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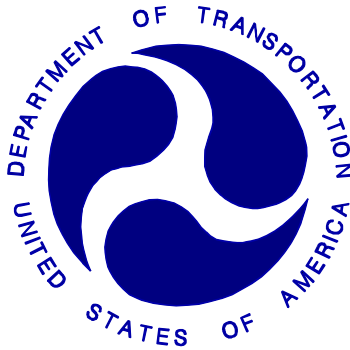
**NEW CAR ASSESSMENT PROGRAM (NCAP)
FRONTAL BARRIER IMPACT TEST**

**FORD MOTOR COMPANY
2001 FORD F150 XL
EXTENDED CAB 4-DOOR**

NHTSA NUMBER: M10205

VERIDIAN TEST NUMBER: 8602-7

VERIDIAN ENGINEERING
TRANSPORTATION SCIENCES CENTER
P.O. BOX 400
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December 12, 2000

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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NHTSA, Office of Crashworthiness Standards

Date of Report Acceptance

COTR, New Car Assessment Program (NCAP)
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15. <i>Supplementary Notes</i>					
16. <i>Abstract</i> A frontal load cell barrier test of a 2001 Ford F150 XL Extended Cab 4-Door was performed at Veridian Engineering crash test facility in Buffalo, New York, on December 12, 2000. The impact velocity was 56 kph and the temperature at the barrier face was 21 °C. The maximum post-test vehicle crush was 705 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.					
ATD Position	HIC	Clip (g's)	Chest Disp (mm)	Left Femur (N)	Right Femur (N)
Driver (064)	623.4	41.2	34.9	3586.6	4242.9
Passenger (061)	506.7	38.9	35.2	3583.5	4262.3
17. <i>Key Words</i> 56 kph Frontal Barrier Impact test New Car Assessment Program (NCAP)				18. <i>Distribution Statement</i> <u>Copies of this report are available from:</u> NHTSA Technical Reference Division National Highway Traffic Safety Admin. 400 Seventh St., SW, Room 5108 Washington, DC 20590	
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SECTION 1

PURPOSE AND SUMMARY OF TEST M10205

PURPOSE

This 56 kph frontal barrier impact test is part of the Vehicle Barrier Impact Testing Program sponsored by the National Highway Traffic Safety Administration (NHTSA) under Contract No. DTNH22-96-D-02010. The purpose of this test was to obtain vehicle crashworthiness and occupant restraint system performance data for an impact speed in excess of the current 48.3 kph requirements.

The 56 kph frontal barrier impact test was conducted in accordance with the Office of Crashworthiness Standards Laboratory Indicant Test procedure.

SUMMARY

A load cell barrier consisting of 36 load cells was impacted by a 2001 Ford F150 XL Extended Cab 4-Door at a velocity of 56 kph. The test was performed at Veridian Engineering on December 12, 2000. Pre- and post-test photographs of the vehicle and dummies can be found in Appendix A.

The frontal barrier impact event was documented by 1 real-time camera and 16 high-speed cameras. Camera locations and other pertinent camera information can be found in this report.

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

Both ATDs were fully instrumented with head, chest, and pelvis triaxial accelerometers, chest displacement potentiometers, upper neck transducers, right/left femur load cells, and lower leg instrumentation. The driver (position 1) ATD (Serial No. 064) and the right-front passenger (position 2) ATD (Serial No. 061) were calibrated previous to this test. Certification details, along with instrumentation calibration data, are found in Appendix C.

The 125 channels of data were recorded on an on-board data acquisition system. Appendix B contains the vehicle, load cell barrier and dummy response data traces.

The driver's HIC was 623.4. The maximum chest deceleration over 3 milliseconds was 41.2 g's and maximum chest deflection was 34.9 mm. Compressive femur loads were 3586.6 Newtons on the left and 4242.9 Newtons on the right.

The right front passenger's HIC was 506.7. Maximum chest deceleration over 3 milliseconds was 38.9 g's and maximum chest deflection was 35.2 mm. Compressive femur loads were 3583.5 Newtons on the left and 4262.3 Newtons on the right.

SECTION 2

GENERAL TEST AND VEHICLE PARAMETER DATA

DATA SHEET NO. 1 CRASH TEST SUMMARY

Vehicle NHTSA No. : M10205 Test Mode : 56.3 kph Frontal Barrier
 Test Date : December 12, 2000 Time: 12:30 Temperature : 5 °C
 Vehicle Make/Model/Body Style : 2001 Ford F150 XL Extended Cab 4-Door
 Vehicle Test Weight : 2270.5 kg
 Vehicle/Barrier Impact Angle : 0 °
 Impact Velocity : 56 kph
 Maximum Static Crush : 705 mm
 Vehicle Rebound : 378 mm

<u>DUMMIES:</u>	<u>DRIVER</u>	<u>PASSENGER</u>
Type :	<u> 572E </u>	<u> 572E </u>
Restraint System :	<u> 3-point belt system with airbag </u>	<u> 3-point belt system with airbag </u>

Number of Data Channels : 125
 Number of Cameras : 1 Real Time
 16 High Speed

DOOR OPENING DATA : Closed/Operable - Left Front
 Closed/Operable - Right Front

Front Seat(s) Data :	<u>DRIVER</u>	<u>PASSENGER</u>
Seat Track Failure :(mm of shift)	<u> 0 </u>	<u> 0 </u>
Seat Back Failure :	<u> none </u>	<u> none </u>

<u>VISIBLE DUMMY CONTACT POINTS :</u>	<u>DRIVER</u>	<u>PASSENGER</u>
Head :	<u> Airbag / Back of head to headrest </u>	<u> Airbag / Back of head to headrest </u>
Abdomen :	<u> - </u>	<u> - </u>
Chest	<u> Airbag </u>	<u> Airbag </u>
Knees	<u> Knee Bolster </u>	<u> Knee Bolster </u>

DATA SHEET NO. 2 GENERAL TEST AND VEHICLE PARAMETER DATA

TEST VEHICLE INFORMATION :

Year/Make/Model/Body Style : 2001 Ford F150 XL Extended Cab 4-Door
NHTSA No. : M10205 ; VIN: 2FTZX17231CA28286 ; Color : Black
Engine Data: 6 cylinders; - CID; 4.2 Liters; - cc
Placement : x Longitudinal or In-Line; - Transverse or Lateral
Transmission Data : 4 speeds; - Manual; x Automatic; x Overdrive
Final Drive : x Rear Wheel Drive; - Front Wheel Drive; - Four Wheel Drive
Major Options : x A/C; x Pwr.Strg.; x Pwr. Brakes
- Pwr. Windows; - Pwr. Door Locks; x Tilt Wheel
Date Received : 11/29/00 ; Odometer Reading 28 km
Selling Dealer : Rainbow Ford
& Address: 6980 Niagara Falls N.Y. , 14304

DATA FROM TIRE VEHICLE'S CERTIFICATION LABEL:

Vehicle Manufactured by : Ford Motor Company
Date of Manufacture 11/00
GVWR : 2721 kg; GAWR: 1338 kg FRONT; 1451 kg REAR

DATA FROM TIRE PLACARD:

Tire Pressure with Maximum Capacity Vehicle Load : 300 kpa FRONT
300 kpa REAR
Recommended Tire Size : P225/70R16SL
* Recommended Cold Tire Pressure : 300 kpa FRONT; 300 kpa REAR
Size of Tires on Test Vehicle: P225/70R16SL ; Manufacturer: General
Vehicle Capacity Data :
Type of Front Seats: x Bench; - Bucket; - Split Bench
Number of Occupants: 3 Front; 3 Rear; 6 Total
Vehicle Capacity Weight (VCW) = 730.5 kg
No. of Occupants x 68 kg = 408.2 kg
Rated Cargo/Luggage Weight (RCLW) = 322.3 kg

*Tire pressure used for test

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

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

Right Front	=	<u>557</u>	kg	Right Rear	=	<u>428.5</u>	kg
Left Front	=	<u>571.5</u>	kg	Left Rear	=	<u>433.5</u>	kg
TOTAL FRONT	=	<u>1128.5</u>	kg	TOTAL REAR	=	<u>862.0</u>	kg
TOTAL DELIVERED WEIGHT	=	<u>1990.5</u>	kg				
% of Total Front of Vehicle Weight	=	<u>56.7</u>	%	% of Total Rear Weight	=	<u>43.3</u>	%

CALCULATION OF VEHICLE'S TARGET TEST WEIGHT :

Total Delivered Weight (UDW)	=	<u>1990.5</u>	kg
Rated Cargo/Luggage Weight (RCLW)	=	<u>136.1</u>	kg 136 kg maximum load
Weight of 2 p.572 Dummies @ 76 each	=	<u>152.0</u>	kg
TARGET TEST WEIGHT	=	<u>2278.6</u>	kg

WEIGHT OF TEST VEHICLE WITH TWO DUMMIES AND 128 KG OF CARGO WEIGHT:

Right Front	=	<u>602</u>	kg	Right Rear	=	<u>532.5</u>	kg
Left Front	=	<u>605</u>	kg	Left Rear	=	<u>531</u>	kg
TOTAL FRONT	=	<u>1207.0</u>	kg	TOTAL REAR	=	<u>1063.5</u>	kg
TOTAL TEST WEIGHT	=	<u>2270.5</u>	kg				
% of Total Front Weight	=	<u>53.2</u>	%	% of Total Rear Weight	=	<u>46.8</u>	%
Weight of Ballast Secured in Vehicle Trunk Area	=	<u>112</u>	kg				
Vehicle Components Removed for Weight Reduction:		<u>none</u>					

VEHICLE ATTITUDE (all dimension in millimeters):

AS DELIVERED :	RF	<u>872</u>	LF	<u>870</u>	RR	<u>920</u>	LR	<u>909</u>
FULLY LOADED :	RF	<u>865</u>	LF	<u>865</u>	RR	<u>885</u>	LR	<u>876</u>
AS TESTED :	RF	<u>865</u>	LF	<u>865</u>	RR	<u>887</u>	LR	<u>890</u>
Vehicle's Wheel Base :		<u>3514</u>	mm					
Location of Vehicle's C.G. :		<u>1646.0</u>	mm rearward of front wheel center.					

FUEL SYSTEM DATA :

Fuel System Capacity From Owner's Manual	=	<u>94.64</u>	liters
Usable Capacity Figure Furnished by COTR	=	<u>94.64</u>	liters
Test Volume Range (92 to 94% of Usable Capacity)	=	<u>87.1</u>	to <u>89.0</u> liters
ACTUAL TEST VOLUME	=	<u>88</u>	liters (with entire fuel system filled)
Test Fluid Type:	<u>Stoddard Solution</u>	;	Spec. Grav. = <u>0.764</u>
	Kinematic Viscosity =	<u>0.96</u>	centistokes; Color = <u>Orange</u>
Type of Fuel Pump:	Electric- <u>x</u>	;	Mechanical- <u>-</u>
Does Electric Pump operate with ignition switch "ON" & engine "OFF"		Yes- <u>x</u>	No- <u>-</u>
Details of Fuel System	<u>Fuel tank is mounted on the left side, forward of the rear axle and inboard of rails.</u>		

DATA SHEET NO. 3 POST IMPACT DATA

TYPE OF TEST:

Type of Test : Frontal Barrier Impact Angle : 0°
Test Date : December 12, 2000 Time: 12:30 Temperature: 5 °C
Vehicle NHTSA No. : M10205
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 kph; Trap No. 2 = 56 kph
Distance from vehicle to barrier : (1) entering trap = 813 mm
(2) exiting trap = 305 mm

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

Vehicle Length:

Pre-Test Right = 5630 ; C/L = 5730 ; Left = 5630
Post-Test Right = 5022 ; C/L = 5095 ; Left = 5061
Crush Right = 608.0 ; C/L = 635.0 ; Left = 569.0
AVERAGE = 604.0 mm

VEHICLE REBOUND: (From rigid barrier only.)

Distance from front of test vehicle to impact point :

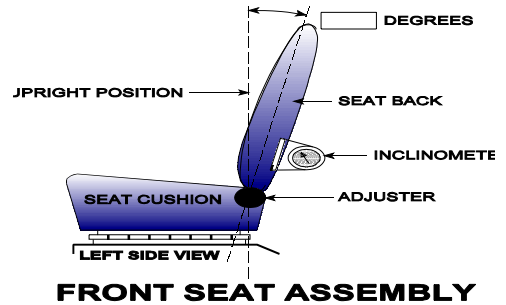
Right = 350 ; C/L = 397 ; Left = 387
AVERAGE = 378.0 mm

DATA SHEET NO. 4 TEST VEHICLE INFORMATION

VEHICLE IDENTIFICATION:

Model Year : 2001 Vehicle Model: Ford F150 XL Body Style : Extended Cab 4-Door

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



Seat back angle for driver's seat: 18

Measurement instructions: Measured on outboard seat frame 13" above pivot point

Seat back angle for passenger's seat: 18

Measurement instructions: Measured on outboard seat frame 13" above pivot point

2. Seat Fore and Aft Positioning

Positioning of the driver's seat: Located 19 positions, placed seat in mechanical middle at 9th notch

Positioning of the passenger's seat: Located 19 positions, placed seat in mechanical middle at 9th notch

3. Fuel Tank Capacity Data

3.1 A. "Usable Capacity" of the standard equipment fuel tank is 94.64 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 = 89.9 liters

3.2 Amount of Stoddard solvent added to vehicle(s) used for certification test(s) = 89.9 liters

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

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

With ignition turned on.

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

4. STEERING COLUMN ADJUSTMENTS :

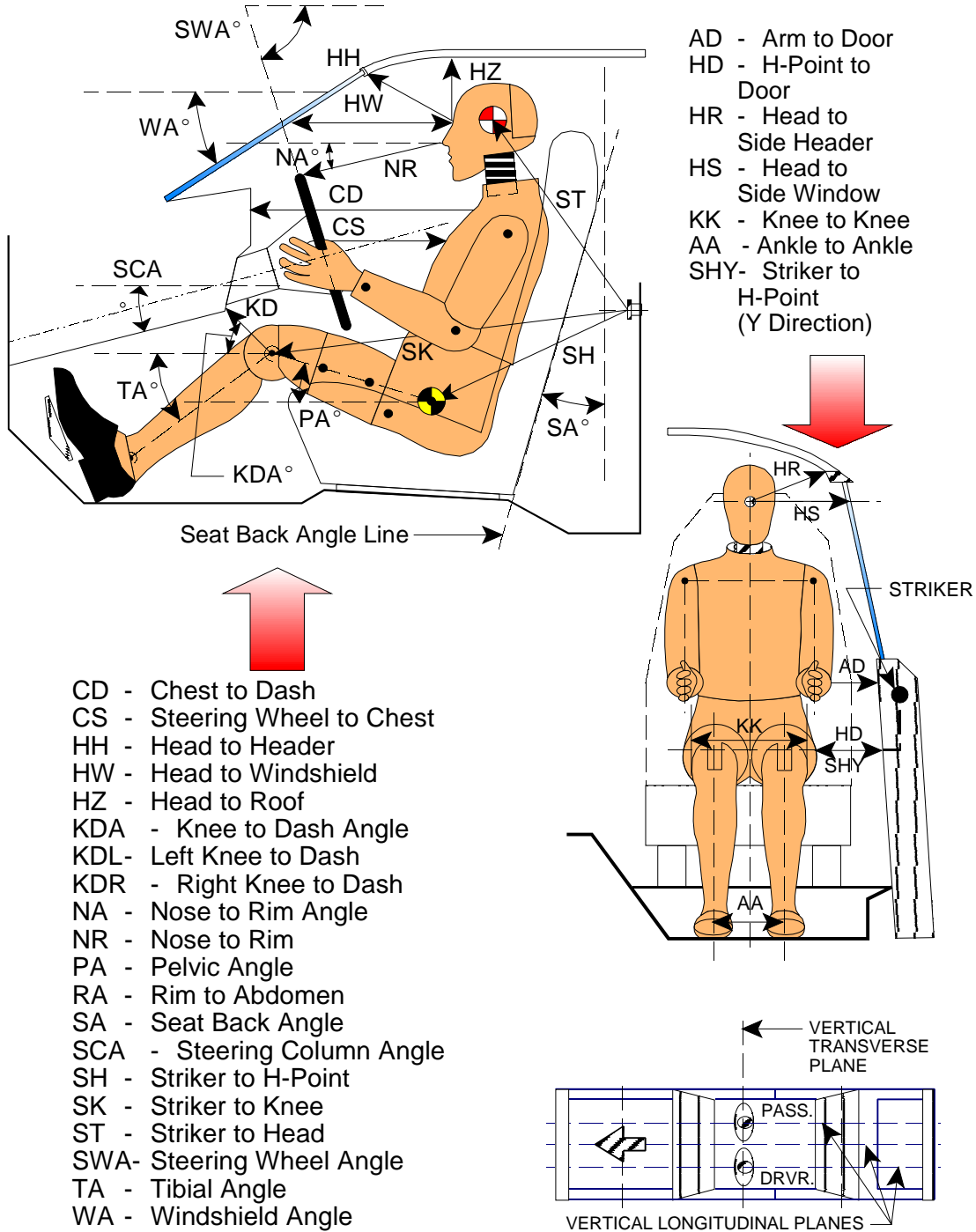
Steering wheel and column adjustments are made so that the steering wheel hub is at the geometric center of the locus it describes when it is moved through its full range of driving positions. If the tested vehicle has any of these adjustments, does your company use any specific procedures to determine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

Operational Instructions: Positioned in steering wheel hub geometric center

5. SEAT BELT UPPER ANCHORAGE

Nominal design riding position: Integrated seat belt system

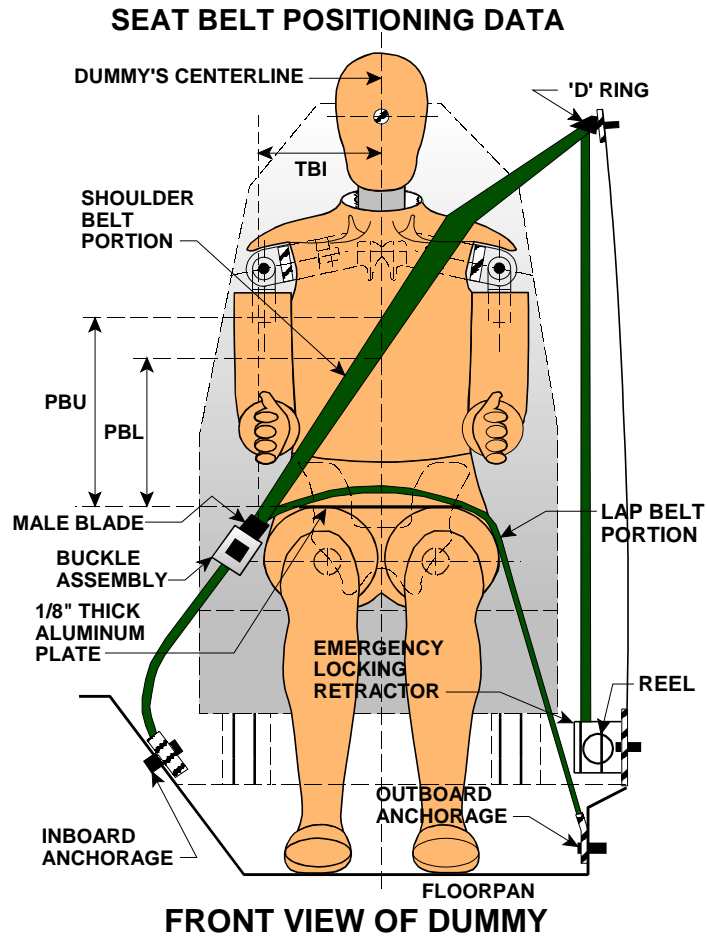
DUMMY MEASUREMENT FOR FRONT SEAT PASSENGERS



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

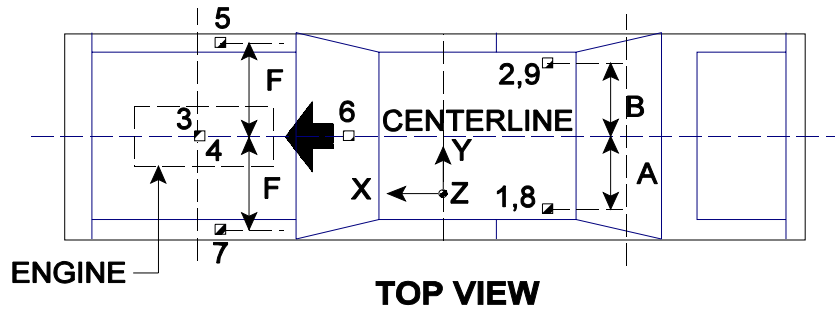
	DRIVER (Serial #064)			PASS. (Serial # 061)		
WA ^o	33.5 deg.			N/A		
SWA ^o	69 deg.			N/A		
SCA ^o	21 deg.			N/A		
SA ^o	18 deg.			18 deg.		
HZ	241			242		
HH	440			445		
HW	659			665		
HR	234			241		
NR	442	Angle	15 deg.	N/A		
CD	618			619		
CS	336			N/A		
RA	231			N/A		
KDL	186	Angle (KDA)	23.7 deg.	207		
KDR	178			221	Angle (KDA)	28 deg.
PA ^o	20.9 deg.			21.5 deg.		
TA ^o	61.0 deg.			56 deg.		
KK	330			270		
AA	325			270		
ST	638	Angle	68 deg.	634	Angle	69 deg.
SK	737	Angle	91 deg.	735	Angle	91 deg.
SH	354	Angle	107 deg.	353	Angle	107 deg.
SHY	257			255		
HS	324			329		
HD	185			181		
AD	123			130		

Dimensions in millimeters

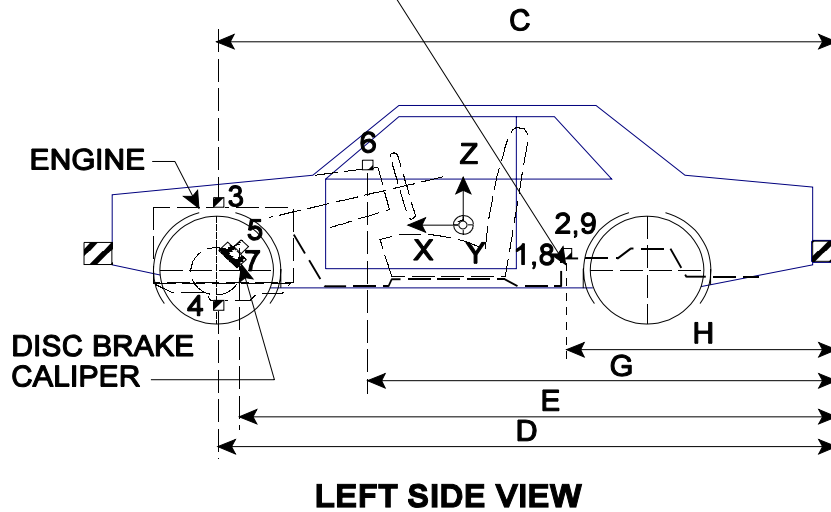


	DRIVER DUMMY (mm)	PASSENGER DUMMY (mm)
PBU -- Top surface of alum. plate to upper edge	320	320
PBL-- Top surface of alum. plate to belt lower edge	230	230
<u>LAP BELT TENSION</u>	Retractor	Retractor
<u>SHOULDER BELT TENSION</u>	Retractor	Retractor

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.)

DIMENSION	PRE-TEST LENGTH (mm)
A Left Rear Seat Crossmember Y	-453
B Right Rear Seat Crossmember Y	531
C Top of Engine X	4891
D Bottom of Engine X	4413
E Disc Brake Calipers X	4648
F Disc Brake Calipers Y	821
G Instrument Panel X	4076
H Rear Seat Crossmembers X	2859

LOCATION NUMBER	DESCRIPTION	MAXIMUM VALUE (g's)			
		Pos.	msec.	Neg.	msec.
1	Rear Seat X-Member @ Left Side	2.7	183.3	-34.9	18.0
2	Rear Seat X-Member @ Right Side	2.7	179.3	-34.8	18.2
3 *	Top of Engine Block	526.4	117.4	-508.4	45.1
4	Bottom of Engine	16.7	70.7	-41.9	56.4
5	Disc Brake Caliper @ Right Side	37.9	15.7	-71.8	11.9
6	Instrument Panel	31.1	61.4	-57.4	35.5
7	Disc Brake Caliper @Left Side	216.5	114.6	-95.0	299.9
8	Rear Seat X-Member @ Left-Redundant	3.4	180.5	-31.4	17.8
9	Rear Seat X-Member @ Right-Redundant	2.7	179.2	-35.7	18.3

* - Cable damaged @ 40 msec.

DATA SHEET NO. 8 DUMMY INJURY CRITERIA VALUES

Vehicle Year/Make/Model/Body Style: 2001 Ford F150 XL Extended Cab 4-Door

NHTSA Test No.: M10205 Test Date: December 12, 2000

		MAXIMUM VALUE							
		Driver				Passenger			
DESCRIPTION	Unit	Pos	msec	Neg	msec	Pos	msec	Neg	msec
Head X	g	13.6	255.8	-64.3	108.6	22.4	239.6	-45.4	103.8
Head Y	g	4.7	156.1	-15.2	108.2	6.7	234.9	-11.9	114.3
Head Z	g	32.4	96.2	-8.8	151.6	25.9	88.5	-7.7	133.5
Head Resultant	g	68.1	108.4	0.0	-27.3	50.7	97.0	0.0	-38.3
Redundant Head X	g	14.0	255.3	-65.9	108.5	22.3	238.5	-44.9	99.6
Redundant Head Y	g	4.6	159.7	-14.6	108.4	6.7	235.1	-11.3	113.9
Redundant Head Z	g	33.1	96.3	-8.4	151.7	0.1	74.2	0.0	8.9
Redundant Head Resultant	g	70.0	108.4	0.0	-27.2	45.5	104.3	0.0	24.9
Upper Neck Fx	N	518.4	88.7	-308.9	169.8	634.9	100.7	-555.6	156.8
Upper Neck Fy	N	160.4	147.0	-156.8	280.2	142.0	233.0	-159.5	166.5
Upper Neck Fz	N	1582.9	81.9	-441.2	148.6	1473.3	74.8	-658.7	268.3
Upper Neck F Resultant	N	1634.6	83.9	0.7	-27.1	1475.5	74.8	2.6	-43.1
Upper Neck Mx	N-m	14.3	153.2	-19.6	110.7	30.1	113.5	-11.0	73.8
Upper Neck My	N-m	42.8	102.1	-29.8	278.4	48.9	166.7	-46.9	269.6
Upper Neck Mz	N-m	14.7	99.2	-4.7	247.8	18.8	110.6	-10.1	167.8
Upper Neck M Resultant	N-m	46.9	103.2	0.1	-26.5	50.0	166.7	0.2	-5.8
Chest X	g	6.3	209.0	-40.4	97.9	8.5	204.6	-35.9	92.4
Chest Y	g	5.2	106.4	-4.4	51.8	2.9	85.5	-5.8	80.4
Chest Z	g	17.0	80.3	-11.4	153.0	18.1	91.6	-15.2	135.1
Chest Resultant	g	42.1	97.8	0.0	-28.2	40.2	92.4	0.0	-17.4
Redundant Chest X	g	6.3	209.1	-40.7	97.9	8.5	203.2	-35.9	92.4
Redundant Chest Y	g	11.4	149.6	-16.8	78.7	3.0	85.6	-5.6	80.4
Redundant Chest Z	g	4.6	51.9	-5.6	106.7	18.0	94.5	-15.3	135.5
Redundant Chest Resultant	g	42.5	97.8	0.0	-30.2	39.9	92.4	0.0	10.9
Chest Displacement	mm	0.0	-35.8	-34.9	102.3	0.0	-17.4	-35.2	89.3

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

Vehicle Year/Make/Model/Body Style: 2001 Ford F150 XL Extended Cab 4-Door

NHTSA Test No.: M10205 Test Date: December 12, 2000

DESCRIPTION	Unit	MAXIMUM VALUE							
		Driver				Passenger			
		Pos	msec	Neg	msec	Pos	msec	Neg	msec
Pelvic X	g	6.4	145.6	-67.3	56.0	6.0	146.7	-66.1	65.0
Pelvic Y	g	8.0	93.3	-10.2	58.9	8.7	72.5	-5.1	62.4
Pelvic Z	g	3.6	40.4	-13.1	136.5	4.9	55.6	-20.2	132.6
Pelvic Resultant	g	67.5	56.0	0.0	-29.8	66.3	65.0	0.0	-47.5
Left Femur	N	741.8	50.3	-3586.6	55.4	570.9	51.0	-3583.5	64.6
Right Femur	N	874.7	48.7	-4242.9	60.2	564.6	49.0	-4262.3	64.5
Left Upper Tibia Mx	N-m	27.7	133.7	-51.2	73.8	22.9	64.8	-17.5	120.9
Left Upper Tibia My	N-m	60.2	90.2	-34.6	61.6	12.9	63.5	-60.8	73.8
Left Lower Tibia Fz	N	371.5	80.8	-799.9	57.4	356.1	68.5	-2126.6	56.3
Left Lower Tibia Mx	N-m	33.0	59.9	-5.5	136.8	18.4	54.5	-4.7	235.8
Left Lower Tibia My	N-m	22.1	126.6	-108.1	60.1	21.0	60.2	-25.0	57.3
Right Upper Tibia Mx	N-m	58.0	64.3	-26.8	168.5	18.1	109.7	-50.3	84.9
Right Upper Tibia My	N-m	115.5	53.9	-52.2	85.8	222.2	63.6	-32.1	113.2
Right Lower Tibia Fz	N	447.8	52.7	-932.5	108.8	854.4	59.5	-1445.6	110.3
Right Lower Tibia Mx	N-m	15.4	62.7	-47.1	70.4	26.3	66.8	-18.6	51.0
Right Lower Tibia My	N-m	33.2	112.7	-60.6	59.4	141.5	63.7	-9.9	42.9
Left Foot Aft Ax	g	21.8	125.8	-112.9	59.1	21.7	72.7	-222.5	53.4
Left Foot Aft Az	g	34.8	56.6	-28.3	70.7	45.1	53.6	-33.2	67.3
Left Foot Fore Az	g	83.3	56.8	-100.5	62.7	95.2	50.9	-87.7	60.4
Right Foot Aft Ax	g	18.6	86.3	-132.7	56.4	30.2	95.9	-170.2	51.8
Right Foot Aft Az	g	14.4	86.1	-45.7	58.9	85.6	51.3	-43.8	75.6
Right Foot Fore Az	g	30.1	86.3	-95.7	50.4	132.6	68.7	-271.8	51.8
Lap Belt Load	N	‡	‡	‡	‡	‡	‡	‡	‡
Torso Belt	N	‡	‡	‡	‡	‡	‡	‡	‡

‡ Integrated seat belt system.

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

Vehicle Year/Make/Model/Body Style: 2001 Ford F150 XL Extended Cab 4-Door

NHTSA Test No.: M10205 Test Date: December 12, 2000

HEAD INJURY CRITERIA (HIC)				
	HIC**	t ₁ (msec)	t ₂ (msec)	Average Acceleration t ₁ to t ₂
Position #1 - Driver	623.4	81.6	117.6	49.6
Position #2 - Passenger	506.7	83.4	119.3	45.6

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

CLIP SUMMARY*				
	CLIP (g's)	t ₁ (msec)	t ₂ (msec)	CSI
Position #1 - Driver	41.2	96.5	99.5	392.5
Position #2 - Passenger	38.9	90.7	93.7	396.0

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

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

Vehicle Year/Make/Model/Body Style: 2001 Ford F150 XL Extended Cab 4-Door

NHTSA Test No.: M10205 Test Date: December 12, 2000

HEAD INJURY CRITERIA (HIC) REDUNDANT				
	HIC**	t ₁ (msec)	t ₂ (msec)	Average Acceleration t ₁ to t ₂
Position #1 - Driver	646.8	81.8	117.8	50.3
Position #2 - Passenger	395.5	84.8	120.8	41.3

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

CLIP SUMMARY* REDUNDANT				
	CLIP (g's)	t ₁ (msec)	t ₂ (msec)	CSI
Position #1 - Driver	41.6	96.4	99.4	397.9
Position #2 - Passenger	38.6	89.5	93.7	389.7

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

DATA SHEET NO. 9 SEAT BELT PERFORMANCE ASSESSMENT TEST DATA

BELT LENGTH DATA:

	<u>Driver</u>	<u>Passenger</u>
Belt length from trim panel exit to bolt hole anchor point for continuous webbing systems.	1440	1440
Shoulder belt length as measured on Part 572 Dummy.	825	825
Lap belt length as measured on Part 572 Dummy.	615	615

SHOULDER BELT SPOOL-OFF DATA:

As determined by film analysis.	‡	‡
As determined mechanically.	‡	‡
As determined electronically.	‡	‡

BELT STRETCH DATA:

Measured electronically between shoulder belt load cell and the "D" ring.	‡	‡
Measured mechanically.	1	1

‡ Integrated seat belt system

_____ 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 31 mm molding.

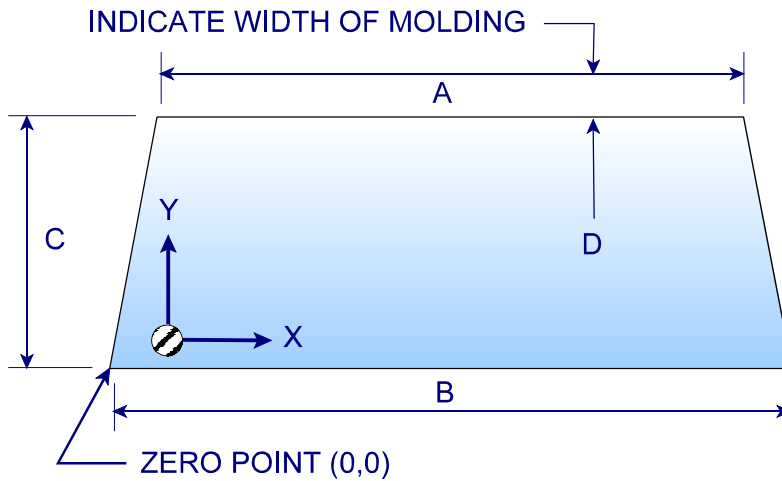
FMVSS 212 REQUIREMENTS:

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	2270	2270	100
LEFT SIDE	2270	2270	100
TOTAL	4540	4540	100

AREA OF RETENTION FAILURE:



DIMENSIONS (mm)	
A	1350
B	1750
C	720
D	31

FRONT VIEW OF WINDSHIELD

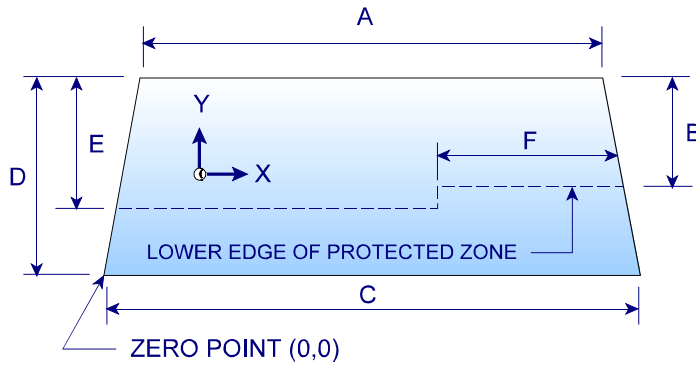
FAILURE DETAILS: none

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:



DIMENSIONS (mm)	
A	1350
B	435
C	1750
D	720
E	535
F	865

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.		

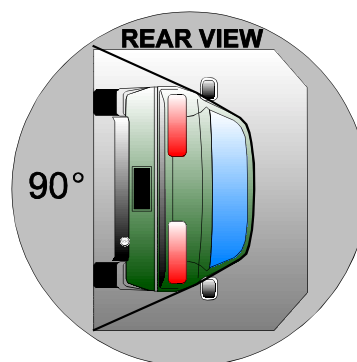
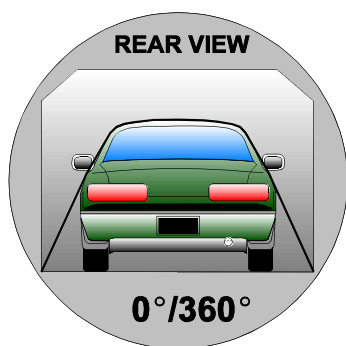
DATA SHEET 13

FMVSS NO. 301 STATIC ROLLOVER DATA SHEET

Vehicle: 2001 Ford F150 XL

NHTSA No. M10205

0 - 90 Degrees



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD :

Rollover Fixture 90° Rotation Time (Spec. Range = 1 to 3 minutes)	<u>1</u>	minutes	<u>12</u>	seconds
FMVSS 301 Position Hold Time +	<u>5</u>	minutes	<u>0</u>	seconds
TOTAL	<u>6</u>	minutes	<u>12</u>	seconds
Next whole minute interval	<u>7</u>	minutes		

II. FMVSS 301 REQUIREMENTS :

(1) Time Period

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

(2) Maximum Allowable Solvent Spillage

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

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

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

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

IV. SOLVENT SPILLAGE LOCATION(S) :

None

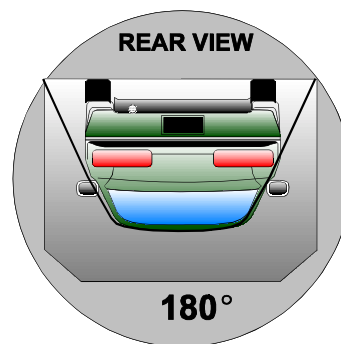
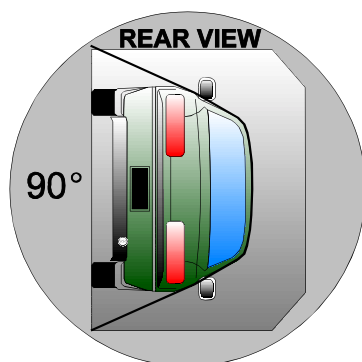
DATA SHEET 13

FMVSS NO. 301 STATIC ROLLOVER DATA SHEET (CONTINUED)

Vehicle: 2001 Ford F150 XL

NHTSA No. M10205

90 - 180 Degrees



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD :

Rollover Fixture 90° Rotation Time (Spec. Range = 1 to 3 minutes)	<u>1</u>	minutes	<u>24</u>	seconds
FMVSS 301 Position Hold Time +	<u>5</u>	minutes	<u>0</u>	seconds
TOTAL	<u>6</u>	minutes	<u>24</u>	seconds
Next whole minute interval	<u>7</u>	minutes		

II. FMVSS 301 REQUIREMENTS :

(1) Time Period

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

(2) Maximum Allowable Solvent Spillage

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

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

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

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

IV. SOLVENT SPILLAGE LOCATION(S) :

None

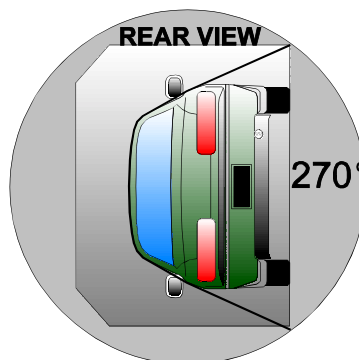
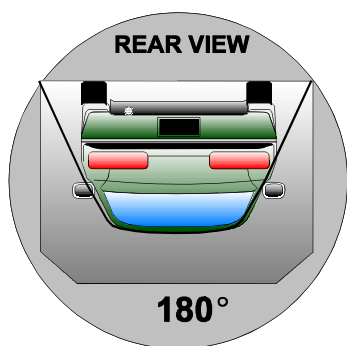
DATA SHEET 13

FMVSS NO. 301 STATIC ROLLOVER DATA SHEET (CONTINUED)

Vehicle: 2001 Ford F150 XL

NHTSA No. M10205

180 - 270 Degrees



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD :

Rollover Fixture 90° Rotation Time (Spec. Range = 1 to 3 minutes)	<u>1</u>	minutes	<u>21</u>	seconds
FMVSS 301 Position Hold Time +	<u>5</u>	minutes	<u>0</u>	seconds
TOTAL	<u>6</u>	minutes	<u>21</u>	seconds
Next whole minute interval	<u>7</u>	minutes		

II. FMVSS 301 REQUIREMENTS :

(1) Time Period

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

(2) Maximum Allowable Solvent Spillage

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

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

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

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

IV. SOLVENT SPILLAGE LOCATION(S) :

None

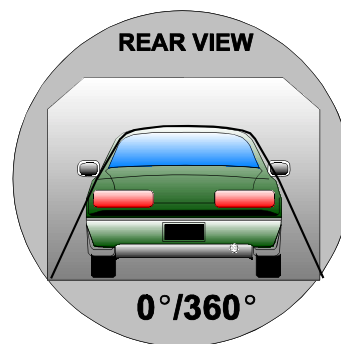
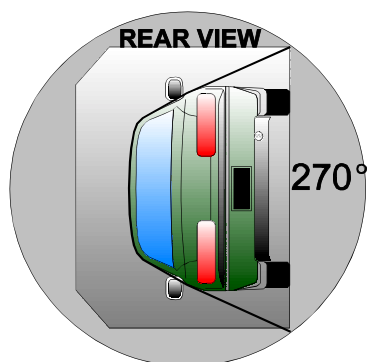
DATA SHEET 13

FMVSS NO. 301 STATIC ROLLOVER DATA SHEET (CONTINUED)

Vehicle: 2001 Ford F150 XL

NHTSA No. M10205

270 - 360 Degrees



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD :

Rollover Fixture 90° Rotation Time (Spec. Range = 1 to 3 minutes)	<u>1</u>	minutes	<u>17</u>	seconds
FMVSS 301 Position Hold Time +	<u>5</u>	minutes	<u>0</u>	seconds
TOTAL	<u>6</u>	minutes	<u>17</u>	seconds
Next whole minute interval	<u>7</u>	minutes		

II. FMVSS 301 REQUIREMENTS :

(1) Time Period

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

(2) Maximum Allowable Solvent Spillage

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

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

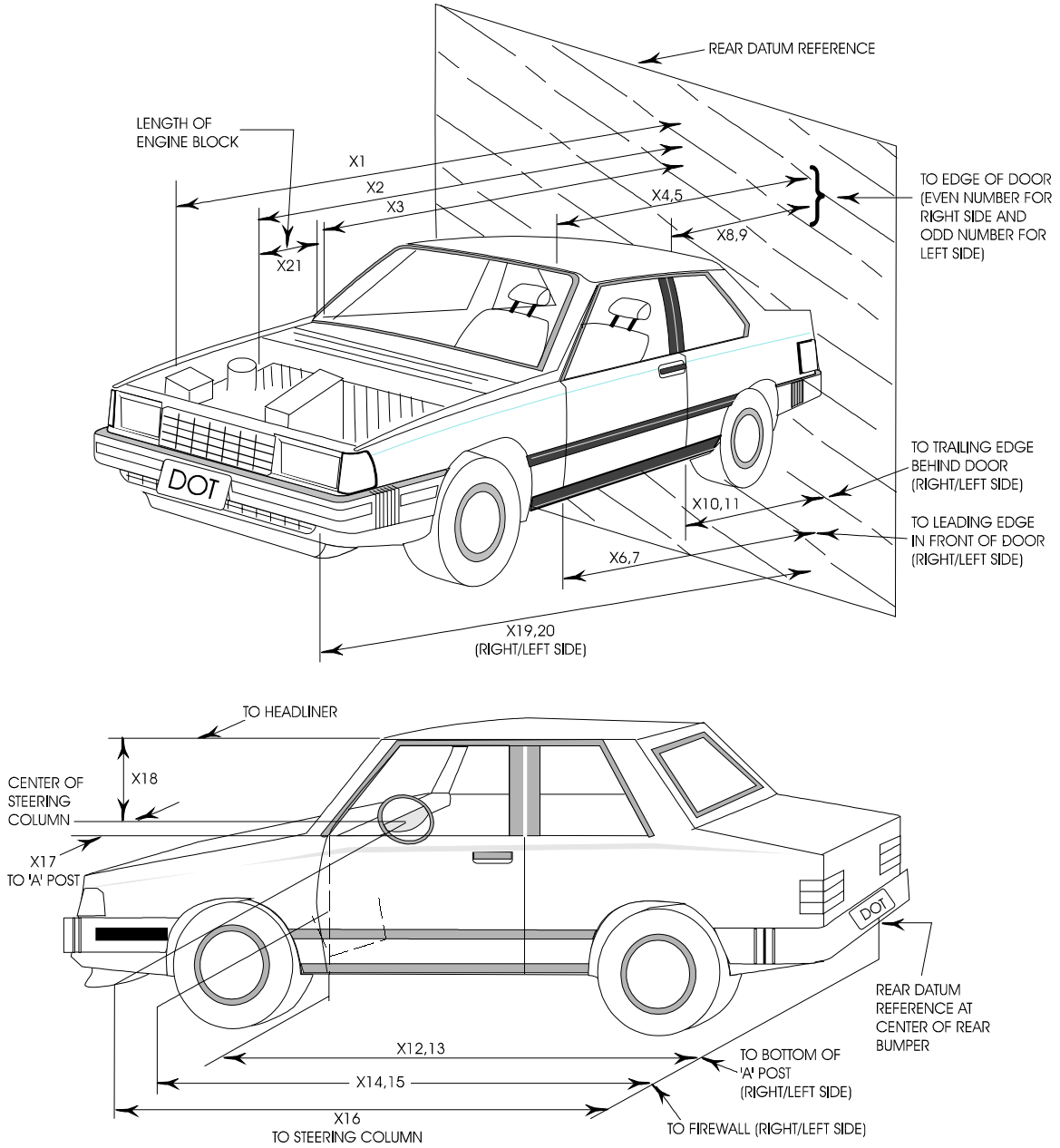
0 g	0 g	0 g	N/A
-----	-----	-----	-----

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

IV. SOLVENT SPILLAGE LOCATION(S) :

None

DATA SHEET NO. 14 TEST VEHICLE MEASUREMENTS

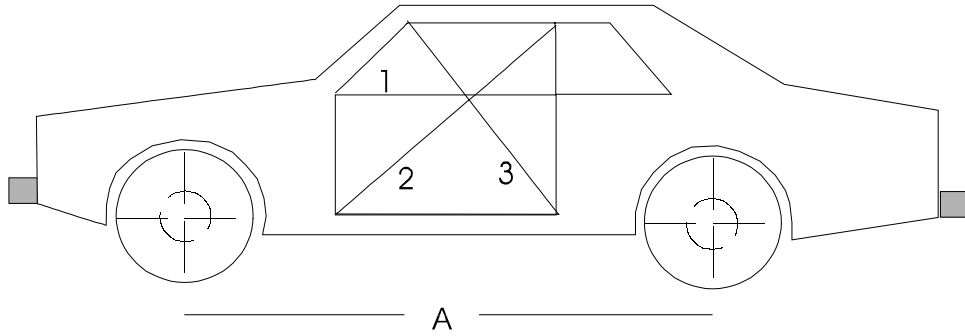


DATA SHEET NO.14 VEHICLE MEASUREMENTS (cont.)

No.		Pre-Test	Post-Test	Difference
X1	Total Length of Vehicle at Centerline	5741	5076	665
X2	Rear Surface of Vehicle to Front of Engine	4735	4590	145
X3	Rear Surface of Vehicle to Firewall	4539	4498	41
X4	Rear Surface of Vehicle to Upper Leading Edge of Right Door	4145	4127	18
X5	Rear Surface of Vehicle to Upper Leading Edge of Left Door	4145	4111	34
X6	Rear Surface of Vehicle to Lower Leading Edge of Right Door	4076	4076	0
X7	Rear Surface of Vehicle to Lower Leading Edge of Left Door	4078	4066	12
X8	Rear Surface of Vehicle to Upper Trailing Edge of Right Door	2883	2875	8
X9	Rear Surface of Vehicle to Upper Trailing Edge of Left Door	2879	2848	31
X10	Rear Surface of Vehicle to Lower Trailing Edge of Right Door	2947	2935	12
X11	Rear Surface of Vehicle to Lower Trailing Edge of Left Door	2952	2922	30
X12	Rear Surface of Vehicle to Bottom of "A" Post of Right Side	4237	4098	139
X13	Rear Surface of Vehicle to Bottom of "A" Post of Left Side	4222	4158	64
X14	Rear Surface of Vehicle to Firewall, Right Side	4533	4488	45
X15	Rear Surface of Vehicle to Firewall, Left Side	4525	4455	70
X16	Rear Surface of Vehicle to Steering Column	3664	3687	-23
X17	Center of Steering Column to "A" Post	276	291	-15
X18	Center of Steering Column to Headliner	476	475	1
X19	Rear Surface of Vehicle to Right Side of Front Bumper	5648	5091	557
X20	Rear Surface of Vehicle to Left Side of Front Bumper	5641	5012	629
X21	Length of Engine Block	621	621	0
RD	Rear Surface of Vehicle to Right Side of Dash Panel	3897	3882	15
CD	Rear Surface of Vehicle to Center of Dash Panel	3891	3852	39
LD	Rear Surface of Vehicle to Left Side of Dash Panel	3778	3731	47

All Dimensions in mm

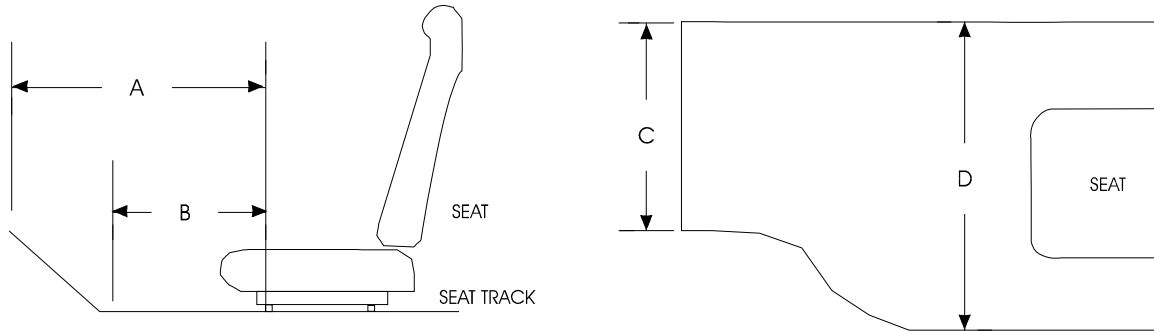
DATA SHEET NO.14 VEHICLE MEASUREMENTS (cont.)
 VEHICLE INTRUSION MEASUREMENTS
 DOOR OPENING WIDTH



UNITS (mm)	LEFT			RIGHT		
MEASUREMENT	1	2	3	1	2	3
BEFORE TEST	1190	1600	1336	1163	1636	1342
AFTER TEST	1167	1614	1358	1150	1601	1365
DIFFERENCE	23	-14	-22	13	35	-23

UNITS (mm)	A = WHEELBASE LEFT	A = WHEELBASE RIGHT
BEFORE TEST	3514	3523
AFTER TEST	3426	3408
DIFFERENCE	88	115

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



DRIVER

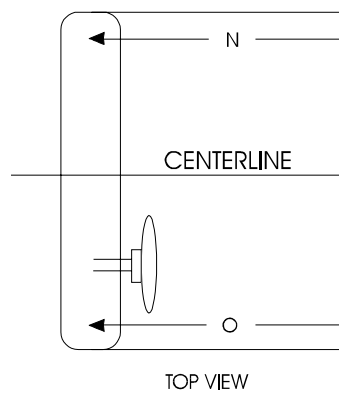
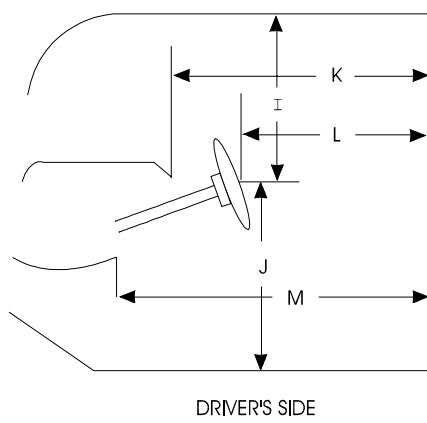
Measurement	Pre-Test	Post-Test	Difference
A	711	703	8
B	525	536	-11
C	483	486	-3
D	526	502	24

PASSENGER

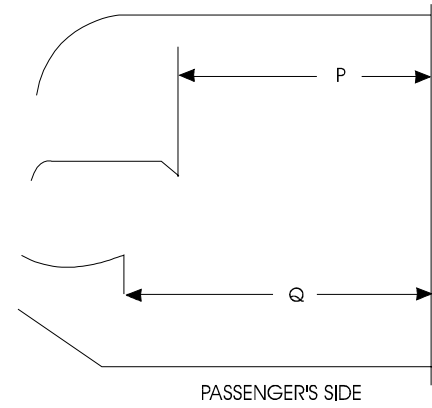
Measurement	Pre-Test	Post-Test	Difference
A	684	640	44
B	507	491	16
C	449	477	-28
D	533	541	-8

Units = mm

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



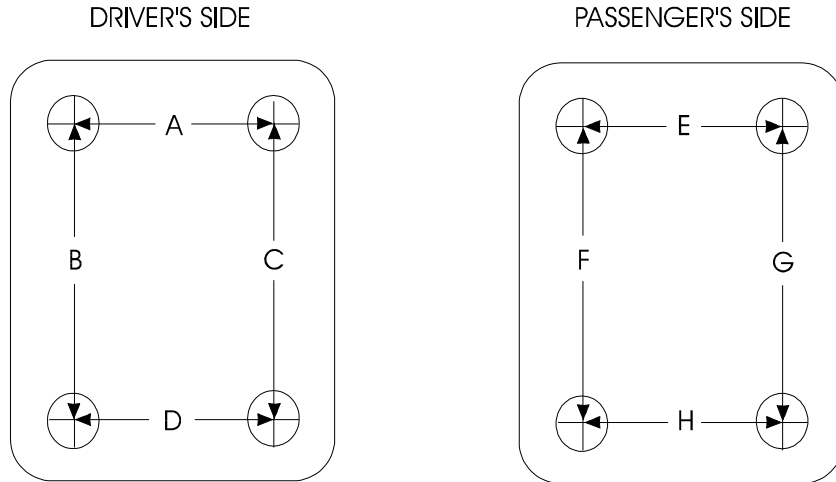
MEASUREMENTS
FROM C-PILLAR
BELT ANCHORAGE



Measurement	Pre-Test	Post-Test	Difference
I	476	475	1
J	706	774	-68
K	1539	1488	51
L	1289	1311	-22
M	1497	1482	15
N	1528	1508	20
O	1403	1354	49
P = K (PASS.)	1632	1577	55
Q = M (PASS.)	1571	1477	94

Units = mm

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

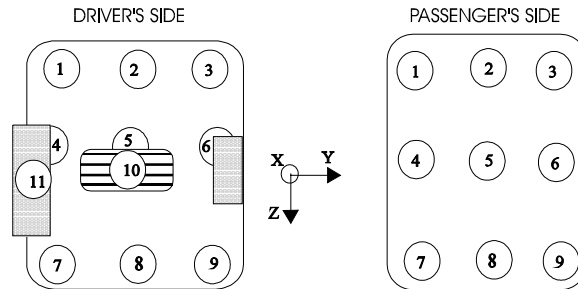


TOP VIEW THROUGH FLOOR PAN

Measurement	Pre-Test	Post-Test	Difference
A	225	221	4
B	390	379	11
C	349	340	9
D	209	208	1
E	230	222	8
F	358	350	8
G	374	369	5
H	220	220	0

Units = mm

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



Driver Side Floorpan Measurements

Floorpan Location	X Deformation (mm)			Z Deformation (mm)		
	Pre-Test	Post-Test	Difference	Pre-Test	Post-Test	Difference
1	4282	4256	26	-607	-590	-17
2	4280	4248	32	-616	-603	-13
3	4263	4223	40	-619	-596	-23
4	4197	4183	14	-564	-527	-37
5	4199	4183	16	-557	-530	-27
6	4203	4172	31	-558	-532	-26
7	4095	4077	18	-517	-476	-41
8	4094	4080	14	-514	-473	-41
9	4087	4073	14	-510	-481	-29
10	4113	4041	72	-680	-700	20
11	4199	4178	21	-563	-547	-16

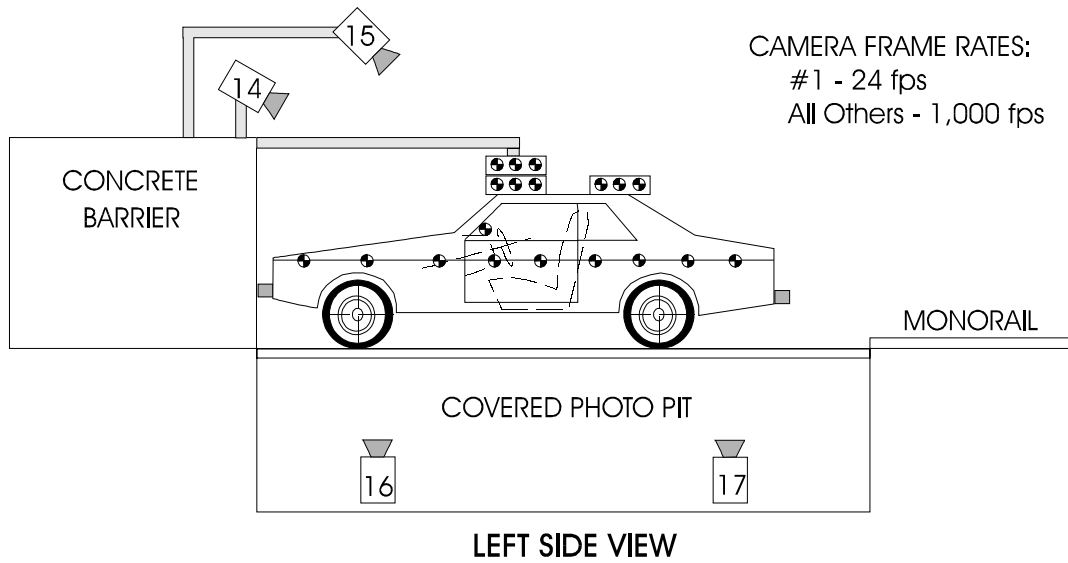
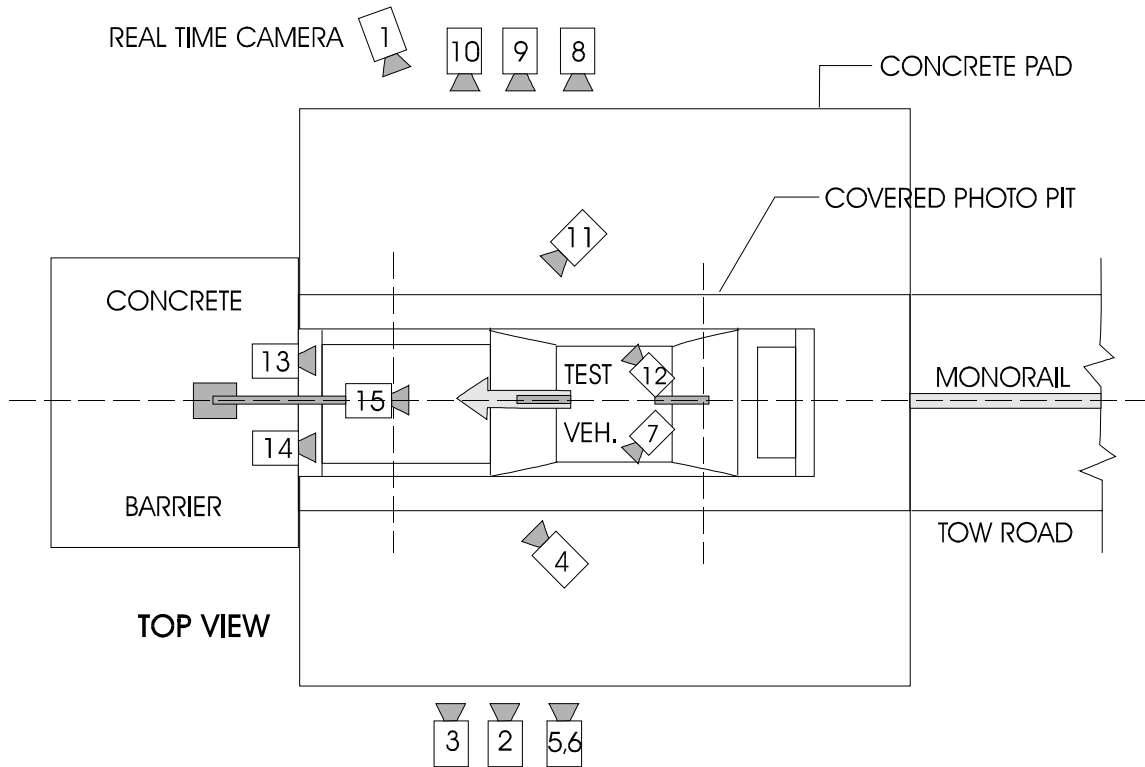
Passenger Side Floorpan Measurements

Floorpan Location	X Deformation (mm)			Z Deformation (mm)		
	Pre-Test	Post-Test	Difference	Pre-Test	Post-Test	Difference
1	4231	4194	37	-582	-573	-9
2	4239	4186	53	-564	-543	-21
3	4248	4215	33	-560	-532	-28
4	4165	4129	36	-520	-500	-20
5	4166	4145	21	-519	-482	-37
6	4161	4155	6	-511	-488	-23
7	4061	4046	15	-478	-429	-49
8	4062	4037	25	-467	-416	-51
9	4068	4058	10	-471	-414	-57

Reference: X = Rear Bumper; Z = Ground

DATA SHEET NO.15 HIGH-SPEED CAMERA LOCATIONS

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



CAMERA FRAME RATES:
 #1 - 24 fps
 All Others - 1,000 fps

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

NHTSA Test No.: M10205 Vehicle: 2001 Ford F150 XL Extended Cab 4-Door

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	7983	2159	1161	-2	7466	12.5	1005
3	Left Side View	8200	1081	1104	-2	7683	25	1010
4	Driver and Interior View	7917	3011	1941	-7	-	25	1030
5	Steering Column (Bottom)	9243	2287	1172	-1	8726	25	1010
6	Steering Column (Top)	9243	2287	1780	-4	8726	25	1010
7	Left Belt	-	-	-	-	-	-	-
8	Overall Right Side	7720	2129	1219	-1	7203	12.5	1010
9	Right Side View	8796	1667	1233	-2	8279	25	1005
10	Right Passenger View	8576	2043	1485	-2	8059	35	1010
11	Passenger and Interior View	7833	2734	1974	-8	-	25	1005
12	Right Belt	-	-	-	-	-	-	-
13	Passenger Front View	620	-92	1987	-28	-	13	1015
14	Driver Front View	620	-92	1987	-26	-	13	1010
15	Windshield View	0	-530	3374	-49	-	13	1010
16	Pit View of Engine	0	615	-3048	90	-	13	1005
17	Pit View of Fuel Tank	0	2375	-3048	90	-	13	1020

*X = film plane to monorail centerline

Y = film plane to impact location

Z = film plane to ground

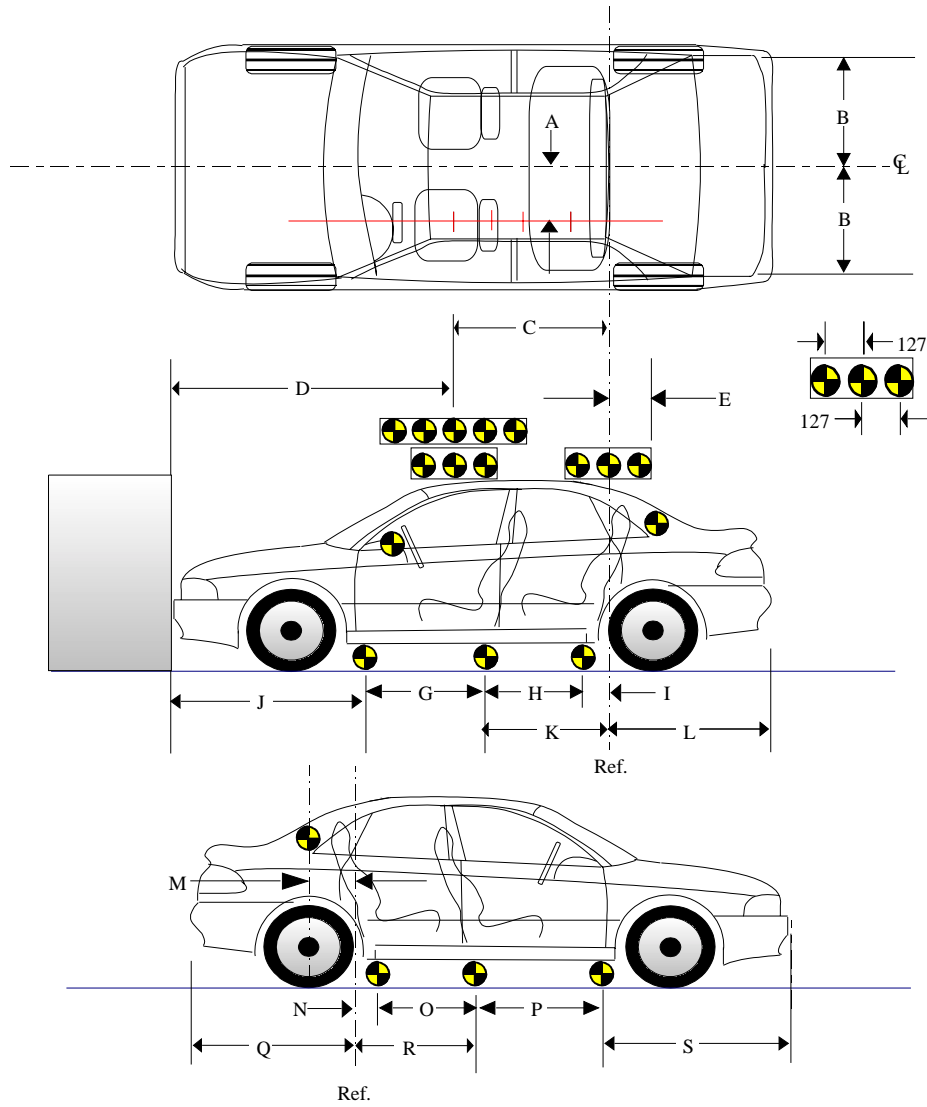
** = referenced to horizontal plane

N.T. indicates No Timing

DATA SHEET NO. 16 VEHICLE REFERENCE PHOTO TARGET LOCATIONS

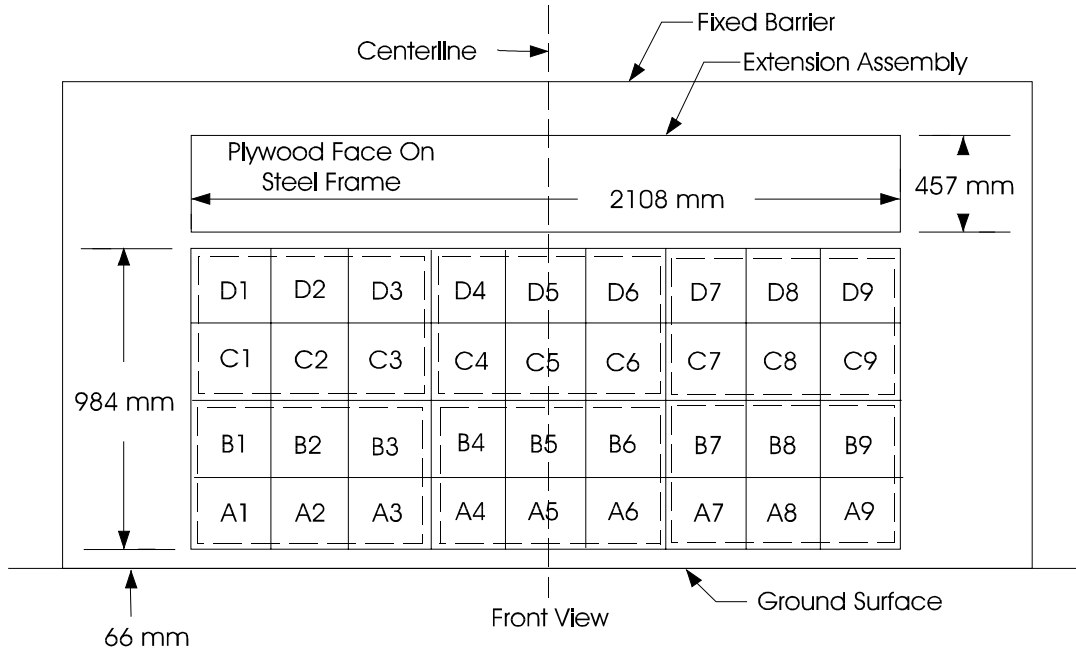
(Dimensions in millimeters)

A	441
B	817
C	1208
D	2376
E	2158
F	1702
G	1203
H	1241
I	156
J	1538
K	1397
L	1605
M	2158
N	175
O	1219
P	1219
Q	1599
R	1394
S	1542



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)

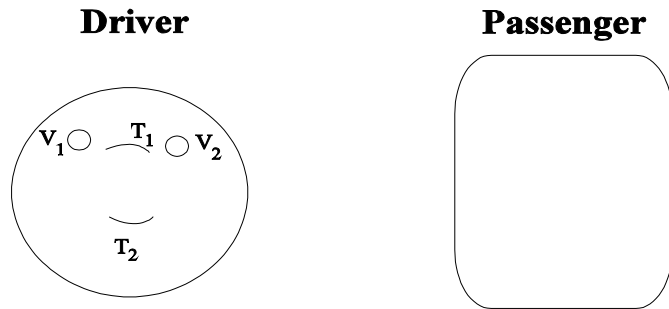
DATA SHEET NO. 18 POST TEST AIR BAG DATA

NHTSA No. : M10205; Test Date: December 12, 2000; Technician: James A. Czarnecki

Vehicle Model Year/Make/Model: 2001 Ford F150 XL

- A. No. of vent holes: 2 -Driver 0 -Passenger
- B. Size of vent holes: (mm²) 30 -Driver 0 -Passenger
- C. Total vent area: (mm²) 60 -Driver 0 -Passenger
- D. Deflated air bag length and width dimensions or, if round, diameter. (mm)
 Driver: - -Length; - -Width; 650 -Diameter
 Passenger: 700 -Height; 600 -Width; 400 -Depth
- E. Is the air bag tethered?
 Driver: x -Yes; - -No; If yes, record length of tether- 210
 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_n = Vent hole_n, T_n = Tether_n).



- F. Record part numbers and manufacturer name of the air bag and gas generator.
 Driver: Air bag: T1KW293N20047
 Generator: XL3A 15043B13ACJAFS
 Passenger: Air bag: NONE
 Generator: XL3A 15044874 AA ZUKA

DATA SHEET NO. 19 ACCIDENT INVESTIGATION DIVISION DATA

FOR 56.3 KPH FRONTAL BARRIER IMPACT

Vehicle Make/Model/Body Style: Ford F150 XL Extended Cab 4-Door

NHTSA Test No.: M10205 VIN: 2FTZX17231CA28286

Model Year: 2001 Build Date: 11/00 Test Date: December 12, 2000

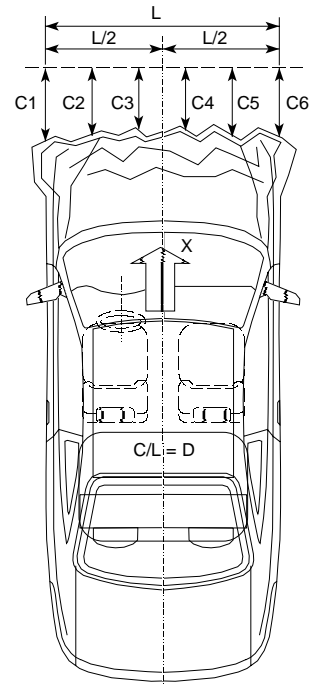
Vehicle Size Category: Pickup Test Weight: 2270.5 kg

Vehicle Wheelbase: 3514 mm; Front Overhang: 1540 mm; Overall Width: 2014 mm

Collision Deformation Classification (CDC) Code: 12FDEW3

Crush Depth Dimensions:

	PRE	POST	DIFF	
C1 =	5554	4987	567.0	mm
C2 =	5676	5030	646.0	mm
C3 =	5740	5035	705.0	mm
C4 =	5730	5051	679.0	mm
C5 =	5689	5066	623.0	mm
C6 =	5564	5080	484.0	mm



Midpoint of Damage: $D = \frac{\text{Vehicle Centerline}}{\text{(Longitudinal)}}$

Length of Damaged Region:

L1= 2014 mm
 L2= 1007.0 mm
 L3= 671.3 mm

APPENDIX A
PHOTOGRAPHS

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Figure A-1: LOAD CELL LOCATIONS.



Figure A-2: PRE-TEST FRONT VIEW



Figure A-3: POST-TEST FRONT VIEW.



