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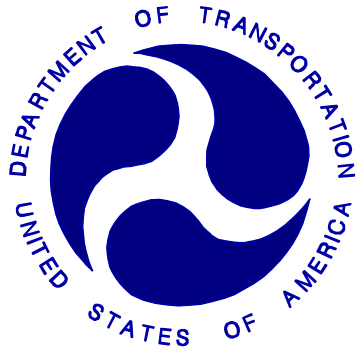
**NEW CAR ASSESSMENT PROGRAM (NCAP)
FRONTAL BARRIER IMPACT TEST**

**DAIMLER CHRYSLER
2001 DODGE RAM 1500
PICKUP**

NHTSA NUMBER: M10309

VERIDIAN TEST NUMBER: 8602-14

VERIDIAN ENGINEERING
TRANSPORTATION SCIENCES CENTER
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BUFFALO, NEW YORK 14225



January 11, 2001

FINAL REPORT

PREPARED FOR:

U. S. DEPARTMENT OF TRANSPORTATION
National Highway Traffic Safety Administration
Safety Performance Standards
Office of Crashworthiness Standards
Mail Code: NPS-10
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Manager, New Car Assessment Program (NCAP)
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 Dodge Ram 1500 Pickup was performed at Veridian Engineering crash test facility in Buffalo, New York, on January 11, 2001. The impact velocity was 56.33 kph and the temperature at the barrier face was 21°C. The maximum post-test vehicle crush was 820 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 (061)	352.1	36.0	36.9	4634.5	3416.2
Passenger (064)	410.3	44.4	33.8	4392.2	3780.8
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 M10309

PURPOSE

This 56.33 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 56.33 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 Dodge Ram 1500 Pickup at a velocity of 56.33 kph. The test was performed at Veridian Engineering on January 11, 2001. Pre- and post-test photographs of the vehicle and dummies can be found in Appendix A.

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

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

Both ATDs were fully instrumented with head, chest, and pelvis triaxial accelerometers, chest displacement potentiometers, upper neck transducers, right/left femur load cells, and lower leg instrumentation. Seat belt load cells were also on the driver's and passenger's lap and shoulder belts to measure dummy torso and pelvic section loading. The driver (position 1) ATD (Serial No. 061) and the right-front passenger (position 2) ATD (Serial No. 064) were calibrated previous to this test. Certification details, along with instrumentation calibration data, are found in Appendix C.

The 135 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 352.1. The maximum chest deceleration over 3 milliseconds was 36.0 g's and maximum chest

deflection was 36.9 mm. Compressive femur loads were 4634.5 Newtons on the left and 3416.2 Newtons on the right.

The right front passenger's HIC was 410.3. Maximum chest deceleration over 3 milliseconds was 44.4 g's and maximum chest deflection was 33.8 mm. Compressive femur loads were 4392.2 Newtons on the left and 3780.8 Newtons on the right.

SECTION 2

GENERAL TEST AND VEHICLE PARAMETER DATA

DATA SHEET NO. 1 CRASH TEST SUMMARY

Vehicle NHTSA No. : M10309 Test Mode : 56.3 kph Frontal Barrier

Test Date : January 11, 2001 Time: 11:30 Temperature : 6 °C

Vehicle Make/Model/Body Style : 2001 Dodge Ram 1500 Pickup

Vehicle Test Weight : 2200 kg

Vehicle/Barrier Impact Angle : 0 °

Impact Velocity : 56.33 kph

Maximum Static Crush : 820 mm

Vehicle Rebound : 474 mm

DUMMIES:

DRIVER

PASSENGER

Type :

572E

572E

Restraint System :

3-point belt system with airbags

3-point belt system with airbags

Number of Data Channels : 135

Number of Cameras : 1 Real Time

16 High Speed

DOOR OPENING DATA :

Closed/Inoperable - Left Front

Closed/Inoperable - Right Front

Front Seat(s) Data :

DRIVER

PASSENGER

Seat Track Failure :(mm of shift)

0

0

Seat Back Failure :

None

None

VISIBLE DUMMY CONTACT POINTS :

DRIVER

PASSENGER

Head :

Airbag / Back of head to headrest

Airbag / Back of head to headrest

Abdomen :

-

-

Chest

Airbag

Airbag

Knees

Knee Bolster

Knee Bolster

DATA SHEET NO. 2 GENERAL TEST AND VEHICLE PARAMETER DATA

TEST VEHICLE INFORMATION :

Year/Make/Model/Body Style : 2001 Dodge Ram 1500 Pickup

NHTSA No. : M10309 ; VIN: 1B7HC16X71S138290 ; Color : Silver

Engine Data: 6 cylinders; - CID; 3.9 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 : - A/C; x Pwr.Strg.; x Pwr. Brakes

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

Date Received : 12/21/00 ; Odometer Reading 154 km

Selling Dealer : Walden Dodge

& Address: 2185 Walden Ave. Cheektowaga, N.Y. 14225

DATA FROM TIRE VEHICLE'S CERTIFICATION LABEL:

Vehicle Manufactured by : Daimler Chrysler

Date of Manufacture 8/00

GVWR : 2903 kg; GAWR: 1656 kg FRONT; 1727 kg REAR

DATA FROM TIRE PLACARD:

Tire Pressure with Maximum Capacity Vehicle Load : 340 kpa FRONT

340 kpa REAR

Recommended Tire Size : P225/75R16XL

* Recommended Cold Tire Pressure : 282 kpa FRONT; 282 kpa REAR

Size of Tires on Test Vehicle: P225/75R16XL ; Manufacturer: Goodyear

Vehicle Capacity Data :

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

Number of Occupants: 3 Front; - Rear; 3 Total

Vehicle Capacity Weight (VCW) = 985.5 kg

No. of Occupants x 68 kg = 204.1 kg

Rated Cargo/Luggage Weight (RCLW) = 781.4 kg 136 kg maximum for test

*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>528.5</u>	kg	Right Rear	=	<u>406.5</u>	kg
Left Front	=	<u>564</u>	kg	Left Rear	=	<u>418.5</u>	kg
TOTAL FRONT	=	<u>1092.5</u>	kg	TOTAL REAR	=	<u>825.0</u>	kg
TOTAL DELIVERED WEIGHT = <u>1917.5</u> kg							
% of Total Front of Vehicle Weight = <u>57.0</u>				% of Total Rear Weight = <u>43.0</u> %			

CALCULATION OF VEHICLE'S TARGET TEST WEIGHT :

Total Delivered Weight (UDW)	=	<u>1917.5</u>	kg	
Rated Cargo/Luggage Weight (RCLW)	=	<u>136.0</u>	kg	136 kg maximum for test
Weight of 2 p.572 Dummies @ 76 each	=	<u>152.0</u>	kg	
TARGET TEST WEIGHT	=	<u>2205.5</u>	kg	

WEIGHT OF TEST VEHICLE WITH TWO DUMMIES AND 131 KG OF CARGO WEIGHT:

Right Front	=	<u>571</u>	kg	Right Rear	=	<u>519</u>	kg
Left Front	=	<u>589</u>	kg	Left Rear	=	<u>521</u>	kg
TOTAL FRONT	=	<u>1160.0</u>	kg	TOTAL REAR	=	<u>1040.0</u>	kg
TOTAL TEST WEIGHT = <u>2200.0</u> kg							
% of Total Front Weight = <u>52.7</u> %				% of Total Rear Weight = <u>47.3</u> %			
Weight of Ballast Secured in Vehicle Trunk Area = <u>140</u> kg							
Vehicle Components Removed for Weight Reduction:				<u>None</u>			

VEHICLE ATTITUDE (all dimension in millimeters):

AS DELIVERED :	RF	<u>887</u>	LF	<u>881</u>	RR	<u>957</u>	LR	<u>957</u>
FULLY LOADED :	RF	<u>878</u>	LF	<u>873</u>	RR	<u>935</u>	LR	<u>928</u>
AS TESTED :	RF	<u>878</u>	LF	<u>879</u>	RR	<u>935</u>	LR	<u>936</u>
Vehicle's Wheel Base : <u>3030</u> mm								
Location of Vehicle's C.G. : <u>1432.4</u> mm rearward of front wheel center.								

FUEL SYSTEM DATA :

Fuel System Capacity From Owner's Manual	=	<u>98.43</u>	liters
Usable Capacity Figure Furnished by COTR	=	<u>98.43</u>	liters
Test Volume Range (92 to 94% of Usable Capacity)	=	<u>90.6</u>	to <u>92.5</u> liters
ACTUAL TEST VOLUME	=	<u>91</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 filler fore of rear axle on left side and gas tank fore of rear axle.</u>			

DATA SHEET NO. 3 POST IMPACT DATA

TYPE OF TEST:

Type of Test : Frontal Barrier Impact Angle : 0°
Test Date : January 11, 2001 Time: 11:30 Temperature: 6 °C
Vehicle NHTSA No. : M10309
Required Impact Velocity Range : 55.5 to 57.1 kph

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

Trap No. 1 = 56.33 kph; Trap No. 2 = 56.33 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 =	<u>5132</u>	; C/L =	<u>5183</u>	; Left =	<u>5134</u>
Post-Test	Right =	<u>4367</u>	; C/L =	<u>4363</u>	; Left =	<u>4422</u>
Crush	Right =	<u>765.0</u>	; C/L =	<u>820.0</u>	; Left =	<u>712.0</u>
AVERAGE	=	<u>765.7</u>	mm			

VEHICLE REBOUND: (From rigid barrier only.)

Distance from front of test vehicle to impact point :

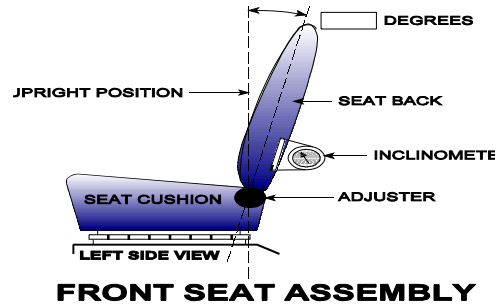
	Right =	<u>451</u>	; C/L =	<u>501</u>	; Left =	<u>470</u>
AVERAGE	=	<u>474.0</u>	mm			

DATA SHEET NO. 4 TEST VEHICLE INFORMATION

VEHICLE IDENTIFICATION:

Model Year : 2001 Vehicle Model: Dodge Ram 1500 Body Style : Pickup

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



Seat back angle for driver's seat: 19

Measurement instructions: Fixed Back

Seat back angle for passenger's seat: 19

Measurement instructions: Fixed Back

2. Seat Fore and Aft Positioning

Positioning of the driver's seat: Placed in mechanical middle

Positioning of the passenger's seat: Placed in mechanical middle

3. Fuel Tank Capacity Data

3.1 A. "Usable Capacity" of the standard equipment fuel tank is 98.43 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 = 93.5 liters

3.2 Amount of Stoddard solvent added to vehicle(s) used for certification test(s) = 93.5 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:

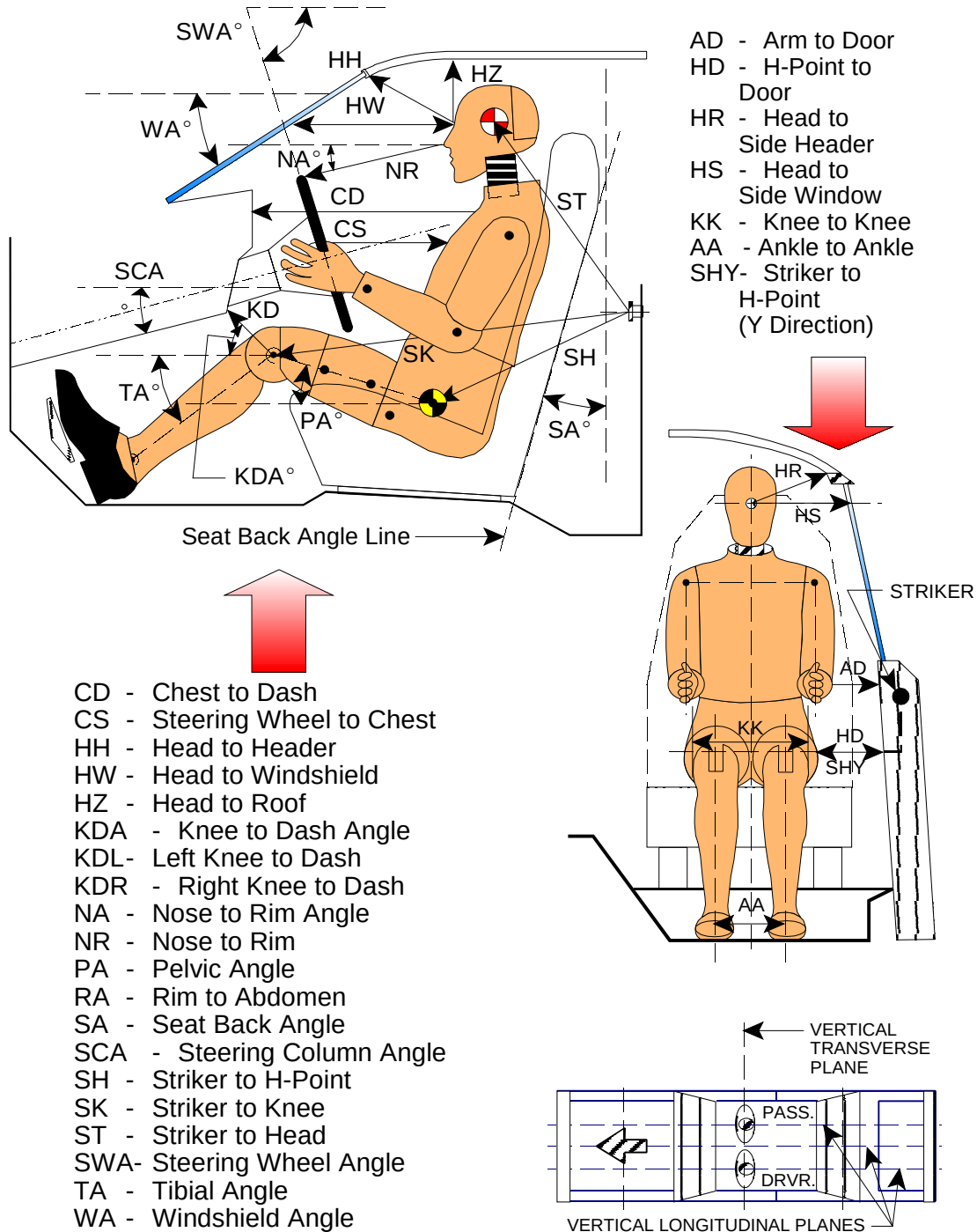
Fixed column

5. SEAT BELT UPPER ANCHORAGE

Nominal design riding position:

Located 6 notches and placed in 3rd from top with top being #1.

DUMMY MEASUREMENT FOR FRONT SEAT PASSENGERS

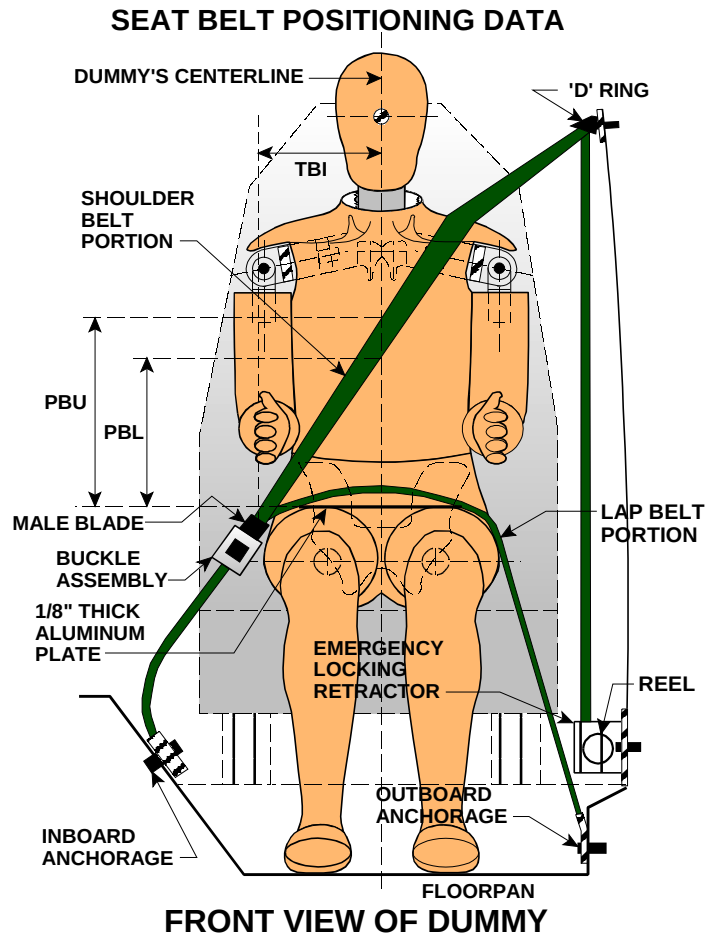


DATA SHEET NO. 5 FRONT SEAT DUMMY POSITIONING MEASUREMENTS IN VEHICLE (cont.)

	DRIVER (Serial #061)			PASS. (Serial # 064)		
WA ^o	37.3 deg.			N/A		
SWA ^o	65 deg.			N/A		
SCA ^o	25 deg.			N/A		
SA ^o	19 deg.			19 deg.		
HZ	224			225		
HH	442			440		
HW	637			636		
HR	274			272		
NR	419	Angle	145 deg.	N/A		
CD	529			532		
CS	321			N/A		
RA	186			N/A		
KDL	183	Angle (KDA)	23 deg.	114		
KDR	179			154	Angle (KDA)	39 deg.
PA ^o	20.5 deg.			24.1 deg.		
TA ^o	55 deg.			61 deg.		
KK	300			291		
AA	269			269		
ST	691	Angle	20 deg.	690	Angle	20 deg.
SK	757	Angle	86 deg.	761	Angle	85 deg.
SH	362	Angle	90 deg.	362	Angle	90 deg.
SHY	231			221		
HS	207			204		
HD	342			334		
AD	136			114		

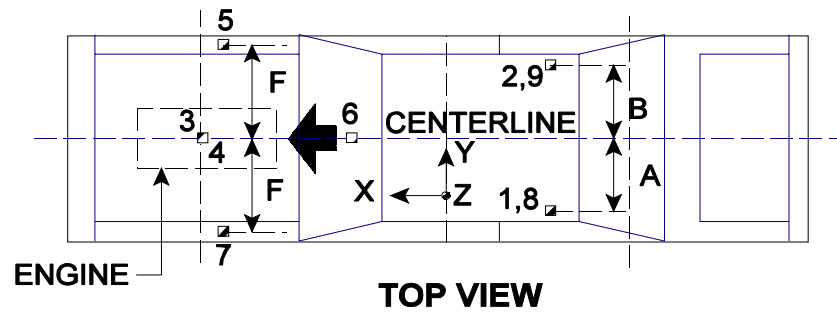
Dimensions in millimeters

DATA SHEET NO. 6 SEAT BELT POSITIONING DATA

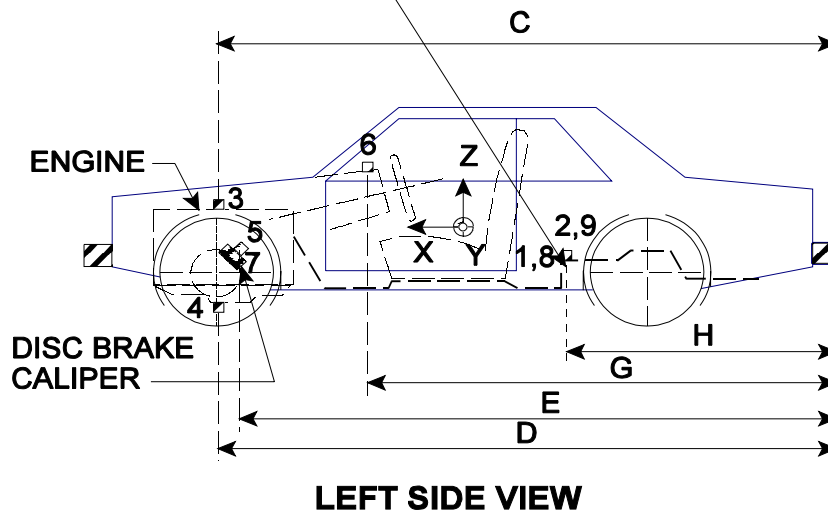


	DRIVER DUMMY (mm)	PASSENGER DUMMY (mm)
PBU -- Top surface of alum. plate to upper edge	319	329
PBL-- Top surface of alum. plate to belt lower edge	236	244
<u>LAP BELT TENSION</u>	10 nwt	10 nwt
<u>SHOULDER BELT TENSION</u>	Retractor	Retractor

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	-549
B Right Rear Seat Crossmember Y	438
C Top of Engine X	4174
D Bottom of Engine X	4095
E Disc Brake Calipers X	4042
F Disc Brake Calipers Y	752
G Instrument Panel X	3633
H Rear Seat Crossmembers X	2455

LOCATION NUMBER	DESCRIPTION	MAXIMUM VALUE (g's)			
		Pos.	msec.	Neg.	msec.
1	Rear Seat X-Member @ Left Side	4.7	74.8	-35.1	67.8
2	Rear Seat X-Member @ Right Side	1.6	114.3	-30.9	69.0
3	Top of Engine Block	29.1	70.3	-63.4	59.3
4	Bottom of Engine	27.1	68.9	-67.6	60.6
5	Disc Brake Caliper @ Right Side	18.0	16.1	-55.0	54.7
6	Instrument Panel	45.0	76.0	-120.3	67.0
7	Disc Brake Caliper @Left Side	*	*	*	*
8	Rear Seat X-Member @ Left-Redundant	3.0	75.0	-34.9	67.9
9	Rear Seat X-Member @ Right-Redundant	1.8	236.1	-32.3	68.8

* - Accelerometer wire cut

DATA SHEET NO. 8 DUMMY INJURY CRITERIA VALUES

Vehicle Year/Make/Model/Body Style: 2001 Dodge Ram 1500 Pickup

NHTSA Test No.: M10309 Test Date: January 11, 2001

		MAXIMUM VALUE							
		Driver				Passenger			
DESCRIPTION	Unit	Pos	msec	Neg	msec	Pos	msec	Neg	msec
Head X	g	15.0	217.8	-38.1	79.7	12.2	221.9	-51.4	90.4
Head Y	g	3.2	240.4	-17.8	98.2	4.7	222.4	-16.0	108.2
Head Z	g	22.8	74.6	-2.3	133.8	22.6	95.7	-3.5	133.5
Head Resultant	g	44.0	79.7	0.0	19.1	54.0	90.7	0.0	-43.9
Redundant Head X	g	14.9	217.9	-37.7	80.3	12.7	222.4	-51.8	90.2
Redundant Head Y	g	3.1	244.6	-17.1	97.2	4.7	222.7	-15.7	107.2
Redundant Head Z	g	24.6	74.7	-2.5	136.5	23.6	95.6	-3.3	133.4
Redundant Head Resultant	g	44.4	79.2	0.1	18.2	54.5	91.1	0.0	-44.5
Upper Neck Fx	N	162.4	80.1	-381.5	63.3	73.3	285.5	-1078.3	88.0
Upper Neck Fy	N	84.4	225.3	-298.2	124.0	421.7	72.8	-240.3	123.8
Upper Neck Fz	N	1745.9	74.7	-205.7	253.4	1867.6	87.9	-101.3	135.5
Upper Neck F Resultant	N	1748.7	74.7	2.0	-40.4	2178.4	87.9	1.5	-40.9
Upper Neck Mx	N-m	3.1	232.7	-25.8	103.8	10.8	51.3	-50.4	104.0
Upper Neck My	N-m	24.8	144.2	-21.0	260.2	18.0	146.6	-75.2	75.8
Upper Neck Mz	N-m	30.6	102.8	-14.0	159.9	27.5	105.1	-10.7	164.7
Upper Neck M Resultant	N-m	40.0	103.8	0.2	-26.0	81.7	75.8	0.1	-41.2
Chest X	g	2.0	215.5	-35.6	77.1	4.2	211.8	-45.8	84.9
Chest Y	g	1.0	128.7	-8.0	67.3	5.3	134.9	-8.5	78.6
Chest Z	g	7.0	62.6	-5.9	117.1	8.2	91.7	-6.0	54.9
Chest Resultant	g	36.7	77.1	0.0	-48.4	45.9	84.9	0.0	-41.0
Redundant Chest X	g	2.0	213.3	-35.6	76.4	4.2	211.7	-46.1	84.9
Redundant Chest Y	g	1.0	128.4	-8.5	65.7	5.3	135.1	-8.2	78.7
Redundant Chest Z	g	6.9	67.5	-6.0	117.9	8.4	91.7	-6.1	54.8
Redundant Chest Resultant	g	36.6	76.4	0.0	-47.9	46.2	84.9	0.0	-41.1
Chest Displacement	mm	0.0	-48.9	-36.9	87.8	0.0	-32.2	-33.8	88.3

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

Vehicle Year/Make/Model/Body Style: 2001 Dodge Ram 1500 Pickup

NHTSA Test No.: M10309 Test Date: January 11, 2001

		MAXIMUM VALUE							
		Driver				Passenger			
DESCRIPTION	Unit	Pos	msec	Neg	msec	Pos	msec	Neg	msec
Pelvic X	g	2.3	173.1	-48.5	57.3	4.4	148.0	-50.9	57.2
Pelvic Y	g	4.4	122.8	-11.1	82.0	5.2	49.5	-5.7	101.7
Pelvic Z	g	2.6	50.0	-11.8	108.0	2.0	37.8	-15.9	83.3
Pelvic Resultant	g	49.1	57.3	0.0	-48.1	51.6	57.2	0.0	-49.5
Left Femur	N	148.3	43.9	-4634.5	61.3	236.4	102.7	-4392.2	51.1
Right Femur	N	595.3	102.4	-3416.2	54.2	257.5	40.1	-3780.8	56.9
Left Upper Tibia Mx	N-m	34.4	82.2	-10.8	207.6	16.7	153.5	-49.3	47.2
Left Upper Tibia My	N-m	16.7	179.9	-207.2	72.7	9.6	156.5	-110.3	69.4
Left Lower Tibia Fz	N	54.9	173.7	-4532.5	72.1	210.6	209.2	-2187.9	96.5
Left Lower Tibia Mx	N-m	40.9	66.4	-12.9	104.6	43.5	63.7	-14.3	44.4
Left Lower Tibia My	N-m	12.6	90.5	-50.9	73.5	26.9	99.2	-43.9	69.6
Right Upper Tibia Mx	N-m	40.9	63.9	-26.9	110.6	10.9	140.7	-23.7	66.8
Right Upper Tibia My	N-m	22.5	142.0	-179.3	70.5	19.2	149.9	-101.3	58.1
Right Lower Tibia Fz	N	91.6	175.8	-3411.3	69.8	112.5	236.7	-1481.4	67.3
Right Lower Tibia Mx	N-m	7.1	69.3	-12.2	49.5	27.3	68.8	-7.8	38.7
Right Lower Tibia My	N-m	13.7	99.7	-56.7	50.4	7.9	101.8	-31.4	58.8
Left Foot Aft Ax	g	14.3	91.2	-73.9	47.8	7.8	96.6	-59.6	46.6
Left Foot Aft Az	g	23.8	82.5	-29.6	47.7	35.7	63.1	-35.8	48.6
Left Foot Fore Az	g	24.2	83.2	-44.3	71.7	49.9	63.3	-46.3	45.8
Right Foot Aft Ax	g	13.4	101.4	-104.8	48.6	3.1	187.6	-45.9	40.1
Right Foot Aft Az	g	18.6	82.5	-47.8	59.4	10.2	66.7	-27.0	45.5
Right Foot Fore Az	g	20.1	64.2	-76.9	51.2	38.7	37.3	-49.1	45.5
Lap Belt Load	N	4219.6	58.1	-4.4	167.5	4296.4	59.7	-23.3	212.3
Torso Belt	N	6133.9	82.4	-12.6	163.9	10785.5	84.4	-67.5	144.8

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

Vehicle Year/Make/Model/Body Style: 2001 Dodge Ram 1500 Pickup

NHTSA Test No.: M10309 Test Date: January 11, 2001

HEAD INJURY CRITERIA (HIC)				
	HIC**	t ₁ (msec)	t ₂ (msec)	Average Acceleration t ₁ to t ₂
Position #1 - Driver	352.1	68.3	104.3	39.5
Position #2 - Passenger	410.3	74.8	110.8	41.9

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

CLIP SUMMARY*				
	CLIP (g's)	t ₁ (msec)	t ₂ (msec)	CSI
Position #1 - Driver	36.0	75.4	78.4	308.9
Position #2 - Passenger	44.4	84.2	87.5	359.9

* 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 Dodge Ram 1500 Pickup

NHTSA Test No.: M10309 Test Date: January 11, 2001

HEAD INJURY CRITERIA (HIC) REDUNDANT				
	HIC**	t ₁ (msec)	t ₂ (msec)	Average Acceleration t ₁ to t ₂
Position #1 - Driver	354.6	68.0	104.0	39.6
Position #2 - Passenger	420.0	74.5	110.5	42.3

** 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	35.6	74.8	77.8	306.8
Position #2 - Passenger	44.6	84.2	87.7	368.7

* 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.	<u>2449</u>	<u>2449</u>
Shoulder belt length as measured on Part 572 Dummy.	<u>971</u>	<u>971</u>
Lap belt length as measured on Part 572 Dummy.	<u>1027</u>	<u>1027</u>

SHOULDER BELT SPOOL-OFF DATA:

As determined by film analysis.	<u>76.2</u>	<u>101.6</u>
As determined mechanically.	<u>81.0</u>	<u>95.0</u>
As determined electronically.	<u>75.0</u>	<u>98.1</u>

BELT STRETCH DATA:

Measured electronically between shoulder belt load cell and the "D" ring.	<u>0.2</u>	<u>2.4</u>
Measured mechanically.	<u>1mm</u>	<u>1mm</u>

Dimensions in millimeters

DATA SHEET NO.10 SUMMARY OF FMVSS 212 DATA

FMVSS NO. 212 - "WINDSHIELD MOUNTING" DATA

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

Windshield is bonded in place and covered with a 23 mm molding.

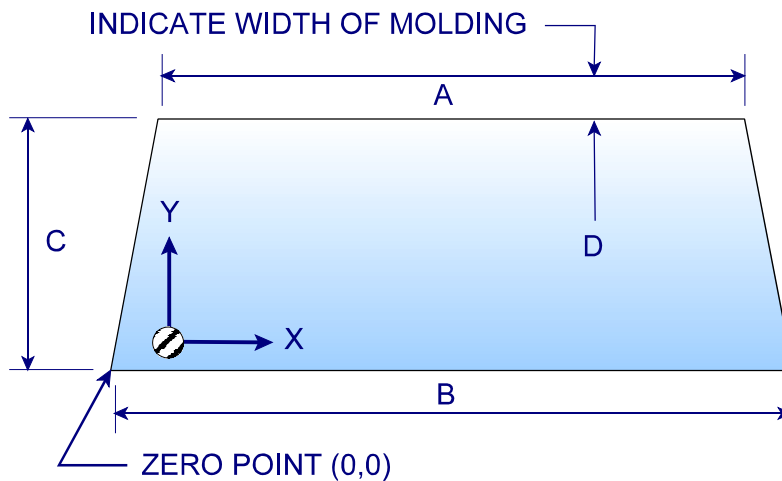
FMVSS 212 REQUIREMENTS:

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	2332	2332	100
LEFT SIDE	2332	2332	100
TOTAL	4664	4664	100

AREA OF RETENTION FAILURE:



DIMENSIONS (mm)	
A	1434
B	1796
C	717
D	23

FRONT VIEW OF WINDSHIELD

FAILURE DETAILS:

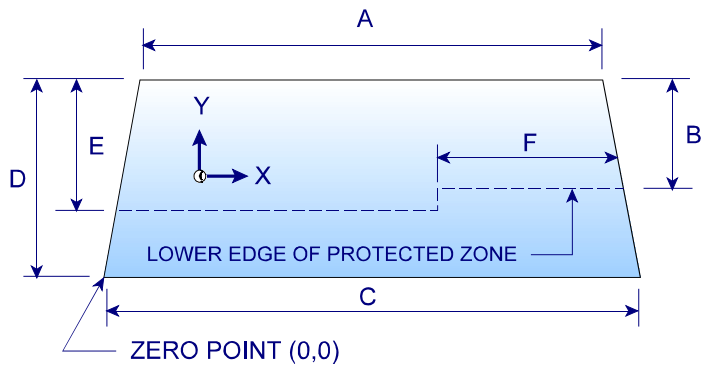
None

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	1434
B	355
C	1796
D	717
E	448
F	952

FRONT VIEW OF WINDSHIELD

DETAILS OF WINDSHIELD GLASS PENETRATION GREATER THAN 6 mm:

None

(Show location of penetration on the above sketch)

	COORDINATES	
	X	Y
1.		
2.		
3.		
4.		

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

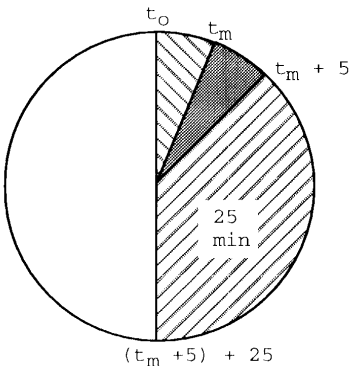
NHTSA TEST No.: M10309 TEST DATE: January 11, 2001
VEHICLE MAKE/MODEL: 2001 Dodge Ram 1500

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

=====

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

FUEL SPILLAGE MEASUREMENT:



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

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

SOLVENT SPILLAGE DETAILS:

None

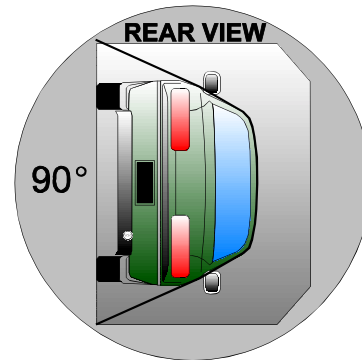
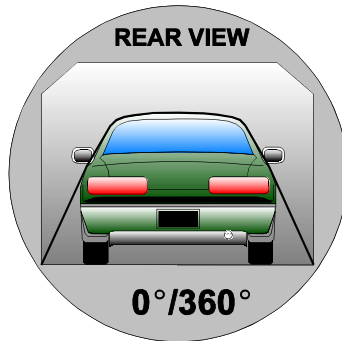
DATA SHEET 13

FMVSS NO. 301 STATIC ROLLOVER DATA SHEET

Vehicle: 2001 Dodge Ram 1500

NHTSA No. M10309

0 - 90 Degrees



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD :

Rollover Fixture 90° Rotation Time	<u>1</u>	minutes	<u>19</u>	seconds
(Spec. Range = 1 to 3 minutes)				
FMVSS 301 Position Hold Time +	<u>5</u>	minutes	<u>0</u>	seconds
TOTAL	<u>6</u>	minutes	<u>19</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

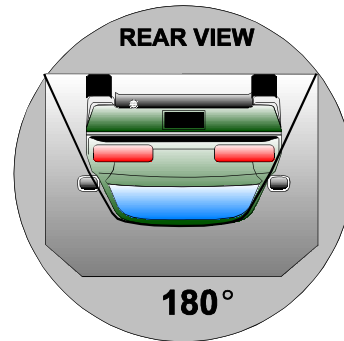
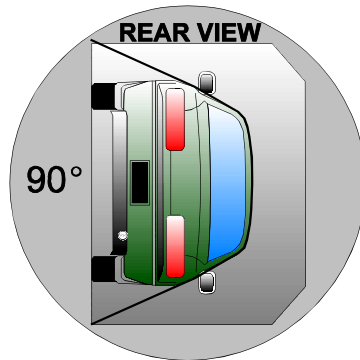
DATA SHEET 13

FMVSS NO. 301 STATIC ROLLOVER DATA SHEET (CONTINUED)

Vehicle: 2001 Dodge Ram 1500

NHTSA No. M10309

90 - 180 Degrees



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD :

Rollover Fixture 90° Rotation Time	<u>1</u>	minutes	<u>11</u>	seconds
(Spec. Range = 1 to 3 minutes)				
FMVSS 301 Position Hold Time +	<u>5</u>	minutes	<u>0</u>	seconds
TOTAL	<u>6</u>	minutes	<u>11</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

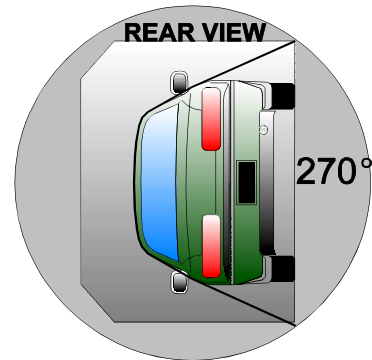
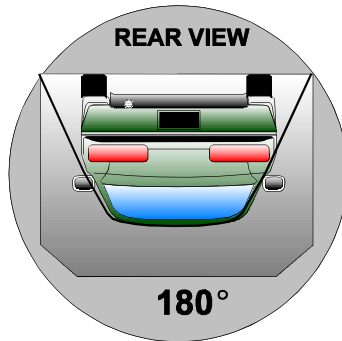
DATA SHEET 13

FMVSS NO. 301 STATIC ROLLOVER DATA SHEET (CONTINUED)

Vehicle: 2001 Dodge Ram 1500

NHTSA No. M10309

180 - 270 Degrees



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD :

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

II. FMVSS 301 REQUIREMENTS :

(1) Time Period

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

(2) Maximum Allowable Solvent Spillage

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

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

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

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

IV. SOLVENT SPILLAGE LOCATION(S) :

None

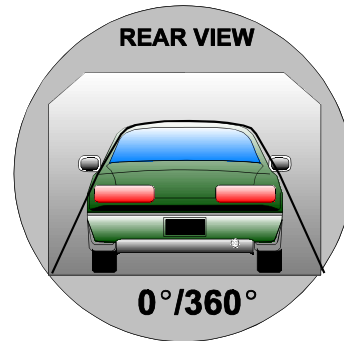
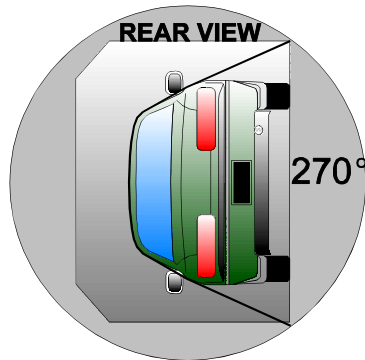
DATA SHEET 13

FMVSS NO. 301 STATIC ROLLOVER DATA SHEET (CONTINUED)

Vehicle: 2001 Dodge Ram 1500

NHTSA No. M10309

270 - 360 Degrees



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD :

Rollover Fixture 90° Rotation Time	<u>1</u>	minutes	<u>16</u>	seconds
(Spec. Range = 1 to 3 minutes)				
FMVSS 301 Position Hold Time +	<u>5</u>	minutes	<u>0</u>	seconds
TOTAL	<u>6</u>	minutes	<u>16</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:

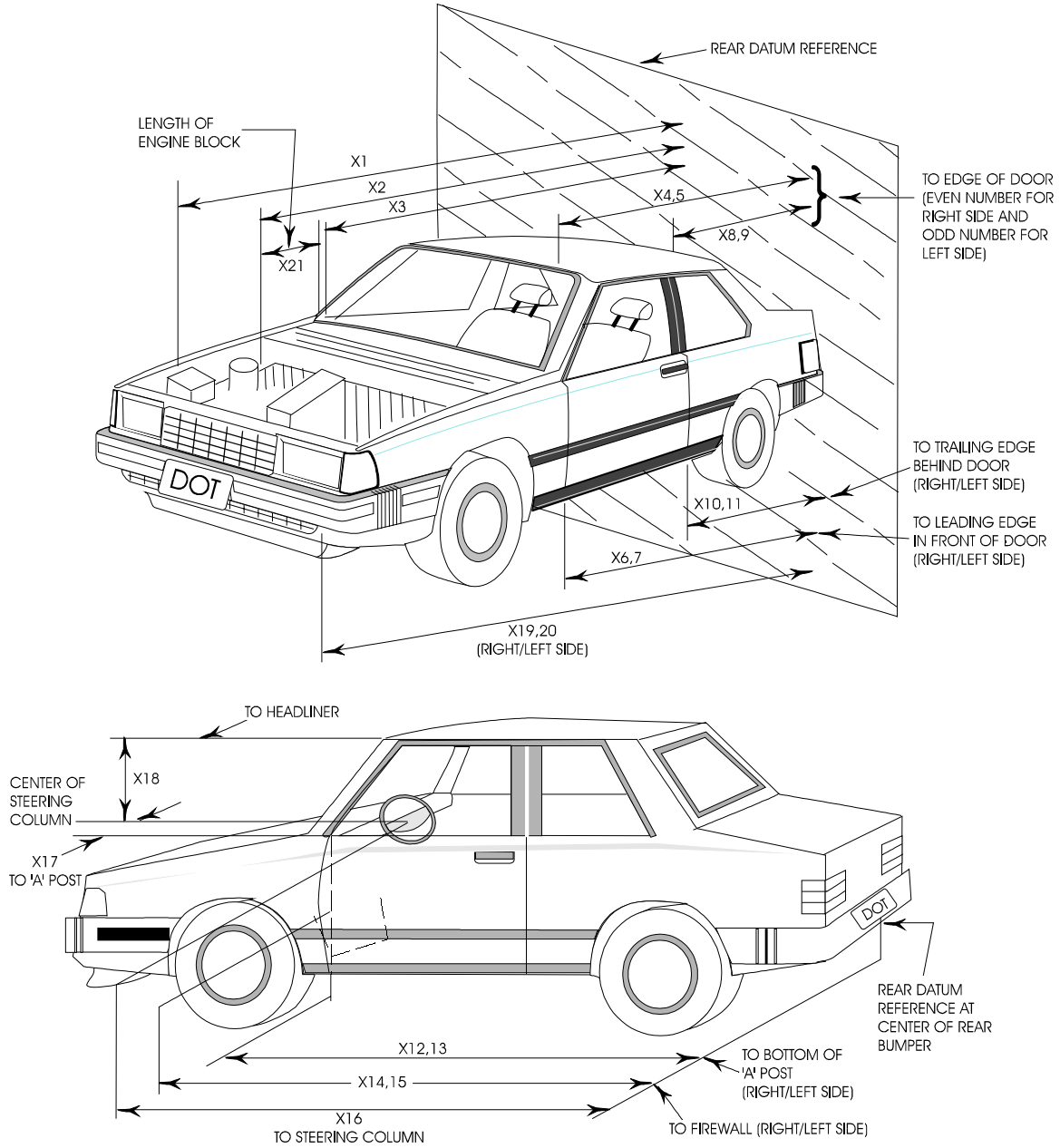
0 g	0 g	0 g	N/A
-----	-----	-----	-----

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

IV. SOLVENT SPILLAGE LOCATION(S) :

None

DATA SHEET NO. 14 TEST VEHICLE MEASUREMENTS

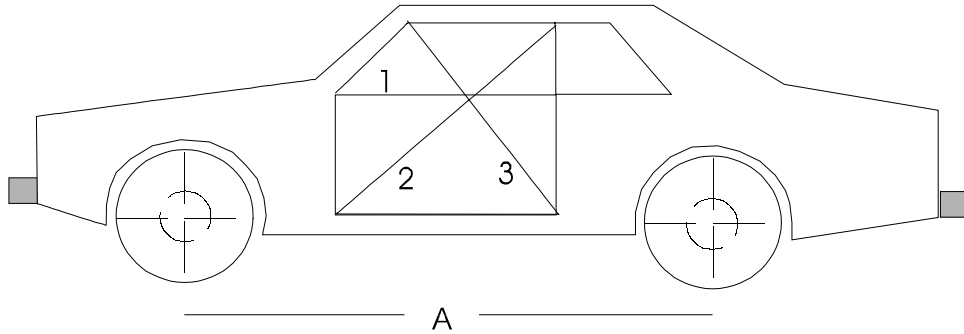


DATA SHEET NO.14 VEHICLE MEASUREMENTS (cont.)

No.		Pre-Test	Post-Test	Difference
X1	Total Length of Vehicle at Centerline	5183	4363	820
X2	Rear Surface of Vehicle to Front of Engine	4320	4135	185
X3	Rear Surface of Vehicle to Firewall	4063	3964	99
X4	Rear Surface of Vehicle to Upper Leading Edge of Right Door	3654	3611	43
X5	Rear Surface of Vehicle to Upper Leading Edge of Left Door	3653	3608	45
X6	Rear Surface of Vehicle to Lower Leading Edge of Right Door	3633	3569	64
X7	Rear Surface of Vehicle to Lower Leading Edge of Left Door	3620	3554	66
X8	Rear Surface of Vehicle to Upper Trailing Edge of Right Door	2354	2323	31
X9	Rear Surface of Vehicle to Upper Trailing Edge of Left Door	2355	2316	39
X10	Rear Surface of Vehicle to Lower Trailing Edge of Right Door	2429	2386	43
X11	Rear Surface of Vehicle to Lower Trailing Edge of Left Door	2398	2310	88
X12	Rear Surface of Vehicle to Bottom of "A" Post of Right Side	3531	3494	37
X13	Rear Surface of Vehicle to Bottom of "A" Post of Left Side	3518	3478	40
X14	Rear Surface of Vehicle to Firewall, Right Side	3974	3848	126
X15	Rear Surface of Vehicle to Firewall, Left Side	3971	3860	111
X16	Rear Surface of Vehicle to Steering Column	3086	3049	37
X17	Center of Steering Column to "A" Post	300	276	24
X18	Center of Steering Column to Headliner	449	484	-35
X19	Rear Surface of Vehicle to Right Side of Front Bumper	5132	4367	765
X20	Rear Surface of Vehicle to Left Side of Front Bumper	5134	4422	712
X21	Length of Engine Block	503	503	0
RD	Rear Surface of Vehicle to Right Side of Dash Panel	3394	3377	17
CD	Rear Surface of Vehicle to Center of Dash Panel	3327	3295	32
LD	Rear Surface of Vehicle to Left Side of Dash Panel	3333	3317	16

All Dimensions in mm

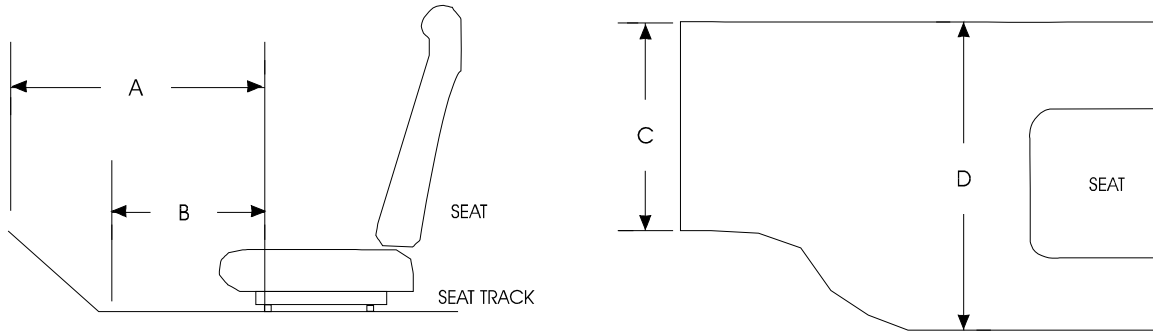
DATA SHEET NO.14 VEHICLE MEASUREMENTS (cont.)
 VEHICLE INTRUSION MEASUREMENTS
 DOOR OPENING WIDTH



UNITS (mm)	LEFT			RIGHT		
MEASUREMENT	1	2	3	1	2	3
BEFORE TEST	1174	1632	1300	1187	1624	1320
AFTER TEST	1168	1618	1351	1166	1611	1353
DIFFERENCE	6	14	-51	21	13	-33

UNITS (mm)	A = WHEELBASE LEFT	A = WHEELBASE RIGHT
BEFORE TEST	3029	3031
AFTER TEST	2921	2895
DIFFERENCE	108	136

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



DRIVER

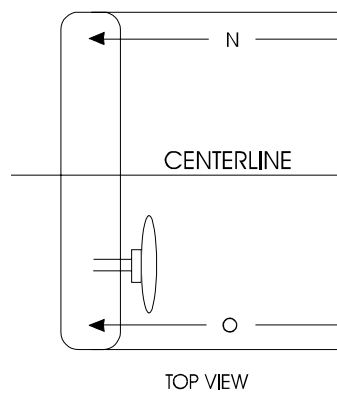
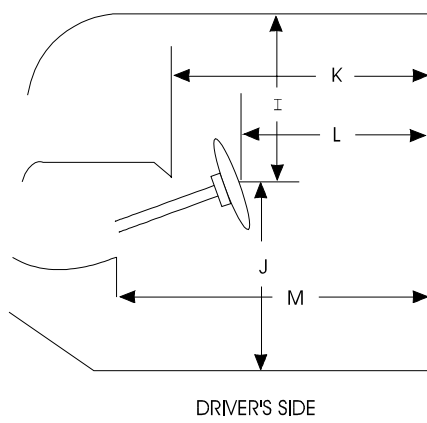
Measurement	Pre-Test	Post-Test	Difference
A	706	723	-17
B	580	601	-21
C	538	534	4
D	489	493	-4

PASSENGER

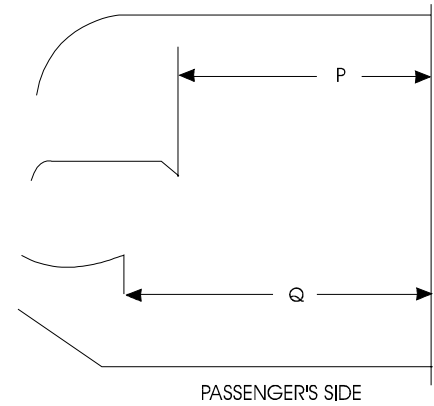
Measurement	Pre-Test	Post-Test	Difference
A	696	706	-10
B	545	552	-7
C	433	416	17
D	378	383	-5

Units = mm

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



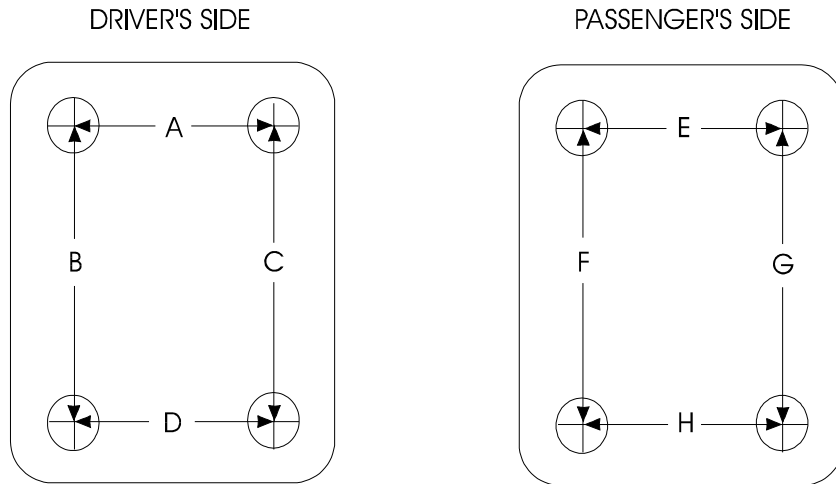
MEASUREMENTS
FROM C-PILLAR
BELT ANCHORAGE



Measurement	Pre-Test	Post-Test	Difference
I	449	484	-35
J	716	729	-13
K	977	943	34
L	757	702	55
M	1053	990	63
N	1054	1027	27
O	1003	969	34
P = K (PASS.)	998	966	32
Q = M (PASS.)	1048	1033	15

Units = mm

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

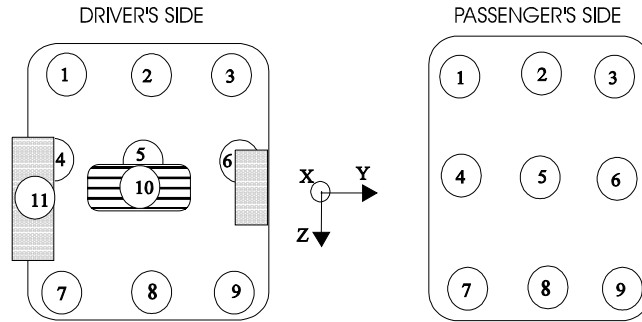


TOP VIEW THROUGH FLOOR PAN

Measurement	Pre-Test	Post-Test	Difference
A	380	368	12
B	530	521	9
C	593	583	10
D	391	391	0
E	380	371	9
F	591	584	7
G	530	525	5
H	392	392	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	3684	3612	72	-624	-588	-36
2	3687	3609	78	-626	-594	-32
3	3690	3605	85	-623	-598	-25
4	3626	3552	74	-597	-558	-39
5	3632	3552	80	-597	-570	-27
6	3627	3555	72	-588	-566	-22
7	3554	3488	66	-567	-535	-32
8	3561	3486	75	-568	-537	-31
9	3563	3485	78	-558	-537	-21
10	3546	3483	63	-700	-663	-37
11	3638	3566	72	-603	-576	-27

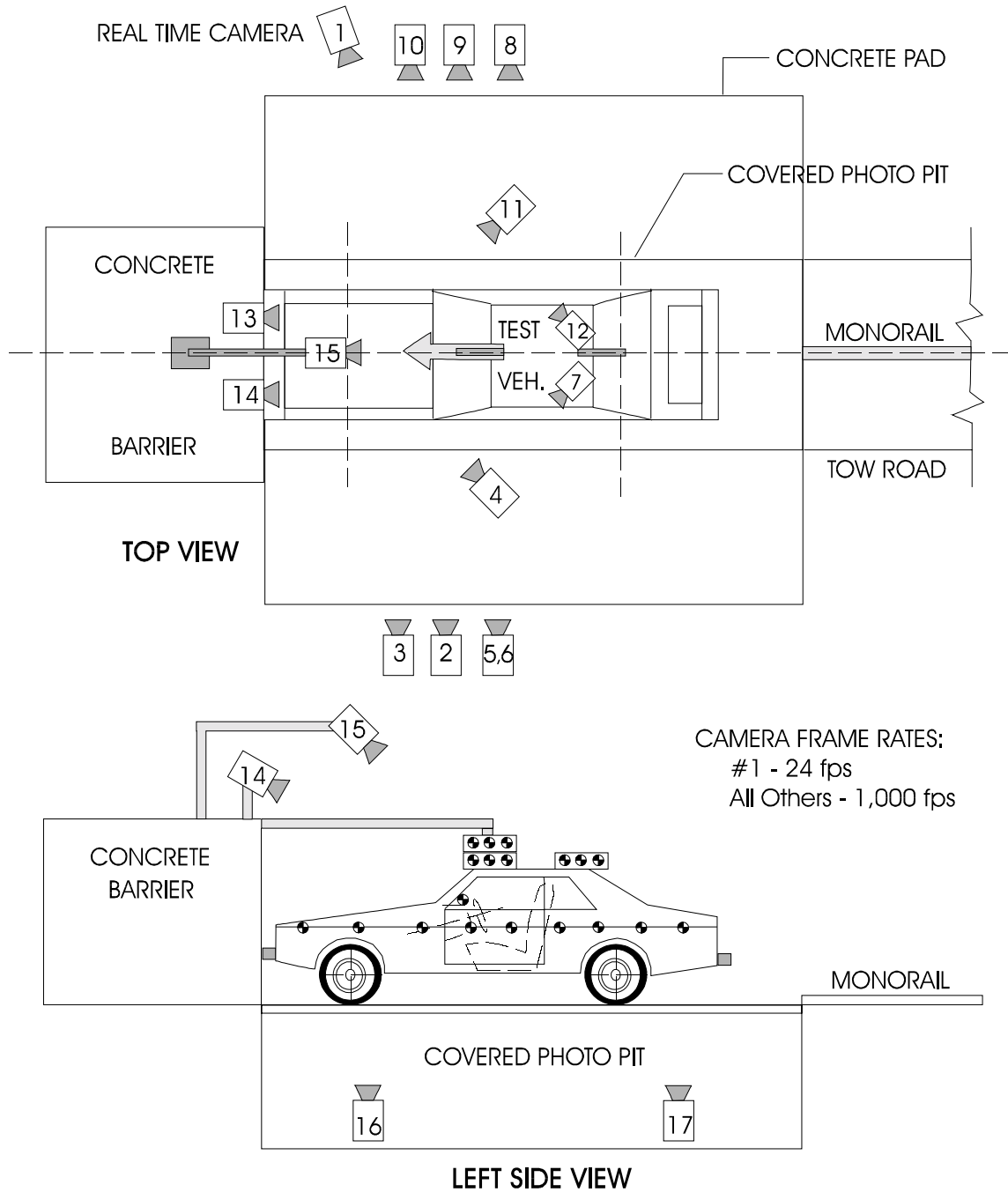
Passenger Side Floorpan Measurements

Floorpan Location	X Deformation (mm)			Z Deformation (mm)		
	Pre-Test	Post-Test	Difference	Pre-Test	Post-Test	Difference
1	3677	3605	72	-590	-596	6
2	3683	3628	55	-577	-560	-17
3	3683	3642	41	-569	-542	-27
4	3602	3540	62	-545	-549	4
5	3616	3554	62	-544	-528	-16
6	3614	3568	46	-534	-507	-27
7	3529	3468	61	-510	-510	0
8	3532	3474	58	-508	-495	-13
9	3527	3477	50	-499	-472	-27

Reference: X = Rear Bumper; Z = Ground

DATA SHEET NO.15 HIGH-SPEED CAMERA LOCATIONS

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



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

NHTSA Test No.: M10309 Vehicle: 2001 Dodge Ram 1500 Pickup

CAMERA NO.	VIEW	CAMERA POSITIONS (mm)*			ANGLE (deg)**	FILM PLANE TO HEAD TARGET	LENS (mm)	SPEED (fps)
		X	Y	Z				
1	Real-Time Camera	-	-	-	-	-	-	24
2	Overall Left Side	7620	1849	1216	2.9	7078	12.5	1010
3	Left Side View	8895	1081	1101	1.4	8353	25	1020
4	Driver and Interior View	7620	2979	1941	7.0	-	25	1040
5	Steering Column (Bottom)	8211	2021	1171	1.6	7669	25	1020
6	Steering Column (Top)	8211	2021	1766	6.0	7669	25	1015
7	Left Belt	-	-	-	-	-	-	-
8	Overall Right Side	7363	1871	1197	2.6	6821	12.5	1020
9	Right Side View	8564	1227	1161	1.7	8022	25	1025
10	Right Passenger View	8344	1885	1466	1.9	7802	35	1020
11	Passenger and Interior View	7706	3028	1958	6.0	-	25	1015
12	Right Belt	-	-	-	-	-	-	-
13	Passenger Front View	620	-92	1987	-41	-	13	1025
14	Driver Front View	620	-92	1987	-40	-	13	1015
15	Windshield View	0	-530	3374	-55	-	13	1015
16	Pit View of Engine	0	615	-3048	90	-	13	1005
17	Pit View of Fuel Tank	0	2750	-3048	90	-	13	1000

*X = film plane to monorail centerline

** = referenced to horizontal plane

Y = film plane to impact location

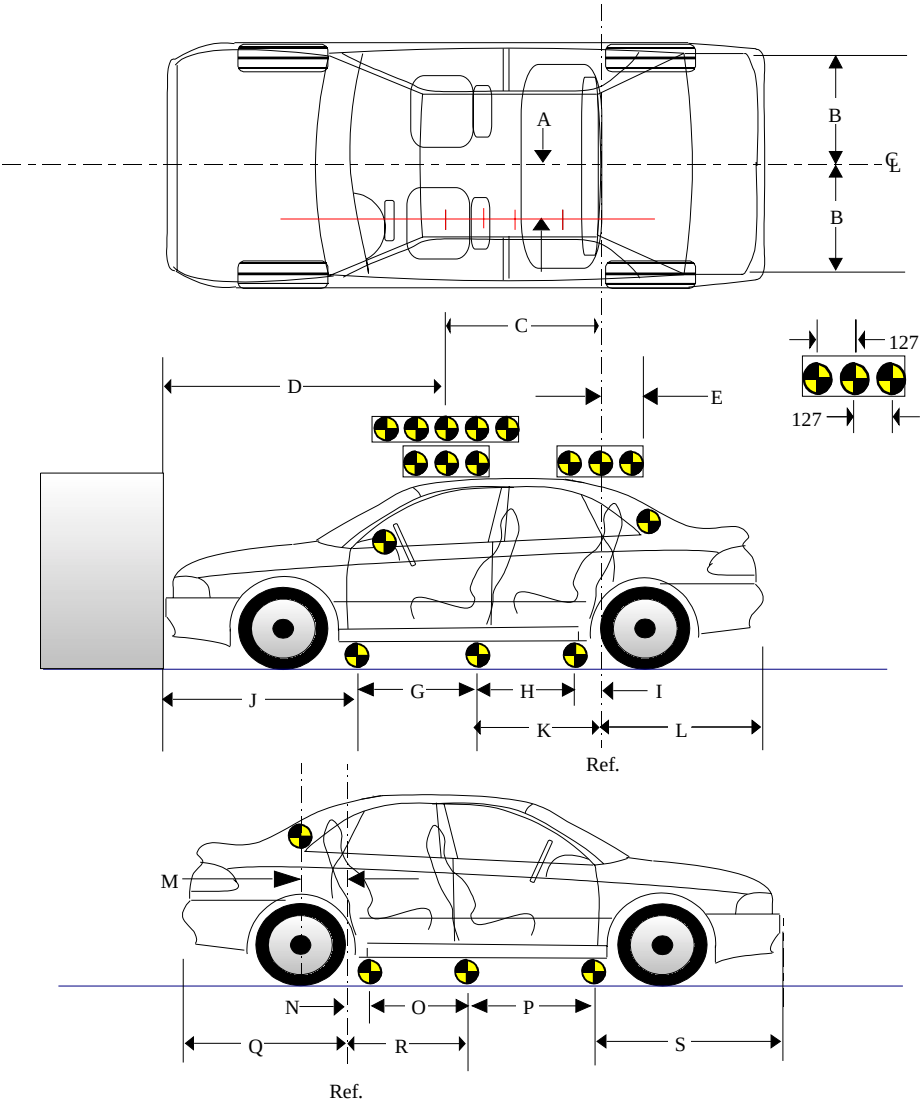
N.T. indicates No Timing

Z = film plane to ground

DATA SHEET NO. 16 VEHICLE REFERENCE PHOTO TARGET LOCATIONS

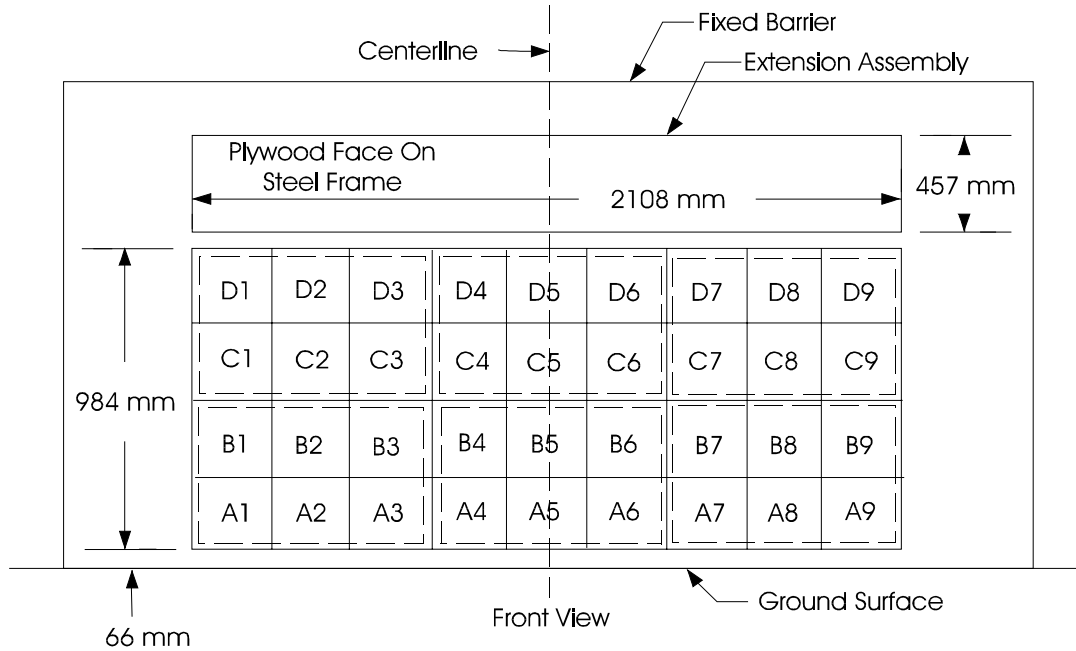
(Dimensions in millimeters)

A	466
B	802
C	908
D	2073
E	-91
F	1053
G	974
H	971
I	151
J	1528
K	1122
L	5176
M	-101
N	158
O	970
P	959
Q	1565
R	1128
S	1545



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. : M10309; Test Date: January 11, 2001; Technician: James A. Czarnecki

Vehicle Model Year/Make/Model: 2001 Dodge Ram 1500

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

B. Size of vent holes: (mm²) 0 -Driver 0 -Passenger

C. Total vent area: (mm²) 0 -Driver 0 -Passenger

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

Driver: - -Length; - -Width; 650 -Diameter

Passenger: 600 -Height; 1000 -Width; 500 -Depth

E. Is the air bag tethered?

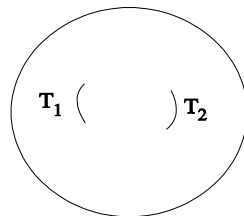
Driver: x -Yes; - -No; If yes, record length of tether- 160

Passenger: x -Yes; - -No; If yes, record length of tether- 470

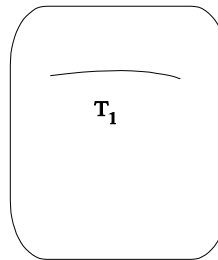
Sketch the air bag showing the location of the vent holes, how the bag is tethered, and where the bag is tethered. Also describe how the tethers are attached to the bag and the steering wheel.

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

Driver



Passenger



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

Driver: Air bag: P118137 - 05R TML2238DAMKL

Generator: TRBDM2300X0879 P5HH12DDX9AA

Passenger: Air bag: -

Generator: P5GE24LAZAA TCTPB231010310

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

Vehicle Make/Model/Body Style: Dodge Ram 1500 Pickup

NHTSA Test No.: M10309 VIN: 1B7HC16X71S138290

Model Year: 2001 Build Date: 8/00 Test Date: January 11, 2001

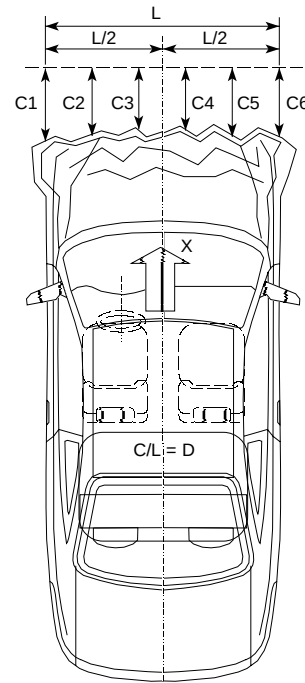
Vehicle Size Category: Pickup Test Weight: 2200 kg

Vehicle Wheelbase: 3030 mm; Front Overhang: 1528 mm; Overall Width: 2014 mm

Collision Deformation Classification (CDC) Code: 12FDEW3

Crush Depth Dimensions:

	PRE	POST	DIFF	
C1 =	5075	4399	676.0	mm
C2 =	5150	4416	734.0	mm
C3 =	5176	4381	795.0	mm
C4 =	5179	4368	811.0	mm
C5 =	5155	4375	780.0	mm
C6 =	5073	4333	740.0	mm



Midpoint of Damage: D = Vehicle Centerline
(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

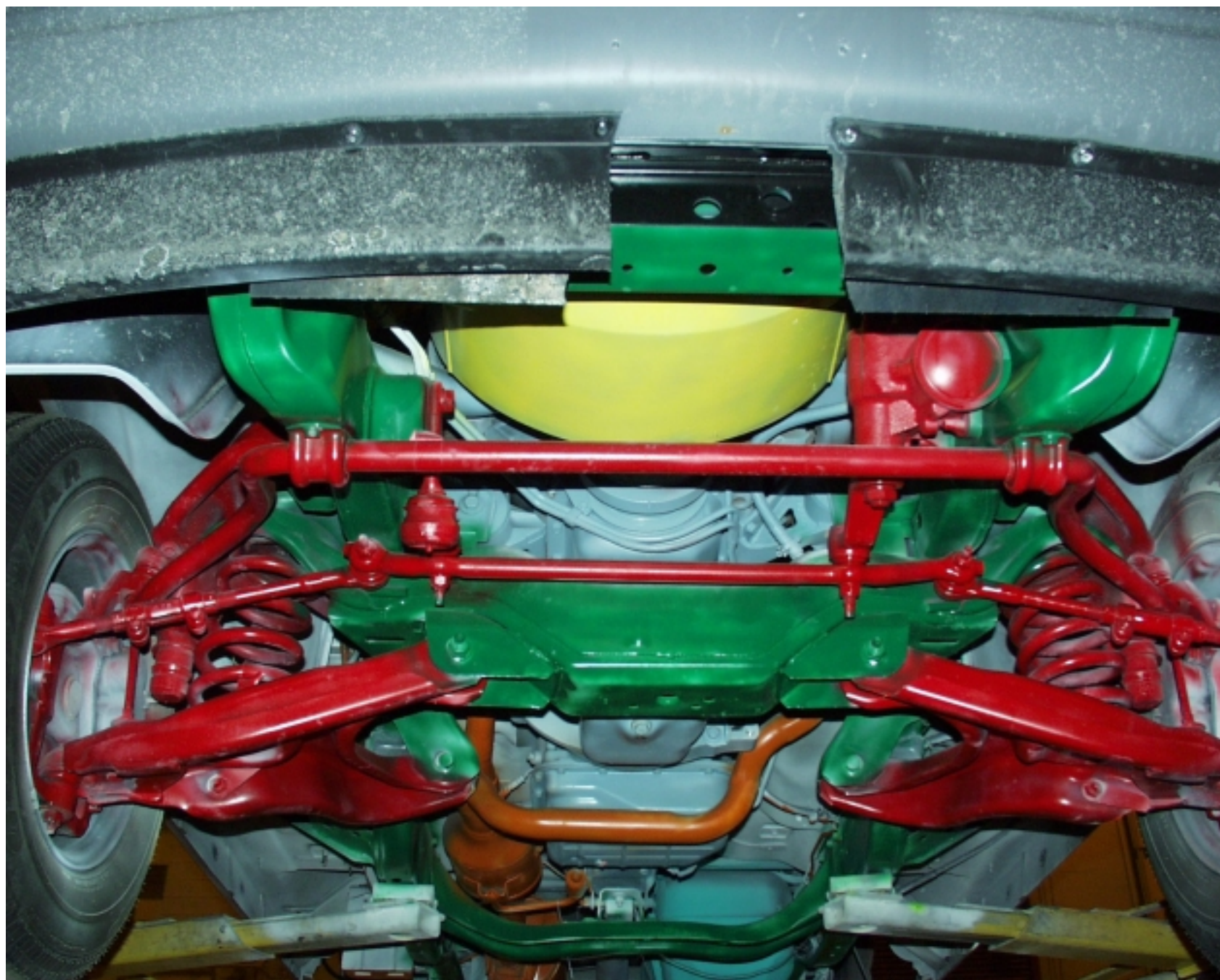


Figure A-16: PRE-TEST FRONT UNDERBODY VIEW



Figure A-17: POST-TEST FRONT UNDERBODY VIEW



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



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



Figure A-20: PRE-TEST REAR UNDERBODY VIEW



Figure A-21: POST-TEST REAR UNDERBODY VIEW



Figure A-22: PRE-TEST DRIVER POSITION VIEW



Figure A-23: POST-TEST DRIVER POSITION VIEW



Figure A-24: PRE-TEST PASSENGER POSITION VIEW



Figure A-25: POST-TEST PASSENGER POSITION VIEW



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



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



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



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



Figure A-30: PRE-TEST DRIVER HEAD LOCATION



Figure A-31: POST-TEST DRIVER HEAD LOCATION



Figure A-32: PRE-TEST PASSENGER HEAD LOCATION



Figure A-33: POST-TEST PASSENGER HEAD LOCATION



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



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



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



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



Figure A-38: ROLLOVER VIEW

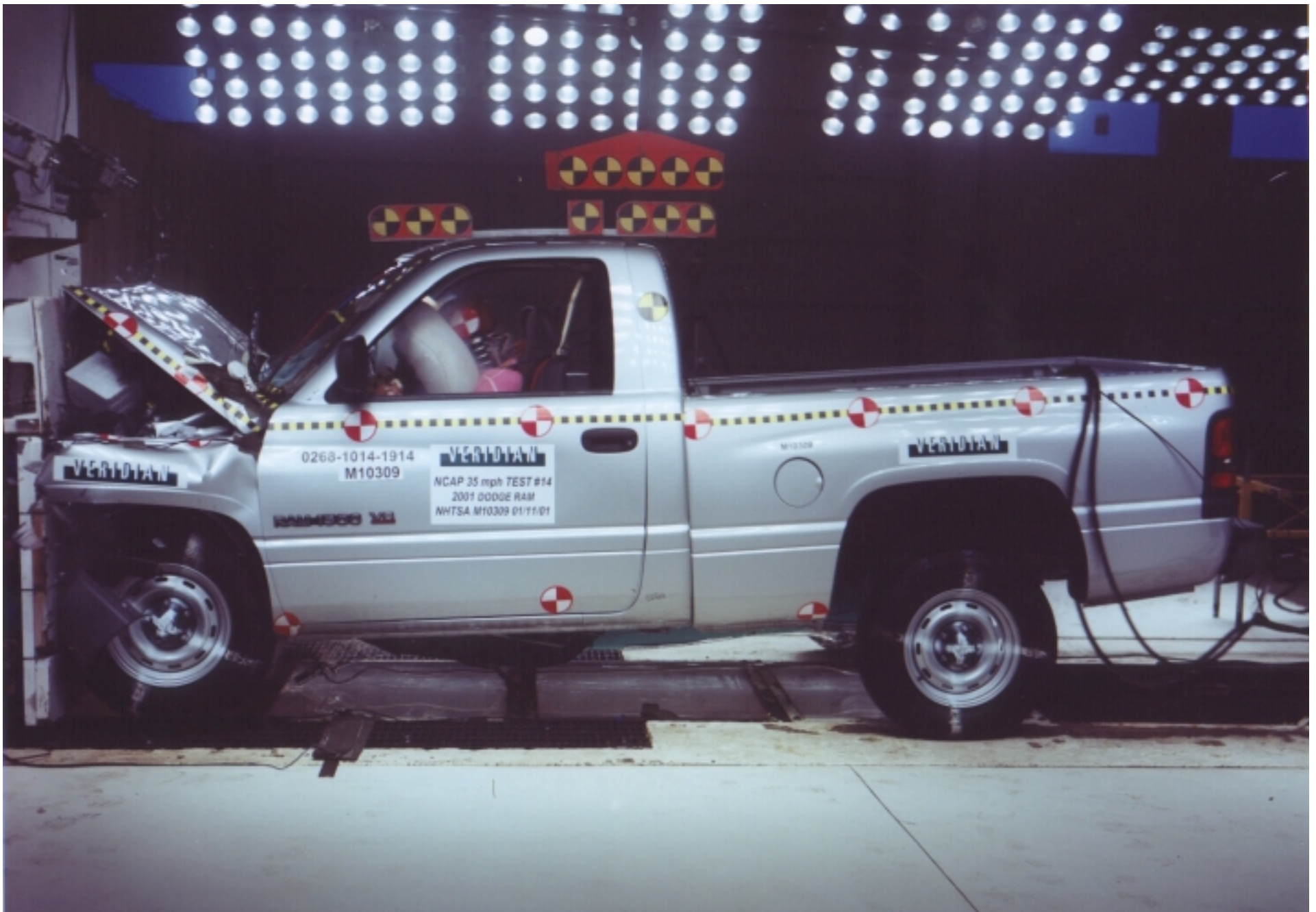


Figure A-39: IMPACT VIEW

APPENDIX B

DUMMY, VEHICLE AND LOAD CELL BARRIER RESPONSE DATA

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

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

DATA CHANNEL FILTER CLASS SUMMARY

NHTSA TEST NO. M10309

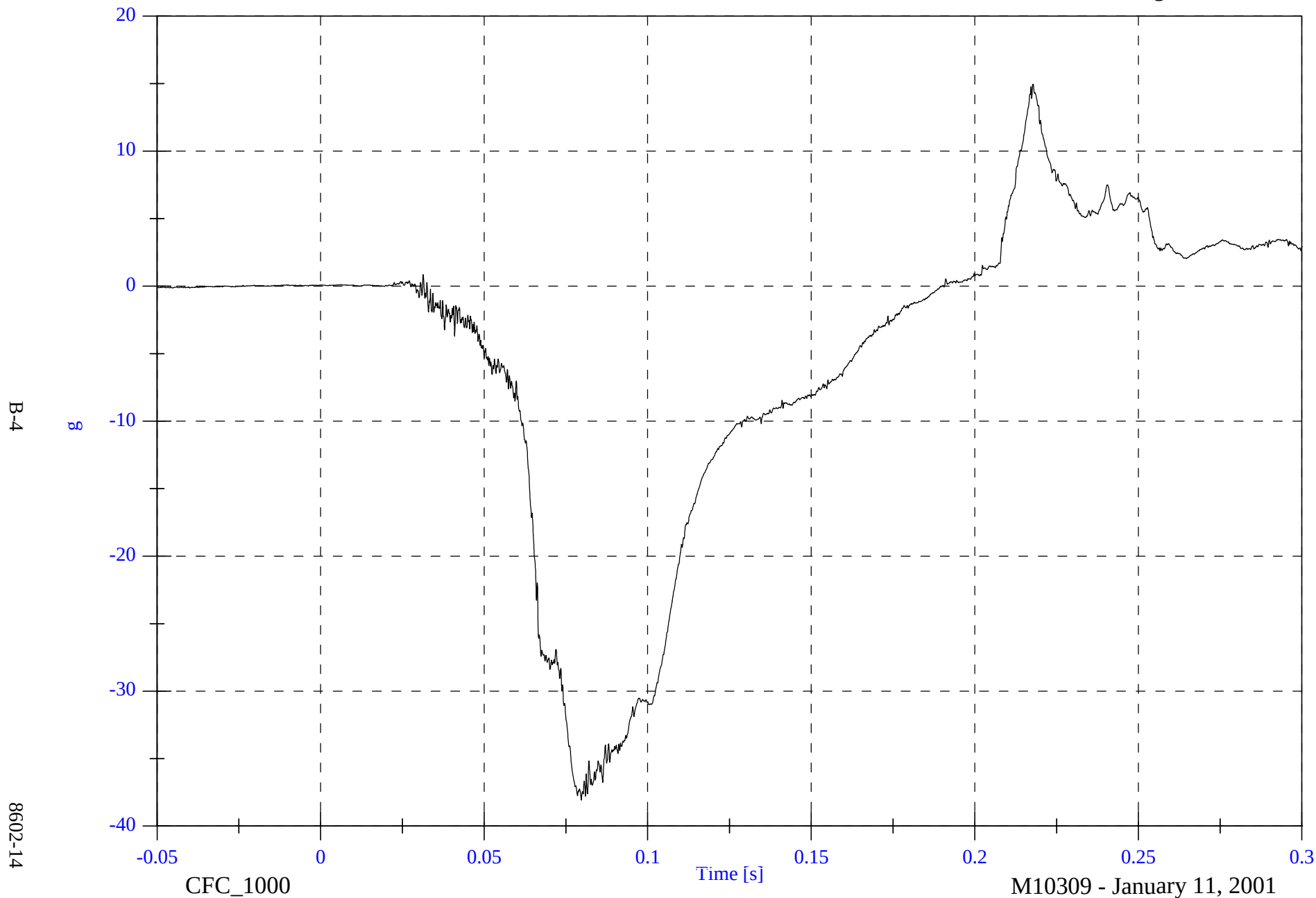
DATA TYPE	SAE FILTER CLASS (Hz)
Dummy Head Accelerations	1000
Dummy Chest Accelerations	180
Dummy Chest Displacements	60
Dummy Femur Forces	600
Dummy Belt Loads	60
Dummy Belt Displacements	180
Dummy Neck Forces	1000
Dummy Neck Moments	600
Vehicle Accelerations	60
Vehicle Velocity Integrations	180
Vehicle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

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P1 Head x

Max: 15.0 [g] at 0.218 [s]

Min: -38.1 [g] at 0.080 [s]



NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P1 Head y

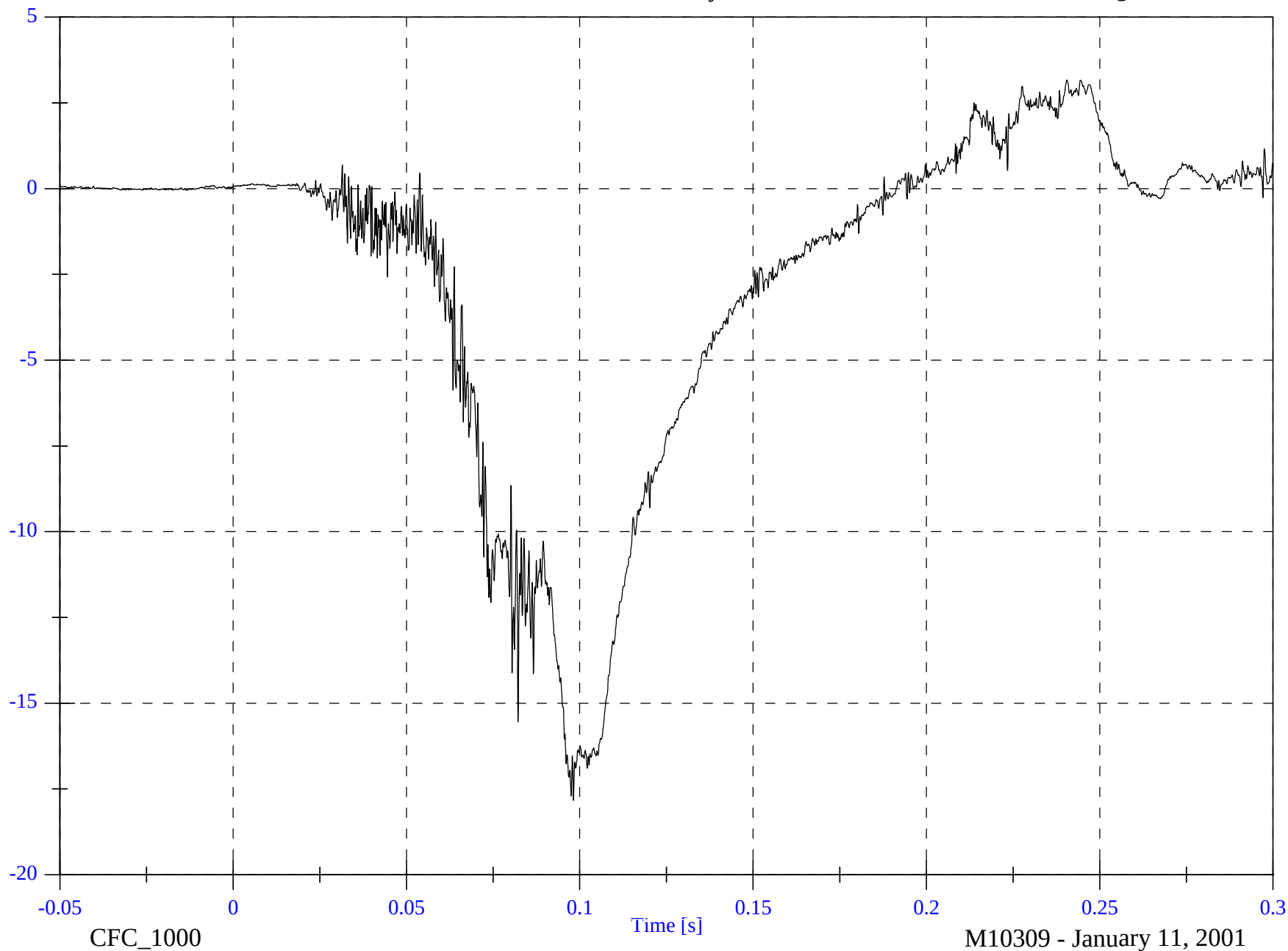
Max: 3.2 [g] at 0.240 [s]

Min: -17.8 [g] at 0.098 [s]

B-5

8602-14

g

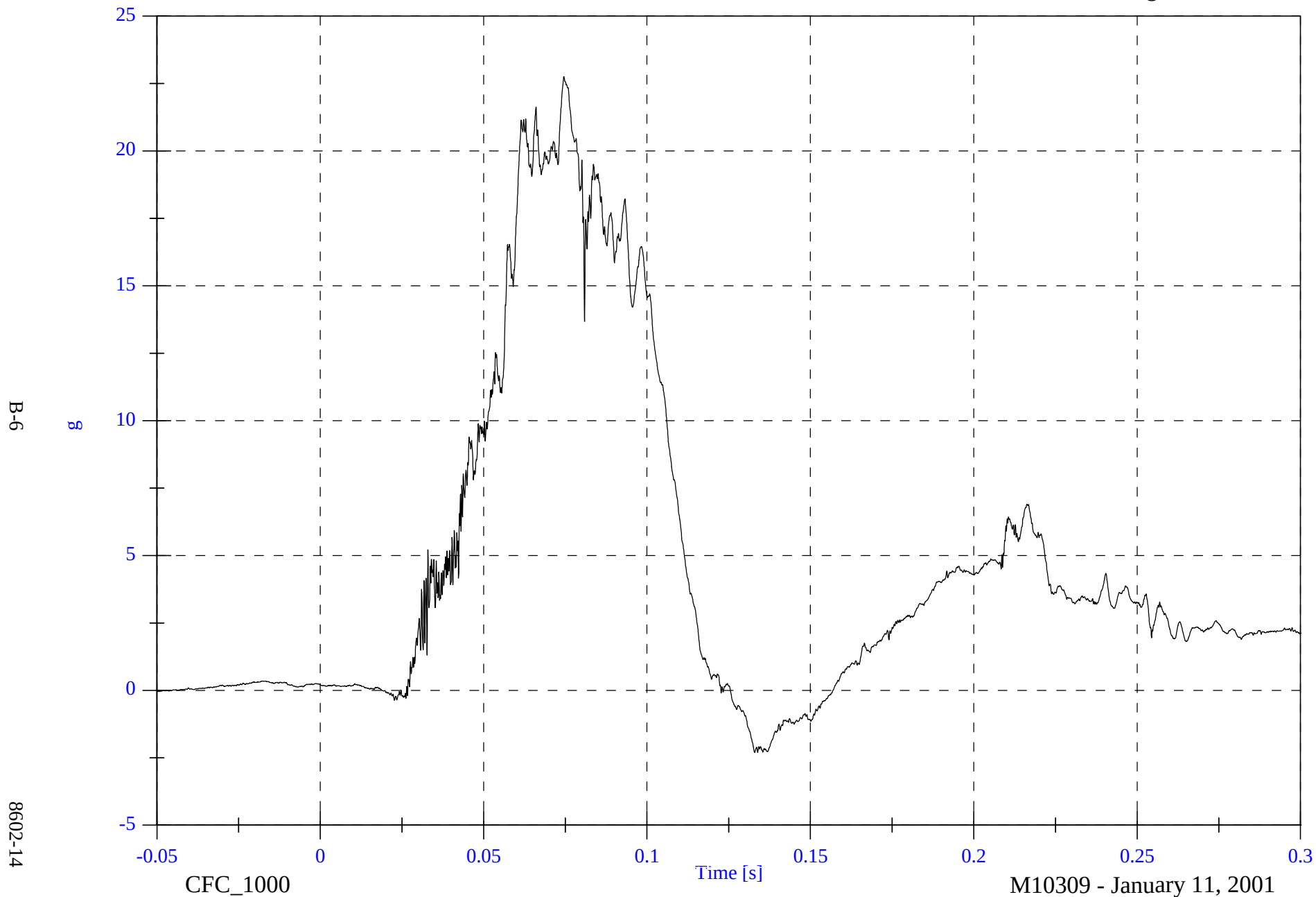


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P1 Head z

Max: 22.8 [g] at 0.075 [s]

Min: -2.3 [g] at 0.134 [s]

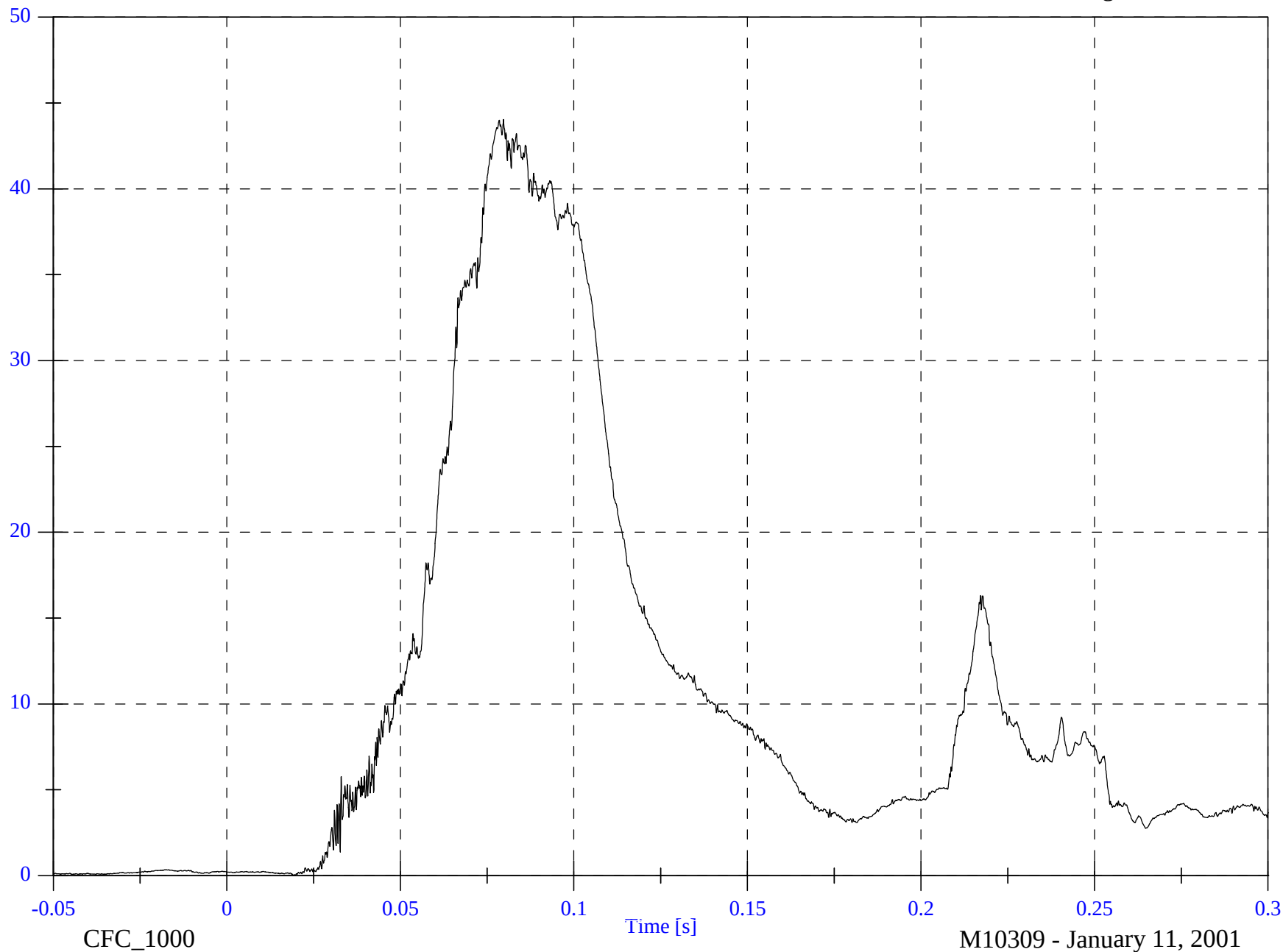


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P1 Head Resultant

Max: 44.0 [g] at 0.080 [s]

Min: 0.0 [g] at 0.019 [s]

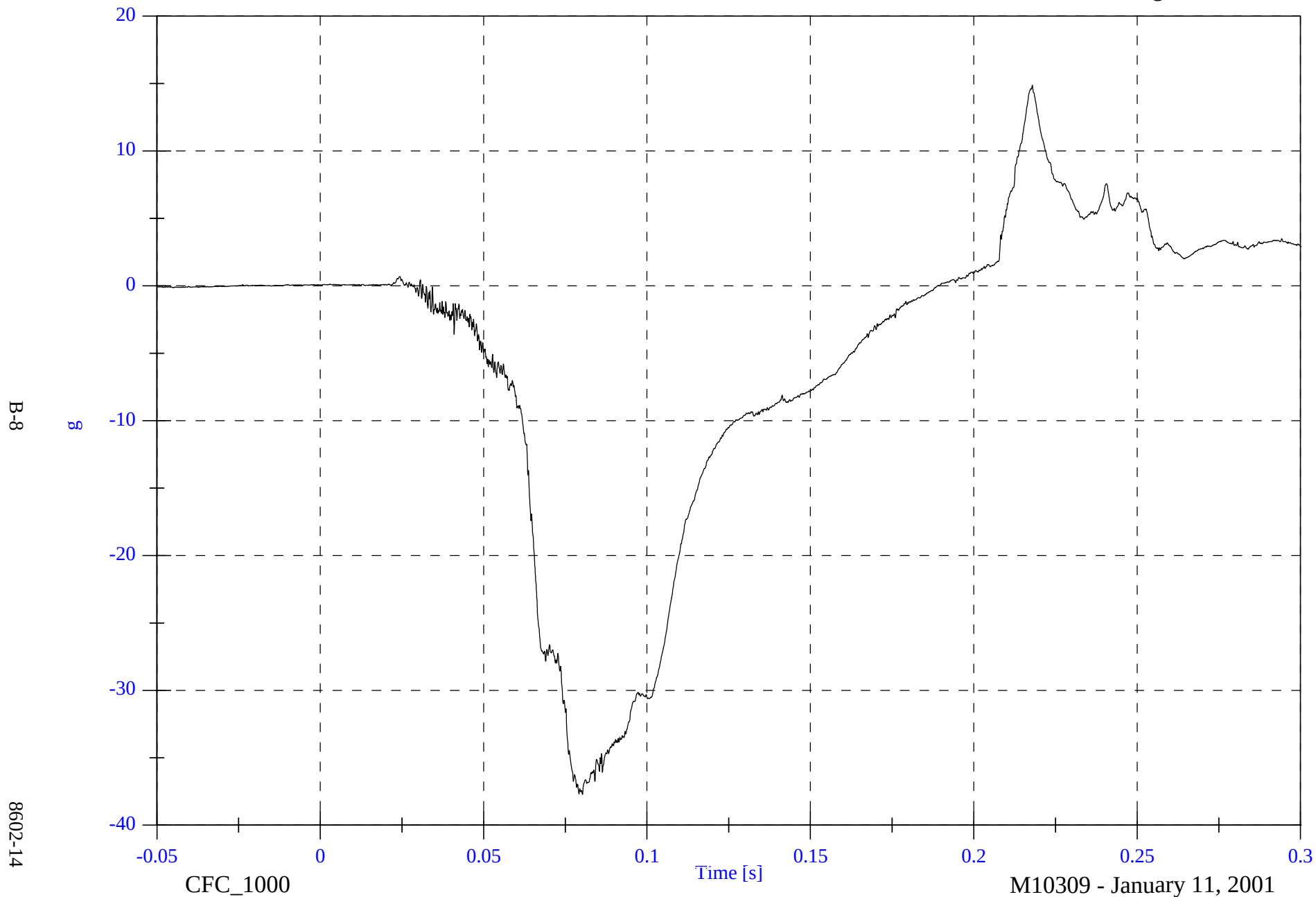


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P1 Head Red x

Max: 14.9 [g] at 0.218 [s]

