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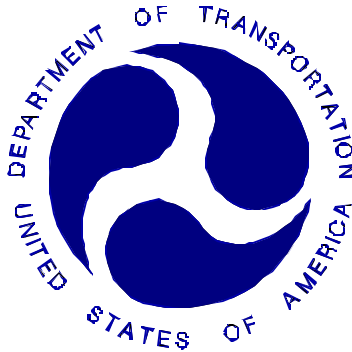
**NEW CAR ASSESSMENT PROGRAM (NCAP)
FRONTAL BARRIER IMPACT TEST**

GENERAL MOTORS CORP
2004 CADILLAC SRX
MPV

NHTSA NUMBER: M40108

GENERAL DYNAMICS TEST NUMBER: 8642-NCAP-44

GENERAL DYNAMICS
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February 9, 2004

FINAL REPORT

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National Highway Traffic Safety Administration
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16. Abstract A frontal load cell barrier test of a 2004 Cadillac SRX MPV was performed at General Dynamics' crash test facility in Buffalo, New York, on February 9, 2004. The impact velocity was 56.65 kph and the temperature at the barrier face was 20°C. The maximum post-test vehicle crush was 498 mm. The test vehicle was equipped with 3-point restraint systems with lap belt pretensioners and force limiters, knee bolsters, adjustable head restraints, 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 (150)	523.1	49.7	-31.1	-4725.0	-4906.2
Passenger (245)	507.8	51.8	-24.9	-2586.1	-1515.4
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SECTION 1

PURPOSE AND SUMMARY OF TEST

1.1 PURPOSE

This 56.65 kph frontal barrier impact test is part of the Vehicle Barrier Impact Testing Program sponsored by the National Highway Traffic Safety Administration (NHTSA) under Contract No. DTNH22-01-D-32005. The purpose of this test was to obtain vehicle crashworthiness and occupant restraint system performance data for an impact speed in excess of the current 48.3 kph requirements.

The 56.65 kph frontal barrier impact test was conducted in accordance with the Office of Crashworthiness Standards Laboratory Indicant Test procedure.

1.2 TEST PROCEDURE

This 56.65 kph frontal barrier impact test was conducted in accordance with the Office of Crashworthiness Standards (OCS) New Car Assessment Program (NCAP) Laboratory Indicant Test Procedure, dated December 1999. Data was obtained indicant of FMVSS 208, "Occupant Crash Protection"; FMVSS 212, "Windshield Retention"; FMVSS 219, "Windshield Zone Intrusion (Partial)"; and FMVSS 301 "Fuel System Integrity" performance. Procedures for receiving, inspection testing and reporting of test results are described in the test procedures and are not repeated in this report.

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

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

Both ATDs were fully instrumented with nine accelerometer array head, chest and pelvis triaxial accelerometers, chest displacement potentiometers, upper neck transducers, right/left femur load cells, and lower leg instrumentation. Seat belt load cells were also on the driver's and passenger's lap to measure dummy pelvic section loading. The driver (position 1) ATD (Serial No. 150) and the right-front passenger (position 2) ATD (Serial No.245) were used in one test (M40107) previous to this test where they did not exceed FMVSS 208 head, chest or femur requirements. Certification details, along with instrumentation calibration data, are found in Appendix C.

The vehicle, occupant, camera and measurement data are presented in Section 2. Appendix A contains the still photograph prints. The 193 channels of data were recorded on an on-board data acquisition system. Appendix B contains the vehicle, load cell barrier and dummy response data traces. Appendix C contains the dummy calibration data and Appendix D contains the transducer calibration dates.

1.3 SUMMARY OF FRONTAL BARRIER IMPACT TEST

A load cell barrier consisting of 36 load cells was impacted by a 2004 Cadillac SRX MPV at a velocity of 56.65 kph. The test was performed at General Dynamics on February 9, 2004. Pre- and post-test photographs of the vehicle and dummies can be found in Appendix A.

The occupant data is summarized below.

	HIC	Clip (g)	Chest Disp. (mm)	Left Femur (N)	Right Femur (N)	Belt Spool (mm)	Belt Stretch (mm/50 mm)
Driver ATD	523.1	49.7	-31.1	-4725.0	-4906.2	*	*
Passenger ATD	507.8	51.8	-24.9	-2586.1	-1515.4	*	*

* Torso belts were integrated into the seat, this instrumentation was not used.

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

The maximum vehicle static crush was 498 mm and both the driver and passenger side doors remained closed during the impact event and were operable after the impact.

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

The 2004 Cadillac SRX MPV did not exceed the requirements of FMVSS 208, FMVSS 212, FMVSS 219, and FMVSS 301. Data pertaining to these standards are presented in the data sheets .

SECTION 2

GENERAL TEST AND VEHICLE PARAMETER DATA

DATA SHEET NO. 1 CRASH TEST SUMMARY

Vehicle NHTSA No.:	<u>M40108</u>	Test Mode:	<u>56.3 kph Frontal Barrier</u>
Test Date:	<u>February 9, 2004</u>	Time:	<u>17:24</u> Temperature: <u>20</u> °C
Vehicle Make/Model/Body Style:	<u>2004 Cadillac SRX MPV</u>		
Vehicle Test Weight:	<u>2294.0</u>	kg	
Vehicle/Barrier Impact Angle:	<u>0</u>	°	
Impact Velocity:	<u>56.65</u>	kph	
Maximum Static Crush:	<u>498</u>	mm	
Vehicle Rebound:	<u>585</u>	mm	

<u>DUMMIES:</u>	<u>DRIVER</u>	<u>PASSENGER</u>
Type:	<u>572E</u>	<u>572E</u>
Restraint System:	<u>Seatbelt with lap belt pretensioner and force limiter, Airbag, Knee Bolster, and Head Restraint</u>	<u>Seatbelt with lap belt pretensioner and force limiter, Airbag, Knee Bolster, and Head Restraint</u>
Number of Data Channels:	<u>193</u>	
Number of Cameras:	<u>1</u> Real Time	
	<u>16</u> High Speed	

DOOR OPENING DATA†: Closed, latched and operable without tools - Left Front
Closed, latched and operable without tools - Right Front

† - Vehicle equipped with automatic door locks. The test was conducted with the vehicle doors in the locked position.

Front Seat(s) Data:	<u>DRIVER</u>	<u>PASSENGER</u>
Seat Track Failure: (mm of shift)	<u>16 mm forward</u>	<u>9 mm forward</u>
Seat Back Failure:	<u>None</u>	<u>None</u>

<u>VISIBLE DUMMY CONTACT POINTS:</u>	<u>DRIVER</u>	<u>PASSENGER</u>
Head:	<u>The face to the center of the airbag; the back of the head to the left of the center of the head restraint</u>	<u>The face to the center of the airbag; the back of the head to the center of the head restraint</u>
Abdomen:	<u>-</u>	<u>-</u>
Chest:	<u>Airbag</u>	<u>Airbag</u>
Knees:	<u>Knee Bolster</u>	<u>Knee Bolster</u>

DATA SHEET NO. 2 GENERAL TEST AND VEHICLE PARAMETER DATA

TEST VEHICLE INFORMATION:

Year/Make/Model/Body Style: 2004 Cadillac SRX MPV

NHTSA No. : M40108 ; VIN: 1GYDE637540130368 ; Color: Silver

Engine Data: 6 cylinders; - CID; 3.6 Liters; - cc

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

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

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

Safety Belt Features – Driver X Pretensioner (Lap); X Load Limiter; - Adj. Anchorage

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

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

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

Date Received: 1/30/2004 ; Odometer Reading 109 km

Selling Dealer: David Cadillac – Oldsmobile GMC Truck

& Address: 6009 S. Transit Road Lockport, NY 14094

DATA FROM TIRE VEHICLE'S CERTIFICATION LABEL:

Vehicle Manufactured by: General Motors Corp

Date of Manufacture 11/03

GVWR: 2675 kg; GAWR: 1852 kg FRONT; 1540 kg REAR

DATA FROM TIRE PLACARD:

Recommended Tire Size: P235/60R17 Front P255/60R17 Rear

* Recommended Cold Tire Pressure: 260 kpa FRONT; 260 kpa REAR

DATA FROM TIRE SIDEWALL:

Size of Front Tires on Vehicle: P235/60R17 103 H ; Manufacturer: Goodyear

Size of Rear Tires on Test: P255/60R17 105 H ; Manufacturer: Goodyear

Tire Pressure with Maximum Capacity Vehicle Load: Front: 300 kPa; Rear: 300 kPa

Treadwear: 260 ; Traction: A ; Temperature: A

VEHICLE CAPACITY DATA:

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

Number of Occupants: 2 Front; 3 Rear; 5 Total

Vehicle Capacity Weight (VCW) = 477.0 kg

No. of Occupants x 68.04 kg = 340.2 kg

Rated Cargo/Luggage Weight (RCLW) = 136.8 kg (136.1 kg Maximum)

*Tire pressure used for test

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

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

Right Front =	<u>517.0</u>	kg	Right Rear =	<u>495.5</u>	kg
Left Front =	<u>521.0</u>	kg	Left Rear =	<u>481.0</u>	kg
TOTAL FRONT =	<u>1038.0</u>	kg	TOTAL REAR =	<u>976.5</u>	kg
TOTAL DELIVERED WEIGHT =	<u>2014.5</u>	kg			
% of Total Front of Vehicle Weight =	<u>51.5%</u>		% of Total Rear Weight =	<u>48.5%</u>	%

CALCULATION OF VEHICLE'S TARGET TEST WEIGHT:

Total Delivered Weight (UDW) =	<u>2014.5</u>	kg
Rated Cargo/Luggage Weight (RCLW) =	<u>136.1</u>	kg
Weight of 2 p.572 Dummies @ 76 each =	<u>152</u>	kg
TARGET TEST WEIGHT =	<u>2302.6</u>	kg

WEIGHT OF TEST VEHICLE WITH TWO DUMMIES AND 127.5 KG OF CARGO WEIGHT:

Right Front =	<u>558.5</u>	kg	Right Rear =	<u>593.0</u>	kg
Left Front =	<u>556.5</u>	kg	Left Rear =	<u>586.0</u>	kg
TOTAL FRONT =	<u>1115.0</u>	kg	TOTAL REAR =	<u>1179.0</u>	kg
TOTAL TEST WEIGHT =	<u>2294.0</u>	kg			
% of Total Front Weight =	<u>48.6%</u>	%	% of Total Rear Weight =	<u>51.4%</u>	%
Weight of Ballast Secured in Vehicle Trunk Area =	<u>0</u>	kg			
Vehicle Components Removed for Weight Reduction:	<u>Rear side door glass; side mirrors</u>				

VEHICLE ATTITUDE (all dimension in millimeters):

AS DELIVERED:	RF	<u>829</u>	LF	<u>830</u>	RR	<u>837</u>	LR	<u>840</u>
FULLY LOADED:	RF	<u>825</u>	LF	<u>824</u>	RR	<u>798</u>	LR	<u>801</u>
AS TESTED:	RF	<u>810</u>	LF	<u>812</u>	RR	<u>792</u>	LR	<u>796</u>
Vehicle's Wheel Base:	<u>2960</u> mm							
Location of Vehicle's C.G.:	<u>1521</u> mm rearward of front wheel center.							

FUEL SYSTEM DATA:

Fuel System Capacity From Owner's Manual =	<u>75.2</u>	liters
Usable Capacity Figure Furnished by COTR =	<u>75.2</u>	liters
Test Volume Range (92 to 94% of Usable Capacity) =	<u>69.18</u>	to <u>70.69</u> liters
ACTUAL TEST VOLUME=	<u>69.8</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: The tank is centered ahead of the rear axle; the fuel lines run along the right frame stiffener; the filler is on the right side behind the rear axle.		

DATA SHEET NO. 3 POST IMPACT DATA

TYPE OF TEST:

Type of Test: Frontal Barrier Impact Angle: 0°
Test Date: February 9, 2004 Time: 17:24 Temperature: 20 °C
Vehicle NHTSA No.: M40108
Required Impact Velocity Range: 55.5 to 57.1 kph

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

Trap No. 1 = 56.65 kph; Trap No. 2 = 56.65 kph
Distance from vehicle to barrier: (1) entering trap = 813 mm
(2) exiting trap = 305 mm

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

Vehicle Length:

Pre-Test	Left = <u>4858</u> ; C/L = <u>4945</u> ; Right = <u>4847</u>
Post-Test	Left = <u>4481</u> ; C/L = <u>4533</u> ; Right = <u>4624</u>
Crush	Left = <u>377</u> ; C/L = <u>412</u> ; Right = <u>223</u>
AVERAGE	= <u>337.33</u> mm

VEHICLE REBOUND: (From rigid barrier only.)

Distance from front of test vehicle to impact point:

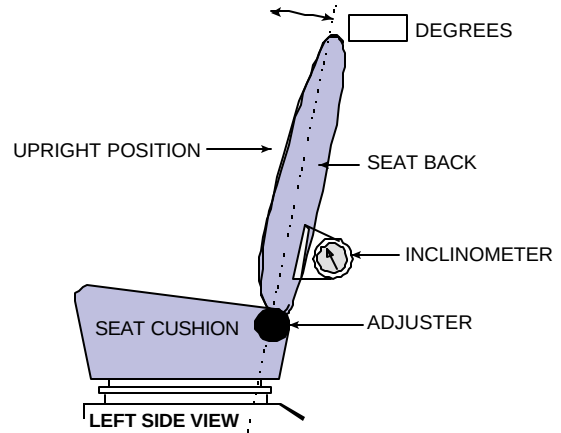
	Left = <u>613</u> ; C/L = <u>596</u> ; Right = <u>545</u>
AVERAGE	= <u>585</u> mm

DATA SHEET NO. 4 TEST VEHICLE INFORMATION

VEHICLE IDENTIFICATION:

Model Year : 2004 Vehicle Model: Cadillac SRX Body Style : MPV

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: 19°

Measurement instructions: Measured on outboard seat frame just below belt tower.

Seat back angle for passenger's seat: 19°

Measurement instructions: Same as the driver's seat.

2. Seat Fore and Aft Positioning

Positioning of the driver's seat: There are 220 mm of total travel; seat was set in mid-position (110 mm)

Positioning of the passenger's seat: There are 220 mm of total travel; seat was set in mid-position (110 mm)

3. Fuel Tank Capacity Data

3.1 A. "Usable Capacity" of the standard equipment fuel tank is 75.2 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 = 75.2 liters

3.2 Amount of Stoddard solvent added to vehicle(s) used for certification test(s) = 71.8 liters

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

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

When the key is turned to the 'ON' position and while the engine is running.

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

4. STEERING COLUMN ADJUSTMENTS:

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

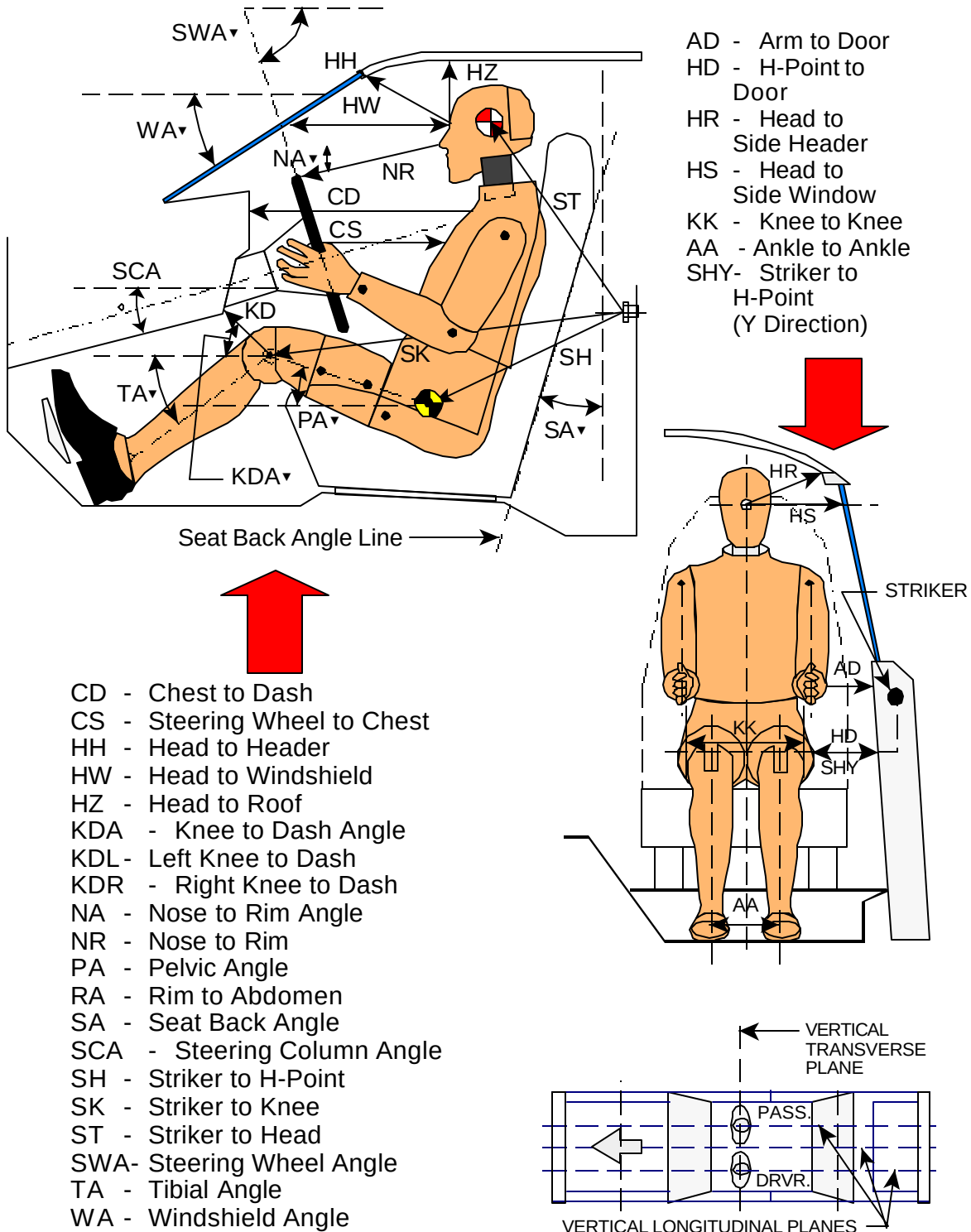
Operational Instructions: There are six total detents with the topmost detent labeled detent 1.

The column was placed in detent 4 to achieve a column angle of 20°.

5. SEAT BELT UPPER ANCHORAGE

Nominal design riding position: Integrated into seats – not adjustable.

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



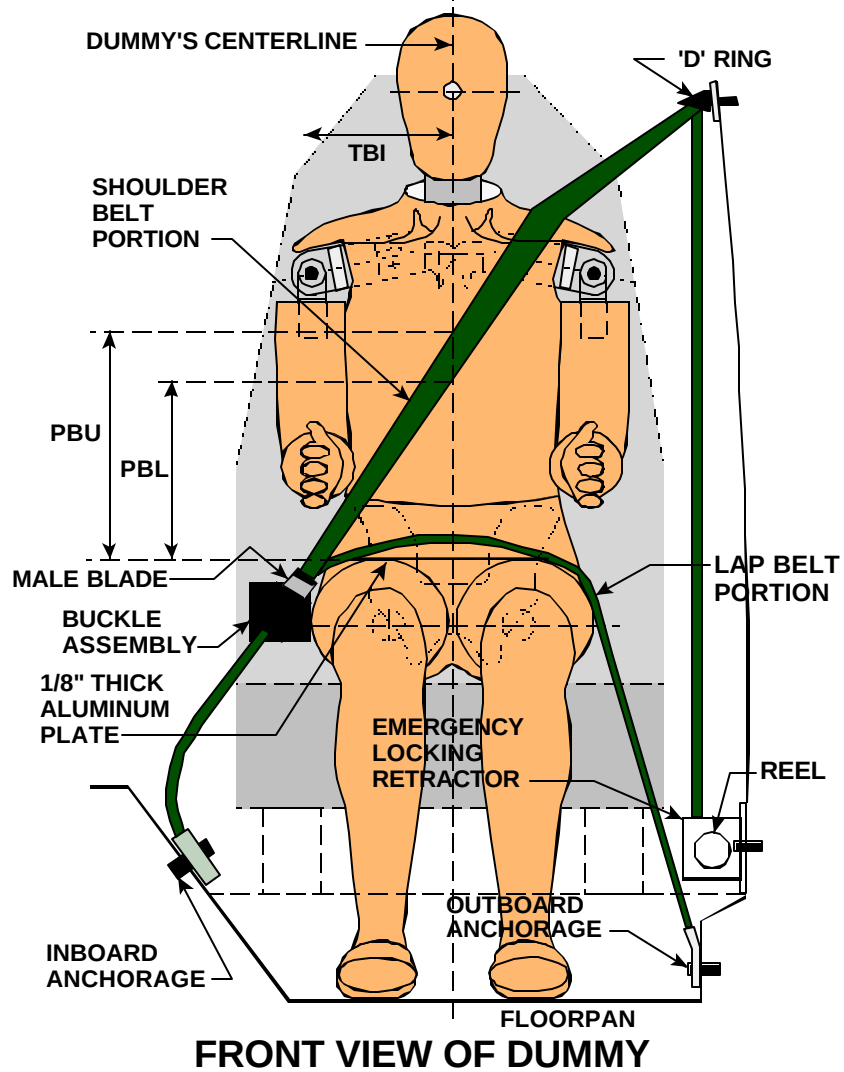
DATA SHEET NO. 5 FRONT SEAT DUMMY POSITIONING MEASUREMENTS IN VEHICLE (cont.)

	DRIVER (Serial #150)			PASS. (Serial #245)		
WA ⁰	29 deg.			N/A		
SWA ⁰	70 deg.			N/A		
SCA ⁰	20 deg.			N/A		
SA ⁰	19 deg.			19 deg.		
HZ	237			226		
HH	400			368		
HW	736			672		
HR	231			230		
NR	407	Angle	-7 deg.	N/A		
CD	507			532		
CS	314			N/A		
RA	200			N/A		
KDL	165	Angle (KDA)	40 deg.	128		
KDR	147			158	Angle (KDA)	42 deg.
PA ⁰	23.5 deg.			24.2 deg.		
TA ⁰	39.6 deg.			39.2 deg.		
KK	290			246		
AA	260			175		
ST	540	Angle	0 deg.	565	Angle	4 deg.
SK	578	Angle	86 deg.	573	Angle	88 deg.
SH	208	Angle	121 deg.	210	Angle	122 deg.
SHY	280			275		
HS	340			342		
HD	155			137		
AD	132			139		

Dimensions in millimeters

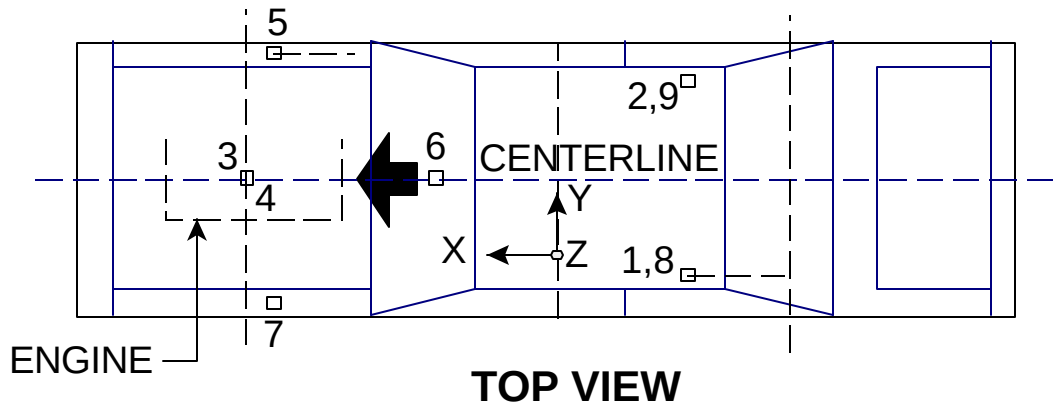
DATA SHEET NO. 6 SEAT BELT POSITIONING DATA

SEAT BELT POSITIONING DATA

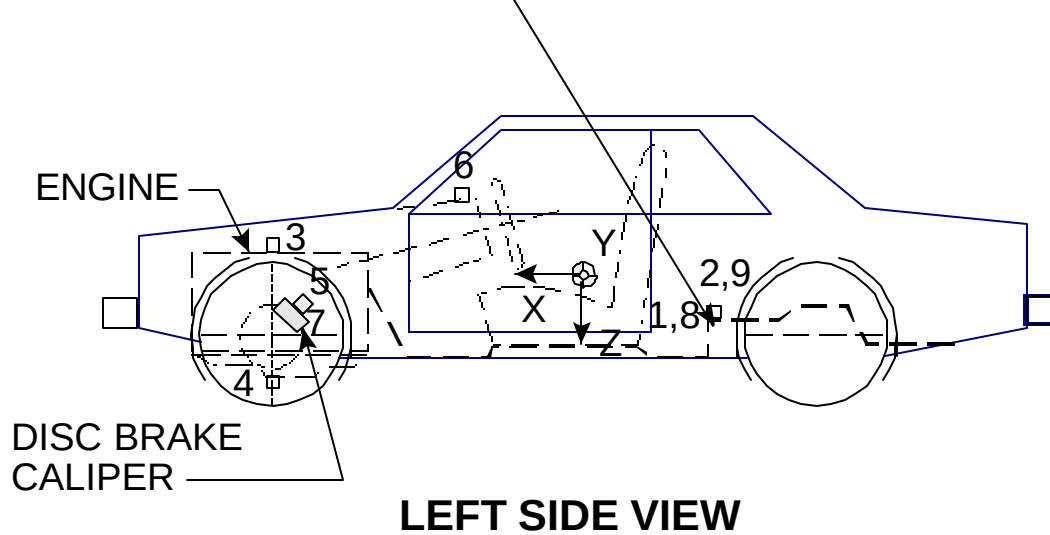


	DRIVER DUMMY (mm)	PASSENGER DUMMY (mm)
PBU -- Top surface of alum. plate to upper edge	365	355
PBL-- Top surface of alum. plate to belt lower edge	280	270
LAP BELT TENSION	10 N	10 N
SHOULDER BELT TENSION	Retractor	Retractor

