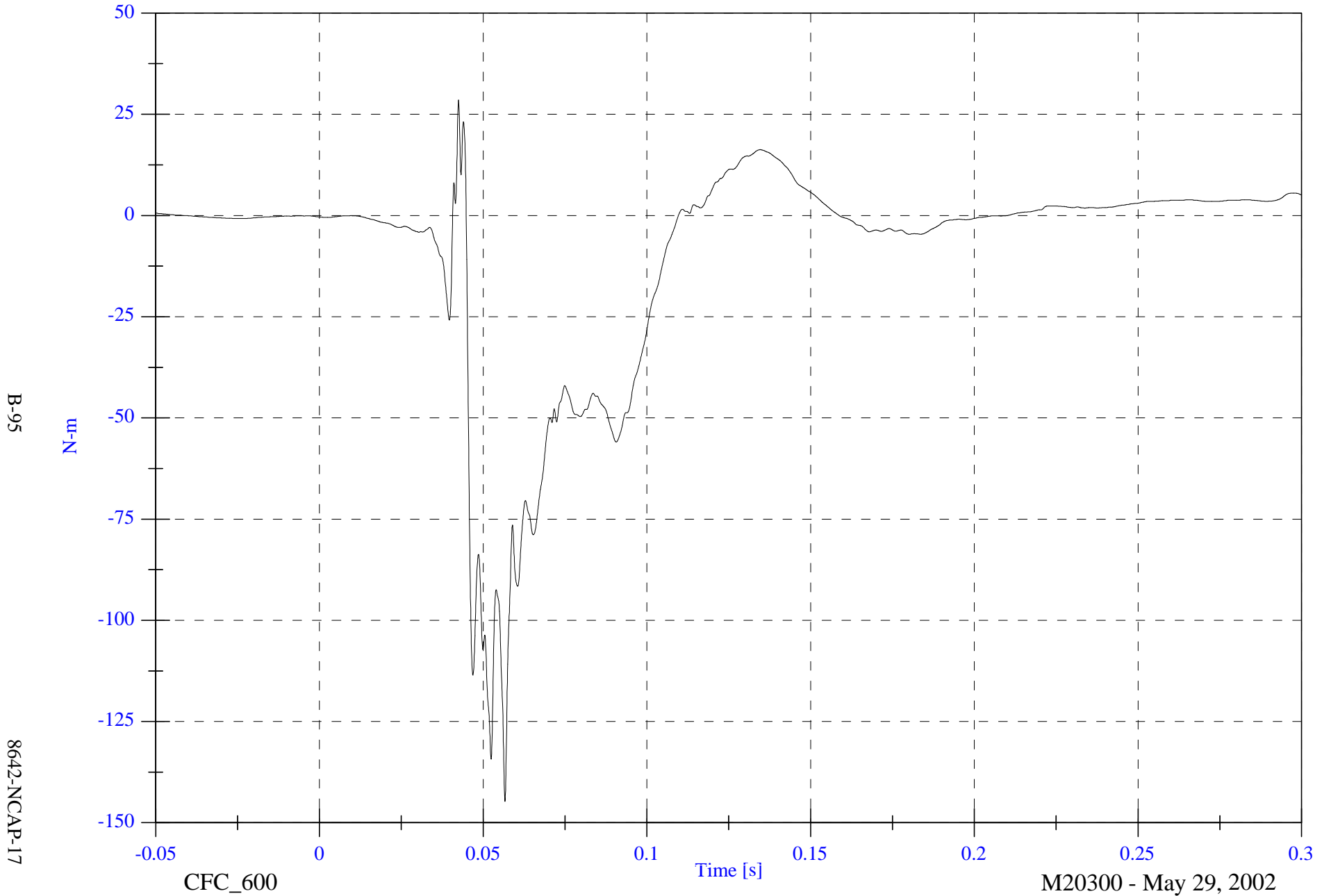


2002 NCAP Test 17 2002 Dodge Dakota

Max: 28.5 [N-m] at 0.043 [s]

Min: -144.8 [N-m] at 0.057 [s]

P2 Left Upper Tibia My



B-95

8642-NCAP-17

CFC\_600

Time [s]

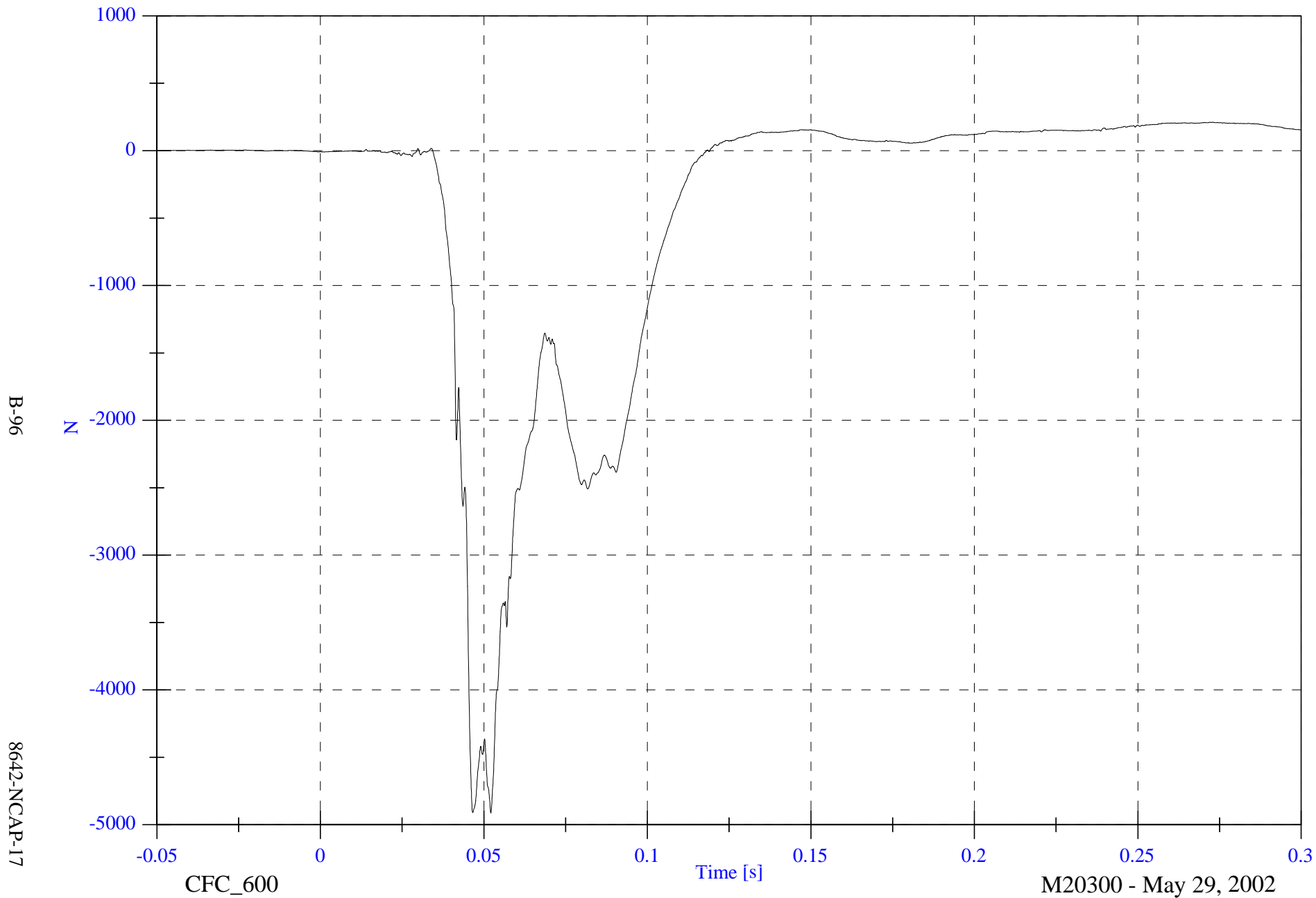
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 210.3 [N] at 0.273 [s]

Min: -4912.9 [N] at 0.052 [s]

P2 Left Lower Tibia Fz



B-96

8642-NCAP-17

CFC\_600

Time [s]

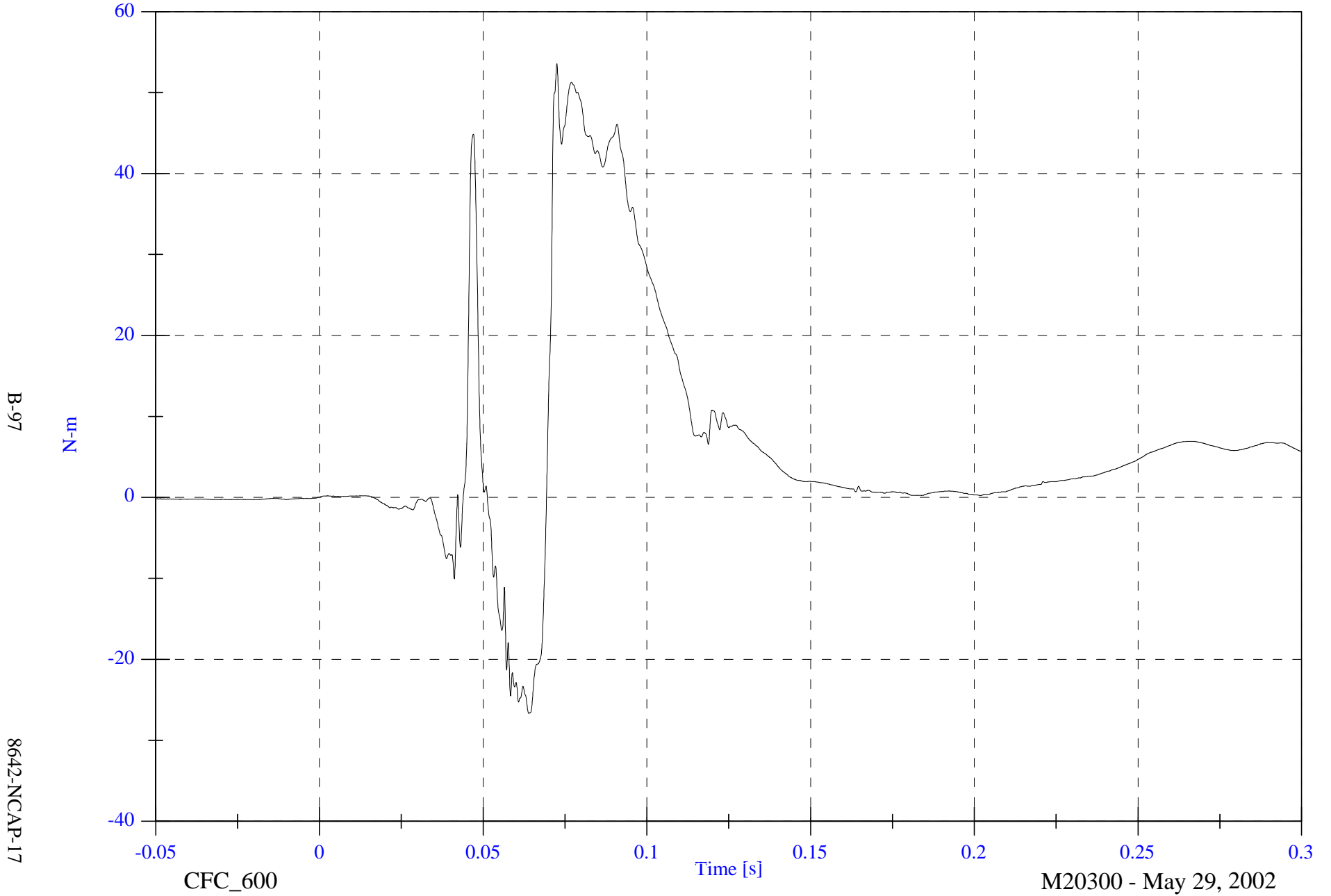
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 53.6 [N-m] at 0.073 [s]

Min: -26.7 [N-m] at 0.064 [s]

P2 Left Lower Tibia Mx



B-97

8642-NCAP-17

CFC\_600

Time [s]

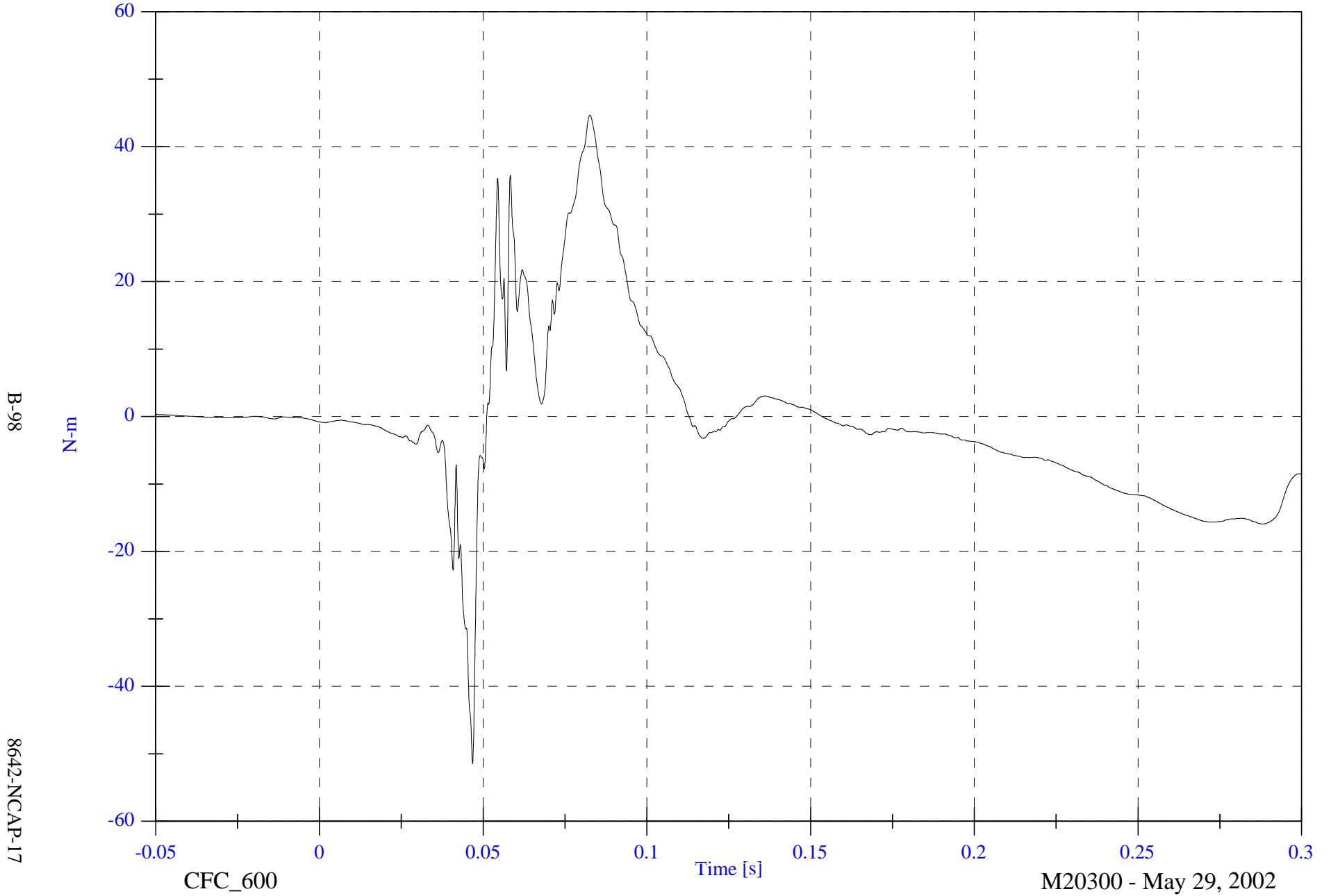
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 44.6 [N-m] at 0.083 [s]

Min: -51.5 [N-m] at 0.047 [s]

P2 Left Lower Tibia My



B-98

8642-NCAP-17

CFC\_600

Time [s]

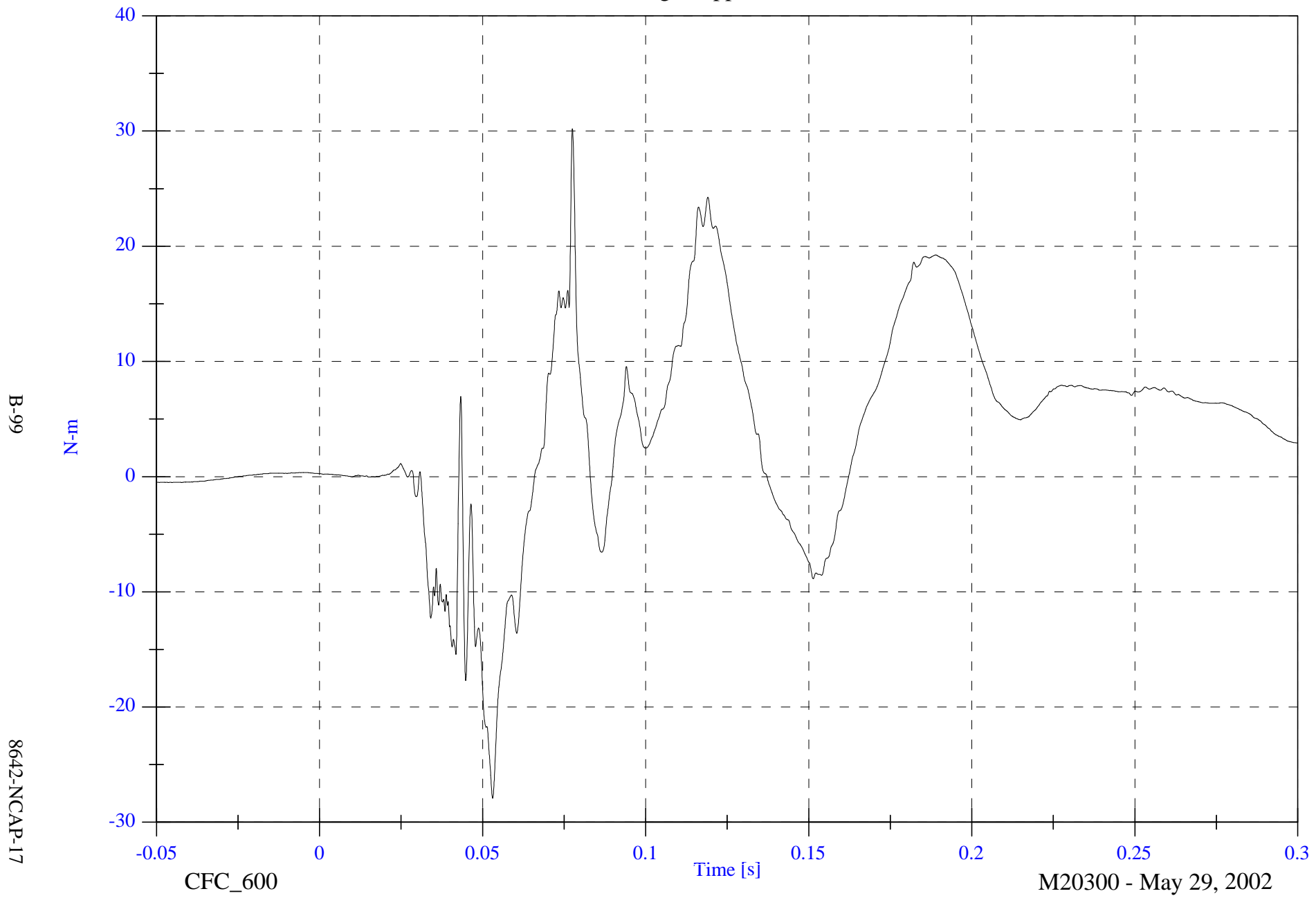
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 30.2 [N-m] at 0.078 [s]

Min: -27.9 [N-m] at 0.053 [s]

P2 Right Upper Tibia Mx



B-99

8642-NCAP-17

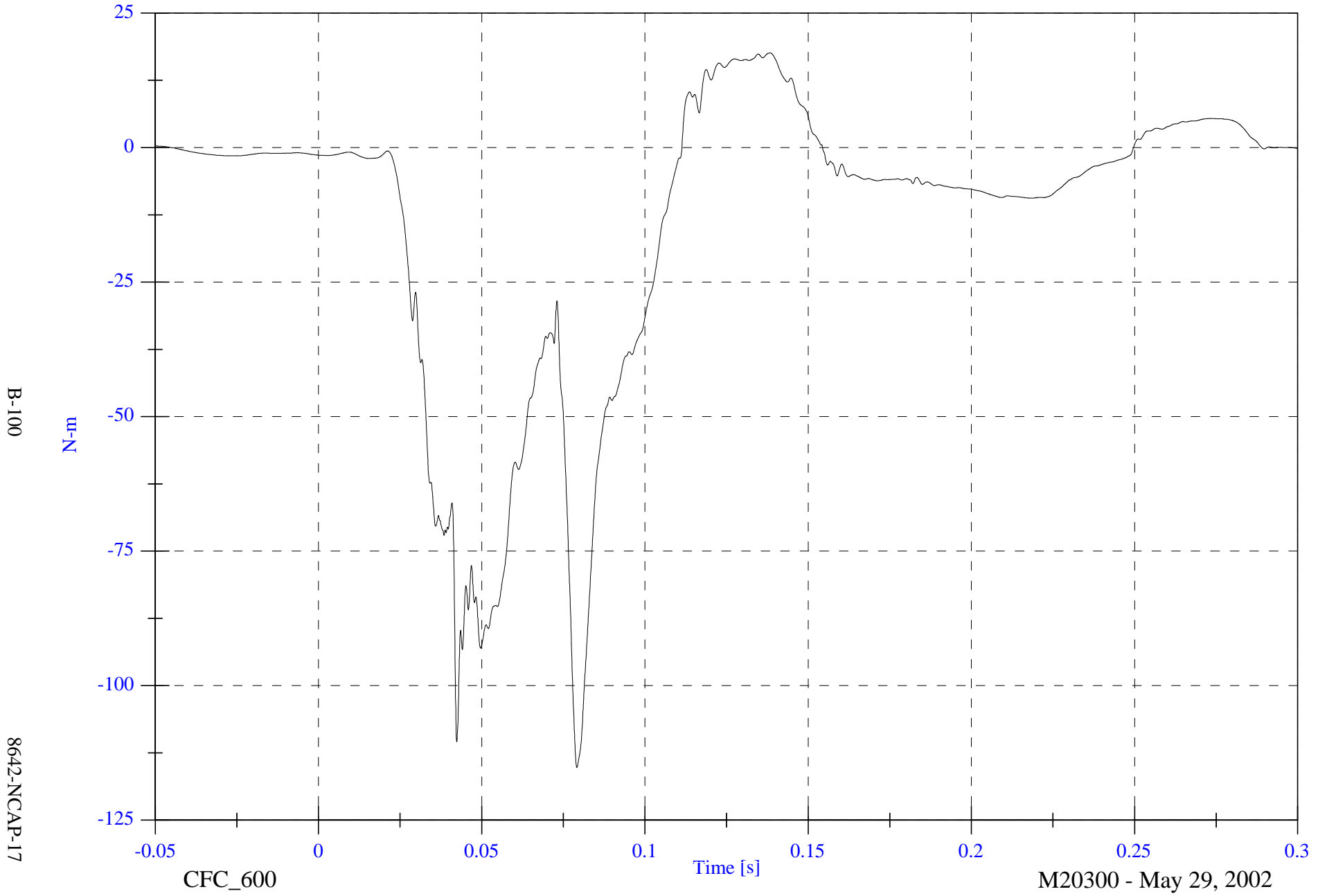
CFC\_600

M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 17.6 [N-m] at 0.138 [s]  
Min: -115.2 [N-m] at 0.079 [s]

P2 Right Upper Tibia My



B-100

8642-NCAP-17

CFC\_600

Time [s]

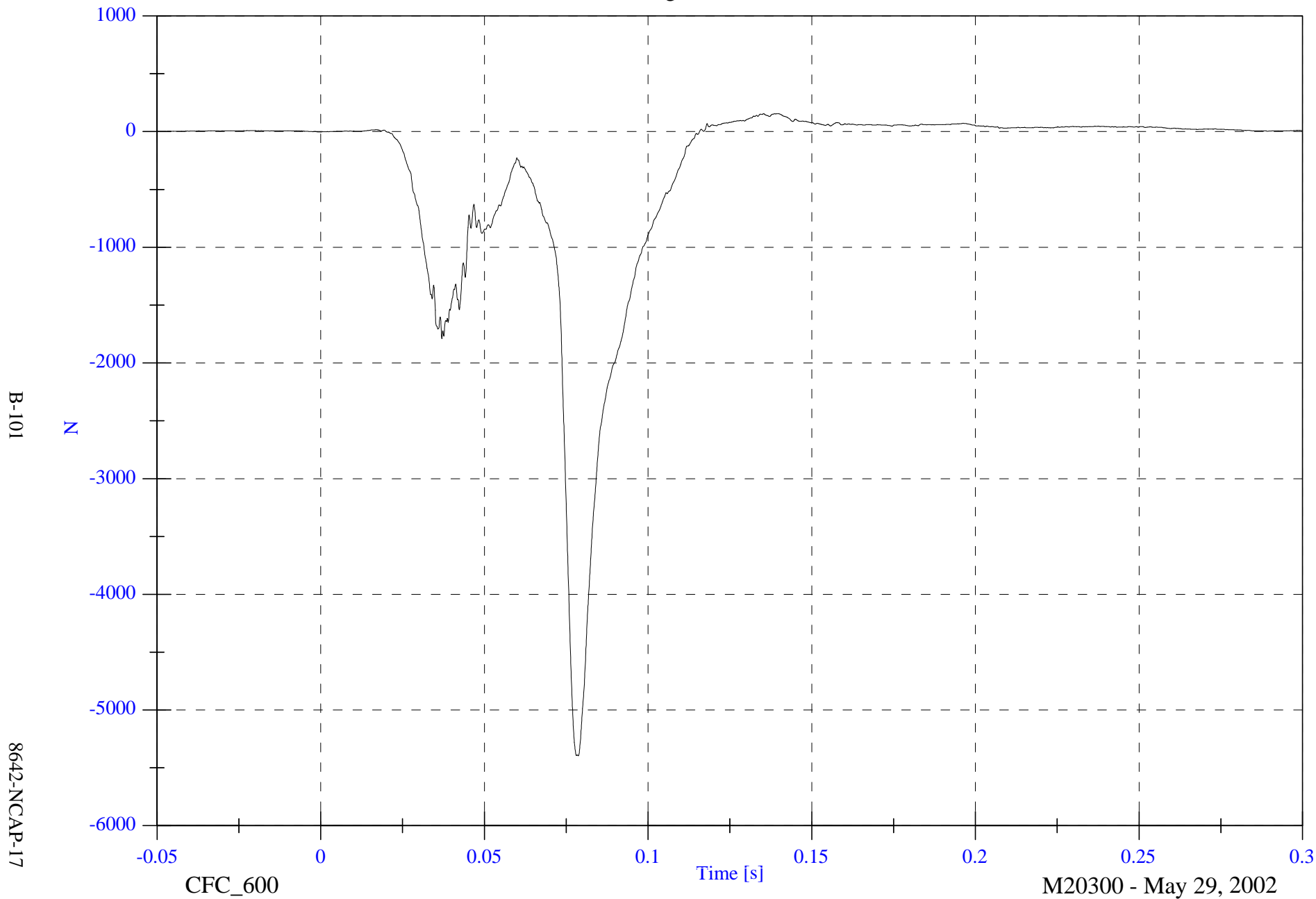
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 155.1 [N] at 0.135 [s]

Min: -5396.2 [N] at 0.079 [s]

P2 Right Lower Tibia Fz



B-101

8642-NCAP-17

CFC\_600

Time [s]

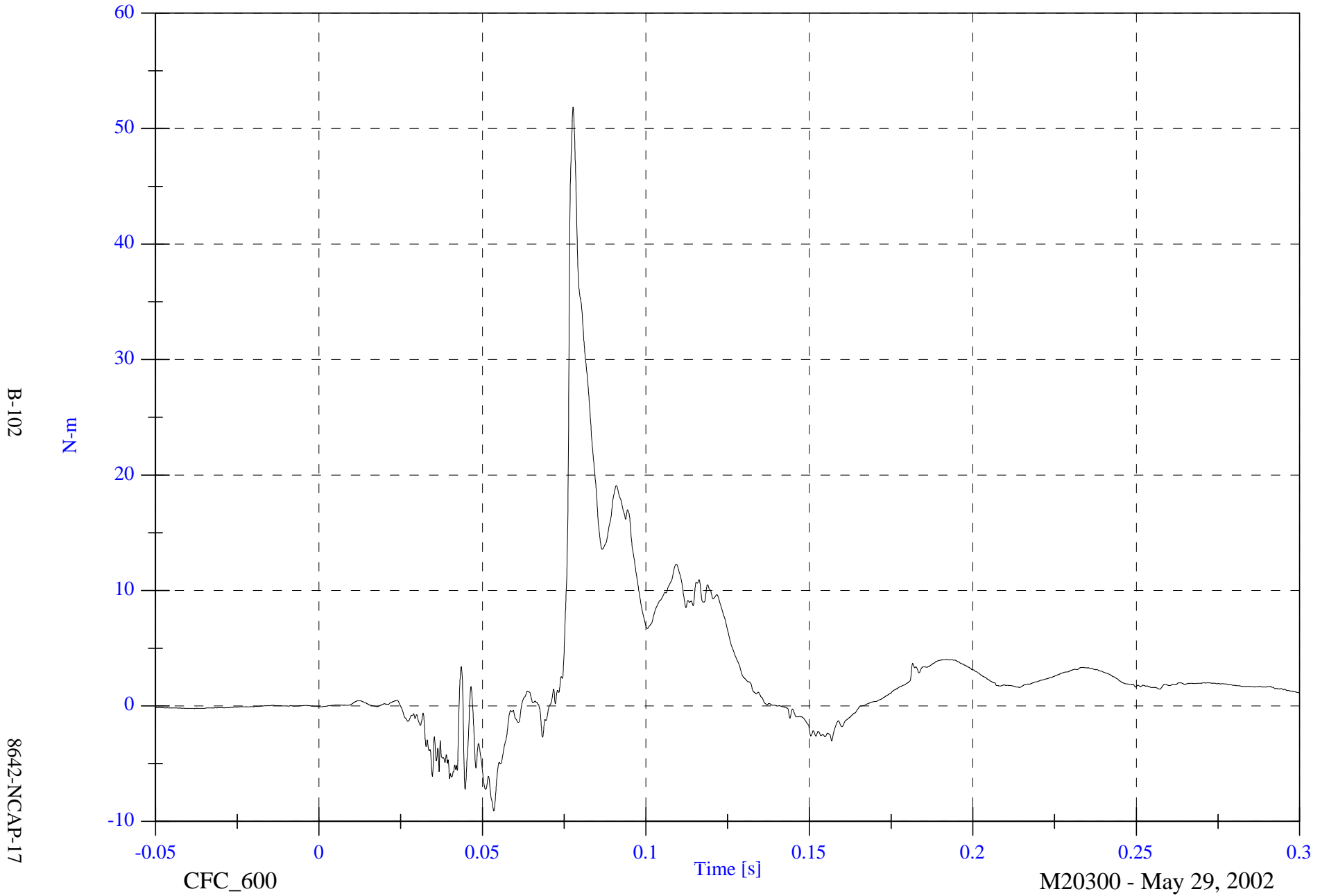
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 51.9 [N-m] at 0.078 [s]

Min: -9.1 [N-m] at 0.054 [s]

P2 Right Lower Tibia Mx

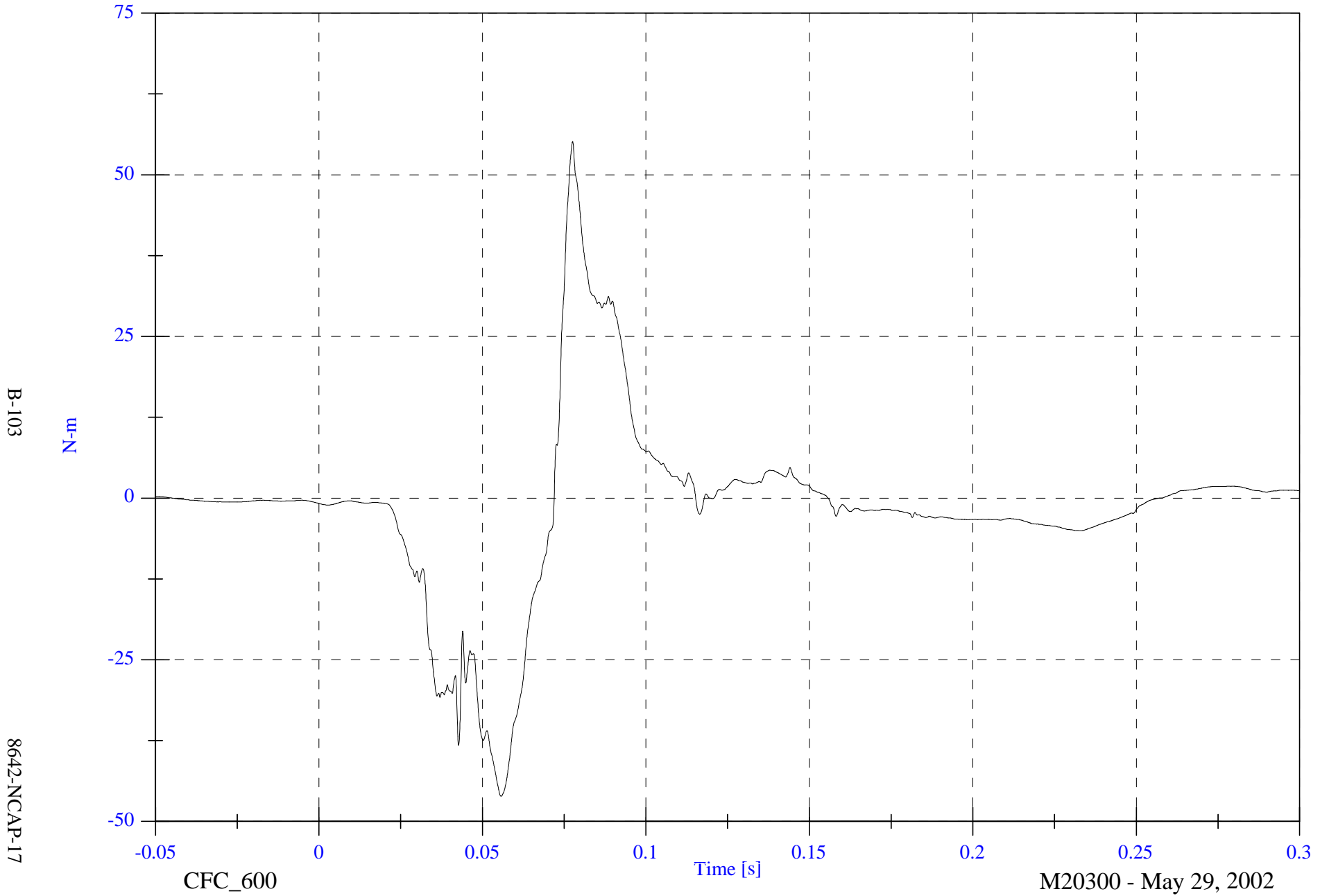


2002 NCAP Test 17 2002 Dodge Dakota

Max: 55.1 [N-m] at 0.078 [s]

Min: -46.1 [N-m] at 0.056 [s]

P2 Right Lower Tibia My

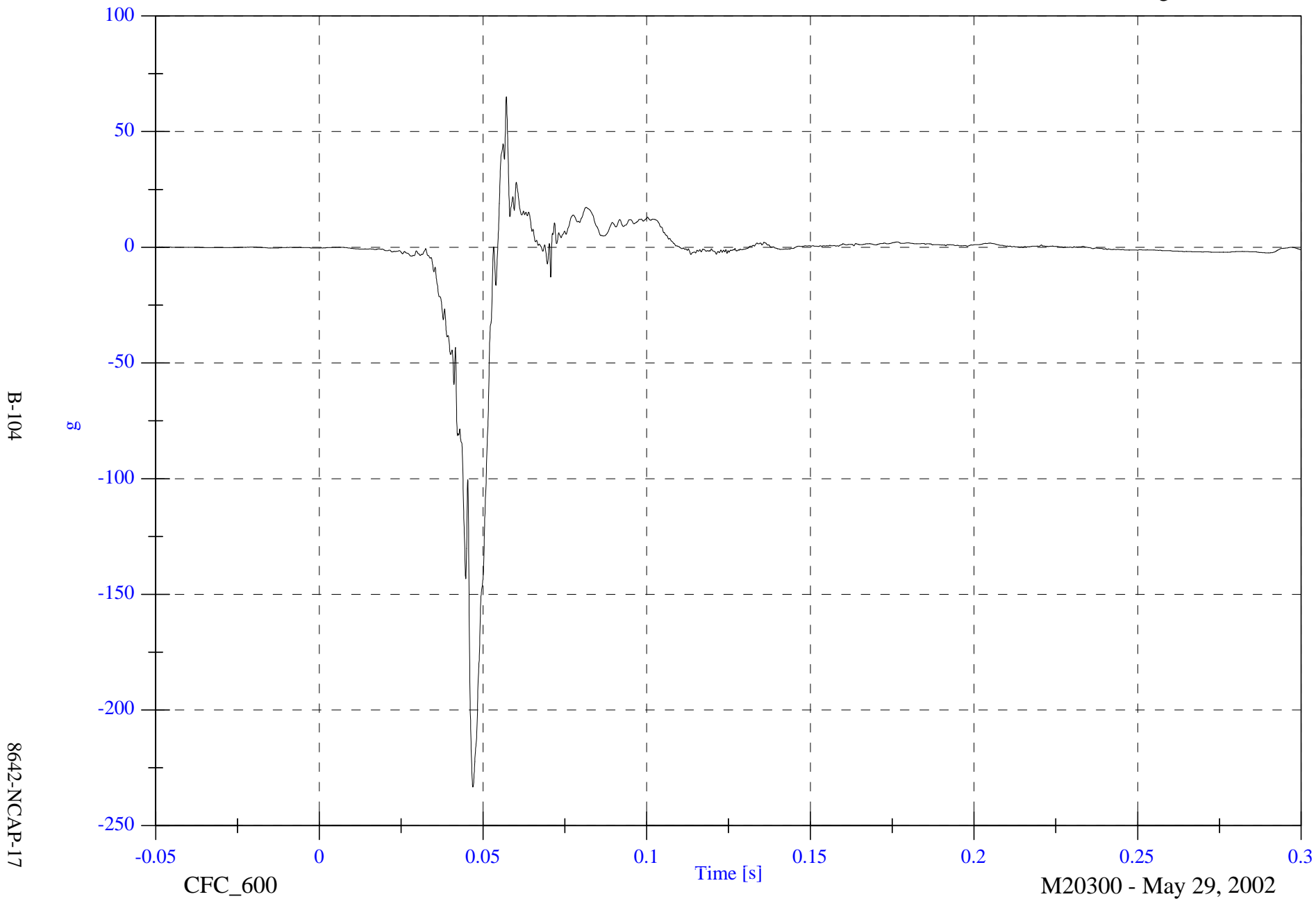


2002 NCAP Test 17 2002 Dodge Dakota

Max: 65.0 [g] at 0.057 [s]

Min: -233.3 [g] at 0.047 [s]

P2 Left foot Aft x



B-104

8642-NCAP-17

CFC\_600

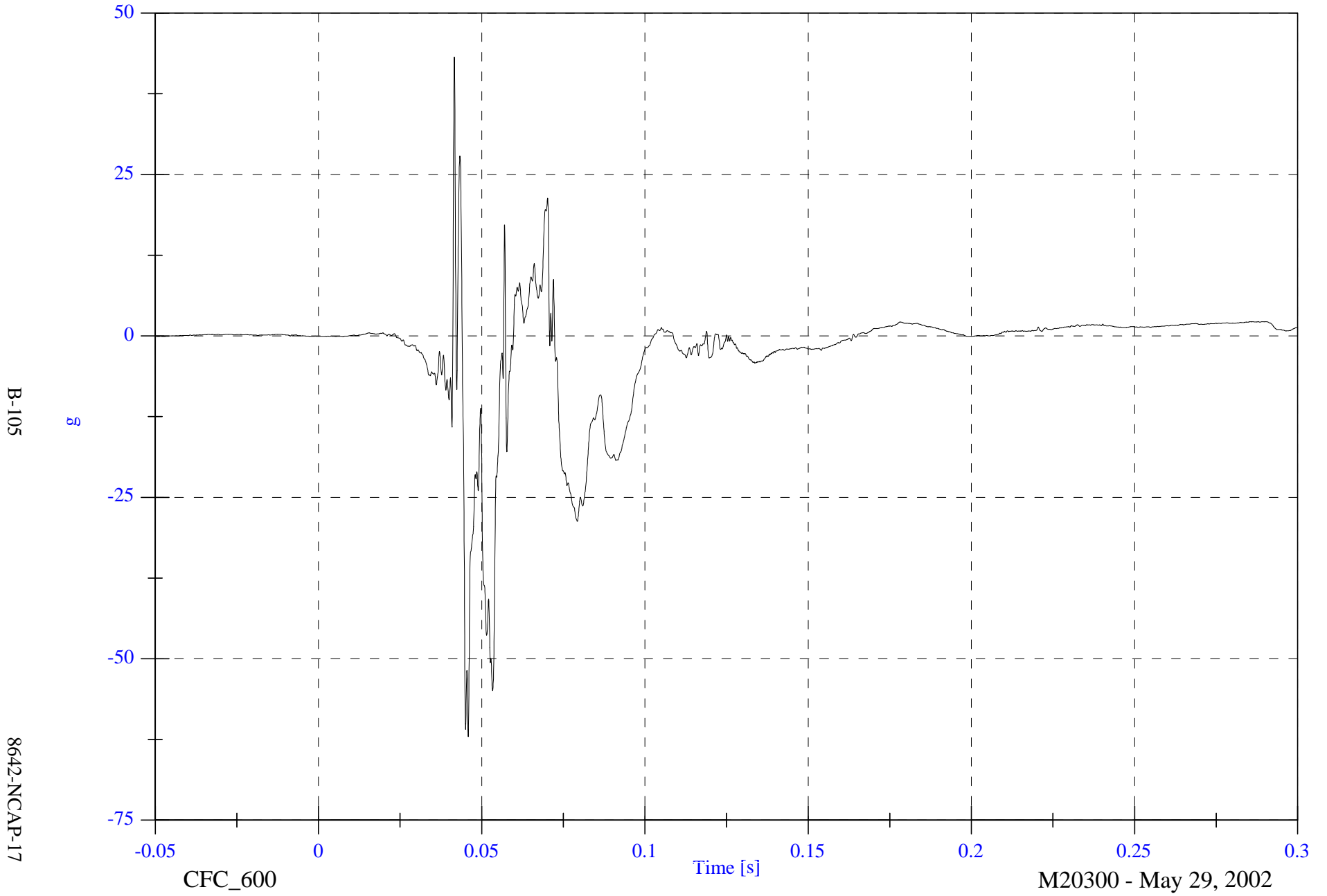
Time [s]

M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 43.2 [g] at 0.042 [s]  
Min: -62.1 [g] at 0.046 [s]

P2 Left Foot Aft z

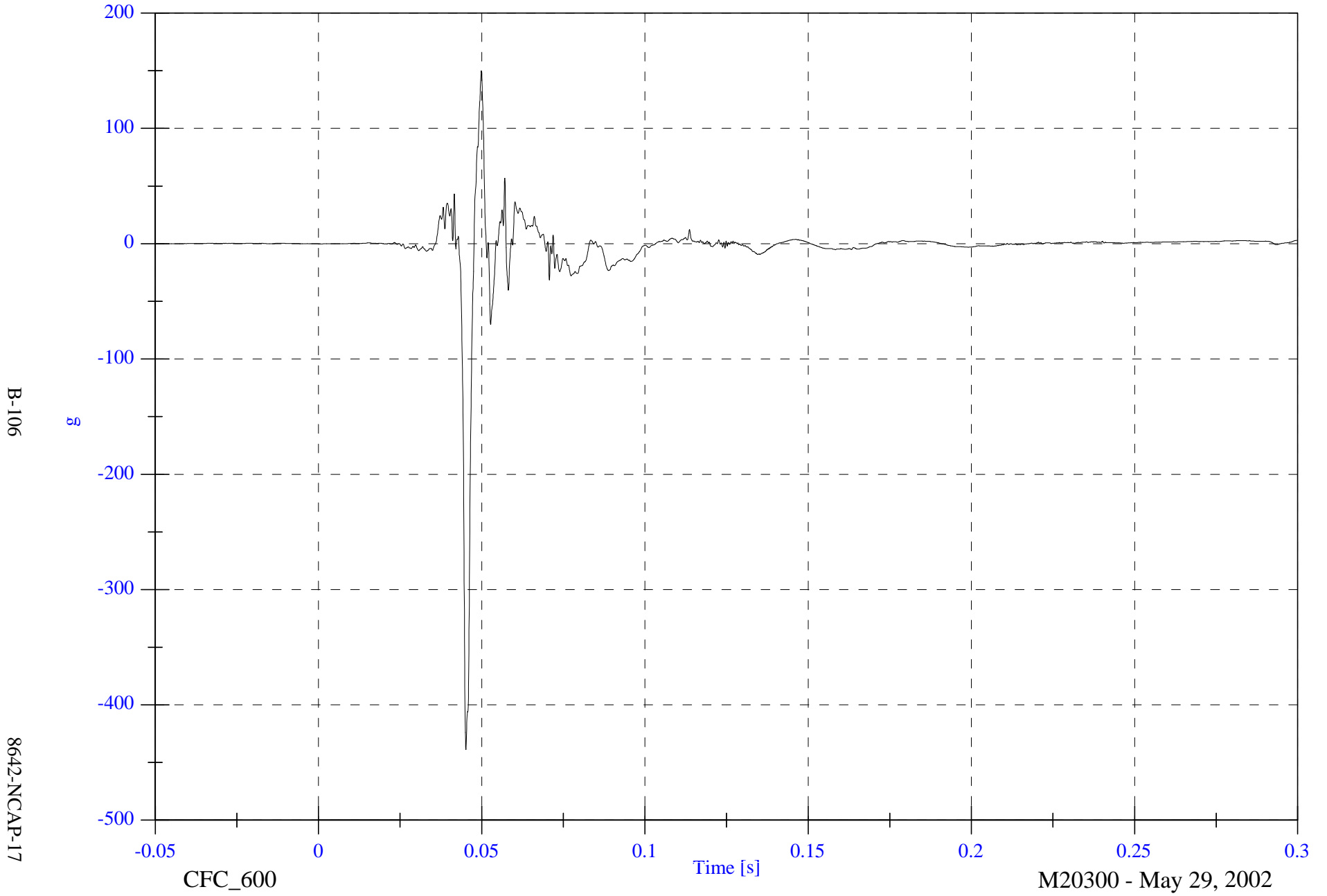


2002 NCAP Test 17 2002 Dodge Dakota

Max: 150.1 [g] at 0.050 [s]

Min: -438.9 [g] at 0.045 [s]

P2 Left Foot Fore z

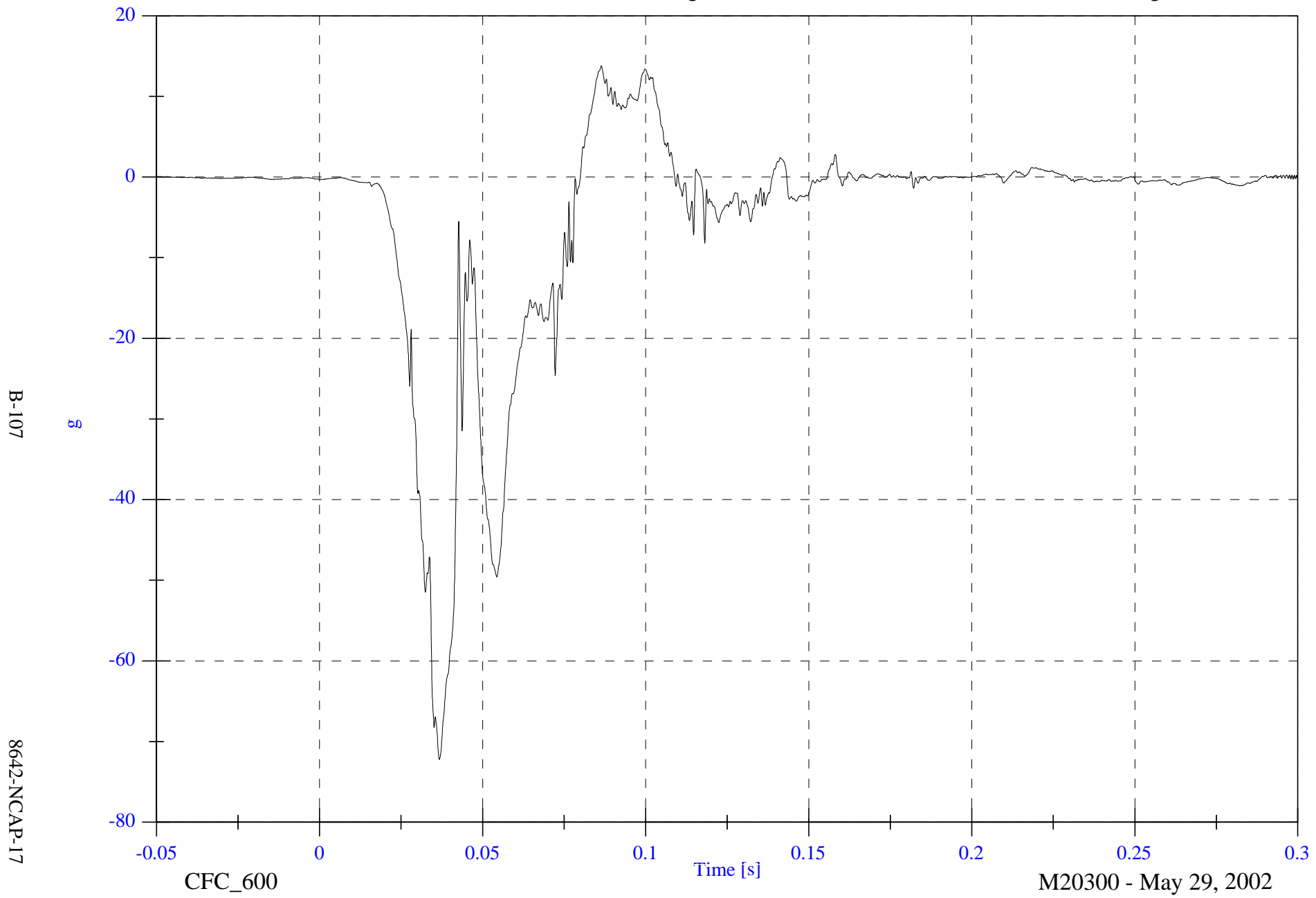


2002 NCAP Test 17 2002 Dodge Dakota

Max: 13.8 [g] at 0.086 [s]

Min: -72.2 [g] at 0.037 [s]

P2 Right Foot Aft x



B-107

8642-NCAP-17

CFC\_600

Time [s]

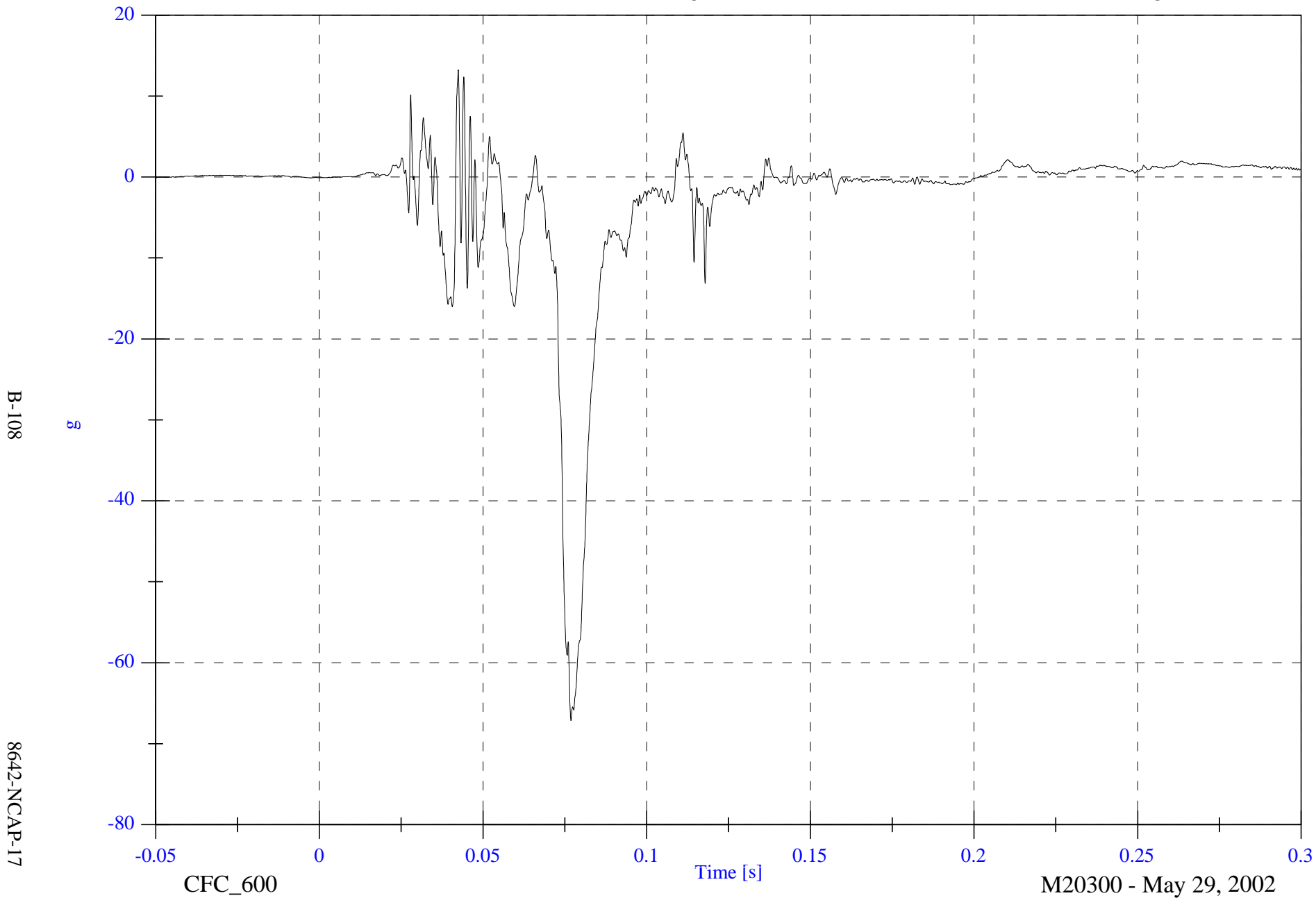
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 13.2 [g] at 0.042 [s]

Min: -67.1 [g] at 0.077 [s]

P2 Right Foot Aft z



B-108

8642-NCAP-17

CFC\_600

Time [s]

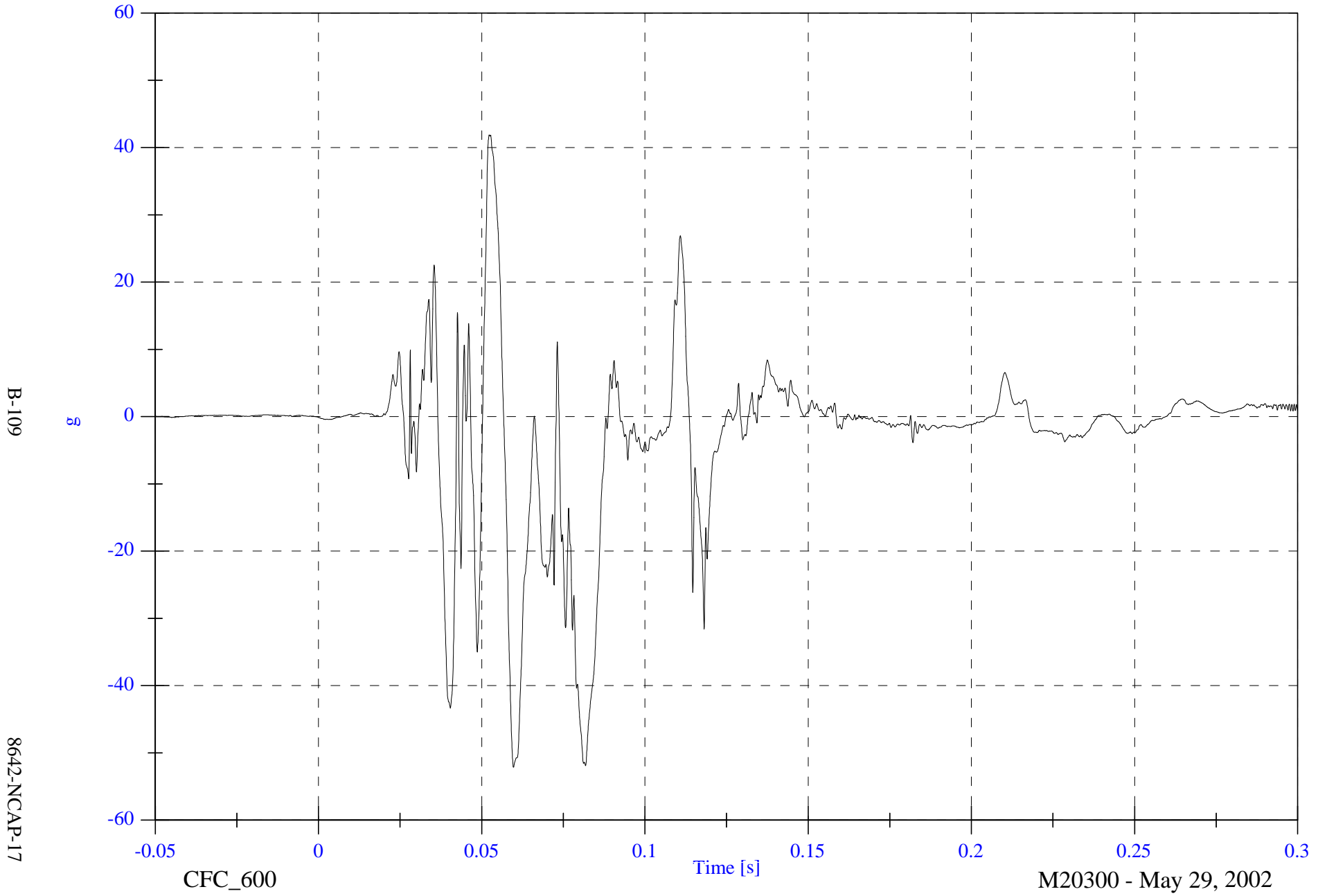
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 41.9 [g] at 0.052 [s]

Min: -52.1 [g] at 0.060 [s]

P2 Right Foot Fore z

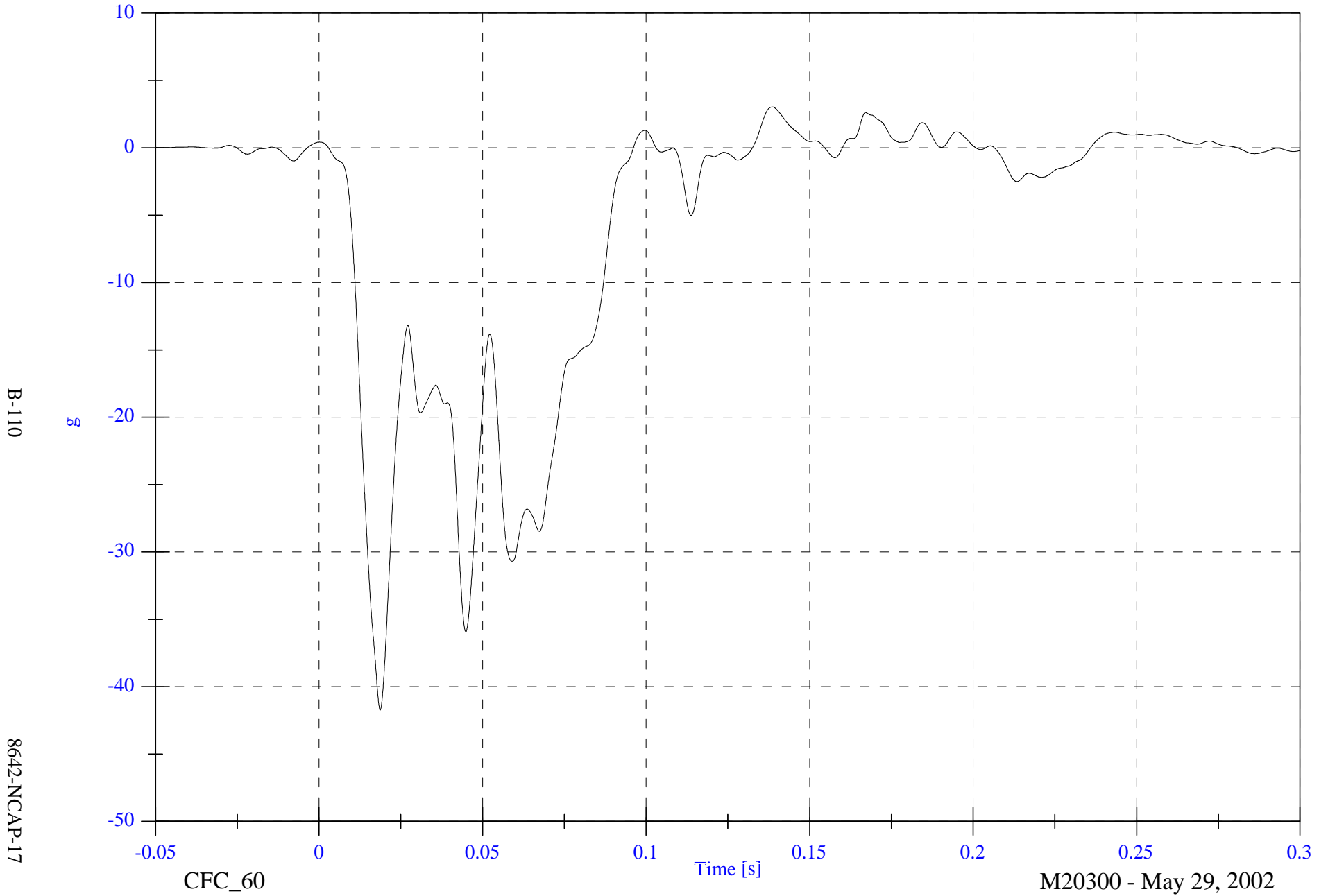


2002 NCAP Test 17 2002 Dodge Dakota

Max: 3.0 [g] at 0.139 [s]

Min: -41.7 [g] at 0.019 [s]

Left Rear #1x



2002 NCAP Test 17 2002 Dodge Dakota

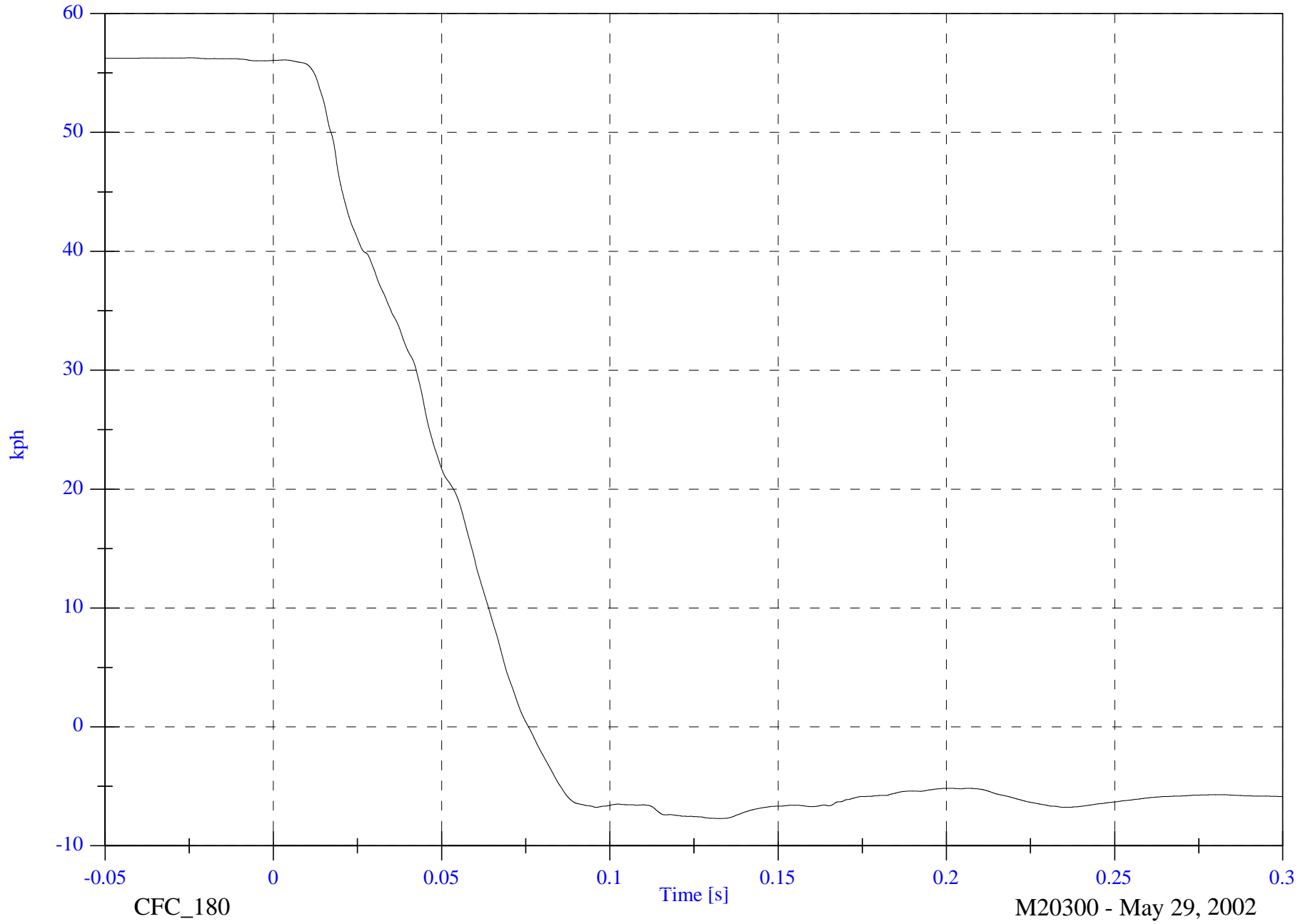
Max: 56.3 [kph] at -0.024 [s]

Left Rear #1x Velocity

Min: -7.7 [kph] at 0.132 [s]

B-111

8642-NCAP-17

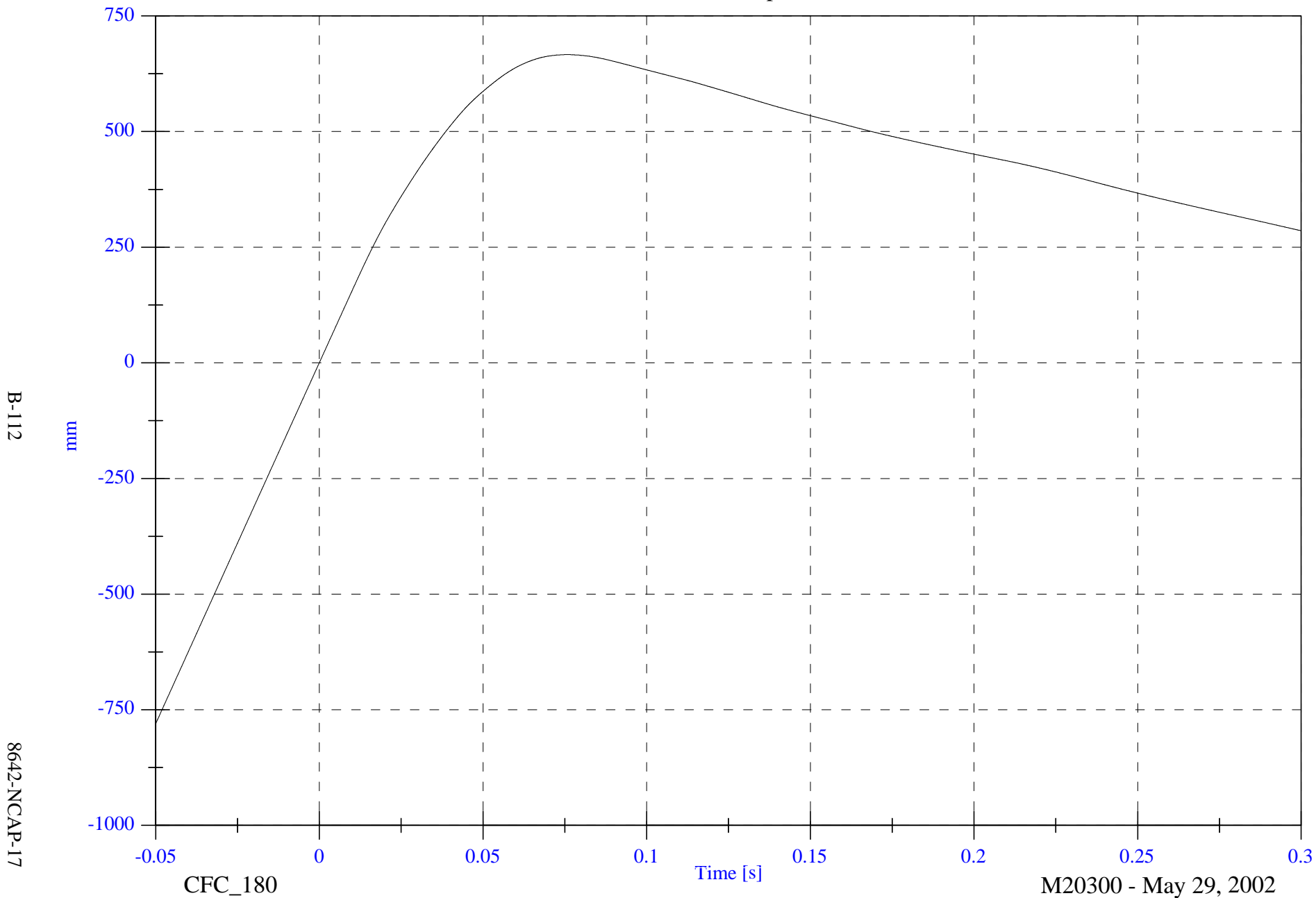


2002 NCAP Test 17 2002 Dodge Dakota

Max: 666.1 [mm] at 0.076 [s]

Min: -780.5 [mm] at -0.050 [s]

### Left Rear #1x Displacement



B-112

8642-NCAP-17

CFC\_180

Time [s]

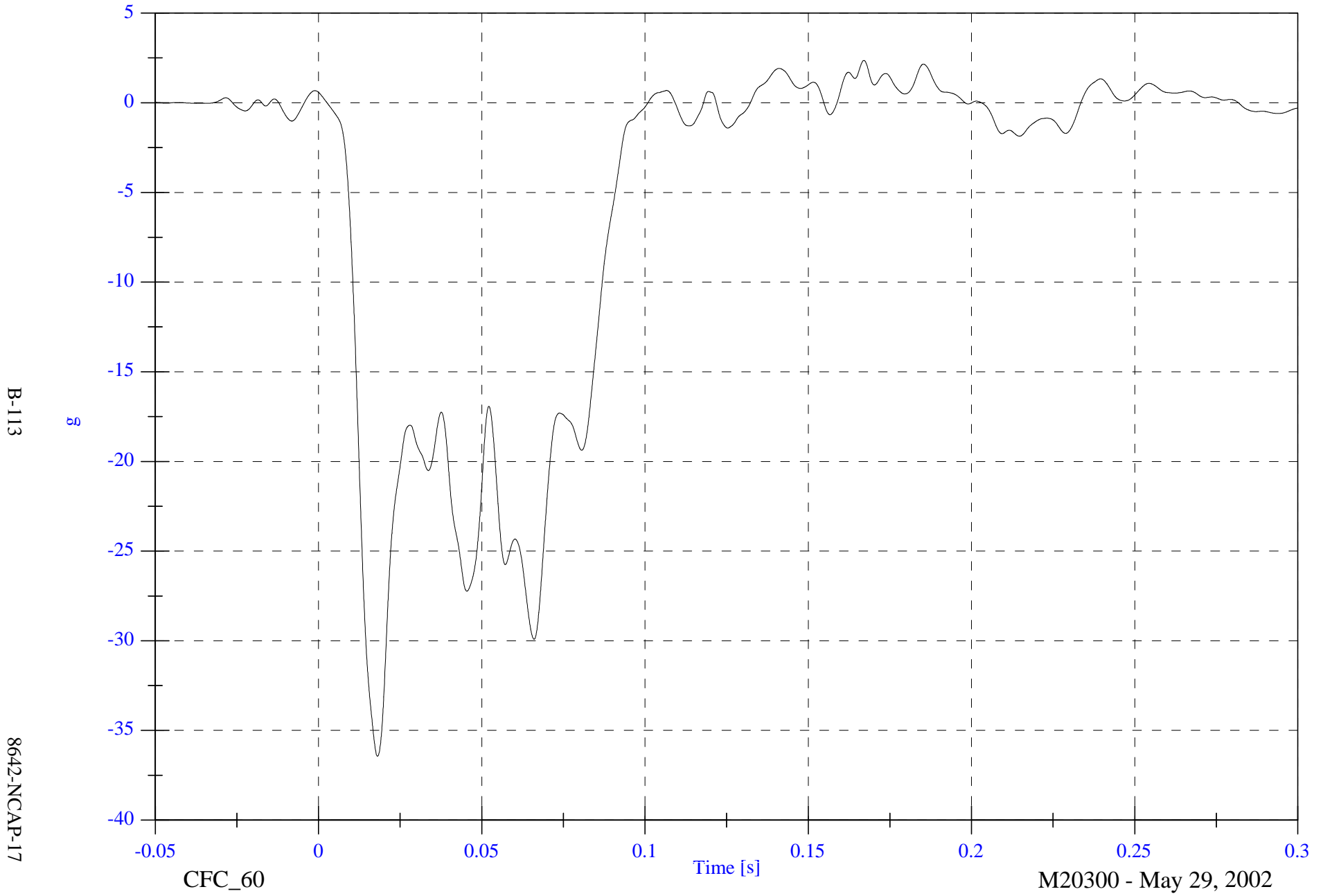
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 2.4 [g] at 0.167 [s]

Min: -36.4 [g] at 0.018 [s]

Right Rear #2x



B-113

8642-NCAP-17

CFC\_60

Time [s]

M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

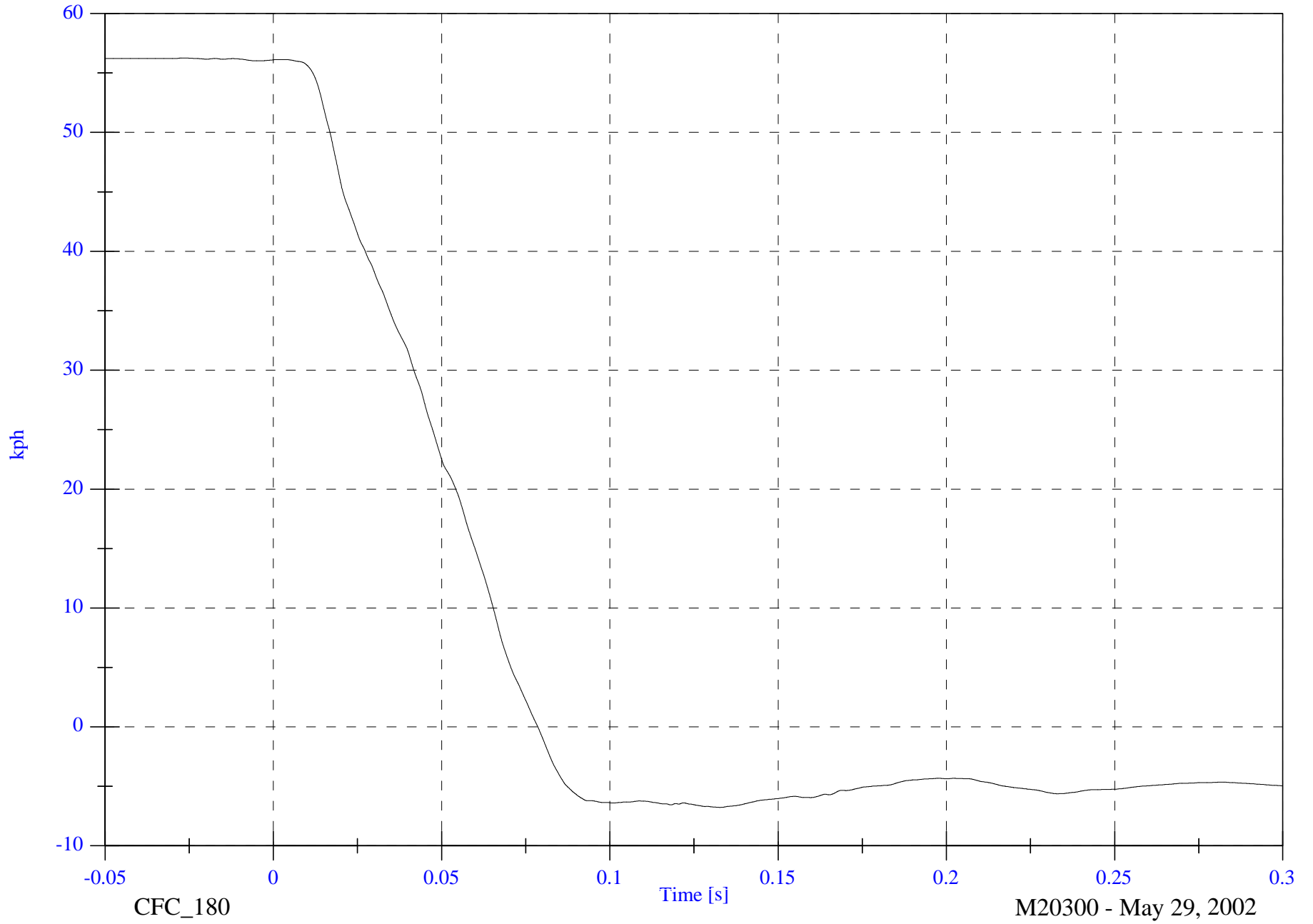
Max: 56.3 [kph] at -0.027 [s]

Right Rear #2x Velocity

Min: -6.8 [kph] at 0.133 [s]

B-114

8642-NCAP-17



CFC\_180

Time [s]

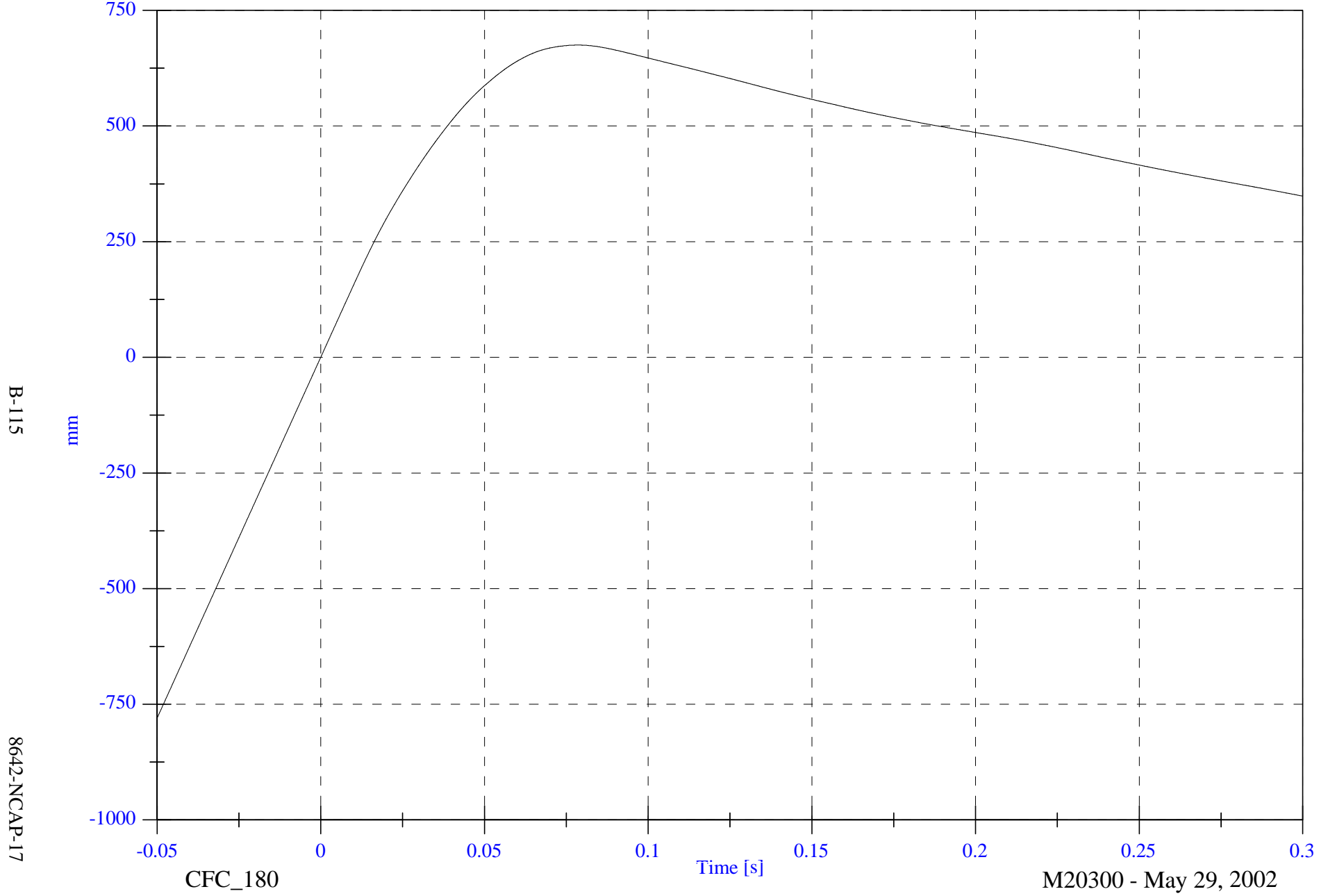
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 674.9 [mm] at 0.079 [s]

Min: -780.3 [mm] at -0.050 [s]

Right Rear #2x Displacement



B-115

8642-NCAP-17

CFC\_180

Time [s]

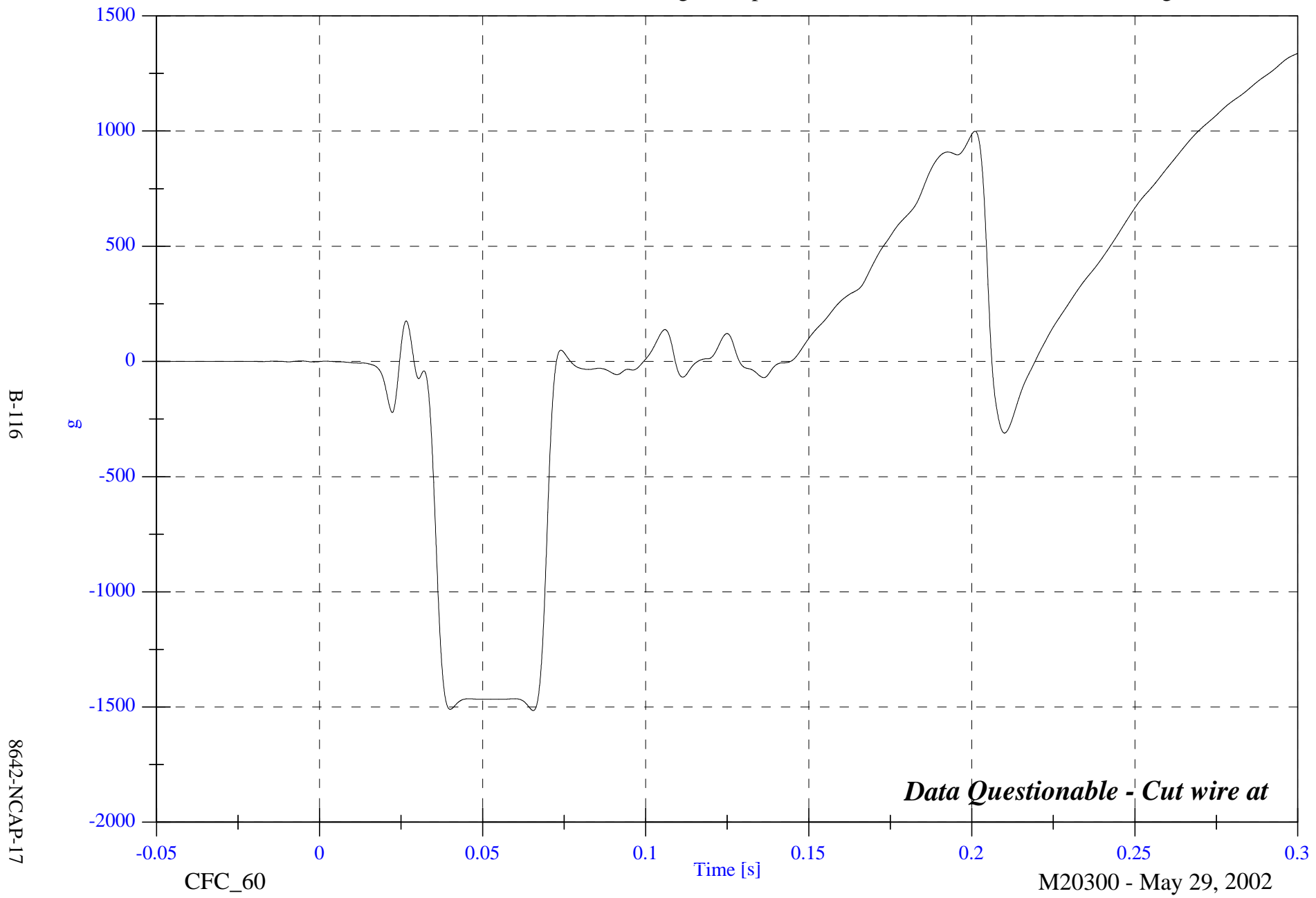
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Engine Top #3x

Max: 1336.9 [g] at 0.300 [s]

Min: -1515.4 [g] at 0.066 [s]



B-116

8642-NCAP-17

CFC\_60

Time [s]

