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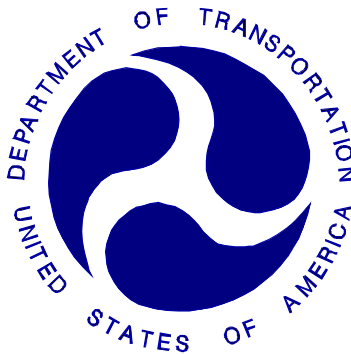
**NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
FRONTAL BARRIER 40% OFFSET IMPACT TEST**

FORD MOTOR CO
2000 NISSAN QUEST
MV

NHTSA NUMBER: RY5212

VERIDIAN TEST NUMBER: 8413-68

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



NOVEMBER 14, 2001

FINAL REPORT

PREPARED FOR:

U.S. DEPARTMENT OF TRANSPORTATION
National Highway Traffic Safety Administration
Research and Development
Crashworthiness Research Division
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16. Abstract This test is to evaluate the use of the Thor Advanced Lower Extremity (Thor-FLx) in the frontal 40% offset deformable barrier test. A frontal 40% offset barrier impact test of a 2000 Nissan Quest MV was performed at Veridian Engineering crash test facility in Buffalo, New York, on November 14, 2001. The impact velocity was 60.03 kph and the temperature at the barrier face was 21°C. The maximum post-test vehicle crush was 674 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 (421)	122.4	28.8	15.6	3237.8	3291.0
Passenger (416)	113.6	29.6	22.5	4533.8	3015.1
17. Key Words Frontal 40% Offset Barrier Impact test Thor-FLx/HIIIR				18. Distribution Statement Copies of this report are available from: NHTSA Technical Reference Division National Highway Traffic Safety Admin. 400 Seventh St., SW, Room 5108 Washington, DC 20590	
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SECTION 1

PURPOSE AND SUMMARY OF TEST

PURPOSE

This 60.03 kph frontal 40% offset barrier impact test is part of the Test Procedure Development Program sponsored by the National Highway Traffic Safety Administration (NHTSA). The purpose of this test was to evaluate the performance of a Thor-Lx 5th percentile adult female- Hybrid III retrofit (Thor-FLx/HIIIr) version lower legs and obtain vehicle crashworthiness and occupant and restraint system performance data.

The frontal 40% offset barrier impact test was conducted in accordance with the Office of Crashworthiness Standards Laboratory Indicant Test procedure.

SUMMARY

A deformable honeycomb barrier mounted to a load cell barrier consisting of 30 load cells and a load cell plate above the barrier was impacted by a 2000 Nissan Quest MV at 40% overlap at a velocity of 60.03 kph. The test was performed at Veridian Engineering on November 14, 2001. Pre- and post-test photographs of the vehicle and dummies can be found in Appendix A.

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

Two Part 572O, 5th percentile female 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, knee sliders and Thor-FLx/HIIIr lower leg instrumentation. The driver (position 1) ATD (Serial No. 421) and the right-front passenger (position 2) ATD (Serial No. 416) were calibrated previous to this test. Certification details, along with instrumentation calibration data, are found in Appendix C.

The 214 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 122.4. The maximum chest deceleration over 3 milliseconds was 28.8 g's and maximum chest deflection was 15.6 mm. Compressive femur loads were 3237.8 Newtons on the left and 3291.0 Newtons on the right.

The right front passenger's HIC was 113.6. Maximum chest deceleration over 3 milliseconds was 29.6 g's and maximum chest deflection was 22.5 mm. Compressive femur loads were 4533.8 Newtons on the left and 3015.1 Newtons on the right.

SECTION 2

GENERAL TEST AND VEHICLE PARAMETER DATA

DATA SHEET NO. 1 CRASH TEST SUMMARY

Vehicle NHTSA No.:	RY5212	Test Mode:	60 kph Offset Frontal Barrier
Test Date:	November 14, 2001	Time:	14:53
		Temperature:	21 °C
Vehicle Make/Model/Body Style:	2000 Nissan Quest MV		
Vehicle Test Weight:	2014	kg	
Vehicle/Barrier Impact Angle:	0	°	
Impact Velocity:	60.03	kph	
Maximum Static Crush:	674	mm	
Actual Vehicle Offset:	40.5	%	
 <u>DUMMIES:</u>			
	<u>DRIVER</u>	<u>PASSENGER</u>	
Type:	5720	5720	
Restraint System:	Seatbelt/Airbag	Seatbelt/Airbag	
Lower Leg:	Thor-FLx/HIIIr	Thor-FLx/HIIIr	
Number of Data Channels:	214		
Number of Cameras:	1	Real Time	
	16	High Speed	
 <u>DOOR OPENING DATA:</u>			
	Closed / Inoperable	- Left Front	
	Closed / Operable	- Right Front	
 Front Seat(s) Data:			
	<u>DRIVER</u>	<u>PASSENGER</u>	
Seat Track Failure:(mm of shift)	0	0	
Seat Back Failure:	None	None	
 <u>VISIBLE DUMMY CONTACT POINTS:</u>			
	<u>DRIVER</u>	<u>PASSENGER</u>	
Head:	Face to center of airbag; Back of head to upper left of seatback	Face to center of airbag; Back of head to right half of headrest	
Abdomen:	None	None	
Chest	Airbag	Airbag	
Knees	Left knee to bolster left of steering column; Right knee to bolster right of steering column	Left knee to left quarter of glove comp. door; Right knee to right third of glove comp. door	

DATA SHEET NO. 2 GENERAL TEST AND VEHICLE PARAMETER DATA

TEST VEHICLE INFORMATION:

Year/Make/Model/Body Style: 2000 Nissan Quest MV

NHTSA No. : RY5212 ; VIN: 4N2XN11T0YD838738 ; Color: Red

Engine Data: 6 cylinders; - CID; 3.3 Liters; - cc

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

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

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

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

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

Date Received: 5/22/01 ; Odometer Reading 23792 km

Selling Dealer: -

& Address: -

DATA FROM TIRE VEHICLE'S CERTIFICATION LABEL:

Vehicle Manufactured by: Ford Motor Co

Date of Manufacture May 2000

GVWR: 2469 kg; GAWR: 1231 kg FRONT; 1290 kg REAR

DATA FROM TIRE PLACARD:

Tire Pressure with Maximum Capacity Vehicle Load: 300 kpa FRONT

300 kpa REAR

Recommended Tire Size: 215/70 R15

* Recommended Cold Tire Pressure: 240 kpa FRONT; 240 kpa REAR

Size of Tires on Test Vehicle: 215/70 R15 ; Manufacturer: General

Vehicle Capacity Data:

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

Number of Occupants: 2 Front; 5 Rear; 7 Total

Vehicle Capacity Weight (VCW) = 585 kg

No. of Occupants x 68.04 kg = 476.28 kg

Rated Cargo/Luggage Weight (RCLW) = 108.72 kg

*Tire pressure used for test

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

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

Right Front =	<u>508</u>	kg	Right Rear =	<u>381.5</u>	kg
Left Front =	<u>528.5</u>	kg	Left Rear =	<u>389.5</u>	kg
TOTAL FRONT =	<u>1036.5</u>	kg	TOTAL REAR =	<u>771.0</u>	kg
TOTAL DELIVERED WEIGHT =	<u>1807.5</u>	kg			
% of Total Front of Vehicle Weight =	<u>57.3%</u>		% of Total Rear Weight =	<u>42.7%</u>	%

CALCULATION OF VEHICLE'S TARGET TEST WEIGHT:

Total Delivered Weight (UDW) =	<u>1807.5</u>	kg
Rated Cargo/Luggage Weight (RCLW) =	<u>108.72</u>	kg
Weight of 2 p.572 Dummies @ 49 each =	<u>98</u>	kg
TARGET TEST WEIGHT =	<u>2014.22</u>	kg

WEIGHT OF TEST VEHICLE WITH TWO DUMMIES AND 108.5 KG OF CARGO WEIGHT:

Right Front =	<u>532</u>	kg	Right Rear =	<u>462</u>	kg
Left Front =	<u>554</u>	kg	Left Rear =	<u>466</u>	kg
TOTAL FRONT =	<u>1086.0</u>	kg	TOTAL REAR =	<u>928.0</u>	kg
TOTAL TEST WEIGHT =	<u>2014.0</u>	kg			
% of Total Front Weight =	<u>53.9%</u>	%	% of Total Rear Weight =	<u>46.1%</u>	%
Weight of Ballast Secured in rear seat Area =	<u>41</u>	kg			
Vehicle Components Removed for Weight Reduction:	<u>None</u>				

VEHICLE ATTITUDE (all dimension in millimeters):

AS DELIVERED:	RF	<u>772</u>	LF	<u>765</u>	RR	<u>788</u>	LR	<u>777</u>
FULLY LOADED:	RF	<u>766</u>	LF	<u>758</u>	RR	<u>758</u>	LR	<u>752</u>
AS TESTED:	RF	<u>770</u>	LF	<u>764</u>	RR	<u>759</u>	LR	<u>752</u>
Vehicle's Wheel Base:		<u>2852</u>	mm					
Location of Vehicle's C.G.:		<u>1314.13</u>	mm rearward of front wheel center.					

FUEL SYSTEM DATA:

Fuel System Capacity From Owner's Manual =	<u>75.7</u>	liters
Usable Capacity Figure Furnished by COTR =	<u>74</u>	liters
Test Volume Range (92 to 94% of Usable Capacity) =	<u>68.08</u>	to <u>69.56</u> liters
ACTUAL TEST VOLUME=	<u>69.7</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: Filler is left above rear axle: Tank is left of center ahead of axle: Lines are at left frame		

DATA SHEET NO. 3 POST IMPACT DATA

TYPE OF TEST:

Type of Test: Offset Frontal Barrier Impact Angle: 0°
Test Date: November 14, 2001 Time: 14:53 Temperature: 21 °C
Vehicle NHTSA No.: RY5212
Required Impact Velocity Range: 59.2 to 60.8 kph

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

Trap No. 1 = 60.03 kph; Trap No. 2 = 60.03 kph
Distance from vehicle to barrier: (1) entering trap = 813 mm
(2) exiting trap = 305 mm

VEHICLE STATIC CRUSH: (mm)

Vehicle Length:

Pre-Test	Left = <u>4843</u>	; C/L = <u>4949</u>	; Right = <u>4843</u>
Post-Test	Left = <u>4218</u>	; C/L = <u>4381</u>	; Right = <u>4818</u>
Crush	Left = <u>625</u>	; C/L = <u>568</u>	; Right = <u>25</u>
AVERAGE	= <u>406.0</u>	mm	

VEHICLE OFFSET DATA: (mm)

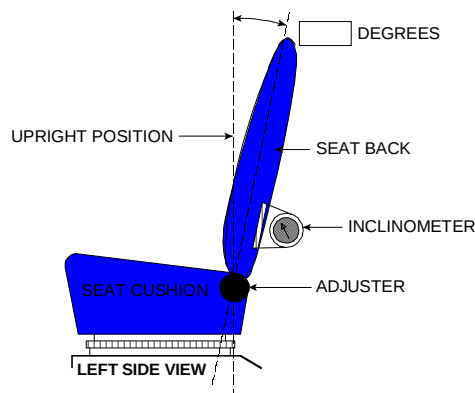
Vehicle Width	= <u>1890</u>	mm
Desired Vehicle Offset	= <u>756</u>	mm
Actual Vehicle Offset	= <u>766</u>	mm (from film analysis)
Offset Difference	= <u>-10</u>	mm
Actual Percent Offset	= <u>40.5</u>	%

DATA SHEET NO. 4 TEST VEHICLE INFORMATION

VEHICLE IDENTIFICATION:

Model Year: 2000 Vehicle Model: Nissan Quest Body Style: MV

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



FRONT SEAT ASSEMBLY

Seat back angle for driver's seat: 6.0

Measurement instructions: Seat back positioned according to the Hybrid III 5th percentile female ATD

Laboratory indicant test procedure.

Seat back angle for passenger's seat: 6.0

Measurement instructions: Seat back positioned according to the Hybrid III 5th percentile female ATD

Laboratory indicant test procedure.

2. Seat Fore and Aft Positioning

Positioning of the driver's seat: The seat was positioned according to the Hybrid III 5th percentile female ATD

Laboratory indicant test procedure. Test position was full forward and mid vertical.

Positioning of the passenger's seat: The seat was positioned according to the Hybrid III 5th percentile female ATD

Laboratory indicant test procedure. Test position was full forward.

3. Fuel Tank Capacity Data

3.1 A. "Usable Capacity" of the standard equipment fuel tank is 74 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 = 75.7 liters

3.2 Amount of Stoddard solvent added to vehicle(s) used for certification test(s) = 69.7 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.

For 5 seconds after the engine is switched on and while engine is running and for 1.5 seconds after engine is switched off.

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

4. STEERING COLUMN ADJUSTMENTS:

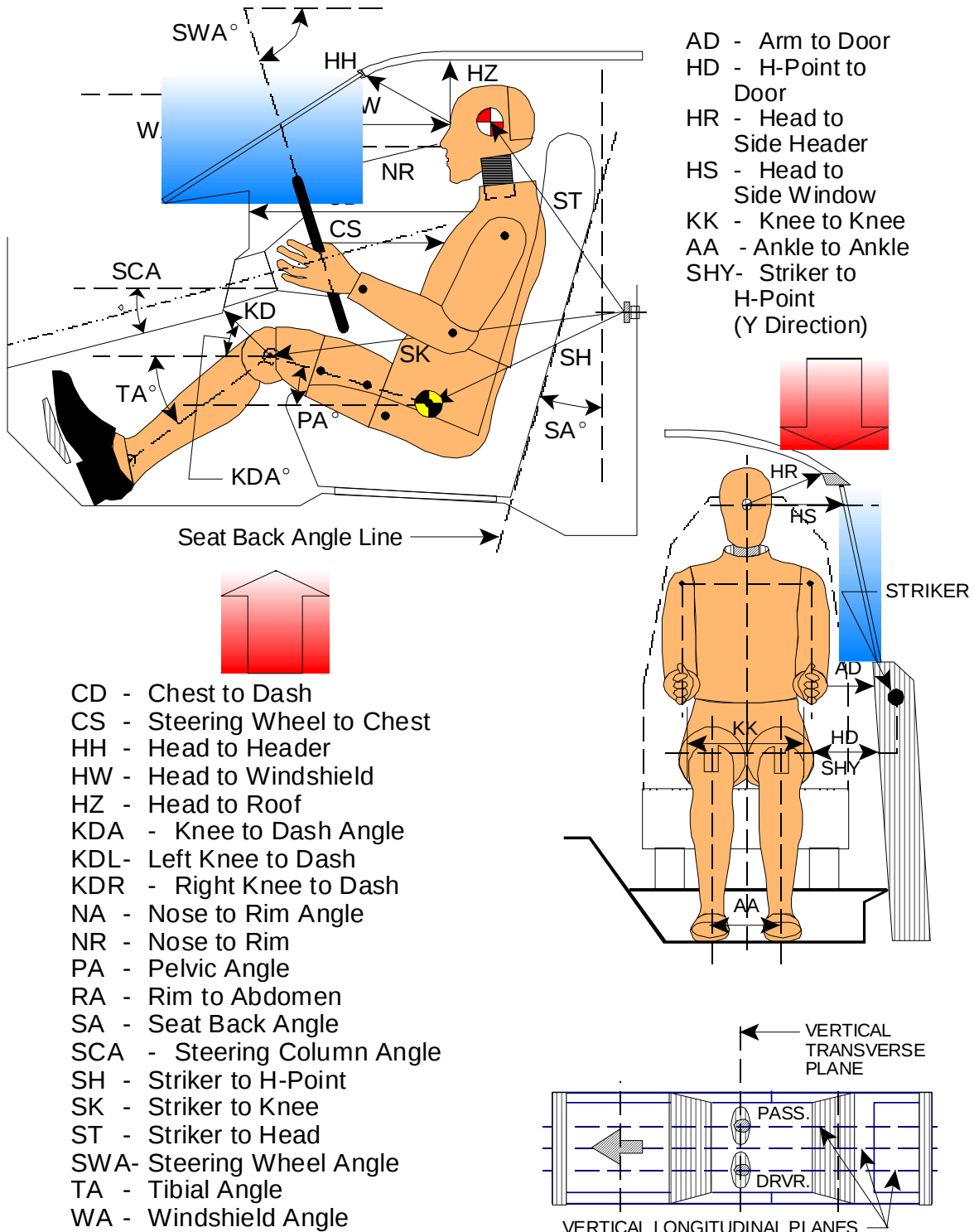
Steering wheel and column adjustments are made so that the steering wheel hub is at the geometric center of the locus it describes when it is moved through its full range of driving positions. If the tested vehicle has any of these adjustments, does your company use any specific procedures to determine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

Operational Instructions: Adjust to mid position

5. SEAT BELT UPPER ANCHORAGE

Nominal design riding position: Adjust to lowest position

DUMMY MEASUREMENT FOR FRONT SEAT PASSENGERS

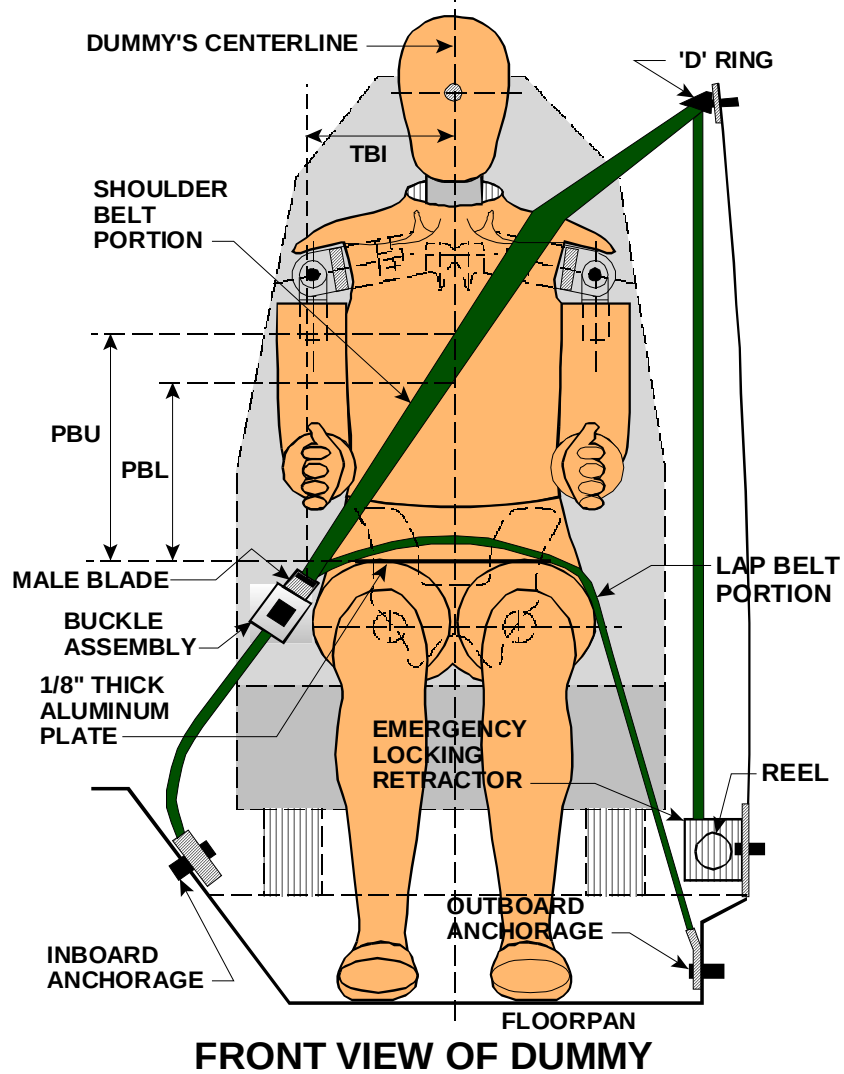


DATA SHEET NO. 5 FRONT SEAT DUMMY POSITIONING MEASUREMENTS IN VEHICLE (cont.)

	DRIVER (Serial #421)			PASS. (Serial #416)		
WA ^o	30.0		deg.	N/A		
SWA ^o	64.5		deg.	N/A		
SCA ^o	25.5		deg.	N/A		
SA ^o	6.0		deg.	6.0		deg.
HZ	270			262		
HH	368			363		
HW	714			690		
HR	270			262		
NR	272	Angle	3 deg.	N/A		
CD	481			429		
CS	226			N/A		
RA	93			N/A		
KDL	98	Angle (KDA)	38 deg.	122		
KDR	95			119	Angle (KDA)	30 deg.
PA ^o	23.0		deg.	21.0 deg.		
TA ^o	56.1		deg.	54.5 deg.		
KK	245			170		
AA	270			170		
ST	580	Angle	28 deg.	572	Angle	28 deg.
SK	728	Angle	90 deg.	745	Angle	90 deg.
SH	400	Angle	98 deg.	413	Angle	98 deg.
SHY	302			307		
HS	385			373		
HD	171			170		
AD	177			90		

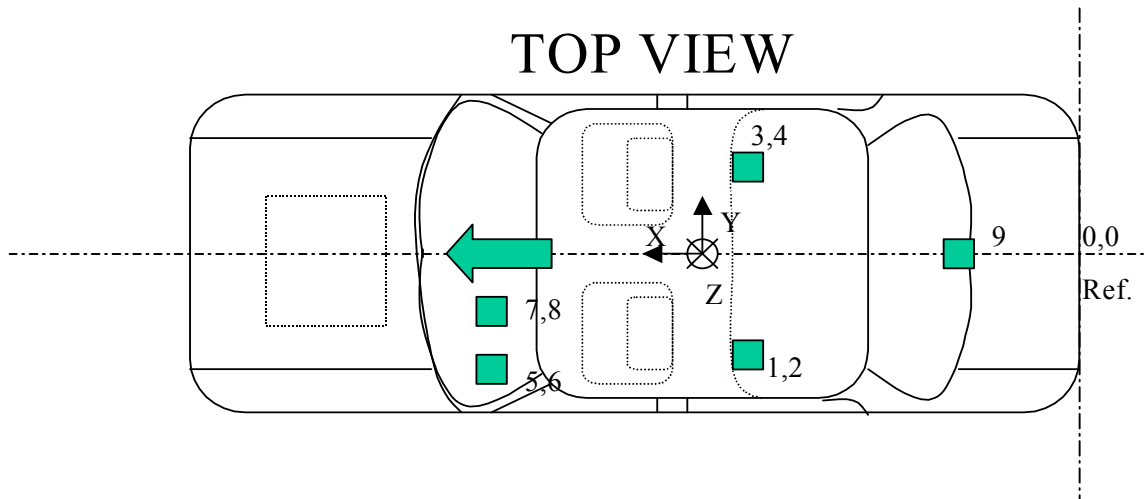
Dimensions in millimeters

SEAT BELT POSITIONING DATA



	DRIVER DUMMY (mm)	PASSENGER DUMMY (mm)
PBU -- Top surface of alum. plate to upper edge	273	267
PBL-- Top surface of alum. plate to belt lower edge	195	195
<u>LAP BELT TENSION</u>	10 N	10 N
<u>SHOULDER BELT TENSION</u>	Retractor	Retractor

DATA SHEET NO. 7 VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY



Accelerometer	X-Direction (mm)	Y-Direction (mm)	Z-Direction (mm)
Left Rear Seat Crossmember	1697	-608	-424
Right Rear Seat Crossmember	1721	619	-422
Driver Left Side Toe pan	3642	-409	-431
Driver Right Side Toe pan	3635	-288	-443
Trunk	1055	35	-469

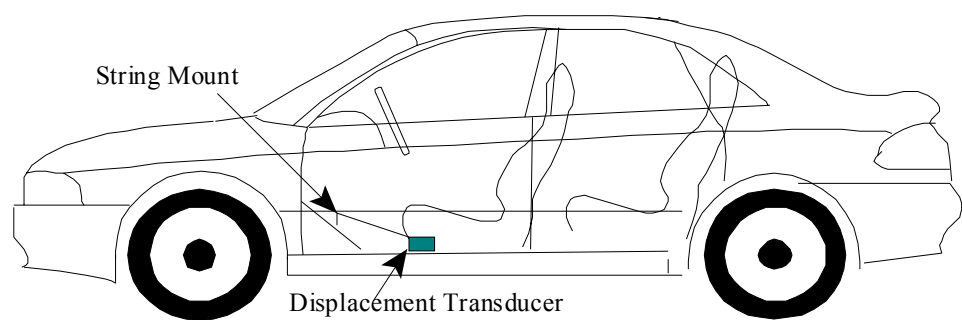
X-Direction is referenced from vehicle rear bumper (positive forward)

Y-Direction is referenced from vehicle centerline (positive to right)

Z-Direction is referenced from ground plane (positive down)

LOCATION NUMBER	DESCRIPTION	MAXIMUM VALUE (g's)			
		Pos.	msec.	Neg.	msec.
1	Rear Seat X-Member @ Left Side X	1.9	213.0	-24.7	92.8
2	Rear Seat X-Member @ Left Side Y	13.6	81.2	-4.3	119.5
3	Rear Seat X-Member @ Right Side X	1.2	223.4	-25.1	87.6
4	Rear Seat X-Member @ Right Side Y	11.2	83.2	-3.3	499.9
5	Driver Toe Pan @ Left Side X	16.9	91.1	-105.7	77.6
6	Driver Toe Pan @ Left Side Z	14.0	101.1	-56.1	77.5
7	Driver Toe Pan @ Right Side X	5.4	166.4	-9.0	97.8
8	Driver Toe Pan @ Right Side Z	1.9	213.0	-24.7	92.8
9	Trunk Z	13.6	81.2	-4.3	119.5

SIDE VIEW



Driver Toe Pan Displacement

P1 Toe Pan Spoolout**	X-Direction (mm)	Y-Direction (mm)	Z-Direction (mm)	Vertical Angle* (Deg)
Pre-Test	735	268	-78	6.0
Post-Test	510	297	-259	26.9

** Measurements taken from string pot mounting base.

*Referenced from horizontal (0 degrees)

SENSOR NAME	MAXIMUM VALUE (mm)			
	Pos.	msec.	Neg.	msec.
	P1 Toe Pan Movement	0.0	-88.4	-143.0

DATA SHEET NO. 8 DUMMY INJURY CRITERIA VALUES

Vehicle Year/Make/Model/Body Style:

2000 Nissan Quest MV

NHTSA Test No.:

RY5212

Test Date:

8413-68

		MAXIMUM VALUE							
		Driver				Passenger			
DESCRIPTION	Unit	Pos	msec	Neg	msec	Pos	msec	Neg	msec
Head 9 Array X Arm Y	g	9.8	208.3	-13.1	122.5	25.5	67.5	-21.0	49.2
Head 9 Array X Arm Z	g	14.4	52.1	-17.7	121.9	15.5	47.3	-9.2	65.1
Head 9 Array Y Arm X	g	6.5	158.6	-31.6	62.9	6.2	295.6	-30.2	118.2
Head 9 Array Y Arm Z	g	7.0	51.6	-29.5	122.1	19.9	68.1	-11.7	48.0
Head 9 Array Z Arm X	g	35.5	154.0	-38.1	60.0	12.6	294.5	-30.5	49.3
Head 9 Array Z Arm Y	g	23.1	154.1	-25.3	128.8	8.3	132.8	-8.0	47.5
Head X	g	17.2	154.1	-35.7	122.7	7.6	298.7	-29.8	119.1
Head Y	g	12.9	154.2	-24.8	122.6	9.5	47.4	-3.0	65.0
Head Z	g	6.5	51.4	-19.1	121.9	18.8	108.4	-10.9	47.9
Head Resultant	g	46.5	122.5	-	-	33.7	117.0	-	-
Redundant Head X	g	17.5	154.1	-35.3	122.7	7.6	297.9	-30.0	119.5
Redundant Head Y	g	13.0	154.2	-25.9	122.6	9.4	47.4	-3.0	65.0
Redundant Head Z	g	6.8	51.4	-18.7	121.9	19.4	68.2	-11.6	48.5
Redundant Head Resultant	g	46.5	122.6	-	-	34.0	116.9	-	-
Upper Neck Fx	N	200.3	140.8	-204.2	123.7	142.4	69.5	-384.0	119.9
Upper Neck Fy	N	341.3	132.2	-98.6	286.7	112.6	186.0	-89.2	280.5
Upper Neck Fz	N	1080.5	124.4	-119.6	207.3	714.3	50.1	-228.2	335.8
Upper Neck F Resultant	N	1106.2	124.4	-	-	751.5	49.9	-	-
Upper Neck Mx	N-m	11.1	122.0	-22.5	132.3	8.3	199.0	-6.8	127.3
Upper Neck My	N-m	11.0	65.6	-21.5	122.5	25.9	97.0	-25.0	119.5
Upper Neck Mz	N-m	23.7	122.6	-6.4	291.5	5.6	218.7	-7.4	119.9
Upper Neck M Resultant	N-m	33.7	122.4	-	-	26.7	119.2	-	-
Chest X	g	2.6	168.7	-29.5	119.6	1.8	343.8	-31.1	1.8
Chest Y	g	7.4	139.7	-4.3	205.8	7.2	102.9	-2.6	7.2
Chest Z	g	3.5	120.2	-9.1	175.3	7.7	69.5	-8.2	7.7
Chest Resultant	g	29.9	119.6	-	-	31.8	97.0	-	-

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

Vehicle Year/Make/Model/Body Style: 2000 Nissan Quest MV

NHTSA Test No.: RY5212 Test Date: 8413-68

		MAXIMUM VALUE							
		Driver				Passenger			
DESCRIPTION	Unit	Pos	msec	Neg	msec	Pos	msec	Neg	msec
Redundant Chest X	g	2.4	168.7	-29.7	119.6	1.8	339.6	-31.6	97.0
Redundant Chest Y	g	7.3	139.2	-4.2	205.8	7.8	102.9	-2.6	190.7
Redundant Chest Z	g	3.8	113.3	-9.1	175.4	8.0	69.5	-16.3	181.7
Redundant Chest Resultant	g	30.1	119.6	-	-	32.4	97.0	-	-
Chest Displacement	mm	0.0	5.2	-15.6	118.1	0.0	-68.0	-22.5	86.8
Pelvic X	g	2.7	195.2	-33.6	92.9	1.4	199.2	-48.3	94.3
Pelvic Y	g	11.2	125.8	-4.4	176.5	15.0	107.2	-7.8	168.1
Pelvic Z	g	2.9	286.2	-7.6	125.0	1.8	325.6	-23.1	107.7
Pelvic Resultant	g	34.0	92.9	0.0	-81.2	50.9	94.3	0.0	-24.9
Left Femur Fx	N	752.9	112.5	-7.0	28.8	240.7	101.9	-165.6	62.5
Left Femur Fy	N	259.7	130.5	-175.7	179.7	213.2	122.3	-50.8	75.7
Left Femur Fz	N	115.3	45.3	-3237.8	114.7	481.2	70.3	-4533.8	99.2
Left Femur Force Resultant	N	3320.7	114.7	-	-	4541.4	99.2	-	-
Left Femur Mx	N-m	29.9	143.6	-63.2	97.8	63.9	139.1	-26.1	86.7
Left Femur My	N-m	80.5	89.7	-124.3	134.8	67.7	95.2	-13.5	77.8
Left Femur Mz	N-m	27.0	142.2	-0.9	27.3	27.2	130.9	-16.2	160.6
Left Femur Moment Res.	N-m	125.7	135.0	-	-	72.2	95.2	-	-
Right Femur Fx	N	601.7	108.1	-105.2	56.1	309.4	107.4	-193.3	87.6
Right Femur Fy	N	524.3	121.0	-10.1	40.3	160.5	110.1	-45.1	93.8
Right Femur Fz	N	219.0	143.5	-3291.0	97.2	170.8	57.2	-3015.1	94.7
Right Femur Force Resultant	N	3348.6	97.3	-	-	3015.3	94.7	-	-
Right Femur Mx	N-m	6.7	106.4	-48.9	83.1	11.8	144.5	-41.0	105.6
Right Femur My	N-m	71.5	83.0	-28.5	103.2	68.6	95.6	-7.8	77.9
Right Femur Mz	N-m	6.3	56.1	-16.3	118.2	24.0	139.7	-25.7	180.3
Right Femur Moment Res.	N-m	86.5	83.0	-	-	77.1	95.6	-	-

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

Vehicle Year/Make/Model/Body Style: 2000 Nissan Quest MV

NHTSA Test No.: RY5212 Test Date: 8413-68

		MAXIMUM VALUE							
		Driver				Passenger			
DESCRIPTION	Unit	Pos	msec	Neg	msec	Pos	msec	Neg	msec
Left Knee Shear Dx	mm	1.0	423.1	-0.5	126.6	0.7	91.4	-1.4	97.2
Right Knee Shear Dx	mm	0.8	86.3	-3.5	97.0	0.5	88.2	-0.7	112.2
Left Upper Tibia Fx	N	120.3	71.4	-322.4	109.9	323.9	100.4	-21.4	341.5
Left Upper Tibia Fz	N	608.0	137.0	-1448.0	88.7	179.5	62.6	-948.8	101.6
Left Upper Tibia Mx	N-m	22.4	88.5	-35.8	93.2	24.2	127.9	-23.9	100.9
Left Upper Tibia My	N-m	15.2	261.6	-105.2	137.8	11.4	132.0	-31.0	70.8
Left Lower Tibia Fx	N	4.0	23.5	-1174.1	137.9	48.2	185.0	-279.0	70.4
Left Lower Tibia Fy	N	10.0	44.4	-383.5	90.1	103.8	101.7	-125.4	129.7
Left Lower Tibia Fz	N	2.7	-31.8	-2894.2	88.3	110.5	62.3	-1156.0	102.3
Left Lower Tibia FR	N	2934.2	88.3	-	-	1165.4	102.3	-	-
Left Lower Tibia Mx	N-m	10.2	143.1	-70.8	92.4	18.9	142.9	-30.1	100.8
Left Lower Tibia My	N-m	6.3	110.1	-40.3	138.4	6.6	225.5	-33.7	70.2
Right Upper Tibia Fx	N	456.2	85.0	-492.1	93.9	185.1	99.3	-39.8	128.4
Right Upper Tibia Fz	N	5.3	43.4	-2555.1	89.6	135.6	94.3	-518.5	117.2
Right Upper Tibia Mx	N-m	18.4	139.3	-42.9	97.3	23.7	117.5	-19.7	181.1
Right Upper Tibia My	N-m	33.6	95.6	-65.1	84.8	26.1	117.9	-26.7	86.4
Right Lower Tibia Fx	N	23.0	271.6	-714.9	84.8	232.4	128.6	-255.6	87.0
Right Lower Tibia Fy	N	140.6	89.0	-295.9	131.6	103.4	77.2	-181.4	129.4
Right Lower Tibia Fz	N	4.2	-0.7	-3628.3	89.6	80.5	77.2	-587.6	66.4
Right Lower Tibia FR	N	3640.2	89.6	-	-	593.0	66.4	-	-
Right Lower Tibia Mx	N-m	19.1	132.2	-65.8	97.0	6.1	136.8	-20.4	103.6
Right Lower Tibia My	N-m	38.4	94.3	-68.2	84.1	7.2	127.8	-23.0	99.1

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

Vehicle Year/Make/Model/Body Style: 2000 Nissan Quest MV

NHTSA Test No.: RY5212 Test Date: 8413-68

		MAXIMUM VALUE							
		Driver				Passenger			
DESCRIPTION	Unit	Pos	msec	Neg	msec	Pos	msec	Neg	msec
Left Tibia Ax	g	6.4	120.2	-63.0	99.3	3.2	223.2	-43.9	68.7
Left Tibia Ay	g	44.6	93.1	-35.7	88.2	24.6	100.5	-11.4	145.9
Right Tibia Ax	g	35.4	93.1	-115.5	82.3	34.0	128.4	-33.6	99.2
Right Tibia Ay	g	40.9	90.0	-20.6	82.2	17.5	107.4	-20.7	129.4
Left Ankle Rotation X	Deg	-1.4	57.0	-27.6	105.3	9.2	161.1	-14.1	106.7
Left Ankle Rotation Y	Deg	39.7	162.5	-19.3	20.5	2.8	145.1	-17.8	65.7
Left Ankle Rotation Z	Deg	10.7	109.3	-2.6	152.7	-3.3	205.8	-10.5	141.2
Right Ankle Rotation X	Deg	10.7	83.3	-10.0	106.6	3.2	-78.5	-22.4	112.3
Right Ankle Rotation Y	Deg	37.4	106.6	-1.4	52.0	5.2	99.0	-8.6	48.7
Right Ankle Rotation Z	Deg	8.3	96.4	-6.7	224.1	-2.2	90.3	-8.5	365.0
Left Foot Ax	g	18.6	84.8	-53.0	77.5	3.3	222.4	-66.4	68.1
Left Foot Ay	g	38.7	100.2	-17.3	133.5	19.5	92.8	-42.0	164.4
Left Foot Az	g	65.6	90.4	-88.4	87.0	4.2	119.7	-15.9	61.8
Left Foot A Resultant	g	91.6	84.4	-	-	66.7	68.1	-	-
Right Foot Ax	g	59.9	128.5	-36.8	134.8	49.8	93.7	-178.9	81.8
Right Foot Ay	g	135.3	79.5	-33.3	84.1	22.8	104.3	-50.7	128.0
Right Foot Az	g	75.2	95.6	-161.8	87.0	14.3	118.5	-31.0	95.2
Right Foot A Resultant	g	175.8	80.4	-	-	179.0	81.8	-	-

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

Vehicle Year/Make/Model/Body Style: 2000 Nissan Quest MV

NHTSA Test No.: RY5212 Test Date: 8413-68

HEAD INJURY CRITERIA (HIC)				
	HIC**	t ₁ (msec)	t ₂ (msec)	Average Acceleration t ₁ to t ₂
Position #1 - Driver	122.4	101.7	137.7	25.9
Position #2 - Passenger	113.6	100.1	136.1	25.1

** 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	28.8	121.1	124.1	188.9
Position #2 - Passenger	29.6	102.6	105.6	186.7

* 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: 2000 Nissan Quest MV

NHTSA Test No.: RY5212 Test Date: 8413-68

HEAD INJURY CRITERIA (HIC) REDUNDANT				
	HIC**	t ₁ (msec)	t ₂ (msec)	Average Acceleration t ₁ to t ₂
Position #1 - Driver	115.9	101.7	137.7	25.3
Position #2 - Passenger	115.2	100.1	136.1	25.2

** 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	28.9	118.8	124.1	189.5
Position #2 - Passenger	30.3	95.5	98.5	196.1

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

DATA SHEET NO. 9 SEAT BELT PERFORMANCE ASSESSMENT TEST DATA

BELT LENGTH DATA:

	<u>Driver</u>	<u>Passenger</u>
Belt length from trim panel exit to bolt hole anchor point for continuous webbing systems.	<u>2253 mm</u>	<u>2265 mm</u>
Shoulder belt length as measured on Part 572 Dummy.	<u>1040 mm</u>	<u>1044 mm</u>
Lap belt length as measured on Part 572 Dummy.	<u>1068 mm</u>	<u>1076 mm</u>

SHOULDER BELT SPOOL-OFF DATA:

As determined by film analysis.	<u>-</u>	<u>-</u>
As determined mechanically.	<u>14 mm</u>	<u>25 mm</u>
As determined electronically.	<u>-</u>	<u>-</u>

BELT STRETCH DATA:

Measured electronically between shoulder belt load cell and the "D" ring.	<u>-</u>	<u>-</u>
Measured mechanically.	<u>0 mm/M</u>	<u>2 mm/M</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.:

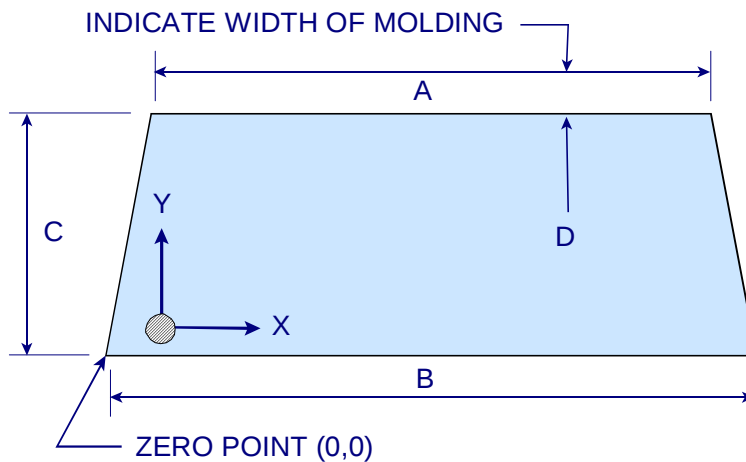
Windshield is bonded in place and covered with a 15 mm molding.

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			
	PRE-TEST (mm)	POST-TEST (mm)	% OF RETENTION
RIGHT SIDE	2252.5	2252.5	100.0%
LEFT SIDE	2252.5	2252.5	100.0%
TOTAL	4505	4505	100.0%

AREA OF RETENTION FAILURE: None



DIMENSIONS (mm)	
A	1305
B	1700
C	750
D	15

FRONT VIEW OF WINDSHIELD

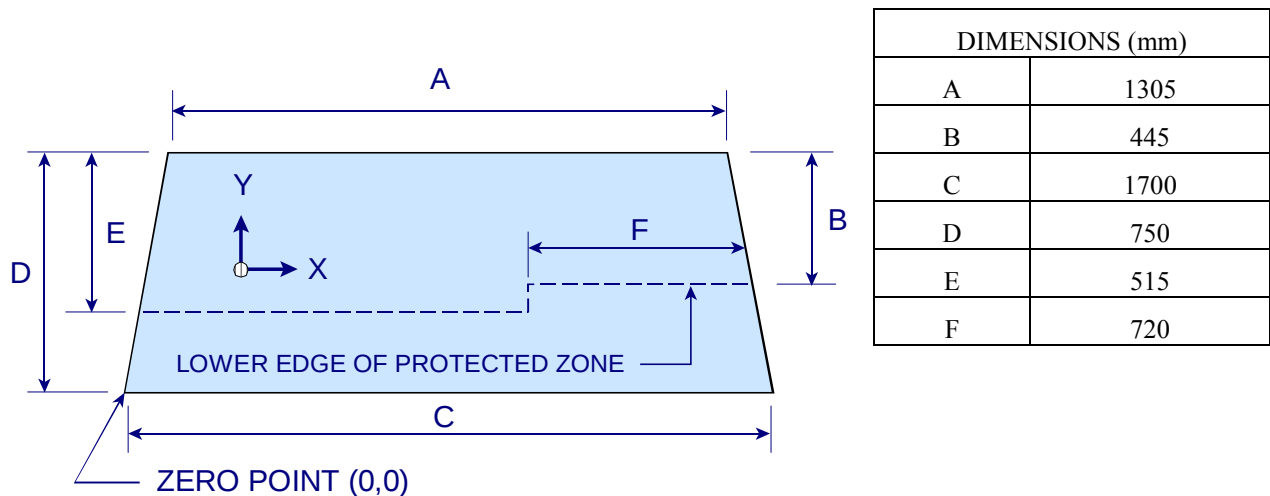
FAILURE DETAILS: None

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

PROTECTED ZONE LOWER EDGE REQUIREMENT:

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

FMVSS 219 TEST DATA:



FRONT VIEW OF WINDSHIELD

DETAILS OF WINDSHIELD GLASS PENETRATION GREATER THAN 6 mm:

(Show location of penetration on the above sketch)

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

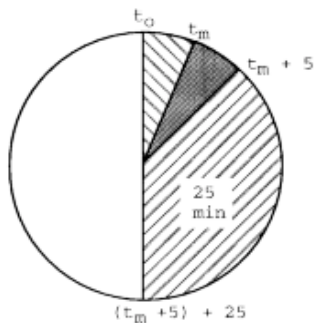
DATA SHEET NO. 12 FMVSS NO. 301-75 "FUEL SYSTEM INTEGRITY" POST IMPACT TEST DATA

<u>NHTSA TEST No.:</u>	RY5212	<u>TEST DATE:</u>	November 14, 2001
<u>VEHICLE MAKE/MODEL:</u>	2000 Nissan Quest MV		

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.

<u>TEST VEHICLE IMPACT TYPE:</u>	<u> X </u>	Offset Frontal (60 kph)
		Oblique (48 kph) with _____ deg. barrier face first contacting _____
	<u> - </u>	(driver/passenger) side
	<u> - </u>	Rear Moving Barrier (48 kph)
	<u> - </u>	Lateral Moving Barrier (32 kph)

FUEL SPILLAGE MEASUREMENT:



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

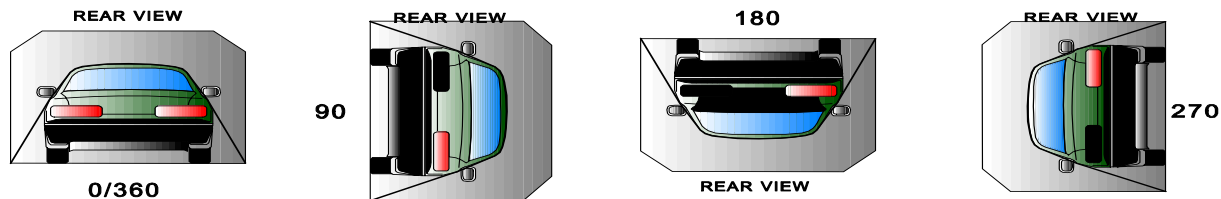
ACTUAL	MAX ALLOWED
0	28 g
0	141 g
0	28 g/min.

SOLVENT SPILLAGE DETAILS: None

DATA SHEET NO. 13 - ROLLOVER DATA

Vehicle: 2000 Nissan Quest MV

NHTSA No.: RY5212



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Stage	Rotation Time (spec. 1 -3 min)				FMVSS 301 Hold Time		Total Time				Next Whole Minute Interval	
0° - 90°	1	minutes	30	seconds	5	minutes	6	minutes	22	seconds	7	minutes
90° - 180°	1	minutes	28	seconds	5	minutes	6	minutes	24	seconds	7	minutes
180°-270°	1	minutes	24	seconds	5	minutes	6	minutes	26	seconds	7	minutes
270°-360°	1	minutes	32	seconds	5	minutes	6	minutes	22	seconds	7	minutes

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

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

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

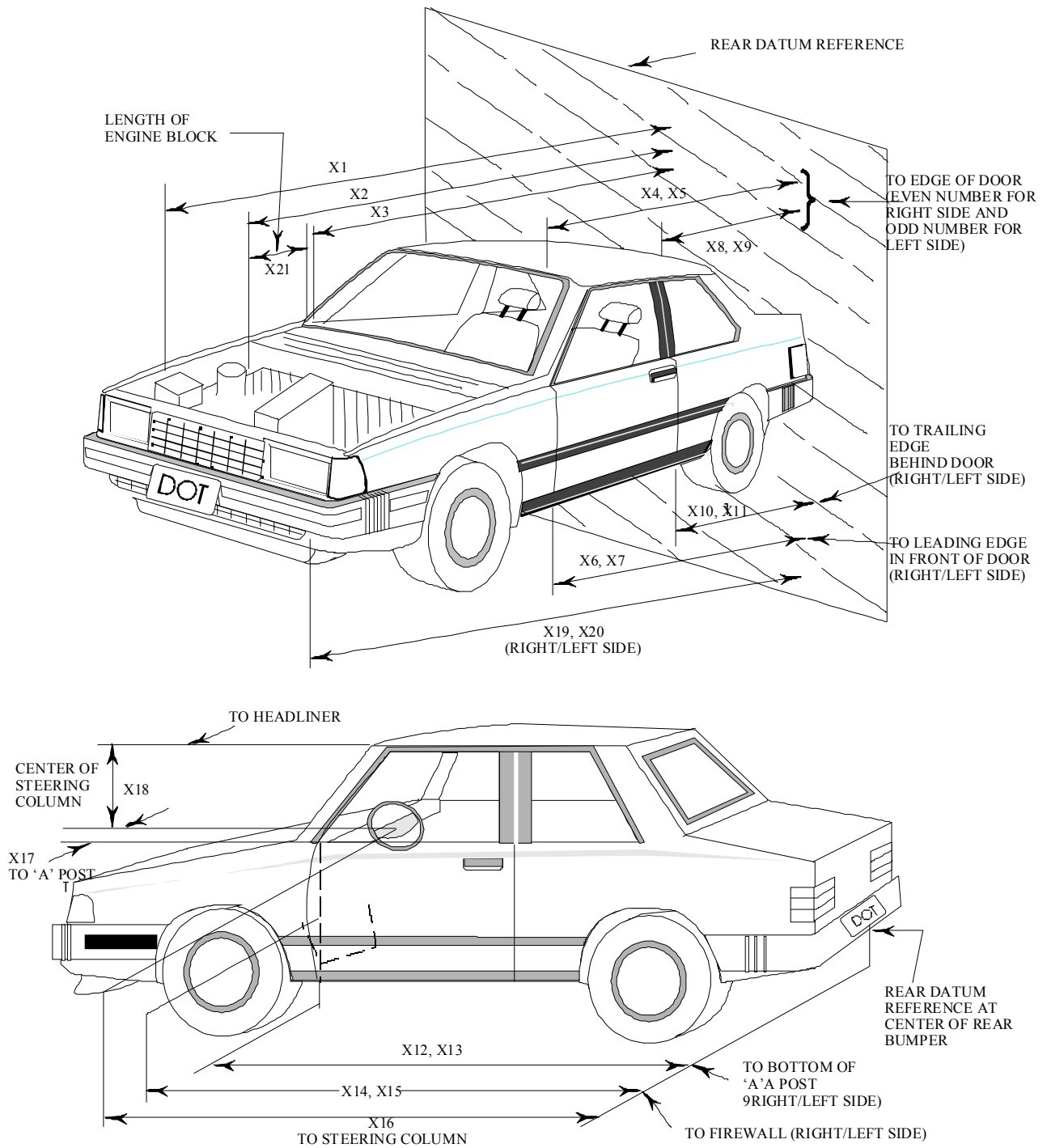
Rollover Stage	First 5 minutes from onset of rotation (g)	6th min. (g)	7th min. (g)	8th min. (if required) (g)
0° - 90°	0	0	0	N/A
90° - 180°	0	0	0	N/A
180°-270°	0	0	0	N/A
270°-360°	0	0	0	N/A

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

IV. SOLVENT SPILLAGE LOCATION(S):

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

DATA SHEET NO. 14 TEST VEHICLE MEASUREMENTS



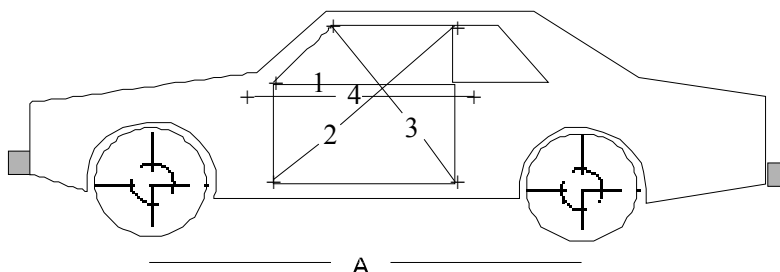
DATA SHEET NO.14 VEHICLE MEASUREMENTS (cont.)

No.		Pre-Test	Post-Test	Difference
X1	Total Length of Vehicle at Centerline	4949	4381	568
X2	Rear Surface of Vehicle to Front of Engine	4441	4244	197
X3	Rear Surface of Vehicle to Firewall	4004	3802	202
X4	Rear Surface of Vehicle to Upper Leading Edge of Right Door	3511	3516	-5
X5	Rear Surface of Vehicle to Upper Leading Edge of Left Door	3511	3369	142
X6	Rear Surface of Vehicle to Lower Leading Edge of Right Door	3424	3431	-7
X7	Rear Surface of Vehicle to Lower Leading Edge of Left Door	3422	3336	86
X8	Rear Surface of Vehicle to Upper Trailing Edge of Right Door	2358	2358	0
X9	Rear Surface of Vehicle to Upper Trailing Edge of Left Door	2359	2323	36
X10	Rear Surface of Vehicle to Lower Trailing Edge of Right Door	2387	2396	-9
X11	Rear Surface of Vehicle to Lower Trailing Edge of Left Door	2391	2376	15
X12	Rear Surface of Vehicle to Bottom of "A" Post of Right Side	3510	3525	-15
X13	Rear Surface of Vehicle to Bottom of "A" Post of Left Side	3512	3381	131
X14	Rear Surface of Vehicle to Firewall, Right Side	3905	3859	46
X15	Rear Surface of Vehicle to Firewall, Left Side	3900	3678	222
X16	Rear Surface of Vehicle to Steering Column	3028	2881	147
X17	Center of Steering Column to "A" Post	320	313	7
X18	Center of Steering Column to Headliner	442	463	-21
X19	Rear Surface of Vehicle to Right Side of Front Bumper	4843	4818	25
X20	Rear Surface of Vehicle to Left Side of Front Bumper	4843	4218	625
X21	Length of Engine Block	478	478	0
RD	Rear Surface of Vehicle to Right Side of Dash Panel	3233	3232	1
CD	Rear Surface of Vehicle to Center of Dash Panel	3195	3196	-1
LD	Rear Surface of Vehicle to Left Side of Dash Panel	3201	3032	169

All Dimensions in mm

All measurements taken forward from a lateral plane located at the rearmost point of the vehicle.

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

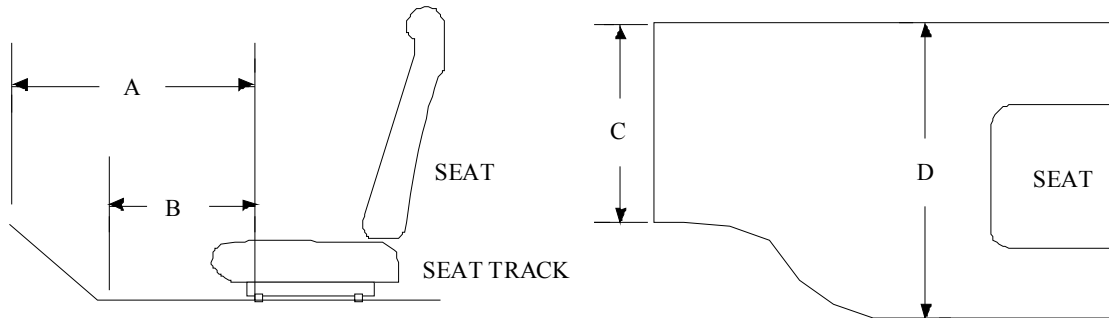


UNITS (mm)	LEFT				RIGHT		
MEASUREMENT	1	2	3	4*	1	2	3
BEFORE TEST	1074	1547	1159	1082	1064	1545	1152
AFTER TEST	904	1415	1287	941	1073	1536	1160
DIFFERENCE	170	132	-128	141	-9	9	-8

* Insurance Institute for Highway Safety (IIHS) measurement for driver's side only

UNITS (mm)	A = WHEELBASE LEFT	A = WHEELBASE RIGHT
BEFORE TEST	2852	2851
AFTER TEST	2544	2934
DIFFERENCE	308	-83

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



DRIVER

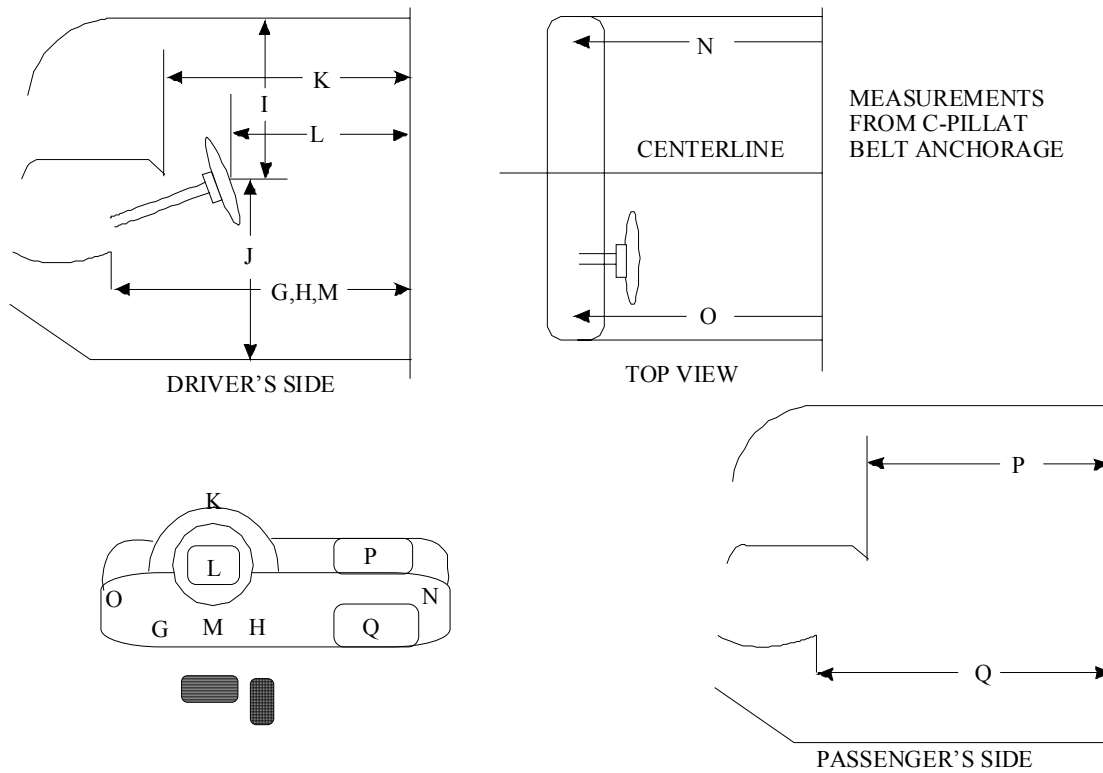
Measurement	Pre-Test	Post-Test	Difference
A	785	484	301
B	577	409	168
C	518	497	21
D	489	436	53

PASSENGER

Measurement	Pre-Test	Post-Test	Difference
A	784	748	36
B	568	554	14
C	460	424	36
D	461	456	5

Units = mm

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

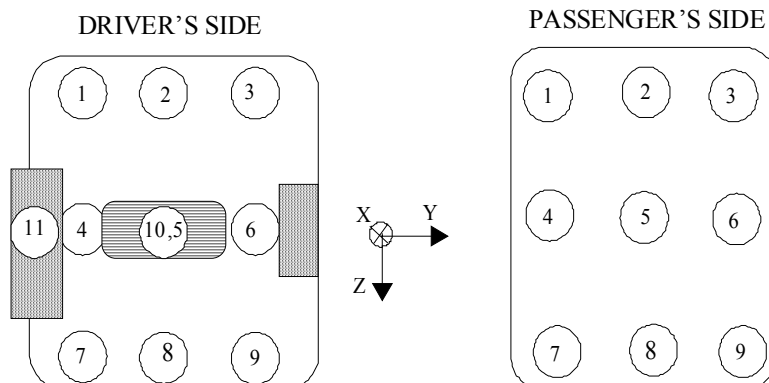


Measurement	Pre-Test	Post-Test	Difference
G*	2188	2042	146
H*	2181	2064	117
I	442	463	-21
J	713	663	50
K	2195	2077	118
L	1946	1800	146
M	2155	2024	131
N	2153	2156	-3
O	2119	1950	169
P = K (PASS.)	2167	2145	22
Q = M (PASS.)	2228	2208	20

* IIHS measurement locations; 15 cm left and right of steering wheel center 45 cm from floor.

Units = mm

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



Driver Side Toe-pan Measurements

Toe-pan Location	X Deformation (mm)			Y Deformation (mm)			Z Deformation (mm)		
	Pre	Post	Δ	Pre	Post	Δ	Pre	Post	Δ
1	3650	3350	300	-523	-561	38	-543	-684	141
2	3702	3412	290	-370	-402	32	-535	-687	152
3	3709	3516	193	-231	-246	15	-533	-662	129
4*	3582	3353	229	-528	-564	36	-442	-567	125
5* ^A	3622	3384	238	-377	-419	42	-414	-630	216
6*	3568	3286	282	-216	-201	-15	-440	-507	67
7	3498	3331	167	-523	-559	36	-359	-501	142
8	3494	3338	156	-377	-409	32	-362	-510	148
9	3494	3318	176	-223	-241	18	-365	-468	103
10	3479	3206	273	-387	-423	36	-531	-731	200
11*	3560	3382	178	-632	-671	39	-484	-607	123

Passenger Side Toe-pan Measurements

Toe-pan Location	X Deformation (mm)			Y Deformation (mm)			Z Deformation (mm)		
	Pre	Post	Δ	Pre	Post	Δ	Pre	Post	Δ
1	3696	3632	64	252	225	27	-551	-568	17
2	3708	3670	38	435	381	54	-553	-575	22
3	3590	3581	9	588	544	44	-553	-565	12
4	3632	3568	64	291	253	38	-429	-452	23
5	3622	3605	17	433	389	44	-421	-445	24
6	3536	3541	-5	585	551	34	-452	-463	11
7	3495	3448	47	297	275	22	-360	-375	15
8	3492	3476	16	443	412	31	-360	-391	31
9	3476	3494	-18	587	559	28	-357	-368	11

Reference: (SAE) X = Rear Bumper (pos: forward); Y = Vehicle Centerline (pos: right); Z = Ground (pos: down)

* IIHS measurement locations

*^A IIHS measurement located directly behind 10 (brake pedal center) on the vehicle floorpan in same vertical plane.

DATA SHEET NO.14 VEHICLE MEASUREMENTS (cont.)
INSURANCE INSTITUTE MEASUREMENT LOCATION AND FLOOR PAN DEFORMATION DATA

IIHS Measurement Location Data

Meas. Loc*	X Measurement (mm)			Y Measurement (mm)			Z Measurement (mm)		
	Pre	Post	Δ	Pre	Post	Δ	Pre	Post	Δ
1	3028	2881	147	-404	-454	50	-1074	-1215	141
2	3270	3124	146	-547	-574	27	-818	-947	129
3	3263	3146	117	-246	-277	31	-816	-929	113
4	3479	3206	273	-387	-423	36	-531	-731	200
5	3582	3353	229	-528	-564	36	-442	-567	125
6	3622	3384	238	-377	-419	42	-414	-630	216
7	3568	3286	282	-216	-201	-15	-440	-507	67
8	3560	3382	178	-632	-671	39	-484	-607	123
17	3481	3375	106	-821	-873	52	-1066	-1253	187
18	2400	2325	75	-854	-912	58	-1058	-1049	-9

Floor Pan Deformation Measurement Data

Meas. Loc**	X Measurement (mm)			Y Measurement (mm)			Z Measurement (mm)		
	Pre	Post	Δ	Pre	Post	Δ	Pre	Post	Δ
1	3454	3306	148	-511	-538	27	-338	-469	131
2	3454	3307	147	-359	-386	27	-339	-499	160
3	3453	3264	189	-213	-222	9	-336	-439	103
4	3298	3164	134	-512	-504	-8	-339	-452	113
5	3302	3186	116	-361	-393	32	-342	-449	107
6	3301	3187	114	-210	-253	43	-340	-478	138
7	3151	3061	90	-511	-509	-2	-345	-390	45
8	3152	3072	80	-363	-402	39	-345	-383	38
9	3145	3123	22	-209	-257	48	-342	-359	17

Reference: (SAE) X = Rear Bumper (pos: forward); Y = Vehicle Centerline (pos: right); Z = Ground (pos: down)

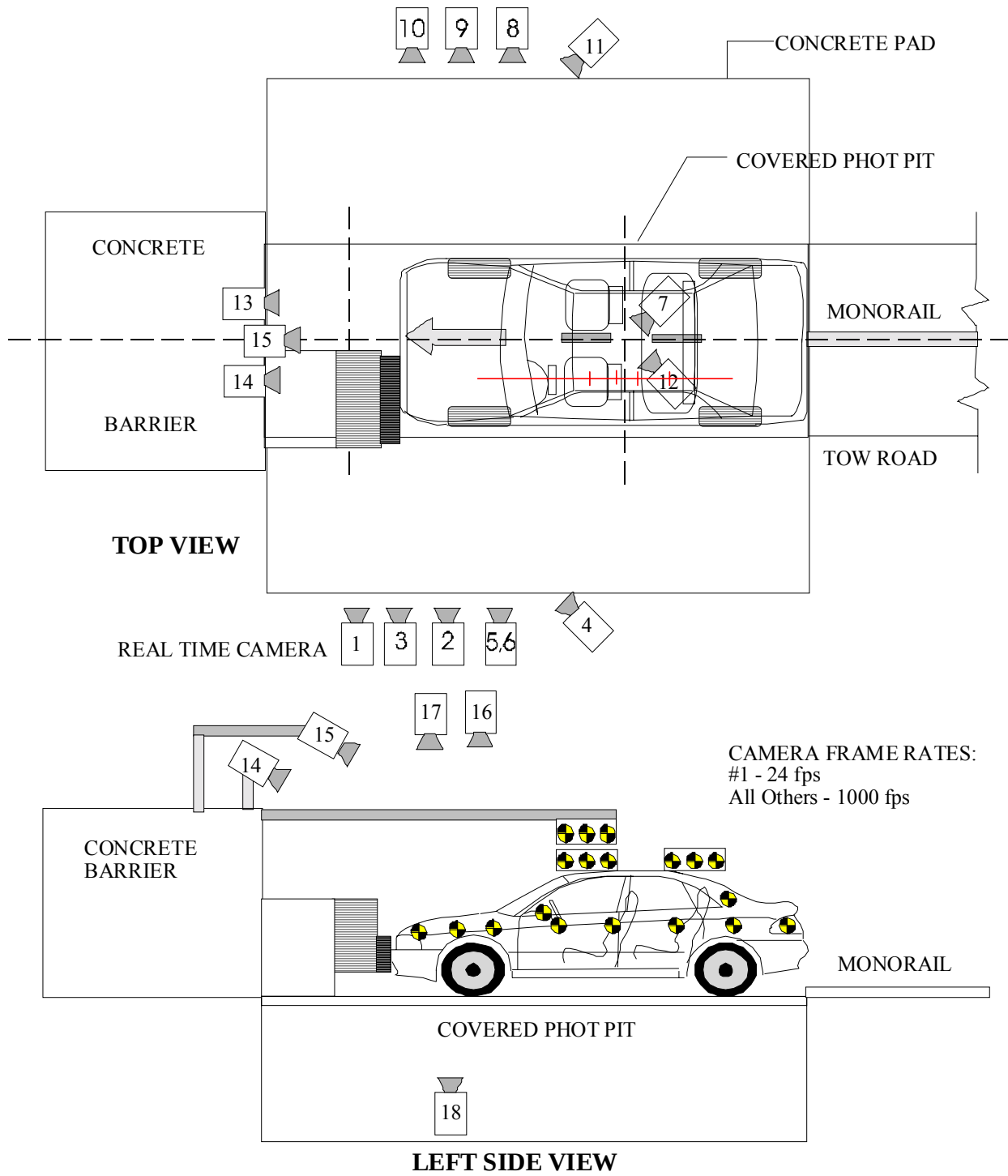
Measurement Location Descriptions*

1. Steering Column - Geometric center of the steering wheel on airbag door.
2. Lower Instrument Panel Left - Taken 45 cm above floorpan and 15 cm to the left of the steering wheel center.
3. Lower Instrument Panel Right - Taken 45 cm above floorpan and 15 cm to the right of the steering wheel center.
4. Brake Pedal - Geometric center of the brake pedal.
5. Toepan Left - Taken 15 cm to the left of the brake pedal center on the same vertical plane on the vehicle toepan.
6. Toepan Center - Taken directly behind the brake pedal center on the same vertical plane on the vehicle toepan.
7. Toepan Right - Taken 15 cm to the right of the brake pedal center on the same vertical plane on the vehicle toepan.
8. Left Footrest - Taken 25 cm to the left of the brake pedal center on the same vertical plane on the vehicle toepan.
17. A-pillar - Taken on the vehicle exterior at the same vertical coordinate as the base on the left front window.
18. B-pillar - Taken on the vehicle exterior at the same vertical coordinate as the lower A-pillar mark.

** There is an equal spaced 3 x 3 floor pan matrix. Position 1 if floor pan left side forwardmost position; Position 9 is located on the right side rearmost position of the 3 x 3 grid.

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.:

RY5212

Vehicle:

2000 Nissan Quest MV

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	7258	810	1070	-2	6784	12.5	1010
3	Left Side View	8947	210	1220	-2	8473	25	1000
4	Driver and Interior View	6728	1400	2000	-8	-	25	990
5	Steering Column (Bottom)	8521	300	1177	-4	8047	25	1005
6	Steering Column (Top)	8521	300	1777	-8	8047	25	1005
7	Interior Driver View	-	-	-	-	-	-	-
8	Overall Right Side View	7400	1355	1125	-2.8	7722	12.5	1000
9	Right Side View	9274	1158	1118	-3.4	9596	25	1050
10	Right Passenger View	9792	747	1428	-3.4	10114	35	1005
11	Passenger and Interior View	8290	1975	1980	-7.5	-	25	1015
12	Interior Passenger View	-	-	-	-	-	-	-
13	Passenger Front View	-520	-2050	1987		-	13	1010
14	Driver Front View	-520	-2050	3488		-	13	1005
15	Windshield View	0	-2050	3048		-	13	1005
16	Overhead Overall View	0	156	4880		-	13	750
17	Overhead Close-Up View	0	323	4880		-	13	1005
18	Pit View of Engine	0	1325	-3048	90	-	13	990

*X = film plane to monorail centerline

** = referenced to horizontal plane

Y = film plane to impact location

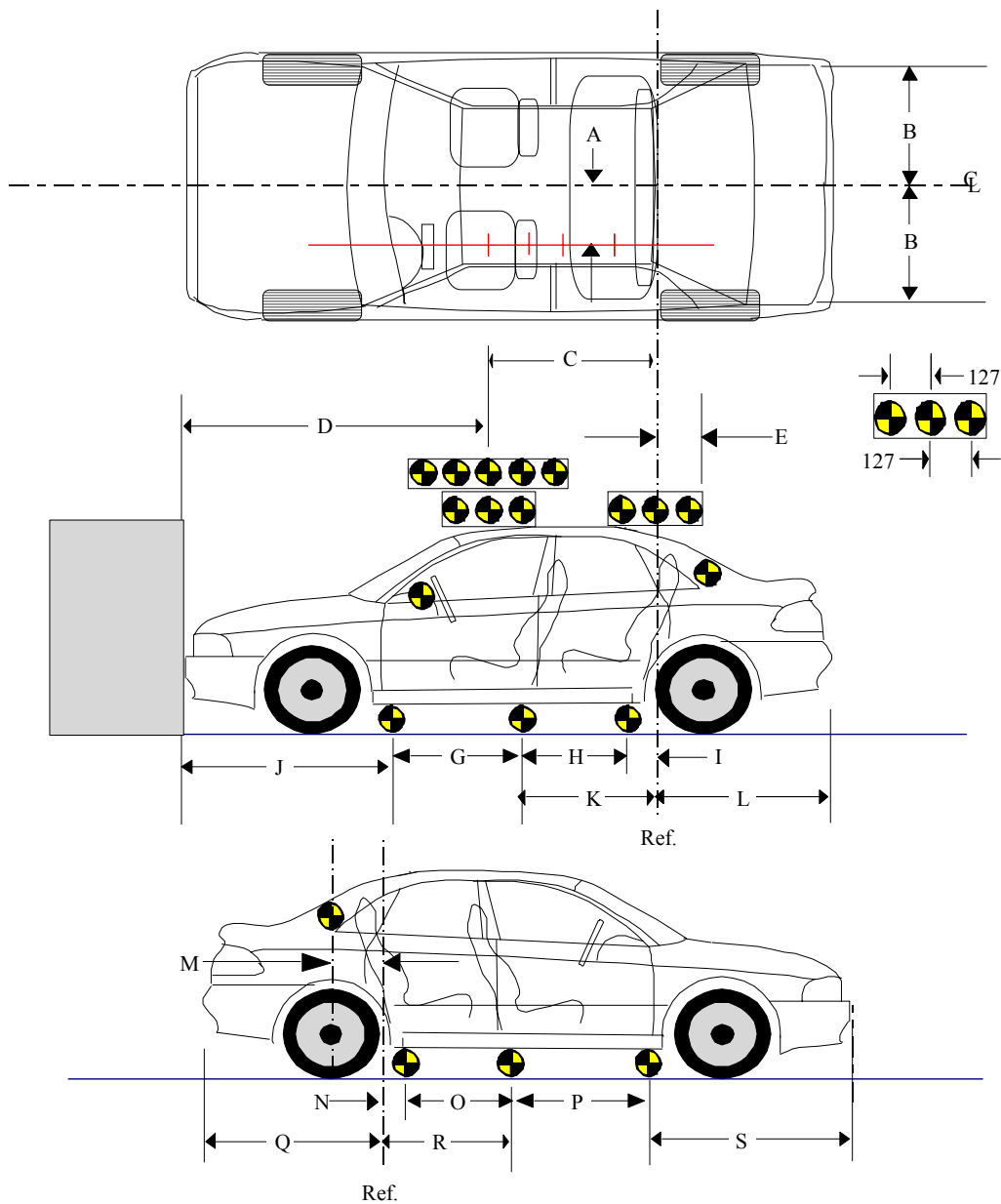
N.T. indicates No Timing

Z = film plane to ground

DATA SHEET NO. 16 VEHICLE REFERENCE PHOTO TARGET LOCATIONS

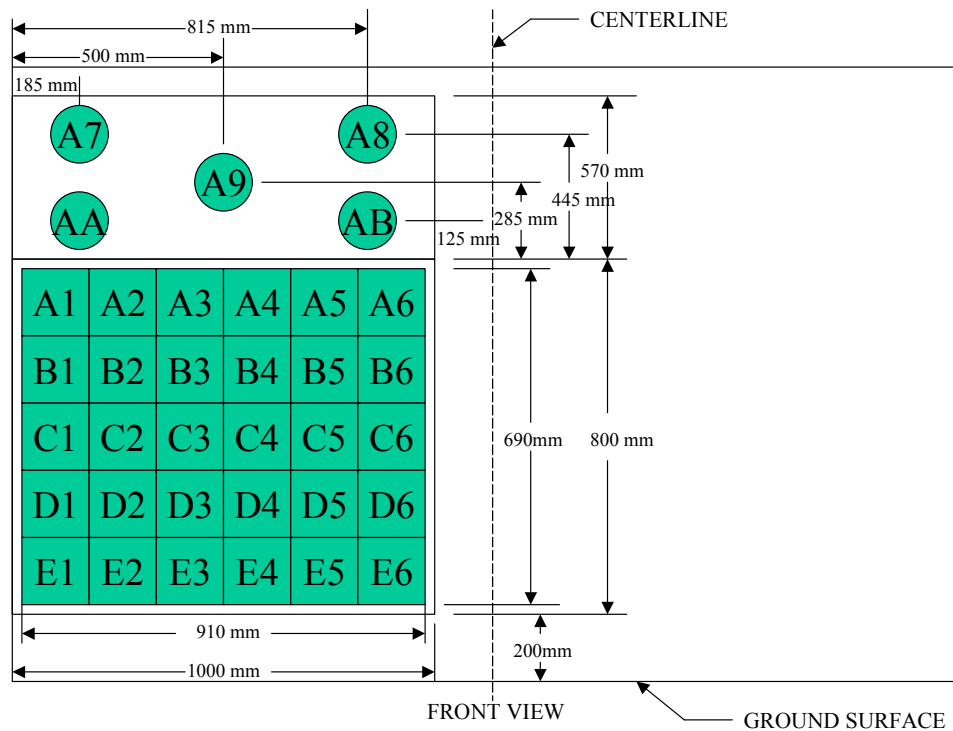
(Dimensions in millimeters)

A	398
B	796
C	1226
D	2158
E	483
F	1642
G	957
H	950
I	135
J	1479
K	1085
L	1428
M	485
N	136
O	952
P	951
Q	1426
R	1088
S	1389



DATA SHEET NO. 17 LOAD CELL LOCATIONS RELATIVE TO FIXED BARRIER AND
DEFORMABLE BARRIER FACE

35 Load Cells



Load cell width	146 mm
Load cell height	133 mm
Vertical gap between load cells	6 mm
Horizontal gap between load cells	6 mm
Vertical filler block width	55 mm

The following data is presented in Appendix B:

- (1)X Direction Data from load cells A1 through A6
- (2)X and Y Direction Data from load cells B1 through E6

DATA SHEET NO. 18 POST TEST AIR BAG DATA

NHTSA No.: RY5212; Test Date: November 14, 2001; Technician: Lawrence Q. Valvo

Vehicle Model Year/Make/Model: 2000 Nissan Quest MV

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

B. Size of vent holes: (mm²) 491 -Driver 1257 -Passenger

C. Total vent area: (mm²) 982 -Driver 2514 -Passenger

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

Driver: 490 -Height; 570 -Width; 260 -Depth

Passenger: 700 -Height; 580 -Width; 670 -Depth

E. Is the air bag tethered?

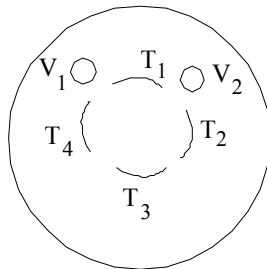
Driver: X -Yes; - -No; If yes, record length of tether- 250

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

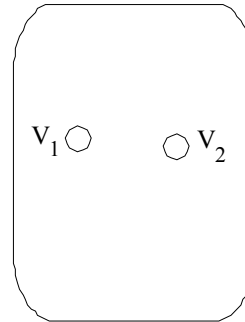
Sketch the air bag showing the location of the vent holes, how the bag is tethered, and where the bag is tethered. Also describe how the tethers are attached to the bag and the steering wheel.

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

Driver



Passenger



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

Driver: Air bag: *P117972-02G* *TML1268D0114*

Generator: *AD992005190336* *NR6L5J1HBDM*

Passenger: Air bag: *P600142800AA03* *FTVL4KSPBTE*

Generator: *AP992005180366*

DATA SHEET NO. 19 ACCIDENT INVESTIGATION DIVISION DATA

FOR 56.3 KPH OFFSET FRONTAL BARRIER IMPACT

Vehicle Make/Model/Body Style: Nissan Quest MV

NHTSA Test No.: RY5212 VIN: 4N2XN11T0YD838738

Model Year: 2000 Build Date: May 2000 Test Date: November 14, 2001

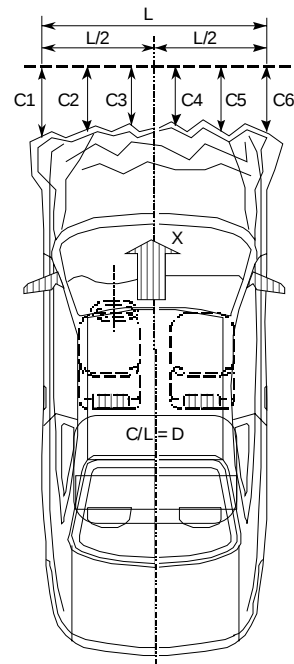
Vehicle Size Category: Minivan Test Weight: 2014 kg

Vehicle Wheelbase: 2852 mm; Front Overhang: 1008 mm; Overall Width: 1890 mm

Collision Deformation Classification (CDC) Code: 12FDEW4

Crush Depth Dimensions

	PRE	POST	DIFF	
C1 =	4761	4147	614	mm
C2 =	4891	4249	642	mm
C3 =	4943	4269	674	mm
C4 =	4943	4505	438	mm
C5 =	4893	4722	171	mm
C6 =	4756	4892	-136	mm



Midpoint of Damage: D = Vehicle Centerline (Longitudinal)

Length of Damaged Region:

L1=	<u>1518</u>	mm
L2=	<u>759</u>	mm
L5=	<u>303.6</u>	mm

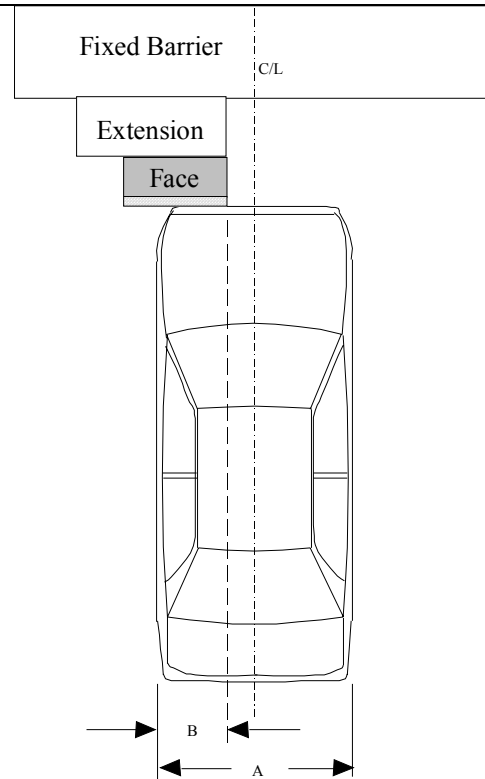
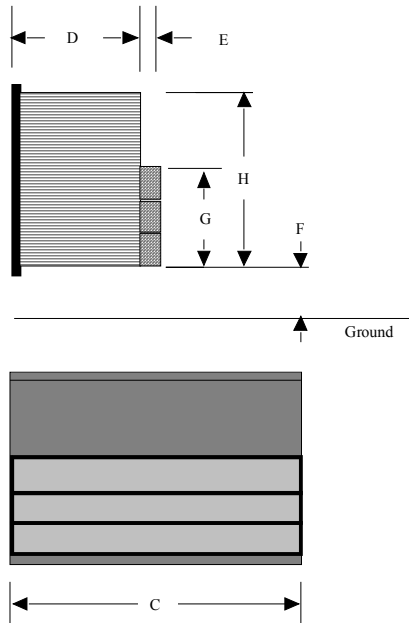
DATA SHEET NO. 20 OFFSET BARRIER AND VEHICLE ORIENTATION

NHTSA Test No.: RY5212

Vehicle: 2000 Nissan Quest MV

Barrier Manufacturer and Serial Number:

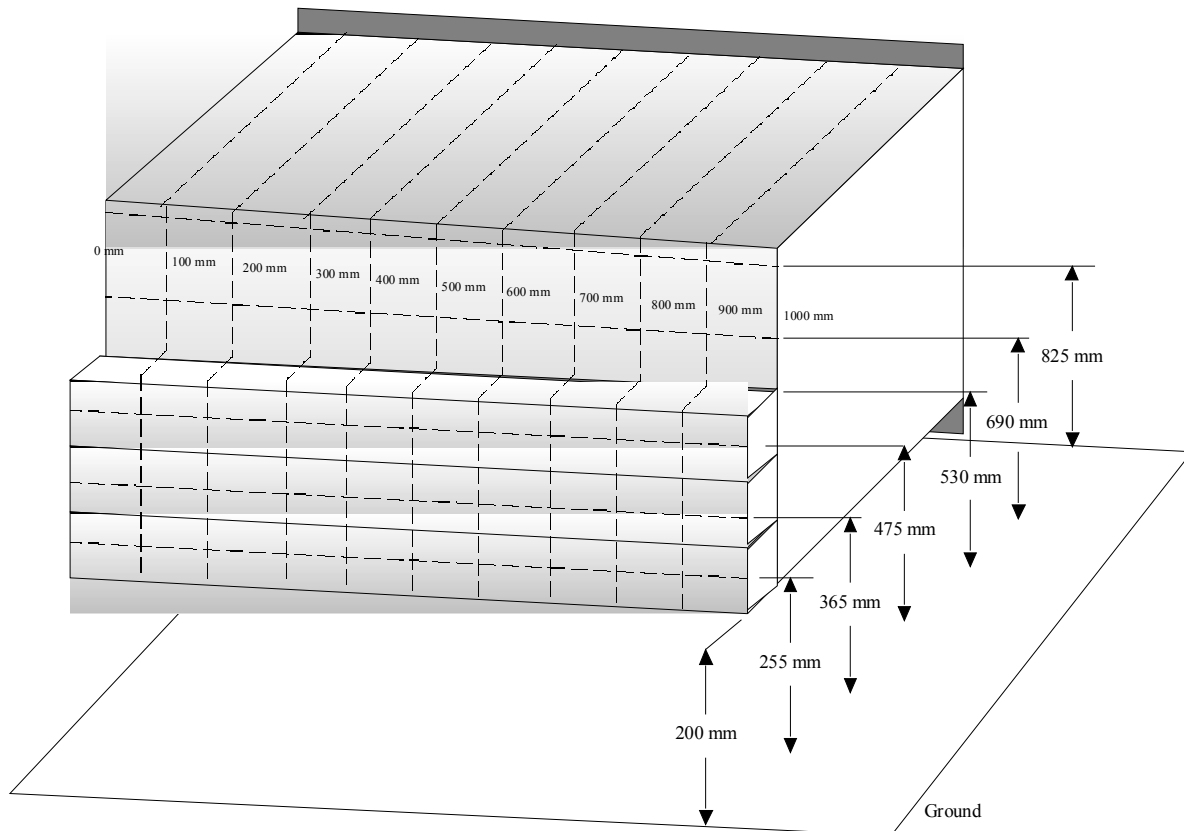
Cellbond



A	Total Vehicle Width	1890	mm
B	40% Overlap Distance	756.0	mm
C	Deformable Face Width	1000	mm
D	Single Stage Honeycomb Depth	450	mm
E	Bumper Element Depth	90	mm
F	Lower Edge Height From Ground	200	mm
G*	Bumper Element Height	330	mm
H	Deformable Barrier Honeycomb Height	650	mm

* The bumper element consists of three 110 mm height blocks of 1.723 MPa honeycomb

Offset Barrier Measurement Locations



DATA SHEET NO. 21 OFFSET BARRIER DEFORMATION (continued)

EXTERIOR STATIC CRUSH FOR BARRIER FACE
(Grid as looking at barrier from front)

Vehicle: _ 2000 Nissan Quest MV

NHTSA No. RY5212

NOTE: All dimensions are in millimeters with a tolerance of ± 3 mm

LEVEL	HEIGHT AT CL (mm)*		DISTANCE RIGHT OF CENTER (mm)					0	DISTANCE LEFT OF CENTER (mm)				
			500	400	300	200	100		100	200	300	400	500
LEVEL 6 TOP STACK	825	PRE	546	546	546	546	546	546	546	546	546	546	546
		POST	537	593	645	713	799	812	832	876	873	905	940
		CRUSH	-9	47	99	167	253	266	286	330	327	359	394
LEVEL 5 MID STACK	687	PRE	546	546	546	546	546	546	546	546	546	546	546
		POST	530	592	666	738	784	847	930	964	976	975	976
		CRUSH	-16	46	120	192	238	301	384	418	430	429	430
LEVEL 4 TOP BUMPER	530	PRE	546	546	546	546	546	546	546	546	546	546	546
		POST	551	631	701	762	859	911	943	971	970	962	972
		CRUSH	5	85	155	216	313	365	397	425	424	416	426
LEVEL 3 BUMPER TOP	475	PRE	456	456	456	456	456	456	456	456	456	456	456
		POST	478	562	652	727	781	837	895	944	949	945	974
		CRUSH	22	106	196	271	325	381	439	488	493	489	518
LEVEL 2 BUMPER MID	365	PRE	456	456	456	456	456	456	456	456	456	456	456
		POST	522	587	659	701	742	789	854	885	874	879	895
		CRUSH	66	131	203	245	286	333	398	429	418	423	439
LEVEL 1 BUMPER LOW	255	PRE	456	456	456	456	456	456	456	456	456	456	456
		POST	500	552	602	642	677	722	782	810	843	861	873
		CRUSH	44	96	146	186	221	266	326	354	387	405	417

*Heights measured above ground level.

APPENDIX A
PHOTOGRAPHS

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Figure A-1: PRE-TEST FRONT VIEW



Figure A-2: POST-TEST FRONT VIEW



Figure A-3: PRE-TEST LEFT SIDE VIEW



Figure A-4: POST-TEST LEFT SIDE VIEW



Figure A-5: PRE-TEST RIGHT SIDE VIEW



Figure A-6: POST-TEST RIGHT SIDE VIEW



Figure A-7: PRE-TEST RIGHT FRONT THREE-QUARTER VIEW



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



Figure A-9: PRE-TEST LEFT REAR THREE-QUARTER VIEW



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

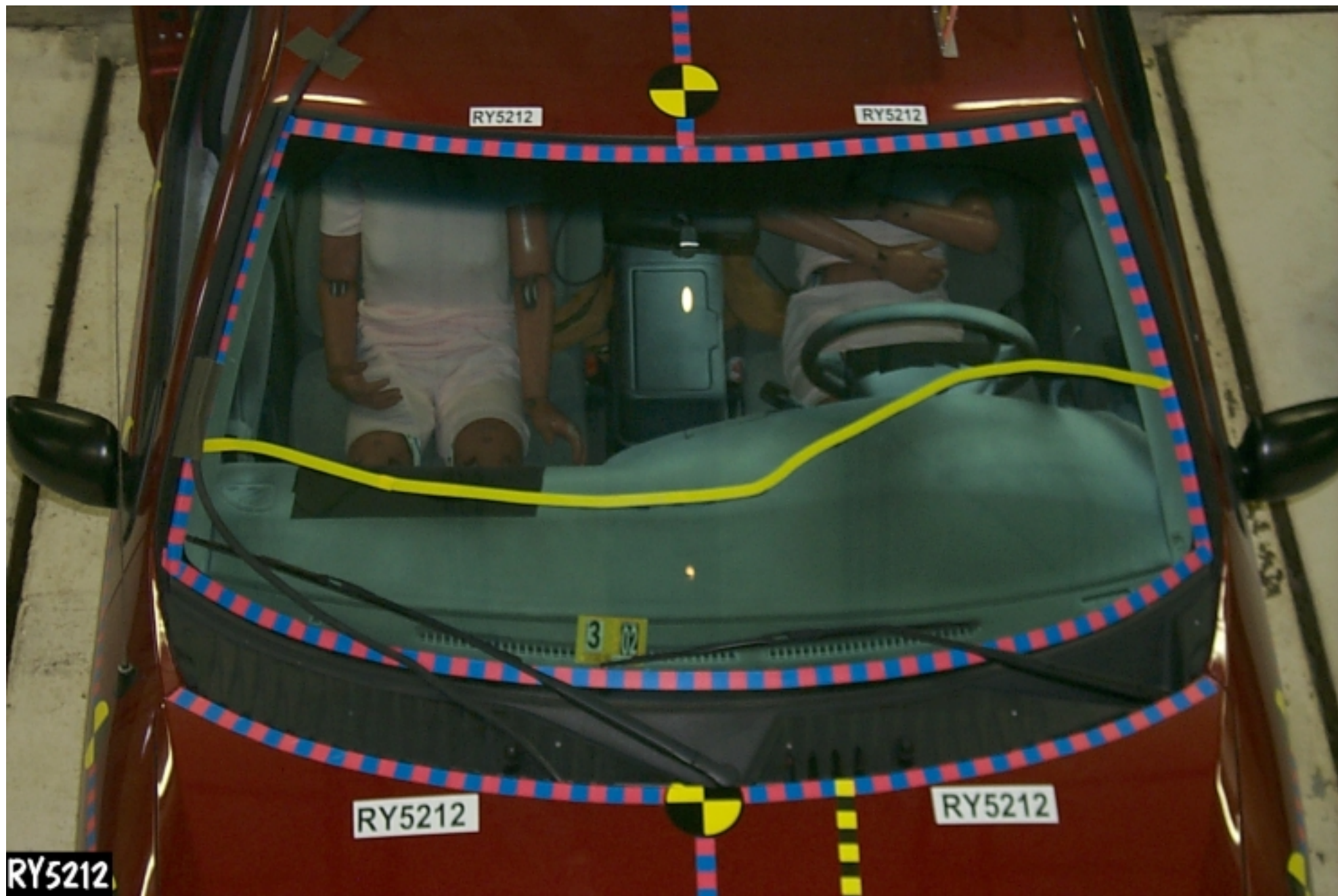


Figure A-11: PRE-TEST WINDSHIELD VIEW



Figure A-12: POST-TEST WINDSHIELD VIEW



Figure A-13: PRE-TEST ENGINE COMPARTMENT VIEW



Figure A-14: FUEL CAP VIEW



Figure A-15: PRE-TEST FRONT UNDERBODY VIEW



Figure A-16: POST-TEST FRONT UNDERBODY VIEW



Figure A-17: PRE-TEST FRONT SIDE UNDERBODY VIEW

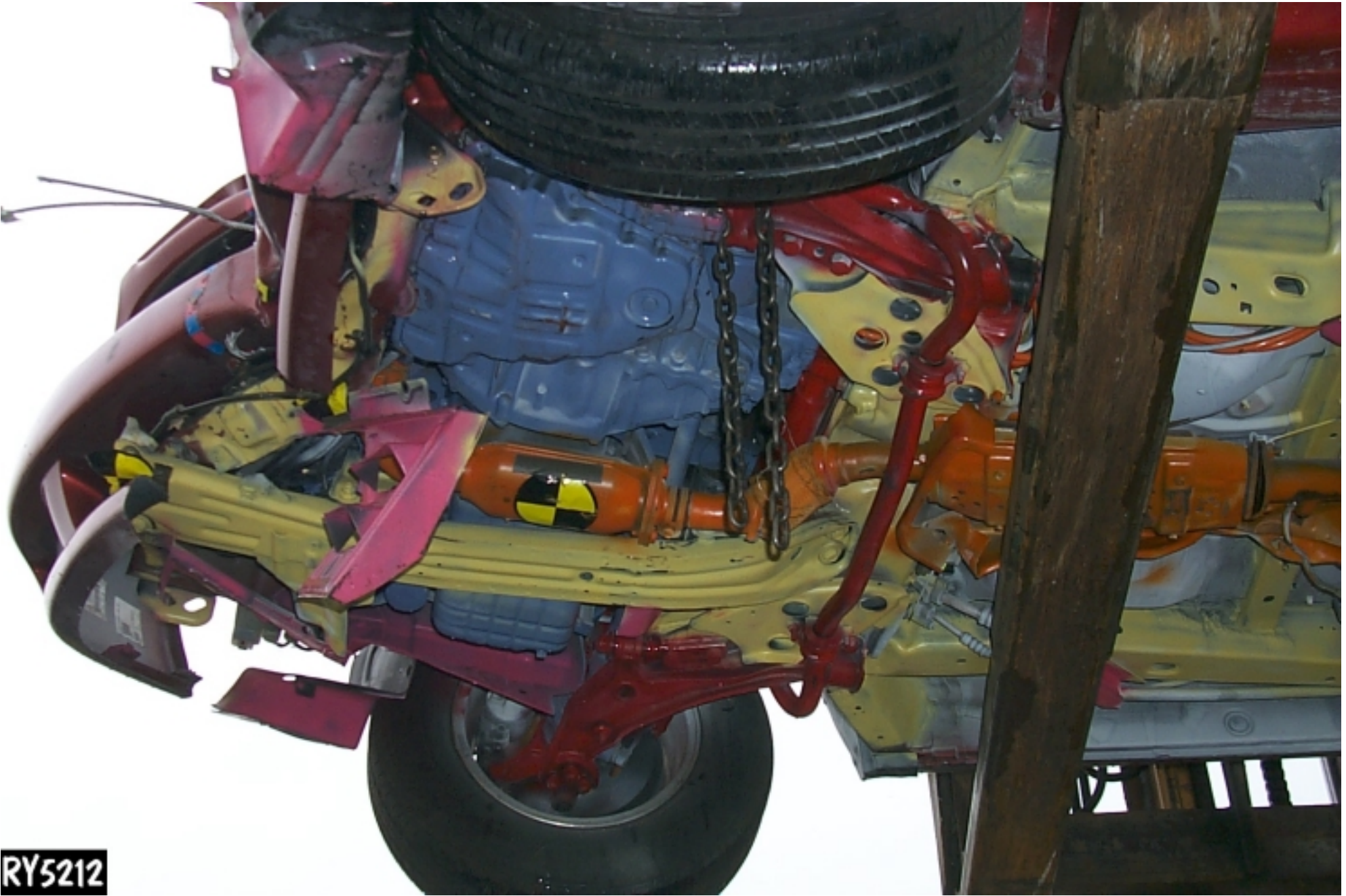


Figure A-18: POST-TEST FRONT SIDE UNDERBODY VIEW



Figure A-19: PRE-TEST REAR UNDERBODY VIEW



Figure A-20: POST-TEST REAR UNDERBODY VIEW



Figure A-21: PRE-TEST DRIVER POSITION VIEW



Figure A-22: POST-TEST DRIVER POSITION VIEW



Figure A-23: PRE-TEST PASSENGER POSITION VIEW



Figure A-24: POST-TEST PASSENGER POSITION VIEW



Figure A-25: PRE-TEST DRIVER AND INTERIOR VIEW



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



Figure A-27: PRE-TEST PASSENGER AND INTERIOR VIEW

PHOTOGRAPH NOT AVAILABLE

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



Figure A-29: PRE-TEST DRIVER HEAD LOCATION



Figure A-30: POST-TEST DRIVER HEAD LOCATION



Figure A-31: PRE-TEST PASSENGER HEAD LOCATION



Figure A-32: POST-TEST PASSENGER HEAD LOCATION



Figure A-33: PRE-TEST DRIVER FLOOR PAN VIEW



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



Figure A-35: PRE-TEST PASSENGER FLOOR PAN VIEW

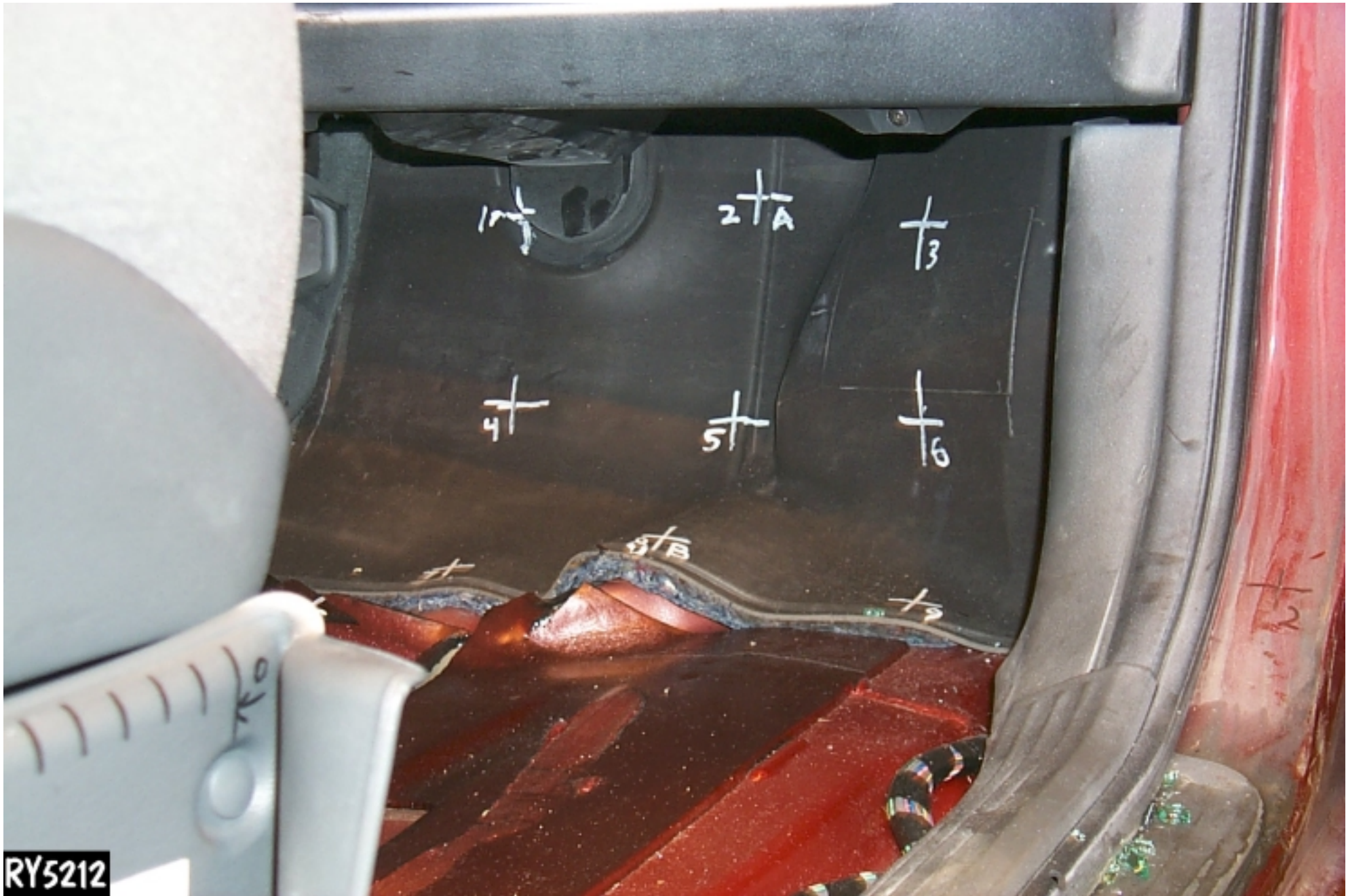


Figure A-36: POST-TEST PASSENGER FLOOR PAN VIEW



Figure A-37: PRE-TEST BARRIER FRONT VIEW



Figure A-38: POST-TEST BARRIER FRONT VIEW



Figure A-39: PRE-TEST BARRIER LEFT SIDE VIEW



Figure A-40: POST-TEST BARRIER LEFT SIDE VIEW

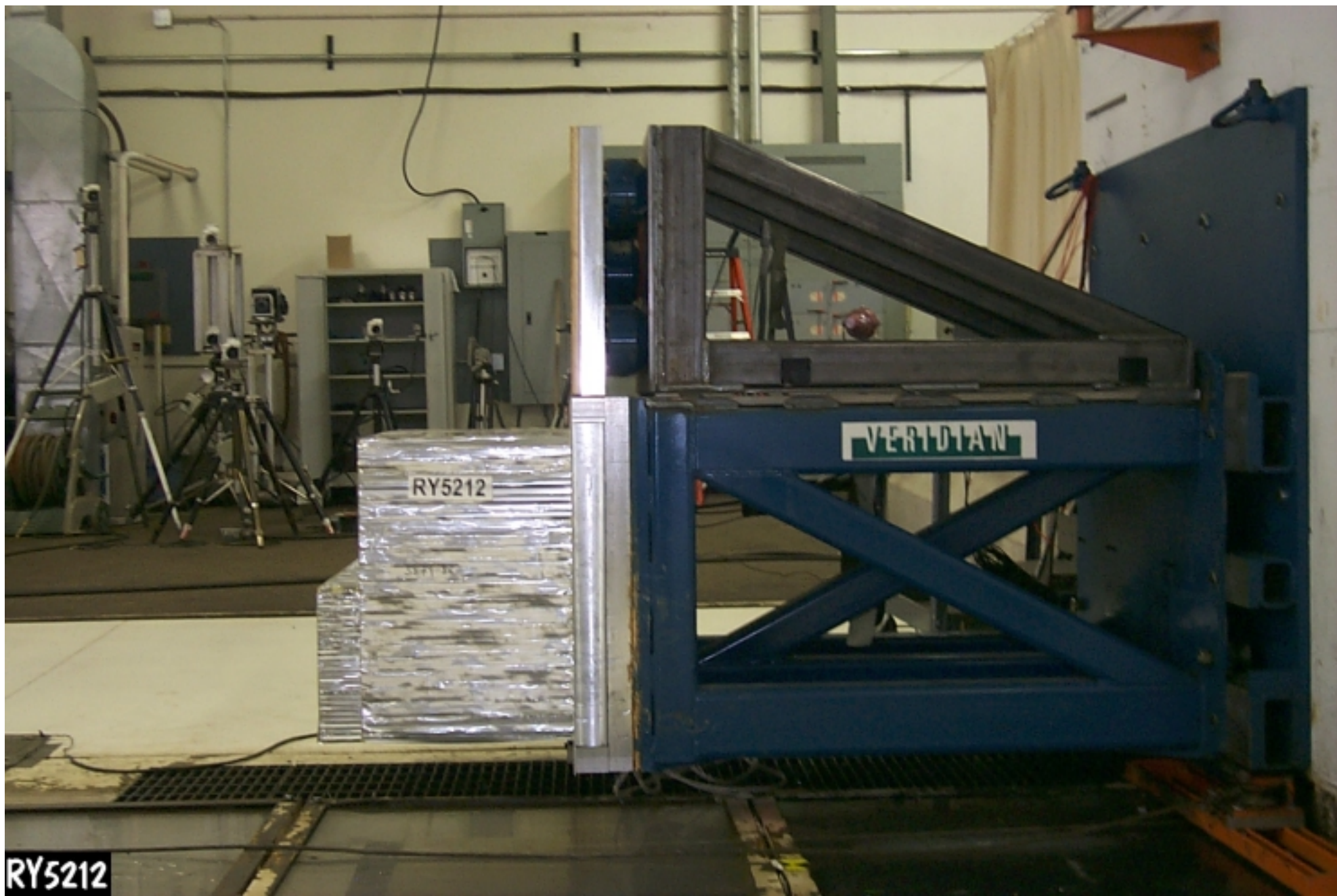


Figure A-41: PRE-TEST BARRIER RIGHT SIDE VIEW



Figure A-42: POST-TEST BARRIER RIGHT SIDE VIEW

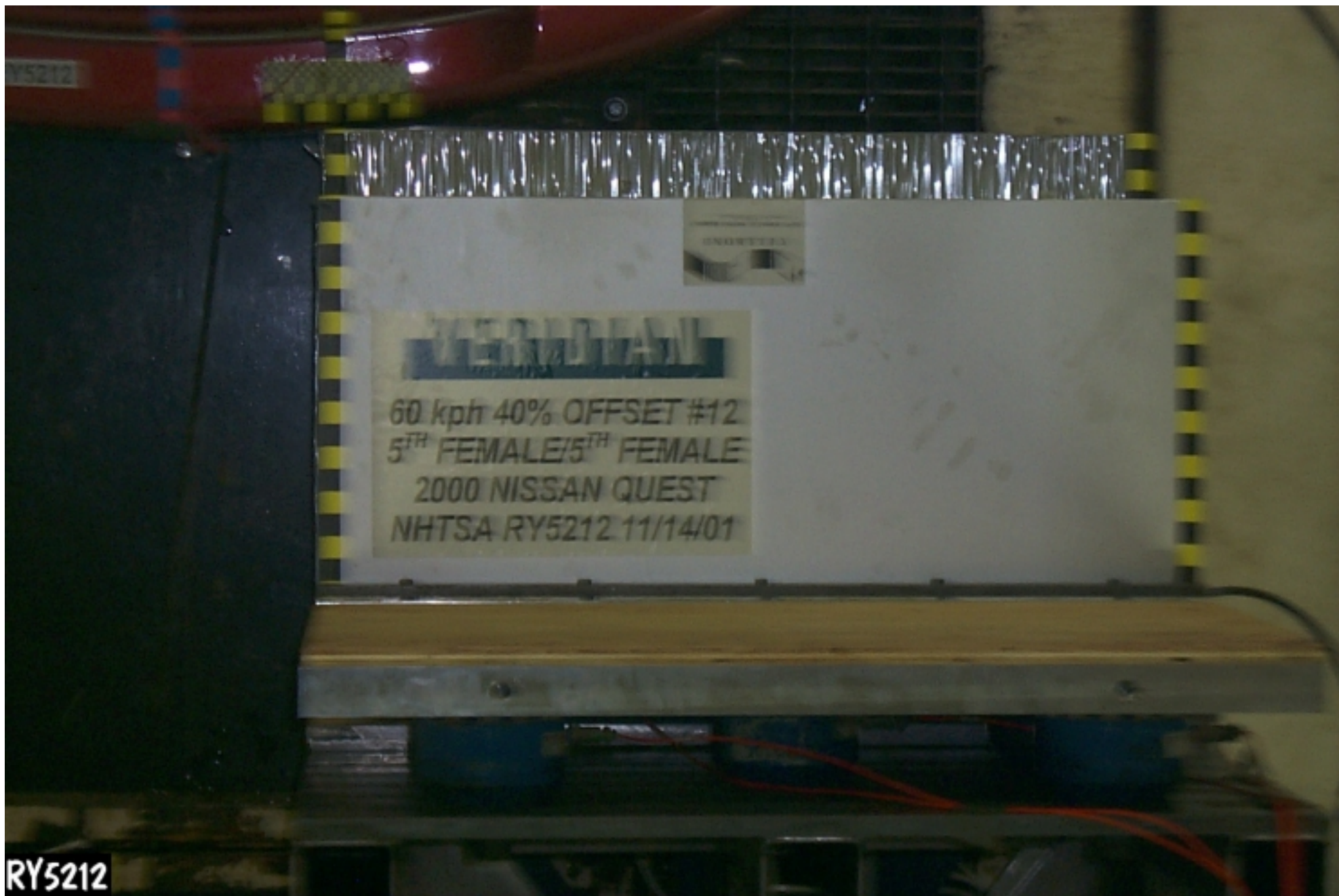


Figure A-43: PRE-TEST BARRIER TOP VIEW



Figure A-44: POST-TEST BARRIER TOP VIEW



Figure A-45: POST-TEST OVERHEAD VIEW



Figure A-46: ROLLOVER VIEW



Figure A-47: 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, Chest Froward Fy Head leftward, Chest rightward Fz Head Upward, Chest Downward Mx Left ear toward left shoulder My Chin toward sternum (flexion) Mz Chin toward 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 (right and left leg)	Fx Knee Upward, Upper Femur Downward Fy Knee Rightward, Upper Femur Leftward Fz Knee Forward, Pelvis Rearward Mx Knee Leftward, Hold Upper Femur in Place My Knee Upward, Hold Upper Femur in Place Mz Tibia Leftward, Hold Pelvis in Place
Upper Tibia Load Cell (right and left leg)	Fx Ankle Forward, Knee Rearward Fy Ankle Rightward, Knee Leftward Fz Tibia Downward, Femur Upward Mx Ankle Leftward, Hold Knee in Place My Ankle Forward, Bottom of Knee Clevis Rearward
Lower Tibia Load Cell (right and left leg)	Fx Ankle Forward, Knee Rearward Fy Ankle Rightward, Knee Leftward Fz Tibia Downward, Femur Upward Mx Ankle Leftward, Hold Knee in Place My Ankle Forward, Bottom of Knee Clevis Rearward
Knee Shear Displacement	X Hold Femur Move Tibia Forward
Tibia Mid-Shaft Accelerometer	X Forward Y To the Right
Foot Rotations (left foot)	X Eversion Y Dorsi Flexion Z Internal Rotation
Foot Rotations (right foot)	X Inversion Y Dorsi Flexion Z External Rotation
Foot Accelerometer (right and left foot)	X Forward Y To the Right Z Down

DATA CHANNEL FILTER CLASS SUMMARY

NHTSA TEST NO. RY5212

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

PLOT	PLOT NAME [UNITS, CHANNEL FILTER CLASS]	PAGE
1	P1 Head 9 Array X Arm Ay [g, CFC_1000]	B-9
2	P1 Head 9 Array X Arm Az [g, CFC_1000]	B-10
3	P1 Head 9 Array Y Arm Ax [g, CFC_1000]	B-11
4	P1 Head 9 Array Y Arm Az [g, CFC_1000]	B-12
5	P1 Head 9 Array Z Arm Ax [g, CFC_1000]	B-13
6	P1 Head 9 Array Z Arm Ay [g, CFC_1000]	B-14
7	P1 Head CG Ax [g, CFC_1000]	B-15
8	P1 Head CG Ay [g, CFC_1000]	B-16
9	P1 Head CG Az [g, CFC_1000]	B-17
10	P1 Head CG A Resultant [g, CFC_1000]	B-18
11	P1 Head CG Red Ax [g, CFC_1000]	B-19
12	P1 Head CG Red Ay [g, CFC_1000]	B-20
13	P1 Head CG Red Az [g, CFC_1000]	B-21
14	P1 Head CG Red A Resultant [g, CFC_1000]	B-22
15	P1 Upper Neck Fx [N, CFC_1000]	B-23
16	P1 Upper Neck Fy [N, CFC_1000]	B-24
17	P1 Upper Neck Fz [N, CFC_1000]	B-25
18	P1 Upper Neck F Resultant [N, CFC_1000]	B-26
19	P1 Upper Neck Mx [N-m, CFC_600]	B-27
20	P1 Upper Neck My [N-m, CFC_600]	B-28
21	P1 Upper Neck Mz [N-m, CFC_600]	B-29
22	P1 Upper Neck M Resultant [N-m, CFC_600]	B-30
23	P1 Chest Ax [g, CFC_180]	B-31
24	P1 Chest Ay [g, CFC_180]	B-32
25	P1 Chest Az [g, CFC_180]	B-33
26	P1 Chest A Resultant [g, CFC_180]	B-34
27	P1 Chest Red Ax [g, CFC_180]	B-35
28	P1 Chest Red Ay [g, CFC_180]	B-36
29	P1 Chest Red Az [g, CFC_180]	B-37
30	P1 Chest Red A Resultant [g, CFC_180]	B-38
31	P1 Chest Displacement [mm, CFC_600]	B-39
32	P1 Pelvic Ax [g, CFC_1000]	B-40
33	P1 Pelvic Ay [g, CFC_1000]	B-41
34	P1 Pelvic Az [g, CFC_1000]	B-42
35	P1 Pelvic A Resultant [g, CFC_1000]	B-43
36	P1 Left Femur Fx [N, CFC_600]	B-44
37	P1 Left Femur Fy [N, CFC_600]	B-45
38	P1 Left Femur Fz [N, CFC_600]	B-46
39	P1 Left Femur F Resultant [N, CFC_600]	B-47
40	P1 Left Femur Mx [N-m, CFC_600]	B-48
41	P1 Left Femur My [N-m, CFC_600]	B-49
42	P1 Left Femur Mz [N-m, CFC_600]	B-50
43	P1 Left Femur M Resultant [N-m, CFC_600]	B-51
44	P1 Right Femur Fx [N, CFC_600]	B-52
45	P1 Right Femur Fy [N, CFC_600]	B-53
46	P1 Right Femur Fz [N, CFC_600]	B-54
47	P1 Right Femur F Resultant [N, CFC_600]	B-55
48	P1 Right Femur Mx [N-m, CFC_600]	B-56
49	P1 Right Femur My [N-m, CFC_600]	B-57
50	P1 Right Femur Mz [N-m, CFC_600]	B-58

51	P1 Right Femur M Resultant [N-m, CFC_600]	B-59
52	P1 Left Knee Shear Dx [mm, CFC_180]	B-60
53	P1 Right Knee Shear Dx [mm, CFC_180]	B-61
54	P1 Left Upper Tibia Fx [N, CFC_600]	B-62
55	P1 Left Upper Tibia Fz [N, CFC_600]	B-63
56	P1 Left Upper Tibia Mx [N-m, CFC_600]	B-64
57	P1 Left Upper Tibia My [N-m, CFC_600]	B-65
58	P1 Left Lower Tibia Fx [N, CFC_600]	B-66
59	P1 Left Lower Tibia Fy [N, CFC_600]	B-67
60	P1 Left Lower Tibia Fz [N, CFC_600]	B-68
61	P1 Left Lower Tibia F Resultant [N, CFC_600]	B-69
62	P1 Left Lower Tibia Mx [N-m, CFC_600]	B-70
63	P1 Left Lower Tibia My [N-m, CFC_600]	B-71
64	P1 Right Upper Tibia Fx [N, CFC_600]	B-72
65	P1 Right Upper Tibia Fz [N, CFC_600]	B-73
66	P1 Right Upper Tibia Mx [N-m, CFC_600]	B-74
67	P1 Right Upper Tibia My [N-m, CFC_600]	B-75
68	P1 Right Lower Tibia Fx [N, CFC_600]	B-76
69	P1 Right Lower Tibia Fy [N, CFC_600]	B-77
70	P1 Right Lower Tibia Fz [N, CFC_600]	B-78
71	P1 Right Lower Tibia F Resultant [N, CFC_600]	B-79
72	P1 Right Lower Tibia Mx [N-m, CFC_600]	B-80
73	P1 Right Lower Tibia My [N-m, CFC_600]	B-81
74	P1 Left Tibia Ax [g, CFC_600]	B-82
75	P1 Left Tibia Ay [g, CFC_600]	B-83
76	P1 Right Tibia Ax [g, CFC_600]	B-84
77	P1 Right Tibia Ay [g, CFC_600]	B-85
78	P1 Left Ankle Rotation x [Deg, CFC_180]	B-86
79	P1 Left Ankle Rotation y [Deg, CFC_180]	B-87
80	P1 Left Ankle Rotation z [Deg, CFC_180]	B-88
81	P1 Right Ankle Rotation x [Deg, CFC_180]	B-89
82	P1 Right Ankle Rotation y [Deg, CFC_180]	B-90
83	P1 Right Ankle Rotation z [Deg, CFC_180]	B-91
84	P1 Left Foot Ax [g, CFC_600]	B-92
85	P1 Left Foot Ay [g, CFC_600]	B-93
86	P1 Left Foot Az [g, CFC_600]	B-94
87	P1 Left Foot A Resultant [g, CFC_600]	B-95
88	P1 Right Foot Ax [g, CFC_600]	B-96
89	P1 Right Foot Ay [g, CFC_600]	B-97
90	P1 Right Foot Az [g, CFC_600]	B-98
91	P1 Right Foot A Resultant [g, CFC_600]	B-99
92	P1 Toepan Left Displacement [mm, CFC_1000]	B-100
93	P2 Head 9 Array X Arm Ay [g, CFC_1000]	B-101
94	P2 Head 9 Array X Arm Az [g, CFC_1000]	B-102
95	P2 Head 9 Array Y Arm Ax [g, CFC_1000]	B-103
96	P2 Head 9 Array Y Arm Az [g, CFC_1000]	B-104
97	P2 Head 9 Array Z Arm Ax [g, CFC_1000]	B-105
98	P2 Head 9 Array Z Arm Ay [g, CFC_1000]	B-106
99	P2 Head CG Ax [g, CFC_1000]	B-107
100	P2 Head CG Ay [g, CFC_1000]	B-108
101	P2 Head CG Az [g, CFC_1000]	B-109
102	P2 Head CG A Resultant [g, CFC_1000]	B-110
103	P2 Head CG Red Ax [g, CFC_1000]	B-111

104	P2 Head CG Red Ay [g, CFC_1000]	B-112
105	P2 Head CG Red Az [g, CFC_1000]	B-113
106	P2 Head CG Red A Resultant [g, CFC_1000]	B-114
107	P2 Upper Neck Fx [N, CFC_1000]	B-115
108	P2 Upper Neck Fy [N, CFC_1000]	B-116
109	P2 Upper Neck Fz [N, CFC_1000]	B-117
110	P2 Upper Neck F Resultant [N, CFC_1000]	B-118
111	P2 Upper Neck Mx [N-m, CFC_600]	B-119
112	P2 Upper Neck My [N-m, CFC_600]	B-120
113	P2 Upper Neck Mz [N-m, CFC_600]	B-121
114	P2 Upper Neck M Resultant [N-m, CFC_600]	B-122
115	P2 Chest Ax [g, CFC_180]	B-123
116	P2 Chest Ay [g, CFC_180]	B-124
117	P2 Chest Az [g, CFC_180]	B-125
118	P2 Chest A Resultant [g, CFC_180]	B-126
119	P2 Chest Red Ax [g, CFC_180]	B-127
120	P2 Chest Red Ay [g, CFC_180]	B-128
121	P2 Chest Red Az [g, CFC_180]	B-129
122	P2 Chest Red A Resultant [g, CFC_180]	B-130
123	P2 Chest Displacement [mm, CFC_600]	B-131
124	P2 Pelvic Ax [g, CFC_1000]	B-132
125	P2 Pelvic Ay [g, CFC_1000]	B-133
126	P2 Pelvic Az [g, CFC_1000]	B-134
127	P2 Pelvic A Resultant [g, CFC_1000]	B-135
128	P2 Left Femur Fx [N, CFC_600]	B-136
129	P2 Left Femur Fy [N, CFC_600]	B-137
130	P2 Left Femur Fz [N, CFC_600]	B-138
131	P2 Left Femur F Resultant [N, CFC_600]	B-139
132	P2 Left Femur Mx [N-m, CFC_600]	B-140
133	P2 Left Femur My [N-m, CFC_600]	B-141
134	P2 Left Femur Mz [N-m, CFC_600]	B-142
135	P2 Left Femur M Resultant [N-m, CFC_600]	B-143
136	P2 Right Femur Fx [N, CFC_600]	B-144
137	P2 Right Femur Fy [N, CFC_600]	B-145
138	P2 Right Femur Fz [N, CFC_600]	B-146
139	P2 Right Femur F Resultant [N, CFC_600]	B-147
140	P2 Right Femur Mx [N-m, CFC_600]	B-148
141	P2 Right Femur My [N-m, CFC_600]	B-149
142	P2 Right Femur Mz [N-m, CFC_600]	B-150
143	P2 Right Femur M Resultant [N-m, CFC_600]	B-151
144	P2 Left Knee Shear Dx [mm, CFC_180]	B-152
145	P2 Right Knee Shear Dx [mm, CFC_180]	B-153
146	P2 Left Upper Tibia Fx [N, CFC_600]	B-154
147	P2 Left Upper Tibia Fz [N, CFC_600]	B-155
148	P2 Left Upper Tibia Mx [N-m, CFC_600]	B-156
149	P2 Left Upper Tibia My [N-m, CFC_600]	B-157
150	P2 Left Lower Tibia Fx [N, CFC_600]	B-158
151	P2 Left Lower Tibia Fy [N, CFC_600]	B-159
152	P2 Left Lower Tibia Fz [N, CFC_600]	B-160
153	P2 Left Lower Tibia F Resultant [N, CFC_600]	B-161
154	P2 Left Lower Tibia Mx [N-m, CFC_600]	B-162
155	P2 Left Lower Tibia My [N-m, CFC_600]	B-163
156	P2 Right Upper Tibia Fx [N, CFC_600]	B-164

157	P2 Right Upper Tibia Fz [N, CFC_600]	B-165
158	P2 Right Upper Tibia Mx [N-m, CFC_600]	B-166
159	P2 Right Upper Tibia My [N-m, CFC_600]	B-167
160	P2 Right Lower Tibia Fx [N, CFC_600]	B-168
161	P2 Right Lower Tibia Fy [N, CFC_600]	B-169
162	P2 Right Lower Tibia Fz [N, CFC_600]	B-170
163	P2 Right Lower Tibia F Resultant [N, CFC_600]	B-171
164	P2 Right Lower Tibia Mx [N, CFC_600]	B-172
165	P2 Right Lower Tibia My [N, CFC_600]	B-173
166	P2 Left Tibia Ax [g, CFC_600]	B-174
167	P2 Left Tibia Ay [g, CFC_600]	B-175
168	P2 Right Tibia Ax [g, CFC_600]	B-176
169	P2 Right Tibia Ay [g, CFC_600]	B-177
170	P2 Left Ankle Rotation x [Deg, CFC_180]	B-178
171	P2 Left Ankle Rotation y [Deg, CFC_180]	B-179
172	P2 Left Ankle Rotation z [Deg, CFC_180]	B-180
173	P2 Right Ankle Rotation x [Deg, CFC_180]	B-181
174	P2 Right Ankle Rotation y [Deg, CFC_180]	B-182
175	P2 Right Ankle Rotation z [Deg, CFC_180]	B-183
176	P2 Left Foot Ax [g, CFC_600]	B-184
177	P2 Left Foot Ay [g, CFC_600]	B-185
178	P2 Left Foot Az [g, CFC_600]	B-186
179	P2 Left Foot A Resultant [g, CFC_600]	B-187
180	P2 Right Foot Ax [g, CFC_600]	B-188
181	P2 Right Foot Ay [g, CFC_600]	B-189
182	P2 Right Foot Az [g, CFC_600]	B-190
183	P2 Right Foot A Resultant [g, CFC_600]	B-191
184	Acc 1 Rear XMBR Left Ax [g, CFC_60]	B-192
185	Acc 1 Rear XMBR Left Ax Velocity [kph, CFC_180]	B-193
186	Acc 1 Rear XMBR Left Ax Displacement [mm, CFC_180]	B-194
187	Acc 2 Rear XMBR Left Ay [g, CFC_60]	B-195
188	Acc 2 Rear XMBR Left Ay Velocity [kph, CFC_180]	B-196
189	Acc 2 Rear XMBR Left Ay Displacement [mm, CFC_180]	B-197
190	Acc 3 Rear XMBR Right Ax [g, CFC_60]	B-198
191	Acc 3 Rear XMBR Right Ax Velocity [kph, CFC_180]	B-199
192	Acc 3 Rear XMBR Right Ax Displacement [mm, CFC_180]	B-200
193	Acc 4 Rear XMBR Right Ay [g, CFC_60]	B-201
194	Acc 4 Rear XMBR Right Ay Velocity [kph, CFC_180]	B-202
195	Acc 4 Rear XMBR Right Ay Displacement [mm, CFC_180]	B-203
196	Acc 7 P1 Toepan Right Ax [g, CFC_60]	B-204
197	Acc 7 P1 Toepan Right Ax Velocity [kph, CFC_180]	B-205
198	Acc 7 P1 Toepan Right Ax Displacement [mm, CFC_180]	B-206
199	Acc 8 P1 Toepan Right Az [g, CFC_60]	B-207
200	Acc 8 P1 Toepan Right Az Velocity [kph, CFC_180]	B-208
201	Acc 8 P1 Toepan Right Az Displacement [mm, CFC_180]	B-209
202	Acc 9 Trunk Az [g, CFC_60]	B-210
203	Acc 9 Trunk Az Velocity [kph, CFC_180]	B-211
204	Acc 9 Trunk Az Displacement [mm, CFC_180]	B-212
205	Barrier Load Cell E2 FY [N, CFC_60]	B-213
206	Barrier Load Cell E3 FY [N, CFC_60]	B-214
207	Barrier Load Cell E4 FY [N, CFC_60]	B-215
208	Barrier Load Cell E5 FY [N, CFC_60]	B-216
209	Barrier Load Cell E6 FY [N, CFC_60]	B-217

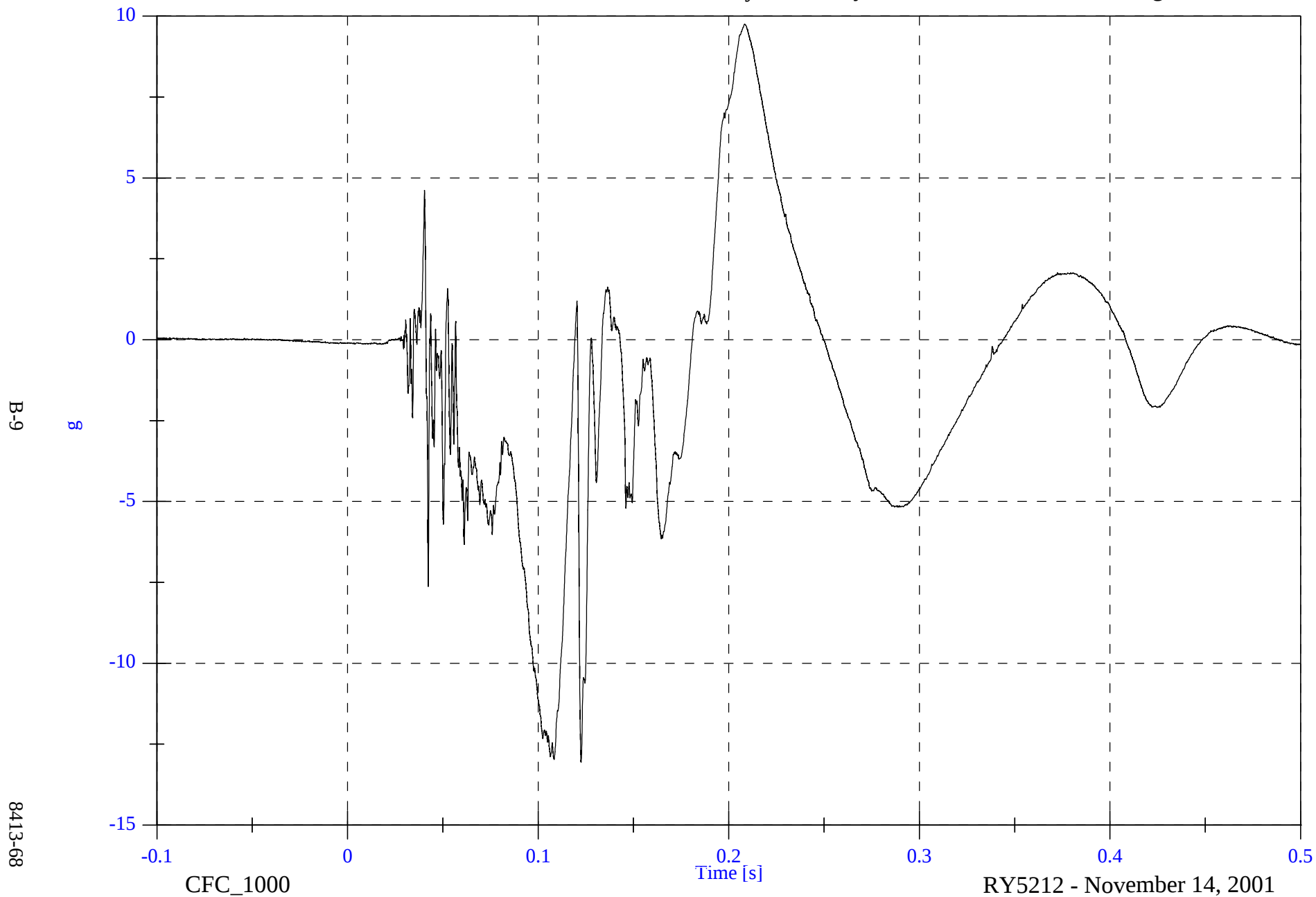
210	Barrier Load Cell E1 FX [N, CFC_60]	B-218
211	Barrier Load Cell E2 FX [N, CFC_60]	B-219
212	Barrier Load Cell E3 FX [N, CFC_60]	B-220
213	Barrier Load Cell E4 FX [N, CFC_60]	B-221
214	Barrier Load Cell E5 FX [N, CFC_60]	B-222
215	Barrier Load Cell E6 FX [N, CFC_60]	B-223
216	Barrier Load Cell D2 FY [N, CFC_60]	B-224
217	Barrier Load Cell D3 FY [N, CFC_60]	B-225
218	Barrier Load Cell D4 FY [N, CFC_60]	B-226
219	Barrier Load Cell D5 FY [N, CFC_60]	B-227
220	Barrier Load Cell D6 FY [N, CFC_60]	B-228
221	Barrier Load Cell D1 FX [N, CFC_60]	B-229
222	Barrier Load Cell D2 FX [N, CFC_60]	B-230
223	Barrier Load Cell D3 FX [N, CFC_60]	B-231
224	Barrier Load Cell D4 FX [N, CFC_60]	B-232
225	Barrier Load Cell D5 FX [N, CFC_60]	B-233
226	Barrier Load Cell D6 FX [N, CFC_60]	B-234
227	Barrier Load Cell C2 FY [N, CFC_60]	B-235
228	Barrier Load Cell C3 FY [N, CFC_60]	B-236
229	Barrier Load Cell C4 FY [N, CFC_60]	B-237
230	Barrier Load Cell C5 FY [N, CFC_60]	B-238
231	Barrier Load Cell C6 FY [N, CFC_60]	B-239
232	Barrier Load Cell C1 FX [N, CFC_60]	B-240
233	Barrier Load Cell C2 FX [N, CFC_60]	B-241
234	Barrier Load Cell C3 FX [N, CFC_60]	B-242
235	Barrier Load Cell C4 FX [N, CFC_60]	B-243
236	Barrier Load Cell C5 FX [N, CFC_60]	B-244
237	Barrier Load Cell C6 FX [N, CFC_60]	B-245
238	Barrier Load Cell B3 FY [N, CFC_60]	B-246
239	Barrier Load Cell B4 FY [N, CFC_60]	B-247
240	Barrier Load Cell B5 FY [N, CFC_60]	B-248
241	Barrier Load Cell B6 FY [N, CFC_60]	B-249
242	Barrier Load Cell B1 FX [N, CFC_60]	B-250
243	Barrier Load Cell B2 FX [N, CFC_60]	B-251
244	Barrier Load Cell B3 FX [N, CFC_60]	B-252
245	Barrier Load Cell B4 FX [N, CFC_60]	B-253
246	Barrier Load Cell B5 FX [N, CFC_60]	B-254
247	Barrier Load Cell B6 FX [N, CFC_60]	B-255
248	Barrier Load Cell A1 FX [N, CFC_60]	B-256
249	Barrier Load Cell A2 FX [N, CFC_60]	B-257
250	Barrier Load Cell A3 FX [N, CFC_60]	B-258
251	Barrier Load Cell A4 FX [N, CFC_60]	B-259
252	Barrier Load Cell A5 FX [N, CFC_60]	B-260
253	Barrier Load Cell A6 FX [N, CFC_60]	B-261
254	Barrier Load Cell UH1 TL FX [N, CFC_60]	B-262
255	Barrier Load Cell UH2 TR FX [N, CFC_60]	B-263
256	Barrier Load Cell UH3 CL FX [N, CFC_60]	B-264
257	Barrier Load Cell UH4 BL FX [N, CFC_60]	B-265
258	Barrier Load Cell UH5 BR FX [N, CFC_60]	B-266

40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Head 9 Array X Arm Ay

Max: 9.8 [g] at 0.208 [s]

Min: -13.1 [g] at 0.122 [s]

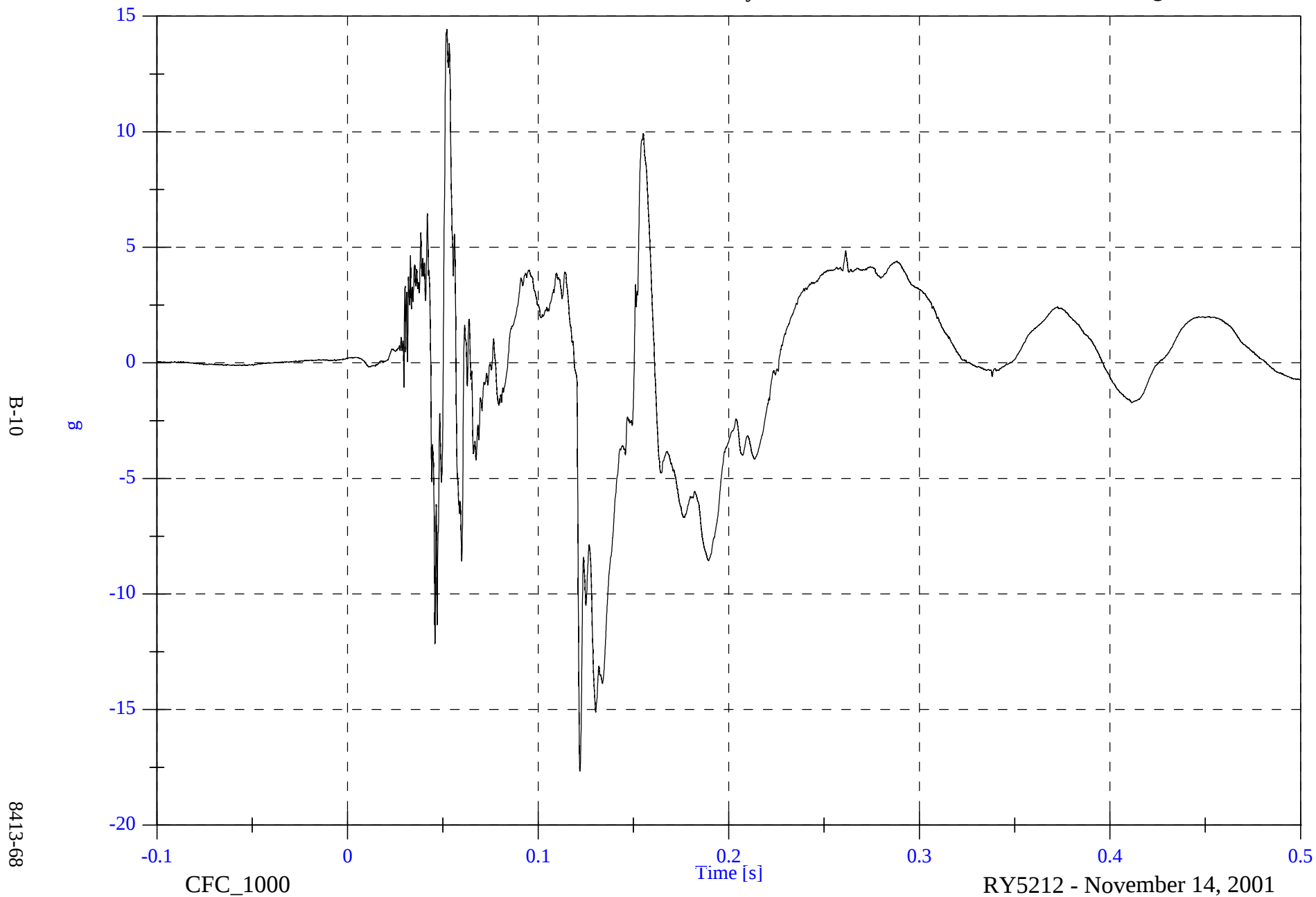


40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Head 9 Array X Arm Az

Max: 14.4 [g] at 0.052 [s]

Min: -17.7 [g] at 0.122 [s]

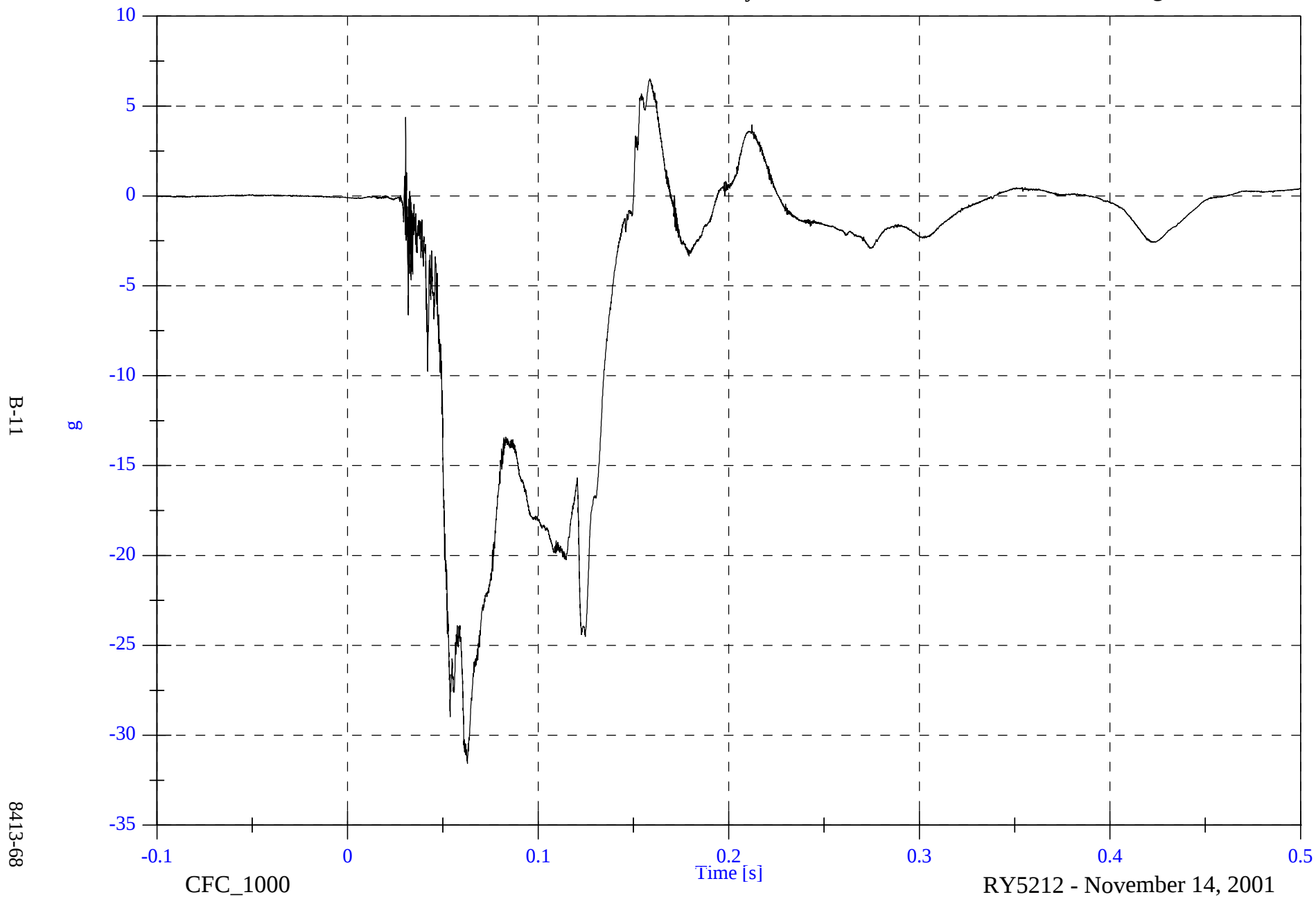


40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Head 9 Array Y Arm Ax

Max: 6.5 [g] at 0.159 [s]

Min: -31.6 [g] at 0.063 [s]



40% Frontal Offset Test #12 - 2000 Nissan Quest

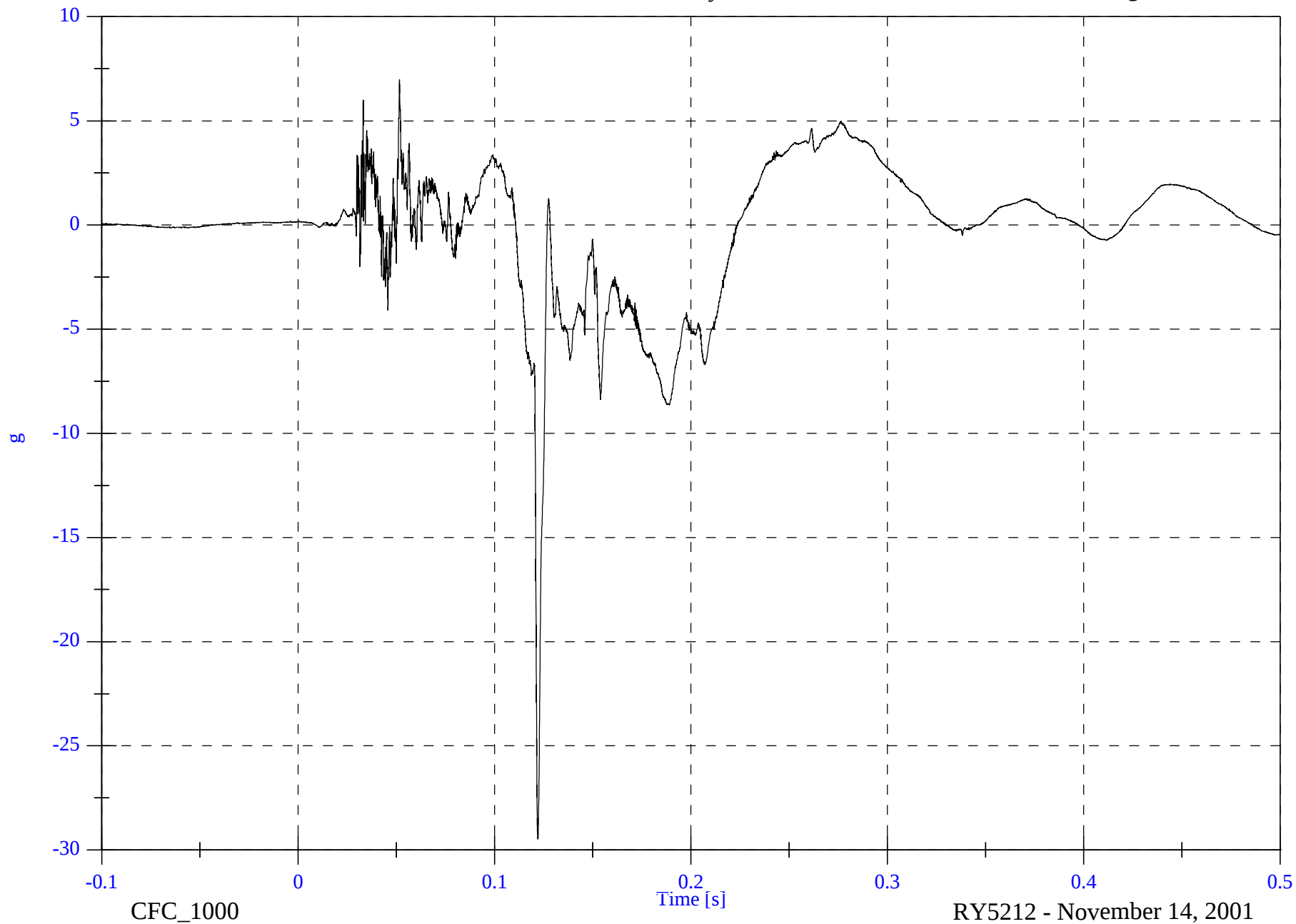
P1 Head 9 Array Y Arm Az

Max: 7.0 [g] at 0.052 [s]