VEHICLE ACCELEROMETER LOCATION AND DATA SUMMARY



REAR SEAT CUSHION
ASSY. FRONT ATTACHMENT
BRACKET SUPPORT



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

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

LOCATION		PRE-TEST LENGTH (mm)		
		X	Y	Z
1	Left Rear Seat Cross Member X	2105	-721	-428
2	Right Rear Seat Cross Member X	2105	707	-428
3	Top of Engine Block	4278	301	-825
4	Bottom of Engine	4011	54	-161
5	Disc Brake Caliper @ Right Side	4171	811	-433
6	Instrument Panel	3025	53	-895
7	Disc Brake Caliper @Left Side	4039	-804	-497
8	Left Rear Seat Cross Member Z	2105	-721	-428
9	Right Rear Seat Cross Member Z	2105	707	-428

LOCATION NUMBER	DESCRIPTION	MAXIMUM VALUE (g's)			
		Pos.	msec.	Neg.	msec.
1	Left Rear Seat Cross Member X	4.3	15.9	-47.0	54.2
2	Right Rear Seat Cross Member X	3.2	131.5	-40.8	56.5
3	Top of Engine Block	37.7	52.1	-146.6	34.4
4	Bottom of Engine	34.0	50.9	-122.2	38.1
5	Disc Brake Caliper @ Right Side	47.6	79.8	-90.8	43.6
6	Instrument Panel	43.3	76.8	-60.9	55.9
7	Disc Brake Caliper @Left Side	49.0	52.6	-82.5	25.9
8	Left Rear Seat Cross Member Z	7.2	20.3	-7.6	56.5
9	Right Rear Seat Cross Member Z	§	§	§	§

§ - Channel opened from 35 to 90 ms

DATA SHEET NO. 8 DUMMY INJURY CRITERIA VALUES

Vehicle Year/Make/Model/Body Style: 2004 Cadillac SRX MPV

NHTSA Test No.: M40108 Test Date: February 9, 2004

		MAXIMUM VALUE							
		Driver				Passenger			
DESCRIPTION	Unit	Pos	msec	Neg	msec	Pos	msec	Neg	msec
Head 9 Array X Arm Y	g	6.1	85.5	-2.0	64.7	1.9	95.4	-12.5	53.1
Head 9 Array X Arm Z	g	24.9	48.2	-11.2	120.9	26.3	63.0	-10.0	89.5
Head 9 Array Y Arm X	g	1.0	29.4	-63.8	75.9	1.2	32.6	-59.4	77.3
Head 9 Array Y Arm Z	g	23.3	68.5	-3.5	128.6	22.3	62.9	-14.4	96.8
Head 9 Array Z Arm X	g	5.8	196.8	-65.9	77.7	2.5	35.8	-61.8	78.6
Head 9 Array Z Arm Y	g	10.1	115.9	-5.7	79.6	4.9	102.5	-9.6	83.4
Head X	g	1.3	199.9	-66.7	76.3	3.7	32.7	-61.6	77.3
Head Y	g	12.0 ¹	108.4 ¹	-4.9 ¹	36.8 ¹	2.7	33.8	-5.9	79.4
Head Z	g	23.1	67.8	-1.6	138.9	22.6	63.9	-11.7	93.3
Head Resultant	g	67.6	76.3	0.0	-46.7	64.4	77.3	0.1	9.1
Redundant Head X	g	2.1	176.8	-67.4	76.3	‡	‡	‡	‡
Redundant Head Y	g	5.8	121.6	-3.4	77.4	2.8	33.8	-7.0	80.3
Redundant Head Z	g	23.4	68.3	-1.5	138.3	18.9	63.1	-9.4	96.5
Redundant Head Resultant	g	68.4	76.3	0.0	-48.6	‡	‡	‡	‡
Upper Neck Fx	N	1386.6	78.1	-559.0	130.7	300.0	71.5	-538.1	139.6
Upper Neck Fy	N	216.9	122.3	-155.3	83.2	272.2	85.4	-155.2	129.7
Upper Neck Fz	N	1019.2	58.1	-112.9	86.7	1299.7	60.2	-328.6	96.7
Upper Neck F Resultant	N	1489.4	71.7	0.7	-47.8	1299.8	60.2	3.9	7.2
Upper Neck Mx	N-m	17.1	115.2	-10.7	97.7	7.8	101.8	-16.2	75.1
Upper Neck My	N-m	82.9	61.9	-18.5	102.5	42.8	148.9	-45.6	100.6
Upper Neck Mz	N-m	5.7	143.8	-9.6	103.1	6.7	99.8	-8.4	142.0
Upper Neck M Resultant	N-m	83.1	61.9	0.1	-40.7	46.7	100.6	0.1	13.7
Chest X	g	2.6	127.8	-49.0	70.5	2.2	172.0	-50.6	72.2
Chest Y	g	10.0	70.2	-4.0	45.4	2.2	38.0	-11.2	77.8
Chest Z	g	8.1	64.6	-3.0	111.2	21.0	76.3	-2.2	120.2
Chest Resultant	g	50.5	70.3	0.1	7.7	53.6	72.3	0.0	7.4

‡ - Channel opened from 43 to 48 ms.

¹ - Data spikes are present.

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

Vehicle Year/Make/Model/Body Style: 2004 Cadillac SRX MPV

NHTSA Test No.: M40108 Test Date: February 9, 2004

		MAXIMUM VALUE							
		Driver				Passenger			
DESCRIPTION	Unit	Pos	msec	Neg	msec	Pos	msec	Neg	msec
Redundant Chest X	g	2.7	128.2	-48.7	70.8	2.2	172.3	-49.3	72.2
Redundant Chest Y	g	10.0	70.0	-4.0	45.4	2.3	38.2	-11.5	75.6
Redundant Chest Z	g	7.9	64.8	-3.0	111.3	20.8	76.3	-2.2	120.1
Redundant Chest Resultant	g	50.1	70.3	0.1	7.8	52.3	72.3	0.0	7.5
Chest Displacement	mm	0.0	-25.3	-31.1	70.7	0.0	-40.9	-24.9	97.4
Pelvic X	g	2.6	199.9	-72.2	50.7	105.0	67.0	-58.9	60.4
Pelvic Y	g	11.2	78.4	-10.7	43.0	38.1	74.2	-18.8	69.4
Pelvic Z	g	2.6	199.9	-32.4	67.8	27.9	71.0	-27.2	66.2
Pelvic Resultant	g	76.0	51.9	0.1	6.9	107.9	72.0	0.0	-39.3
Left Femur	N	485.5	36.1	-4725.0	53.1	788.3	36.7	-2586.1	49.0
Right Femur	N	908.6	37.4	-4906.2	52.9	847.1	41.5	-1515.4	77.8
Left Upper Tibia Mx	N-m	43.4	63.1	-38.7	47.6	21.2	78.7	-70.5	49.5
Left Upper Tibia My	N-m	10.1	96.1	-110.5	47.5	10.2	125.1	-150.3	59.1
Left Lower Tibia Fz	N	58.8	185.0	-2444.0	49.1	195.1	15.4	-5205.1	48.7
Left Lower Tibia Mx	N-m	96.5	58.6	-11.5	46.5	59.2	59.4	-39.7	49.2
Left Lower Tibia My	N-m	20.4	56.7	-46.7	45.5	123.9	48.4	-101.7	37.2
Right Upper Tibia Mx	N-m	11.9	43.1	-41.0	41.5	21.7	148.8	-40.8	48.6
Right Upper Tibia My	N-m	12.4	97.5	-171.0	55.5	22.8	132.7	-133.9	63.0
Right Lower Tibia Fz	N	125.3	30.1	-5797.9	53.7	76.0	25.1	-1989.1	54.4
Right Lower Tibia Mx	N-m	28.4	40.0	-97.8	51.0	63.7	54.2	-18.9	43.8
Right Lower Tibia My	N-m	73.3	53.2	-36.7	35.7	33.2	51.1	-89.4	36.2
Left Foot Aft Ax	g	11.3	56.1	-87.5	44.3	130.0	47.8	-144.7	36.5
Left Foot Aft Az	g	5.9	49.1	-73.8	46.0	42.3	33.0	-104.4	47.9
Left Foot Fore Az	g	48.2	38.3	-165.2	46.1	182.1	33.0	-224.3	40.1
Right Foot Aft Ax	g	23.8	52.1	-77.5	39.8	48.4	49.1	-114.5	35.6
Right Foot Aft Az	g	16.0	42.1	-89.7	38.9	25.9	32.2	-52.6	47.2
Right Foot Fore Az	g	116.5	42.0	-127.9	34.5	113.5	32.1	-112.5	40.0
Lap Belt Load	N	5733.1	48.4	-9.7	196.4	7457.0	60.9	-20.7	107.6

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

Vehicle Year/Make/Model/Body Style: 2004 Cadillac SRX MPV

NHTSA Test No.: M40108 Test Date: February 9, 2004

HEAD INJURY CRITERIA (HIC)				
	HIC**	t ₁ (msec)	t ₂ (msec)	Average Acceleration t ₁ to t ₂
Position #1 - Driver	523.1	62.5	88.8	52.4 g
Position #2 - Passenger	507.8	59.3	95.3	45.7 g

** 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	49.7	69.0	72.0	508.1
Position #2 - Passenger	51.8	71.4	74.4	476.4

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

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

Vehicle Year/Make/Model/Body Style: 2004 Cadillac SRX MPV
 NHTSA Test No.: M40108 Test Date: February 9, 2004

HEAD INJURY CRITERIA (HIC) REDUNDANT				
	HIC**	t ₁ (msec)	t ₂ (msec)	Average Acceleration t ₁ to t ₂
Position #1 - Driver	526.5	62.6	88.7	52.7 g
Position #2 - Passenger	490.5§	60.2	96.2	45.1 g

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

§ - Calculated using Primary Head X accelerometer

CLIP SUMMARY* REDUNDANT				
	CLIP (g's)	t ₁ (msec)	t ₂ (msec)	CSI
Position #1 - Driver	49.5	69.0	72.0	507.8
Position #2 - Passenger	50.9	71.5	74.5	453.8

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

DATA SHEET NO. 9 SEAT BELT PERFORMANCE ASSESSMENT TEST DATA

BELT LENGTH DATA:

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

Driver

Passenger

1420

1420

Shoulder belt length as measured
on Part 572 Dummy.

800

800

Lap belt length as measured
on Part 572 Dummy.

420

420

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 an 8 mm molding.

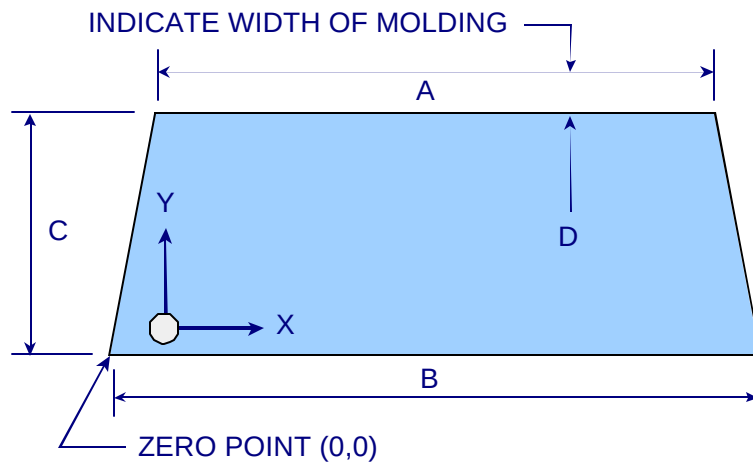
FMVSS 212 REQUIREMENTS:

The Post-Test periphery retention amount must be at least 75% of the Pre-Test periphery measurement for vehicles NOT equipped with automatic restraints, and 50% for each side of the windshield for vehicles equipped with automatic restraint systems for front occupants,

FMVSS 212 TEST DATA

	WINDSHIELD PERIPHERY		% OF RETENTION
	PRE-TEST (mm)	POST-TEST (mm)	
RIGHT SIDE	2205	2205	100.0%
LEFT SIDE	2205	2205	100.0%
TOTAL	4410	4410	100.0%

AREA OF RETENTION FAILURE: None



DIMENSIONS (mm)	
A	1190
B	1540
C	840
D	8

FRONT VIEW OF WINDSHIELD

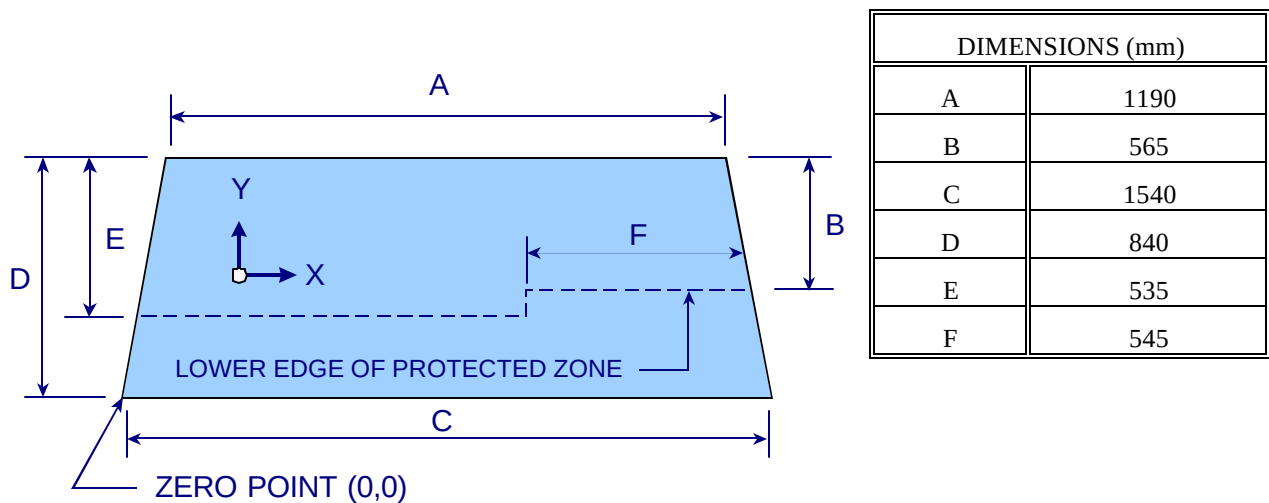
FAILURE DETAILS: None

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

PROTECTED ZONE LOWER EDGE REQUIREMENT:

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

FMVSS 219 TEST DATA:



FRONT VIEW OF WINDSHIELD

DETAILS OF WINDSHIELD GLASS PENETRATION GREATER THAN 6 mm: None

(Show location of penetration on the above sketch)

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

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

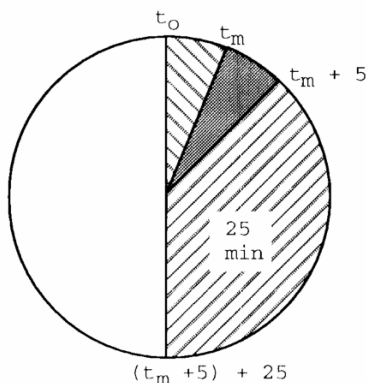
NHTSA TEST No.: M40108 TEST DATE: February 9, 2004
VEHICLE MAKE/MODEL: 2004 Cadillac SRX MPV

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

=====

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

FUEL SPILLAGE MEASUREMENT:



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

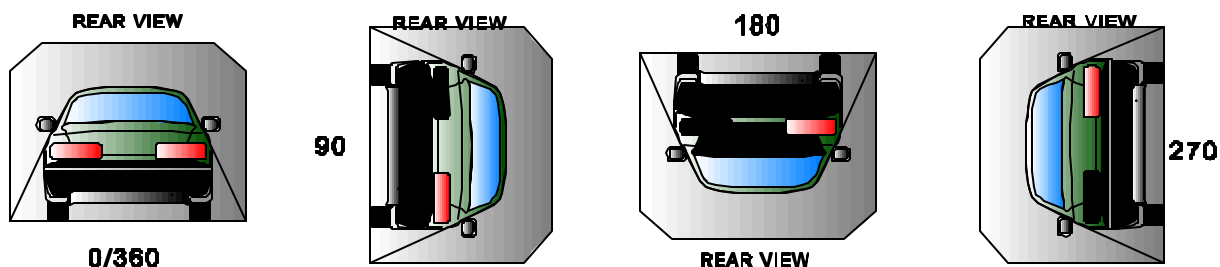
ACTUAL	MAX ALLOWED
0	28 g
0	141 g
0	28 g/min.

SOLVENT SPILLAGE DETAILS: None

DATA SHEET NO. 13 - ROLLOVER DATA

Vehicle: 2004 Cadillac SRX MPV

NHTSA No.: M40108



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	12	seconds	5	minutes	6	minutes	12	seconds	7	minutes
90° - 180°	1	minutes	13	seconds	5	minutes	6	minutes	13	seconds	7	minutes
180°-270°	1	minutes	06	seconds	5	minutes	6	minutes	6	seconds	7	minutes
270°-360°	1	minutes	08	seconds	5	minutes	6	minutes	8	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:

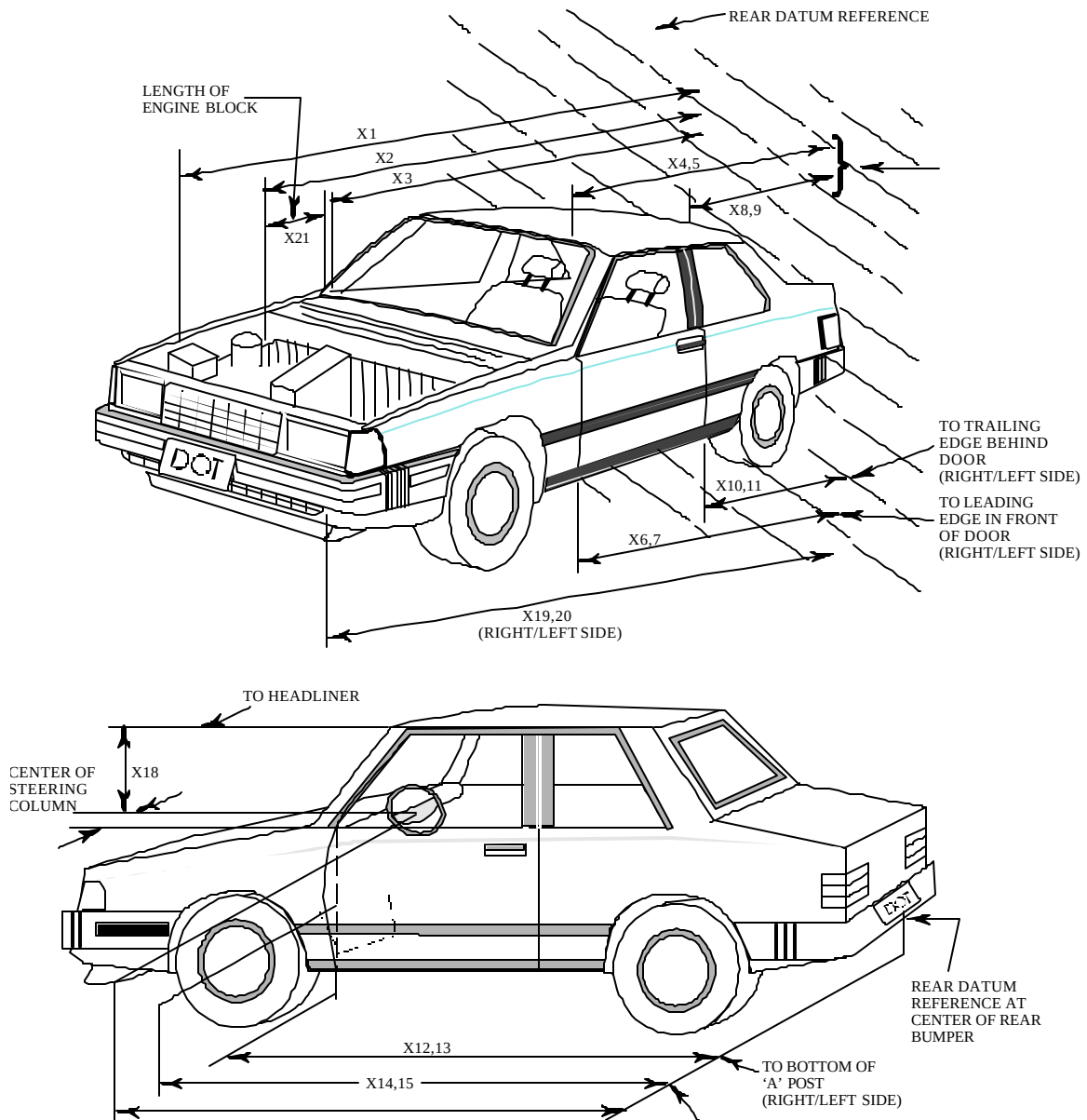
Rollover Stage	First 5 minutes from onset of rotation (g)	6th min. (g)	7th min. (g)	8th min. (if required) (g)
0° - 90°	0	0	0	N/A
90° - 180°	0	0	0	N/A
180°-270°	0	0	0	N/A
270°-360°	0	0	0	N/A

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

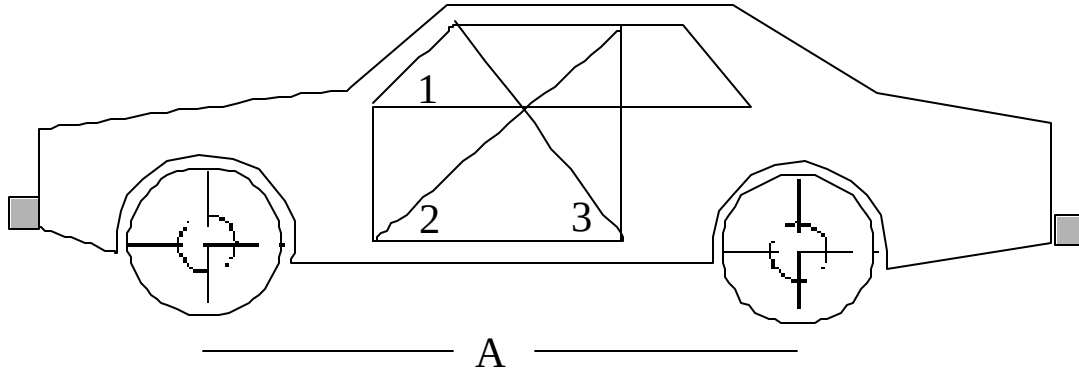


DATA SHEET NO.14 VEHICLE MEASUREMENTS (cont.)

No.		Pre-Test	Post-Test	Difference
X1	Total Length of Vehicle at Centerline	4945	4533	412
X2	Rear Surface of Vehicle to Front of Engine	4390	4370	20
X3	Rear Surface of Vehicle to Firewall	3805	3767	38
X4	Rear Surface of Vehicle to Upper Leading Edge of Right Door	3438	3435	3
X5	Rear Surface of Vehicle to Upper Leading Edge of Left Door	3445	3430	15
X6	Rear Surface of Vehicle to Lower Leading Edge of Right Door	3501	3488	13
X7	Rear Surface of Vehicle to Lower Leading Edge of Left Door	3501	3483	18
X8	Rear Surface of Vehicle to Upper Trailing Edge of Right Door	2293	2288	5
X9	Rear Surface of Vehicle to Upper Trailing Edge of Left Door	2295	2281	14
X10	Rear Surface of Vehicle to Lower Trailing Edge of Right Door	2345	2346	-1
X11	Rear Surface of Vehicle to Lower Trailing Edge of Left Door	2350	2329	21
X12	Rear Surface of Vehicle to Bottom of "A" Post of Right Side	3458	3453	5
X13	Rear Surface of Vehicle to Bottom of "A" Post of Left Side	3471	3453	18
X14	Rear Surface of Vehicle to Firewall, Right Side	3803	3793	10
X15	Rear Surface of Vehicle to Firewall, Left Side	3725	3717	8
X16	Rear Surface of Vehicle to Steering Column	2913	2865	48
X17	Center of Steering Column to "A" Post	293	291	2
X18	Center of Steering Column to Headliner	441	498	-57
X19	Rear Surface of Vehicle to Right Side of Front Bumper	4847	4624	223
X20	Rear Surface of Vehicle to Left Side of Front Bumper	4858	4481	377
X21	Length of Engine Block	552	552	0
RD	Rear Surface of Vehicle to Right Side of Dash Panel	3077	3081	-4
CD	Rear Surface of Vehicle to Center of Dash Panel	3133	3125	8
LD	Rear Surface of Vehicle to Left Side of Dash Panel	3080	3069	11

All Dimensions in mm

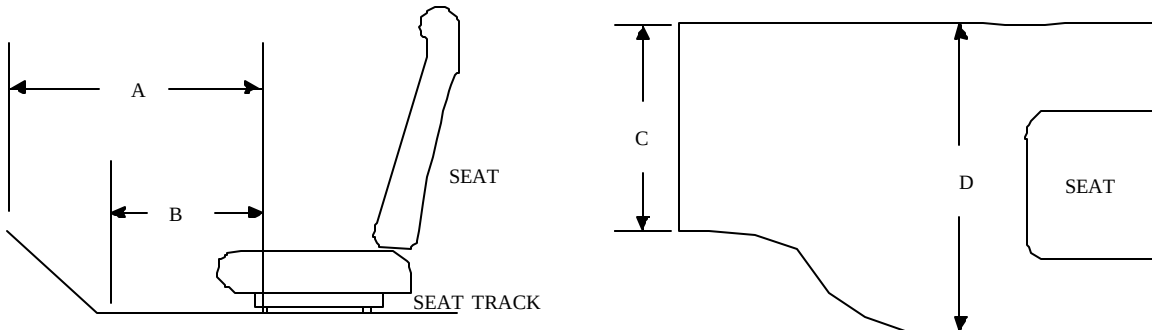
DATA SHEET NO.14 VEHICLE MEASUREMENTS (cont.)
 VEHICLE INTRUSION MEASUREMENTS
 DOOR OPENING WIDTH



UNITS (mm)	LEFT			RIGHT		
MEASUREMENT	1	2	3	1	2	3
BEFORE TEST	1032	1568	1023	1040	1580	1023
AFTER TEST	1035	1562	1026	1038	1579	1018
DIFFERENCE	-3	6	-3	2	1	5