Min: -37.7 [g] at 0.080 [s]

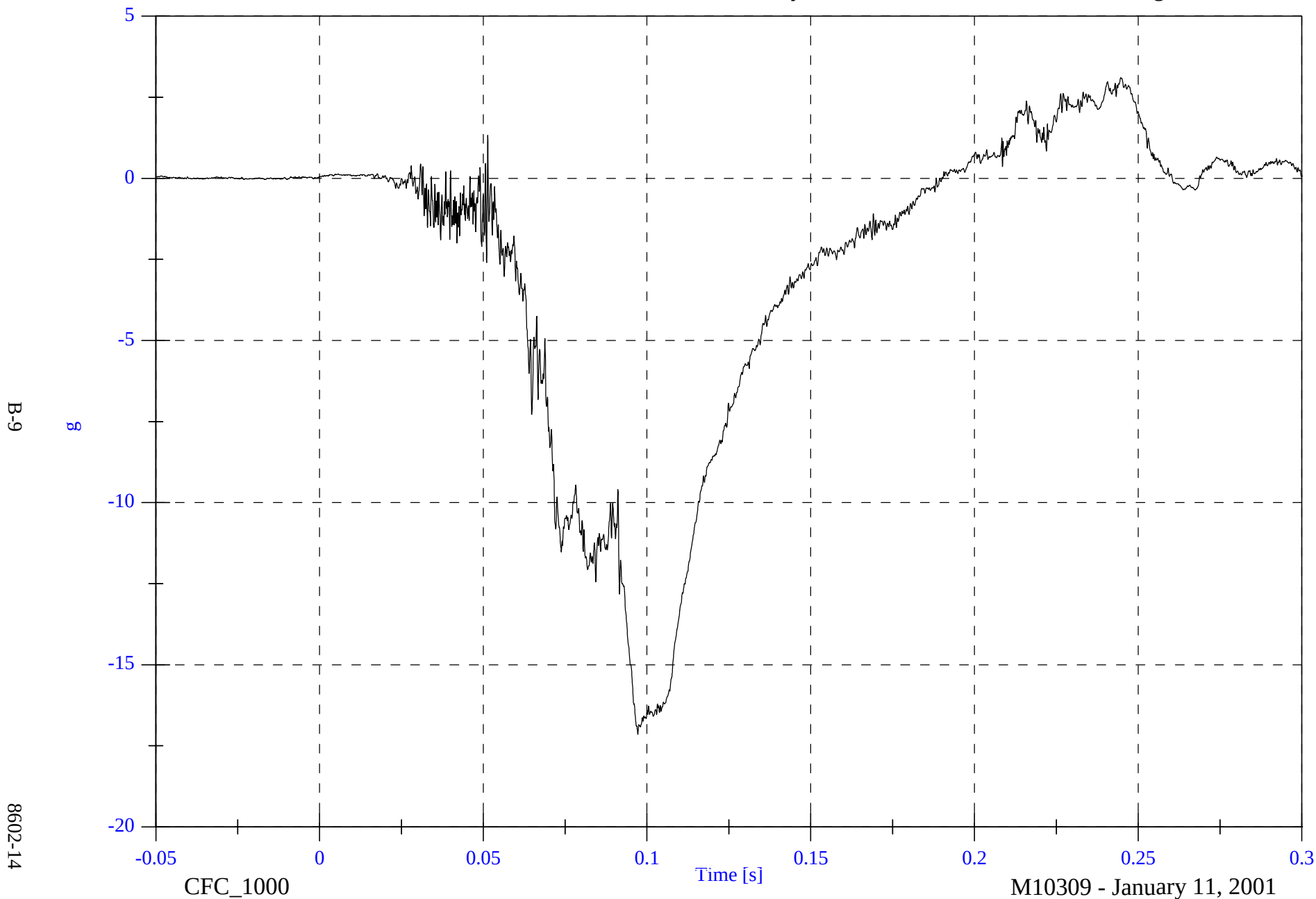


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P1 Head Red y

Max: 3.1 [g] at 0.245 [s]

Min: -17.1 [g] at 0.097 [s]

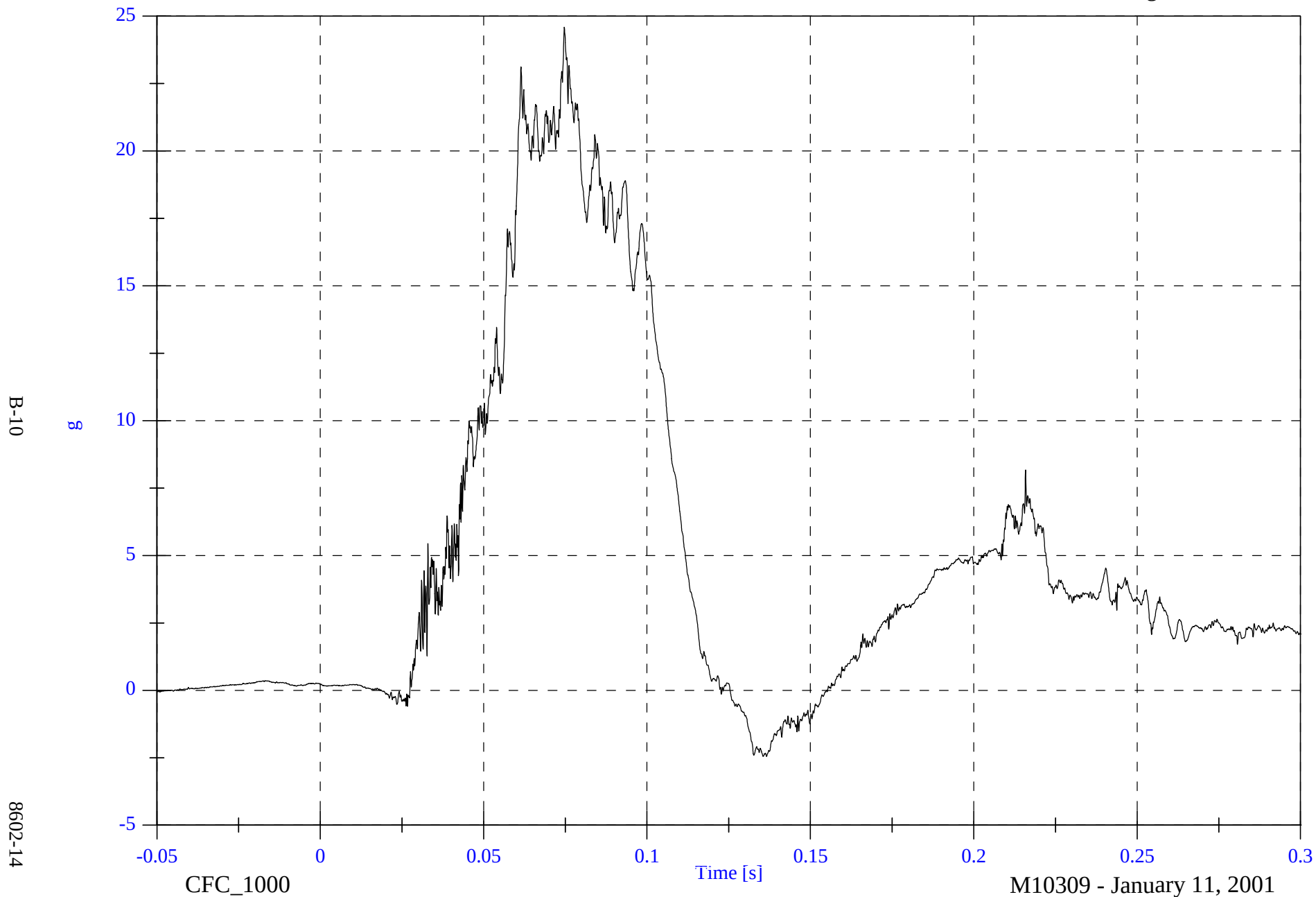


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P1 Head Red z

Max: 24.6 [g] at 0.075 [s]

Min: -2.5 [g] at 0.137 [s]

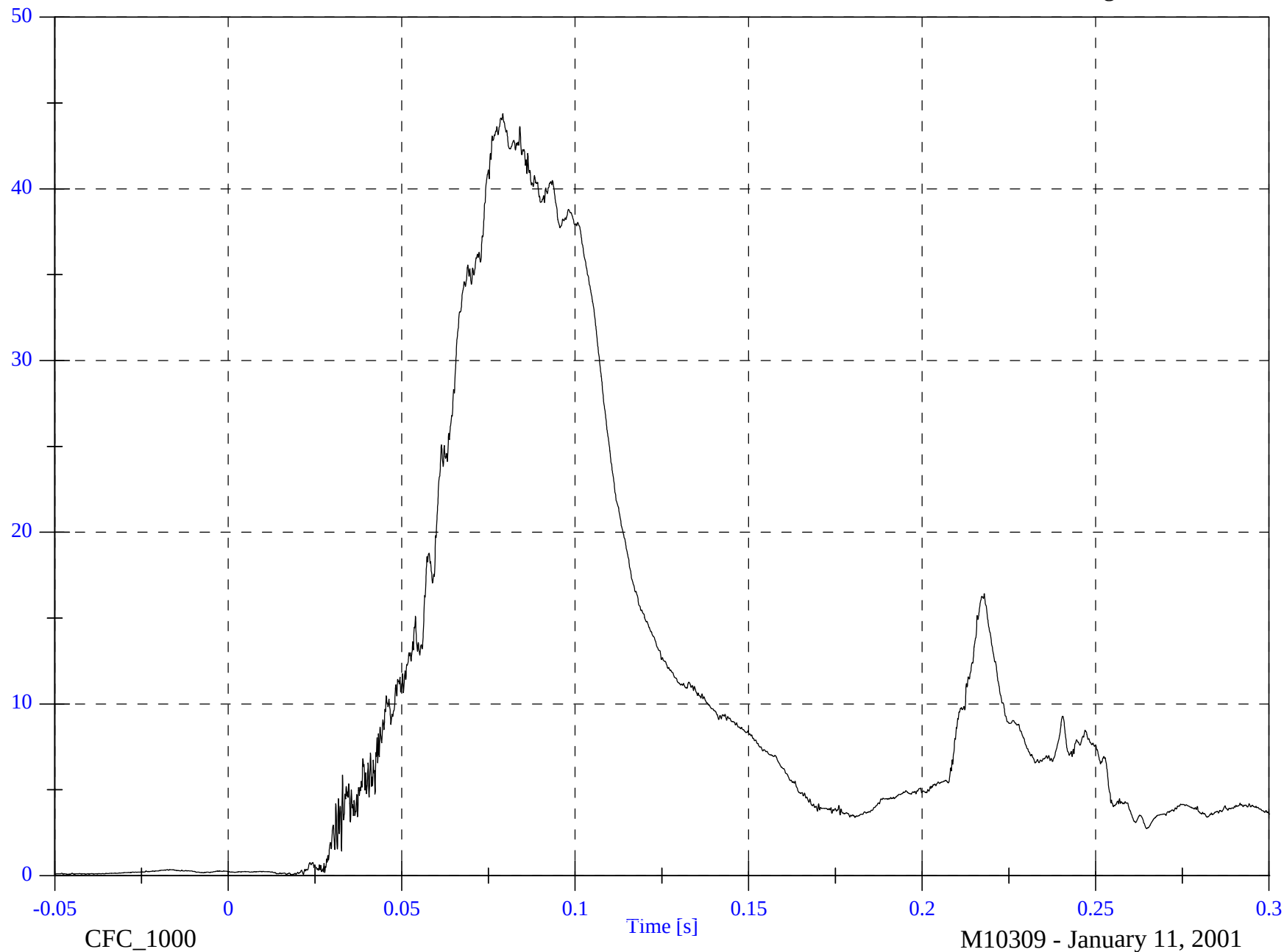


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P1 Head Red Resultant

Max: 44.4 [g] at 0.079 [s]

Min: 0.1 [g] at 0.018 [s]



B-11

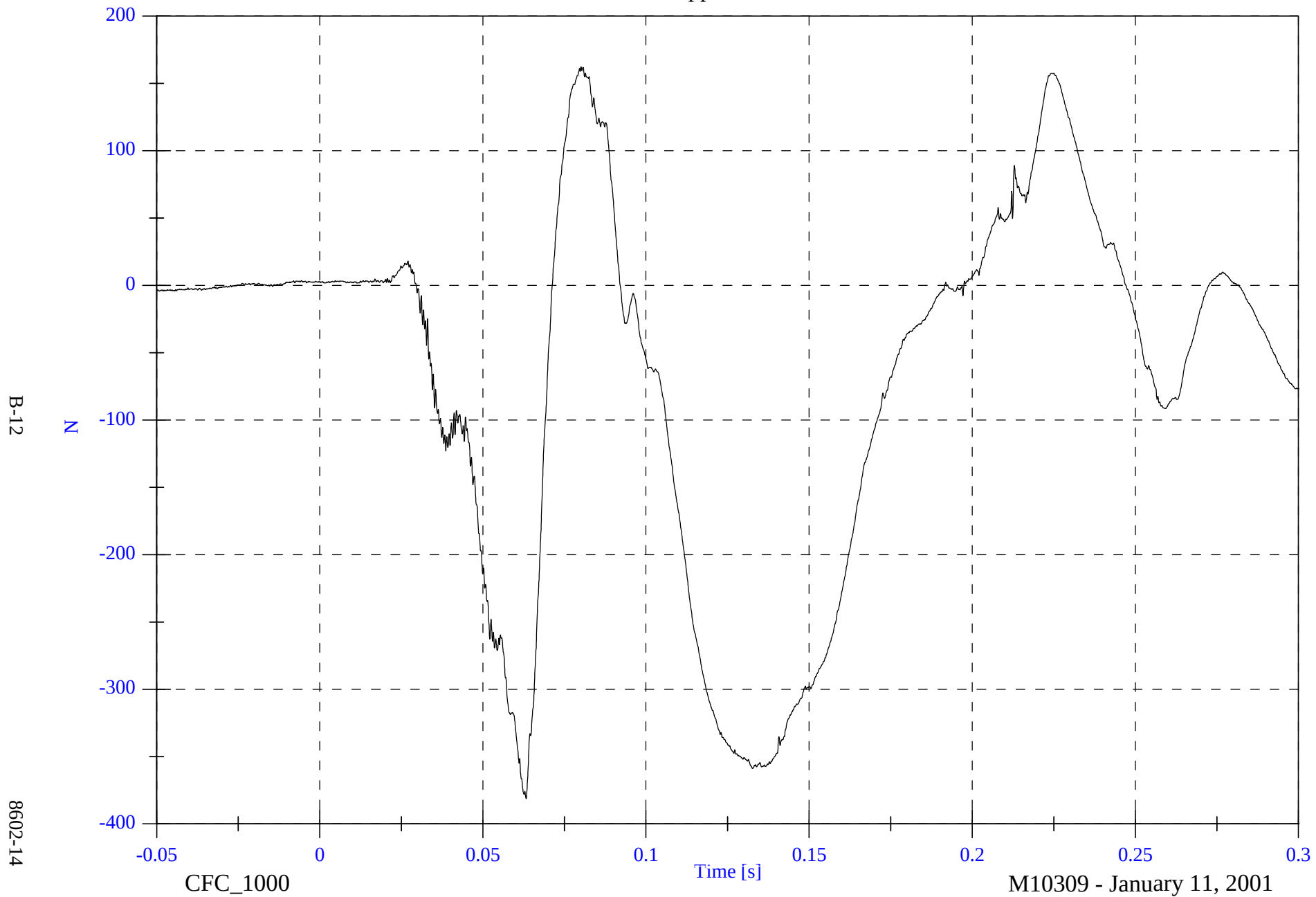
8602-14

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P1 Upper Neck Fx

Max: 162.4 [N] at 0.080 [s]

Min: -381.5 [N] at 0.063 [s]

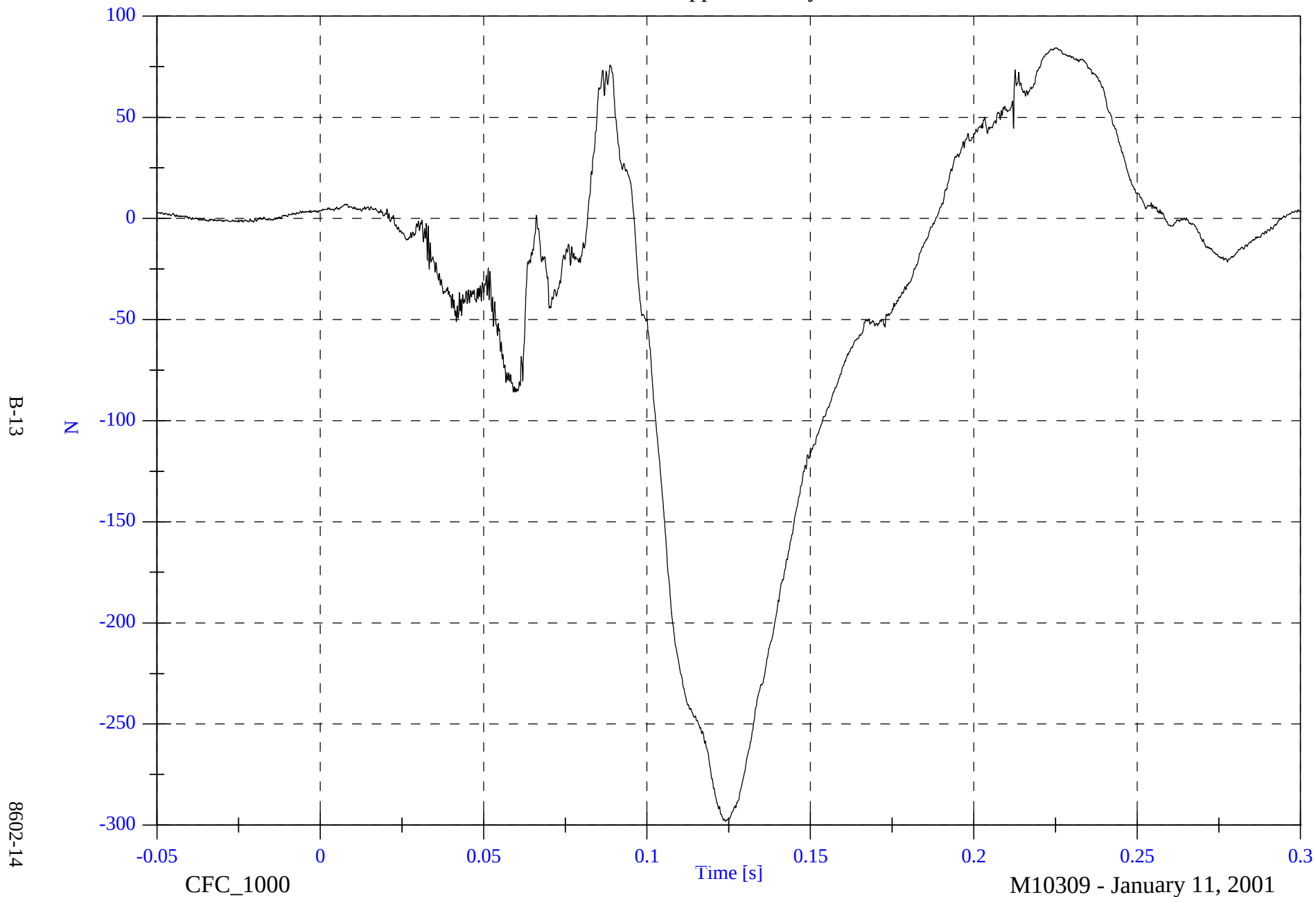


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P1 Upper Neck Fy

Max: 84.4 [N] at 0.225 [s]

Min: -298.2 [N] at 0.124 [s]



NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P1 Upper Neck Fz

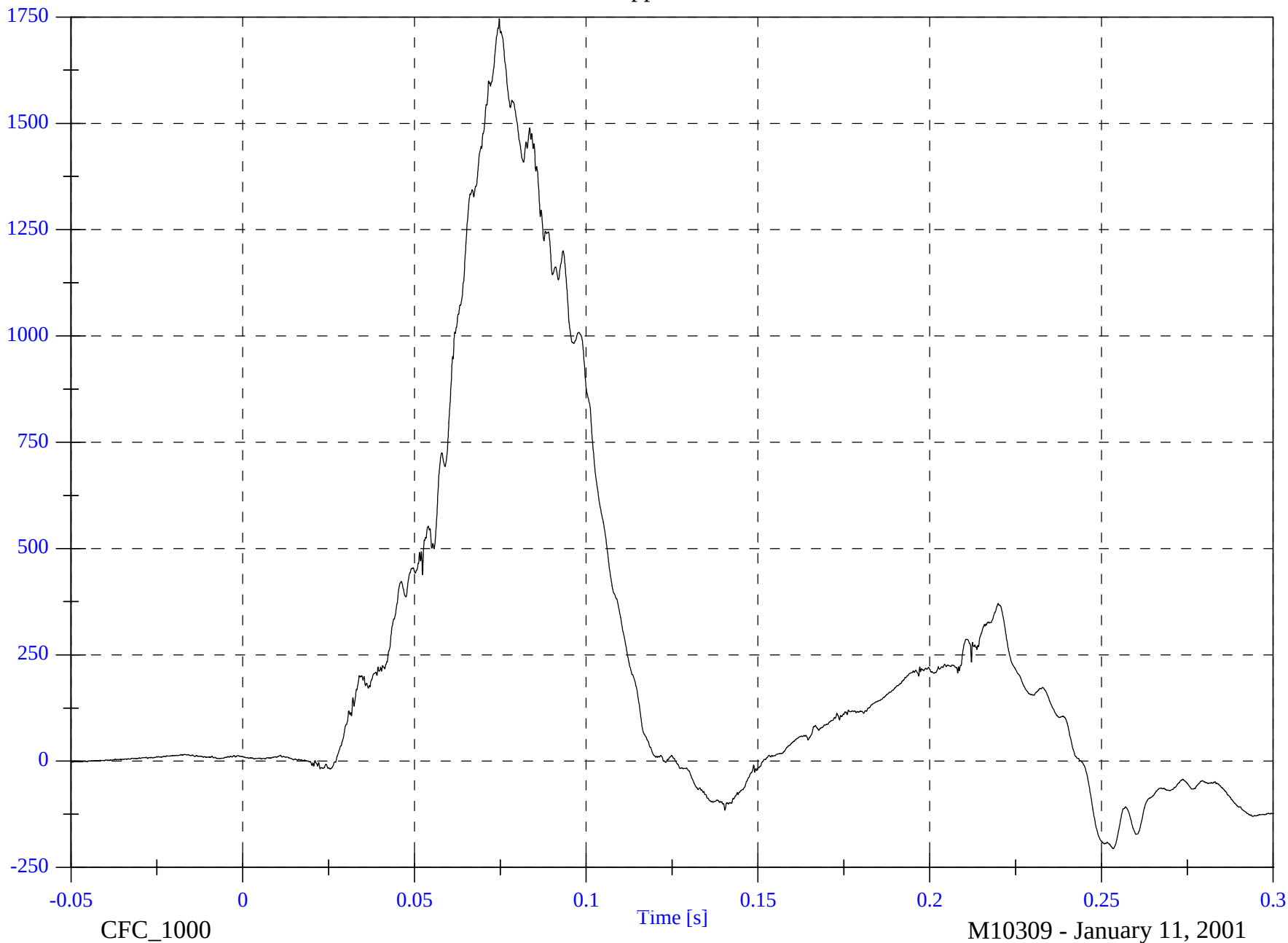
Max: 1745.9 [N] at 0.075 [s]

Min: -205.7 [N] at 0.253 [s]

B-14

N

8602-14



NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

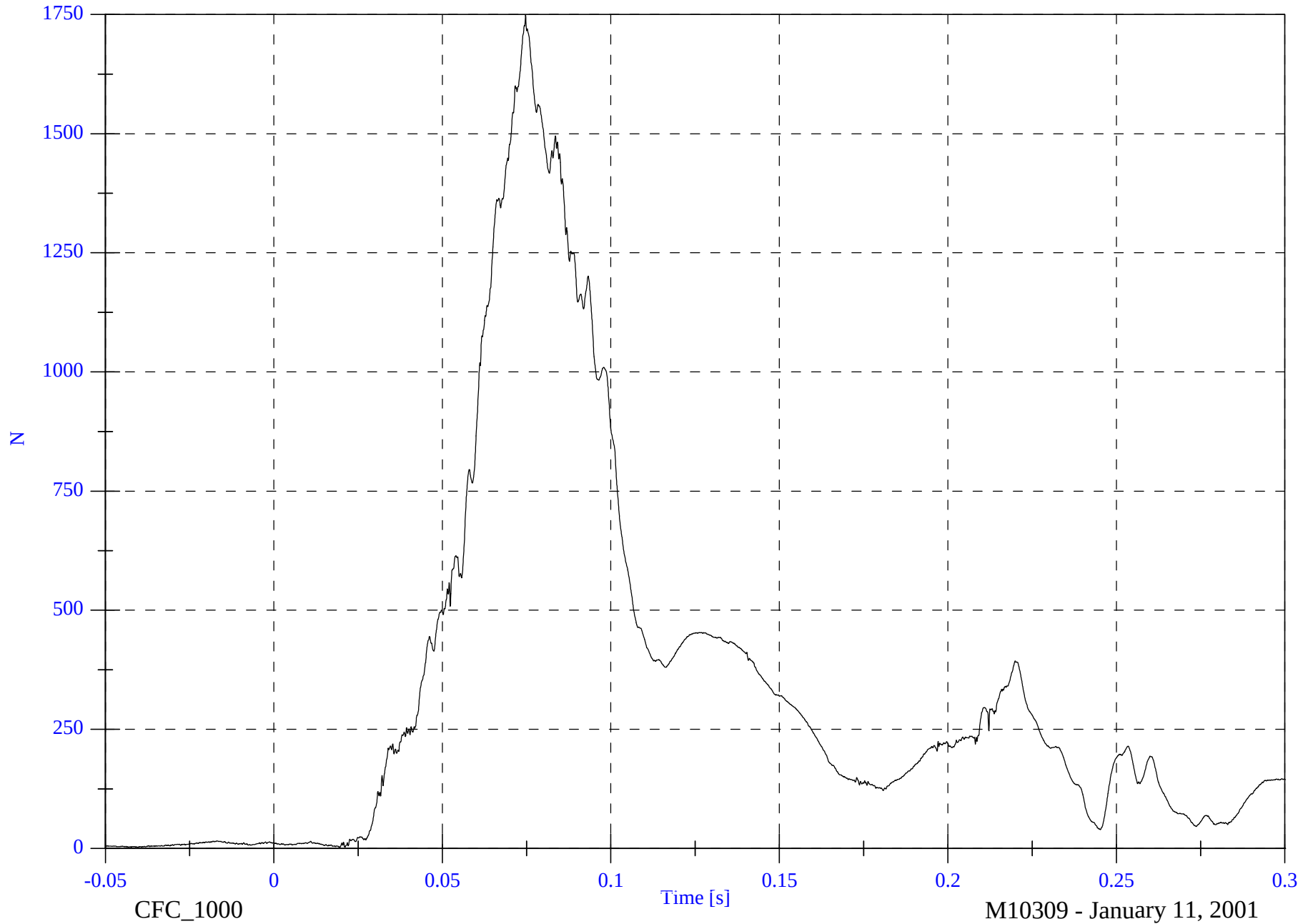
P1 Upper Neck F Resultant

Max: 1748.7 [N] at 0.075 [s]

Min: 2.0 [N] at -0.040 [s]

B-15

8602-14

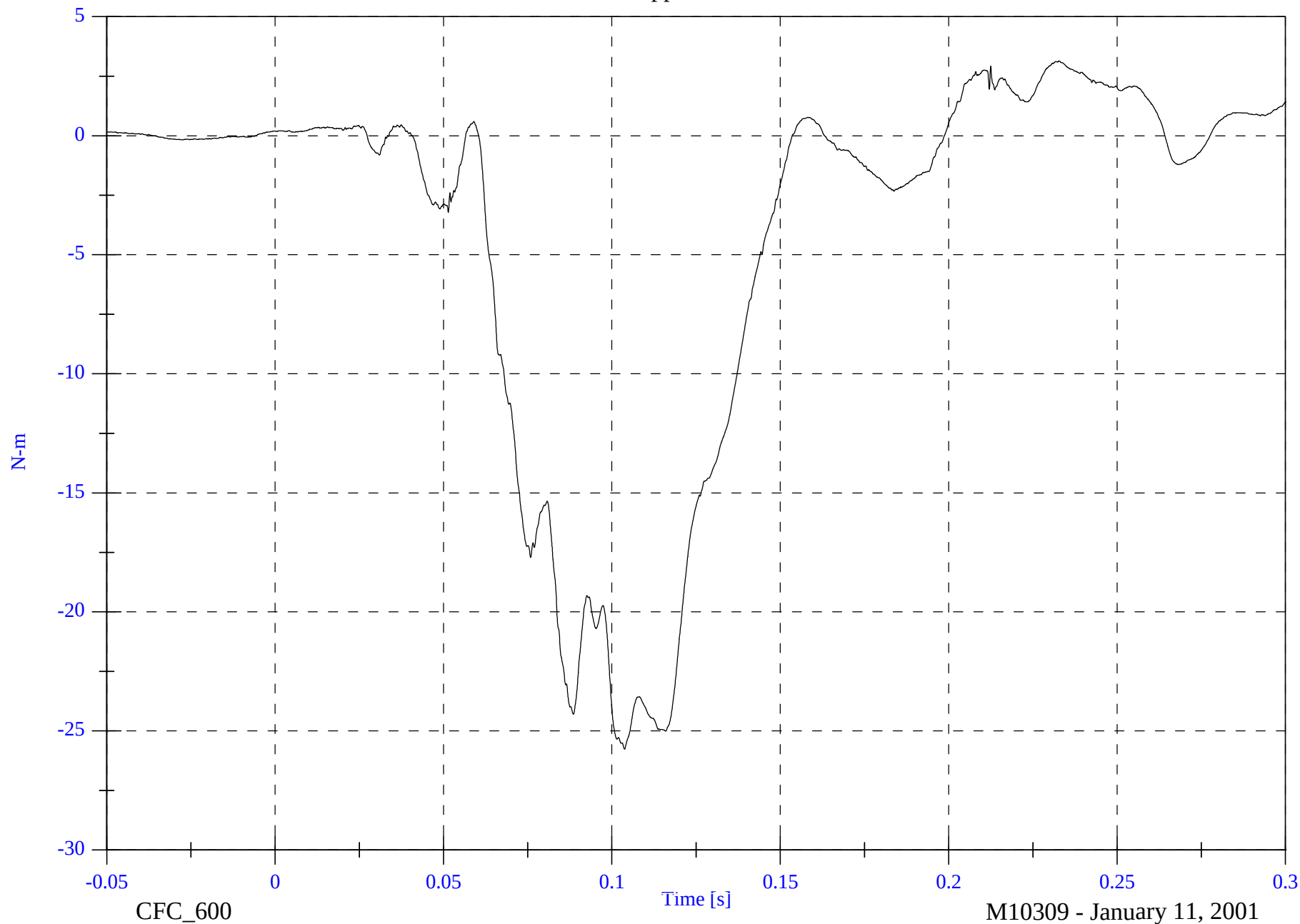


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P1 Upper Neck Mx

Max: 3.1 [N-m] at 0.233 [s]

Min: -25.8 [N-m] at 0.104 [s]



B-16

8602-14

CFC_600

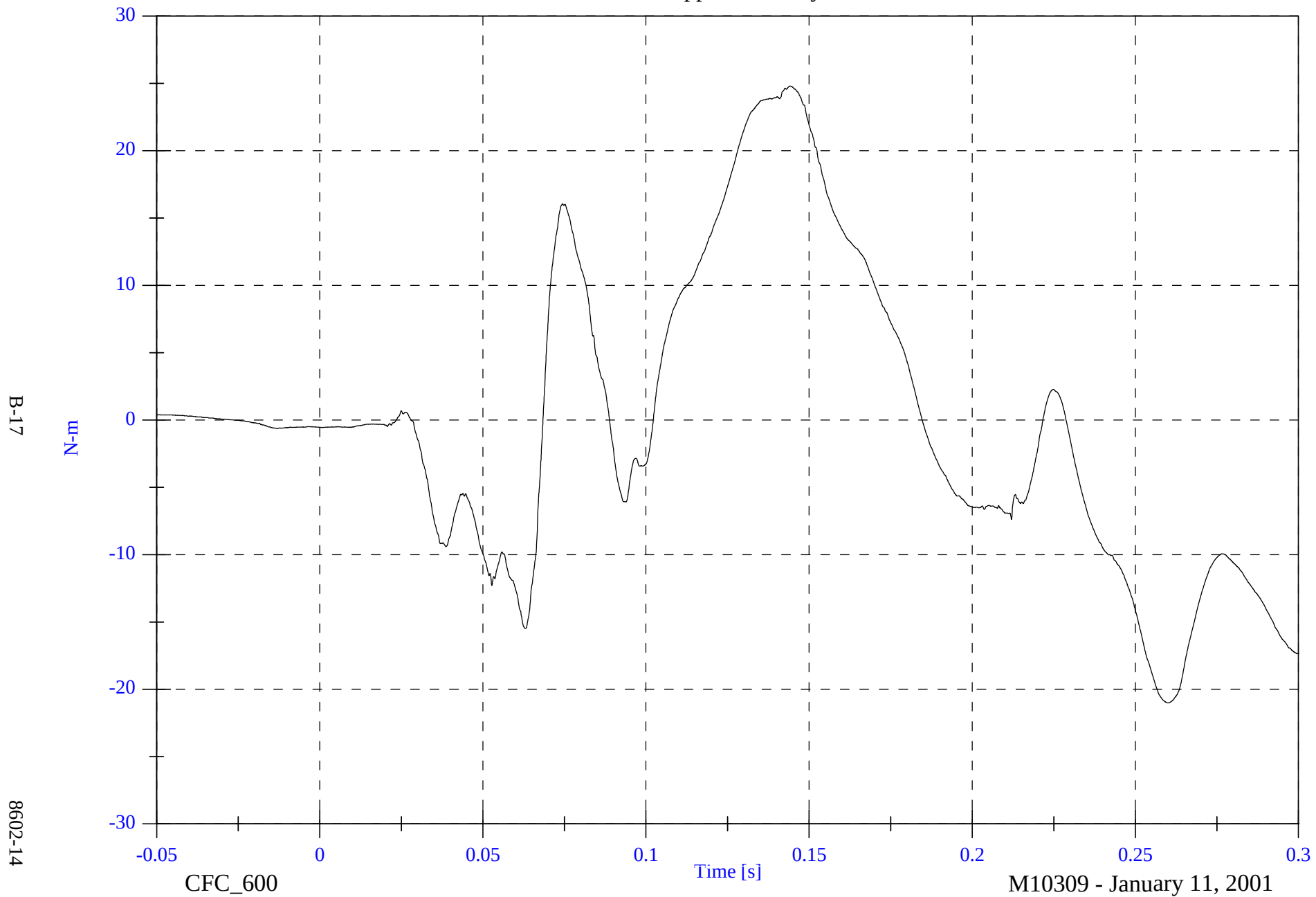
M10309 - January 11, 2001

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P1 Upper Neck My

Max: 24.8 [N-m] at 0.144 [s]

Min: -21.0 [N-m] at 0.260 [s]

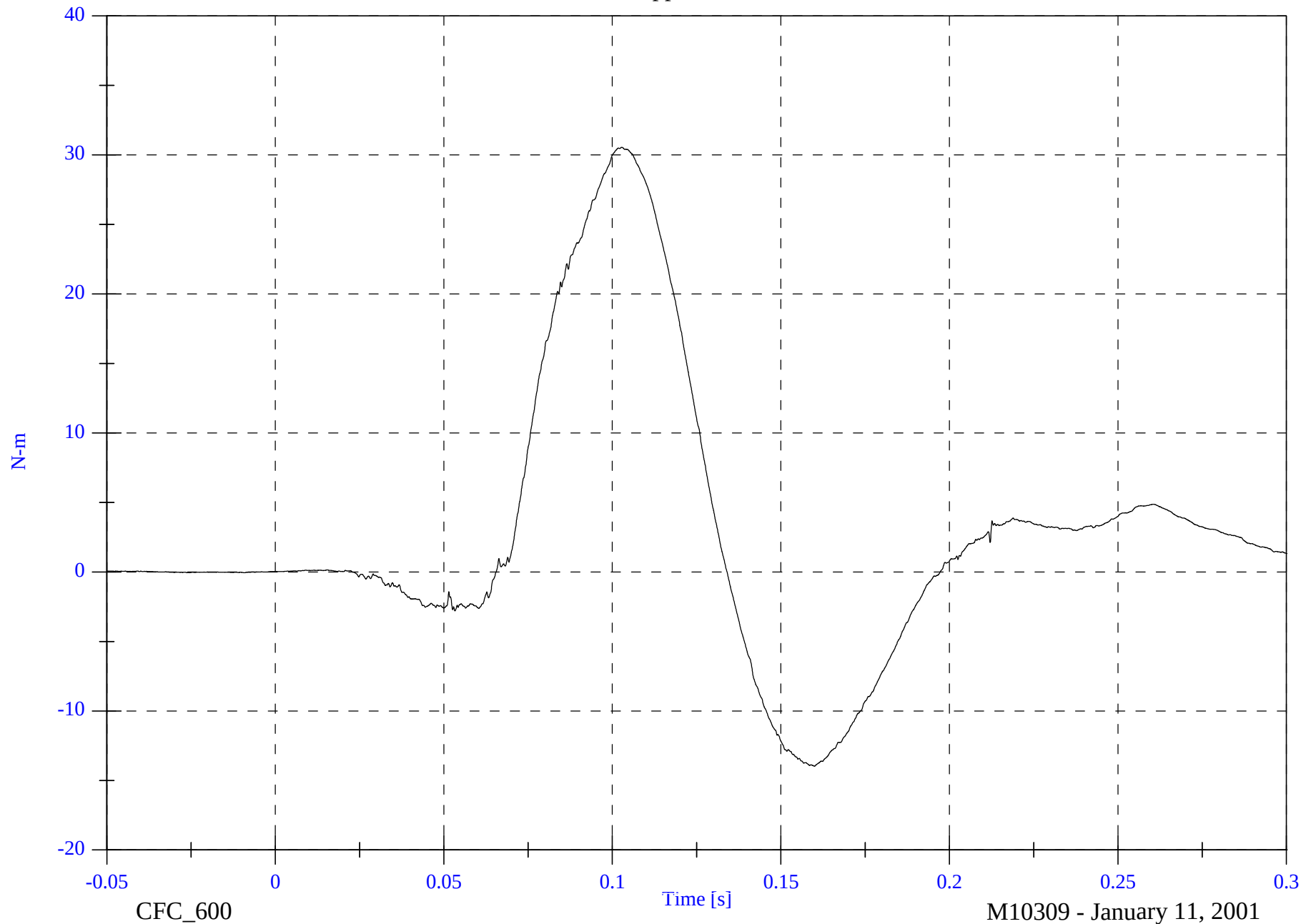


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P1 Upper Neck Mz

Max: 30.6 [N-m] at 0.103 [s]

Min: -14.0 [N-m] at 0.160 [s]



B-18

8602-14

CFC_600

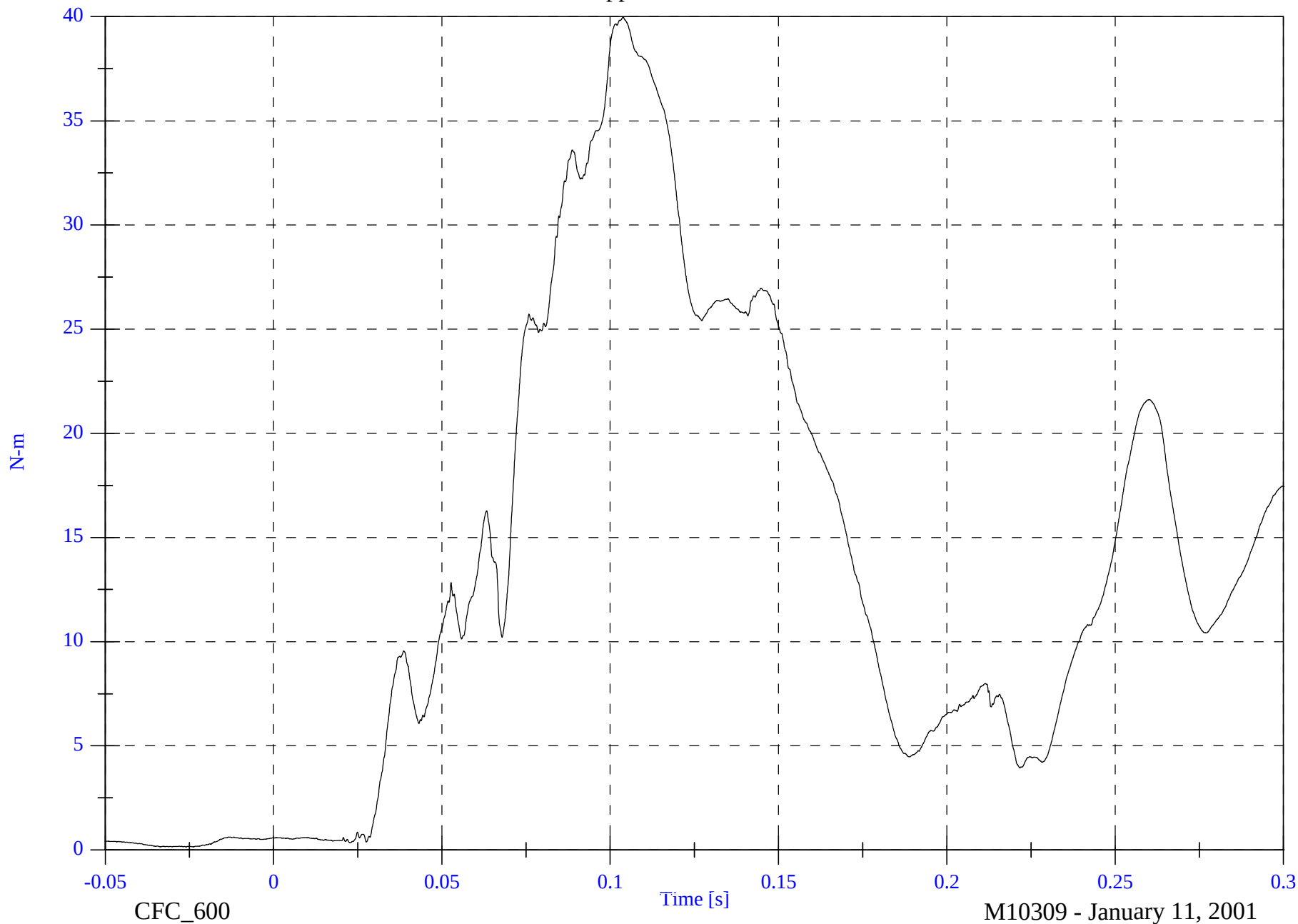
M10309 - January 11, 2001

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P1 Upper Neck M Resultant

Max: 40.0 [N-m] at 0.104 [s]

Min: 0.2 [N-m] at -0.026 [s]



B-19

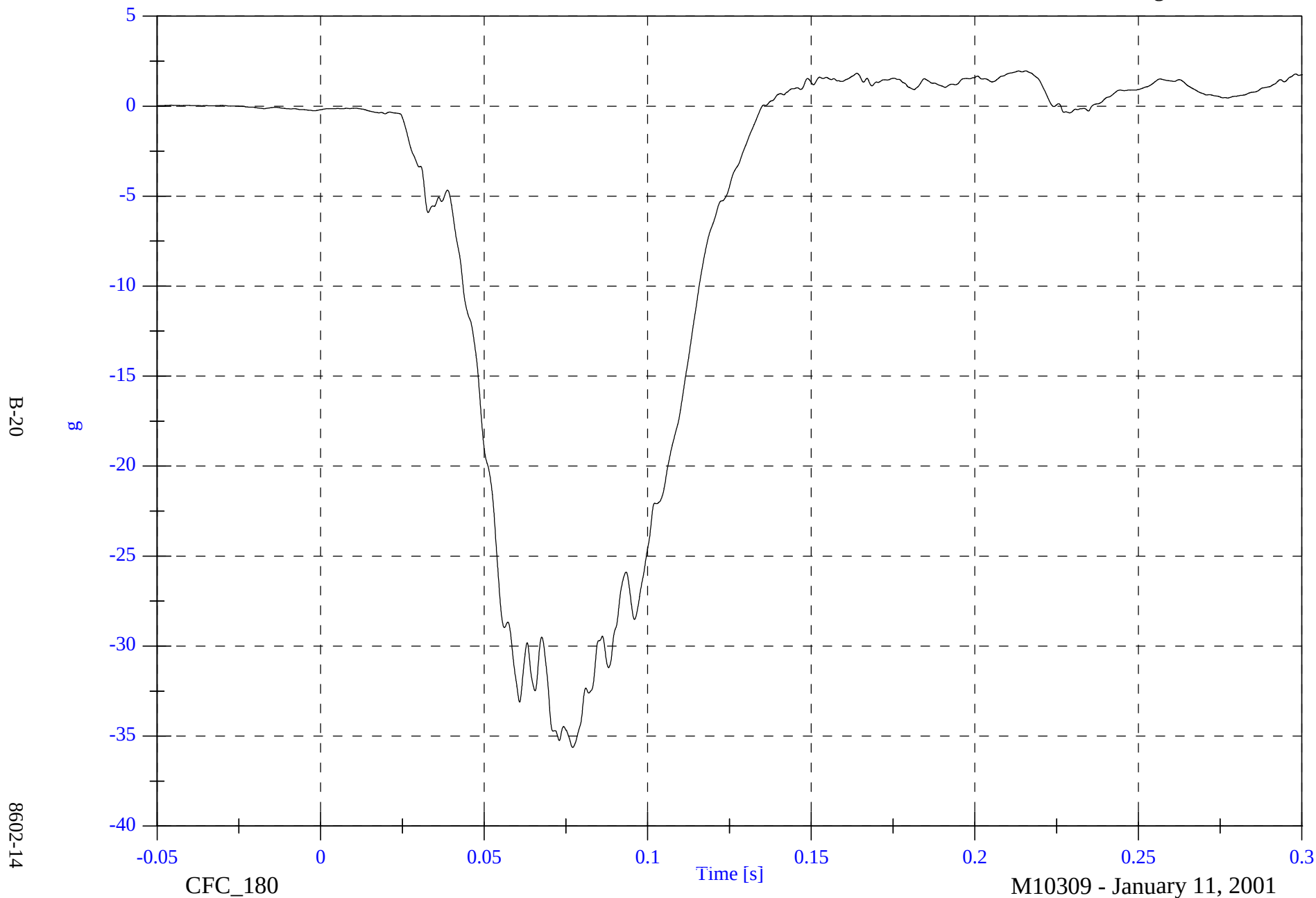
8602-14

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P1 Chest x

Max: 2.0 [g] at 0.216 [s]

Min: -35.6 [g] at 0.077 [s]

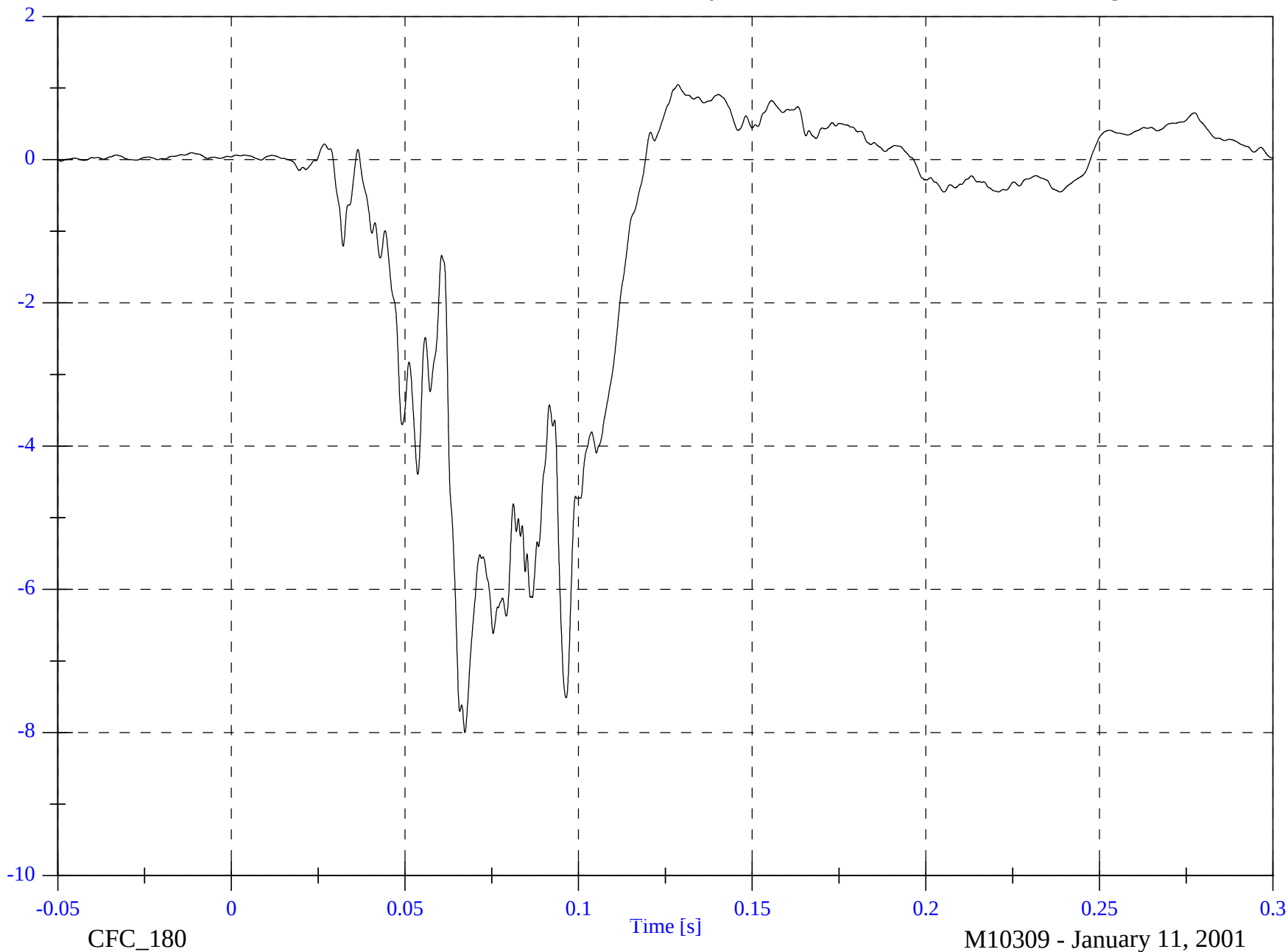


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P1 Chest y

Max: 1.0 [g] at 0.129 [s]

Min: -8.0 [g] at 0.067 [s]



B-21

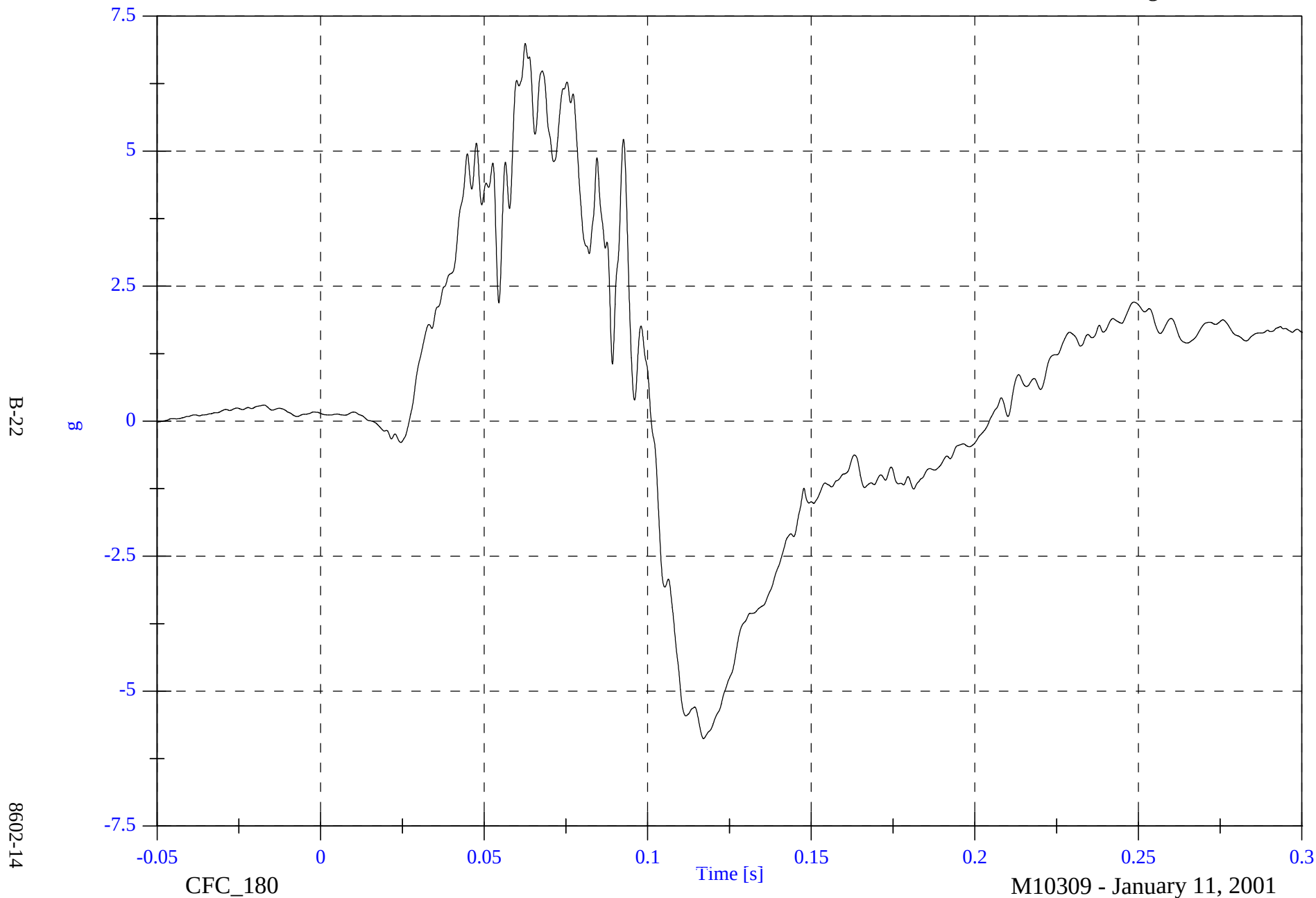
8602-14

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P1 Chest z

Max: 7.0 [g] at 0.063 [s]

Min: -5.9 [g] at 0.117 [s]

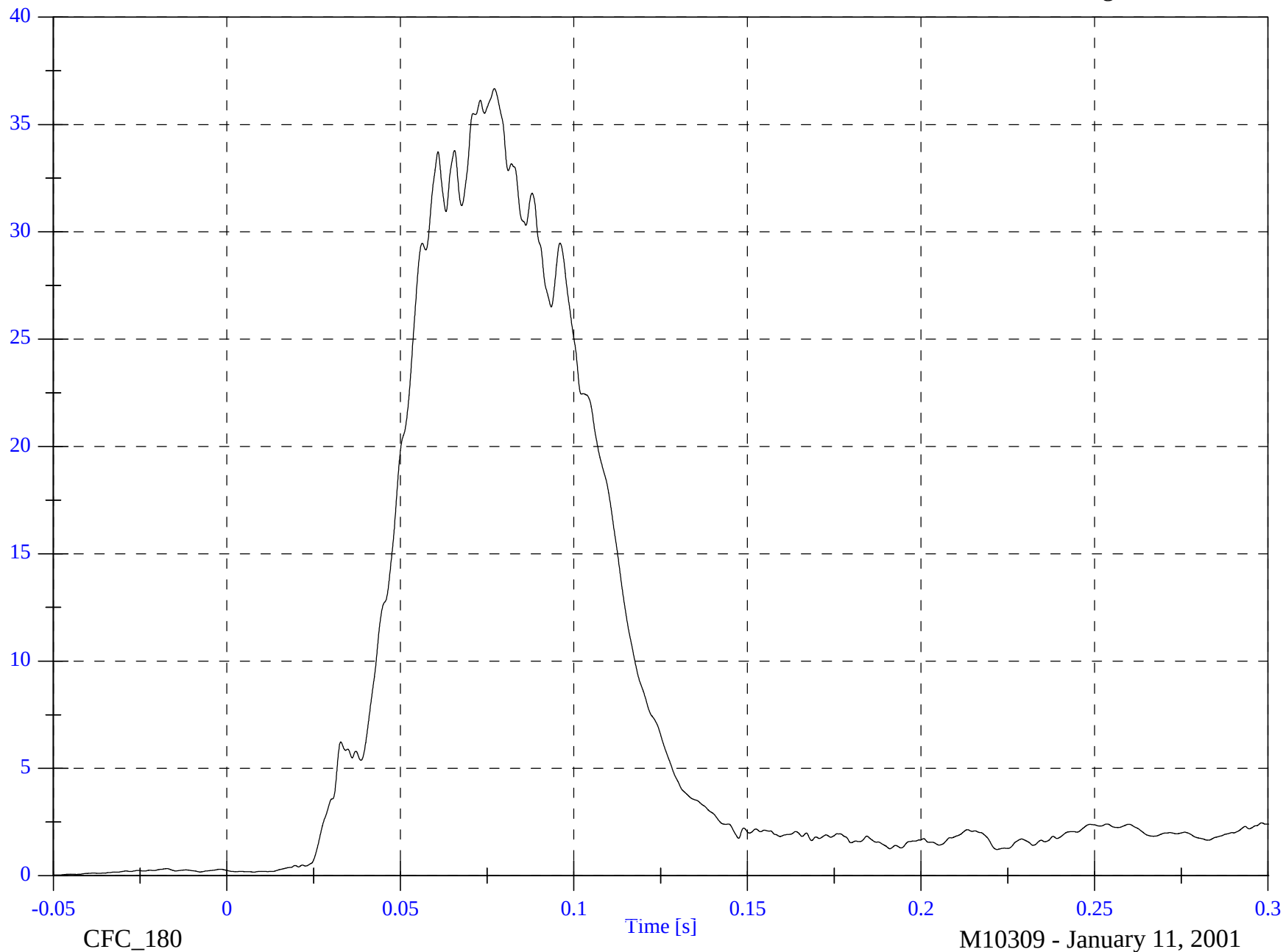


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P1 Chest Resultant

Max: 36.7 [g] at 0.077 [s]

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



B-23

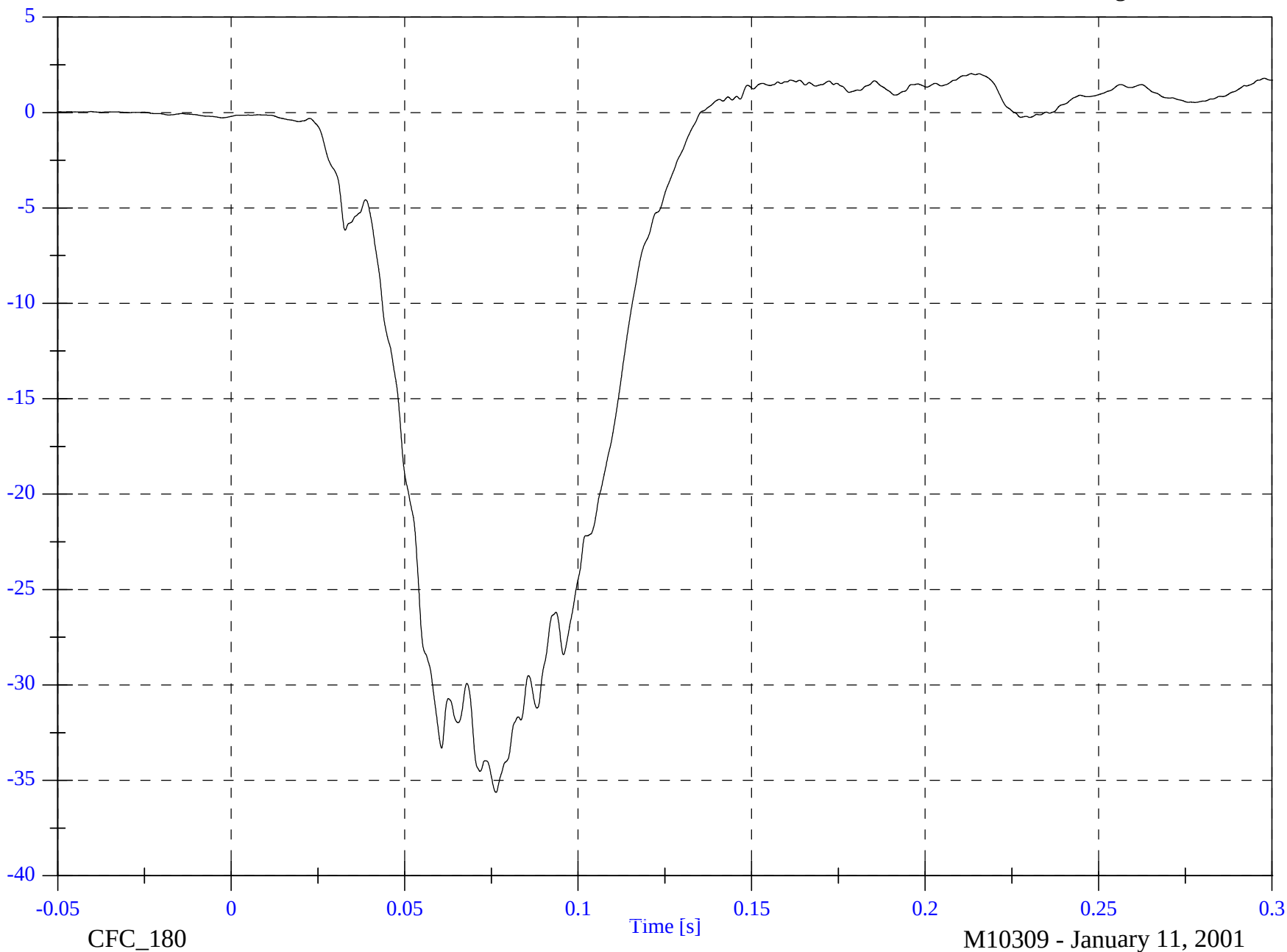
8602-14

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P1 Chest Red x

Max: 2.0 [g] at 0.213 [s]

Min: -35.6 [g] at 0.076 [s]



B-24

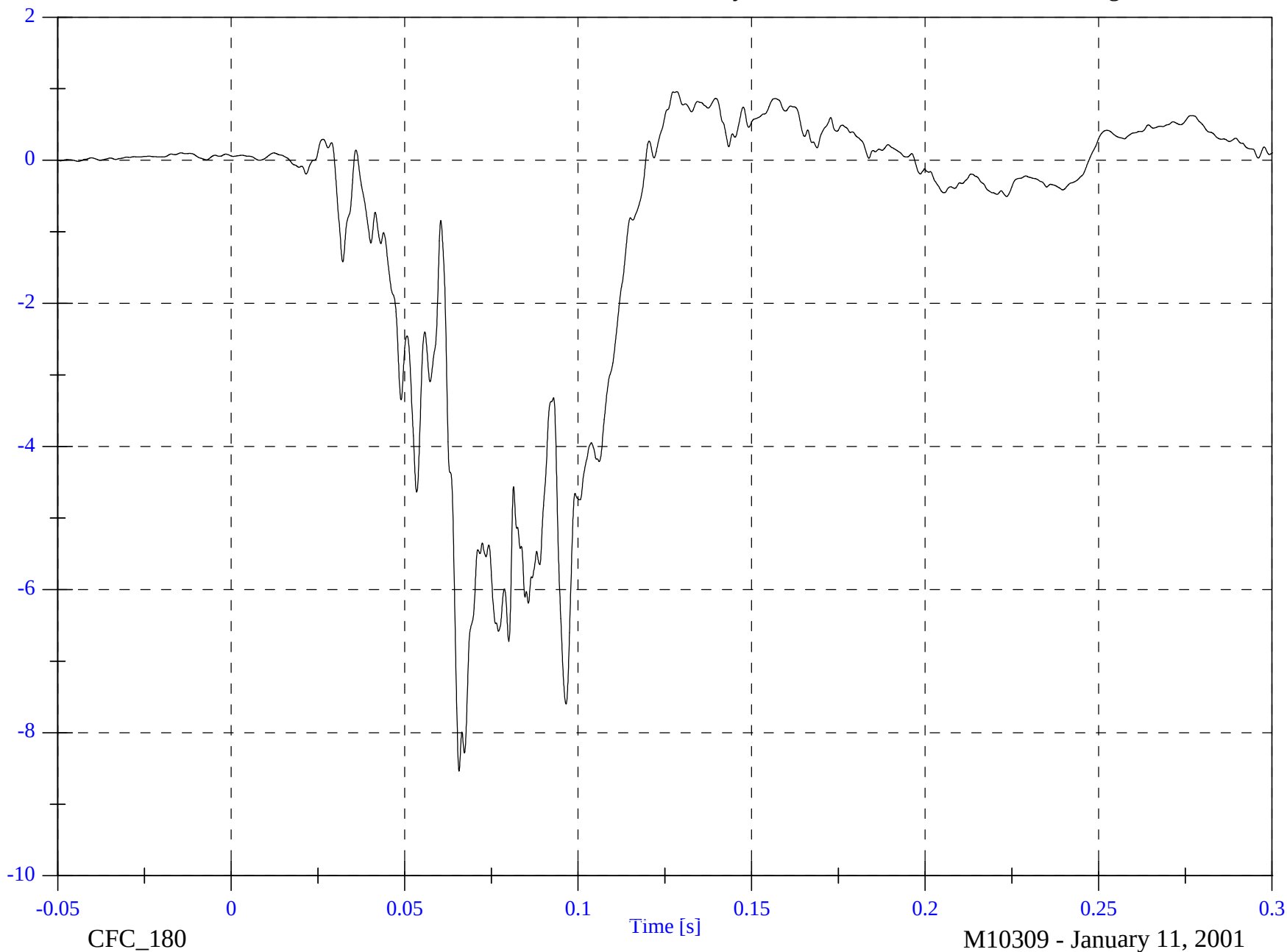
8602-14

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P1 Chest Red y

Max: 1.0 [g] at 0.128 [s]

Min: -8.5 [g] at 0.066 [s]



B-25

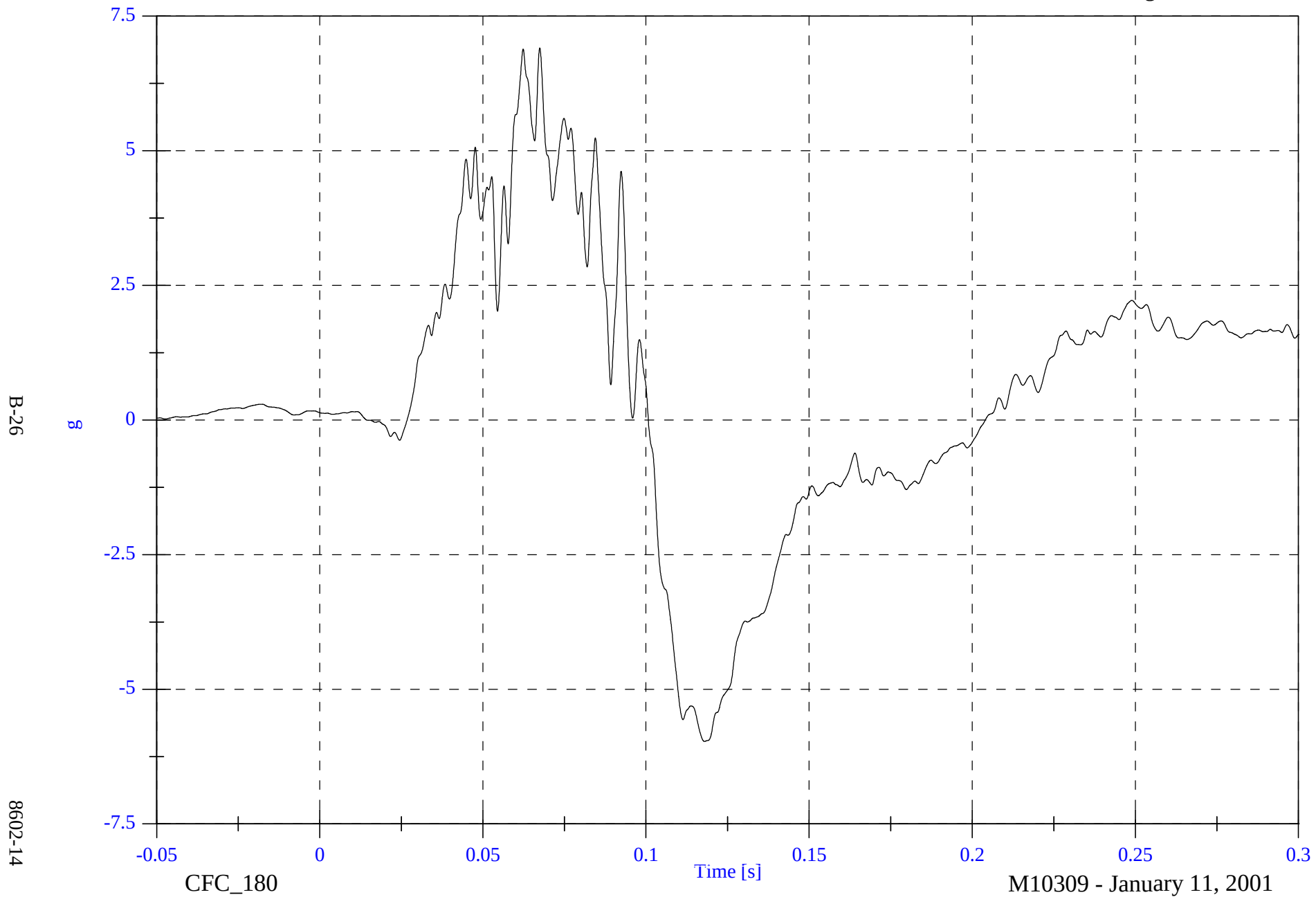
8602-14

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P1 Chest Red z

Max: 6.9 [g] at 0.067 [s]

Min: -6.0 [g] at 0.118 [s]

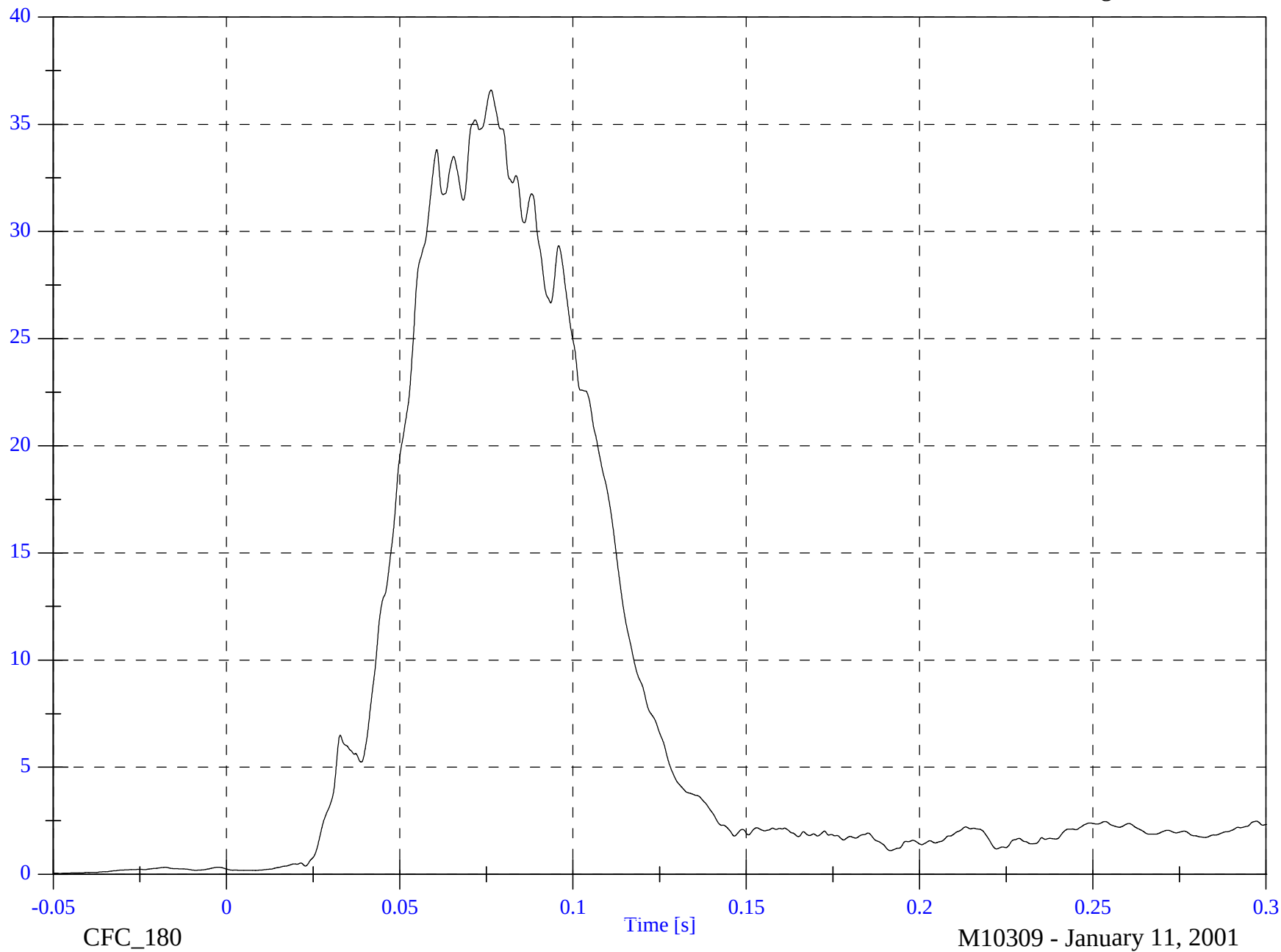


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P1 Chest Red Resultant

Max: 36.6 [g] at 0.076 [s]

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

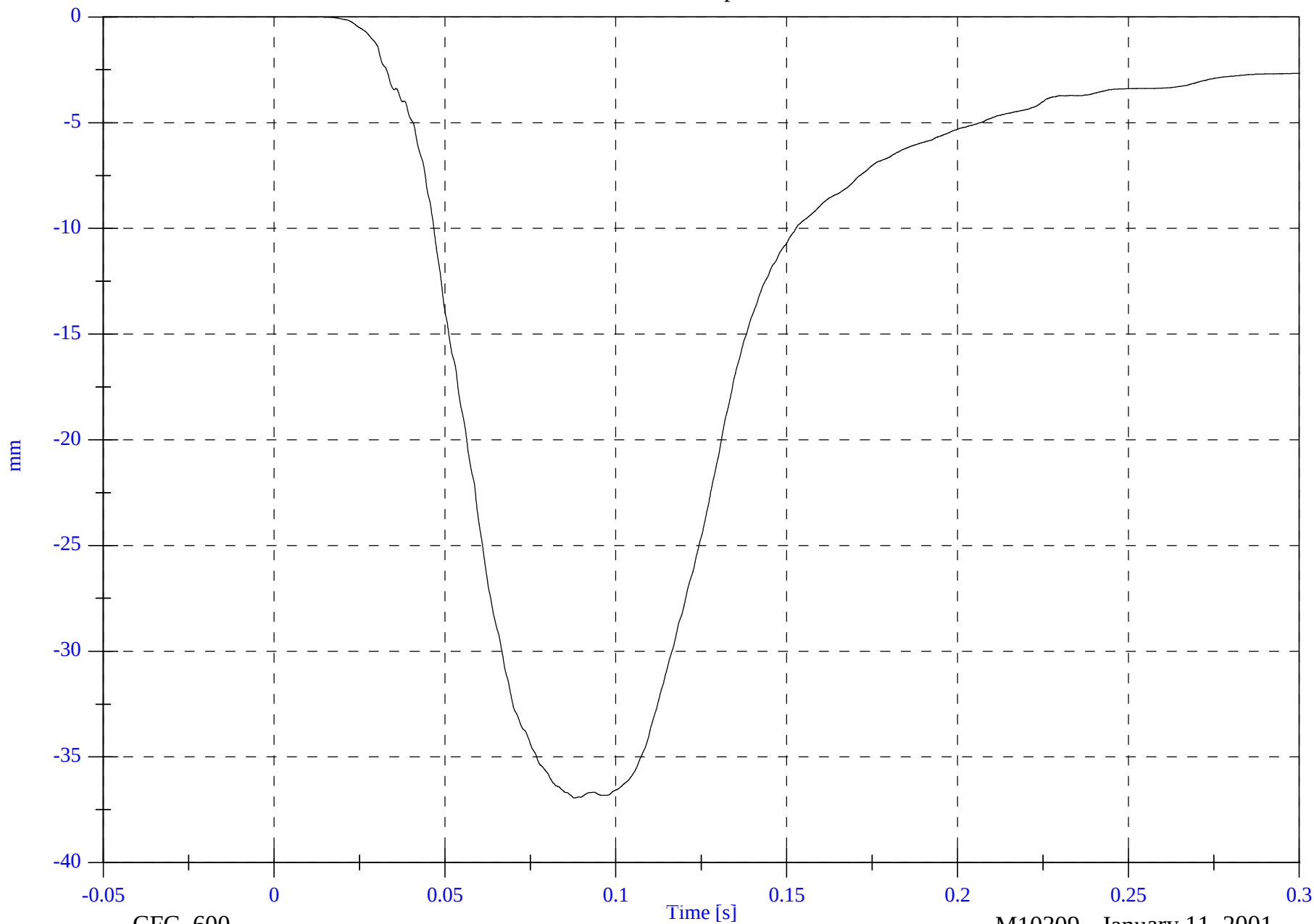


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P1 Chest Compression x

Max: 0.0 [mm] at -0.049 [s]

Min: -36.9 [mm] at 0.088 [s]



B-28

8602-14

CFC_600

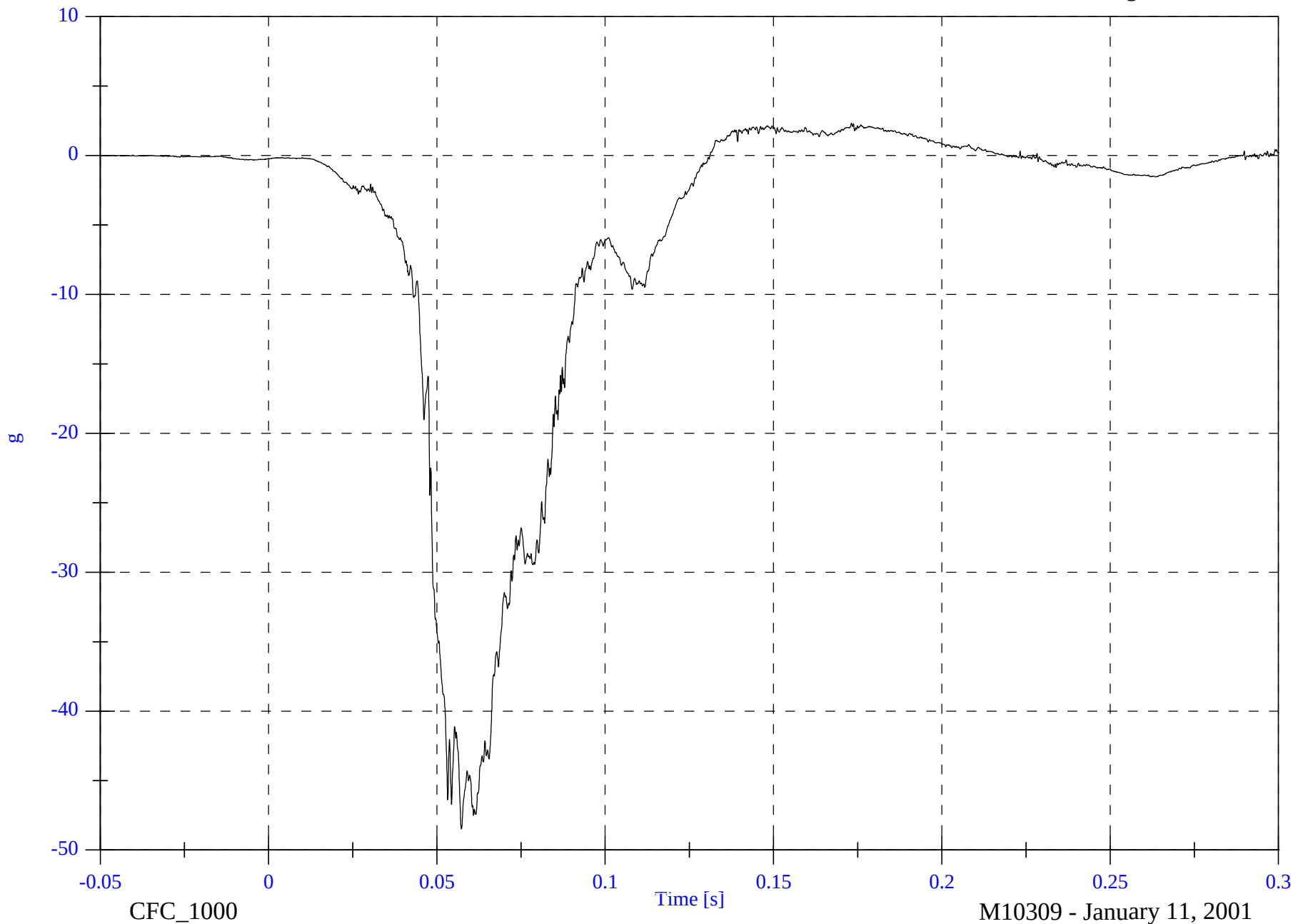
M10309 - January 11, 2001

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P1 Pelvic x

Max: 2.3 [g] at 0.173 [s]

Min: -48.5 [g] at 0.057 [s]



B-29

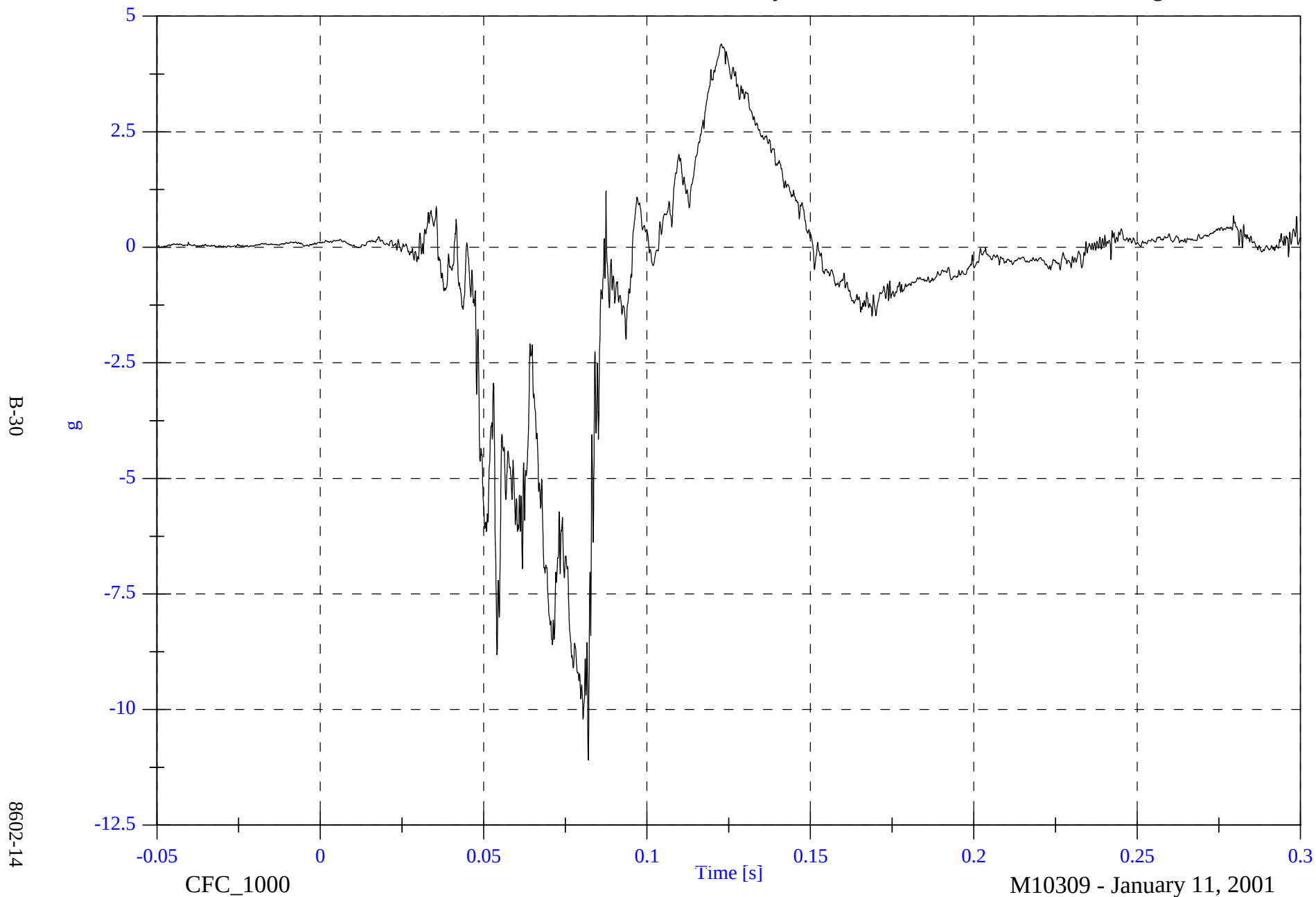
8602-14

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P1 Pelvic y

Max: 4.4 [g] at 0.123 [s]

Min: -11.1 [g] at 0.082 [s]

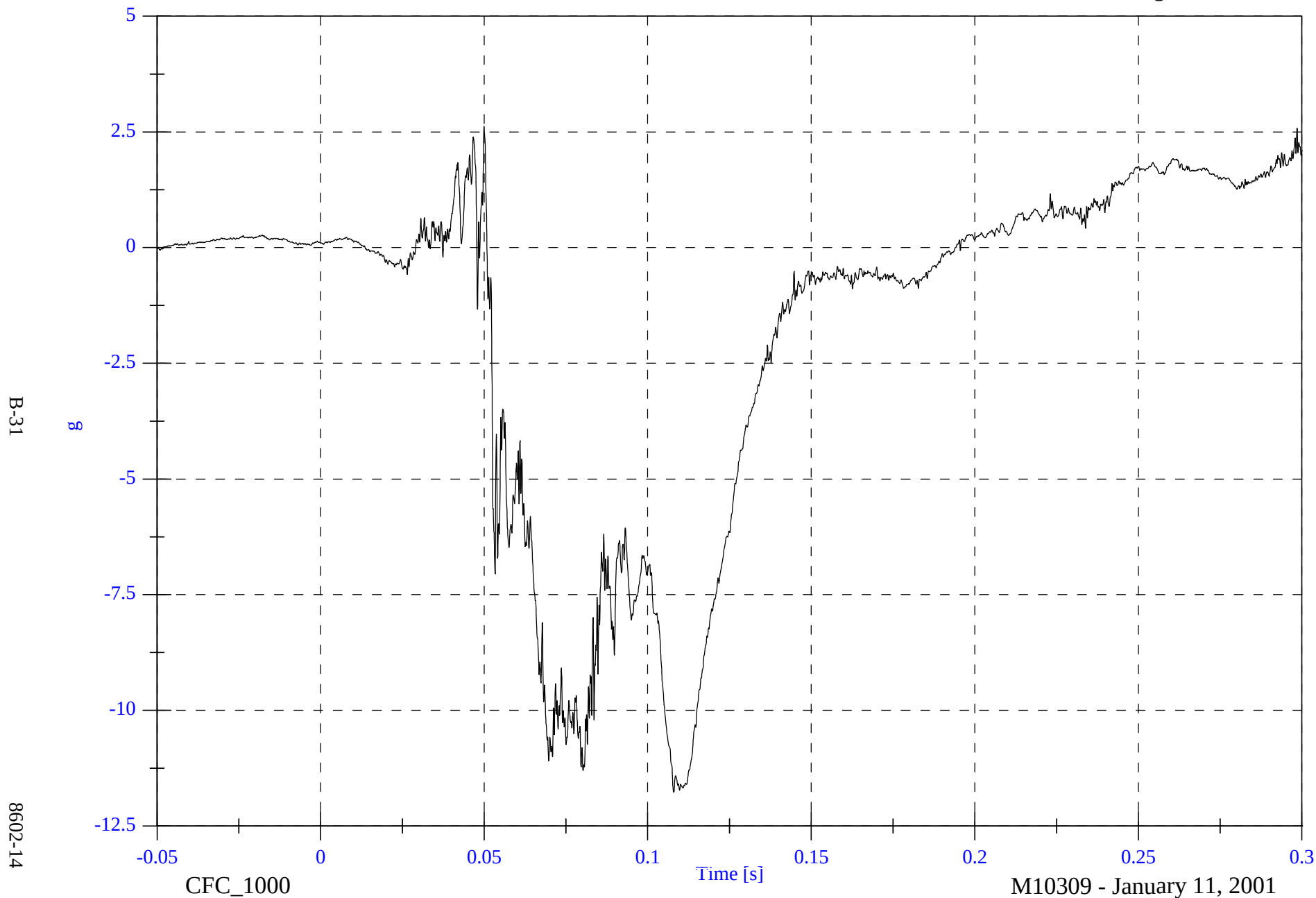


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P1 Pelvic z

Max: 2.6 [g] at 0.050 [s]

Min: -11.8 [g] at 0.108 [s]

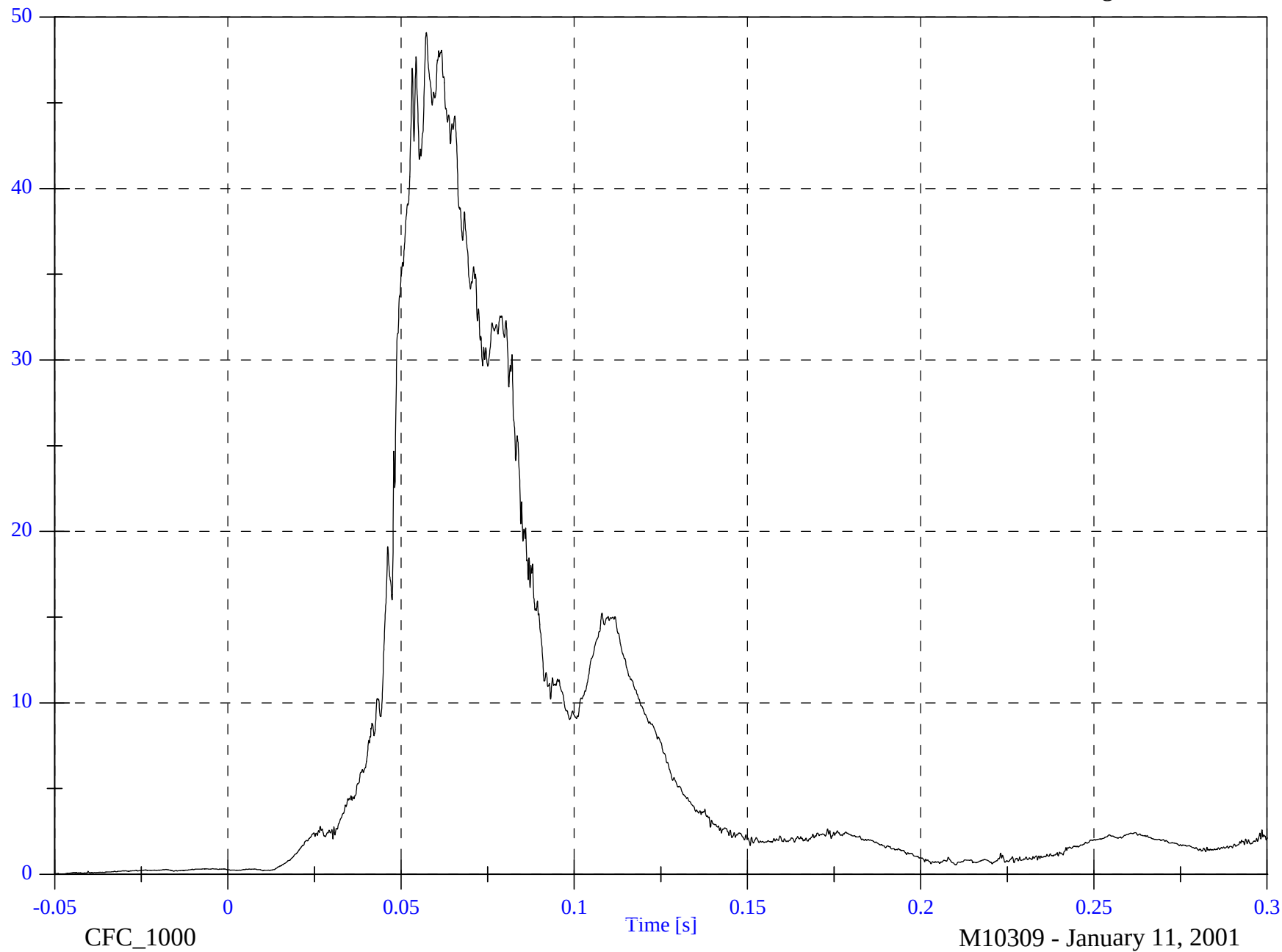


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P1 Pelvic Resultant

Max: 49.1 [g] at 0.057 [s]

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



B-32

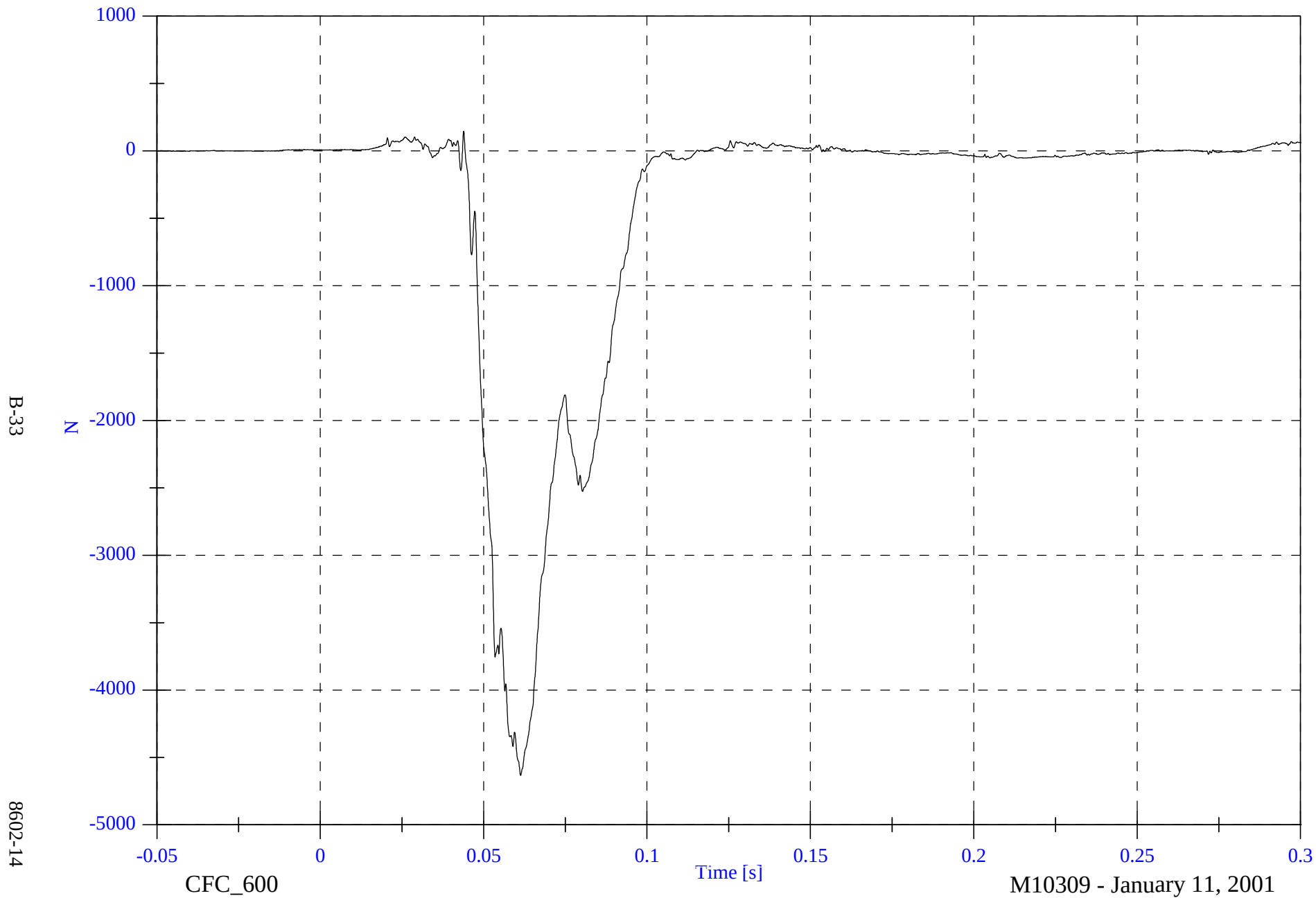
8602-14

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

Max: 148.3 [N] at 0.044 [s]