Figure A-4: PRE-TEST LEFT SIDE VIEW



Figure A-5: POST-TEST LEFT SIDE VIEW



Figure A-6: PRE-TEST RIGHT SIDE VIEW



Figure A-7: POST-TEST RIGHT SIDE VIEW



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



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



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



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



Figure A-12: PRE-TEST WINDSHIELD VIEW



Figure A-13: POST-TEST WINDSHIELD VIEW



Figure A-14: PRE-TEST ENGINE COMPARTMENT VIEW



Figure A-15: FUEL CAP VIEW



Figure A-16: PRE-TEST FRONT UNDERBODY VIEW



Figure A-17: POST-TEST FRONT UNDERBODY VIEW



A-20

8602-7

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



A-23

8602-7

Figure A-21: POST-TEST REAR UNDERBODY VIEW



Figure A-22: PRE-TEST DRIVER POSITION VIEW



Figure A-23: POST-TEST DRIVER POSITION VIEW



Figure A-24: PRE-TEST PASSENGER POSITION VIEW



Figure A-25: POST-TEST PASSENGER POSITION VIEW



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



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



A-30

8602-7

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



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



Figure A-30: PRE-TEST DRIVER HEAD LOCATION



Figure A-31: POST-TEST DRIVER HEAD LOCATION



Figure A-32: PRE-TEST PASSENGER HEAD LOCATION



Figure A-33: POST-TEST PASSENGER HEAD LOCATION



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



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



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



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



Figure A-38: ROLLOVER VIEW



Figure A-39: IMPACT VIEW

APPENDIX B

DUMMY, VEHICLE AND LOAD CELL BARRIER RESPONSE DATA

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

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

DATA CHANNEL FILTER CLASS SUMMARY

NHTSA TEST NO. M10205

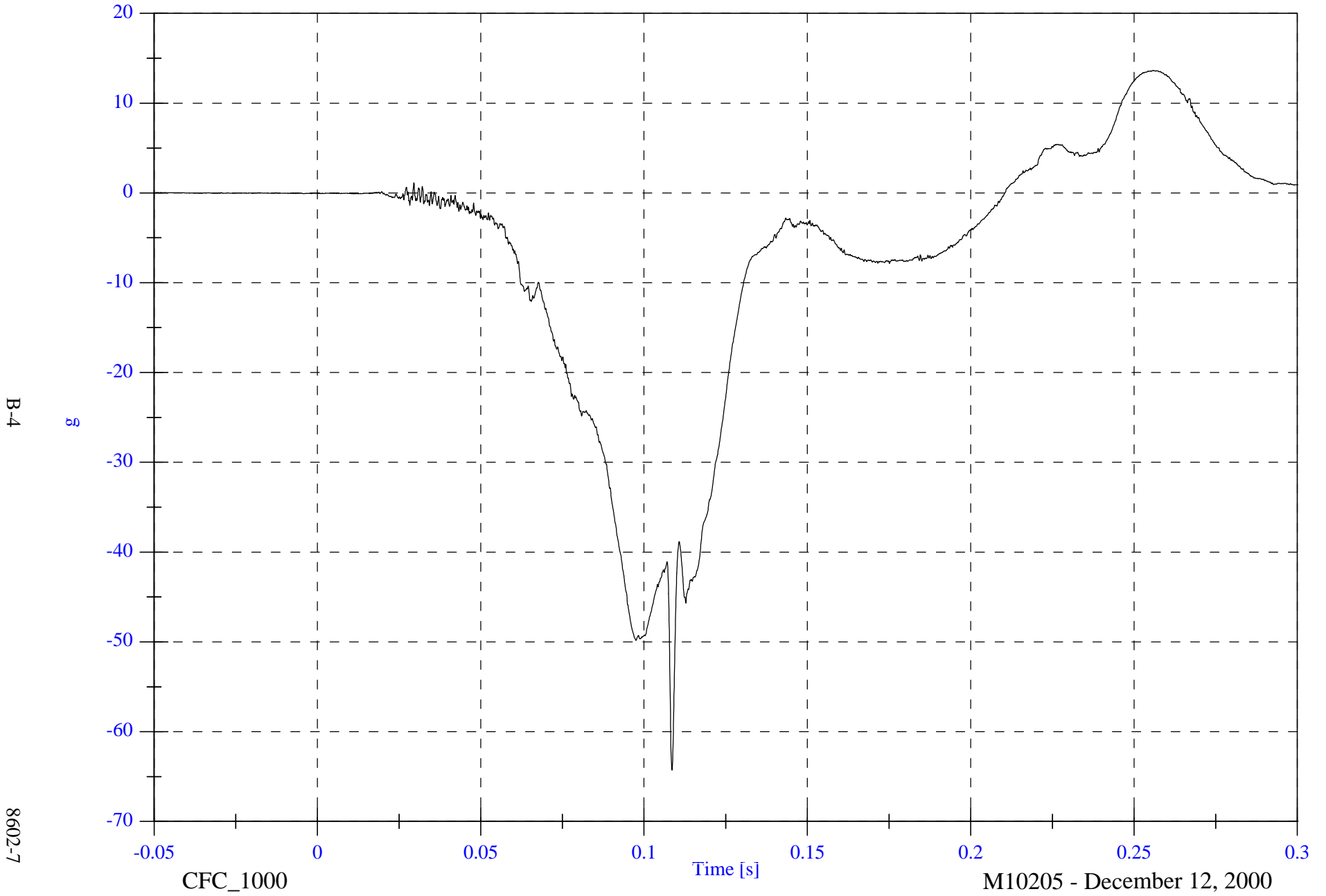
DATA TYPE	SAE FILTER CLASS (Hz)
Dummy Head Accelerations	1000
Dummy Chest Accelerations	180
Dummy Chest Displacements	60
Dummy Femur Forces	600
Dummy Belt Loads	60
Dummy Belt Displacements	180
Dummy Neck Forces	1000
Dummy Neck Moments	600
Vehicle Accelerations	60
Vehicle Velocity Integrations	180
Vehicle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

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

P1 Head x

Max: 13.6 [g] at 0.256 [s]

Min: -64.3 [g] at 0.109 [s]

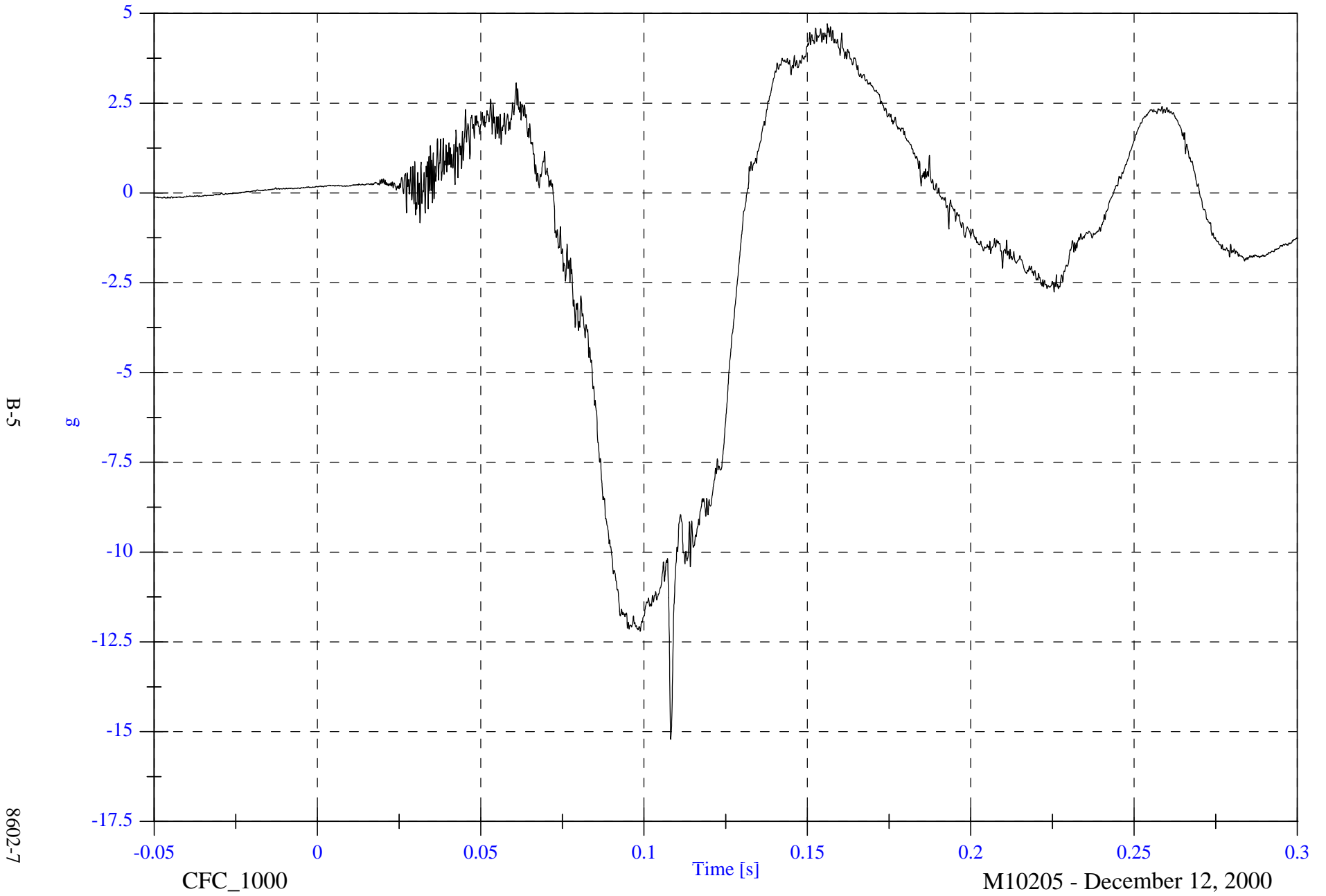


NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

P1 Head y

Max: 4.7 [g] at 0.156 [s]

Min: -15.2 [g] at 0.108 [s]

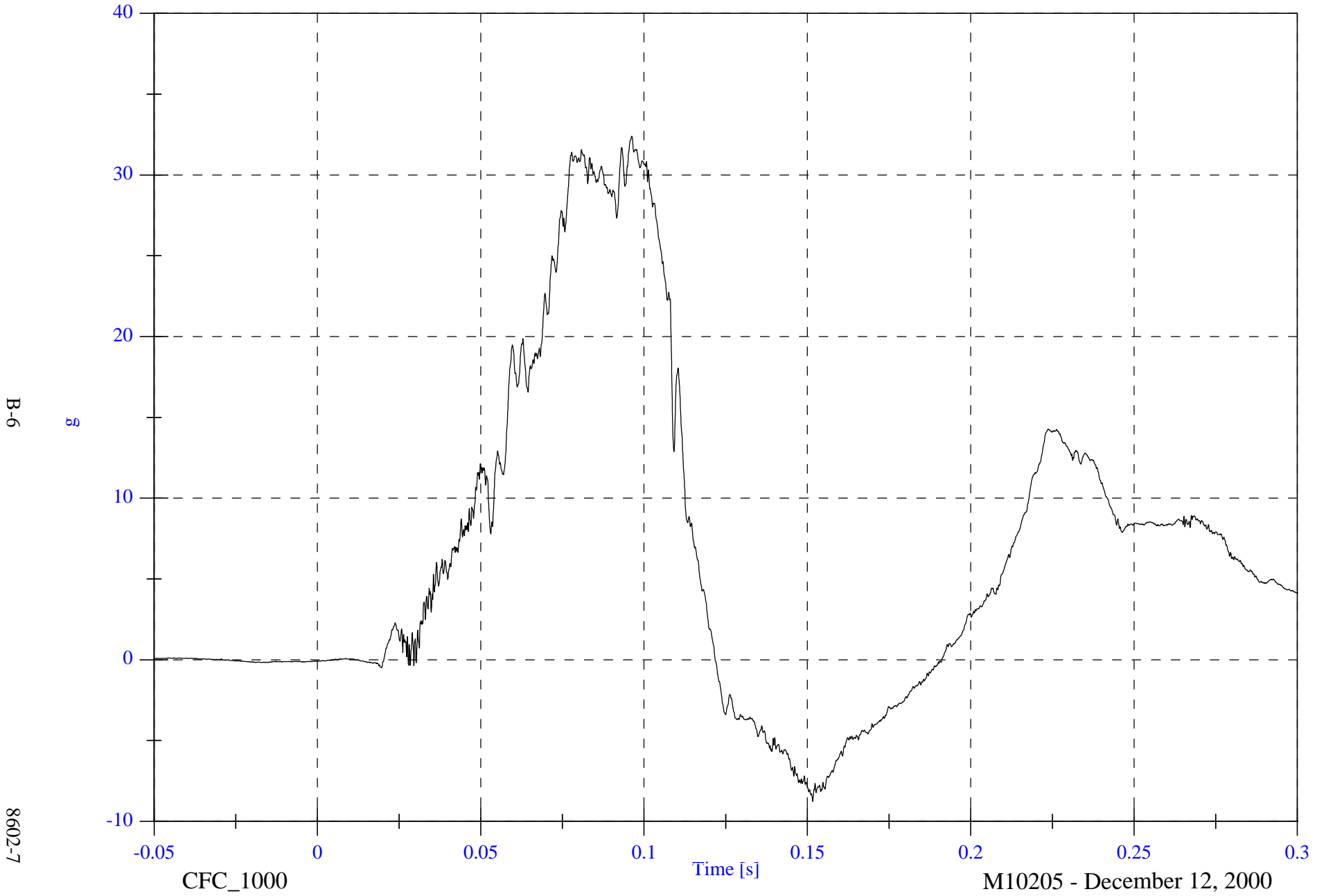


NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

P1 Head z

Max: 32.4 [g] at 0.096 [s]

Min: -8.8 [g] at 0.152 [s]



B-6

g

8602-7

CFC_1000

Time [s]

M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

P1 Head Resultant

Max: 68.1 [g] at 0.108 [s]

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

B-7

8602-7

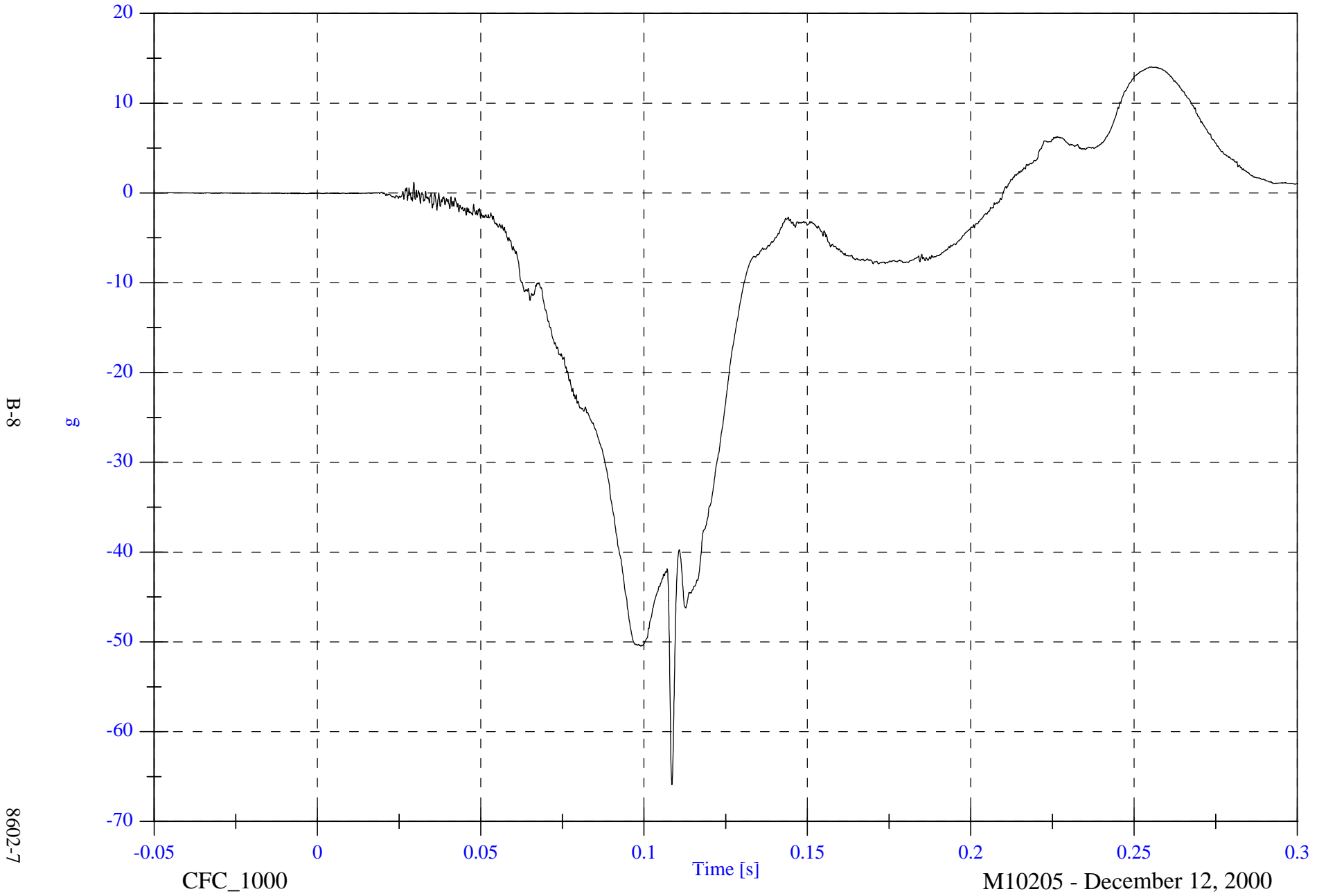


NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

P1 Head Red x

Max: 14.0 [g] at 0.255 [s]

Min: -65.9 [g] at 0.109 [s]

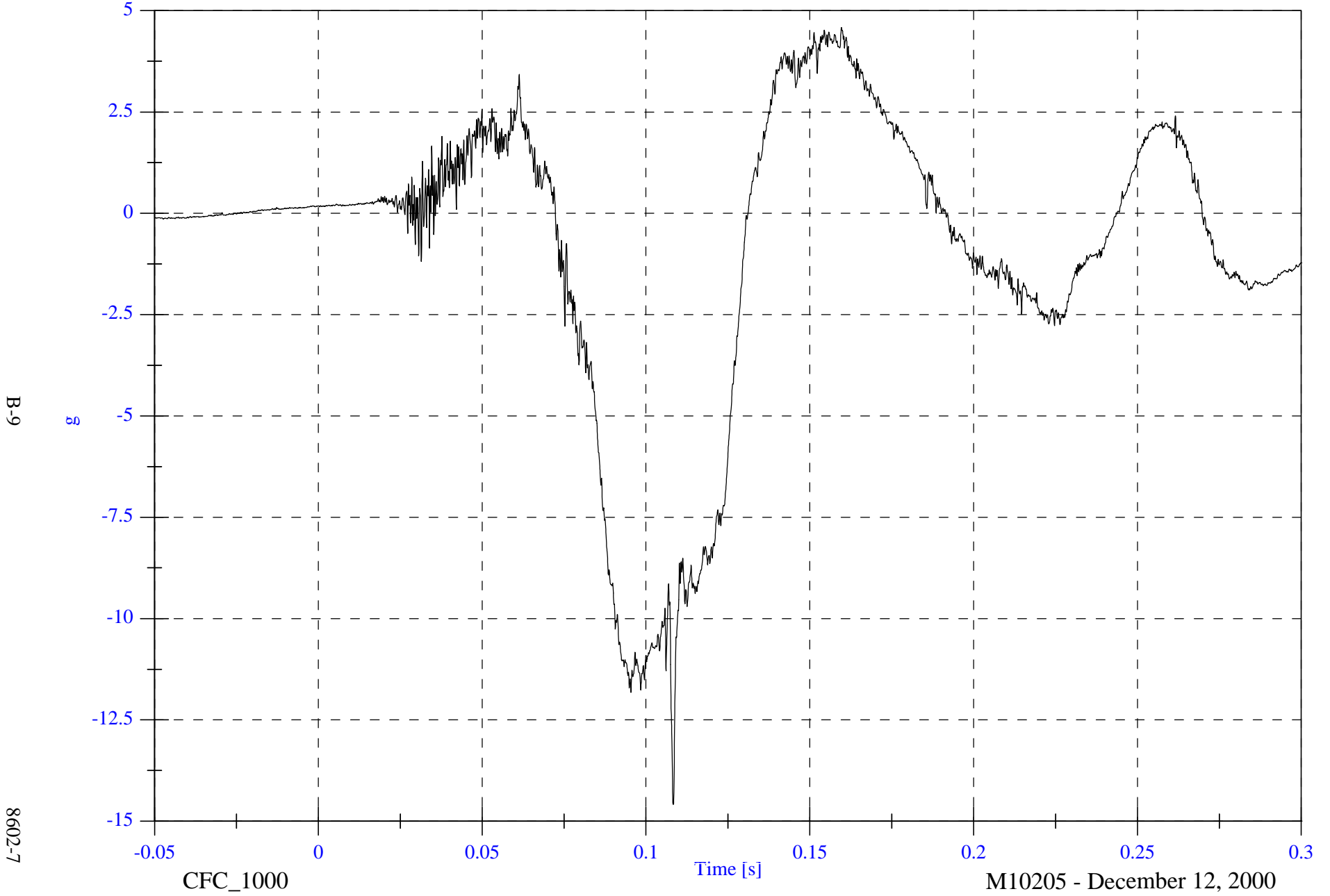


NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

P1 Head Red y

Max: 4.6 [g] at 0.160 [s]

Min: -14.6 [g] at 0.108 [s]

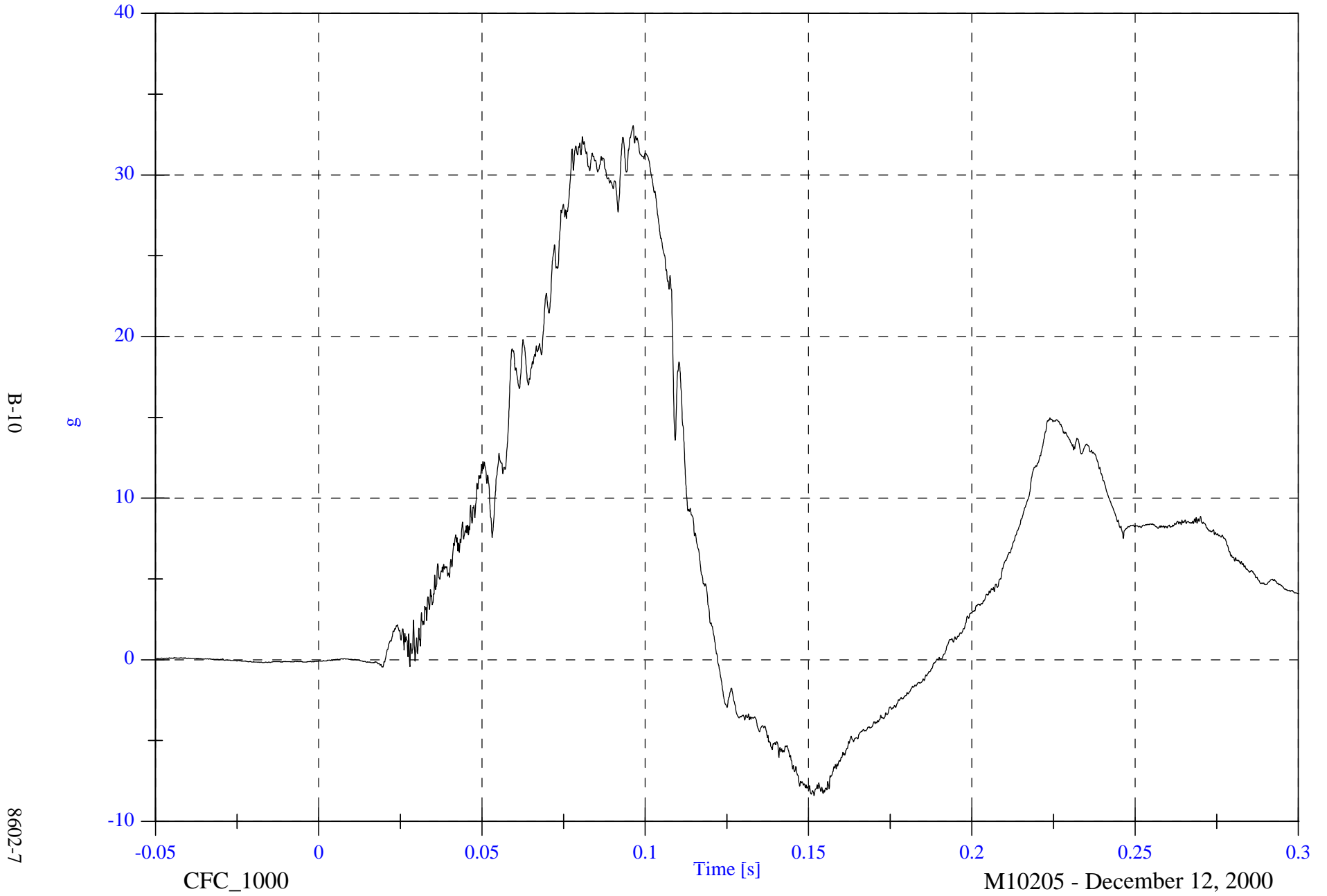


NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

P1 Head Red z

Max: 33.1 [g] at 0.096 [s]

Min: -8.4 [g] at 0.152 [s]



B-10

g

8602-7

CFC_1000

Time [s]

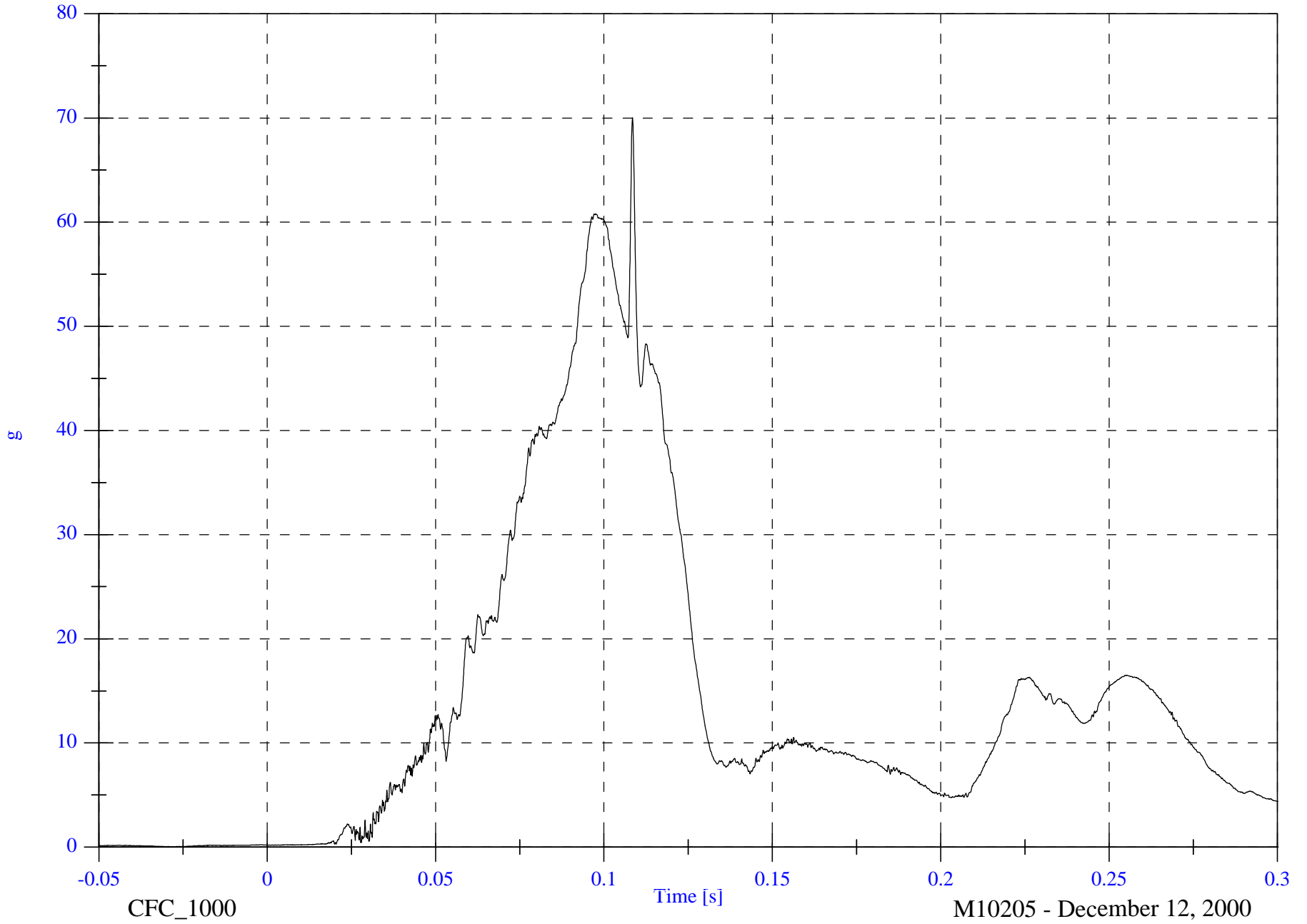
M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

P1 Head Red Resultant

Max: 70.0 [g] at 0.108 [s]

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



B-11

8602-7

CFC_1000

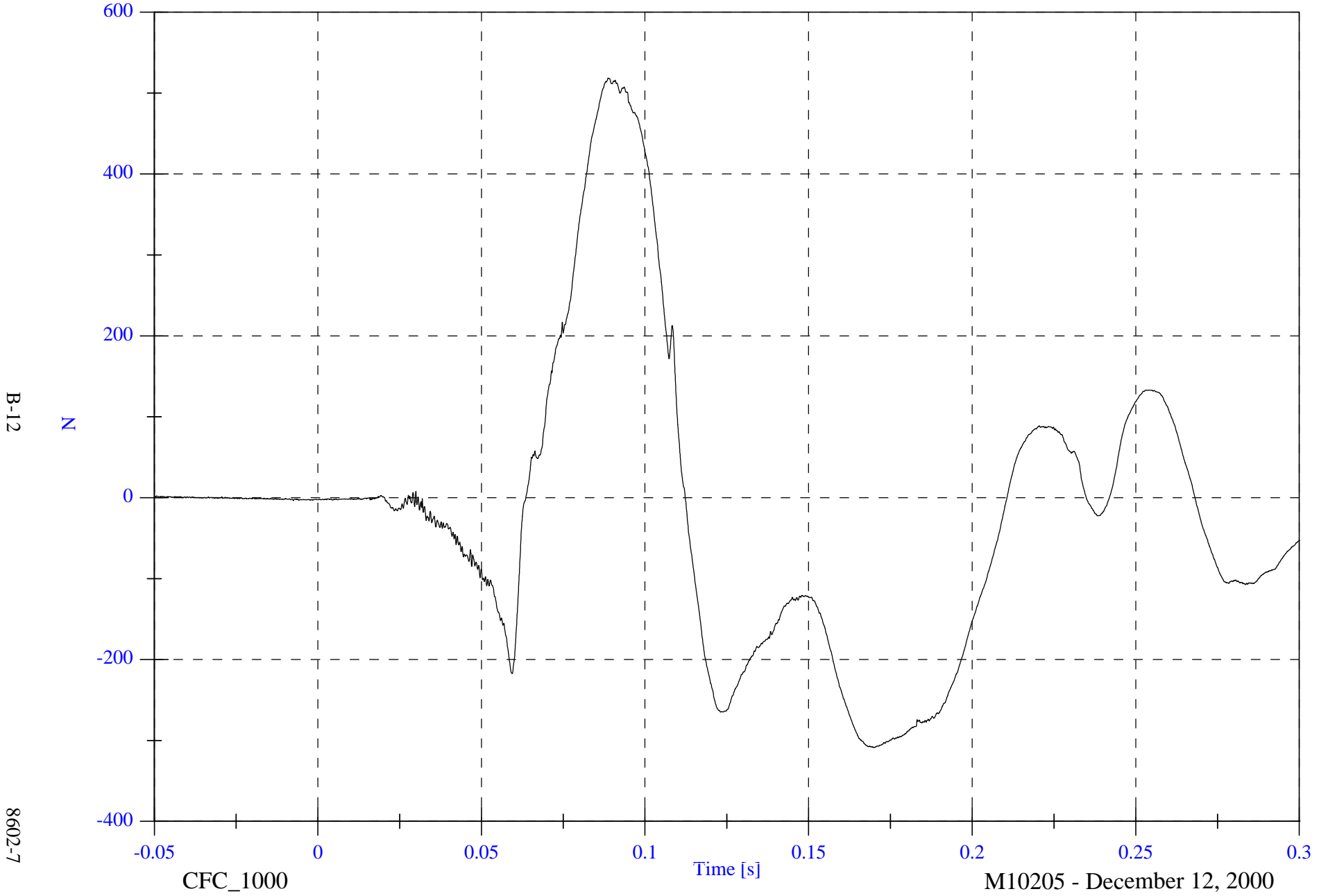
M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

P1 Upper Neck Fx

Max: 518.4 [N] at 0.089 [s]

Min: -308.9 [N] at 0.170 [s]



B-12

8602-7

CFC_1000

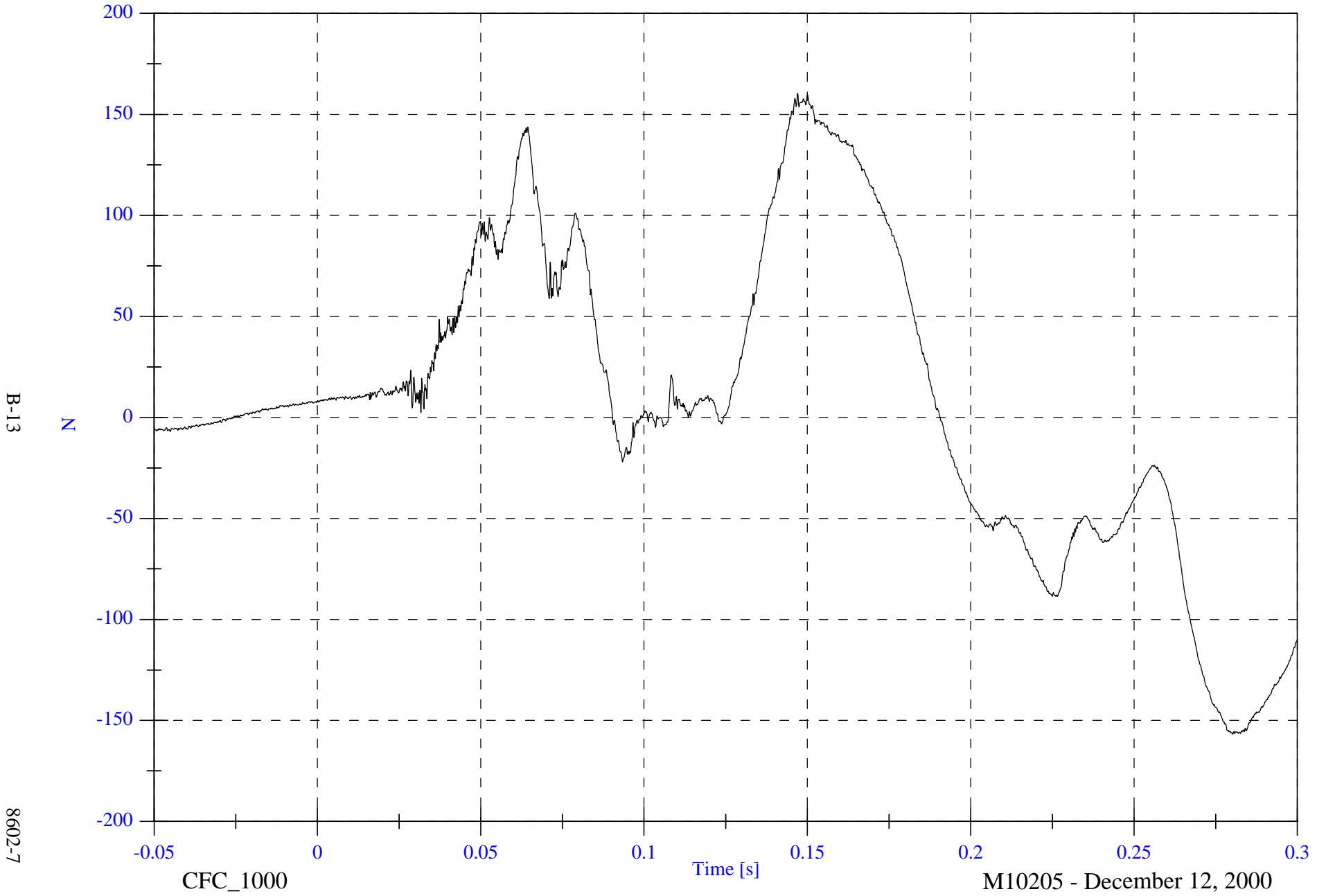
M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

P1 Upper Neck Fy

Max: 160.4 [N] at 0.147 [s]

Min: -156.8 [N] at 0.280 [s]



B-13

N

8602-7

CFC_1000

Time [s]

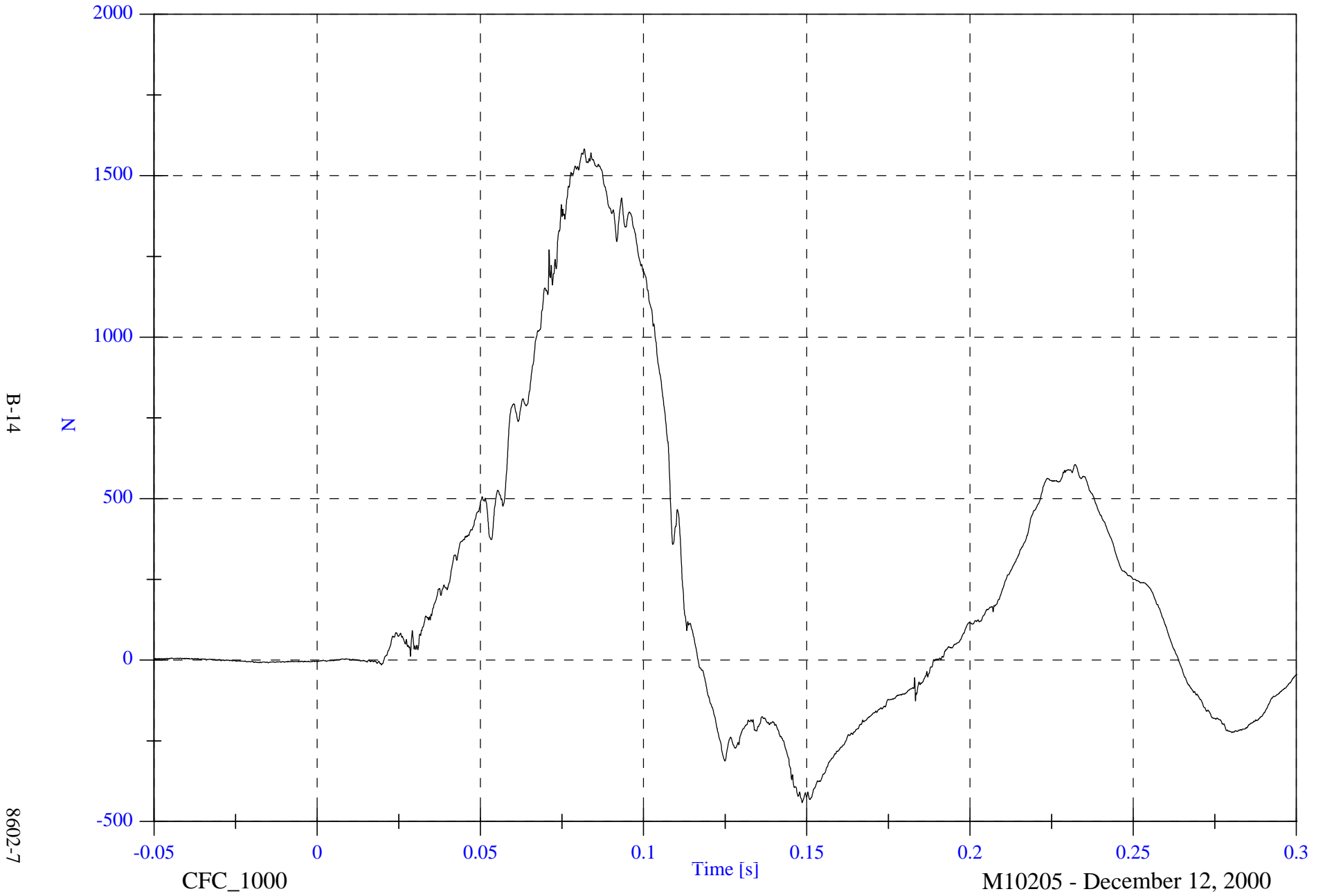
M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

P1 Upper Neck Fz

Max: 1582.9 [N] at 0.082 [s]

Min: -441.2 [N] at 0.149 [s]



B-14

8602-7

CFC_1000

Time [s]

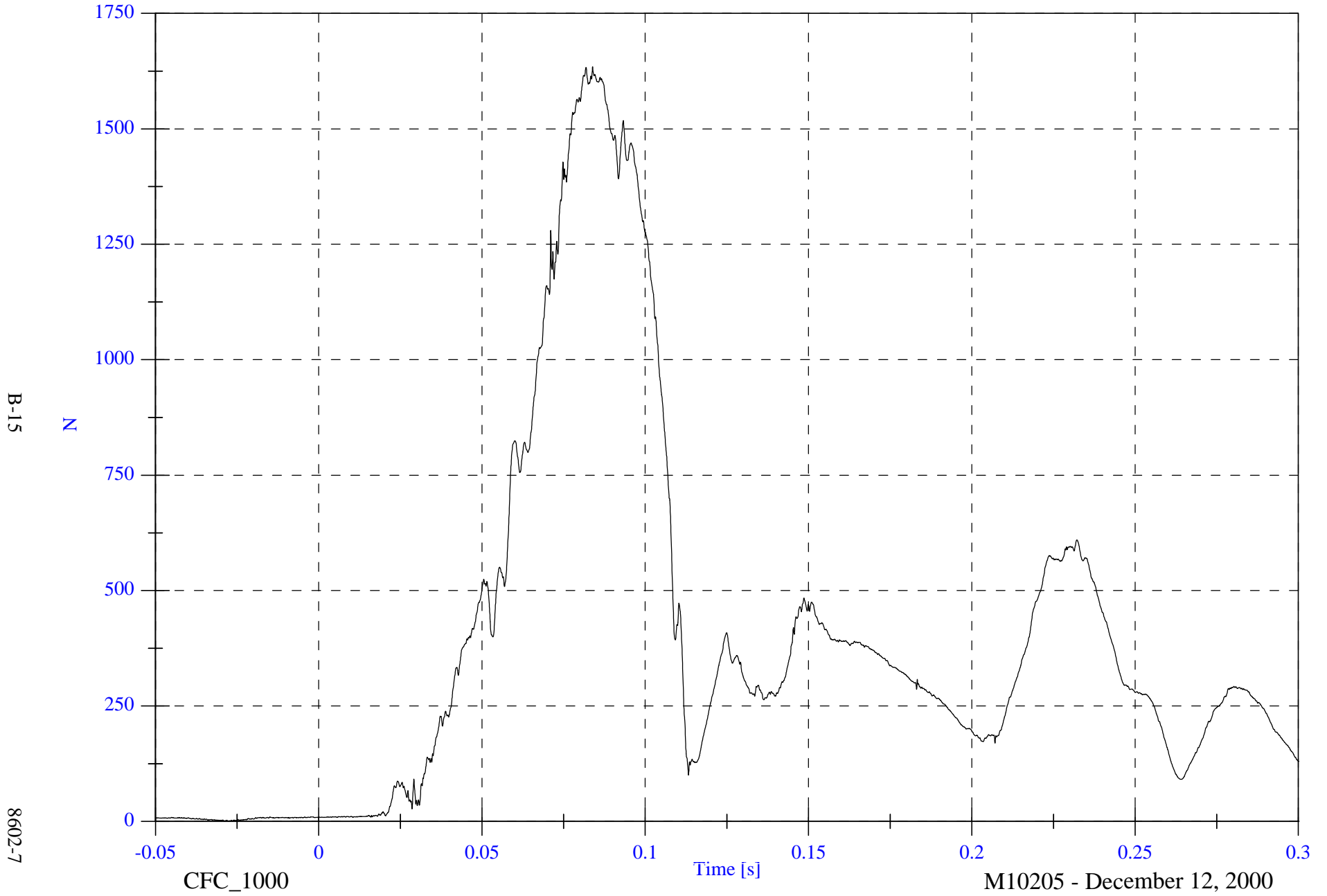
M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

P1 Upper Neck F Resultant

Max: 1634.6 [N] at 0.084 [s]

Min: 0.7 [N] at -0.027 [s]



B-15

8602-7

CFC_1000

Time [s]

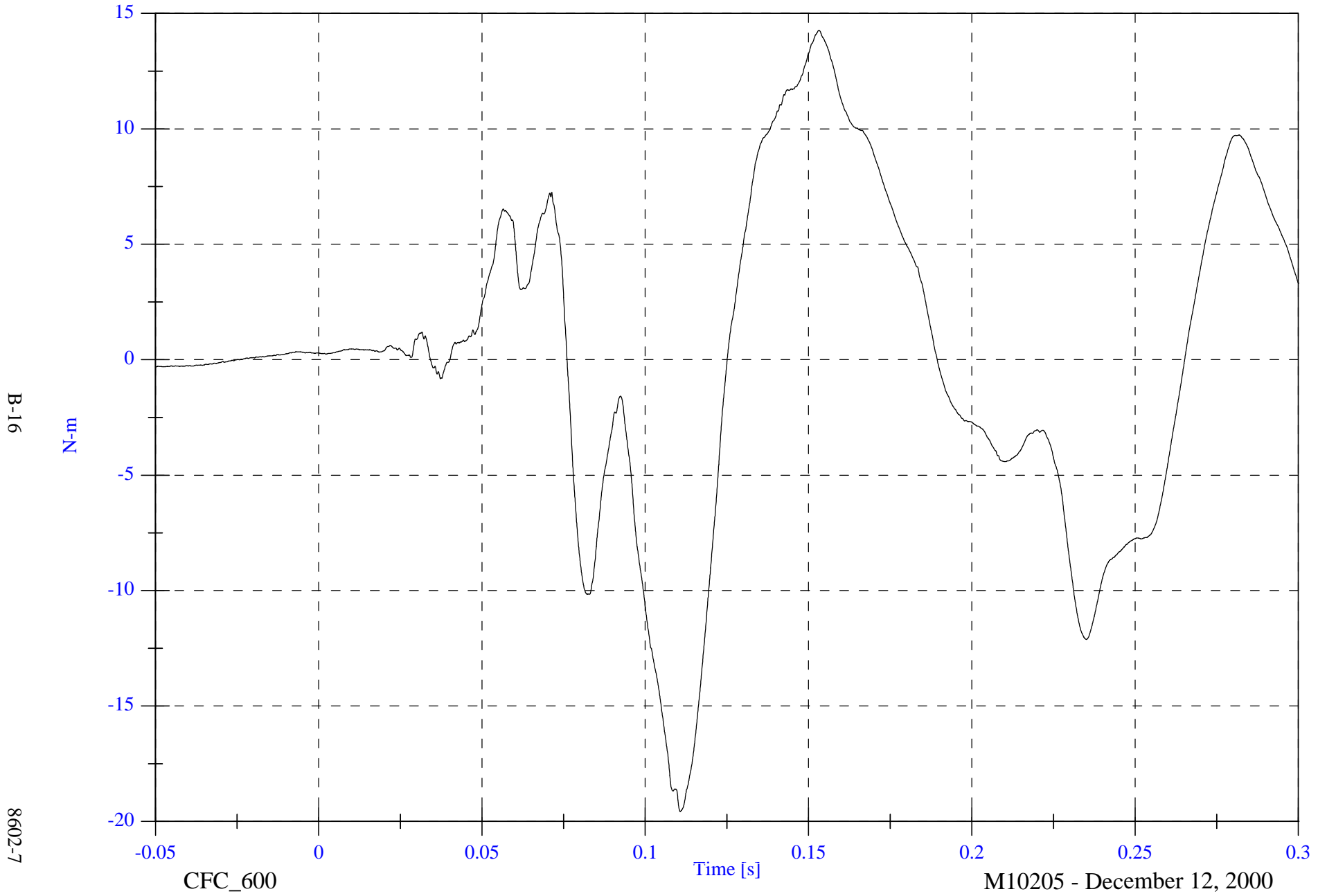
M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

P1 Upper Neck Mx

Max: 14.3 [N-m] at 0.153 [s]

Min: -19.6 [N-m] at 0.111 [s]



B-16

8602-7

CFC_600

M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

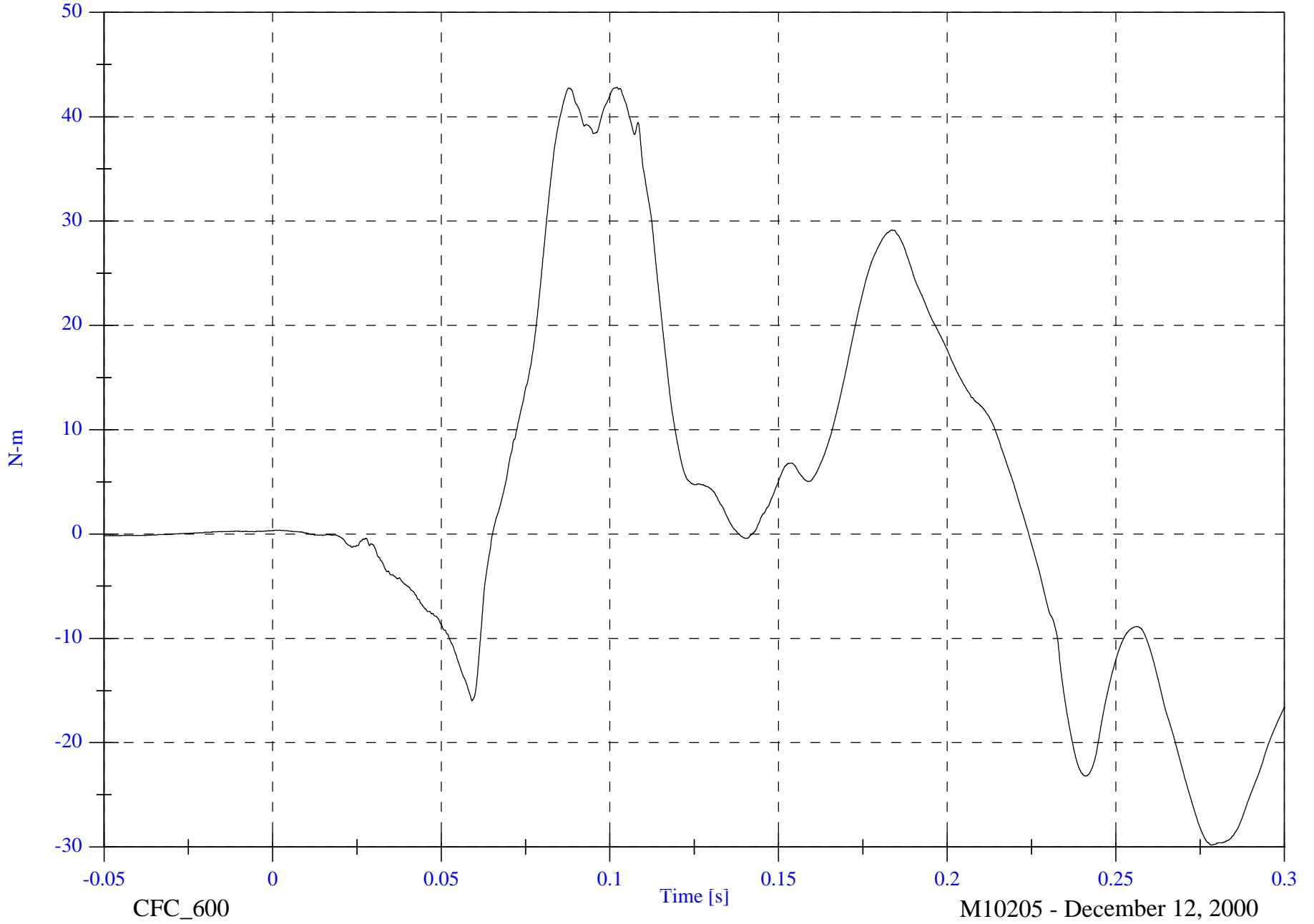
P1 Upper Neck My

Max: 42.8 [N-m] at 0.102 [s]

Min: -29.8 [N-m] at 0.278 [s]

B-17

8602-7



CFC_600

Time [s]

M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

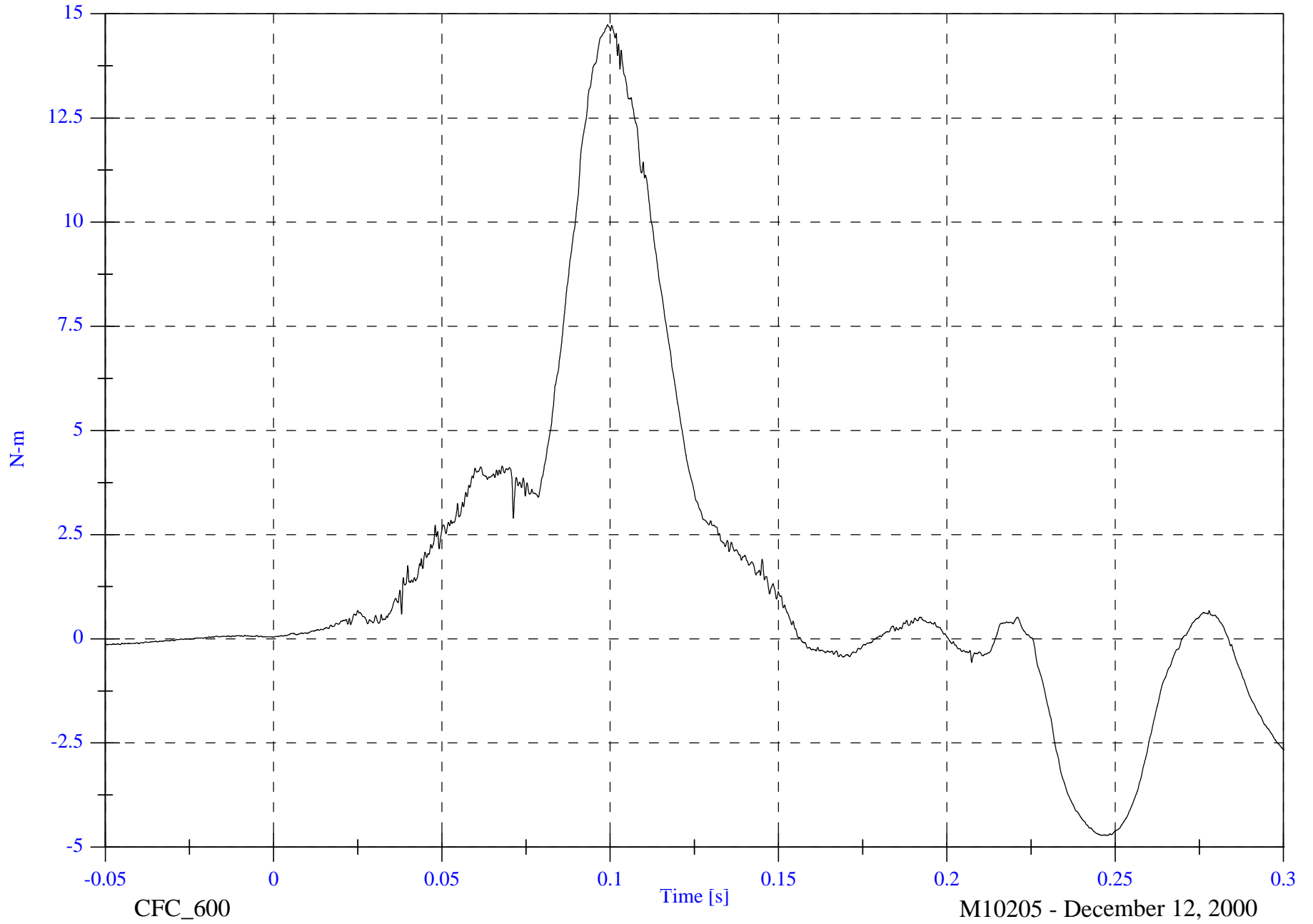
P1 Upper Neck Mz

Max: 14.7 [N-m] at 0.099 [s]

Min: -4.7 [N-m] at 0.248 [s]

B-18

8602-7



NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

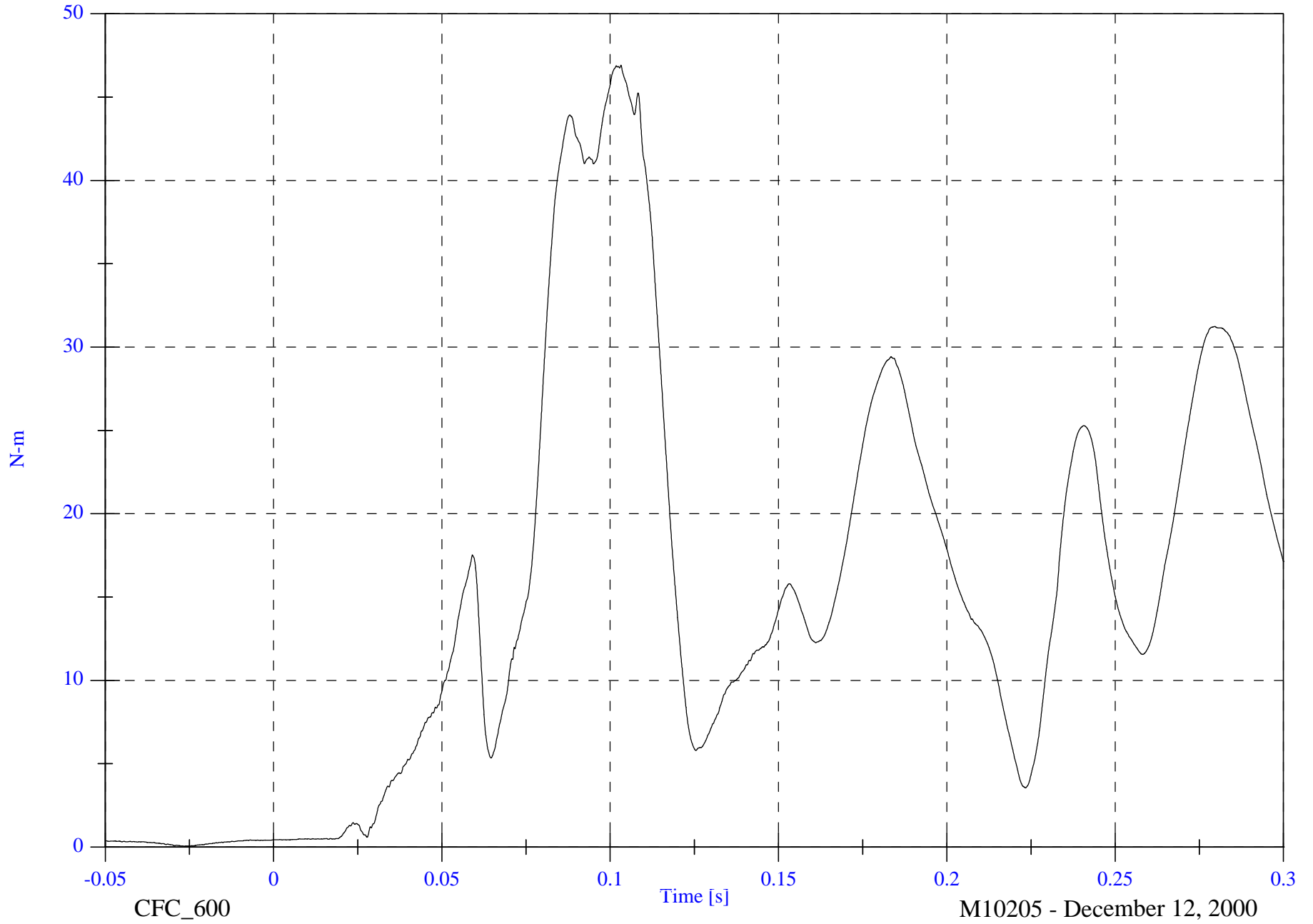
P1 Upper Neck M Resultant

Max: 46.9 [N-m] at 0.103 [s]

Min: 0.1 [N-m] at -0.026 [s]

B-19

8602-7



CFC_600

Time [s]

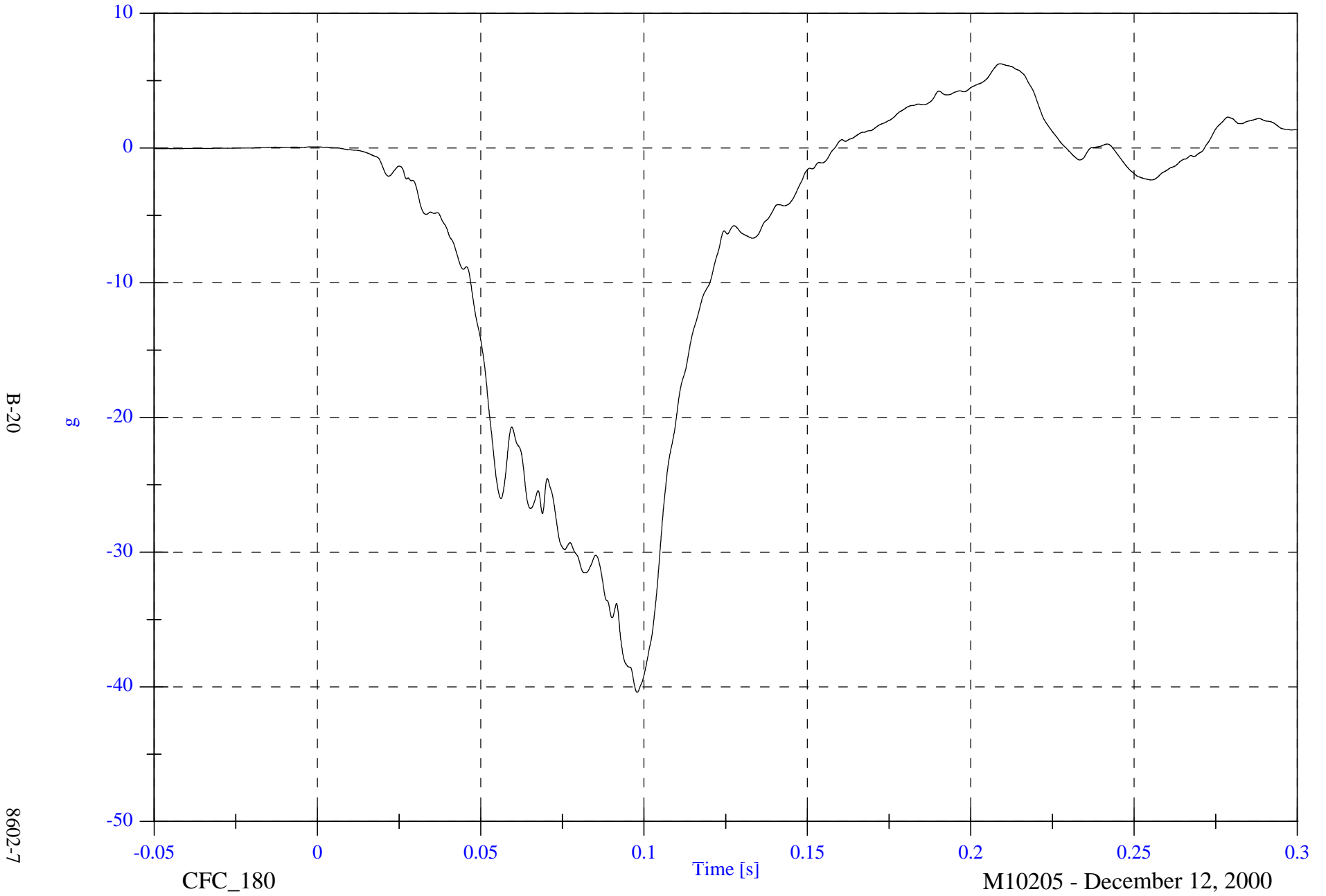
M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

P1 Chest x

Max: 6.3 [g] at 0.209 [s]

Min: -40.4 [g] at 0.098 [s]



NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

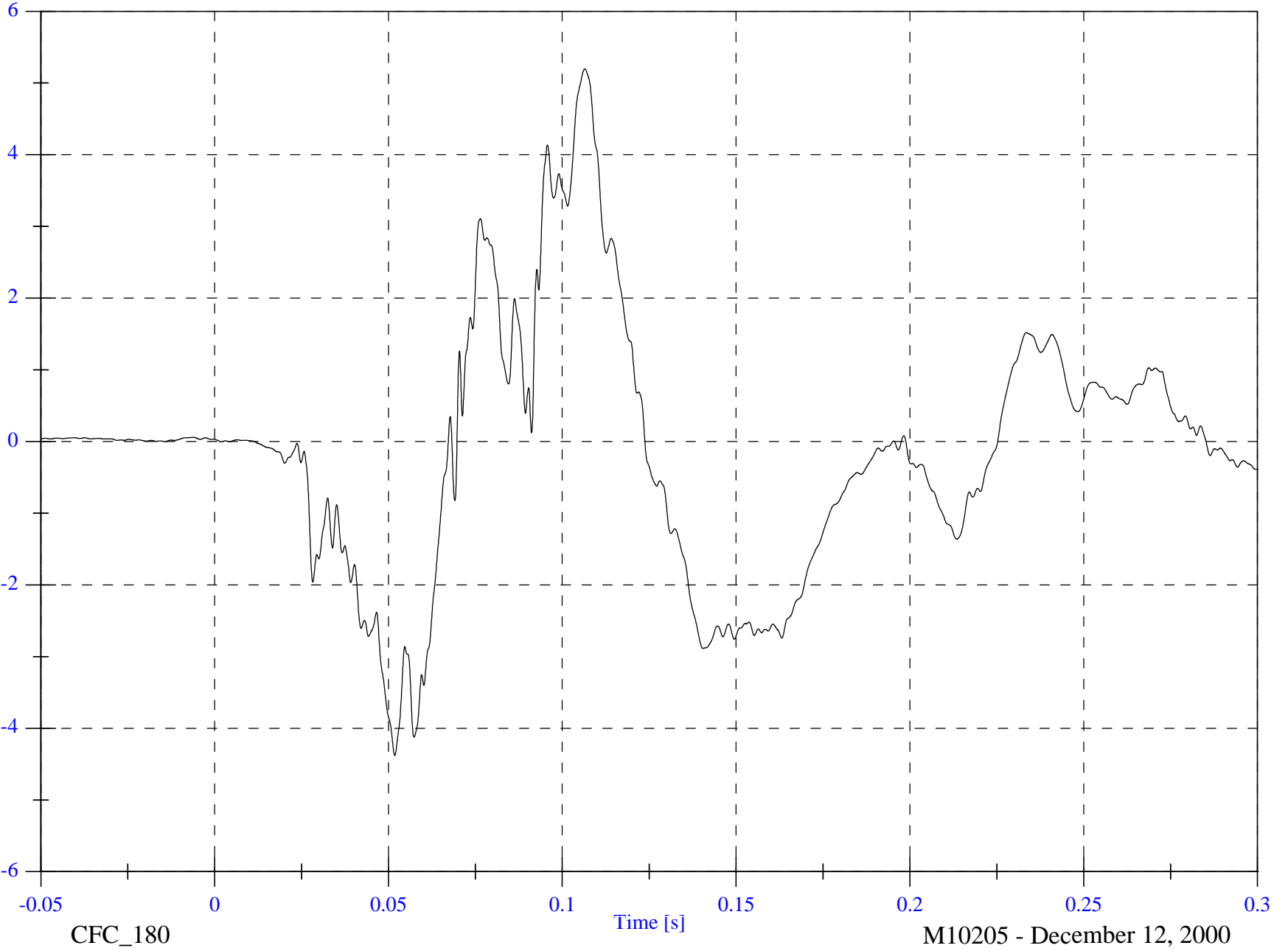
Max: 5.2 [g] at 0.106 [s]

P1 Chest y

Min: -4.4 [g] at 0.052 [s]

B-21

g



8602-7

CFC_180

Time [s]

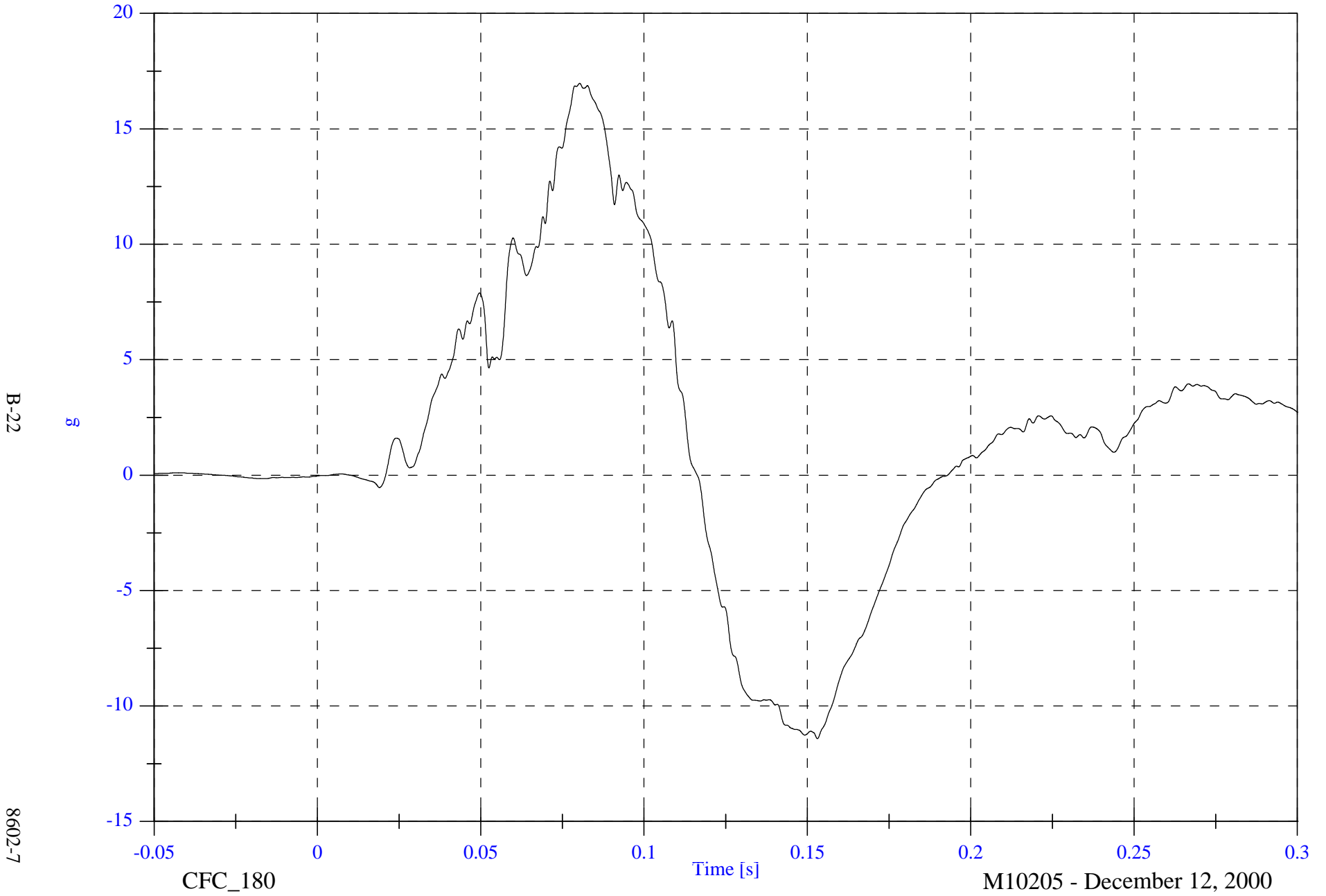
M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

Max: 17.0 [g] at 0.080 [s]

P1 Chest z

Min: -11.4 [g] at 0.153 [s]



B-22

8602-7

CFC_180

M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

P1 Chest Resultant

Max: 42.1 [g] at 0.098 [s]

Min: 0.0 [g] at -0.028 [s]

B-23

8602-7



CFC_180

M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

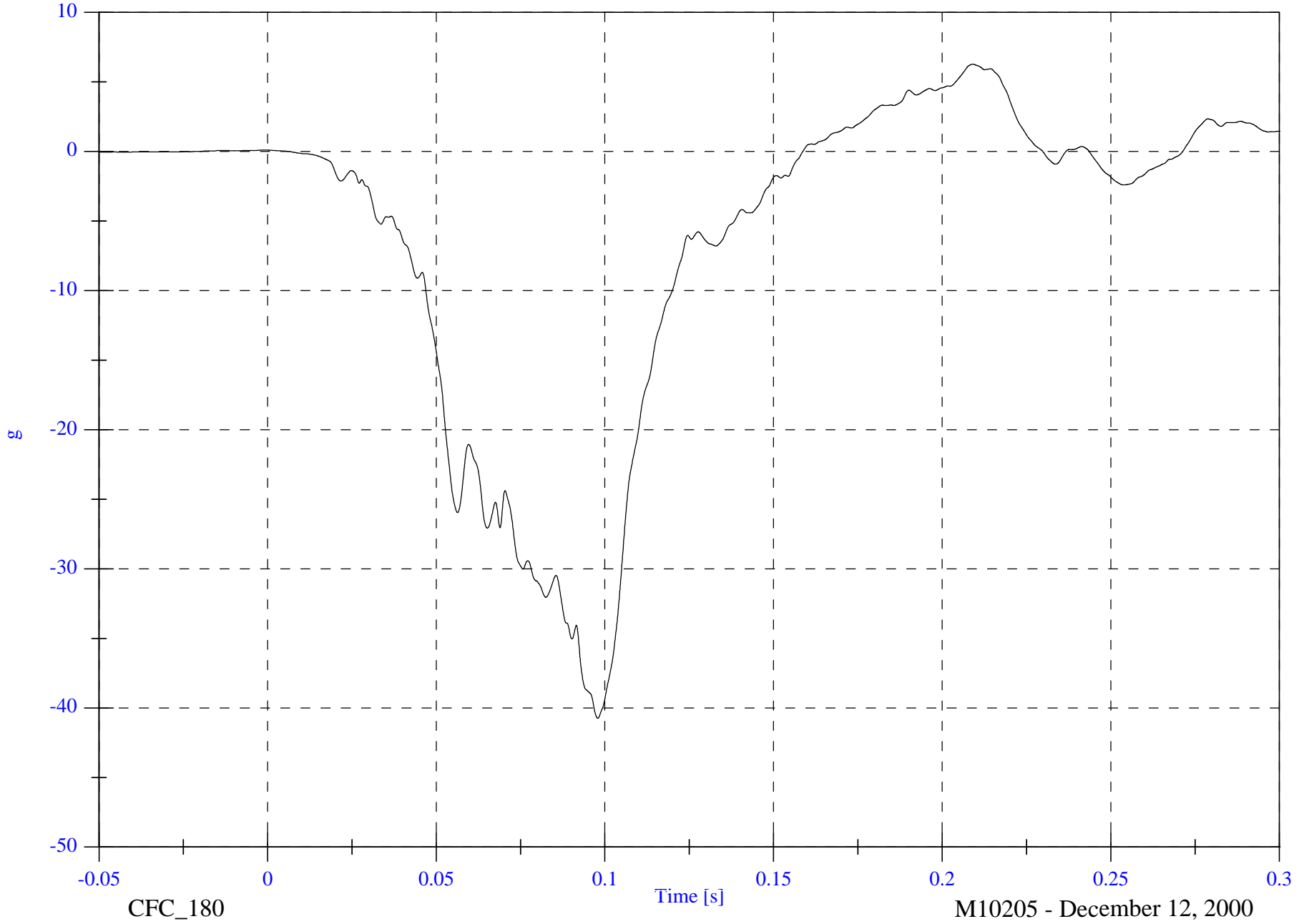
P1 Chest Red x

Max: 6.3 [g] at 0.209 [s]

Min: -40.7 [g] at 0.098 [s]

B-24

8602-7

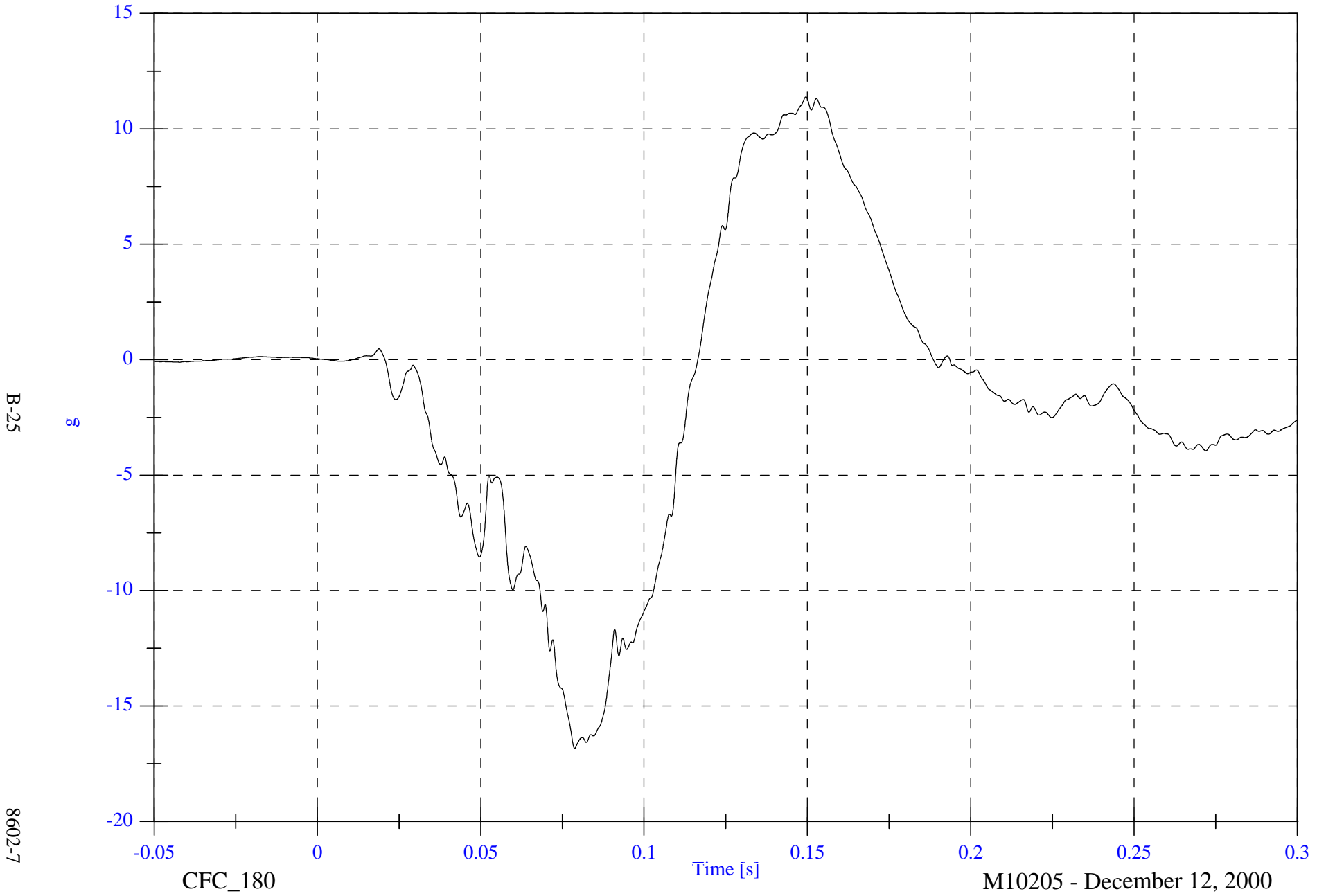


NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

P1 Chest Red y

Max: 11.4 [g] at 0.150 [s]

Min: -16.8 [g] at 0.079 [s]



B-25

g

8602-7

CFC_180

Time [s]

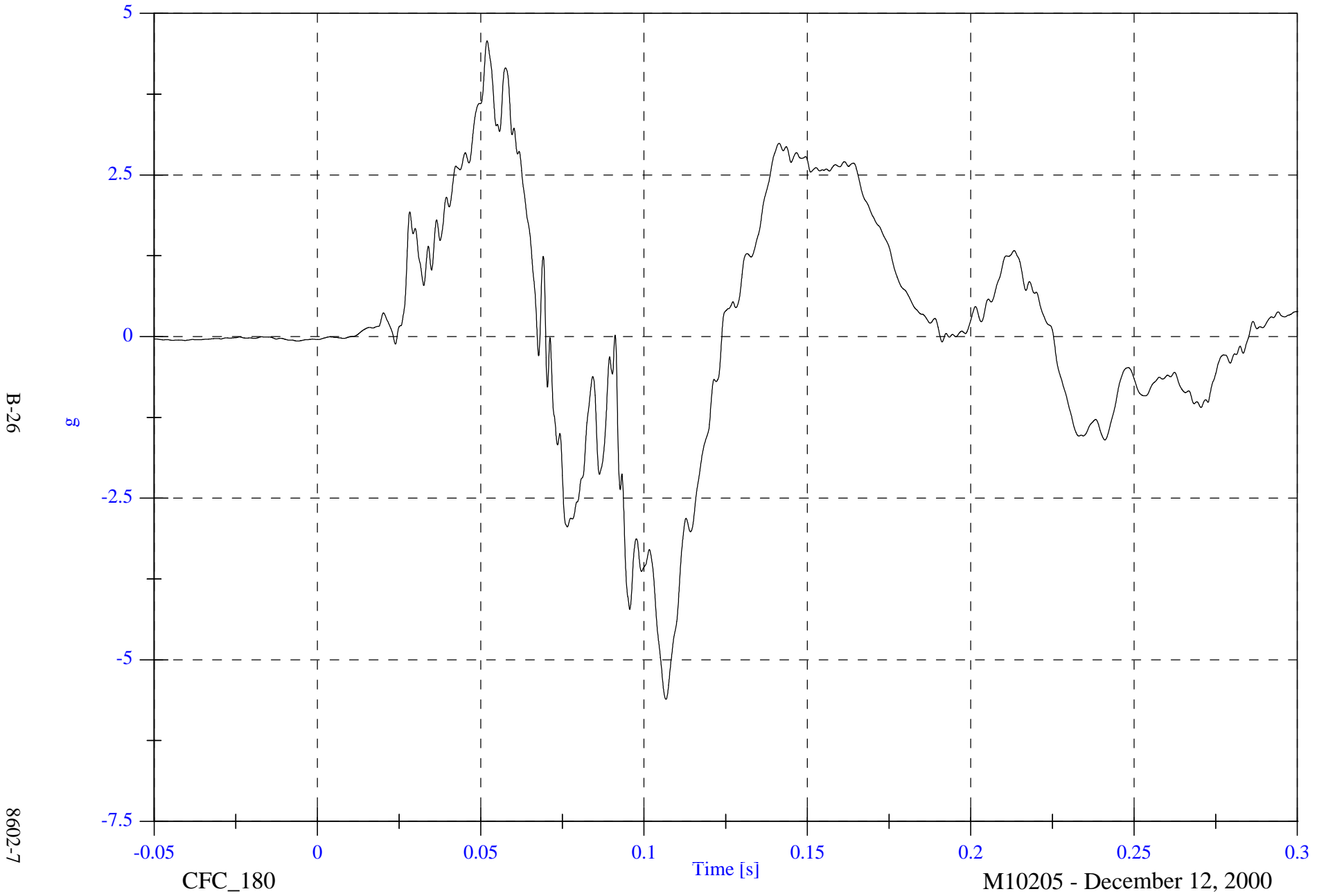
M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

P1 Chest Red z

Max: 4.6 [g] at 0.052 [s]

Min: -5.6 [g] at 0.107 [s]



B-26

8602-7

CFC_180

Time [s]

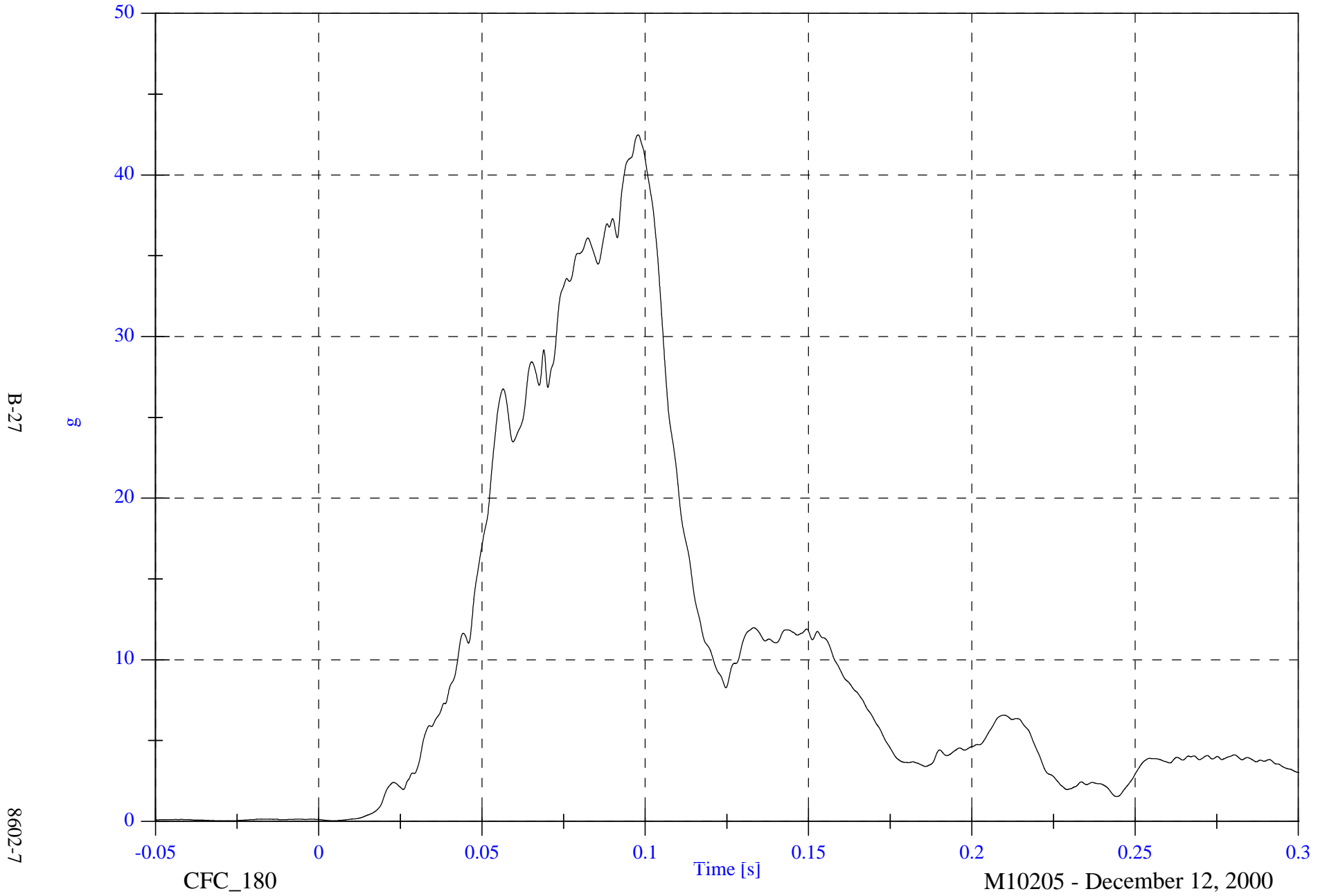
M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

P1 Chest Red Resultant

Max: 42.5 [g] at 0.098 [s]

Min: 0.0 [g] at -0.030 [s]



B-27

8602-7

CFC_180

Time [s]

M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

Max: 0.0 [mm] at -0.036 [s]

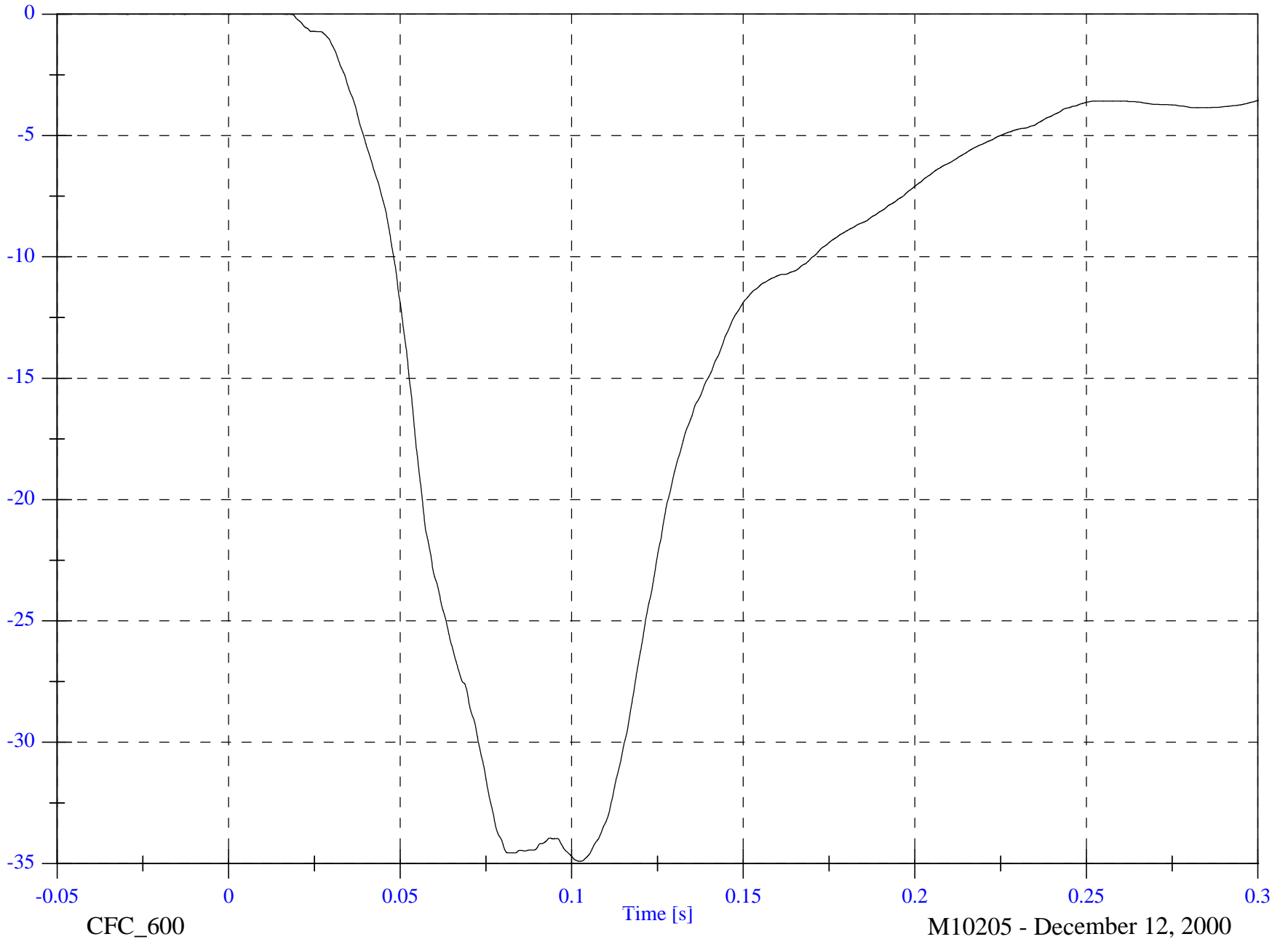
P1 Chest Compression x

Min: -34.9 [mm] at 0.102 [s]

B-28

mm

8602-7



CFC_600

Time [s]

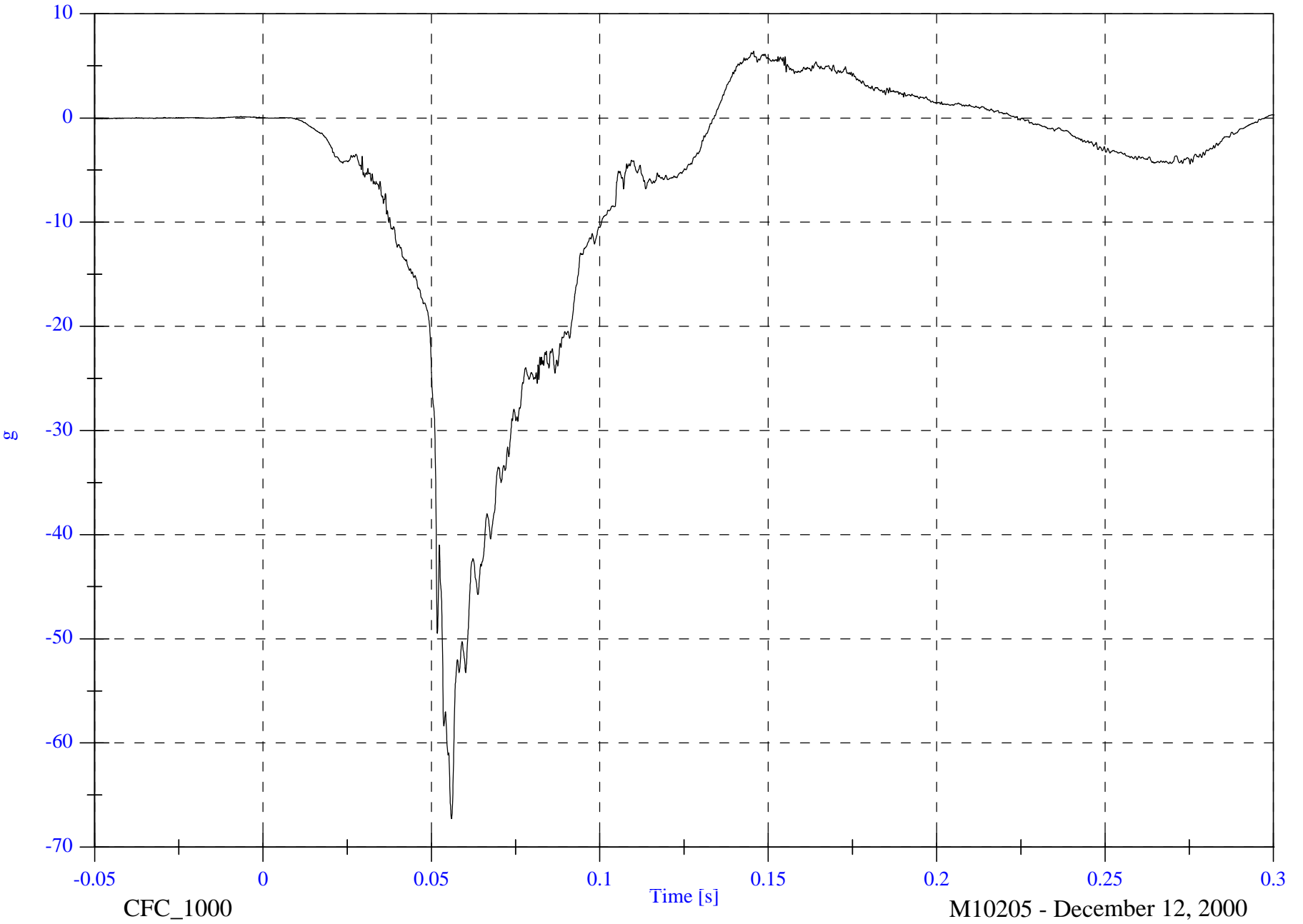
M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