Min: -29.5 [g] at 0.122 [s]

B-12

8413-68



40% Frontal Offset Test #12 - 2000 Nissan Quest

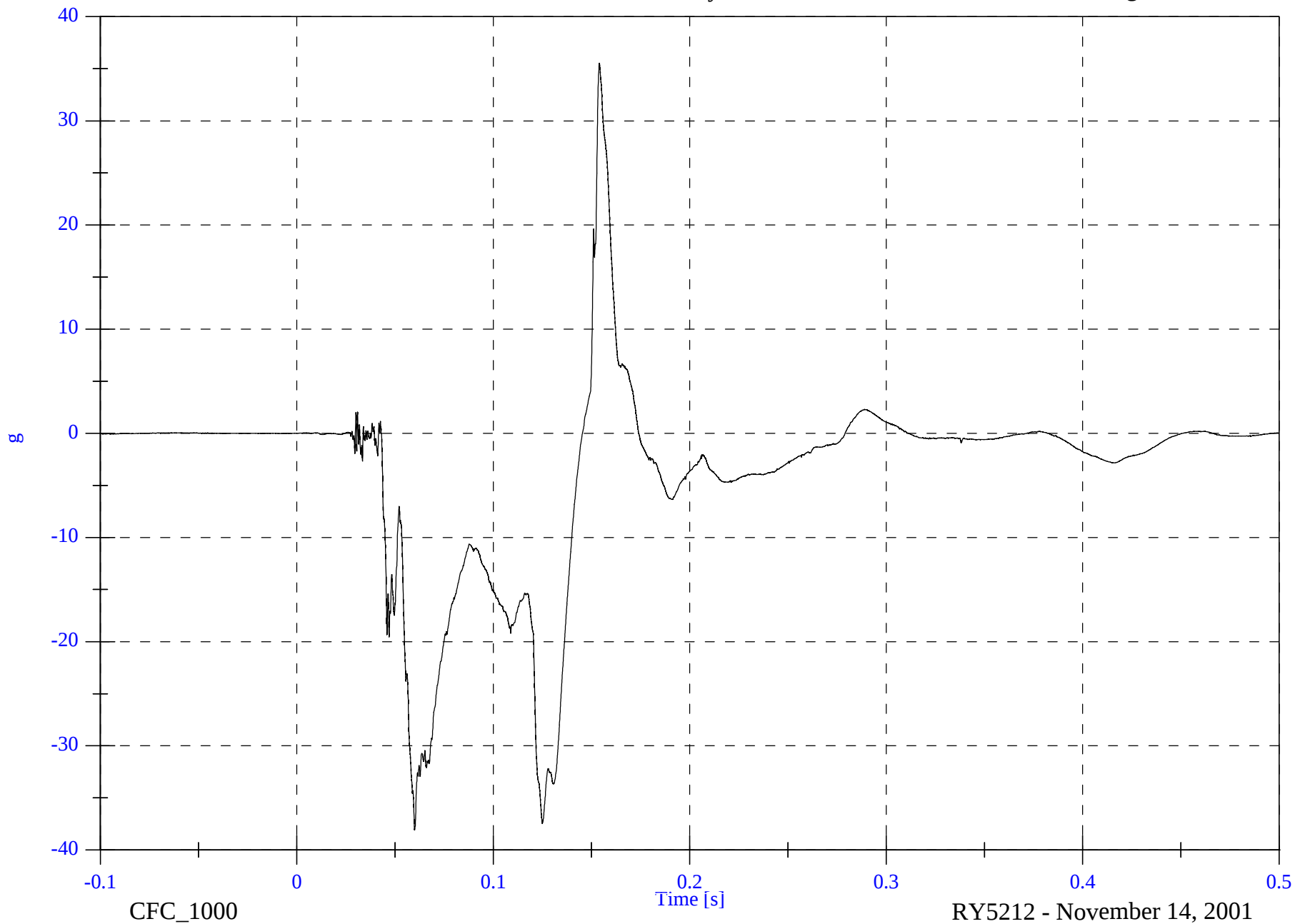
P1 Head 9 Array Z Arm Ax

Max: 35.5 [g] at 0.154 [s]

Min: -38.1 [g] at 0.060 [s]

B-13

8413-68

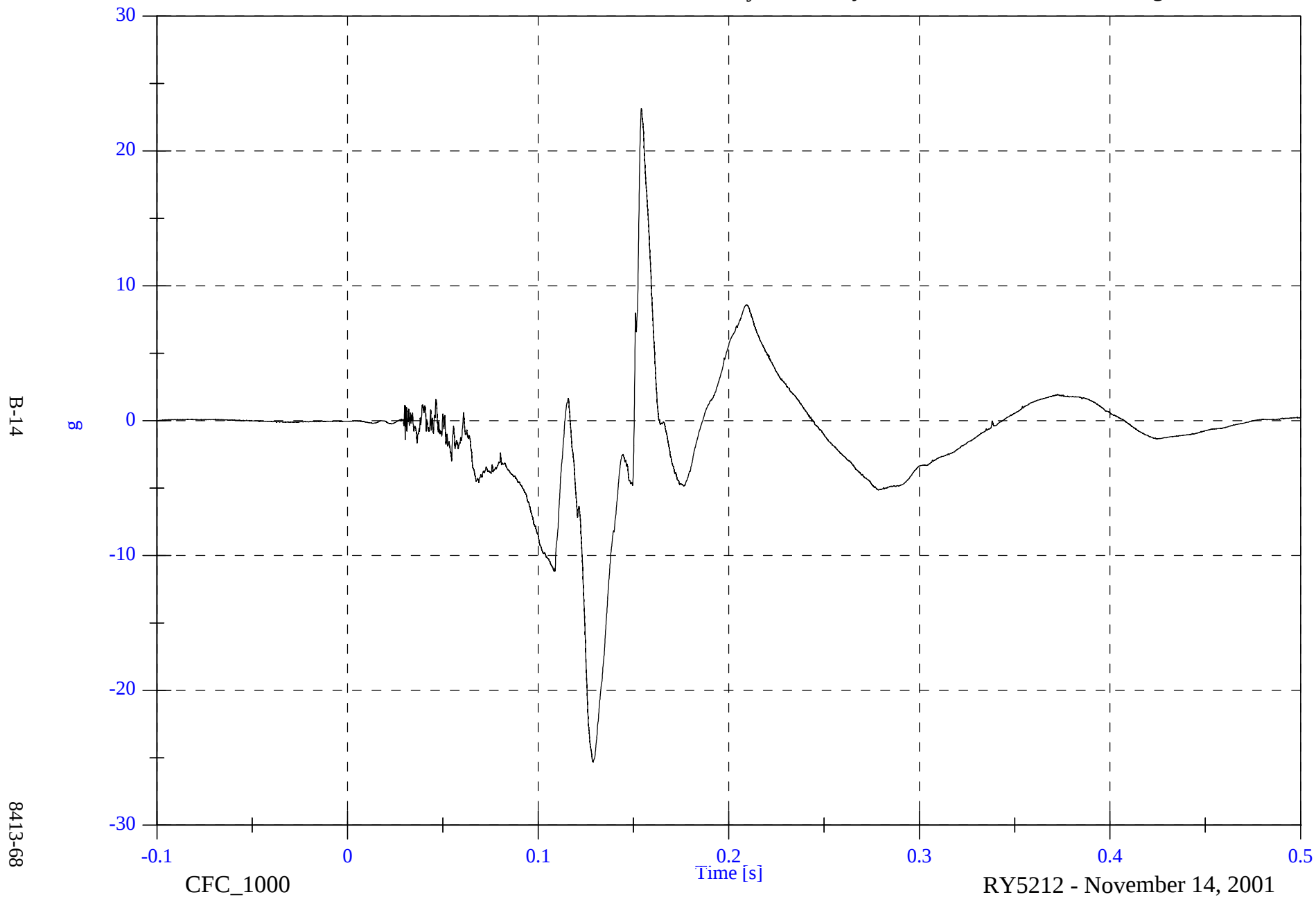


40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Head 9 Array Z Arm Ay

Max: 23.1 [g] at 0.154 [s]

Min: -25.3 [g] at 0.129 [s]



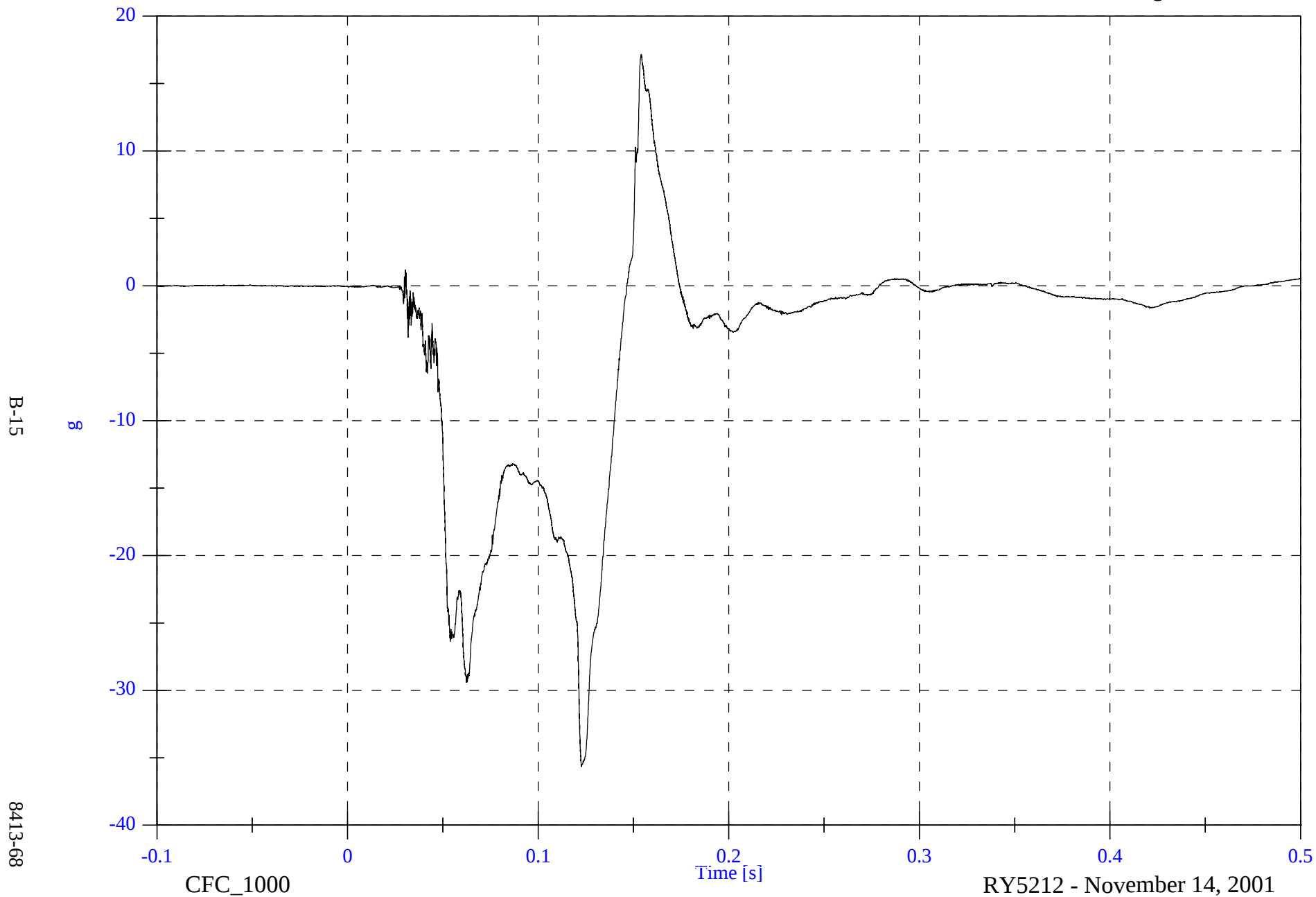
8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Head CG Ax

Max: 17.2 [g] at 0.154 [s]

Min: -35.7 [g] at 0.123 [s]

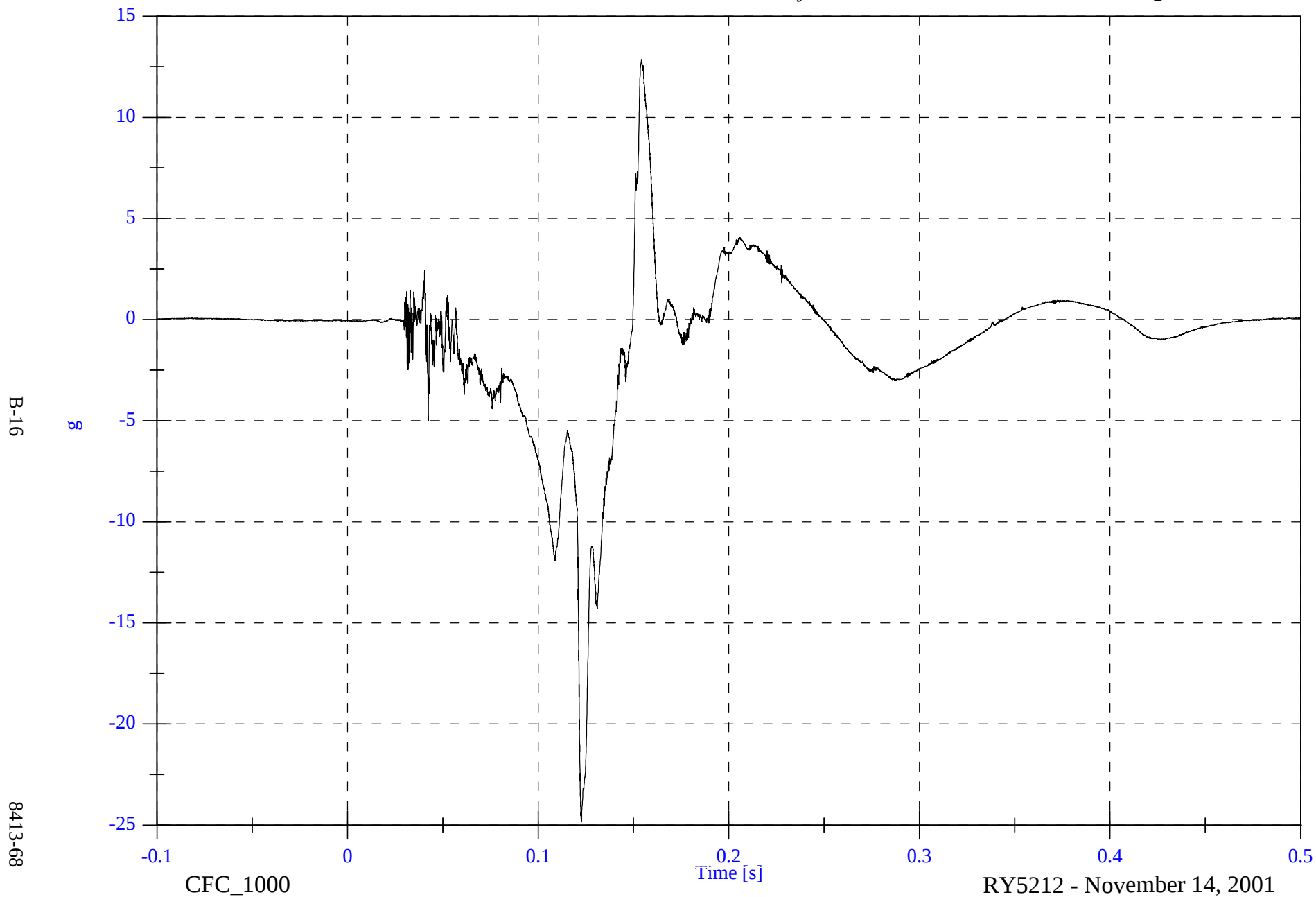


40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Head CG Ay

Max: 12.9 [g] at 0.154 [s]

Min: -24.8 [g] at 0.123 [s]

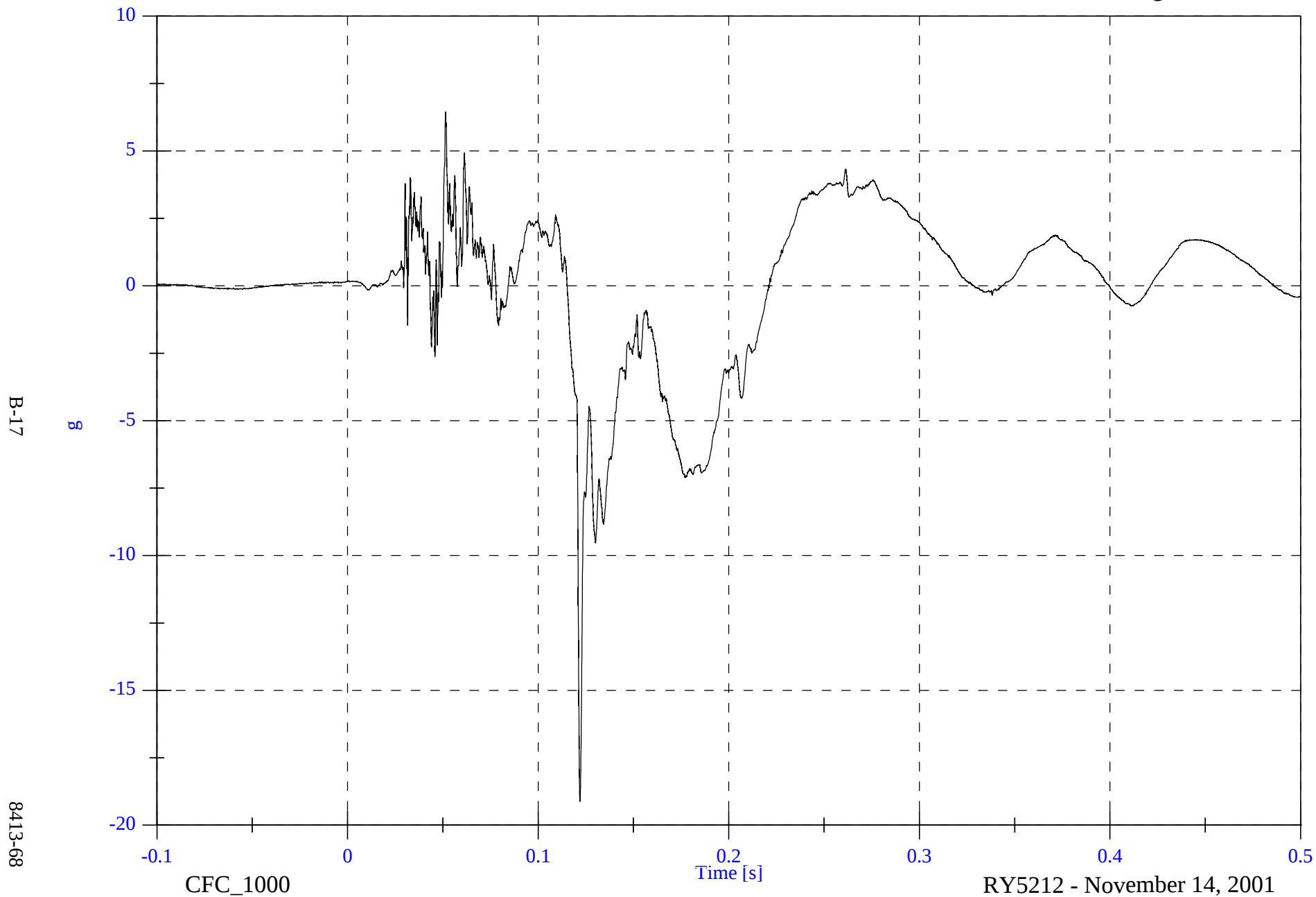


40% Frontal Offset Test #12 - 2000 Nissan Quest

Max: 6.5 [g] at 0.051 [s]

P1 Head CG Az

Min: -19.1 [g] at 0.122 [s]



40% Frontal Offset Test #12 - 2000 Nissan Quest

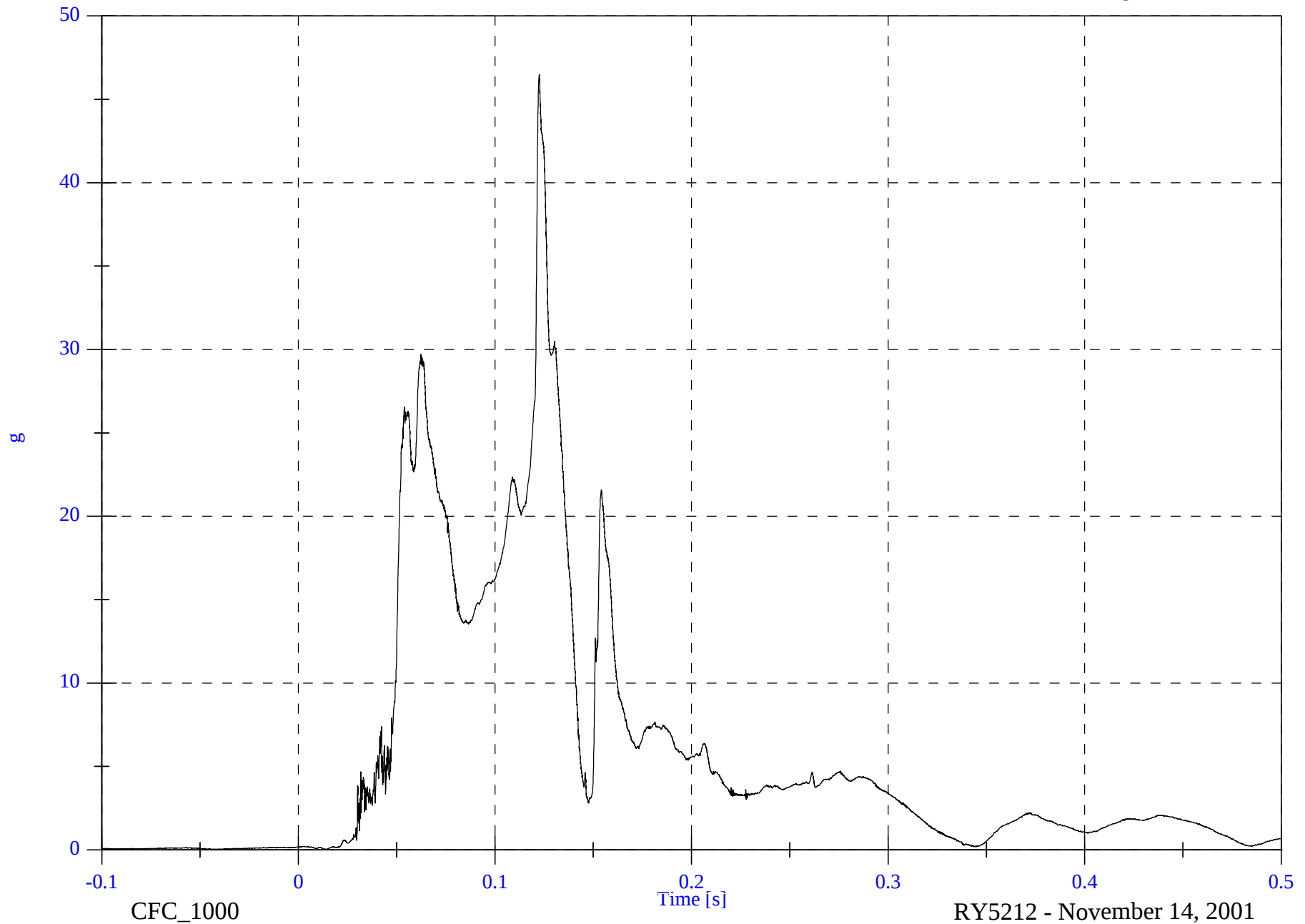
P1 Head CG A Resultant

Max: 46.5 [g] at 0.123 [s]

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

B-18

8413-68

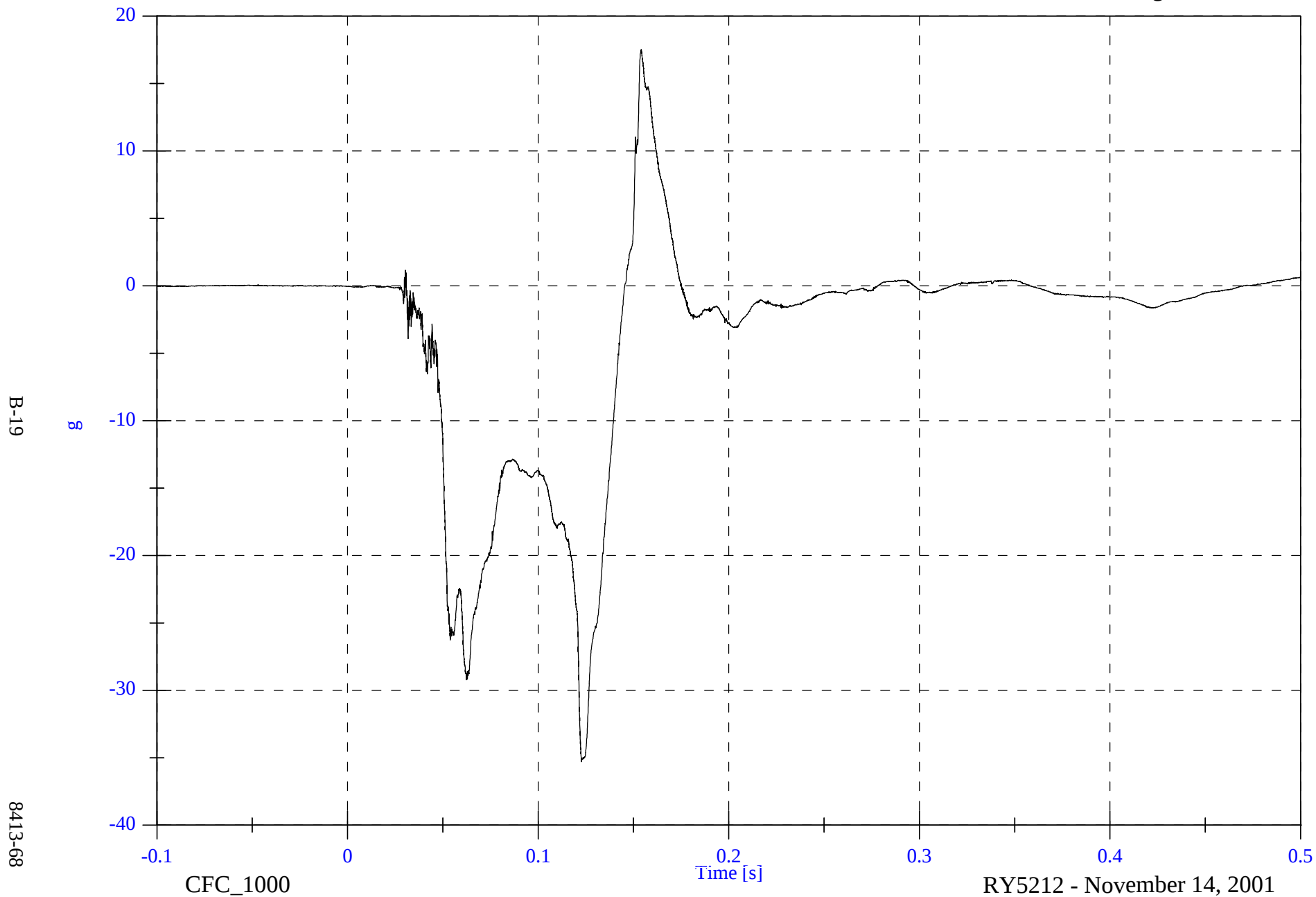


40% Frontal Offset Test #12 - 2000 Nissan Quest

Max: 17.5 [g] at 0.154 [s]

P1 Head CG Red Ax

Min: -35.3 [g] at 0.123 [s]

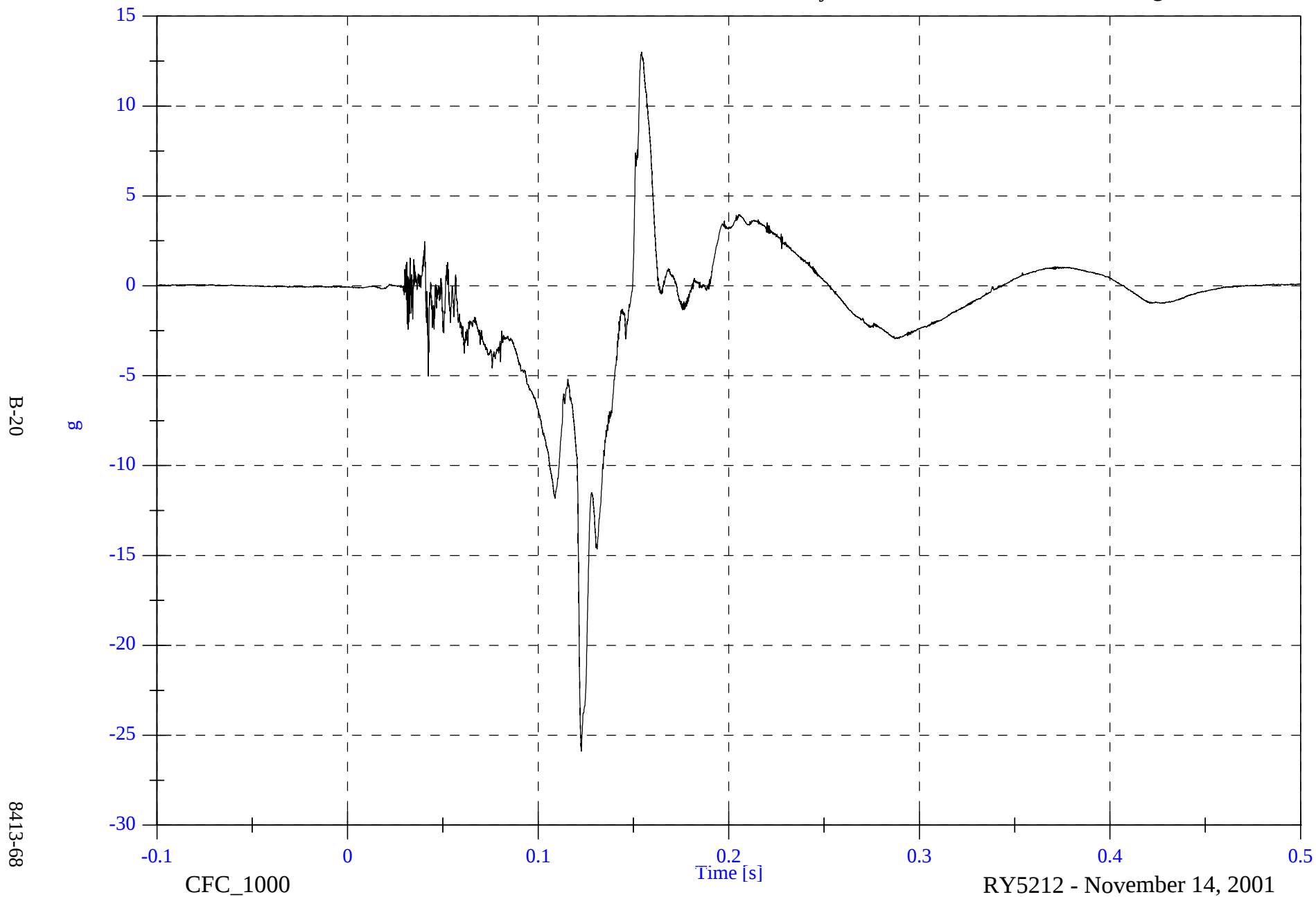


40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Head CG Red Ay

Max: 13.0 [g] at 0.154 [s]

Min: -25.9 [g] at 0.123 [s]



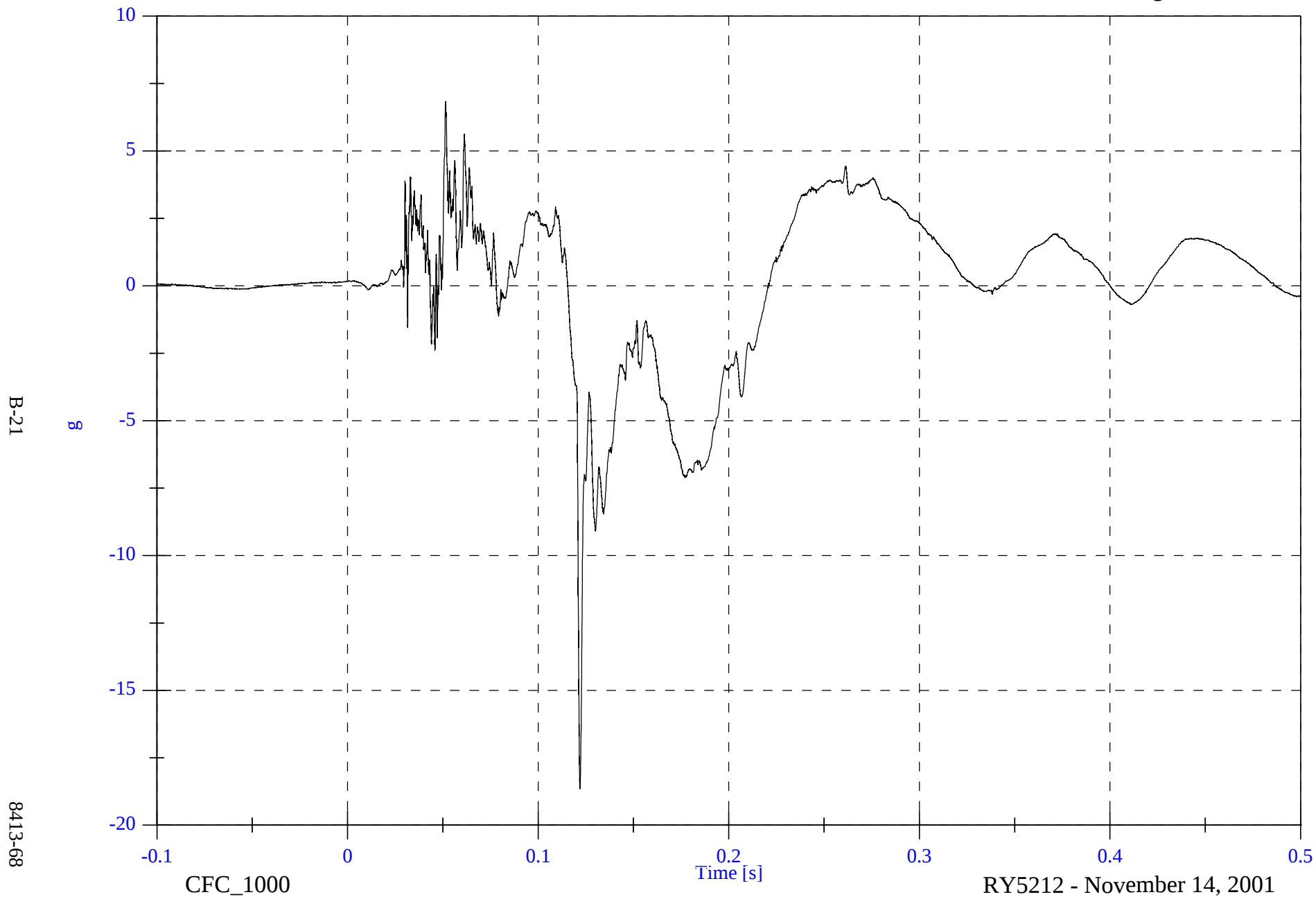
8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Head CG Red Az

Max: 6.8 [g] at 0.051 [s]

Min: -18.7 [g] at 0.122 [s]

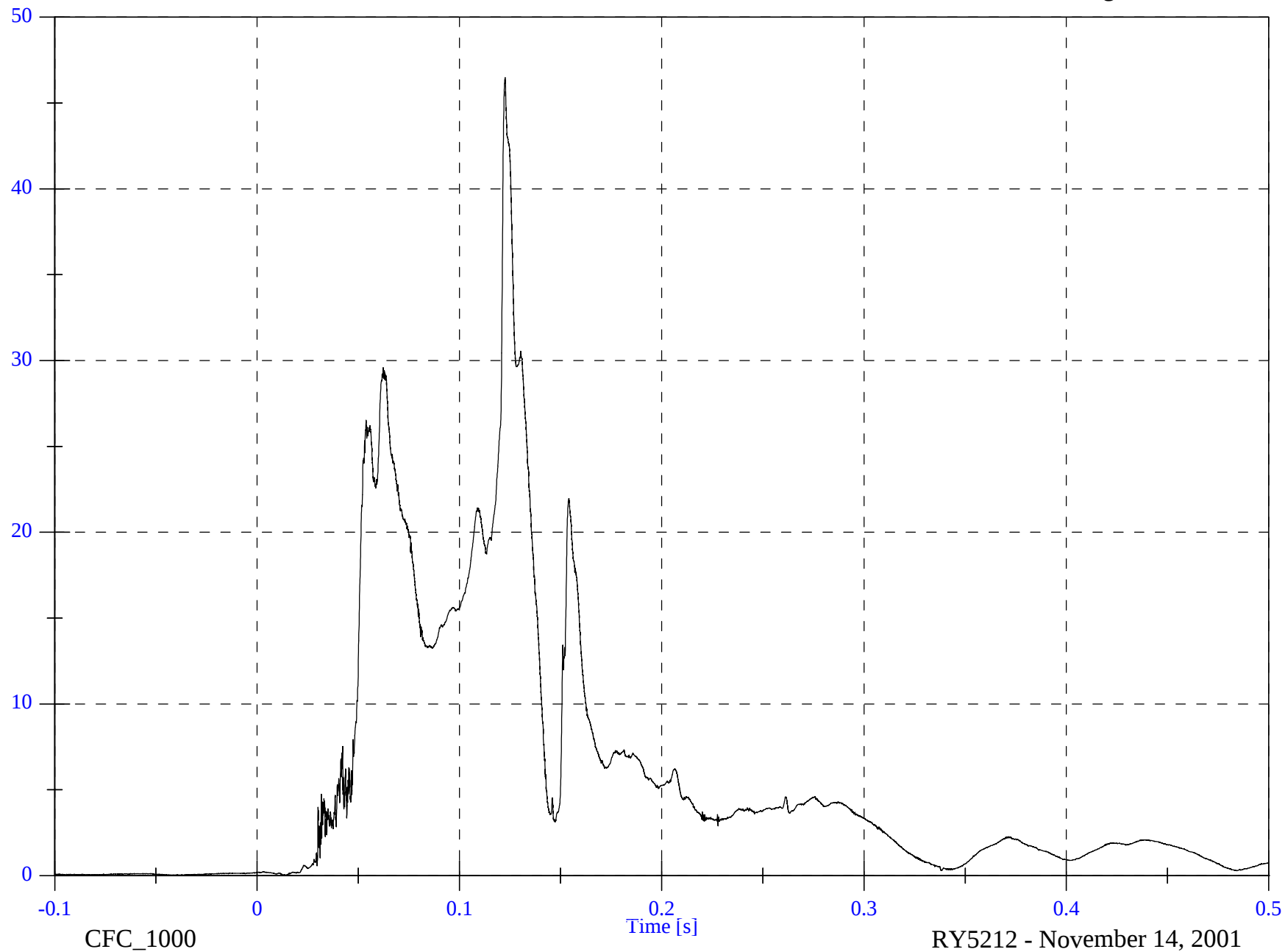


40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Head CG Red A Resultant

Max: 46.5 [g] at 0.123 [s]

Min: 0.0 [g] at 0.014 [s]



B-22

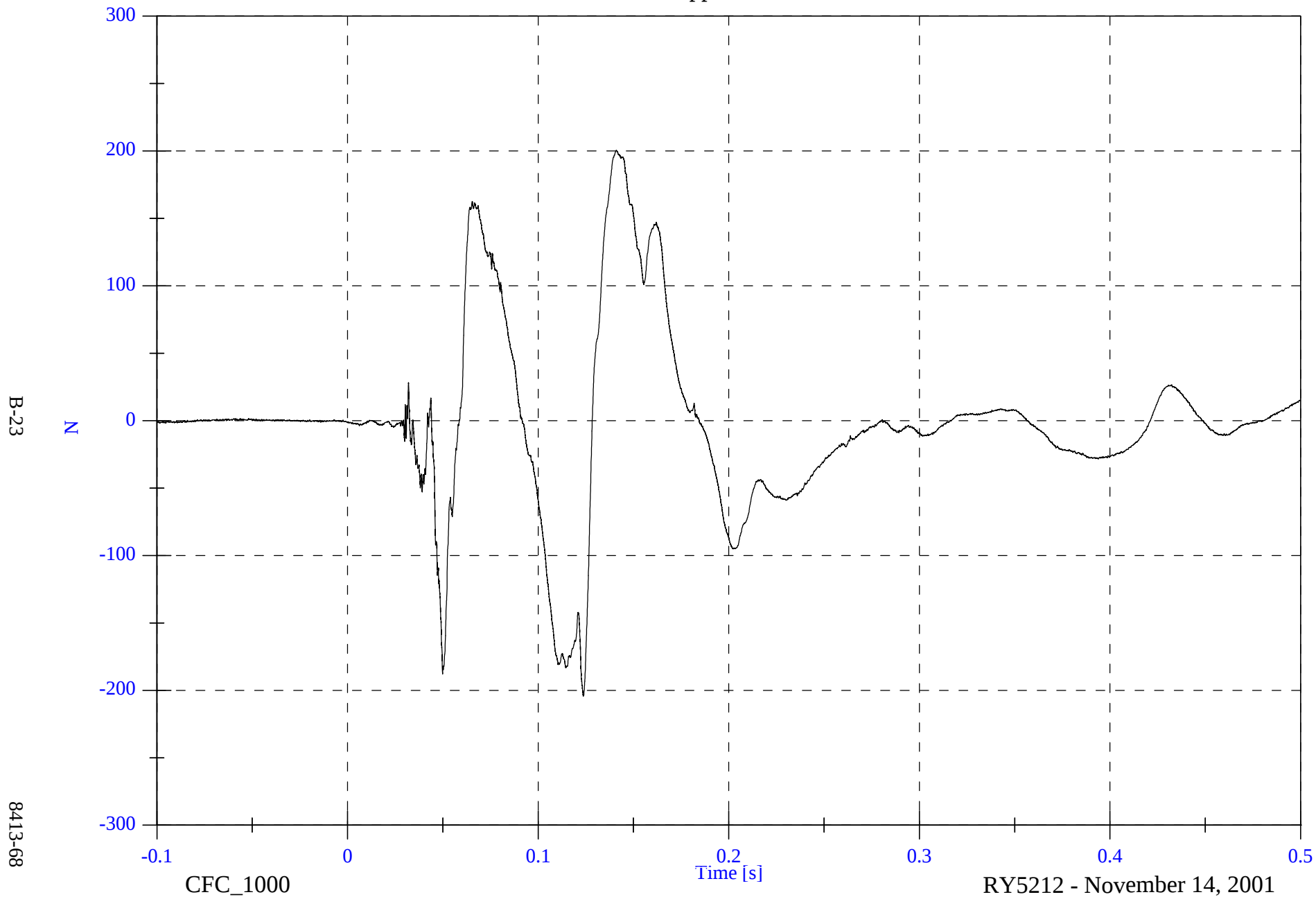
8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Upper Neck Fx

Max: 200.3 [N] at 0.141 [s]

Min: -204.2 [N] at 0.124 [s]

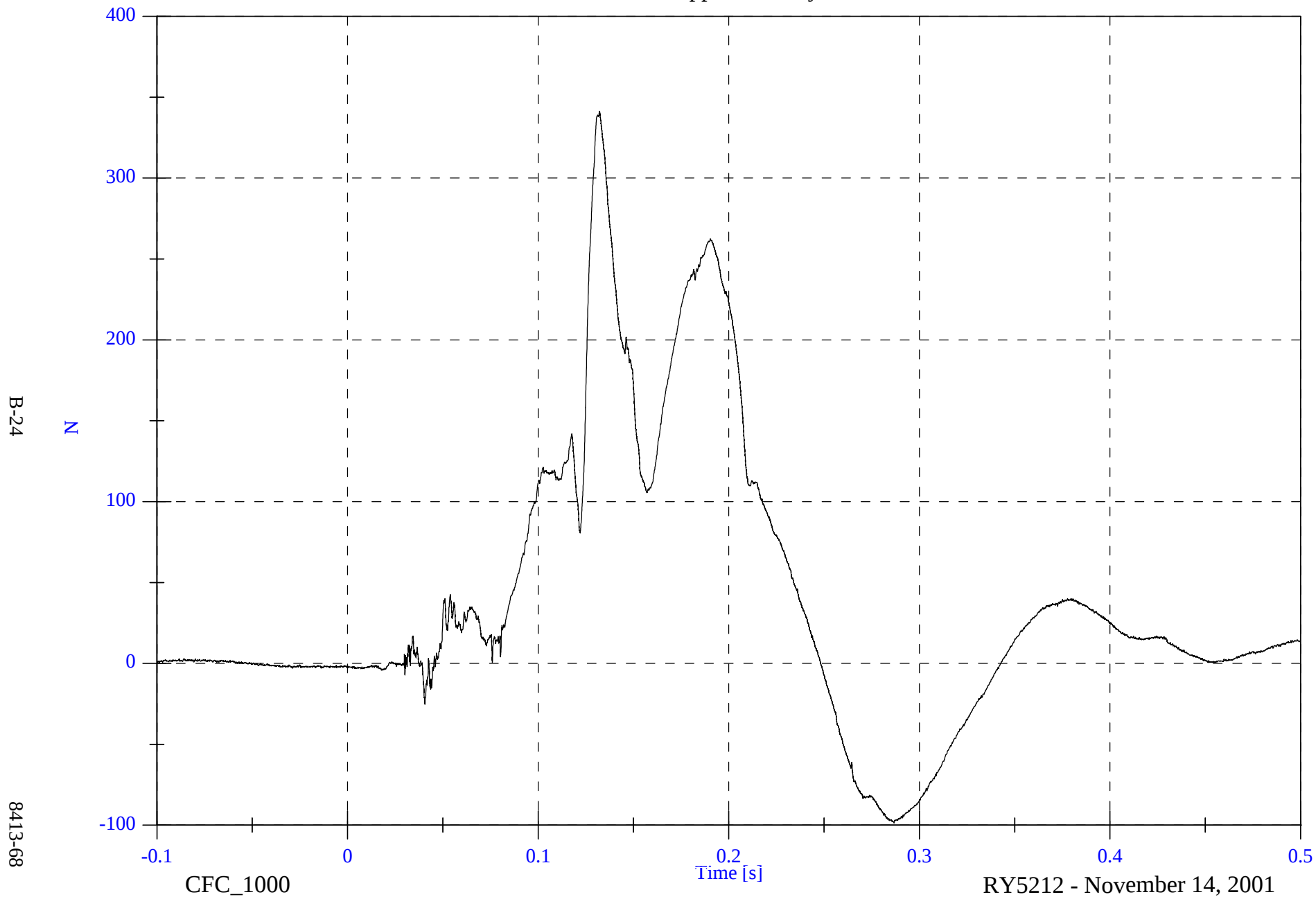


40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Upper Neck Fy

Max: 341.3 [N] at 0.132 [s]

Min: -98.6 [N] at 0.287 [s]

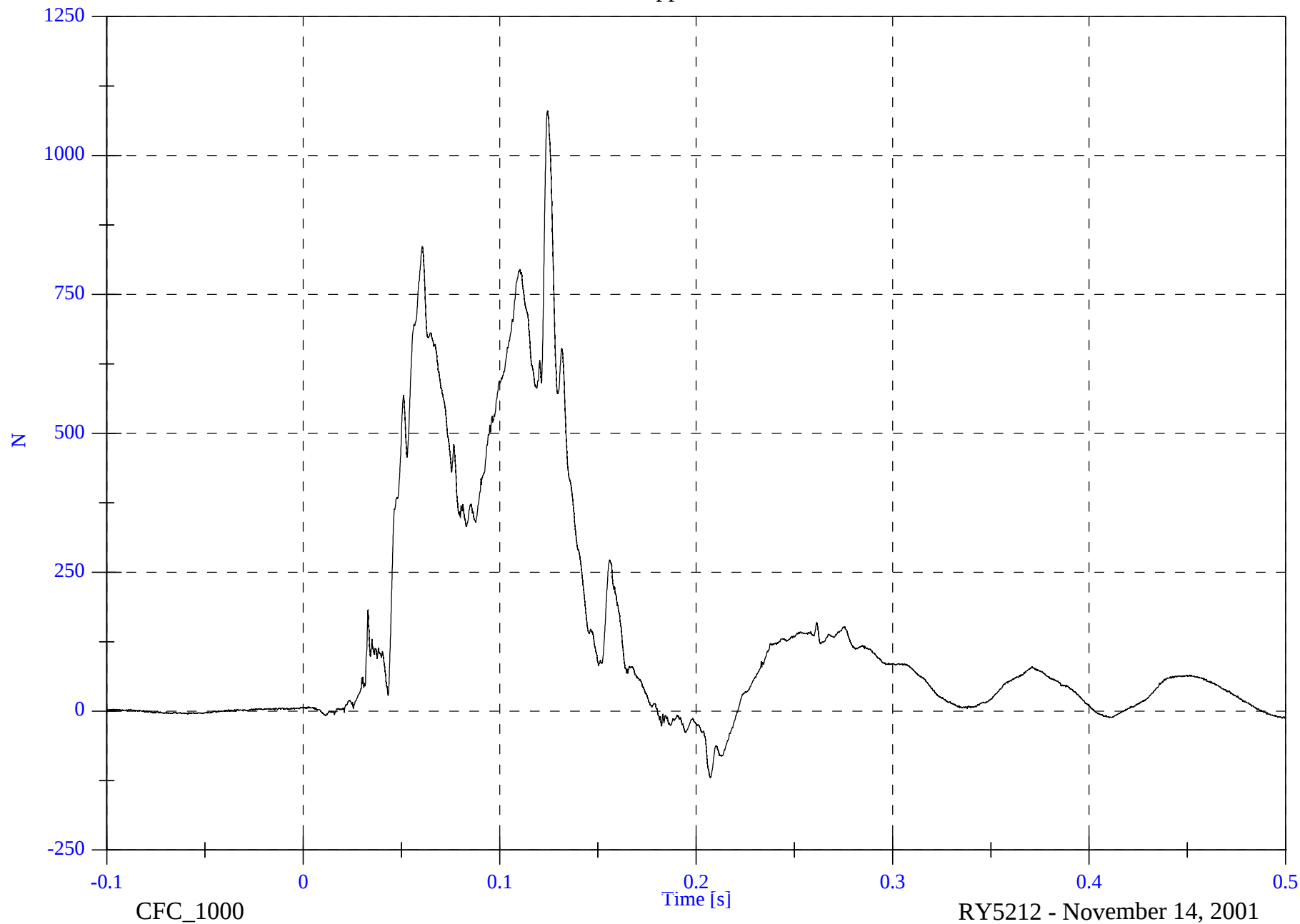


40% Frontal Offset Test #12 - 2000 Nissan Quest

Max: 1080.5 [N] at 0.124 [s]

P1 Upper Neck Fz

Min: -119.6 [N] at 0.207 [s]



B-25

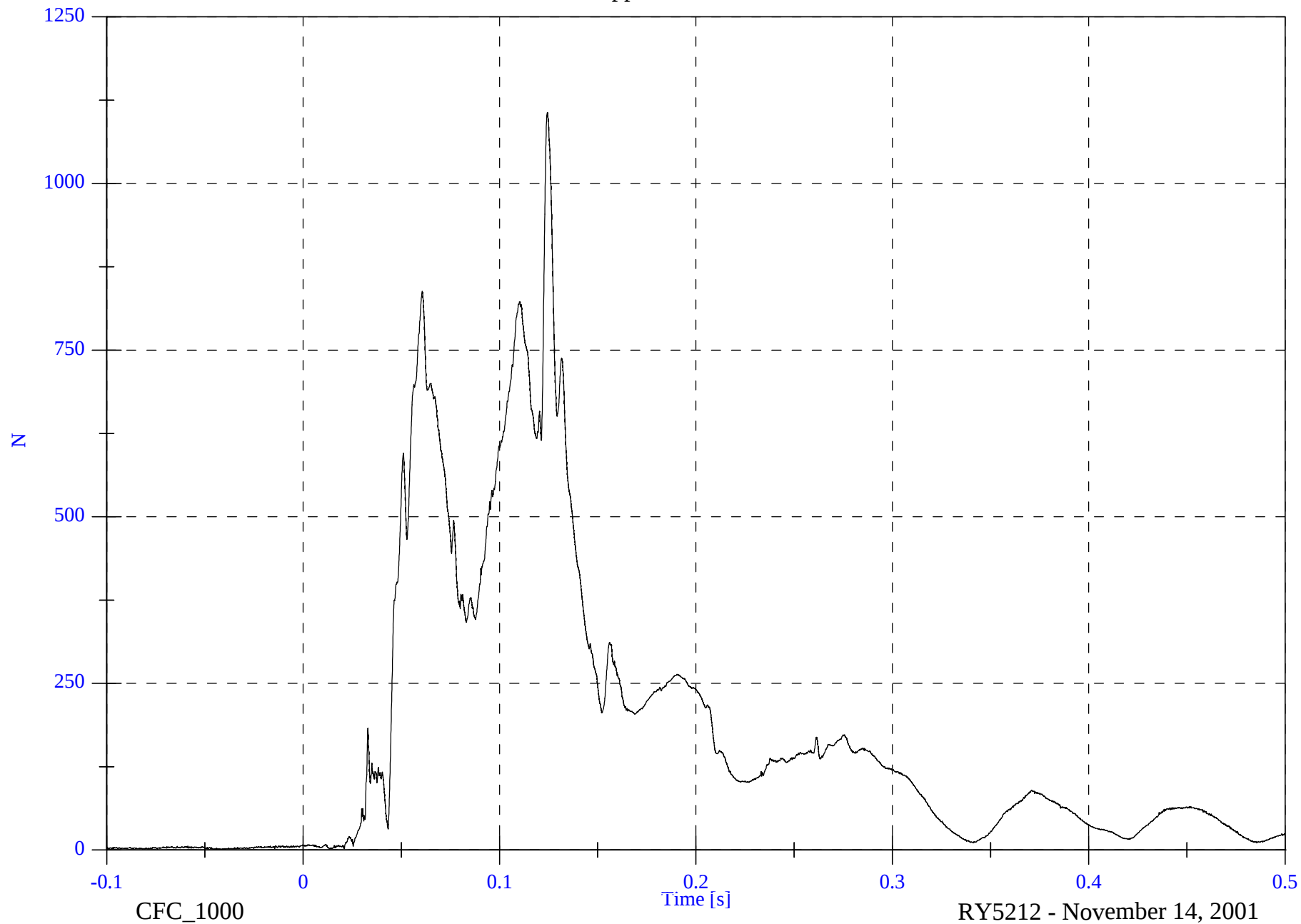
8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Upper Neck F Resultant

Max: 1106.2 [N] at 0.124 [s]

Min: 0.2 [N] at -0.046 [s]

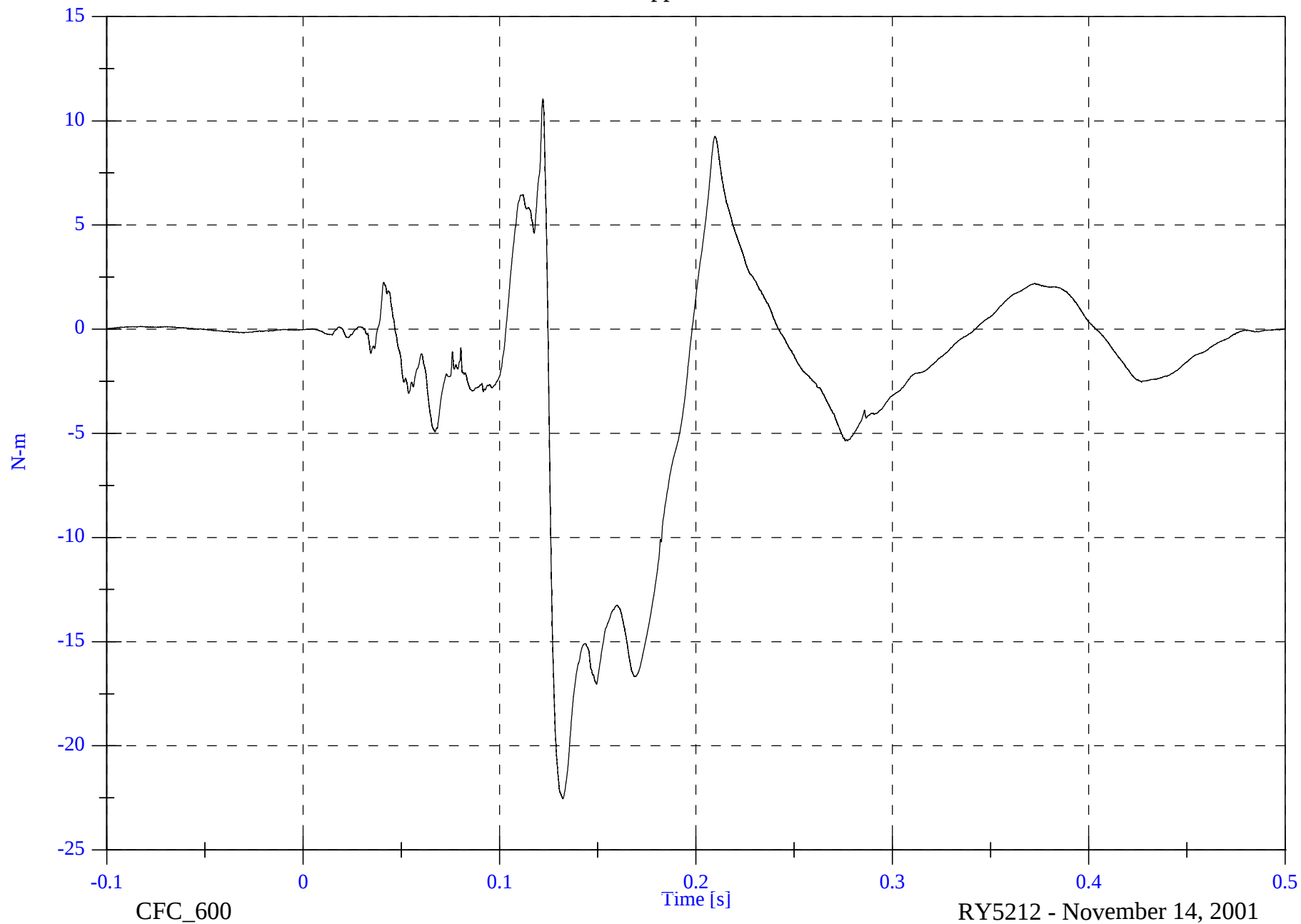


40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Upper Neck Mx

Max: 11.1 [N-m] at 0.122 [s]

Min: -22.5 [N-m] at 0.132 [s]



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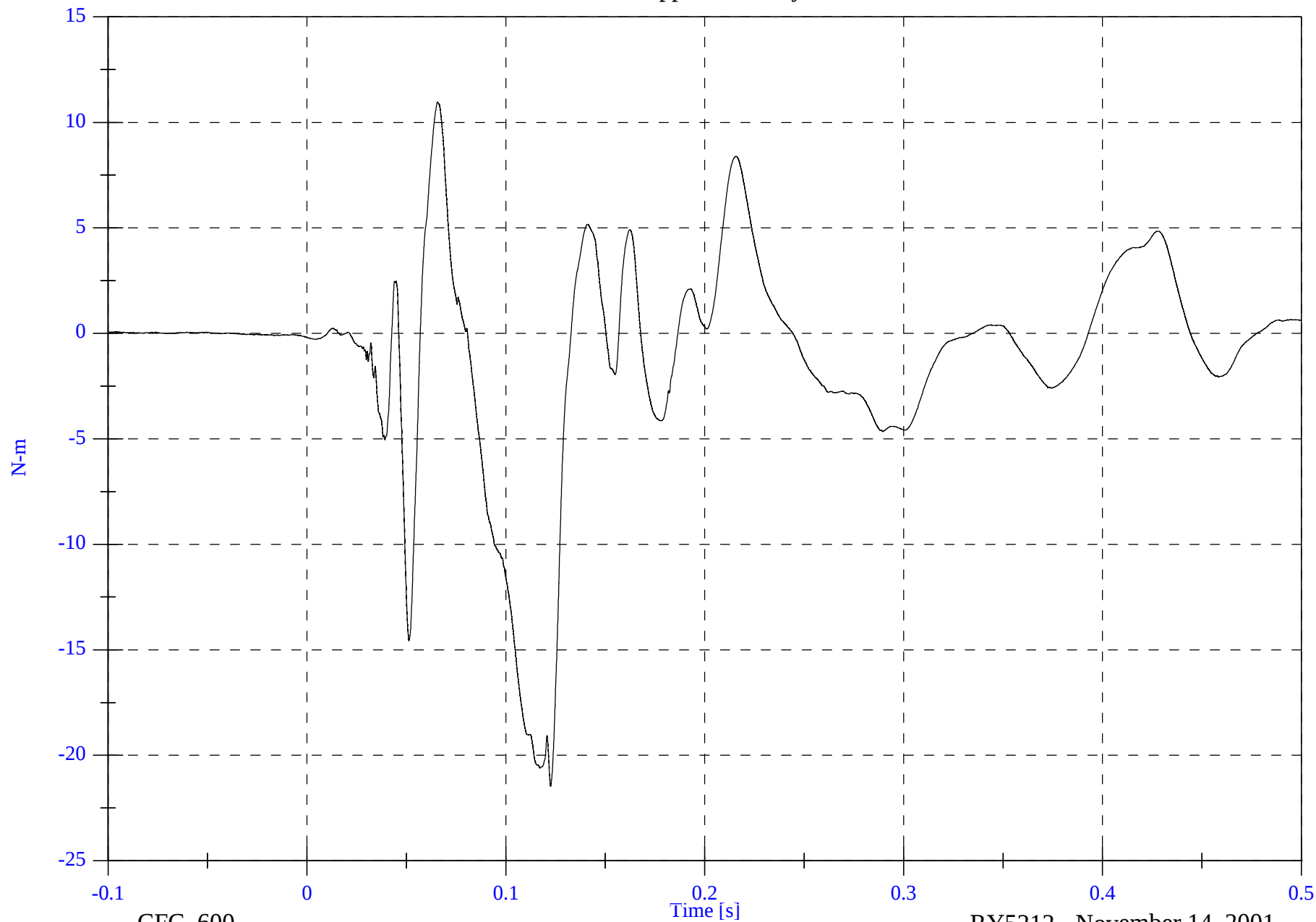
8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Upper Neck My

Max: 11.0 [N-m] at 0.066 [s]

Min: -21.5 [N-m] at 0.123 [s]



B-28

8413-68

CFC_600

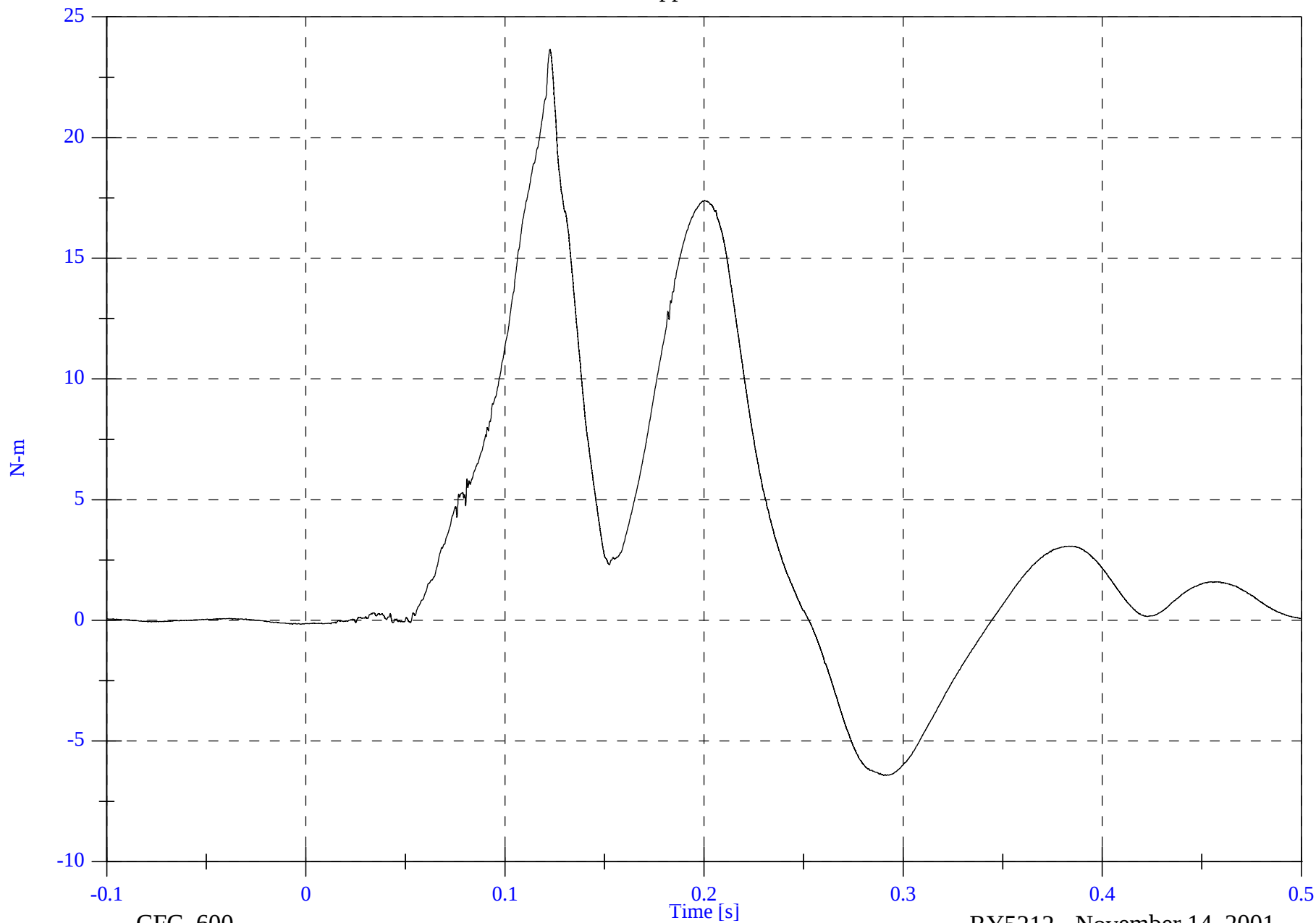
RY5212 - November 14, 2001

40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Upper Neck Mz

Max: 23.7 [N-m] at 0.123 [s]

Min: -6.4 [N-m] at 0.291 [s]



B-29

8413-68

CFC_600

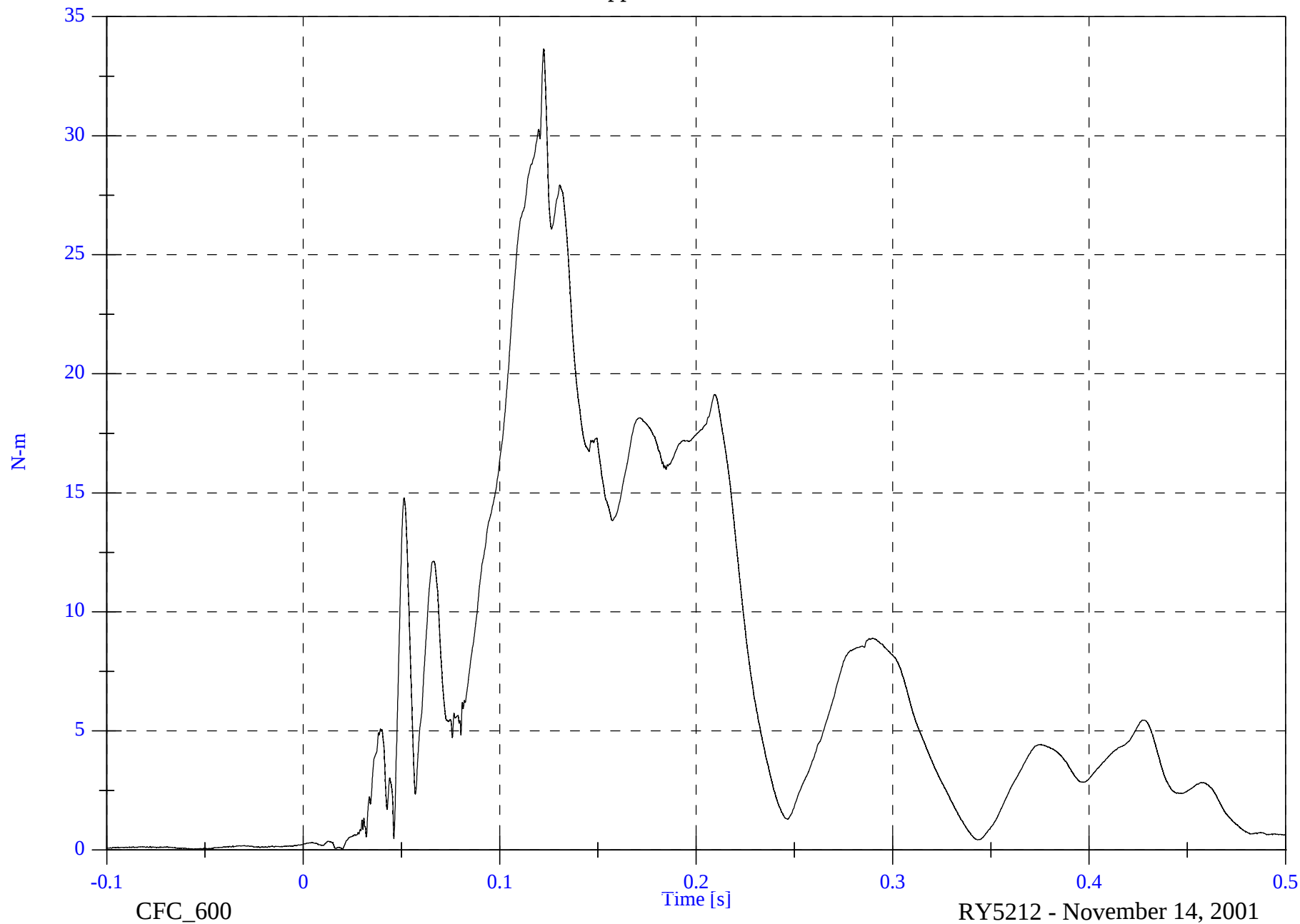
RY5212 - November 14, 2001

40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Upper Neck M Resultant

Max: 33.7 [N-m] at 0.122 [s]

Min: 0.0 [N-m] at -0.056 [s]



B-30

8413-68

CFC_600

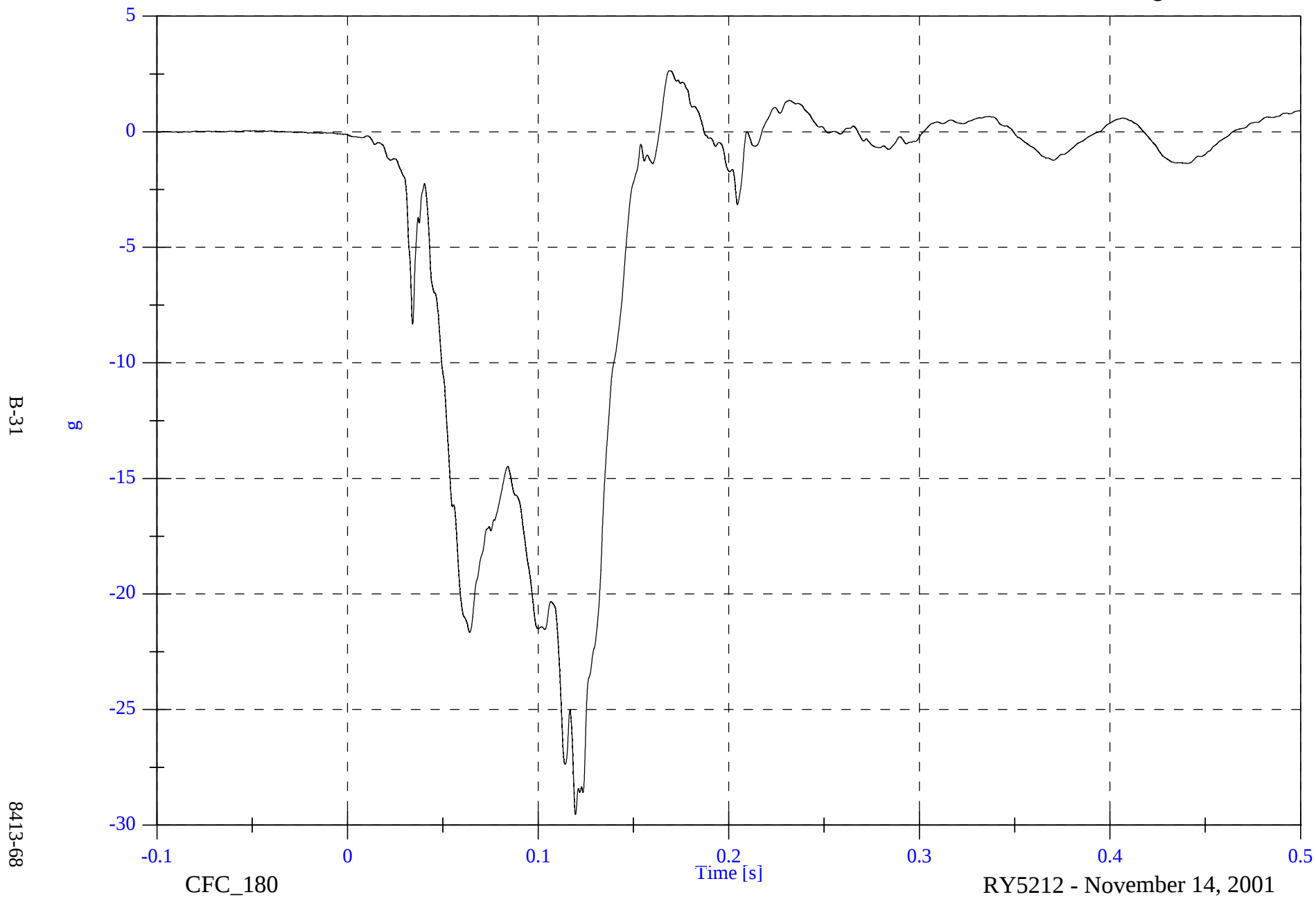
RY5212 - November 14, 2001

40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Chest Ax

Max: 2.6 [g] at 0.169 [s]

Min: -29.5 [g] at 0.120 [s]

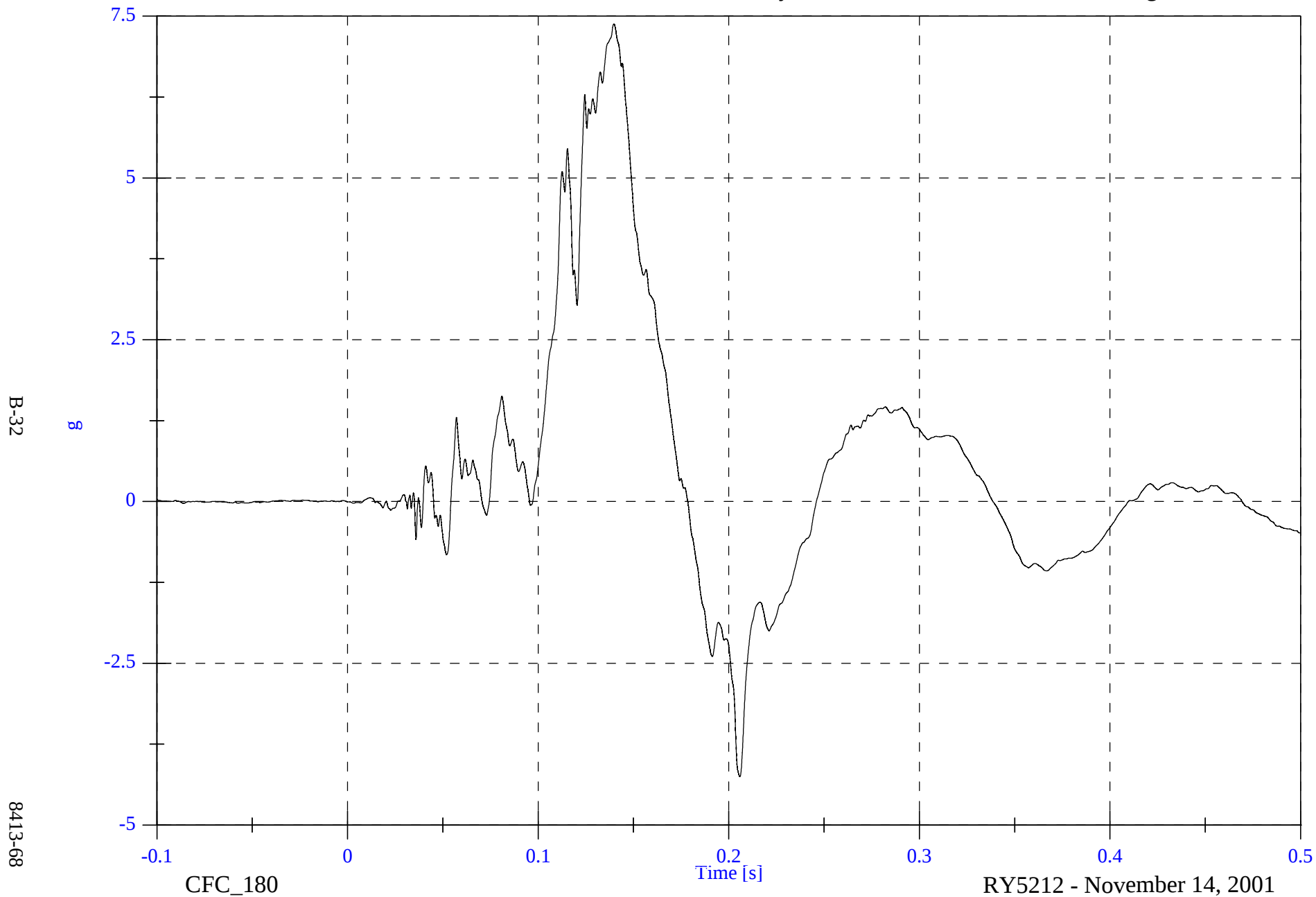


40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Chest Ay

Max: 7.4 [g] at 0.140 [s]

Min: -4.3 [g] at 0.206 [s]

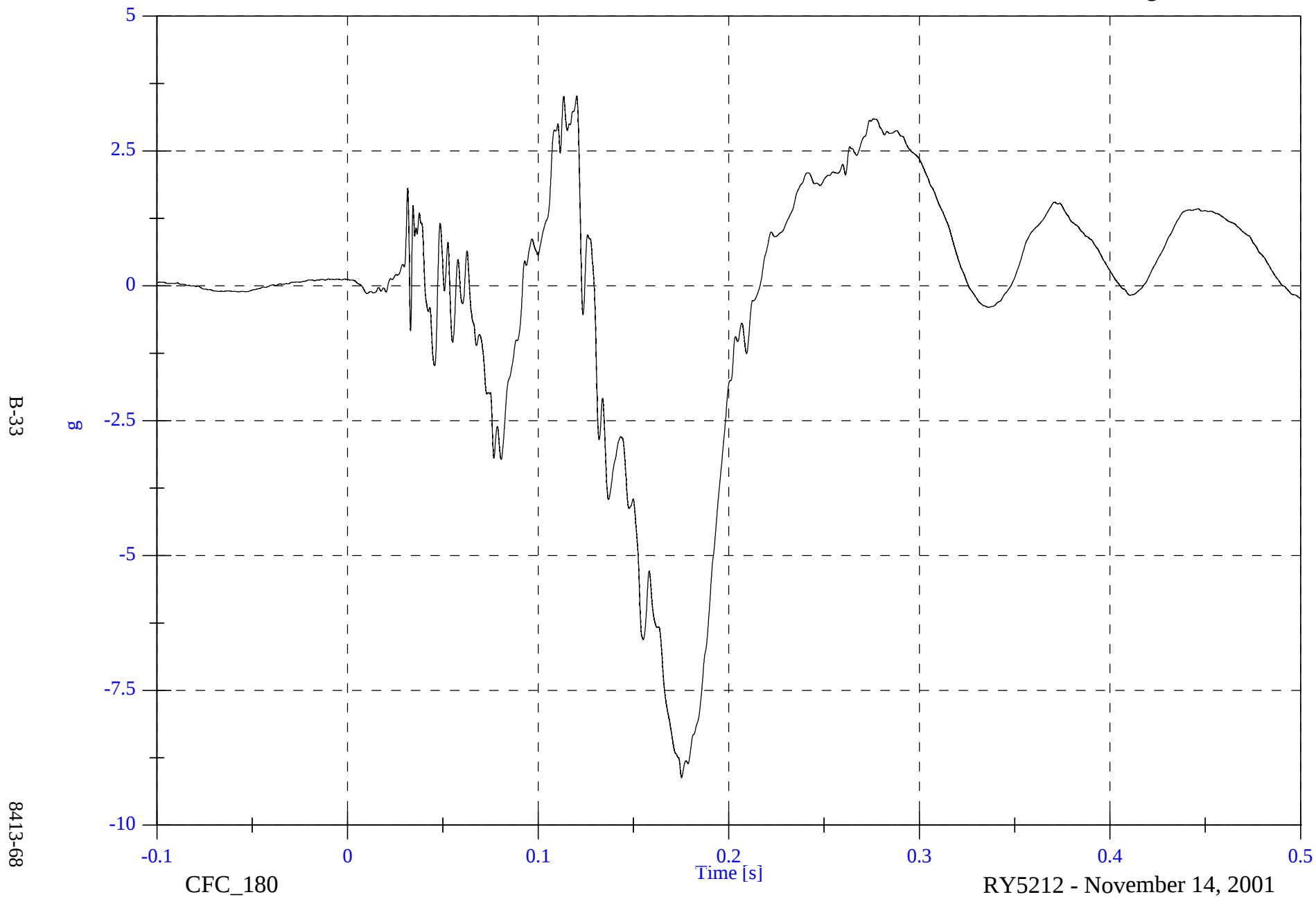


40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Chest Az

Max: 3.5 [g] at 0.120 [s]

Min: -9.1 [g] at 0.175 [s]



40% Frontal Offset Test #12 - 2000 Nissan Quest

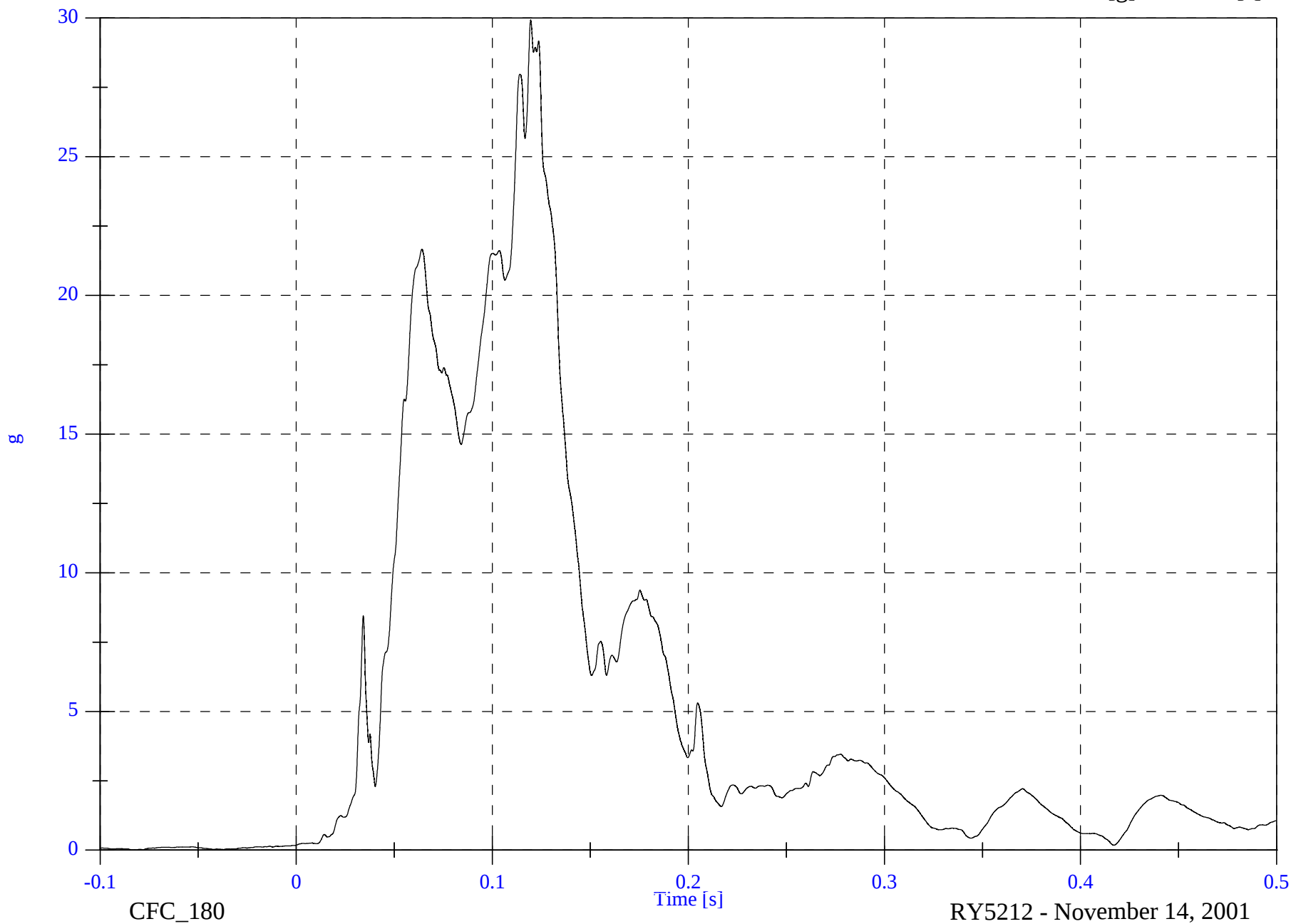
P1 Chest A Resultant

Max: 29.9 [g] at 0.120 [s]

Min: 0.0 [g] at -0.082 [s]

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8413-68

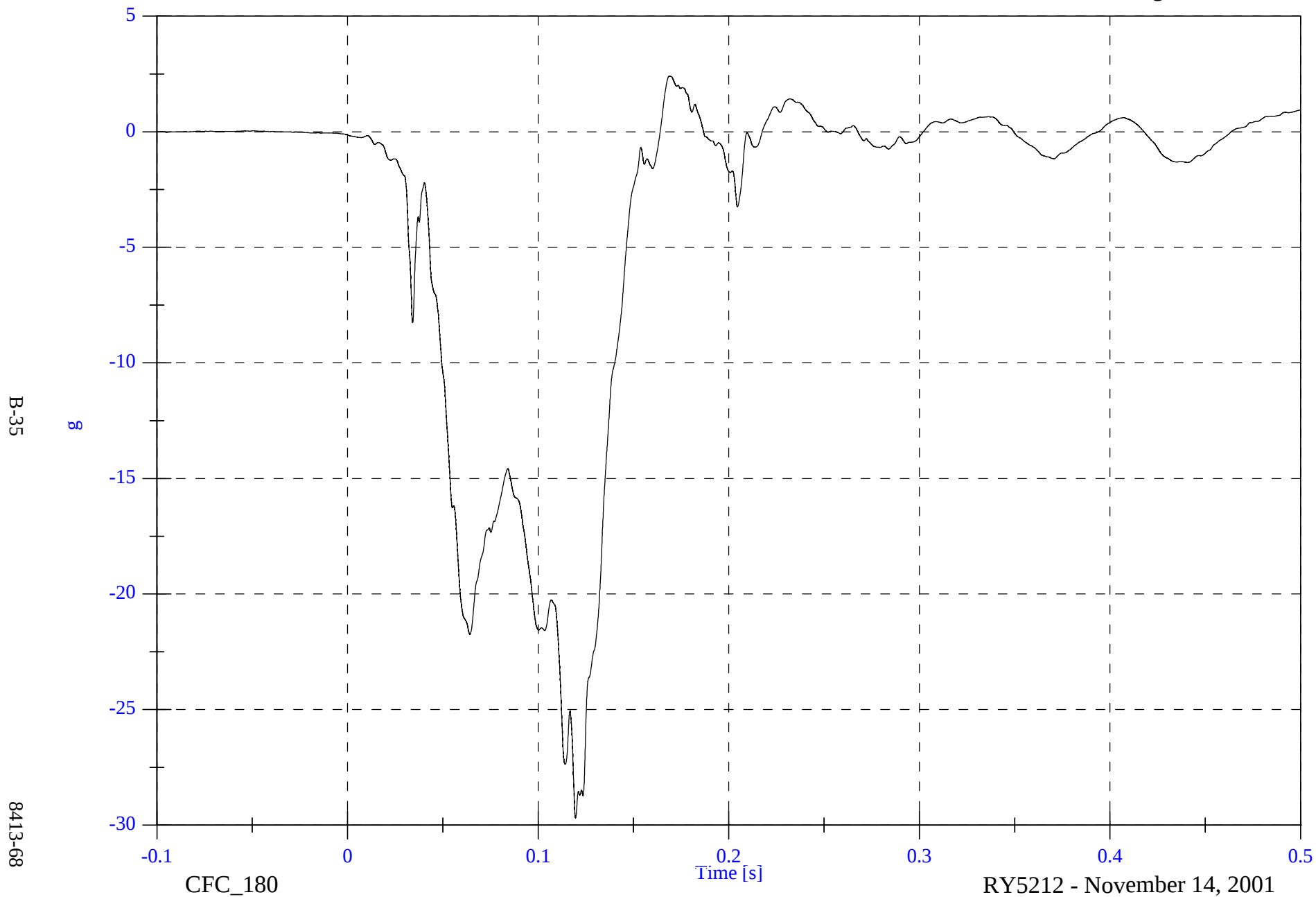


40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Chest Red Ax

Max: 2.4 [g] at 0.169 [s]

Min: -29.7 [g] at 0.120 [s]

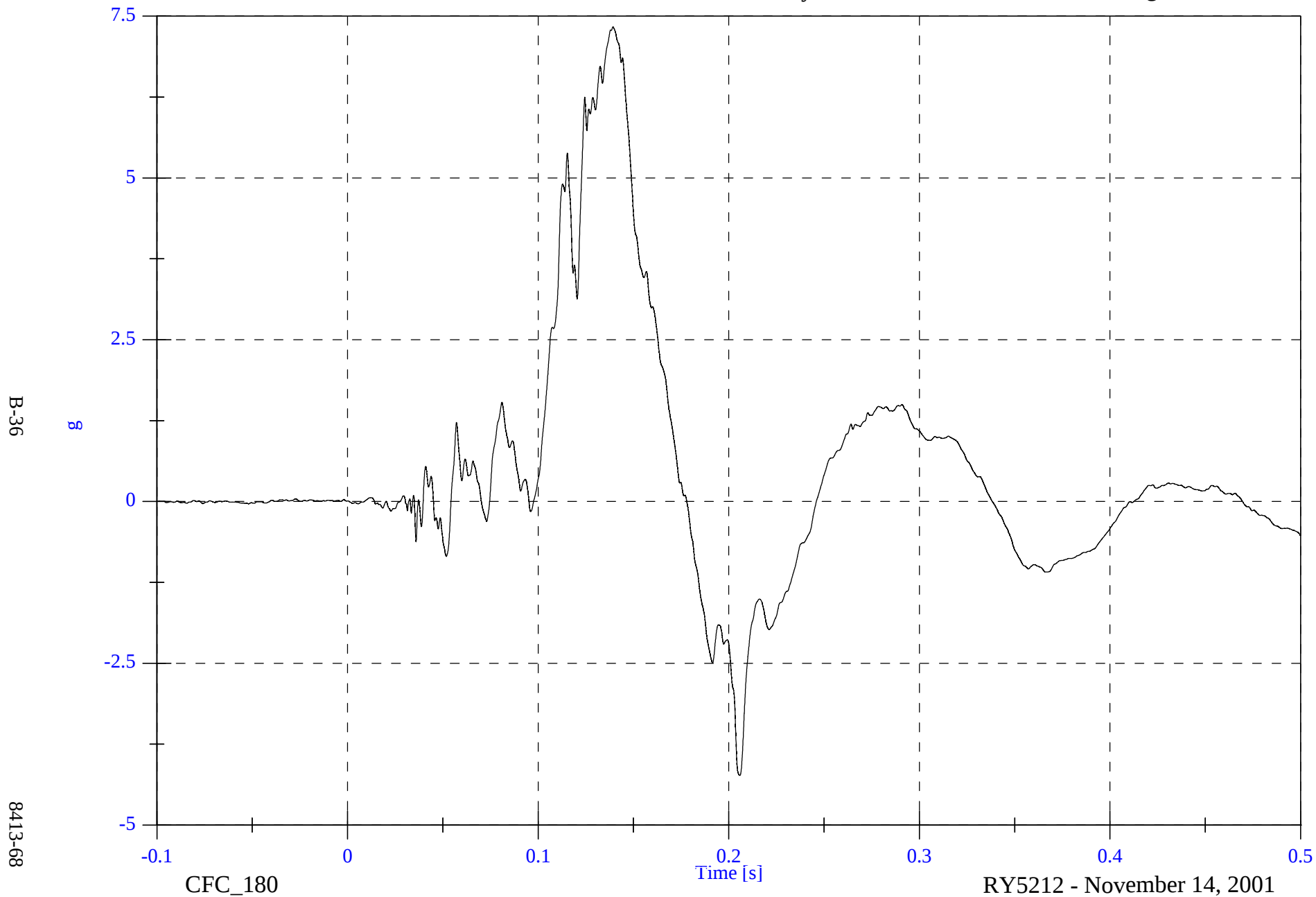


40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Chest Red Ay

Max: 7.3 [g] at 0.139 [s]

Min: -4.2 [g] at 0.206 [s]

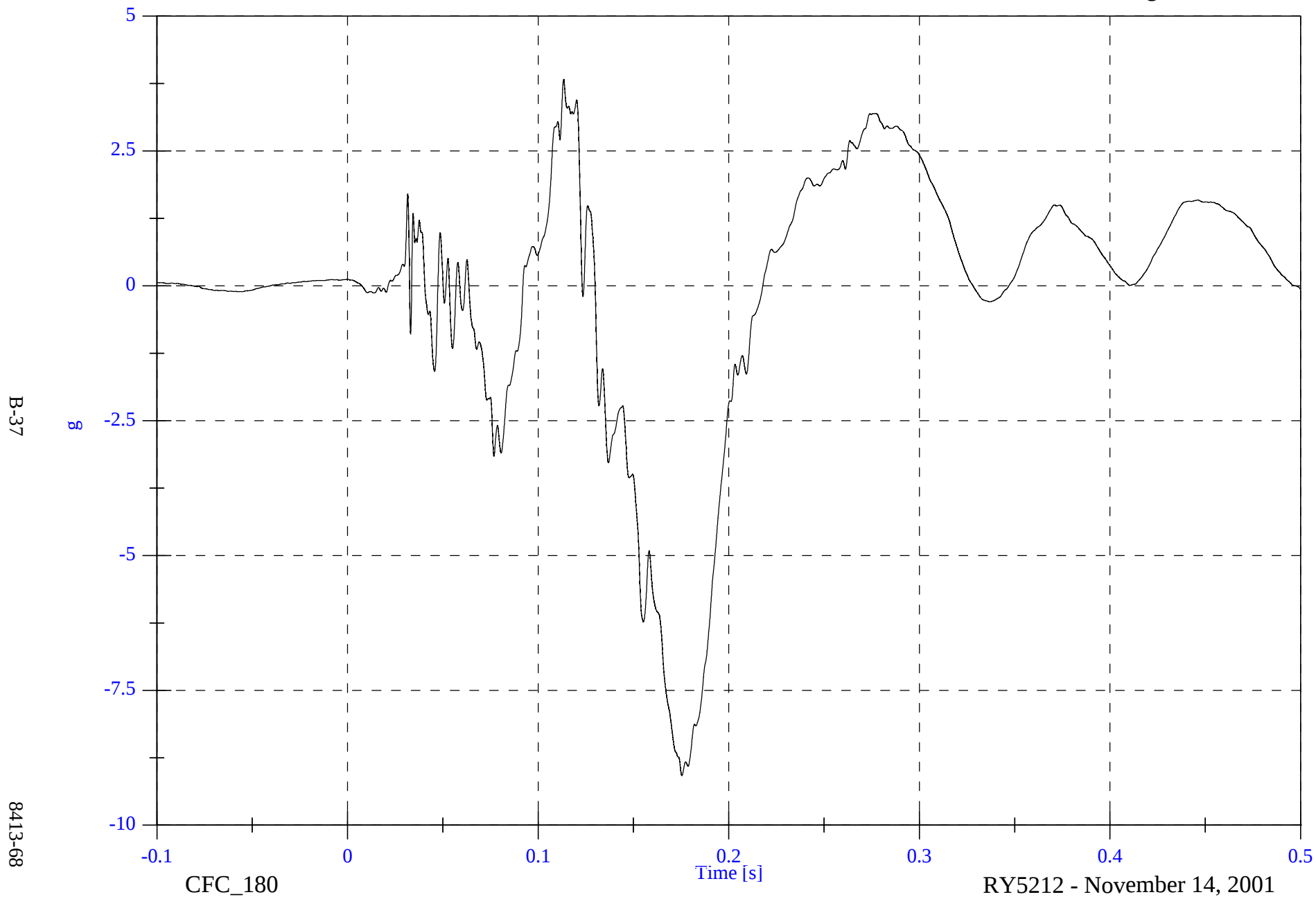


40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Chest Red Az

Max: 3.8 [g] at 0.113 [s]

Min: -9.1 [g] at 0.175 [s]



40% Frontal Offset Test #12 - 2000 Nissan Quest

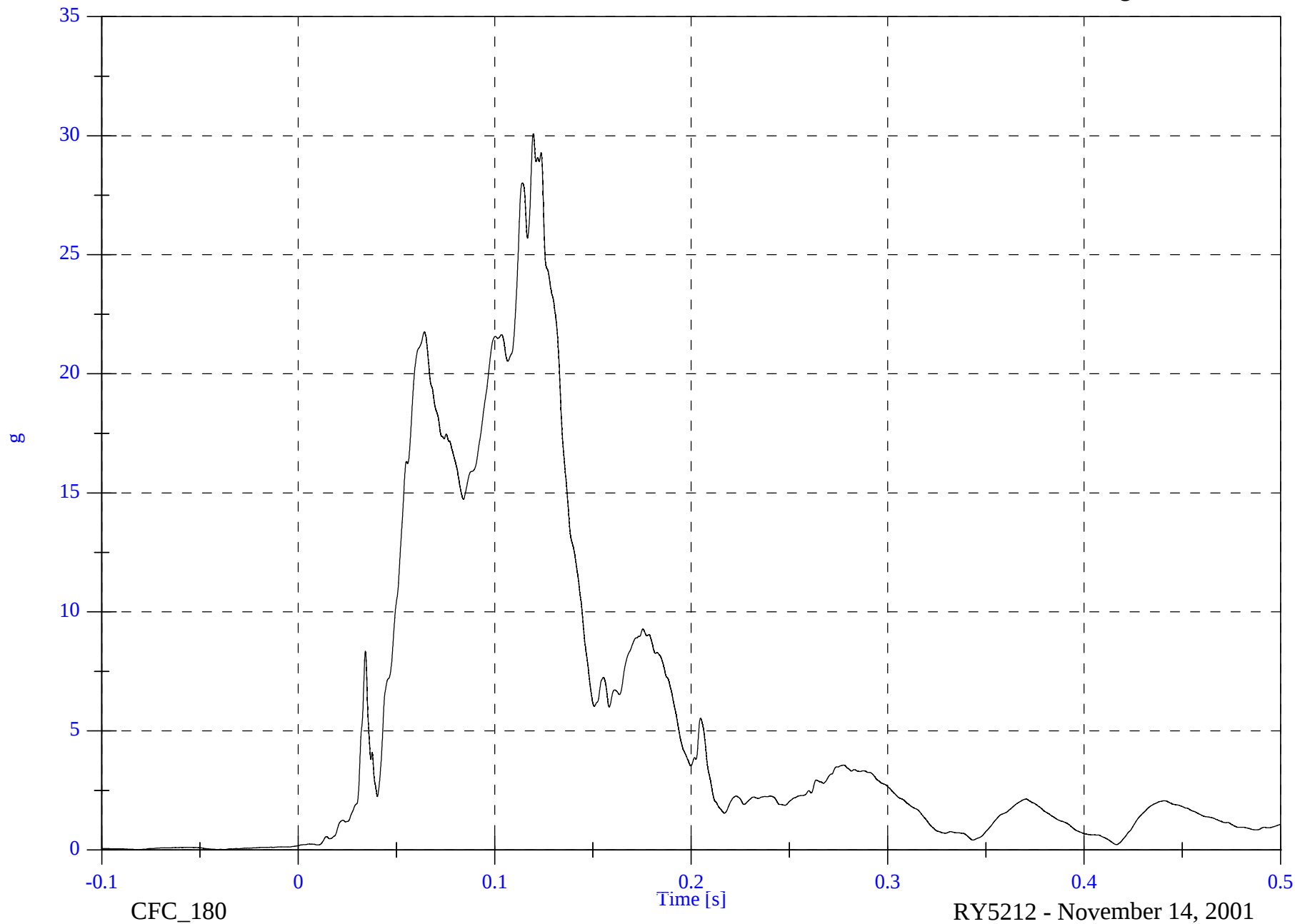
P1 Chest Red A Resultant

Max: 30.1 [g] at 0.120 [s]

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

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40% Frontal Offset Test #12 - 2000 Nissan Quest

Max: 0.0 [mm] at 0.005 [s]

P1 Chest Displacement

Min: -15.6 [mm] at 0.118 [s]

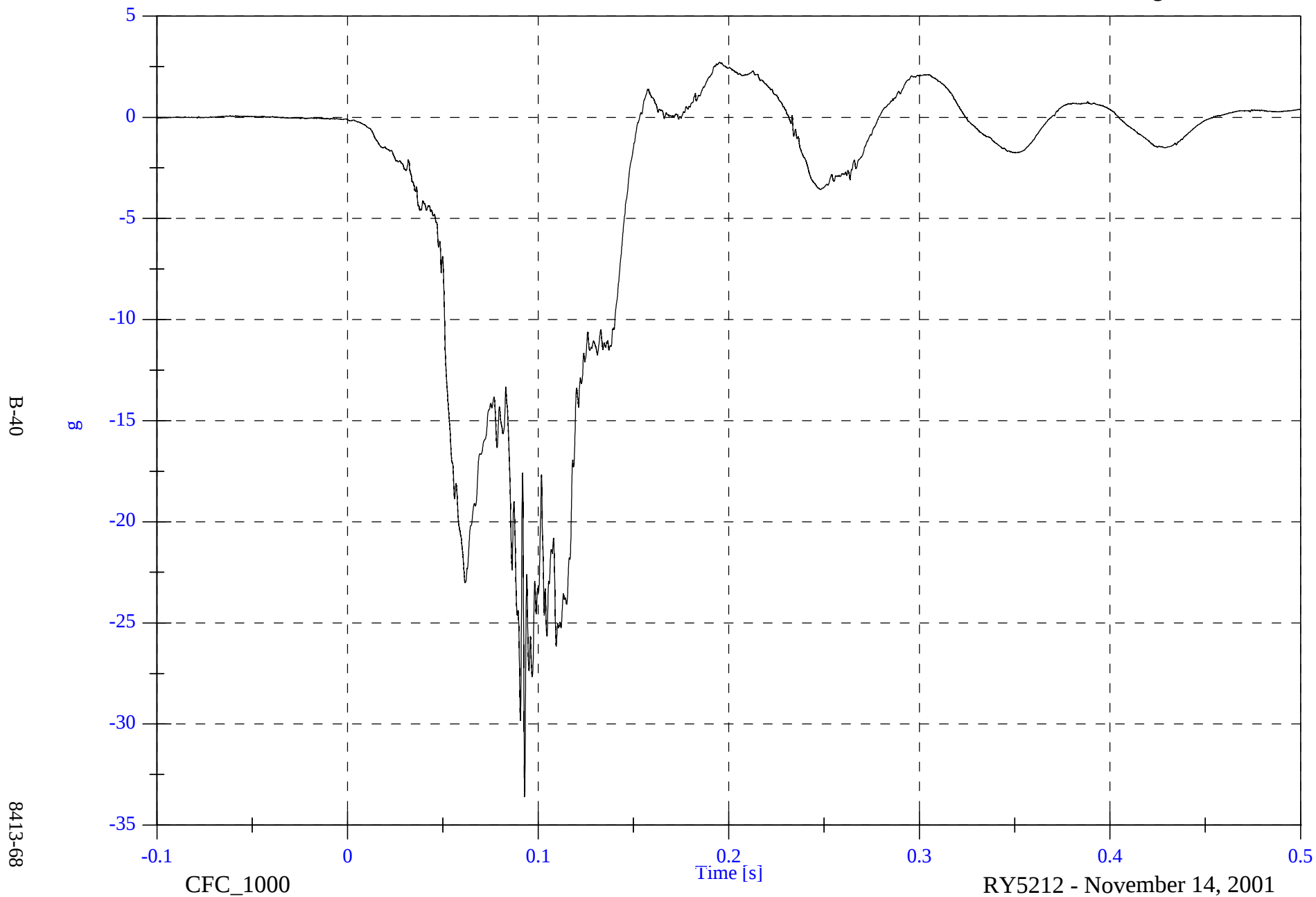


40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Pelvic Ax

Max: 2.7 [g] at 0.195 [s]

Min: -33.6 [g] at 0.093 [s]

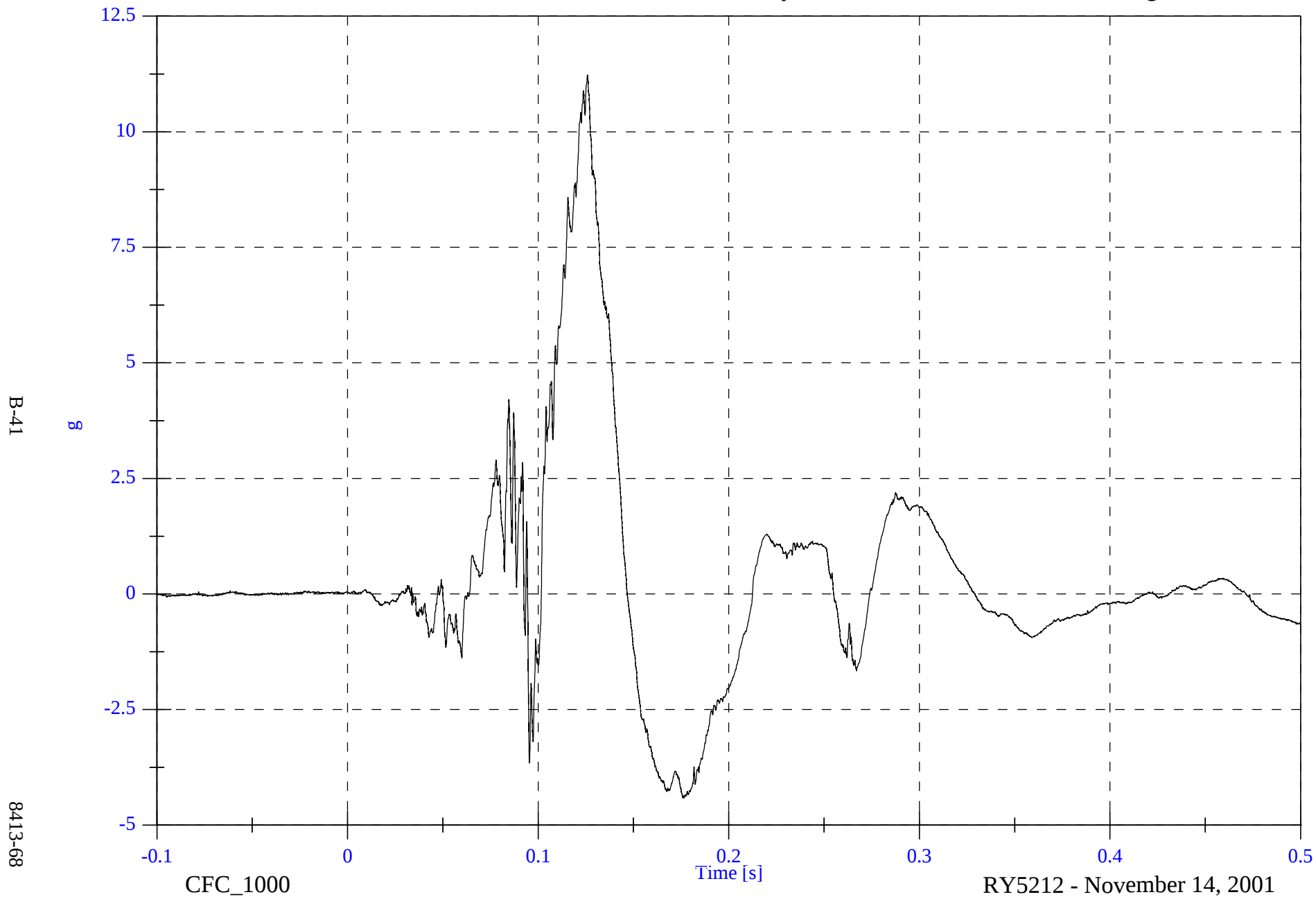


40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Pelvic Ay

Max: 11.2 [g] at 0.126 [s]

Min: -4.4 [g] at 0.177 [s]

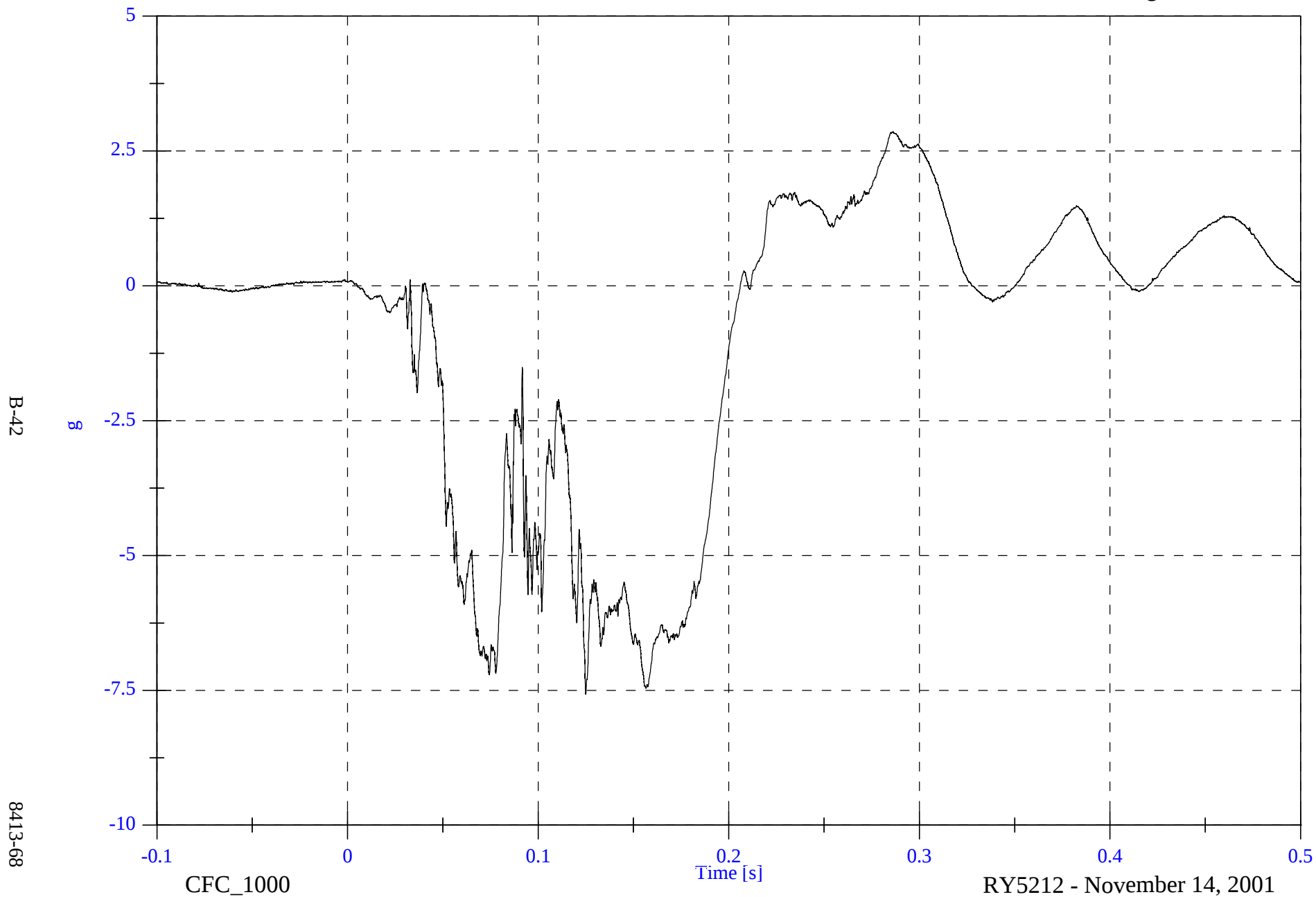


40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Pelvic Az

Max: 2.9 [g] at 0.286 [s]

Min: -7.6 [g] at 0.125 [s]

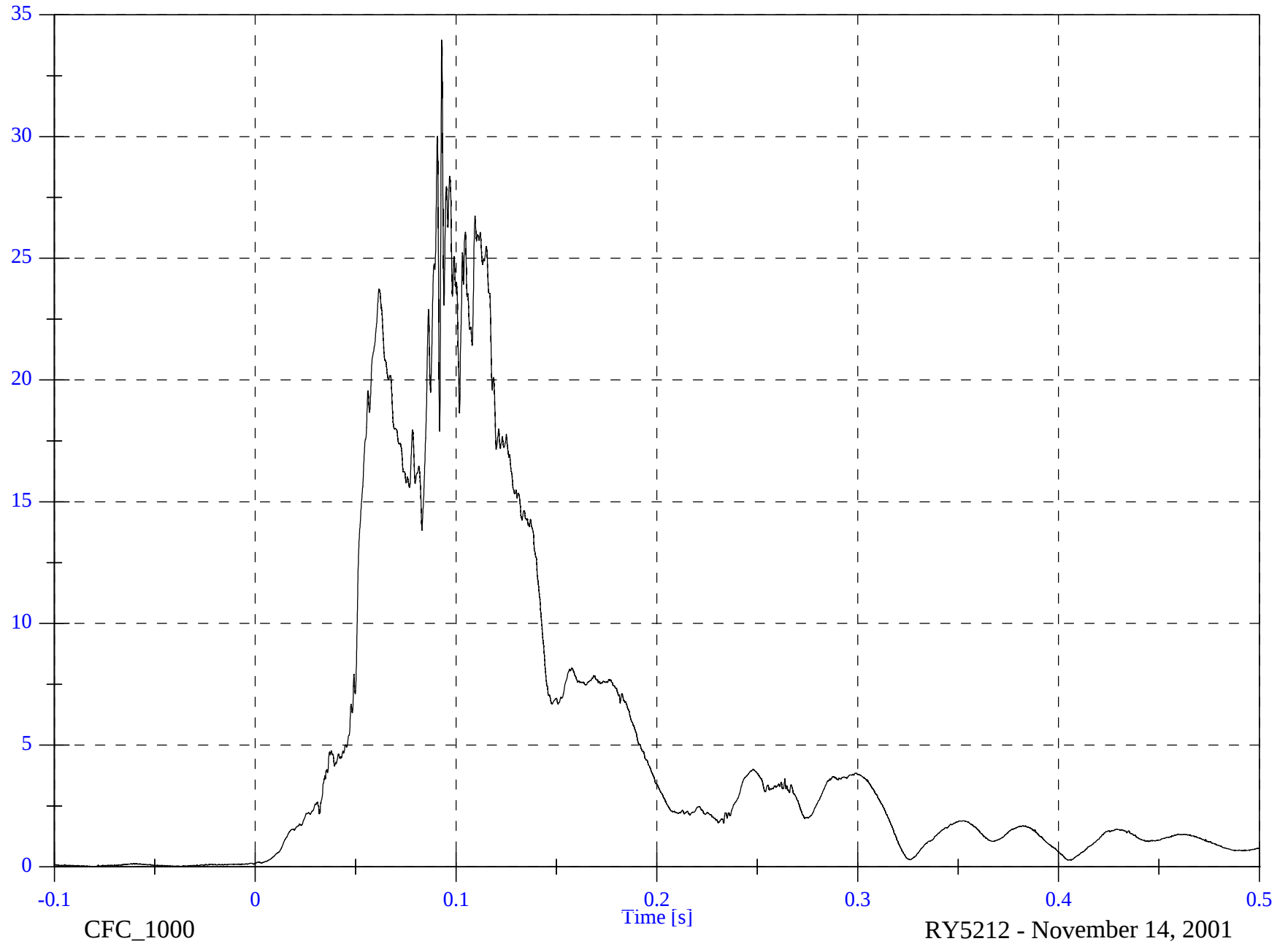


40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Pelvic A Resultant

Max: 34.0 [g] at 0.093 [s]

Min: 0.0 [g] at -0.081 [s]

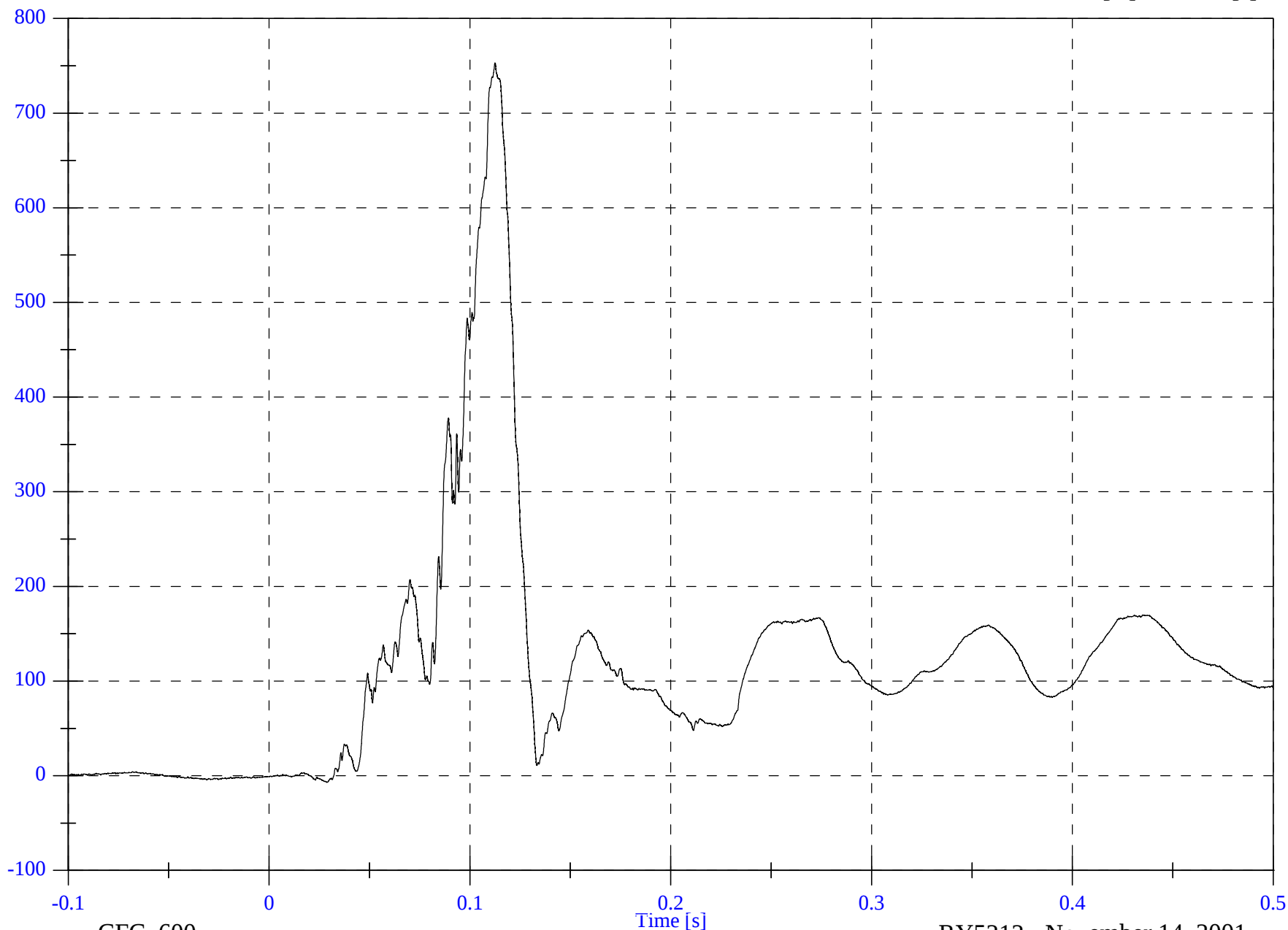


40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Left Femur Fx

Max: 752.9 [N] at 0.112 [s]

Min: -7.0 [N] at 0.029 [s]



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8413-68

CFC_600

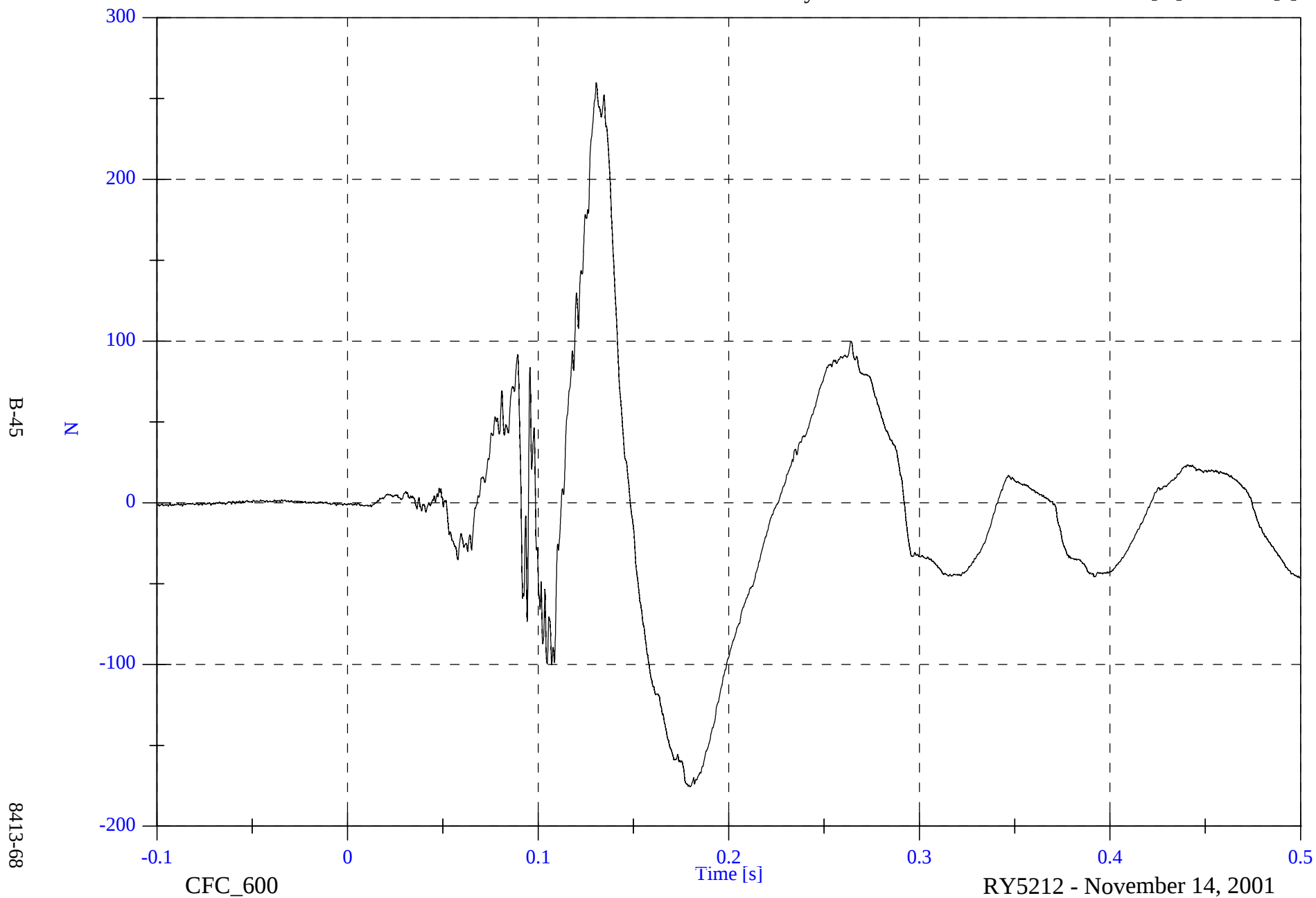
RY5212 - November 14, 2001

40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Left Femur Fy

Max: 259.7 [N] at 0.130 [s]

Min: -175.7 [N] at 0.180 [s]

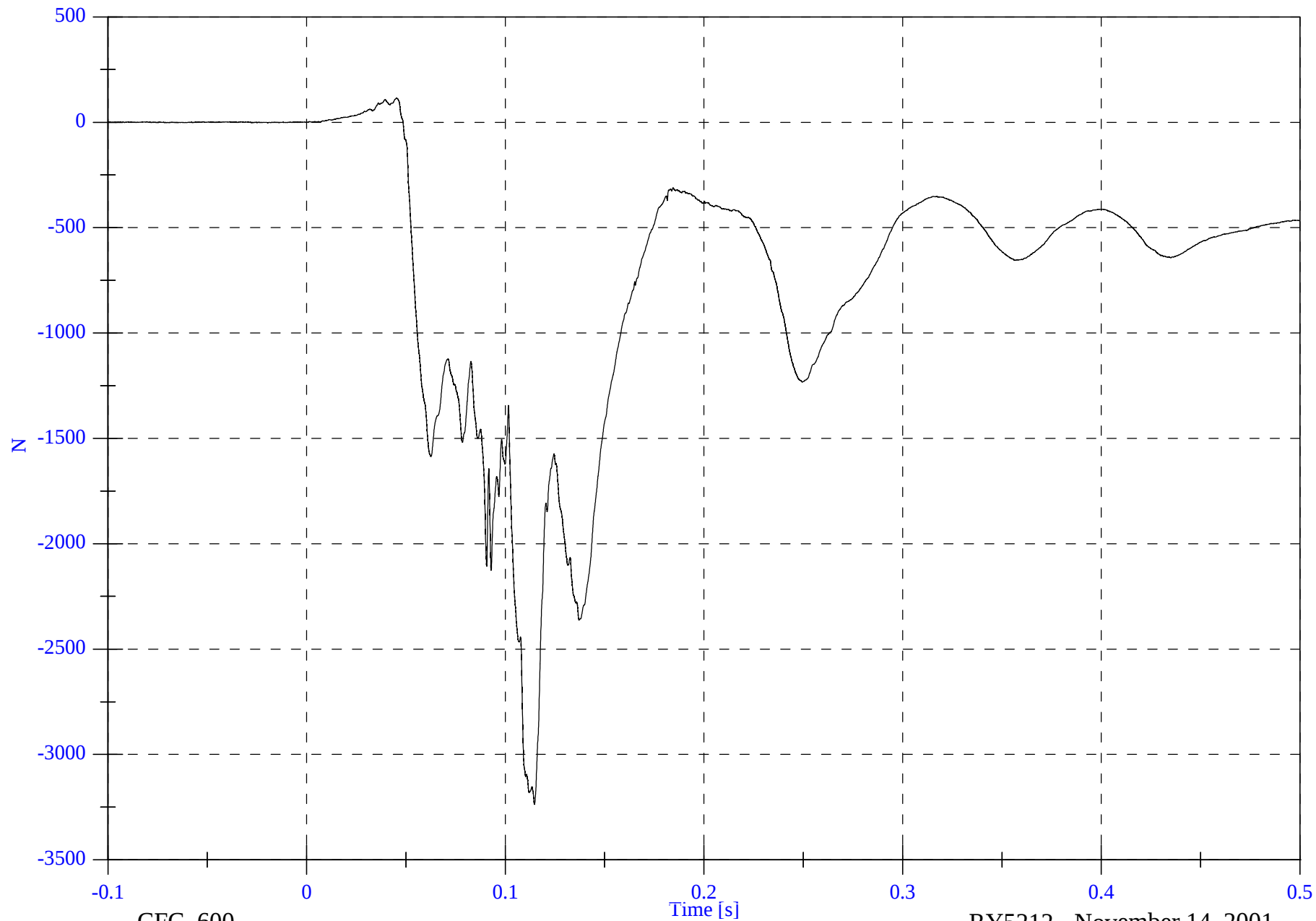


40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Left Femur Fz

Max: 115.3 [N] at 0.045 [s]

Min: -3237.8 [N] at 0.115 [s]



B-46

8413-68

CFC_600

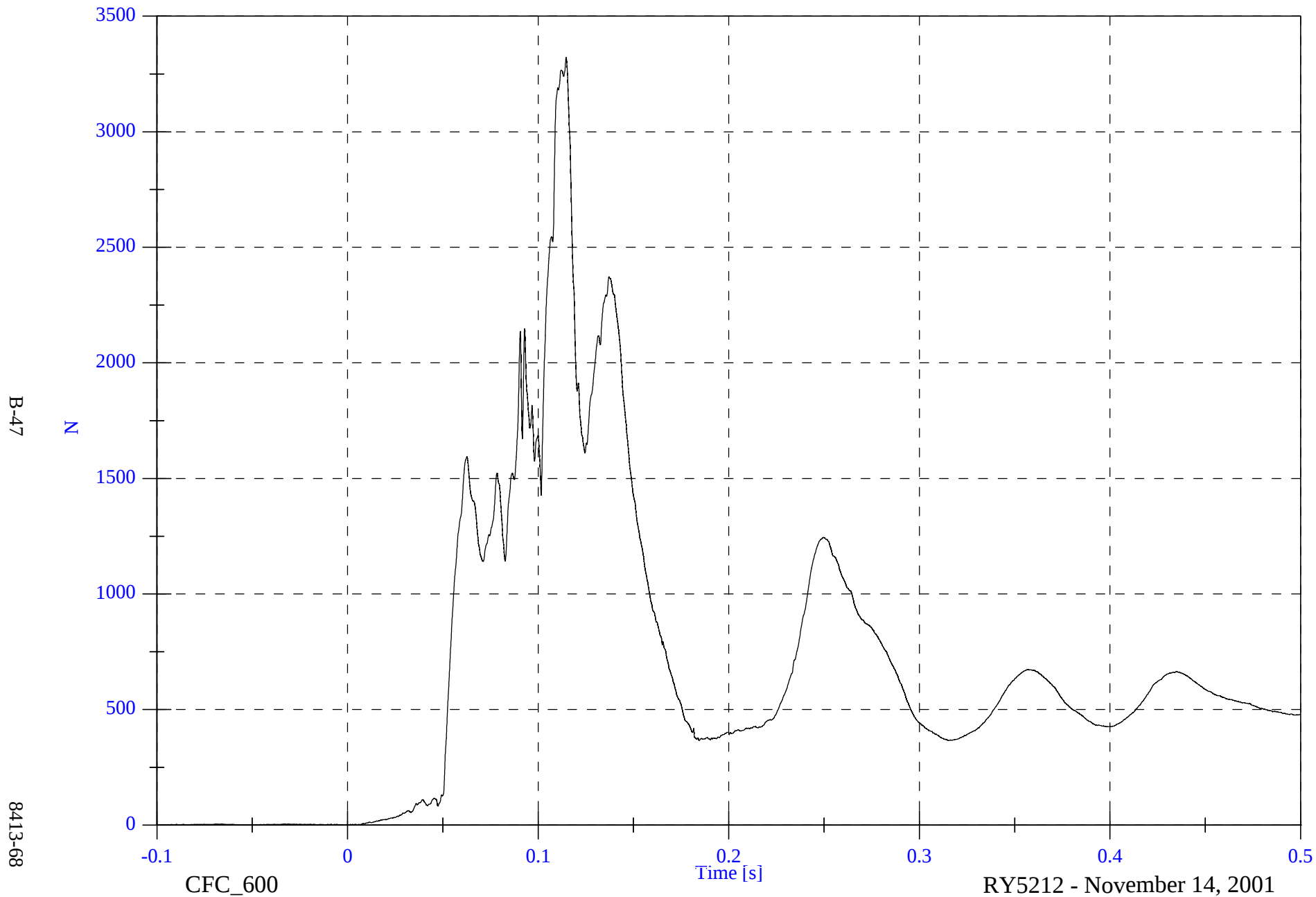
RY5212 - November 14, 2001

40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Left Femur F Resultant

Max: 3320.7 [N] at 0.115 [s]

Min: 0.4 [N] at -0.051 [s]

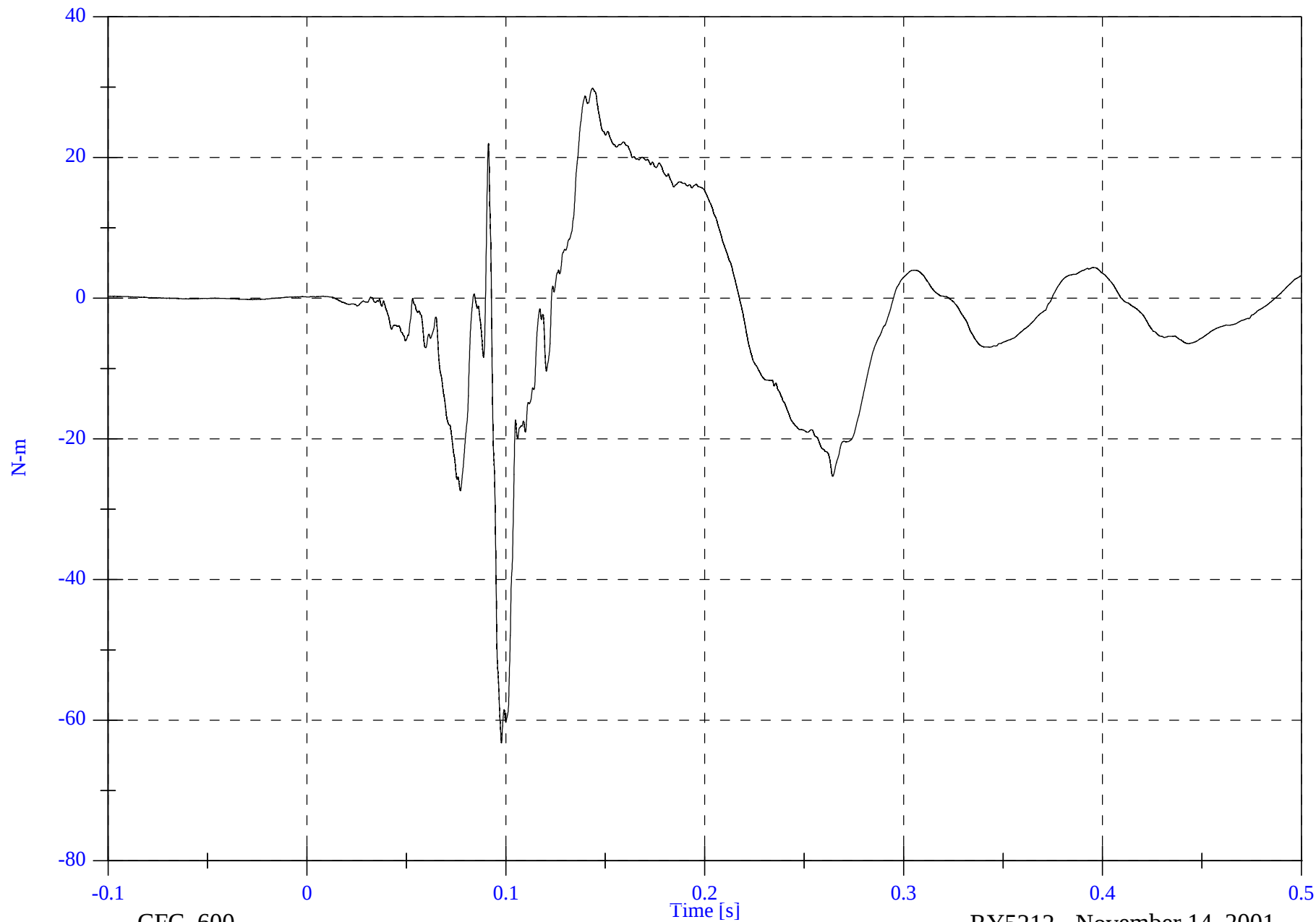


40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Left Femur Mx

Max: 29.9 [N-m] at 0.144 [s]

Min: -63.2 [N-m] at 0.098 [s]



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8413-68

CFC_600

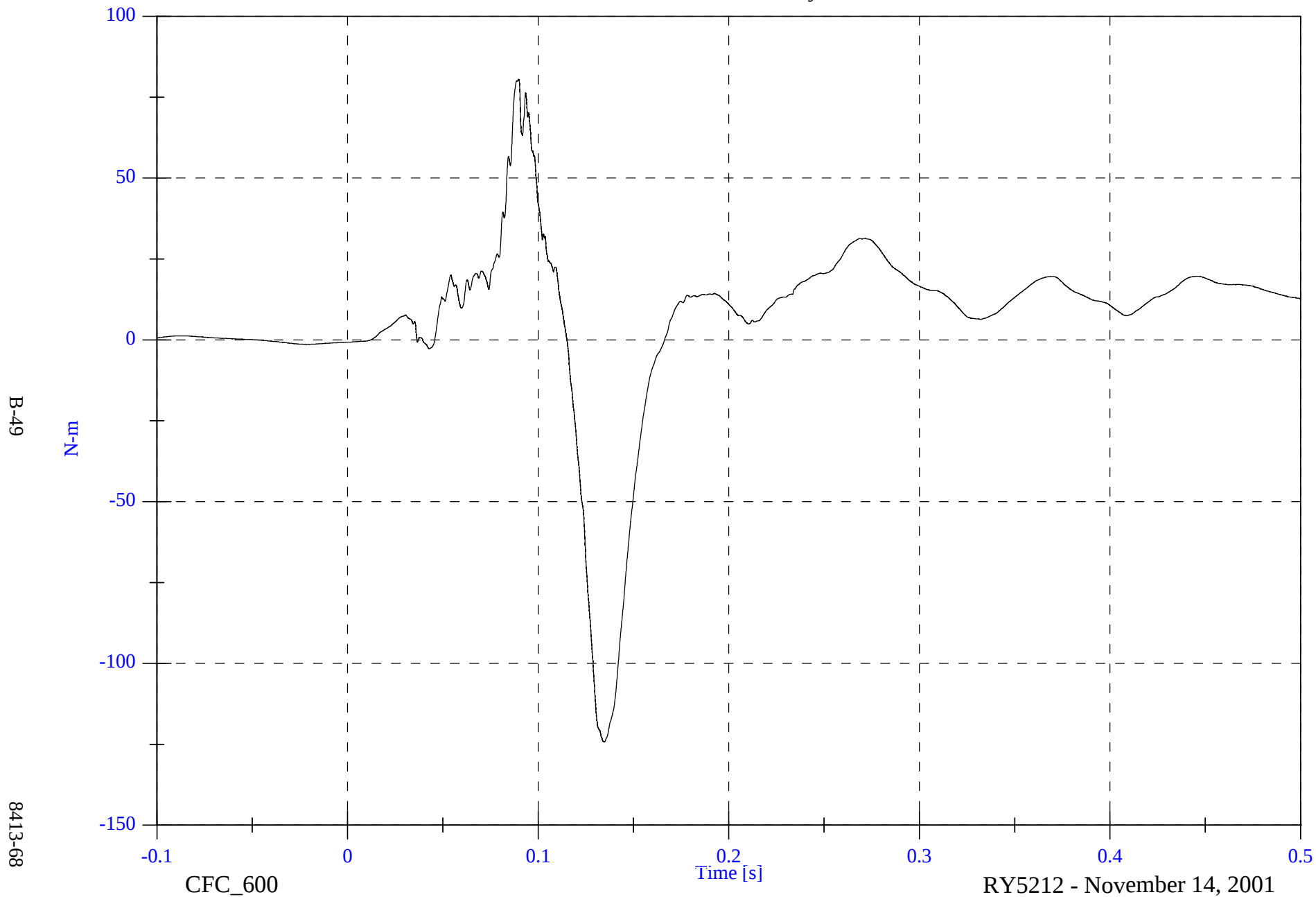
RY5212 - November 14, 2001

40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Left Femur My

Max: 80.5 [N-m] at 0.090 [s]

Min: -124.3 [N-m] at 0.135 [s]

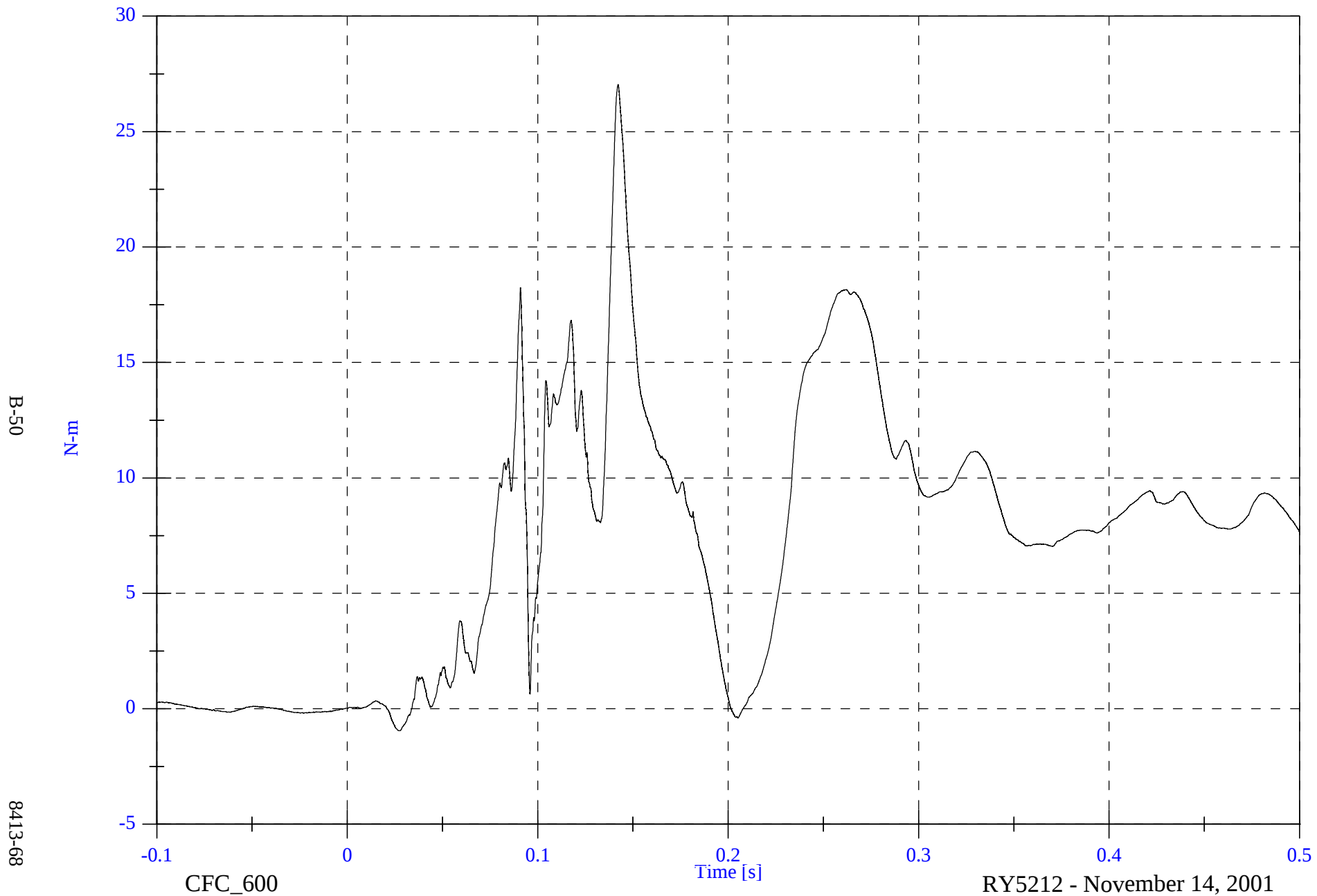


40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Left Femur Mz

Max: 27.0 [N-m] at 0.142 [s]