P1 Left Femur z

Min: -4634.5 [N] at 0.061 [s]

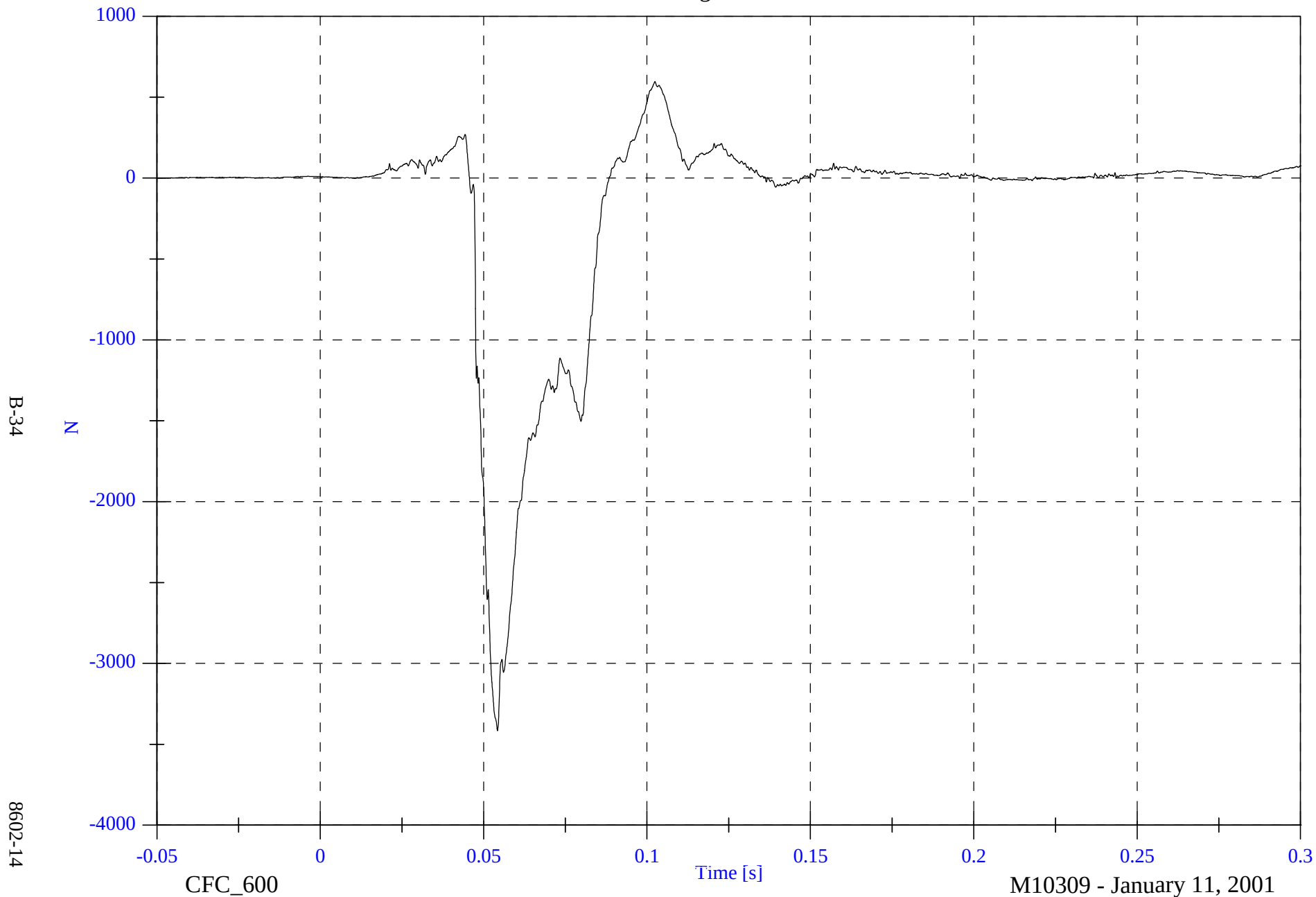


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

Max: 595.3 [N] at 0.102 [s]

P1 Right Femur z

Min: -3416.2 [N] at 0.054 [s]

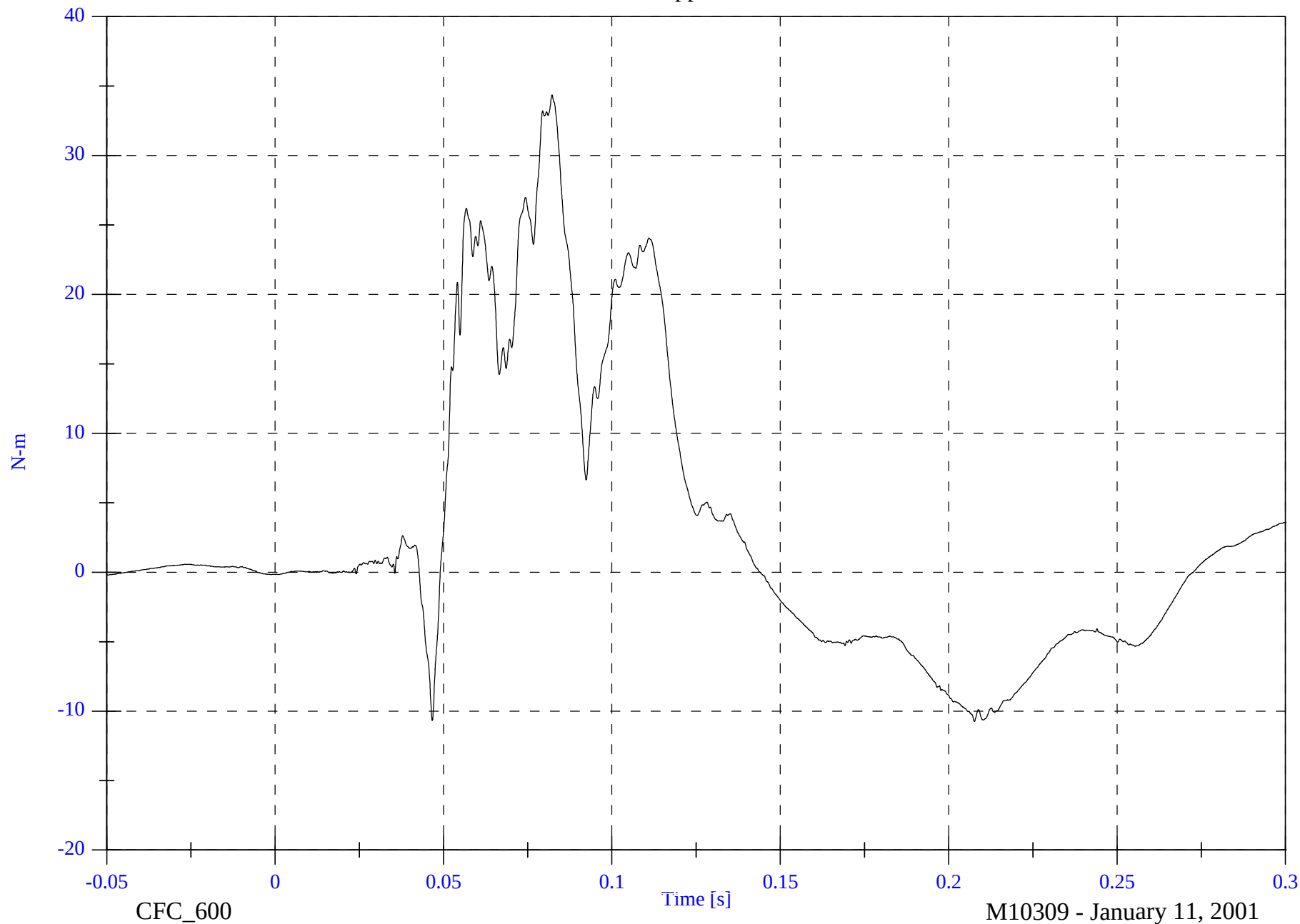


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P1 Left Upper Tibia Mx

Max: 34.4 [N-m] at 0.082 [s]

Min: -10.8 [N-m] at 0.208 [s]



B-35

8602-14

CFC_600

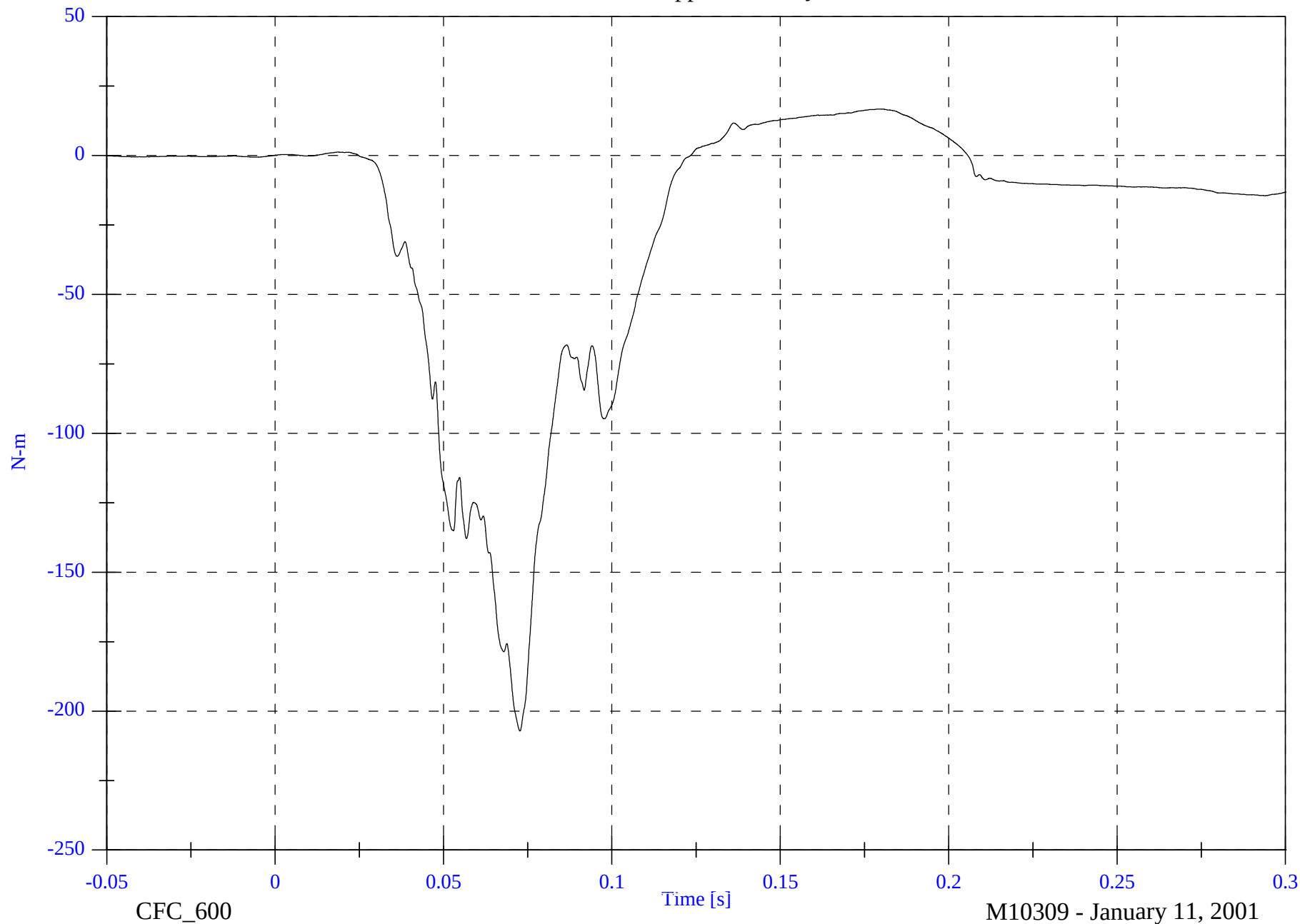
M10309 - January 11, 2001

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P1 Left Upper Tibia My

Max: 16.7 [N-m] at 0.180 [s]

Min: -207.2 [N-m] at 0.073 [s]



B-36

8602-14

CFC_600

Time [s]

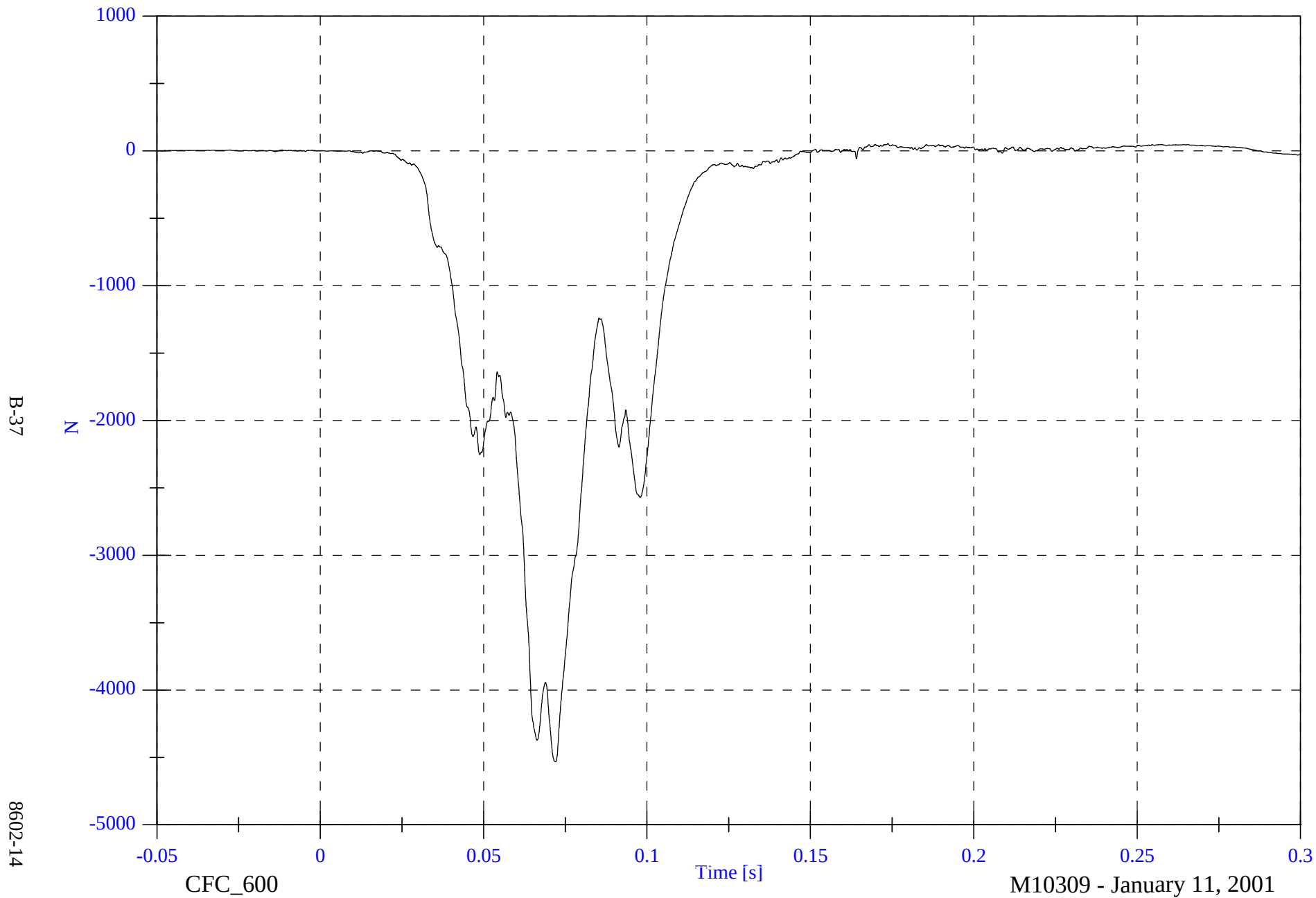
M10309 - January 11, 2001

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P1 Left Lower Tibia Fz

Max: 54.9 [N] at 0.174 [s]

Min: -4532.5 [N] at 0.072 [s]

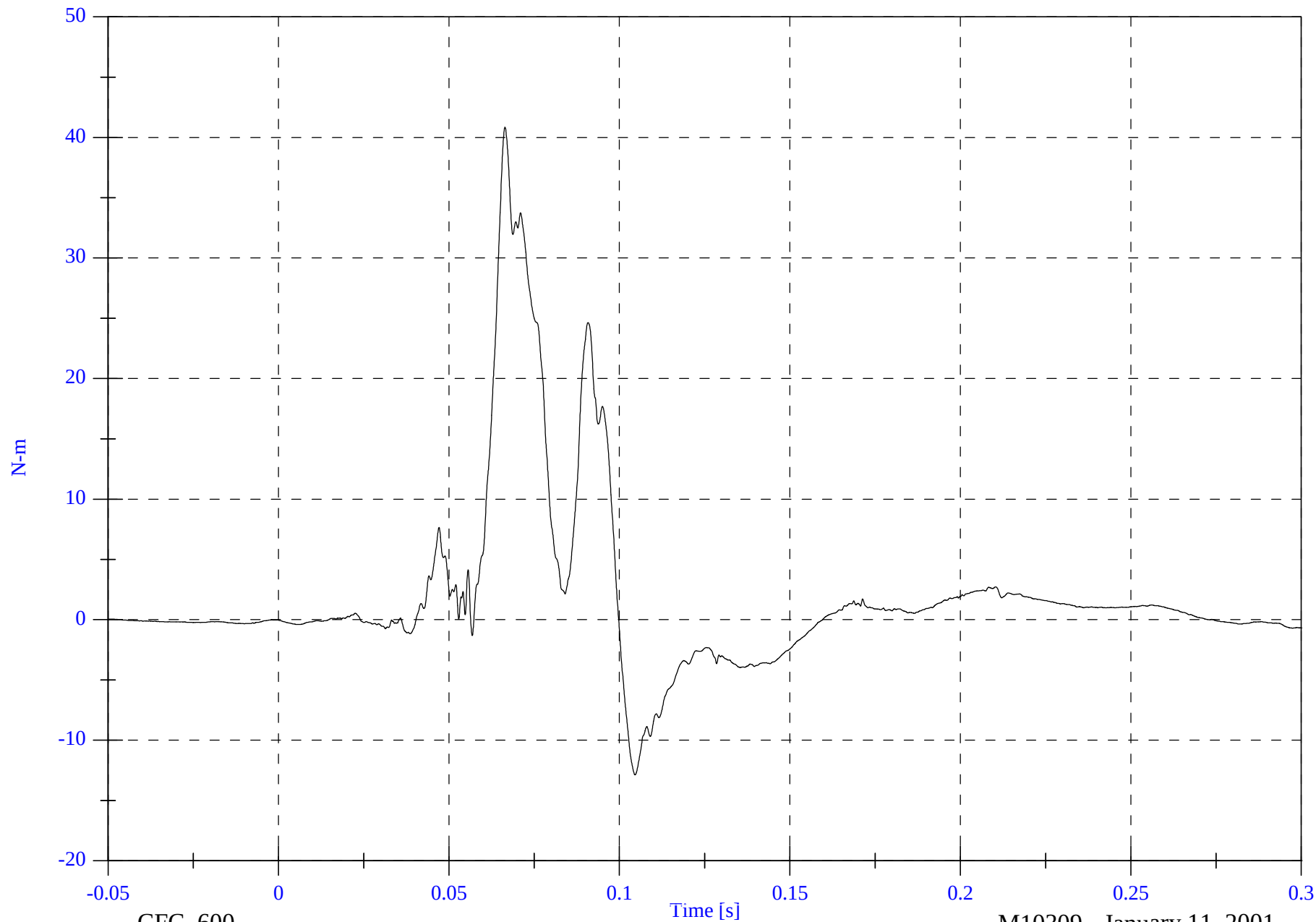


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P1 Left Lower Tibia Mx

Max: 40.9 [N-m] at 0.066 [s]

Min: -12.9 [N-m] at 0.105 [s]



B-38

8602-14

CFC_600

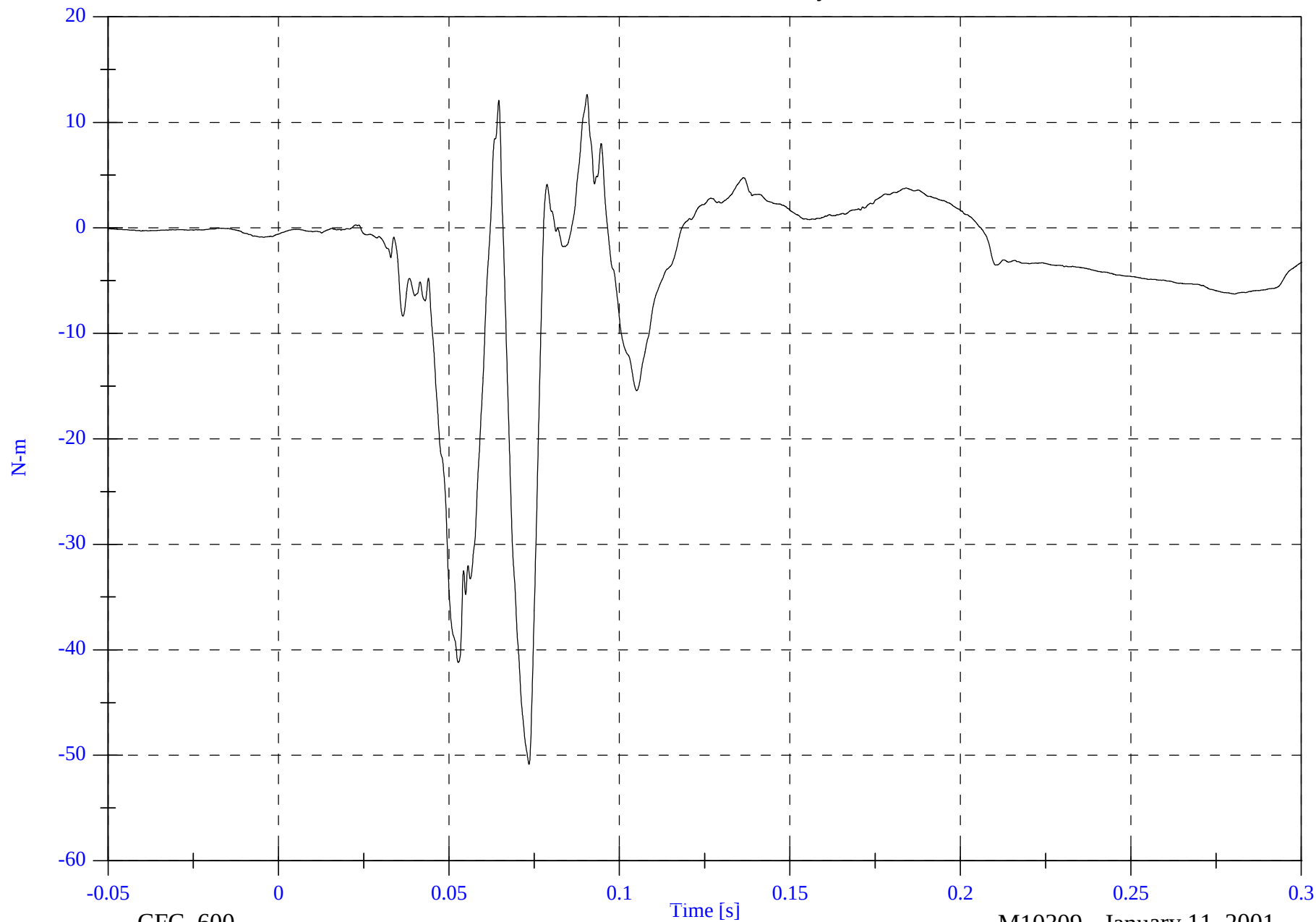
M10309 - January 11, 2001

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P1 Left Lower Tibia My

Max: 12.6 [N-m] at 0.091 [s]

Min: -50.9 [N-m] at 0.073 [s]



B-39

8602-14

CFC_600

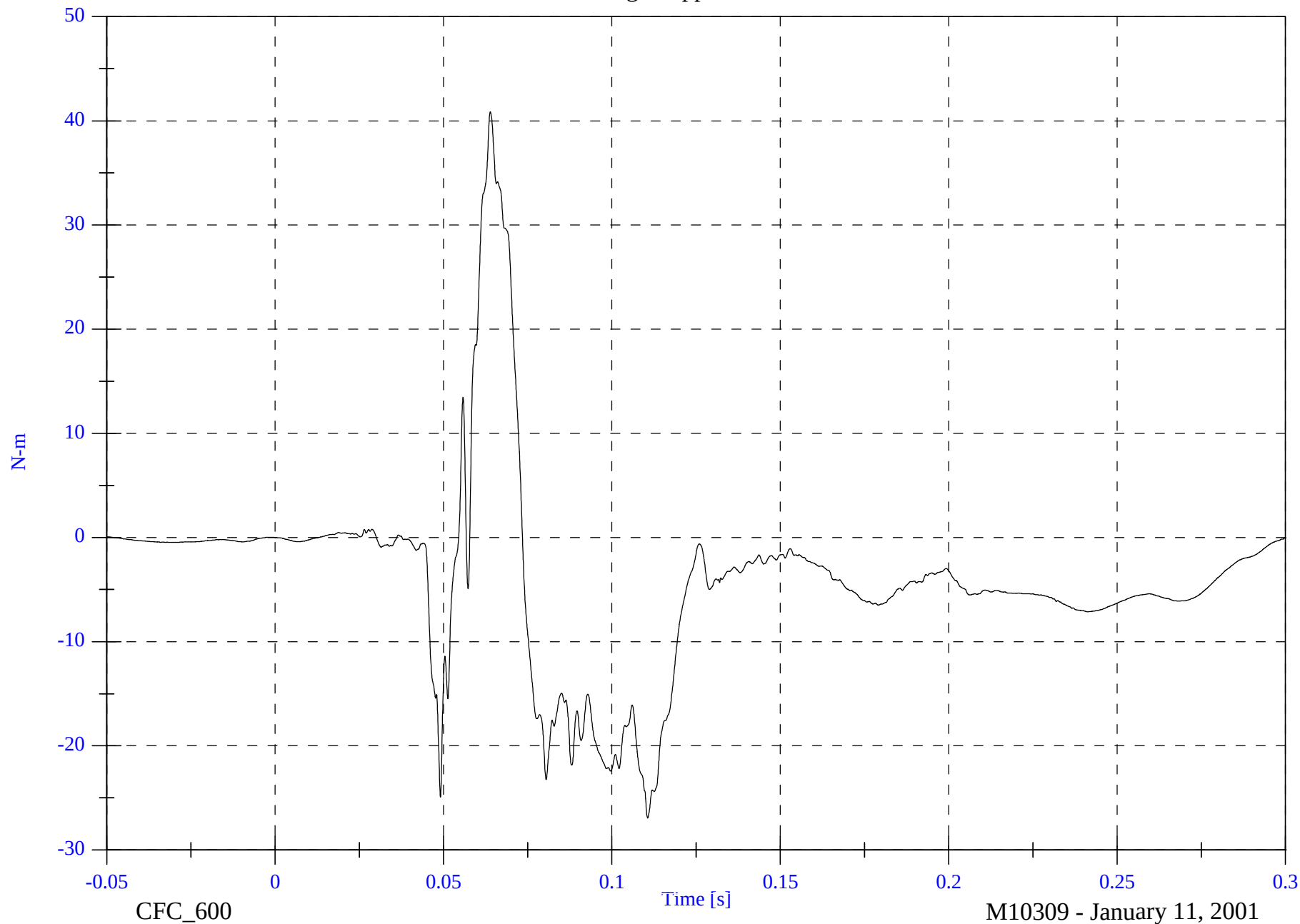
M10309 - January 11, 2001

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P1 Right Upper Tibia Mx

Max: 40.9 [N-m] at 0.064 [s]

Min: -26.9 [N-m] at 0.111 [s]



B-40

8602-14

CFC_600

Time [s]

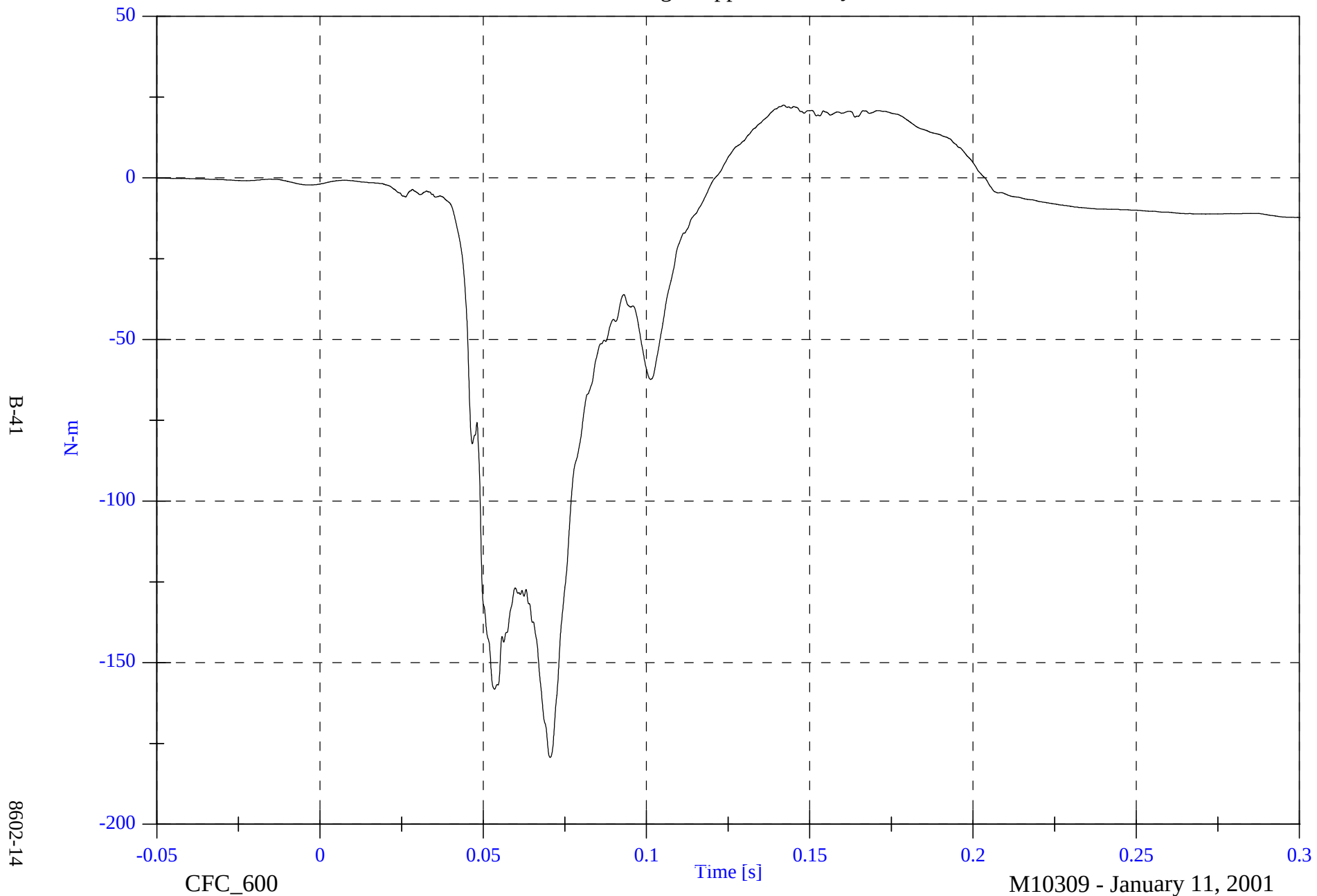
M10309 - January 11, 2001

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P1 Right Upper Tibia My

Max: 22.5 [N-m] at 0.142 [s]

Min: -179.3 [N-m] at 0.070 [s]

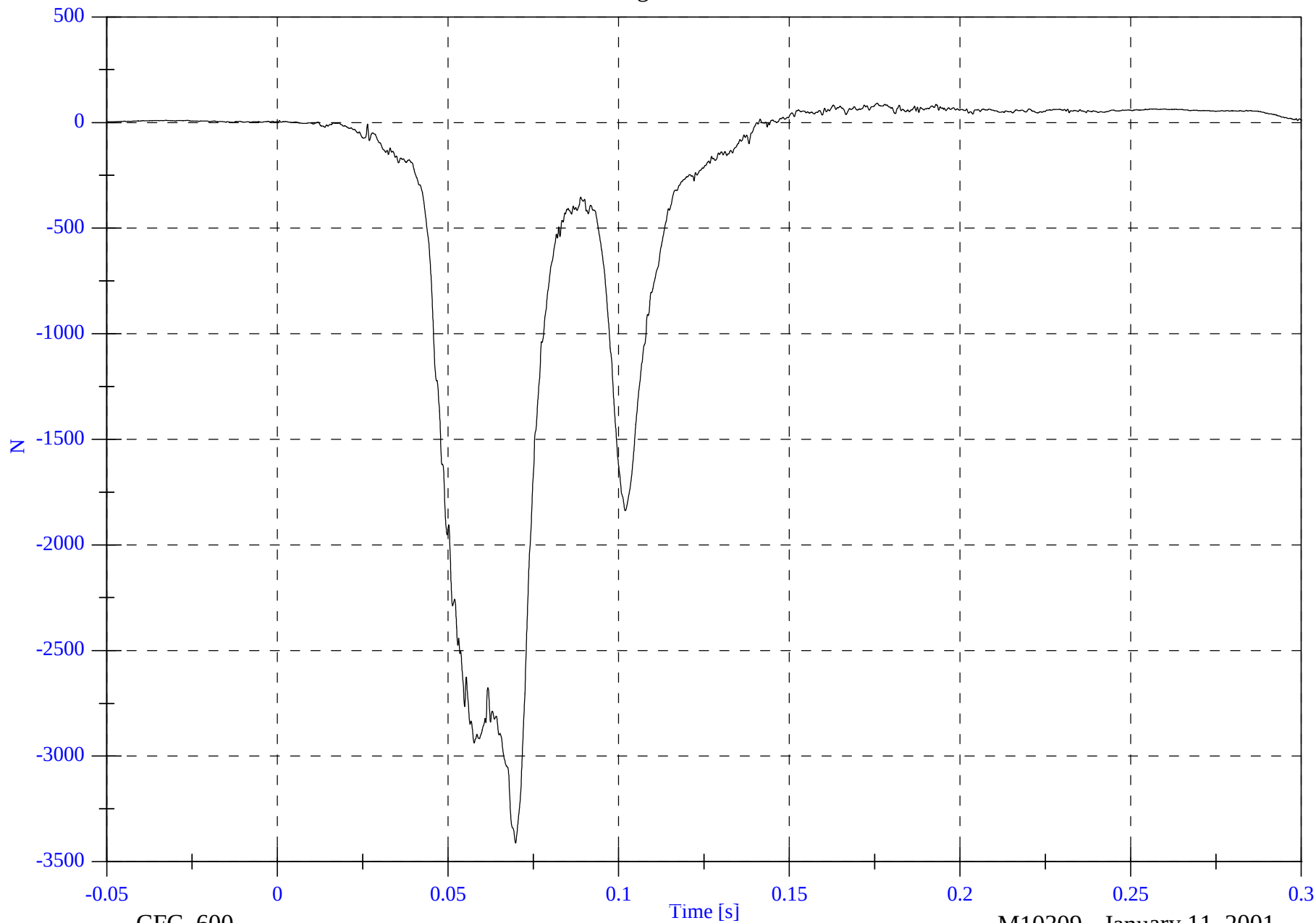


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P1 Right Lower Tibia Fz

Max: 91.6 [N] at 0.176 [s]

Min: -3411.3 [N] at 0.070 [s]



B-42

8602-14

CFC_600

M10309 - January 11, 2001

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

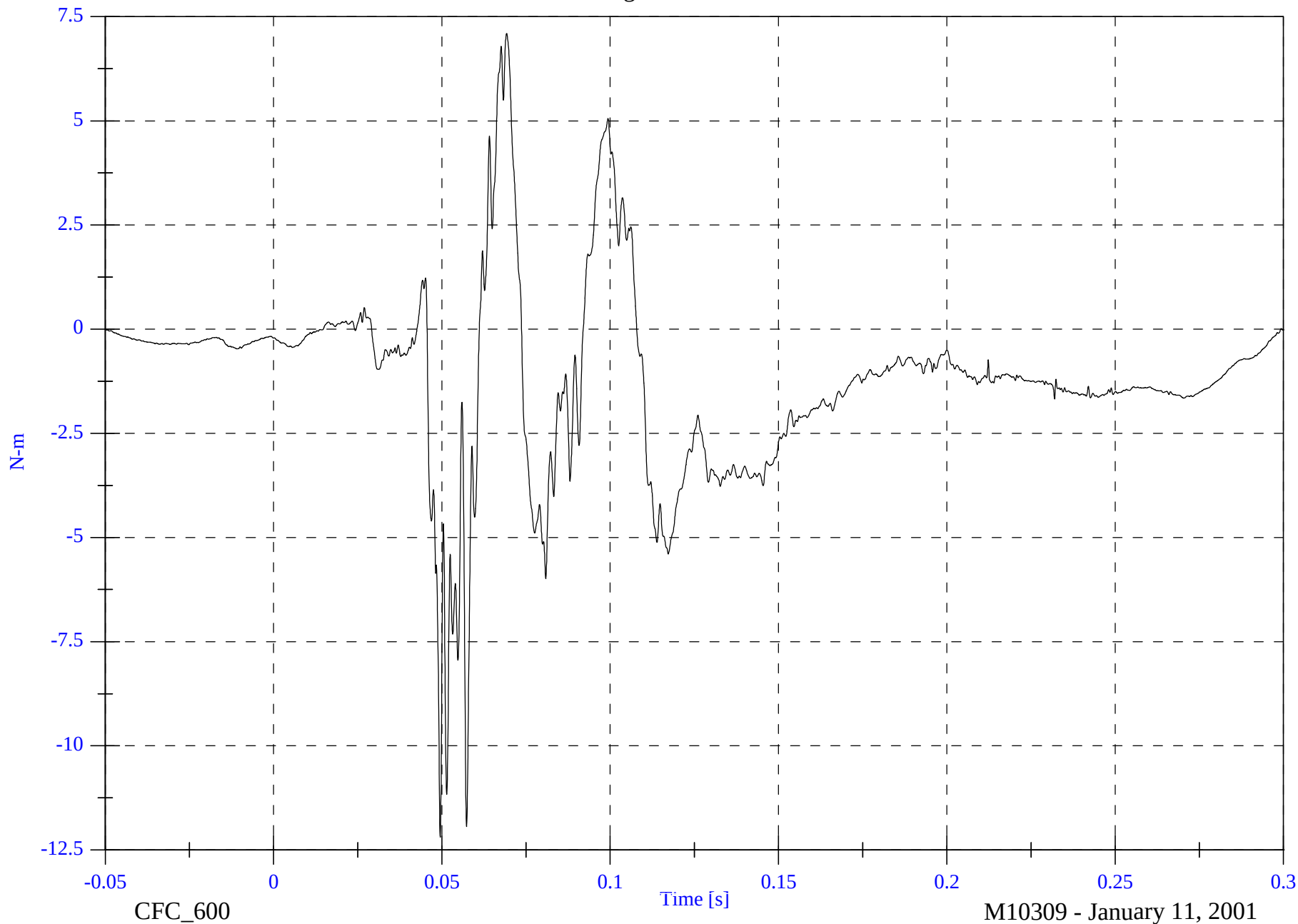
P1 Right Lower Tibia Mx

Max: 7.1 [N-m] at 0.069 [s]

Min: -12.2 [N-m] at 0.050 [s]

B-43

8602-14

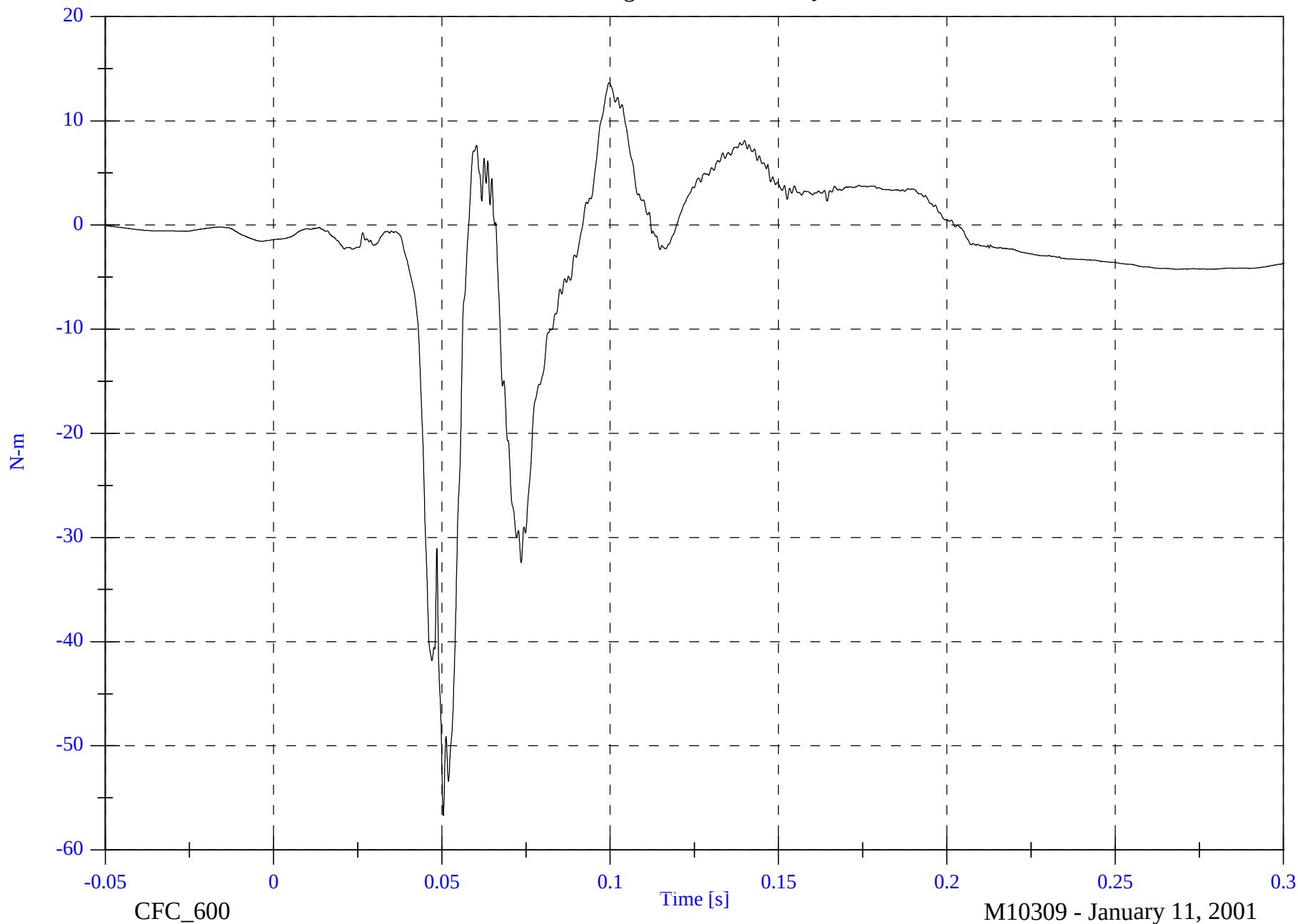


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P1 Right Lower Tibia My

Max: 13.7 [N-m] at 0.100 [s]

Min: -56.7 [N-m] at 0.050 [s]



B-44

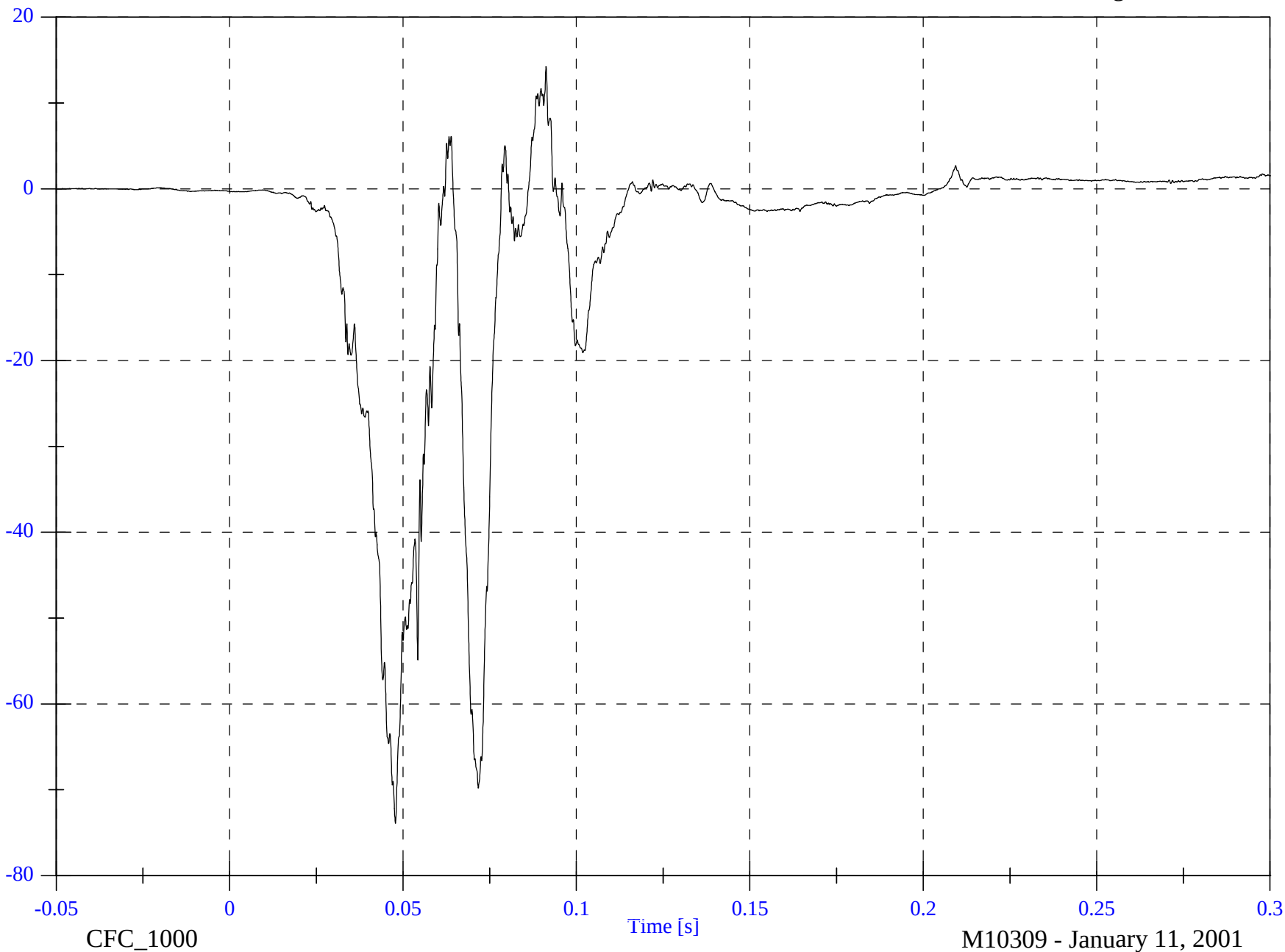
8602-14

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P1 Left Foot Aft x

Max: 14.3 [g] at 0.091 [s]

Min: -73.9 [g] at 0.048 [s]



B-45

8602-14

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

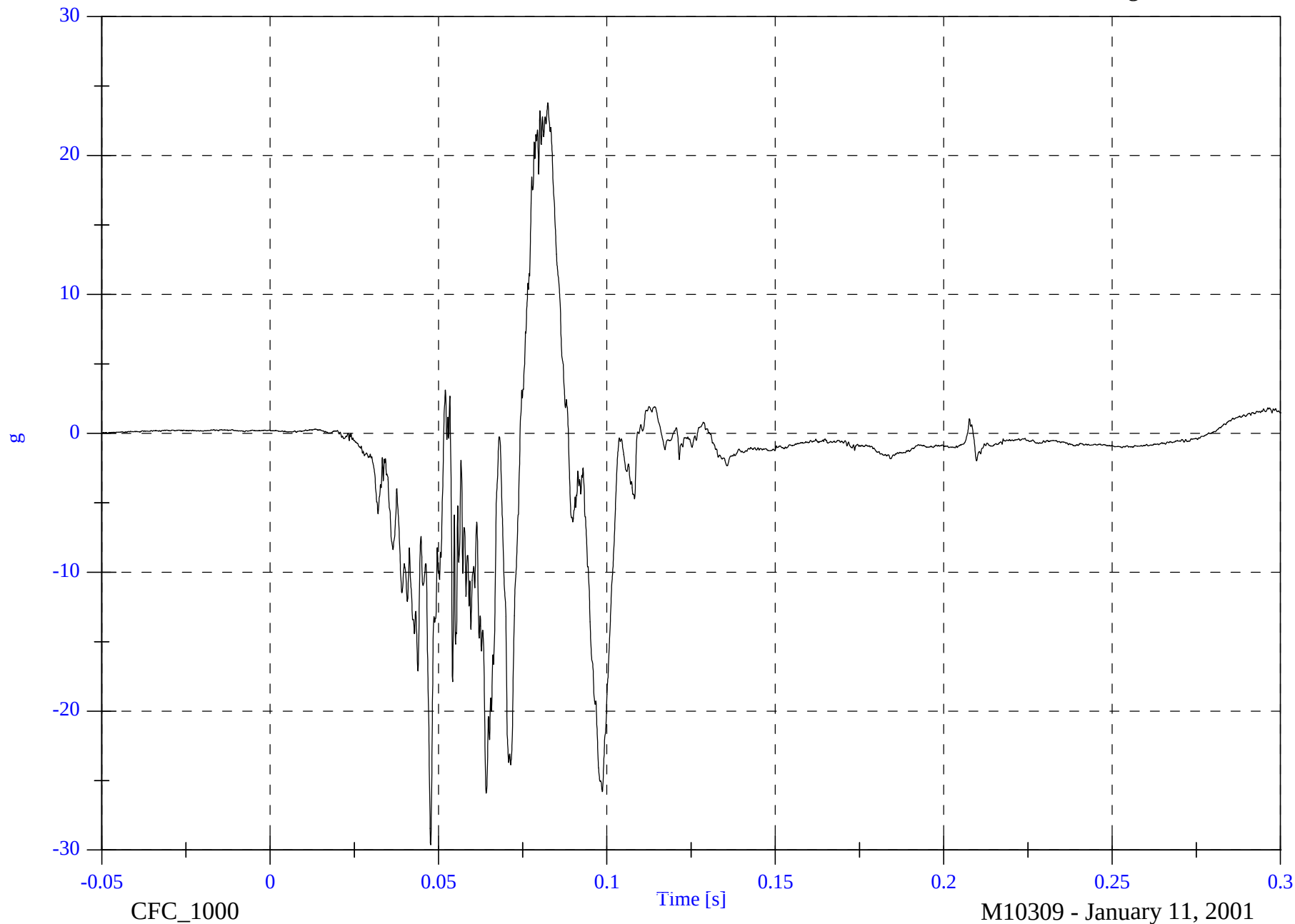
P1 Left Foot Aft z

Max: 23.8 [g] at 0.082 [s]

Min: -29.6 [g] at 0.048 [s]

B-46

8602-14

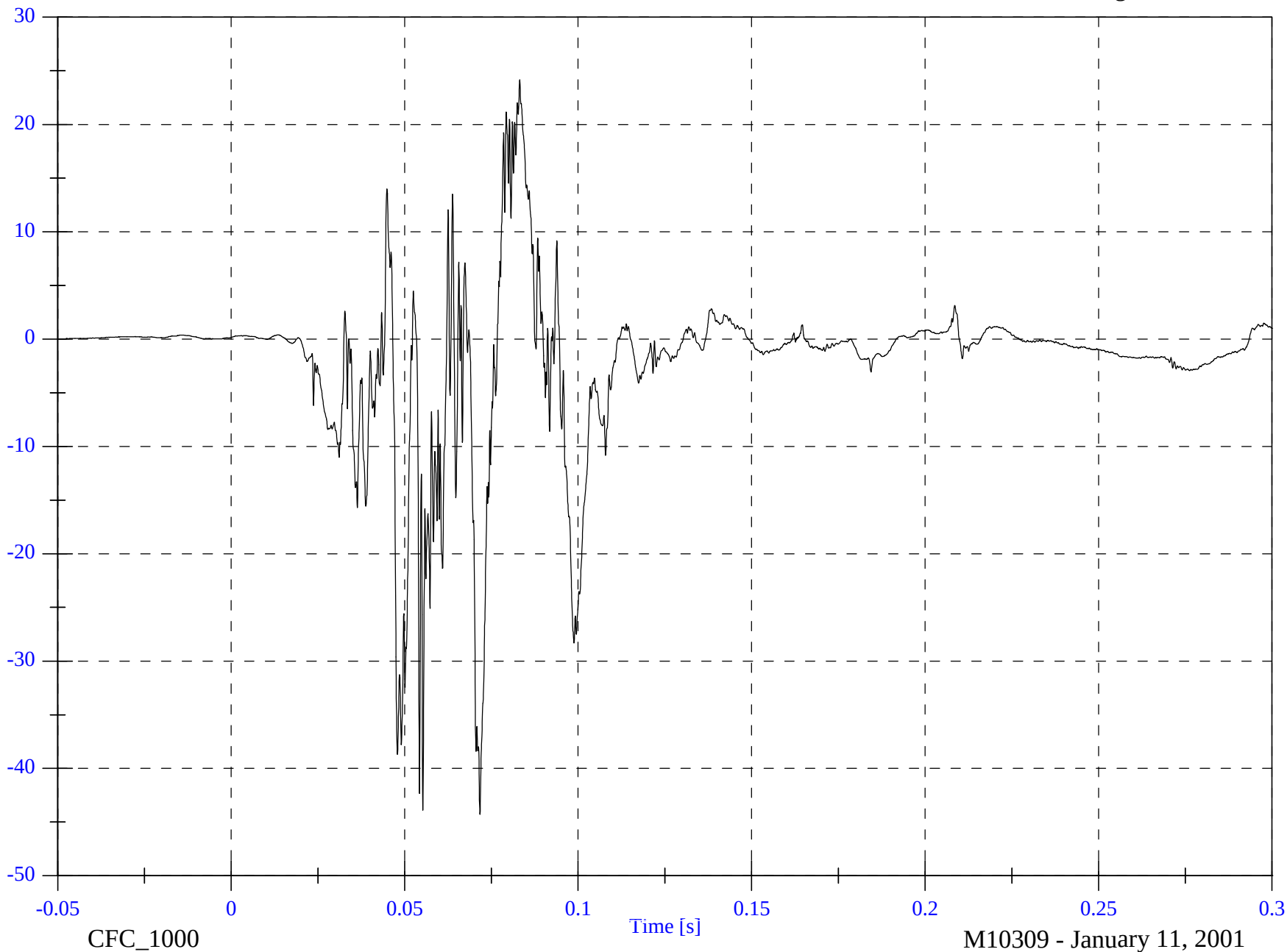


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P1 Left Foot Fore z

Max: 24.2 [g] at 0.083 [s]

Min: -44.3 [g] at 0.072 [s]



B-47

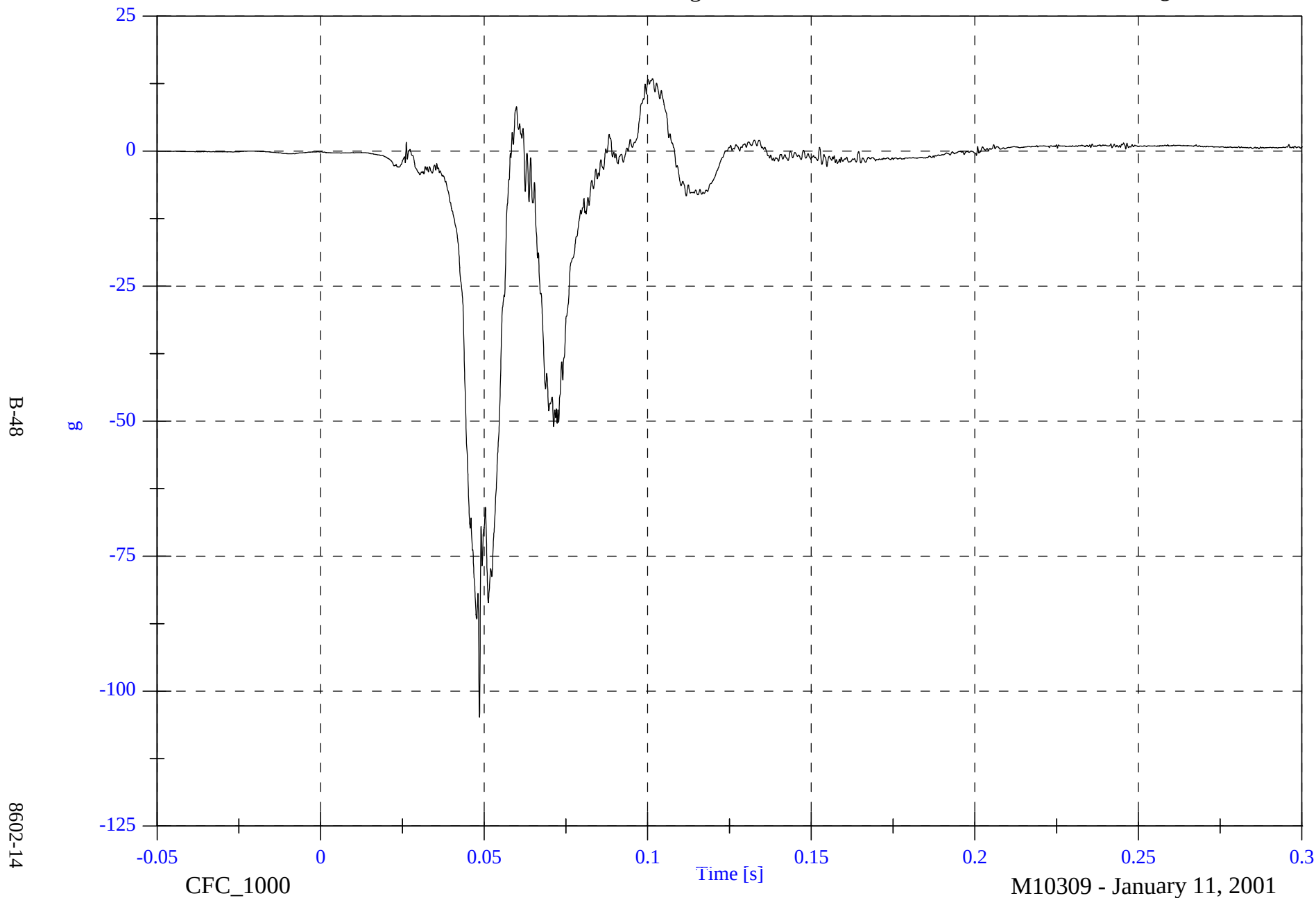
8602-14

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P1 Right Foot Aft x

Max: 13.4 [g] at 0.101 [s]

Min: -104.8 [g] at 0.049 [s]

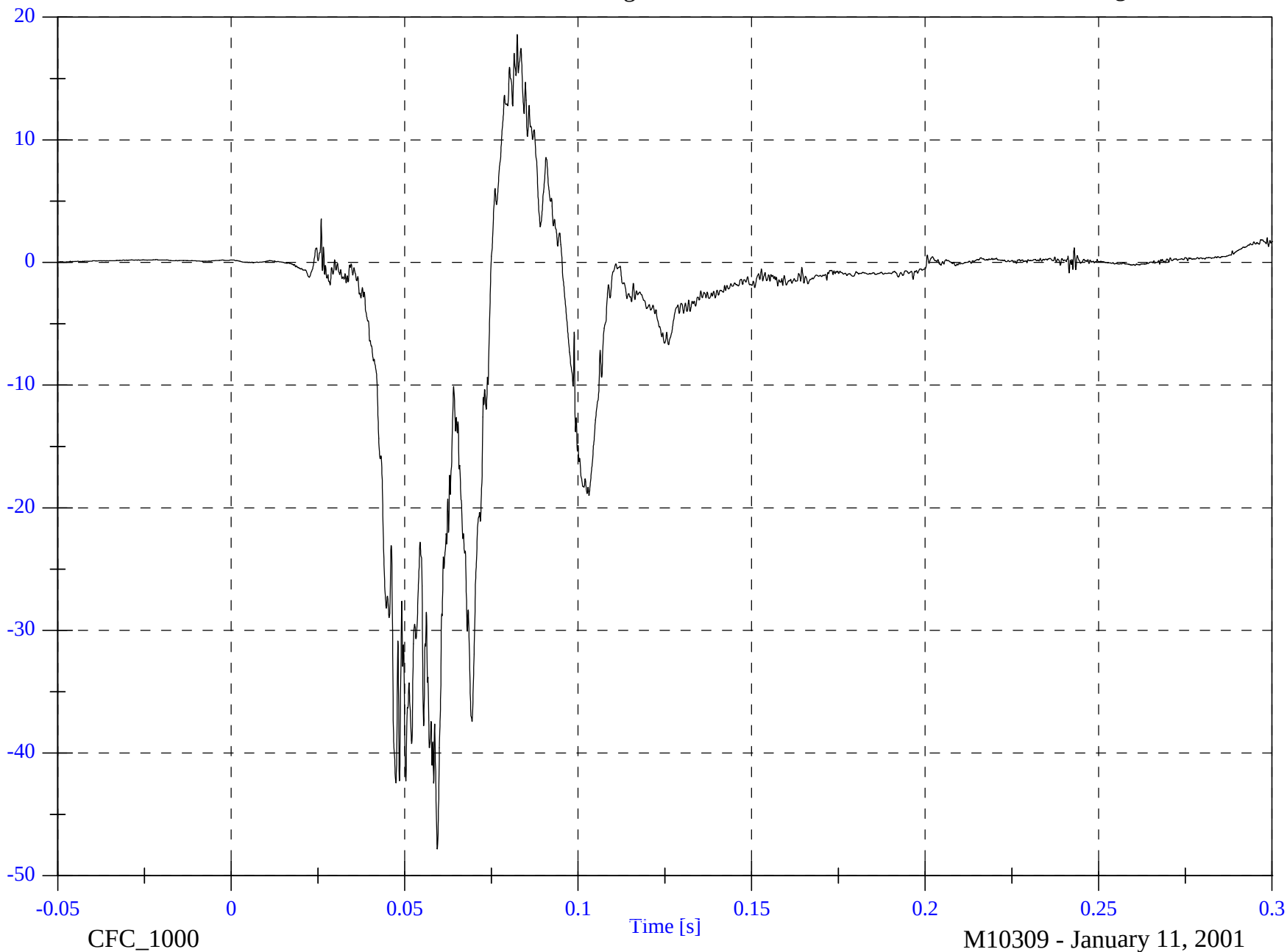


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P1 Right Foot Aft z

Max: 18.6 [g] at 0.082 [s]

Min: -47.8 [g] at 0.059 [s]

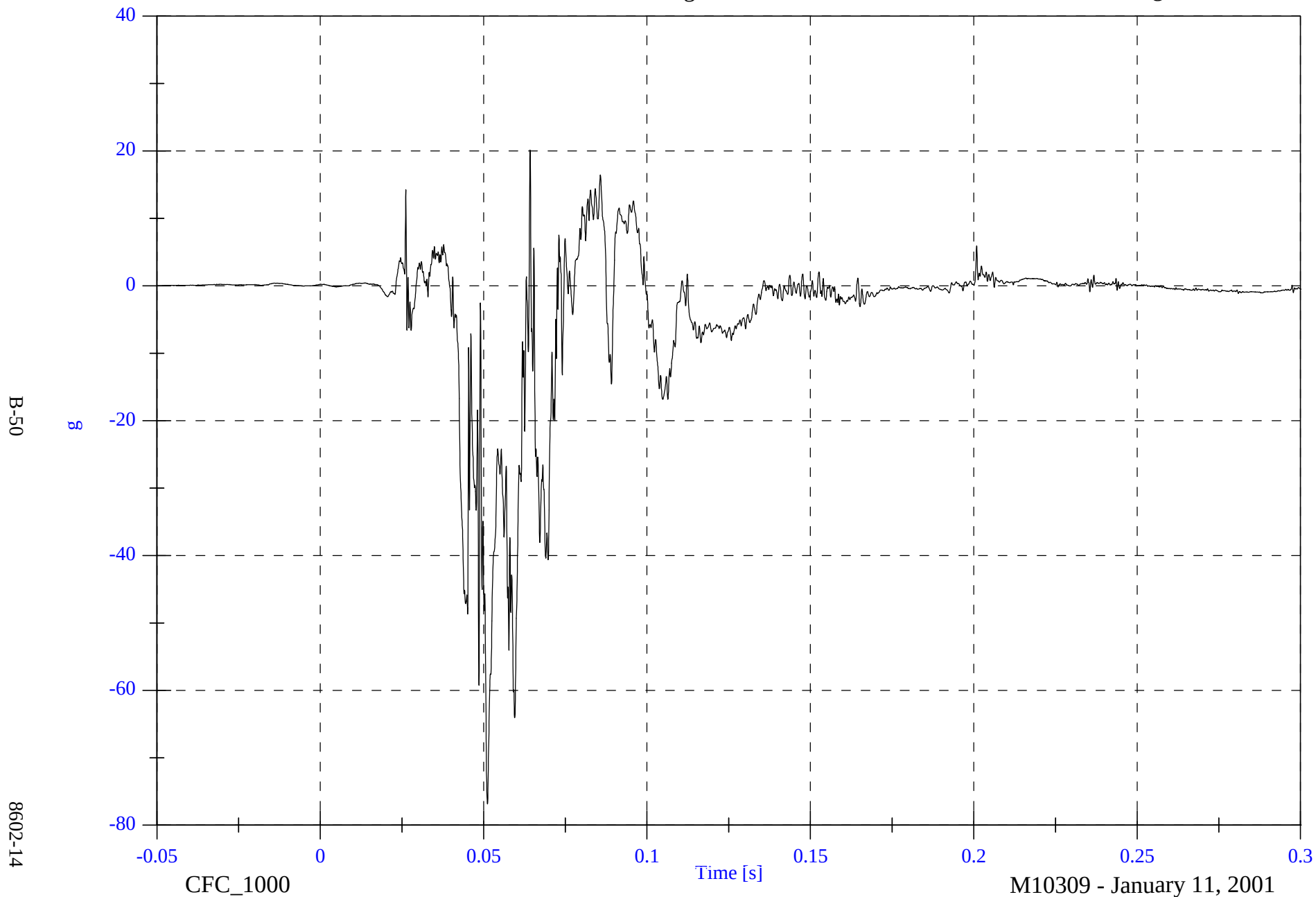


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P1 Right Foot Fore z

Max: 20.1 [g] at 0.064 [s]

Min: -76.9 [g] at 0.051 [s]

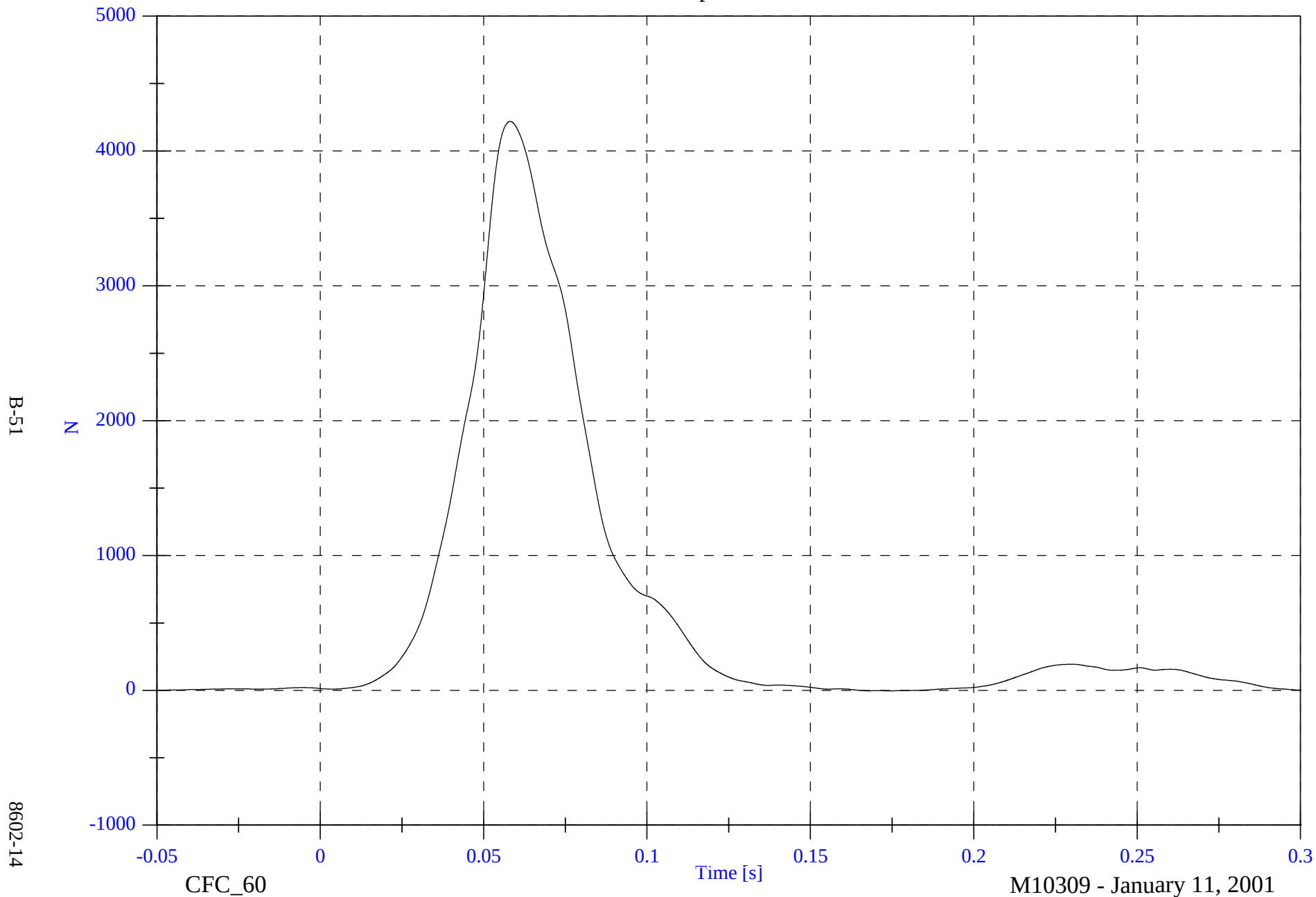


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P1 Lap Belt Force

Max: 4219.6 [N] at 0.058 [s]

Min: -4.4 [N] at 0.168 [s]

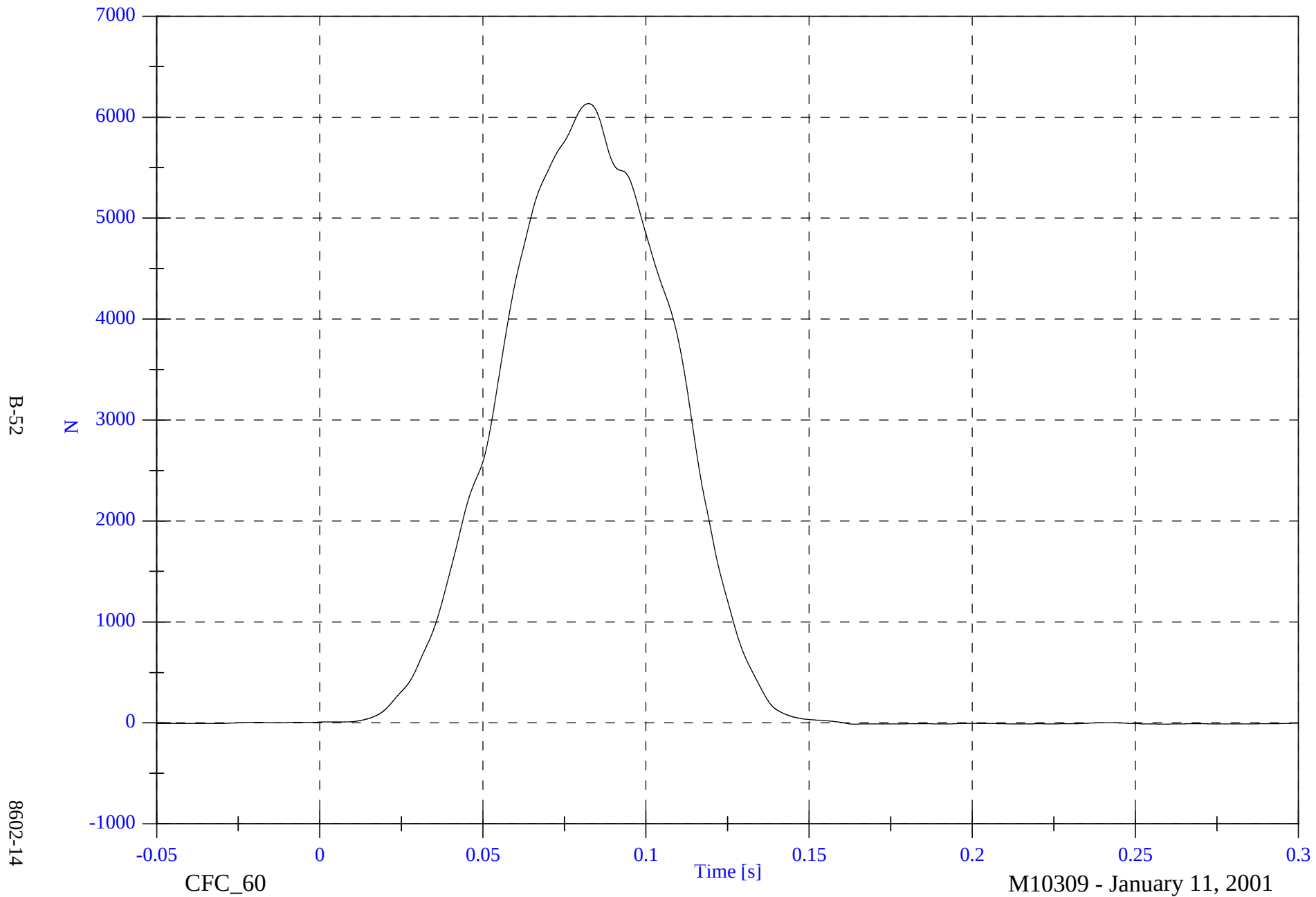


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P1 Shoulder Belt Force

Max: 6133.9 [N] at 0.082 [s]

Min: -12.6 [N] at 0.164 [s]

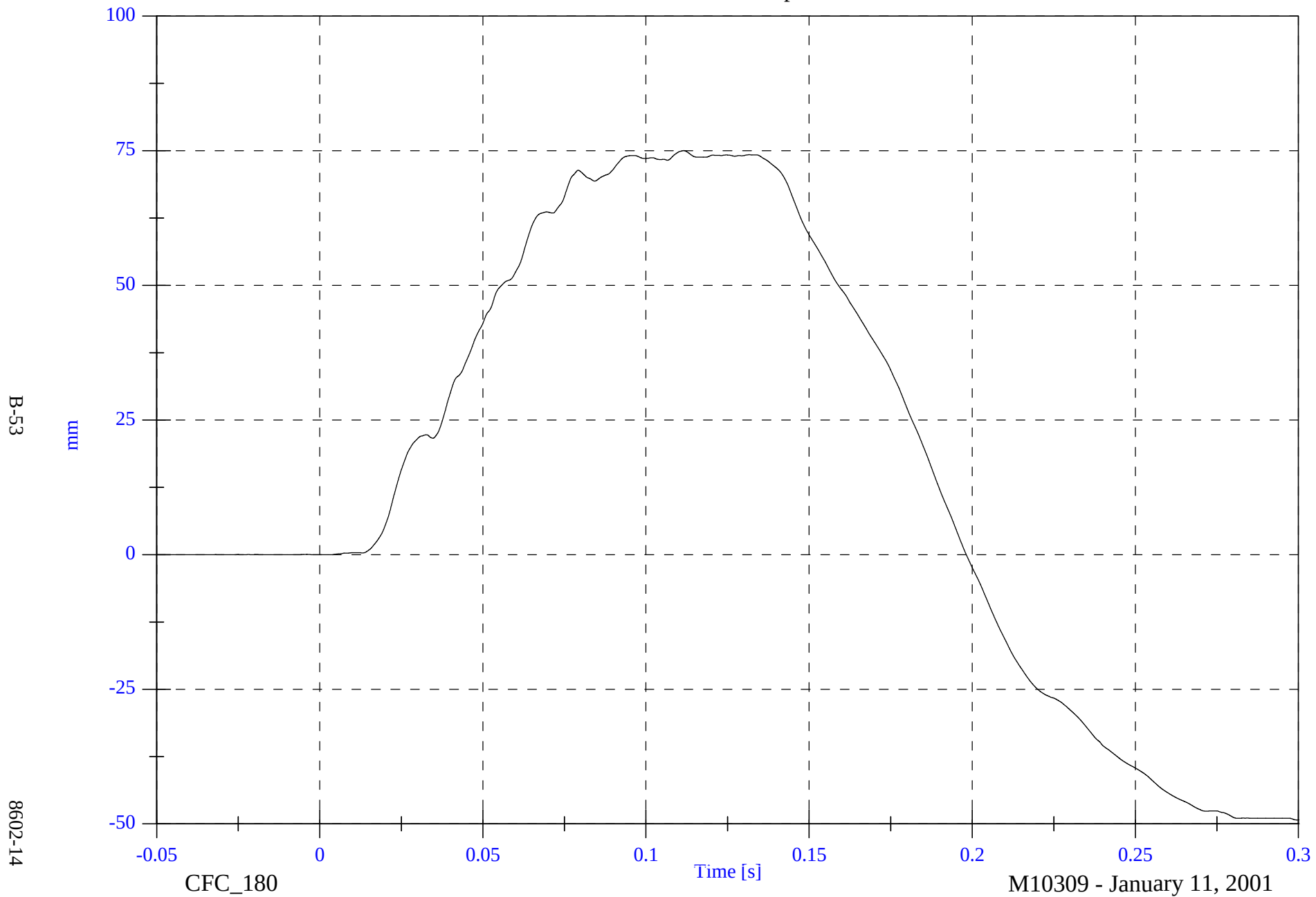


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P1 Shoulder Belt Spoolout

Max: 75.0 [mm] at 0.112 [s]

Min: -49.3 [mm] at 0.299 [s]



NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

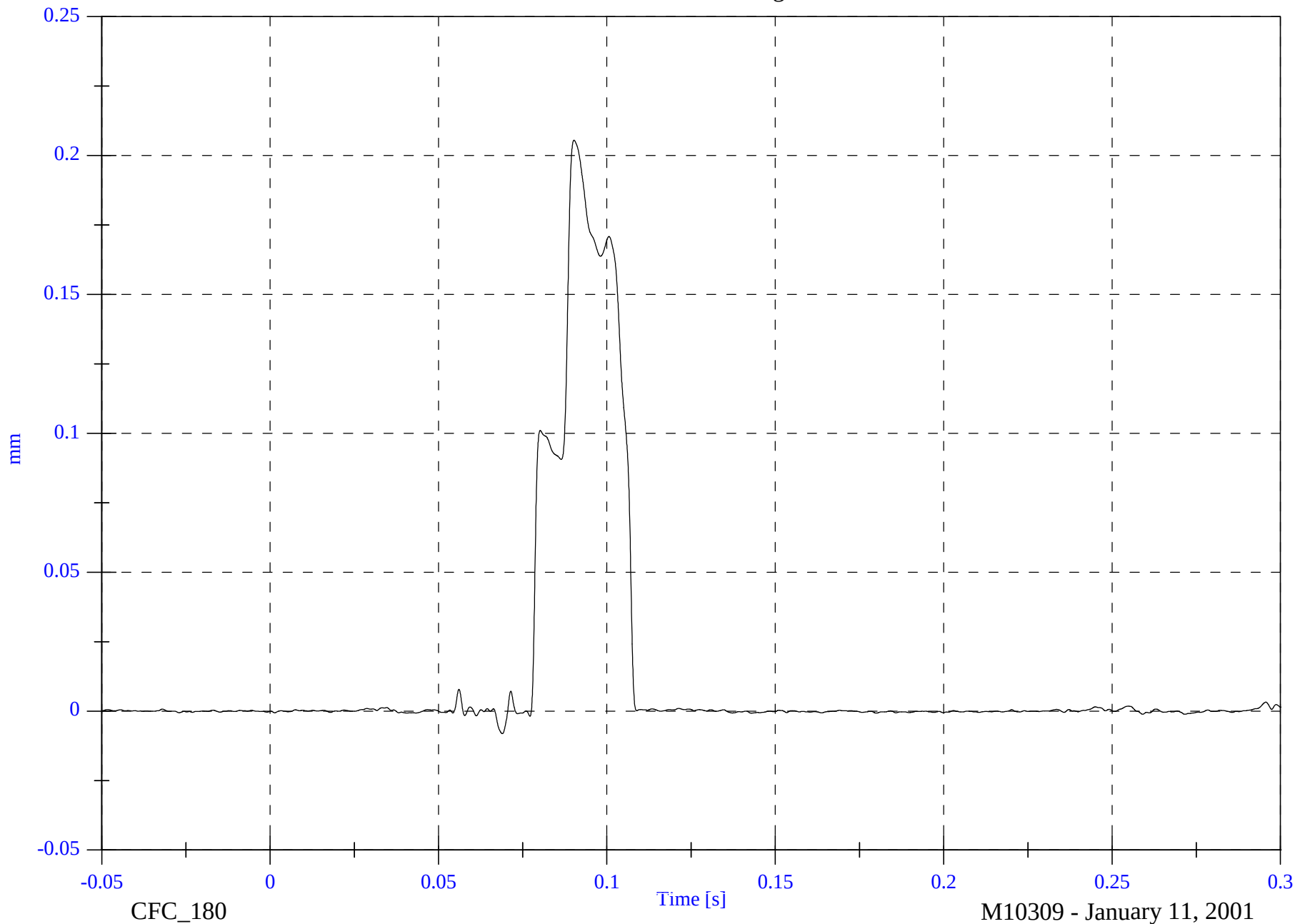
P1 Shoulder Belt Elongation

Max: 0.2 [mm] at 0.090 [s]

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

B-54

8602-14

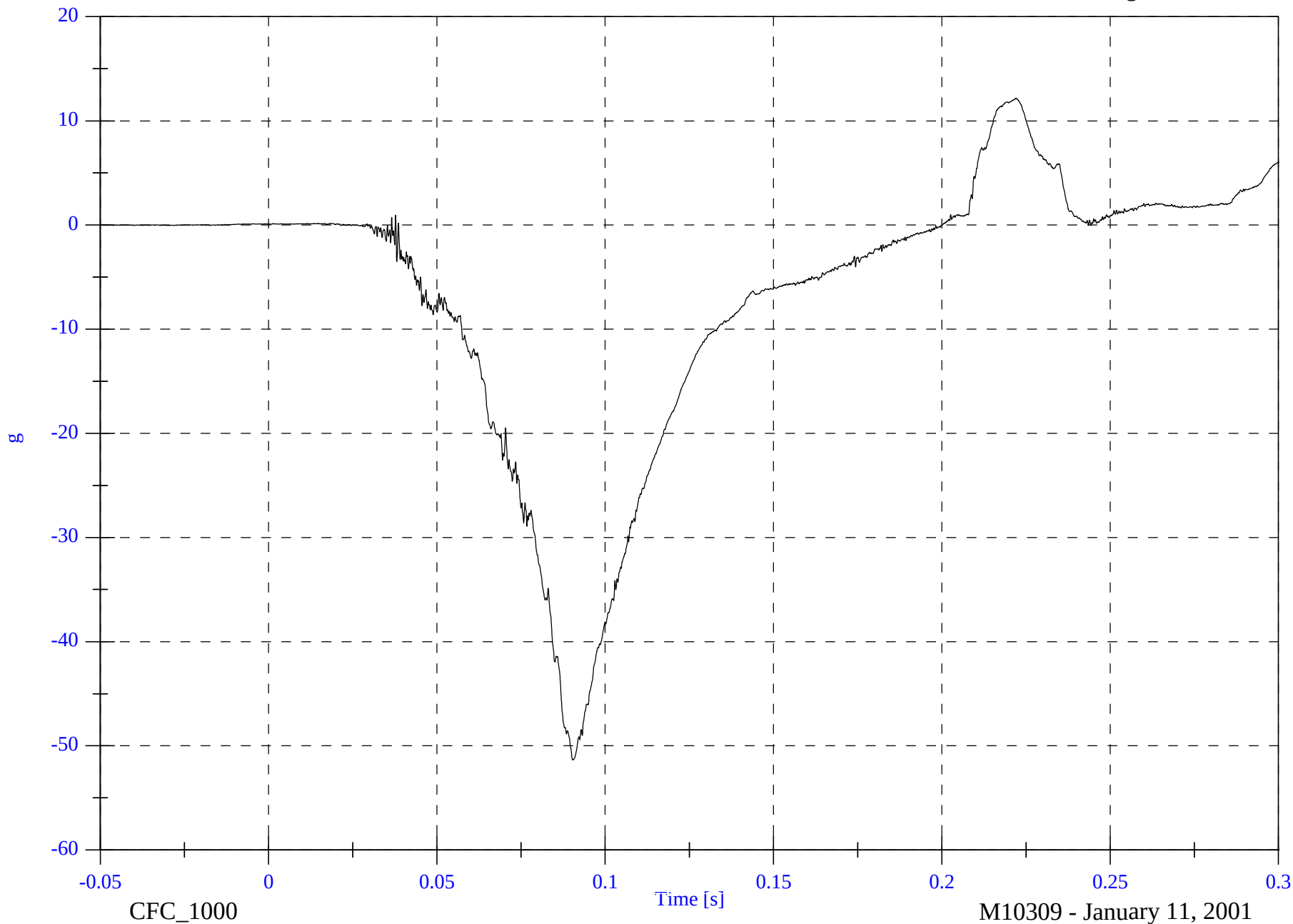


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P2 Head x

Max: 12.2 [g] at 0.222 [s]

Min: -51.4 [g] at 0.090 [s]



B-55

8602-14

CFC_1000

Time [s]

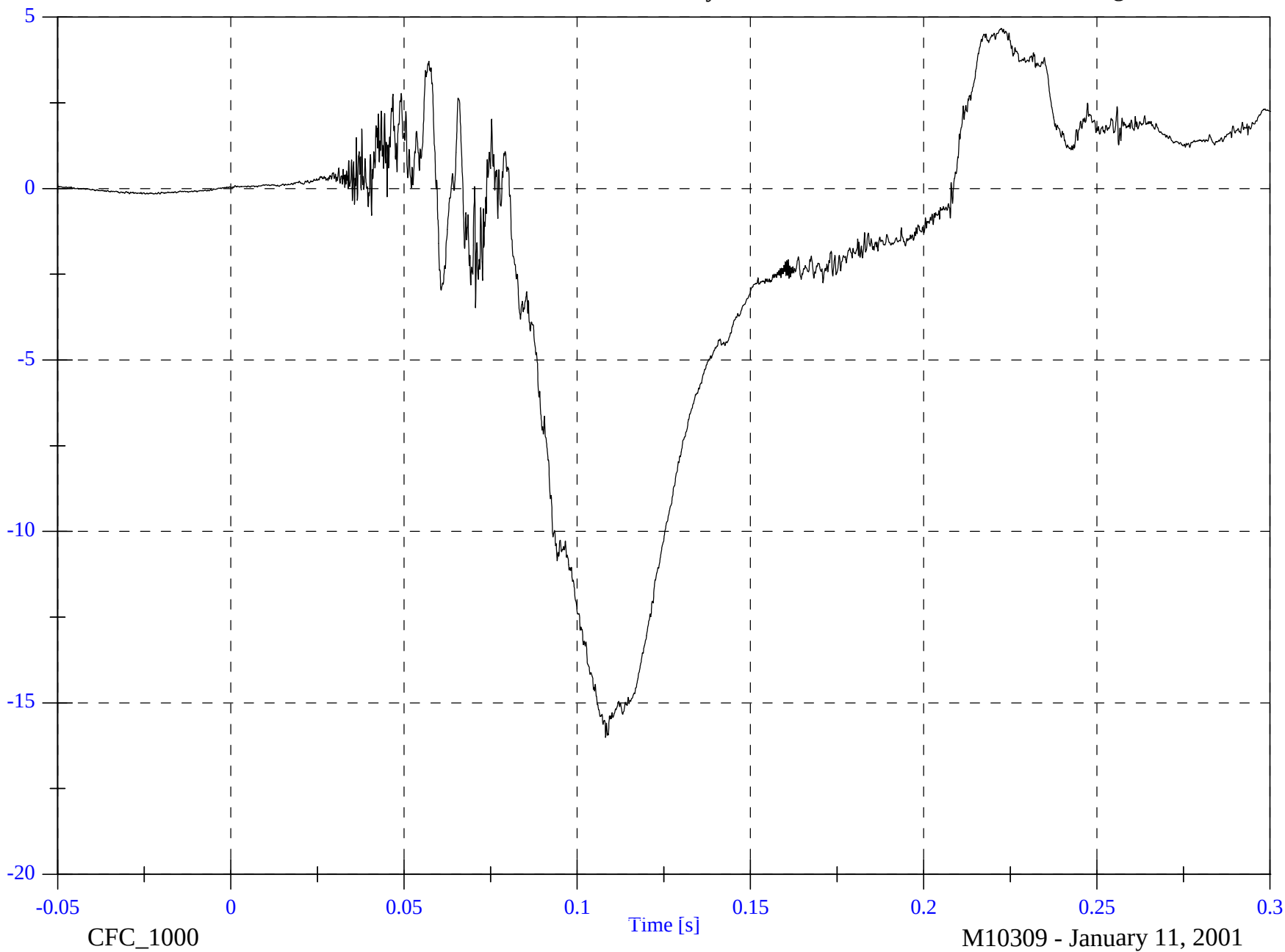
M10309 - January 11, 2001

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P2 Head y

Max: 4.7 [g] at 0.222 [s]

Min: -16.0 [g] at 0.108 [s]



B-56

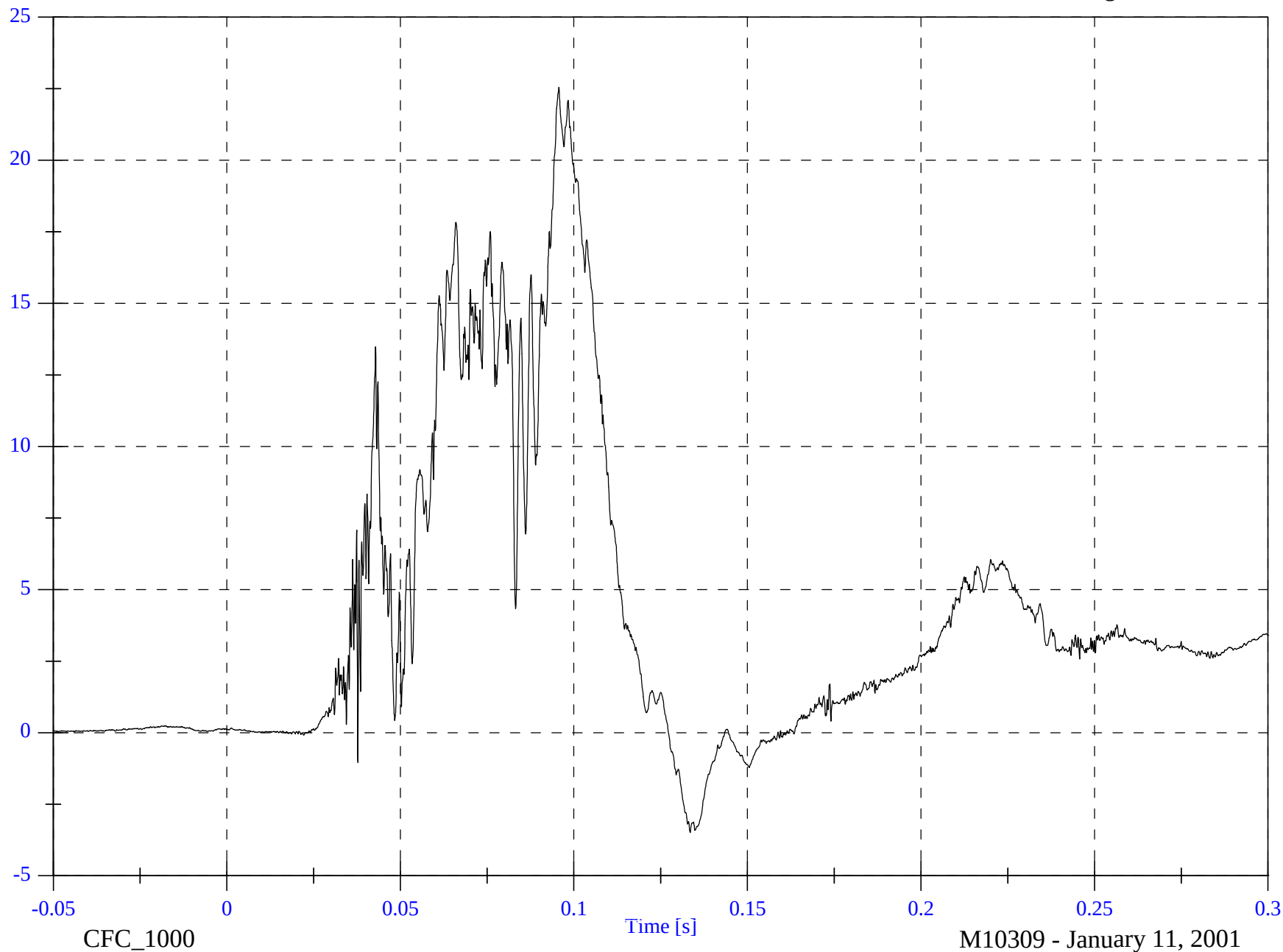
8602-14

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P2 Head z

Max: 22.6 [g] at 0.096 [s]

Min: -3.5 [g] at 0.133 [s]