Max: 6.4 [g] at 0.146 [s]

P1 Pelvic x

Min: -67.3 [g] at 0.056 [s]



B-29

8602-7

CFC_1000

Time [s]

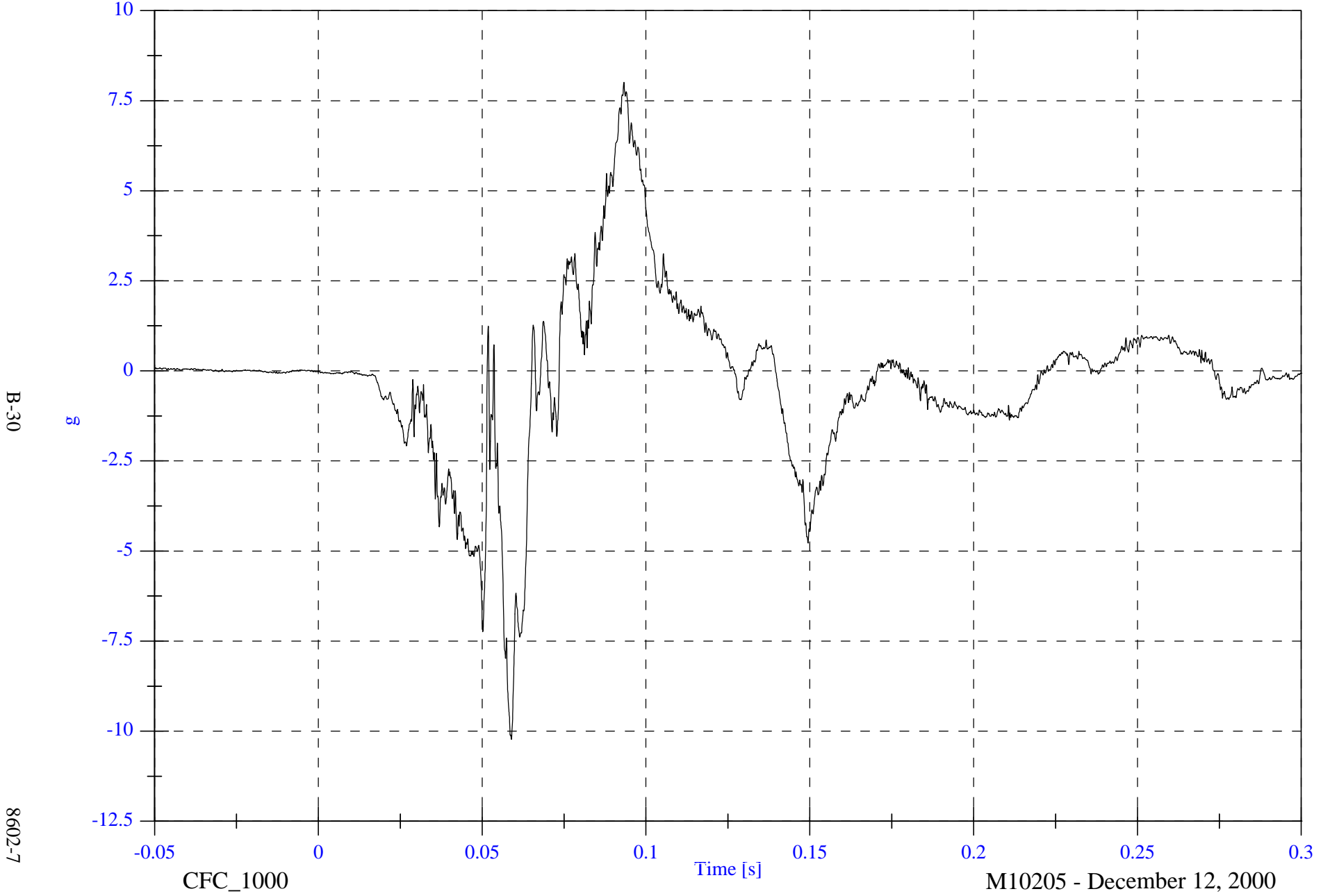
M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

Max: 8.0 [g] at 0.093 [s]

P1 Pelvic y

Min: -10.2 [g] at 0.059 [s]



B-30

8602-7

CFC_1000

Time [s]

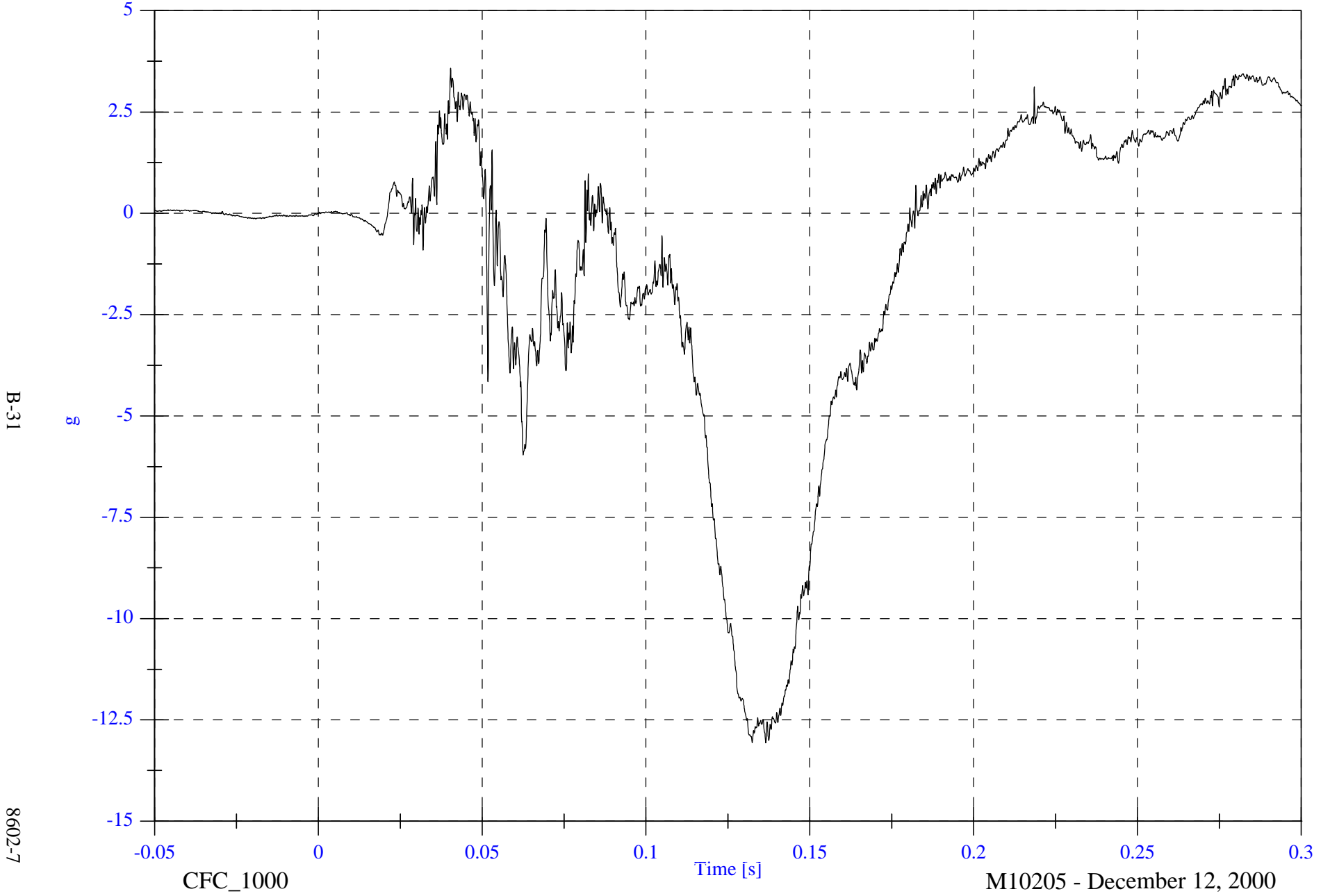
M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

Max: 3.6 [g] at 0.040 [s]

P1 Pelvic z

Min: -13.1 [g] at 0.137 [s]



B-31

8602-7

CFC_1000

Time [s]

M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

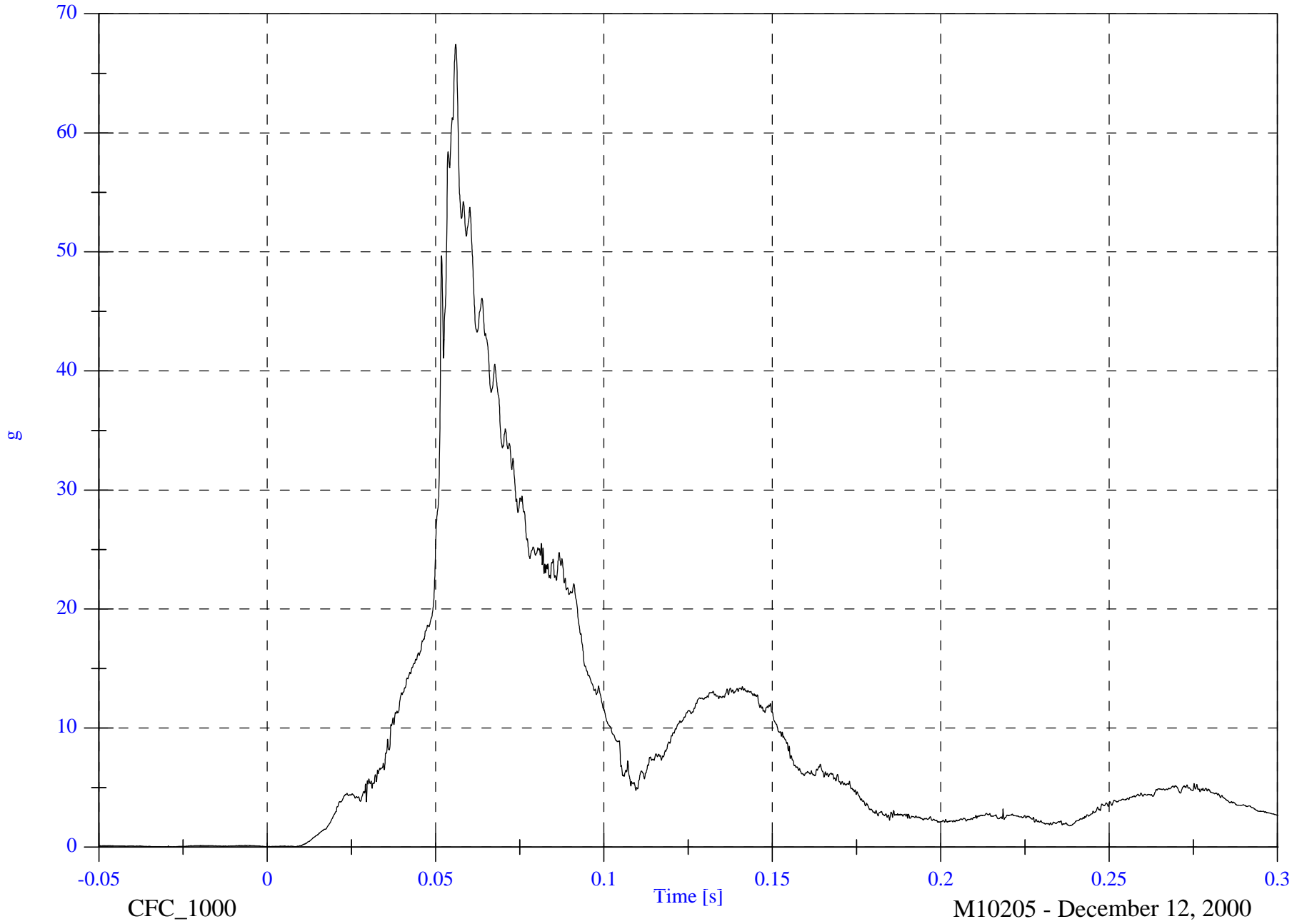
P1 Pelvic Resultant

Max: 67.5 [g] at 0.056 [s]

Min: 0.0 [g] at -0.030 [s]

B-32

8602-7



CFC_1000

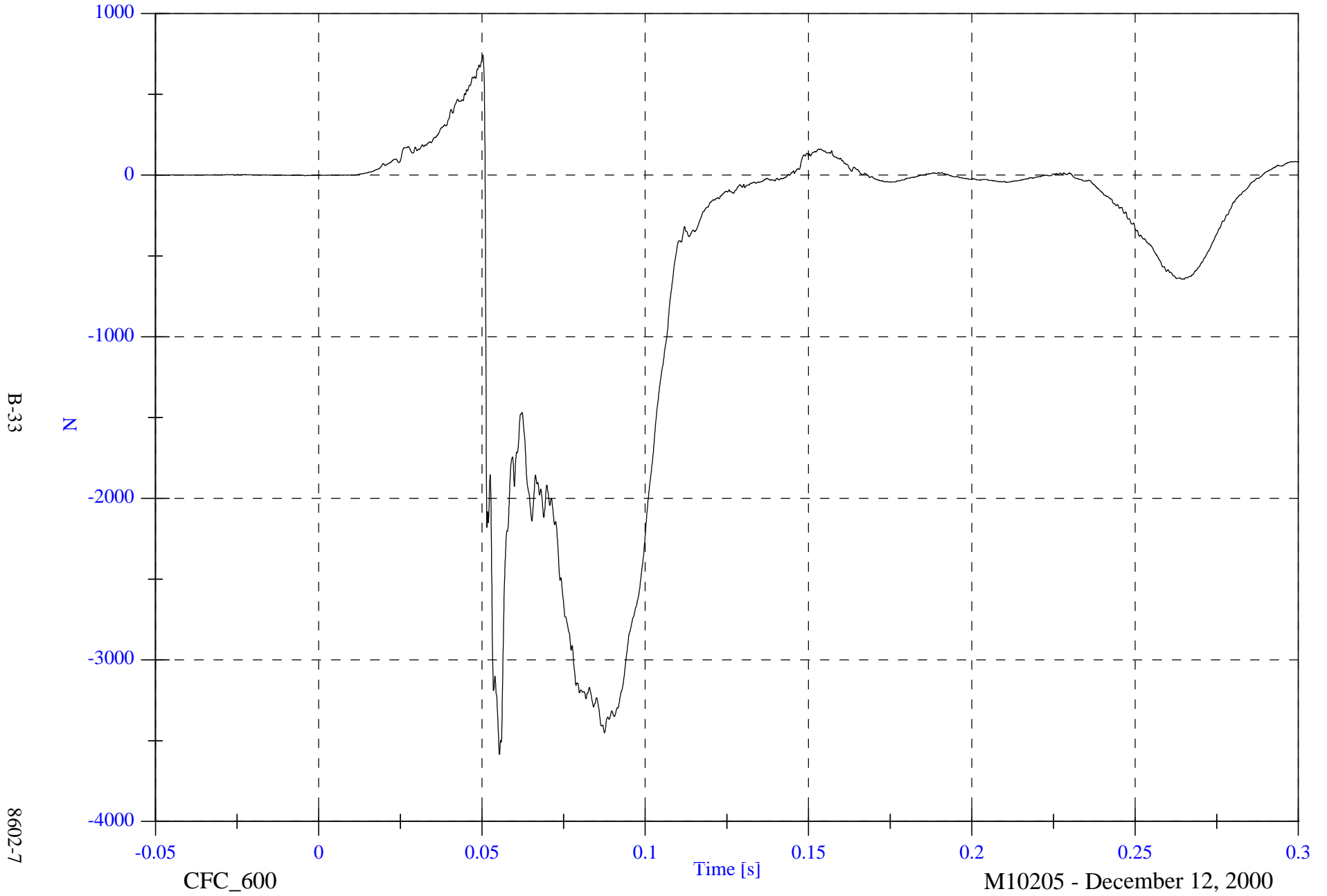
M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

Max: 741.8 [N] at 0.050 [s]

P1 Left Femur z

Min: -3586.6 [N] at 0.055 [s]



B-33

8602-7

CFC_600

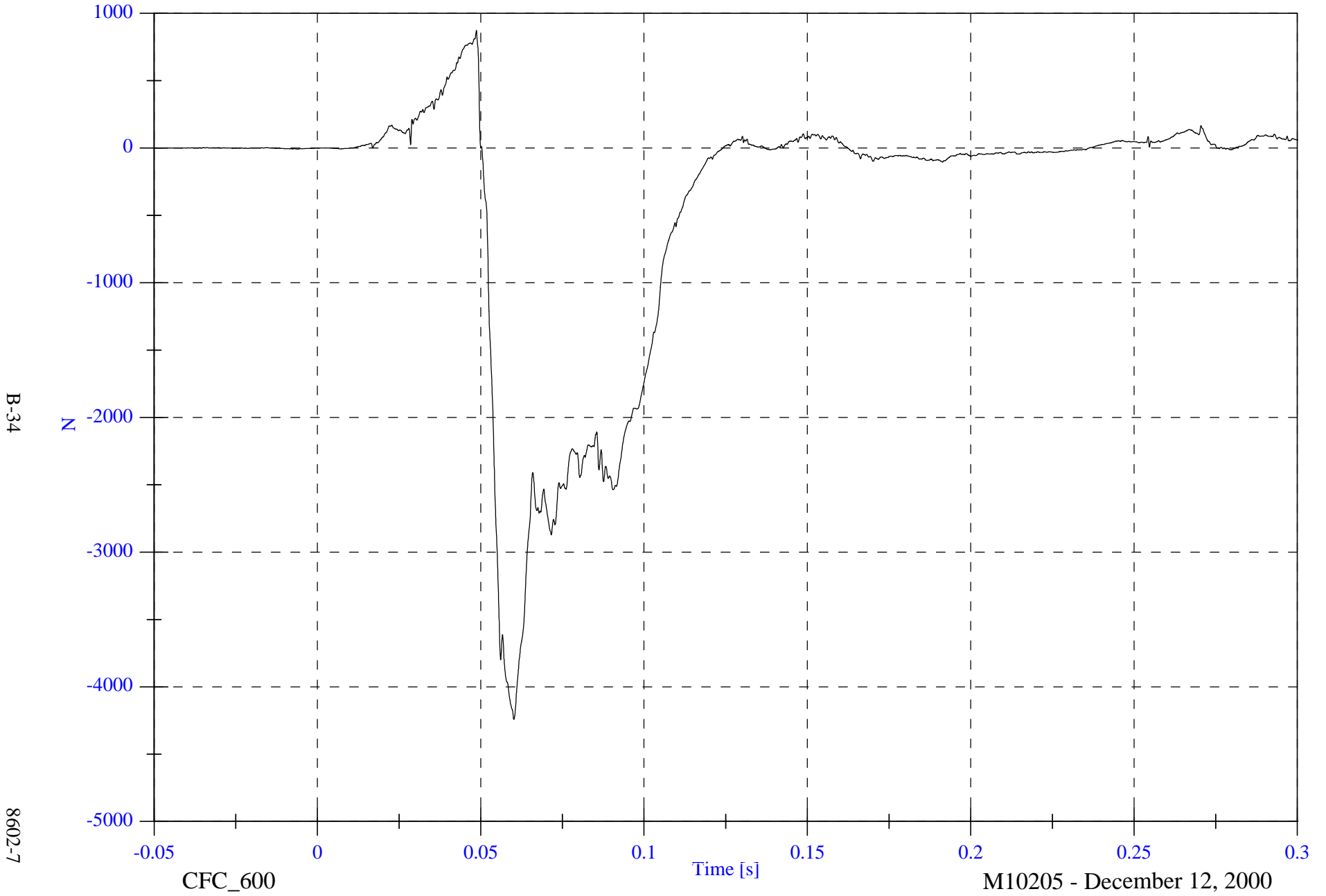
M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

Max: 874.7 [N] at 0.049 [s]

P1 Right Femur z

Min: -4242.9 [N] at 0.060 [s]

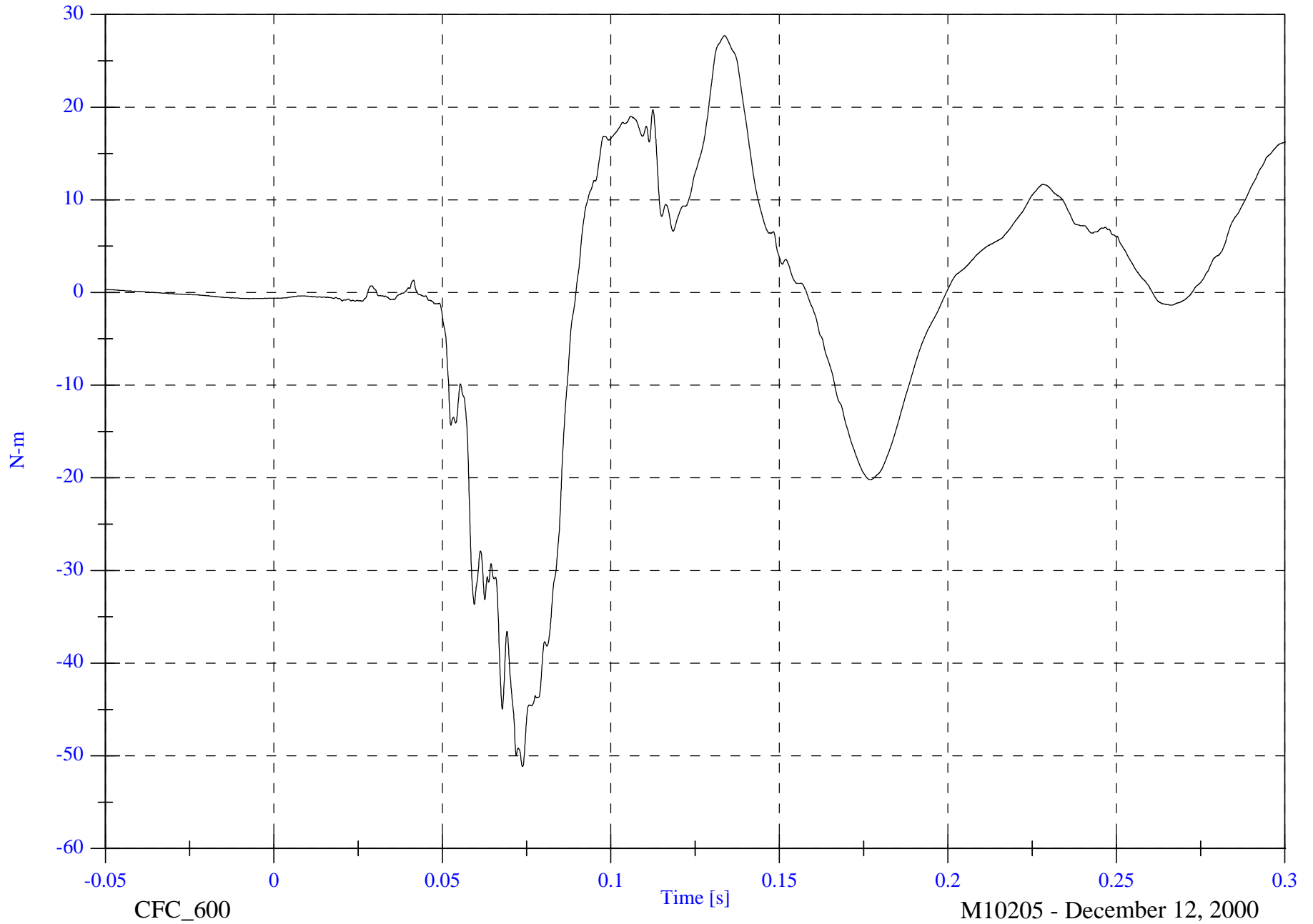


NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

P1 Left Upper Tibia Mx

Max: 27.7 [N-m] at 0.134 [s]

Min: -51.2 [N-m] at 0.074 [s]



B-35

8602-7

CFC_600

Time [s]

M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

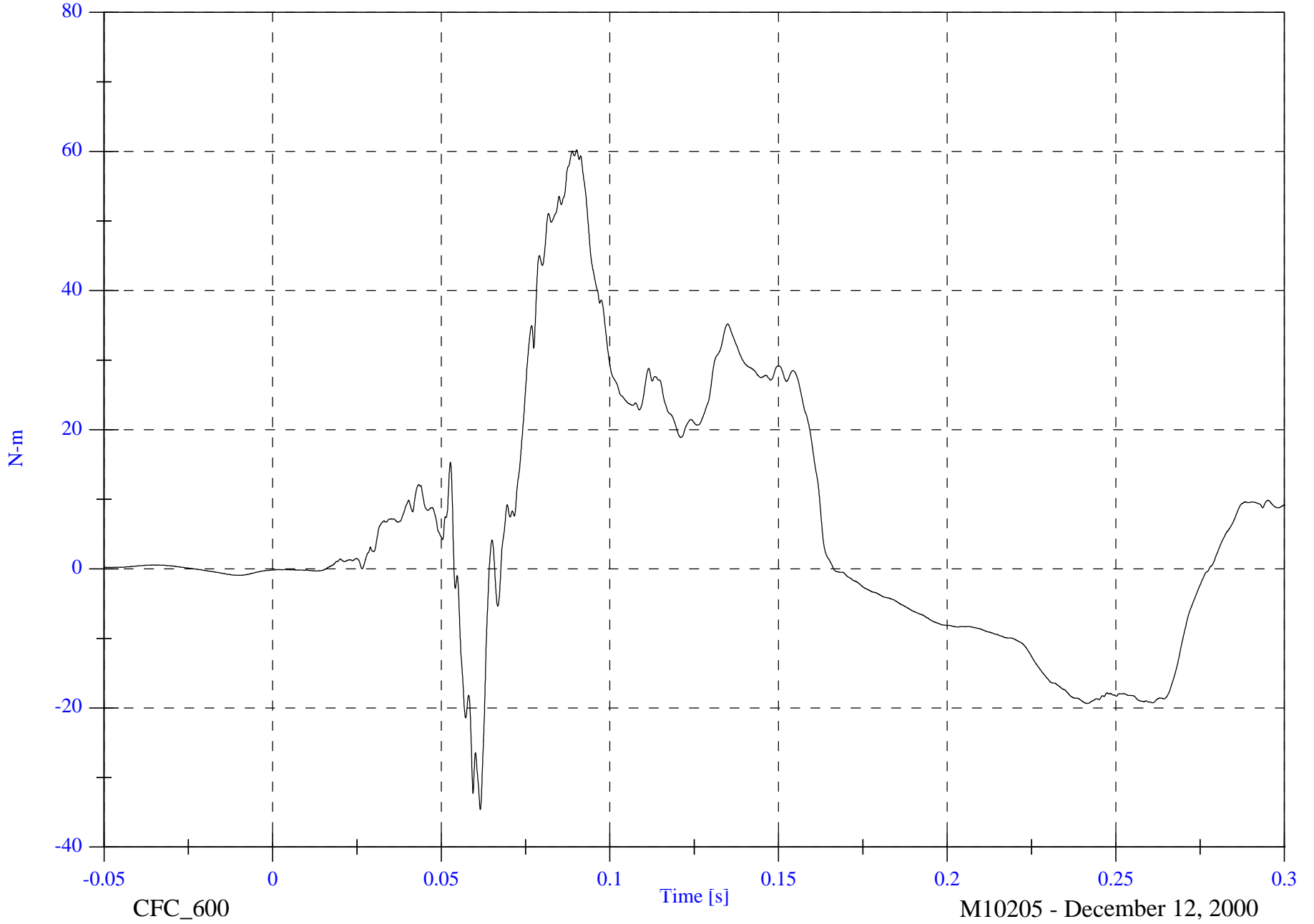
P1 Left Upper Tibia My

Max: 60.2 [N-m] at 0.090 [s]

Min: -34.6 [N-m] at 0.062 [s]

B-36

8602-7

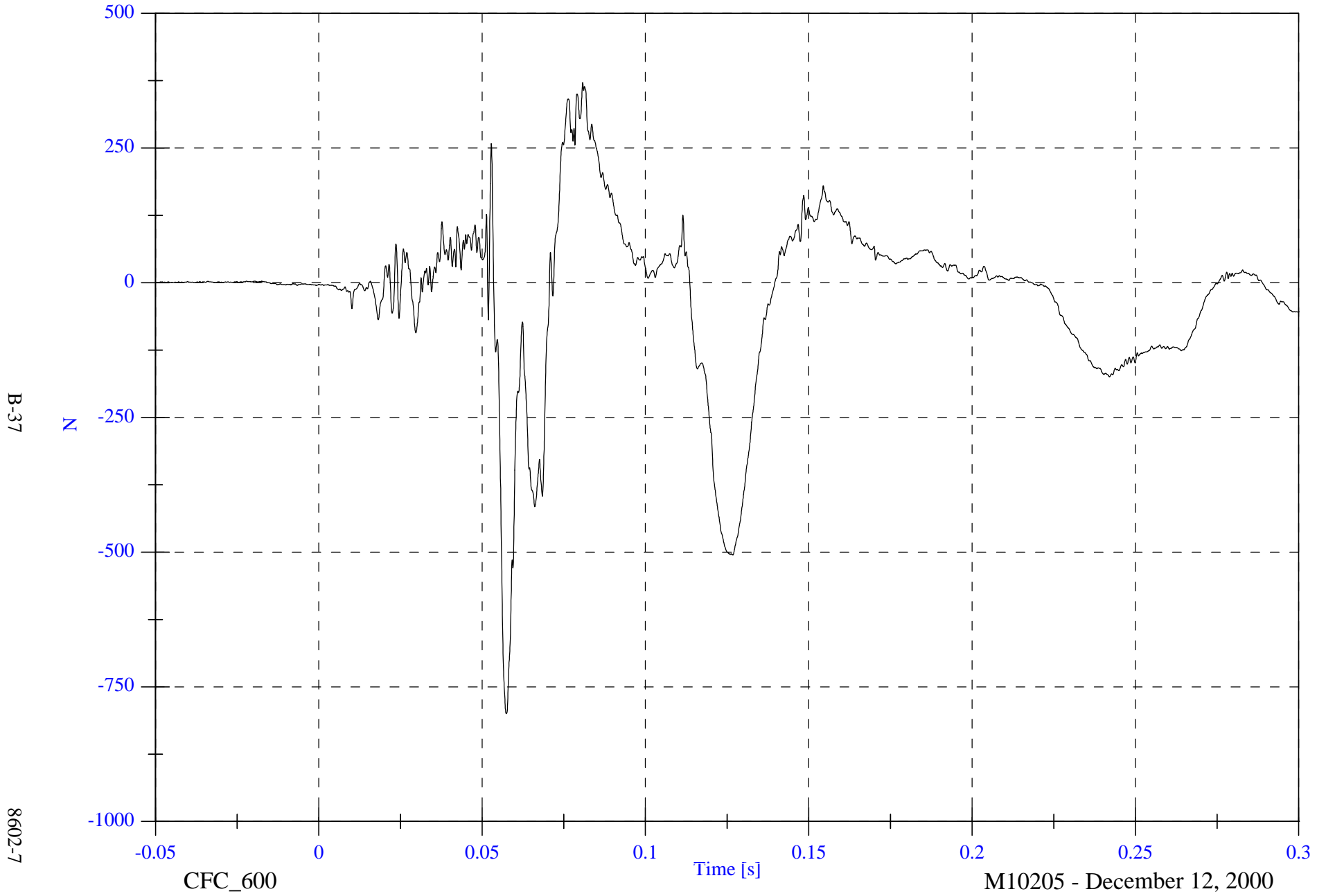


NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

P1 Left Lower Tibia Fz

Max: 371.5 [N] at 0.081 [s]

Min: -799.9 [N] at 0.057 [s]



NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

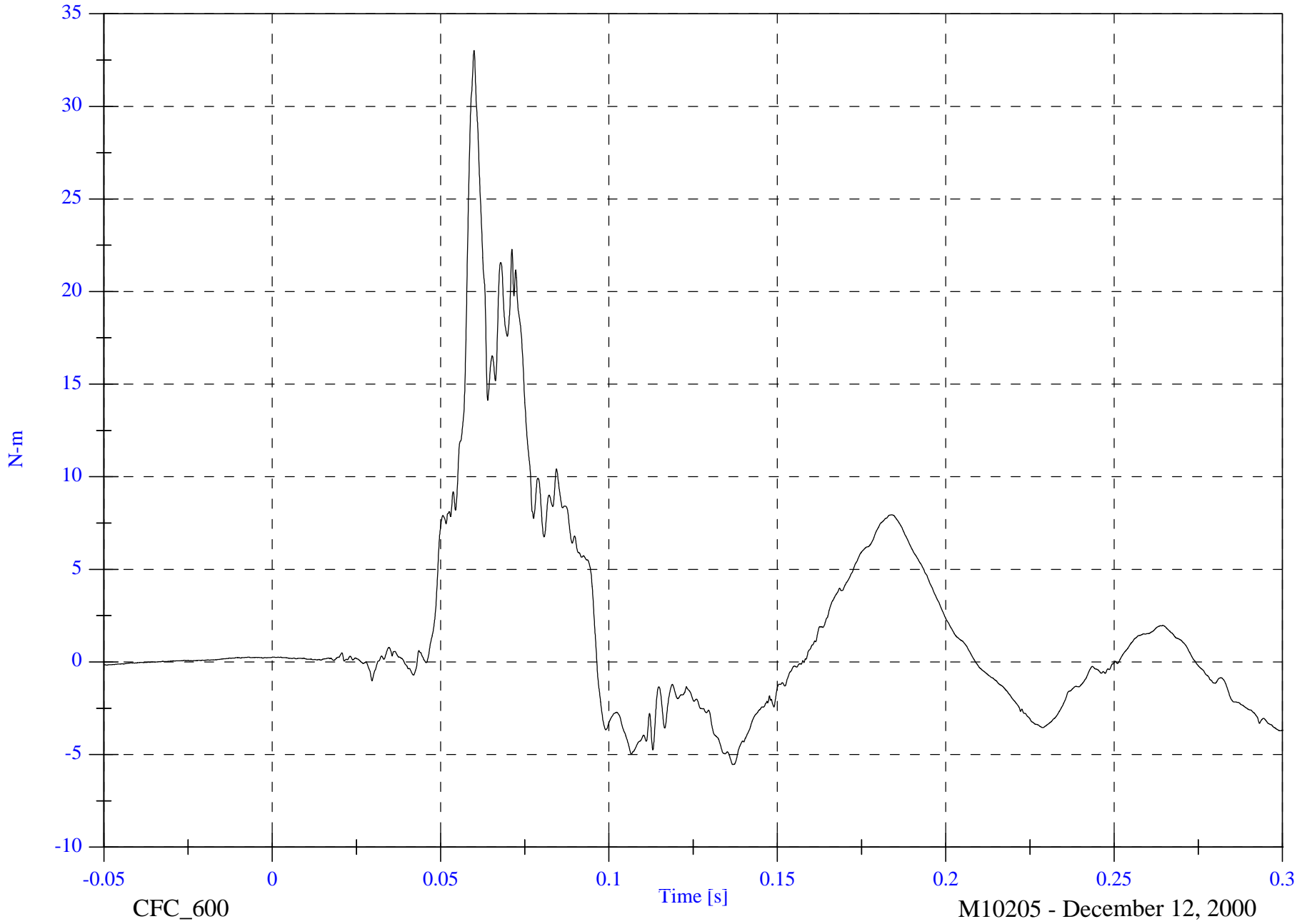
P1 Left Lower Tibia Mx

Max: 33.0 [N-m] at 0.060 [s]

Min: -5.5 [N-m] at 0.137 [s]

B-38

8602-7



NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

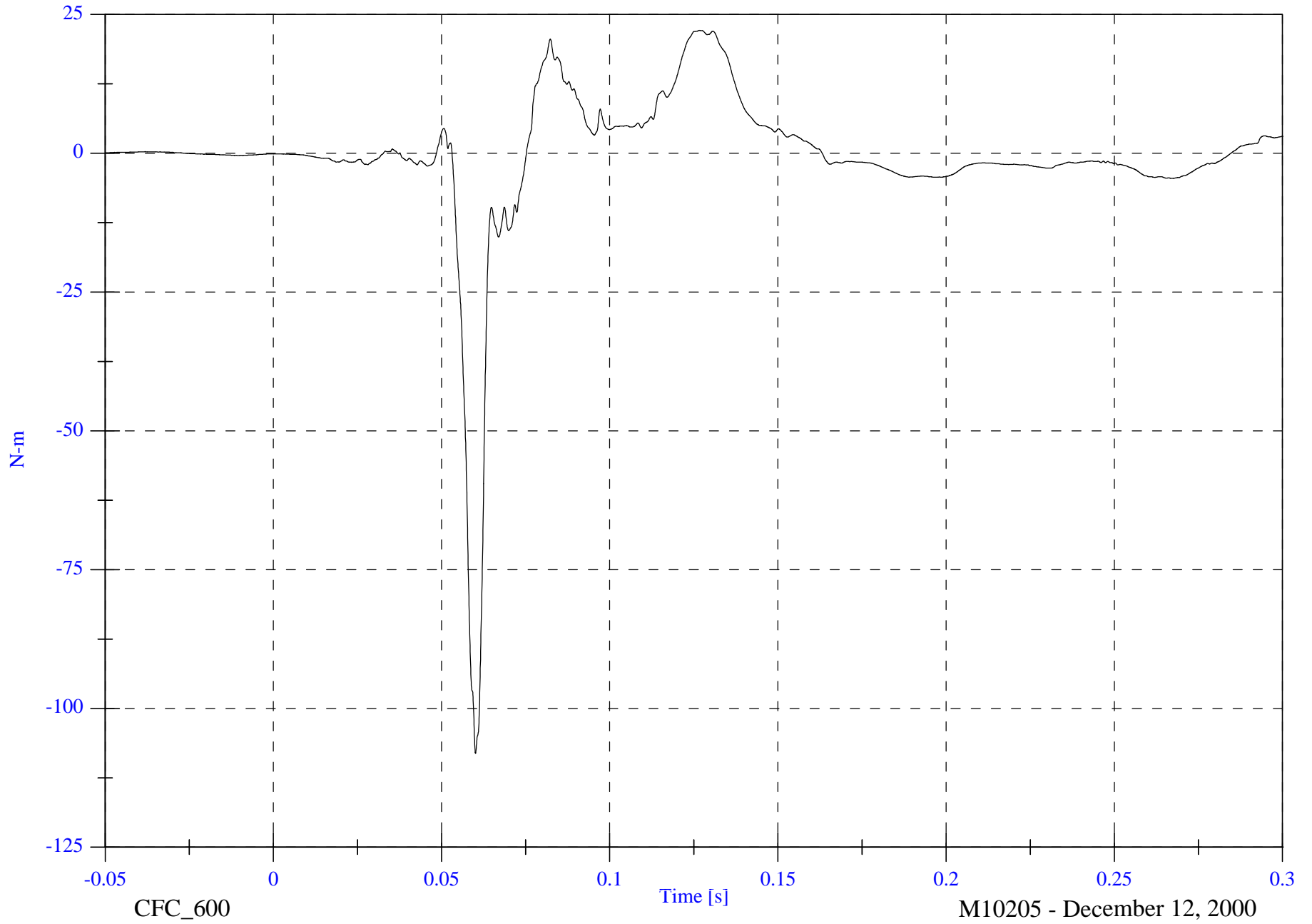
Max: 22.1 [N-m] at 0.127 [s]

P1 Left Lower Tibia My

Min: -108.1 [N-m] at 0.060 [s]

B-39

8602-7



NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

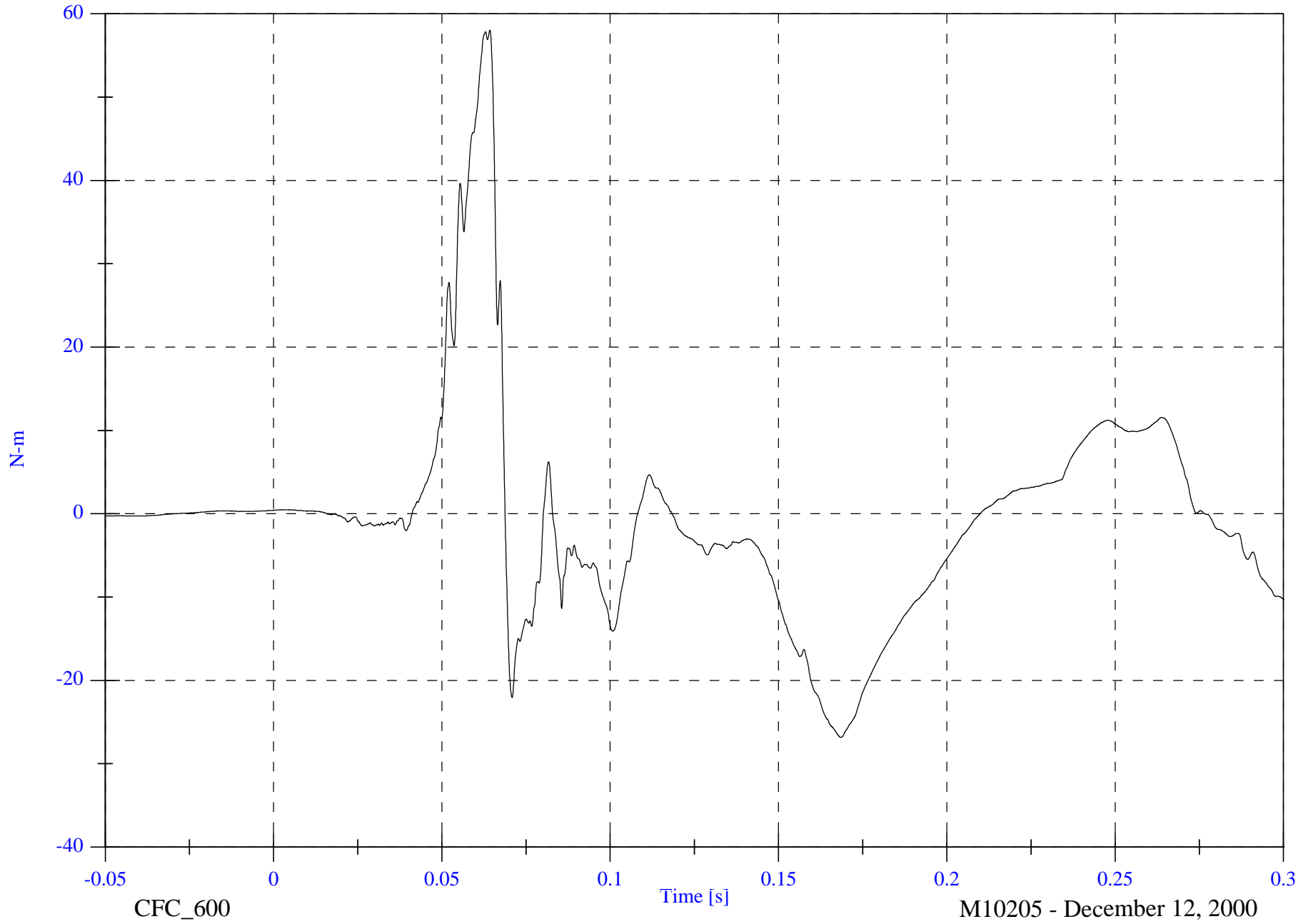
P1 Right Upper Tibia Mx

Max: 58.0 [N-m] at 0.064 [s]

Min: -26.8 [N-m] at 0.168 [s]

B-40

8602-7



CFC_600

M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

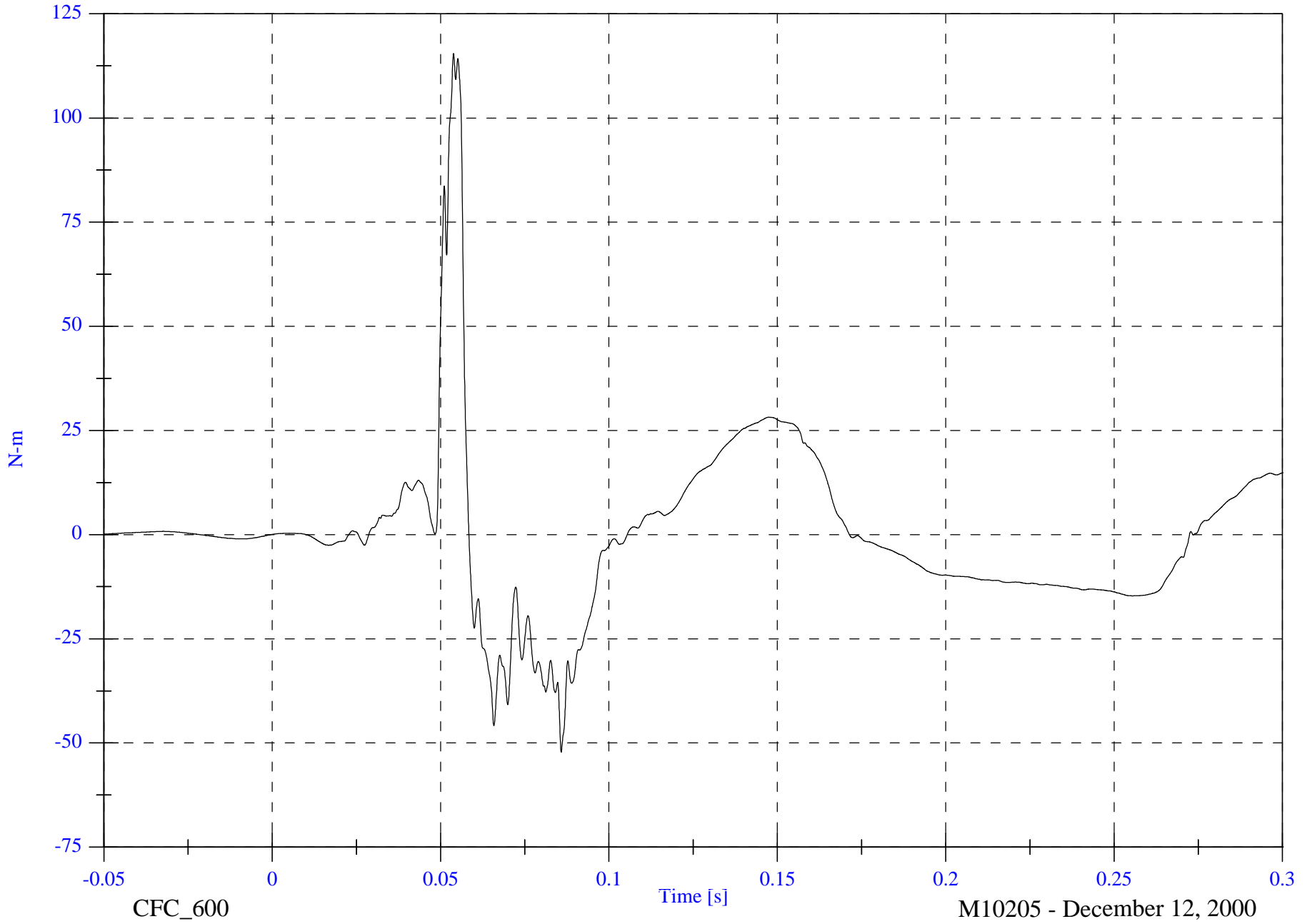
P1 Right Upper Tibia My

Max: 115.5 [N-m] at 0.054 [s]

Min: -52.2 [N-m] at 0.086 [s]

B-41

8602-7



CFC_600

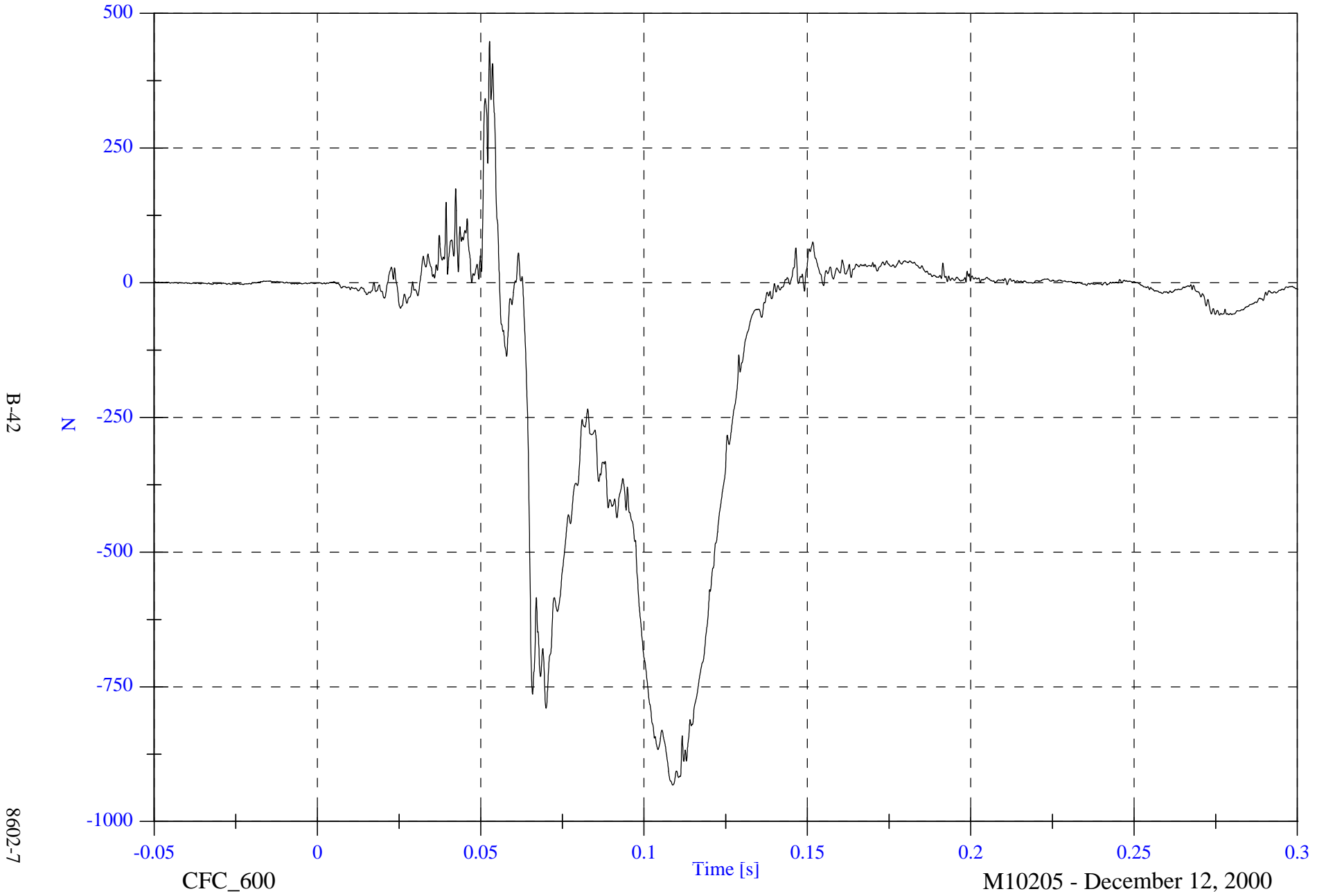
M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

Max: 447.8 [N] at 0.053 [s]

P1 Right Lower Tibia Fz

Min: -932.5 [N] at 0.109 [s]



B-42

8602-7

CFC_600

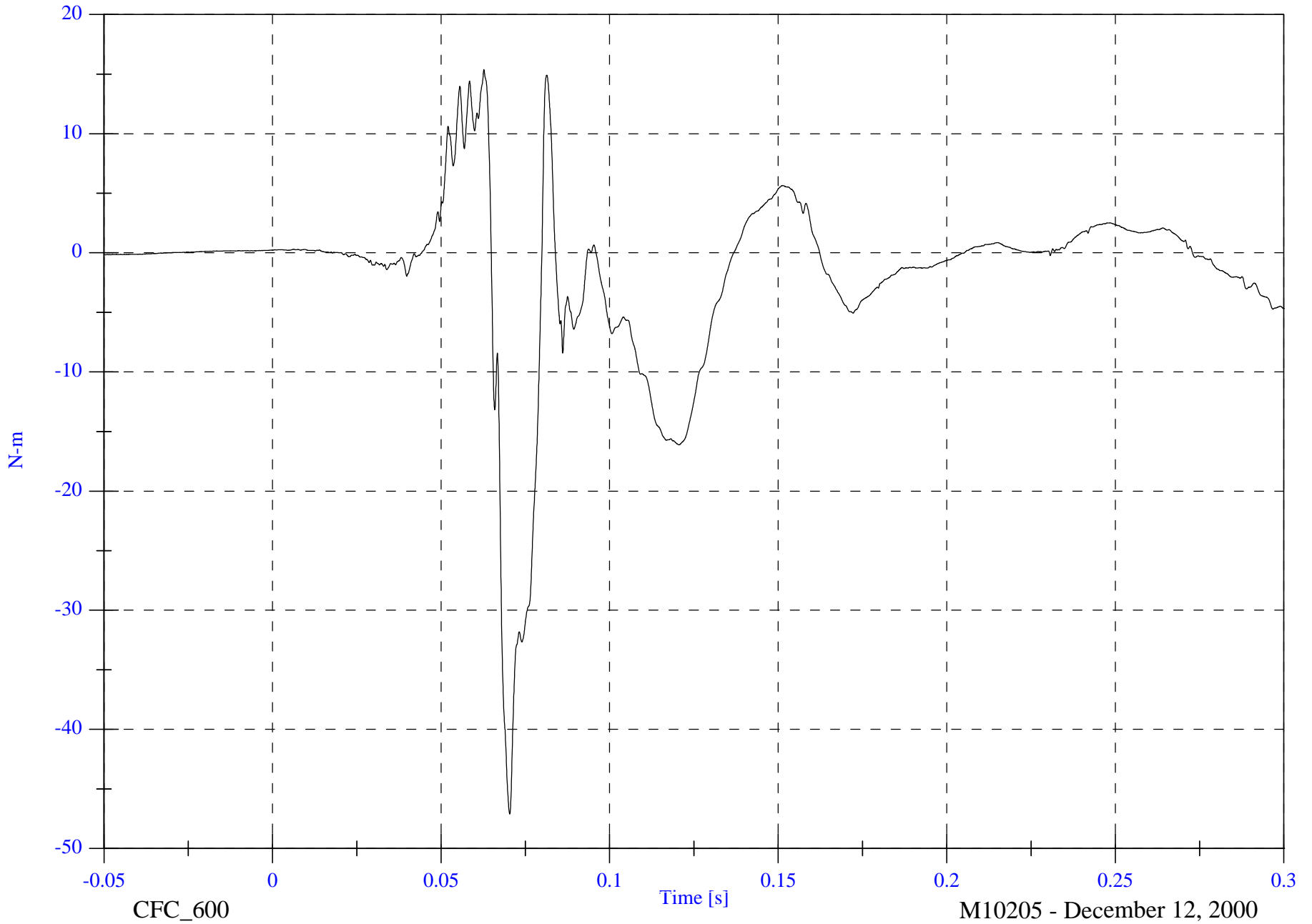
M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

P1 Right Lower Tibia Mx

Max: 15.4 [N-m] at 0.063 [s]

Min: -47.1 [N-m] at 0.070 [s]



B-43

8602-7

CFC_600

Time [s]

M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

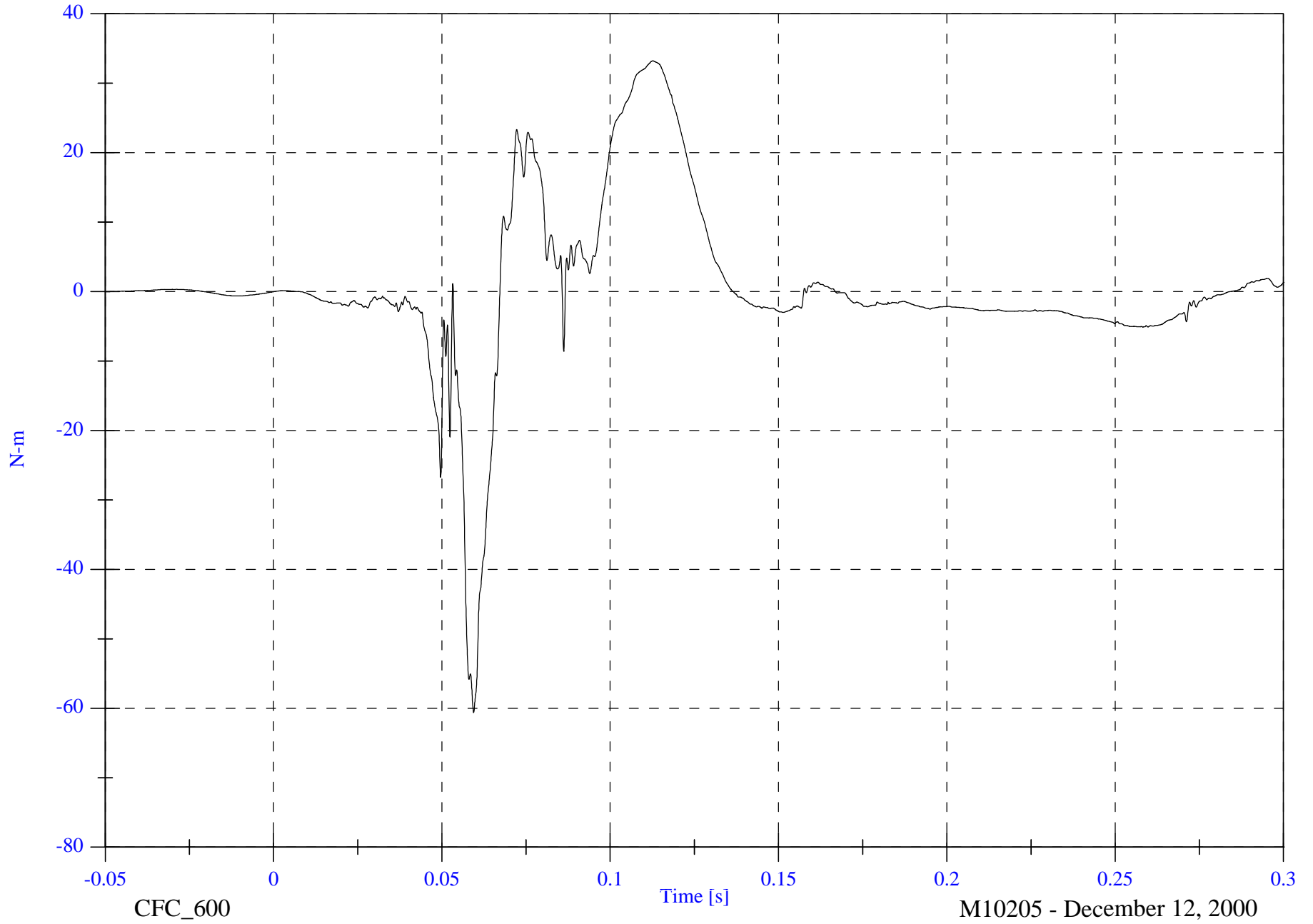
Max: 33.2 [N-m] at 0.113 [s]

P1 Right Lower Tibia My

Min: -60.6 [N-m] at 0.059 [s]

B-44

8602-7

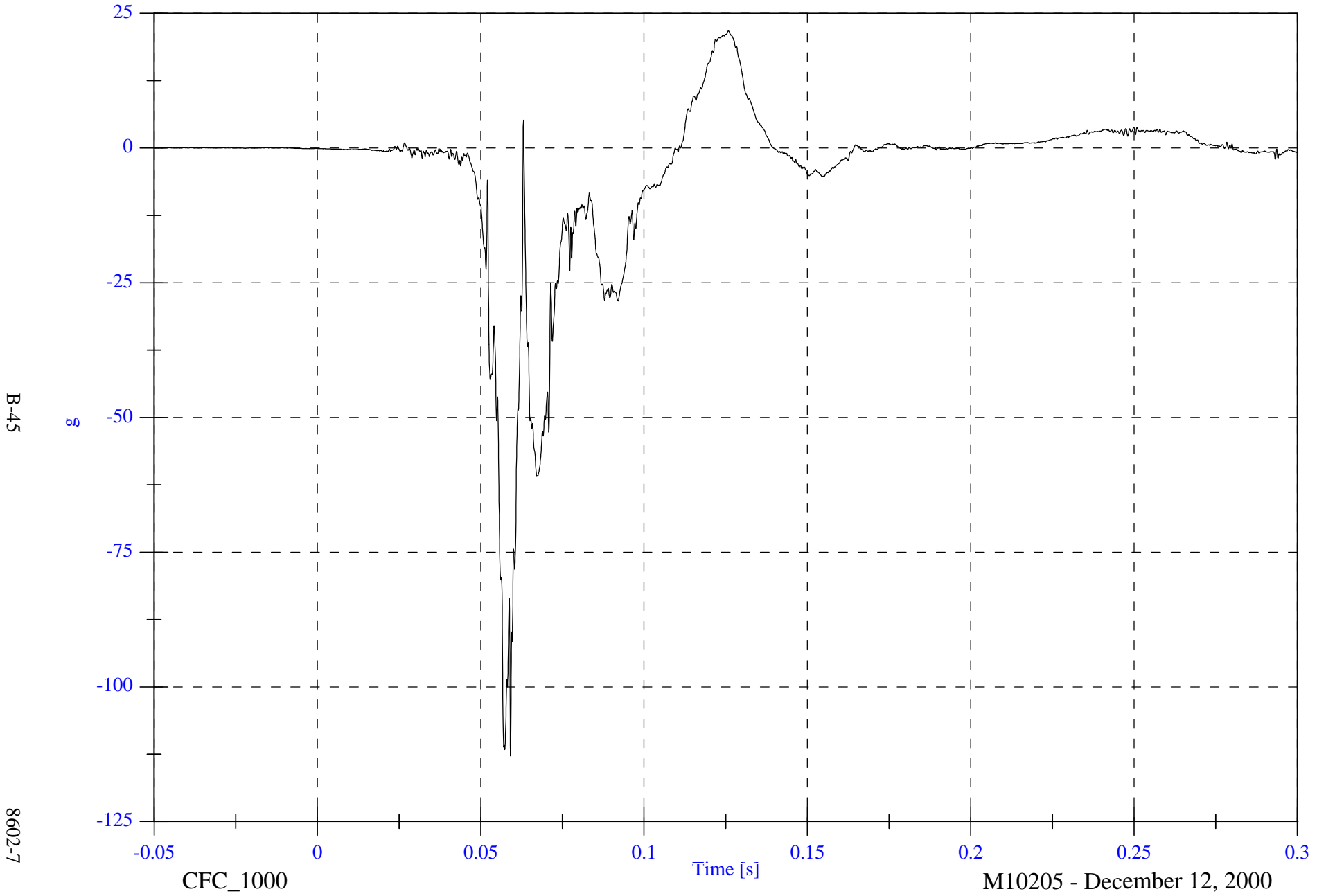


NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

P1 Left Foot Aft x

Max: 21.8 [g] at 0.126 [s]

Min: -112.9 [g] at 0.059 [s]



NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

P1 Left Foot Aft z

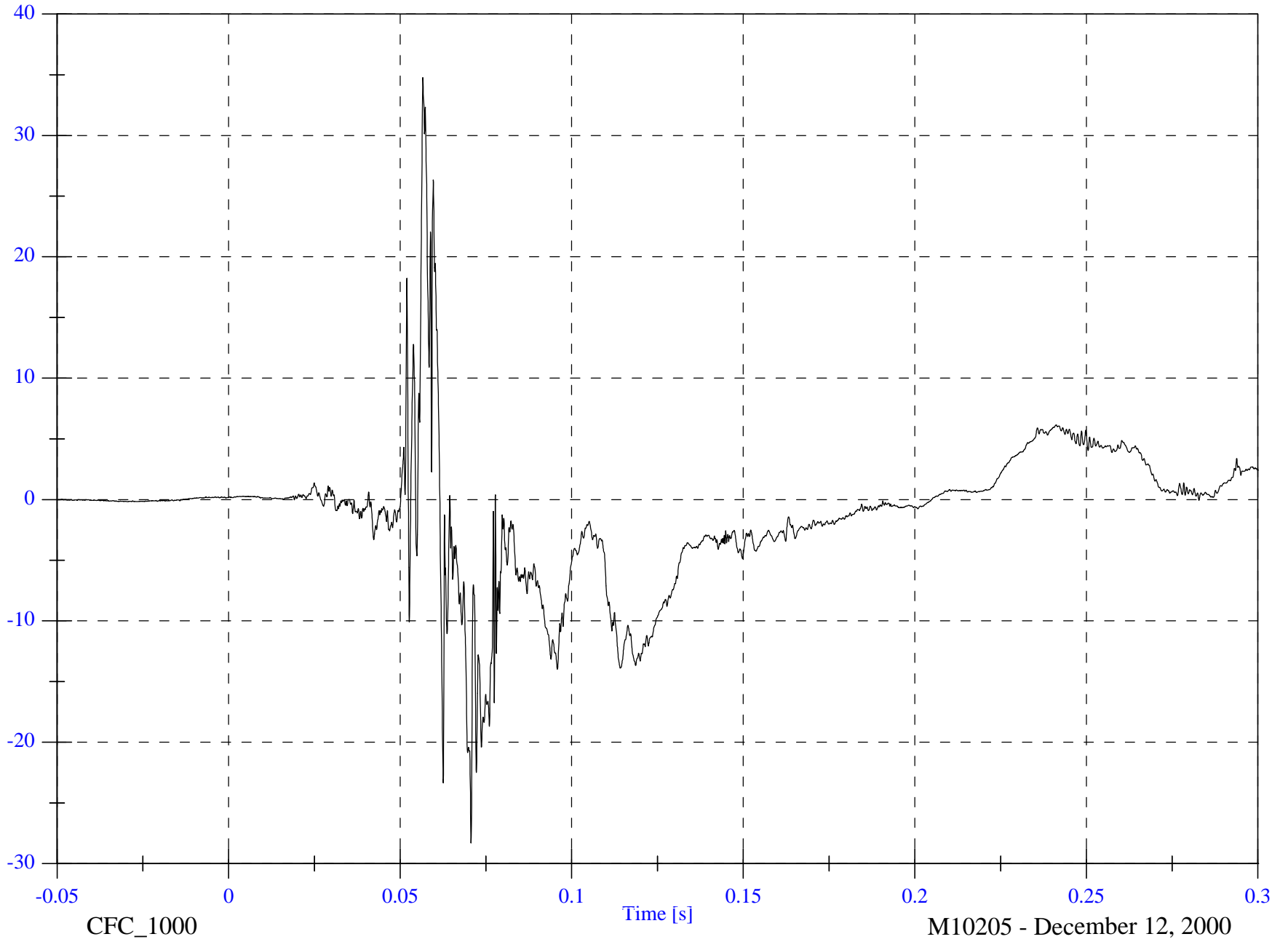
Max: 34.8 [g] at 0.057 [s]

Min: -28.3 [g] at 0.071 [s]

B-46

g

8602-7

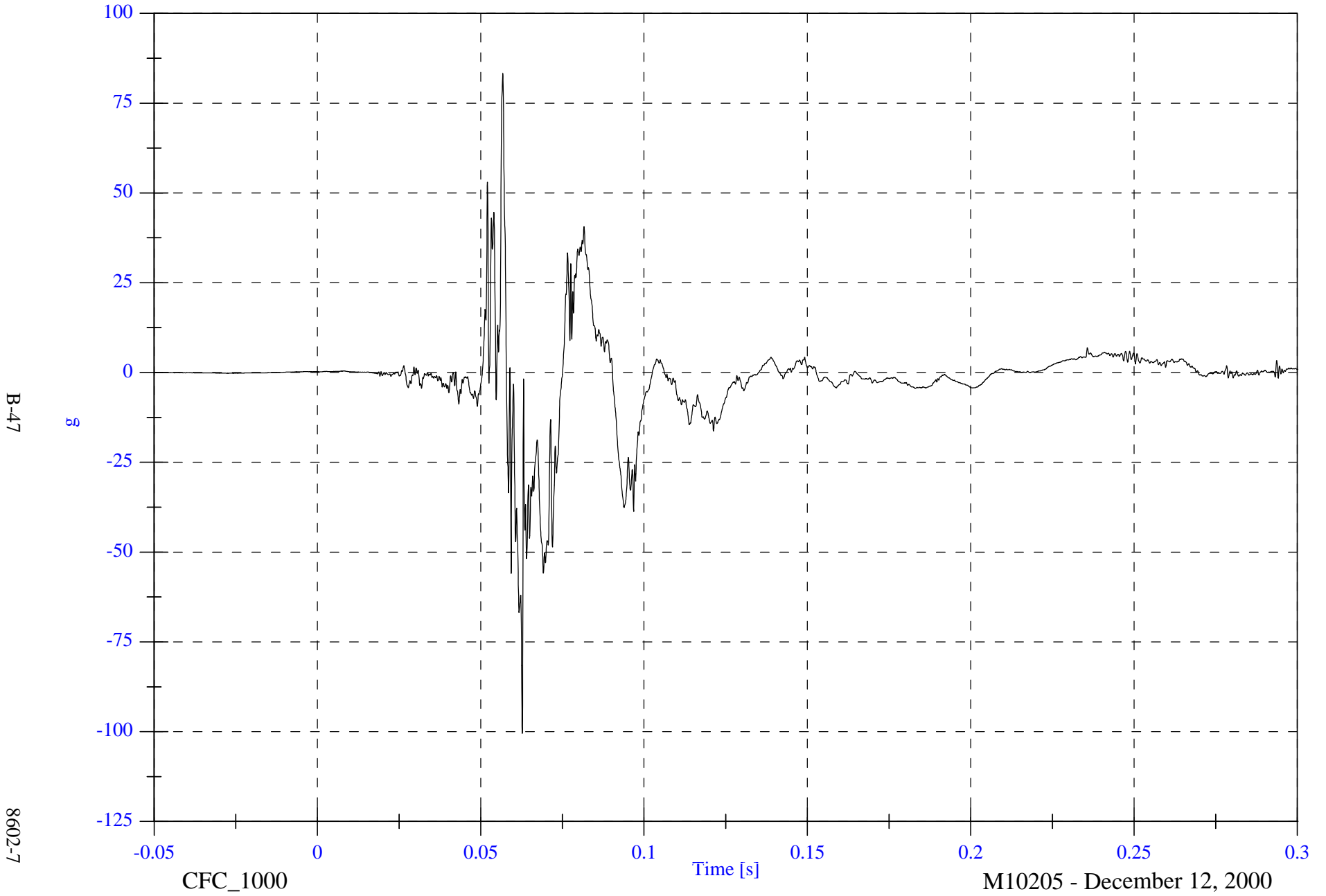


NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

P1 Left Foot Fore z

Max: 83.3 [g] at 0.057 [s]

Min: -100.5 [g] at 0.063 [s]

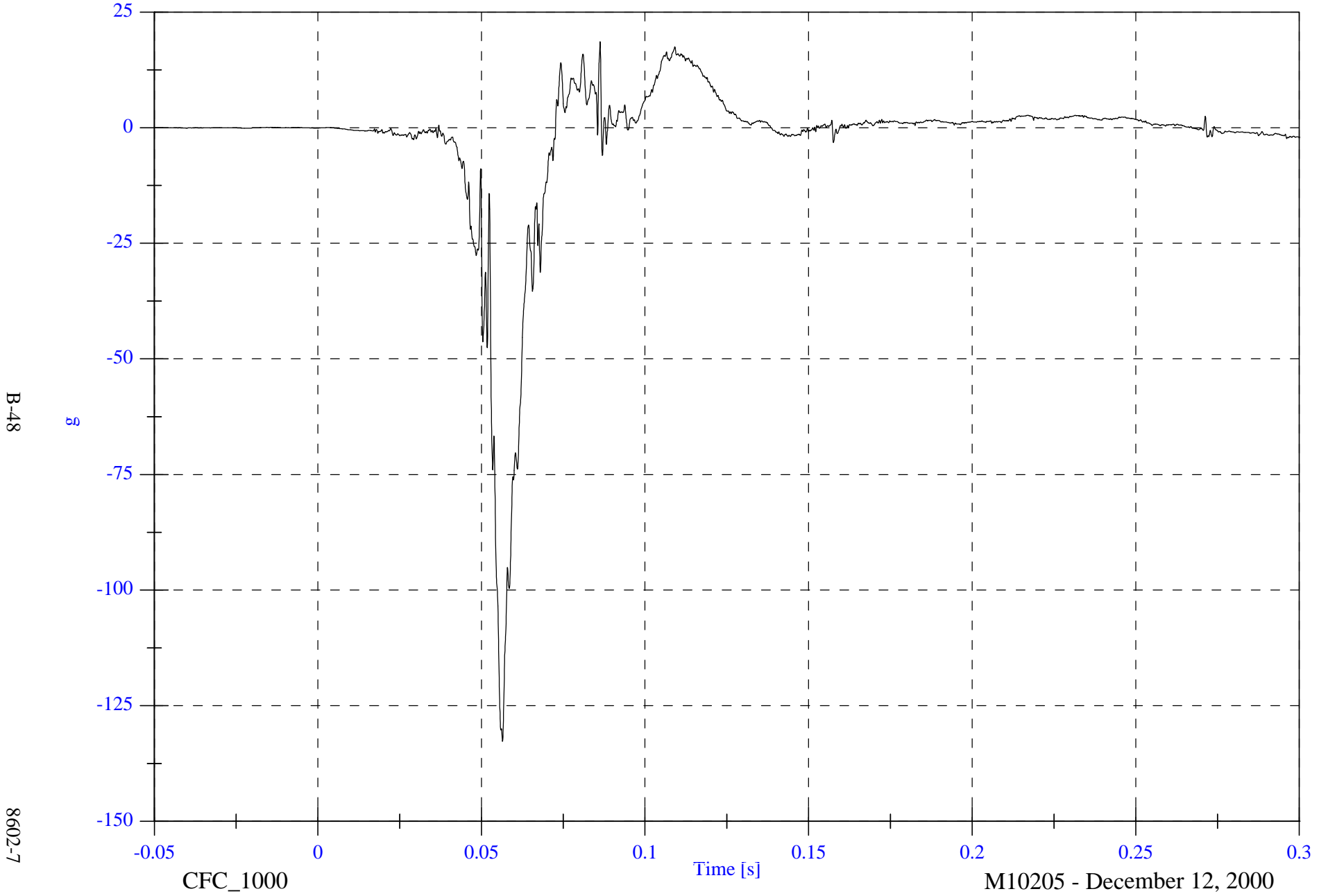


NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

P1 Right Foot Aft x

Max: 18.6 [g] at 0.086 [s]

Min: -132.7 [g] at 0.056 [s]

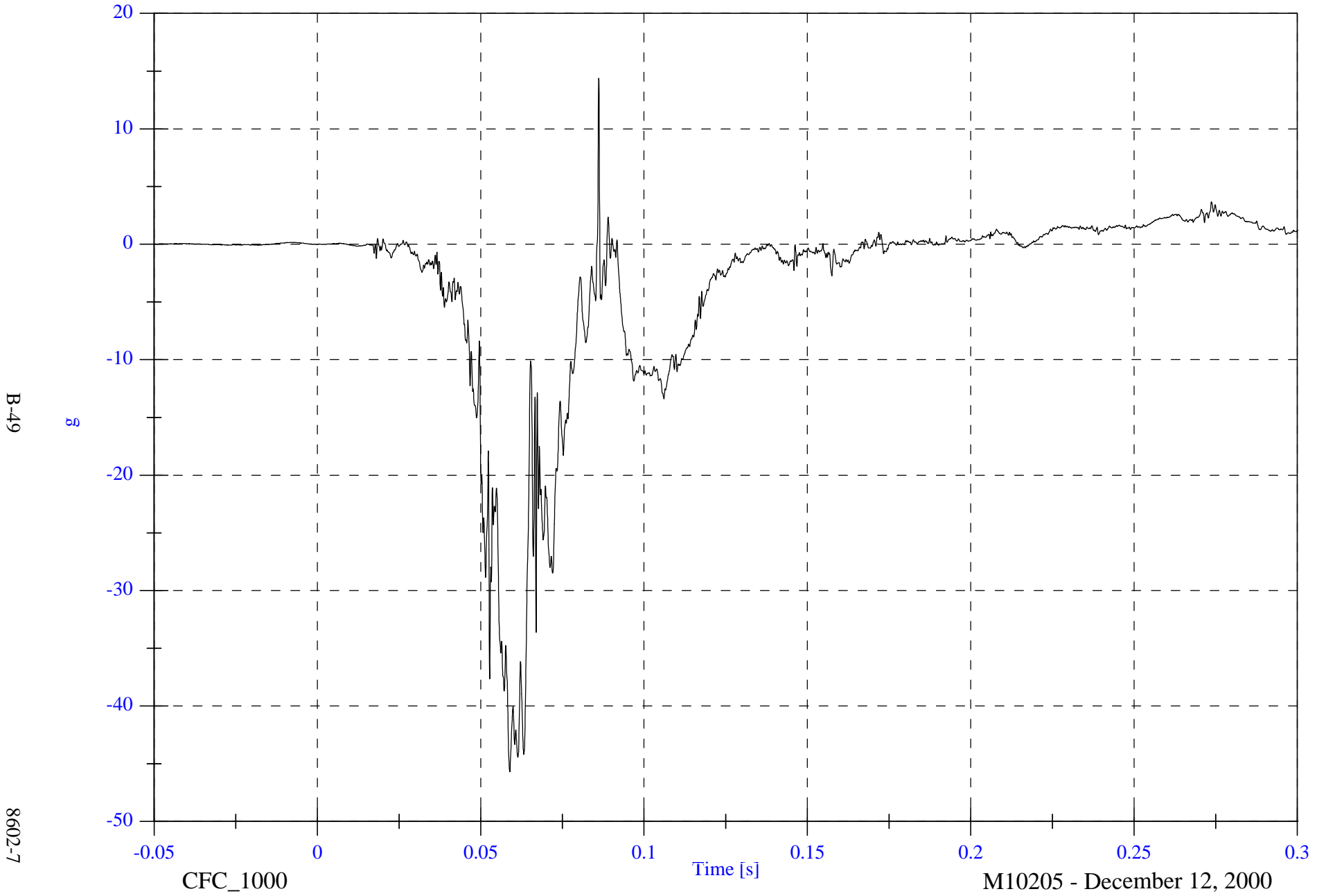


NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

P1 Right Foot Aft z

Max: 14.4 [g] at 0.086 [s]

Min: -45.7 [g] at 0.059 [s]

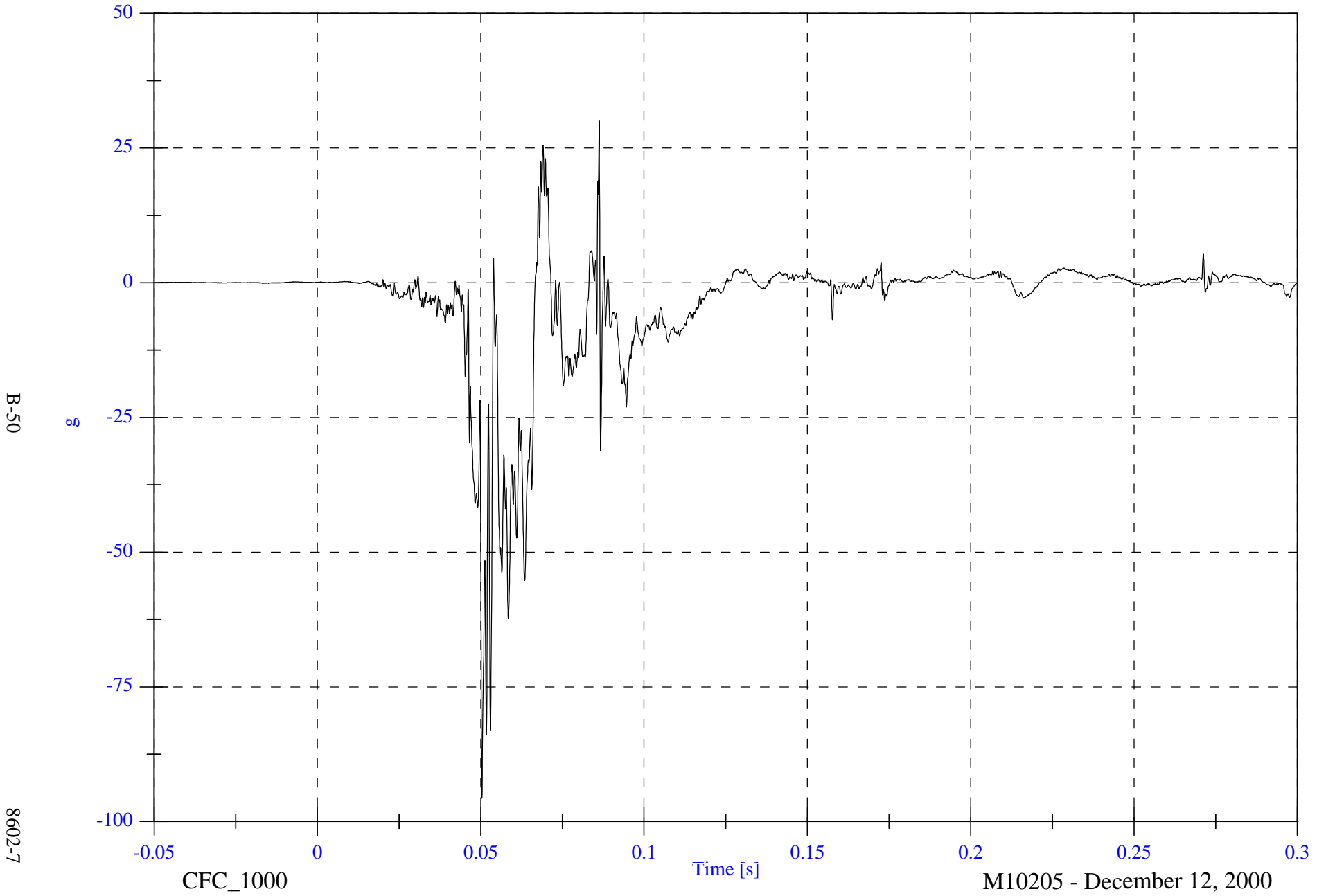


NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

Max: 30.1 [g] at 0.086 [s]

P1 Right Foot Fore z

Min: -95.7 [g] at 0.050 [s]

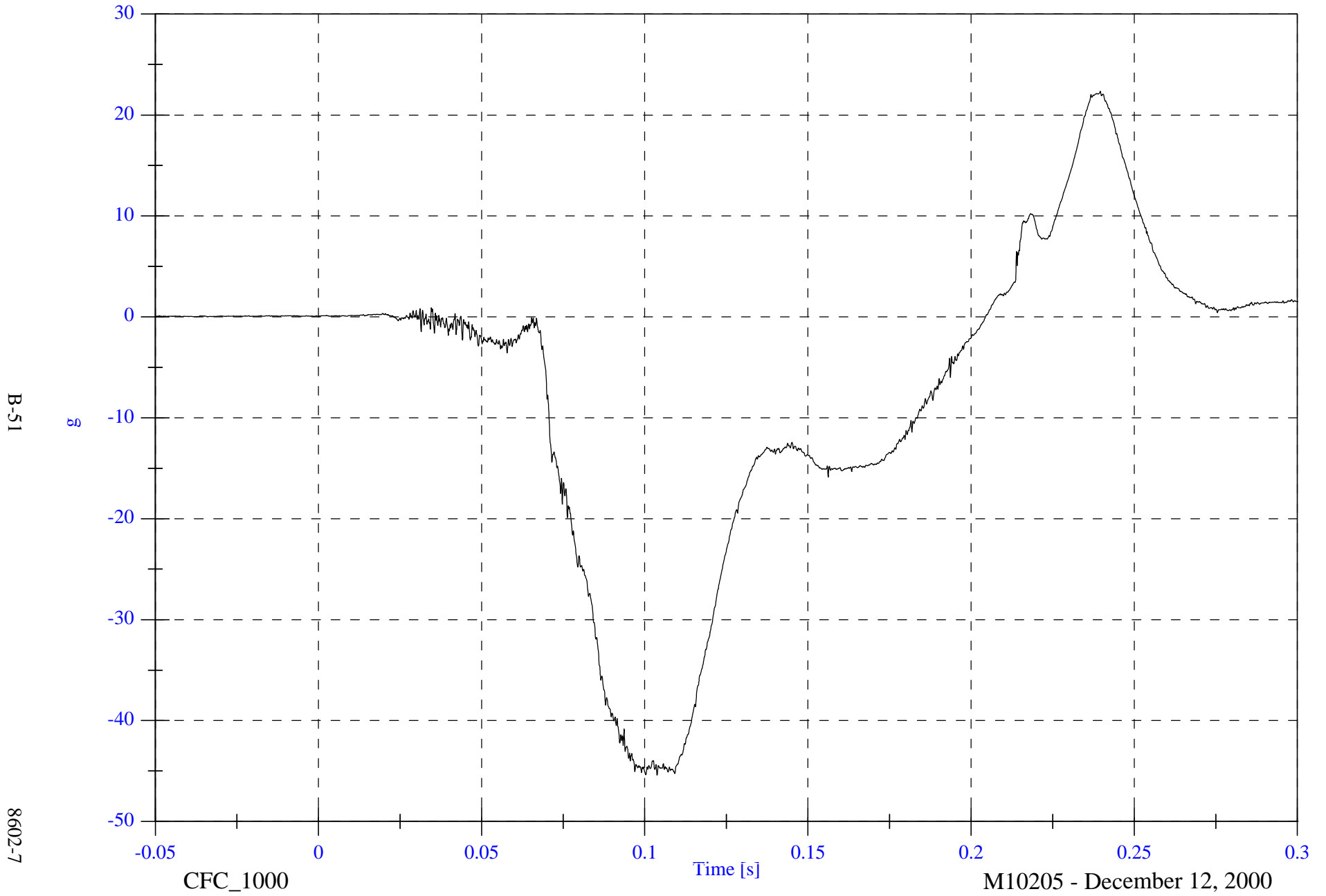


NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

P2 Head x

Max: 22.4 [g] at 0.240 [s]