UNITS (mm)	A = WHEELBASE LEFT	A = WHEELBASE RIGHT
BEFORE TEST	2960	2960
AFTER TEST	2865	2840
DIFFERENCE	96	120

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



DRIVER

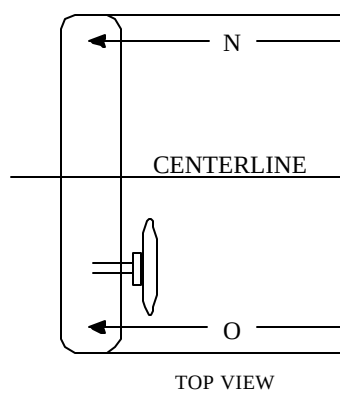
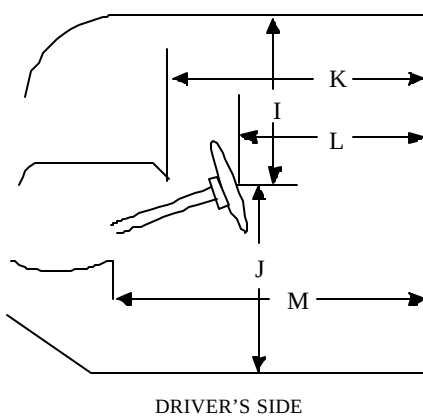
Measurement	Pre-Test	Post-Test	Difference
A	727	681	46
B	568	548	20
C	545	454	91
D	472	416	56

PASSENGER

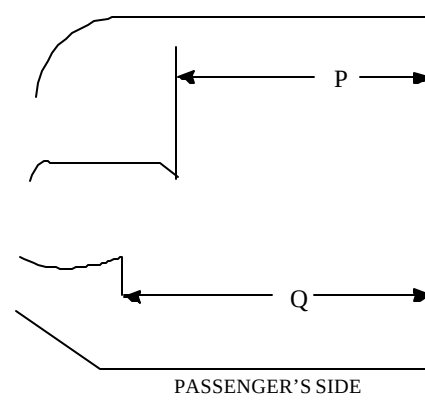
Measurement	Pre-Test	Post-Test	Difference
A	666	669	-3
B	589	574	15
C	343	340	3
D	377	374	3

Units = mm

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



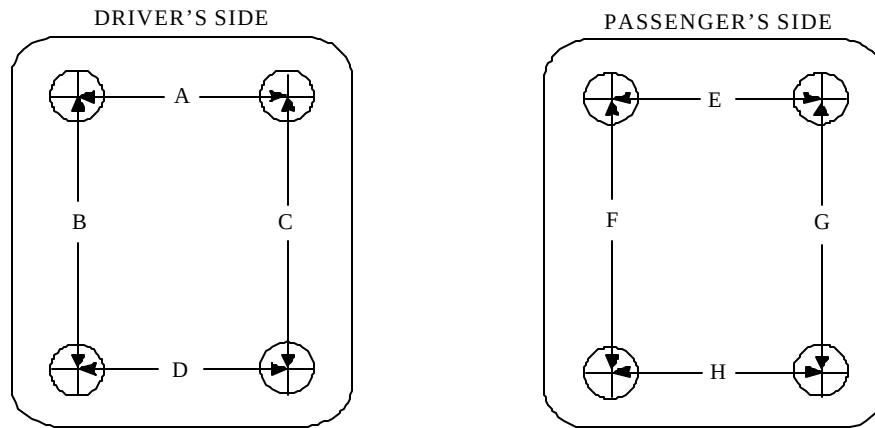
MEASUREMENTS
FROM C-PILLAR
BELT ANCHORAGE



Measurement	Pre-Test	Post-Test	Difference
I	441	498	-57
J	643	603	40
K	1816	1810	6
L	1639	1599	40
M	1862	1851	11
N	1800	1799	1
O	1806	1802	4
P = K (PASS.)	1849	1849	0
Q = M (PASS.)	1899	1887	12

Units = mm

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

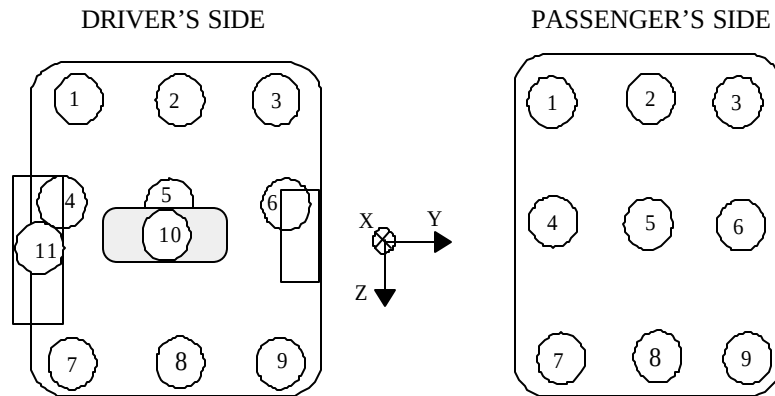


TOP VIEW THROUGH FLOOR PAN

Measurement	Pre-Test	Post-Test	Difference
A	545	454	92
B	468	464	4
C	259	407	-148
D	472	416	56
E	343	340	3
F	426	425	2
G	383	380	3
H	377	374	3

Units = mm

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



Driver Side Toe-pan Measurements

Toe-pan Location	X Deformation (mm)			Z Deformation (mm)		
	Pre-Test	Post-Test	Difference	Pre-Test	Post-Test	Difference
1	3593	3546	47	-513	-526	13
2	3589	3543	46	-491	-518	27
3	3601	3537	64	-507	-511	4
4	3522	3487	35	-442	-449	7
5	3472	3473	-1	-415	-446	31
6	3511	3484	27	-417	-440	23
7	3438	3416	22	-380	-379	-1
8	3430	3410	20	-374	-373	-1
9	3441	3397	44	-376	-381	5
10	3370	3389	-19	-536	-542	6
11	3493	3460	33	-511	-508	-3

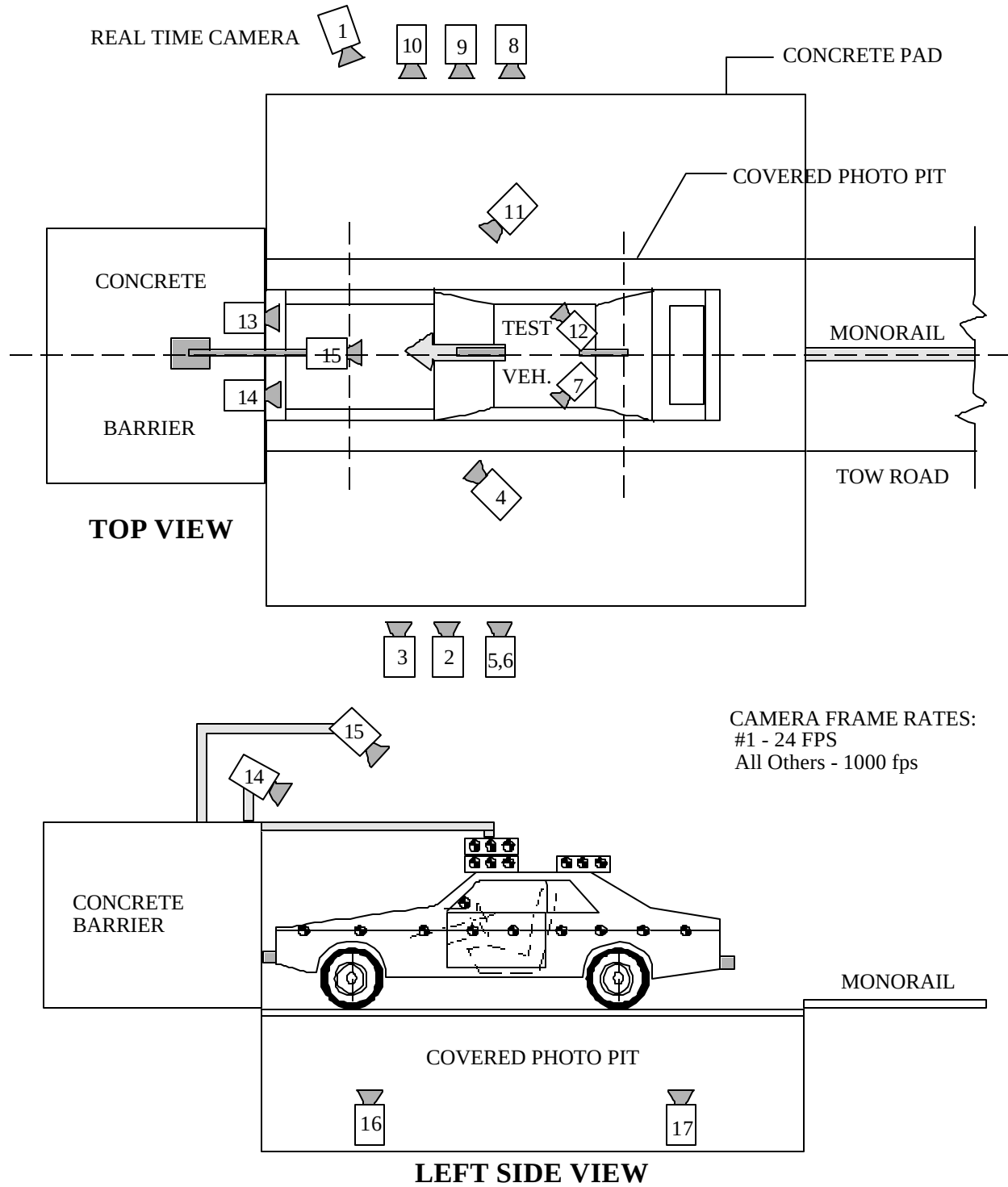
Passenger Side Toe-pan Measurements

Toe-pan Location	X Deformation (mm)			Z Deformation (mm)		
	Pre-Test	Post-Test	Difference	Pre-Test	Post-Test	Difference
1	3600	3521	79	-552	-574	22
2	3520	3531	-11	-562	-593	31
3	3603	3562	41	-592	-598	6
4	3538	3505	33	-449	-458	9
5	3544	3501	43	-456	-467	11
6	3561	3548	13	-469	-471	2
7	3422	3413	9	-369	-372	3
8	3444	3435	9	-377	-369	-8
9	3467	3451	16	-391	-383	-8

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

DATA SHEET NO.15 HIGH-SPEED CAMERA LOCATIONS

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



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

NHTSA Test No.: M40108 Vehicle: 2004 Cadillac SRX MPV

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	7107	1644	1096	-2	6761	12.5	1020
3	Left Side View	8172	872	1100	-2	7826	25	1030
4	Driver and Interior View	7620	2624	1988	-9	-	25	1045
5	Steering Column (Bottom)	7757	1934	1177	-2	7411	25	1030
6	Steering Column (Top)	7757	1934	1777	-8	7411	25	1030
7	Left Side Lateral CRS View	1002	3156	1256	-11	-	13	1030
8	Overall Right Side	7139	4863	1064	-3	7462	12.5	1020
9	Right Side View	7870	1260	1202	-1	8193	25	‡
10	Right Passenger View	8430	1850	1455	-2	8753	35	1025
11	Passenger and Interior View	7416	1945	1983	-9	-	25	1005
12	Right Side Lateral CRS View	1002	3149	1261	-9	-	13	1025
13	Passenger Front View	620	-92	1987	-32	-	13	1025
14	Driver Front View	620	-92	1987	-32	-	13	1015
15	Windshield View	0	-530	3374	-56	-	13	1010
16	Pit View of Engine	0	615	-3048	90	-	13	1010
17	Pit View of Fuel Tank	0	3168	-3048	90	-	13	1015

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

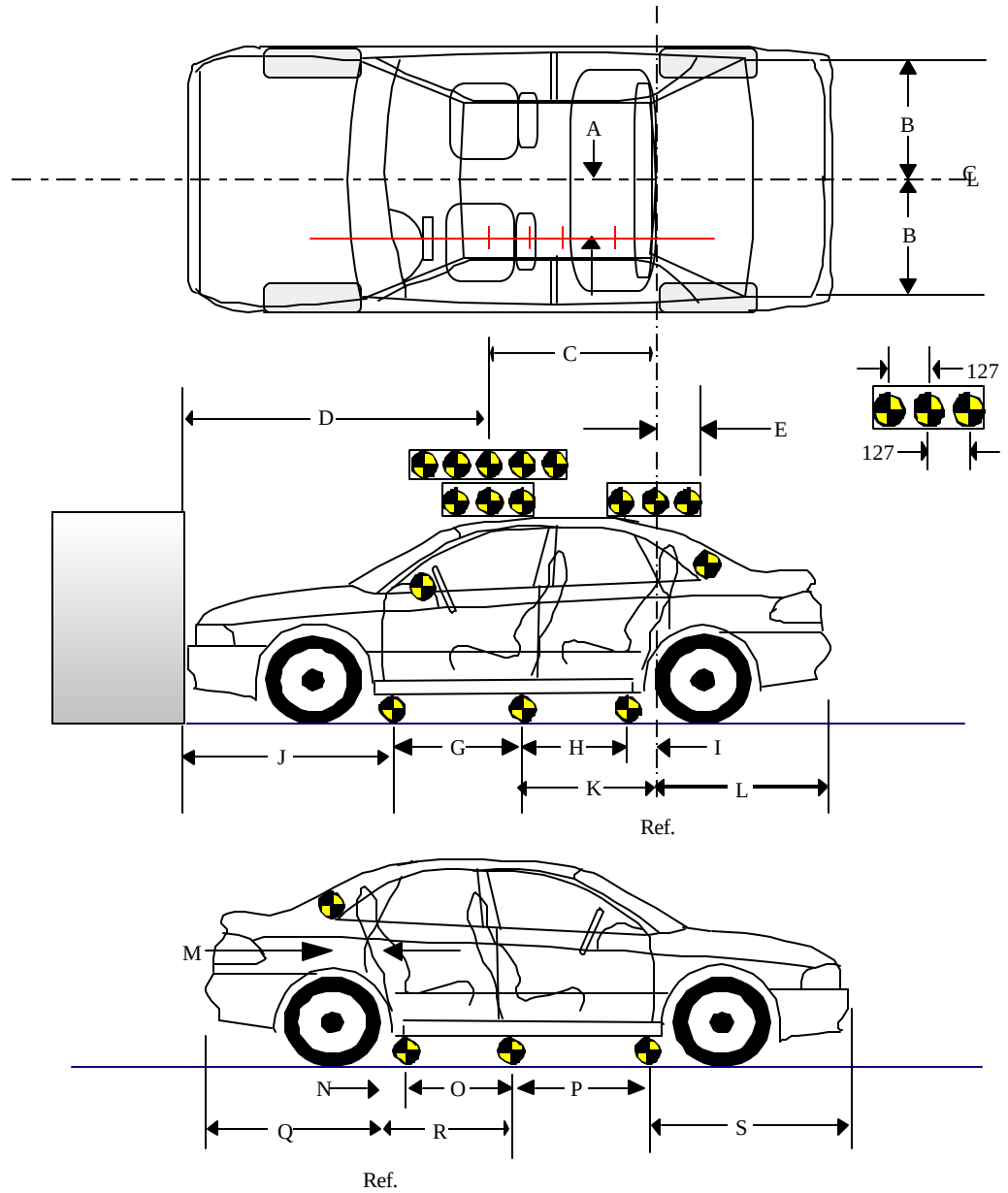
Y = film plane to impact location N.T. indicates No Timing

Z = film plane to ground ‡ - Camera Failed

DATA SHEET NO. 16 VEHICLE REFERENCE PHOTO TARGET LOCATIONS

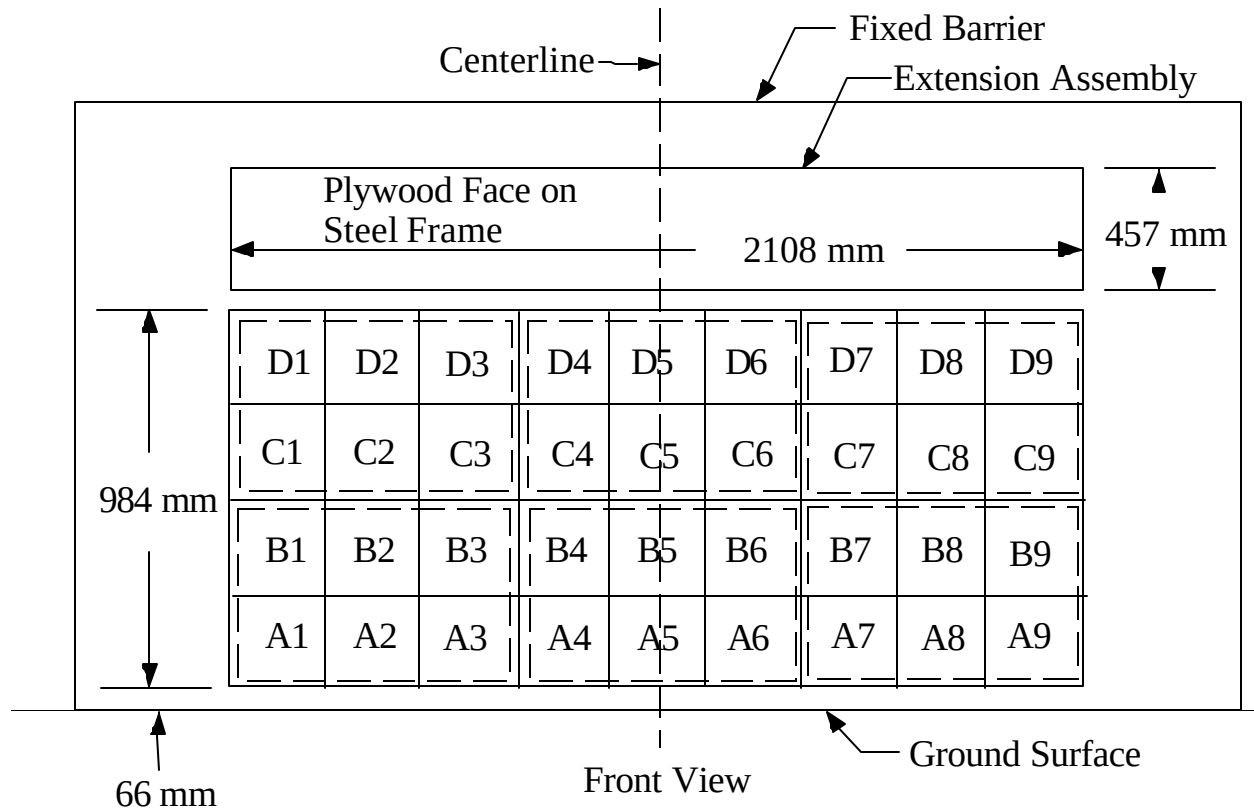
(Dimensions in millimeters)

A	399
B	669
C	910
D	2518
E	362
F	1561
G	996
H	997
I	111
J	1329
K	1108
L	1512
M	363
N	115
O	992
P	1003
Q	1506
R	1107
S	1330



DATA SHEET NO. 17 LOAD CELL LOCATIONS ON FIXED BARRIER

36 Load Cells
 4 Rows
 9 Columns
 6 Groupings (6 cells/group)



6 GROUPS OF 6 LOAD CELLS EACH

Group 4 C1 thru D3	Group 5 C4 thru D6	Group 6 C7 thru D9
Group 1 A1 thru B3	Group 2 A4 thru B6	Group 3 A7 thru B9

The following data is presented in Appendix B:

- (1)Data from 36 individual load cells
- (2)Total or Sum of 36 individual load cells
- (3)Data from 6 Groupings shown above (6 cells/group)

DATA SHEET NO. 18 POST TEST AIR BAG DATA

NHTSA No.: M40108; Test Date: February 9, 2004; Technician: P. MacDiarmid

Vehicle Model Year/Make/Model: 2004 Cadillac SRX MPV

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

B. Size of vent holes: (mm²) 314 -Driver 2827 -Passenger

C. Total vent area: (mm²) 628 -Driver 5654 -Passenger

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

Driver: 500 -Height; 450 -Width; 325 -Depth

Passenger: 600 -Height; 350 -Width; 650 -Depth

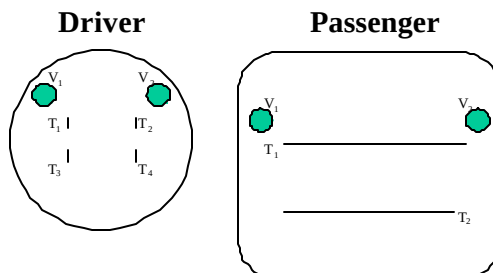
E. Is the air bag tethered?

Driver: X -Yes; - -No; If yes, record length of tether- 300

Passenger: X -Yes; - -No; If yes, record length of tether- 500

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

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



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

Driver: Air bag: GM X 320 DRIVER 16866418

Generator: -

Passenger: Air bag: G4PPXP02BBW 6022458008 REV B03

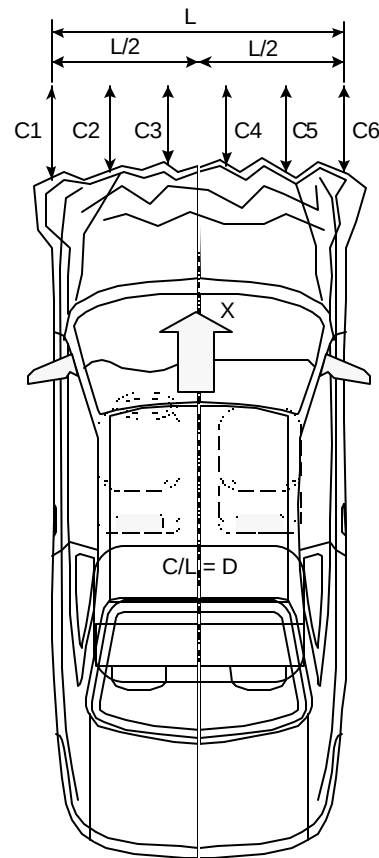
Generator: AL6980M5302Z1283

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

Vehicle Make/Model/Body Style: Cadillac SRX MPV
 NHTSA Test No.: M40108 VIN: 1GYDE637540130368
 Model Year: 2004 Build Date: 11/03 Test Date: February 9, 2004
 Vehicle Size Category: MPV Test Weight: 2294.0 kg
 Vehicle Wheelbase: 2960 mm; Front Overhang: 837 mm; Overall Width: 1844 mm
 Collision Deformation Classification (CDC) Code: 12FDEW 3

Crush Depth Dimensions

	PRE (mm)	POST (mm)	DIFF (mm)
C1 =	4795	4537	258
C2 =	4978	4480	498
C3 =	4921	4510	411
C4 =	4921	4552	369
C5 =	4977	4609	368
C6 =	4794	4671	123



Midpoint of Damage: D = Vehicle Centerline (Longitudinal)

Length of Damaged Region: L1= 1601 mm
 L2= 800.5 mm
 L5= 320.2 mm

APPENDIX A
PHOTOGRAPHS

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A-30	Pre-Test Driver Head Location	A-33
A-31	Post-Test Driver Head Location	A-34
A-32	Pre-Test Driver Position View	A-35
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A-57	Post-Test Passenger Contact To Airbag	A-60
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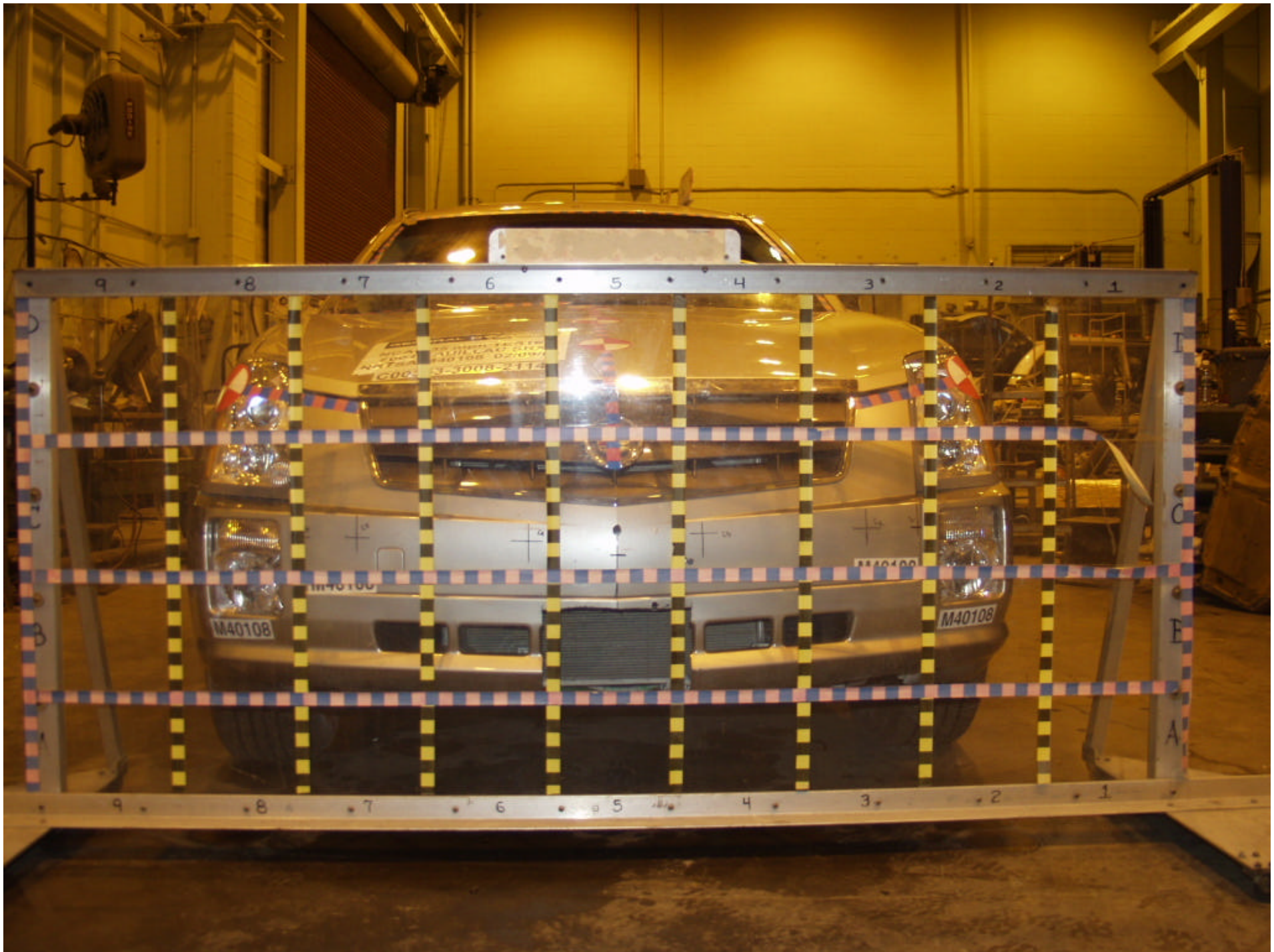