B-57

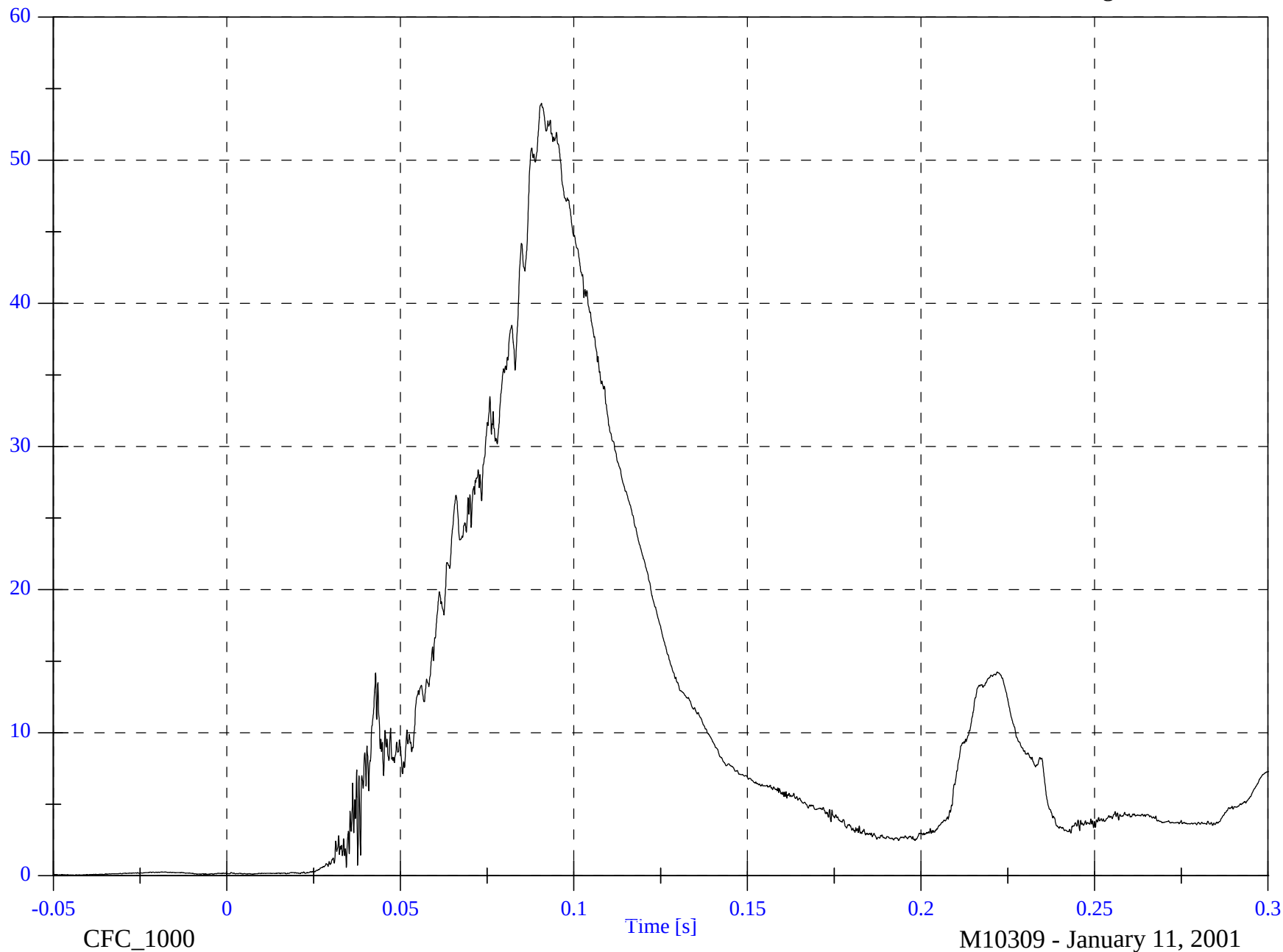
8602-14

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P2 Head Resultant

Max: 54.0 [g] at 0.091 [s]

Min: 0.0 [g] at -0.044 [s]

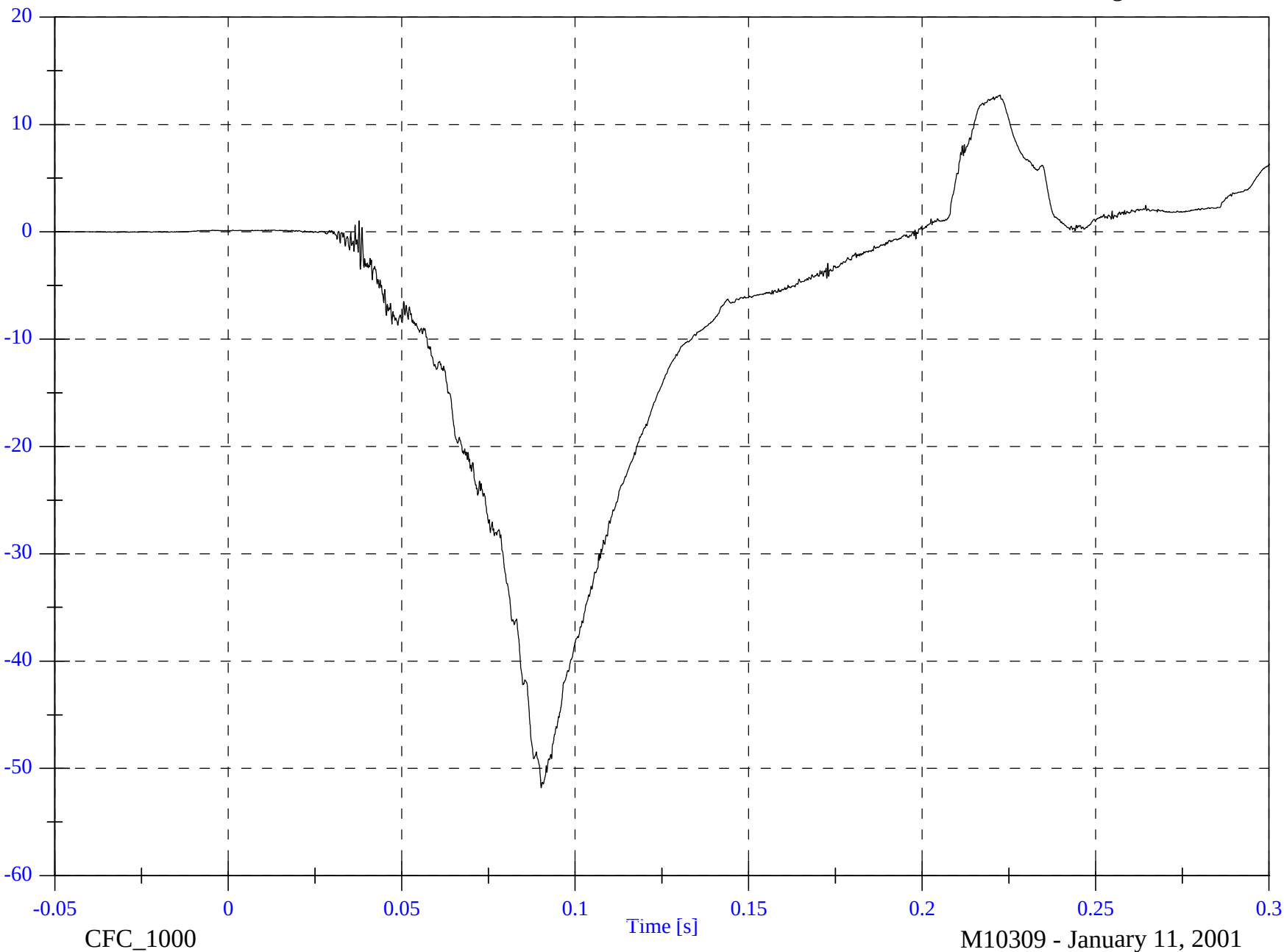


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P2 Head Red x

Max: 12.7 [g] at 0.222 [s]

Min: -51.8 [g] at 0.090 [s]



B-59

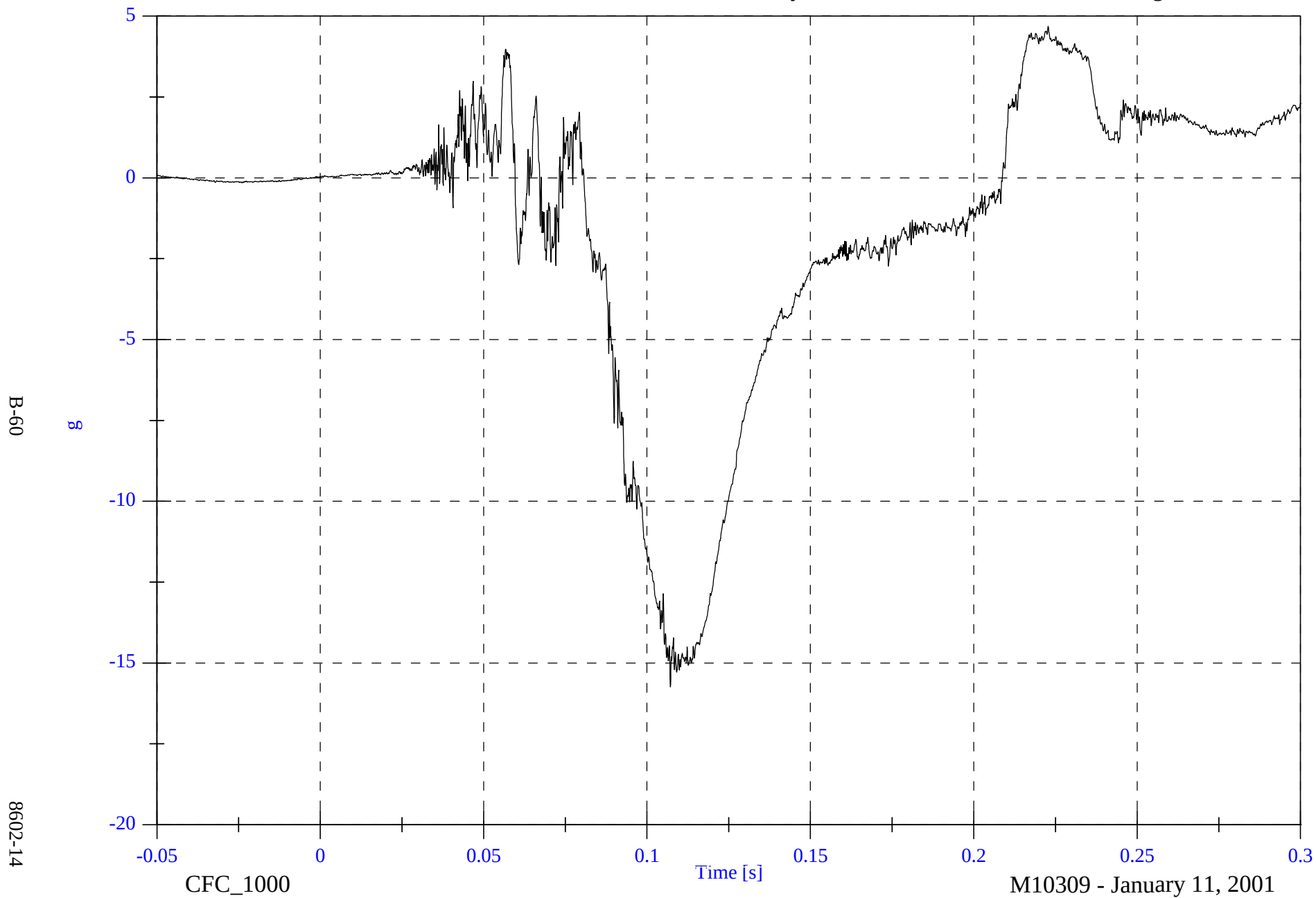
8602-14

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P2 Head Red y

Max: 4.7 [g] at 0.223 [s]

Min: -15.7 [g] at 0.107 [s]

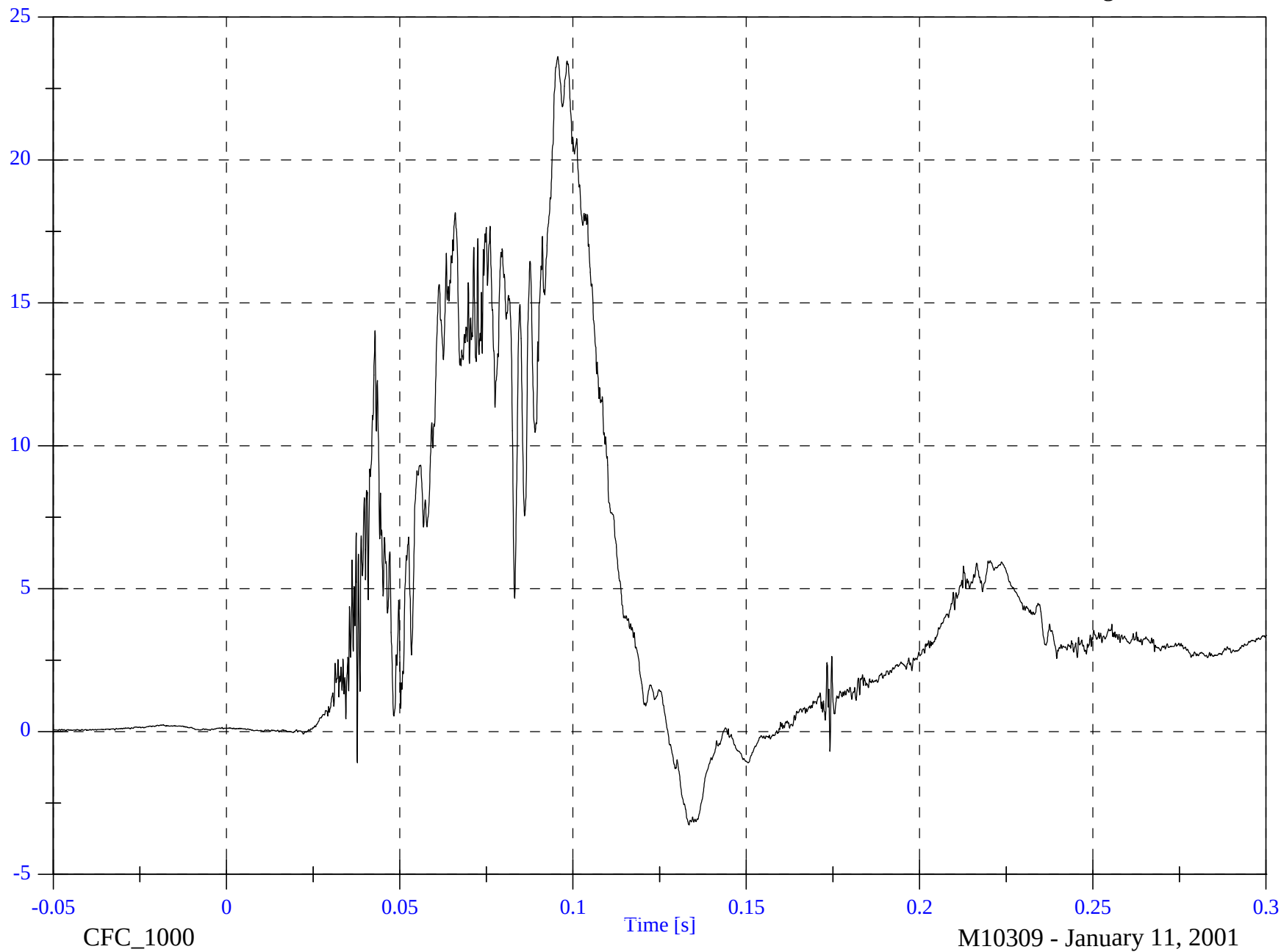


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P2 Head Red z

Max: 23.6 [g] at 0.096 [s]

Min: -3.3 [g] at 0.133 [s]



B-61

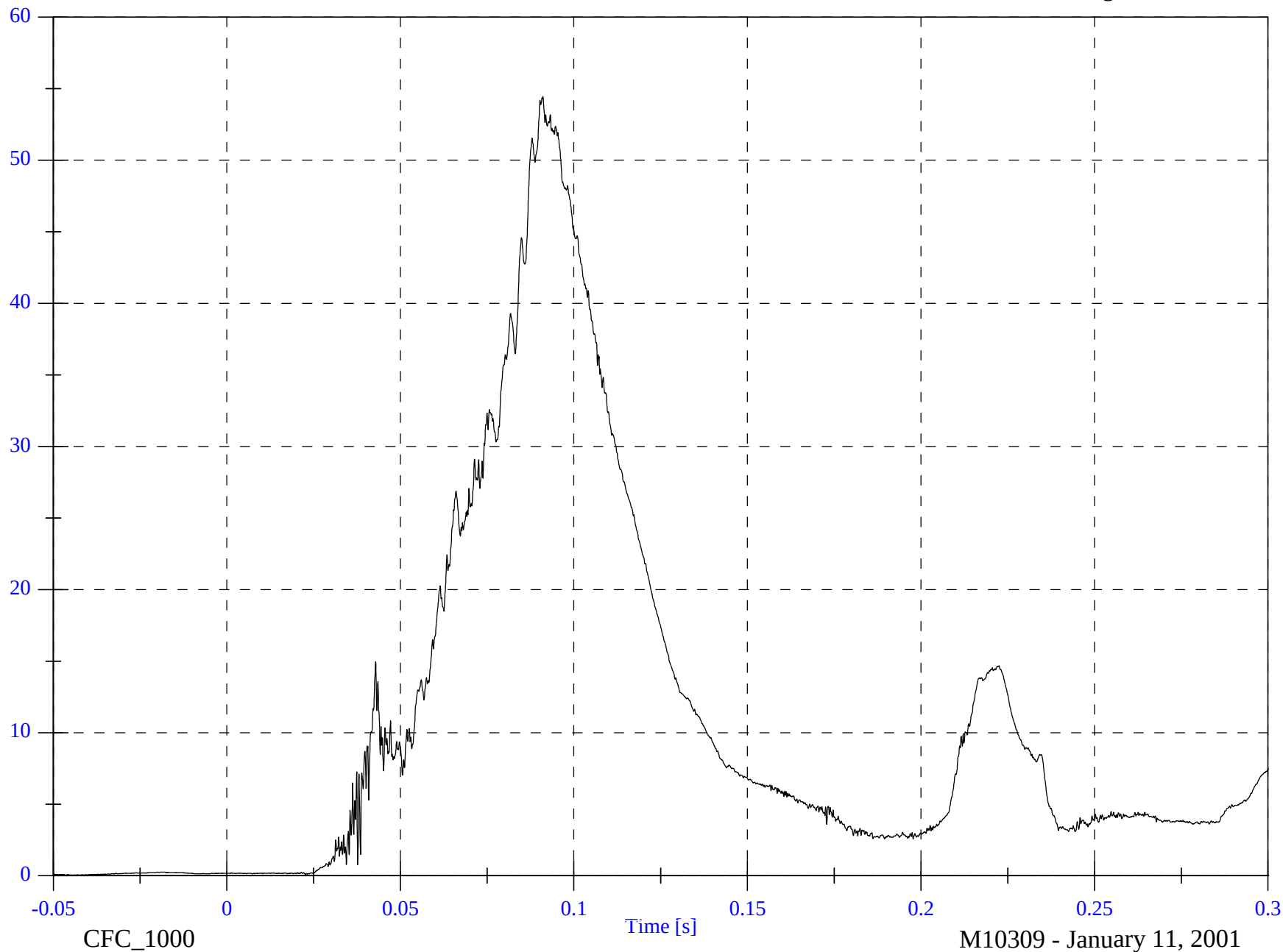
8602-14

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P2 Head Red Resultant

Max: 54.5 [g] at 0.091 [s]

Min: 0.0 [g] at -0.044 [s]



B-62

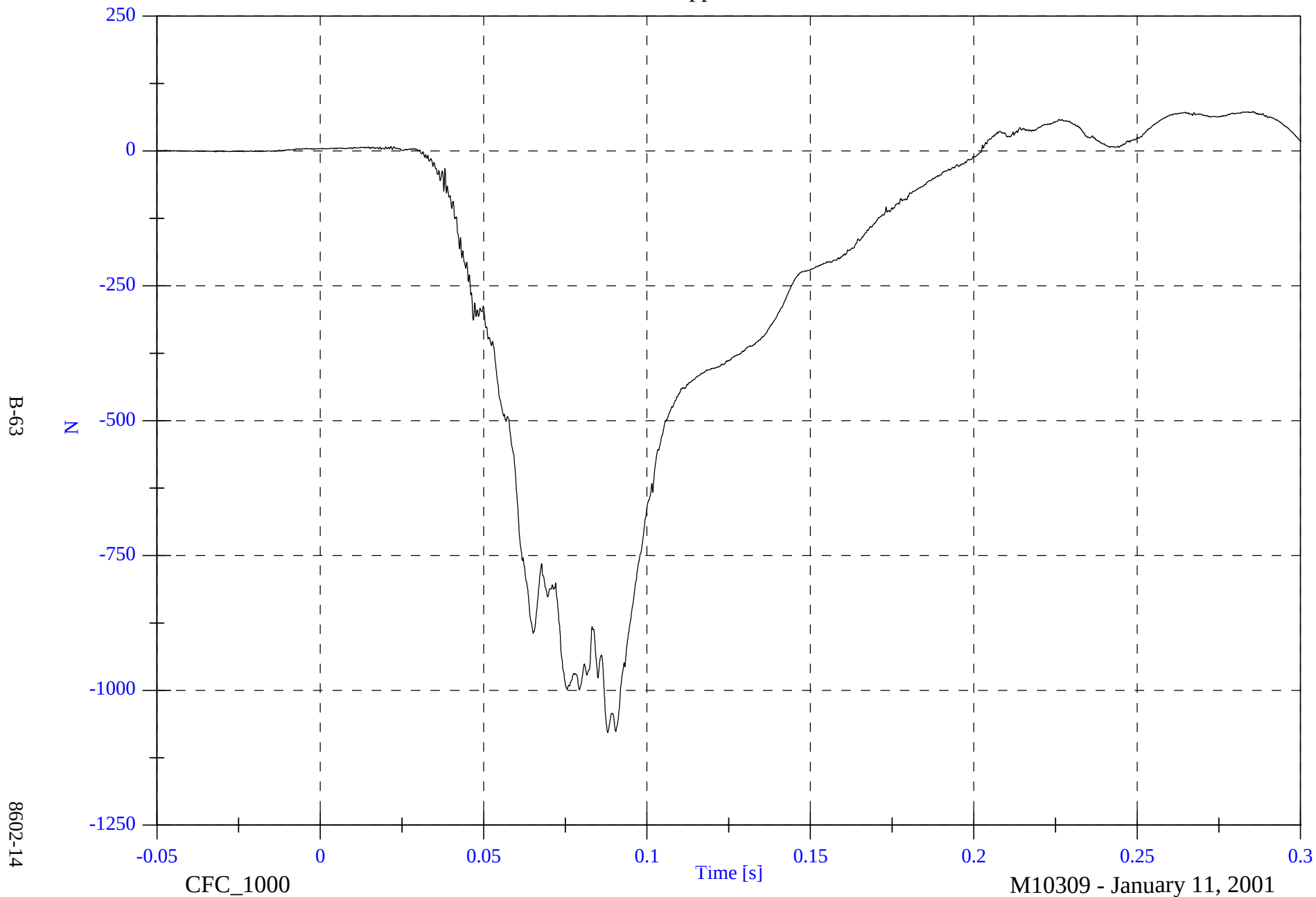
8602-14

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P2 Upper Neck Fx

Max: 73.3 [N] at 0.285 [s]

Min: -1078.3 [N] at 0.088 [s]

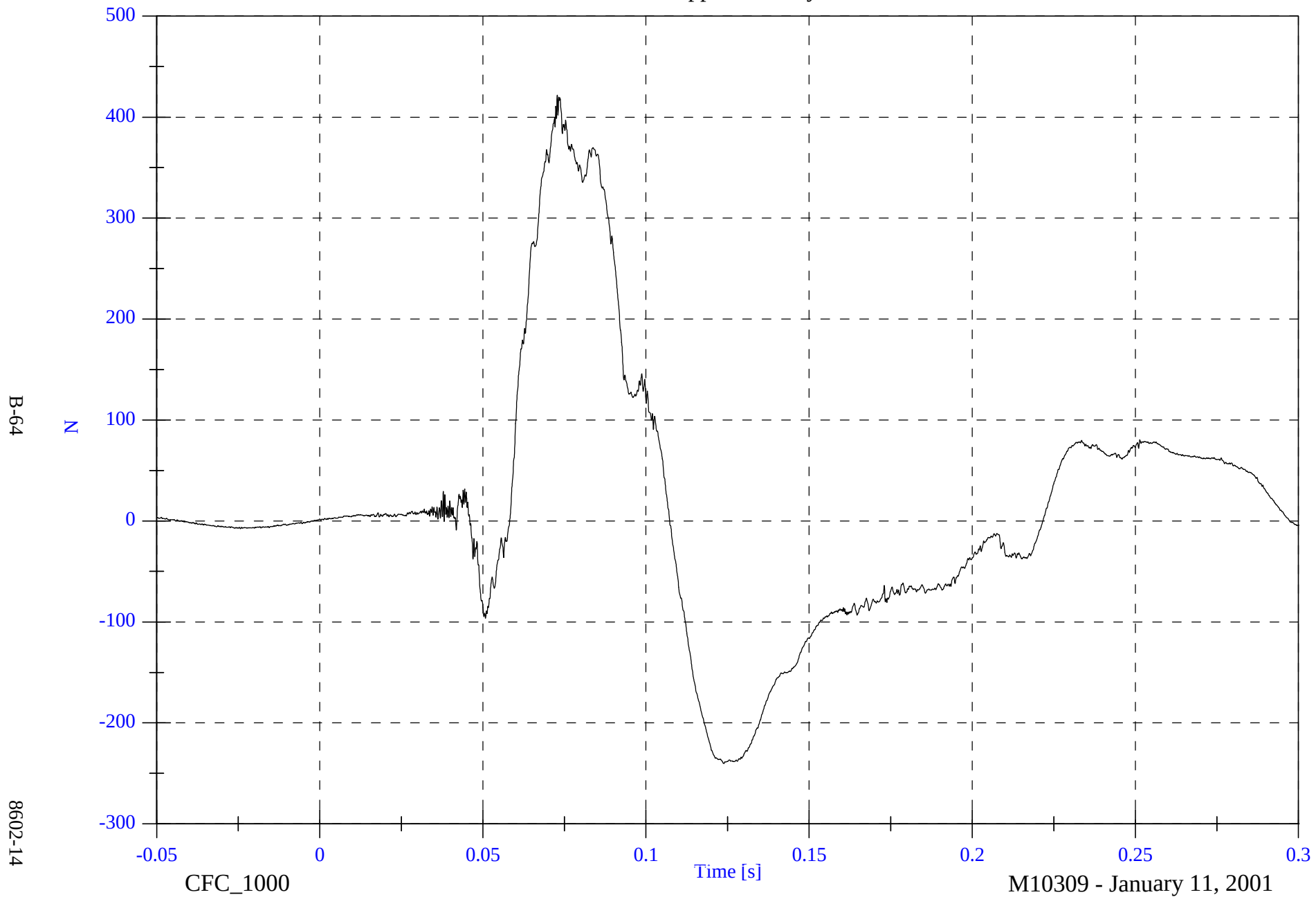


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P2 Upper Neck Fy

Max: 421.7 [N] at 0.073 [s]

Min: -240.3 [N] at 0.124 [s]



NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

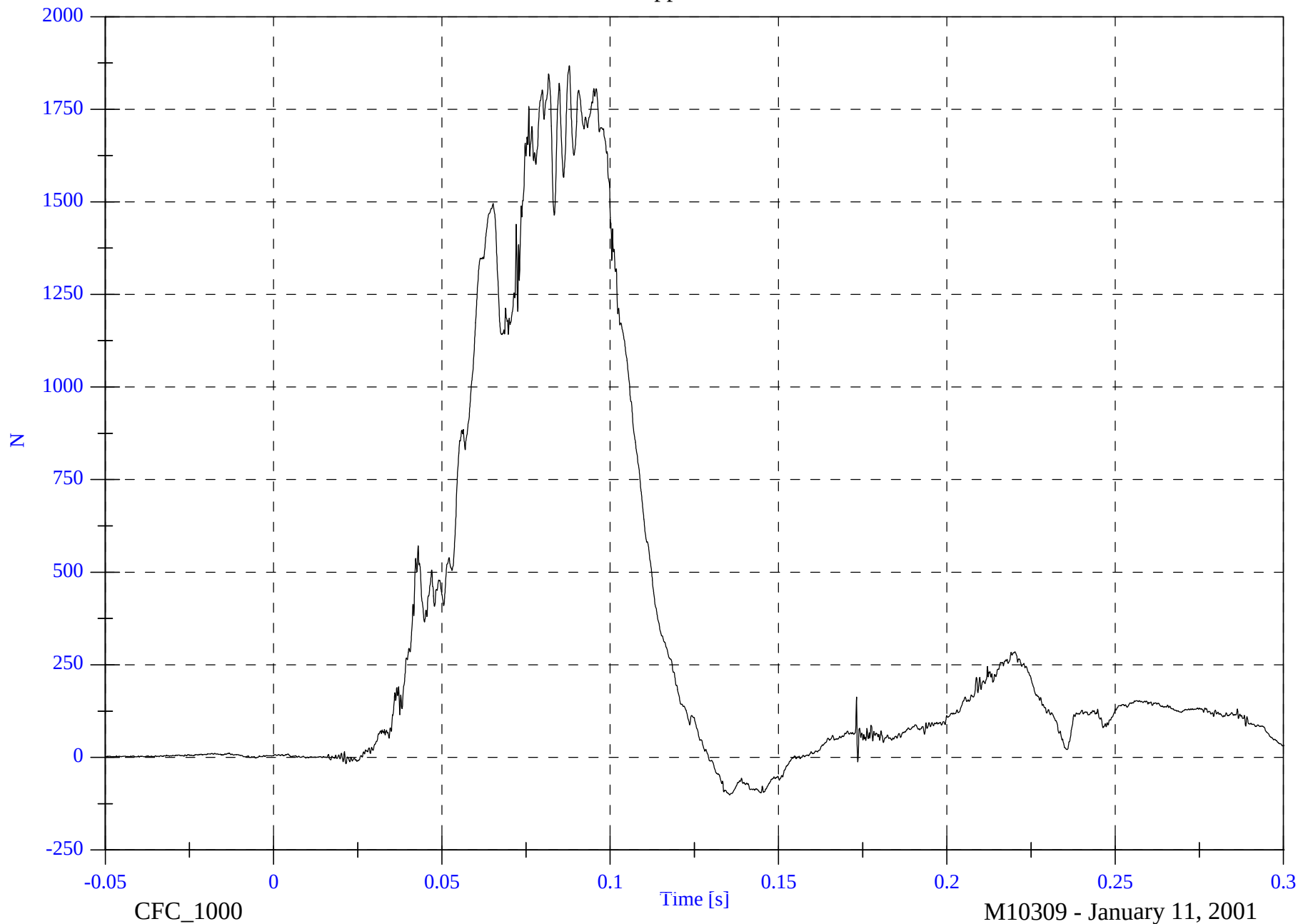
P2 Upper Neck Fz

Max: 1867.6 [N] at 0.088 [s]

Min: -101.3 [N] at 0.135 [s]

B-65

8602-14

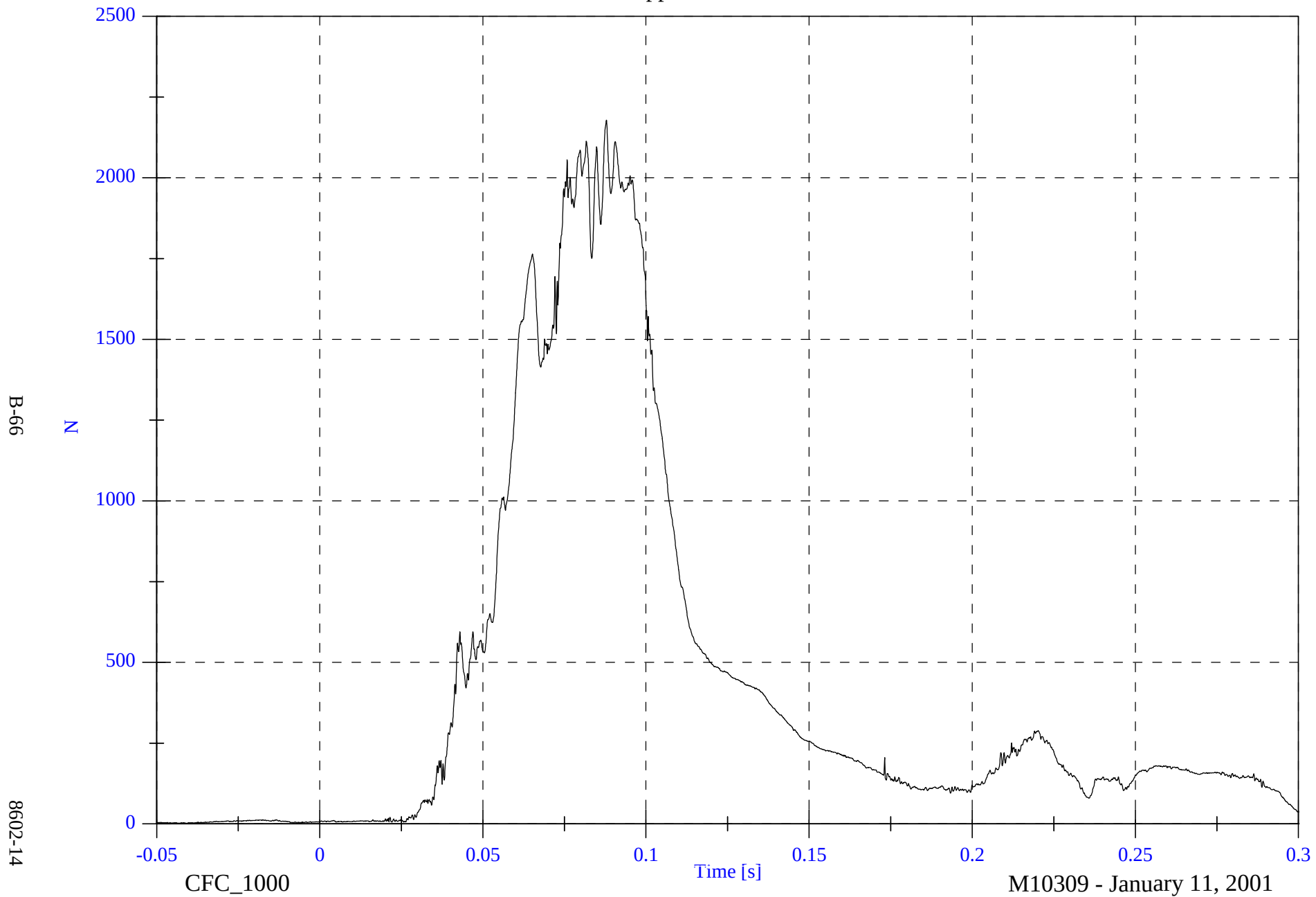


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P2 Upper Neck F Resultant

Max: 2178.4 [N] at 0.088 [s]

Min: 1.5 [N] at -0.041 [s]

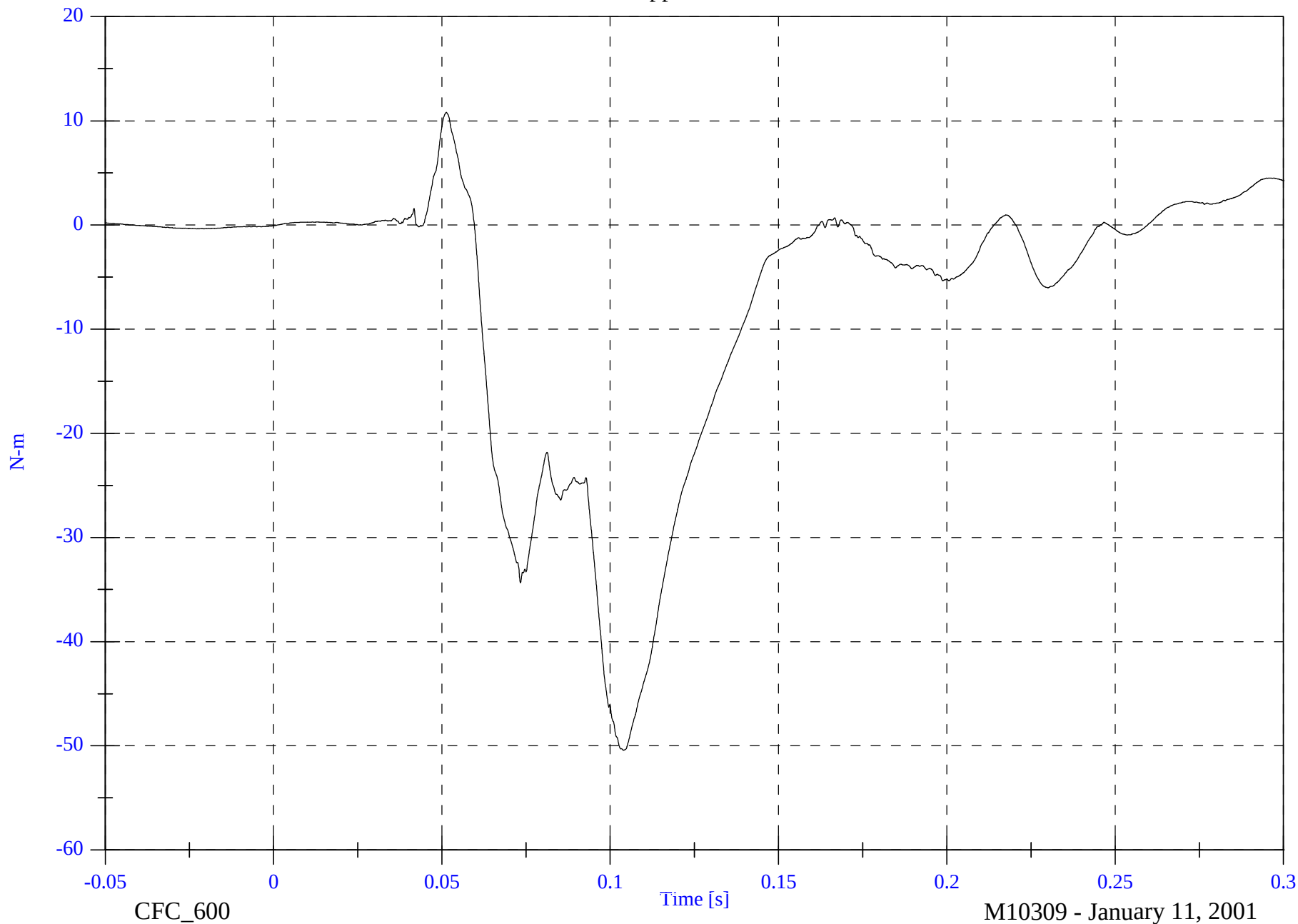


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P2 Upper Neck Mx

Max: 10.8 [N-m] at 0.051 [s]

Min: -50.4 [N-m] at 0.104 [s]



B-67

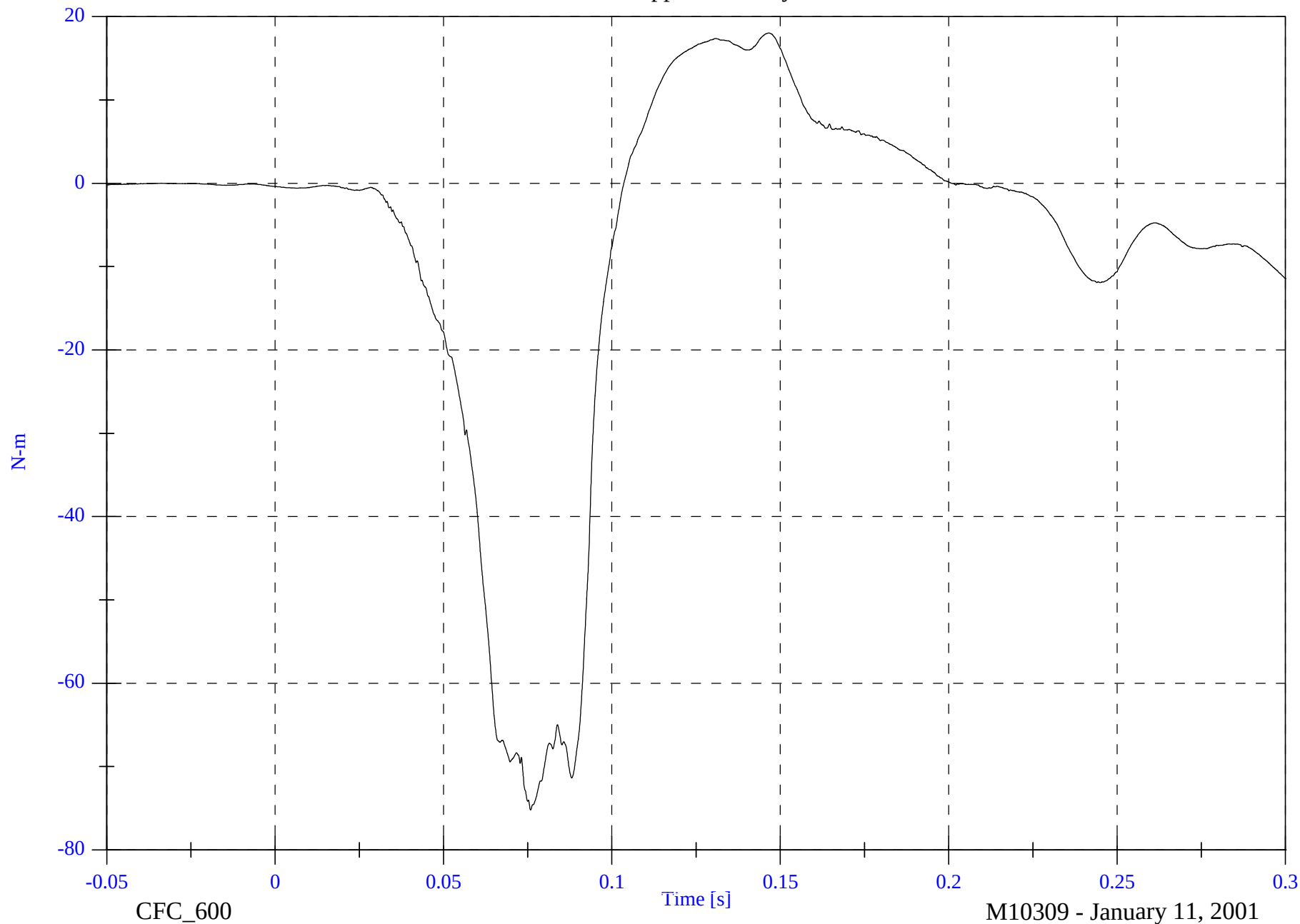
8602-14

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P2 Upper Neck My

Max: 18.0 [N-m] at 0.147 [s]

Min: -75.2 [N-m] at 0.076 [s]



B-68

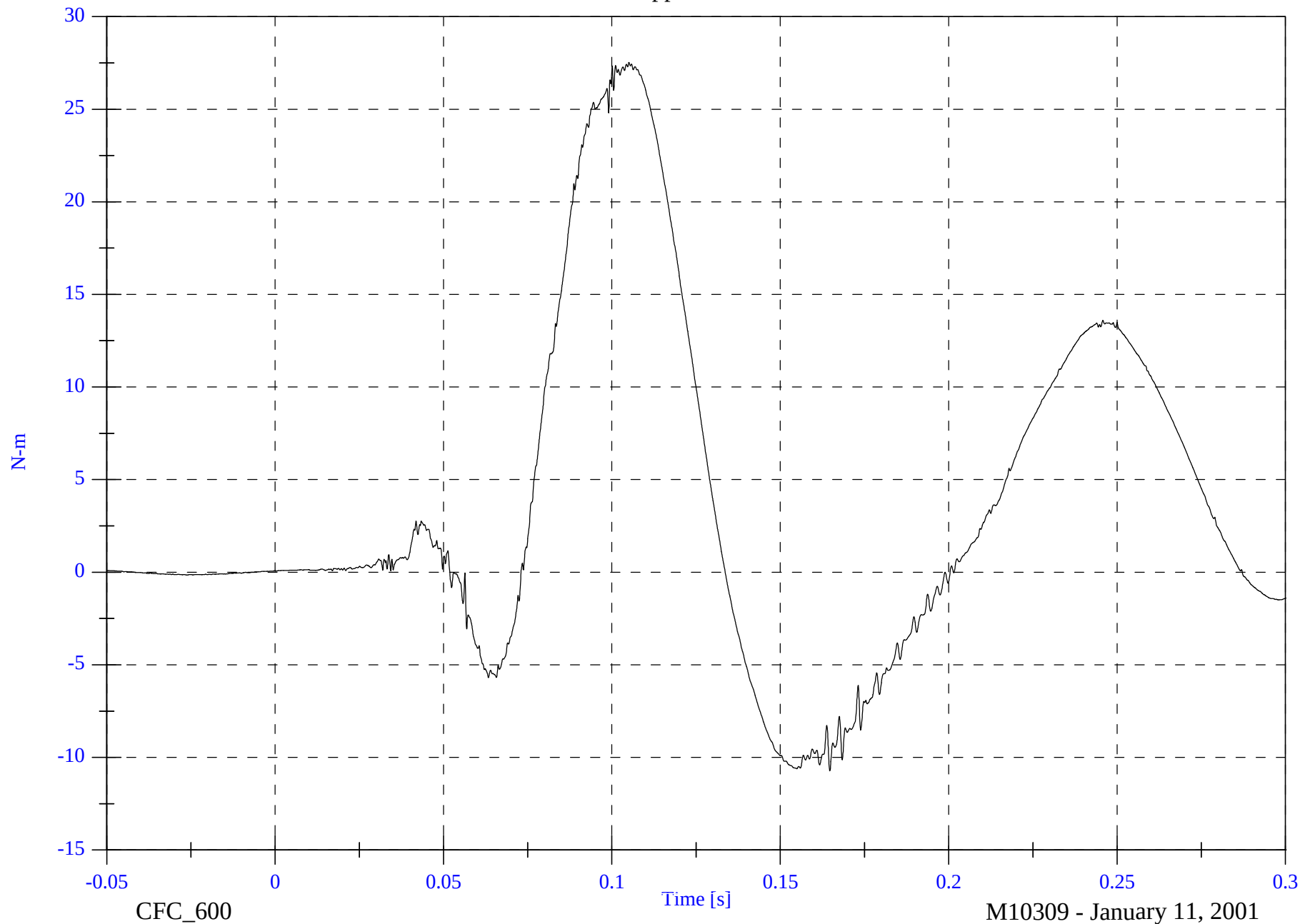
8602-14

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P2 Upper Neck Mz

Max: 27.5 [N-m] at 0.105 [s]

Min: -10.7 [N-m] at 0.165 [s]



B-69

8602-14

CFC_600

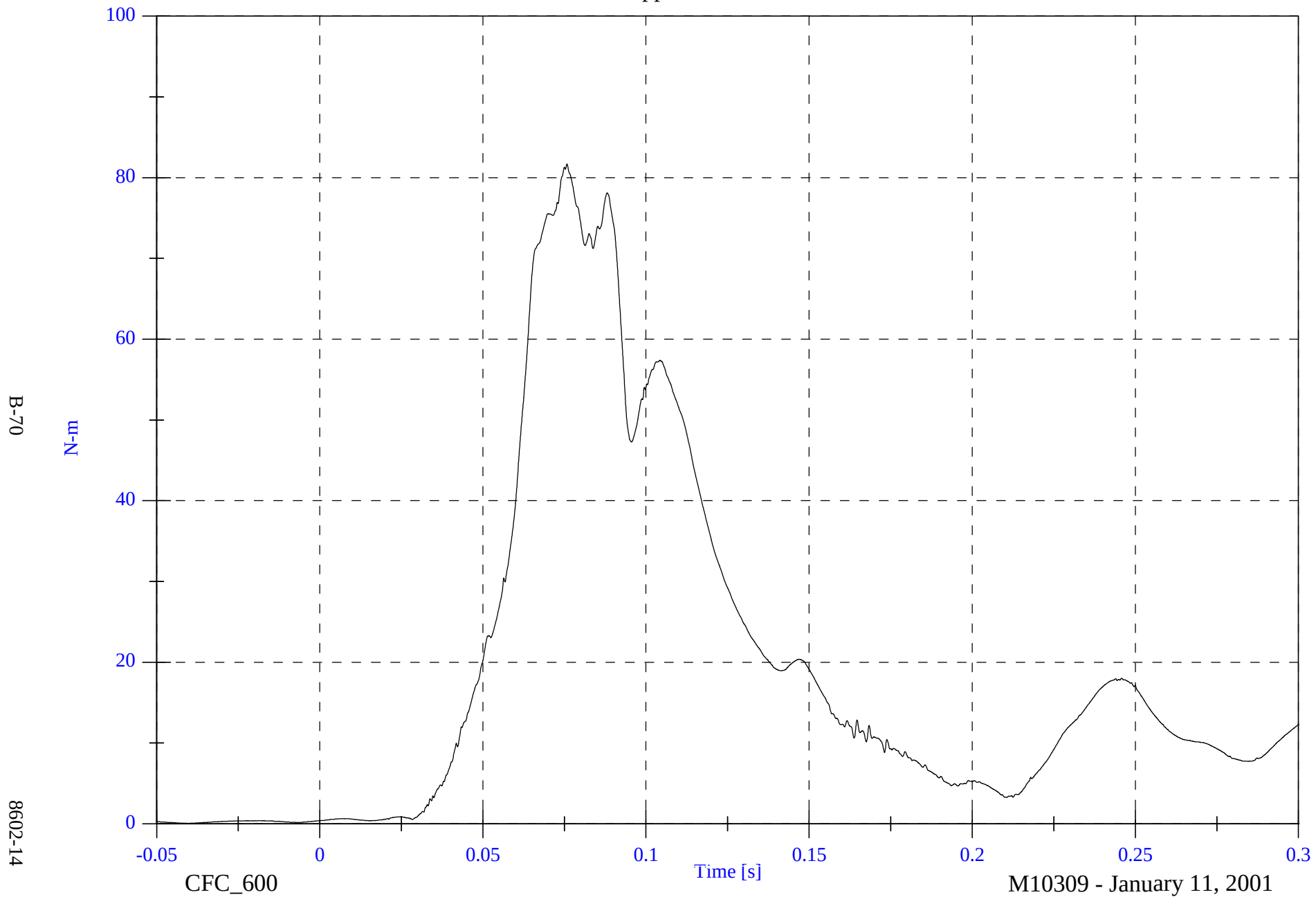
M10309 - January 11, 2001

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P2 Upper Neck M Resultant

Max: 81.7 [N-m] at 0.076 [s]

Min: 0.1 [N-m] at -0.041 [s]

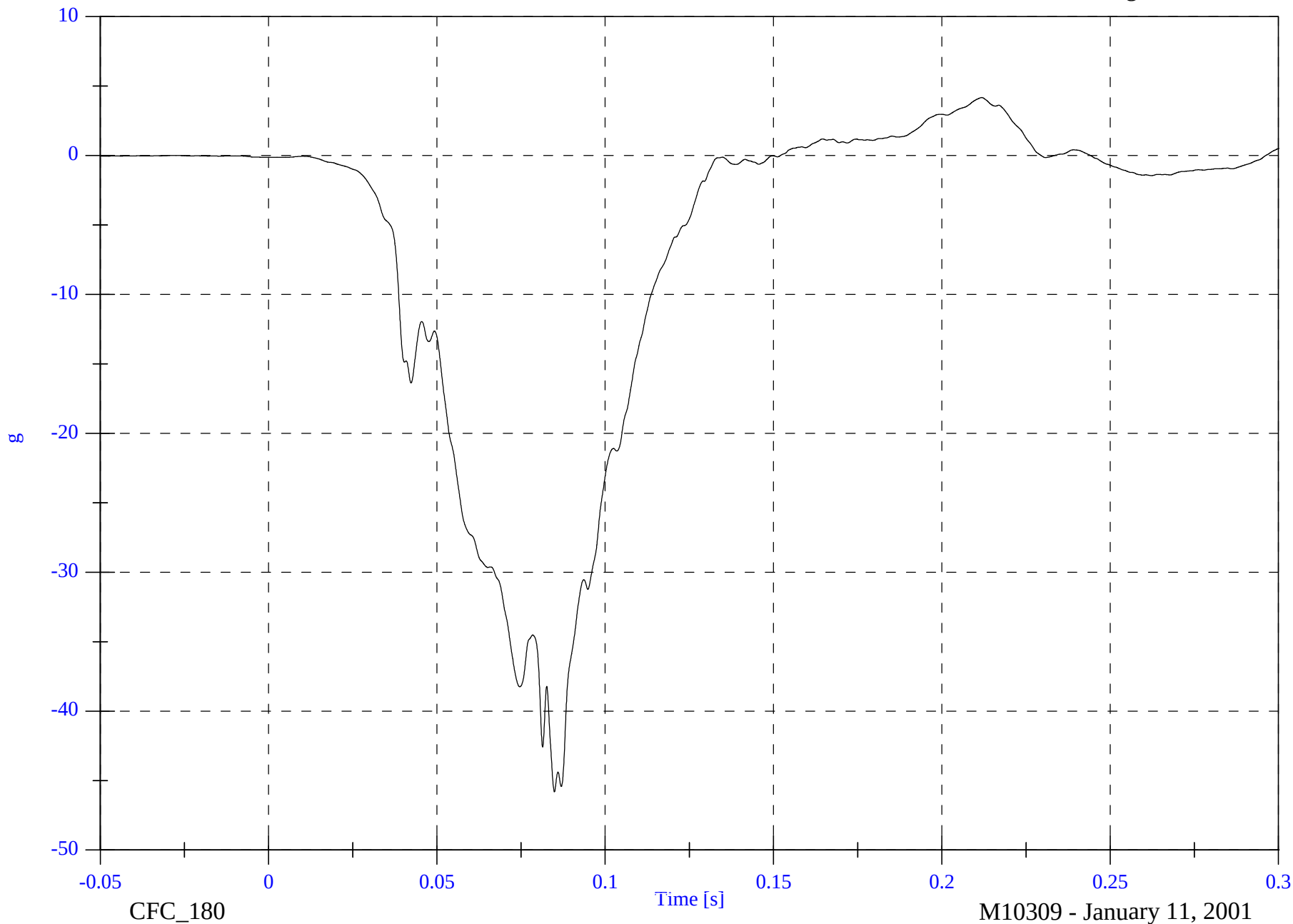


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P2 Chest x

Max: 4.2 [g] at 0.212 [s]

Min: -45.8 [g] at 0.085 [s]



B-71

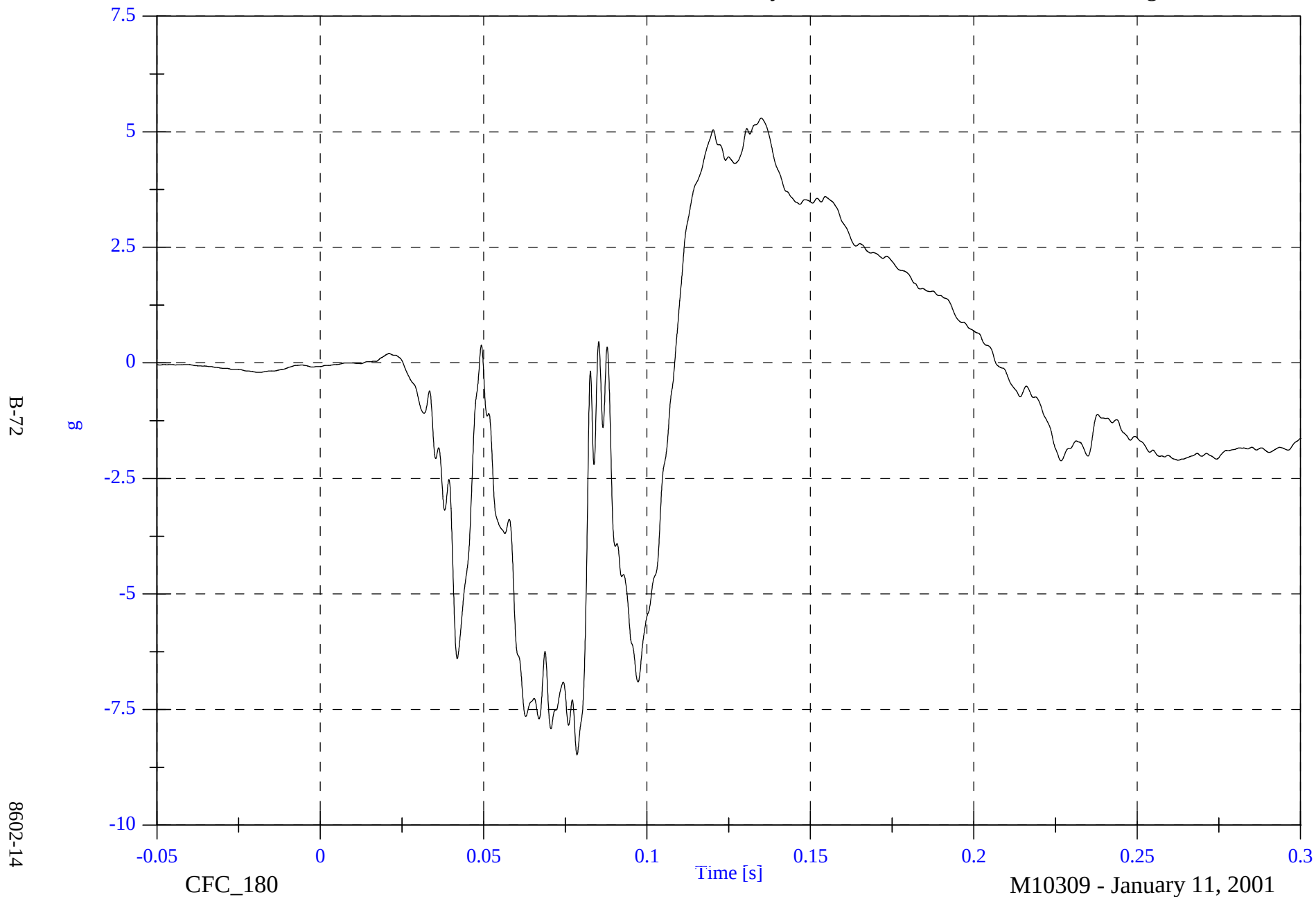
8602-14

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P2 Chest y

Max: 5.3 [g] at 0.135 [s]

Min: -8.5 [g] at 0.079 [s]

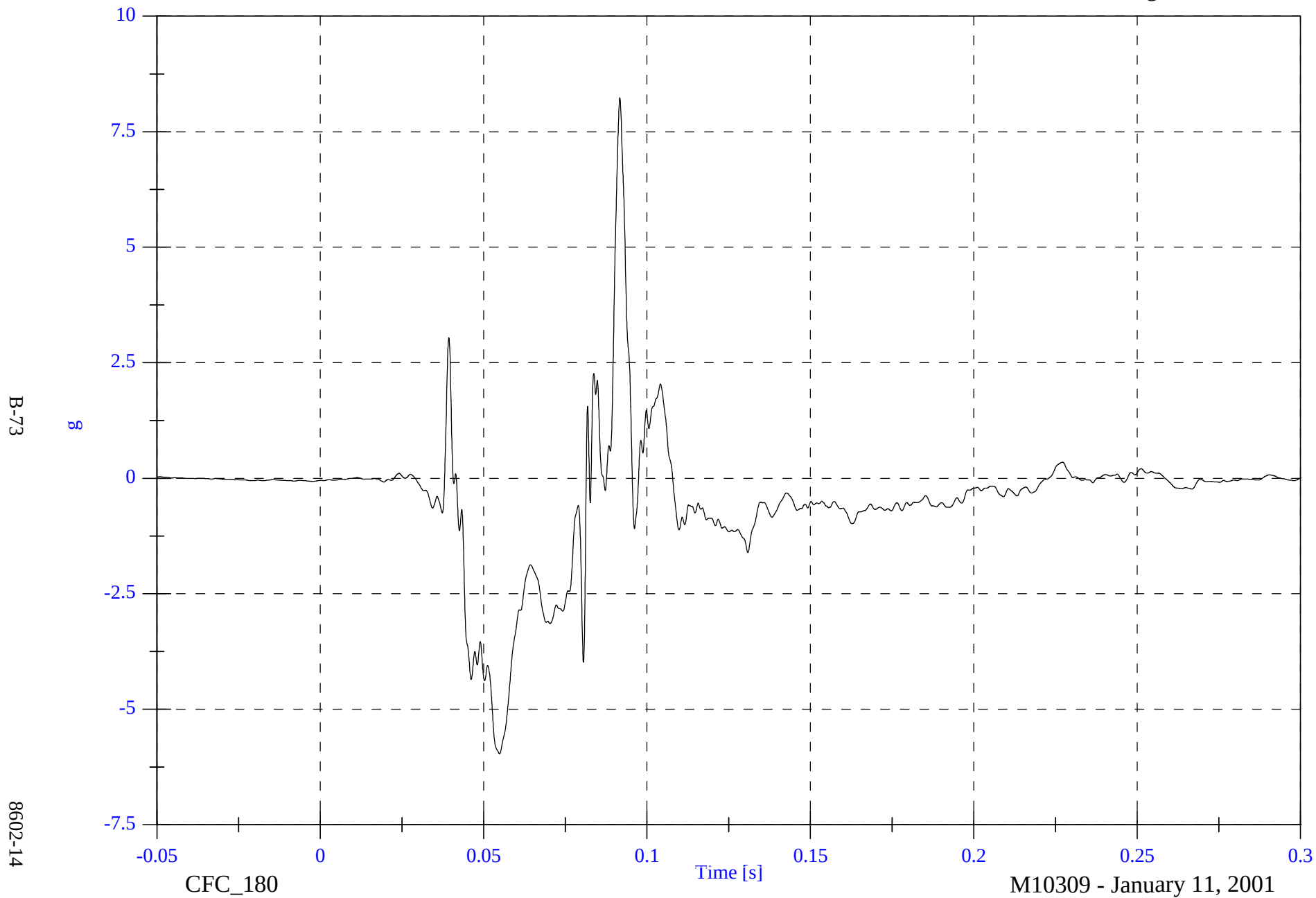


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P2 Chest z

Max: 8.2 [g] at 0.092 [s]

Min: -6.0 [g] at 0.055 [s]

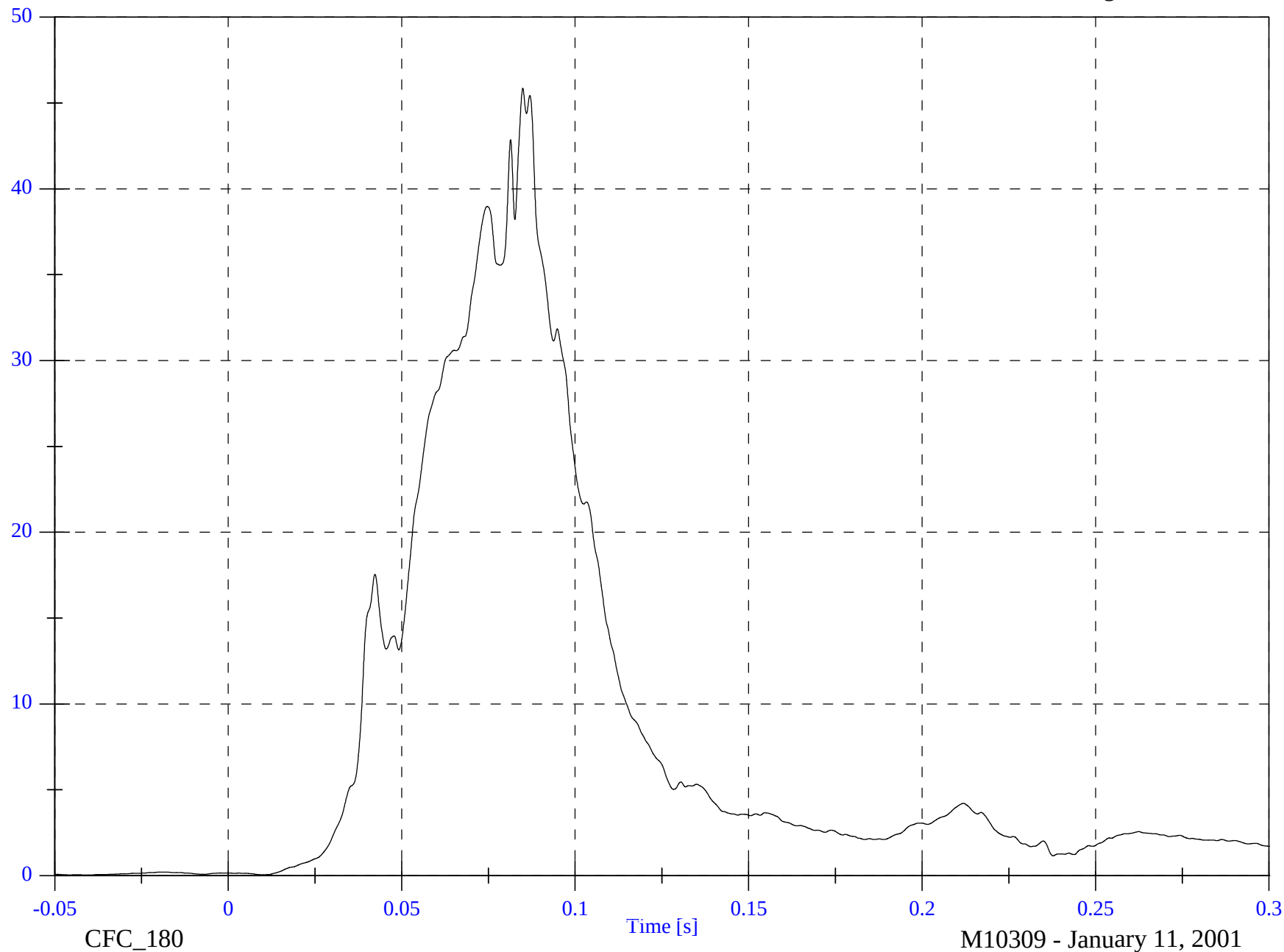


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P2 Chest Resultant

Max: 45.9 [g] at 0.085 [s]

Min: 0.0 [g] at -0.041 [s]



B-74

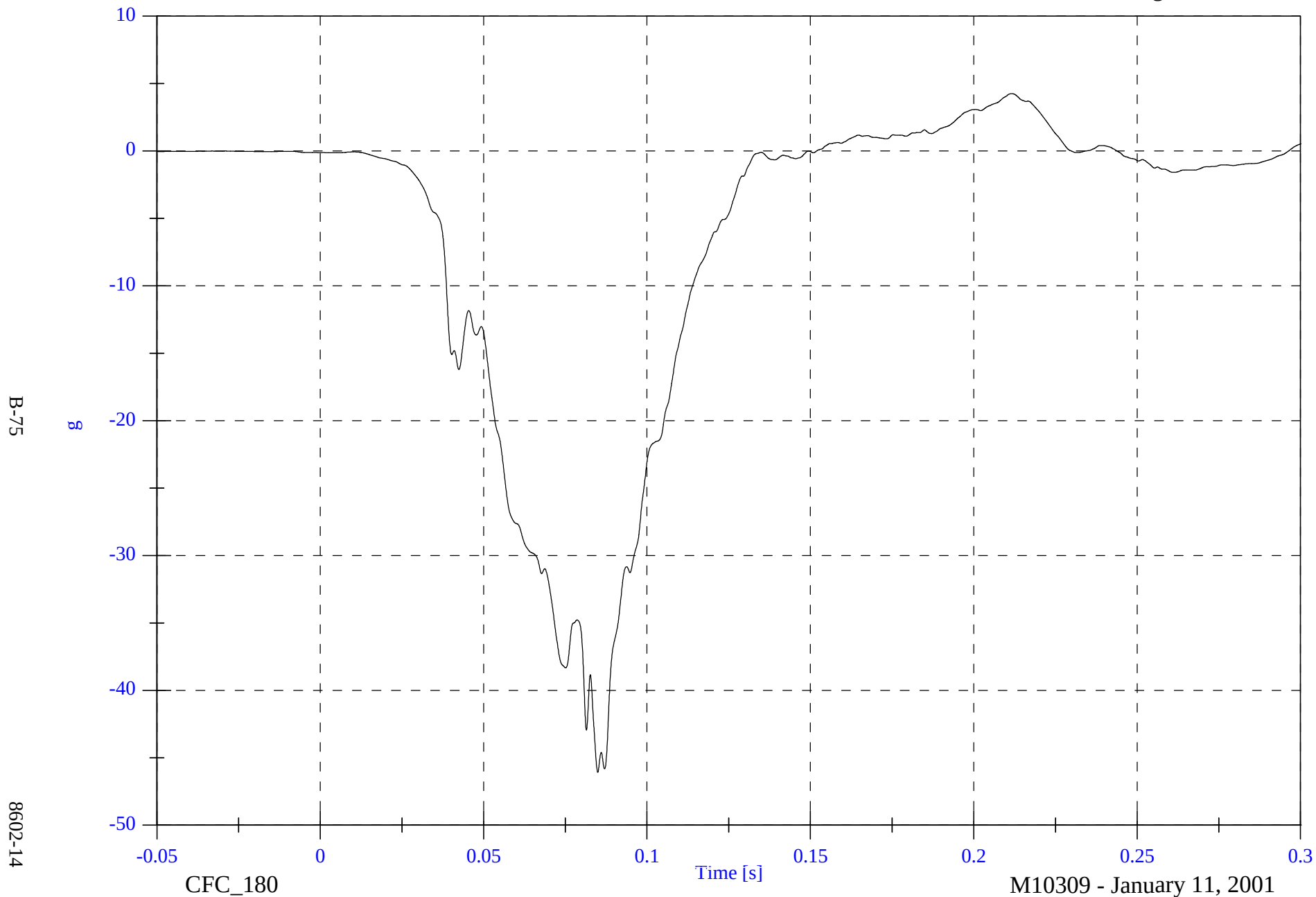
8602-14

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P2 Chest Red x

Max: 4.2 [g] at 0.212 [s]

Min: -46.1 [g] at 0.085 [s]

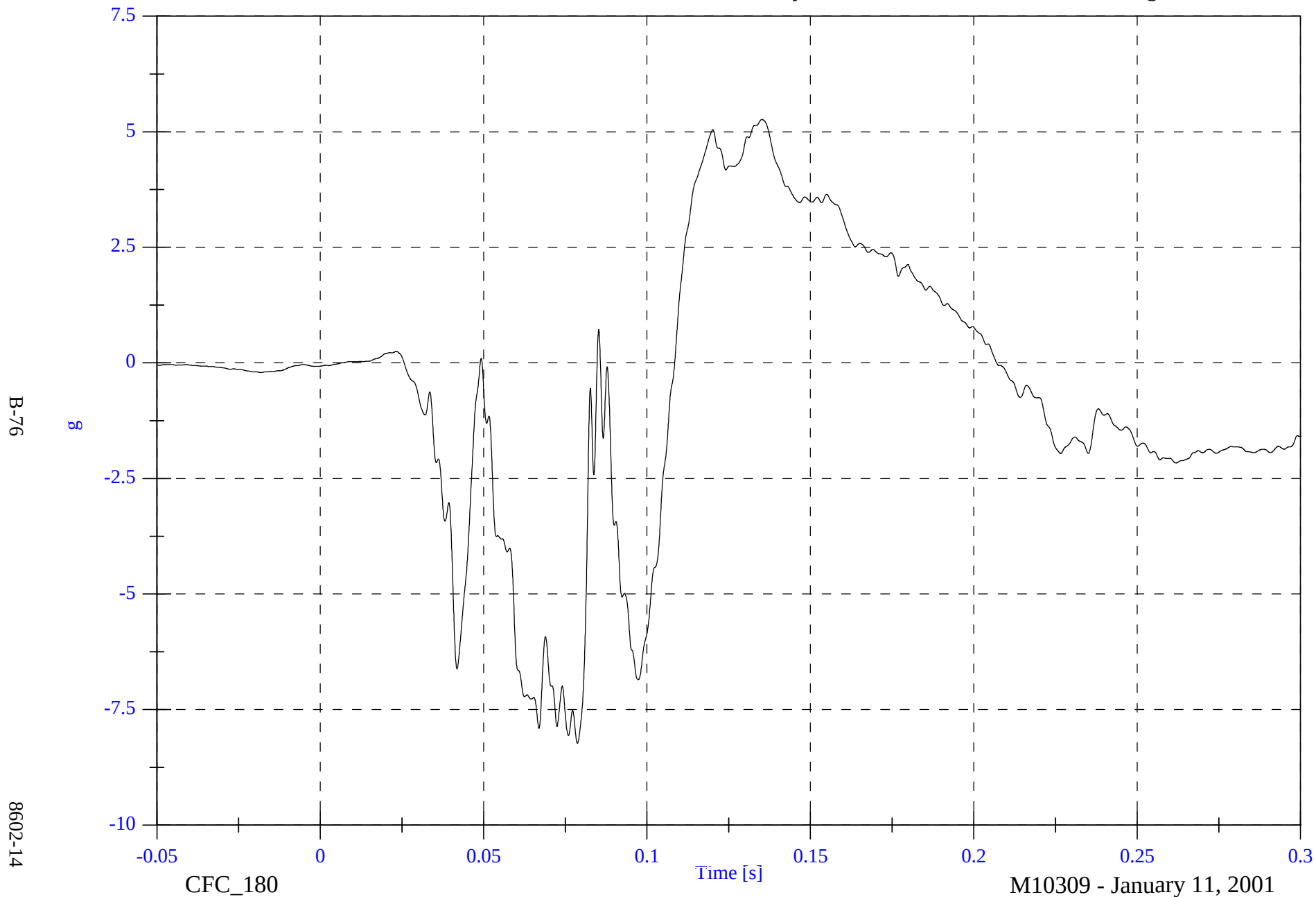


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P2 Chest Red y

Max: 5.3 [g] at 0.135 [s]

Min: -8.2 [g] at 0.079 [s]

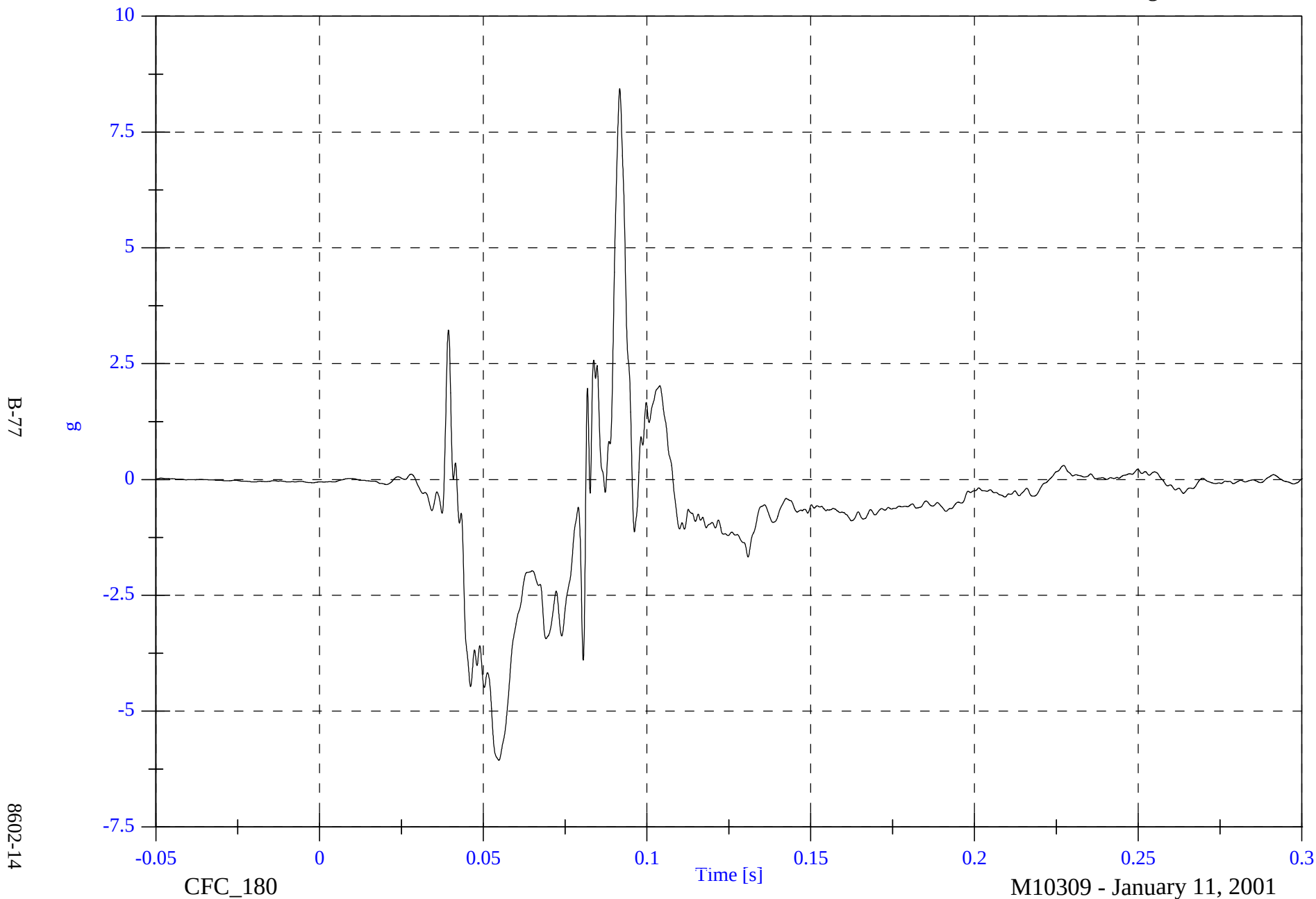


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P2 Chest Red z

Max: 8.4 [g] at 0.092 [s]

Min: -6.1 [g] at 0.055 [s]

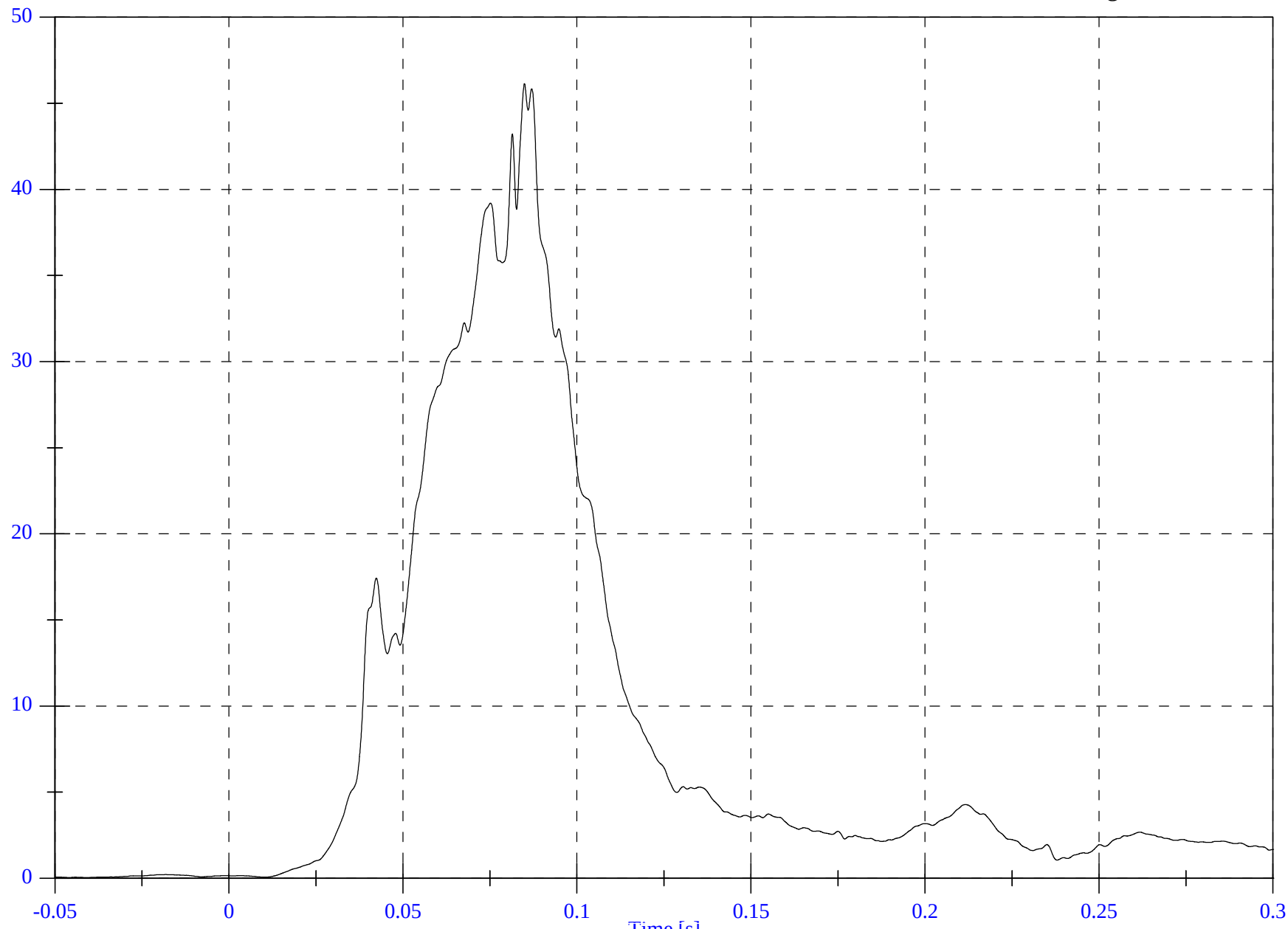


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P2 Chest Red Resultant

Max: 46.2 [g] at 0.085 [s]

Min: 0.0 [g] at -0.041 [s]



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CFC_180

Time [s]

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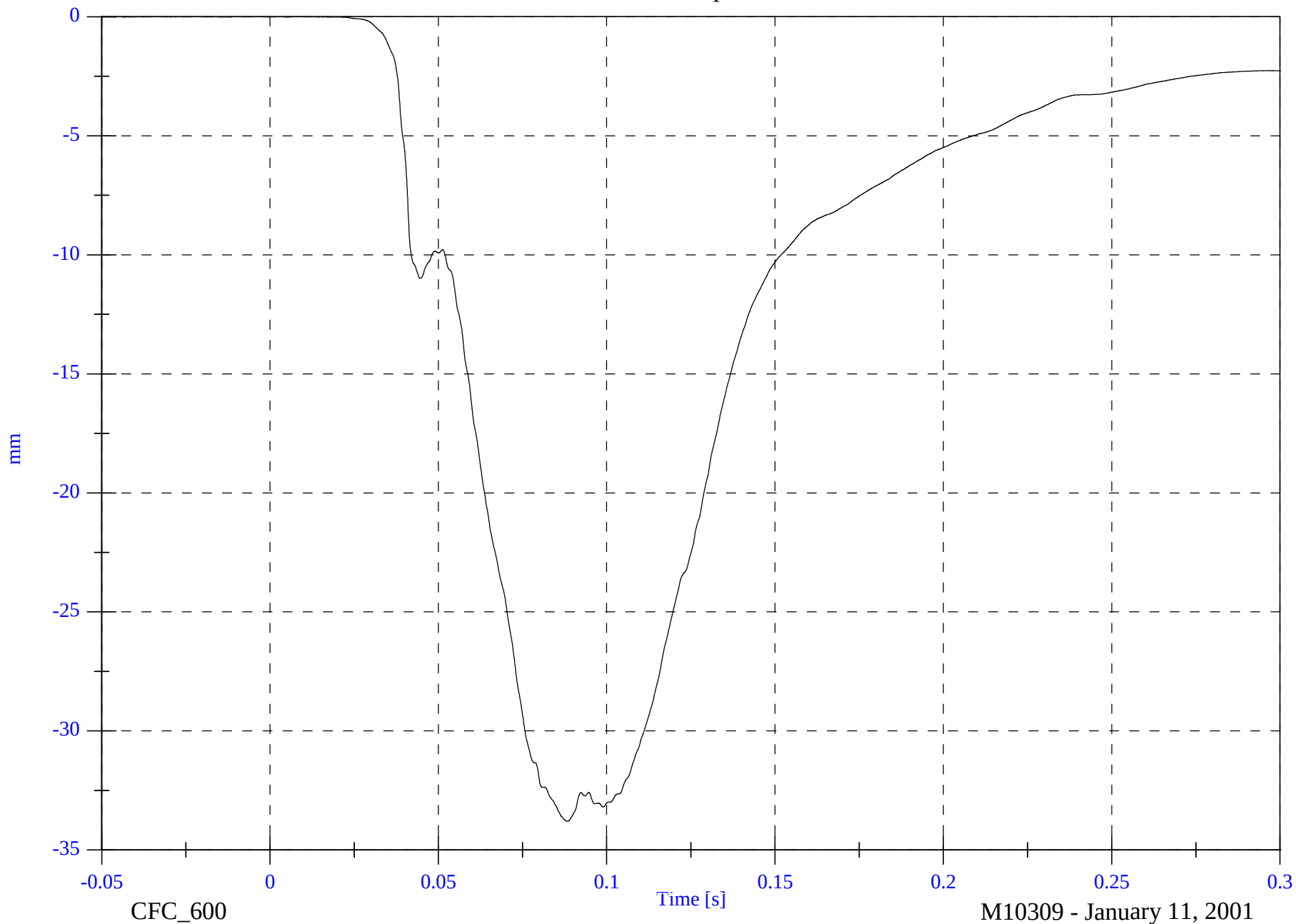
P2 Chest Compression x

Max: 0.0 [mm] at -0.032 [s]

Min: -33.8 [mm] at 0.088 [s]

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8602-14



CFC_600

Time [s]

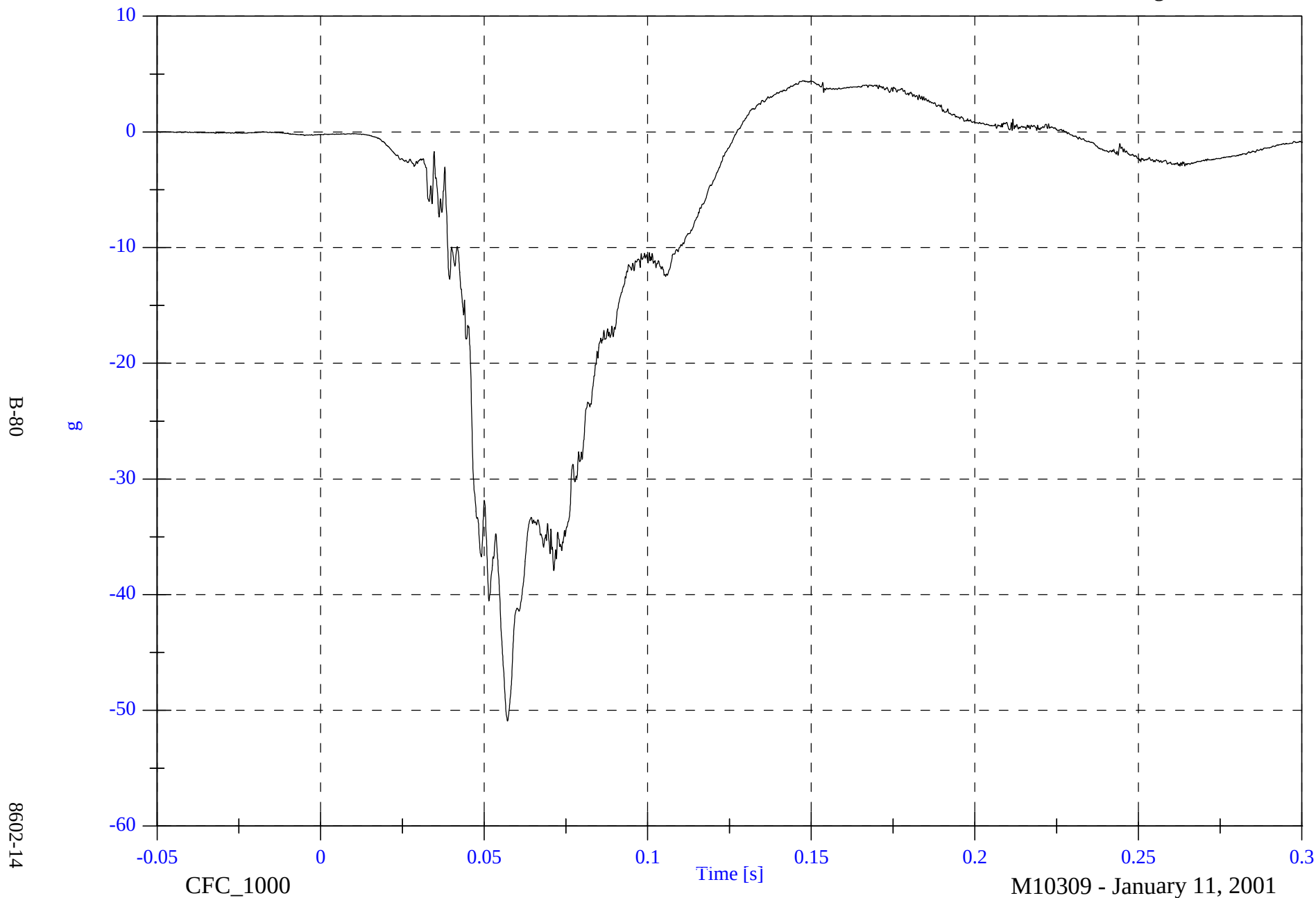
M10309 - January 11, 2001

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P2 Pelvic x

Max: 4.4 [g] at 0.148 [s]

Min: -50.9 [g] at 0.057 [s]

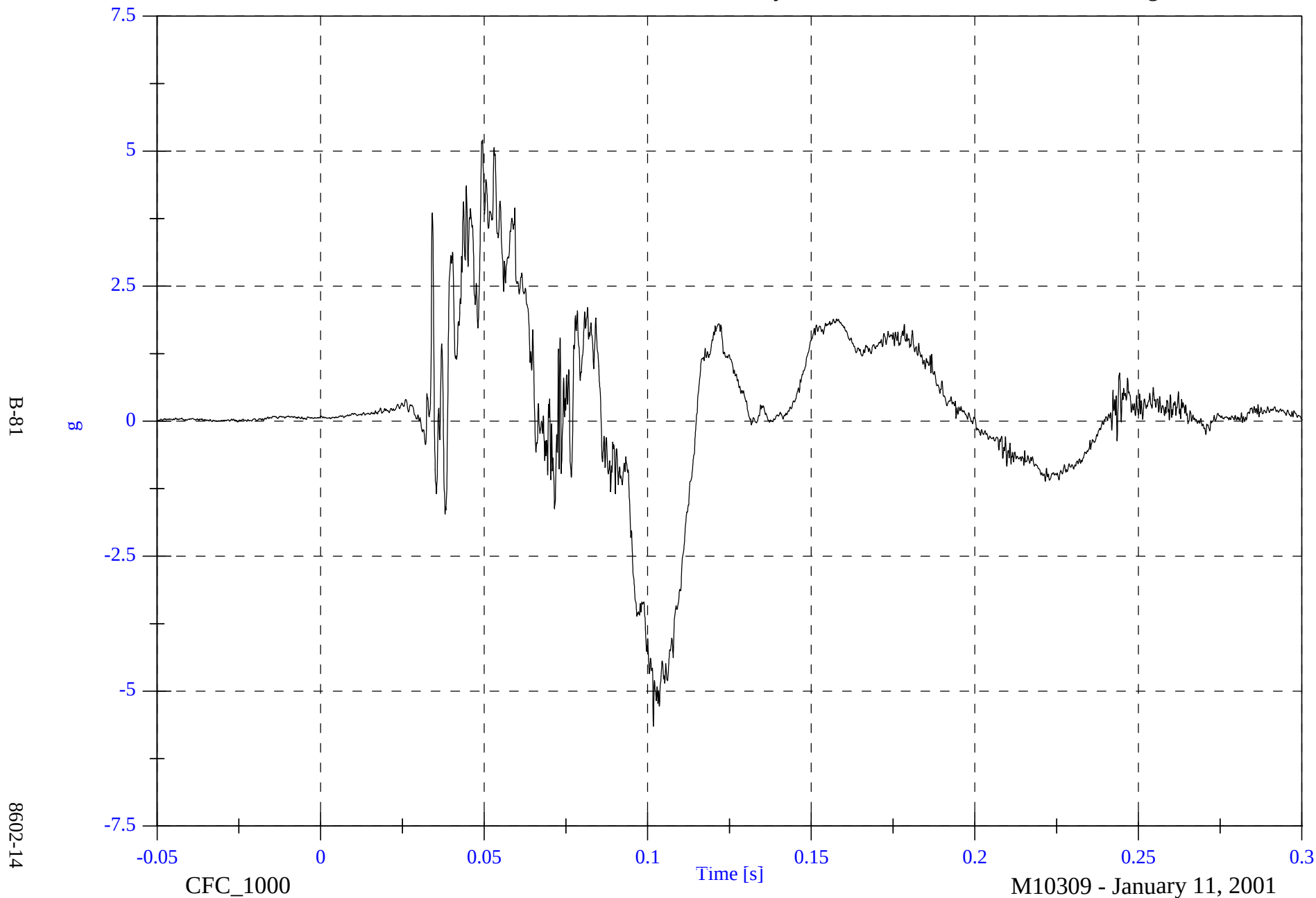


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P2 Pelvic y

Max: 5.2 [g] at 0.050 [s]

Min: -5.7 [g] at 0.102 [s]



NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

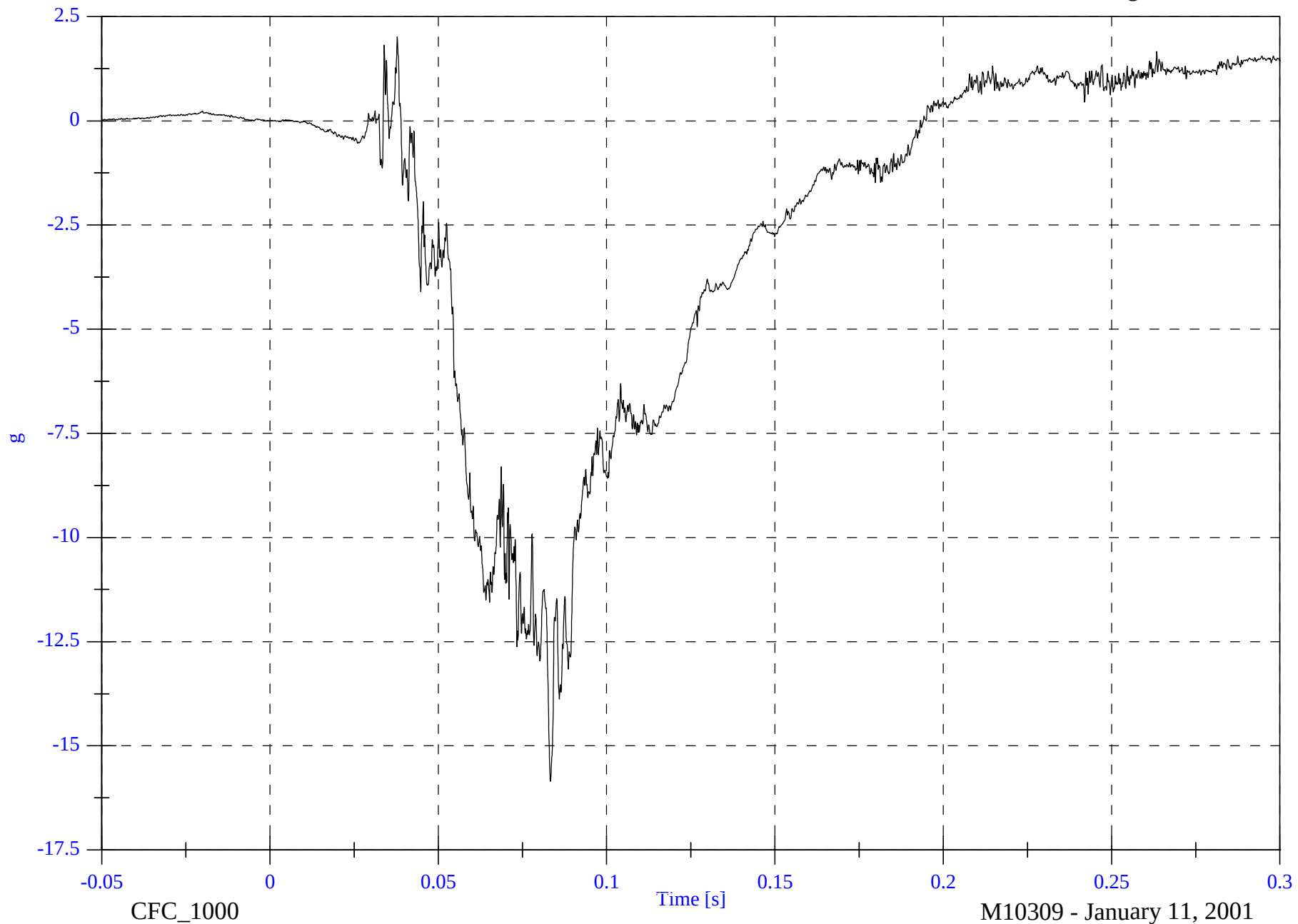
P2 Pelvic z

Max: 2.0 [g] at 0.038 [s]