M20300 - May 29, 2002

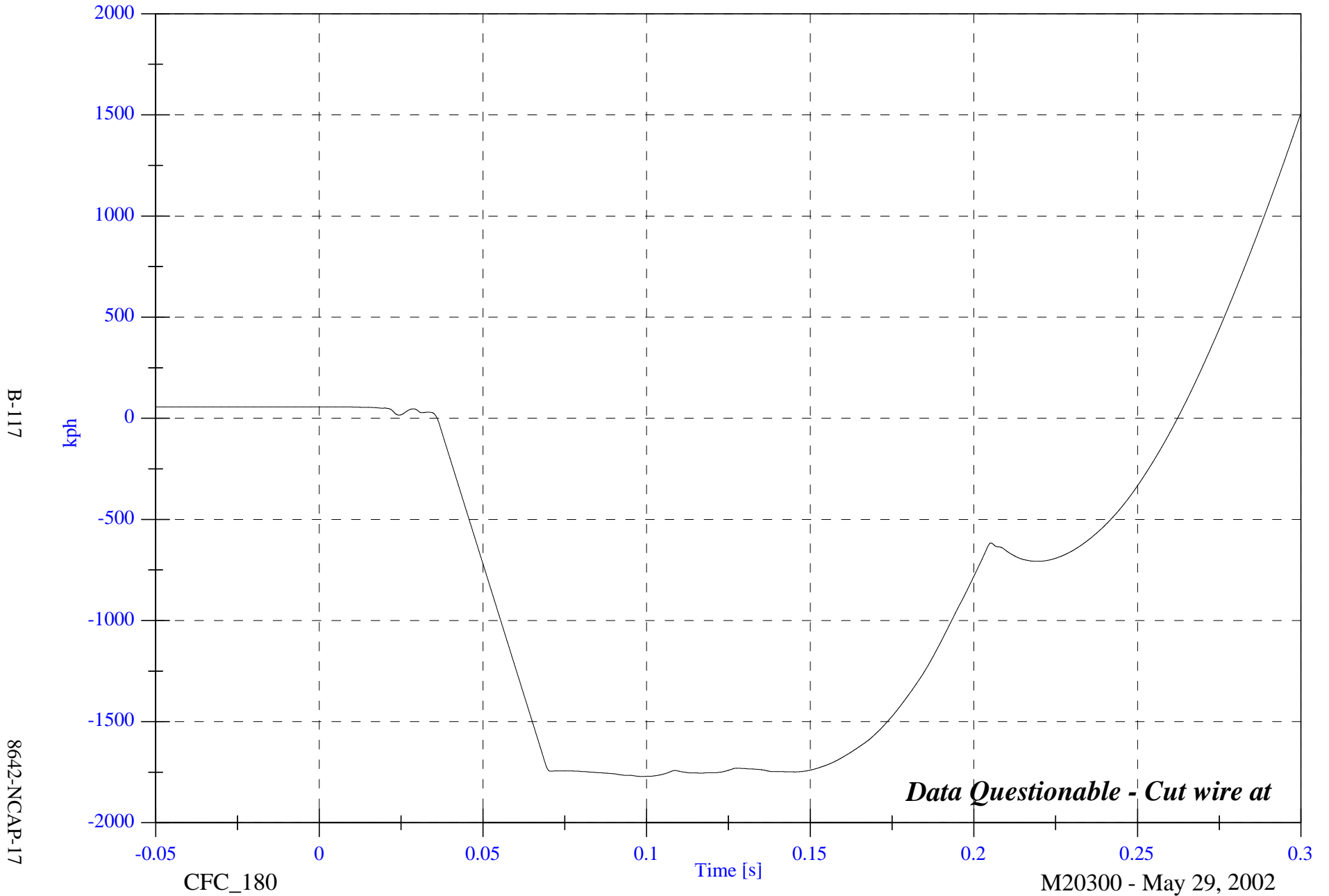
*Data Questionable - Cut wire at*

2002 NCAP Test 17 2002 Dodge Dakota

Max: 1508.2 [kph] at 0.300 [s]

Min: -1771.0 [kph] at 0.099 [s]

### Engine Top #3x Velocity



B-117

8642-NCAP-17

CFC\_180

Time [s]

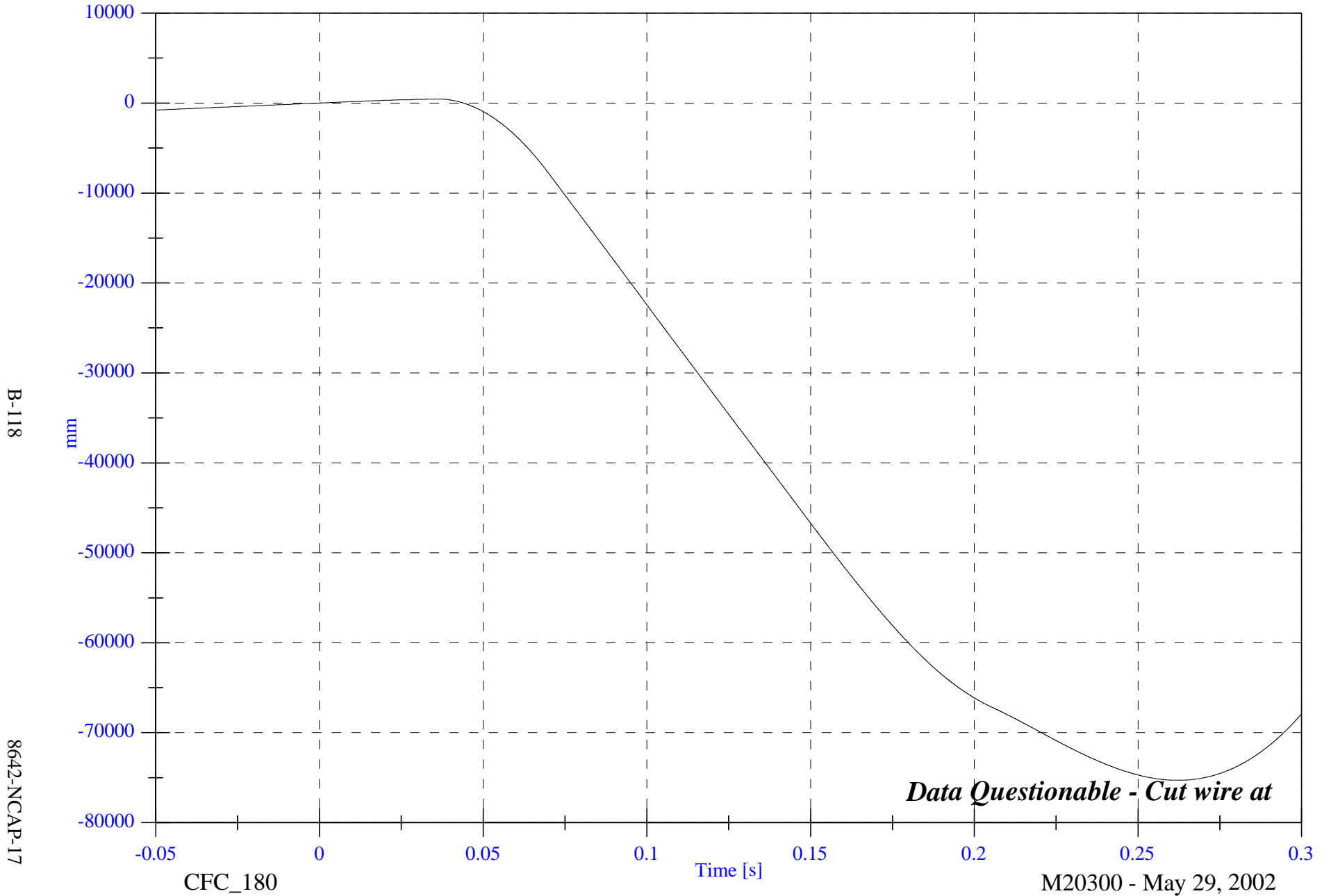
M20300 - May 29, 2002

*Data Questionable - Cut wire at*

2002 NCAP Test 17 2002 Dodge Dakota

Max: 445.6 [mm] at 0.036 [s]  
Min: -75287.4 [mm] at 0.262 [s]

### Engine Top #3x Displacement



B-118

8642-NCAP-17

CFC\_180

Time [s]

M20300 - May 29, 2002

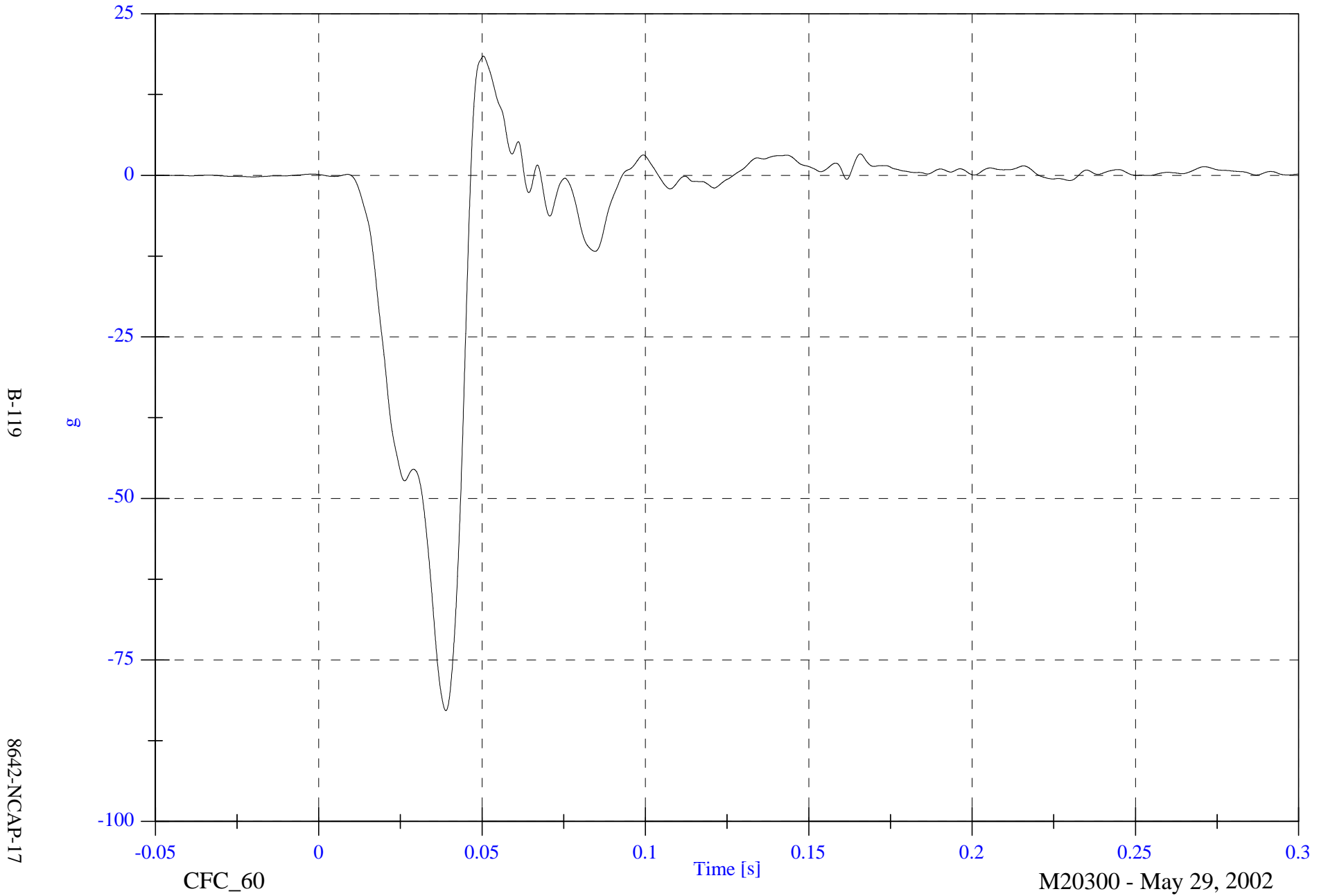
*Data Questionable - Cut wire at*

2002 NCAP Test 17 2002 Dodge Dakota

Max: 18.5 [g] at 0.050 [s]

Min: -82.8 [g] at 0.039 [s]

Engine Bottom #4x



2002 NCAP Test 17 2002 Dodge Dakota

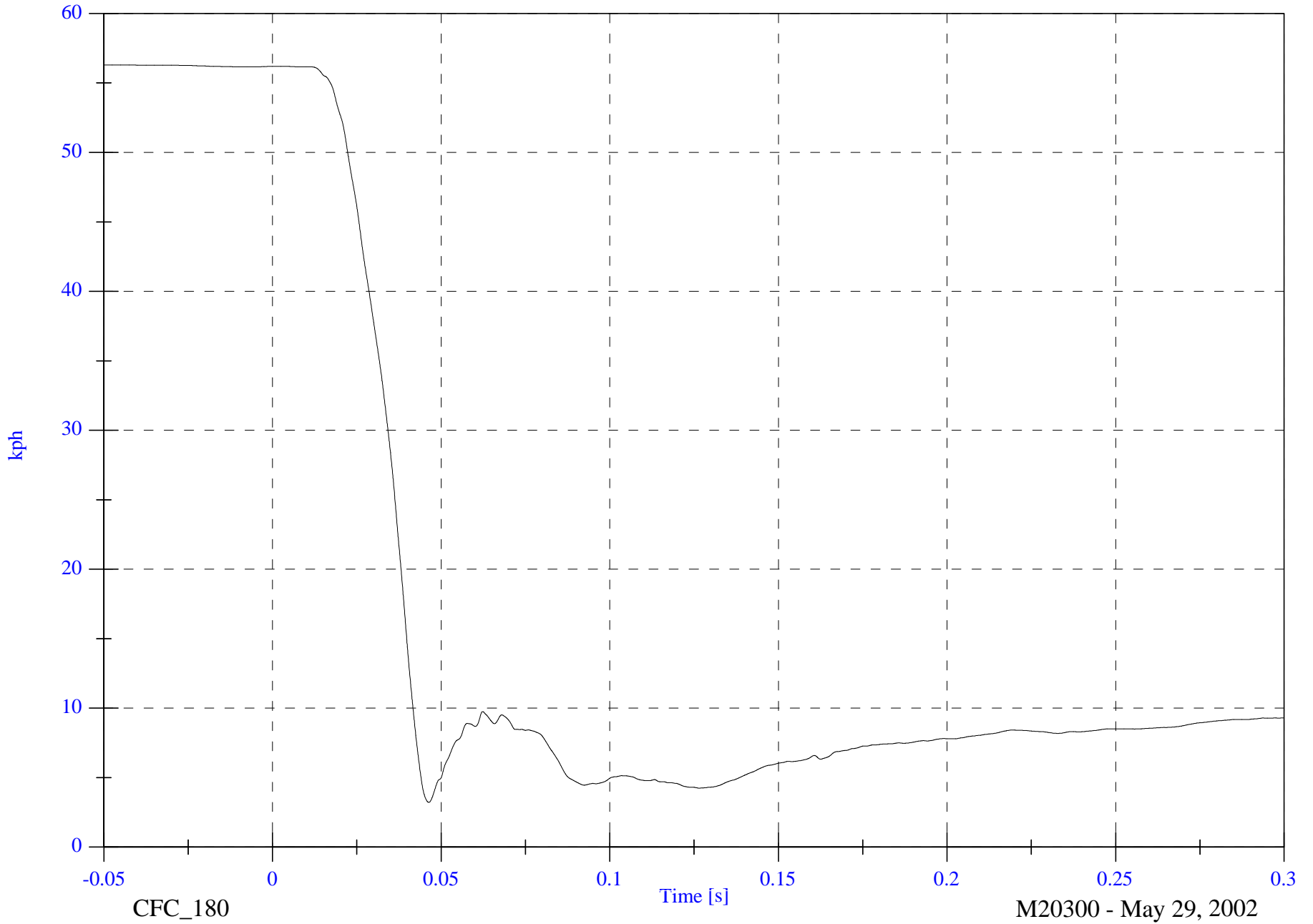
Max: 56.3 [kph] at -0.050 [s]

Engine Bottom #4x Velocity

Min: 3.2 [kph] at 0.046 [s]

B-120

8642-NCAP-17



CFC\_180

Time [s]

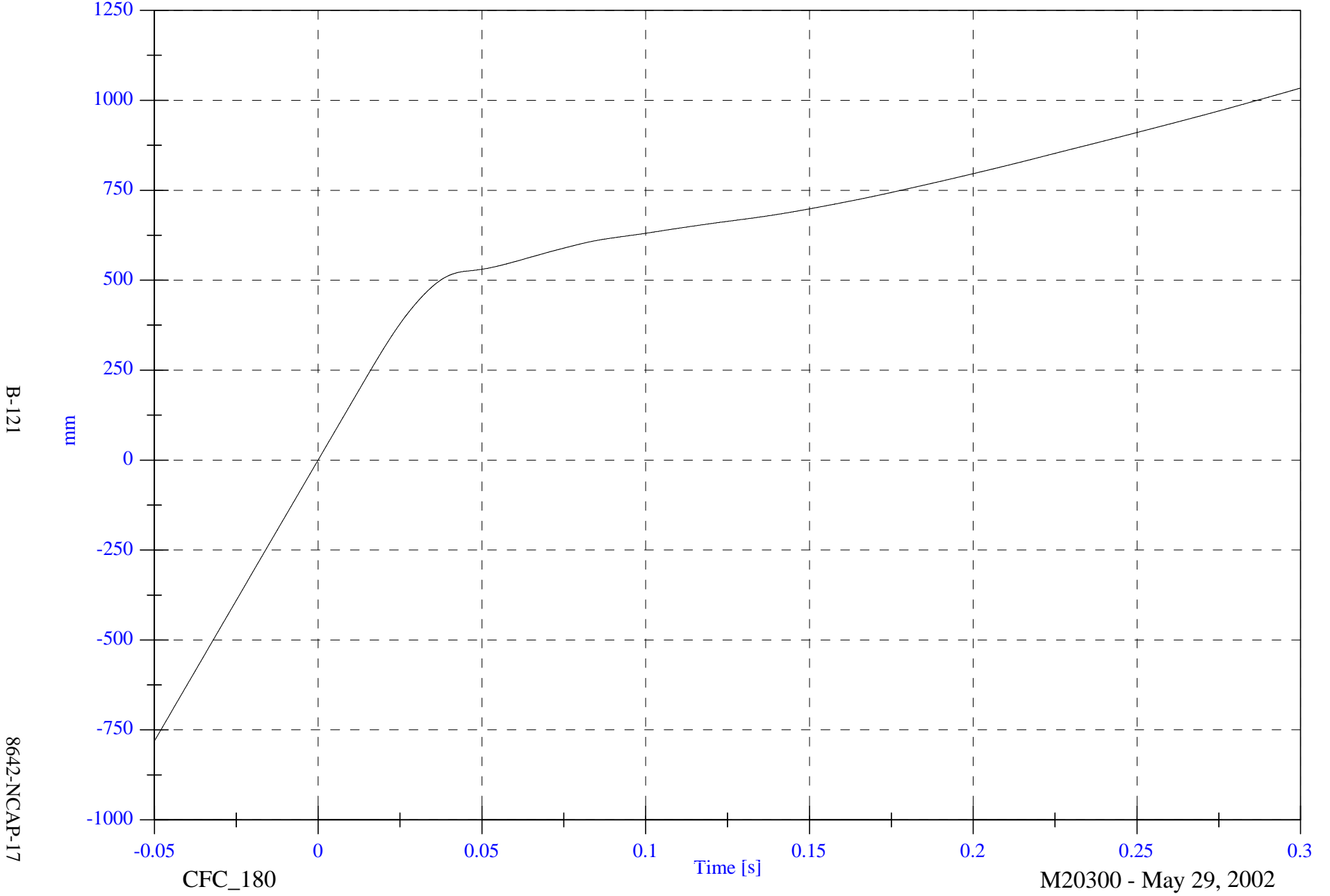
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 1033.8 [mm] at 0.300 [s]

Engine Bottom #4x Displacement

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



B-121

8642-NCAP-17

CFC\_180

Time [s]

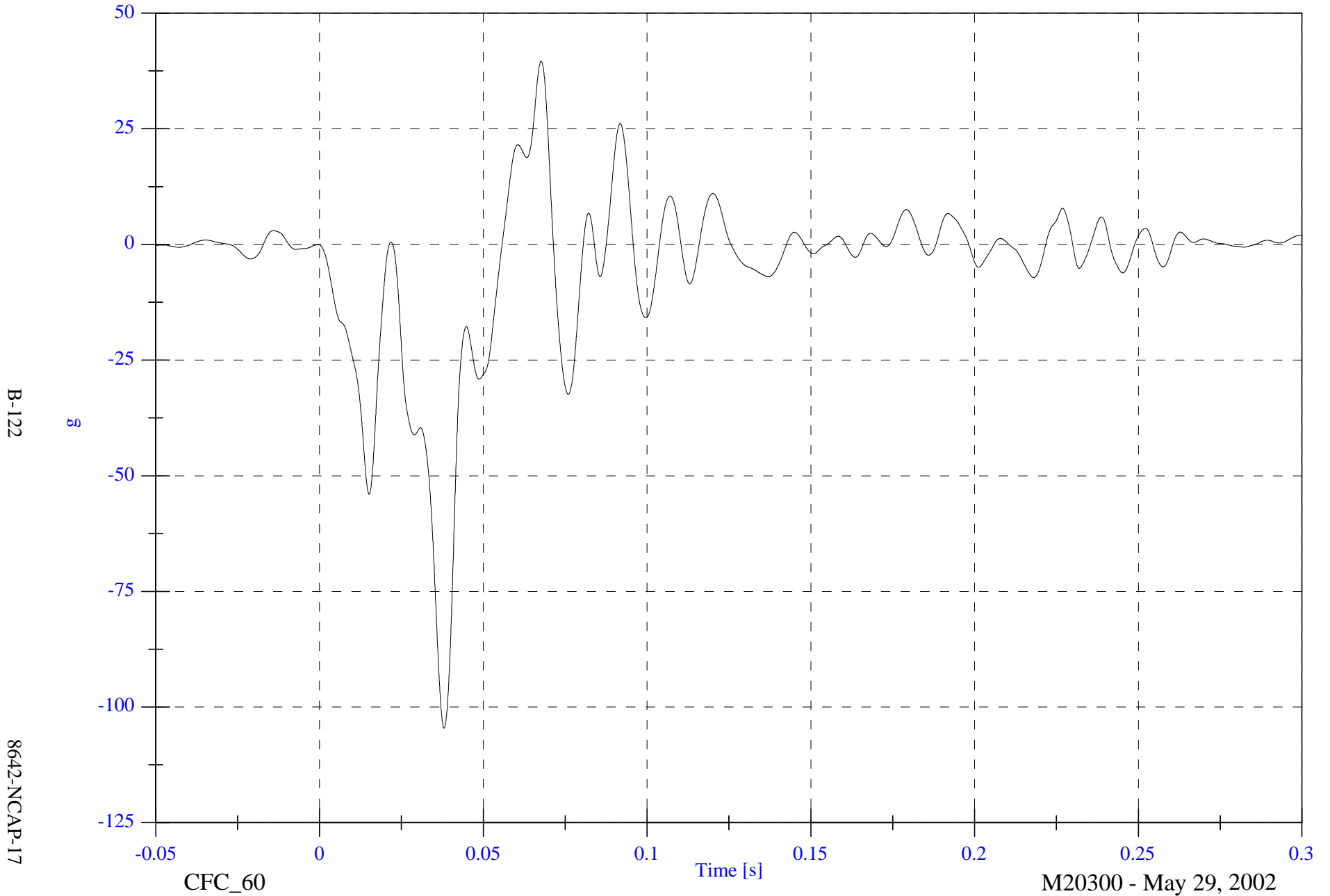
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Right Caliper #5x

Max: 39.6 [g] at 0.068 [s]

Min: -104.6 [g] at 0.038 [s]



B-122

8642-NCAP-17

CFC\_60

Time [s]

M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

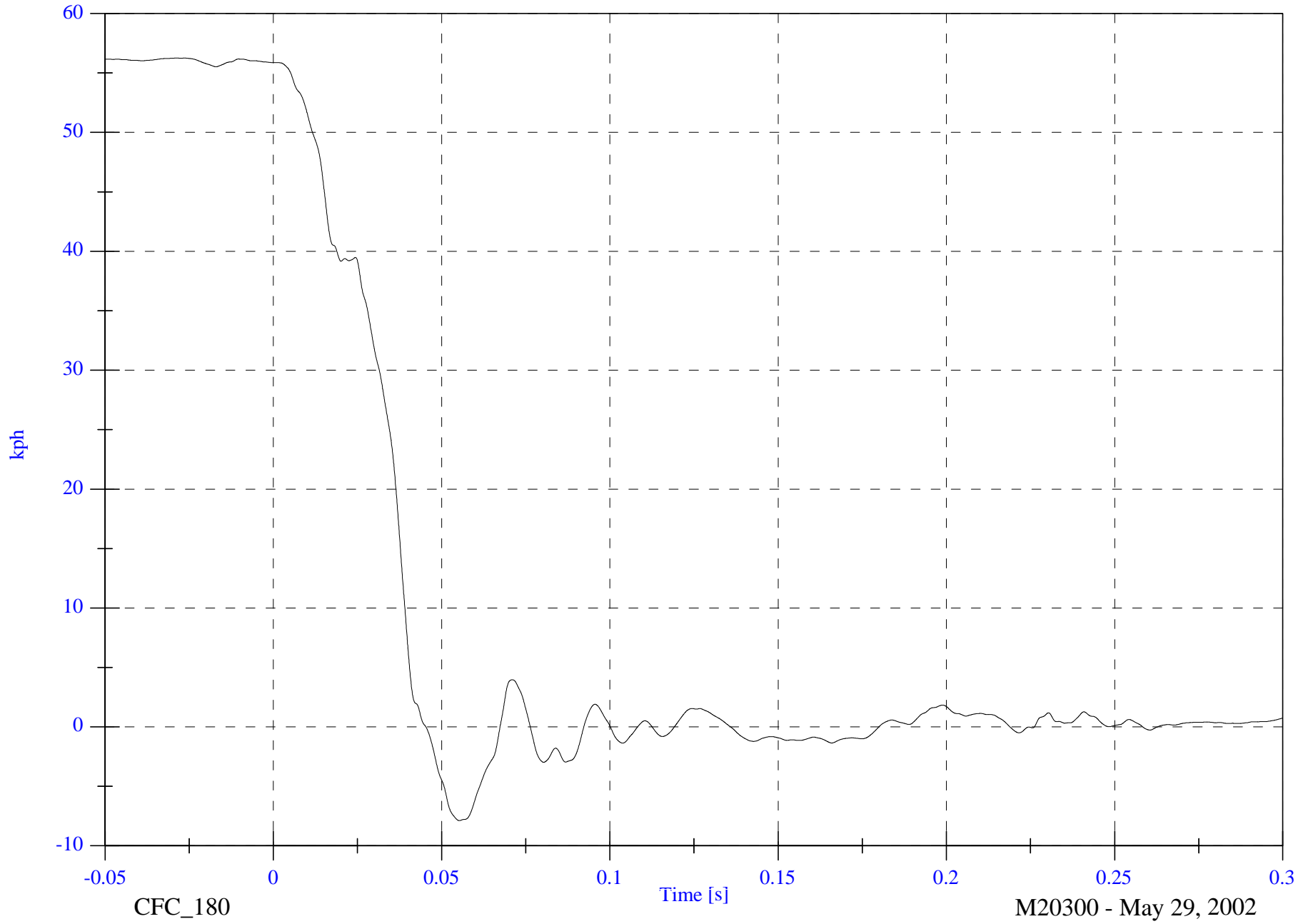
Max: 56.2 [kph] at -0.029 [s]

Right Caliper #5x Velocity

Min: -7.9 [kph] at 0.055 [s]

B-123

8642-NCAP-17



CFC\_180

Time [s]

M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

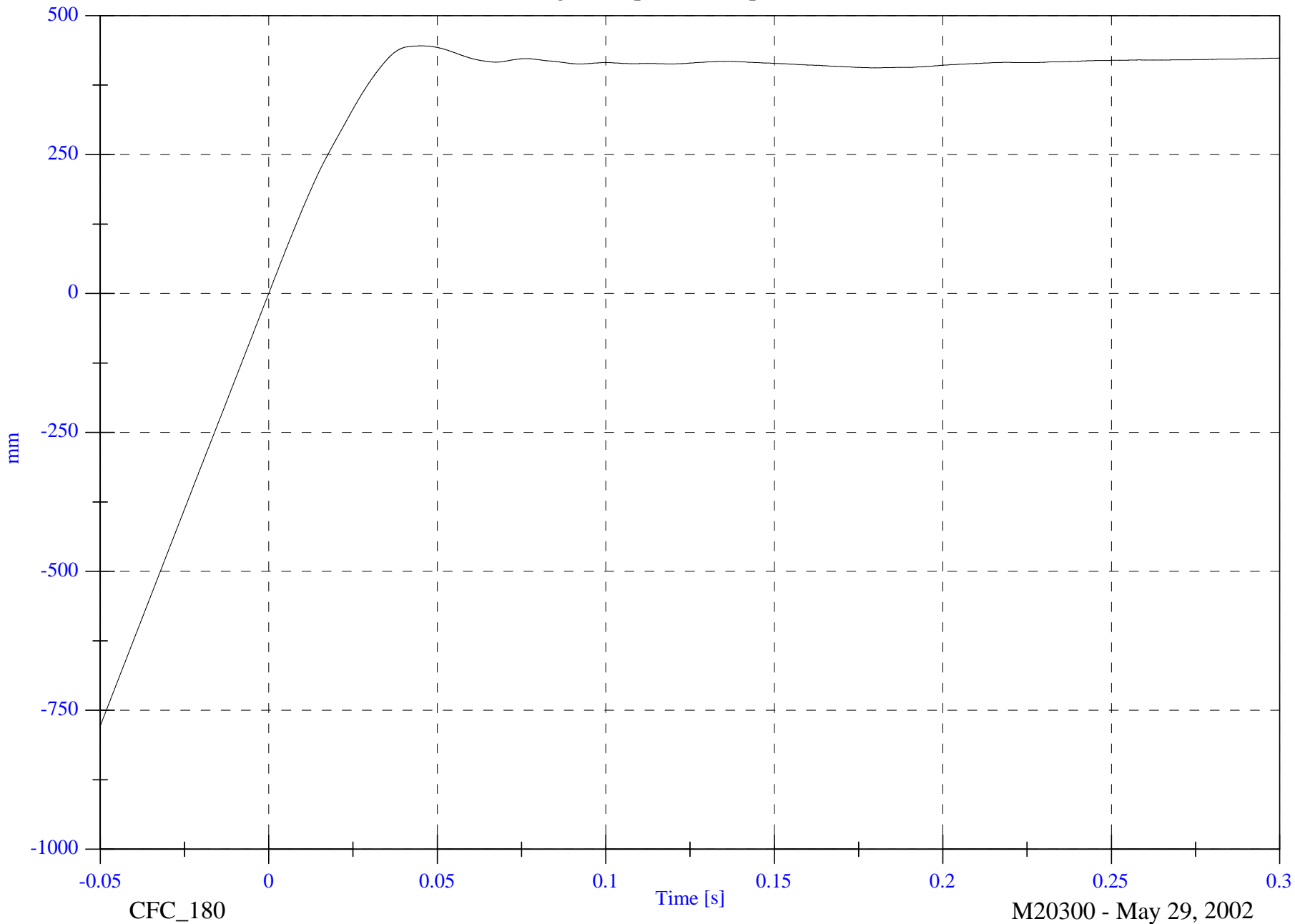
Max: 445.5 [mm] at 0.045 [s]

Right Caliper #5x Displacement

Min: -778.3 [mm] at -0.050 [s]

B-124

8642-NCAP-17



CFC\_180

Time [s]

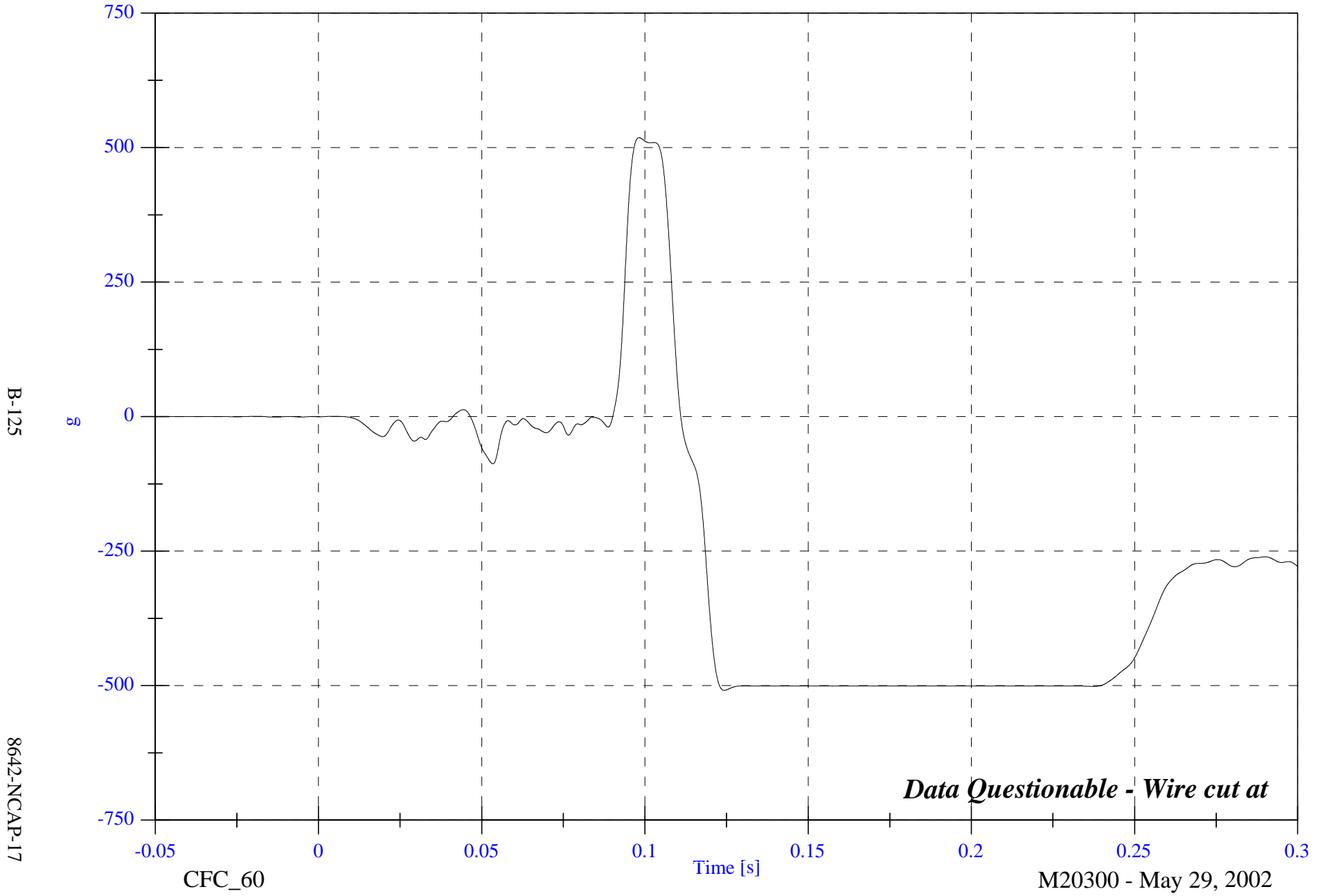
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 518.5 [g] at 0.098 [s]

Min: -508.8 [g] at 0.124 [s]

Instrument Panel #6x



B-125

8642-NCAP-17

*Data Questionable - Wire cut at*

CFC\_60

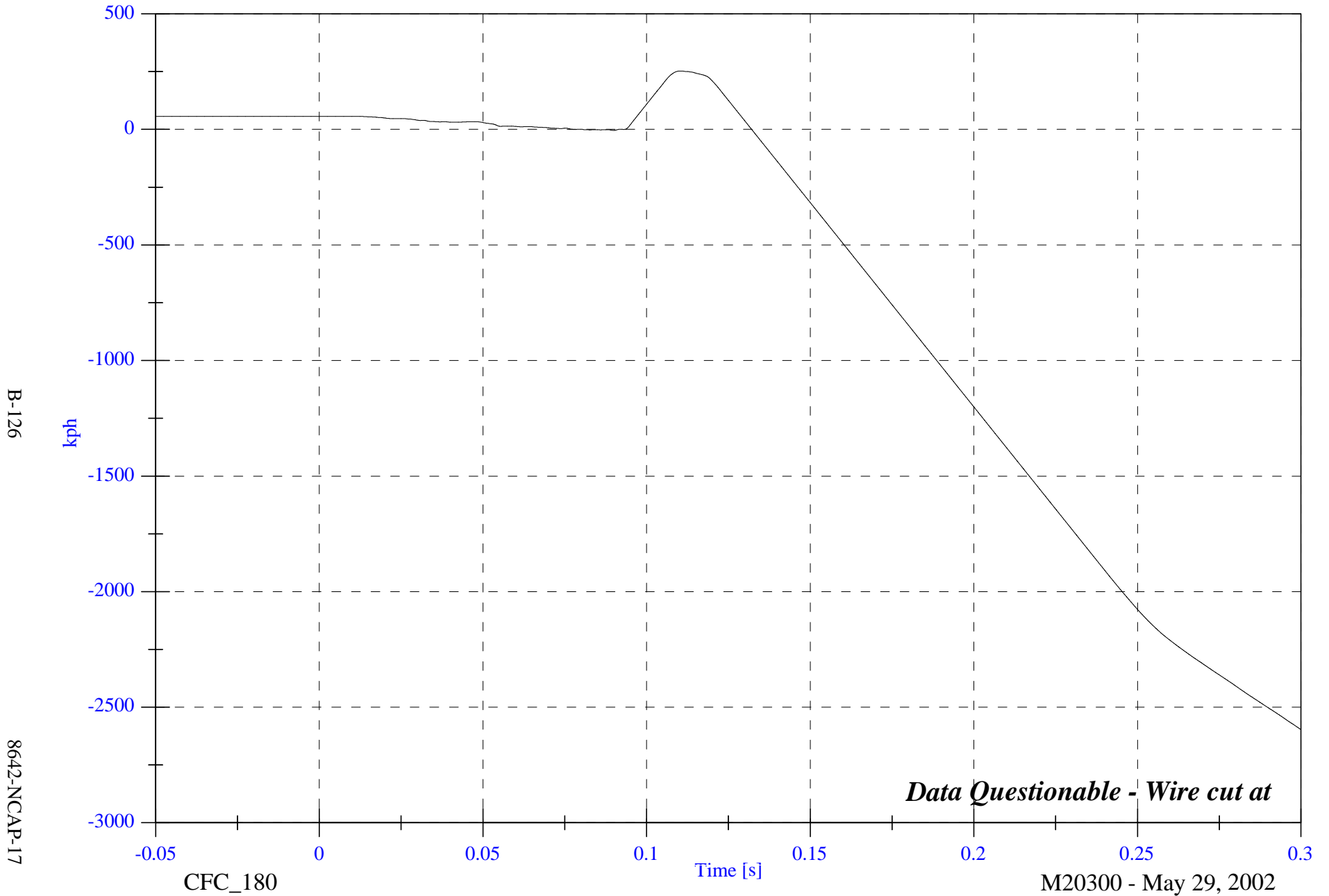
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 252.2 [kph] at 0.110 [s]

Min: -2597.0 [kph] at 0.300 [s]

Instrument Panel #6x Velocity



B-126

8642-NCAP-17

CFC\_180

Time [s]

M20300 - May 29, 2002

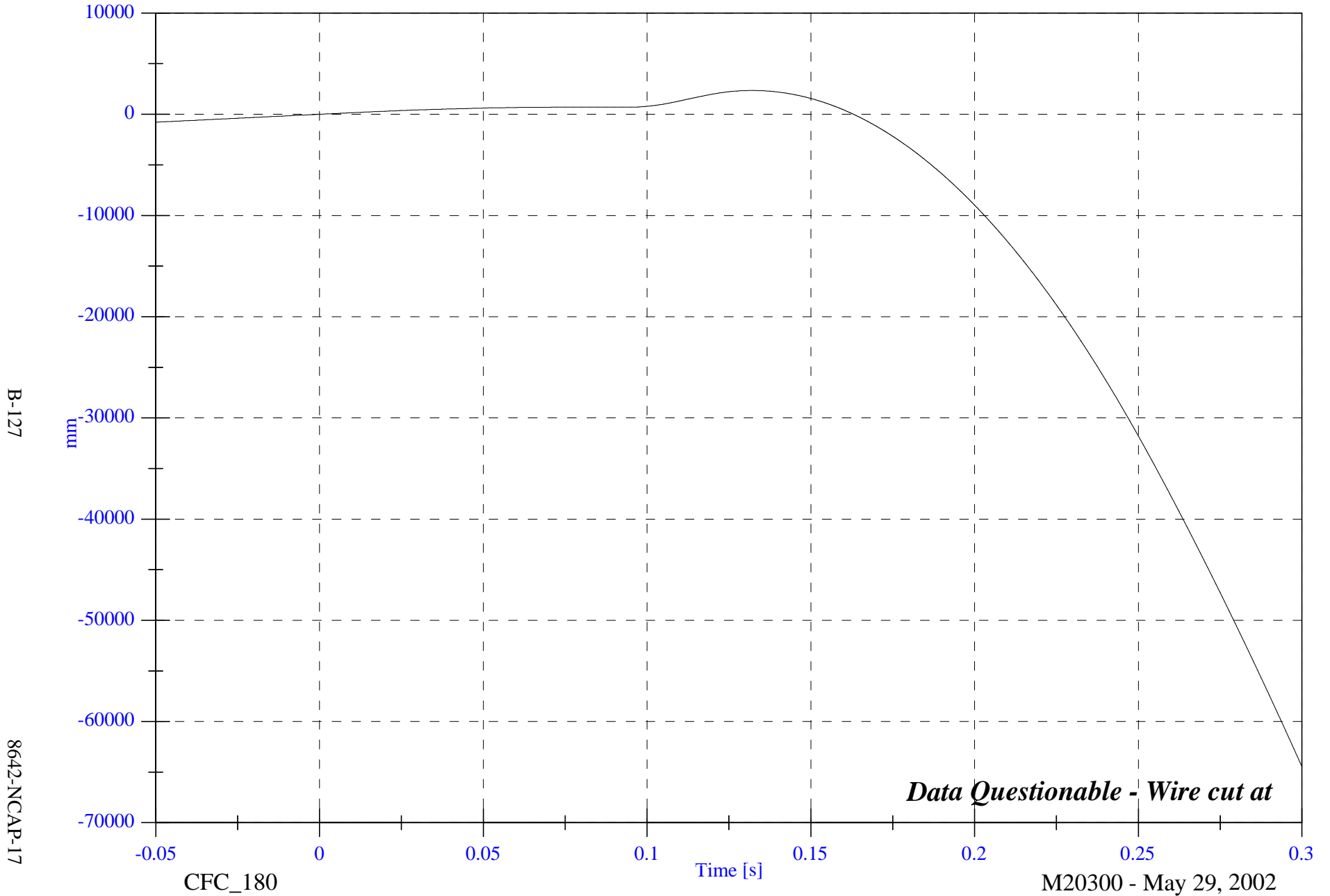
*Data Questionable - Wire cut at*

2002 NCAP Test 17 2002 Dodge Dakota

Max: 2351.7 [mm] at 0.132 [s]

Min: -64455.2 [mm] at 0.300 [s]

Instrument Panel #6x Displacement



B-127

8642-NCAP-17

CFC\_180

Time [s]

M20300 - May 29, 2002

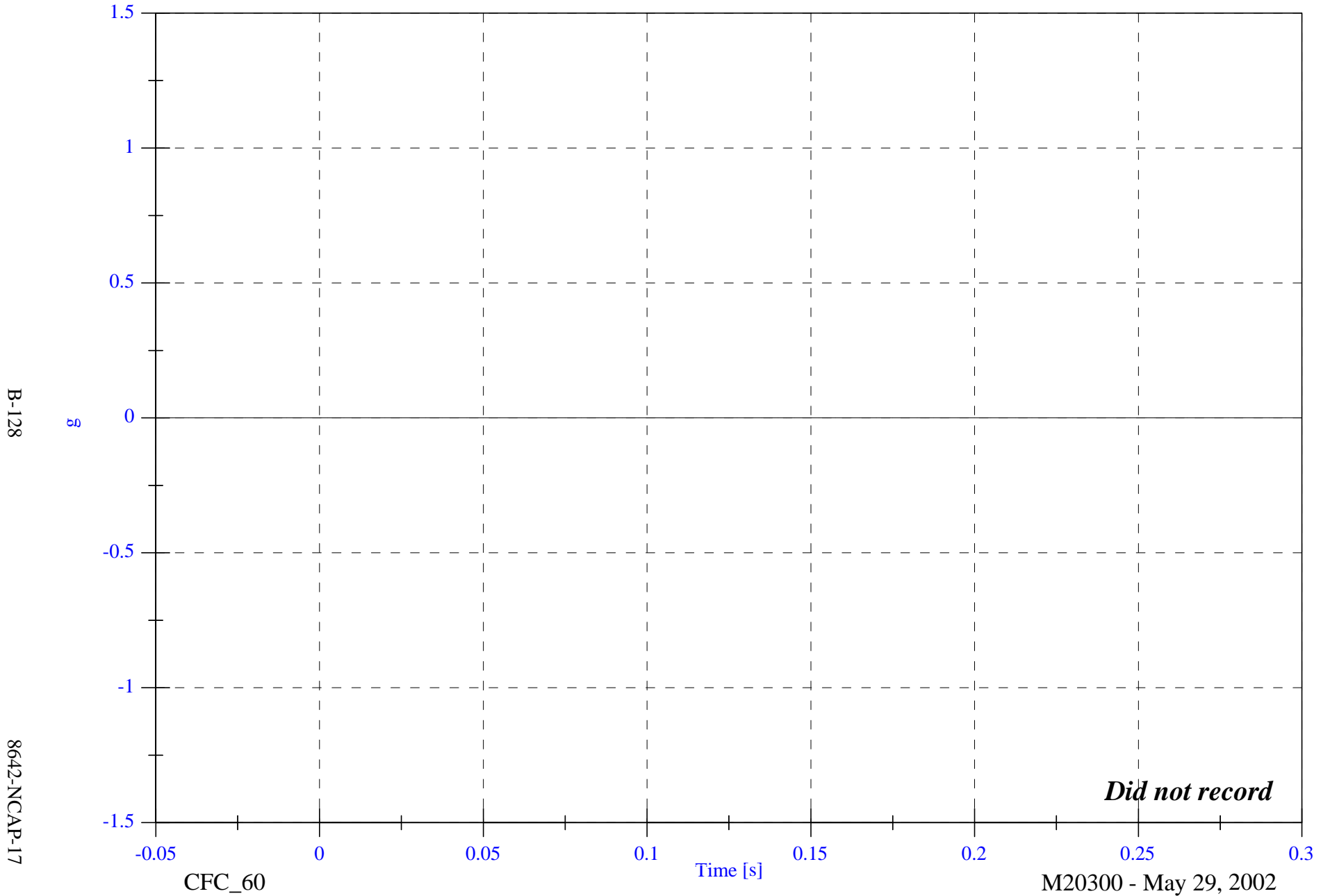
*Data Questionable - Wire cut at*

2002 NCAP Test 17 2002 Dodge Dakota

Max: 0.0 [g] at -0.050 [s]

Min: 0.0 [g] at -0.050 [s]

Left Caliper #7x

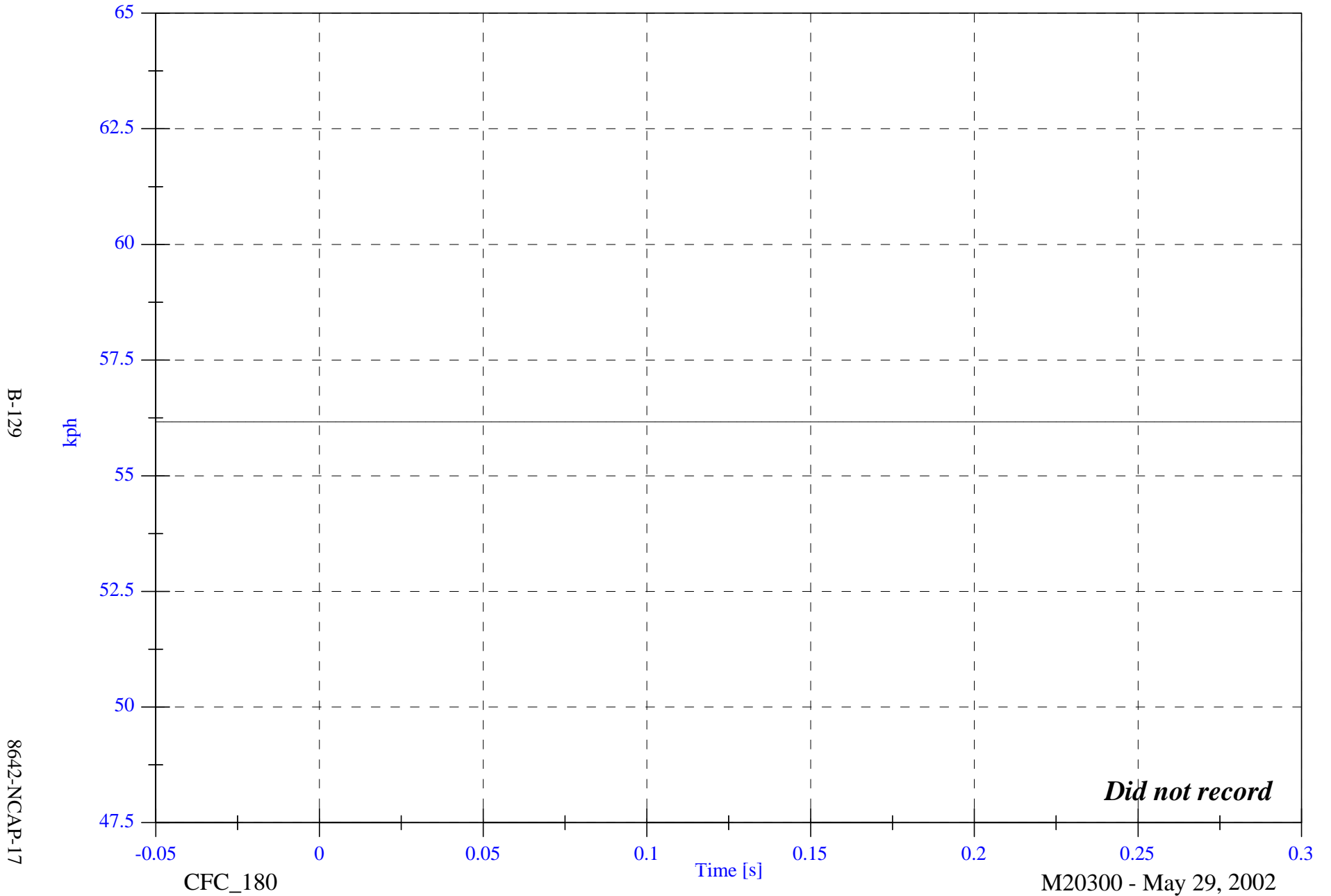


2002 NCAP Test 17 2002 Dodge Dakota

Max: 56.2 [kph] at -0.050 [s]

Min: 56.2 [kph] at -0.050 [s]

Left Caliper #7x Velocity

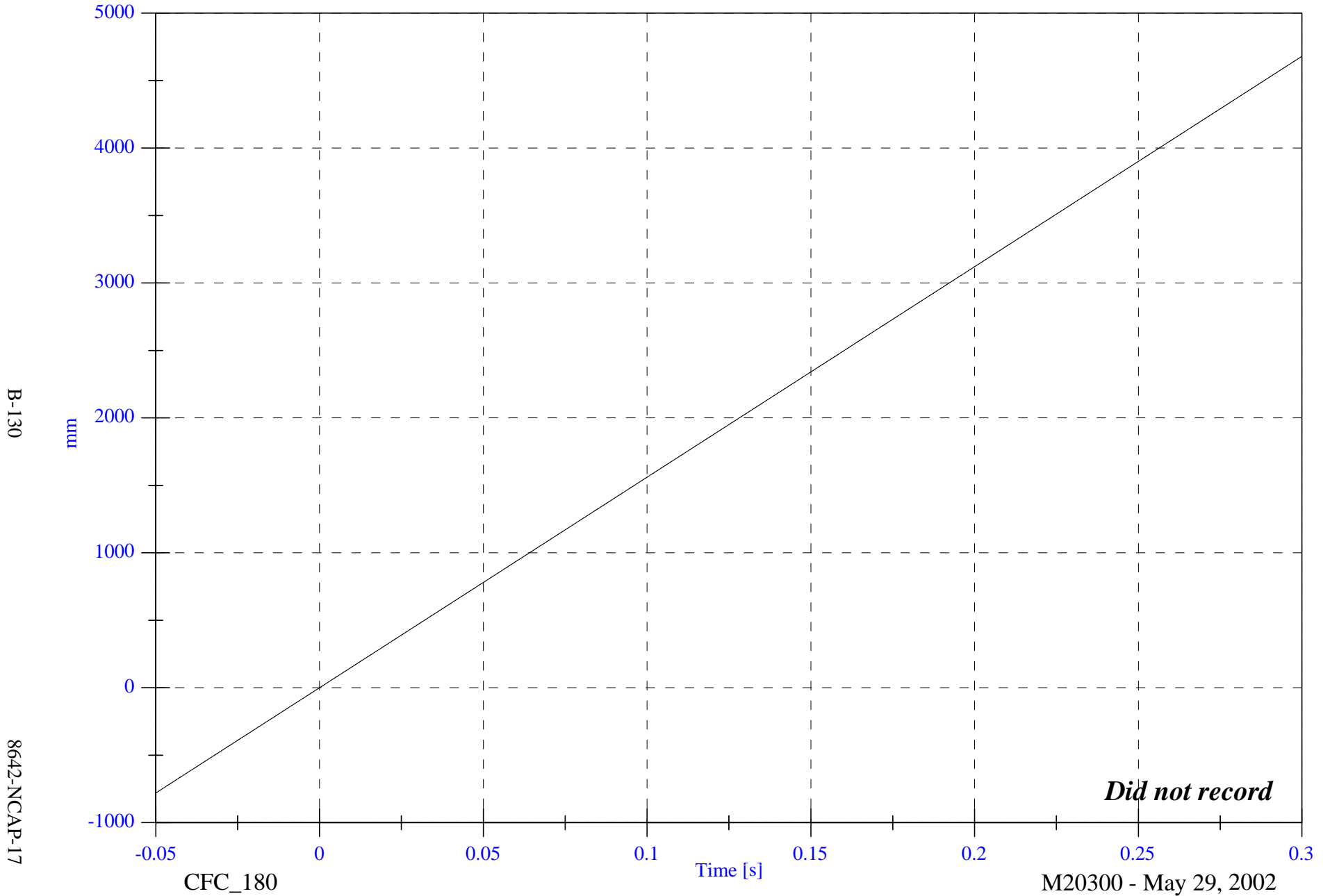


2002 NCAP Test 17 2002 Dodge Dakota

Max: 4679.7 [mm] at 0.300 [s]

Min: -780.1 [mm] at -0.050 [s]

Left Caliper #7x Displacement

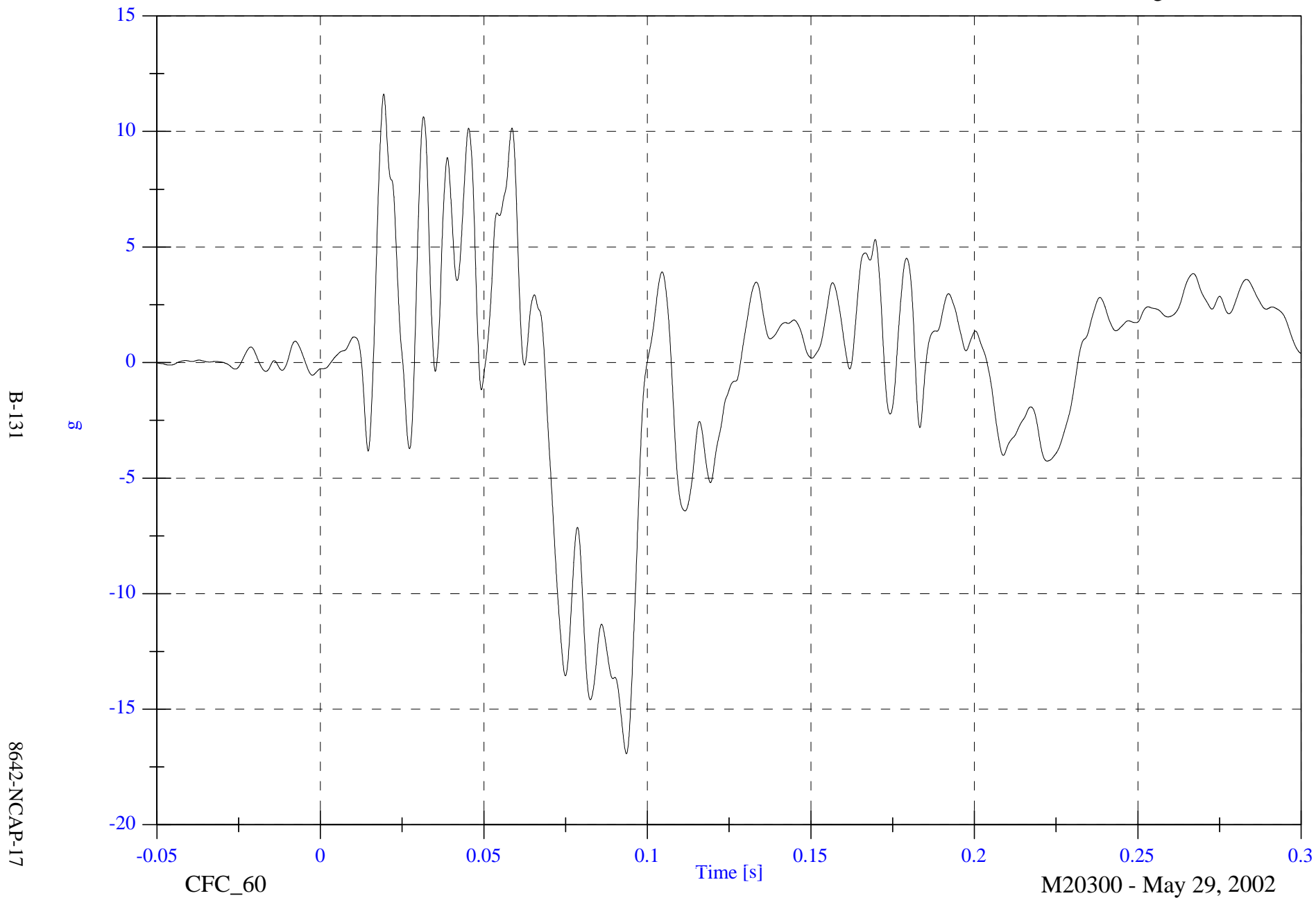


2002 NCAP Test 17 2002 Dodge Dakota

Max: 11.6 [g] at 0.019 [s]

Left Rear #8z

Min: -16.9 [g] at 0.094 [s]



2002 NCAP Test 17 2002 Dodge Dakota

Max: 8.5 [kph] at 0.069 [s]

Min: -5.5 [kph] at 0.128 [s]

Left Rear #8z Velocity



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8642-NCAP-17

CFC\_180

Time [s]

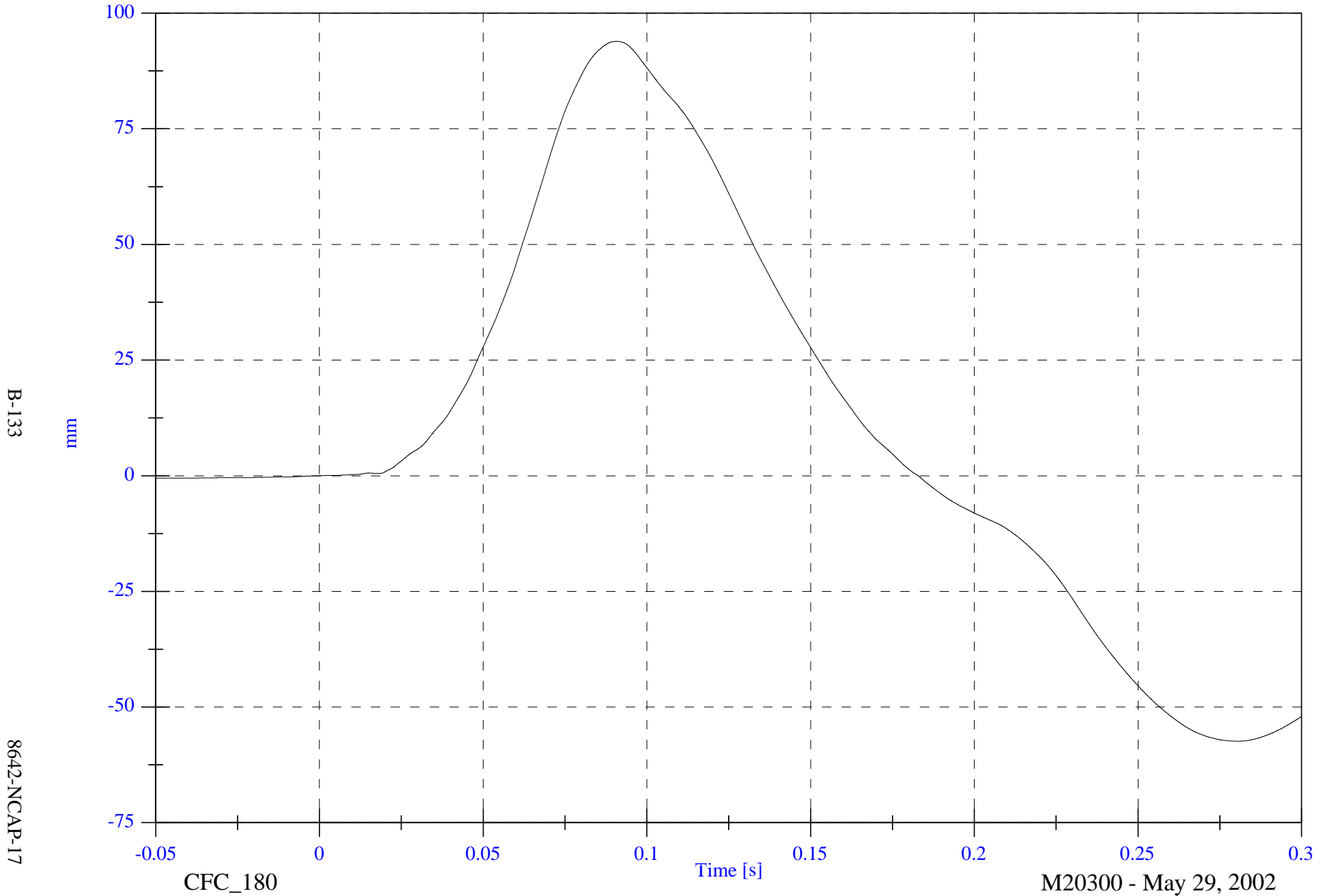
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 93.9 [mm] at 0.091 [s]

Min: -57.4 [mm] at 0.280 [s]

Left Rear #8z Displacement



B-133

8642-NCAP-17

CFC\_180

Time [s]

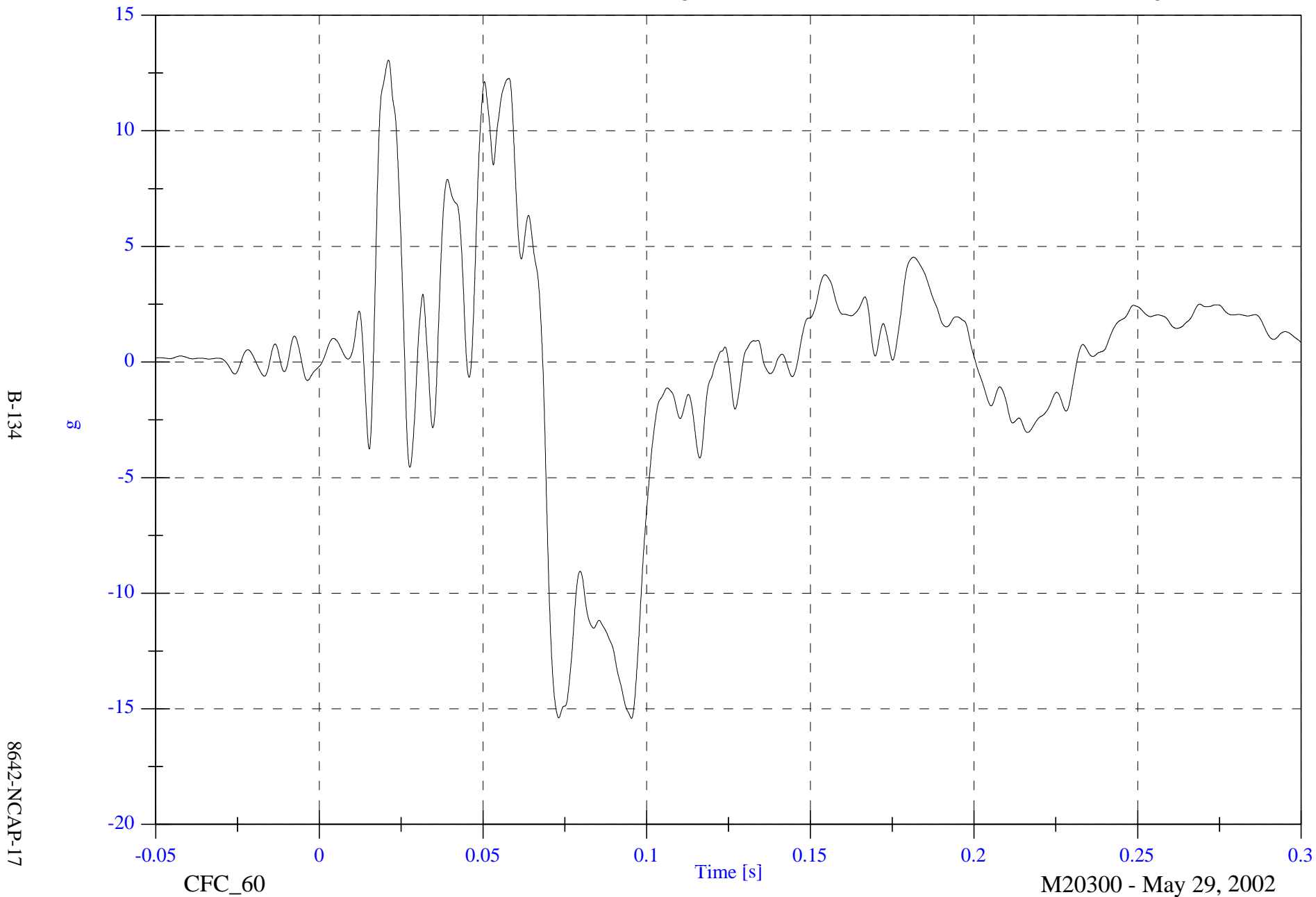
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 13.1 [g] at 0.021 [s]

Min: -15.4 [g] at 0.095 [s]

Right Rear #9z



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8642-NCAP-17

CFC\_60

Time [s]

M20300 - May 29, 2002

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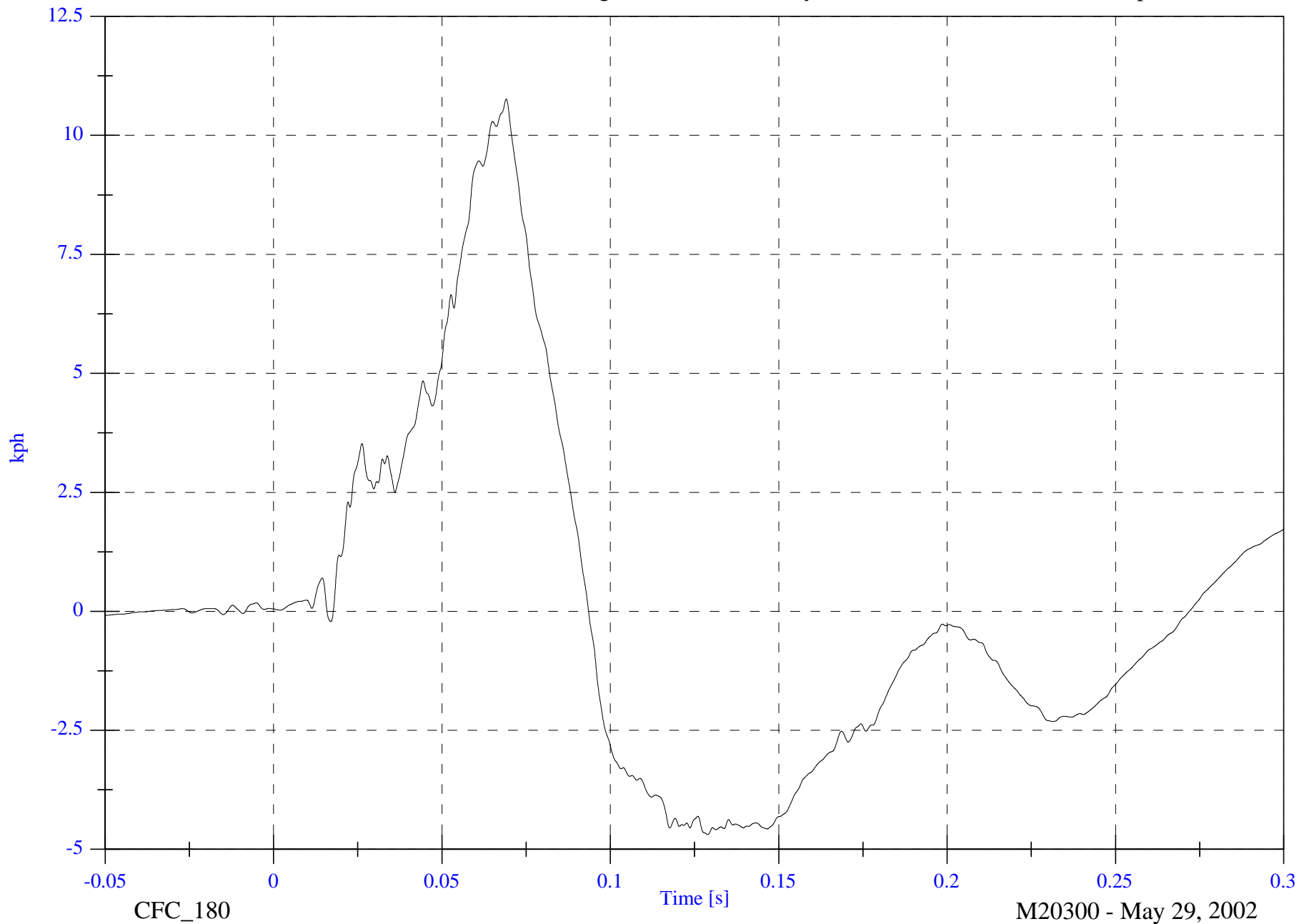
Max: 10.8 [kph] at 0.069 [s]

Right Rear #9z Velocity

Min: -4.7 [kph] at 0.129 [s]

B-135

8642-NCAP-17



CFC\_180

Time [s]

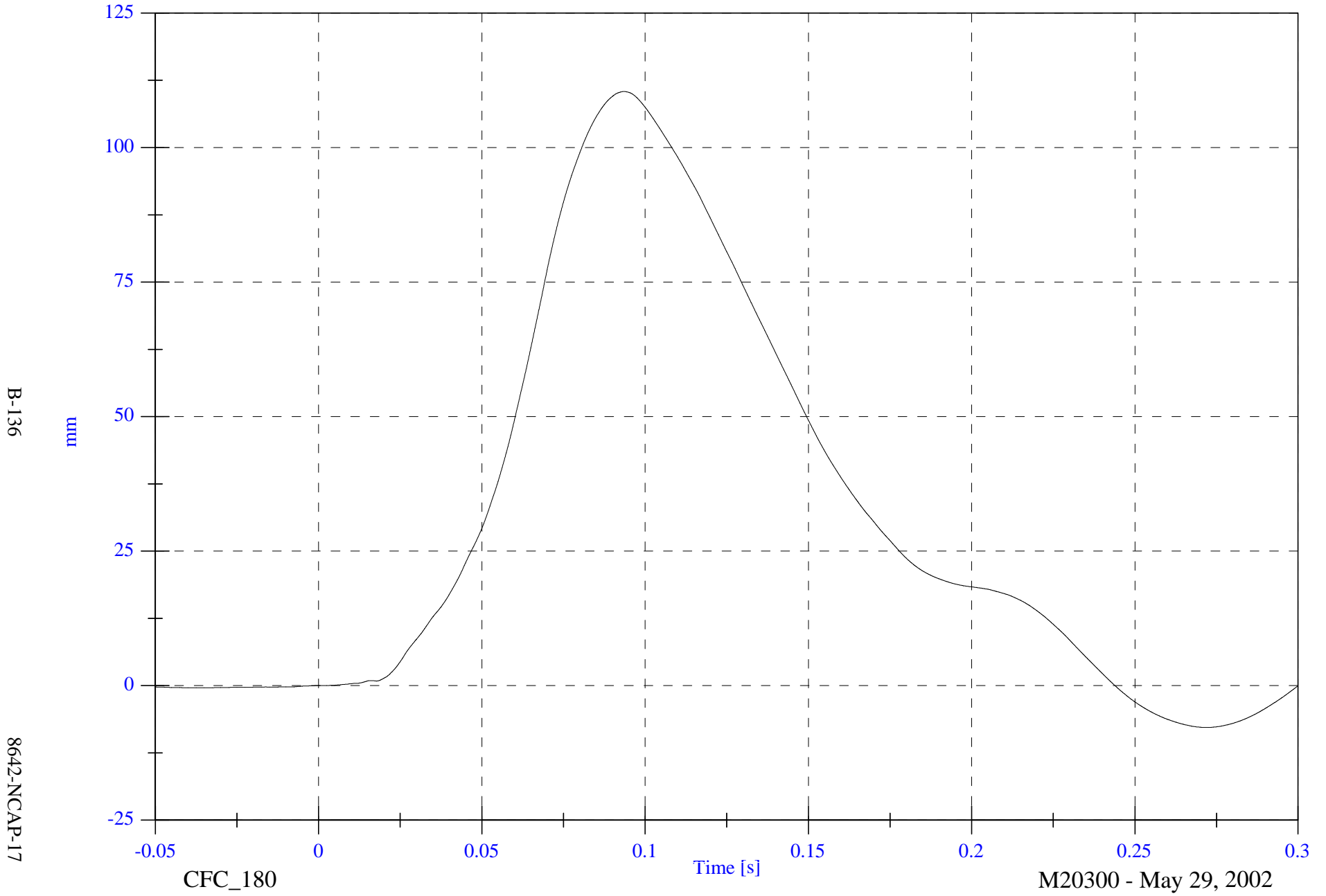
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 110.4 [mm] at 0.094 [s]

Min: -7.8 [mm] at 0.272 [s]

Right Rear #9z Displacement



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8642-NCAP-17

CFC\_180

Time [s]

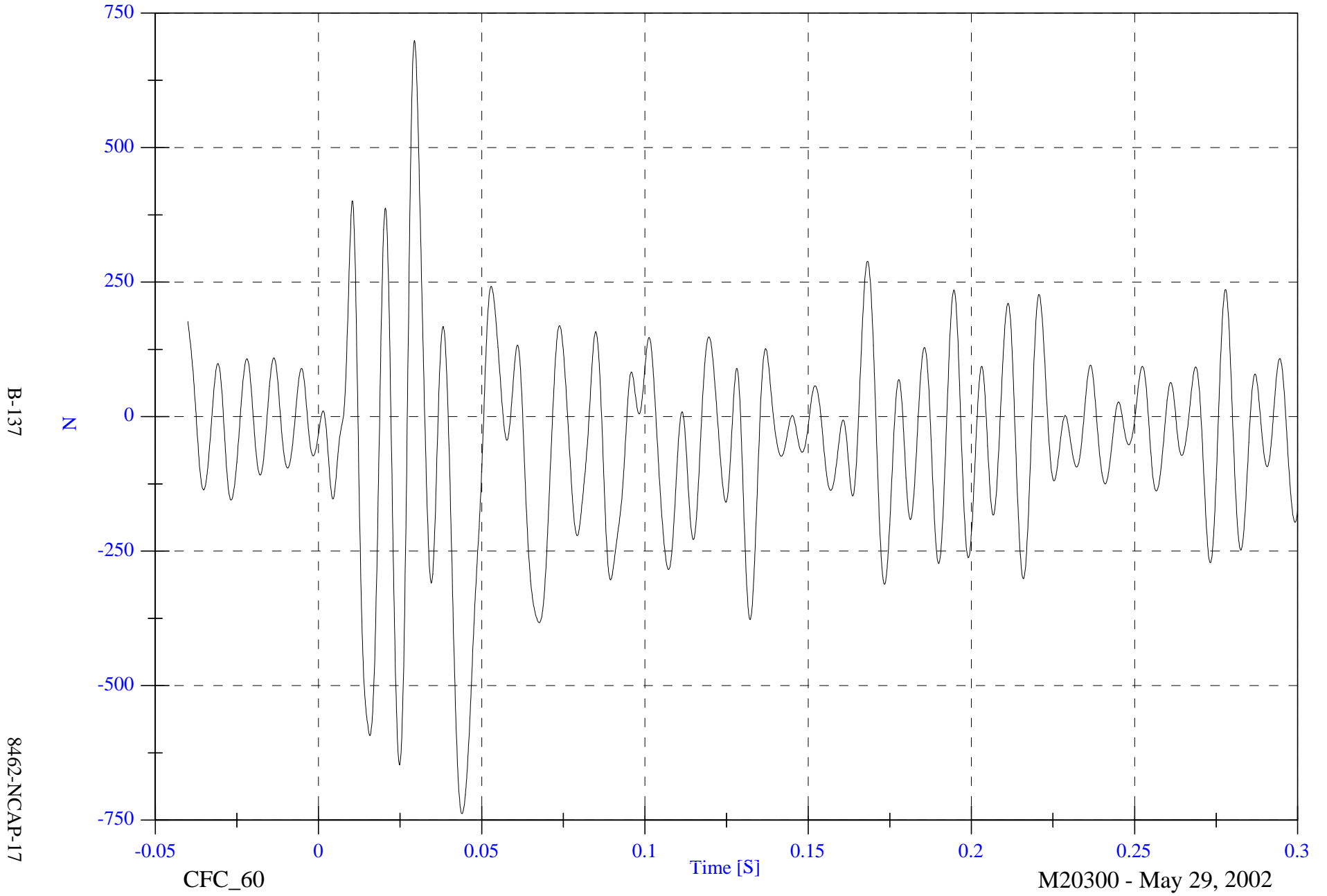
M20300 - May 29, 2002

NCAP Test 17- 2002 Dodge Dakota

Barrier Load Cell A1 Fx

Max: 699.3 [N] at 0.029 [S]

Min: -738.0 [N] at 0.044 [S]

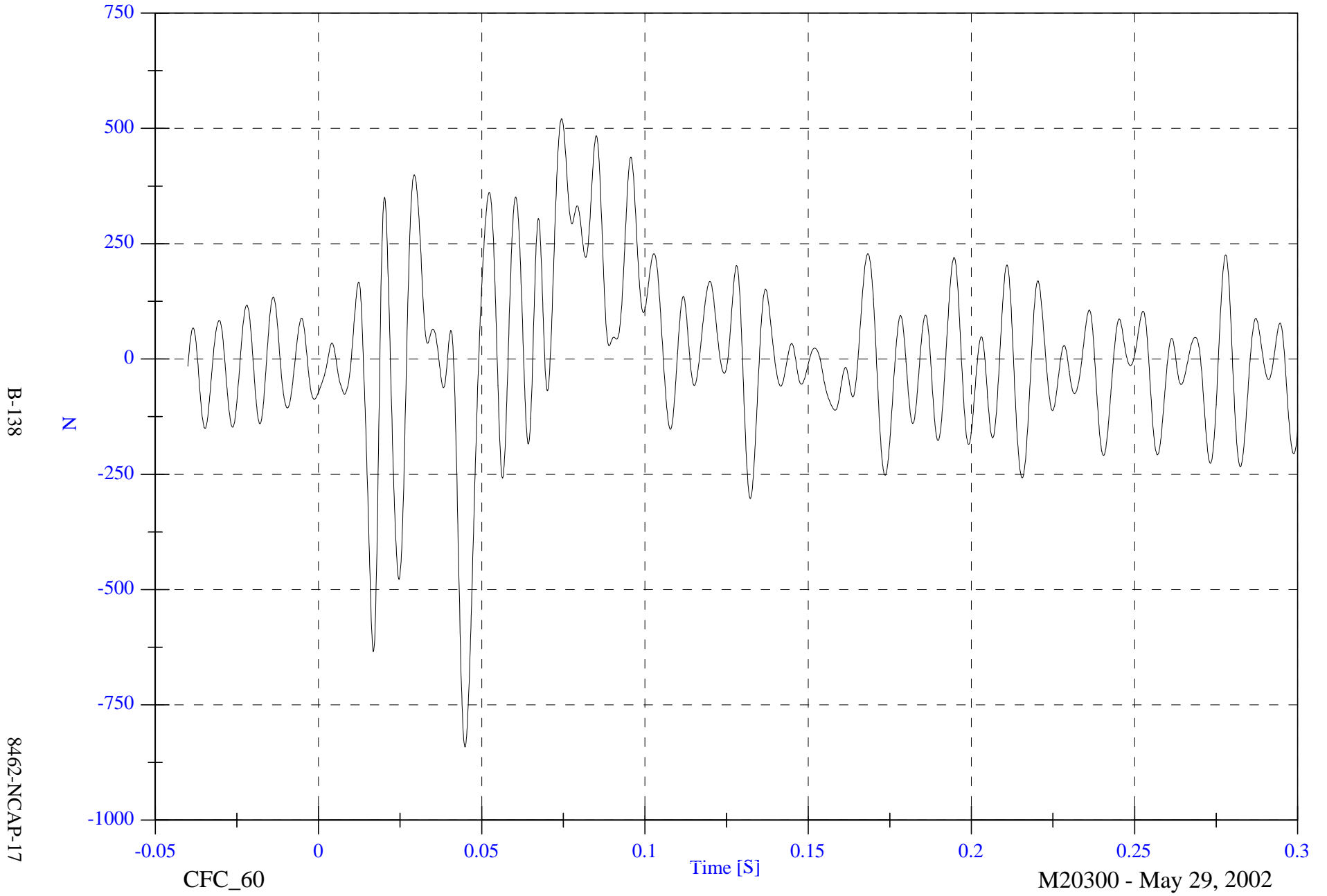


NCAP Test 17- 2002 Dodge Dakota

Barrier Load Cell A2 Fx

Max: 521.0 [N] at 0.074 [S]

Min: -841.9 [N] at 0.045 [S]



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8462-NCAP-17

CFC\_60

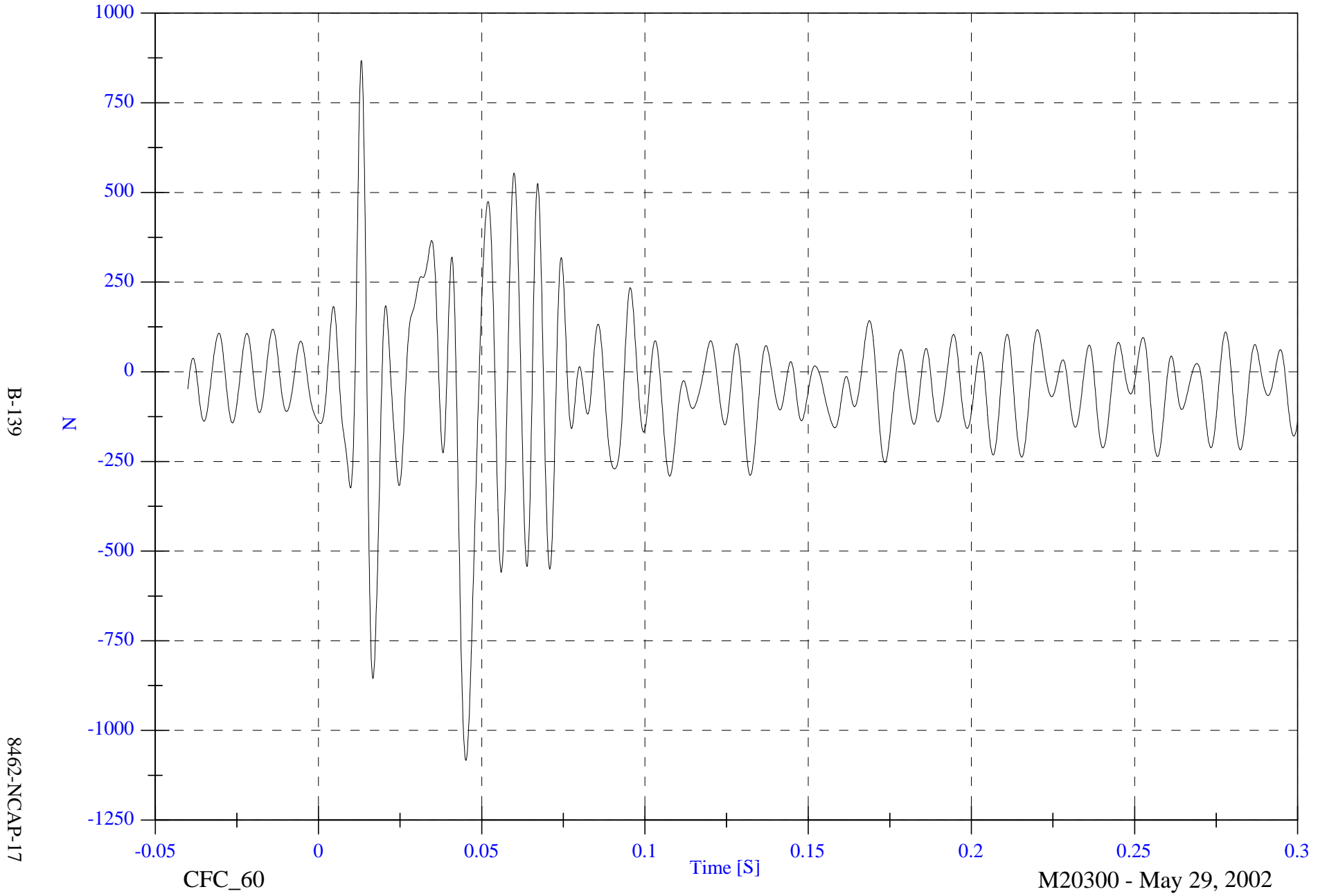
M20300 - May 29, 2002

NCAP Test 17- 2002 Dodge Dakota

Barrier Load Cell A3 Fx

Max: 867.9 [N] at 0.013 [S]

Min: -1083.4 [N] at 0.045 [S]



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8462-NCAP-17

CFC\_60

Time [S]