Figure A-1 LOAD CELL LOCATIONS



Figure A-2 VEHICLE CERTIFICATION PLACARD



Figure A-3 VEHICLE TIRE PLACARD



Figure A-4 RIGHT FRONT, AS RECEIVED



Figure A-5 LEFT REAR, AS RECEIVED



Figure A-6 PRE-TEST FRONT VIEW



Figure A-7 POST-TEST FRONT VIEW



Figure A-8 PRE-TEST LEFT SIDE VIEW



Figure A-9 POST-TEST LEFT SIDE VIEW



Figure A-10 PRE-TEST RIGHT SIDE VIEW



Figure A-11 POST-TEST RIGHT SIDE VIEW



Figure A-12 PRE-TEST RIGHT FRONT THREE-QUARTER VIEW



Figure A-13 POST-TEST RIGHT FRONT THREE-QUARTER VIEW



Figure A-14 PRE-TEST LEFT REAR THREE-QUARTER VIEW



Figure A-15 POST-TEST LEFT REAR THREE-QUARTER VIEW



Figure A-16 LEFT REAR THREE-QUARTER VIEW OF DOORS AFTER IMPACT



Figure A-17 RIGHT REAR THREE-QUARTER VIEW OF DOORS AFTER IMPACT



Figure A-18 PRE-TEST WINDSHIELD VIEW



Figure A-19 POST-TEST WINDSHIELD VIEW



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Figure A-20 PRE-TEST ENGINE COMPARTMENT VIEW

PHOTOGRAPH IS NOT AVAILABLE

Figure A-21 POST-TEST ENGINE COMPARTMENT VIEW

M40108



Figure A-22 PRE-TEST FUEL CAP VIEW

M40108



Figure A-23 POST-TEST FUEL CAP VIEW

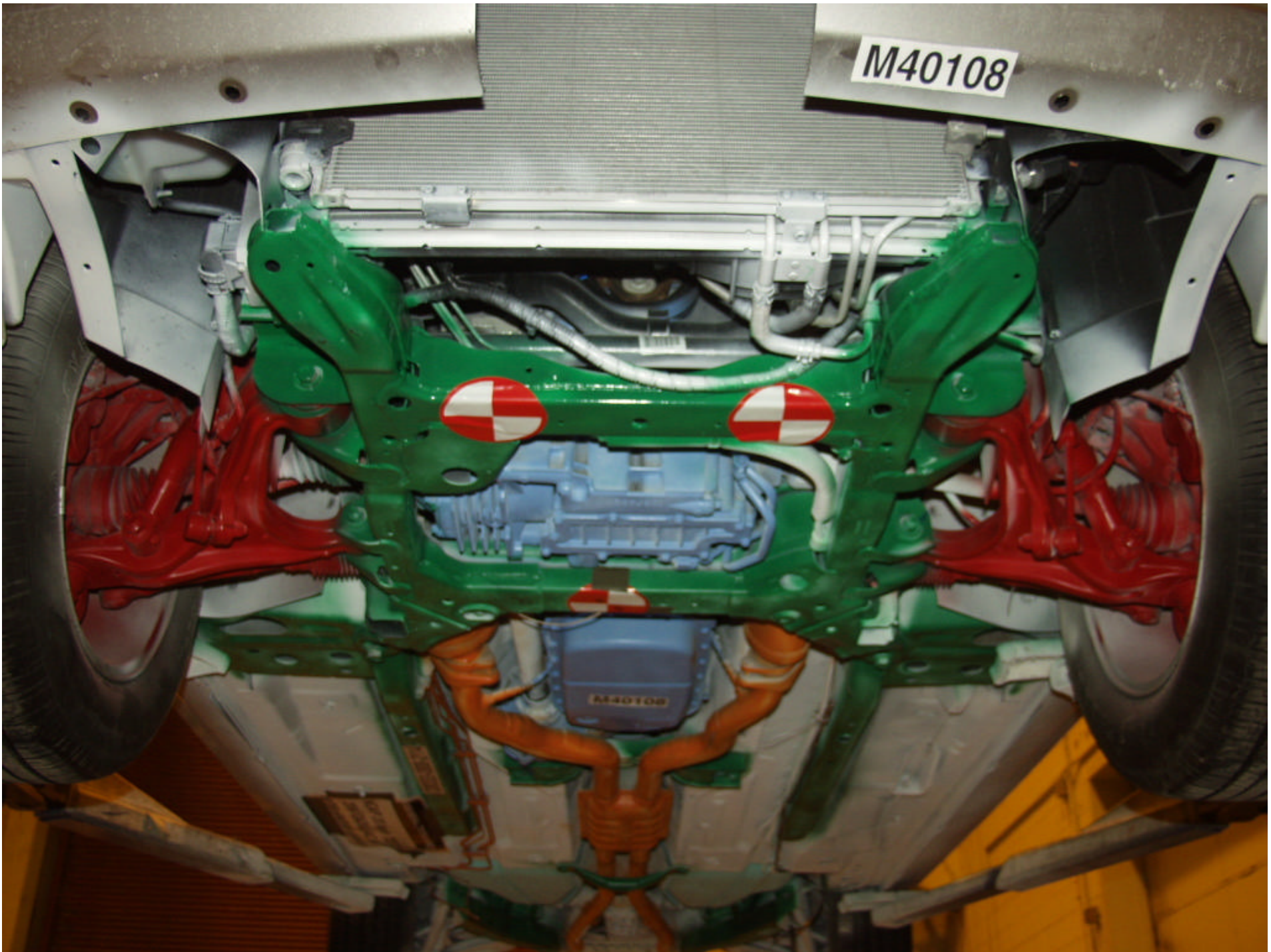


Figure A-24 PRE-TEST FRONT UNDERBODY VIEW

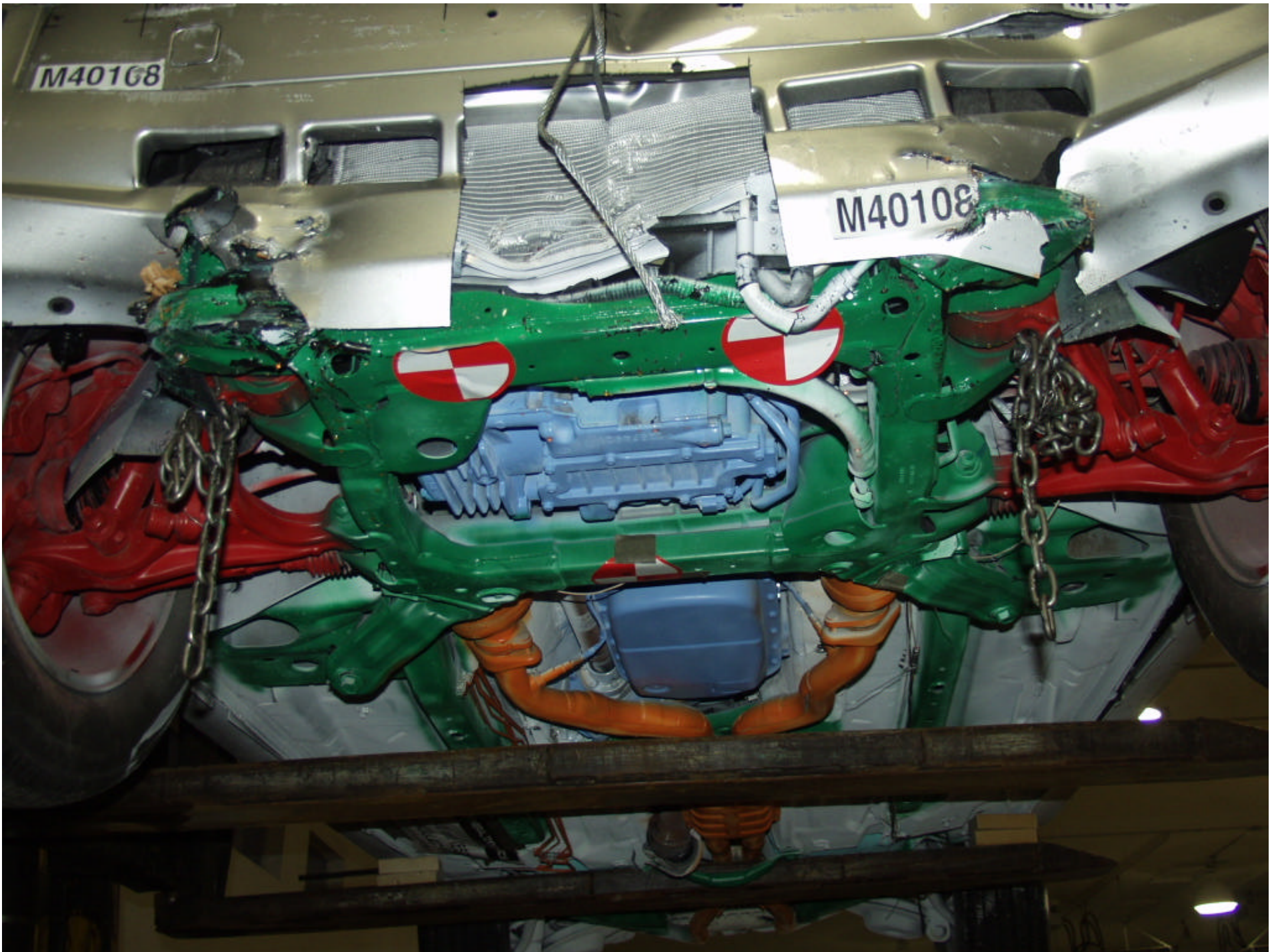


Figure A-25 POST-TEST FRONT UNDERBODY VIEW

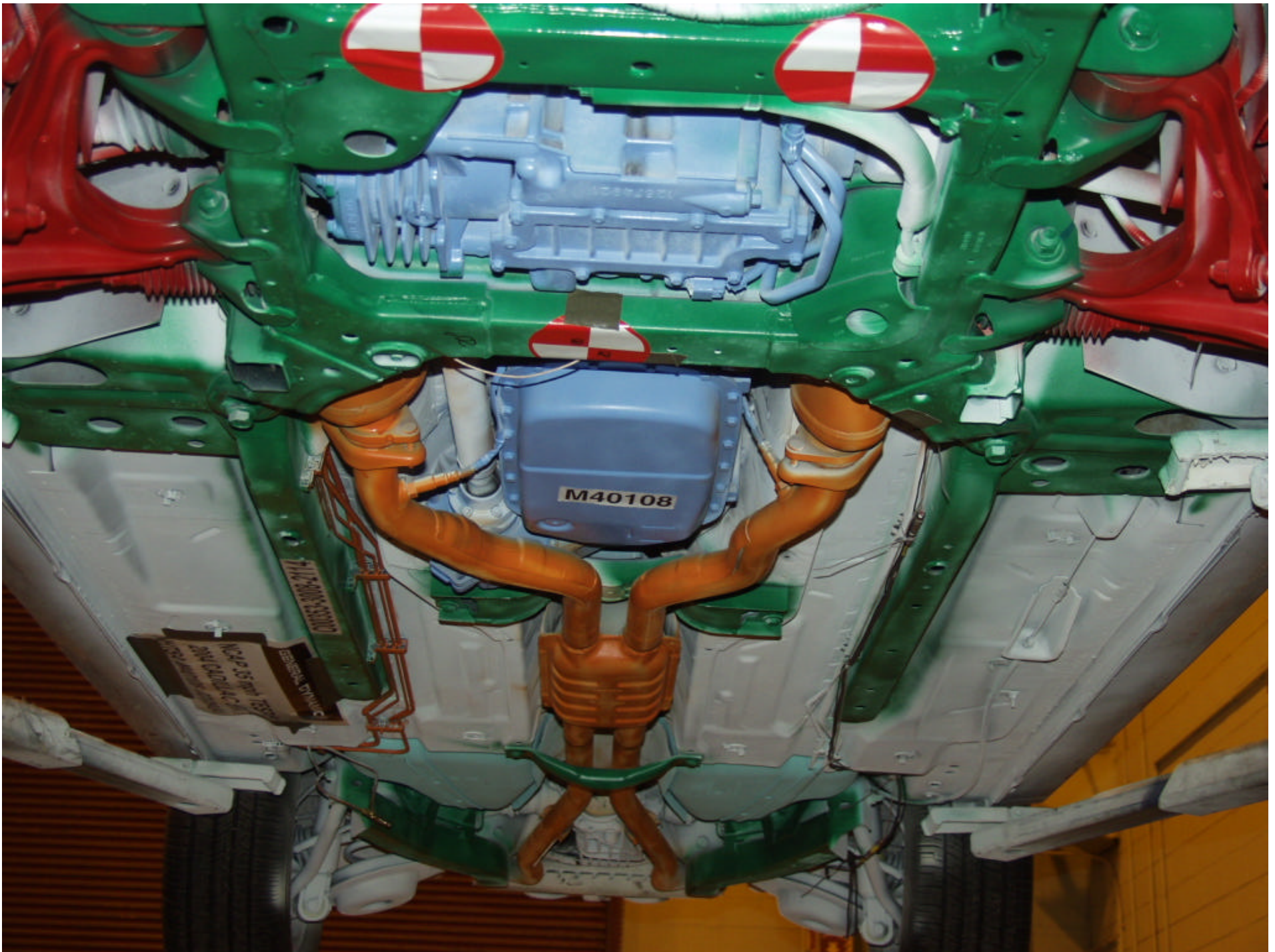


Figure A-26 PRE-TEST MID UNDERBODY VIEW



Figure A-27 POST-TEST MID UNDERBODY VIEW

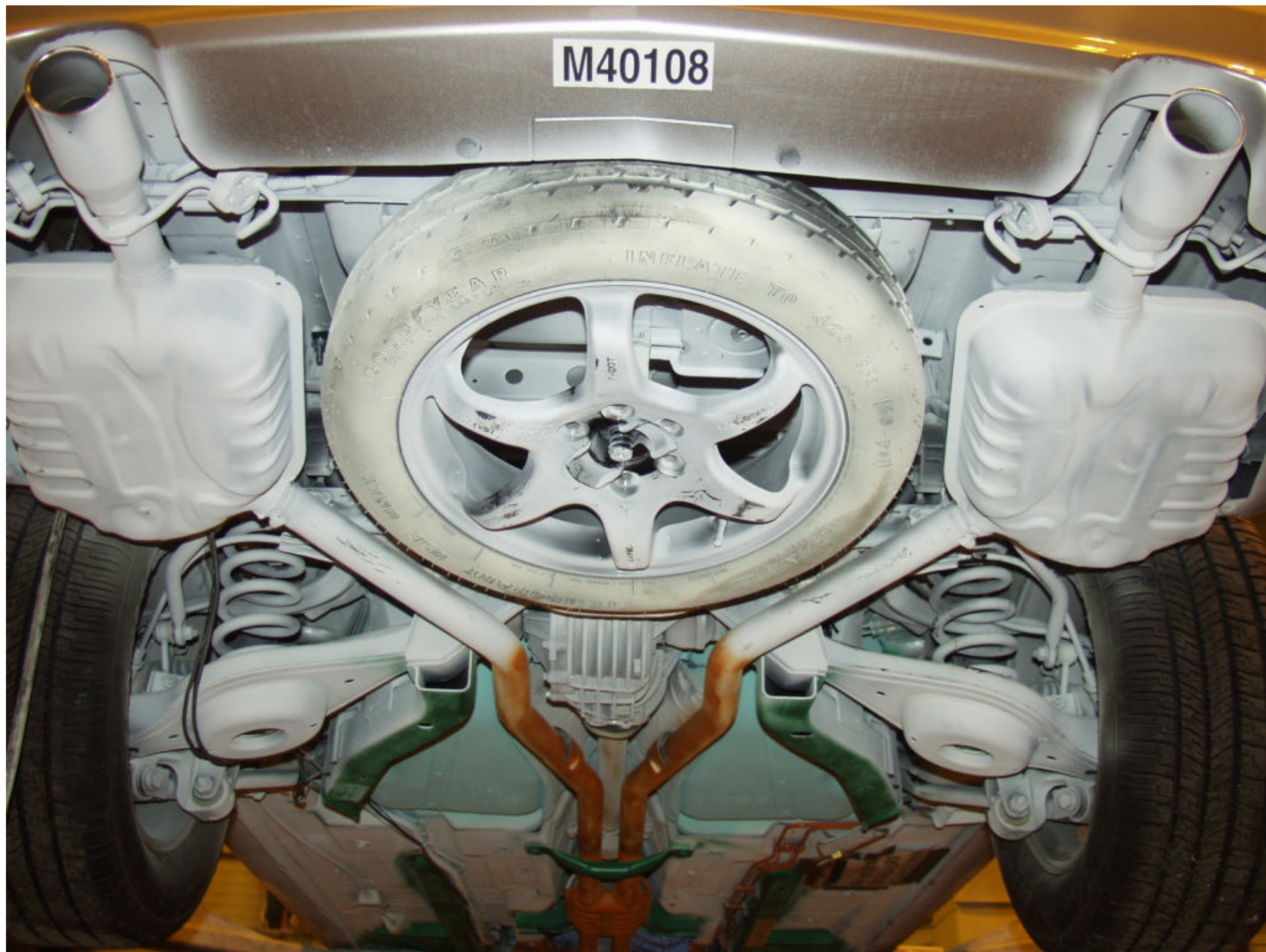


Figure A-28 PRE-TEST REAR UNDERBODY VIEW



Figure A-29 POST-TEST REAR UNDERBODY VIEW



Figure A-30 PRE-TEST DRIVER HEAD LOCATION



Figure A-31 POST-TEST DRIVER HEAD LOCATION



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Figure A-32 PRE-TEST DRIVER POSITION VIEW



Figure A-33 POST-TEST DRIVER POSITION VIEW



Figure A-34 PRE-TEST DRIVER AND INTERIOR VIEW



Figure A-35 POST-TEST DRIVER AND INTERIOR VIEW



Figure A-36 PRE-TEST DRIVER FEET VIEW



Figure A-37 POST-TEST DRIVER FEET VIEW



Figure A-38 PRE-TEST DRIVER KNEE BOLSTER VIEW



Figure A-39 POST-TEST DRIVER KNEE BOLSTER VIEW



Figure A-40 PRE-TEST DRIVER FLOOR PAN VIEW



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Figure A-41 POST-TEST DRIVER FLOOR PAN VIEW



Figure A-42 POST-TEST DRIVER HEAD VIEW



Figure A-43 POST-TEST DRIVER CONTACT TO AIRBAG



Figure A-44 PRE-TEST PASSENGER HEAD LOCATION



Figure A-45 POST-TEST PASSENGER HEAD LOCATION



Figure A-46 PRE-TEST PASSENGER POSITION VIEW



Figure A-47 POST-TEST PASSENGER POSITION VIEW



Figure A-48 PRE-TEST PASSENGER AND INTERIOR VIEW



Figure A-49 POST-TEST PASSENGER AND INTERIOR VIEW



Figure A-50 PRE- TEST PASSENGER FEET VIEW



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Figure A-51 POST-TEST PASSENGER FEET VIEW



Figure A-52 PRE-TEST PASSENGER KNEE BOLSTER VIEW



Figure A-53 POST-TEST PASSENGER KNEE BOLSTER VIEW



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Figure A-54 PRE-TEST PASSENGER FLOOR PAN VIEW



Figure A-55 POST-TEST PASSENGER FLOOR PAN VIEW



Figure A-56 POST-TEST PASSENGER HEAD VIEW



Figure A-57 POST-TEST PASSENGER CONTACT TO AIRBAG



Figure A-58 ROLLOVER VIEW



Figure A-59 IMPACT VIEW

APPENDIX B

DUMMY, VEHICLE AND LOAD CELL BARRIER RESPONSE DATA

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

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

DATA CHANNEL FILTER CLASS SUMMARY

NHTSA TEST NO.

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

Table of Data Plots

PLOT	PLOT NAME[UNITS, CHANNEL FILTER CLASS]	PAGE
1	V1P1 Head 9 Array X Arm Ay [g, CFC_1000]	B-8
2	V1P1 Head 9 Array X Arm Az [g, CFC_1000]	B-9
3	V1P1 Head 9 Array Y Arm Ax [g, CFC_1000]	B-10
4	V1P1 Head 9 Array Y Arm Az [g, CFC_1000]	B-11
5	V1P1 Head 9 Array Z Arm Ax [g, CFC_1000]	B-12
6	V1P1 Head 9 Array Z Arm Ay [g, CFC_1000]	B-13
7	V1P1 Head CG x [g, CFC_1000]	B-14
8	V1P1 Head CG y [g, CFC_1000]	B-15
9	V1P1 Head CG z [g, CFC_1000]	B-16
10	V1P1 Head CG Resultant [g, CFC_1000]	B-17
11	V1P1 Head CG Red x [g, CFC_1000]	B-18
12	V1P1 Head CG Red y [g, CFC_1000]	B-19
13	V1P1 Head CG Red z [g, CFC_1000]	B-20
14	V1P1 Head CG Red Resultant [g, CFC_1000]	B-21
15	V1P1 Upper Neck Fx [N, CFC_1000]	B-22
16	V1P1 Upper Neck Fy [N, CFC_1000]	B-23
17	V1P1 Upper Neck Fz [N, CFC_1000]	B-24
18	V1P1 Upper Neck F Resultant [N, CFC_1000]	B-25
19	V1P1 Upper Neck Mx [N-m, CFC_600]	B-26
20	V1P1 Upper Neck My [N-m, CFC_600]	B-27
21	V1P1 Upper Neck Mz [N-m, CFC_600]	B-28
22	V1P1 Upper Neck M Resultant [N-m, CFC_600]	B-29
23	V1P1 Chest x [g, CFC_180]	B-30
24	V1P1 Chest y [g, CFC_180]	B-31
25	V1P1 Chest z [g, CFC_180]	B-32
26	V1P1 Chest Resultant [g, CFC_180]	B-33
27	V1P1 Chest Red x [g, CFC_180]	B-34
28	V1P1 Chest Red y [g, CFC_180]	B-35
29	V1P1 Chest Red z [g, CFC_180]	B-36
30	V1P1 Chest Red Resultant [g, CFC_180]	B-37
31	V1P1 Chest Compression [mm, CFC_600]	B-38
32	V1P1 Pelvic x [g, CFC_1000]	B-39
33	V1P1 Pelvic y [g, CFC_1000]	B-40
34	V1P1 Pelvic z [g, CFC_1000]	B-41
35	V1P1 Pelvic Resultant [g, CFC_1000]	B-42
36	V1P1 Left Femur [N, CFC_600]	B-43
37	V1P1 Right Femur [N, CFC_600]	B-44
38	V1P1 Left Upper Tibia Mx [N-m, CFC_600]	B-45
39	V1P1 Left Upper Tibia My [N-m, CFC_600]	B-46
40	V1P1 Left Lower Tibia Fz [N, CFC_600]	B-47
41	V1P1 Left Lower Tibia Mx [N-m, CFC_600]	B-48
42	V1P1 Left Lower Tibia My [N-m, CFC_600]	B-49
43	V1P1 Right Upper Tibia Mx [N-m, CFC_600]	B-50
44	V1P1 Right Upper Tibia My [N-m, CFC_600]	B-51
45	V1P1 Right Lower Tibia Fz [N, CFC_600]	B-52
46	V1P1 Right Lower Tibia Mx [N-m, CFC_600]	B-53

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PLOT	PLOT NAME[UNITS, CHANNEL FILTER CLASS]	PAGE
47	V1P1 Right Lower Tibia My [N-m, CFC_600]	B-54
48	V1P1 Left Foot Aft Ax [g, CFC_600]	B-55
49	V1P1 Left Foot Aft Az [g, CFC_600]	B-56
50	V1P1 Left Foot Fore Az [g, CFC_600]	B-57
51	V1P1 Right Foot Aft x [g, CFC_600]	B-58
52	V1P1 Right Foot Aft z [g, CFC_600]	B-59
53	V1P1 Right Foot Fore z [g, CFC_600]	B-60
54	V1 Driver Lap Belt [N, CFC_60]	B-61
55	V1P2 Head 9 Array X Arm y [g, CFC_1000]	B-62
56	V1P2 Head 9 Array X Arm z [g, CFC_1000]	B-63
57	V1P2 Head 9 Array Y Arm x [g, CFC_1000]	B-64
58	V1P2 Head 9 Array Y Arm z [g, CFC_1000]	B-65
59	V1P2 Head 9 Array Z Arm x [g, CFC_1000]	B-66
60	V1P2 Head 9 Array Z Arm y [g, CFC_1000]	B-67
61	V1P2 Head CG x [g, CFC_1000]	B-68
62	V1P2 Head CG y [g, CFC_1000]	B-69
63	V1P2 Head CG z [g, CFC_1000]	B-70
64	V1P2 Head CG Resultant [g, CFC_1000]	B-71
65	V1P2 Head CG Red x [g, CFC_1000]	B-72
66	V1P2 Head CG Red y [g, CFC_1000]	B-73
67	V1P2 Head CG Red z [g, CFC_1000]	B-74
68	V1P2 Head CG Red Resultant [g, CFC_1000]	B-75
69	V1P2 Upper Neck Fx [N, CFC_1000]	B-76
70	V1P2 Upper Neck Fy [N, CFC_1000]	B-77
71	V1P2 Upper Neck Fz [N, CFC_1000]	B-78
72	V1P2 Upper Neck F Resultant [N, CFC_1000]	B-79
73	V1P2 Upper Neck Mx [N-m, CFC_600]	B-80
74	V1P2 Upper Neck My [N-m, CFC_600]	B-81
75	V1P2 Upper Neck Mz [N-m, CFC_600]	B-82
76	V1P2 Upper Neck M Resultant [N-m, CFC_600]	B-83
77	V1P2 Chest x [g, CFC_180]	B-84
78	V1P2 Chest y [g, CFC_180]	B-85
79	V1P2 Chest z [g, CFC_180]	B-86
80	V1P2 Chest Resultant [g, CFC_180]	B-87
81	V1P2 Chest Red x [g, CFC_180]	B-88
82	V1P2 Chest Red y [g, CFC_180]	B-89
83	V1P2 Chest Red z [g, CFC_180]	B-90
84	V1P2 Chest Red Resultant [g, CFC_180]	B-91
85	V1P2 Chest Compression [mm, CFC_600]	B-92
86	V1P2 Pelvic x [g, CFC_1000]	B-93
87	V1P2 Pelvic y [g, CFC_1000]	B-94
88	V1P2 Pelvic z [g, CFC_1000]	B-95
89	V1P2 Pelvic Resultant [g, CFC_1000]	B-96
90	V1P2 Left Femur [N, CFC_600]	B-97
91	V1P2 Right Femur [N, CFC_600]	B-98
92	V1P2 Left Upper Tibia Mx [N-m, CFC_600]	B-99