Min: -15.9 [g] at 0.083 [s]

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8602-14



NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

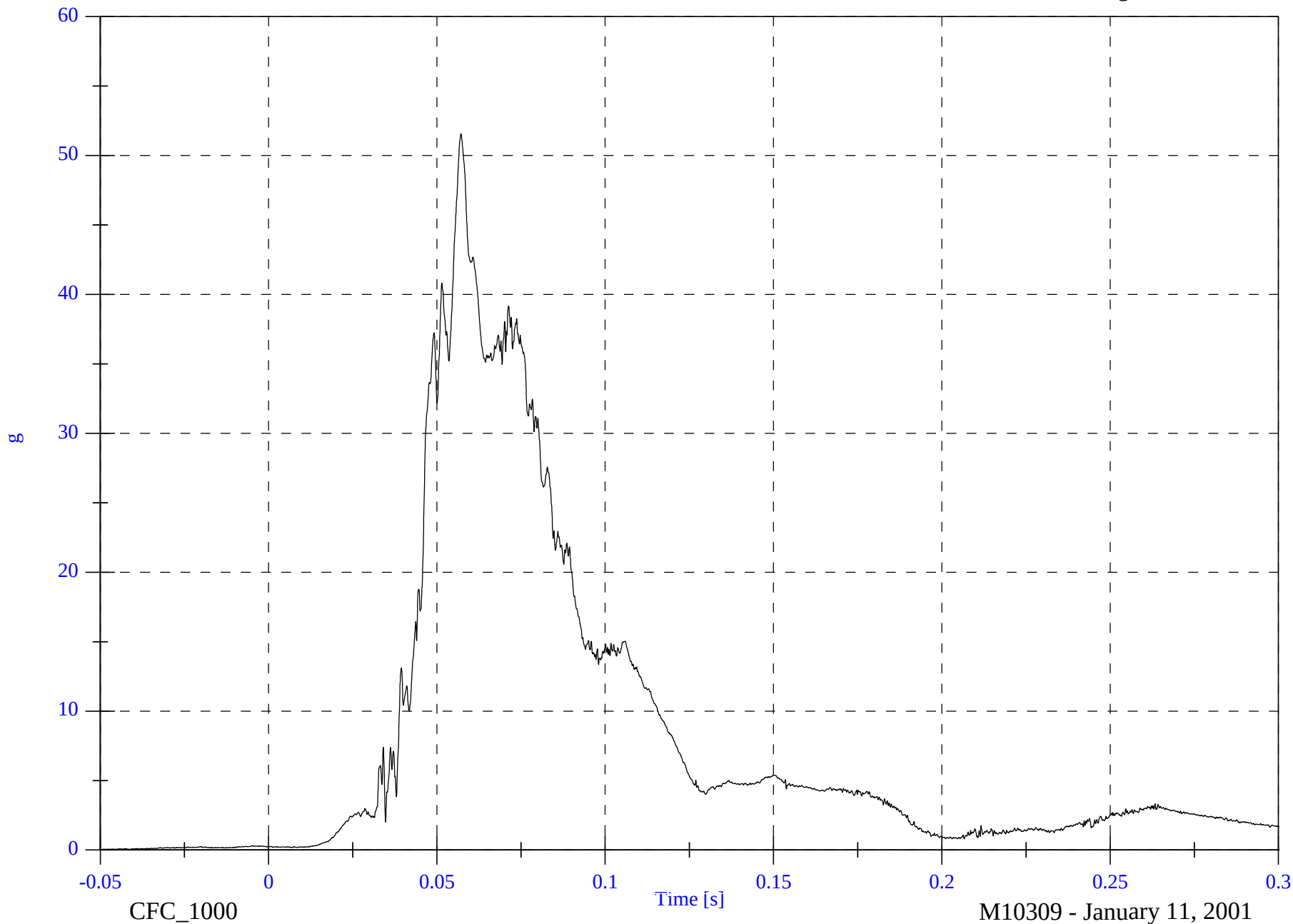
P2 Pelvic Resultant

Max: 51.6 [g] at 0.057 [s]

Min: 0.0 [g] at -0.049 [s]

B-83

8602-14

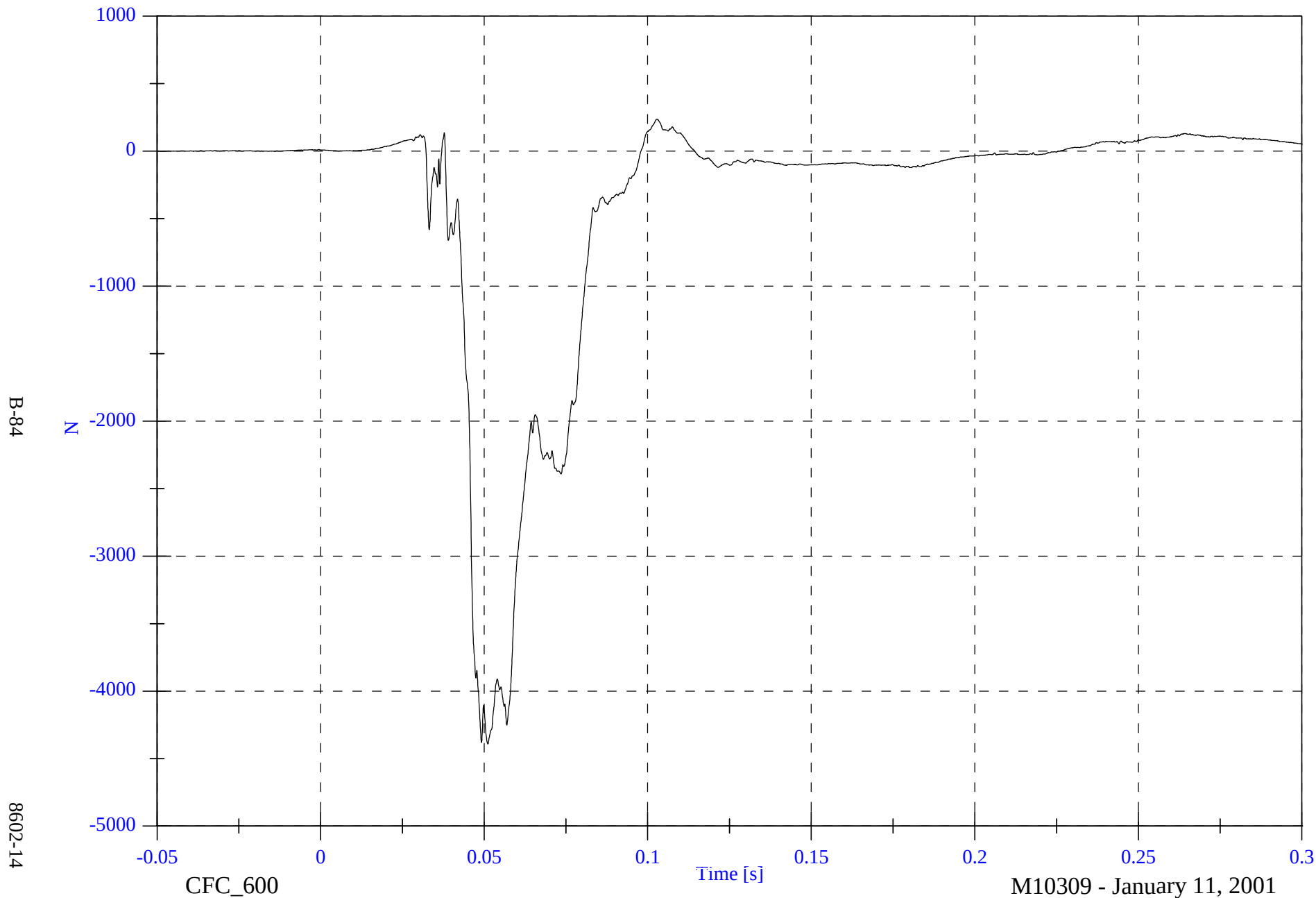


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

Max: 236.4 [N] at 0.103 [s]

P2 Left Femur z

Min: -4392.2 [N] at 0.051 [s]

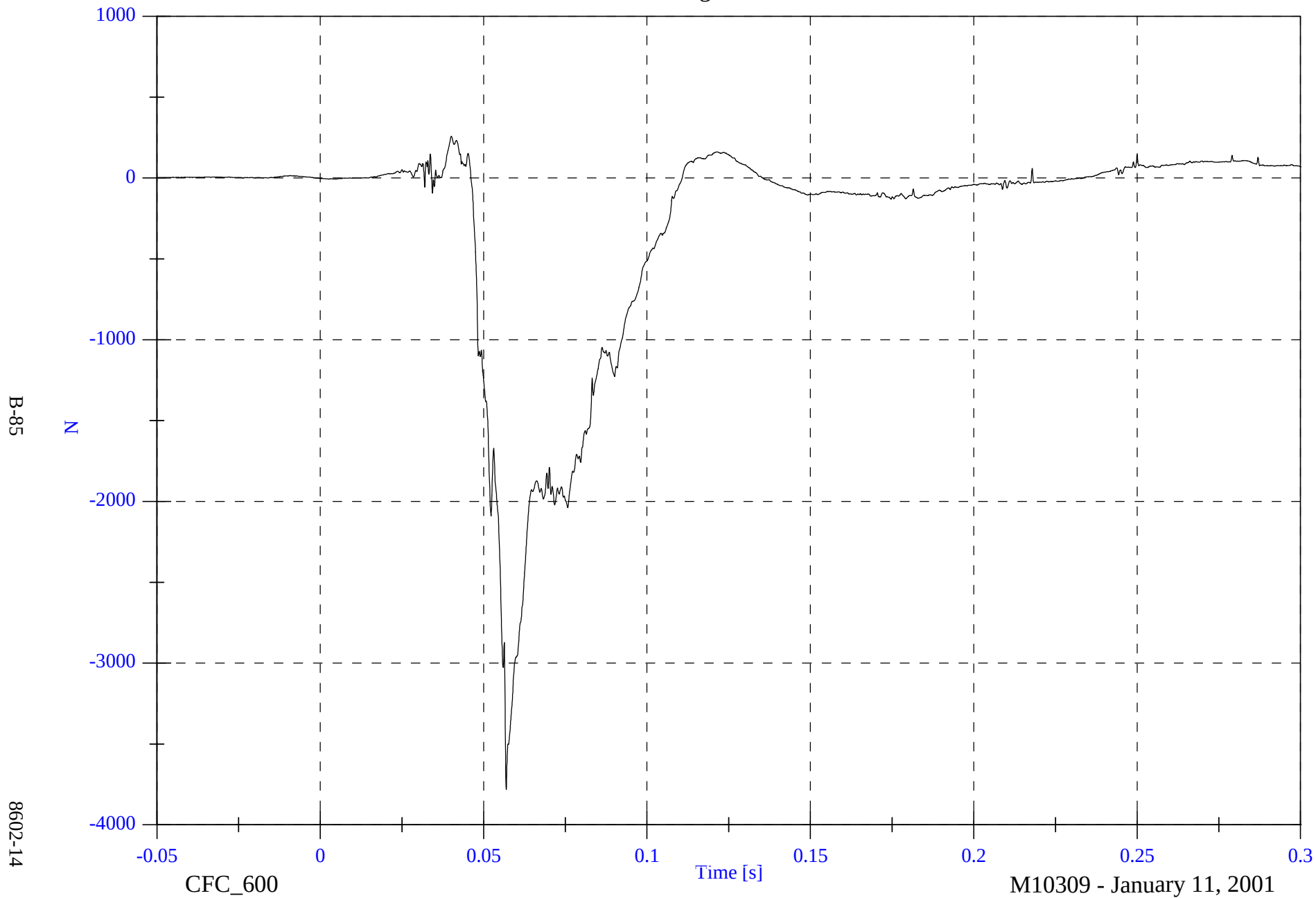


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P2 Right Femur z

Max: 257.5 [N] at 0.040 [s]

Min: -3780.8 [N] at 0.057 [s]

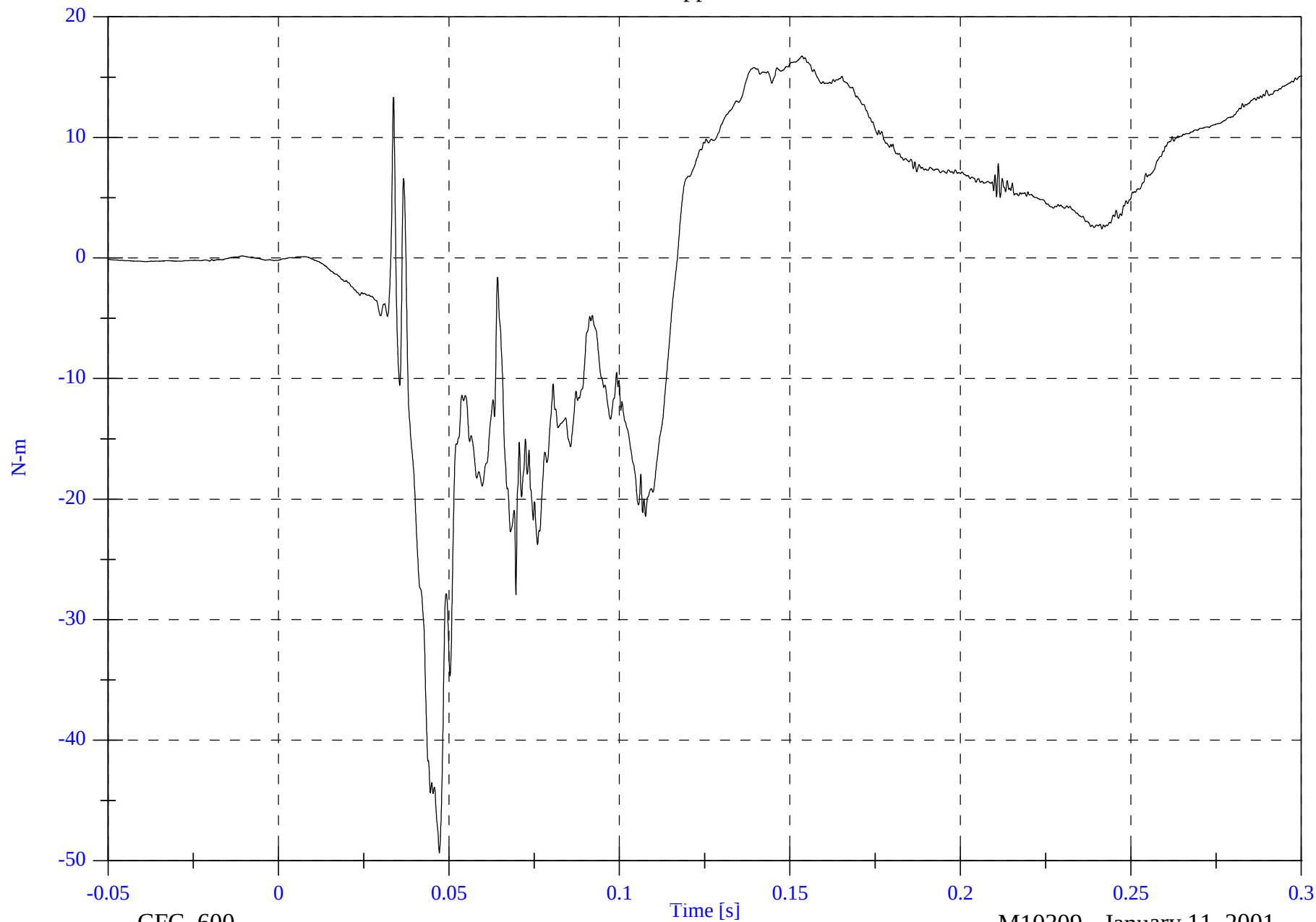


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P2 Left Upper Tibia Mx

Max: 16.7 [N-m] at 0.154 [s]

Min: -49.3 [N-m] at 0.047 [s]



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8602-14

CFC_600

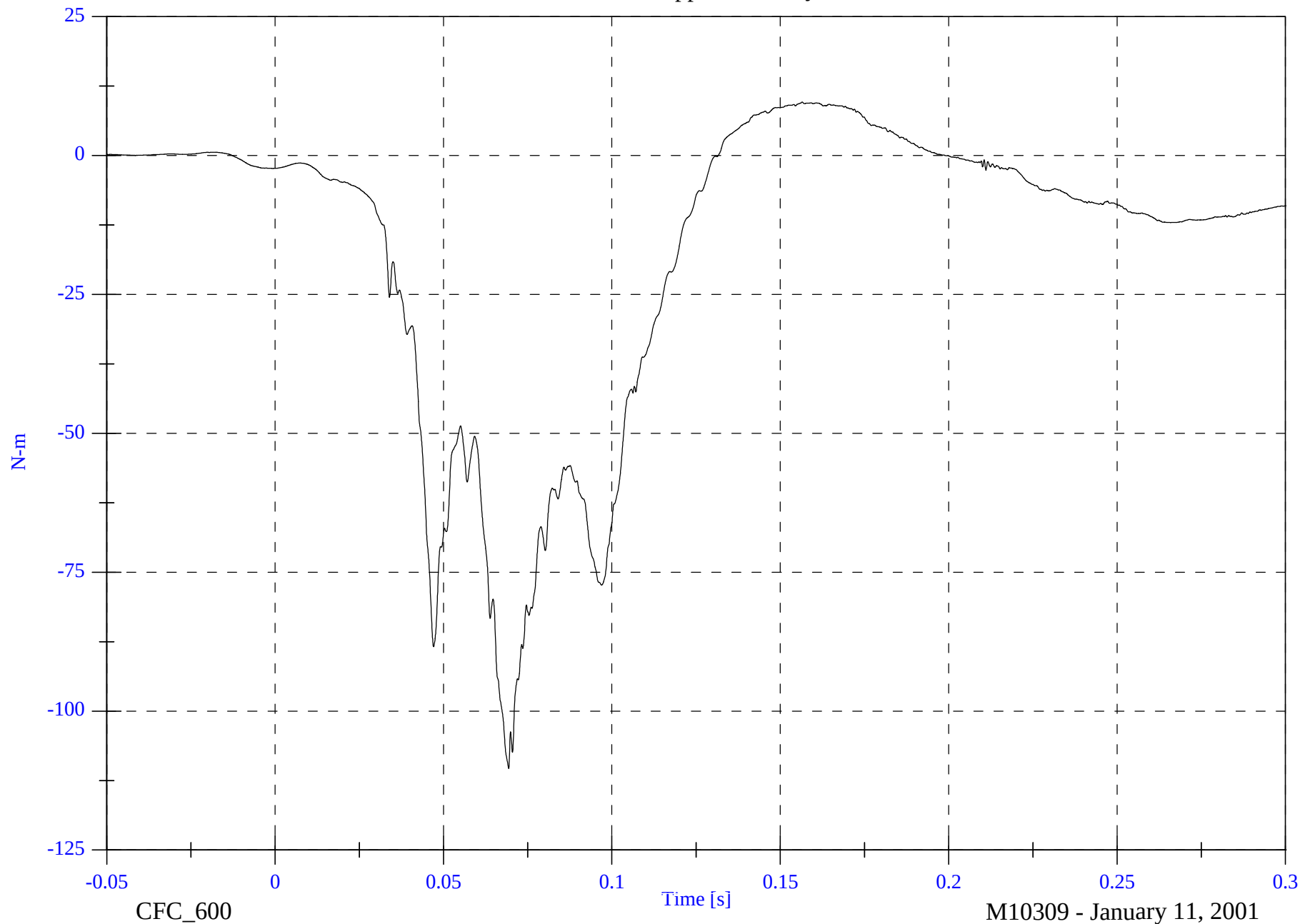
M10309 - January 11, 2001

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P2 Left Upper Tibia My

Max: 9.6 [N-m] at 0.156 [s]

Min: -110.3 [N-m] at 0.069 [s]



B-87

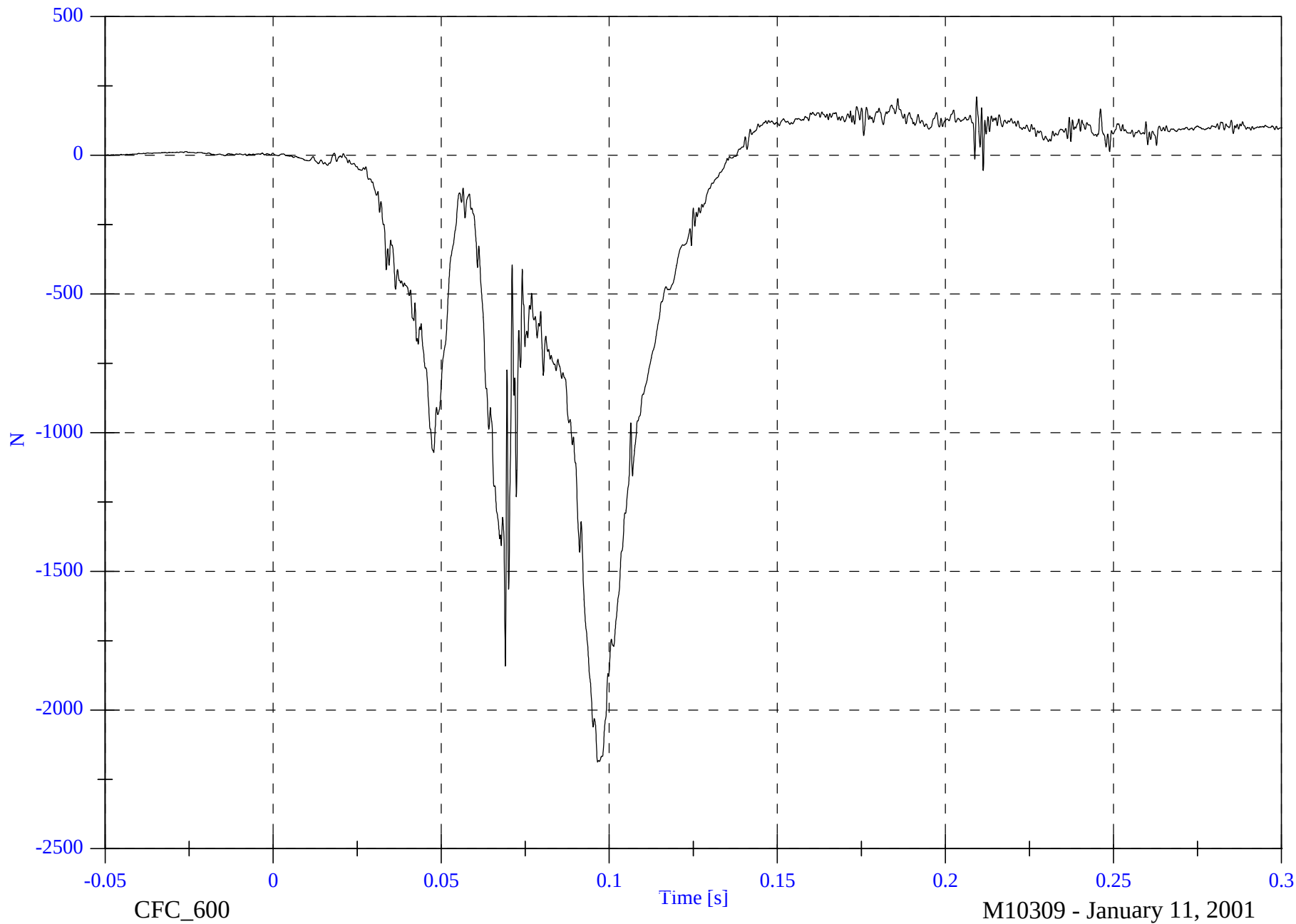
8602-14

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P2 Left Lower Tibia Fz

Max: 210.6 [N] at 0.209 [s]

Min: -2187.9 [N] at 0.097 [s]



B-88

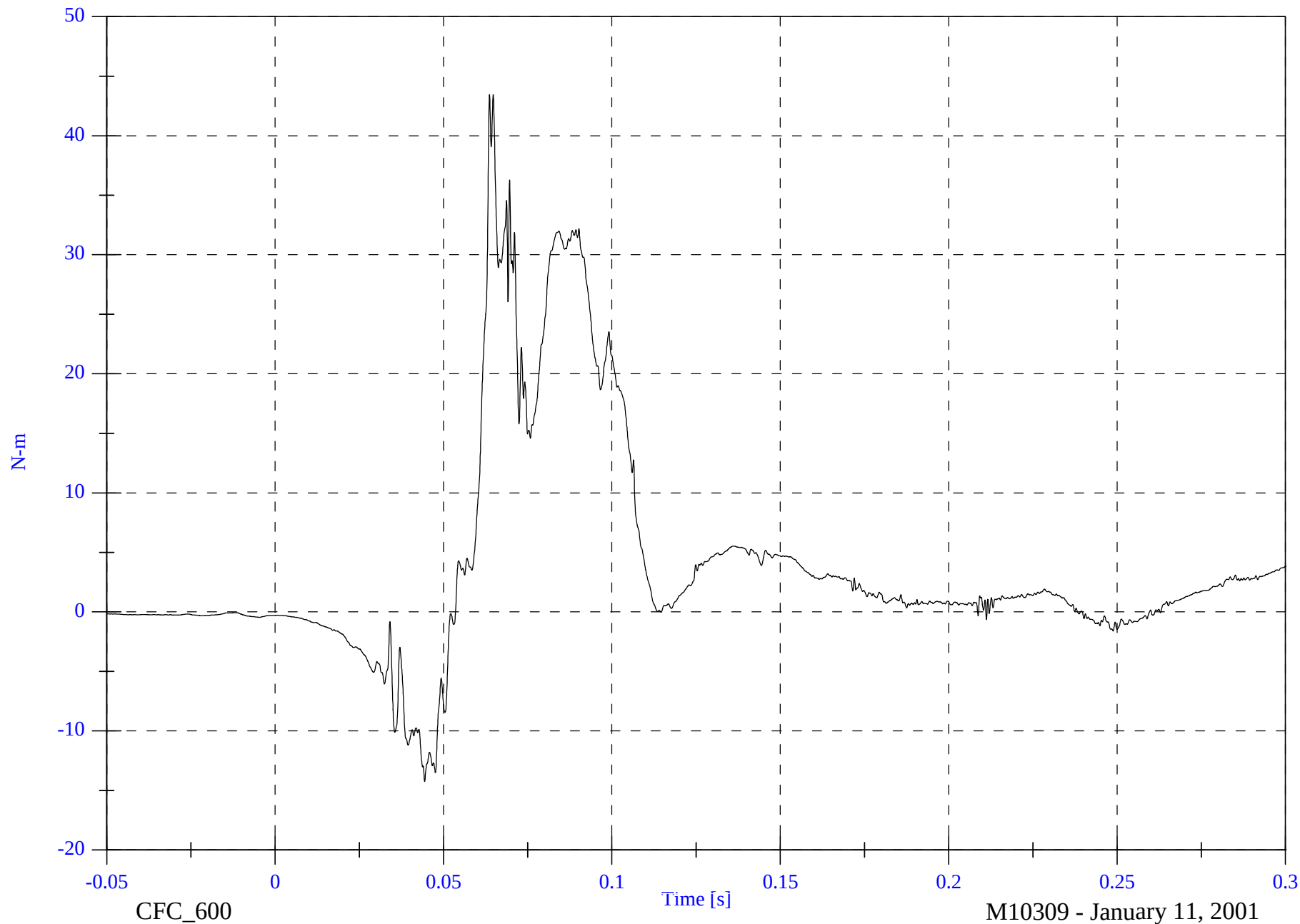
8602-14

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P2 Left Lower Tibia Mx

Max: 43.5 [N-m] at 0.064 [s]

Min: -14.3 [N-m] at 0.044 [s]



B-89

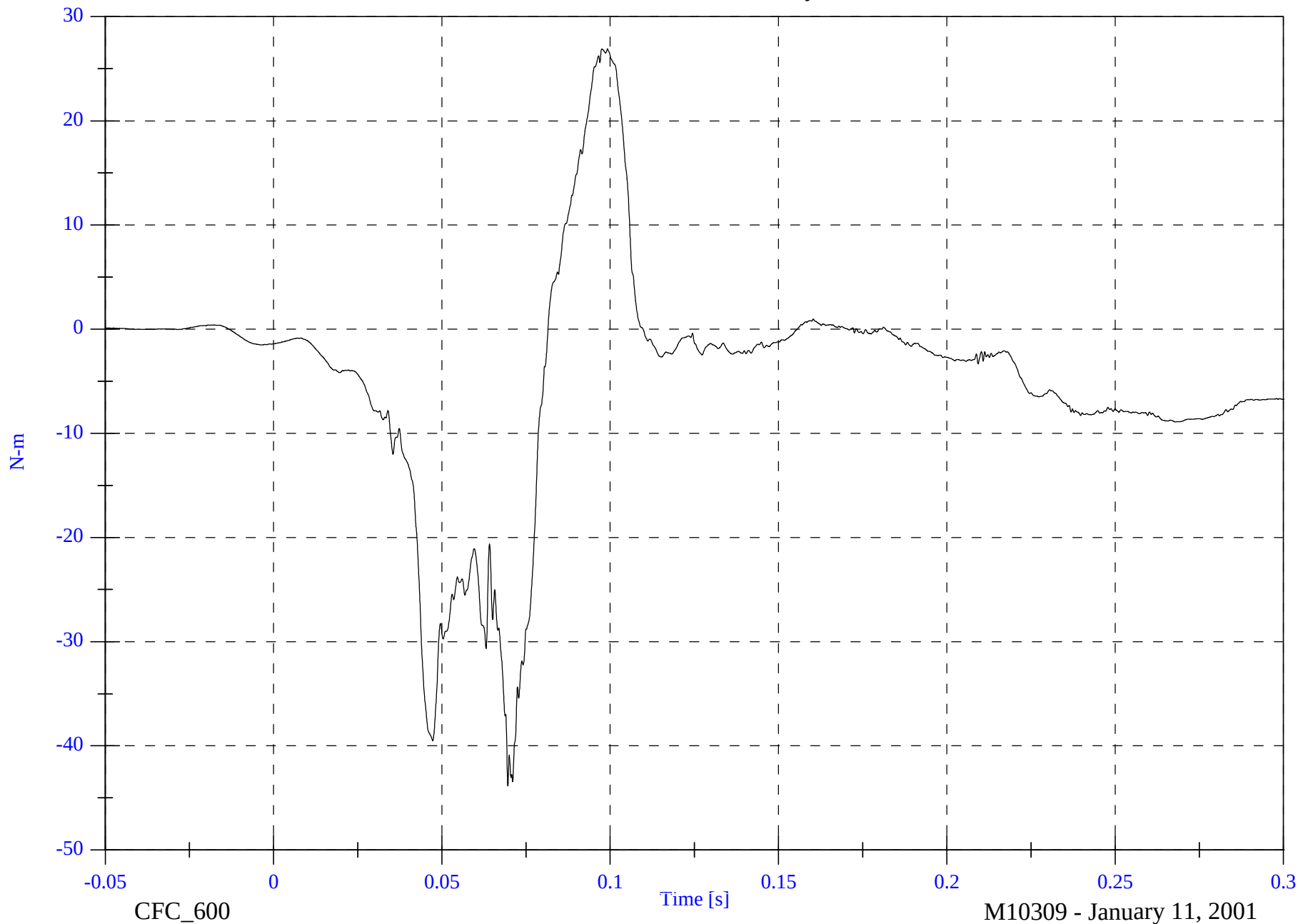
8602-14

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P2 Left Lower Tibia My

Max: 26.9 [N-m] at 0.099 [s]

Min: -43.9 [N-m] at 0.070 [s]



B-90

8602-14

CFC_600

Time [s]

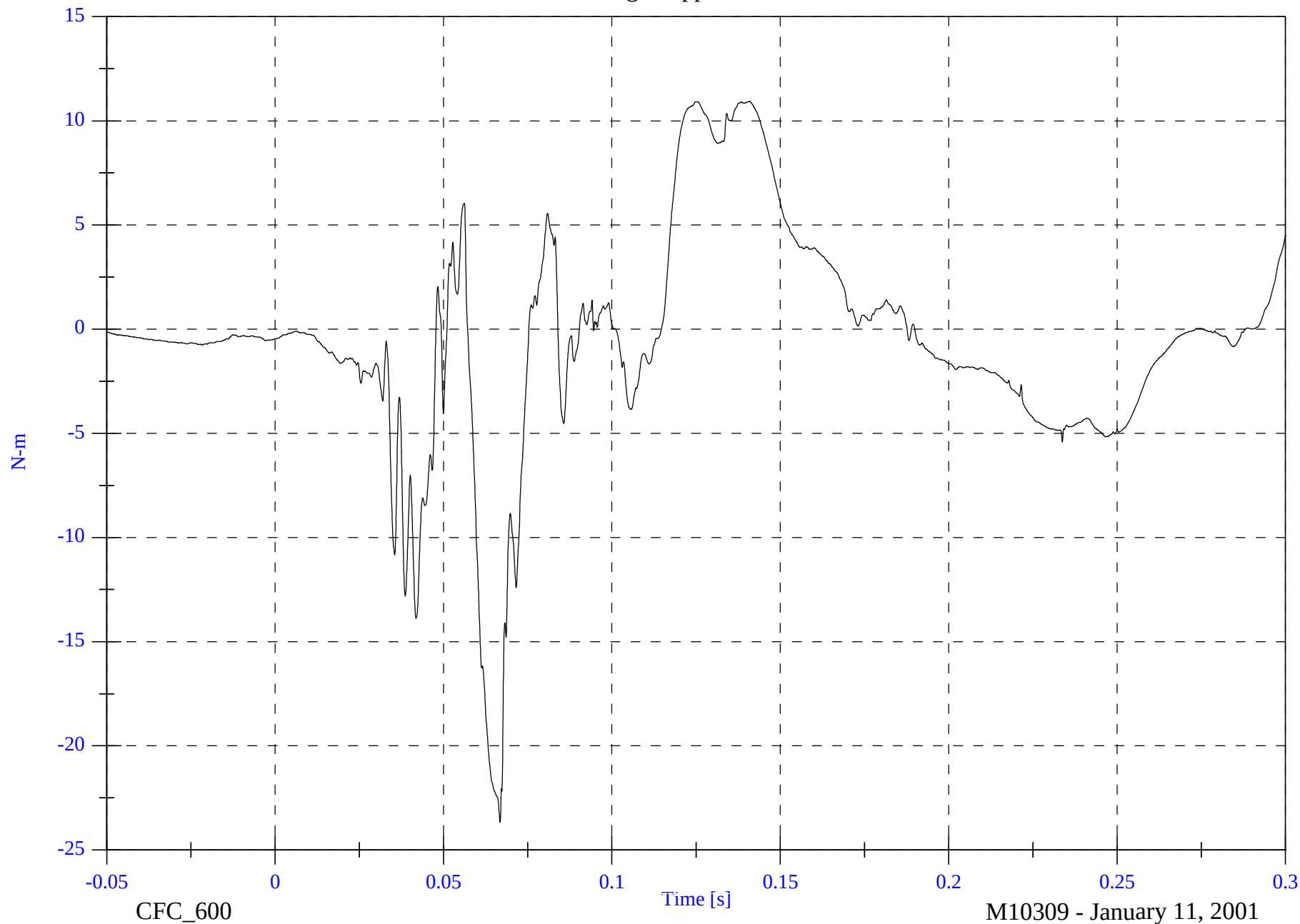
M10309 - January 11, 2001

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P2 Right Upper Tibia Mx

Max: 10.9 [N-m] at 0.141 [s]

Min: -23.7 [N-m] at 0.067 [s]



B-91

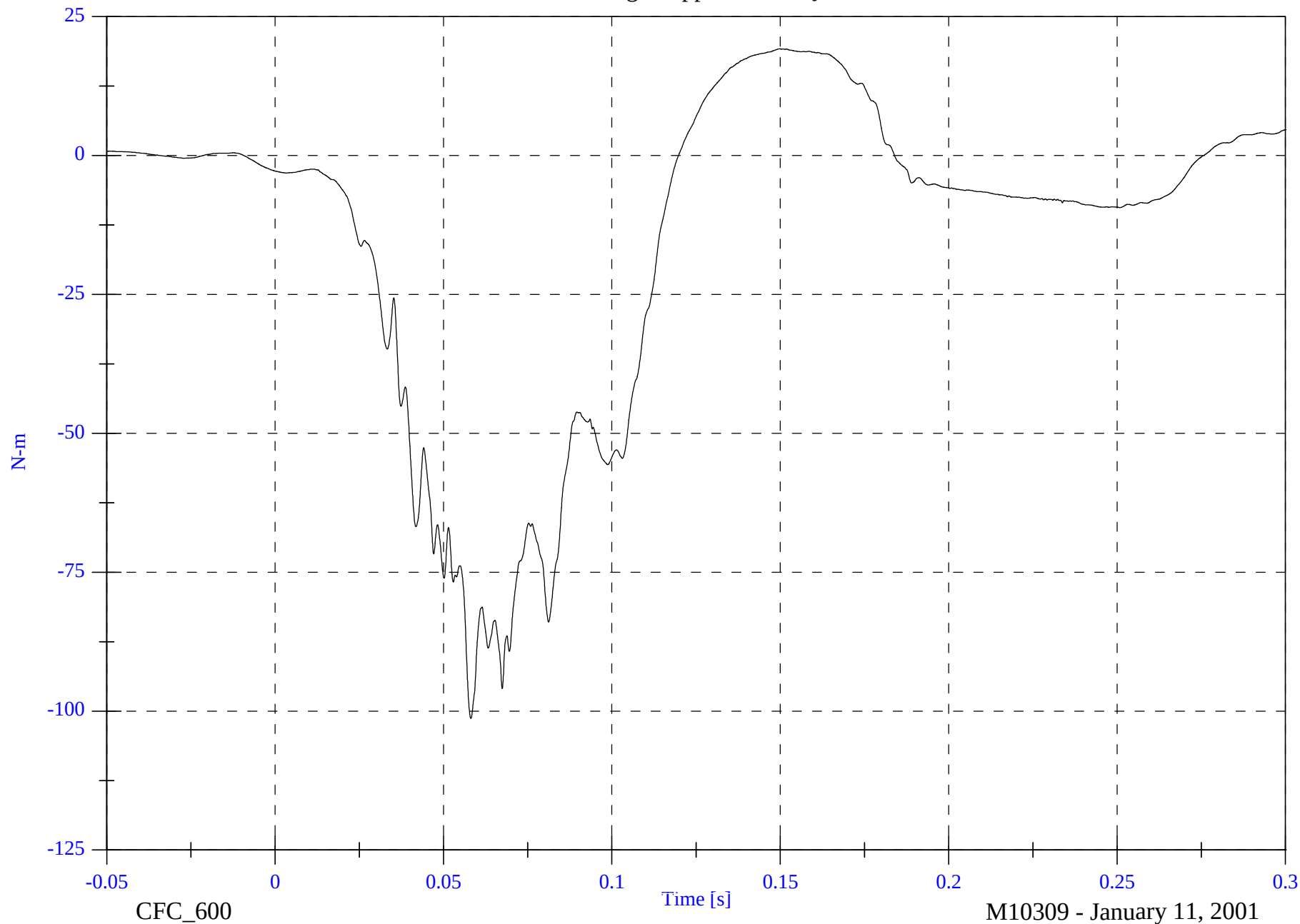
8602-14

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P2 Right Upper Tibia My

Max: 19.2 [N-m] at 0.150 [s]

Min: -101.3 [N-m] at 0.058 [s]



B-92

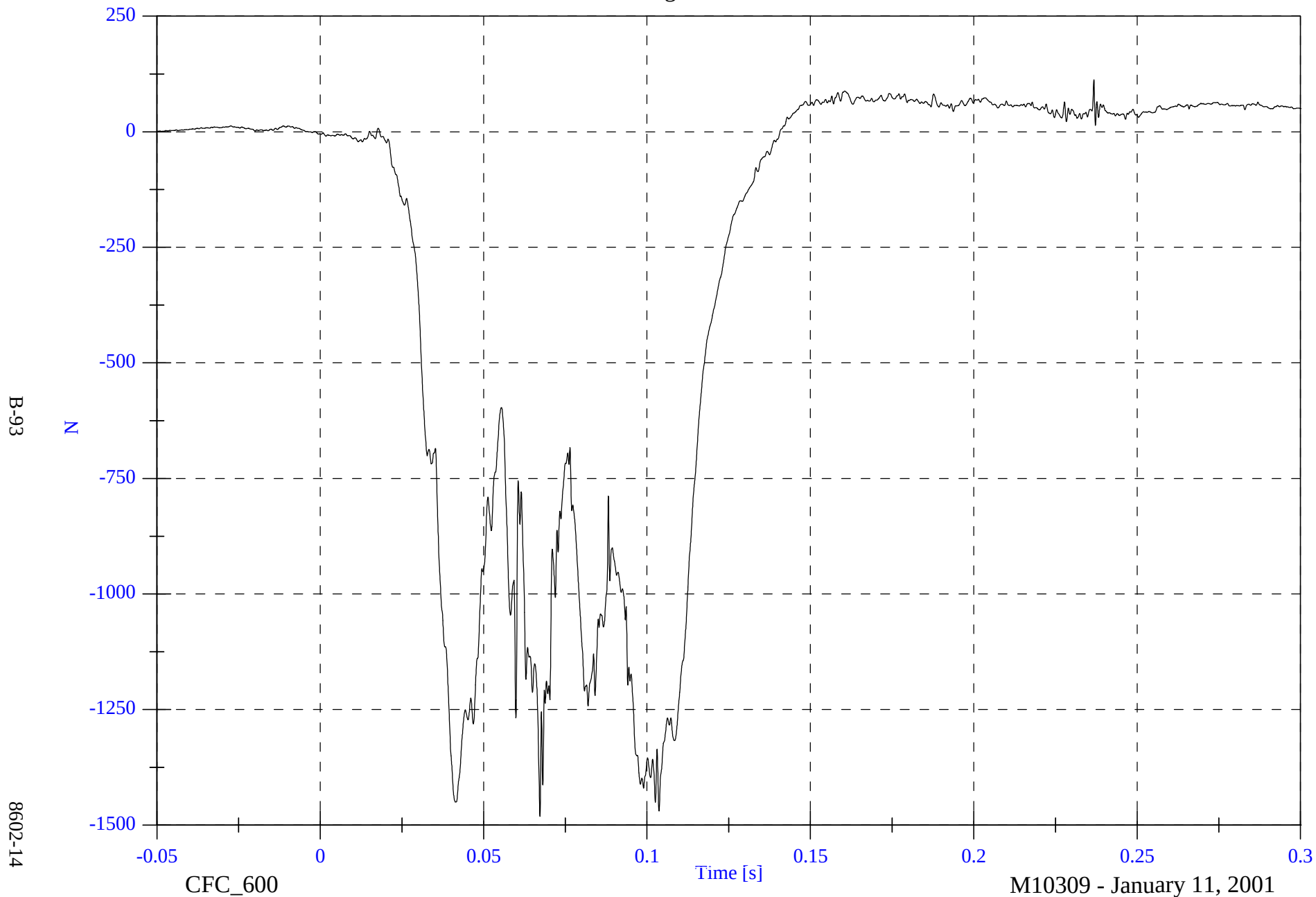
8602-14

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P2 Right Lower Tibia Fz

Max: 112.5 [N] at 0.237 [s]

Min: -1481.4 [N] at 0.067 [s]

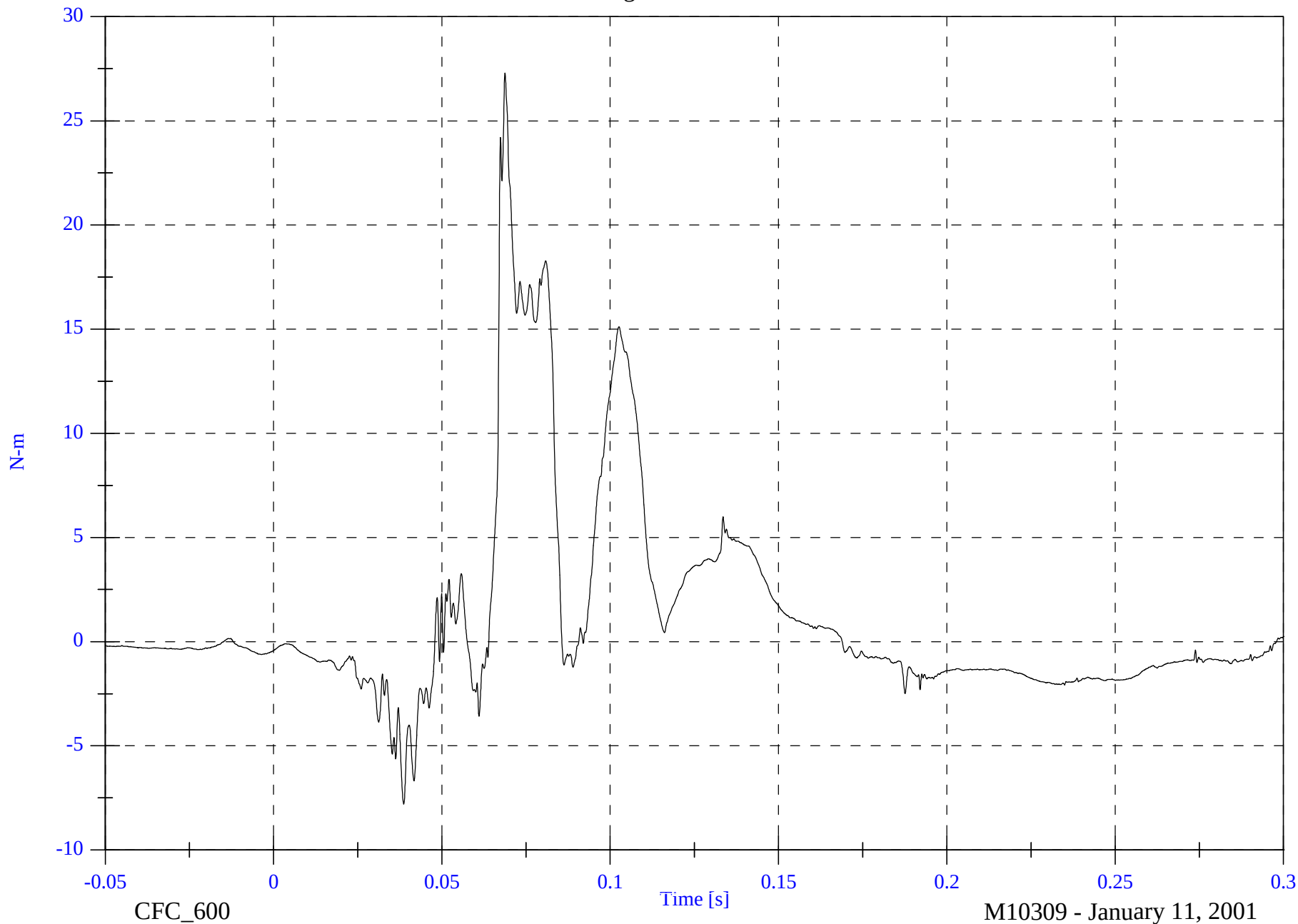


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P2 Right Lower Tibia Mx

Max: 27.3 [N-m] at 0.069 [s]

Min: -7.8 [N-m] at 0.039 [s]



B-94

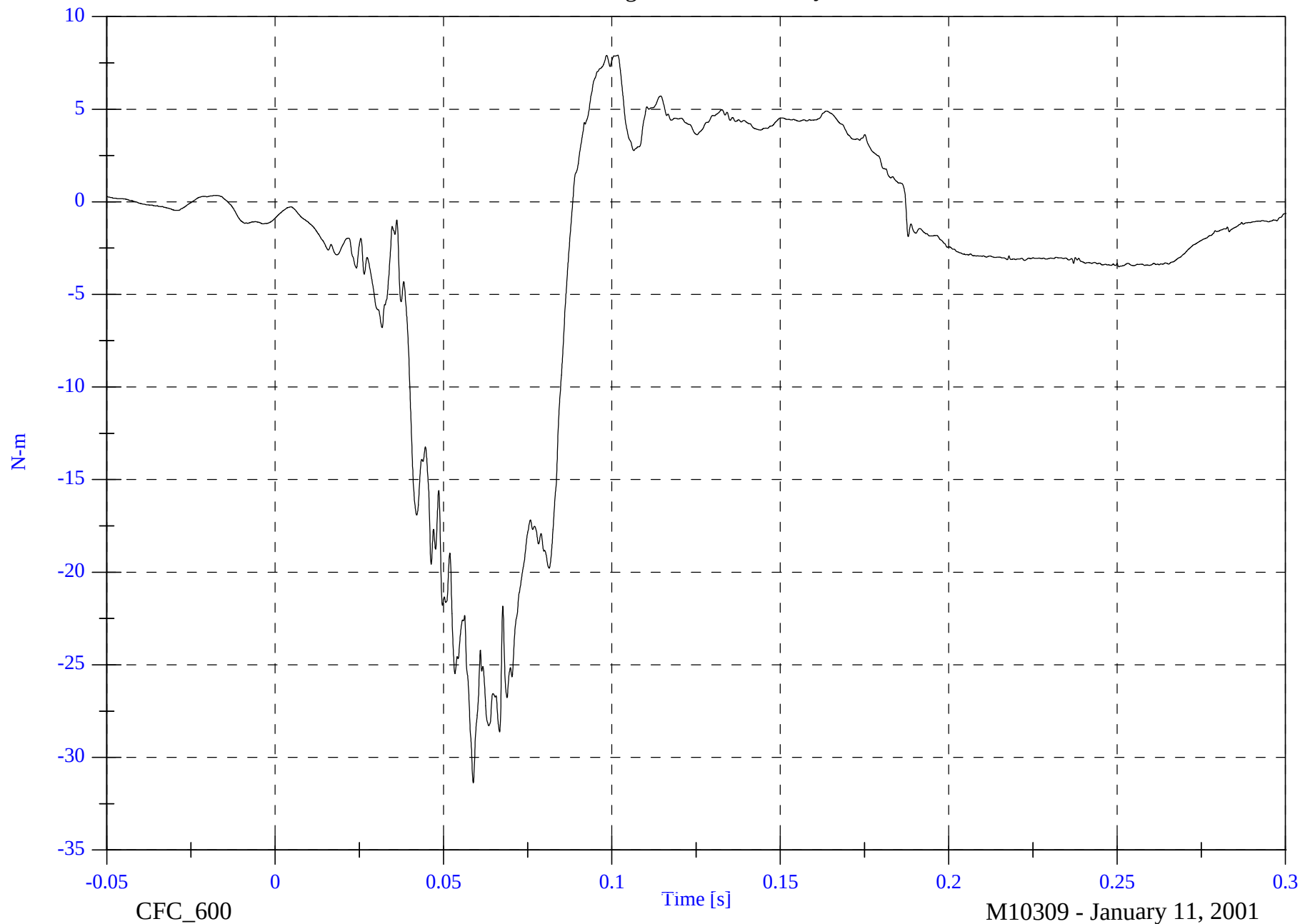
8602-14

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P2 Right Lower Tibia My

Max: 7.9 [N-m] at 0.102 [s]

Min: -31.4 [N-m] at 0.059 [s]



B-95

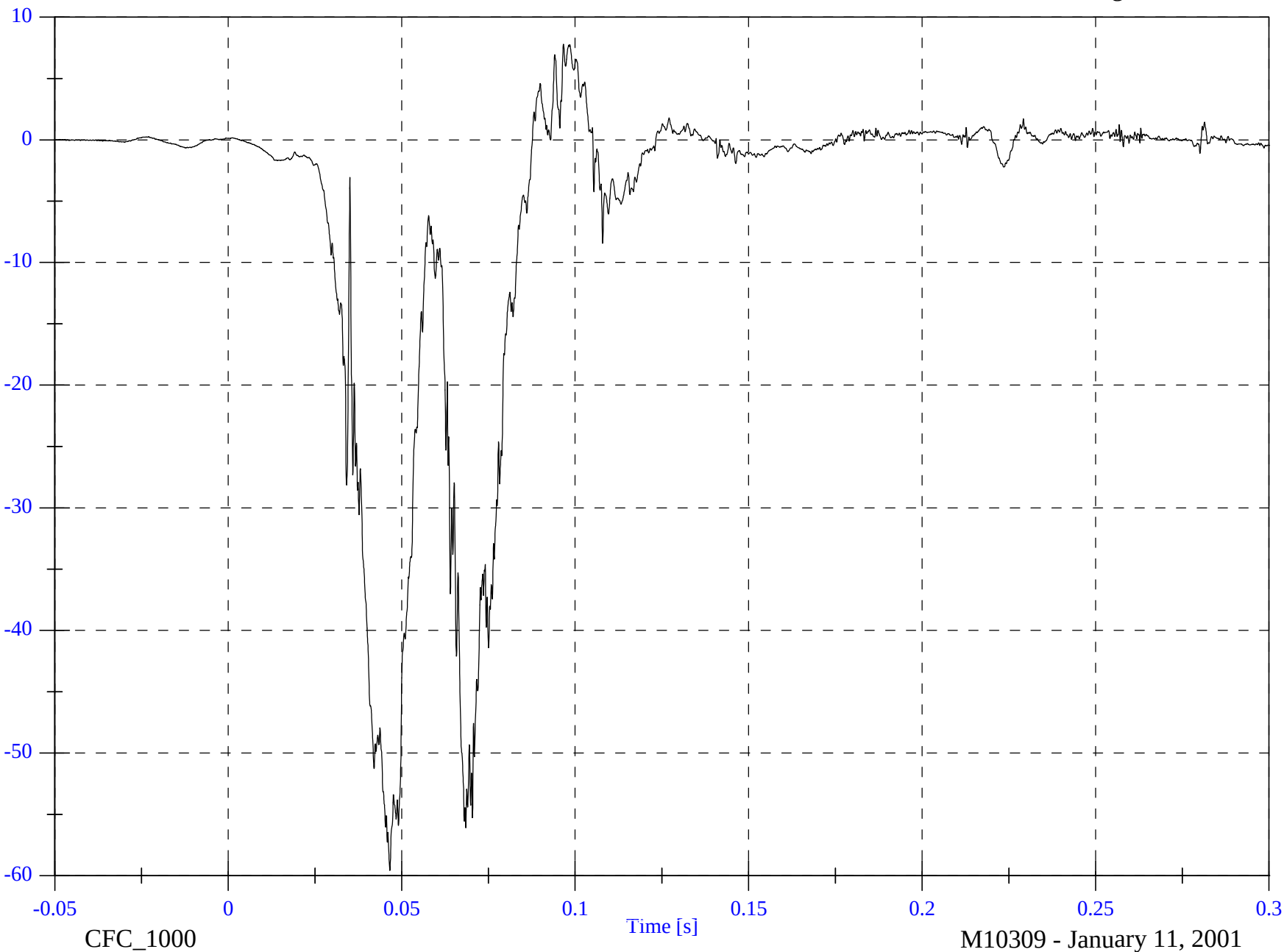
8602-14

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P2 Left Foot Aft x

Max: 7.8 [g] at 0.097 [s]

Min: -59.6 [g] at 0.047 [s]



B-96

8602-14

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

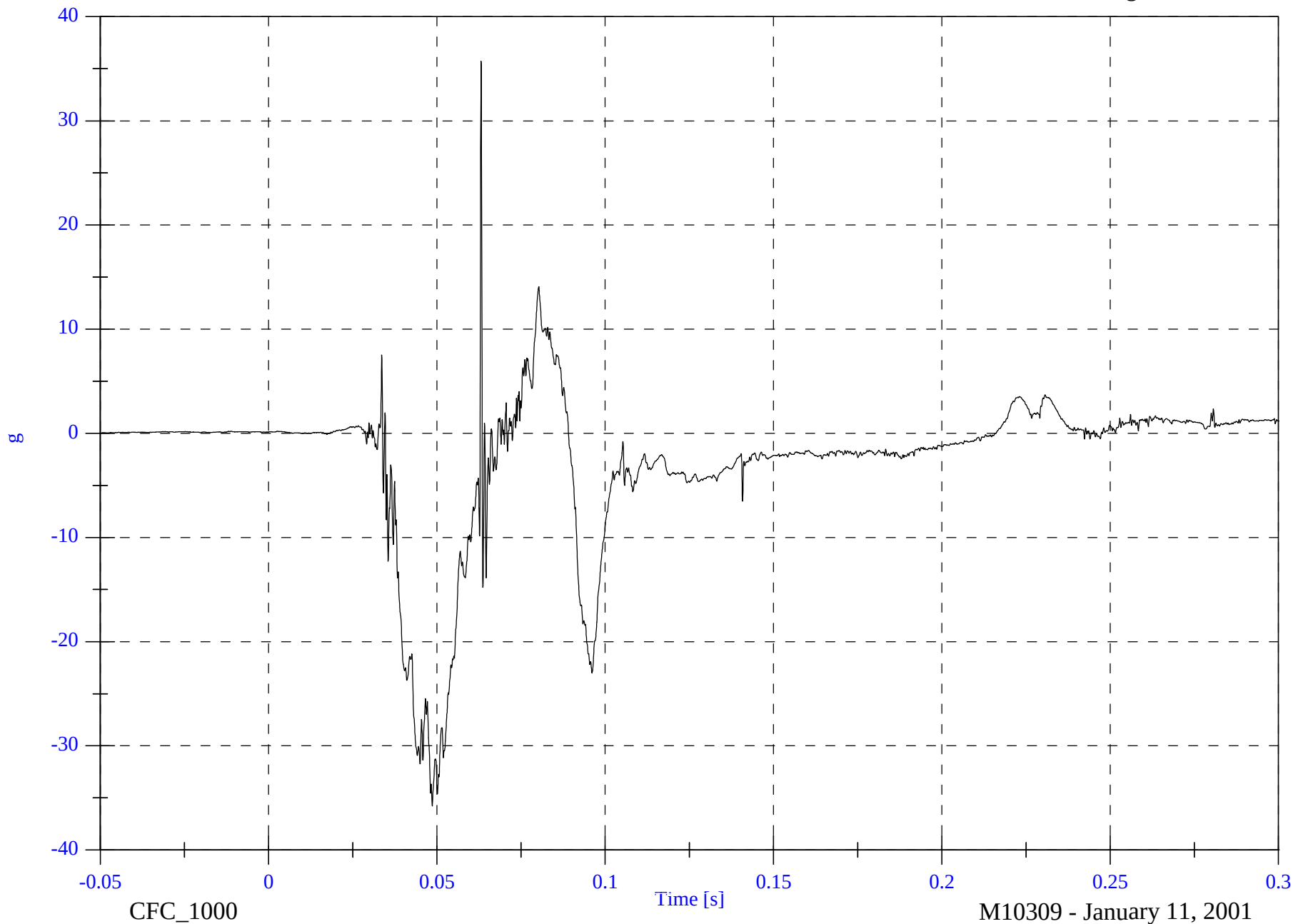
P2 Left Foot Aft z

Max: 35.7 [g] at 0.063 [s]

Min: -35.8 [g] at 0.049 [s]

B-97

8602-14

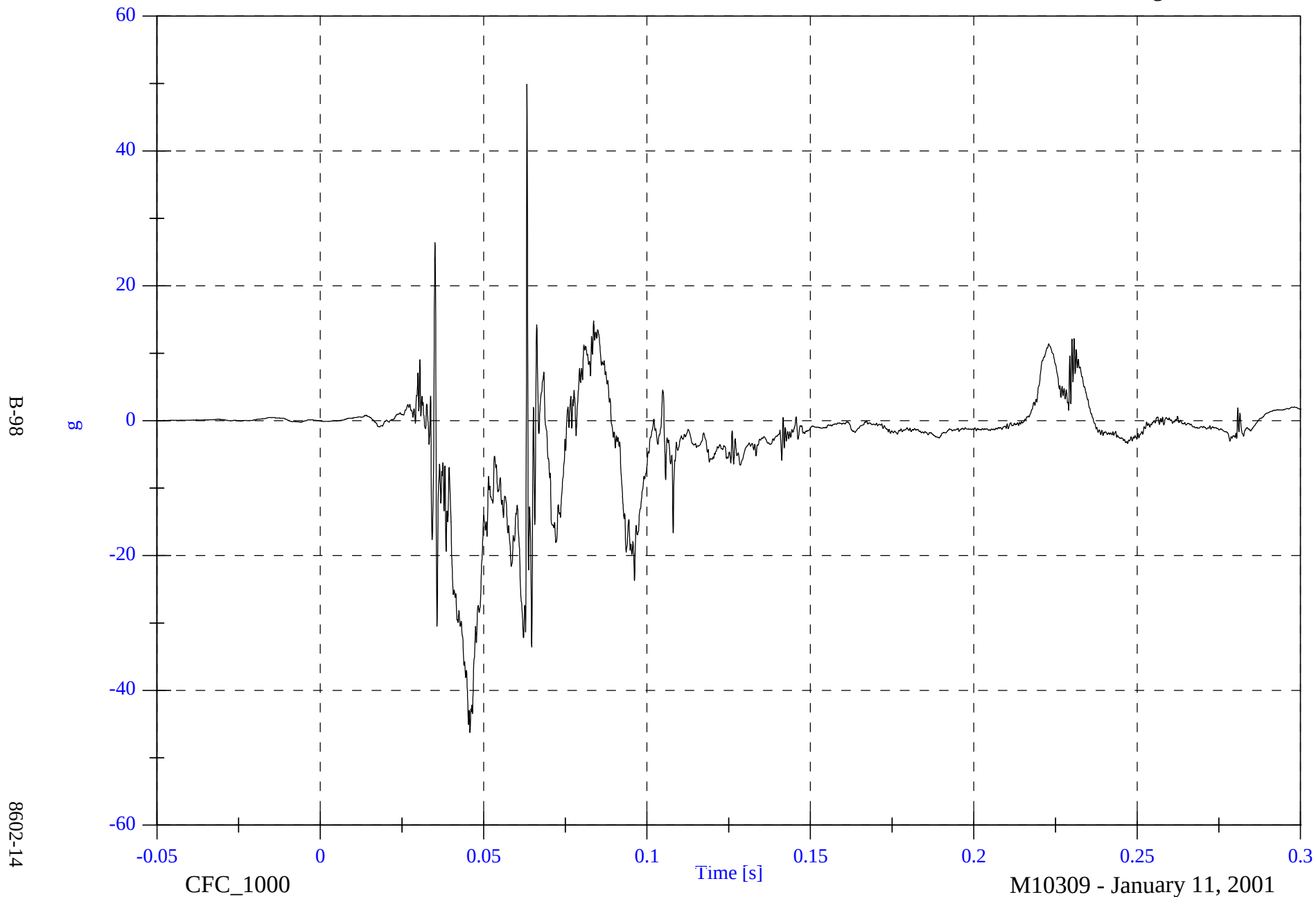


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P2 Left Foot Fore z

Max: 49.9 [g] at 0.063 [s]

Min: -46.3 [g] at 0.046 [s]

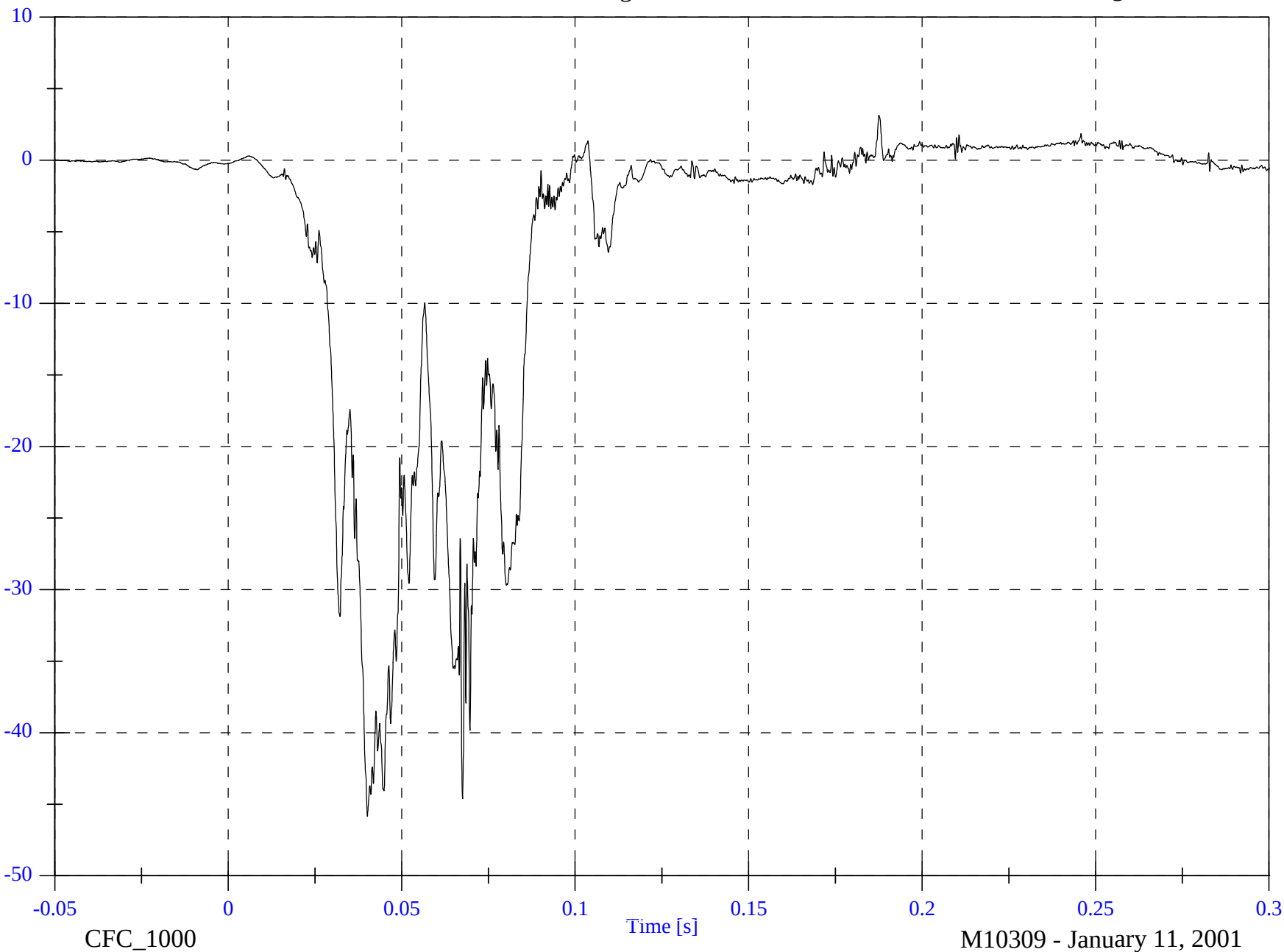


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P2 Right Foot Aft x

Max: 3.1 [g] at 0.188 [s]

Min: -45.9 [g] at 0.040 [s]



B-99

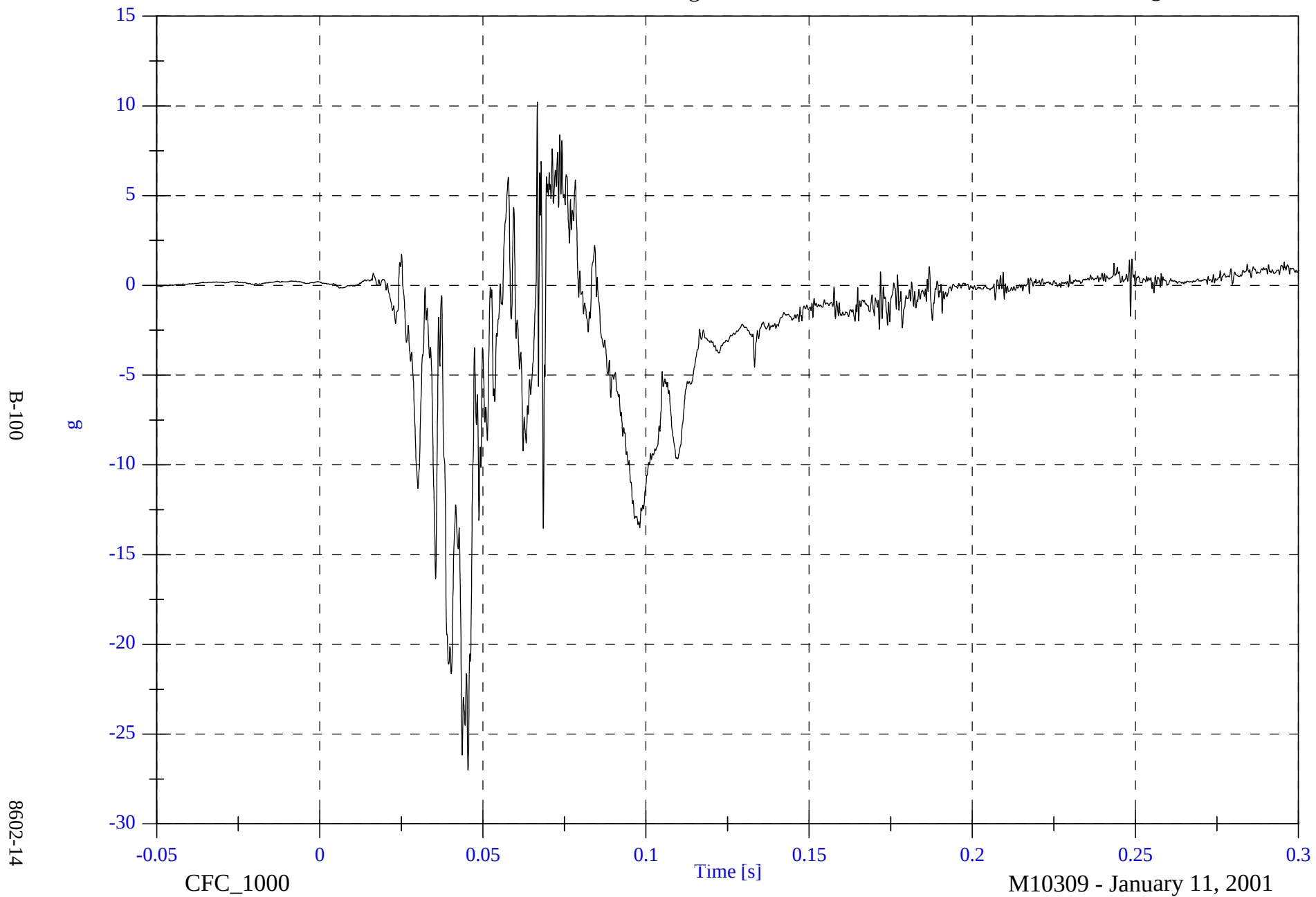
8602-14

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P2 Right Foot Aft z

Max: 10.2 [g] at 0.067 [s]

Min: -27.0 [g] at 0.045 [s]

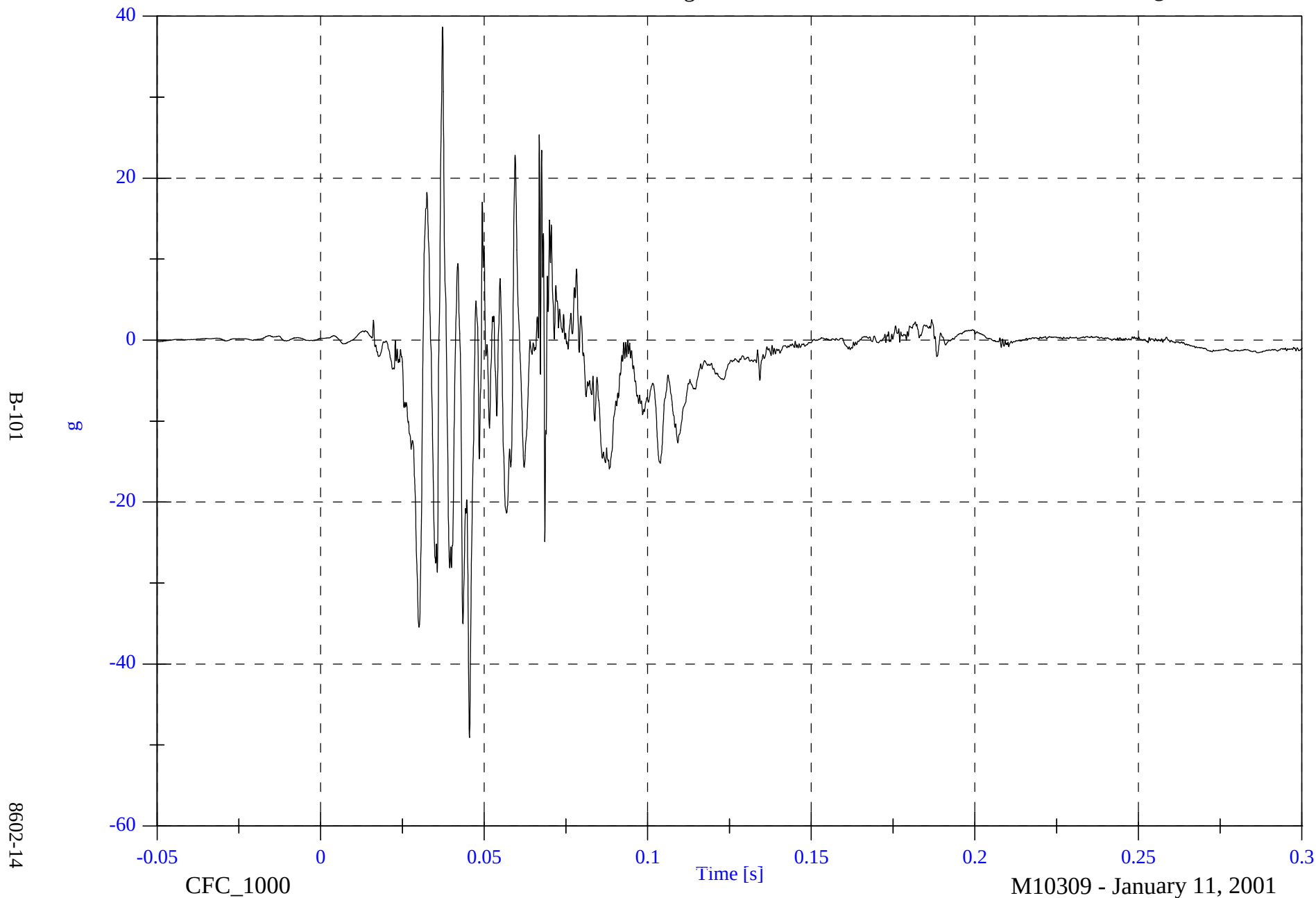


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P2 Right Foot Fore x

Max: 38.7 [g] at 0.037 [s]

Min: -49.1 [g] at 0.046 [s]

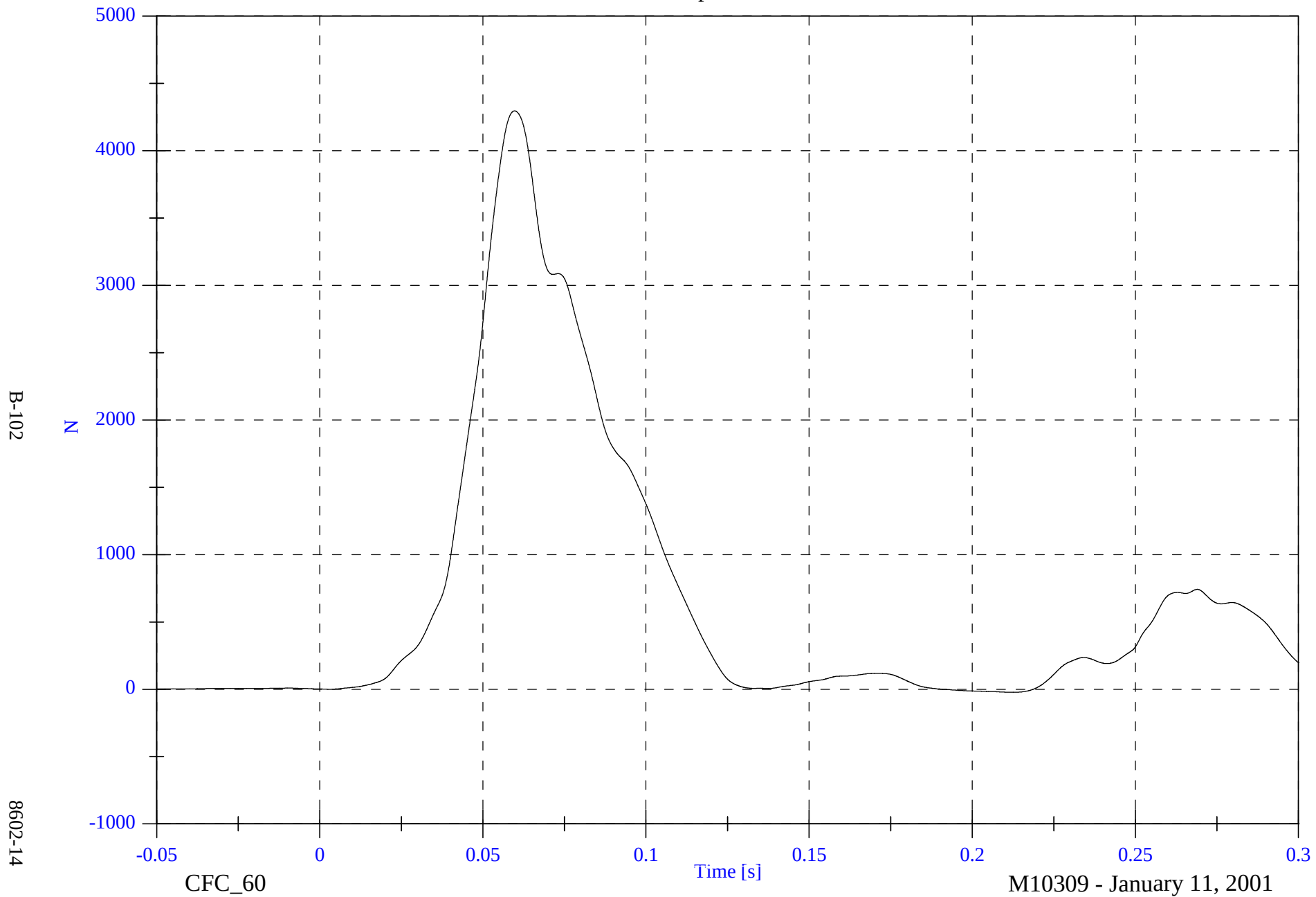


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P2 Lap Belt Force

Max: 4296.4 [N] at 0.060 [s]

Min: -23.3 [N] at 0.212 [s]

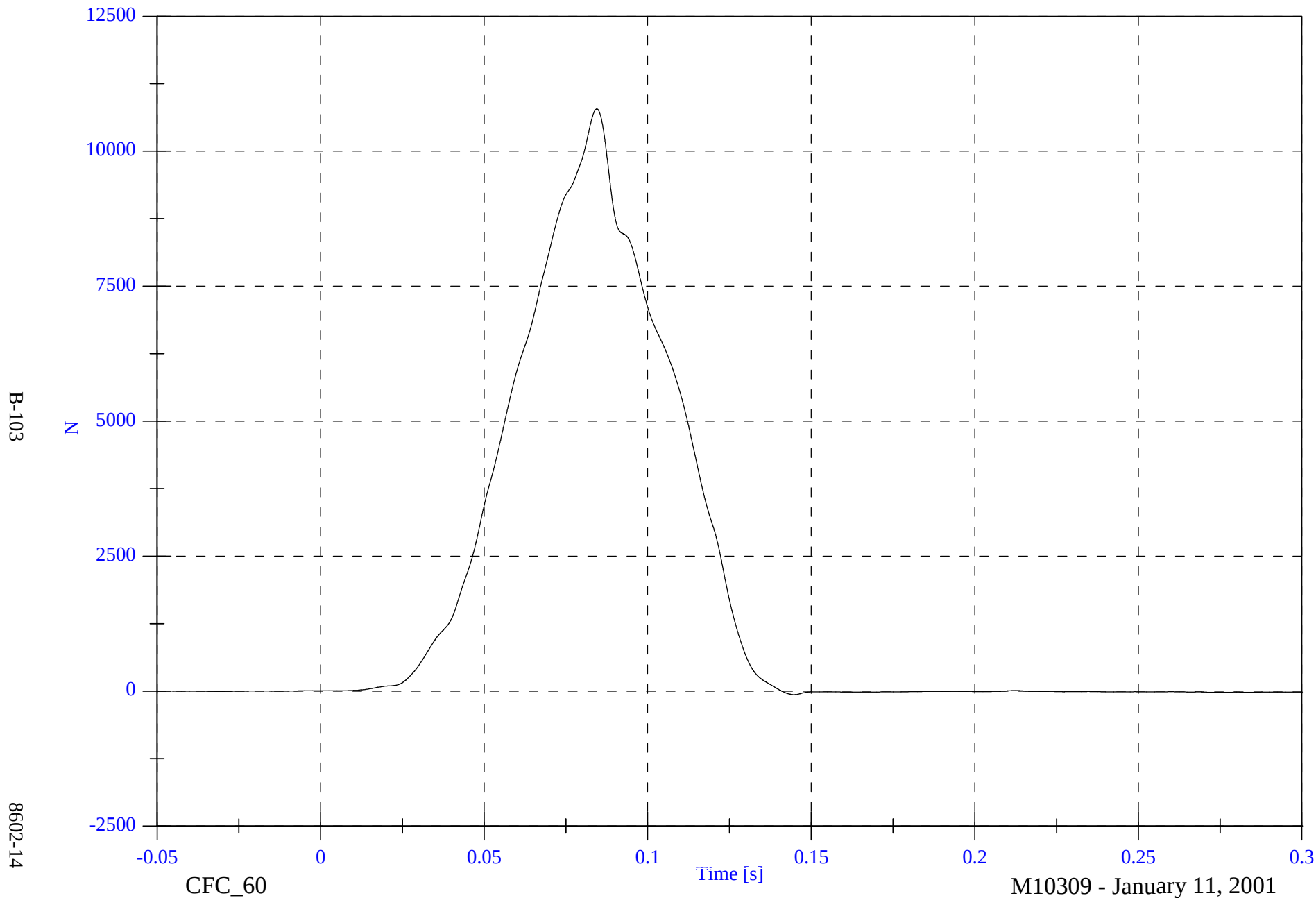


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P2 Shoulder Belt Force

Max: 10785.5 [N] at 0.084 [s]

Min: -67.5 [N] at 0.145 [s]

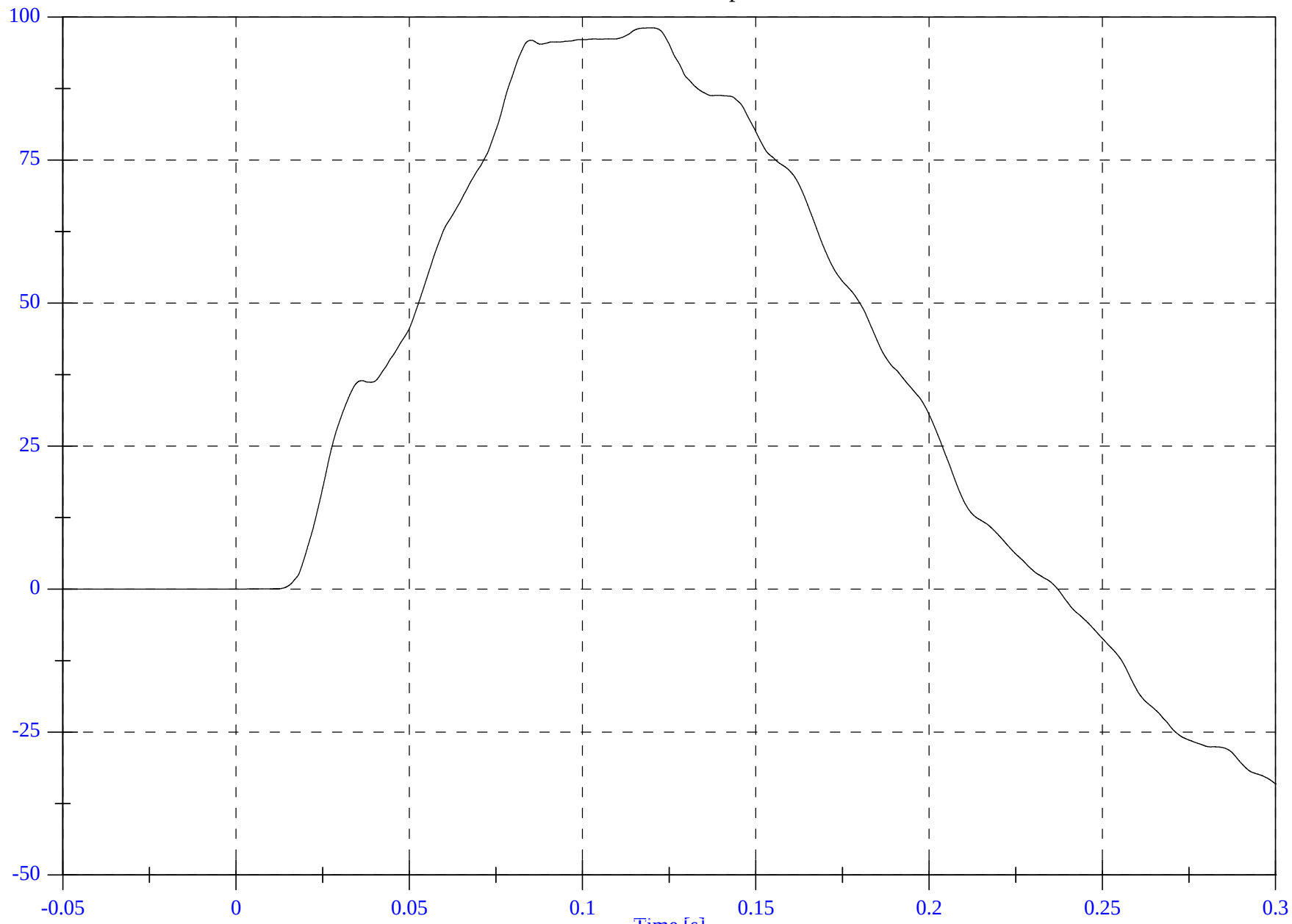


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

P2 Shoulder Belt Spoolout

Max: 98.1 [mm] at 0.120 [s]

Min: -34.1 [mm] at 0.300 [s]



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8602-14

CFC_180

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NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

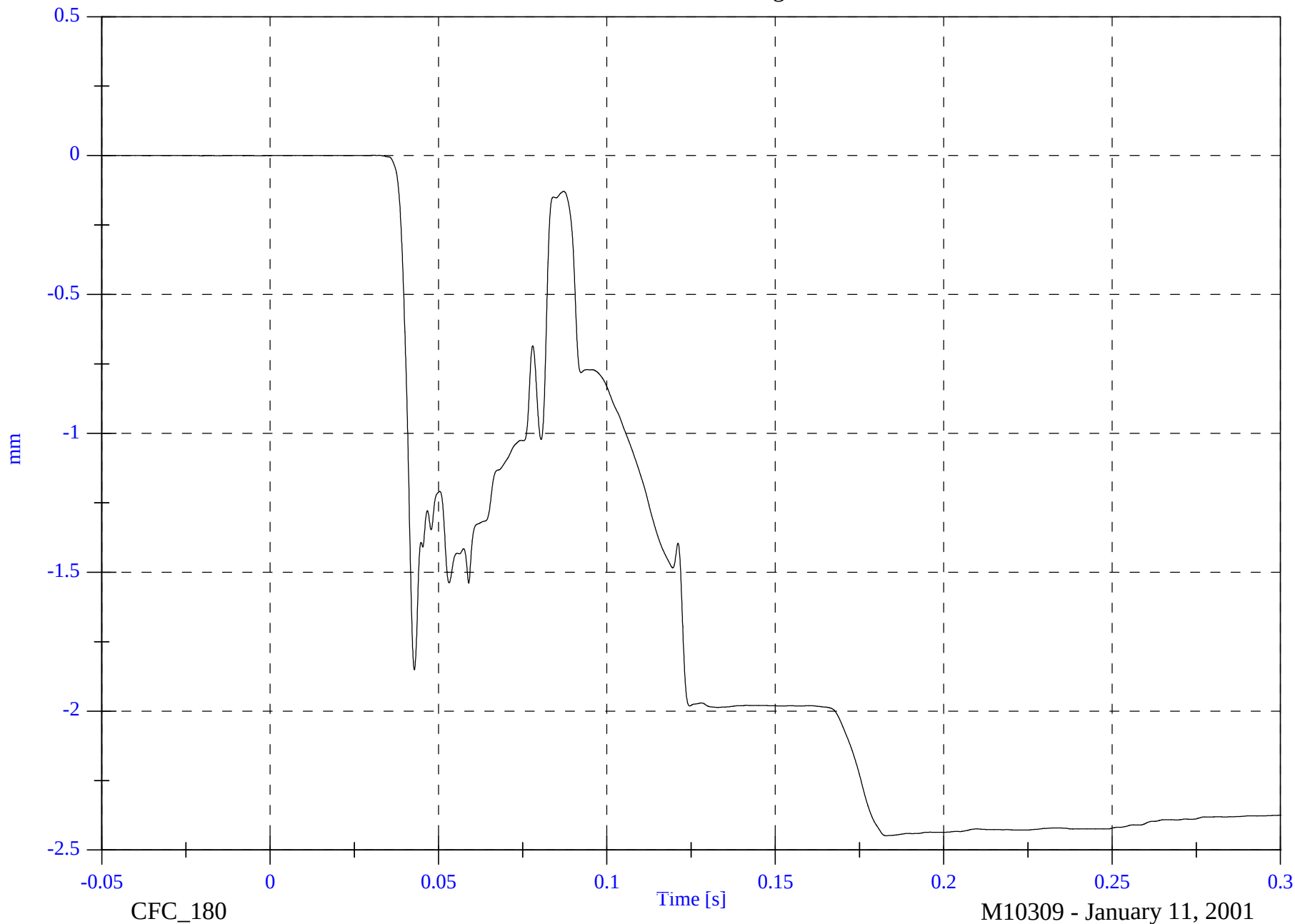
P2 Shoulder Belt Elongation

Max: 0.0 [mm] at 0.031 [s]

Min: -2.4 [mm] at 0.183 [s]

B-105

8602-14

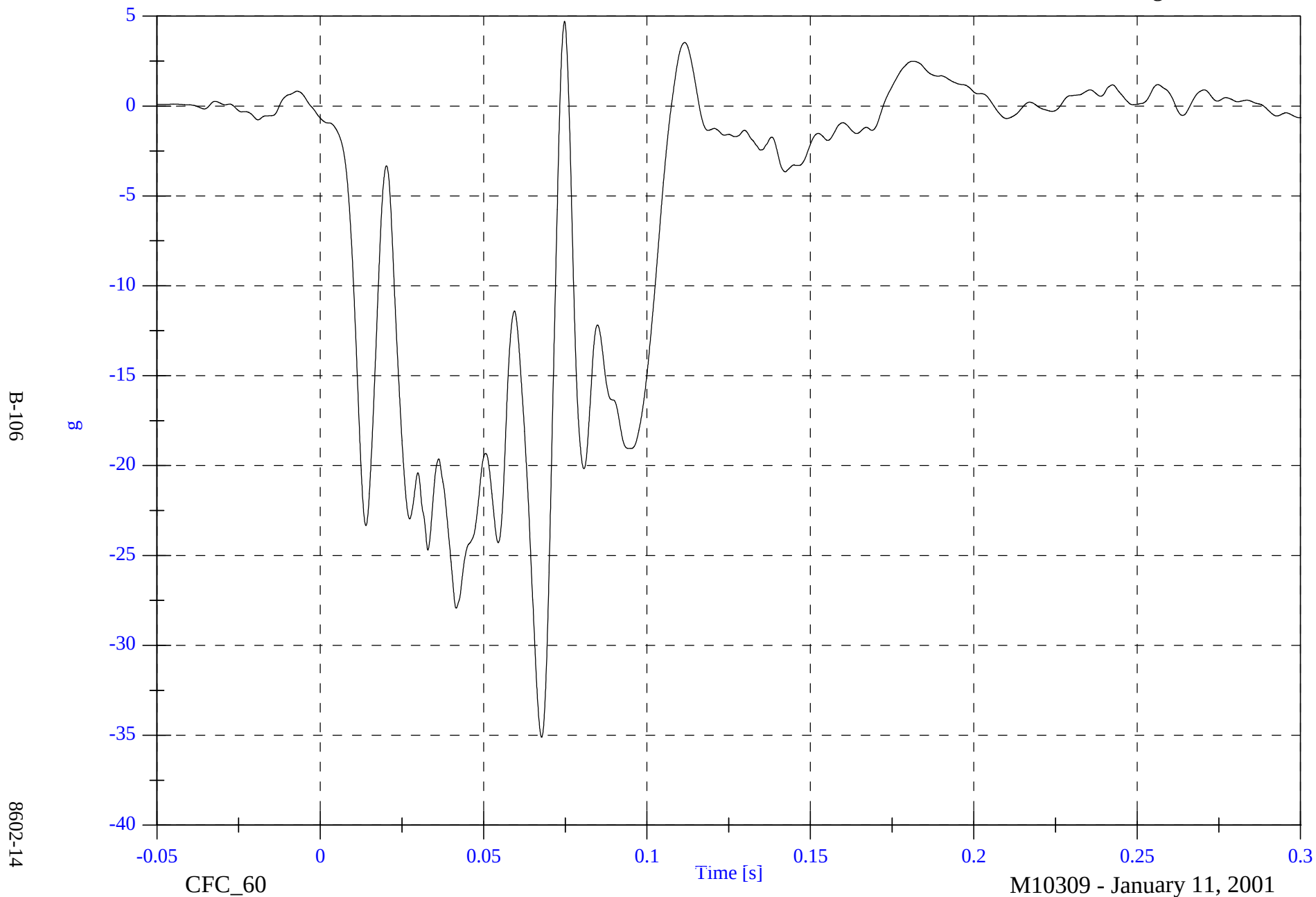


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

Left Rear #1x

Max: 4.7 [g] at 0.075 [s]

Min: -35.1 [g] at 0.068 [s]