Min: -45.4 [g] at 0.104 [s]



B-51

8602-7

CFC_1000

Time [s]

M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

P2 Head y

Max: 6.7 [g] at 0.235 [s]

Min: -11.9 [g] at 0.114 [s]

B-52

8602-7



NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

P2 Head z

Max: 25.9 [g] at 0.089 [s]

Min: -7.7 [g] at 0.133 [s]

B-53

g

8602-7



CFC_1000

M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

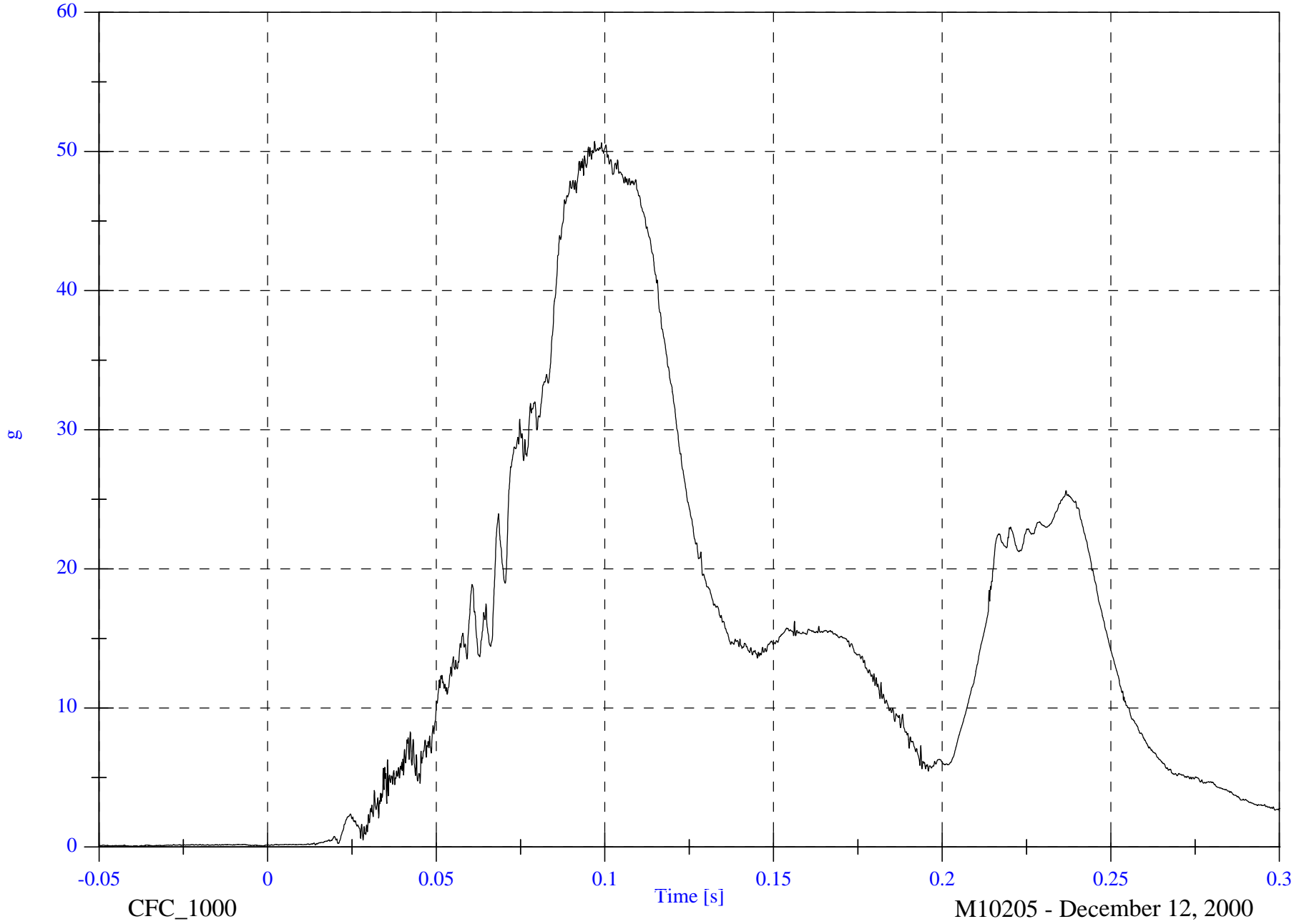
P2 Head Resultant

Max: 50.7 [g] at 0.097 [s]

Min: 0.0 [g] at -0.038 [s]

B-54

8602-7



NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

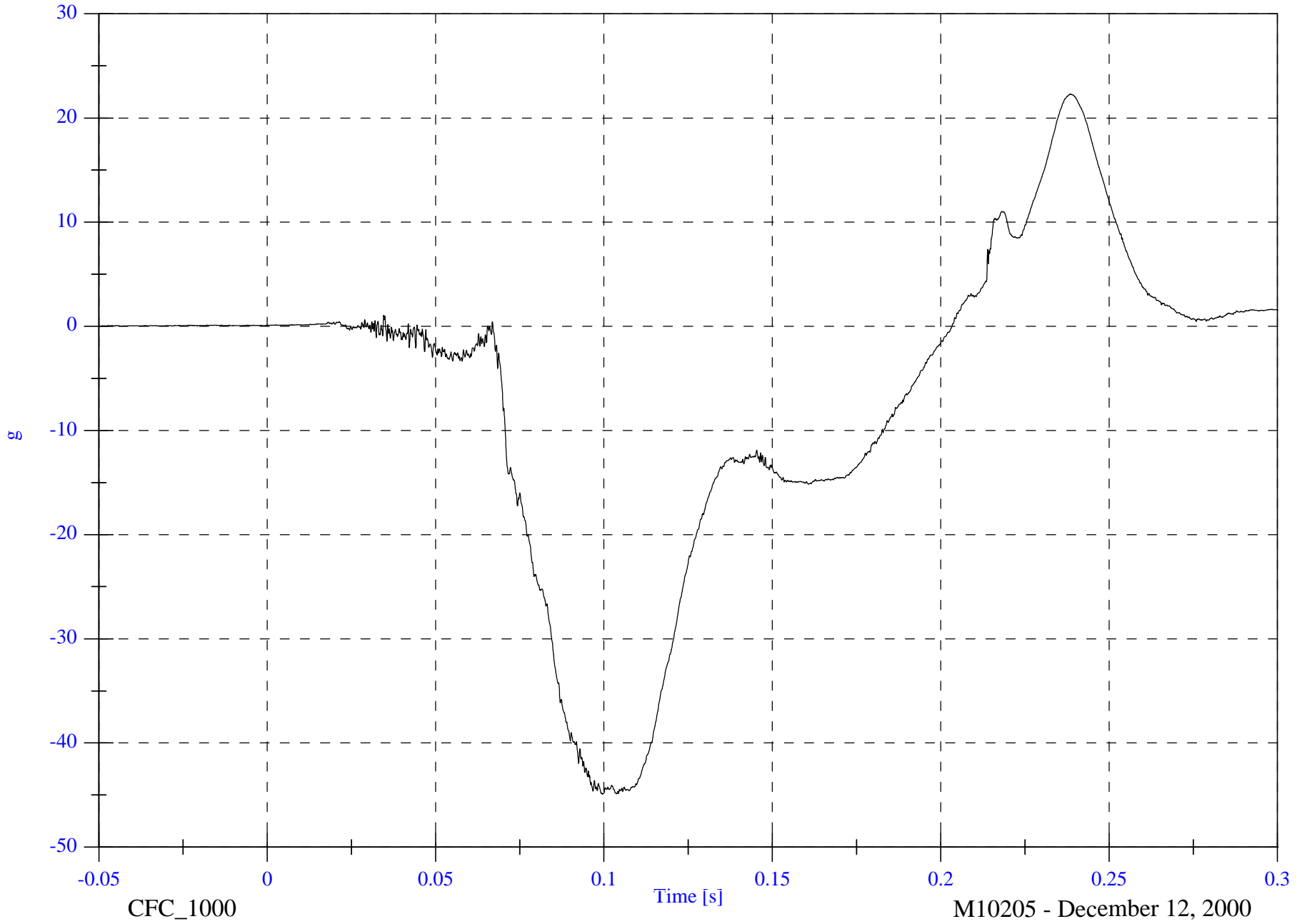
P2 Head Red x

Max: 22.3 [g] at 0.239 [s]

Min: -44.9 [g] at 0.100 [s]

B-55

8602-7



NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

P2 Head Red y

Max: 6.7 [g] at 0.235 [s]

Min: -11.3 [g] at 0.114 [s]

B-56

8602-7

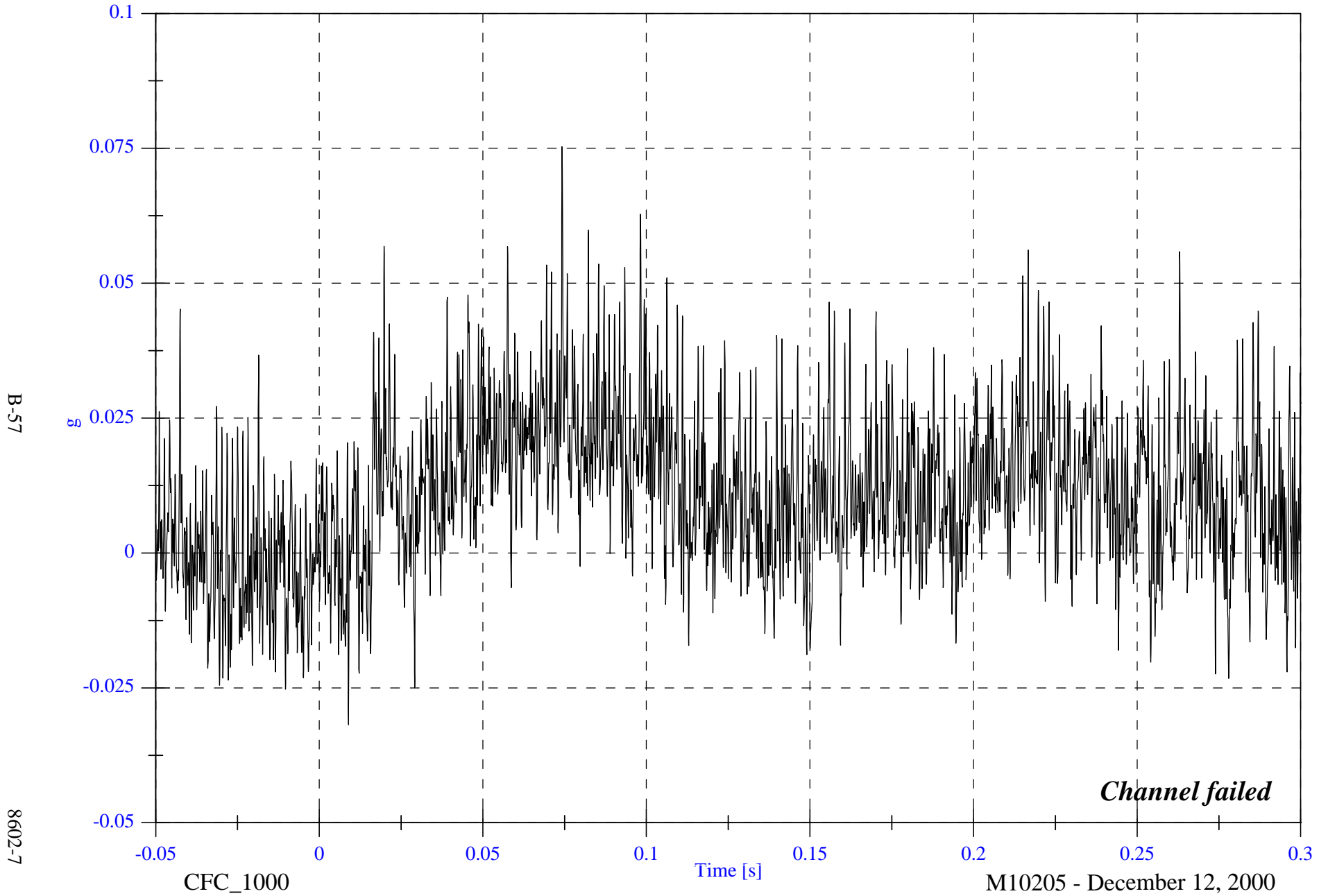


NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

P2 Head Red z

Max: 0.1 [g] at 0.074 [s]

Min: -0.0 [g] at 0.009 [s]

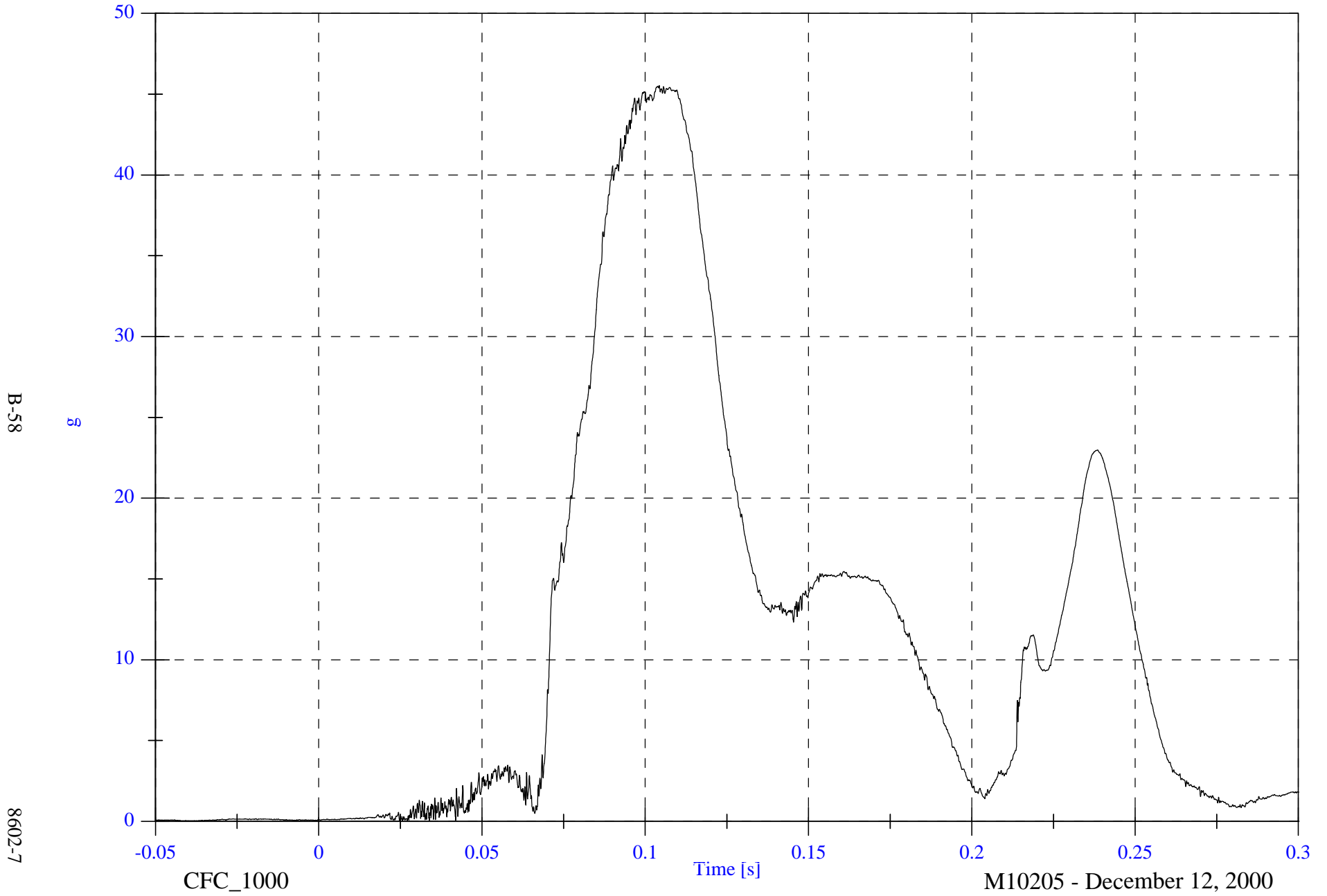


NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

P2 Head Red Resultant

Max: 45.5 [g] at 0.104 [s]

Min: 0.0 [g] at 0.025 [s]



B-58

g

8602-7

CFC_1000

Time [s]

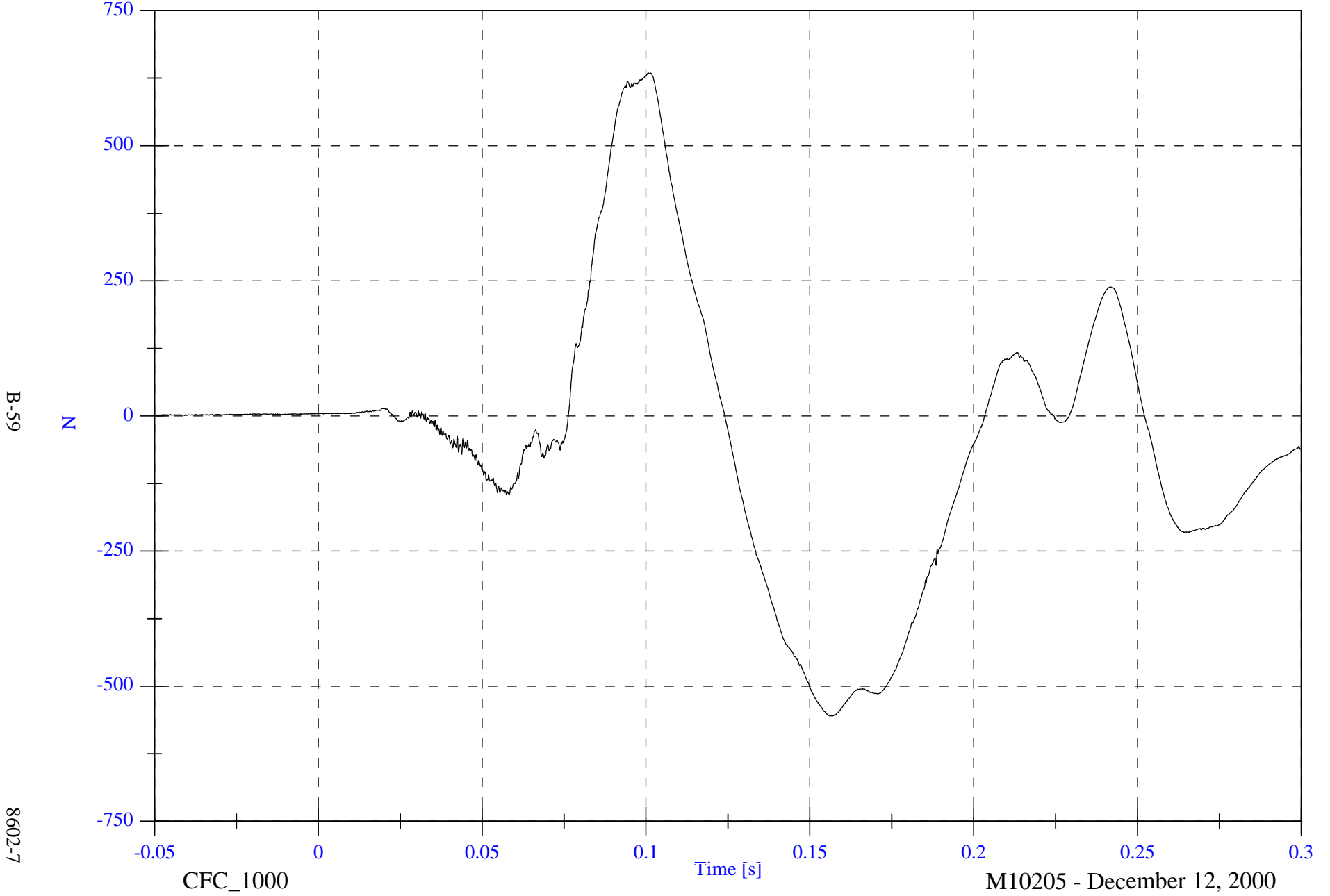
M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

P2 Upper Neck Fx

Max: 634.9 [N] at 0.101 [s]

Min: -555.6 [N] at 0.157 [s]



B-59

N

8602-7

CFC_1000

Time [s]

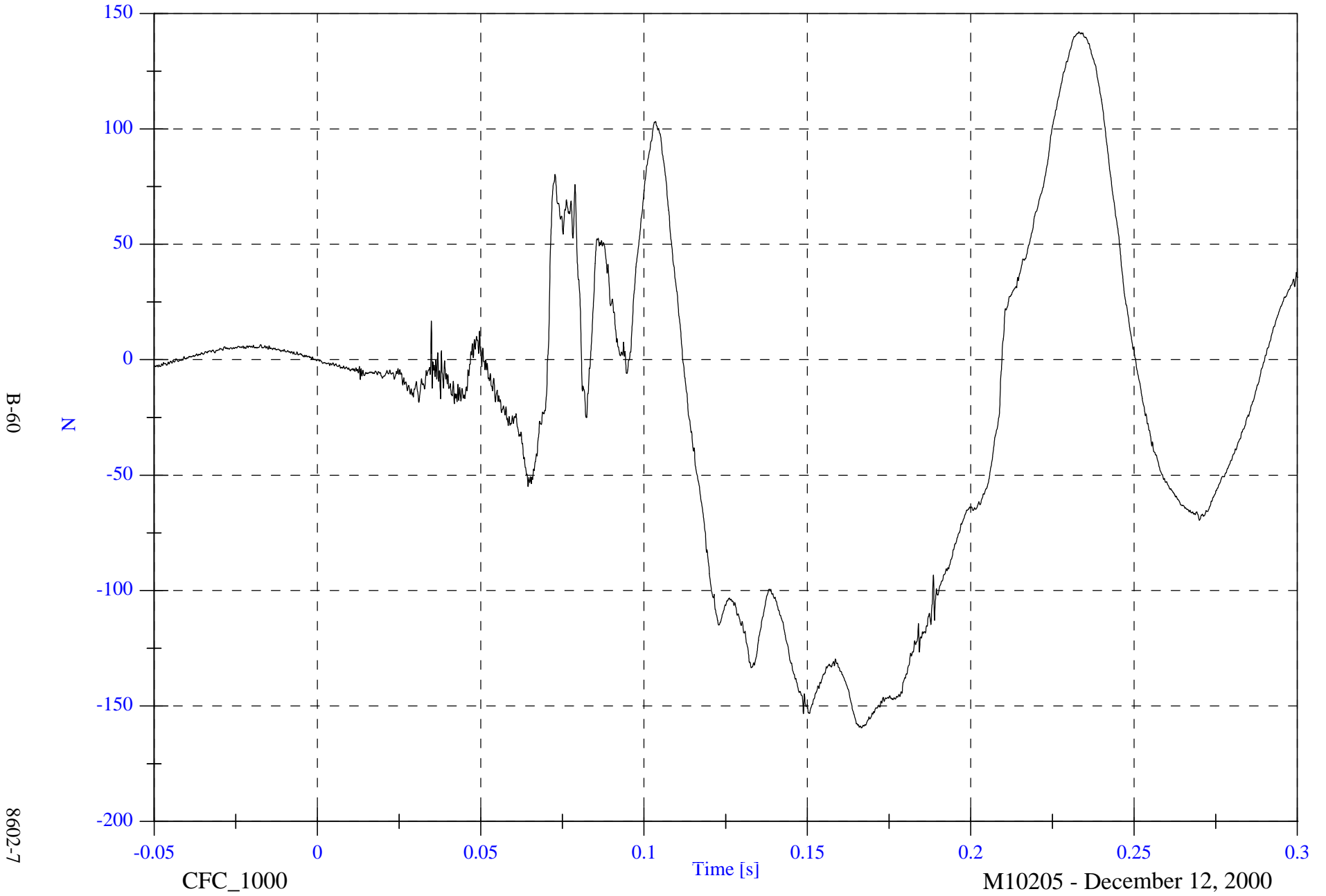
M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

P2 Upper Neck Fy

Max: 142.0 [N] at 0.233 [s]

Min: -159.5 [N] at 0.167 [s]



B-60

N

8602-7

CFC_1000

Time [s]

M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

P2 Upper Neck Fz

Max: 1473.3 [N] at 0.075 [s]

Min: -658.7 [N] at 0.268 [s]

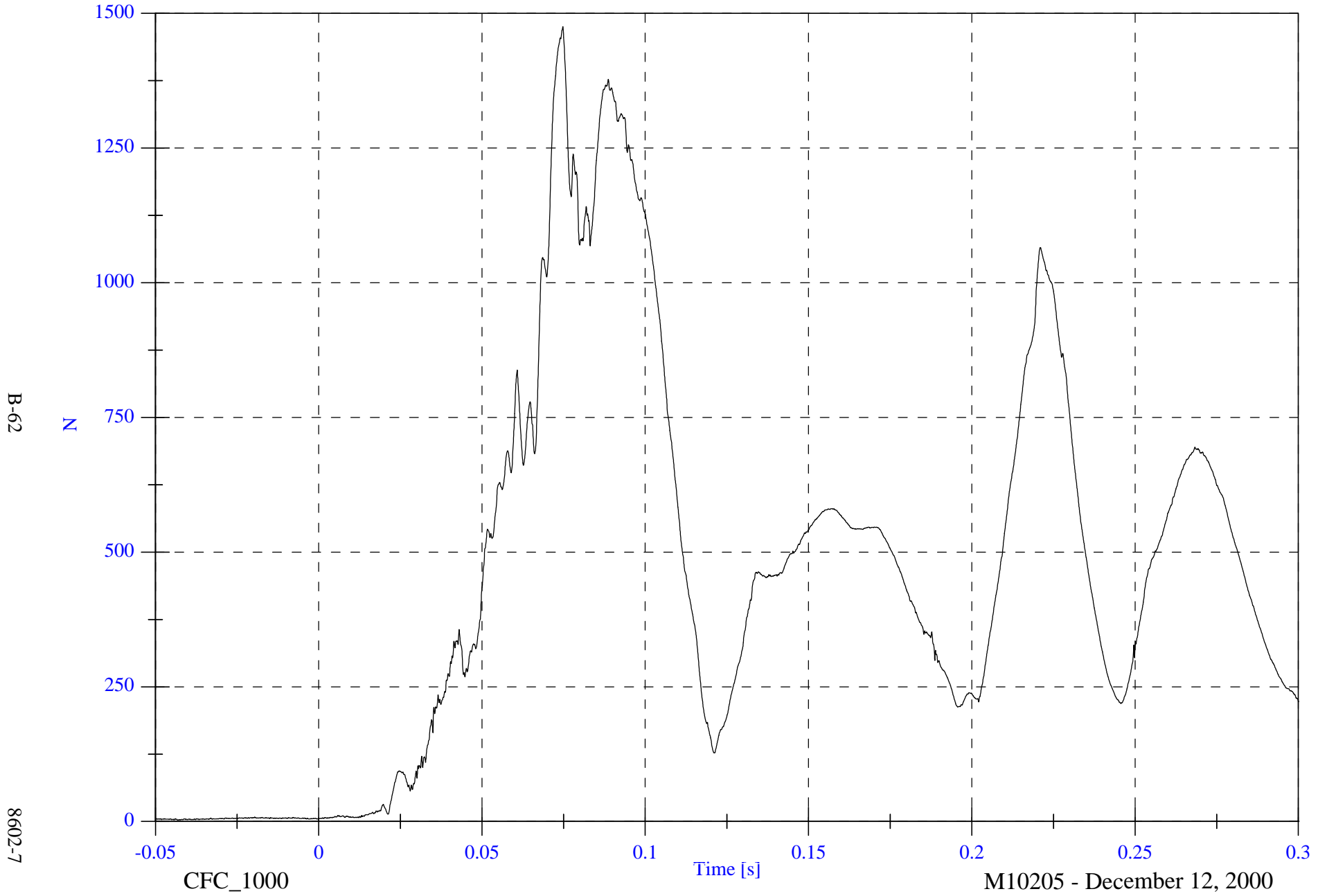


NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

P2 Upper Neck F Resultant

Max: 1475.5 [N] at 0.075 [s]

Min: 2.6 [N] at -0.043 [s]



B-62

8602-7

CFC_1000

Time [s]

M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

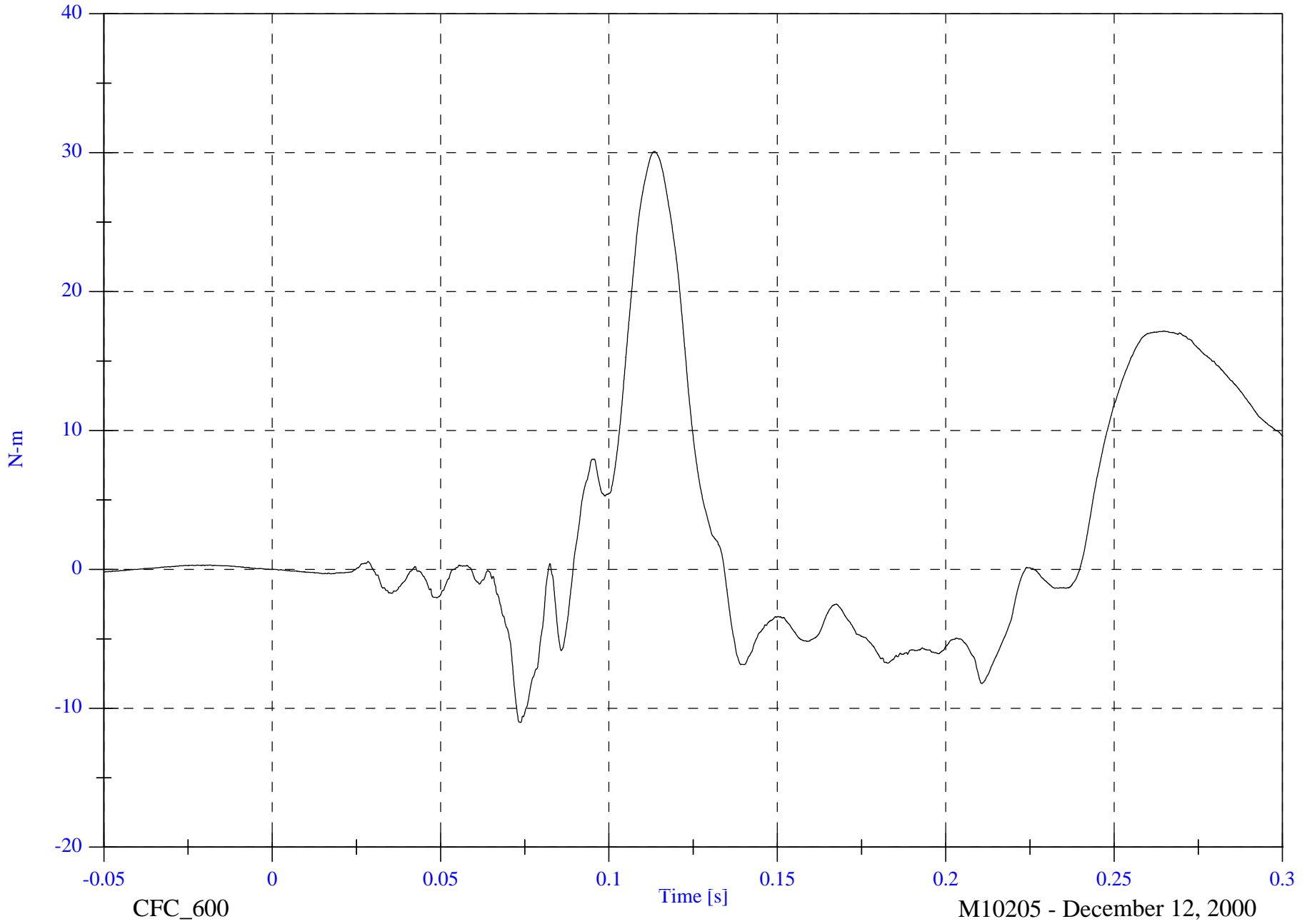
P2 Upper Neck Mx

Max: 30.1 [N-m] at 0.114 [s]

Min: -11.0 [N-m] at 0.074 [s]

B-63

8602-7



NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

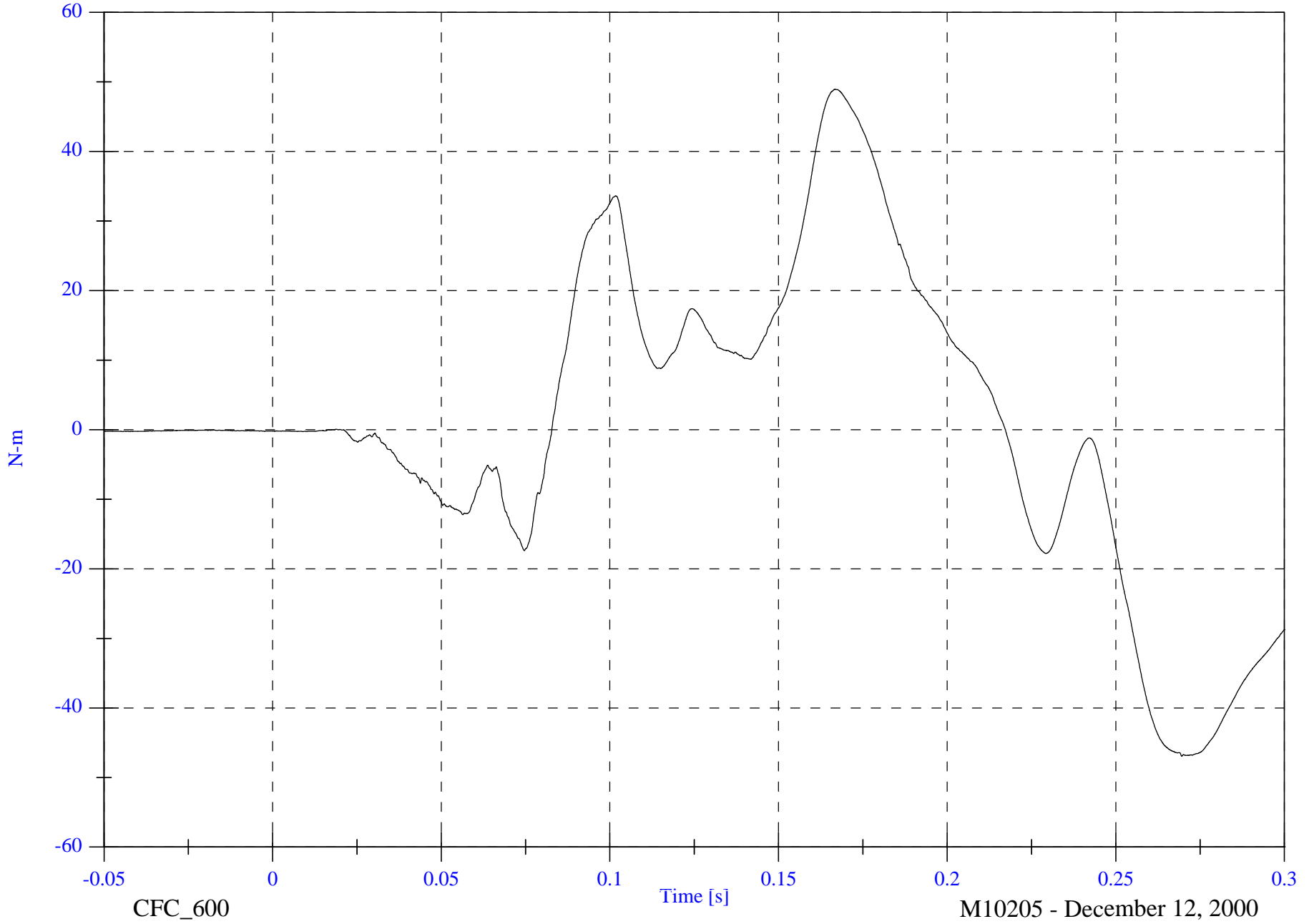
P2 Upper Neck My

Max: 48.9 [N-m] at 0.167 [s]

Min: -46.9 [N-m] at 0.270 [s]

B-64

8602-7



CFC_600

Time [s]

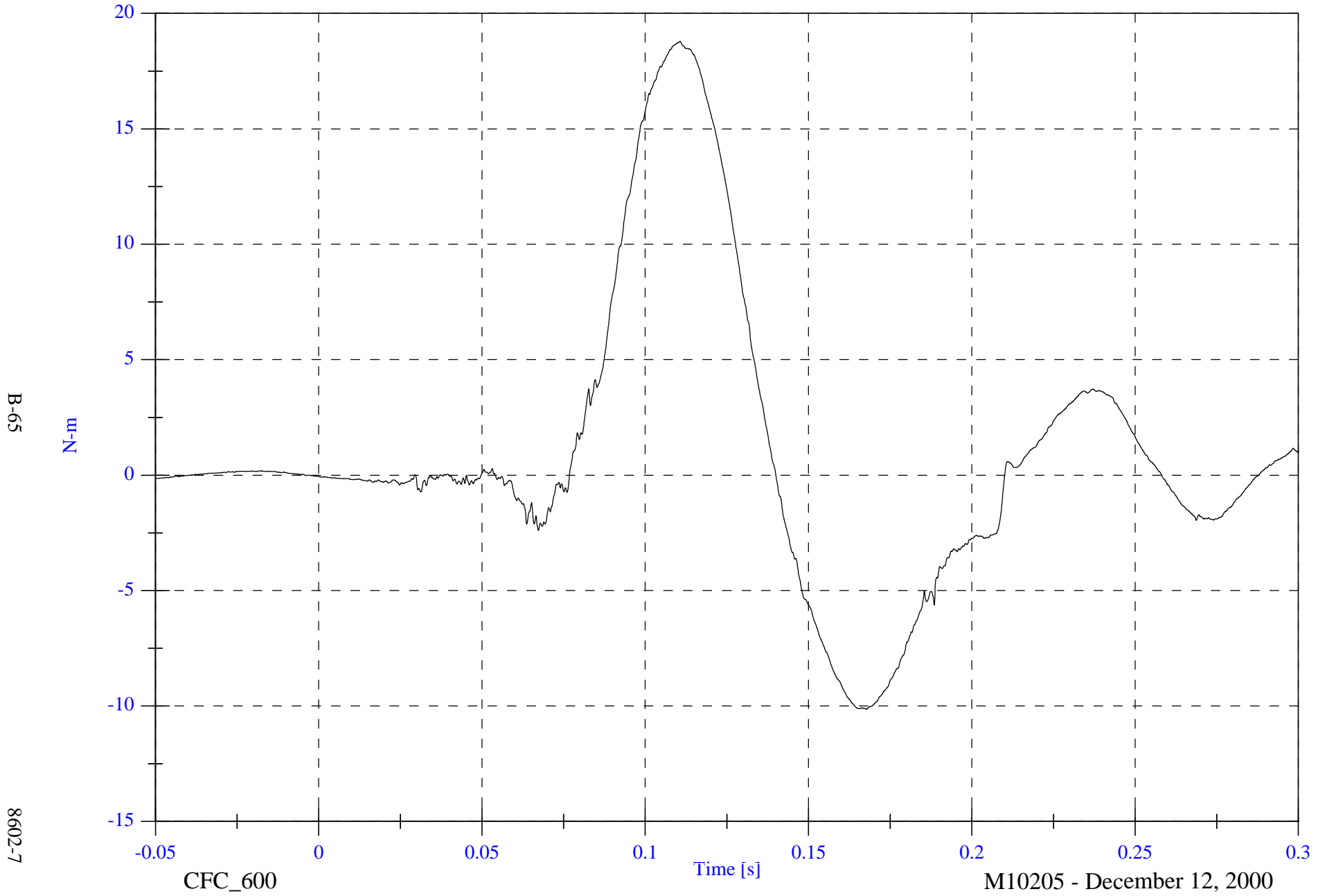
M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

P2 Upper Neck Mz

Max: 18.8 [N-m] at 0.111 [s]

Min: -10.1 [N-m] at 0.168 [s]



B-65

8602-7

CFC_600

M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

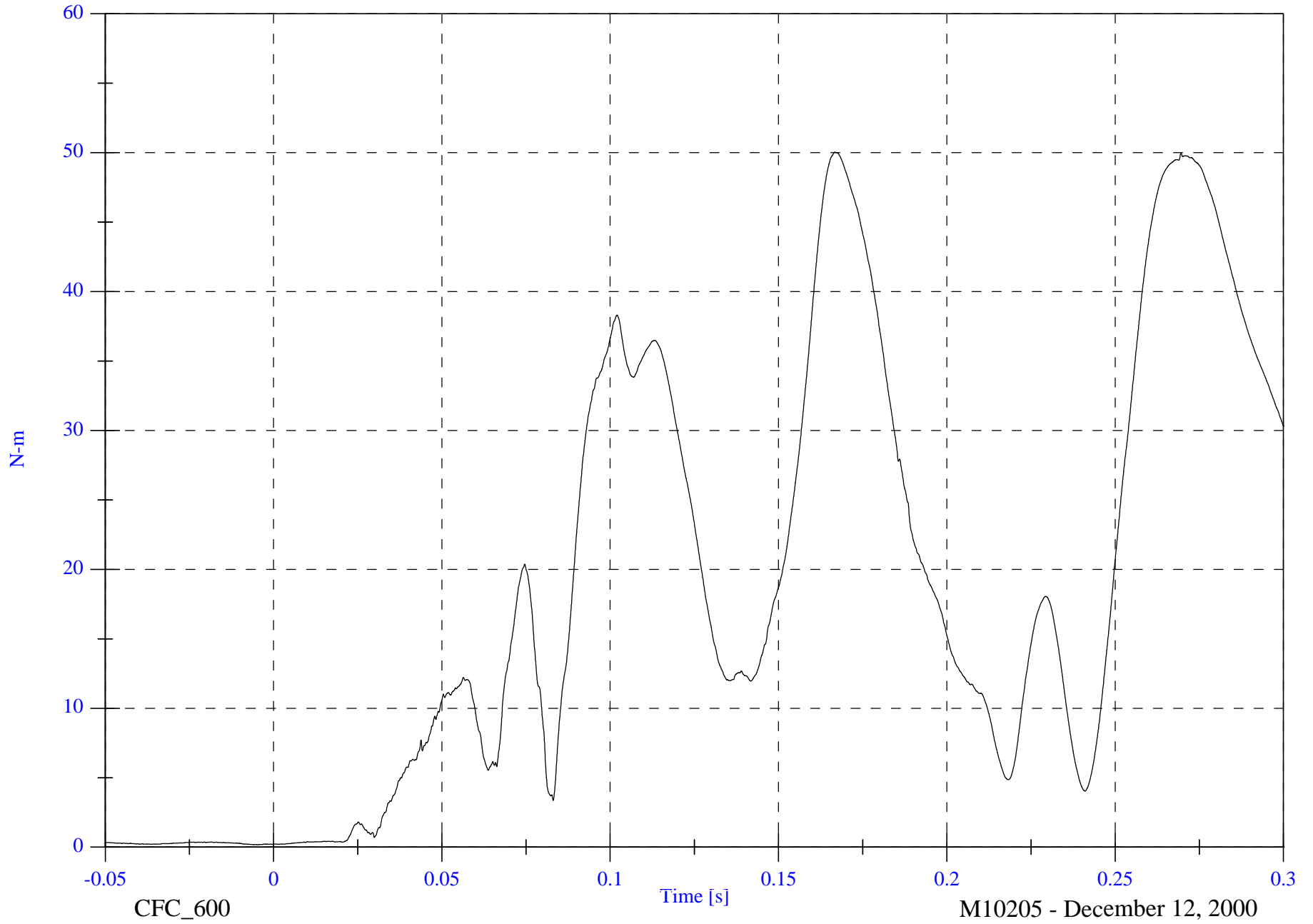
P2 Upper Neck M Resultant

Max: 50.0 [N-m] at 0.167 [s]

Min: 0.2 [N-m] at -0.006 [s]

B-66

8602-7



NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

P2 Chest x

Max: 8.5 [g] at 0.205 [s]

Min: -35.9 [g] at 0.092 [s]



B-67

g

8602-7

CFC_180

Time [s]

M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

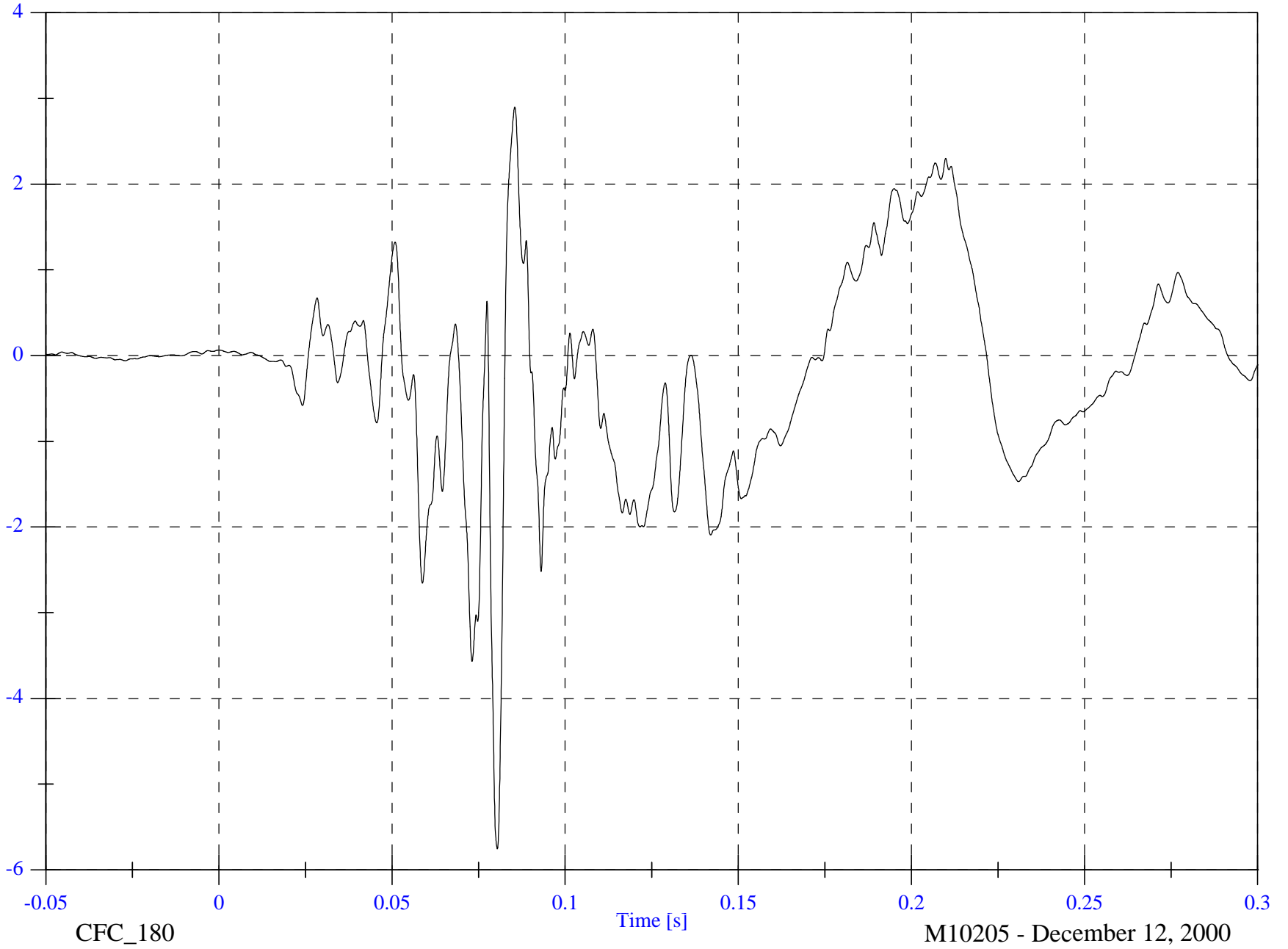
P2 Chest y

Max: 2.9 [g] at 0.085 [s]

Min: -5.8 [g] at 0.080 [s]

B-68

g



8602-7

CFC_180

M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

Max: 18.1 [g] at 0.092 [s]

P2 Chest z

Min: -15.2 [g] at 0.135 [s]

B-69

g

8602-7



CFC_180

Time [s]

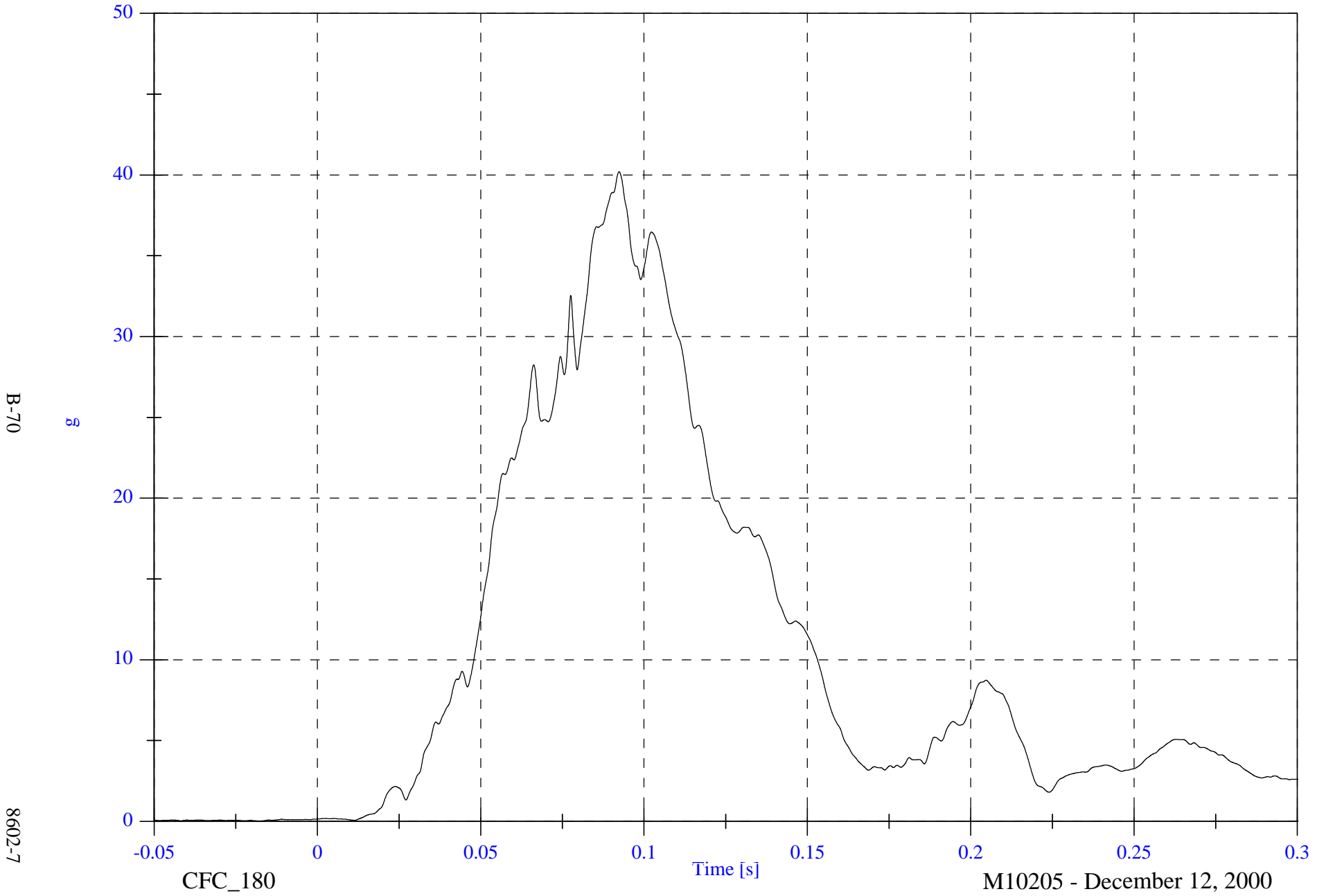
M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

P2 Chest Resultant

Max: 40.2 [g] at 0.092 [s]

Min: 0.0 [g] at -0.017 [s]



B-70

8602-7

CFC_180

M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

P2 Chest Red x

Max: 8.5 [g] at 0.203 [s]

Min: -35.9 [g] at 0.092 [s]



B-71

g

8602-7

CFC_180

Time [s]

M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

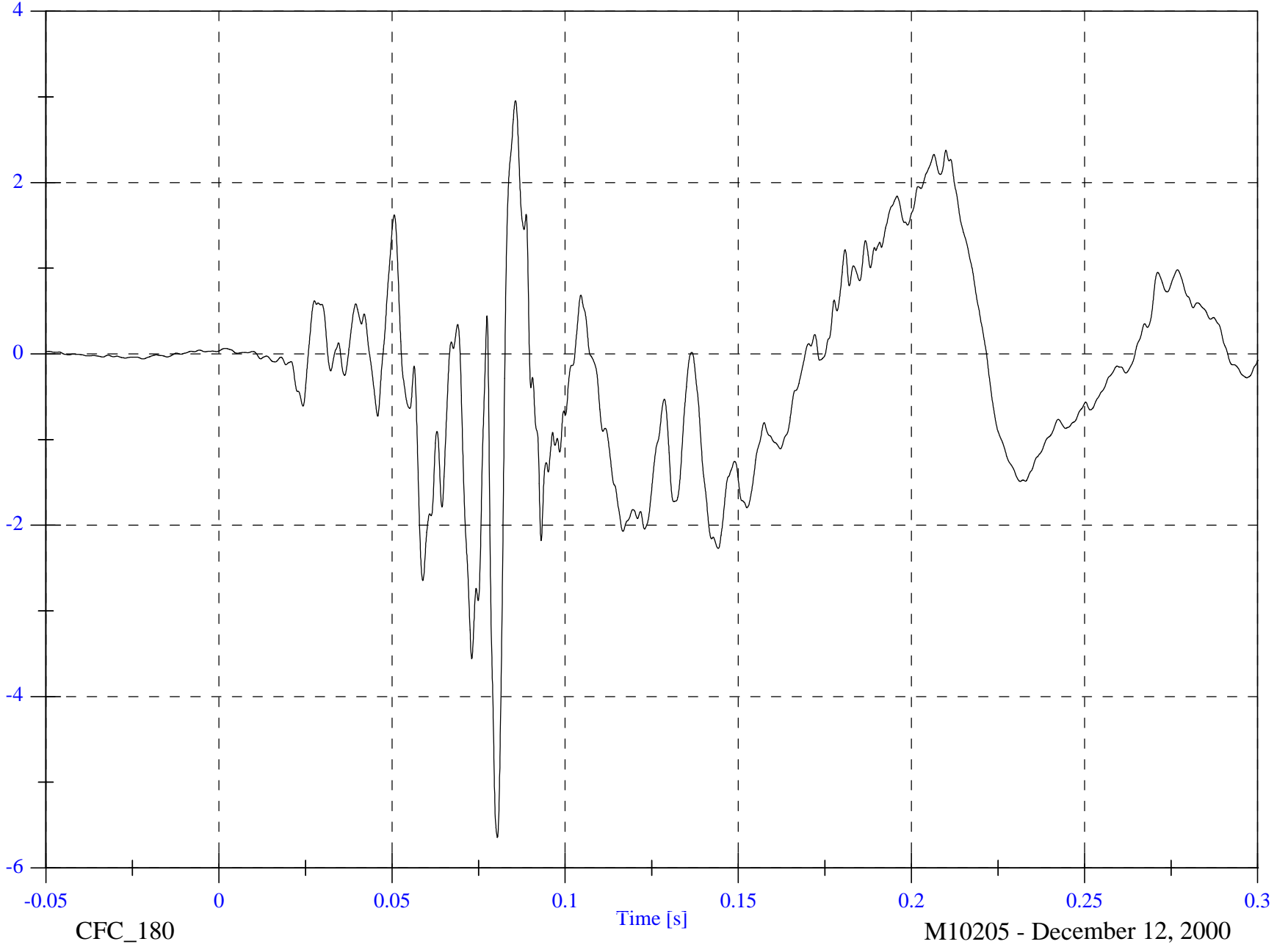
P2 Chest Red y

Max: 3.0 [g] at 0.086 [s]

Min: -5.6 [g] at 0.080 [s]

B-72

g



8602-7

CFC_180

Time [s]

M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

P2 Chest Red z

Max: 18.0 [g] at 0.094 [s]

Min: -15.3 [g] at 0.136 [s]



NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

P2 Chest Red Resultant

Max: 39.9 [g] at 0.092 [s]

Min: 0.0 [g] at 0.011 [s]

B-74

8602-7



CFC_180

Time [s]

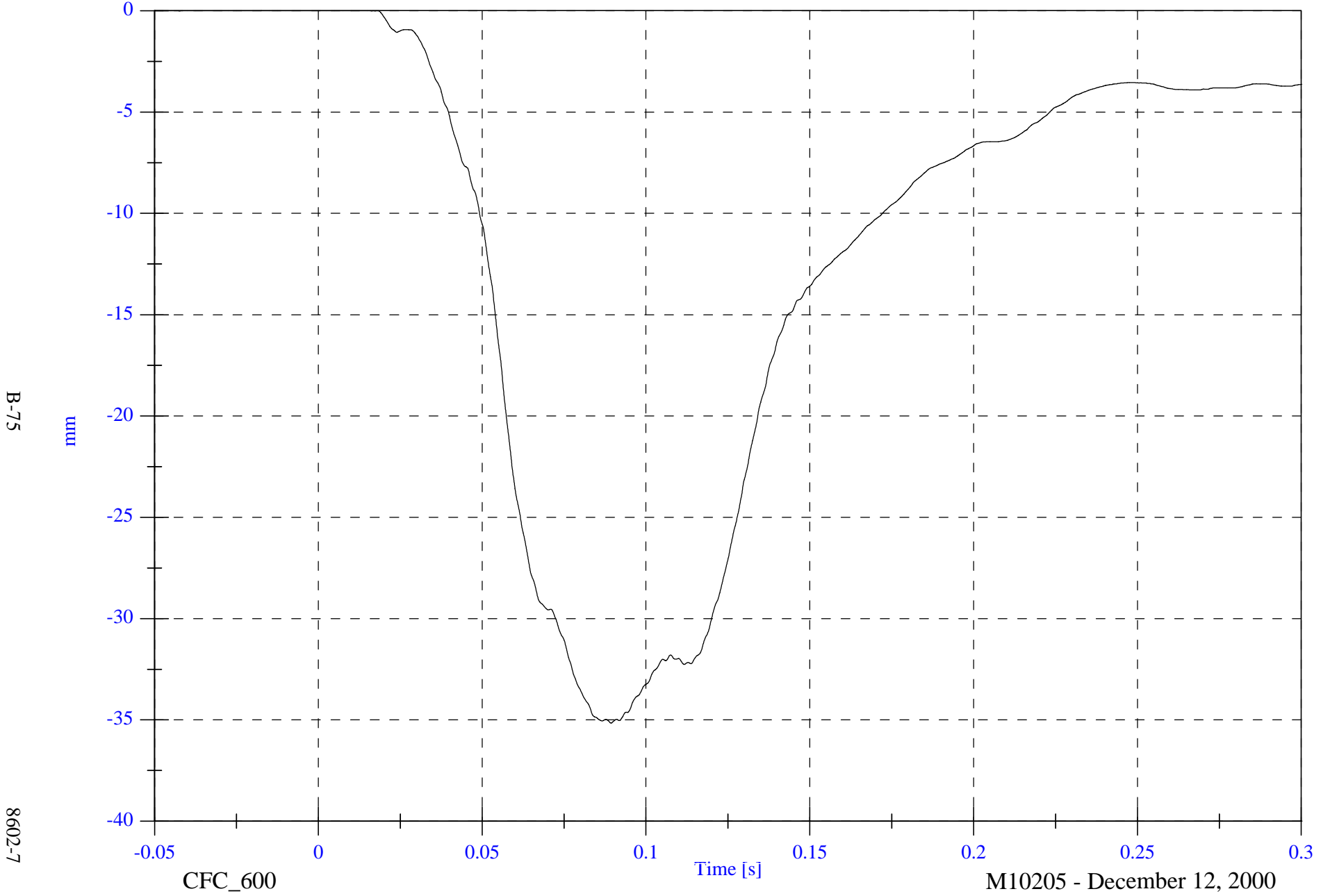
M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

P2 Chest Compression x

Max: 0.0 [mm] at -0.017 [s]

Min: -35.2 [mm] at 0.089 [s]



B-75

mm

8602-7

CFC_600

Time [s]

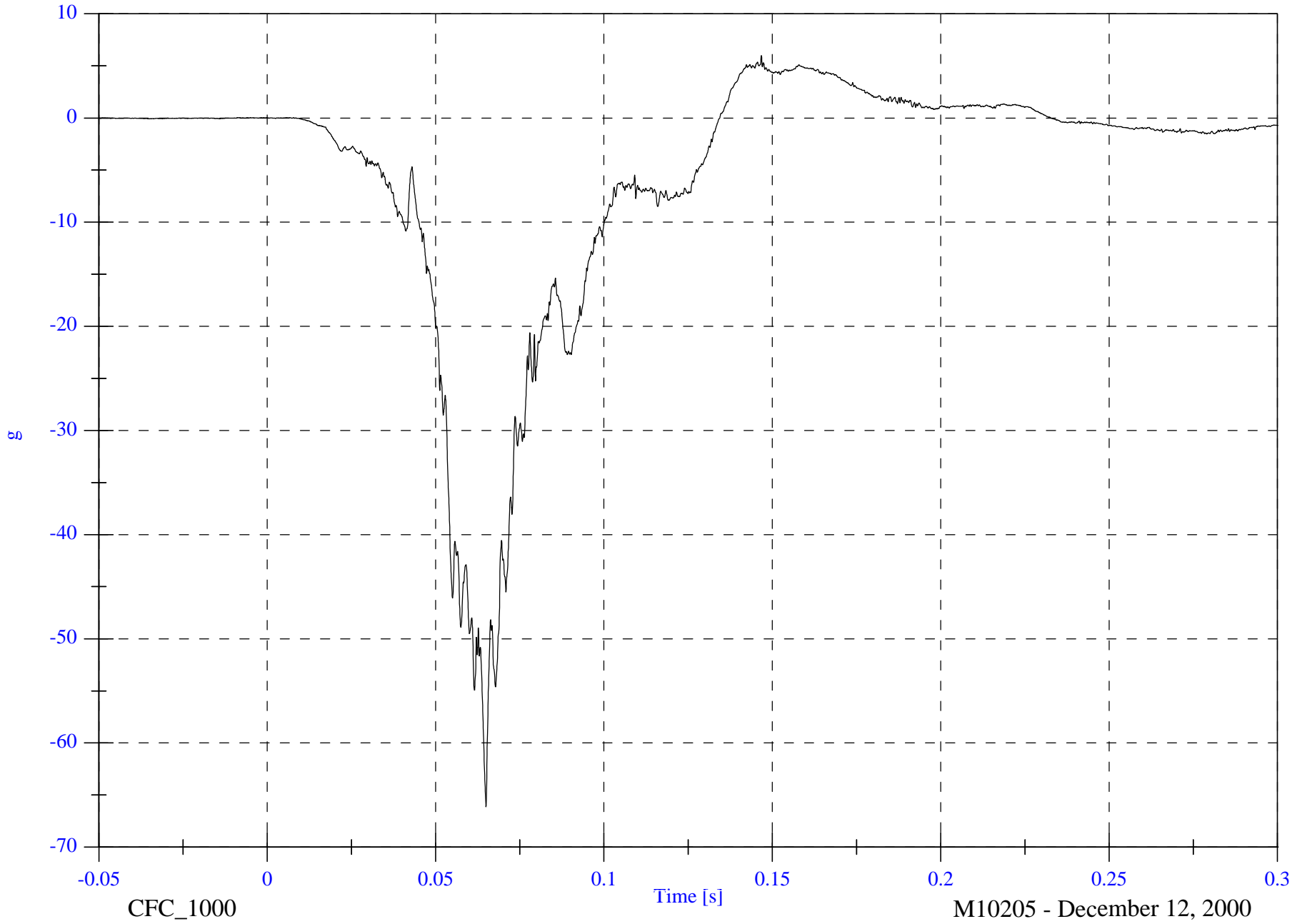
M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

Max: 6.0 [g] at 0.147 [s]

P2 Pelvic x

Min: -66.1 [g] at 0.065 [s]



B-76

8602-7

CFC_1000

Time [s]

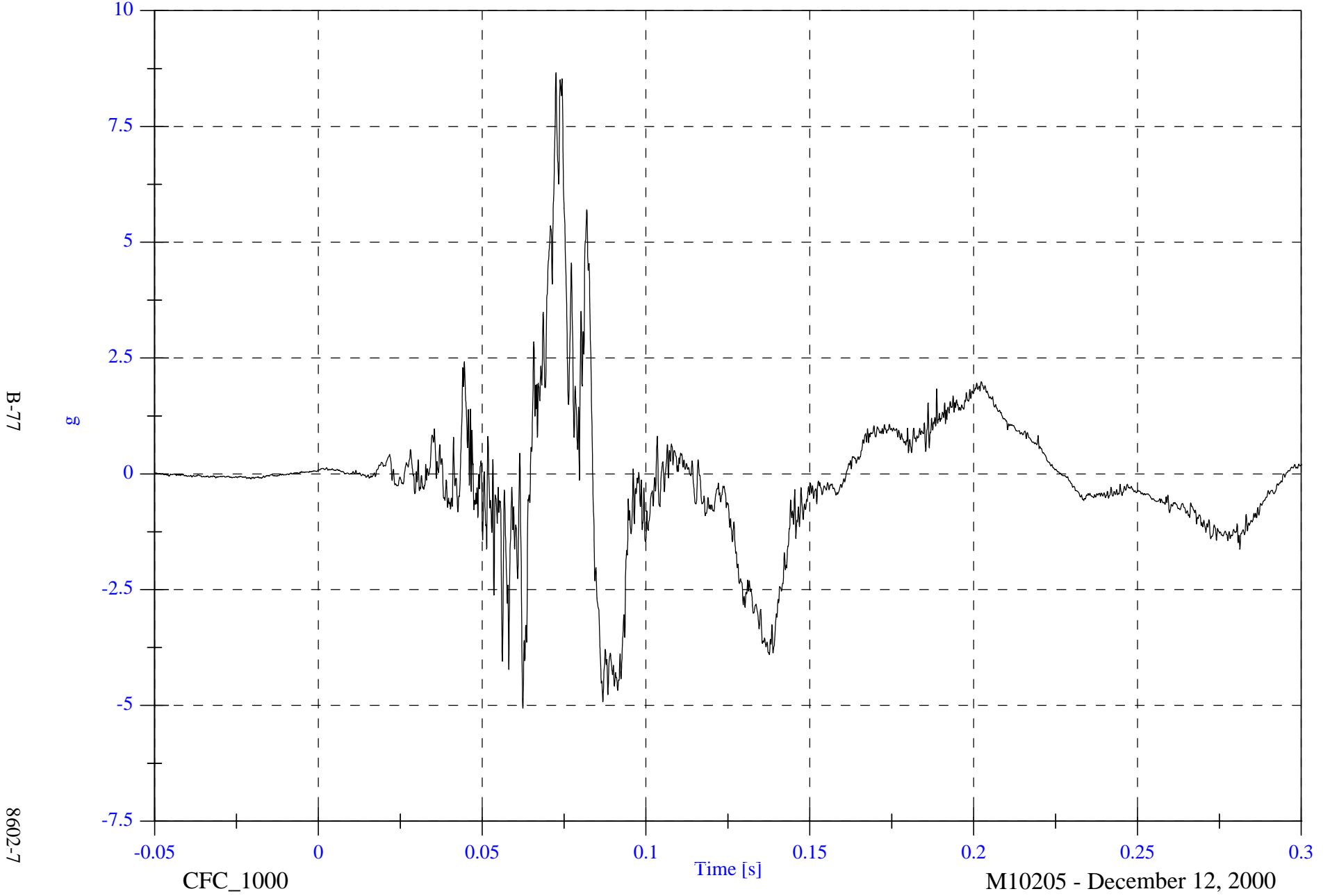
M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

P2 Pelvic y

Max: 8.7 [g] at 0.073 [s]

Min: -5.1 [g] at 0.062 [s]



B-77

8602-7

CFC_1000

Time [s]

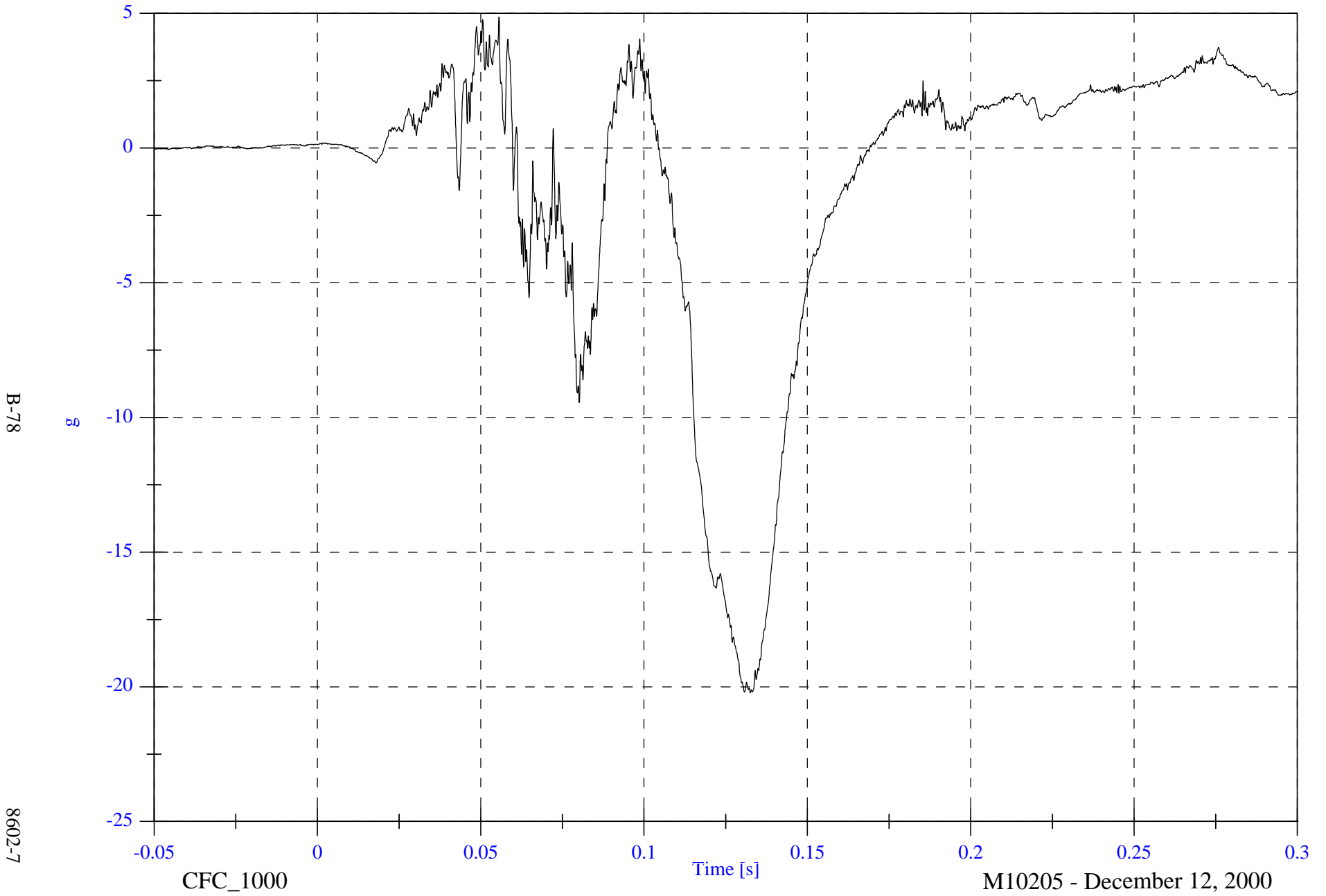
M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

Max: 4.9 [g] at 0.056 [s]

P2 Pelvic z

Min: -20.2 [g] at 0.133 [s]



B-78

8602-7

CFC_1000

M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

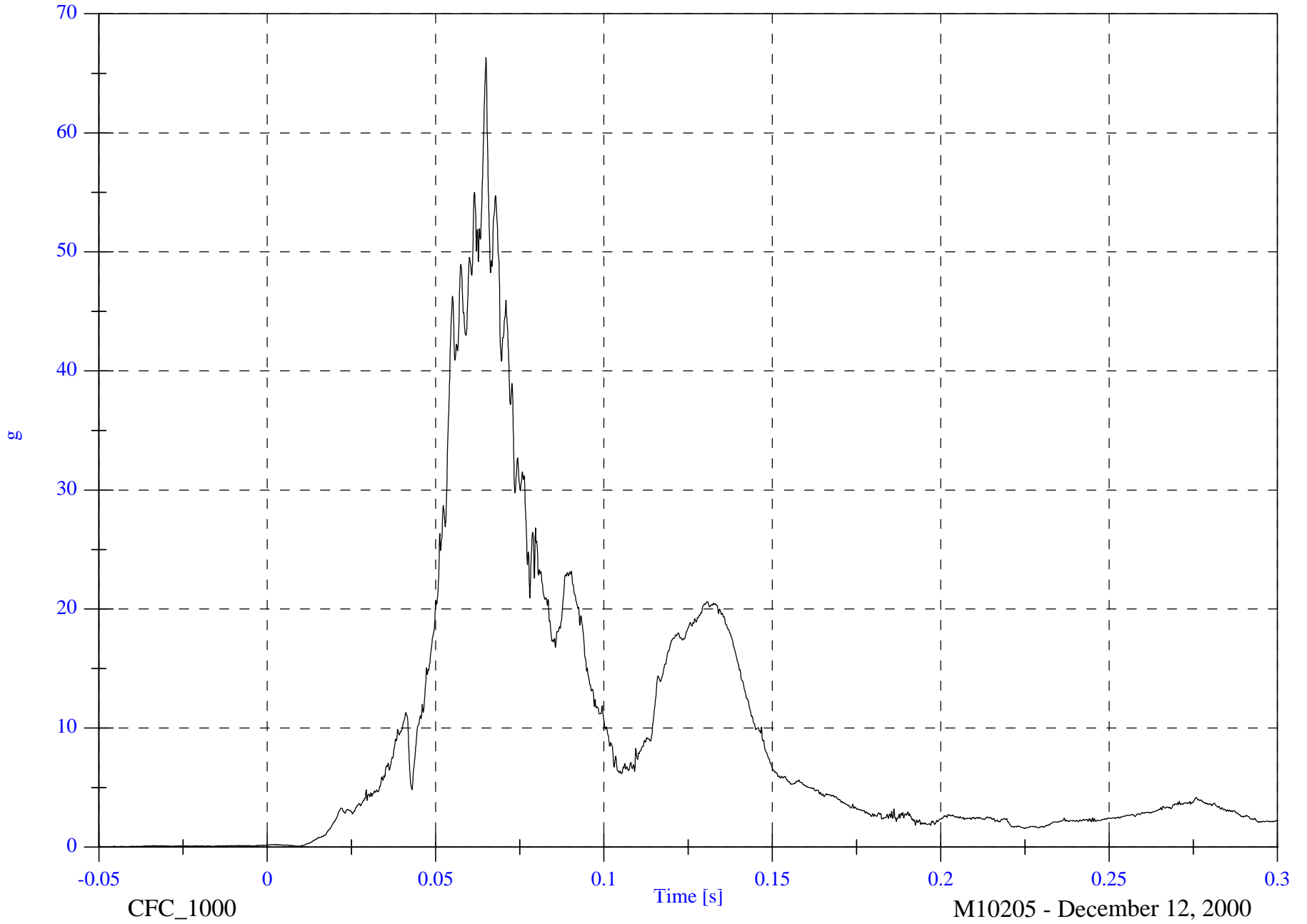
P2 Pelvic Resultant

Max: 66.3 [g] at 0.065 [s]

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

B-79

8602-7

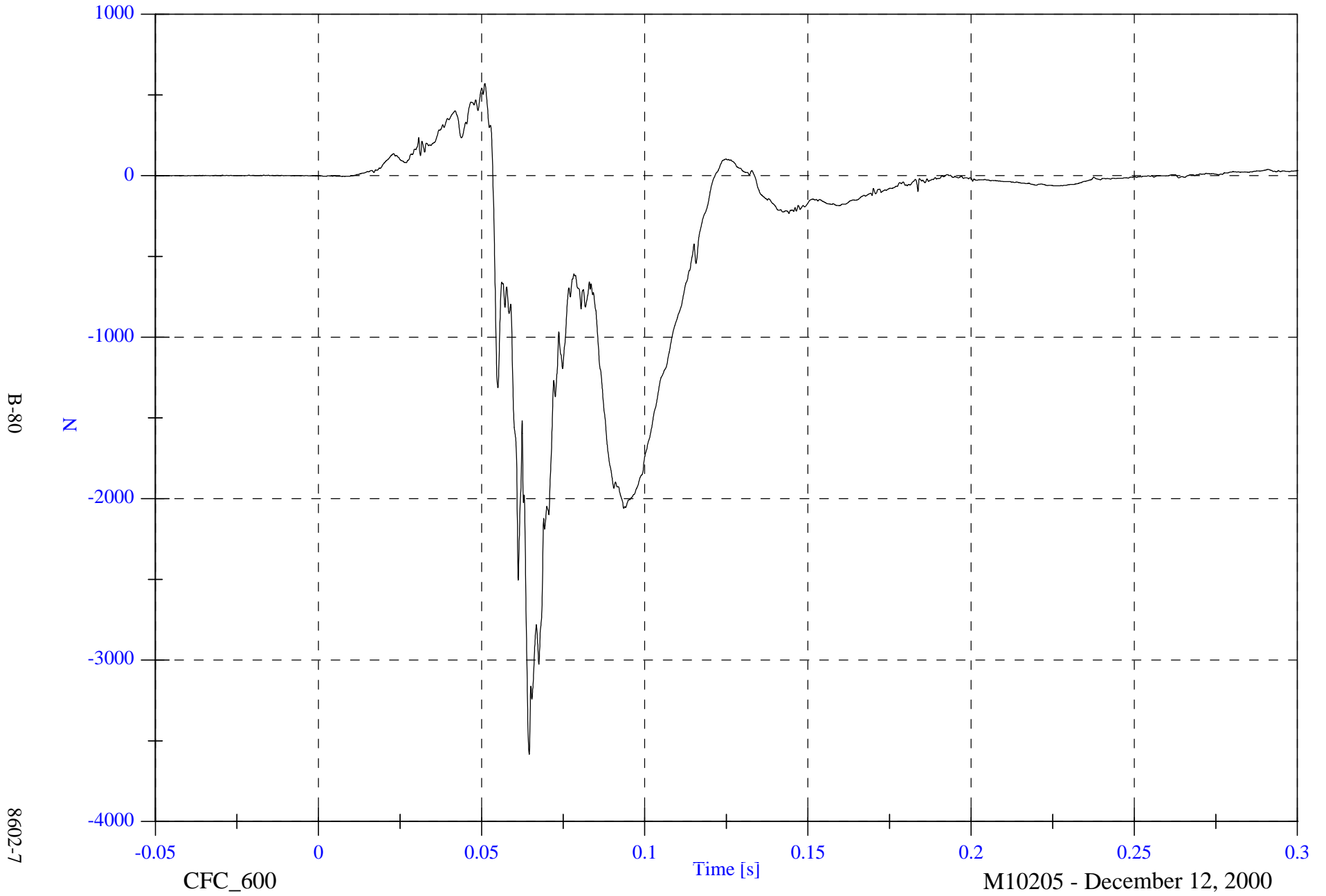


NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

P2 Left Femur z

Max: 570.9 [N] at 0.051 [s]

Min: -3583.5 [N] at 0.065 [s]

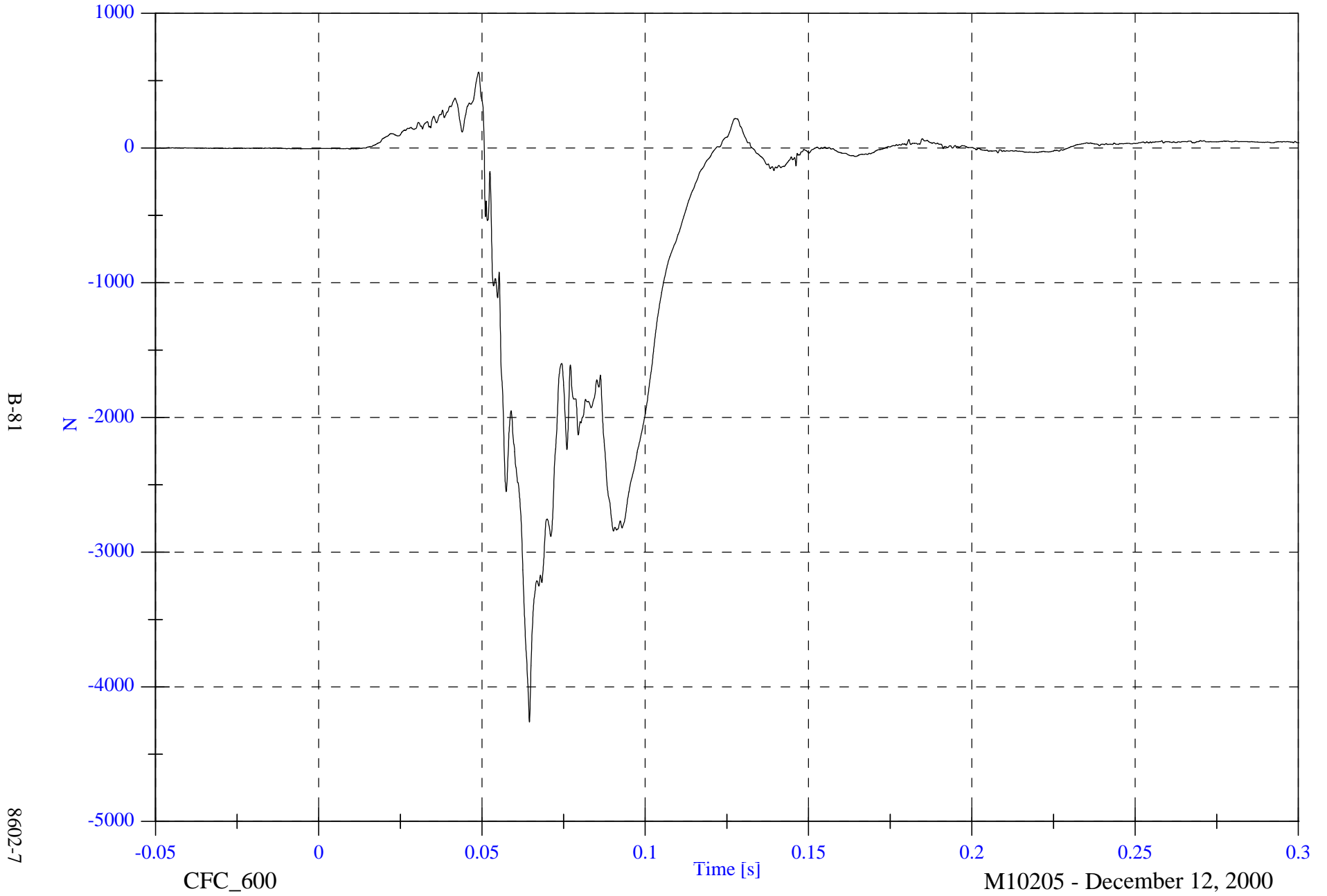


NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

P2 Right Femur z

Max: 564.6 [N] at 0.049 [s]