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93	V1P2 Left Upper Tibia My [N-m, CFC_600]	B-100
94	V1P2 Left Lower Tibia Fz [N, CFC_600]	B-101
95	V1P2 Left Lower Tibia Mx [N-m, CFC_600]	B-102
96	V1P2 Left Lower Tibia My [N-m, CFC_600]	B-103
97	V1P2 Right Upper Tibia Mx [N-m, CFC_600]	B-104
98	V1P2 Right Upper Tibia My [N-m, CFC_600]	B-105
99	V1P2 Right Lower Tibia Fz [N, CFC_600]	B-106
100	V1P2 Right Lower Tibia Mx [N-m, CFC_600]	B-107
101	V1P2 Right Lower Tibia My [N-m, CFC_600]	B-108
102	V1P2 Left Foot Aft x [g, CFC_600]	B-109
103	V1P2 Left Foot Aft z [g, CFC_600]	B-110
104	V1P2 Left Foot Fore z [g, CFC_600]	B-111
105	V1P2 Right Foot Aft x [g, CFC_600]	B-112
106	V1P2 Right Foot Aft z [g, CFC_600]	B-113
107	V1P2 Right Foot Fore z [g, CFC_600]	B-114
108	V1 RFP Lap Belt [N, CFC_60]	B-115
109	V1 Left Rear #1x [g, CFC_60]	B-116
110	V1 Left Rear #1x Velocity [kph, CFC_180]	B-117
111	V1 Left Rear #1x Displacement [mm, CFC_180]	B-118
112	V1 Right Rear #2x [g, CFC_60]	B-119
113	V1 Right Rear #2x Velocity [kph, CFC_180]	B-120
114	V1 Right Rear #2x Displacement [mm, CFC_180]	B-121
115	V1 Engine Top #3x [g, CFC_60]	B-122
116	V1 Engine Top #3x Velocity [kph, CFC_180]	B-123
117	V1 Engine Top #3x Displacement [mm, CFC_180]	B-124
118	V1 Engine Bottom #4x [g, CFC_60]	B-125
119	V1 Engine Bottom #4x Velocity [kph, CFC_180]	B-126
120	V1 Engine Bottom #4x Displacement [mm, CFC_180]	B-127
121	V1 Right Caliper #5x [g, CFC_60]	B-128
122	V1 Right Caliper #5x Velocity [kph, CFC_180]	B-129
123	V1 Right Caliper #5x Displacement [mm, CFC_180]	B-130
124	V1 Instrument Panel #6x [g, CFC_60]	B-131
125	V1 Instrument Panel #6x Velocity [kph, CFC_180]	B-132
126	V1 Instrument Panel #6x Displacement [mm, CFC_180]	B-133
127	V1 Left Caliper #7x [g, CFC_60]	B-134
128	V1 Left Caliper #7x Velocity [kph, CFC_180]	B-135
129	V1 Left Caliper #7x Displacement [mm, CFC_180]	B-136
130	V1 Left Rear #8z [g, CFC_60]	B-137
131	V1 Left Rear #8z Velocity [kph, CFC_180]	B-138
132	V1 Left Rear #8z Displacement [mm, CFC_180]	B-139
133	V1 Right Rear #9z [g, CFC_60]	B-140
134	V1 Right Rear #9z Velocity [kph, CFC_180]	B-141
135	V1 Right Rear #9z Displacement [mm, CFC_180]	B-142
136	Barrier Load Cell A1 Fx [N, CFC_60]	B-143
137	Barrier Load Cell A2 Fx [N, CFC_60]	B-144
138	Barrier Load Cell A3 Fx [N, CFC_60]	B-145

Table of Data Plots (continued)

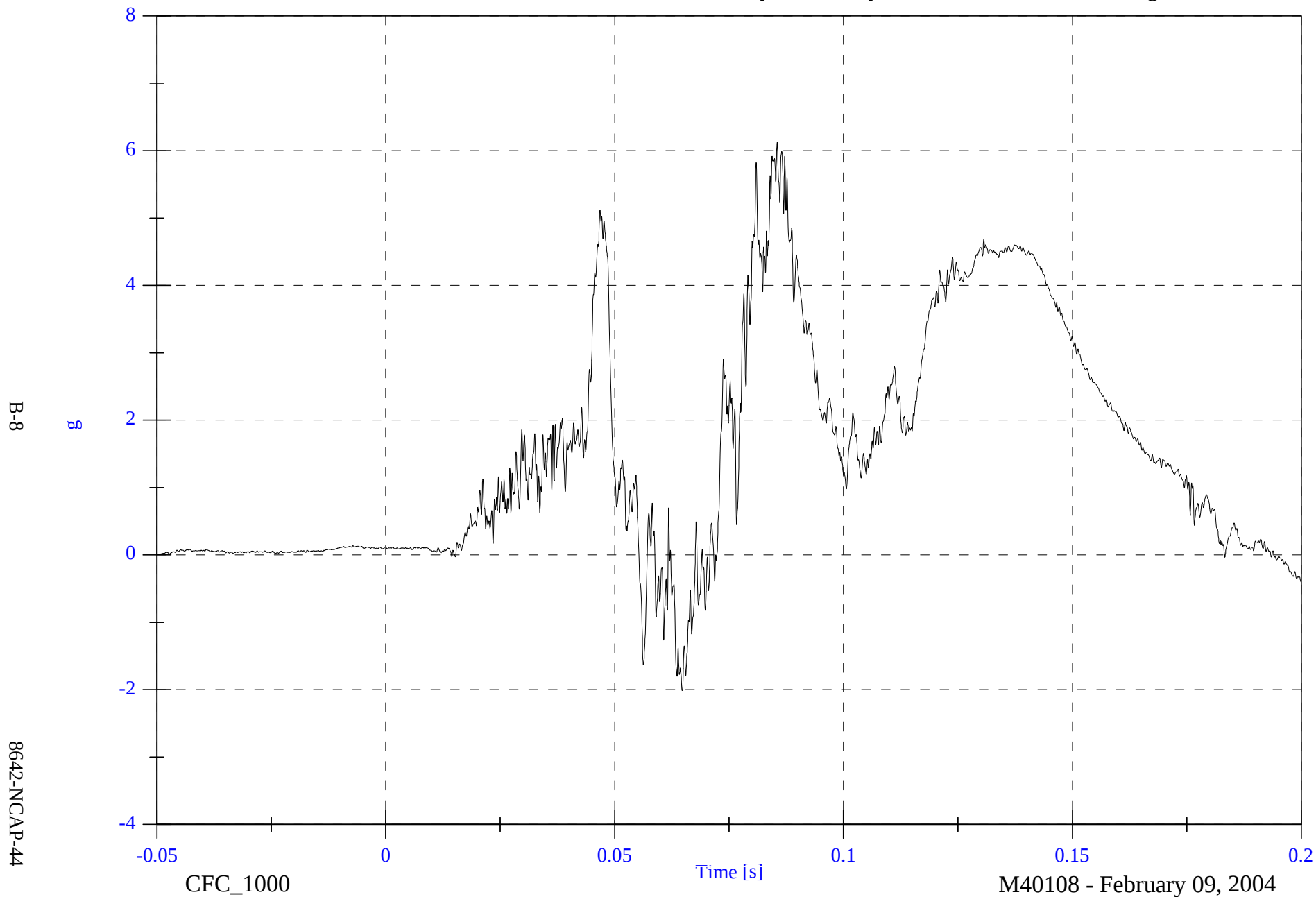
PLOT	PLOT NAME[UNITS, CHANNEL FILTER CLASS]	PAGE
139	Barrier Load Cell A4 Fx [N, CFC_60]	B-146
140	Barrier Load Cell A5 Fx [N, CFC_60]	B-147
141	Barrier Load Cell A6 Fx [N, CFC_60]	B-148
142	Barrier Load Cell A7 Fx [N, CFC_60]	B-149
143	Barrier Load Cell A8 Fx [N, CFC_60]	B-150
144	Barrier Load Cell A9 Fx [N, CFC_60]	B-151
145	Barrier Load Cell B1 Fx [N, CFC_60]	B-152
146	Barrier Load Cell B2 Fx [N, CFC_60]	B-153
147	Barrier Load Cell B3 Fx [N, CFC_60]	B-154
148	Barrier Load Cell B4 Fx [N, CFC_60]	B-155
149	Barrier Load Cell B5 Fx [N, CFC_60]	B-156
150	Barrier Load Cell B6 Fx [N, CFC_60]	B-157
151	Barrier Load Cell B7 Fx [N, CFC_60]	B-158
152	Barrier Load Cell B8 Fx [N, CFC_60]	B-159
153	Barrier Load Cell B9 Fx [N, CFC_60]	B-160
154	Barrier Load Cell C1 Fx [N, CFC_60]	B-161
155	Barrier Load Cell C2 Fx [N, CFC_60]	B-162
156	Barrier Load Cell C3 Fx [N, CFC_60]	B-163
157	Barrier Load Cell C4 Fx [N, CFC_60]	B-164
158	Barrier Load Cell C5 Fx [N, CFC_60]	B-165
159	Barrier Load Cell C6 Fx [N, CFC_60]	B-166
160	Barrier Load Cell C7 Fx [N, CFC_60]	B-167
161	Barrier Load Cell C8 Fx [N, CFC_60]	B-168
162	Barrier Load Cell C9 Fx [N, CFC_60]	B-169
163	Barrier Load Cell D1 Fx [N, CFC_60]	B-170
164	Barrier Load Cell D2 Fx [N, CFC_60]	B-171
165	Barrier Load Cell D3 Fx [N, CFC_60]	B-172
166	Barrier Load Cell D4 Fx [N, CFC_60]	B-173
167	Barrier Load Cell D5 Fx [N, CFC_60]	B-174
168	Barrier Load Cell D6 Fx [N, CFC_60]	B-175
169	Barrier Load Cell D7 Fx [N, CFC_60]	B-176
170	Barrier Load Cell D8 Fx [N, CFC_60]	B-177
171	Barrier Load Cell D9 Fx [N, CFC_60]	B-178
172	Group 1 Load Cell Sum (A1,A2,A3,B1,B2,B3)	B-179
173	Group 2 Load Cell Sum (A4,A5,A6,B4,B5,B6)	B-180
174	Group 3 Load Cell Sum (A7,A8,A9,B7,B8,B9)	B-181
175	Group 4 Load Cell Sum (C1,C2,C3,D1,D2,D3)	B-182
176	Group 5 Load Cell Sum (C4,C5,C6,D4,D5,D6)	B-183
177	Group 6 Load Cell Sum (C7,C8,C9,D7,D8,D9)	B-184
178	Total Load Cell Sum (All 6 Groups)	B-185

2004 NCAP Test 8 2004 Cadillac SRX

V1P1 Head 9 Array X Arm Ay

Max: 6.1 [g] at 0.085 [s]

Min: -2.0 [g] at 0.065 [s]

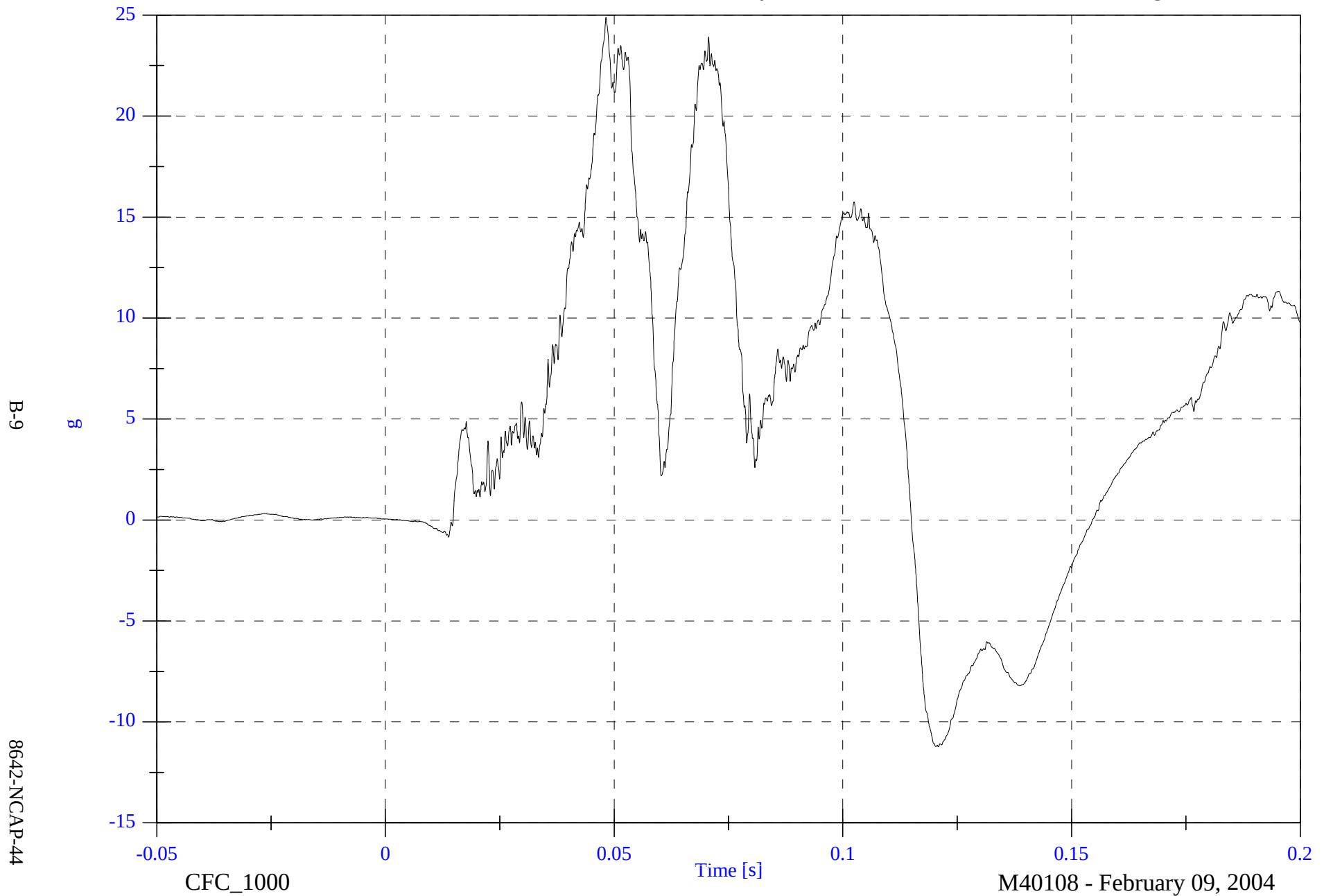


2004 NCAP Test 8 2004 Cadillac SRX

V1P1 Head 9 Array X Arm Az

Max: 24.9 [g] at 0.048 [s]

Min: -11.2 [g] at 0.121 [s]

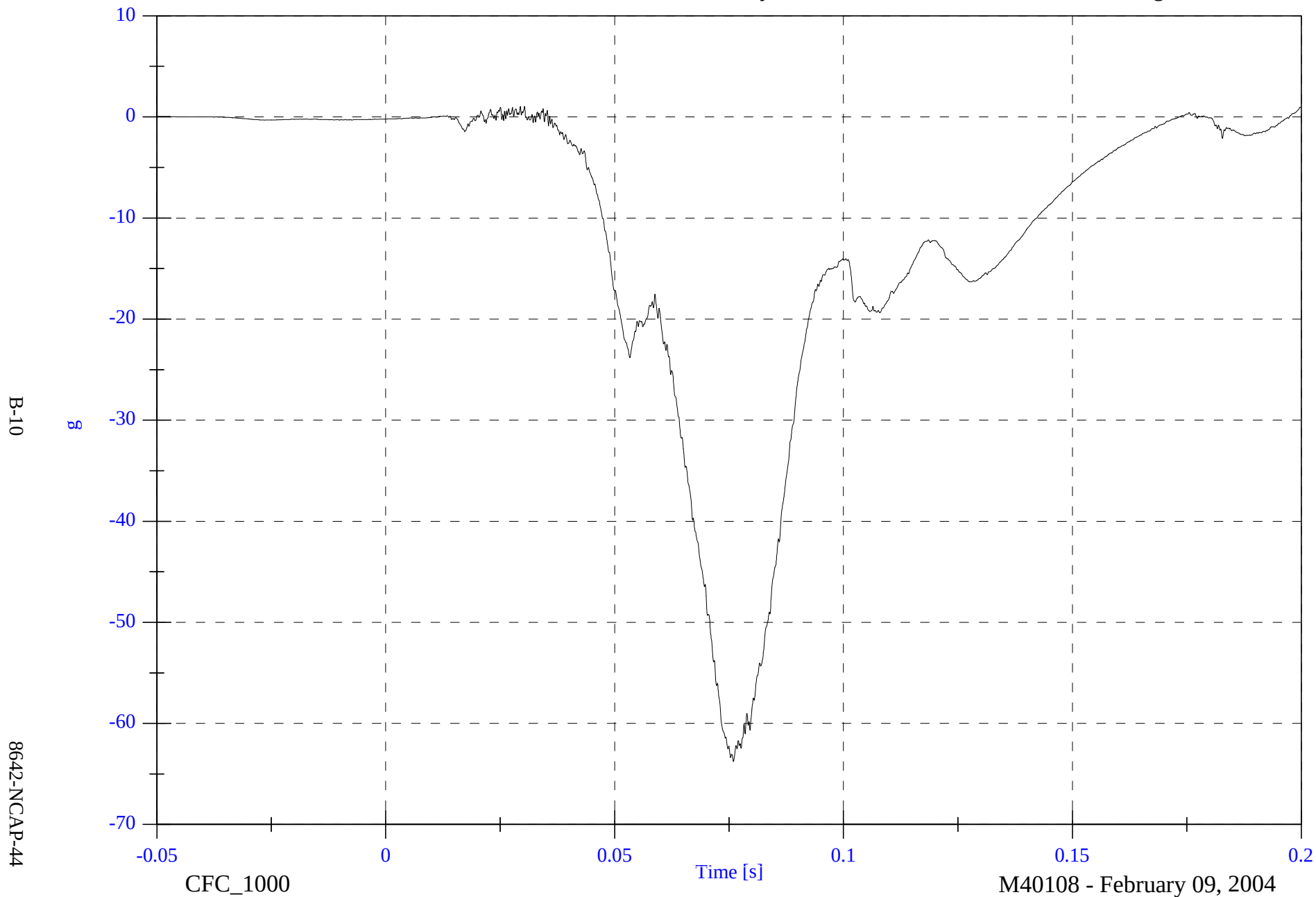


2004 NCAP Test 8 2004 Cadillac SRX

V1P1 Head 9 Array Y Arm Ax

Max: 1.0 [g] at 0.029 [s]

Min: -63.8 [g] at 0.076 [s]



2004 NCAP Test 8 2004 Cadillac SRX

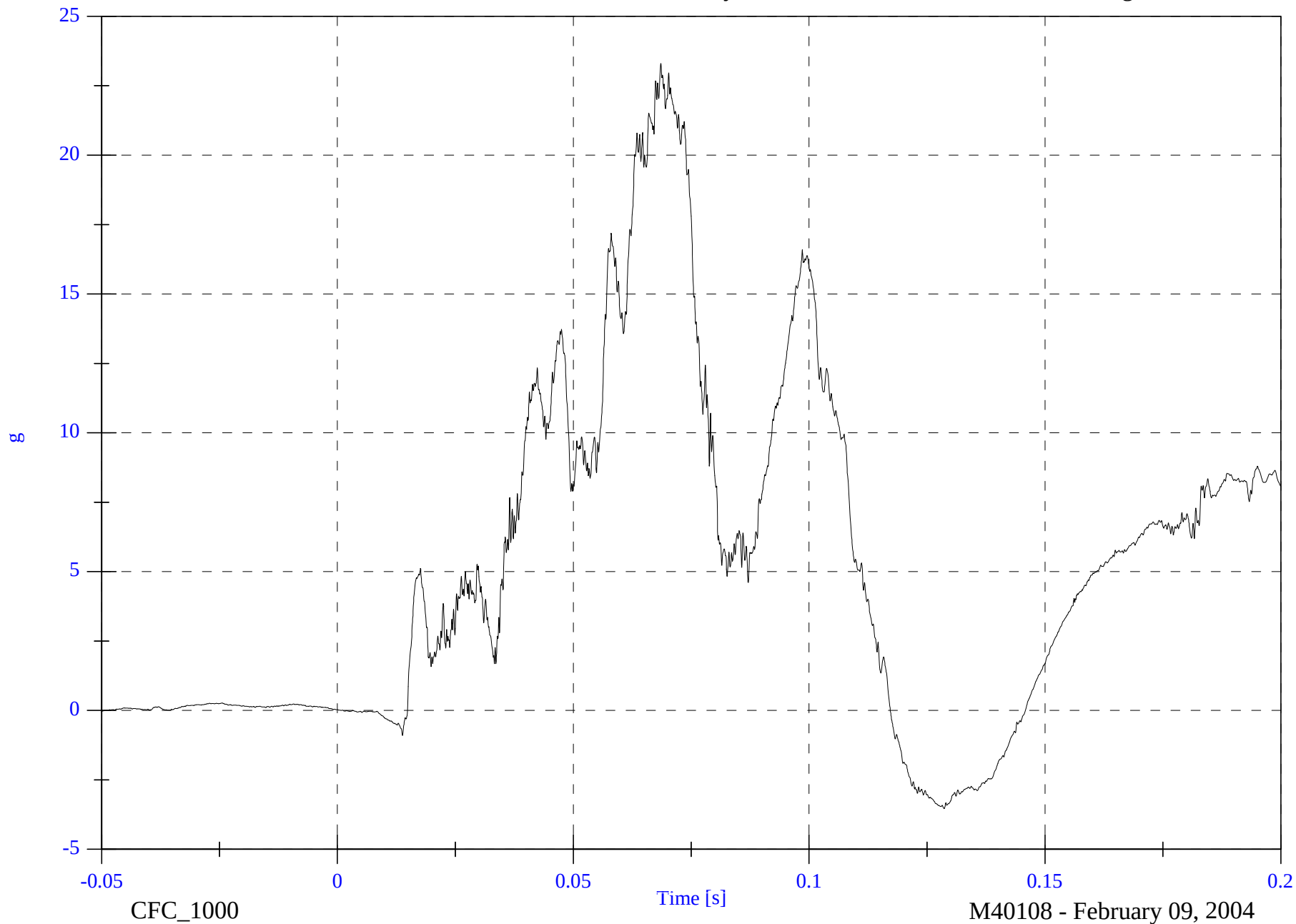
V1P1 Head 9 Array Y Arm Az

Max: 23.3 [g] at 0.069 [s]

Min: -3.5 [g] at 0.129 [s]

B-11

8642-NCAP-44

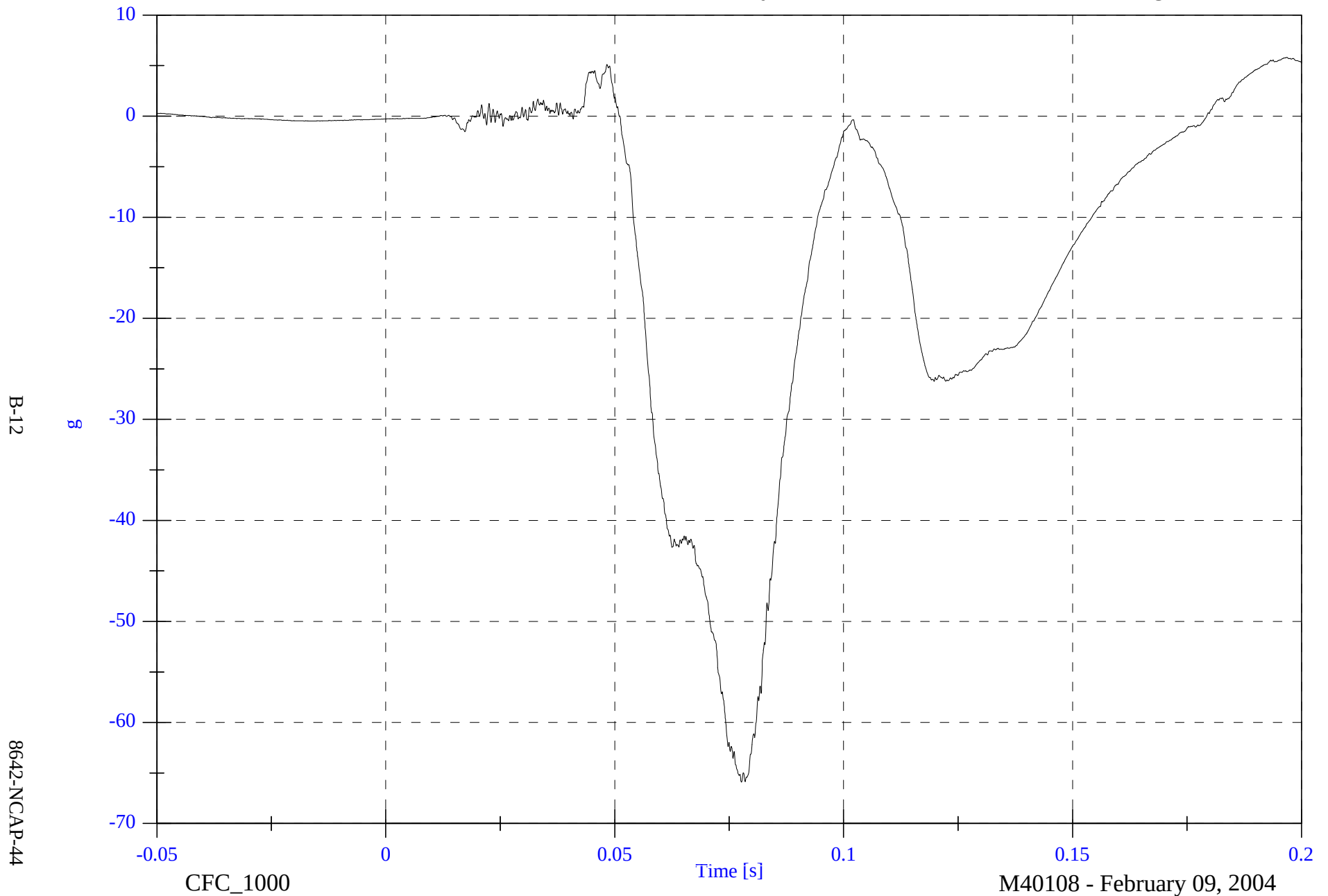


2004 NCAP Test 8 2004 Cadillac SRX

V1P1 Head 9 Array Z Arm Ax

Max: 5.8 [g] at 0.197 [s]