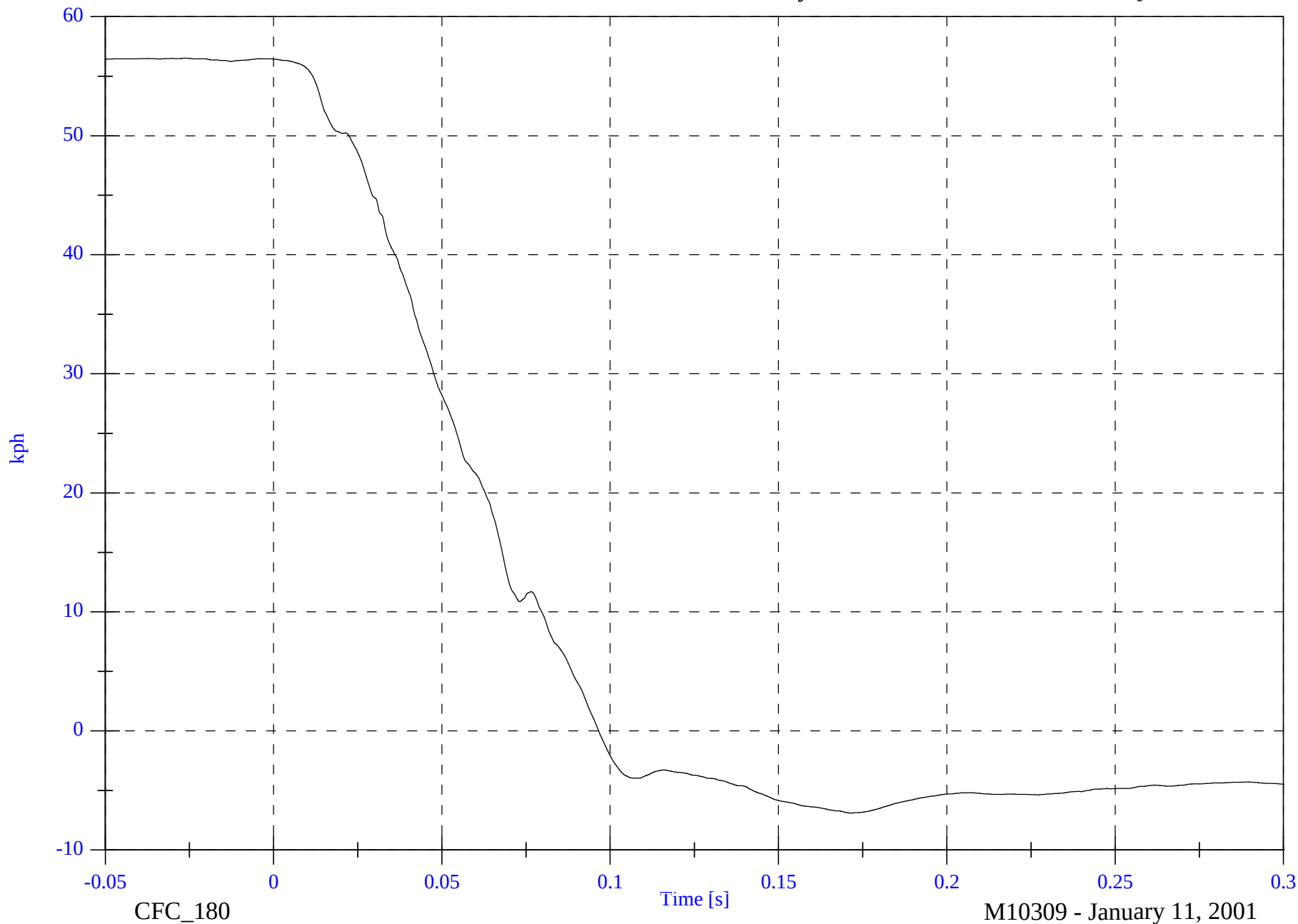


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

Left Rear #1x Velocity

Max: 56.5 [kph] at -0.026 [s]

Min: -6.9 [kph] at 0.171 [s]



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8602-14

CFC_180

Time [s]

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NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

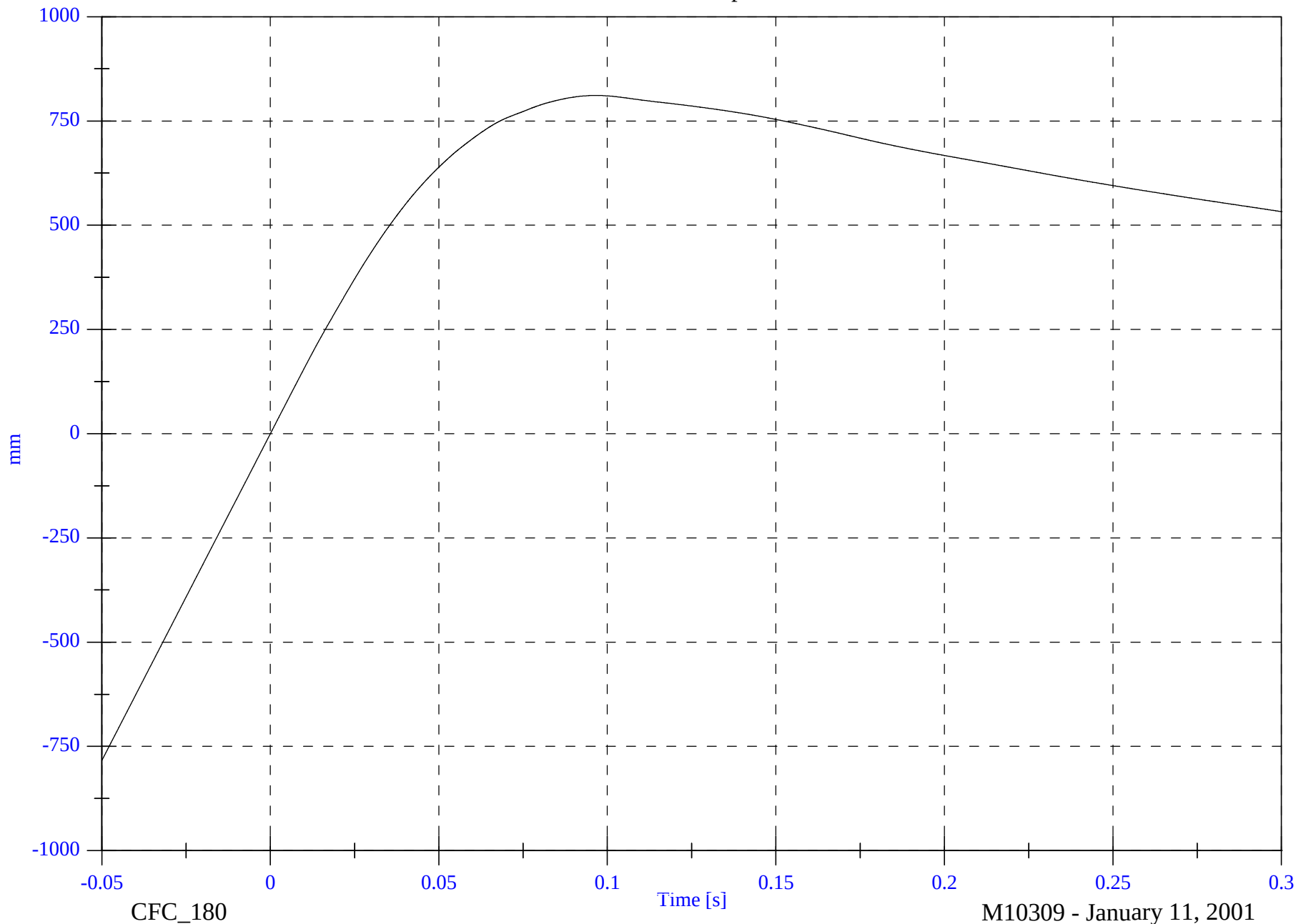
Left Rear #1x Displacement

Max: 811.1 [mm] at 0.097 [s]

Min: -783.8 [mm] at -0.050 [s]

B-108

8602-14

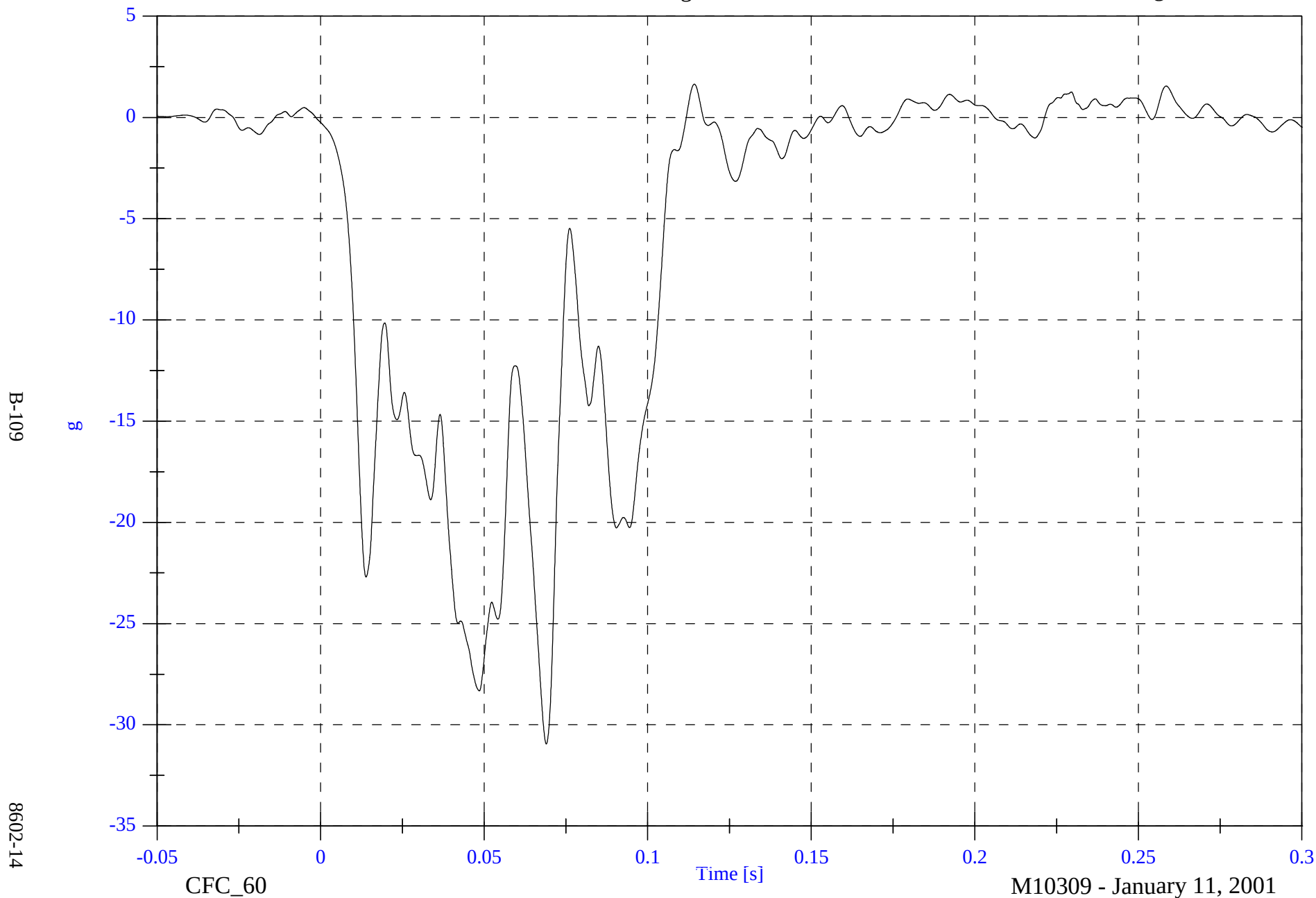


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

Right Rear #2x

Max: 1.6 [g] at 0.114 [s]

Min: -30.9 [g] at 0.069 [s]

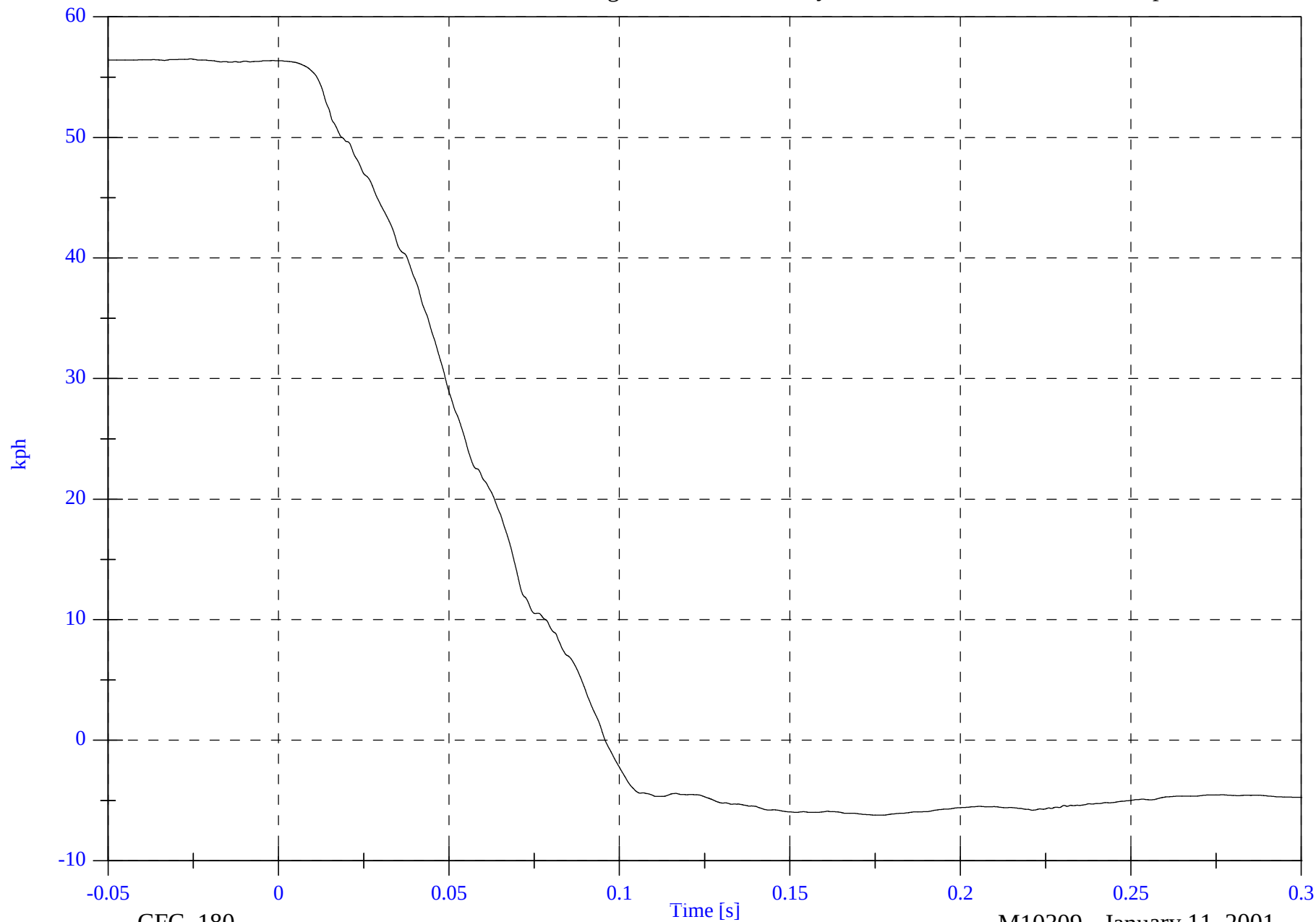


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

Right Rear #2x Velocity

Max: 56.5 [kph] at -0.026 [s]

Min: -6.2 [kph] at 0.177 [s]



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8602-14

CFC_180

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NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

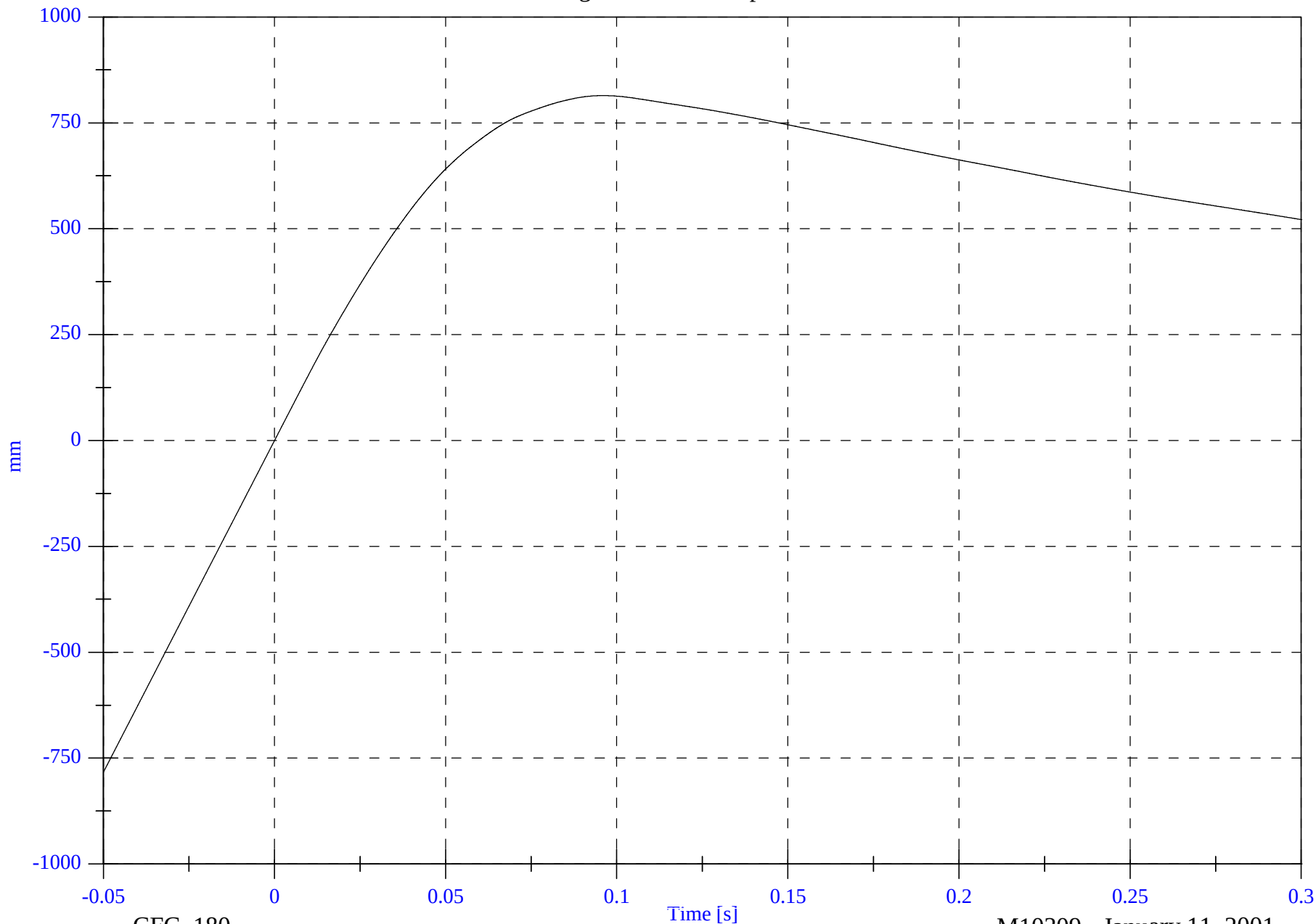
Right Rear #2x Displacement

Max: 814.5 [mm] at 0.096 [s]

Min: -783.2 [mm] at -0.050 [s]

B-111

8602-14



CFC_180

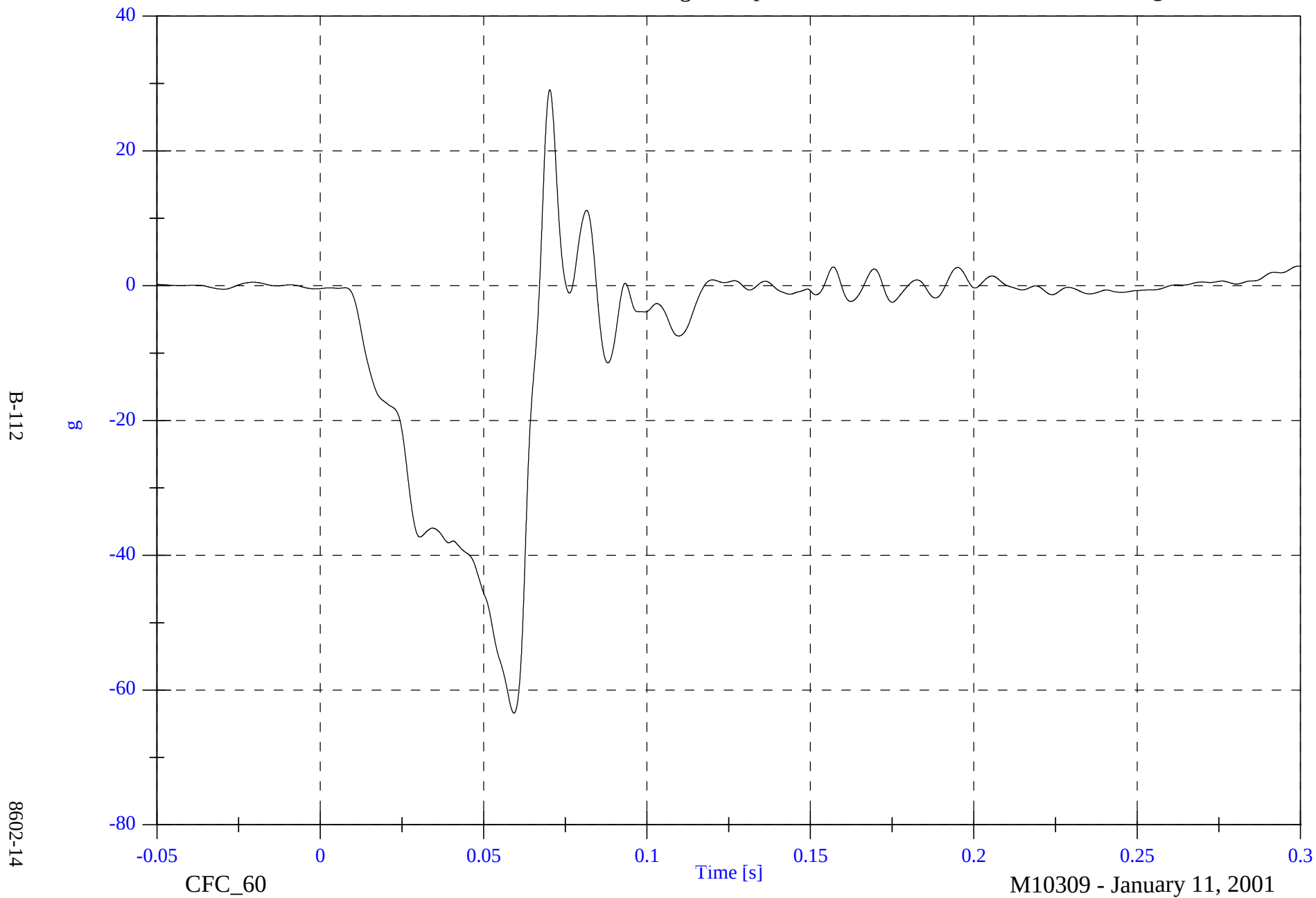
M10309 - January 11, 2001

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

Engine Top #3x

Max: 29.1 [g] at 0.070 [s]

Min: -63.4 [g] at 0.059 [s]

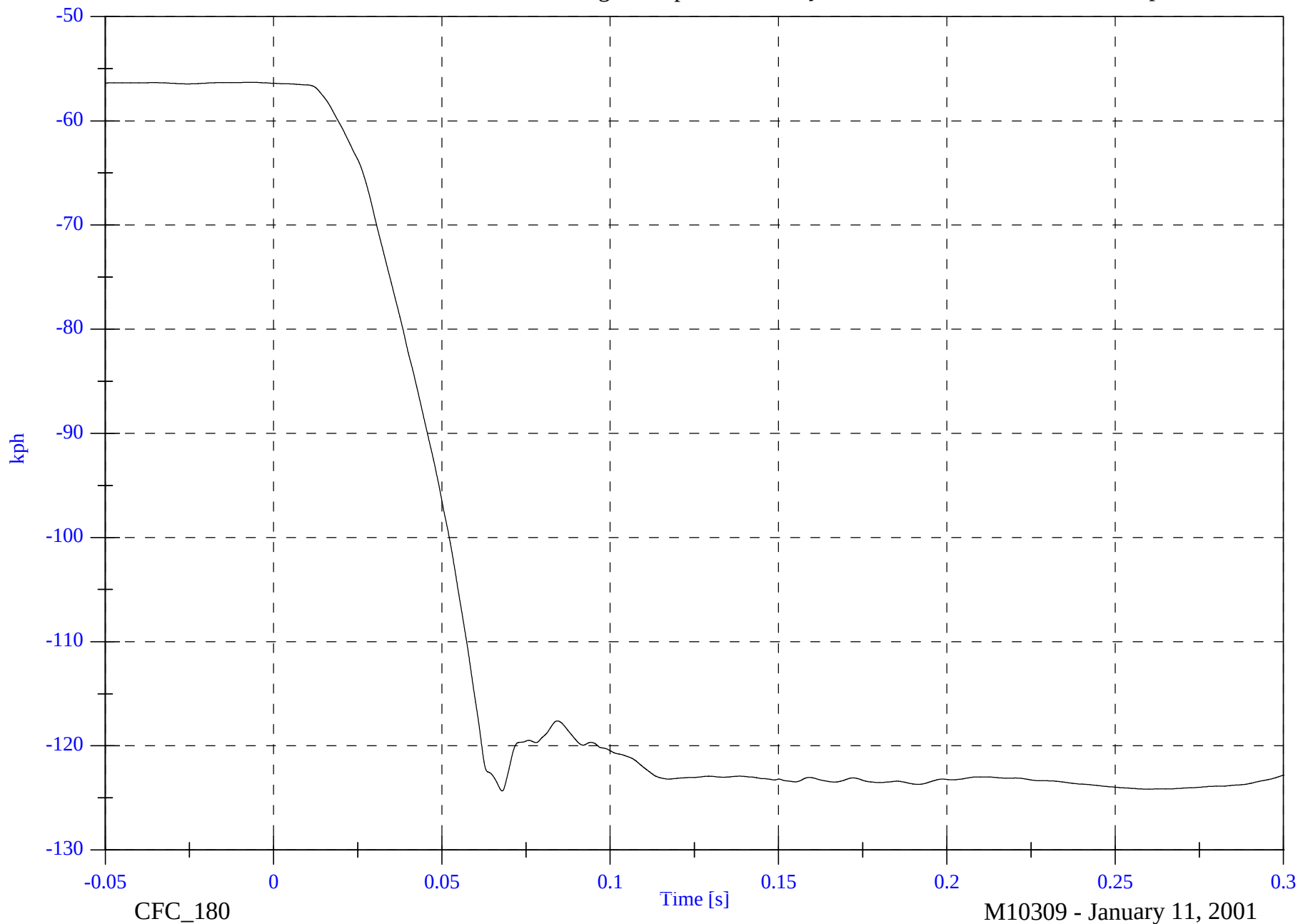


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

Engine Top #3x Velocity

Max: -56.3 [kph] at -0.007 [s]

Min: -124.3 [kph] at 0.068 [s]



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8602-14

CFC_180

Time [s]

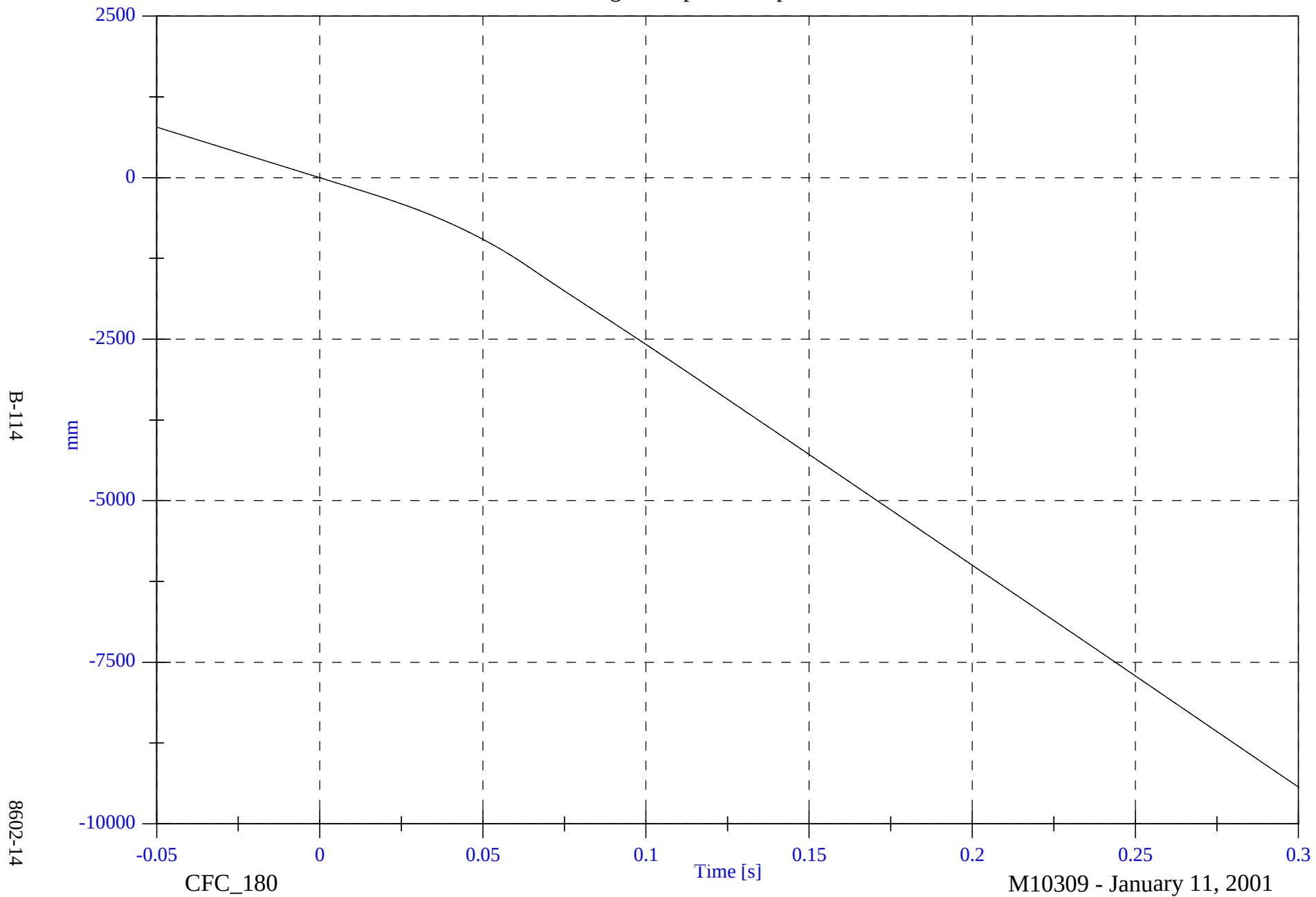
M10309 - January 11, 2001

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

Engine Top #3x Displacement

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

Min: -9429.3 [mm] at 0.300 [s]

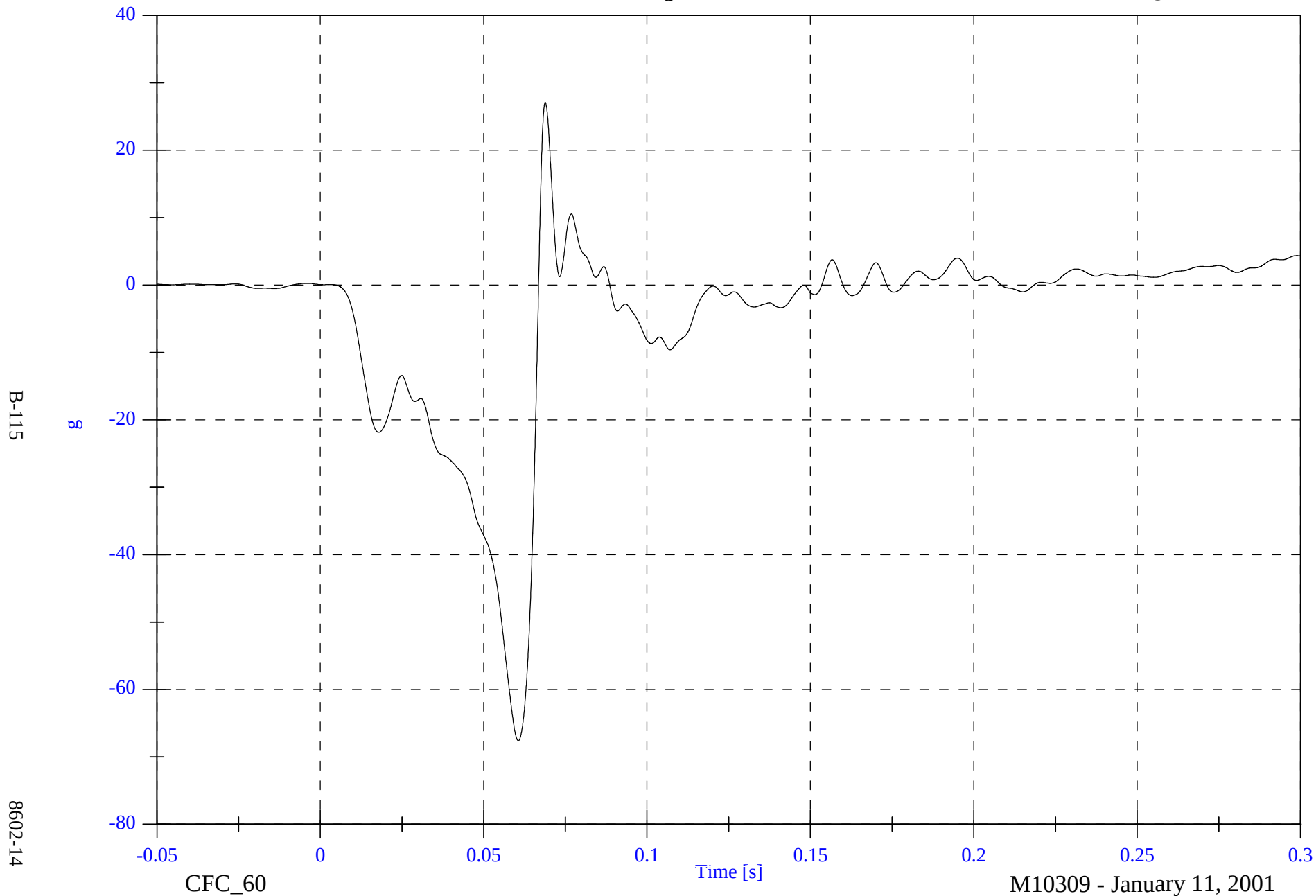


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

Engine Bottom #4x

Max: 27.1 [g] at 0.069 [s]

Min: -67.6 [g] at 0.061 [s]

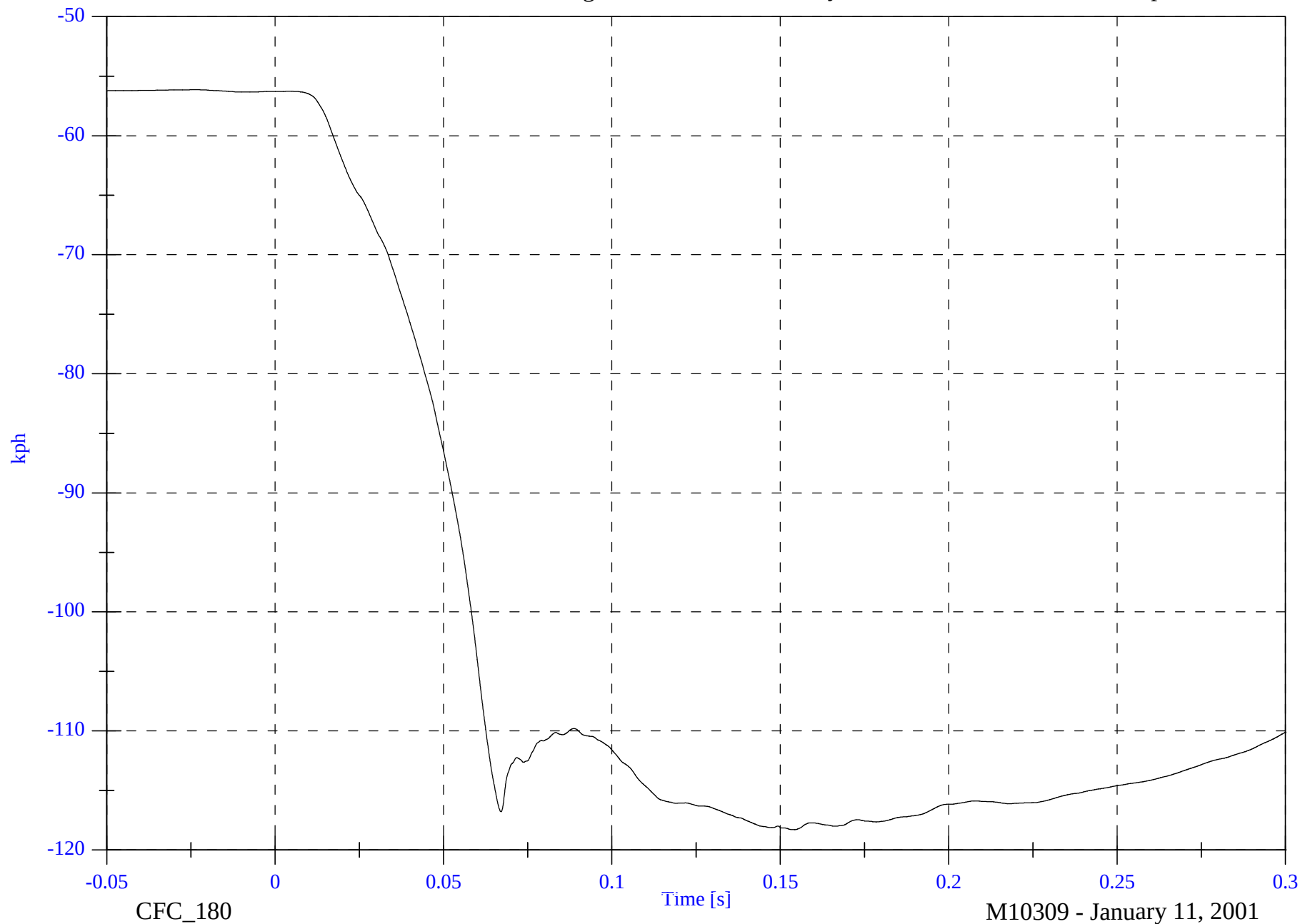


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

Engine Bottom #4x Velocity

Max: -56.1 [kph] at -0.024 [s]

Min: -118.3 [kph] at 0.154 [s]



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8602-14

CFC_180

Time [s]

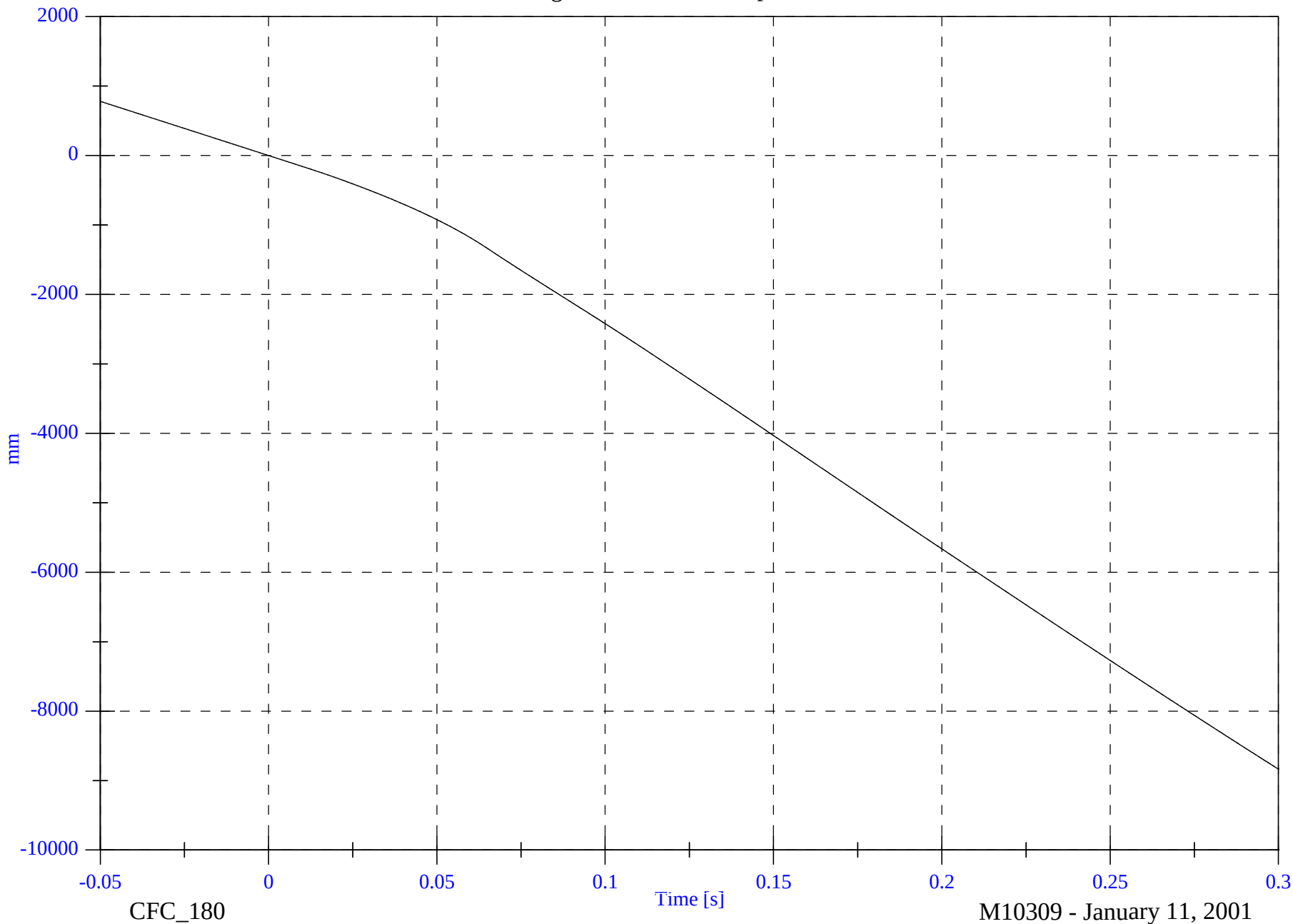
M10309 - January 11, 2001

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

Engine Bottom #4x Displacement

Max: 780.8 [mm] at -0.050 [s]

Min: -8835.4 [mm] at 0.300 [s]



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8602-14

CFC_180

Time [s]

M10309 - January 11, 2001

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

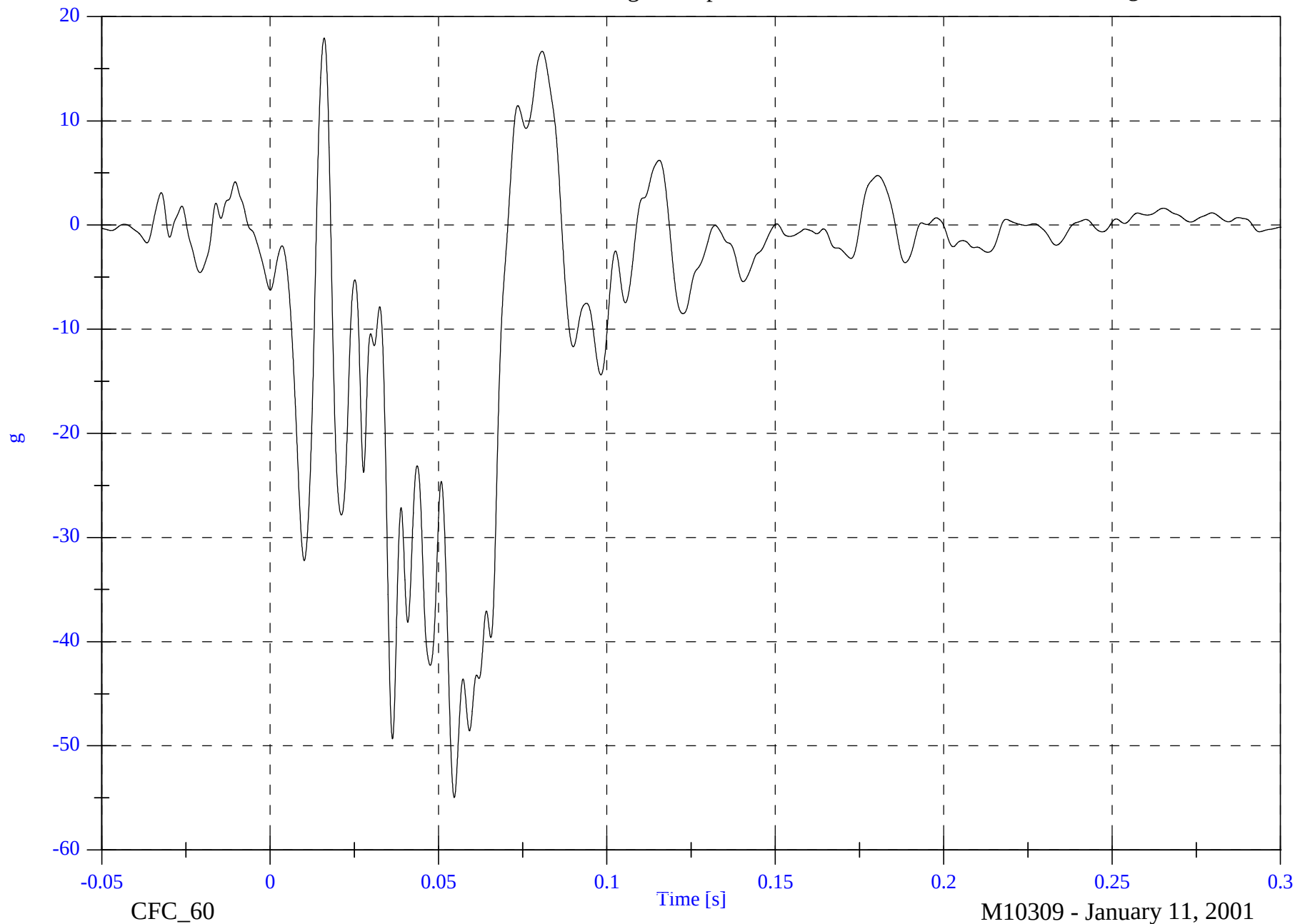
Right Caliper #5x

Max: 18.0 [g] at 0.016 [s]

Min: -55.0 [g] at 0.055 [s]

B-118

8602-14

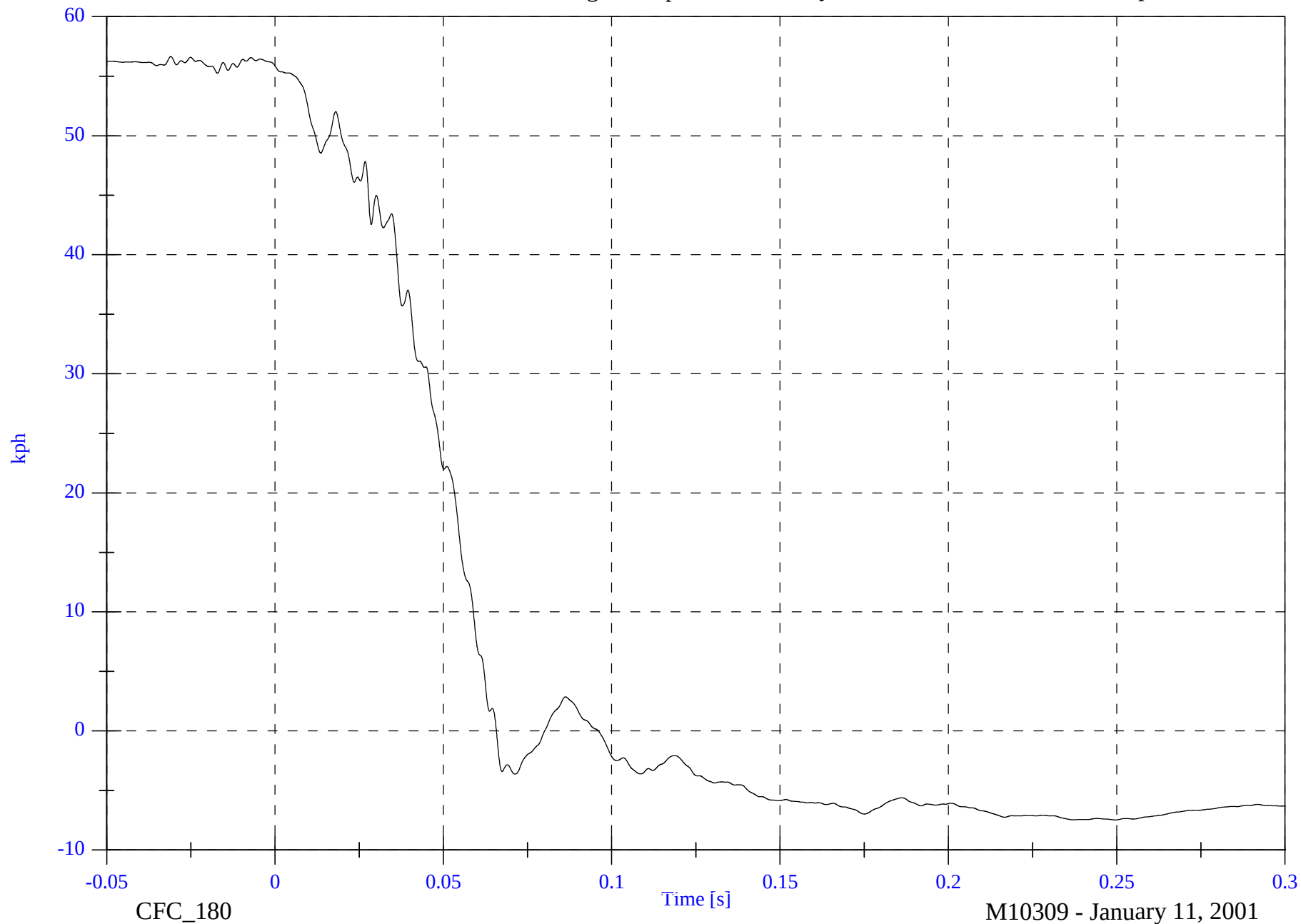


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

Right Caliper #5x Velocity

Max: 56.7 [kph] at -0.031 [s]

Min: -7.5 [kph] at 0.250 [s]



B-119

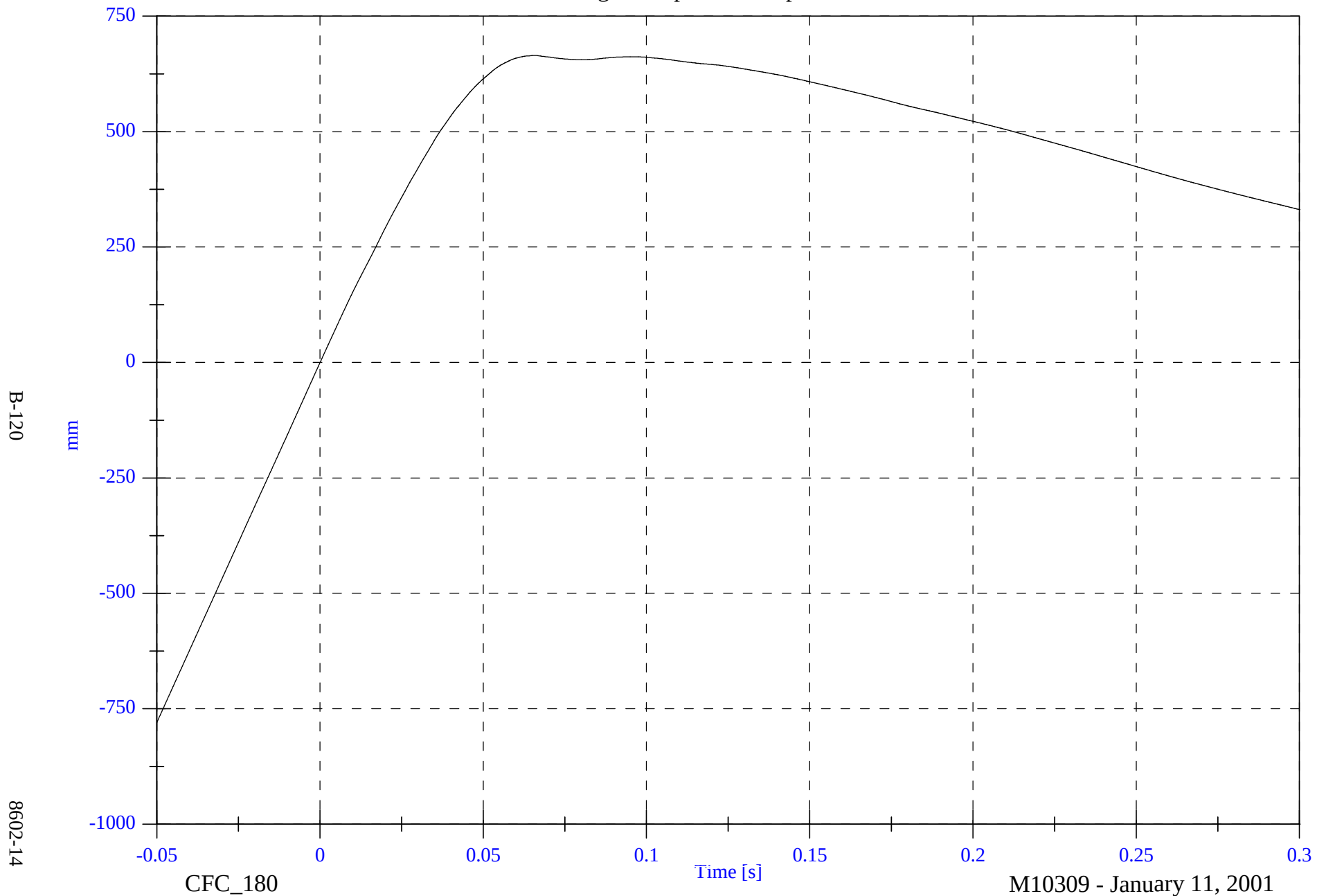
8602-14

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

Right Caliper #5x Displacement

Max: 664.8 [mm] at 0.066 [s]

Min: -779.7 [mm] at -0.050 [s]

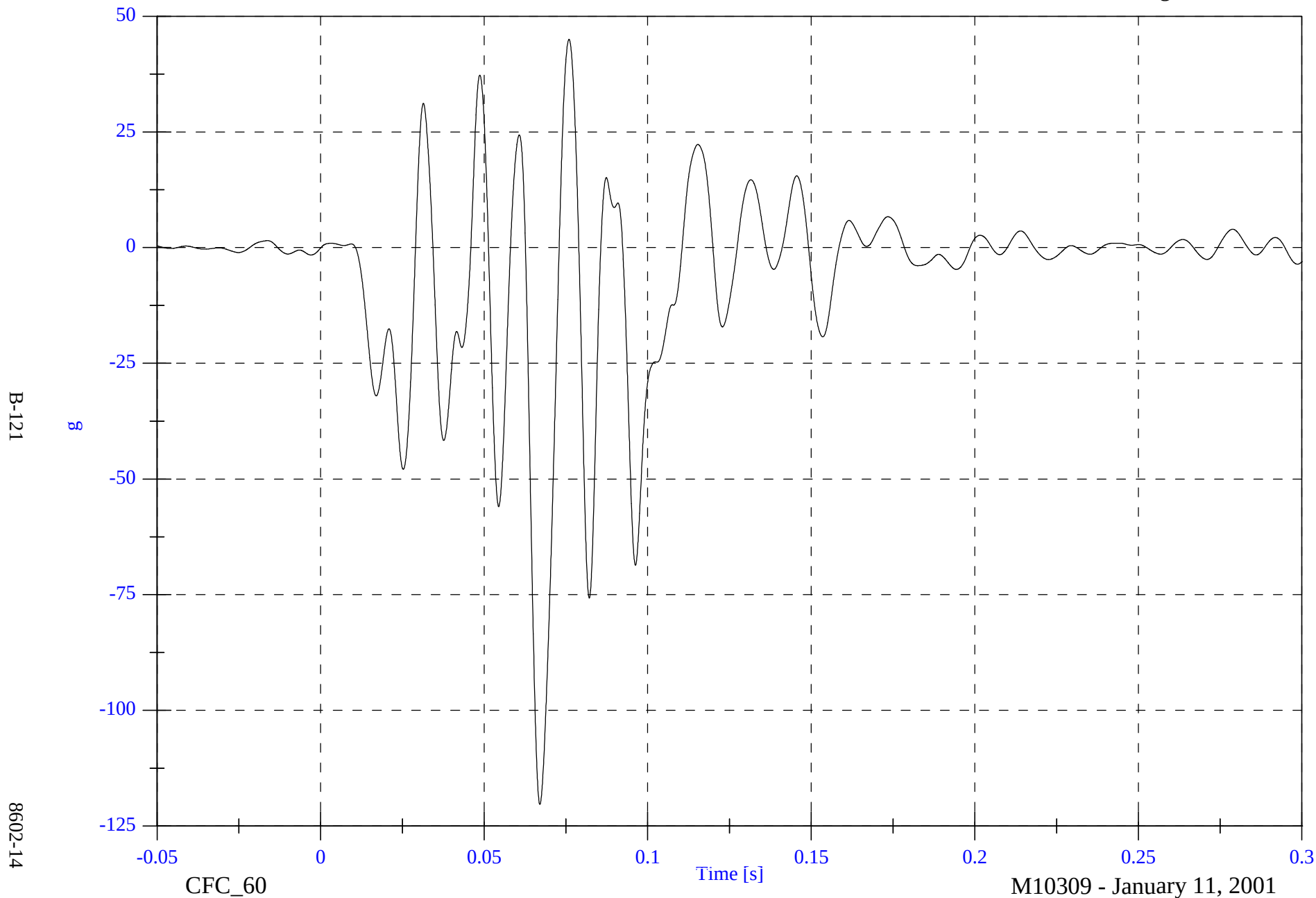


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

Instrument Panel #6x

Max: 45.0 [g] at 0.076 [s]

Min: -120.3 [g] at 0.067 [s]

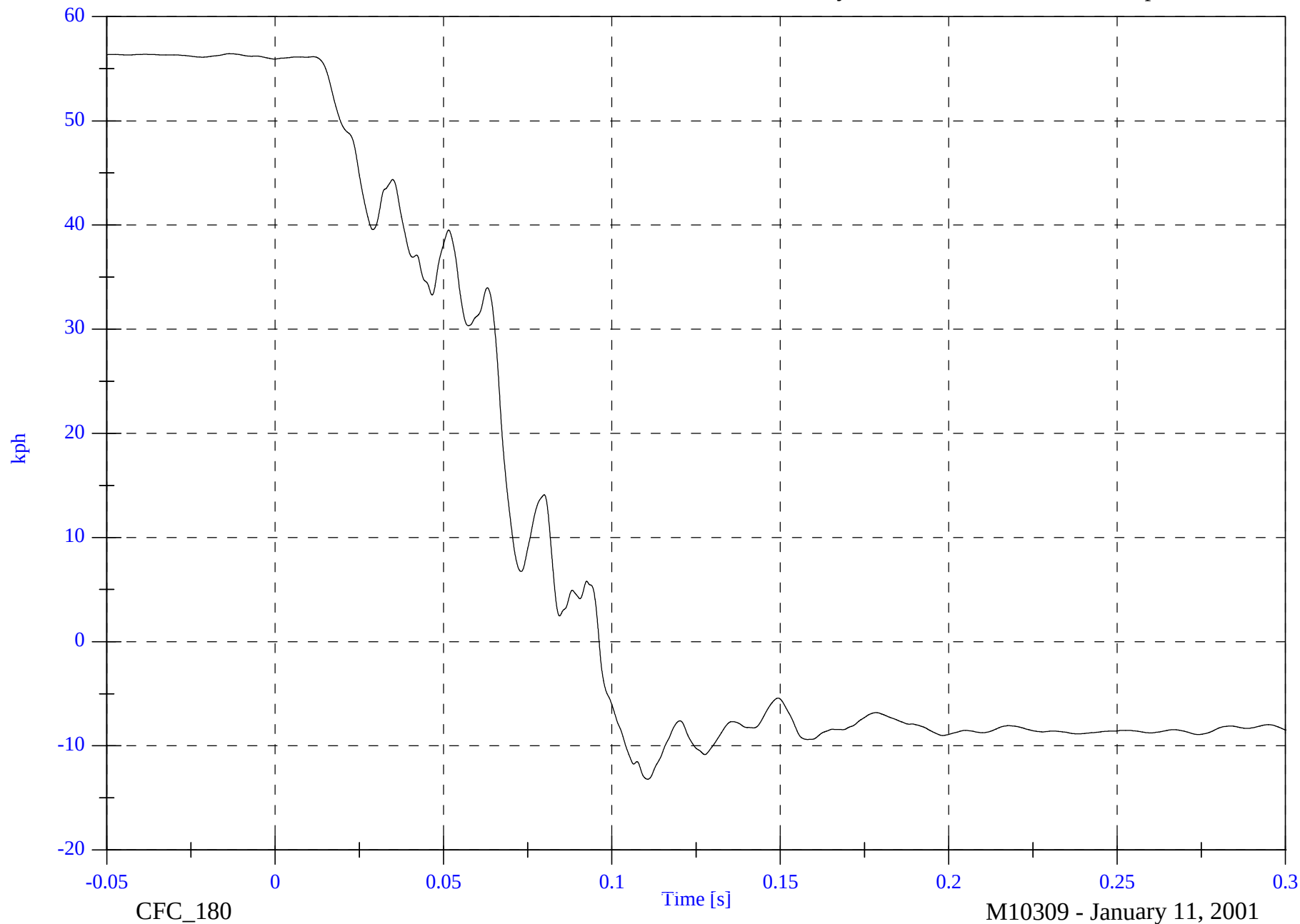


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

Instrument Panel #6x Velocity

Max: 56.5 [kph] at -0.014 [s]

Min: -13.2 [kph] at 0.111 [s]



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8602-14

CFC_180

Time [s]

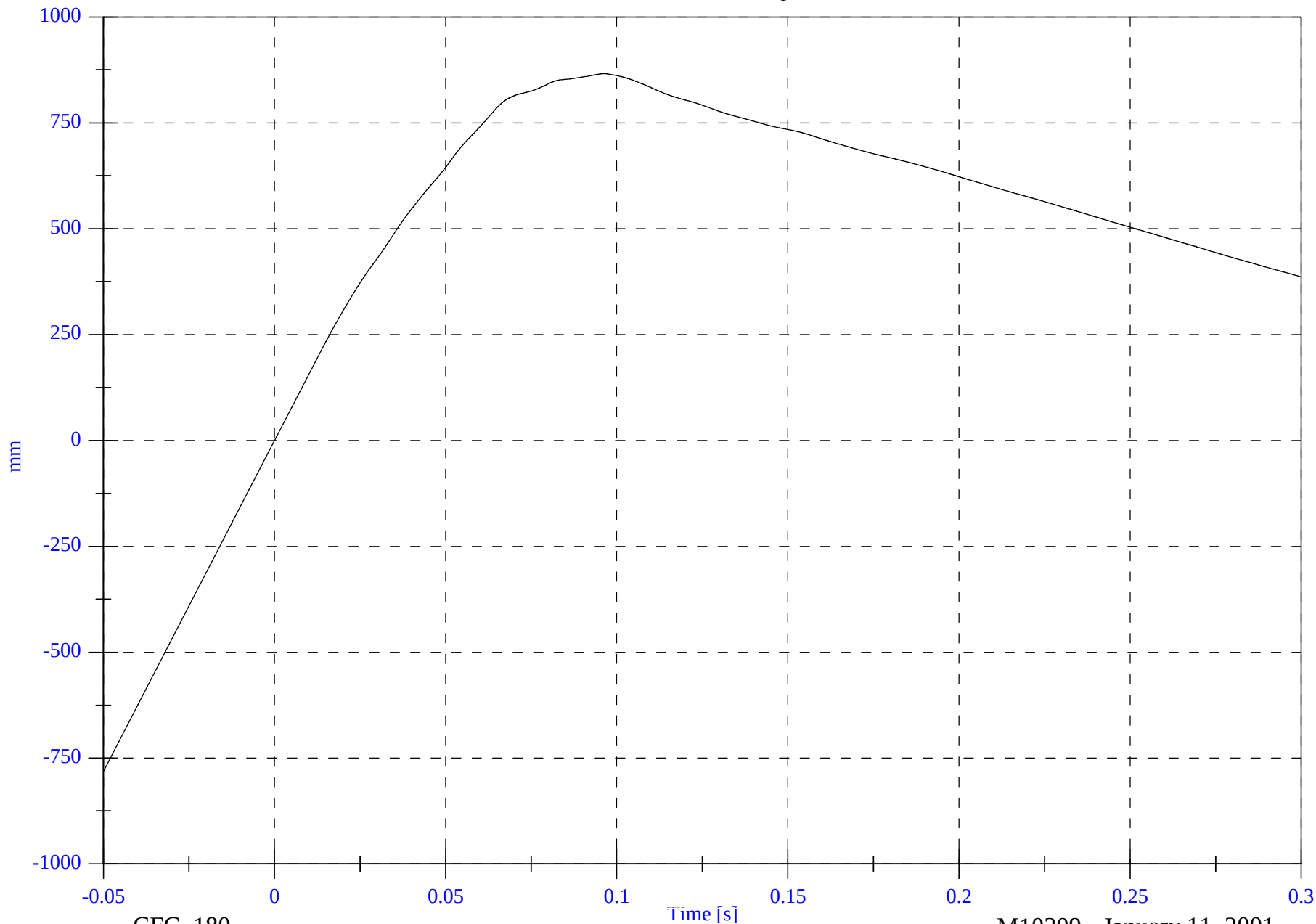
M10309 - January 11, 2001

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

Instrument Panel #6x Displacement

Max: 865.9 [mm] at 0.096 [s]

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



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8602-14

CFC_180

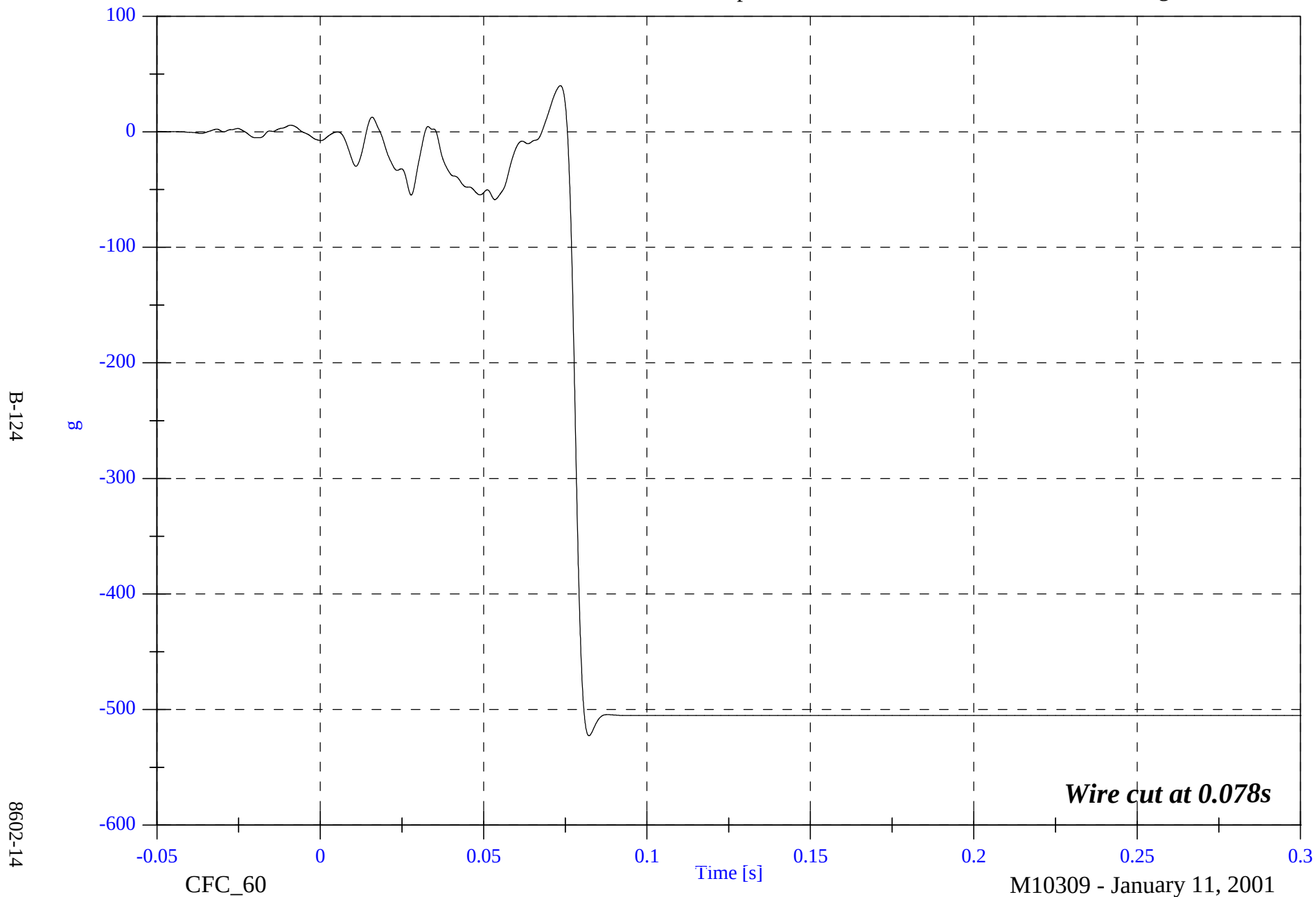
M10309 - January 11, 2001

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

Left Caliper #7x

Max: 39.9 [g] at 0.073 [s]

Min: -522.7 [g] at 0.082 [s]

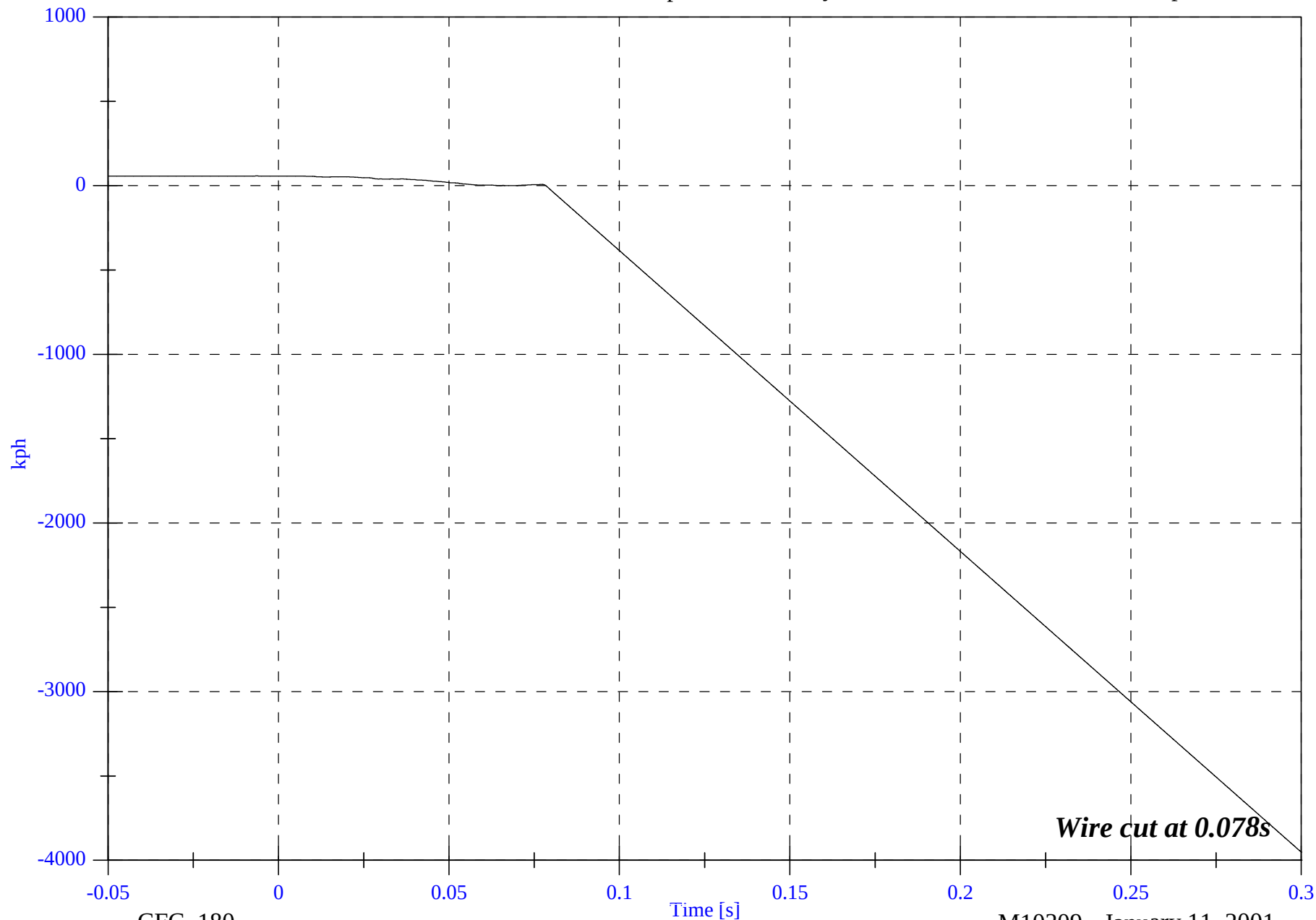


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

Left Caliper #7x Velocity

Max: 57.2 [kph] at -0.006 [s]

Min: -3951.5 [kph] at 0.300 [s]



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8602-14

CFC_180

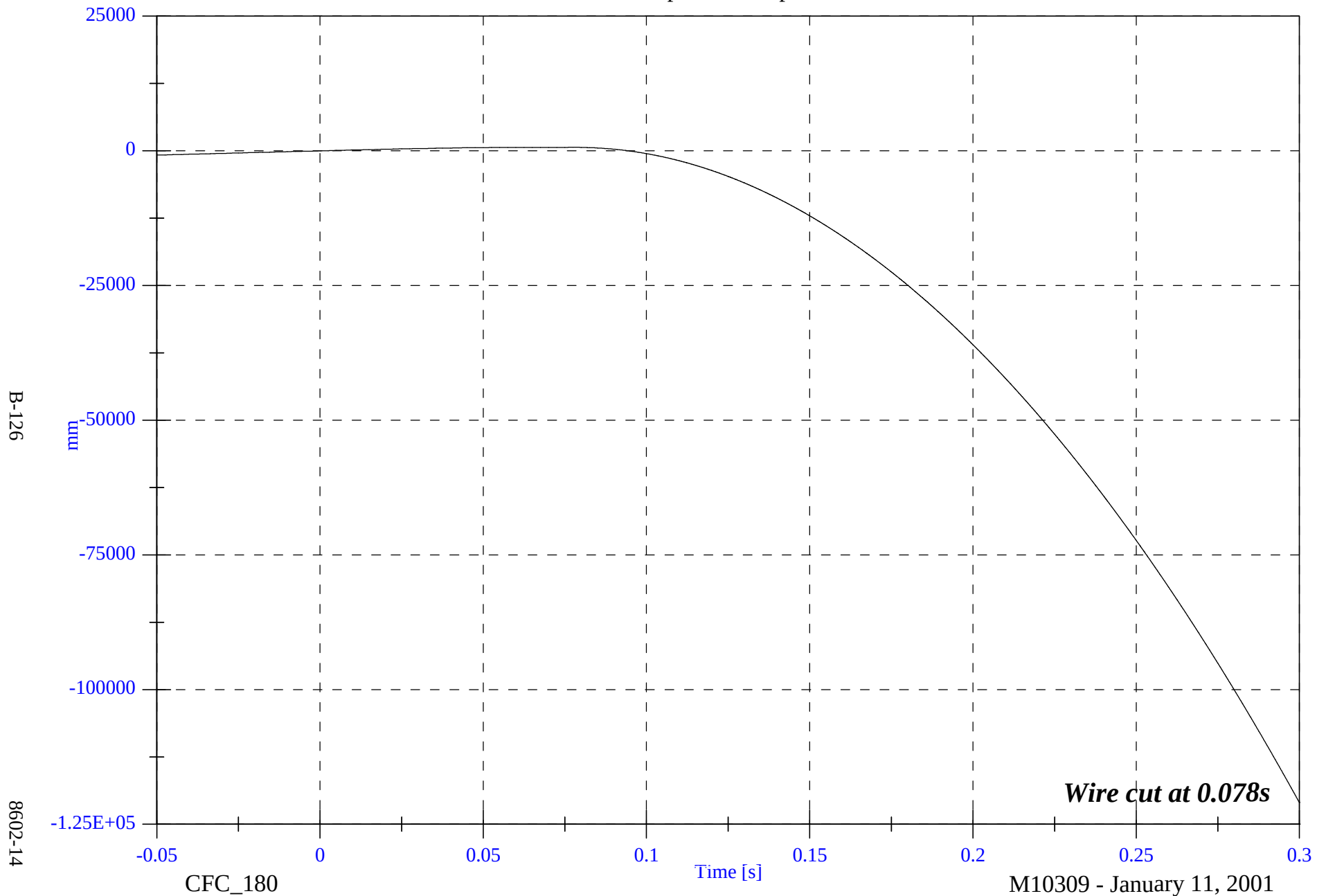
M10309 - January 11, 2001

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

Left Caliper #7x Displacement

Max: 644.8 [mm] at 0.078 [s]

Min: -120968.5 [mm] at 0.300 [s]

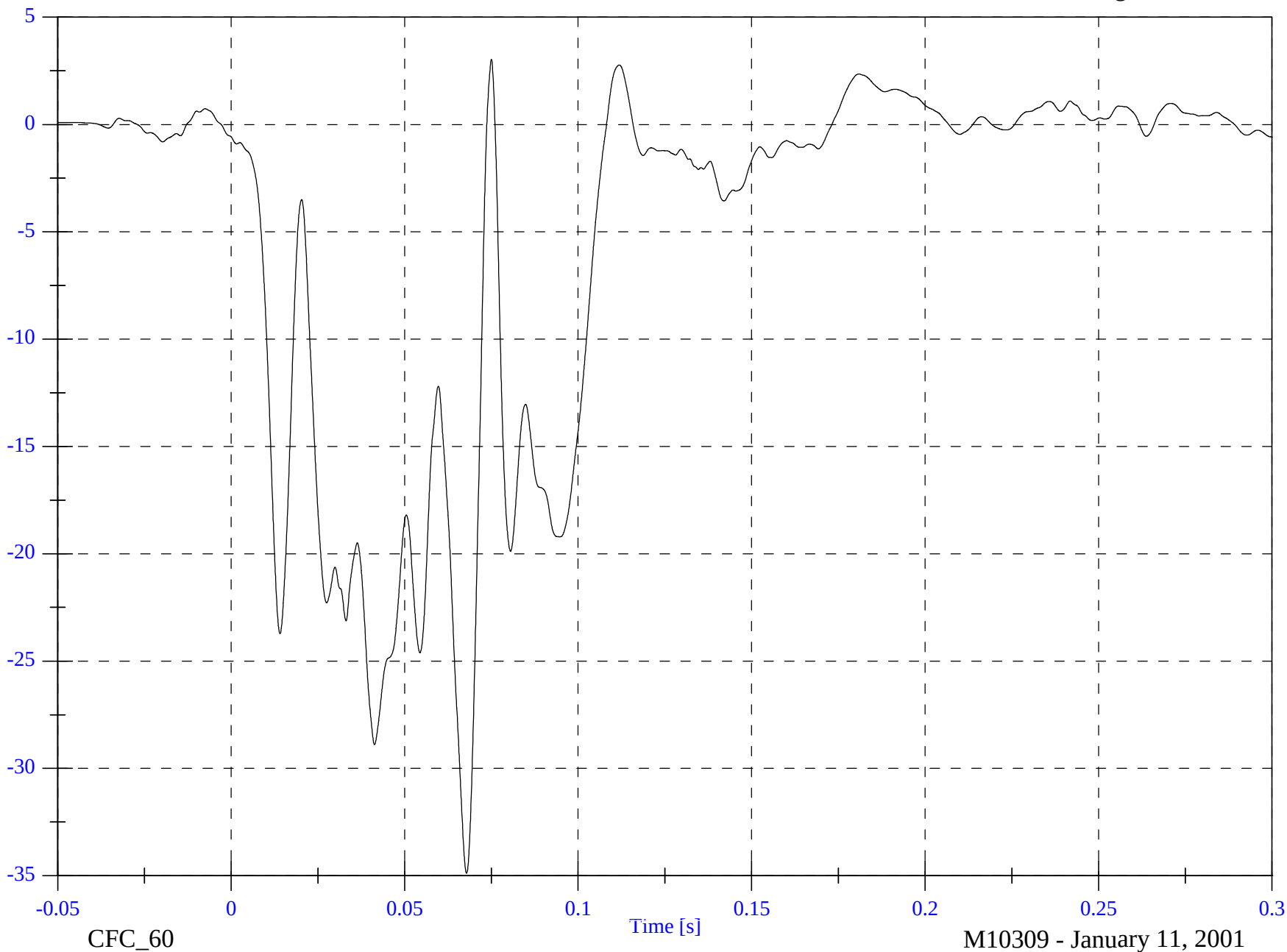


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

Left Rear Red #8x

Max: 3.0 [g] at 0.075 [s]

Min: -34.9 [g] at 0.068 [s]



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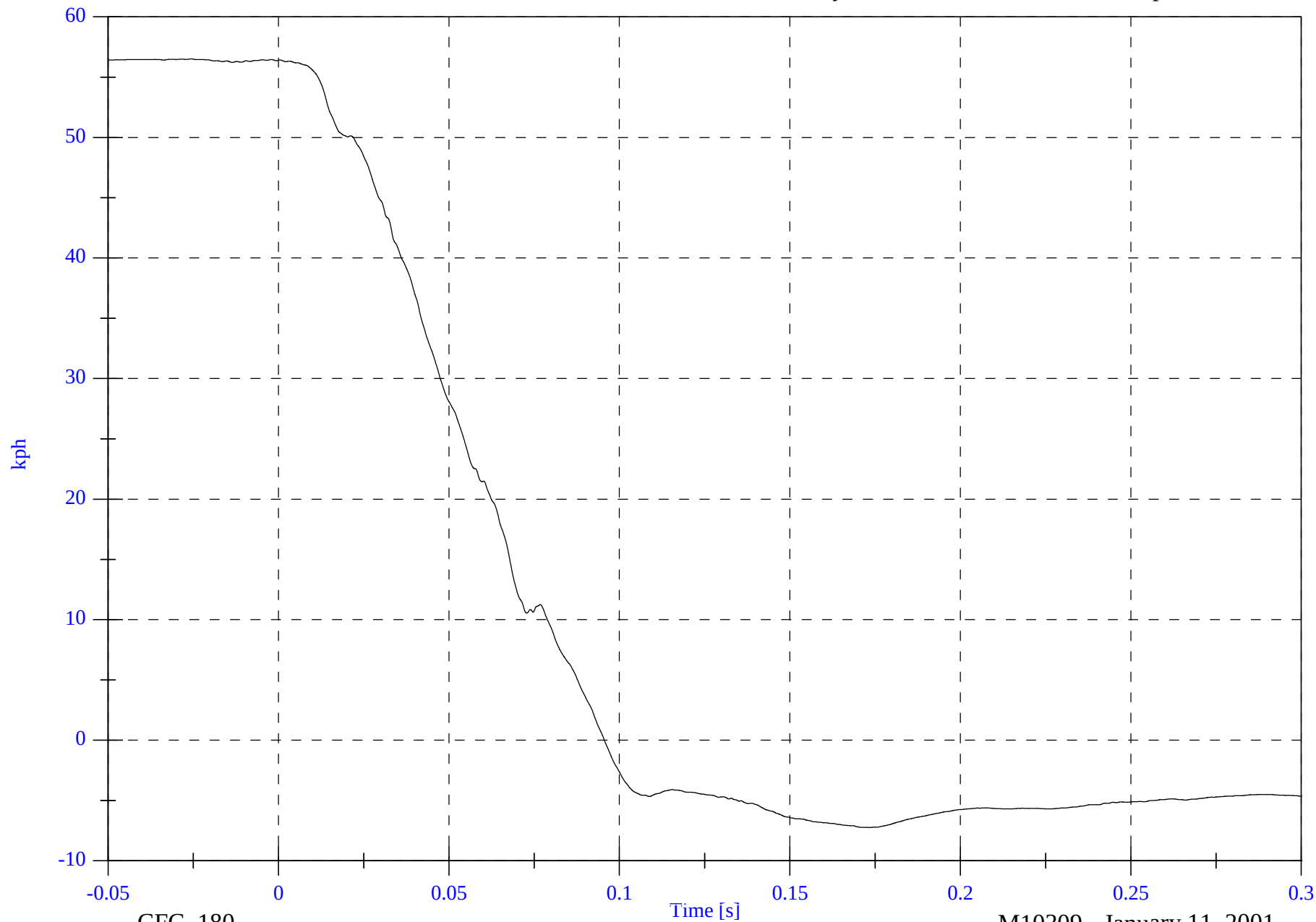
8602-14

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

Left Rear Red #8x Velocity

Max: 56.5 [kph] at -0.026 [s]

Min: -7.2 [kph] at 0.173 [s]



B-128

8602-14

CFC_180

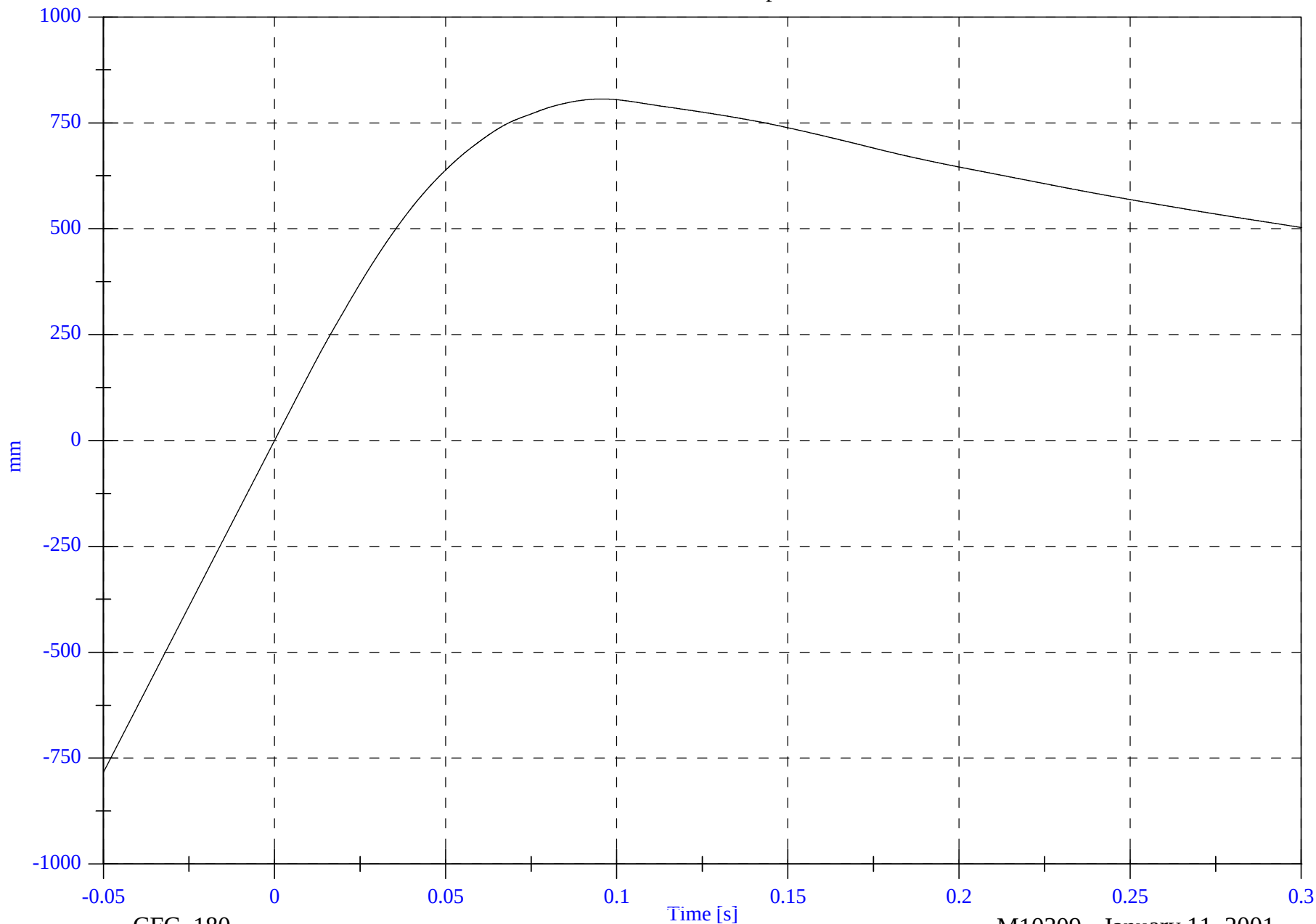
M10309 - January 11, 2001

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

Left Rear Red #8x Displacement

Max: 806.3 [mm] at 0.096 [s]

Min: -783.5 [mm] at -0.050 [s]



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8602-14

CFC_180

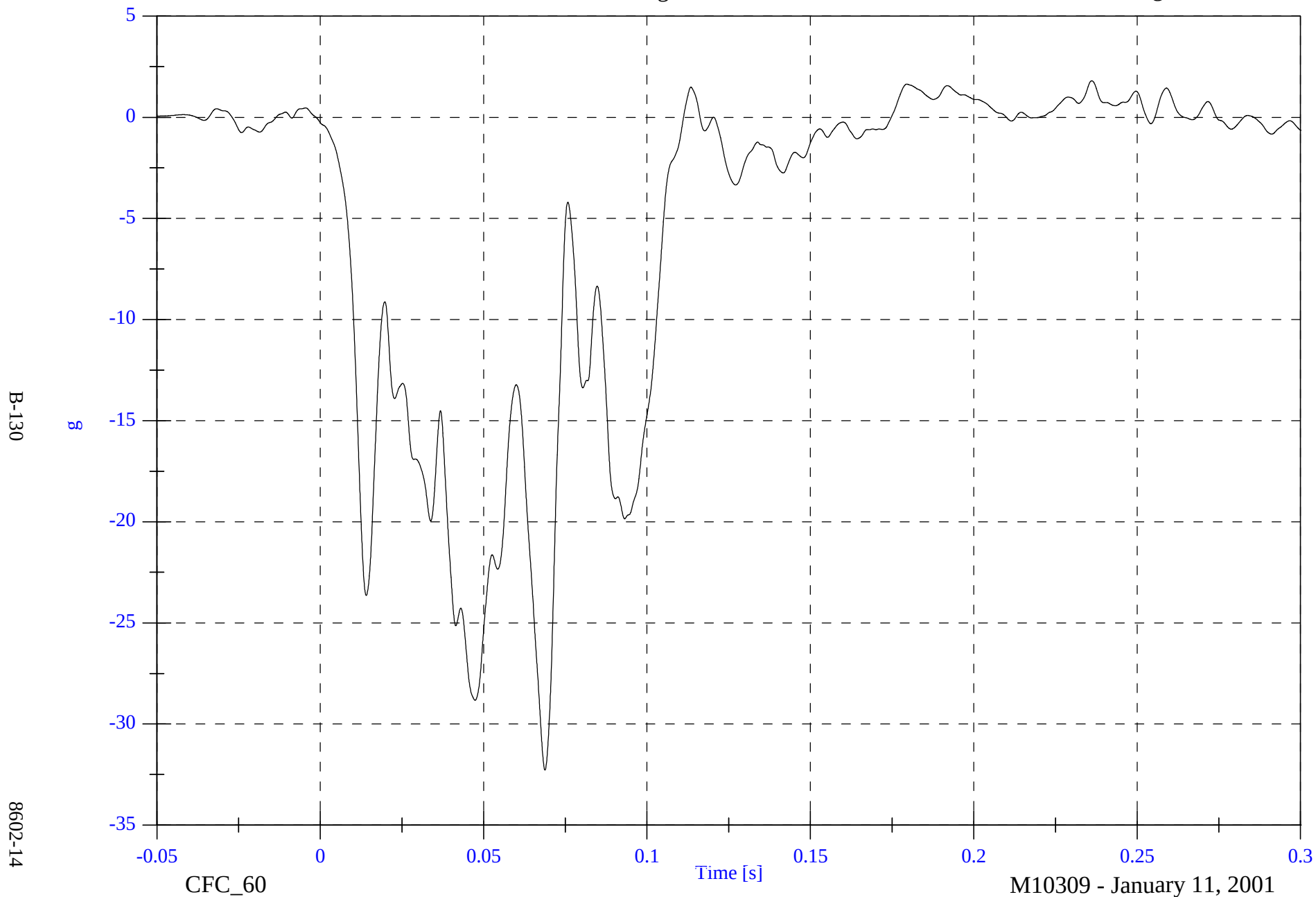
M10309 - January 11, 2001

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

Right Rear Red #9x

Max: 1.8 [g] at 0.236 [s]

Min: -32.3 [g] at 0.069 [s]

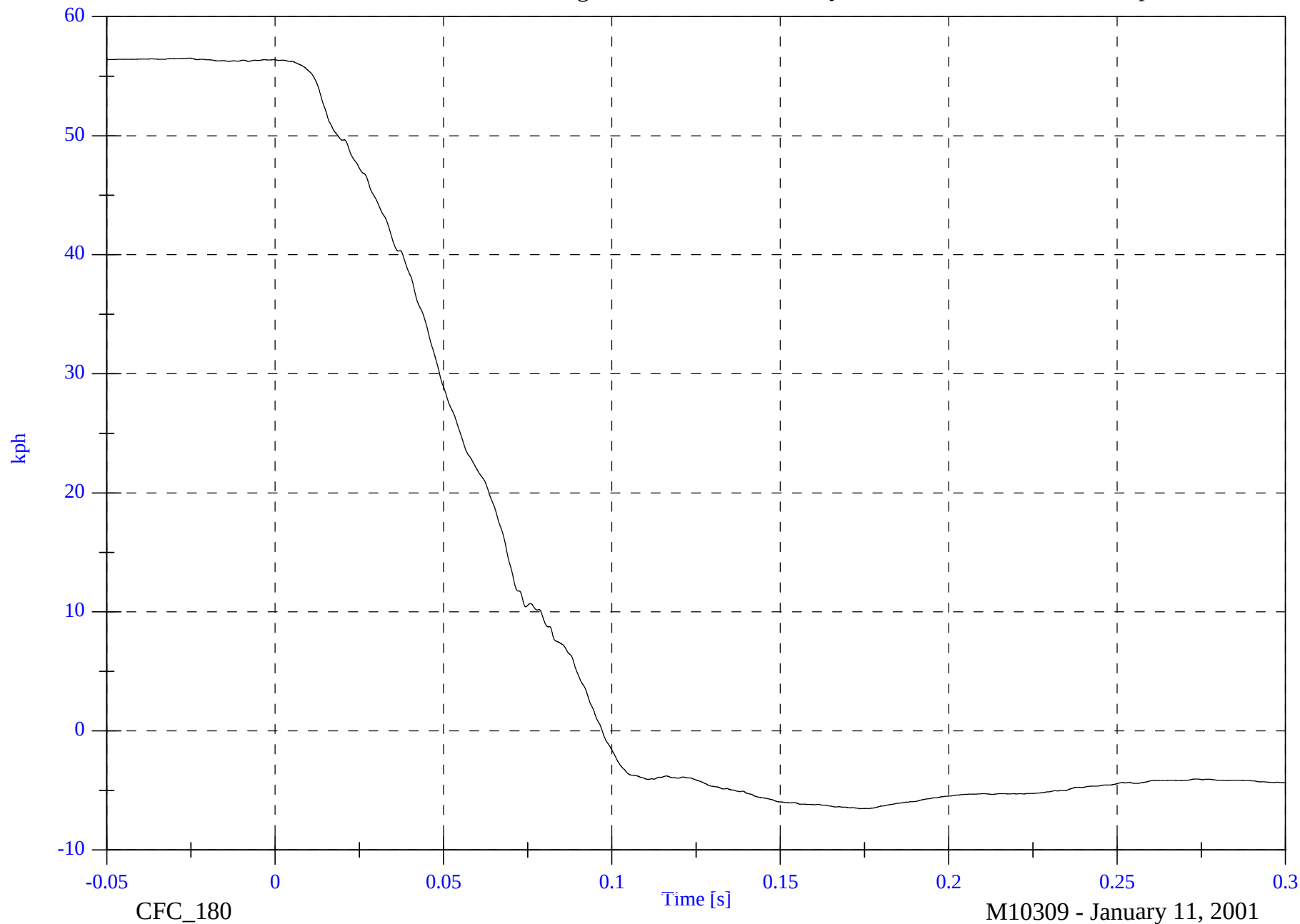


NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

Right Rear Red #9x Velocity

Max: 56.5 [kph] at -0.025 [s]