Min: -0.9 [N-m] at 0.027 [s]

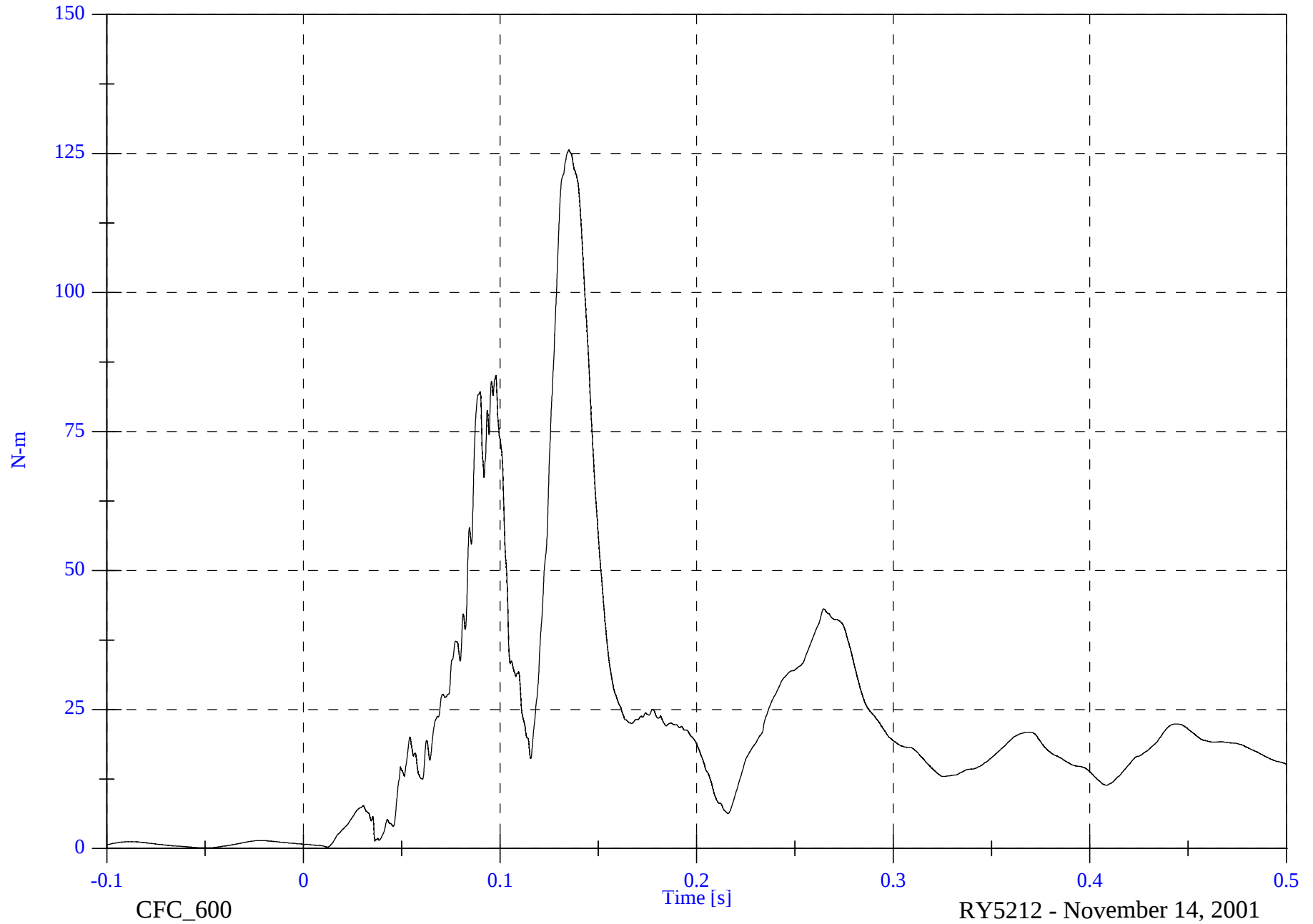


40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Left Femur M Resultant

Max: 125.7 [N-m] at 0.135 [s]

Min: 0.1 [N-m] at -0.049 [s]



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8413-68

CFC_600

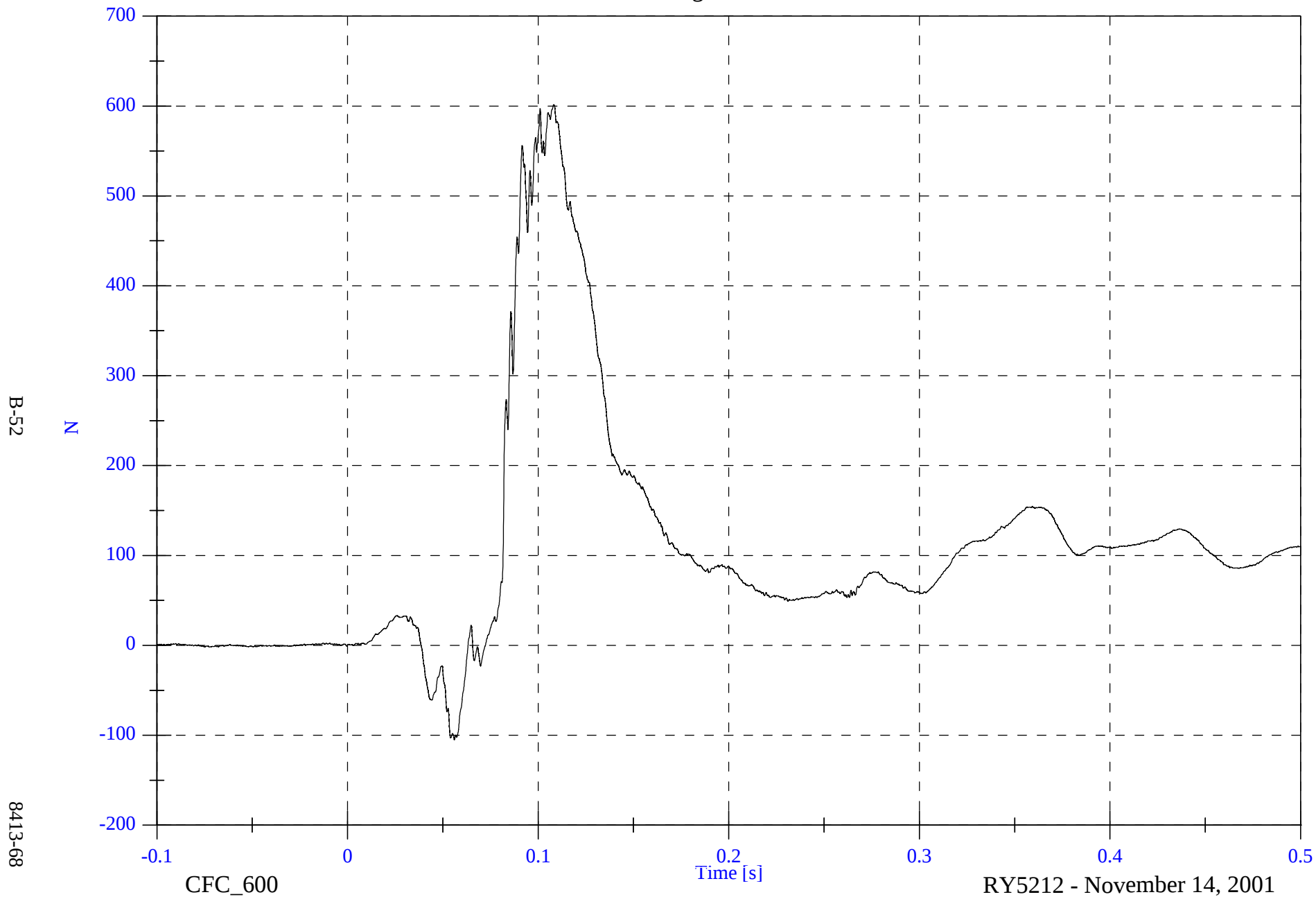
RY5212 - November 14, 2001

40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Right Femur Fx

Max: 601.7 [N] at 0.108 [s]

Min: -105.2 [N] at 0.056 [s]

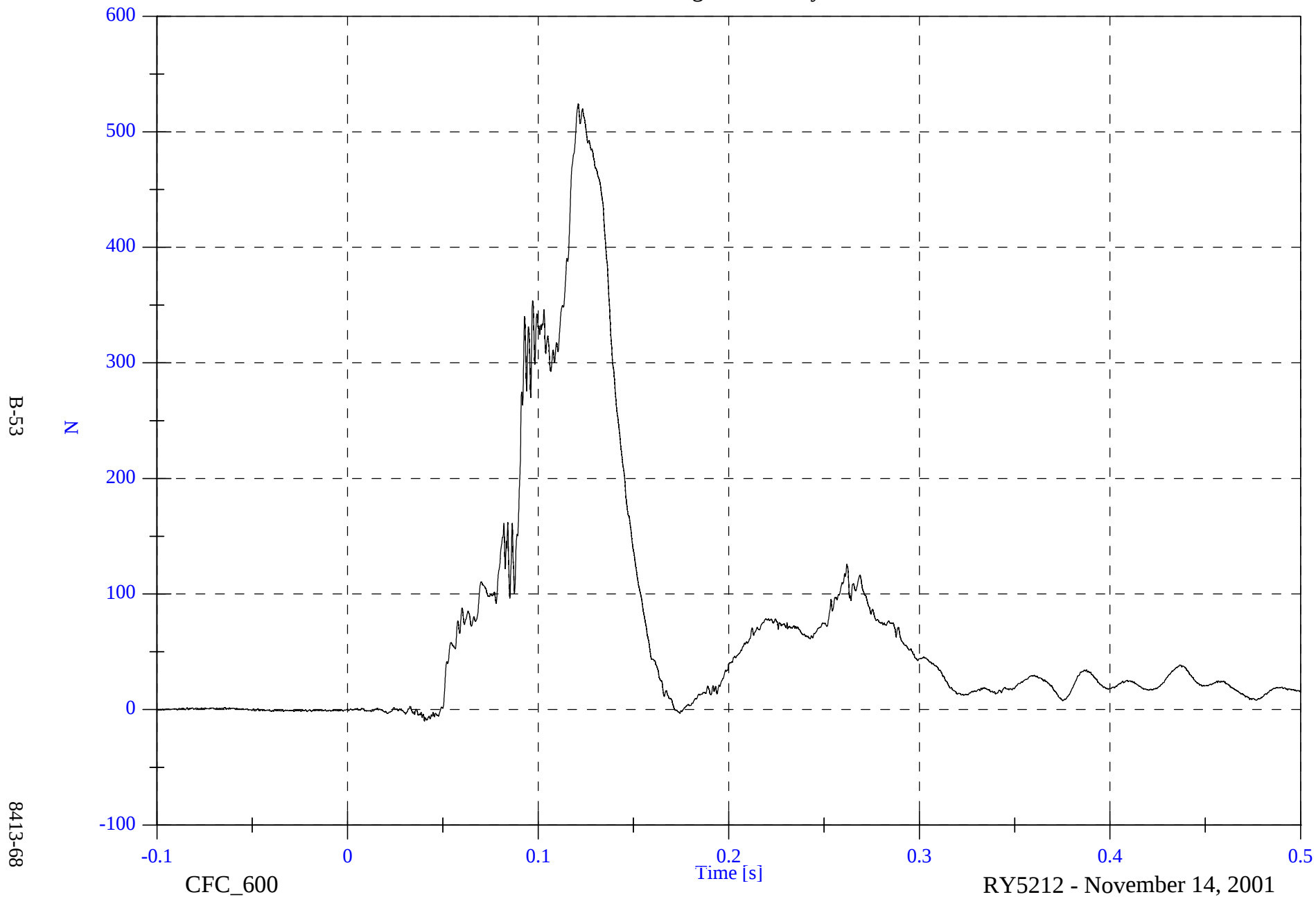


40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Right Femur Fy

Max: 524.3 [N] at 0.121 [s]

Min: -10.1 [N] at 0.040 [s]

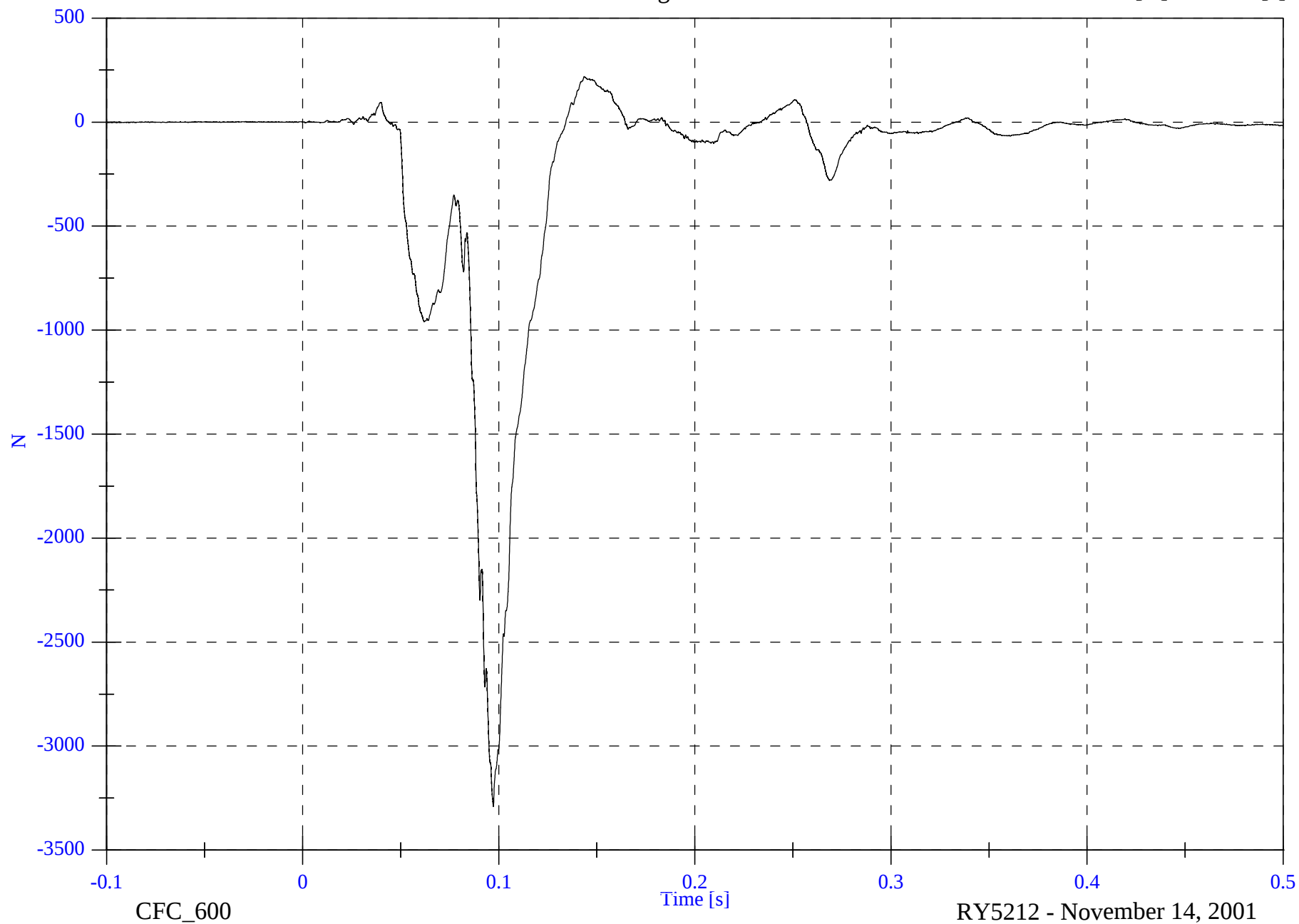


40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Right Femur Fz

Max: 219.0 [N] at 0.144 [s]

Min: -3291.0 [N] at 0.097 [s]



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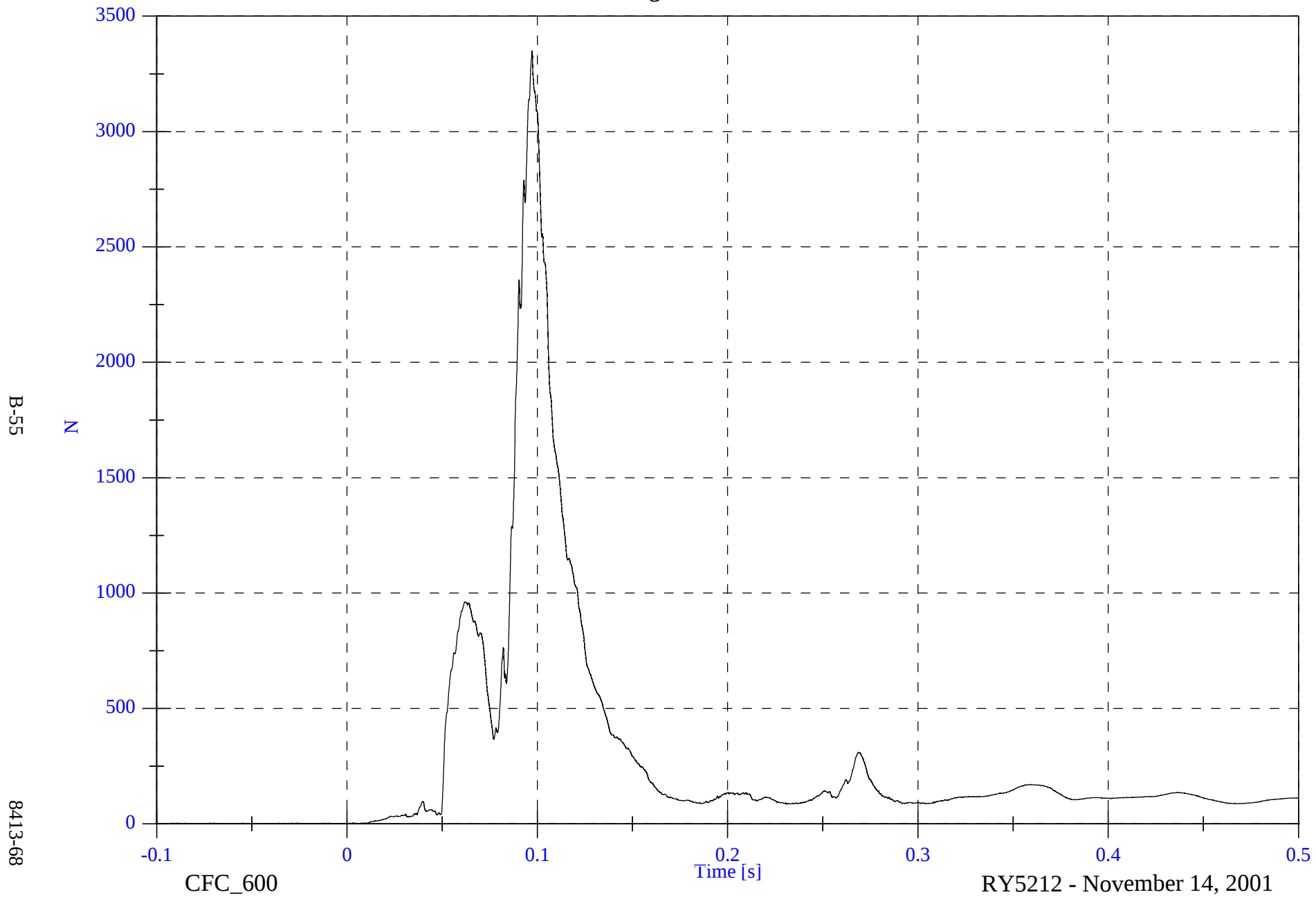
8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Right Femur F Resultant

Max: 3348.6 [N] at 0.097 [s]

Min: 0.2 [N] at -0.041 [s]

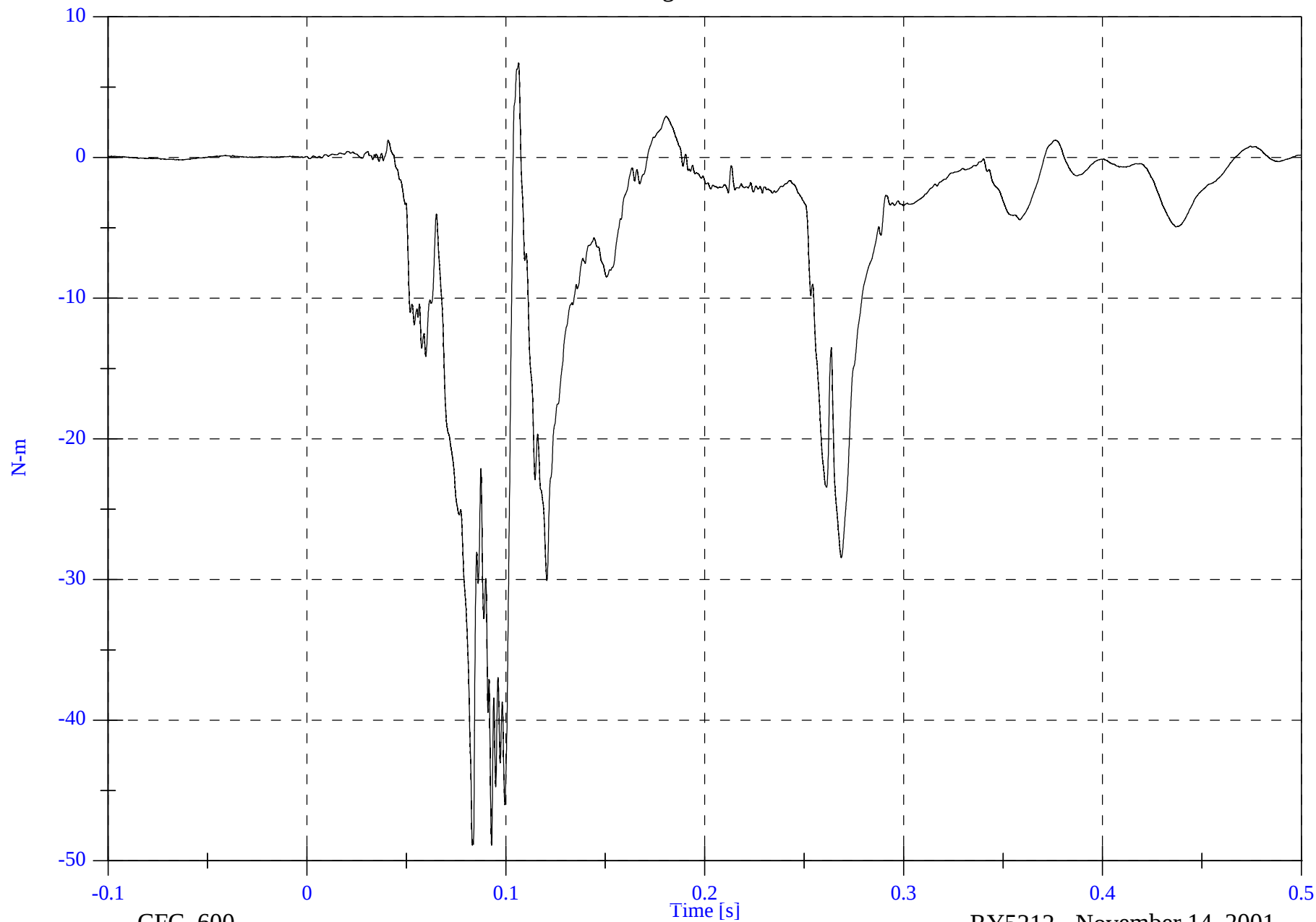


40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Right Femur Mx

Max: 6.7 [N-m] at 0.106 [s]

Min: -48.9 [N-m] at 0.083 [s]



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CFC_600

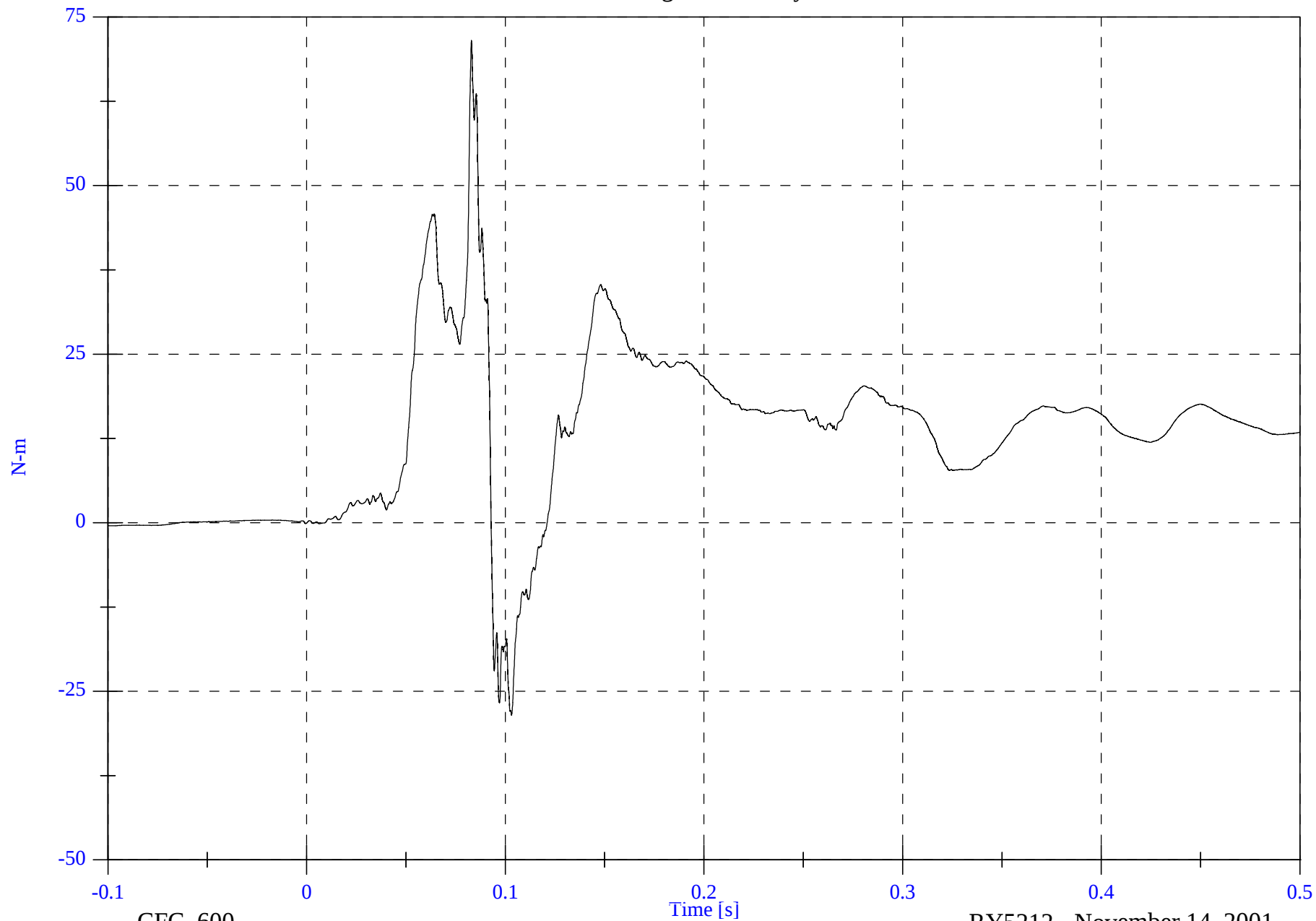
RY5212 - November 14, 2001

40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Right Femur My

Max: 71.5 [N-m] at 0.083 [s]

Min: -28.5 [N-m] at 0.103 [s]



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8413-68

CFC_600

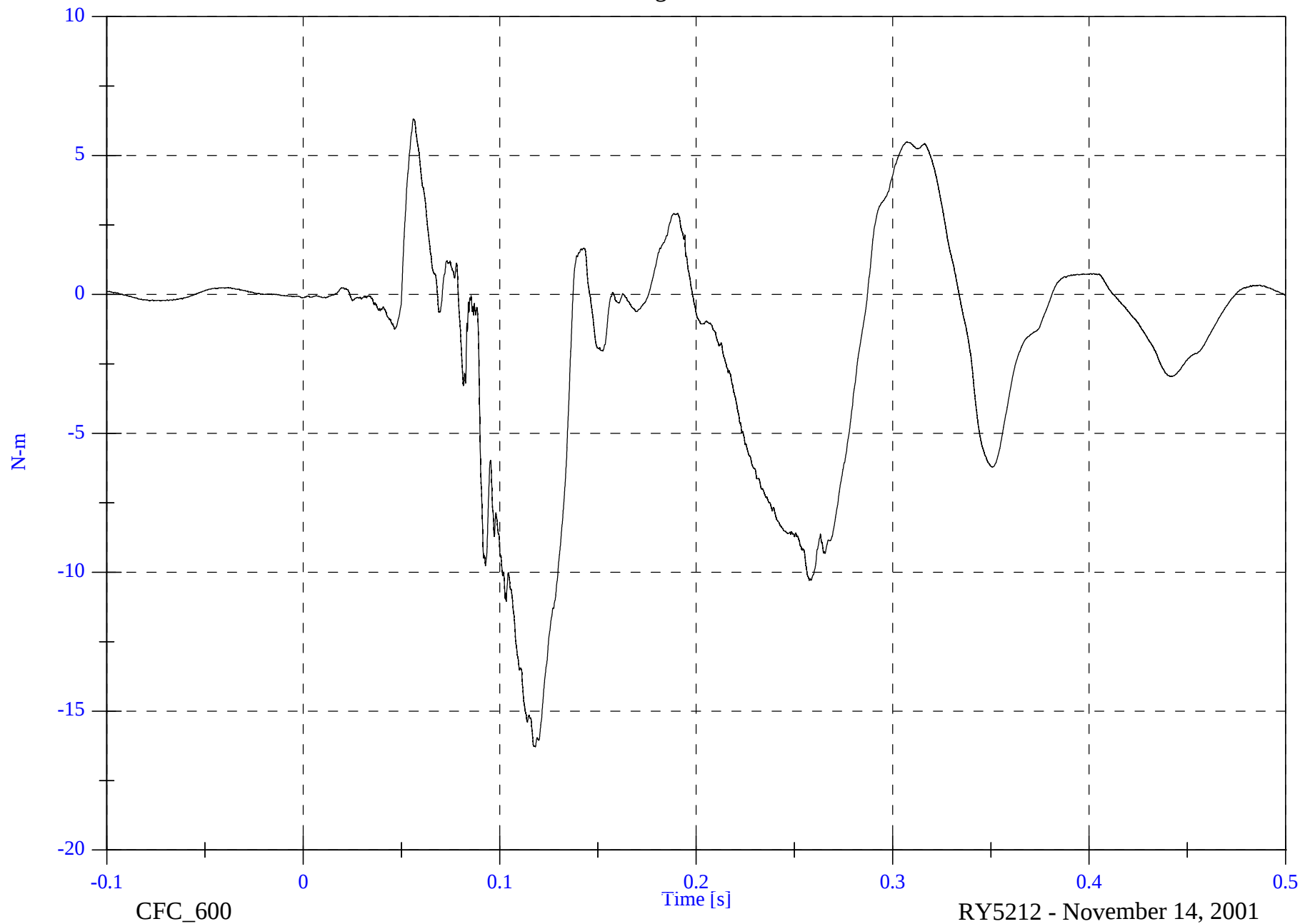
RY5212 - November 14, 2001

40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Right Femur Mz

Max: 6.3 [N-m] at 0.056 [s]

Min: -16.3 [N-m] at 0.118 [s]

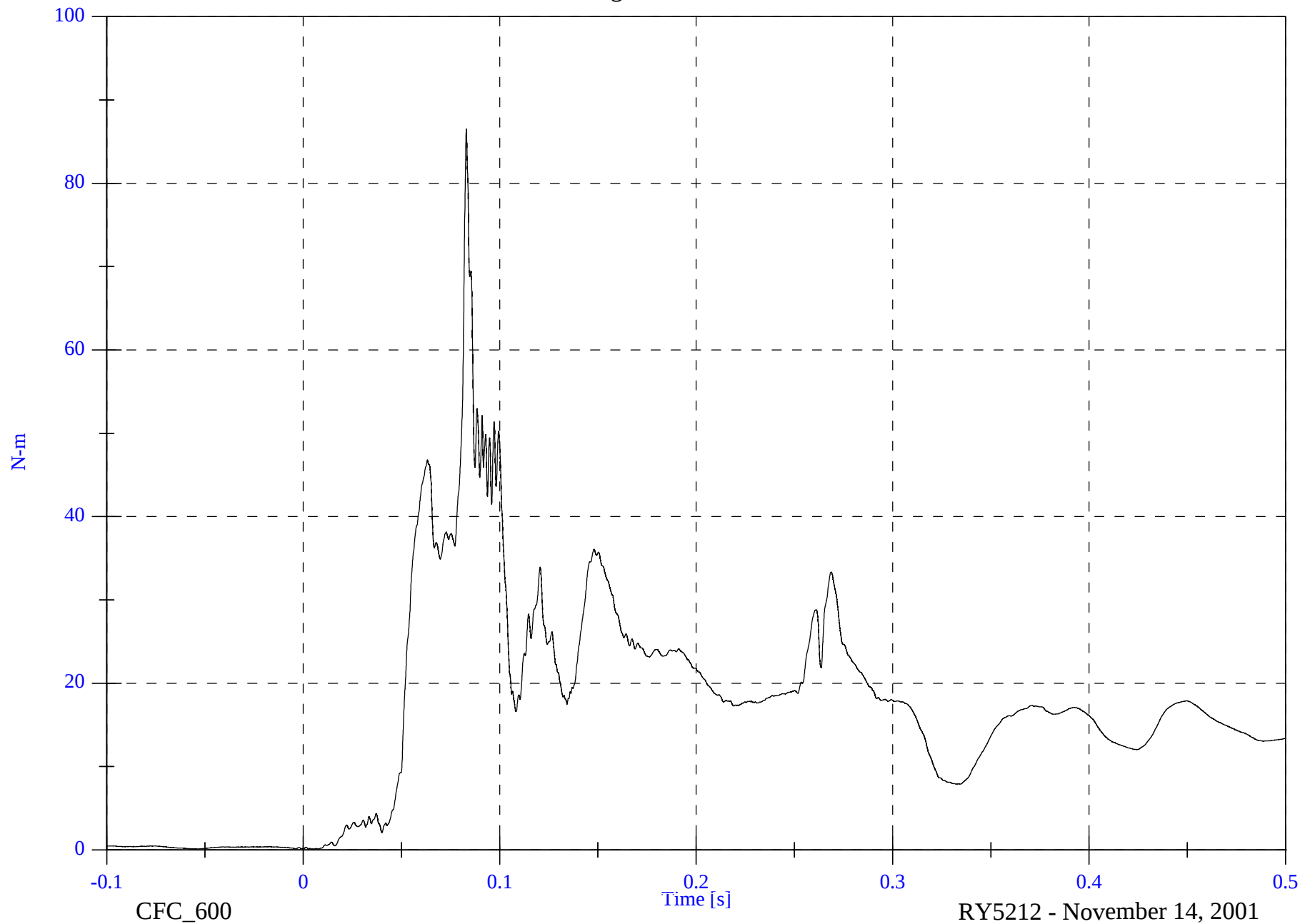


40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Right Femur M Resultant

Max: 86.5 [N-m] at 0.083 [s]

Min: 0.1 [N-m] at 0.006 [s]



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8413-68

CFC_600

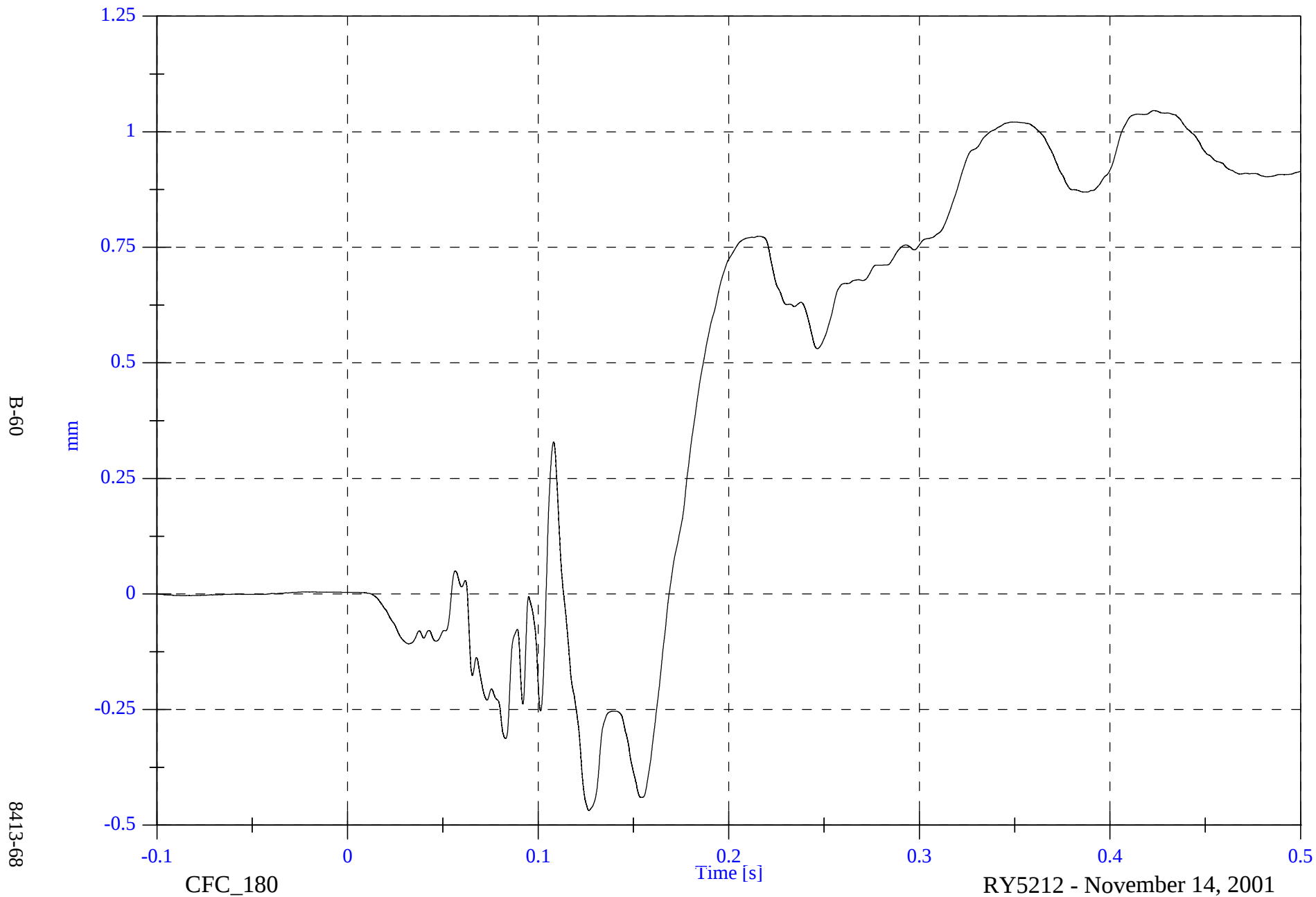
RY5212 - November 14, 2001

40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Left Knee Shear Dx

Max: 1.0 [mm] at 0.423 [s]

Min: -0.5 [mm] at 0.127 [s]

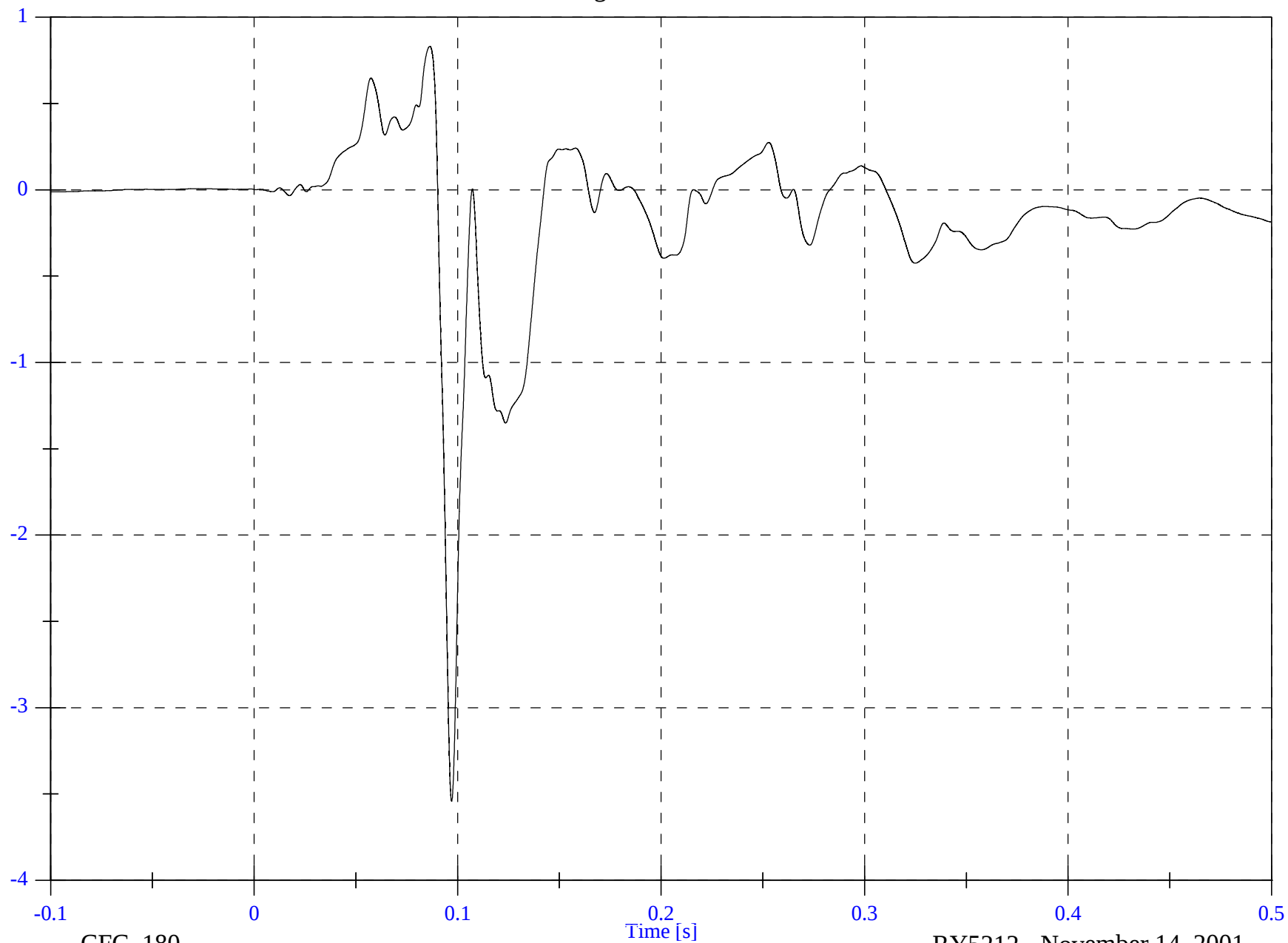


40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Right Knee Shear Dx

Max: 0.8 [mm] at 0.086 [s]

Min: -3.5 [mm] at 0.097 [s]



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CFC_180

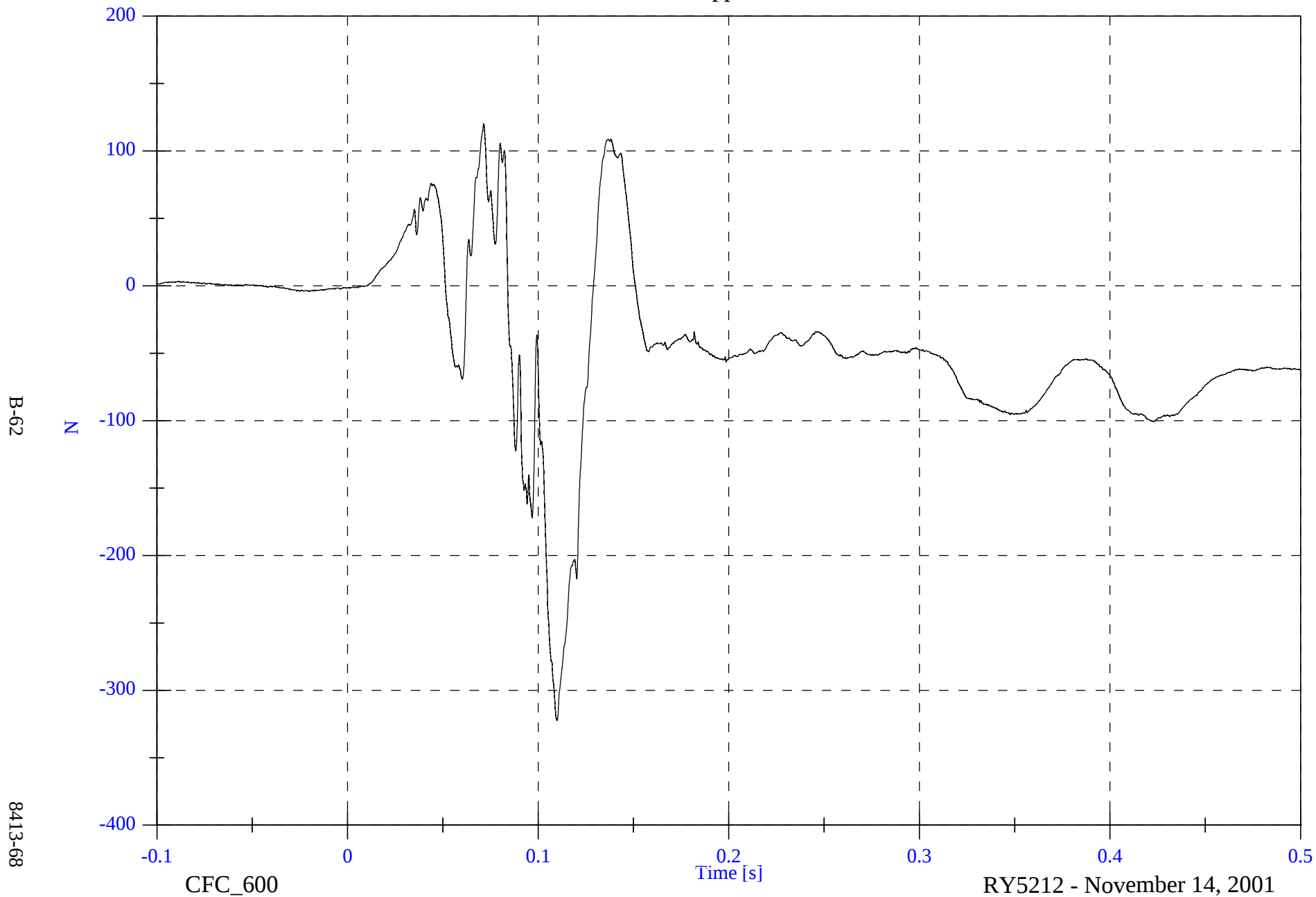
RY5212 - November 14, 2001

40% Frontal Offset Test #12 - 2000 Nissan Quest

Max: 120.3 [N] at 0.071 [s]

P1 Left Upper Tibia Fx

Min: -322.4 [N] at 0.110 [s]

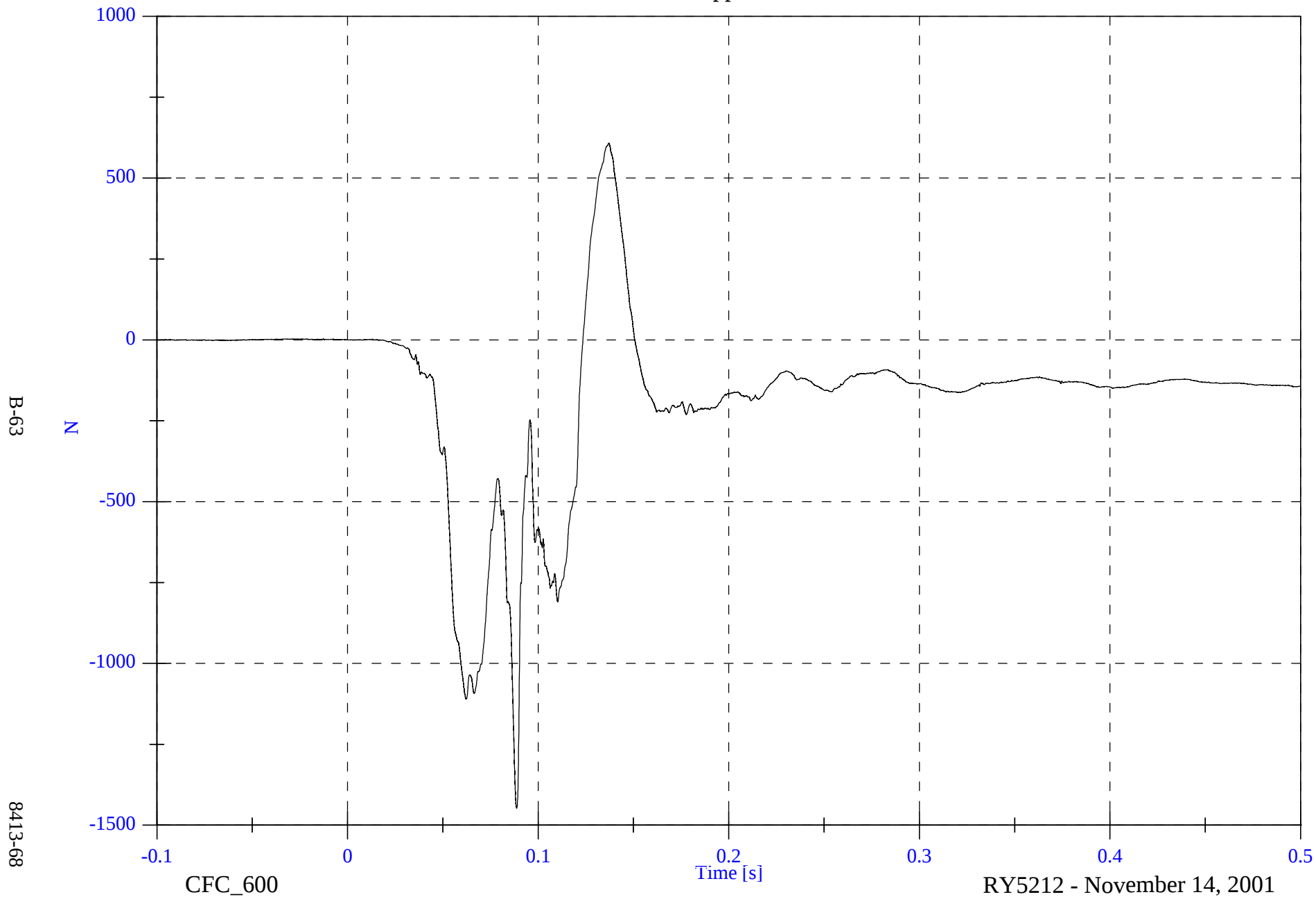


40% Frontal Offset Test #12 - 2000 Nissan Quest

Max: 608.0 [N] at 0.137 [s]

P1 Left Upper Tibia Fz

Min: -1448.0 [N] at 0.089 [s]

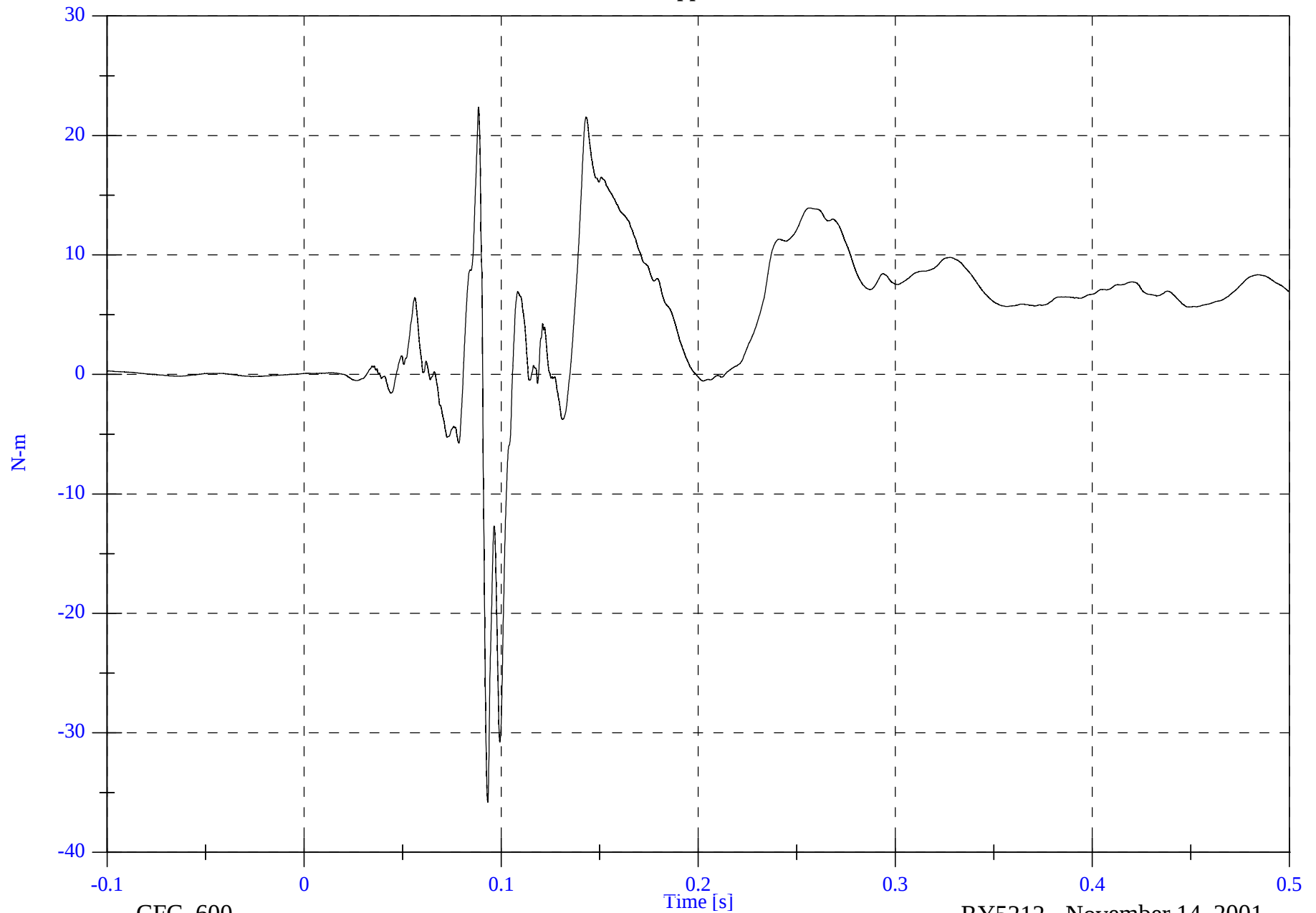


40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Left Upper Tibia Mx

Max: 22.4 [N-m] at 0.088 [s]

Min: -35.8 [N-m] at 0.093 [s]



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8413-68

CFC_600

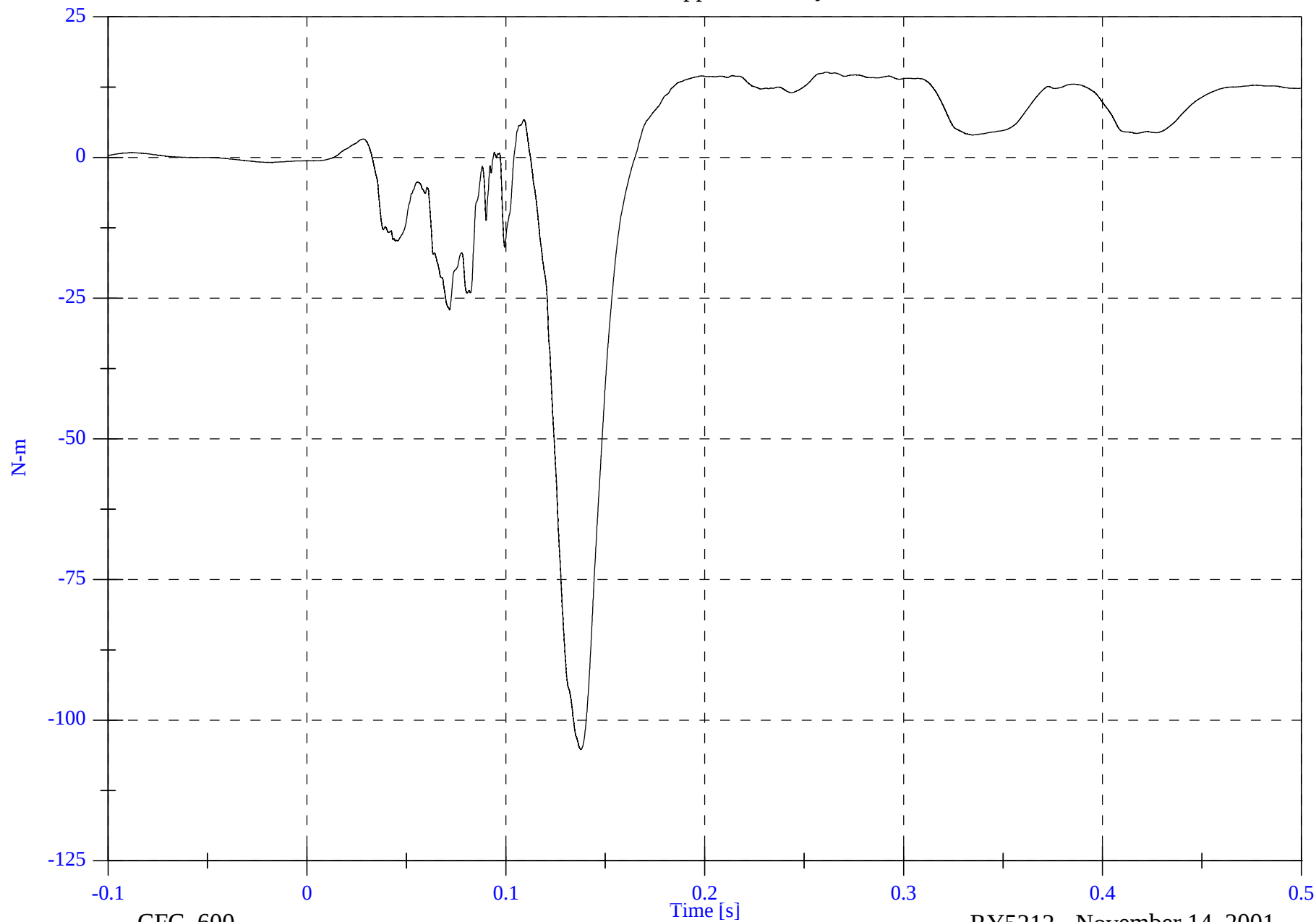
RY5212 - November 14, 2001

40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Left Upper Tibia My

Max: 15.2 [N-m] at 0.262 [s]

Min: -105.2 [N-m] at 0.138 [s]



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8413-68

CFC_600

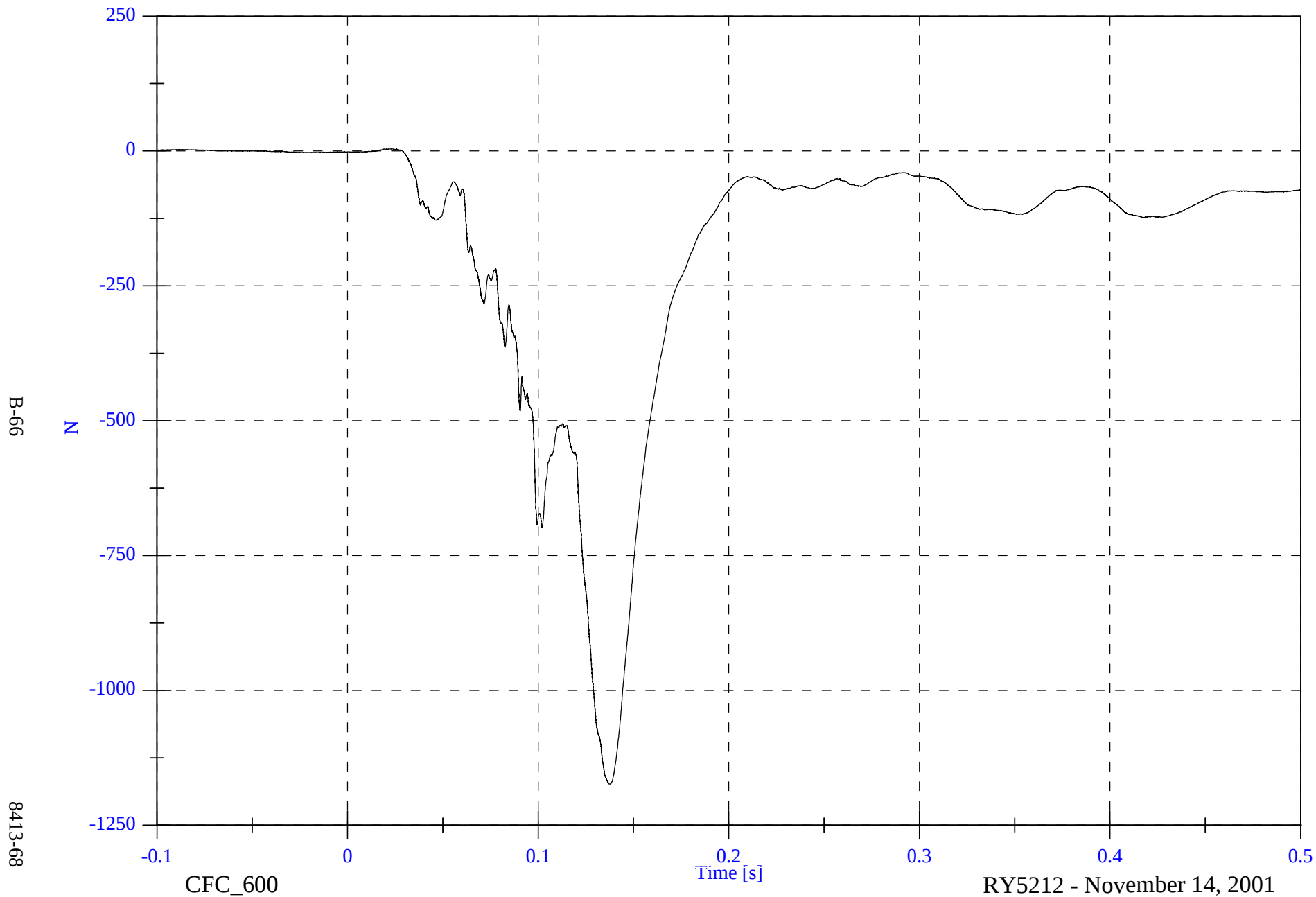
RY5212 - November 14, 2001

40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Left Lower Tibia Fx

Max: 4.0 [N] at 0.024 [s]

Min: -1174.1 [N] at 0.138 [s]

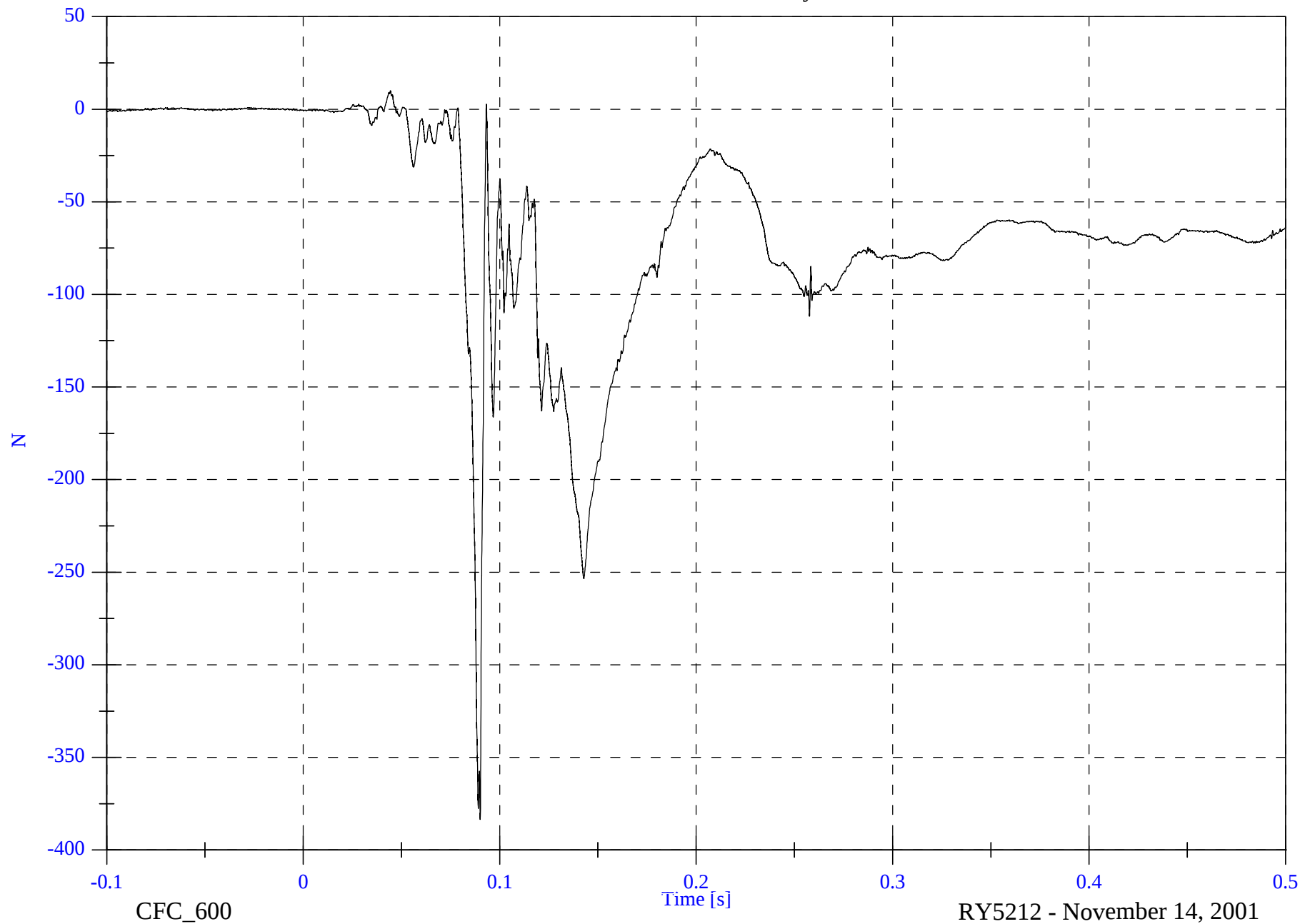


40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Left Lower Tibia Fy

Max: 10.0 [N] at 0.044 [s]

Min: -383.5 [N] at 0.090 [s]



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8413-68

CFC_600

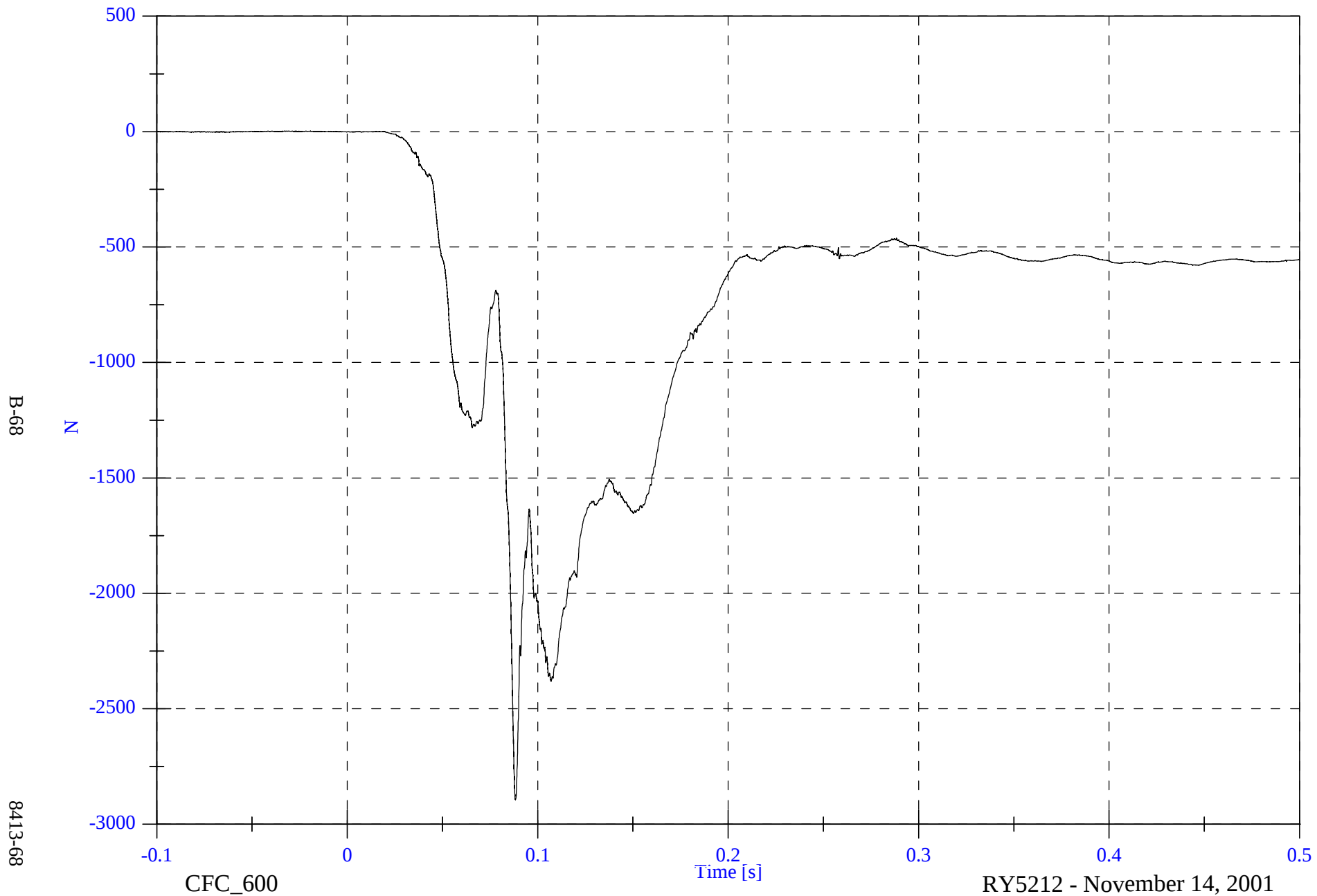
RY5212 - November 14, 2001

40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Left Lower Tibia Fz

Max: 2.7 [N] at -0.032 [s]

Min: -2894.2 [N] at 0.088 [s]

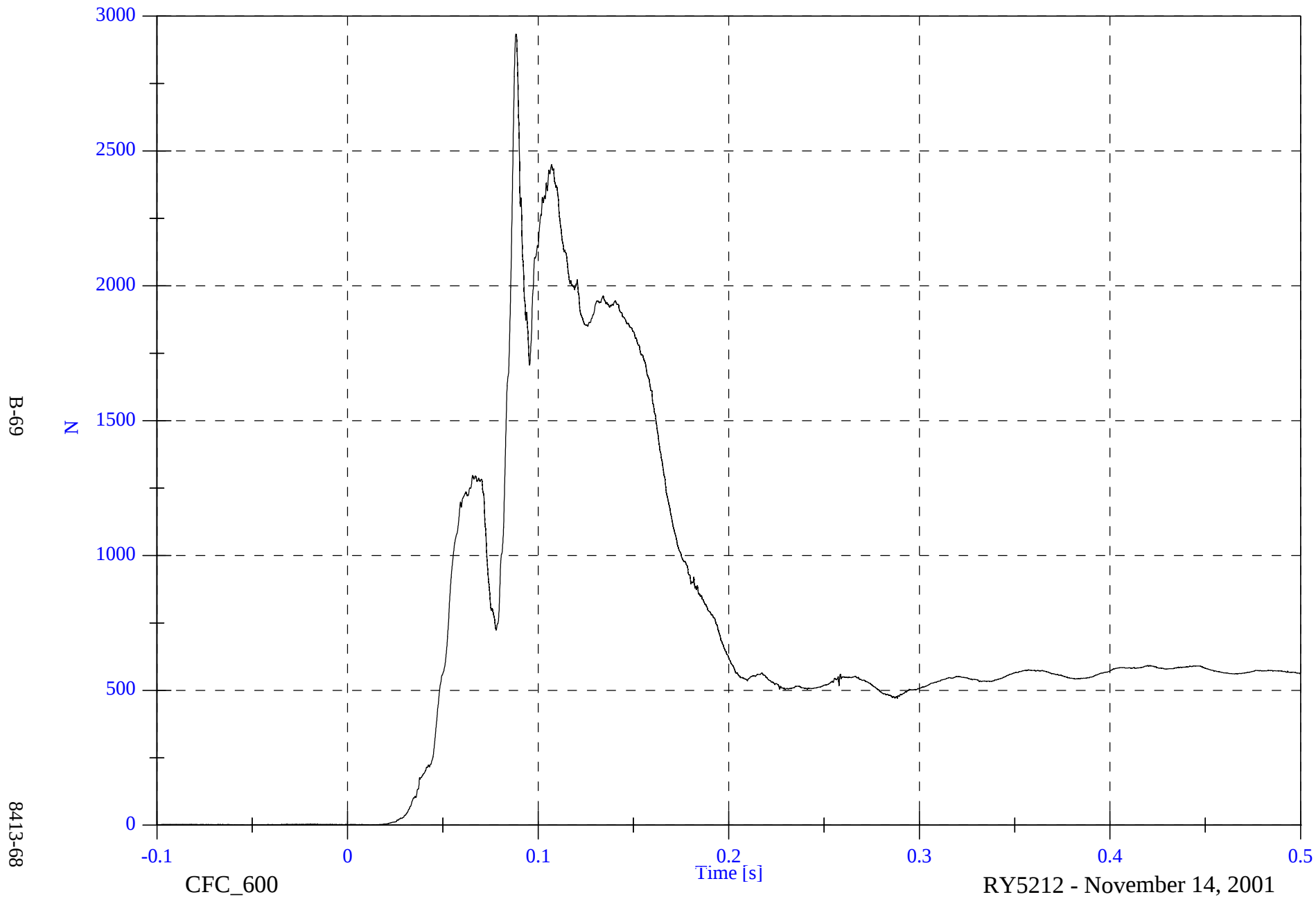


40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Left Lower Tibia F Resultant

Max: 2934.2 [N] at 0.088 [s]

Min: 0.2 [N] at -0.051 [s]

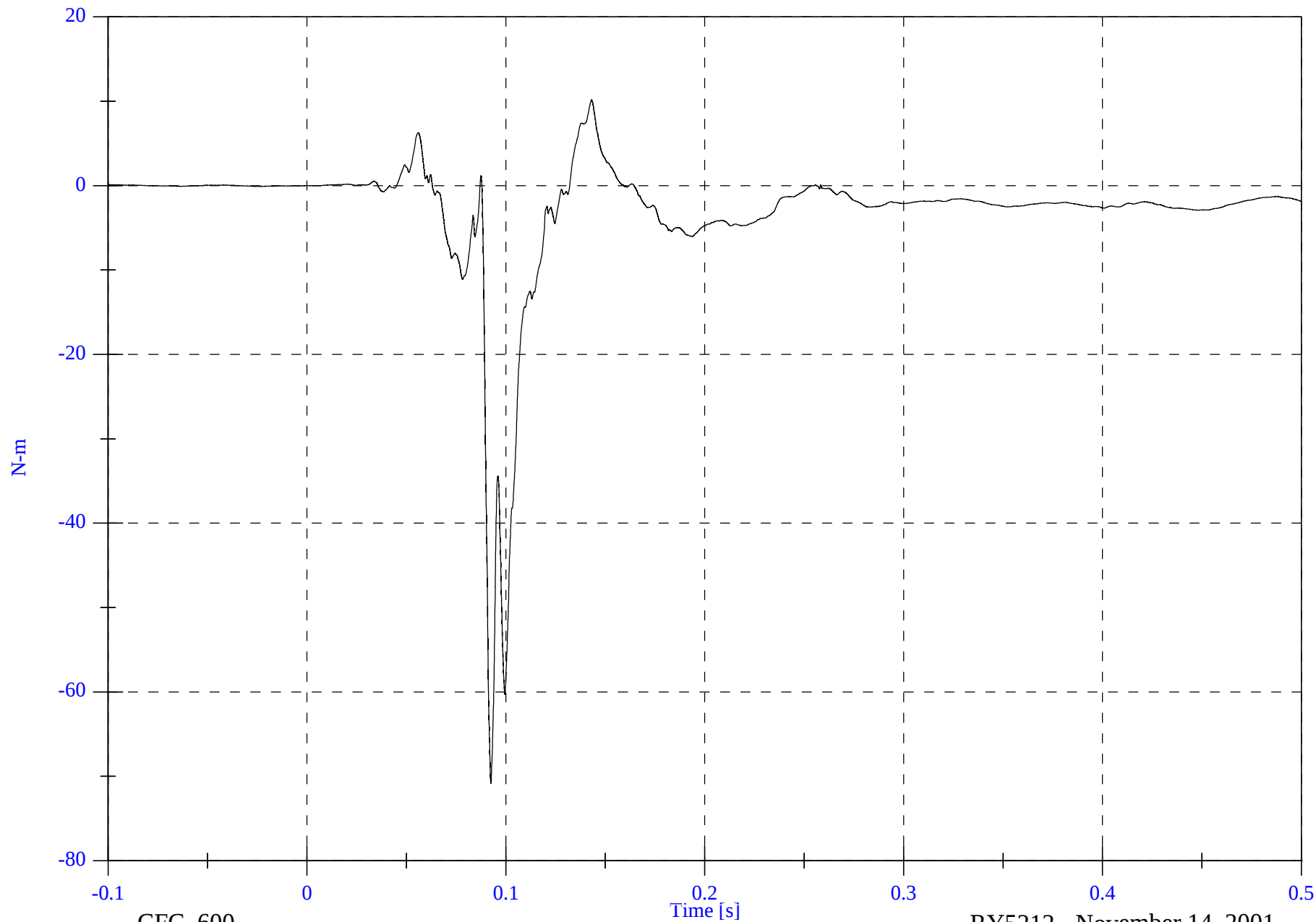


40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Left Lower Tibia Mx

Max: 10.2 [N-m] at 0.143 [s]

Min: -70.8 [N-m] at 0.092 [s]



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8413-68

CFC_600

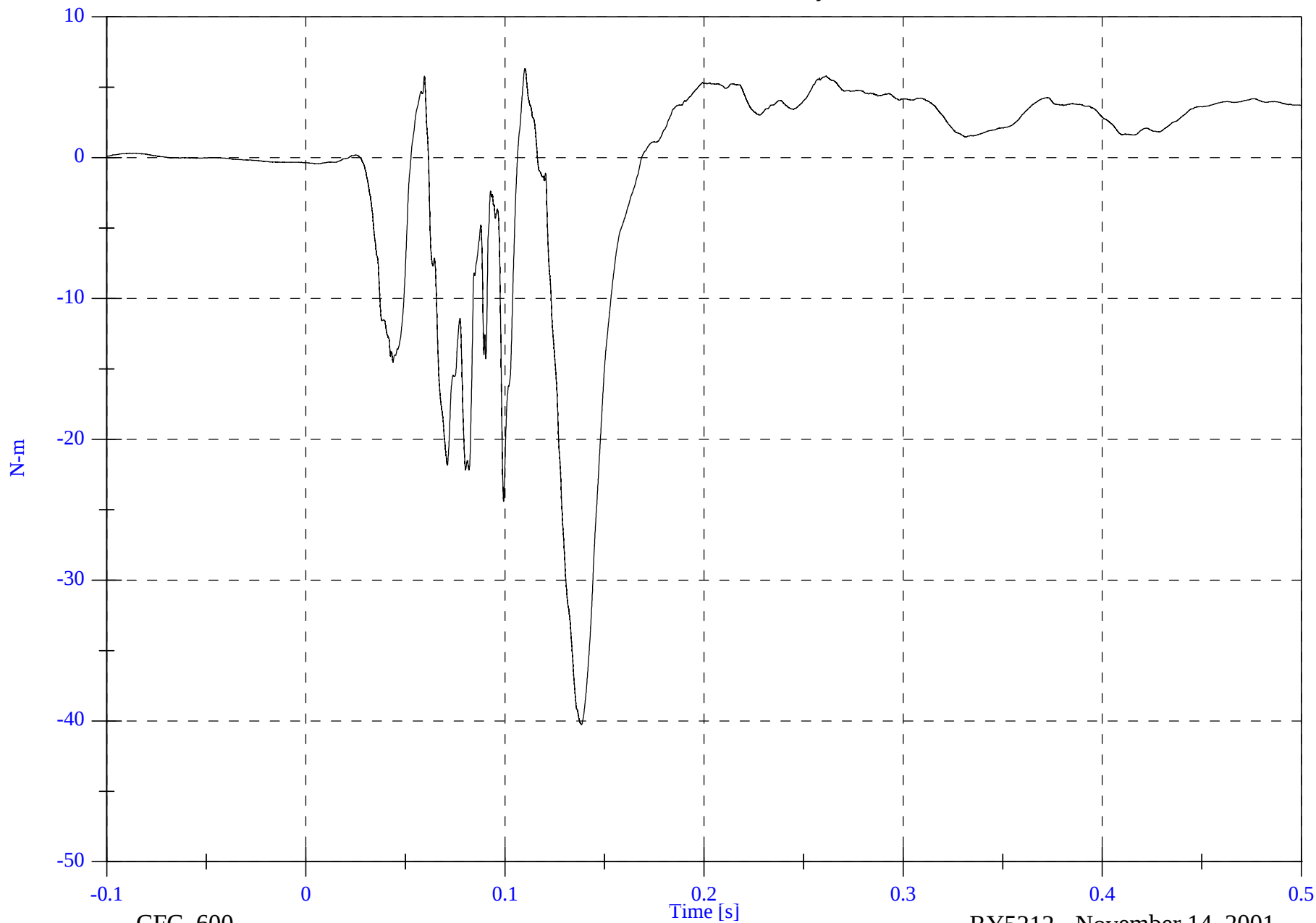
RY5212 - November 14, 2001

40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Left Lower Tibia My

Max: 6.3 [N-m] at 0.110 [s]

Min: -40.3 [N-m] at 0.138 [s]



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8413-68

CFC_600

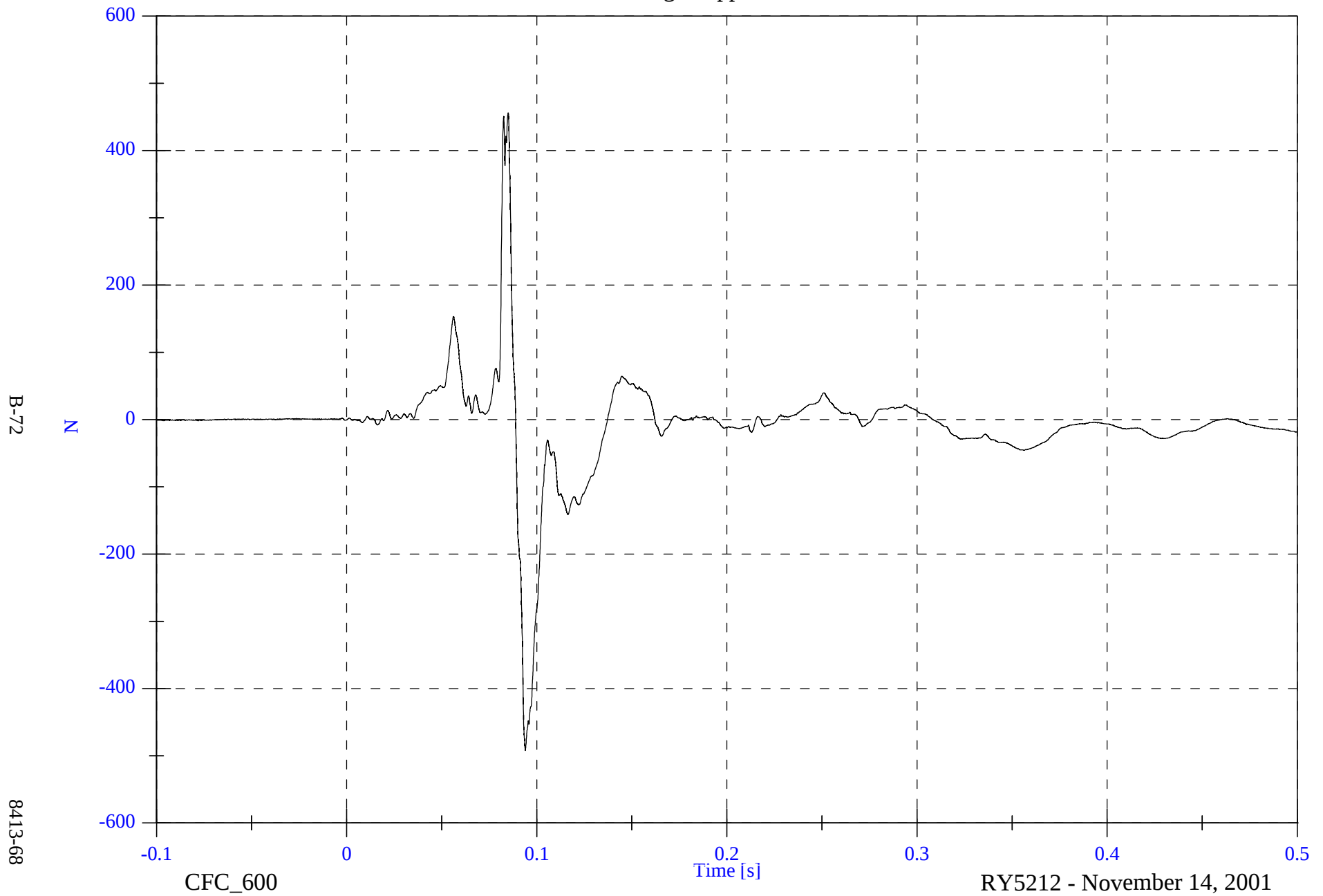
RY5212 - November 14, 2001

40% Frontal Offset Test #12 - 2000 Nissan Quest

Max: 456.2 [N] at 0.085 [s]

P1 Right Upper Tibia Fx

Min: -492.1 [N] at 0.094 [s]

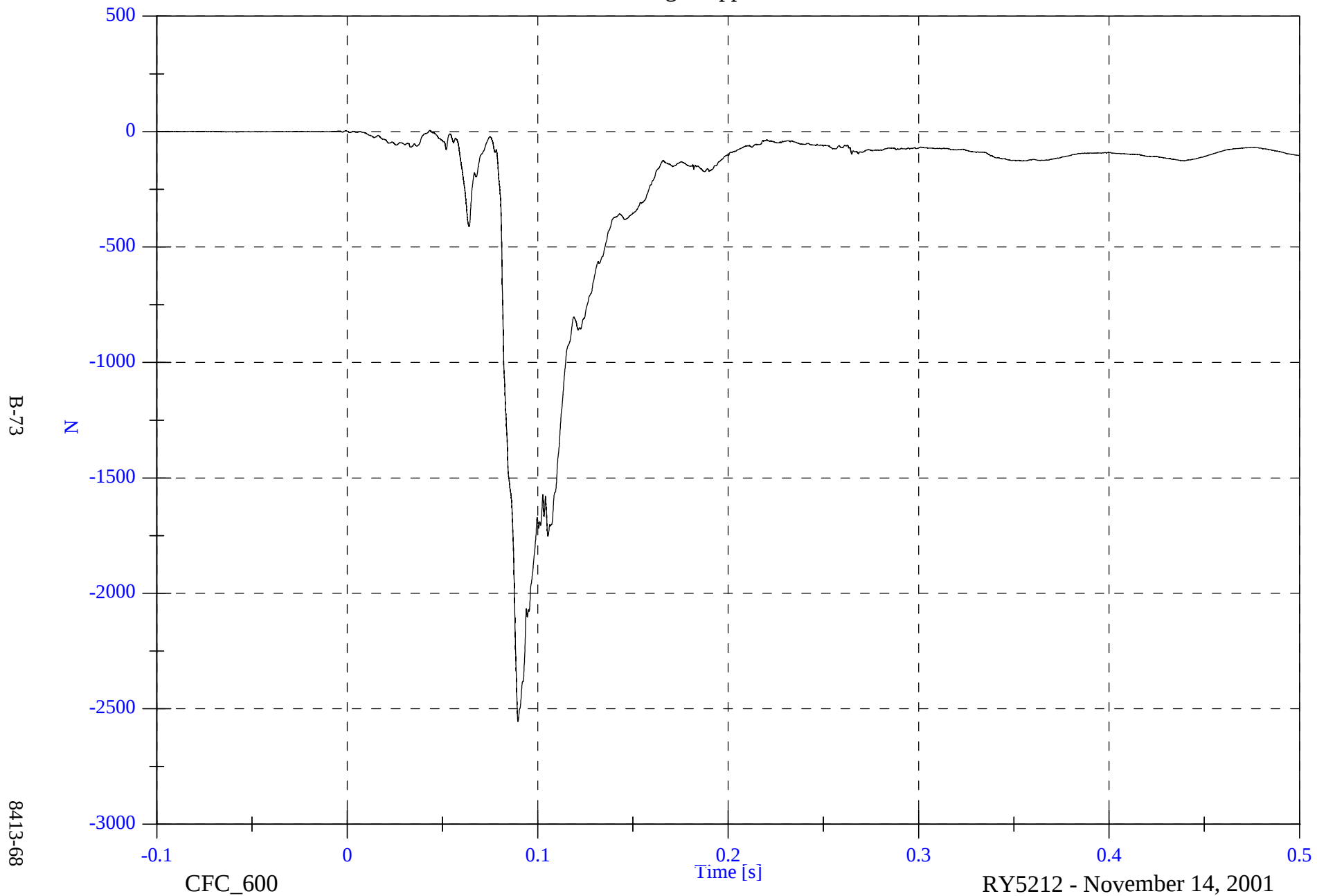


40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Right Upper Tibia Fz

Max: 5.3 [N] at 0.043 [s]

Min: -2555.1 [N] at 0.090 [s]

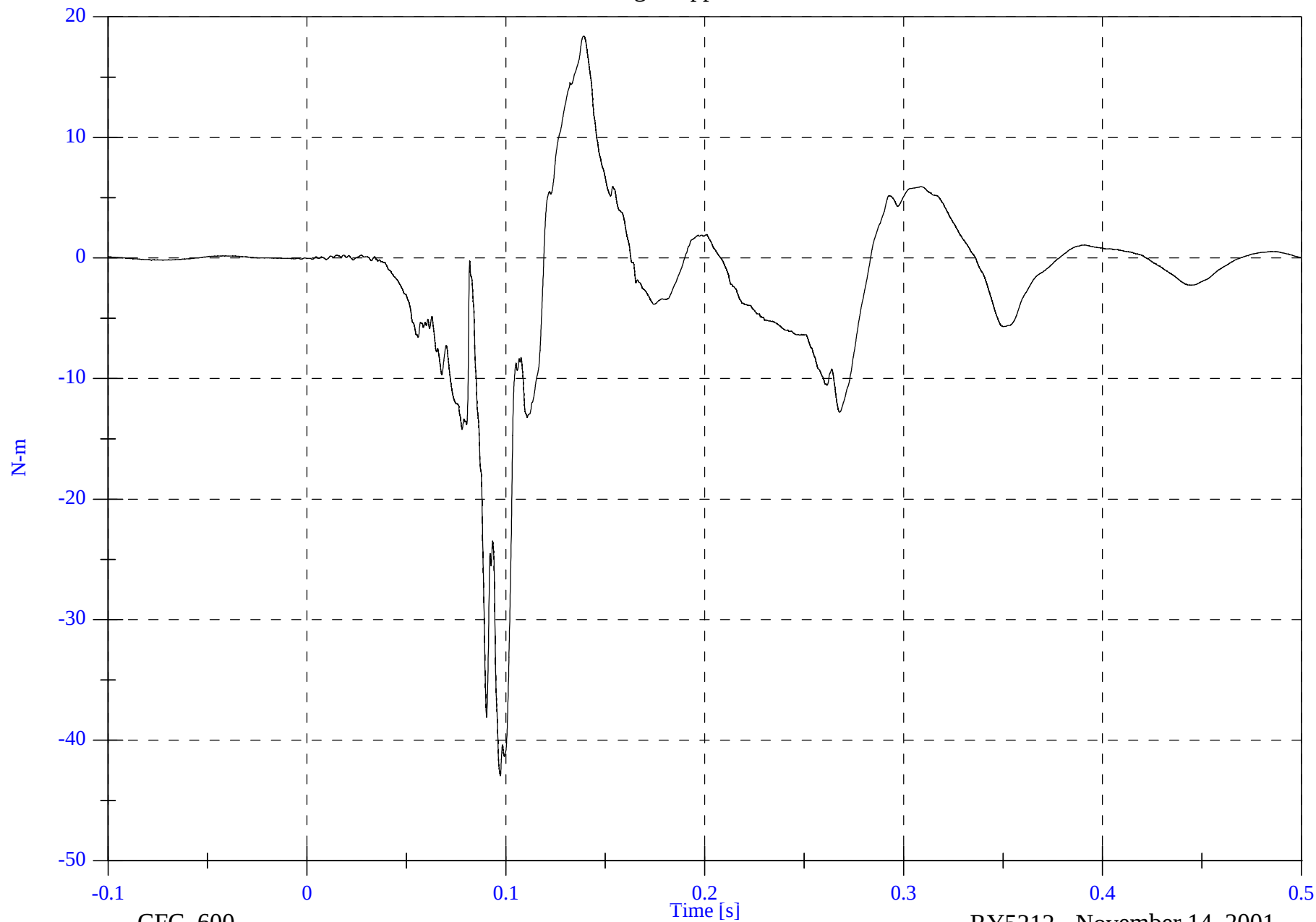


40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Right Upper Tibia Mx

Max: 18.4 [N-m] at 0.139 [s]

Min: -42.9 [N-m] at 0.097 [s]



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8413-68

CFC_600

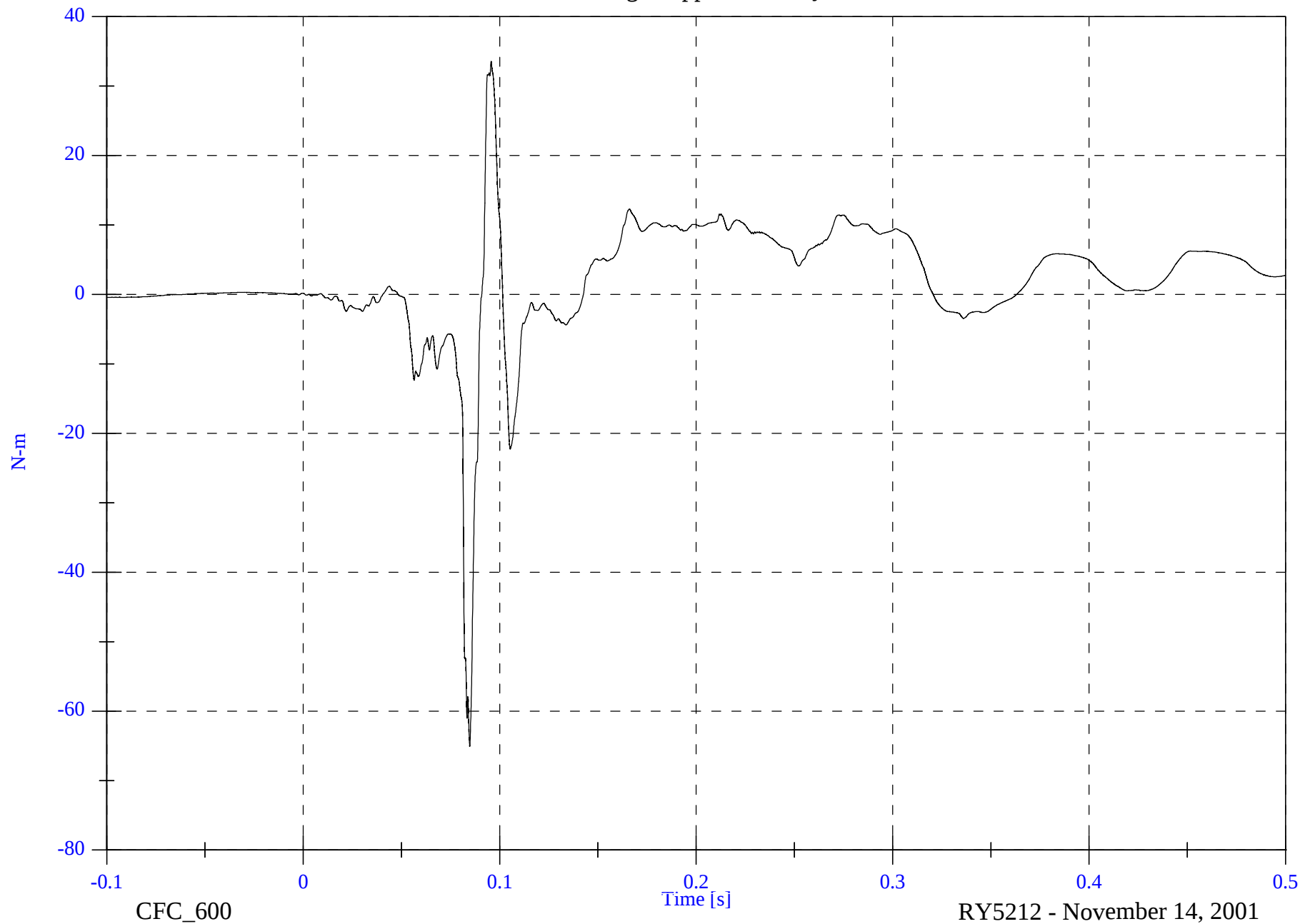
RY5212 - November 14, 2001

40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Right Upper Tibia My

Max: 33.6 [N-m] at 0.096 [s]

Min: -65.1 [N-m] at 0.085 [s]



B-75

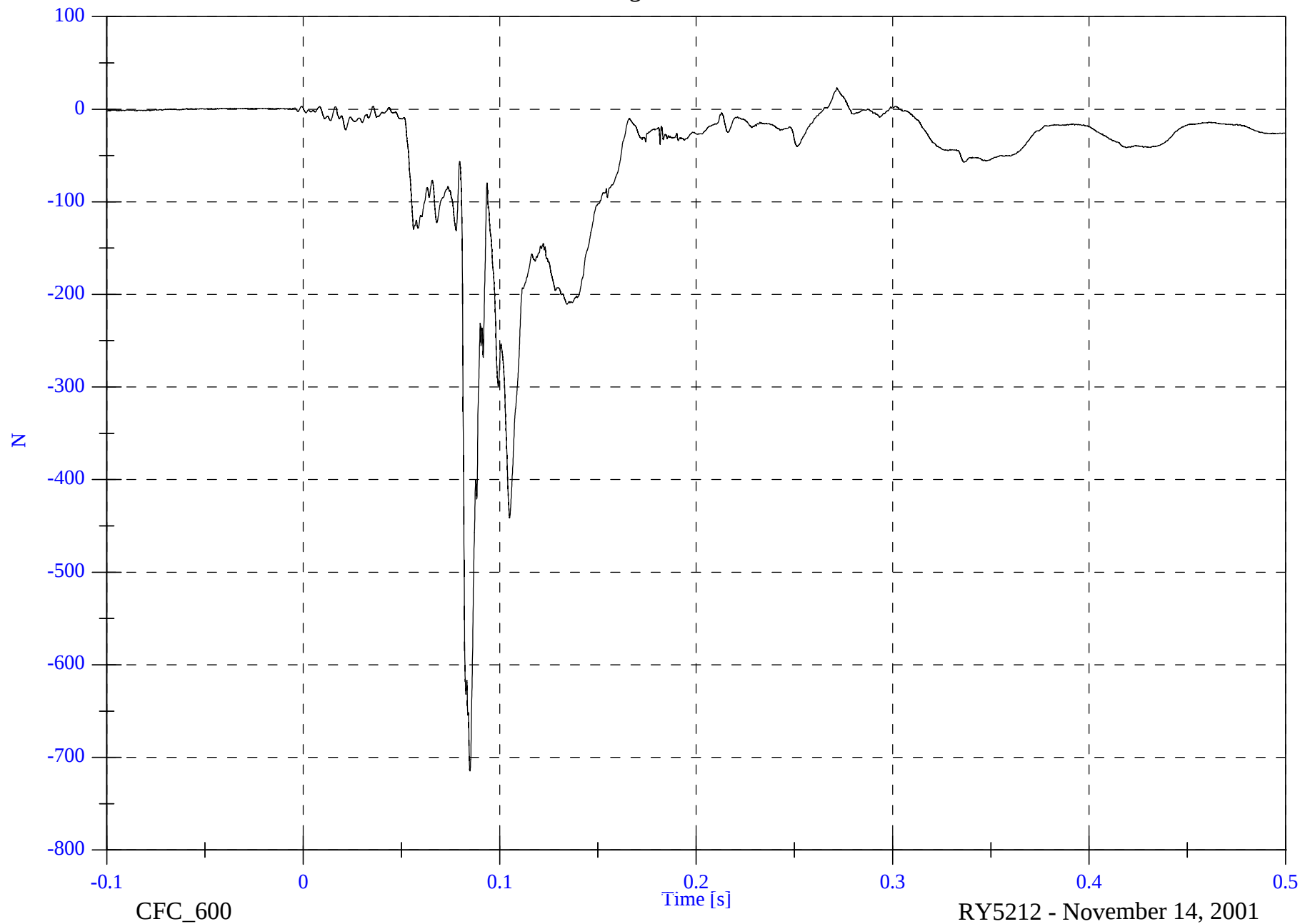
8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Right Lower Tibia Fx

Max: 23.0 [N] at 0.272 [s]

Min: -714.9 [N] at 0.085 [s]



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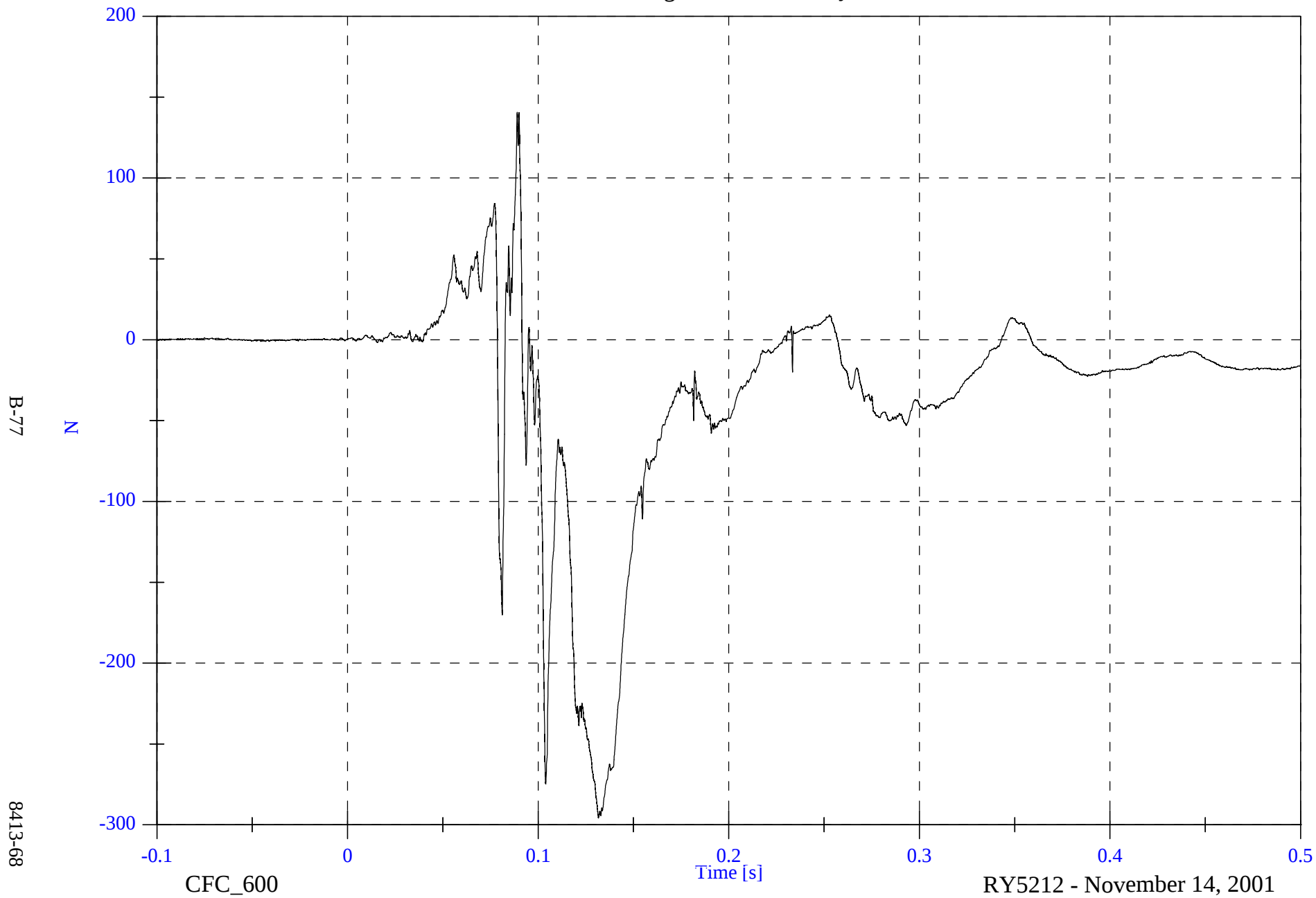
8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Right Lower Tibia Fy

Max: 140.6 [N] at 0.089 [s]

Min: -295.9 [N] at 0.132 [s]

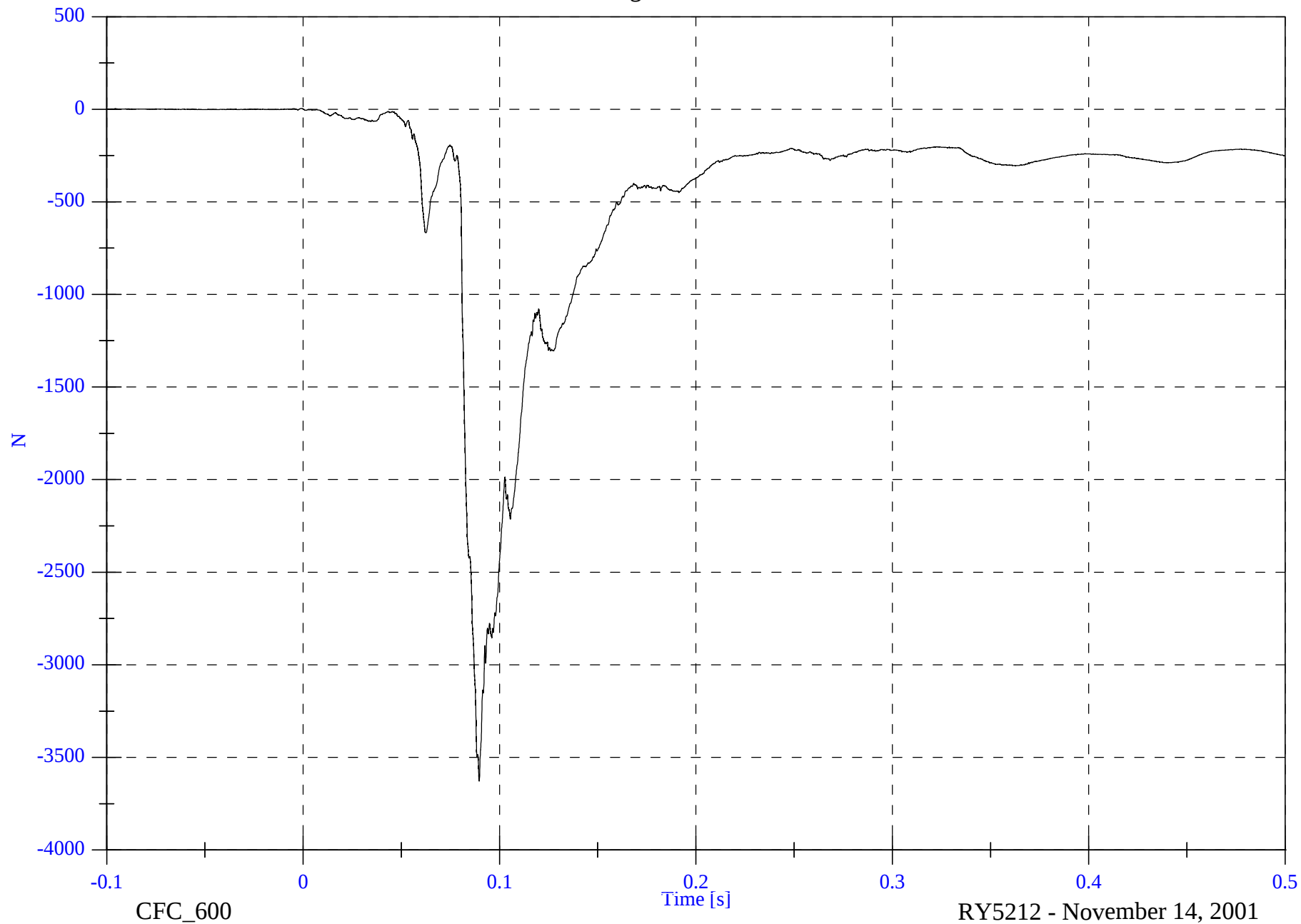


40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Right Lower Tibia Fz

Max: 4.2 [N] at -0.001 [s]

Min: -3628.3 [N] at 0.090 [s]



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8413-68

CFC_600

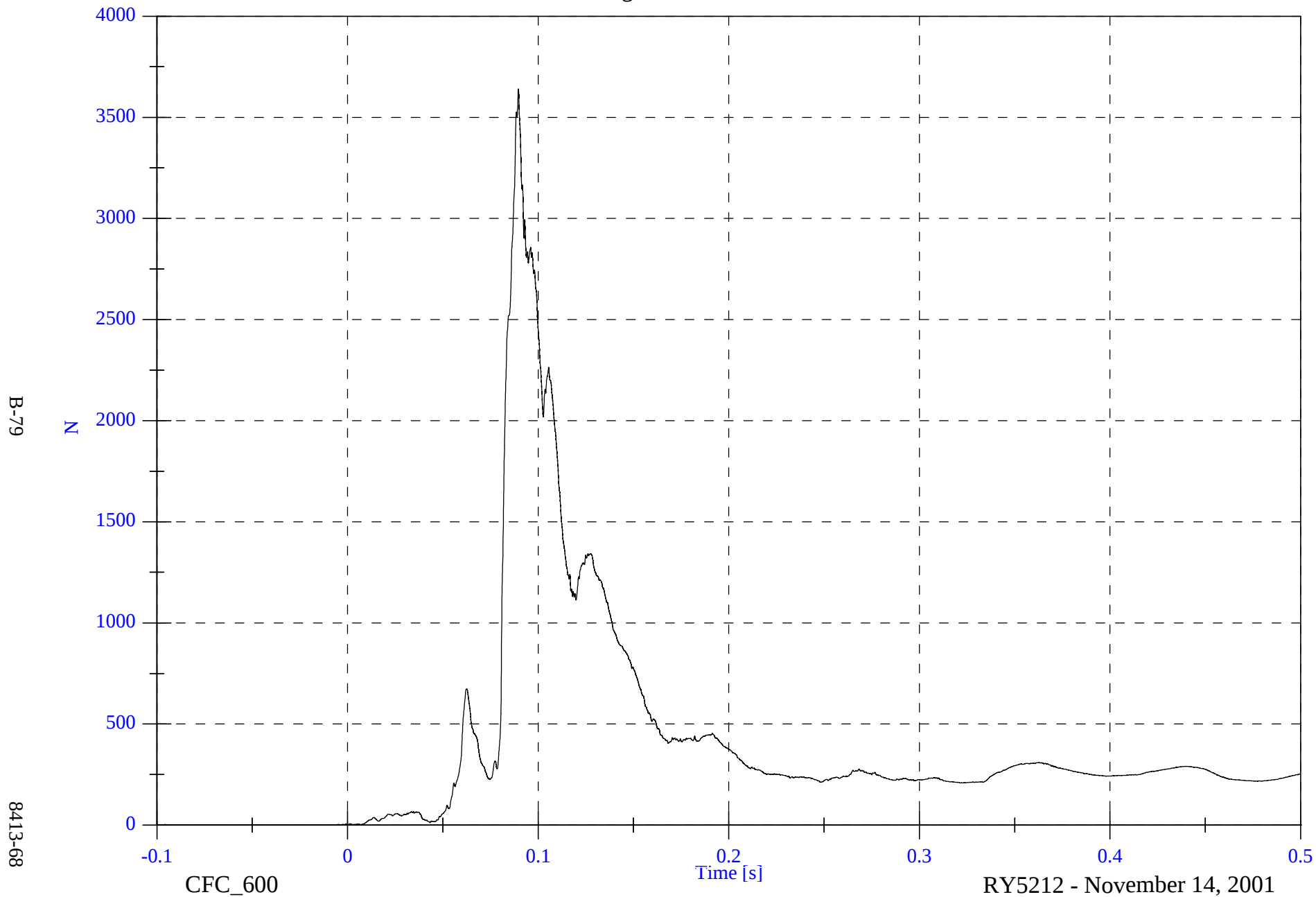
RY5212 - November 14, 2001

40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Right Lower Tibia F Resultant

Max: 3640.2 [N] at 0.090 [s]

Min: 0.1 [N] at -0.061 [s]

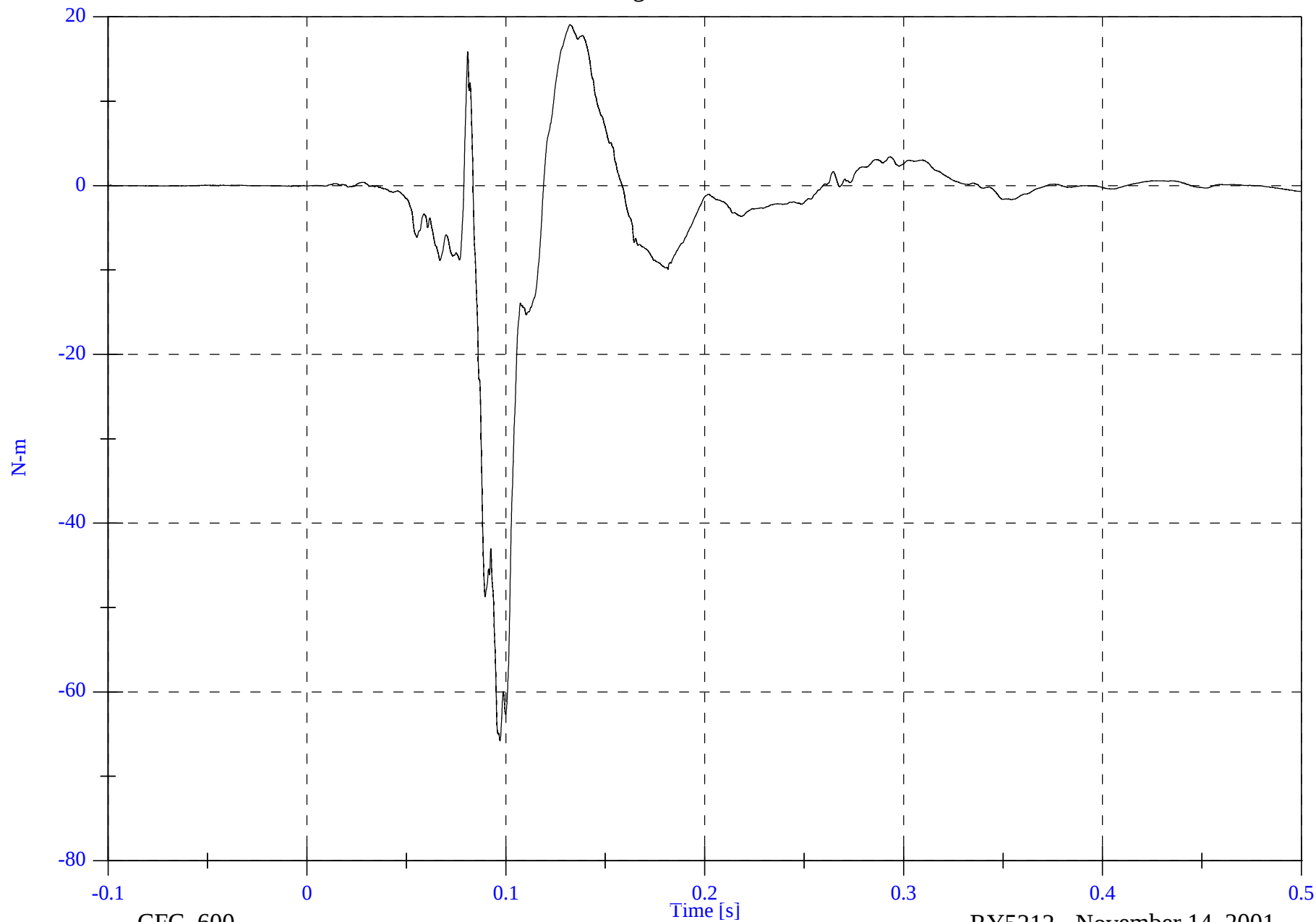


40% Frontal Offset Test #12 - 2000 Nissan Quest

Max: 19.1 [N-m] at 0.132 [s]

P1 Right Lower Tibia Mx

Min: -65.8 [N-m] at 0.097 [s]



B-80

8413-68

CFC_600

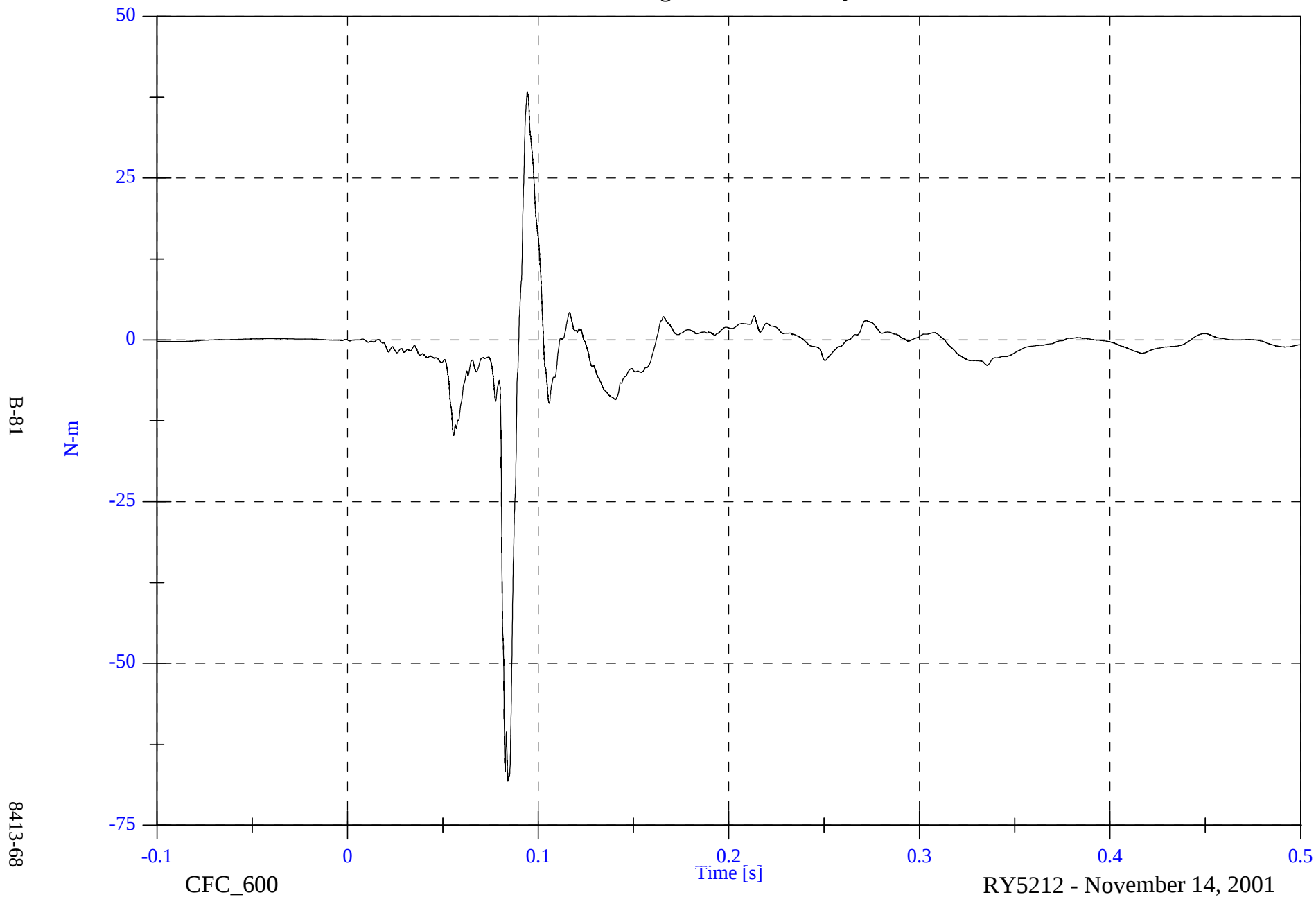
RY5212 - November 14, 2001

40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Right Lower Tibia My

Max: 38.4 [N-m] at 0.094 [s]

Min: -68.2 [N-m] at 0.084 [s]

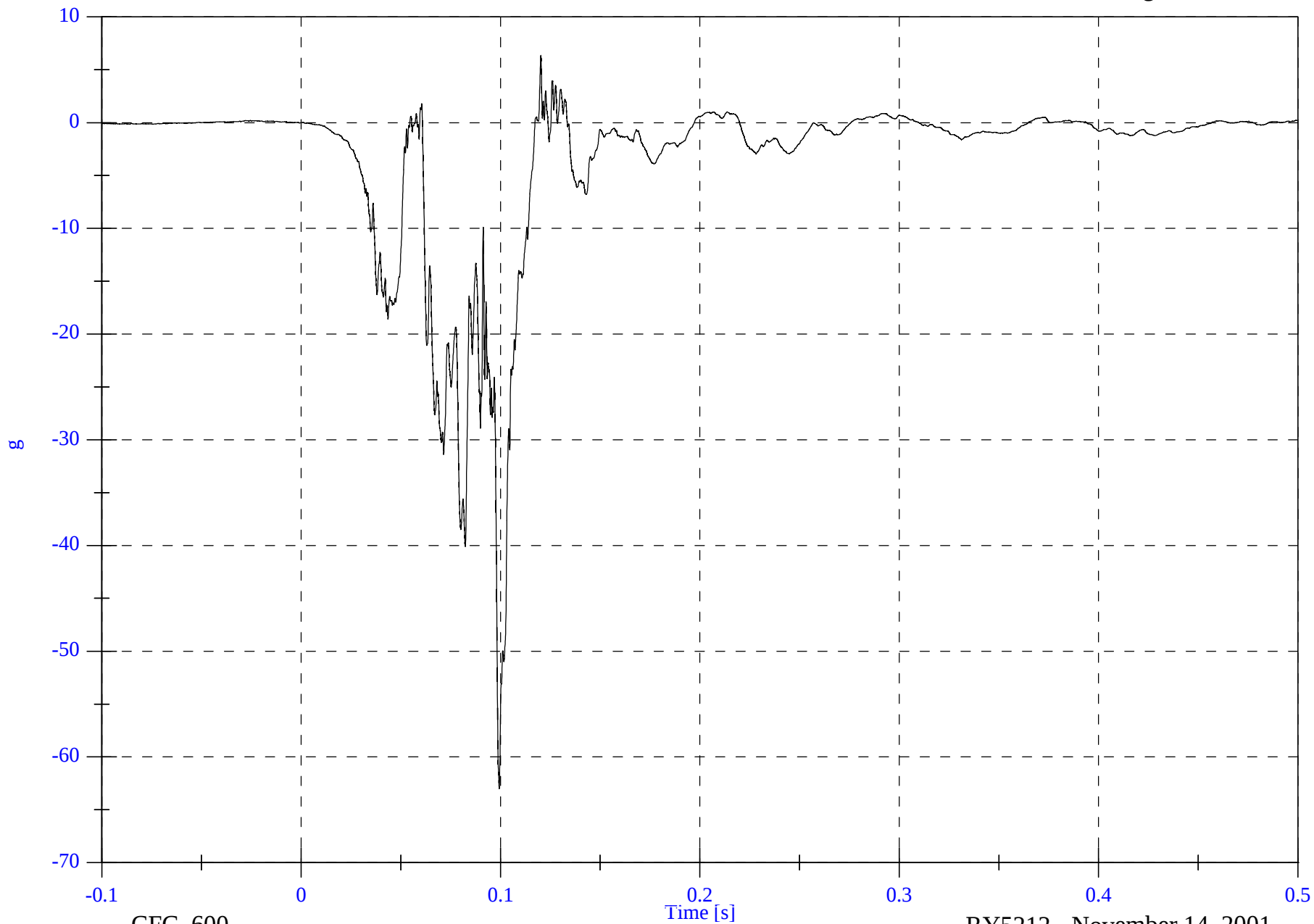


40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Left Tibia Ax

Max: 6.4 [g] at 0.120 [s]

Min: -63.0 [g] at 0.099 [s]



B-82

8413-68

CFC_600

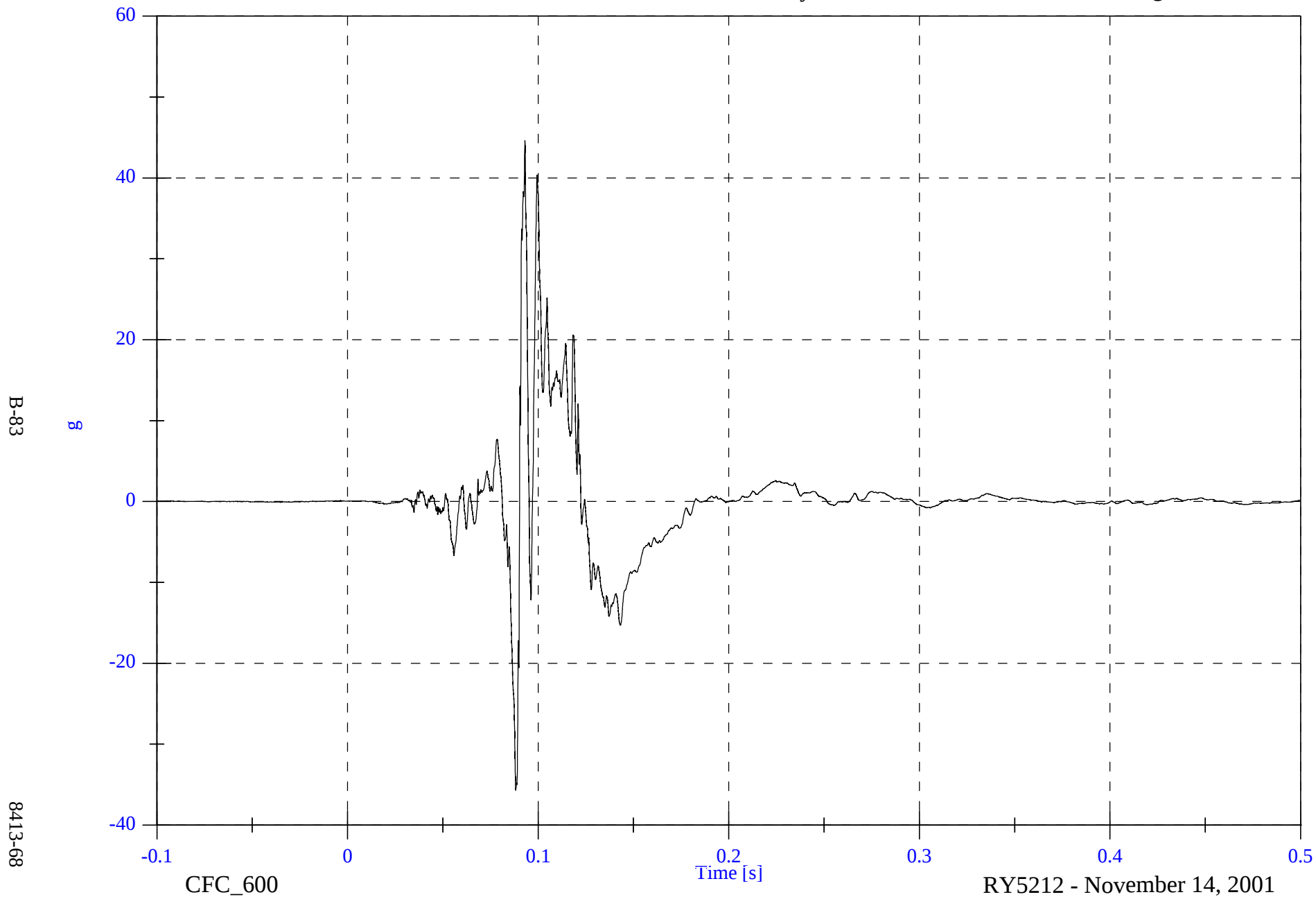
RY5212 - November 14, 2001

40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Left Tibia Ay

Max: 44.6 [g] at 0.093 [s]

Min: -35.7 [g] at 0.088 [s]

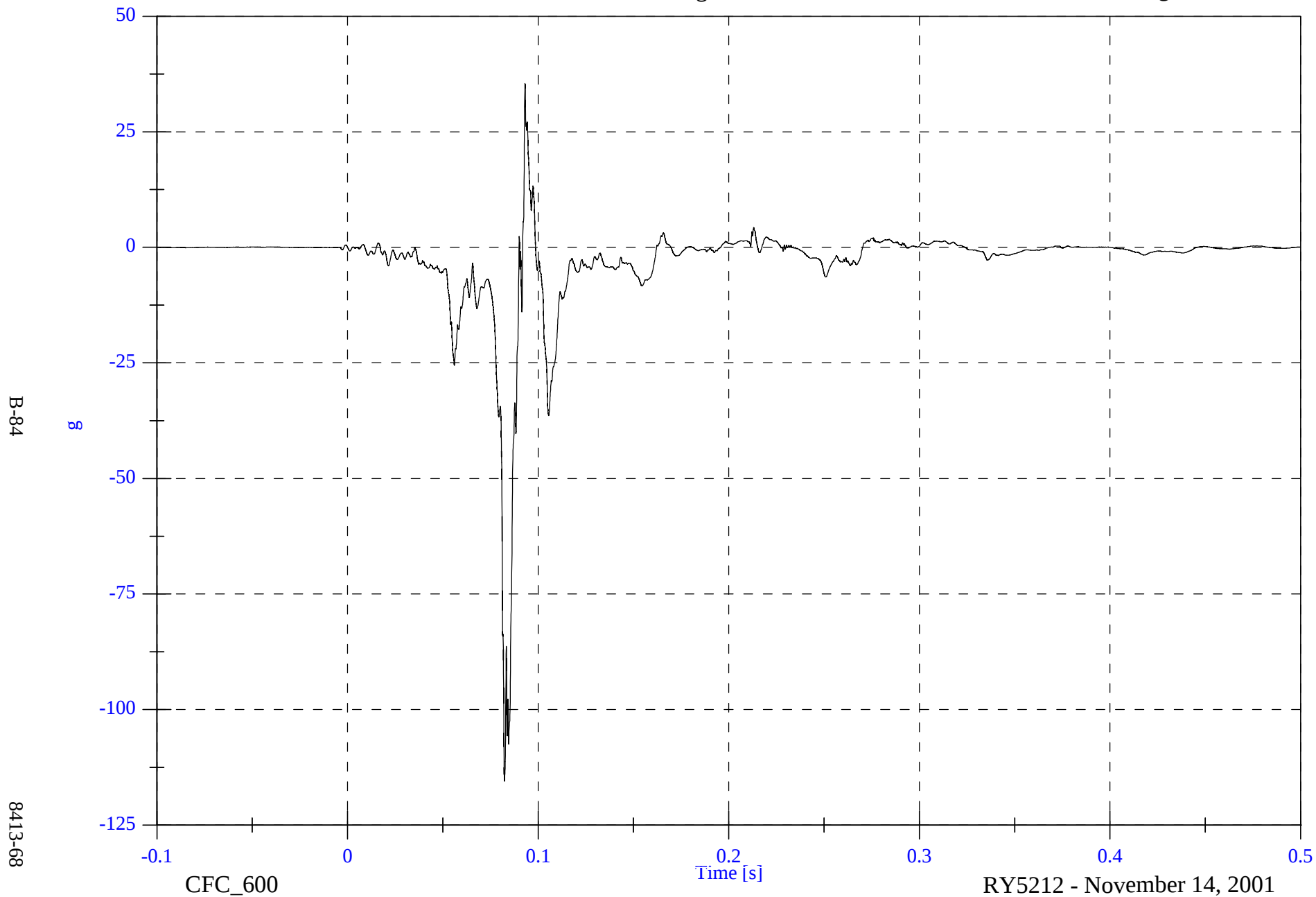


40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Right Tibia Ax

Max: 35.4 [g] at 0.093 [s]

Min: -115.5 [g] at 0.082 [s]

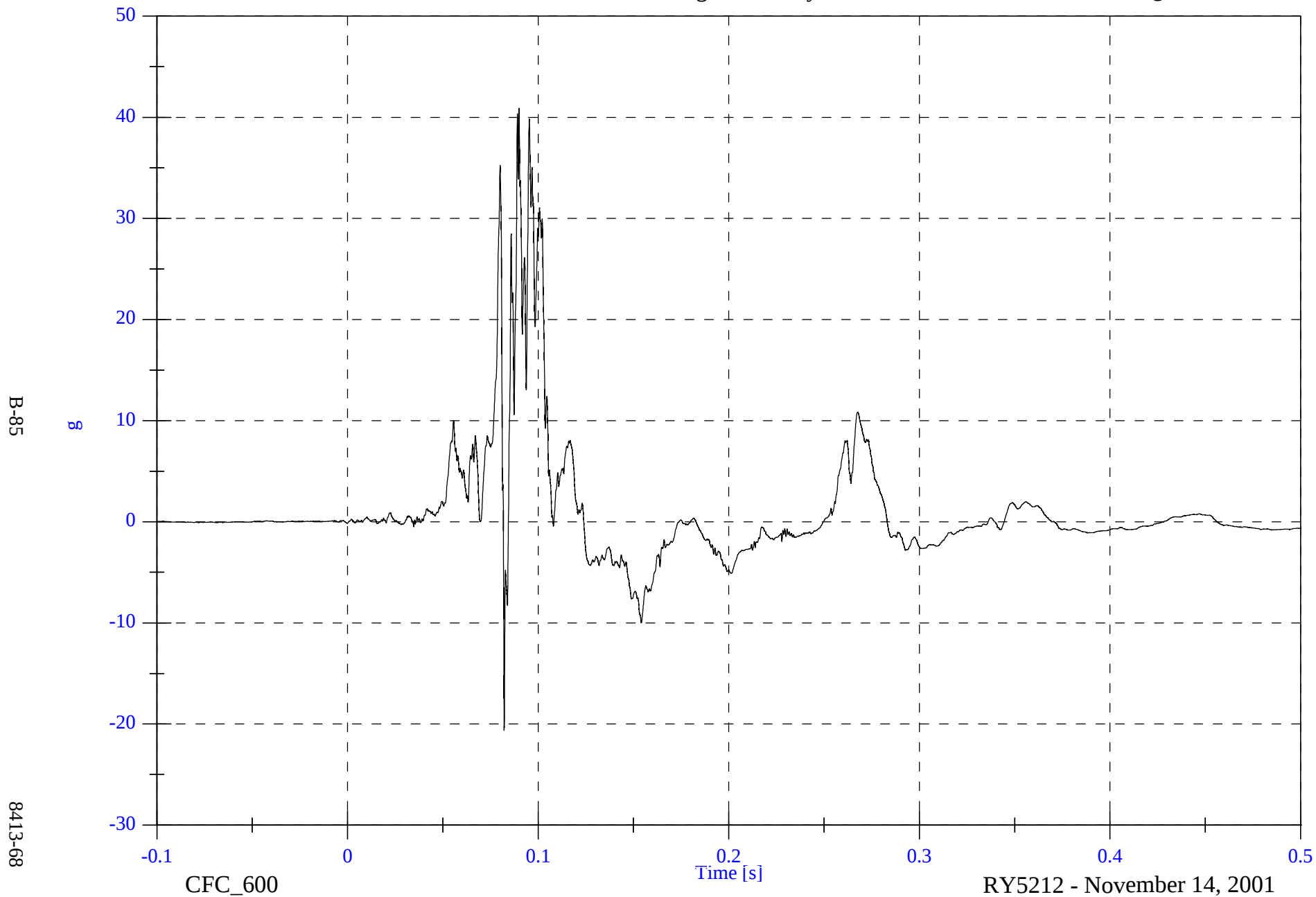


40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Right Tibia Ay

Max: 40.9 [g] at 0.090 [s]

Min: -20.6 [g] at 0.082 [s]

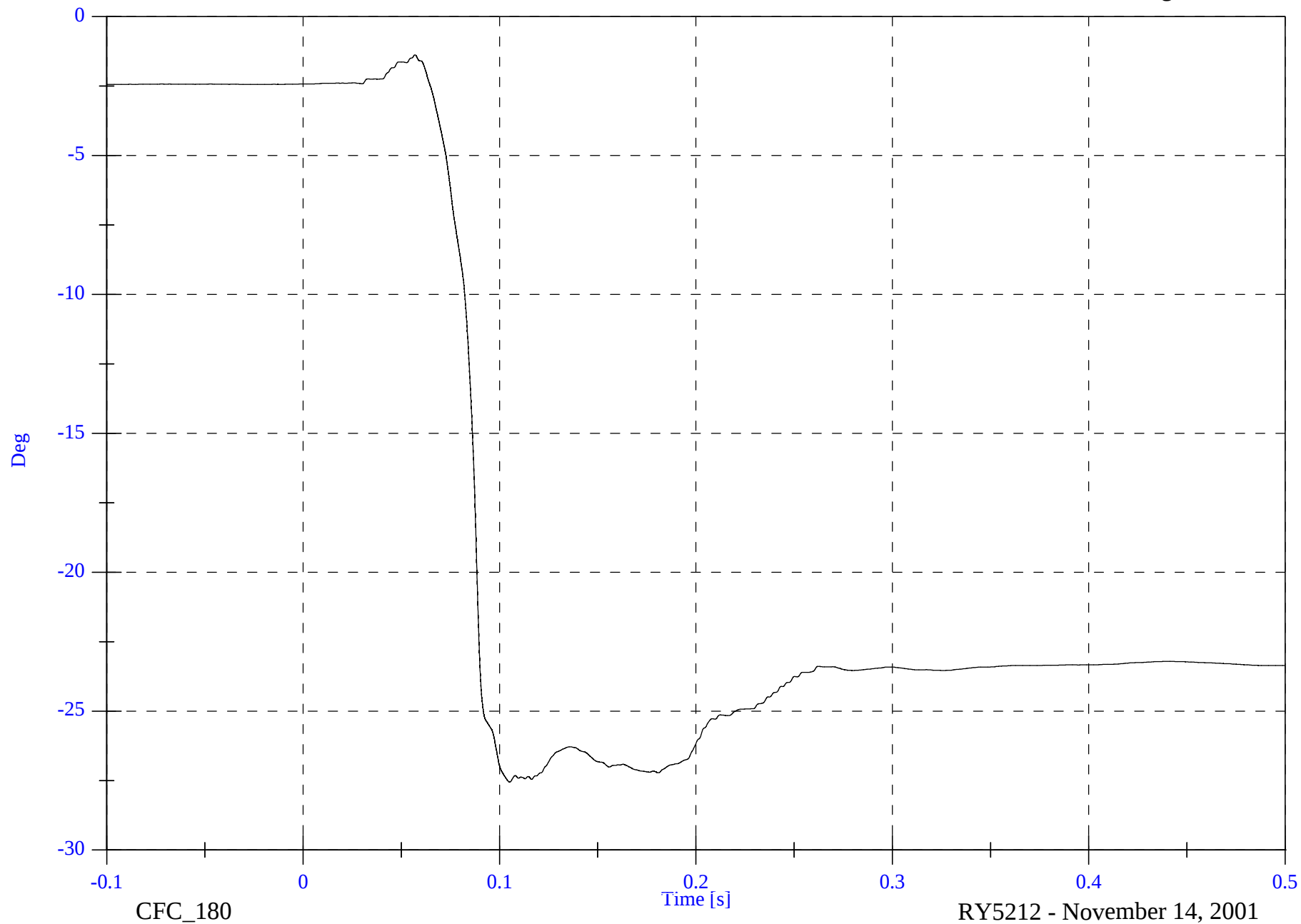


40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Left Ankle Rotation x

Max: -1.4 [Deg] at 0.057 [s]

Min: -27.6 [Deg] at 0.105 [s]



B-86

8413-68

CFC_180

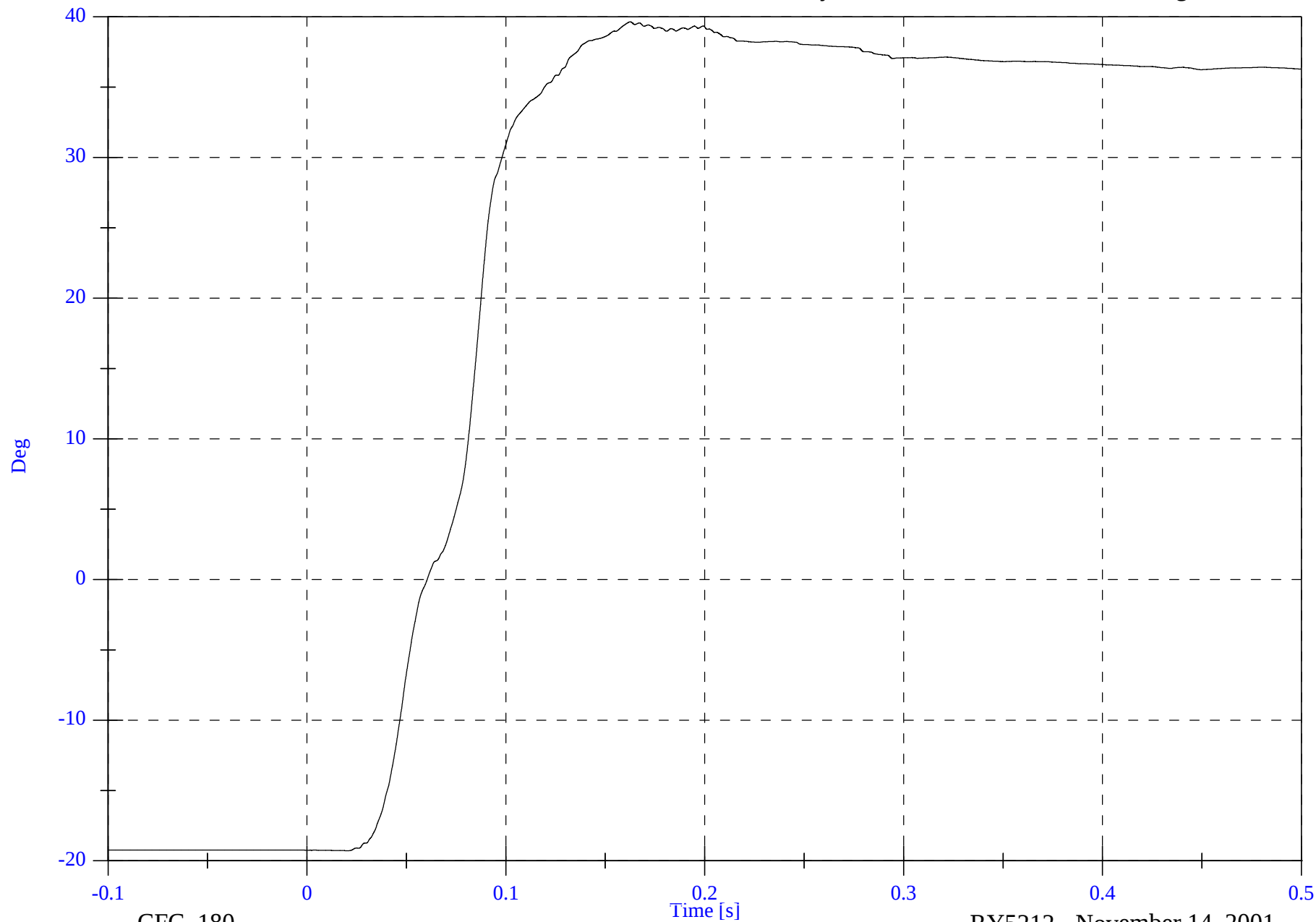
RY5212 - November 14, 2001

40% Frontal Offset Test #12 - 2000 Nissan Quest

Max: 39.7 [Deg] at 0.163 [s]