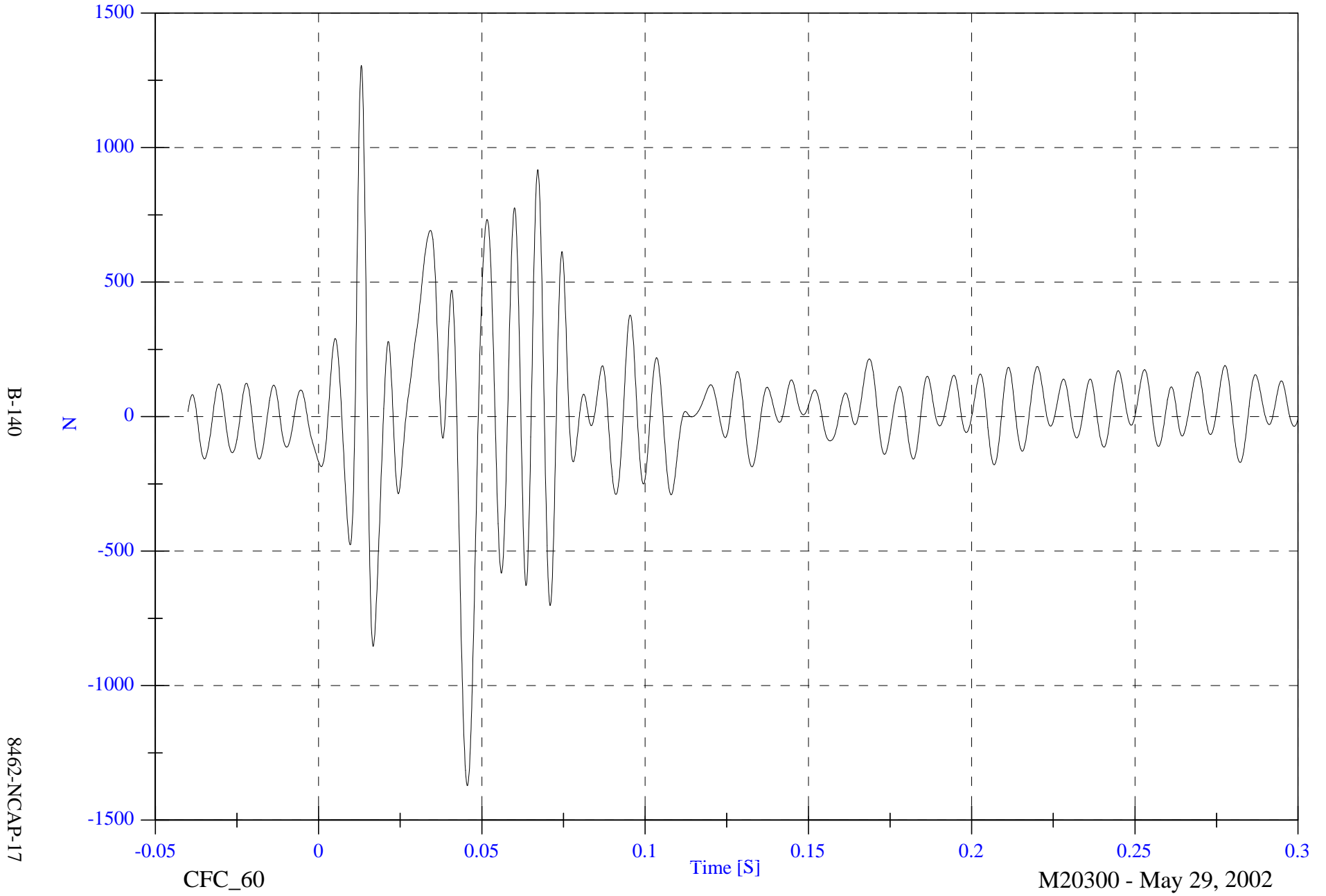
M20300 - May 29, 2002

NCAP Test 17- 2002 Dodge Dakota

Barrier Load Cell A4 Fx

Max: 1305.3 [N] at 0.013 [S]

Min: -1372.3 [N] at 0.046 [S]

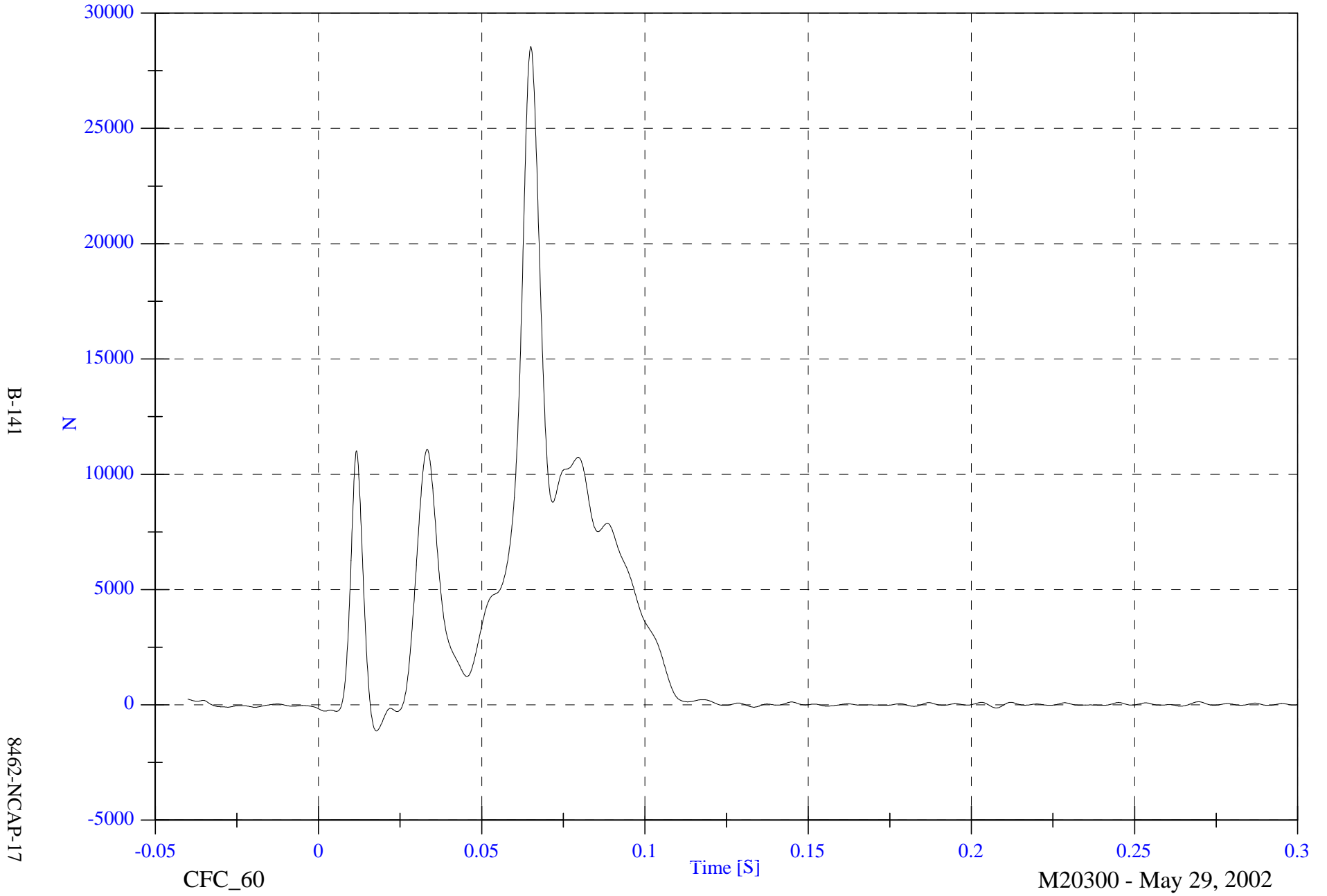


NCAP Test 17- 2002 Dodge Dakota

Barrier Load Cell A5 Fx

Max: 28538.8 [N] at 0.065 [S]

Min: -1132.3 [N] at 0.018 [S]



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8462-NCAP-17

CFC\_60

Time [S]

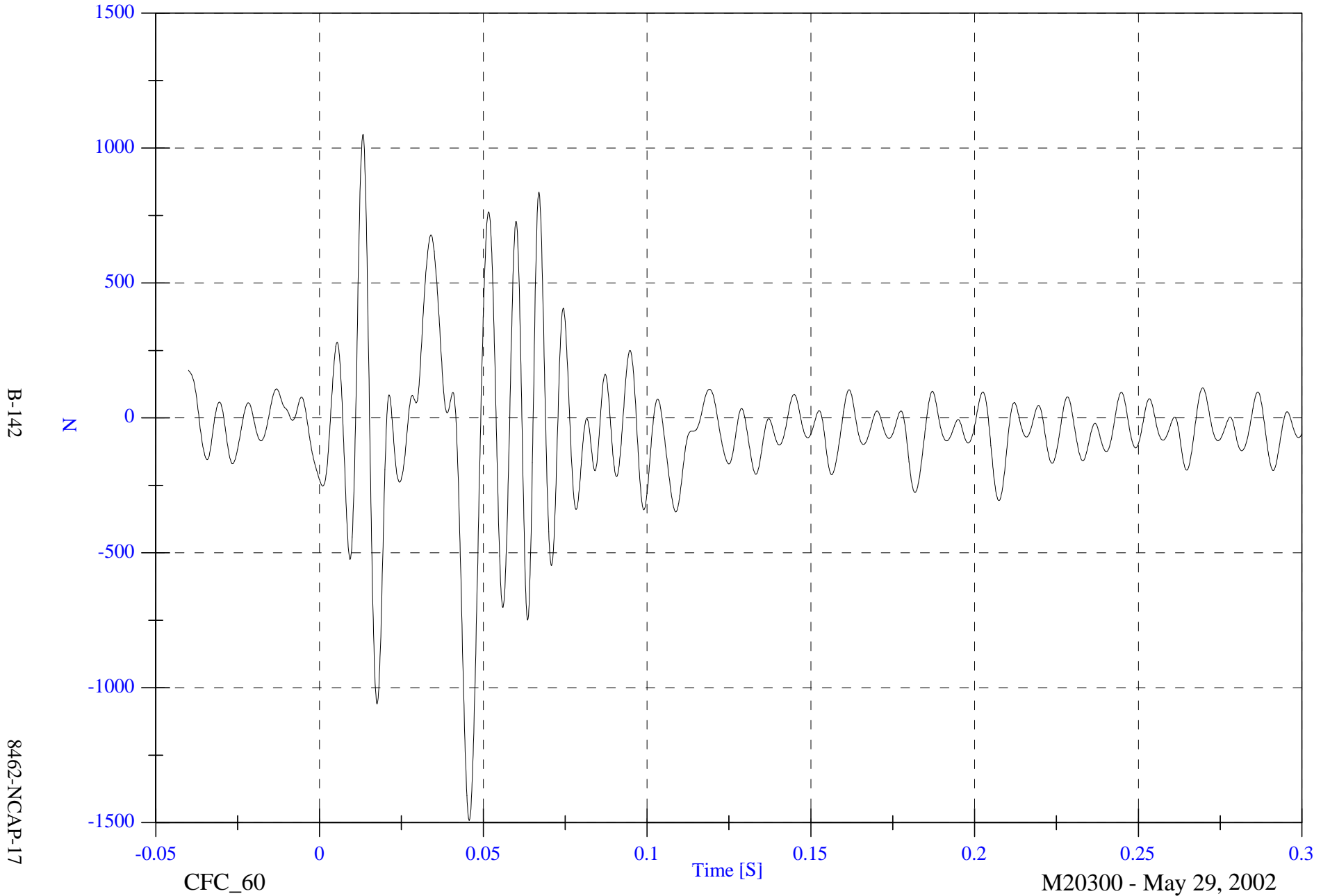
M20300 - May 29, 2002

NCAP Test 17- 2002 Dodge Dakota

Barrier Load Cell A6 Fx

Max: 1050.9 [N] at 0.013 [S]

Min: -1492.0 [N] at 0.046 [S]



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8462-NCAP-17

CFC\_60

Time [S]

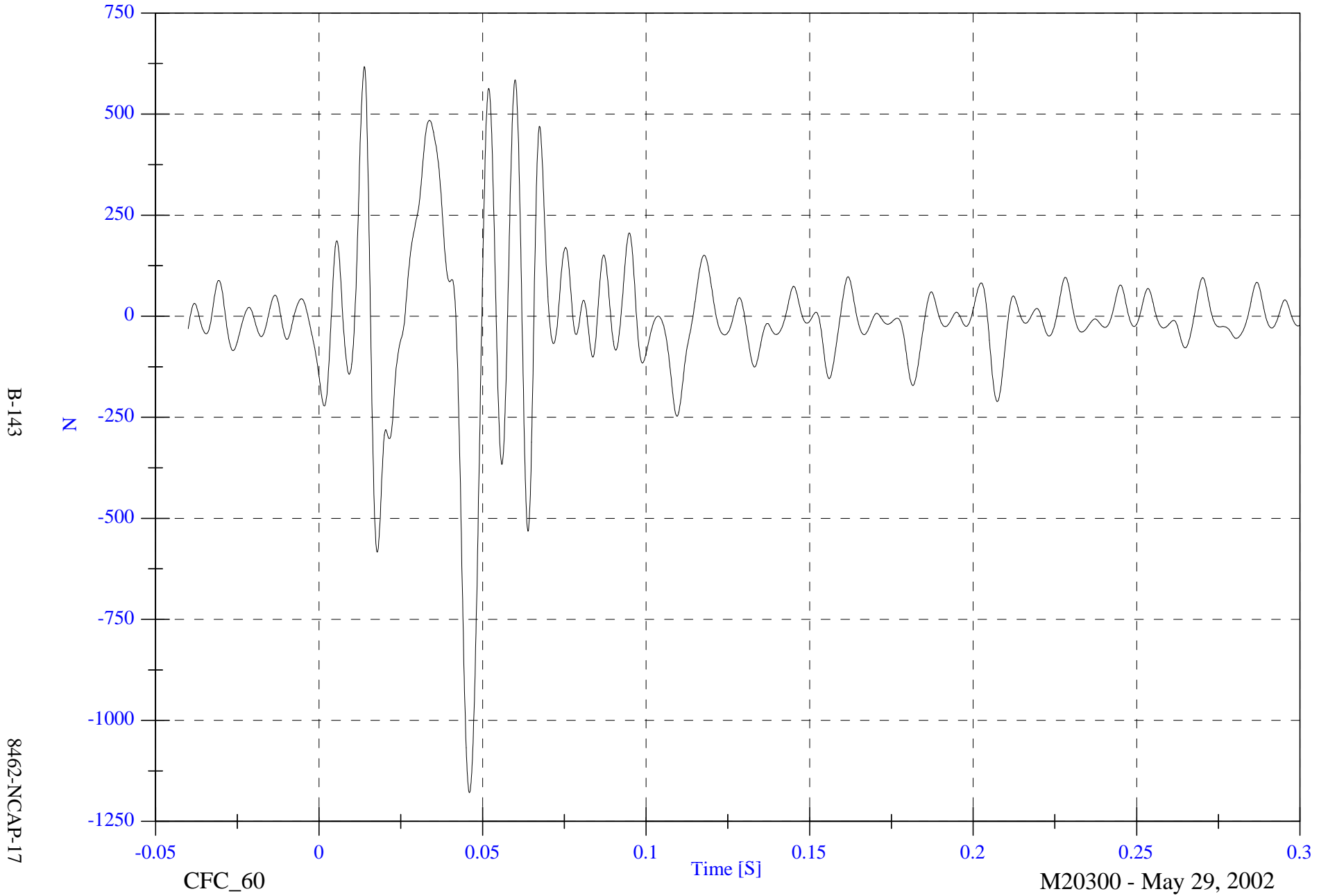
M20300 - May 29, 2002

NCAP Test 17- 2002 Dodge Dakota

Barrier Load Cell A7 Fx

Max: 617.6 [N] at 0.014 [S]

Min: -1178.7 [N] at 0.046 [S]

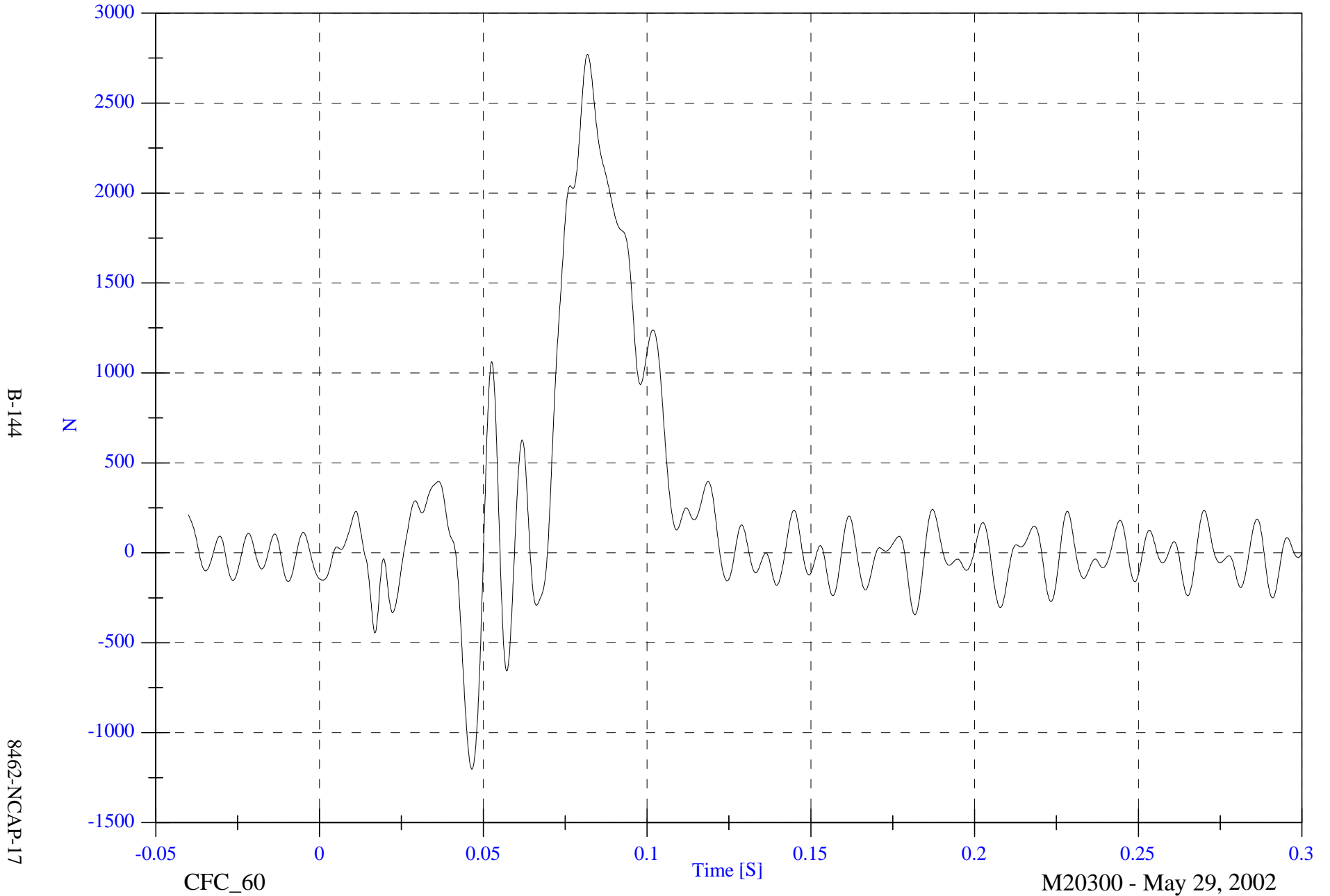


NCAP Test 17- 2002 Dodge Dakota

Barrier Load Cell A8 Fx

Max: 2770.3 [N] at 0.082 [S]

Min: -1202.1 [N] at 0.046 [S]

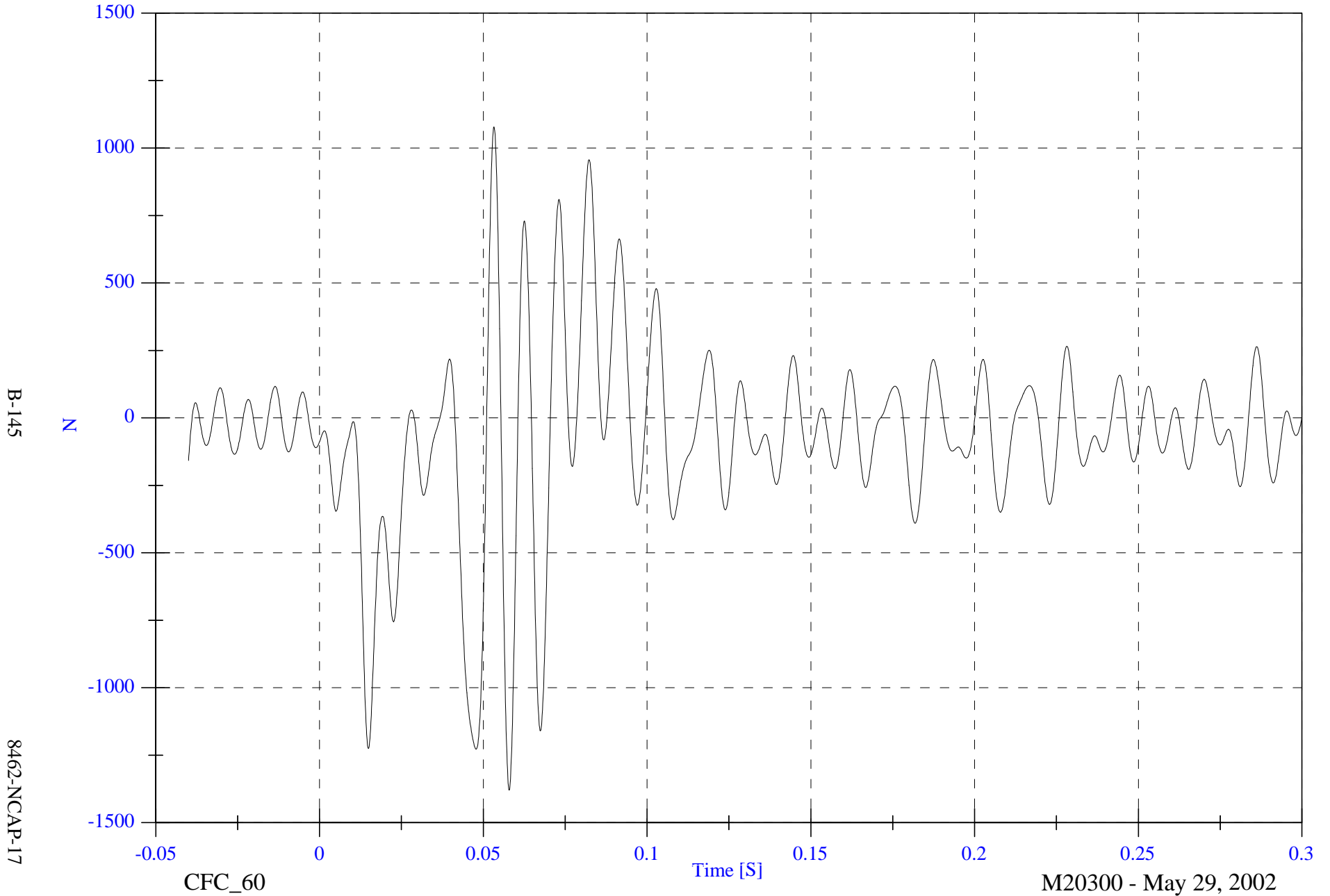


NCAP Test 17- 2002 Dodge Dakota

Barrier Load Cell A9 Fx

Max: 1078.4 [N] at 0.053 [S]

Min: -1379.3 [N] at 0.058 [S]

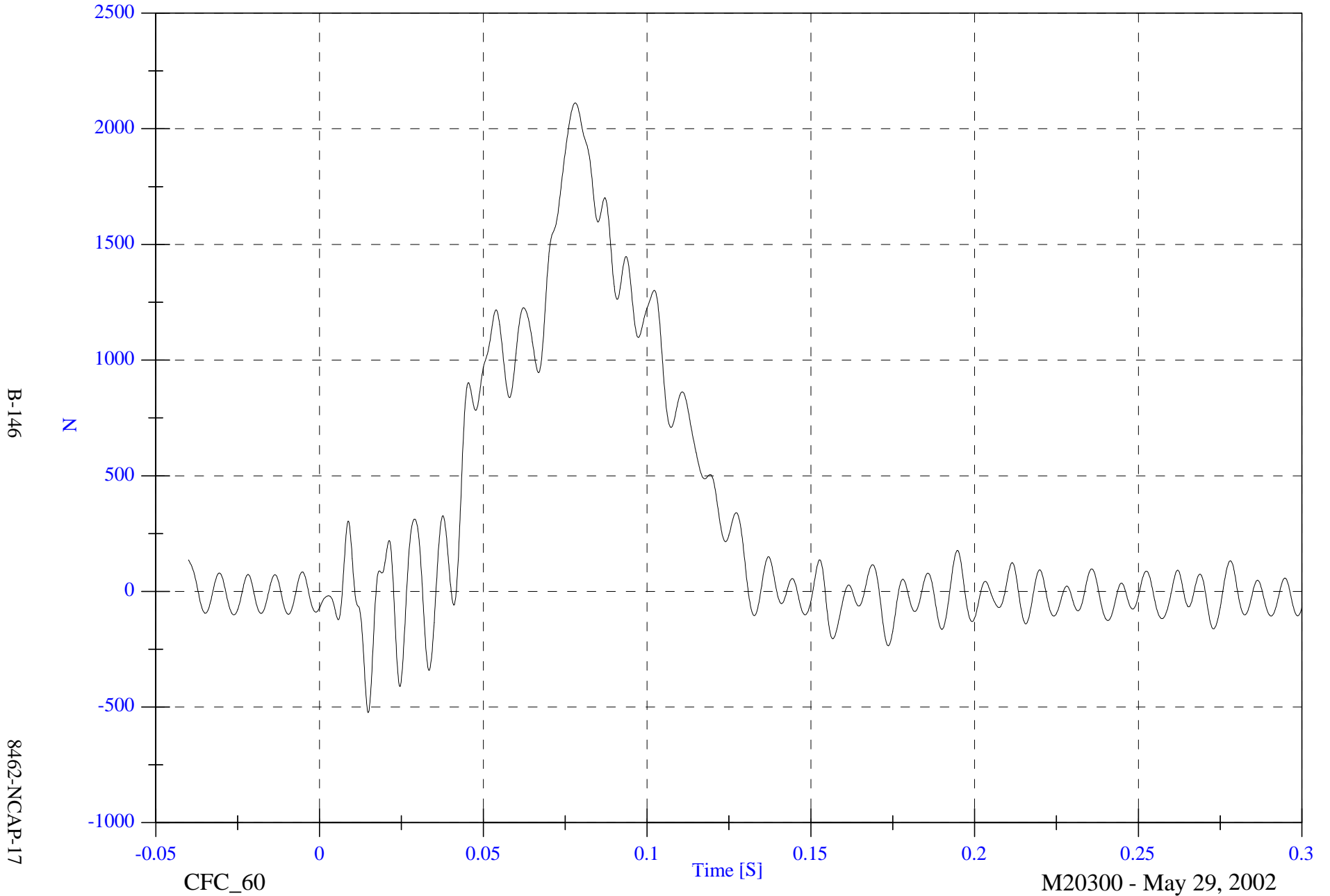


NCAP Test 17- 2002 Dodge Dakota

Barrier Load Cell B1 Fx

Max: 2112.0 [N] at 0.078 [S]

Min: -524.2 [N] at 0.015 [S]



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8462-NCAP-17

CFC\_60

Time [S]

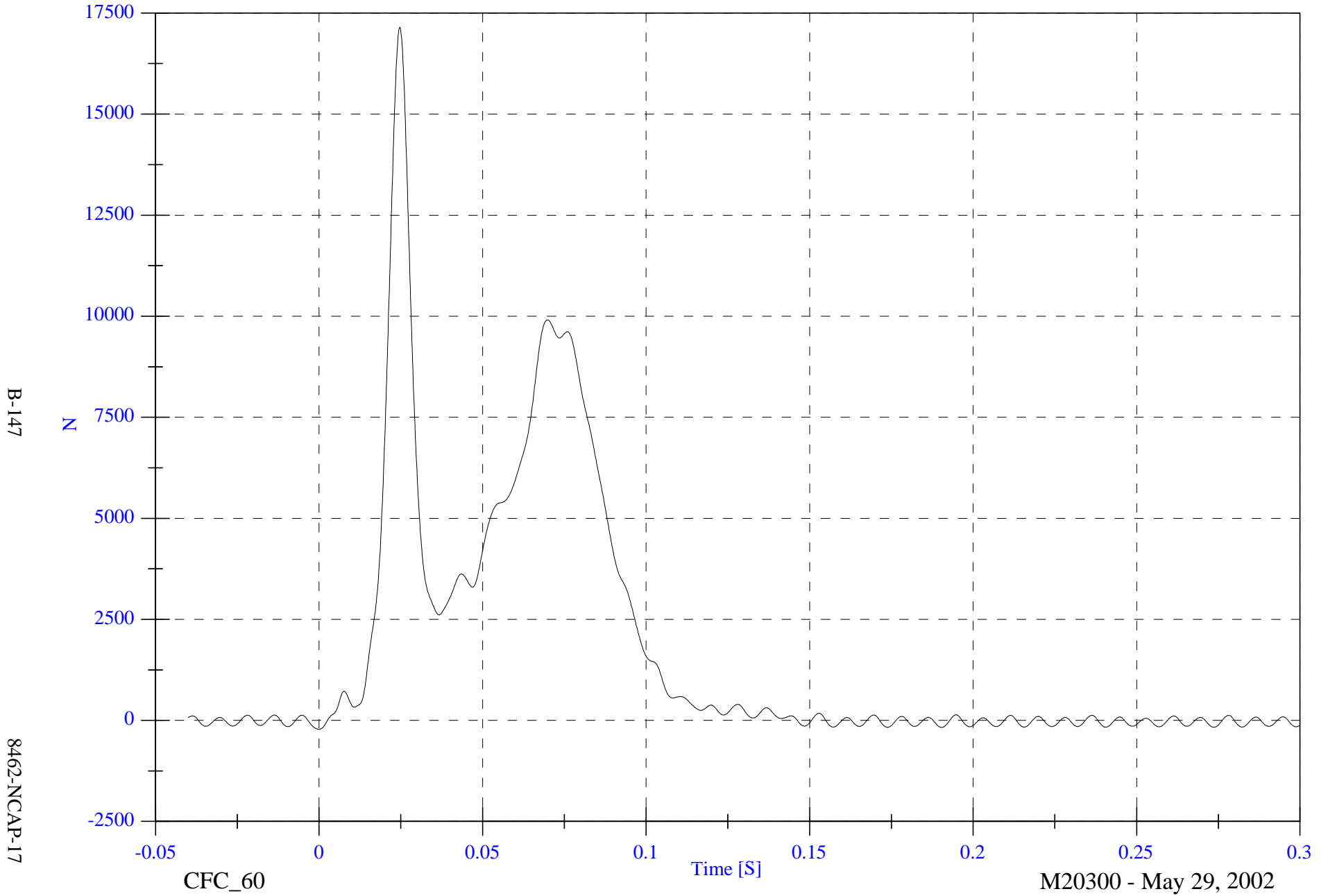
M20300 - May 29, 2002

NCAP Test 17- 2002 Dodge Dakota

Barrier Load Cell B2 Fx

Max: 17148.2 [N] at 0.025 [S]

Min: -219.7 [N] at -0.000 [S]



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8462-NCAP-17

CFC\_60

Time [S]

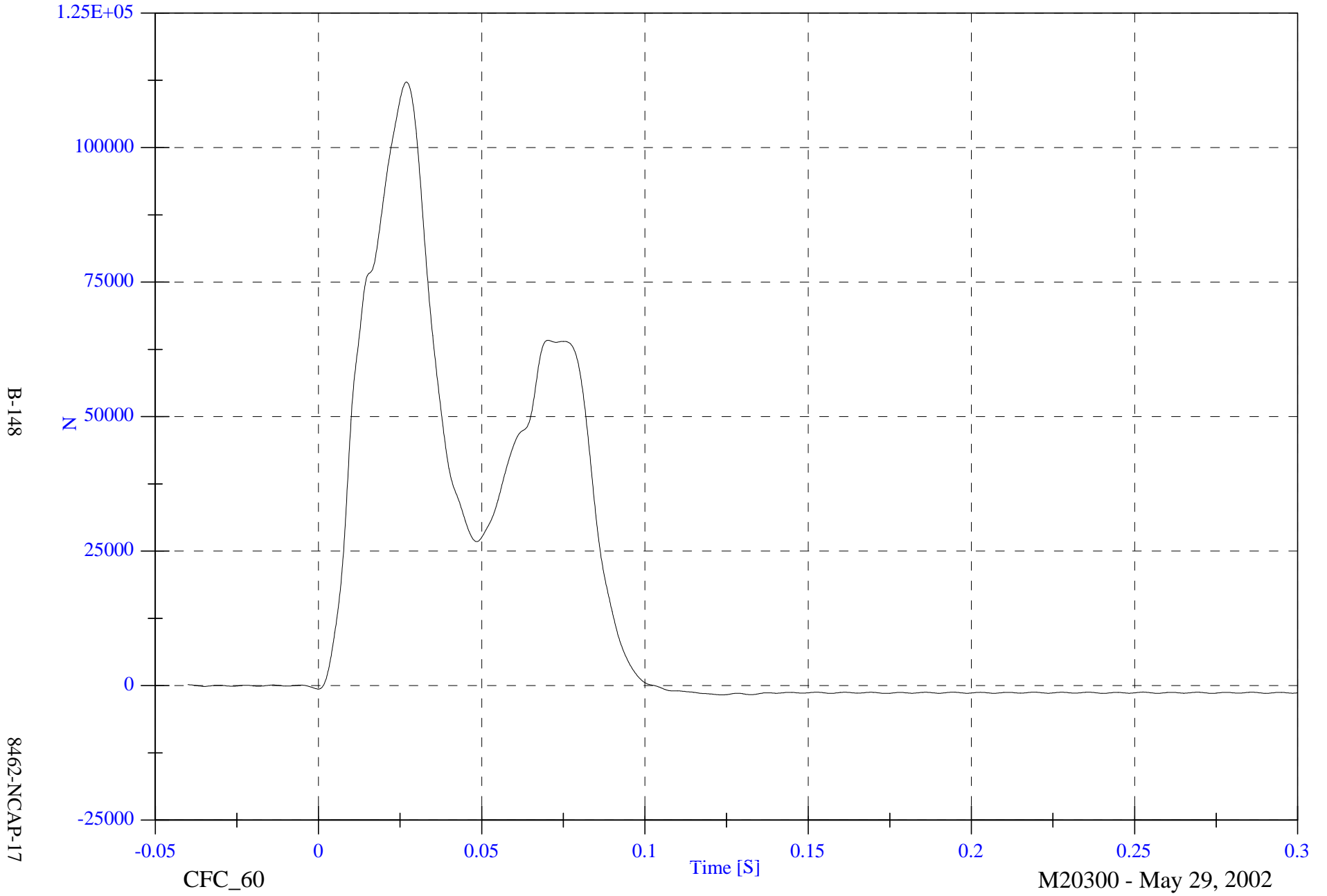
M20300 - May 29, 2002

NCAP Test 17- 2002 Dodge Dakota

Barrier Load Cell B3 Fx

Max: 112172.6 [N] at 0.027 [S]

Min: -1732.1 [N] at 0.124 [S]



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8462-NCAP-17

CFC\_60

Time [S]

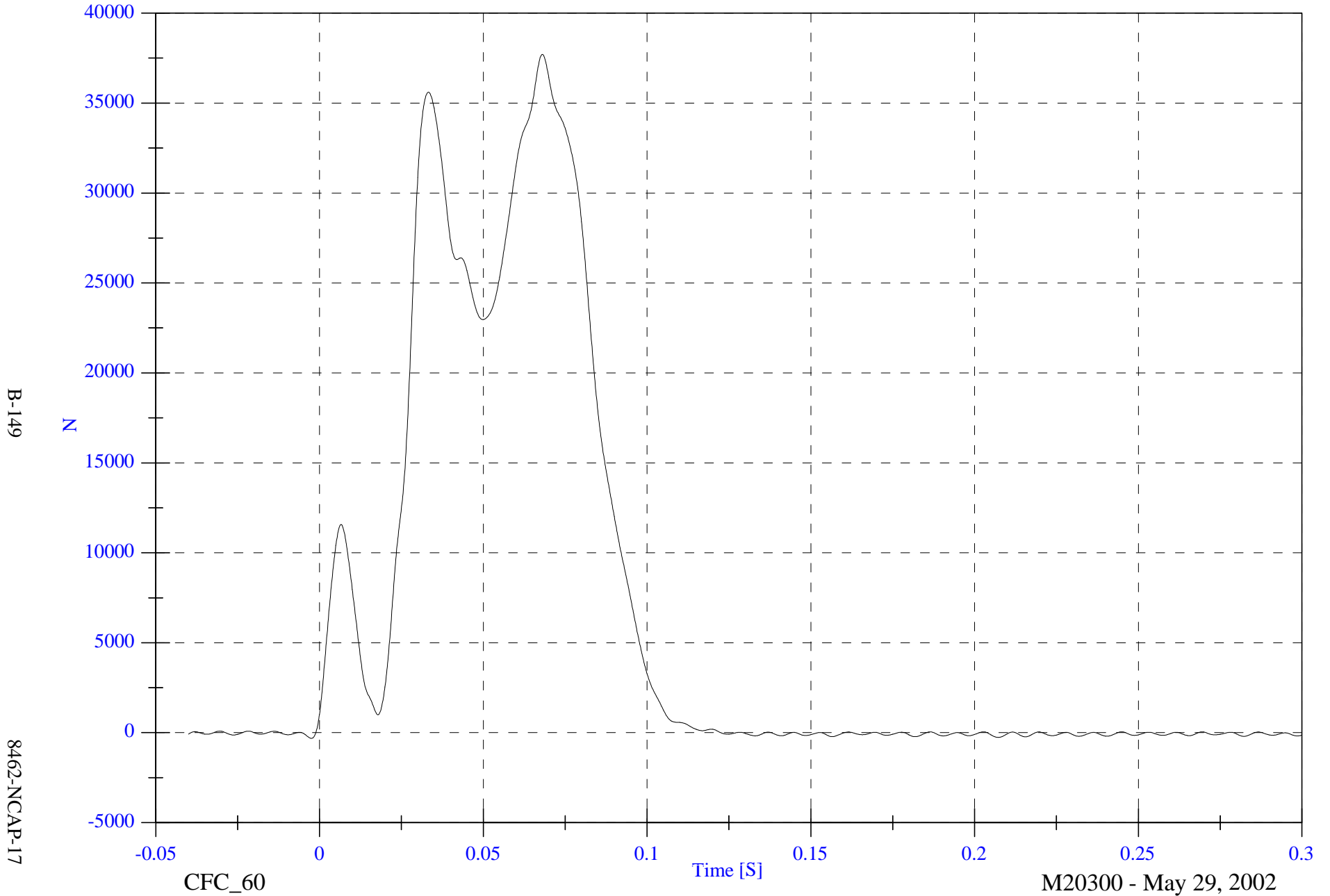
M20300 - May 29, 2002

NCAP Test 17- 2002 Dodge Dakota

Barrier Load Cell B4 Fx

Max: 37704.2 [N] at 0.068 [S]

Min: -313.7 [N] at -0.003 [S]



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8462-NCAP-17

CFC\_60

Time [S]

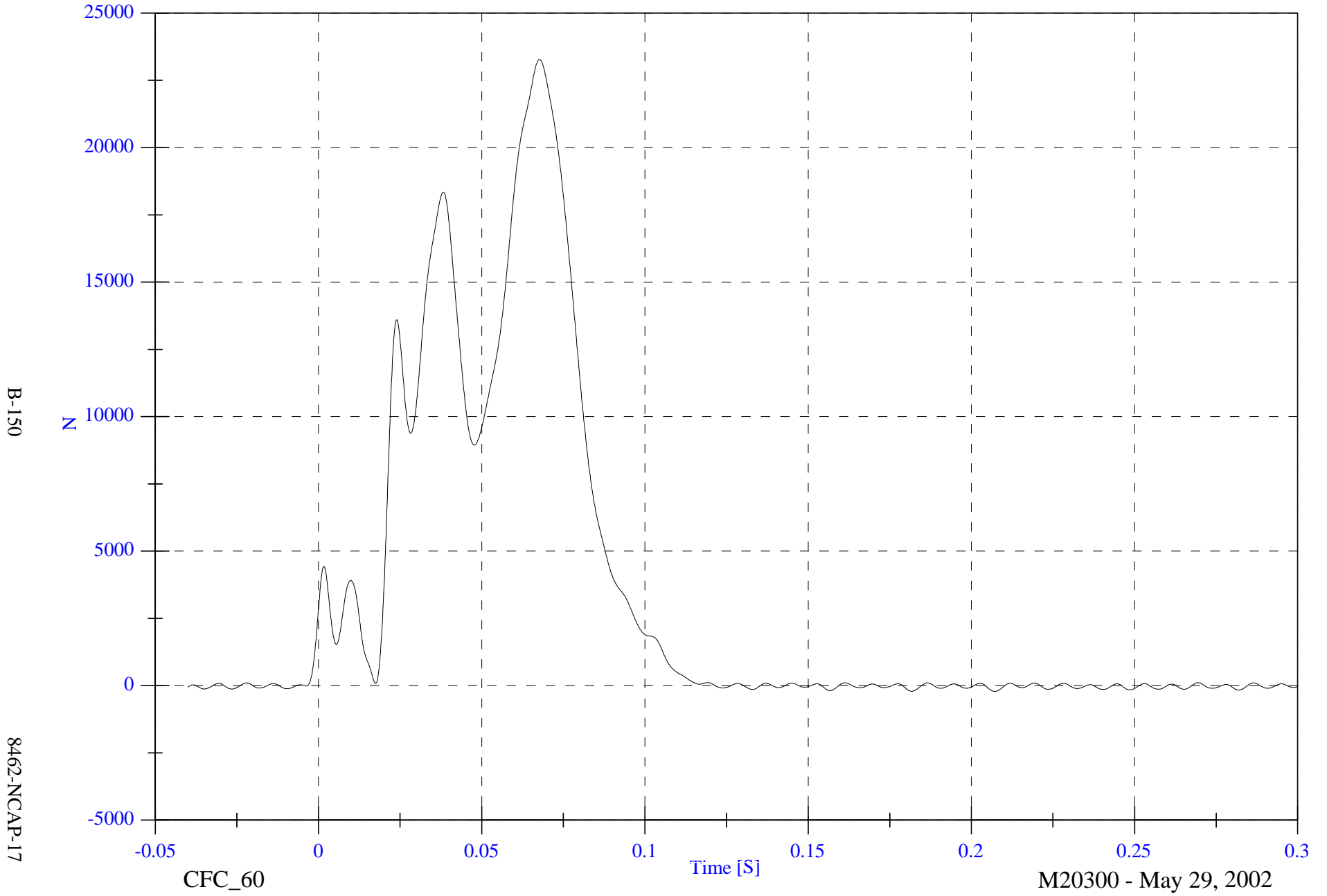
M20300 - May 29, 2002

NCAP Test 17- 2002 Dodge Dakota

Barrier Load Cell B5 Fx

Max: 23272.8 [N] at 0.068 [S]

Min: -215.1 [N] at 0.207 [S]

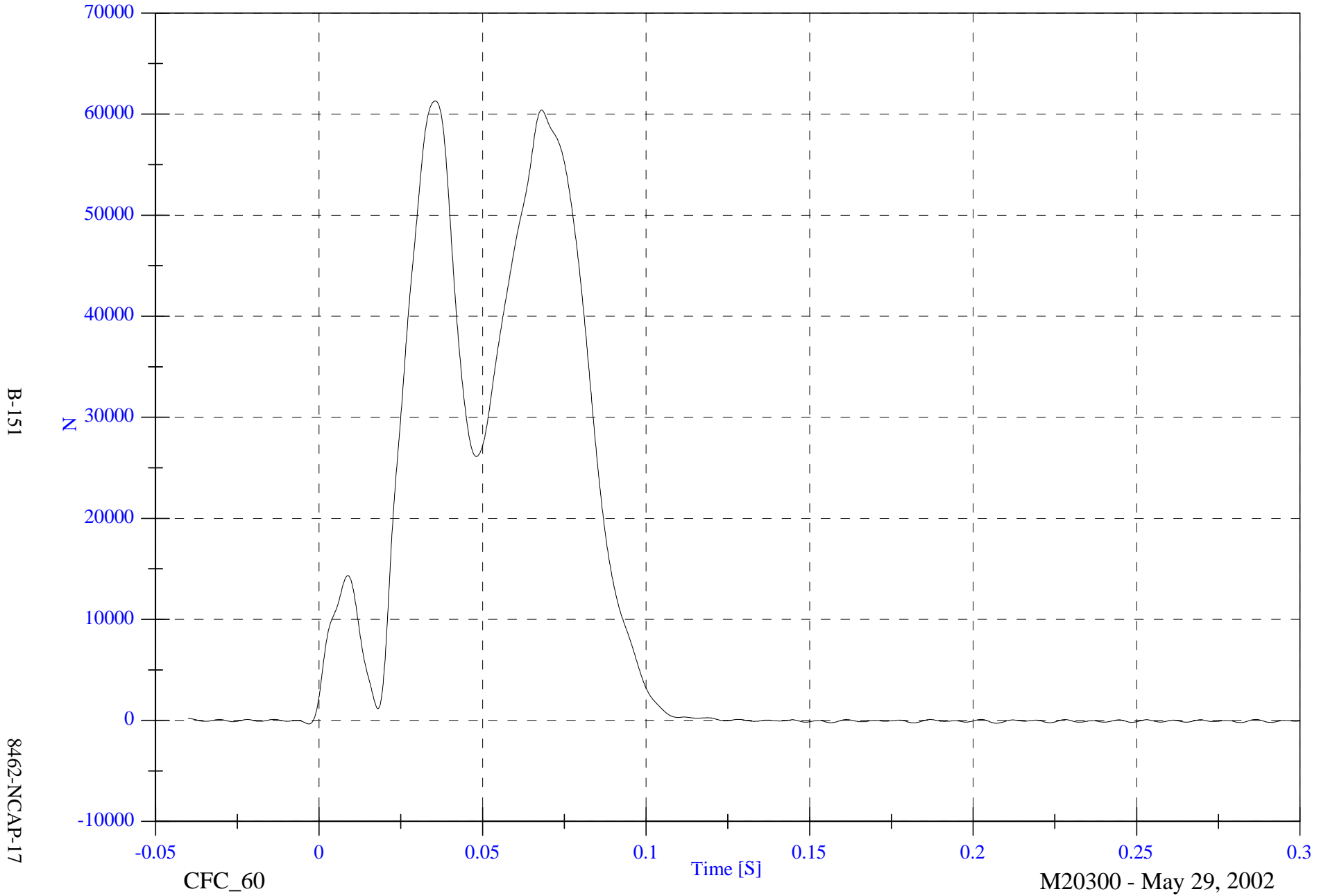


NCAP Test 17- 2002 Dodge Dakota

Barrier Load Cell B6 Fx

Max: 61296.0 [N] at 0.035 [S]

Min: -352.6 [N] at -0.003 [S]



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CFC\_60

Time [S]

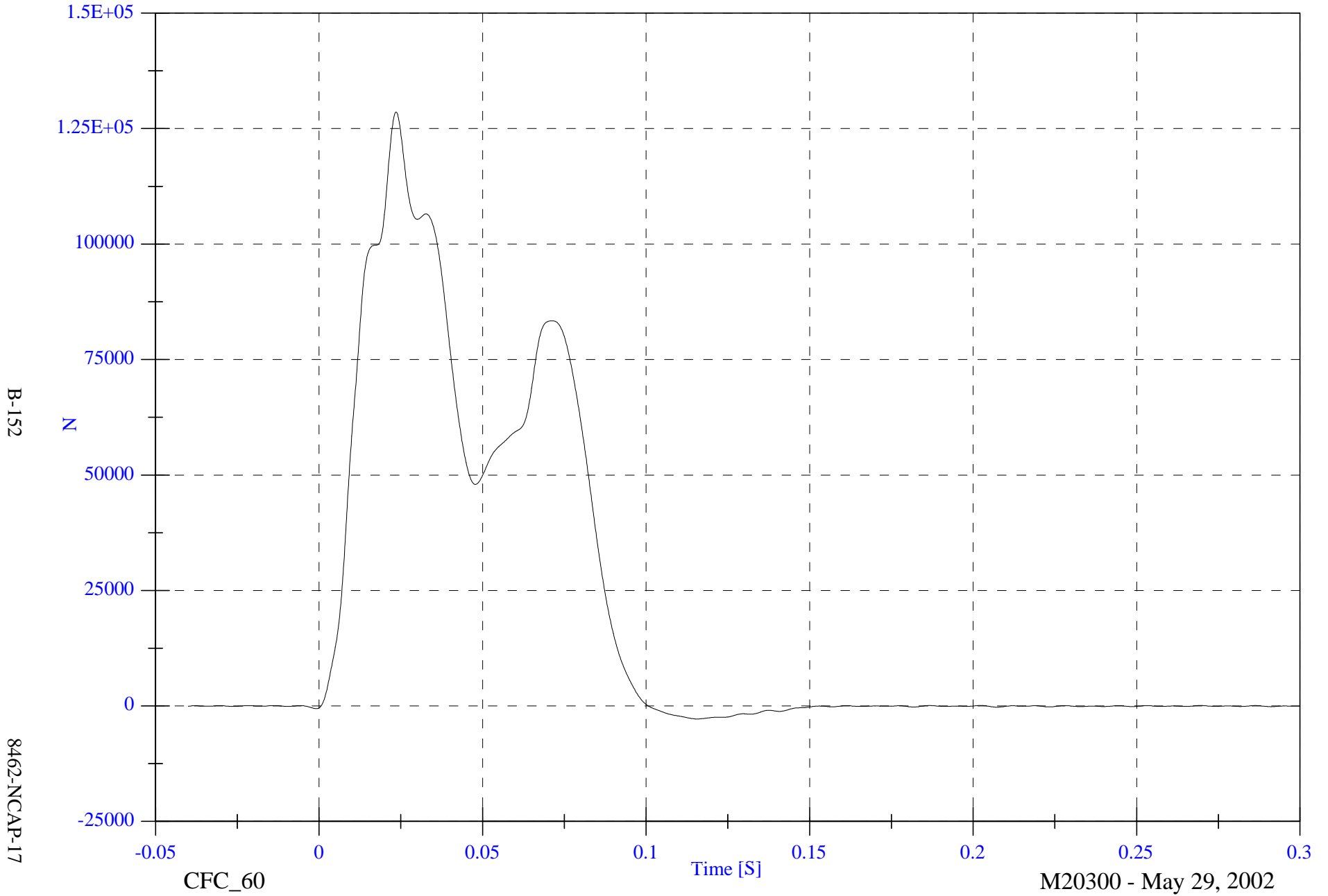
M20300 - May 29, 2002

NCAP Test 17- 2002 Dodge Dakota

Barrier Load Cell B7 Fx

Max: 128569.0 [N] at 0.024 [S]

Min: -2812.2 [N] at 0.116 [S]



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CFC\_60

Time [S]

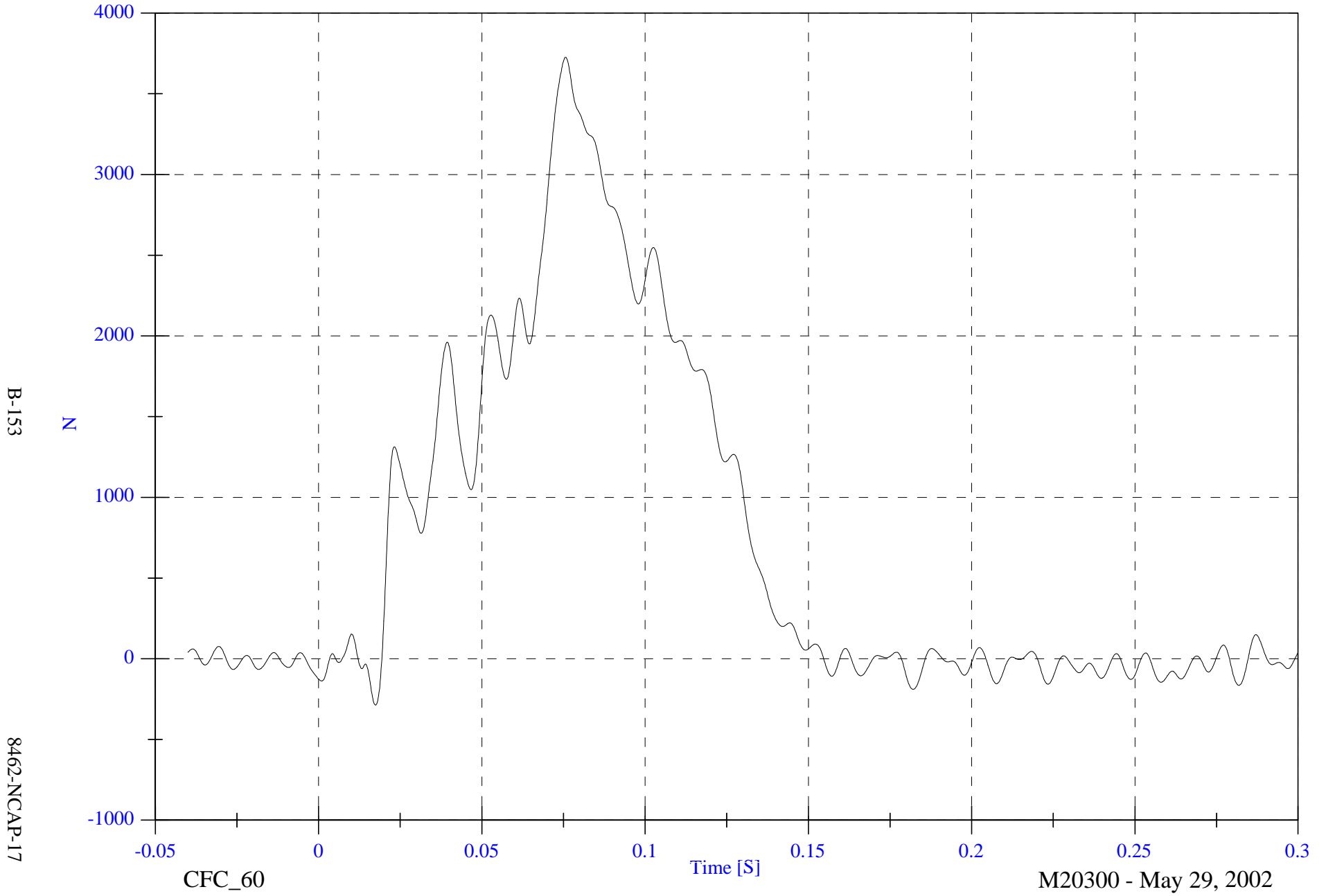
M20300 - May 29, 2002

NCAP Test 17- 2002 Dodge Dakota

Barrier Load Cell B8 Fx

Max: 3725.8 [N] at 0.076 [S]

Min: -287.1 [N] at 0.017 [S]



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8462-NCAP-17

CFC\_60

Time [S]

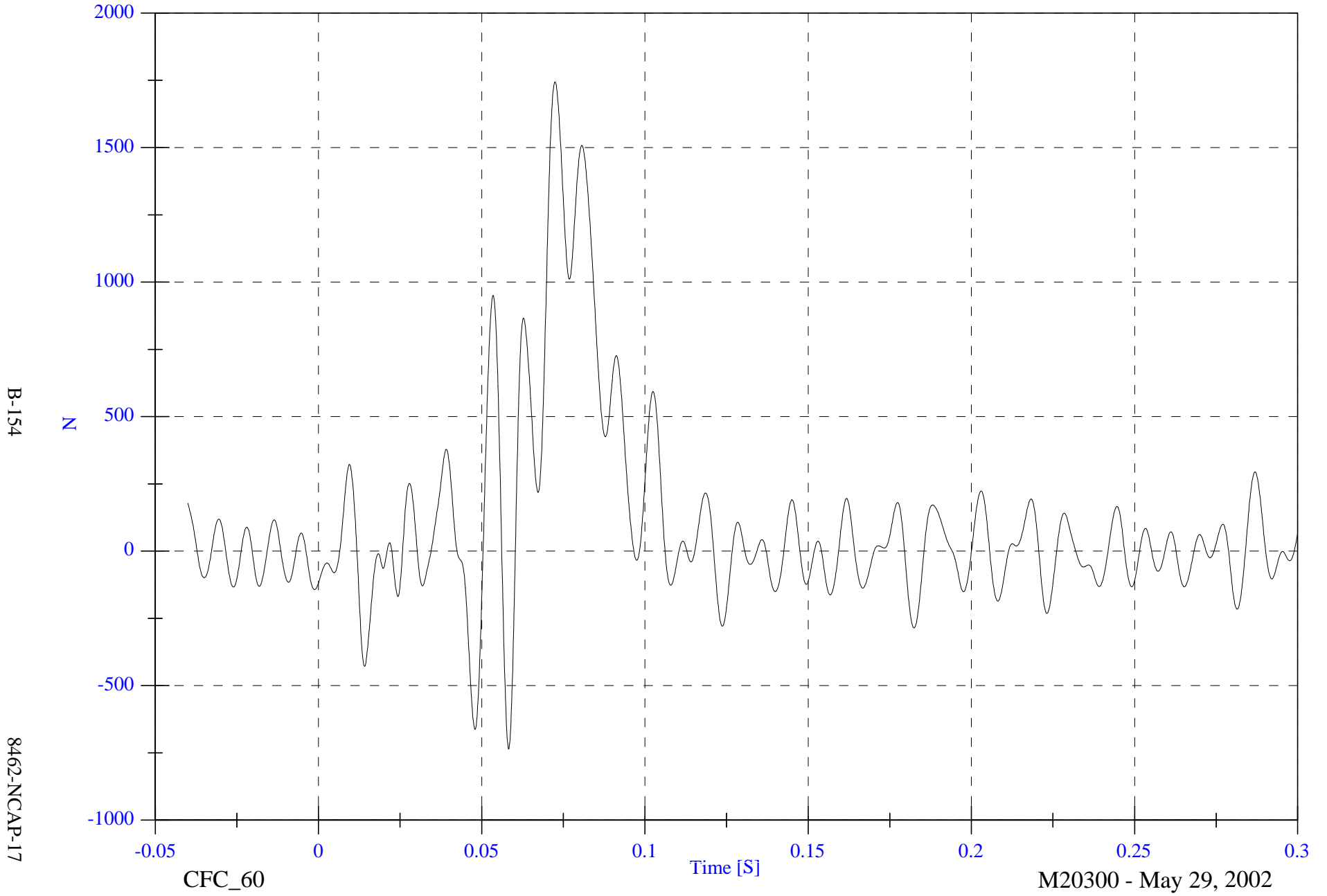
M20300 - May 29, 2002

NCAP Test 17- 2002 Dodge Dakota

Barrier Load Cell B9 Fx

Max: 1744.3 [N] at 0.072 [S]

Min: -736.2 [N] at 0.058 [S]



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8462-NCAP-17

CFC\_60

Time [S]

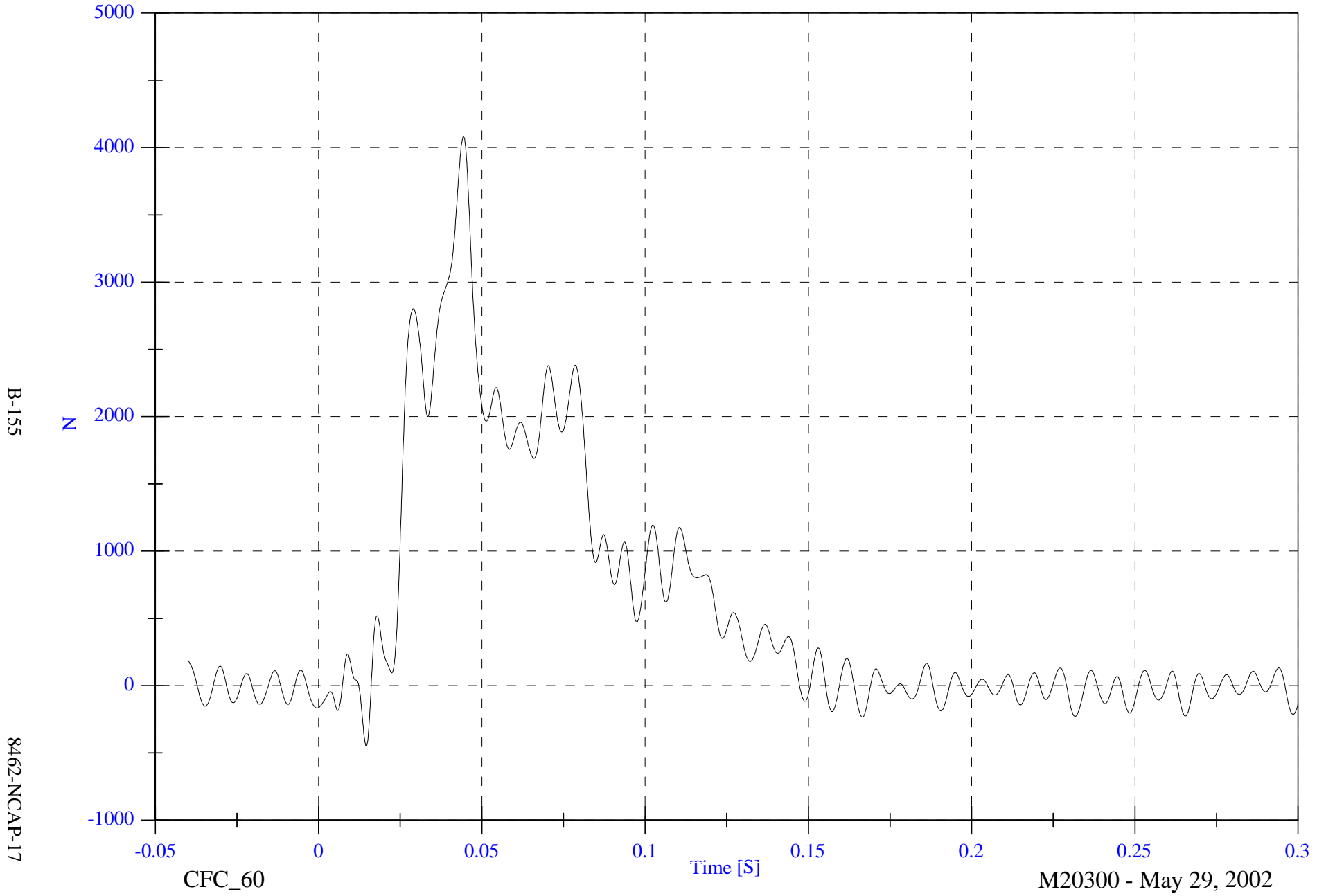
M20300 - May 29, 2002

NCAP Test 17- 2002 Dodge Dakota

Barrier Load Cell C1 Fx

Max: 4081.8 [N] at 0.044 [S]

Min: -451.3 [N] at 0.015 [S]



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CFC\_60

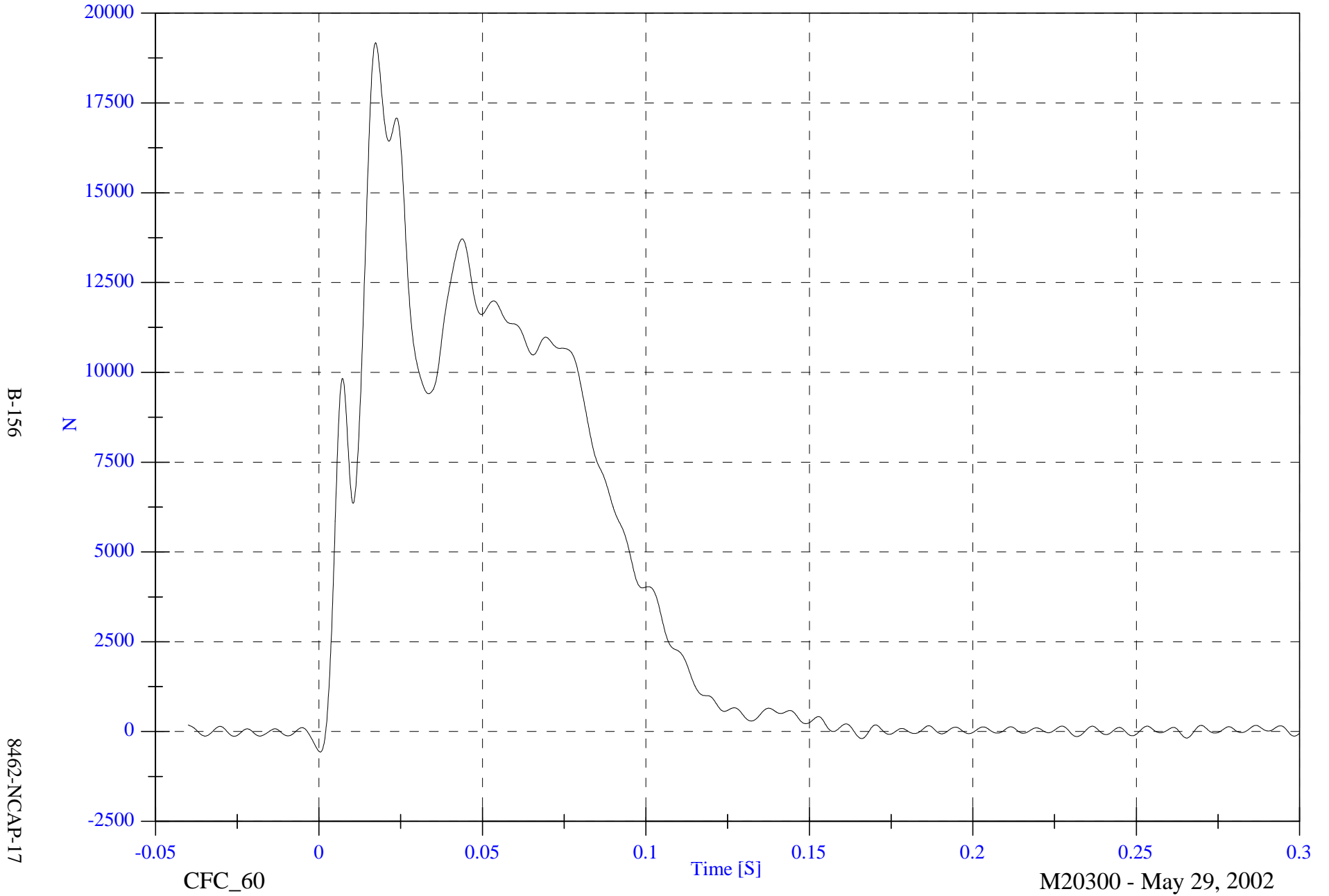
M20300 - May 29, 2002

NCAP Test 17- 2002 Dodge Dakota

Barrier Load Cell C2 Fx

Max: 19174.2 [N] at 0.017 [S]

Min: -567.4 [N] at 0.000 [S]



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8462-NCAP-17

CFC\_60

Time [S]

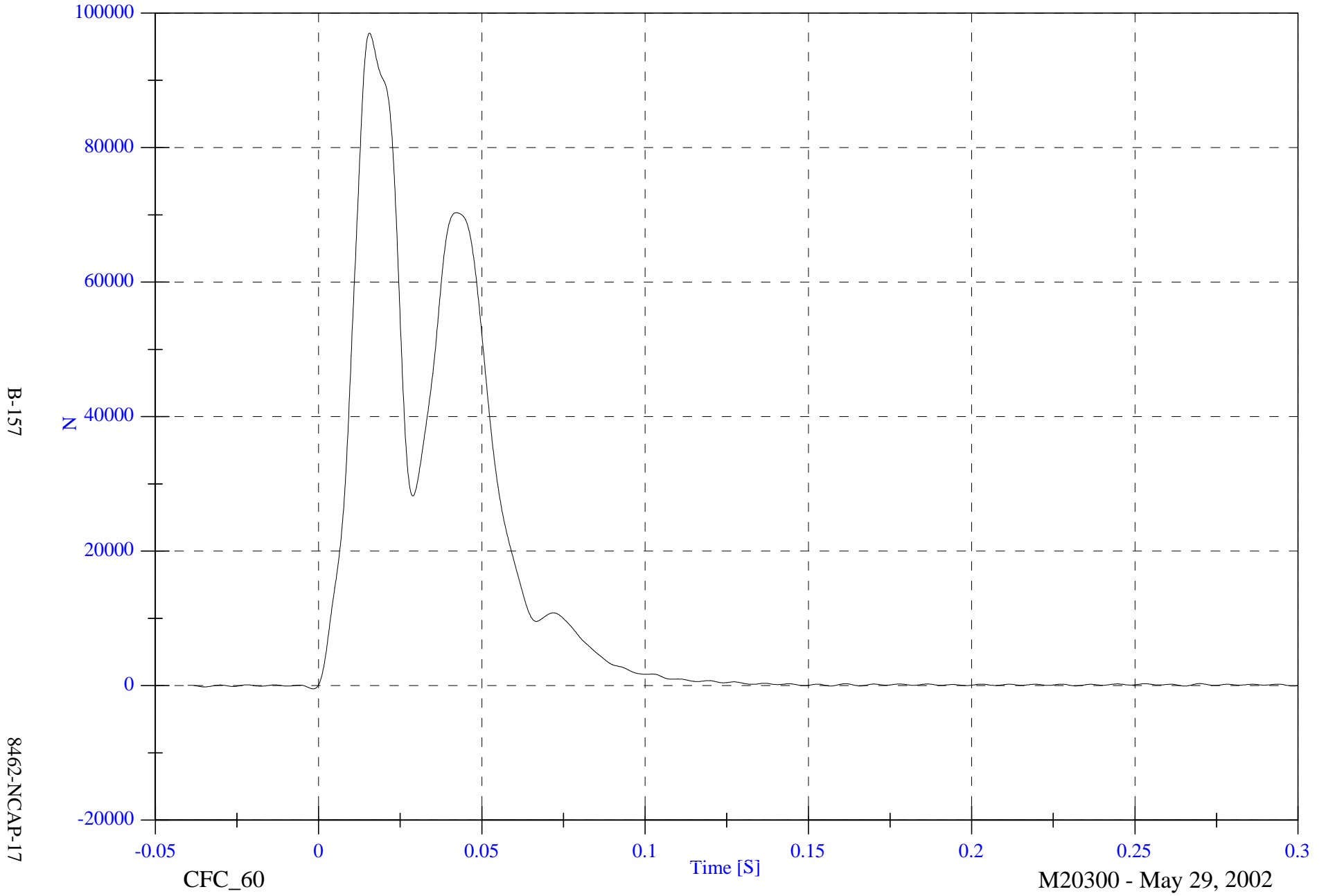
M20300 - May 29, 2002

NCAP Test 17- 2002 Dodge Dakota

Barrier Load Cell C3 Fx

Max: 97015.1 [N] at 0.016 [S]

Min: -484.5 [N] at -0.002 [S]

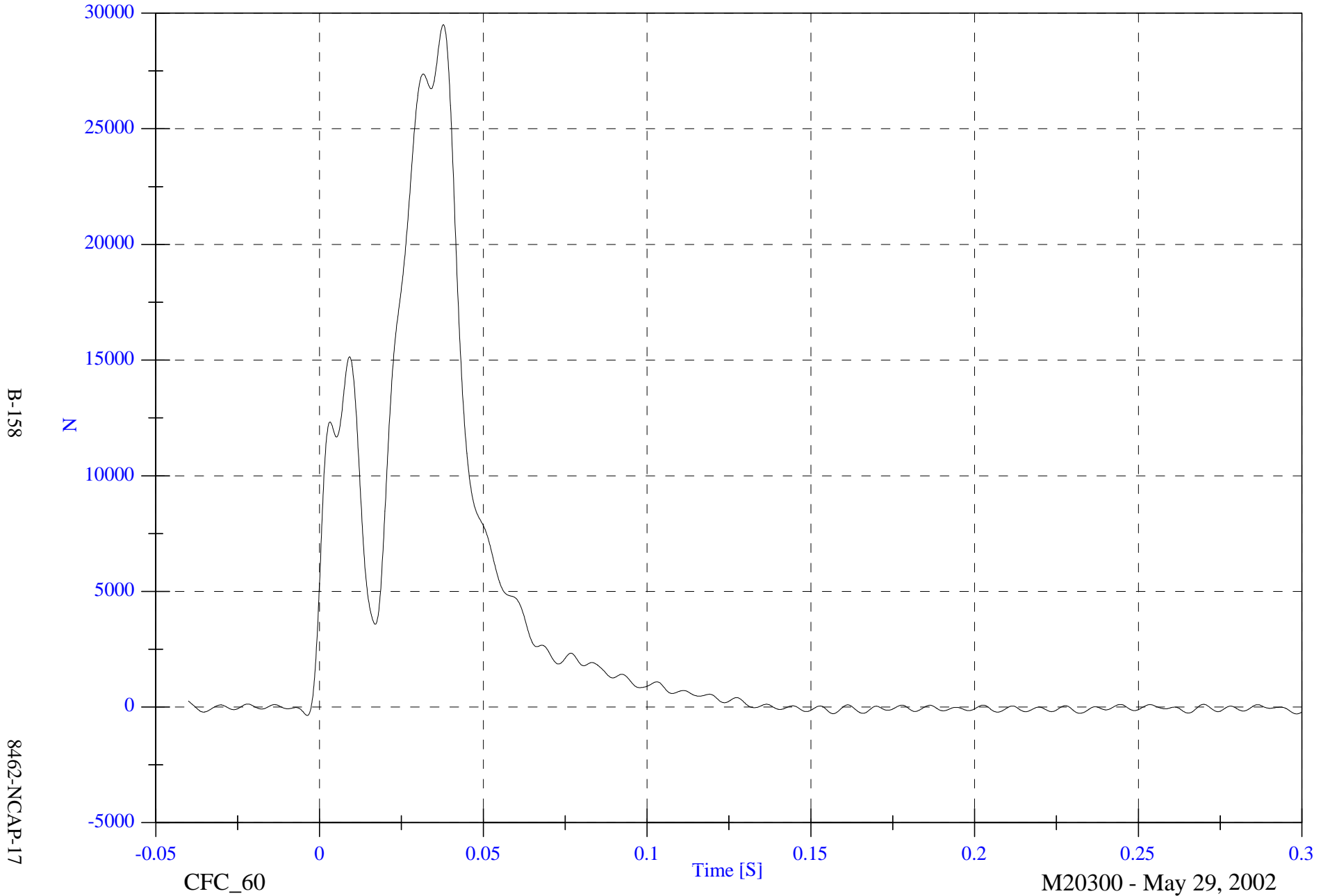


NCAP Test 17- 2002 Dodge Dakota

Barrier Load Cell C4 Fx

Max: 29502.6 [N] at 0.038 [S]

Min: -362.8 [N] at -0.004 [S]



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CFC\_60

Time [S]

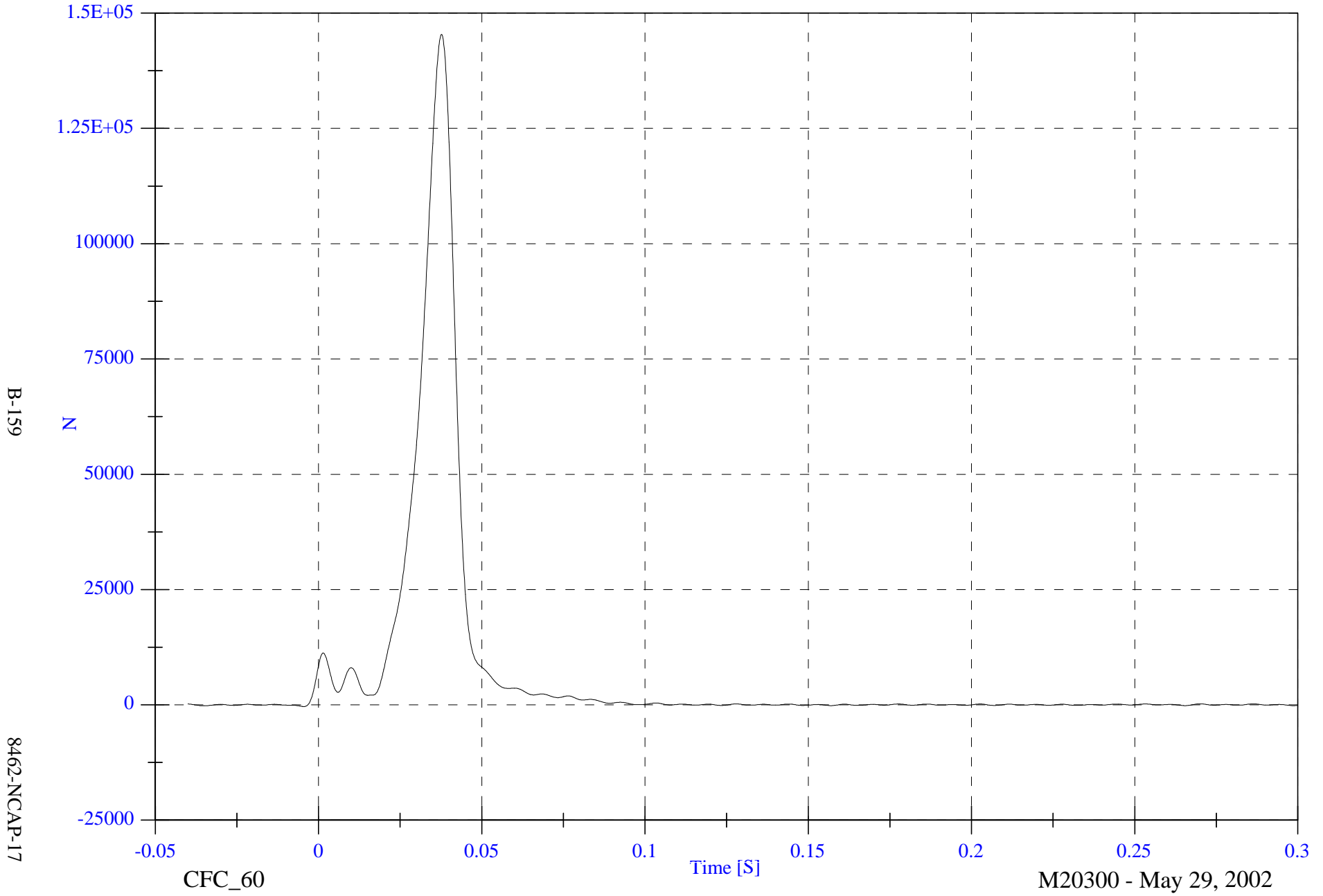
M20300 - May 29, 2002

NCAP Test 17- 2002 Dodge Dakota

Barrier Load Cell C5 Fx

Max: 145390.0 [N] at 0.038 [S]

Min: -366.7 [N] at -0.005 [S]



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8462-NCAP-17

CFC\_60

Time [S]

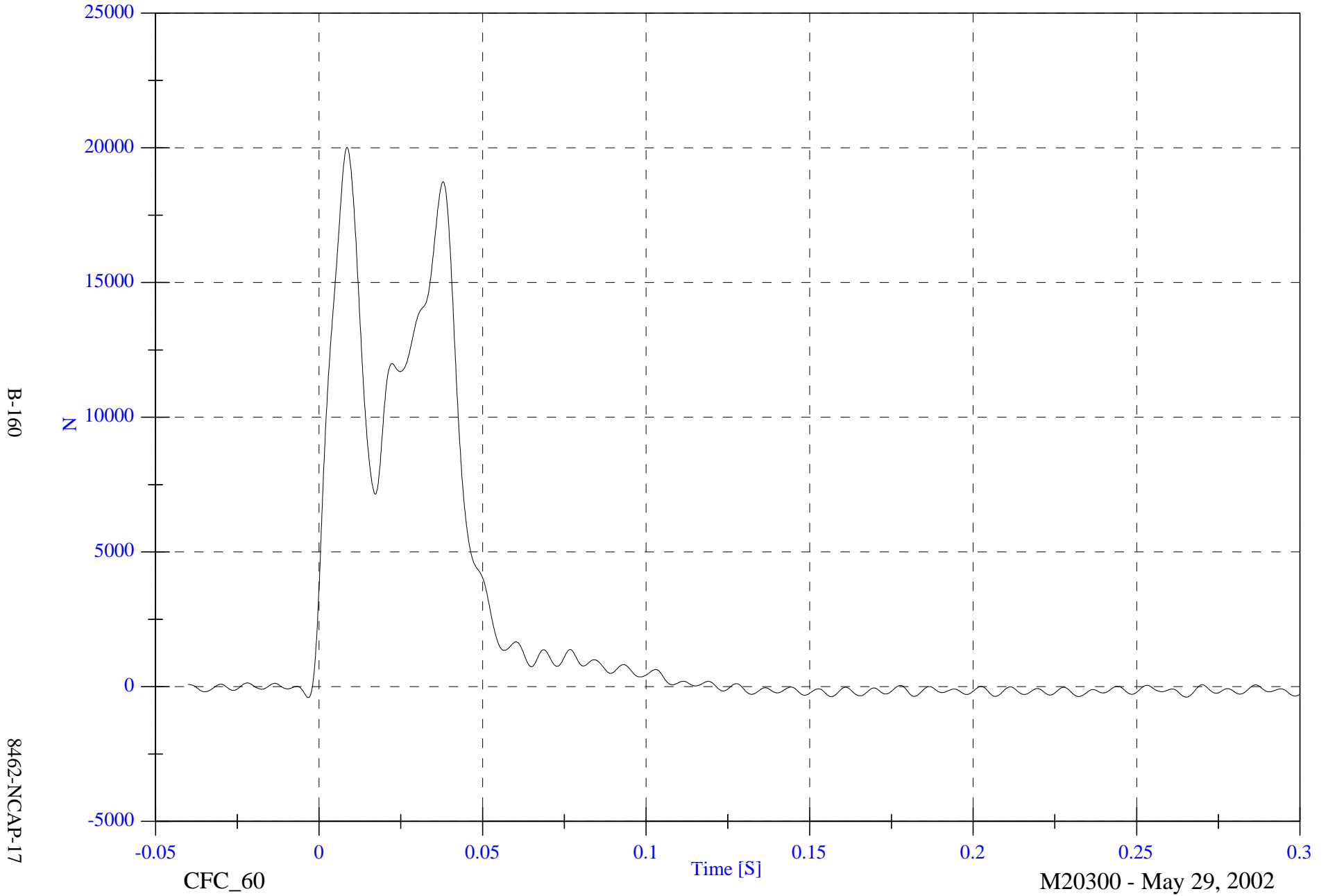
M20300 - May 29, 2002

NCAP Test 17- 2002 Dodge Dakota

Barrier Load Cell C6 Fx

Max: 20018.9 [N] at 0.009 [S]

Min: -403.0 [N] at -0.003 [S]



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8462-NCAP-17

CFC\_60

Time [S]

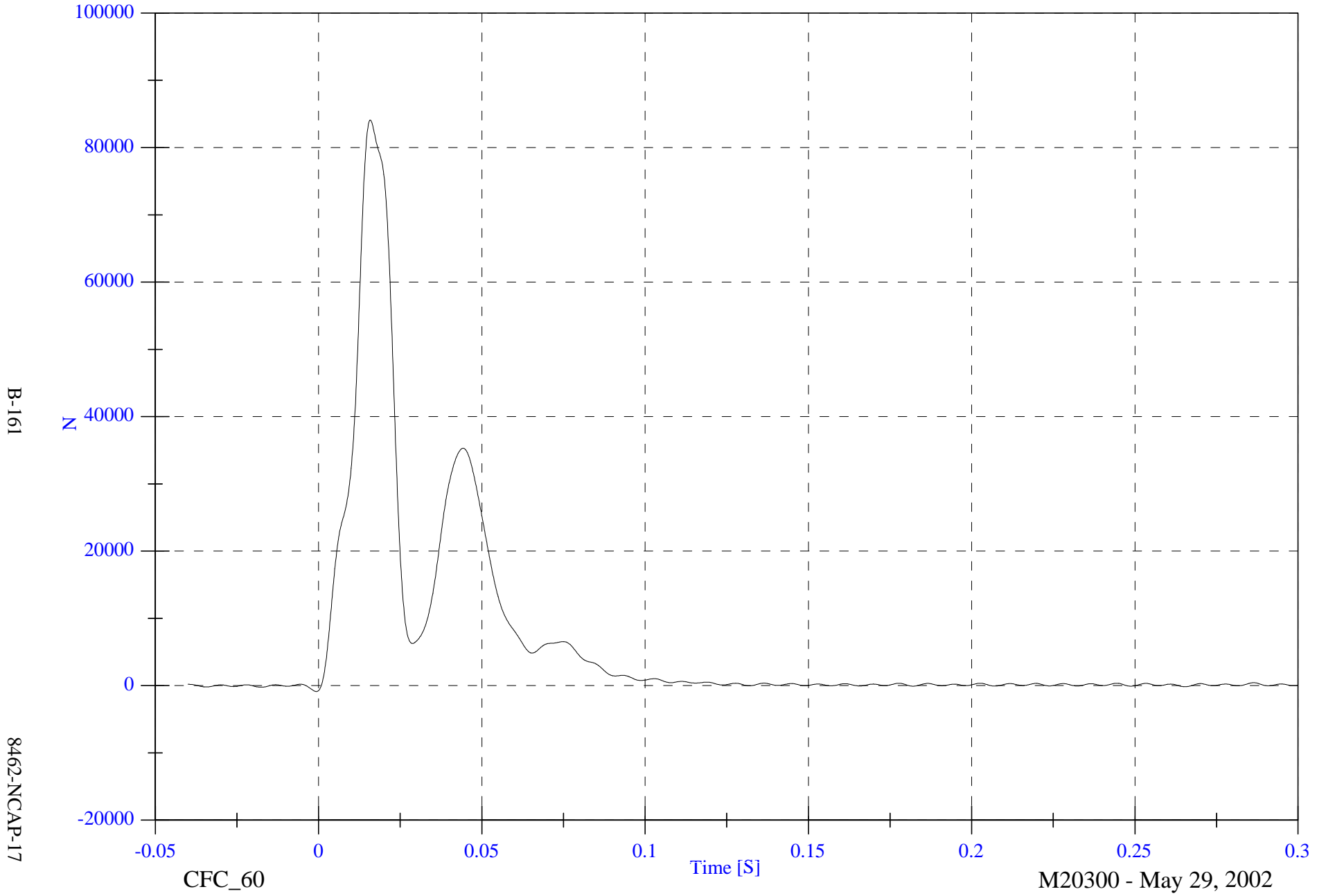
M20300 - May 29, 2002

NCAP Test 17- 2002 Dodge Dakota

Barrier Load Cell C7 Fx

Max: 84100.1 [N] at 0.016 [S]

Min: -873.4 [N] at -0.001 [S]



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8462-NCAP-17

CFC\_60

Time [S]