Min: -4262.3 [N] at 0.065 [s]



B-81

8602-7

CFC_600

Time [s]

M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

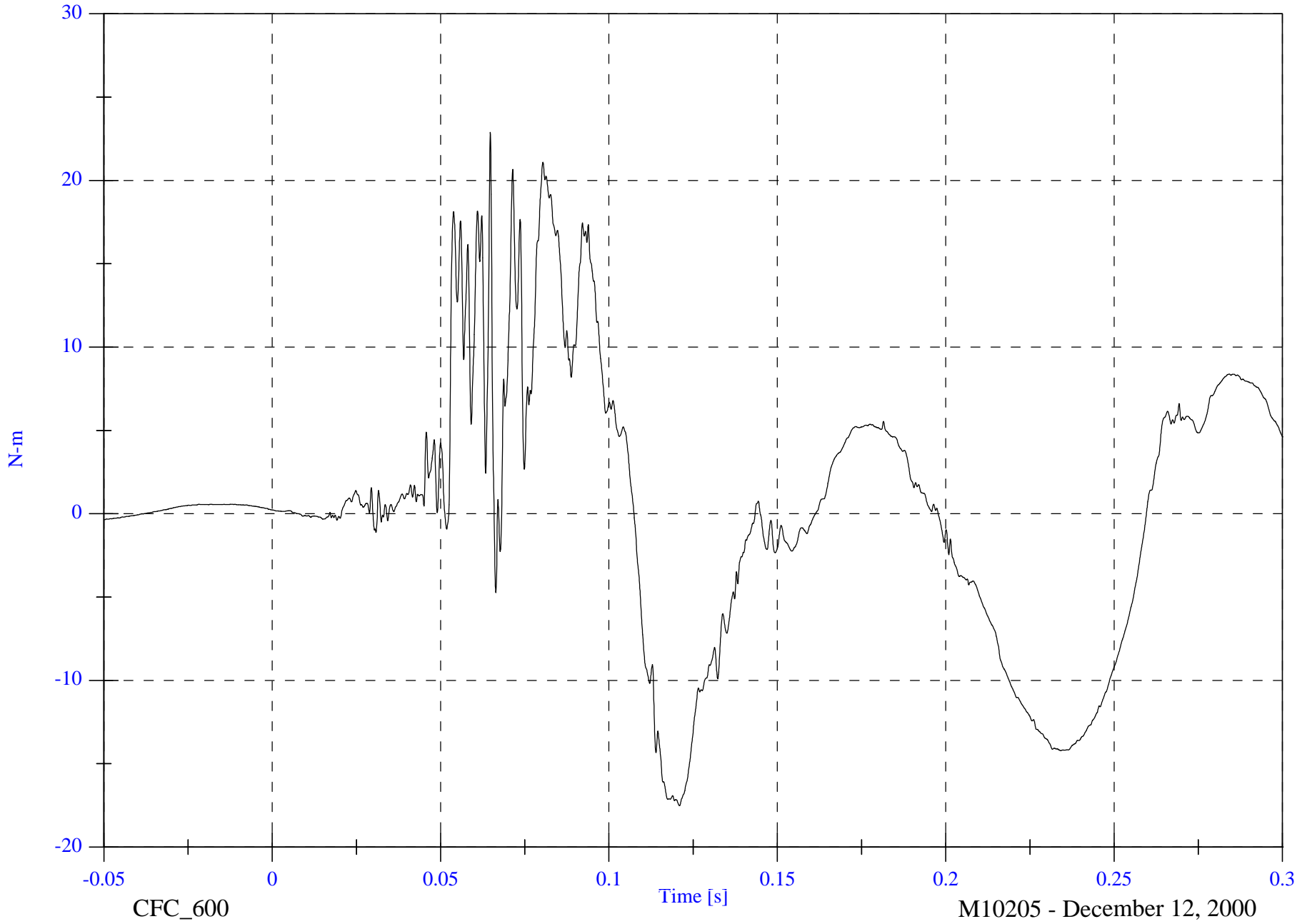
P2 Left Upper Tibia Mx

Max: 22.9 [N-m] at 0.065 [s]

Min: -17.5 [N-m] at 0.121 [s]

B-82

8602-7



NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

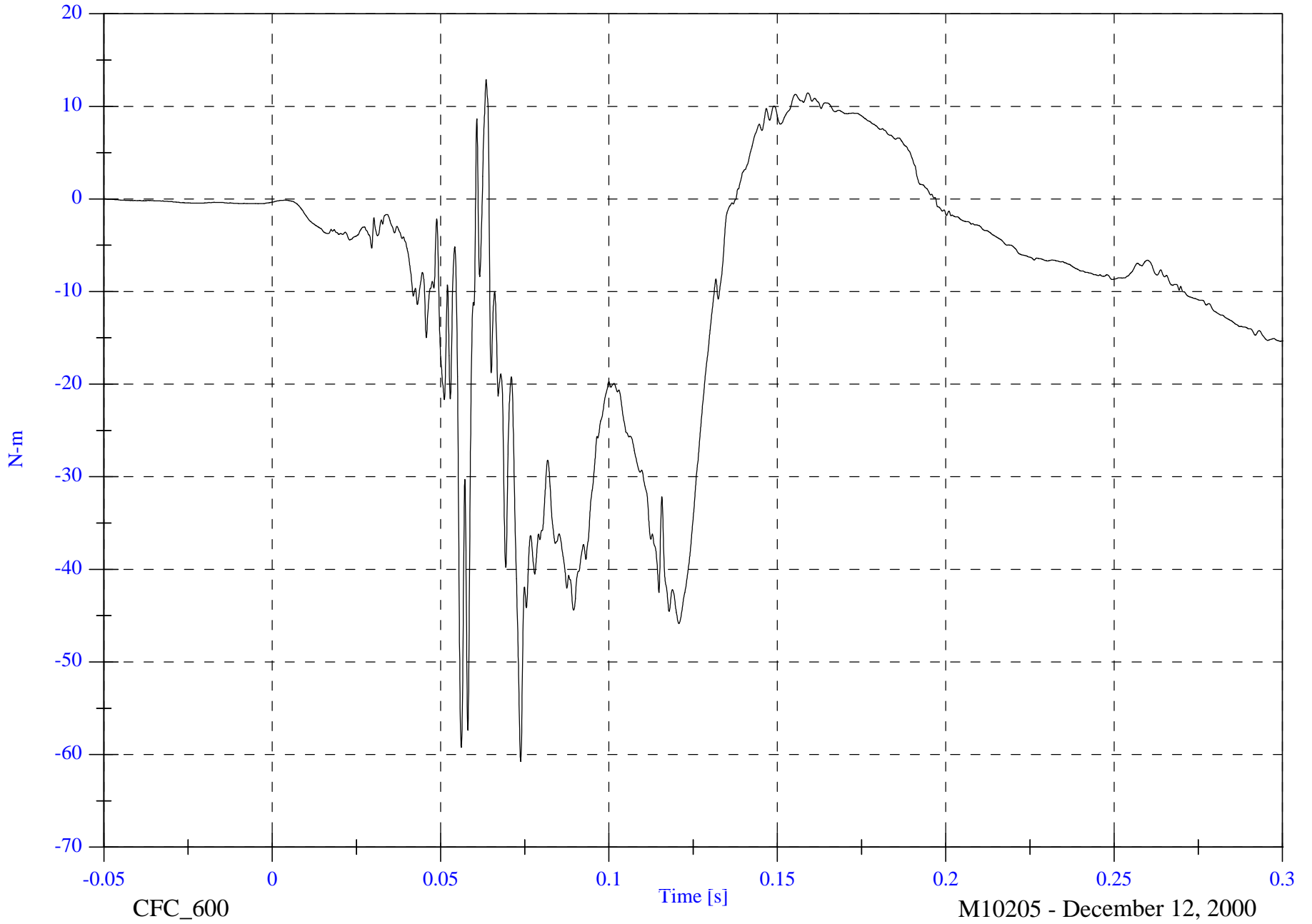
P2 Left Upper Tibia My

Max: 12.9 [N-m] at 0.064 [s]

Min: -60.8 [N-m] at 0.074 [s]

B-83

8602-7



CFC_600

Time [s]

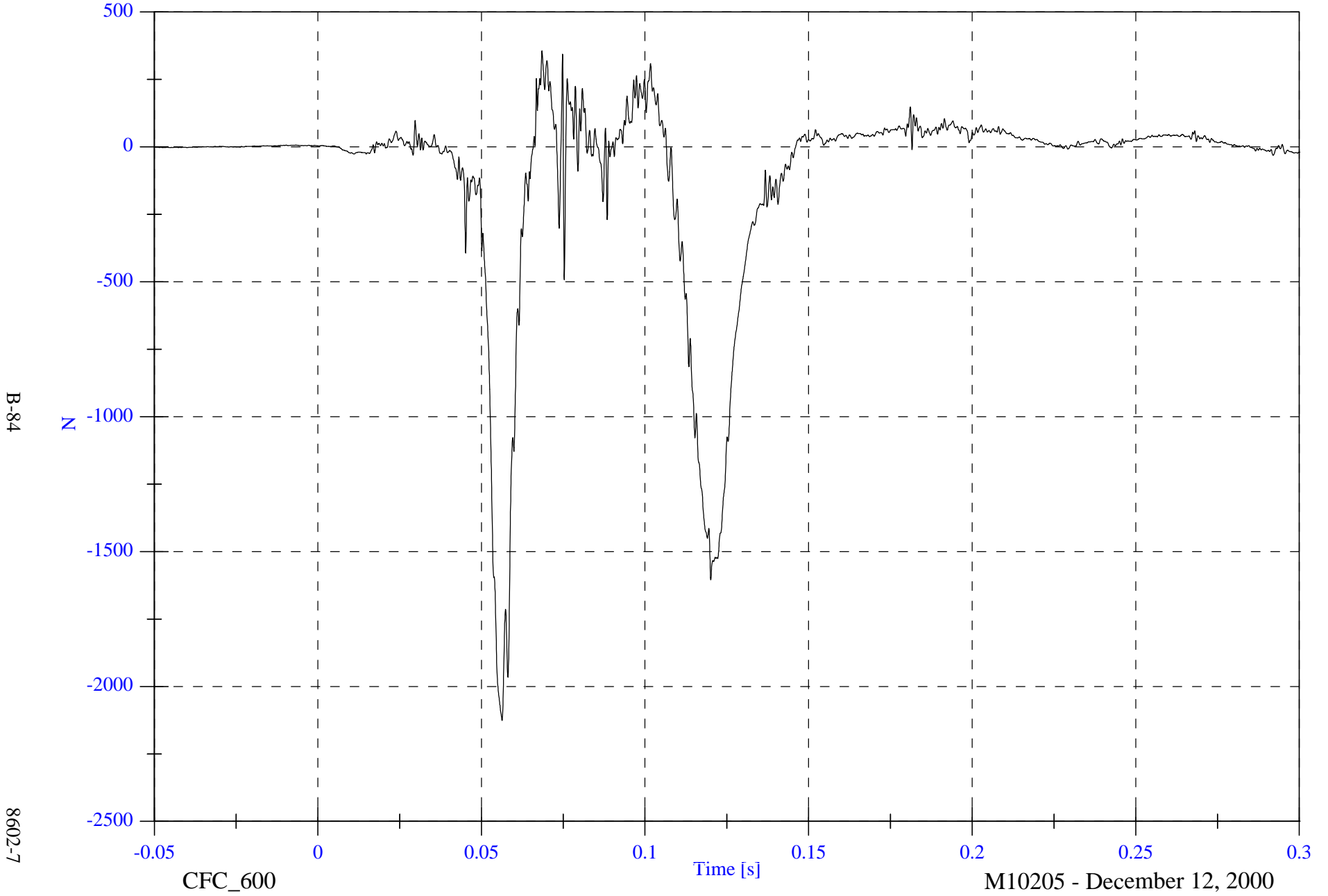
M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

P2 Left Lower Tibia Fz

Max: 356.1 [N] at 0.069 [s]

Min: -2126.6 [N] at 0.056 [s]



NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

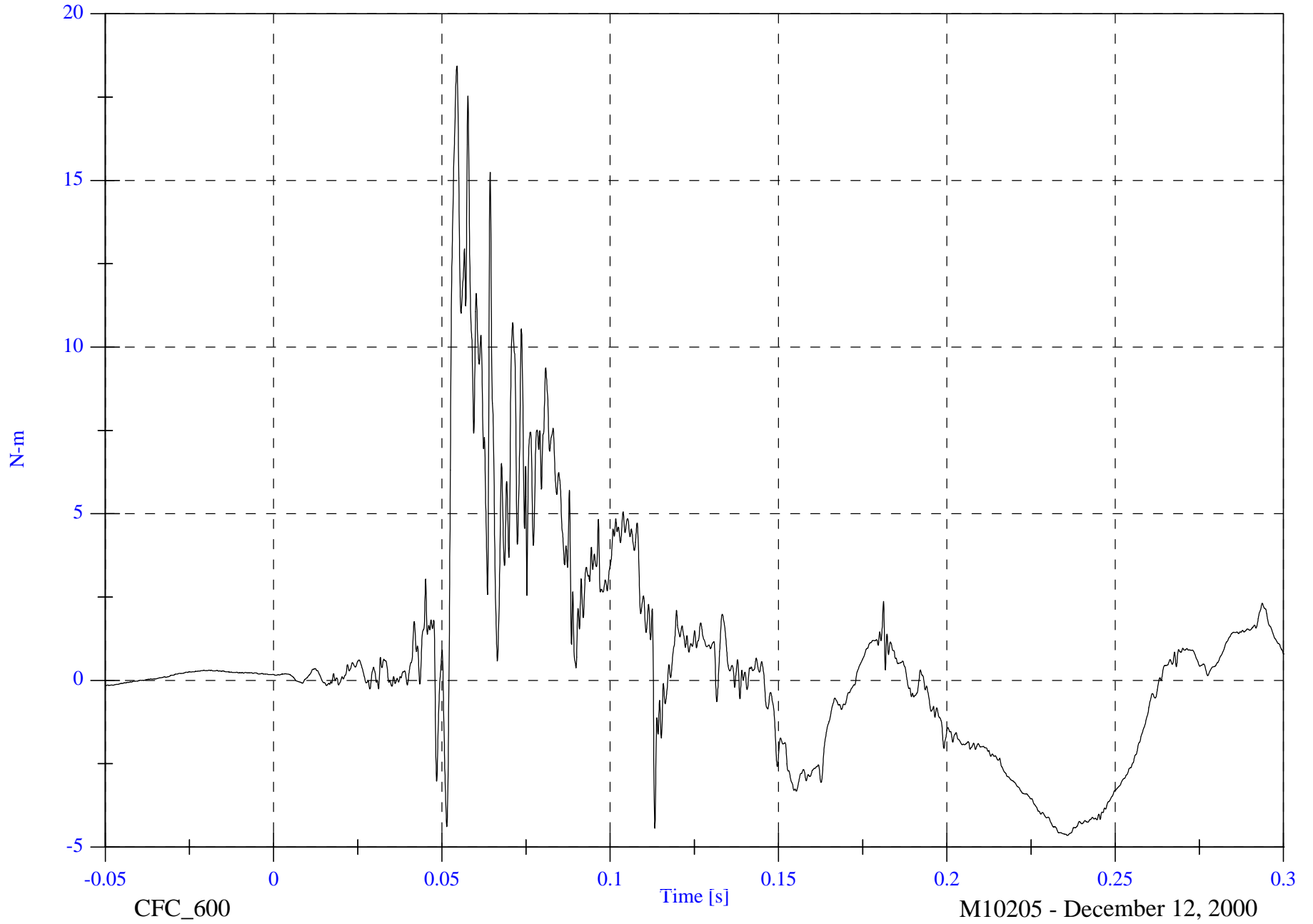
P2 Left Lower Tibia Mx

Max: 18.4 [N-m] at 0.054 [s]

Min: -4.7 [N-m] at 0.236 [s]

B-85

8602-7



NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

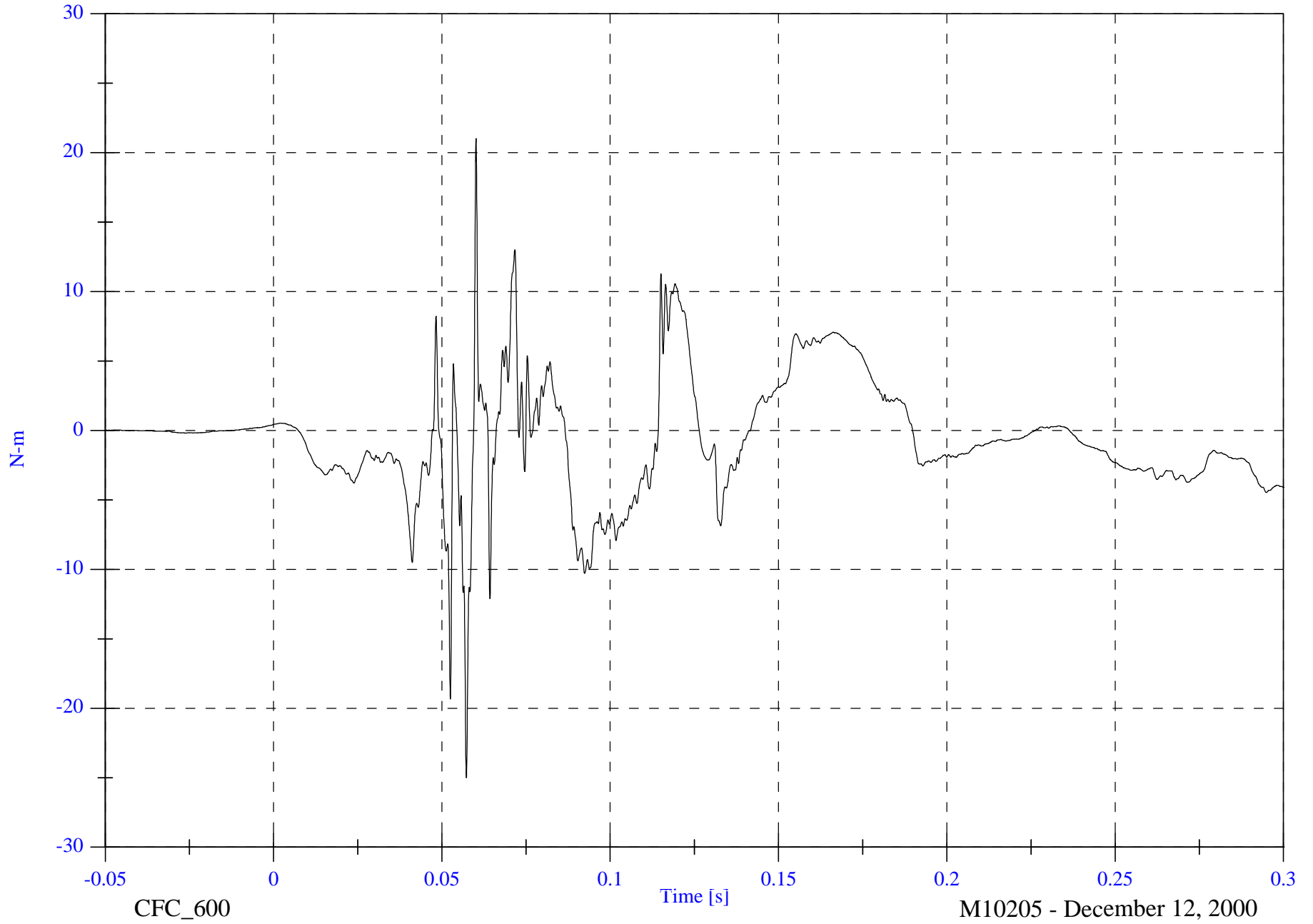
P2 Left Lower Tibia My

Max: 21.0 [N-m] at 0.060 [s]

Min: -25.0 [N-m] at 0.057 [s]

B-86

8602-7



CFC_600

Time [s]

M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

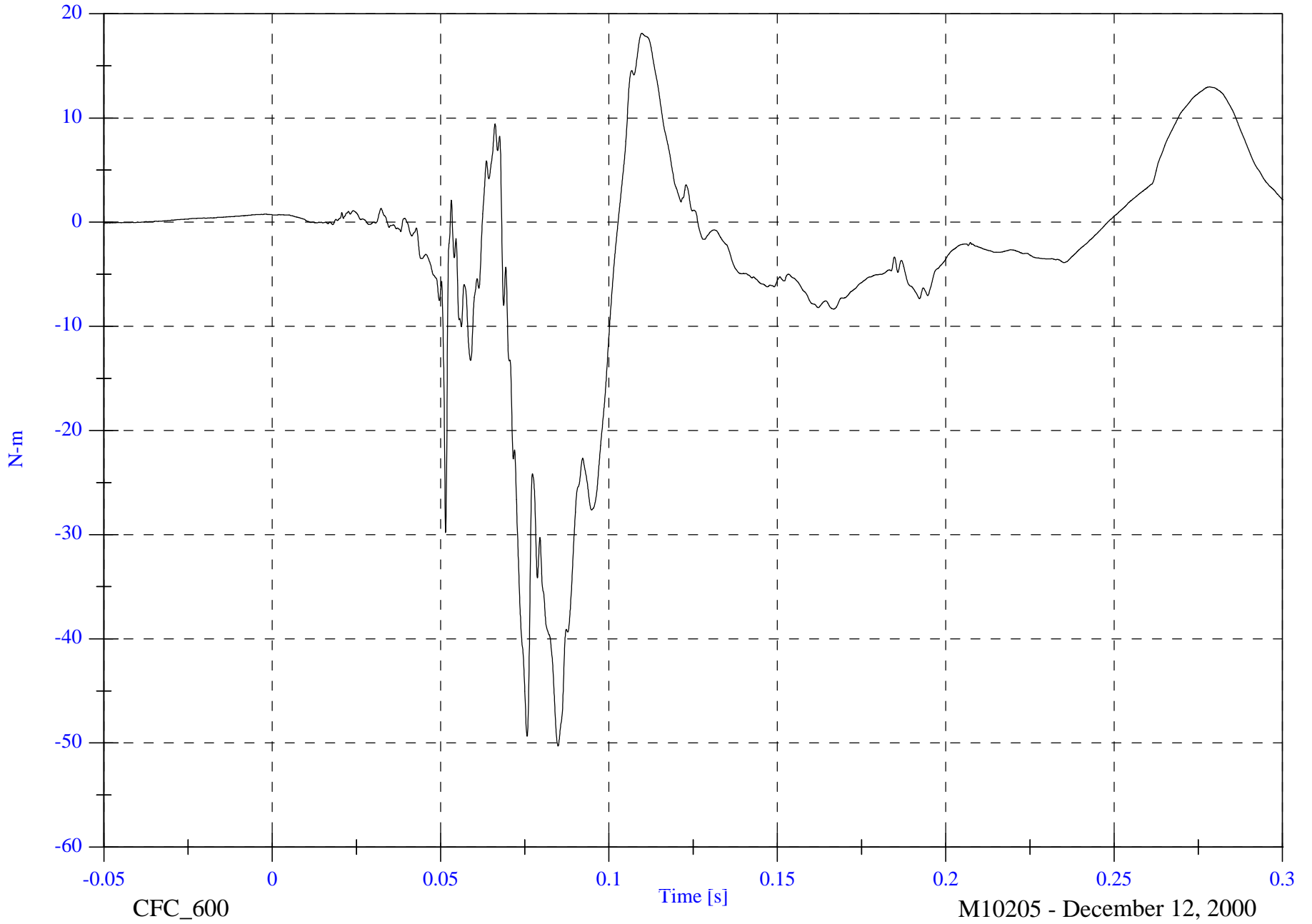
P2 Right Upper Tibia Mx

Max: 18.1 [N-m] at 0.110 [s]

Min: -50.3 [N-m] at 0.085 [s]

B-87

8602-7



CFC_600

Time [s]

M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

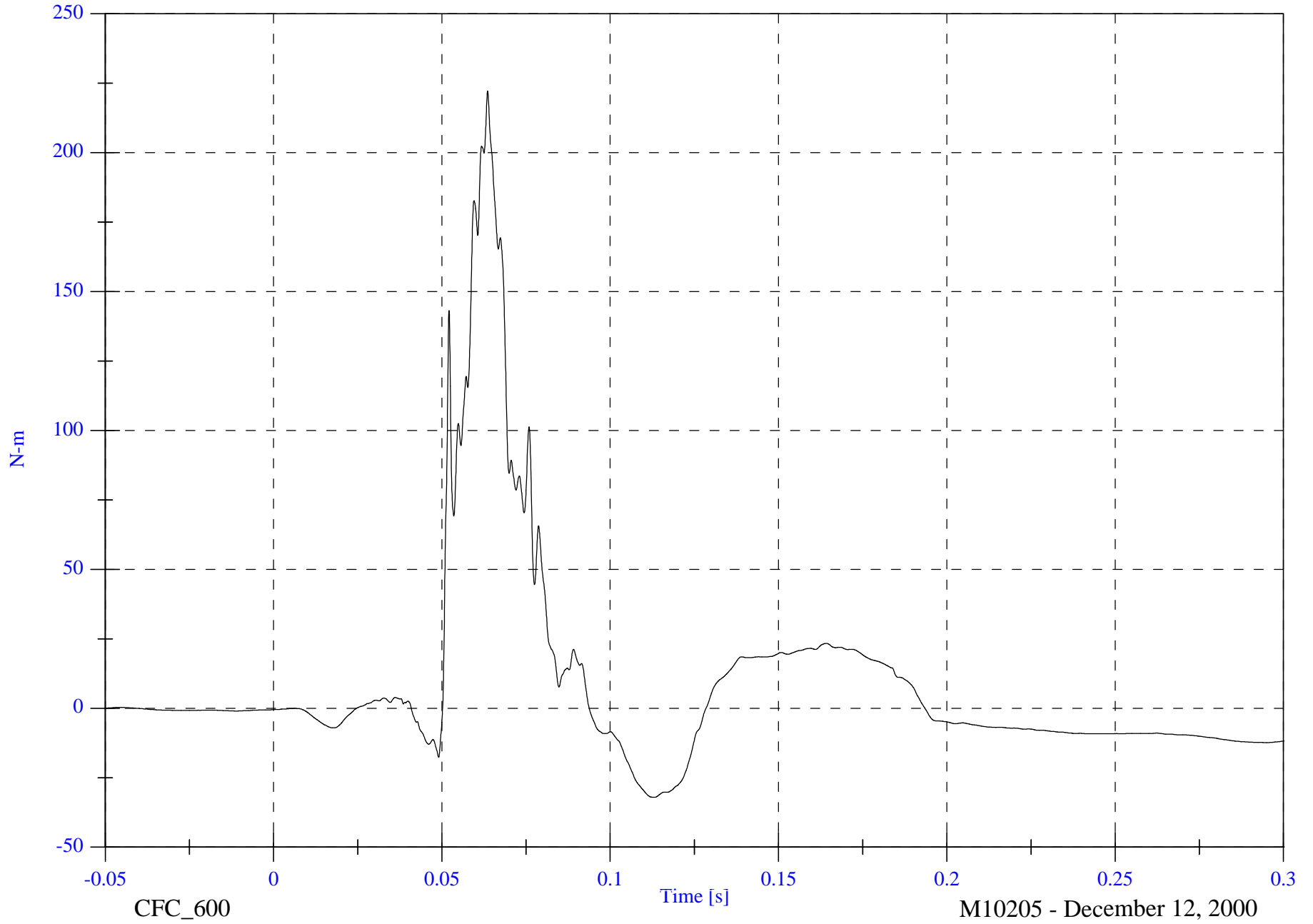
Max: 222.2 [N-m] at 0.064 [s]

P2 Right Upper Tibia My

Min: -32.1 [N-m] at 0.113 [s]

B-88

8602-7

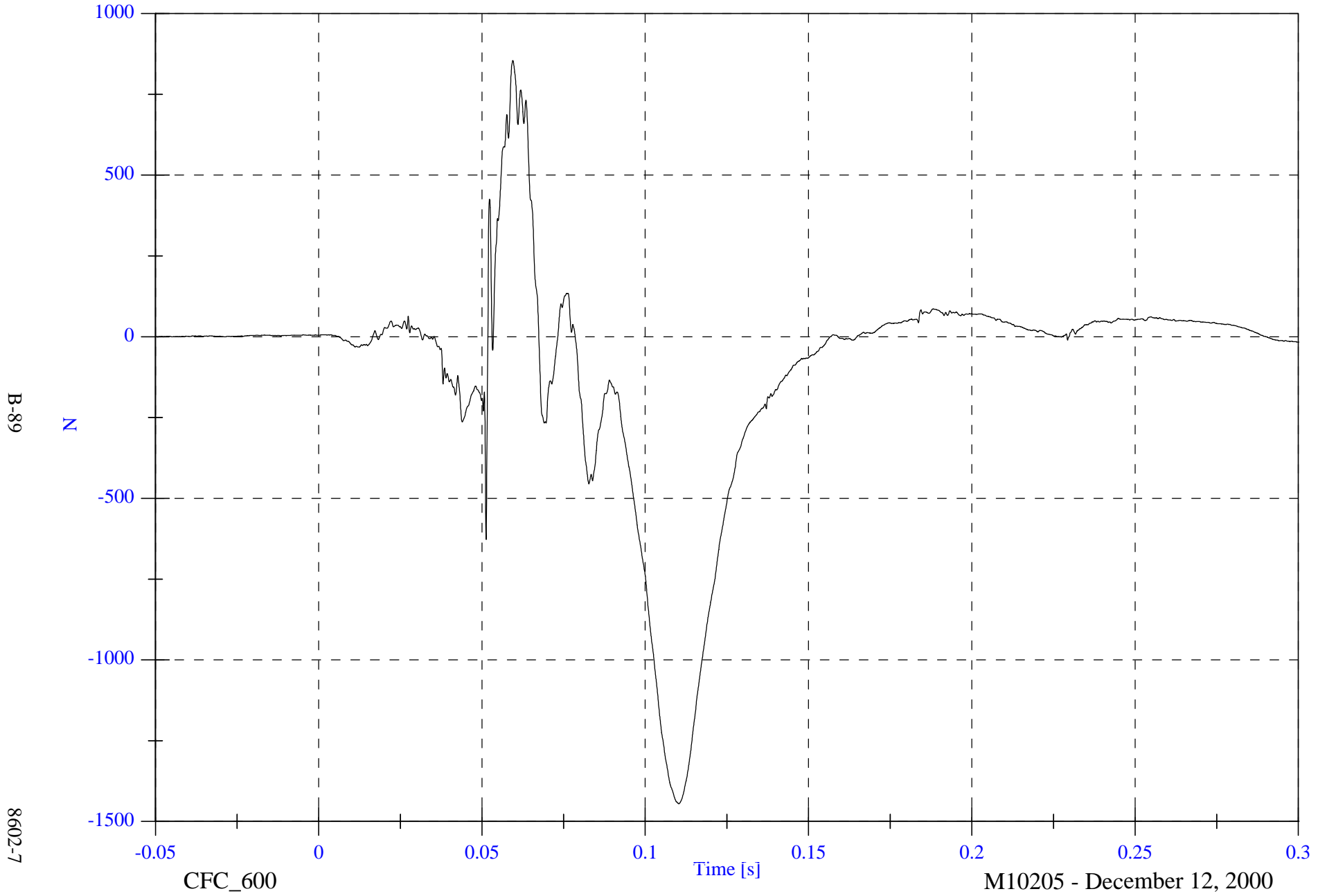


NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

P2 Right Lower Tibia Fz

Max: 854.4 [N] at 0.059 [s]

Min: -1445.6 [N] at 0.110 [s]



B-89

8602-7

CFC_600

Time [s]

M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

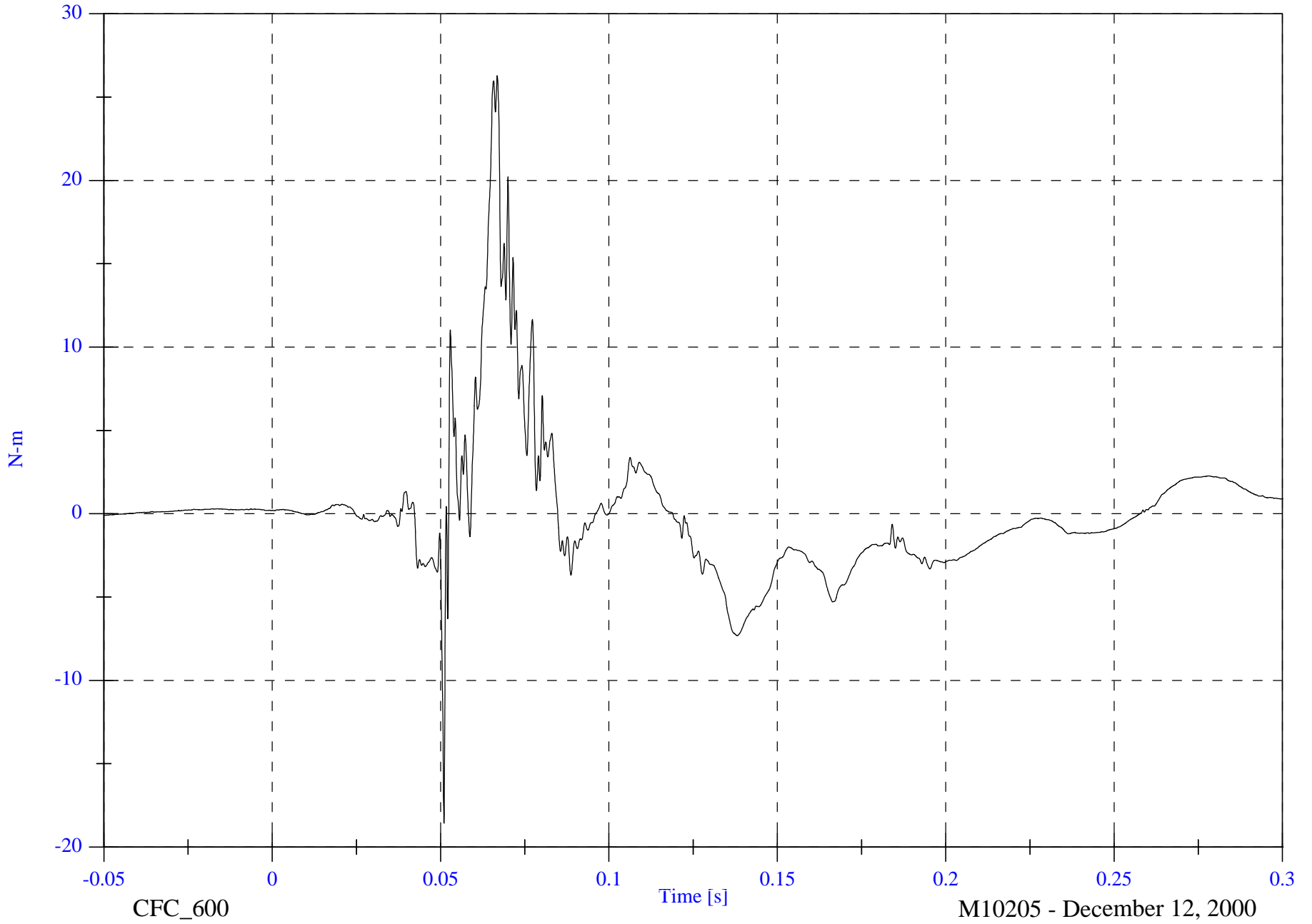
P2 Right Lower Tibia Mx

Max: 26.3 [N-m] at 0.067 [s]

Min: -18.6 [N-m] at 0.051 [s]

B-90

8602-7



NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

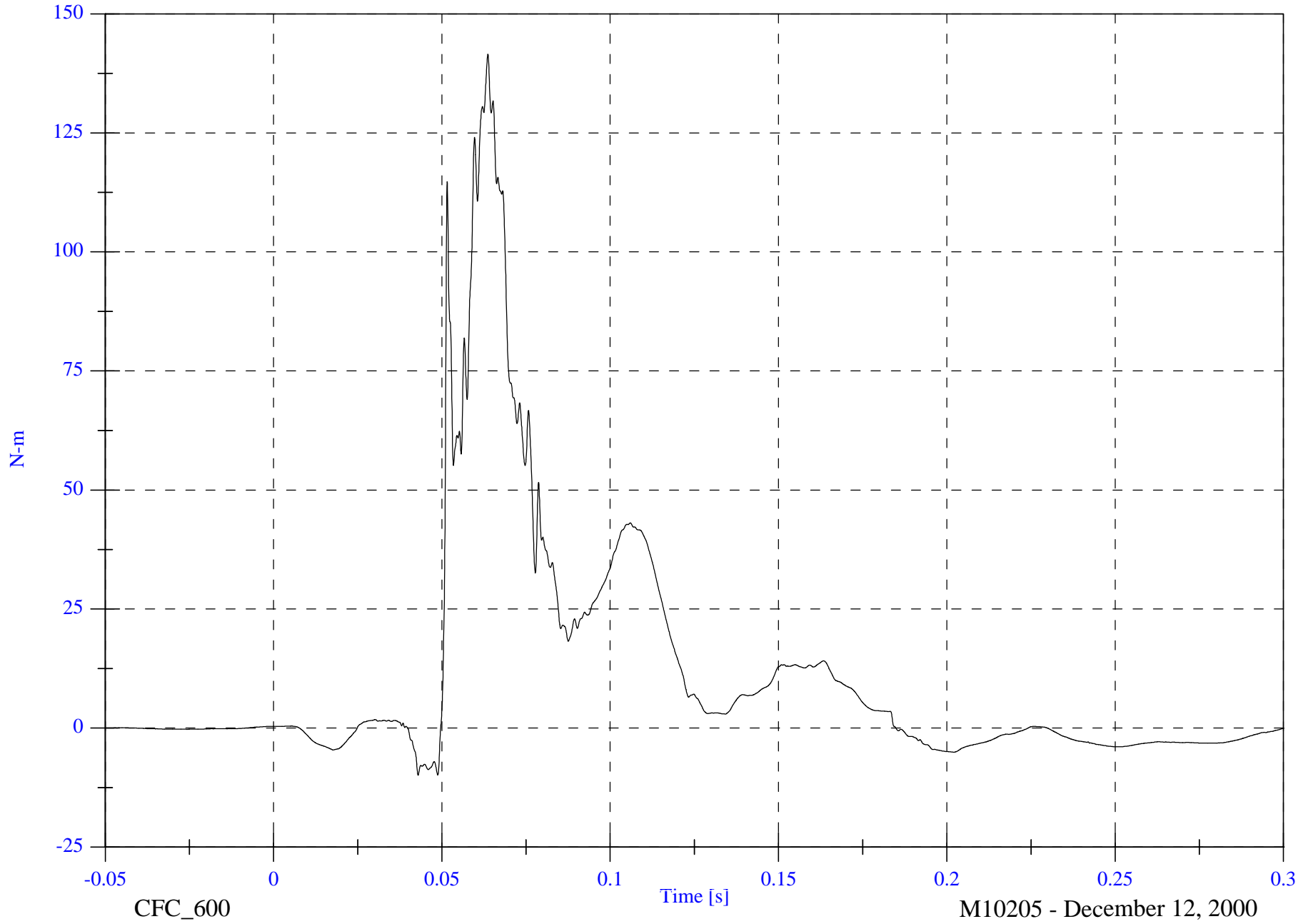
Max: 141.5 [N-m] at 0.064 [s]

P2 Right Lower Tibia My

Min: -9.9 [N-m] at 0.043 [s]

B-91

8602-7

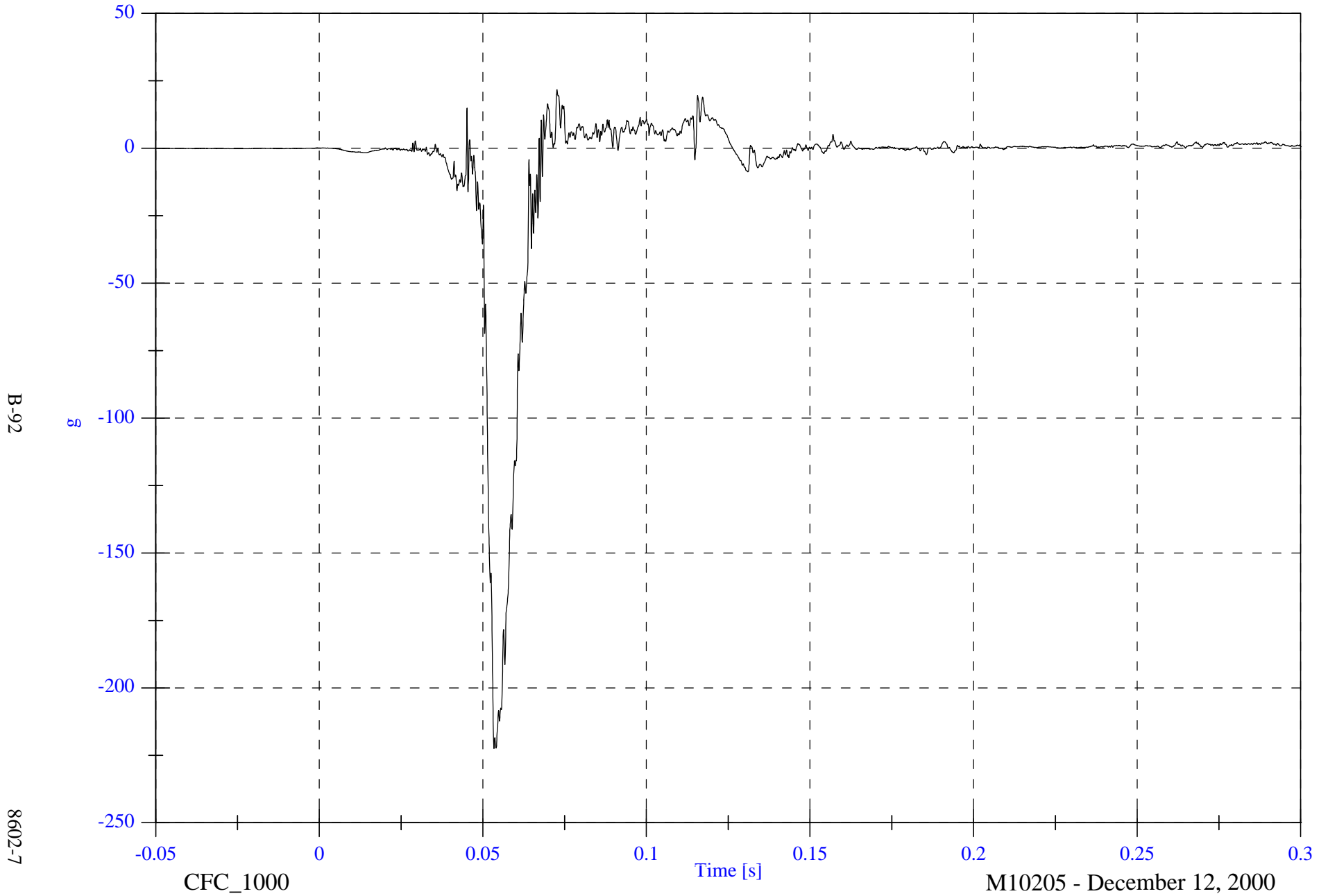


NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

P2 Left Foot Aft x

Max: 21.7 [g] at 0.073 [s]

Min: -222.5 [g] at 0.053 [s]

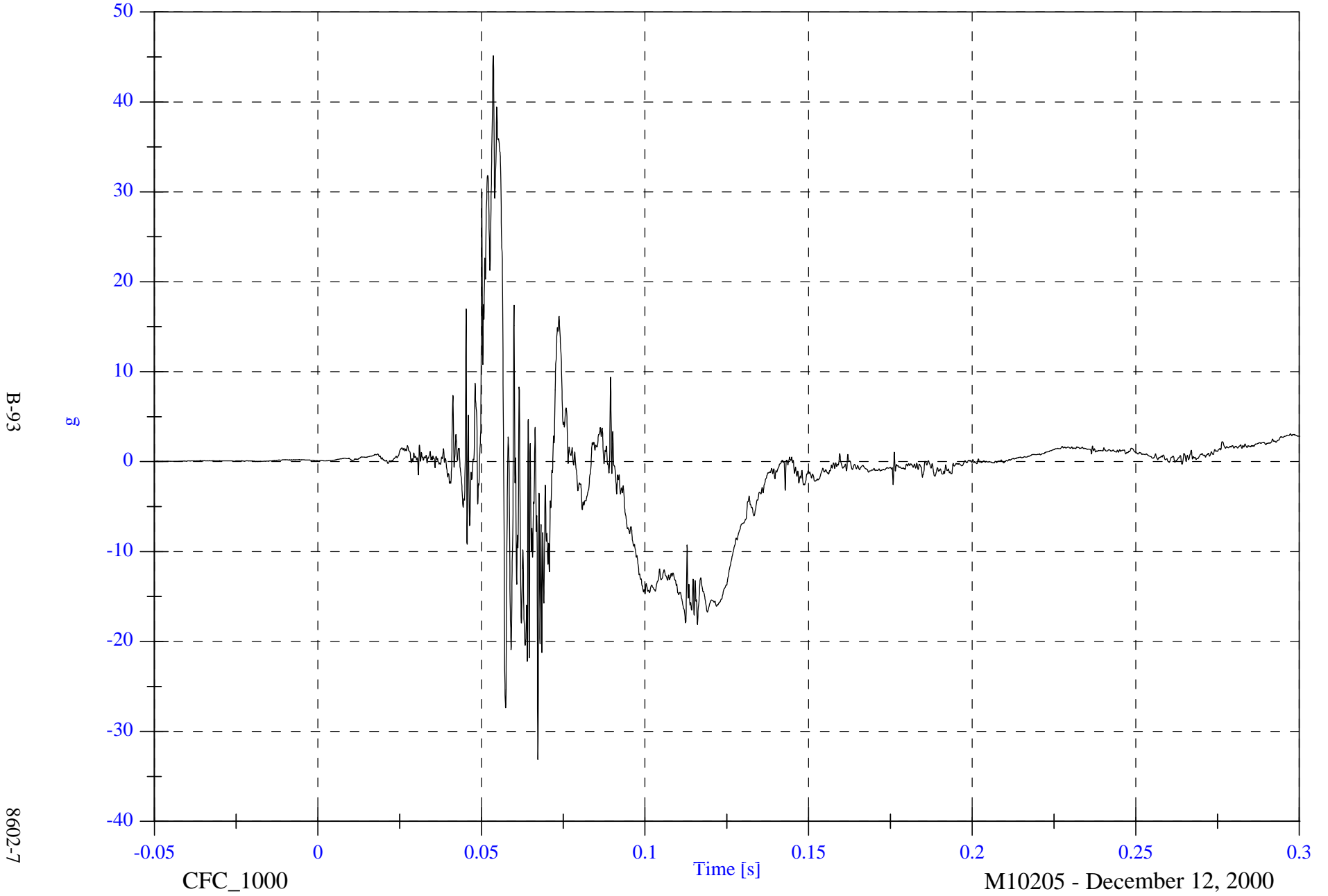


NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

P2 Left Foot Aft z

Max: 45.1 [g] at 0.054 [s]

Min: -33.2 [g] at 0.067 [s]

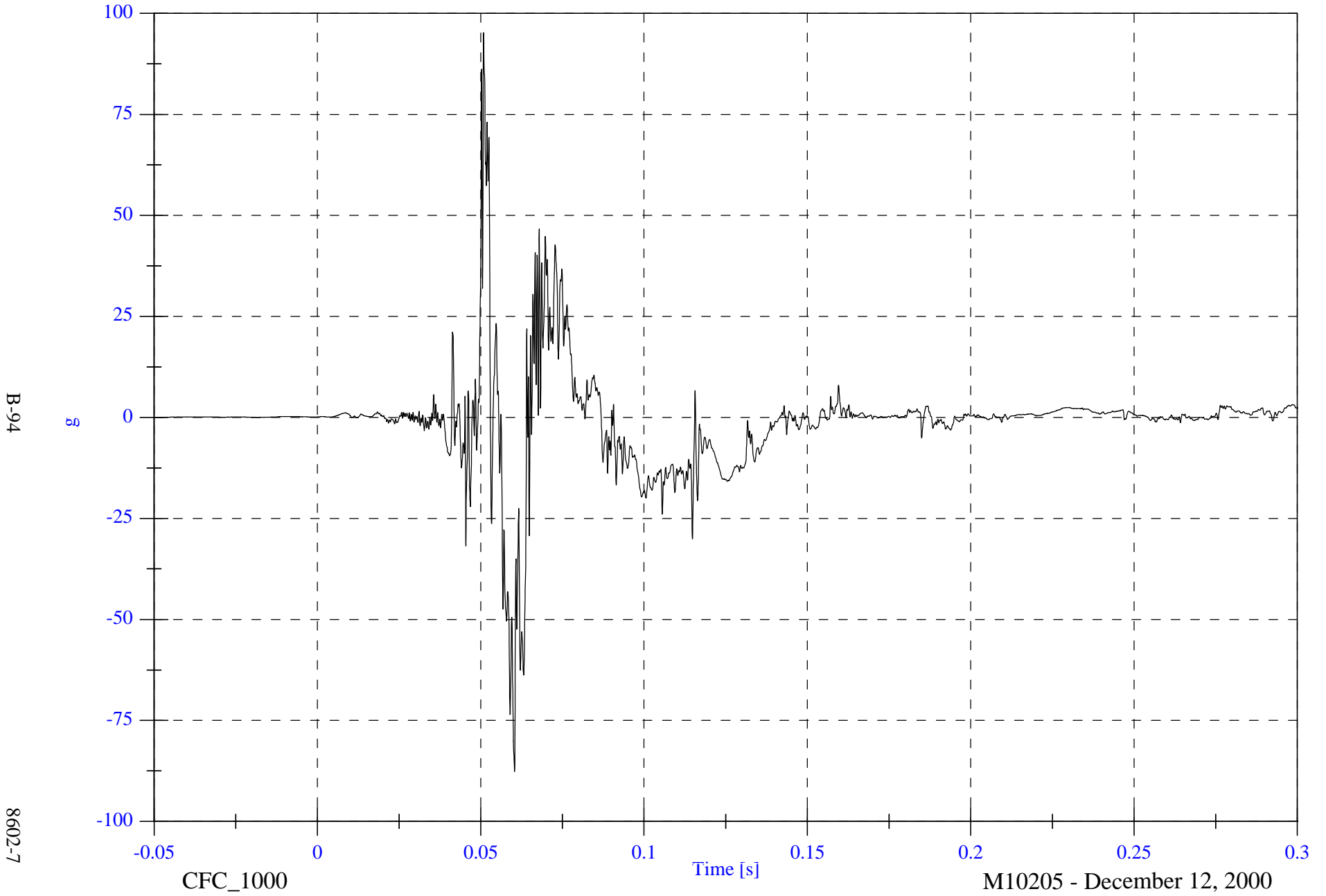


NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

P2 Left Foot Fore z

Max: 95.2 [g] at 0.051 [s]

Min: -87.7 [g] at 0.060 [s]

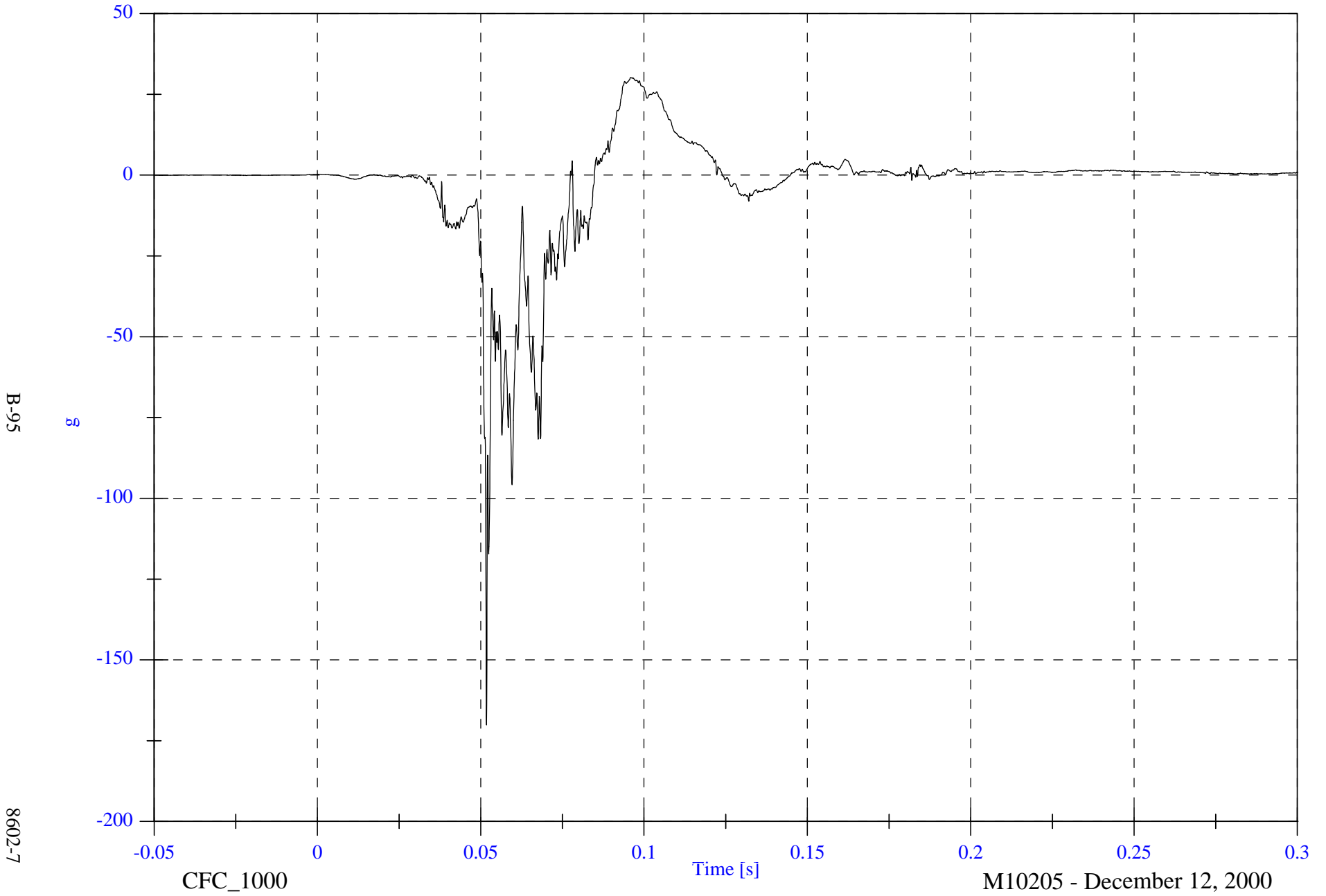


NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

P2 Right Foot Aft x

Max: 30.2 [g] at 0.096 [s]

Min: -170.2 [g] at 0.052 [s]

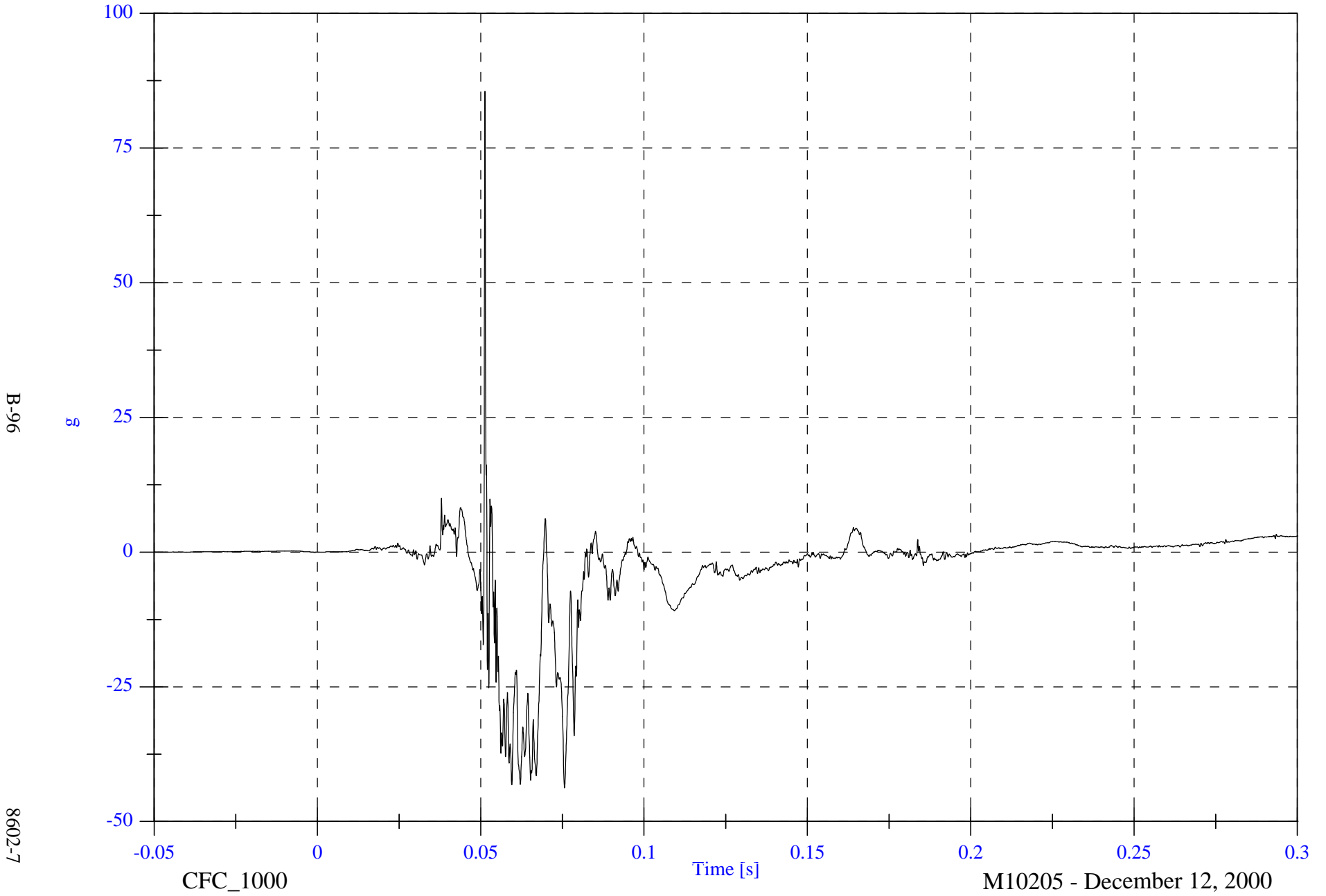


NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

Max: 85.6 [g] at 0.051 [s]

P2 Right Foot Aft z

Min: -43.8 [g] at 0.076 [s]

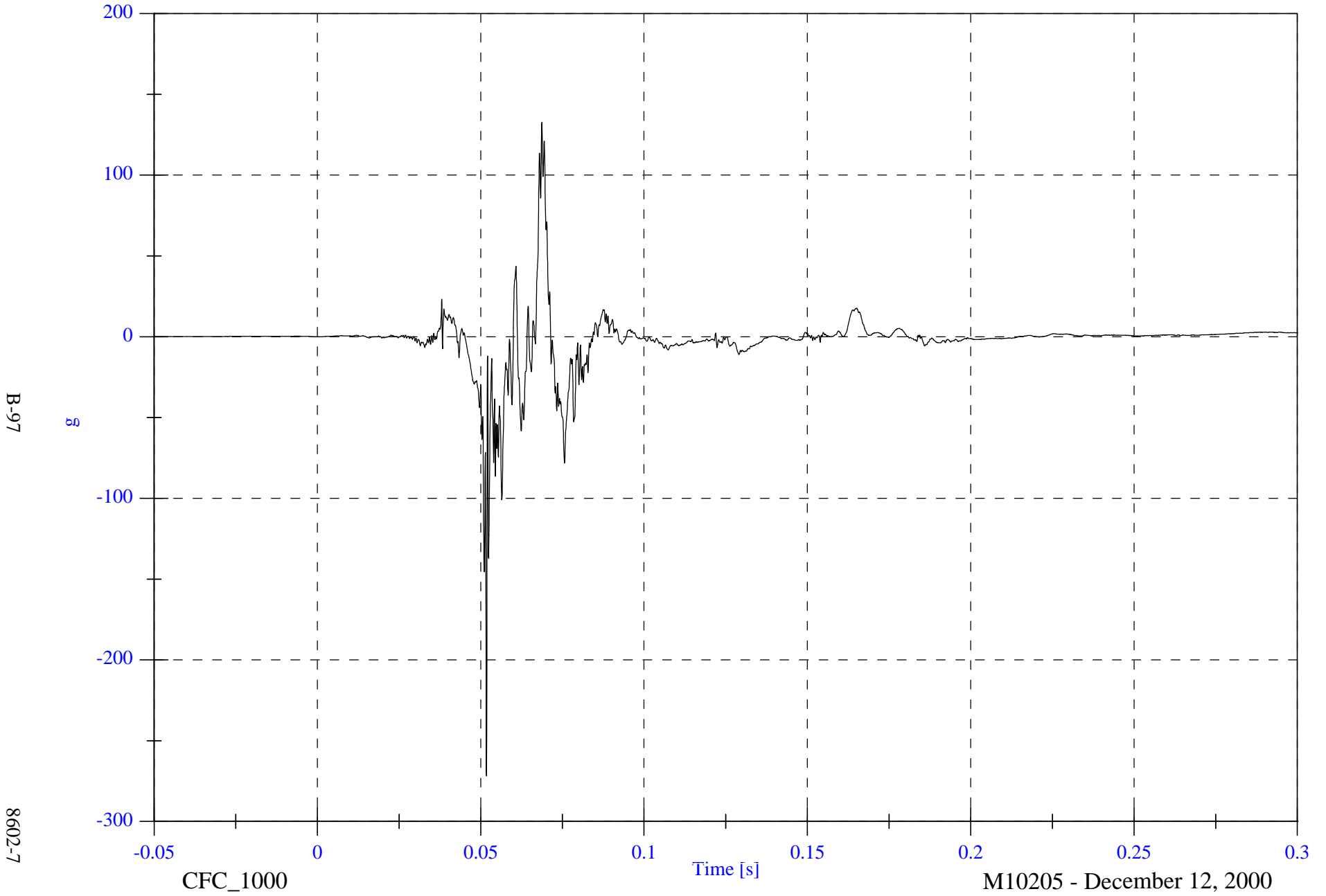


NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

Max: 132.6 [g] at 0.069 [s]

P2 Right Foot Fore x

Min: -271.8 [g] at 0.052 [s]



NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

Left Rear #1x

Max: 2.7 [g] at 0.183 [s]

Min: -34.9 [g] at 0.018 [s]

B-98

8602-7



CFC_60

Time [s]

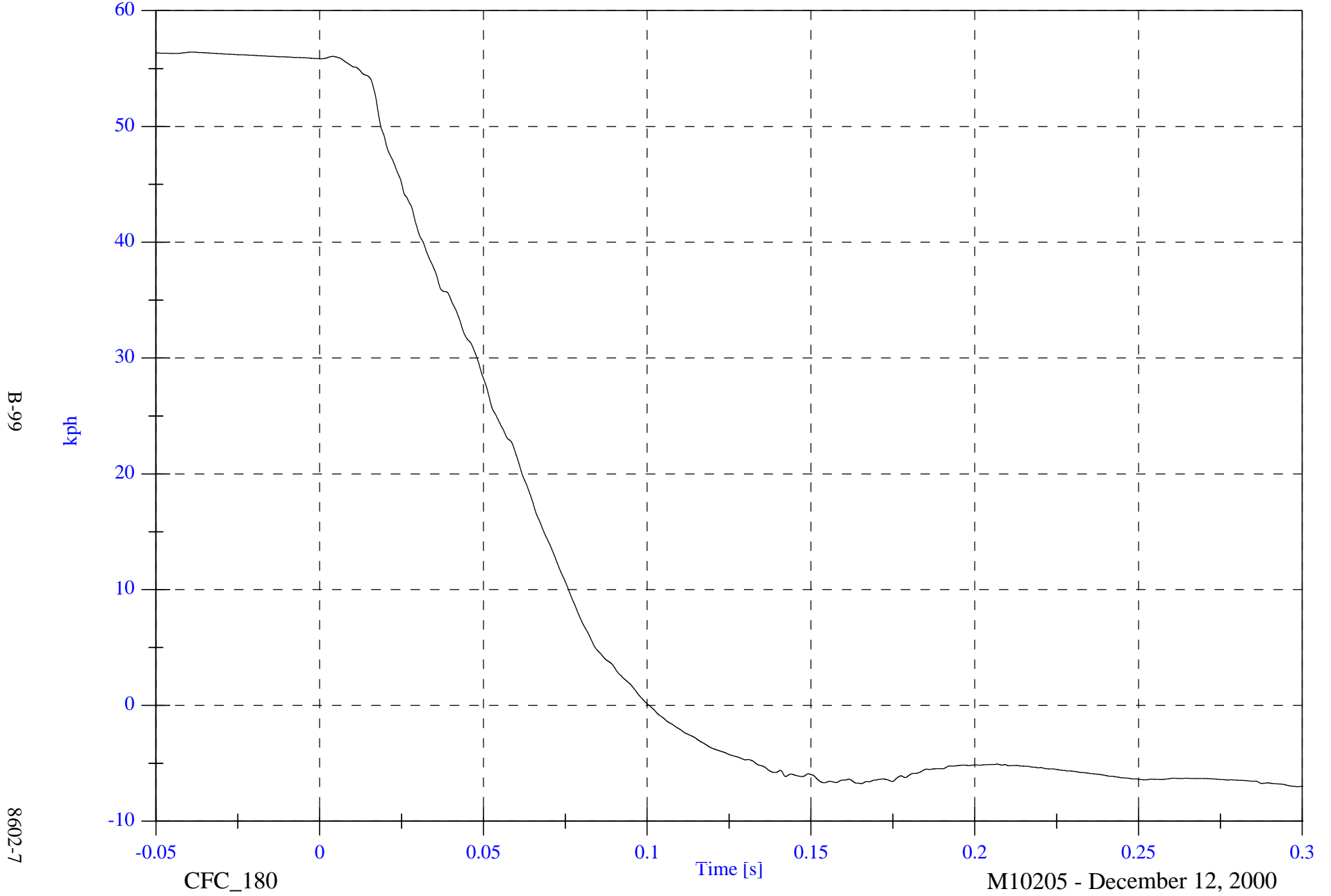
M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

Max: 56.4 [kph] at -0.039 [s]

Left Rear #1x Velocity

Min: -7.0 [kph] at 0.299 [s]



B-99

8602-7

CFC_180

Time [s]

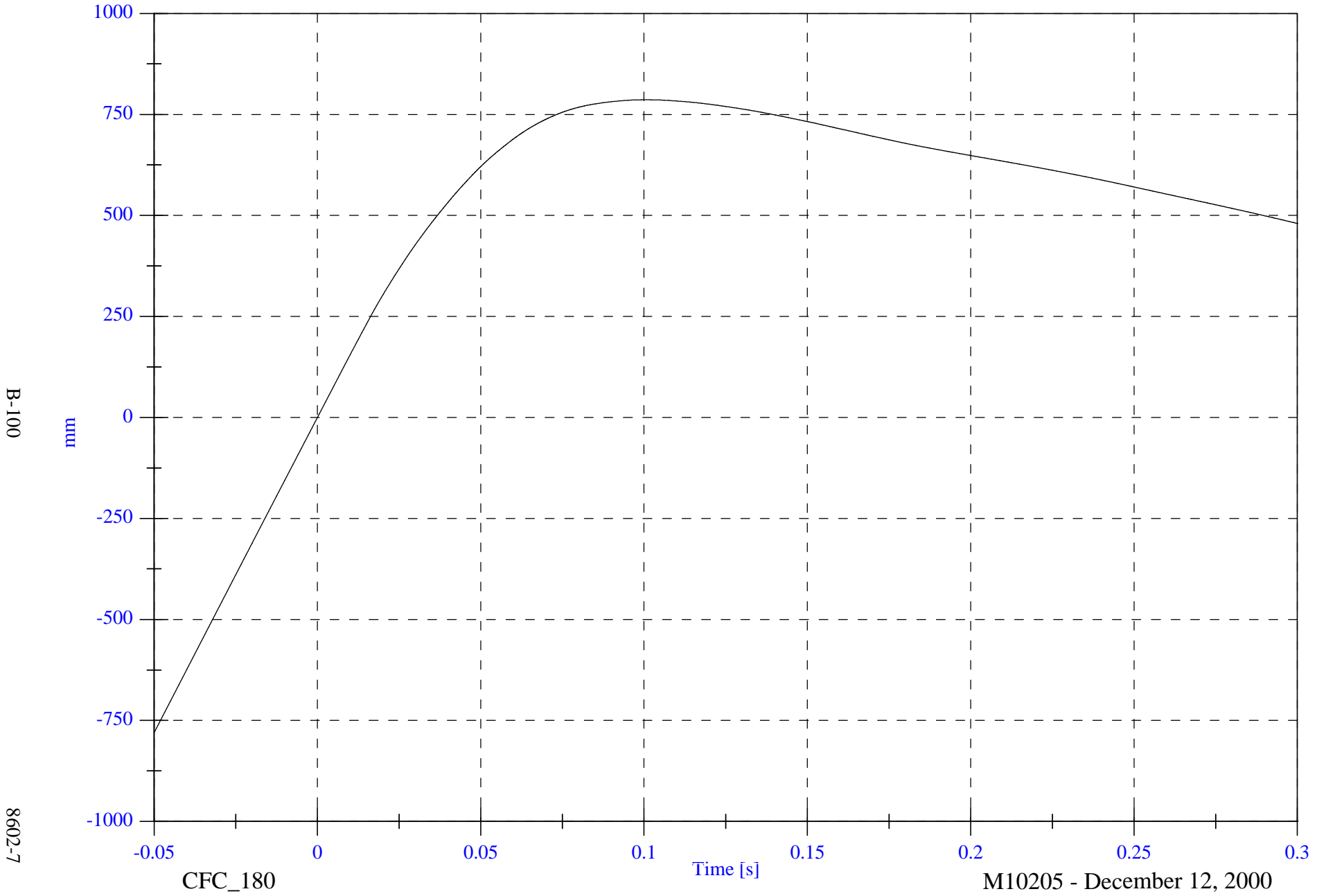
M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

Left Rear #1x Displacement

Max: 786.2 [mm] at 0.101 [s]

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



B-100

8602-7

CFC_180

Time [s]

M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

Right Rear #2x

Max: 2.7 [g] at 0.179 [s]

Min: -34.8 [g] at 0.018 [s]



NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

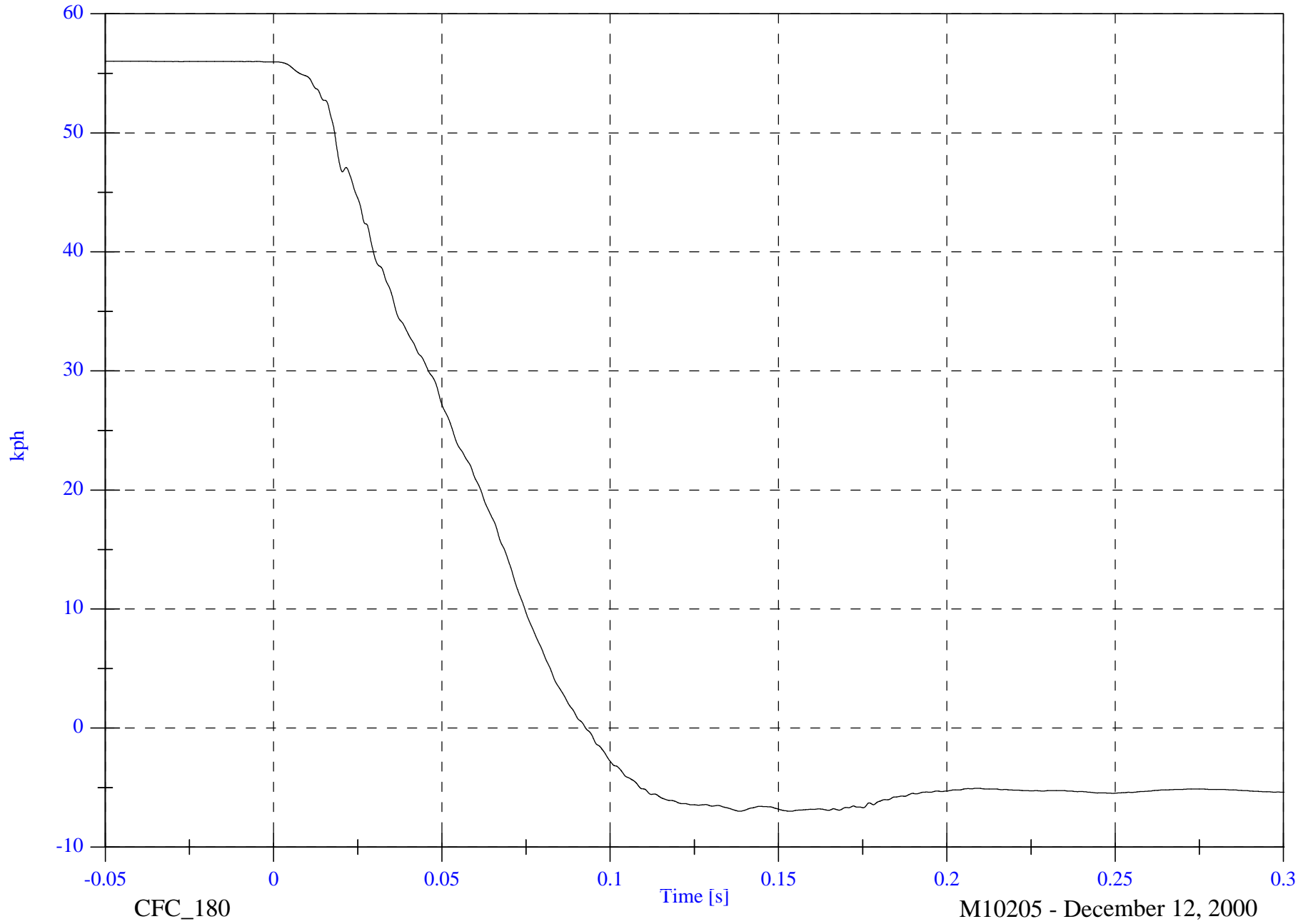
Max: 56.0 [kph] at -0.050 [s]

Right Rear #2x Velocity

Min: -7.0 [kph] at 0.153 [s]

B-102

8602-7



CFC_180

Time [s]

M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

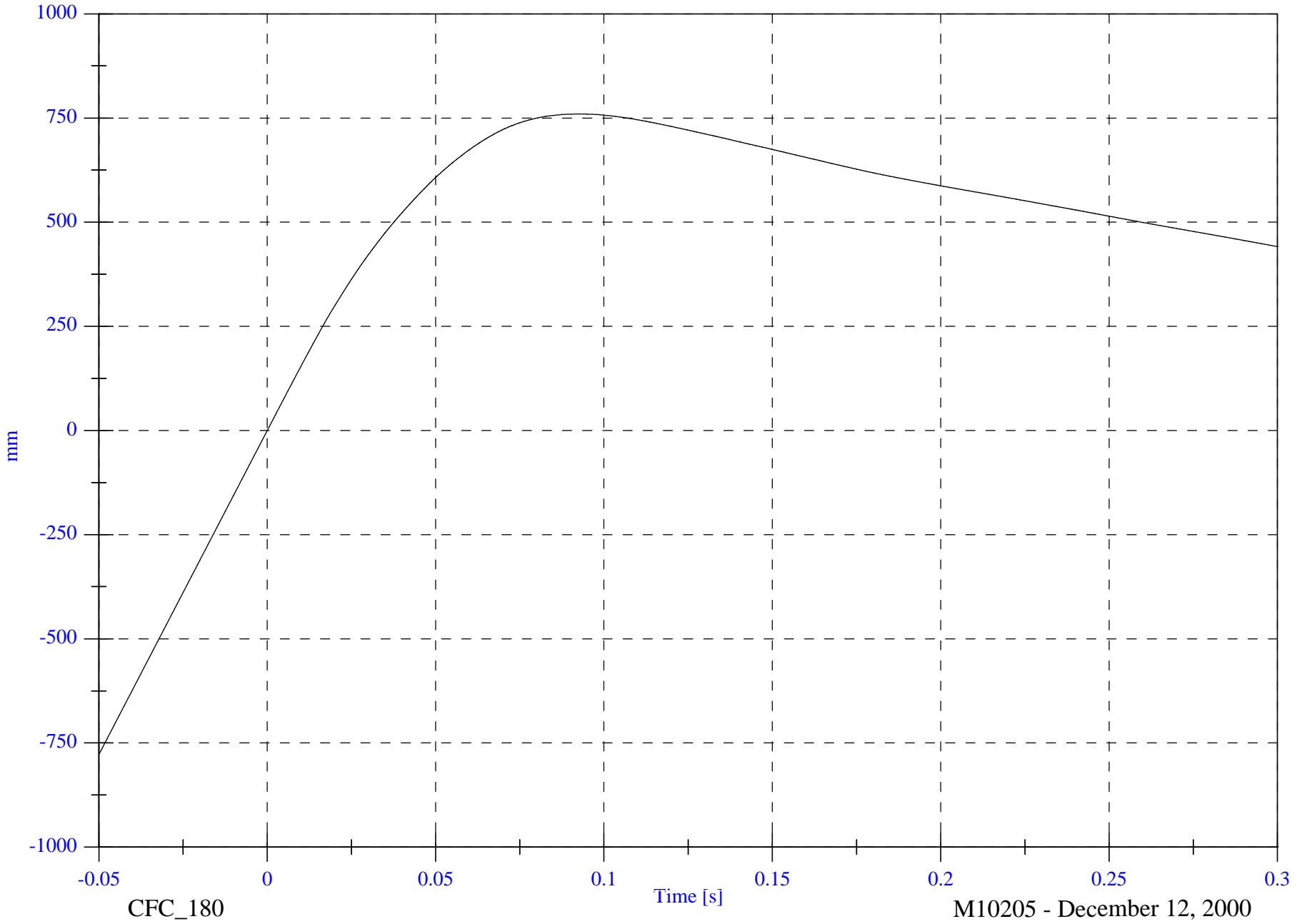
Right Rear #2x Displacement

Max: 759.7 [mm] at 0.093 [s]

Min: -777.7 [mm] at -0.050 [s]

B-103

8602-7



CFC_180

Time [s]

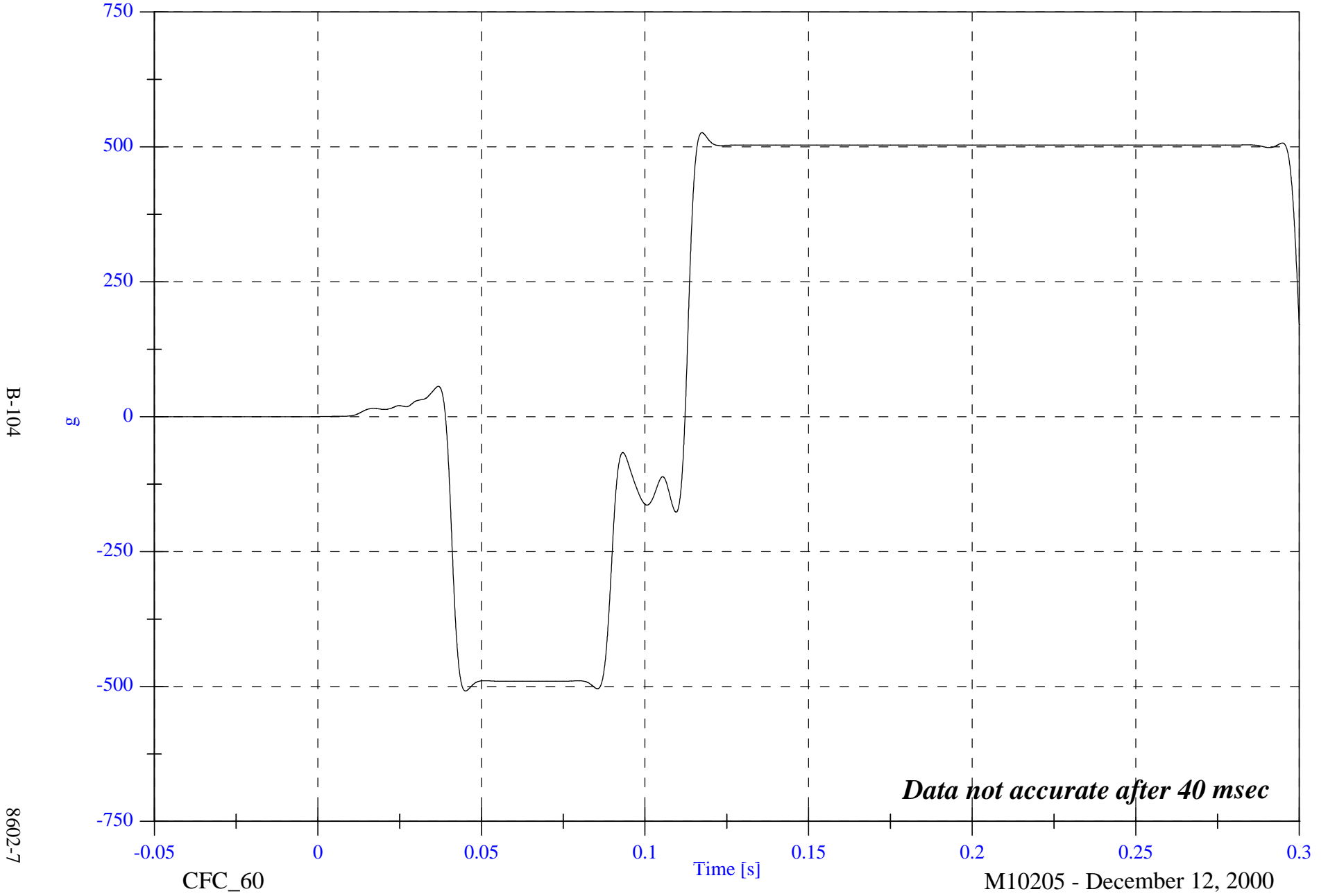
M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

Engine Top #3x

Max: 526.4 [g] at 0.117 [s]

Min: -508.4 [g] at 0.045 [s]