P1 Left Ankle Rotation y

Min: -19.3 [Deg] at 0.020 [s]



B-87

8413-68

CFC_180

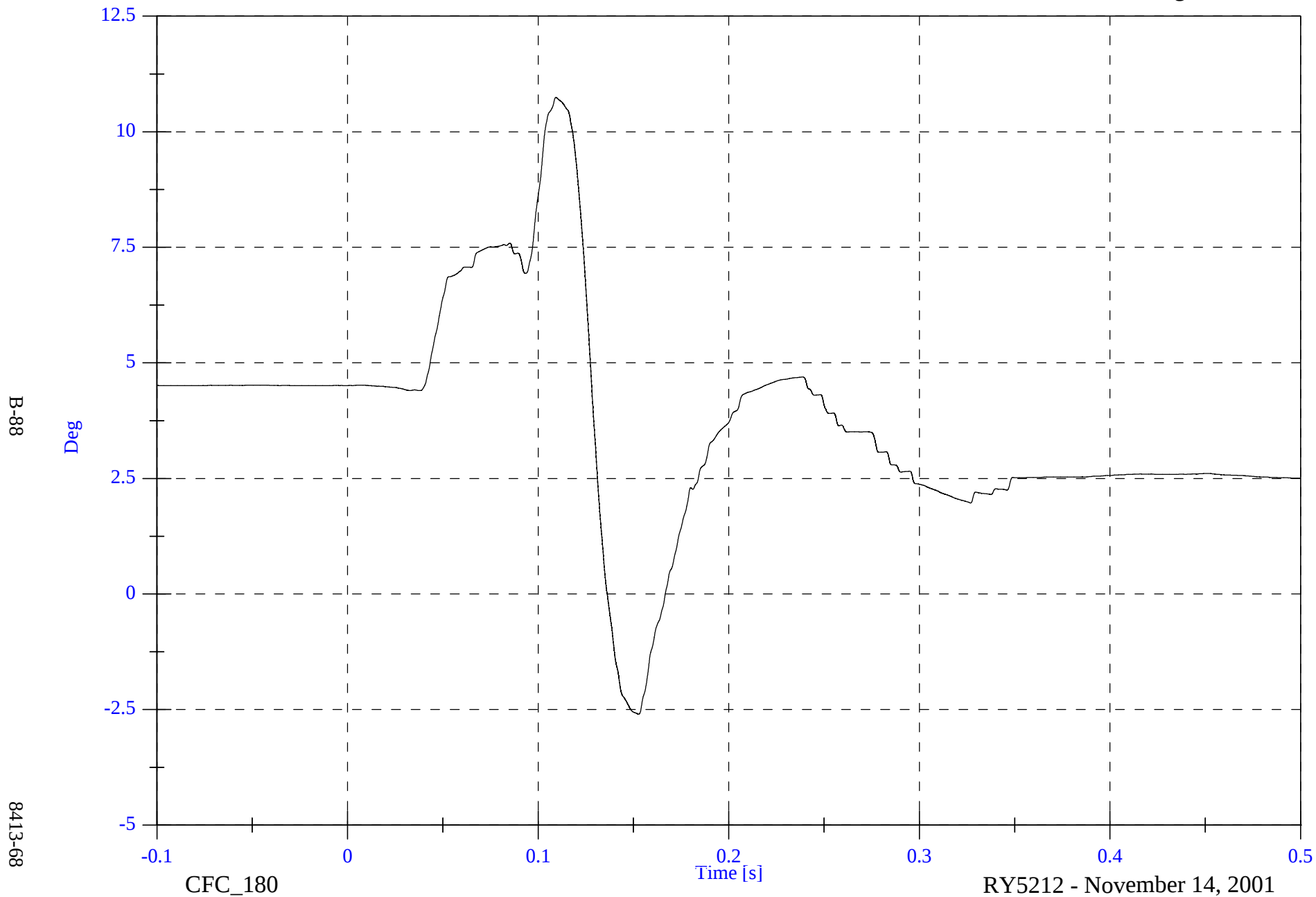
RY5212 - November 14, 2001

40% Frontal Offset Test #12 - 2000 Nissan Quest

Max: 10.7 [Deg] at 0.109 [s]

P1 Left Ankle Rotation z

Min: -2.6 [Deg] at 0.153 [s]

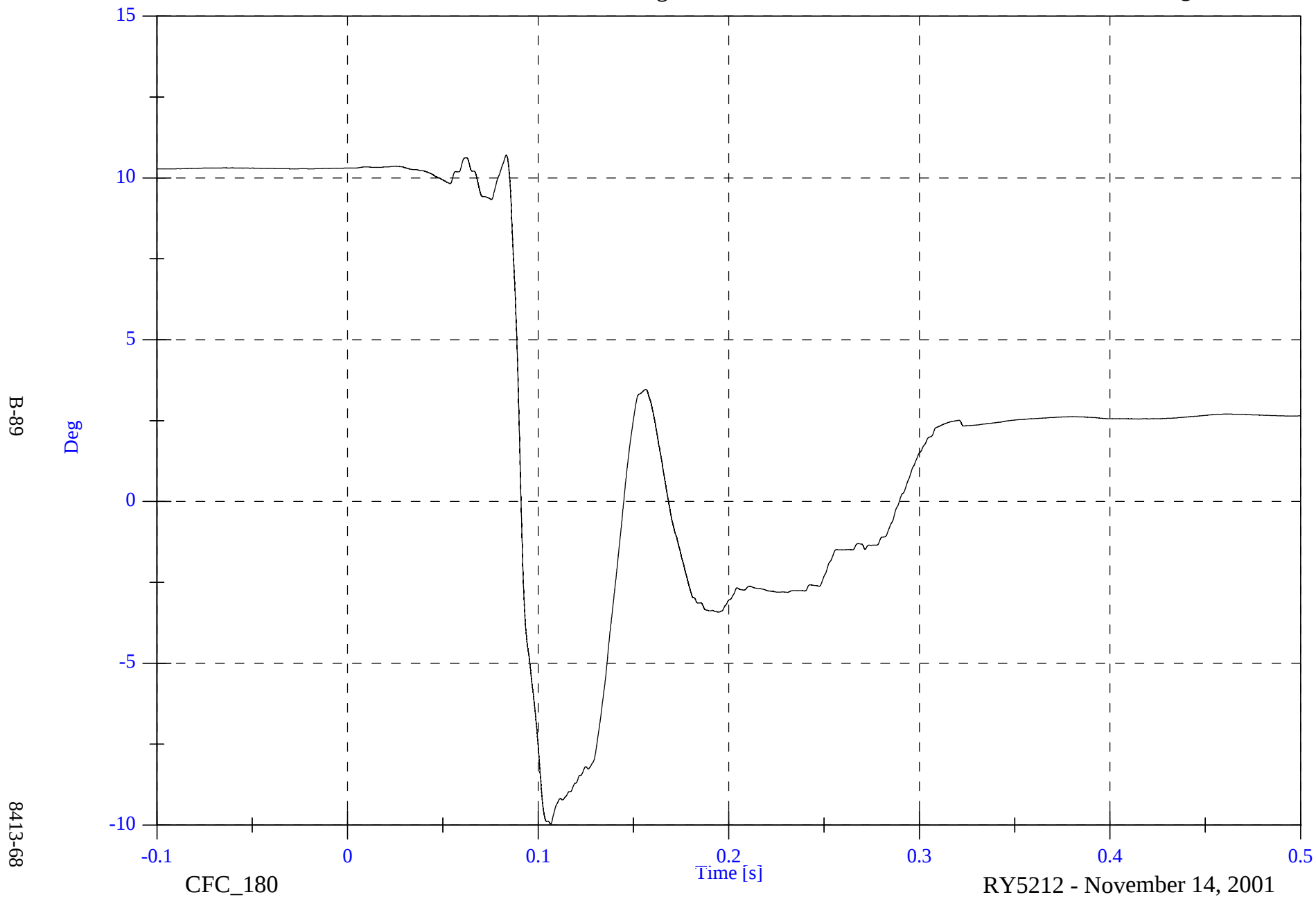


40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Right Ankle Rotation x

Max: 10.7 [Deg] at 0.083 [s]

Min: -10.0 [Deg] at 0.107 [s]

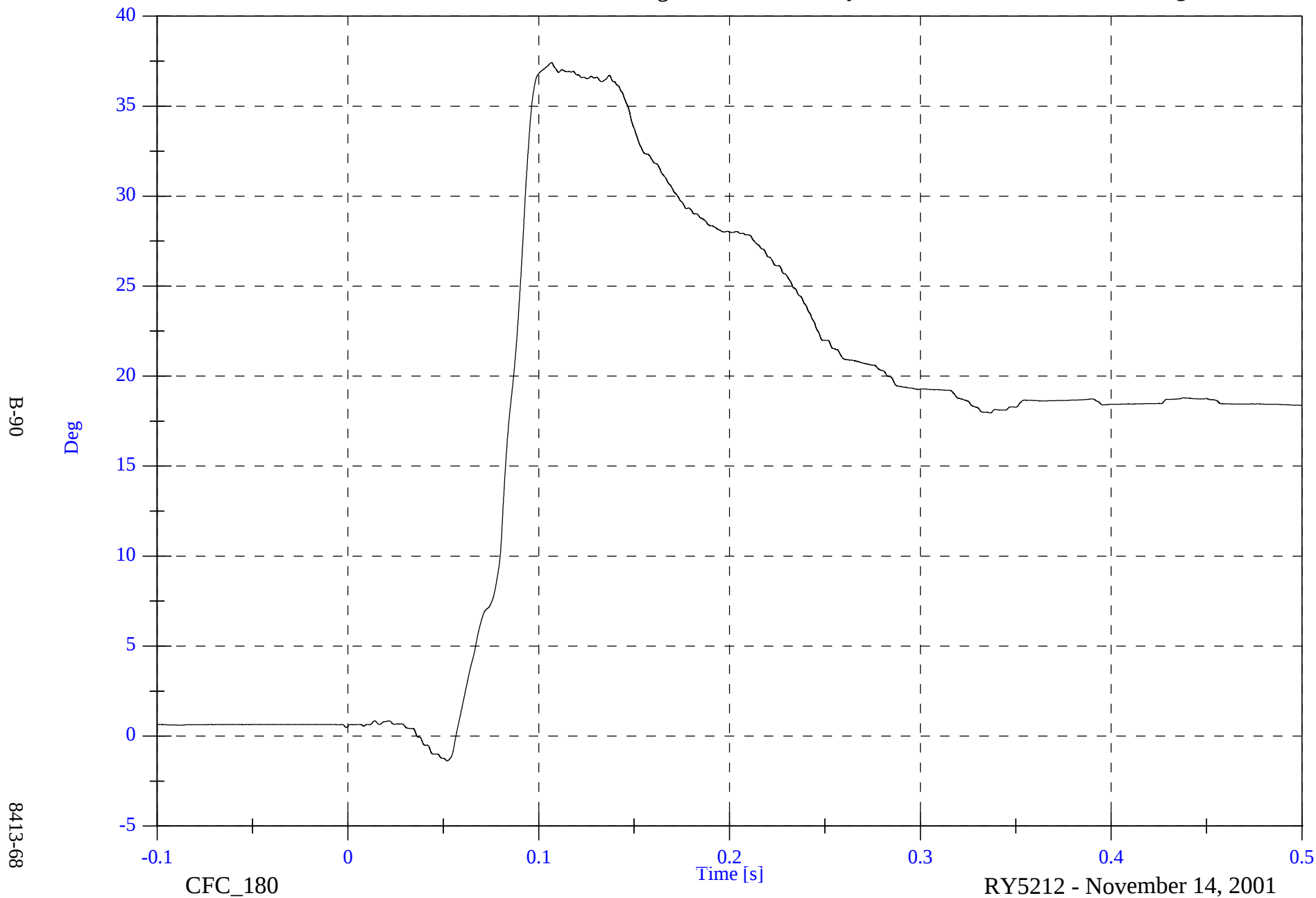


40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Right Ankle Rotation y

Max: 37.4 [Deg] at 0.107 [s]

Min: -1.4 [Deg] at 0.052 [s]

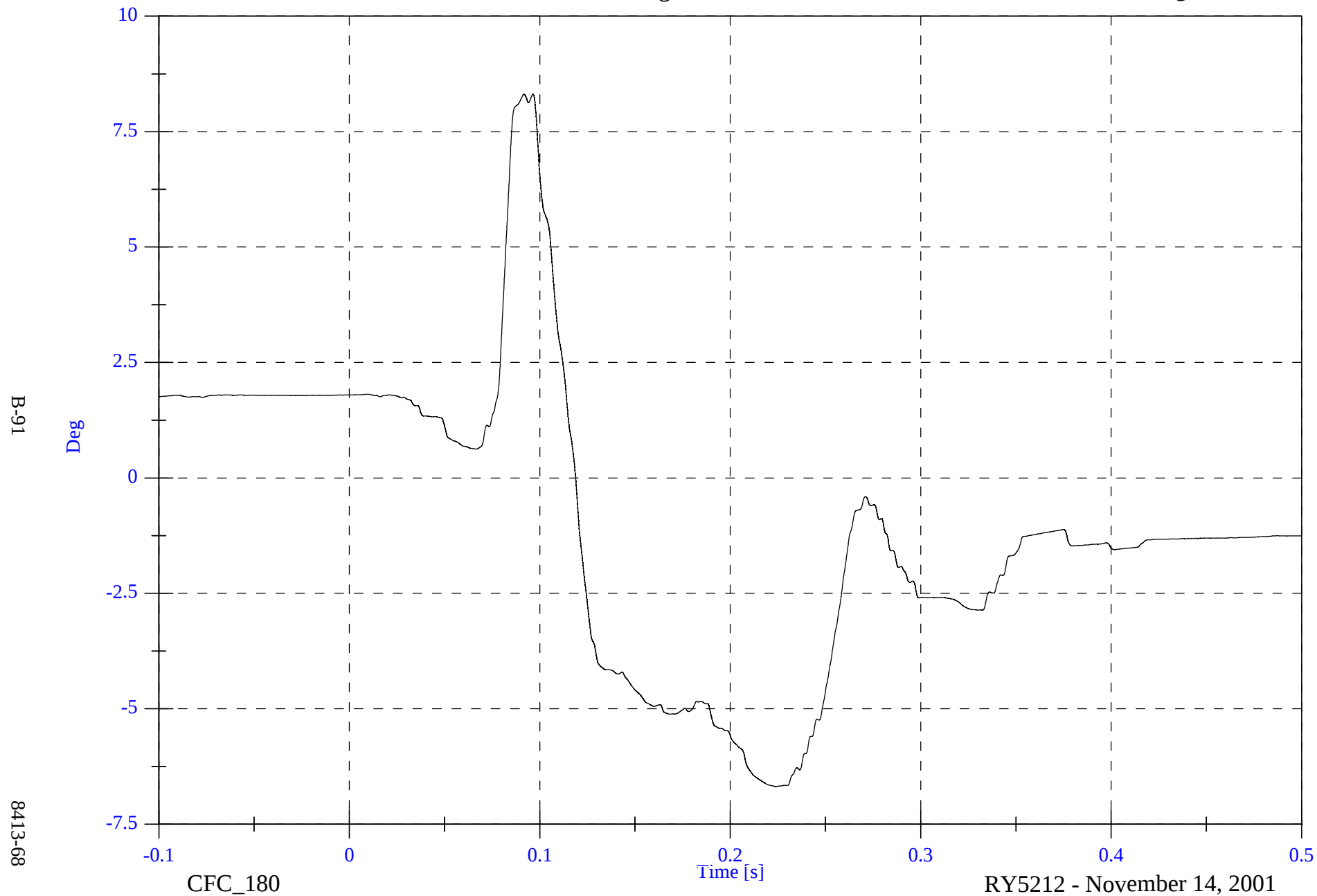


40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Right Ankle Rotation z

Max: 8.3 [Deg] at 0.096 [s]

Min: -6.7 [Deg] at 0.224 [s]



40% Frontal Offset Test #12 - 2000 Nissan Quest

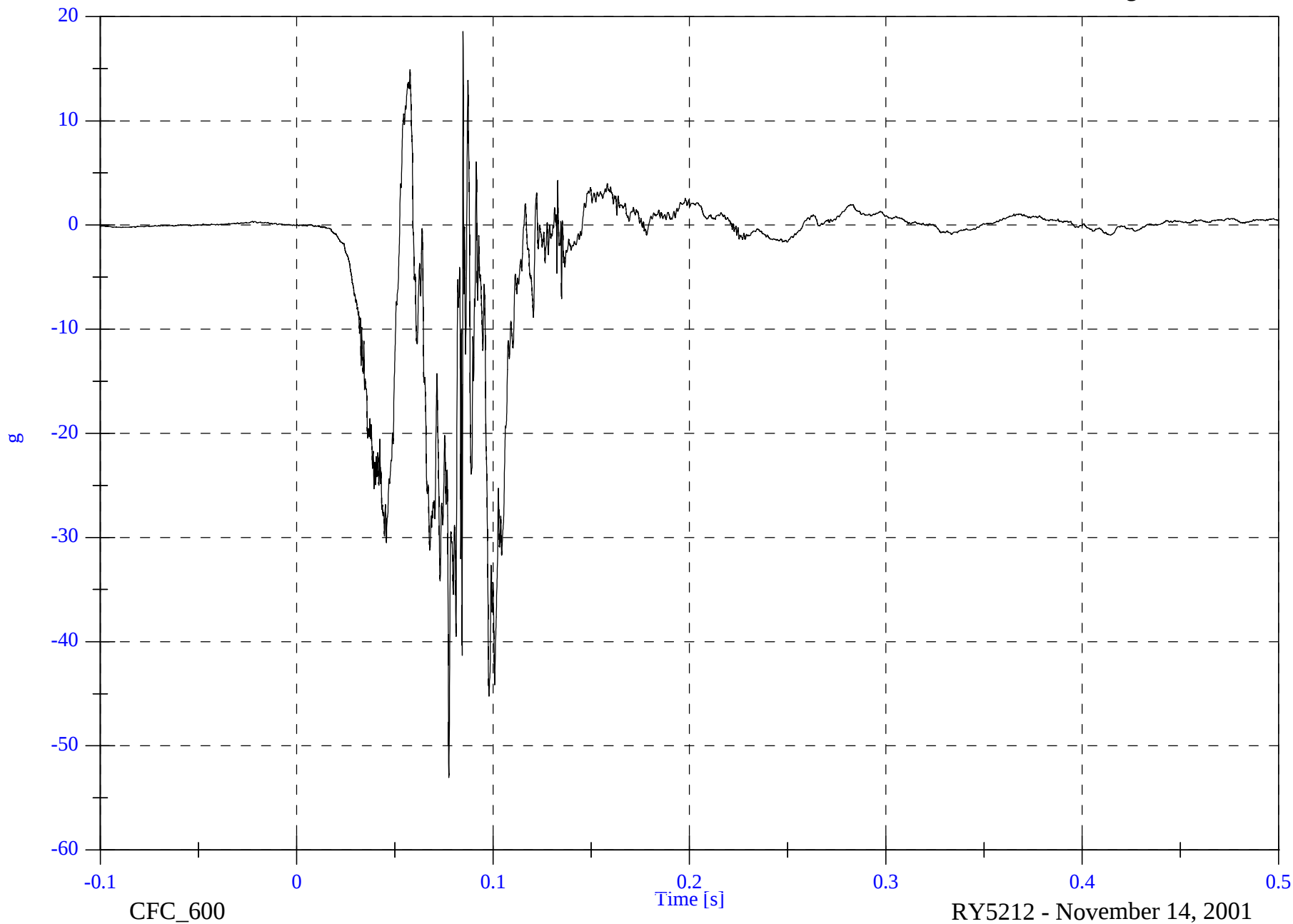
P1 Left Foot Ax

Max: 18.6 [g] at 0.085 [s]

Min: -53.0 [g] at 0.078 [s]

B-92

8413-68

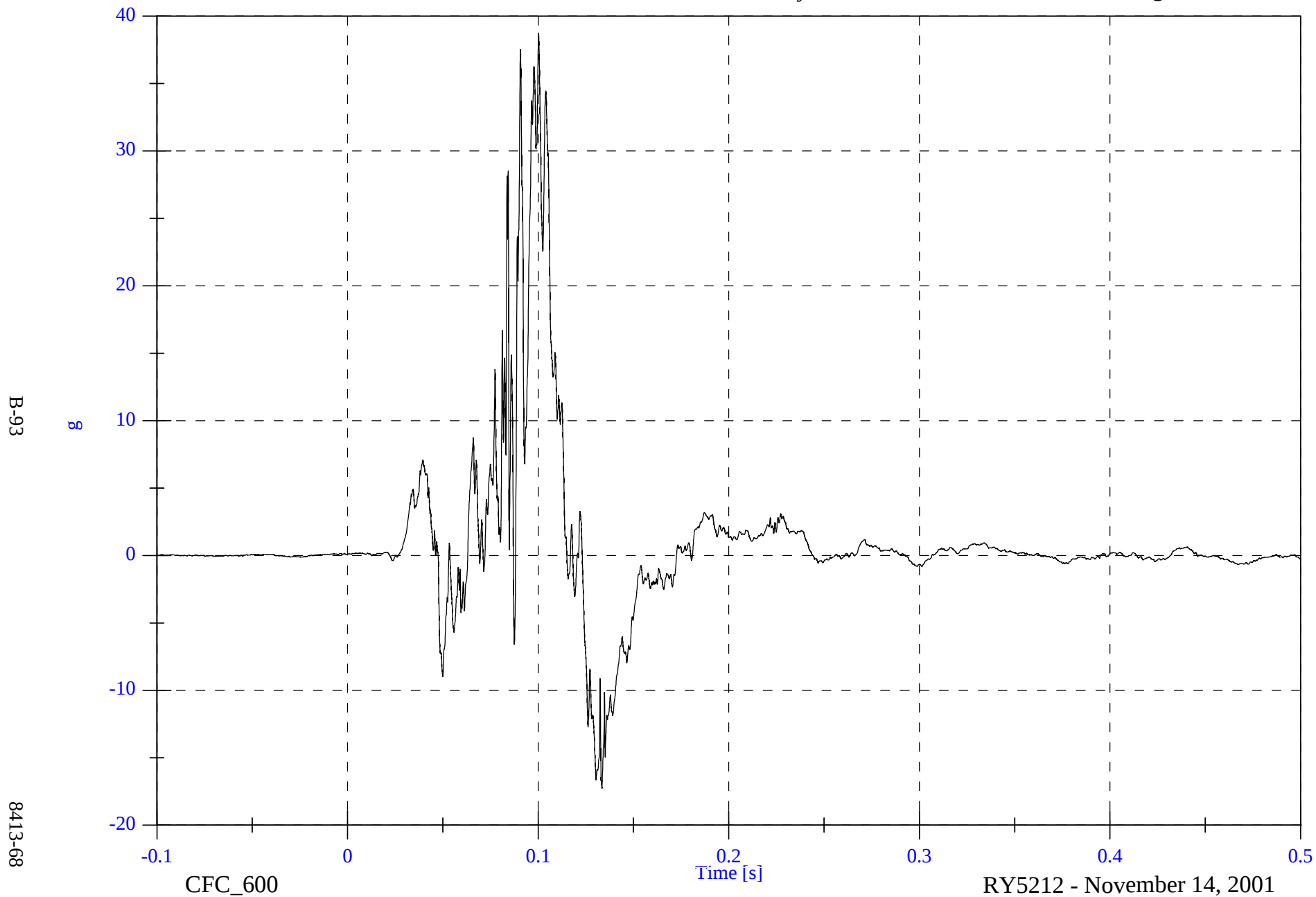


40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Left Foot Ay

Max: 38.7 [g] at 0.100 [s]

Min: -17.3 [g] at 0.133 [s]

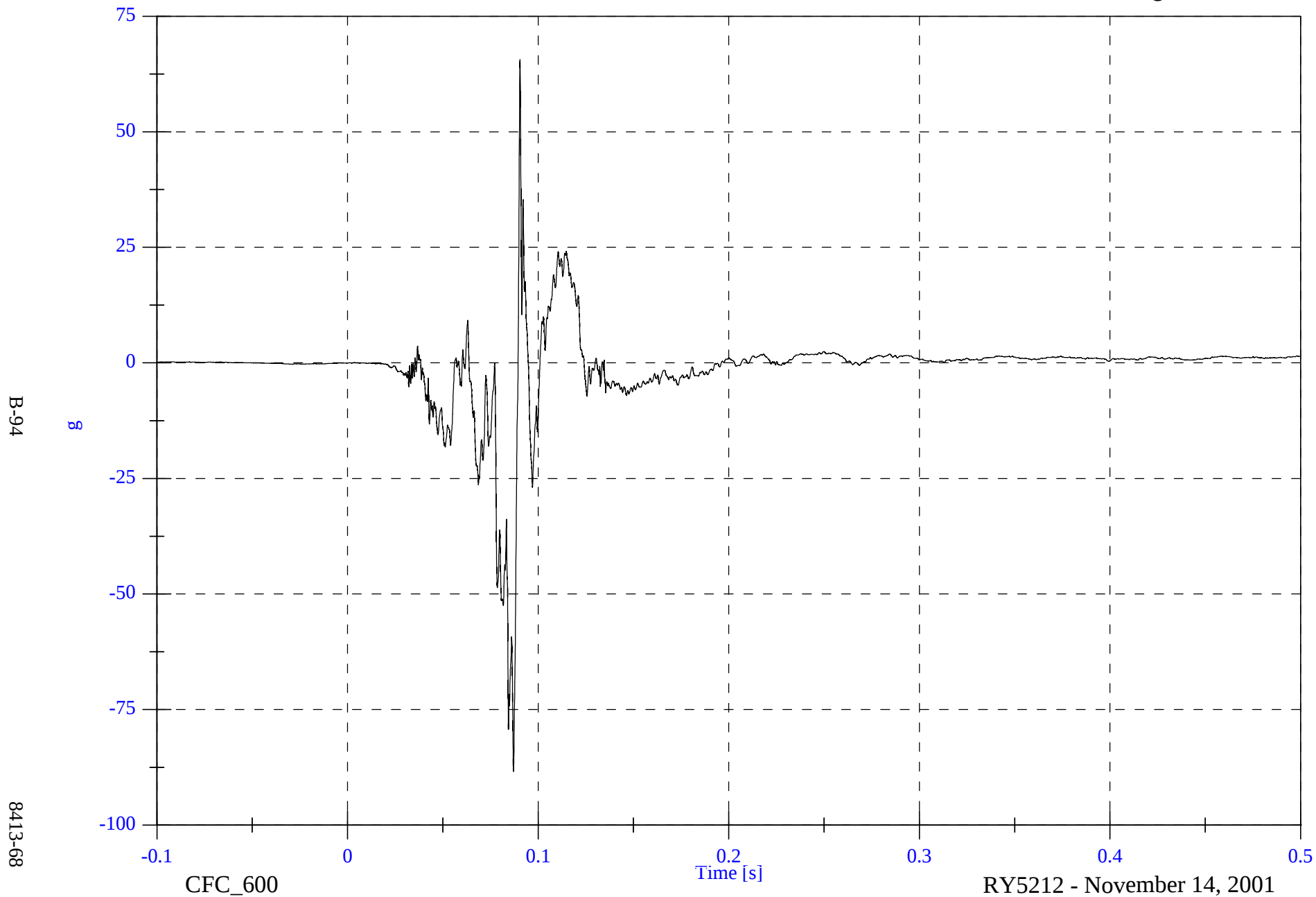


40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Left Foot Az

Max: 65.6 [g] at 0.090 [s]

Min: -88.4 [g] at 0.087 [s]

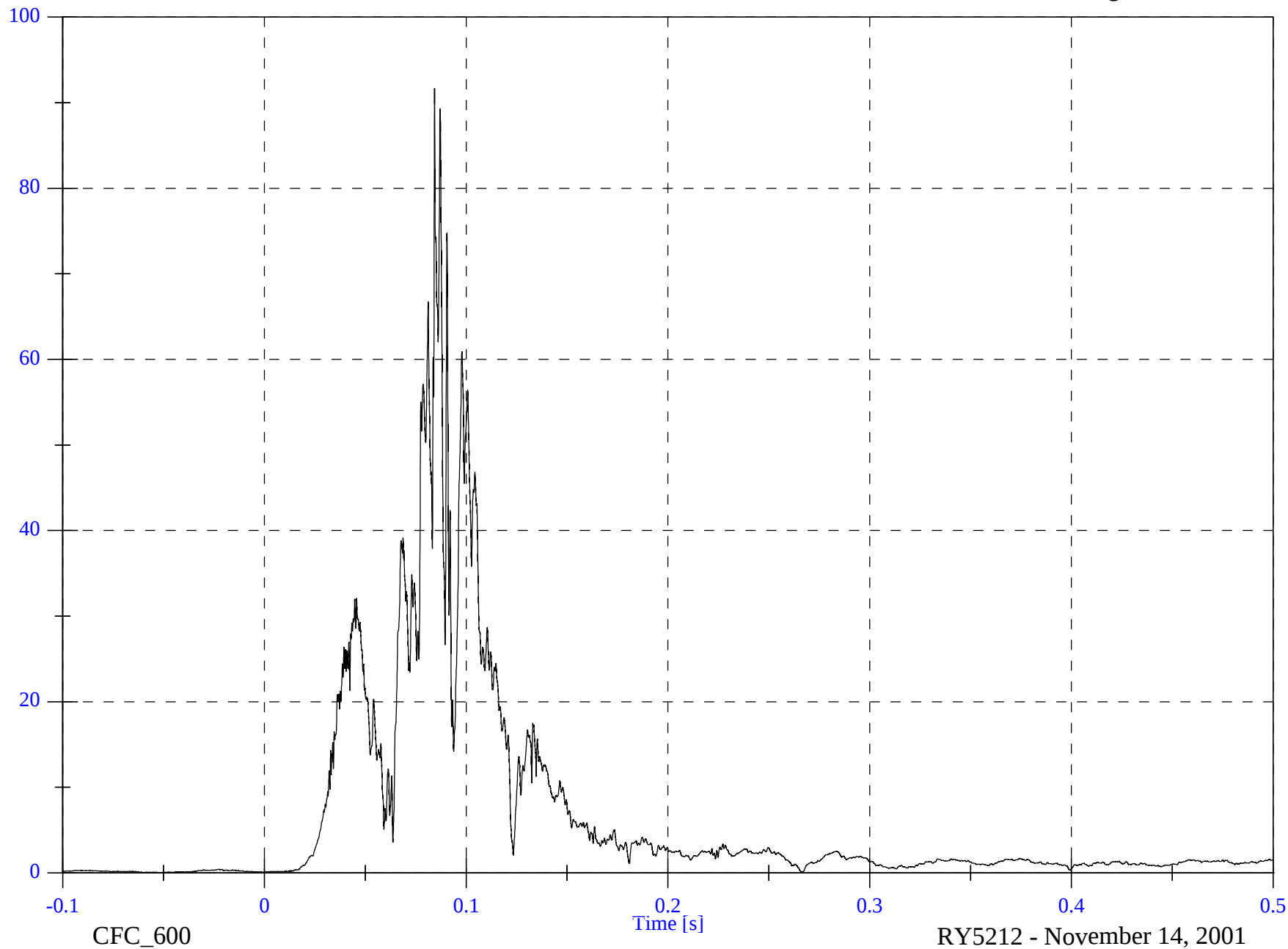


40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Left Foot A Resultant

Max: 91.6 [g] at 0.084 [s]

Min: 0.0 [g] at -0.052 [s]

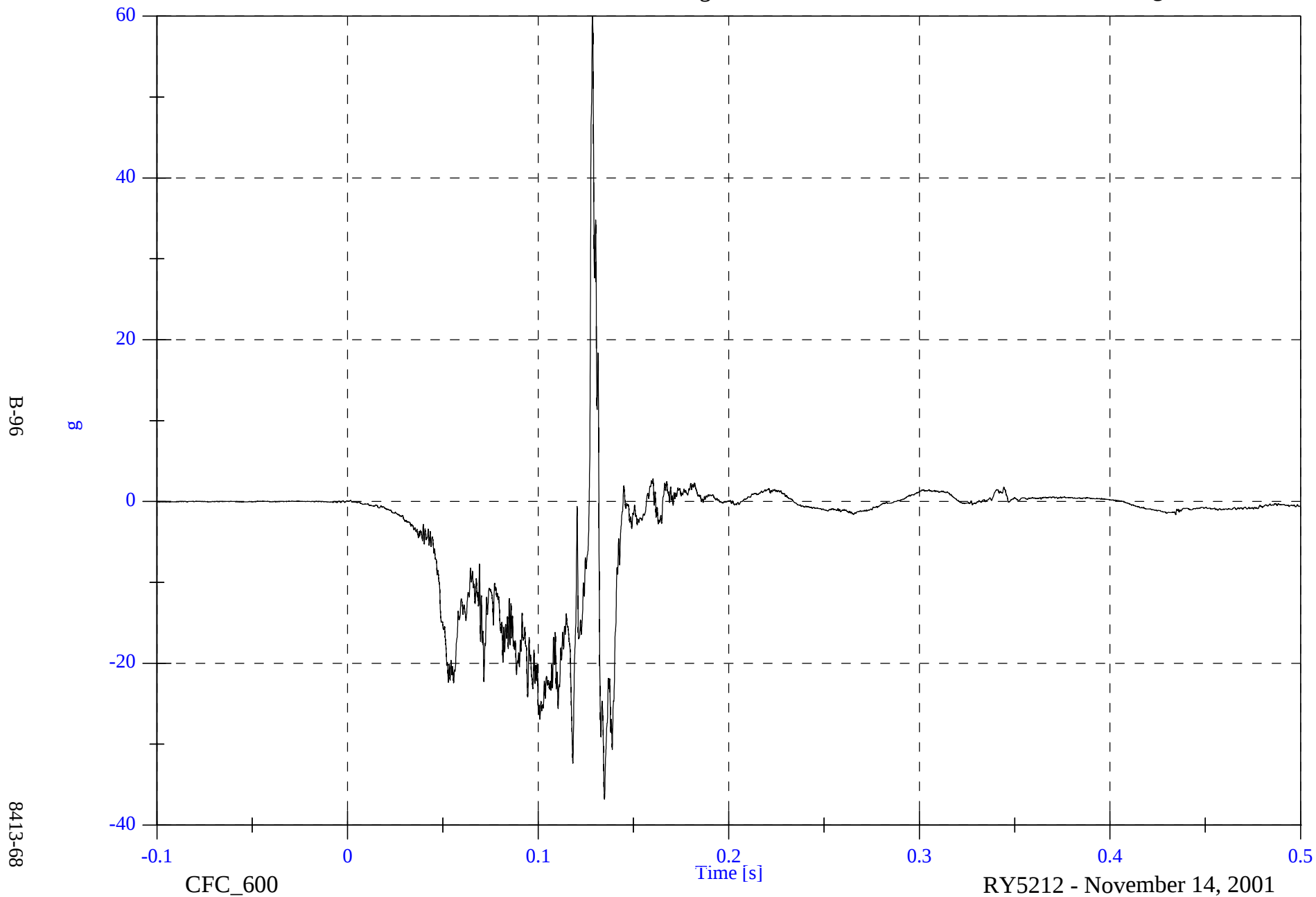


40% Frontal Offset Test #12 - 2000 Nissan Quest

Max: 59.9 [g] at 0.129 [s]

P1 Right Foot Ax

Min: -36.8 [g] at 0.135 [s]



40% Frontal Offset Test #12 - 2000 Nissan Quest

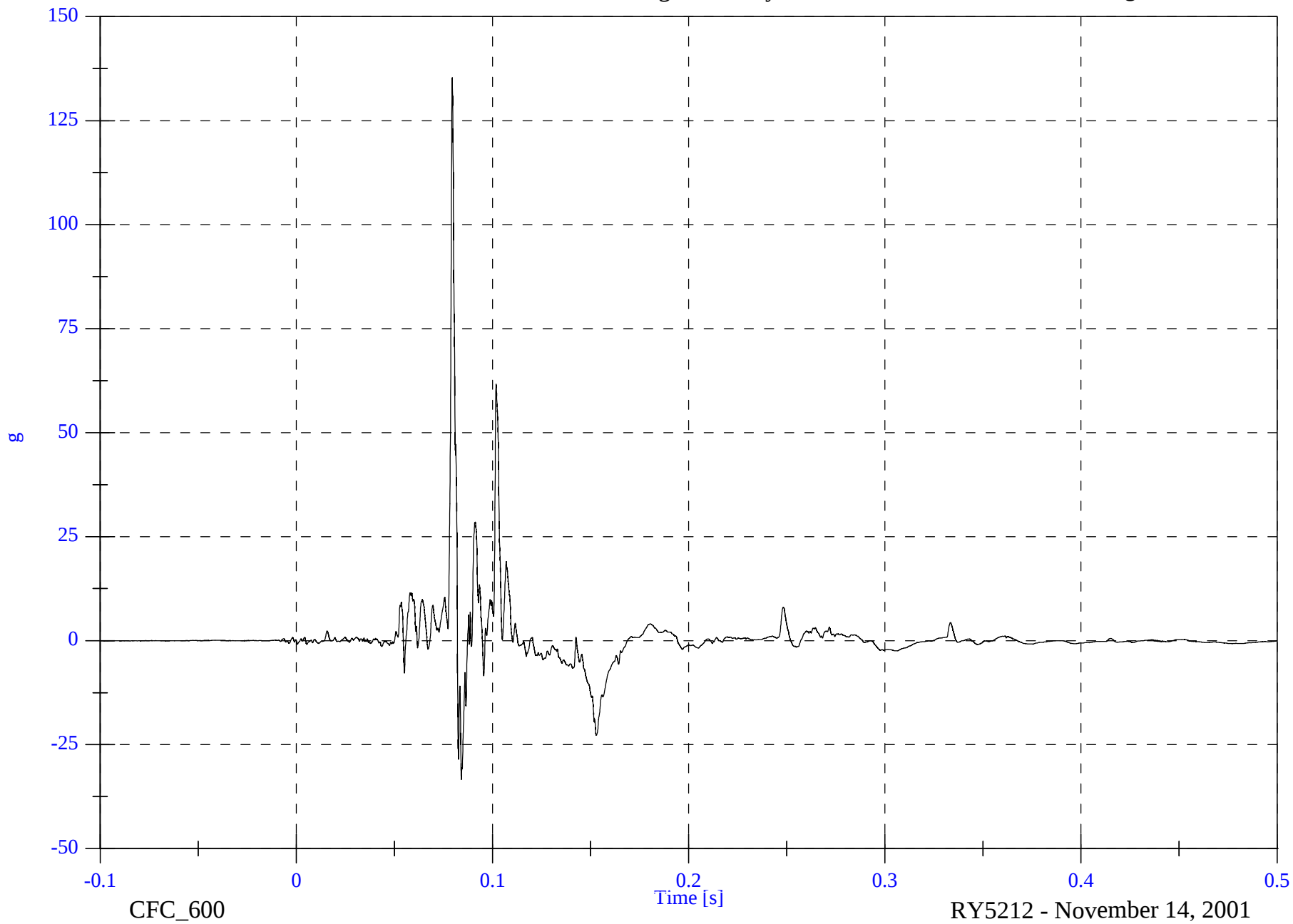
P1 Right Foot Ay

Max: 135.3 [g] at 0.079 [s]

Min: -33.3 [g] at 0.084 [s]

B-97

8413-68

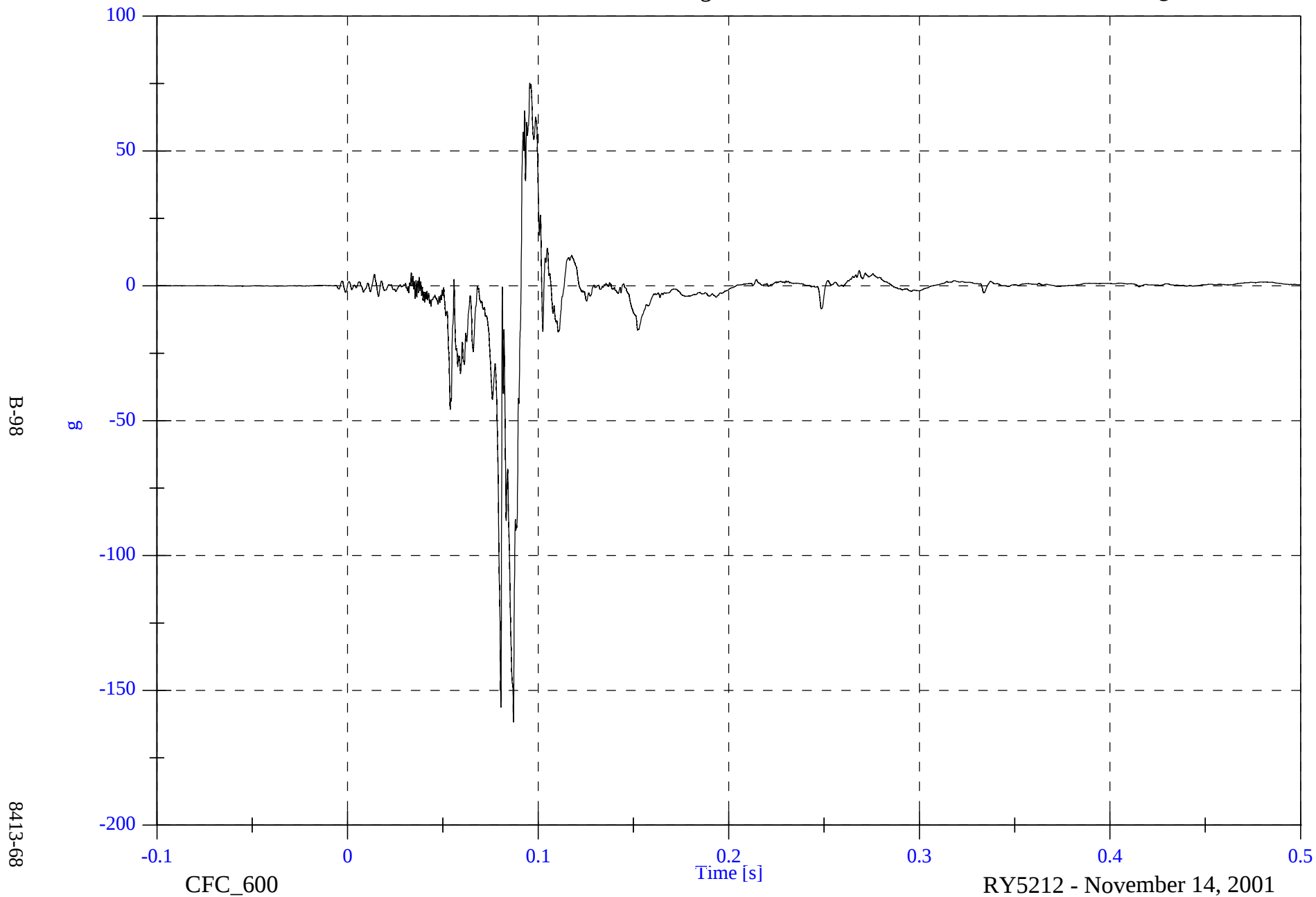


40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Right Foot Az

Max: 75.2 [g] at 0.096 [s]

Min: -161.8 [g] at 0.087 [s]



40% Frontal Offset Test #12 - 2000 Nissan Quest

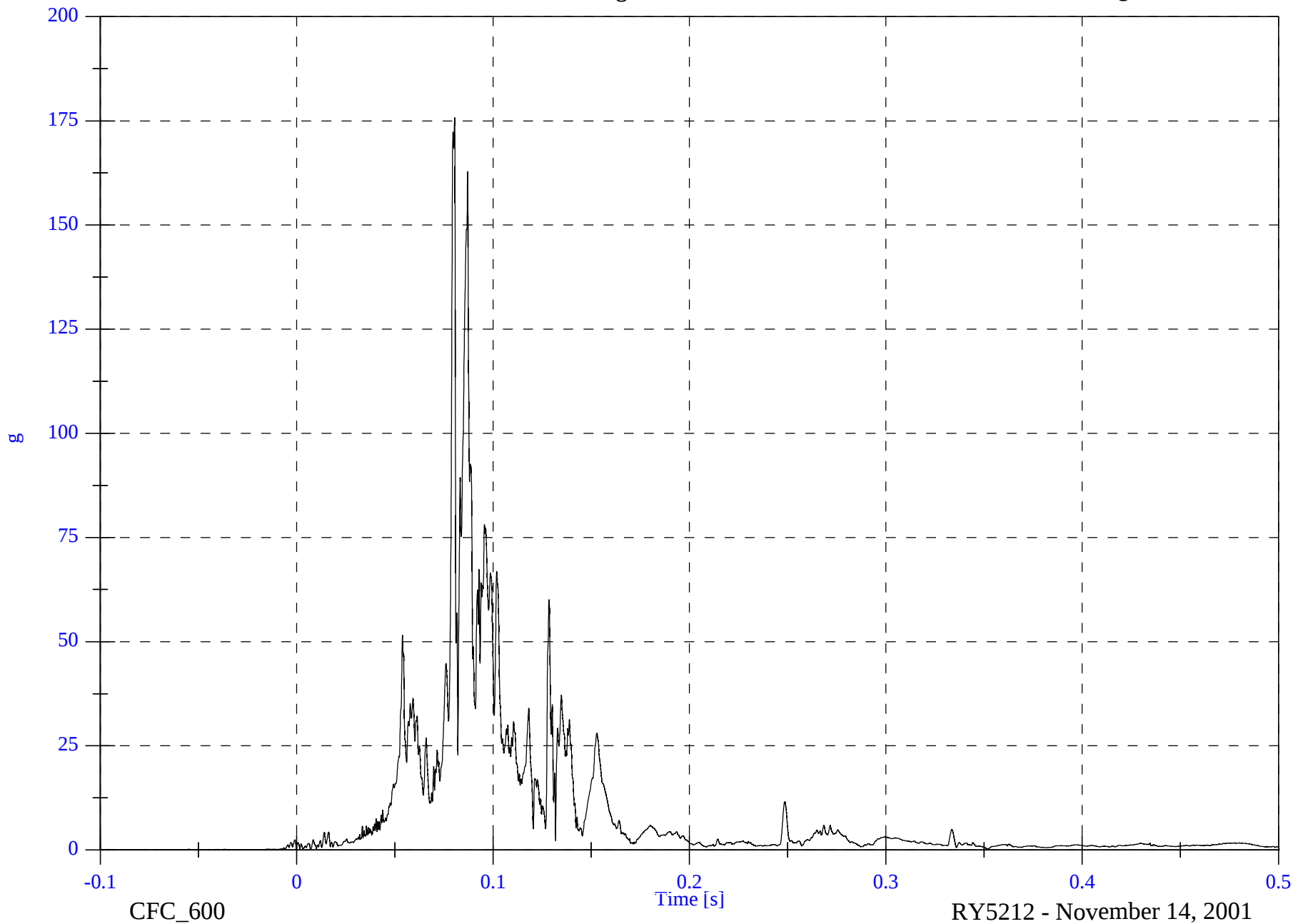
P1 Right Foot A Resultant

Max: 175.8 [g] at 0.080 [s]

Min: 0.0 [g] at -0.075 [s]

B-99

8413-68

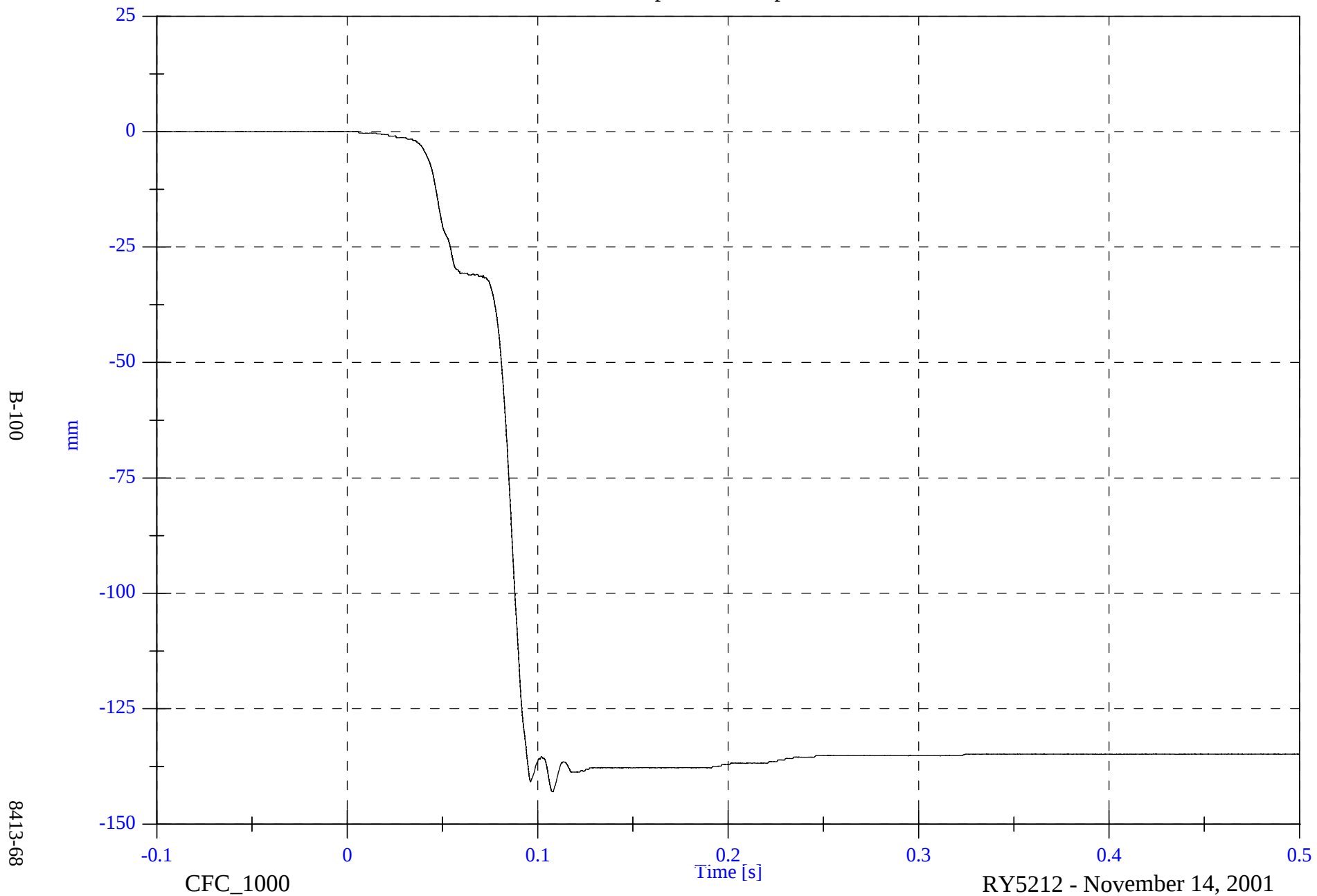


40% Frontal Offset Test #12 - 2000 Nissan Quest

P1 Toepan Left Displacement

Max: 0.0 [mm] at -0.088 [s]

Min: -143.0 [mm] at 0.108 [s]

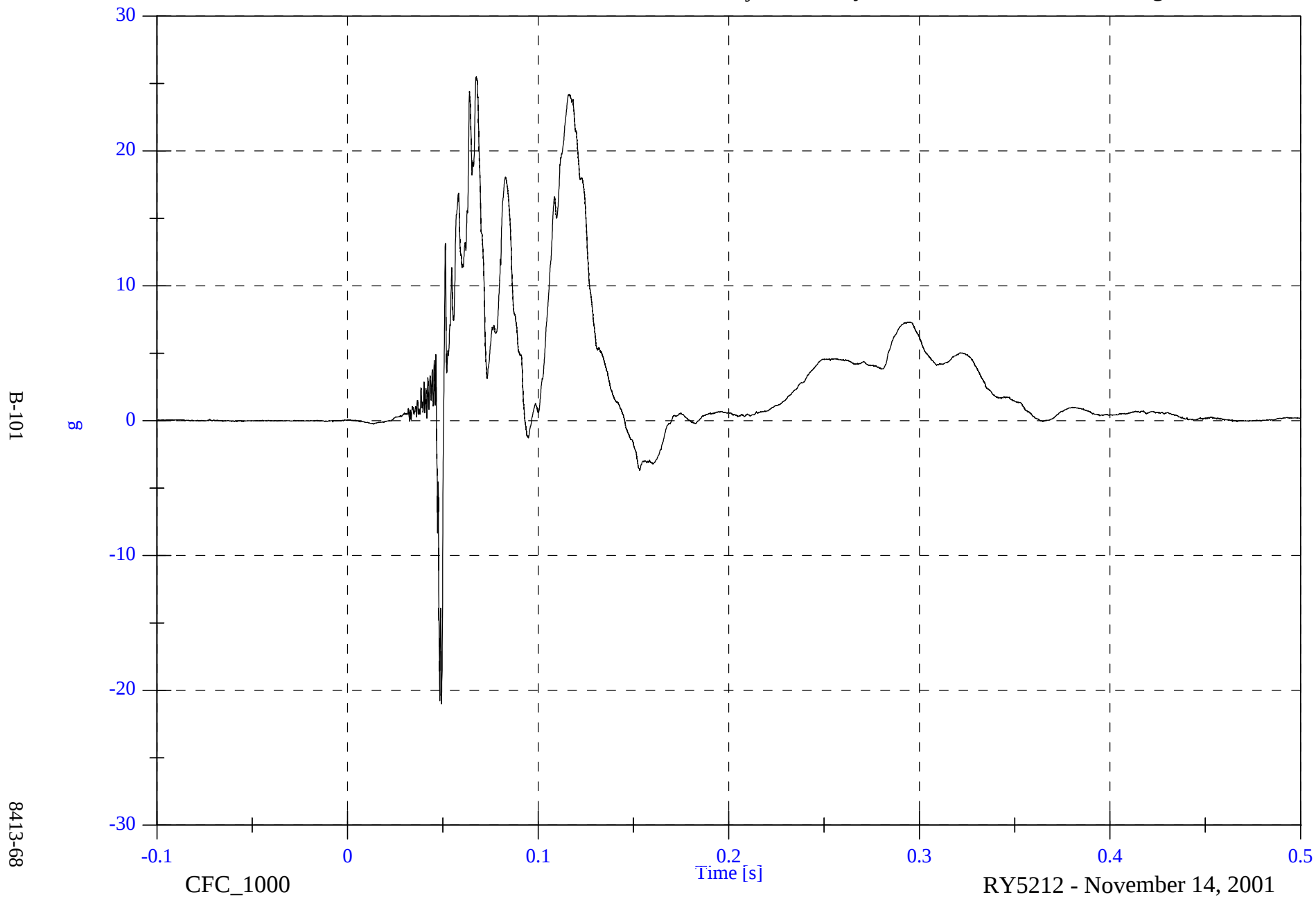


40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Head 9 Array X Arm Ay

Max: 25.5 [g] at 0.068 [s]

Min: -21.0 [g] at 0.049 [s]



40% Frontal Offset Test #12 - 2000 Nissan Quest

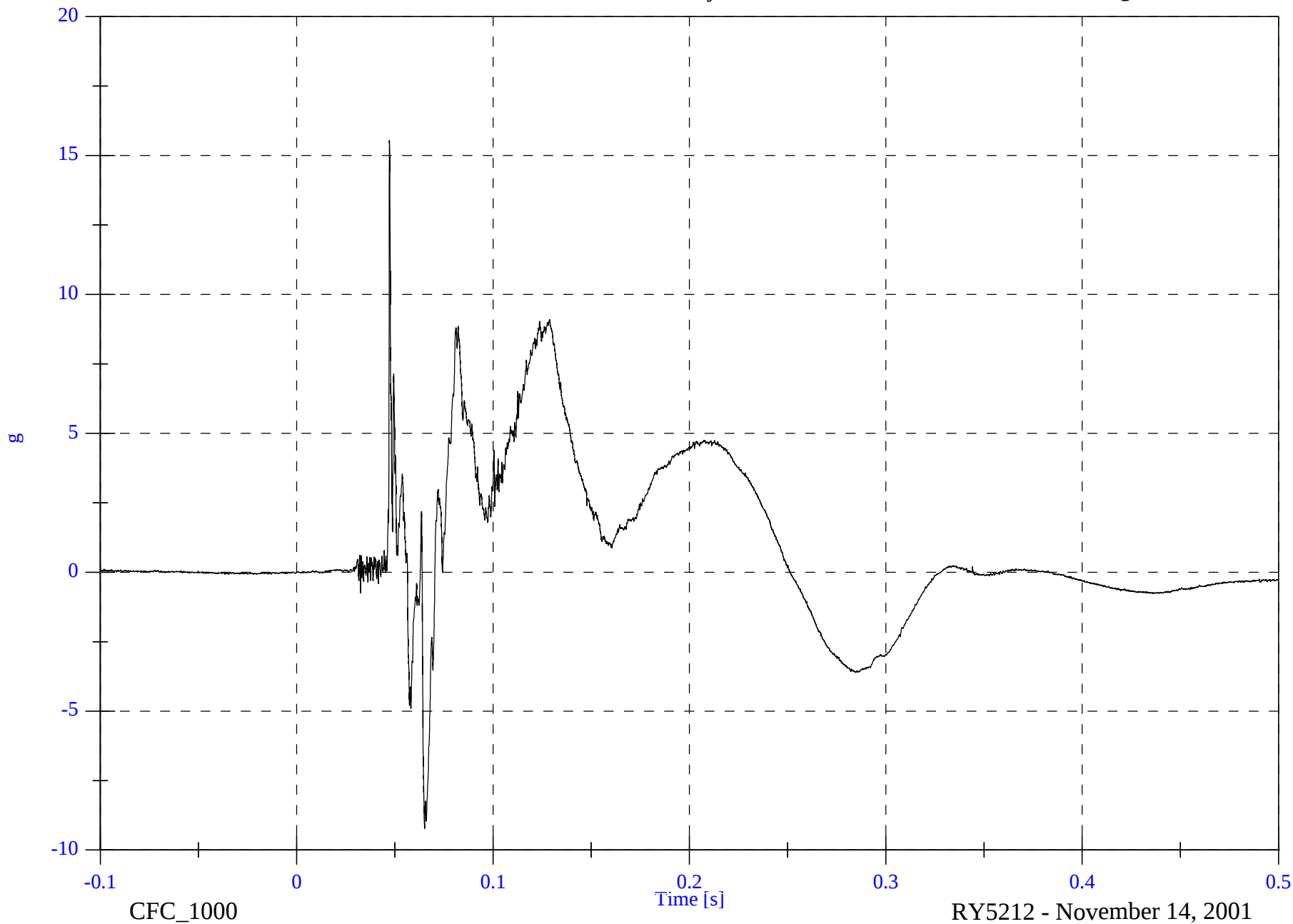
P2 Head 9 Array X Arm Az

Max: 15.5 [g] at 0.047 [s]

Min: -9.2 [g] at 0.065 [s]

B-102

8413-68

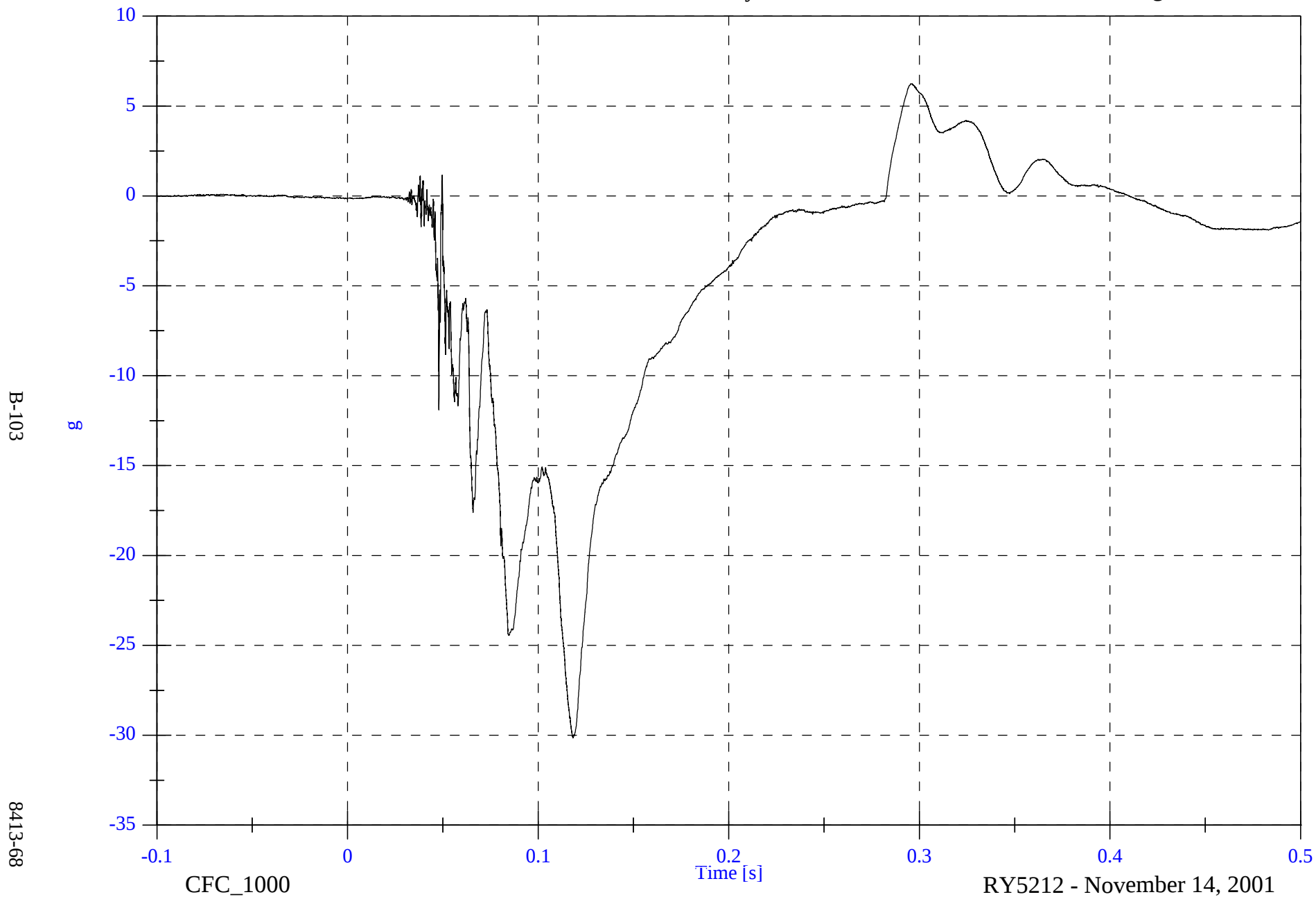


40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Head 9 Array Y Arm Ax

Max: 6.2 [g] at 0.296 [s]

Min: -30.2 [g] at 0.118 [s]

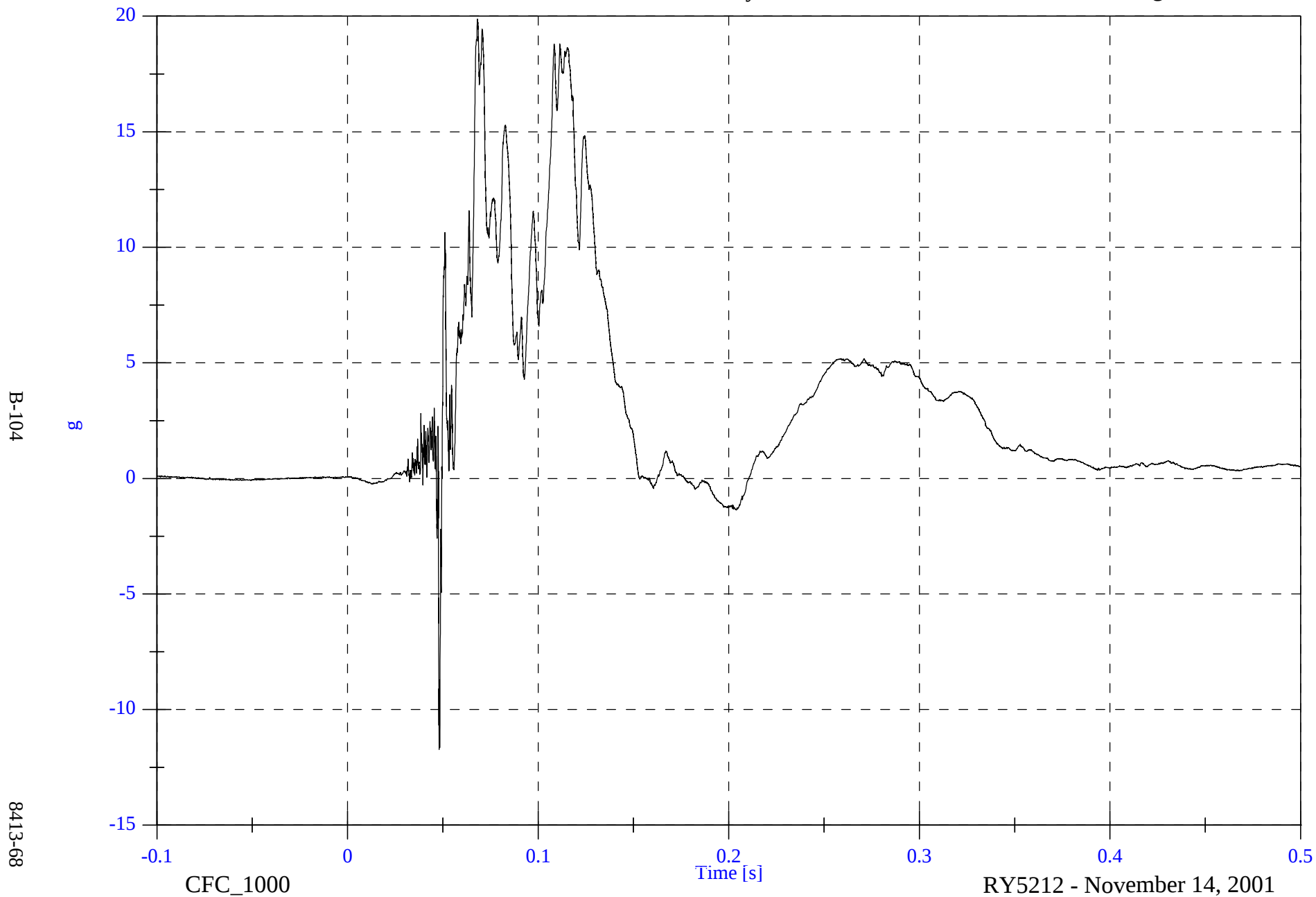


40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Head 9 Array Y Arm Az

Max: 19.9 [g] at 0.068 [s]

Min: -11.7 [g] at 0.048 [s]



40% Frontal Offset Test #12 - 2000 Nissan Quest

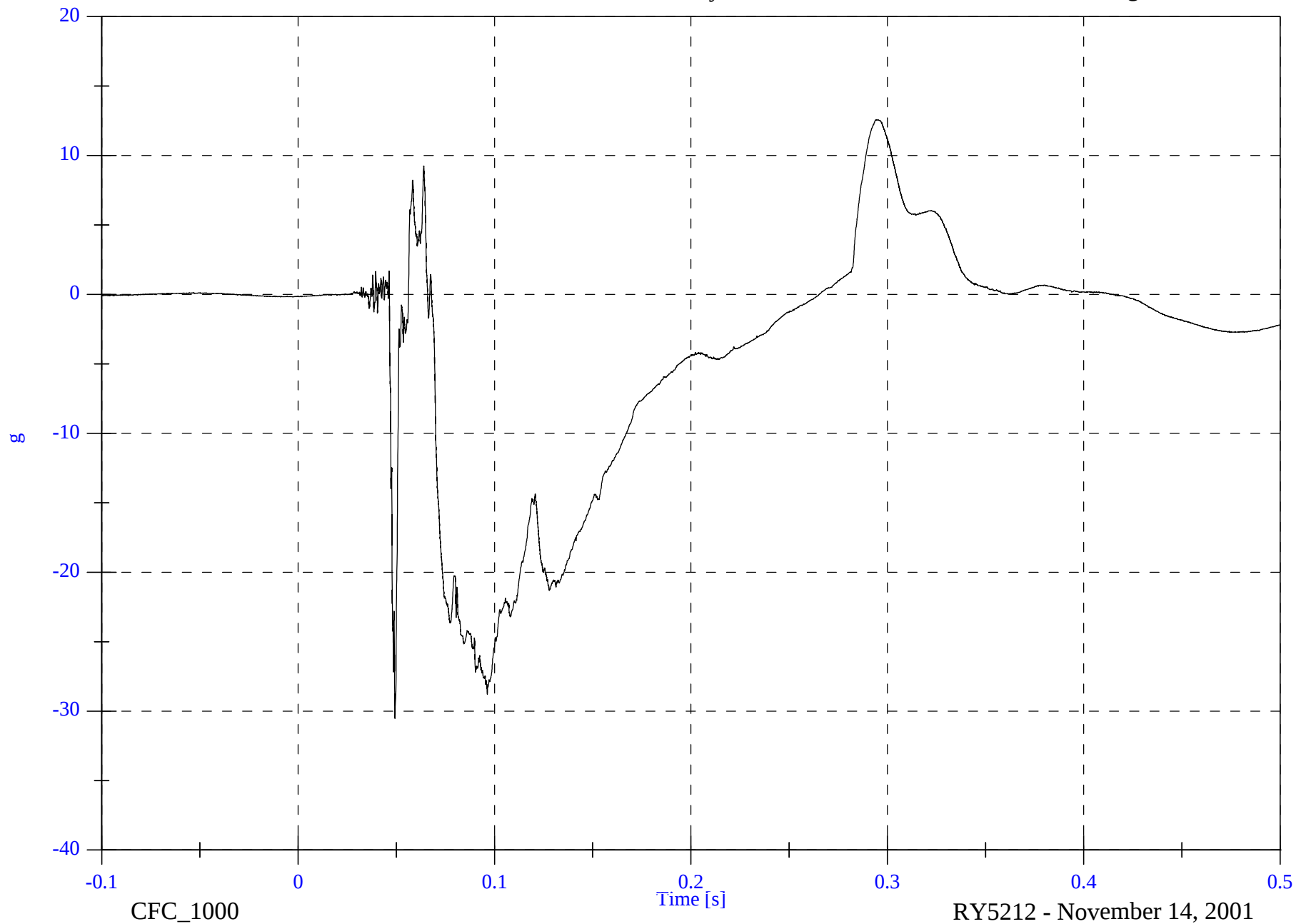
P2 Head 9 Array Z Arm Ax

Max: 12.6 [g] at 0.295 [s]

Min: -30.5 [g] at 0.049 [s]

B-105

8413-68



40% Frontal Offset Test #12 - 2000 Nissan Quest

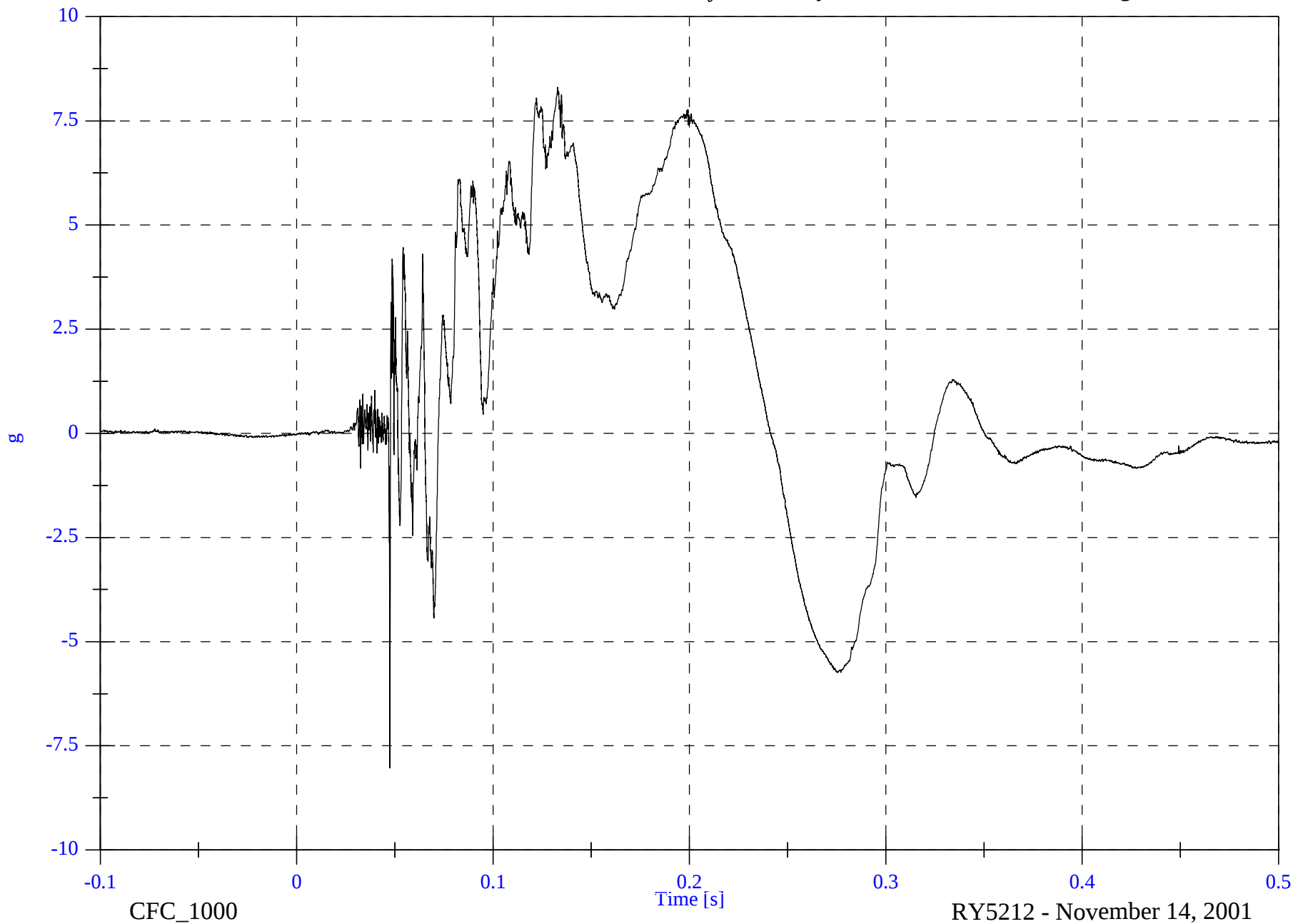
P2 Head 9 Array Z Arm Ay

Max: 8.3 [g] at 0.133 [s]

Min: -8.0 [g] at 0.047 [s]

B-106

8413-68

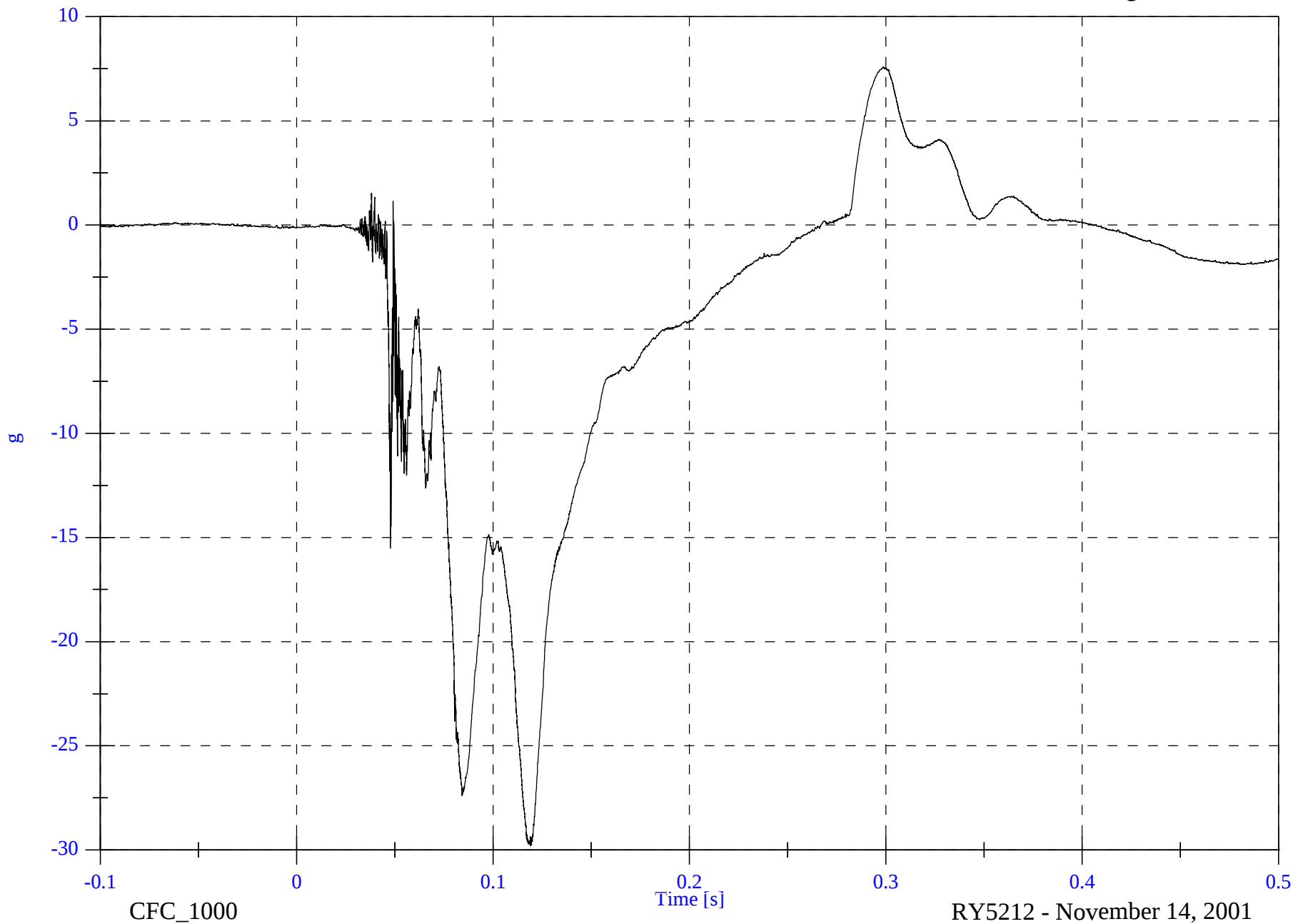


40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Head CG Ax

Max: 7.6 [g] at 0.299 [s]

Min: -29.8 [g] at 0.119 [s]

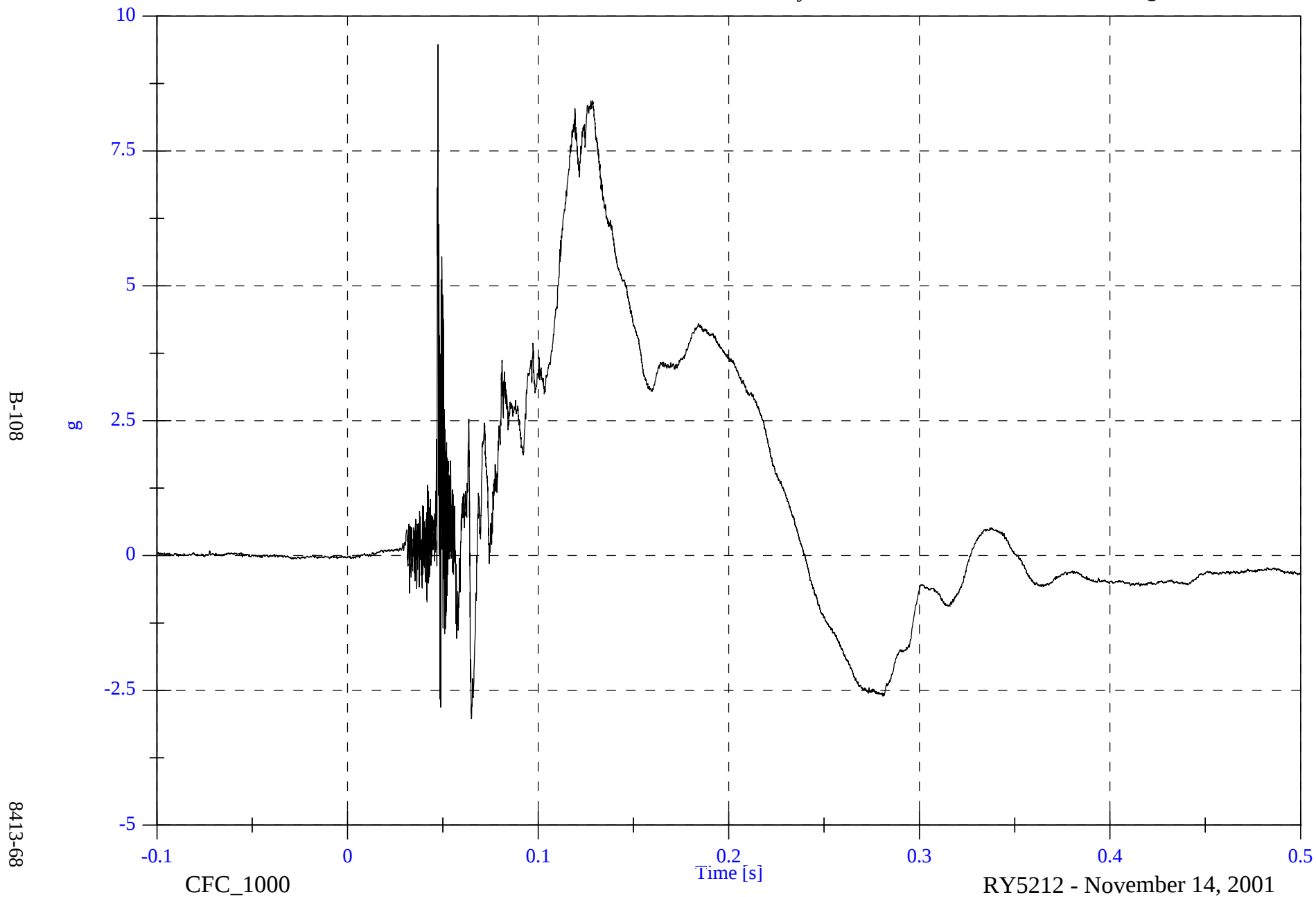


40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Head CG Ay

Max: 9.5 [g] at 0.047 [s]

Min: -3.0 [g] at 0.065 [s]

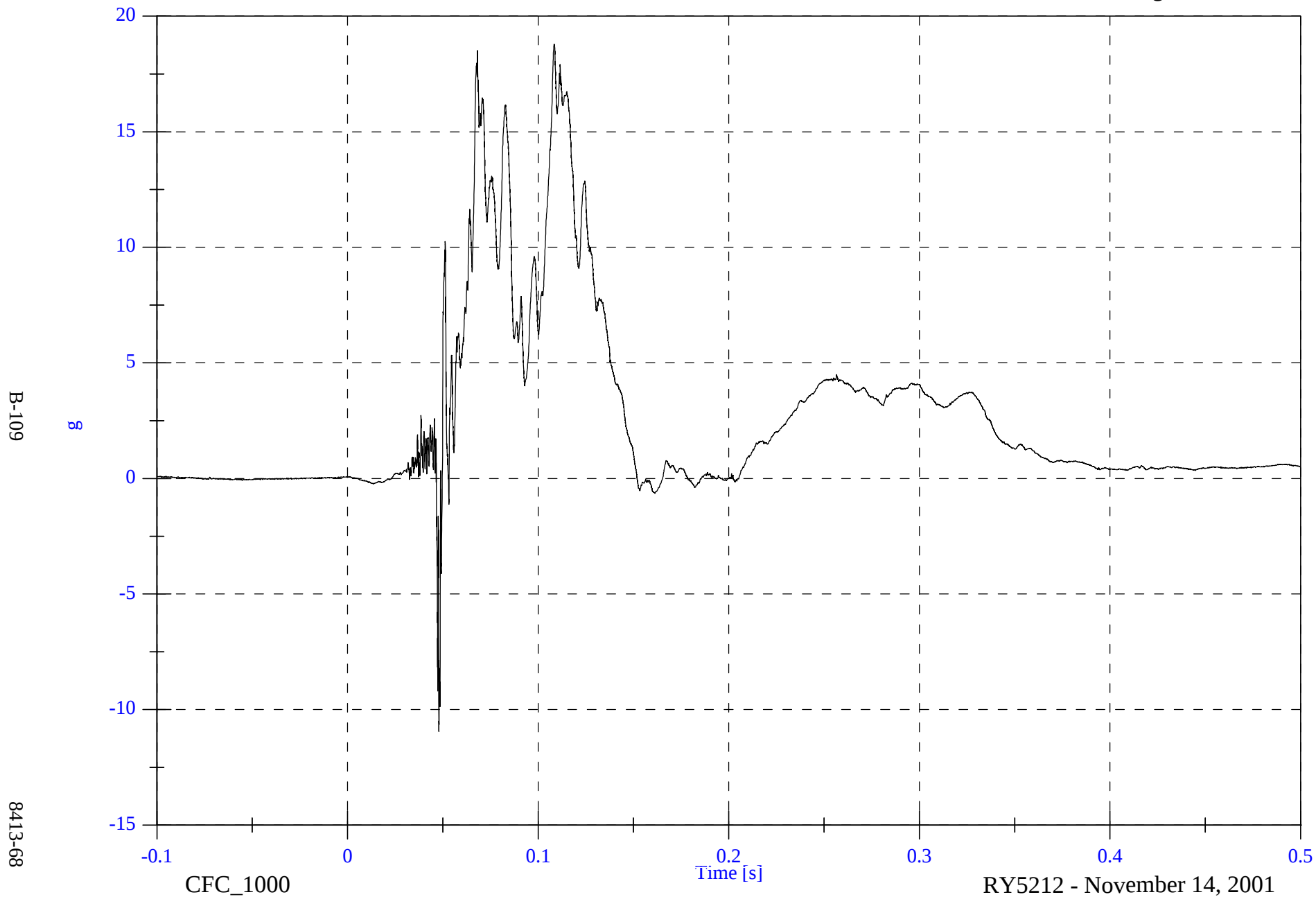


40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Head CG Az

Max: 18.8 [g] at 0.108 [s]

Min: -10.9 [g] at 0.048 [s]



40% Frontal Offset Test #12 - 2000 Nissan Quest

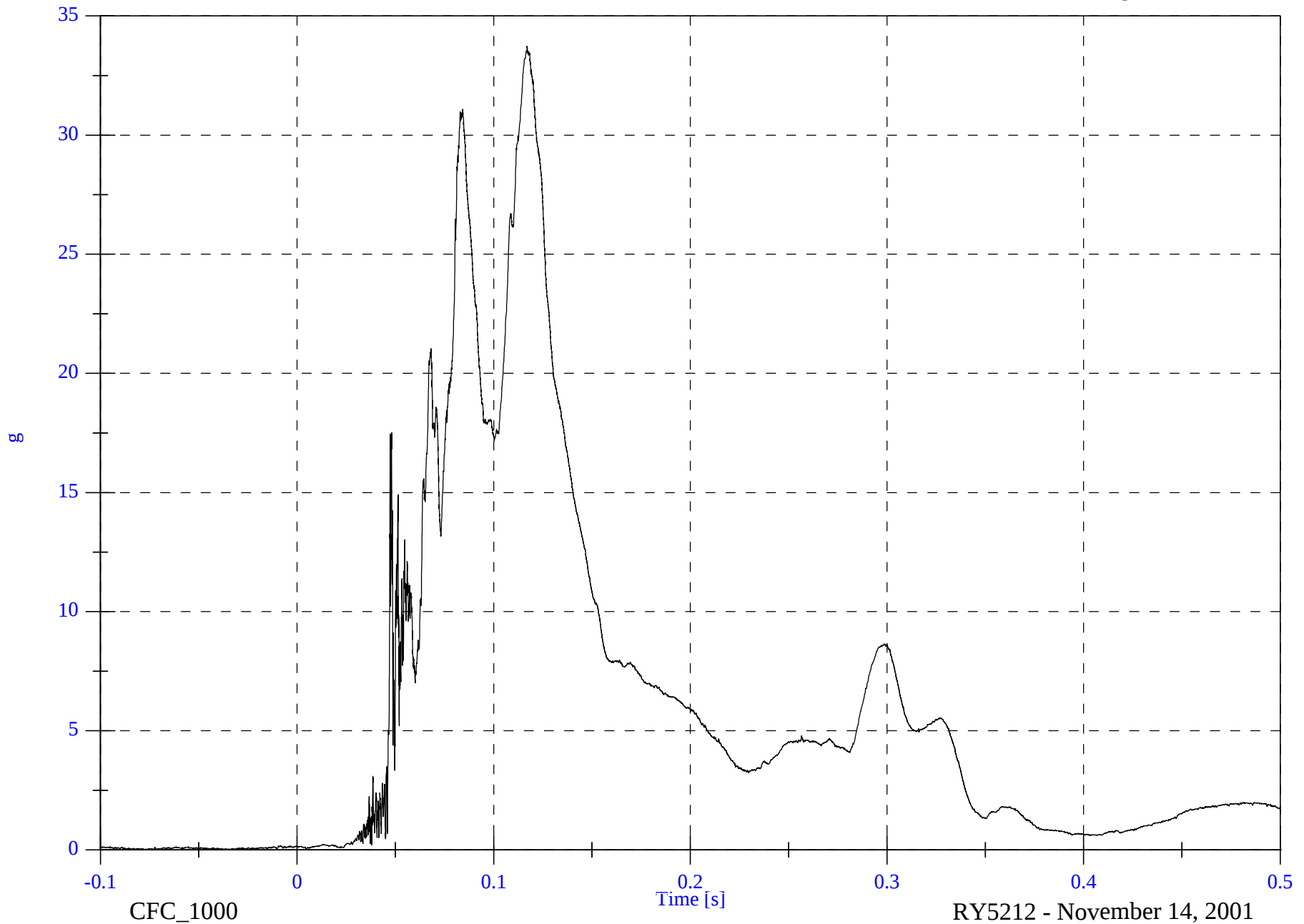
P2 Head CG A Resultant

Max: 33.7 [g] at 0.117 [s]

Min: 0.0 [g] at -0.079 [s]

B-110

8413-68

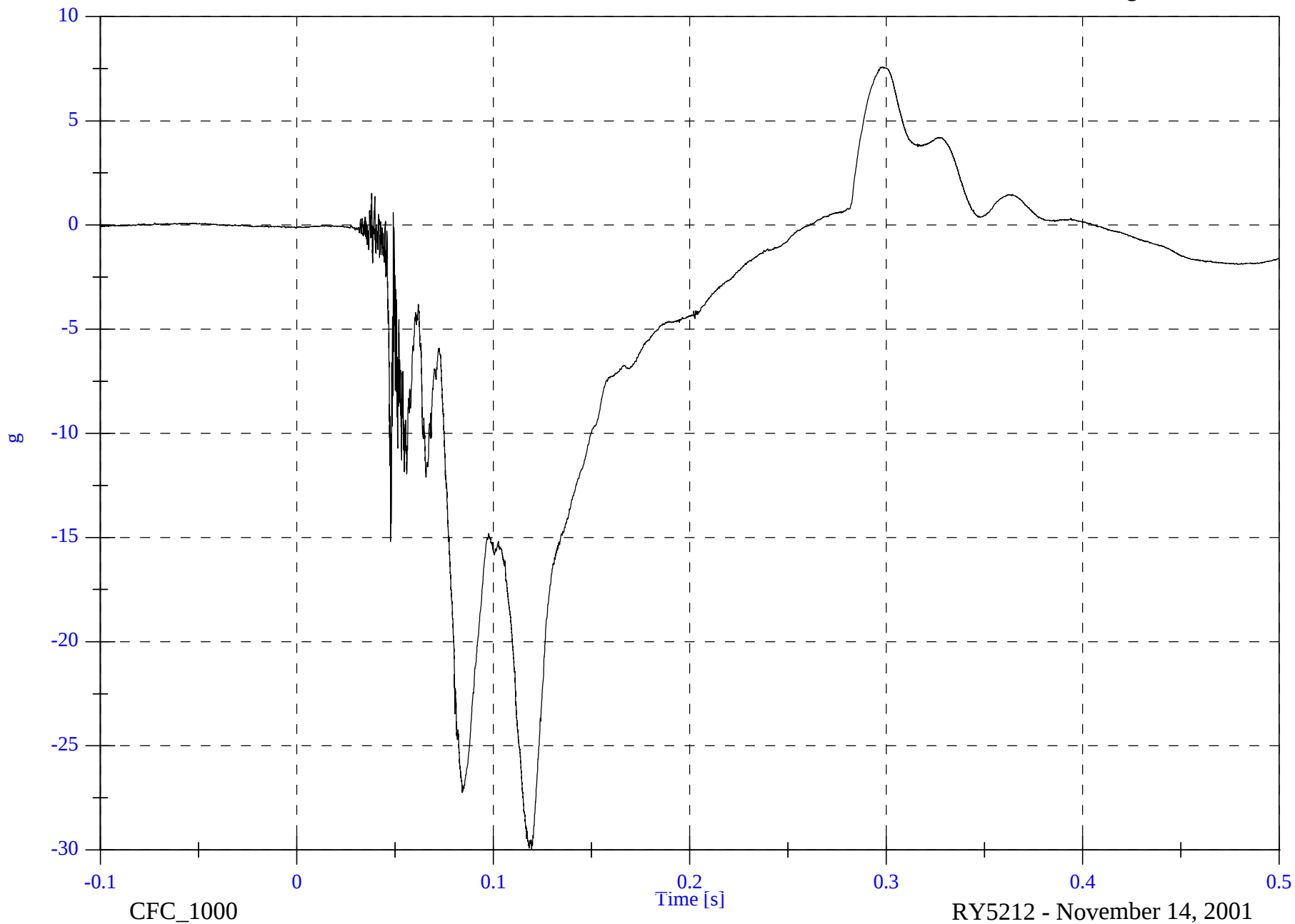


40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Head CG Red Ax

Max: 7.6 [g] at 0.298 [s]

Min: -30.0 [g] at 0.120 [s]

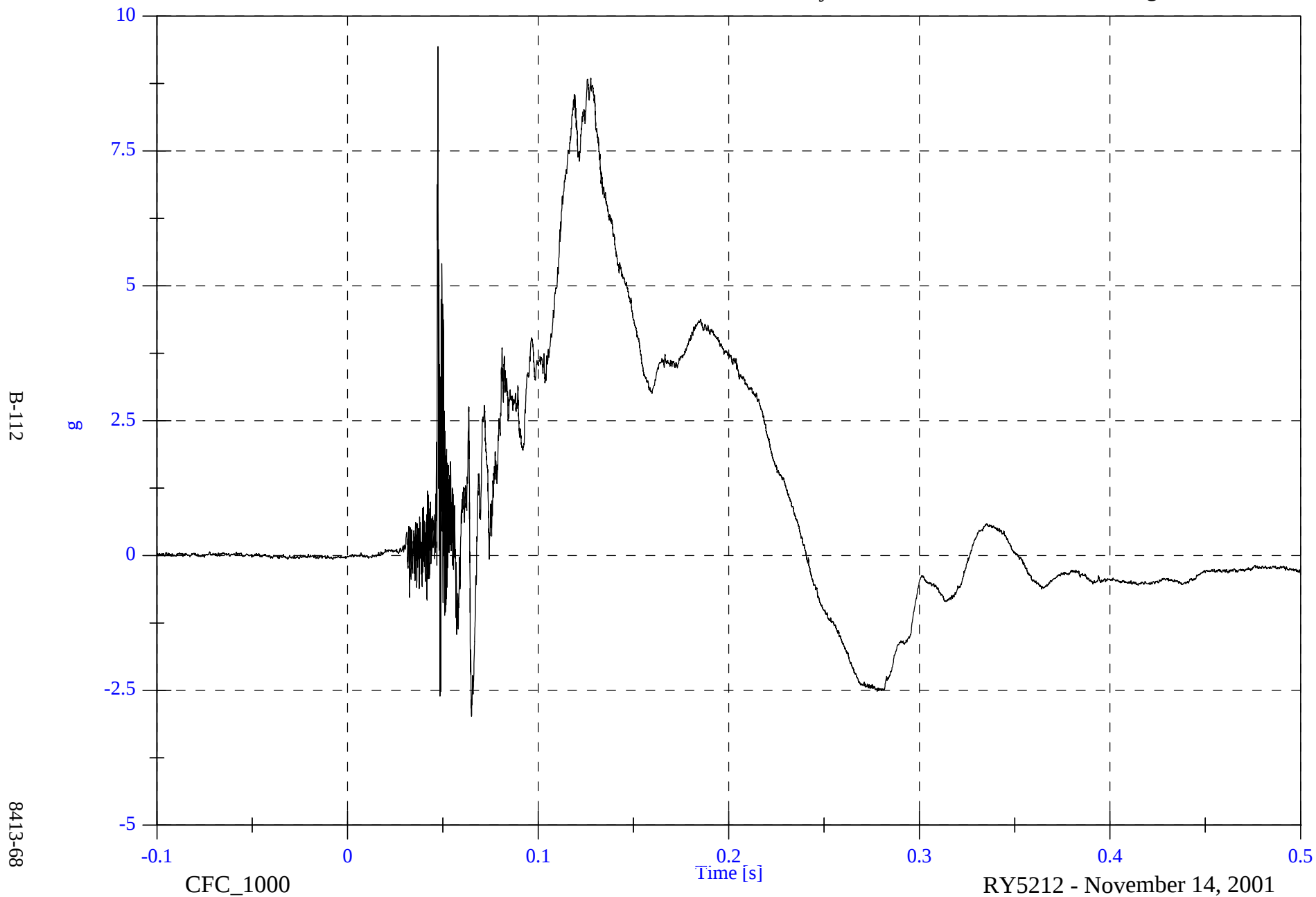


40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Head CG Red Ay

Max: 9.4 [g] at 0.047 [s]

Min: -3.0 [g] at 0.065 [s]

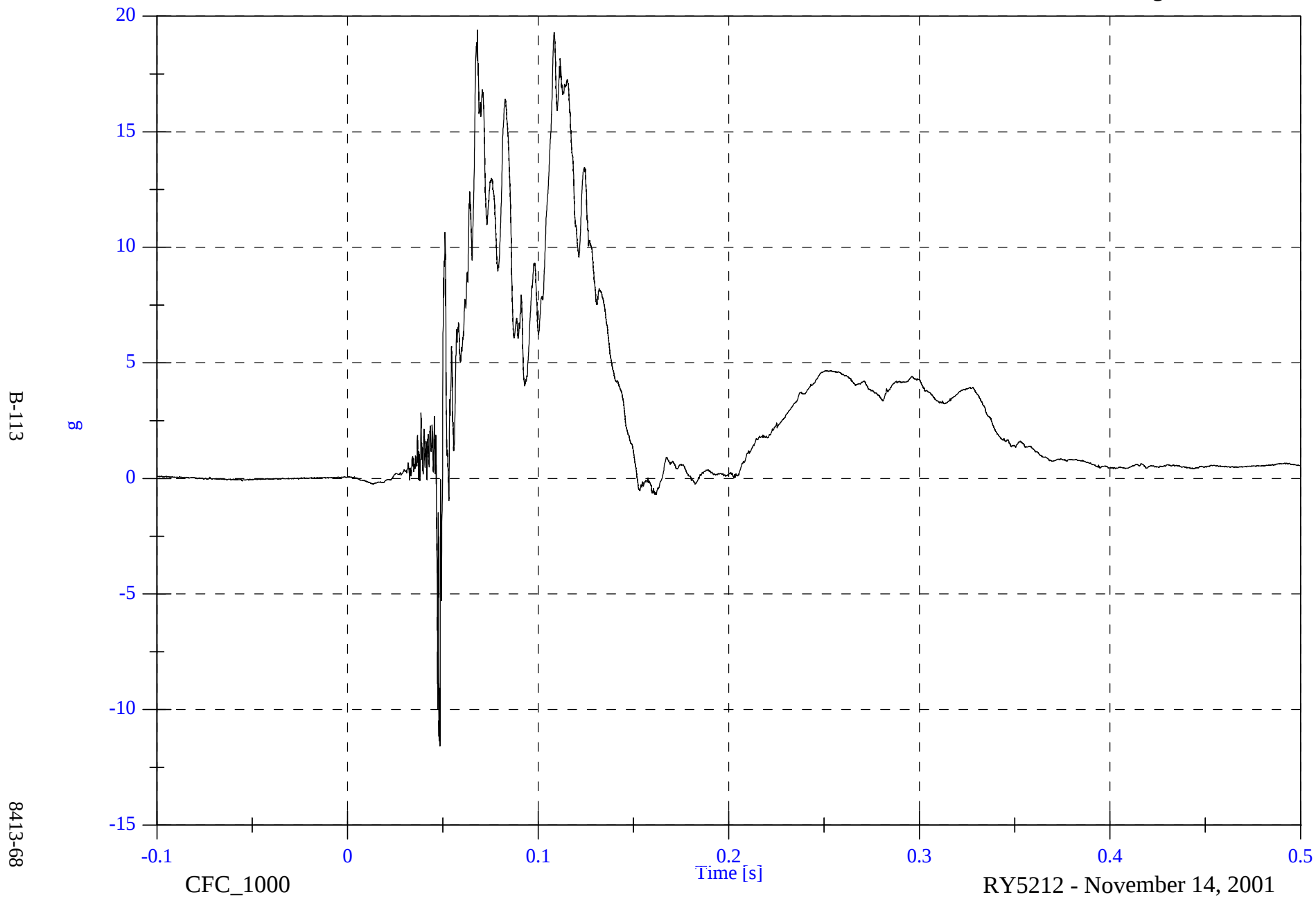


40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Head CG Red Az

Max: 19.4 [g] at 0.068 [s]

Min: -11.6 [g] at 0.048 [s]



40% Frontal Offset Test #12 - 2000 Nissan Quest

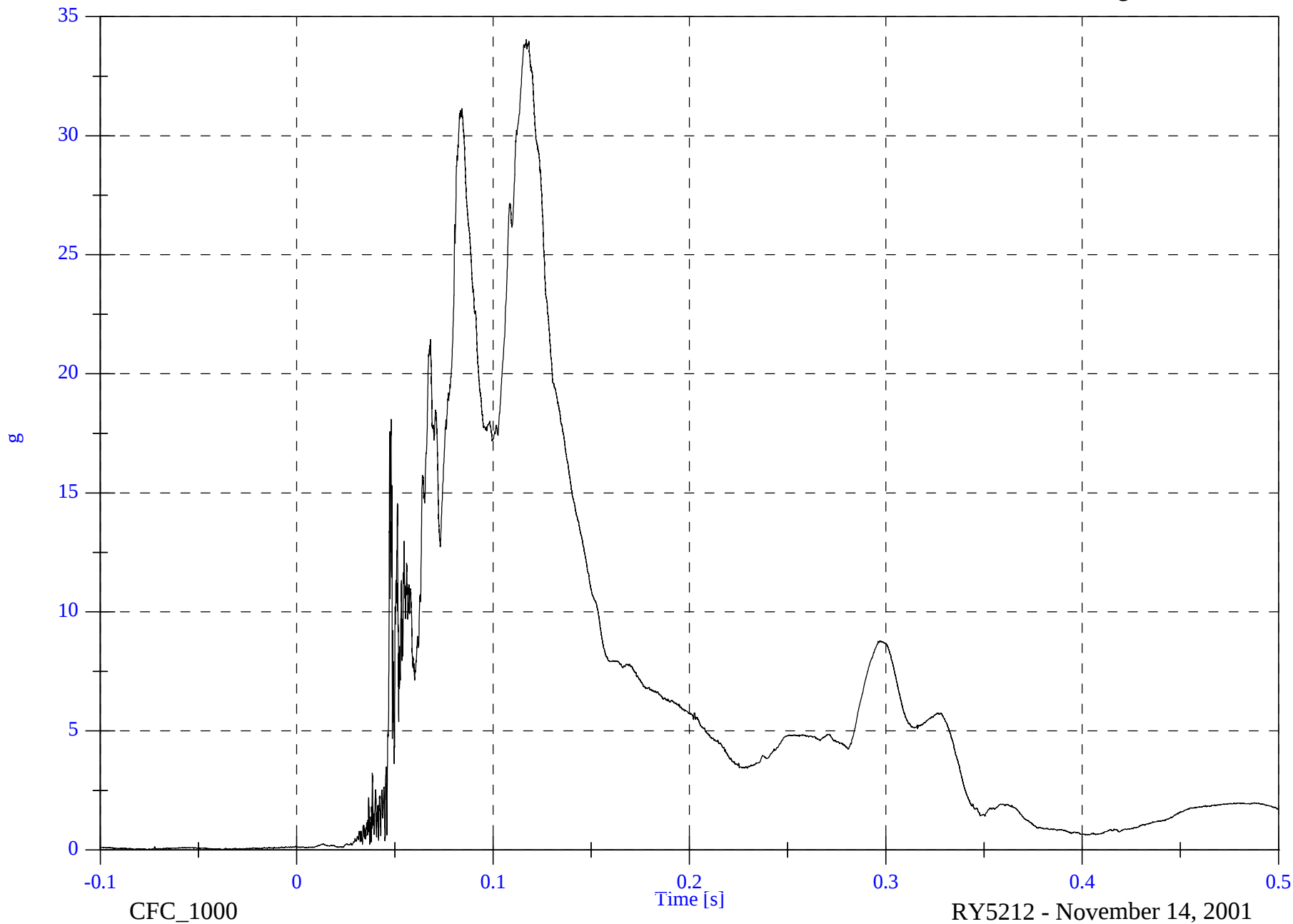
P2 Head CG Red A Resultant

Max: 34.0 [g] at 0.117 [s]

Min: 0.0 [g] at -0.076 [s]

B-114

8413-68

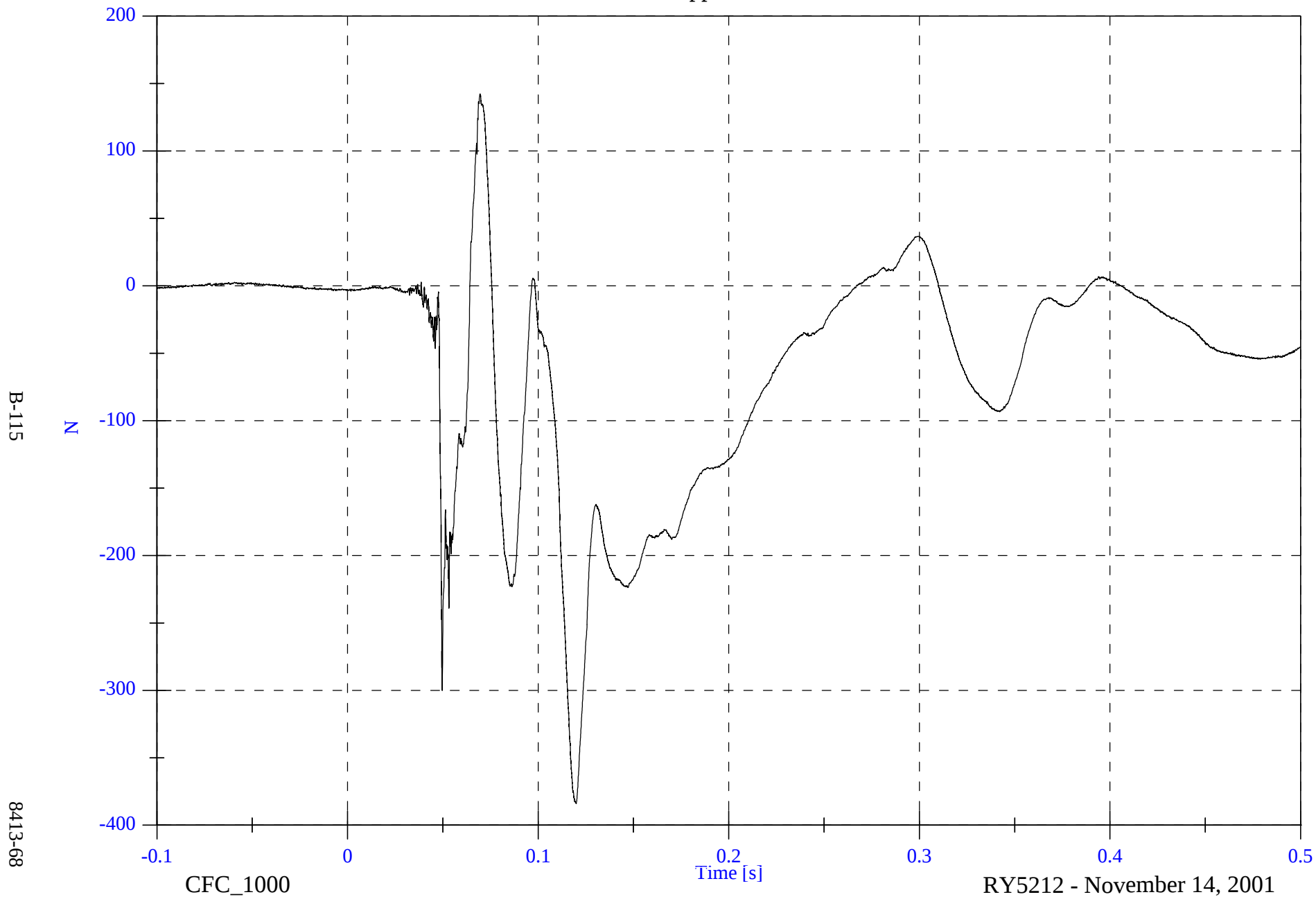


40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Upper Neck Fx

Max: 142.4 [N] at 0.070 [s]

Min: -384.0 [N] at 0.120 [s]

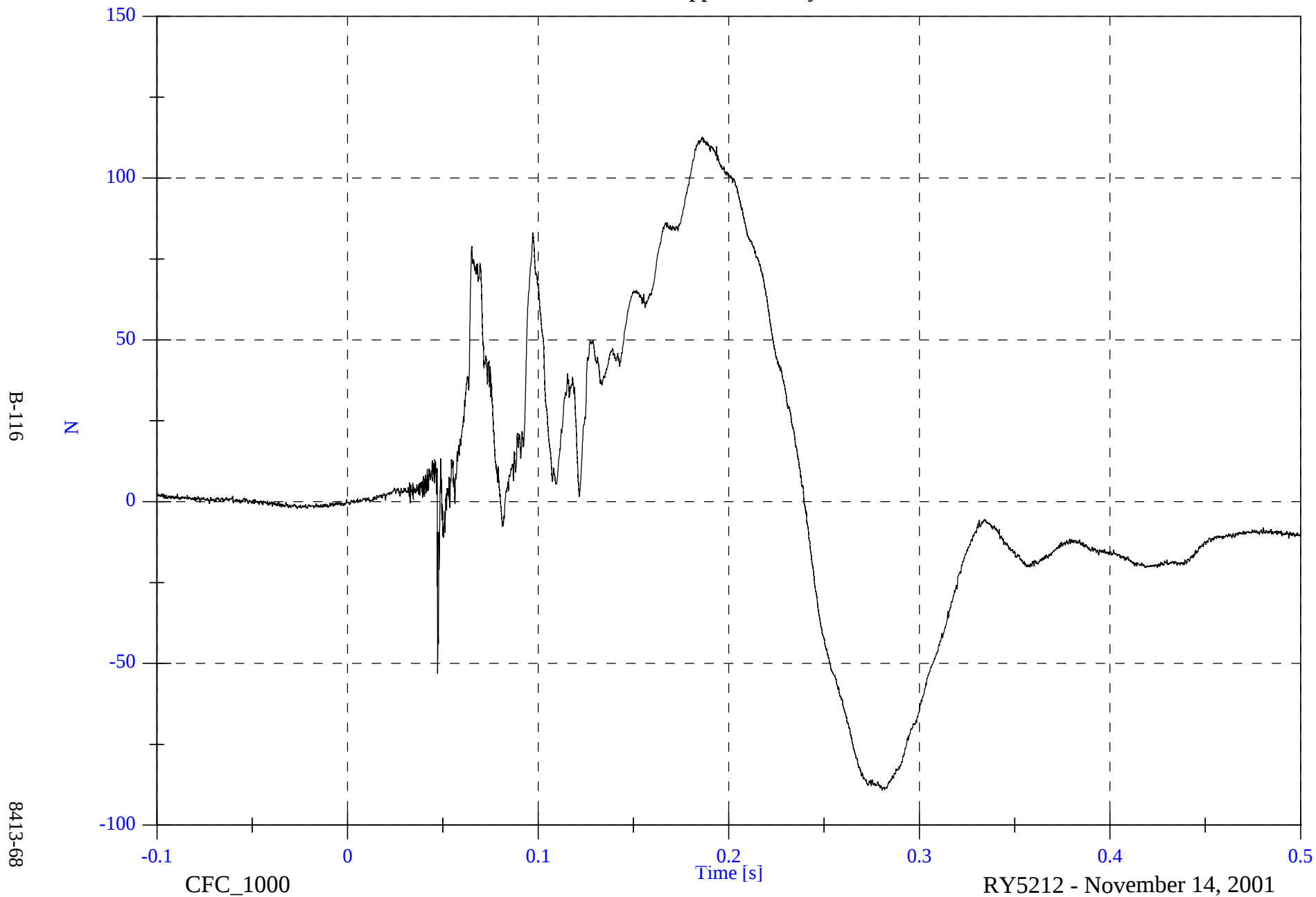


40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Upper Neck Fy

Max: 112.6 [N] at 0.186 [s]

Min: -89.2 [N] at 0.280 [s]

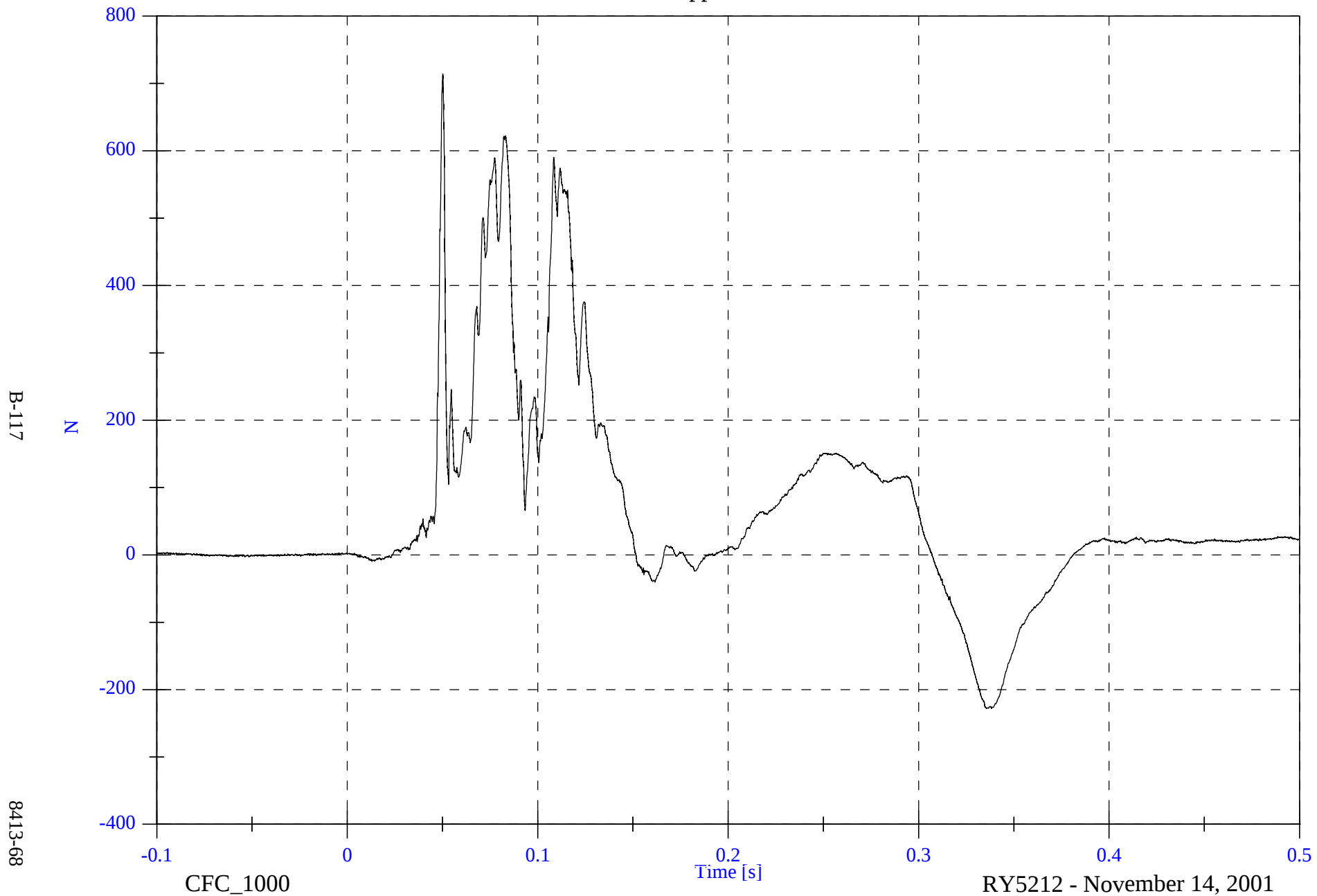


40% Frontal Offset Test #12 - 2000 Nissan Quest

Max: 714.3 [N] at 0.050 [s]

P2 Upper Neck Fz

Min: -228.2 [N] at 0.336 [s]

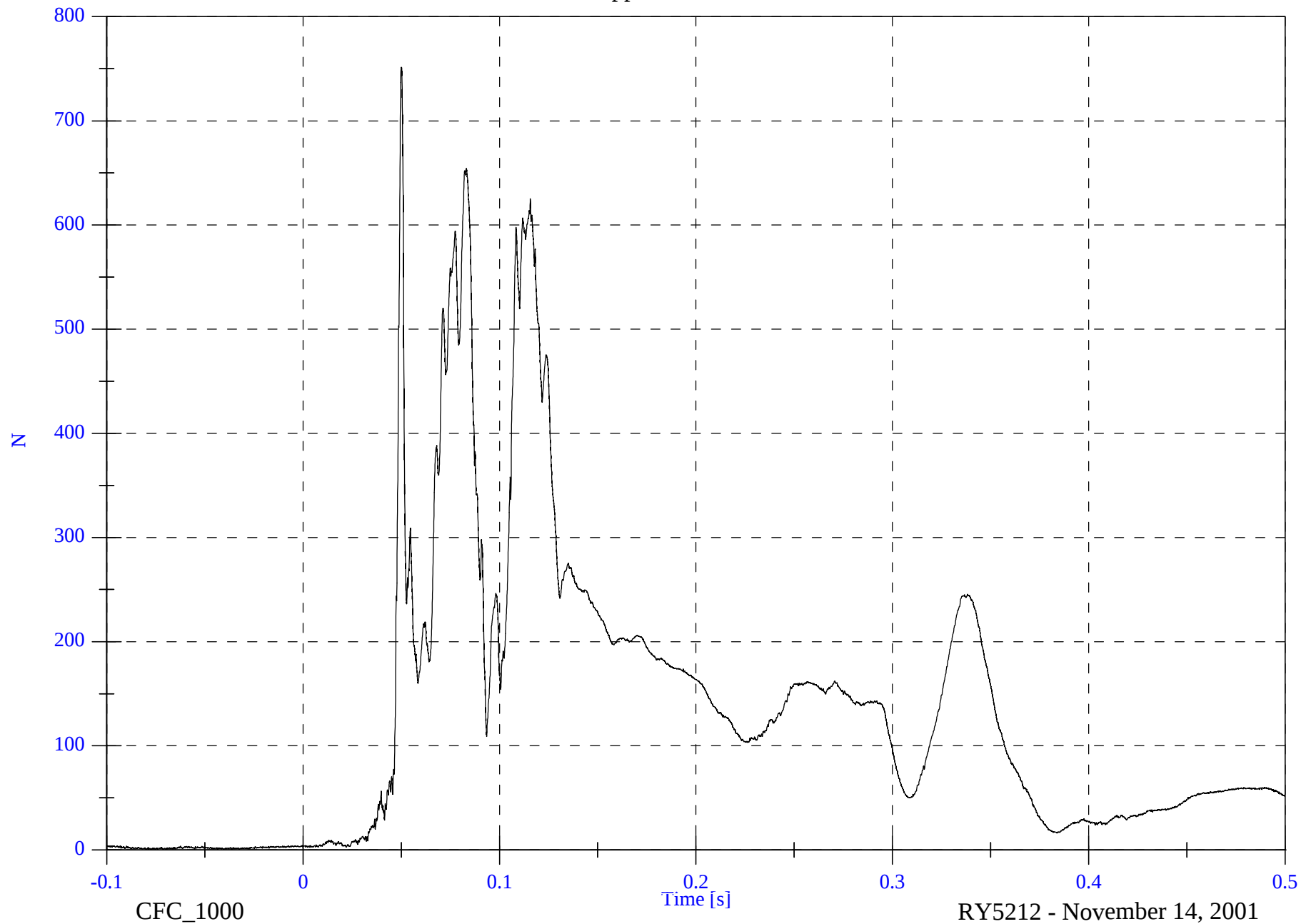


40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Upper Neck F Resultant

Max: 751.5 [N] at 0.050 [s]

Min: 0.3 [N] at -0.077 [s]

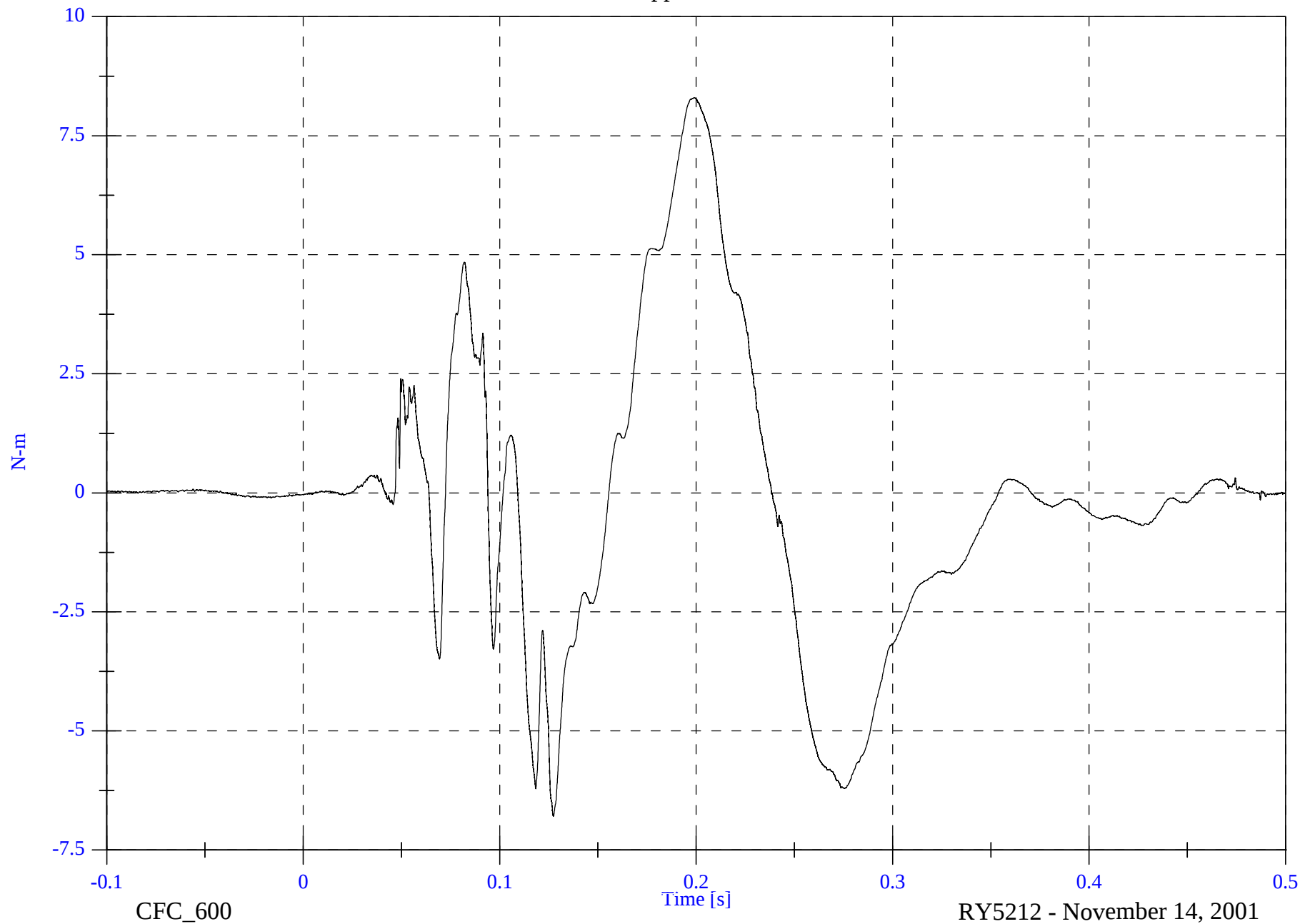


40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Upper Neck Mx

Max: 8.3 [N-m] at 0.199 [s]

Min: -6.8 [N-m] at 0.127 [s]

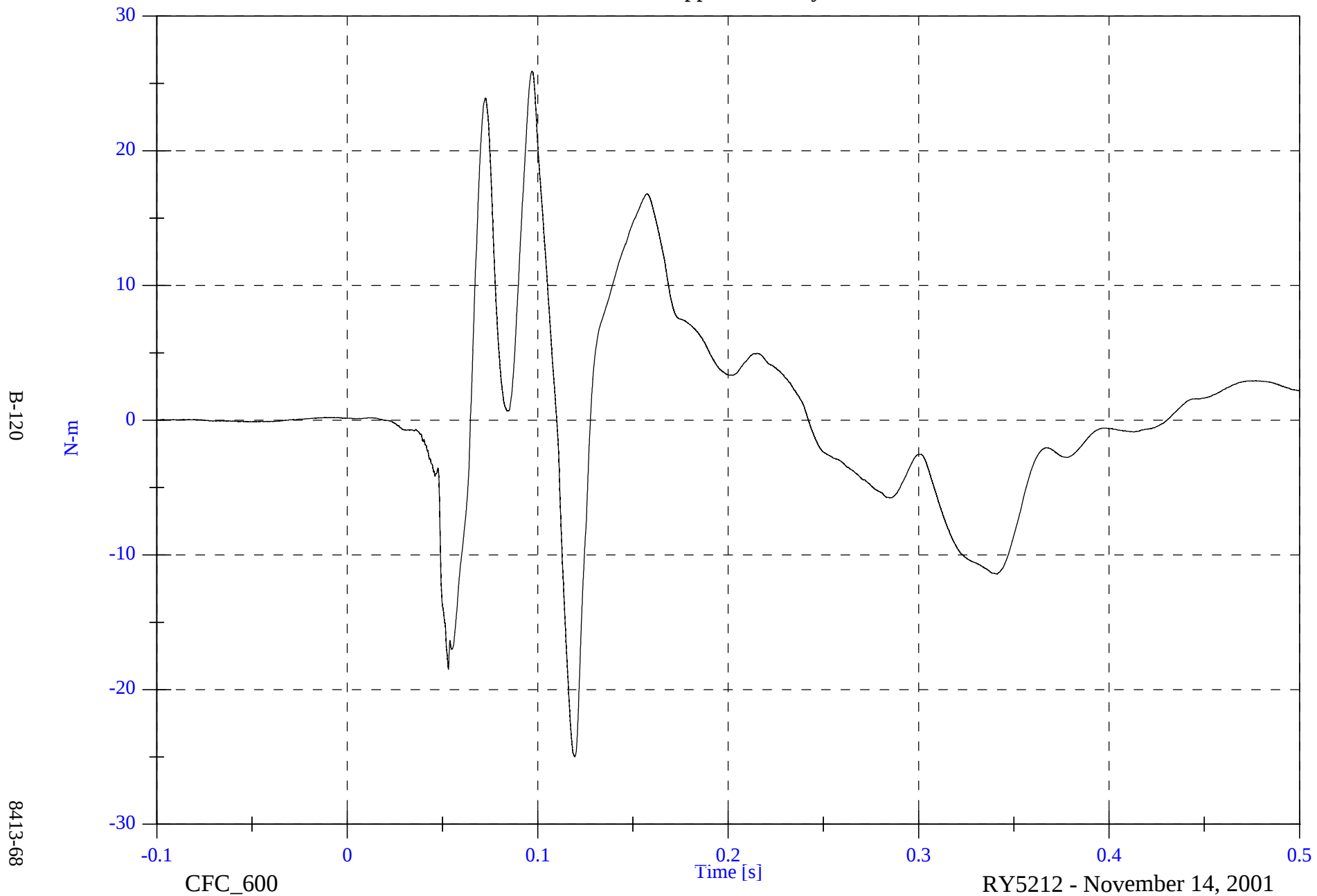


40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Upper Neck My

Max: 25.9 [N-m] at 0.097 [s]

Min: -25.0 [N-m] at 0.119 [s]

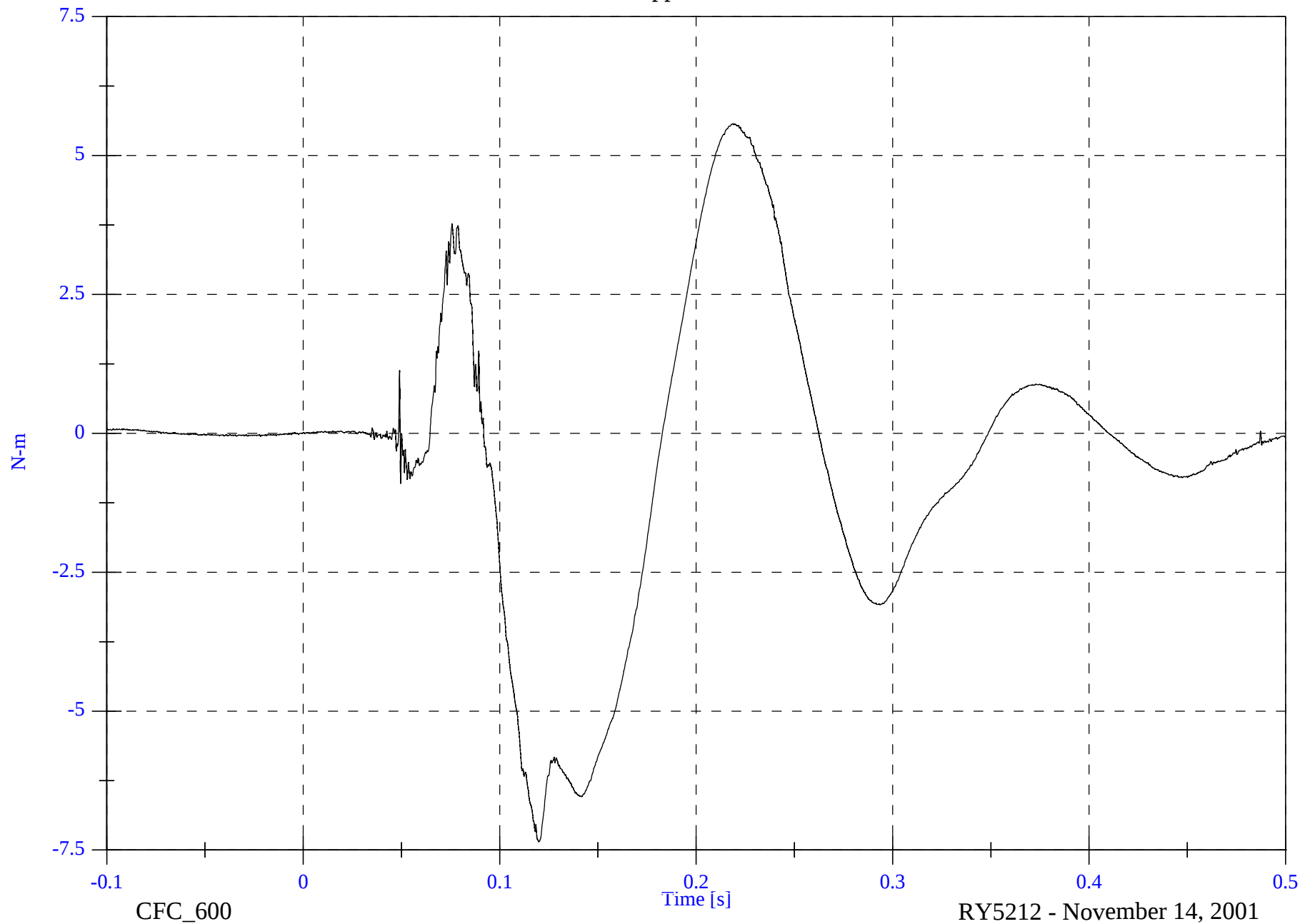


40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Upper Neck Mz

Max: 5.6 [N-m] at 0.219 [s]

Min: -7.4 [N-m] at 0.120 [s]



B-121

8413-68

CFC_600

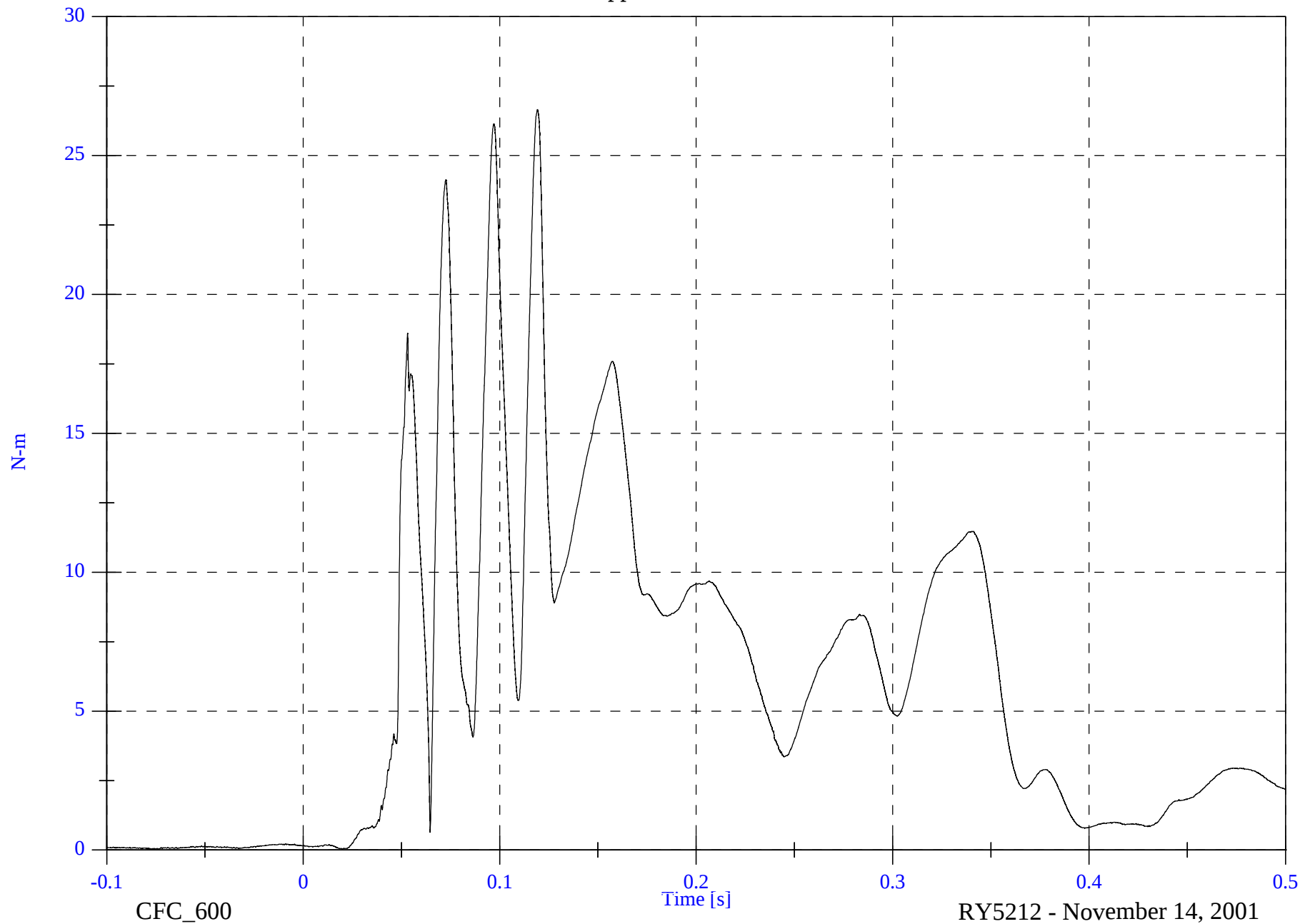
RY5212 - November 14, 2001

40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Upper Neck M Resultant

Max: 26.7 [N-m] at 0.119 [s]

Min: 0.0 [N-m] at 0.020 [s]



B-122

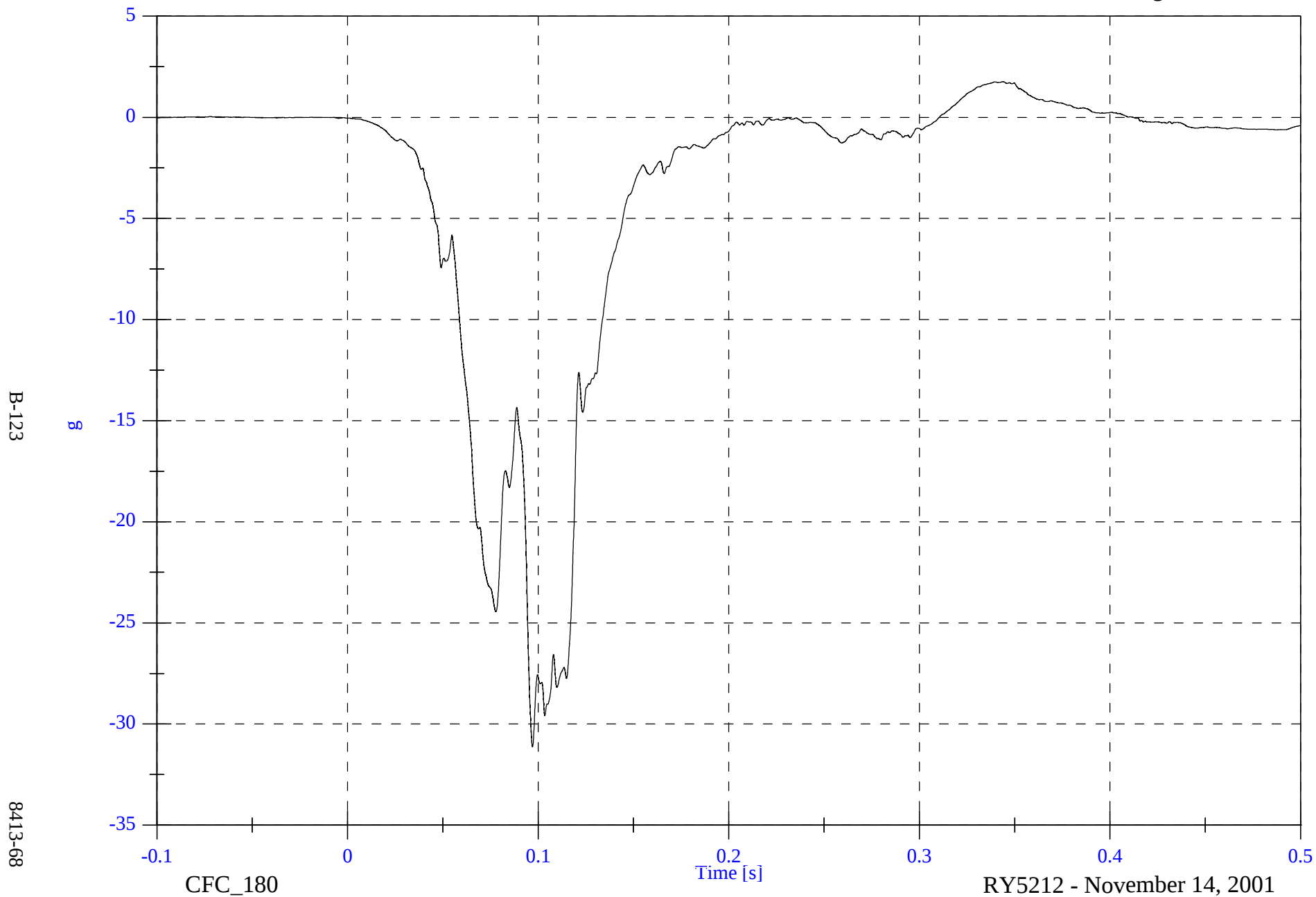
8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Chest Ax

Max: 1.8 [g] at 0.344 [s]

Min: -31.1 [g] at 0.097 [s]

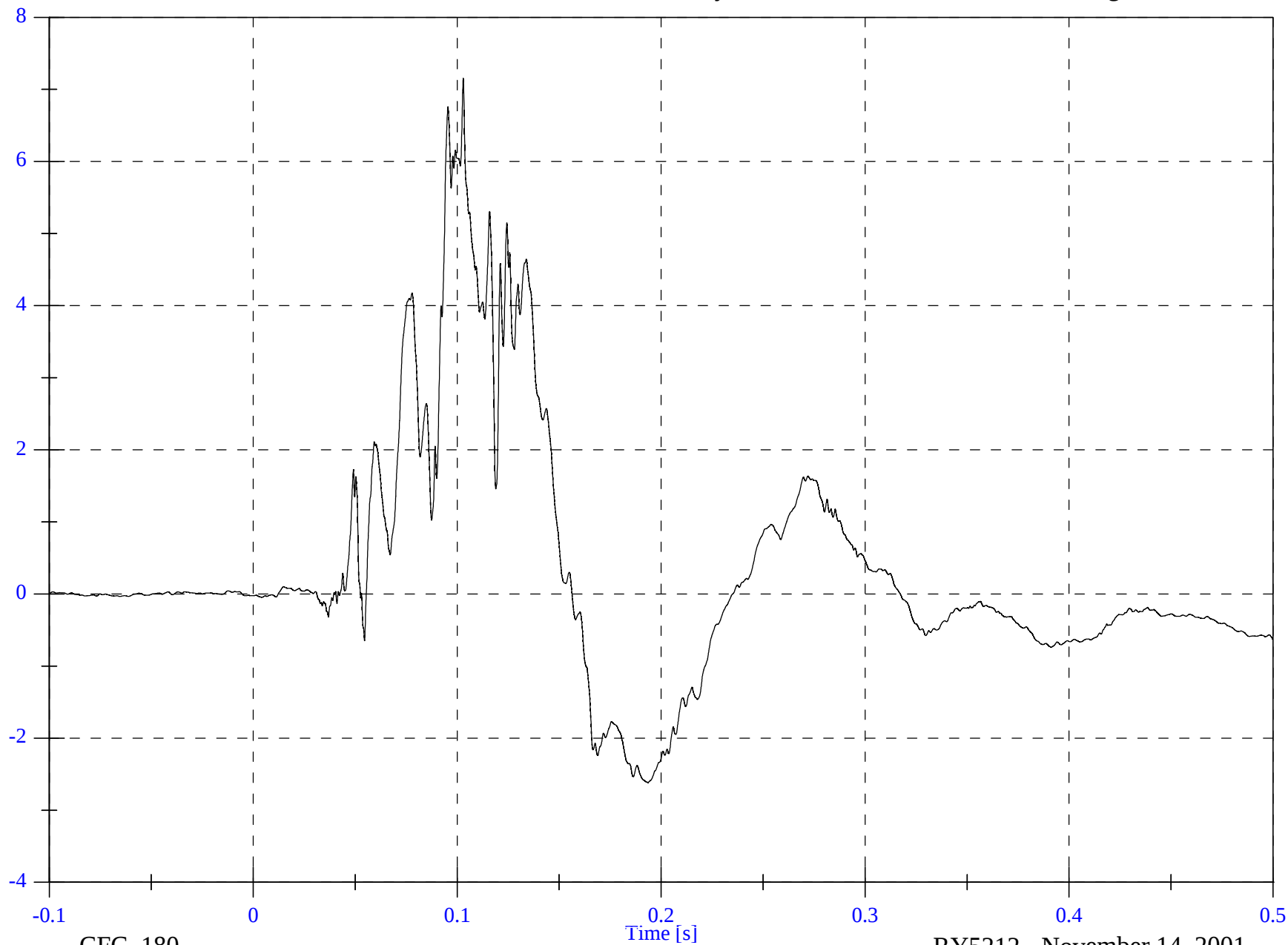


40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Chest Ay

Max: 7.2 [g] at 0.103 [s]