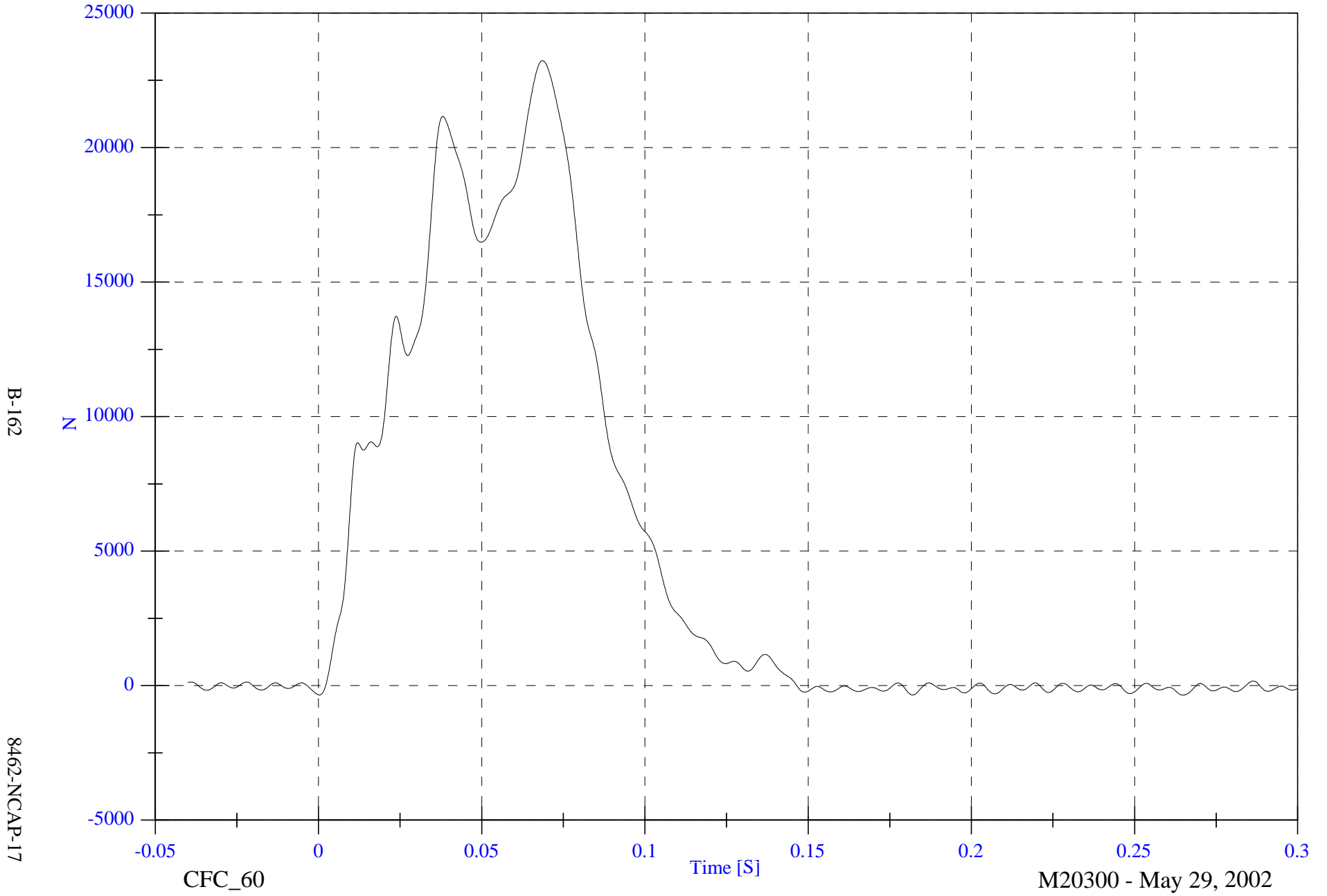
M20300 - May 29, 2002

NCAP Test 17- 2002 Dodge Dakota

Barrier Load Cell C8 Fx

Max: 23230.9 [N] at 0.069 [S]

Min: -354.8 [N] at 0.265 [S]



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8462-NCAP-17

CFC\_60

Time [S]

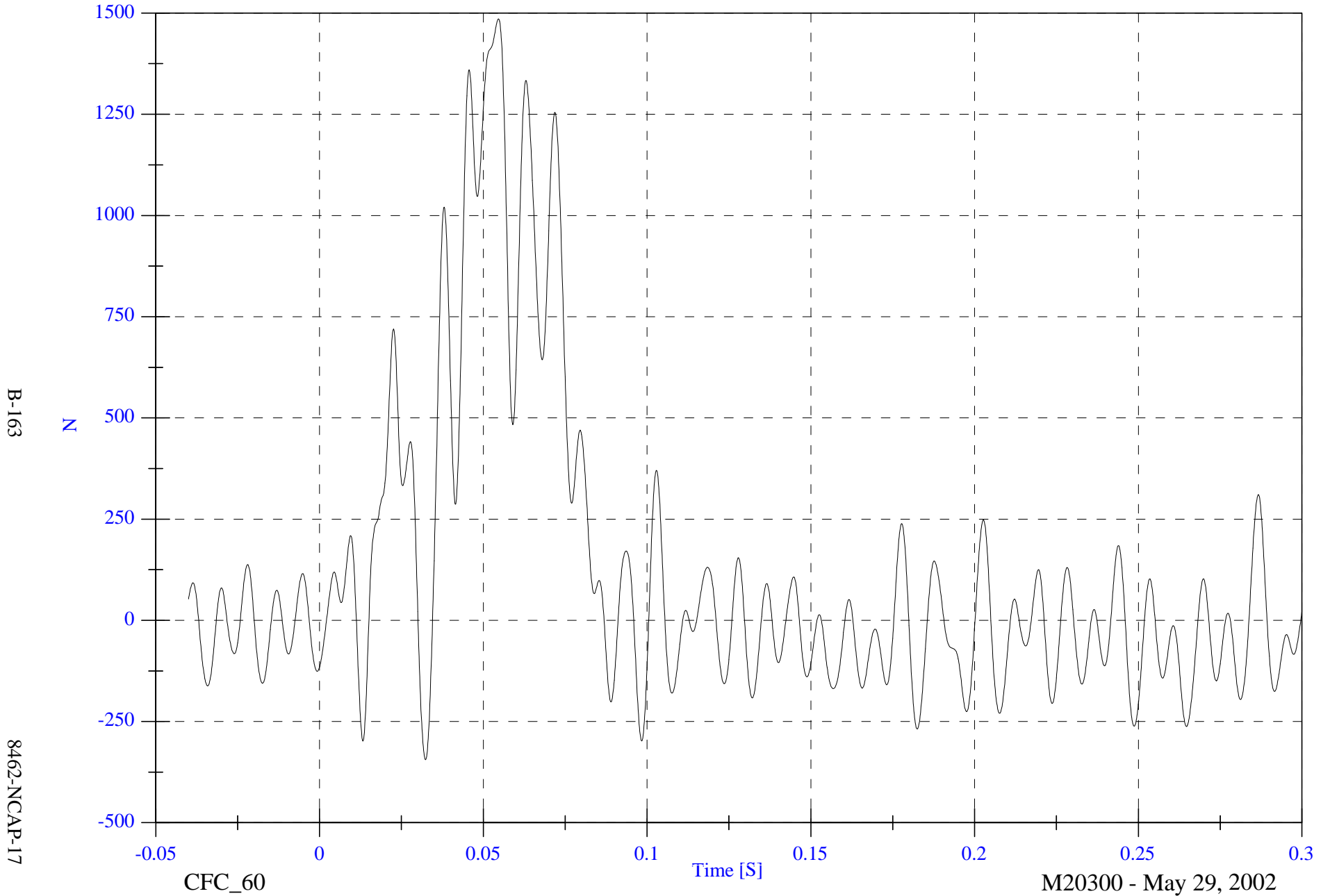
M20300 - May 29, 2002

NCAP Test 17- 2002 Dodge Dakota

Barrier Load Cell C9 Fx

Max: 1485.6 [N] at 0.055 [S]

Min: -344.7 [N] at 0.032 [S]



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8462-NCAP-17

CFC\_60

Time [S]

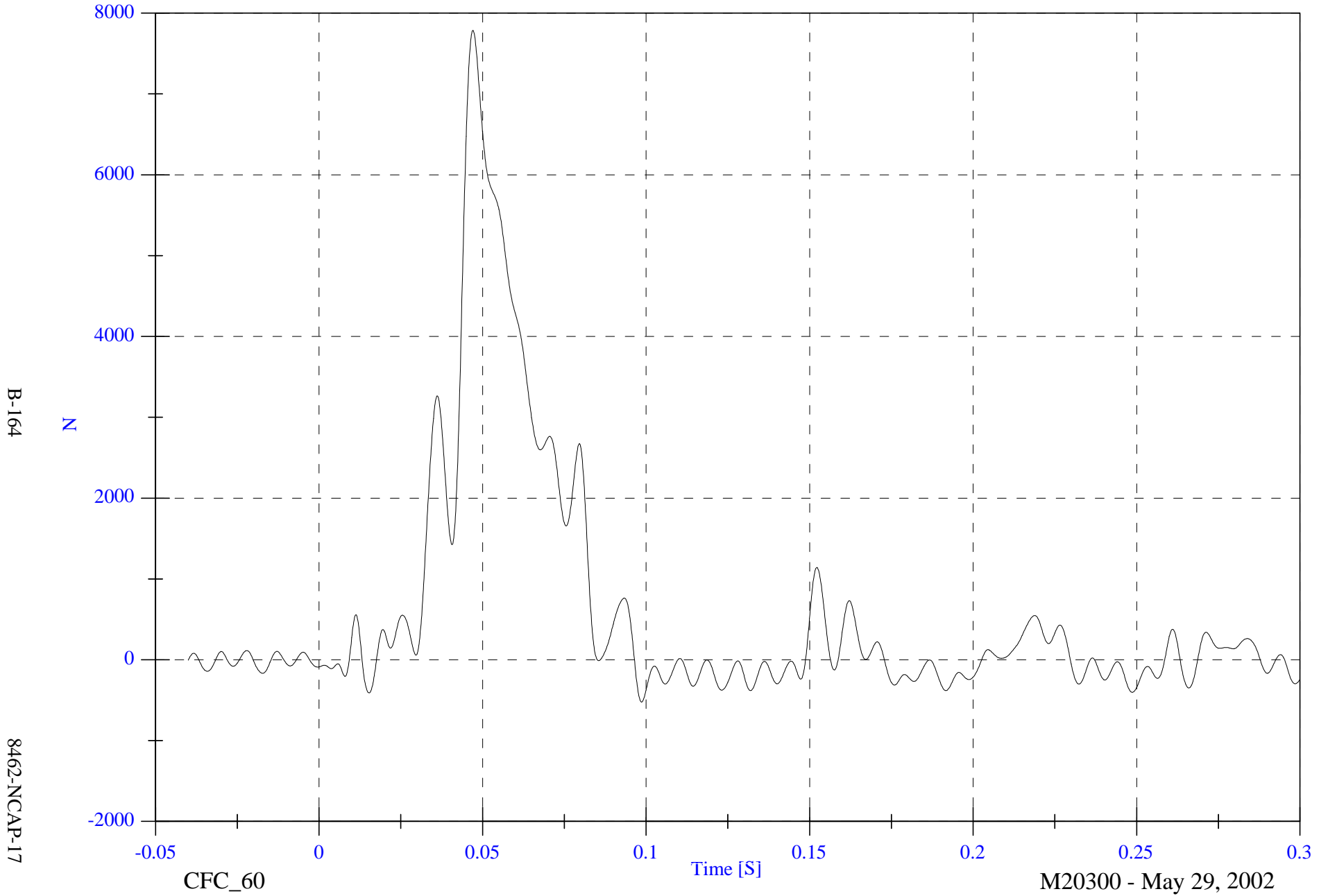
M20300 - May 29, 2002

NCAP Test 17- 2002 Dodge Dakota

Barrier Load Cell D1 Fx

Max: 7786.6 [N] at 0.047 [S]

Min: -523.5 [N] at 0.099 [S]

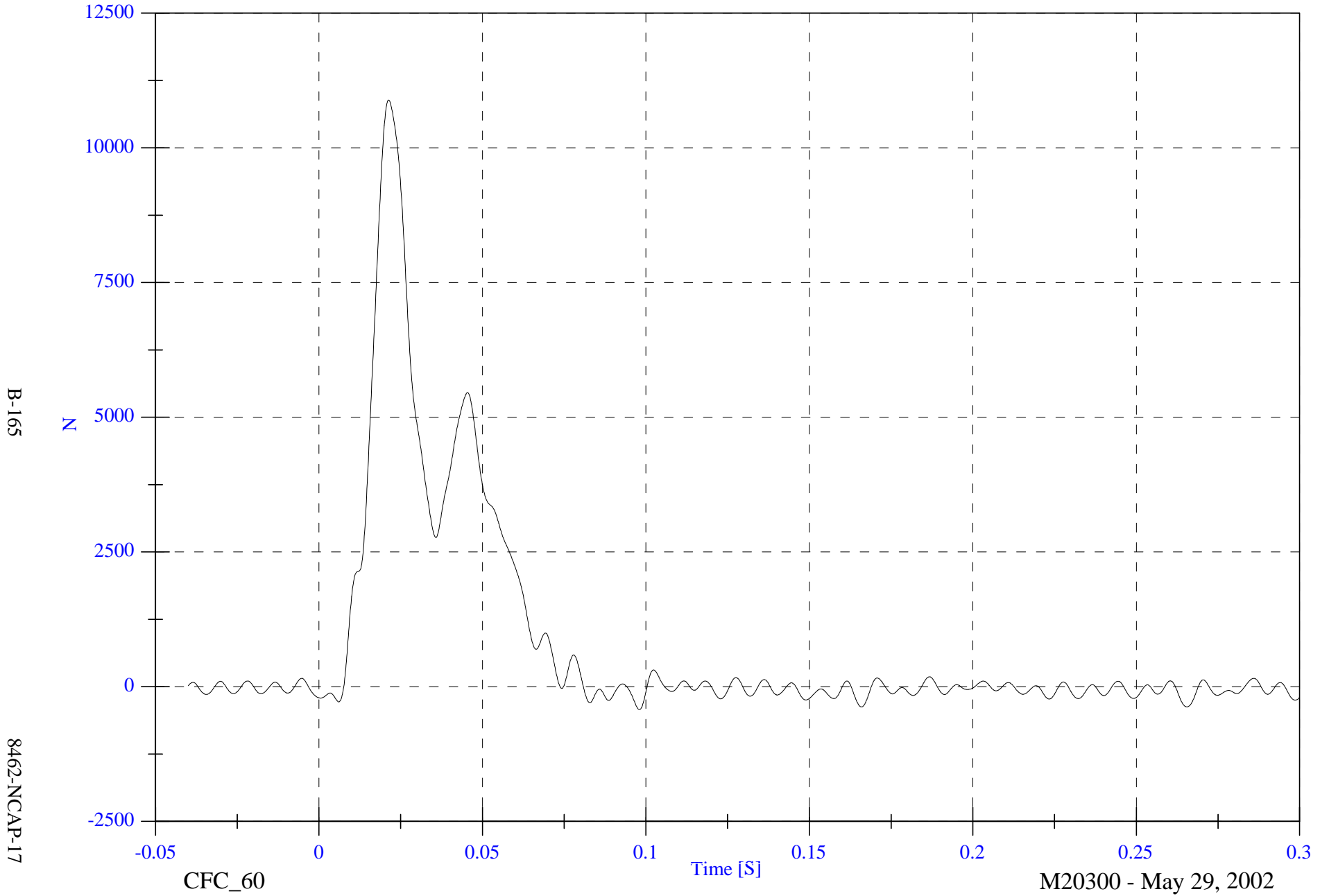


NCAP Test 17- 2002 Dodge Dakota

Barrier Load Cell D2 Fx

Max: 10886.6 [N] at 0.021 [S]

Min: -424.4 [N] at 0.098 [S]



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8462-NCAP-17

CFC\_60

Time [S]

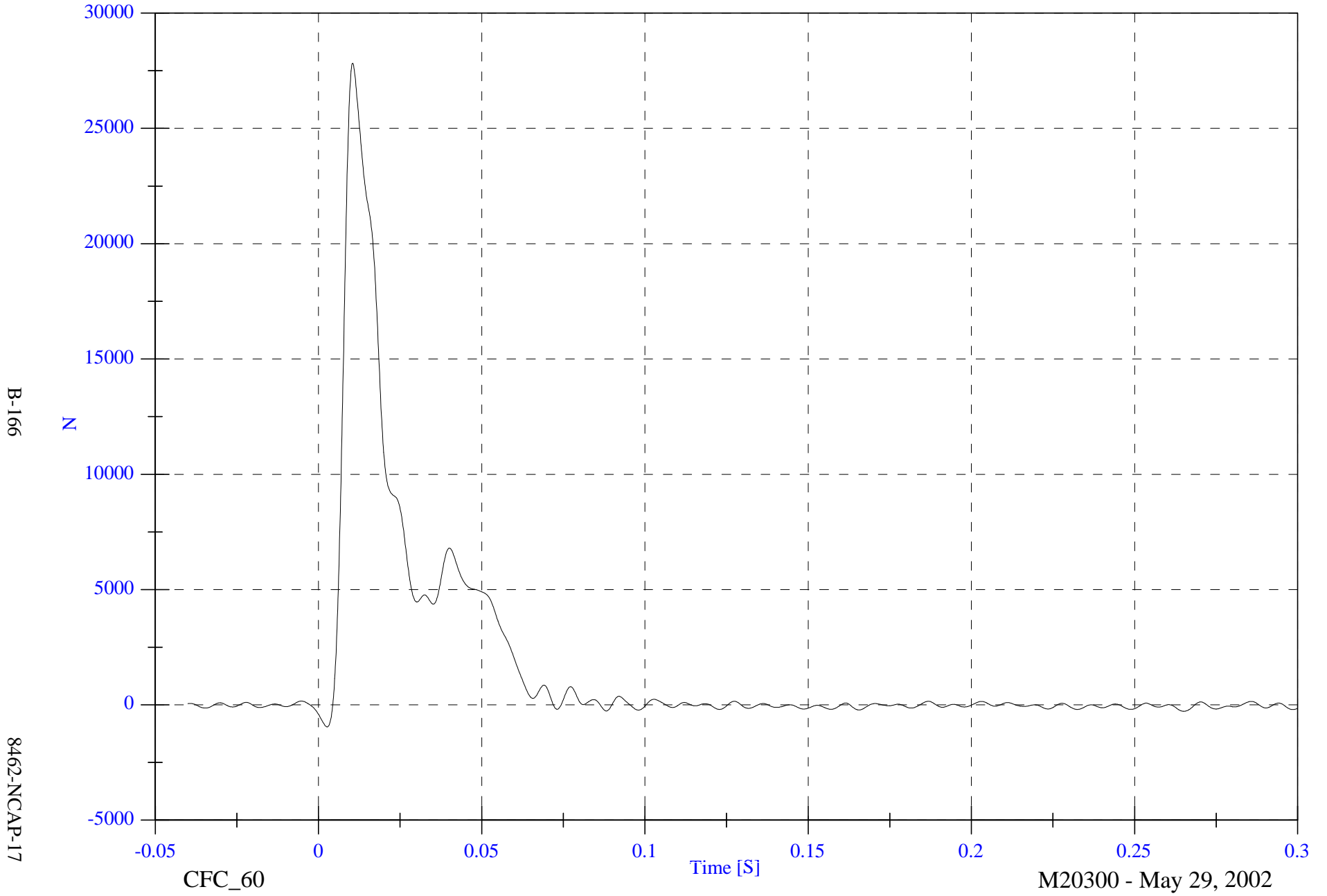
M20300 - May 29, 2002

NCAP Test 17- 2002 Dodge Dakota

Barrier Load Cell D3 Fx

Max: 27829.0 [N] at 0.010 [S]

Min: -958.8 [N] at 0.003 [S]



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8462-NCAP-17

CFC\_60

Time [S]

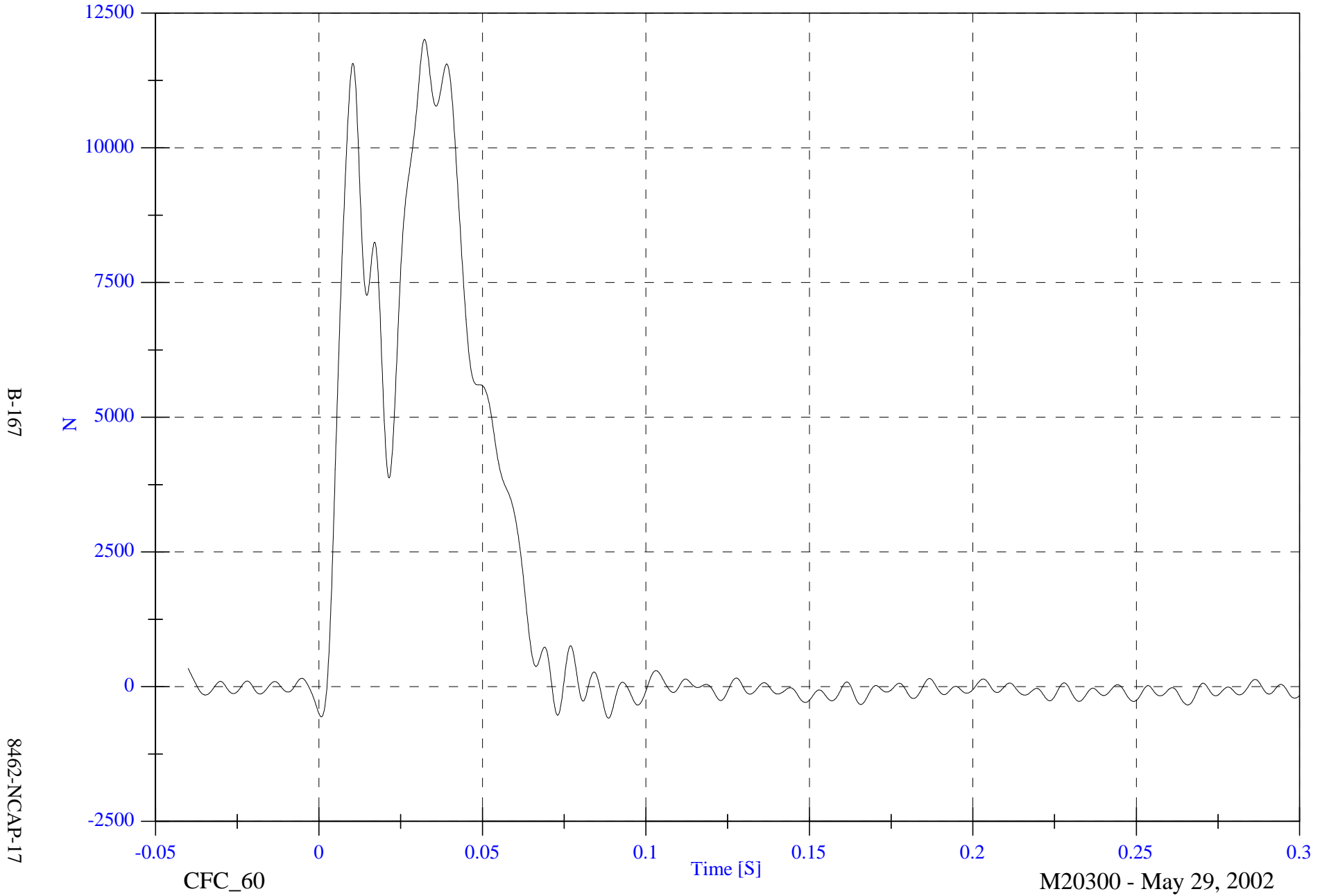
M20300 - May 29, 2002

NCAP Test 17- 2002 Dodge Dakota

Barrier Load Cell D4 Fx

Max: 12013.4 [N] at 0.032 [S]

Min: -583.7 [N] at 0.089 [S]



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8462-NCAP-17

CFC\_60

Time [S]

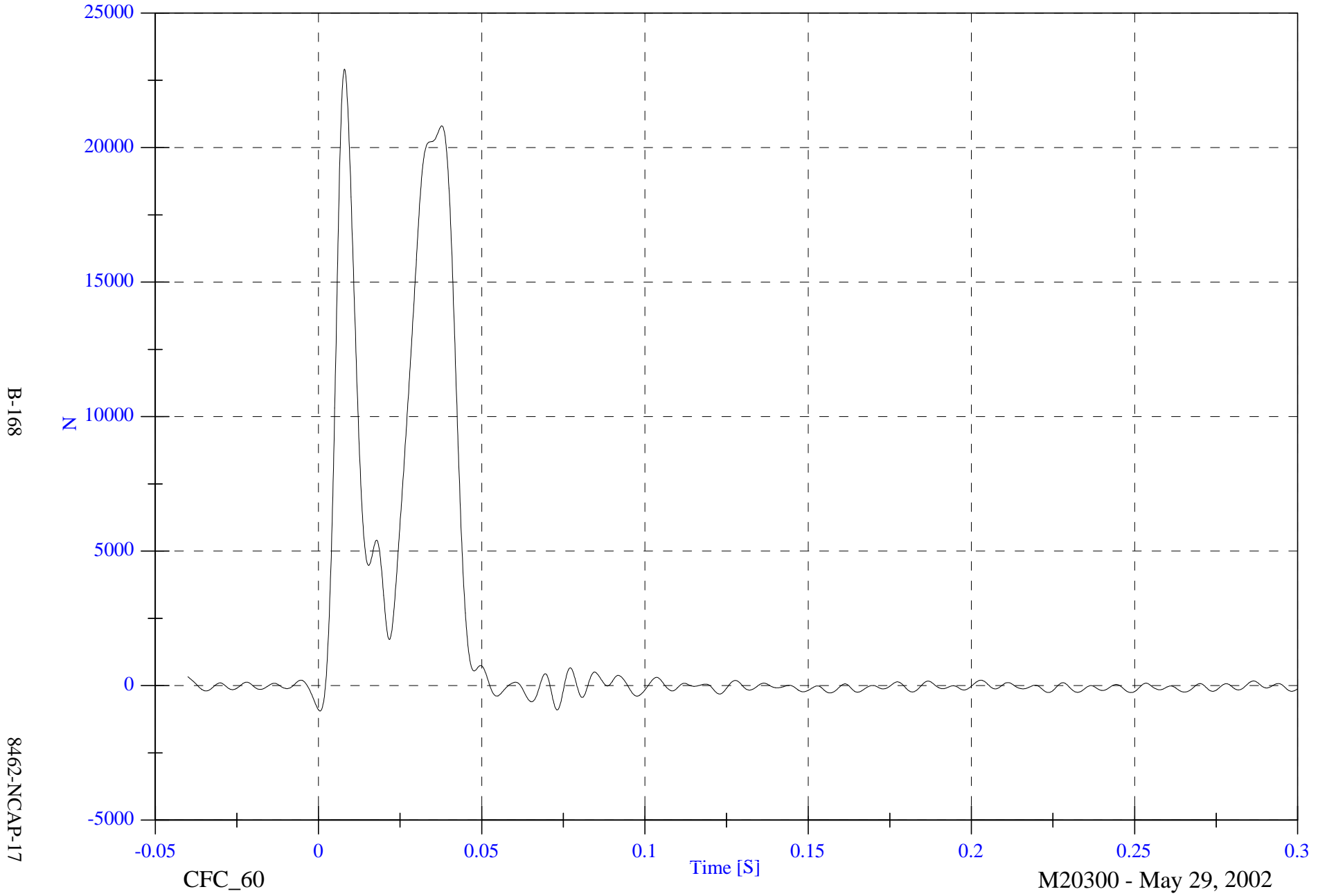
M20300 - May 29, 2002

NCAP Test 17- 2002 Dodge Dakota

Barrier Load Cell D5 Fx

Max: 22918.5 [N] at 0.008 [S]

Min: -942.1 [N] at 0.000 [S]



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8462-NCAP-17

CFC\_60

Time [S]

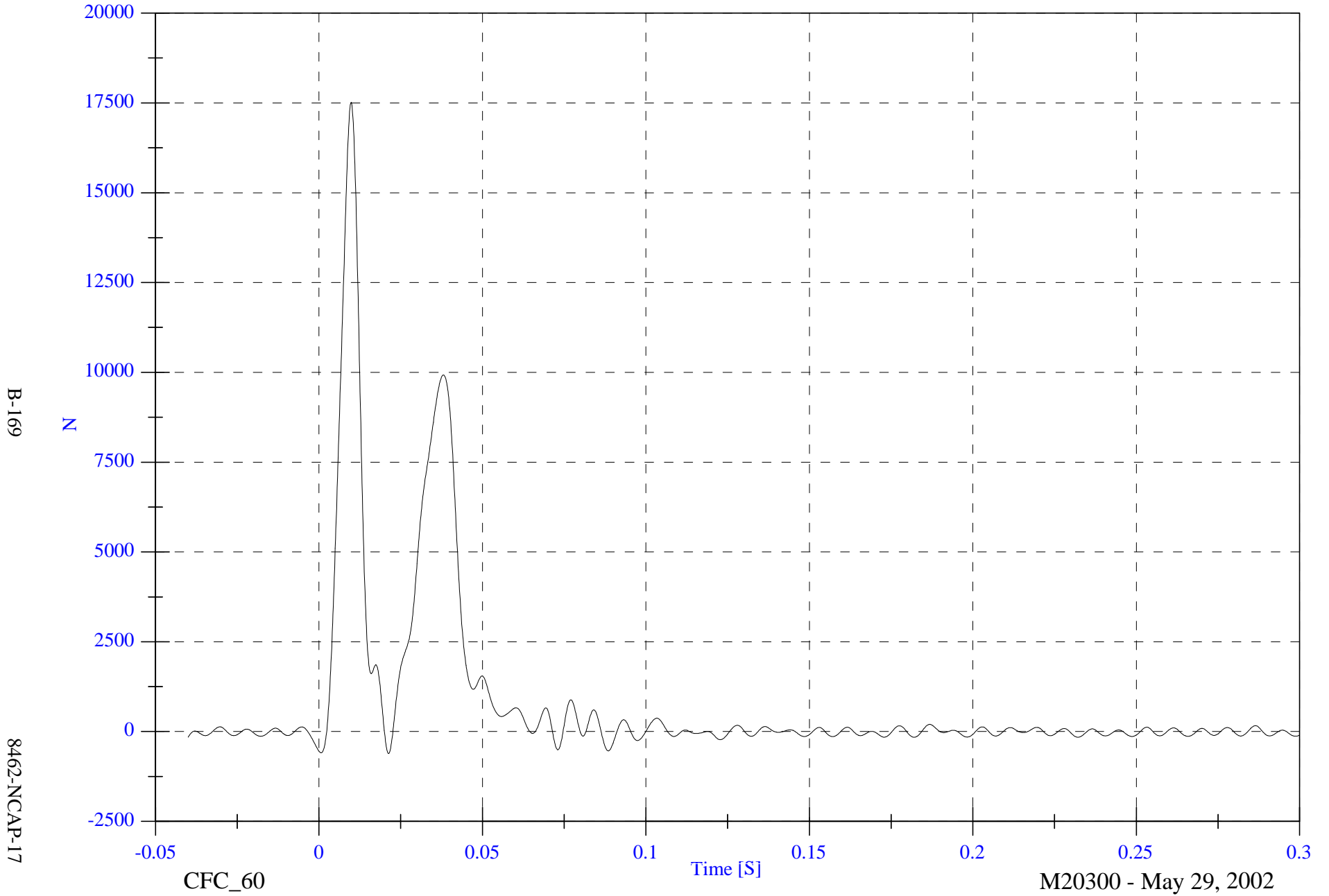
M20300 - May 29, 2002

NCAP Test 17- 2002 Dodge Dakota

Barrier Load Cell D6 Fx

Max: 17515.2 [N] at 0.010 [S]

Min: -611.1 [N] at 0.021 [S]

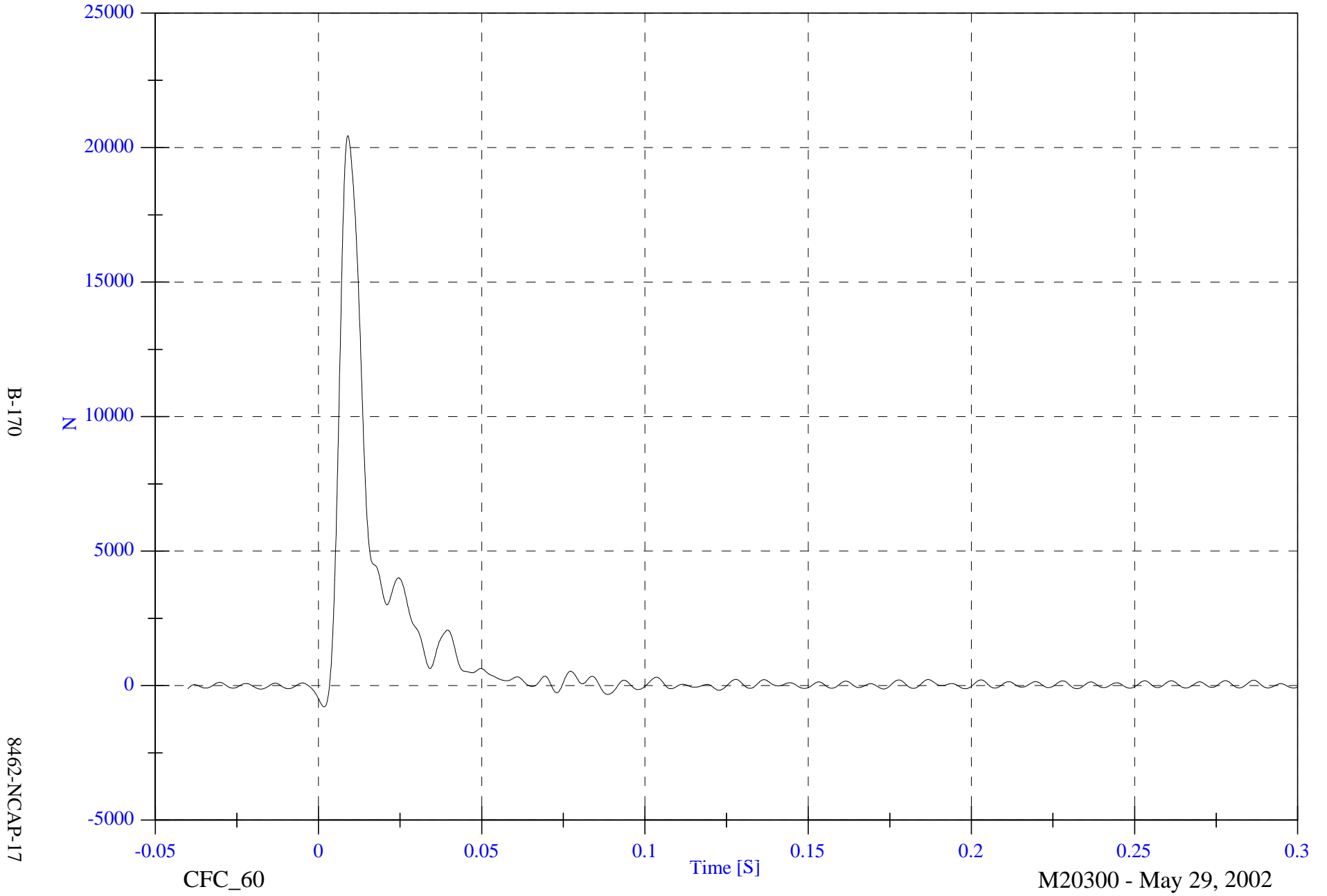


NCAP Test 17- 2002 Dodge Dakota

Barrier Load Cell D7 Fx

Max: 20441.7 [N] at 0.009 [S]

Min: -792.1 [N] at 0.002 [S]



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8462-NCAP-17

CFC\_60

Time [S]

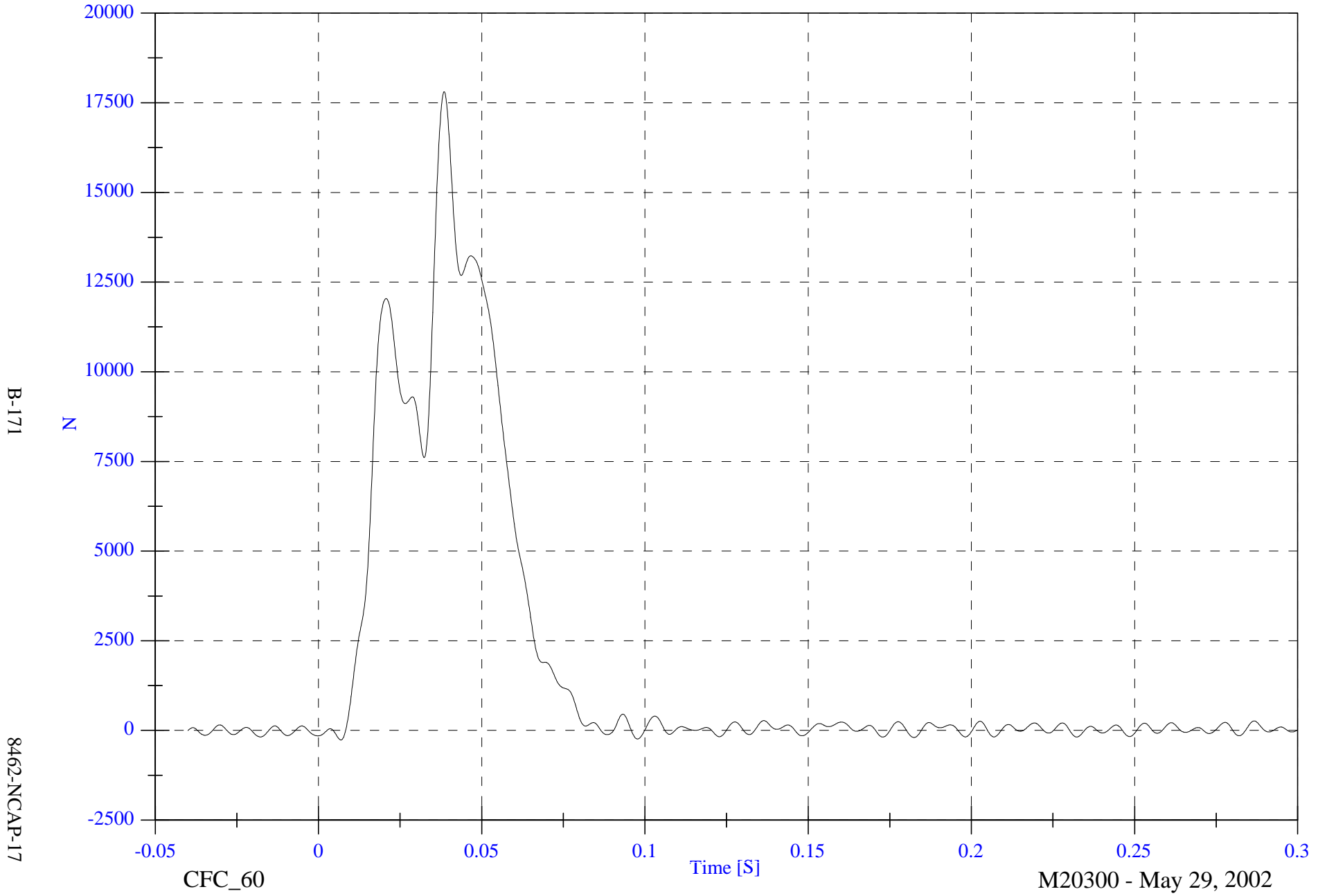
M20300 - May 29, 2002

NCAP Test 17- 2002 Dodge Dakota

Barrier Load Cell D8 Fx

Max: 17806.4 [N] at 0.038 [S]

Min: -267.0 [N] at 0.007 [S]



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8462-NCAP-17

CFC\_60

Time [S]

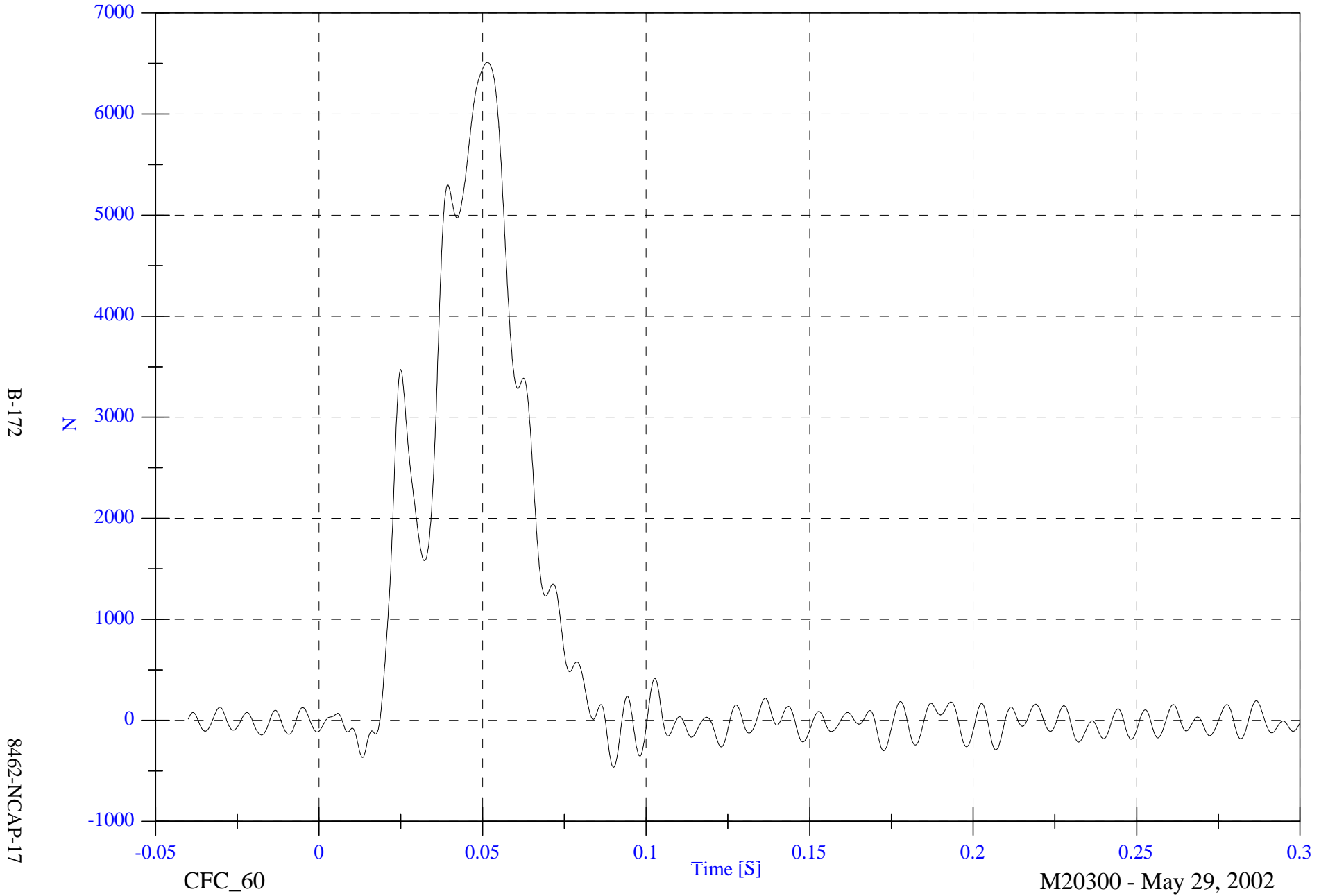
M20300 - May 29, 2002

NCAP Test 17- 2002 Dodge Dakota

Barrier Load Cell D9 Fx

Max: 6510.1 [N] at 0.051 [S]

Min: -464.0 [N] at 0.090 [S]



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8462-NCAP-17

CFC\_60

Time [S]

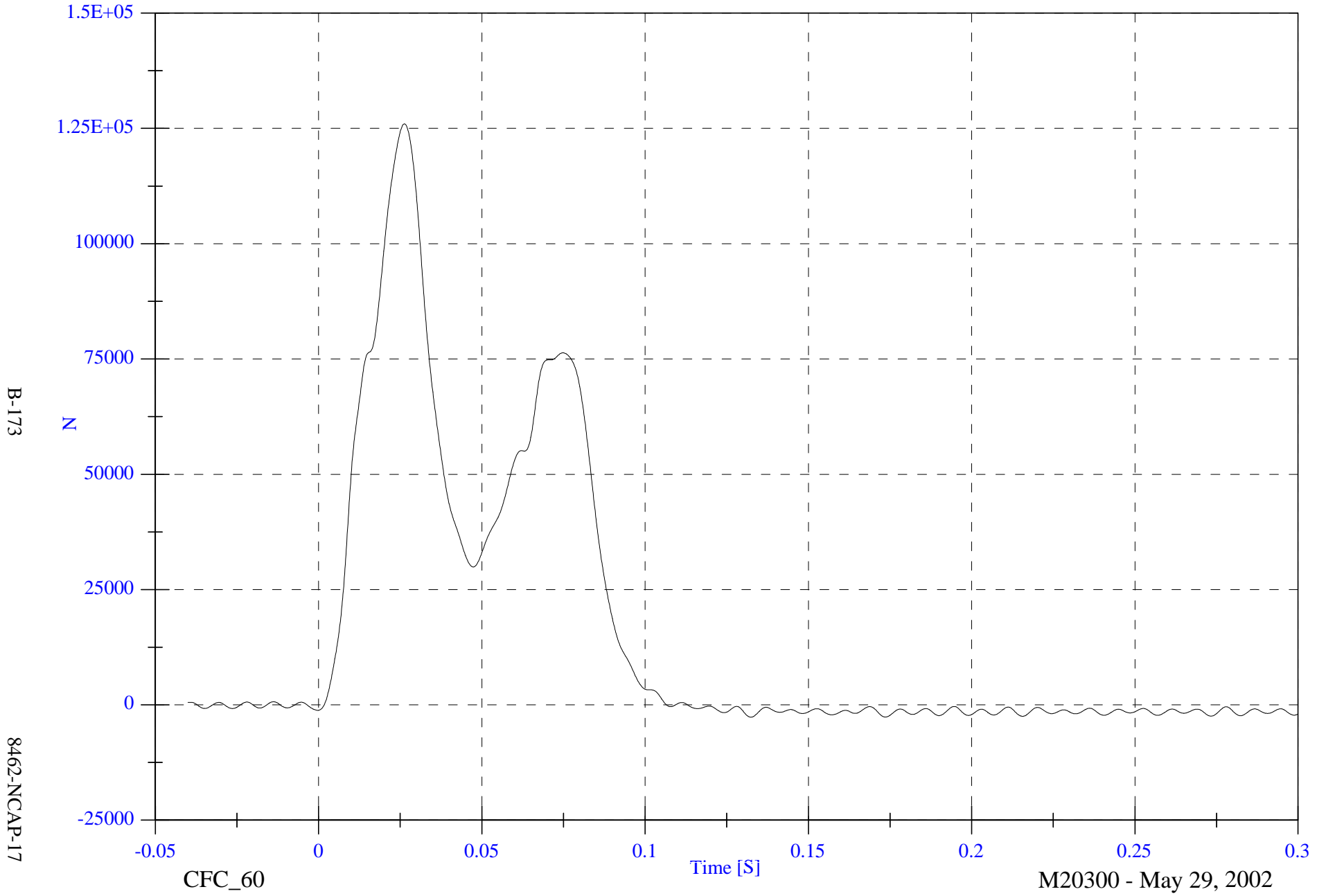
M20300 - May 29, 2002

NCAP Test 17- 2002 Dodge Dakota

Max: 125988.9 [N] at 0.026 [S]

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

Min: -2683.4 [N] at 0.132 [S]



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8462-NCAP-17

CFC\_60

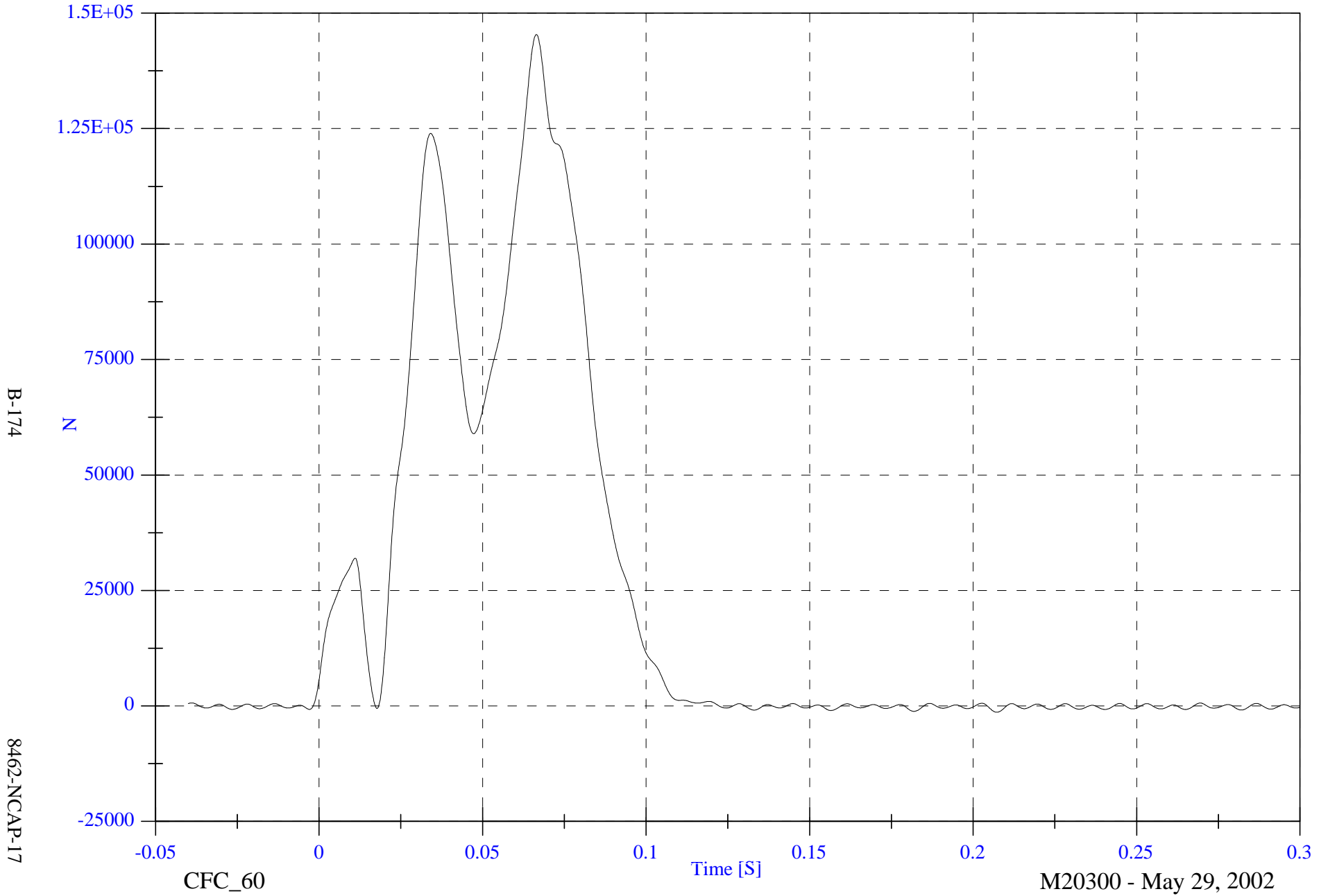
M20300 - May 29, 2002

NCAP Test 17- 2002 Dodge Dakota

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

Max: 145355.1 [N] at 0.066 [S]

Min: -1357.5 [N] at 0.207 [S]

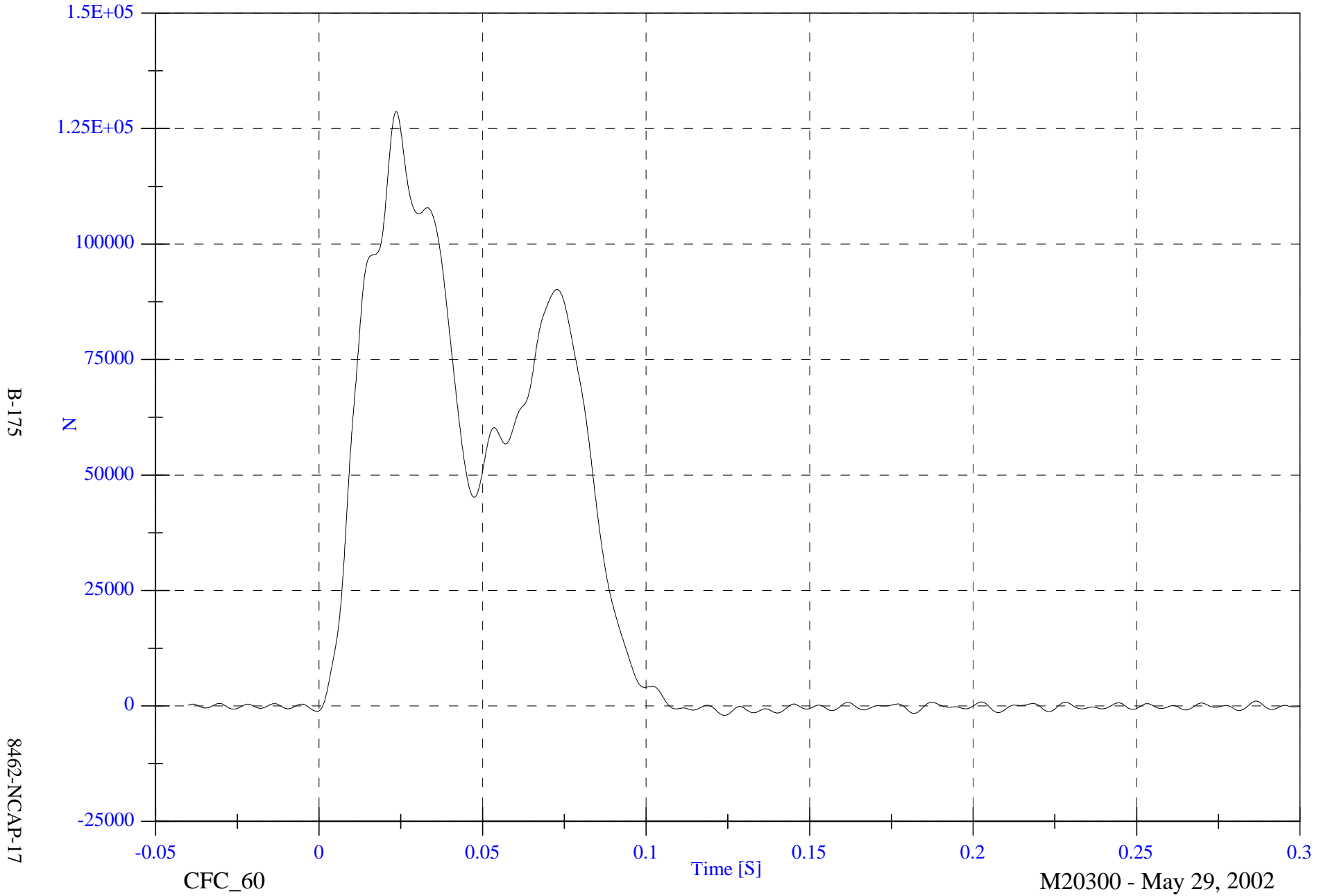


NCAP Test 17- 2002 Dodge Dakota

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

Max: 128689.9 [N] at 0.024 [S]

Min: -2041.4 [N] at 0.124 [S]

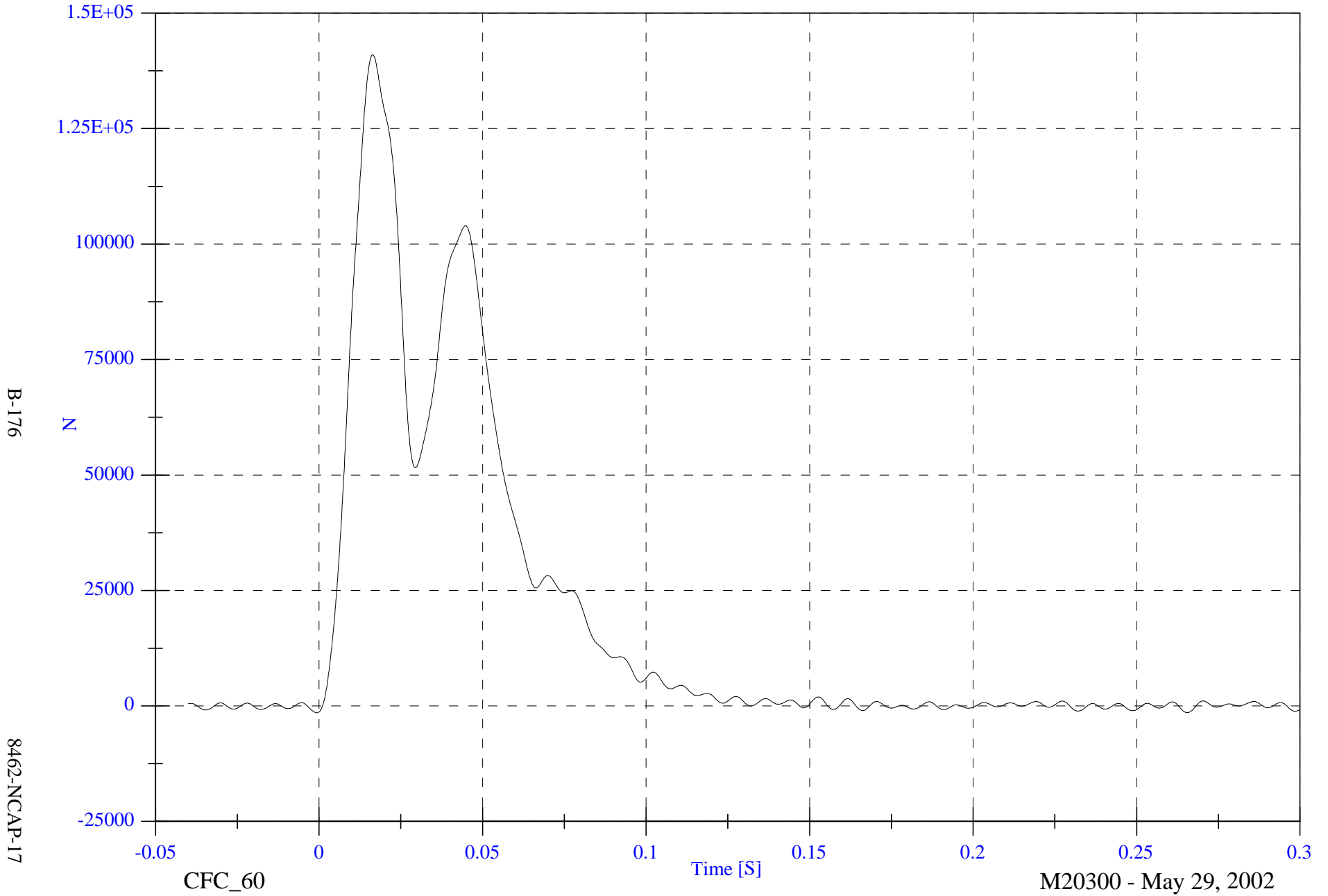


NCAP Test 17- 2002 Dodge Dakota

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

Max: 140997.3 [N] at 0.016 [S]

Min: -1482.7 [N] at -0.001 [S]



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8462-NCAP-17

CFC\_60

Time [S]

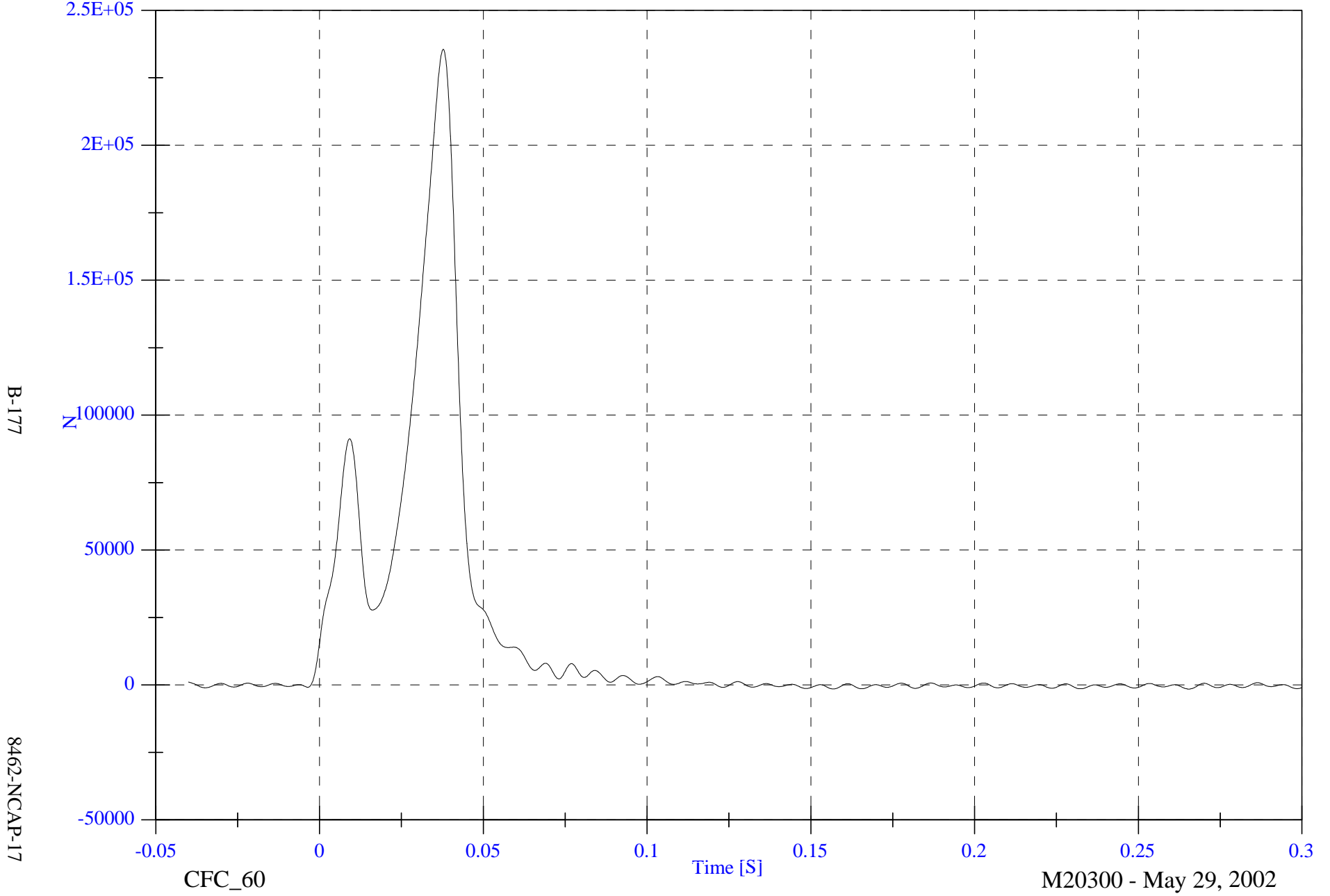
M20300 - May 29, 2002

NCAP Test 17- 2002 Dodge Dakota

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

Max: 235558.4 [N] at 0.038 [S]

Min: -1512.2 [N] at 0.265 [S]



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8462-NCAP-17

CFC\_60

Time [S]

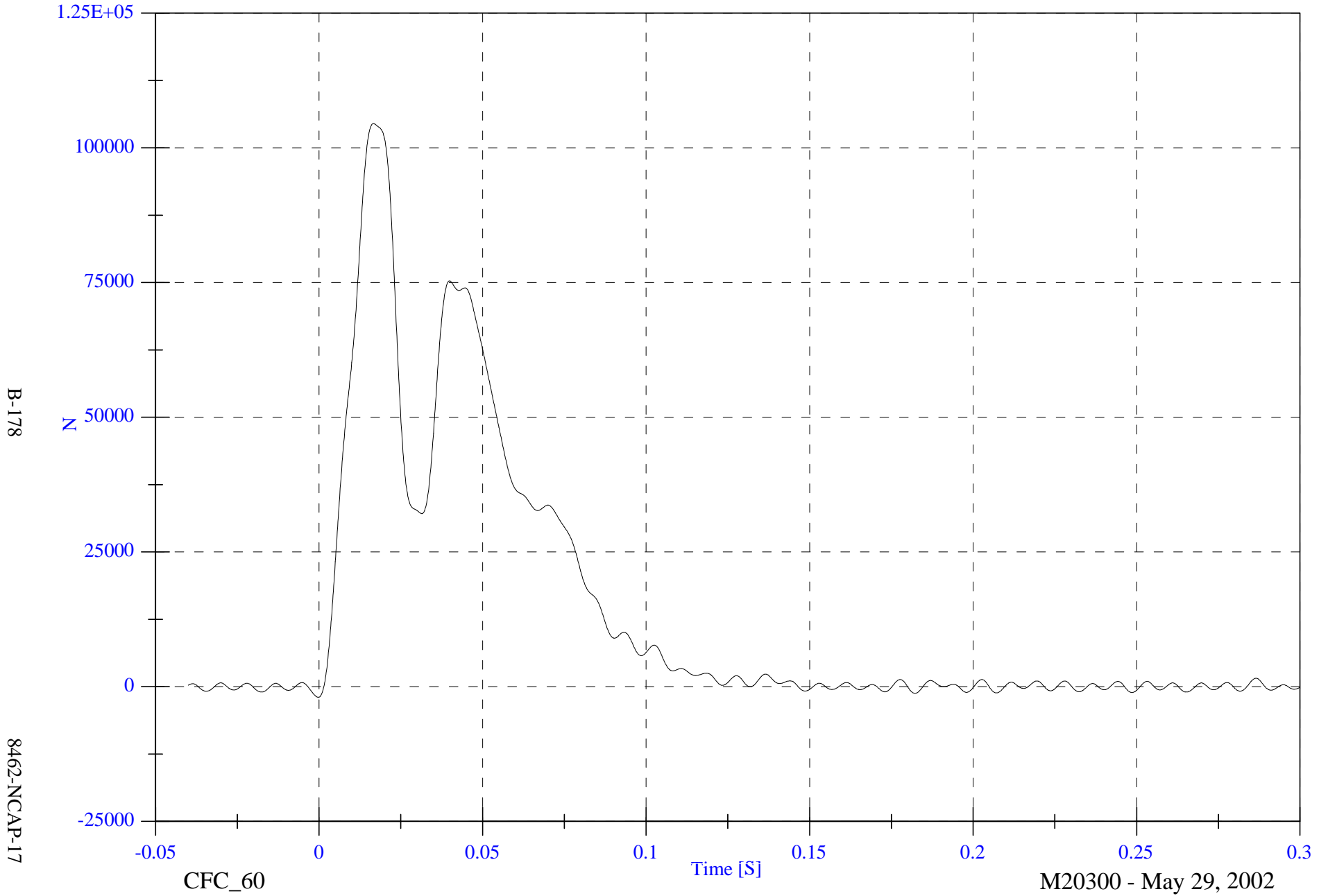
M20300 - May 29, 2002

NCAP Test 17- 2002 Dodge Dakota

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

Max: 104486.4 [N] at 0.017 [S]

Min: -1964.4 [N] at -0.000 [S]

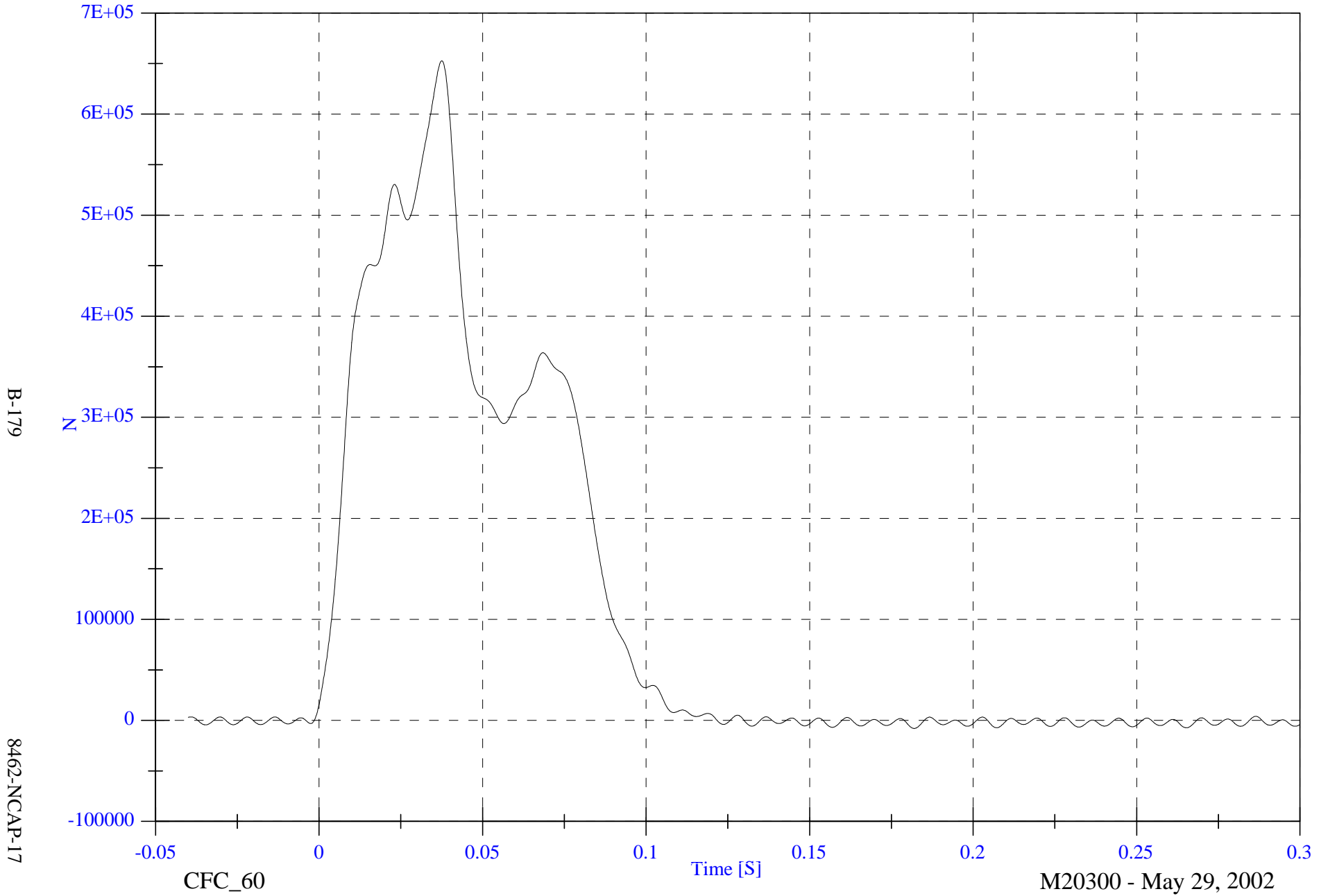


NCAP Test 17- 2002 Dodge Dakota

Max: 652839.9 [N] at 0.037 [S]

Total Load Cell Sum (All 6 Groups)

Min: -7975.4 [N] at 0.182 [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:

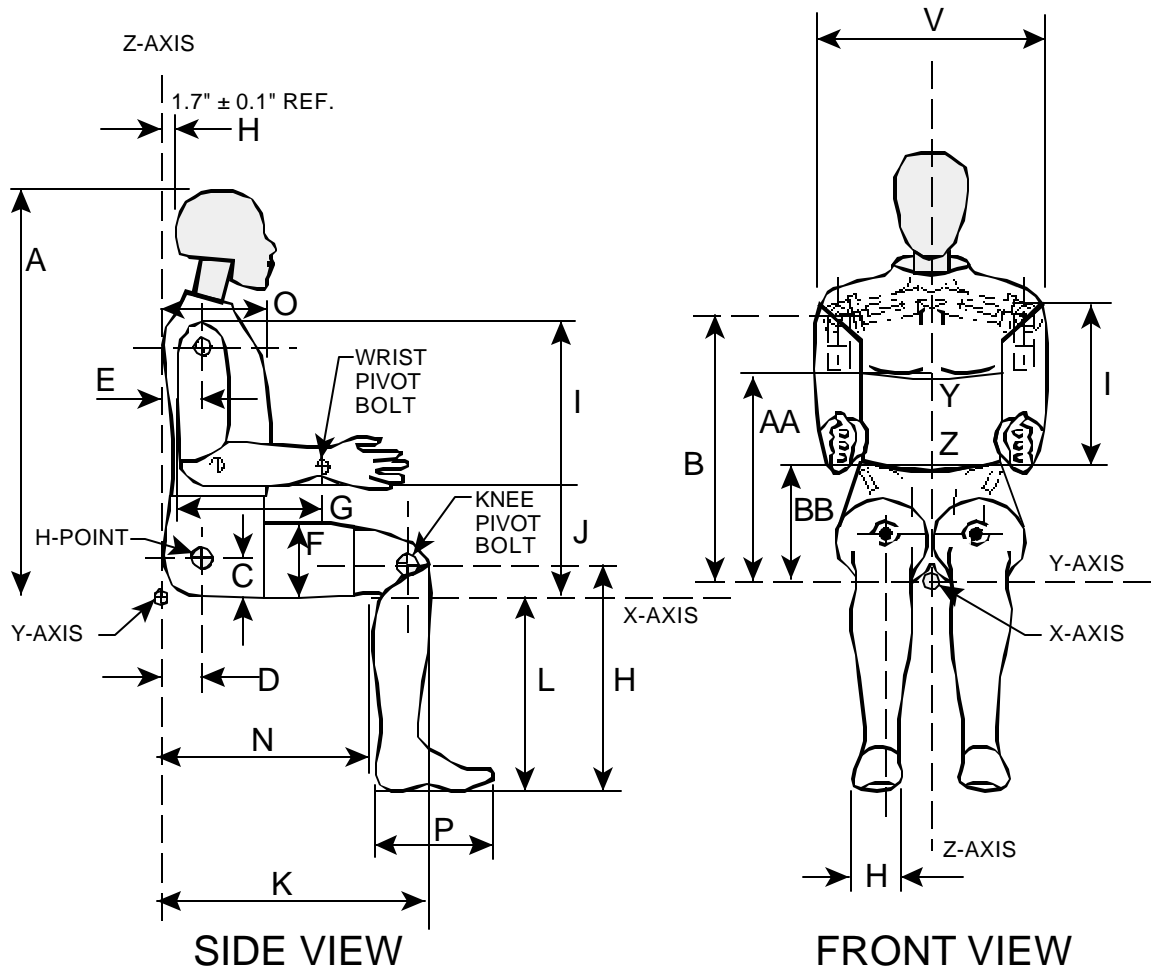
<u>Position No./Location</u>	<u>Serial No.</u>	<u>Completion Date</u>
#1/Driver	150	May 16, 2002
#2/Right Front Passenger	245	May 16, 2002

#### Electronic Test Equipment

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

DUMMY CONFIGURATION DIMENSIONS

EXTERNAL DIMENSIONS SPECIFICATIONS



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

PART 572E  
HEAD DROP TEST

Dummy Serial Number 150  
Sequential Test Number 1  
Date May 9, 2002  
Workfile 150H

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	66-78 Deg F	70.0
Relative Humidity	10% - 70%	33.0
Peak Resultant Acceleration	225-275 G's	237.55
Peak Lateral Acceleration	15 G's Max	5.23
Is Acceleration Curve Unimodal?	YES	YES

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572E  
NECK FLEXION TEST

Dummy Serial Number	150	
Sequential Test Number	1	
Date	May 15, 2002	6 Axis Neck Transducer
Workfile	150Flx	

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	69-72 Deg F	71.0
Relative Humidity	10% - 70%	42.0
Impact Velocity	22.60 - 23.40 Ft/s	23.11
Pendulum Deceleration    10 ms	22.50 - 27.50 G's	24.97
20 ms	17.60 - 22.60 G's	21.83
30 ms	12.50 - 18.50 G's	17.03
Max Pendulum G's Above 30 ms	29 G's Max	17.03
Deceleration - Time Curve Decay Time to 5 G's	34 - 42 ms	39.40
D Plane Rotation            Max	64 - 78 Deg	66.36
Time	57 - 64 ms	58.50
Moment About Occipital    Max	65 - 80 Ft-Lbs	77.07
Condyle                        Time	47 - 58 ms	51.80
Rotation Angle - Time Curve Decay Time to Zero	113 - 128 ms	113.30
Positive Moment - Time Curve Decay Time to Zero	97 - 107 ms	98.50

Remarks:

Laboratory Technician: \_\_\_\_\_ B. Swiecicki

PART 572E  
NECK EXTENSION TEST

Dummy Serial Number	150	
Sequential Test Number	1	
Date	May 14, 2002	6 Axis Neck Transducer
Workfile	150Ext	

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	69-72 Deg F	70.0
Relative Humidity	10% - 70%	42.0
Impact Velocity	19.50 - 20.30 Ft/s	19.84
Pendulum Deceleration	10 ms	17.20 - 21.20 G's
	20 ms	14.00 - 19.00 G's
	30 ms	11.00 - 16.00 G's
Max Pendulum G's Above 30 ms	22 G's Max	14.20
Deceleration - Time Curve Decay Time to 5 G's	38 - 46 ms	40.10
D Plane Rotation	Max	81 - 106 Deg
	Time	72 - 82 ms
Moment About Occipital Condyle	Max	-59.0 - -39.0 Ft-Lbs
	Time	65 - 79 ms
Rotation Angle - Time Curve Decay Time to Zero	147 - 174 ms	156.50
Positive Moment - Time Curve Decay Time to Zero	120 - 148 ms	145.70

Remarks:

Laboratory Technician:

B. Swiecicki

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PART 572E  
THORAX IMPACT TEST

Dummy Serial Number 150  
Sequential Test Number 1  
Date May 16, 2002  
Workfile 150T

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	69-72 Deg F	71.0
Relative Humidity	10% - 70%	36.0
Pendulum Velocity	21.6 - 22.4 Ft/s	22.01
Maximum Deflection	2.50 - 2.86 in	2.58
Maximum Resistive Force	1160 - 1325 Lbs	1297.31
Internal Hysteresis	69 - 85 %	72.32

Remarks:

Laboratory Technician:

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

PART 572E  
KNEE IMPACT TEST

Dummy Serial Number            150  
 Sequential Test Number        1  
 Date                                May 16, 2002  
 Workfile                         150LF/150RF

TEST PARAMETER	SPECIFICATION	TEST RESULTS
<b>LEFT KNEE</b>		
Temperature	66 - 78 Deg F	71.0
Relative Humidity	10% - 70%	41.0
Probe Velocity	6.8 - 7.0 Ft/s	7.00
Peak Knee Impact Force	1060 - 1300 Lbs	1166.09
<b>RIGHT KNEE</b>		
Temperature	66 - 78 Deg F	71.0
Relative Humidity	10% - 70%	41.0
Probe Velocity	6.8 - 7.0 Ft/s	7.00
Peak Knee Impact Force	1060 - 1300 Lbs	1177.25

Remarks:

Laboratory Technician:

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

PART 572E  
EXTERNAL DIMENSIONS

Dummy Serial Number            150  
 Sequential Test Number         1  
 Date                                    May 16, 2002

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature			71
Relative Humidity			40
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	39.1
Waist Circumference	Z	32.9 - 34.1 in	34.0
Chest Depth	O	8.4 - 9.0 in	8.4
H-Point Height	C	3.3 - 3.5 in	3.4
H-Point from Backline	D	5.3 - 5.5 in	5.4
Skull Cap to Backline	H	1.6 - 1.8 in	1.7
Total Sitting Height	A	34.6 - 35.0 in	34.6
Thigh Clearance	F	5.5 - 6.1 in	5.8
Buttock Knee Length	K	22.8 - 23.8 in	23.4
Buttock Popliteal Length	N	17.8 - 18.8 in	18.5
Popliteal Height	L	16.9 - 17.9 in	17.8
Knee Pivot Height	M	19.1 - 19.7 in	19.6
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	3.7
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	8.1
Shoulder - Elbow Length	I	13.0 - 13.6 in	13.2
Back of Elbow to Wrist Pivot	G	11.4 - 12.0 in	11.5

Remarks:

Laboratory Technician:

B. Swiecicki

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PART 572E  
HEAD DROP TEST

Dummy Serial Number 245  
Sequential Test Number 1  
Date May 10, 2002  
Workfile 245H

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	66-78 Deg F	71.0
Relative Humidity	10% - 70%	40.0
Peak Resultant Acceleration	225-275 G's	264.25
Peak Lateral Acceleration	15 G's Max	13.14
Is Acceleration Curve Unimodal?	YES	YES

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572E  
NECK FLEXION TEST

Dummy Serial Number	245	
Sequential Test Number	1	
Date	May 10, 2002	6 Axis Neck Transducer
Workfile	245Flx	

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	69-72 Deg F	70.0
Relative Humidity	10% - 70%	40.0
Impact Velocity	22.60 - 23.40 Ft/s	23.05
Pendulum Deceleration    10 ms	22.50 - 27.50 G's	25.02
20 ms	17.60 - 22.60 G's	21.81
30 ms	12.50 - 18.50 G's	16.65
Max Pendulum G's Above 30 ms	29 G's Max	16.65
Deceleration - Time Curve Decay Time to 5 G's	34 - 42 ms	35.90
D Plane Rotation            Max	64 - 78 Deg	73.42
Time	57 - 64 ms	62.70
Moment About Occipital    Max	65 - 80 Ft-Lbs	72.75
Condyle                        Time	47 - 58 ms	51.0
Rotation Angle - Time Curve Decay Time to Zero	113 - 128 ms	122.70
Positive Moment - Time Curve Decay Time to Zero	97 - 107 ms	103.00

Remarks:

Laboratory Technician: \_\_\_\_\_ B. Swiecicki \_\_\_\_\_

PART 572E  
NECK EXTENSION TEST

Dummy Serial Number	245	
Sequential Test Number	1	
Date	May 14, 2002	6 Axis Neck Transducer
Workfile	245Ext	

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	69-72 Deg F	69.0
Relative Humidity	10% - 70%	41.0
Impact Velocity	19.50 - 20.30 Ft/s	19.84
Pendulum Deceleration	10 ms	17.20 - 21.20 G's
	20 ms	14.00 - 19.00 G's
	30 ms	11.00 - 16.00 G's
Max Pendulum G's Above 30 ms	22 G's Max	13.52
Deceleration - Time Curve Decay Time to 5 G's	38 - 46 ms	39.80
D Plane Rotation	Max	81 - 106 Deg
	Time	72 - 82 ms
Moment About Occipital Condyle	Max	-59.0 - -39.0 Ft-Lbs
	Time	65 - 79 ms
Rotation Angle - Time Curve Decay Time to Zero	147 - 174 ms	164.60
Positive Moment - Time Curve Decay Time to Zero	120 - 148 ms	144.20

Remarks:

Laboratory Technician:

B. Swiecicki

---

PART 572E  
THORAX IMPACT TEST

Dummy Serial Number 245  
Sequential Test Number 1  
Date May 16, 2002  
Workfile 245T

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	69-72 Deg F	70.0
Relative Humidity	10% - 70%	35.0
Pendulum Velocity	21.6 - 22.4 Ft/s	22.12
Maximum Deflection	2.50 - 2.86 in	2.54
Maximum Resistive Force	1160 - 1325 Lbs	1266.06
Internal Hysteresis	69 - 85 %	73.50

Remarks:

Laboratory Technician:

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



PART 572E  
EXTERNAL DIMENSIONS

Dummy Serial Number            245  
 Sequential Test Number        1  
 Date                                    May 16, 2002

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature			71
Relative Humidity			40
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	33.8
Chest Depth	O	8.4 - 9.0 in	8.4
H-Point Height	C	3.3 - 3.5 in	3.4
H-Point from Backline	D	5.3 - 5.5 in	5.4
Skull Cap to Backline	H	1.6 - 1.8 in	1.7
Total Sitting Height	A	34.6 - 35.0 in	34.7
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	18.5
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

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## **APPENDIX D**

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

INSTRUMENT CALIBRATION FOR DRIVER DUMMY  
(Six Month Calibration Minimum)

DRIVER DUMMY (S/N 150)		Manufacturer	Serial #	Calibration	
				Last	Next
Head 9 Array	X Arm Y	ENDEVCO	AC-P17531	25-Mar-02	25-Sep-02
	X Arm Z	ENDEVCO	AC-P14965	25-Mar-02	25-Sep-02
	Y Arm X	ENDEVCO	AC-P17563	25-Mar-02	25-Sep-02
	Y Arm Z	ENDEVCO	AC-P18551	25-Mar-02	25-Sep-02
	Z Arm X	ENDEVCO	AC-P17539	25-Mar-02	25-Sep-02
	Z Arm Y	ENDEVCO	AC-P18718	25-Mar-02	25-Sep-02
Head	X	ENDEVCO	AC-P16832	26-Mar-02	26-Sep-02
	Y	ENDEVCO	AC-P16591	26-Mar-02	26-Sep-02
	Z	ENDEVCO	AC-P16286	26-Mar-02	26-Sep-02
Head	X (R)	ENDEVCO	AC-P17141	26-Mar-02	26-Sep-02
	Y (R)	ENDEVCO	AC-P17242	26-Mar-02	26-Sep-02
	Z (R)	ENDEVCO	AC-P17152	26-Mar-02	26-Sep-02
Neck Load Cell	X	DENTON	LC-269Fx	17-Jan-02	17-Jul-02
	Y	DENTON	LC-269Fy	17-Jan-02	17-Jul-02
	Z	DENTON	LC-269Fz	17-Jan-02	17-Jul-02
Neck Moment	X	DENTON	LC-269Mx	17-Jan-02	17-Jul-02
	Y	DENTON	LC-269My	17-Jan-02	17-Jul-02
	Z	DENTON	LC-269Mz	17-Jan-02	17-Jul-02
Chest	X	ENDEVCO	AC-P17235	04-Apr-02	04-Oct-02
	Y	ENDEVCO	AC-P14393	04-Apr-02	04-Oct-02
	Z	ENDEVCO	AC-P17285	04-Apr-02	04-Oct-02
Chest	X (R)	ENDEVCO	AC-P16863	04-Apr-02	04-Oct-02
	Y (R)	ENDEVCO	AC-P17248	04-Apr-02	04-Oct-02
	Z (R)	ENDEVCO	AC-P17283	04-Apr-02	04-Oct-02
Chest Deflection	X	SERVO	DS-150	22-Mar-02	22-Sep-02
Pelvic	X	ENDEVCO	AC-J30041	25-Mar-02	25-Sep-02
	Y	ENDEVCO	AC-P13355	25-Mar-02	25-Sep-02
	Z	ENDEVCO	AC-P13329	25-Mar-02	25-Sep-02

INSTRUMENT CALIBRATION FOR DRIVER DUMMY  
(Six Month Calibration Minimum)

DRIVER DUMMY (S/N 150)	Manufacturer	Serial #	Calibration		
			Last	Next	
Left Femur Load Cell	Fz	GSE	LC-418	24-Jan-02	24-Jul-02
Right Femur Load Cell	Fz	GSE	LC-419	24-Jan-02	24-Jul-02
Left Upper Tibia	Mx	DENTON	LC-265Mx	16-May-02	16-Nov-02
	My	DENTON	LC-265My	16-May-02	16-Nov-02
Left Lower Tibia	Fz	DENTON	LC-178Fz	16-May-02	16-Nov-02
	Mx	DENTON	LC-178Mx	16-May-02	16-Nov-02
	My	DENTON	LC-178My	16-May-02	16-Nov-02
Right Upper Tibia	Mx	DENTON	LC-199Mx	16-May-02	16-Nov-02
	My	DENTON	LC-199My	16-May-02	16-Nov-02
Right Lower Tibia	Fz	DENTON	LC-128Fz	16-May-02	16-Nov-02
	Mx	DENTON	LC-128Mx	16-May-02	16-Nov-02
	My	DENTON	LC-128My	16-May-02	16-Nov-02
Left Foot Rear	X	ENDEVCO	AC-J19868	17-May-02	17-Nov-02
	Z	ENDEVCO	AC-AJ8C0	17-May-02	17-Nov-02
Left Foot Front	Z	ENDEVCO	AC-J34378	17-May-02	17-Nov-02
Right Foot Rear	X	ENDEVCO	AC-AJ7F6	17-May-02	17-Nov-02
	Z	ENDEVCO	AC-J27079	17-May-02	17-Nov-02
Right Foot Front	Z	ENDEVCO	AC-J23997	17-May-02	17-Nov-02

INSTRUMENT CALIBRATION FOR PASSENGER DUMMY  
(Six Month Calibration Minimum)

PASSENGER DUMMY (S/N 245)	Manufacturer	Serial #	Calibration		
			Last	Next	
Head 9 Array	X Arm Y	ENDEVCO	AC-P18558	21-Mar-02	21-Sep-02
	X Arm Z	ENDEVCO	AC-P19212	21-Mar-02	21-Sep-02
	Y Arm X	ENDEVCO	AC-P19197	21-Mar-02	21-Sep-02
	Y Arm Z	ENDEVCO	AC-P18738	21-Mar-02	21-Sep-02
	Z Arm X	ENDEVCO	AC-P19217	21-Mar-02	21-Sep-02
	Z Arm Y	ENDEVCO	AC-P18739	21-Mar-02	21-Sep-02
Head	X	ENDEVCO	AC-J32184	22-Mar-02	22-Sep-02
	Y	ENDEVCO	AC-J32185	22-Mar-02	22-Sep-02
	Z	ENDEVCO	AC-J31011	22-Mar-02	22-Sep-02
Head	X (R)	ENDEVCO	AC-J31020	24-Mar-02	24-Mar-02
	Y (R)	ENDEVCO	AC-J31101	22-Mar-02	22-Sep-02
	Z (R)	ENDEVCO	AC-J31059	22-Mar-02	22-Sep-02
Neck Load Cell	X	DENTON	LC-076Fx	17-Jan-02	17-Jul-02
	Y	DENTON	LC-076Fy	17-Jan-02	17-Jul-02
	Z	DENTON	LC-076Fz	17-Jan-02	17-Jul-02
Neck Moment	X	DENTON	LC-076Mx	17-Jan-02	17-Jul-02
	Y	DENTON	LC-076My	17-Jan-02	17-Jul-02
	Z	DENTON	LC-076Mz	17-Jan-02	17-Jul-02
Chest	X	ENDEVCO	AC-J34019	21-Mar-02	21-Sep-02
	Y	ENDEVCO	AC-J33018	21-Mar-02	21-Sep-02
	Z	ENDEVCO	AC-J32783	21-Mar-02	21-Sep-02
Chest	X (R)	ENDEVCO	AC-J31066	21-Mar-02	21-Sep-02
	Y (R)	ENDEVCO	AC-P16979	21-Mar-02	21-Sep-02
	Z (R)	ENDEVCO	AC-J31022	21-Mar-02	21-Sep-02
Chest Deflection	X	SERVO	DS-245	22-Mar-02	22-Sep-02
Pelvic	X	ENDEVCO	AC-J31034	21-Mar-02	21-Sep-02
	Y	ENDEVCO	AC-P17258	21-Mar-02	21-Sep-02
	Z	ENDEVCO	AC-J31010	21-Mar-02	21-Sep-02

INSTRUMENT CALIBRATION FOR PASSENGER DUMMY  
(Six Month Calibration Minimum)

PASSENGER DUMMY (S/N 245)	Manufacturer	Serial #	Calibration		
			Last	Next	
Left Femur Load Cell	Fz	GSE	LC-551	24-Jan-02	24-Jul-02
Right Femur Load Cell	Fz	GSE	LC-951	24-Jan-02	24-Jul-02
Left Upper Tibia	Mx	DENTON	LC-200Mx	16-May-02	16-Nov-02
	My	DENTON	LC-200My	16-May-02	16-Nov-02
Left Lower Tibia	Fz	DENTON	LC-129Fz	16-May-02	16-Nov-02
	Mx	DENTON	LC-129Mx	16-May-02	16-Nov-02
	My	DENTON	LC-129My	16-May-02	16-Nov-02
Right Upper Tibia	Mx	DENTON	LC-264Mx	16-May-02	16-Nov-02
	My	DENTON	LC-264My	16-May-02	16-Nov-02
Right Lower Tibia	Fz	DENTON	LC-177Fz	16-May-02	16-Nov-02
	Mx	DENTON	LC-177Mx	16-May-02	16-Nov-02
	My	DENTON	LC-177My	16-May-02	16-Nov-02
Left Foot Rear	X	ENDEVCO	AC-J18059	17-May-02	17-Nov-02
	Z	ENDEVCO	AC-J18662	17-May-02	17-Nov-02
Left Foot Front	Z	ENDEVCO	AC-J36176	17-May-02	17-Nov-02
Right Foot Rear	X	ENDEVCO	AC-J20084	17-May-02	17-Nov-02
	Z	ENDEVCO	AC-J28727	17-May-02	17-Nov-02
Right Foot Front	Z	ENDEVCO	AC-J18738	17-May-02	17-Nov-02

INSTRUMENT CALIBRATION FOR VEHICLE ACCELEROMETERS  
(Six Month Calibration Minimum)

	Manufacturer	Serial #	Calibration	
			Last	Next
Left Seat Rear Crossmember X	ICS	AC-X83	15-Jan-02	15-Jul-02
Right Rear Seat Crossmember X	ICS	AC-X86	25-Apr-02	25-Oct-02
Top of Engine	ENDEVCO	AC-J32965	25-Mar-02	25-Sep-02
Bottom of Engine	ENDEVCO	AC-A13883	11-Feb-02	11-Aug-02
Right Disc Brake Caliper	ENDEVCO	AC-P16665	15-Jan-02	15-Jul-02
Instrument Panel	ENDEVCO	AC-P18536	27-Feb-02	27-Aug-02
Left Disc Brake Caliper	ENDEVCO	AC-J31050	14-Feb-02	14-Aug-02
Left Seat Rear Crossmember Z	ICS	AC-D82	04-Apr-02	04-Oct-02
Right Seat Rear Crossmember Z	ICS	AC-Y13	11-Feb-02	11-Aug-02

REPORT NUMBER: CAL-02-17

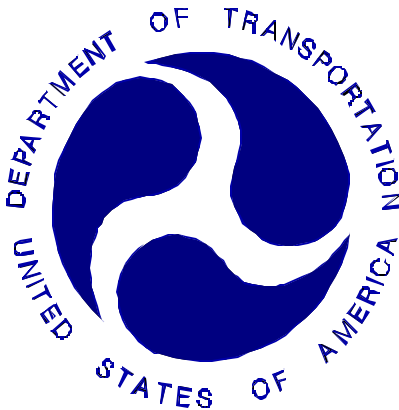
**NEW CAR ASSESSMENT PROGRAM (NCAP)  
FRONTAL BARRIER IMPACT TEST**

CENTURY BREVERRA BOOSTER  
SAFETY FRIST FORERUNNER

NHTSA NUMBER: M20300

VERIDIAN ENGINEERING TEST NUMBER: 8642-NCAP-17

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



May 24, 2002

FINAL REPORT

U. S. DEPARTMENT OF TRANSPORTATION  
National Highway Traffic Safety Administration  
Safety Performance Standards  
Office of Crashworthiness Standards  
Mail Code: NPS-10  
400 Seventh Street, SW, Room No. 5313  
Washington, DC 20590

This Final Test Report was prepared for the U.S. Department of Transportation, National Highway Traffic Safety Administration, under Contract No. DTNH22-01-D-32005. This document is disseminated under the sponsorship of the U.S. Department of Transportation in the interest of information exchange. The United States Government assumes no liability for its contents or use thereof.