Min: -6.5 [kph] at 0.174 [s]



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8602-14

CFC_180

Time [s]

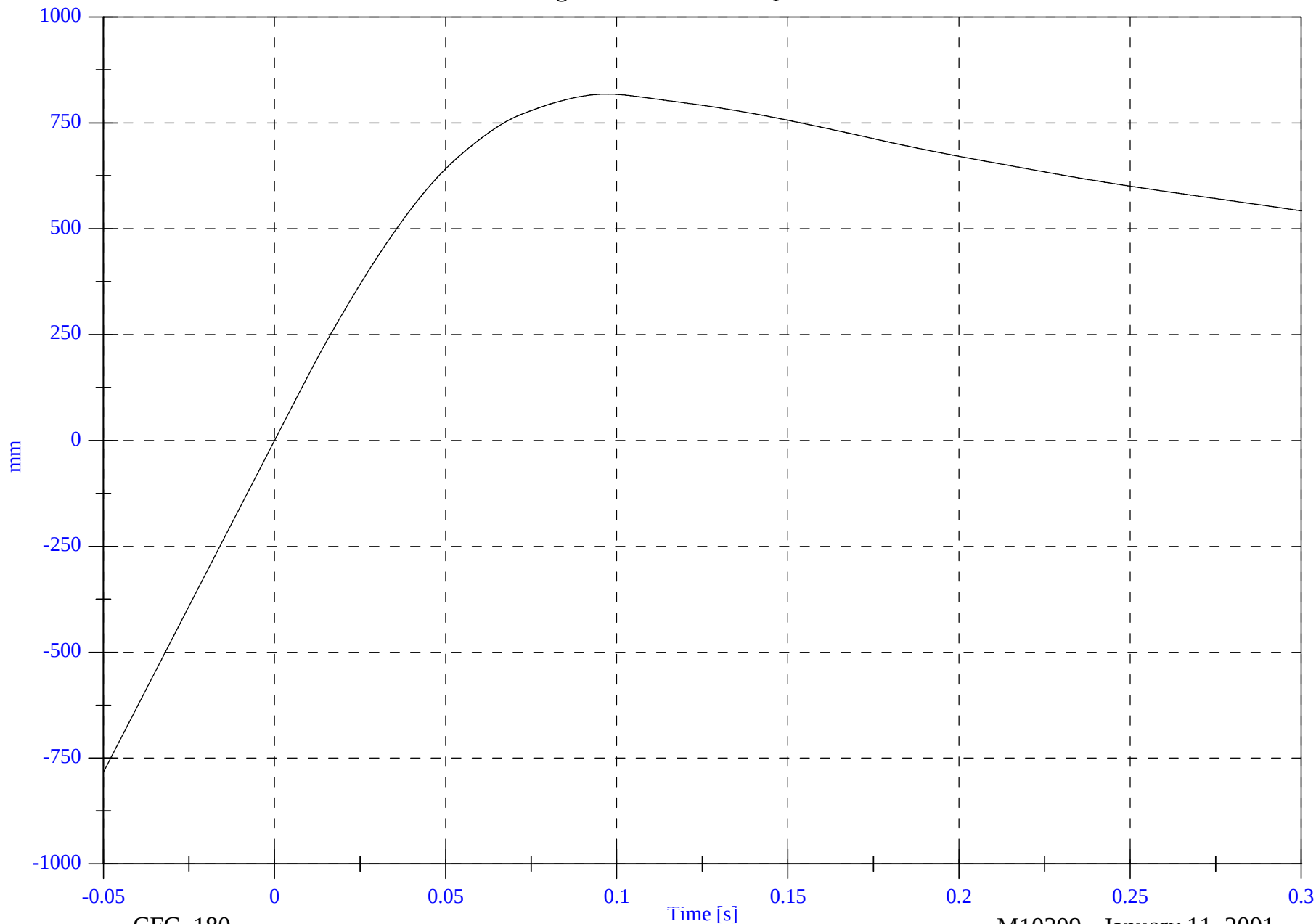
M10309 - January 11, 2001

NCAP 2001 Test 14 - 2001 Dodge Ram 1500 Pickup

Right Rear Red #9x Displacement

Max: 817.8 [mm] at 0.097 [s]

Min: -783.2 [mm] at -0.050 [s]



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8602-14

CFC_180

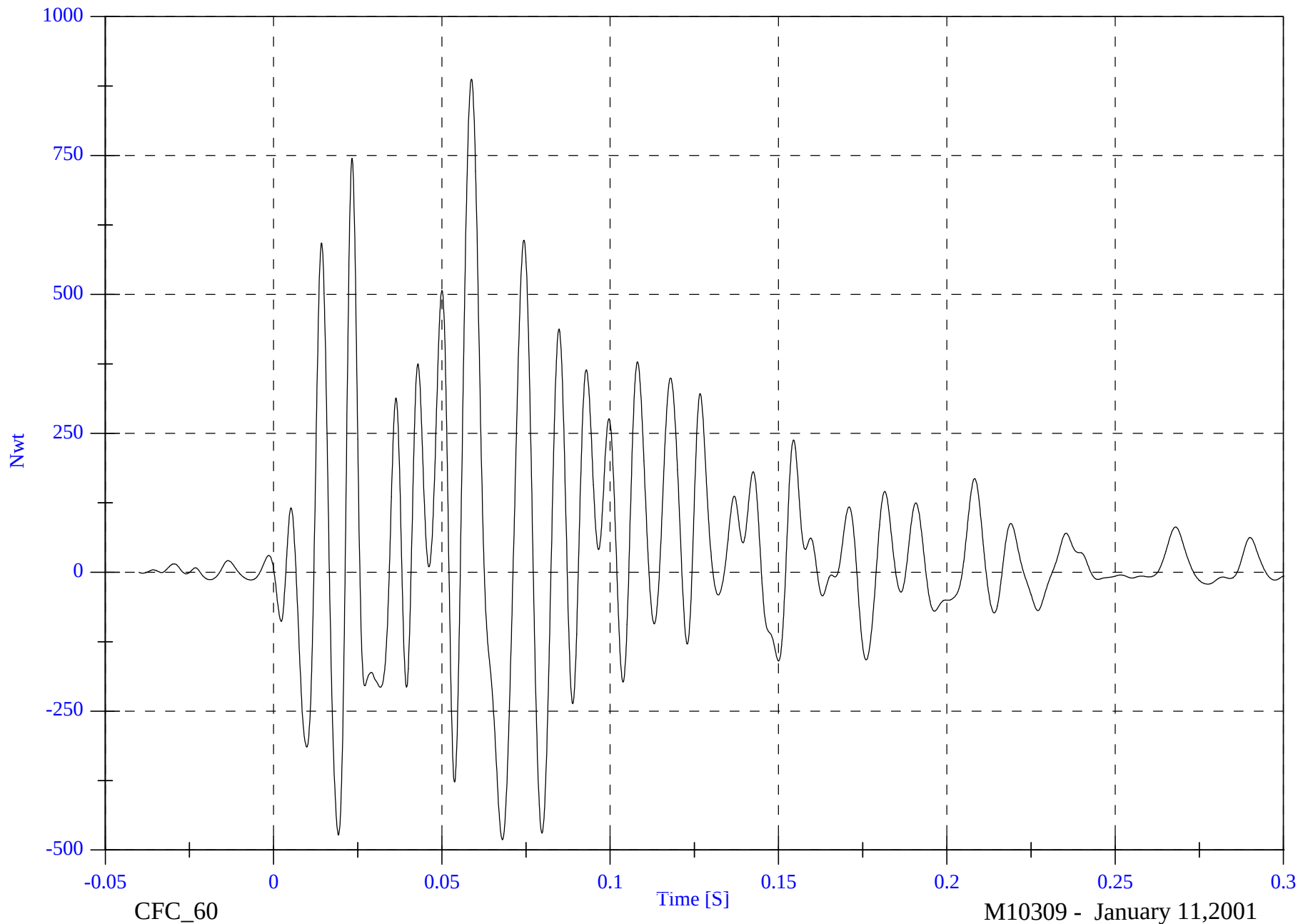
M10309 - January 11, 2001

NCAP 2001 TEST #14 - 2001 Dodge Ram 1500 Pickup

BLC A1 Fx

Max: 887.5 [Nwt] at 0.059 [S]

Min: -481.6 [Nwt] at 0.068 [S]



B-133

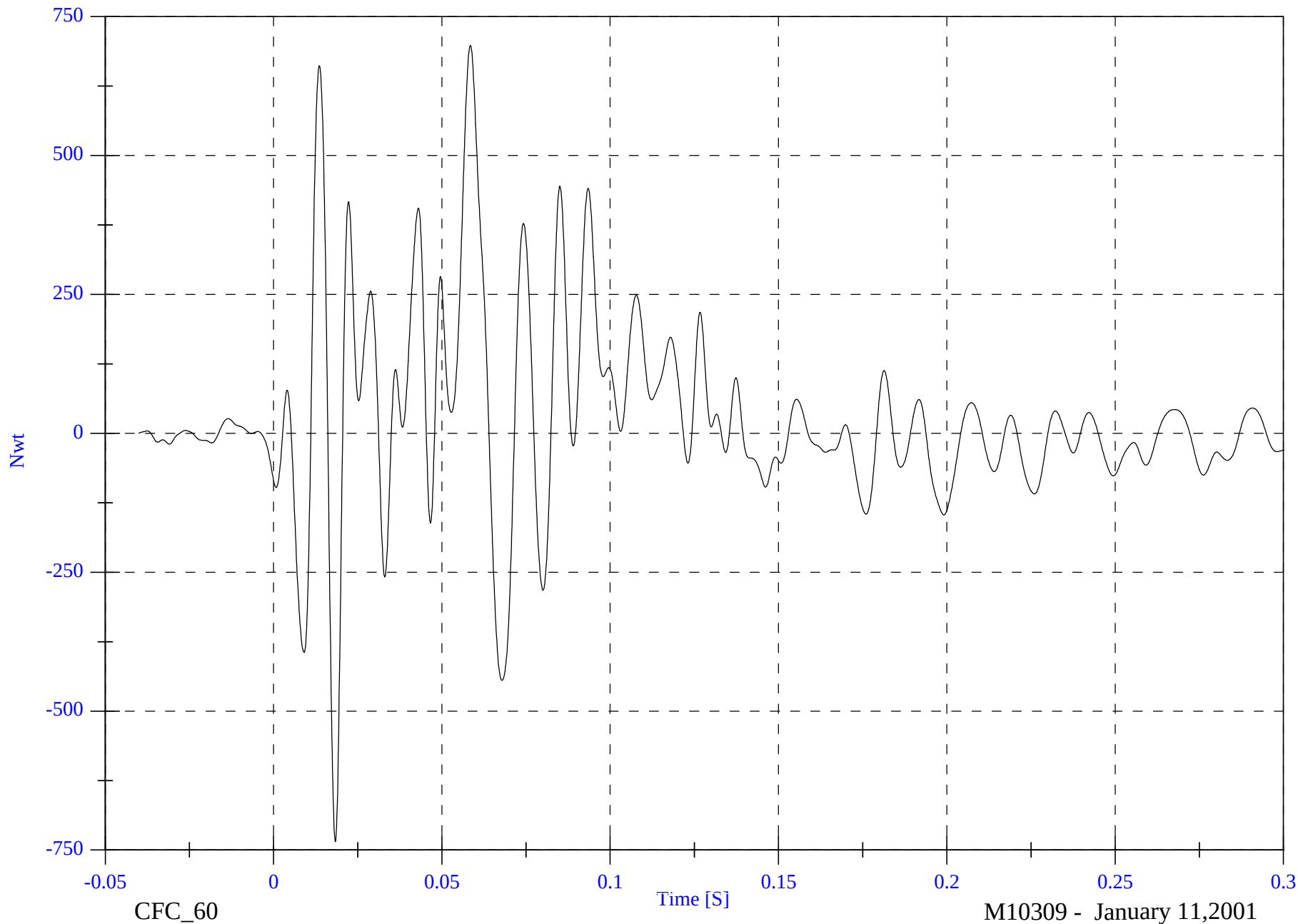
8602-14

NCAP 2001 TEST #14 - 2001 Dodge Ram 1500 Pickup

BLC A2 Fx

Max: 698.4 [Nwt] at 0.058 [S]

Min: -735.1 [Nwt] at 0.018 [S]



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8602-14

CFC_60

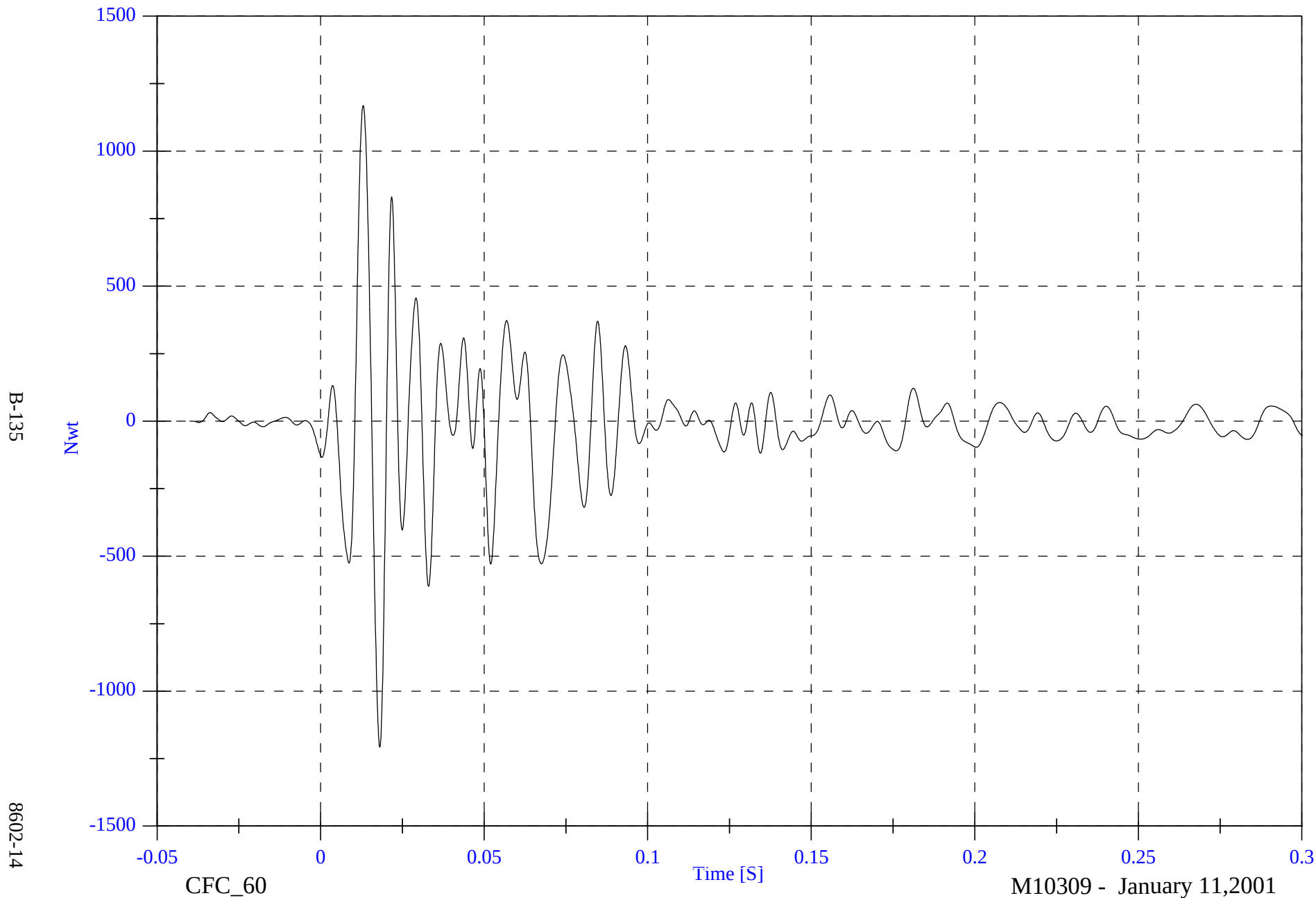
M10309 - January 11, 2001

NCAP 2001 TEST #14 - 2001 Dodge Ram 1500 Pickup

BLC A3 Fx

Max: 1169.2 [Nwt] at 0.013 [S]

Min: -1207.7 [Nwt] at 0.018 [S]

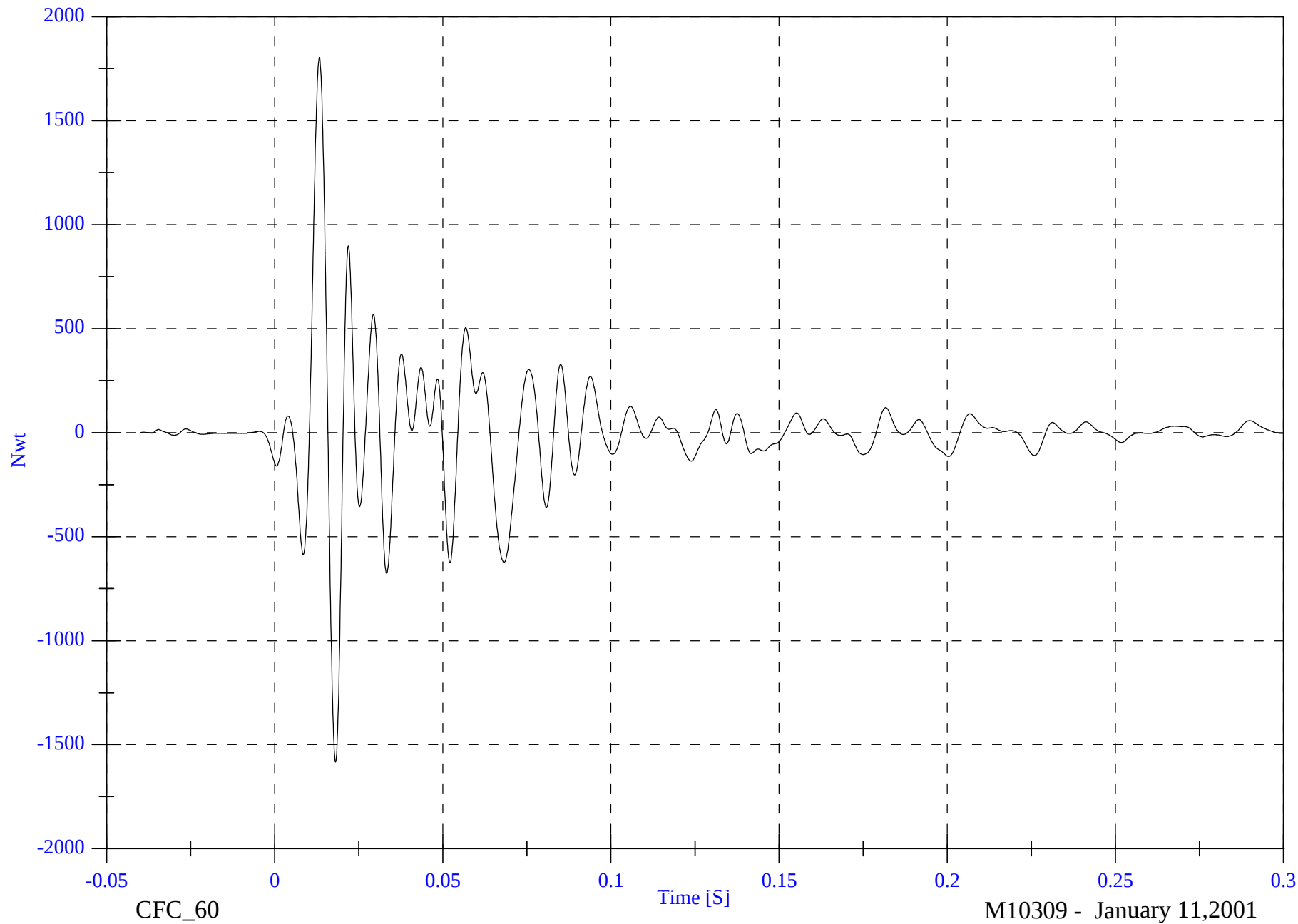


NCAP 2001 TEST #14 - 2001 Dodge Ram 1500 Pickup

BLC A4 Fx

Max: 1804.1 [Nwt] at 0.013 [S]

Min: -1584.5 [Nwt] at 0.018 [S]



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8602-14

CFC_60

Time [S]

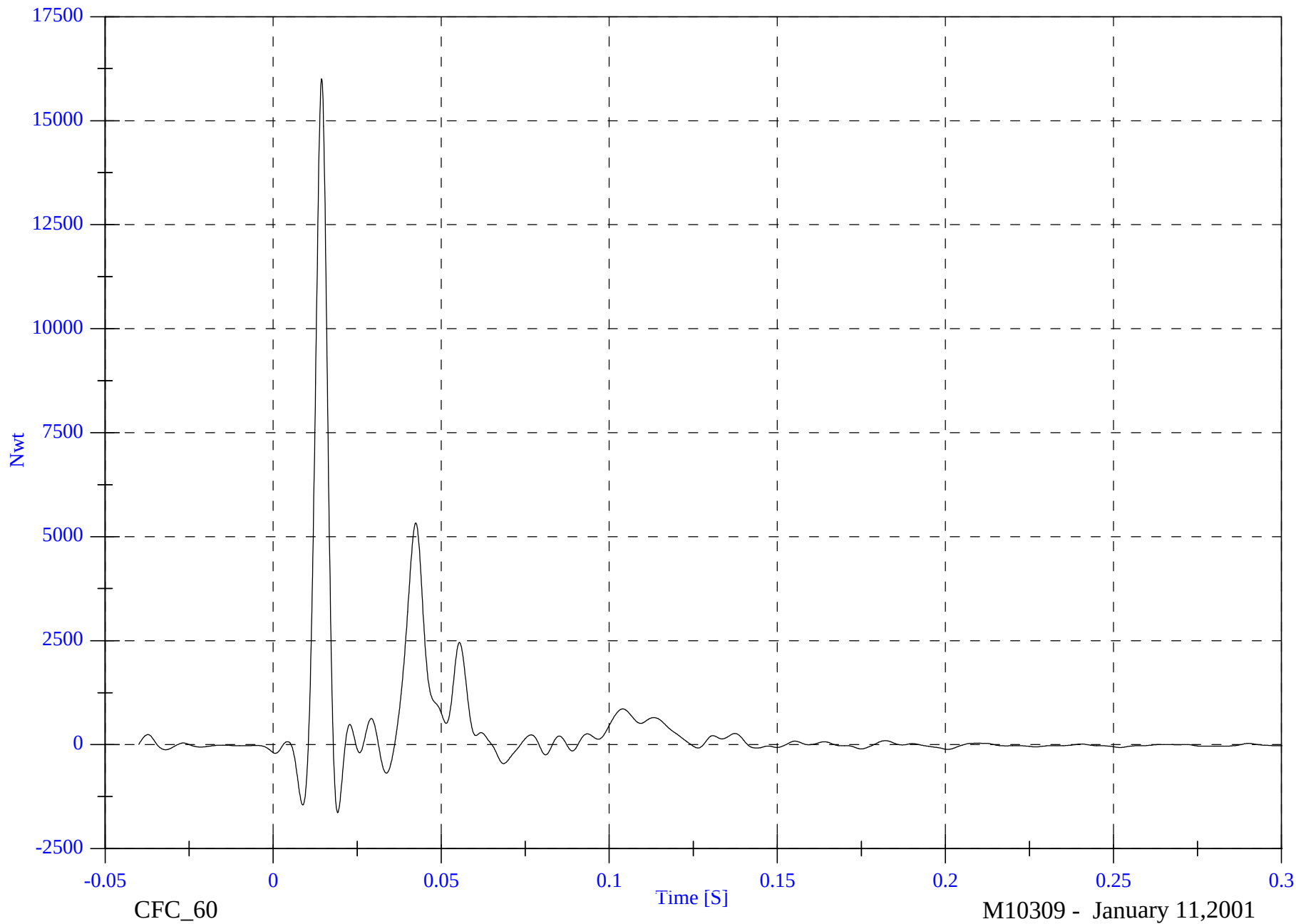
M10309 - January 11, 2001

NCAP 2001 TEST #14 - 2001 Dodge Ram 1500 Pickup

BLC A5 Fx

Max: 16004.0 [Nwt] at 0.014 [S]

Min: -1636.4 [Nwt] at 0.019 [S]



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8602-14

CFC_60

Time [S]

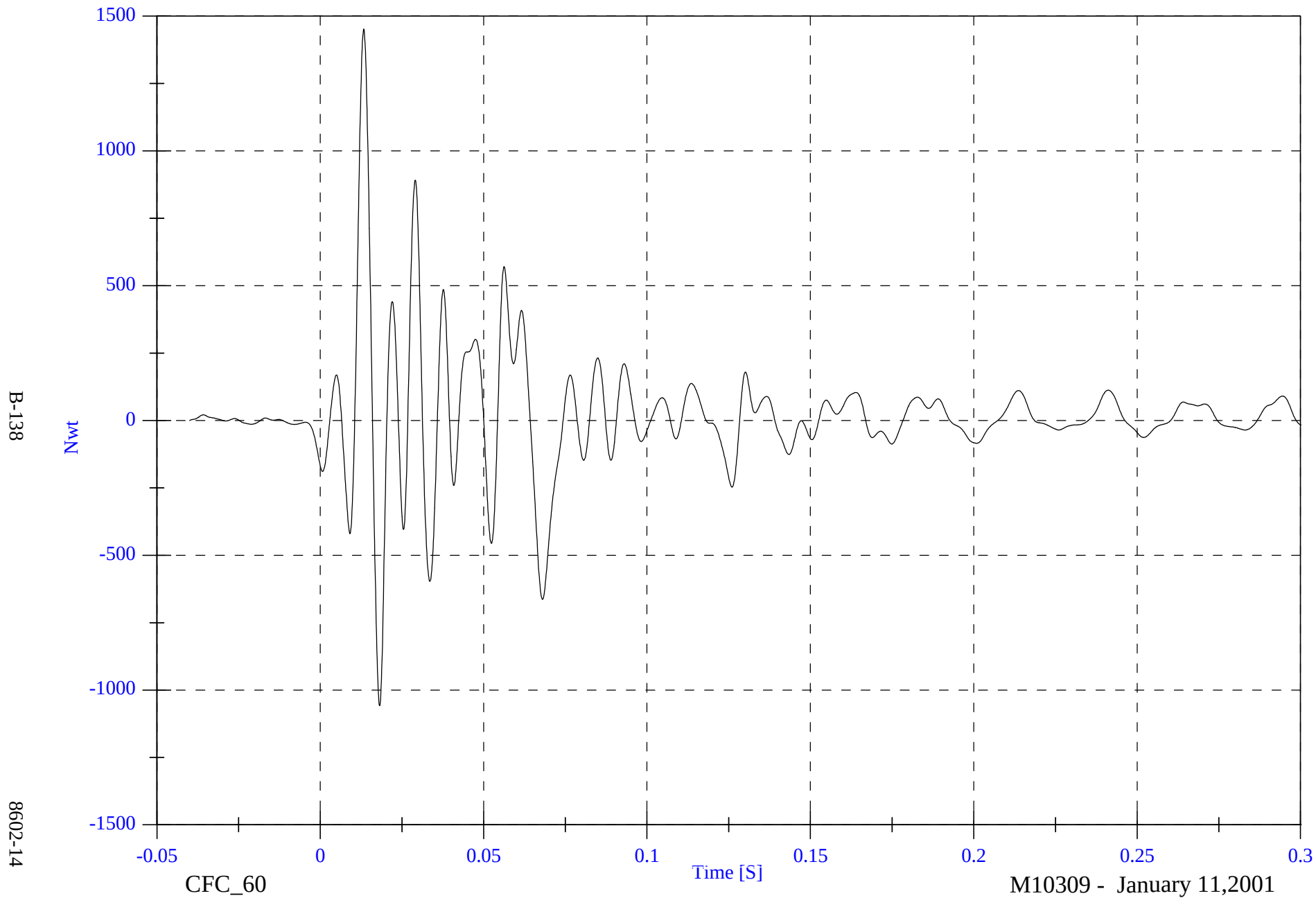
M10309 - January 11, 2001

NCAP 2001 TEST #14 - 2001 Dodge Ram 1500 Pickup

BLC A6 Fx

Max: 1452.4 [Nwt] at 0.013 [S]

Min: -1057.8 [Nwt] at 0.018 [S]

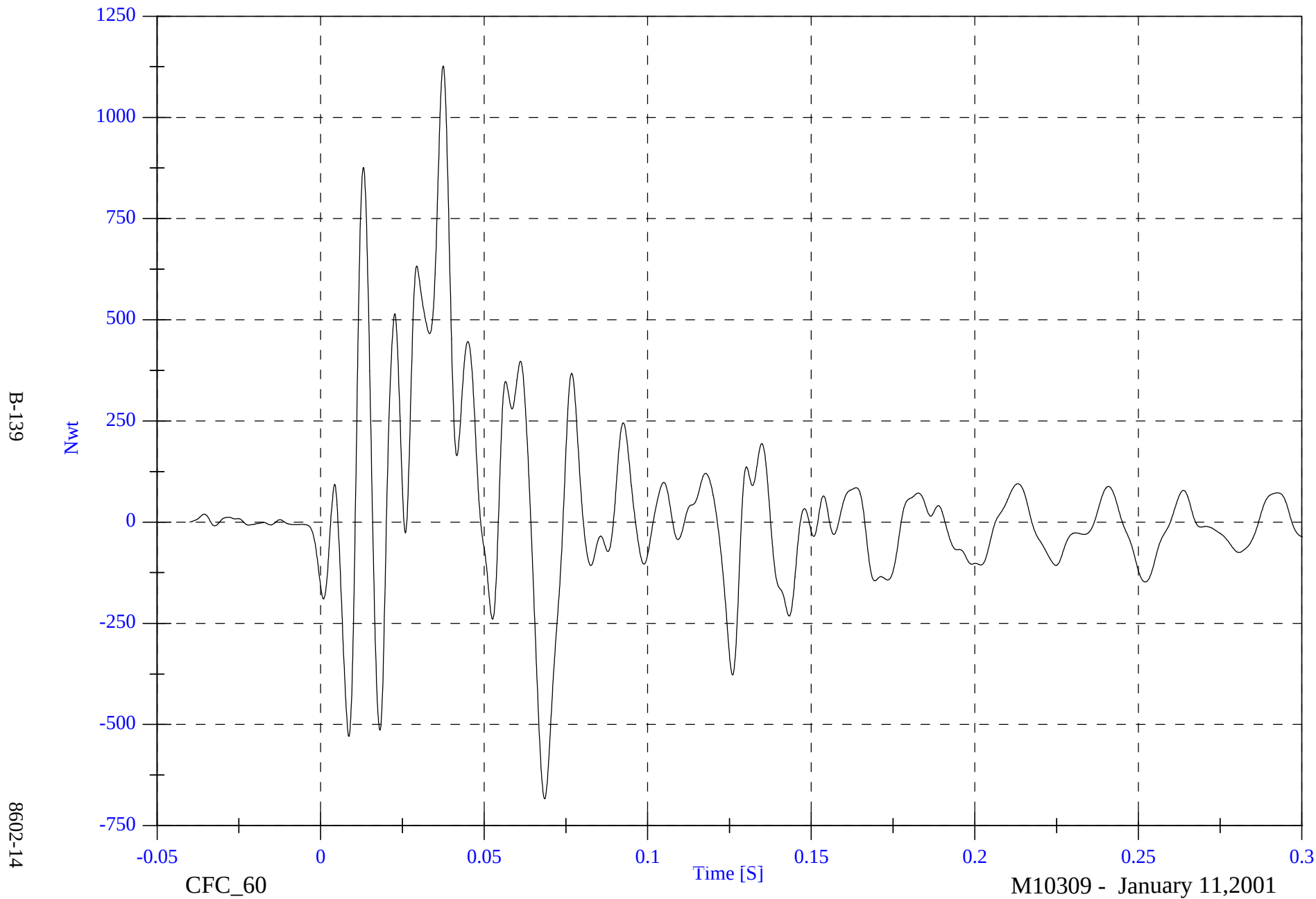


NCAP 2001 TEST #14 - 2001 Dodge Ram 1500 Pickup

BLC A7 Fx

Max: 1127.0 [Nwt] at 0.037 [S]

Min: -683.7 [Nwt] at 0.068 [S]

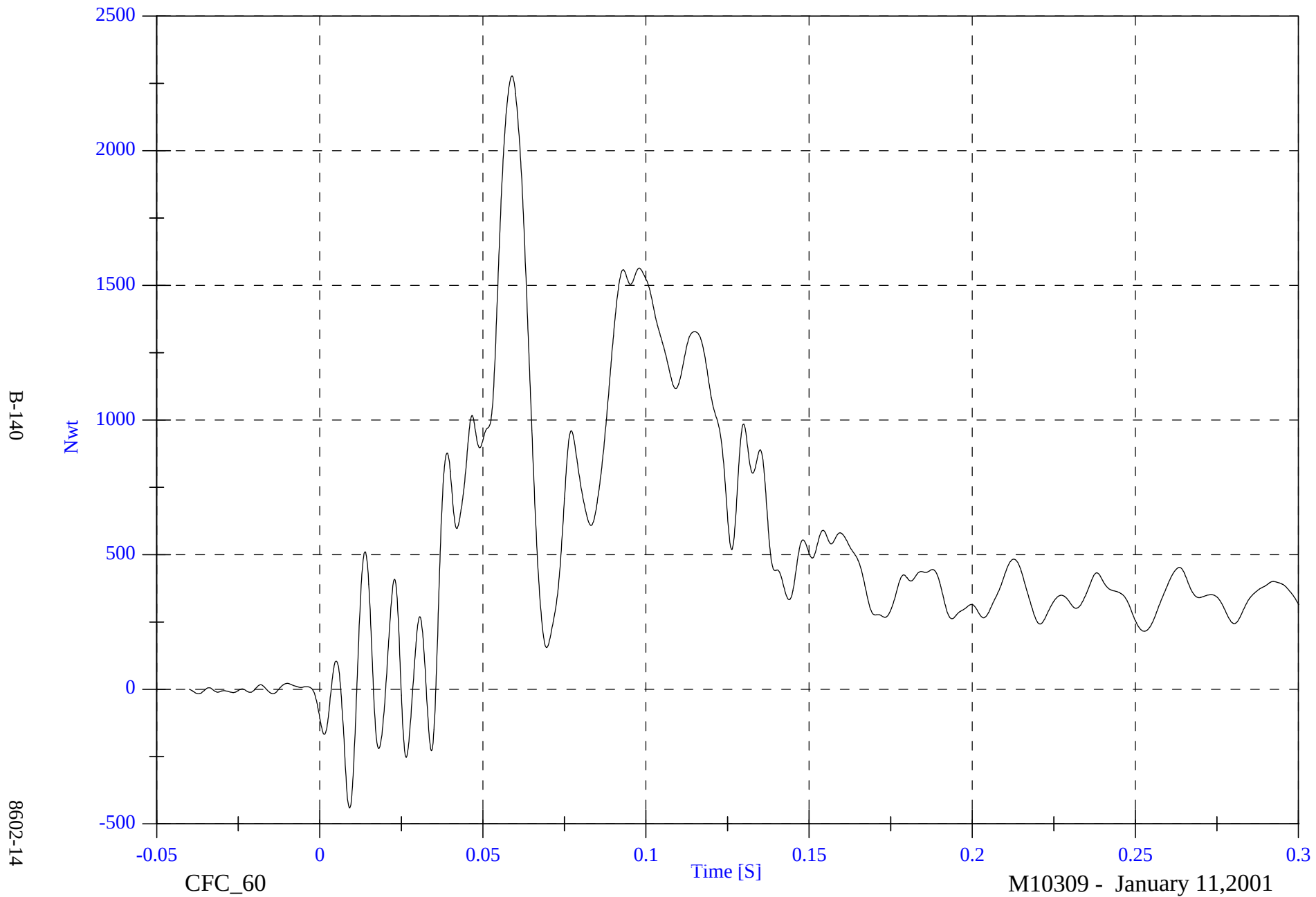


NCAP 2001 TEST #14 - 2001 Dodge Ram 1500 Pickup

BLC A8 Fx

Max: 2278.1 [Nwt] at 0.059 [S]

Min: -441.1 [Nwt] at 0.009 [S]



NCAP 2001 TEST #14 - 2001 Dodge Ram 1500 Pickup

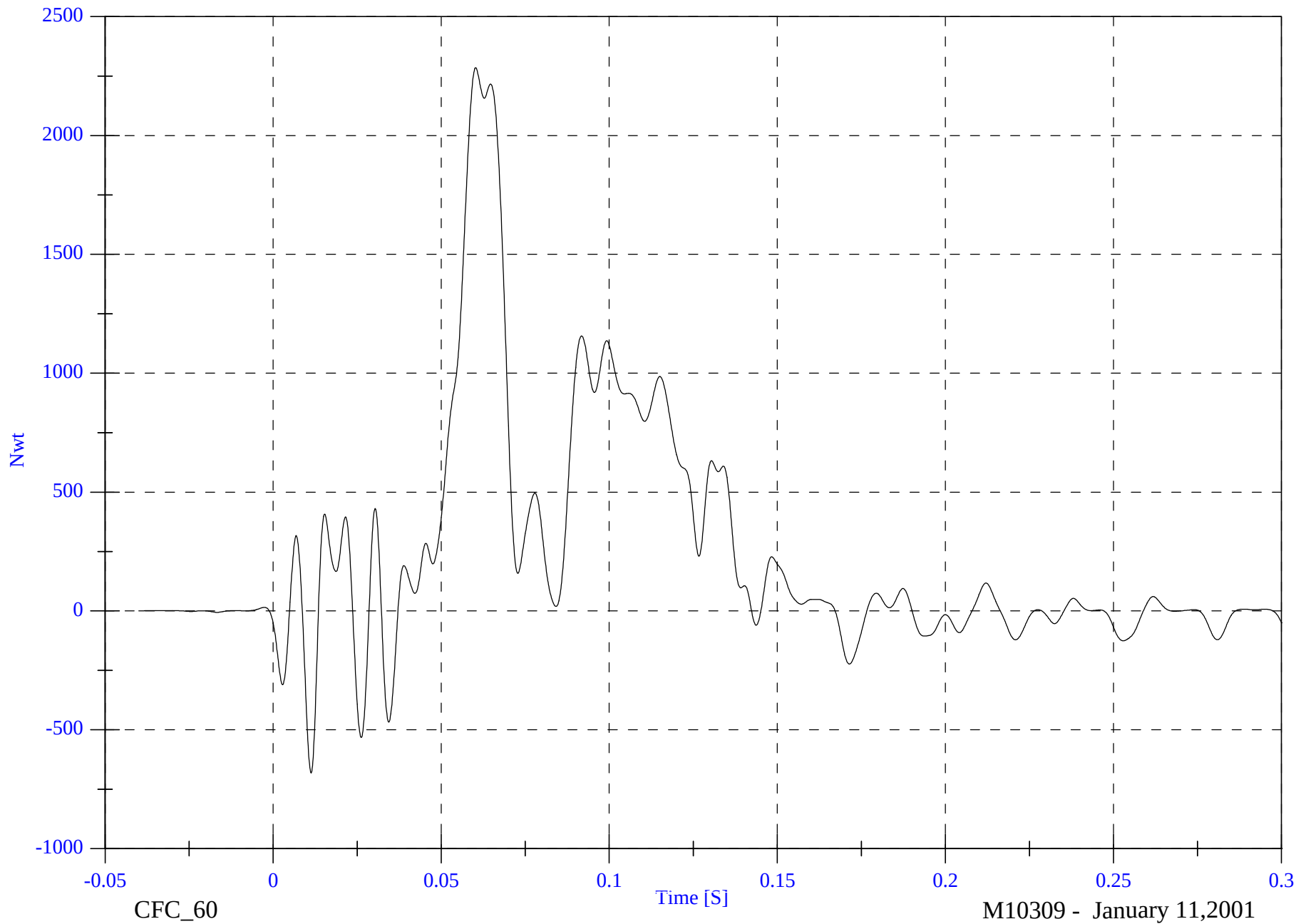
BLC A9 Fx

Max: 2285.3 [Nwt] at 0.060 [S]

Min: -681.9 [Nwt] at 0.011 [S]

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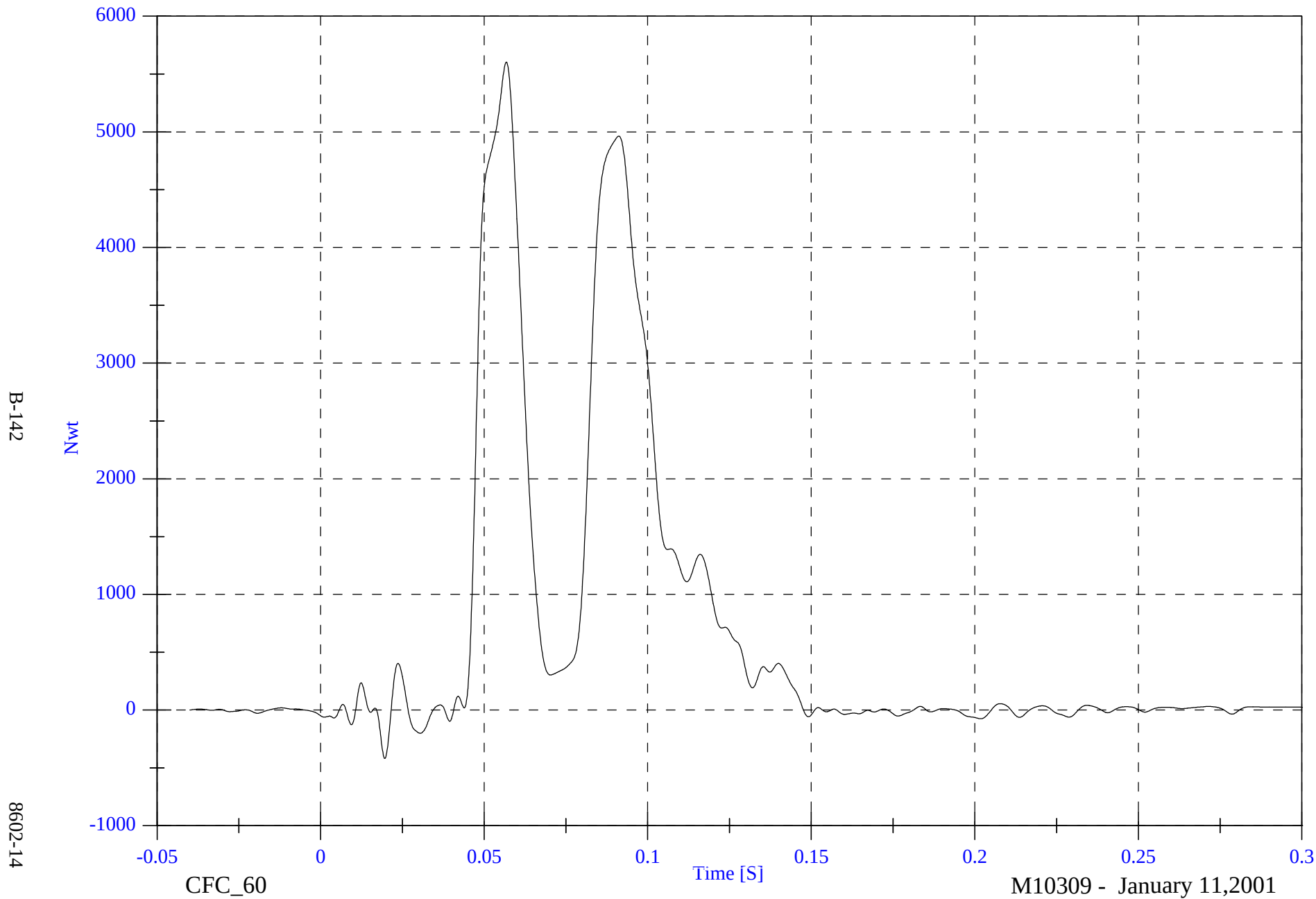


NCAP 2001 TEST #14 - 2001 Dodge Ram 1500 Pickup

BLC B1 Fx

Max: 5603.7 [Nwt] at 0.057 [S]

Min: -418.7 [Nwt] at 0.020 [S]

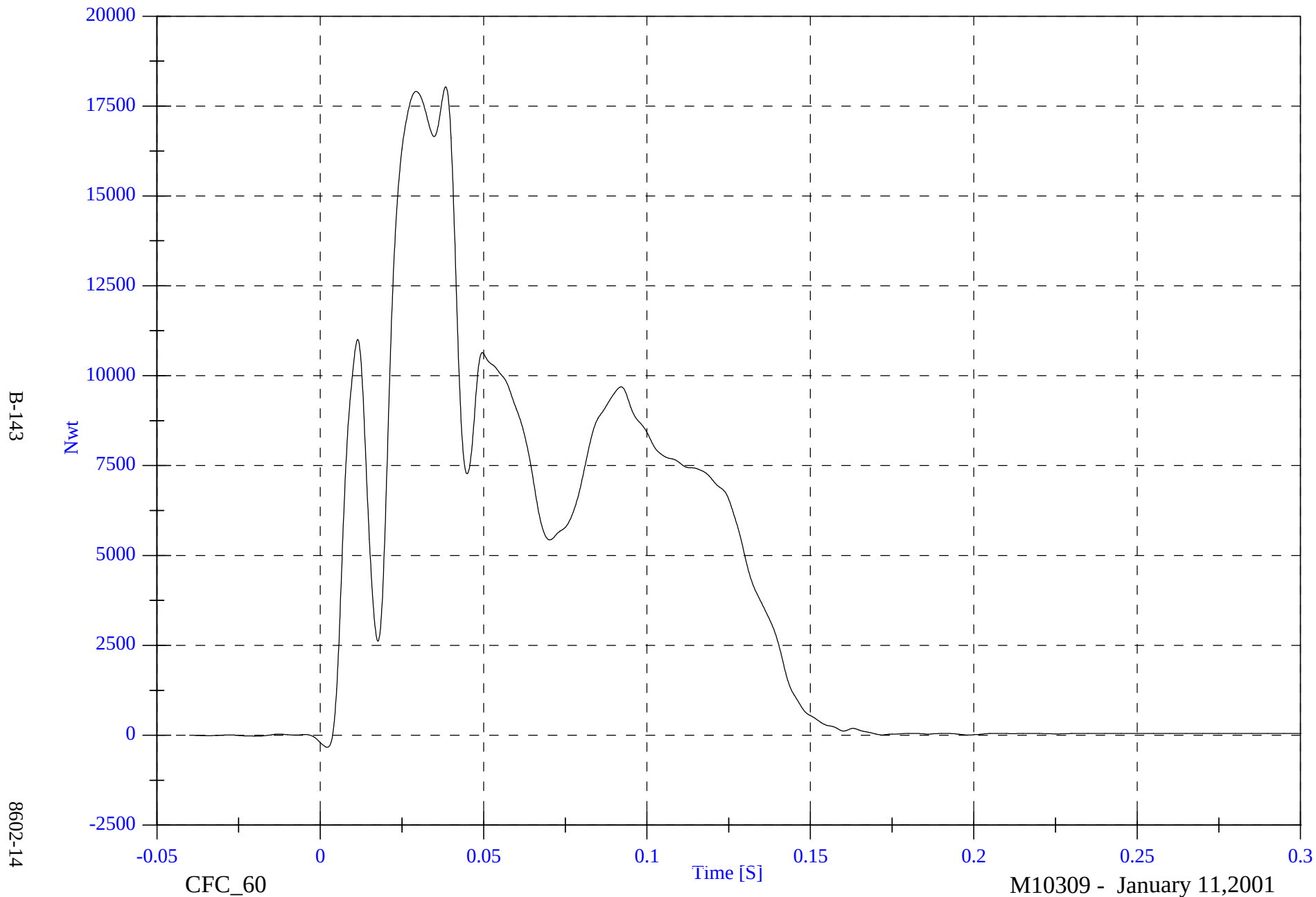


NCAP 2001 TEST #14 - 2001 Dodge Ram 1500 Pickup

BLC B2 Fx

Max: 18035.3 [Nwt] at 0.038 [S]

Min: -333.6 [Nwt] at 0.002 [S]

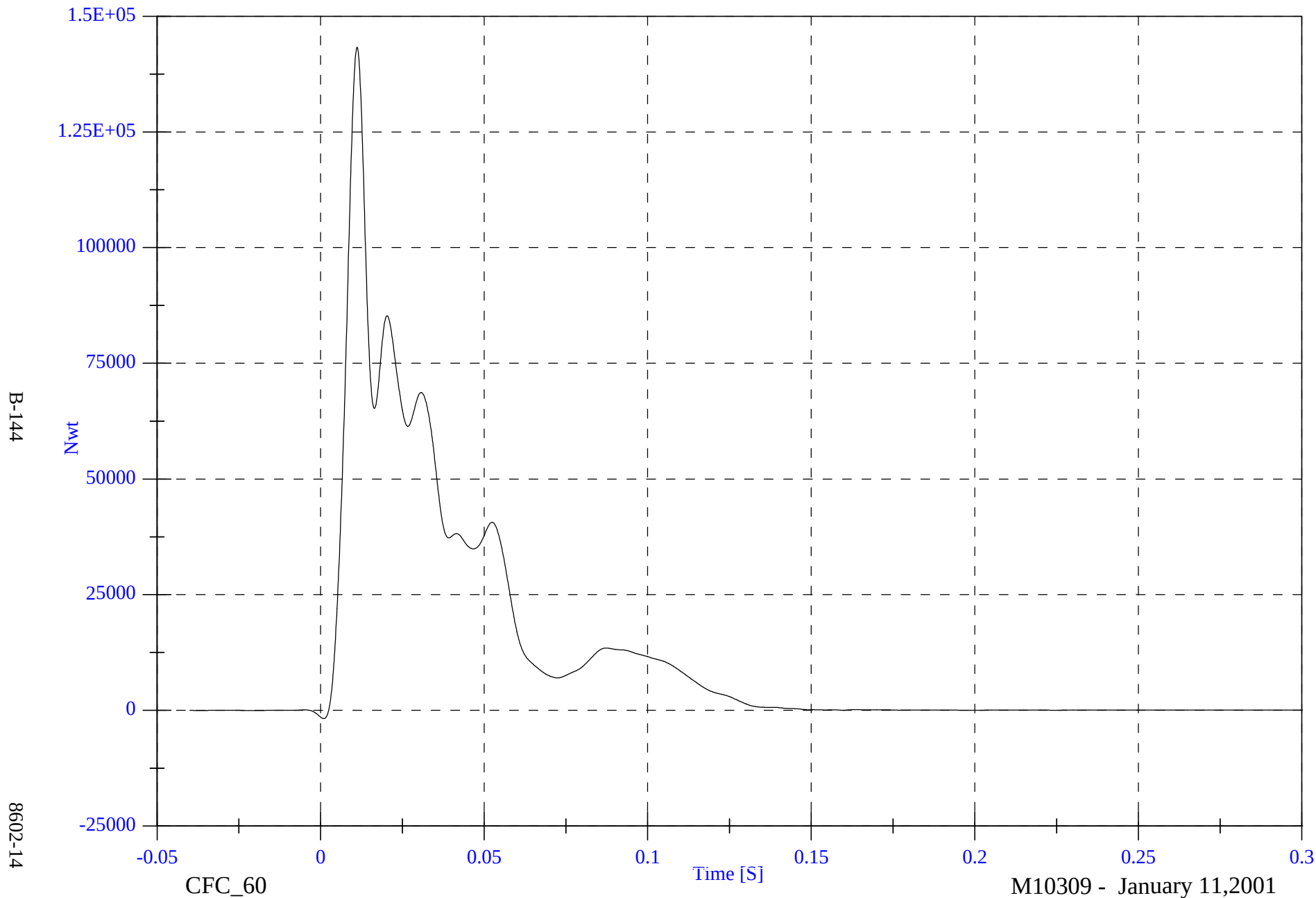


NCAP 2001 TEST #14 - 2001 Dodge Ram 1500 Pickup

BLC B3 Fx

Max: 143326.8 [Nwt] at 0.011 [S]

Min: -1779.4 [Nwt] at 0.001 [S]

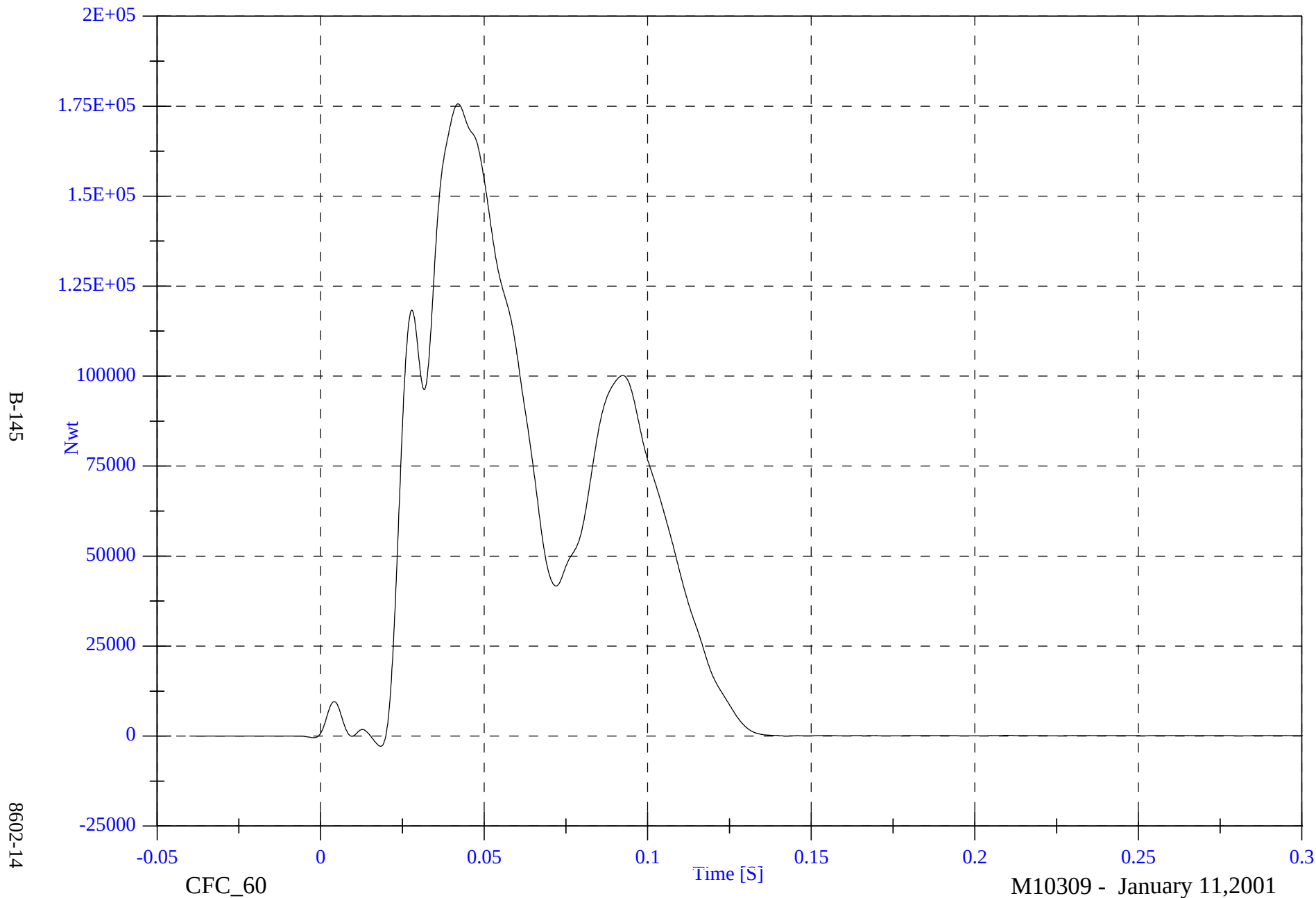


NCAP 2001 TEST #14 - 2001 Dodge Ram 1500 Pickup

BLC B4 Fx

Max: 175653.4 [Nwt] at 0.042 [S]

Min: -2833.3 [Nwt] at 0.018 [S]

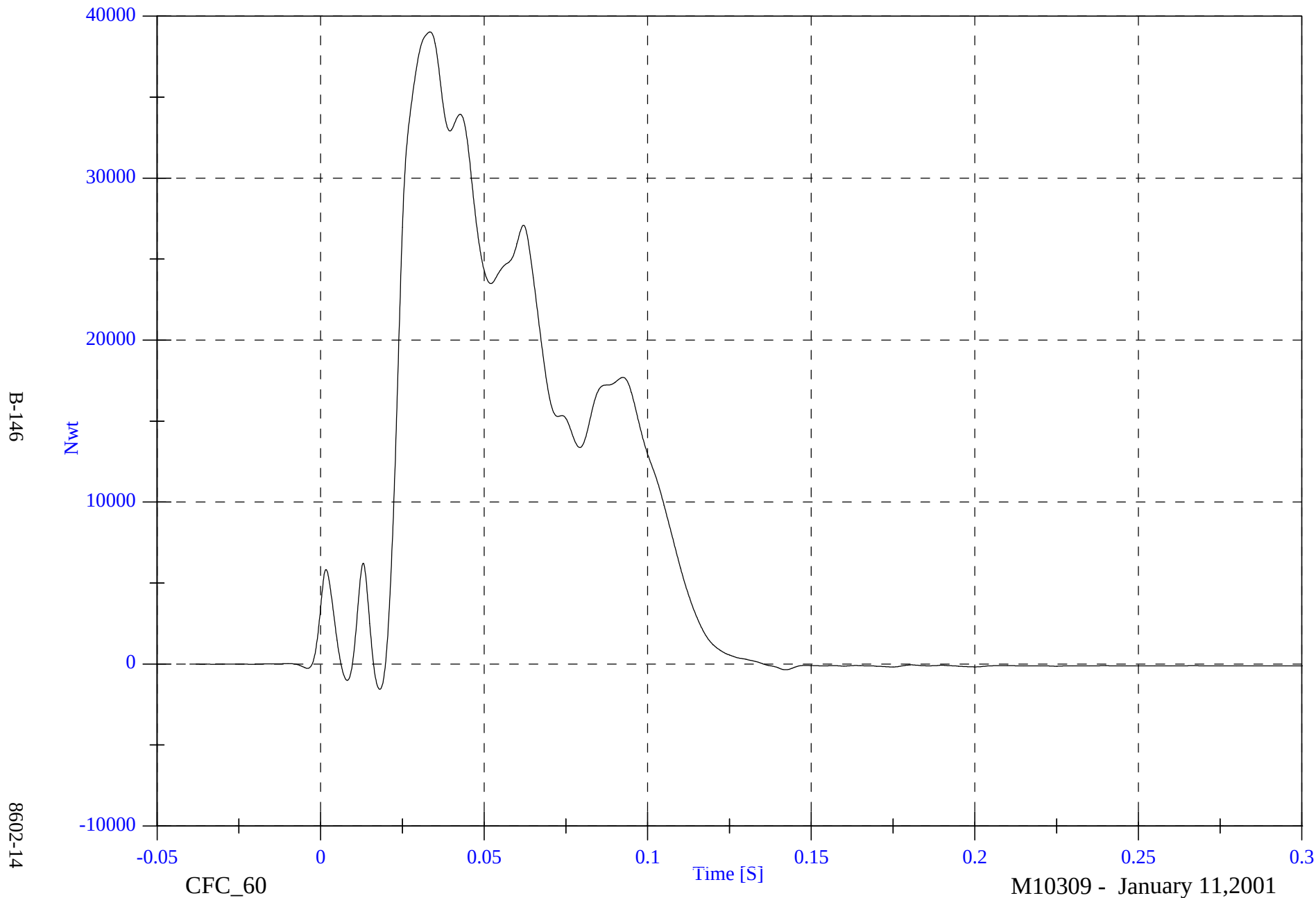


NCAP 2001 TEST #14 - 2001 Dodge Ram 1500 Pickup

BLC B5 Fx

Max: 39030.7 [Nwt] at 0.033 [S]

Min: -1556.1 [Nwt] at 0.018 [S]

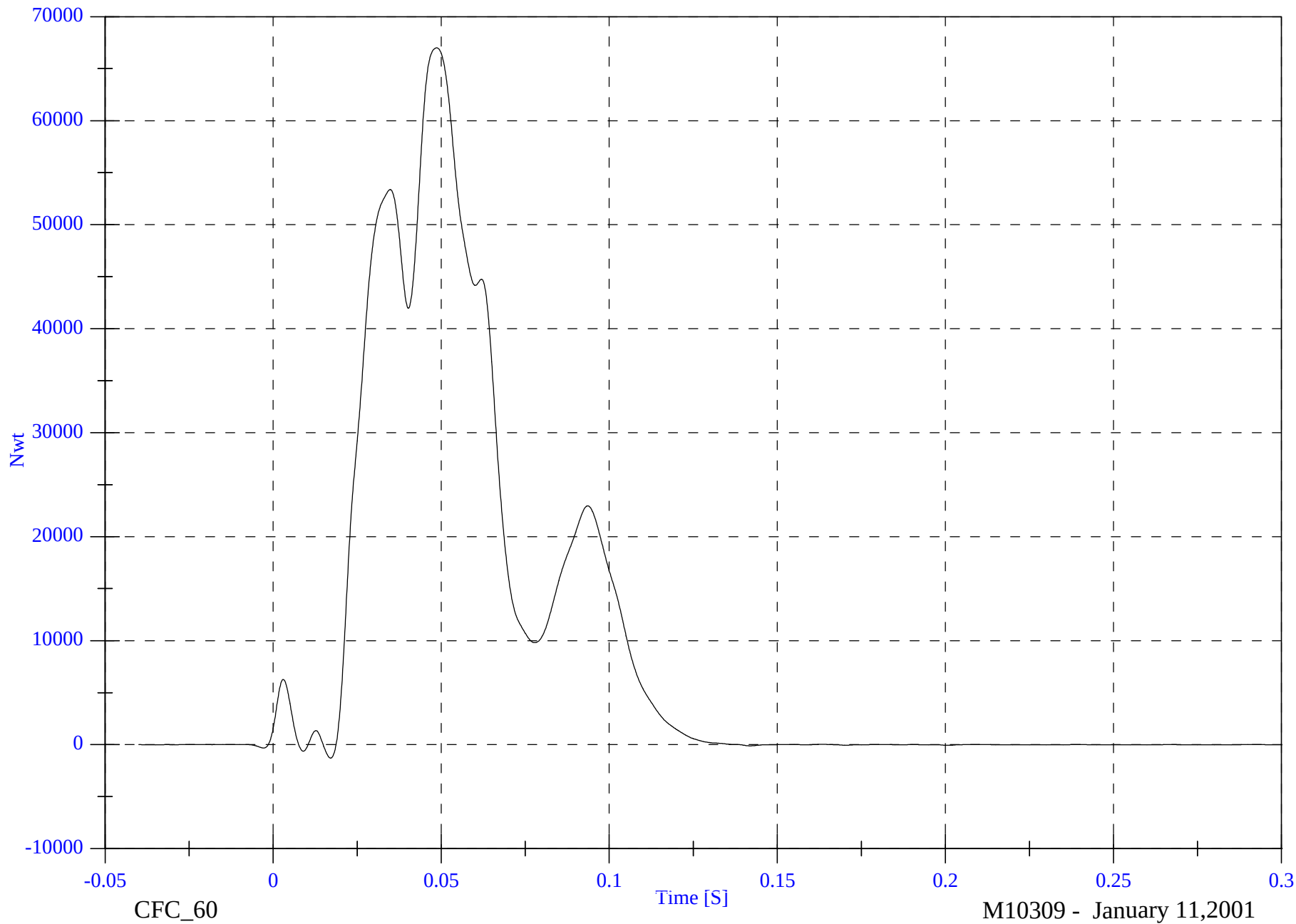


NCAP 2001 TEST #14 - 2001 Dodge Ram 1500 Pickup

BLC B6 Fx

Max: 66998.5 [Nwt] at 0.049 [S]

Min: -1294.4 [Nwt] at 0.017 [S]

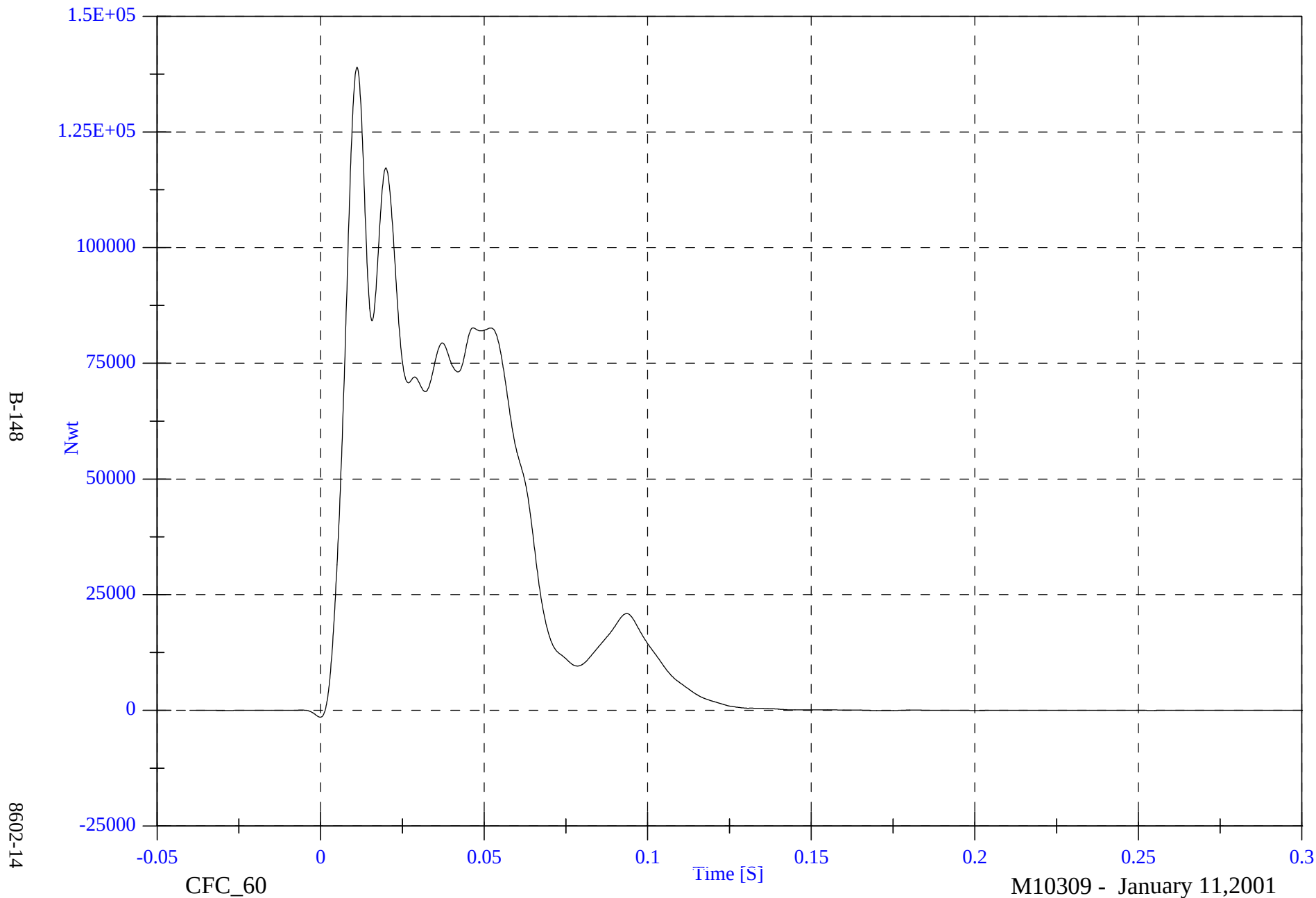


NCAP 2001 TEST #14 - 2001 Dodge Ram 1500 Pickup

BLC B7 Fx

Max: 138983.1 [Nwt] at 0.011 [S]

Min: -1488.9 [Nwt] at -0.000 [S]

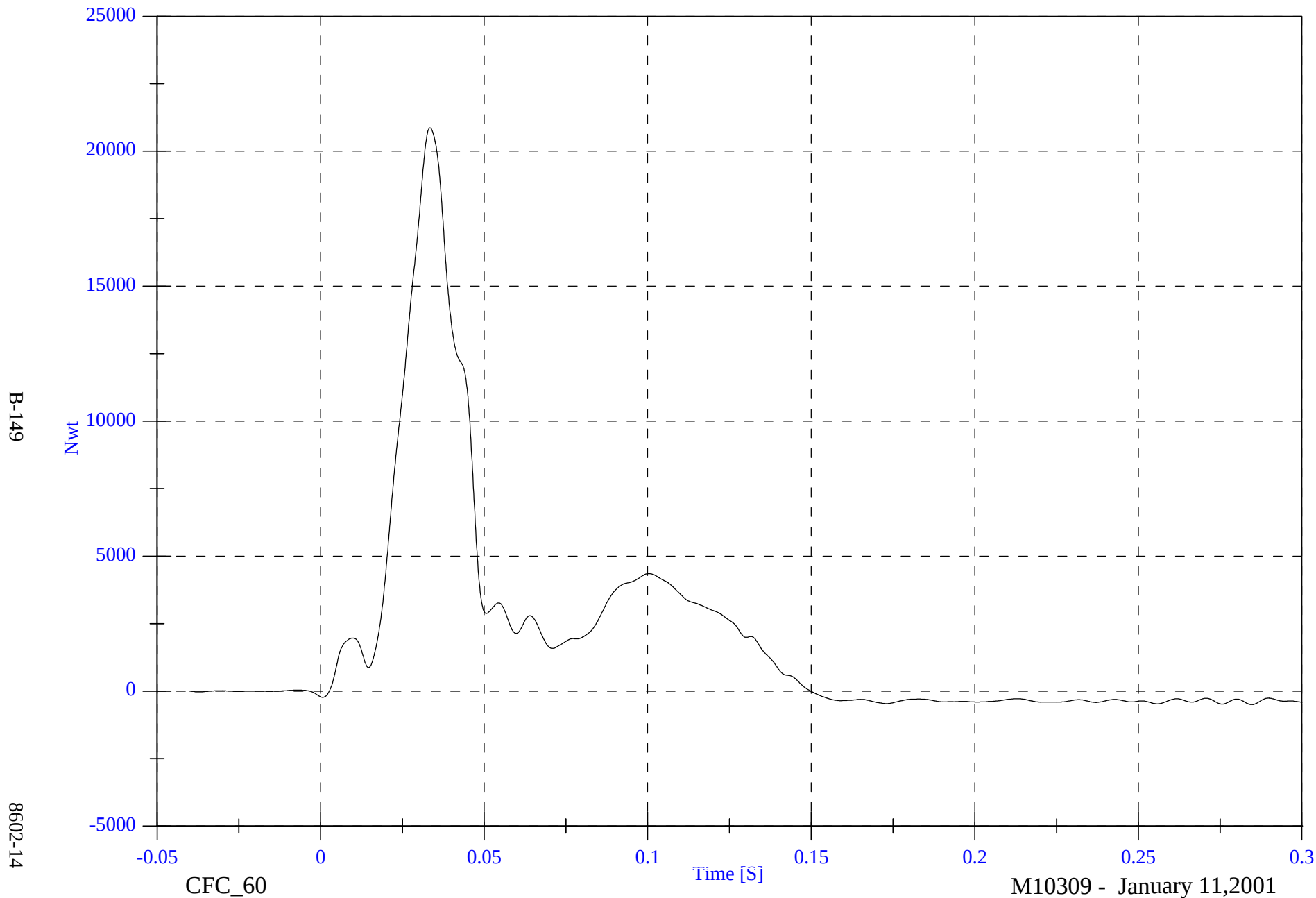


NCAP 2001 TEST #14 - 2001 Dodge Ram 1500 Pickup

BLC B8 Fx

Max: 20868.2 [Nwt] at 0.033 [S]

Min: -502.1 [Nwt] at 0.285 [S]

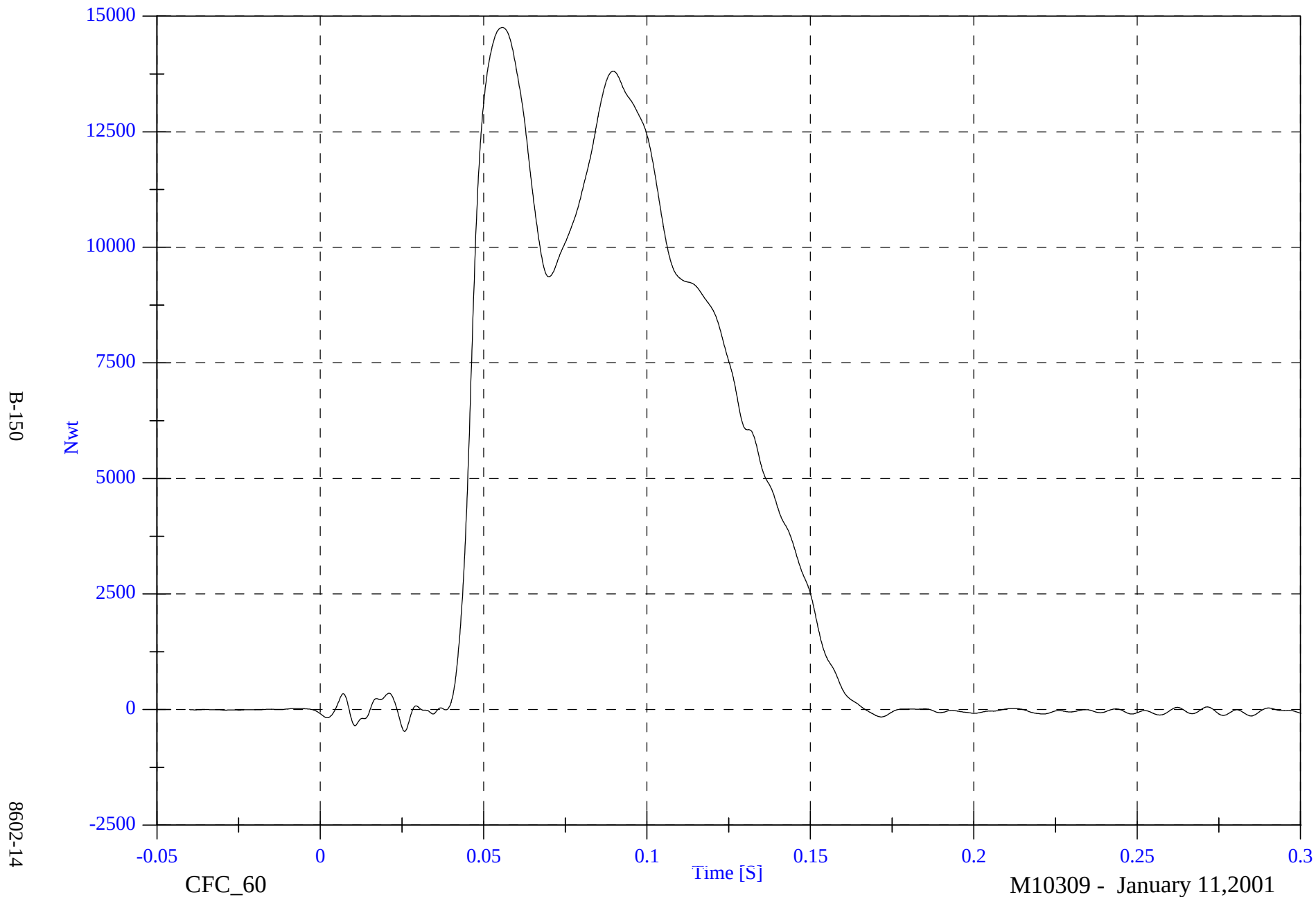


NCAP 2001 TEST #14 - 2001 Dodge Ram 1500 Pickup

BLC B9 Fx

Max: 14756.0 [Nwt] at 0.056 [S]

Min: -473.0 [Nwt] at 0.026 [S]

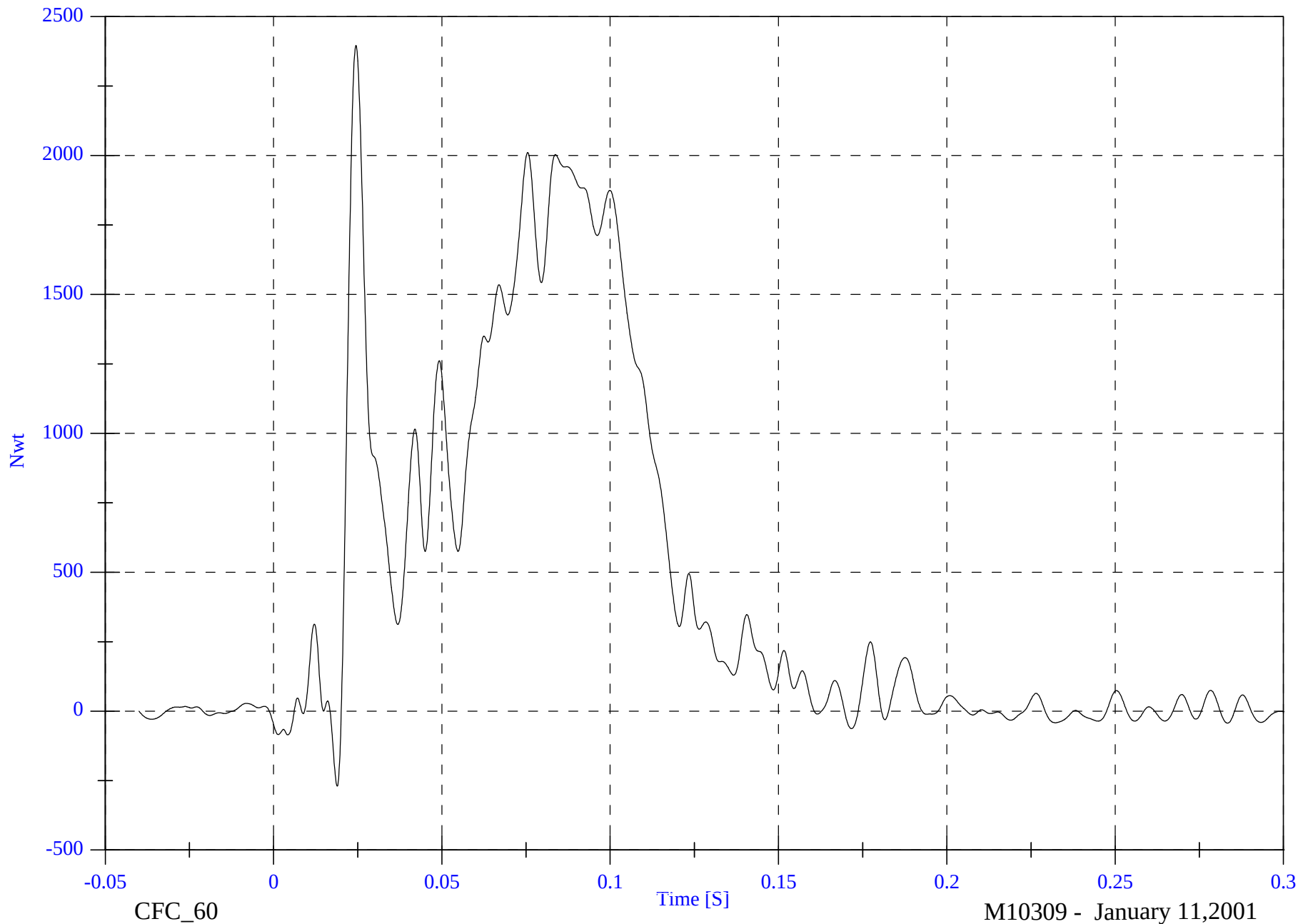


NCAP 2001 TEST #14 - 2001 Dodge Ram 1500 Pickup

BLC C1 Fx

Max: 2396.7 [Nwt] at 0.024 [S]

Min: -270.1 [Nwt] at 0.019 [S]



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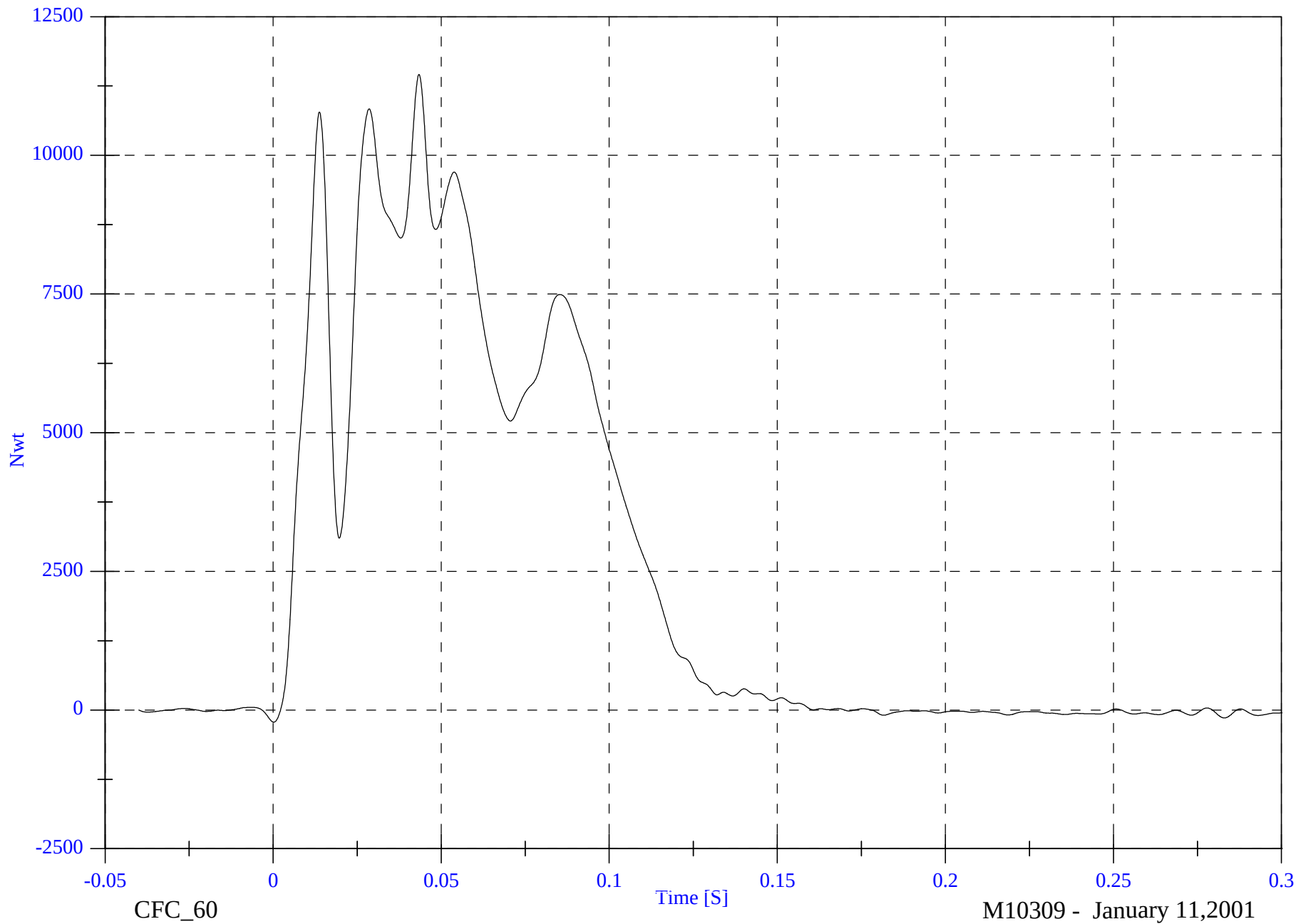
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NCAP 2001 TEST #14 - 2001 Dodge Ram 1500 Pickup

BLC C2 Fx

Max: 11456.3 [Nwt] at 0.043 [S]

Min: -219.3 [Nwt] at 0.000 [S]



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8602-14

CFC_60

Time [S]

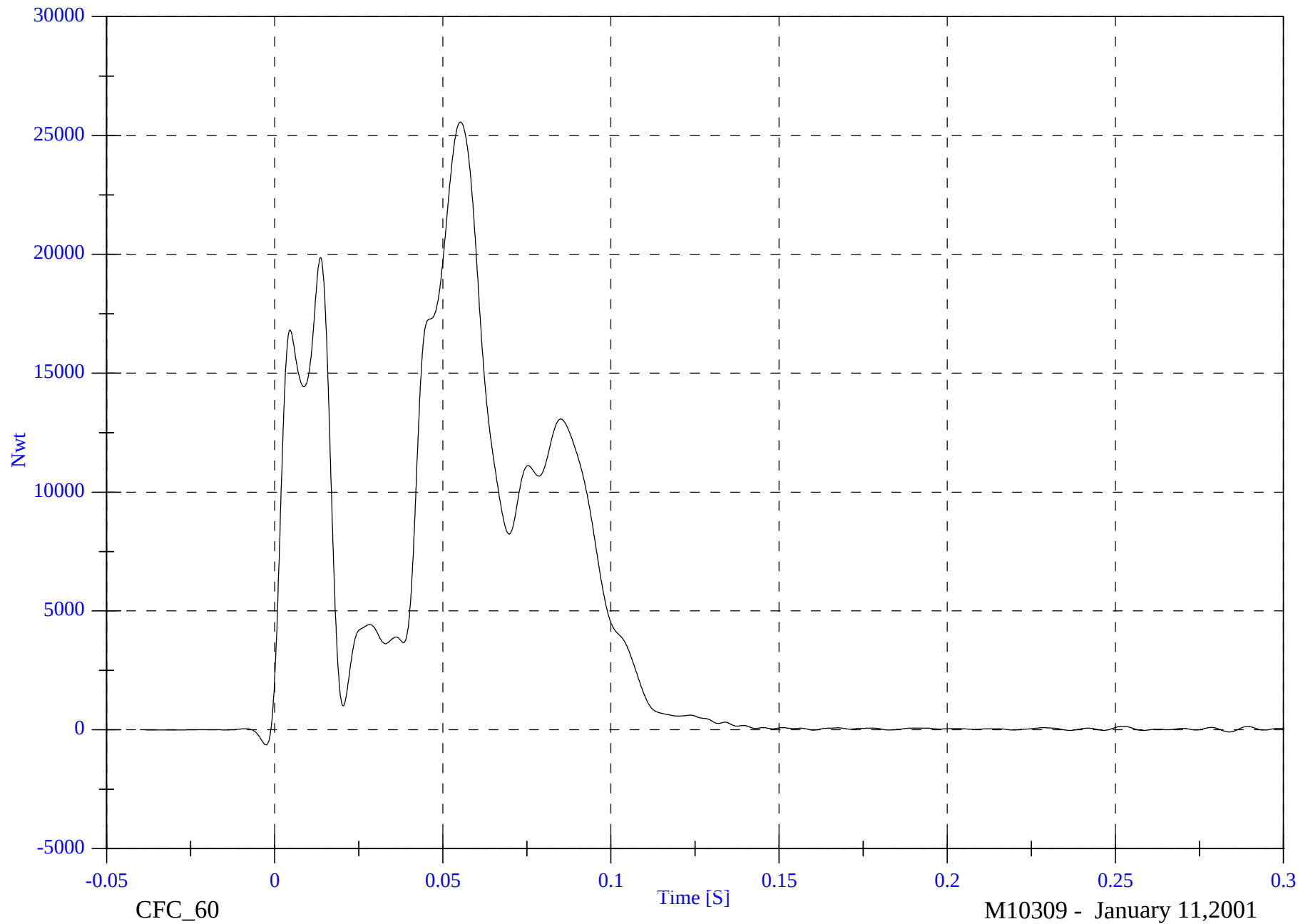
M10309 - January 11, 2001

NCAP 2001 TEST #14 - 2001 Dodge Ram 1500 Pickup

BLC C3 Fx

Max: 25568.3 [Nwt] at 0.055 [S]

Min: -638.2 [Nwt] at -0.003 [S]

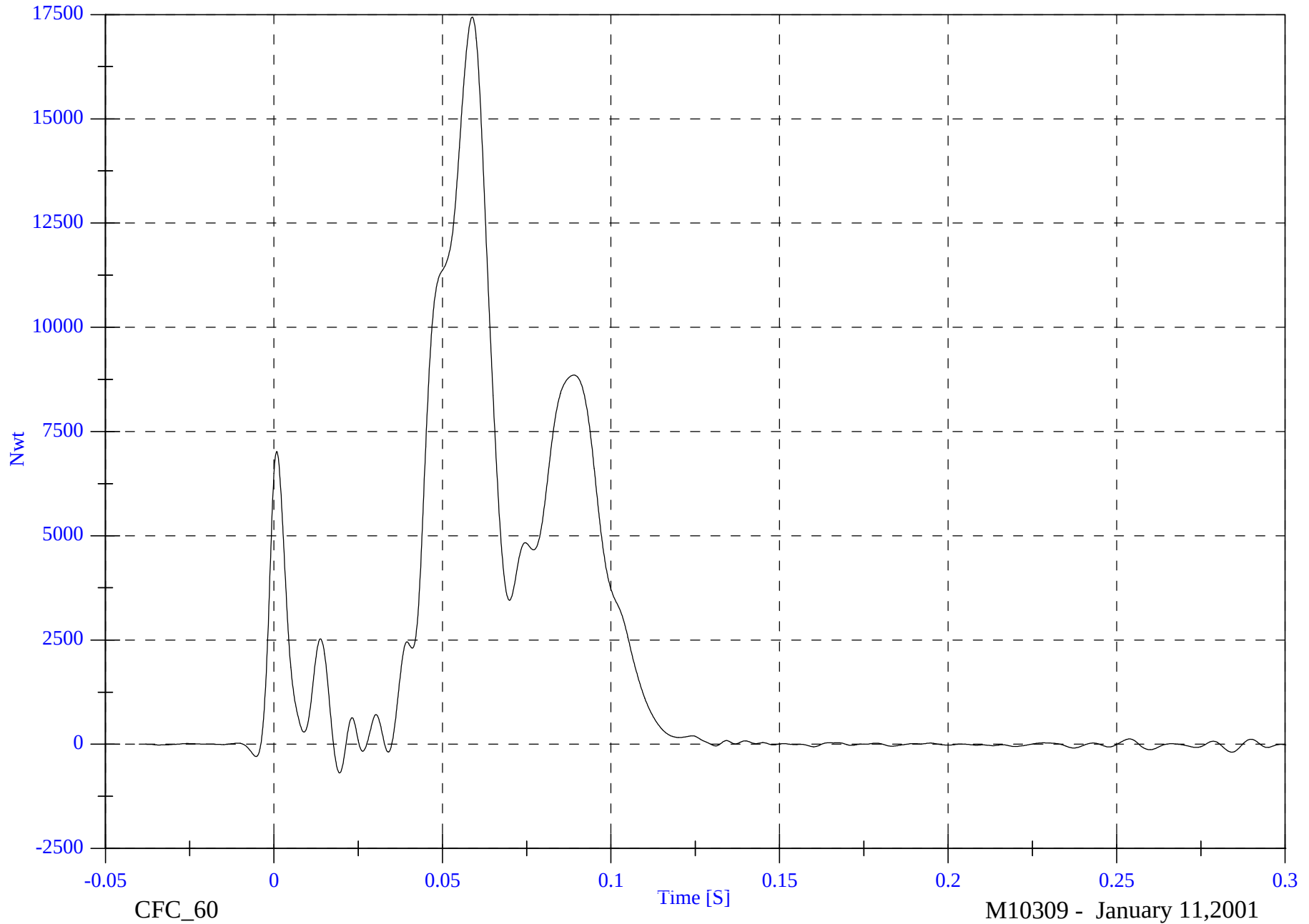


NCAP 2001 TEST #14 - 2001 Dodge Ram 1500 Pickup

BLC C4 Fx

Max: 17437.3 [Nwt] at 0.059 [S]

Min: -688.3 [Nwt] at 0.019 [S]



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CFC_60

Time [S]

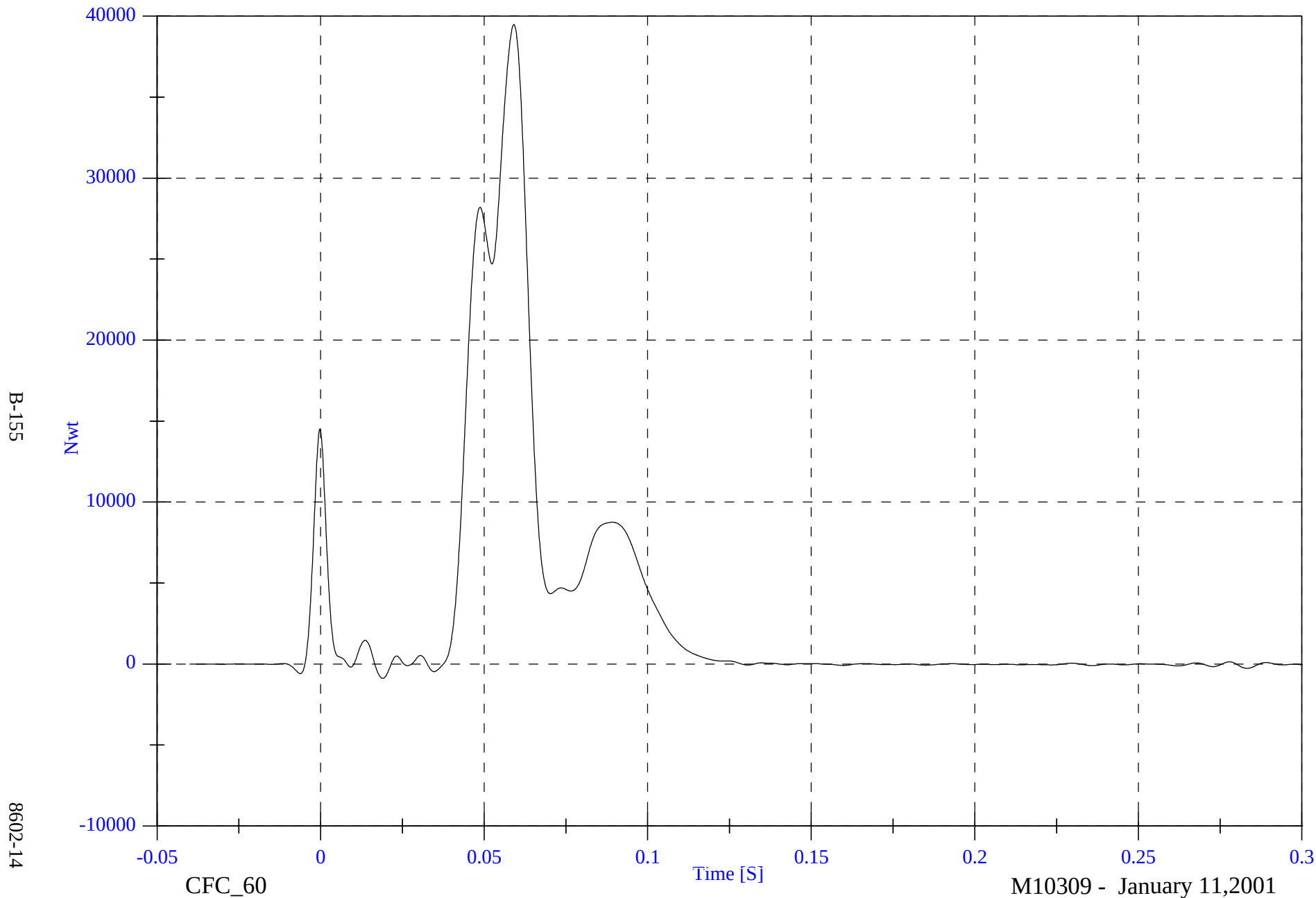
M10309 - January 11, 2001

NCAP 2001 TEST #14 - 2001 Dodge Ram 1500 Pickup

BLC C5 Fx

Max: 39485.0 [Nwt] at 0.059 [S]