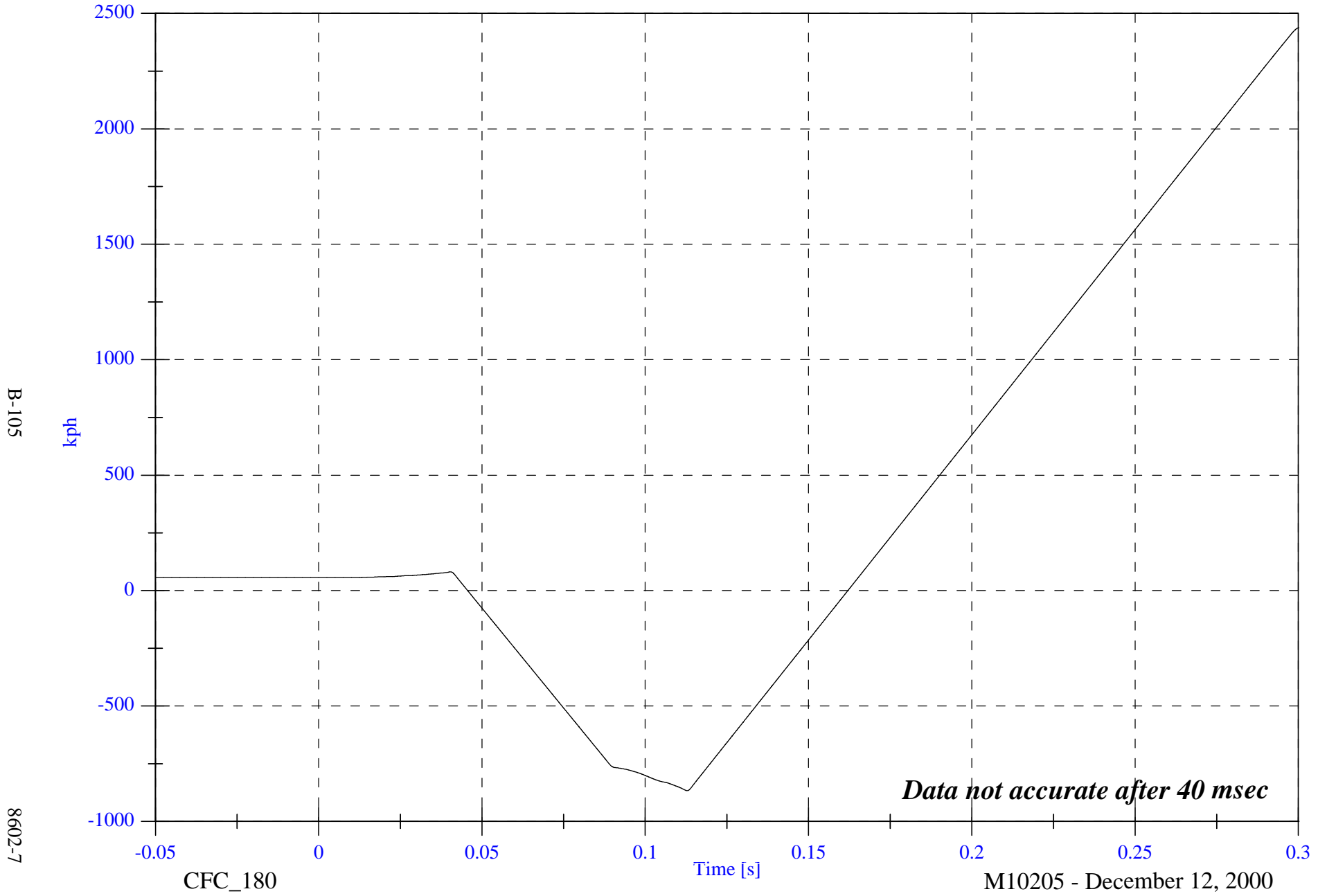


NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

Engine Top #3x Velocity

Max: 2437.8 [kph] at 0.300 [s]

Min: -866.9 [kph] at 0.113 [s]



B-105

8602-7

CFC_180

Time [s]

M10205 - December 12, 2000

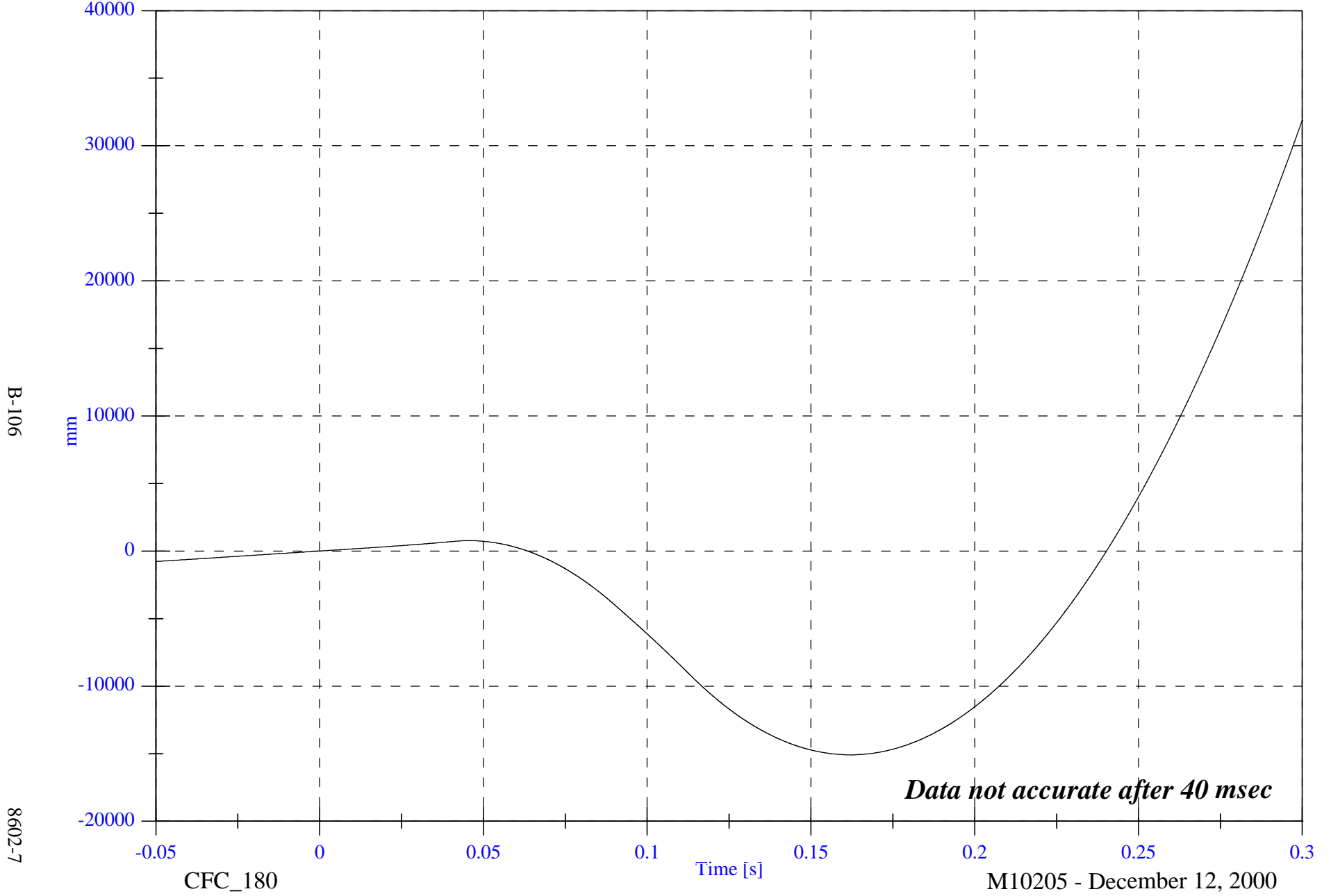
Data not accurate after 40 msec

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

Engine Top #3x Displacement

Max: 31865.0 [mm] at 0.300 [s]

Min: -15086.2 [mm] at 0.162 [s]



B-106

8602-7

CFC_180

Time [s]

M10205 - December 12, 2000

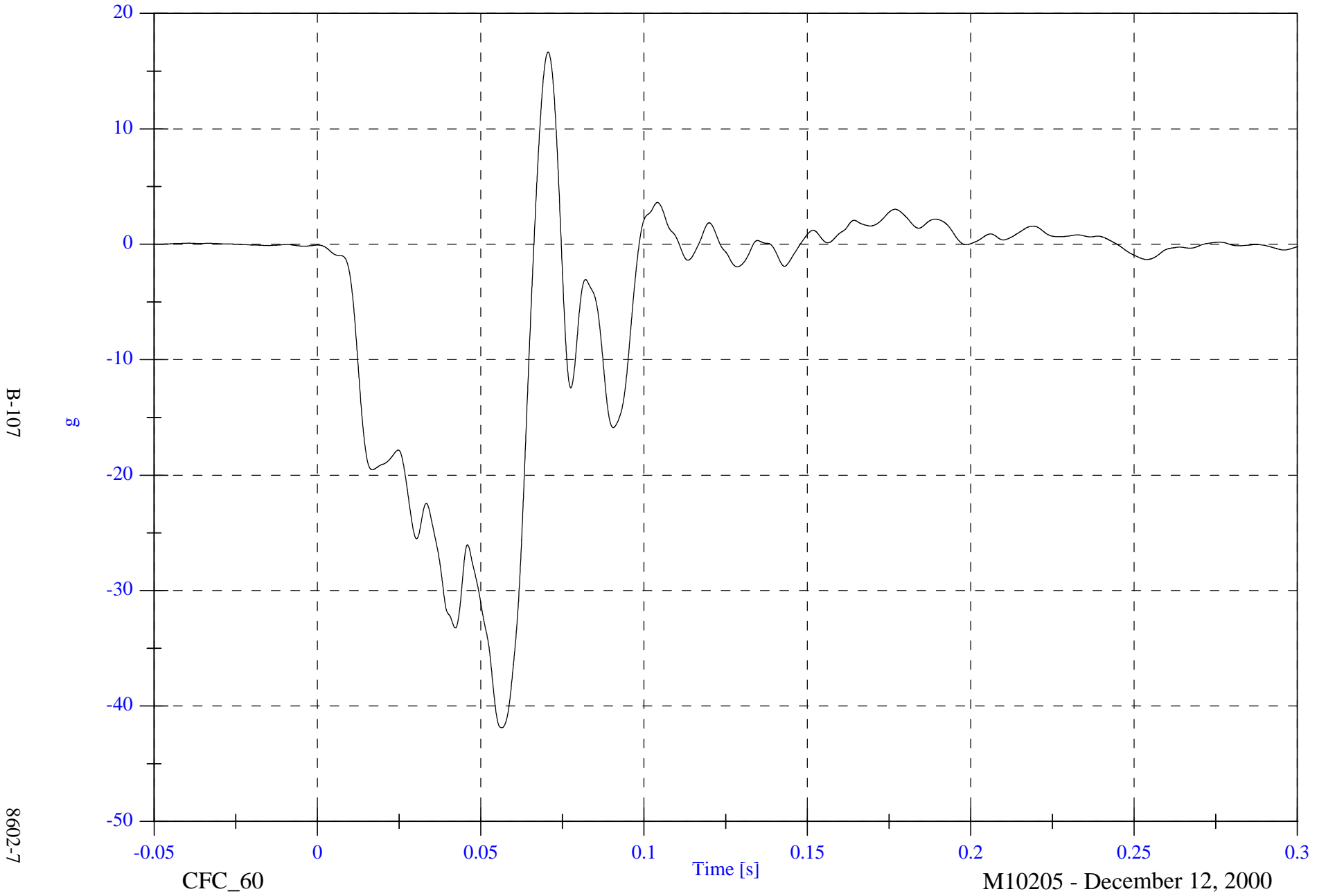
Data not accurate after 40 msec

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

Engine Bottom #4x

Max: 16.7 [g] at 0.071 [s]

Min: -41.9 [g] at 0.056 [s]



NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

Engine Bottom #4x Velocity

Max: 56.0 [kph] at -0.025 [s]

Min: 1.6 [kph] at 0.098 [s]

B-108

8602-7



CFC_180

Time [s]

M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

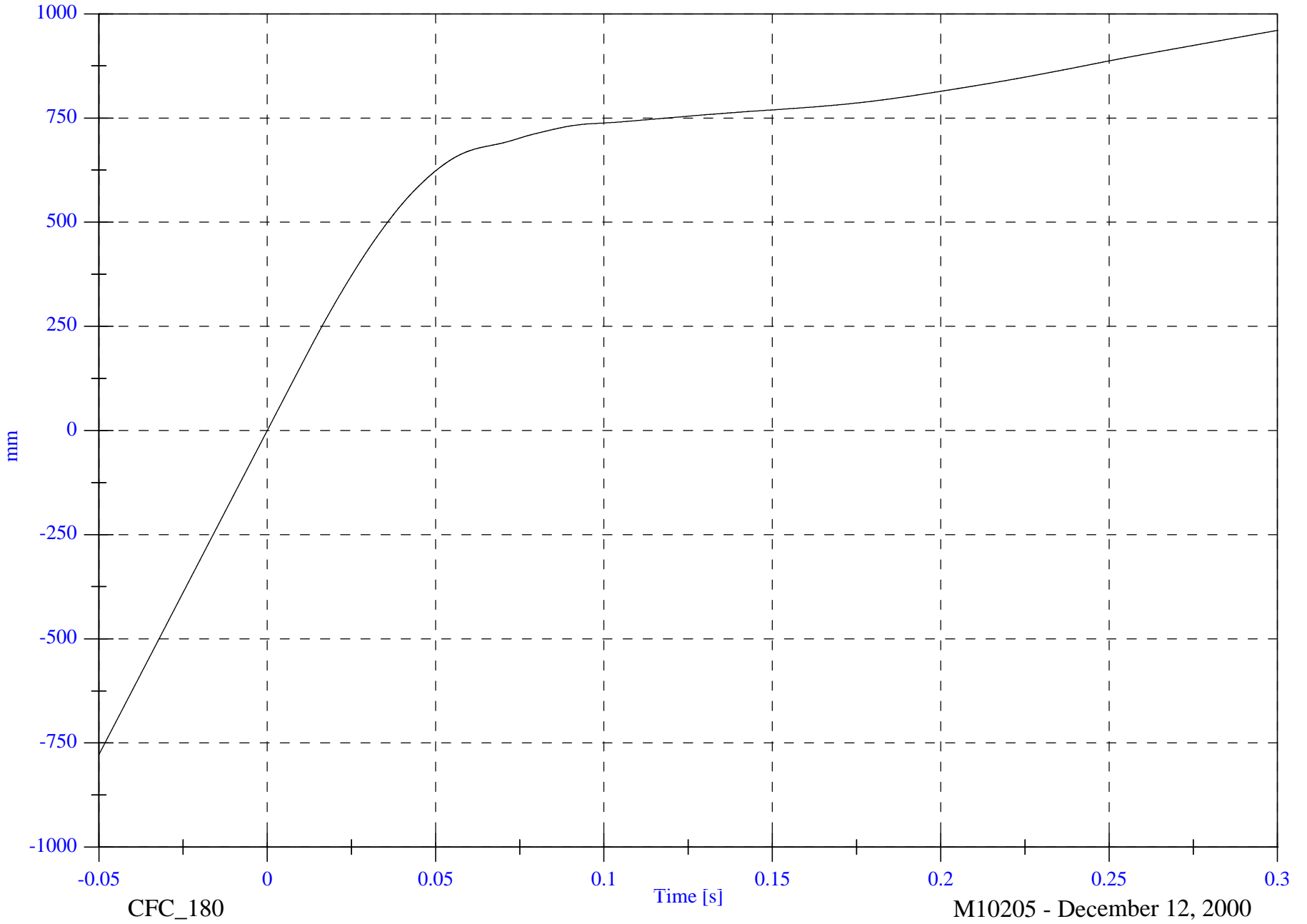
Engine Bottom #4x Displacement

Max: 960.2 [mm] at 0.300 [s]

Min: -777.9 [mm] at -0.050 [s]

B-109

8602-7



CFC_180

Time [s]

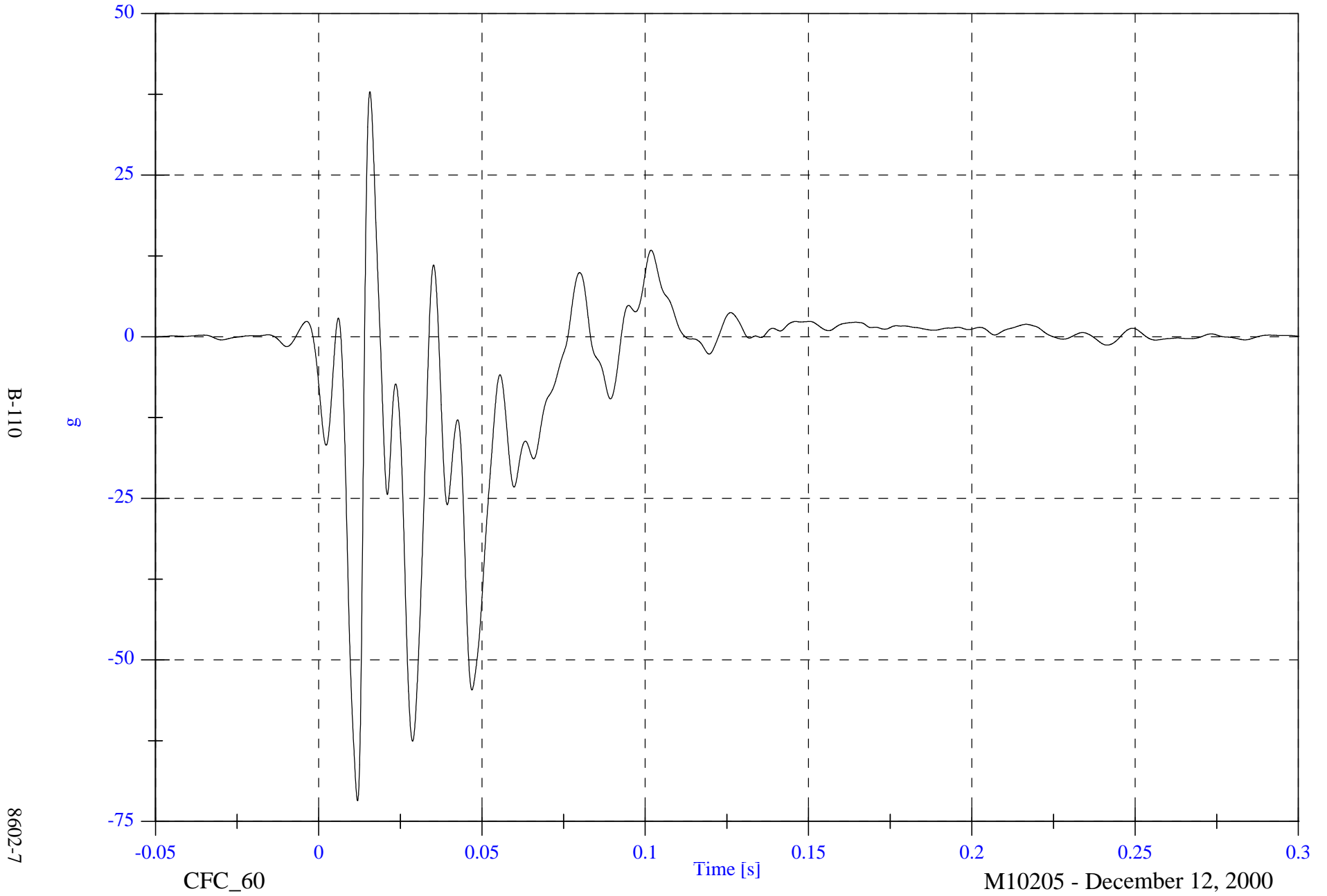
M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

Right Caliper #5x

Max: 37.9 [g] at 0.016 [s]

Min: -71.8 [g] at 0.012 [s]



B-110

8602-7

CFC_60

Time [s]

M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

Right Caliper #5x Velocity

Max: 56.2 [kph] at -0.001 [s]

Min: 4.5 [kph] at 0.093 [s]

B-111

8602-7



CFC_180

Time [s]

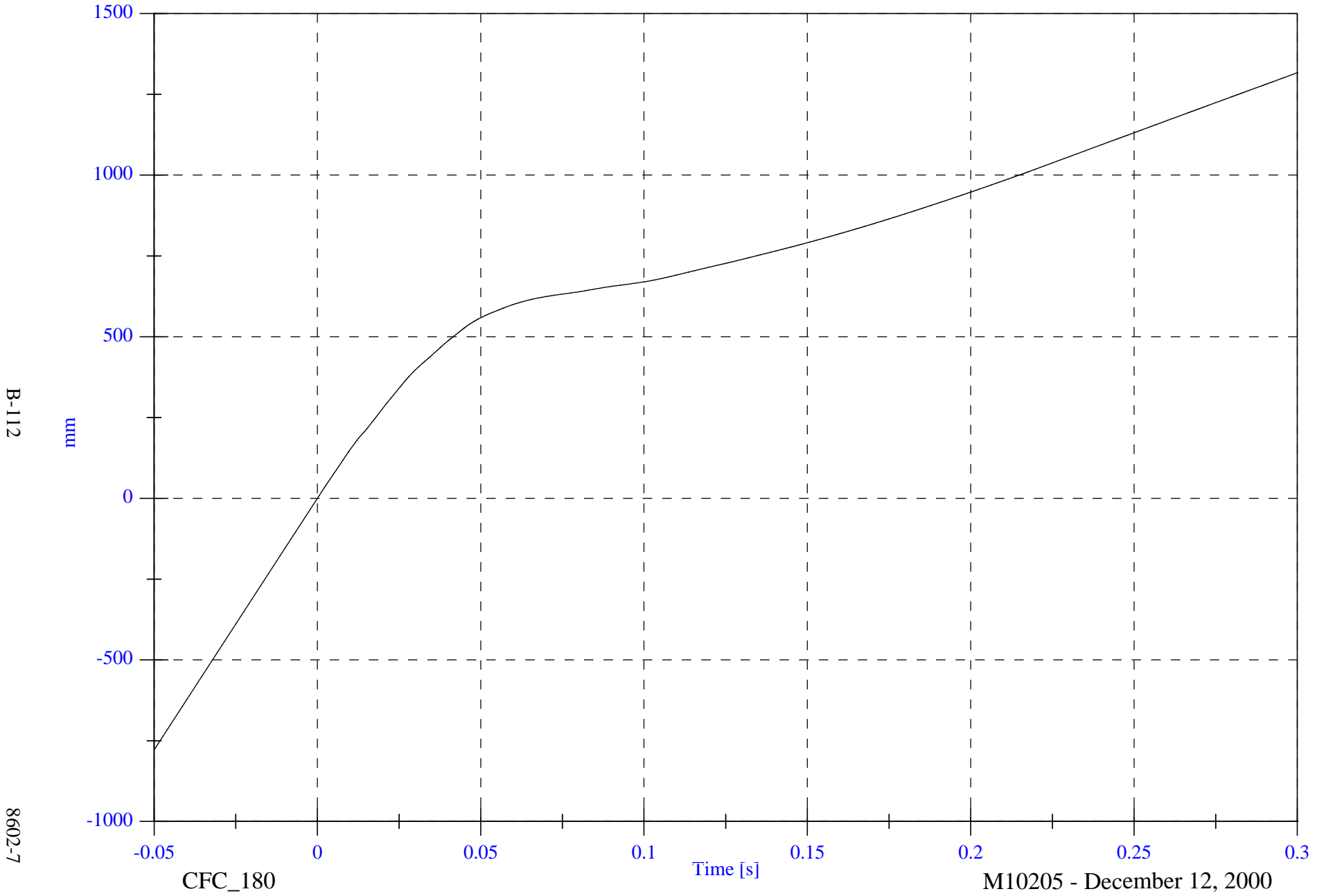
M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

Right Caliper #5x Displacement

Max: 1316.4 [mm] at 0.300 [s]

Min: -778.5 [mm] at -0.050 [s]



B-112

8602-7

CFC_180

Time [s]

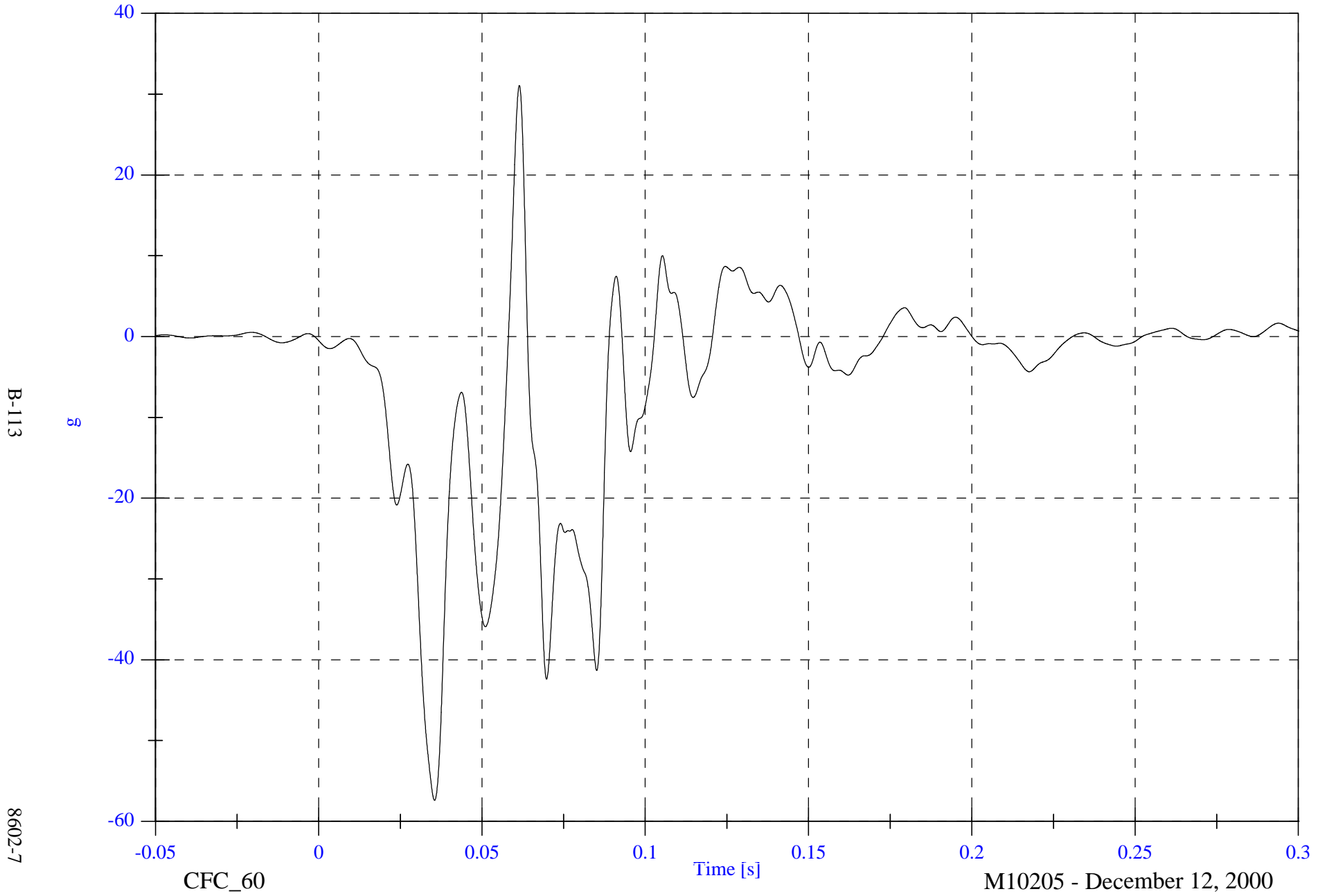
M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

Instrument Panel #6x

Max: 31.1 [g] at 0.061 [s]

Min: -57.4 [g] at 0.035 [s]



NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

Instrument Panel #6x Velocity

Max: 56.1 [kph] at -0.016 [s]

Min: -2.7 [kph] at 0.104 [s]

B-114

8602-7



CFC_180

M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

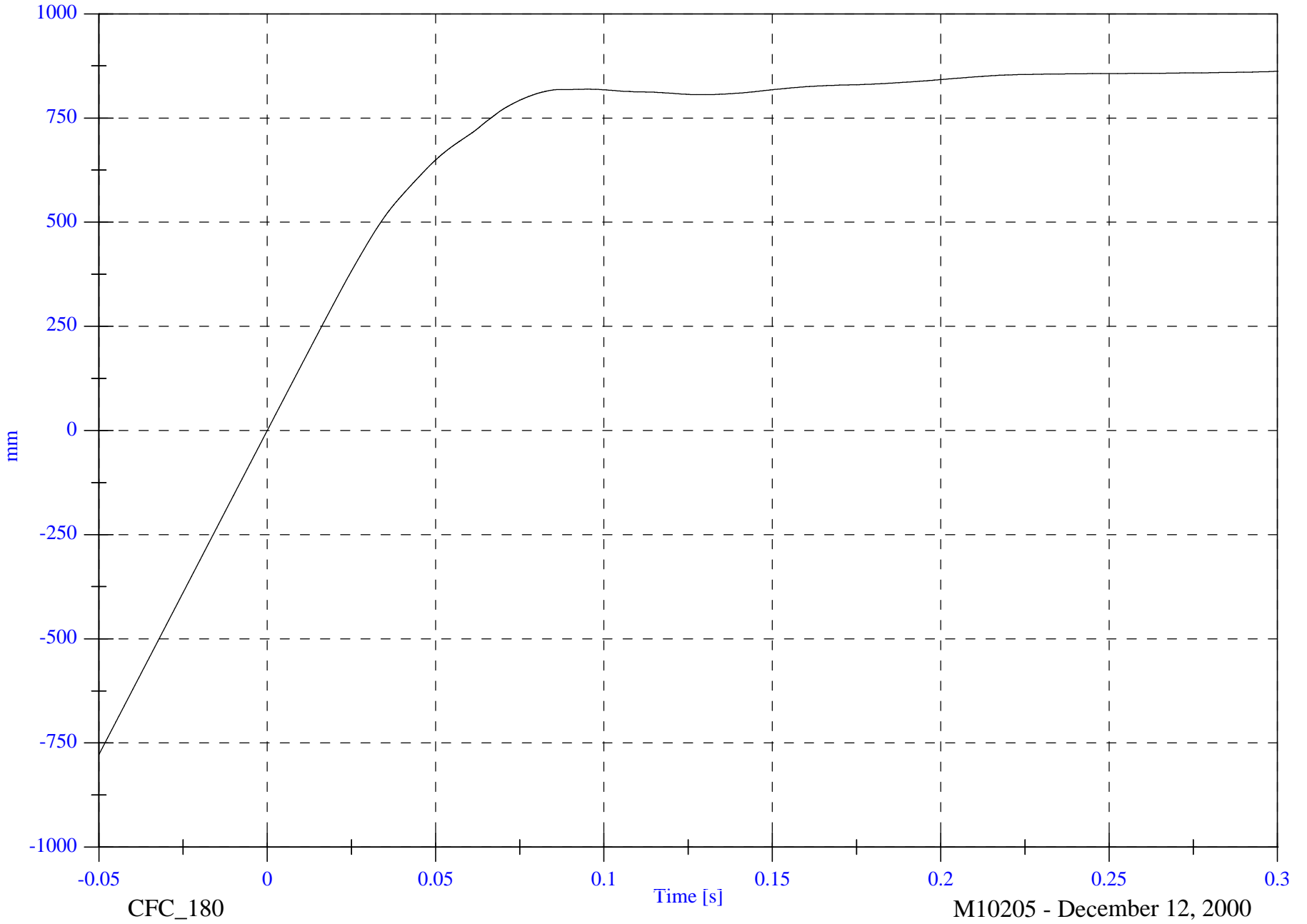
Instrument Panel #6x Displacement

Max: 862.0 [mm] at 0.300 [s]

Min: -777.9 [mm] at -0.050 [s]

B-115

8602-7



CFC_180

Time [s]

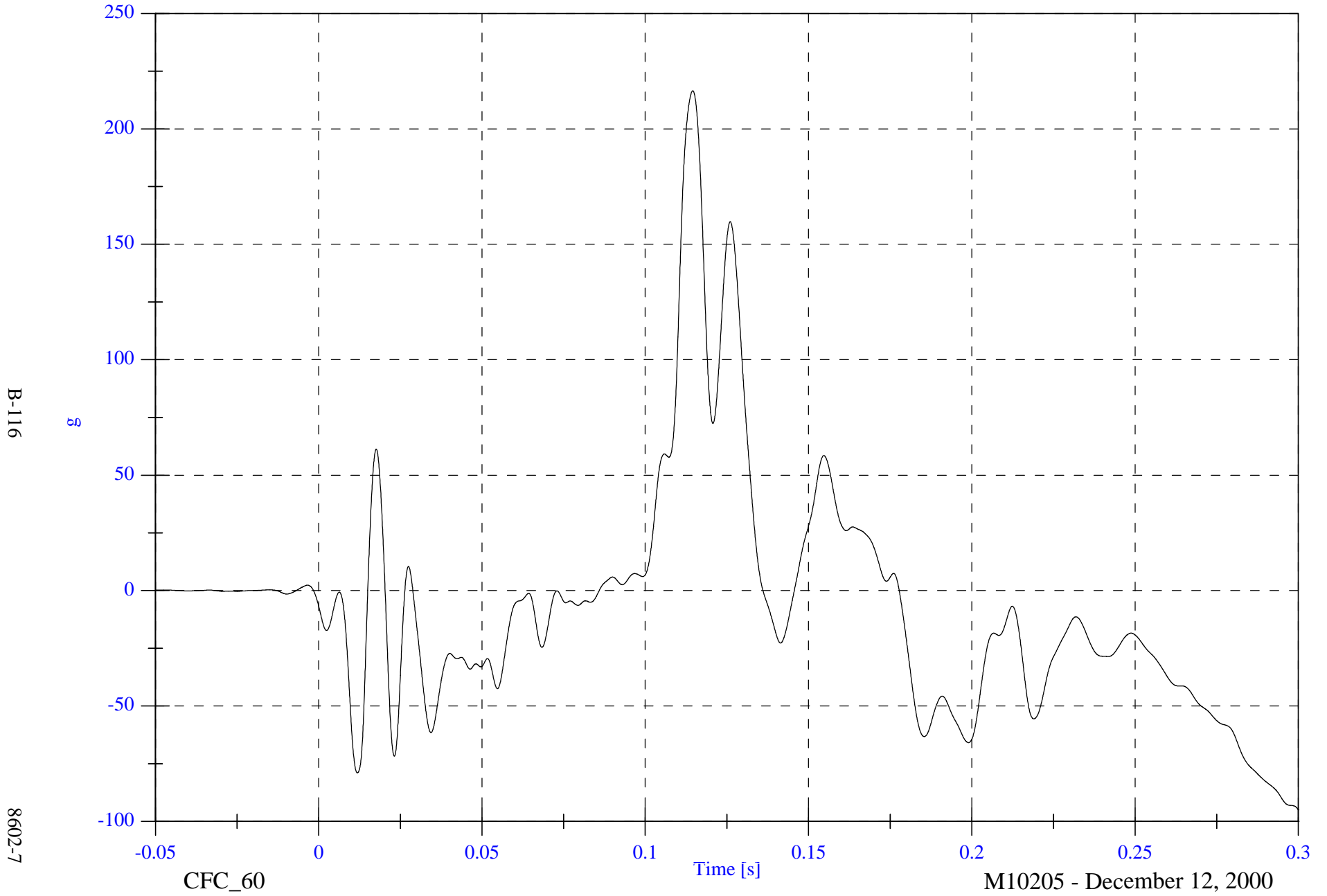
M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

Left Caliper #7x

Max: 216.5 [g] at 0.115 [s]

Min: -95.0 [g] at 0.300 [s]



B-116

8602-7

CFC_60

Time [s]

M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

Left Caliper #7x Velocity

Max: 150.8 [kph] at 0.178 [s]

Min: -38.4 [kph] at 0.300 [s]

B-117

8602-7

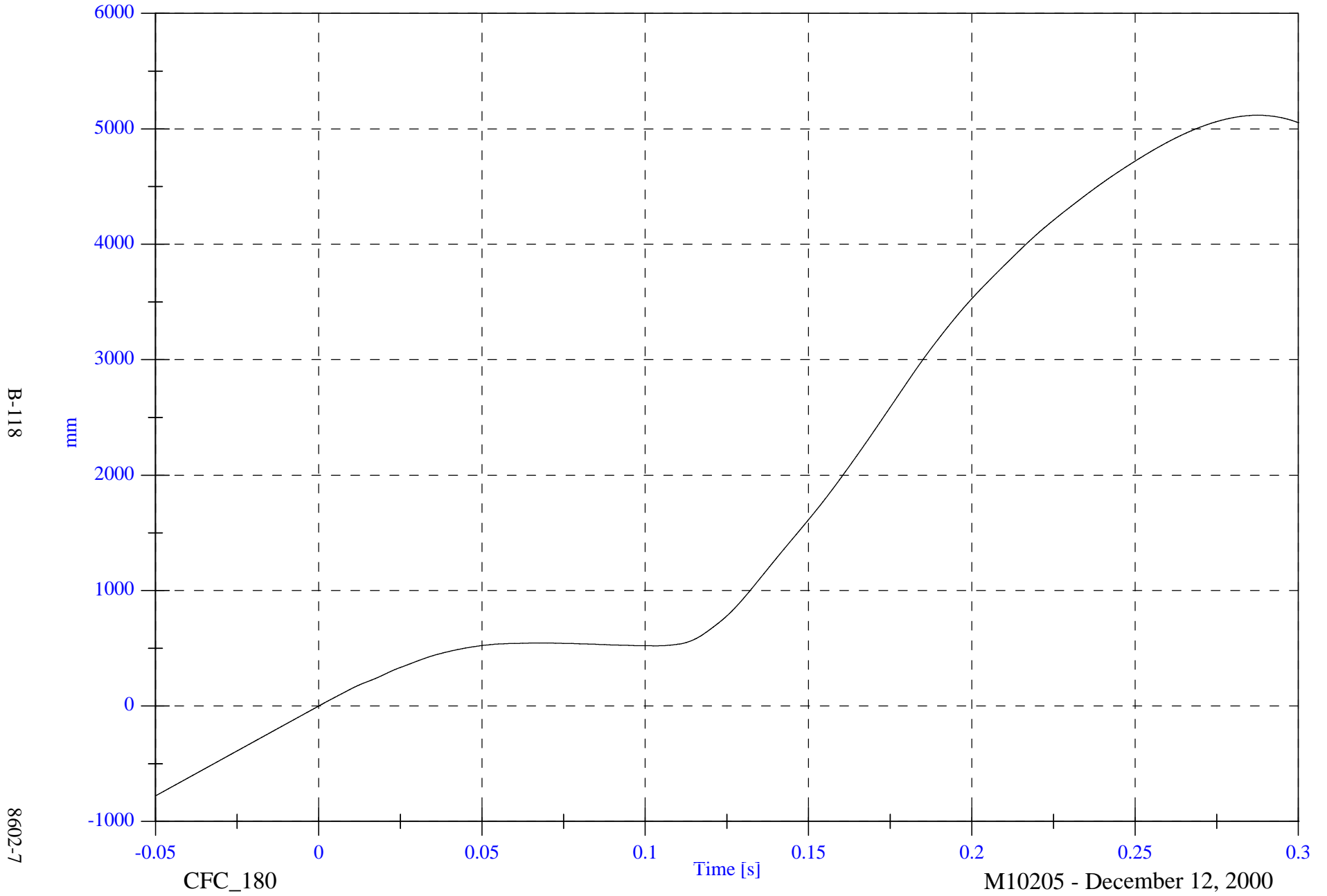


NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

Left Caliper #7x Displacement

Max: 5118.0 [mm] at 0.288 [s]

Min: -778.7 [mm] at -0.050 [s]



B-118

8602-7

CFC_180

Time [s]

M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

Left Rear Red #8x

Max: 3.4 [g] at 0.180 [s]

Min: -31.4 [g] at 0.018 [s]



NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

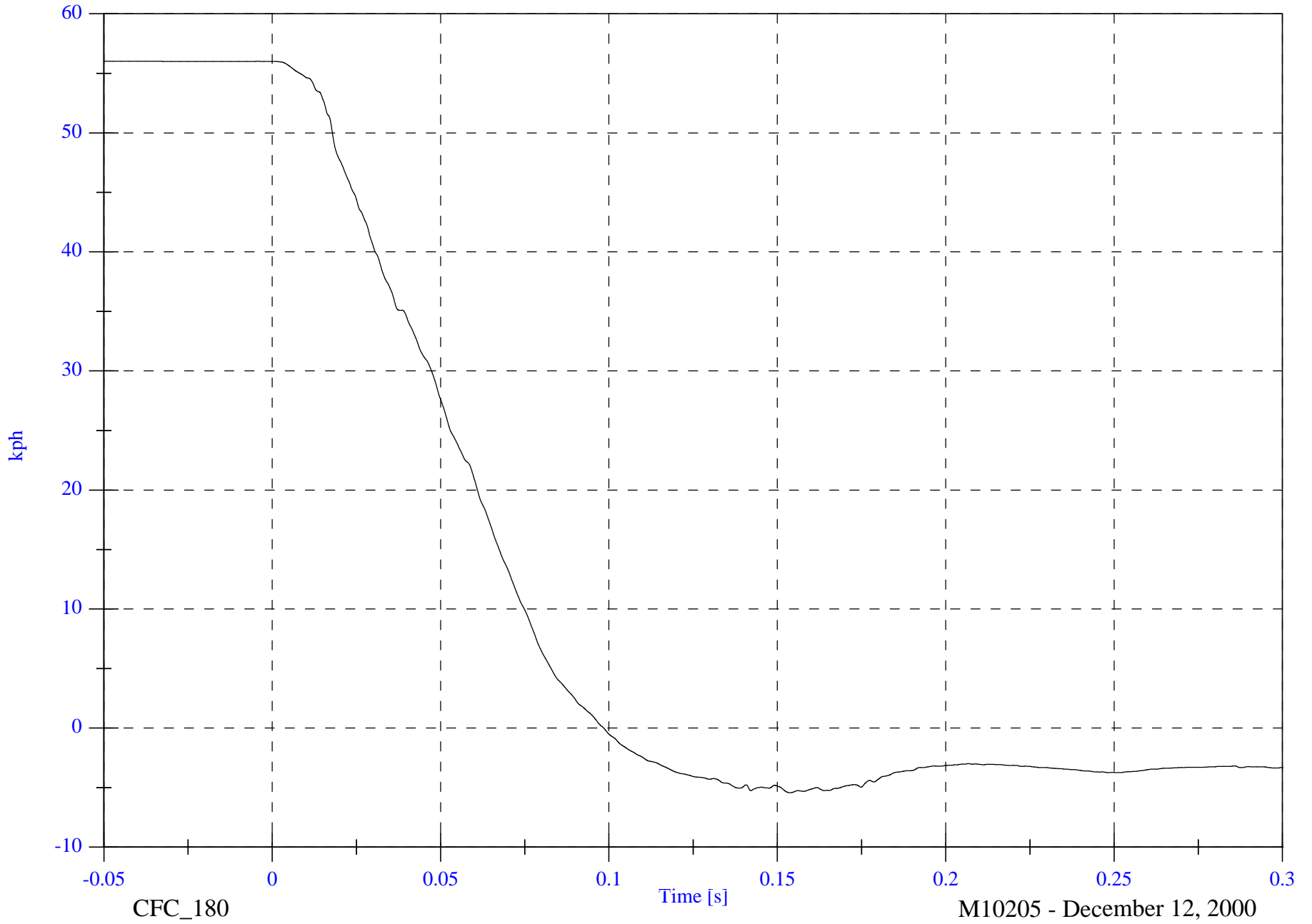
Left Rear Red #8x Velocity

Max: 56.0 [kph] at -0.050 [s]

Min: -5.4 [kph] at 0.154 [s]

B-120

8602-7



CFC_180

Time [s]

M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

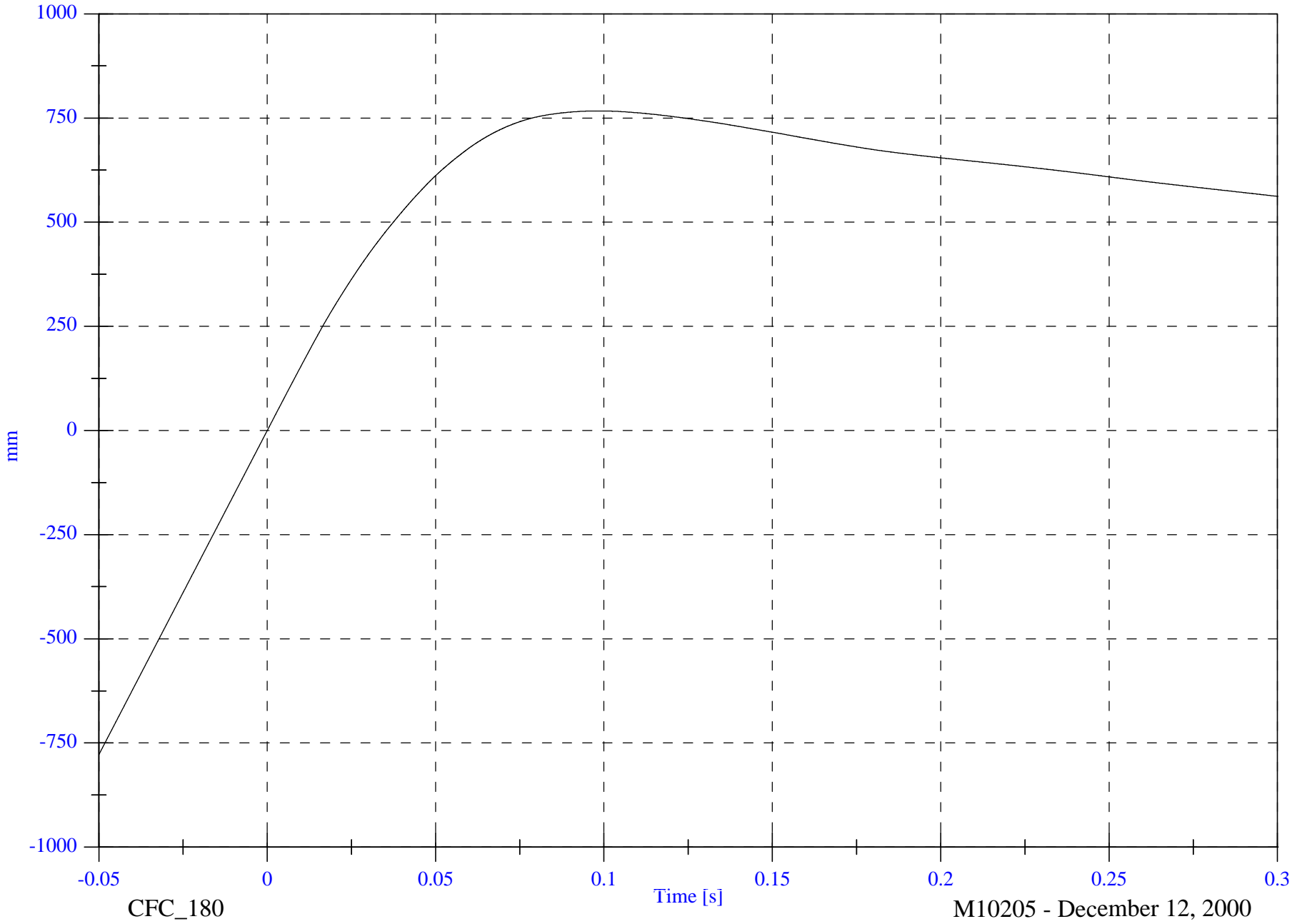
Left Rear Red #8x Displacement

Max: 767.0 [mm] at 0.098 [s]

Min: -777.9 [mm] at -0.050 [s]

B-121

8602-7



CFC_180

Time [s]

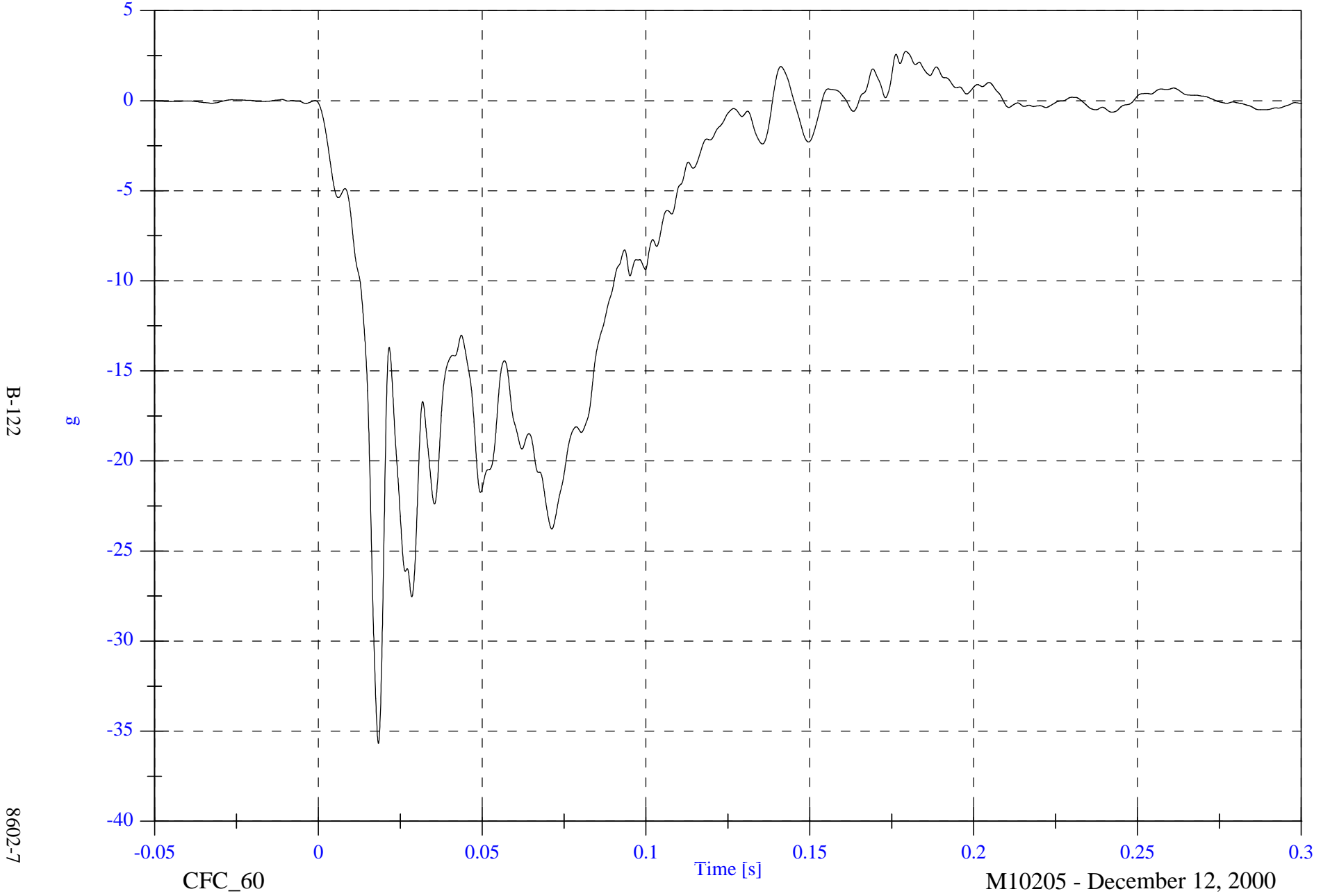
M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

Right Rear Red #9x

Max: 2.7 [g] at 0.179 [s]

Min: -35.7 [g] at 0.018 [s]



B-122

8602-7

CFC_60

Time [s]

M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

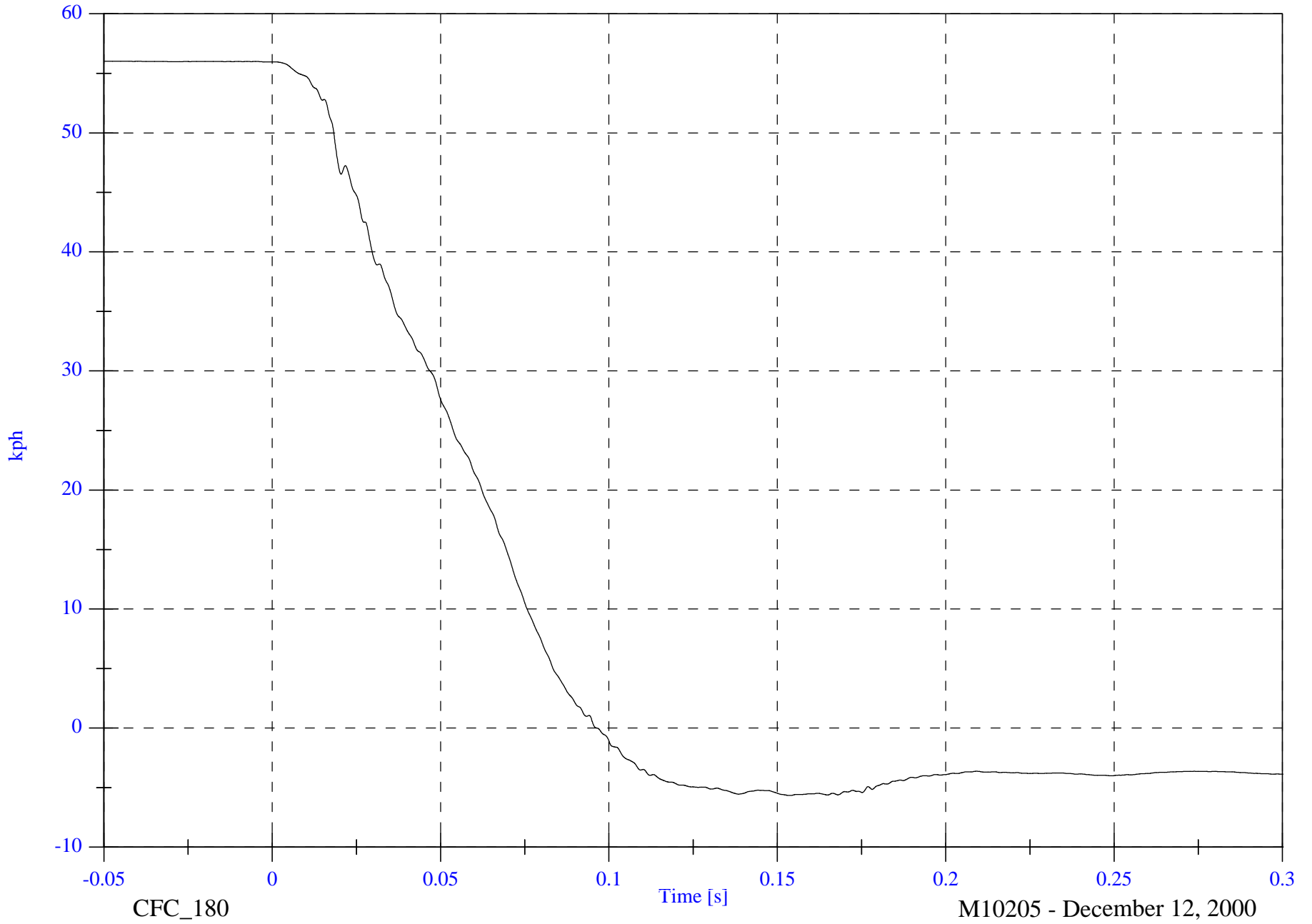
Right Rear Red #9x Velocity

Max: 56.0 [kph] at -0.050 [s]

Min: -5.7 [kph] at 0.154 [s]

B-123

8602-7



CFC_180

Time [s]

M10205 - December 12, 2000

NCAP 2001 Test 7 - 2001 Ford F-150 ExCab Pickup

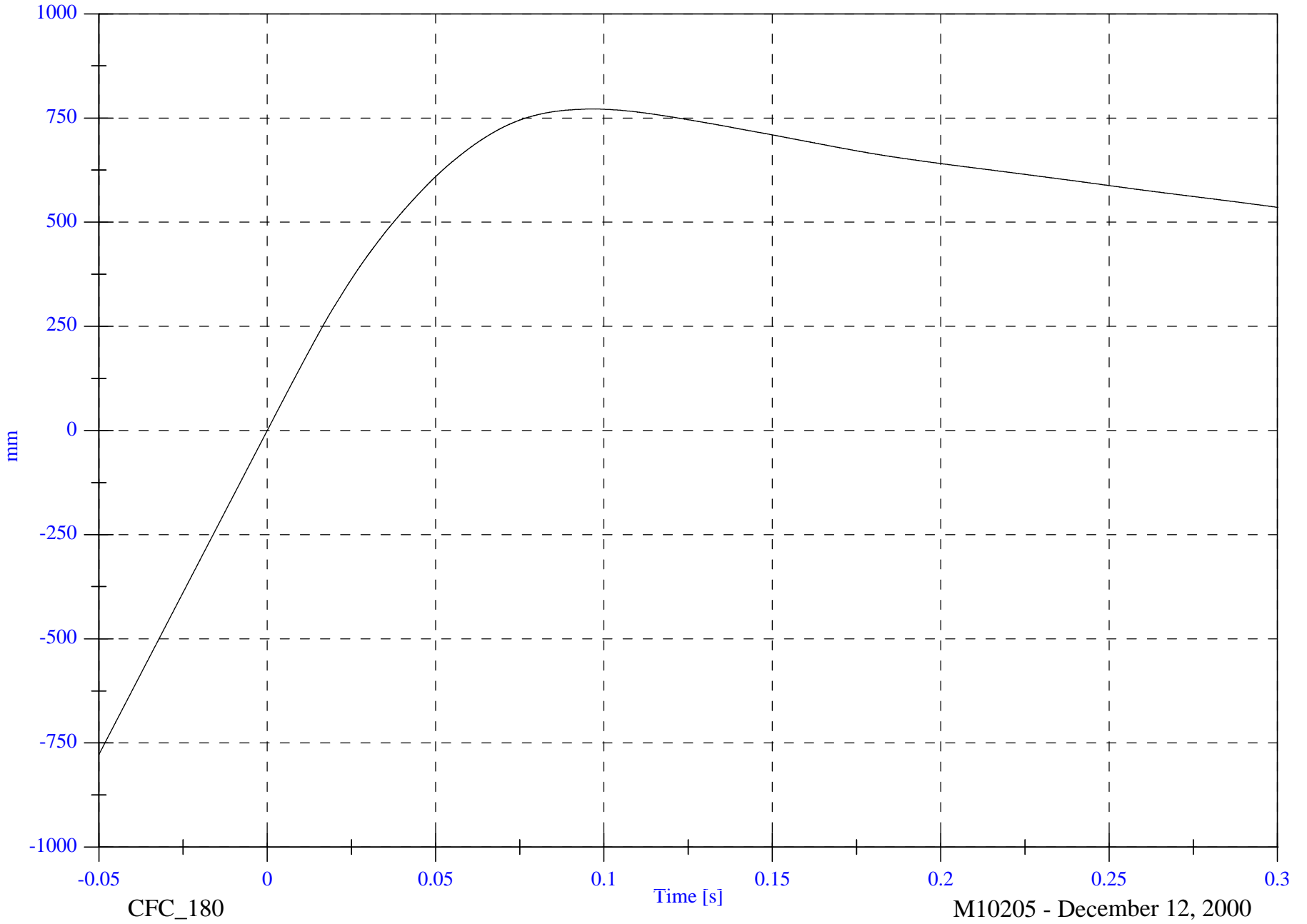
Right Rear Red #9x Displacement

Max: 771.4 [mm] at 0.096 [s]

Min: -777.7 [mm] at -0.050 [s]

B-124

8602-7



CFC_180

Time [s]

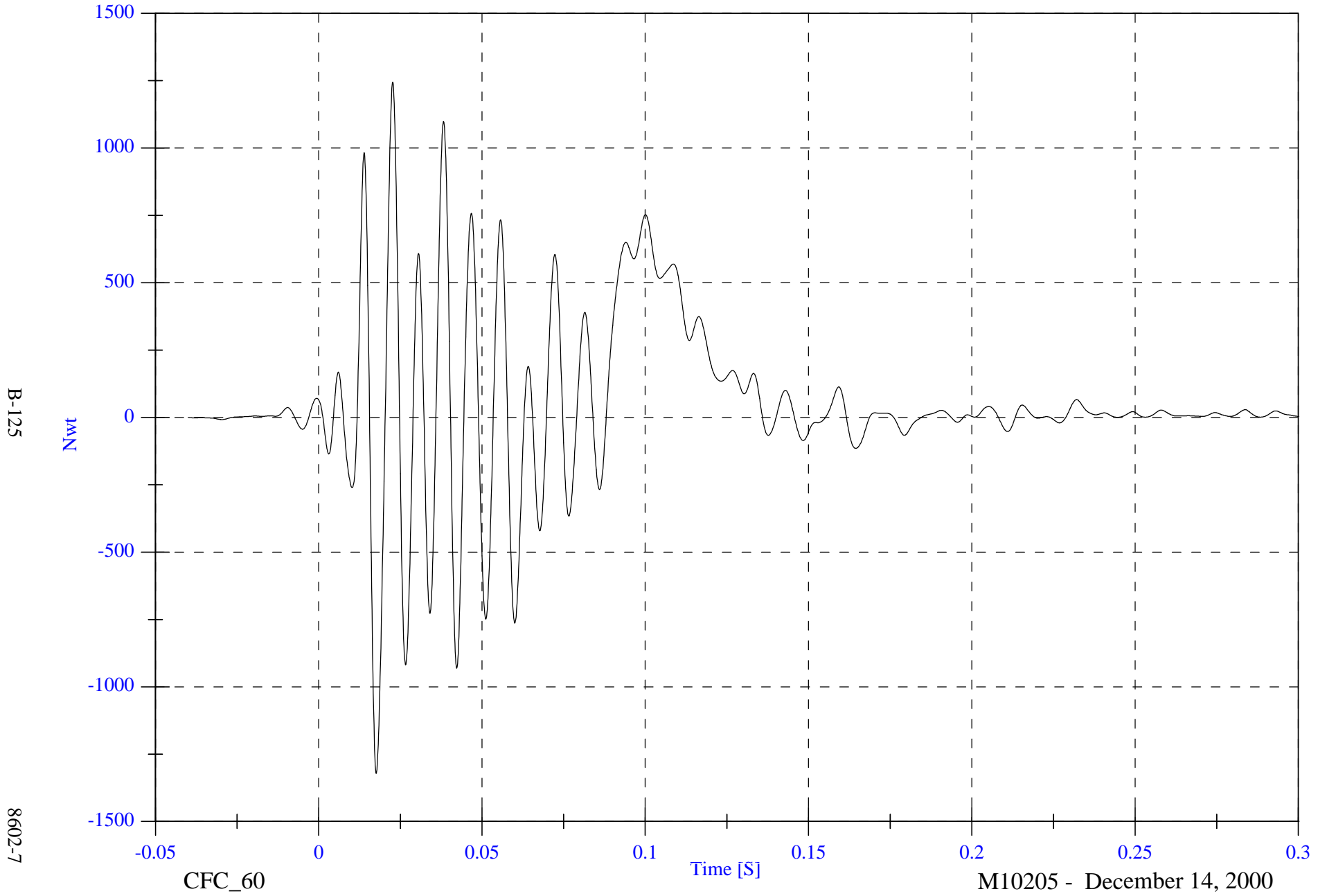
M10205 - December 12, 2000

NCAP TEST #7- 2001 Ford F150 ExCab Pickup

Max: 1244.9 [Nwt] at 0.023 [S]

BLC A1 Fx

Min: -1321.9 [Nwt] at 0.018 [S]



B-125

8602-7

CFC_60

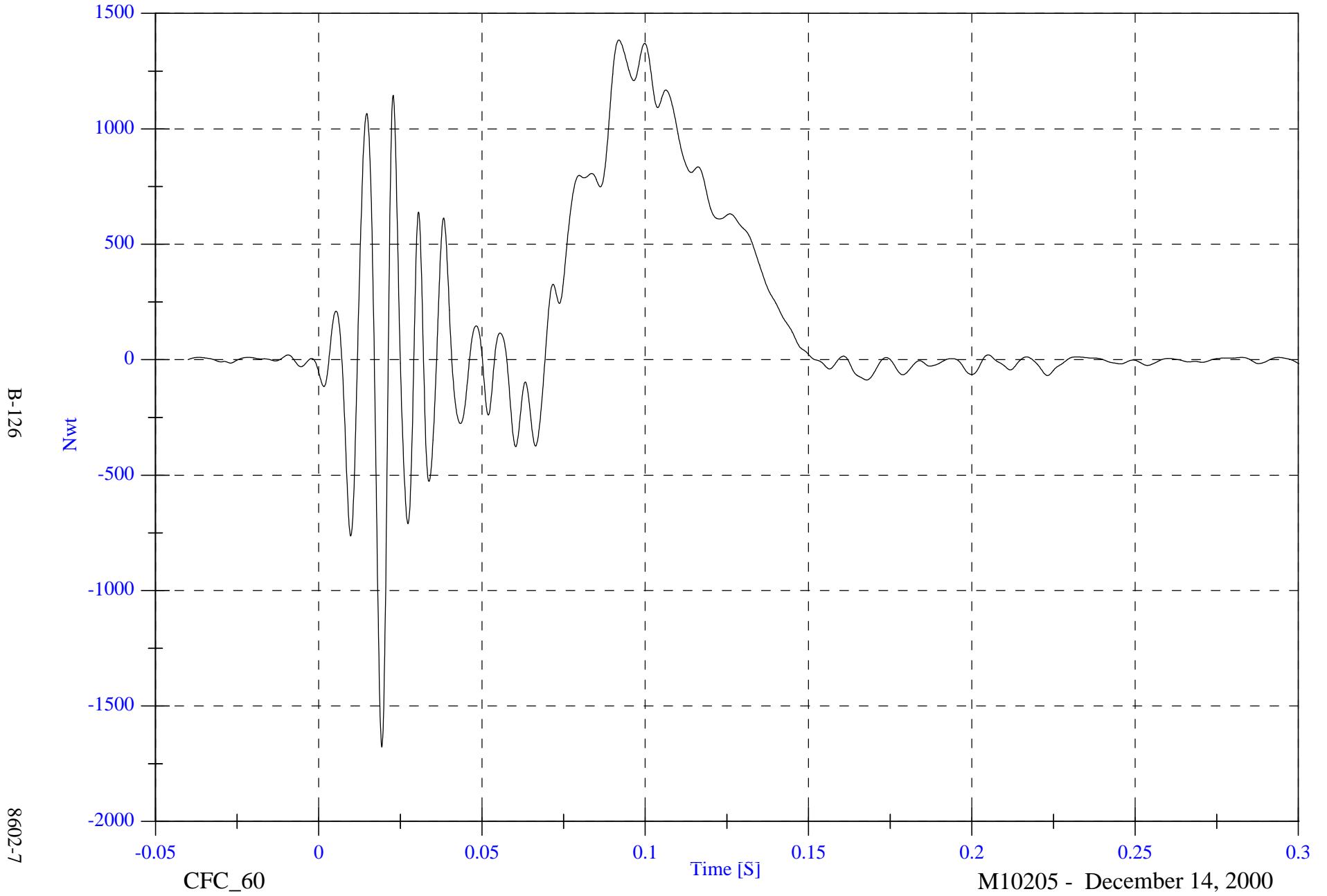
M10205 - December 14, 2000

NCAP TEST #7- 2001 Ford F150 ExCab Pickup

Max: 1384.5 [Nwt] at 0.092 [S]

BLC A2 Fx

Min: -1678.0 [Nwt] at 0.019 [S]



B-126

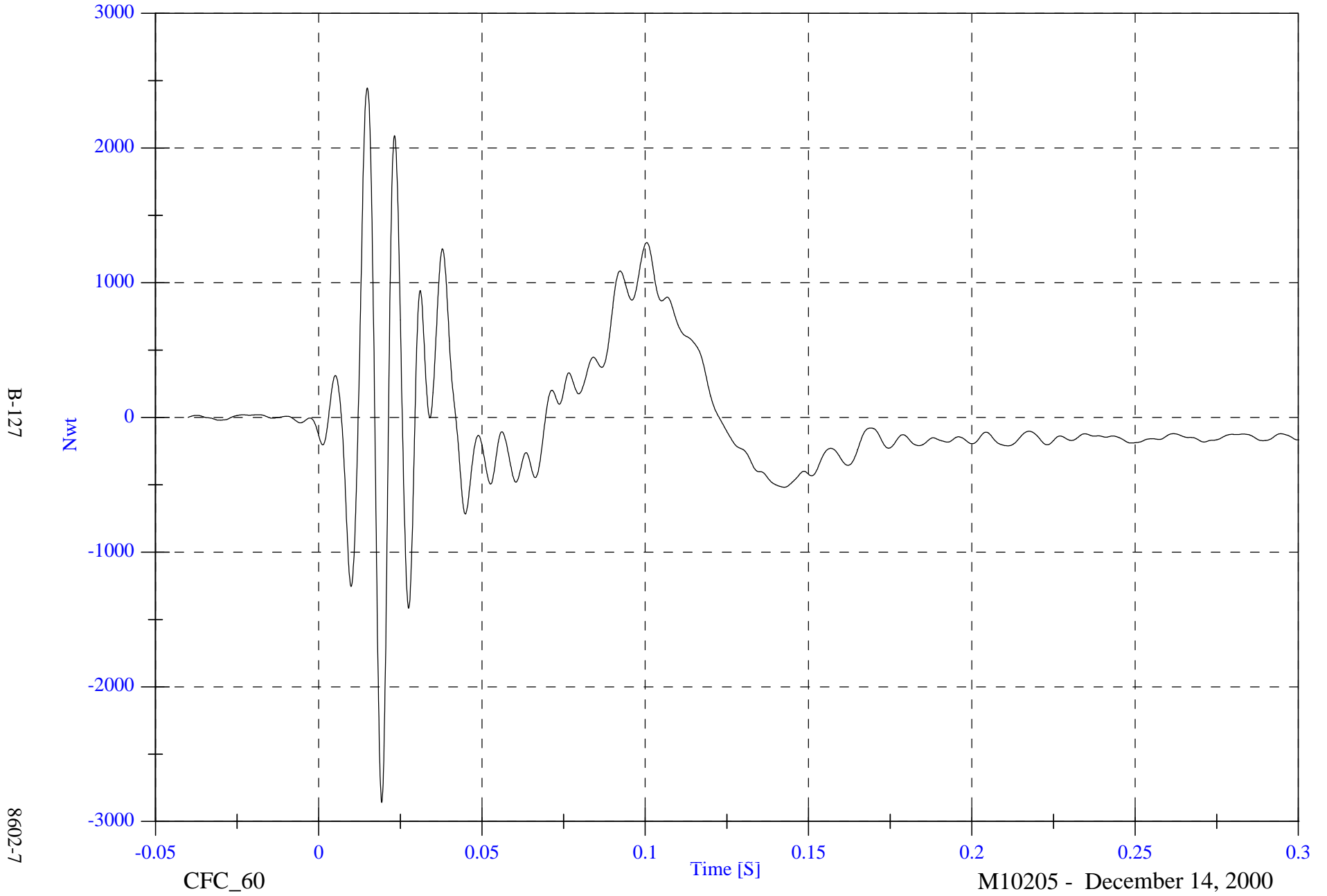
8602-7

NCAP TEST #7- 2001 Ford F150 ExCab Pickup

Max: 2446.3 [Nwt] at 0.015 [S]

BLC A3 Fx

Min: -2859.8 [Nwt] at 0.019 [S]



B-127

8602-7

CFC_60

Time [S]

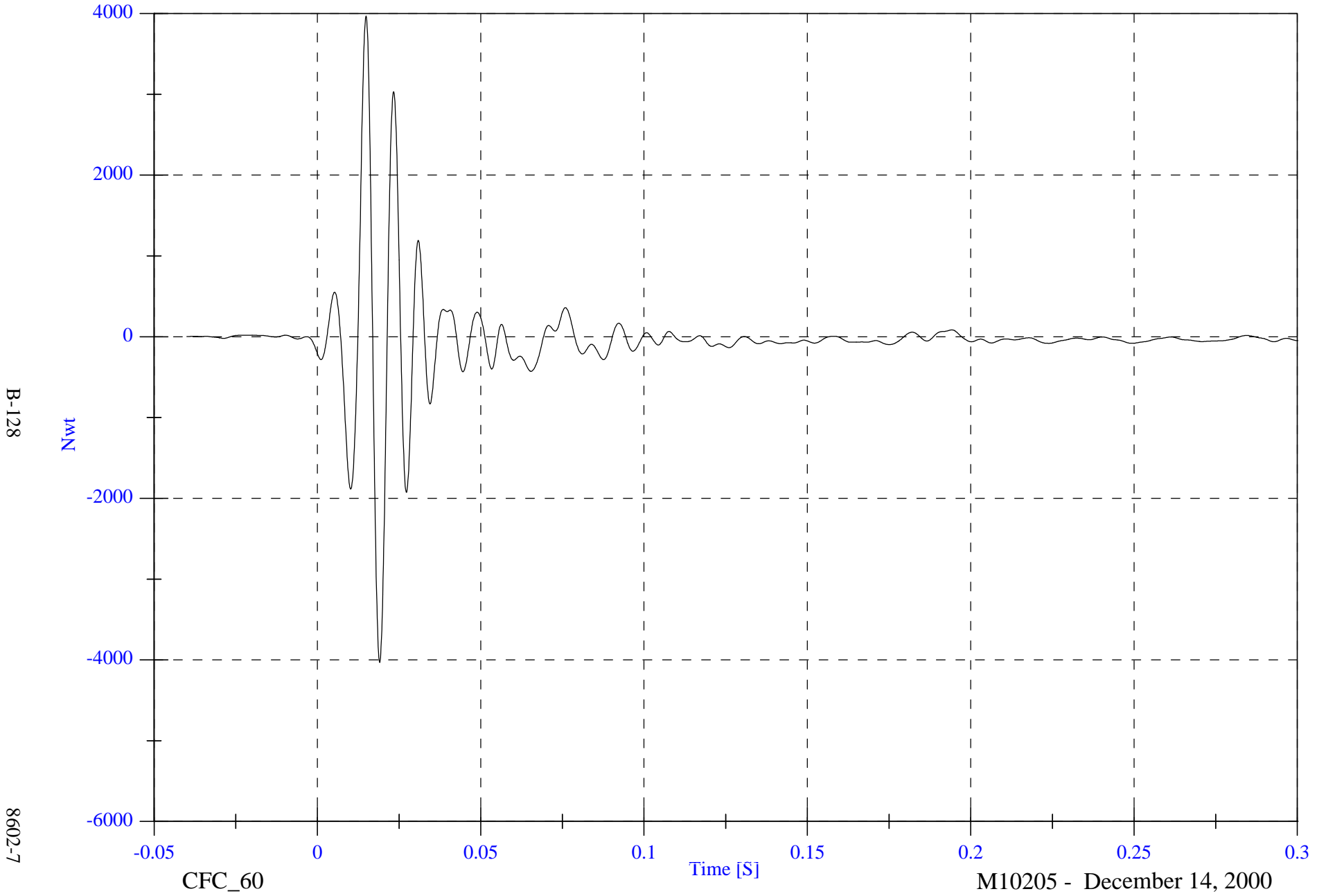
M10205 - December 14, 2000

NCAP TEST #7- 2001 Ford F150 ExCab Pickup

Max: 3969.2 [Nwt] at 0.015 [S]

BLC A4 Fx

Min: -4031.4 [Nwt] at 0.019 [S]



B-128

8602-7

CFC_60

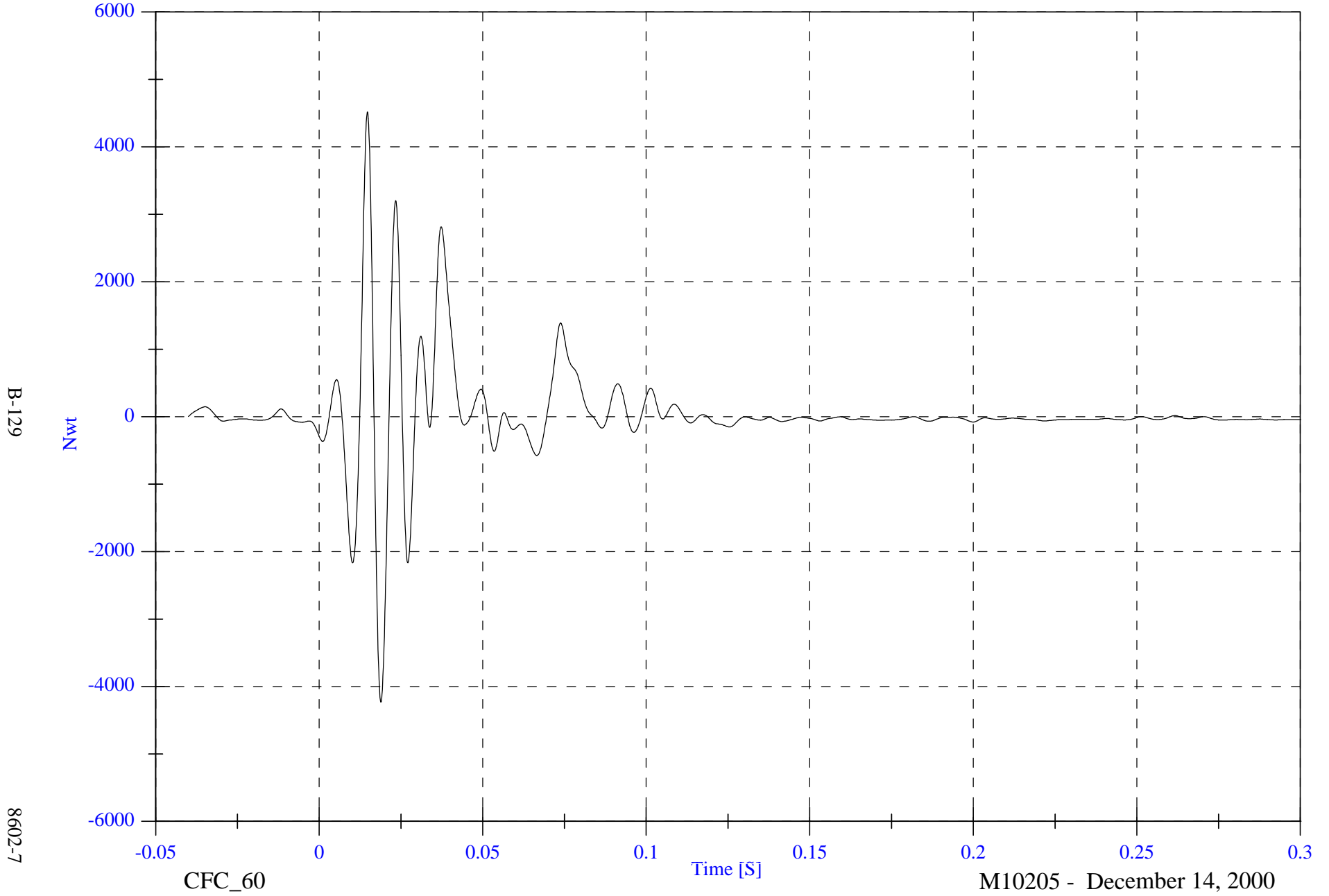
M10205 - December 14, 2000

NCAP TEST #7- 2001 Ford F150 ExCab Pickup

Max: 4519.5 [Nwt] at 0.015 [S]

BLC A5 Fx

Min: -4232.5 [Nwt] at 0.019 [S]



B-129

8602-7

CFC_60

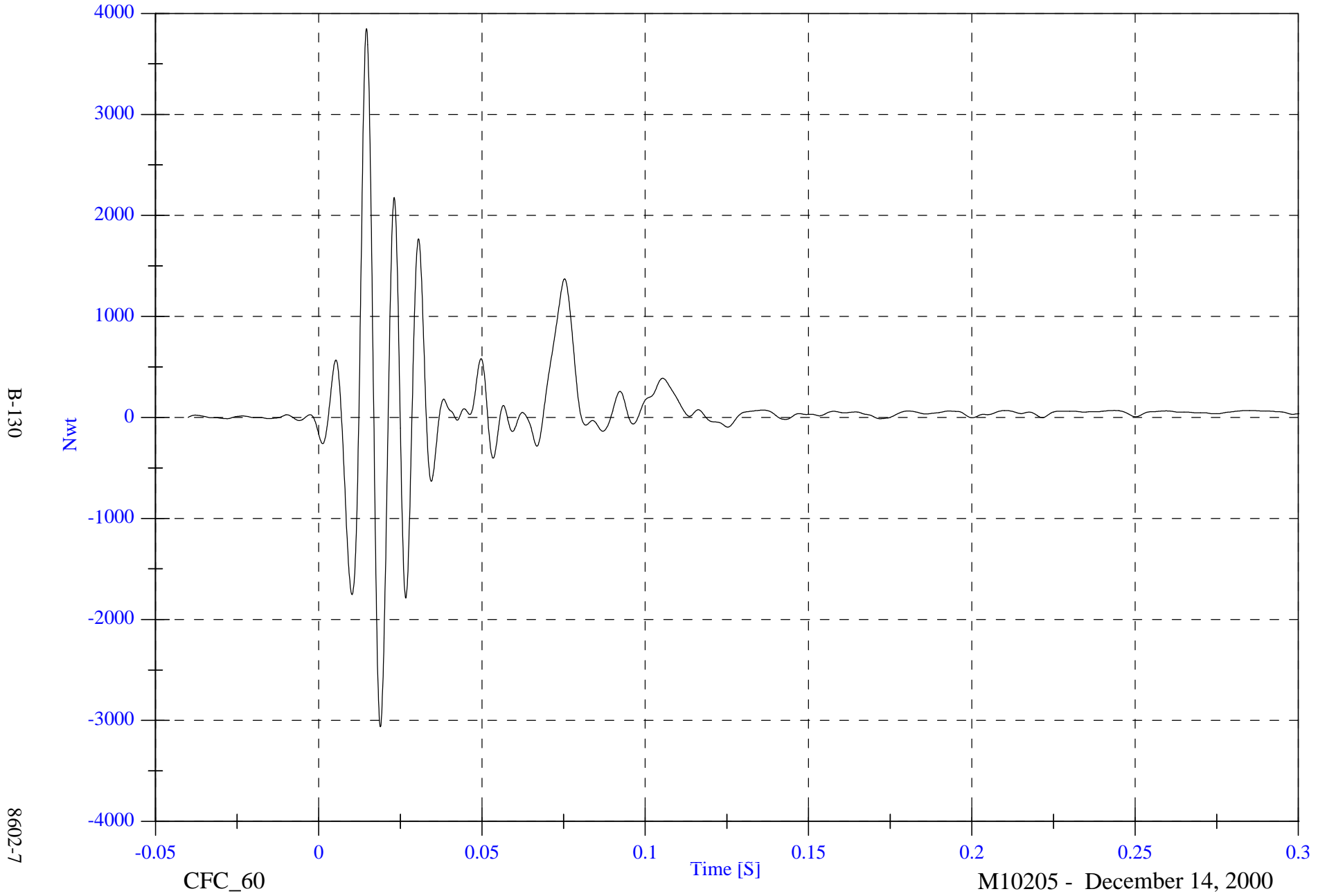
M10205 - December 14, 2000

NCAP TEST #7- 2001 Ford F150 ExCab Pickup

Max: 3851.5 [Nwt] at 0.015 [S]

BLC A6 Fx

Min: -3063.3 [Nwt] at 0.019 [S]