Min: -2.6 [g] at 0.194 [s]



B-124

8413-68

CFC_180

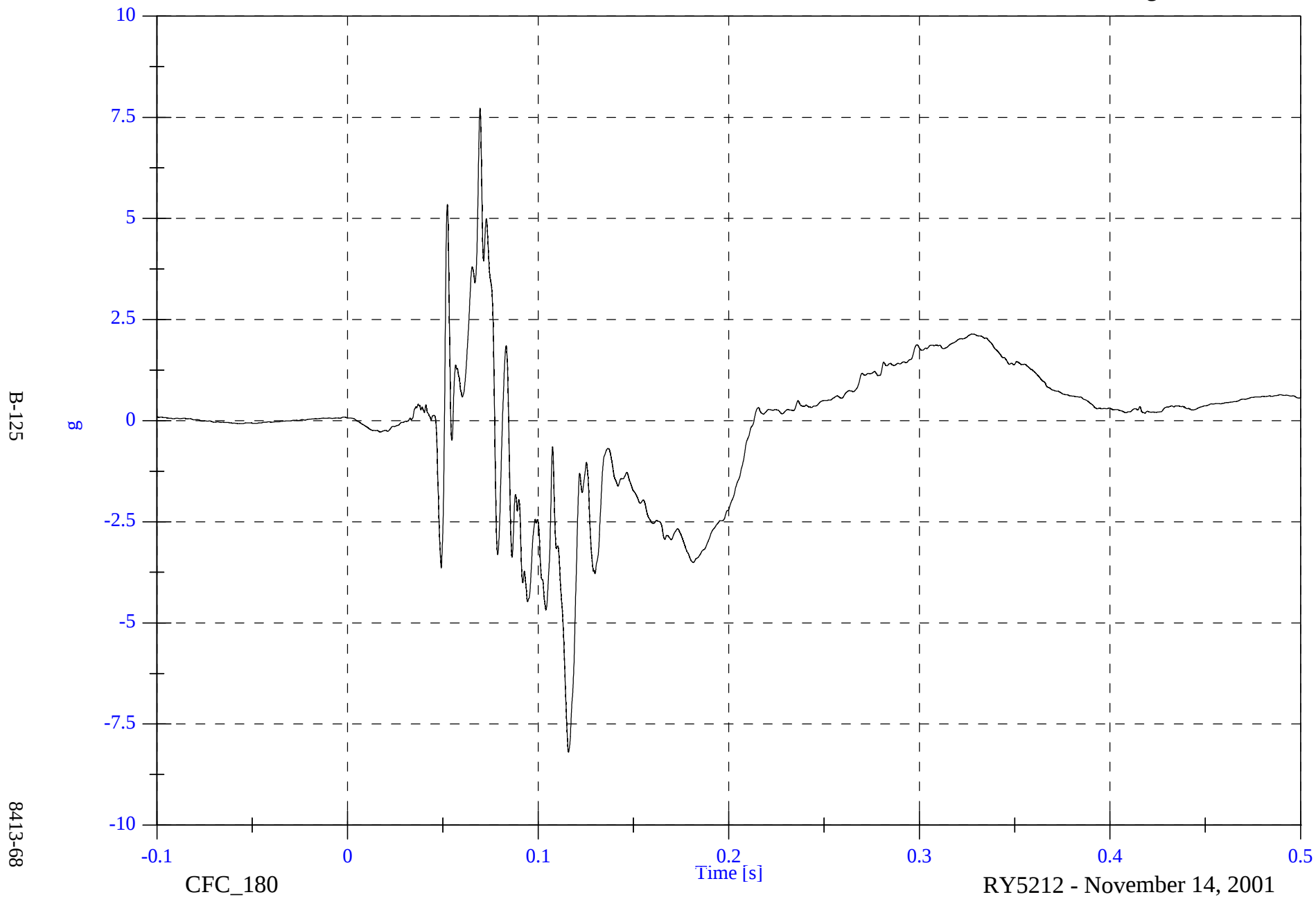
RY5212 - November 14, 2001

40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Chest Az

Max: 7.7 [g] at 0.070 [s]

Min: -8.2 [g] at 0.116 [s]

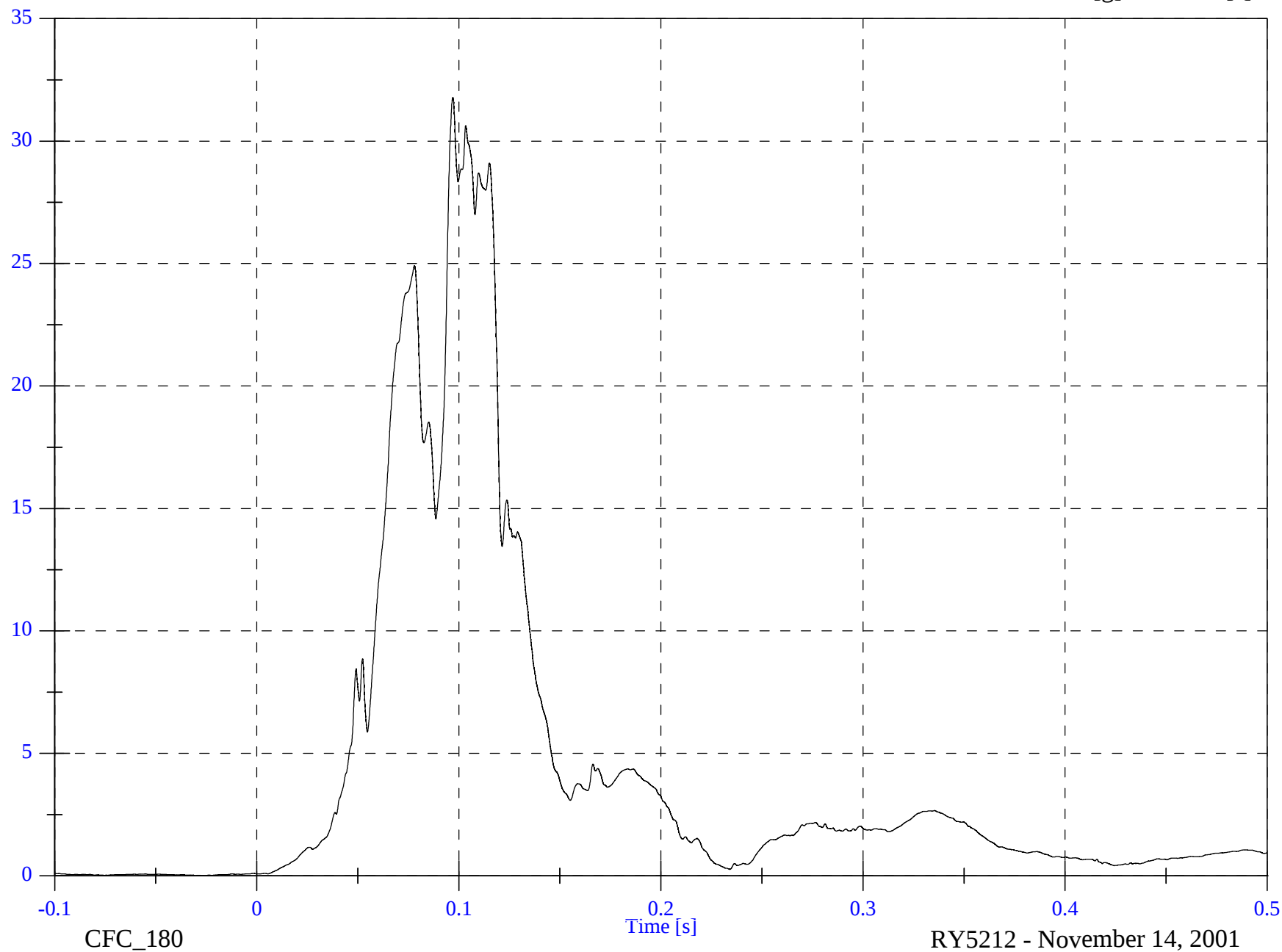


40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Chest A Resultant

Max: 31.8 [g] at 0.097 [s]

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



B-126

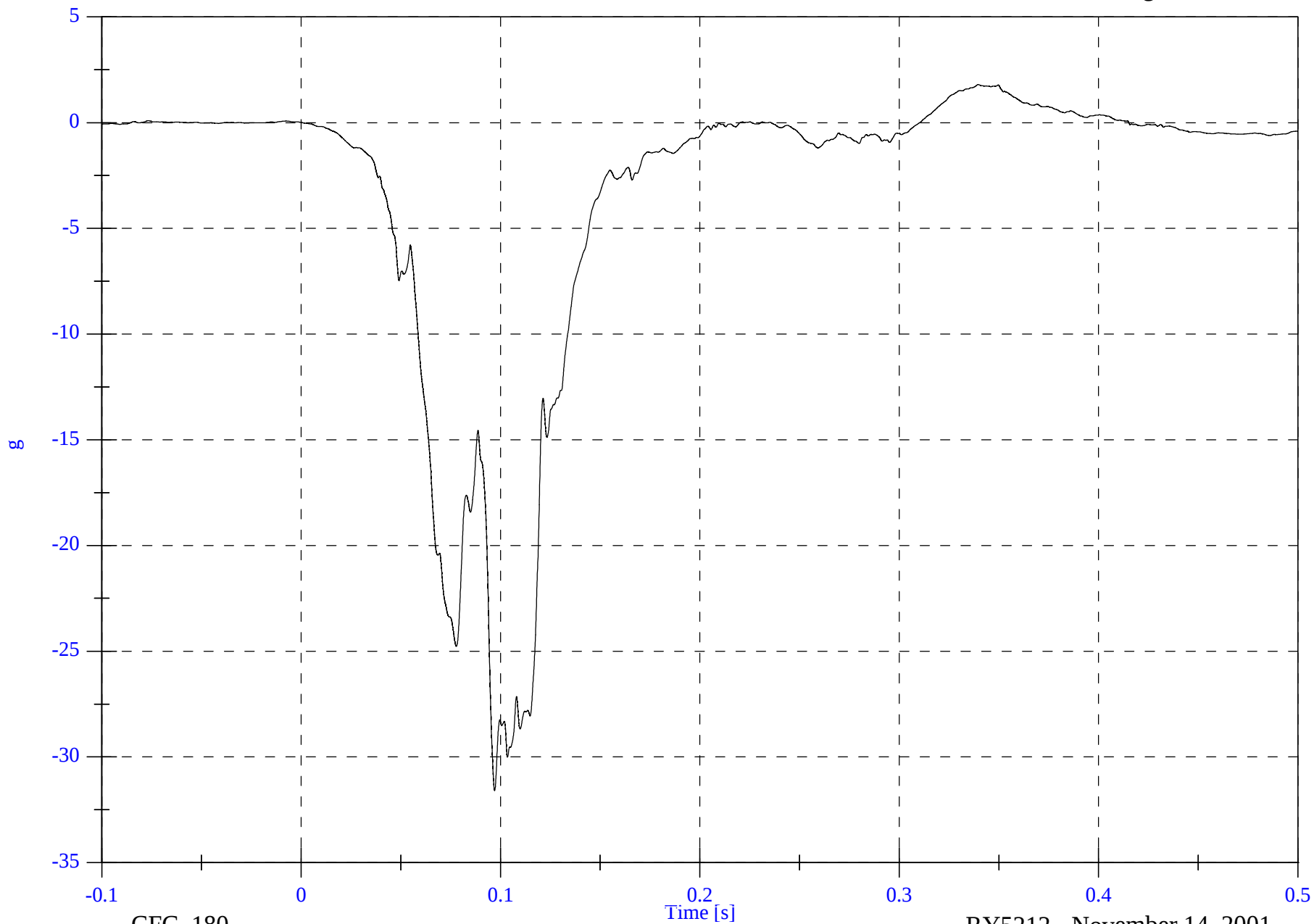
8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Chest Red Ax

Max: 1.8 [g] at 0.340 [s]

Min: -31.6 [g] at 0.097 [s]



B-127

8413-68

CFC_180

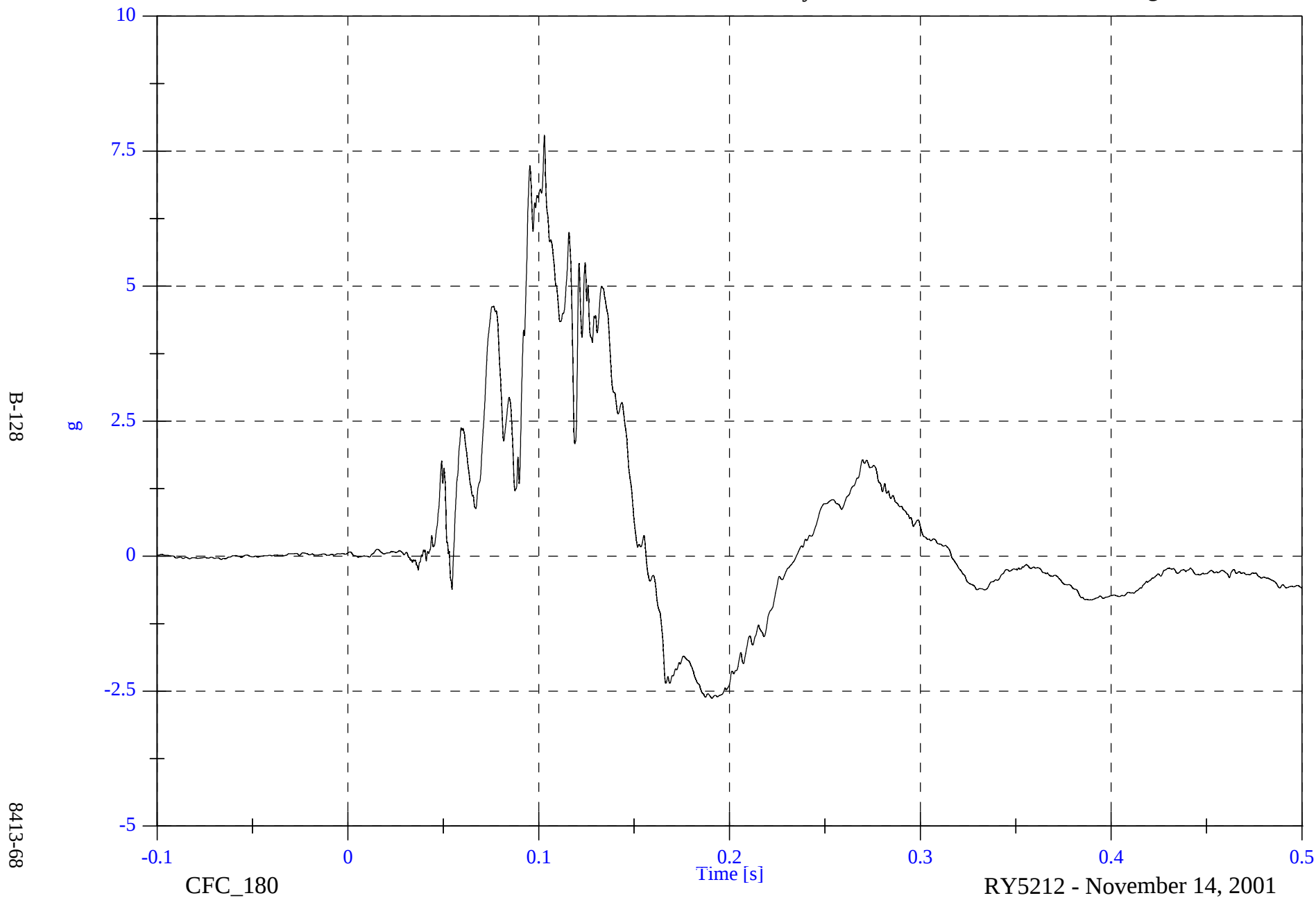
RY5212 - November 14, 2001

40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Chest Red Ay

Max: 7.8 [g] at 0.103 [s]

Min: -2.6 [g] at 0.191 [s]

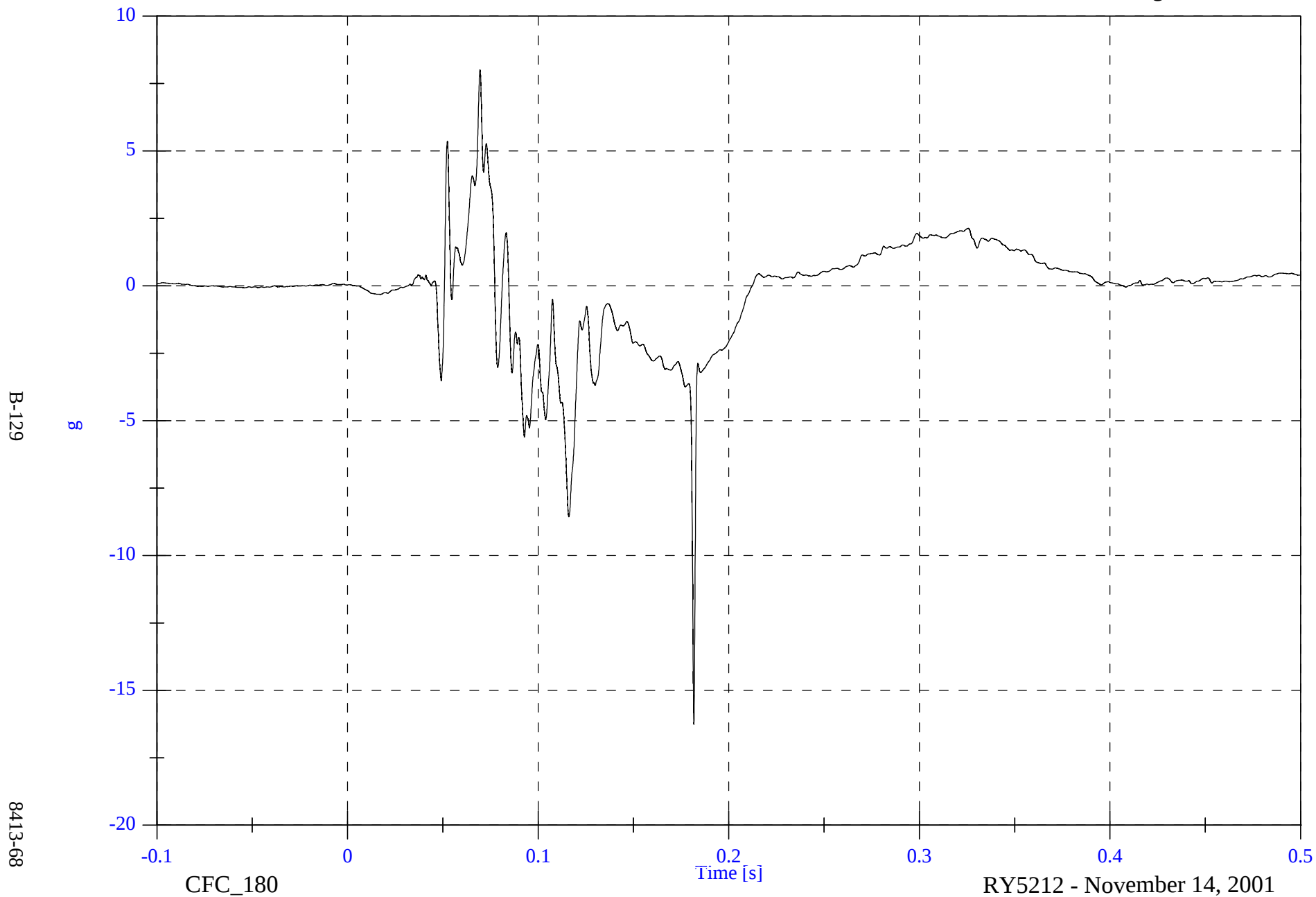


40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Chest Red Az

Max: 8.0 [g] at 0.070 [s]

Min: -16.3 [g] at 0.182 [s]



40% Frontal Offset Test #12 - 2000 Nissan Quest

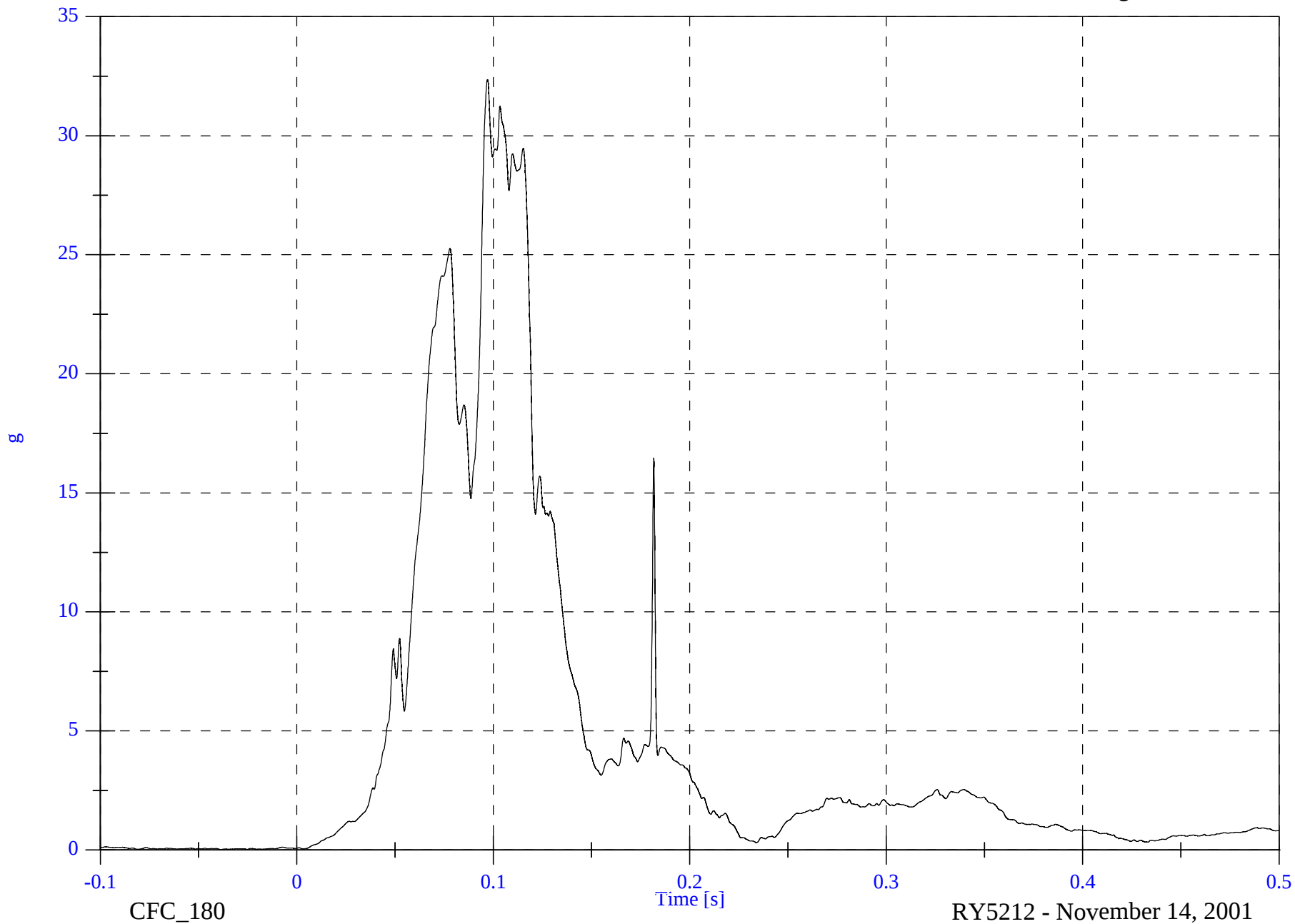
P2 Chest Red A Resultant

Max: 32.4 [g] at 0.097 [s]

Min: 0.0 [g] at -0.039 [s]

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8413-68



40% Frontal Offset Test #12 - 2000 Nissan Quest

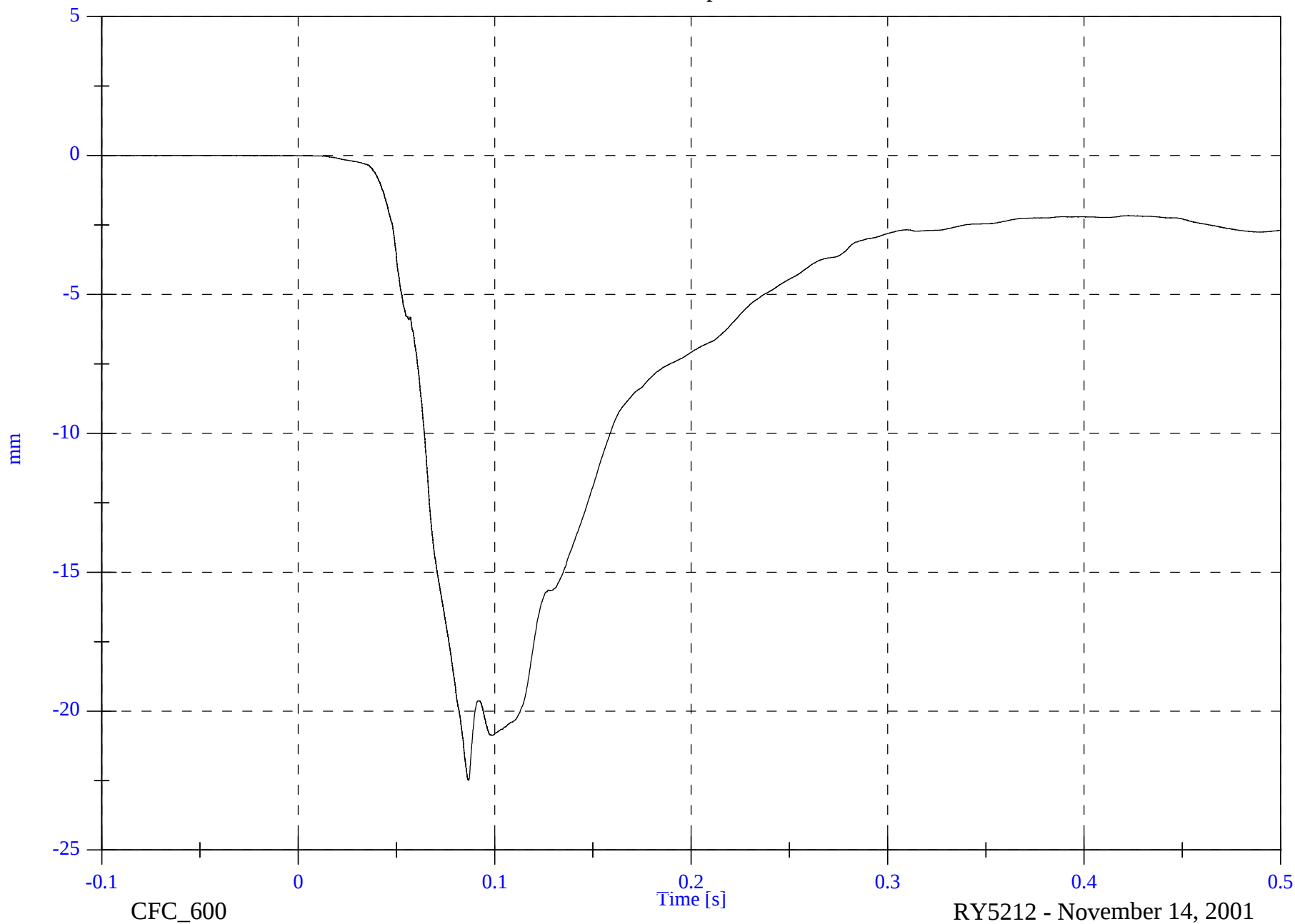
P2 Chest Displacement

Max: 0.0 [mm] at -0.068 [s]

Min: -22.5 [mm] at 0.087 [s]

B-131

8413-68

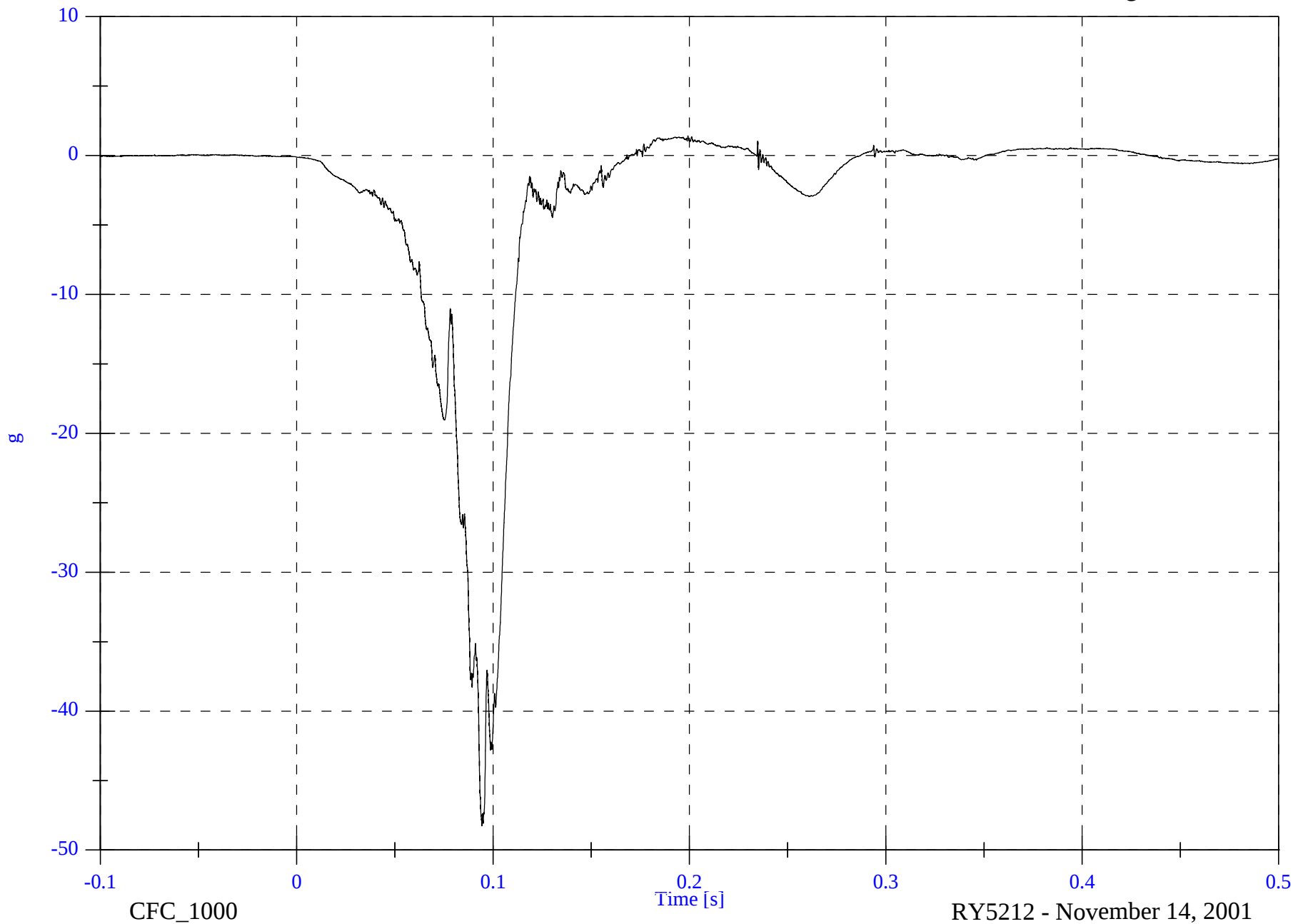


40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Pelvic Ax

Max: 1.4 [g] at 0.199 [s]

Min: -48.3 [g] at 0.094 [s]

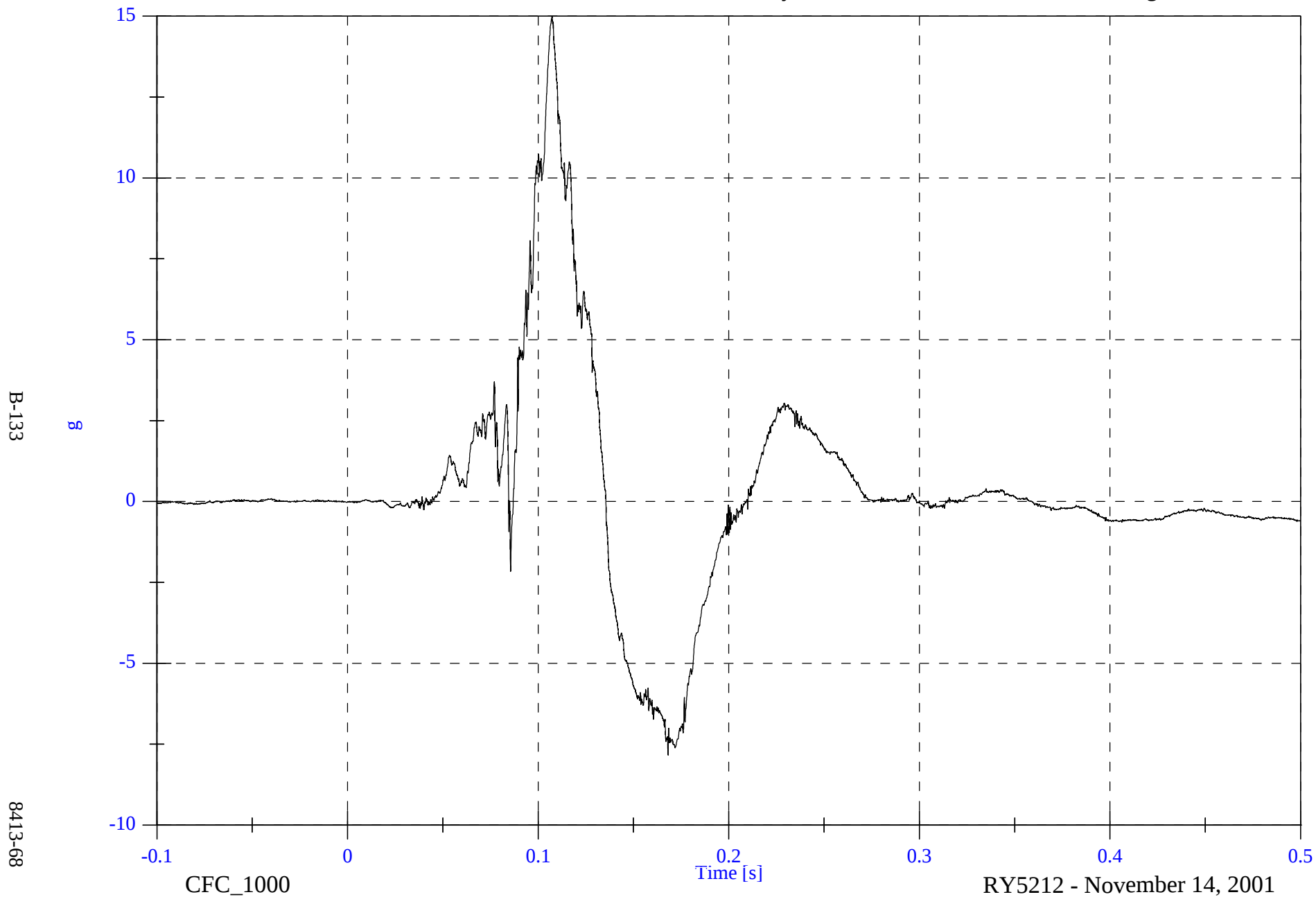


40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Pelvic Ay

Max: 15.0 [g] at 0.107 [s]

Min: -7.8 [g] at 0.168 [s]

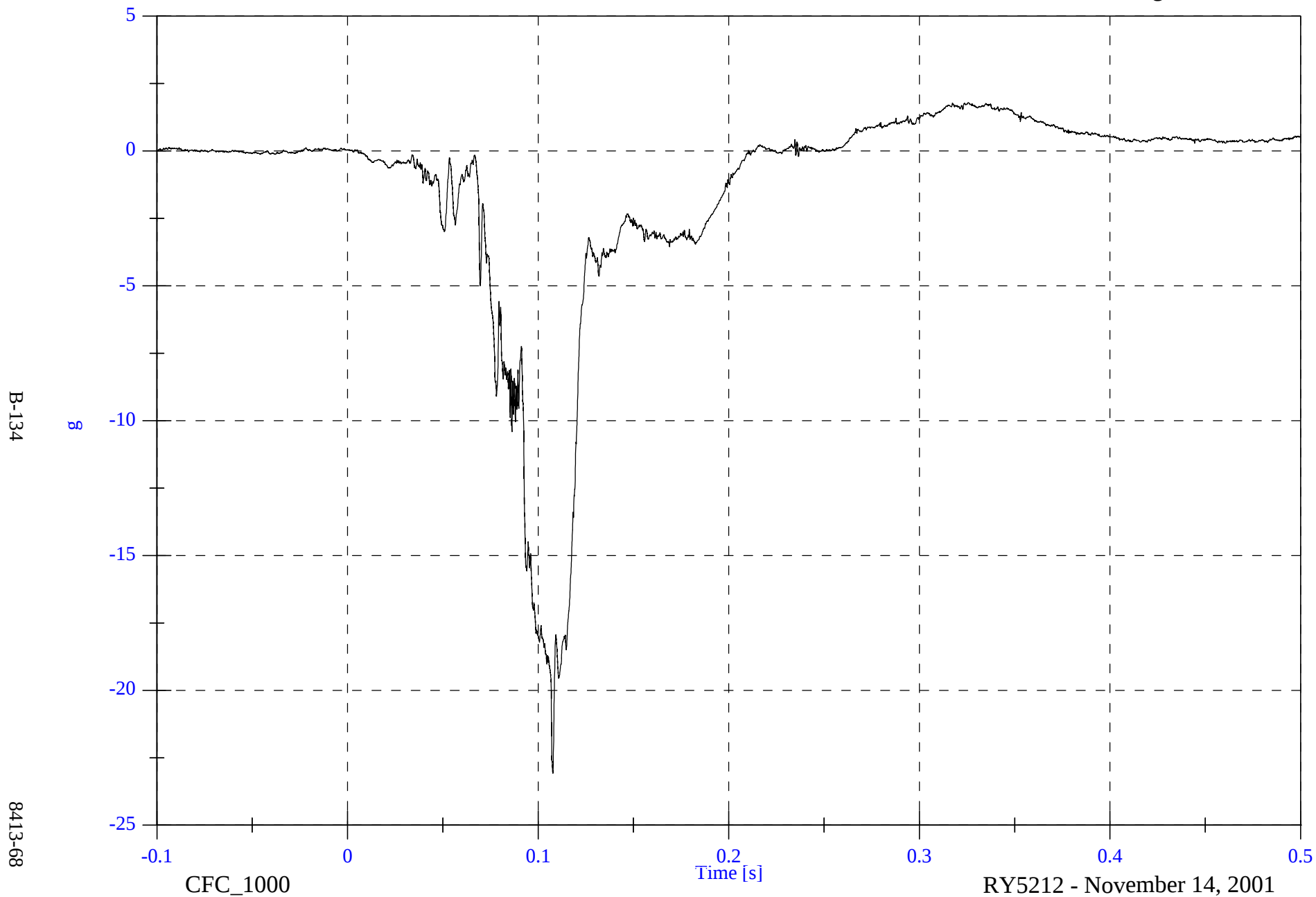


40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Pelvic Az

Max: 1.8 [g] at 0.326 [s]

Min: -23.1 [g] at 0.108 [s]

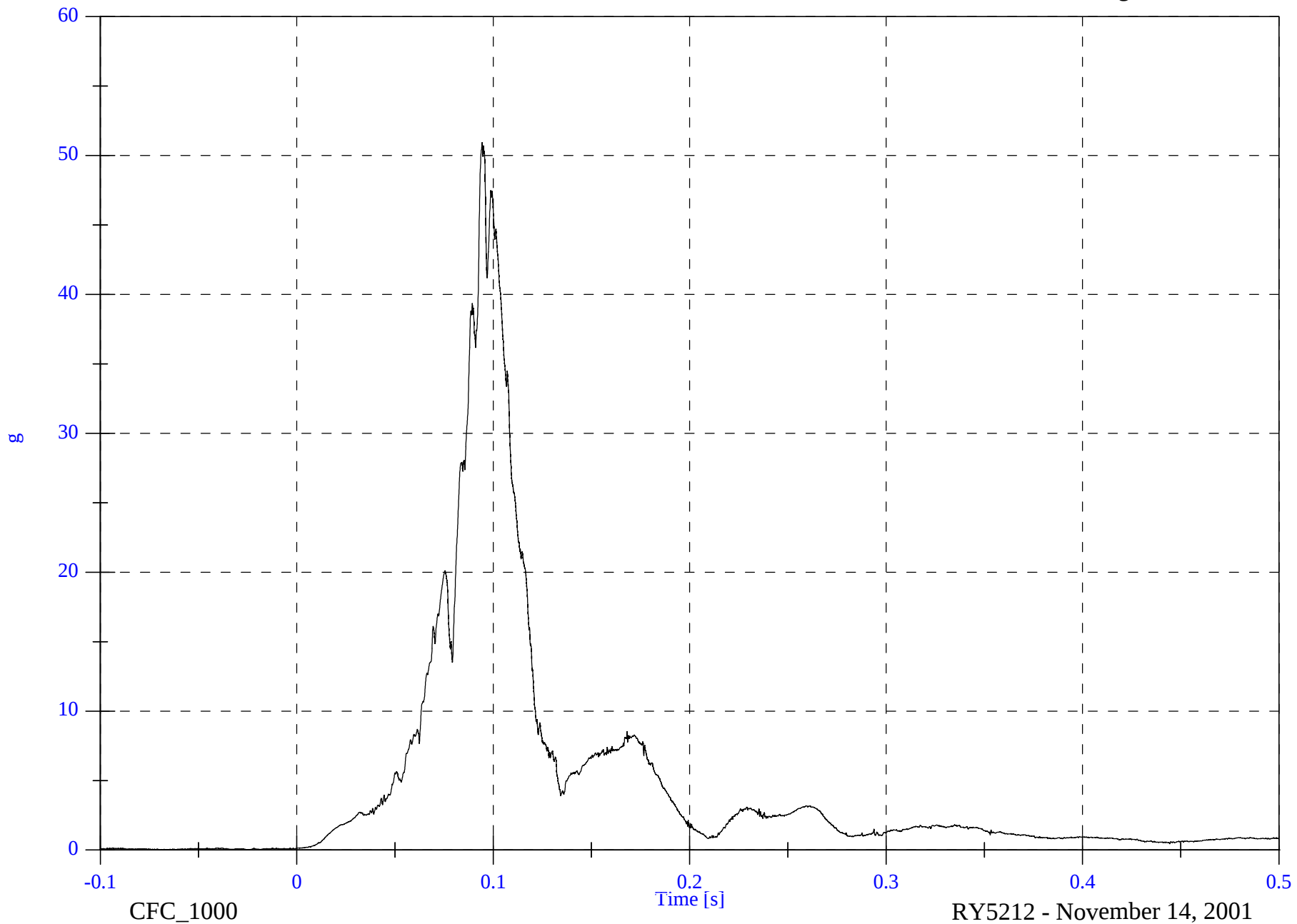


40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Pelvic A Resultant

Max: 50.9 [g] at 0.094 [s]

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



B-135

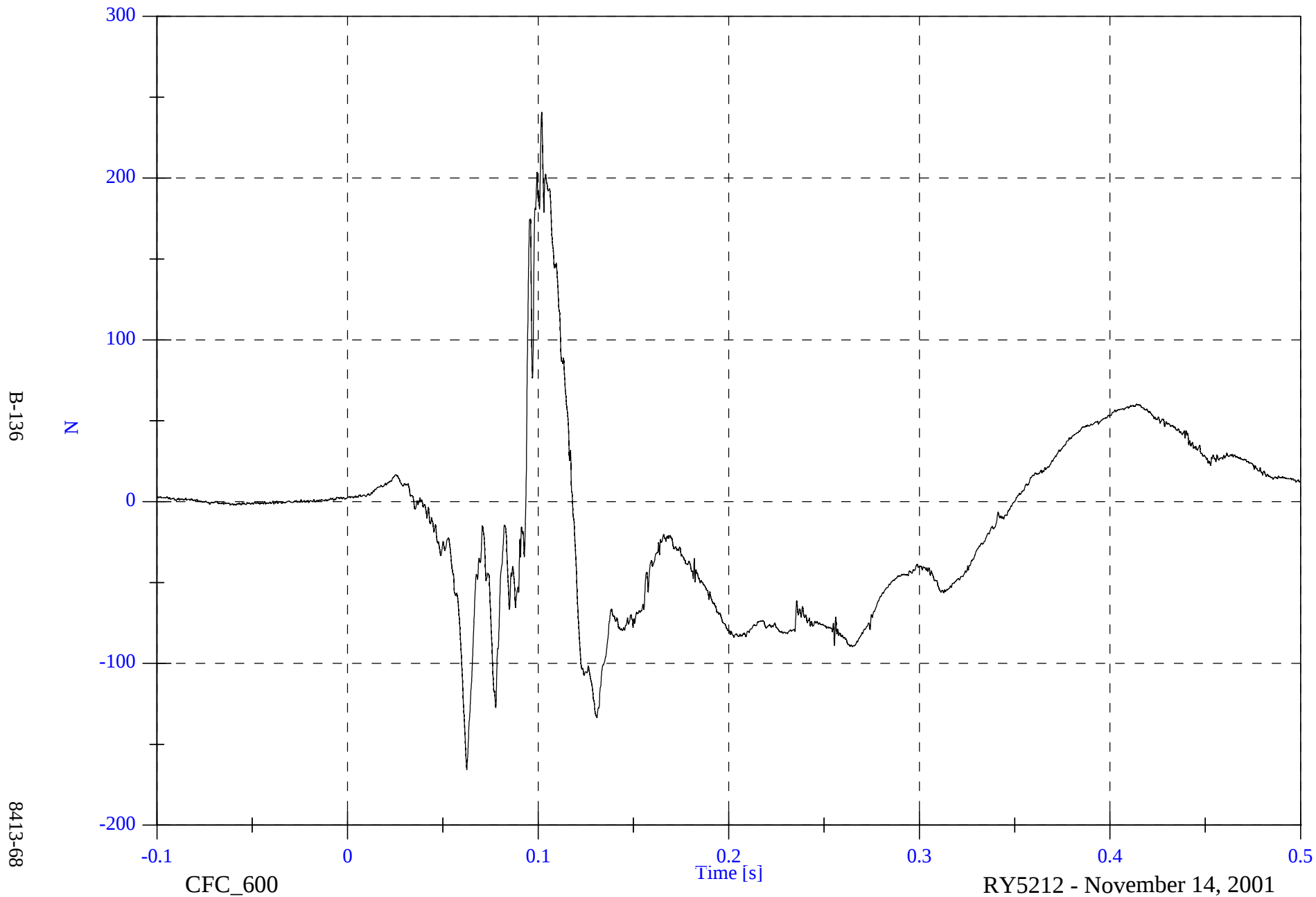
8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Left Femur Fx

Max: 240.7 [N] at 0.102 [s]

Min: -165.6 [N] at 0.063 [s]

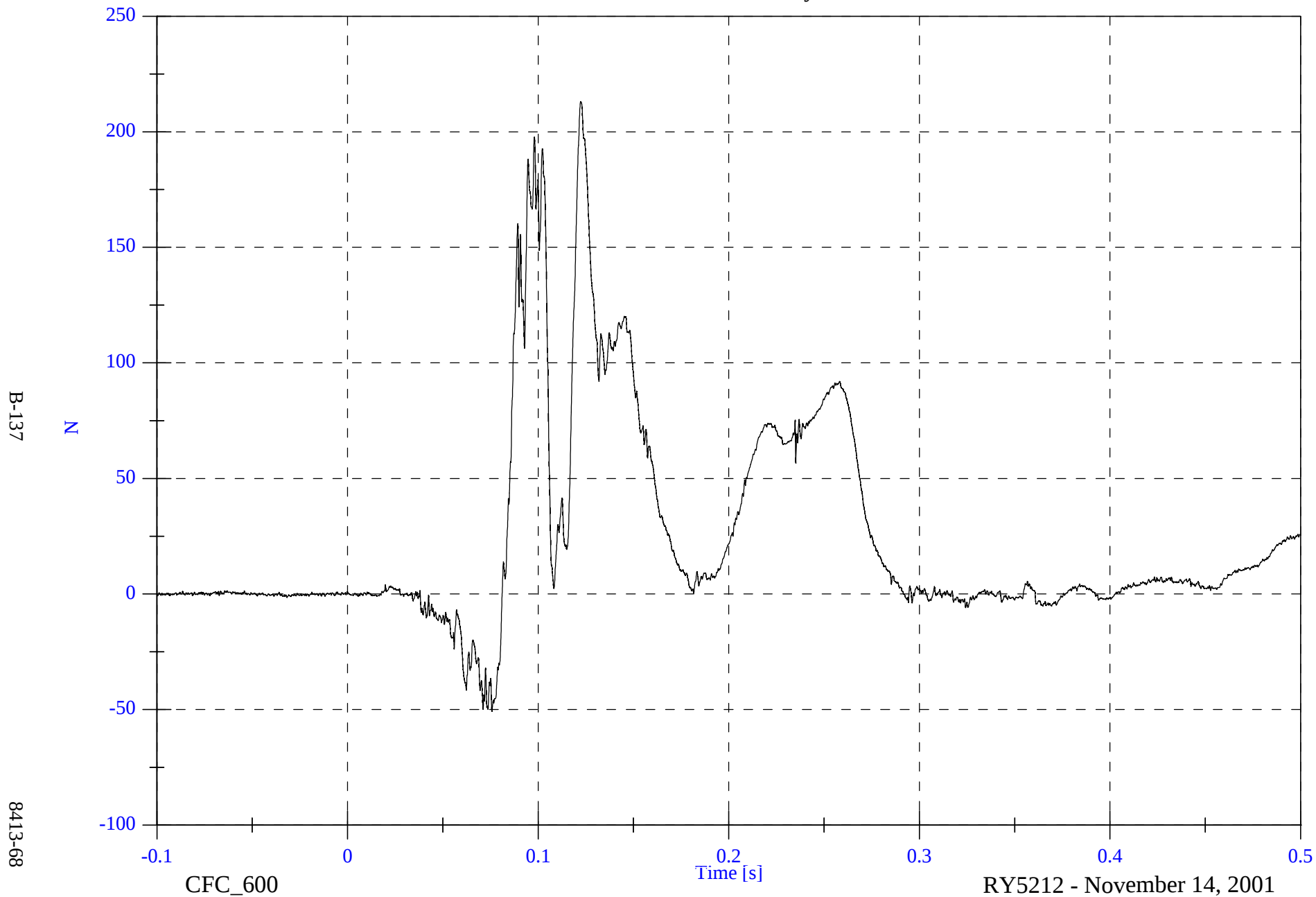


40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Left Femur Fy

Max: 213.2 [N] at 0.122 [s]

Min: -50.8 [N] at 0.076 [s]

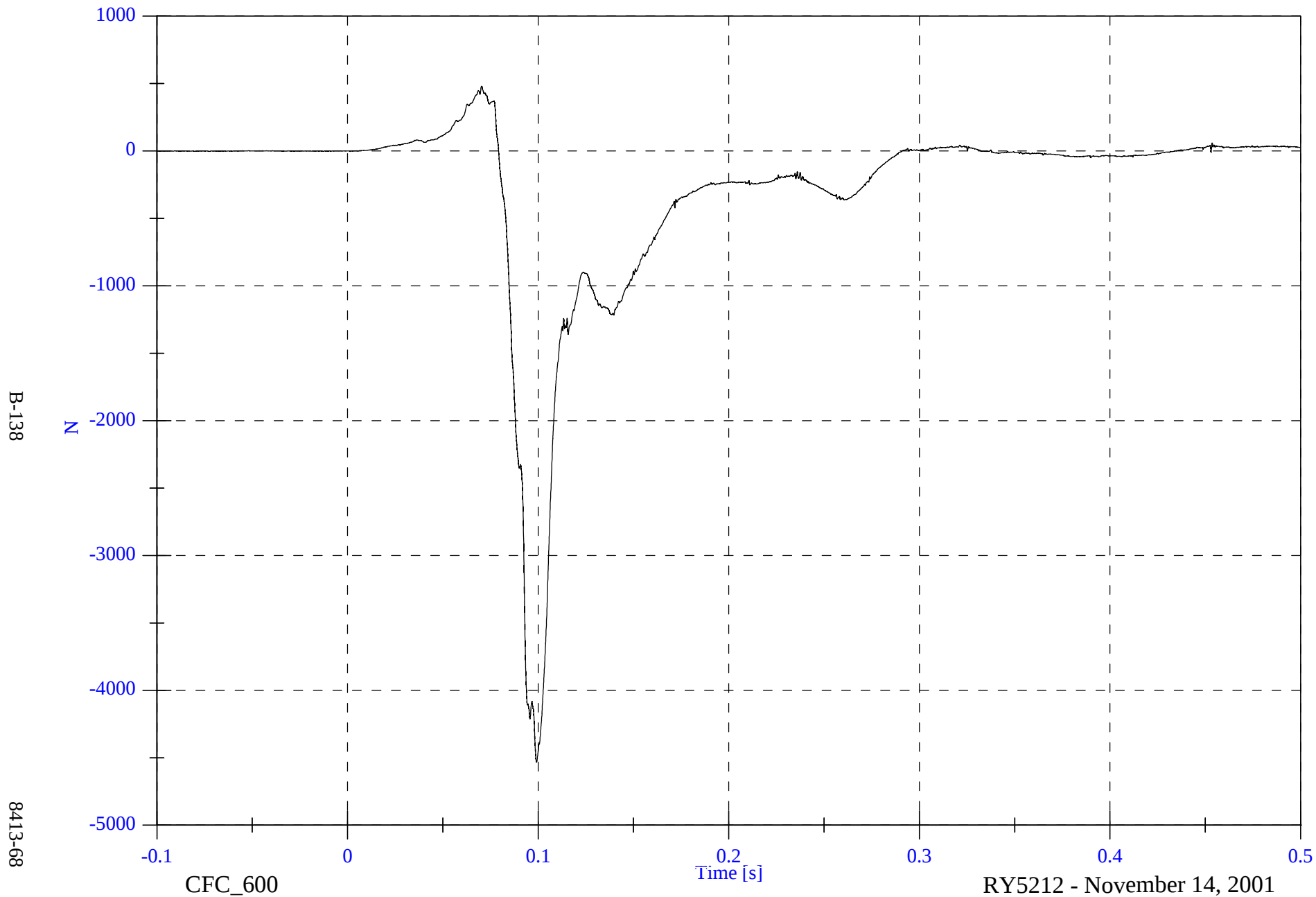


40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Left Femur Fz

Max: 481.2 [N] at 0.070 [s]

Min: -4533.8 [N] at 0.099 [s]

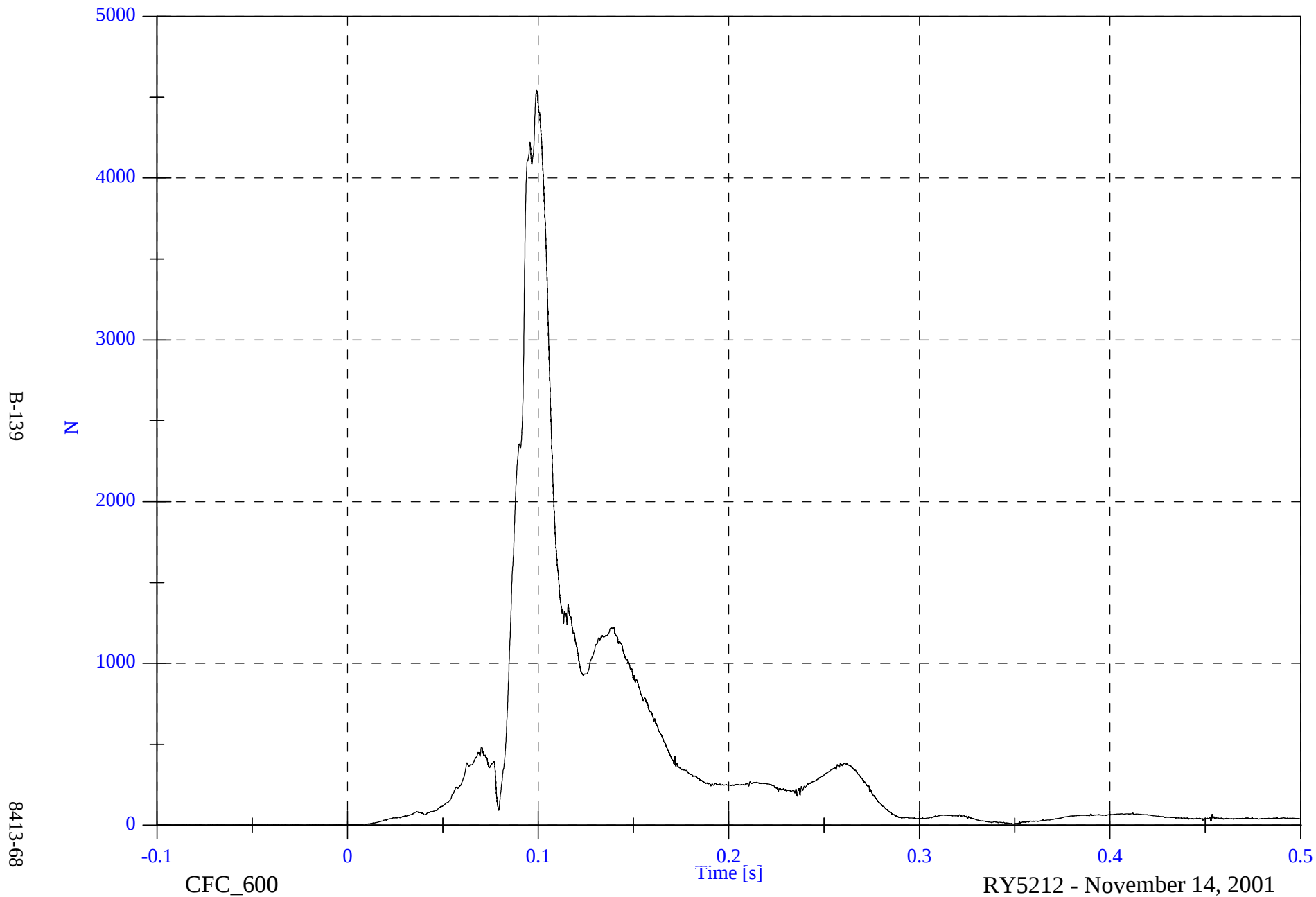


40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Left Femur F Resultant

Max: 4541.4 [N] at 0.099 [s]

Min: 0.1 [N] at -0.018 [s]

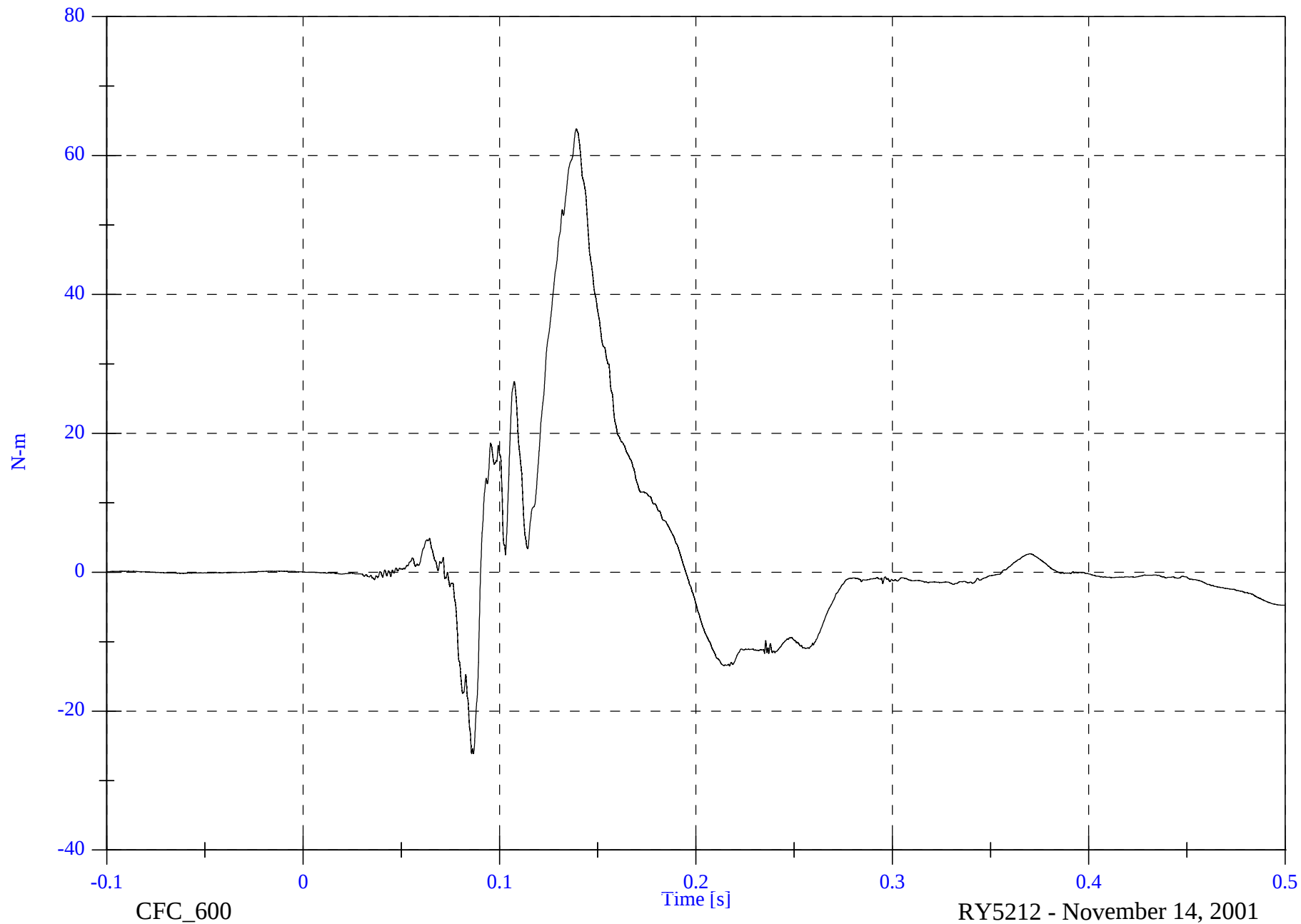


40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Left Femur Mx

Max: 63.9 [N-m] at 0.139 [s]

Min: -26.1 [N-m] at 0.087 [s]

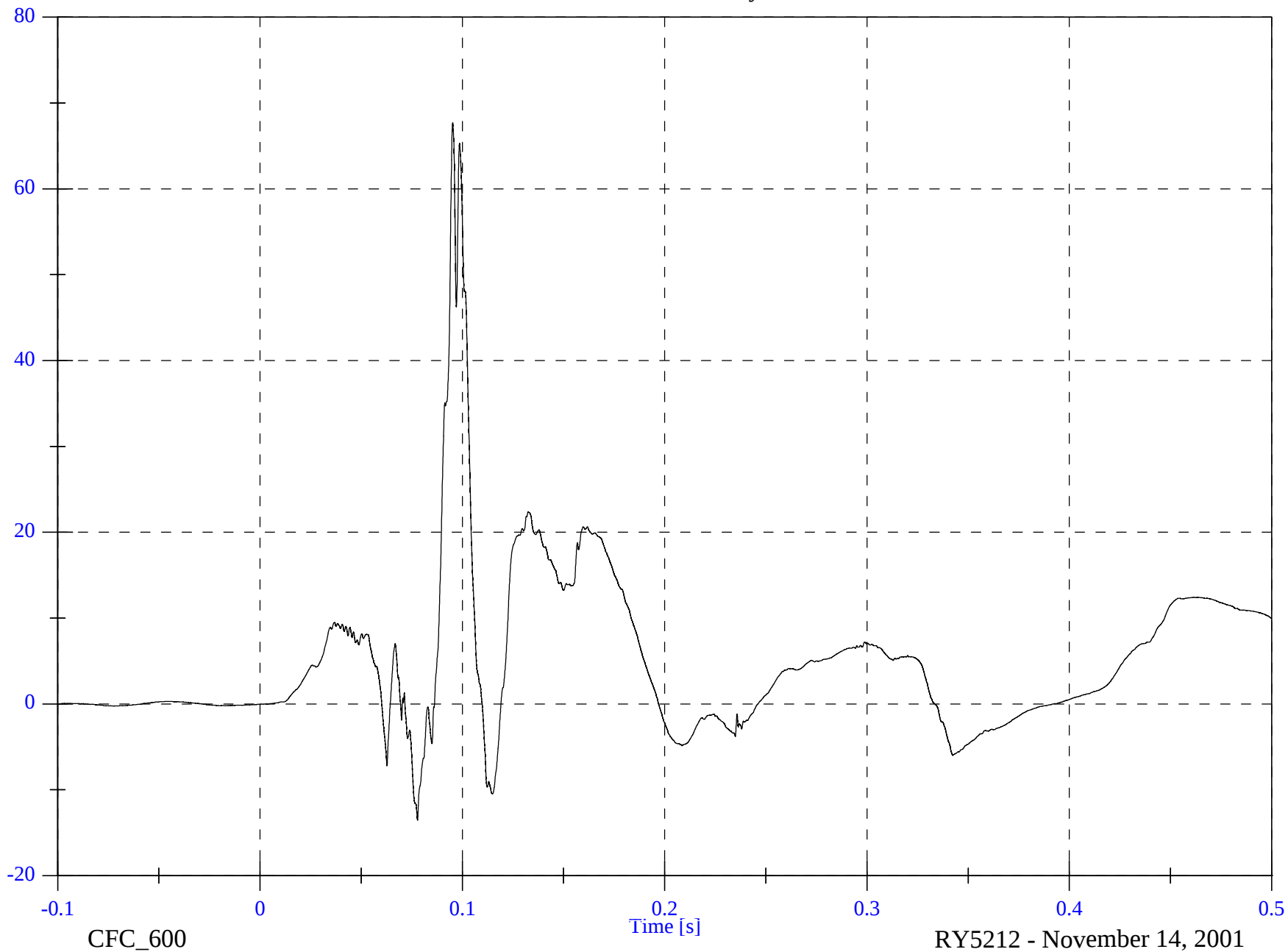


40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Left Femur My

Max: 67.7 [N-m] at 0.095 [s]

Min: -13.5 [N-m] at 0.078 [s]



B-141

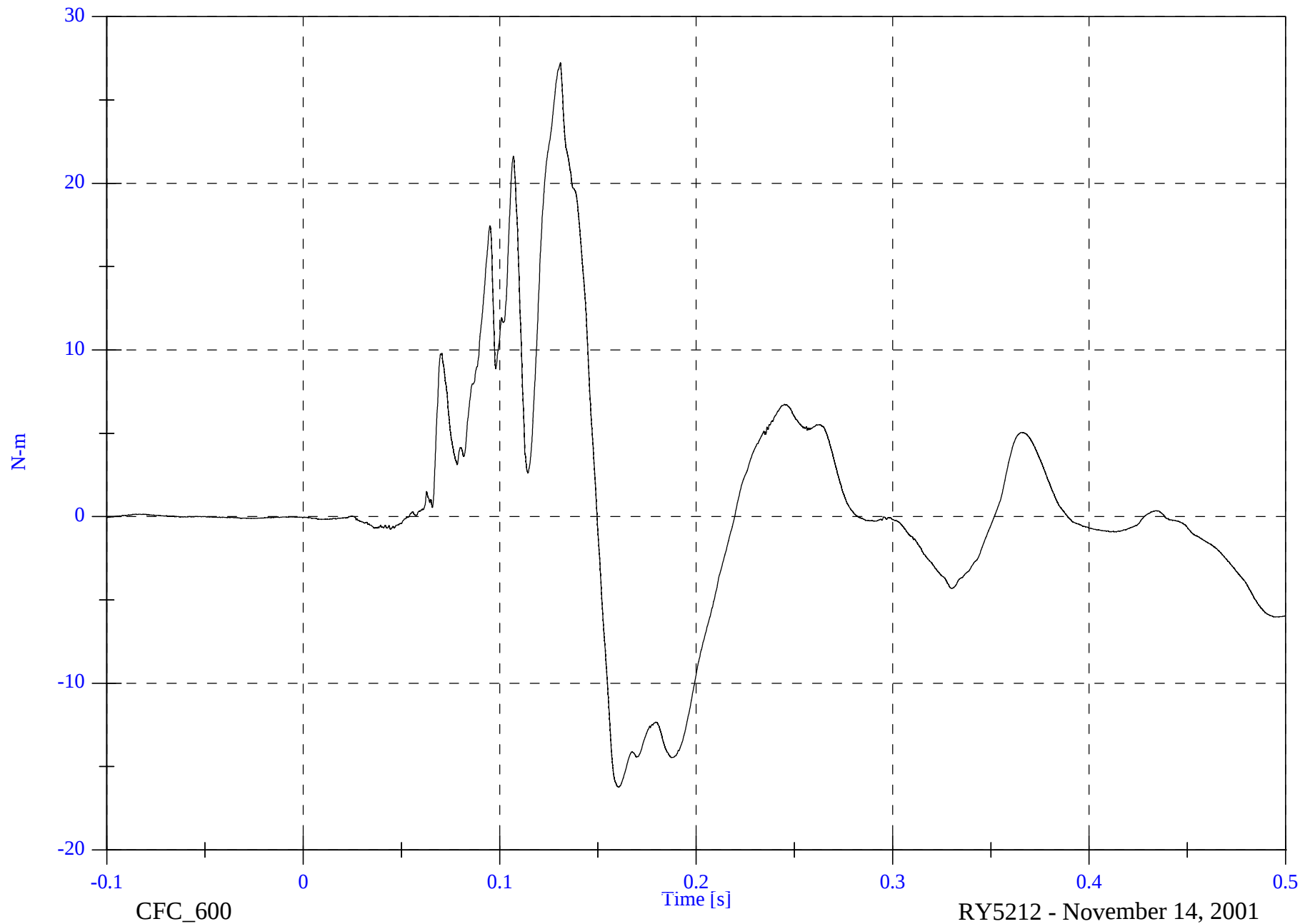
8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Left Femur Mz

Max: 27.2 [N-m] at 0.131 [s]

Min: -16.2 [N-m] at 0.161 [s]



B-142

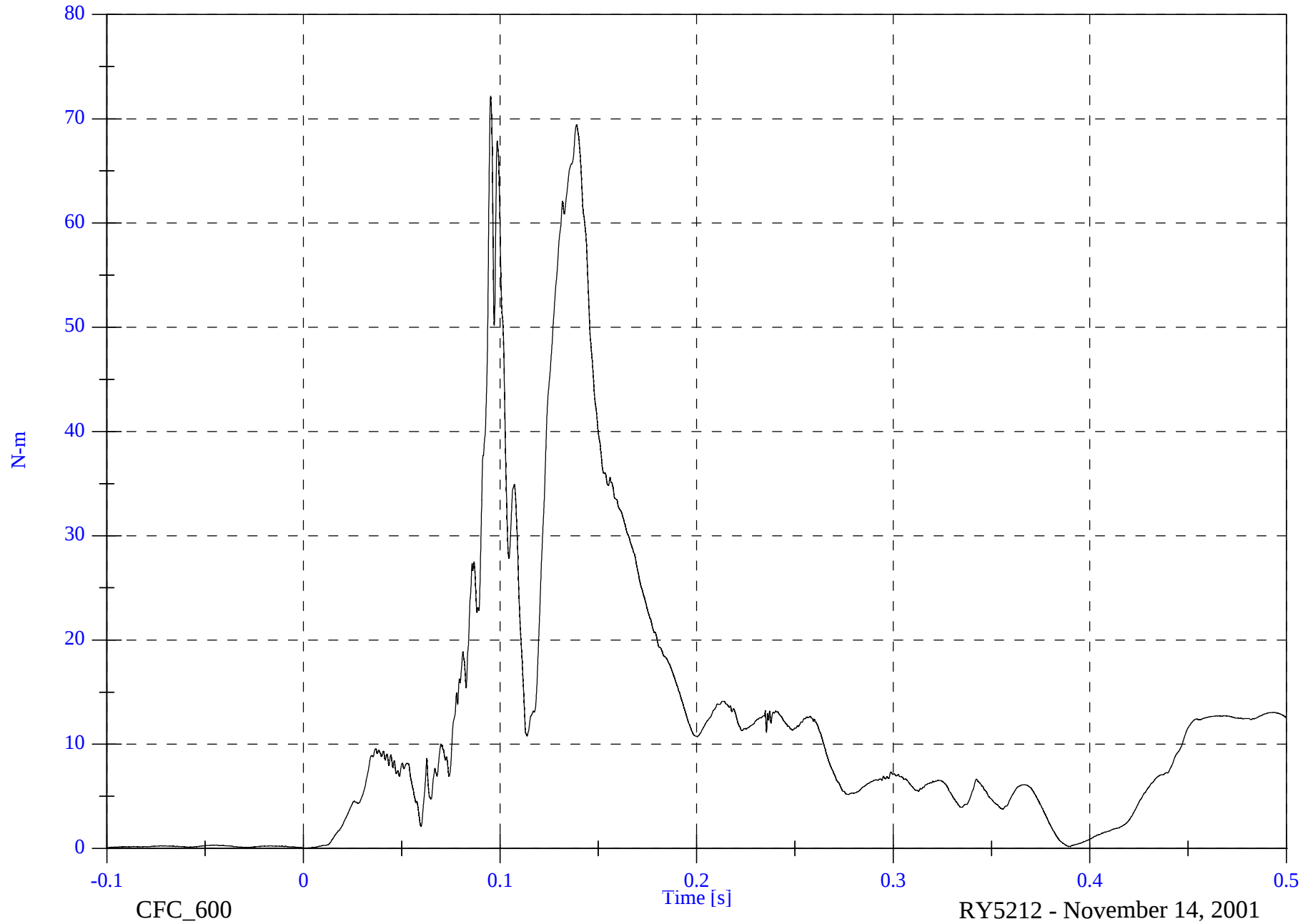
8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Left Femur M Resultant

Max: 72.2 [N-m] at 0.095 [s]

Min: 0.0 [N-m] at 0.001 [s]



B-143

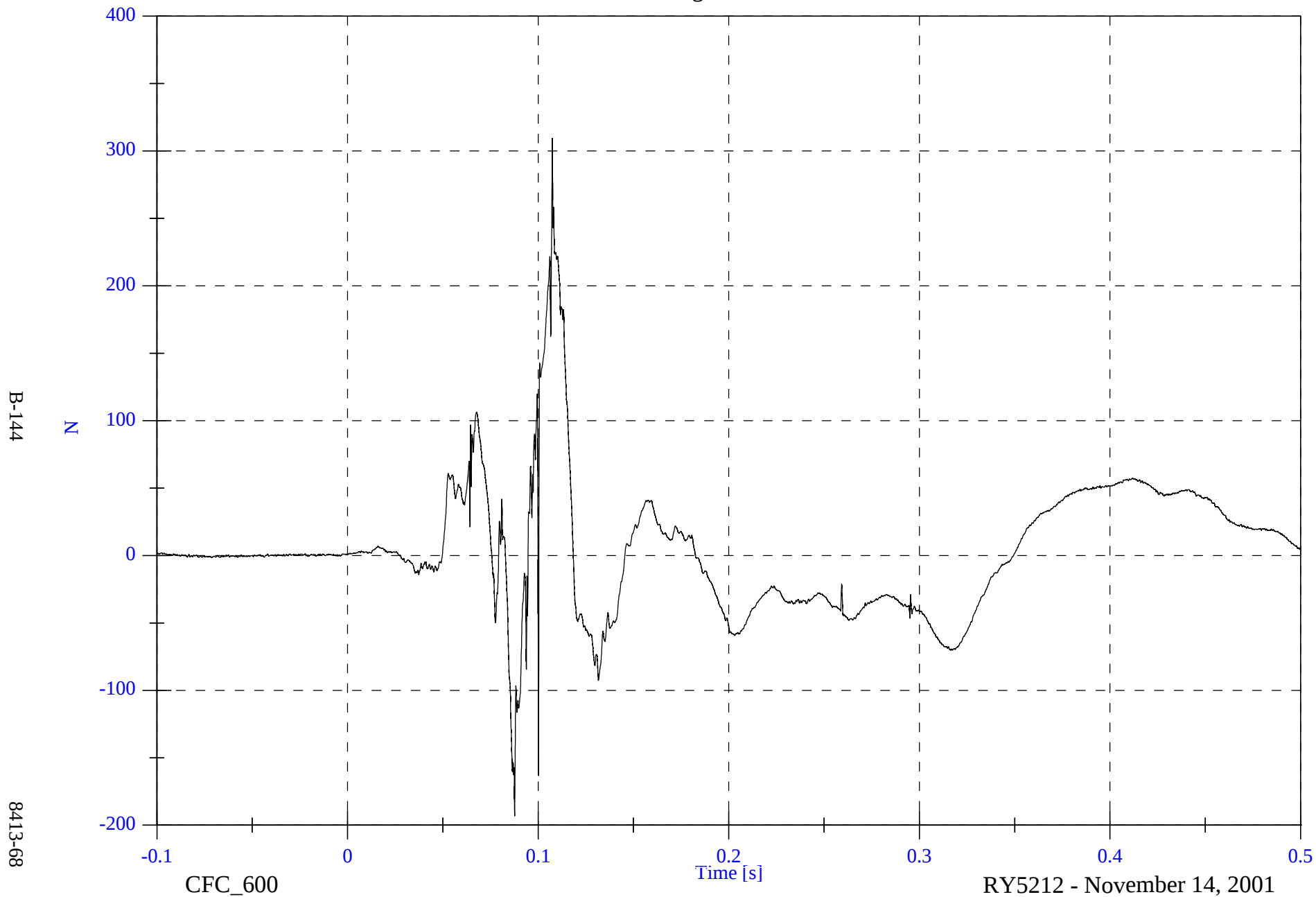
8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Right Femur Fx

Max: 309.4 [N] at 0.107 [s]

Min: -193.3 [N] at 0.088 [s]

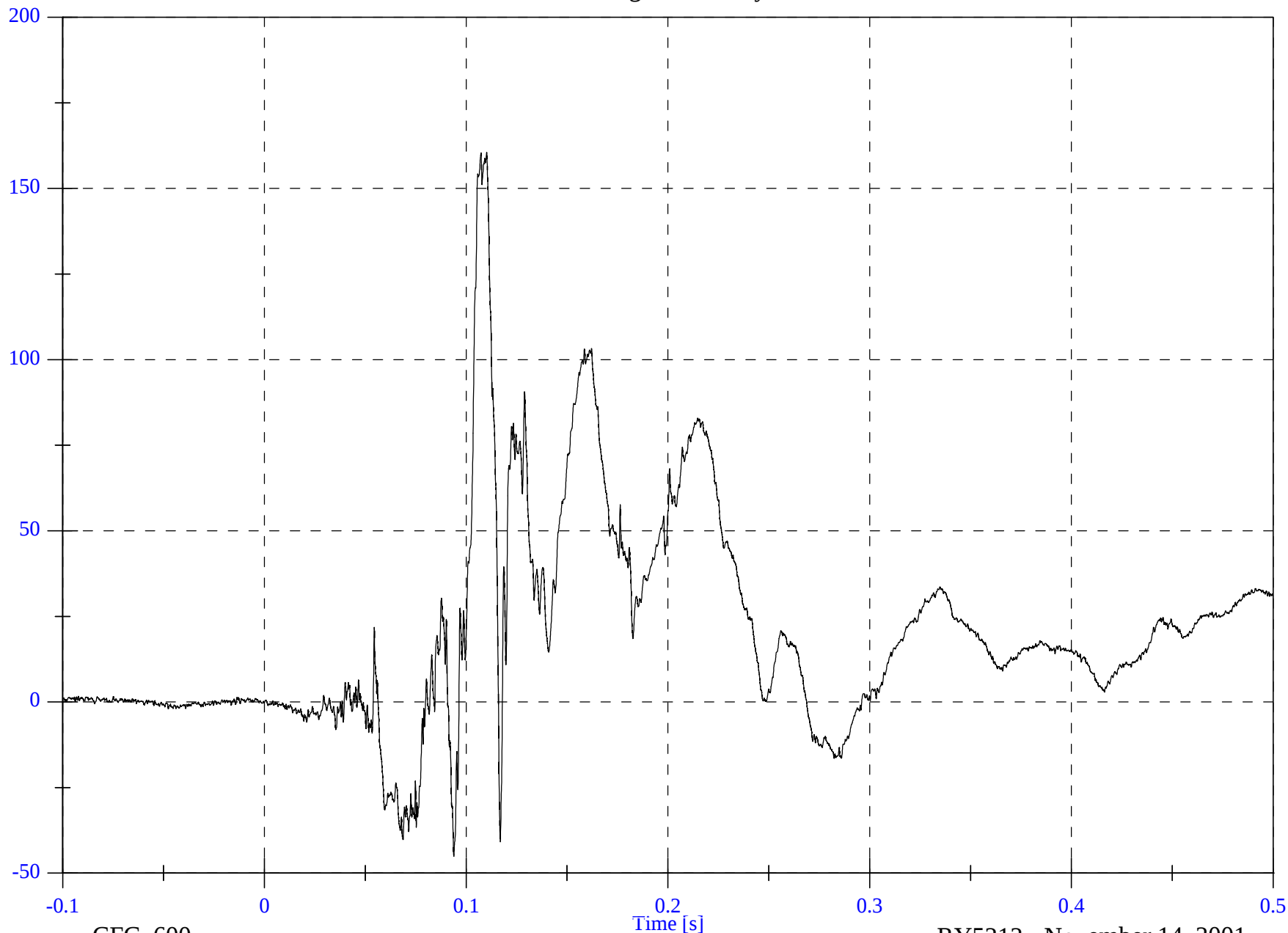


40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Right Femur Fy

Max: 160.5 [N] at 0.110 [s]

Min: -45.1 [N] at 0.094 [s]



B-145

8413-68

CFC_600

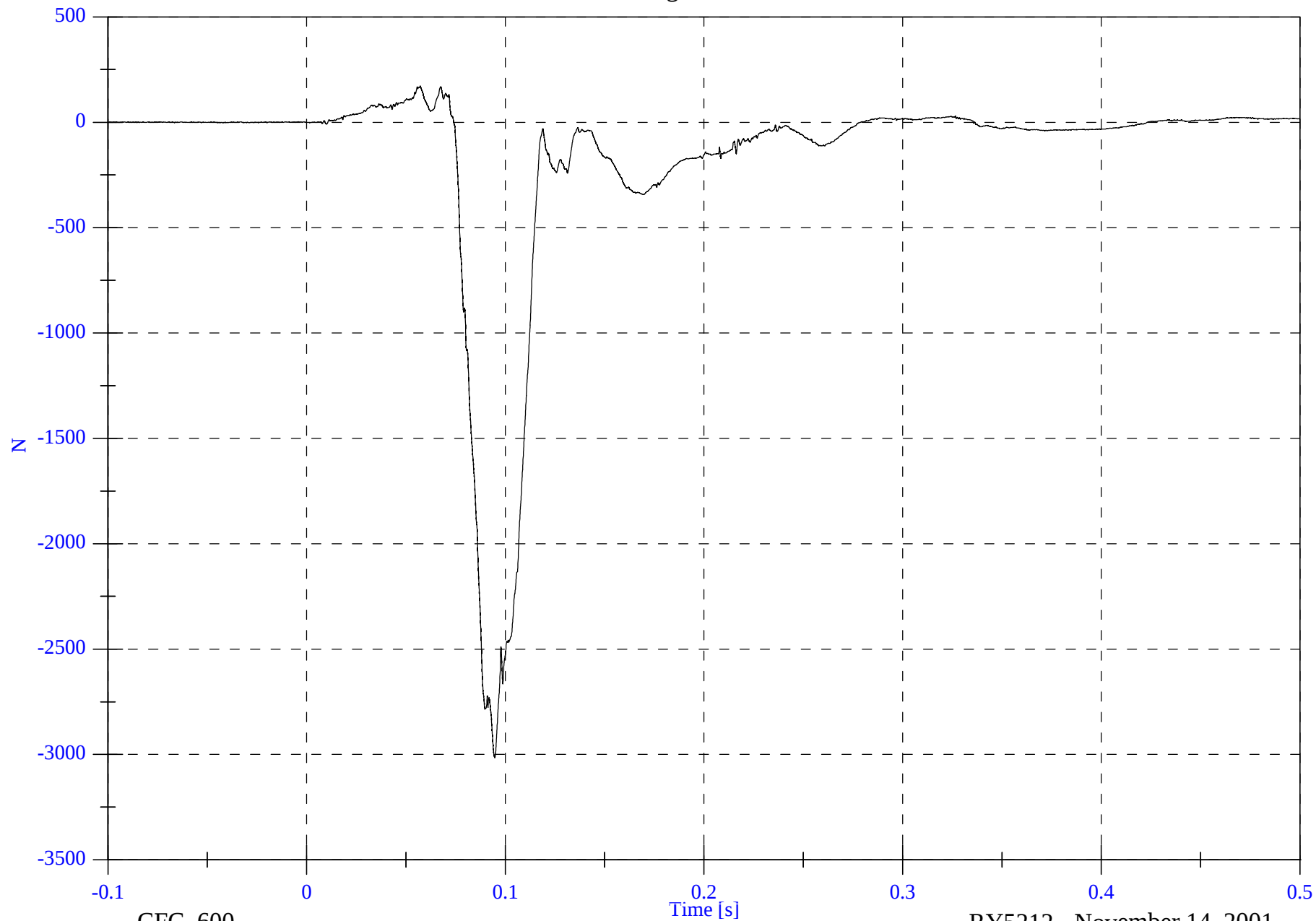
RY5212 - November 14, 2001

40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Right Femur Fz

Max: 170.8 [N] at 0.057 [s]

Min: -3015.1 [N] at 0.095 [s]



B-146

8413-68

CFC_600

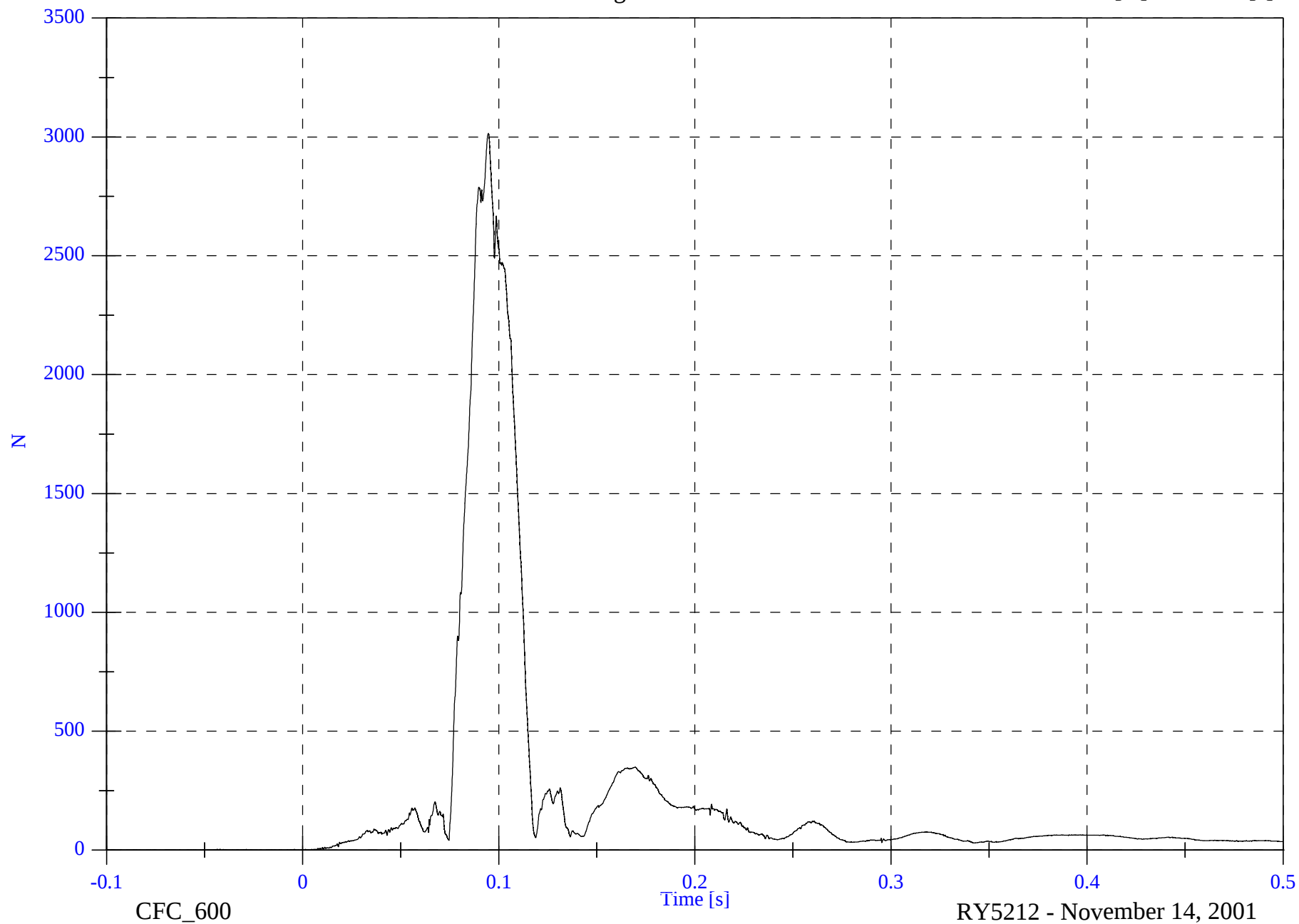
RY5212 - November 14, 2001

40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Right Femur F Resultant

Max: 3015.3 [N] at 0.095 [s]

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

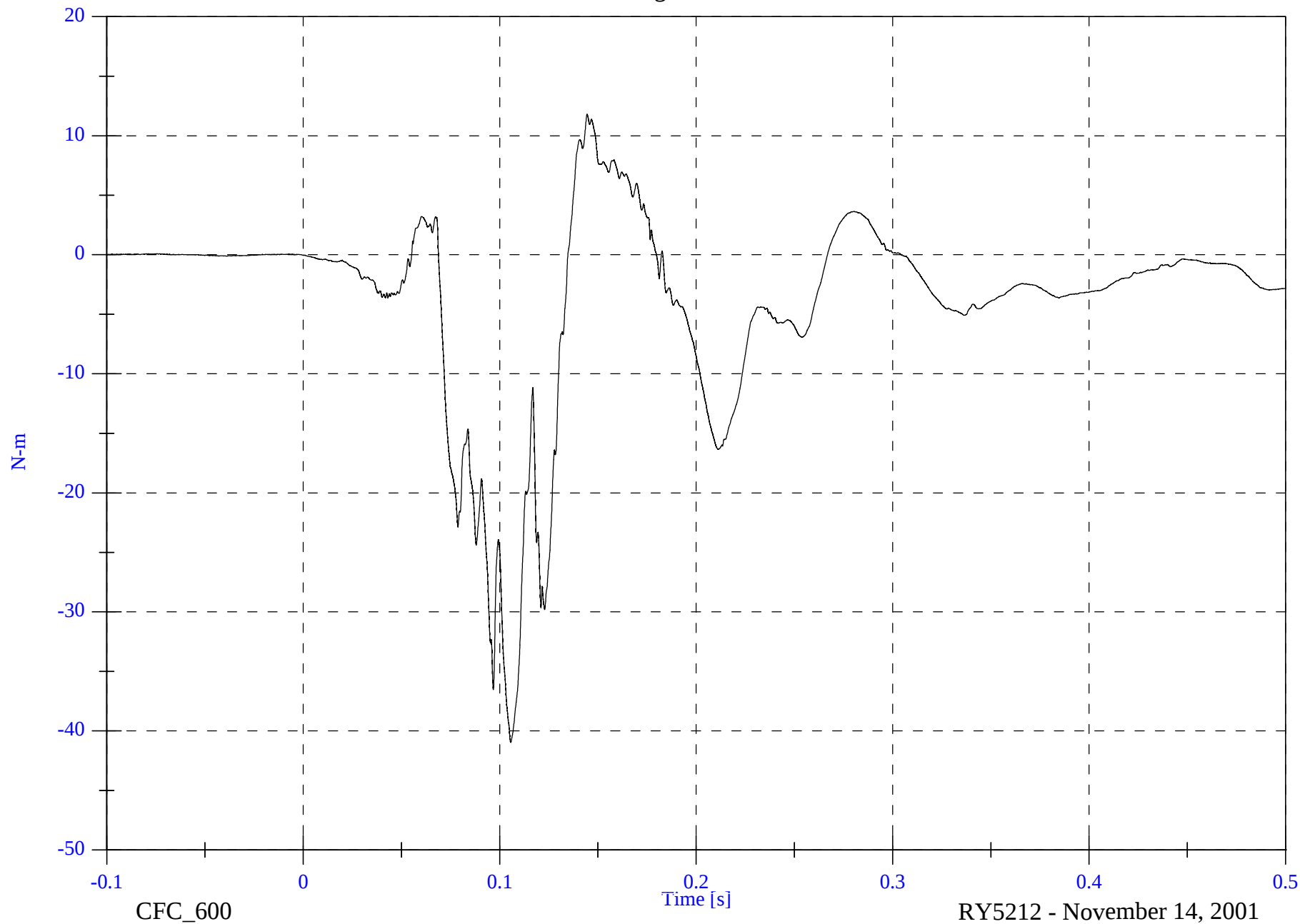


40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Right Femur Mx

Max: 11.8 [N-m] at 0.144 [s]

Min: -41.0 [N-m] at 0.106 [s]



B-148

8413-68

CFC_600

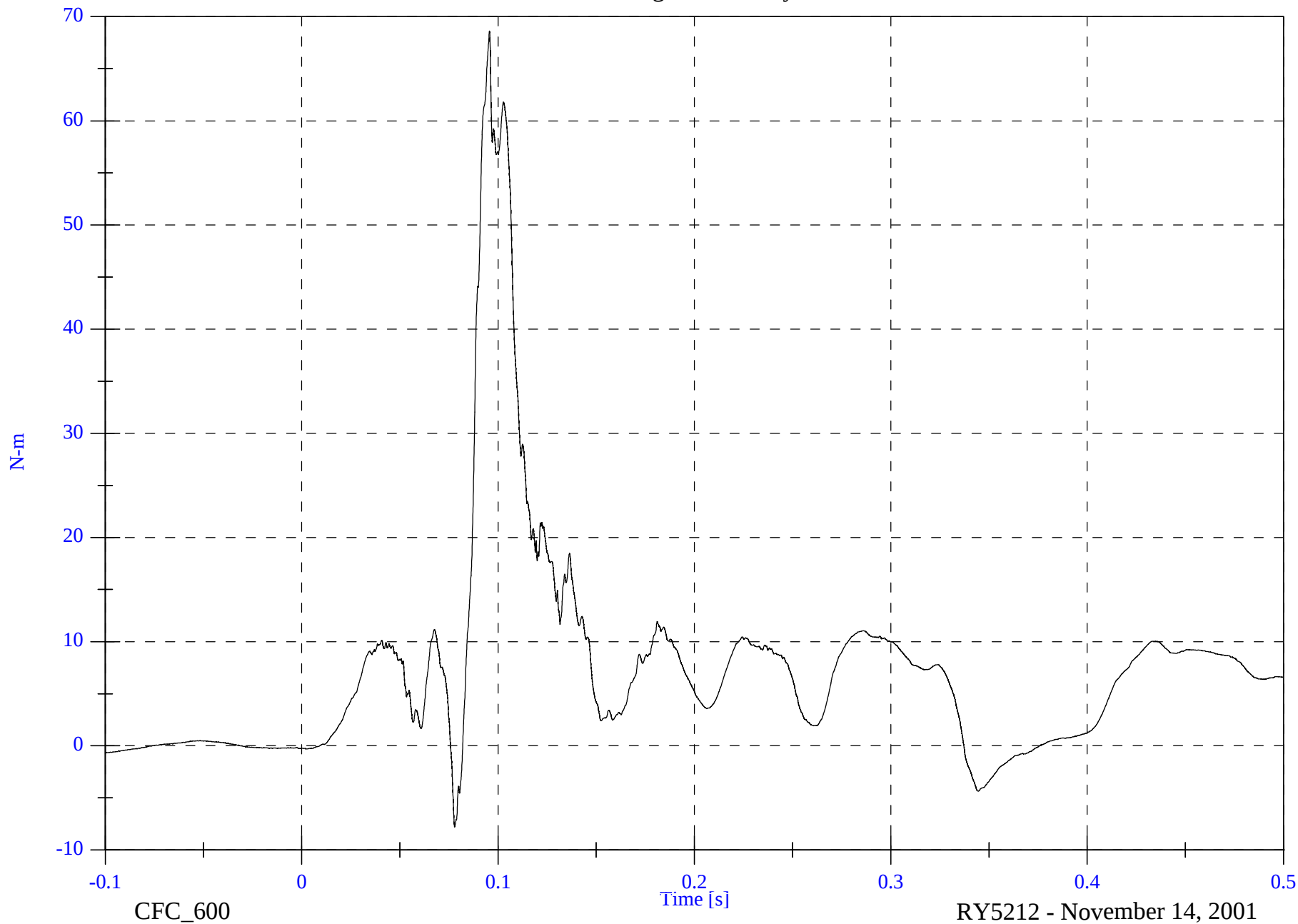
RY5212 - November 14, 2001

40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Right Femur My

Max: 68.6 [N-m] at 0.096 [s]

Min: -7.8 [N-m] at 0.078 [s]



B-149

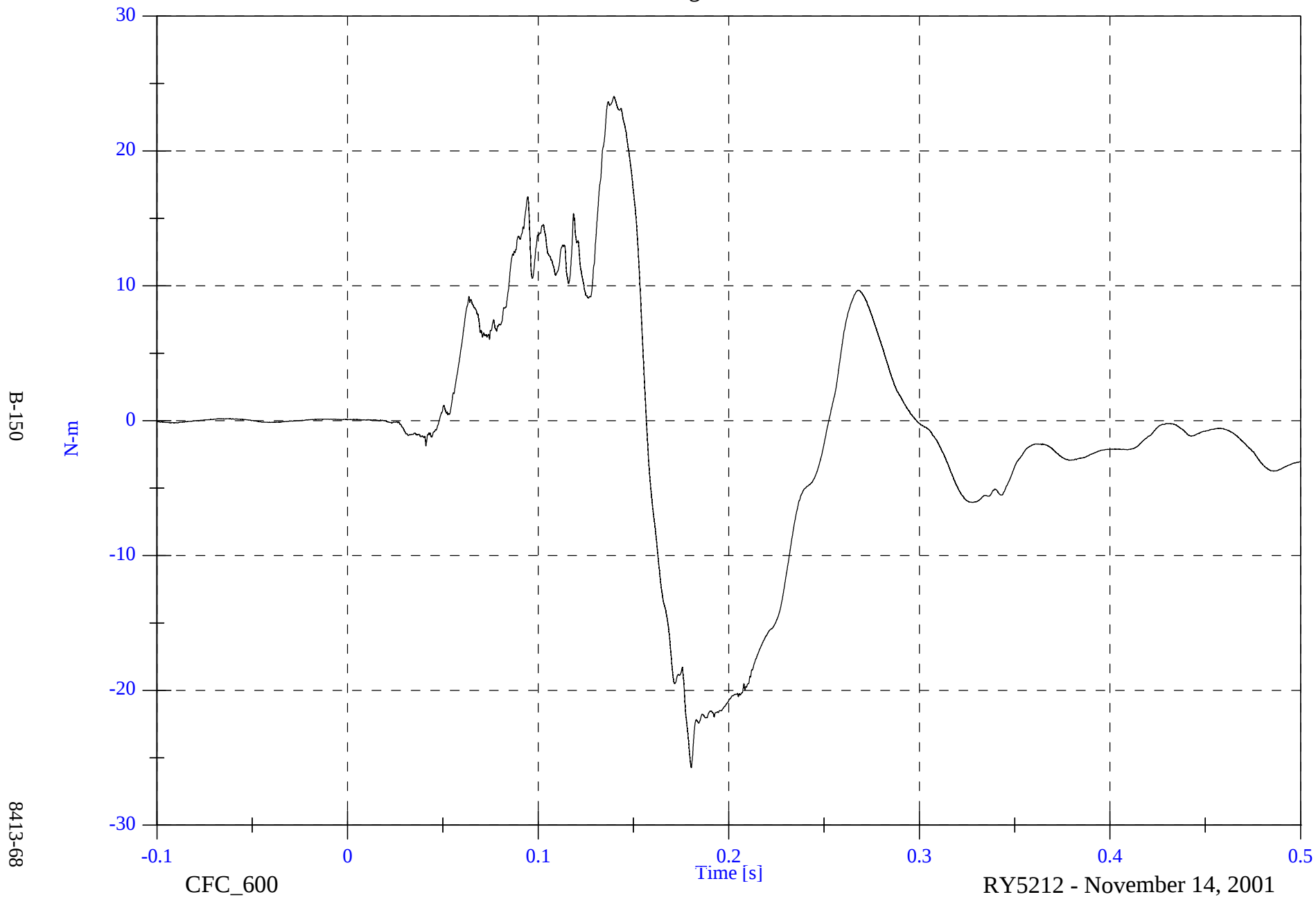
8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Right Femur Mz

Max: 24.0 [N-m] at 0.140 [s]

Min: -25.7 [N-m] at 0.180 [s]

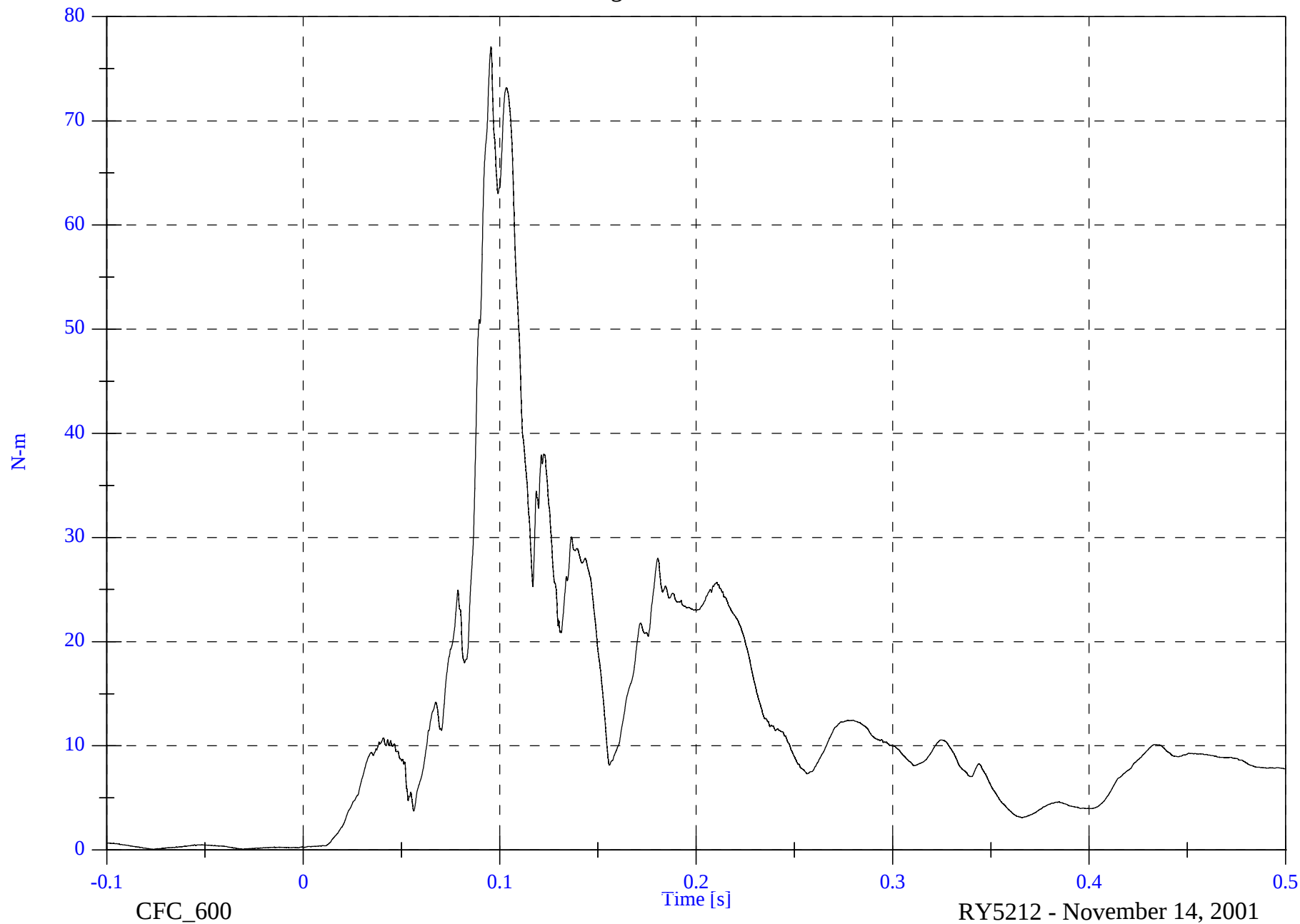


40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Right Femur M Resultant

Max: 77.1 [N-m] at 0.096 [s]

Min: 0.1 [N-m] at -0.076 [s]



B-151

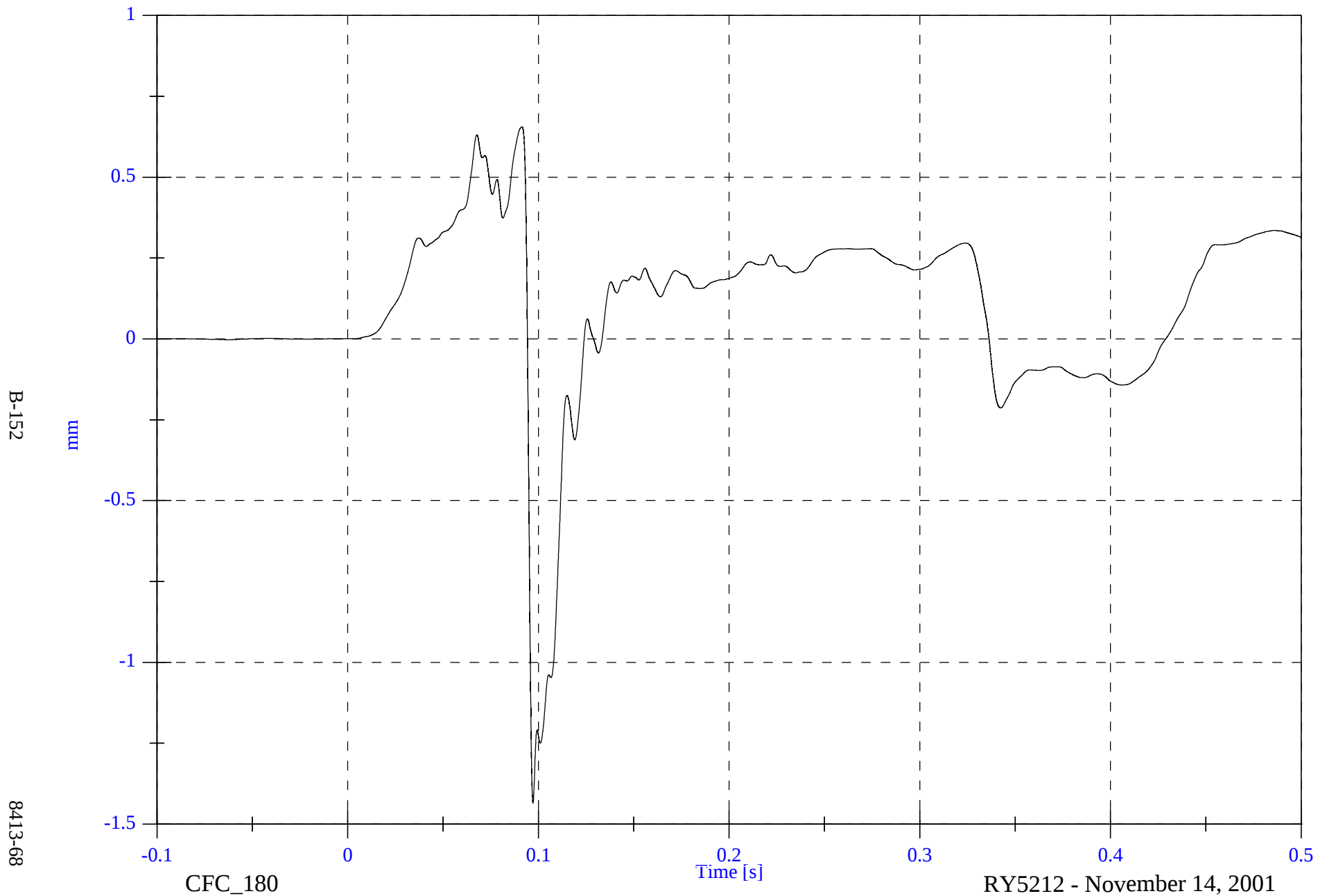
8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Left Knee Shear Dx

Max: 0.7 [mm] at 0.091 [s]

Min: -1.4 [mm] at 0.097 [s]

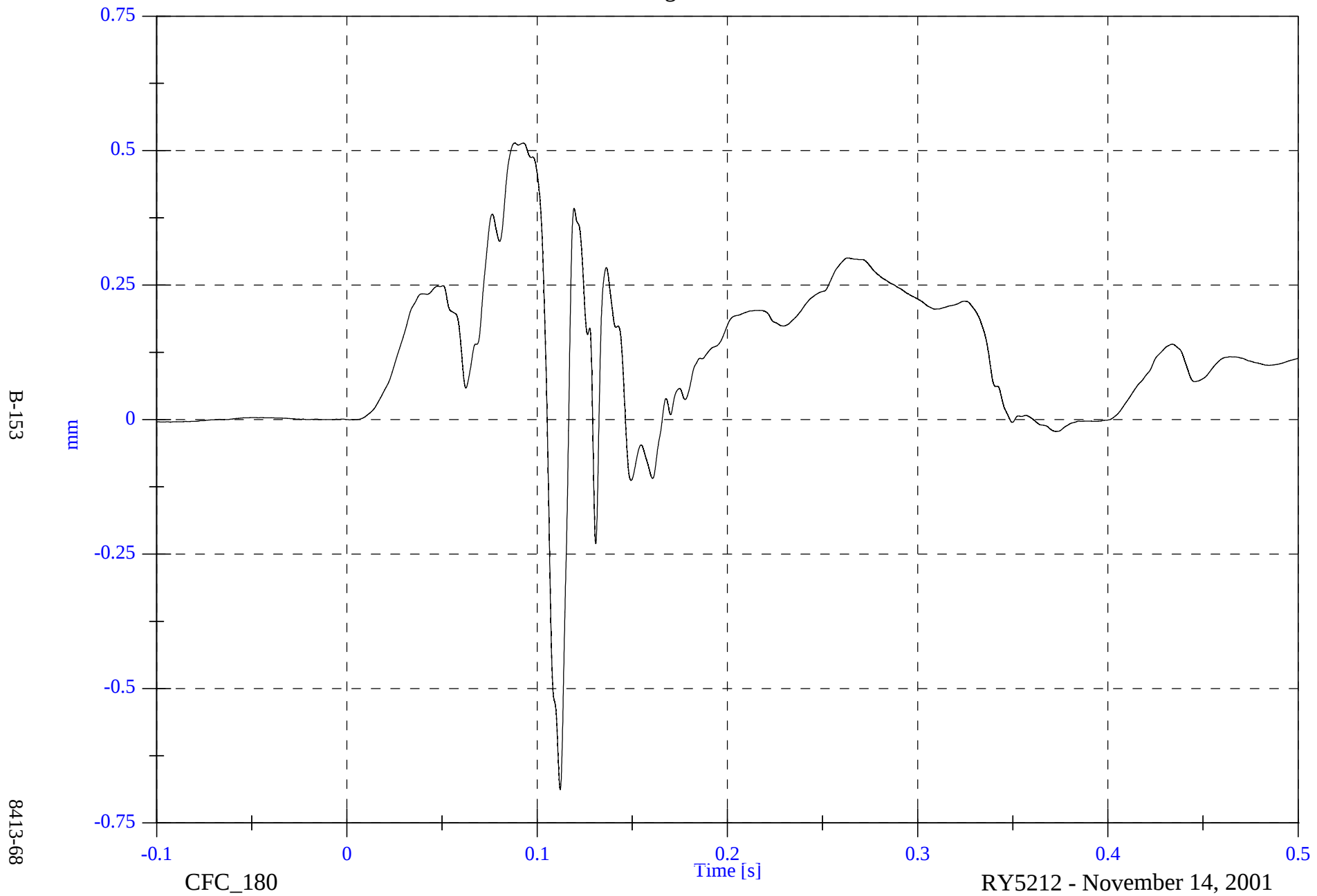


40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Right Knee Shear Dx

Max: 0.5 [mm] at 0.088 [s]

Min: -0.7 [mm] at 0.112 [s]

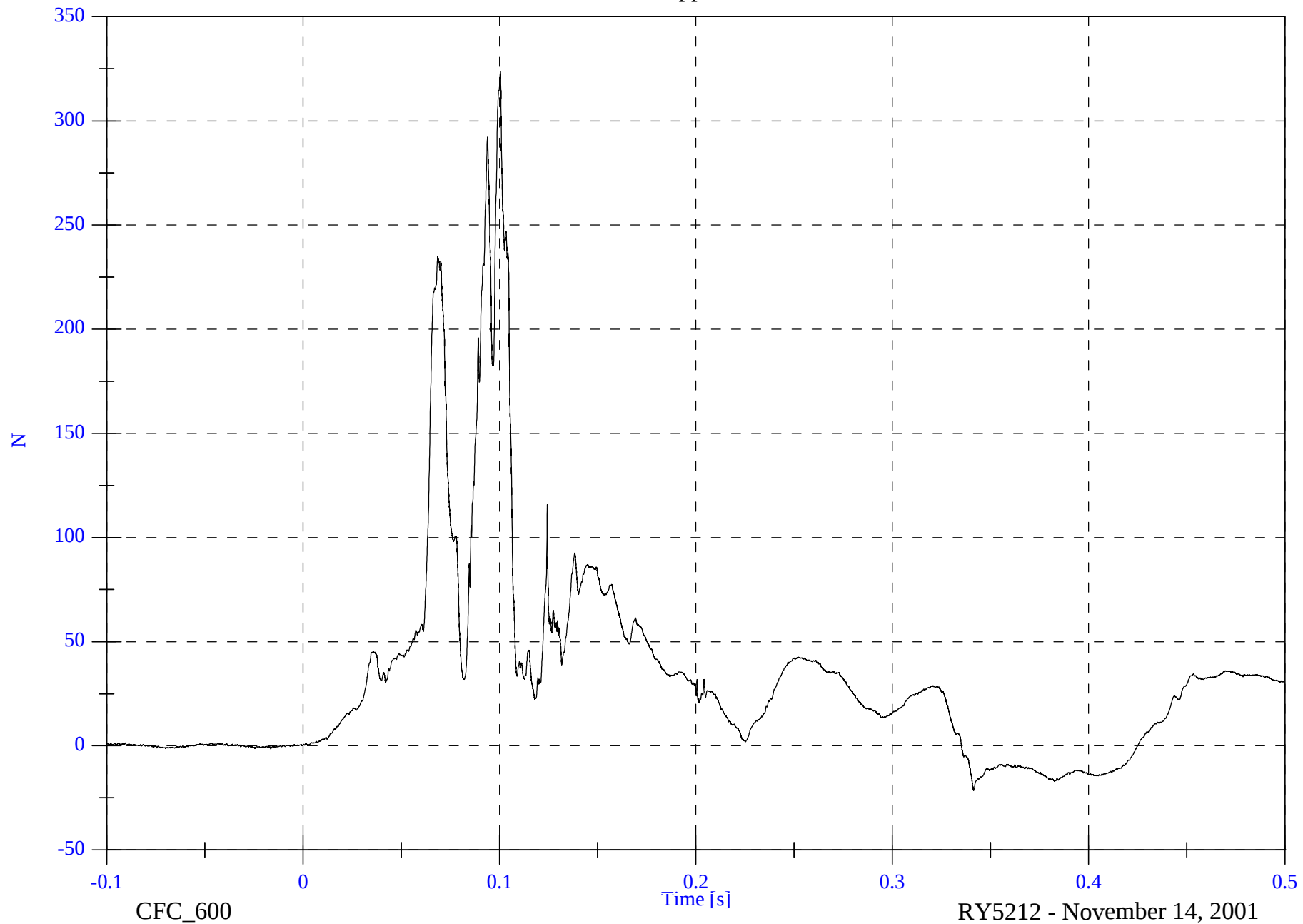


40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Left Upper Tibia Fx

Max: 323.9 [N] at 0.100 [s]

Min: -21.4 [N] at 0.341 [s]

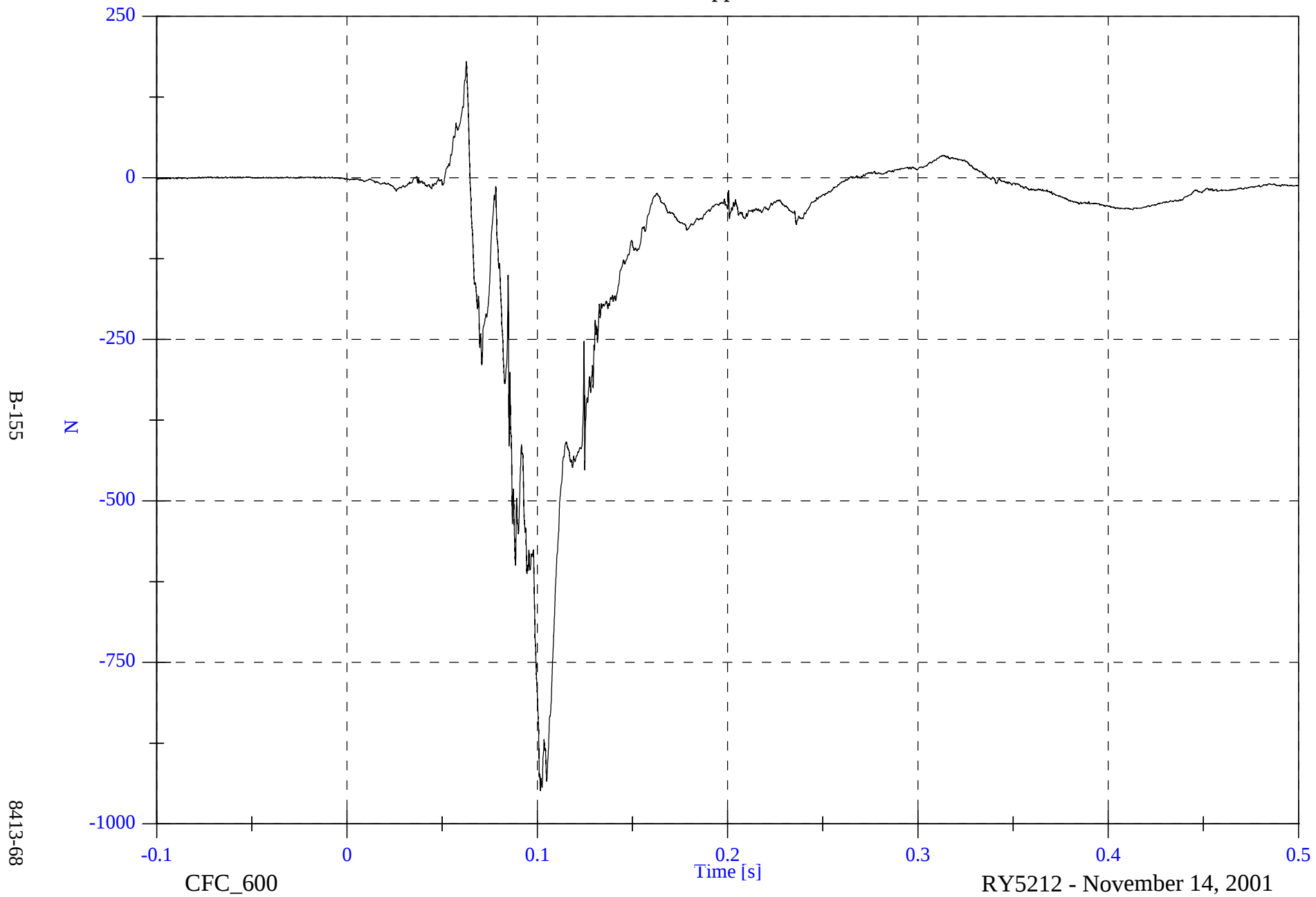


40% Frontal Offset Test #12 - 2000 Nissan Quest

Max: 179.5 [N] at 0.063 [s]

P2 Left Upper Tibia Fz

Min: -948.8 [N] at 0.102 [s]

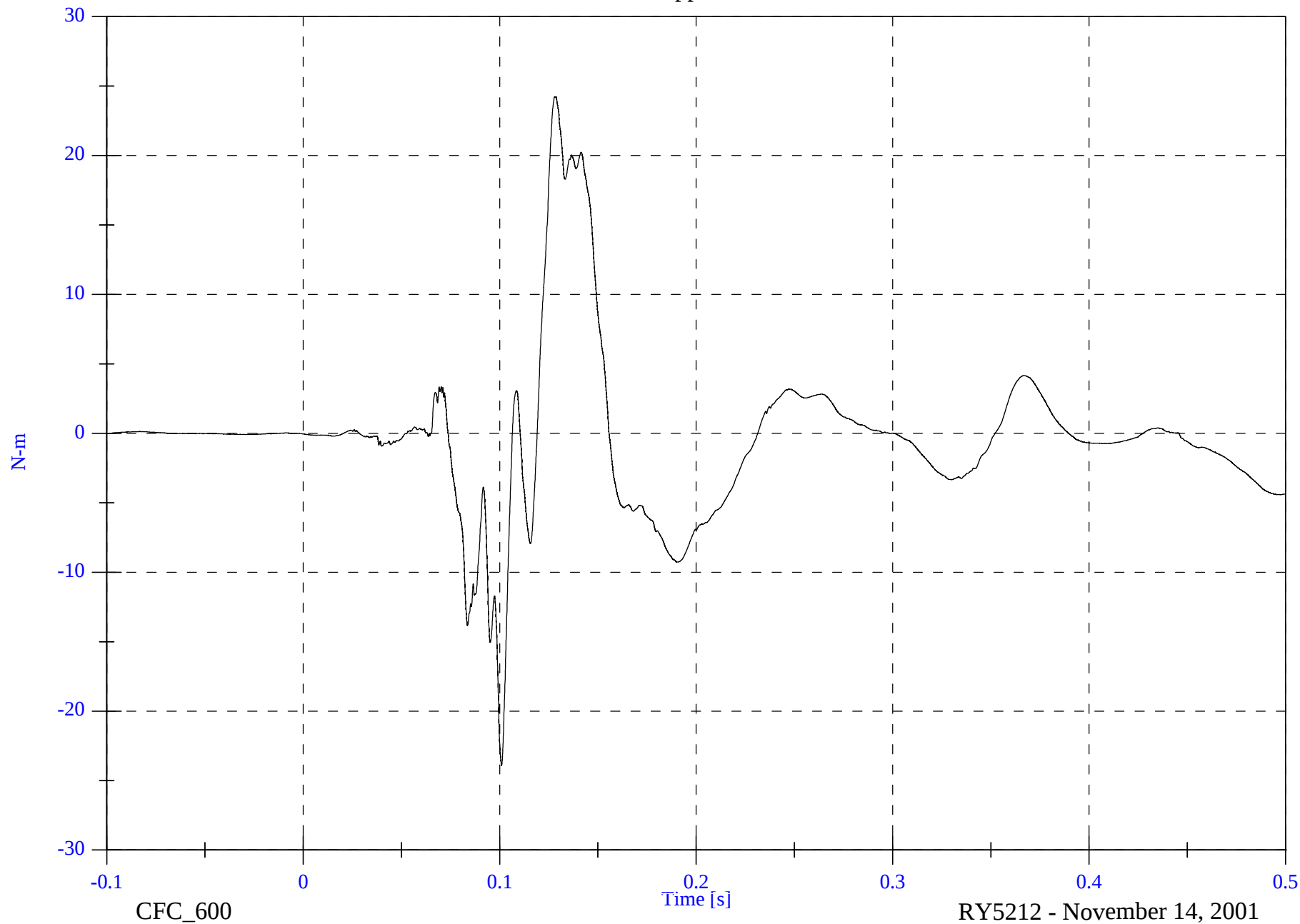


40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Left Upper Tibia Mx

Max: 24.2 [N-m] at 0.128 [s]

Min: -23.9 [N-m] at 0.101 [s]

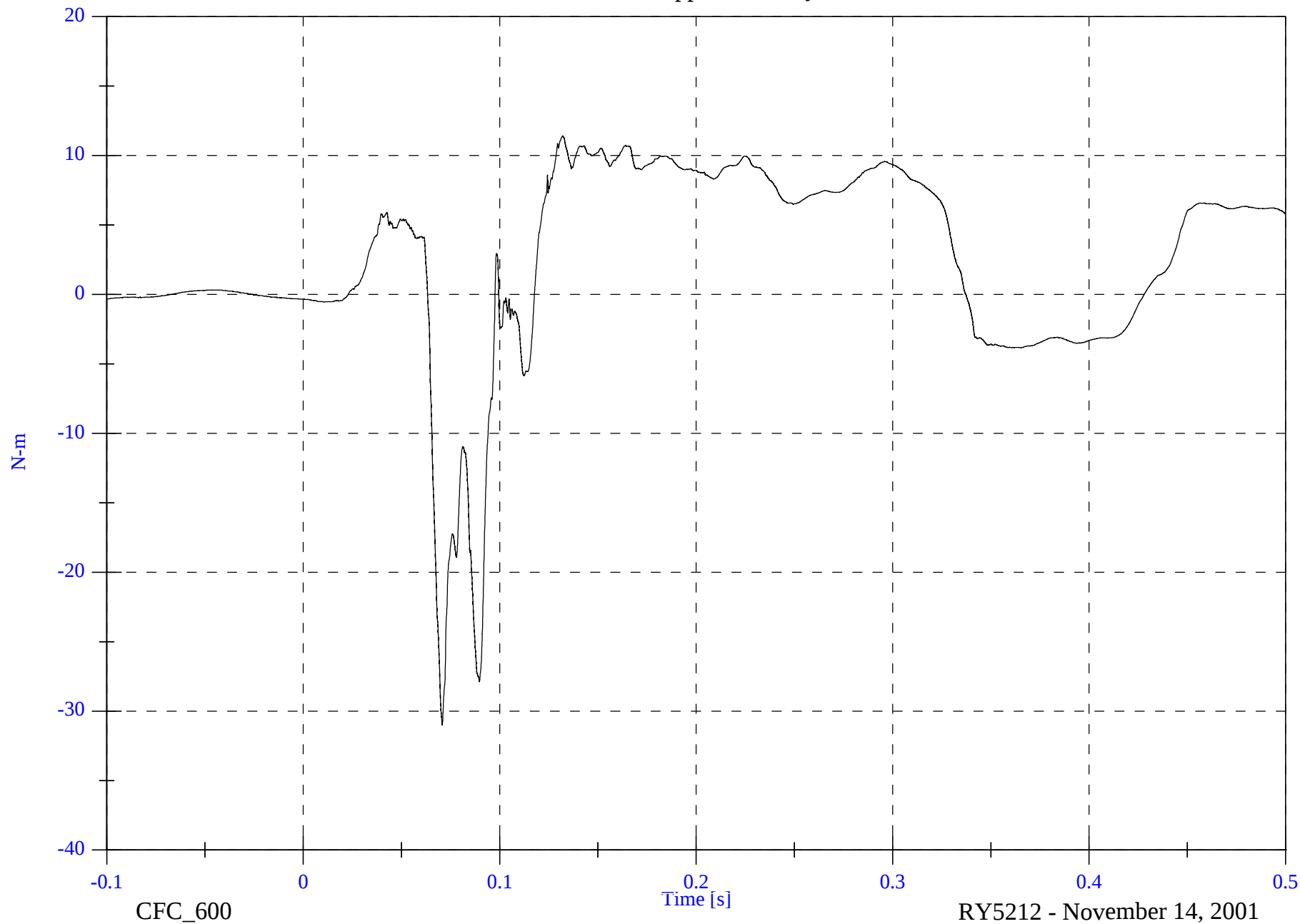


40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Left Upper Tibia My

Max: 11.4 [N-m] at 0.132 [s]

Min: -31.0 [N-m] at 0.071 [s]



B-157

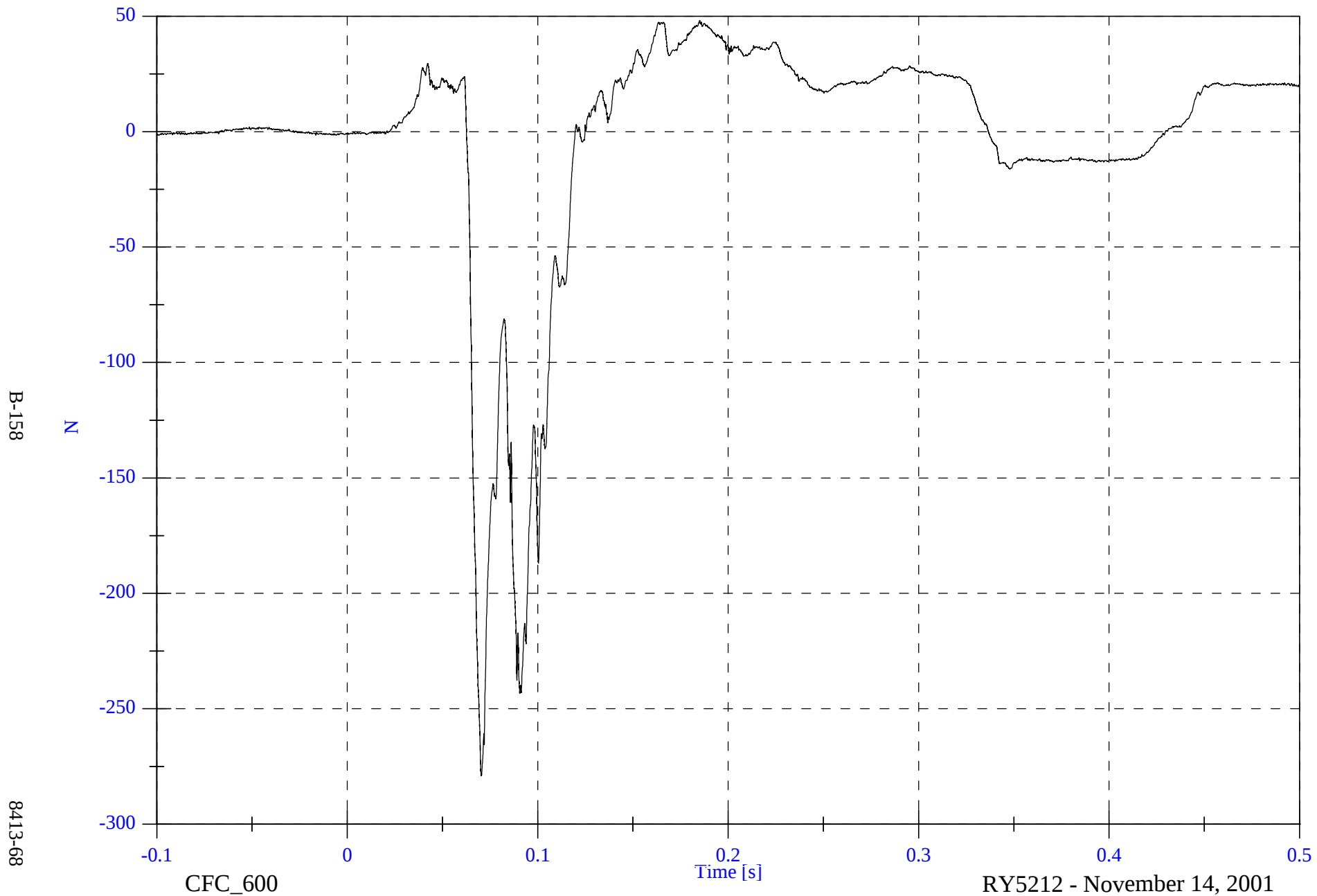
8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

Max: 48.2 [N] at 0.185 [s]

P2 Left Lower Tibia Fx

Min: -279.0 [N] at 0.070 [s]

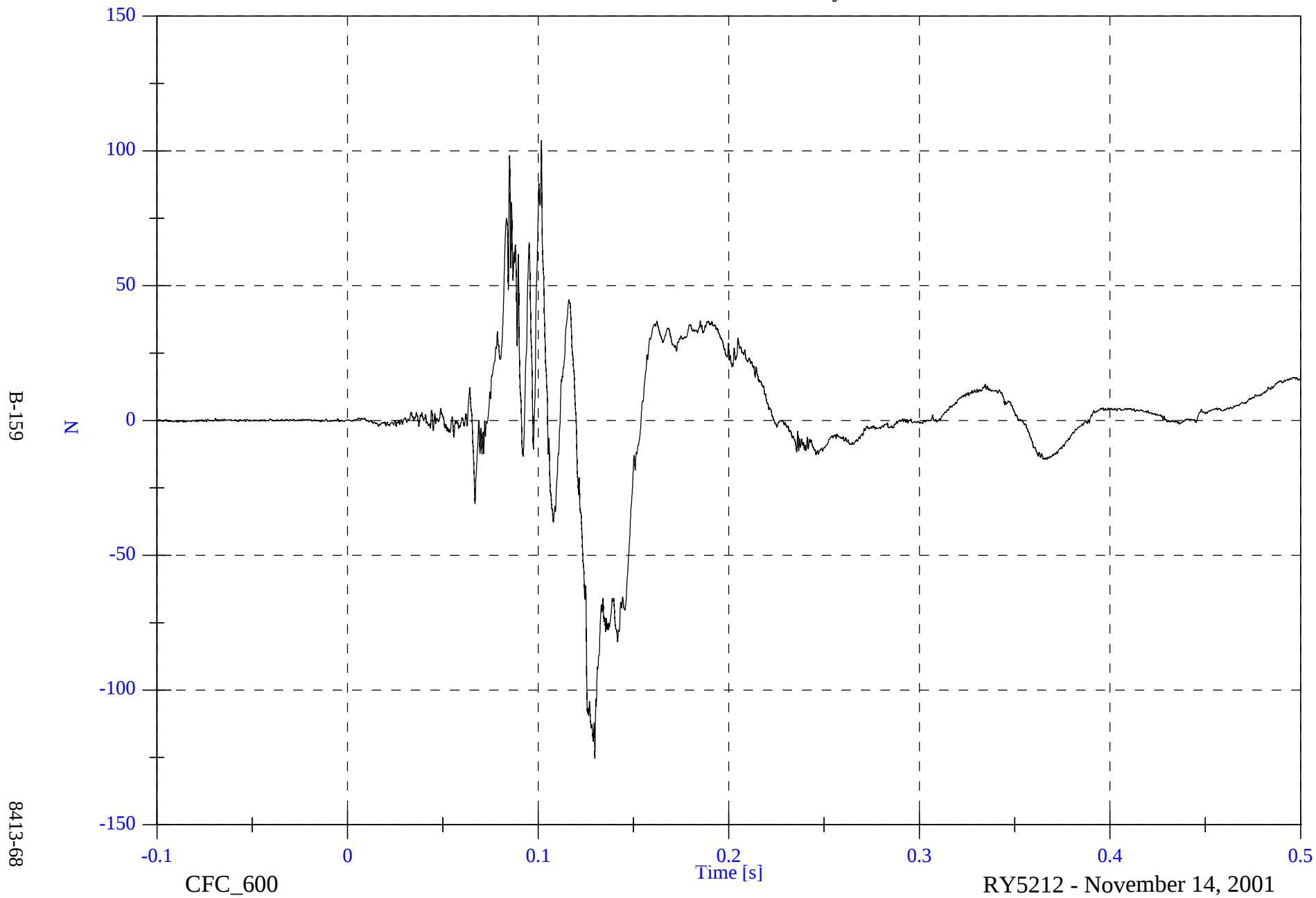


40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Left Lower Tibia Fy

Max: 103.8 [N] at 0.102 [s]

Min: -125.4 [N] at 0.130 [s]

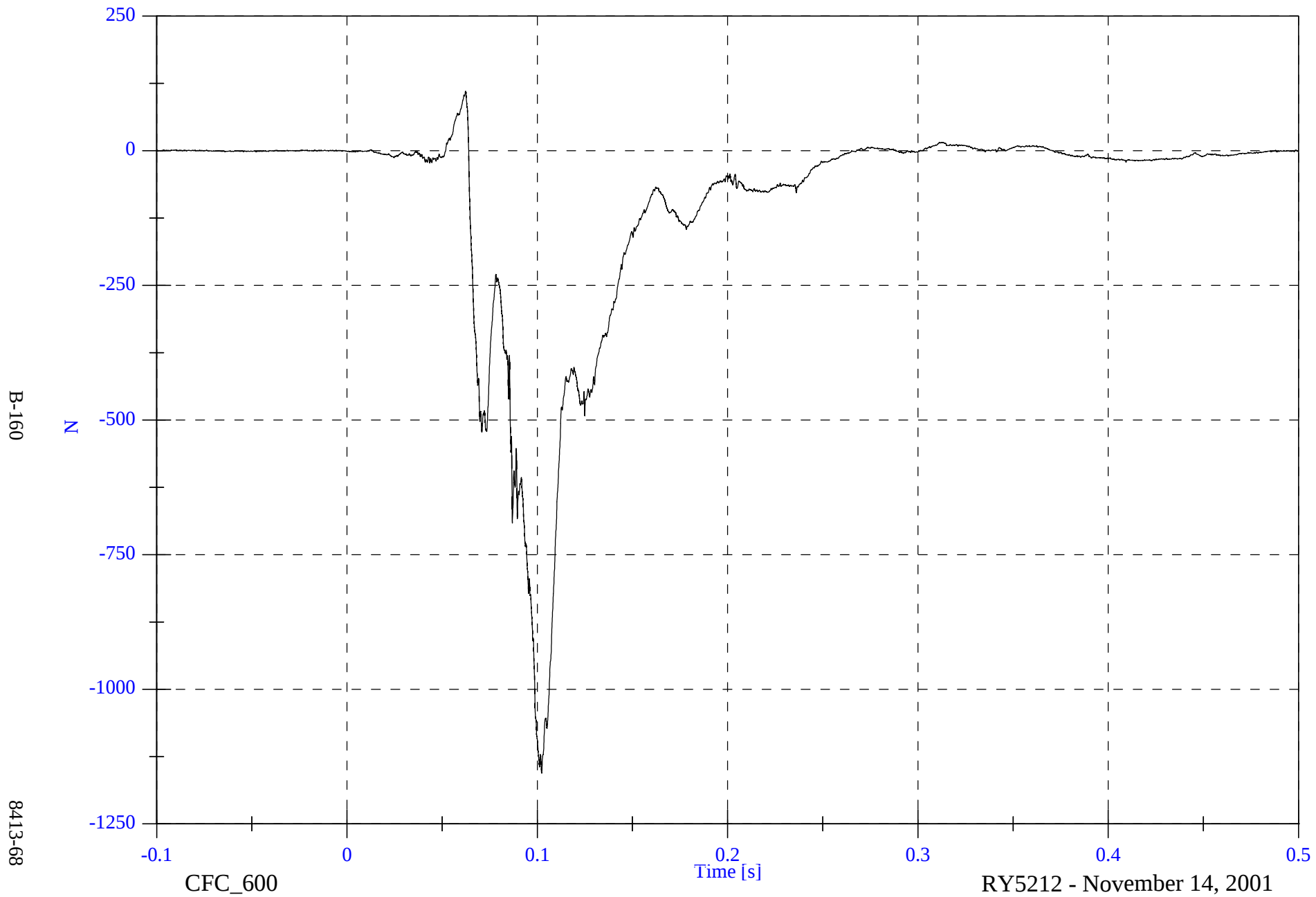


40% Frontal Offset Test #12 - 2000 Nissan Quest

Max: 110.5 [N] at 0.062 [s]

P2 Left Lower Tibia Fz

Min: -1156.0 [N] at 0.102 [s]

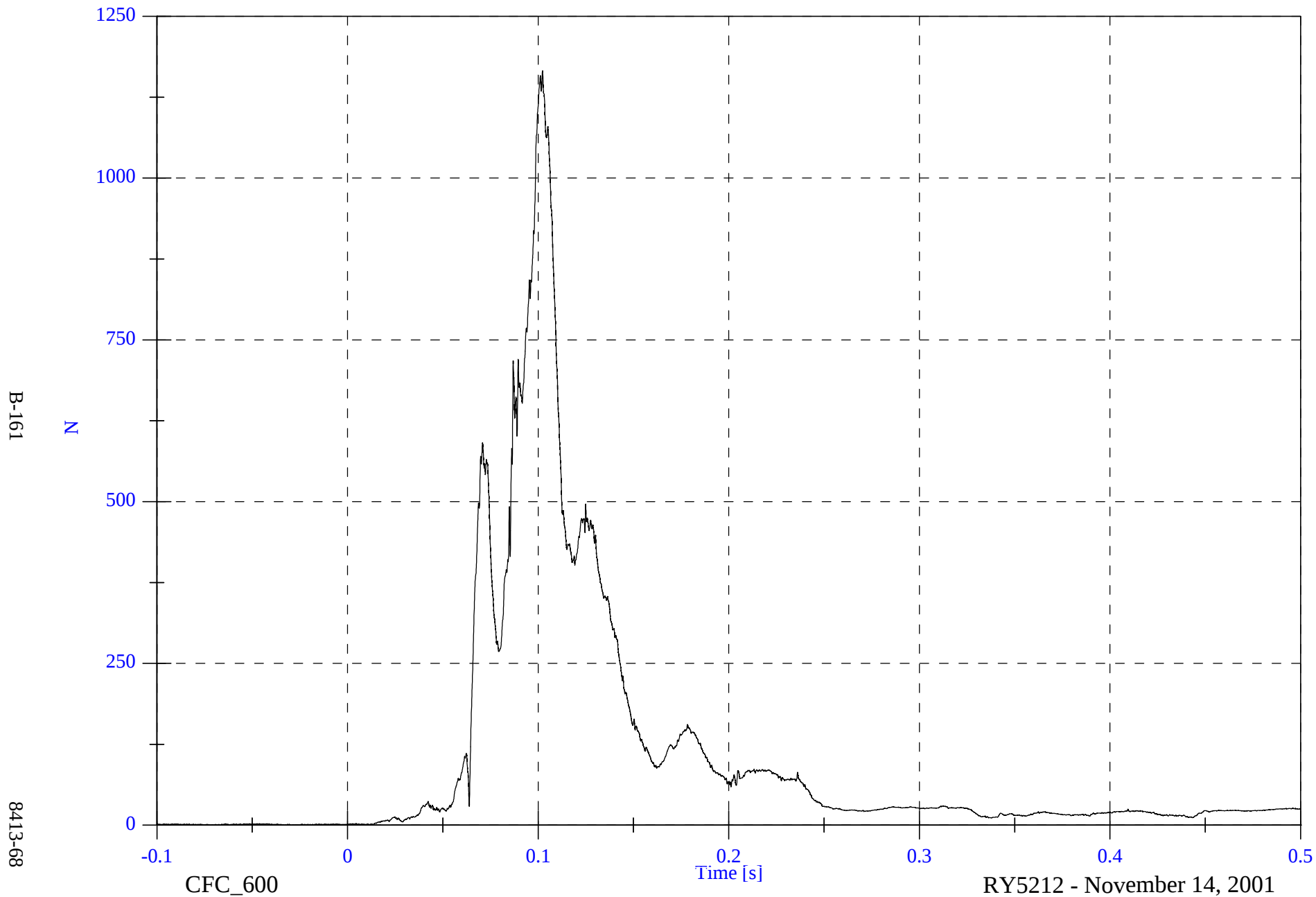


40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Left Lower Tibia F Resultant