Min: -883.4 [Nwt] at 0.019 [S]

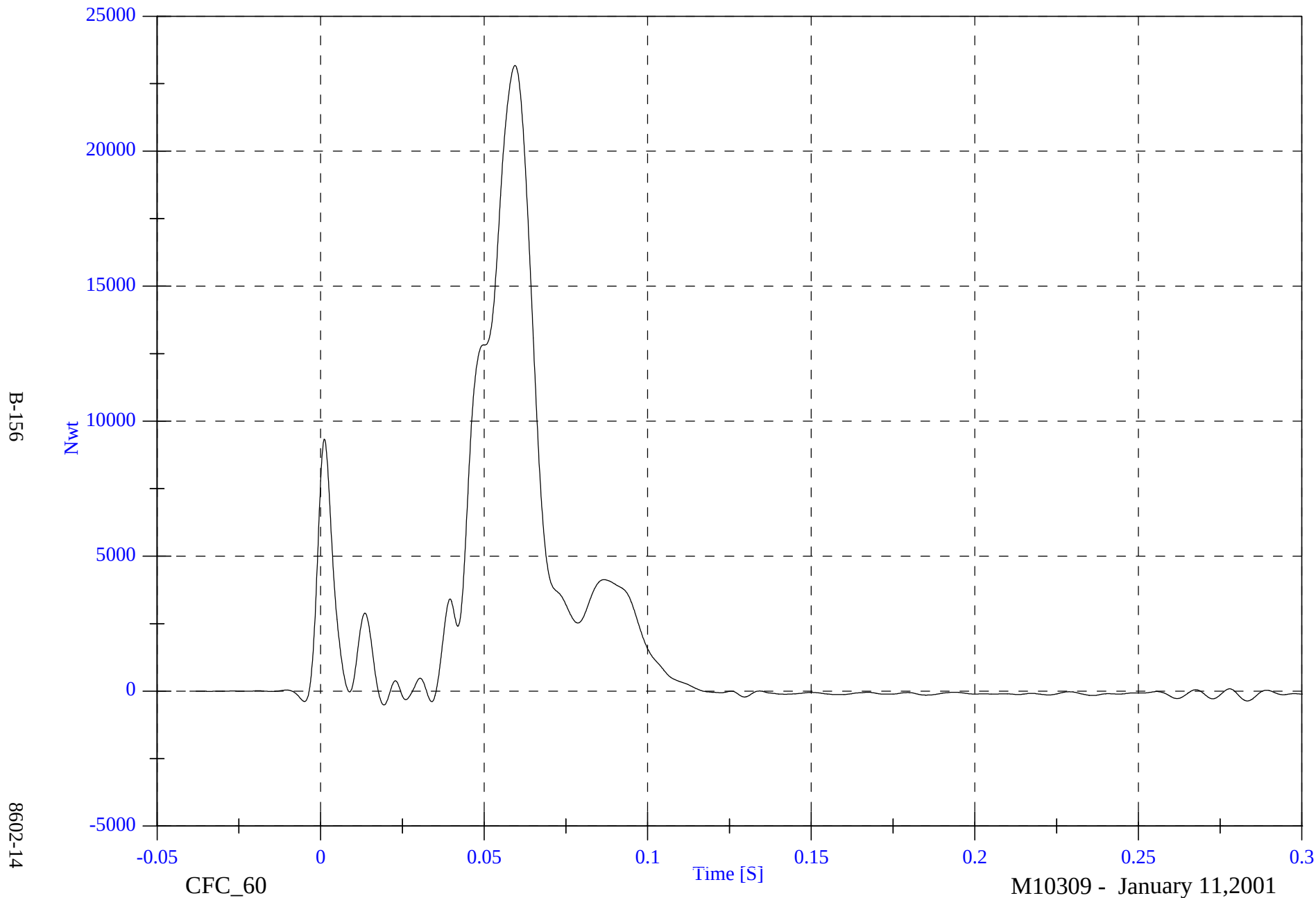


NCAP 2001 TEST #14 - 2001 Dodge Ram 1500 Pickup

BLC C6 Fx

Max: 23176.6 [Nwt] at 0.059 [S]

Min: -516.3 [Nwt] at 0.019 [S]

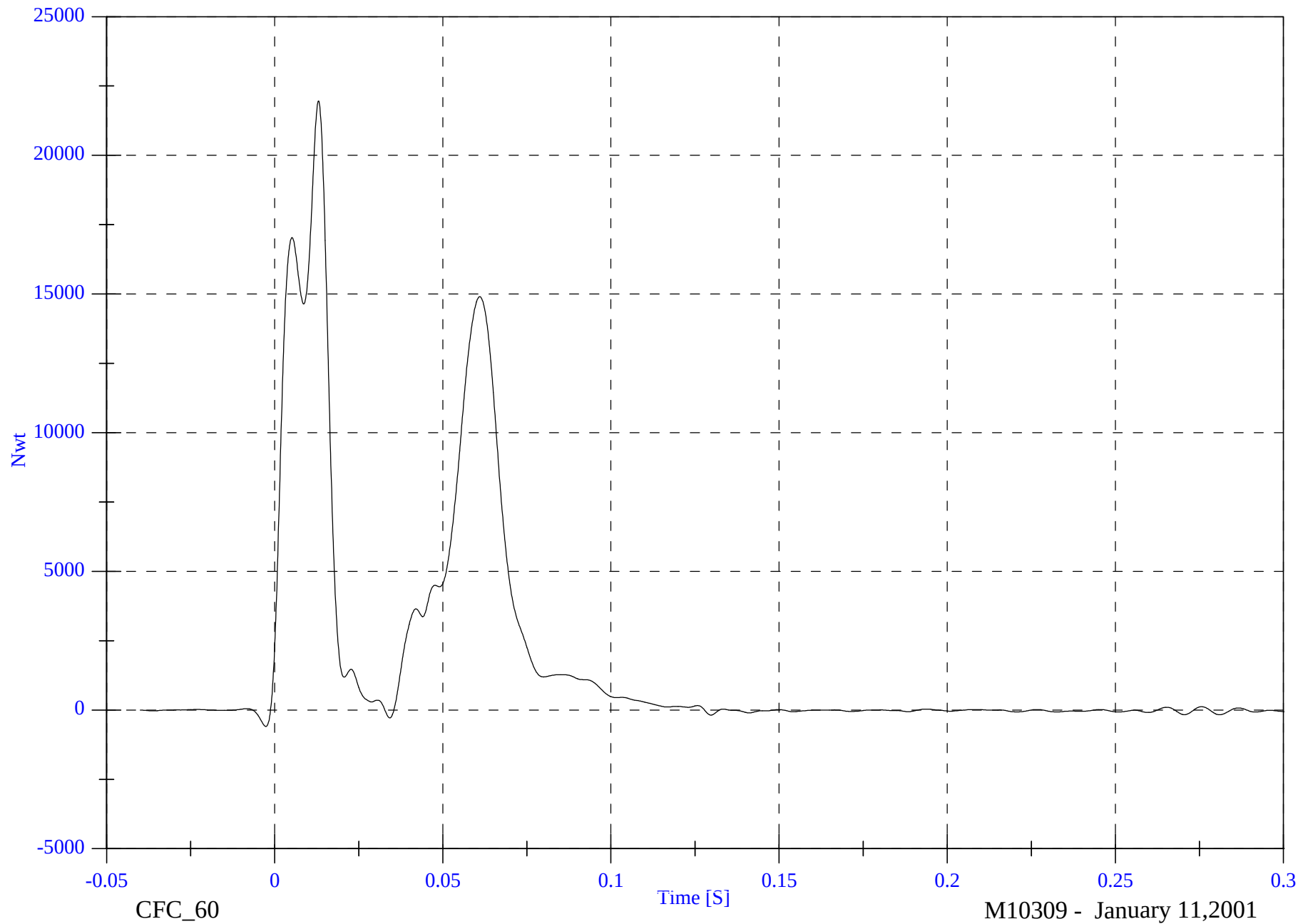


NCAP 2001 TEST #14 - 2001 Dodge Ram 1500 Pickup

BLC C7 Fx

Max: 21961.9 [Nwt] at 0.013 [S]

Min: -592.6 [Nwt] at -0.003 [S]



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8602-14

CFC_60

Time [S]

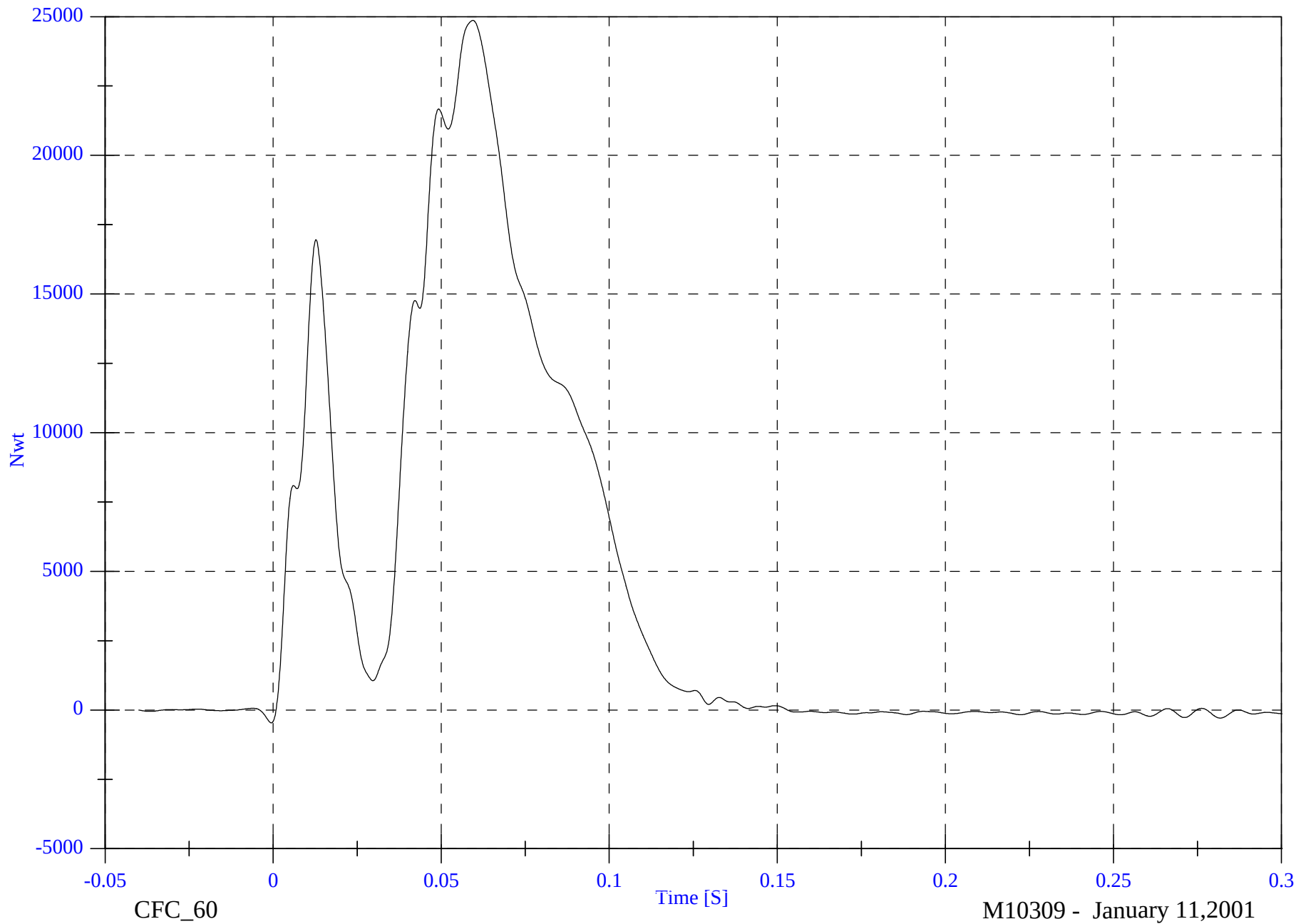
M10309 - January 11, 2001

NCAP 2001 TEST #14 - 2001 Dodge Ram 1500 Pickup

BLC C8 Fx

Max: 24865.6 [Nwt] at 0.059 [S]

Min: -464.3 [Nwt] at -0.001 [S]

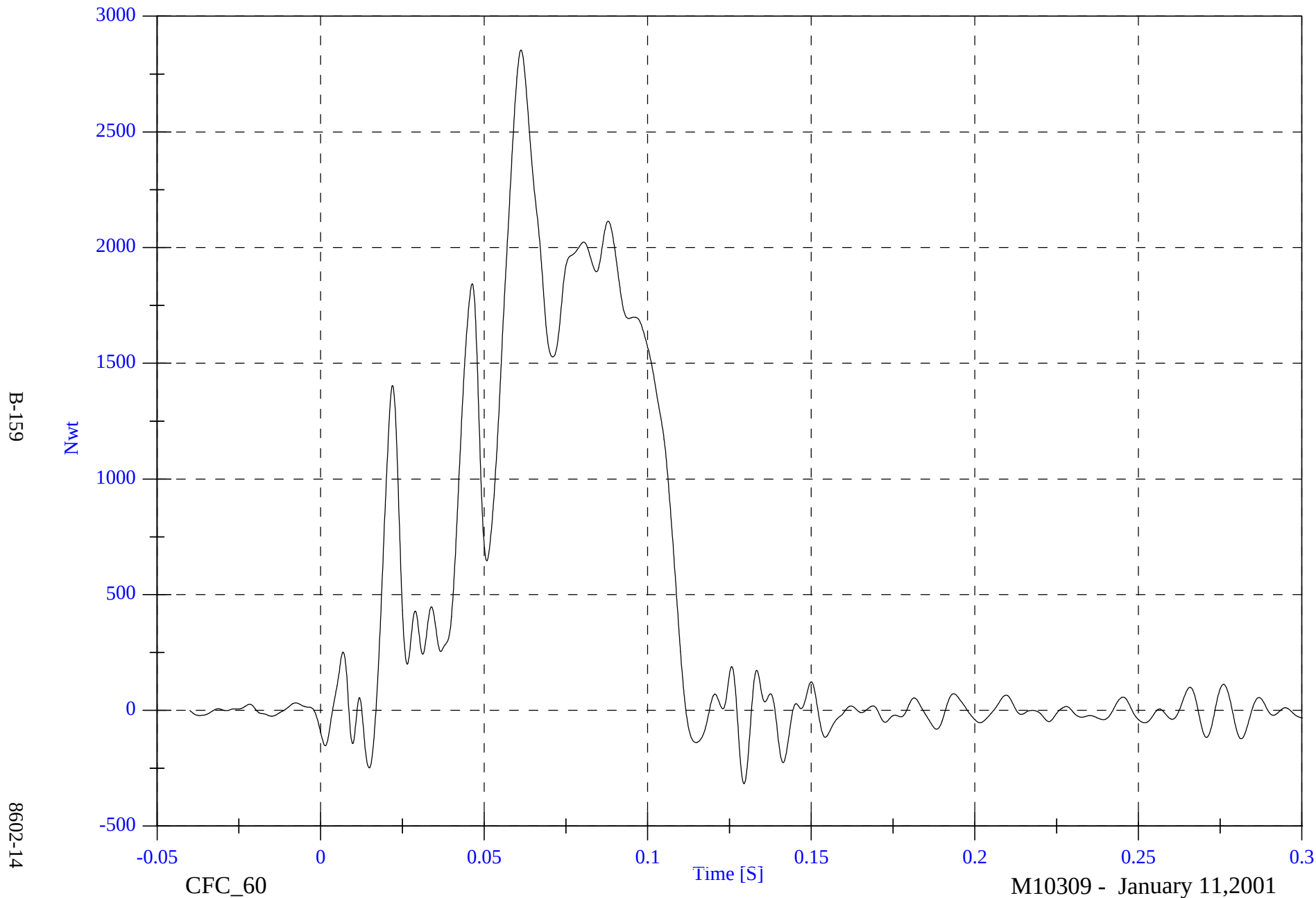


NCAP 2001 TEST #14 - 2001 Dodge Ram 1500 Pickup

BLC C9 Fx

Max: 2854.1 [Nwt] at 0.061 [S]

Min: -317.1 [Nwt] at 0.129 [S]

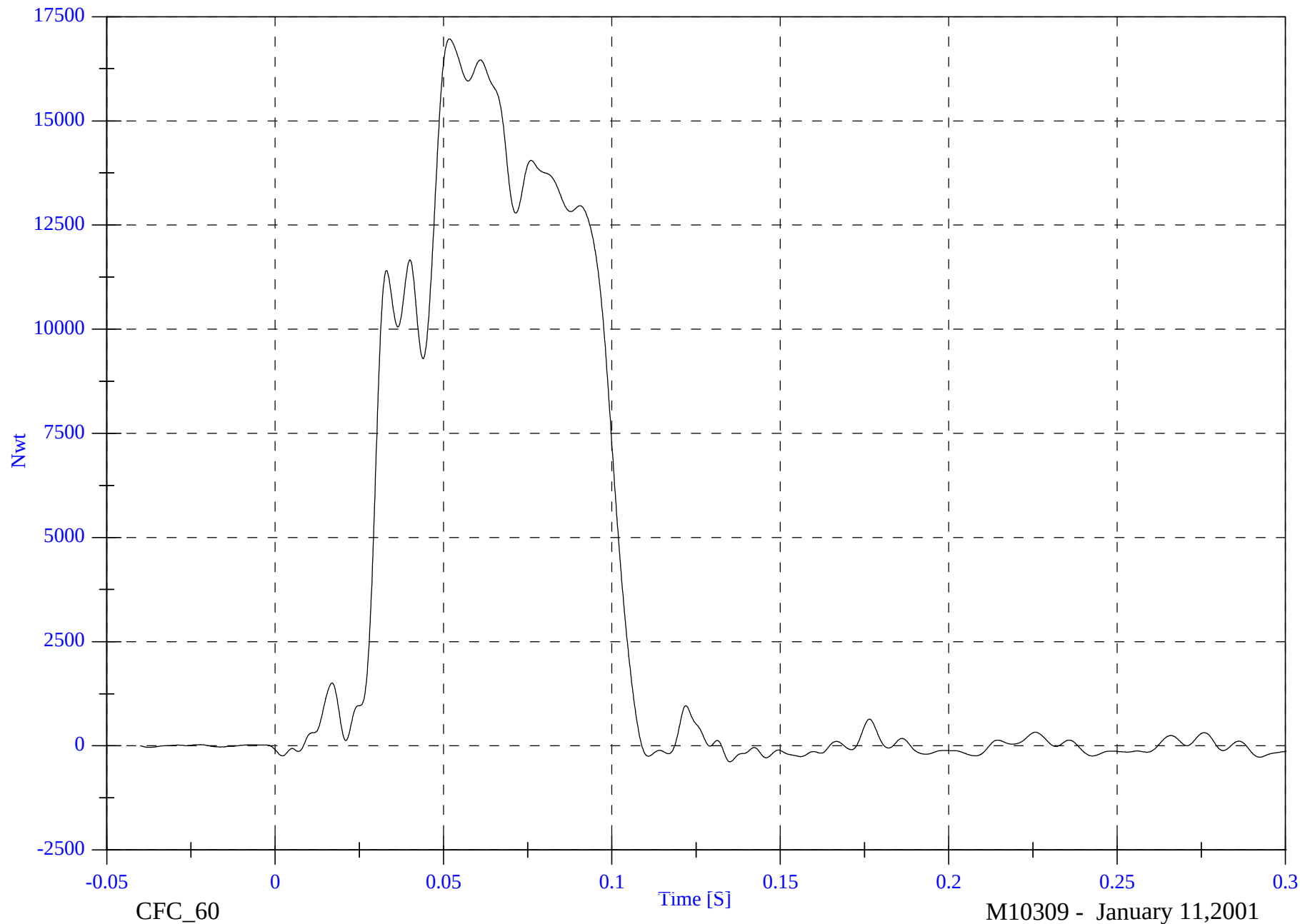


NCAP 2001 TEST #14 - 2001 Dodge Ram 1500 Pickup

BLC D1 Fx

Max: 16966.3 [Nwt] at 0.052 [S]

Min: -384.5 [Nwt] at 0.135 [S]



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CFC_60

Time [S]

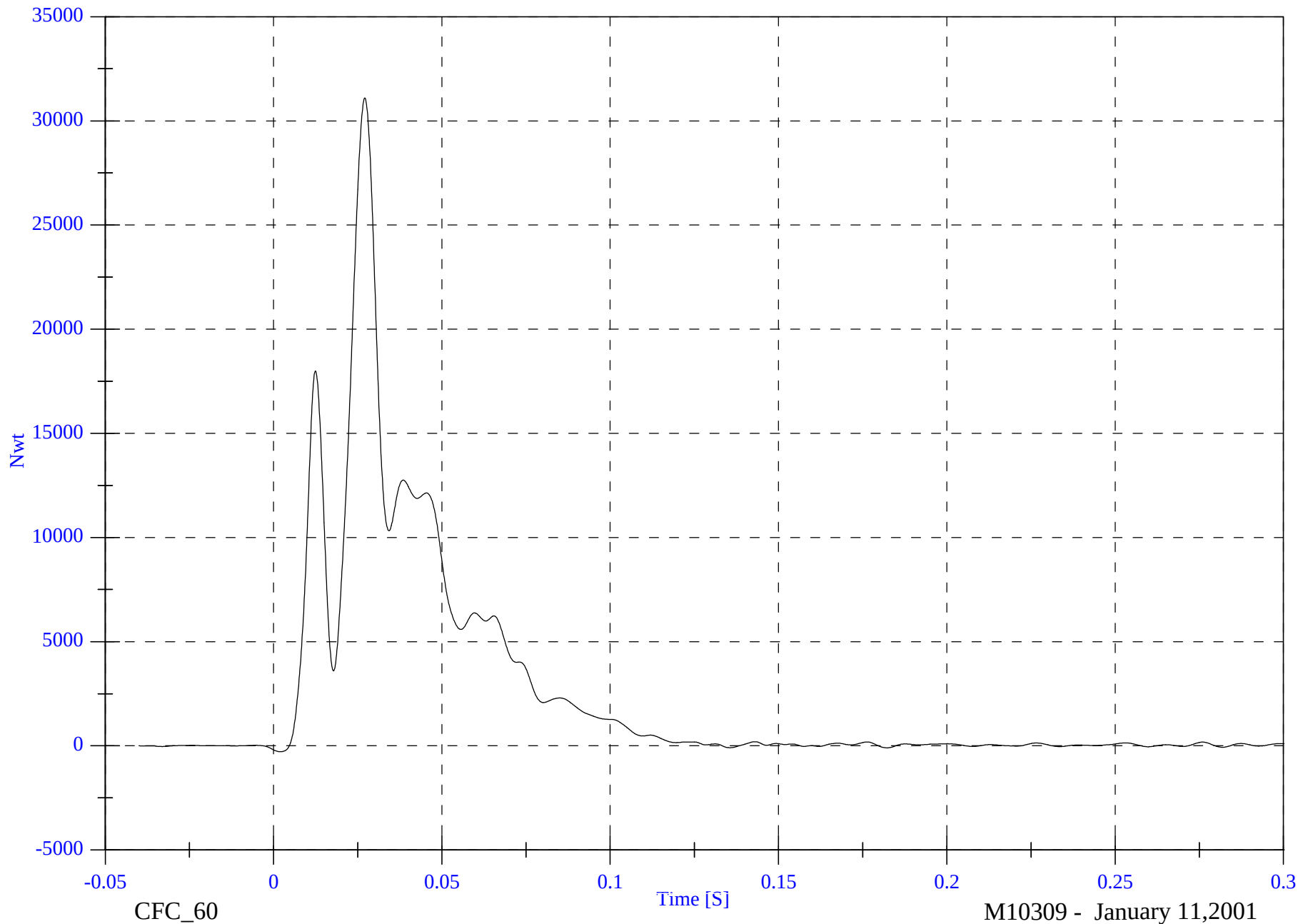
M10309 - January 11, 2001

NCAP 2001 TEST #14 - 2001 Dodge Ram 1500 Pickup

BLC D2 Fx

Max: 31097.4 [Nwt] at 0.027 [S]

Min: -282.5 [Nwt] at 0.002 [S]



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8602-14

CFC_60

Time [S]

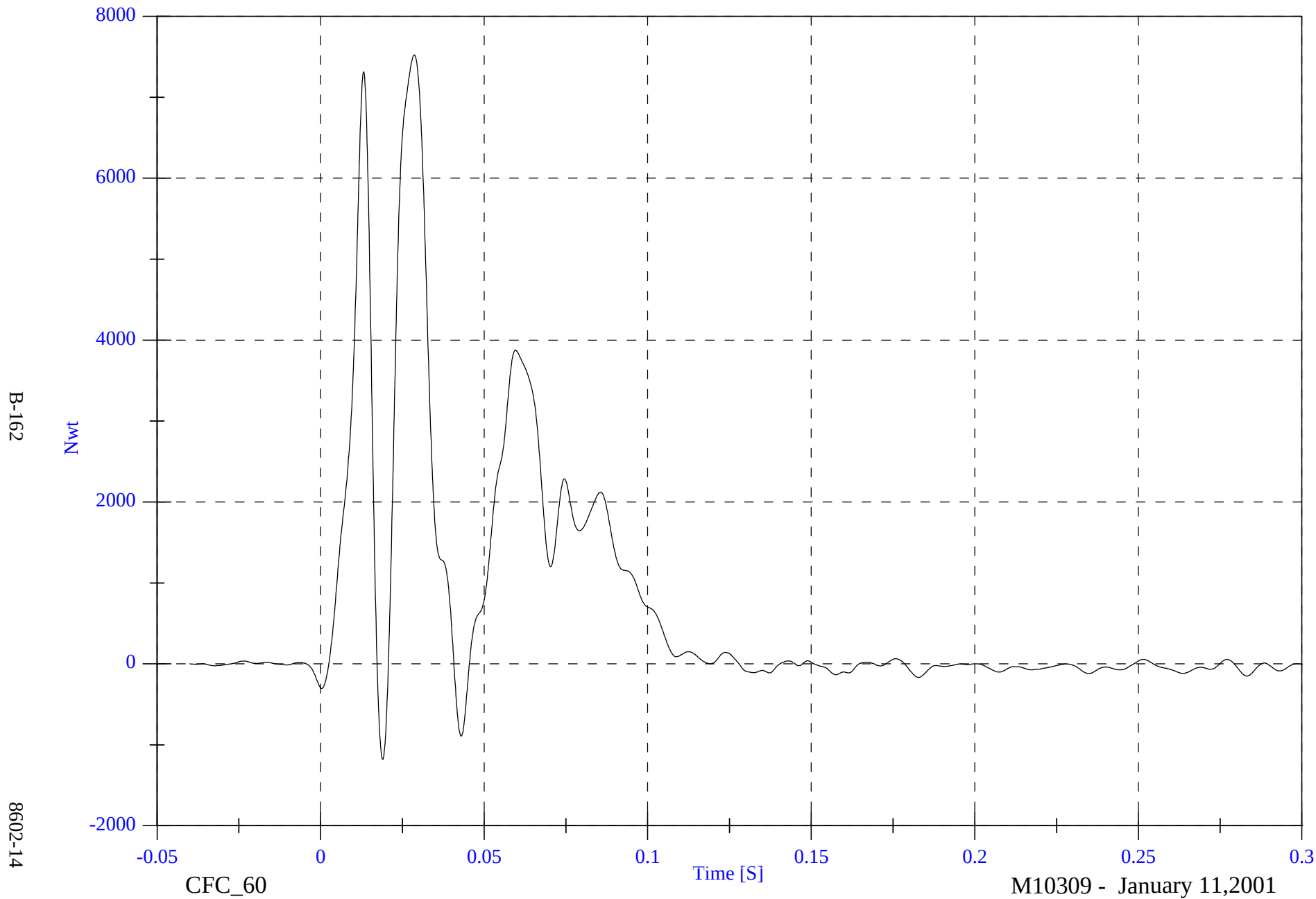
M10309 - January 11, 2001

NCAP 2001 TEST #14 - 2001 Dodge Ram 1500 Pickup

BLC D3 Fx

Max: 7521.3 [Nwt] at 0.029 [S]

Min: -1180.5 [Nwt] at 0.019 [S]

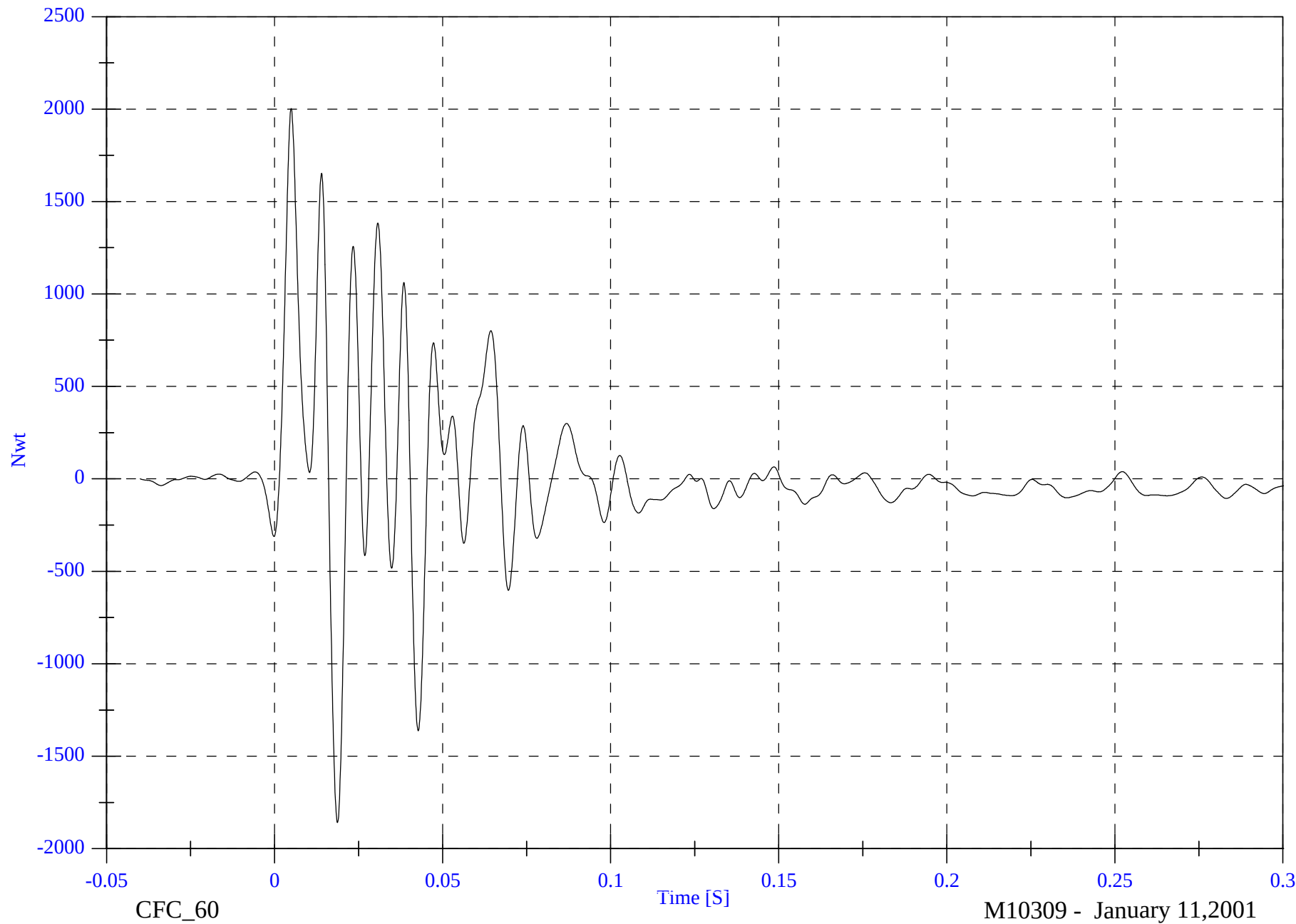


NCAP 2001 TEST #14 - 2001 Dodge Ram 1500 Pickup

BLC D4 Fx

Max: 2003.4 [Nwt] at 0.005 [S]

Min: -1859.3 [Nwt] at 0.019 [S]



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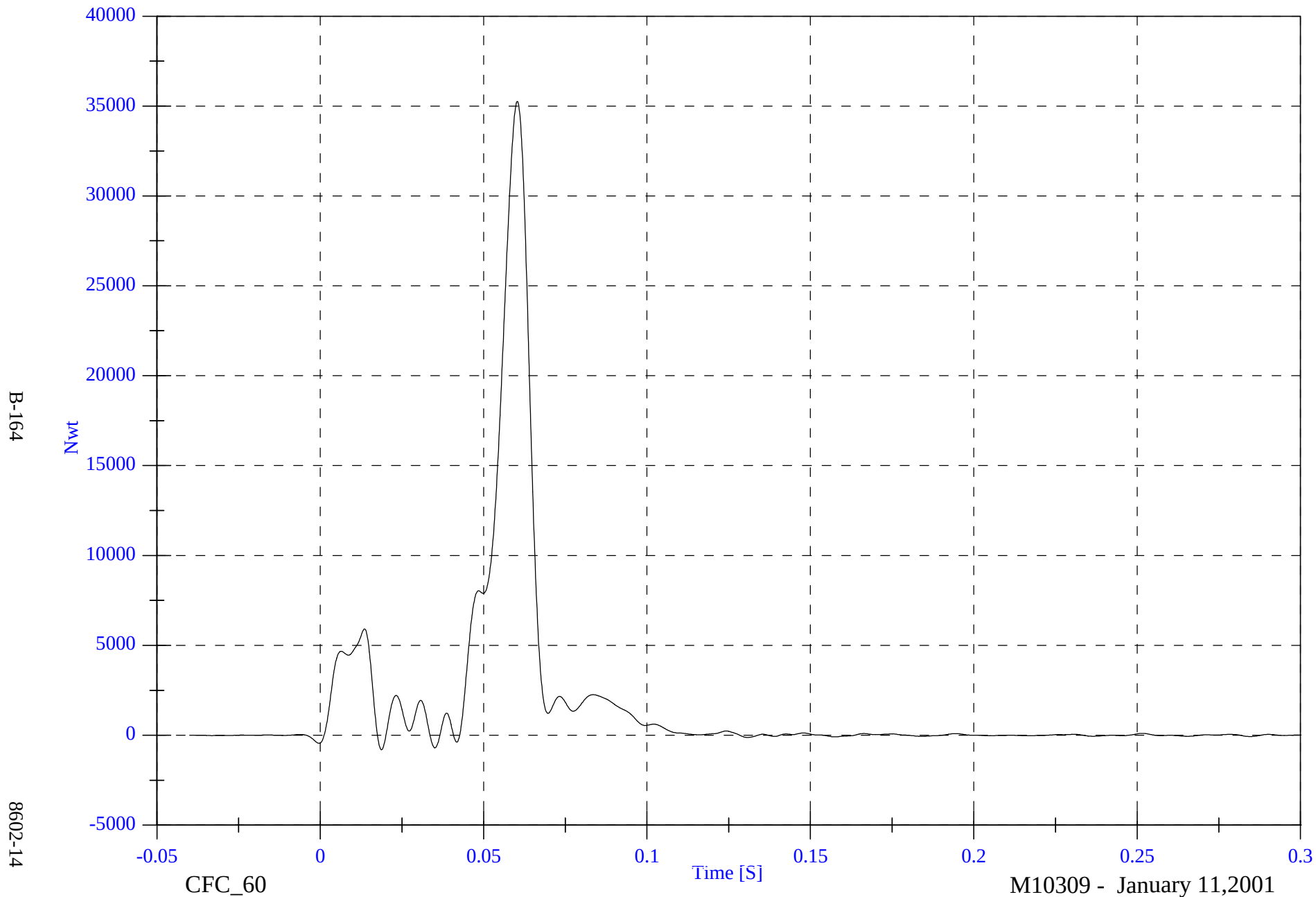
8602-14

NCAP 2001 TEST #14 - 2001 Dodge Ram 1500 Pickup

BLC D5 Fx

Max: 35263.6 [Nwt] at 0.060 [S]

Min: -804.7 [Nwt] at 0.019 [S]

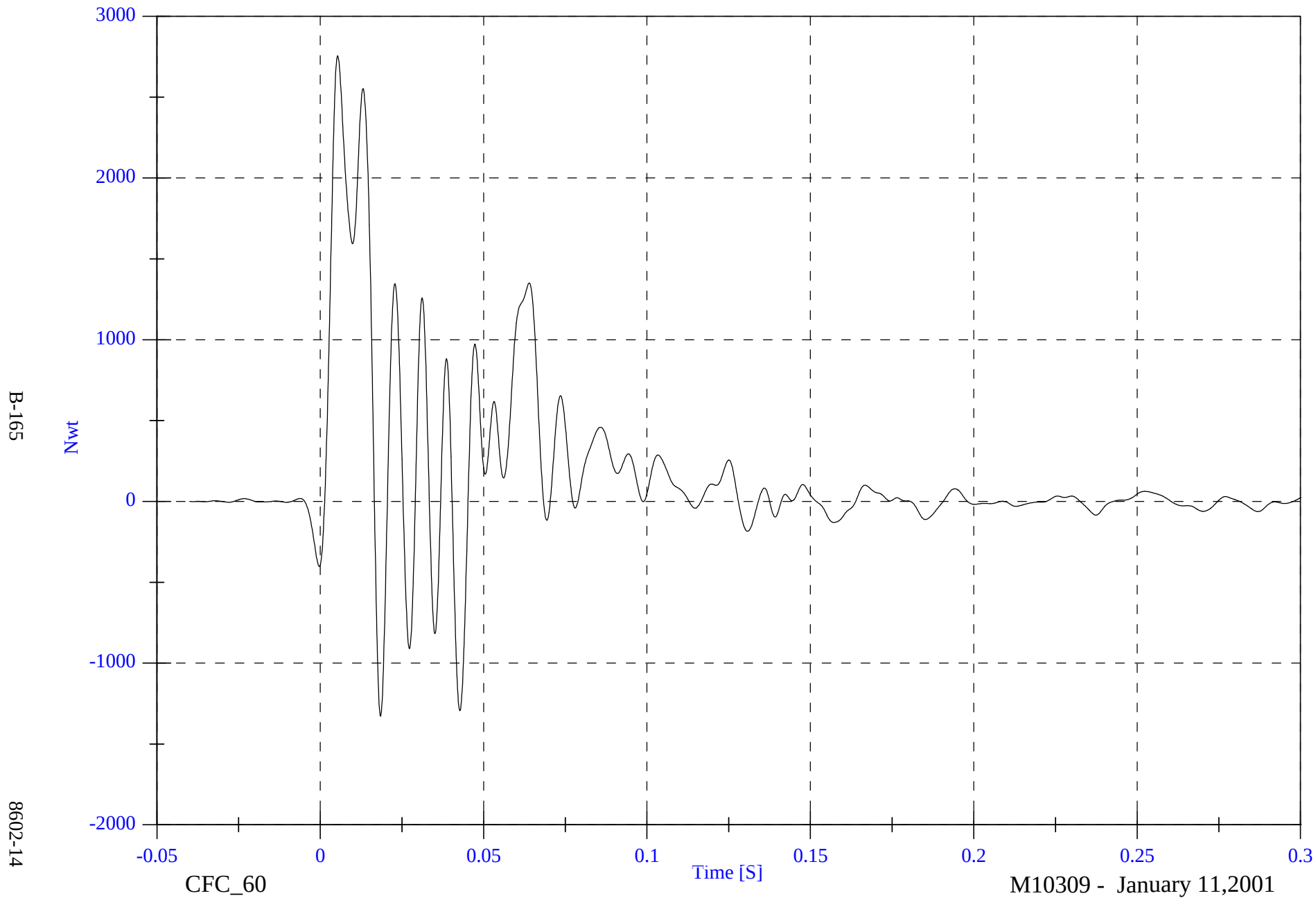


NCAP 2001 TEST #14 - 2001 Dodge Ram 1500 Pickup

BLC D6 Fx

Max: 2754.9 [Nwt] at 0.005 [S]

Min: -1328.5 [Nwt] at 0.018 [S]



NCAP 2001 TEST #14 - 2001 Dodge Ram 1500 Pickup

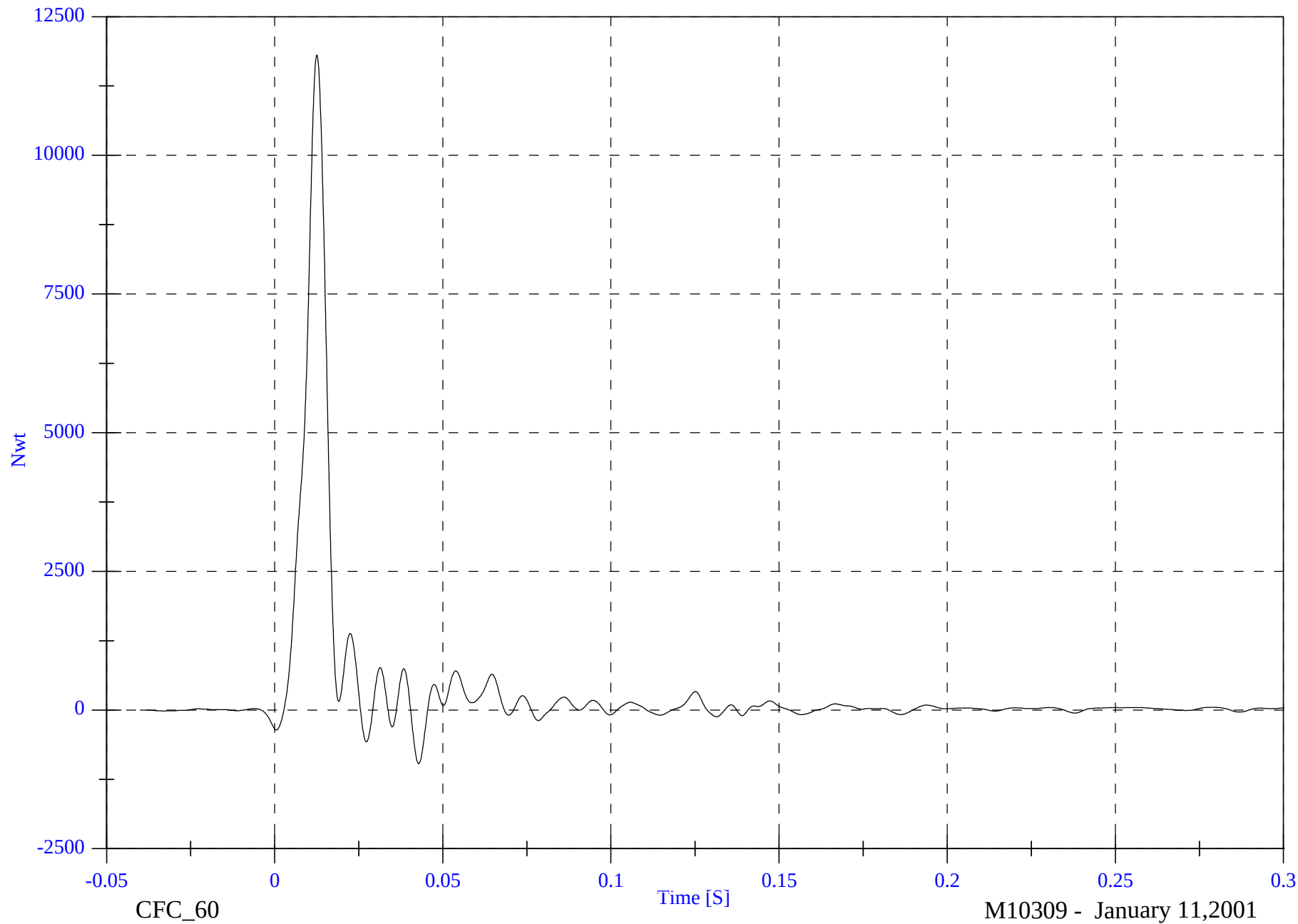
BLC D7 Fx

Max: 11809.8 [Nwt] at 0.012 [S]

Min: -967.9 [Nwt] at 0.043 [S]

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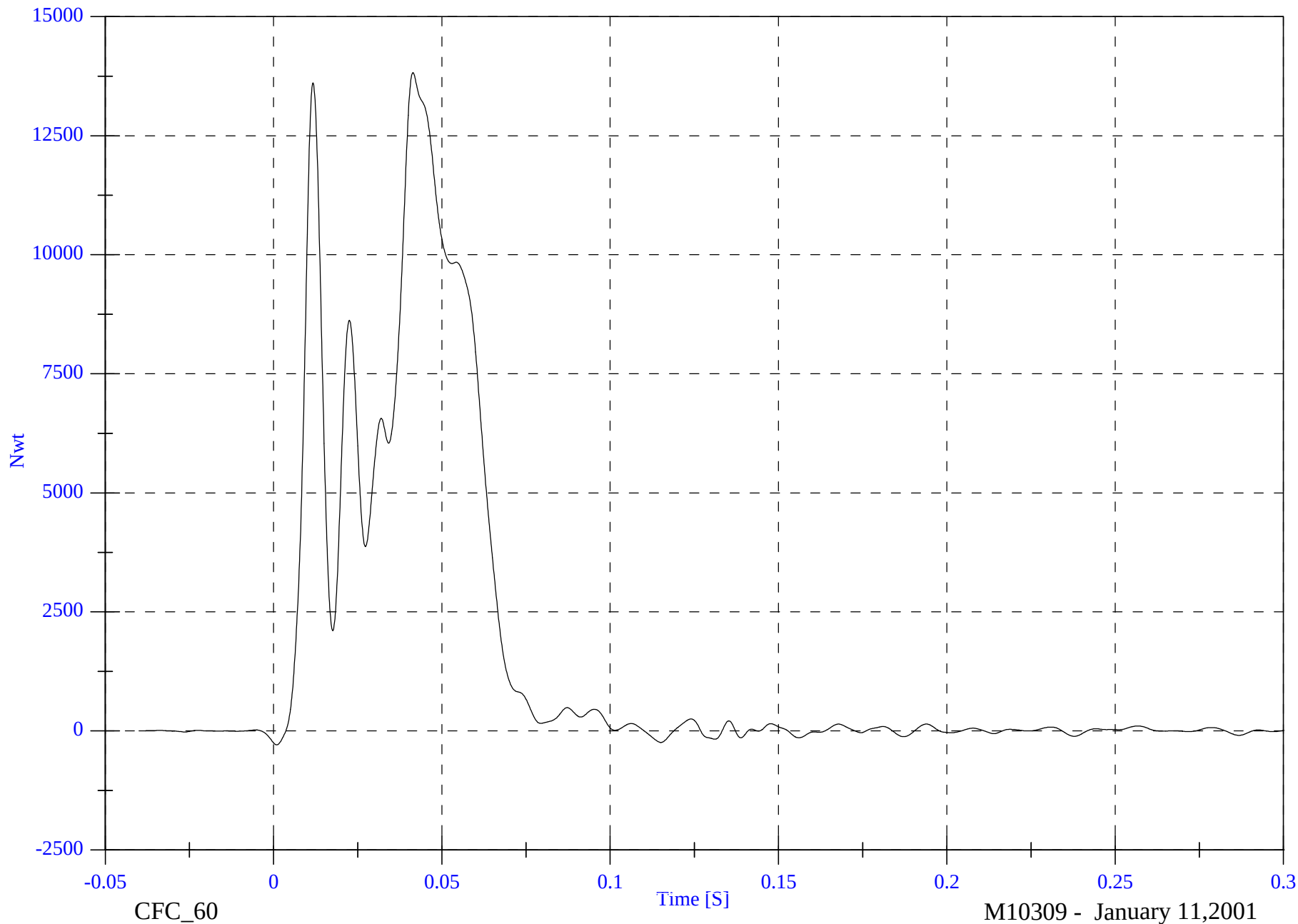


NCAP 2001 TEST #14 - 2001 Dodge Ram 1500 Pickup

BLC D8 Fx

Max: 13826.0 [Nwt] at 0.041 [S]

Min: -293.0 [Nwt] at 0.001 [S]



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CFC_60

Time [S]

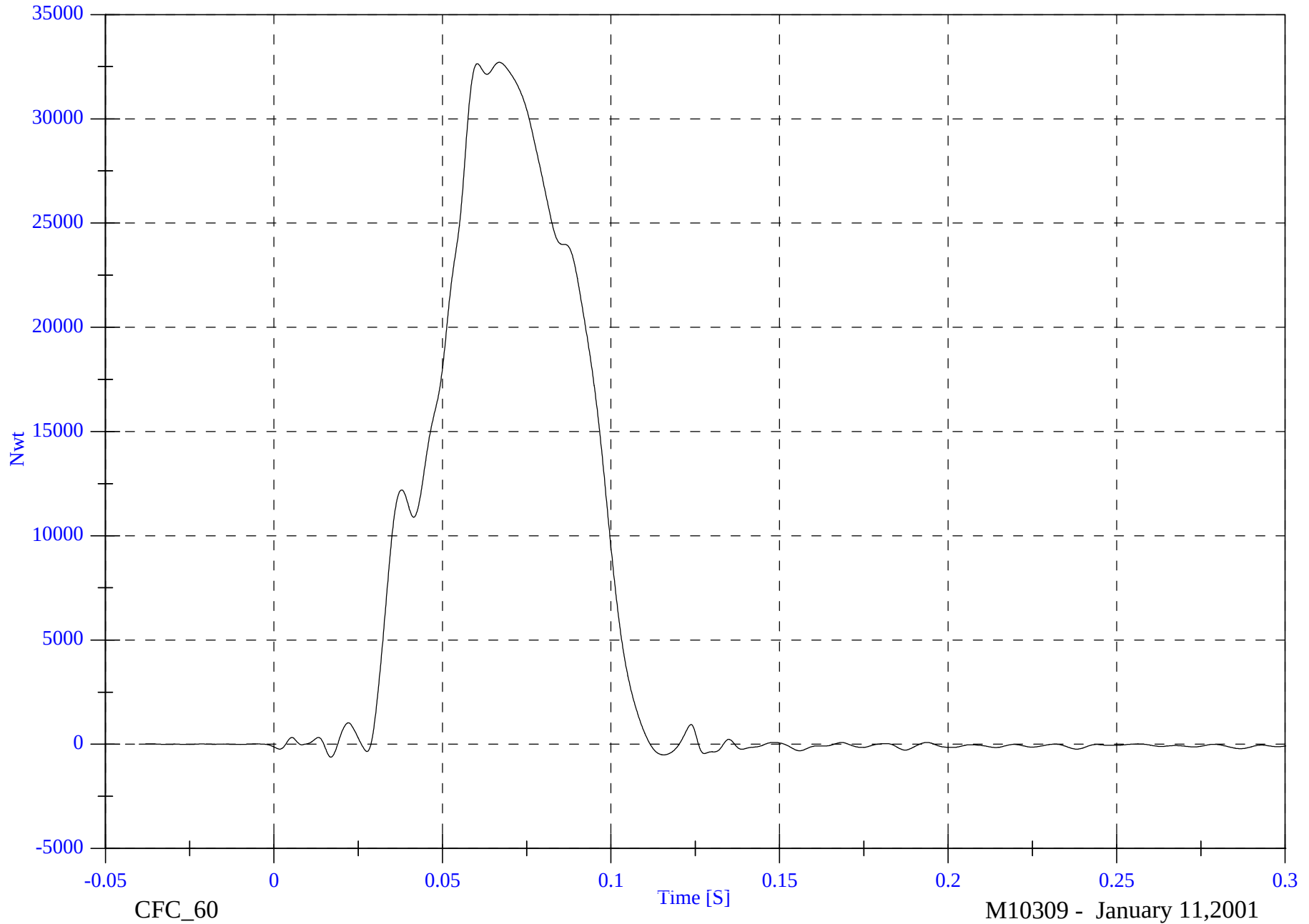
M10309 - January 11, 2001

NCAP 2001 TEST #14 - 2001 Dodge Ram 1500 Pickup

BLC D9 Fx

Max: 32707.4 [Nwt] at 0.067 [S]

Min: -620.1 [Nwt] at 0.017 [S]

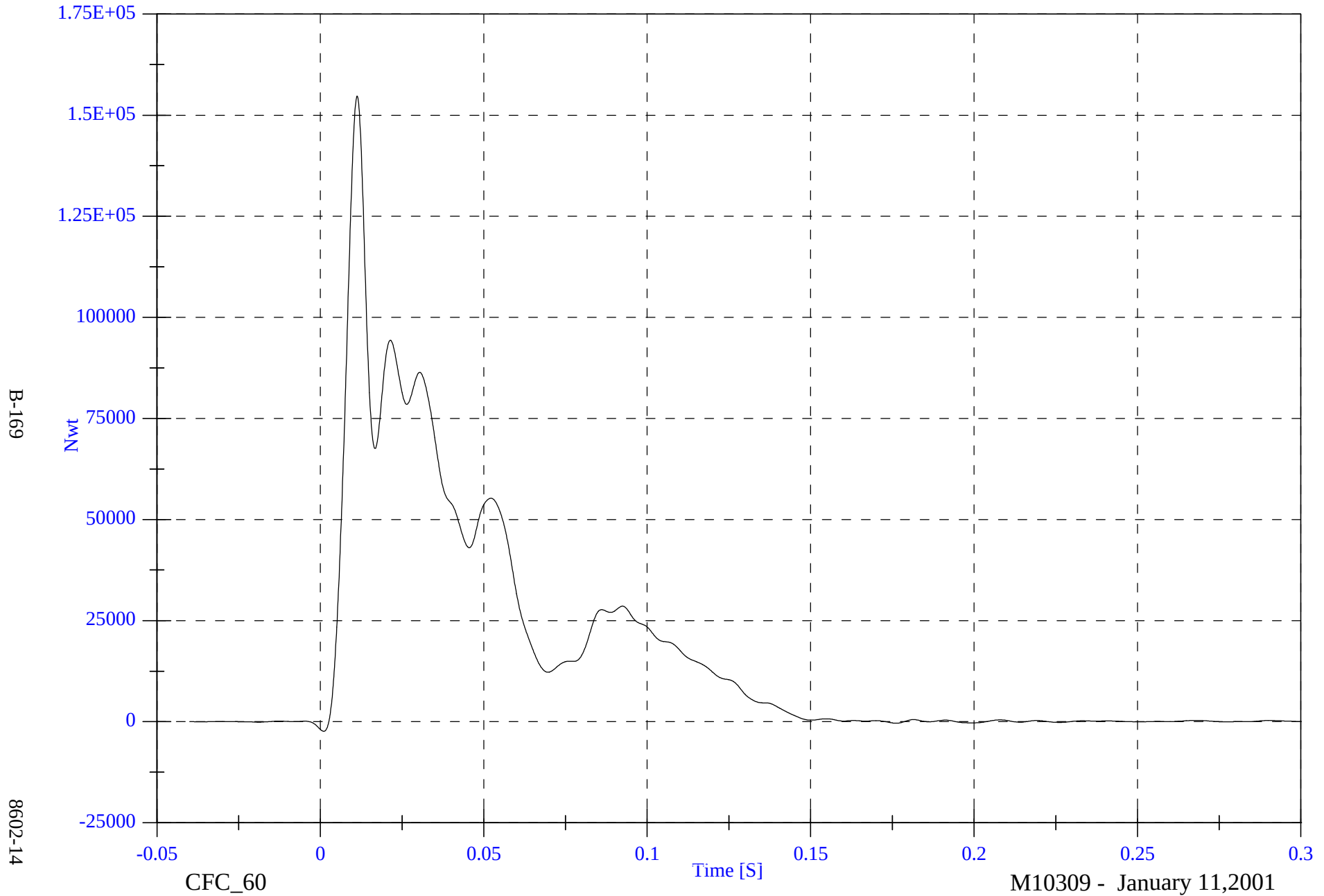


NCAP 2001 TEST #14 - 2001 Dodge Ram 1500 Pickup

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

Max: 154734.5 [Nwt] at 0.011 [S]

Min: -2384.5 [Nwt] at 0.001 [S]

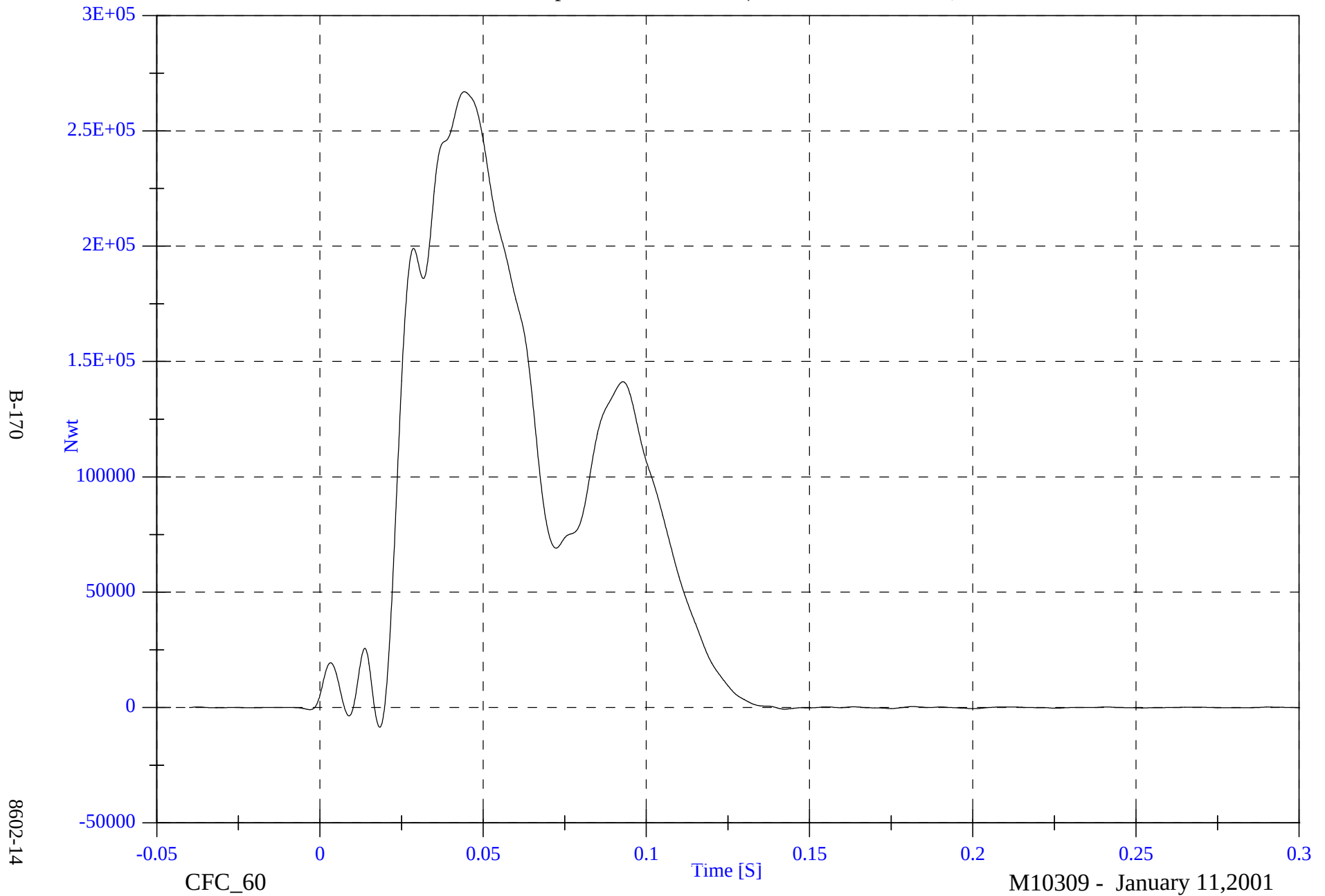


NCAP 2001 TEST #14 - 2001 Dodge Ram 1500 Pickup

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

Max: 266929.3 [Nwt] at 0.044 [S]

Min: -8528.1 [Nwt] at 0.018 [S]

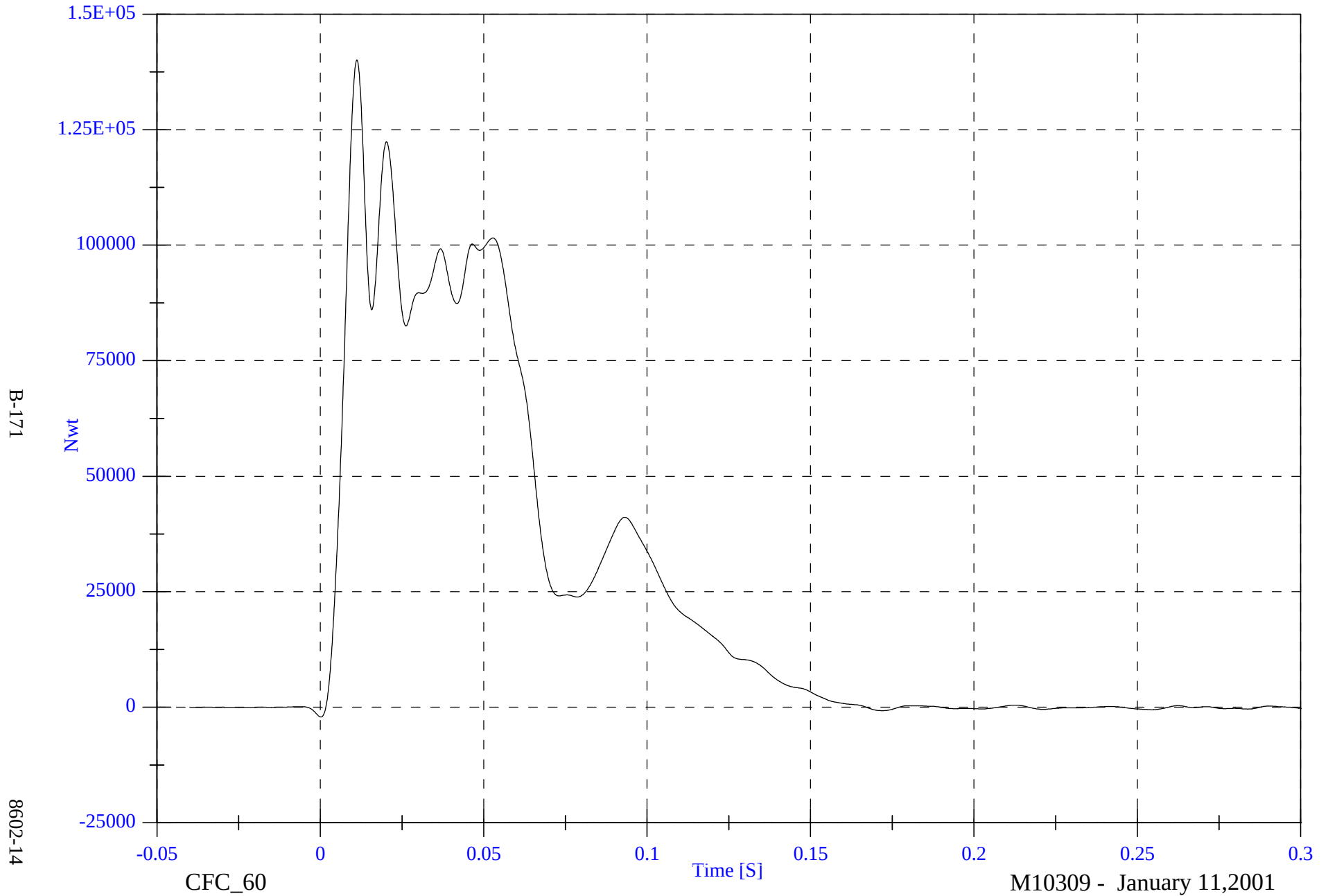


NCAP 2001 TEST #14 - 2001 Dodge Ram 1500 Pickup

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

Max: 140110.2 [Nwt] at 0.011 [S]

Min: -2123.9 [Nwt] at 0.000 [S]

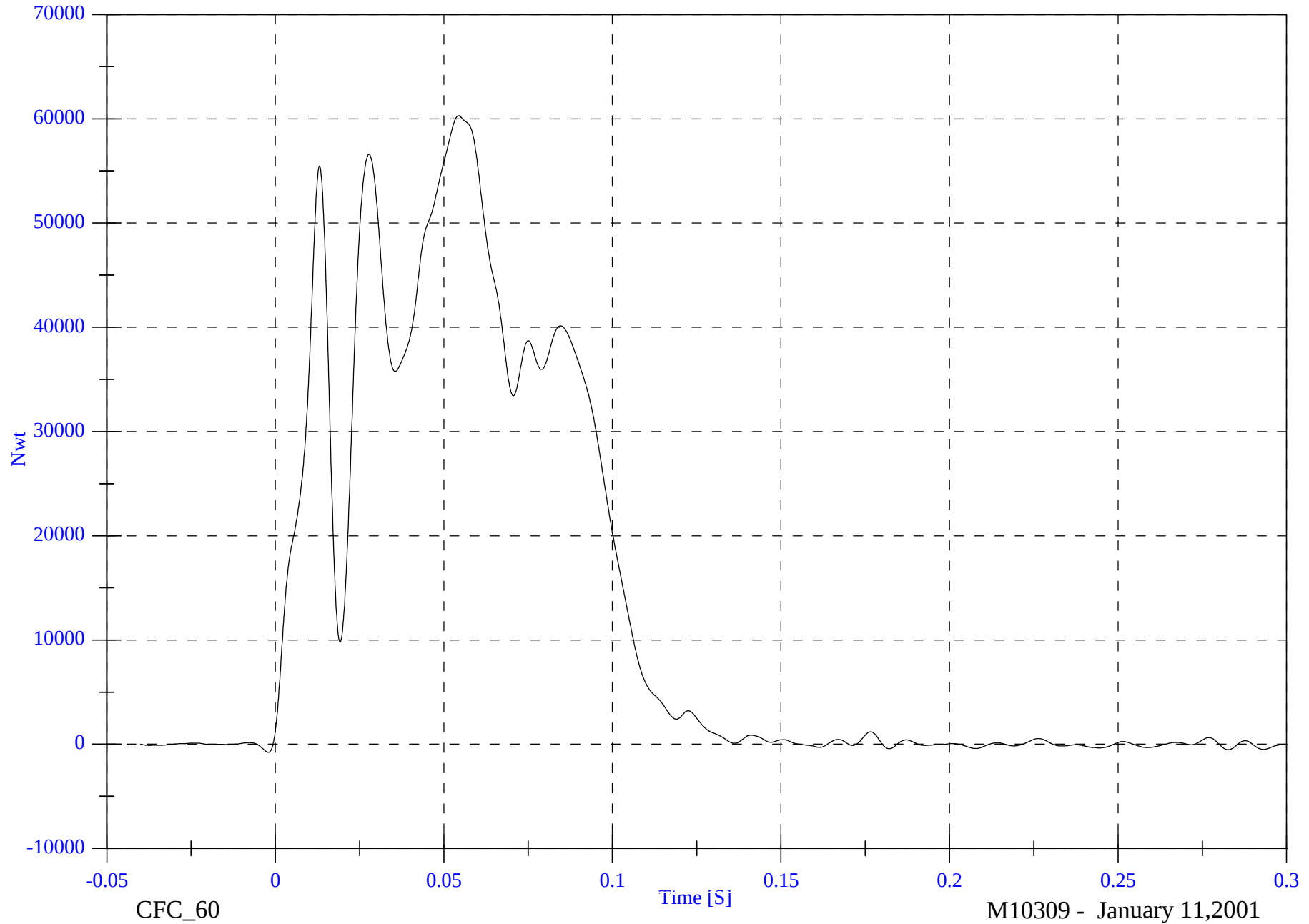


NCAP 2001 TEST #14 - 2001 Dodge Ram 1500 Pickup

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

Max: 60292.0 [Nwt] at 0.054 [S]

Min: -778.5 [Nwt] at -0.002 [S]



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8602-14

CFC_60

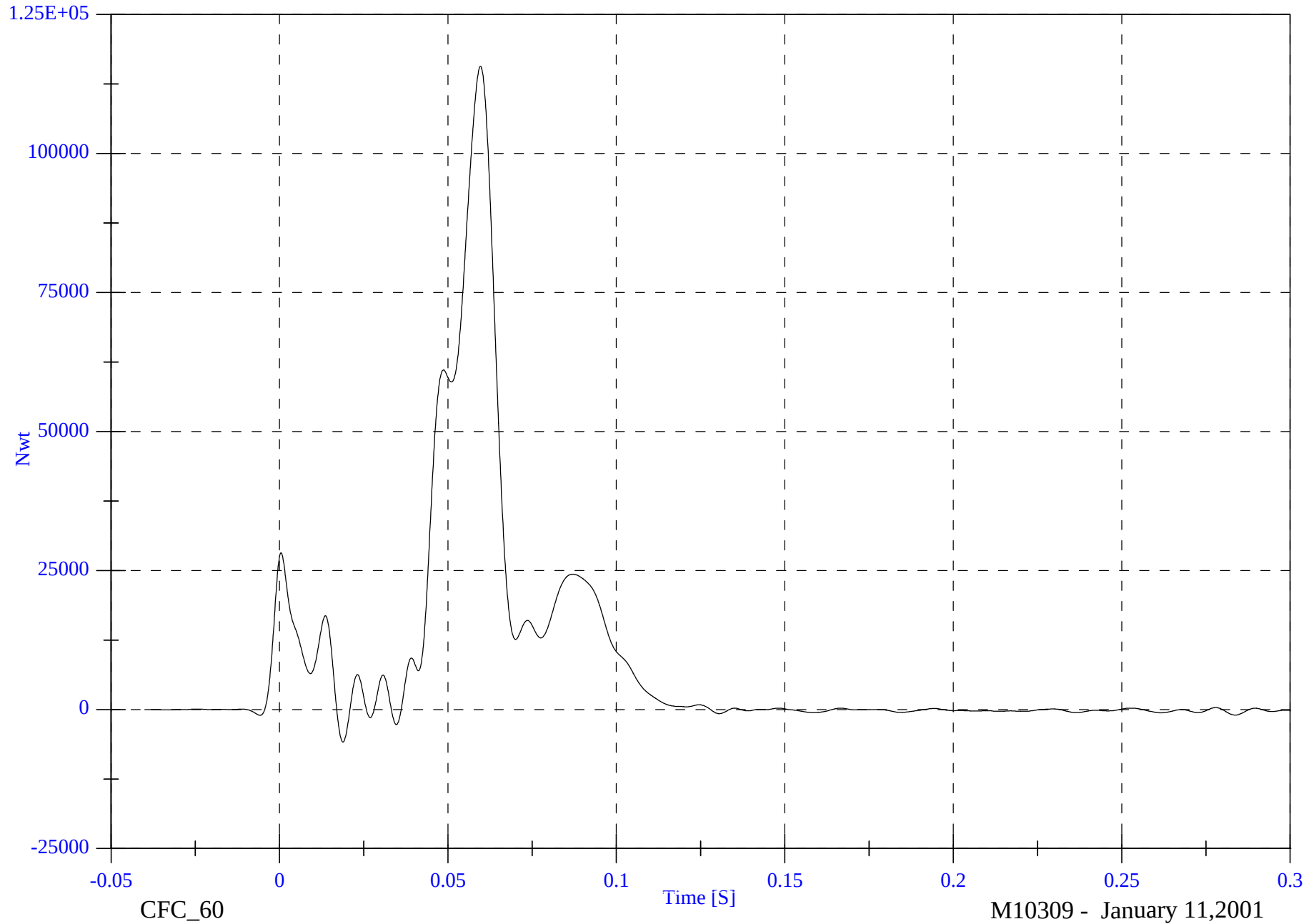
M10309 - January 11, 2001

NCAP 2001 TEST #14 - 2001 Dodge Ram 1500 Pickup

Max: 115698.8 [Nwt] at 0.060 [S]

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

Min: -5859.0 [Nwt] at 0.019 [S]



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CFC_60

Time [S]

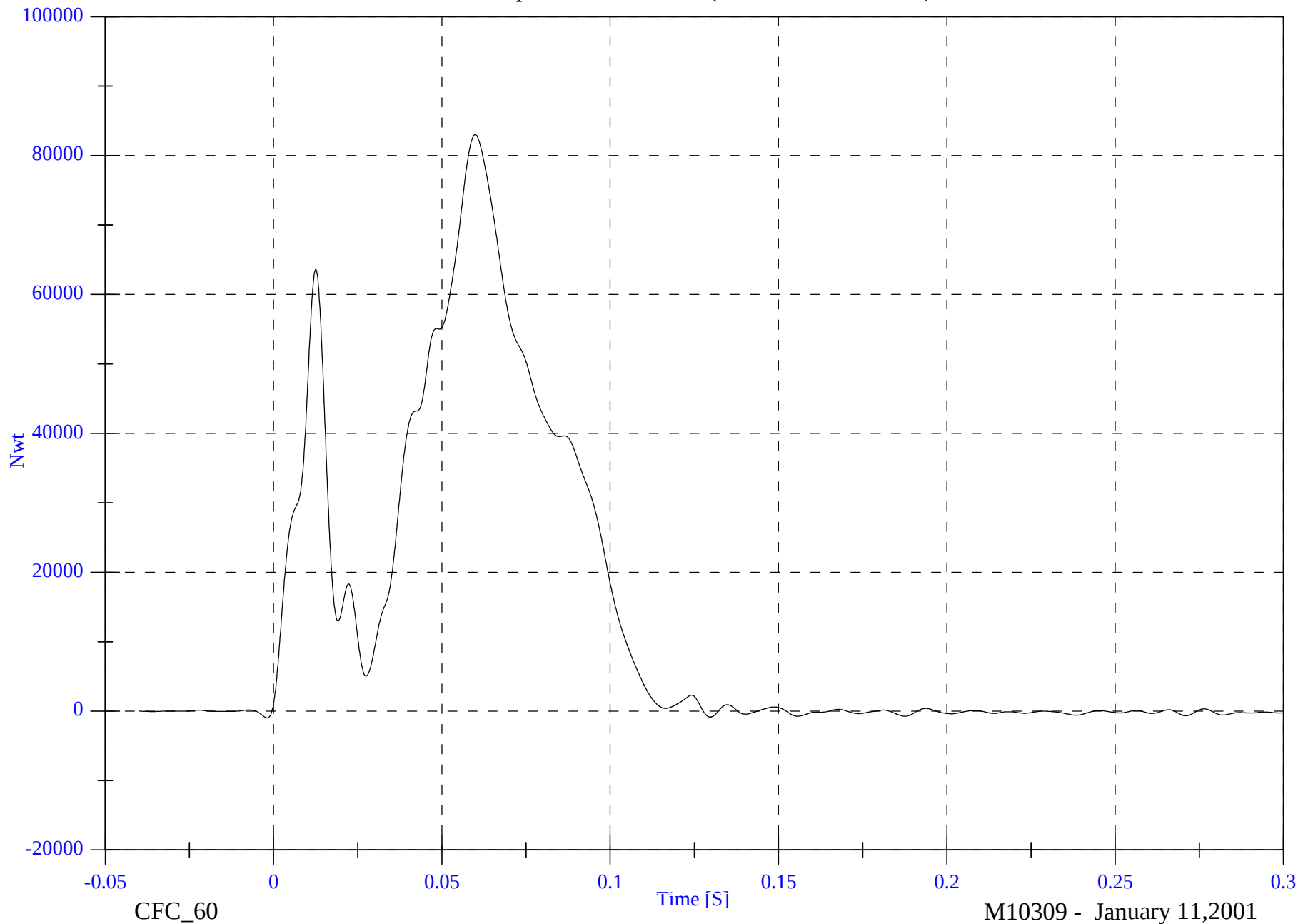
M10309 - January 11, 2001

NCAP 2001 TEST #14 - 2001 Dodge Ram 1500 Pickup

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

Max: 83030.3 [Nwt] at 0.060 [S]

Min: -999.5 [Nwt] at -0.002 [S]



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8602-14

CFC_60

Time [S]

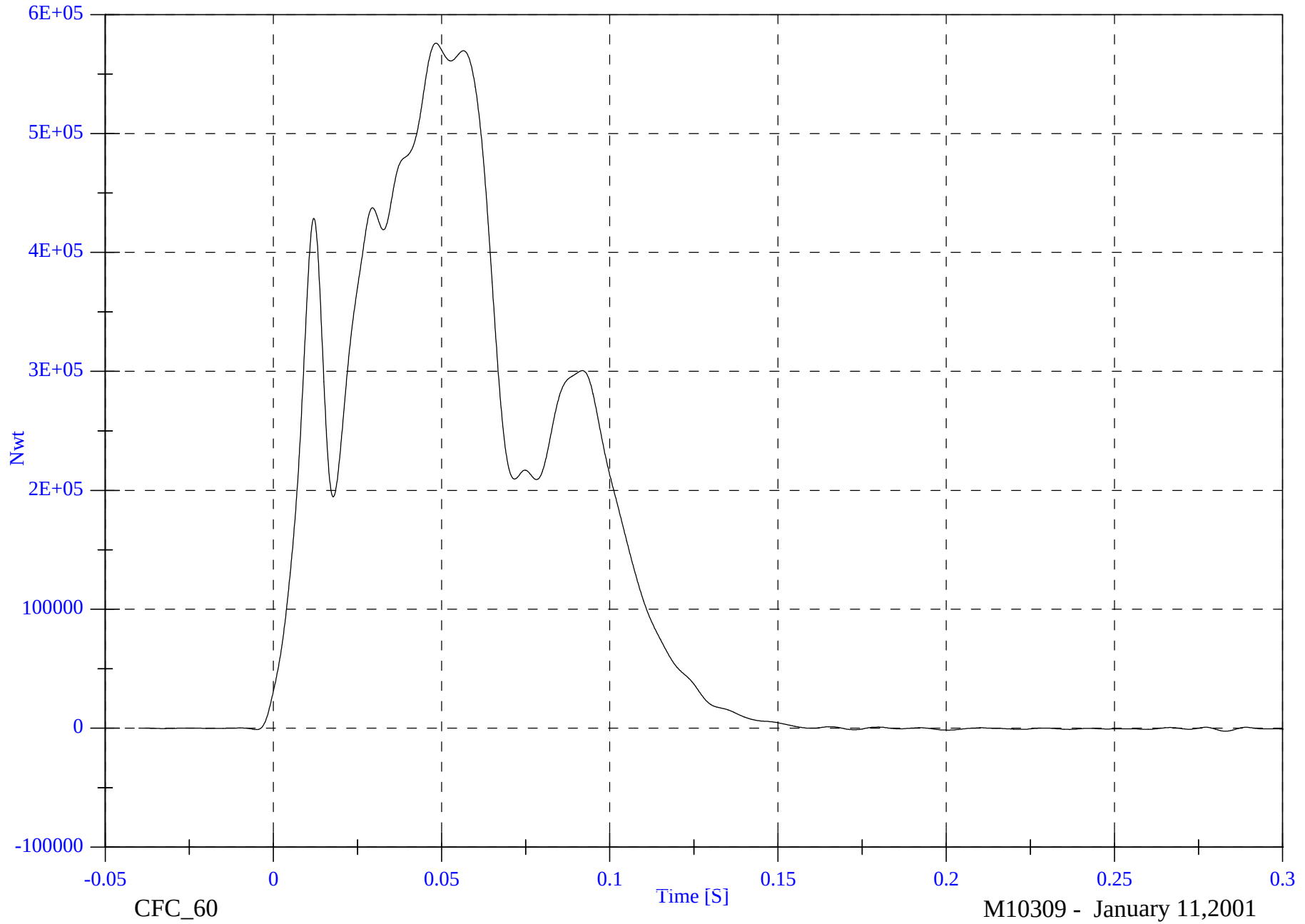
M10309 - January 11, 2001

NCAP 2001 TEST #14 - 2001 Dodge Ram 1500 Pickup

Max: 575935.1 [Nwt] at 0.048 [S]

Total Load Cell Sum (All 6 Groups)

Min: -2499.2 [Nwt] at 0.283 [S]



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CFC_60

M10309 - January 11, 2001

APPENDIX C

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

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

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

Dummy serial numbers and certification dates are:

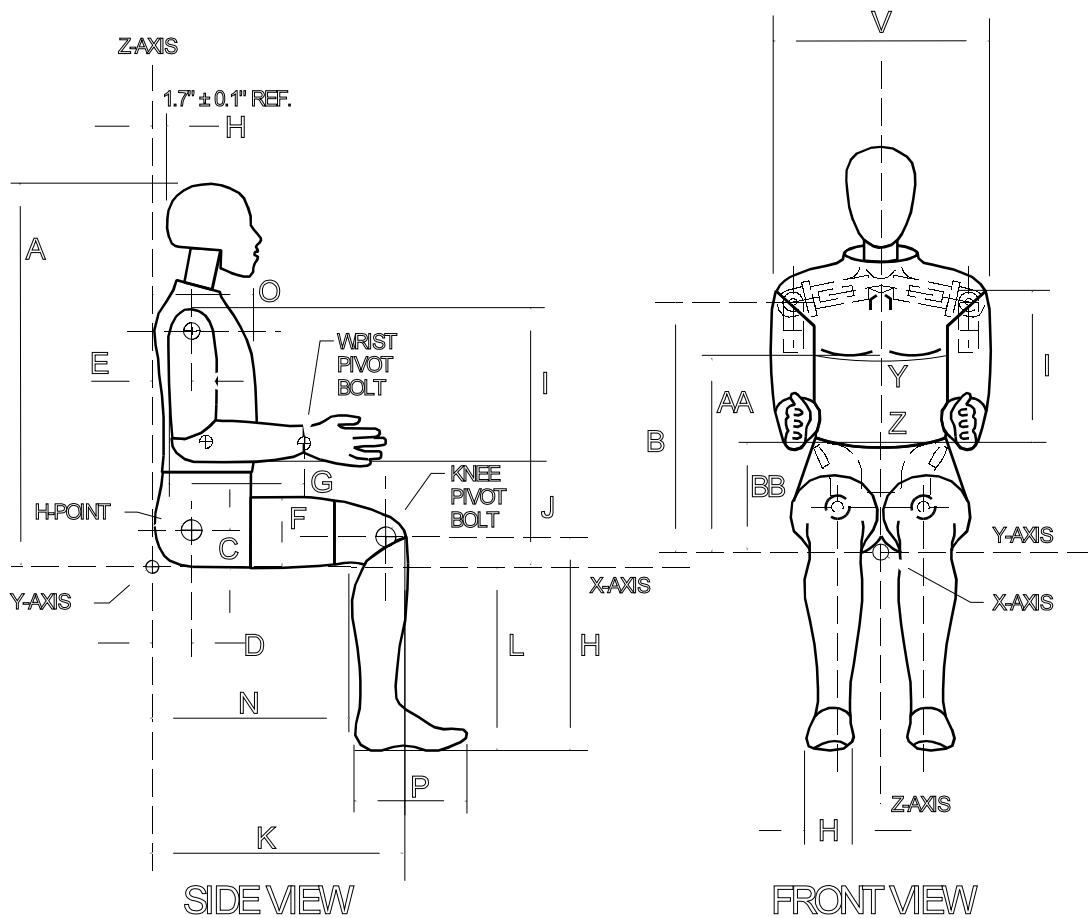
<u>Position No./Location</u>	<u>Serial No.</u>	<u>Completion Date</u>
#1/Driver	061	12/21/00
#2/Right Front Passenger	064	12/21/00

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 Inducant Testing Final Report No. 6525-V-1.

DUMMY CONFIGURATION DIMENSIONS

EXTERNAL DIMENSIONS SPECIFICATIONS



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

PART 572E
HEAD DROP TEST

Dummy Serial Number 061
Sequential Test Number 4
Date 12/17/2000
Workfile 061400.hdp

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	66-78 Deg F	71.0
Relative Humidity	10% - 70%	31.0
Peak Resultant Acceleration	225-275 G's	248.58
Peak Lateral Acceleration	15 G's Max	8.77
Is Acceleration Curve Unimodal?	YES	YES

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
NECK FLEXION TEST

Dummy Serial Number	061	
Sequential Test Number	4	
Date	12/16/2000	6 Axis Neck Transducer
Workfile	061400.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	23.66
	20 ms	17.60 - 22.60 G's	19.32
	30 ms	12.50 - 18.50 G's	13.80
Max Pendulum G's Above 30 ms		29 G's Max	13.80
Deceleration - Time Curve Decay Time to 5 G's		34 - 42 ms	38.38
D Plane Rotation	Max	64 - 78 Deg	70.33
	Time	57 - 64 ms	63.00
Moment About Occipital Condyle	Max	65 - 80 Ft-Lbs	72.88
	Time	47 - 58 ms	52.12
Rotation Angle - Time Curve Decay Time to Zero		113 - 128 ms	121.00
Positive Moment - Time Curve Decay Time to Zero		97 - 107 ms	98.62

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
NECK EXTENSION TEST

Dummy Serial Number	061	
Sequential Test Number	4	
Date	12/16/2000	6 Axis Neck Transducer
Workfile	061400.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	19.59
Pendulum Deceleration	10 ms	17.20 - 21.20 G's	17.75
	20 ms	14.00 - 19.00 G's	16.22
	30 ms	11.00 - 16.00 G's	12.93
Max Pendulum G's Above 30 ms		22 G's Max	12.93
Deceleration - Time Curve Decay Time to 5 G's		38 - 46 ms	45.75
D Plane Rotation	Max	81 - 106 Deg	94.83
	Time	72 - 82 ms	75.88
Moment About Occipital Condyle	Max	-59.0 - -39.0 Ft-Lbs	-46.08
	Time	65 - 79 ms	66.12
Rotation Angle - Time Curve Decay Time to Zero		147 - 174 ms	151.88
Positive Moment - Time Curve Decay Time to Zero		120 - 148 ms	140.25

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
THORAX IMPACT TEST

Dummy Serial Number 061
Sequential Test Number 4
Date 12/18/2000
Workfile 061400.th3

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	69-72 Deg F	70.0
Relative Humidity	10% - 70%	32.0
Pendulum Velocity	21.6 - 22.4 Ft/s	22.0
Maximum Deflection	2.50 - 2.86 in	2.74
Maximum Resistive Force	1160 - 1325 Lbs	1200.05
Internal Hysteresis	69 - 85 %	77.03

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
KNEE IMPACT TEST

Dummy Serial Number 061
Sequential Test Number 4
Date 12/18/2000
Workfile 061400.lf / 061400.rf

TEST PARAMETER	SPECIFICATION	TEST RESULTS
LEFT KNEE		
Temperature	66 - 78 Deg F	70.0
Relative Humidity	10% - 70%	29.0
Probe Velocity	6.8 - 7.0 Ft/s	7.0
Peak Knee Impact Force	1060 - 1300 Lbs	1163.03
RIGHT KNEE		
Temperature	66 - 78 Deg F	70.0
Relative Humidity	10% - 70%	29.0
Probe Velocity	6.8 - 7.0 Ft/s	7.0
Peak Knee Impact Force	1060 - 1300 Lbs	1156.62

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
EXTERNAL DIMENSIONS

Dummy Serial Number 061
Sequential Test Number 4
Date 12/21/2000

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature			71
Relative Humidity			31
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	8.6
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	34.7
Thigh Clearance	F	5.5 - 6.1 in	6.1
Buttock Knee Length	K	22.8 - 23.8 in	23.4
Buttock Popliteal Length	N	17.8 - 18.8 in	18.3
Popliteal Height	L	16.9 - 17.9 in	17.7
Knee Pivot Height	M	19.1 - 19.7 in	19.4
Foot Length	P	9.9 - 10.5 in	10.1
Foot Breadth	W	3.6 - 4.2 in	3.8
Shoulder Pivot from Backline	E	3.3 - 3.7 in	3.5
Shoulder Breadth	V	16.6 - 17.2 in	16.8
Shoulder Pivot Height	B	19.9 - 20.5 in	20.2
Elbow Rest Height	J	7.5 - 8.3 in	7.7
Shoulder - Elbow Length	I	13.0 - 13.6 in	13.4
Back of Elbow to Wrist Pivot	G	11.4 - 12.0 in	11.6

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
HEAD DROP TEST

Dummy Serial Number 064
Sequential Test Number 5
Date 12/17/2000
Workfile 064500.hdp

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	66-78 Deg F	71.0
Relative Humidity	10% - 70%	31.0
Peak Resultant Acceleration	225-275 G's	260.81
Peak Lateral Acceleration	15 G's Max	11.73
Is Acceleration Curve Unimodal?	YES	YES

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
NECK FLEXION TEST

Dummy Serial Number	064	
Sequential Test Number	5	
Date	12/16/2000	6 Axis Neck Transducer
Workfile	064500.nfl	

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature		69-72 Deg F	71.0
Relative Humidity		10% - 70%	31.0
Impact Velocity		22.60 - 23.40 Ft/s	22.89
Pendulum Deceleration	10 ms	22.50 - 27.50 G's	23.52
	20 ms	17.60 - 22.60 G's	18.19
	30 ms	12.50 - 18.50 G's	14.03
Max Pendulum G's Above 30 ms		29 G's Max	15.93
Deceleration - Time Curve Decay Time to 5 G's		34 - 42 ms	39.88
D Plane Rotation	Max	64 - 78 Deg	71.92
	Time	57 - 64 ms	57.12
Moment About Occipital Condyle	Max	65 - 80 Ft-Lbs	70.76
	Time	47 - 58 ms	53.62
Rotation Angle - Time Curve Decay Time to Zero		113 - 128 ms	120.50
Positive Moment - Time Curve Decay Time to Zero		97 - 107 ms	102.25

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
NECK EXTENSION TEST

Dummy Serial Number	064	
Sequential Test Number	5	
Date	12/16/2000	6 Axis Neck Transducer
Workfile	064500.nex	

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature		69-72 Deg F	71.0
Relative Humidity		10% - 70%	31.0
Impact Velocity		19.50 - 20.30 Ft/s	19.54
Pendulum Deceleration	10 ms	17.20 - 21.20 G's	19.19
	20 ms	14.00 - 19.00 G's	16.20
	30 ms	11.00 - 16.00 G's	12.77
Max Pendulum G's Above 30 ms		22 G's Max	12.77
Deceleration - Time Curve Decay Time to 5 G's		38 - 46 ms	42.25
D Plane Rotation	Max	81 - 106 Deg	98.52
	Time	72 - 82 ms	73.38
Moment About Occipital Condyle	Max	-59.0 - -39.0 Ft-Lbs	-56.96
	Time	65 - 79 ms	66.50
Rotation Angle - Time Curve Decay Time to Zero		147 - 174 ms	147.25
Positive Moment - Time Curve Decay Time to Zero		120 - 148 ms	136.12

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
THORAX IMPACT TEST

Dummy Serial Number 064
Sequential Test Number 5
Date 12/18/2000
Workfile 064500.th3

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	69-72 Deg F	70.0
Relative Humidity	10% - 70%	32.0
Pendulum Velocity	21.6 - 22.4 Ft/s	21.6
Maximum Deflection	2.50 - 2.86 in	2.57
Maximum Resistive Force	1160 - 1325 Lbs	1184.83
Internal Hysteresis	69 - 85 %	76.79

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
KNEE IMPACT TEST

Dummy Serial Number 064
Sequential Test Number 5
Date 12/18/2000
Workfile 064500.lf / 064500.rf

TEST PARAMETER	SPECIFICATION	TEST RESULTS
LEFT KNEE		
Temperature	66 - 78 Deg F	70.0
Relative Humidity	10% - 70%	29.0
Probe Velocity	6.8 - 7.0 Ft/s	7.0
Peak Knee Impact Force	1060 - 1300 Lbs	110.75
RIGHT KNEE		
Temperature	66 - 78 Deg F	70.0
Relative Humidity	10% - 70%	29.0
Probe Velocity	6.8 - 7.0 Ft/s	7.0
Peak Knee Impact Force	1060 - 1300 Lbs	1186.09

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
EXTERNAL DIMENSIONS

Dummy Serial Number 064
Sequential Test Number 5
Date 12/21/2000

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature			70
Relative Humidity			31
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	38.8
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

APPENDIX D

DUMMY, VEHICLE AND LABORATORY INSTRUMENT CALIBRATION

INSTRUMENT CALIBRATION FOR DRIVER DUMMY

(6 Month Calibration Minimum)

DRIVER DUMMY (S/N 061)		Manufacturer	Serial #	Calibration	
				Last	Next
Head	X	ENDEVCO	AC-J33019	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-P16593	13-Sep-00	13-Mar-01
Neck Load Cell	X	DENTON	LC-205Fx	28-Aug-00	01-Mar-01
	Y	DENTON	LC-205Fy	28-Aug-00	01-Mar-01
	Z	DENTON	LC-205Fz	28-Aug-00	01-Mar-01
Neck Moment	X	DENTON	LC-205Mx	28-Aug-00	01-Mar-01
	Y	DENTON	LC-205My	28-Aug-00	01-Mar-01
	Z	DENTON	LC-205Mz	28-Aug-00	01-Mar-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 DRIVER DUMMY

(6 Month Calibration Minimum)

DRIVER 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-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
Lap Belt Load Cells		LEBOW	LC-707	01-Dec-00	01-Jun-01
Shoulder Belt Load Cells		LEBOW	LC-711	01-Dec-00	01-Jun-01
Spool-Out Potentiometer		MAGNETEK	DS-M11	02-Jan-00	02-Jul-01
Belt Stretch Transducer		CAL	DS-E6	08-Aug-00	08-Feb-01

INSTRUMENT CALIBRATION FOR PASSENGER DUMMY

(6 Month Calibration Minimum)

				Calibration	
PASSENGER DUMMY (S/N 064)		Manufacturer	Serial #	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-Nov-01
	Y	ENDEVCO	AC-P13331	20-Nov-00	20-Nov-01
	Z	ENDEVCO	AC-P13356	20-Nov-00	20-Nov-01

INSTRUMENT CALIBRATION FOR PASSENGER DUMMY

(6 Month Calibration Minimum)

PASSENGER 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-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	16-Jul-00	16-Jan-01
	Z	ENDEVCO	AC-J31026	21-Sep-00	21-Mar-01
Left Foot Front	Z	ENDEVCO	AC-J32831	16-Jul-00	16-Jan-01
Right Foot Rear	X	ENDEVCO	AC-J32832	14-Jul-00	14-Jan-01
	Z	ENDEVCO	AC-J33376	16-Jul-00	16-Jan-01
Right Foot Front	Z	ENDEVCO	AC-J18400	28-Sep-00	28-Mar-01
Lap Belt Load Cells		LEBOW	LC-712	01-Dec-00	01-Jun-01
Shoulder Belt Load Cells		LEBOW	LC-773	01-Dec-00	01-Jun-01
Spool-Out Potentiometer		MAGNETEK	DS-M27	17-Nov-00	17-May-01
Belt Stretch Transducer		CAL	DS-E5	07-Aug-00	07-Feb-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	2/15/01
Right Rear Seat Crossmember	ICS	AC-D32	25-Aug-00	2/26/01
Top of Engine	ENDEVCO	AC-AA35	10-Dec-00	6/11/01
Bottom of Engine	ENDEVCO	AC-BA80	28-Sep-00	3/29/01
Right Disc Brake Caliper	ENTRAN	AC-D03	31-Aug-00	2/1/01
Instrument Panel	ENDEVCO	AC-A14131	27-Nov-00	5/28/01
Left Disc Brake Caliper	ENDEVCO	AC-A13939	07-Aug-00	2/8/01
Left Seat Rear Crossmember (R)	ICS	AC-D61	14-Aug-00	2/15/01
Right Seat Rear Crossmember (R)	ENDEVCO	AC-X93	10-Aug-00	2/8/01