Prepared By:

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Patrick G. MacDiarmid, Jr., Project Engineer

Approved By:

\_\_\_\_\_  
David J. Travale, Program Manager  
Transportation Sciences Center

Approval Date:

\_\_\_\_\_

FINAL REPORT ACCEPTANCE BY:

Accepted By:

\_\_\_\_\_

Acceptance Date:

\_\_\_\_\_

**TECHNICAL REPORT STANDARD TITLE PAGE**

1. Report No. SNCAP-CAL-02-17	2. Government Accession No.	3. Recipient's Catalog No.	
4. Title and Subtitle Final Report of Century Breverra Booster NHTSA No.: M20300		5. Report Date May 24, 2002	
		6. Performing Organization Code CAL	
7. Author(s) Patrick G. MacDiarmid, Jr., Project Engineer David J. Travale, Program Manager		8. Performing Organization Report No. 8642-NCAP-17	
9. Performing Organization Name and Address Veridian Engineering Transportation Sciences Center P.O. Box 400 Buffalo, New York 14225		10. Work Unit No.	
		11. Contract or Grant No. DTNH22-01-D-32005	
12. Sponsoring Agency Name and Address U.S. Department of Transportation National Highway Traffic Safety Administration Office of Crashworthiness Standards Mail Code: NPS-10 400 Seventh SW, Room 5313 Washington, D.C. 20590		13. Type of Report and Period Covered Final Report, May-June 2002	
		14. Sponsoring Agency Code NPS-10	
15. Supplementary Notes			
16. Abstract A frontal load cell barrier test was conducted on the subject CRS Century Breverra Boosterin and Safety First ForeRunner in accordance with the specifications of the Office of Crashworthiness Standards Test Procedure for the determination of CRS crashworthiness. This test was conducted at the Veridian Engineering Crash Test Facility in Buffalo, New York, on May 24, 2002.			
17. Key Words New Car Assessment Program (NCAP)		18. Distribution Statement <u>Copies of this report are available from:</u> National Highway Traffic Safety Administration Technical Reference Division Room 5108 (NAD-52) 400 Seventh St., S.W. Washington, D.C. 20590 Telephone No. (202) 366-4946 ATTN: Robert Hornicle	
19. Security Classification of Report UNCLASSIFIED	20. Security Classification of Page UNCLASSIFIED	21. No. of Pages	22. Price

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## SECTION 1

### PURPOSE AND SUMMARY OF TEST M20300

The purpose of this test was to obtain CRS performance data in a frontal impact NCAP condition.

The 56.17 kph NCAP frontal impact test was conducted in accordance with the Office of Crashworthiness Standards (OCS) NCAP Laboratory Test Procedure.

#### SUMMARY

Both child dummies were instrumented with head, chest, and pelvic triaxial accelerometers. In addition, chest displacement and upper and lower six axial neck force and moment load cell sensors were utilized. Position 3 was equipped with lower spine force and moment load cells as well as left and right upper and lower ASIS load cell sensors. Position 4 was also equipped with a head redundant z accelerometer.

The right rear (Position 3) child dummy (serial no. 144 ) and left rear (Position 4) child dummy (serial no. 042 ) were calibrated previous to this test. Child dummy certification information is found in section 5.

The right rear child dummy's HIC was 476.8, maximum chest deceleration over 3 ms was 55.9 g's. The left rear child dummy's HIC was 1664.8, maximum chest deceleration over 3 ms was 58.6 g's.

**SECTION 2**  
**DATA SHEET NO. 1**  
**CRASH TEST SUMMARY**

TEST DUMMY INFORMATION:

<b>DESCRIPTION</b>	<b>Position #3 CRS</b>	<b>Position #4 CRS</b>
<b>ATD Type/Serial No.</b>	Hybrid III six year old child/144	Hybrid III 3 year old child/042
<b>Restraint System:</b>	Century Breverra Booster	Safety First ForeRunner

Number of Data Channels \_\_\_\_\_ 59 \_\_\_\_\_

Number of Cameras: \_\_\_\_\_ 1 \_\_\_\_\_ Real Time

\_\_\_\_\_ 2 \_\_\_\_\_ High Speed

POST TEST DOOR OPENING

<b>DESCRIPTION</b>	<b>FRONT</b>	<b>REAR</b>
<b>Left Side Doors</b>	Closed and Latched; Operable without tools	N/A
<b>Right Side Doors</b>	Closed and Latched; Operable without tools	N/A
<b>Hatch/Other Door</b>	N/A	N/A

POST TEST SEAT DATA

<b>LOCATION</b>	<b>SEAT MOVEMENT (mm)</b>	<b>SEAT BACK FAILURE</b>
<b>P1 (Left Front)</b>	0	None
<b>P2 (Right Front)</b>	0	None
<b>P3 (Right Rear)</b>	0	None
<b>P4 (Left Rear)</b>	0	None

VISIBLE DUMMY CONTACT POINTS

	<b>Position #3 CRS</b>	<b>Position #4 CRS</b>
<b>Head Contact:</b>	The top of the head to the P2 seatback; The face to the chest	The top and the back of the head to the P1 seatback
<b>Upper Torso Contact:</b>	None	None
<b>Lower Torso Contact:</b>	None	None
<b>Left Knee Contact:</b>	P2 Seat Back	P1 Seat Back
<b>Right Knee Contact:</b>	P2 Seat Back	P1 Seat Back

**DATA SHEET NO. 2**

**CRS PARAMETER DATA**

CRS: Century Breverra Booster; Safety First ForeRunner

NHTSA No. M20300

CALCULATION OF VEHICLE'S TARGET TEST WEIGHT:

Delivered Weight of Vehicle with Maximum Fluids = 1758.0 kg (A)

AS TESTED WEIGHT OF VEHICLE (2 ATDs + 1 P572C w/ CRS + 1 P572I with CRS +CARGO + EQUIPMENT & INSTRUMENTATION):

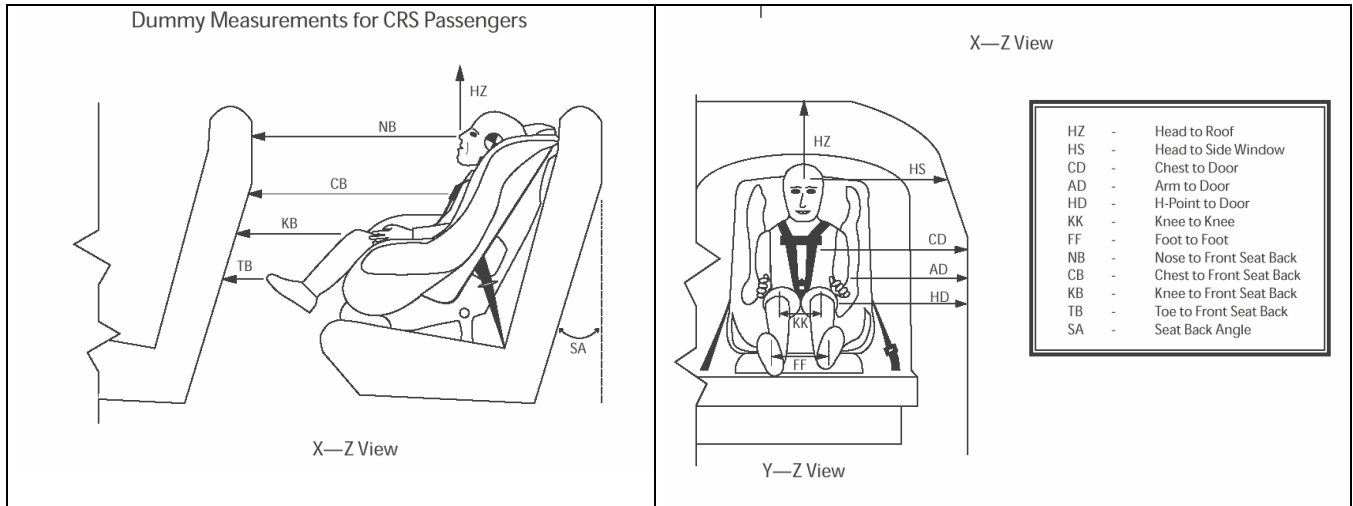
Left Front	=	<u>575.5</u>	kg	Left Rear	=	<u>449.5</u>	kg
Right Front	=	<u>581.5</u>	kg	Right Rear	=	<u>432.0</u>	kg
TOTAL FRONT	=	<u>1157.0</u>	kg	TOTAL REAR	=	<u>881.5</u>	kg
TOTAL TEST WEIGHT =		<u>2038.5</u>	kg				

DATA SHEET NO. 3

CHILD DUMMY POSITIONING IN VEHICLE

CRS: Century Breverra Booster; Safety First ForeRunner

NHTSA No. M20300



Measurement	Pre-Test (mm)		Post Test (mm)	
	P3 CRS ( 144)	P4 CRS (042)	P3 CRS ( 144)	P4 CRS (042)
SA	90°	90°	90°	90°
HS	280	408	367	408
CD	262	334	320	335
AD	93	175	161	180
HD	123	228	134	213
HZ	337	397	396	403
NB	266	283	241	270
CB	339	296	315	255
KK	93	124	117	140
FF	90	124	117	140
KB – LEFT	170	125	125	90
KB – RIGHT	160	115	135	65
TB – LEFT	116	0	40	0
TB – RIGHT	120	0	0	0

All dimensions in mm (unless noted)

P3 – Right Rear Passenger (CRS #1)

P4 – Left Rear Passenger (CRS #2)

**DATA SHEET 4**

**CHILD DUMMY INJURY CRITERIA VALUES**

CRS: Century Breverra Booster; Safety First ForeRunner

NHTSA No. M20300

DESCRIPTION	Unit	MAXIMUM VALUE							
		Position #3				Position #4			
		Pos	msec	Neg	msec	Pos	msec	Neg	msec
Head X	g	11.3	174.1	-27.2	118.8	5.8	205.4	-133.4	82.5
Head Y	g	9.0	112.7	-1.5	36.2	16.6	82.4	-5.9	136.2
Head Z	g	65.1	74.5	-0.1	-49.2	127.7	82.3	-25.1	133.0
Head Resultant	g	67.5	65.3	0.1	-44.9	184.1	82.4	0.0	-49.5
Head RZ	g	-	-	-	-	230.3	82.3	-7.4	110.0
Upper Neck Fx	N	89.7	298.4	-587.3	65.9	783.3	75.2	-31.7	157.7
Upper Neck Fy	N	294.8	80.3	-20.4	178.8	45.6	299.7	-120.4	125.9
Upper Neck Fz	N	2031.4	74.5	-3.6	-49.9	2188.3	81.6	-142.5	136.5
Upper Neck F Resultant	N	2079.4	74.5	1.4	-42.5	2272.8	81.6	1.0	-49.8
Upper Neck Mx	N-m	13.1	87.7	-3.8	168.8	14.5	94.2	-5.2	123.6
Upper Neck My	N-m	16.4	111.9	-34.2	60.4	5.4	137.8	-26.6	73.0
Upper Neck Mz	N-m	7.9	77.6	-8.1	126.8	8.3	259.6	-1.3	63.3
Upper Neck M Resultant	N-m	34.3	60.4	0.1	-37.1	26.6	73.0	0.1	-41.9
Lower Neck Fx	N	1527.4	81.2	-156.9	299.0	1051.6	82.0	-90.2	136.4
Lower Neck Fy	N	333.1	75.6	-256.1	80.1	209.5	98.0	-131.8	124.6
Lower Neck Fz	N	7456.7	132.7	-714.4	117.2	1911.1	80.8	-516.2	133.1
Lower Neck F Resultant	N	7470.3	132.7	1.3	-44.6	2170.4	80.8	0.7	-49.4
Lower Neck Mx	N-m	46.8	93.1	-7.1	43.7	14.8	145.0	-6.5	299.9
Lower Neck My	N-m	184.3	117.7	-28.8	299.7	85.2	85.6	-9.1	193.6
Lower Neck Mz	N-m	20.8	75.4	-16.0	112.6	10.5	230.7	-11.1	136.8
Lower Neck M Resultant	N-m	186.4	117.7	0.4	-41.5	85.6	85.6	0.1	20.0
Chest X	g	2.2	199.1	-54.9	63.0	26.5	132.0	-76.8	83.5
Chest Y	g	13.7	82.9	-2.4	62.9	5.7	99.6	-7.8	122.2
Chest Z	g	14.3	60.6	-18.6	108.9	23.2	83.1	-20.9	103.6
Chest Resultant	g	56.4	59.4	0.0	-47.9	79.9	83.5	0.0	-25.2
Chest Displacement	g	*	*	*	*	0.4	174.8	-15.8	135.7

\* Data Clipped

**DATA SHEET 4**

**CHILD DUMMY INJURY CRITERIA VALUES (CONTINUED)**

CRS: Century Breverra Booster; Safety First ForeRunner

NHTSA No. M20300

DESCRIPTION	Unit	MAXIMUM VALUE							
		Position #3				Position #4			
		Pos	msec	Neg	msec	Pos	msec	Neg	msec
Lower Spine Fx	N	1126.5	112.9	-825.4	56.1	-	-	-	-
Lower Spine Fy	N	565.4	81.7	-33.5	224.6	-	-	-	-
Lower Spine Fz	N	1684.0	55.7	-1.2	-49.8	-	-	-	-
Lower Spine F Resultant	N	1887.3	55.7	2.0	-48.1	-	-	-	-
Lower Spine Mx	N-m	45.5	81.5	-0.7	120.2	-	-	-	-
Lower Spine My	N-m	26.0	56.9	-29.0	291.9	-	-	-	-
Lower Spine Mz	N-m	3.8	48.3	-15.1	80.8	-	-	-	-
Lower Spine M Resultant	N-m	51.4	81.5	0.0	-45.6	-	-	-	-
Pelvic X	g	5.8	188.6	-54.7	61.6	52.5	52.7	-32.8	116.4
Pelvic Y	g	*	*	*	*	13.1	135.0	-16.8	165.7
Pelvic Z	g	9.6	60.4	-19.6	103.9	15.1	83.8	-27.8	71.7
Pelvic Resultant	g	118.2	57.0	0.0	-49.8	55.4	52.8	0.0	-25.8
Left Upper ASIS Fz	N	167.7	104.1	-386.3	56.0	-	-	-	-
Left Lower ASIS Fz	N	1.0	-8.1	-1593.2	59.1	-	-	-	-
Right Upper ASIS Fz	N	269.7	115.0	-400.7	58.0	-	-	-	-
Right Lower ASIS Fz	N	0.1	-49.2	-1170.8	59.1	-	-	-	-
Lap Belt Load	N	5673.6	57.9	-4.7	-50.0	3346.3	71.4	-82.6	145.2

\*Questionable Data – Loose Connector



**DATA SHEET NO. 5**

**CRS PERFORMANCE DATA**

CRS: Century Breverra Booster; Safety First ForeRunner

NHTSA No. M20300

		MAXIMUM VALUE			
DESCRIPTION	Unit	Positive	Time (ms)	Negative	Time (ms)
P3 CRS X	g	6.8	162.8	-40.8	63.4
P4 CRS X	g	38.5	111.4	-64.9	60.1

**DATA SHEET NO. 5**

**CRS PERFORMANCE DATA (CONTINUED)**

CRS: Century Breverra Booster; Safety First ForeRunner

NHTSA No. M20300

**POSITION #3 CRS POST-TEST INSPECTION (Serial No. NCAP Sample)**

<b>LOCATION</b>	<b>DAMAGE</b>	<b>REMARKS</b>
Upper Tether Strap	N/A	N/A
Upper Tether Buckle	N/A	N/A
Upper Tether Hook	N/A	N/A
Vehicle Upper Tether Anchor	N/A	N/A
Lower Anchor Strap	N/A	N/A
Lower Anchor Buckle	N/A	N/A
Lower Anchor Hooks	N/A	N/A
Vehicle Lower CRS Anchors	N/A	N/A
Five Point Harness Connections	N/A	N/A
Cracks on CRS	No	None
Fabric Tears on CRS	No	None
Vehicle Seat Structure	No	None
Vehicle Seat Fabric Tears	No	None
Child Dummy	No	None

**POSITION #4 CRS POST-TEST INSPECTION (Serial No. 02-925-BRD)**

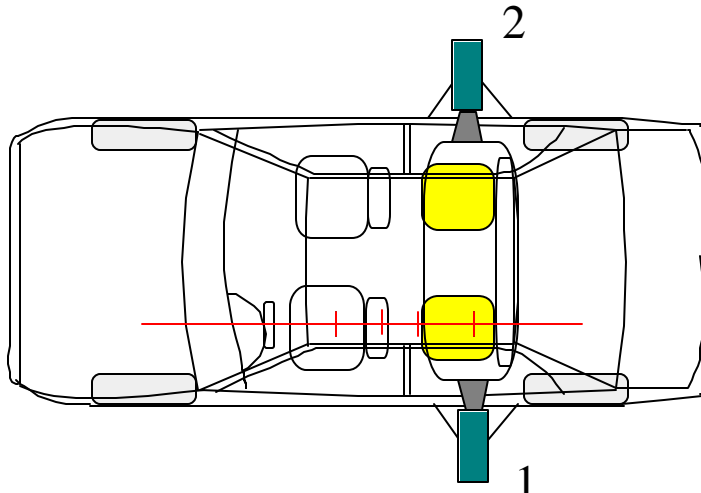
<b>LOCATION</b>	<b>DAMAGE</b>	<b>REMARKS</b>
Upper Tether Strap	No	None
Upper Tether Buckle	No	None
Upper Tether Hook	No	None
Vehicle Upper Tether Anchor	No	None
Lower Anchor Strap	N/A	N/A
Lower Anchor Buckle	N/A	N/A
Lower Anchor Hooks	N/A	N/A
Vehicle Lower CRS Anchors	N/A	N/A
Five Point Harness Connections	No	None
Cracks on CRS	No	None
Fabric Tears on CRS	No	None
Vehicle Seat Structure	No	None
Vehicle Seat Fabric Tears	No	None
Child Dummy	No	None

**DATA SHEET NO. 6**

**CRS CAMERA DATA**

CRS: Century Breverra Booster; Safety First ForeRunner

NHTSA No. M20300



Camera No.	View	Coordinates (millimeters)			Angle (deg.)	Lens (mm)	Film Speed (fps)
		X*	Y*	Z*			
1	Left side CRS lateral view	2955	2812	2539	-23	25	500
2	Right side CRS lateral view	2961	2717	2540	-24	25	500

\* Reference (from point of impact); all measurements accurate to within  $\pm 6$  mm.

- X = + Forward
- Y = + To Right
- Z = + Down

**SECTION 3**

**PHOTOGRAPHS**

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Figure 3-1 CLOSE-UP VIEW OF POSITION 3 CRS LABEL



Figure 3-2 PRE-TEST FRONTAL VIEW OF POSITION 3 CRS



Figure 3-3 POST-TEST FRONTAL VIEW OF POSITION 3 CRS



Figure 3-4 PRE-TEST REAR VIEW OF POSITION 3 CRS



Figure 3-5 POST-TEST REAR VIEW OF POSITION 3 CRS



Figure 3-6 PRE-TEST LEFT SIDE VIEW OF POSITION 3 CRS



Figure 3-7 POST-TEST LEFT SIDE VIEW OF POSITION 3 CRS



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8642-NCAP-17

Figure 3-8 PRE-TEST RIGHT SIDE VIEW OF POSITION 3 CRS



Figure 3-9 POST-TEST RIGHT SIDE VIEW OF POSITION 3 CRS

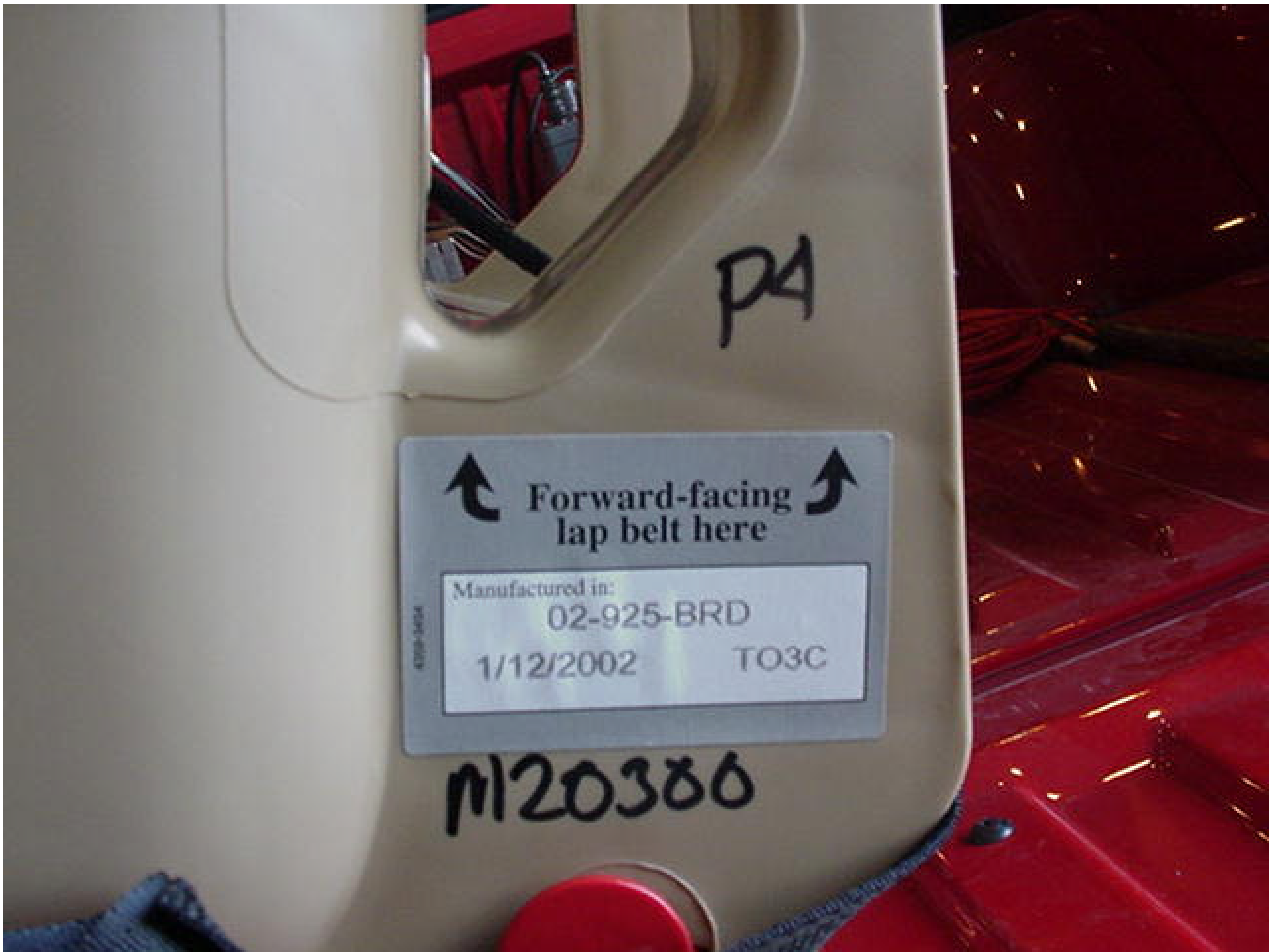


Figure 3-10 CLOSE-UP VIEW OF POSITION 4 CRS LABEL



Figure 3-11 PRE-TEST FRONTAL VIEW OF POSITION 4 CRS



Figure 3-12 POST-TEST FRONTAL VIEW OF POSITION 4 CRS



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Figure 3-15 PRE-TEST LEFT SIDE VIEW OF POSITION 4 CRS



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Figure 3-22 POST-TEST POSITION 4 LEFT SIDE VIEW



Figure 3-23 PRE-TEST POSITION 3 RIGHT SIDE VIEW



Figure 3-24 POST-TEST POSITION 3 RIGHT SIDE VIEW



Figure 3-25 PRE-TEST POSITION 4 RIGHT SIDE VIEW



Figure 3-26 POST-TEST POSITION 4 RIGHT SIDE VIEW



Figure 3-27 PRE-TEST POSITION 3 FRONT VIEW



Figure 3-28 POST-TEST POSITION 3 FRONT VIEW



Figure 3-29 PRE-TEST POSITION 4 FRONT VIEW



Figure 3-30 POST-TEST POSITION 4 FRONT VIEW

## **SECTION 4**

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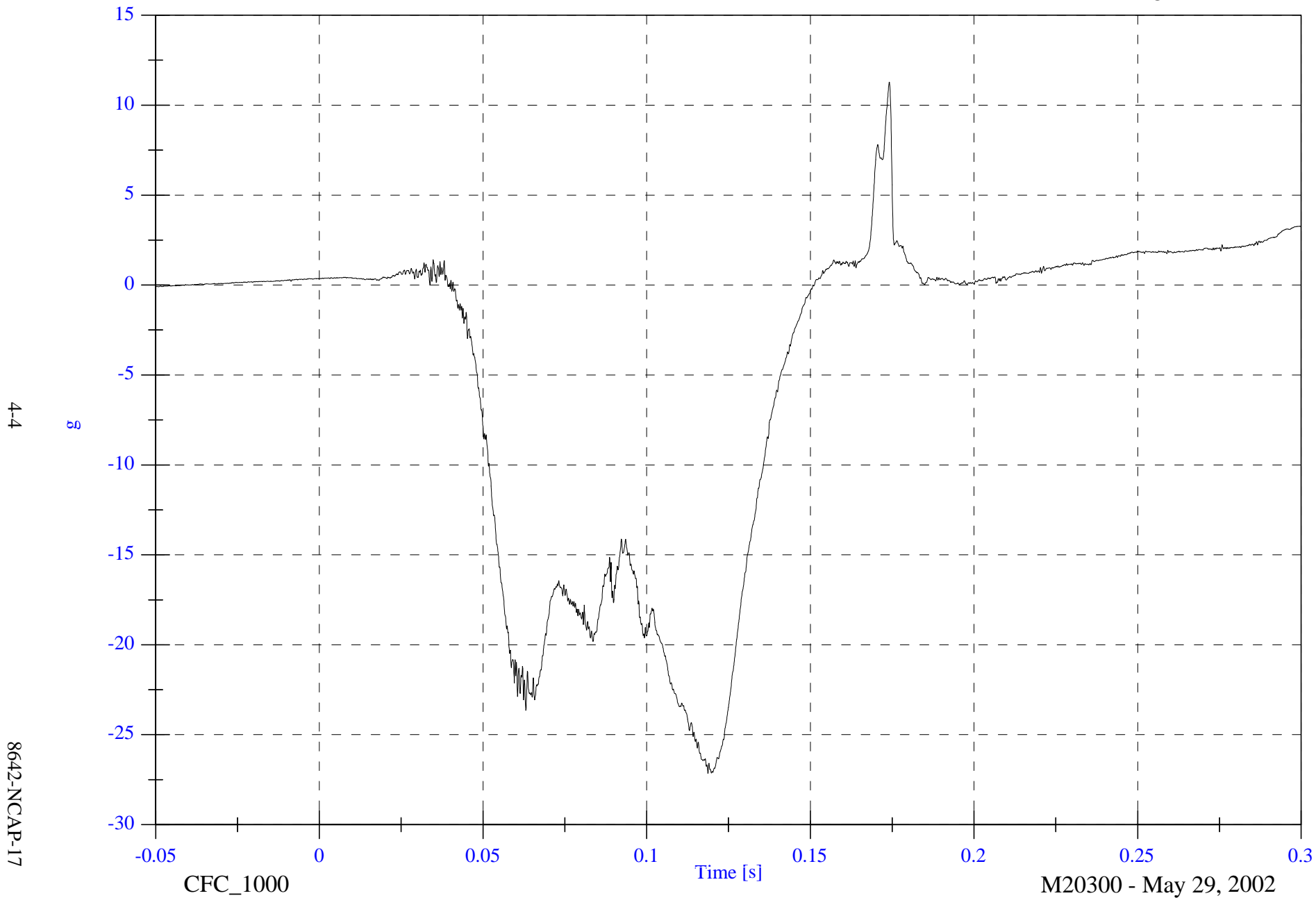
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76	P3 Child Seat x Displacement [mm, CFC_180]	4-79
77	P4 Child Seat x [g, CFC_60]	4-80
78	P4 Child Seat x Velocity [kph, CFC_180]	4-81
79	P4 Child Seat x Displacement [mm, CFC_180]	4-82

2002 NCAP Test 17 2002 Dodge Dakota

Max: 11.3 [g] at 0.174 [s]

Min: -27.2 [g] at 0.119 [s]

P3 Head x



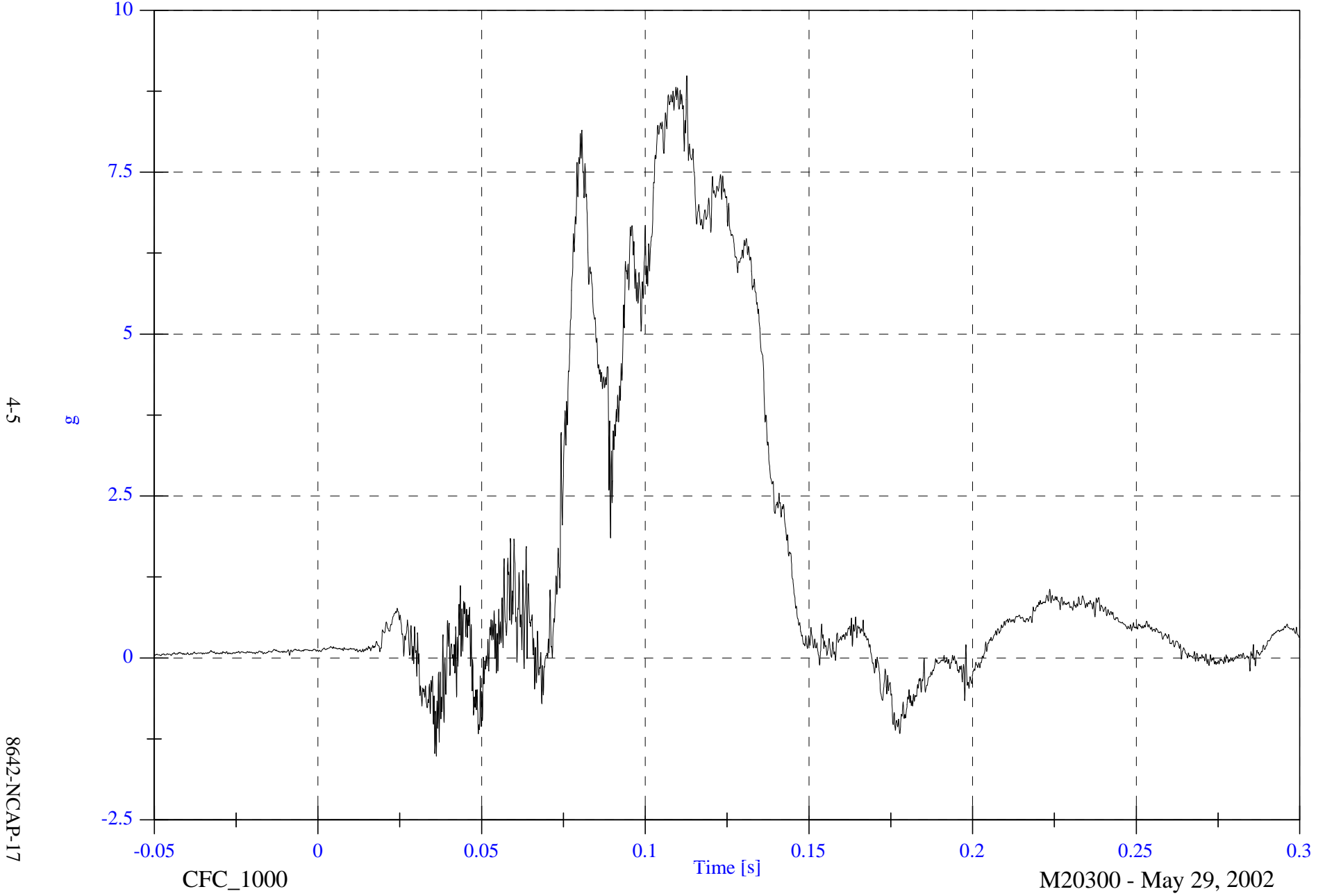
4-4

8642-NCAP-17

2002 NCAP Test 17 2002 Dodge Dakota

Max: 9.0 [g] at 0.113 [s]  
Min: -1.5 [g] at 0.036 [s]

P3 Head y

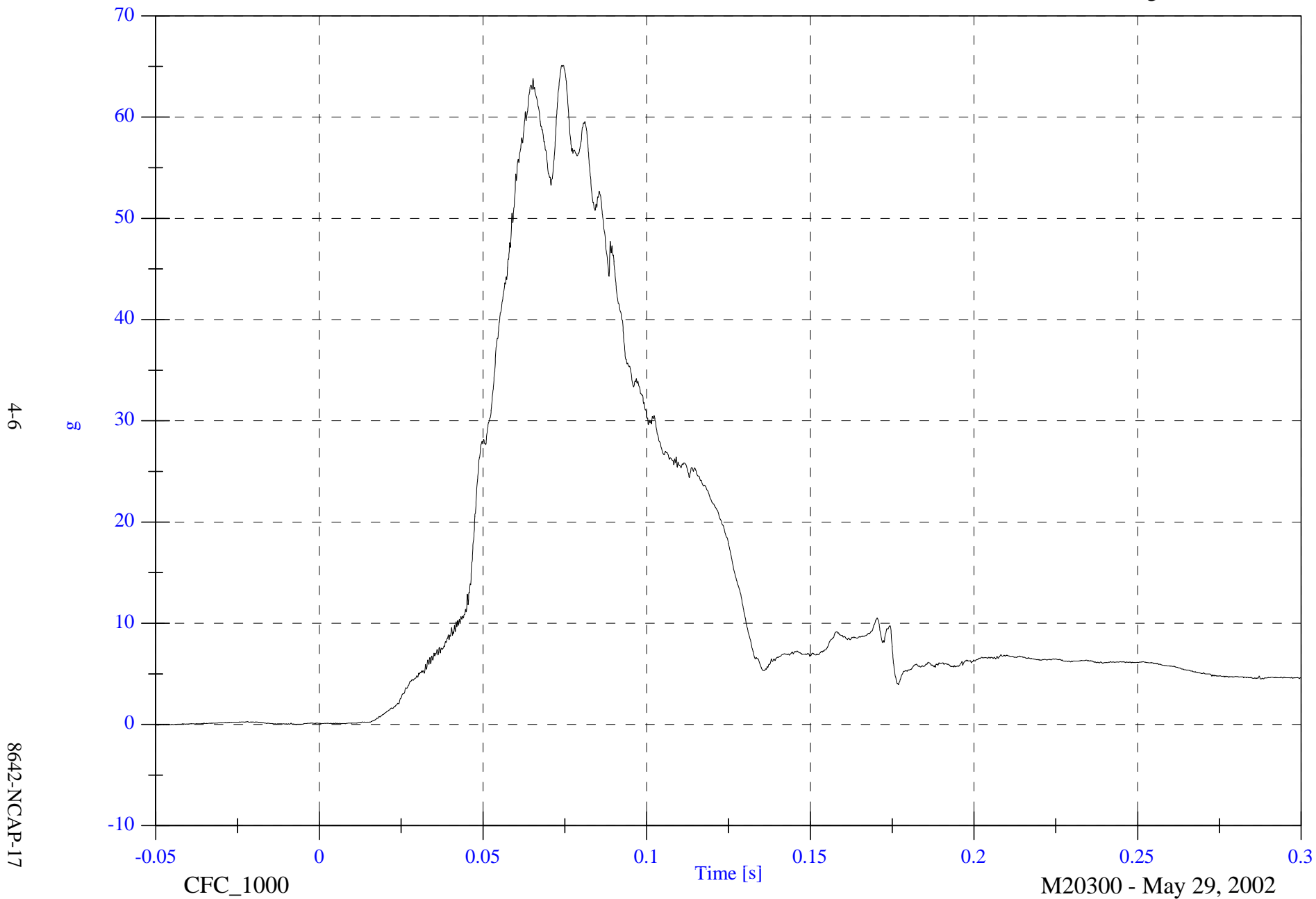


2002 NCAP Test 17 2002 Dodge Dakota

Max: 65.1 [g] at 0.075 [s]

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

P3 Head z



4-6

8642-NCAP-17

2002 NCAP Test 17 2002 Dodge Dakota

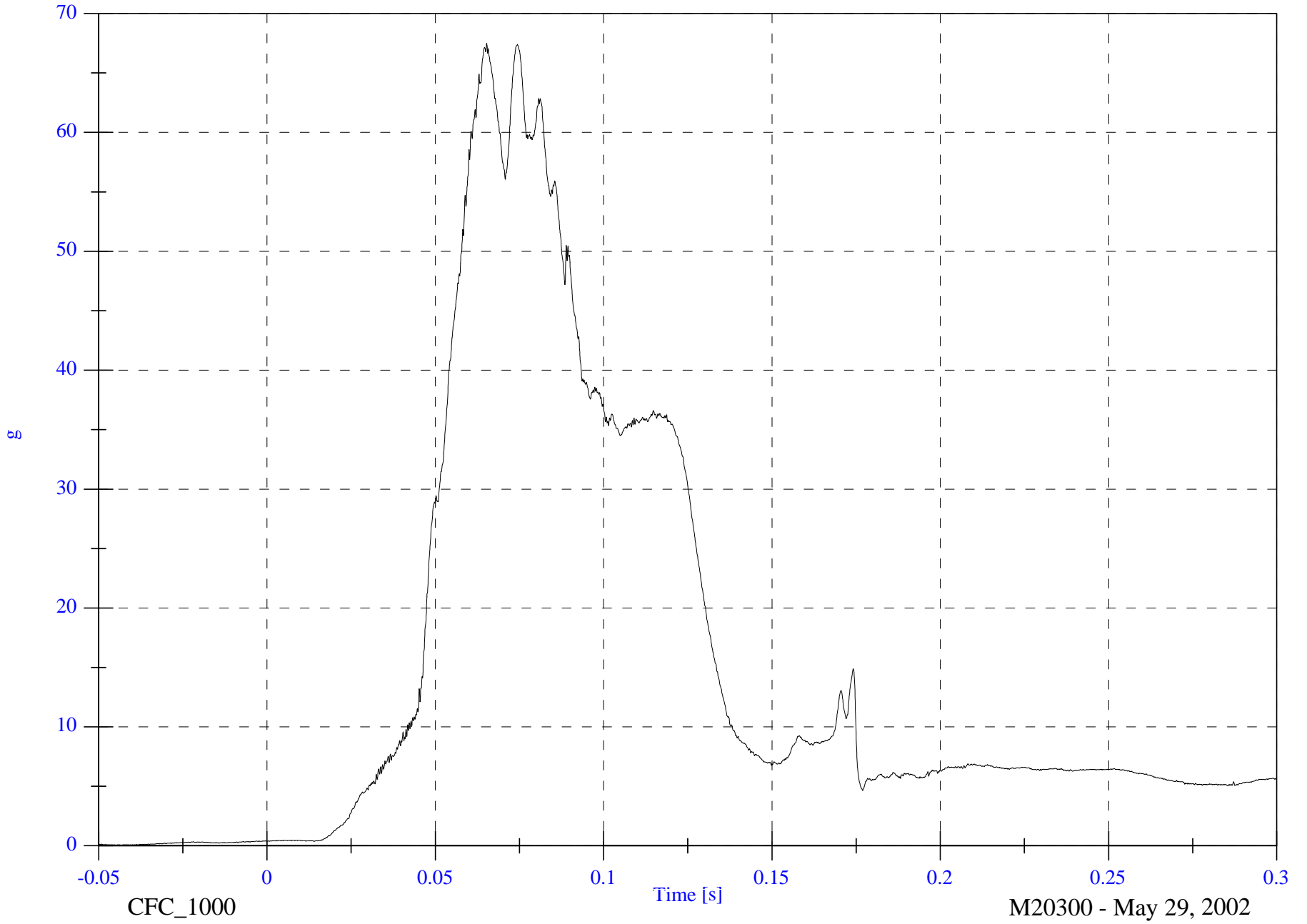
P3 Head Resultant

Max: 67.5 [g] at 0.065 [s]

Min: 0.1 [g] at -0.045 [s]

4-7

8642-NCAP-17

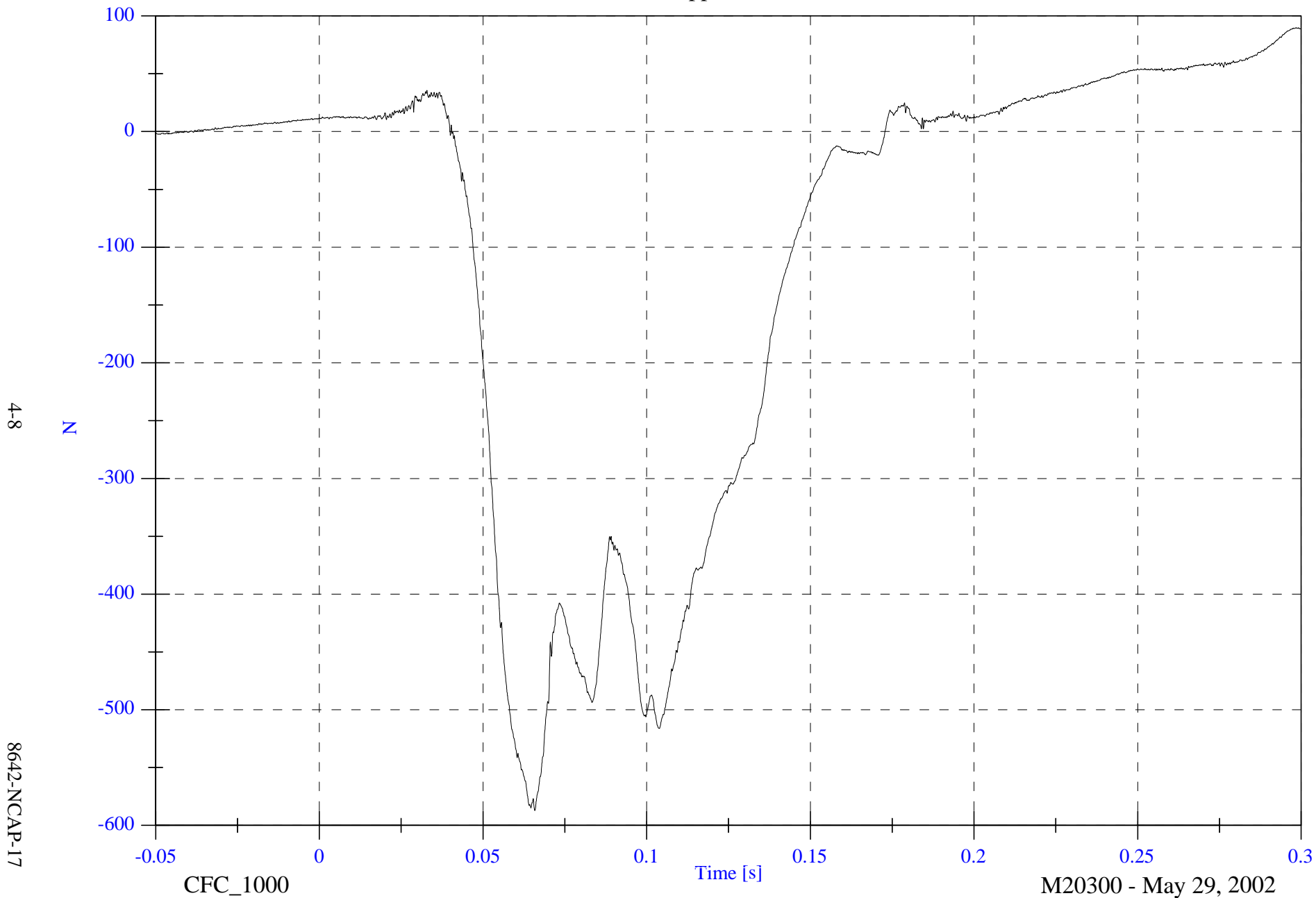


2002 NCAP Test 17 2002 Dodge Dakota

Max: 89.7 [N] at 0.298 [s]

Min: -587.3 [N] at 0.066 [s]

P3 Upper Neck Fx



4-8

8642-NCAP-17

CFC\_1000

Time [s]

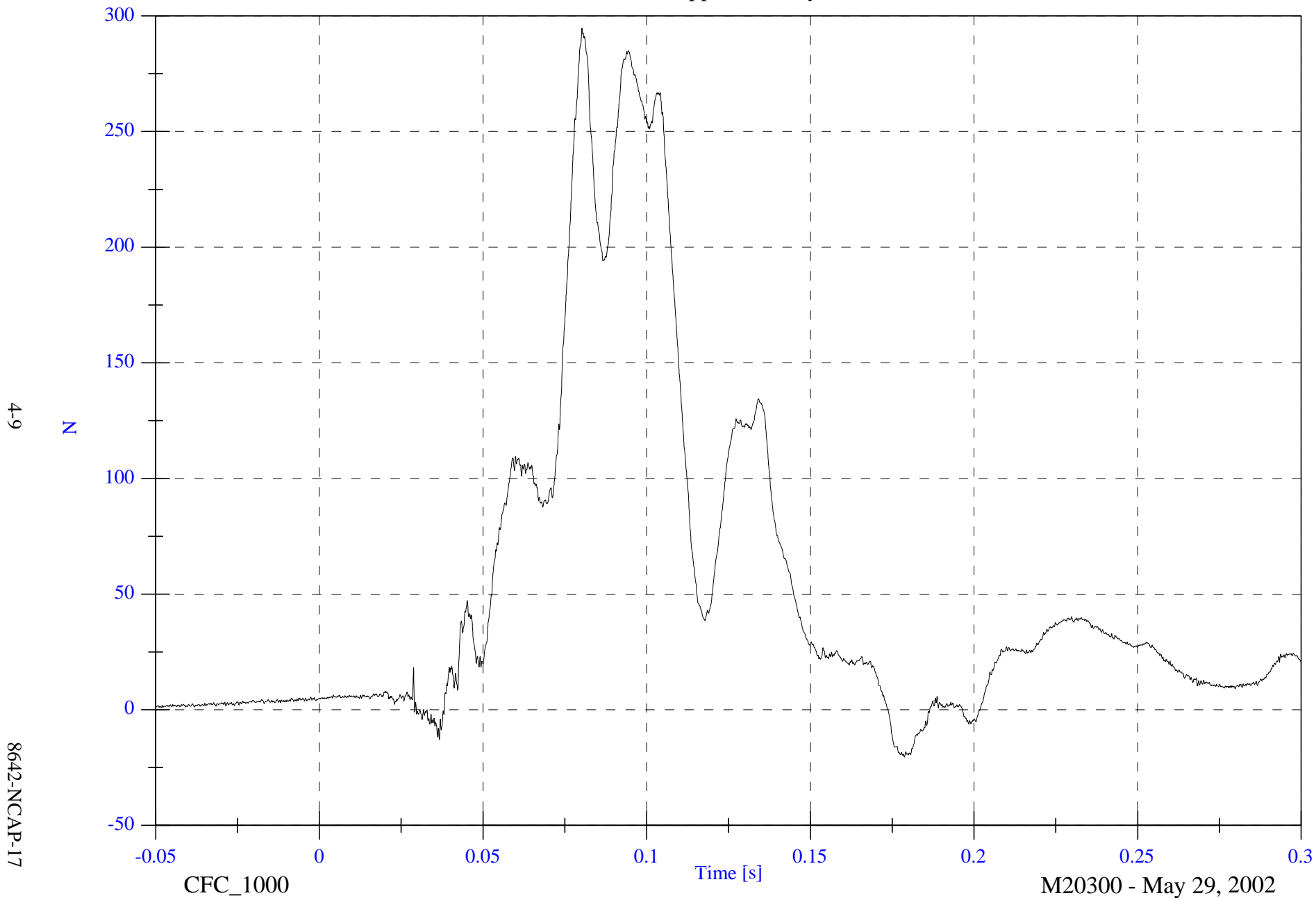
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 294.8 [N] at 0.080 [s]

Min: -20.4 [N] at 0.179 [s]

P3 Upper Neck Fy

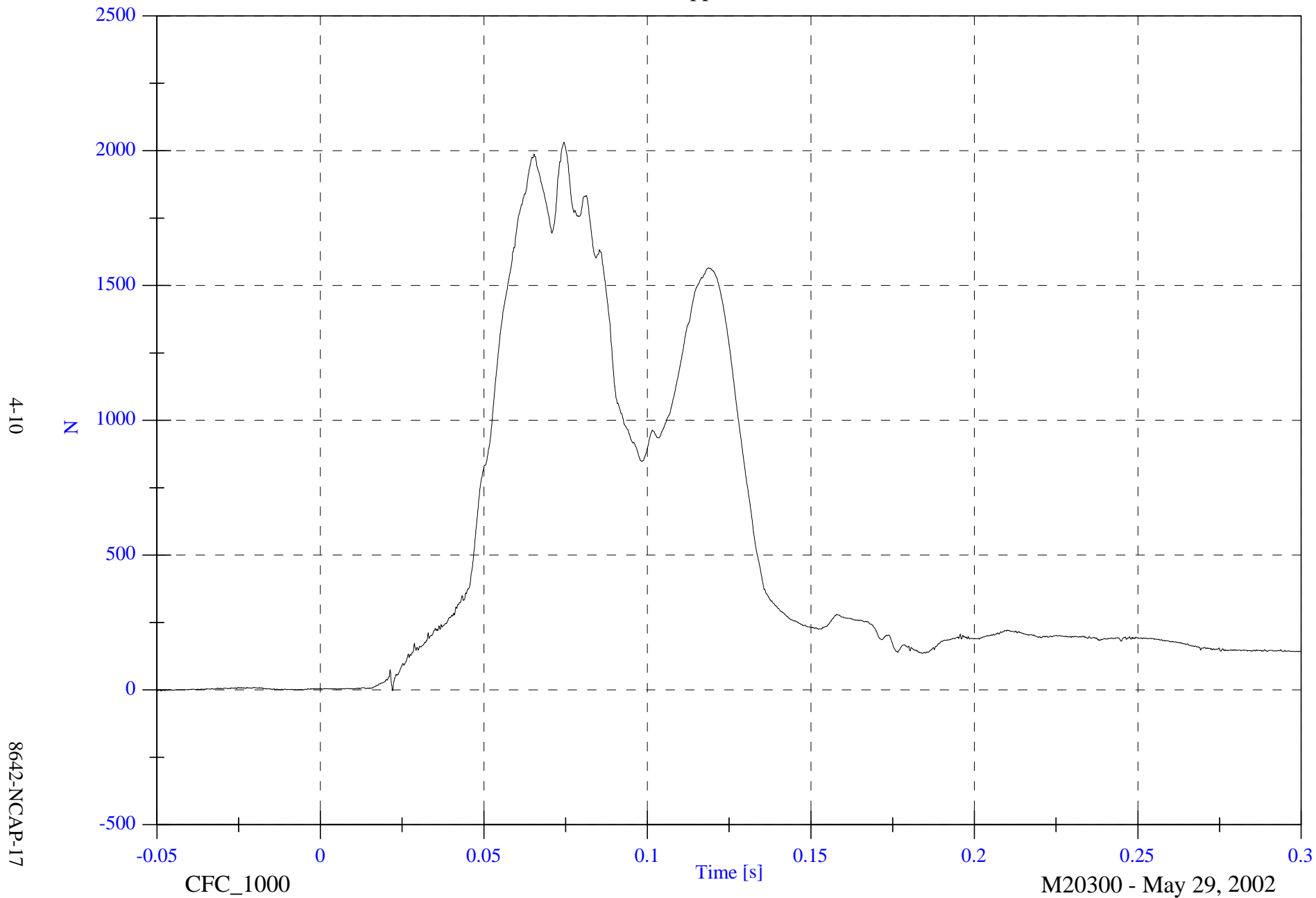


2002 NCAP Test 17 2002 Dodge Dakota

Max: 2031.4 [N] at 0.075 [s]

Min: -3.6 [N] at -0.050 [s]

P3 Upper Neck Fz



4-10

8642-NCAP-17

CFC\_1000

Time [s]

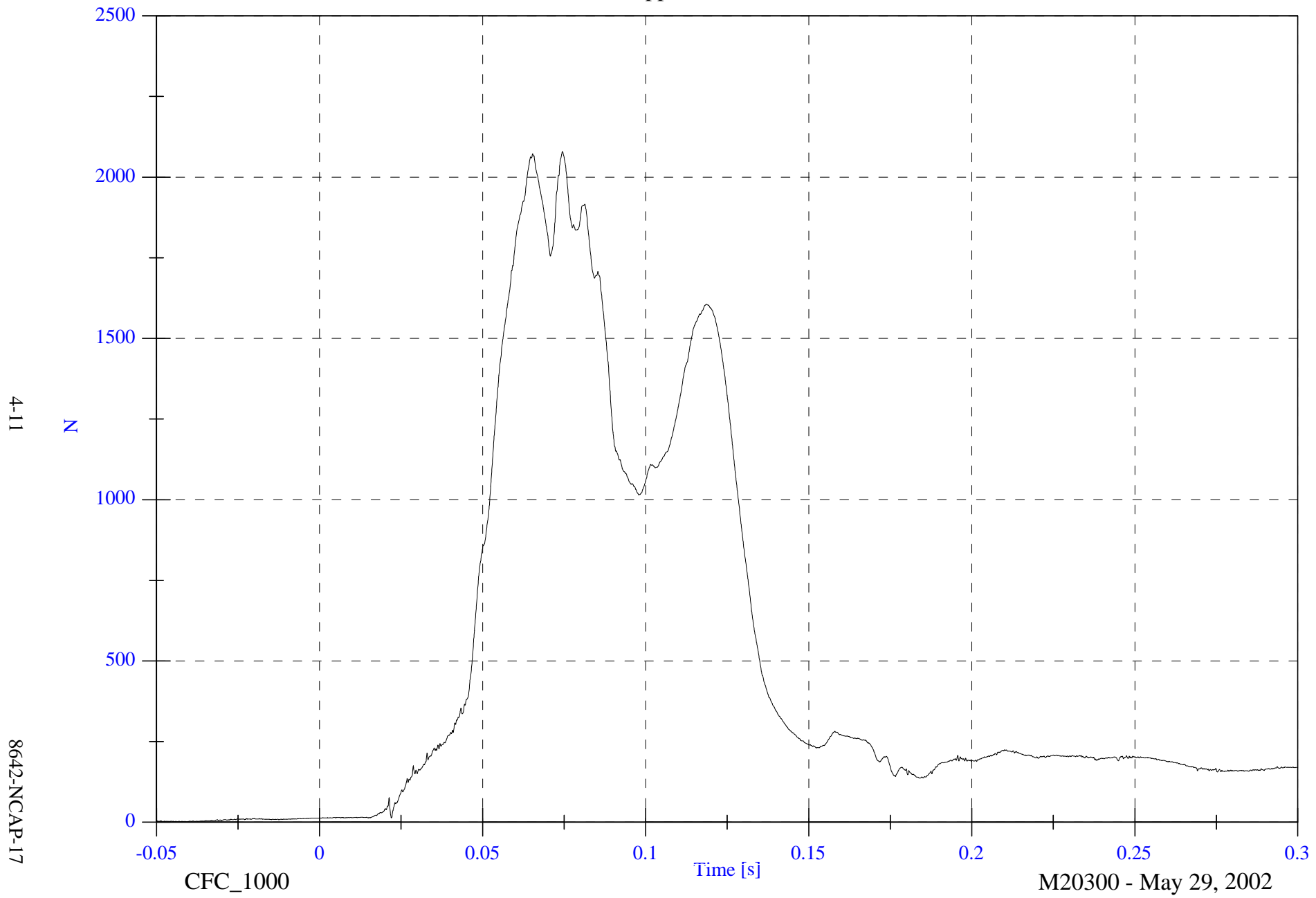
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 2079.4 [N] at 0.075 [s]

P3 Upper Neck F Resultant

Min: 1.4 [N] at -0.043 [s]



4-11

8642-NCAP-17

2002 NCAP Test 17 2002 Dodge Dakota

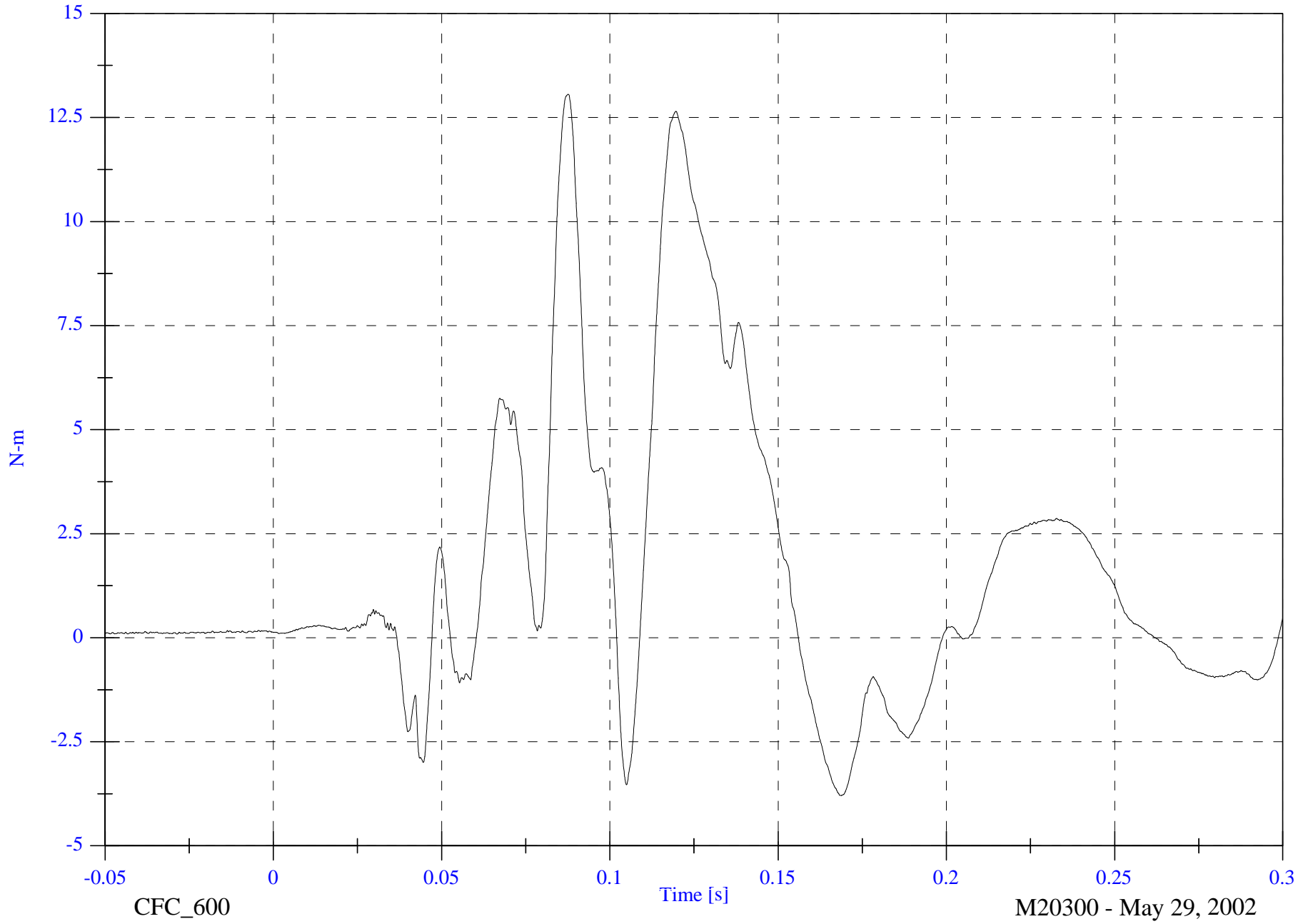
Max: 13.1 [N-m] at 0.088 [s]

Min: -3.8 [N-m] at 0.169 [s]

P3 Upper Neck Mx

4-12

8642-NCAP-17



CFC\_600

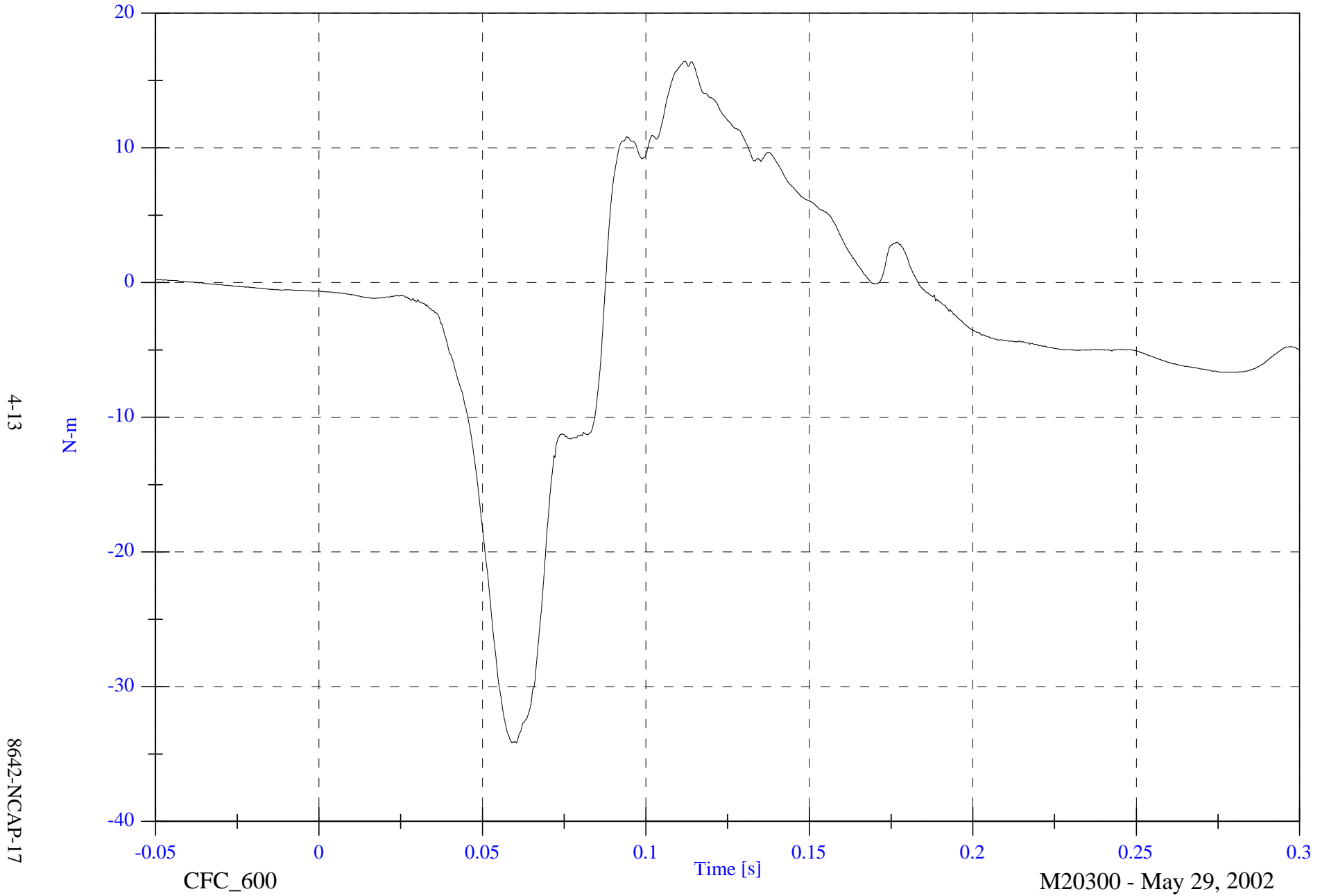
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 16.4 [N-m] at 0.112 [s]

Min: -34.2 [N-m] at 0.060 [s]

P3 Upper Neck My



4-13

8642-NCAP-17

2002 NCAP Test 17 2002 Dodge Dakota

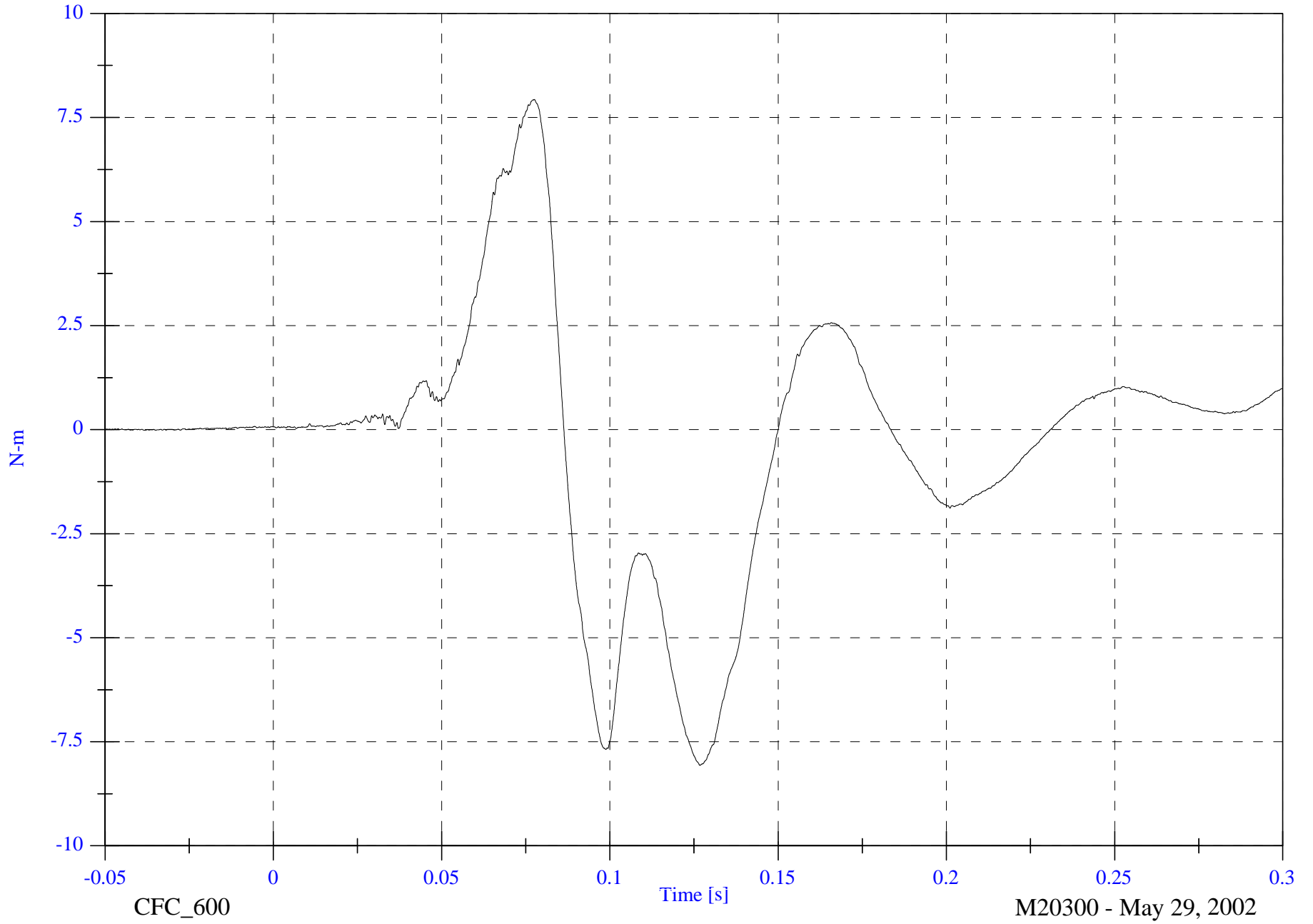
Max: 7.9 [N-m] at 0.078 [s]

P3 Upper Neck Mz

Min: -8.1 [N-m] at 0.127 [s]

4-14

8642-NCAP-17



CFC\_600

M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

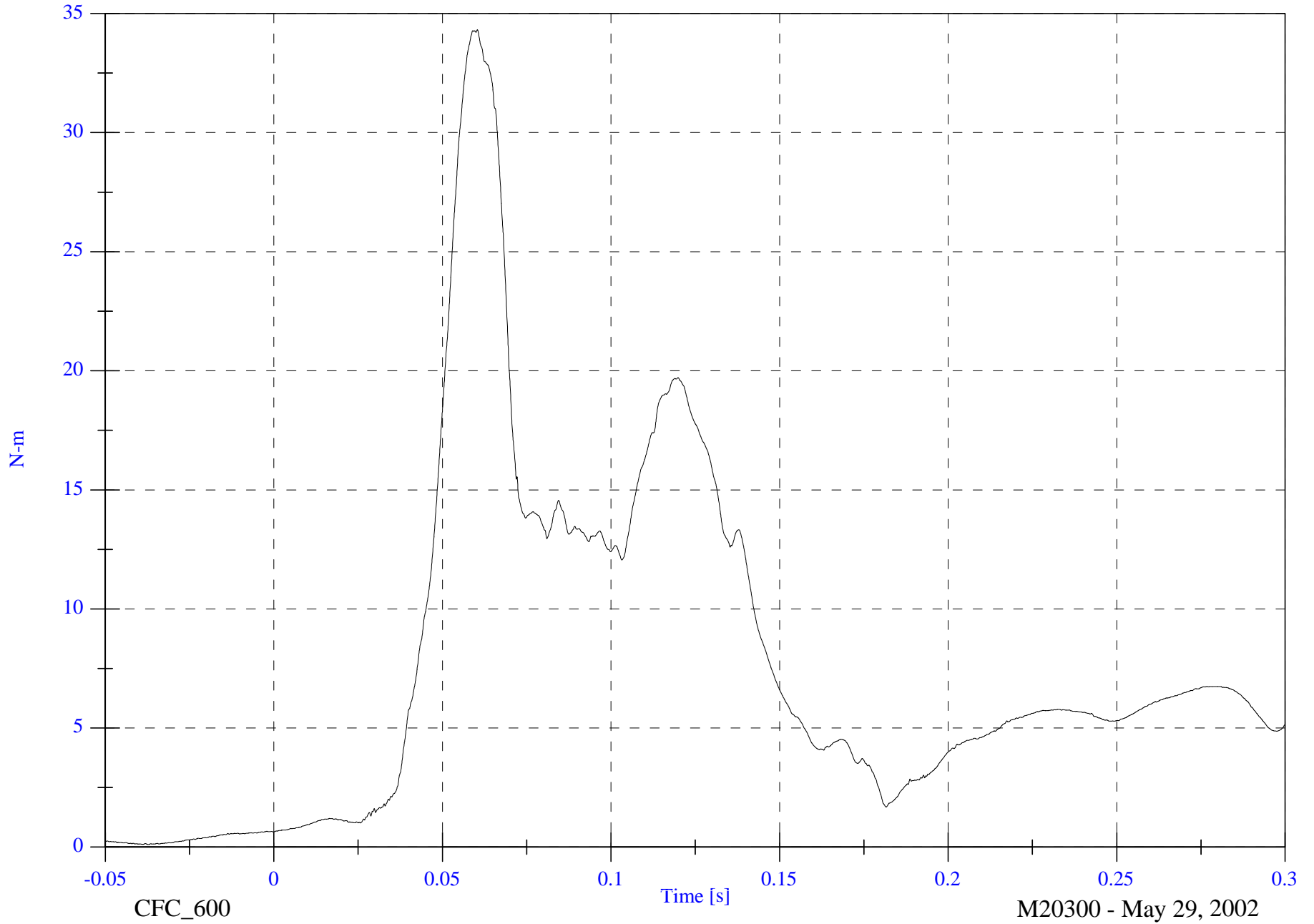
Max: 34.3 [N-m] at 0.060 [s]

P3 Upper Neck M Resultant

Min: 0.1 [N-m] at -0.037 [s]

4-15

8642-NCAP-17

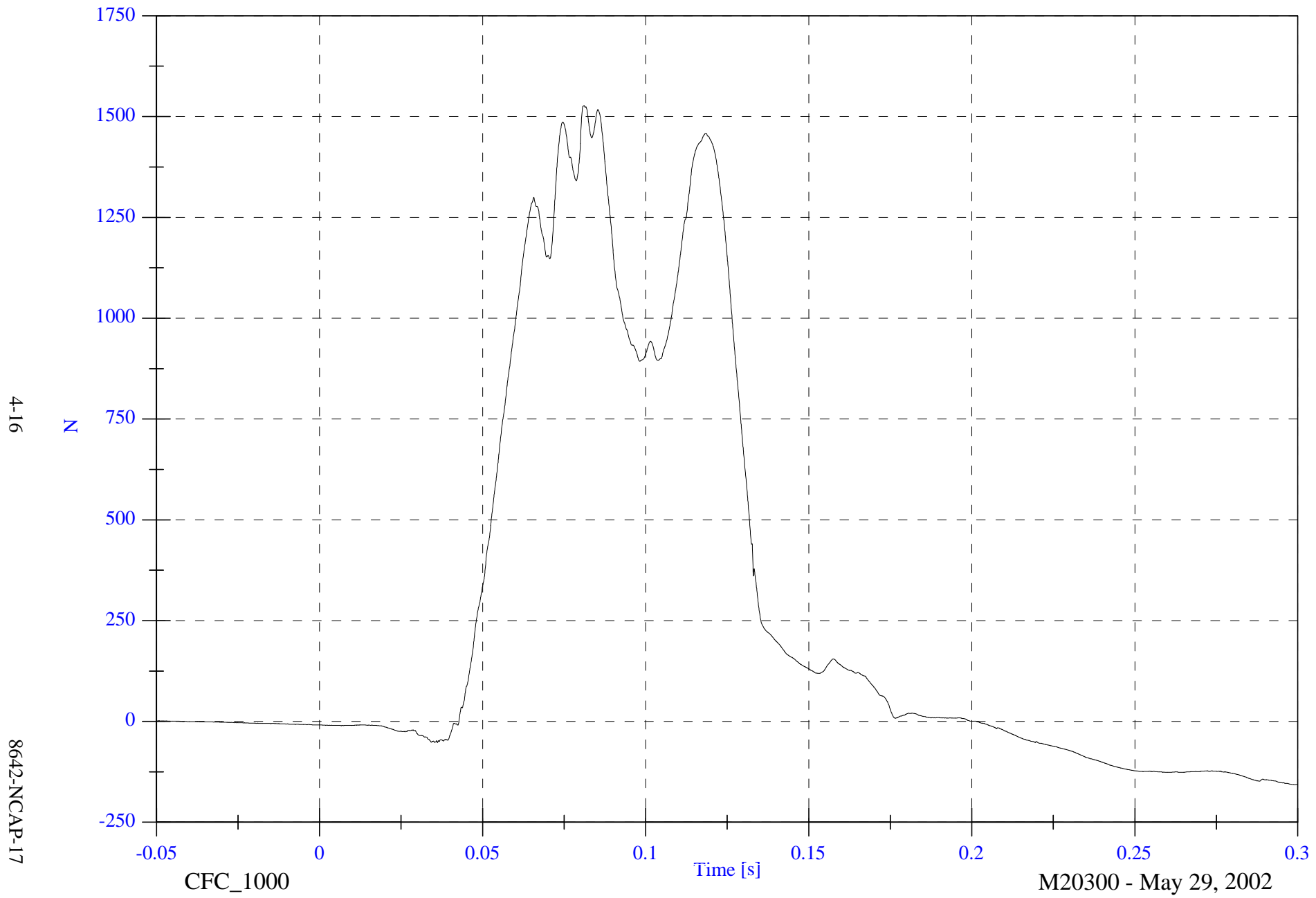


2002 NCAP Test 17 2002 Dodge Dakota

Max: 1527.4 [N] at 0.081 [s]

Min: -156.9 [N] at 0.299 [s]

P3 Lower Neck Fx



4-16

8642-NCAP-17

CFC\_1000

Time [s]

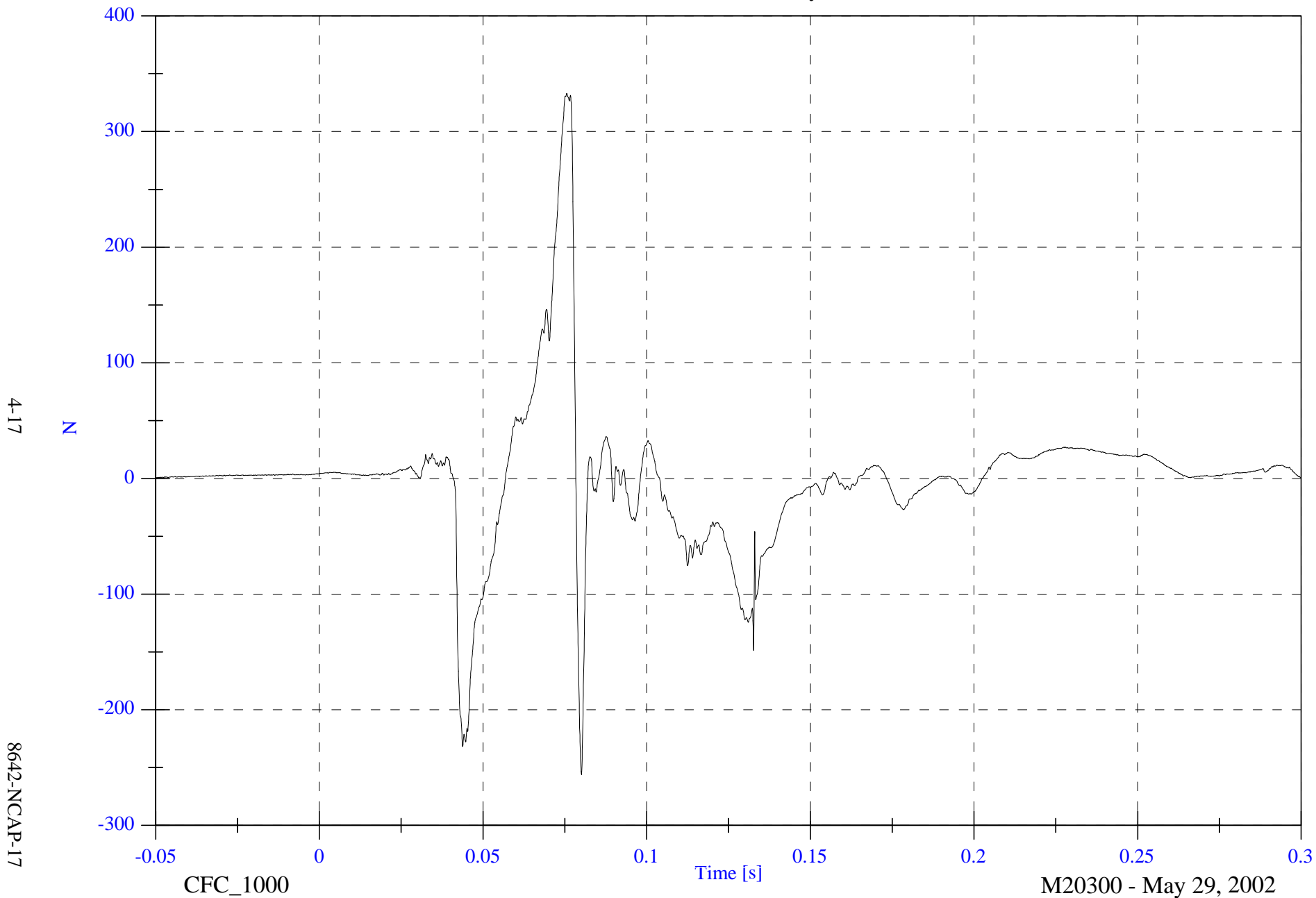
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 333.1 [N] at 0.076 [s]