Max: 1165.4 [N] at 0.102 [s]

Min: 0.0 [N] at -0.029 [s]

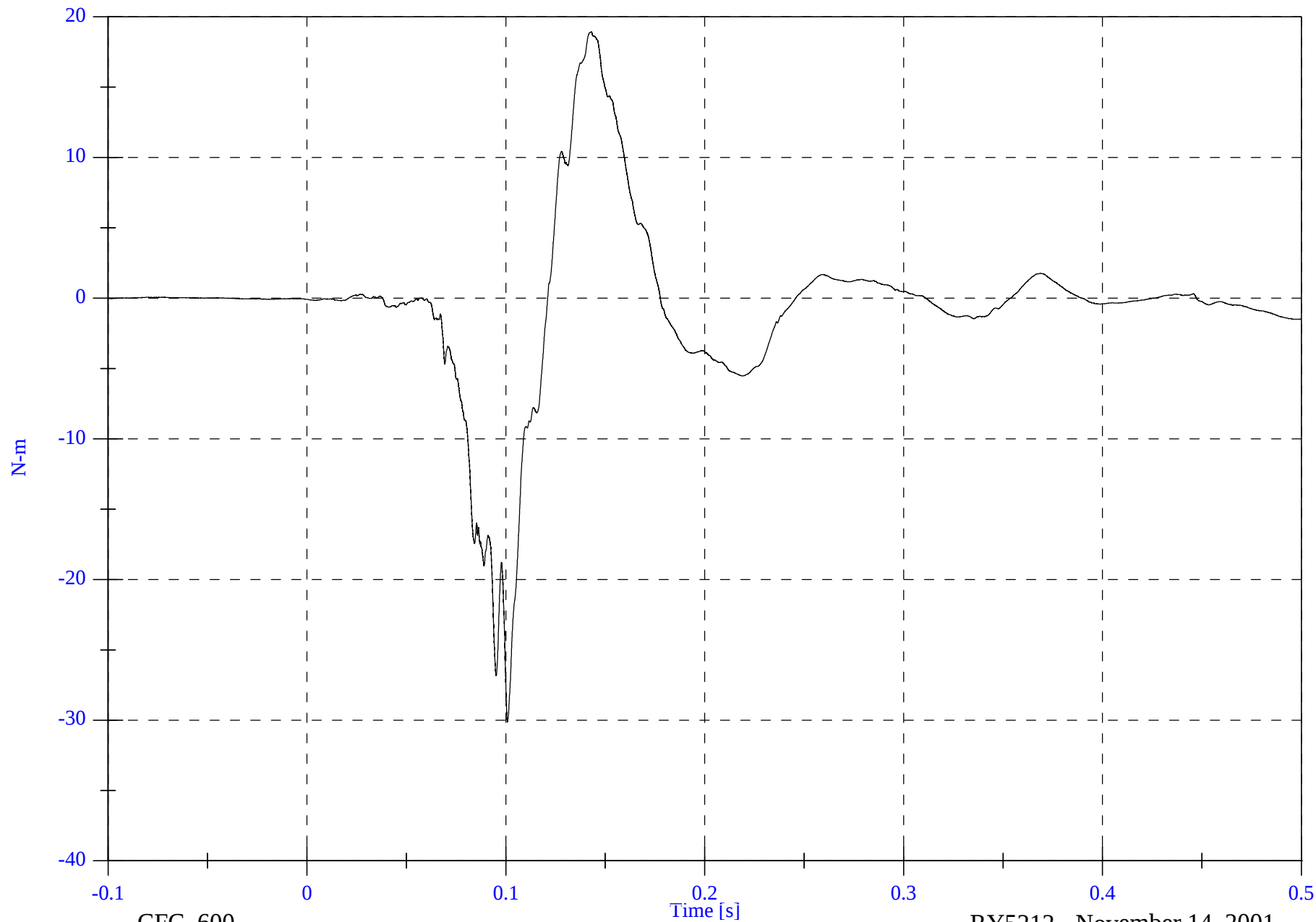


40% Frontal Offset Test #12 - 2000 Nissan Quest

Max: 18.9 [N-m] at 0.143 [s]

P2 Left Lower Tibia Mx

Min: -30.1 [N-m] at 0.101 [s]



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8413-68

CFC_600

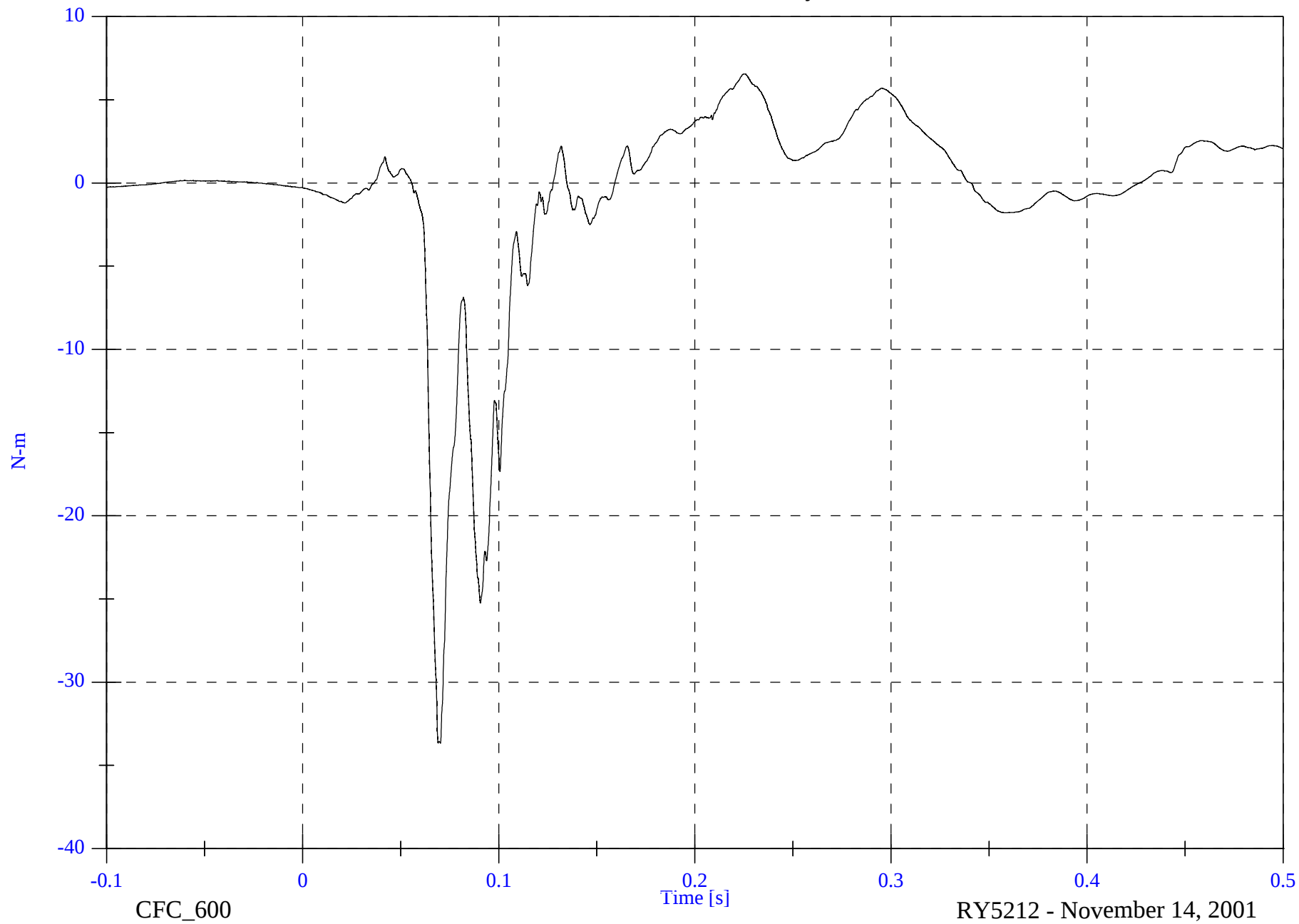
RY5212 - November 14, 2001

40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Left Lower Tibia My

Max: 6.6 [N-m] at 0.225 [s]

Min: -33.7 [N-m] at 0.070 [s]



B-163

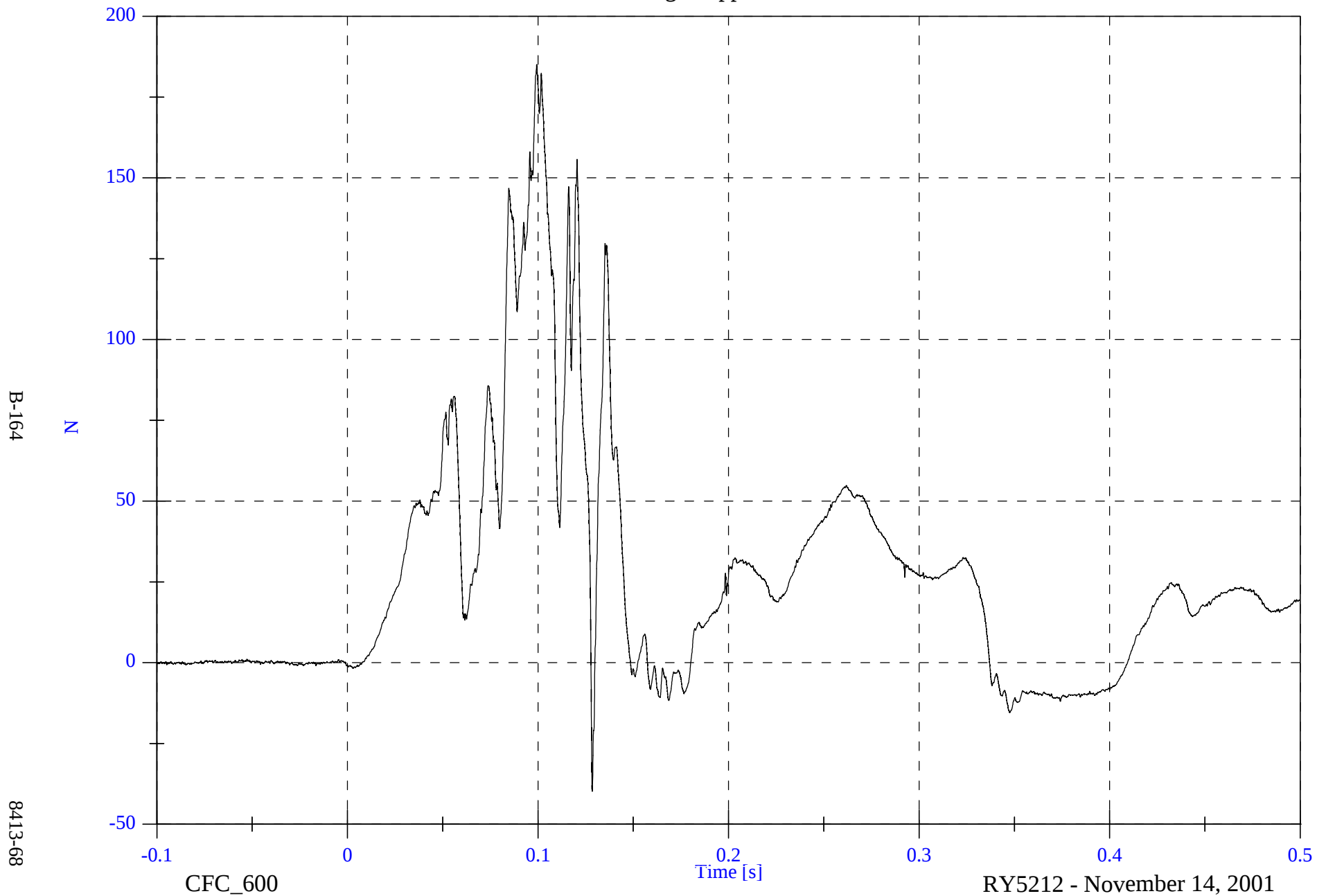
8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

Max: 185.1 [N] at 0.099 [s]

P2 Right Upper Tibia Fx

Min: -39.8 [N] at 0.128 [s]

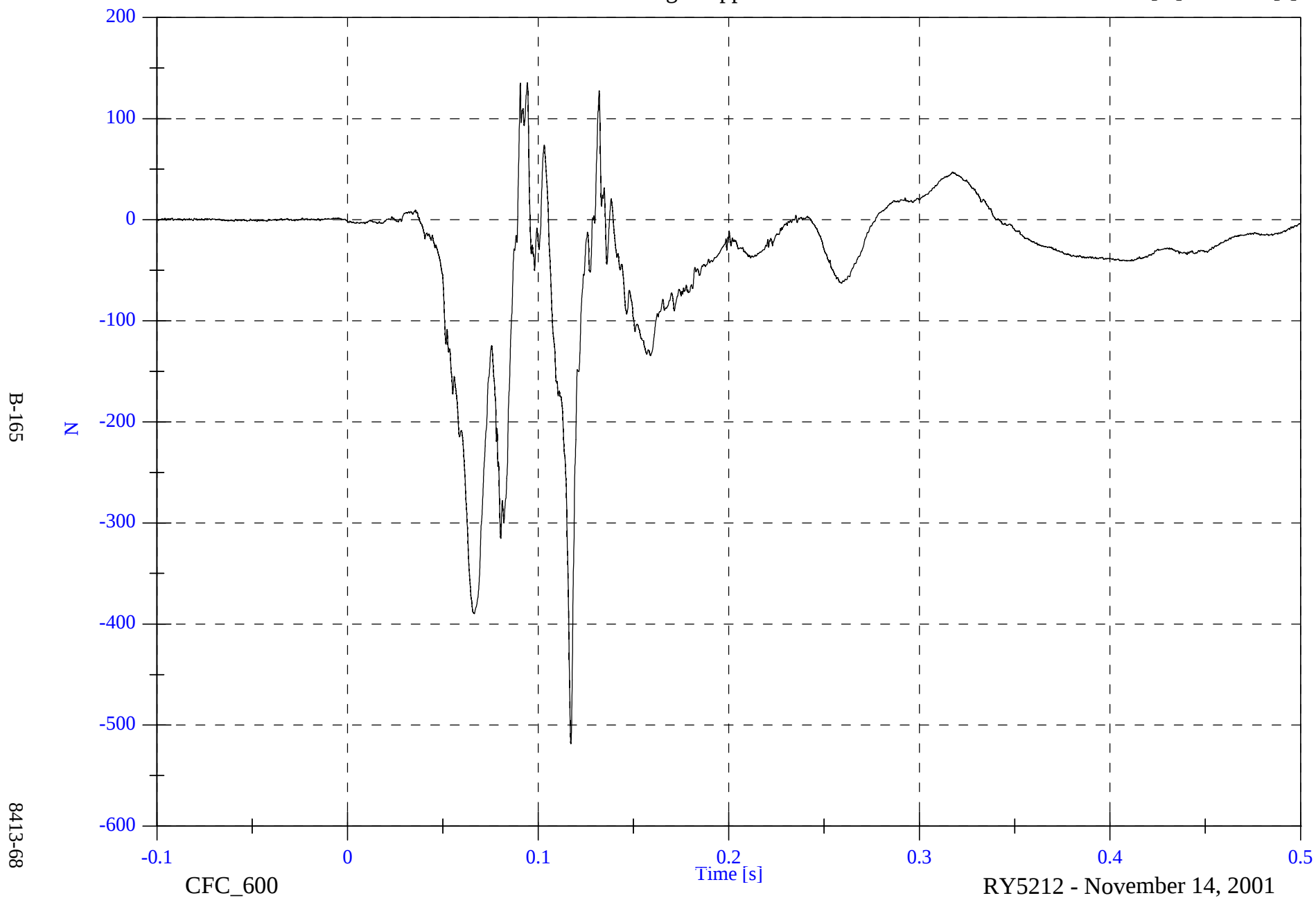


40% Frontal Offset Test #12 - 2000 Nissan Quest

Max: 135.6 [N] at 0.094 [s]

P2 Right Upper Tibia Fz

Min: -518.5 [N] at 0.117 [s]

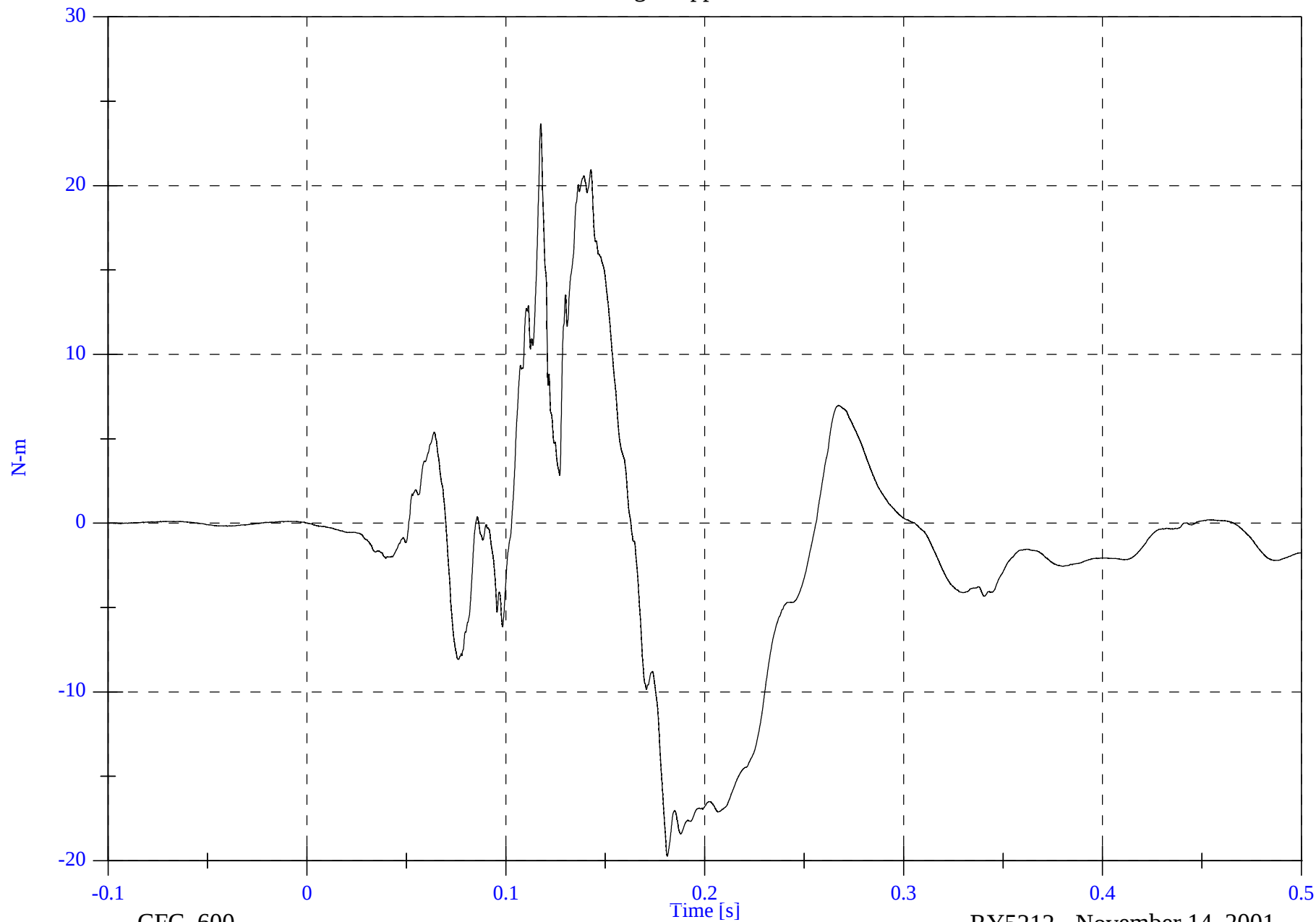


40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Right Upper Tibia Mx

Max: 23.7 [N-m] at 0.118 [s]

Min: -19.7 [N-m] at 0.181 [s]



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8413-68

CFC_600

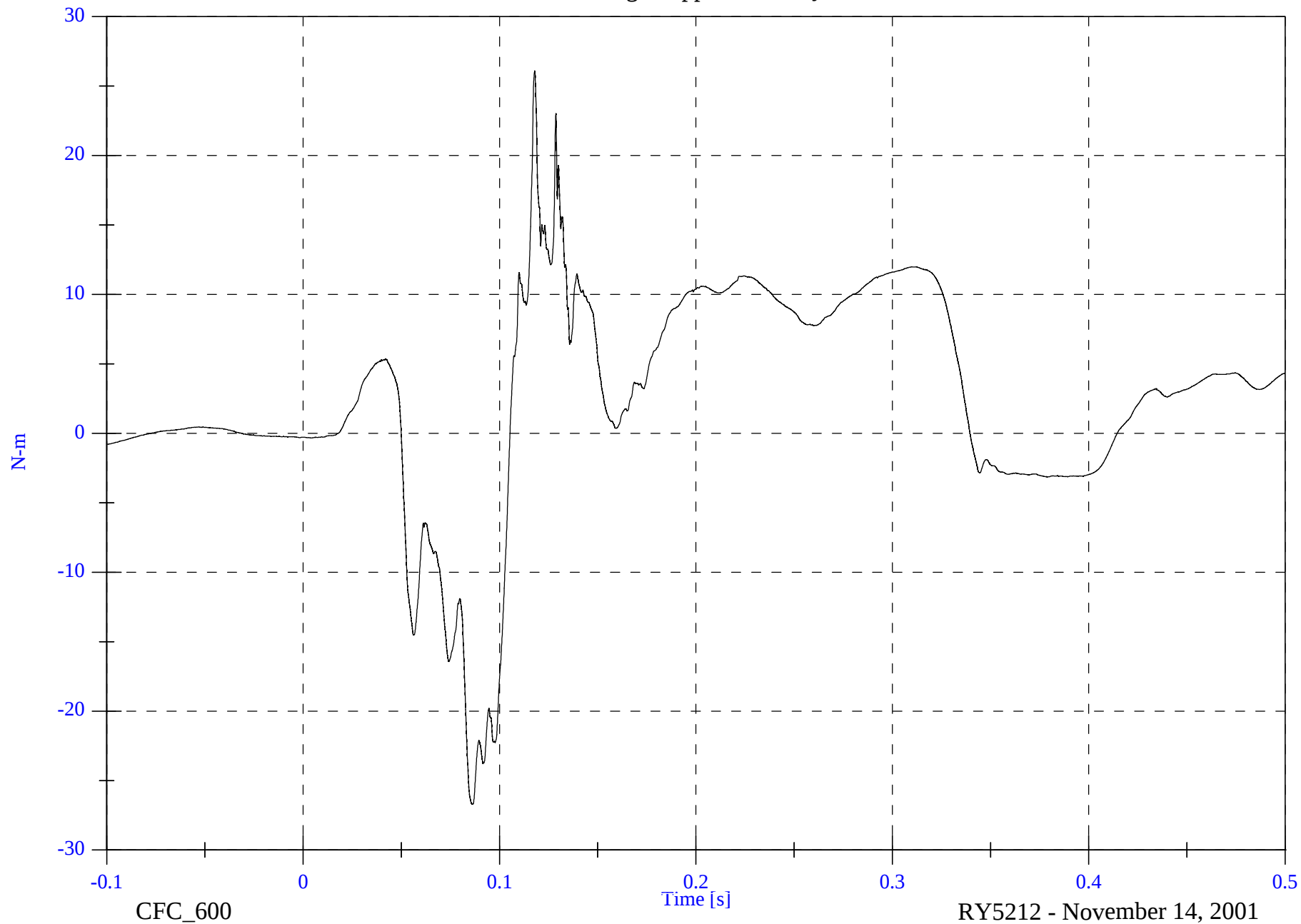
RY5212 - November 14, 2001

40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Right Upper Tibia My

Max: 26.1 [N-m] at 0.118 [s]

Min: -26.7 [N-m] at 0.086 [s]



B-167

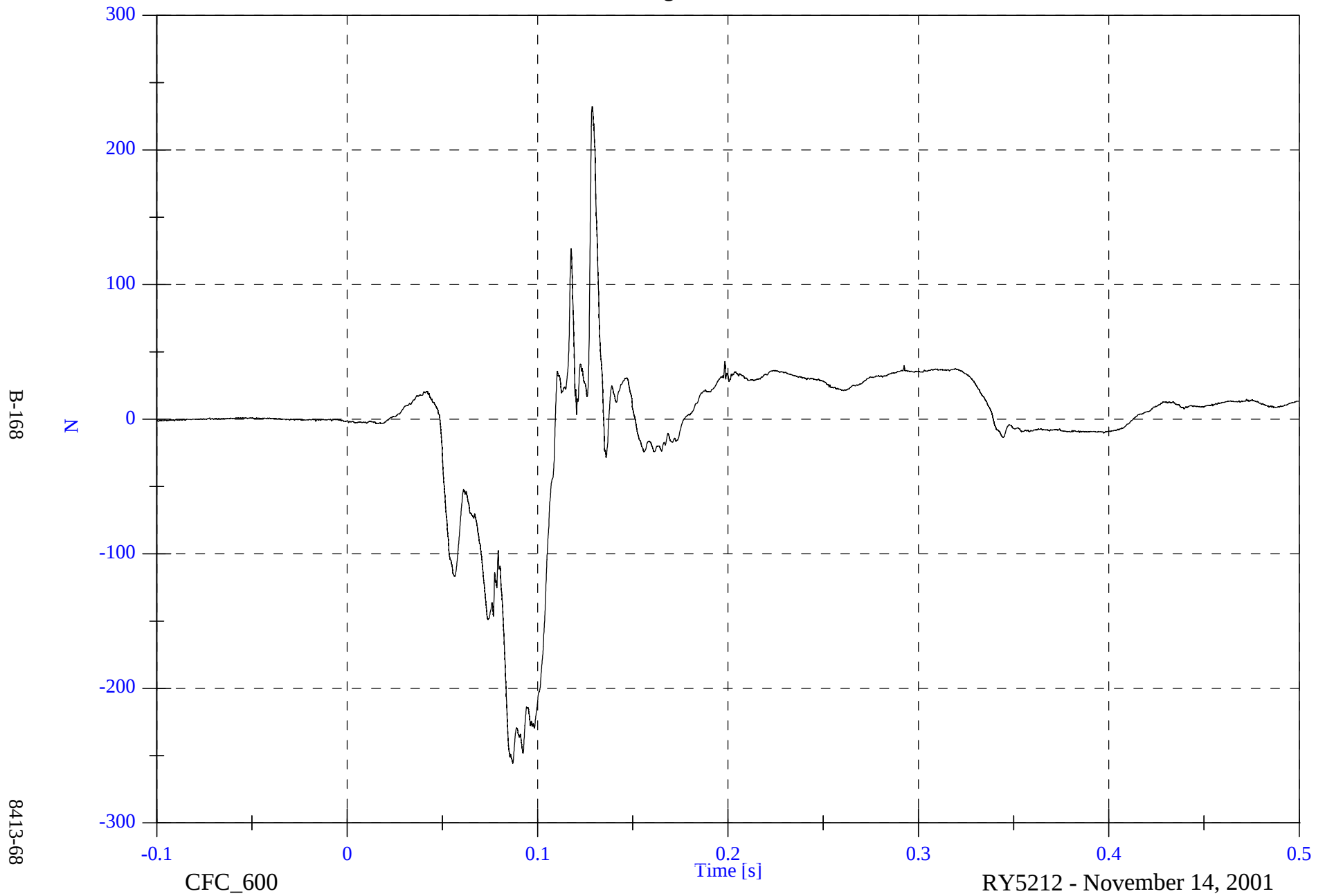
8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

Max: 232.4 [N] at 0.129 [s]

P2 Right Lower Tibia Fx

Min: -255.6 [N] at 0.087 [s]

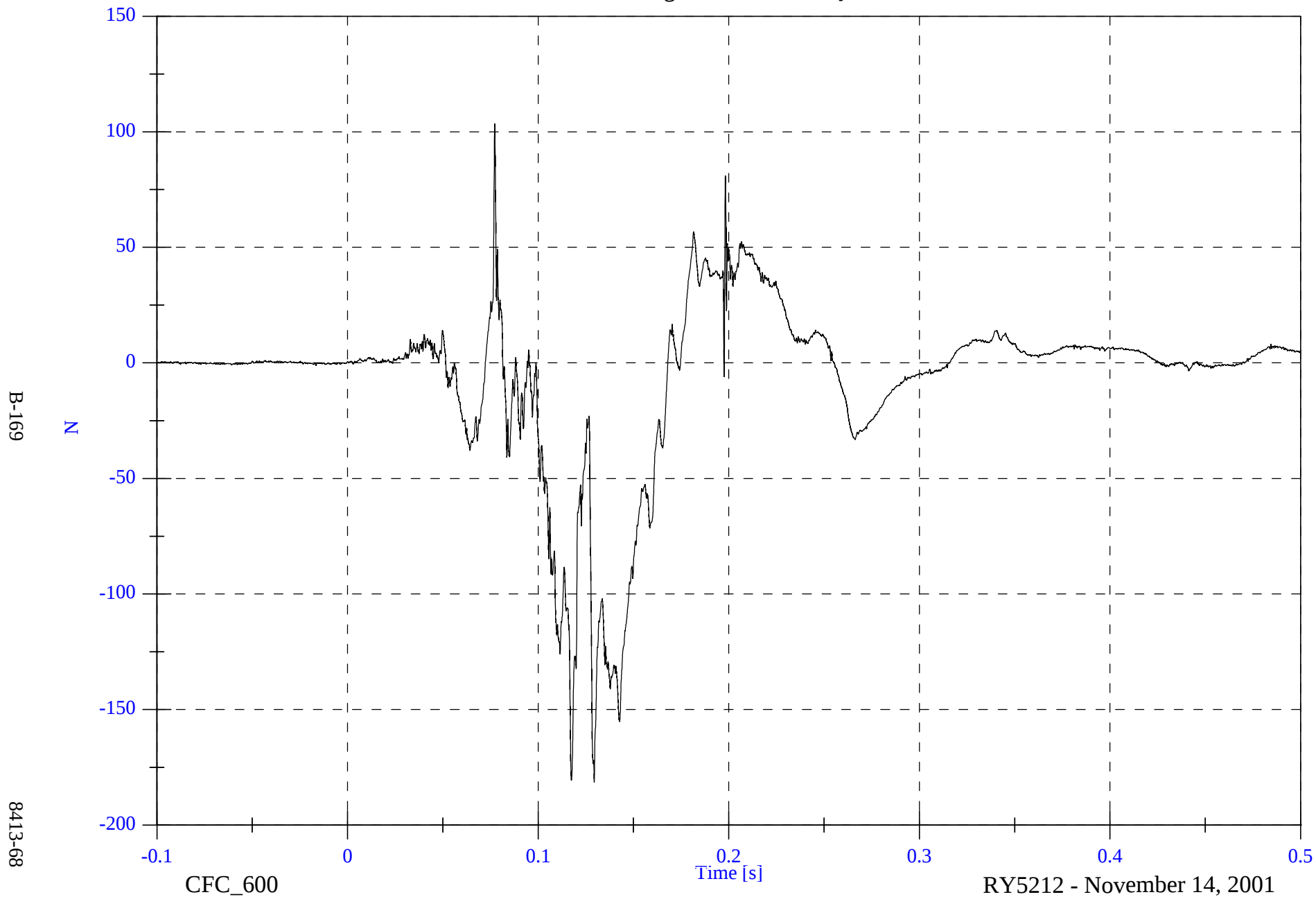


40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Right Lower Tibia Fy

Max: 103.4 [N] at 0.077 [s]

Min: -181.4 [N] at 0.129 [s]

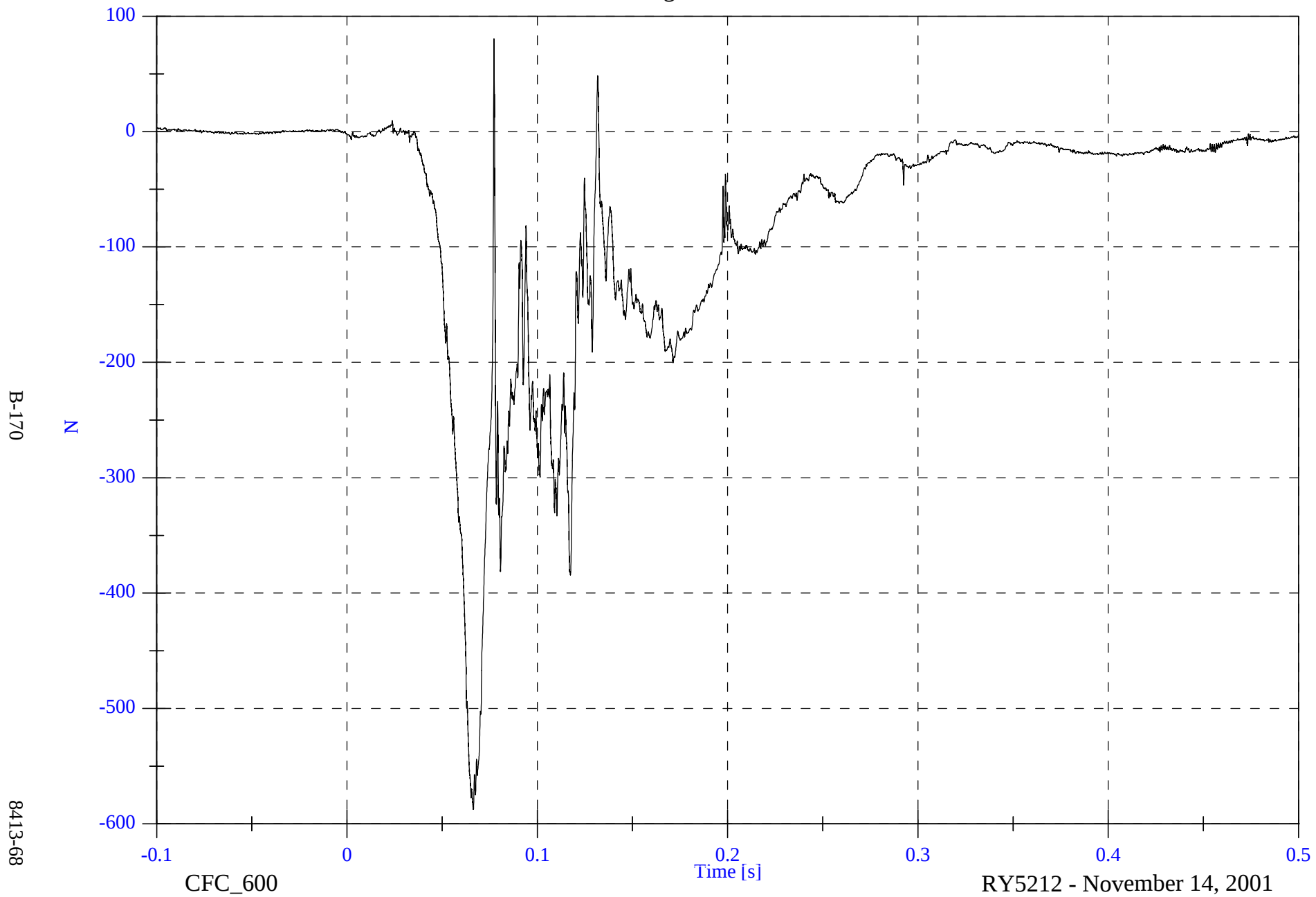


40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Right Lower Tibia Fz

Max: 80.5 [N] at 0.077 [s]

Min: -587.6 [N] at 0.066 [s]

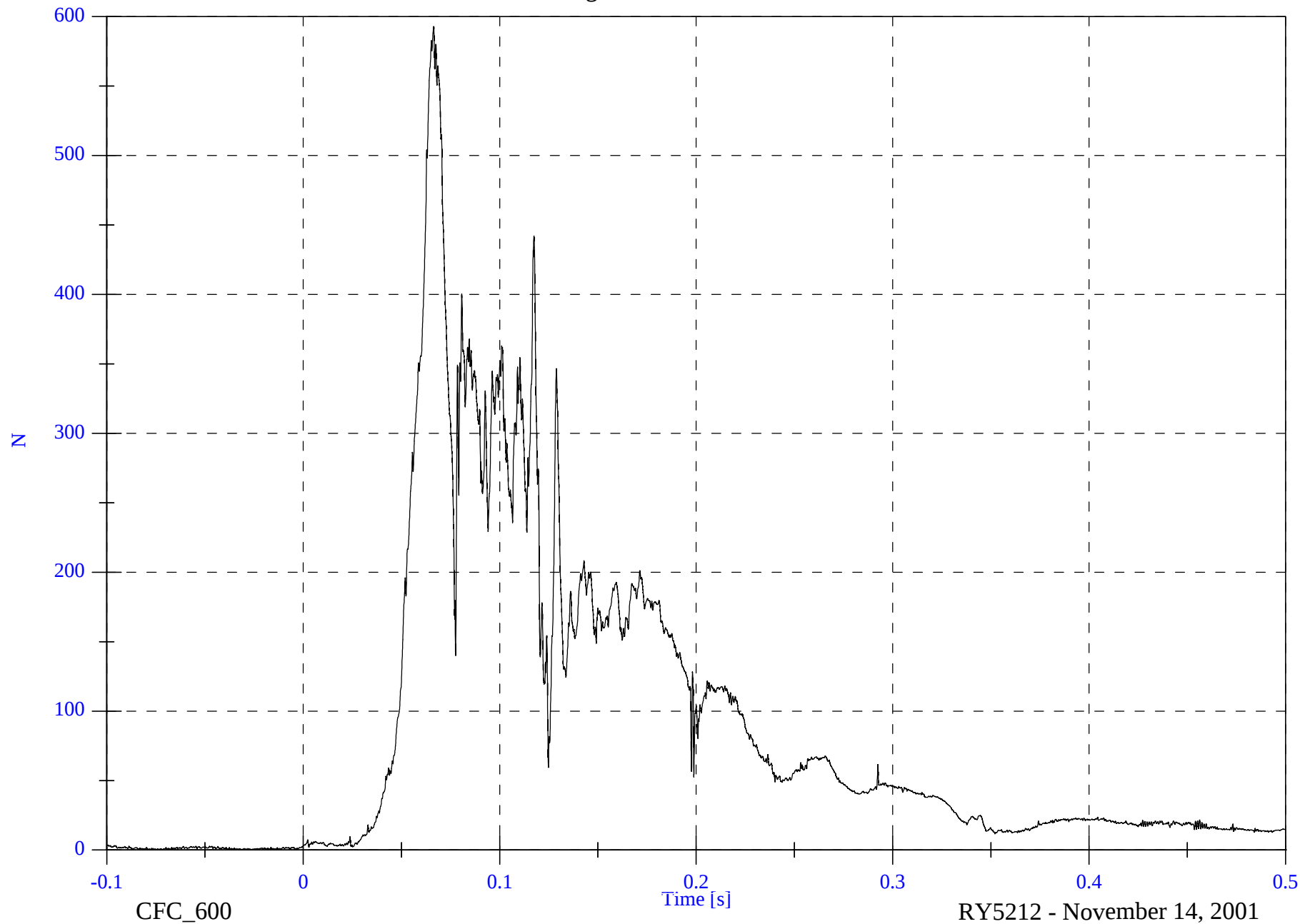


40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Right Lower Tibia F Resultant

Max: 593.0 [N] at 0.066 [s]

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

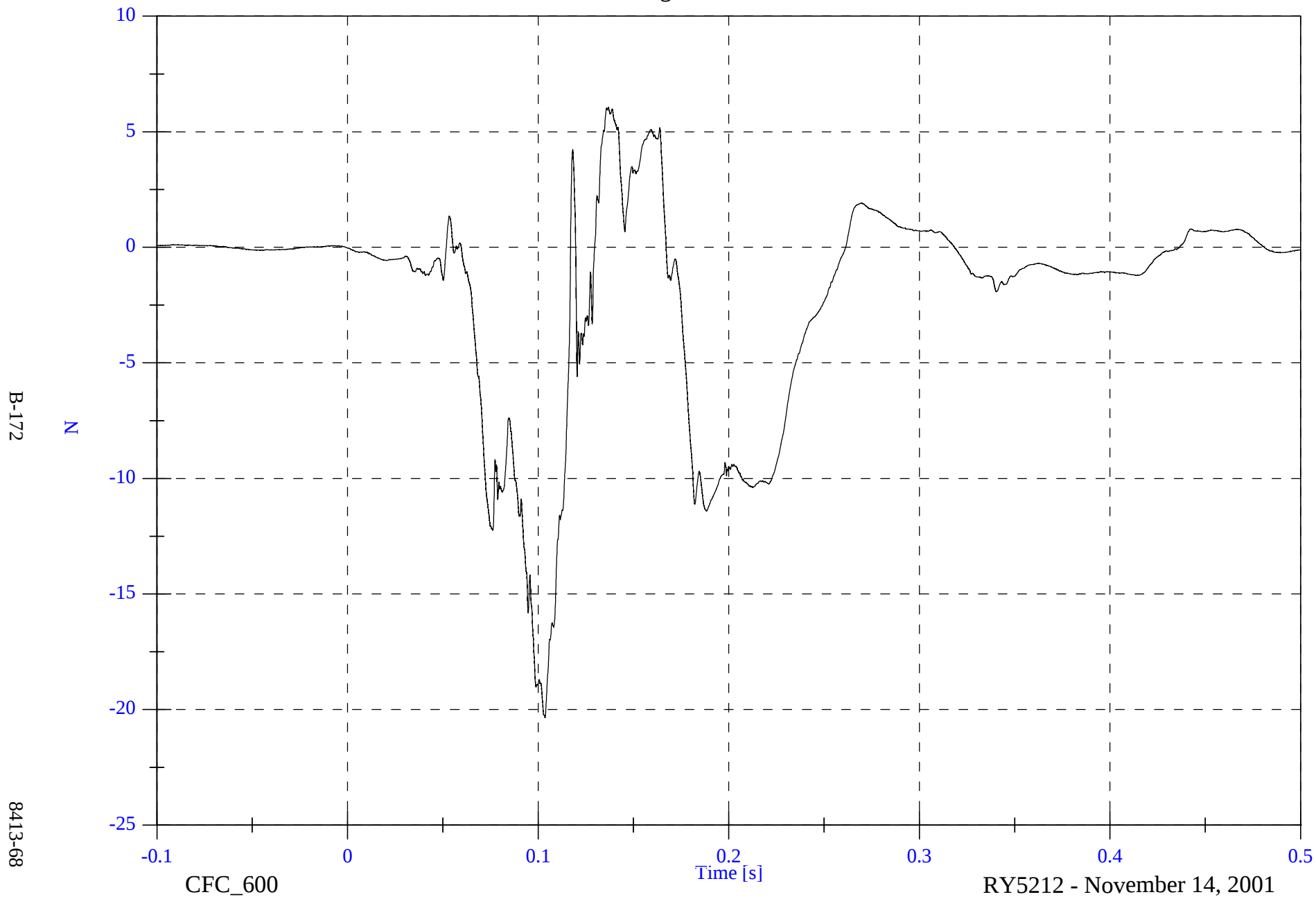


40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Right Lower Tibia Mx

Max: 6.1 [N] at 0.137 [s]

Min: -20.4 [N] at 0.104 [s]

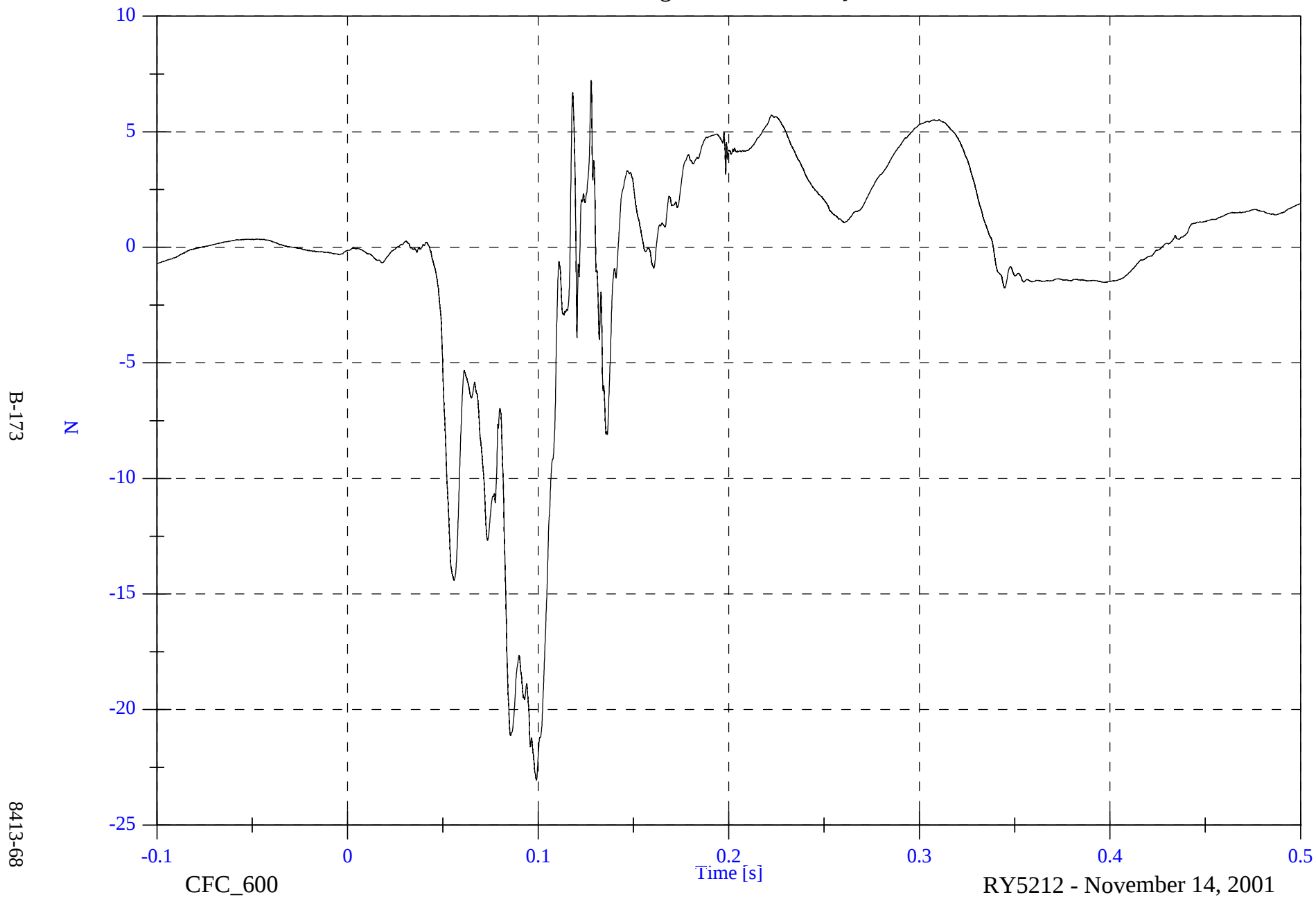


40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Right Lower Tibia My

Max: 7.2 [N] at 0.128 [s]

Min: -23.0 [N] at 0.099 [s]

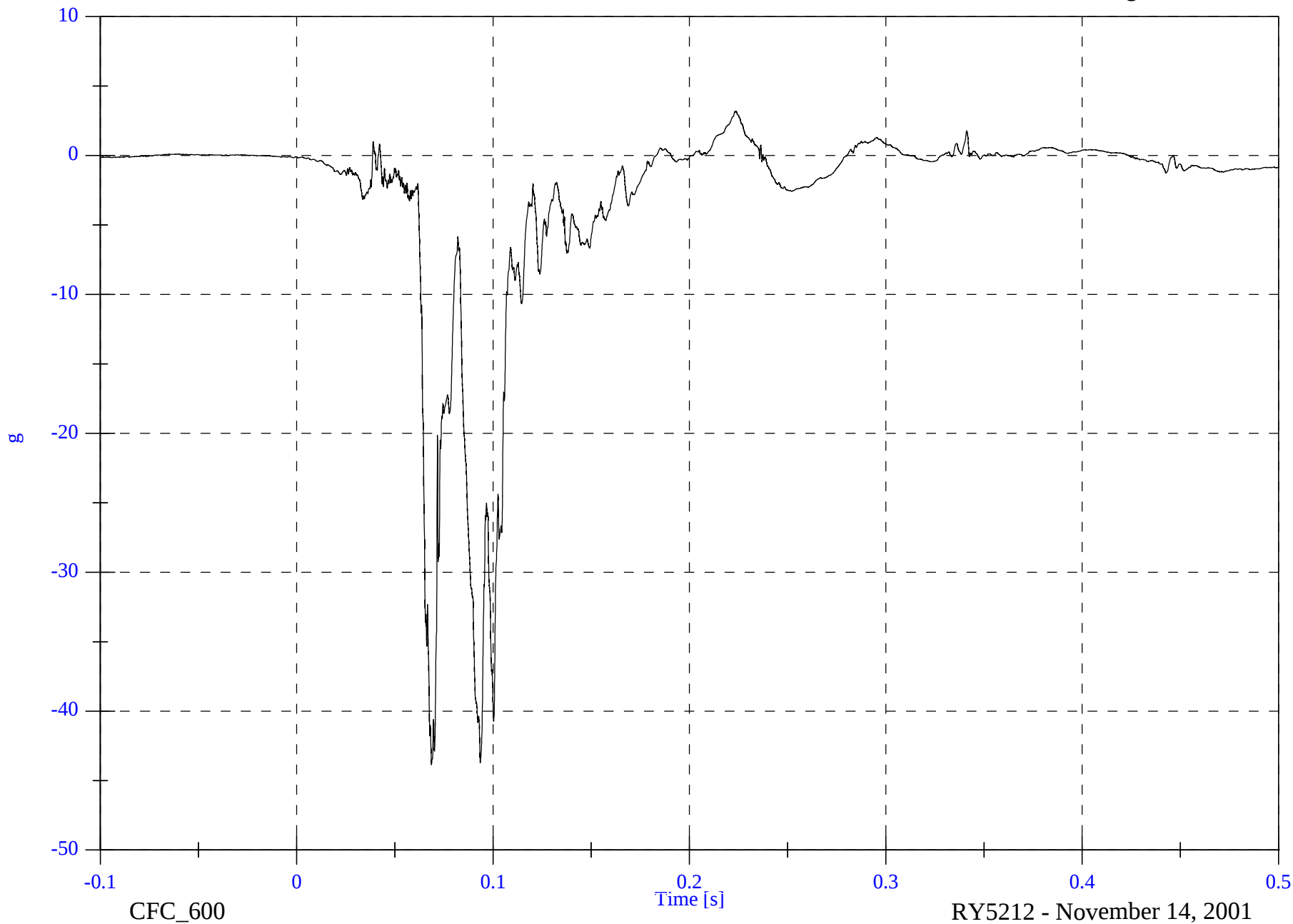


40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Left Tibia Ax

Max: 3.2 [g] at 0.223 [s]

Min: -43.9 [g] at 0.069 [s]



B-174

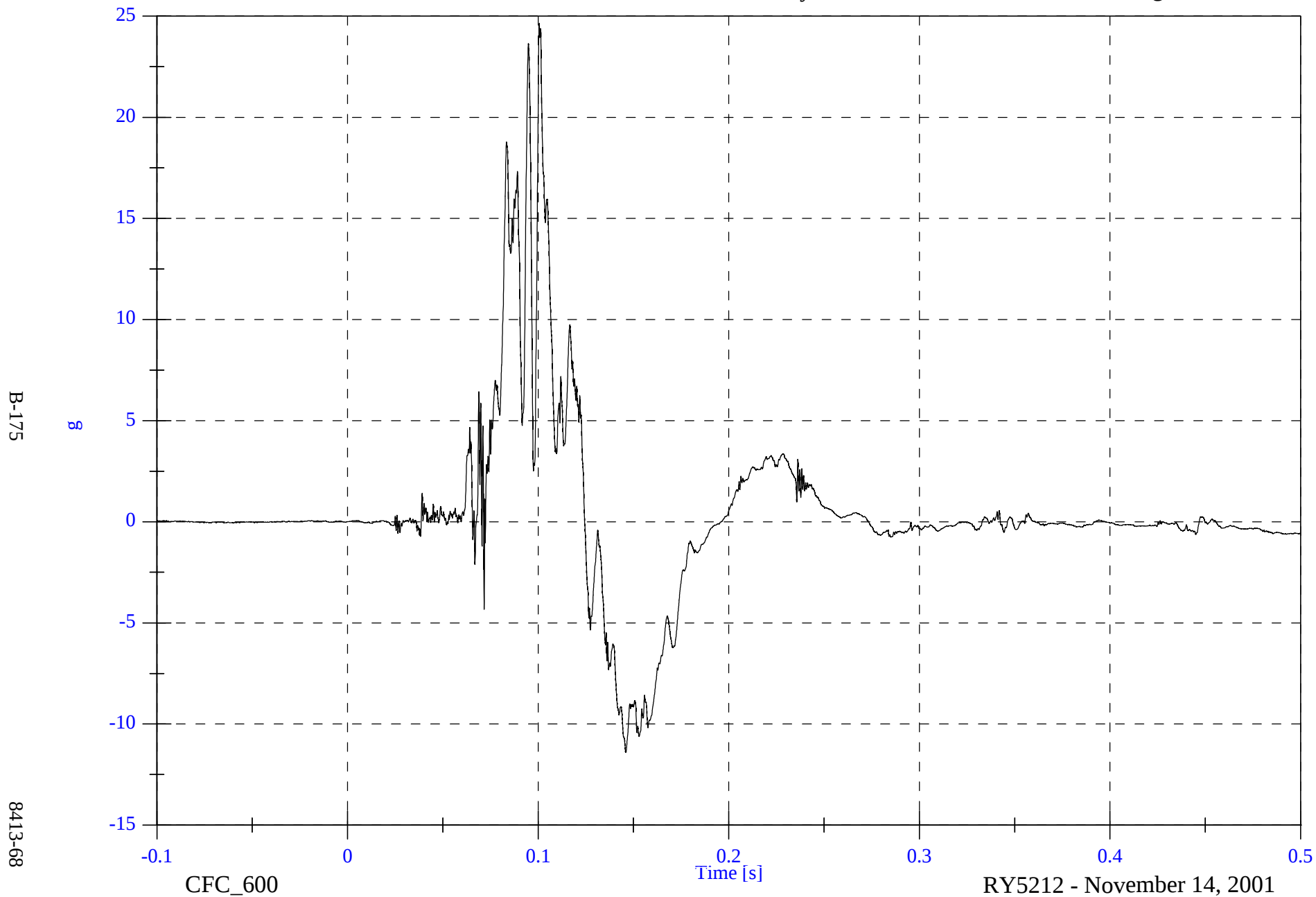
8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Left Tibia Ay

Max: 24.6 [g] at 0.101 [s]

Min: -11.4 [g] at 0.146 [s]

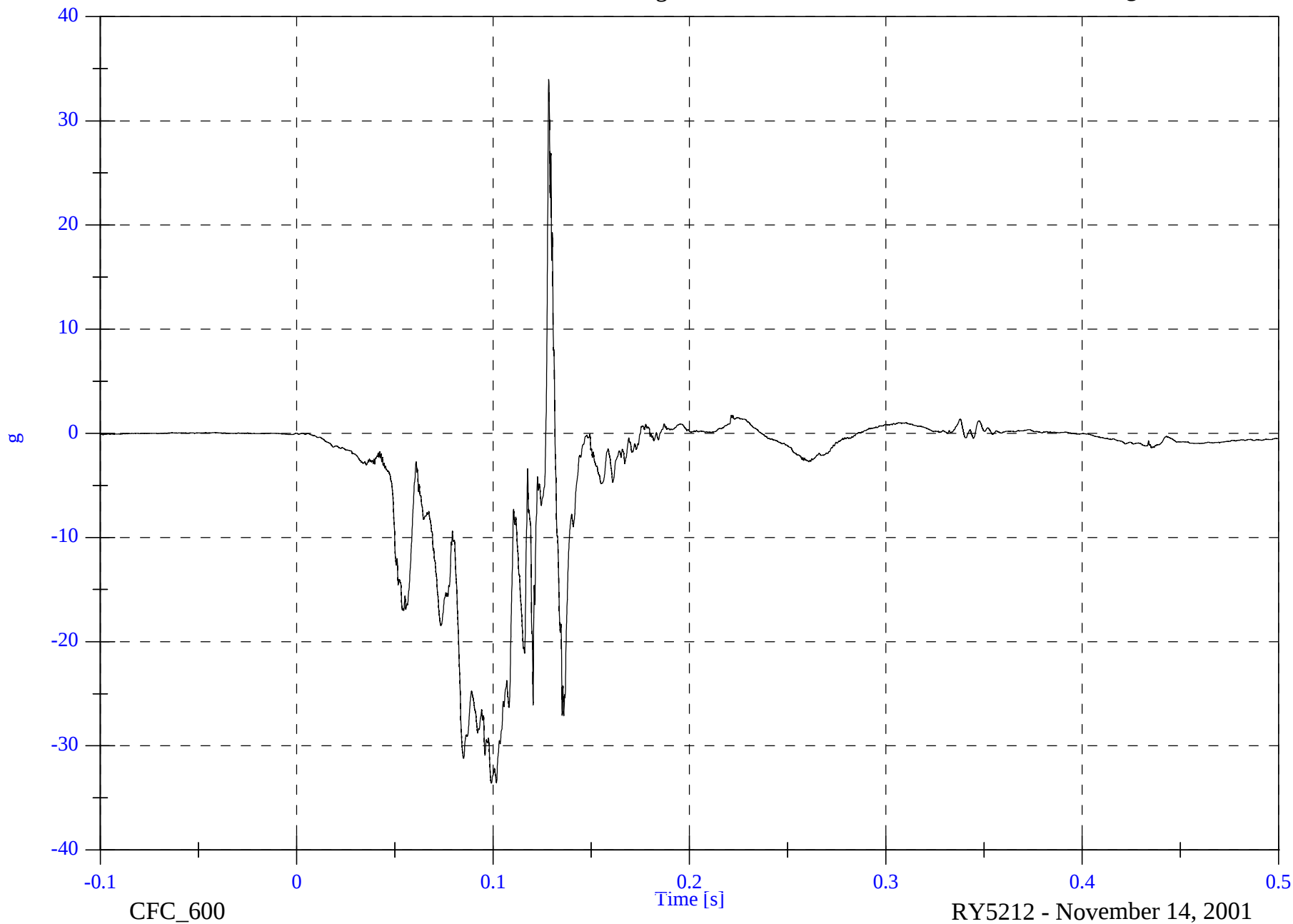


40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Right Tibia Ax

Max: 34.0 [g] at 0.128 [s]

Min: -33.6 [g] at 0.099 [s]



B-176

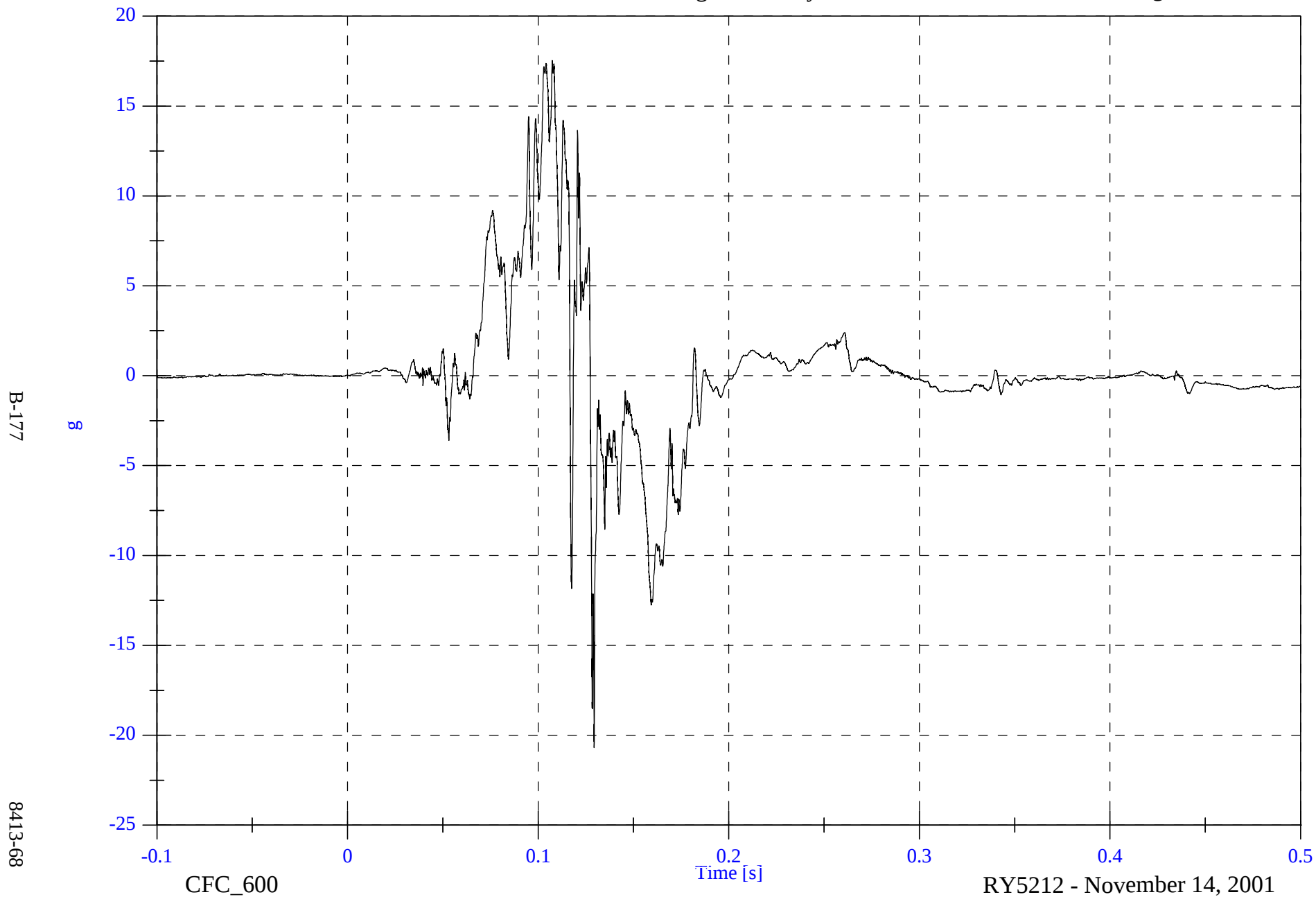
8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Right Tibia Ay

Max: 17.5 [g] at 0.107 [s]

Min: -20.7 [g] at 0.129 [s]

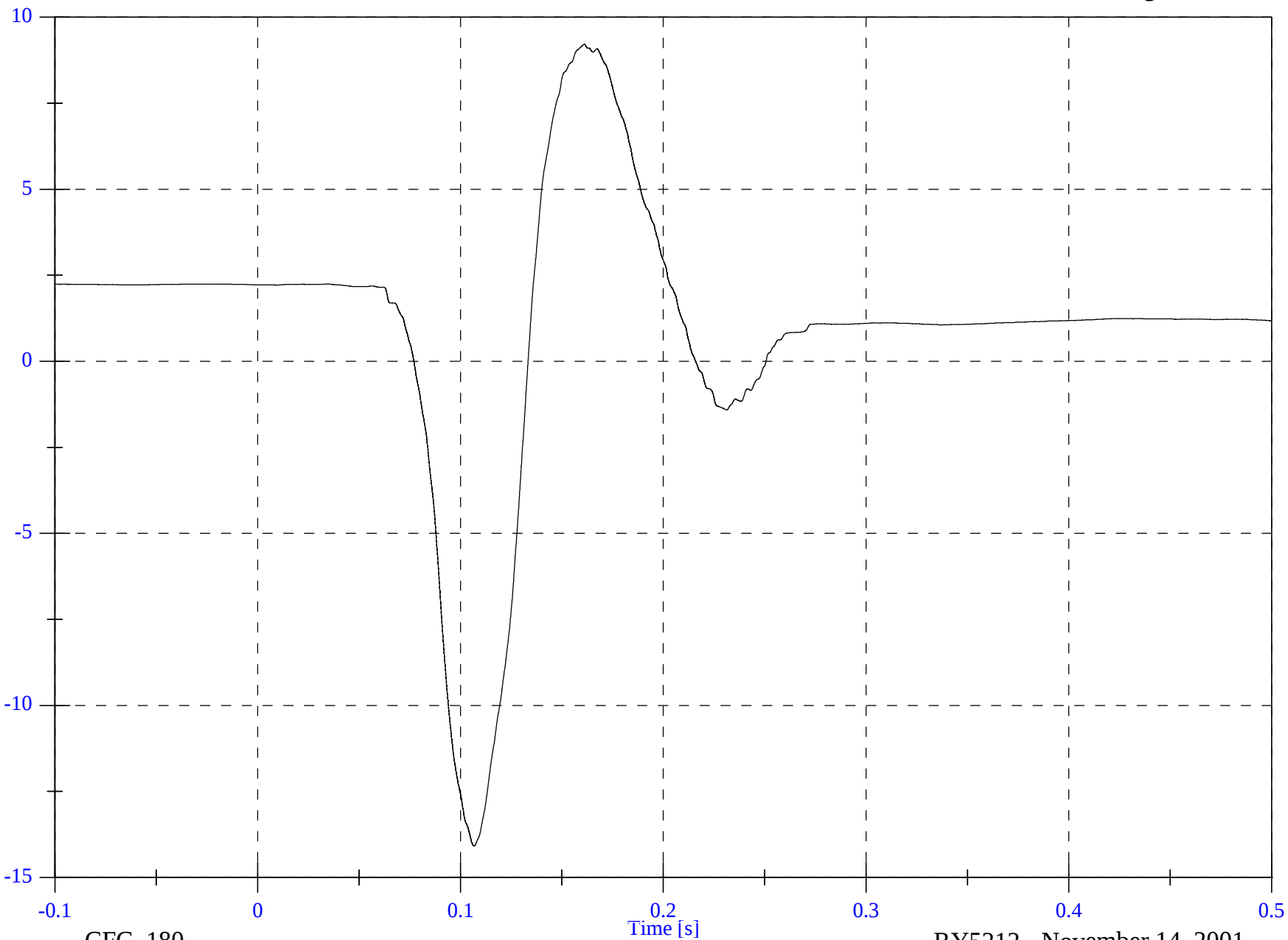


40% Frontal Offset Test #12 - 2000 Nissan Quest

Max: 9.2 [Deg] at 0.161 [s]

P2 Left Ankle Rotation x

Min: -14.1 [Deg] at 0.107 [s]



B-178

8413-68

CFC_180

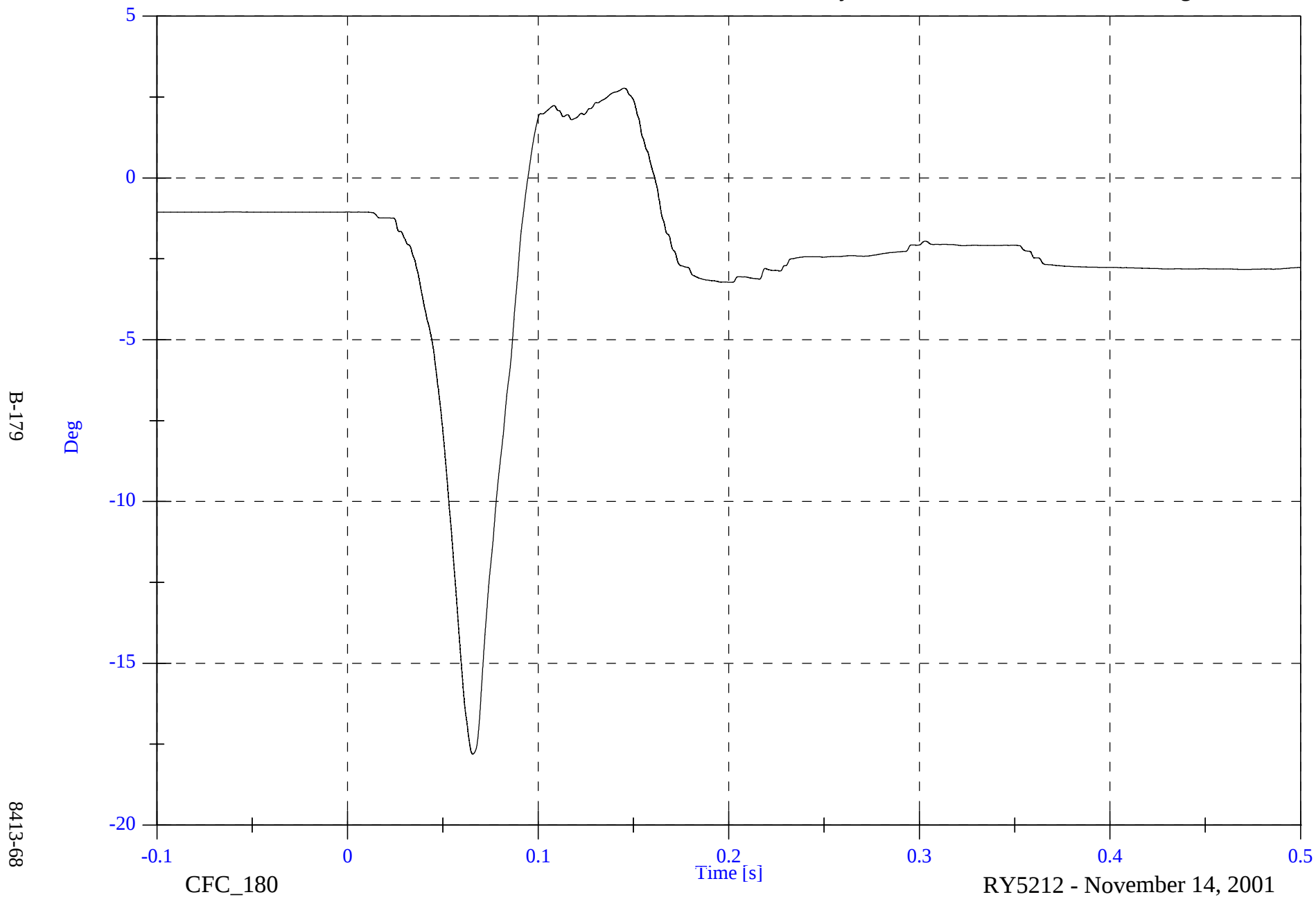
RY5212 - November 14, 2001

40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Left Ankle Rotation y

Max: 2.8 [Deg] at 0.145 [s]

Min: -17.8 [Deg] at 0.066 [s]

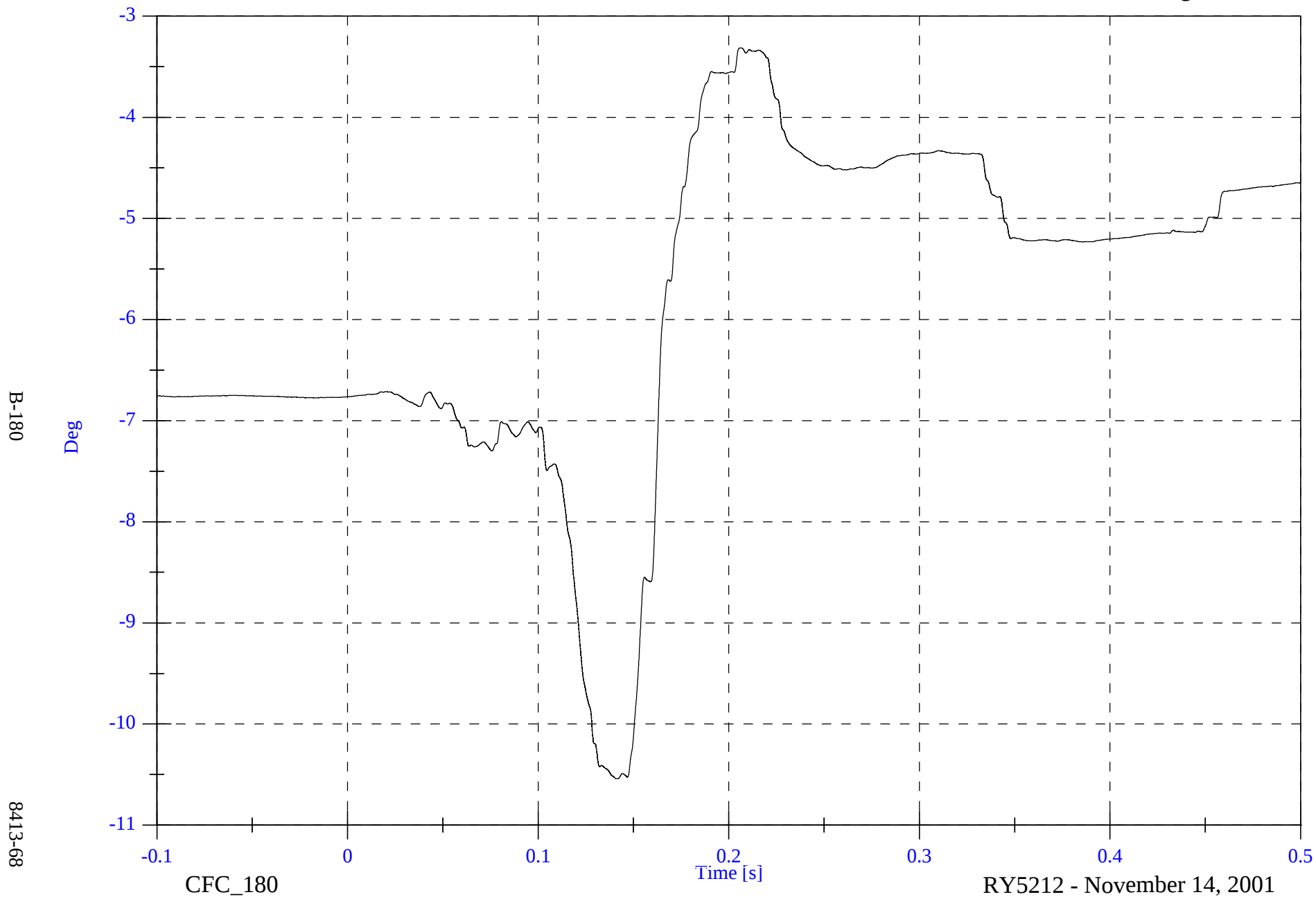


40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Left Ankle Rotation z

Max: -3.3 [Deg] at 0.206 [s]

Min: -10.5 [Deg] at 0.141 [s]



40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Right Ankle Rotation x

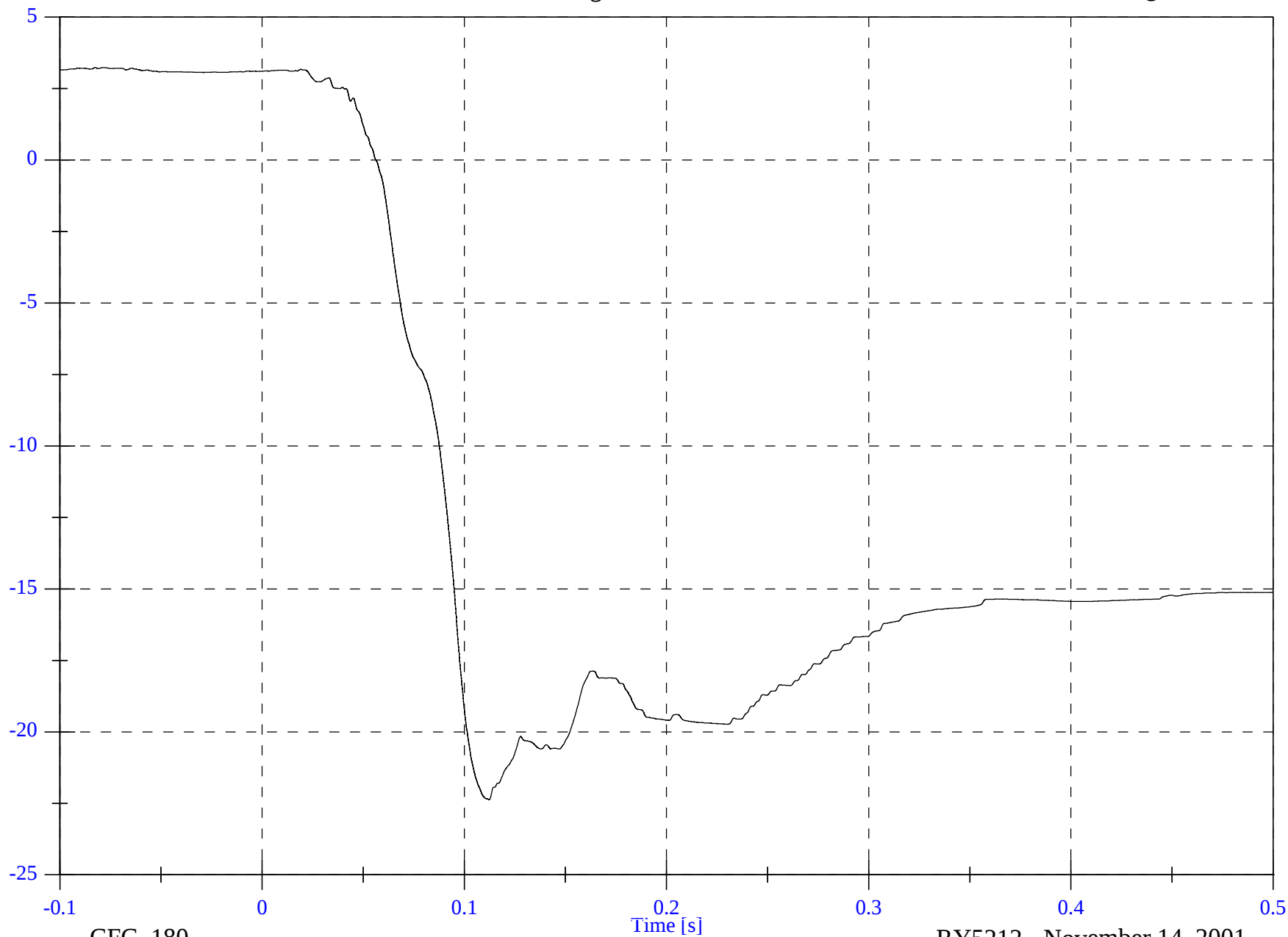
Max: 3.2 [Deg] at -0.079 [s]

Min: -22.4 [Deg] at 0.112 [s]

B-181

Deg

8413-68



CFC_180

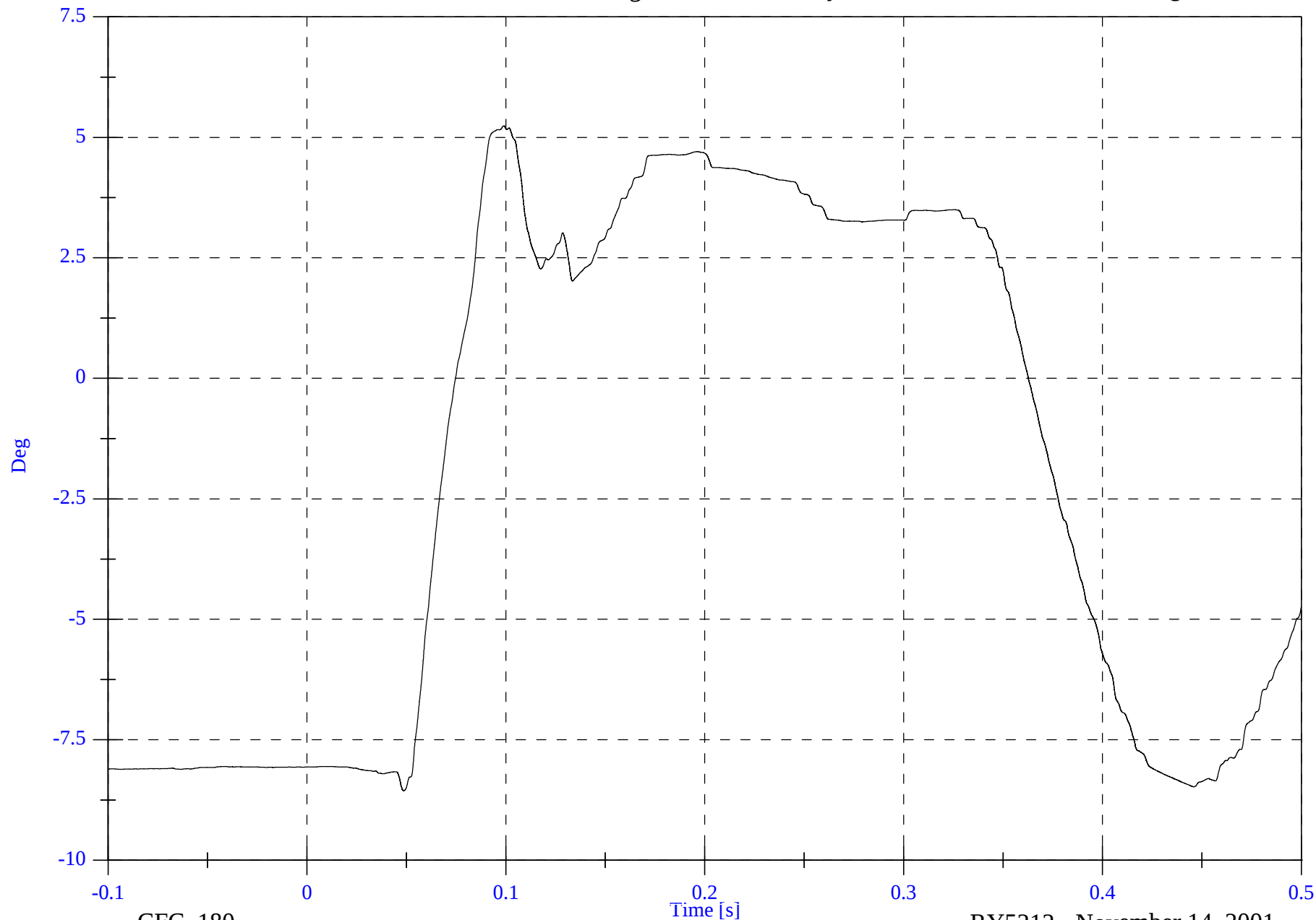
RY5212 - November 14, 2001

40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Right Ankle Rotation y

Max: 5.2 [Deg] at 0.099 [s]

Min: -8.6 [Deg] at 0.049 [s]



B-182

8413-68

CFC_180

RY5212 - November 14, 2001

40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Right Ankle Rotation z

Max: -2.2 [Deg] at 0.090 [s]

Min: -8.5 [Deg] at 0.365 [s]



B-183

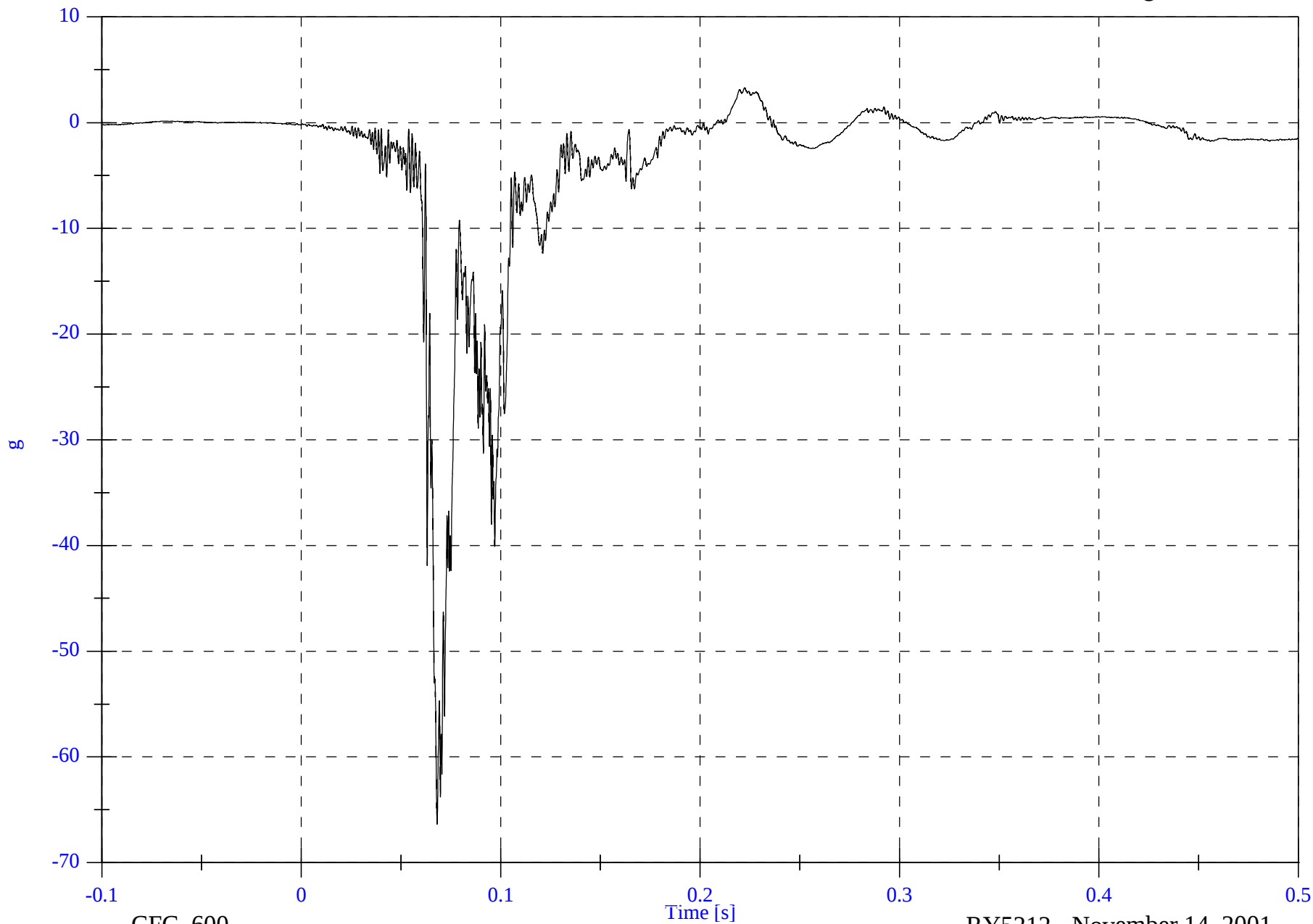
8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Left Foot Ax

Max: 3.3 [g] at 0.222 [s]

Min: -66.4 [g] at 0.068 [s]



40% Frontal Offset Test #12 - 2000 Nissan Quest

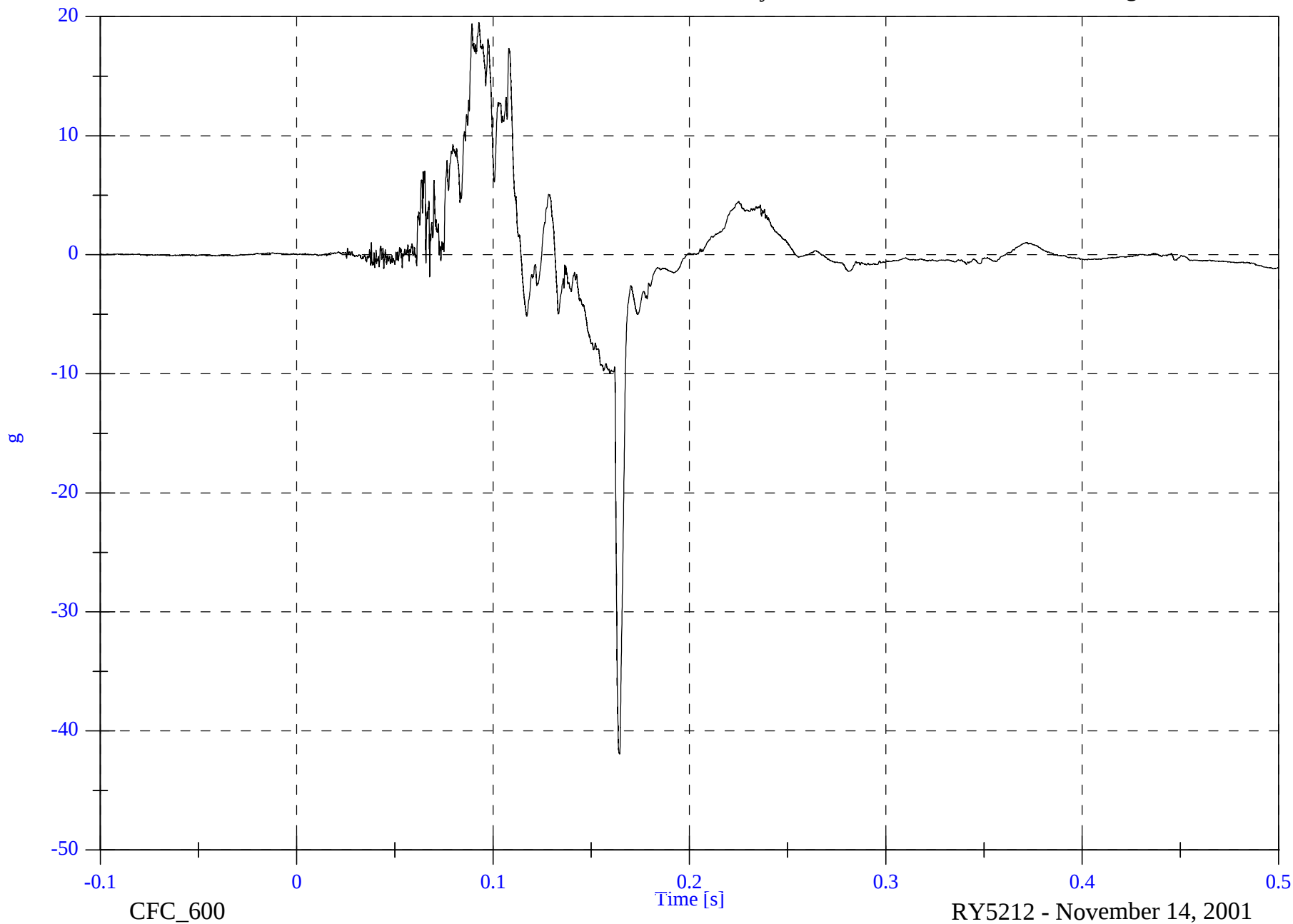
P2 Left Foot Ay

Max: 19.5 [g] at 0.093 [s]

Min: -42.0 [g] at 0.164 [s]

B-185

8413-68

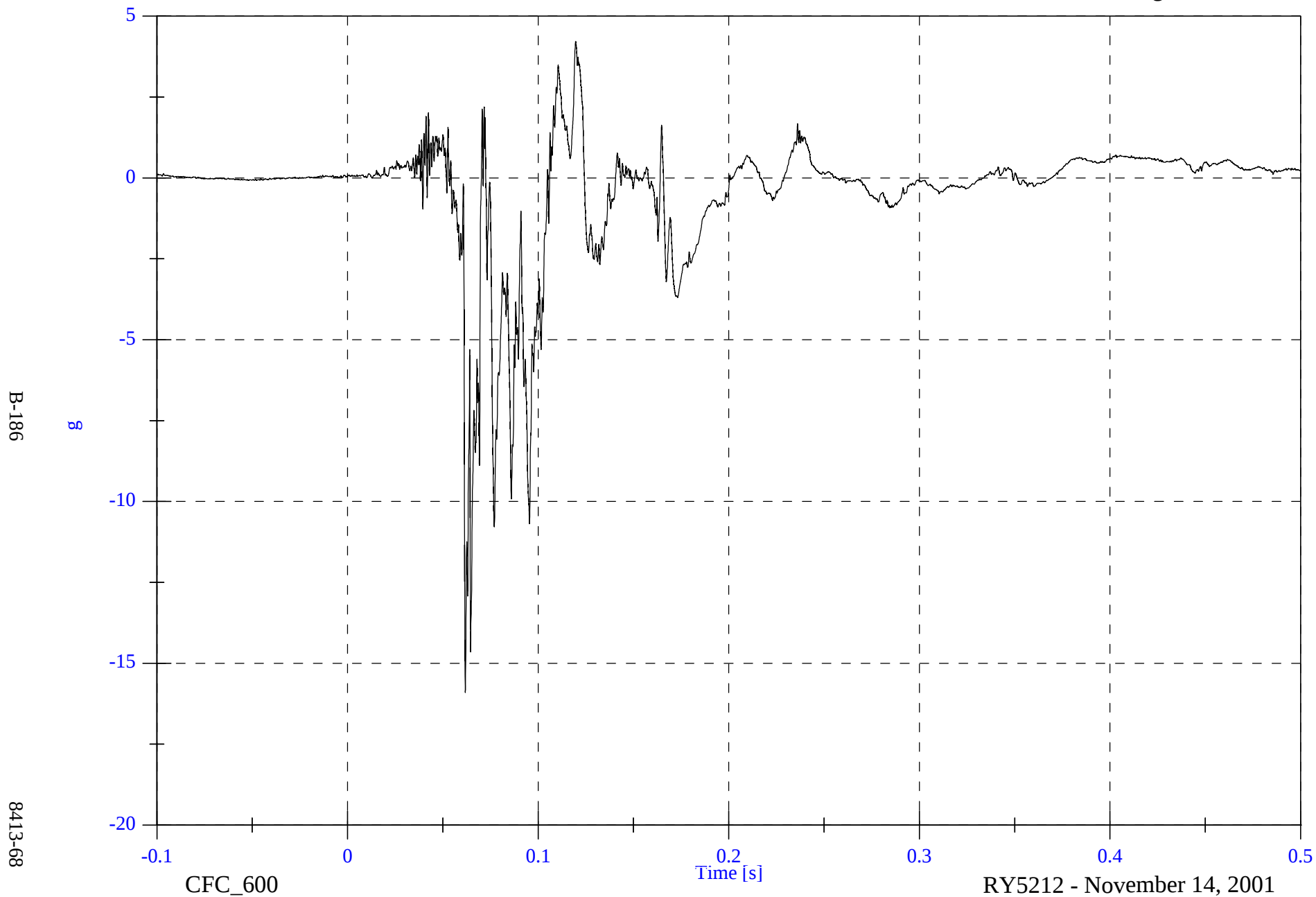


40% Frontal Offset Test #12 - 2000 Nissan Quest

Max: 4.2 [g] at 0.120 [s]

P2 Left Foot Az

Min: -15.9 [g] at 0.062 [s]

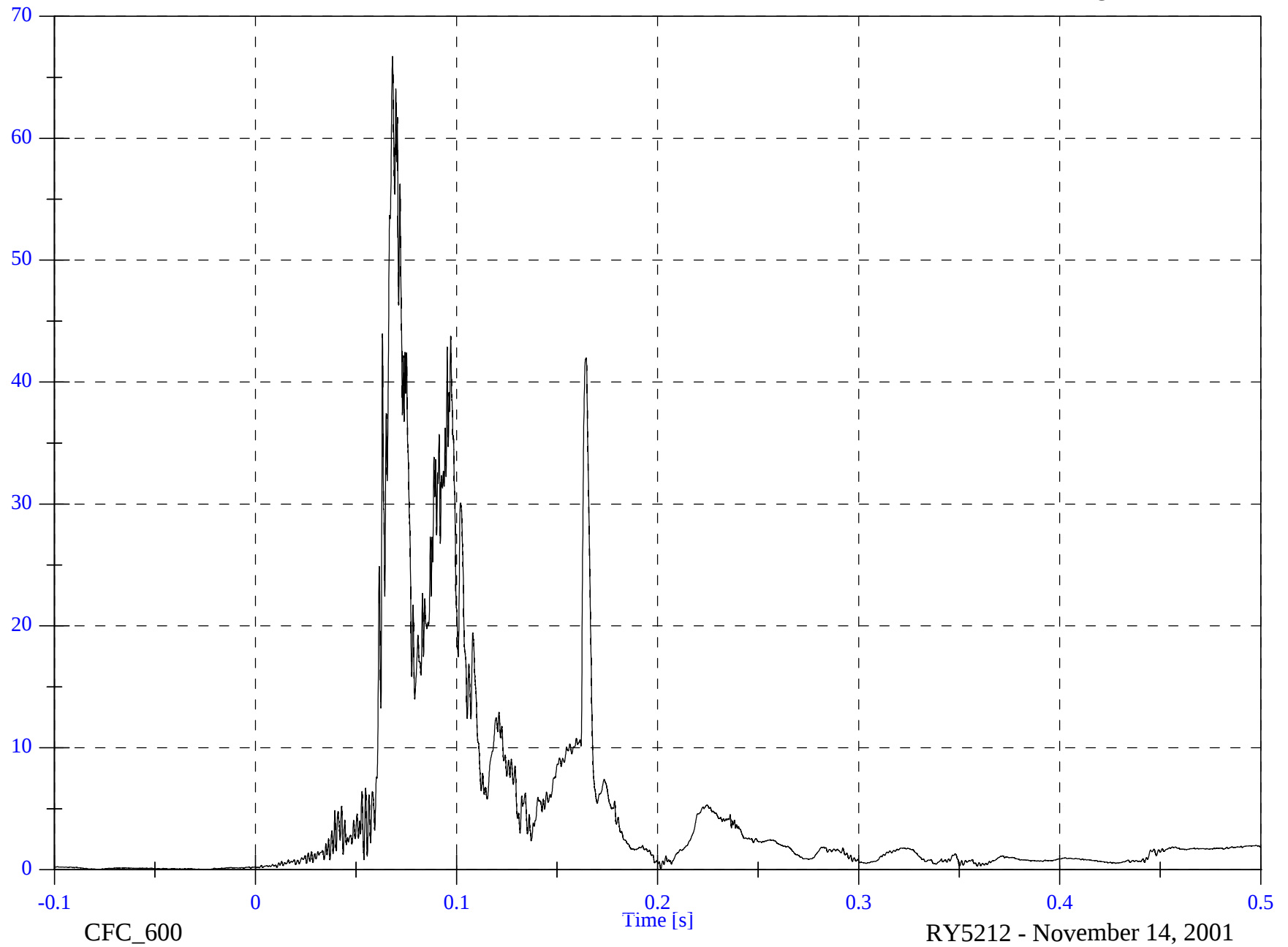


40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Left Foot A Resultant

Max: 66.7 [g] at 0.068 [s]

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



B-187

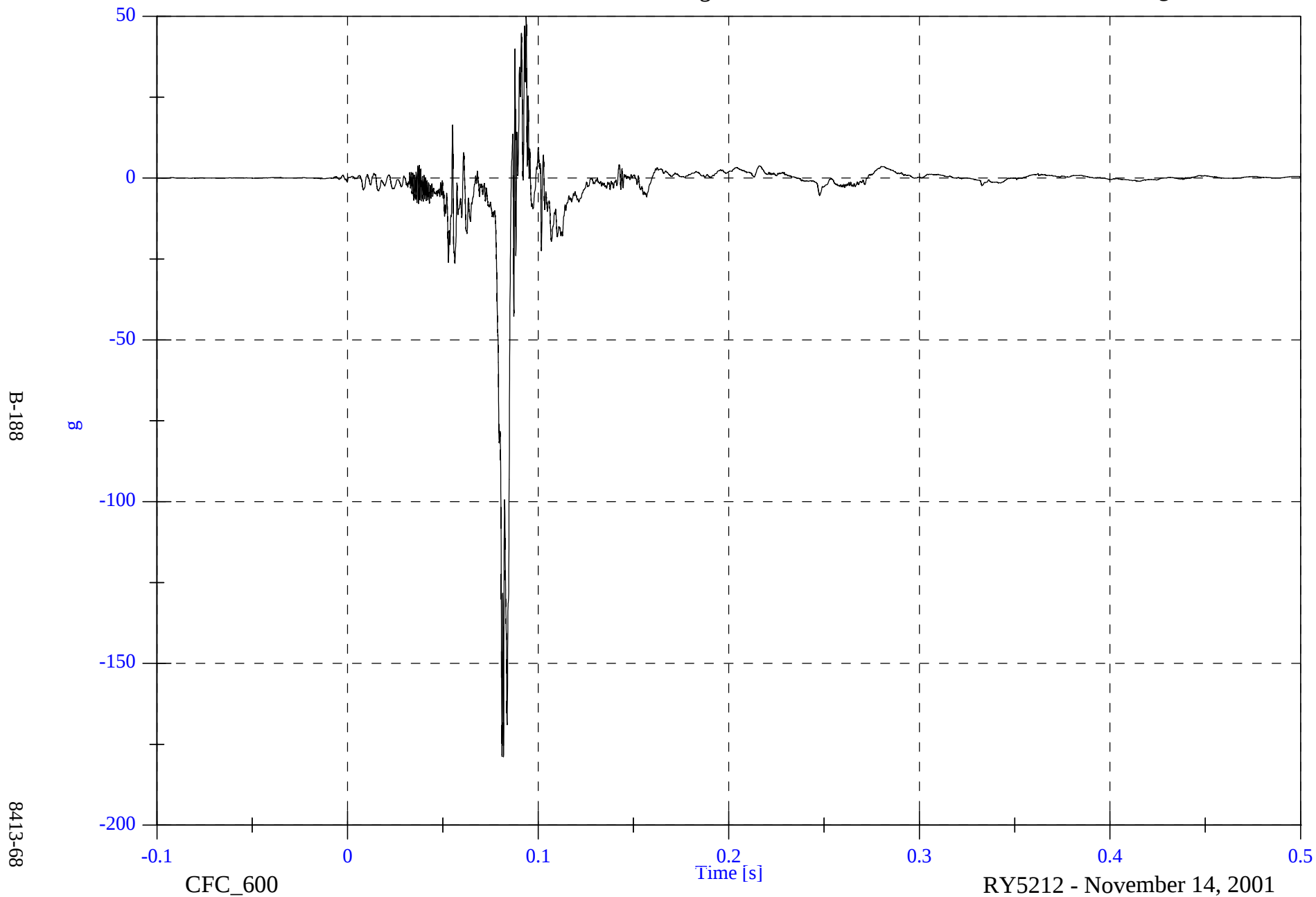
8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Right Foot Ax

Max: 49.8 [g] at 0.094 [s]

Min: -178.9 [g] at 0.082 [s]



40% Frontal Offset Test #12 - 2000 Nissan Quest

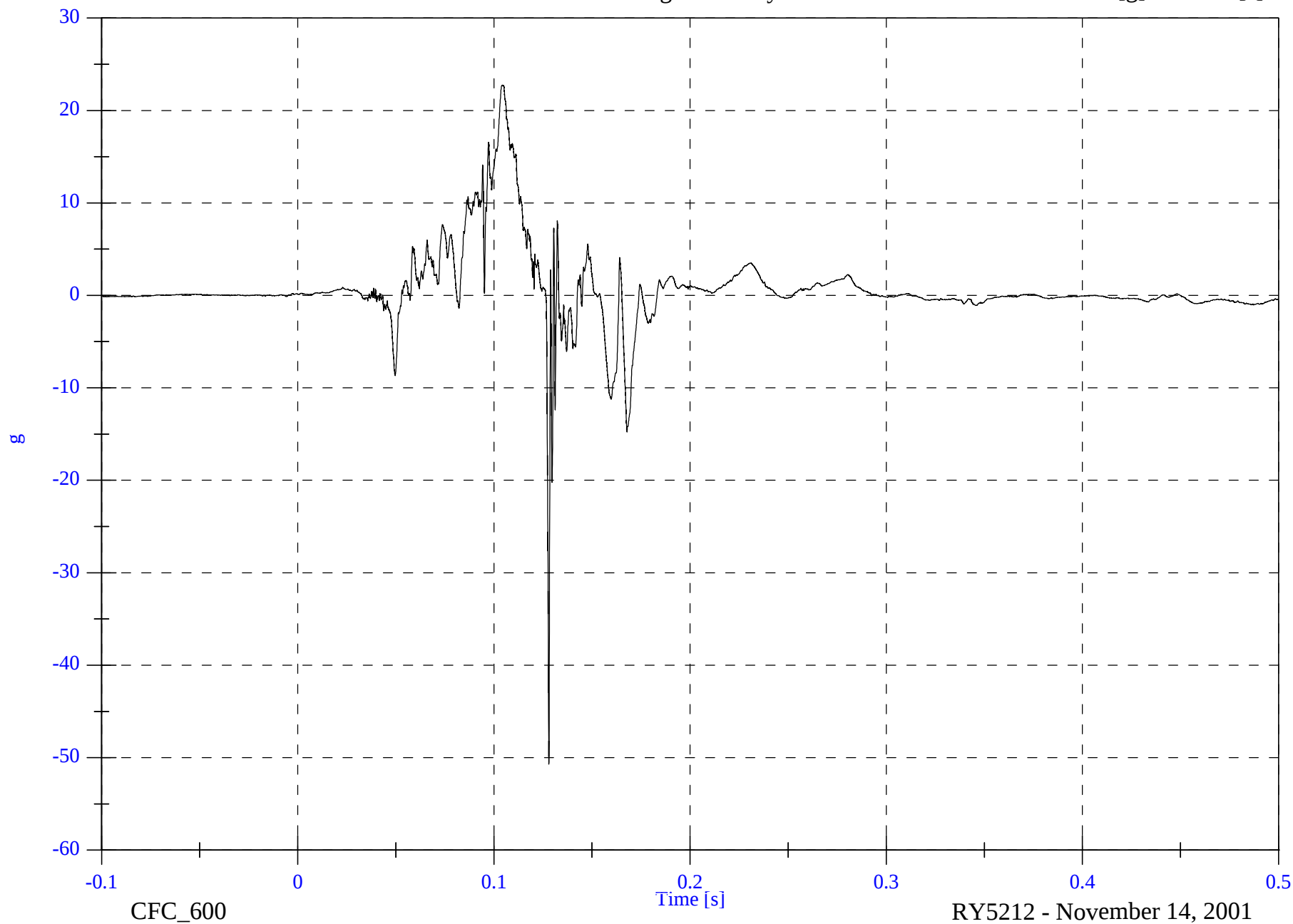
P2 Right Foot Ay

Max: 22.8 [g] at 0.104 [s]

Min: -50.7 [g] at 0.128 [s]

B-189

8413-68

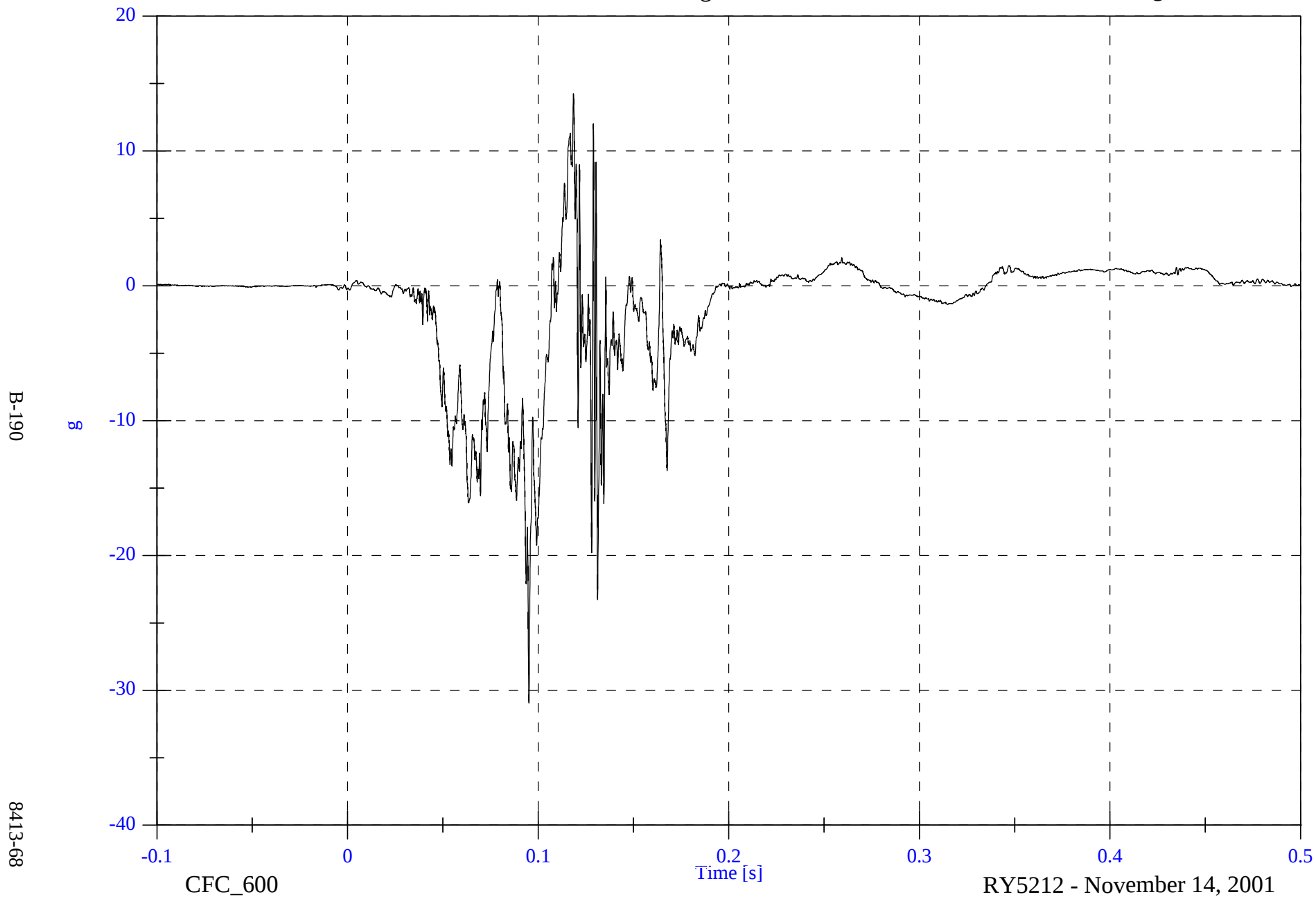


40% Frontal Offset Test #12 - 2000 Nissan Quest

P2 Right Foot Az

Max: 14.3 [g] at 0.119 [s]

Min: -31.0 [g] at 0.095 [s]



40% Frontal Offset Test #12 - 2000 Nissan Quest

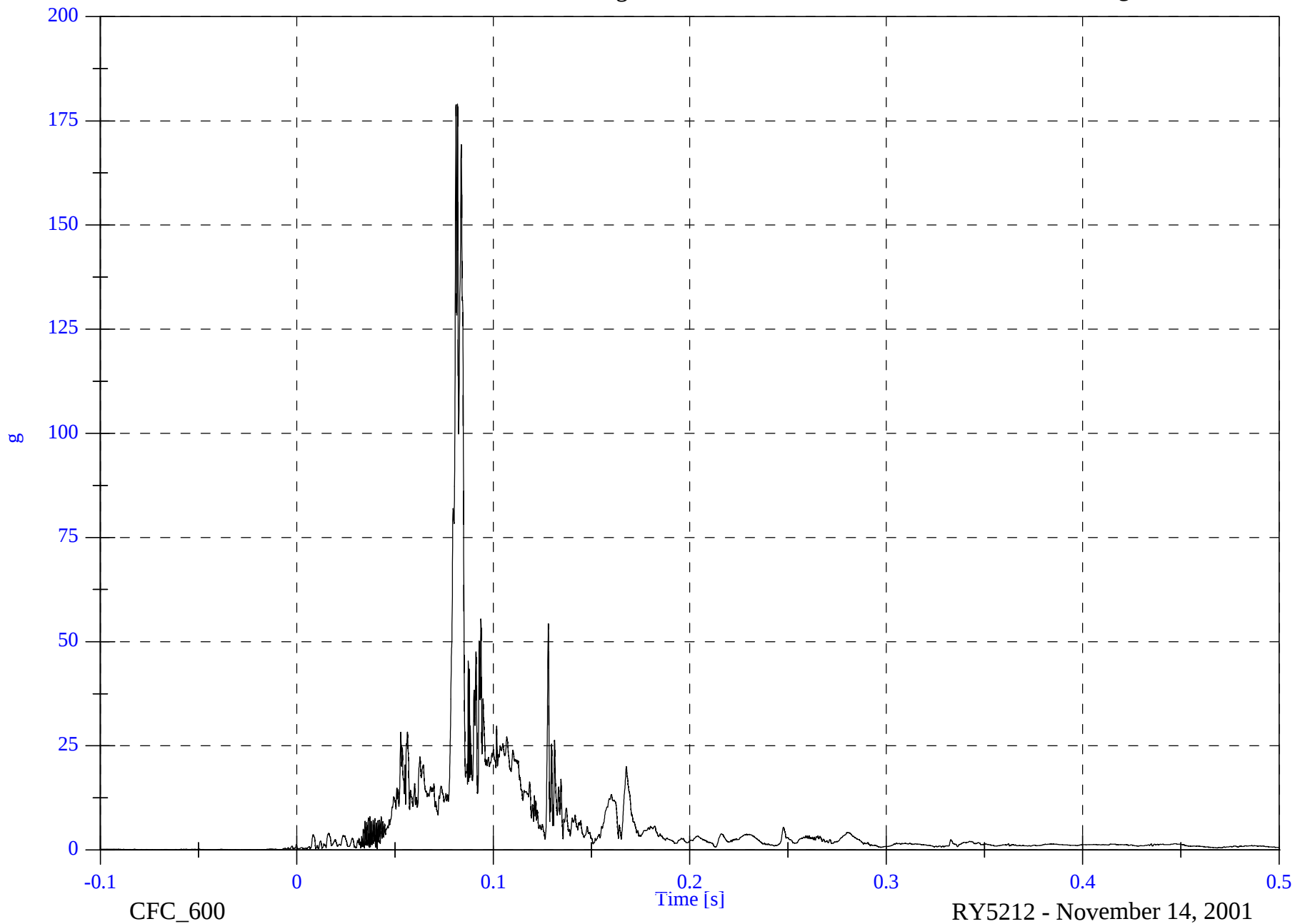
P2 Right Foot A Resultant

Max: 179.0 [g] at 0.082 [s]

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

B-191

8413-68

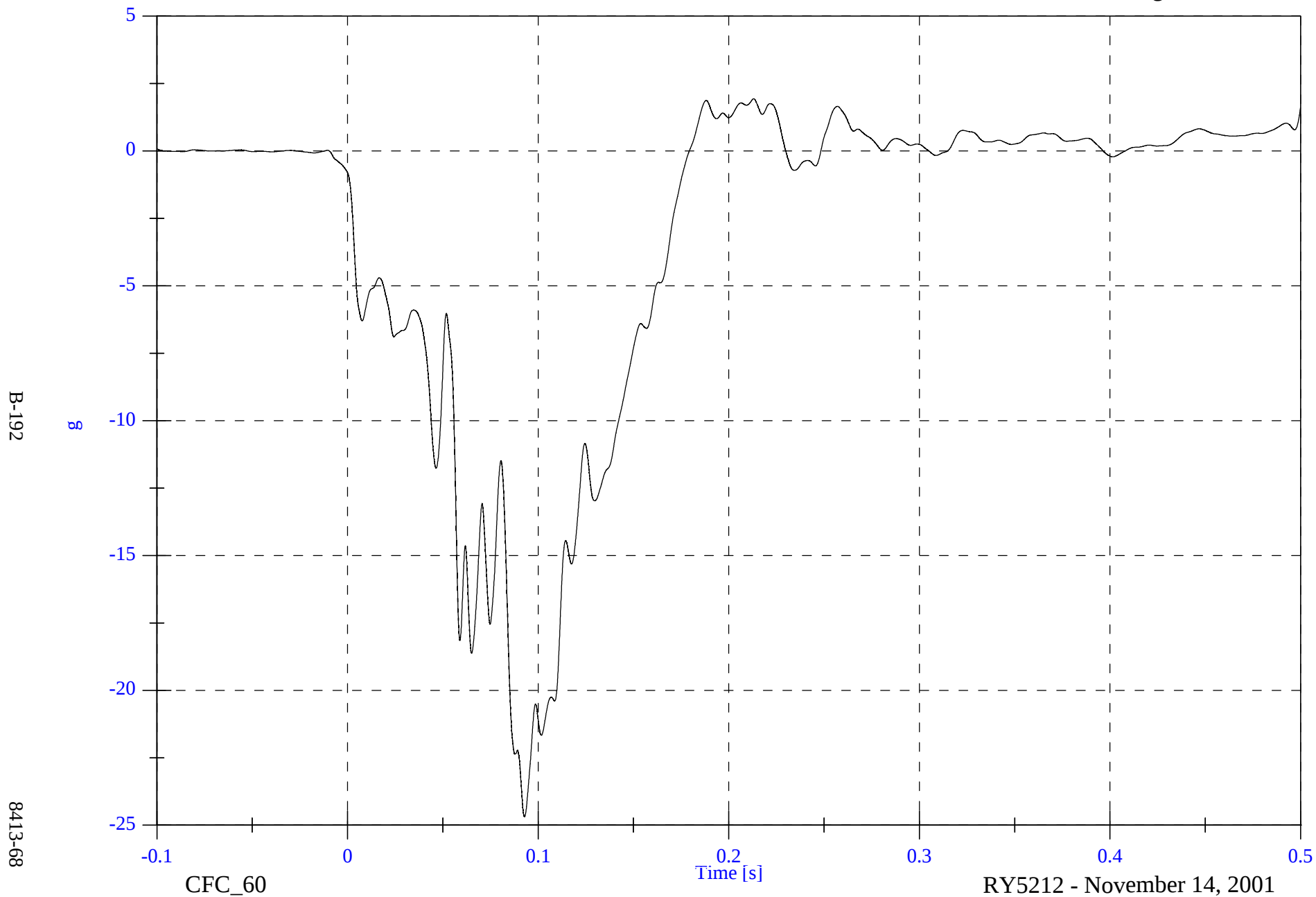


40% Frontal Offset Test #12 - 2000 Nissan Quest

Acc 1 Rear XMBR Left Ax

Max: 1.9 [g] at 0.213 [s]

Min: -24.7 [g] at 0.093 [s]

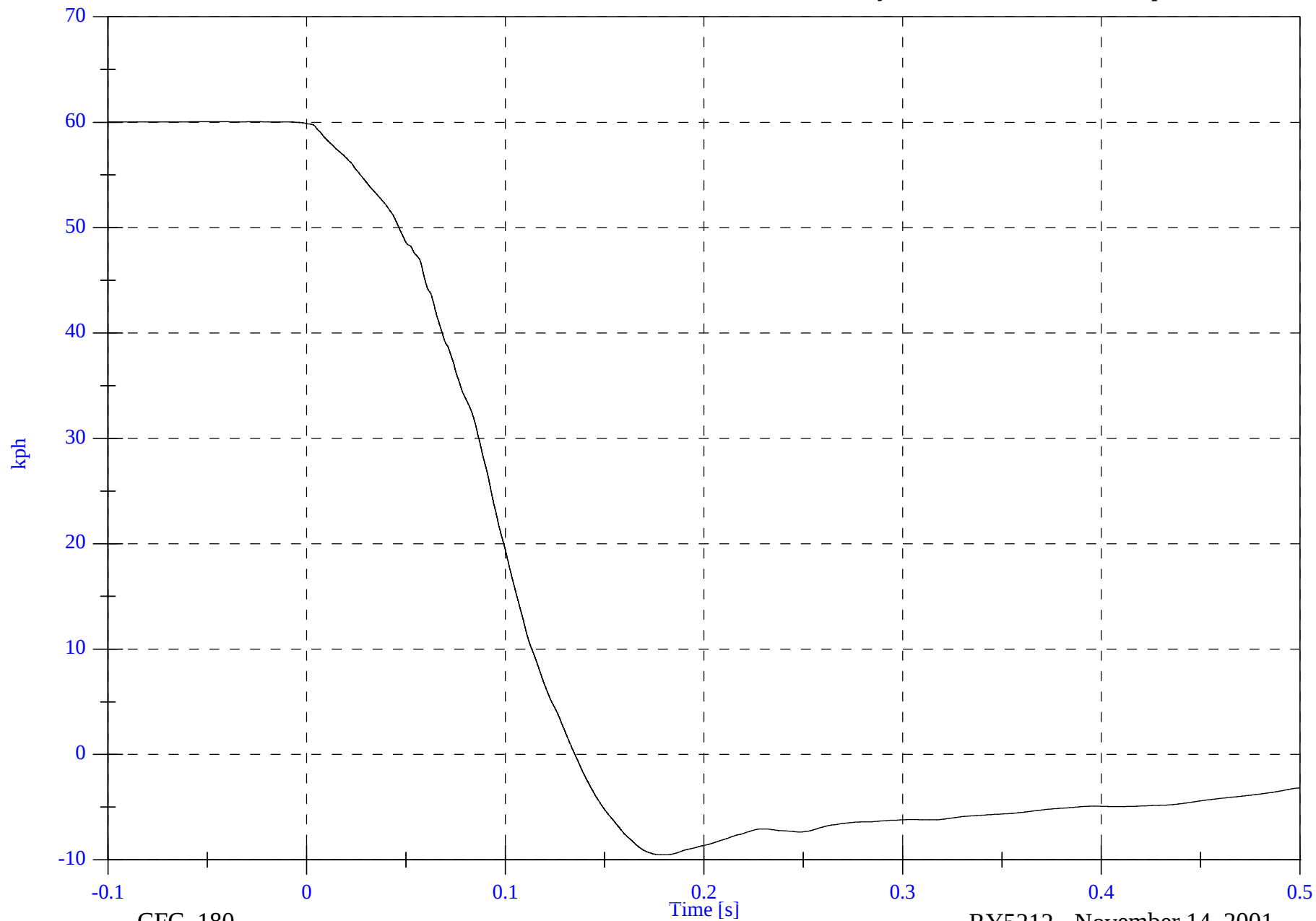


40% Frontal Offset Test #12 - 2000 Nissan Quest

Acc 1 Rear XMBR Left Ax Velocity

Max: 60.1 [kph] at -0.052 [s]

Min: -9.5 [kph] at 0.178 [s]



B-193

8413-68

CFC_180

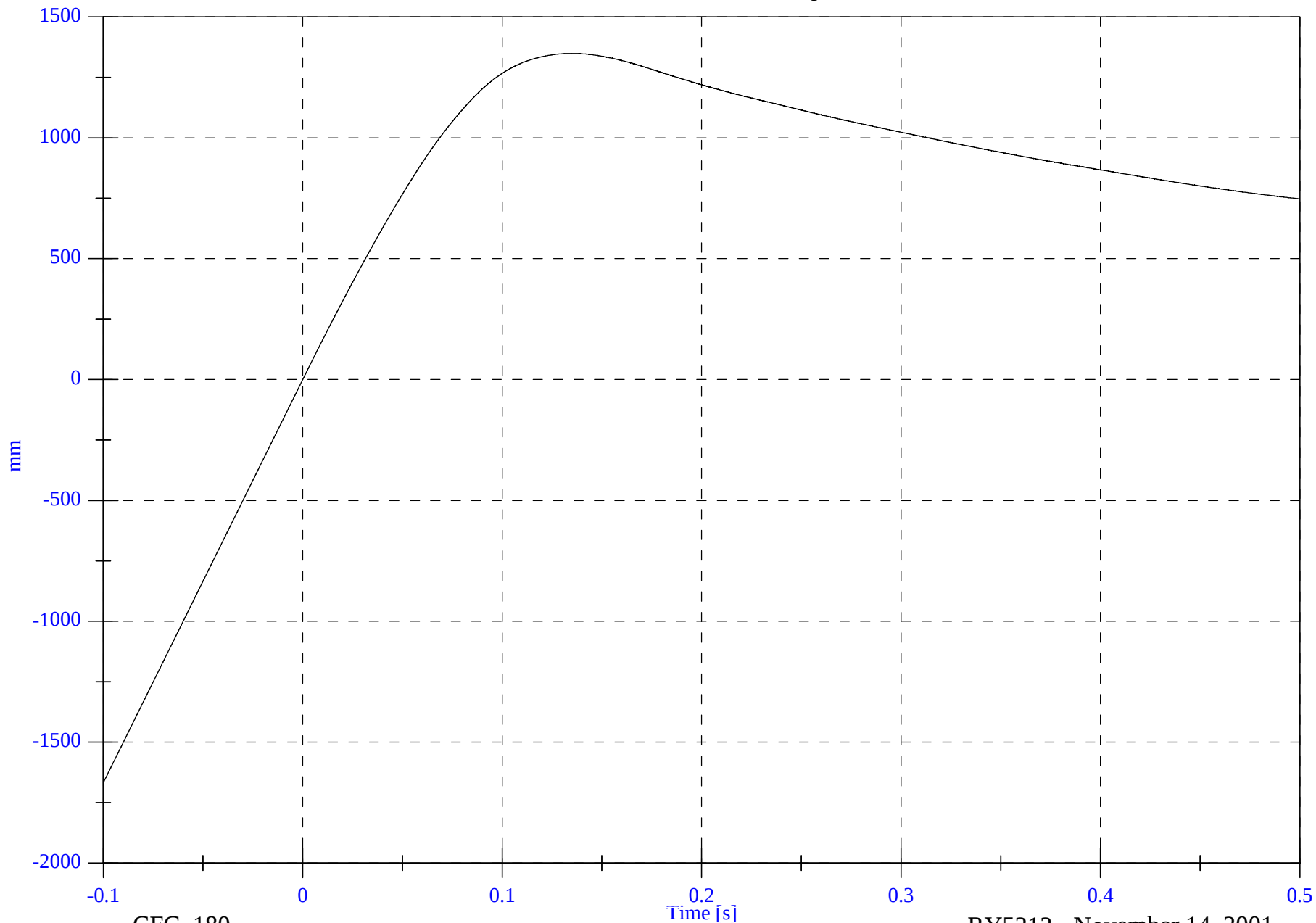
RY5212 - November 14, 2001

40% Frontal Offset Test #12 - 2000 Nissan Quest

Acc 1 Rear XMBR Left Ax Displacement

Max: 1349.3 [mm] at 0.135 [s]

Min: -1667.6 [mm] at -0.100 [s]



B-194

8413-68

CFC_180

RY5212 - November 14, 2001

40% Frontal Offset Test #12 - 2000 Nissan Quest

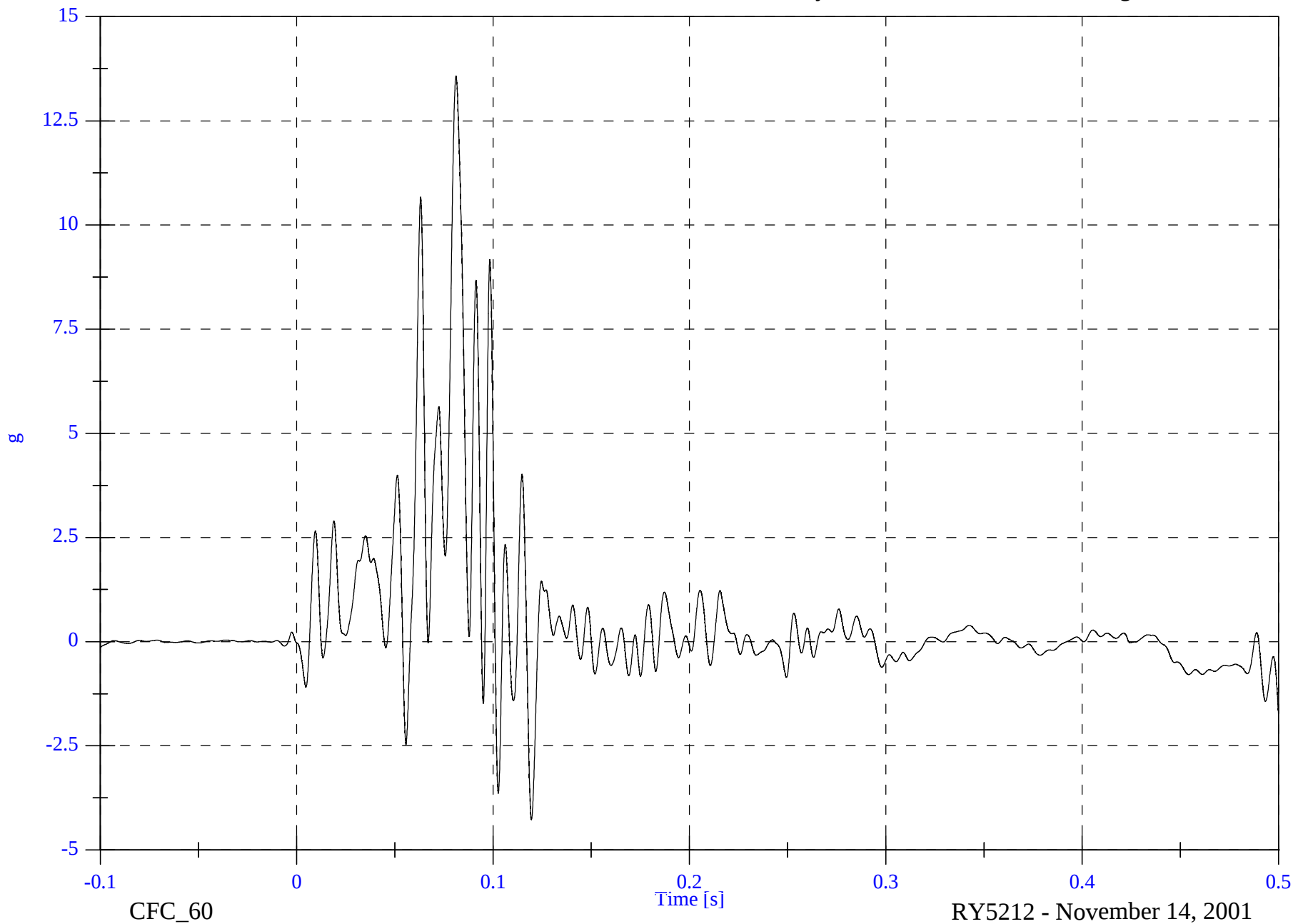
Acc 2 Rear XMBR Left Ay

Max: 13.6 [g] at 0.081 [s]

Min: -4.3 [g] at 0.120 [s]

B-195

8413-68

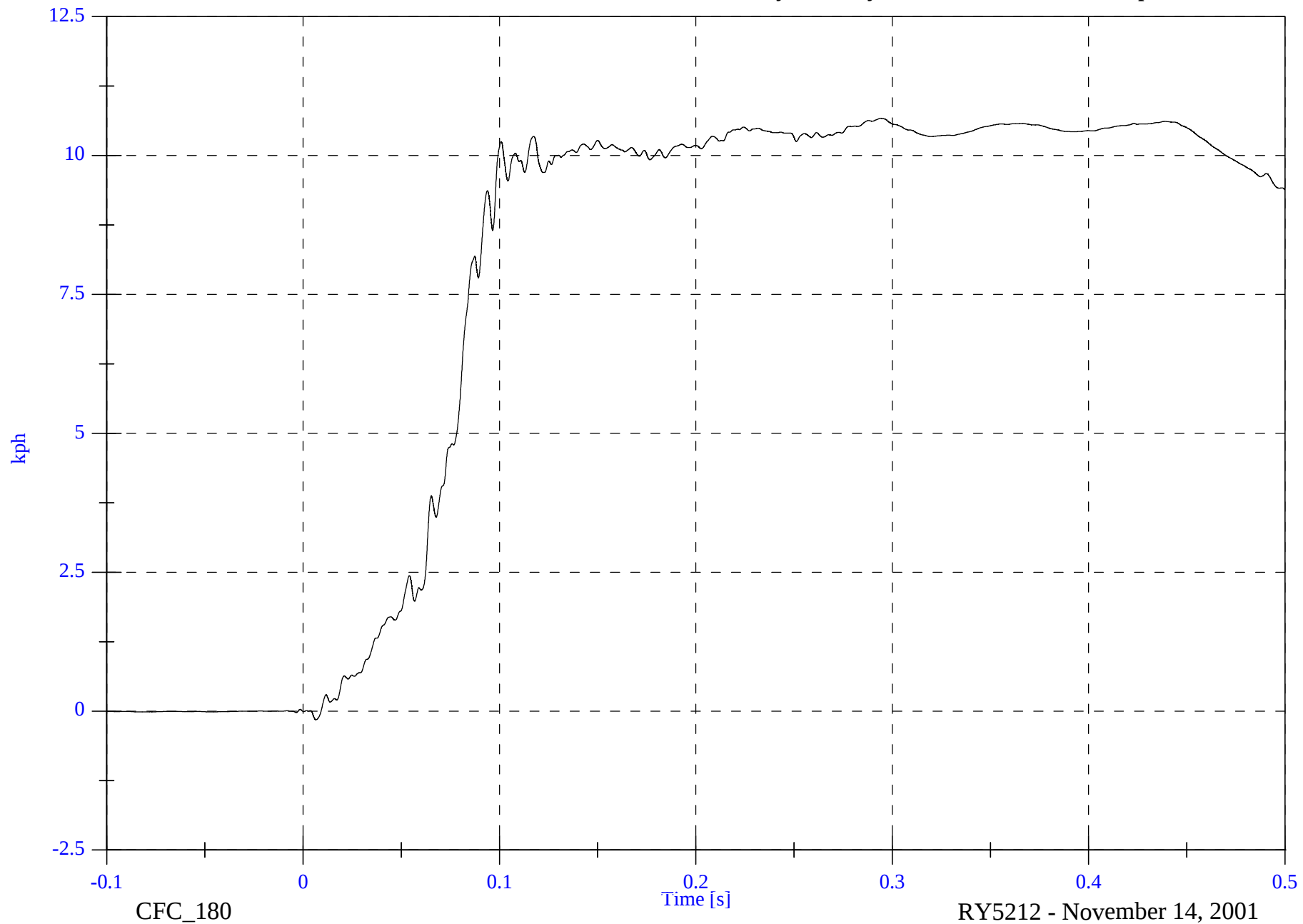


40% Frontal Offset Test #12 - 2000 Nissan Quest

Acc 2 Rear XMBR Left Ay Velocity

Max: 10.7 [kph] at 0.294 [s]

Min: -0.2 [kph] at 0.007 [s]



B-196

8413-68

CFC_180

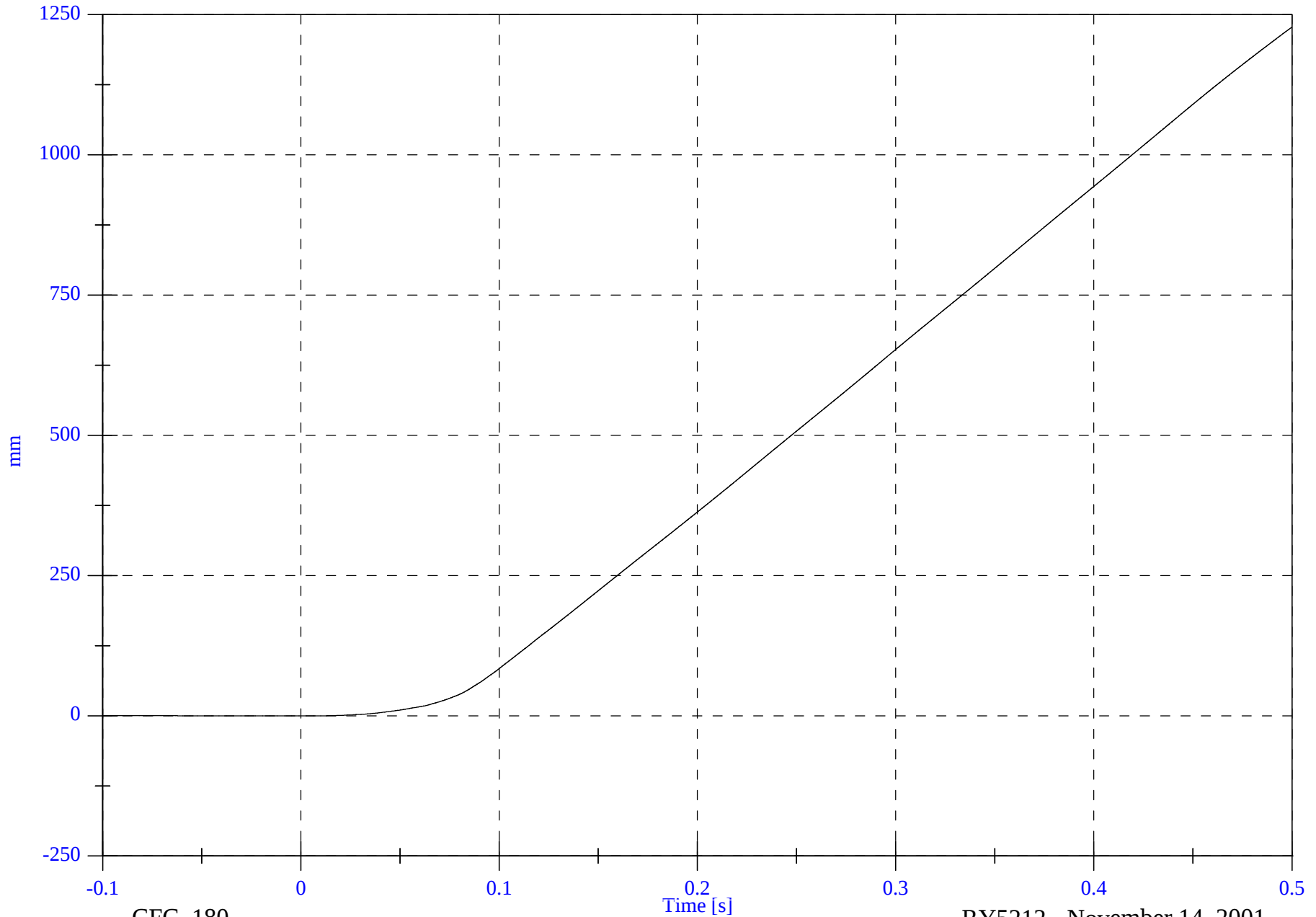
RY5212 - November 14, 2001

40% Frontal Offset Test #12 - 2000 Nissan Quest

Acc 2 Rear XMBR Left Ay Displacement

Max: 1227.9 [mm] at 0.500 [s]

Min: -0.1 [mm] at 0.009 [s]



B-197

8413-68

CFC_180

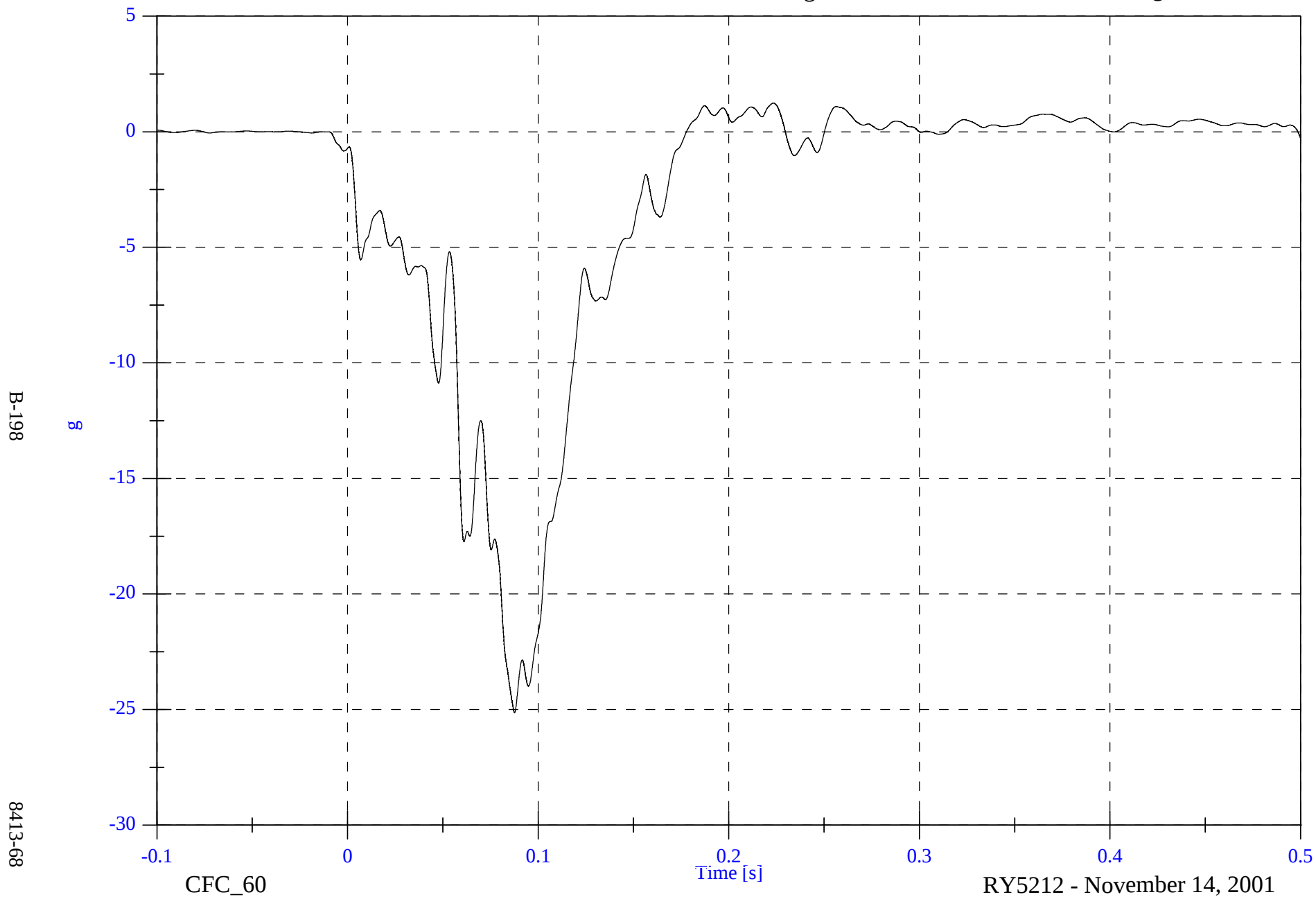
RY5212 - November 14, 2001

40% Frontal Offset Test #12 - 2000 Nissan Quest

Acc 3 Rear XMBR Right Ax

Max: 1.2 [g] at 0.223 [s]

Min: -25.1 [g] at 0.088 [s]