Min: -65.9 [g] at 0.078 [s]

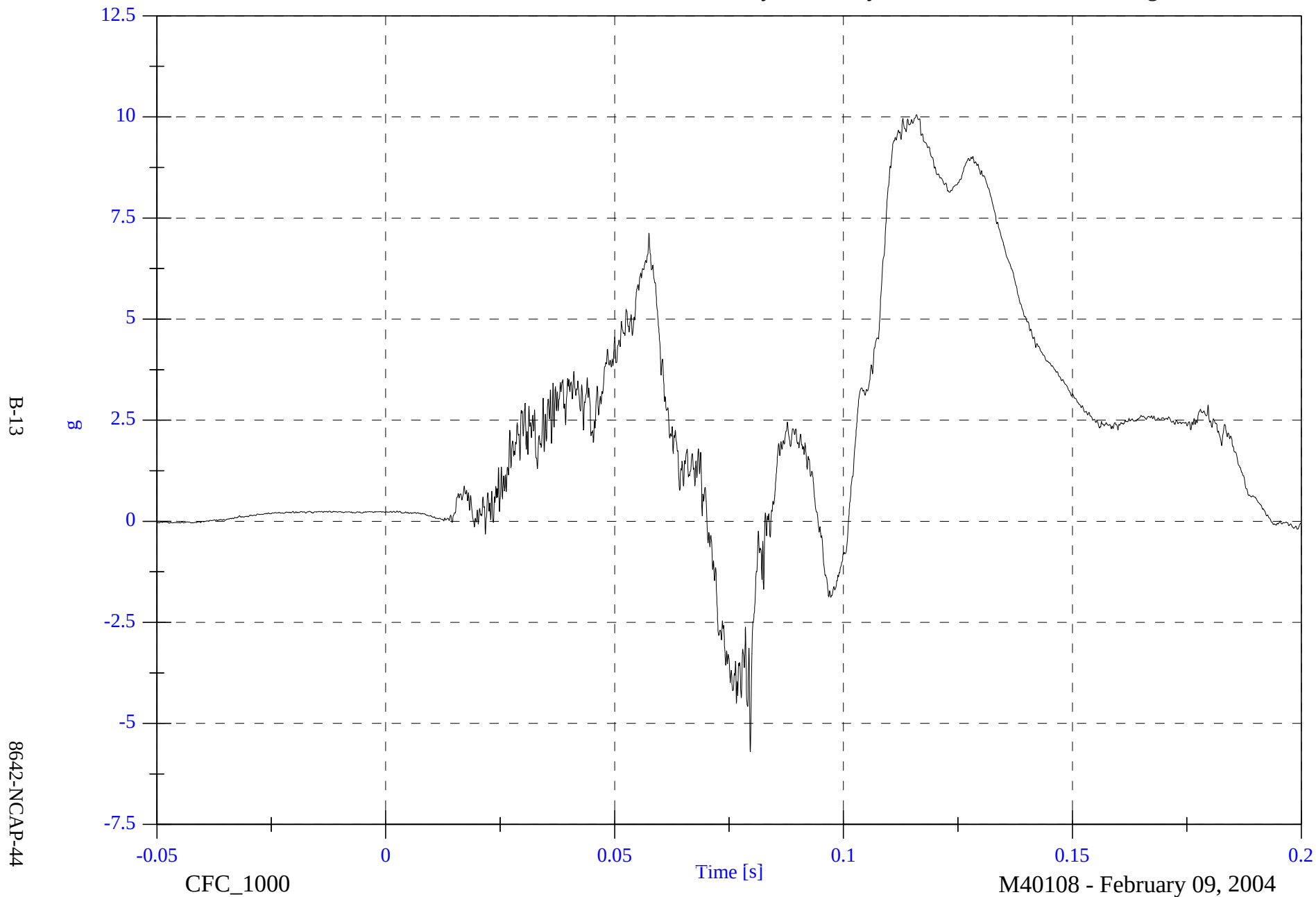


2004 NCAP Test 8 2004 Cadillac SRX

V1P1 Head 9 Array Z Arm Ay

Max: 10.1 [g] at 0.116 [s]

Min: -5.7 [g] at 0.080 [s]

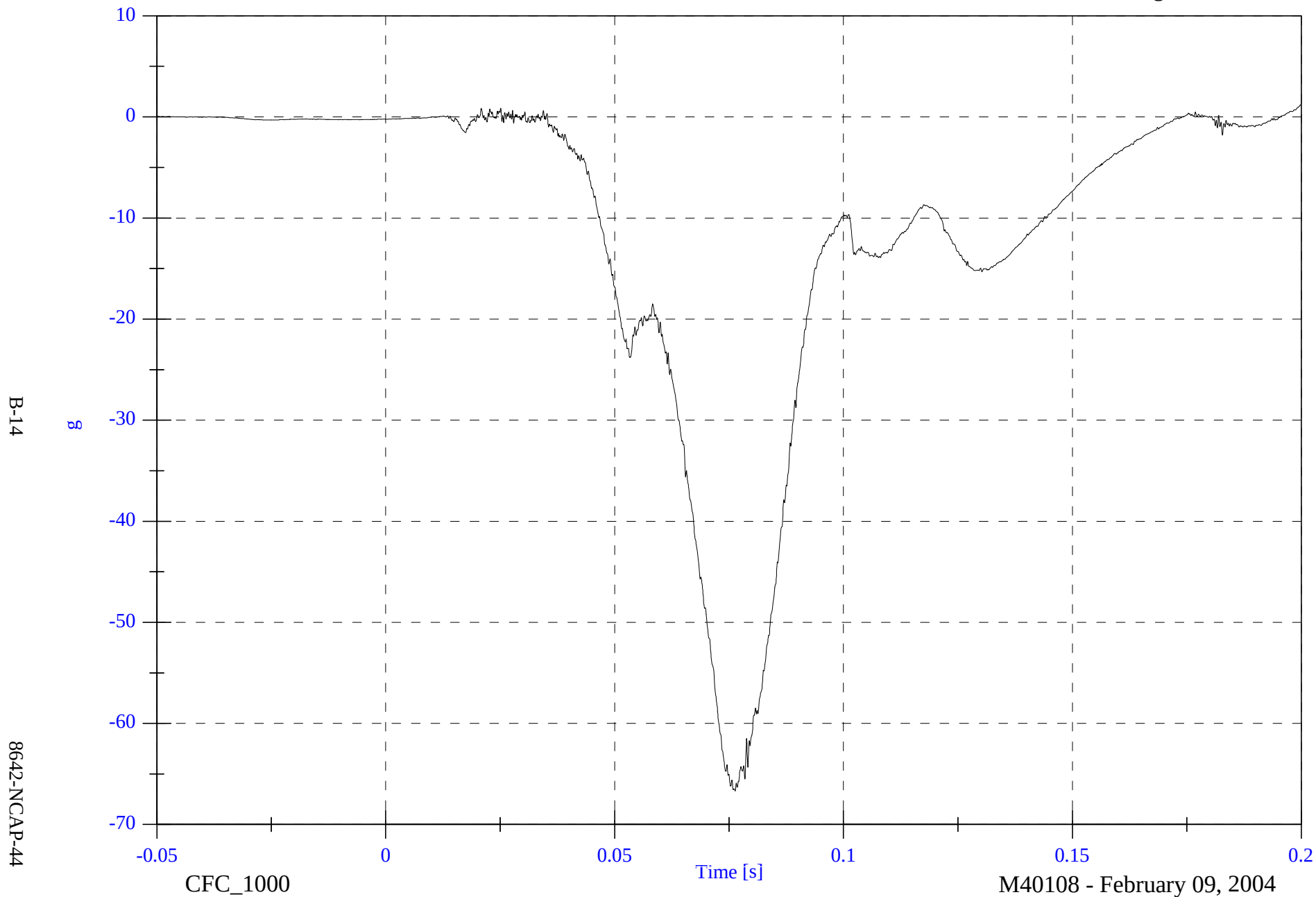


2004 NCAP Test 8 2004 Cadillac SRX

V1P1 Head CG x

Max: 1.3 [g] at 0.200 [s]

Min: -66.7 [g] at 0.076 [s]



2004 NCAP Test 8 2004 Cadillac SRX

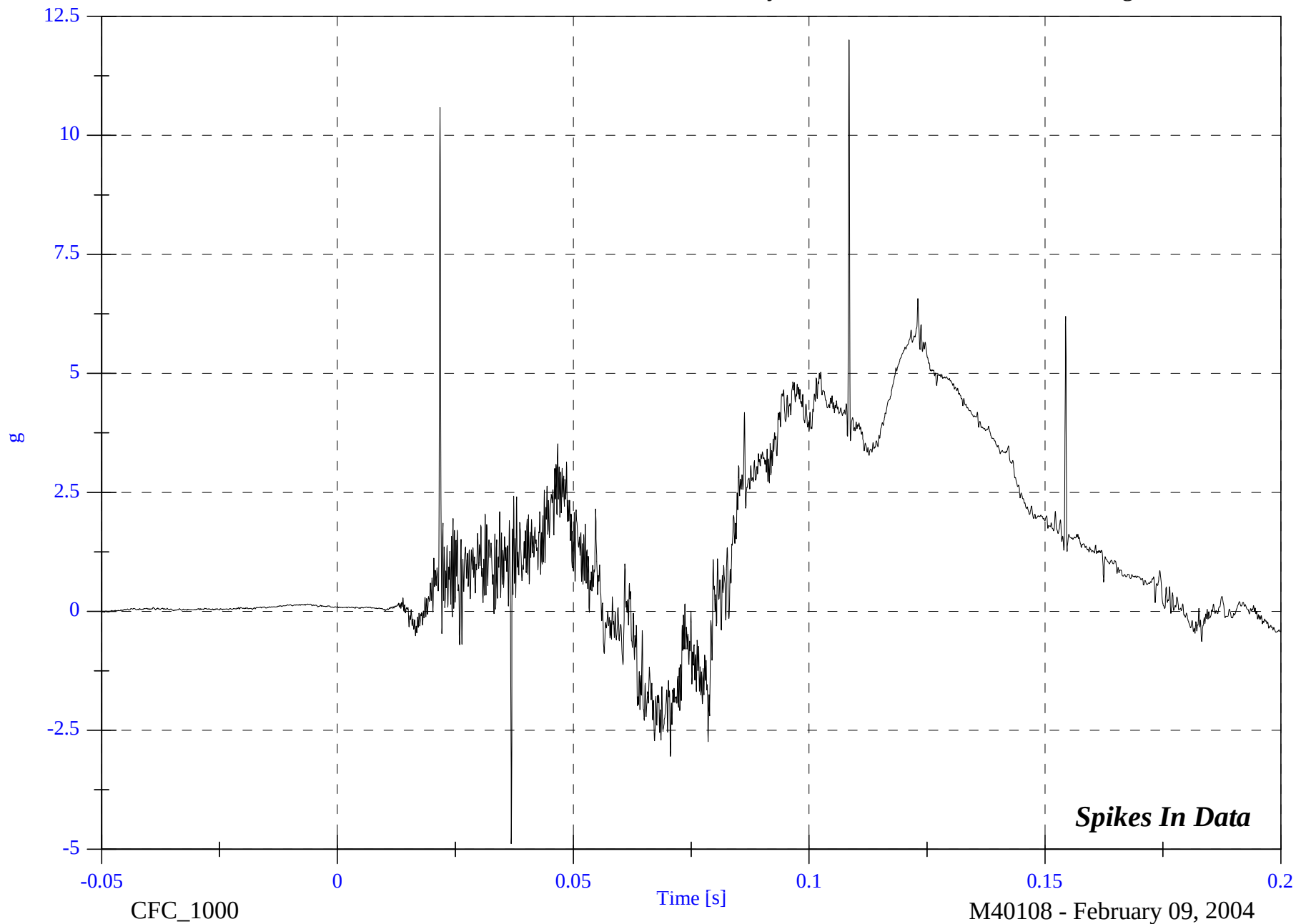
V1P1 Head CG y

Max: 12.0 [g] at 0.108 [s]

Min: -4.9 [g] at 0.037 [s]

B-15

8642-NCAP-44



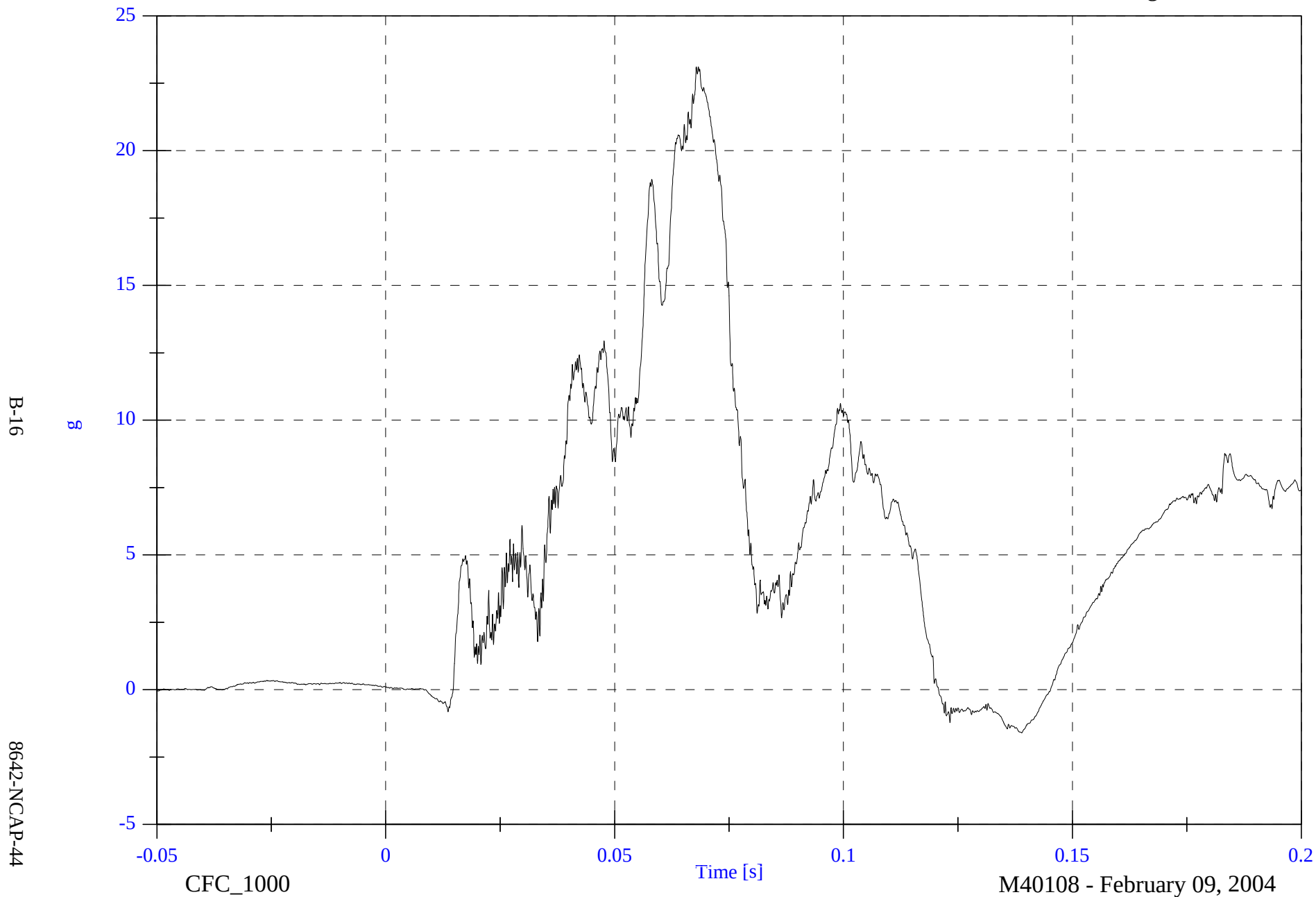
M40108 - February 09, 2004

2004 NCAP Test 8 2004 Cadillac SRX

Max: 23.1 [g] at 0.068 [s]

Min: -1.6 [g] at 0.139 [s]

V1P1 Head CG z



2004 NCAP Test 8 2004 Cadillac SRX

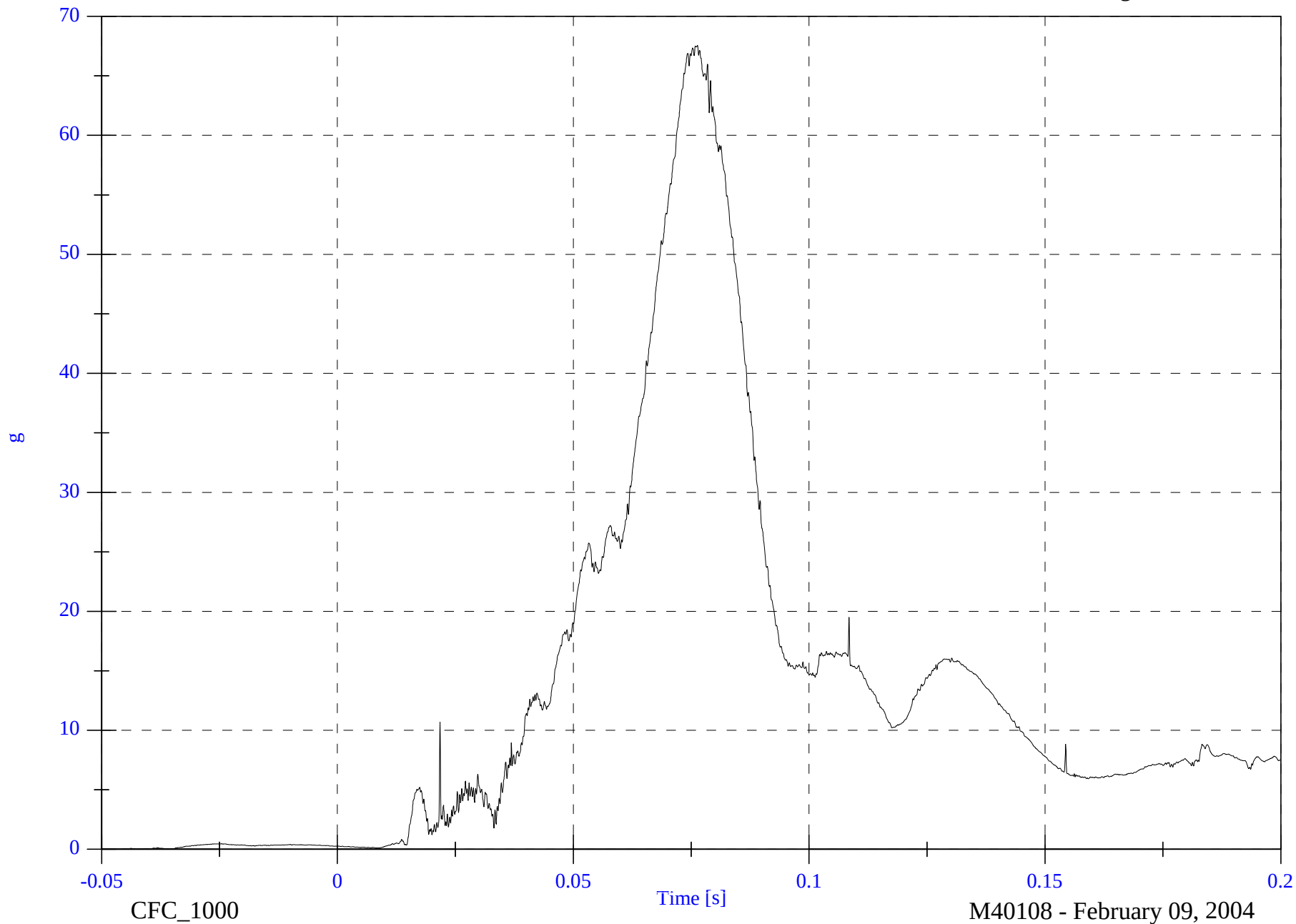
V1P1 Head CG Resultant

Max: 67.6 [g] at 0.076 [s]

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

B-17

8642-NCAP-44

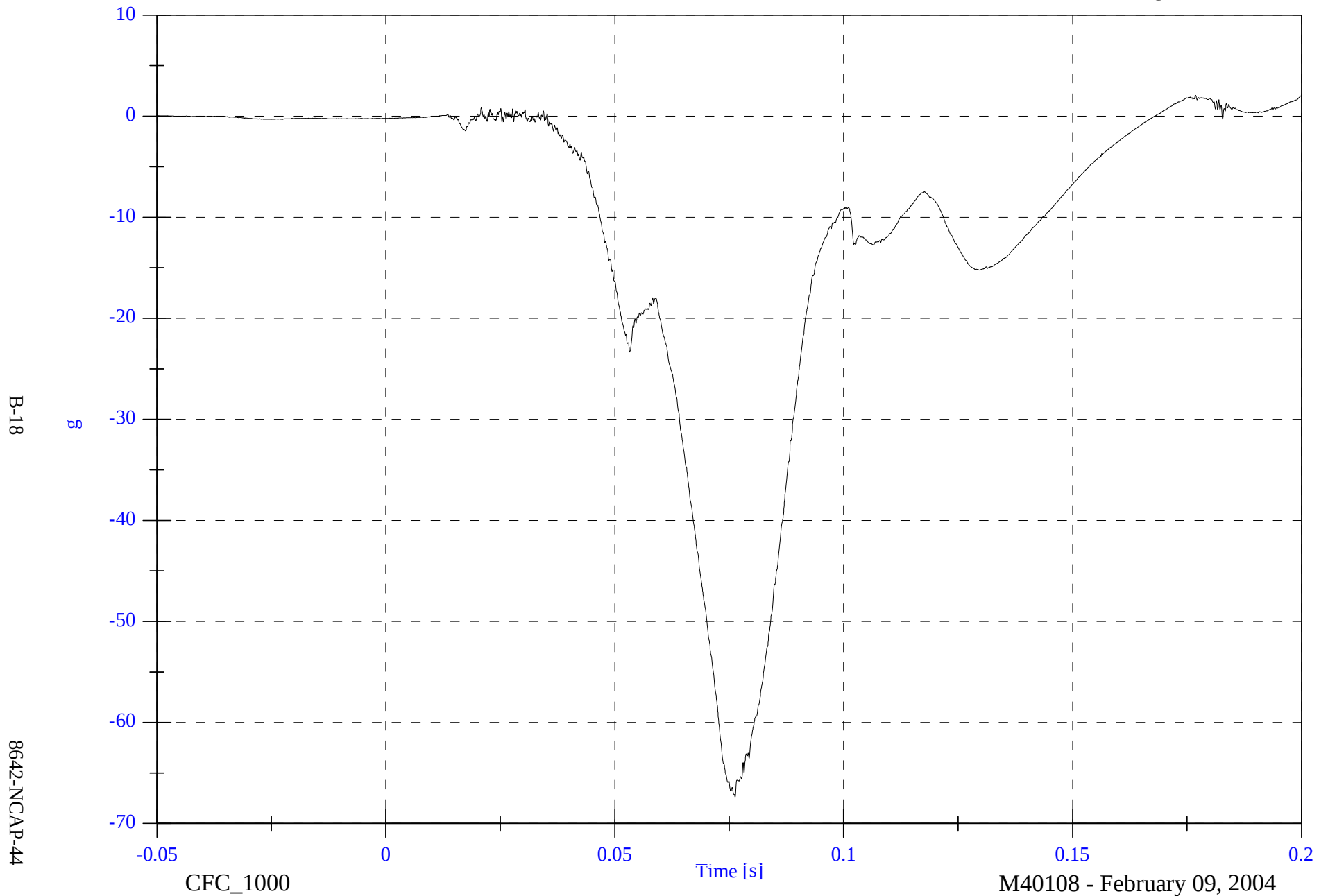


2004 NCAP Test 8 2004 Cadillac SRX

V1P1 Head CG Red x

Max: 2.1 [g] at 0.177 [s]

Min: -67.4 [g] at 0.076 [s]

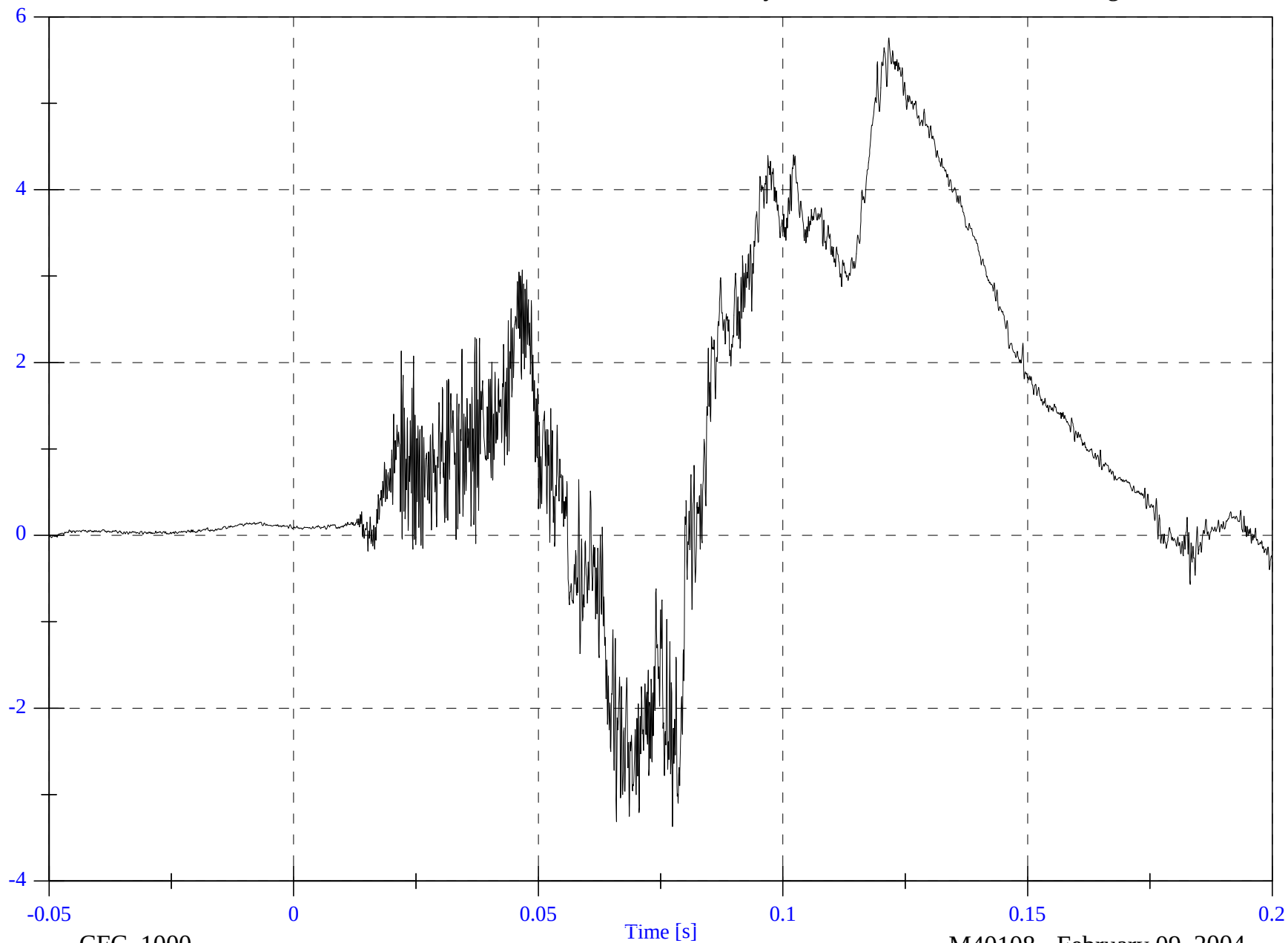


2004 NCAP Test 8 2004 Cadillac SRX

V1P1 Head CG Red y

Max: 5.8 [g] at 0.122 [s]