Min: -256.1 [N] at 0.080 [s]

P3 Lower Neck Fy



4-17

8642-NCAP-17

CFC\_1000

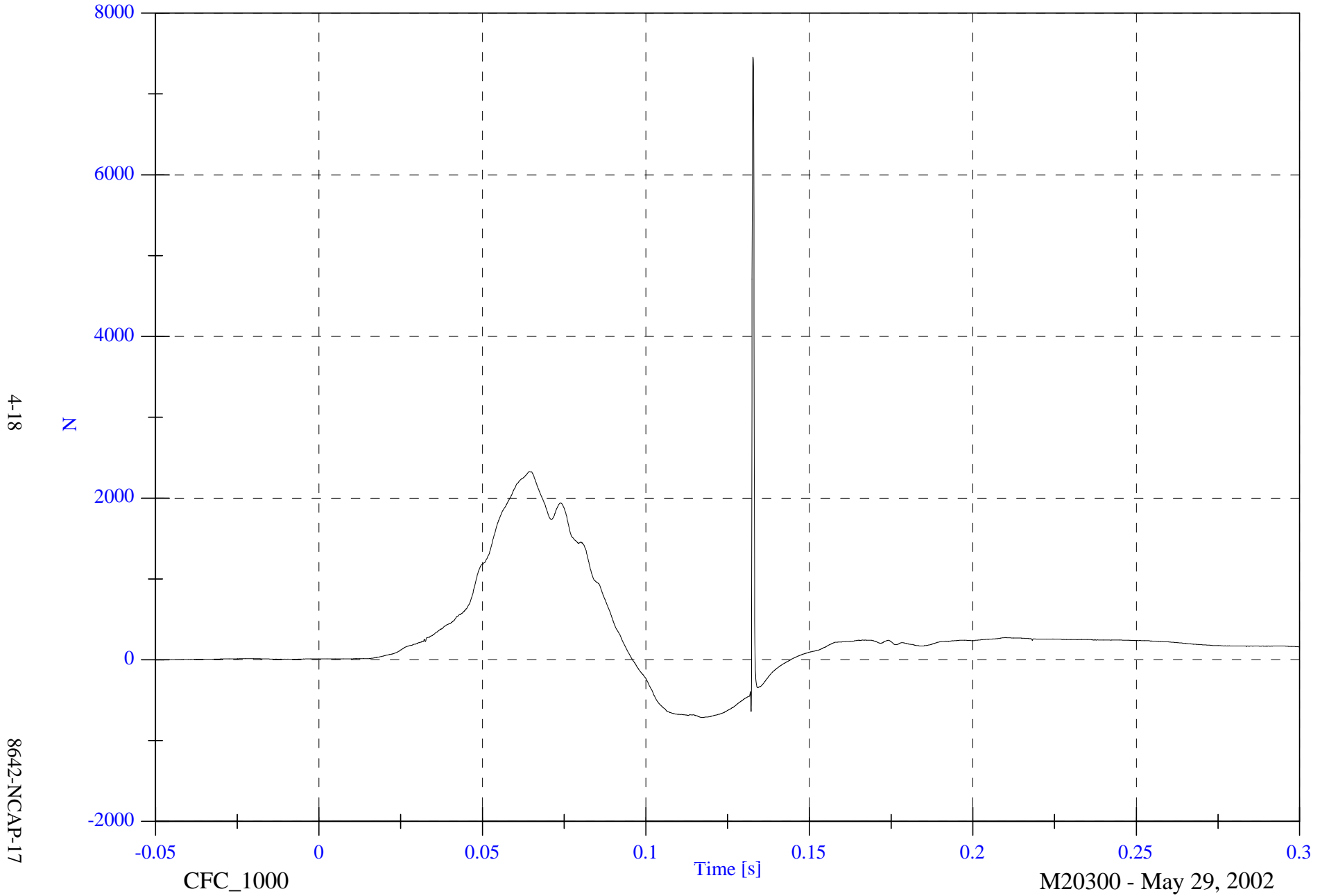
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 7456.7 [N] at 0.133 [s]

Min: -714.4 [N] at 0.117 [s]

P3 Lower Neck Fz



4-18

8642-NCAP-17

CFC\_1000

M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

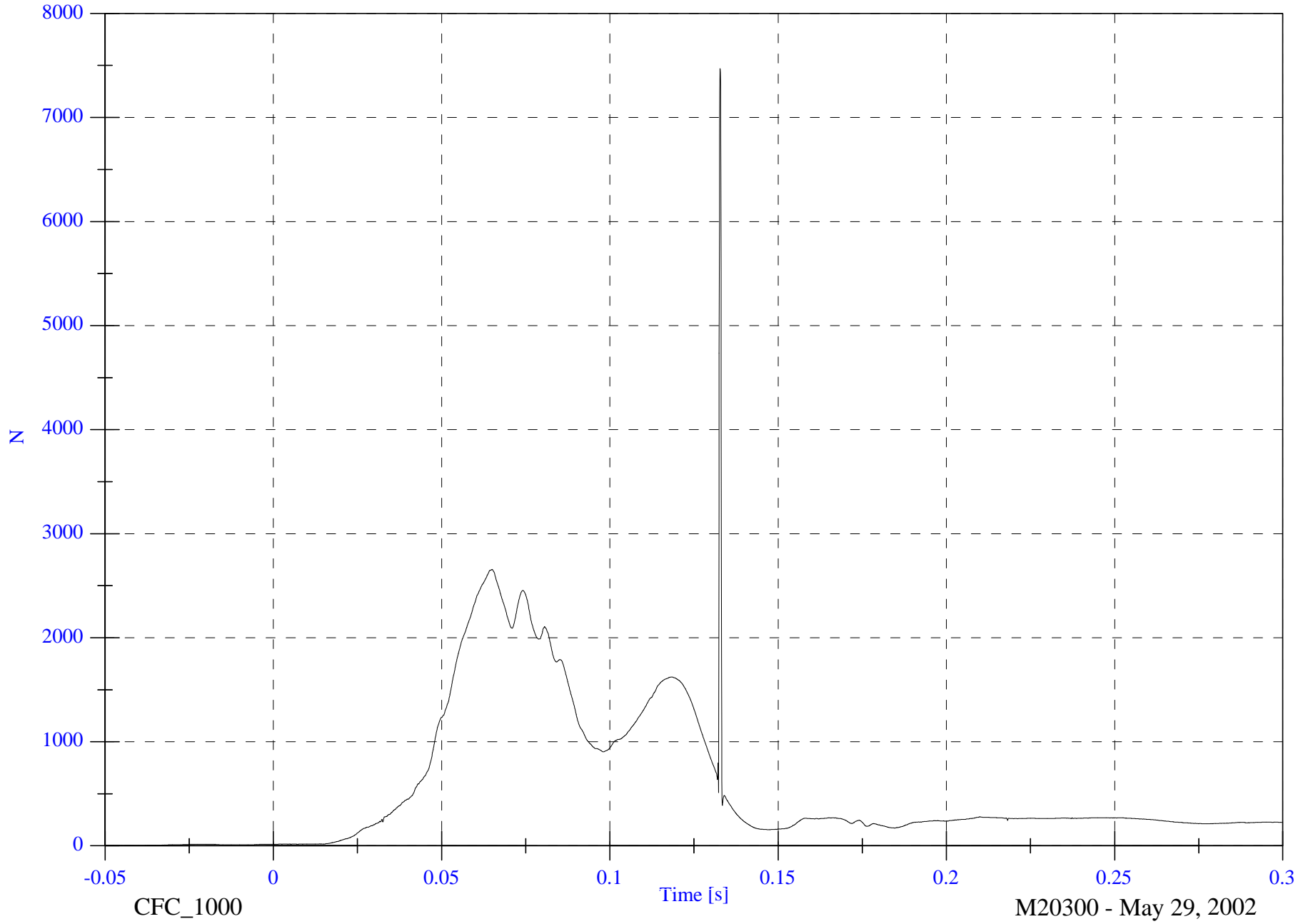
Max: 7470.3 [N] at 0.133 [s]

P3 Lower Neck F Resultant

Min: 1.3 [N] at -0.045 [s]

4-19

8642-NCAP-17



CFC\_1000

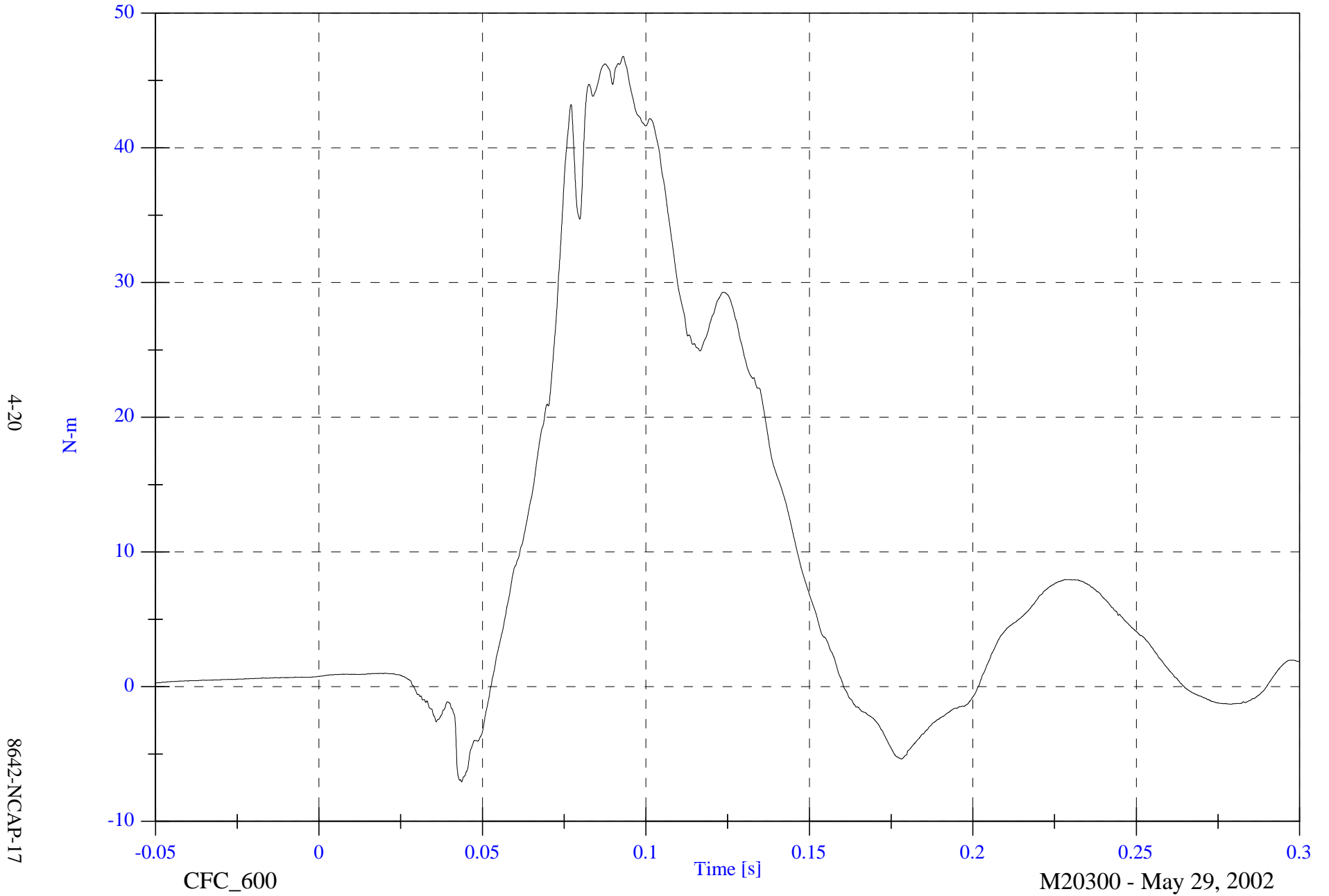
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 46.8 [N-m] at 0.093 [s]

Min: -7.1 [N-m] at 0.044 [s]

P3 Lower Neck Mx



4-20

8642-NCAP-17

CFC\_600

Time [s]

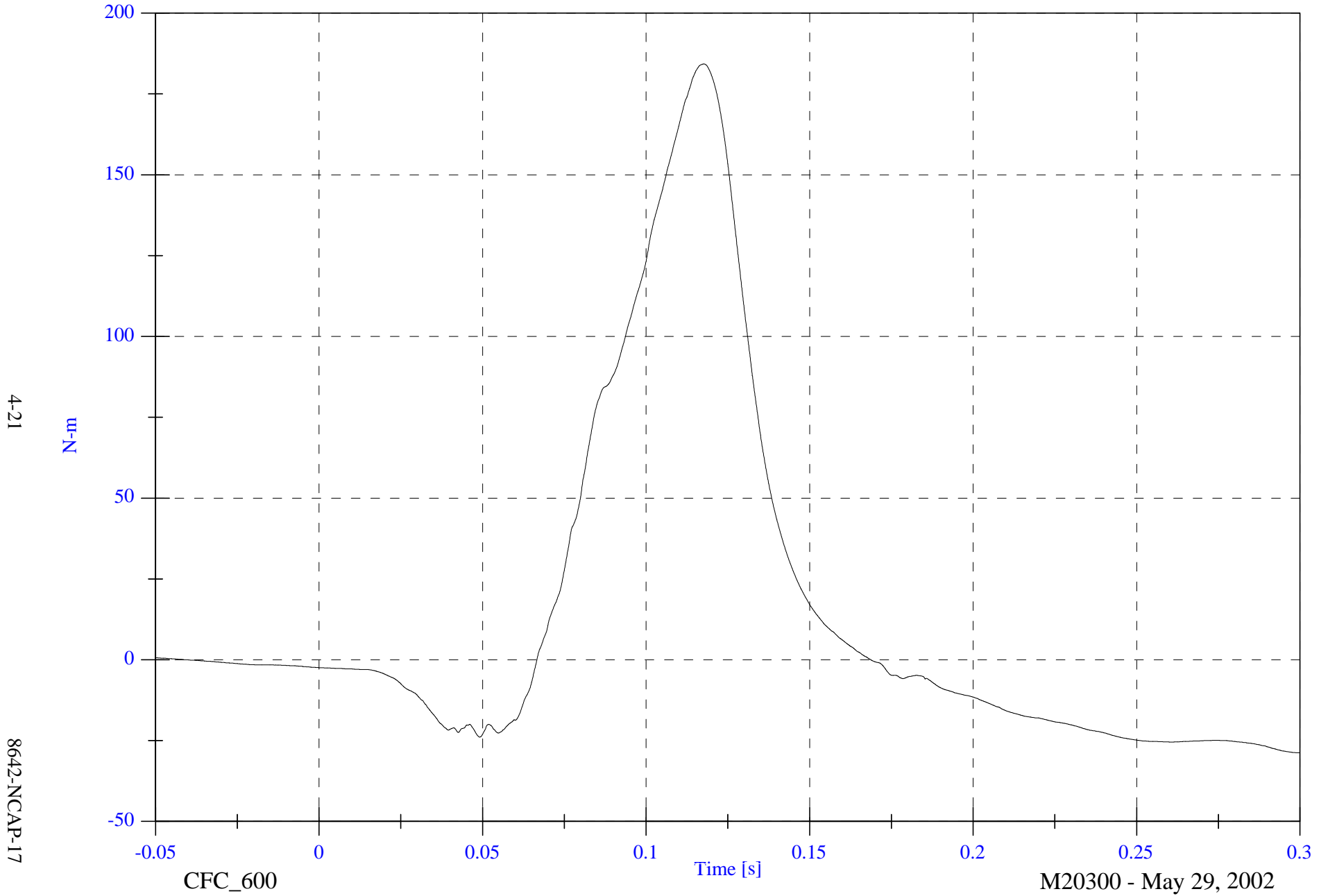
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 184.3 [N-m] at 0.118 [s]

Min: -28.8 [N-m] at 0.300 [s]

P3 Lower Neck My



4-21

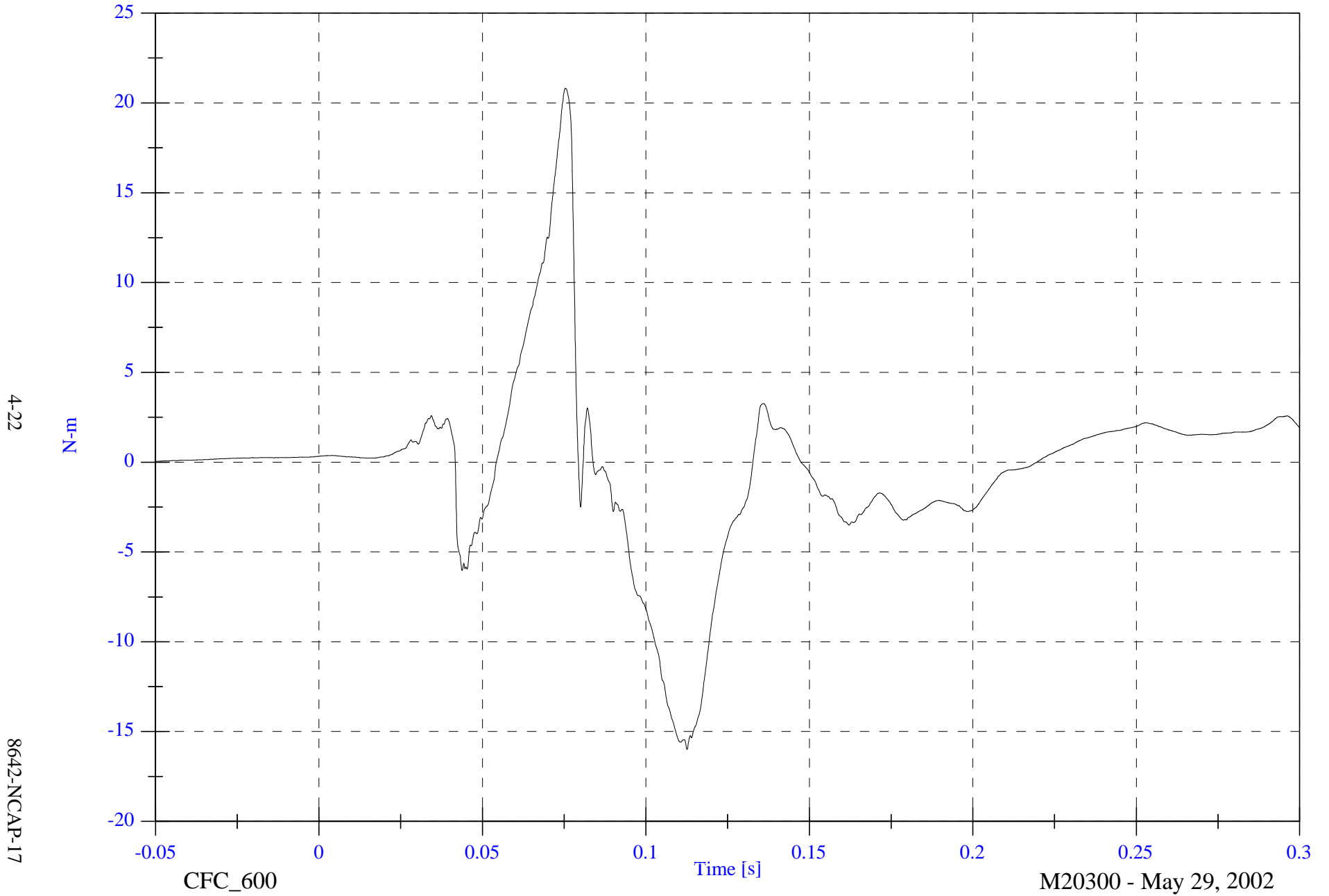
8642-NCAP-17

2002 NCAP Test 17 2002 Dodge Dakota

Max: 20.8 [N-m] at 0.075 [s]

Min: -16.0 [N-m] at 0.113 [s]

P3 Lower Neck Mz



4-22

8642-NCAP-17

CFC\_600

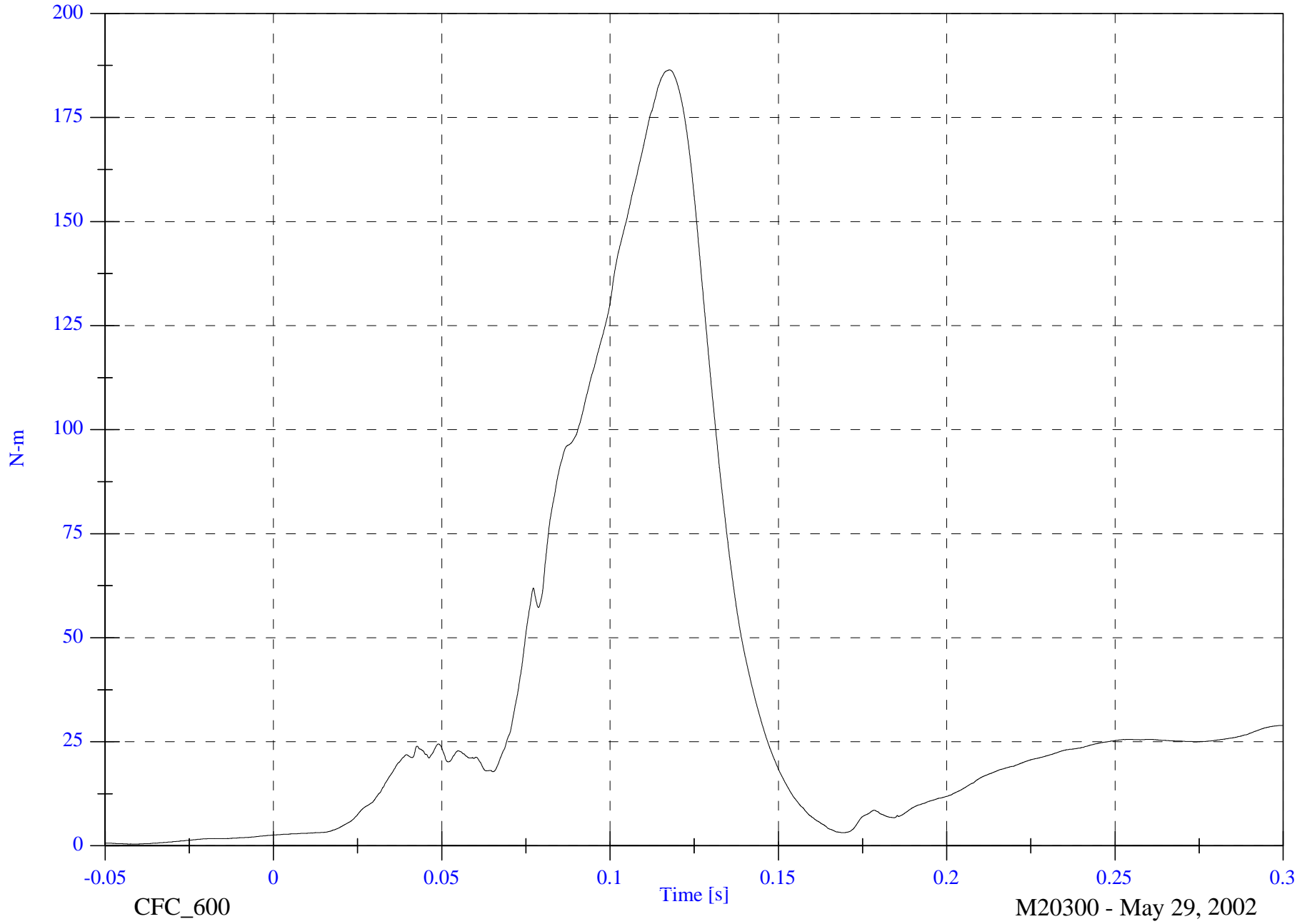
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 186.4 [N-m] at 0.118 [s]

P3 Lower Neck M Resultant

Min: 0.4 [N-m] at -0.041 [s]



4-23

8642-NCAP-17

CFC\_600

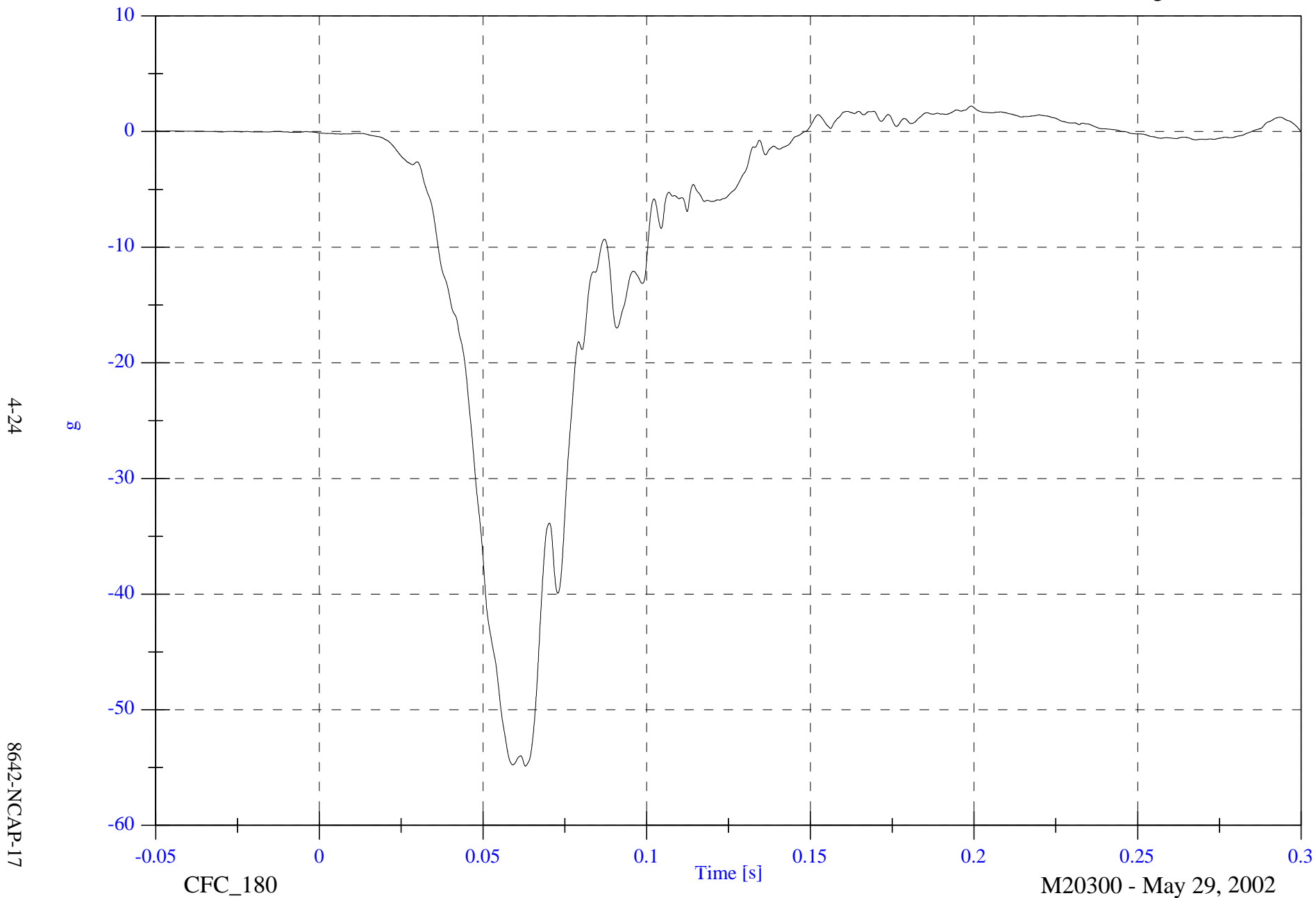
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 2.2 [g] at 0.199 [s]

Min: -54.9 [g] at 0.063 [s]

P3 Chest x



4-24

8642-NCAP-17

CFC\_180

Time [s]

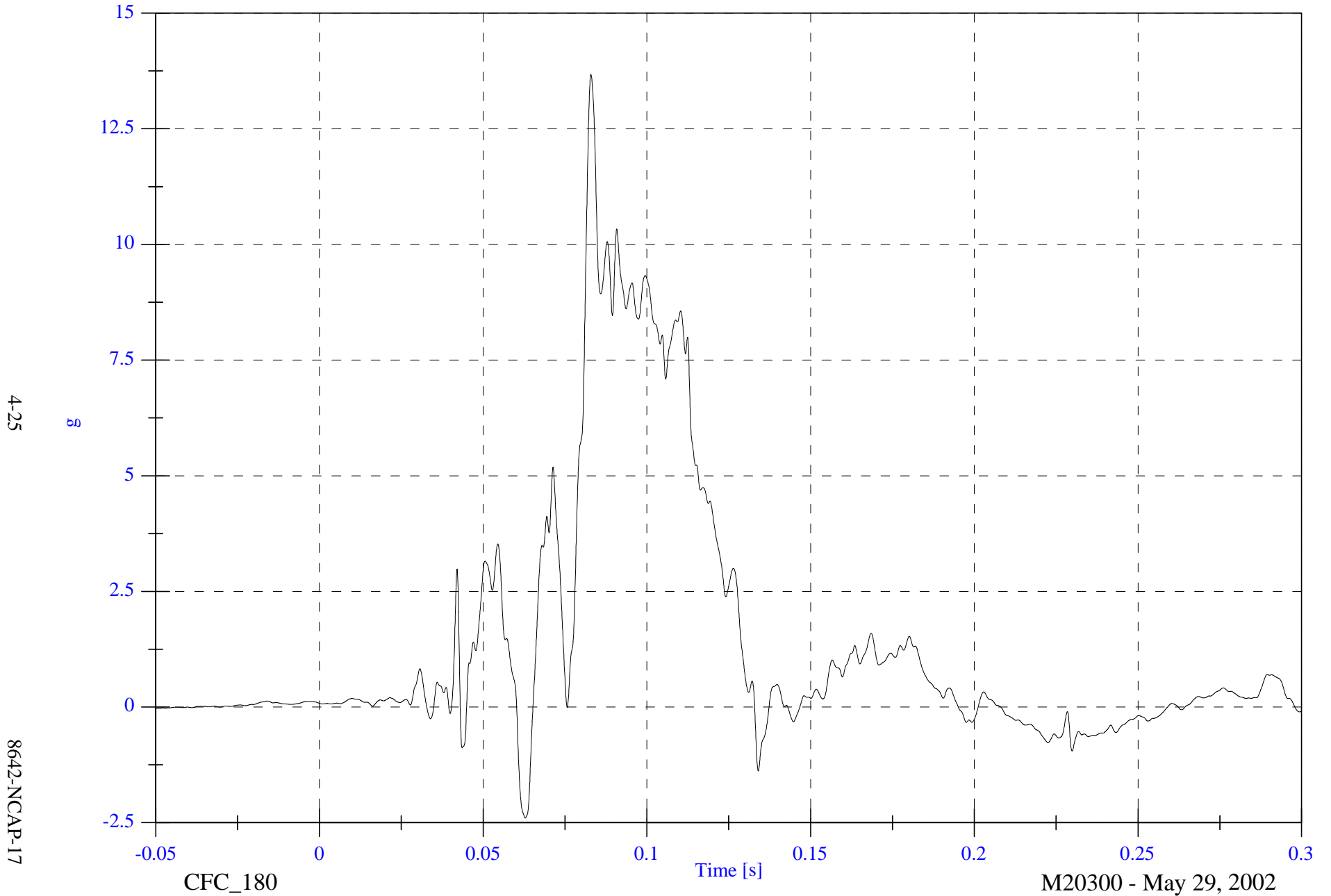
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 13.7 [g] at 0.083 [s]

Min: -2.4 [g] at 0.063 [s]

P3 Chest y



2002 NCAP Test 17 2002 Dodge Dakota

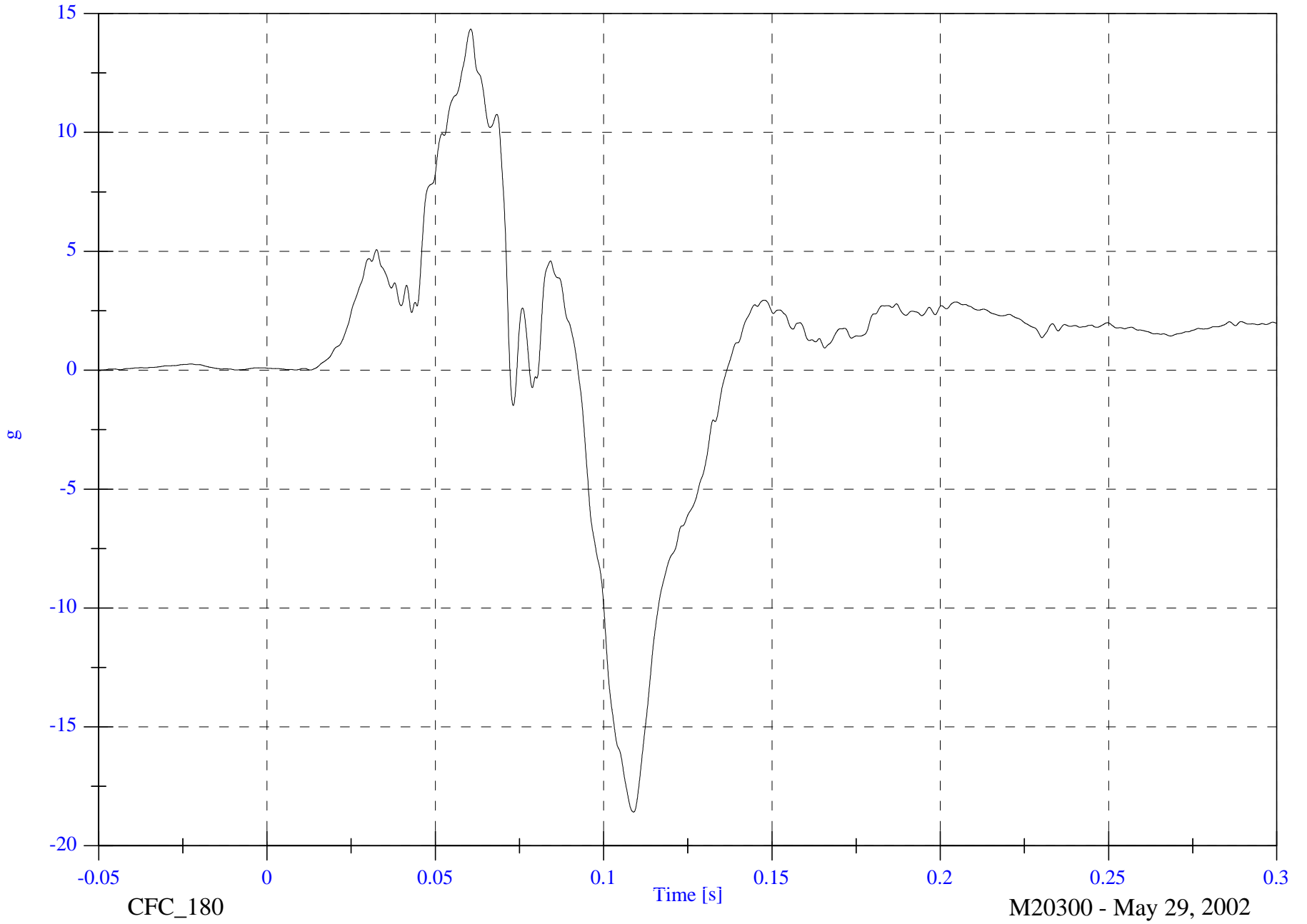
Max: 14.3 [g] at 0.061 [s]

Min: -18.6 [g] at 0.109 [s]

P3 Chest z

4-26

8642-NCAP-17



2002 NCAP Test 17 2002 Dodge Dakota

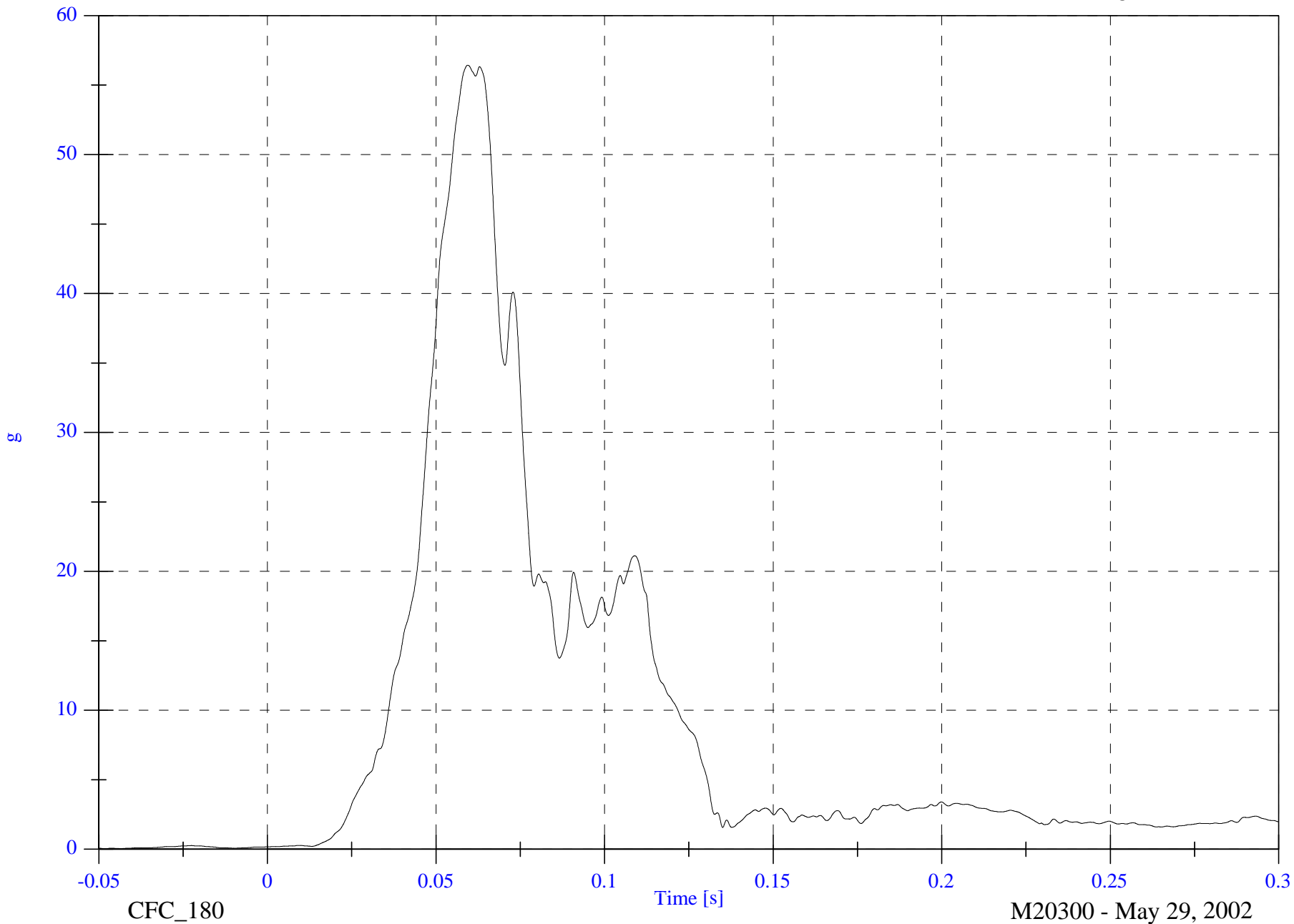
P3 Chest Resultant

Max: 56.4 [g] at 0.059 [s]

Min: 0.0 [g] at -0.048 [s]

4-27

8642-NCAP-17



CFC\_180

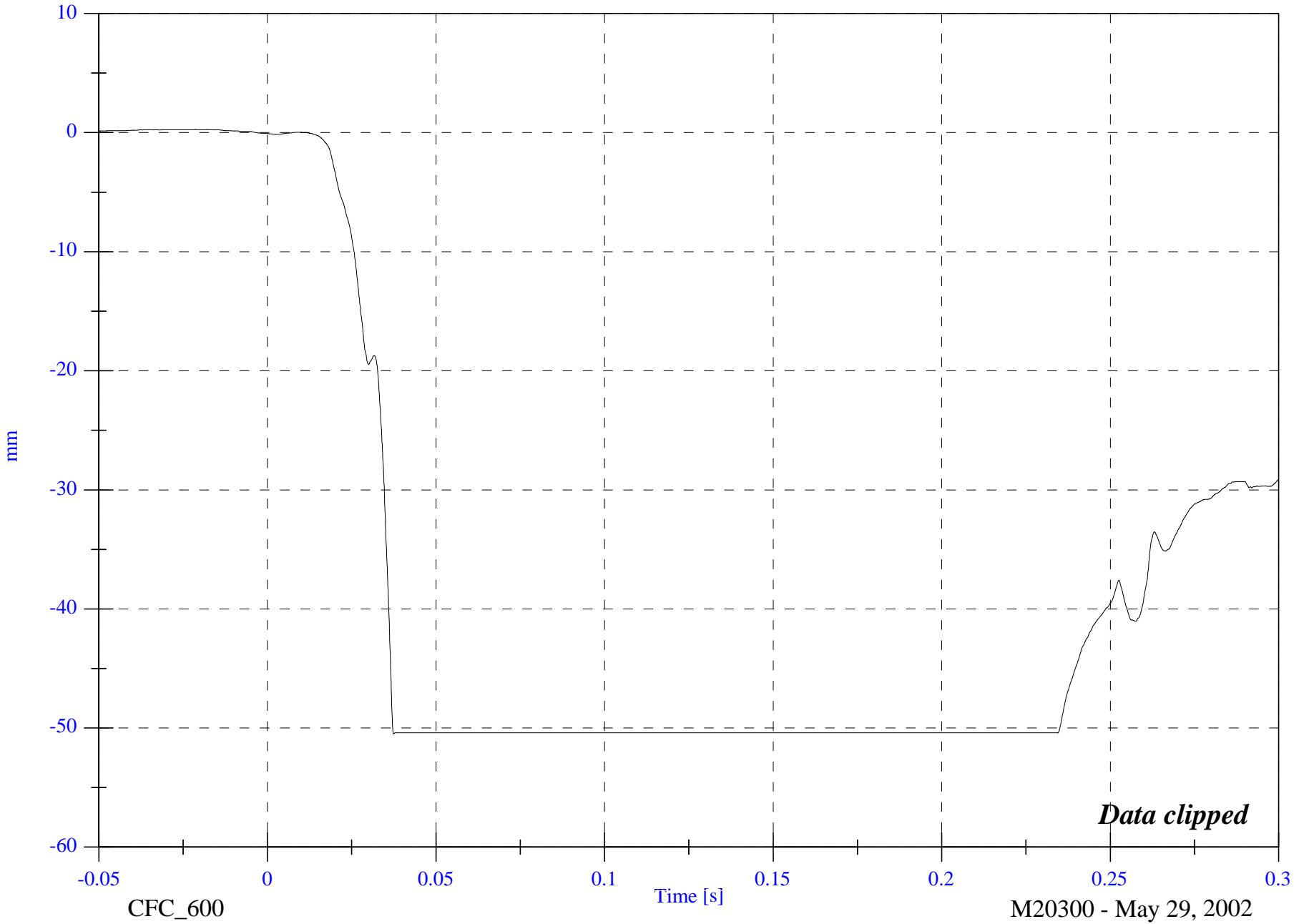
Time [s]

M20300 - May 29, 2002

P3 Chest Compression

4-28

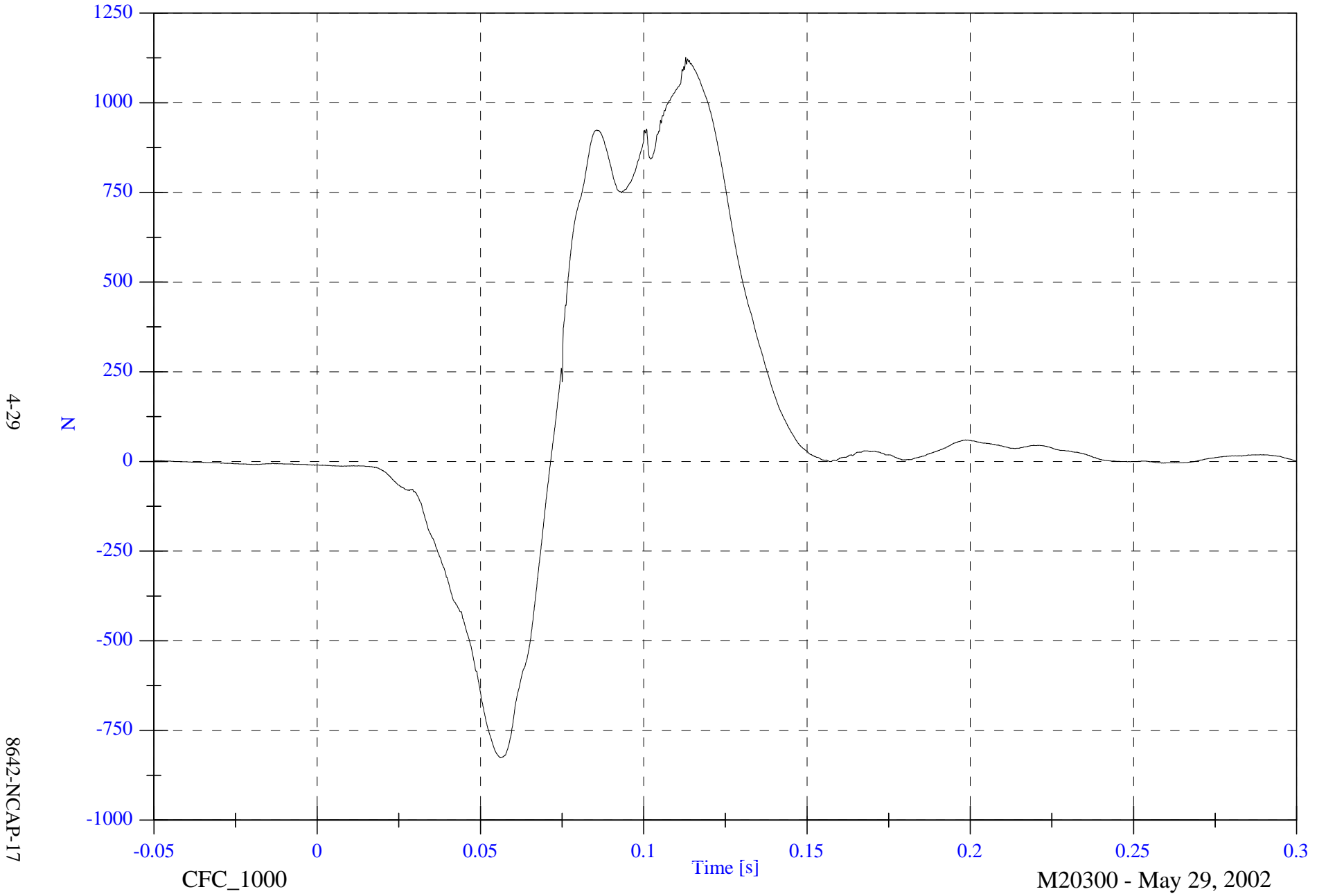
8642-NCAP-17



2002 NCAP Test 17 2002 Dodge Dakota

Max: 1126.5 [N] at 0.113 [s]  
Min: -825.4 [N] at 0.056 [s]

P3 Lumbar Fx



4-29

8642-NCAP-17

CFC\_1000

Time [s]

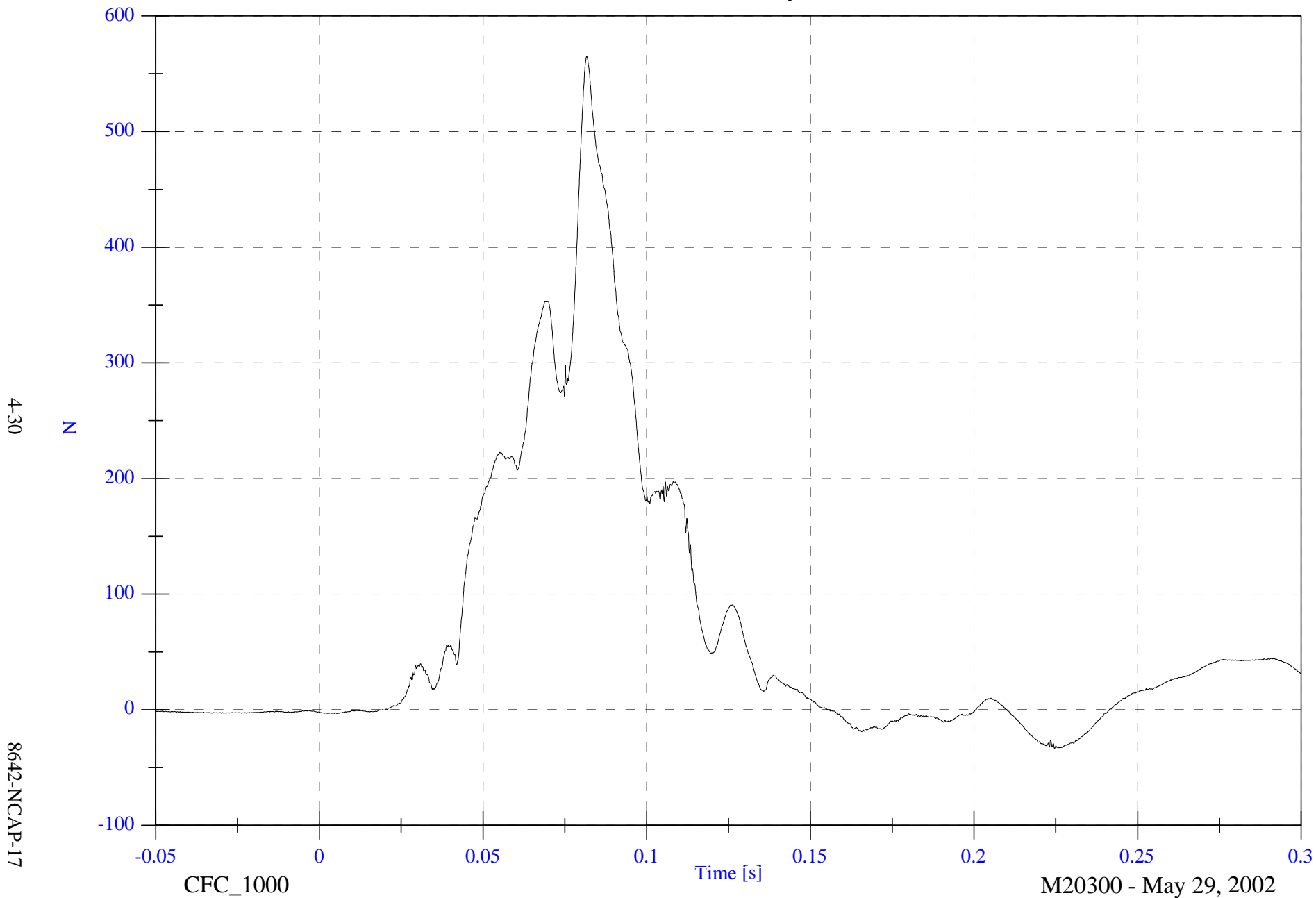
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 565.4 [N] at 0.082 [s]

Min: -33.5 [N] at 0.225 [s]

P3 Lumbar Fy



4-30

8642-NCAP-17

CFC\_1000

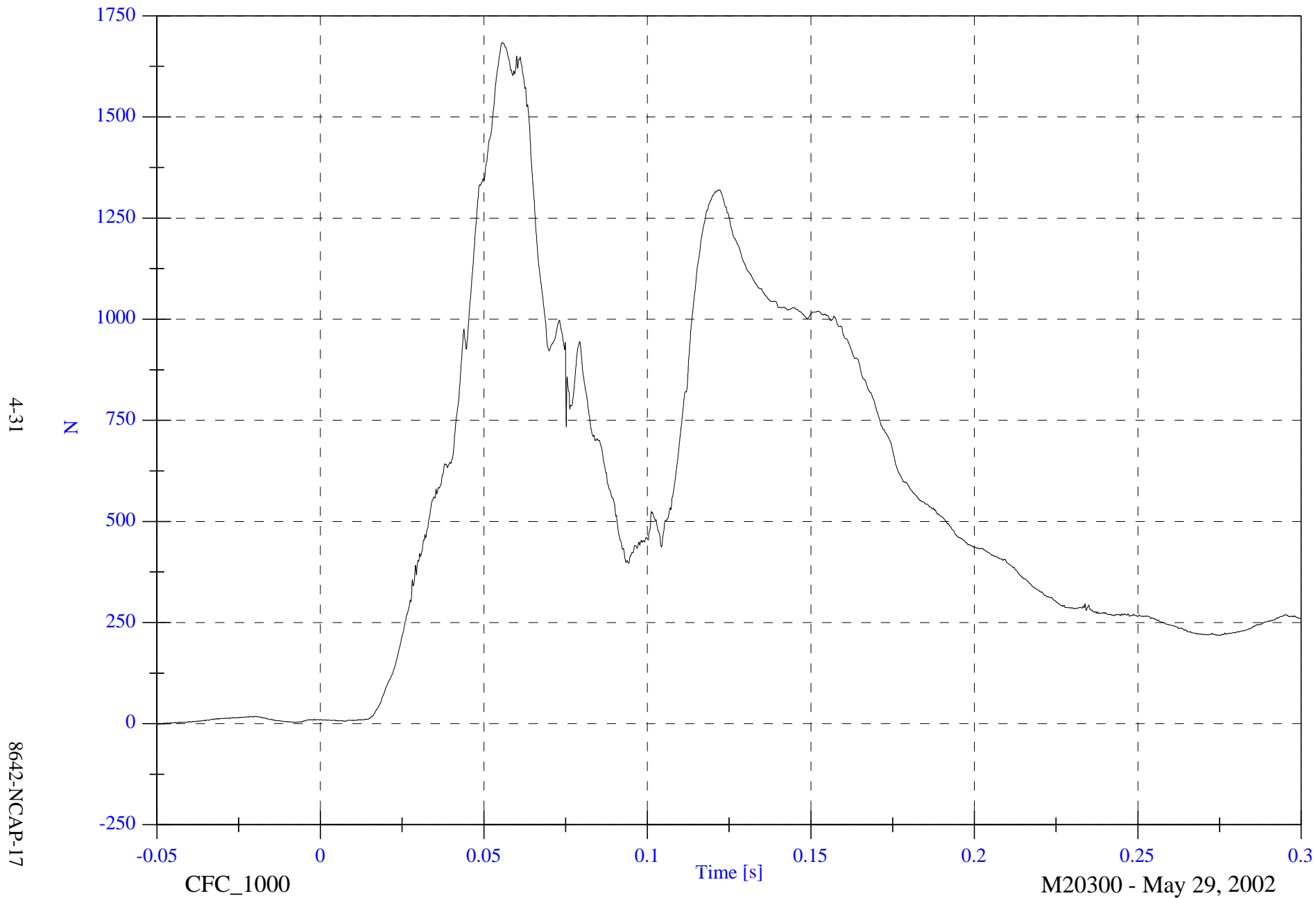
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 1684.0 [N] at 0.056 [s]

Min: -1.2 [N] at -0.050 [s]

P3 Lumbar Fz



4-31

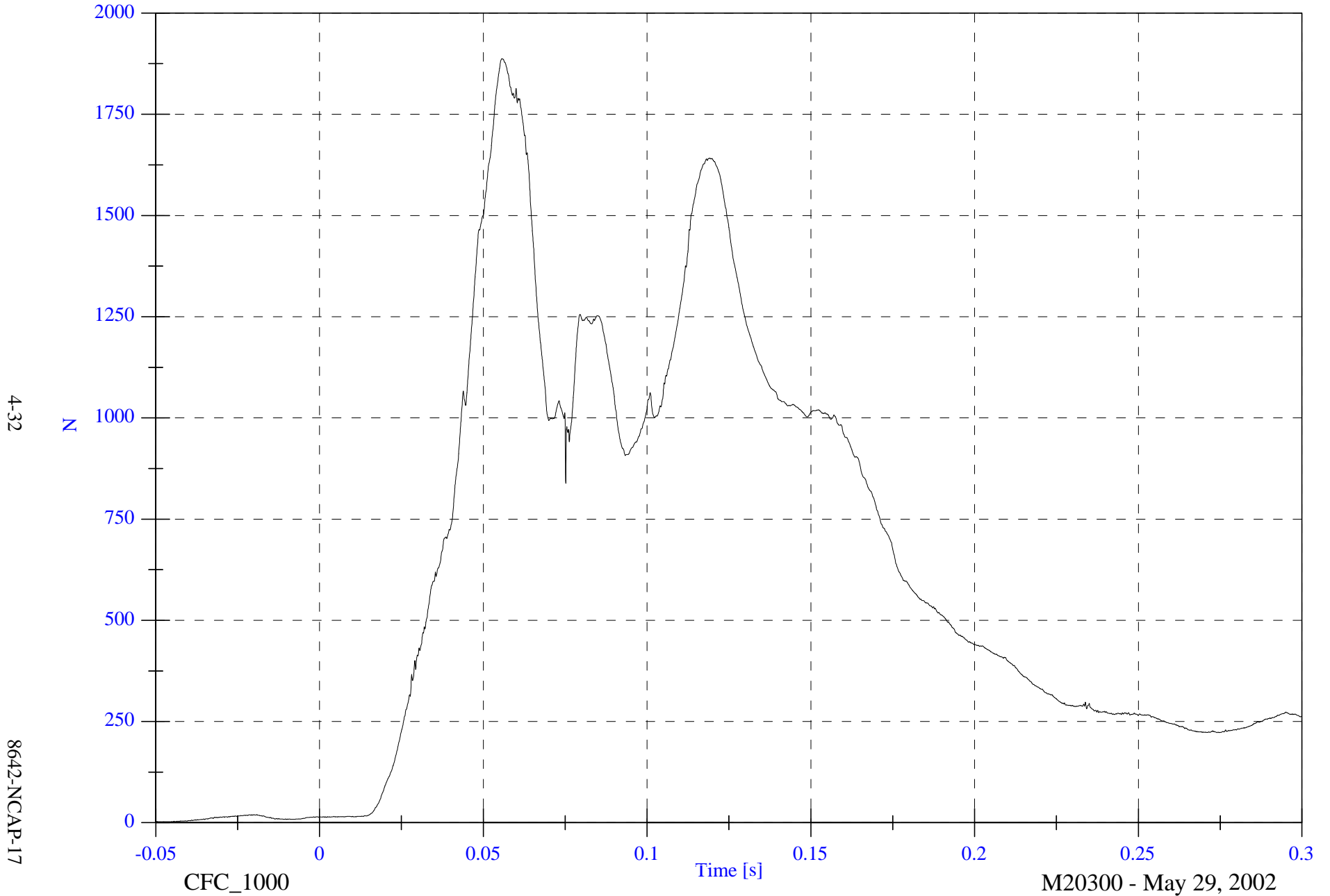
8642-NCAP-17

2002 NCAP Test 17 2002 Dodge Dakota

Max: 1887.3 [N] at 0.056 [s]

Min: 2.0 [N] at -0.048 [s]

P3 Lumbar F Resultant



4-32

8642-NCAP-17

CFC\_1000

Time [s]

M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

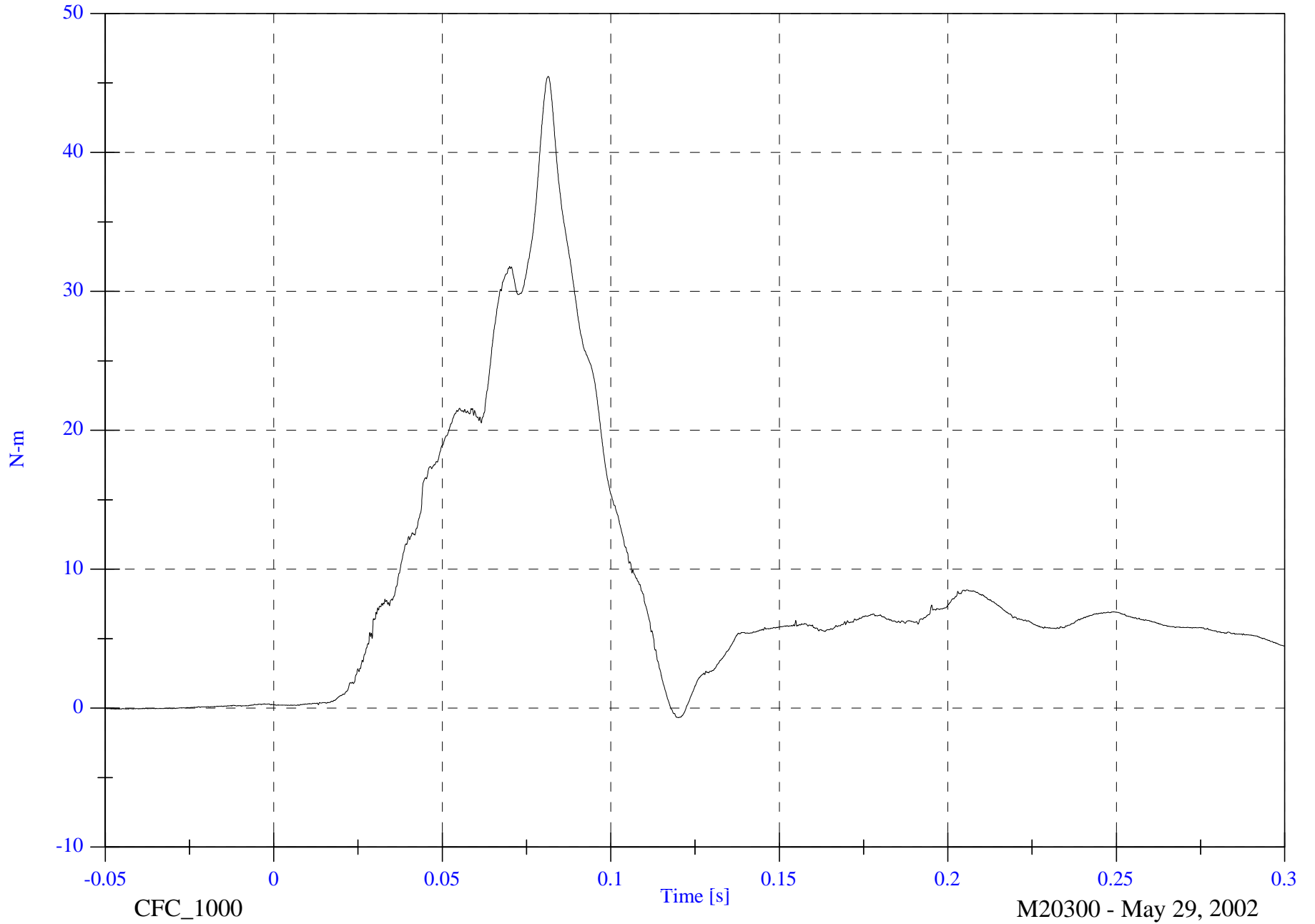
Max: 45.5 [N-m] at 0.082 [s]

Min: -0.7 [N-m] at 0.120 [s]

P3 Lumbar Mx

4-33

8642-NCAP-17



2002 NCAP Test 17 2002 Dodge Dakota

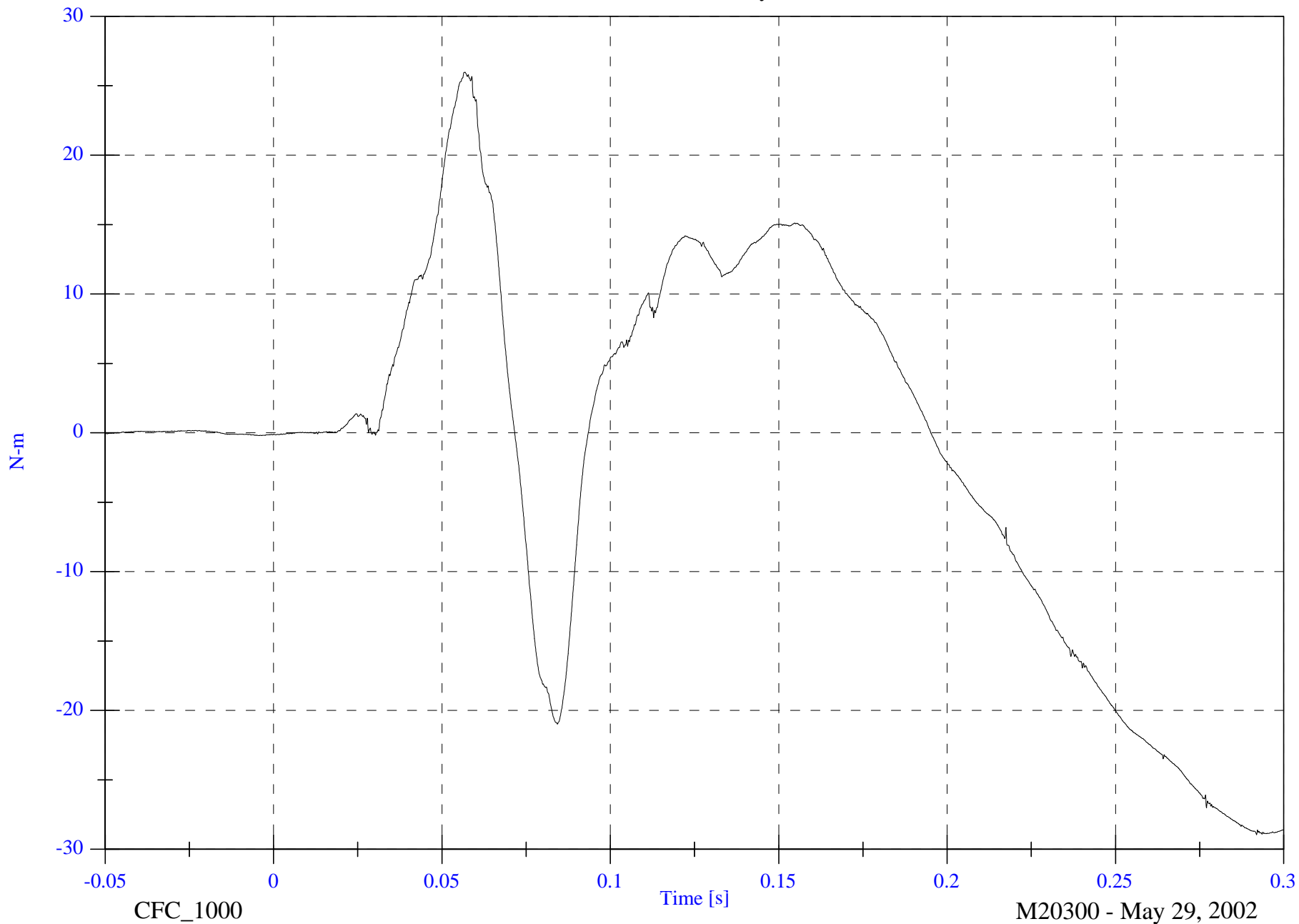
Max: 26.0 [N-m] at 0.057 [s]

Min: -29.0 [N-m] at 0.292 [s]

P3 Lumbar My

4-34

8642-NCAP-17



CFC\_1000

Time [s]

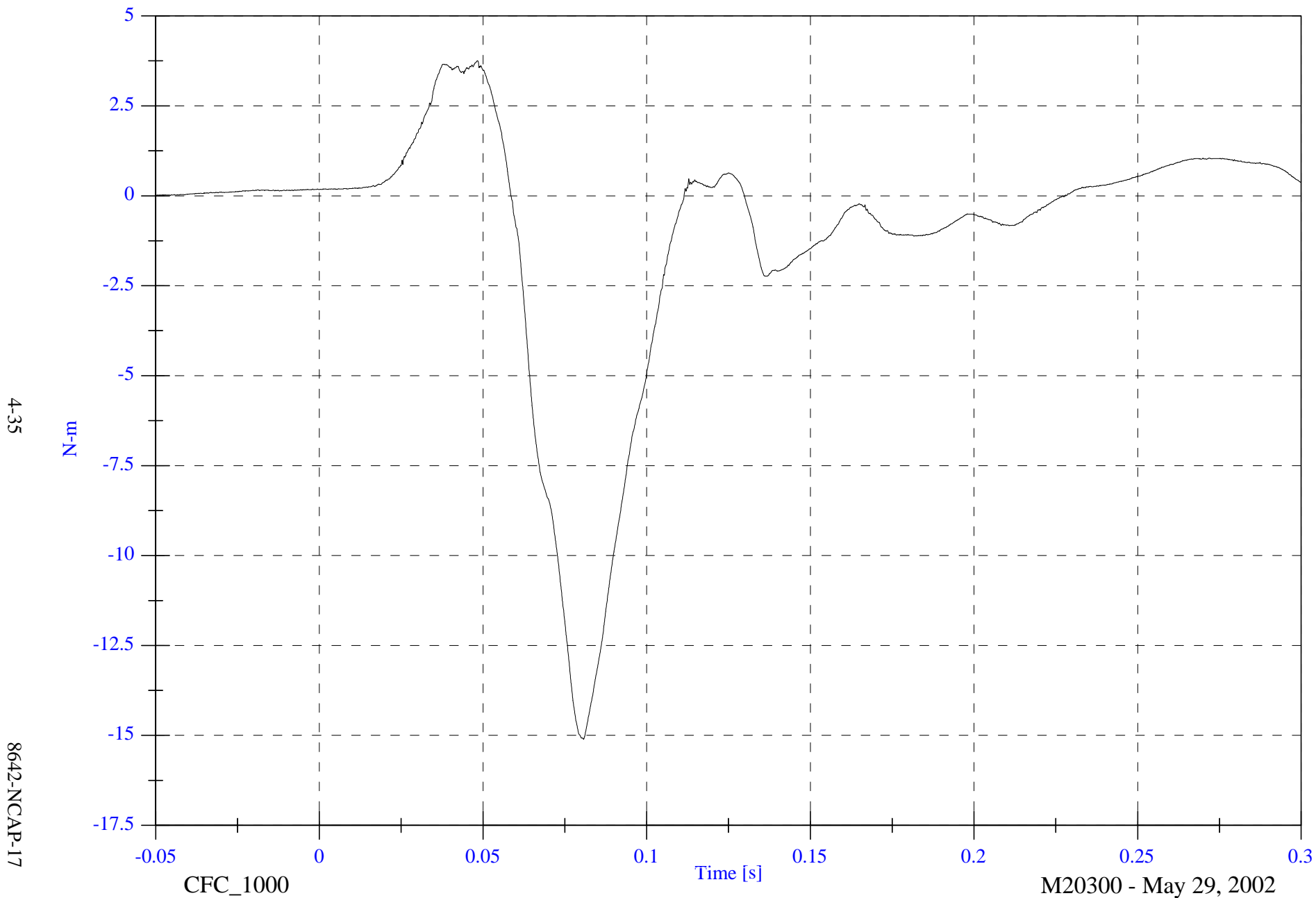
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 3.8 [N-m] at 0.048 [s]

Min: -15.1 [N-m] at 0.081 [s]

P3 Lumbar Mz



4-35

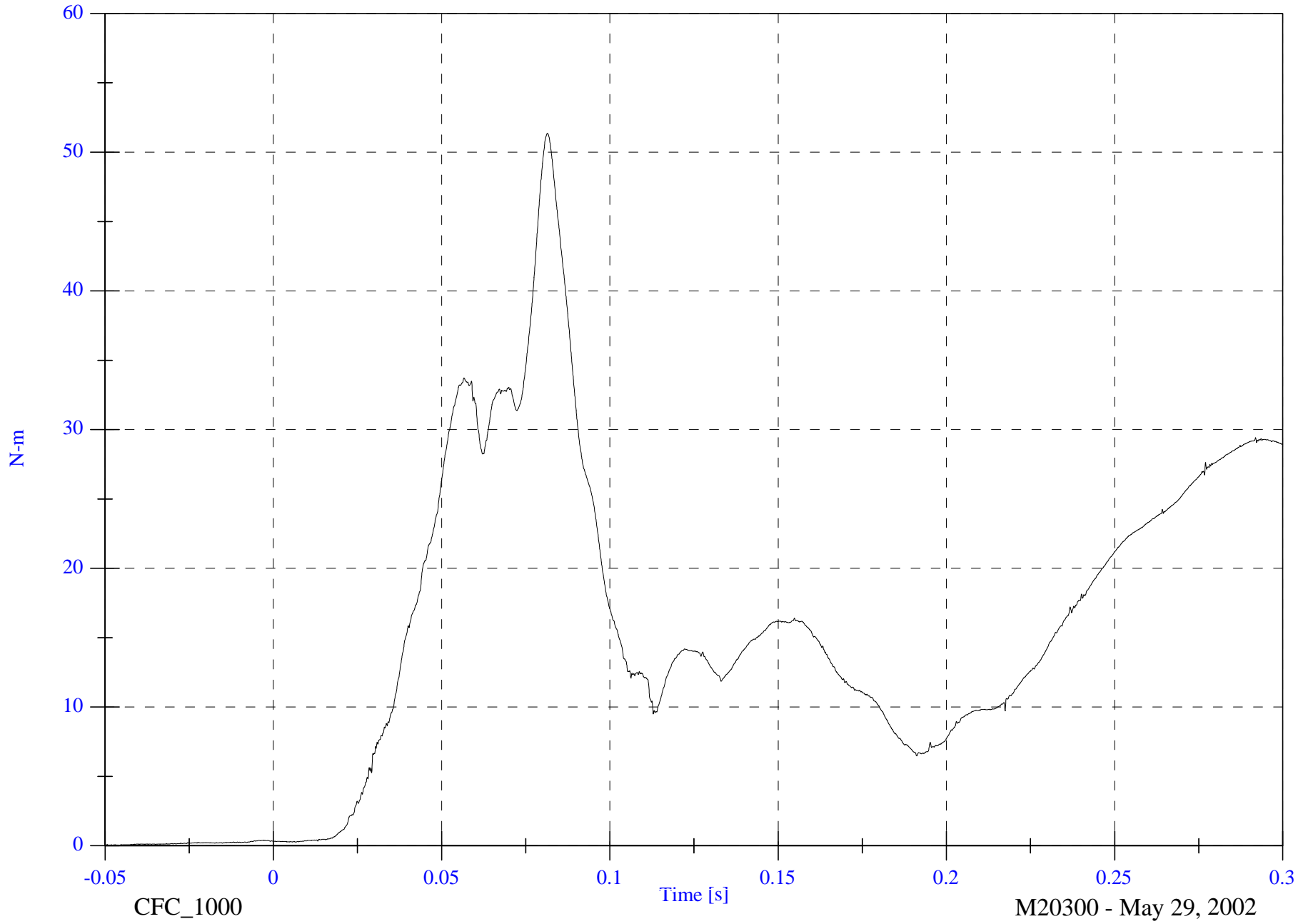
8642-NCAP-17

CFC\_1000

Time [s]

M20300 - May 29, 2002

P3 Lumbar M Resultant

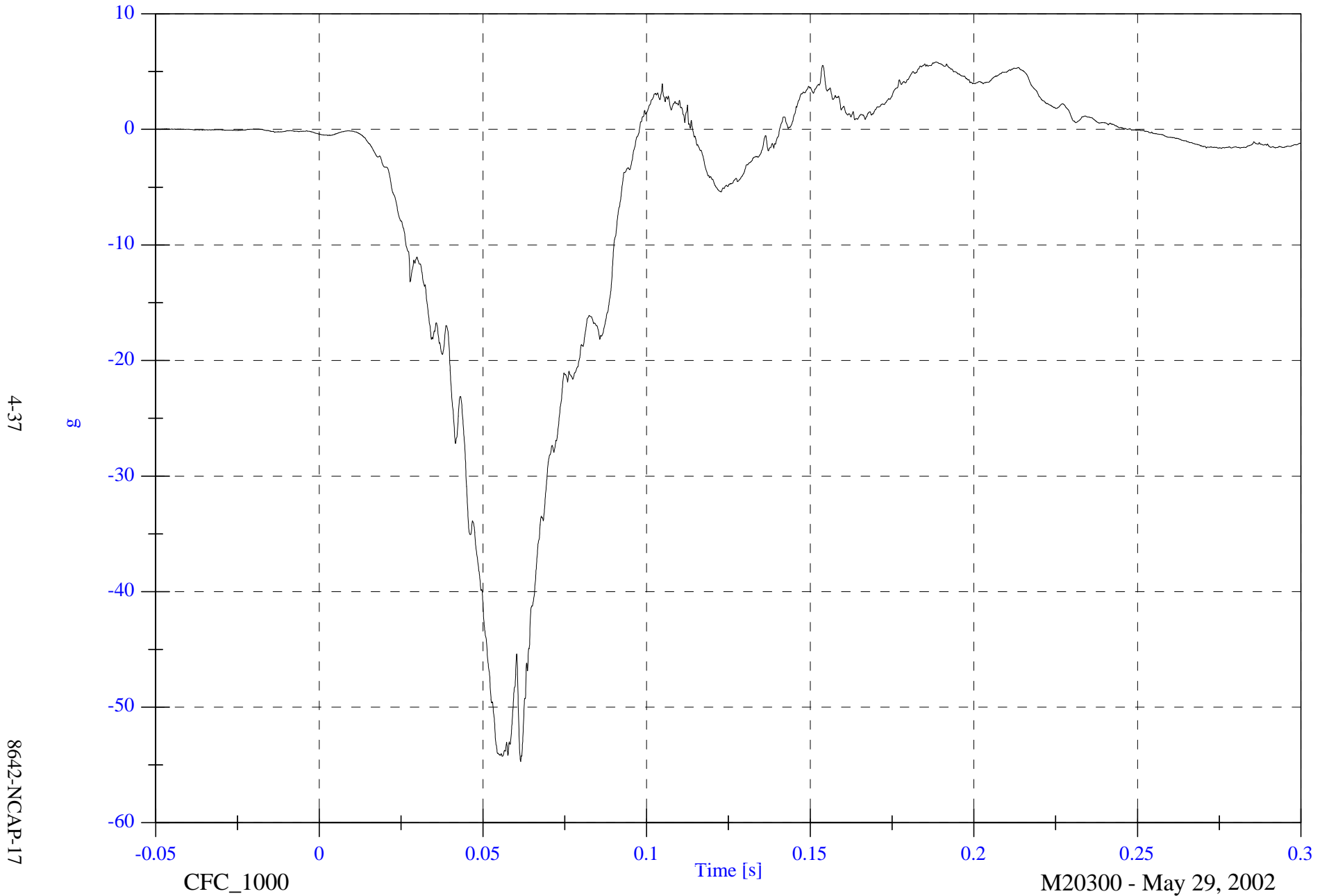


2002 NCAP Test 17 2002 Dodge Dakota

Max: 5.8 [g] at 0.189 [s]

Min: -54.7 [g] at 0.062 [s]

P3 Pelvic x



4-37

8642-NCAP-17

CFC\_1000

Time [s]

M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

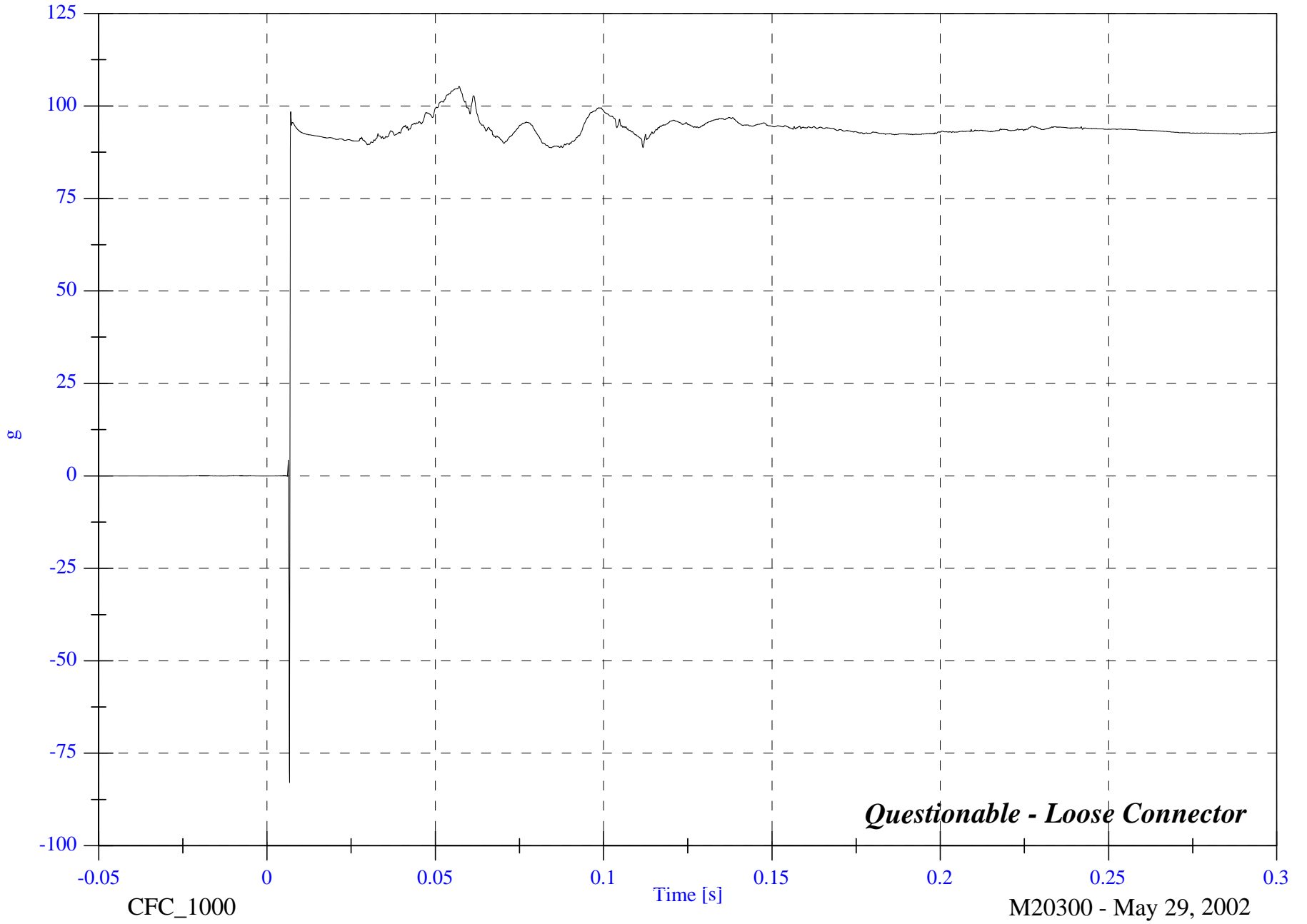
Max: 105.3 [g] at 0.057 [s]

Min: -82.9 [g] at 0.007 [s]

P3 Pelvic y

4-38

8642-NCAP-17



*Questionable - Loose Connector*

CFC\_1000

Time [s]

M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

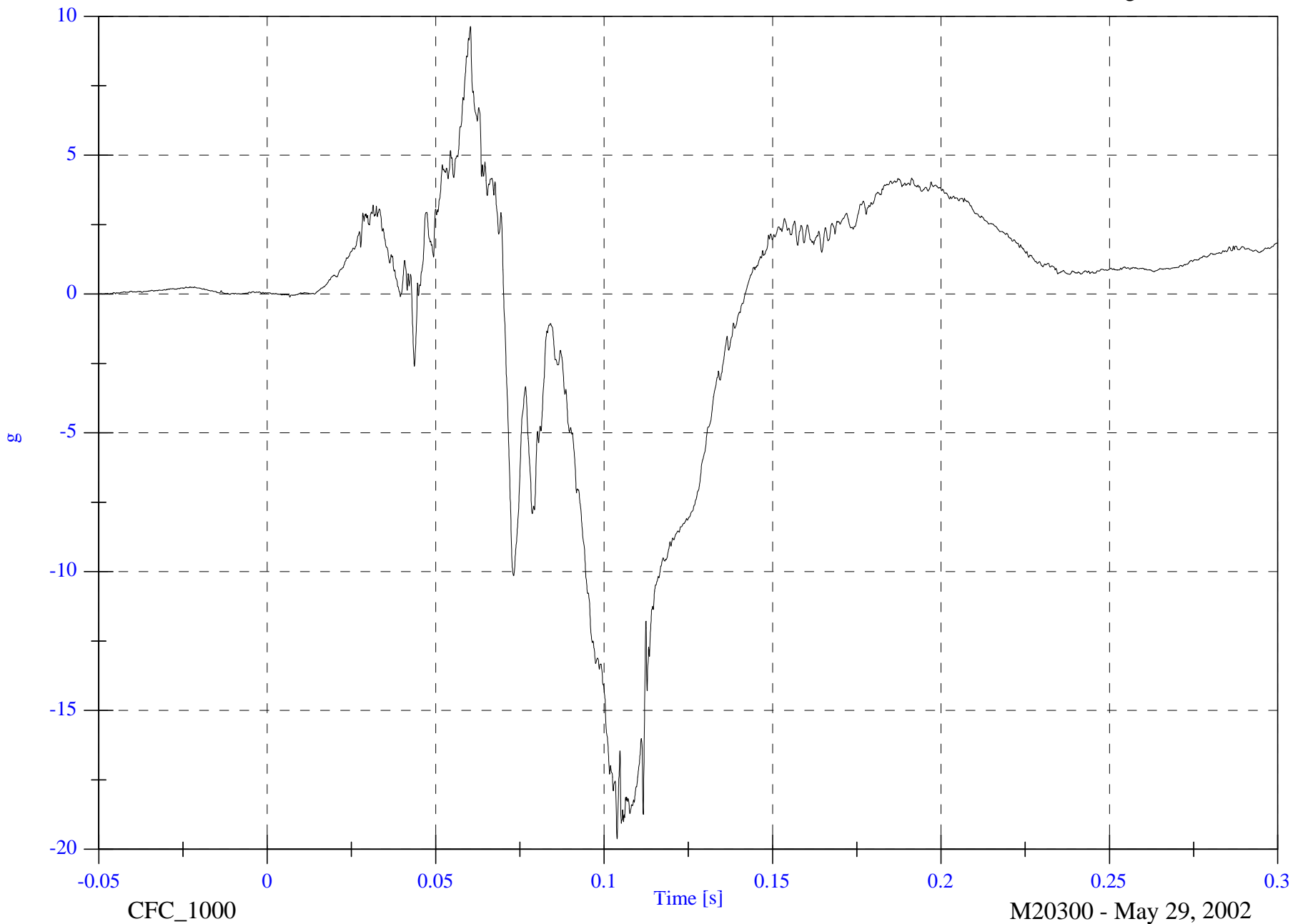
Max: 9.6 [g] at 0.060 [s]

Min: -19.6 [g] at 0.104 [s]