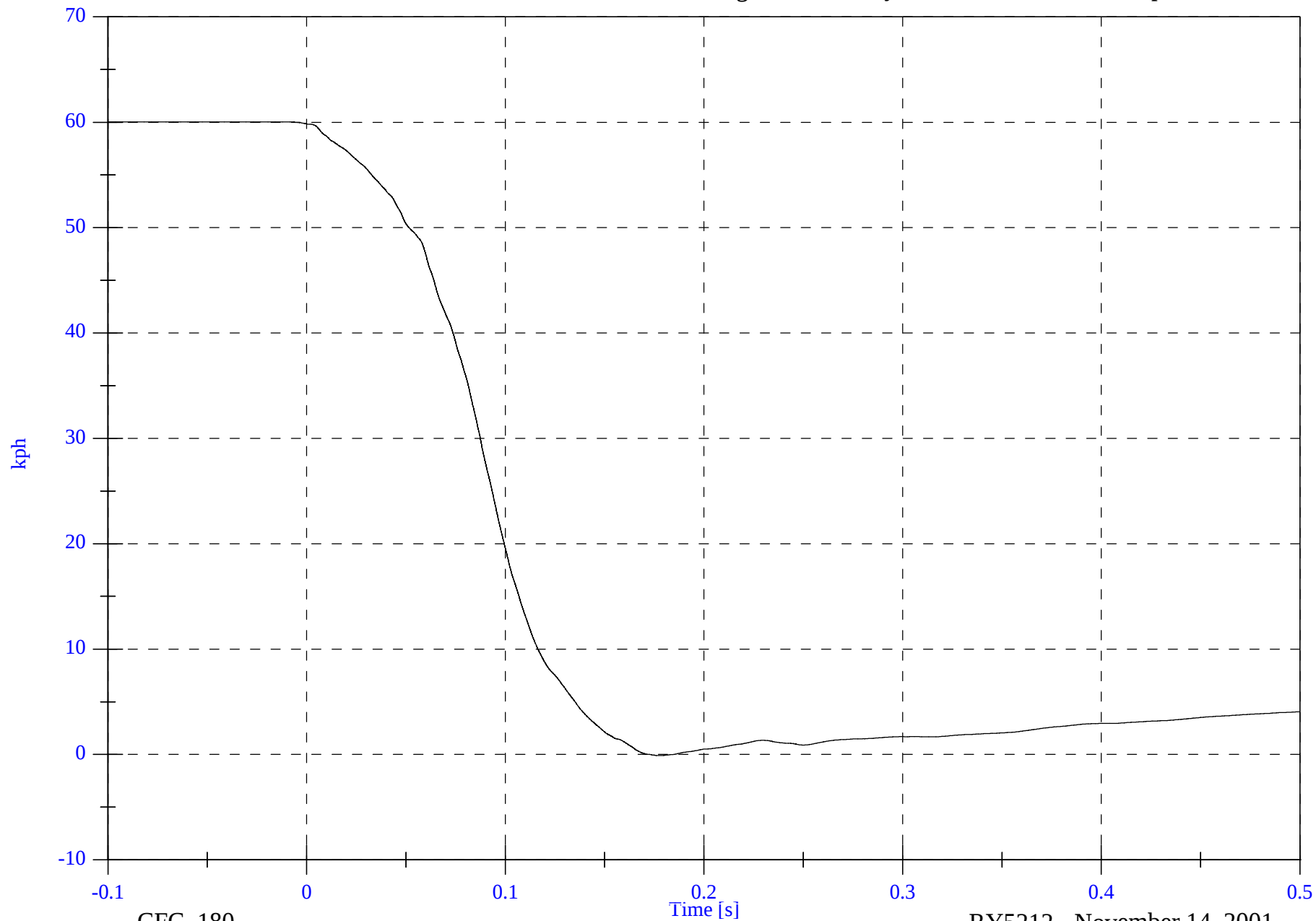


40% Frontal Offset Test #12 - 2000 Nissan Quest

Acc 3 Rear XMBR Right Ax Velocity

Max: 60.0 [kph] at -0.026 [s]

Min: -0.1 [kph] at 0.177 [s]



B-199

8413-68

CFC_180

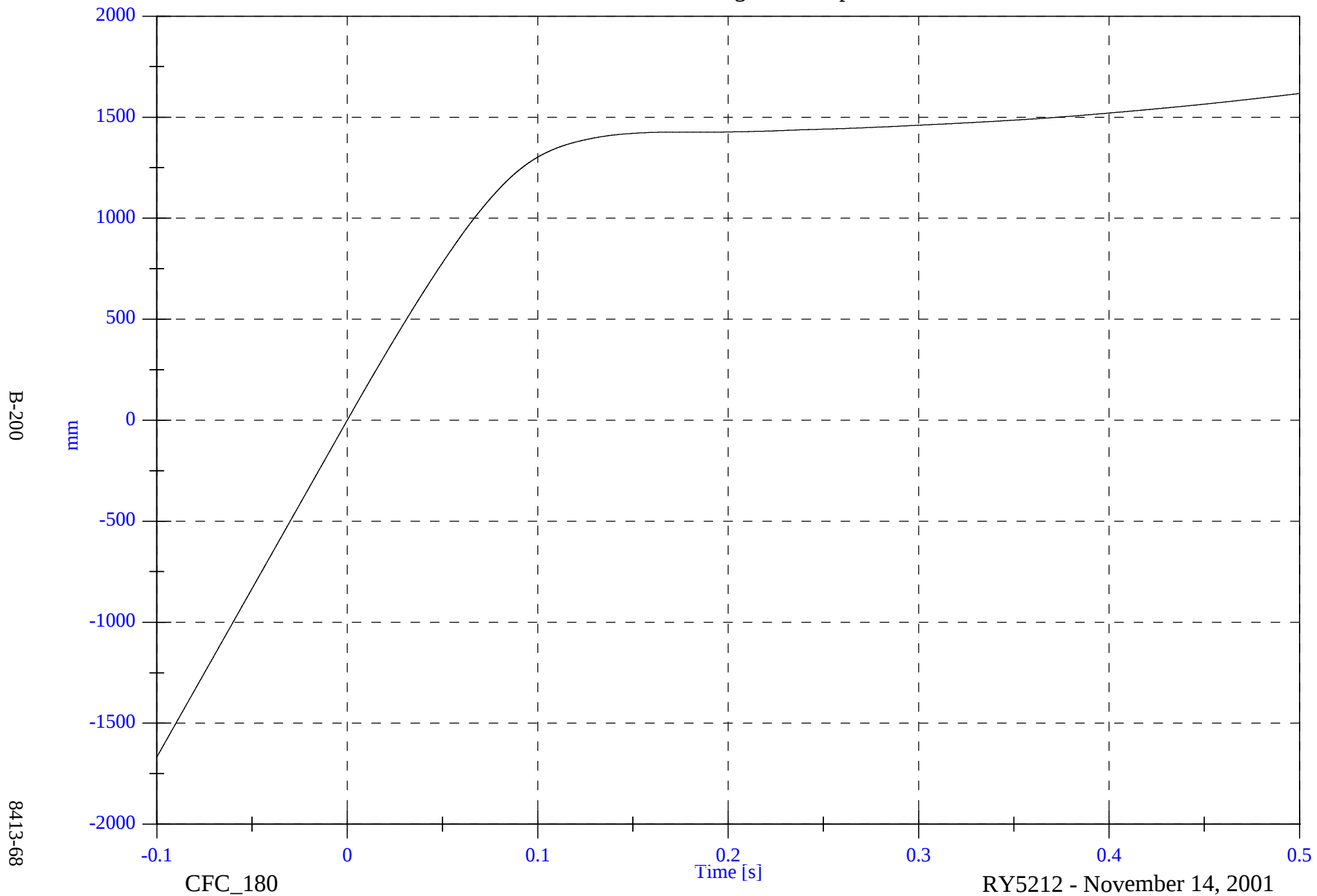
RY5212 - November 14, 2001

40% Frontal Offset Test #12 - 2000 Nissan Quest

Acc 3 Rear XMBR Right Ax Displacement

Max: 1617.3 [mm] at 0.500 [s]

Min: -1667.5 [mm] at -0.100 [s]



40% Frontal Offset Test #12 - 2000 Nissan Quest

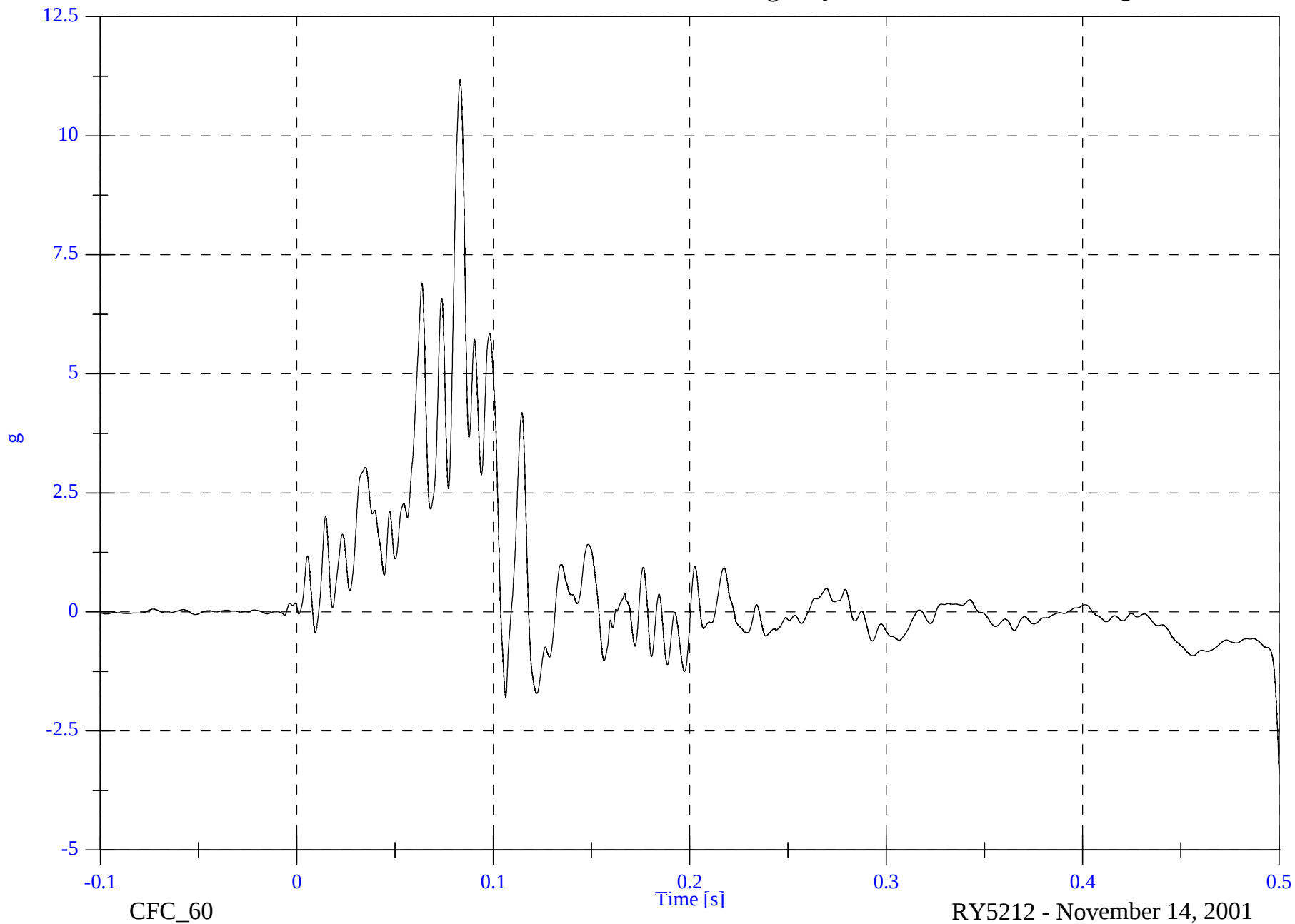
Acc 4 Rear XMBR Right Ay

Max: 11.2 [g] at 0.083 [s]

Min: -3.3 [g] at 0.500 [s]

B-201

8413-68

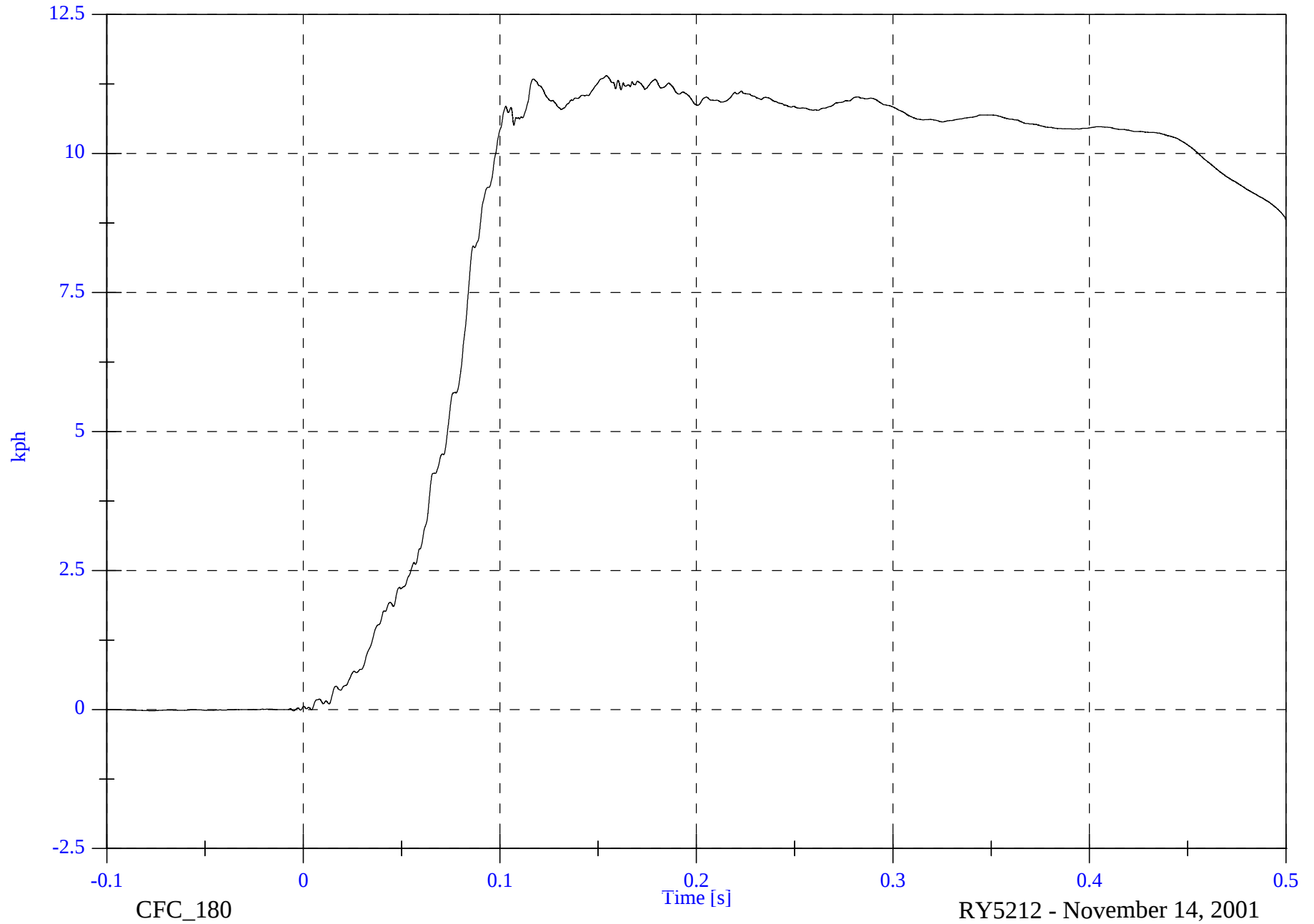


40% Frontal Offset Test #12 - 2000 Nissan Quest

Acc 4 Rear XMBR Right Ay Velocity

Max: 11.4 [kph] at 0.154 [s]

Min: -0.0 [kph] at -0.005 [s]



B-202

8413-68

CFC_180

RY5212 - November 14, 2001

40% Frontal Offset Test #12 - 2000 Nissan Quest

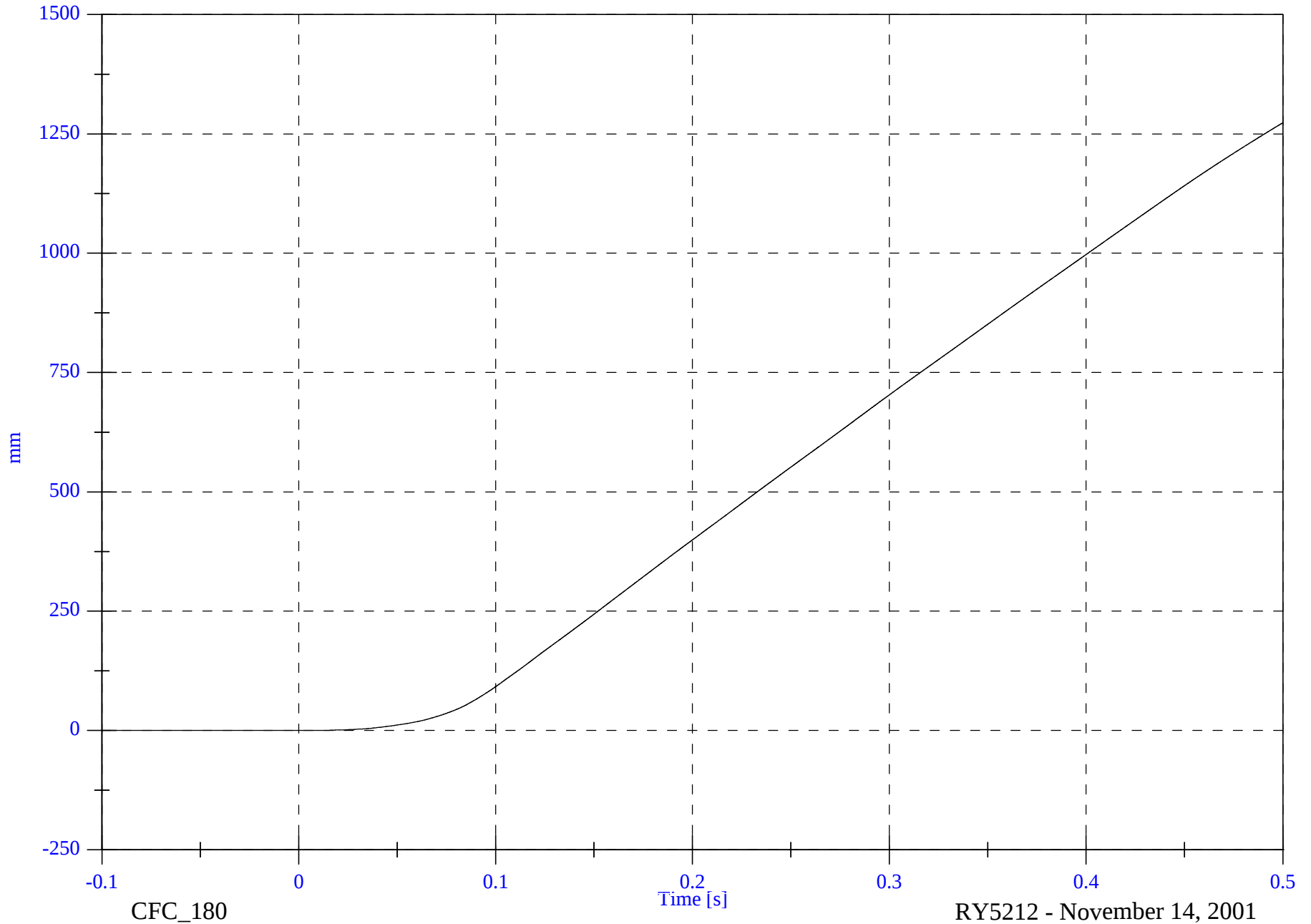
Acc 4 Rear XMBR Right Ay Displacement

Max: 1273.2 [mm] at 0.500 [s]

Min: -0.0 [mm] at -0.022 [s]

B-203

8413-68



CFC_180

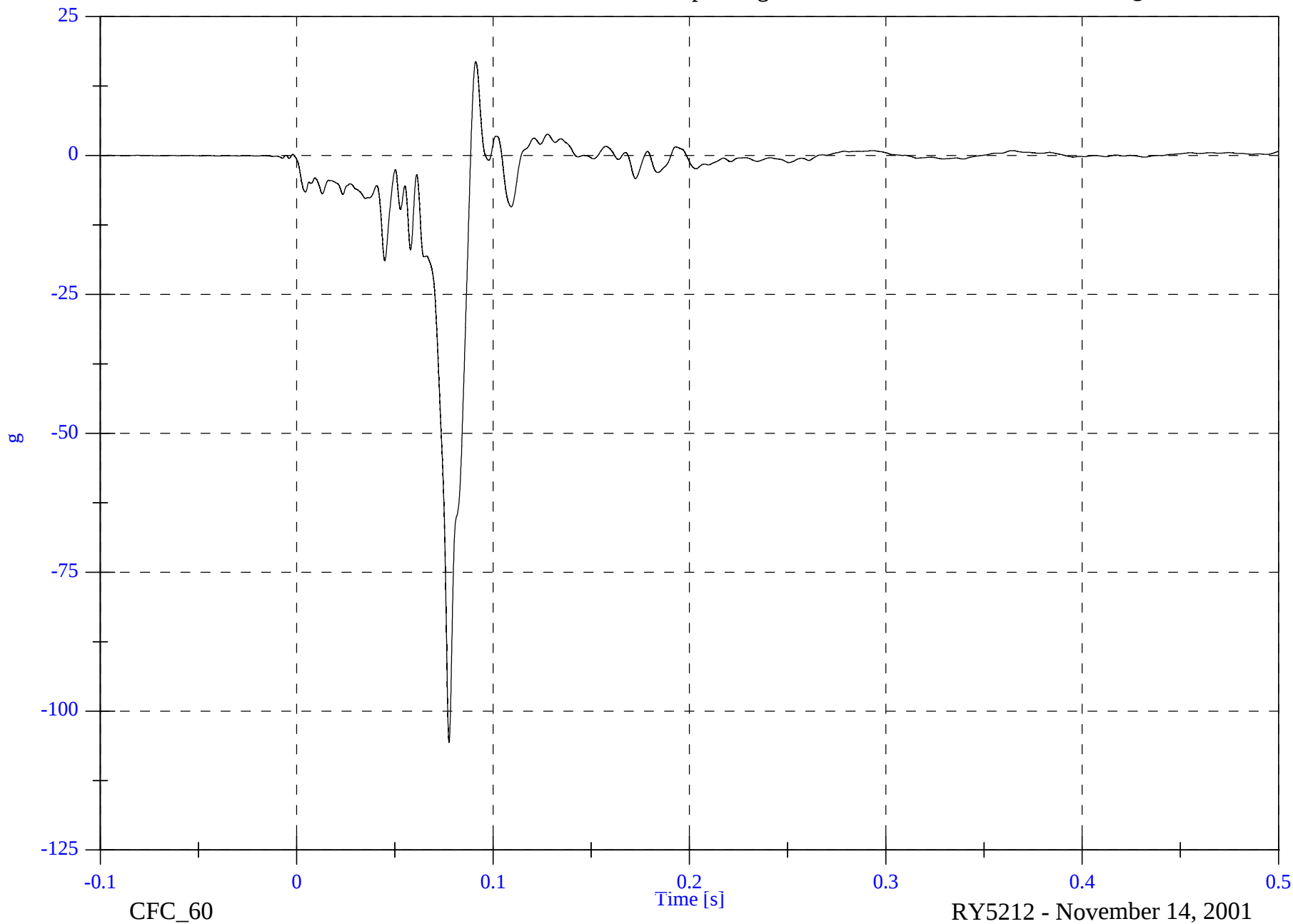
RY5212 - November 14, 2001

40% Frontal Offset Test #12 - 2000 Nissan Quest

Acc 7 P1 Toeplan Right Ax

Max: 16.9 [g] at 0.091 [s]

Min: -105.7 [g] at 0.078 [s]



B-204

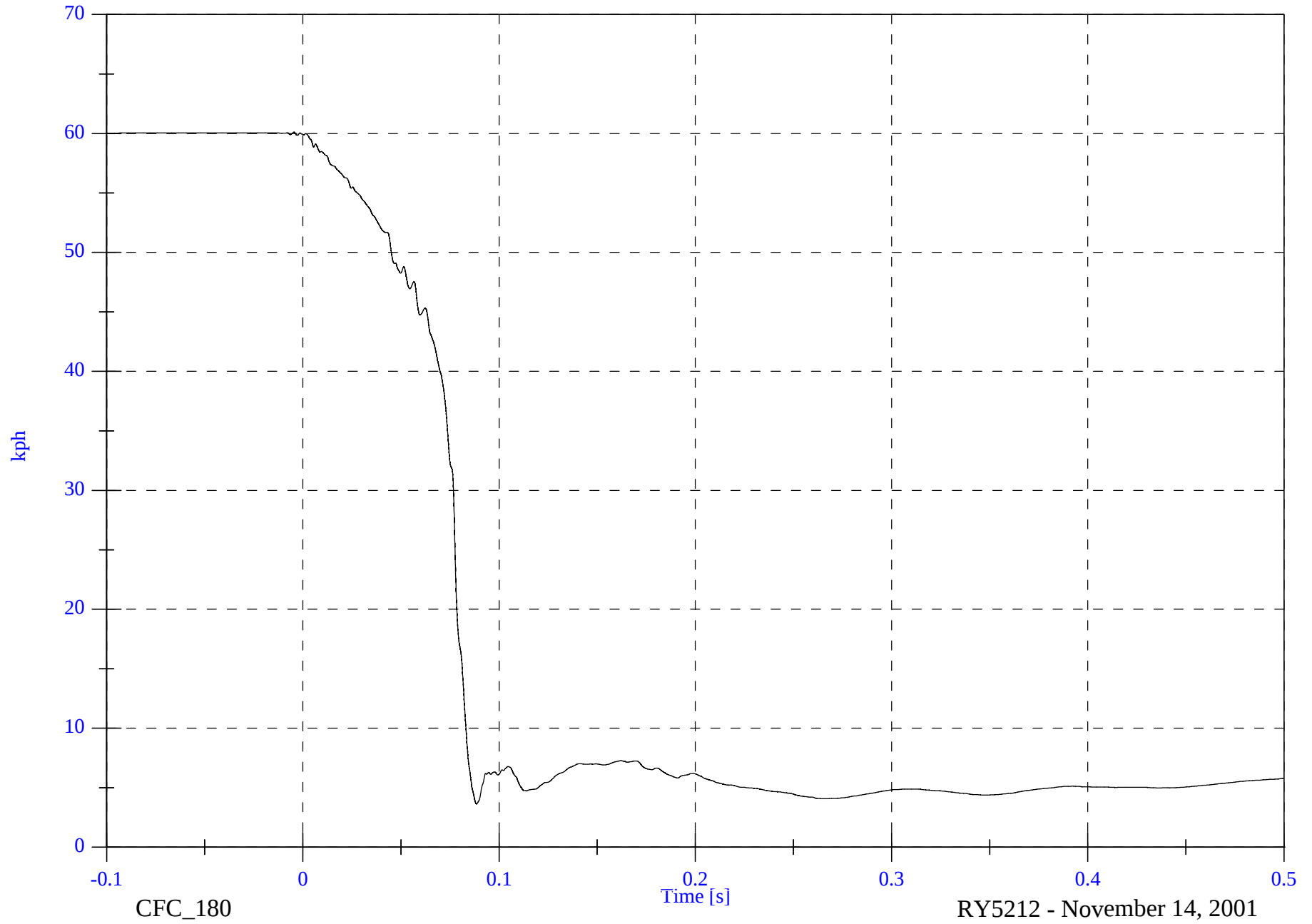
8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

Acc 7 P1 Toeapan Right Ax Velocity

Max: 60.1 [kph] at -0.004 [s]

Min: 3.6 [kph] at 0.088 [s]



B-205

8413-68

CFC_180

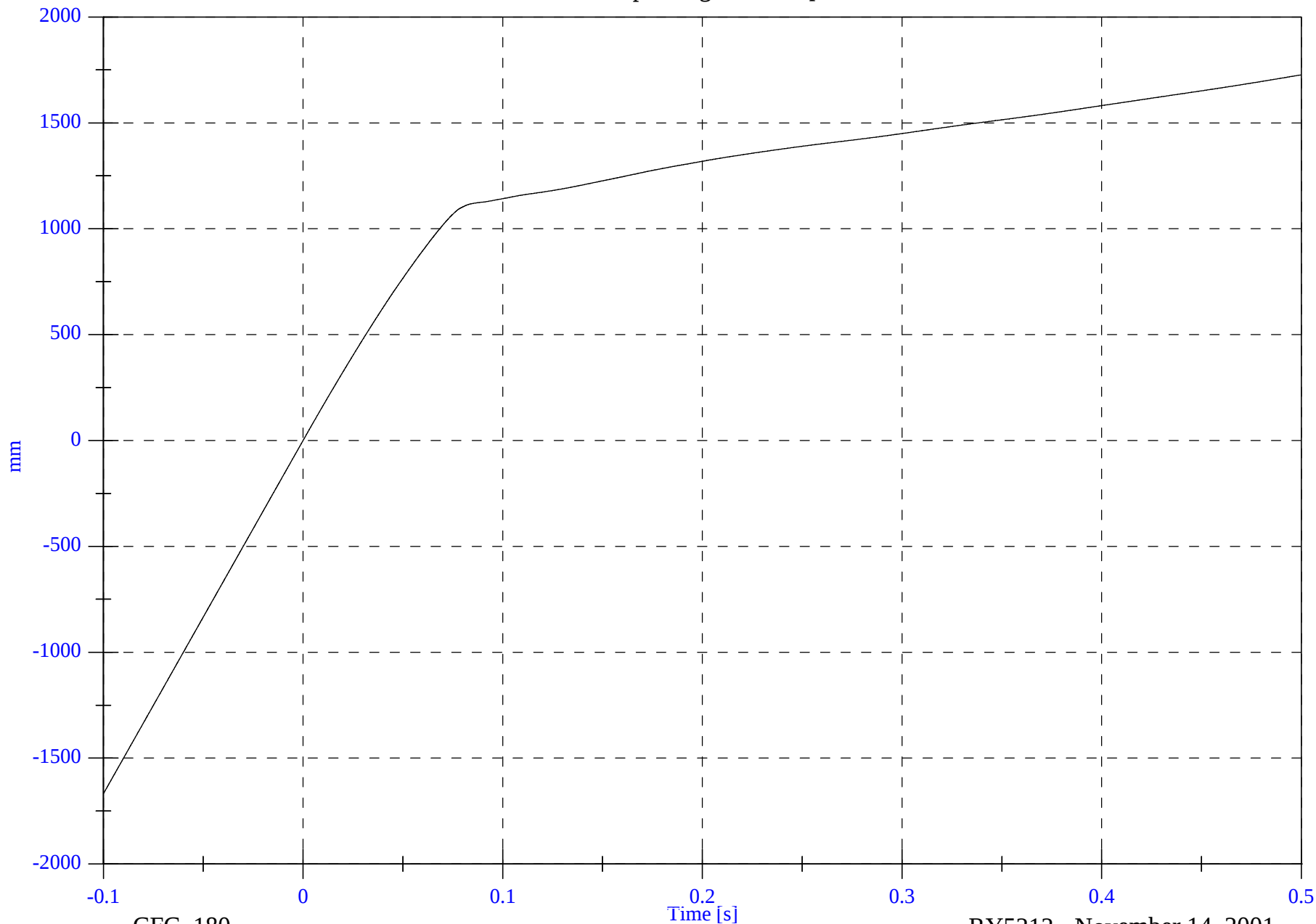
RY5212 - November 14, 2001

40% Frontal Offset Test #12 - 2000 Nissan Quest

Acc 7 P1 Toe pan Right Ax Displacement

Max: 1726.7 [mm] at 0.500 [s]

Min: -1667.9 [mm] at -0.100 [s]



B-206

8413-68

CFC_180

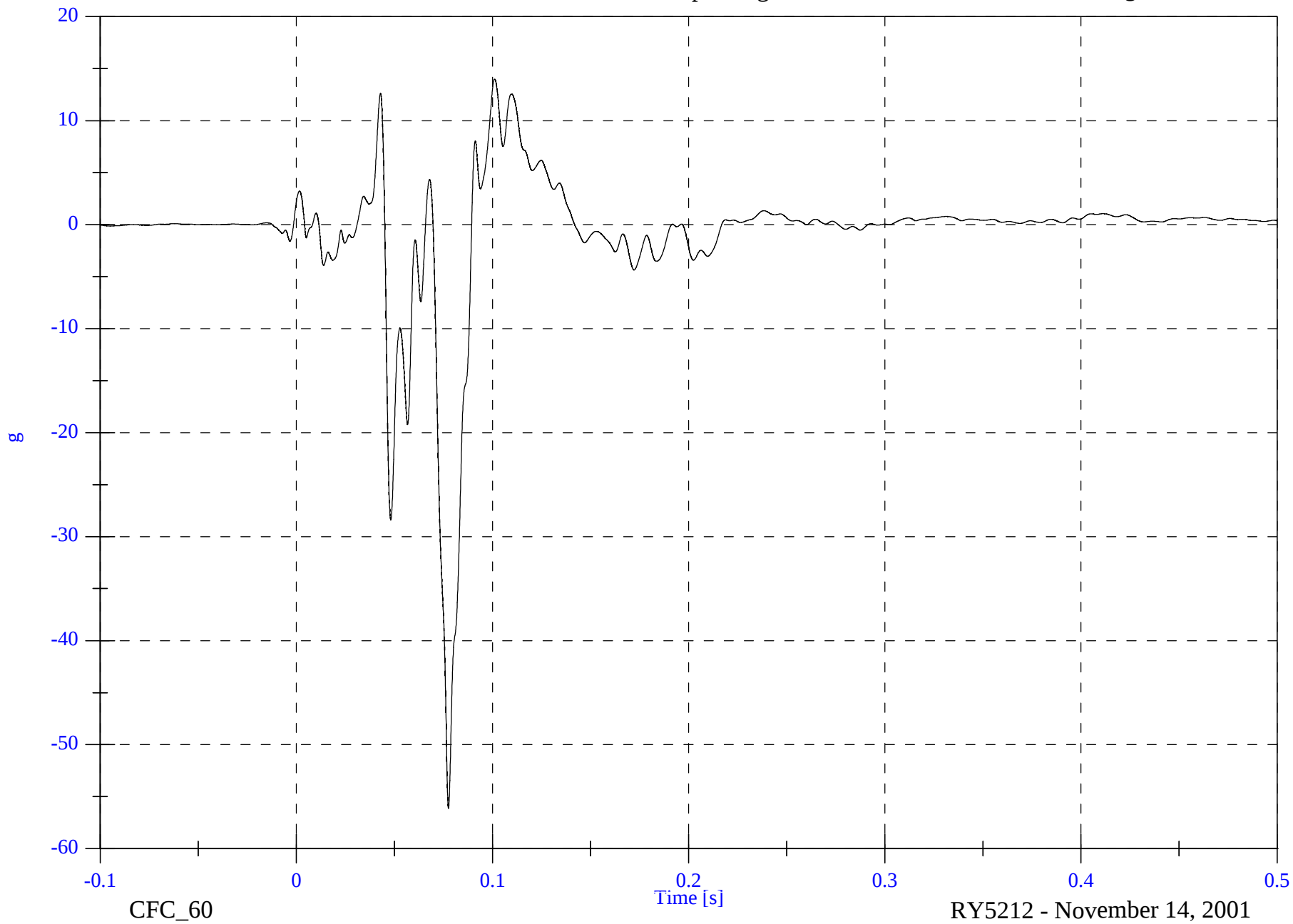
RY5212 - November 14, 2001

40% Frontal Offset Test #12 - 2000 Nissan Quest

Acc 8 P1 Toe pan Right Az

Max: 14.0 [g] at 0.101 [s]

Min: -56.1 [g] at 0.078 [s]



B-207

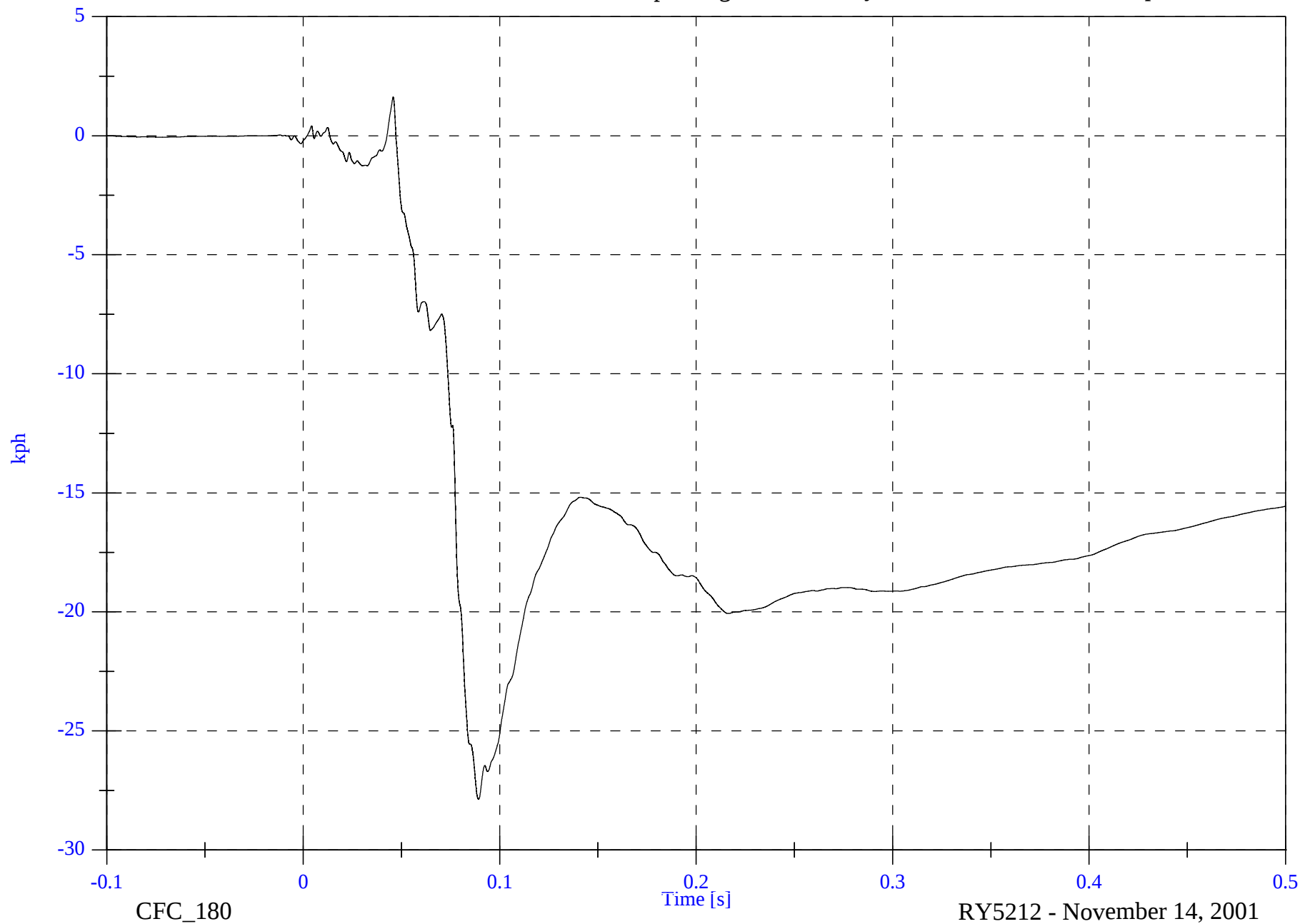
8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

Acc 8 P1 Toe pan Right Az Velocity

Max: 1.6 [kph] at 0.046 [s]

Min: -27.9 [kph] at 0.089 [s]



B-208

8413-68

CFC_180

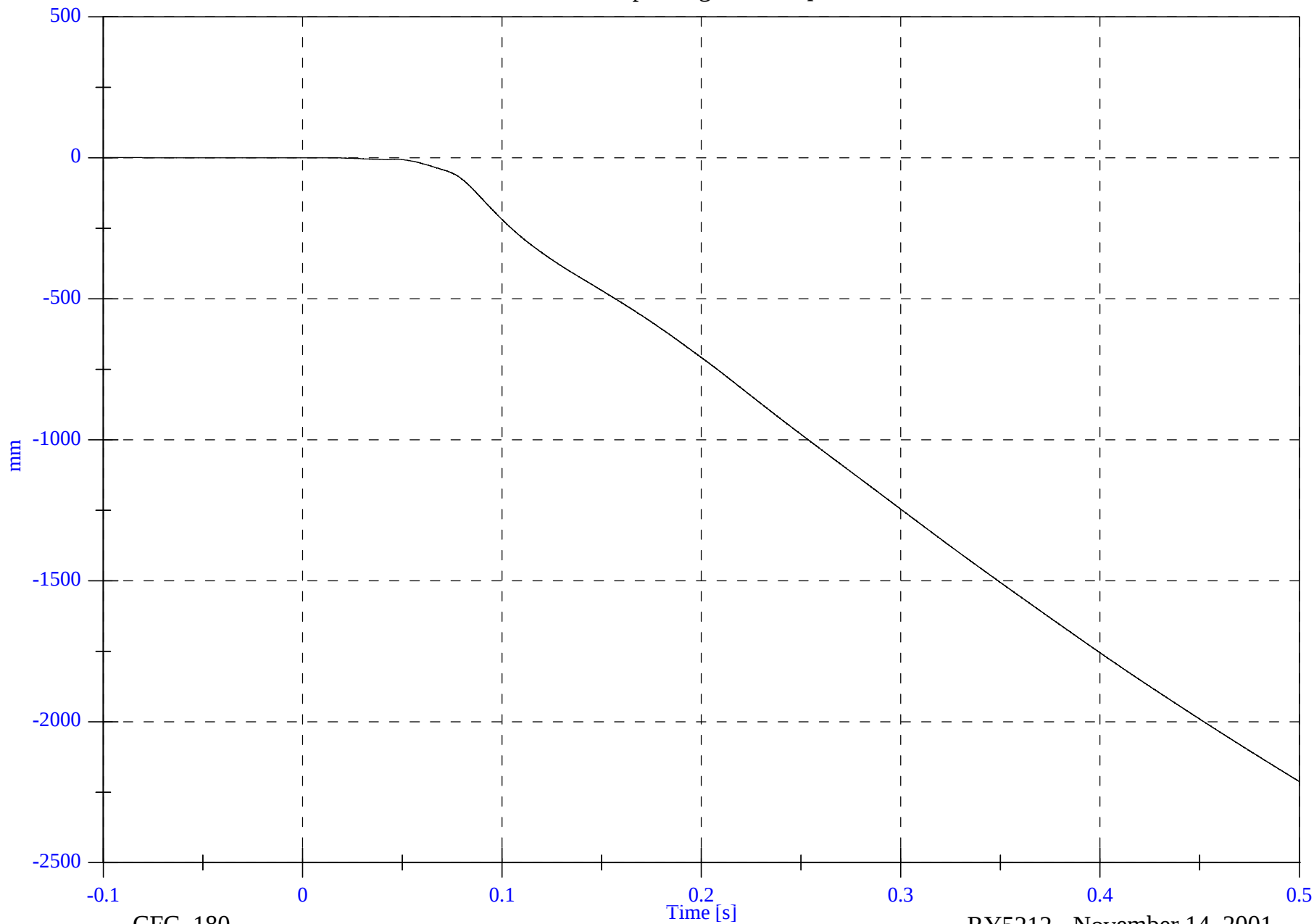
RY5212 - November 14, 2001

40% Frontal Offset Test #12 - 2000 Nissan Quest

Acc 8 P1 Toe pan Right Az Displacement

Max: 1.0 [mm] at -0.100 [s]

Min: -2212.1 [mm] at 0.500 [s]



B-209

8413-68

CFC_180

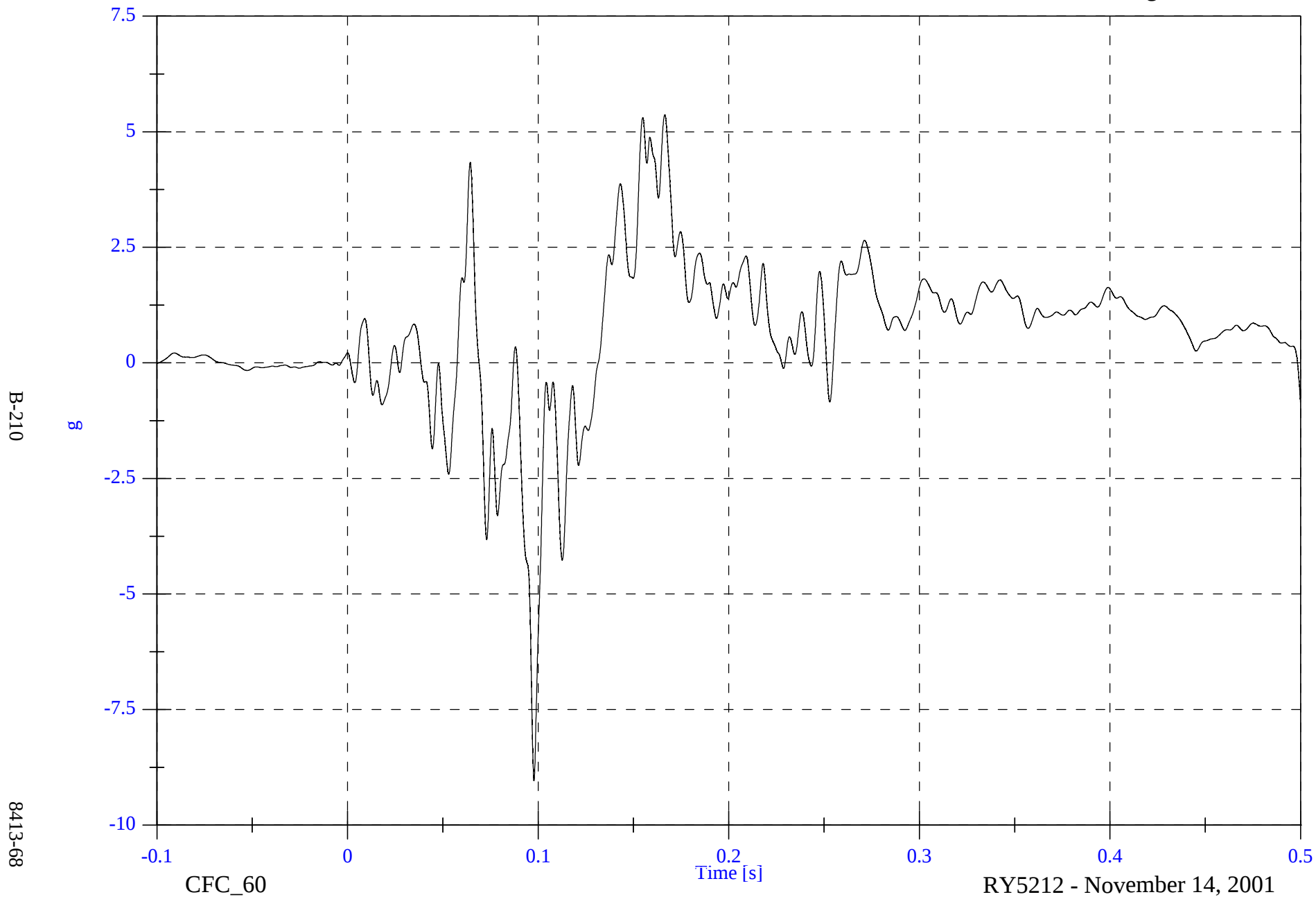
RY5212 - November 14, 2001

40% Frontal Offset Test #12 - 2000 Nissan Quest

Acc 9 Trunk Az

Max: 5.4 [g] at 0.166 [s]

Min: -9.0 [g] at 0.098 [s]



40% Frontal Offset Test #12 - 2000 Nissan Quest

Acc 9 Trunk Az Velocity

Max: 13.1 [kph] at 0.499 [s]

Min: -4.9 [kph] at 0.130 [s]



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8413-68

CFC_180

RY5212 - November 14, 2001

40% Frontal Offset Test #12 - 2000 Nissan Quest

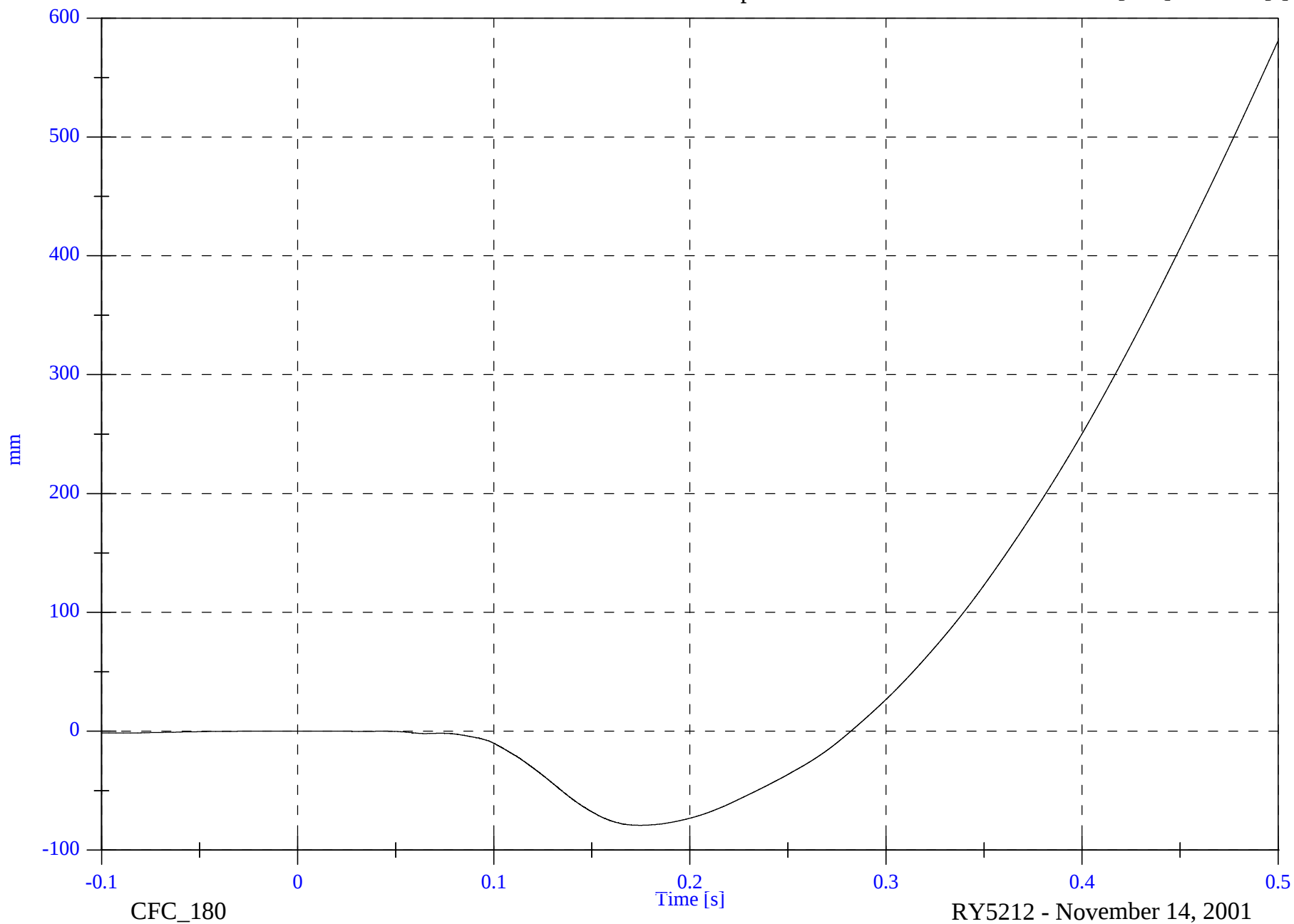
Acc 9 Trunk Az Displacement

Max: 580.8 [mm] at 0.500 [s]

Min: -79.2 [mm] at 0.175 [s]

B-212

8413-68



CFC_180

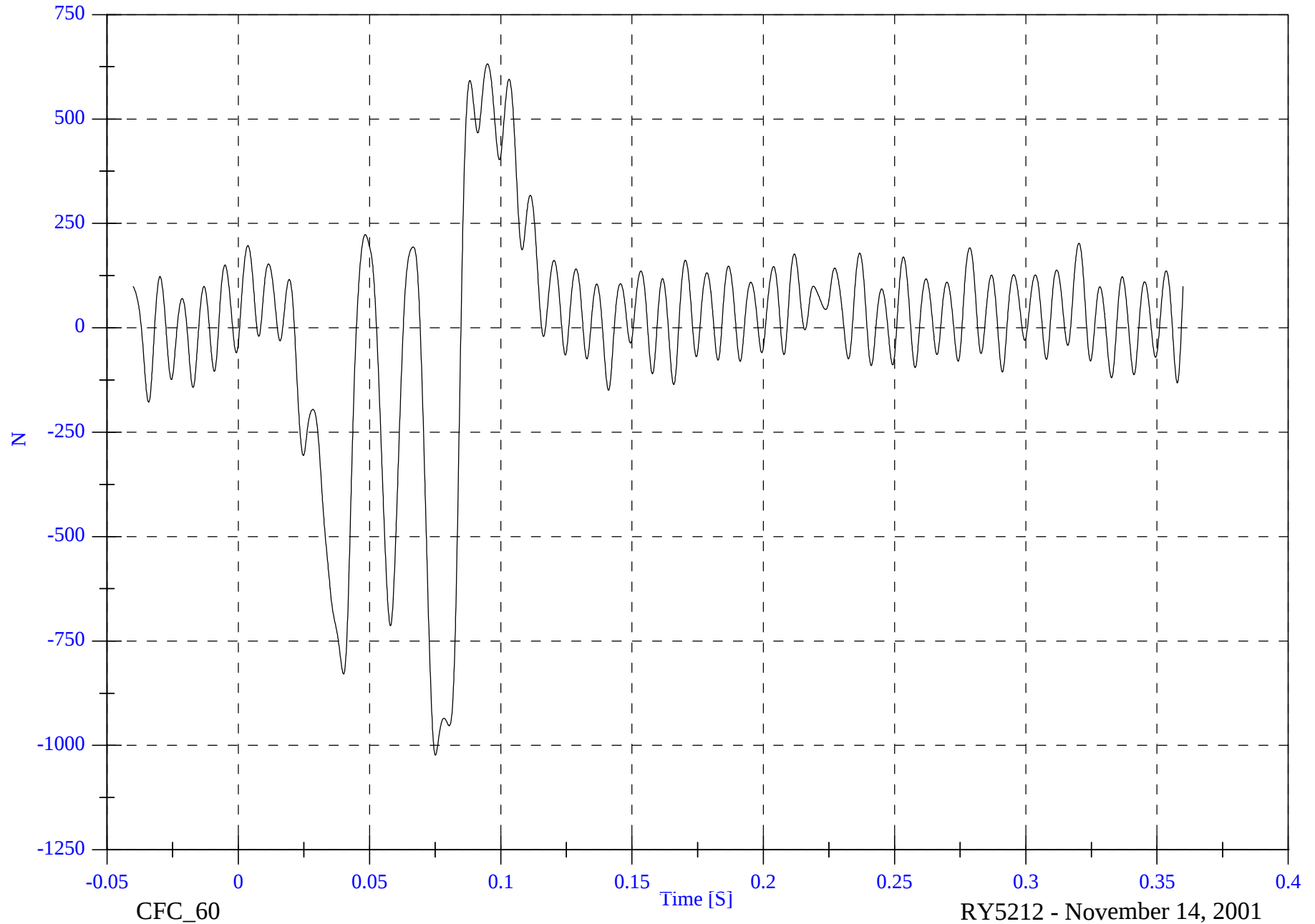
RY5212 - November 14, 2001

40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell E2 FY

Max: 632.0 [N] at 0.095 [S]

Min: -1023.2 [N] at 0.075 [S]



B-213

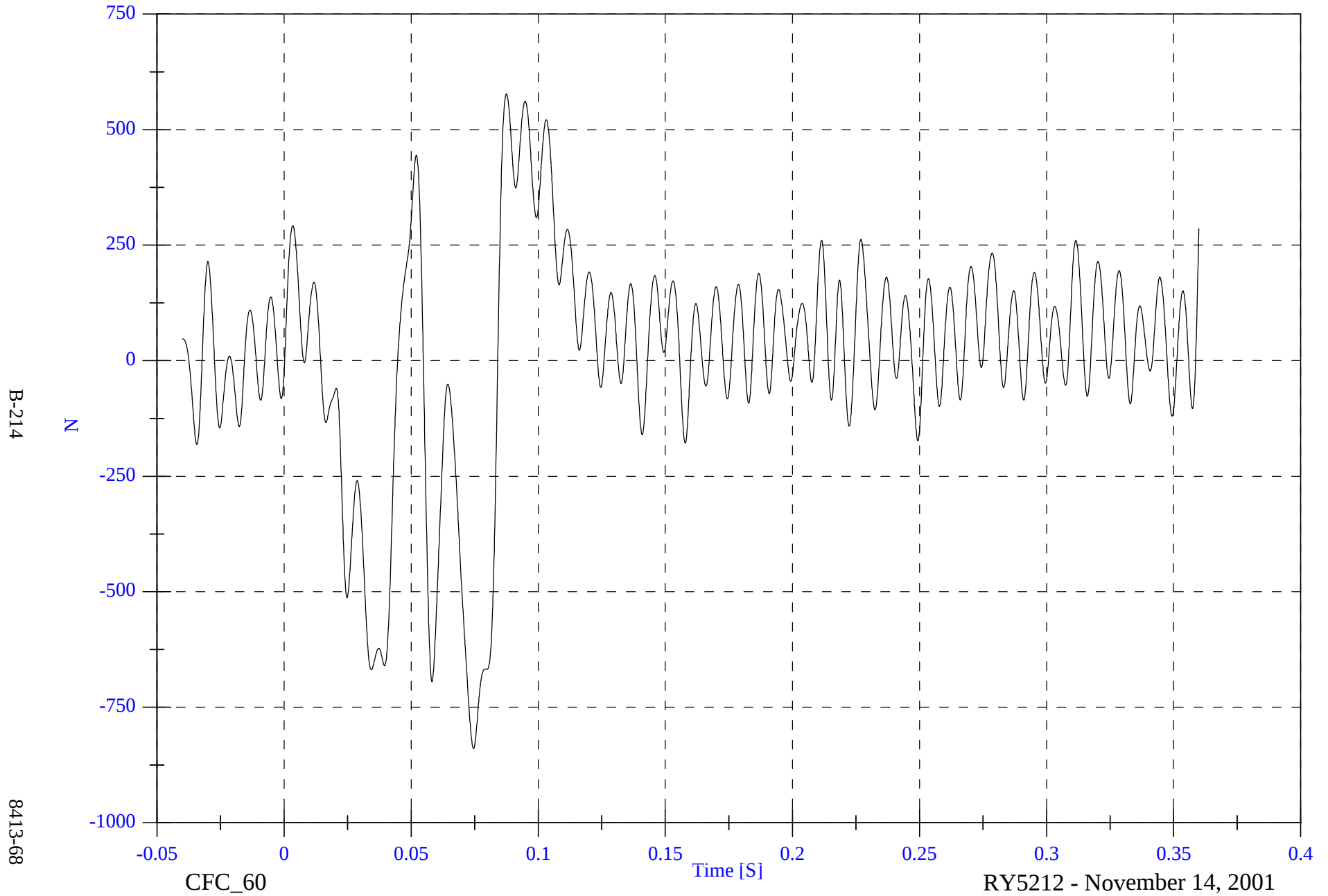
8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell E3 FY

Max: 577.3 [N] at 0.087 [S]

Min: -839.3 [N] at 0.074 [S]

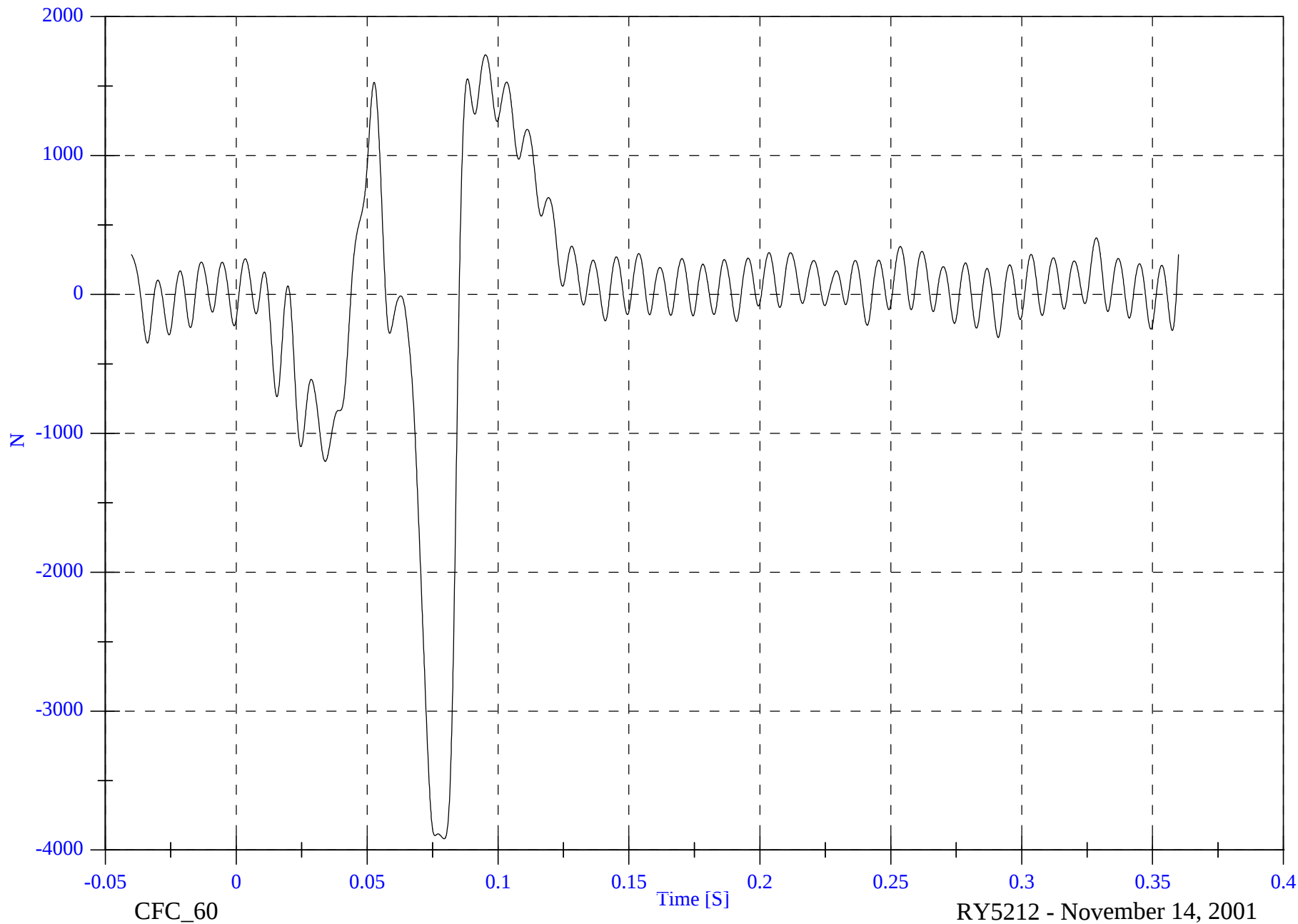


40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell E4 FY

Max: 1724.9 [N] at 0.095 [S]

Min: -3919.7 [N] at 0.079 [S]



B-215

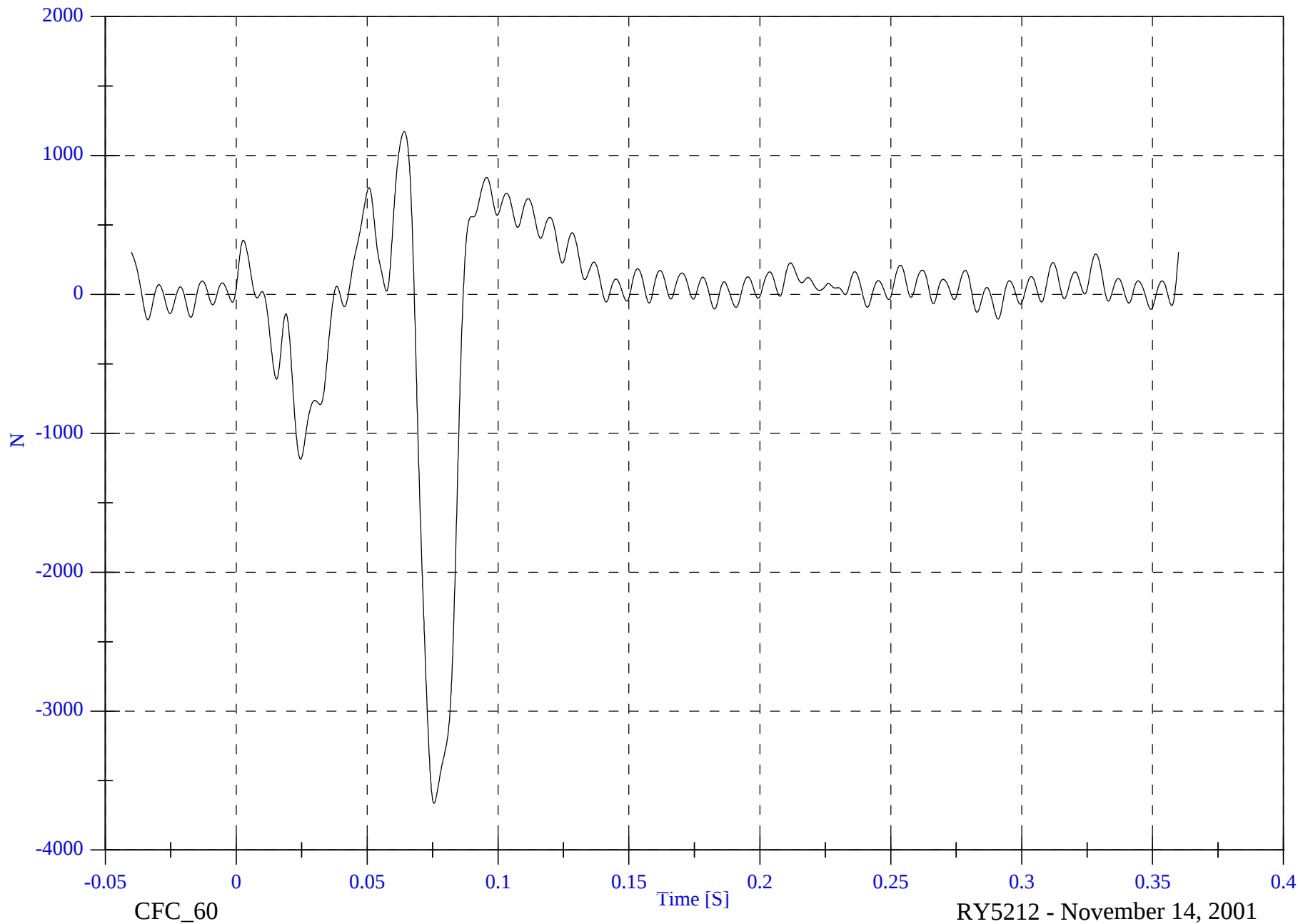
8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell E5 FY

Max: 1172.6 [N] at 0.064 [S]

Min: -3663.1 [N] at 0.076 [S]



B-216

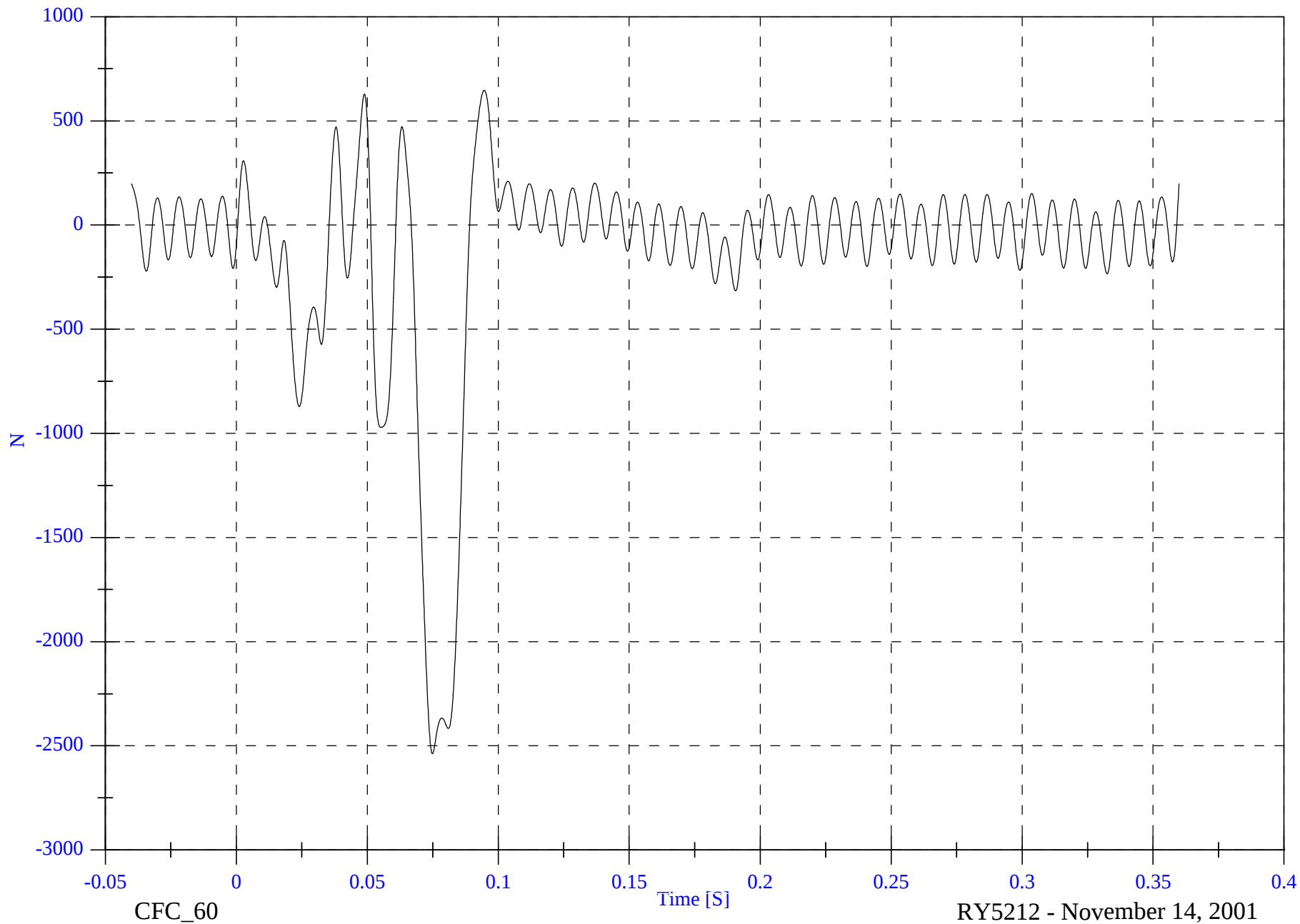
8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell E6 FY

Max: 646.4 [N] at 0.095 [S]

Min: -2538.0 [N] at 0.075 [S]



B-217

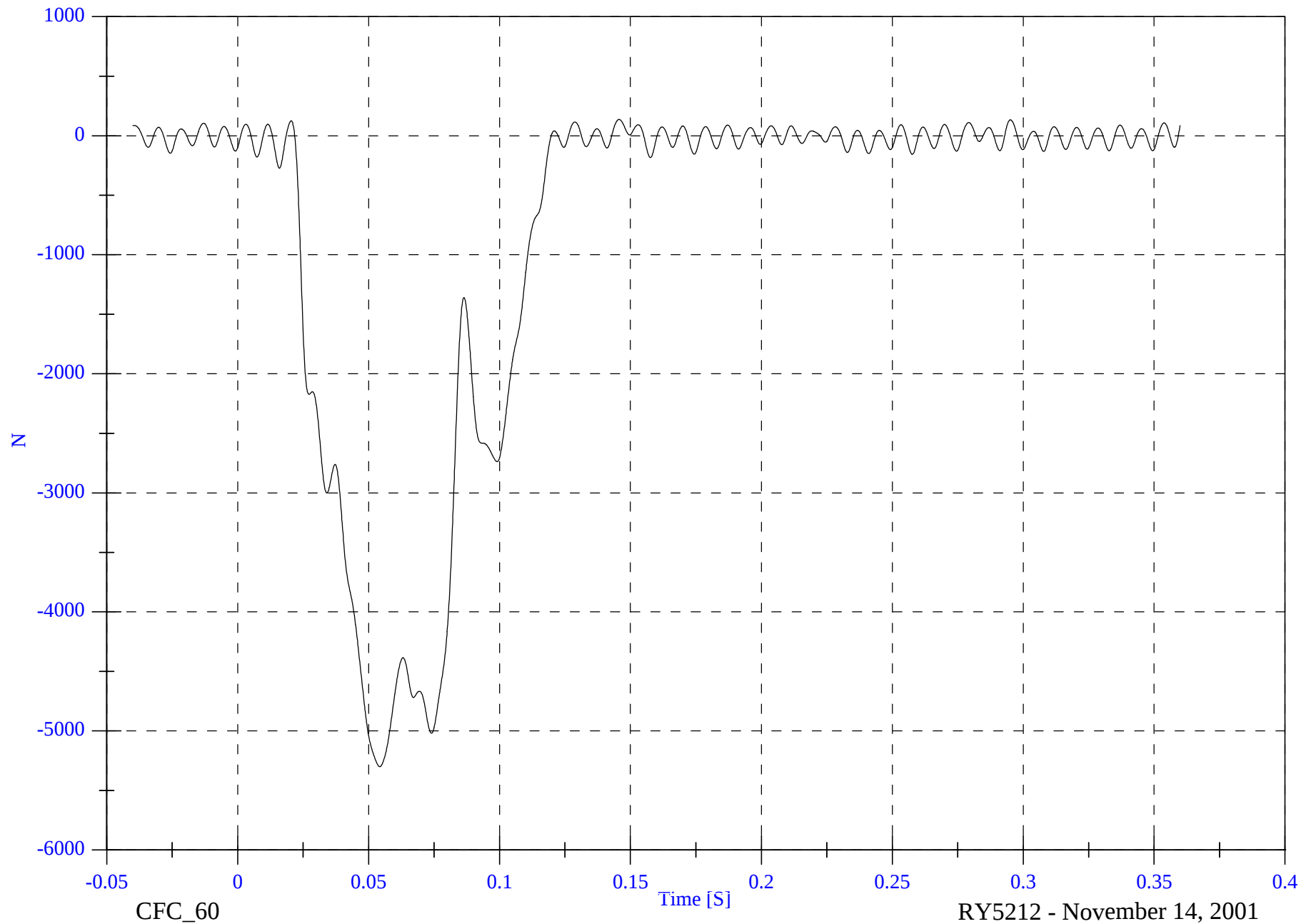
8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell E1 FX

Max: 136.7 [N] at 0.146 [S]

Min: -5300.6 [N] at 0.054 [S]



B-218

8413-68

CFC_60

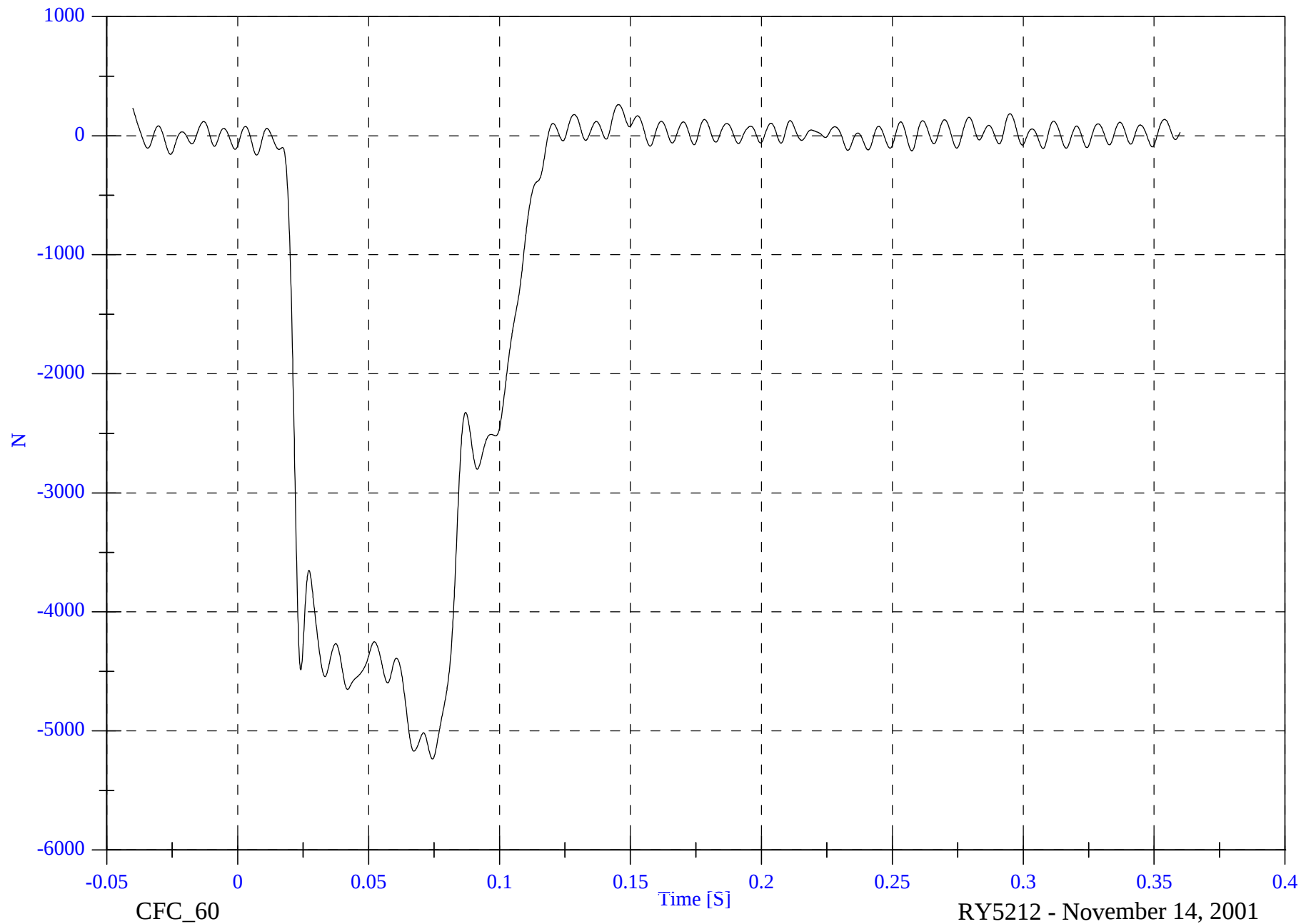
RY5212 - November 14, 2001

40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell E2 FX

Max: 261.4 [N] at 0.145 [S]

Min: -5236.7 [N] at 0.074 [S]



B-219

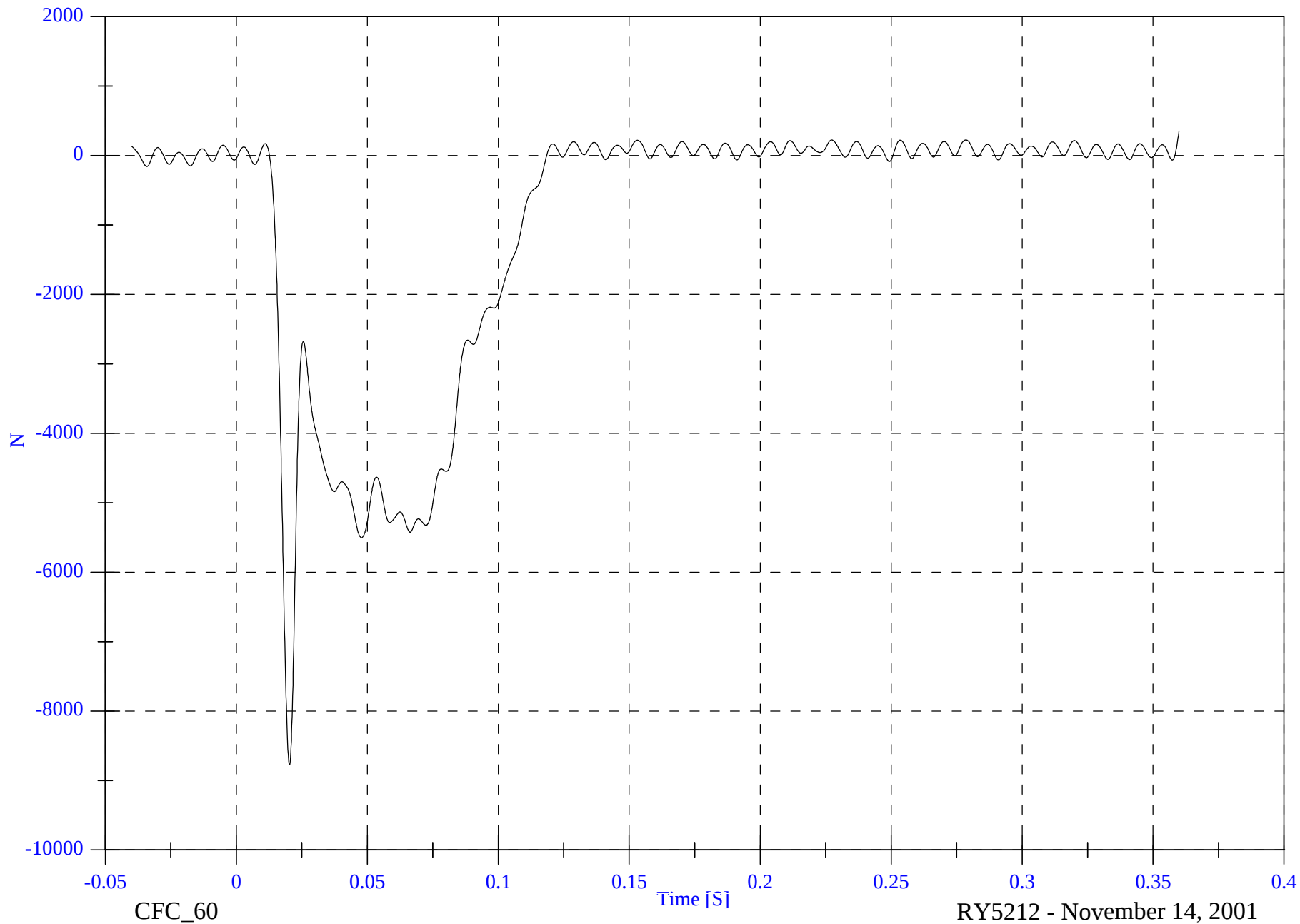
8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell E3 FX

Max: 357.9 [N] at 0.360 [S]

Min: -8776.1 [N] at 0.020 [S]



B-220

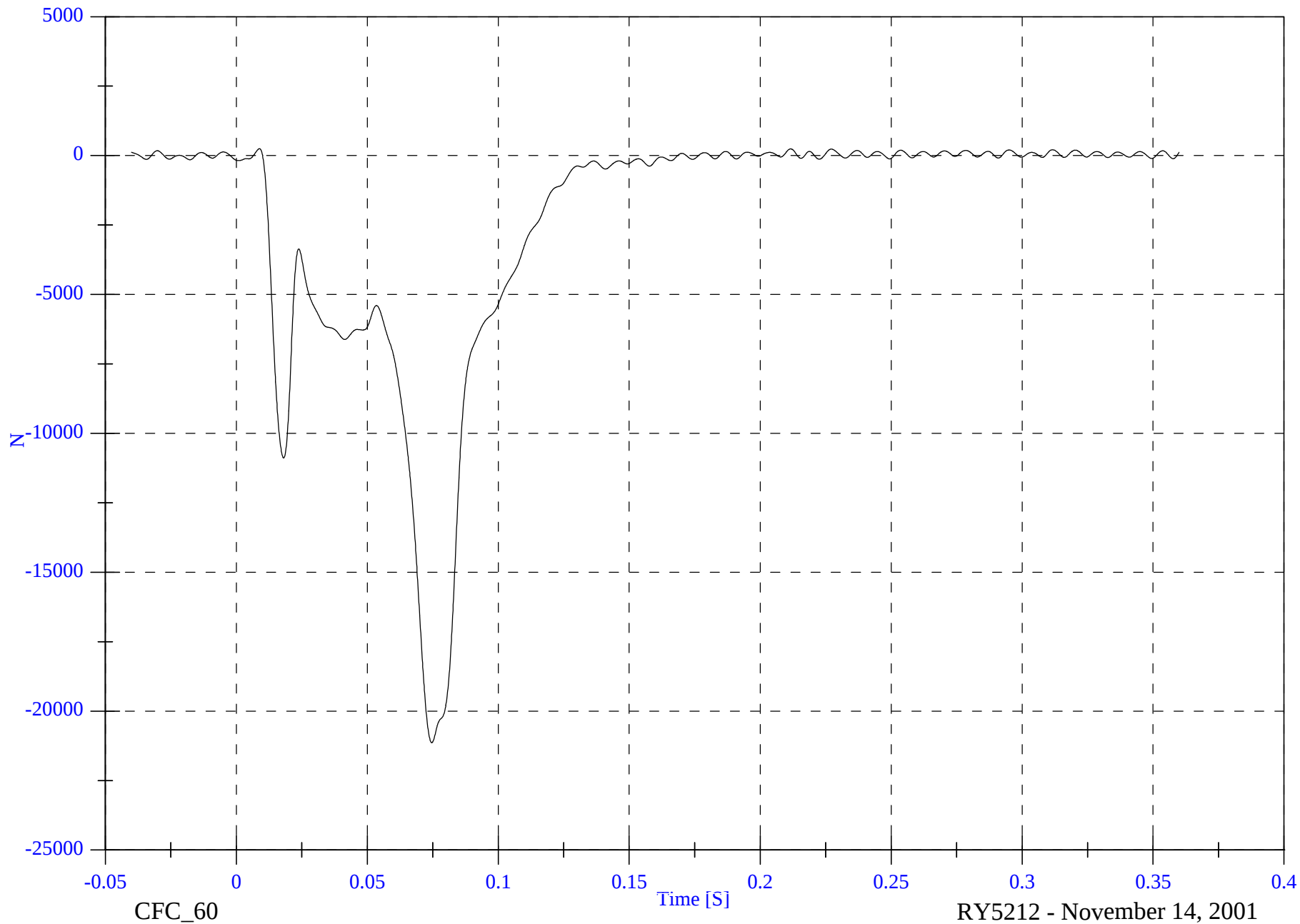
8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell E4 FX

Max: 249.3 [N] at 0.009 [S]

Min: -21140.7 [N] at 0.075 [S]



B-221

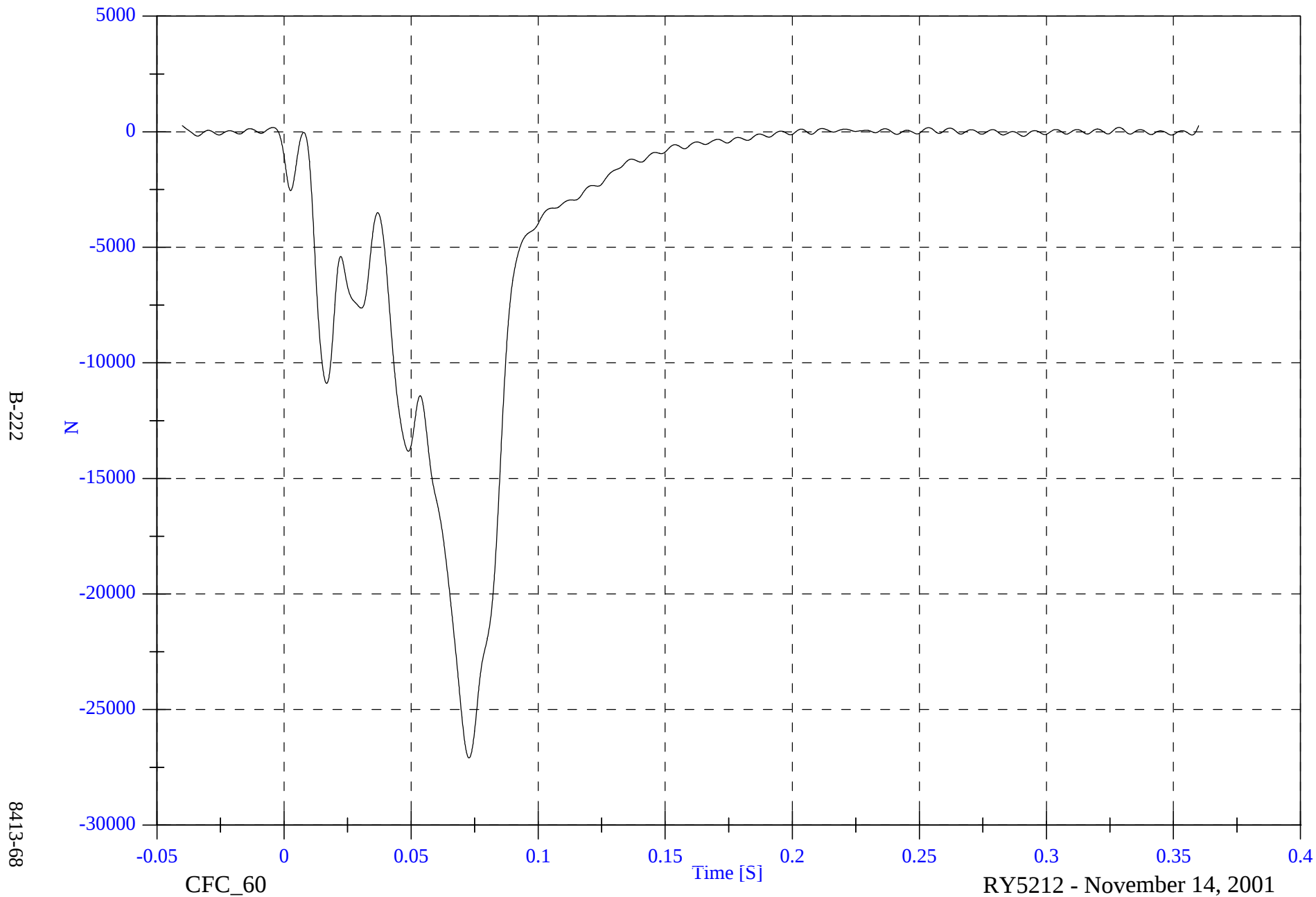
8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell E5 FX

Max: 262.4 [N] at 0.360 [S]

Min: -27092.7 [N] at 0.073 [S]

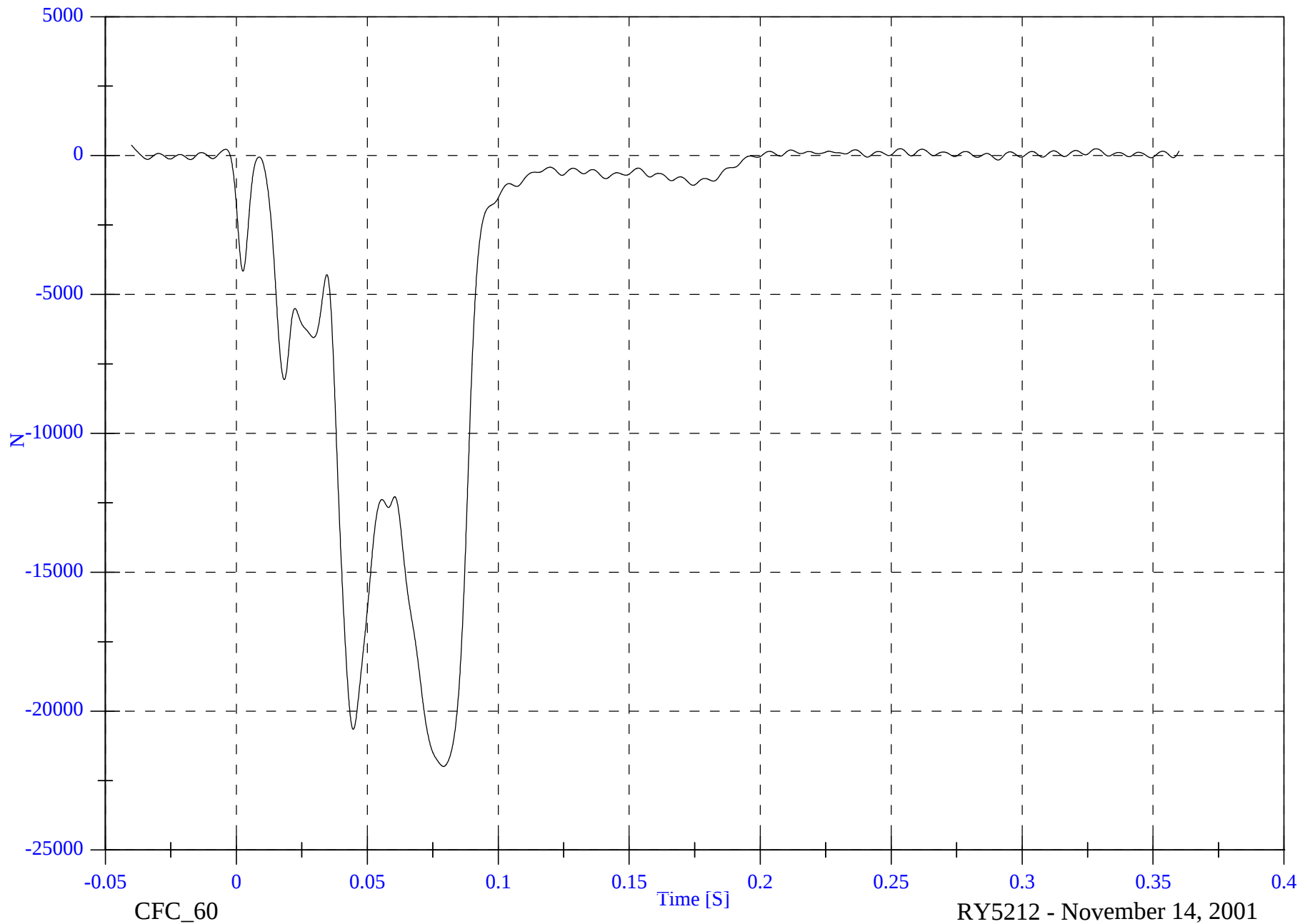


40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell E6 FX

Max: 373.8 [N] at -0.040 [S]

Min: -21992.6 [N] at 0.079 [S]



B-223

8413-68

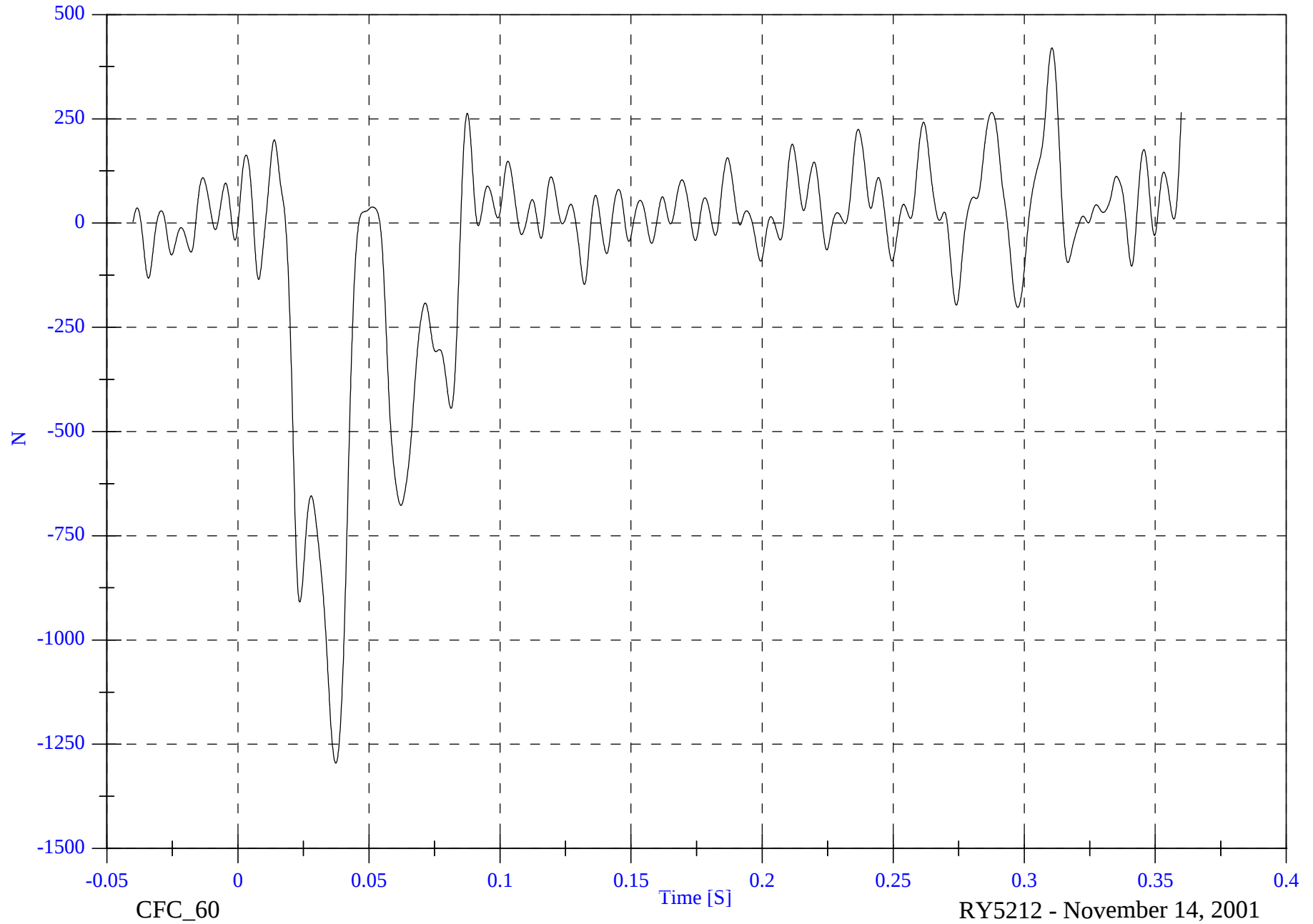
RY5212 - November 14, 2001

40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell D2 FY

Max: 420.2 [N] at 0.311 [S]

Min: -1295.5 [N] at 0.037 [S]



B-224

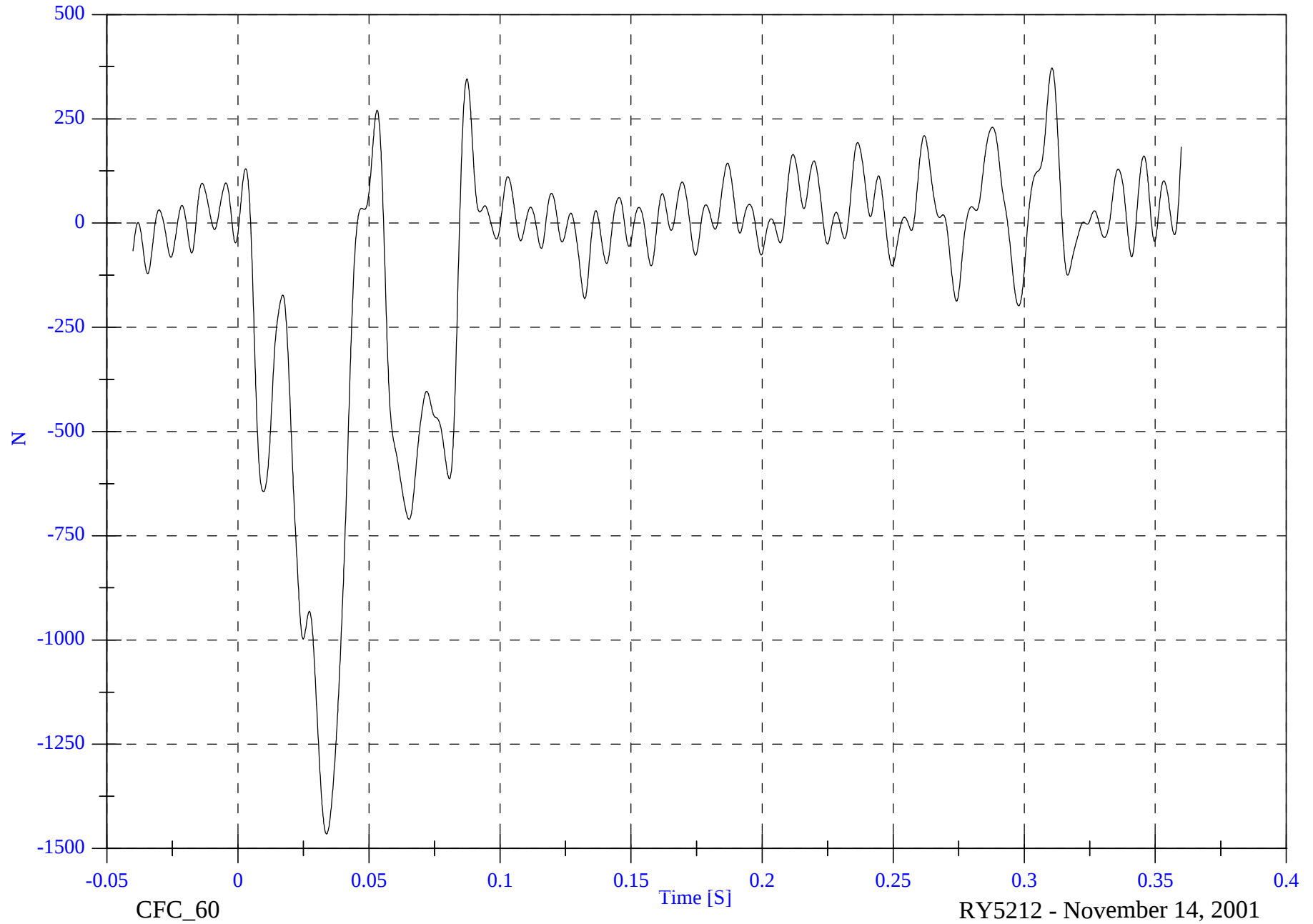
8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell D3 FY

Max: 372.0 [N] at 0.311 [S]

Min: -1465.3 [N] at 0.034 [S]

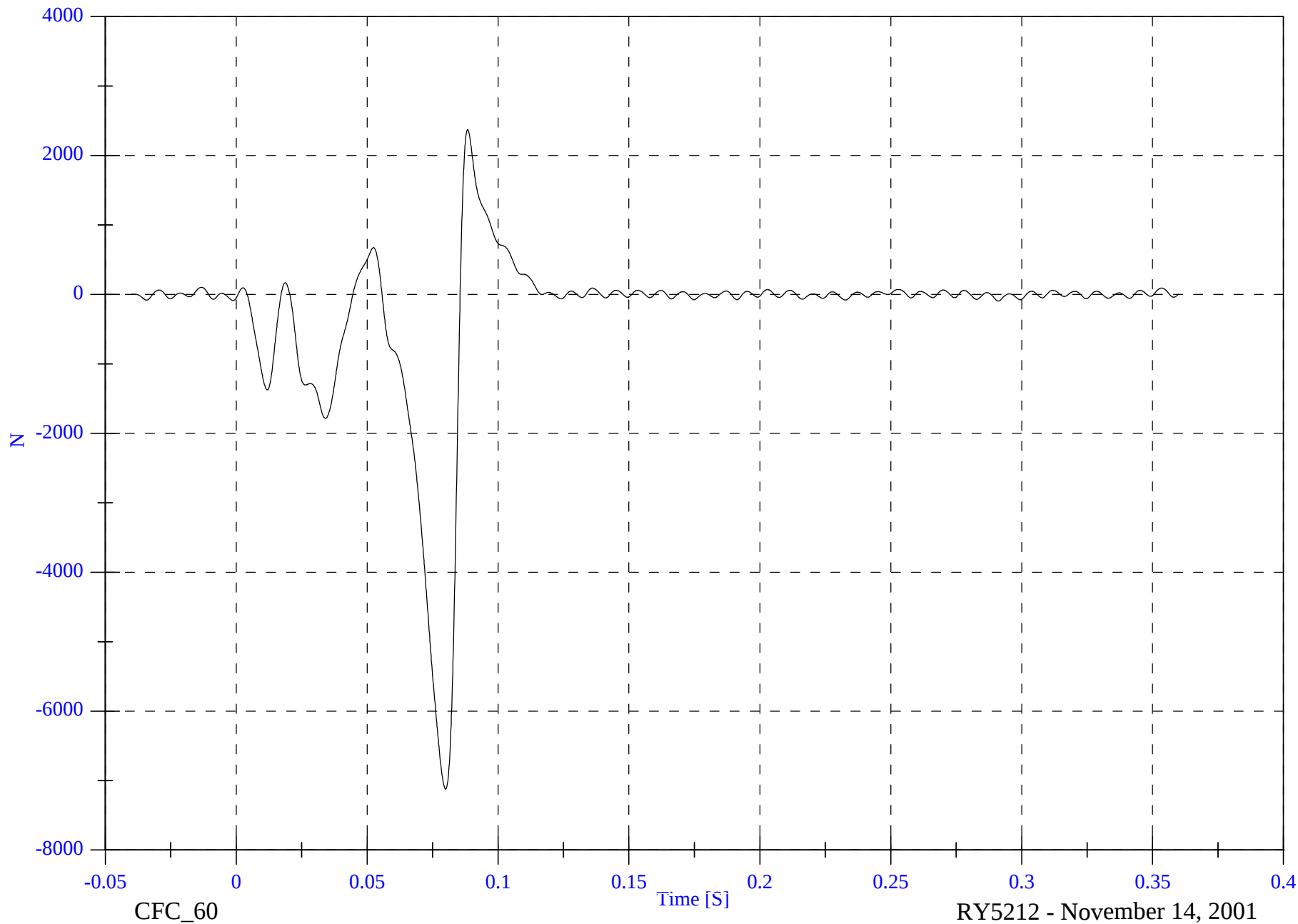


40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell D4 FY

Max: 2373.0 [N] at 0.088 [S]

Min: -7122.9 [N] at 0.080 [S]



B-226

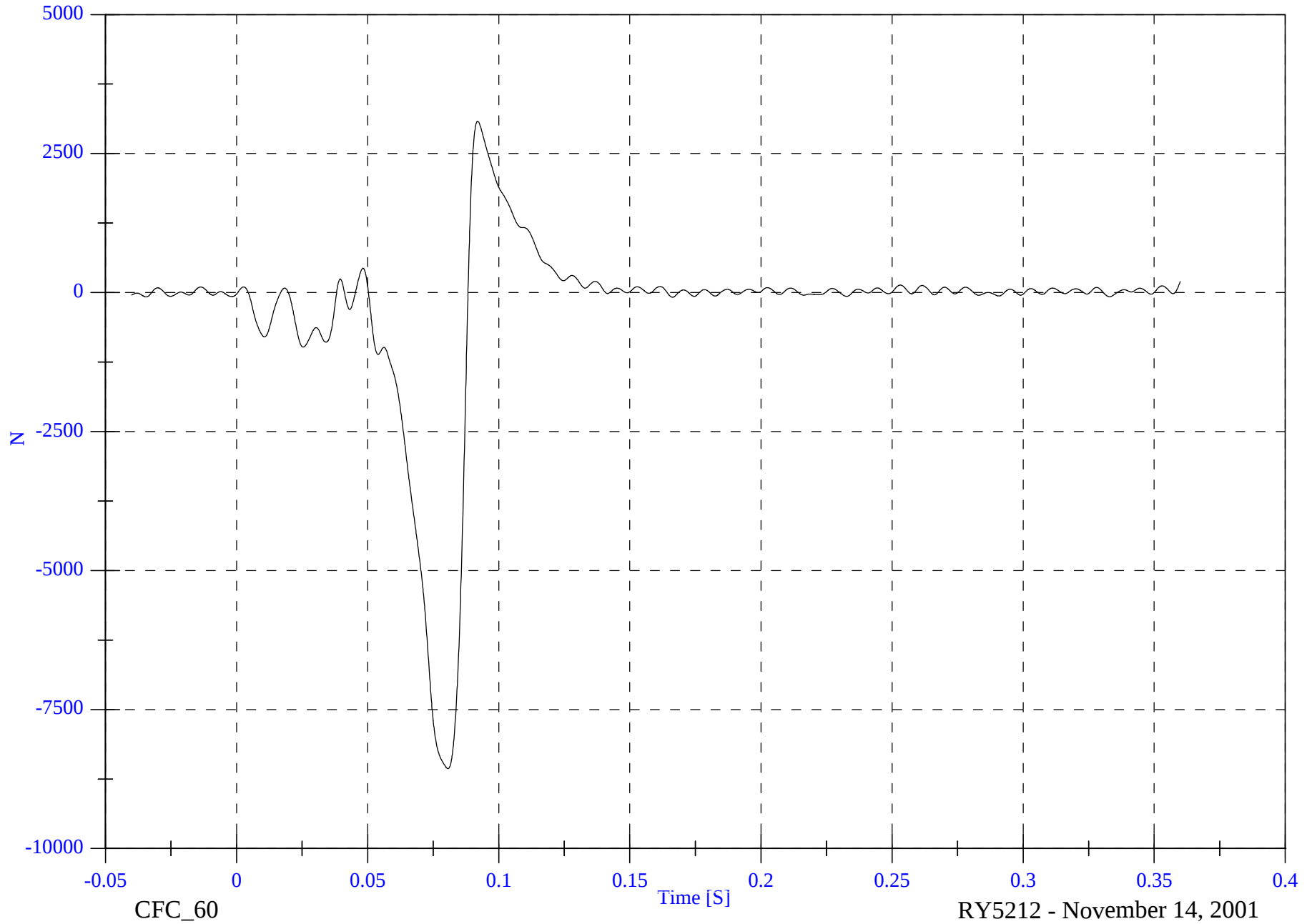
8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell D5 FY

Max: 3080.5 [N] at 0.092 [S]

Min: -8564.4 [N] at 0.081 [S]



B-227

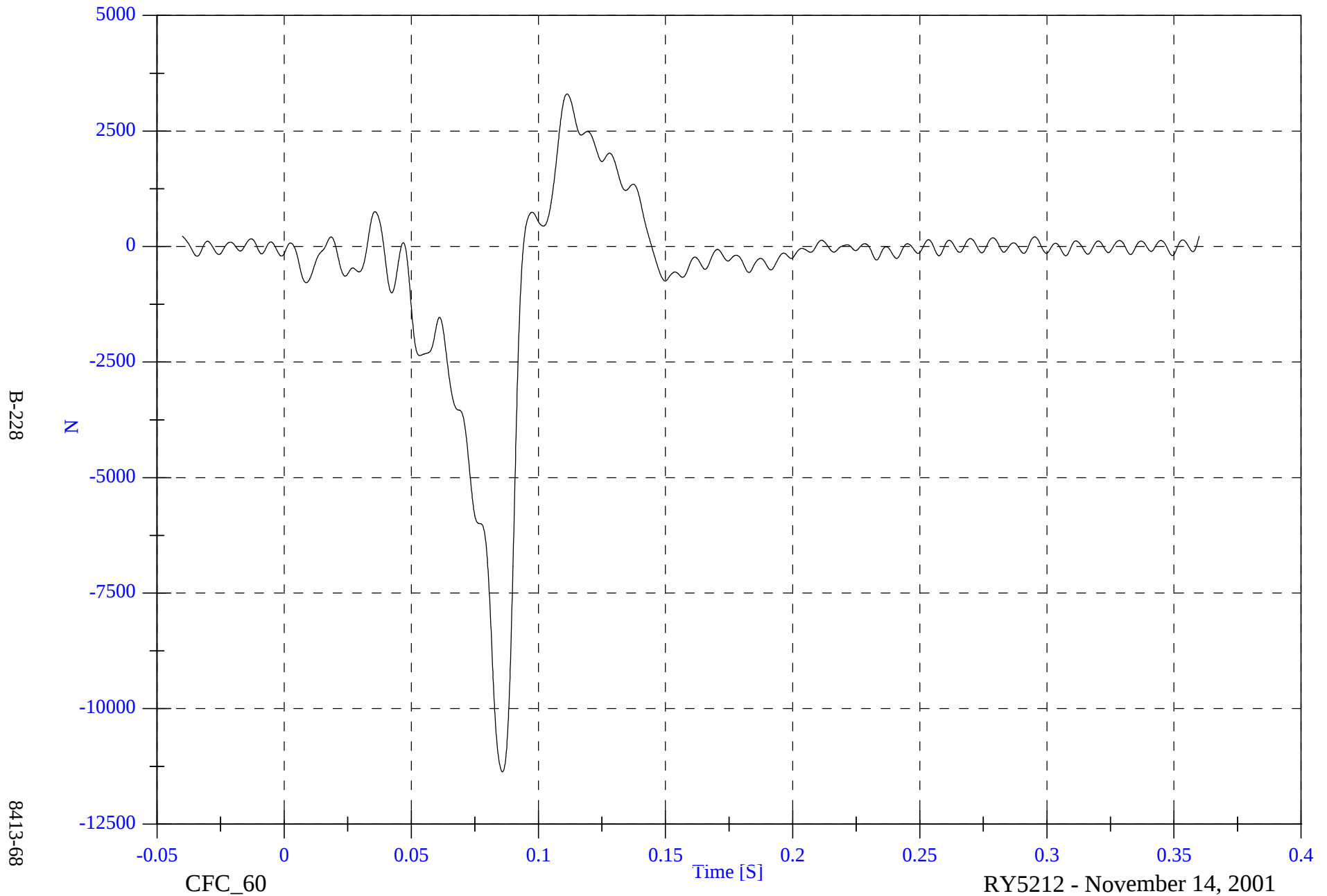
8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell D6 FY

Max: 3301.5 [N] at 0.111 [S]

Min: -11367.5 [N] at 0.086 [S]

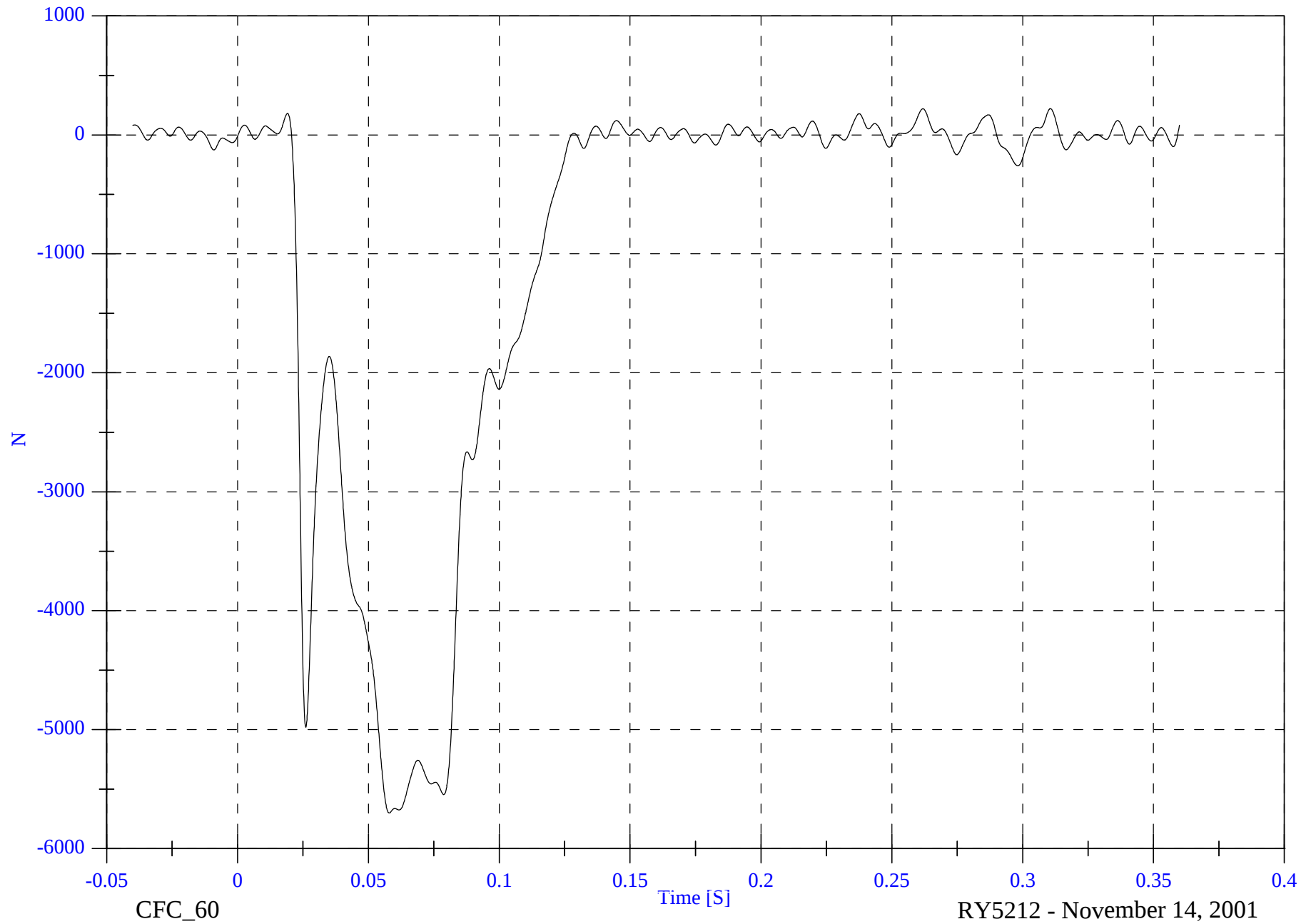


40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell D1 FX

Max: 221.4 [N] at 0.311 [S]

Min: -5701.1 [N] at 0.058 [S]



B-229

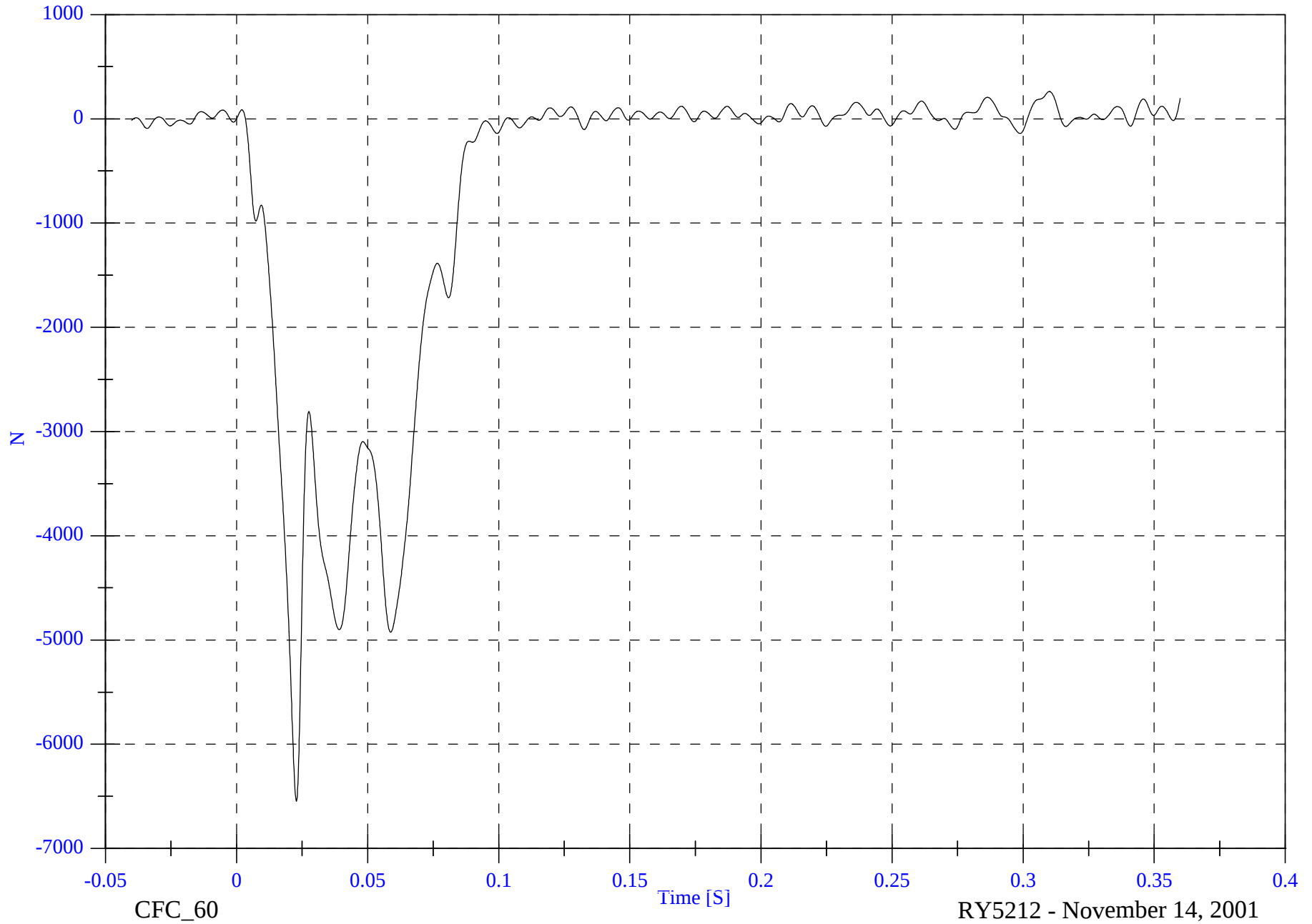
8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell D2 FX

Max: 261.7 [N] at 0.310 [S]

Min: -6547.8 [N] at 0.023 [S]



B-230

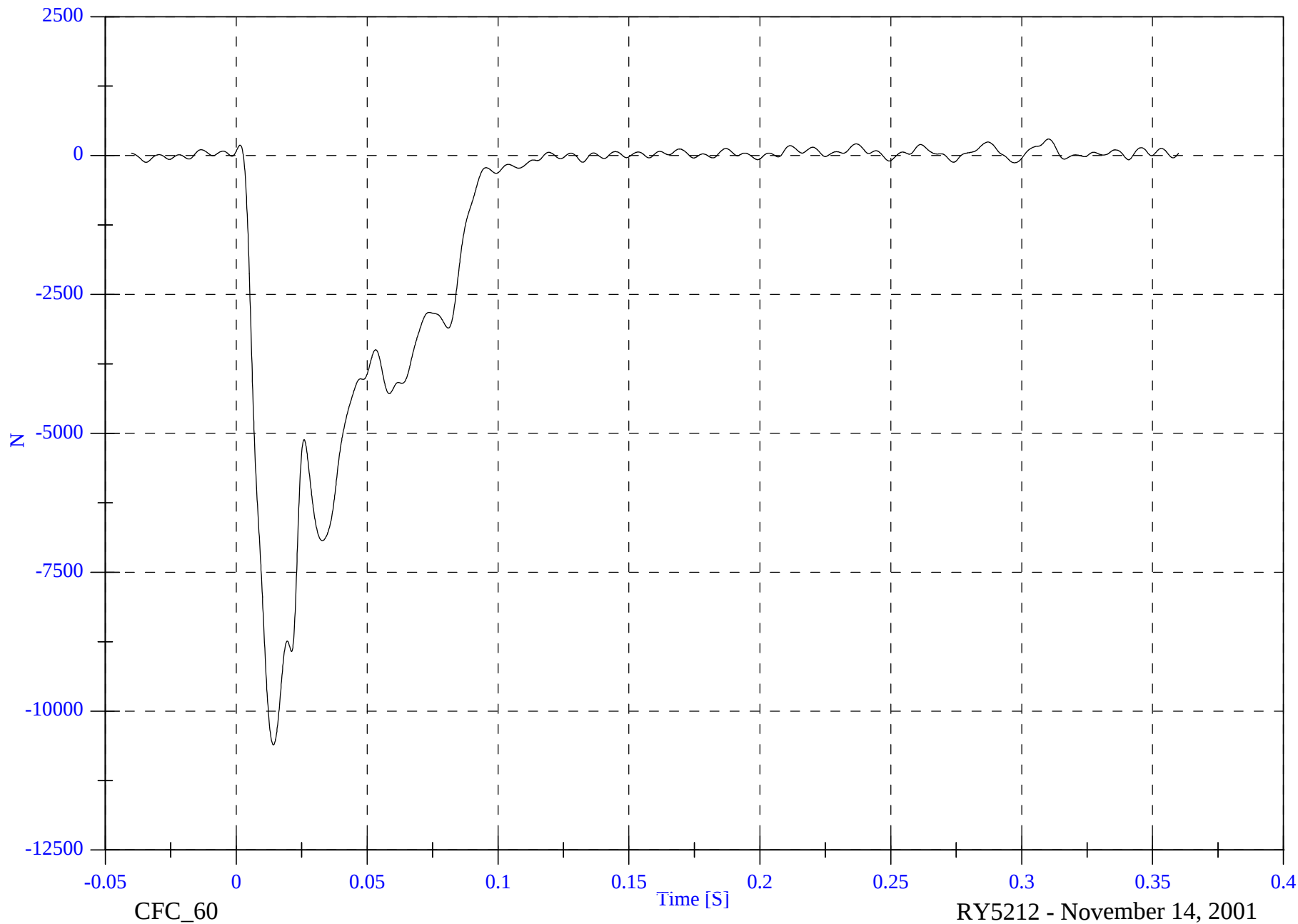
8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell D3 FX

Max: 297.4 [N] at 0.310 [S]

Min: -10606.6 [N] at 0.014 [S]



B-231

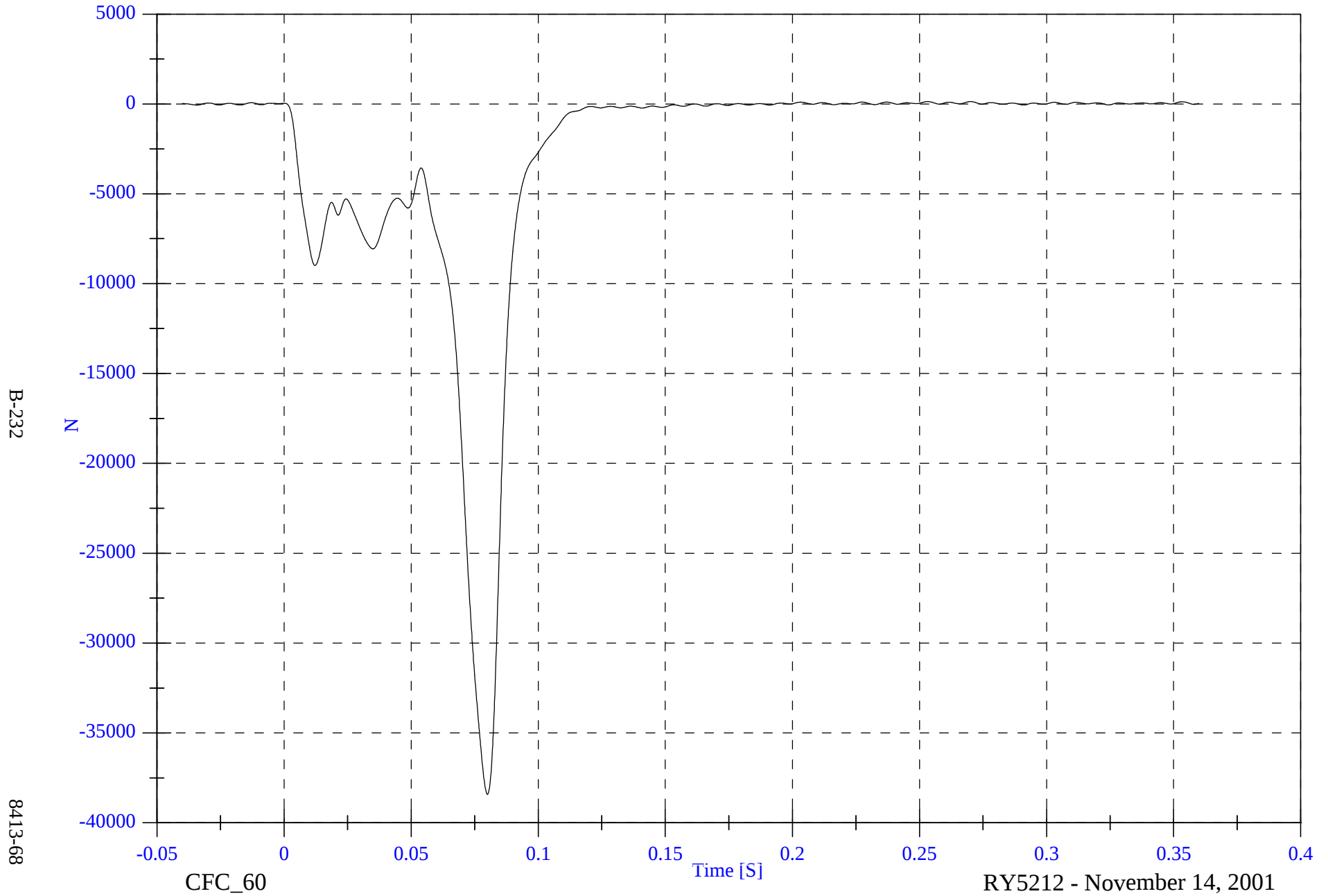
8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell D4 FX

Max: 133.2 [N] at 0.270 [S]

Min: -38412.7 [N] at 0.080 [S]

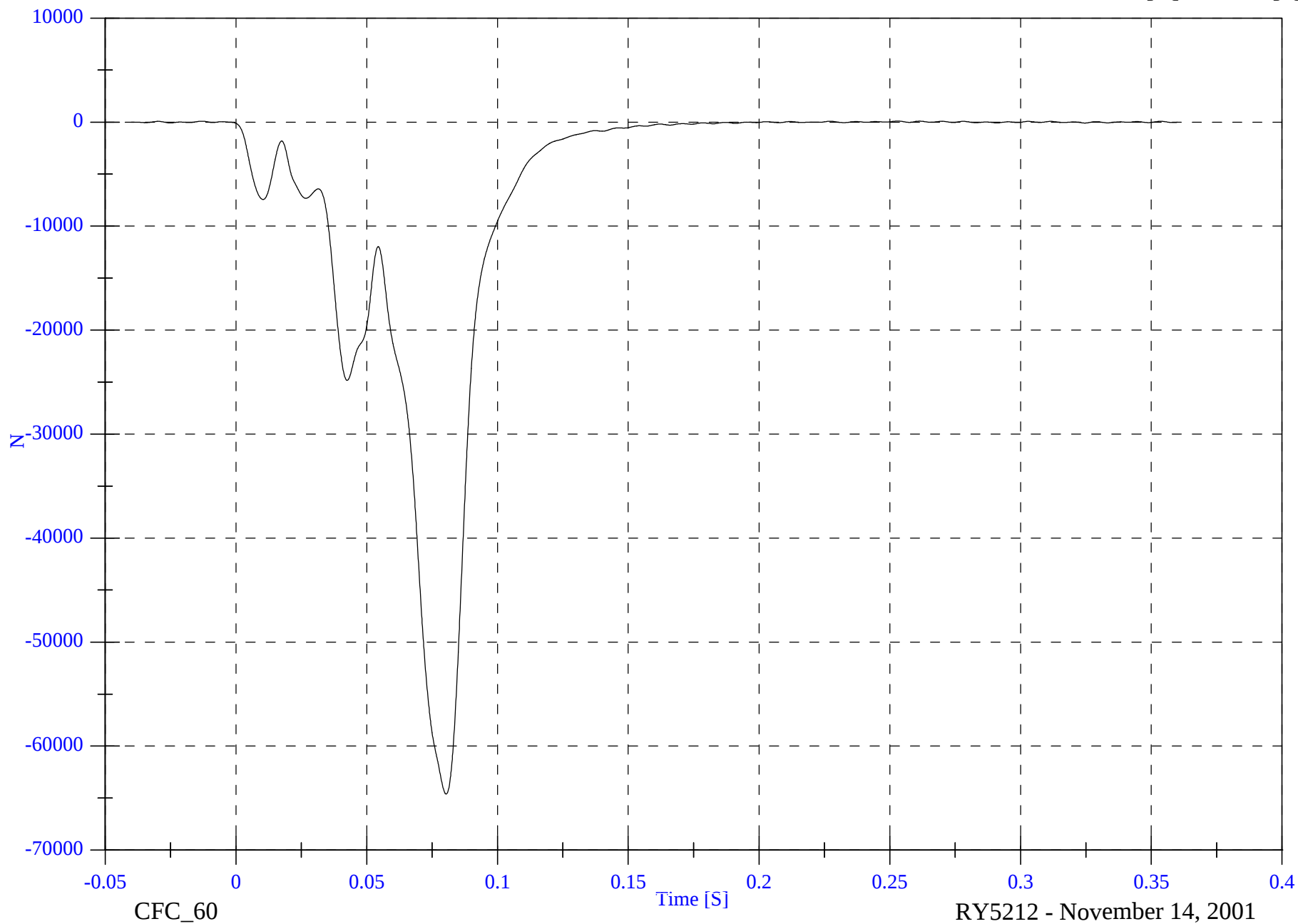


40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell D5 FX

Max: 97.1 [N] at 0.253 [S]

Min: -64613.1 [N] at 0.080 [S]



B-233

8413-68

CFC_60

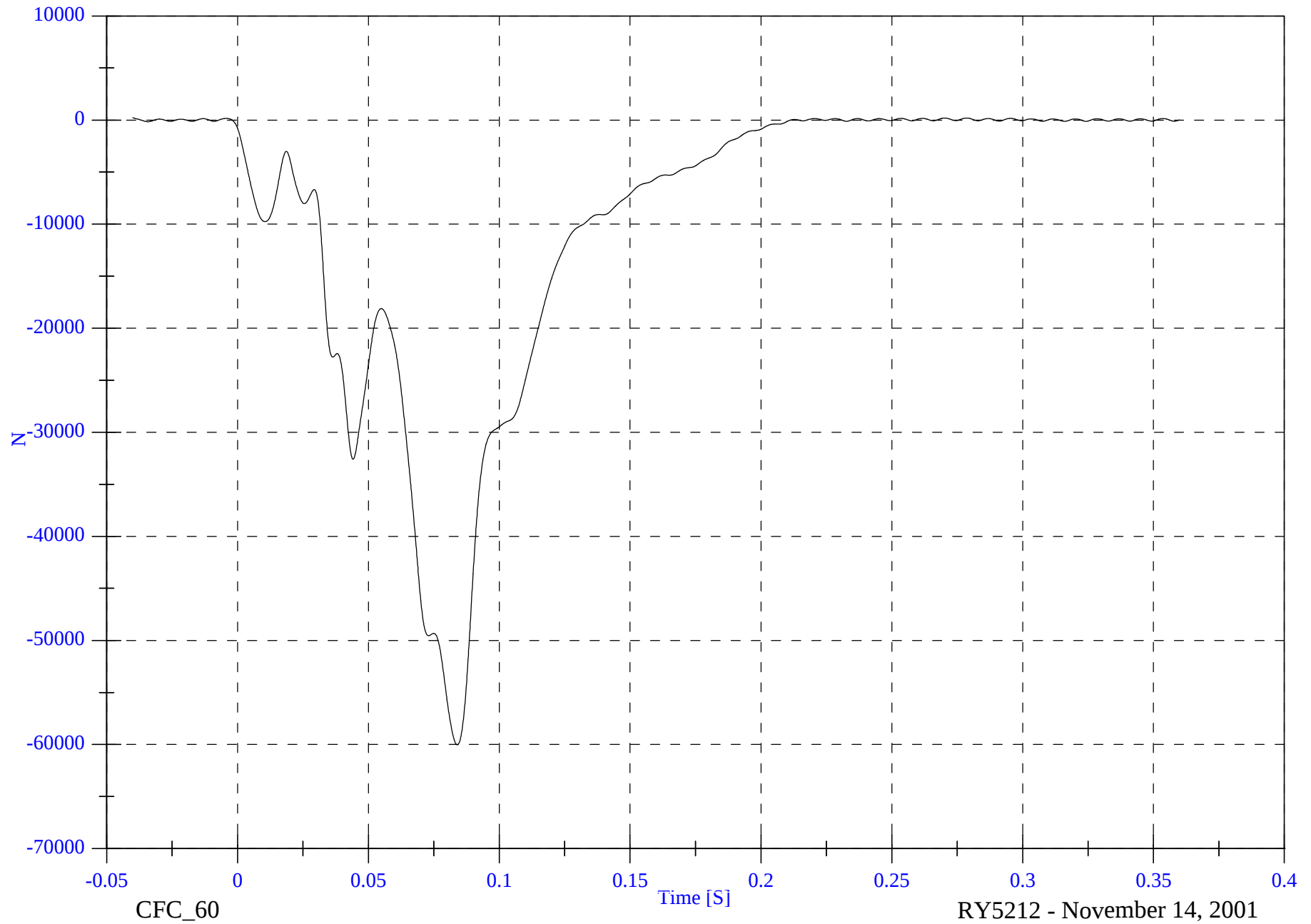
RY5212 - November 14, 2001

40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell D6 FX

Max: 214.6 [N] at -0.040 [S]

Min: -60037.9 [N] at 0.084 [S]

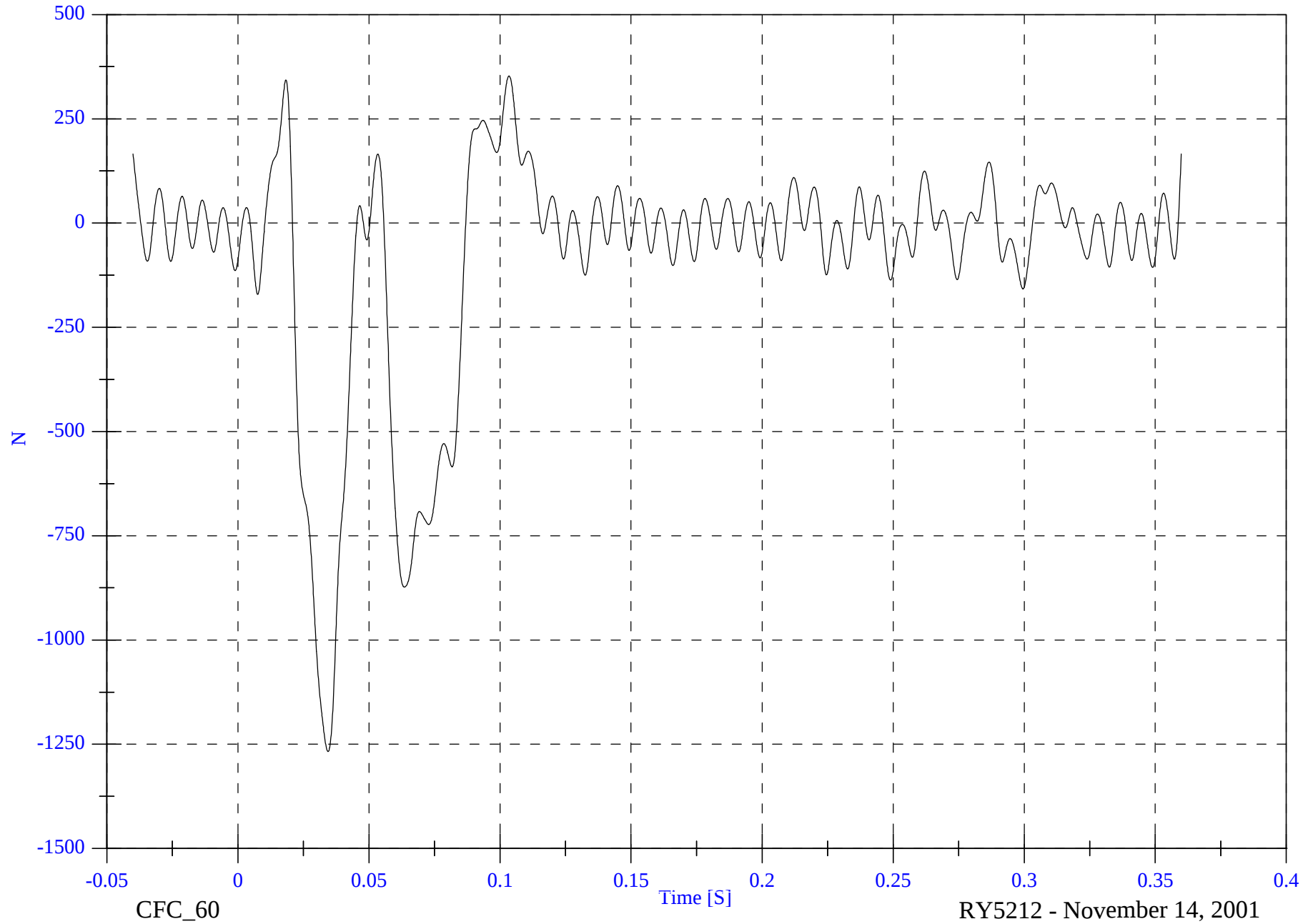


40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell C2 FY

Max: 352.4 [N] at 0.103 [S]

Min: -1267.5 [N] at 0.034 [S]



B-235

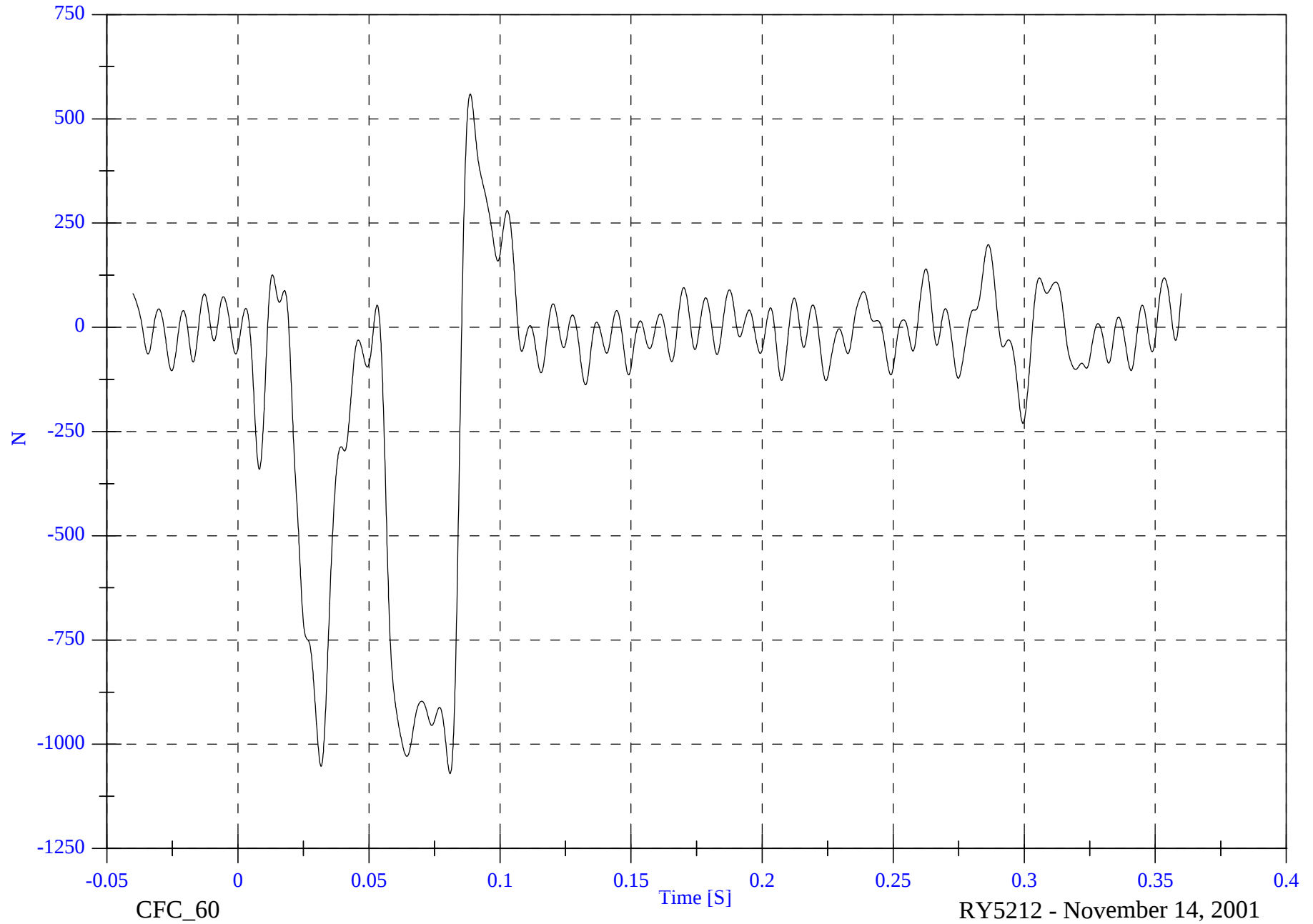
8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell C3 FY

Max: 559.4 [N] at 0.089 [S]

Min: -1070.3 [N] at 0.081 [S]