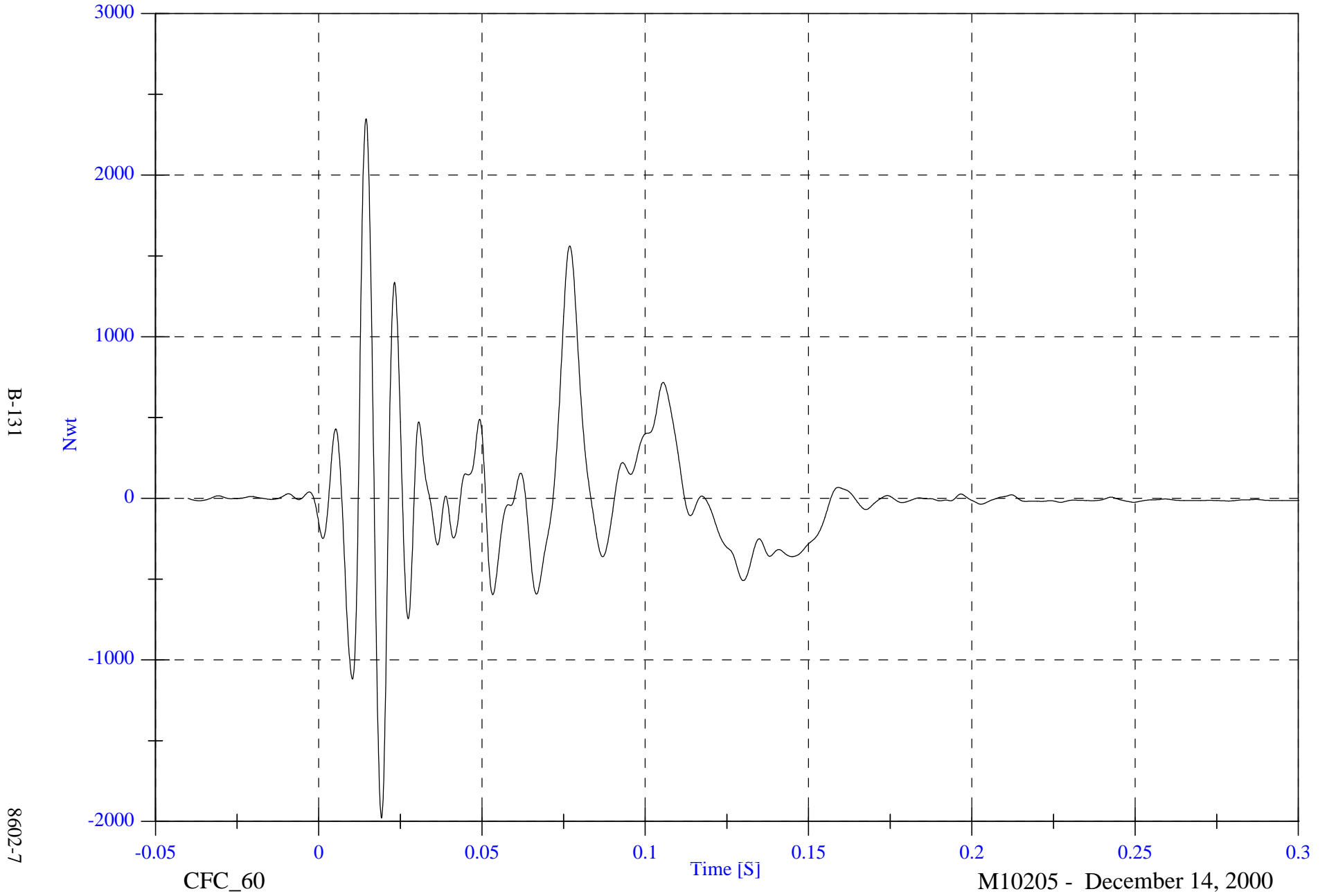


NCAP TEST #7- 2001 Ford F150 ExCab Pickup

Max: 2348.6 [Nwt] at 0.014 [S]

BLC A7 Fx

Min: -1979.5 [Nwt] at 0.019 [S]



B-131

8602-7

CFC_60

M10205 - December 14, 2000

NCAP TEST #7- 2001 Ford F150 ExCab Pickup

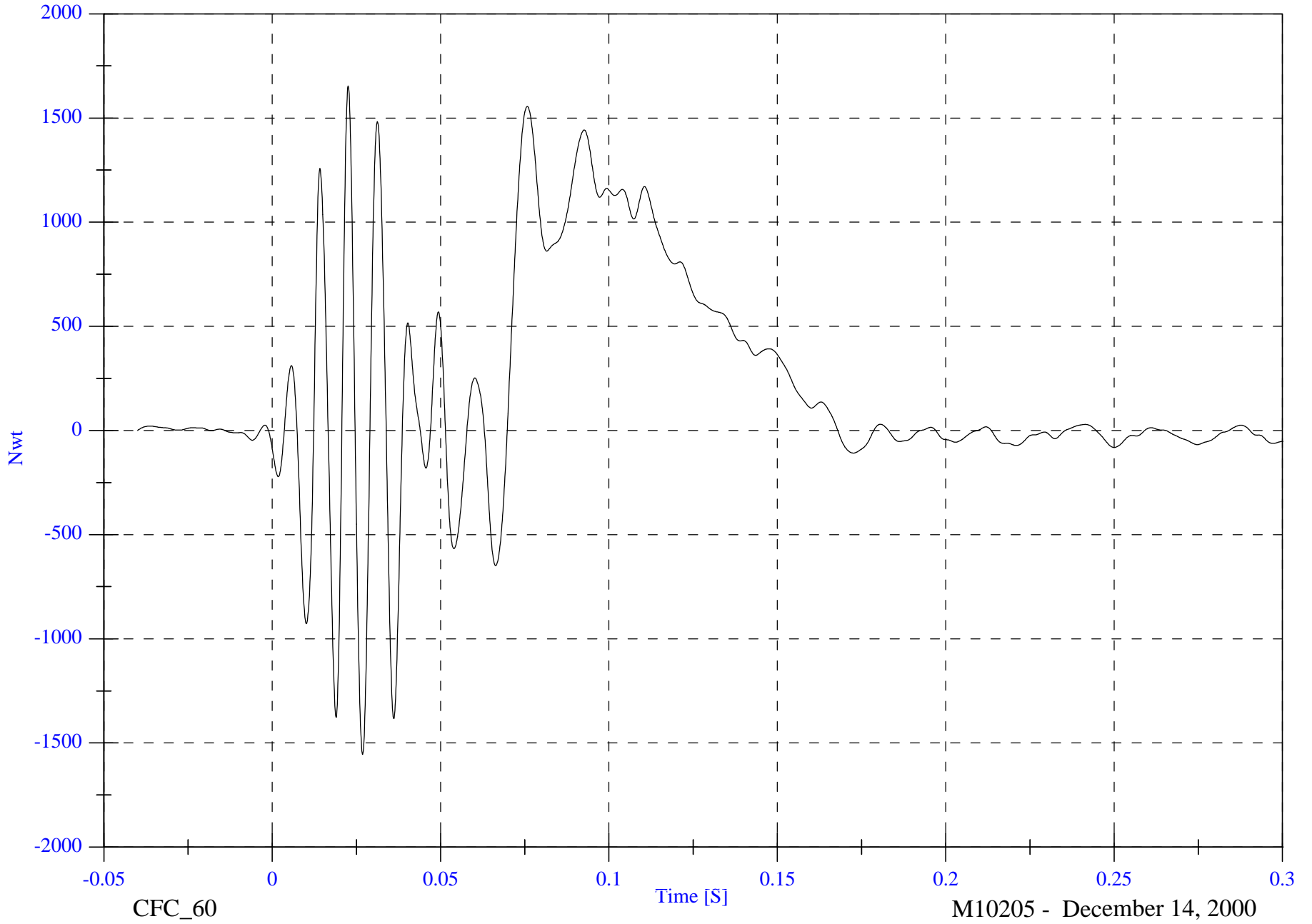
Max: 1653.8 [Nwt] at 0.022 [S]

BLC A8 Fx

Min: -1555.8 [Nwt] at 0.027 [S]

B-132

8602-7



CFC_60

Time [S]

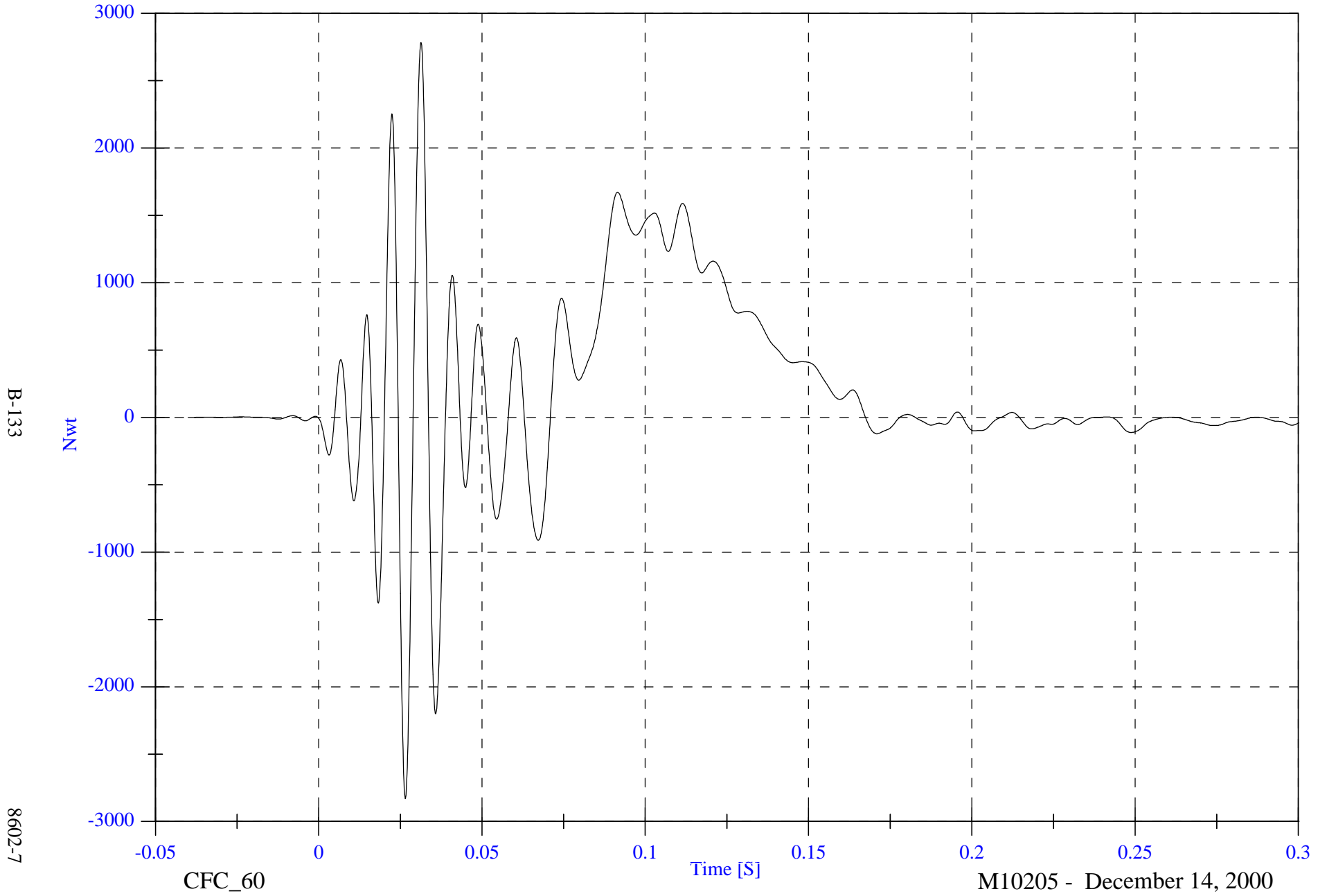
M10205 - December 14, 2000

NCAP TEST #7- 2001 Ford F150 ExCab Pickup

Max: 2784.6 [Nwt] at 0.031 [S]

BLC A9 Fx

Min: -2830.9 [Nwt] at 0.026 [S]



B-133

8602-7

CFC_60

Time [S]

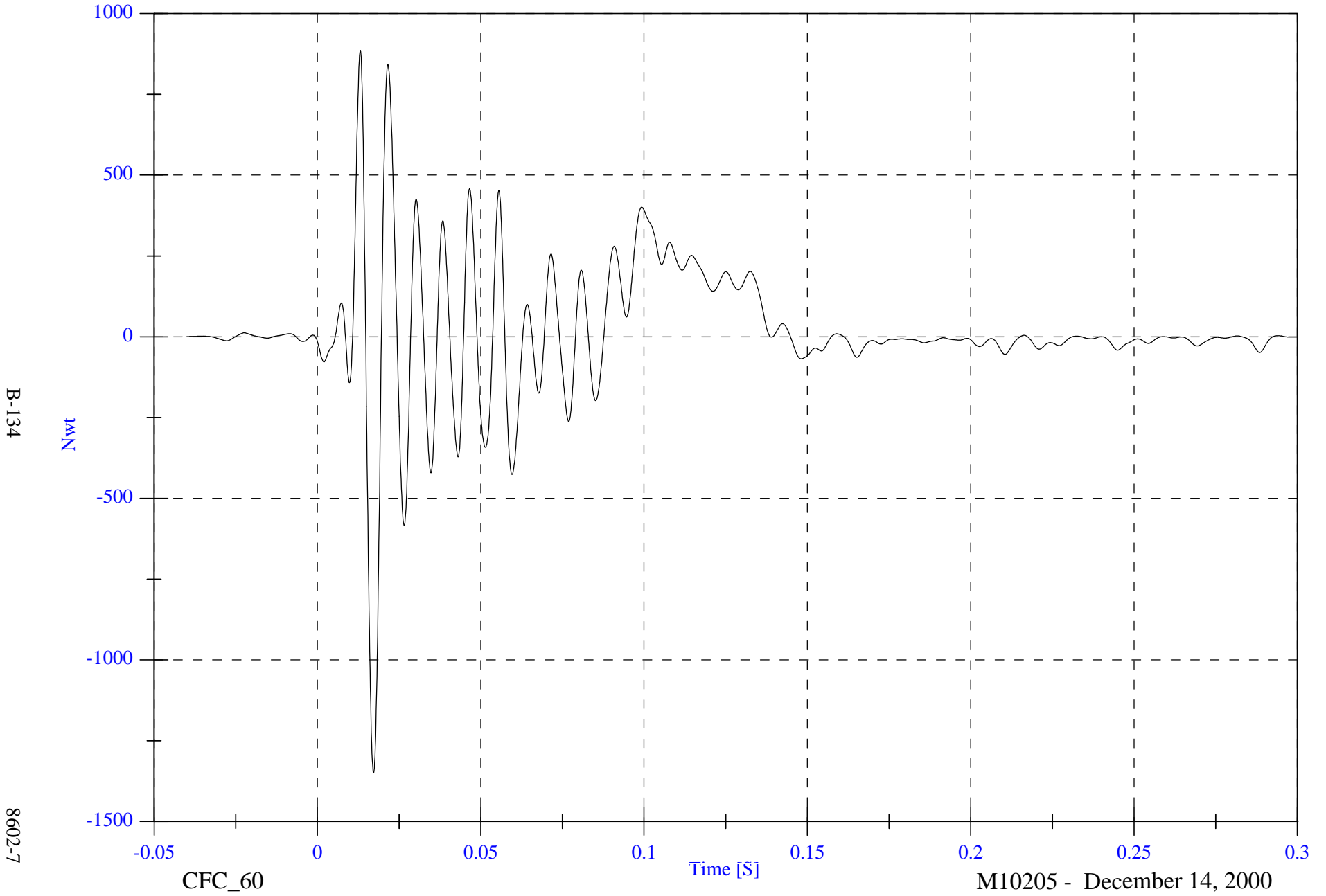
M10205 - December 14, 2000

NCAP TEST #7- 2001 Ford F150 ExCab Pickup

Max: 886.0 [Nwt] at 0.013 [S]

BLC B1 Fx

Min: -1350.6 [Nwt] at 0.017 [S]



B-134

8602-7

CFC_60

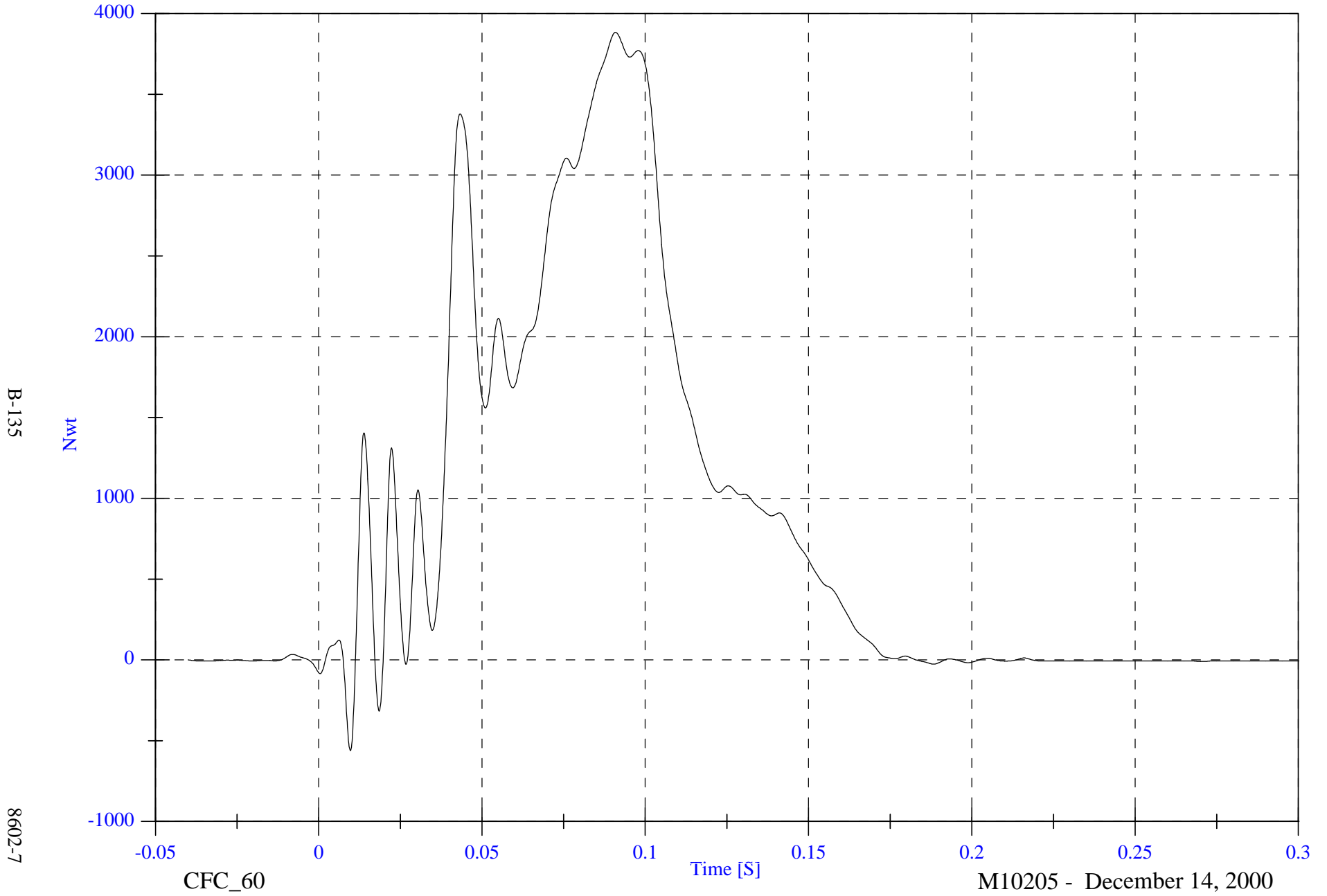
M10205 - December 14, 2000

NCAP TEST #7- 2001 Ford F150 ExCab Pickup

Max: 3882.5 [Nwt] at 0.091 [S]

BLC B2 Fx

Min: -561.6 [Nwt] at 0.010 [S]



B-135

8602-7

CFC_60

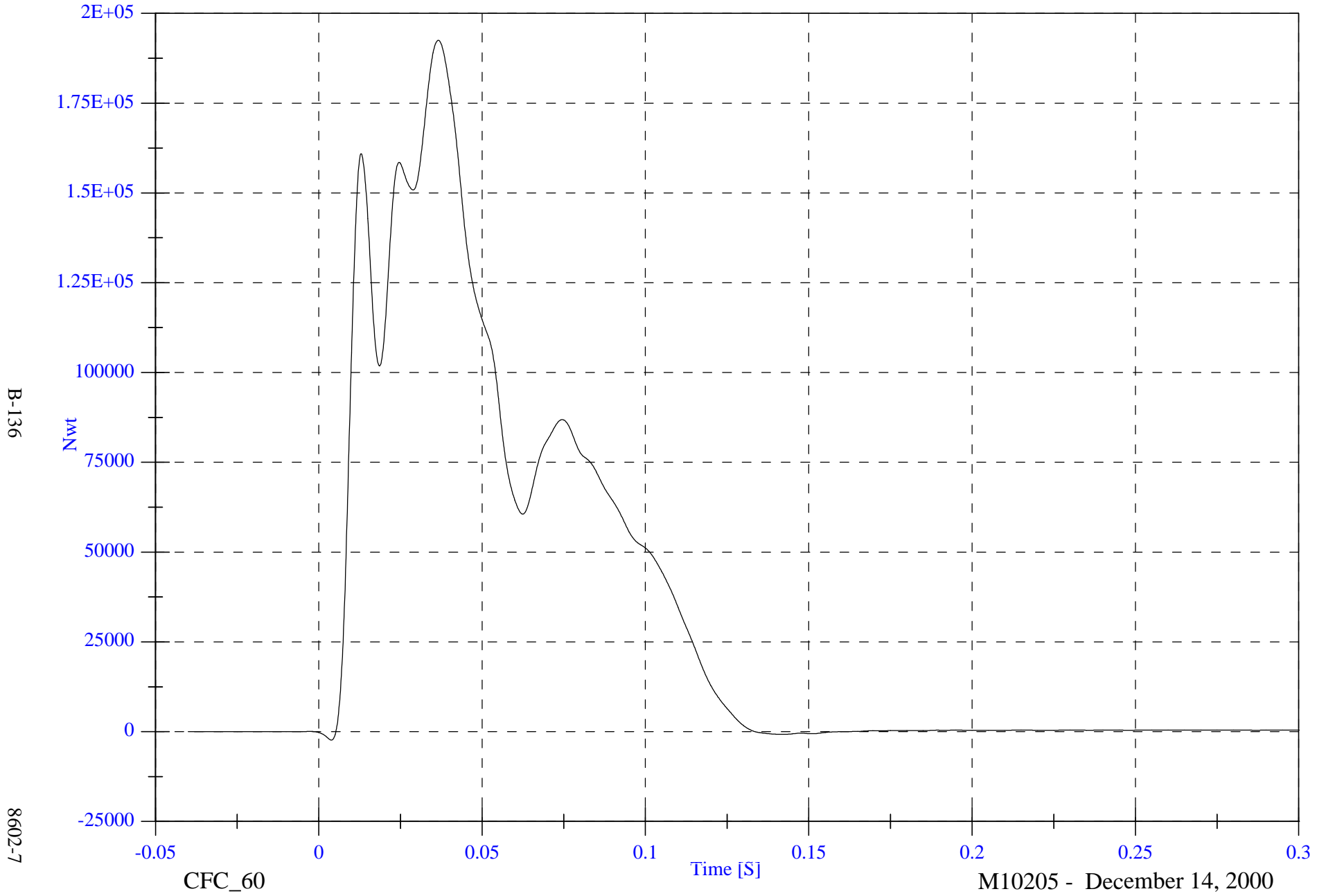
M10205 - December 14, 2000

NCAP TEST #7- 2001 Ford F150 ExCab Pickup

Max: 192509.6 [Nwt] at 0.037 [S]

BLC B3 Fx

Min: -2347.8 [Nwt] at 0.004 [S]

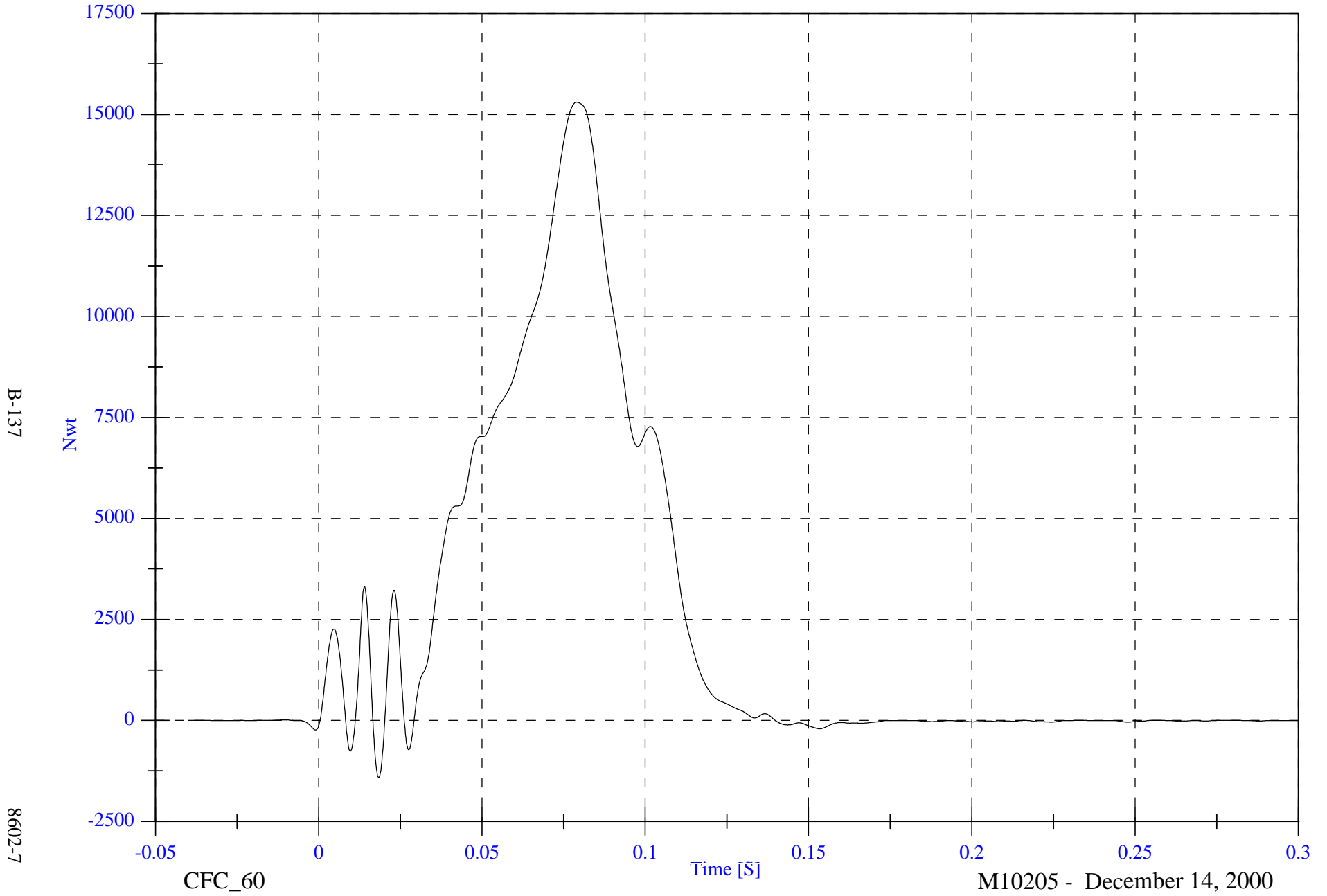


NCAP TEST #7- 2001 Ford F150 ExCab Pickup

Max: 15303.8 [Nwt] at 0.079 [S]

BLC B4 Fx

Min: -1412.8 [Nwt] at 0.018 [S]

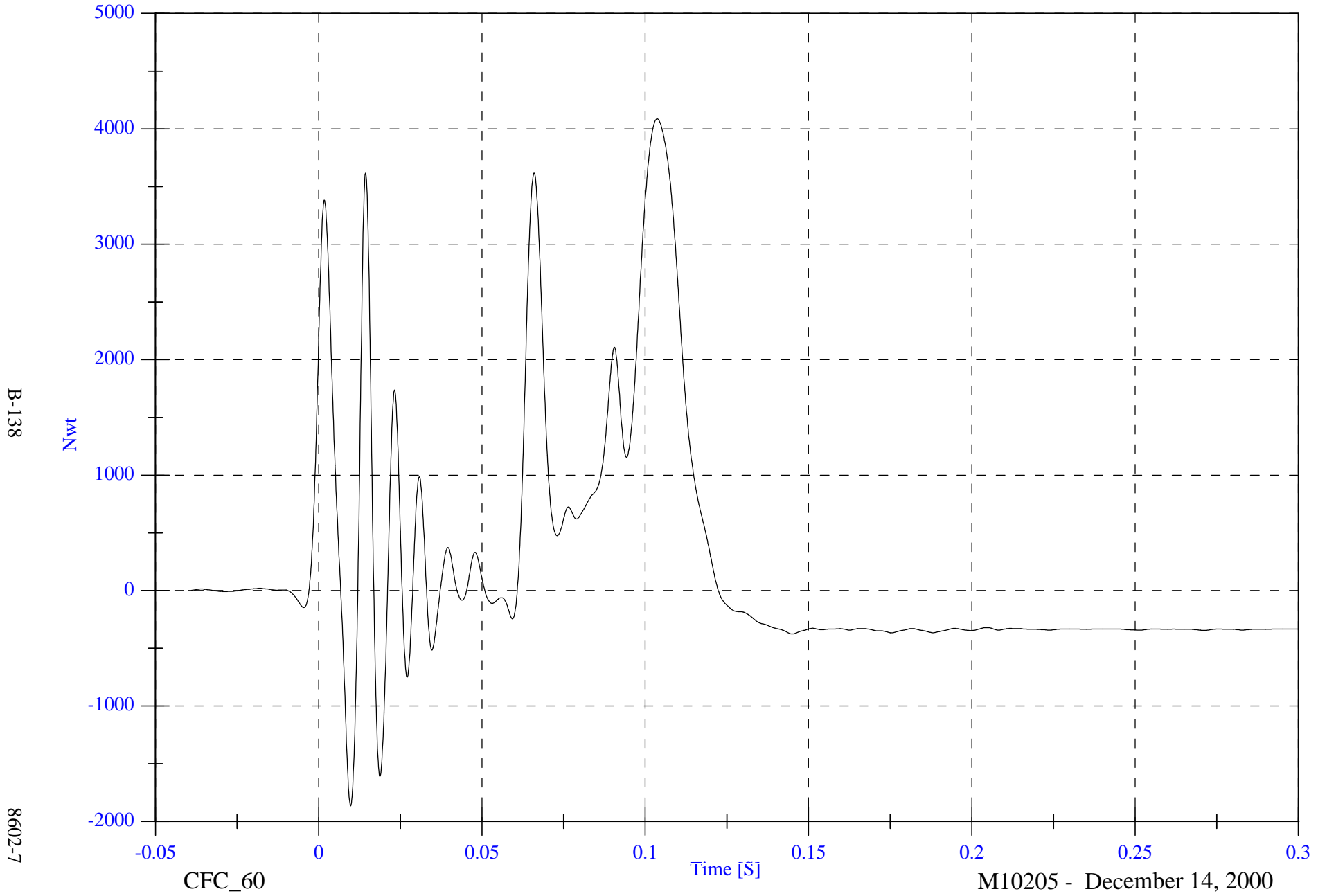


NCAP TEST #7- 2001 Ford F150 ExCab Pickup

Max: 4086.9 [Nwt] at 0.104 [S]

BLC B5 Fx

Min: -1864.7 [Nwt] at 0.010 [S]



B-138

8602-7

CFC_60

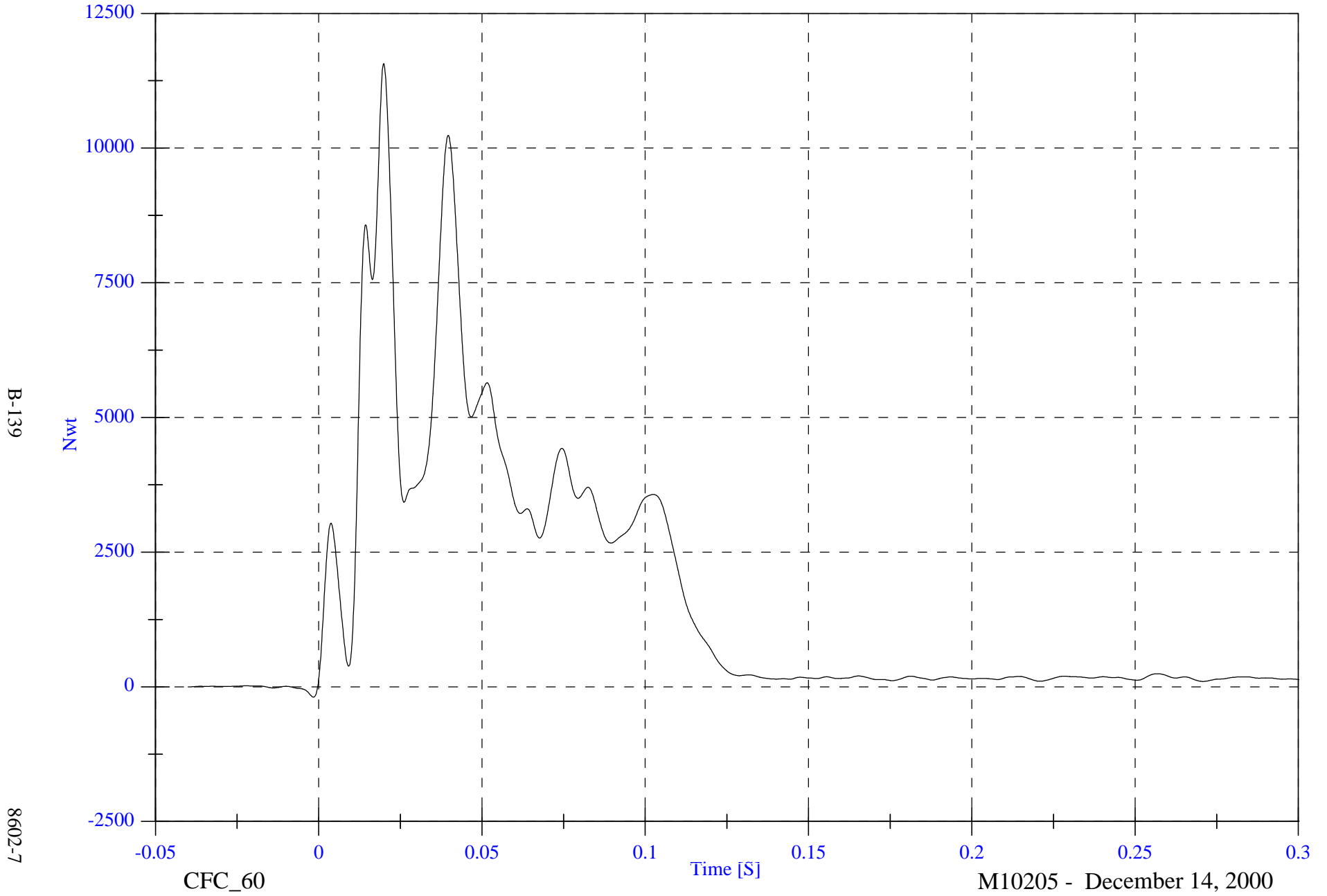
M10205 - December 14, 2000

NCAP TEST #7- 2001 Ford F150 ExCab Pickup

Max: 11570.5 [Nwt] at 0.020 [S]

BLC B6 Fx

Min: -193.5 [Nwt] at -0.002 [S]



B-139

8602-7

CFC_60

Time [S]

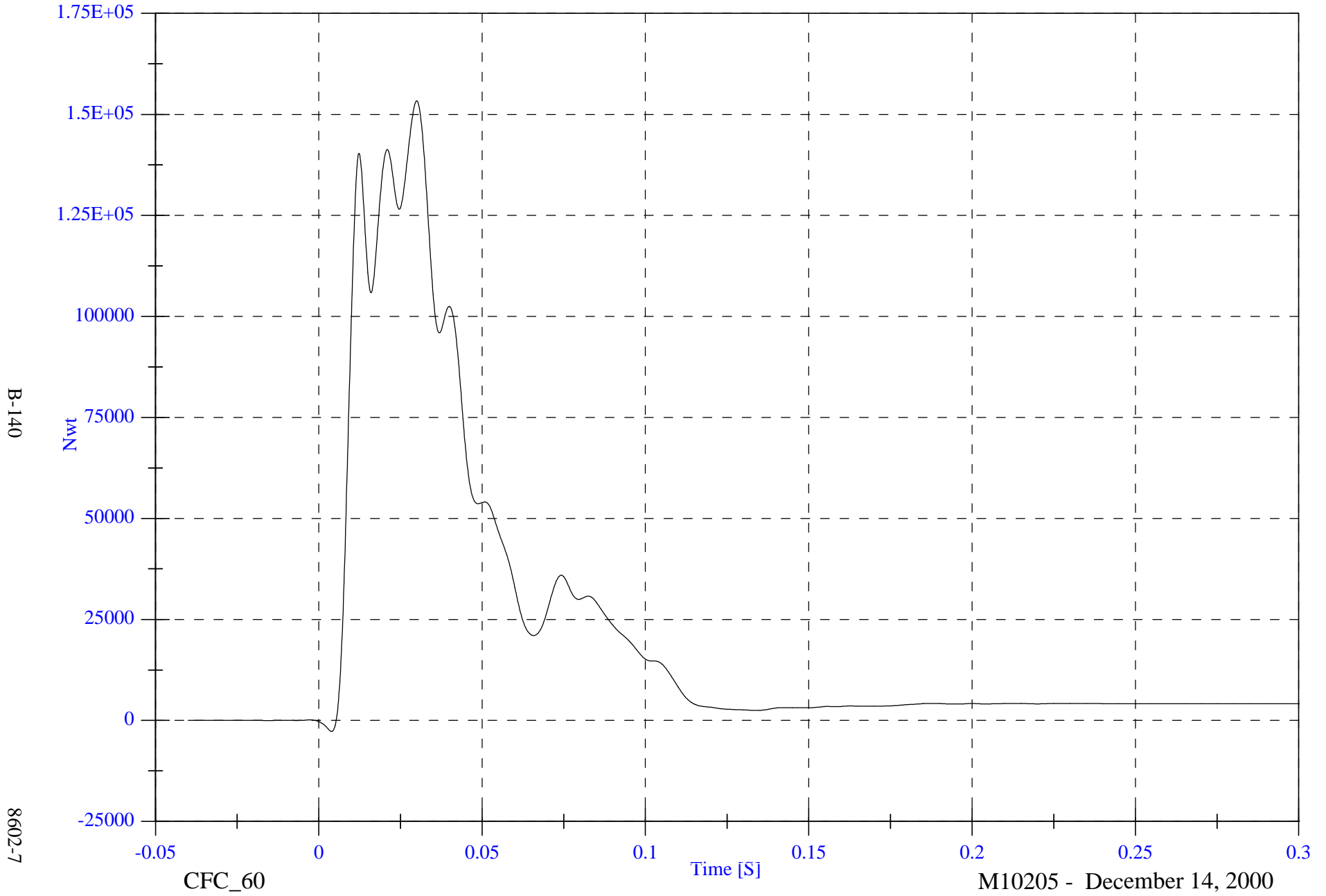
M10205 - December 14, 2000

NCAP TEST #7- 2001 Ford F150 ExCab Pickup

Max: 153347.0 [Nwt] at 0.030 [S]

BLC B7 Fx

Min: -2718.4 [Nwt] at 0.004 [S]



B-140

8602-7

CFC_60

Time [S]

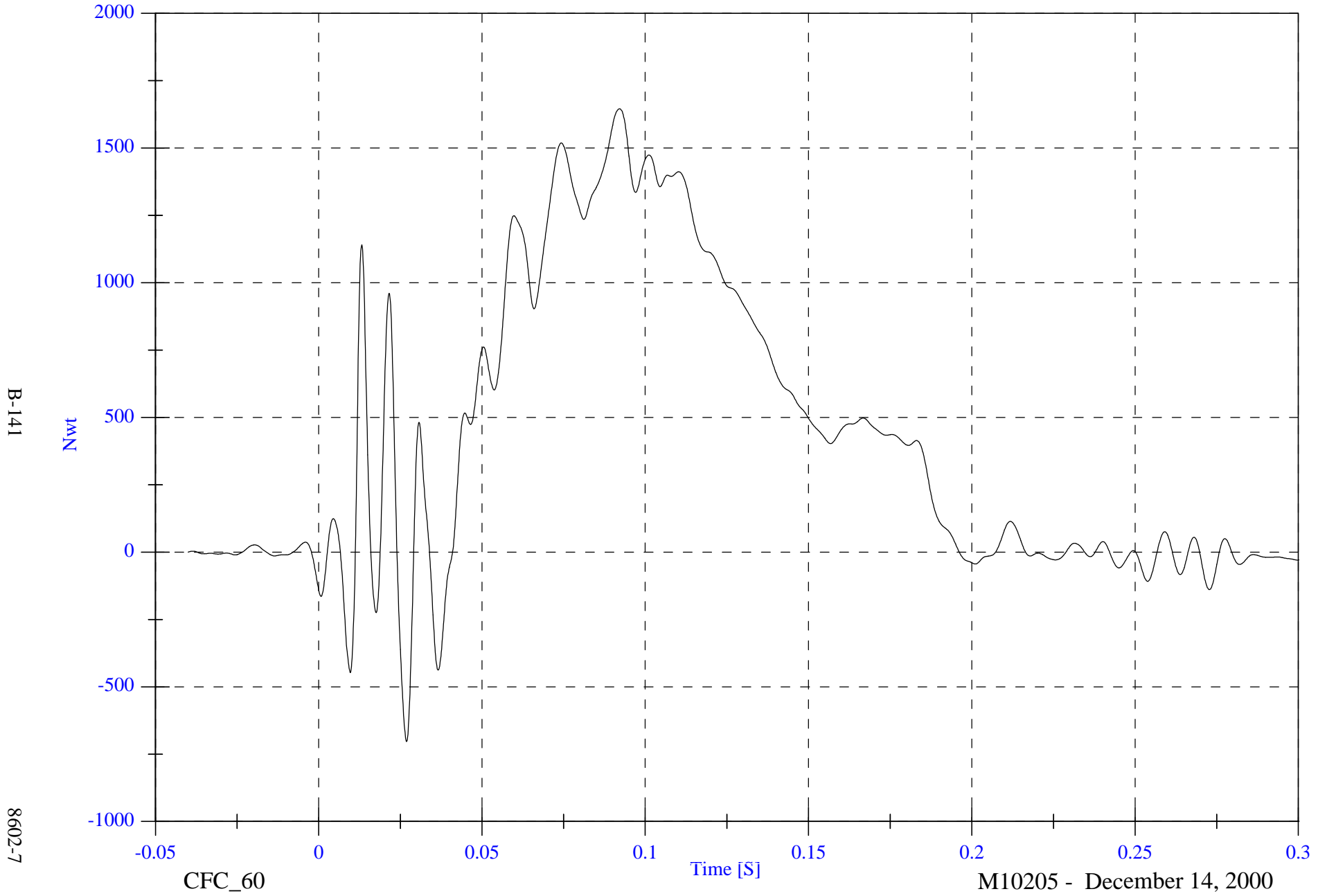
M10205 - December 14, 2000

NCAP TEST #7- 2001 Ford F150 ExCab Pickup

Max: 1646.0 [Nwt] at 0.092 [S]

BLC B8 Fx

Min: -703.3 [Nwt] at 0.027 [S]



B-141

8602-7

CFC_60

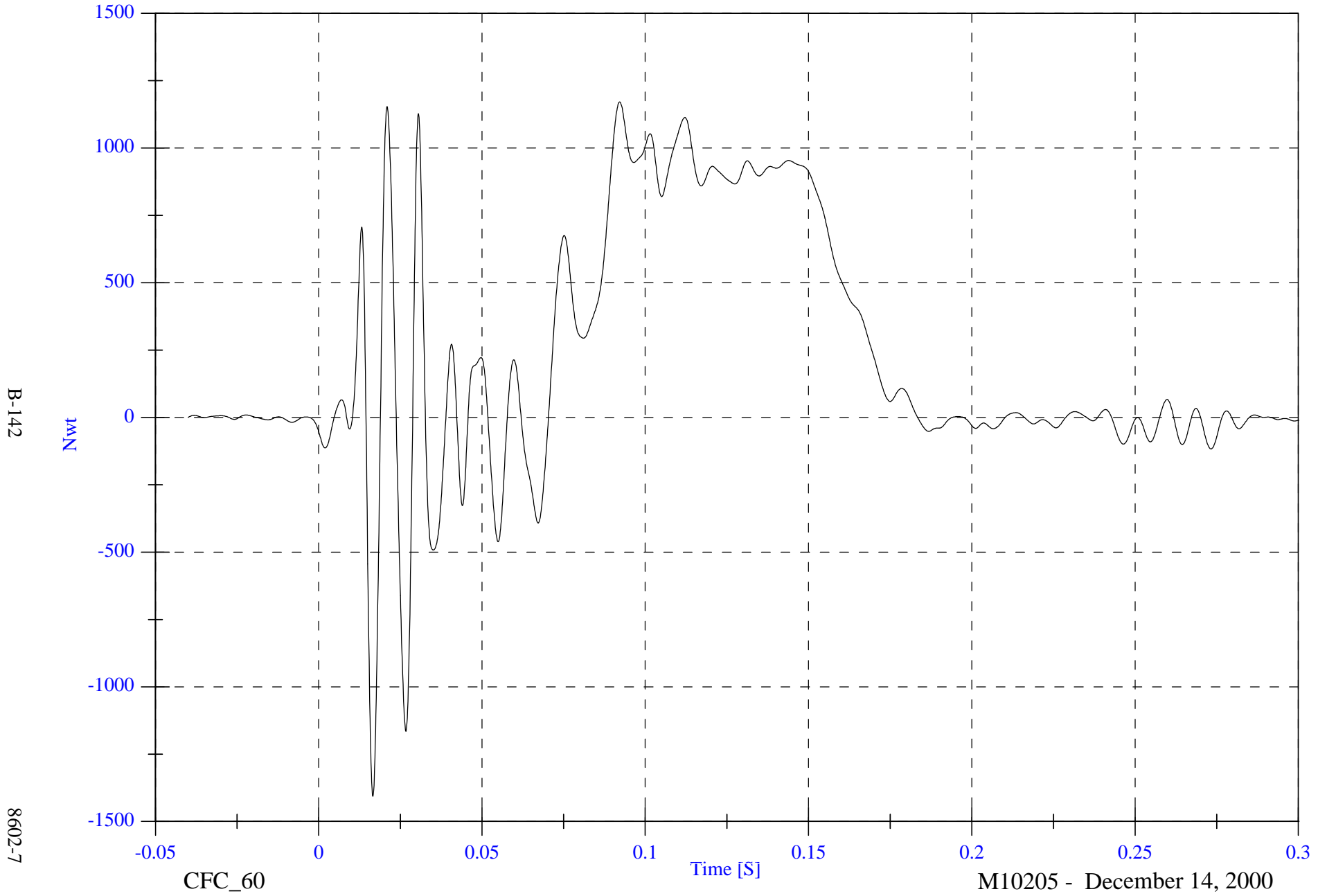
M10205 - December 14, 2000

NCAP TEST #7- 2001 Ford F150 ExCab Pickup

Max: 1171.6 [Nwt] at 0.092 [S]

BLC B9 Fx

Min: -1406.9 [Nwt] at 0.017 [S]



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8602-7

NCAP TEST #7- 2001 Ford F150 ExCab Pickup

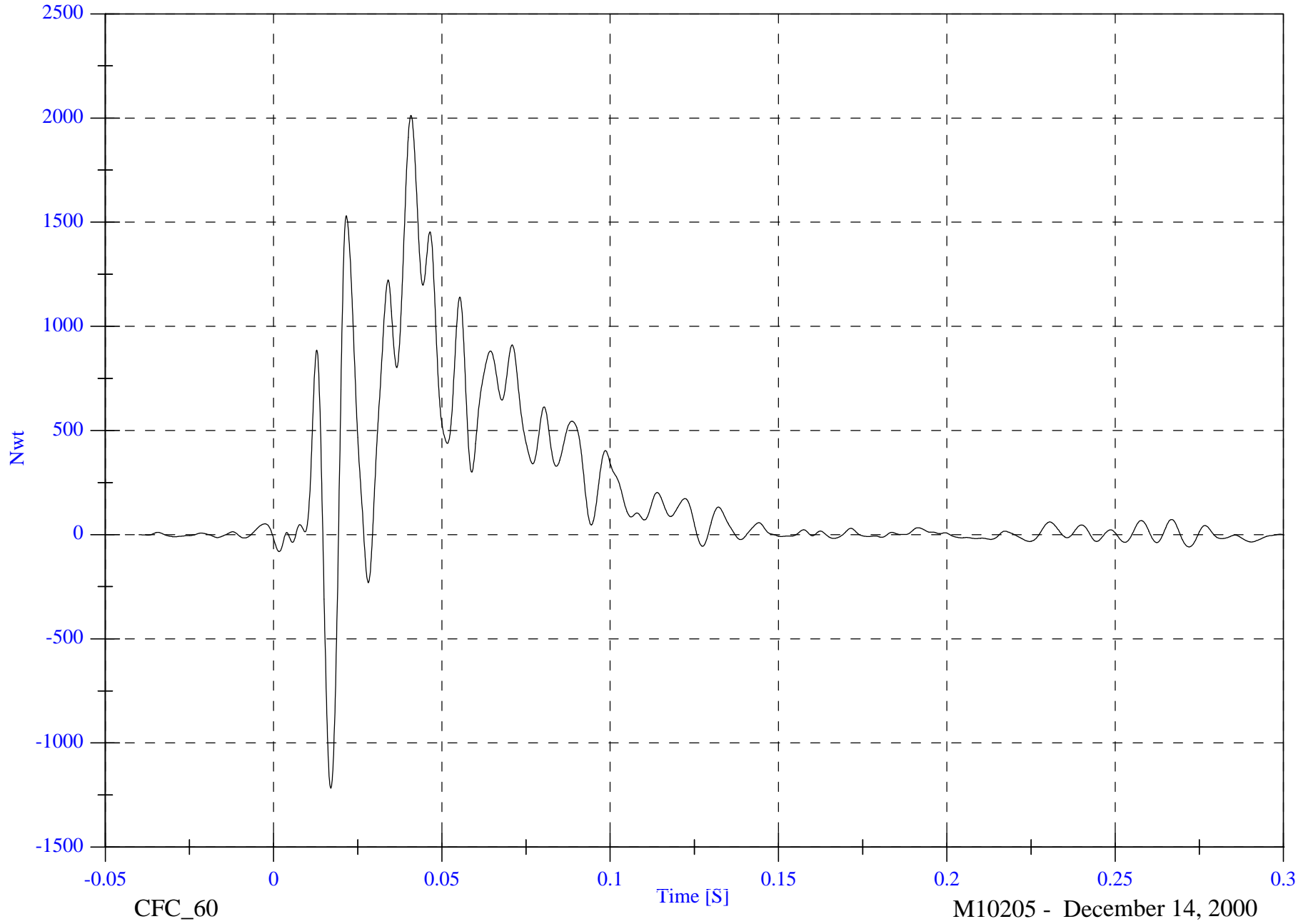
Max: 2013.0 [Nwt] at 0.041 [S]

BLC C1 Fx

Min: -1217.9 [Nwt] at 0.017 [S]

B-143

8602-7



CFC_60

Time [S]

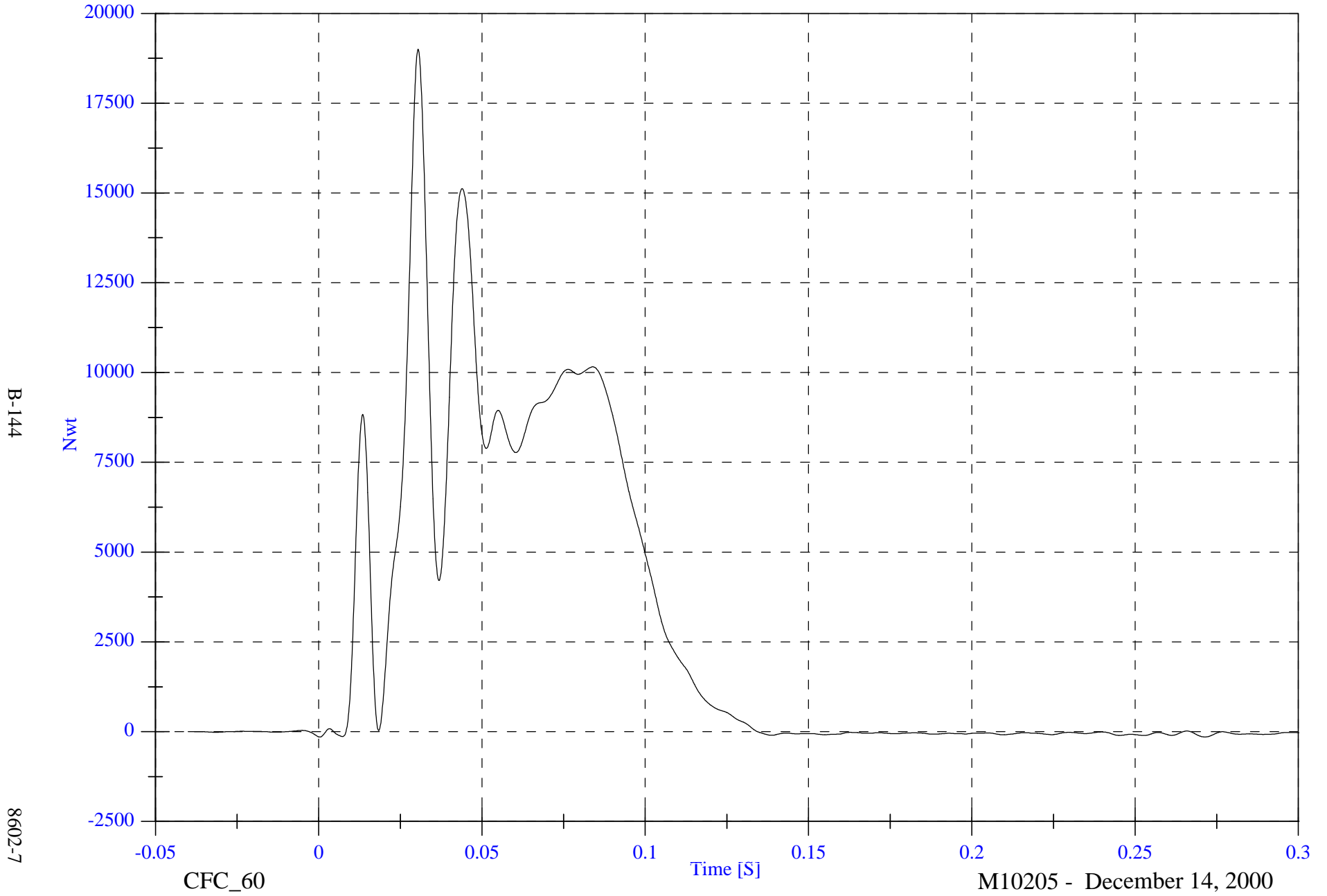
M10205 - December 14, 2000

NCAP TEST #7- 2001 Ford F150 ExCab Pickup

Max: 19004.9 [Nwt] at 0.030 [S]

BLC C2 Fx

Min: -150.5 [Nwt] at 0.000 [S]



B-144

8602-7

CFC_60

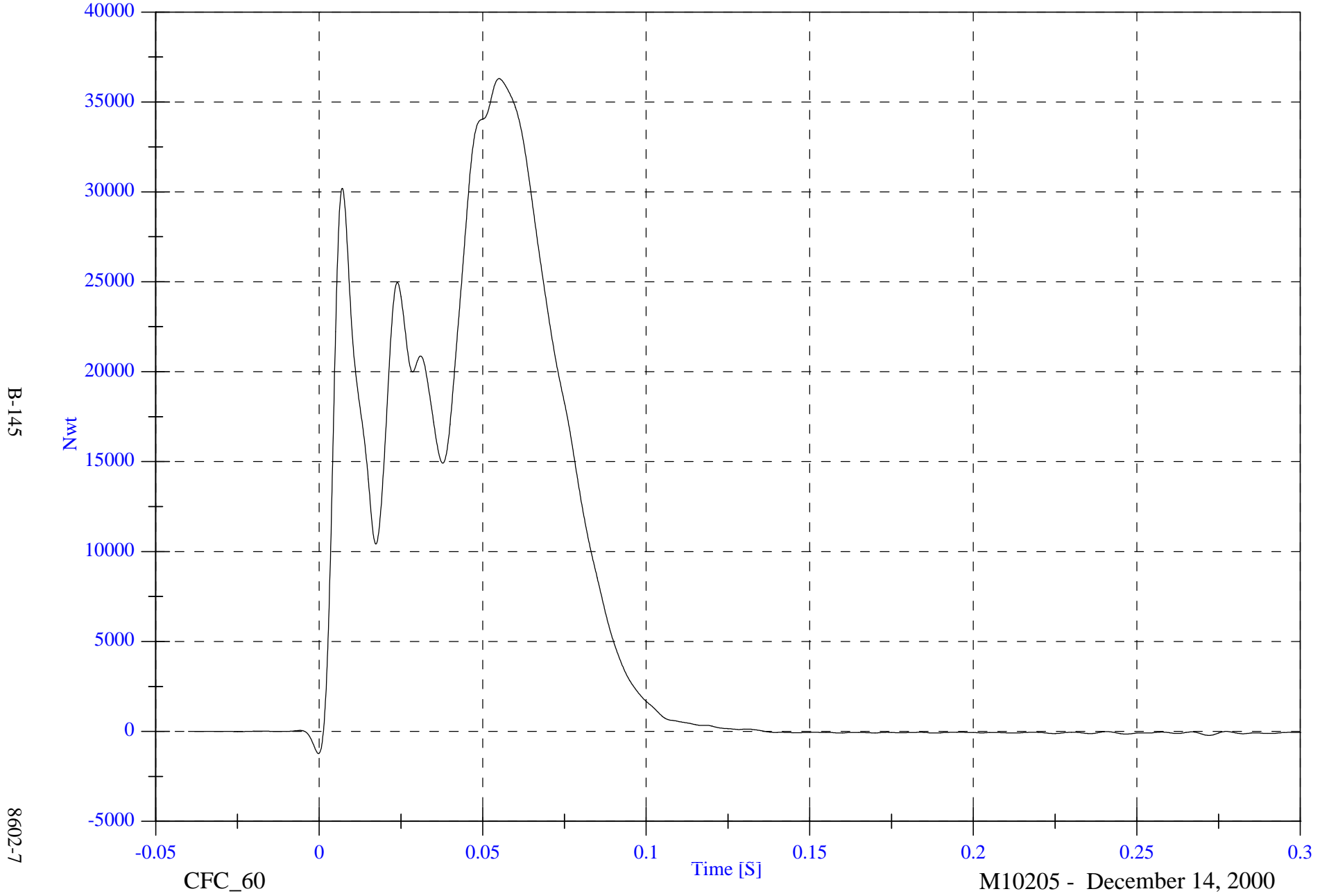
M10205 - December 14, 2000

NCAP TEST #7- 2001 Ford F150 ExCab Pickup

Max: 36296.5 [Nwt] at 0.055 [S]

BLC C3 Fx

Min: -1233.5 [Nwt] at -0.000 [S]



B-145

8602-7

CFC_60

Time [S]

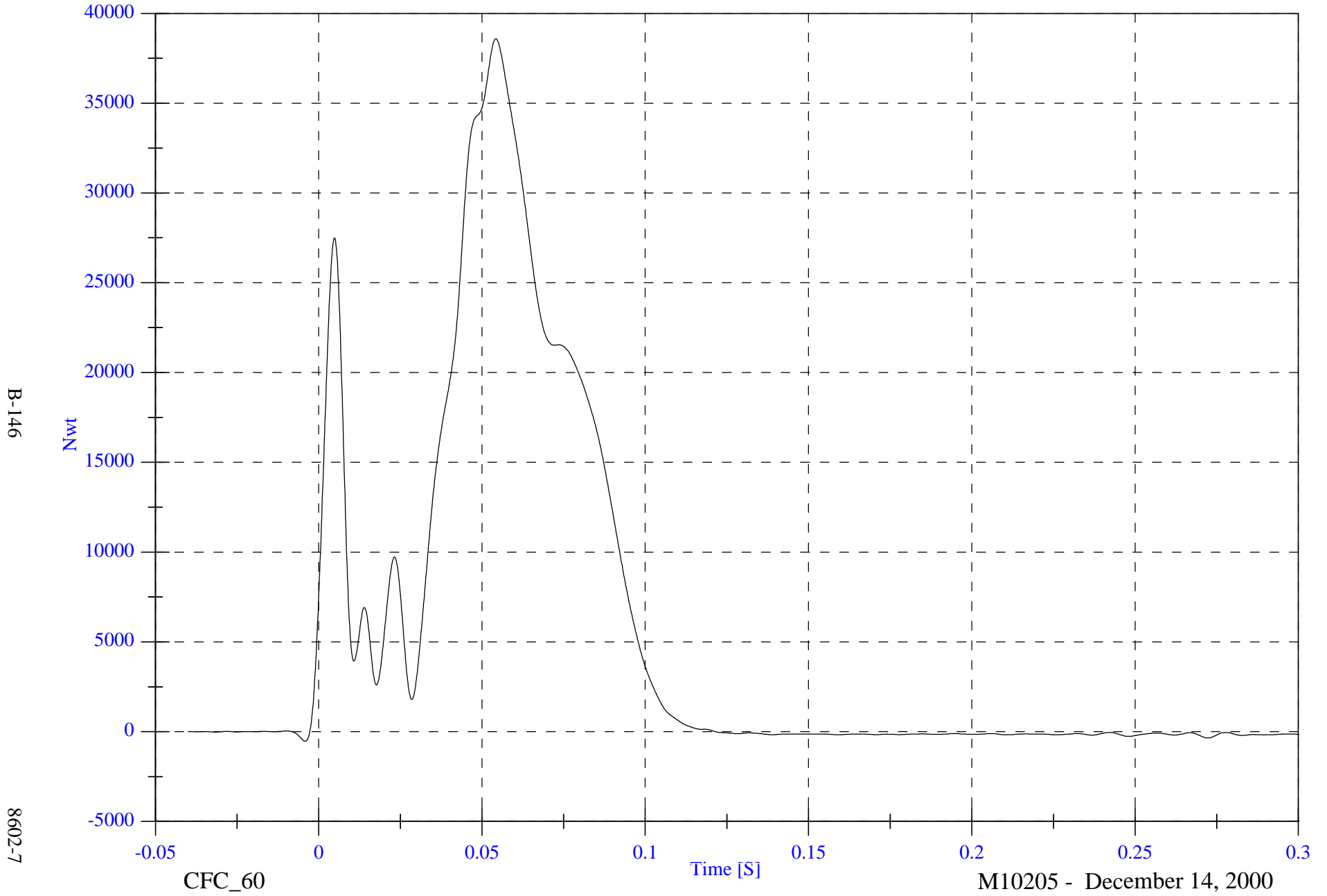
M10205 - December 14, 2000

NCAP TEST #7- 2001 Ford F150 ExCab Pickup

Max: 38585.3 [Nwt] at 0.054 [S]

BLC C4 Fx

Min: -533.7 [Nwt] at -0.004 [S]



B-146

8602-7

CFC_60

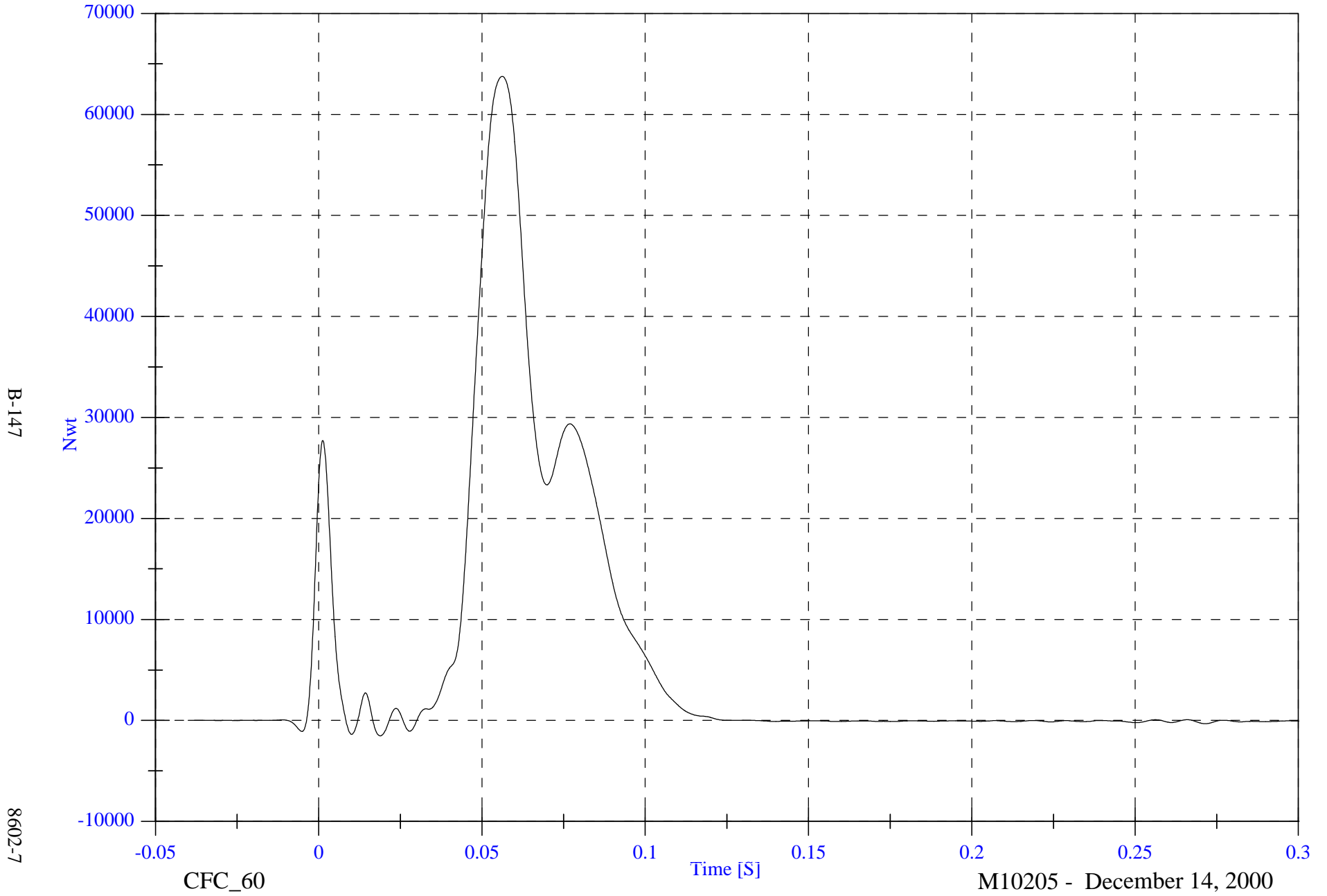
M10205 - December 14, 2000

NCAP TEST #7- 2001 Ford F150 ExCab Pickup

Max: 63770.5 [Nwt] at 0.056 [S]

BLC C5 Fx

Min: -1523.7 [Nwt] at 0.019 [S]



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8602-7

CFC_60

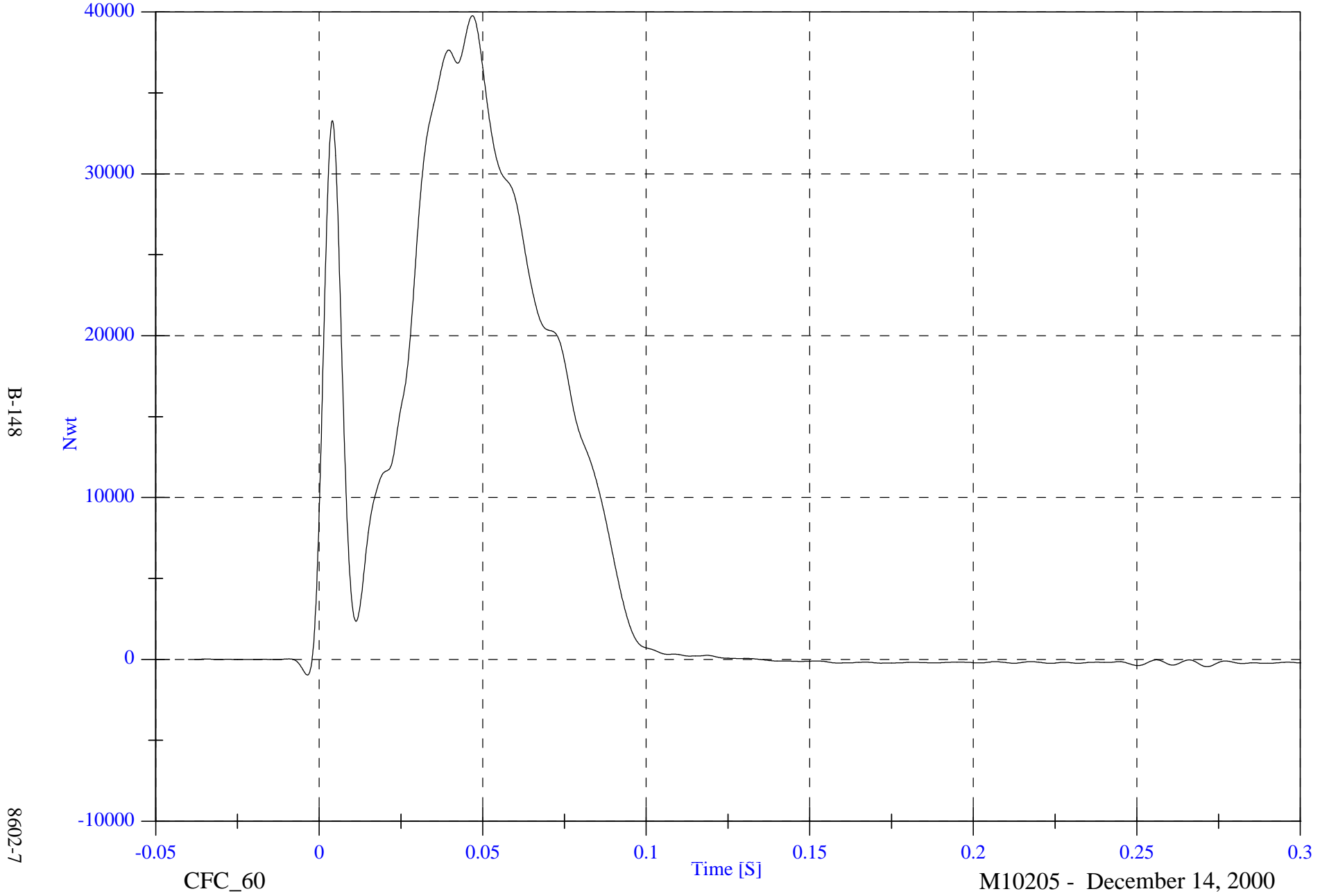
M10205 - December 14, 2000

NCAP TEST #7- 2001 Ford F150 ExCab Pickup

Max: 39770.9 [Nwt] at 0.047 [S]

BLC C6 Fx

Min: -960.3 [Nwt] at -0.004 [S]



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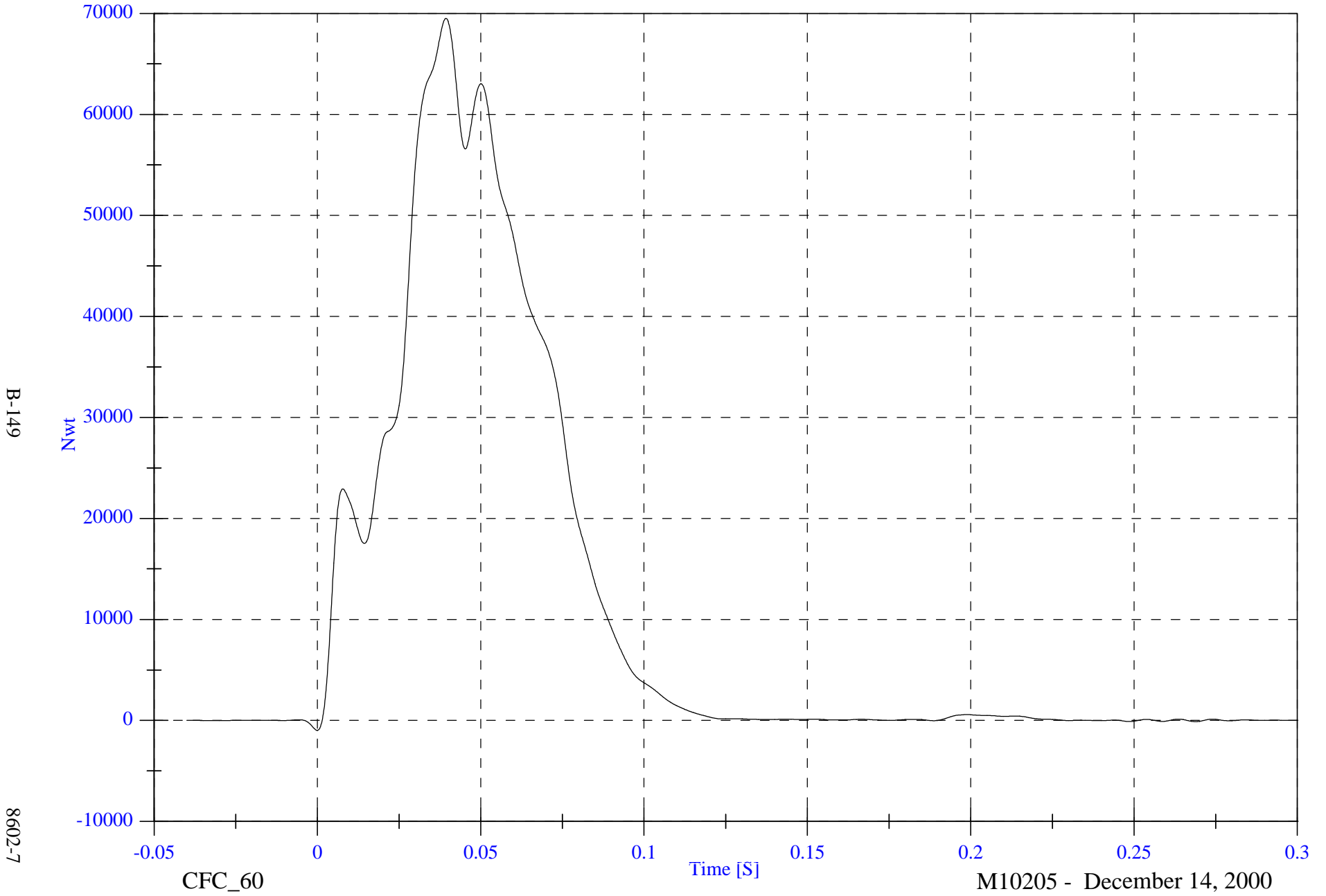
8602-7

NCAP TEST #7- 2001 Ford F150 ExCab Pickup

Max: 69513.6 [Nwt] at 0.039 [S]

BLC C7 Fx

Min: -990.5 [Nwt] at -0.000 [S]



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8602-7

CFC_60

Time [S]

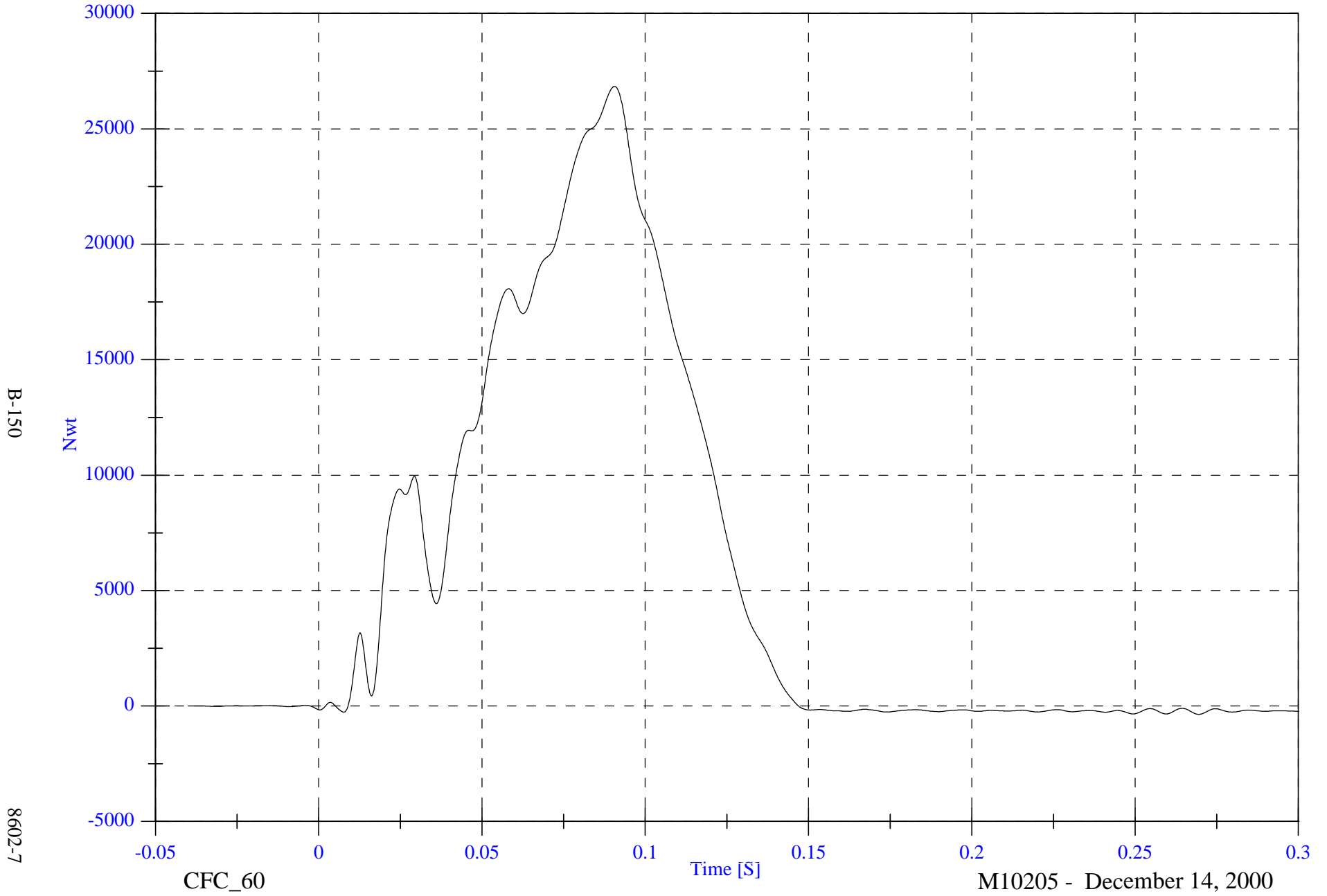
M10205 - December 14, 2000

NCAP TEST #7- 2001 Ford F150 ExCab Pickup

Max: 26841.9 [Nwt] at 0.091 [S]

BLC C8 Fx

Min: -362.9 [Nwt] at 0.269 [S]

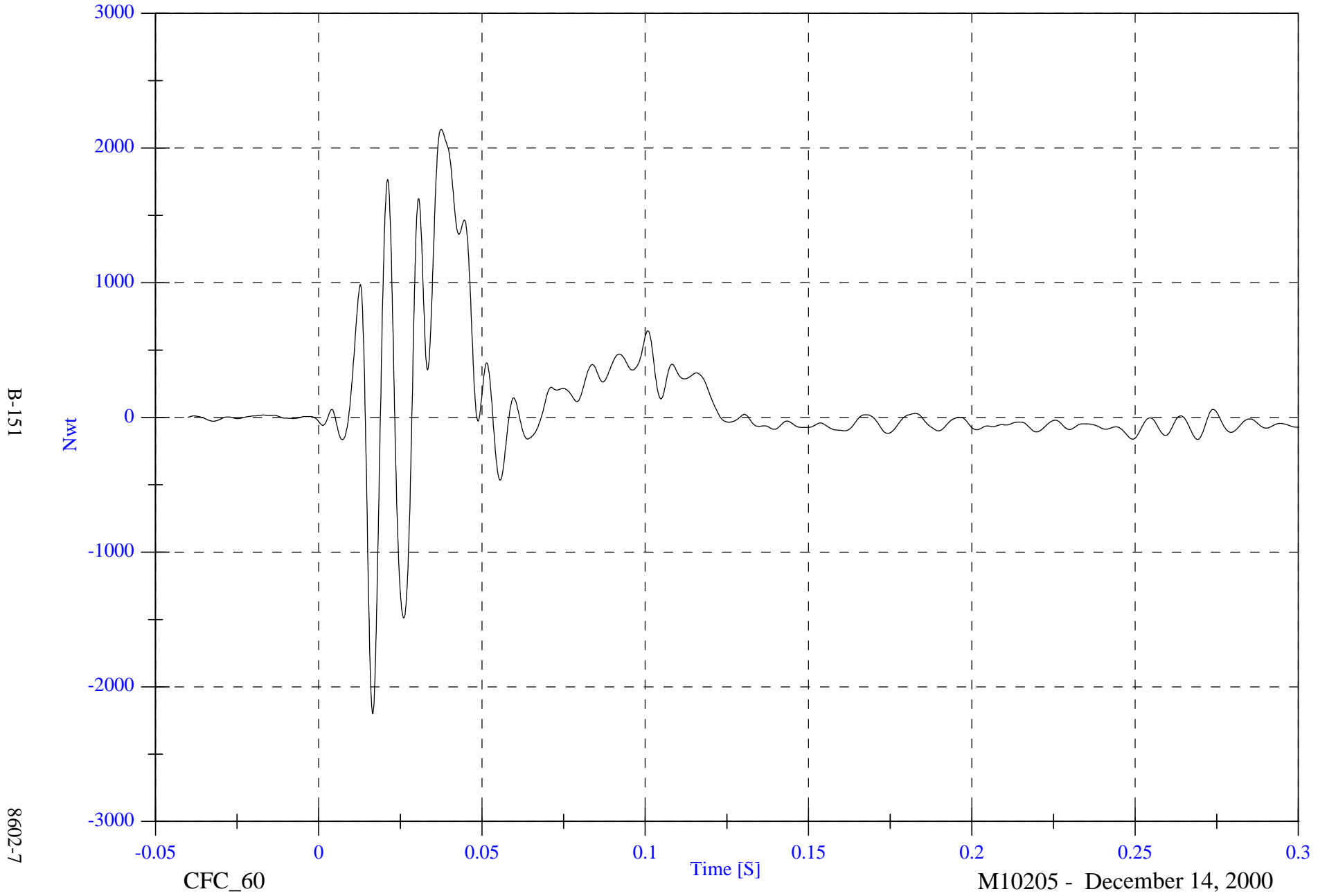


NCAP TEST #7- 2001 Ford F150 ExCab Pickup

Max: 2139.4 [Nwt] at 0.037 [S]

BLC C9 Fx

Min: -2200.1 [Nwt] at 0.016 [S]



B-151

8602-7

CFC_60

Time [S]

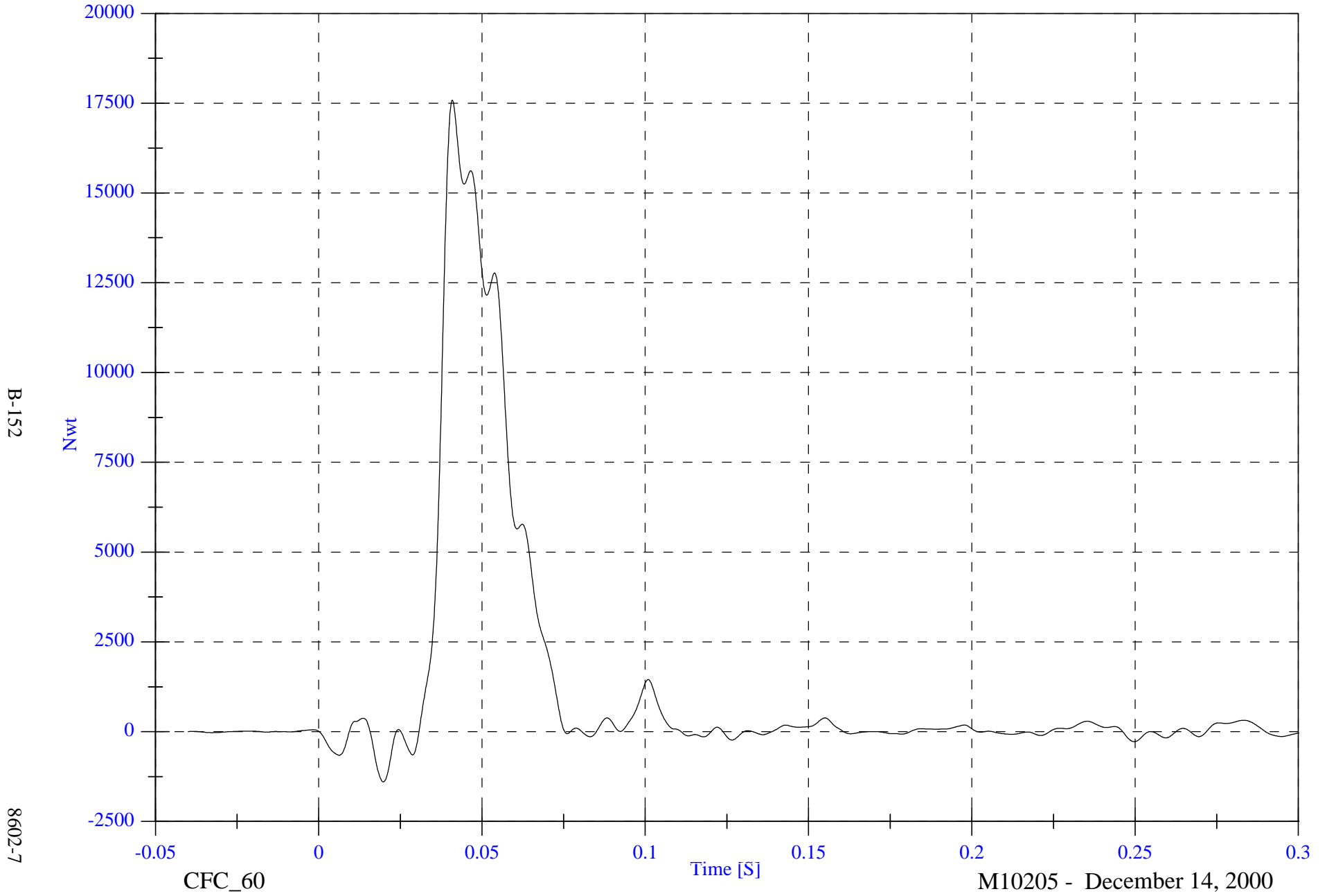
M10205 - December 14, 2000

NCAP TEST #7- 2001 Ford F150 ExCab Pickup

Max: 17584.4 [Nwt] at 0.041 [S]