P3 Pelvic z

4-39

8642-NCAP-17

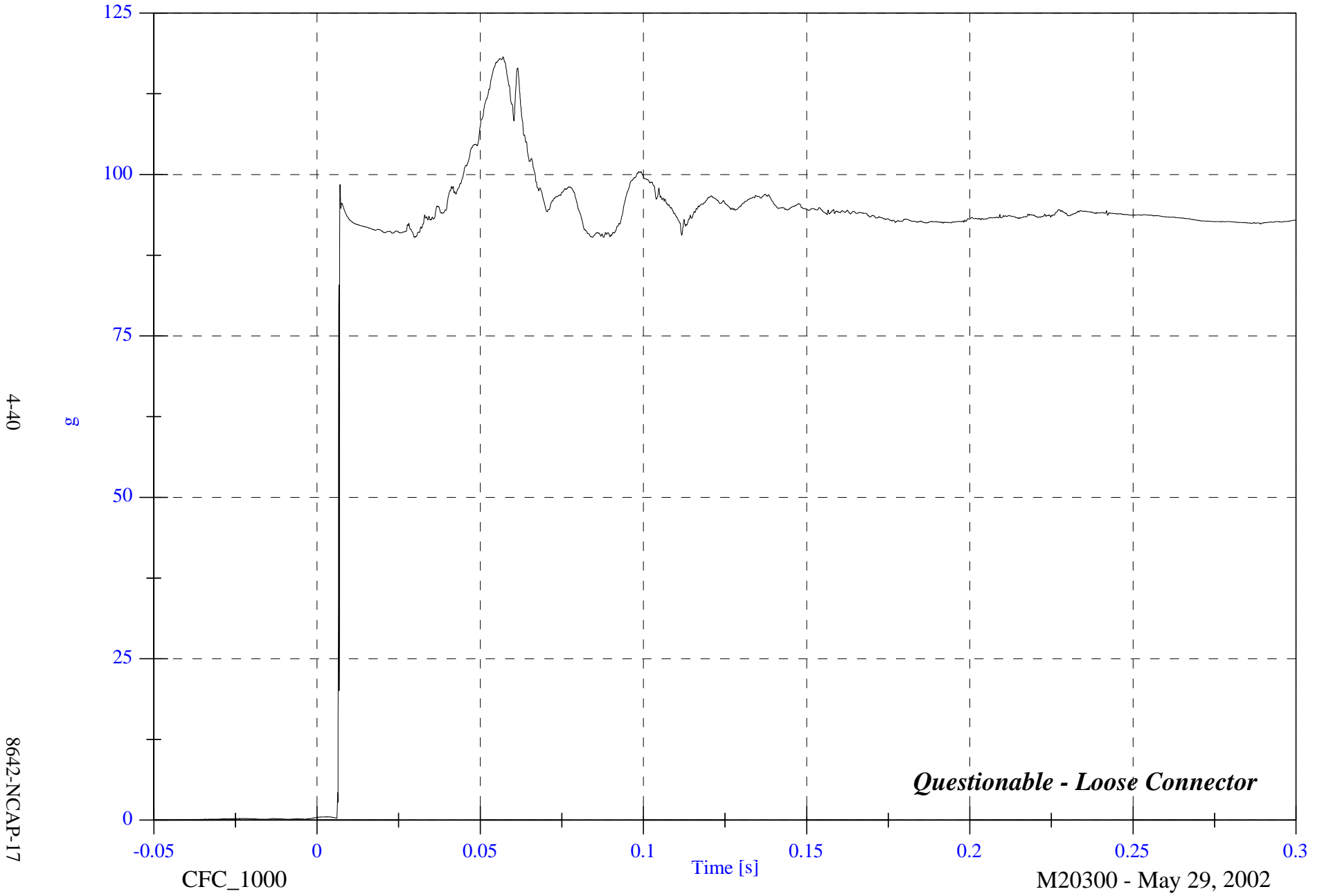


2002 NCAP Test 17 2002 Dodge Dakota

Max: 118.2 [g] at 0.057 [s]

Min: 0.0 [g] at -0.050 [s]

P3 Pelvic Resultant



4-40

8642-NCAP-17

CFC\_1000

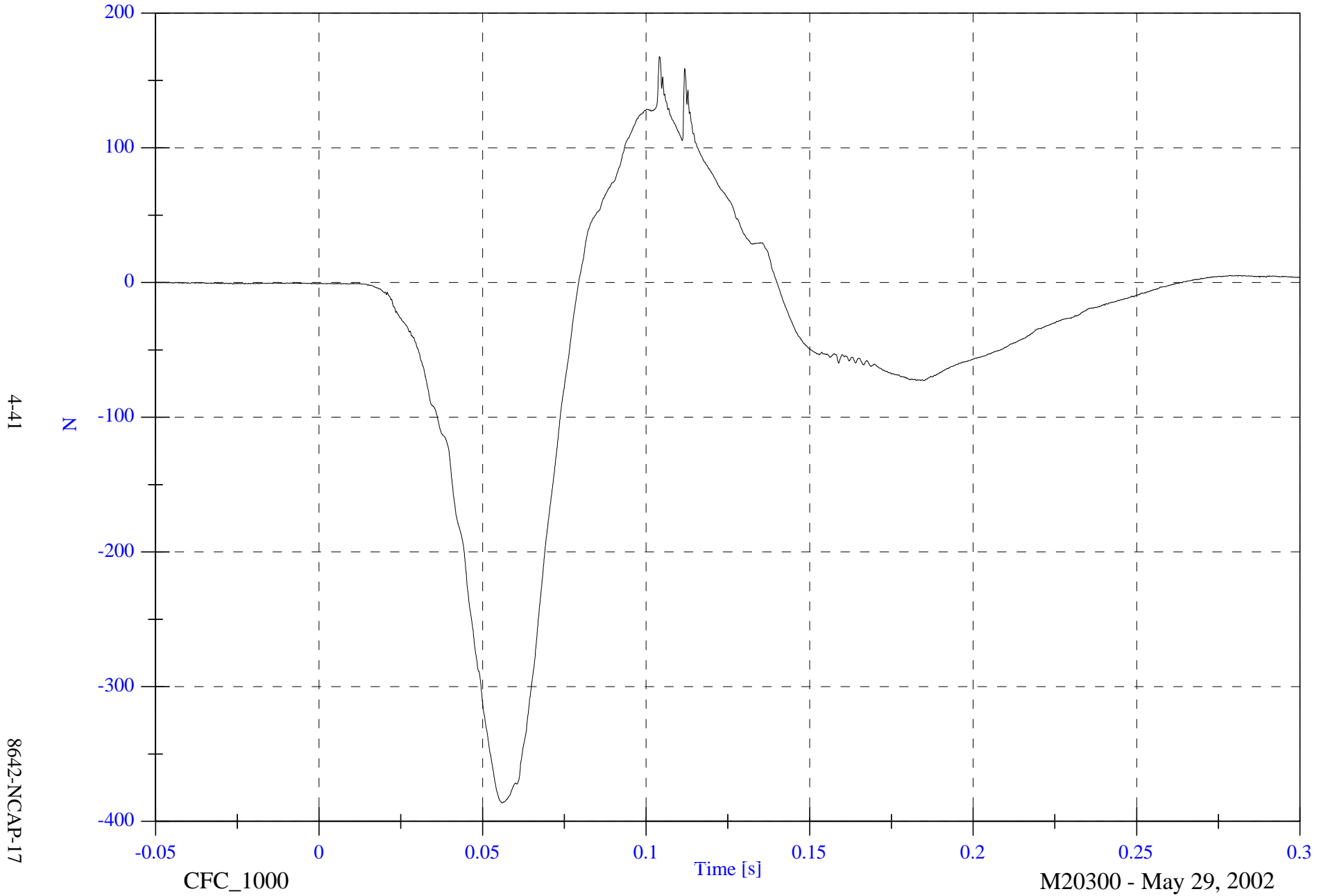
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 167.7 [N] at 0.104 [s]

Min: -386.3 [N] at 0.056 [s]

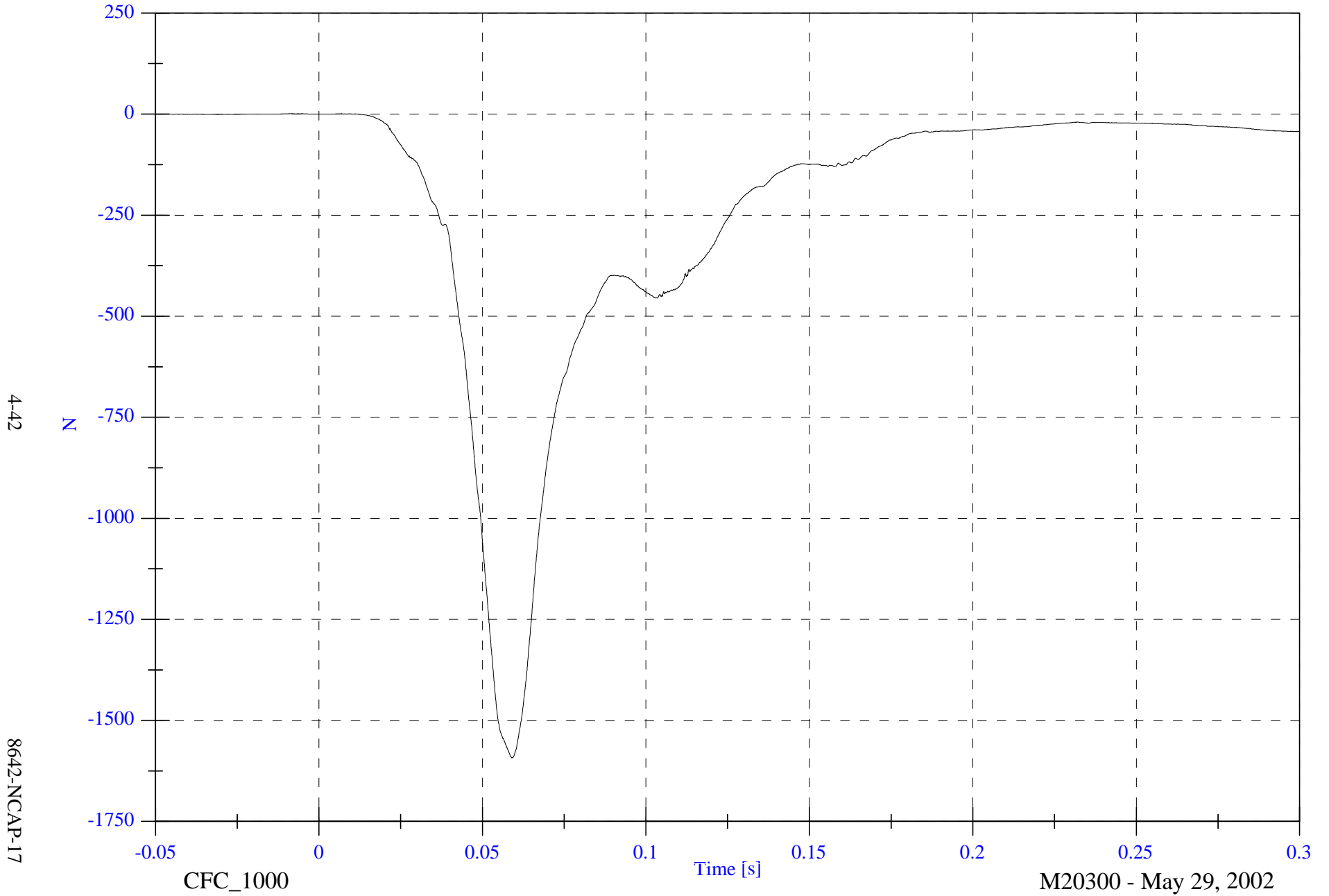
P3 LT.UP ASIS LOAD



2002 NCAP Test 17 2002 Dodge Dakota

Max: 1.0 [N] at -0.008 [s]  
Min: -1593.2 [N] at 0.059 [s]

P3 LT.LO ASIS LOAD



4-42

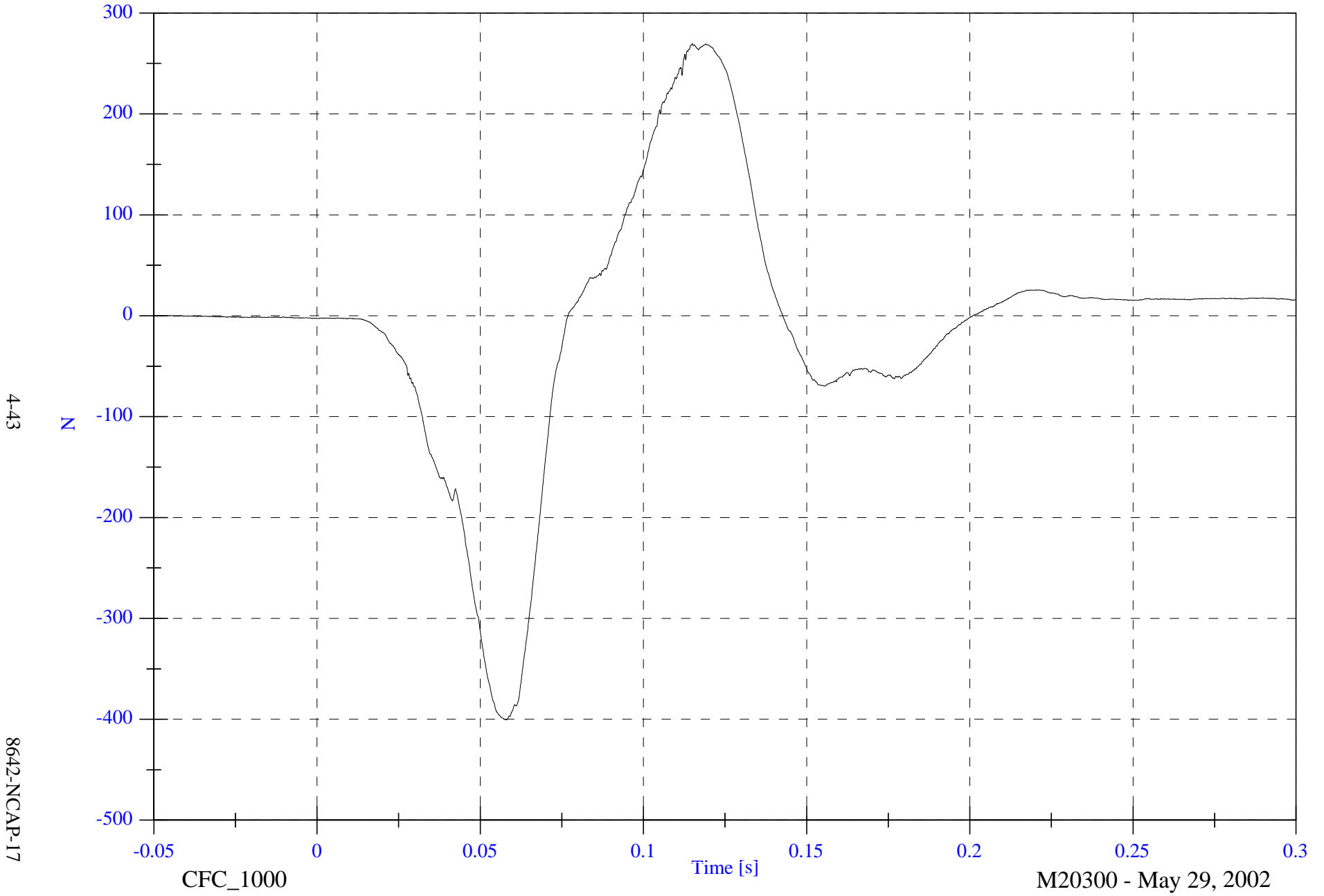
8642-NCAP-17

2002 NCAP Test 17 2002 Dodge Dakota

Max: 269.7 [N] at 0.115 [s]

Min: -400.7 [N] at 0.058 [s]

P3 RT.UP ASIS LOAD



4-43

8642-NCAP-17

CFC\_1000

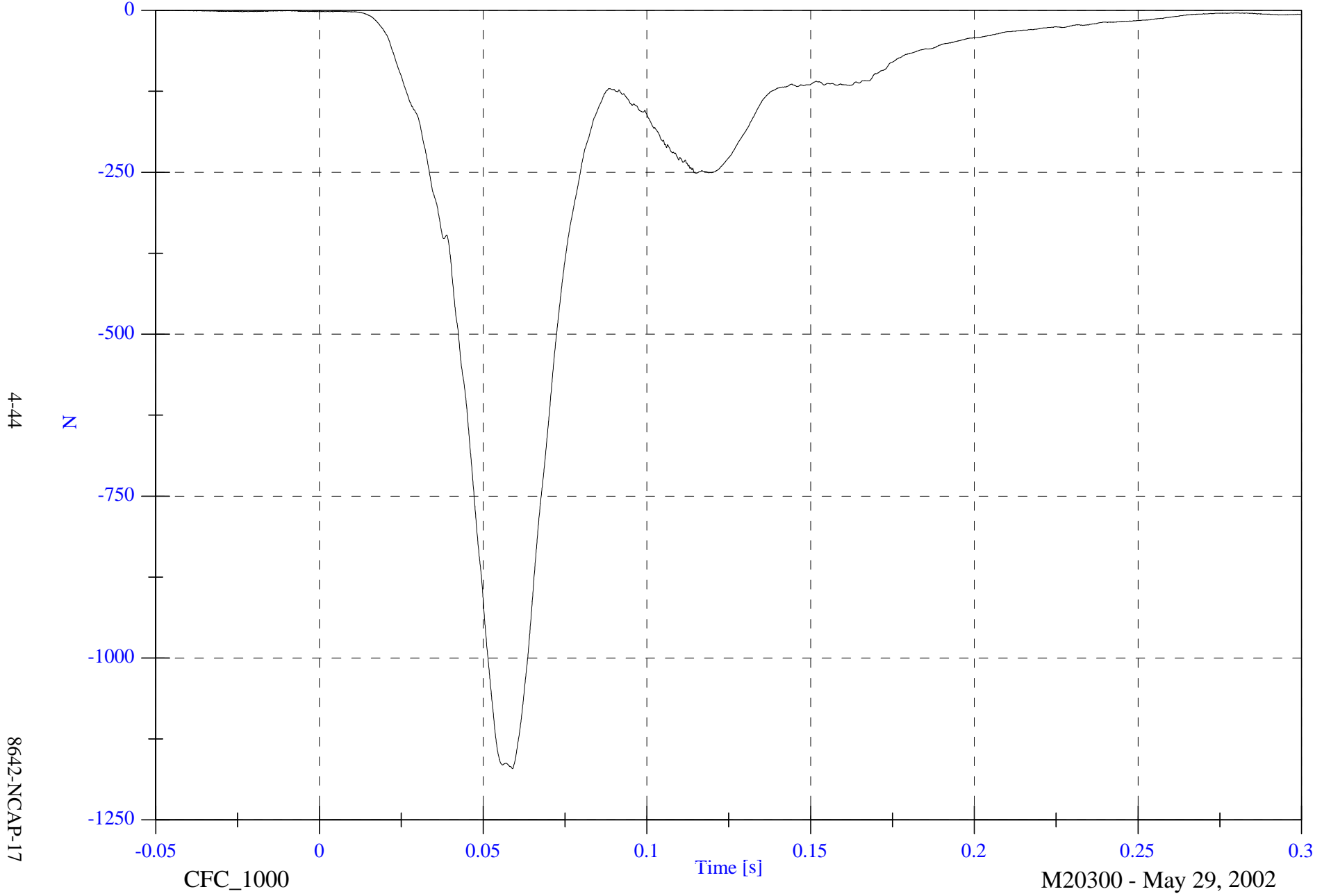
Time [s]

M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 0.1 [N] at -0.049 [s]  
Min: -1170.8 [N] at 0.059 [s]

P3 RT.LO ASIS LOAD



4-44

8642-NCAP-17

CFC\_1000

Time [s]

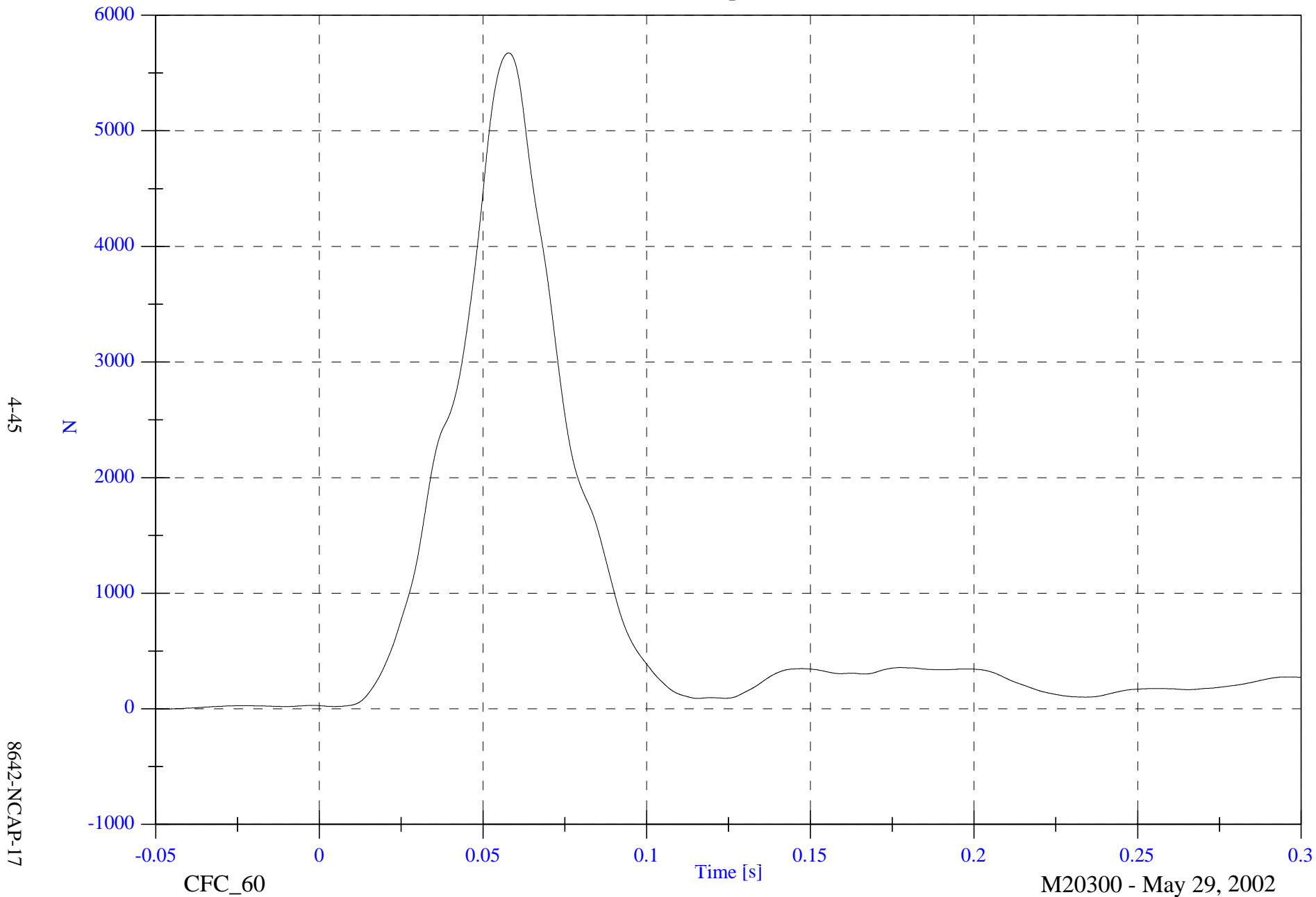
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 5673.6 [N] at 0.058 [s]

P3 Lap Belt

Min: -4.7 [N] at -0.050 [s]



4-45

8642-NCAP-17

CFC\_60

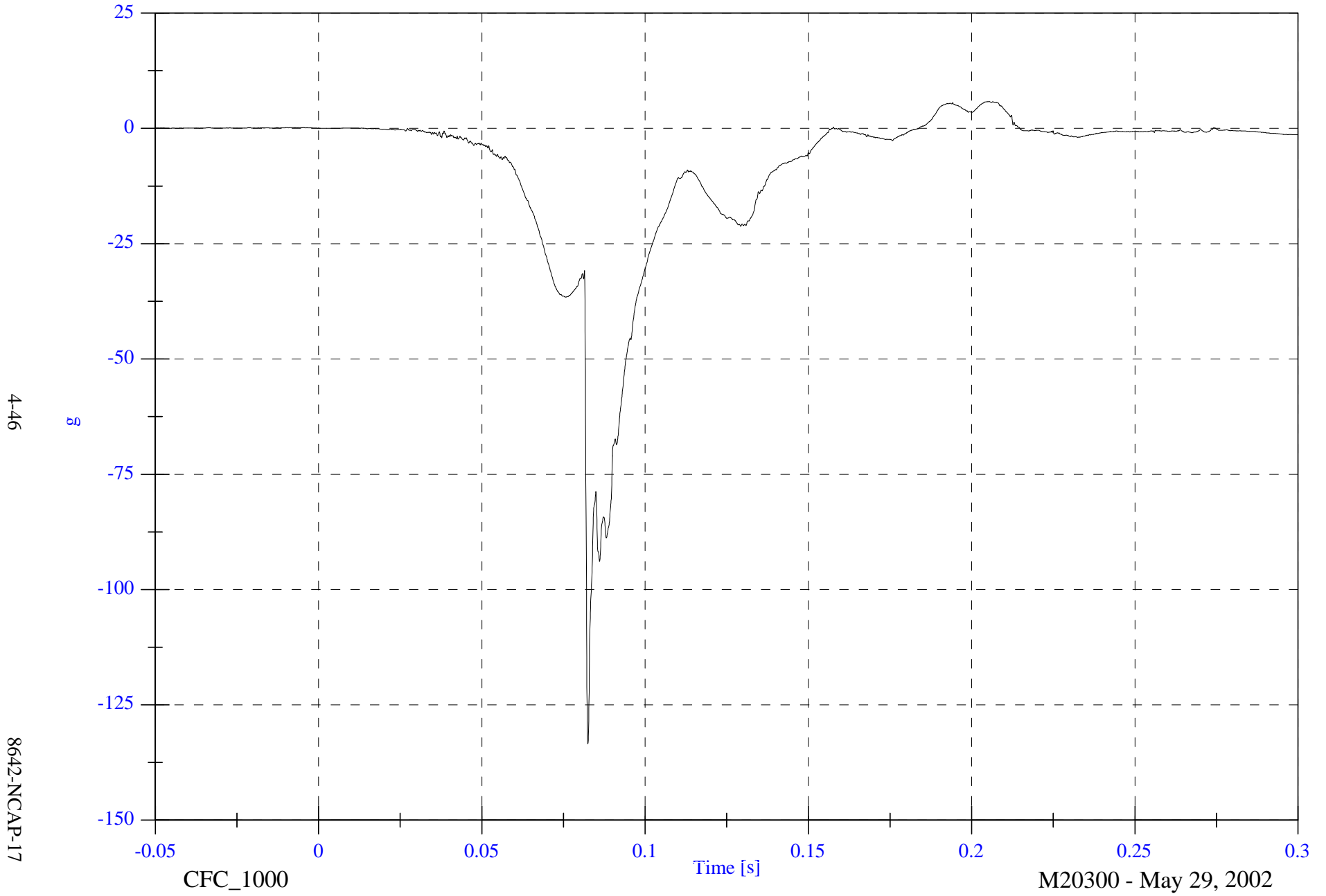
Time [s]

M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 5.8 [g] at 0.205 [s]  
Min: -133.4 [g] at 0.083 [s]

P4 Head x



4-46

8642-NCAP-17

CFC\_1000

Time [s]

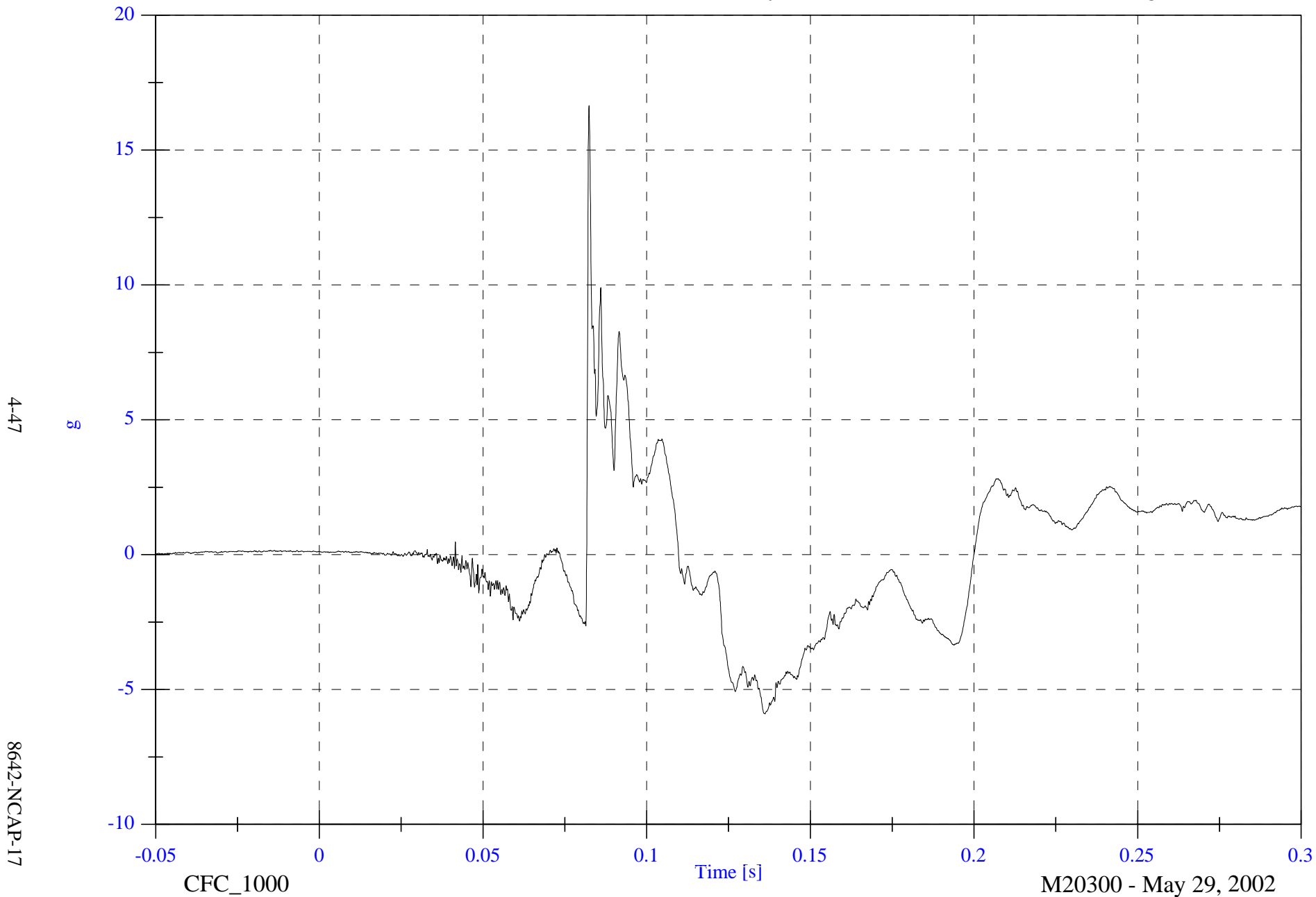
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 16.6 [g] at 0.082 [s]

Min: -5.9 [g] at 0.136 [s]

P4 Head y



2002 NCAP Test 17 2002 Dodge Dakota

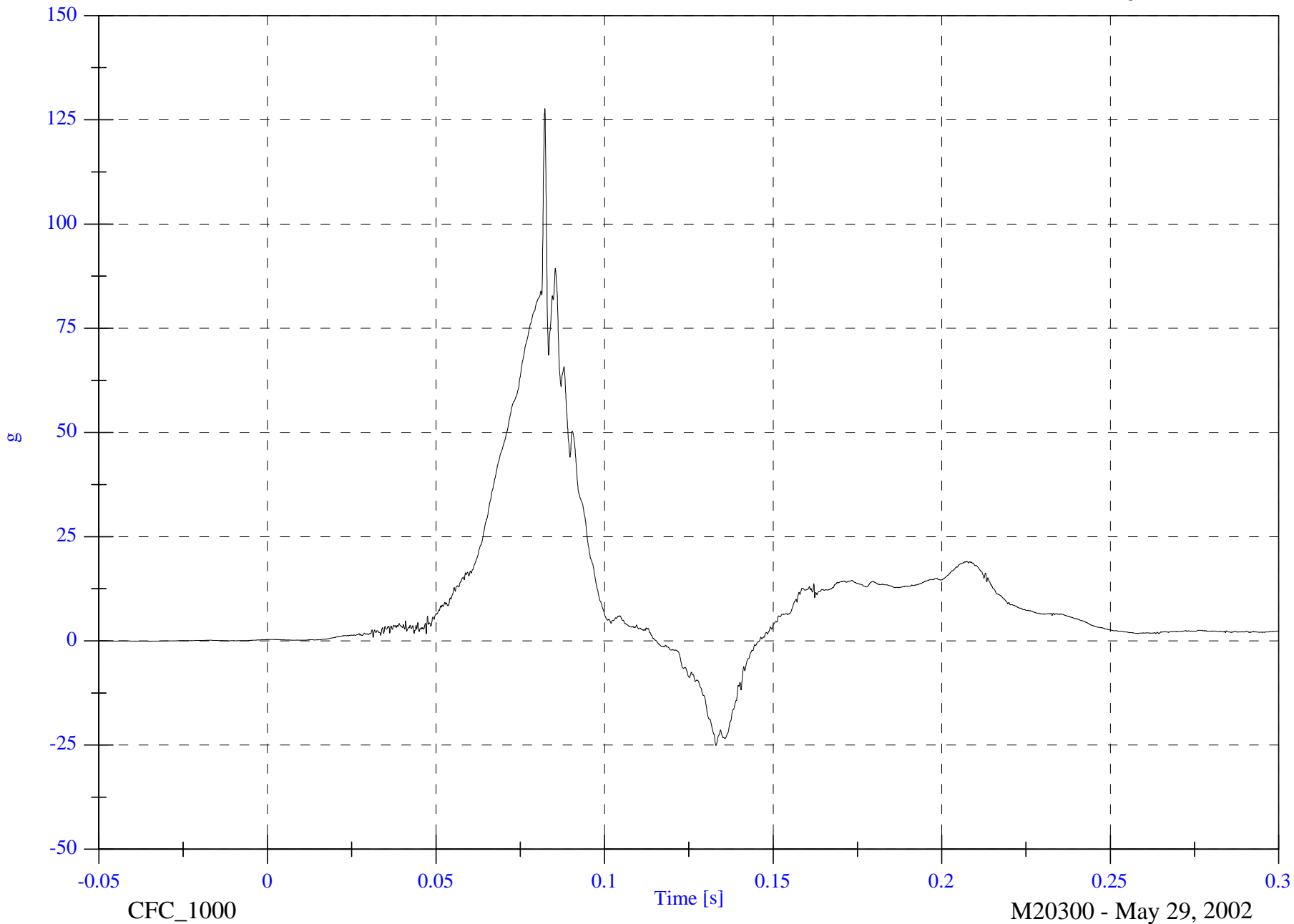
Max: 127.7 [g] at 0.082 [s]

Min: -25.1 [g] at 0.133 [s]

P4 Head z

4-48

8642-NCAP-17



2002 NCAP Test 17 2002 Dodge Dakota

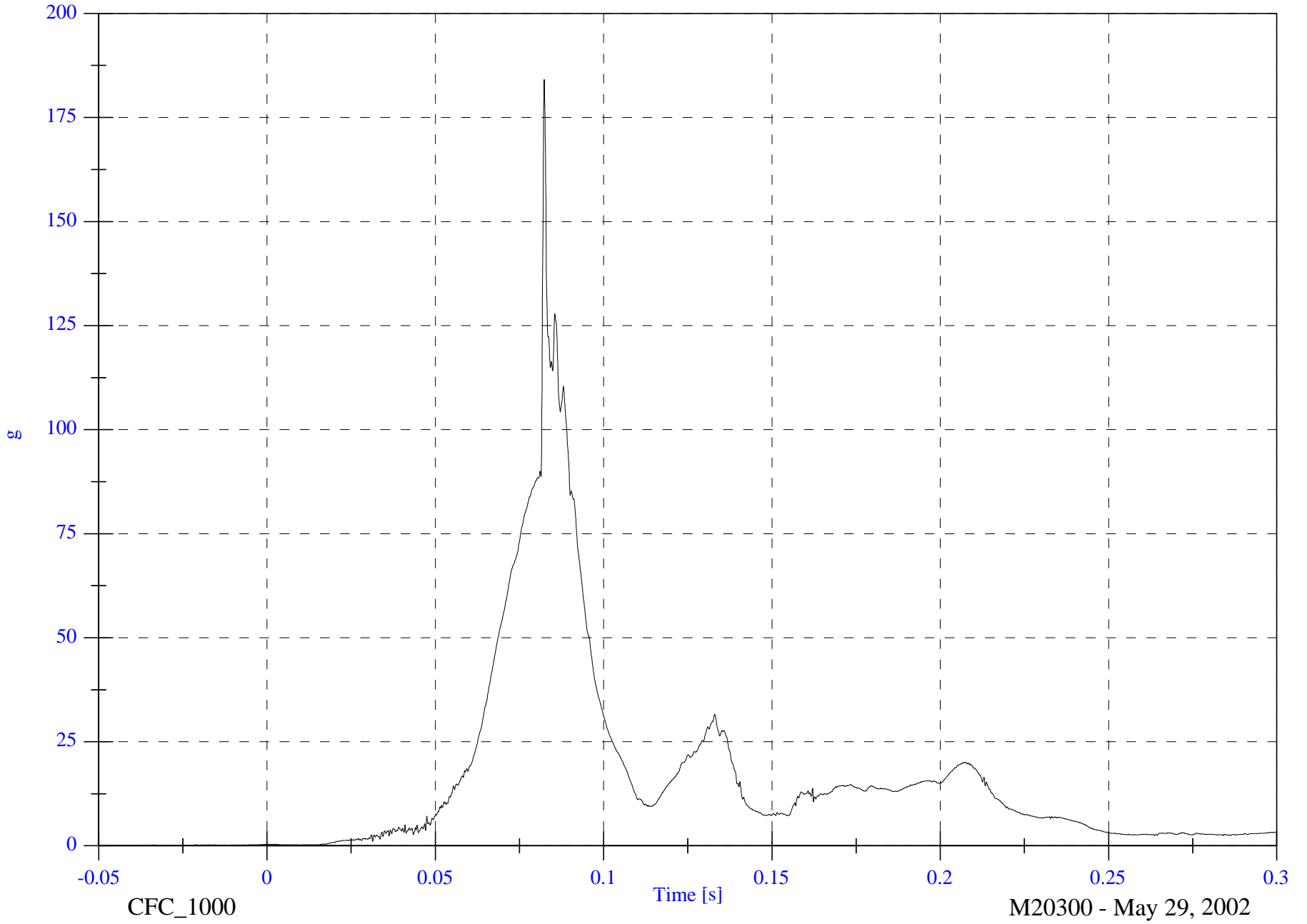
Max: 184.1 [g] at 0.082 [s]

Min: 0.0 [g] at -0.050 [s]

P4 Head Resultant

4-49

8642-NCAP-17

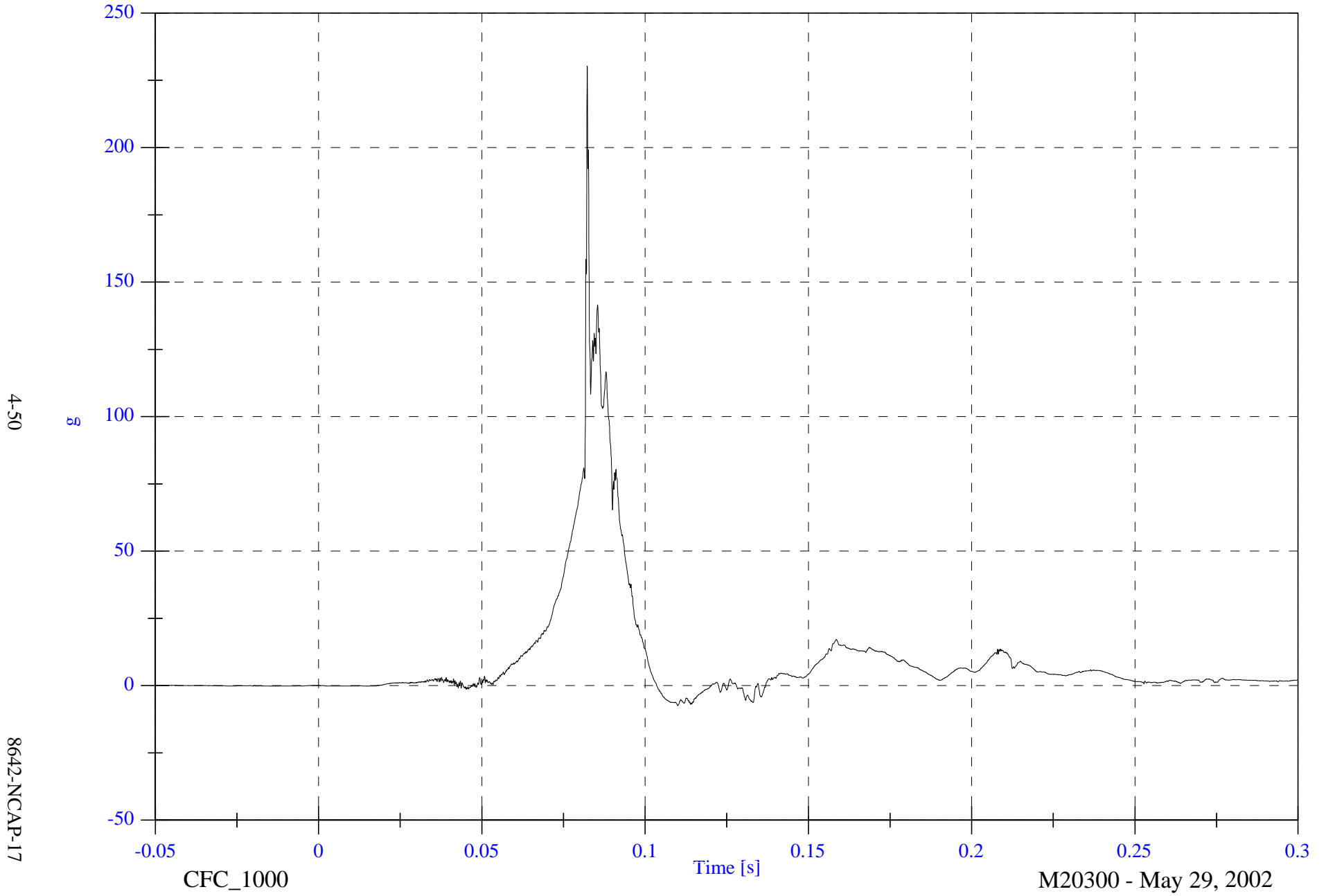


2002 NCAP Test 17 2002 Dodge Dakota

Max: 230.3 [g] at 0.082 [s]

Min: -7.4 [g] at 0.110 [s]

P4 Head Red z

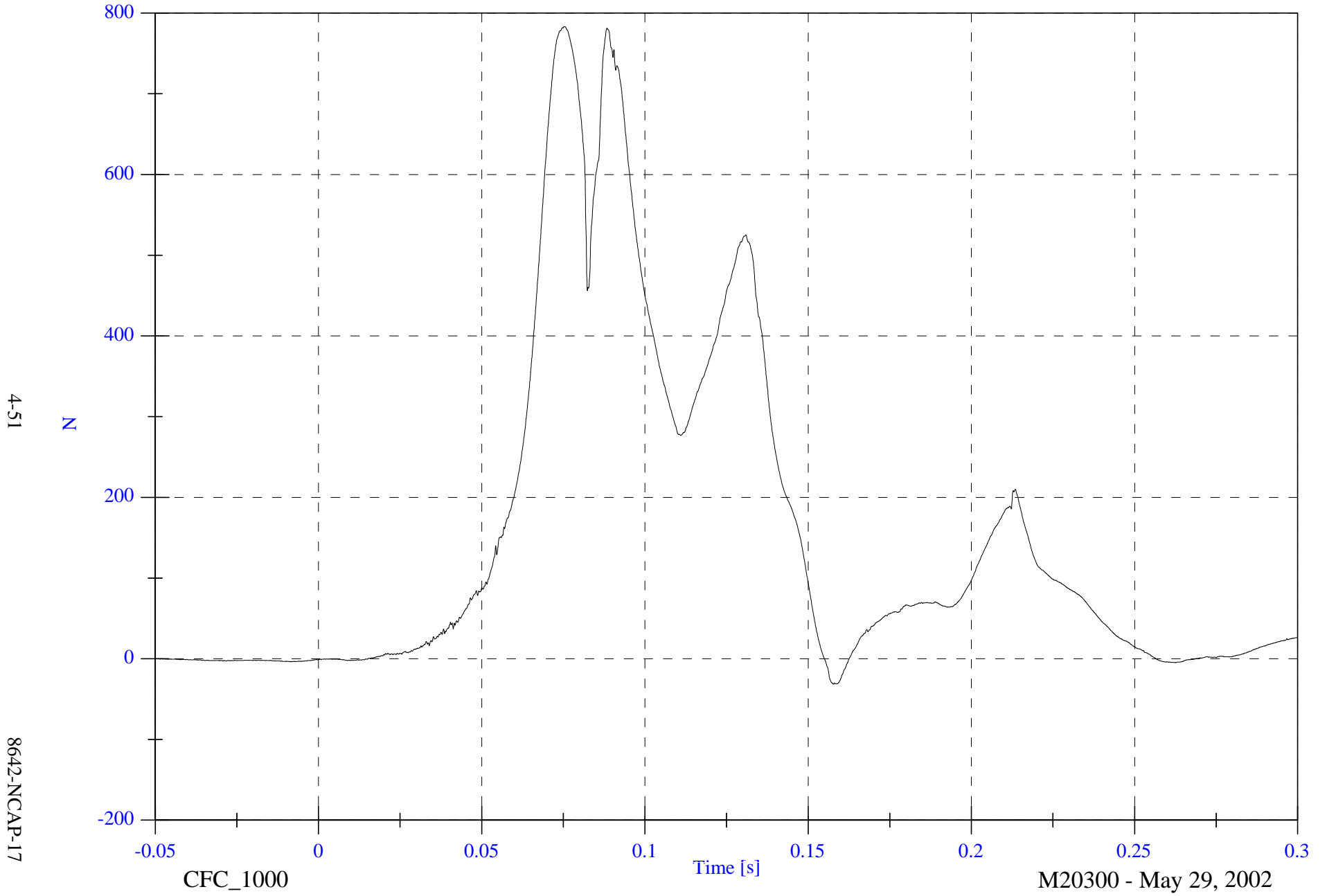


2002 NCAP Test 17 2002 Dodge Dakota

Max: 783.3 [N] at 0.075 [s]

Min: -31.7 [N] at 0.158 [s]

P4 Upper Neck Fx



4-51

8642-NCAP-17

CFC\_1000

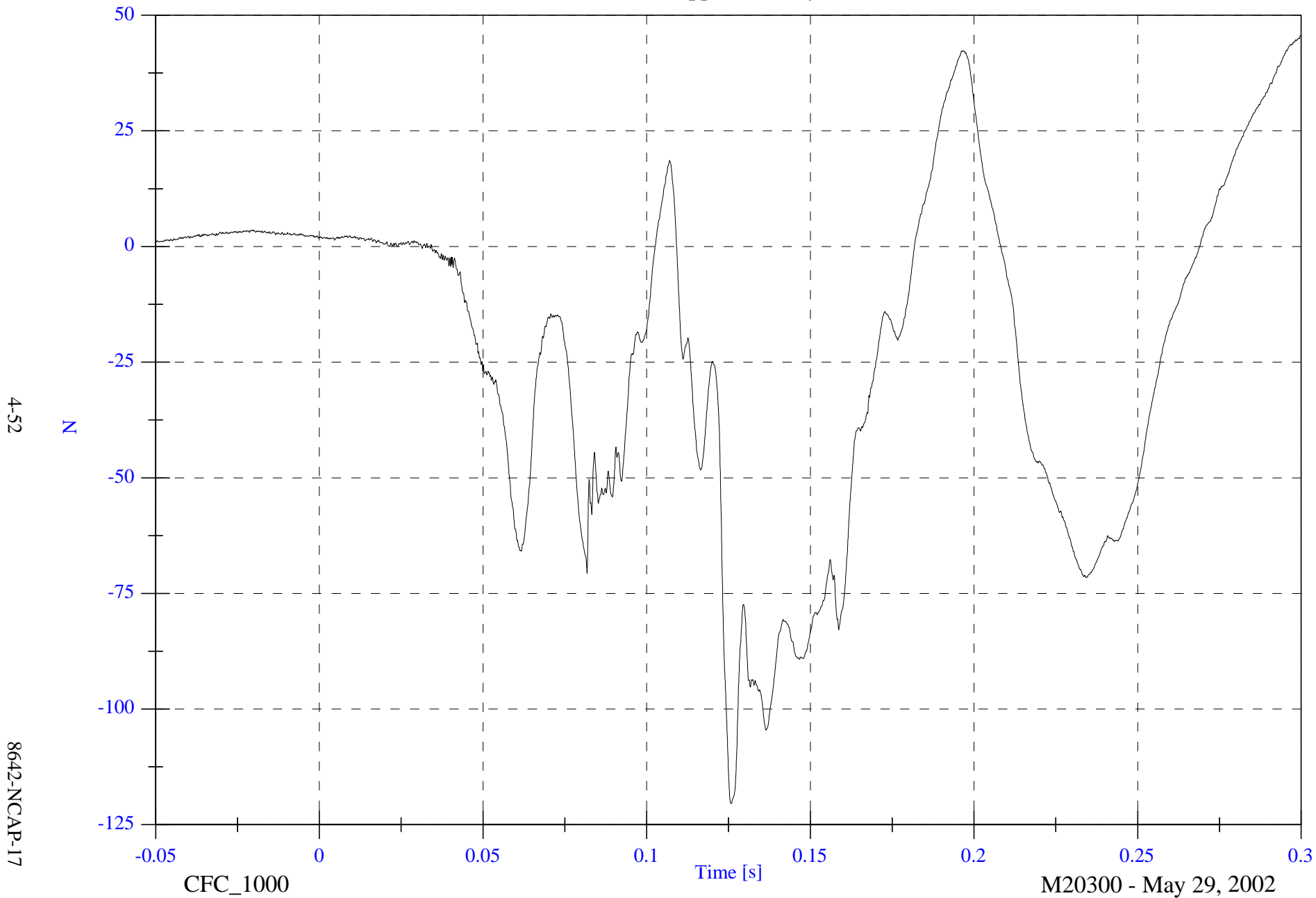
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 45.6 [N] at 0.300 [s]

P4 Upper Neck Fy

Min: -120.4 [N] at 0.126 [s]



4-52

8642-NCAP-17

CFC\_1000

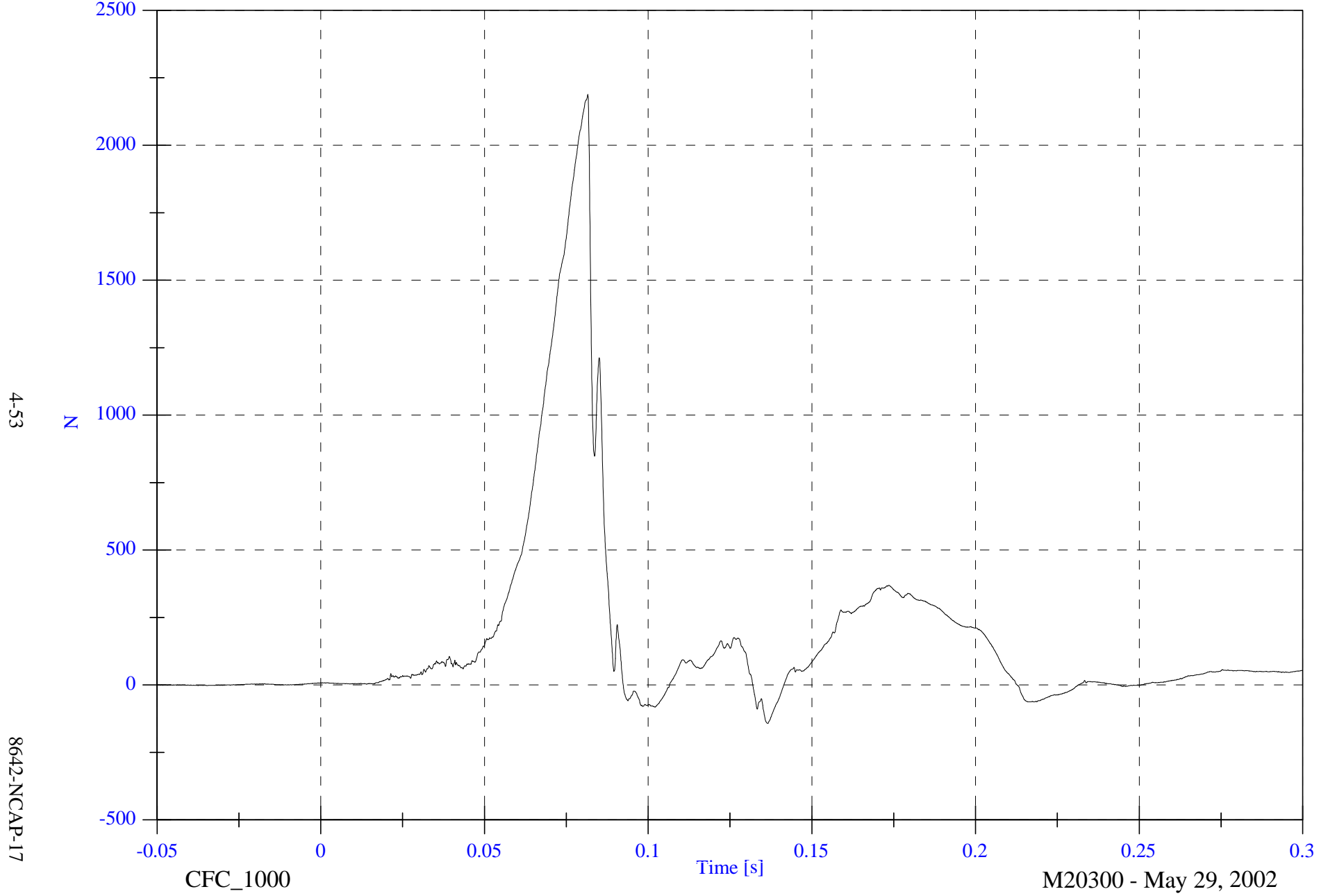
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 2188.3 [N] at 0.082 [s]

Min: -142.5 [N] at 0.137 [s]

P4 Upper Neck Fz



4-53

8642-NCAP-17

CFC\_1000

Time [s]

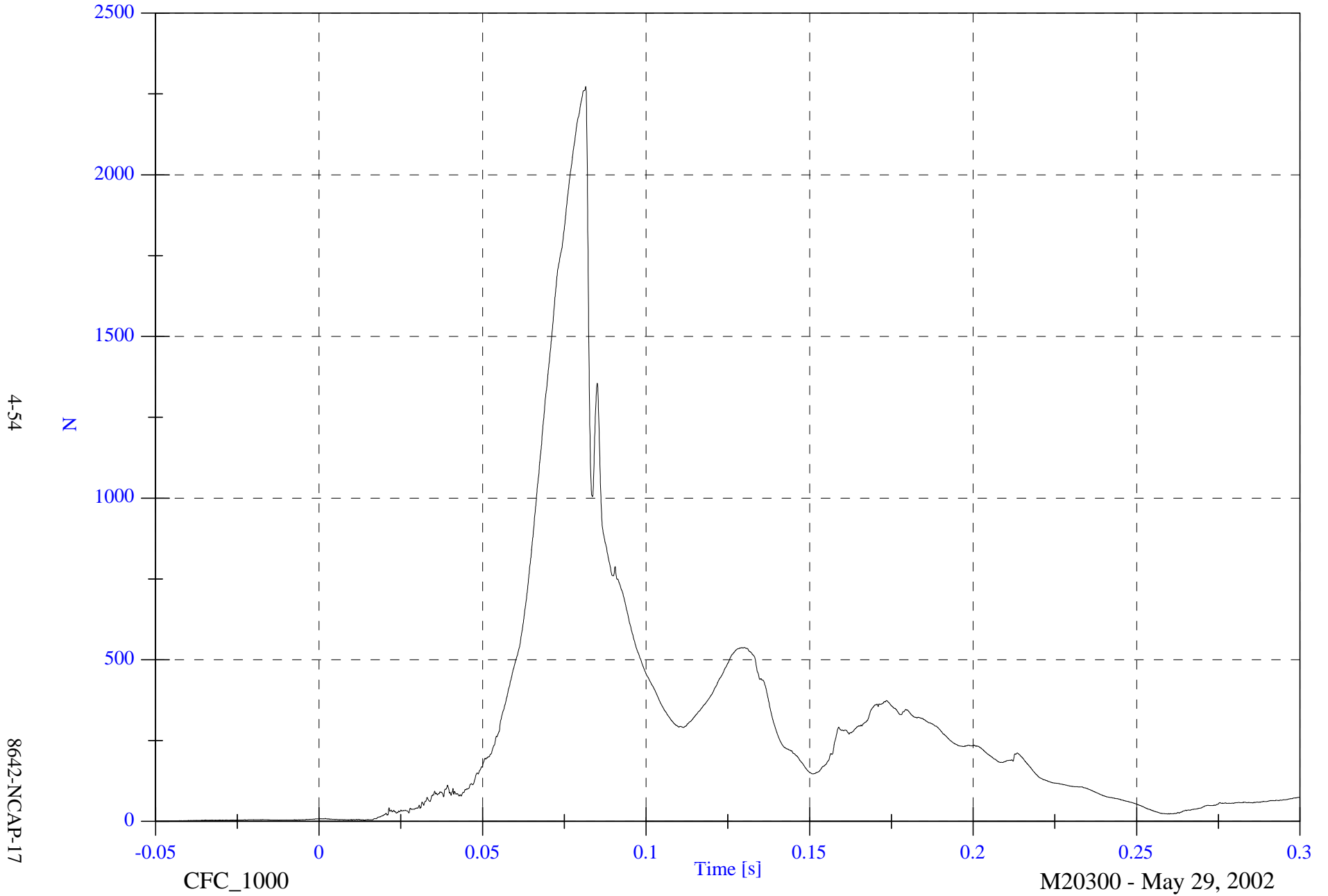
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 2272.8 [N] at 0.082 [s]

P4 Upper Neck F Resultant

Min: 1.0 [N] at -0.050 [s]



4-54

8642-NCAP-17

CFC\_1000

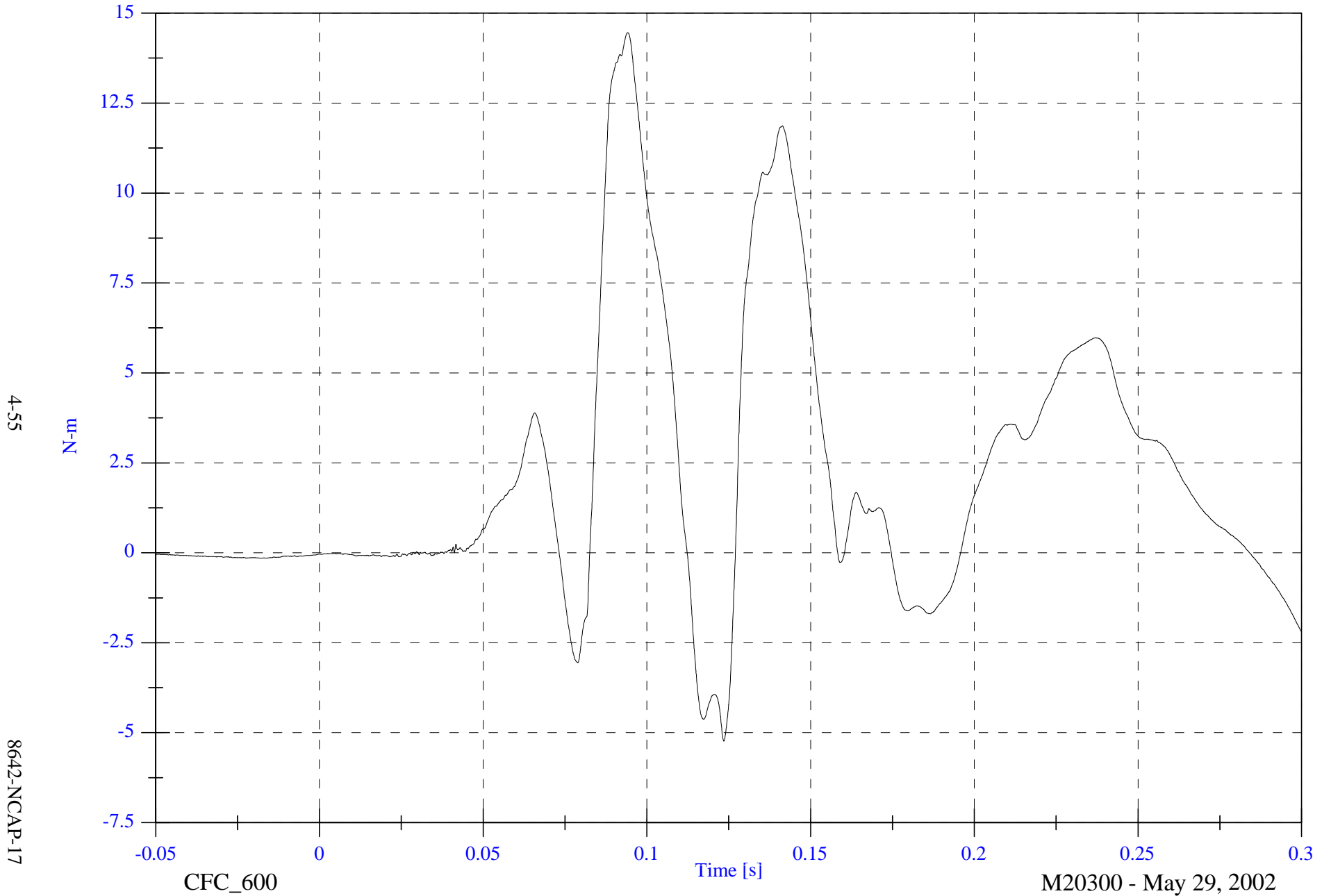
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 14.5 [N-m] at 0.094 [s]

Min: -5.2 [N-m] at 0.124 [s]

P4 Upper Neck Mx



4-55

8642-NCAP-17

CFC\_600

Time [s]

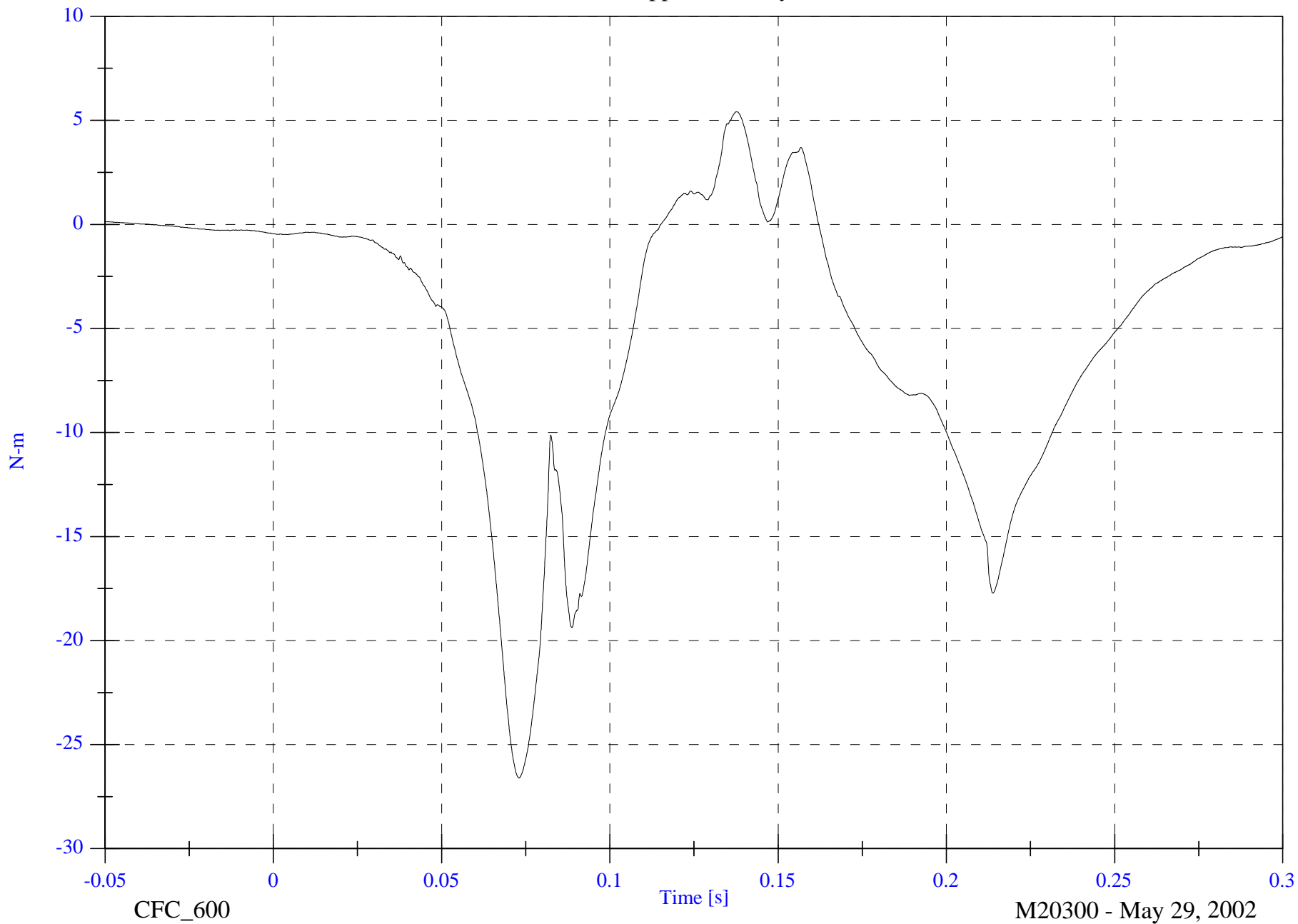
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 5.4 [N-m] at 0.138 [s]

Min: -26.6 [N-m] at 0.073 [s]

P4 Upper Neck My



4-56

8642-NCAP-17

CFC\_600

Time [s]

M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

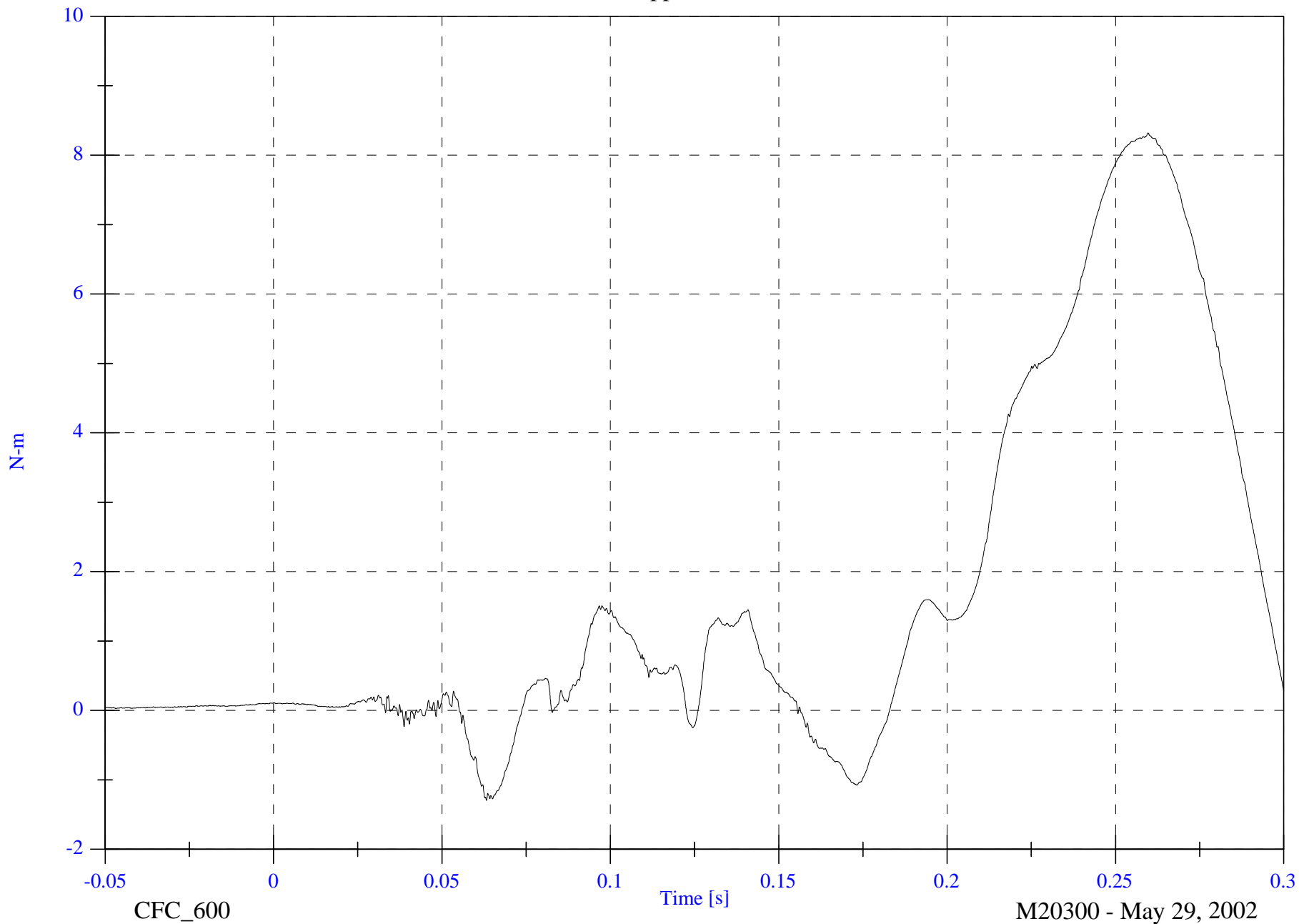
Max: 8.3 [N-m] at 0.260 [s]

Min: -1.3 [N-m] at 0.063 [s]

P4 Upper Neck Mz

4-57

8642-NCAP-17



CFC\_600

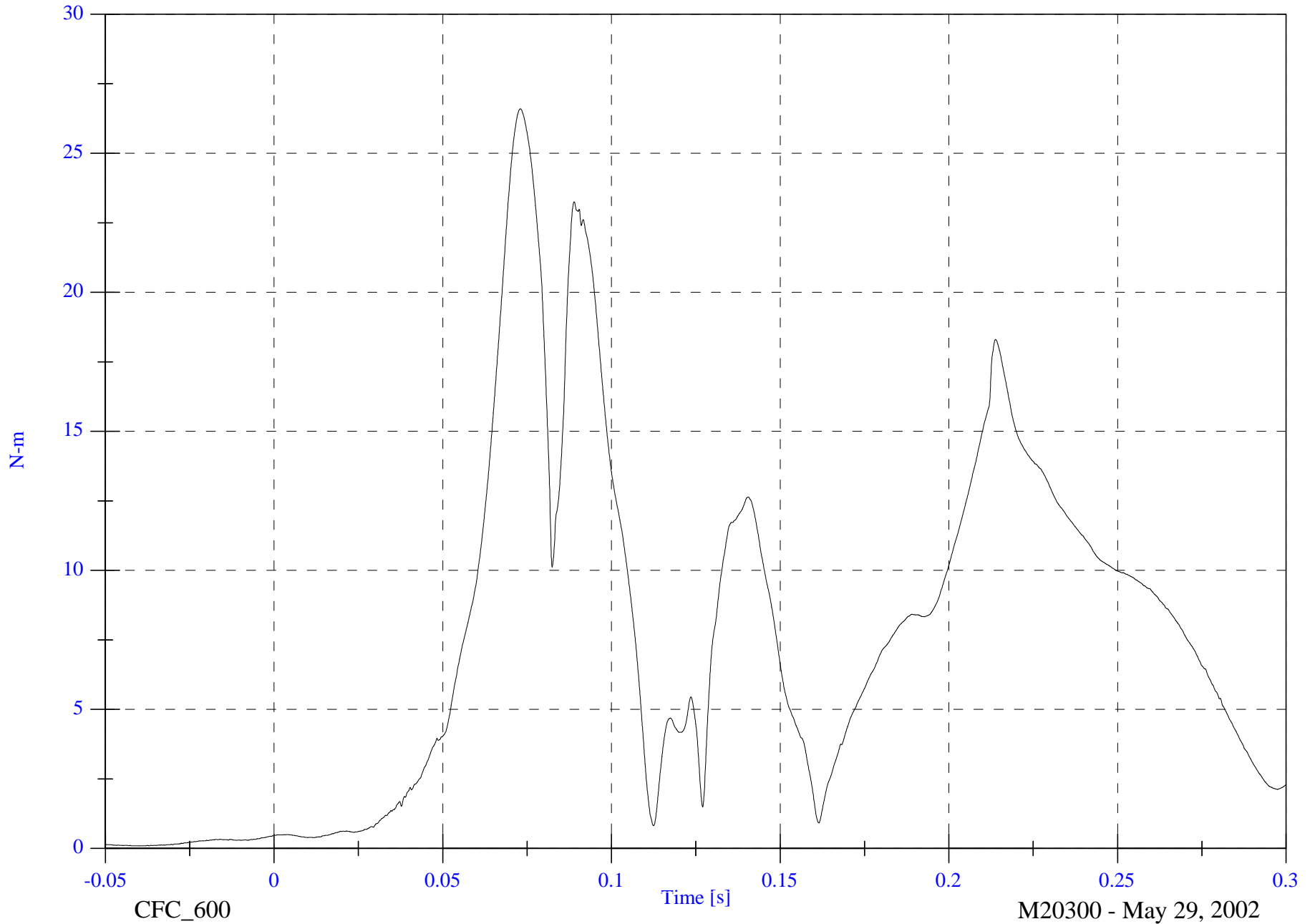
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 26.6 [N-m] at 0.073 [s]

P4 Upper Neck M Resultant

Min: 0.1 [N-m] at -0.042 [s]



4-58

8642-NCAP-17

CFC\_600

Time [s]

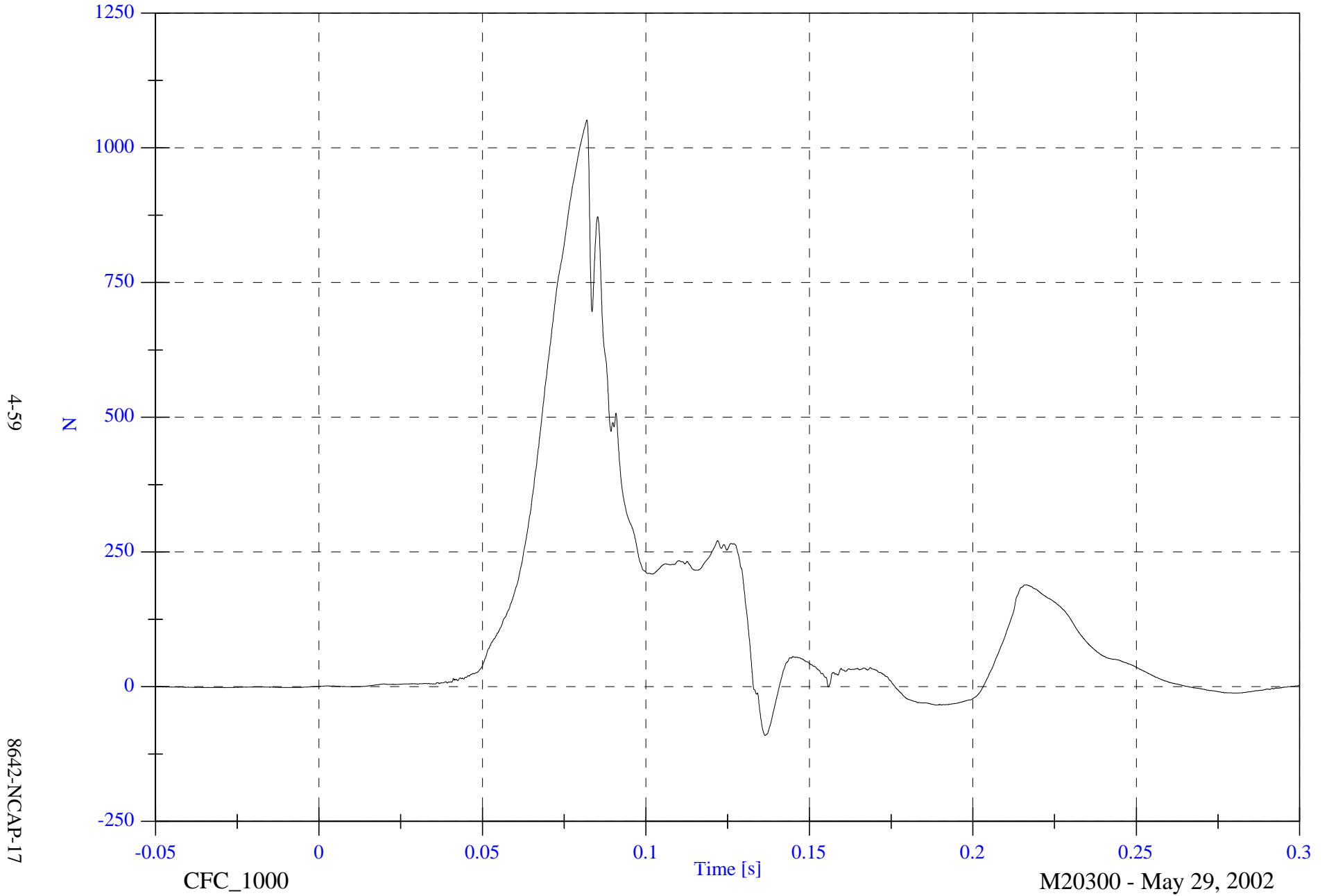
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 1051.6 [N] at 0.082 [s]

Min: -90.2 [N] at 0.136 [s]

P4 Lower Neck Fx



4-59

8642-NCAP-17

CFC\_1000

Time [s]

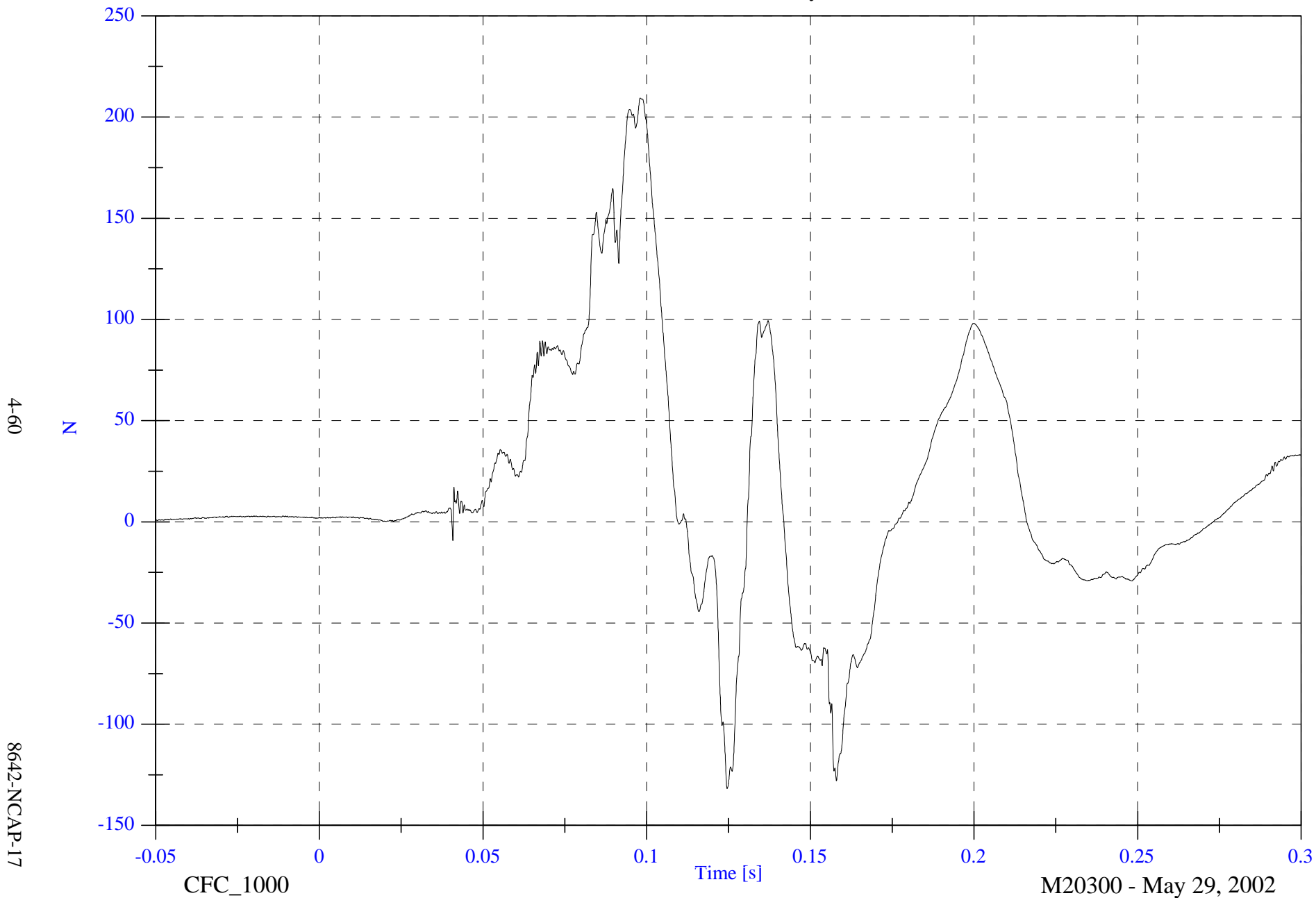
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 209.5 [N] at 0.098 [s]

Min: -131.8 [N] at 0.125 [s]

P4 Lower Neck Fy



4-60

8642-NCAP-17

CFC\_1000

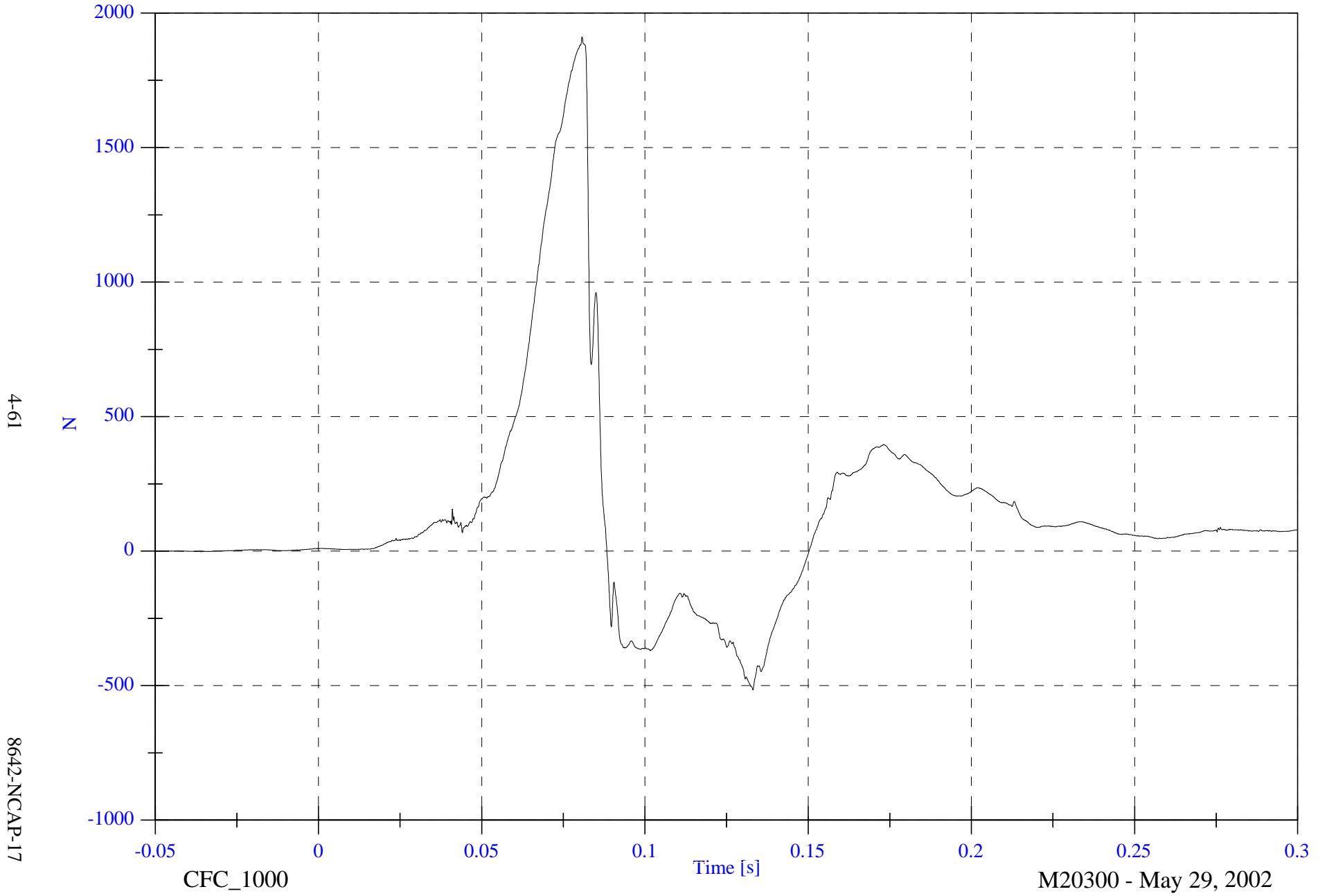
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 1911.1 [N] at 0.081 [s]

Min: -516.2 [N] at 0.133 [s]

P4 Lower Neck Fz



4-61

8642-NCAP-17

CFC\_1000

Time [s]