B-236

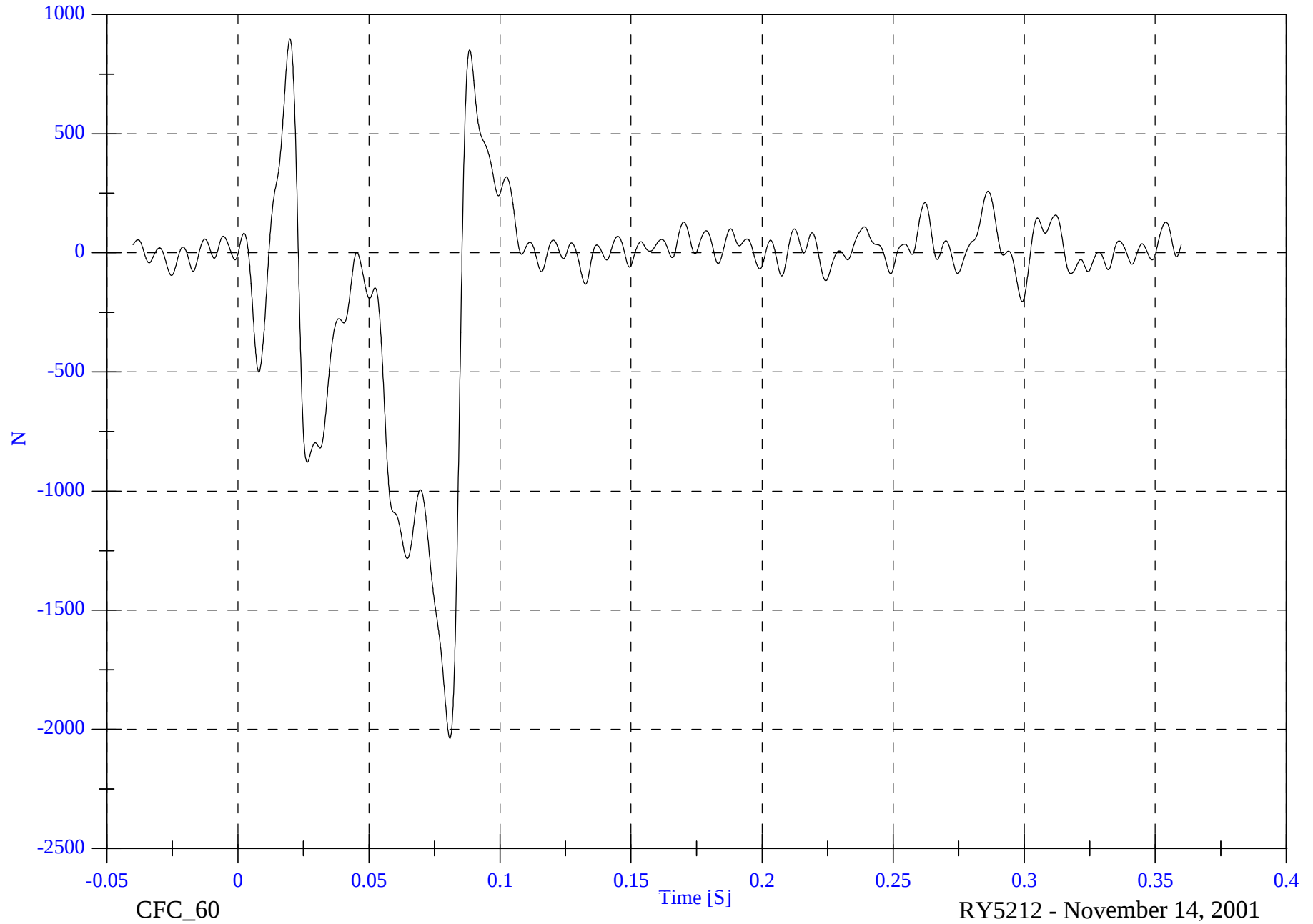
8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell C4 FY

Max: 898.3 [N] at 0.020 [S]

Min: -2038.2 [N] at 0.081 [S]

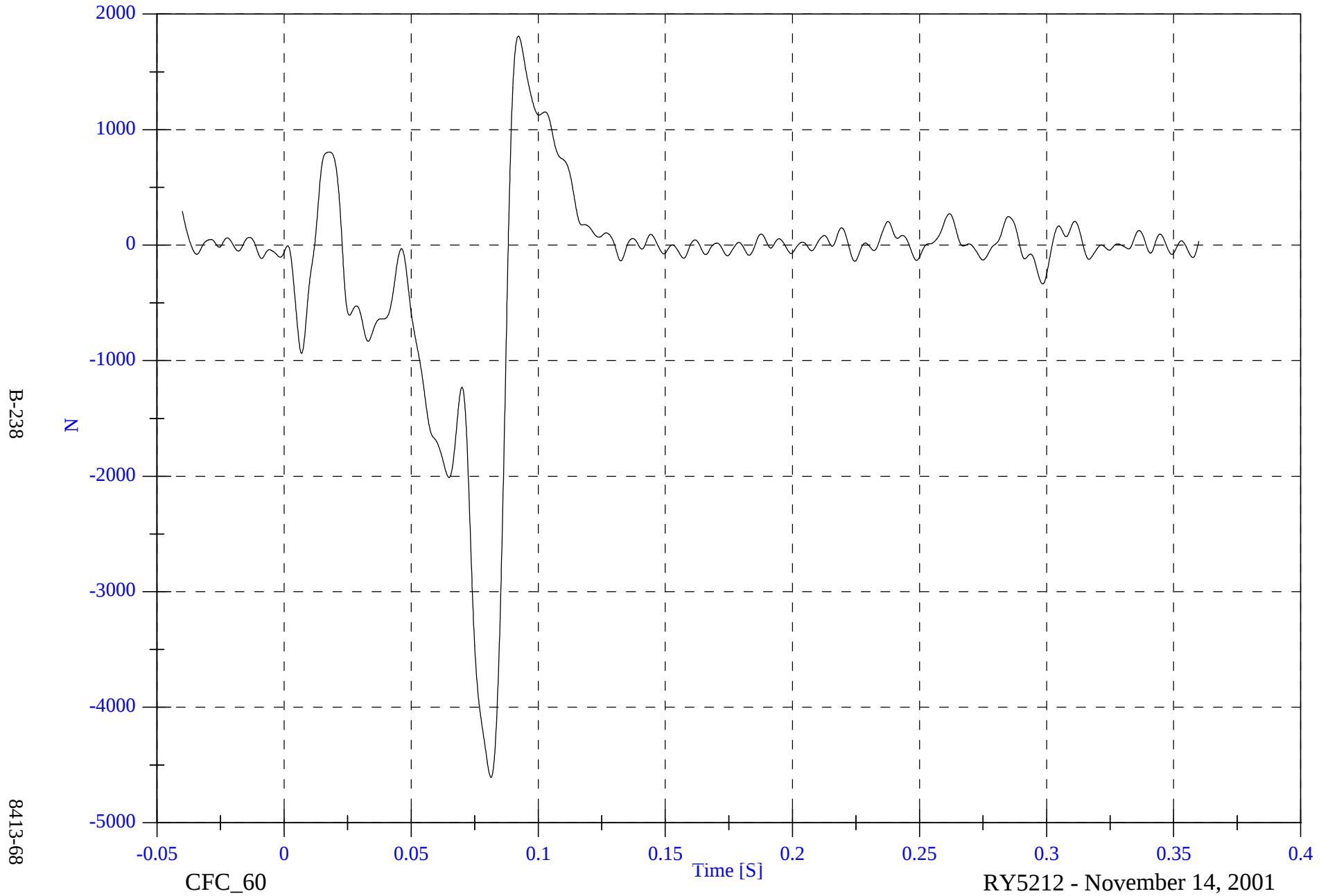


40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell C5 FY

Max: 1809.4 [N] at 0.092 [S]

Min: -4606.9 [N] at 0.081 [S]

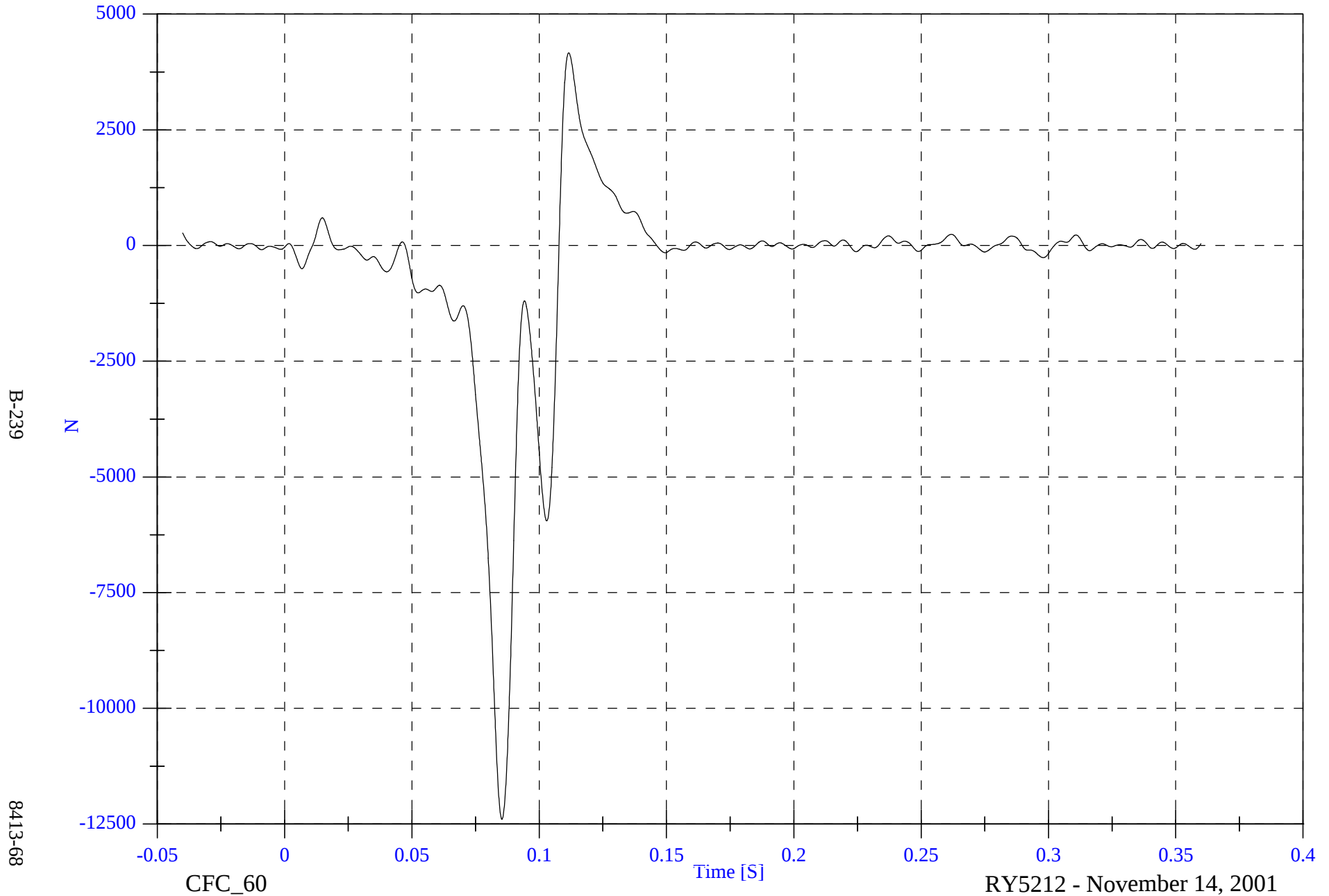


40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell C6 FY

Max: 4163.3 [N] at 0.112 [S]

Min: -12399.8 [N] at 0.085 [S]

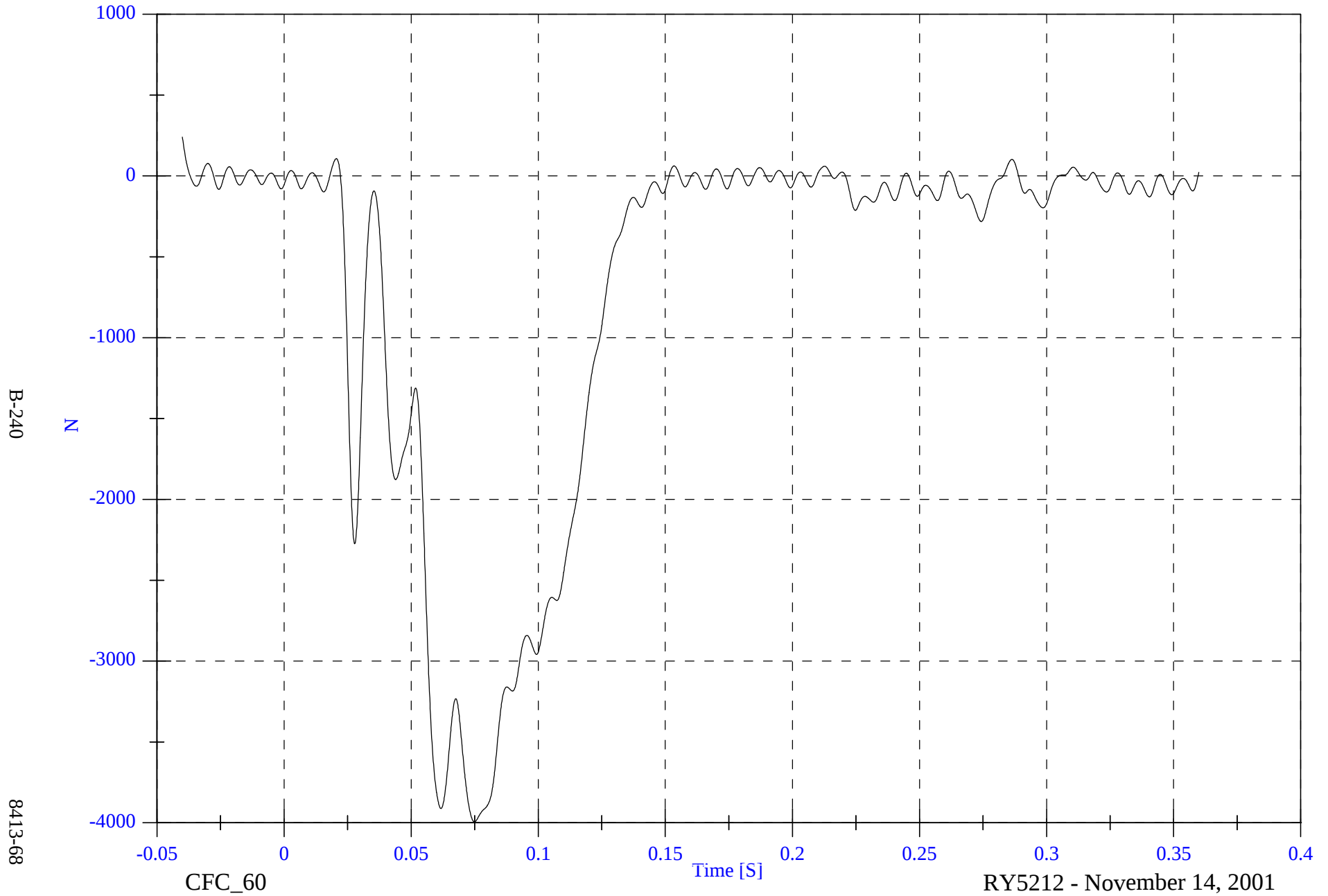


40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell C1 FX

Max: 240.1 [N] at -0.040 [S]

Min: -3994.5 [N] at 0.075 [S]

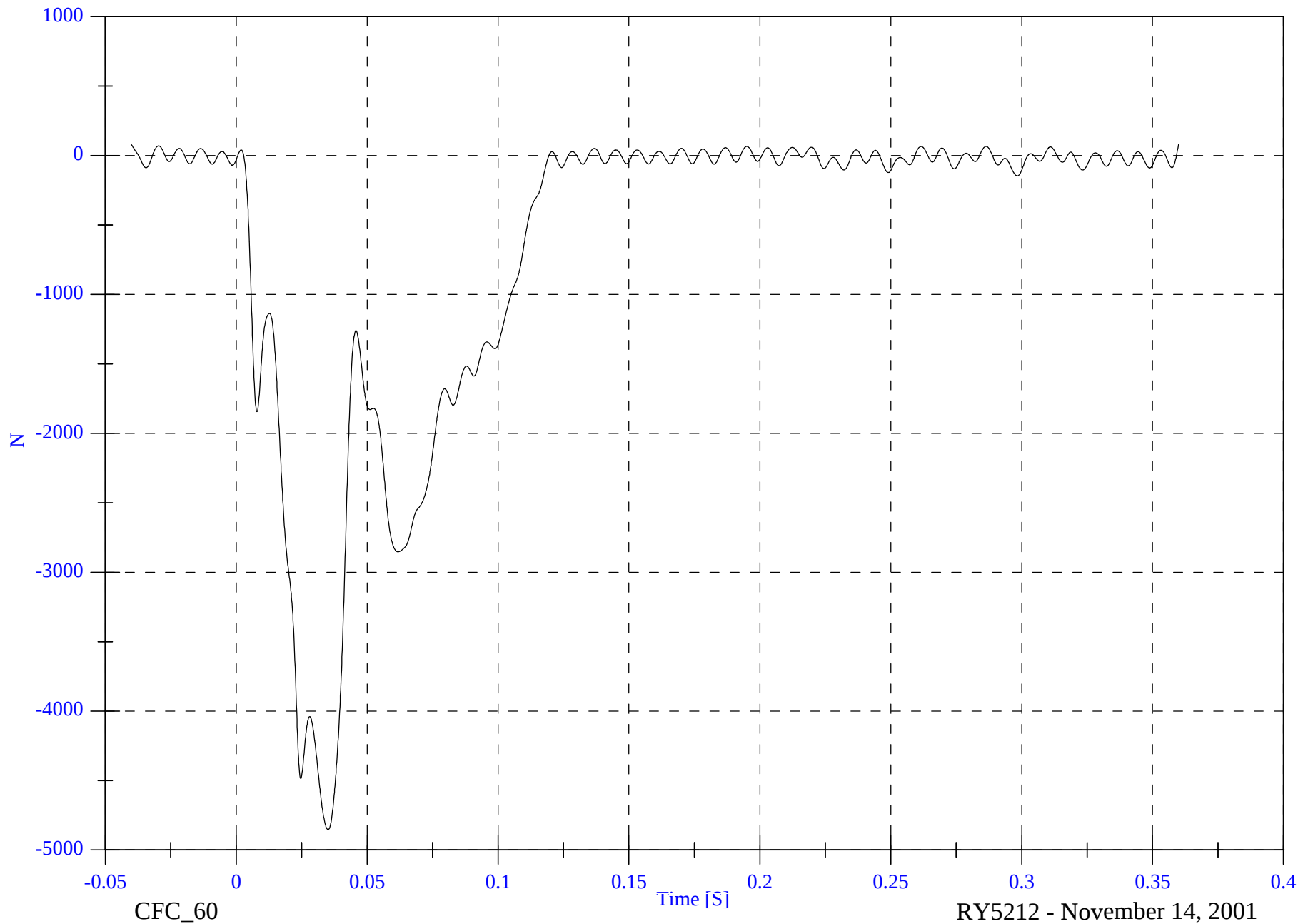


40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell C2 FX

Max: 79.6 [N] at -0.040 [S]

Min: -4856.1 [N] at 0.035 [S]



B-241

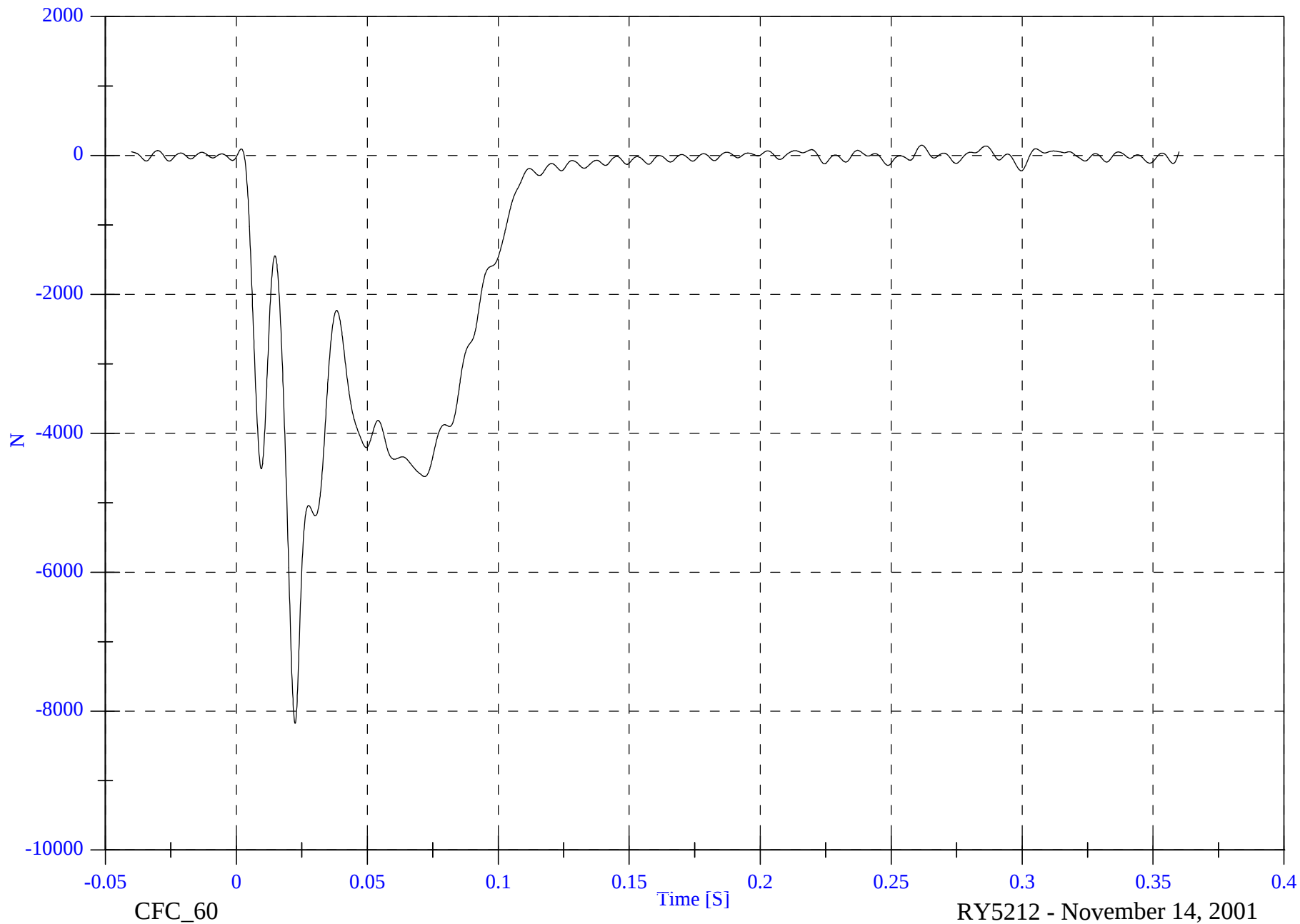
8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell C3 FX

Max: 148.7 [N] at 0.262 [S]

Min: -8176.9 [N] at 0.022 [S]



B-242

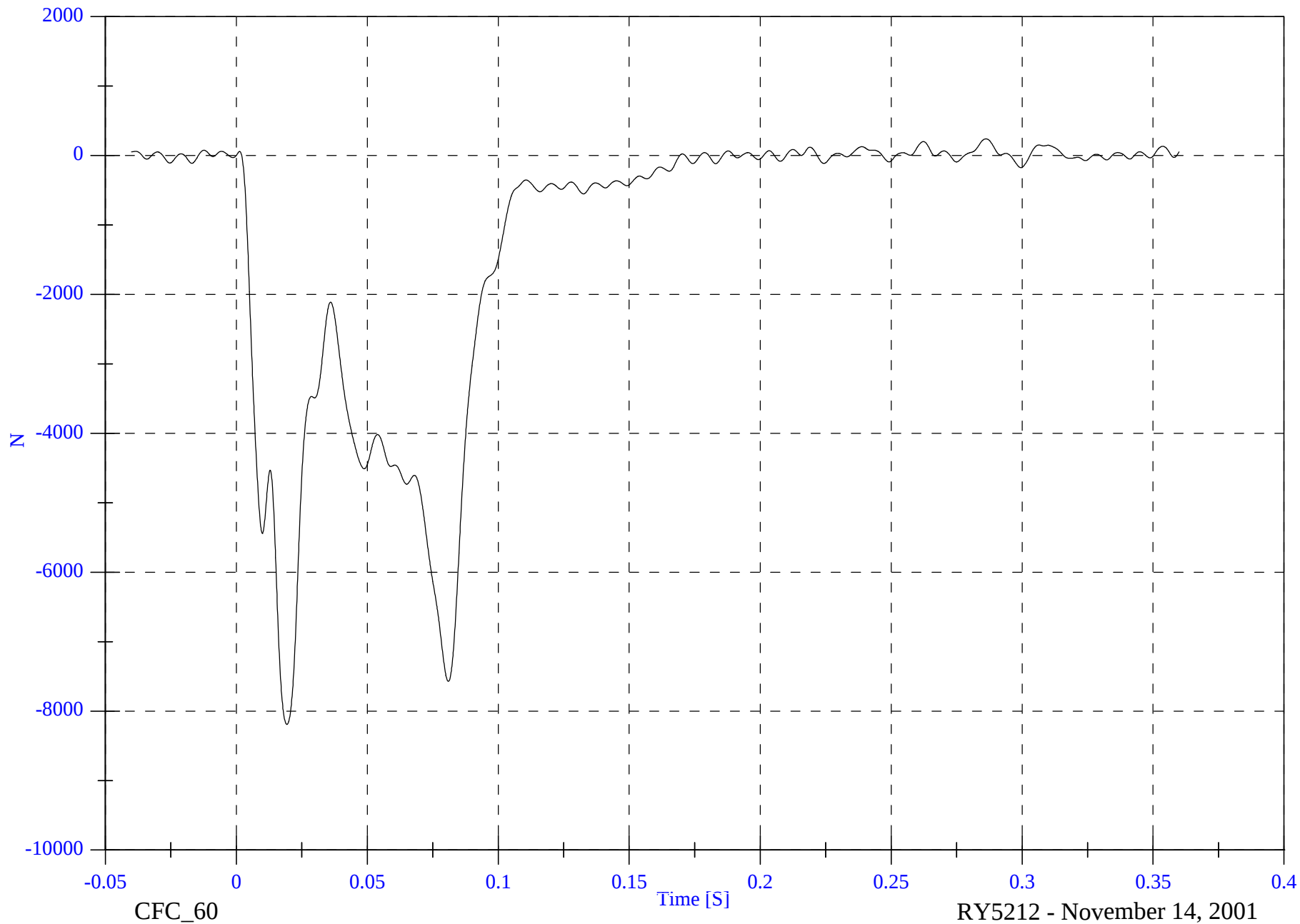
8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell C4 FX

Max: 240.8 [N] at 0.286 [S]

Min: -8191.9 [N] at 0.019 [S]



B-243

8413-68

CFC_60

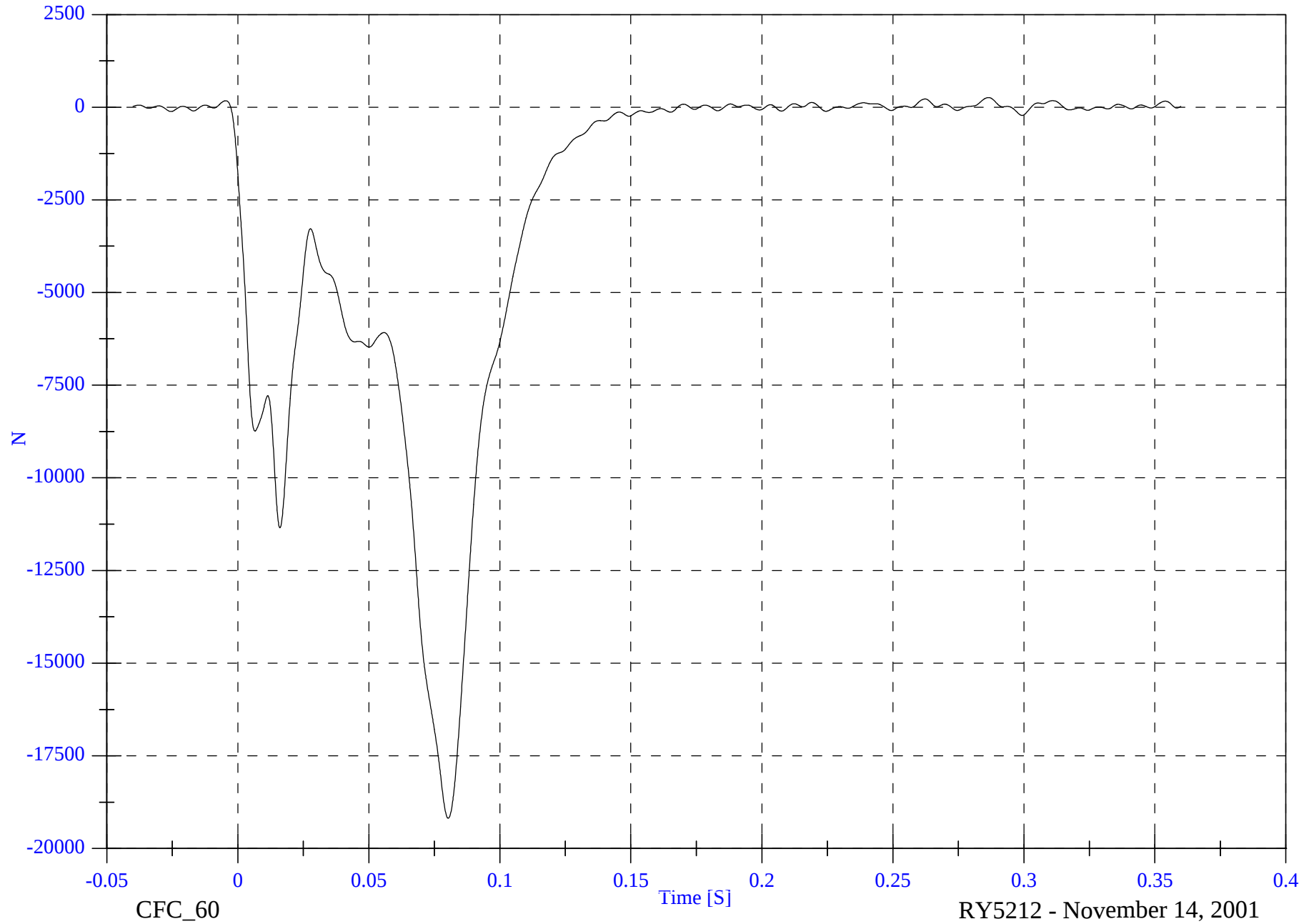
RY5212 - November 14, 2001

40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell C5 FX

Max: 260.9 [N] at 0.286 [S]

Min: -19185.8 [N] at 0.080 [S]



B-244

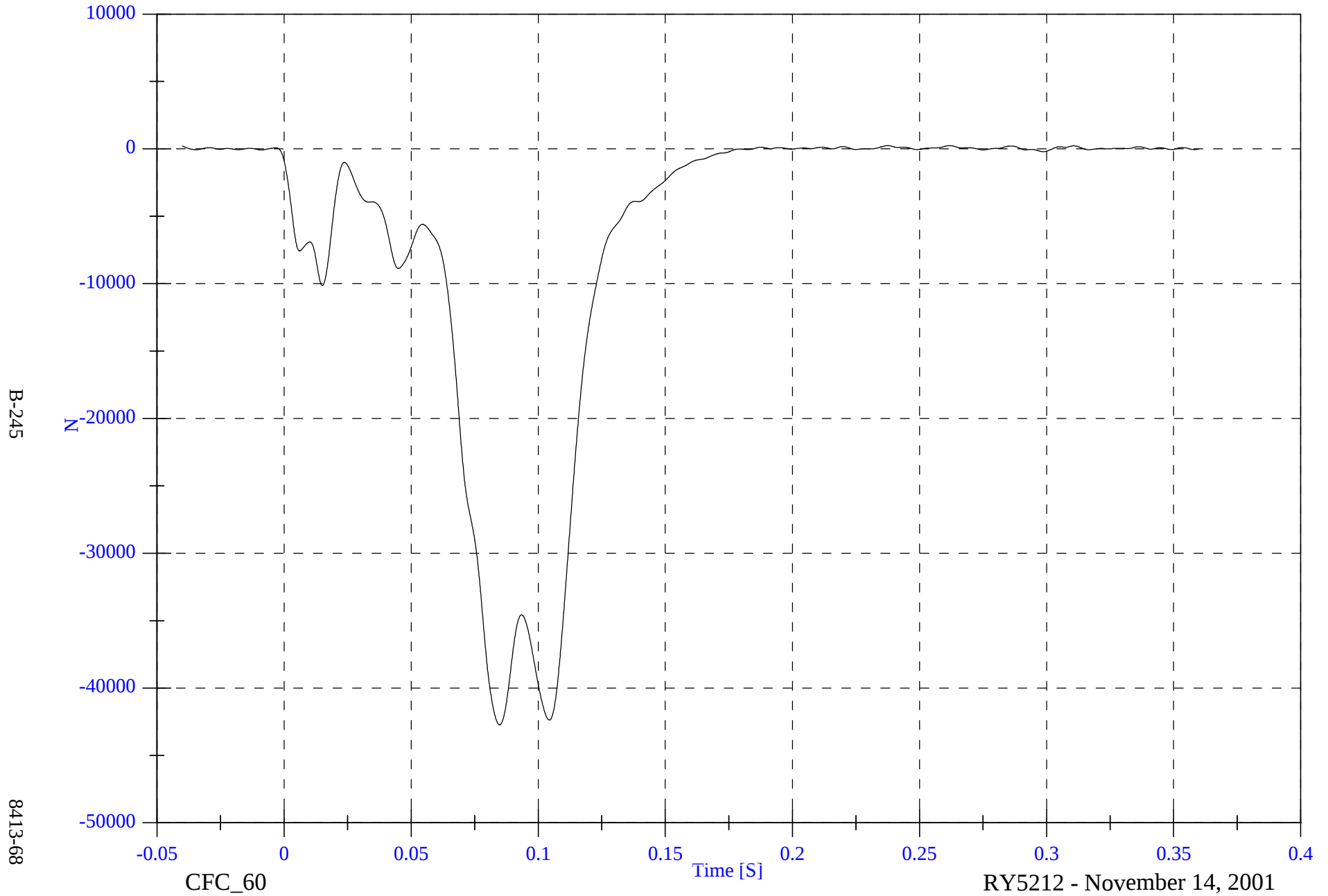
8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell C6 FX

Max: 247.0 [N] at 0.238 [S]

Min: -42733.9 [N] at 0.085 [S]

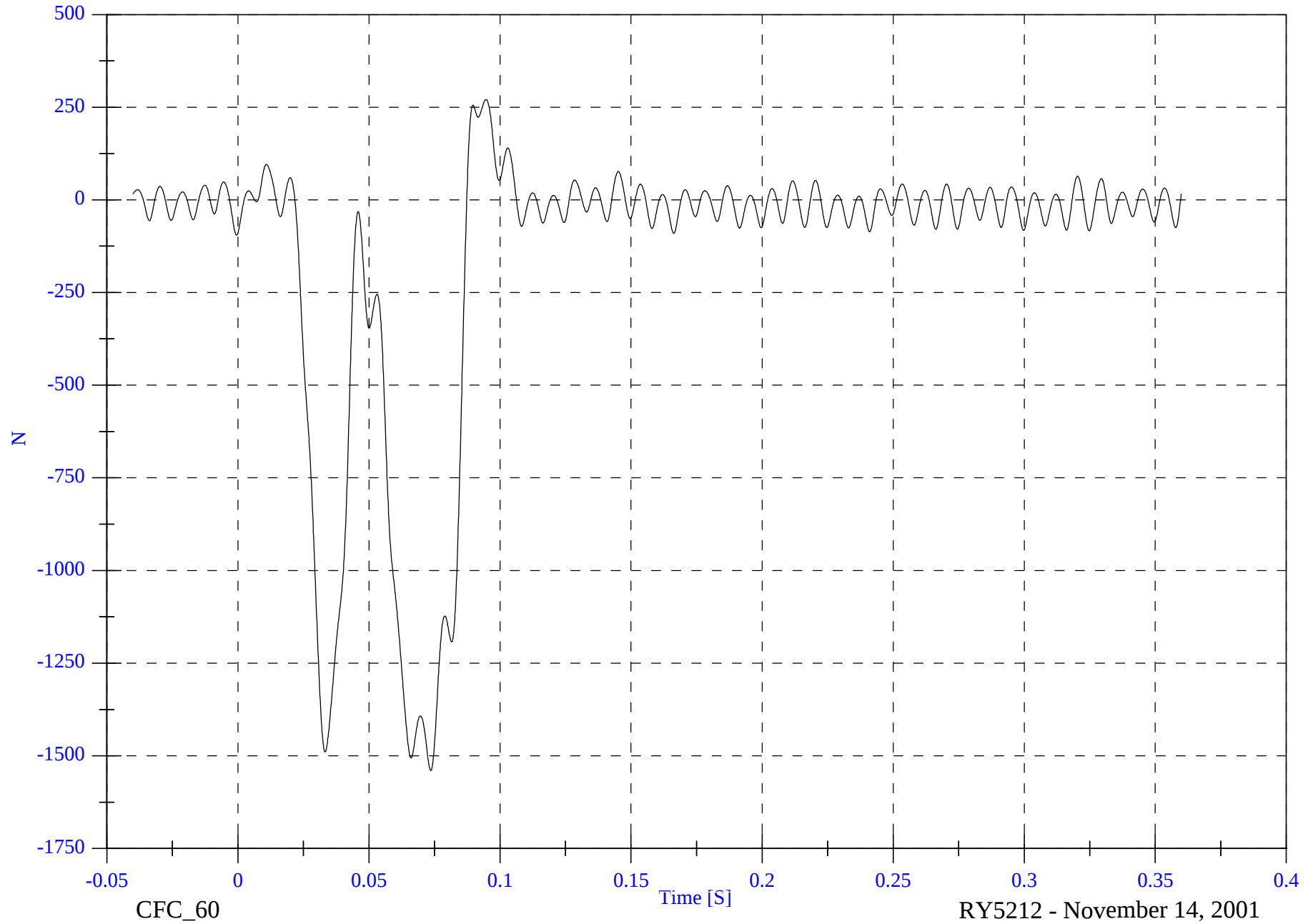


40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell B3 FY

Max: 270.8 [N] at 0.095 [S]

Min: -1539.5 [N] at 0.074 [S]



B-246

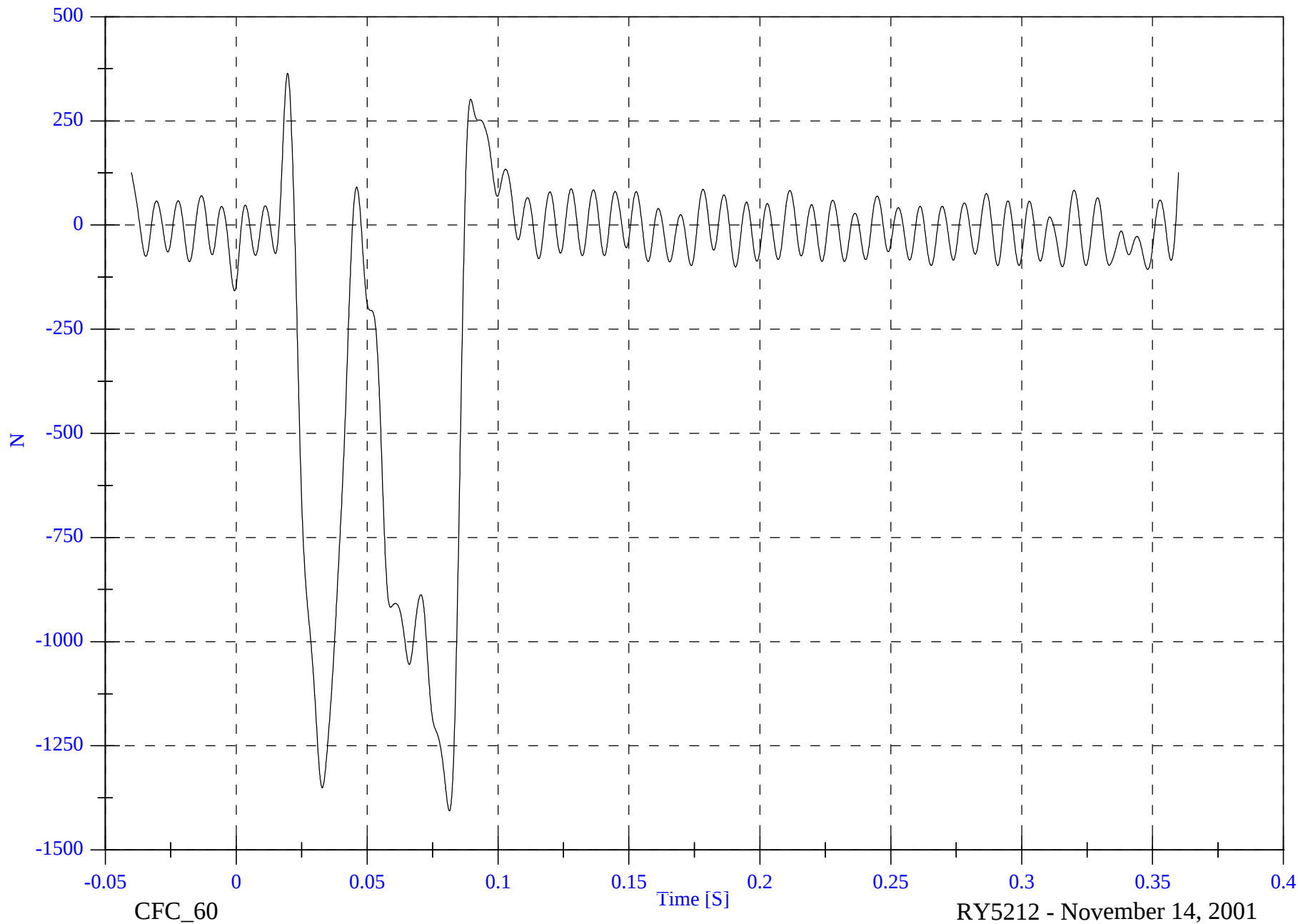
8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell B4 FY

Max: 364.4 [N] at 0.020 [S]

Min: -1406.3 [N] at 0.081 [S]



B-247

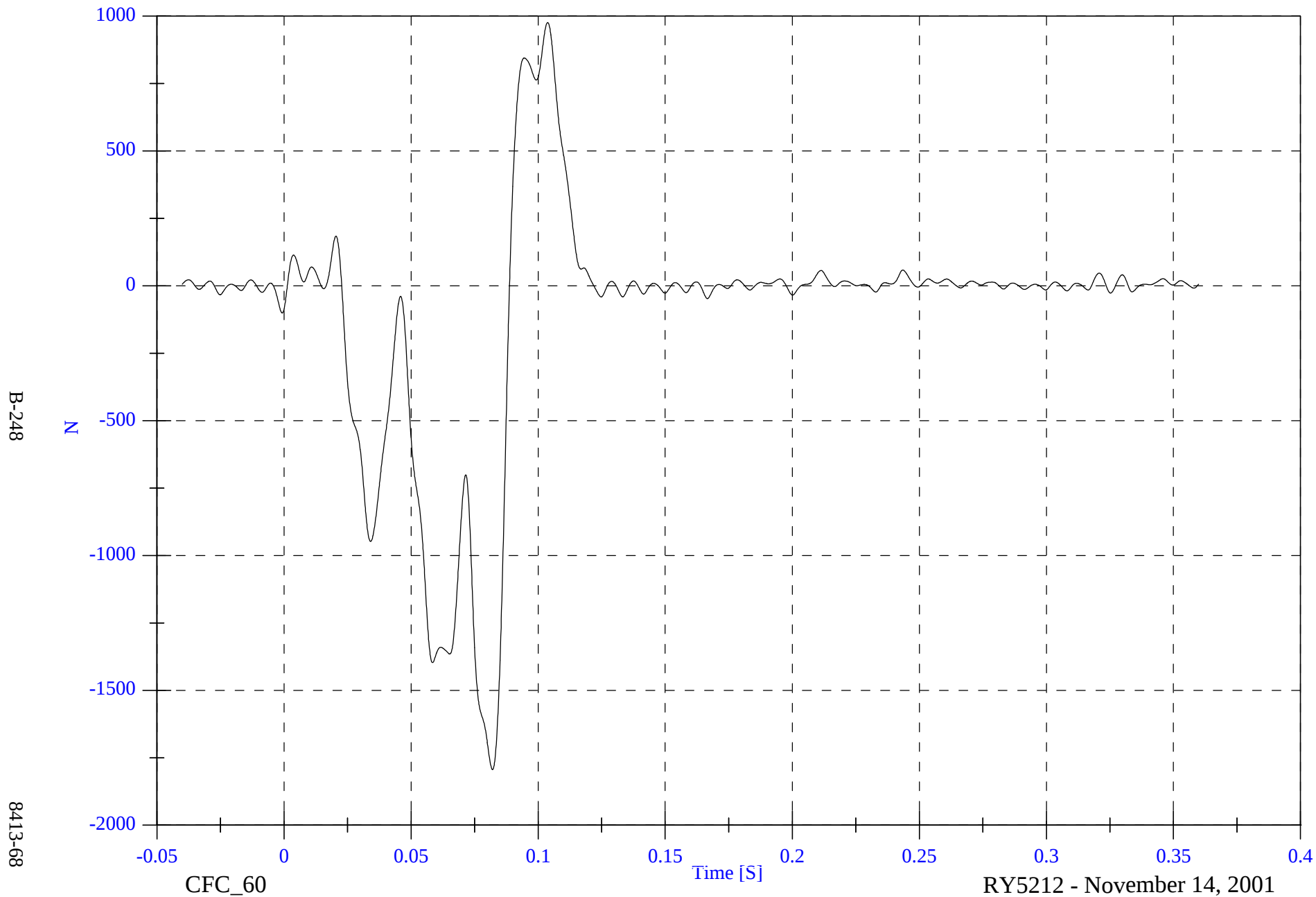
8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell B5 FY

Max: 976.4 [N] at 0.104 [S]

Min: -1794.1 [N] at 0.082 [S]

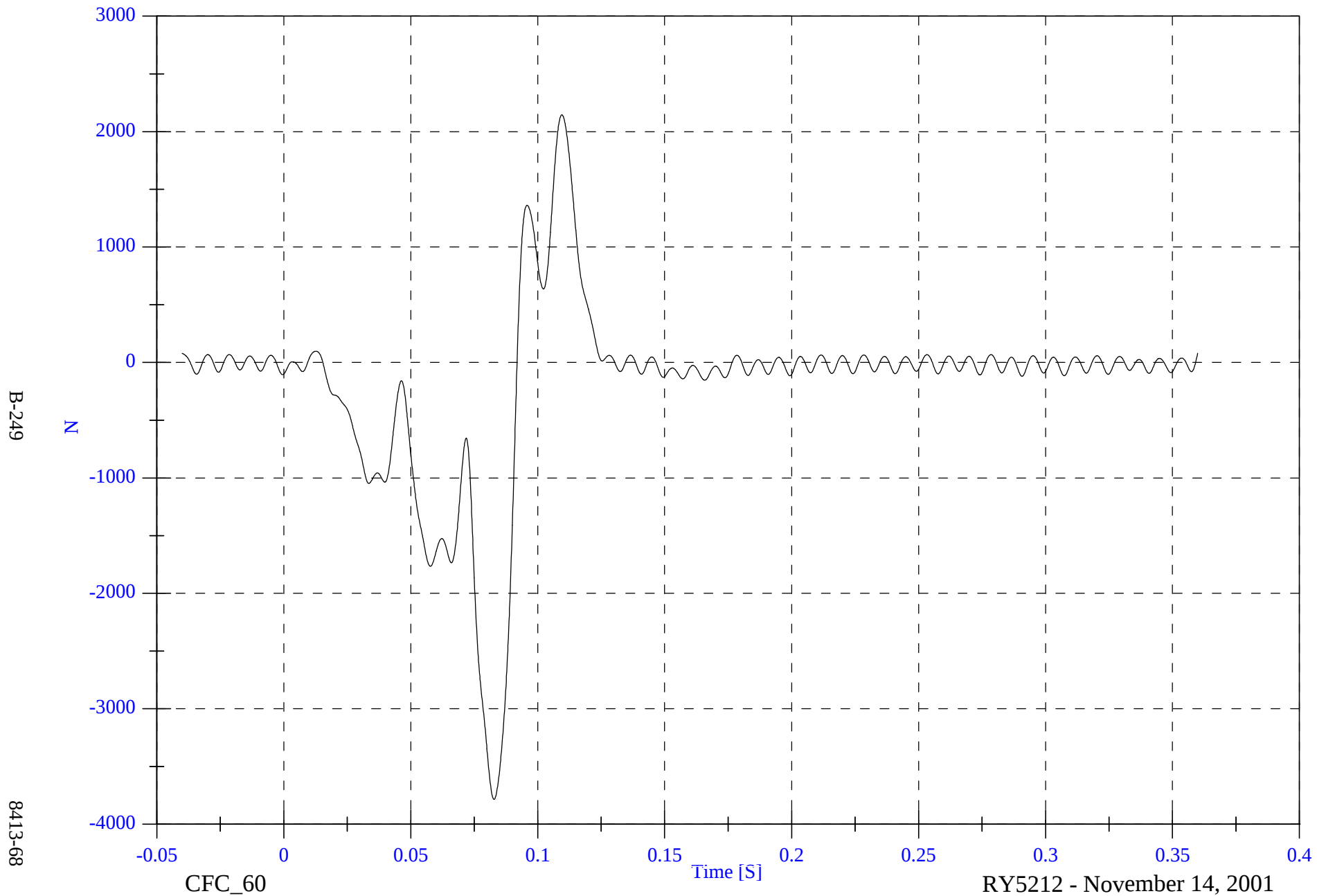


40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell B6 FY

Max: 2145.7 [N] at 0.109 [S]

Min: -3785.1 [N] at 0.083 [S]

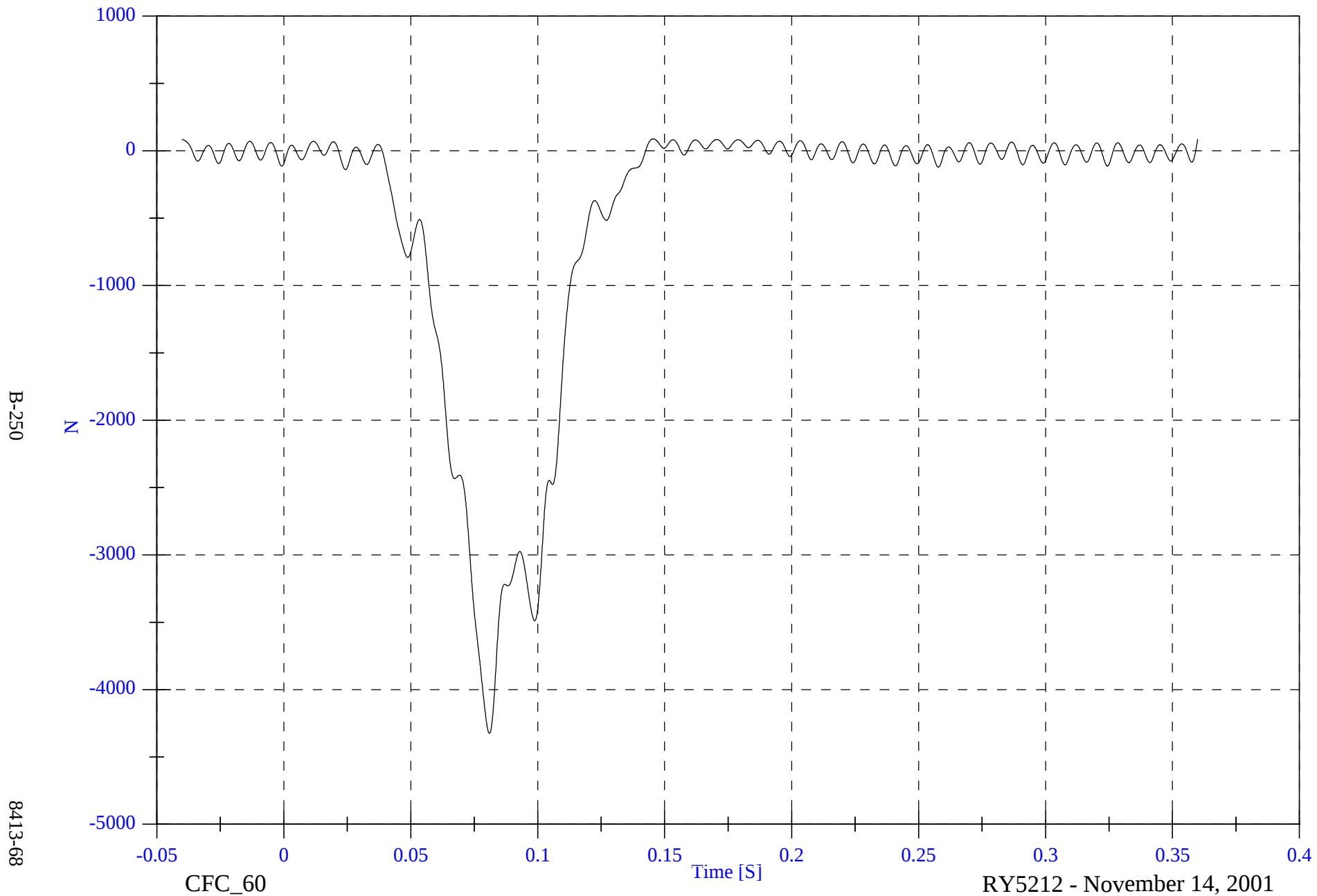


40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell B1 FX

Max: 89.2 [N] at 0.145 [S]

Min: -4326.1 [N] at 0.081 [S]

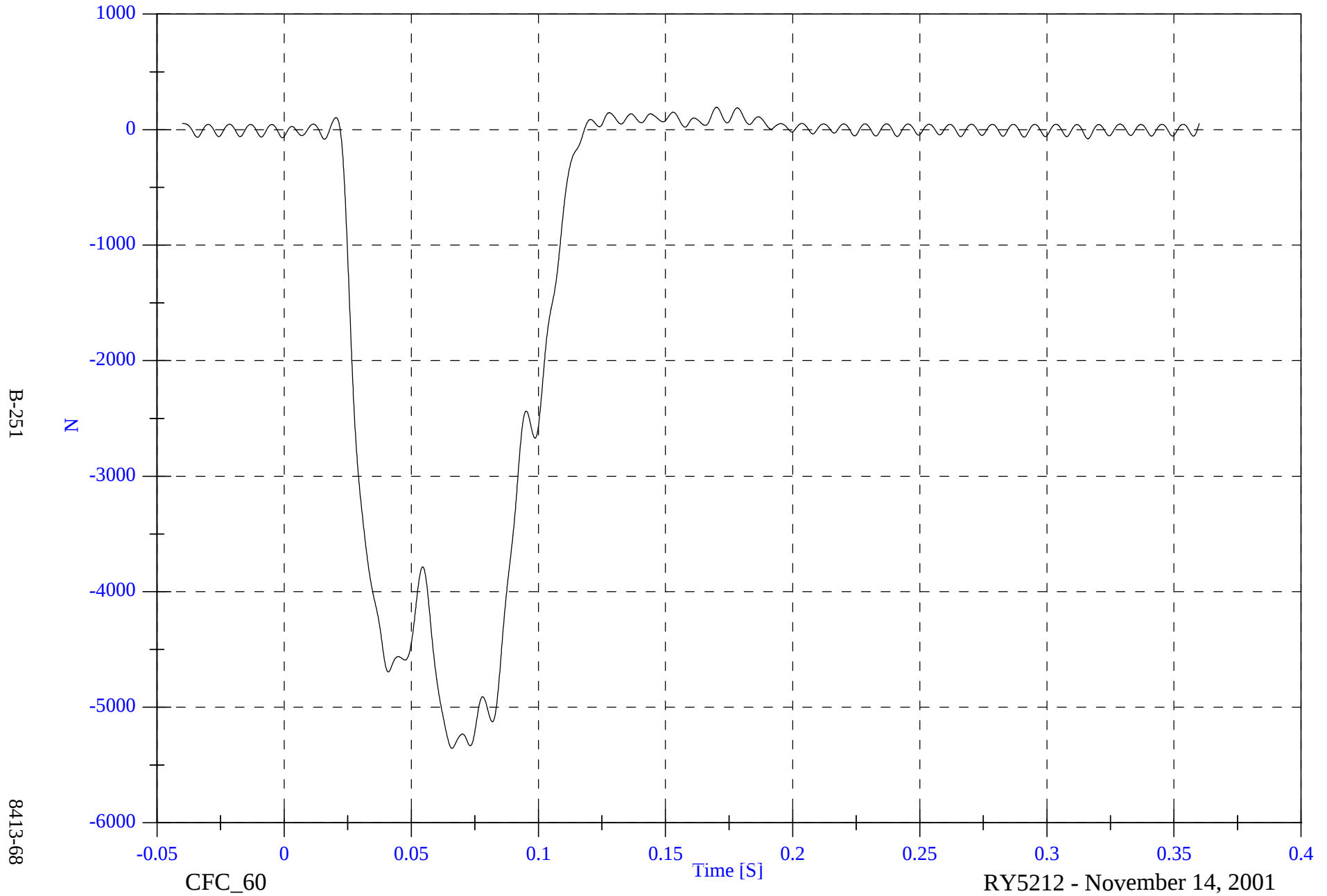


40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell B2 FX

Max: 193.7 [N] at 0.170 [S]

Min: -5355.5 [N] at 0.066 [S]

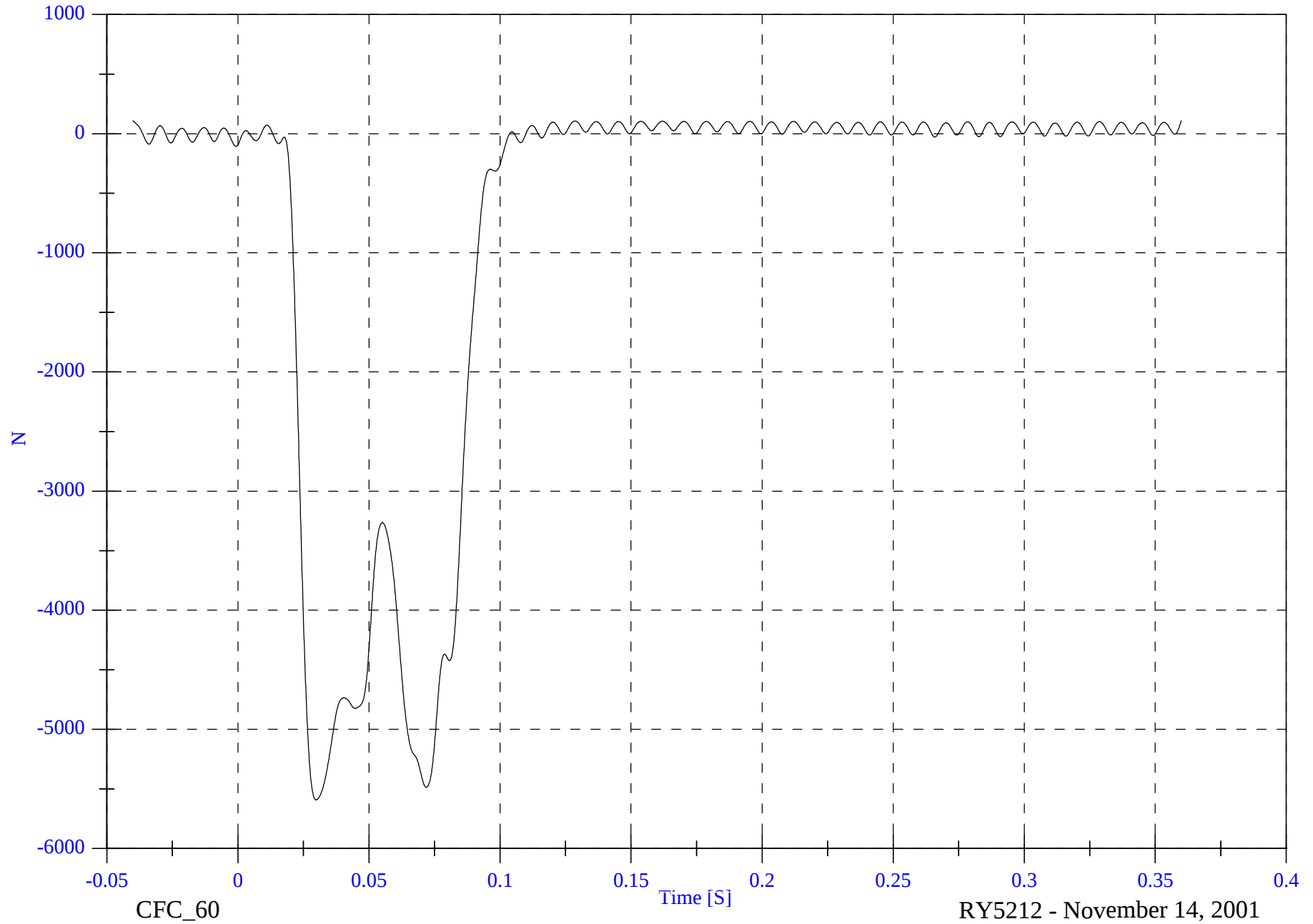


40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell B3 FX

Max: 108.0 [N] at 0.360 [S]

Min: -5592.5 [N] at 0.030 [S]



B-252

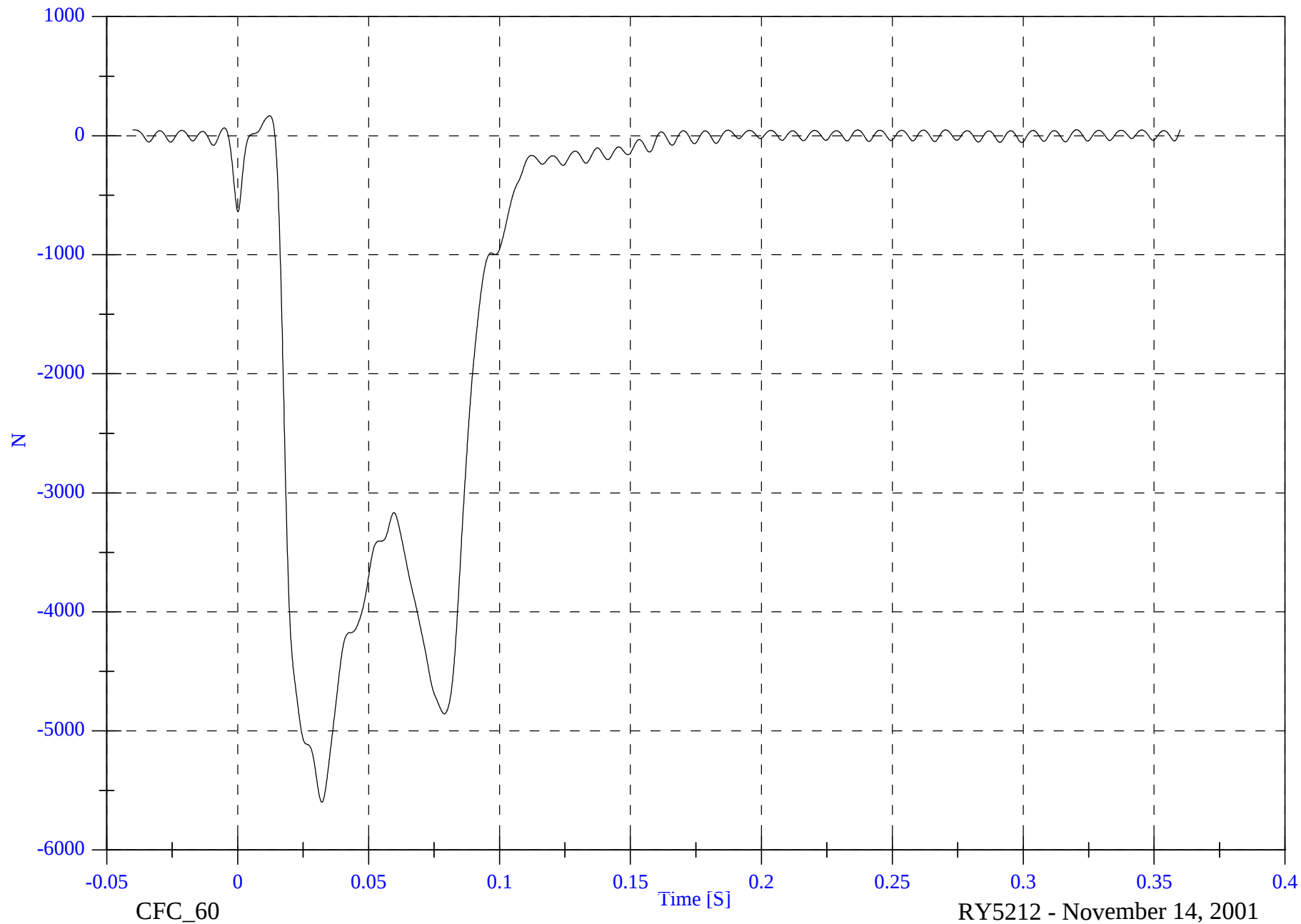
8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell B4 FX

Max: 167.7 [N] at 0.012 [S]

Min: -5598.6 [N] at 0.032 [S]



B-253

8413-68

CFC_60

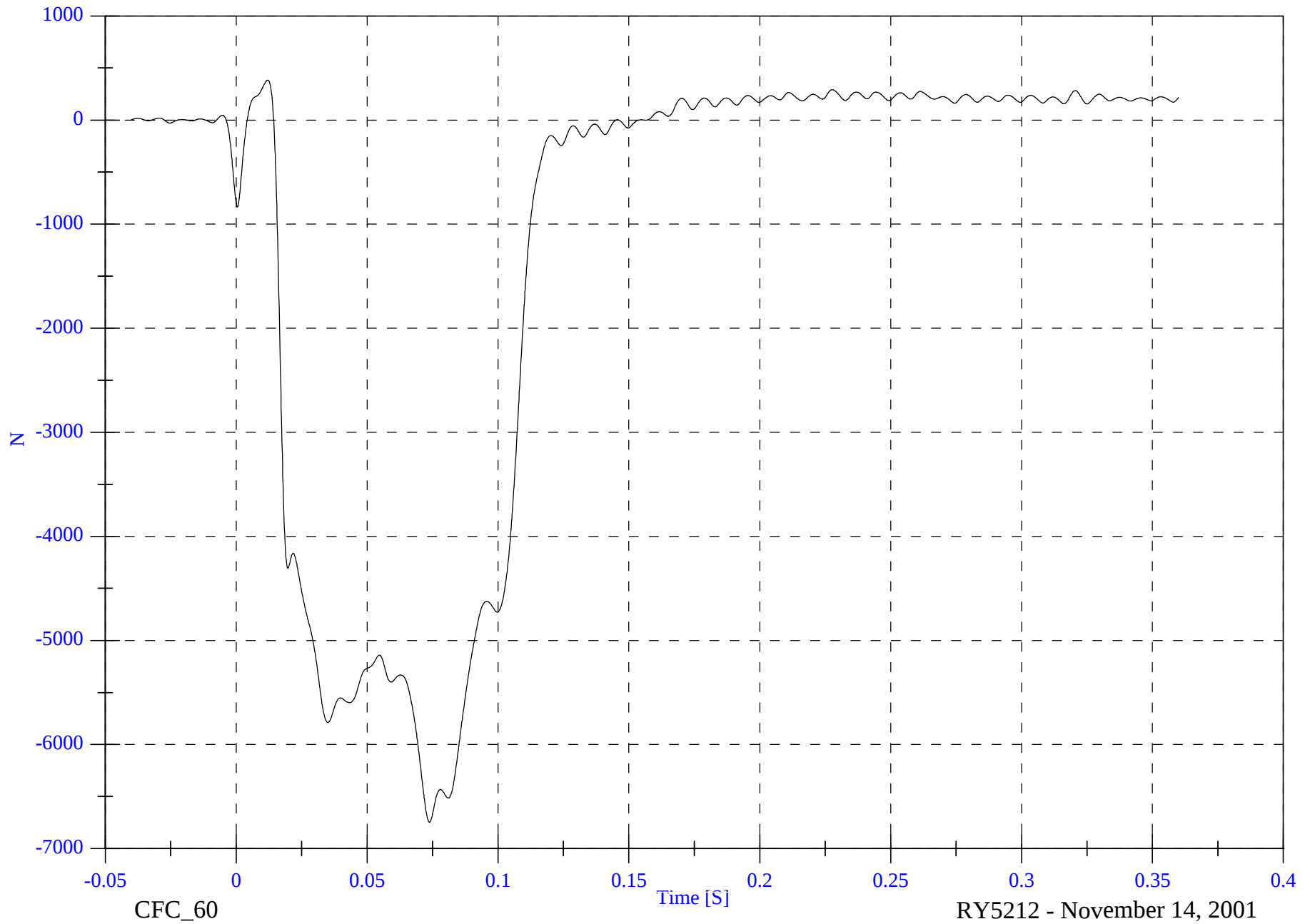
RY5212 - November 14, 2001

40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell B5 FX

Max: 383.6 [N] at 0.012 [S]

Min: -6746.9 [N] at 0.074 [S]



B-254

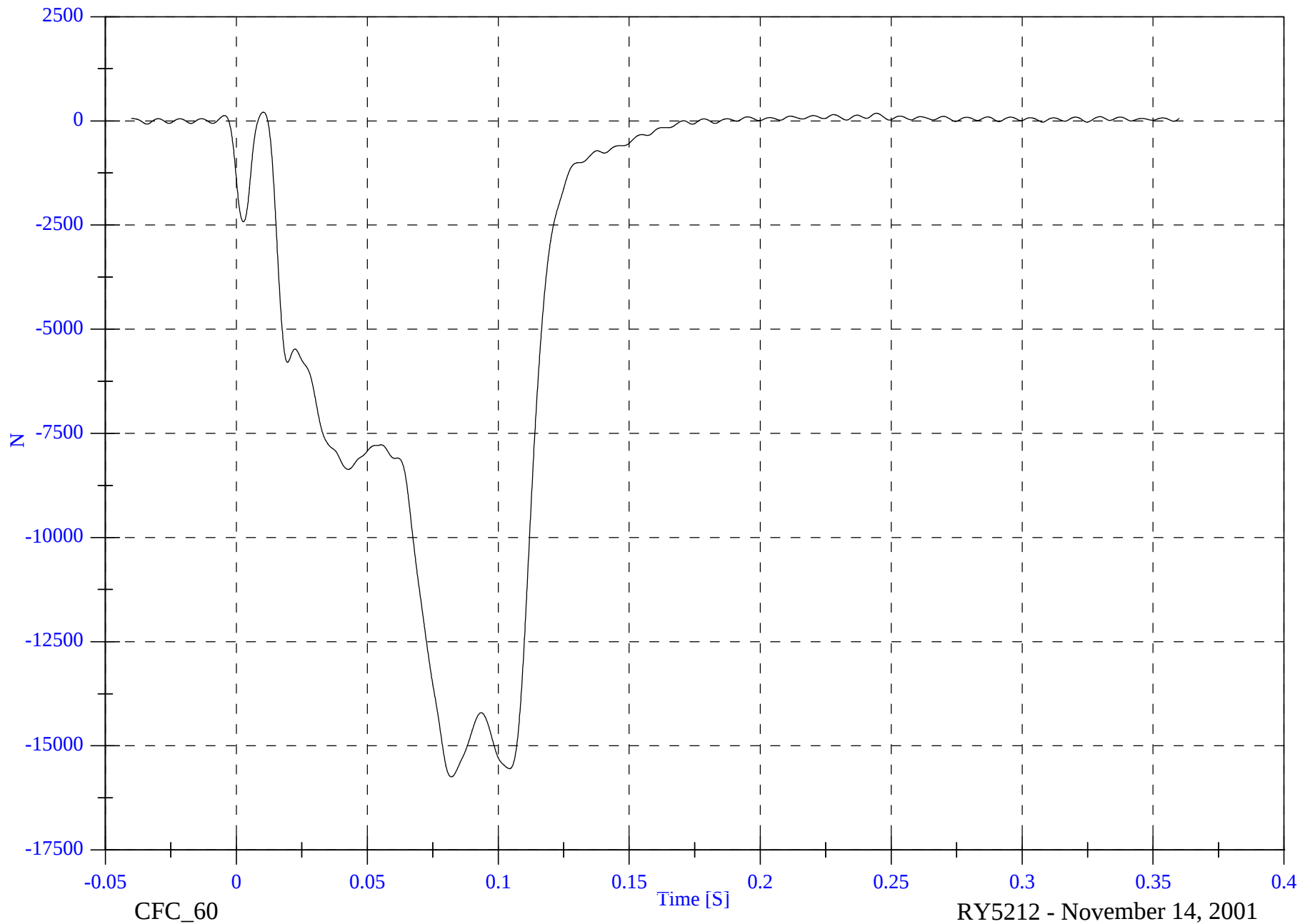
8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell B6 FX

Max: 208.9 [N] at 0.010 [S]

Min: -15746.0 [N] at 0.082 [S]



B-255

8413-68

CFC_60

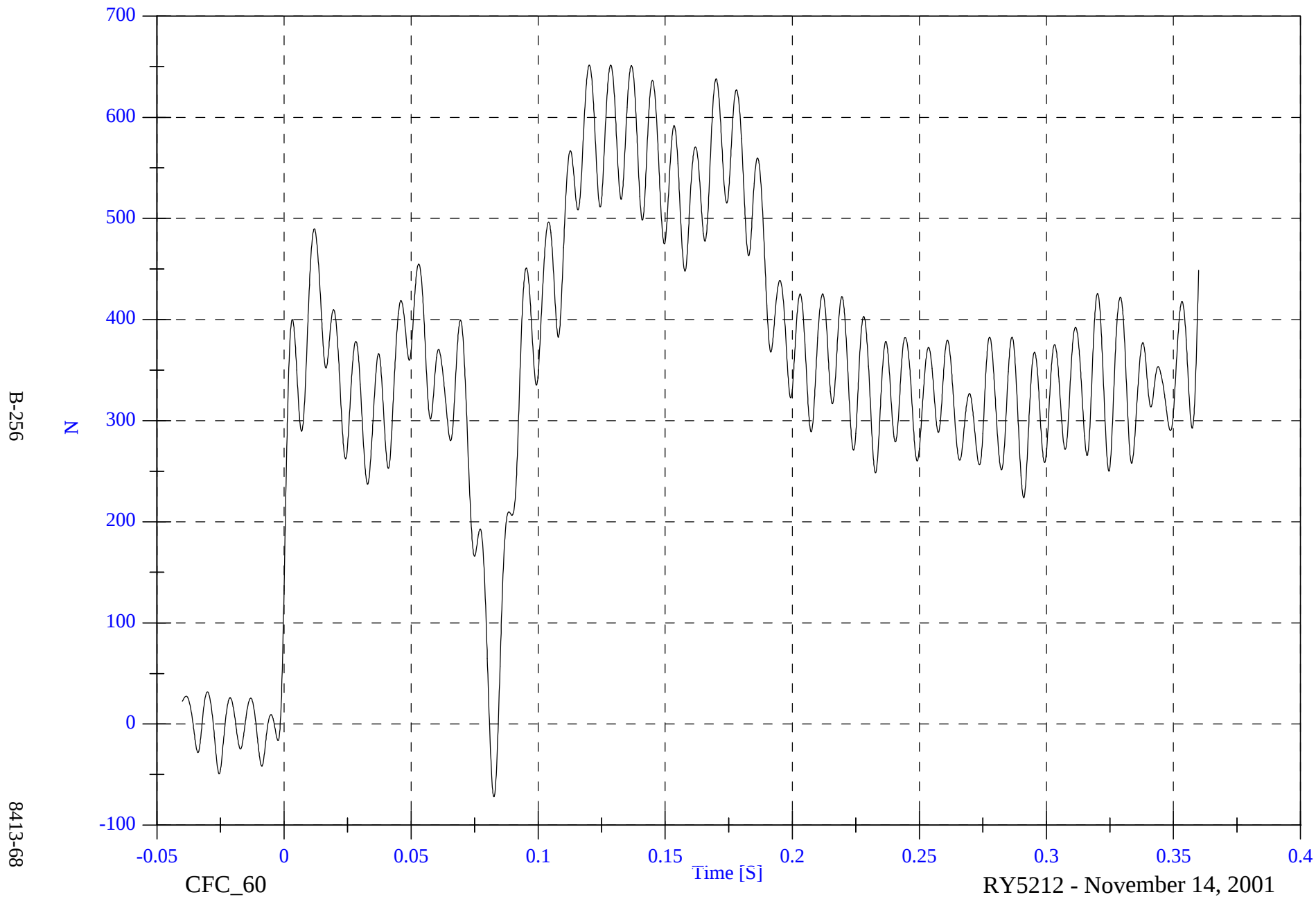
RY5212 - November 14, 2001

40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell A1 FX

Max: 651.7 [N] at 0.120 [S]

Min: -72.1 [N] at 0.083 [S]

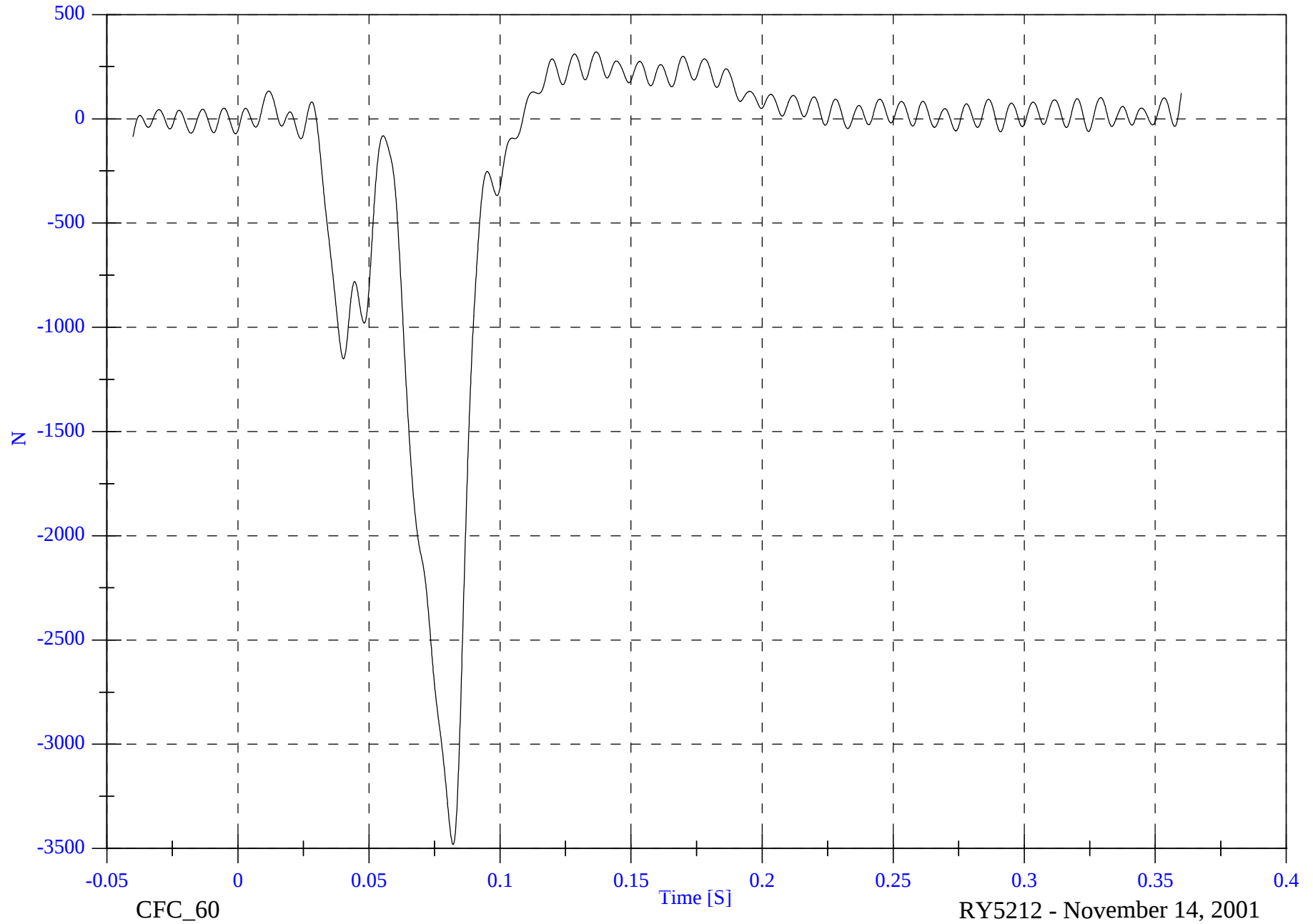


40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell A2 FX

Max: 320.8 [N] at 0.137 [S]

Min: -3481.8 [N] at 0.082 [S]



B-257

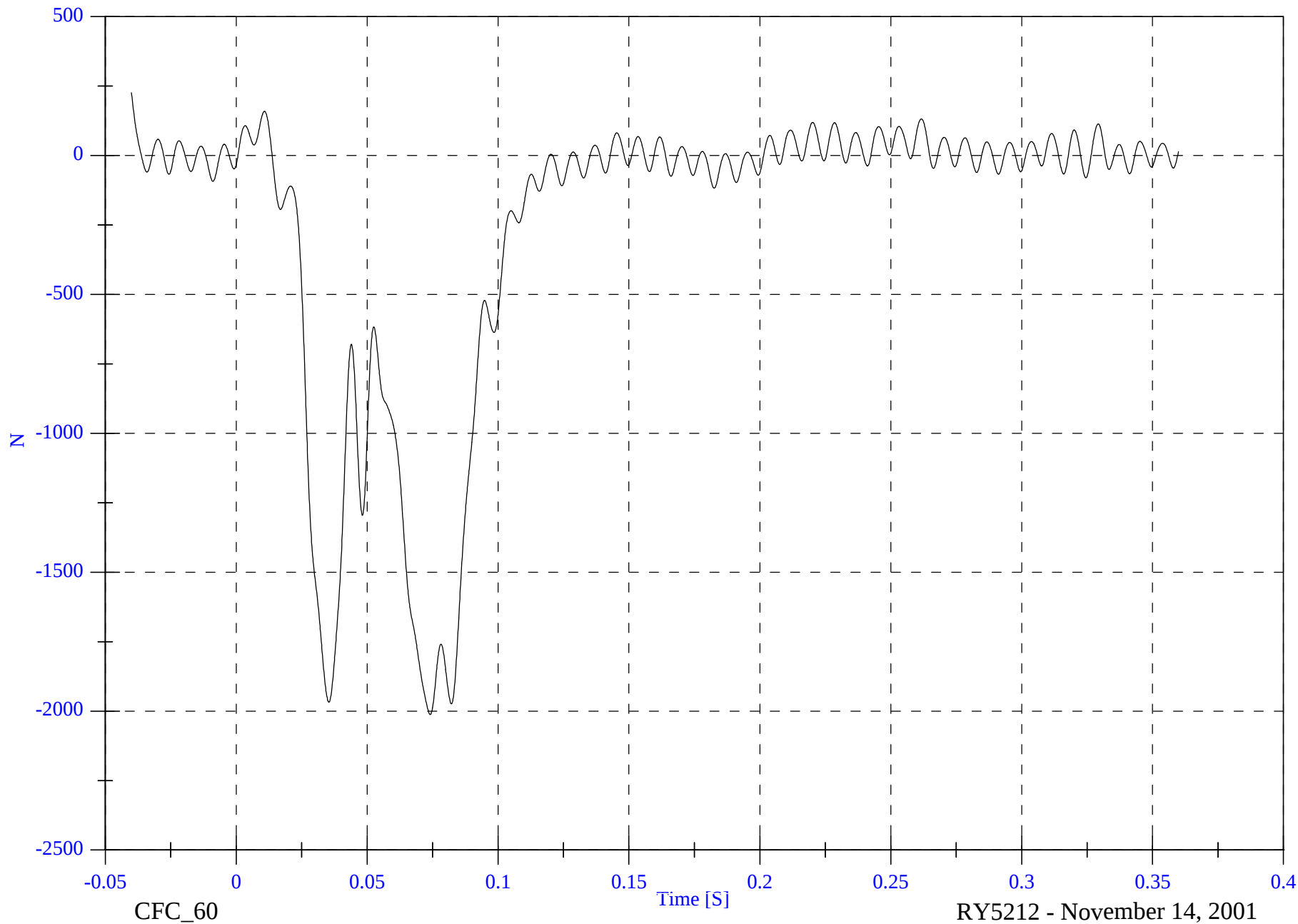
8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell A3 FX

Max: 226.5 [N] at -0.040 [S]

Min: -2012.4 [N] at 0.074 [S]



B-258

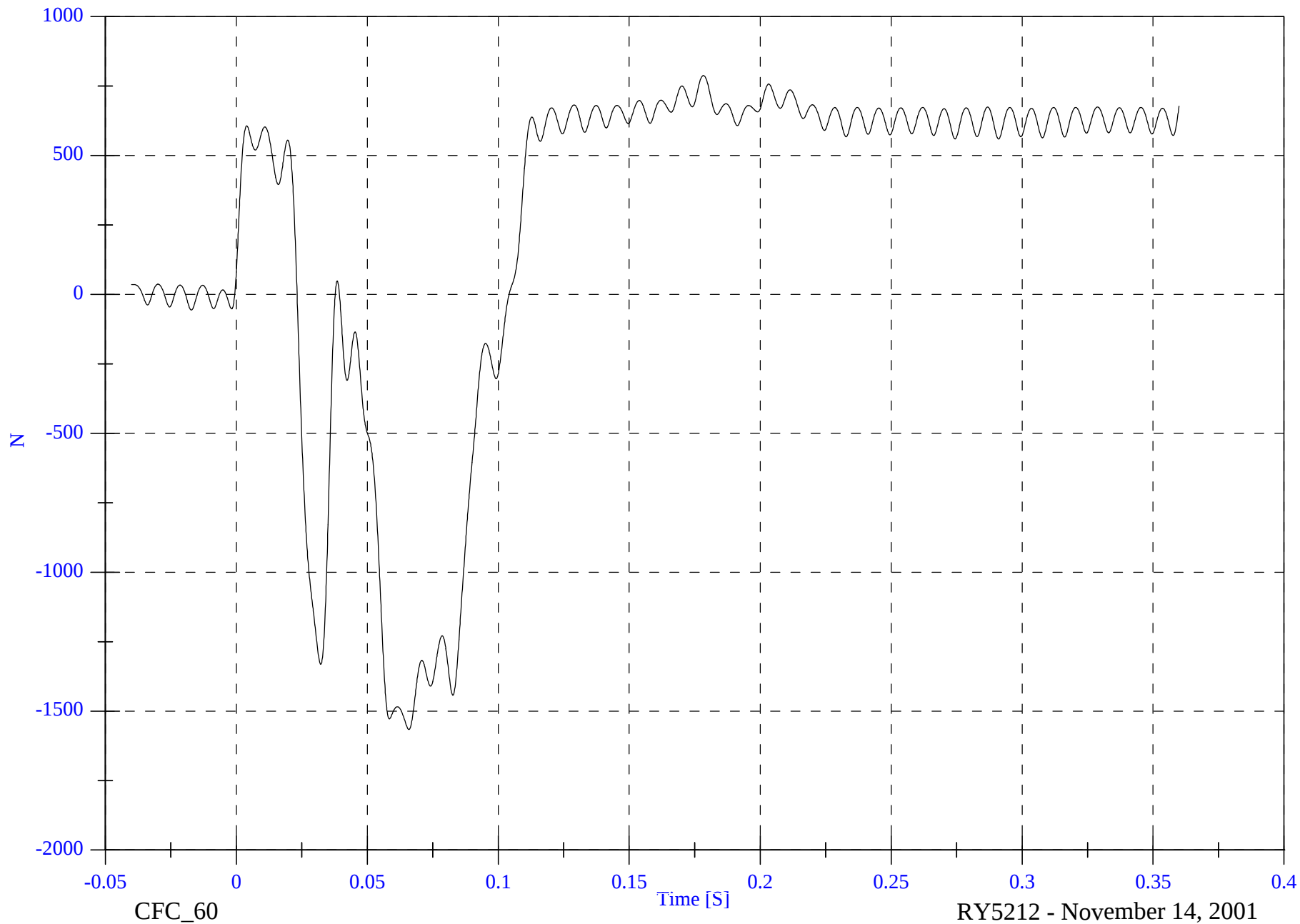
8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell A4 FX

Max: 788.0 [N] at 0.178 [S]

Min: -1566.3 [N] at 0.066 [S]



B-259

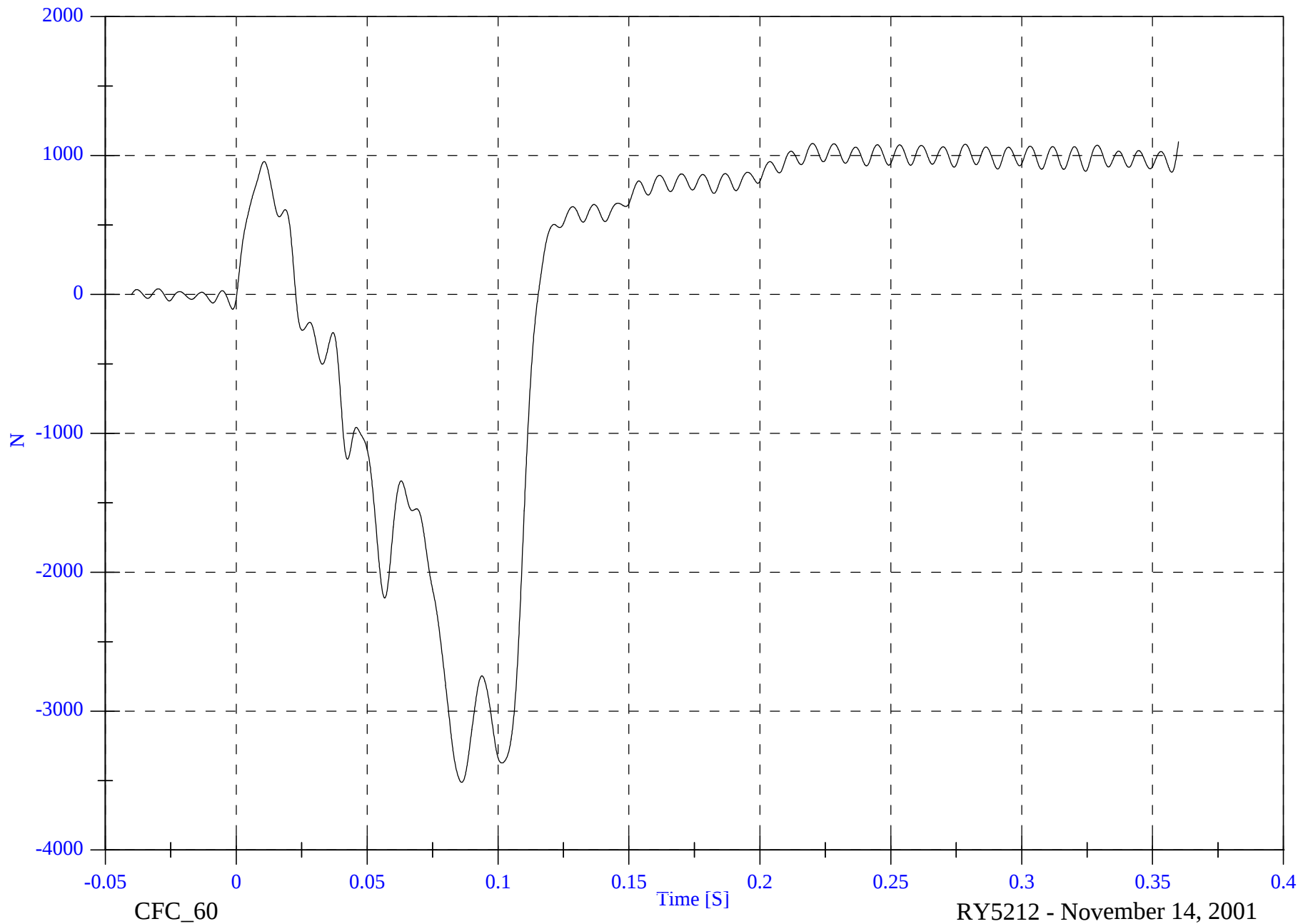
8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell A5 FX

Max: 1099.1 [N] at 0.360 [S]

Min: -3513.2 [N] at 0.086 [S]



B-260

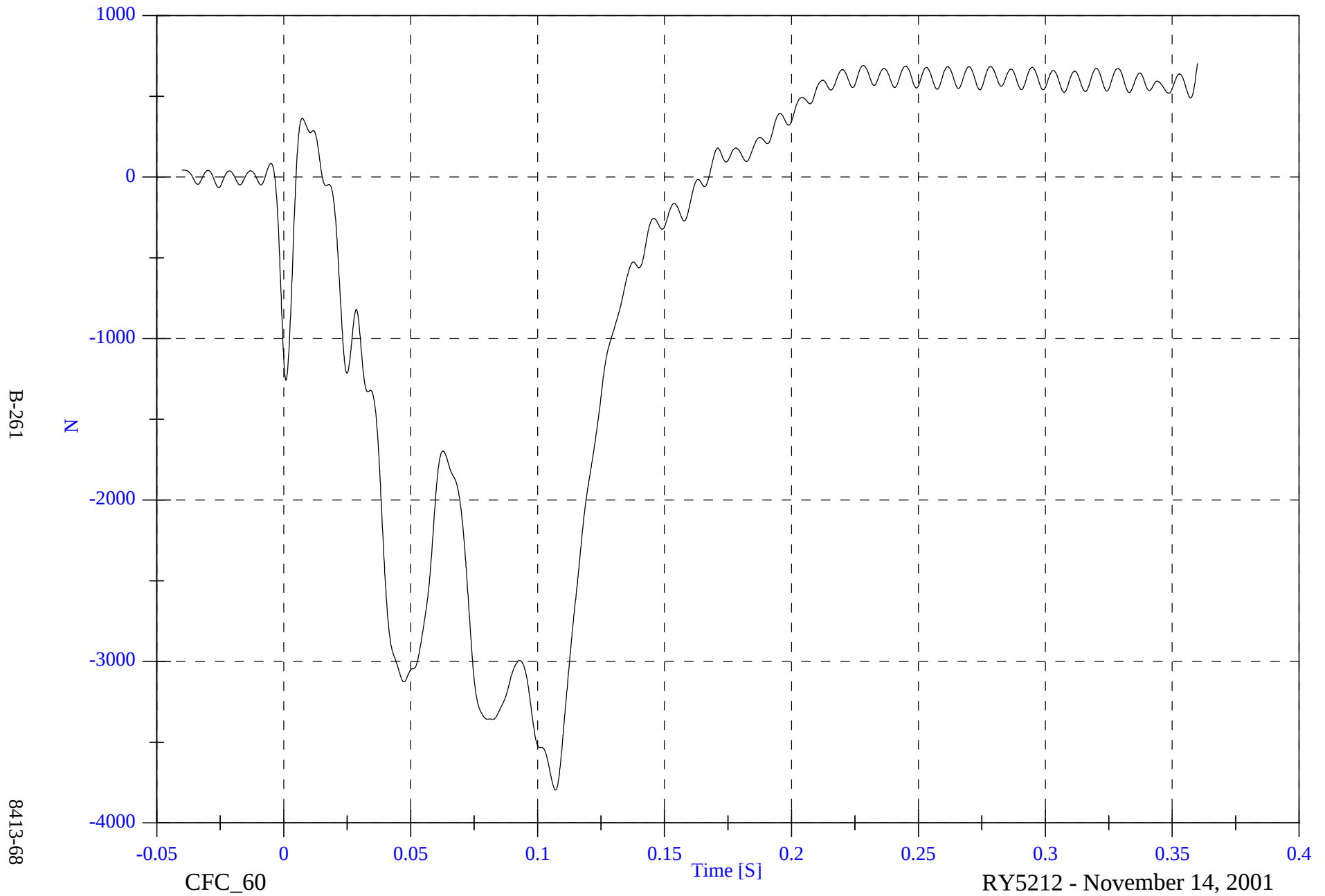
8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell A6 FX

Max: 701.3 [N] at 0.360 [S]

Min: -3797.0 [N] at 0.107 [S]

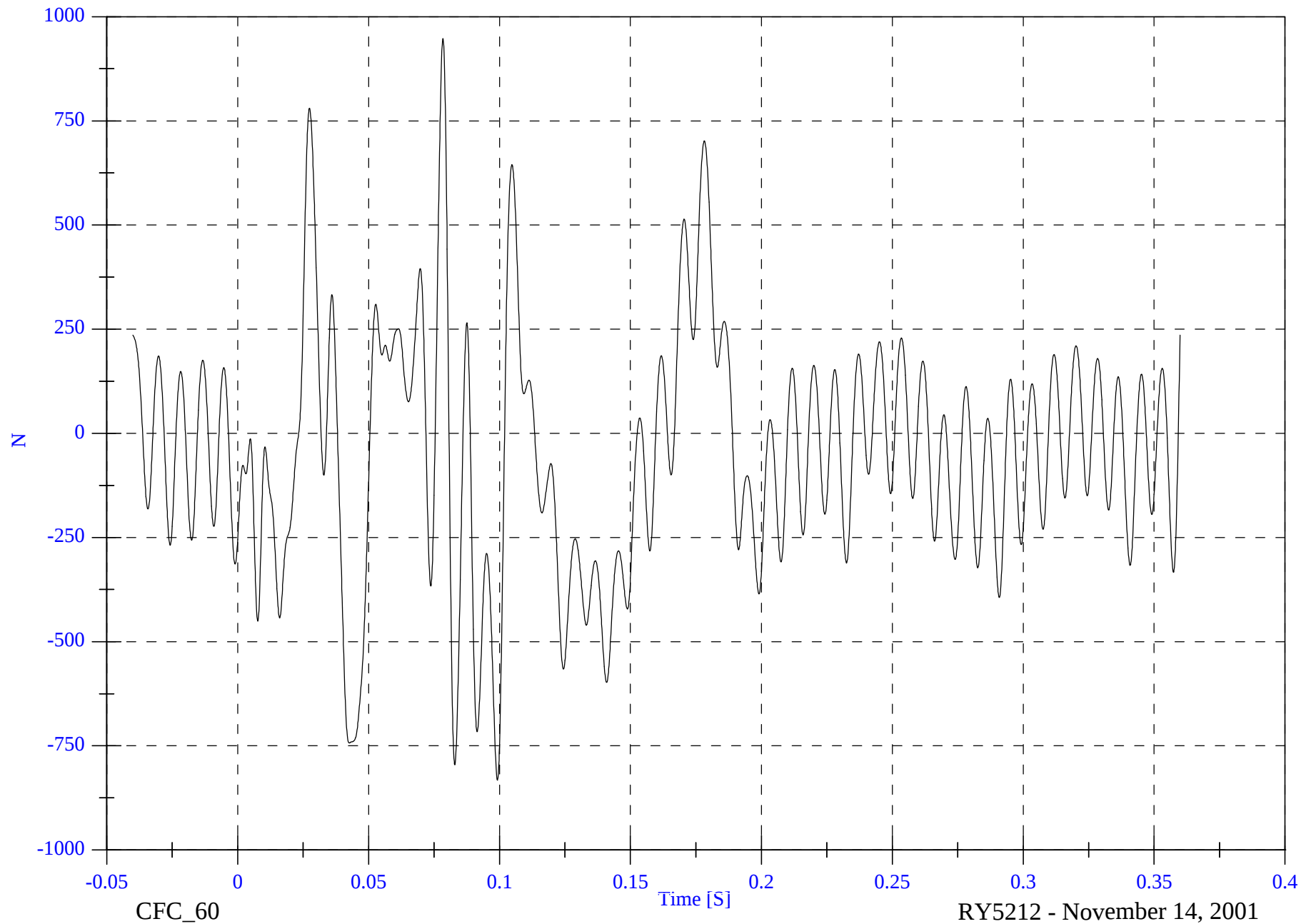


40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell UH1 TL FX

Max: 947.9 [N] at 0.078 [S]

Min: -832.4 [N] at 0.099 [S]



B-262

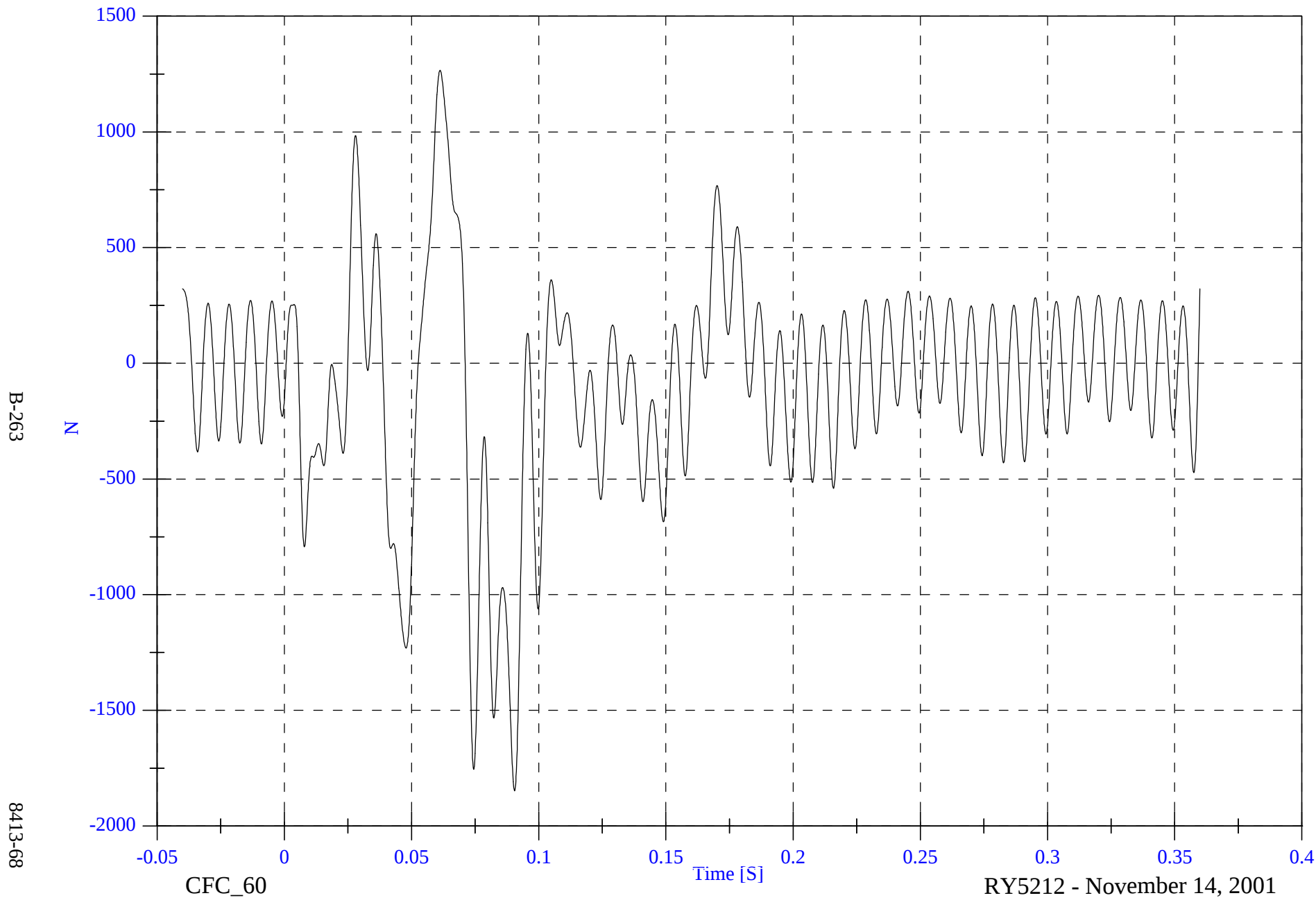
8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell UH2 TR FX

Max: 1266.2 [N] at 0.061 [S]

Min: -1848.1 [N] at 0.090 [S]

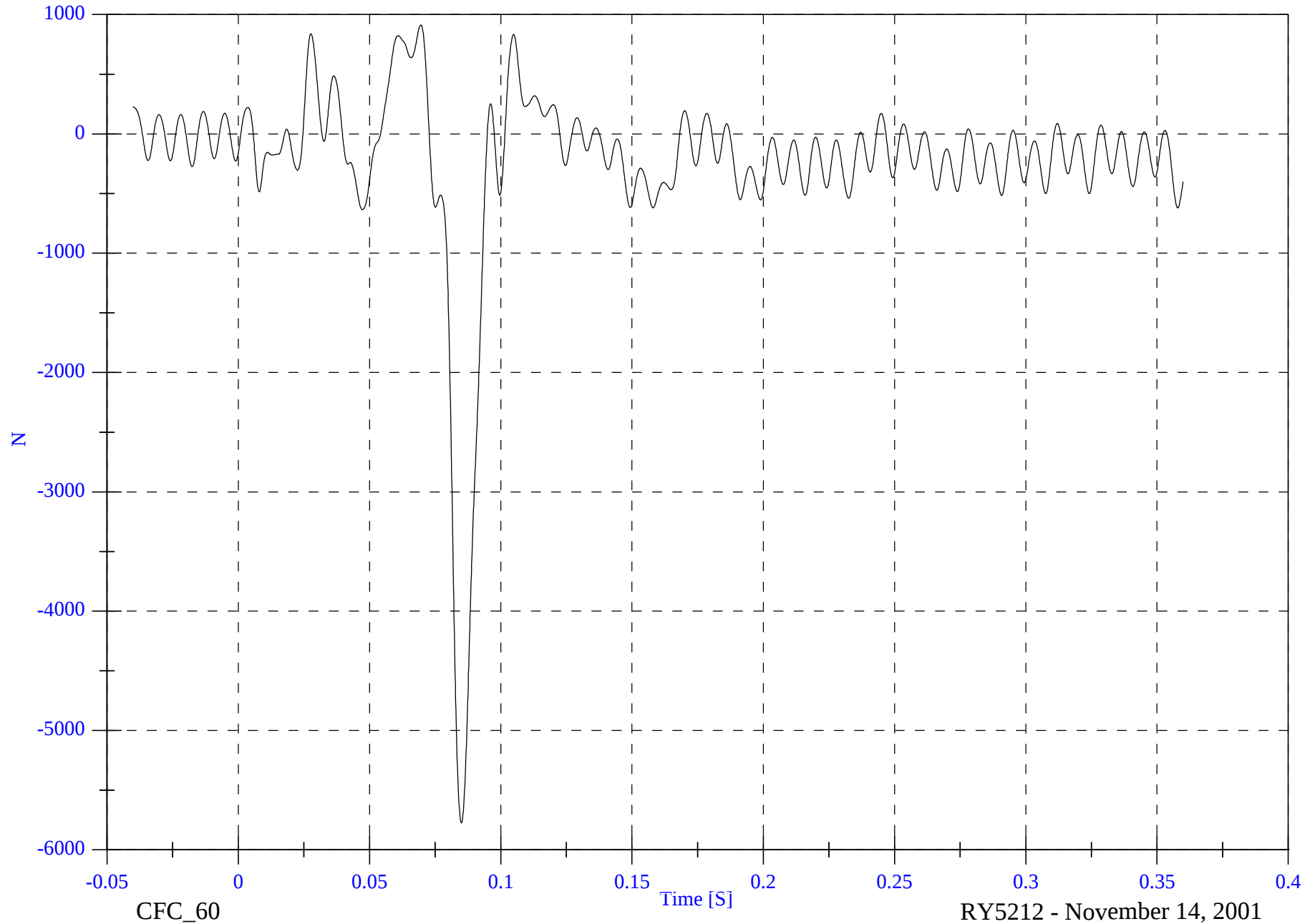


40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell UH3 CL FX

Max: 912.5 [N] at 0.069 [S]

Min: -5774.9 [N] at 0.085 [S]



B-264

8413-68

40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell UH4 BL FX

Max: 476.8 [N] at 0.105 [S]

Min: -1731.2 [N] at 0.083 [S]

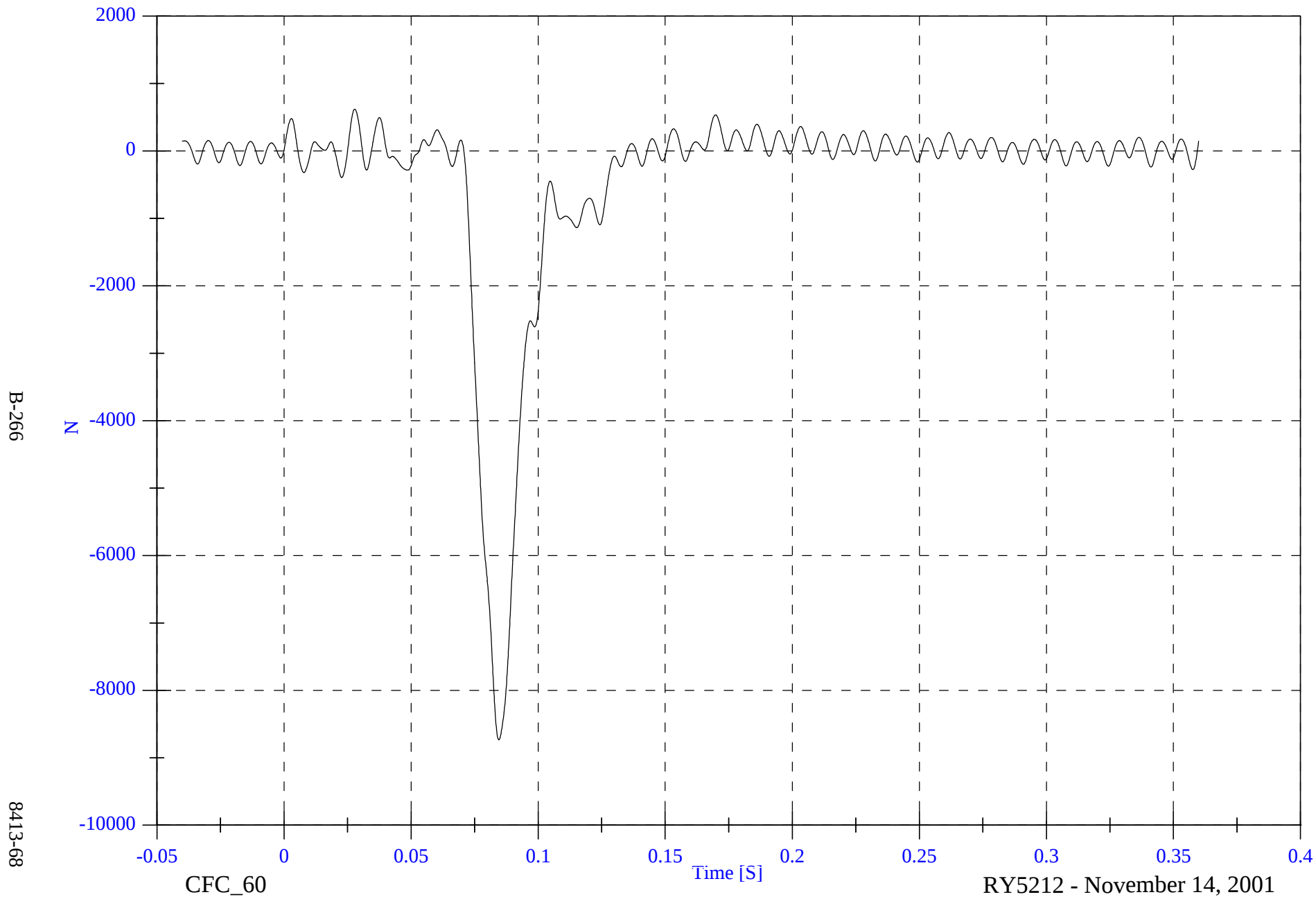


40% Frontal Offset Test #12 - 2000 Nissan Quest

Barrier Load Cell UH5 BR FX

Max: 621.1 [N] at 0.028 [S]

Min: -8734.8 [N] at 0.084 [S]



APPENDIX C

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

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

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

Dummy serial numbers and certification dates are:

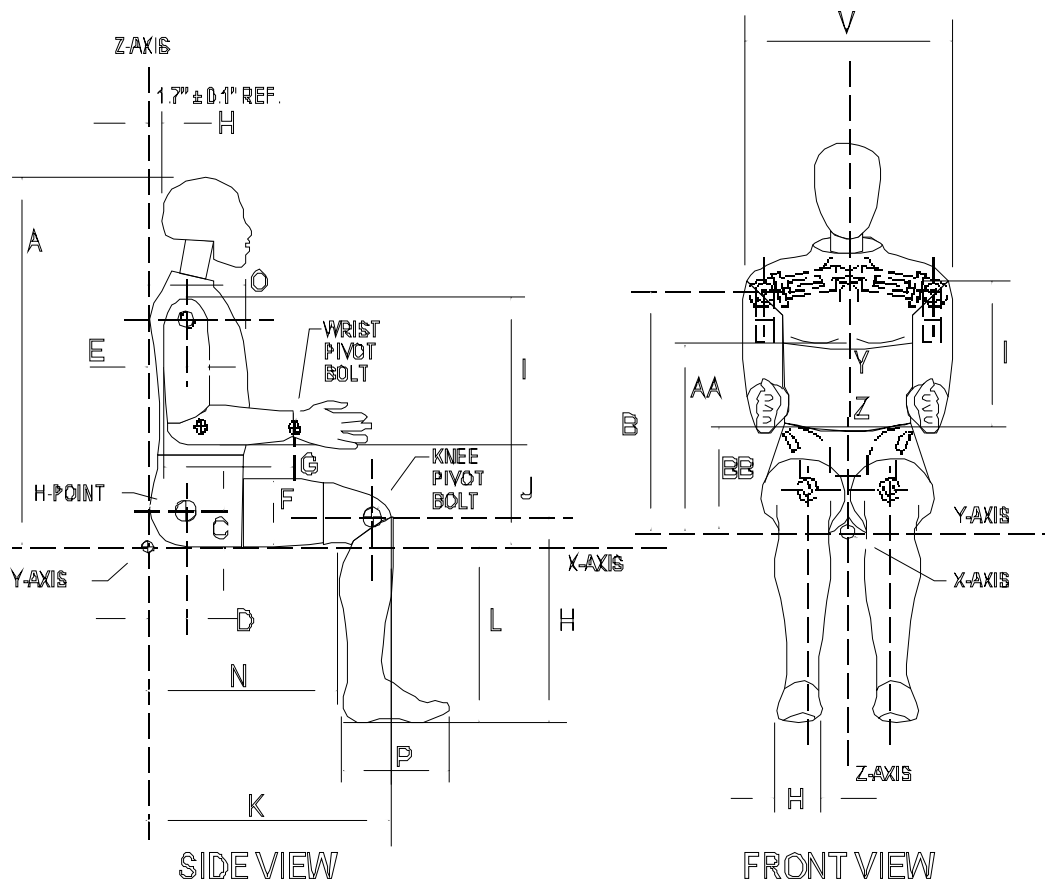
<u>Position No./Location</u>	<u>Serial No.</u>	<u>Completion Date</u>
#1/Driver	421	October 13, 2001
#2/Right Front Passenger	416	October 15, 2001

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 572O

HEAD DROP TEST

Dummy Serial Number	421
Sequential Test Number	1
Date	October 12, 2001
Workfile	421C05HD1

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	18.9-25.6 Deg C	21.7
Relative Humidity	10% - 70%	64.0
Peak Resultant Acceleration	250-300 G's	264.91
Peak Lateral Acceleration	15 G's Max	6.46
Is Acceleration Curve Unimodal?	YES	YES

Remarks:

Laboratory Technician: B. Swiecicki

PART 572O
NECK FLEXION TEST

Dummy Serial Number	<u>421</u>	
Sequential Test Number	<u>1</u>	
Date	<u>October 12, 2001</u>	6 Axis Neck Transducer
Workfile	<u>421C05NF2</u>	

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature		20.6-22.2 Deg C	21.7
Relative Humidity		10% - 70%	64.0
Impact Velocity		6.89 - 7.13 m/s	7.12
Integrated	10 ms	2.0 – 2.5 m/s	2.30
Pendulum	20 ms	4.0 – 5.0 m/s	4.63
Velocity	30 ms	5.8 – 7.0 m/s	6.85
Peak D-Plane Rotation		77 – 91 Deg	85.82
Peak Moment During Rotation Interval		69 – 83 Nm	78.19
Positive Moment Decay Time to 10 Nm Level		80- 100 ms	89.92

Remarks:

Laboratory Technician: B. Swiecicki

PART 572O
NECK EXTENSION TEST

Dummy Serial Number	<u>421</u>	
Sequential Test Number	<u>1</u>	
Date	<u>October 13, 2001</u>	6 Axis Neck Transducer
Workfile	<u>421C05NE3</u>	

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature		20.6-22.2 Deg C	21.7
Relative Humidity		10% - 70%	65.0
Impact Velocity		5.95 – 6.19 m/s	6.16
Integrated Pendulum Velocity	10 ms	1.5 – 1.9 m/s	1.71
	20 ms	3.1 – 3.9 m/s	3.48
	30 ms	4.6 – 5.6 m/s	5.21
Peak D-Plane Rotation		99 – 114 Deg	107.28
Peak Moment During Rotation Interval		-53 - -65 Nm	-62.12
Positive Moment Decay Time to -10 Nm Level		94 - 114 ms	103.36

Remarks:

Laboratory Technician: B. Swiecicki

PART 572O
THORAX IMPACT TEST

Dummy Serial Number	<u>421</u>
Sequential Test Number	<u>1</u>
Date	<u>October 15, 2001</u>
Workfile	<u>421C05TH2</u>

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	20.6 – 22.2 Deg C	21.7
Relative Humidity	10% - 70%	41.0
Pendulum Velocity	6.59 – 6.83 m/s	6.80
Maximum Deflection	50 – 58 mm	51.3
Maximum Resistive Force	3900 – 4400 N	4179
Internal Hysteresis	69 - 85 %	73.1
Peak Force During 18 to 50 mm Deflection	≤ 105%	102

Remarks:

Laboratory Technician:	<u>B. Swiecicki</u>
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PART 5720
KNEE IMPACT TEST

Dummy Serial Number 421

Sequential Test Number 1

Date October 12, 2001

Workfile 421C05LK1/421C05RK1

TEST PARAMETER	SPECIFICATION	TEST RESULTS
LEFT KNEE		
Temperature	18.9 – 25.6 Deg C	21.7
Relative Humidity	10% - 70%	62.0
Probe Velocity	2.07 – 2.13 m/s	2.09
Peak Knee Impact Force	3450 – 4060 N	4052.6
RIGHT KNEE		
Temperature	18.9 – 25.6 Deg C	21.7
Relative Humidity	10% - 70%	61.0
Probe Velocity	2.07 – 2.13 m/s	2.13
Peak Knee Impact Force	3450 – 4060 N	4057.2

Remarks:

Laboratory Technician: B. Swiecicki

PART 572O
KNEE SLIDER TEST

Dummy Serial Number	<u>421</u>
Sequential Test Number	<u>1</u>
Date	<u>October 12, 2001</u>
Workfile	<u>421C05LS1/421C05RS1</u>

TEST PARAMETER	SPECIFICATION	TEST RESULTS
LEFT KNEE		
Temperature	18.9 – 25.6 Deg C	21.7
Relative Humidity	10% - 70%	65.0
Pendulum Velocity	2.70 – 2.80 m/s	2.70
Peak Displacement	12.7 – 15.5 mm	14.4
RIGHT KNEE		
Temperature	18.9 – 25.6 Deg C	21.7
Relative Humidity	10% - 70%	68.0
Probe Velocity	2.70 – 2.80 m/s	2.70
Peak Knee Impact Force	12.7 – 15.5 mm	14.5

Remarks:

Laboratory Technician:	<u>B. Swiecicki</u>
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PART 572O
EXTERNAL DIMENSIONS

Dummy Serial Number 421
Sequential Test Number 1
Date October 13, 2001

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Total Sitting Height	A	774.7 – 800.1 mm	784.86
Shoulder Pivot Height	B	431.8 – 457.2 mm	447.04
H-Point Height	C	81.3 – 86.3 mm	83.82
H-Point from Backline	D	144.8 – 149.8 mm	144.78
Shoulder Pivot from Backline	E	68.6 – 83.8 mm	73.66
Thigh Clearance	F	119.4 – 134.6 mm	134.62
Back of Elbow to Wrist Pivot	G	243.9 – 259.1 mm	256.54
Skull Cap to Backline	H	40.7 – 45.7 mm	45.72
Shoulder - Elbow Length	I	276.8 – 297.2 mm	281.94
Elbow Rest Height	J	182.8 – 203.2 mm	185.42
Buttock Knee Length	K	520.7 – 546.1 mm	535.94
Popliteal Height	L	355.6 – 376 mm	373.38
Knee Pivot Height	M	393.7 – 419.1 mm	408.94
Buttock Popliteal Length	N	414 – 439.4 mm	429.26
Chest Depth	O	175.3 – 190.5 mm	180.34
Foot Length	P	218.5 – 233.7 mm	228.6
Buttock to Knee Pivot Length	R	457.2 – 482.6 mm	469.9
Head Breadth	S	137.1 – 147.3 mm	142.24
Head Depth	T	177.8 – 188 mm	185.42
Hip Breadth	U	299.7 – 314.9 mm	307.34
Shoulder Breadth	V	350.5 – 365.7 mm	353.06
Foot Breadth	W	78.8 – 94 mm	88.9
Head Circumference	X	528.3 – 548.7 mm	546.1
Chest Circumference (With Jacket)	Y	850.9 – 881.3 mm	871.22
Waist Circumference	Z	759.5 – 789.9 mm	764.54
Location for Chest Circumference	AA	299.7 – 309.9 mm	304.8
Location for Waist Circumference	BB	160 – 170.2 mm	165.1

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572O
HEAD DROP TEST

Dummy Serial Number	<u>416</u>
Sequential Test Number	<u>1</u>
Date	<u>October 12, 2001</u>
Workfile	<u>416C12HD1</u>

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	18.9-25.6 Deg C	21.7
Relative Humidity	10% - 70%	60.0
Peak Resultant Acceleration	250-300 G's	274.54
Peak Lateral Acceleration	15 G's Max	0.95
Is Acceleration Curve Unimodal?	YES	YES

Remarks:

Laboratory Technician:	<u>B. Swiecicki</u>
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PART 572O
NECK FLEXION TEST

Dummy Serial Number	<u>416</u>	
Sequential Test Number	<u>1</u>	
Date	<u>October 13, 2001</u>	6 Axis Neck Transducer
Workfile	<u>416C12NF3</u>	

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature		20.6-22.2 Deg C	21.7
Relative Humidity		10% - 70%	61.0
Impact Velocity		6.89 - 7.13 m/s	6.99
Integrated	10 ms	2.0 – 2.5 m/s	2.34
Pendulum	20 ms	4.0 – 5.0 m/s	4.82
Velocity	30 ms	5.8 – 7.0 m/s	6.98
Peak D-Plane Rotation		77 – 91 Deg	83.34
Peak Moment During Rotation Interval		69 – 83 Nm	80.17
Positive Moment Decay Time to 10 Nm Level		80- 100 ms	87.20

Remarks:

Laboratory Technician: B. Swiecicki

PART 572O
NECK EXTENSION TEST

Dummy Serial Number	<u>416</u>	
Sequential Test Number	<u>1</u>	
Date	<u>October 15, 2001</u>	6 Axis Neck Transducer
Workfile	<u>416C12NE2</u>	

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature		20.6-22.2 Deg C	21.7
Relative Humidity		10% - 70%	41.0
Impact Velocity		5.95 – 6.19 m/s	6.14
Integrated Pendulum Velocity	10 ms	1.5 – 1.9 m/s	1.77
	20 ms	3.1 – 3.9 m/s	3.52
	30 ms	4.6 – 5.6 m/s	5.18
Peak D-Plane Rotation		99 – 114 Deg	105.74
Peak Moment During Rotation Interval		-53 - -65 Nm	-59.35
Positive Moment Decay Time to -10 Nm Level		94 - 114 ms	103.36

Remarks:

Laboratory Technician: B. Swiecicki

PART 572O
THORAX IMPACT TEST

Dummy Serial Number	<u>416</u>
Sequential Test Number	<u>1</u>
Date	<u>October 15, 2001</u>
Workfile	<u>416C12TH1</u>

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	20.6 – 22.2 Deg C	21.7
Relative Humidity	10% - 70%	41.0
Pendulum Velocity	6.59 – 6.83 m/s	6.65
Maximum Deflection	50 – 58 mm	56.6
Maximum Resistive Force	3900 – 4400 N	4380.0
Internal Hysteresis	69 - 85 %	73.9
Peak Force During 18 to 50 mm Deflection	≤ 105%	94

Remarks:

Laboratory Technician:	<u>B. Swiecicki</u>
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PART 5720
KNEE IMPACT TEST

Dummy Serial Number 416

Sequential Test Number 1

Date October 12, 2001

Workfile 416C12LK1/416C12RK1

TEST PARAMETER	SPECIFICATION	TEST RESULTS
LEFT KNEE		
Temperature	18.9 – 25.6 Deg C	21.7
Relative Humidity	10% - 70%	63.0
Probe Velocity	2.07 – 2.13 m/s	2.10
Peak Knee Impact Force	3450 – 4060 N	3984.3
RIGHT KNEE		
Temperature	18.9 – 25.6 Deg C	21.7
Relative Humidity	10% - 70%	62.0
Probe Velocity	2.07 – 2.13 m/s	2.10
Peak Knee Impact Force	3450 – 4060 N	3784.0

Remarks:

Laboratory Technician: B. Swiecicki

PART 572O
KNEE SLIDER TEST

Dummy Serial Number	<u>416</u>
Sequential Test Number	<u>1</u>
Date	<u>October 12, 2001</u>
Workfile	<u>416C12LS1/416C12RS1</u>

TEST PARAMETER	SPECIFICATION	TEST RESULTS
LEFT KNEE		
Temperature	18.9 – 25.6 Deg C	21.7
Relative Humidity	10% - 70%	60.0
Pendulum Velocity	2.70 – 2.80 m/s	2.70
Peak Displacement	12.7 – 15.5 mm	14.3
RIGHT KNEE		
Temperature	18.9 – 25.6 Deg C	21.7
Relative Humidity	10% - 70%	65.0
Probe Velocity	2.70 – 2.80 m/s	2.70
Peak Knee Impact Force	12.7 – 15.5 mm	14.3

Remarks:

Laboratory Technician:	<u>B. Swiecicki</u>
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PART 572O
EXTERNAL DIMENSIONS

Dummy Serial Number 416
Sequential Test Number 1
Date October 15, 2001

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Total Sitting Height	A	774.7 – 800.1 mm	782.32
Shoulder Pivot Height	B	431.8 – 457.2 mm	447.04
H-Point Height	C	81.3 – 86.3 mm	83.82
H-Point from Backline	D	144.8 – 149.8 mm	149.86
Shoulder Pivot from Backline	E	68.6 – 83.8 mm	73.66
Thigh Clearance	F	119.4 – 134.6 mm	129.54
Back of Elbow to Wrist Pivot	G	243.9 – 259.1 mm	256.54
Skull Cap to Backline	H	40.7 – 45.7 mm	45.72
Shoulder - Elbow Length	I	276.8 – 297.2 mm	294.64
Elbow Rest Height	J	182.8 – 203.2 mm	190.5
Buttock Knee Length	K	520.7 – 546.1 mm	546.1
Popliteal Height	L	355.6 – 376 mm	373.38
Knee Pivot Height	M	393.7 – 419.1 mm	403.86
Buttock Popliteal Length	N	414 – 439.4 mm	419.1
Chest Depth	O	175.3 – 190.5 mm	185.42
Foot Length	P	218.5 – 233.7 mm	228.6
Buttock to Knee Pivot Length	R	457.2 – 482.6 mm	467.36
Head Breadth	S	137.1 – 147.3 mm	142.24
Head Depth	T	177.8 – 188 mm	185.42
Hip Breadth	U	299.7 – 314.9 mm	307.34
Shoulder Breadth	V	350.5 – 365.7 mm	353.06
Foot Breadth	W	78.8 – 94 mm	88.9
Head Circumference	X	528.3 – 548.7 mm	538.48
Chest Circumference (With Jacket)	Y	850.9 – 881.3 mm	863.6
Waist Circumference	Z	759.5 – 789.9 mm	777.24
Location for Chest Circumference	AA	299.7 – 309.9 mm	304.8
Location for Waist Circumference	BB	160 – 170.2 mm	165.1

Remarks:

Laboratory Technician:

B. Swiecicki

APPENDIX D

DUMMY, VEHICLE AND LABORATORY INSTRUMENT CALIBRATION

INSTRUMENT CALIBRATION FOR PASSENGER DUMMY
(6 Month Calibration Minimum)

DRIVER DUMMY (S/N 421)		Manufacturer	Serial #	Calibration	
				Last	Next
Head X Arm	Y	ENTRAN	AC-99102-F15	05-Oct-01	05-Apr-02
	Z	ENTRAN	AC-99108-F29	05-Oct-01	05-Apr-02
Head Y Arm	X	ENTRAN	AC-99102-F12	05-Oct-01	05-Apr-02
	Z	ENTRAN	AC-99102-F06	05-Oct-01	05-Apr-02
Head Z Arm	X	ENTRAN	AC-99H30-Z03	05-Oct-01	05-Apr-02
	Y	ENTRAN	AC-99108-F28	05-Oct-01	05-Apr-02
Head CG	X	ENTRAN	AC-98G18-F18	05-Oct-01	05-Apr-02
	Y	ENTRAN	AC-99H30-Z05	05-Oct-01	05-Apr-02
	Z	ENTRAN	AC-99102-F09	05-Oct-01	05-Apr-02
Head CG	X (R)	ENTRAN	AC-00L13-F03	05-Oct-01	05-Apr-02
	Y (R)	ENTRAN	AC-99H30-Z08	05-Oct-01	05-Apr-02
	Z (R)	ENTRAN	AC-99H30-Z04	05-Oct-01	05-Apr-02
Neck Load Cell	X	DENTON	LC-852FX	05-Oct-01	05-Apr-02
	Y	DENTON	LC-852FY	05-Oct-01	05-Apr-02
	Z	DENTON	LC-852FZ	05-Oct-01	05-Apr-02
Neck Moment	X	DENTON	LC-852MX	05-Oct-01	05-Apr-02
	Y	DENTON	LC-852MY	05-Oct-01	05-Apr-02
	Z	DENTON	LC-852MZ	05-Oct-01	05-Apr-02
Chest	X	ENTRAN	AC-01G19-F01	08-Oct-01	08-Apr-02
	Y	ENDEVCO	AC-P15321	05-Oct-01	05-Apr-02
	Z	ENDEVCO	AC-P17743	05-Oct-01	05-Apr-02
Chest	X (R)	ENTRAN	AC-99H30-Z07	05-Oct-01	05-Apr-02
	Y (R)	ENDEVCO	AC-P15334	05-Oct-01	05-Apr-02
	Z (R)	ENTRAN	AC-99G29-Q13	05-Oct-01	05-Apr-02
Chest Deflection Gauge		SERVO	DS-421	10-Oct-01	08-Apr-02
Pelvic	X	ENTRAN	AC-99108-F26	05-Oct-01	05-Apr-02
	Y	ENTRAN	AC-99H30-Z02	05-Oct-01	05-Apr-02
	Z	ENTRAN	AC-99108-F30	12-Apr-01	12-Oct-01

INSTRUMENT CALIBRATION FOR PASSENGER DUMMY
(6 Month Calibration Minimum)

DRIVER DUMMY (S/N 421)		Manufacturer	Serial #	Calibration	
				Last	Next
Left Femur Load	X	DENTON	LC-383Fx	24-May-01	24-Nov-01
	Y	DENTON	LC-383Fy	24-May-01	24-Nov-01
	Z	DENTON	LC-383Fz	24-May-01	24-Nov-01
Left Femur Moment	X	DENTON	LC-383Mx	24-May-01	24-Nov-01
	Y	DENTON	LC-383My	24-May-01	24-Nov-01
	Z	DENTON	LC-383Mz	24-May-01	24-Nov-01
Right Femur Load	X	DENTON	LC-376Fx	24-May-01	24-Nov-01
	Y	DENTON	LC-376Fy	24-May-01	24-Nov-01
	Z	DENTON	LC-376Fz	24-May-01	24-Nov-01
Right Femur Moment	X	DENTON	LC-376Mx	24-May-01	24-Nov-01
	Y	DENTON	LC-376My	24-May-01	24-Nov-01
	Z	DENTON	LC-376Mz	24-May-01	24-Nov-01
Left Knee Shear Dx		DENTON	DS-15021	09-Oct-01	09-Apr-02
Right Knee Shear Dx		DENTON	DS-14949	11-Oct-01	11-Apr-02
Left Upper Tibia	Fx	DENTON	FLX-103-UTLFX	29-Nov-00	29-May-01
	Fz	DENTON	FLX-103-UTLFZ	29-Nov-00	29-May-01
	Mx	DENTON	FLX-103-UTLMX	29-Nov-00	29-May-01
	My	DENTON	FLX-103-UTLMY	29-Nov-00	29-May-01
Left Lower Tibia	Fx	DENTON	FLX-103-LTLFX	09-Nov-00	09-May-01
	Fy	DENTON	FLX-103-LTLFY	09-Nov-00	09-May-01
	Fz	DENTON	FLX-103-LTLFZ	09-Nov-00	09-May-01
	Mx	DENTON	FLX-103-LTLMX	09-Nov-00	09-May-01
	My	DENTON	FLX-103-LTLMY	09-Nov-00	09-May-01
Right Upper Tibia	Fx	DENTON	FLX-104-UTRFX	08-Nov-00	08-May-01
	Fz	DENTON	FLX-104-UTRFZ	08-Nov-00	08-May-01
	Mx	DENTON	FLX-104-UTRMX	08-Nov-00	08-May-01
	My	DENTON	FLX-104-UTRMY	08-Nov-00	08-May-01

INSTRUMENT CALIBRATION FOR PASSENGER DUMMY
(6 Month Calibration Minimum)

DRIVER DUMMY (S/N 421)		Manufacturer	Serial #	Calibration	
				Last	Next
Right Lower Tibia	Fx	DENTON	FLX-104-LTRFX	09-Nov-00	09-May-01
	Fy	DENTON	FLX-104-LTRFY	09-Nov-00	09-May-01
	Fz	DENTON	FLX-104-LTRFZ	09-Nov-00	09-May-01
	Mx	DENTON	FLX-104-LTRMX	09-Nov-00	09-May-01
	My	DENTON	FLX-104-LTRMY	09-Nov-00	09-May-01
Left Tibia	X	ENTRAN	AC-00L20-A08	11-Oct-01	11-Apr-02
	Y	ENTRAN	AC-98H13-F15	10-Oct-01	08-Apr-02
Right Tibia	X	ENTRAN	AC-98H10-F18	10-Oct-01	08-Apr-02
	Y	ENTRAN	AC-00L20-A12	10-Oct-01	08-Apr-02
Left Ankle	Rx	Contelec	FLX-103-AXRRP	26-Sep-00	26-Mar-01
	Ry	Contelec	FLX-103-AYRRP	26-Sep-00	26-Mar-01
	Rz	Contelec	FLX-103-AZRRP	26-Sep-00	26-Mar-01
Right Ankle	Rx	Contelec	FLX-104-AXRRP	26-Sep-00	26-Mar-01
	Ry	Contelec	FLX-104-AYRRP	26-Sep-00	26-Mar-01
	Rz	Contelec	FLX-104-AZRRP	26-Sep-00	26-Mar-01
Left Foot	Ax	ENTRAN	AC-00L13-F39	10-Oct-01	08-Apr-02
	Ay	ENTRAN	AC-00L20-A15	10-Oct-01	08-Apr-02
	Az	ENTRAN	AC-00L13-F14	11-Oct-01	11-Apr-02
Right Foot	Ax	ENDEVCO	AC-P19227	04-Sep-01	04-Mar-02
	Ay	ENTRAN	AC-01G25-N11	10-Oct-01	08-Apr-02
	Az	ENTRAN	AC-00L13-F72	10-Oct-01	08-Apr-02

INSTRUMENT CALIBRATION FOR PASSENGER DUMMY
(6 Month Calibration Minimum)

PASSENGER DUMMY (S/N 416)		Manufacturer	Serial #	Calibration	
				Last	Next
Head X Arm	Y	ENTRAN	AC-98H14-K20	05-Oct-01	05-Apr-02
	Z	ENDEVCO	AC-P23142	24-Sep-01	24-Mar-02
Head Y Arm	X	ENTRAN	AC-98H10-F10	08-Oct-01	08-Apr-02
	Z	ENDEVCO	AC-P23303	05-Oct-01	05-Apr-02
Head Z Arm	X	ENDEVCO	AC-P23340	01-Oct-01	01-May-02
	Y	ENDEVCO	AC-P19216	04-Sep-01	04-Mar-02
Head CG	X	ENTRAN	AC-98H13-F01	08-Oct-01	08-Apr-02
	Y	ENTRAN	AC-98H10-F12	08-Oct-01	08-Apr-02
	Z	ENTRAN	AC-99H12-F30	08-Oct-01	08-Apr-02
Head CG	X (R)	ENTRAN	AC-99H12-F06	08-Oct-01	08-Apr-02
	Y (R)	ENTRAN	AC-98H13-F04	08-Oct-01	08-Apr-02
	Z (R)	ENDEVCO	AC-P17535	04-Sep-01	04-Mar-02
Neck Load Cell	X	DENTON	LC-1039Fx	24-May-01	24-Nov-01
	Y	DENTON	LC-1039Fy	24-May-01	24-Nov-01
	Z	DENTON	LC-1039Fz	24-May-01	24-Nov-01
Neck Moment	X	DENTON	LC-1039Mx	24-May-01	24-Nov-01
	Y	DENTON	LC-1039My	24-May-01	24-Nov-01
	Z	DENTON	LC-1039Mz	24-May-01	24-Nov-01
Chest	X	ENTRAN	AC-99H12-F15	05-Oct-01	05-Apr-02
	Y	ENDEVCO	AC-AAMD5	05-Oct-01	05-Apr-02
	Z	ENTRAN	AC-99H12-F08	05-Oct-01	05-Apr-02
Chest	X (R)	ENDEVCO	AC-J19868	05-Oct-01	05-Apr-02
	Y (R)	ENDEVCO	AC-AJ7R1	05-Oct-01	05-Apr-02
	Z (R)	ENDEVCO	AC-DC33J	05-Oct-01	05-Apr-02
Chest Deflection Gauge		SERVO	DS-416	12-Oct-01	12-Apr-02
Pelvic	ENDEVCO	AC-J19547	05-Oct-01	05-Apr-02	
	ENDEVCO	AC-J27079	12-Sep-00	12-Mar-01	
	ENDEVCO	AC-ADAT0	05-Oct-01	05-Apr-02	

INSTRUMENT CALIBRATION FOR PASSENGER DUMMY
(6 Month Calibration Minimum)

PASSENGER DUMMY (S/N 416)		Manufacturer	Serial #	Calibration	
				Last	Next
Left Femur Load	X	FTSS	LC-111Fx	06-Feb-01	06-Aug-01
	Y	FTSS	LC-111Fy	06-Feb-01	06-Aug-01
	Z	FTSS	LC-111Fz	06-Feb-01	06-Aug-01
L. Femur Moment	X	FTSS	LC-111Mx	06-Feb-01	06-Aug-01
	Y	FTSS	LC-111My	06-Feb-01	06-Aug-01
	Z	FTSS	LC-111Mz	06-Feb-01	06-Aug-01
Right Femur Load	X	FTSS	LC-112Fx	06-Feb-01	06-Aug-01
	Y	FTSS	LC-112Fy	06-Feb-01	06-Aug-01
	Z	FTSS	LC-112Fz	06-Feb-01	06-Aug-01
R. Femur Moment	X	FTSS	LC-112Mx	06-Feb-01	06-Aug-01
	Y	FTSS	LC-112My	06-Feb-01	06-Aug-01
	Z	FTSS	LC-112Mz	06-Feb-01	06-Aug-01
Left Knee Shear Dx		SpaceAge Control	DS-13742	09-Oct-01	09-Apr-02
Right Knee Shear Dx		SpaceAge Control	DS-18127	10-Oct-01	08-Apr-02
Left Upper Tibia	Fx	DENTON	FLX-102-UTLFX	08-Nov-00	08-May-01
	Fz	DENTON	FLX-102-UTLFZ	08-Nov-00	08-May-01
	Mx	DENTON	FLX-102-UTLMX	08-Nov-00	08-May-01
	My	DENTON	FLX-102-UTLMY	08-Nov-00	08-May-01
Left Lower Tibia	Fx	DENTON	FLX-102-LTLFX	15-Nov-00	15-May-01
	Fy	DENTON	FLX-102-LTLFY	15-Nov-00	15-May-01
	Fz	DENTON	FLX-102-LTLFZ	15-Nov-00	15-May-01
	Mx	DENTON	FLX-102-LTLMX	15-Nov-00	15-May-01
	My	DENTON	FLX-102-LTLMY	15-Nov-00	15-May-01
Right Upper Tibia	Fx	DENTON	FLX-101-UTRFX	08-Nov-00	08-May-01
	Fz	DENTON	FLX-101-UTRFZ	08-Nov-00	08-May-01
	Mx	DENTON	FLX-101-UTRMX	08-Nov-00	08-May-01
	My	DENTON	FLX-101-UTRMY	08-Nov-00	08-May-01

INSTRUMENT CALIBRATION FOR PASSENGER DUMMY
(6 Month Calibration Minimum)

PASSENGER DUMMY (S/N 416)		Manufacturer	Serial #	Calibration	
				Last	Next
Right Lower Tibia	Fx	DENTON	FLX-101-LTRFX	09-Nov-00	09-May-01
	Fy	DENTON	FLX-101-LTRFY	09-Nov-00	09-May-01
	Fz	DENTON	FLX-101-LTRFZ	09-Nov-00	09-May-01
	Mx	DENTON	FLX-101-LTRMX	09-Nov-00	09-May-01
	My	DENTON	FLX-101-LTRMY	09-Nov-00	09-May-01
Left Tibia	X	ENTRAN	AC-00L13-F04	11-Oct-01	11-Apr-02
	Y	ENTRAN	AC-00L13-F16	10-Oct-01	08-Apr-02
Right Tibia	X	ENTRAN	AC-98H10-F01	10-Oct-01	08-Apr-02
	Y	ENTRAN	AC-00L20-A14	10-Oct-01	08-Apr-02
Left Ankle	Rx	Contelec	FLX-102-AXLRP	26-Sep-00	26-Mar-01
	Ry	Contelec	FLX-102-AYLRP	26-Sep-00	26-Mar-01
	Rz	Contelec	FLX-102-AZLRP	26-Sep-00	26-Mar-01
Right Ankle	Rx	Contelec	FLX-101-AXRRP	26-Sep-00	26-Mar-01
	Ry	Contelec	FLX-101-AYRRP	26-Sep-00	26-Mar-01
	Rz	Contelec	FLX-101-AZRRP	26-Sep-00	26-Mar-01
Left Foot	Ax	ENTRAN	AC-00L13-F33	10-Oct-01	08-Apr-02
	Ay	ENTRAN	AC-00L13-F35	10-Oct-01	08-Apr-02
	Az	ENTRAN	AC-01G18-F03	11-Oct-01	11-Apr-02
Right Foot	Ax	ENDEVCO	AC-P18578	04-Sep-01	04-Mar-02
	Ay	ENTRAN	AC-00L20-A13	10-Oct-01	08-Apr-02
	Az	ENTRAN	AC-01G18-F20	11-Oct-01	11-Apr-02

INSTRUMENT CALIBRATION FOR VEHICLE ACCELEROMETERS

(6 Month Calibration Minimum)

	Manufacturer	Serial #	Calibration	
			Last	Next
Left Seat Rear Crossmember X	ICS	D30	30-Oct-01	30-Apr-02
Left Seat Rear Crossmember Y	ICS	X92	25-Sep-01	25-Mar-02
Right Seat Rear Crossmember X	ICS	D86	30-Oct-01	30-Apr-02
Right Rear Seat Crossmember Y	ICS	D36	30-Oct-01	30-Apr-02
Driver Left Side Toeapan Z	ENDEVCO	AP1A2	29-Aug-01	29-Feb-02
Driver Right Side Toeapan X	ENDEVCO	J31042	21-Sep-01	21-Mar-02
Driver Right Side Toeapan Z	ENDEVCO	J31009	21-Sep-01	21-Mar-02
Driver Toeapan X	PATRIOT	12197	22-Jun-01	22-Dec-01