Min: -3.4 [g] at 0.077 [s]



B-19

8642-NCAP-44

CFC_1000

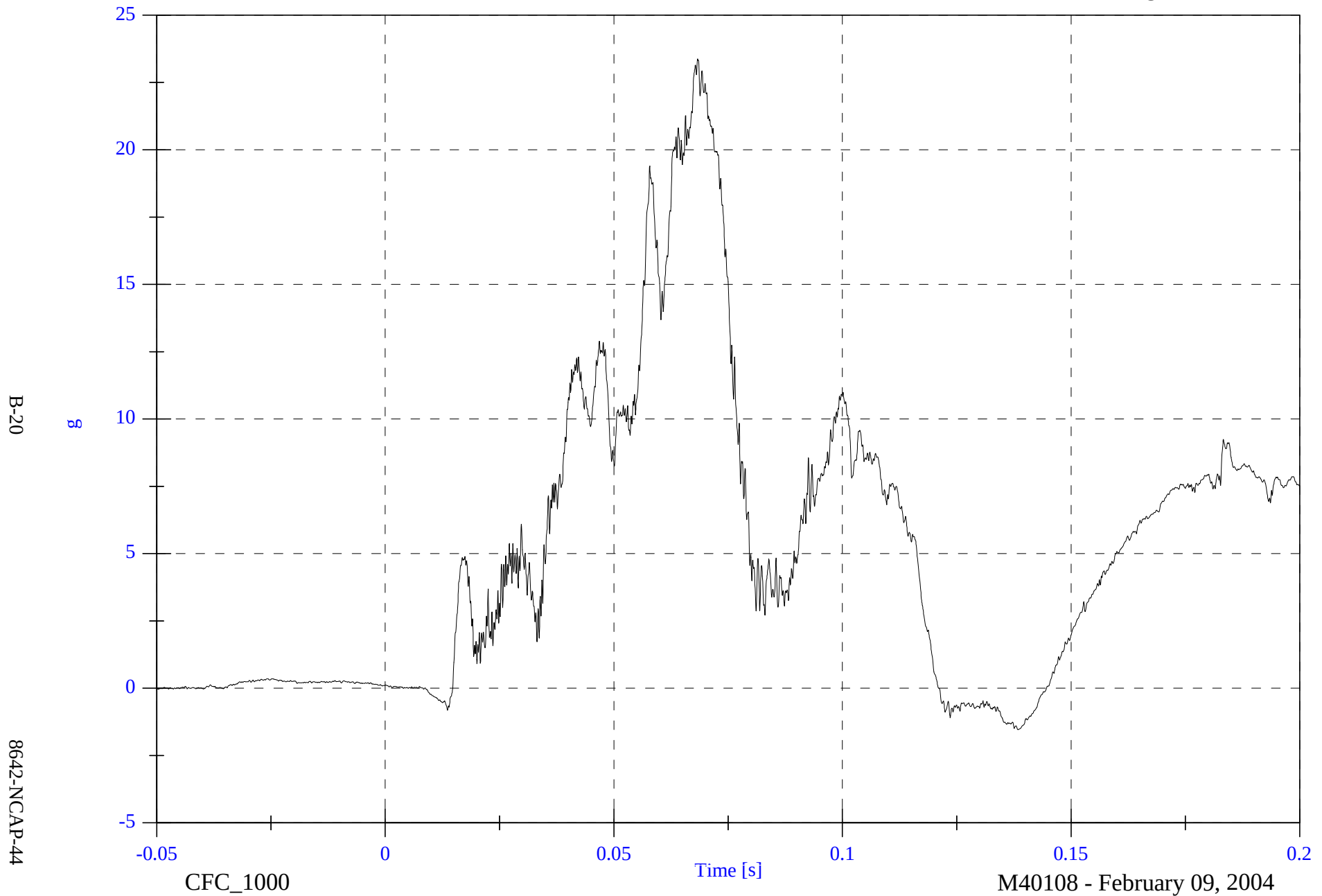
M40108 - February 09, 2004

2004 NCAP Test 8 2004 Cadillac SRX

Max: 23.4 [g] at 0.068 [s]

Min: -1.5 [g] at 0.138 [s]

V1P1 Head CG Red z

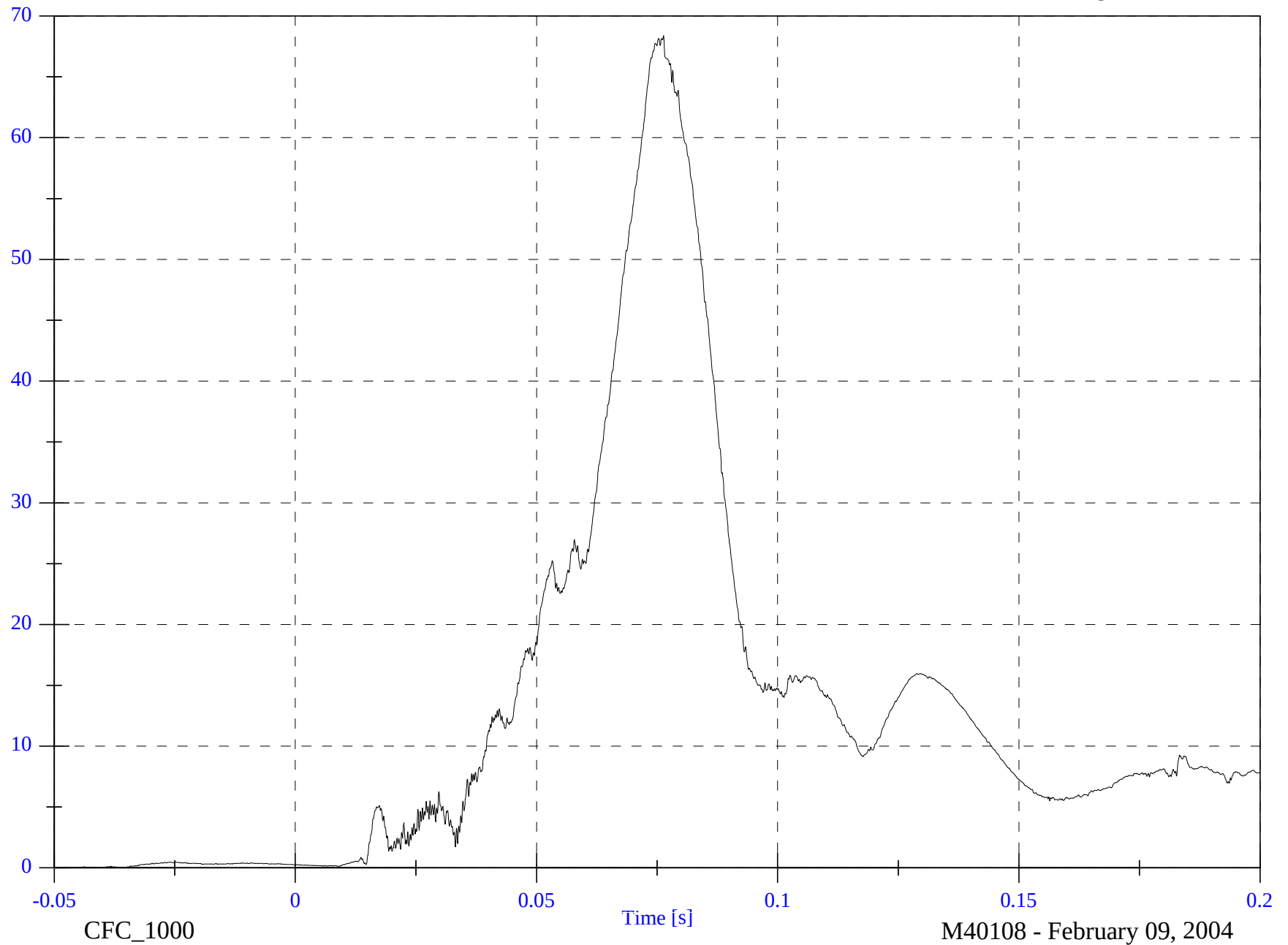


2004 NCAP Test 8 2004 Cadillac SRX

V1P1 Head CG Red Resultant

Max: 68.4 [g] at 0.076 [s]

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



B-21

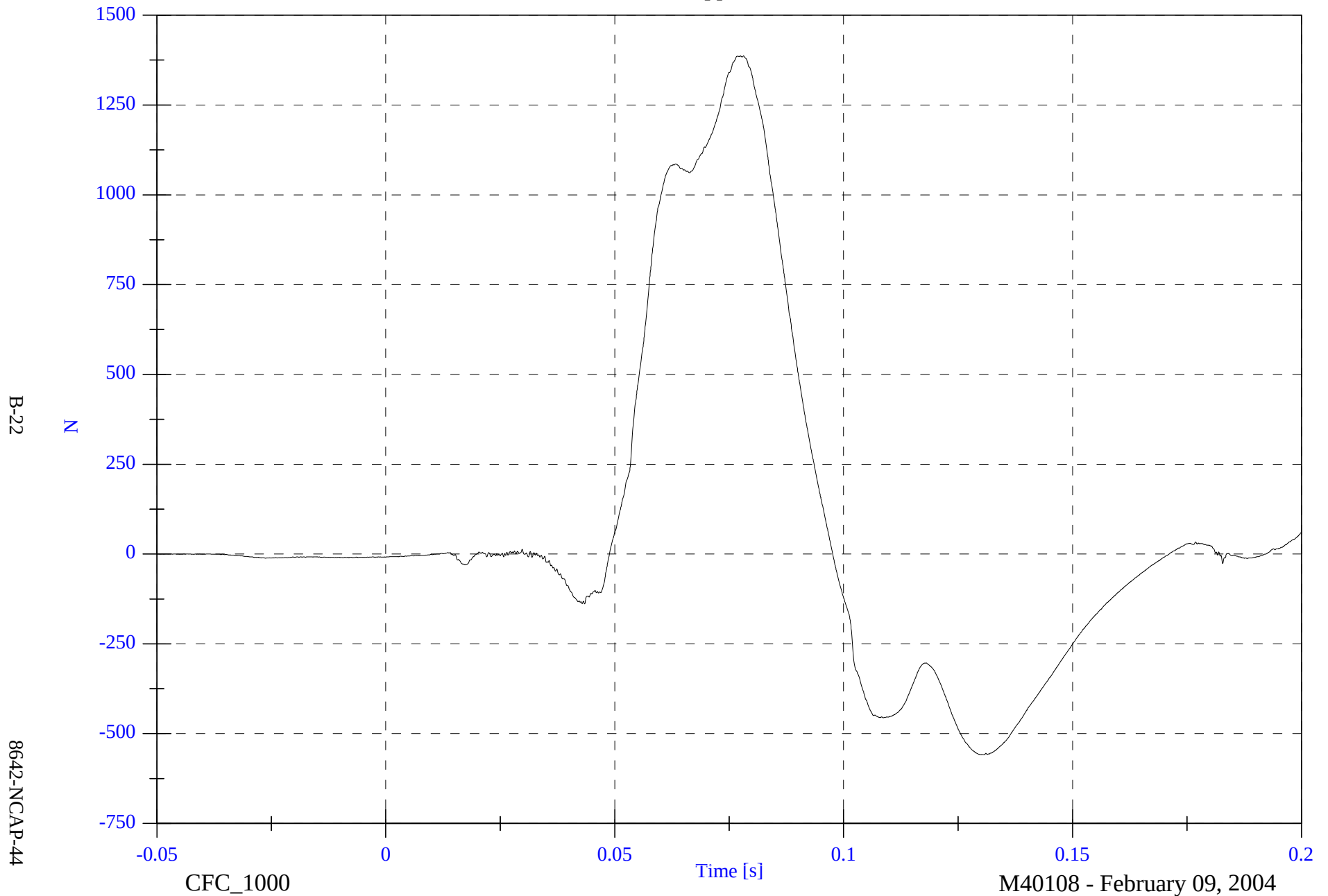
8642-NCAP-44

2004 NCAP Test 8 2004 Cadillac SRX

Max: 1386.6 [N] at 0.078 [s]

Min: -559.0 [N] at 0.131 [s]

V1P1 Upper Neck Fx

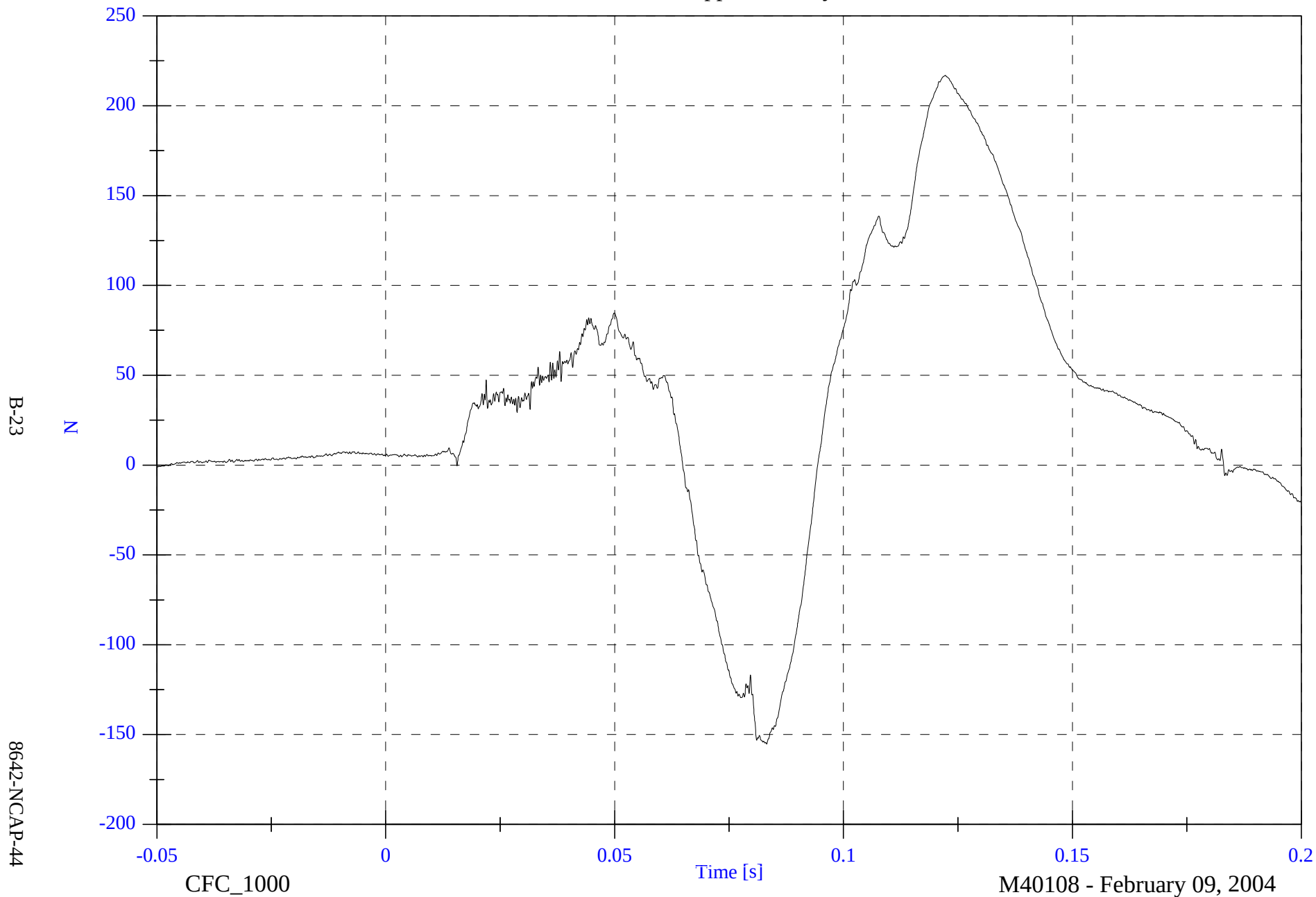


2004 NCAP Test 8 2004 Cadillac SRX

V1P1 Upper Neck Fy

Max: 216.9 [N] at 0.122 [s]

Min: -155.3 [N] at 0.083 [s]

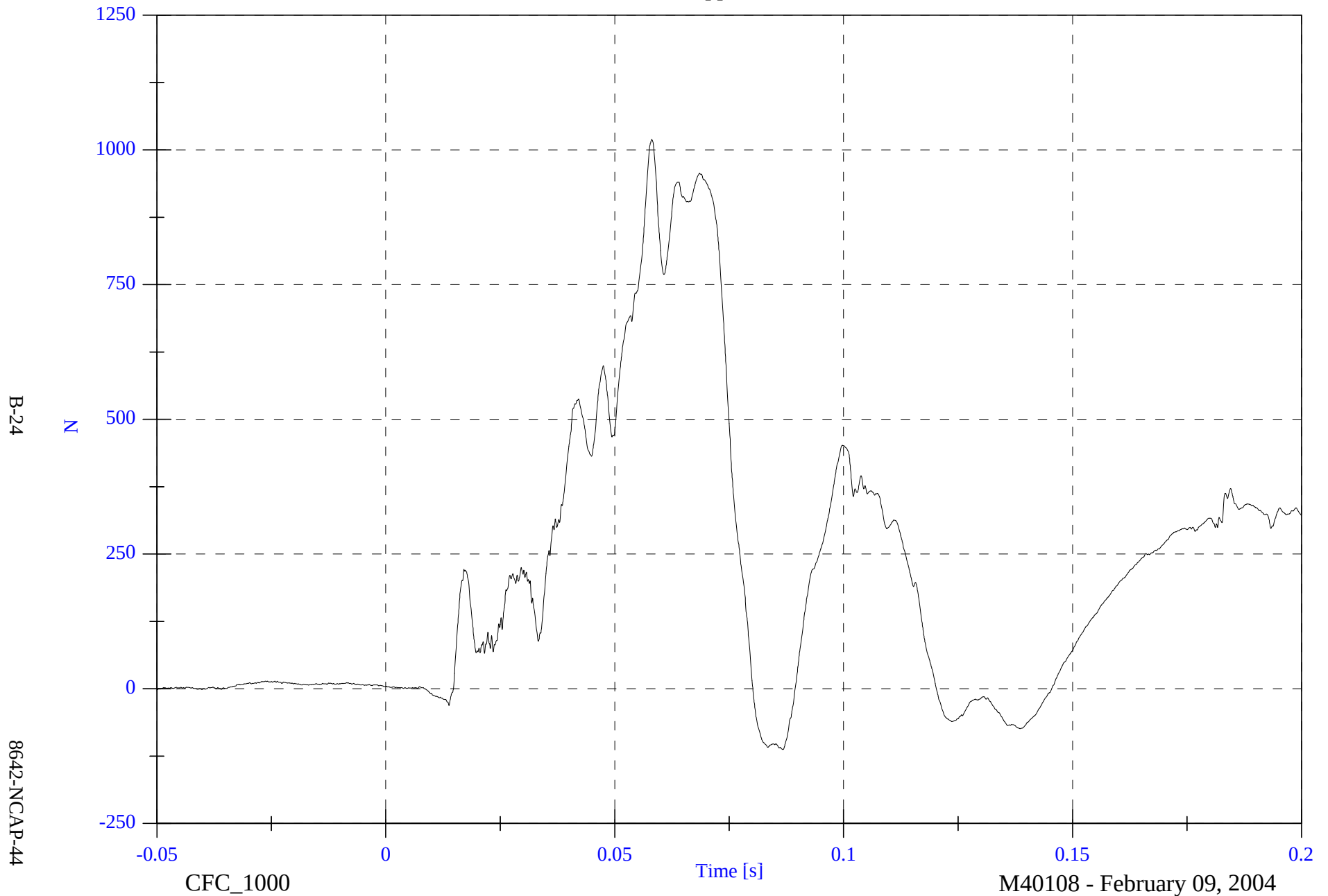


2004 NCAP Test 8 2004 Cadillac SRX

Max: 1019.2 [N] at 0.058 [s]

Min: -112.9 [N] at 0.087 [s]

V1P1 Upper Neck Fz

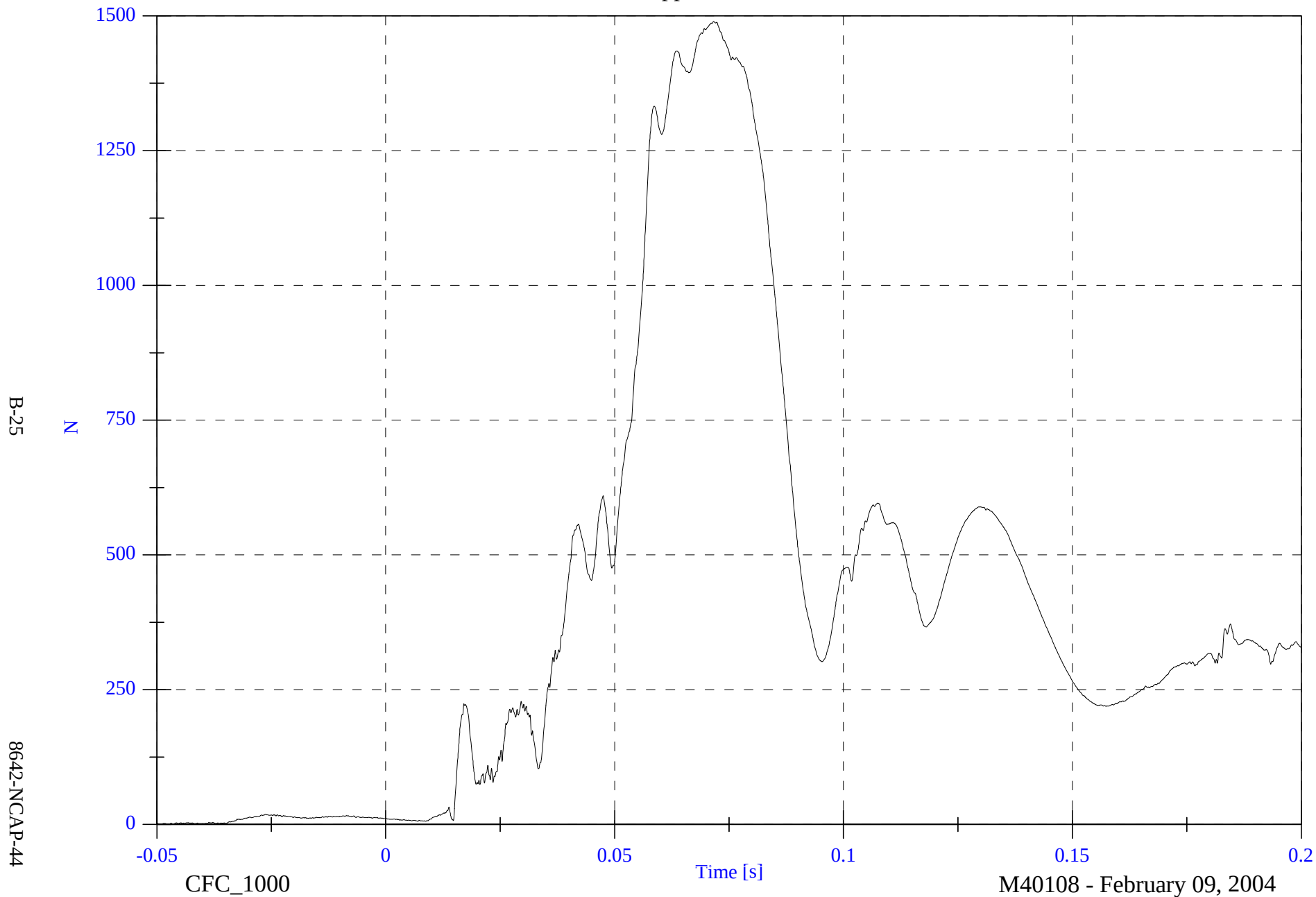


2004 NCAP Test 8 2004 Cadillac SRX

Max: 1489.4 [N] at 0.072 [s]

V1P1 Upper Neck F Resultant

Min: 0.7 [N] at -0.048 [s]