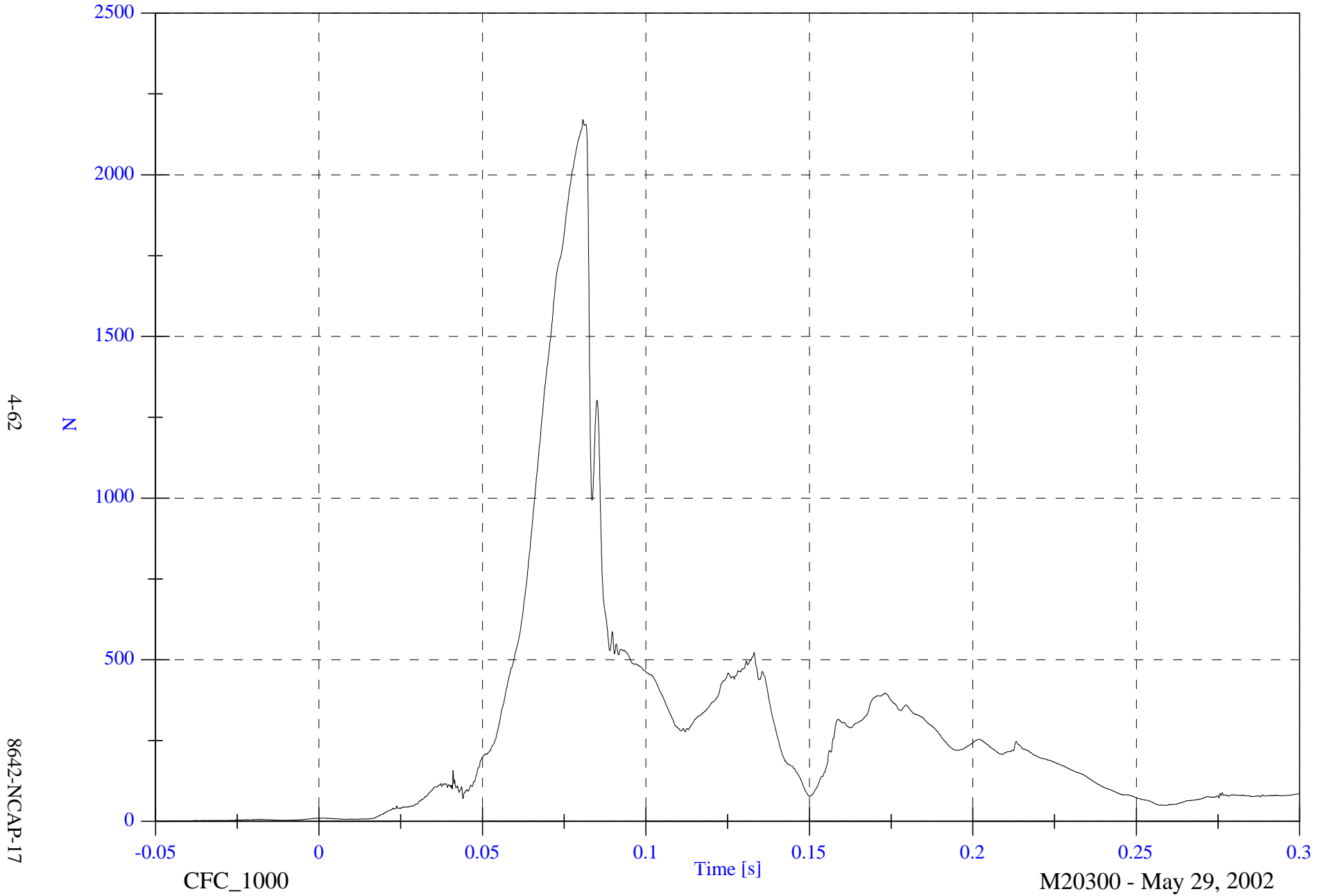
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 2170.4 [N] at 0.081 [s]

P4 Lower Neck F Resultant

Min: 0.7 [N] at -0.049 [s]



4-62

8642-NCAP-17

CFC\_1000

Time [s]

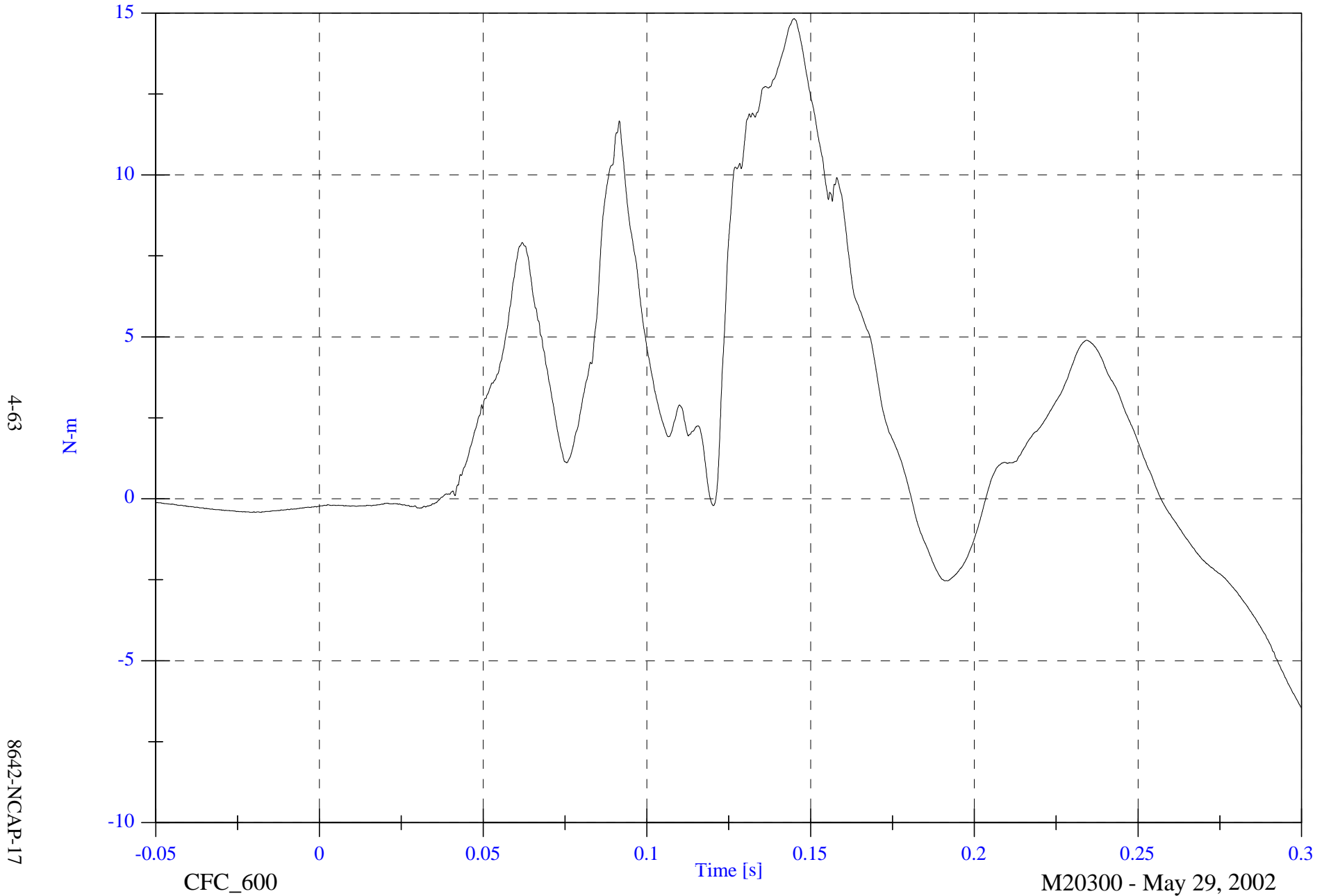
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 14.8 [N-m] at 0.145 [s]

Min: -6.5 [N-m] at 0.300 [s]

P4 Lower Neck Mx



4-63

8642-NCAP-17

CFC\_600

Time [s]

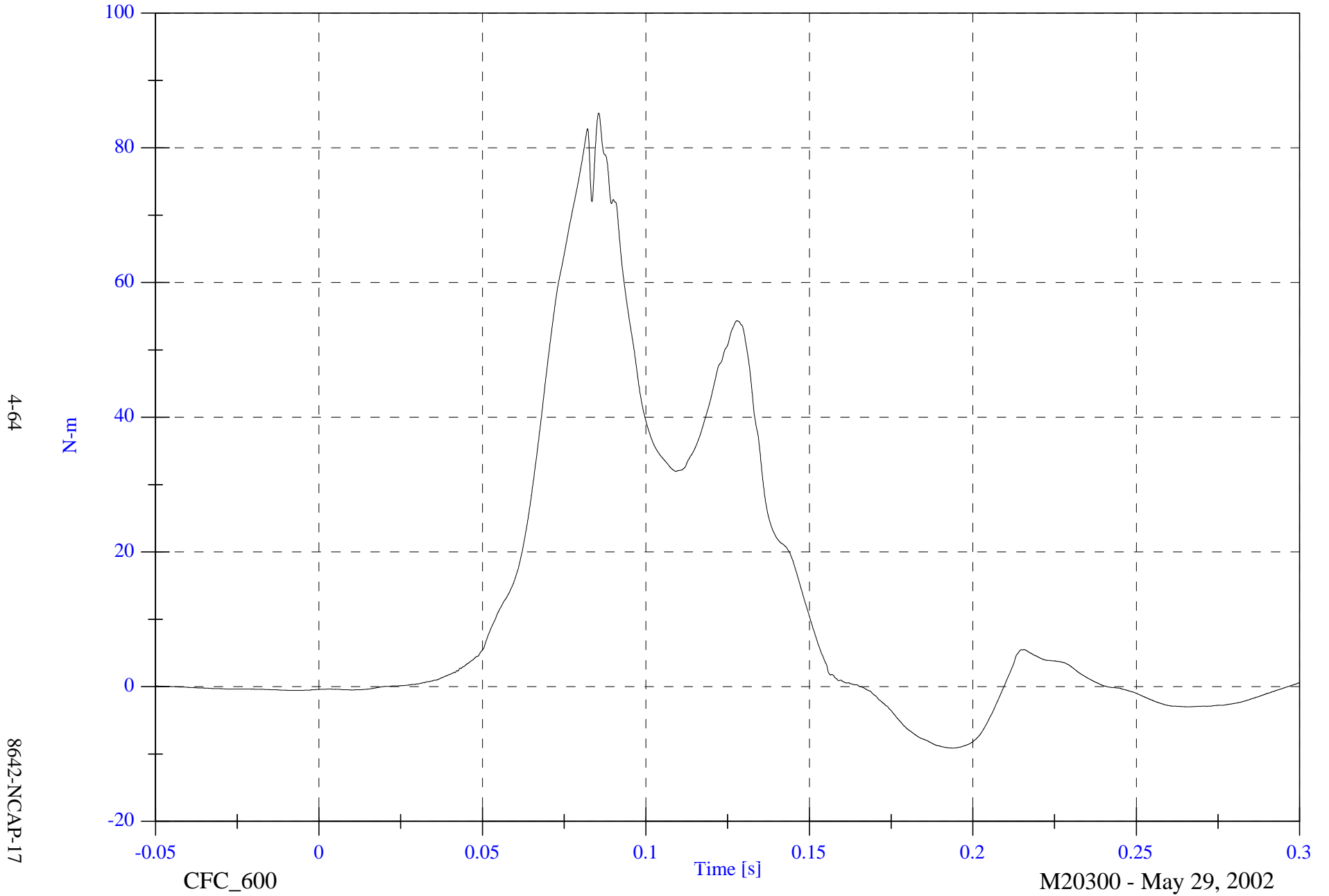
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 85.2 [N-m] at 0.086 [s]

Min: -9.1 [N-m] at 0.194 [s]

P4 Lower Neck My



4-64

8642-NCAP-17

CFC\_600

Time [s]

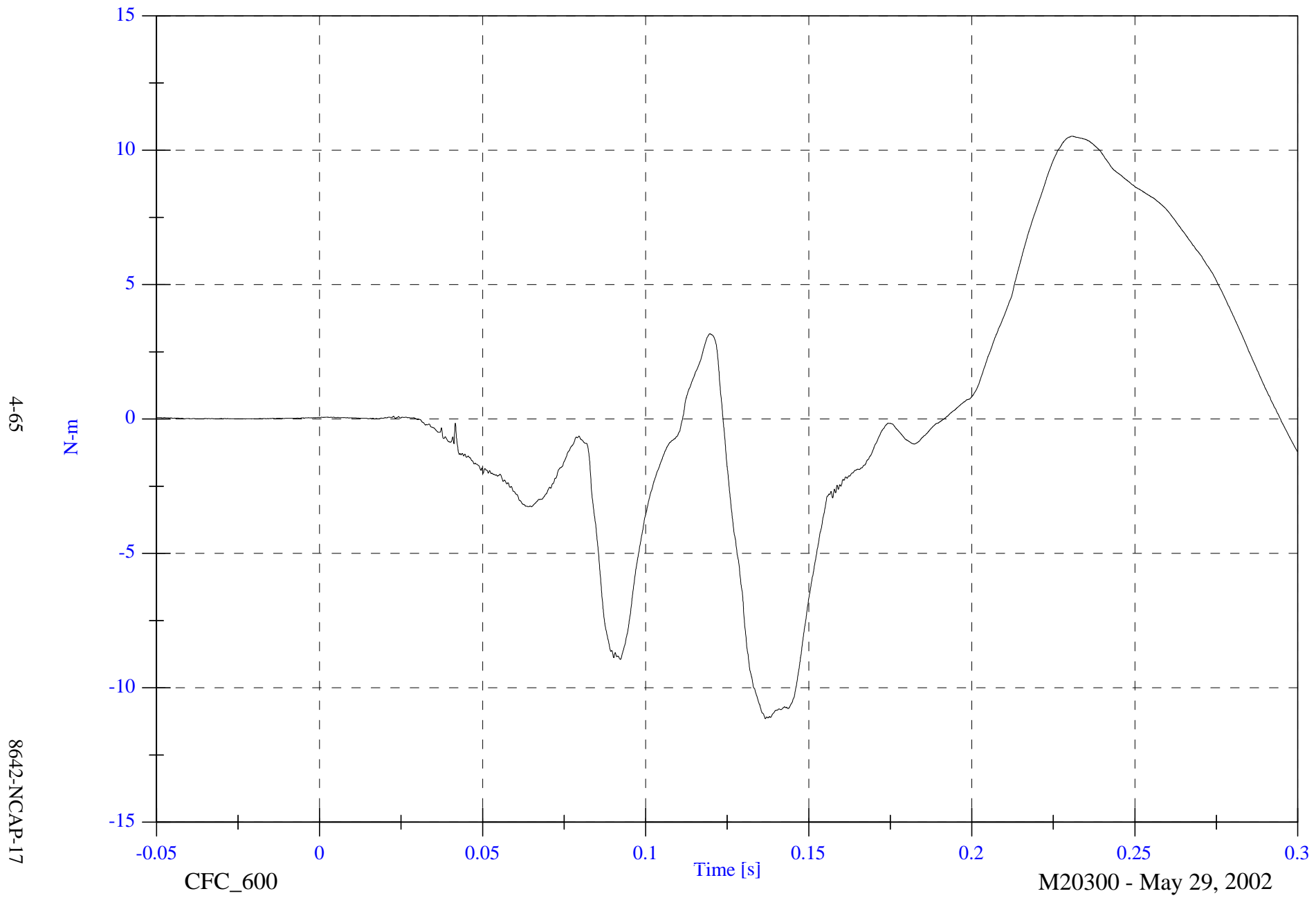
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 10.5 [N-m] at 0.231 [s]

Min: -11.1 [N-m] at 0.137 [s]

P4 Lower Neck Mz



4-65

8642-NCAP-17

CFC\_600

Time [s]

M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

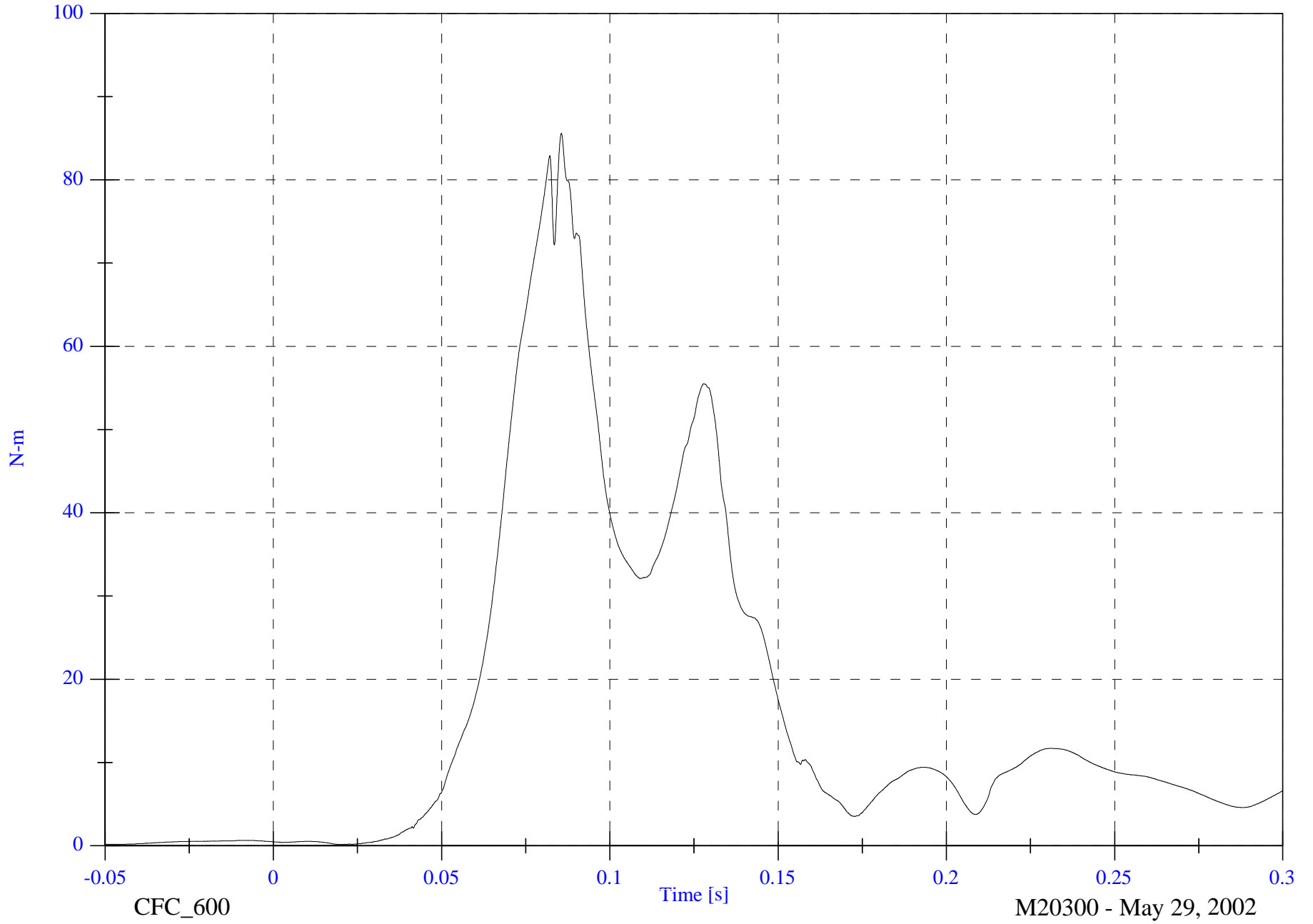
Max: 85.6 [N-m] at 0.086 [s]

P4 Lower Neck M Resultant

Min: 0.1 [N-m] at 0.020 [s]

4-66

8642-NCAP-17

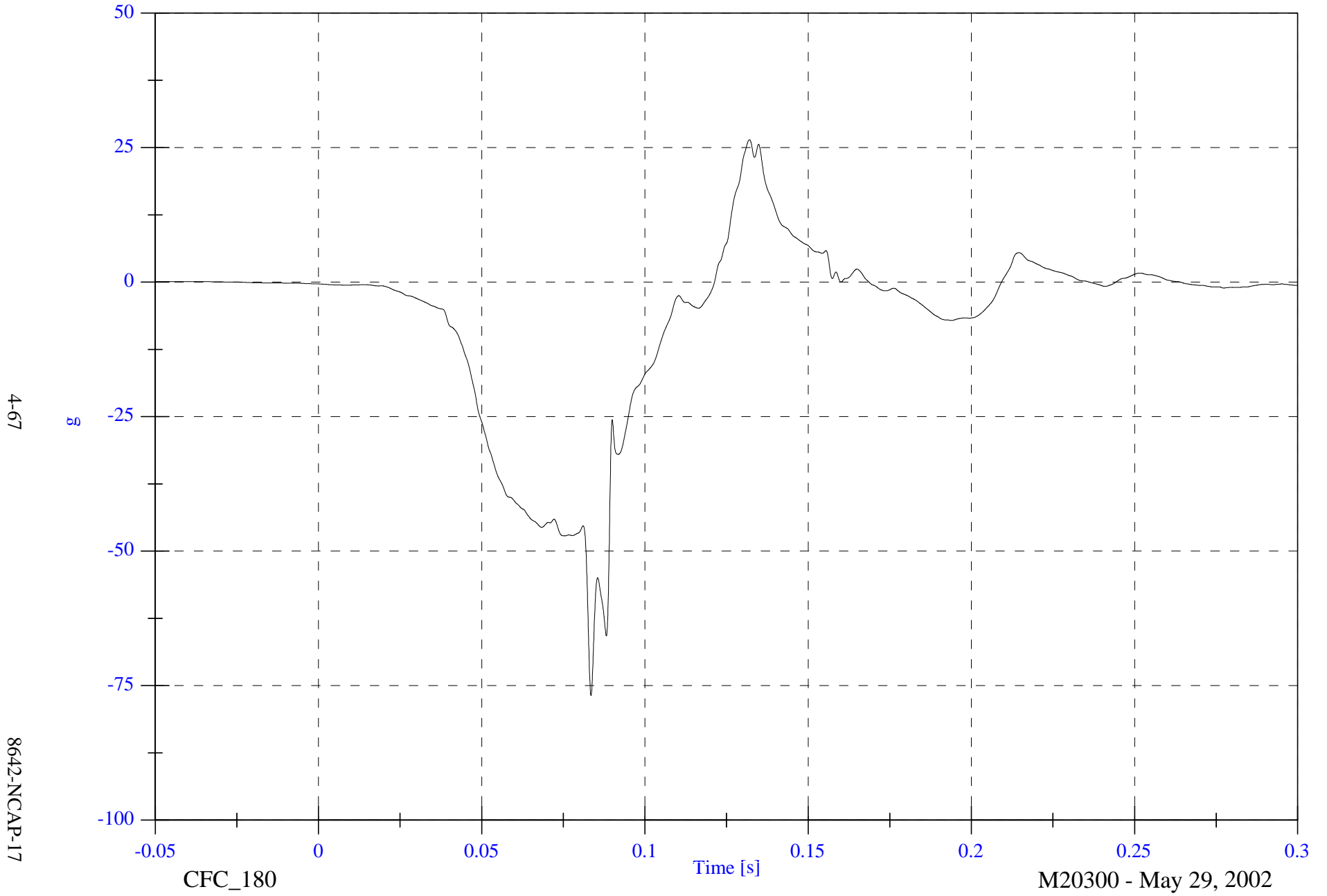


2002 NCAP Test 17 2002 Dodge Dakota

Max: 26.5 [g] at 0.132 [s]

Min: -76.8 [g] at 0.084 [s]

P4 Chest x



4-67

8642-NCAP-17

CFC\_180

Time [s]

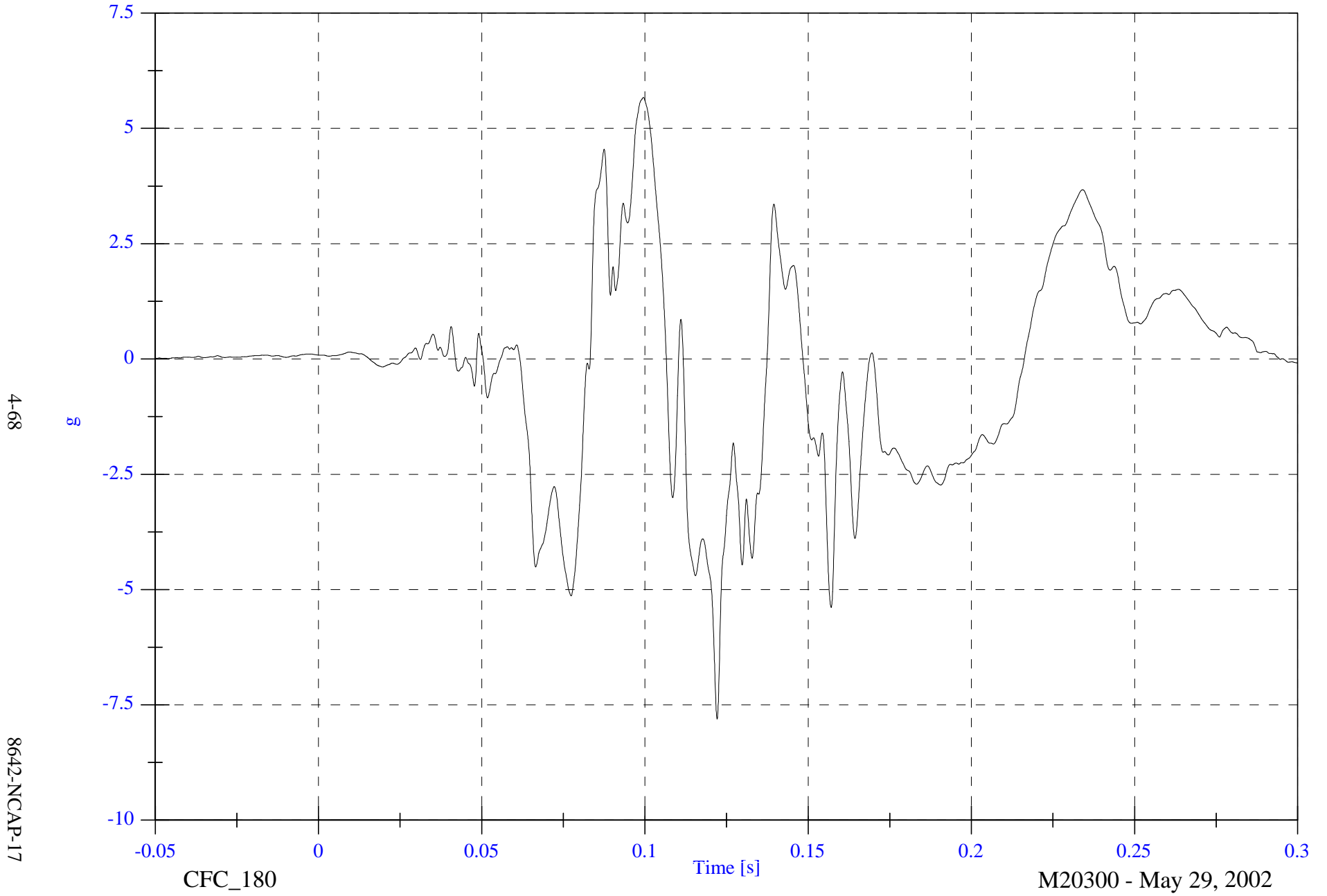
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 5.7 [g] at 0.100 [s]

Min: -7.8 [g] at 0.122 [s]

P4 Chest y

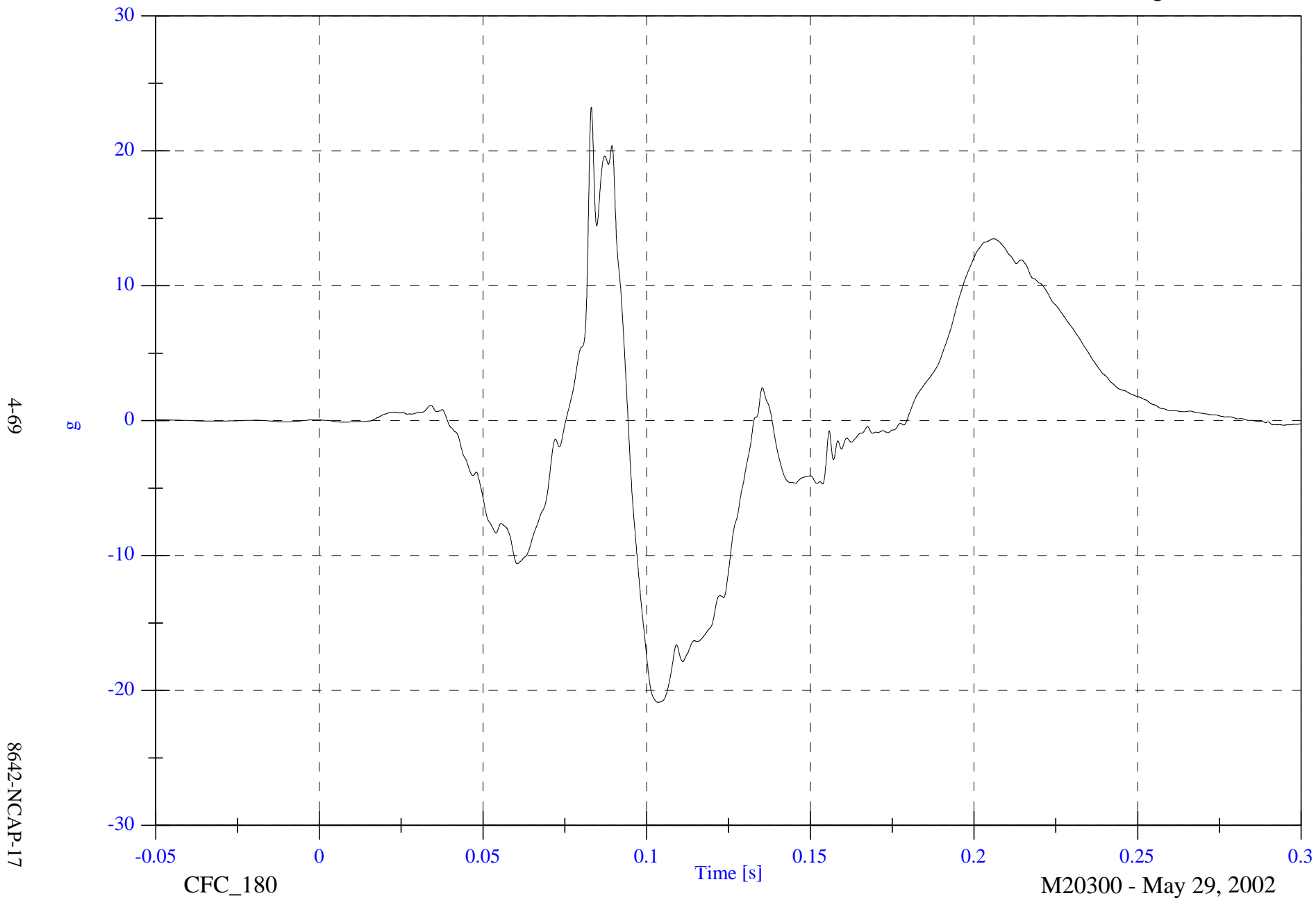


2002 NCAP Test 17 2002 Dodge Dakota

Max: 23.2 [g] at 0.083 [s]

Min: -20.9 [g] at 0.104 [s]

P4 Chest z



4-69

8642-NCAP-17

CFC\_180

Time [s]

M20300 - May 29, 2002

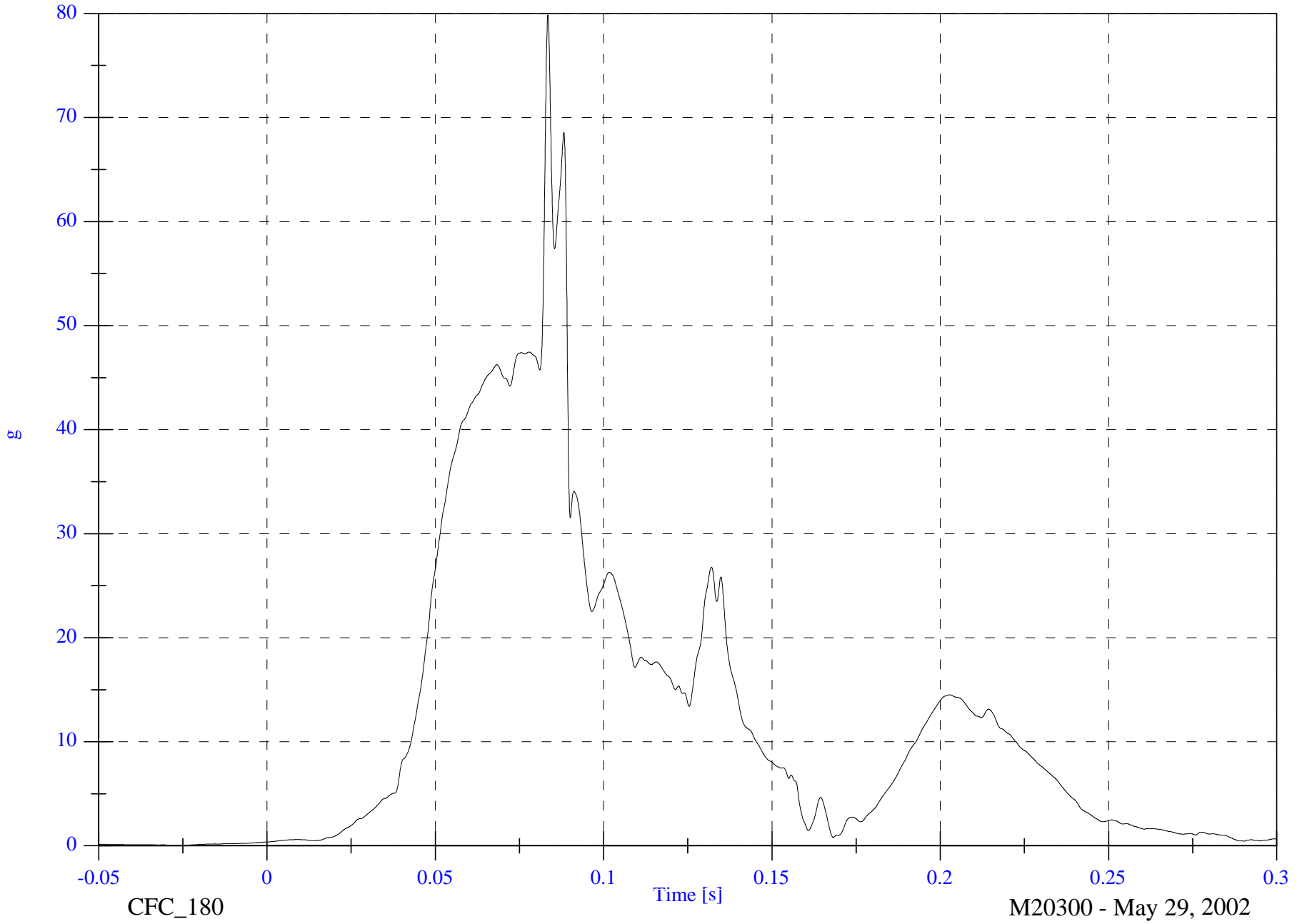
2002 NCAP Test 17 2002 Dodge Dakota

Max: 79.9 [g] at 0.083 [s]  
Min: 0.0 [g] at -0.025 [s]

P4 Chest Resultant

4-70

8642-NCAP-17

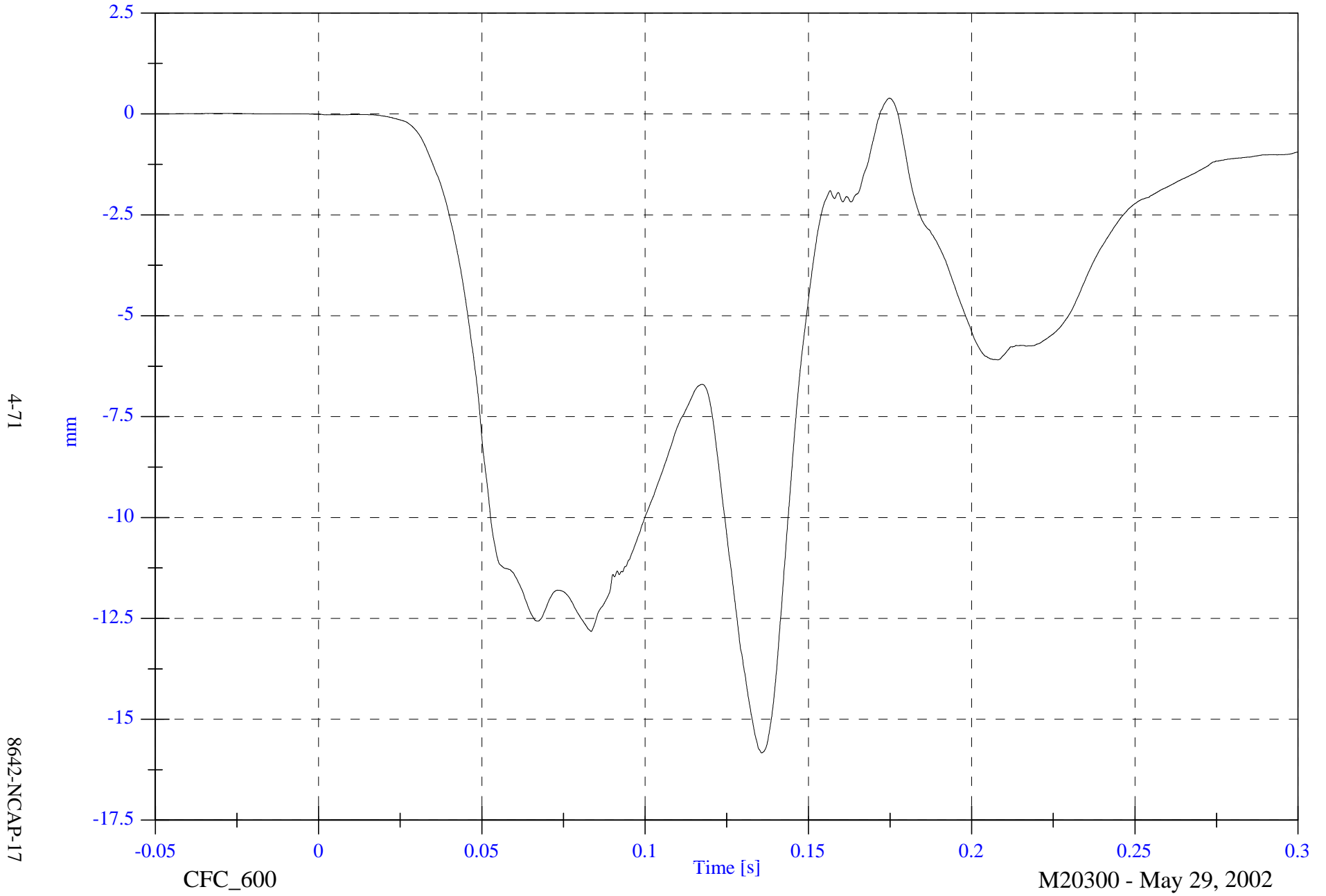


2002 NCAP Test 17 2002 Dodge Dakota

Max: 0.4 [mm] at 0.175 [s]

P4 Chest Compression

Min: -15.8 [mm] at 0.136 [s]



4-71

8642-NCAP-17

CFC\_600

Time [s]

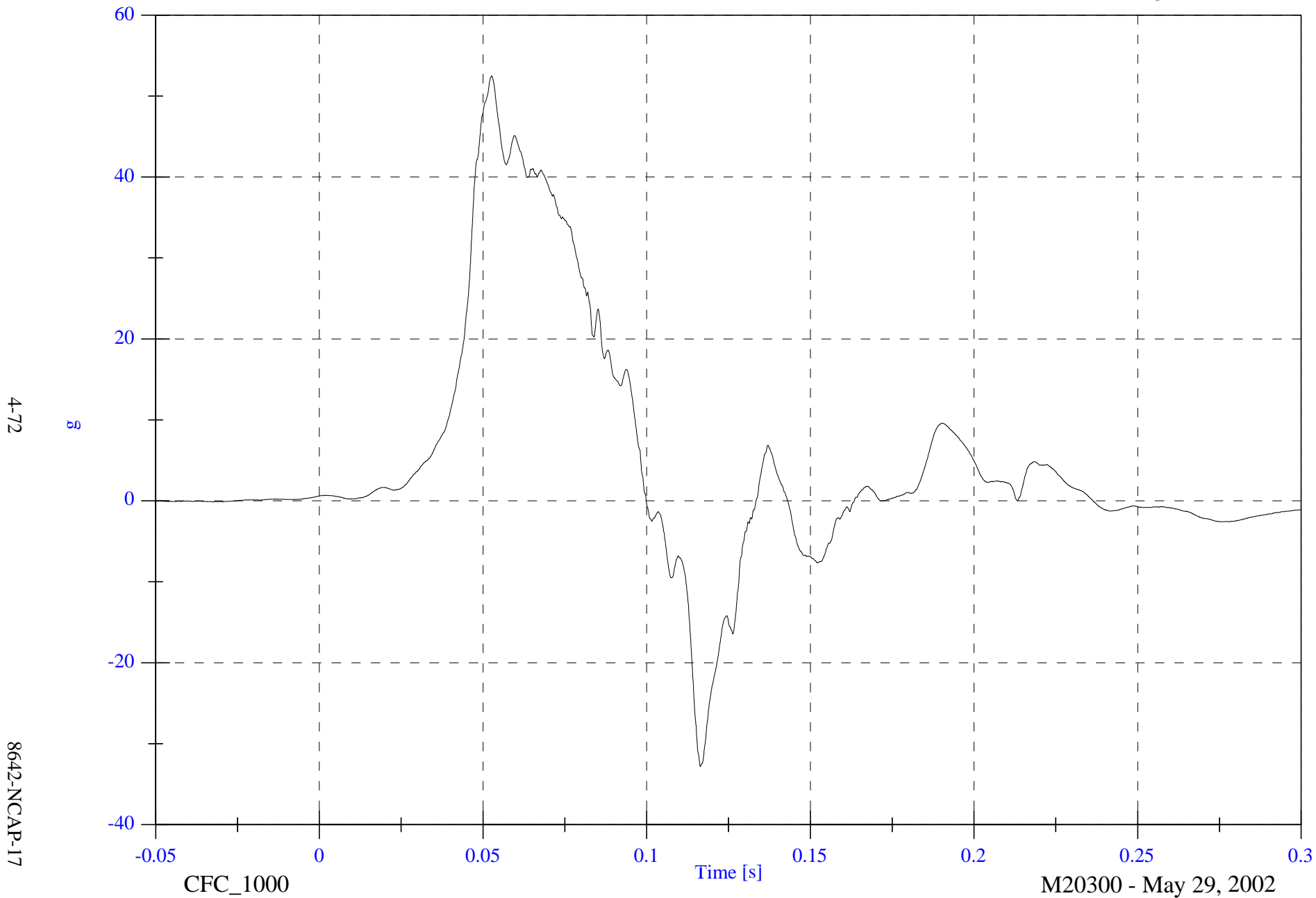
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 52.5 [g] at 0.053 [s]

Min: -32.8 [g] at 0.116 [s]

P4 Pelvic x



4-72

8642-NCAP-17

CFC\_1000

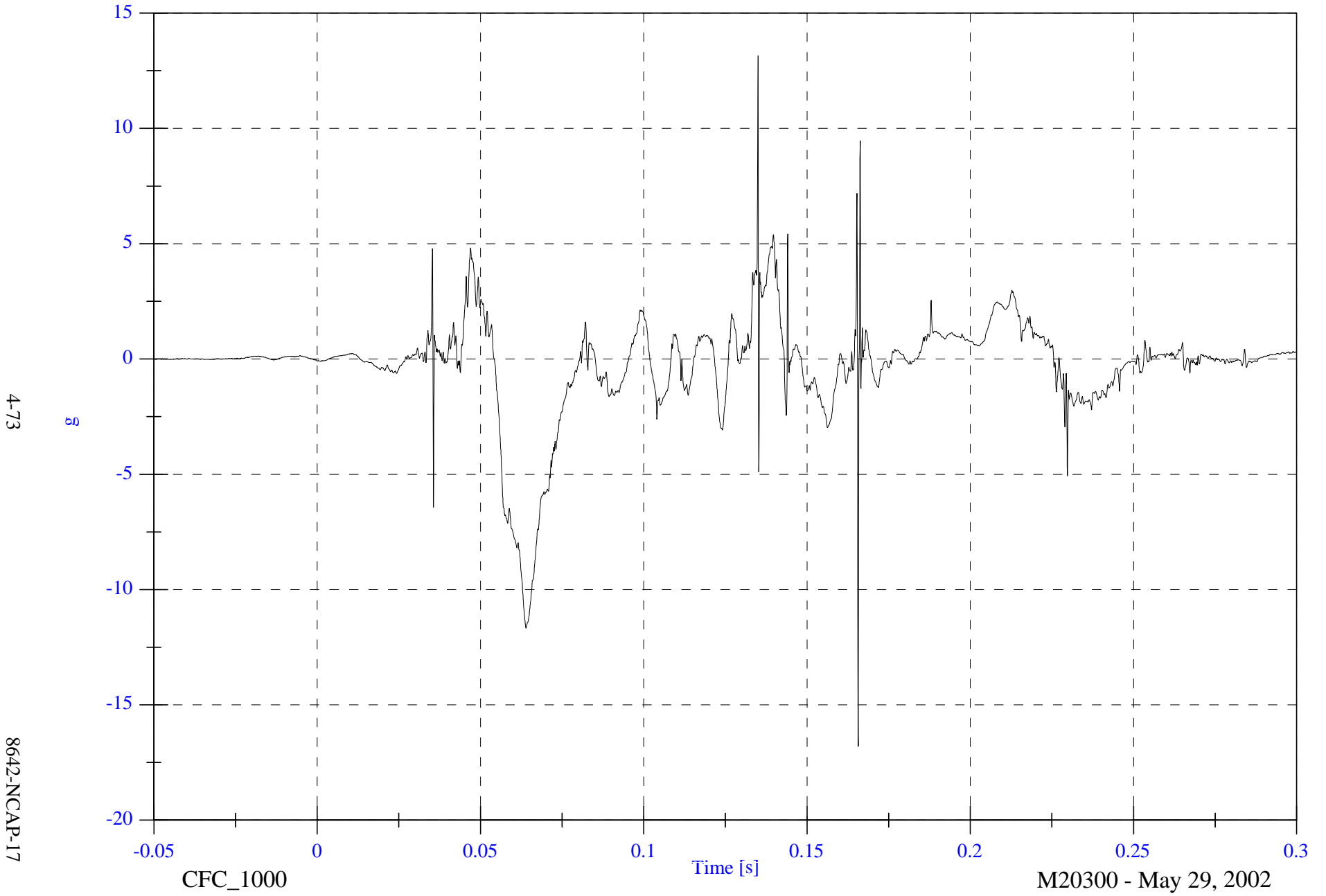
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 13.1 [g] at 0.135 [s]

Min: -16.8 [g] at 0.166 [s]

P4 Pelvic y



4-73

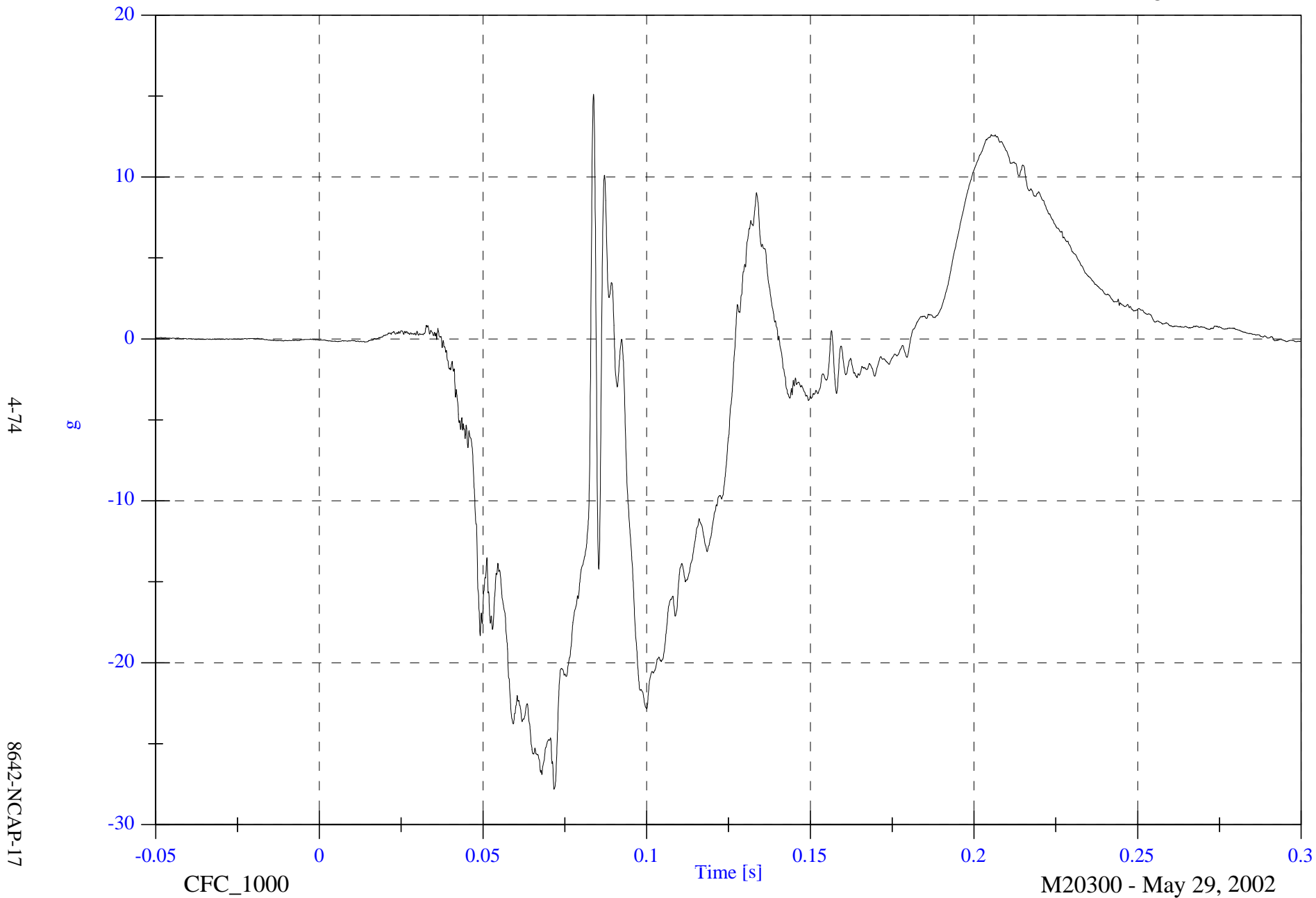
8642-NCAP-17

2002 NCAP Test 17 2002 Dodge Dakota

Max: 15.1 [g] at 0.084 [s]

Min: -27.8 [g] at 0.072 [s]

P4 Pelvic z



4-74

8642-NCAP-17

CFC\_1000

Time [s]

M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

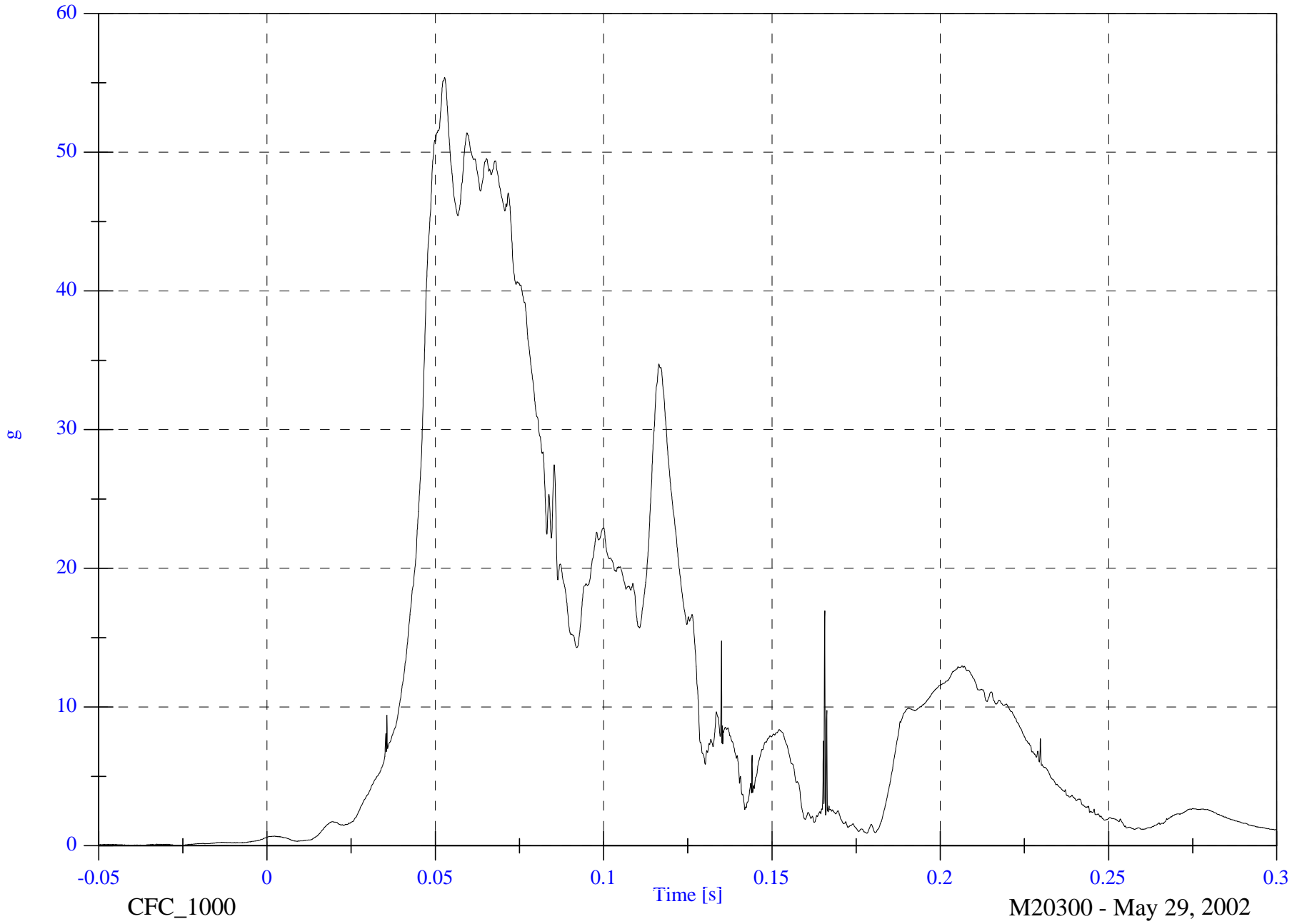
Max: 55.4 [g] at 0.053 [s]

P4 Pelvic Resultant

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

4-75

8642-NCAP-17

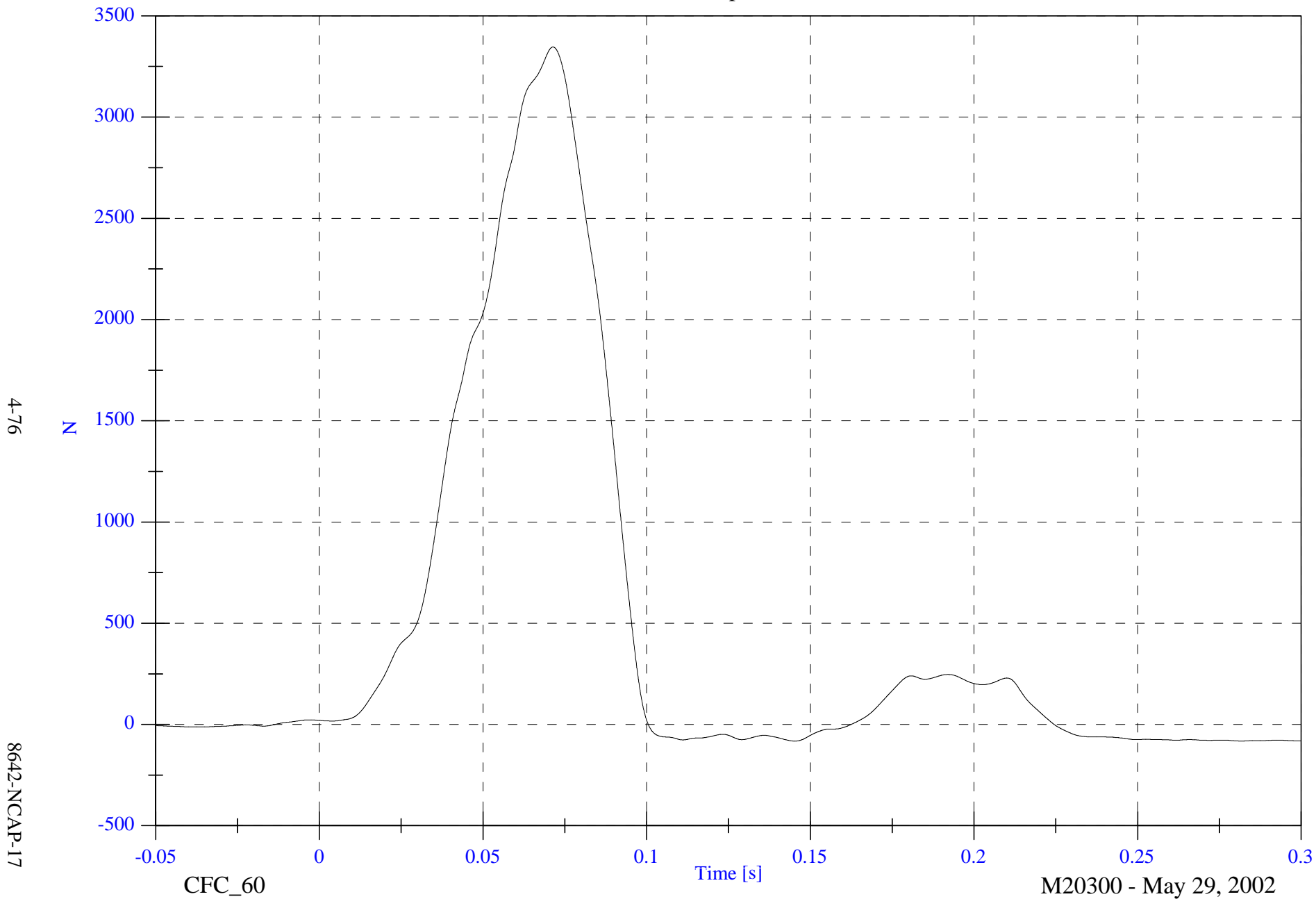


2002 NCAP Test 17 2002 Dodge Dakota

Max: 3346.3 [N] at 0.071 [s]

P4 Lap Belt

Min: -82.6 [N] at 0.145 [s]

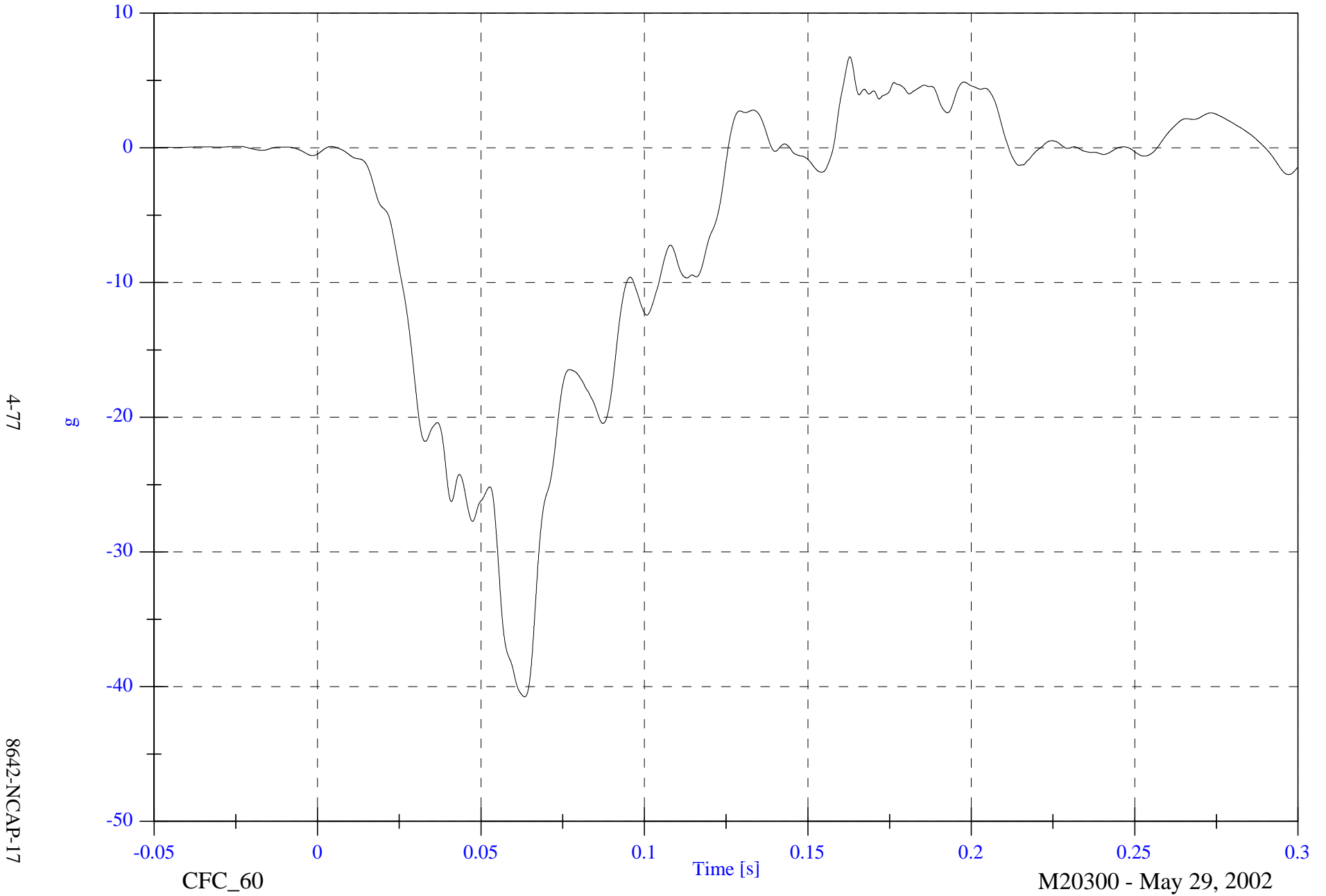


2002 NCAP Test 17 2002 Dodge Dakota

Max: 6.8 [g] at 0.163 [s]

Min: -40.8 [g] at 0.063 [s]

P3 Child Seat x

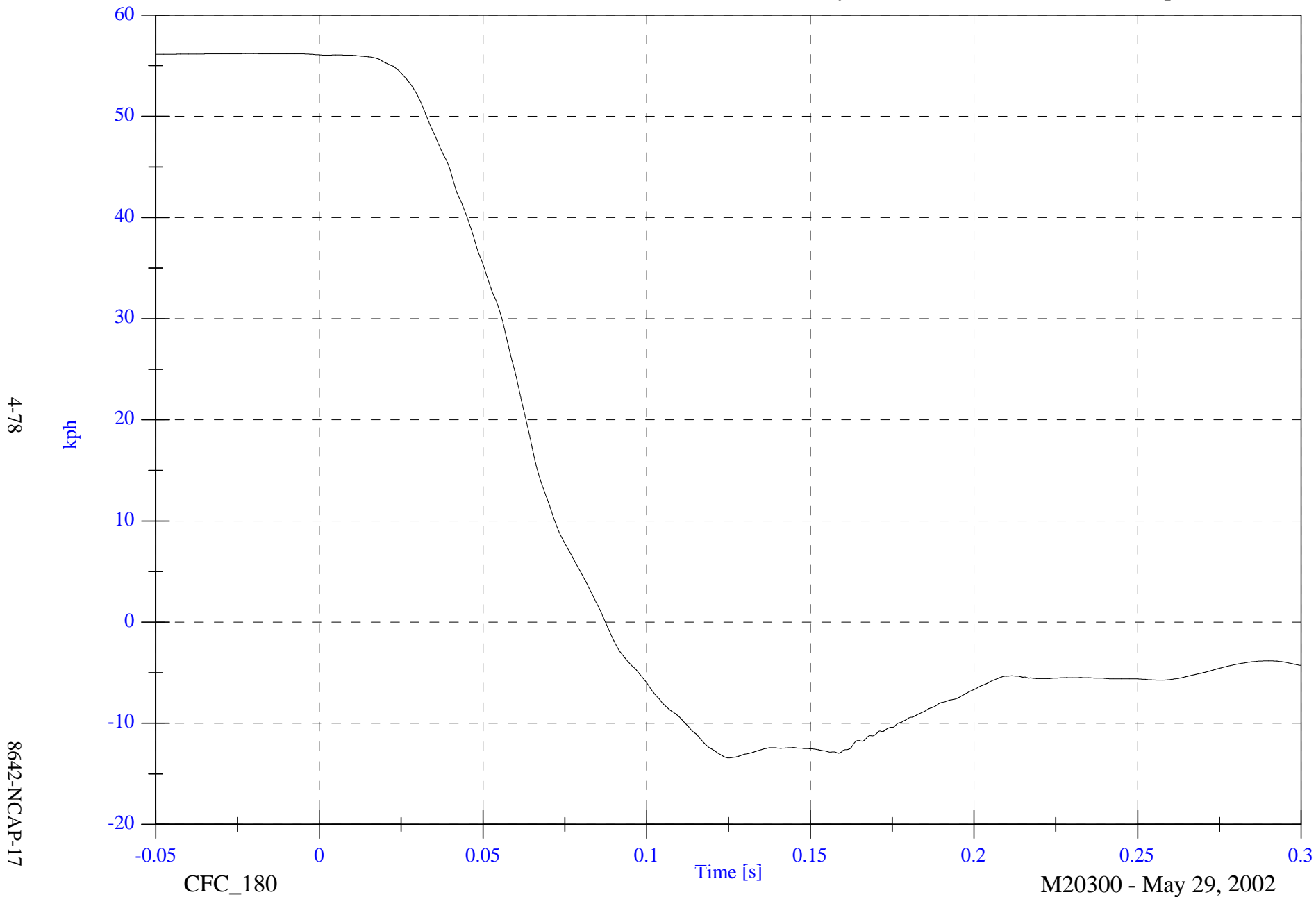


2002 NCAP Test 17 2002 Dodge Dakota

Max: 56.2 [kph] at -0.021 [s]

Min: -13.4 [kph] at 0.125 [s]

### P3 Child Seat x Velocity



4-78

8642-NCAP-17

CFC\_180

Time [s]

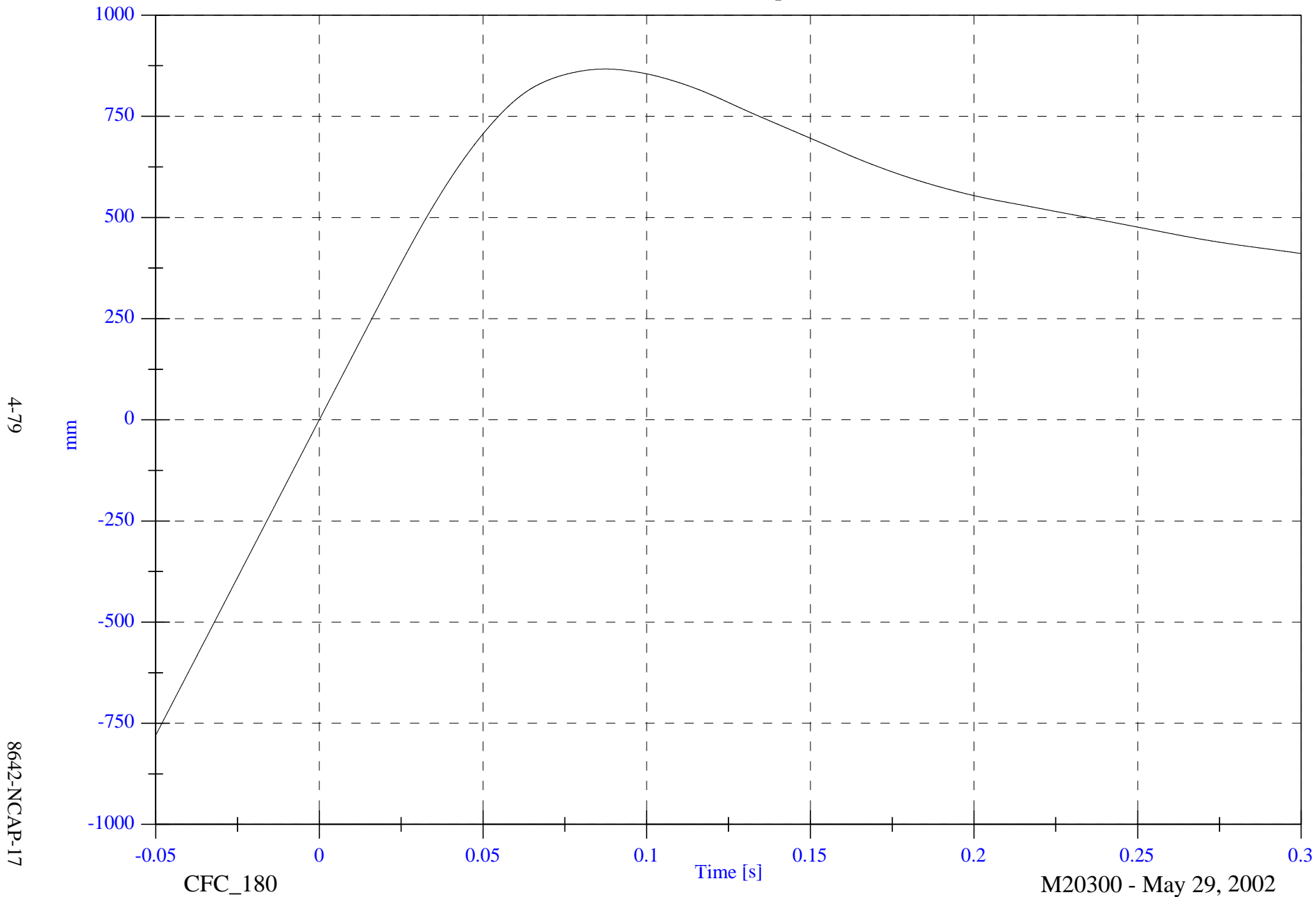
M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 867.0 [mm] at 0.087 [s]

P3 Child Seat x Displacement

Min: -780.0 [mm] at -0.050 [s]



4-79

8642-NCAP-17

CFC\_180

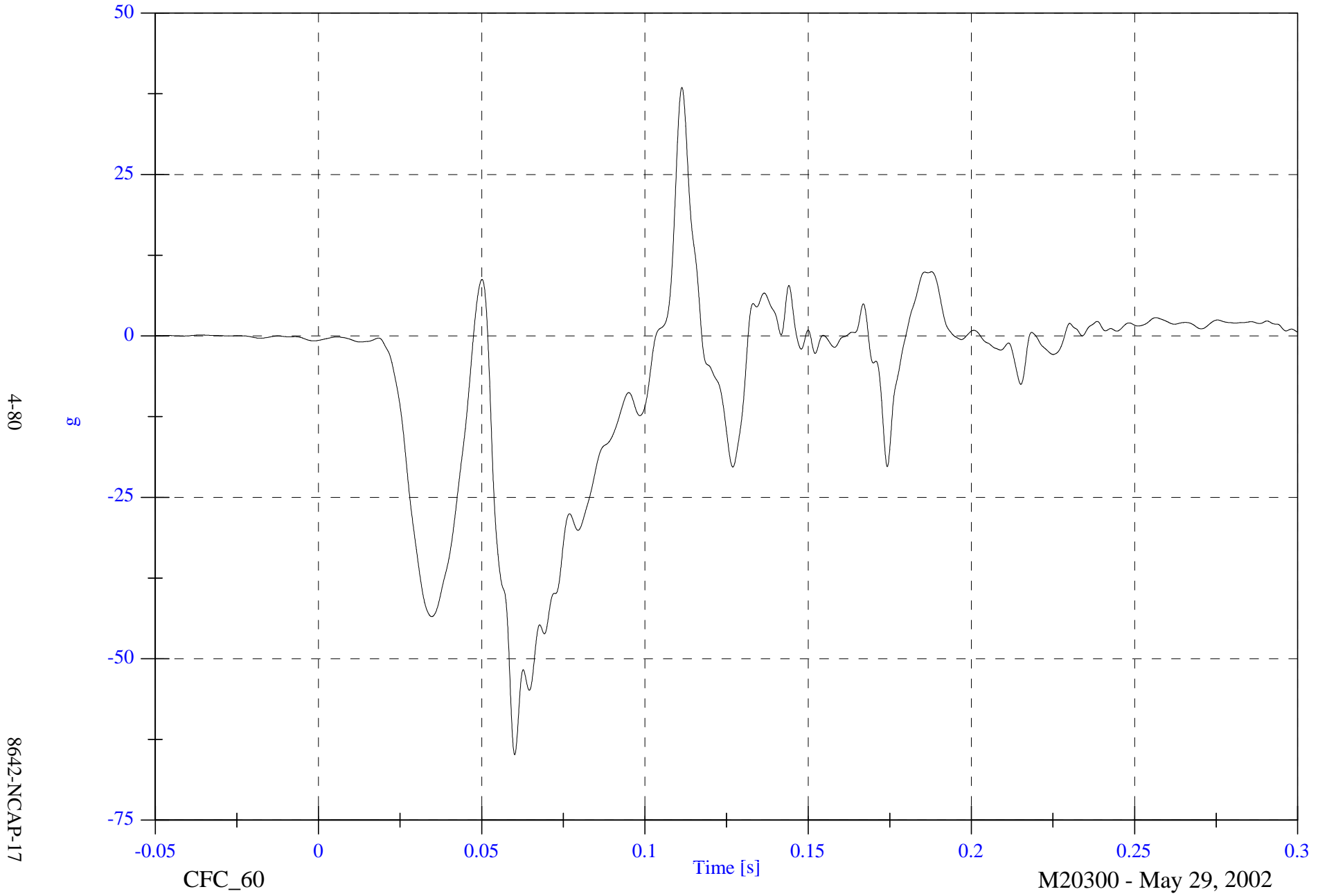
Time [s]

M20300 - May 29, 2002

2002 NCAP Test 17 2002 Dodge Dakota

Max: 38.5 [g] at 0.111 [s]  
Min: -64.9 [g] at 0.060 [s]

P4 Child Seat x



2002 NCAP Test 17 2002 Dodge Dakota

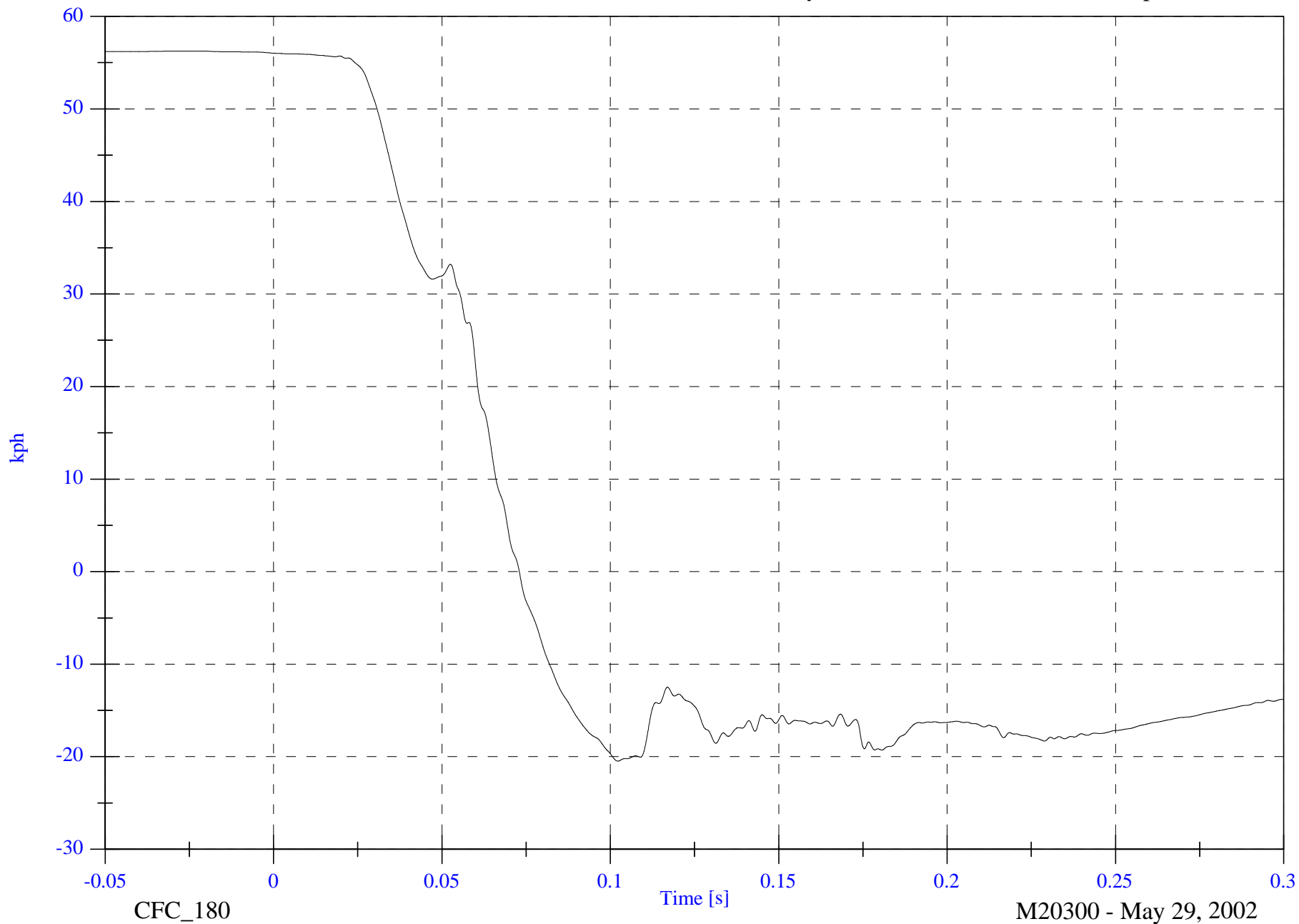
Max: 56.2 [kph] at -0.021 [s]

P4 Child Seat x Velocity

Min: -20.5 [kph] at 0.102 [s]

4-81

8642-NCAP-17



2002 NCAP Test 17 2002 Dodge Dakota

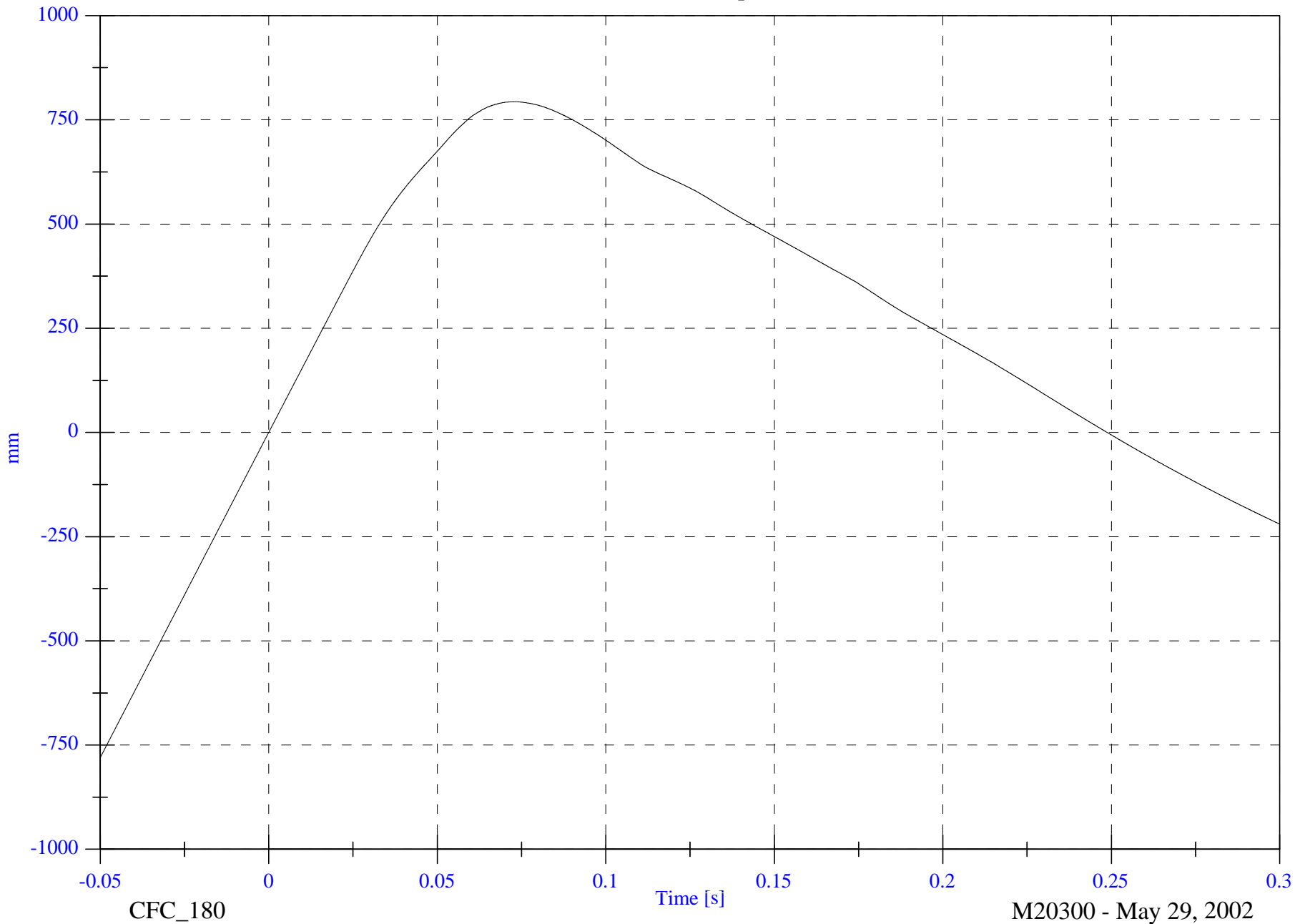
P4 Child Seat x Displacement

Max: 793.4 [mm] at 0.073 [s]

Min: -780.4 [mm] at -0.050 [s]

4-82

8642-NCAP-17



CFC\_180

Time [s]

M20300 - May 29, 2002

## **SECTION 5**

### **CHILD DUMMY CALIBRATION INFORMATION**

ATDs were certified by VRTC prior to the test program.  
Certification details can be found in the bound report

**SECTION 6**

**TEST EQUIPMENT LIST AND CALIBRATION INFORMATION**

**TEST EQUIPMENT LIST AND CALIBRATION INFORMATION**

**P572C INSTRUMENTATION**

	POSITION #3 (RIGHT) SERIAL NO.: 144		
	SERIAL NUMBER	MANUFACTURER	CALIBRATION DATE
HEAD AX	AC-99H12-F18	ENTRAN	03-Apr-02
HEAD AY	AC-J35770	ENDEVCO	03-Apr-02
HEAD AZ	AC-P18545	ENDEVCO	27-Feb-02
UPPER NECK FX	LC-274Fx	DENTON	06-Sep-01
UPPER NECK FY	LC-274Fy	DENTON	06-Sep-01
UPPER NECK FZ	LC-274Fz	DENTON	06-Sep-01
UPPER NECK MX	LC-274Mx	DENTON	06-Sep-01
UPPER NECK MY	LC-274My	DENTON	06-Sep-01
UPPER NECK MZ	LC-274Mz	DENTON	06-Sep-01
LOWER NECK FX	LC-139Fx	DENTON	05-Apr-02
LOWER NECK FY	LC-139Fy	DENTON	05-Apr-02
LOWER NECK FZ	LC-139Fz	GSE	05-Apr-02
LOWER NECK MX	LC-139Mx	DENTON	05-Apr-02
LOWER NECK MY	LC-139My	DENTON	05-Apr-02
LOWER NECK MZ	LC-139Mz	DENTON	05-Apr-02
CHEST AX	AC-J36744	ENDEVCO	03-Apr-02
CHEST AY	AC-J35847	ENDEVCO	03-Apr-02
CHEST AZ	AC-J35718	ENDEVCO	03-Apr-02
CHEST DISPLACEMENT X	DS-144	SERVO	10-Apr-02
LOWER SPINE FX	LC-127Fx	DENTON	04-Apr-02
LOWER SPINE FY	LC-127Fy	DENTON	04-Apr-02
LOWER SPINE FZ	LC-127Fz	DENTON	04-Apr-02
LOWER SPINE MX	LC-127Mx	DENTON	04-Apr-02
LOWER SPINE MY	LC-127My	DENTON	04-Apr-02
LOWER SPINE MZ	LC-127Mz	DENTON	04-Apr-02
PELVIS AX	AC-J36724	ENDEVCO	03-Apr-02
PELVIS AY	AC-J36719	ENDEVCO	03-Apr-02
PELVIS AZ	AC-J34363	ENDEVCO	03-Apr-02
LEFT UPPER ASIS FZ	LC-3745-101U	DENTON	04-Apr-02
LEFT LOWER ASIS FZ	LC-3745-101L	DENTON	04-Apr-02
RIGHT UPPER ASIS FZ	LC-3746-101U	DENTON	04-Apr-02
RIGHT LOWER ASIS FZ	LC-3746-101L	DENTON	04-Apr-02
LAP BELT LOAD	LC-706	LEBOW	12-Feb-02

**TEST EQUIPMENT LIST AND CALIBRATION INFORMATION**

**P572C INSTRUMENTATION**

	POSITION #4 (LEFT) SERIAL NO.: 042		
	SERIAL NUMBER	MANUFACTURER	CALIBRATION DATE
HEAD AX	AC-98H10-F10	ENTRAN	27-Dec-01
HEAD AY	AC-98H10-F12	ENTRAN	26-Dec-01
HEAD AZ	AC-AJ4L1	ENDEVCO	27-Dec-01
HEAD RAZ	AC-ADAT0	ENDEVCO	27-Dec-01
UPPER NECK FX	LC-213-Fx	ENDEVCO	07-Jan-02
UPPER NECK FY	LC-213-Fy	DENTON	07-Jan-02
UPPER NECK FZ	LC-213-Fz	DENTON	07-Jan-02
UPPER NECK MX	LC-213-Mx	DENTON	07-Jan-02
UPPER NECK MY	LC-213-My	DENTON	07-Jan-02
UPPER NECK MZ	LC-213-Mz	DENTON	07-Jan-02
LOWER NECK FX	LC-215-Fx	DENTON	05-Jan-02
LOWER NECK FY	LC-215-Fy	DENTON	05-Jan-02
LOWER NECK FZ	LC-215-Fz	DENTON	05-Jan-02
LOWER NECK MX	LC-215-Mx	DENTON	05-Jan-02
LOWER NECK MY	LC-215-My	DENTON	05-Jan-02
LOWER NECK MZ	LC-215-Mz	DENTON	05-Jan-02
CHEST AX	AC-P23138	ENDEVCO	13-May-02
CHEST AY	AC-P19253	ENDEVCO	13-May-02
CHEST AZ	AC-P21392	ENDEVCO	13-May-02
CHEST DISPLACEMENT X	DS-042	SERVO	04-Jan-02
PELVIS AX	AC-BE95J	ENDEVCO	27-Dec-01
PELVIS AY	AC-DE54J	ENDEVCO	27-Dec-01
PELVIS AZ	AC-99H12-F30	ENTRAN	27-Dec-01
LAP BELT LOAD	LC-707	LEBOW	12-Feb-02

**TEST EQUIPMENT LIST AND CALIBRATION INFORMATION**

**VEHICLE AND MDB INSTRUMENTATION**

VEHICLE AND MDB INSTRUMENTS			
	SERIAL NUMBER	MANUFACTURER	CALIBRATION DATE
P3 CRS (X)	AC-P23288	ENDEVCO	25-Apr-02
P4 CRS (X)	AC-P18792	ENDEVCO	27-Feb-02

**REMARKS:** None