BLC D1 Fx

Min: -1398.2 [Nwt] at 0.020 [S]



B-152

8602-7

CFC_60

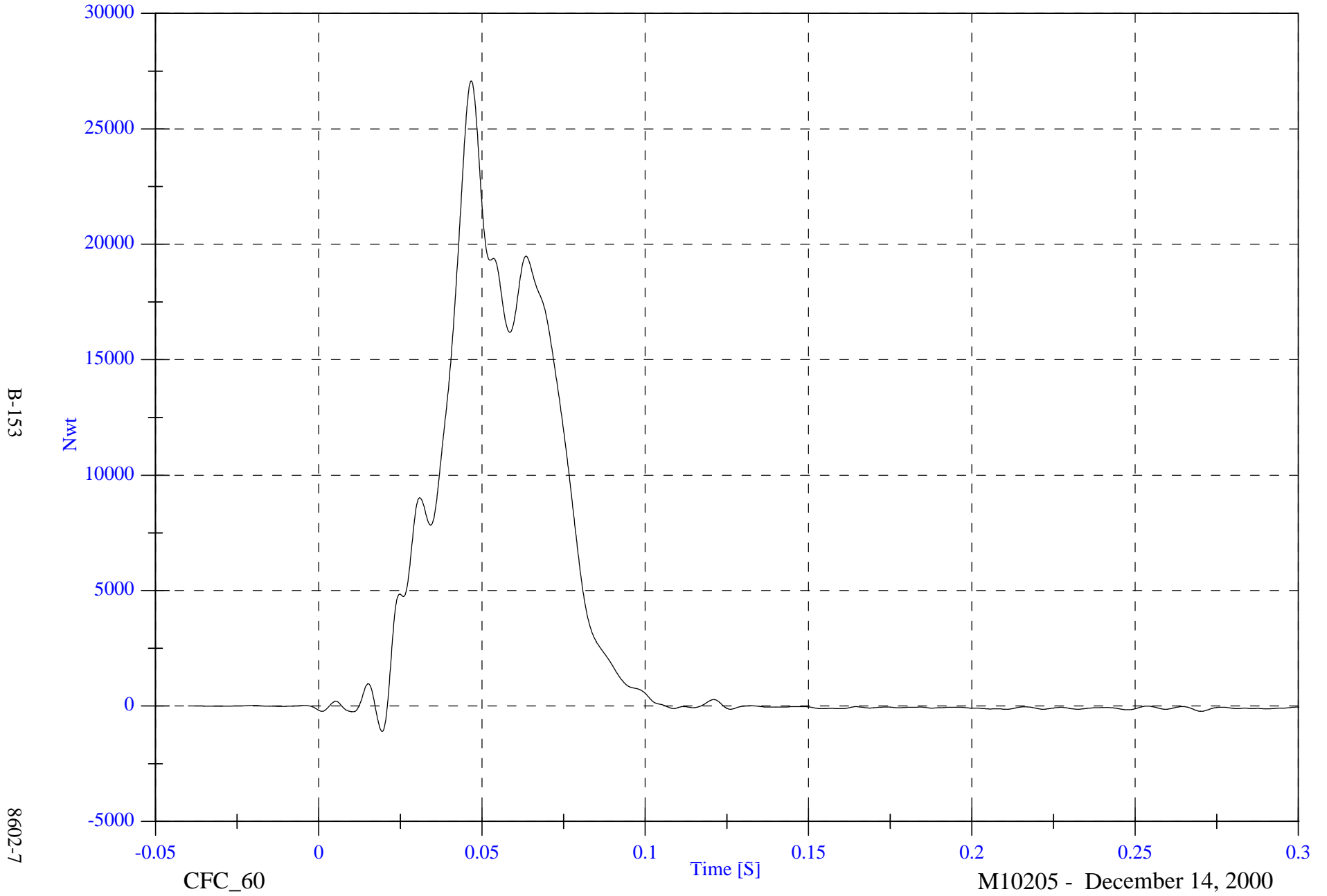
M10205 - December 14, 2000

NCAP TEST #7- 2001 Ford F150 ExCab Pickup

Max: 27080.9 [Nwt] at 0.047 [S]

BLC D2 Fx

Min: -1103.3 [Nwt] at 0.019 [S]

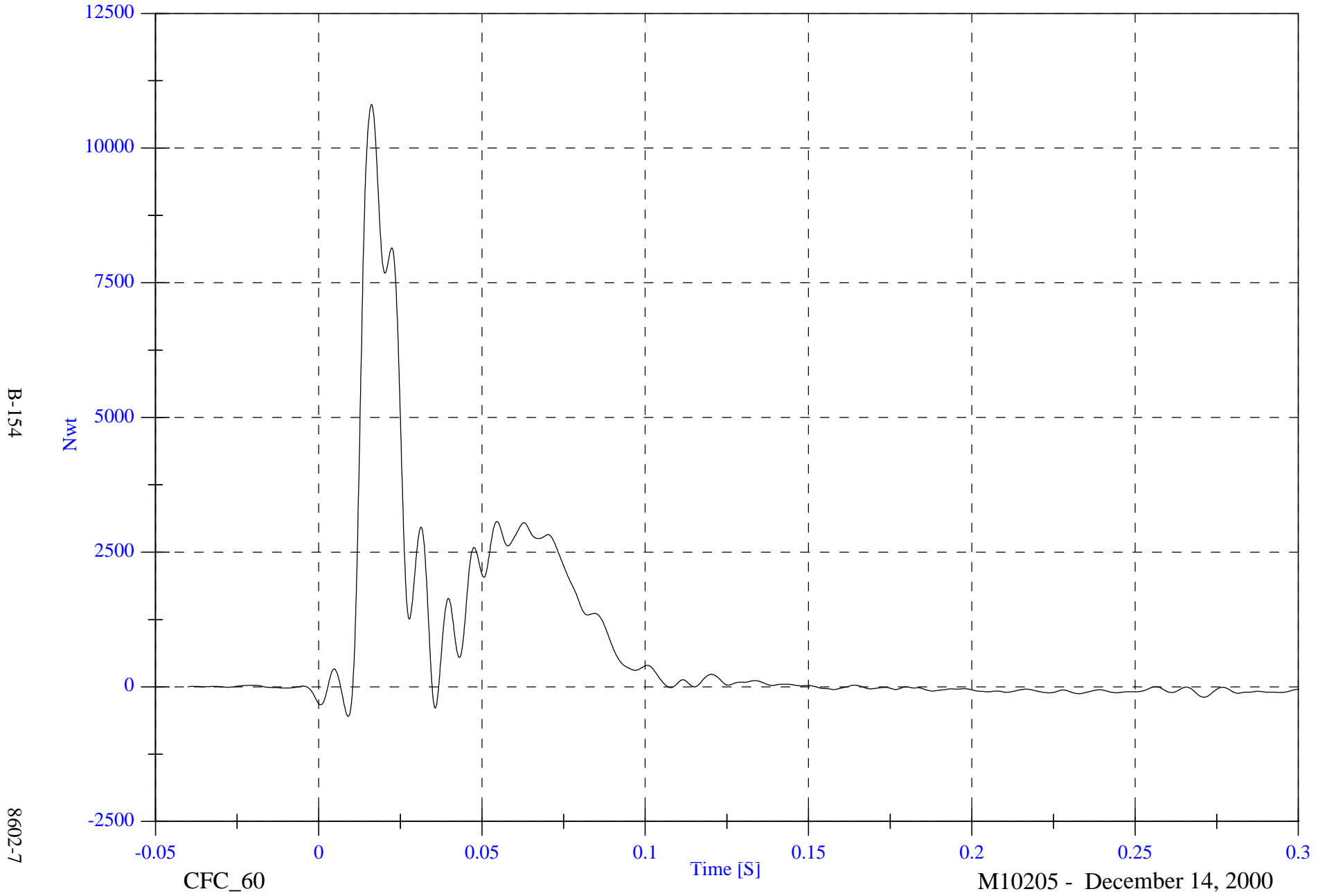


NCAP TEST #7- 2001 Ford F150 ExCab Pickup

Max: 10810.5 [Nwt] at 0.016 [S]

BLC D3 Fx

Min: -549.3 [Nwt] at 0.009 [S]



B-154

8602-7

CFC_60

Time [S]

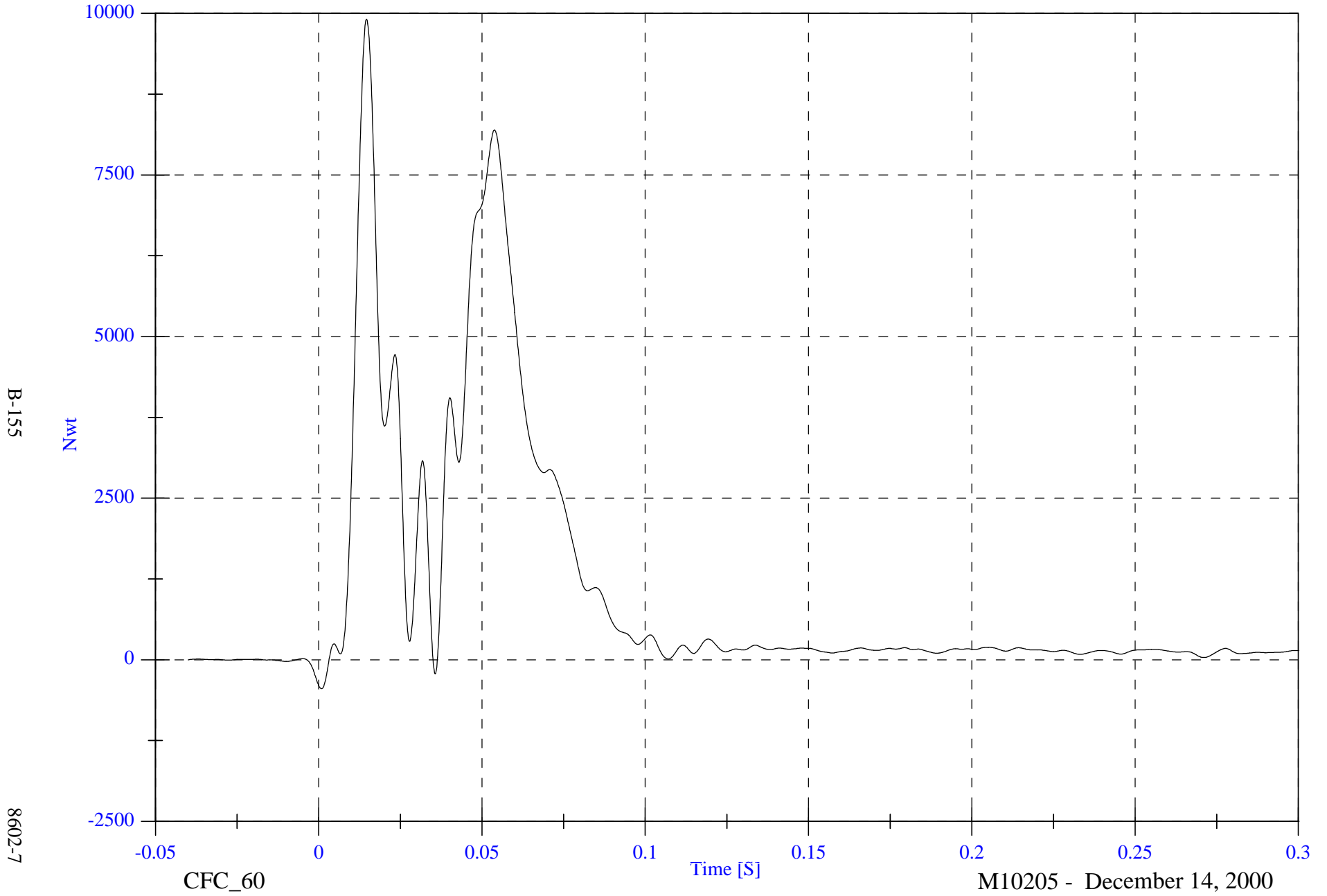
M10205 - December 14, 2000

NCAP TEST #7- 2001 Ford F150 ExCab Pickup

Max: 9909.5 [Nwt] at 0.015 [S]

BLC D4 Fx

Min: -448.1 [Nwt] at 0.001 [S]



B-155

8602-7

CFC_60

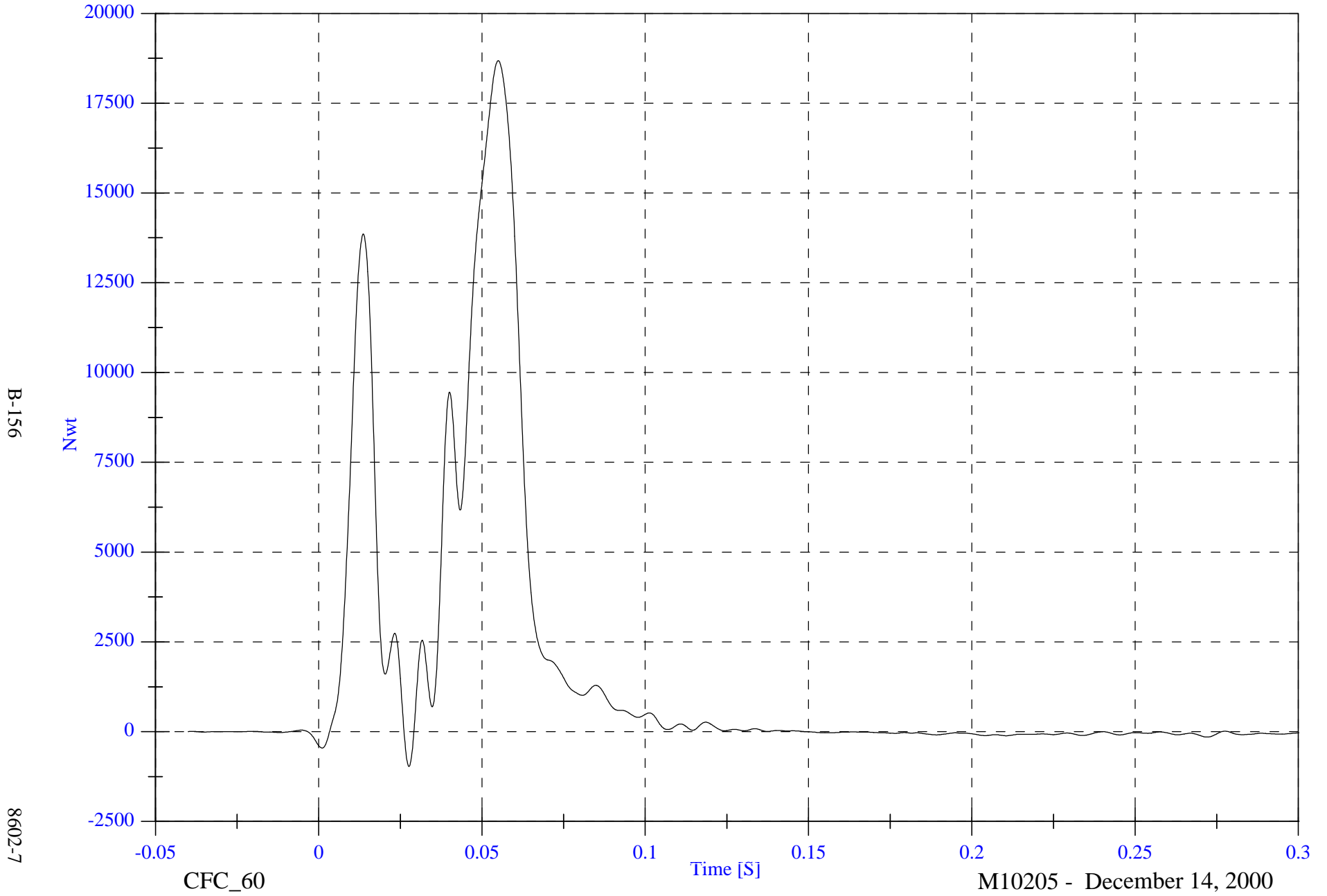
M10205 - December 14, 2000

NCAP TEST #7- 2001 Ford F150 ExCab Pickup

Max: 18685.9 [Nwt] at 0.055 [S]

BLC D5 Fx

Min: -967.2 [Nwt] at 0.028 [S]

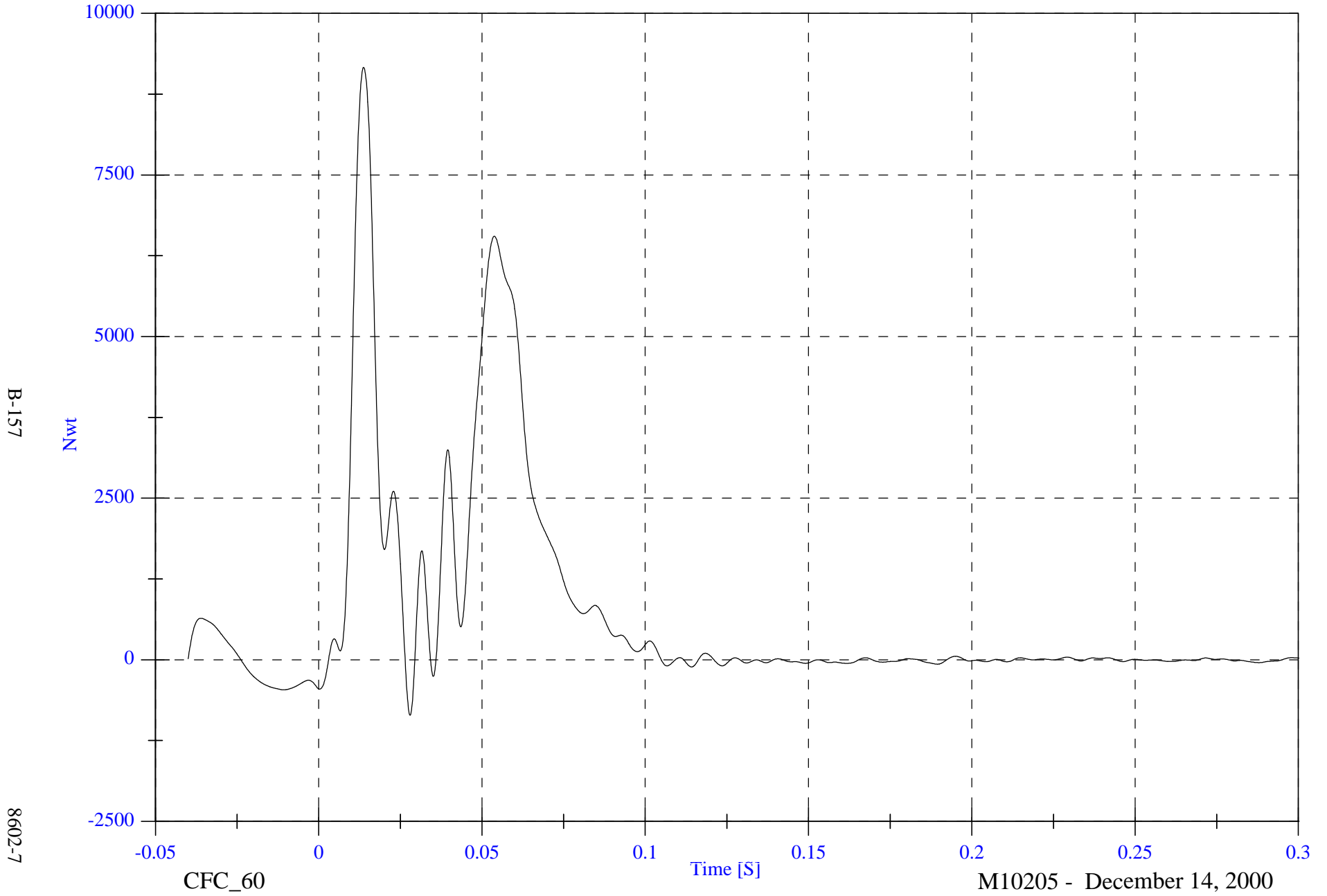


NCAP TEST #7- 2001 Ford F150 ExCab Pickup

Max: 9164.3 [Nwt] at 0.014 [S]

BLC D6 Fx

Min: -859.2 [Nwt] at 0.028 [S]



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8602-7

CFC_60

Time [S]

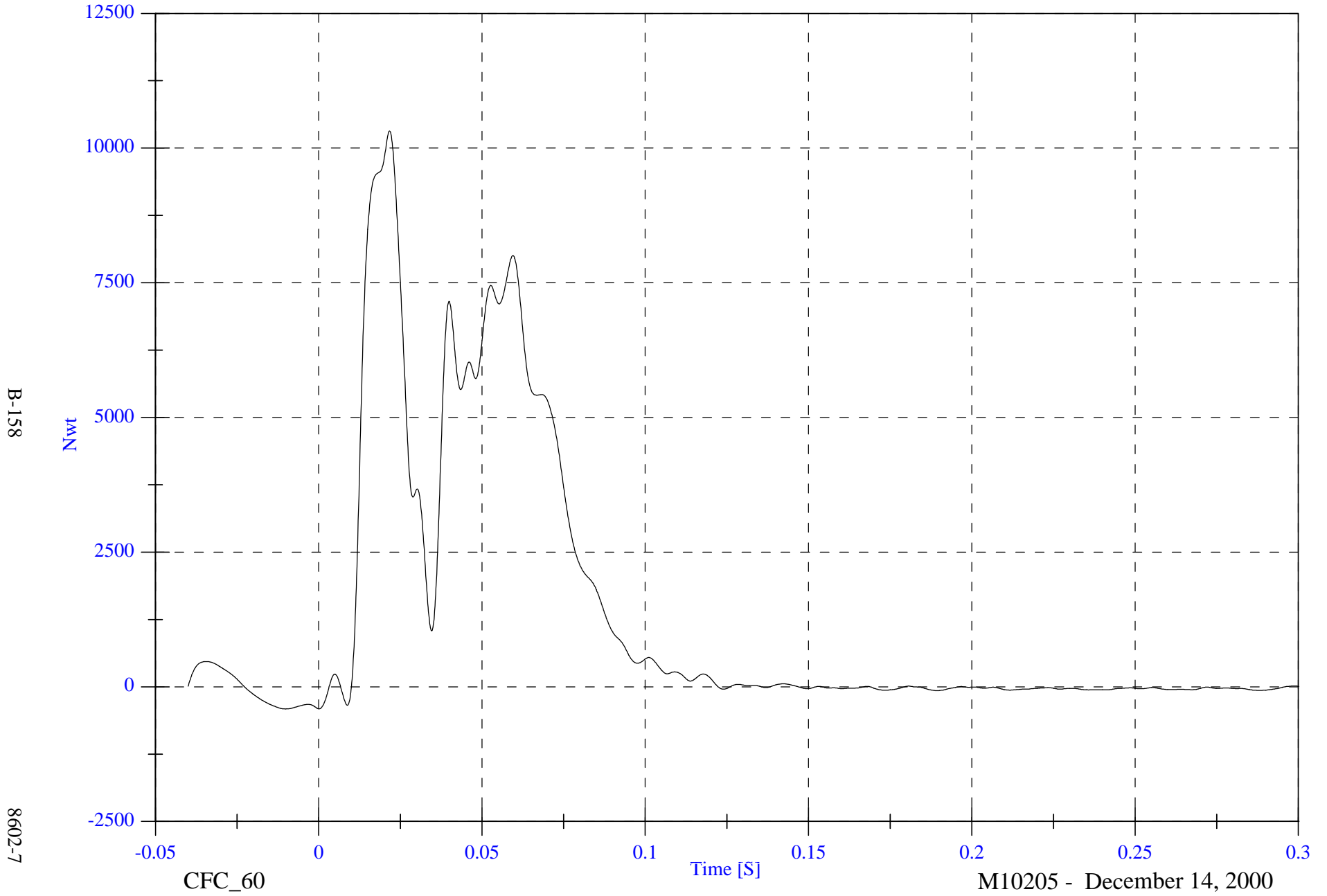
M10205 - December 14, 2000

NCAP TEST #7- 2001 Ford F150 ExCab Pickup

Max: 10320.2 [Nwt] at 0.022 [S]

BLC D7 Fx

Min: -412.6 [Nwt] at -0.010 [S]

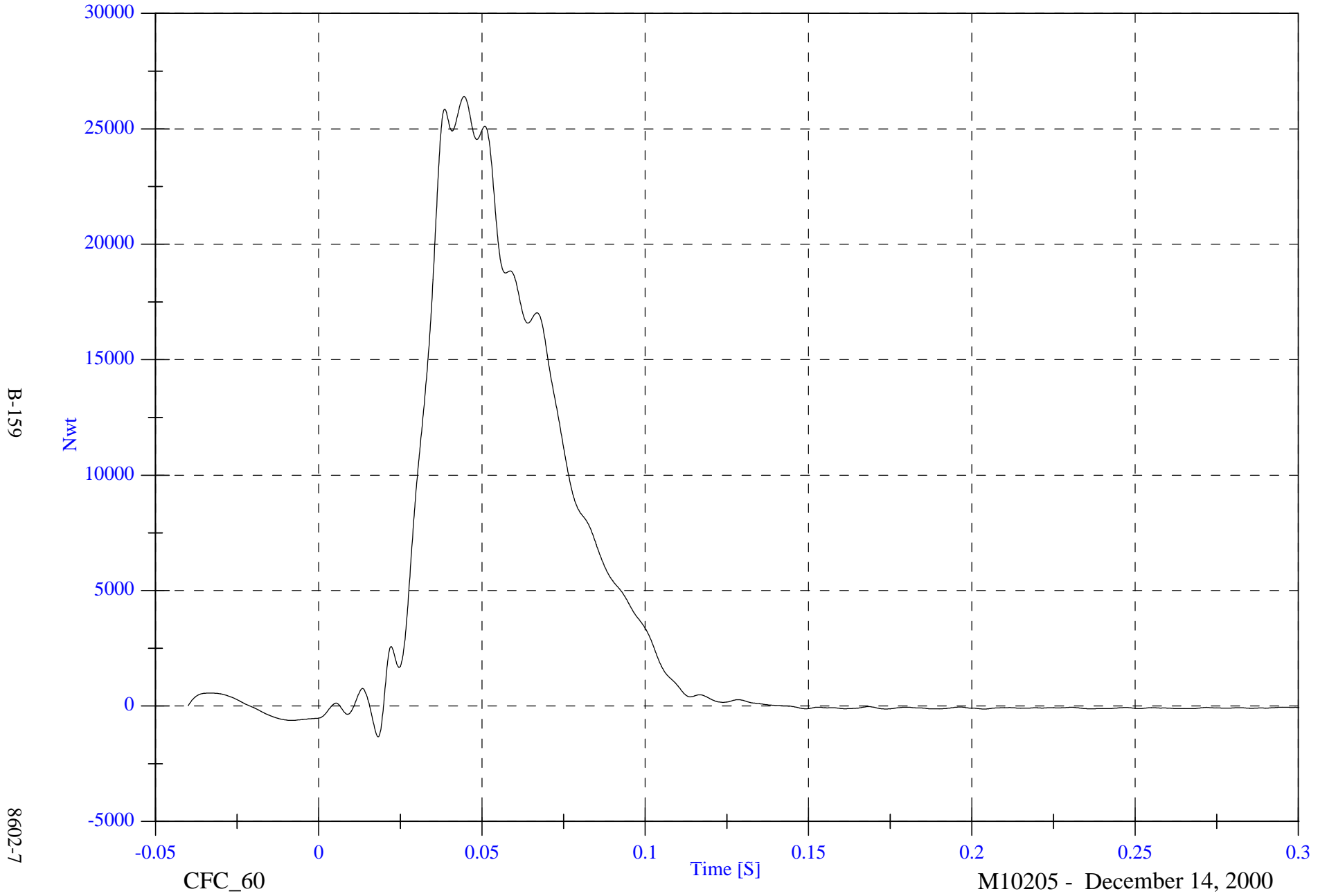


NCAP TEST #7- 2001 Ford F150 ExCab Pickup

Max: 26397.2 [Nwt] at 0.044 [S]

BLC D8 Fx

Min: -1334.4 [Nwt] at 0.018 [S]

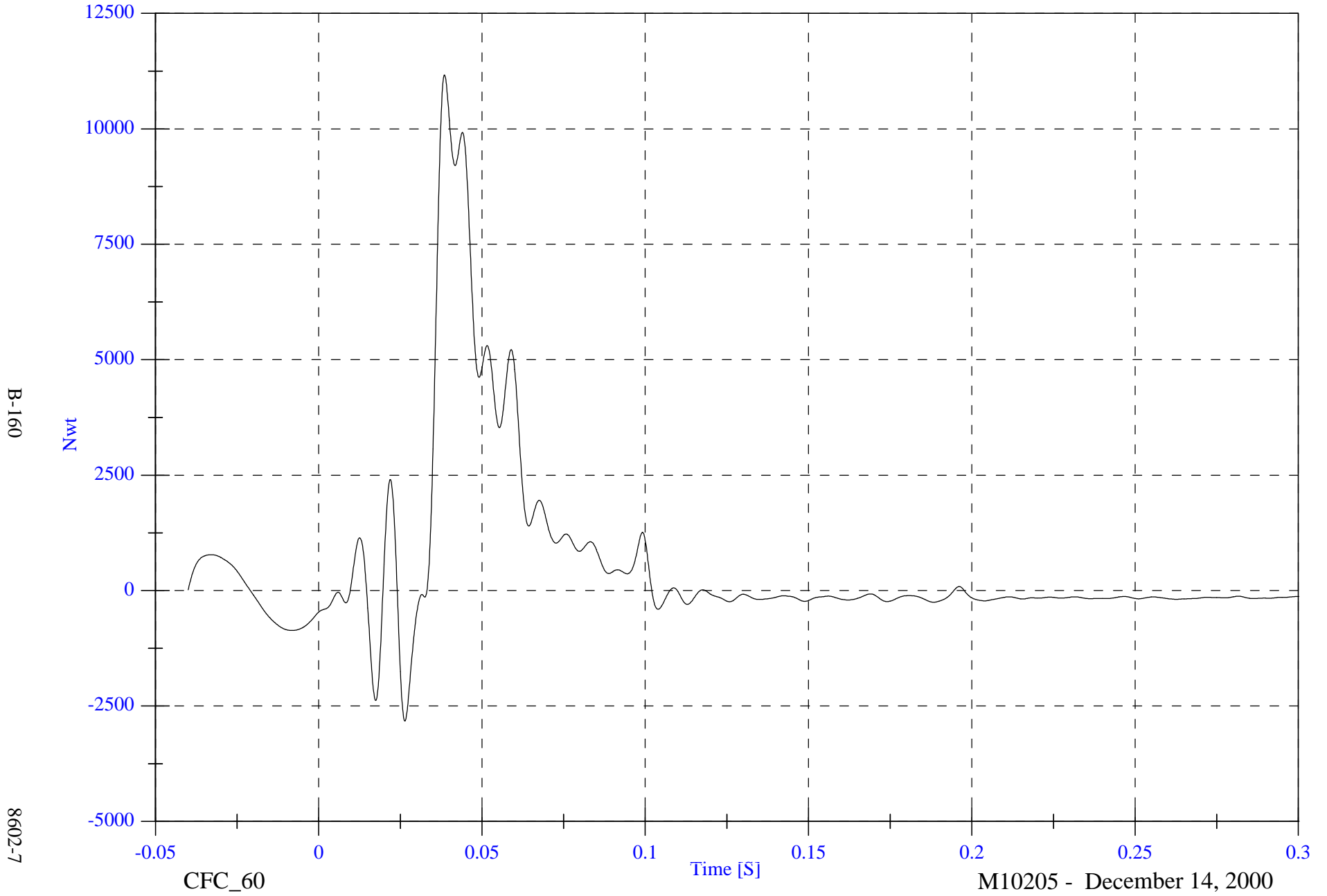


NCAP TEST #7- 2001 Ford F150 ExCab Pickup

Max: 11170.3 [Nwt] at 0.038 [S]

BLC D9 Fx

Min: -2827.3 [Nwt] at 0.026 [S]



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8602-7

CFC_60

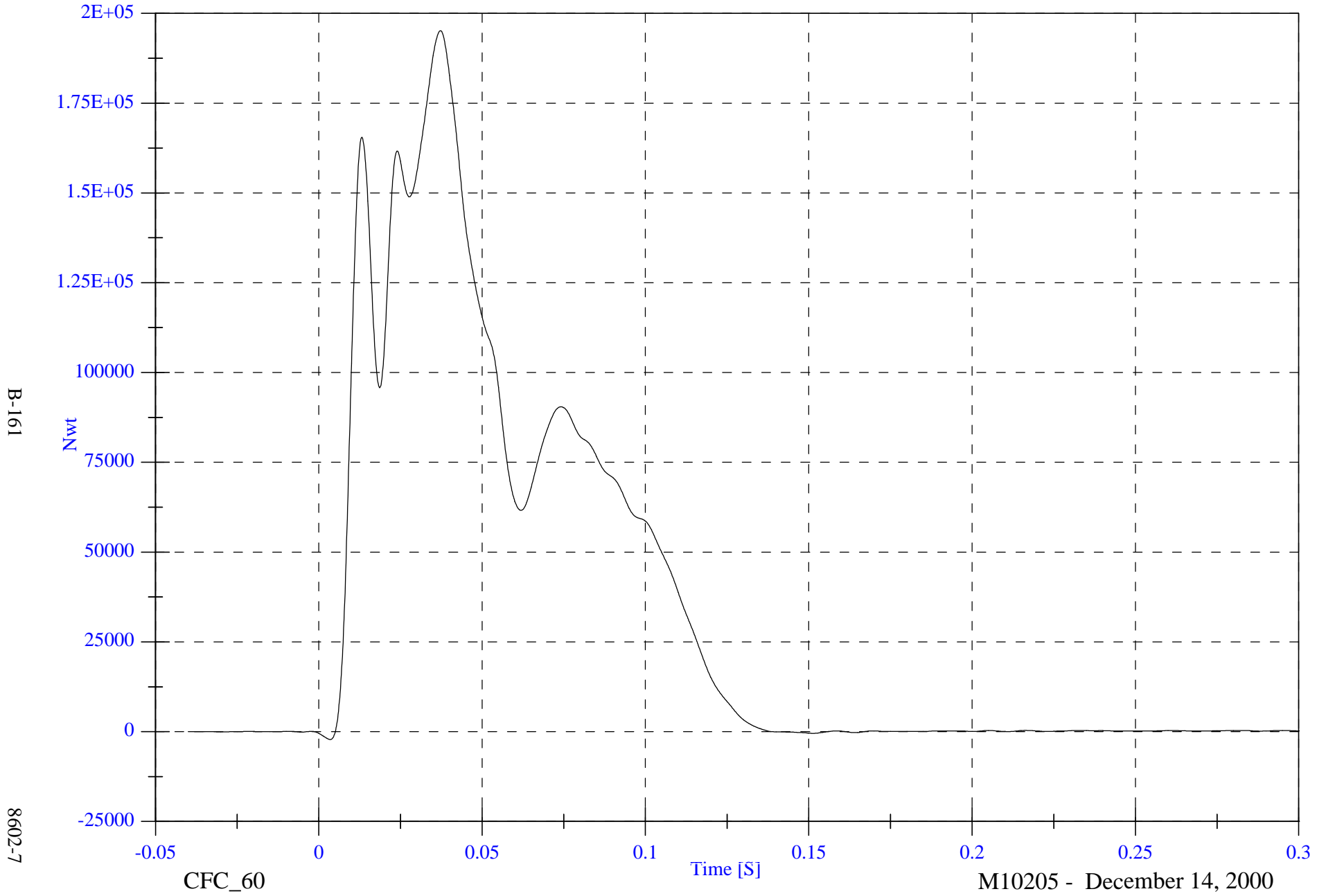
M10205 - December 14, 2000

NCAP TEST #7- 2001 Ford F150 ExCab Pickup

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

Max: 195190.5 [Nwt] at 0.037 [S]

Min: -2194.7 [Nwt] at 0.003 [S]



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8602-7

CFC_60

Time [S]

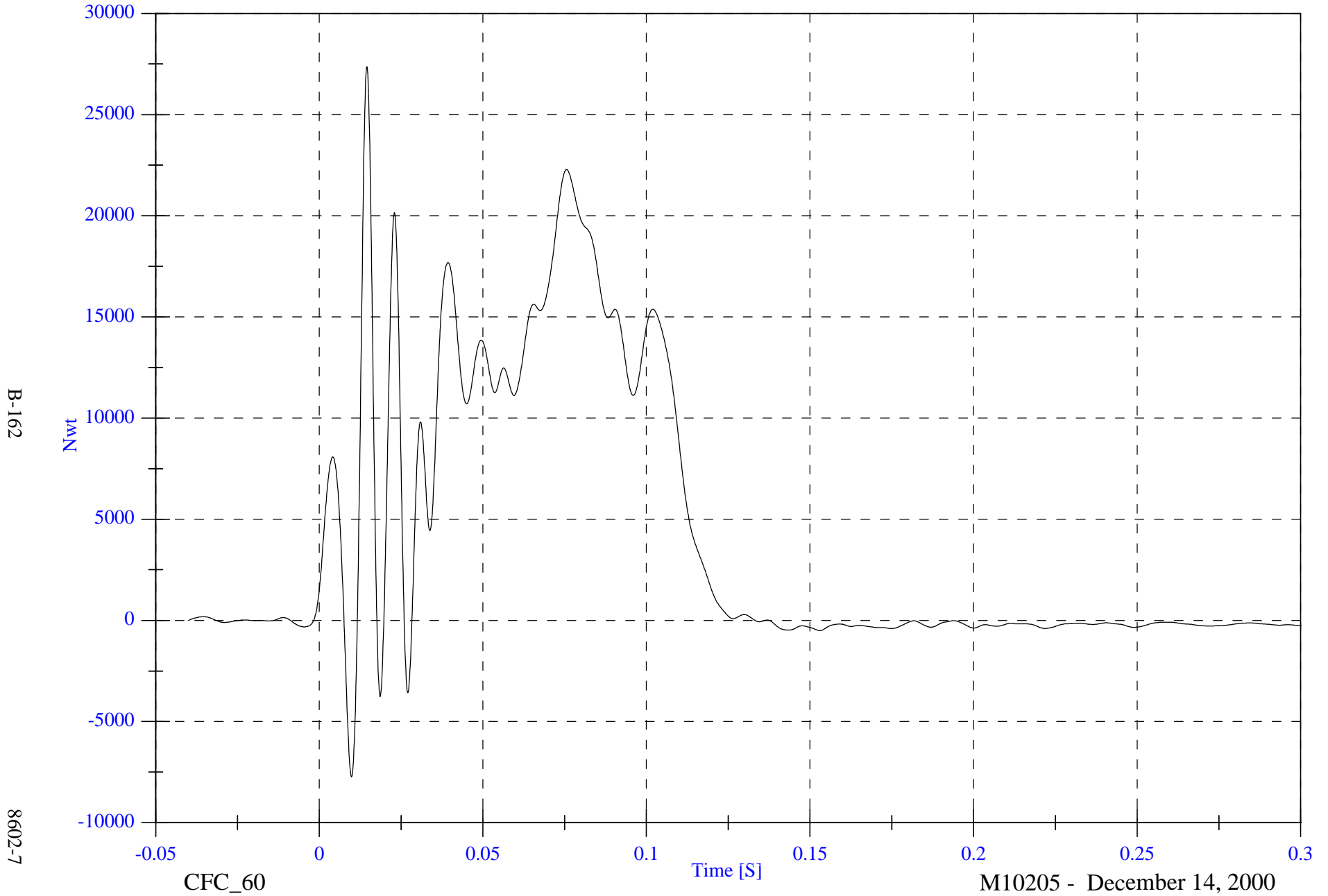
M10205 - December 14, 2000

NCAP TEST #7- 2001 Ford F150 ExCab Pickup

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

Max: 27369.2 [Nwt] at 0.014 [S]

Min: -7733.5 [Nwt] at 0.010 [S]



B-162

8602-7

CFC_60

Time [S]

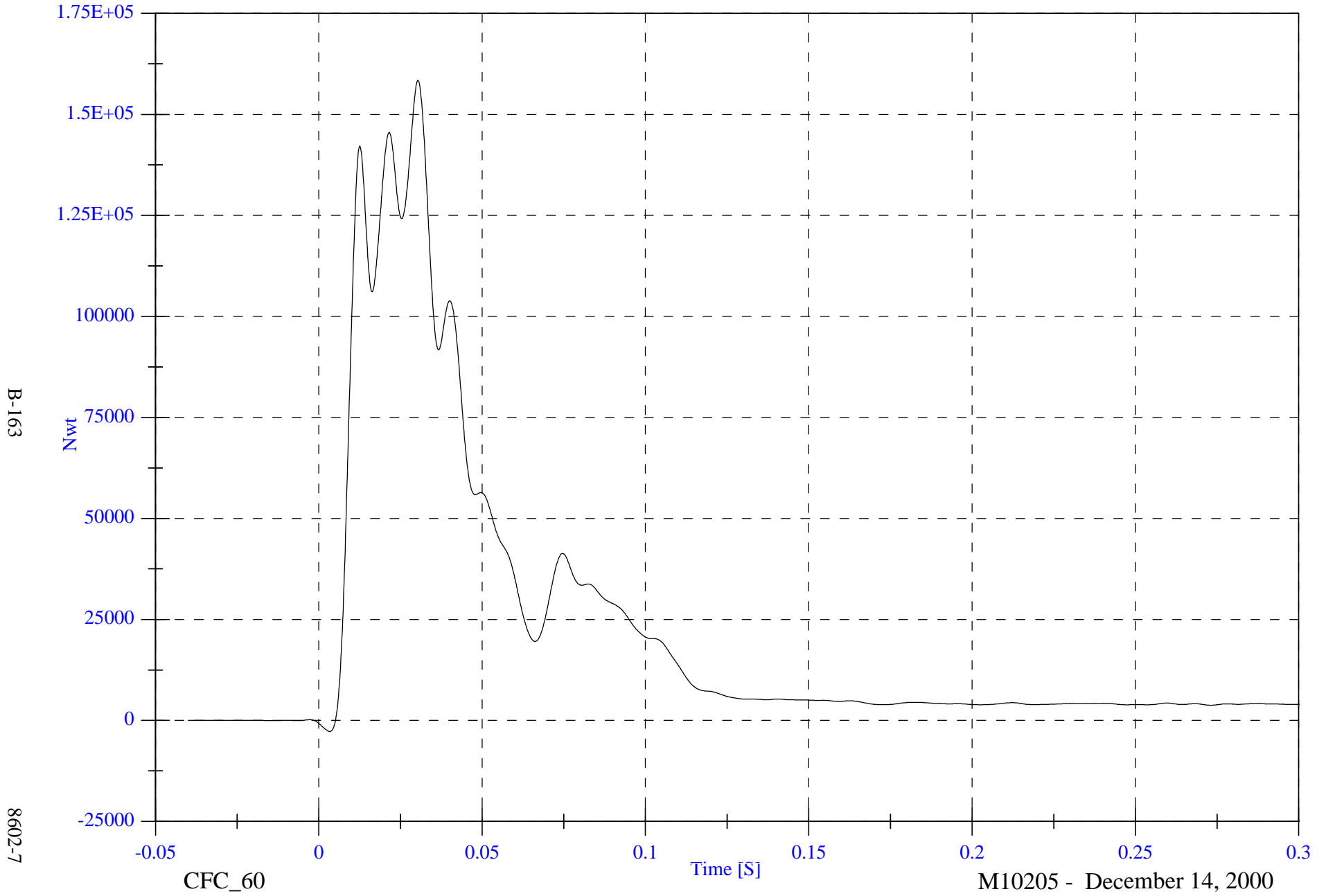
M10205 - December 14, 2000

NCAP TEST #7- 2001 Ford F150 ExCab Pickup

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

Max: 158433.2 [Nwt] at 0.030 [S]

Min: -2737.8 [Nwt] at 0.003 [S]



B-163

8602-7

CFC_60

Time [S]

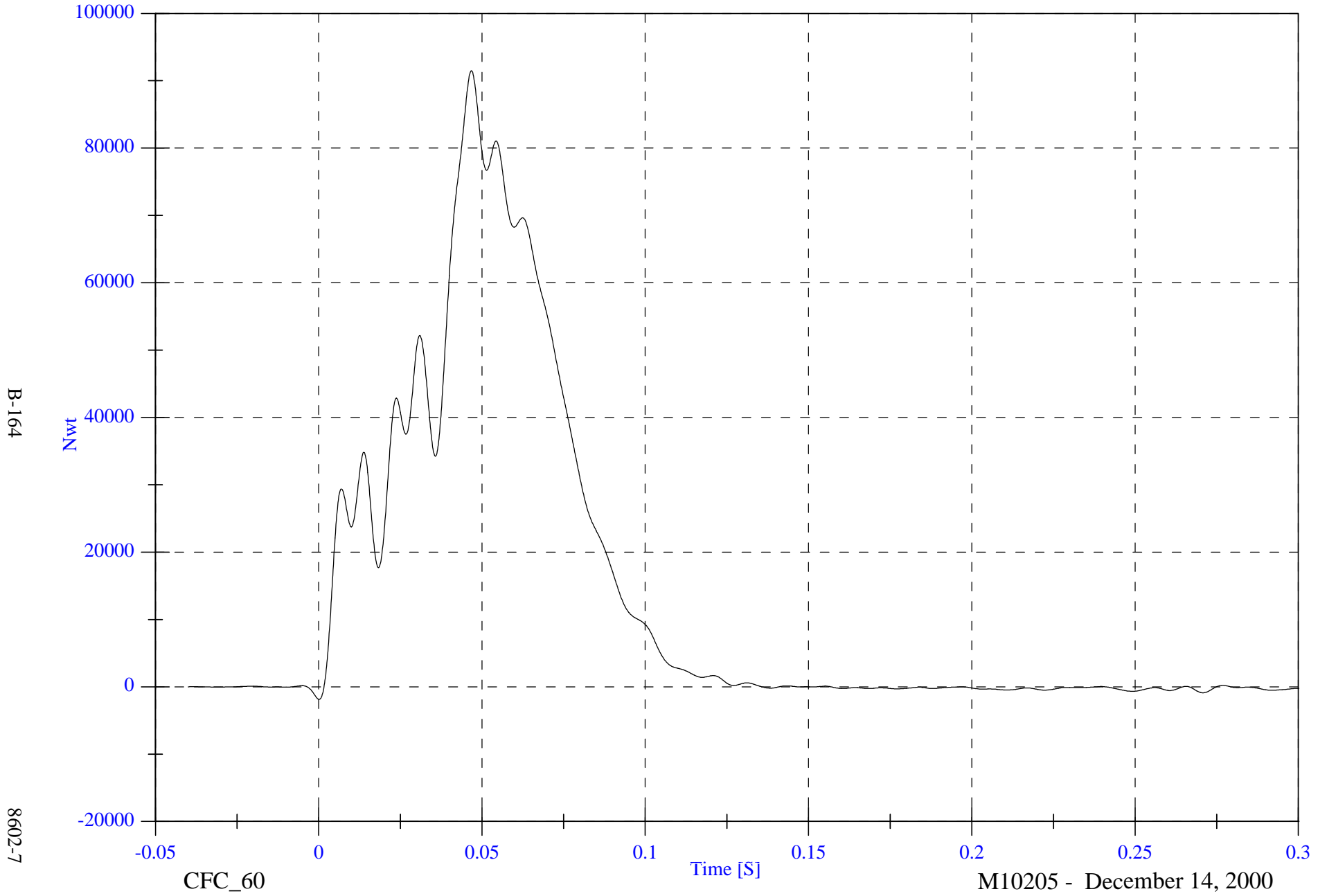
M10205 - December 14, 2000

NCAP TEST #7- 2001 Ford F150 ExCab Pickup

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

Max: 91484.1 [Nwt] at 0.047 [S]

Min: -1877.6 [Nwt] at 0.000 [S]



B-164

8602-7

CFC_60

Time [S]

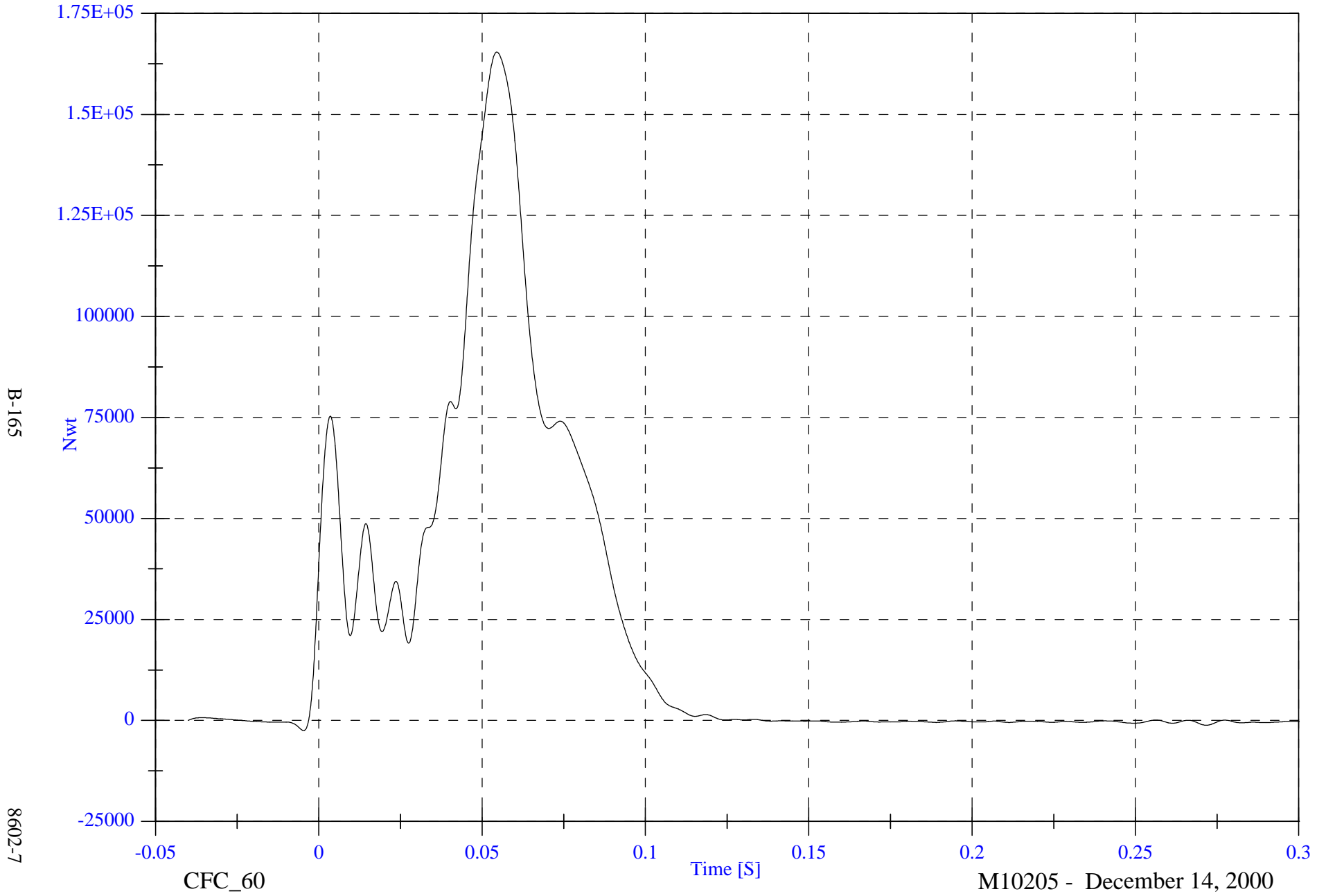
M10205 - December 14, 2000

NCAP TEST #7- 2001 Ford F150 ExCab Pickup

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

Max: 165450.7 [Nwt] at 0.054 [S]

Min: -2520.7 [Nwt] at -0.005 [S]



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8602-7

CFC_60

Time [S]

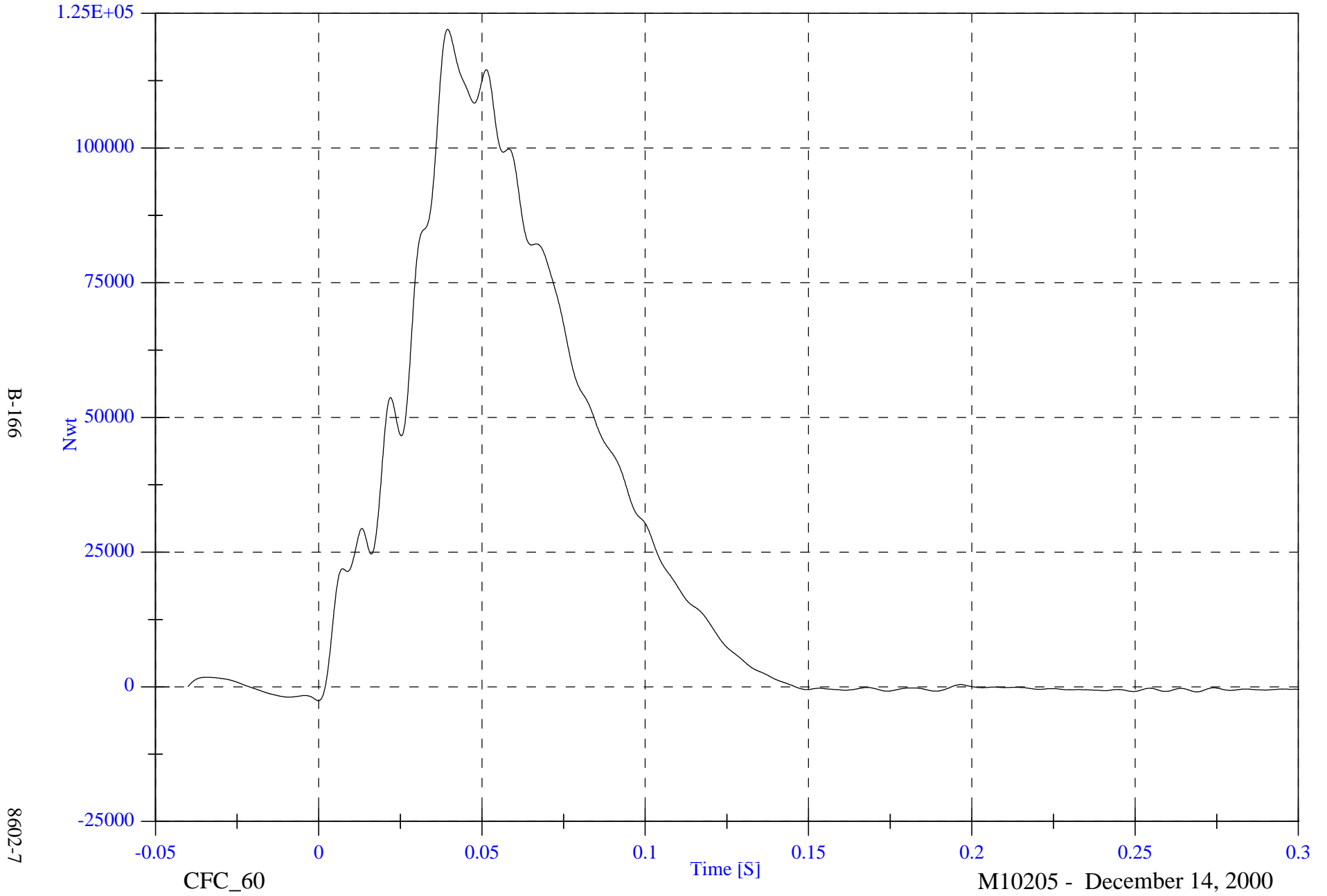
M10205 - December 14, 2000

NCAP TEST #7- 2001 Ford F150 ExCab Pickup

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

Max: 122052.3 [Nwt] at 0.039 [S]

Min: -2585.8 [Nwt] at -0.000 [S]



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8602-7

CFC_60

Time [S]

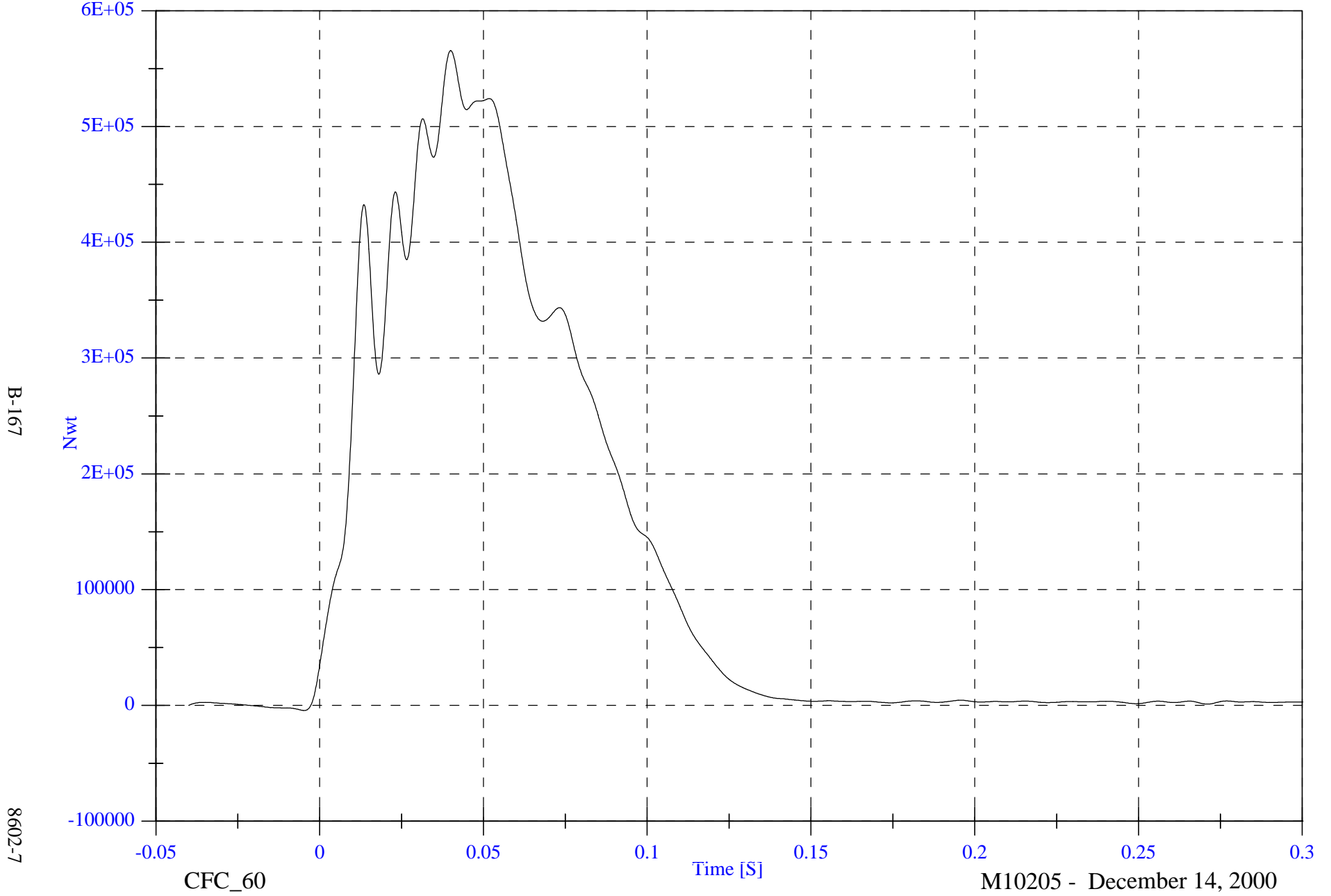
M10205 - December 14, 2000

NCAP TEST #7- 2001 Ford F150 ExCab Pickup

Max: 565537.2 [Nwt] at 0.040 [S]

Total Load Cell Sum (All 6 Groups)

Min: -4390.8 [Nwt] at -0.005 [S]



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8602-7

CFC_60

M10205 - December 14, 2000

APPENDIX C

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

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

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

Dummy serial numbers and certification dates are:

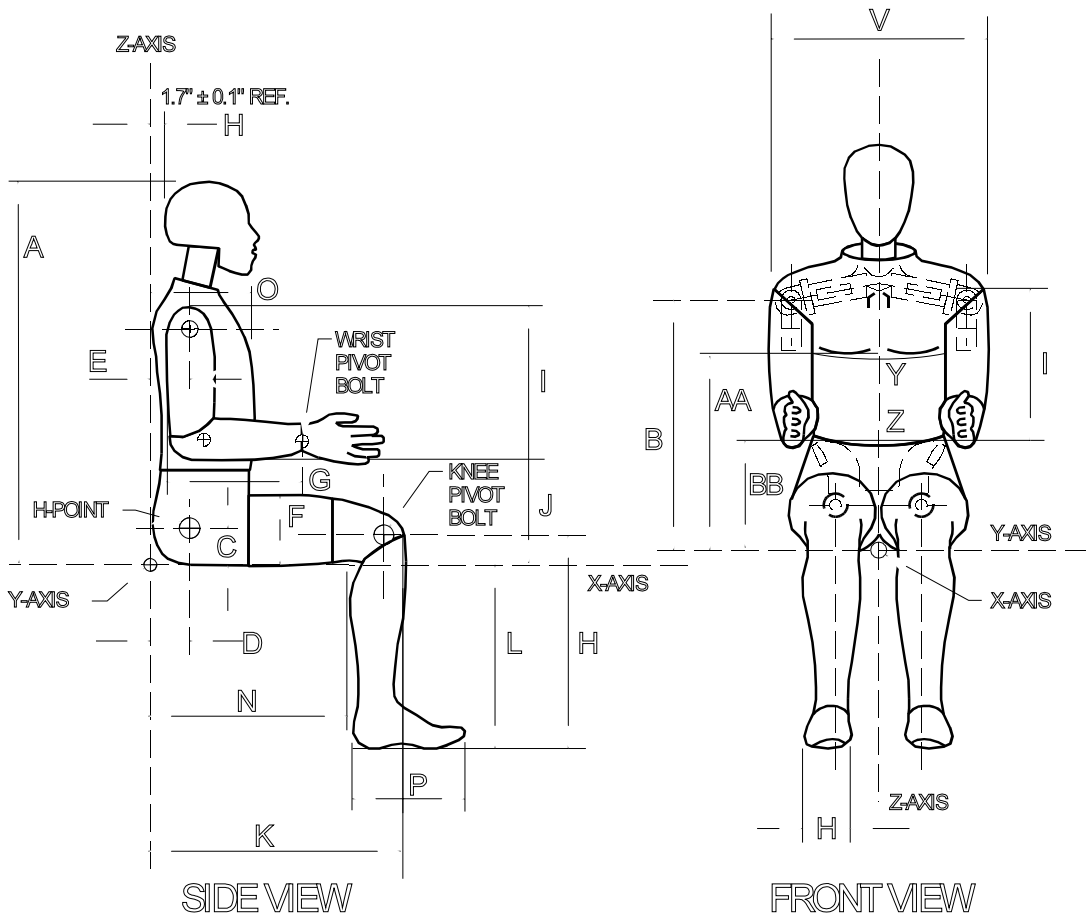
<u>Position No./Location</u>	<u>Serial No.</u>	<u>Completion Date</u>
#1/Driver	064	12/07/00
#2/Right Front Passenger	061	11/28/00

Electronic Test Equipment

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

DUMMY CONFIGURATION DIMENSIONS

EXTERNAL DIMENSIONS
SPECIFICATIONS



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

PART 572E
HEAD DROP TEST

Dummy Serial Number 064
Sequential Test Number 4
Date 12/06/2000
Workfile 064400.hdp

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	66-78 Deg F	71.0
Relative Humidity	10% - 70%	32.0
Peak Resultant Acceleration	225-275 G's	260.65
Peak Lateral Acceleration	15 G's Max	2.59
Is Acceleration Curve Unimodal?	YES	YES

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
NECK FLEXION TEST

Dummy Serial Number	064	
Sequential Test Number	4	
Date	12/06/2000	6 Axis Neck Transducer
Workfile	064400.nfl	

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	69-72 Deg F	71.0
Relative Humidity	10% - 70%	32.0
Impact Velocity	22.60 - 23.40 Ft/s	22.82
Pendulum Deceleration	10 ms	22.50 - 27.50 G's
	20 ms	17.60 - 22.60 G's
	30 ms	12.50 - 18.50 G's
Max Pendulum G's Above 30 ms	29 G's Max	15.49
Deceleration - Time Curve Decay Time to 5 G's	34 - 42 ms	39.75
D Plane Rotation	Max	64 - 78 Deg
	Time	57 - 64 ms
Moment About Occipital Condyle	Max	65 - 80 Ft-Lbs
	Time	47 - 58 ms
Rotation Angle - Time Curve Decay Time to Zero	113 - 128 ms	121.38
Positive Moment - Time Curve Decay Time to Zero	97 - 107 ms	101.00

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
NECK EXTENSION TEST

Dummy Serial Number	064	
Sequential Test Number	4	
Date	12/06/2000	6 Axis Neck Transducer
Workfile	064400.nex	

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature		69-72 Deg F	71.0
Relative Humidity		10% - 70%	32.0
Impact Velocity		19.50 - 20.30 Ft/s	19.58
Pendulum Deceleration	10 ms	17.20 - 21.20 G's	19.01
	20 ms	14.00 - 19.00 G's	16.53
	30 ms	11.00 - 16.00 G's	13.73
Max Pendulum G's Above 30 ms		22 G's Max	13.73
Deceleration - Time Curve Decay Time to 5 G's		38 - 46 ms	41.00
D Plane Rotation	Max	81 - 106 Deg	98.23
	Time	72 - 82 ms	73.00
Moment About Occipital Condyle	Max	-59.0 - -39.0 Ft-Lbs	-52.77
	Time	65 - 79 ms	68.25
Rotation Angle - Time Curve Decay Time to Zero		147 - 174 ms	147.50
Positive Moment - Time Curve Decay Time to Zero		120 - 148 ms	139.50

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
THORAX IMPACT TEST

Dummy Serial Number 064
Sequential Test Number 4
Date 12/07/2000
Workfile 064400.th3

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	69-72 Deg F	71.0
Relative Humidity	10% - 70%	30.0
Pendulum Velocity	21.6 - 22.4 Ft/s	21.6
Maximum Deflection	2.50 - 2.86 in	2.80
Maximum Resistive Force	1160 - 1325 Lbs	1213.37
Internal Hysteresis	69 - 85 %	74.72

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
KNEE IMPACT TEST

Dummy Serial Number 064
 Sequential Test Number 4
 Date 112/07/2000
 Workfile 064400.lf / 064400.rf

TEST PARAMETER	SPECIFICATION	TEST RESULTS
LEFT KNEE		
Temperature	66 - 78 Deg F	70.0
Relative Humidity	10% - 70%	30.0
Probe Velocity	6.8 - 7.0 Ft/s	7.0
Peak Knee Impact Force	1060 - 1300 Lbs	1222.48
RIGHT KNEE		
Temperature	66 - 78 Deg F	70.0
Relative Humidity	10% - 70%	30.0
Probe Velocity	6.8 - 7.0 Ft/s	7.0
Peak Knee Impact Force	1060 - 1300 Lbs	1200.74

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
EXTERNAL DIMENSIONS

Dummy Serial Number 064
 Sequential Test Number 4
 Date 12/07/2000

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature			71
Relative Humidity			32
Location for Chest Circumference	AA	16.9 - 17.1 in	17.0
Location for Waist Circumference	BB	8.9 - 9.1 in	9.0
Chest Circumference (With Jacket)	Y	38.2 - 39.4 in	38.9
Waist Circumference	Z	32.9 - 34.1 in	33.5
Chest Depth	O	8.4 - 9.0 in	8.6
H-Point Height	C	3.3 - 3.5 in	3.4
H-Point from Backline	D	5.3 - 5.5 in	5.4
Skull Cap to Backline	H	1.6 - 1.8 in	1.7
Total Sitting Height	A	34.6 - 35.0 in	34.8
Thigh Clearance	F	5.5 - 6.1 in	6.0
Buttock Knee Length	K	22.8 - 23.8 in	23.6
Buttock Popliteal Length	N	17.8 - 18.8 in	18.4
Popliteal Height	L	16.9 - 17.9 in	17.3
Knee Pivot Height	M	19.1 - 19.7 in	19.4
Foot Length	P	9.9 - 10.5 in	10.1
Foot Breadth	W	3.6 - 4.2 in	3.8
Shoulder Pivot from Backline	E	3.3 - 3.7 in	3.6
Shoulder Breadth	V	16.6 - 17.2 in	16.8
Shoulder Pivot Height	B	19.9 - 20.5 in	20.4
Elbow Rest Height	J	7.5 - 8.3 in	8.0
Shoulder - Elbow Length	I	13.0 - 13.6 in	13.3
Back of Elbow to Wrist Pivot	G	11.4 - 12.0 in	11.6

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
HEAD DROP TEST

Dummy Serial Number 061
Sequential Test Number 3
Date 11/27/2000
Workfile 061300.hdp

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	66-78 Deg F	70.0
Relative Humidity	10% - 70%	30.0
Peak Resultant Acceleration	225-275 G's	228.49
Peak Lateral Acceleration	15 G's Max	6.65
Is Acceleration Curve Unimodal?	YES	YES

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
NECK FLEXION TEST

Dummy Serial Number	061	
Sequential Test Number	3	
Date	11/27/2000	6 Axis Neck Transducer
Workfile	061300.nfl	

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature		69-72 Deg F	70.0
Relative Humidity		10% - 70%	30.0
Impact Velocity		22.60 - 23.40 Ft/s	22.88
Pendulum Deceleration	10 ms	22.50 - 27.50 G's	22.71
	20 ms	17.60 - 22.60 G's	21.37
	30 ms	12.50 - 18.50 G's	16.00
Max Pendulum G's Above 30 ms		29 G's Max	16.00
Deceleration - Time Curve Decay Time to 5 G's		34 - 42 ms	38.12
D Plane Rotation	Max	64 - 78 Deg	72.01
	Time	57 - 64 ms	62.62
Moment About Occipital Condyle	Max	65 - 80 Ft-Lbs	77.18
	Time	47 - 58 ms	51.75
Rotation Angle - Time Curve Decay Time to Zero		113 - 128 ms	118.50
Positive Moment - Time Curve Decay Time to Zero		97 - 107 ms	97.00

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
NECK EXTENSION TEST

Dummy Serial Number	061	
Sequential Test Number	3	
Date	11/27/00	6 Axis Neck Transducer
Workfile	061300.nex	

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	69-72 Deg F	70.0
Relative Humidity	10% - 70%	30.0
Impact Velocity	19.50 - 20.30 Ft/s	19.58
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	12.73
Deceleration - Time Curve Decay Time to 5 G's	38 - 46 ms	41.75
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	150.75
Positive Moment - Time Curve Decay Time to Zero	120 - 148 ms	142.12

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
THORAX IMPACT TEST

Dummy Serial Number 061
Sequential Test Number 3
Date 11/28/00
Workfile 061300.th3

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	69-72 Deg F	70.0
Relative Humidity	10% - 70%	30.0
Pendulum Velocity	21.6 - 22.4 Ft/s	21.7
Maximum Deflection	2.50 - 2.86 in	2.84
Maximum Resistive Force	1160 - 1325 Lbs	1195.55
Internal Hysteresis	69 - 85 %	73.20

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
KNEE IMPACT TEST

Dummy Serial Number 061
 Sequential Test Number 3
 Date 11/28/2000
 Workfile 061300.lf / 061300.rf

TEST PARAMETER	SPECIFICATION	TEST RESULTS
LEFT KNEE		
Temperature	66 - 78 Deg F	70
Relative Humidity	10% - 70%	31
Probe Velocity	6.8 - 7.0 Ft/s	6.9
Peak Knee Impact Force	1060 - 1300 Lbs	1278.98
RIGHT KNEE		
Temperature	66 - 78 Deg F	70
Relative Humidity	10% - 70%	31
Probe Velocity	6.8 - 7.0 Ft/s	7.0
Peak Knee Impact Force	1060 - 1300 Lbs	1285.50

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
EXTERNAL DIMENSIONS

Dummy Serial Number 061
Sequential Test Number 3
Date 11/28/00

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature			70
Relative Humidity			30
Location for Chest Circumference	AA	16.9 - 17.1 in	17.0
Location for Waist Circumference	BB	8.9 - 9.1 in	9.0
Chest Circumference (With Jacket)	Y	38.2 - 39.4 in	39.2
Waist Circumference	Z	32.9 - 34.1 in	33.5
Chest Depth	O	8.4 - 9.0 in	8.5
H-Point Height	C	3.3 - 3.5 in	3.4
H-Point from Backline	D	5.3 - 5.5 in	5.4
Skull Cap to Backline	H	1.6 - 1.8 in	1.7
Total Sitting Height	A	34.6 - 35.0 in	34.8
Thigh Clearance	F	5.5 - 6.1 in	6.1
Buttock Knee Length	K	22.8 - 23.8 in	23.4
Buttock Popliteal Length	N	17.8 - 18.8 in	18.3
Popliteal Height	L	16.9 - 17.9 in	17.7
Knee Pivot Height	M	19.1 - 19.7 in	19.4
Foot Length	P	9.9 - 10.5 in	10.1
Foot Breadth	W	3.6 - 4.2 in	3.8
Shoulder Pivot from Backline	E	3.3 - 3.7 in	3.5
Shoulder Breadth	V	16.6 - 17.2 in	16.8
Shoulder Pivot Height	B	19.9 - 20.5 in	20.2
Elbow Rest Height	J	7.5 - 8.3 in	7.7
Shoulder - Elbow Length	I	13.0 - 13.6 in	13.4
Back of Elbow to Wrist Pivot	G	11.4 - 12.0 in	11.6

Remarks:

Laboratory Technician: B. Swiecicki

APPENDIX D

DUMMY, VEHICLE AND LABORATORY INSTRUMENT CALIBRATION

INSTRUMENT CALIBRATION FOR DRIVER DUMMY

(6 Month Calibration Minimum)

DRIVER DUMMY (S/N 064)	Manufacturer	Serial #	Calibration		
			Last	Next	
Head	X	ENDEVCO	AC-P12587	15-Sep-00	15-Mar-01
	Y	ENDEVCO	AC-P16625	21-Nov-00	21-May-01
	Z	ENDEVCO	AC-P16662	13-Sep-00	13-Mar-01
Head	X (R)	ENDEVCO	AC-P14388	15-Sep-00	15-Mar-01
	Y (R)	ENDEVCO	AC-P16597	21-Nov-00	21-May-01
	Z (R)	ENDEVCO	AC-P17236	13-Sep-00	13-Mar-01
Neck Load Cell	X	DENTON	LC-440Fx	16-Nov-00	16-May-01
	Y	DENTON	LC-440Fy	15-Nov-00	15-May-01
	Z	DENTON	LC-440Fz	16-Nov-00	16-May-01
Neck Moment	X	DENTON	LC-440Mx	16-Nov-00	16-May-01
	Y	DENTON	LC-440My	16-Nov-00	16-May-01
	Z	DENTON	LC-440Mz	16-Nov-00	16-May-01
Chest	X	ENDEVCO	AC-P16583	06-Sep-00	06-Mar-01
	Y	ENDEVCO	AC-P16585	06-Sep-00	06-Mar-01
	Z	ENDEVCO	AC-P16576	06-Sep-00	06-Mar-01
Chest	X (R)	ENDEVCO	AC-P15526	06-Sep-00	06-Mar-01
	Y (R)	ENDEVCO	AC-P16587	06-Sep-00	06-Mar-01
	Z (R)	ENDEVCO	AC-P15534	06-Sep-00	06-Mar-01
Chest Deflection Gauge	SERVO	DS-064	07-Dec-00	07-Jun-01	
Hybrid III Use Only					
Pelvic	X	ENDEVCO	AC-P13323	20-Nov-00	20-May-01
	Y	ENDEVCO	AC-P13331	20-Nov-00	20-May-01
	Z	ENDEVCO	AC-P13356	20-Nov-00	20-May-01

INSTRUMENT CALIBRATION FOR DRIVER DUMMY

(6 Month Calibration Minimum)

DRIVER DUMMY (S/N 064)	Manufacturer	Serial #	Calibration		
			Last	Next	
Left Femur Load Cell	GSE	LC-954	01-Dec-00	01-Jun-01	
Right Femur Load Cell	GSE	LC-955	01-Dec-00	01-Jun-01	
Left Upper Tibia	Mx	DENTON	LC-045Mx	04-Nov-00	04-May-01
	My	DENTON	LC-045My	04-Nov-00	04-May-01
Left Lower Tibia	Fz	DENTON	LC-125Fz	04-Nov-00	04-May-01
	Mx	DENTON	LC-125Mx	04-Nov-00	04-May-01
	My	DENTON	LC-125My	04-Nov-00	04-May-01
Right Upper Tibia	Mx	DENTON	LC-038Mx	09-Nov-00	09-May-01
	My	DENTON	LC-038My	09-Nov-00	09-May-01
Right Lower Tibia	Fz	DENTON	LC-124Fz	09-Nov-00	09-May-01
	Mx	DENTON	LC-124Mx	09-Nov-00	09-May-01
	My	DENTON	LC-124My	09-Nov-00	09-May-01
Left Foot Rear	X	ENDEVCO	AC-P16951	02-Oct-00	02-Apr-01
	Z	ENDEVCO	AC-P17152	02-Oct-00	02-Apr-01
Left Foot Front	Z	ENDEVCO	AC-P16975	02-Oct-00	02-Apr-01
Right Foot Rear	X	ENDEVCO	AC-J31042	07-Nov-00	07-May-01
	Z	ENDEVCO	AC-J32176	07-Nov-00	07-May-01
Right Foot Front	Z	ENDEVCO	AC-J31009	08-Nov-00	08-May-01

INSTRUMENT CALIBRATION FOR PASSENGER DUMMY

(6 Month Calibration Minimum)

PASSENGER DUMMY (S/N 061)	Manufacturer	Serial #	Calibration		
			Last	Next	
Head	X	ENDEVCO	AC-J33019	30-Nov-00	30-May-01
	Y	ENDEVCO	AC-J33127	30-Nov-00	30-May-01
	Z	ENDEVCO	AC-J32782	30-Nov-00	30-May-01
Head	X (R)	ENDEVCO	AC-J31060	30-Nov-00	30-May-01
	Y (R)	ENDEVCO	AC-J31050	30-Nov-00	30-May-01
	Z (R)	ENDEVCO	AC-J32143	30-Nov-00	30-May-01
Neck Load Cell	X	DENTON	LC-205Fx	28-Aug-00	28-Feb-01
	Y	DENTON	LC-205Fy	28-Aug-00	28-Feb-01
	Z	DENTON	LC-205Fz	28-Aug-00	28-Feb-01
Neck Moment	X	DENTON	LC-205Mx	28-Aug-00	28-Feb-01
	Y	DENTON	LC-205My	28-Aug-00	28-Feb-01
	Z	DENTON	LC-205Mz	28-Aug-00	28-Feb-01
Chest	X	ENDEVCO	AC-J33351	30-Nov-00	30-May-01
	Y	ENDEVCO	AC-J32787	30-Nov-00	30-May-01
	Z	ENDEVCO	AC-J32838	30-Nov-00	30-May-01
Chest	X (R)	ENDEVCO	AC-J32791	30-Nov-00	30-May-01
	Y (R)	ENDEVCO	AC-J33156	30-Nov-00	30-May-01
	Z (R)	ENDEVCO	AC-J33020	30-Nov-00	30-May-01
Chest Deflection Gauge	SERVO	DS-061	10-Nov-00	10-May-01	
Hybrid III Use Only					
Pelvic	X	ENDEVCO	AC-J32383	04-Aug-00	04-Feb-01
	Y	ENDEVCO	AC-J32186	04-Aug-00	04-Feb-01
	Z	ENDEVCO	AC-J32098	04-Aug-00	04-Feb-01

INSTRUMENT CALIBRATION FOR PASSENGER DUMMY

(6 Month Calibration Minimum)

PASSENGER DUMMY (S/N 061)	Manufacturer	Serial #	Calibration		
			Last	Next	
Left Femur Load Cell	GSE	LC-419	01-Dec-00	01-Jun-01	
Right Femur Load Cell	GSE	LC-723	01-Dec-00	01-Jun-01	
Left Upper Tibia	Mx	DENTON	LC-016Mx	09-Nov-00	09-May-01
	My	DENTON	LC-016My	09-Nov-00	09-May-01
Left Lower Tibia	Fz	DENTON	LC-123Fz	09-Nov-00	09-May-01
	Mx	DENTON	LC-123Mx	09-Nov-00	09-May-01
	My	DENTON	LC-123My	09-Nov-00	09-May-01
Right Upper Tibia	Mx	DENTON	LC-023Mx	09-Nov-00	09-May-01
	My	DENTON	LC-023My	09-Nov-00	09-May-01
Right Lower Tibia	Fz	DENTON	LC-111Fz	09-Nov-00	09-May-01
	Mx	DENTON	LC-111Mx	09-Nov-00	09-May-01
	My	DENTON	LC-111My	09-Nov-00	09-May-01
Left Foot Rear	X	ENDEVCO	AC-APA30	06-Jul-00	06-Jan-01
	Z	ENDEVCO	AC-J31026	21-Sep-00	21-Mar-01
Left Foot Front	Z	ENDEVCO	AC-J32831	06-Jul-00	06-Jan-01
Right Foot Rear	X	ENDEVCO	AC-J32832	14-Jul-00	14-Jan-01
	Z	ENDEVCO	AC-J33376	06-Jul-00	06-Jan-01
Right Foot Front	Z	ENDEVCO	AC-J18400	28-Sep-00	28-Mar-01

INSTRUMENT CALIBRATION FOR VEHICLE ACCELEROMETERS

(6 Month Calibration Minimum)

	Manufacturer	Serial #	Calibration	
			Last	Next
Left Seat Rear Crossmember	ICS	AC-D29	14-Aug-00	14-Feb-01
Right Rear Seat Crossmember	ICS	AC-D61	14-Aug-00	14-Feb-01
Top of Engine	ENDEVCO	AC-A13883	27-Nov-00	27-May-01
Bottom of Engine	ENTRAN	AC-D03	31-Aug-00	01-Mar-01
Right Disc Brake Caliper	ENDEVCO	AC-A14342	15-Nov-00	15-May-01
Instrument Panel	ENDEVCO	AC-A14261	15-Nov-00	15-May-01
Left Disc Brake Caliper	ENDEVCO	AC-A14126	27-Nov-00	27-May-01
Left Seat Rear Crossmember (R)	ICS	AC-D82	17-Aug-00	17-Feb-01
Right Seat Rear Crossmember (R)	ICS	AC-Y17	25-Aug-00	25-Feb-01