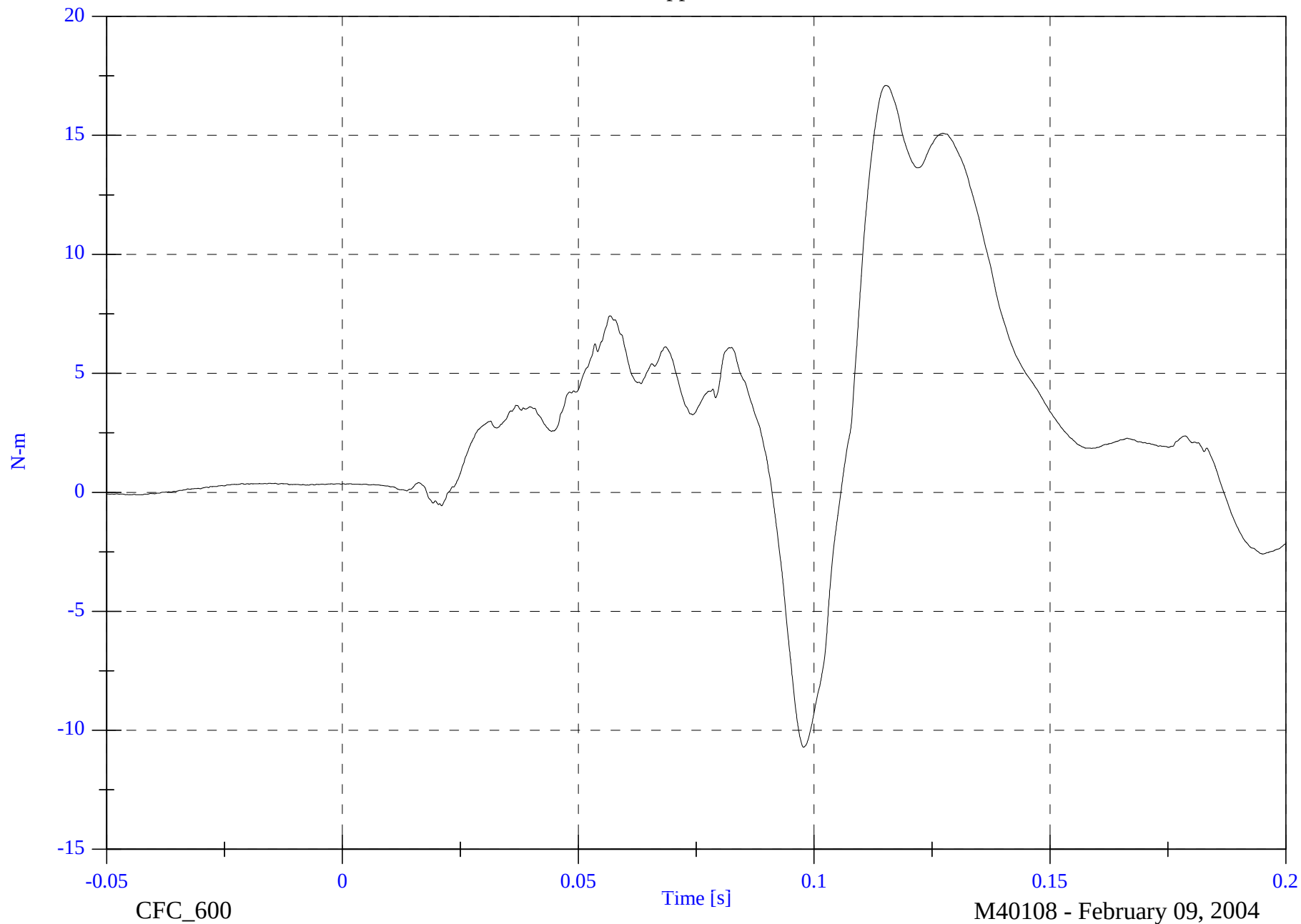


2004 NCAP Test 8 2004 Cadillac SRX

V1P1 Upper Neck Mx

Max: 17.1 [N-m] at 0.115 [s]

Min: -10.7 [N-m] at 0.098 [s]



2004 NCAP Test 8 2004 Cadillac SRX

Max: 82.9 [N-m] at 0.062 [s]

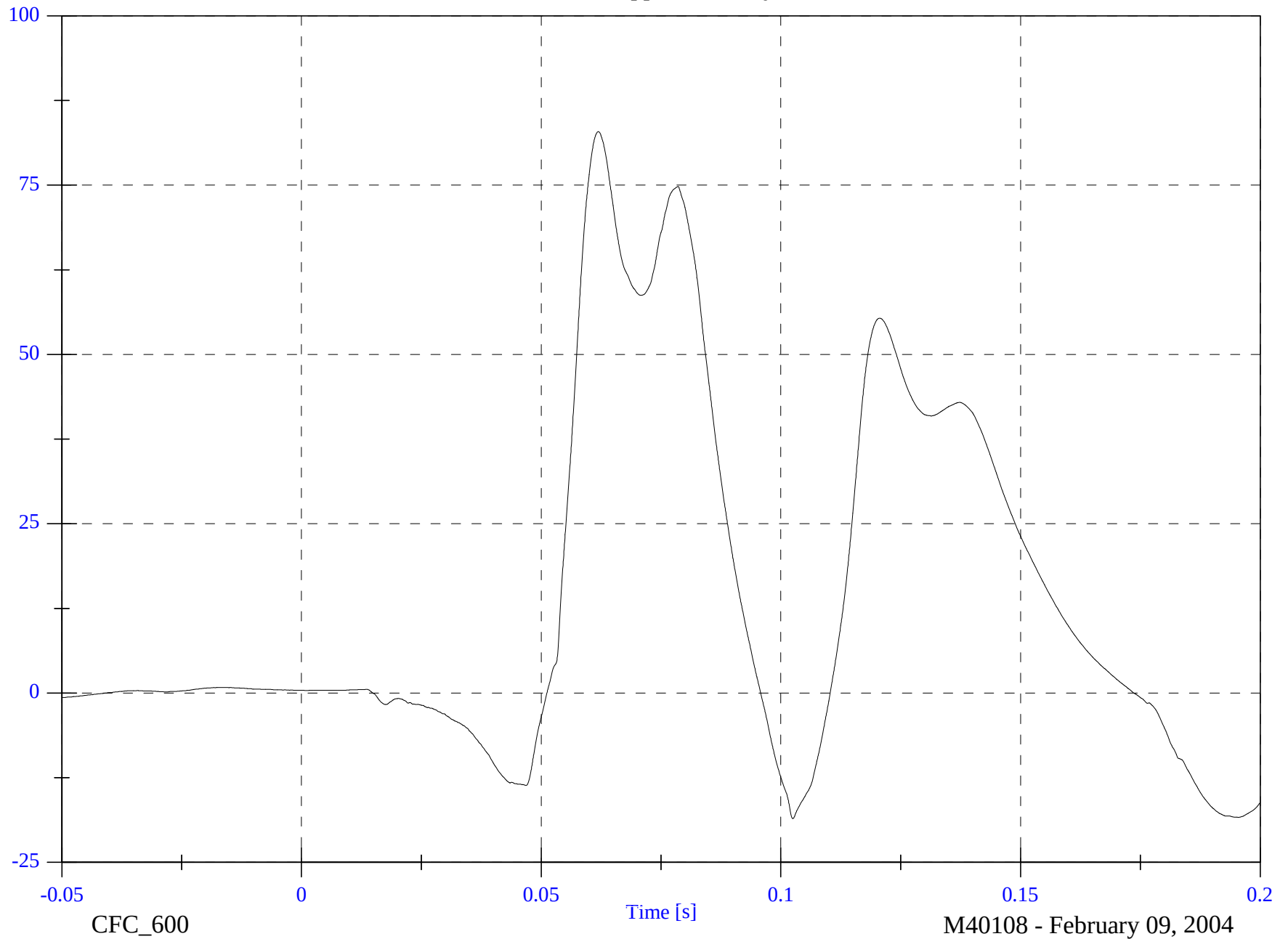
Min: -18.5 [N-m] at 0.102 [s]

V1P1 Upper Neck My

B-27

w-N

8642-NCAP-44

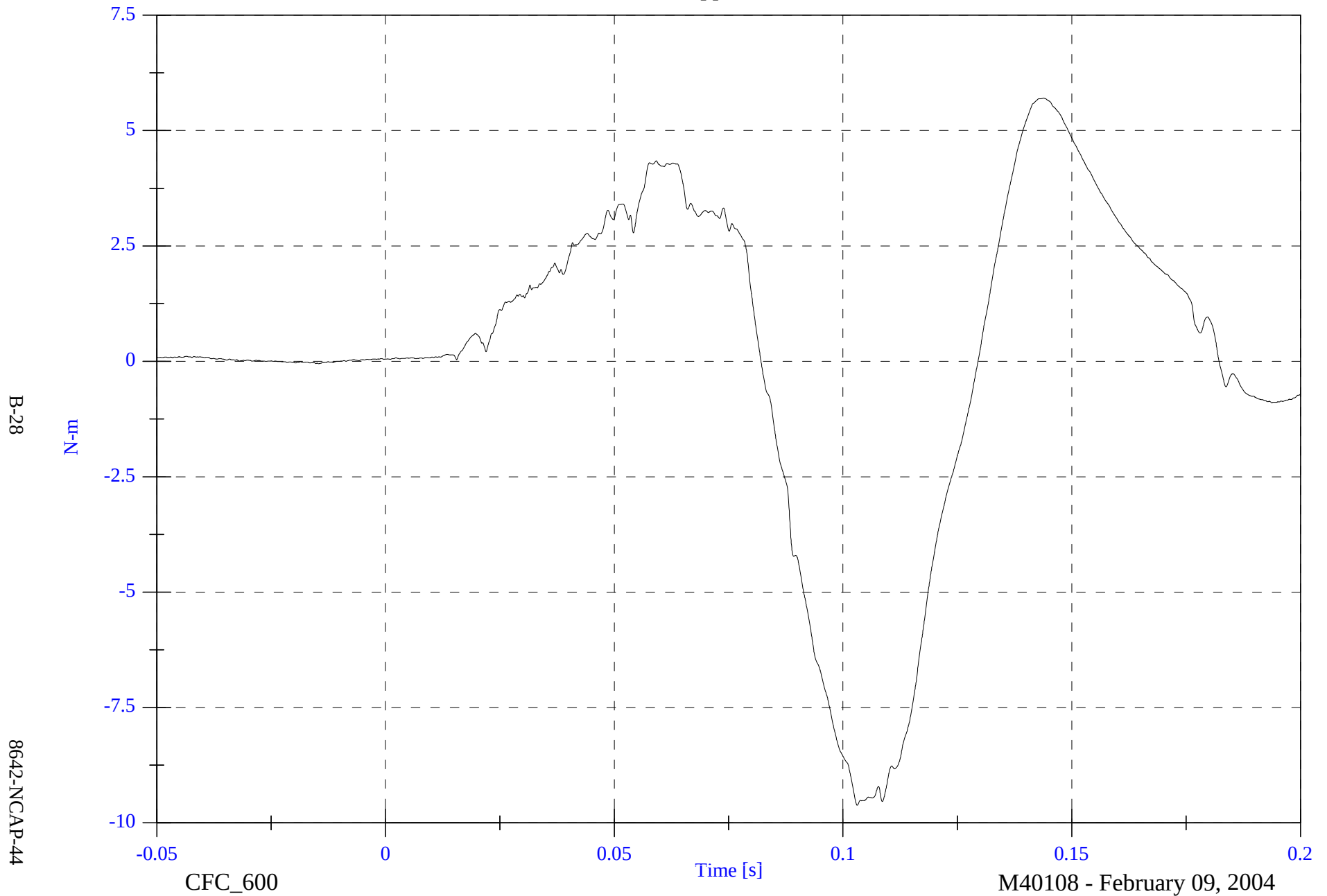


2004 NCAP Test 8 2004 Cadillac SRX

V1P1 Upper Neck Mz

Max: 5.7 [N-m] at 0.144 [s]

Min: -9.6 [N-m] at 0.103 [s]

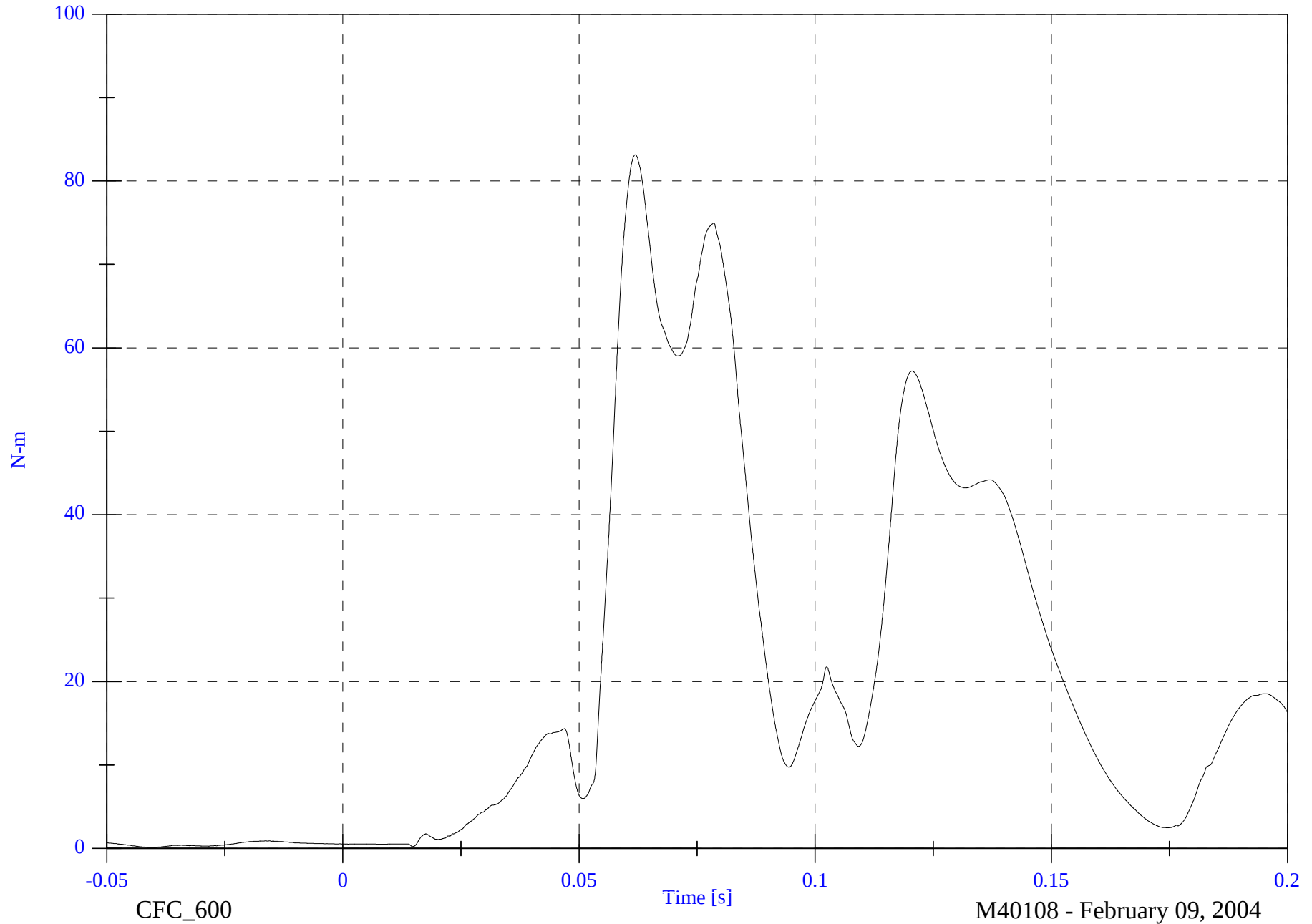


2004 NCAP Test 8 2004 Cadillac SRX

V1P1 Upper Neck M Resultant

Max: 83.1 [N-m] at 0.062 [s]

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

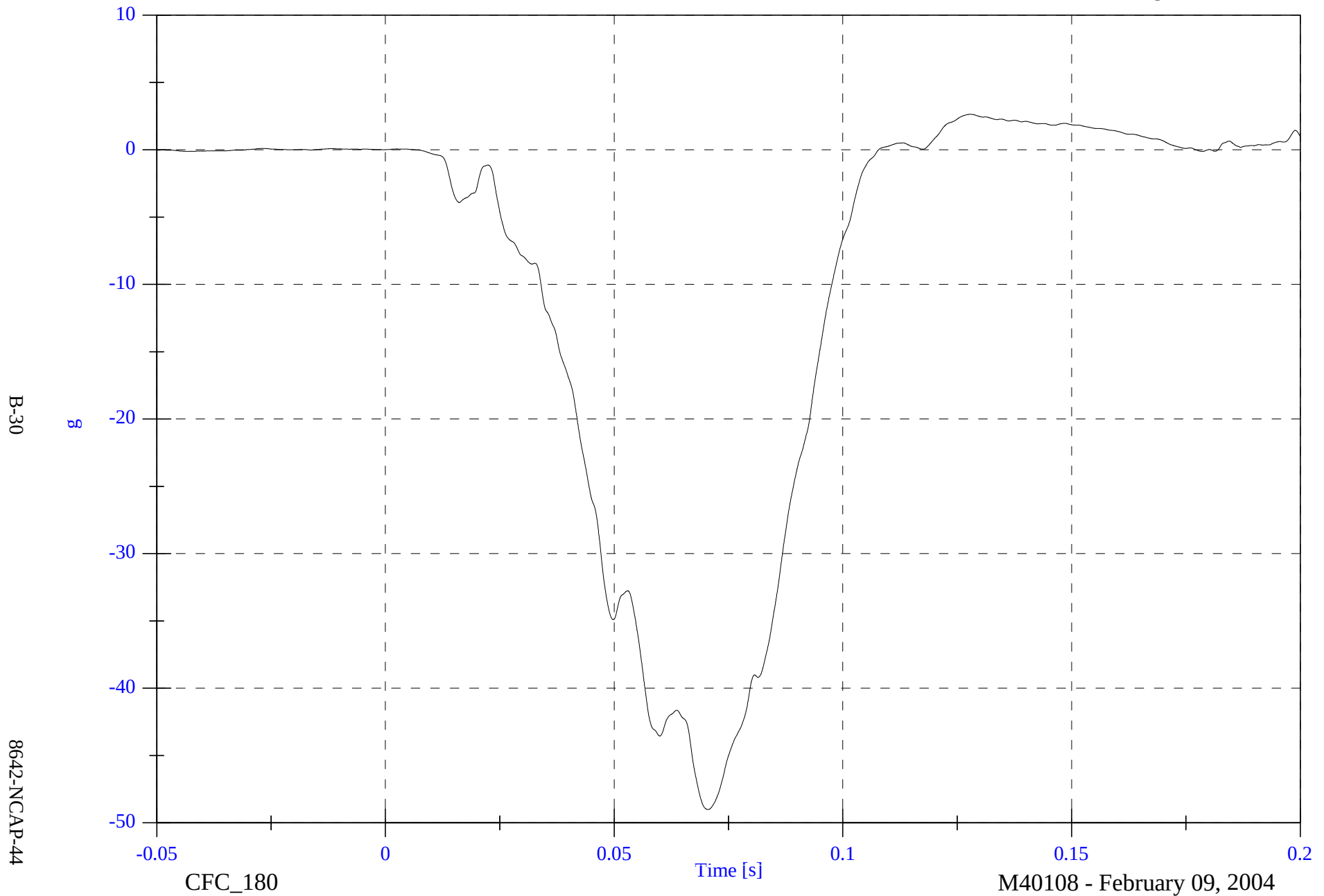


2004 NCAP Test 8 2004 Cadillac SRX

V1P1 Chest x

Max: 2.6 [g] at 0.128 [s]

Min: -49.0 [g] at 0.070 [s]

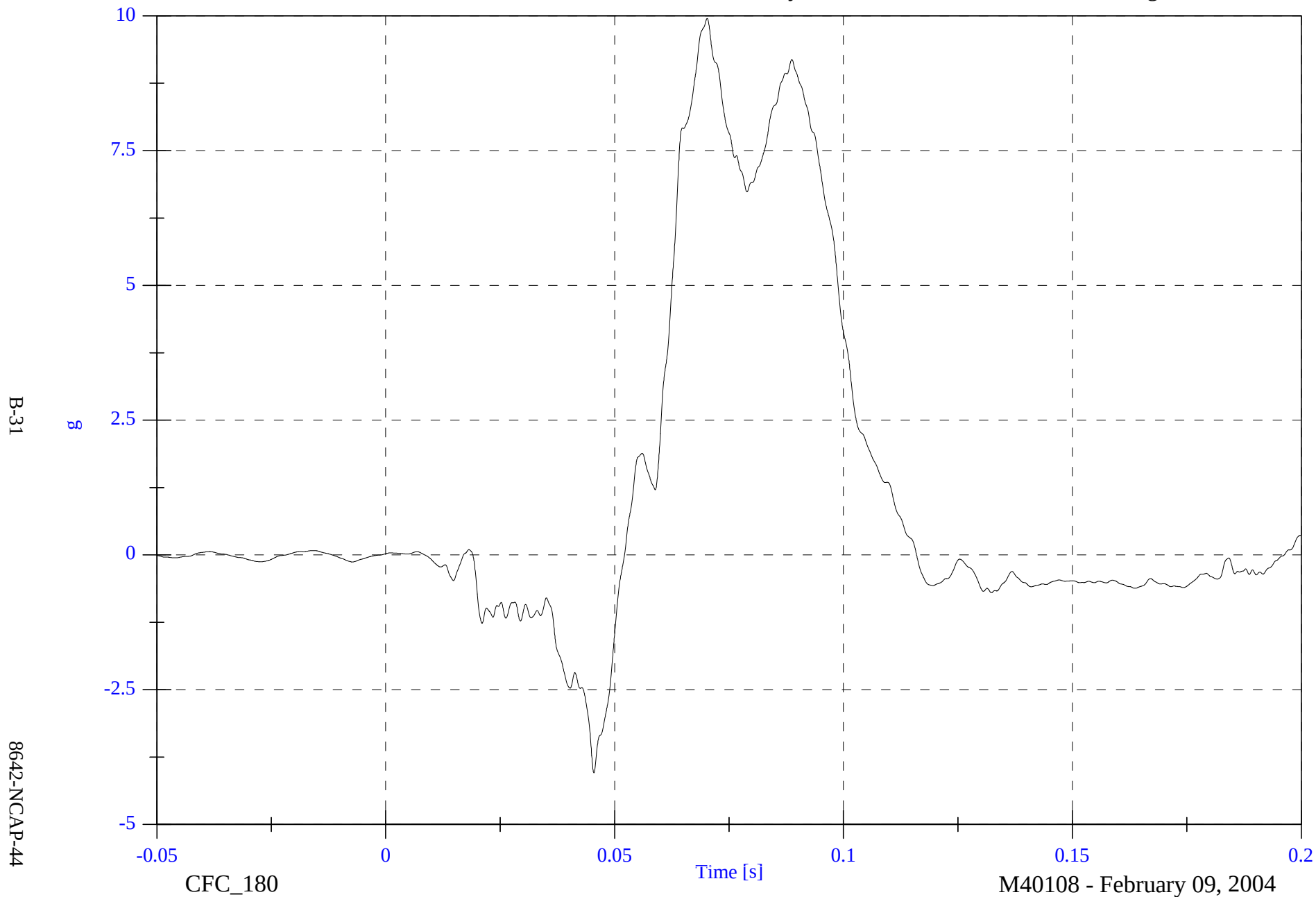


2004 NCAP Test 8 2004 Cadillac SRX

Max: 10.0 [g] at 0.070 [s]

Min: -4.0 [g] at 0.045 [s]

V1P1 Chest y

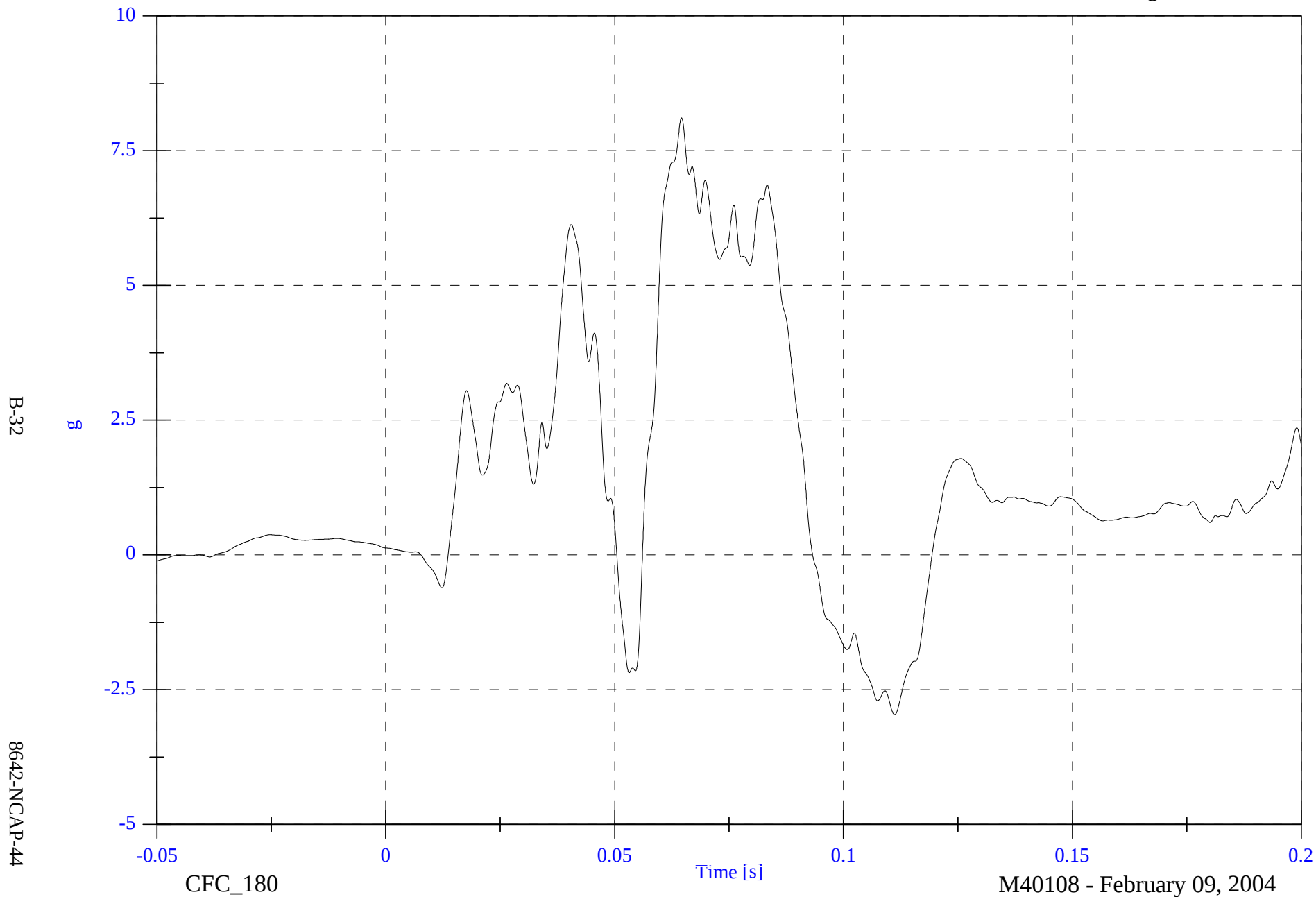


2004 NCAP Test 8 2004 Cadillac SRX

V1P1 Chest z

Max: 8.1 [g] at 0.065 [s]

Min: -3.0 [g] at 0.111 [s]



2004 NCAP Test 8 2004 Cadillac SRX

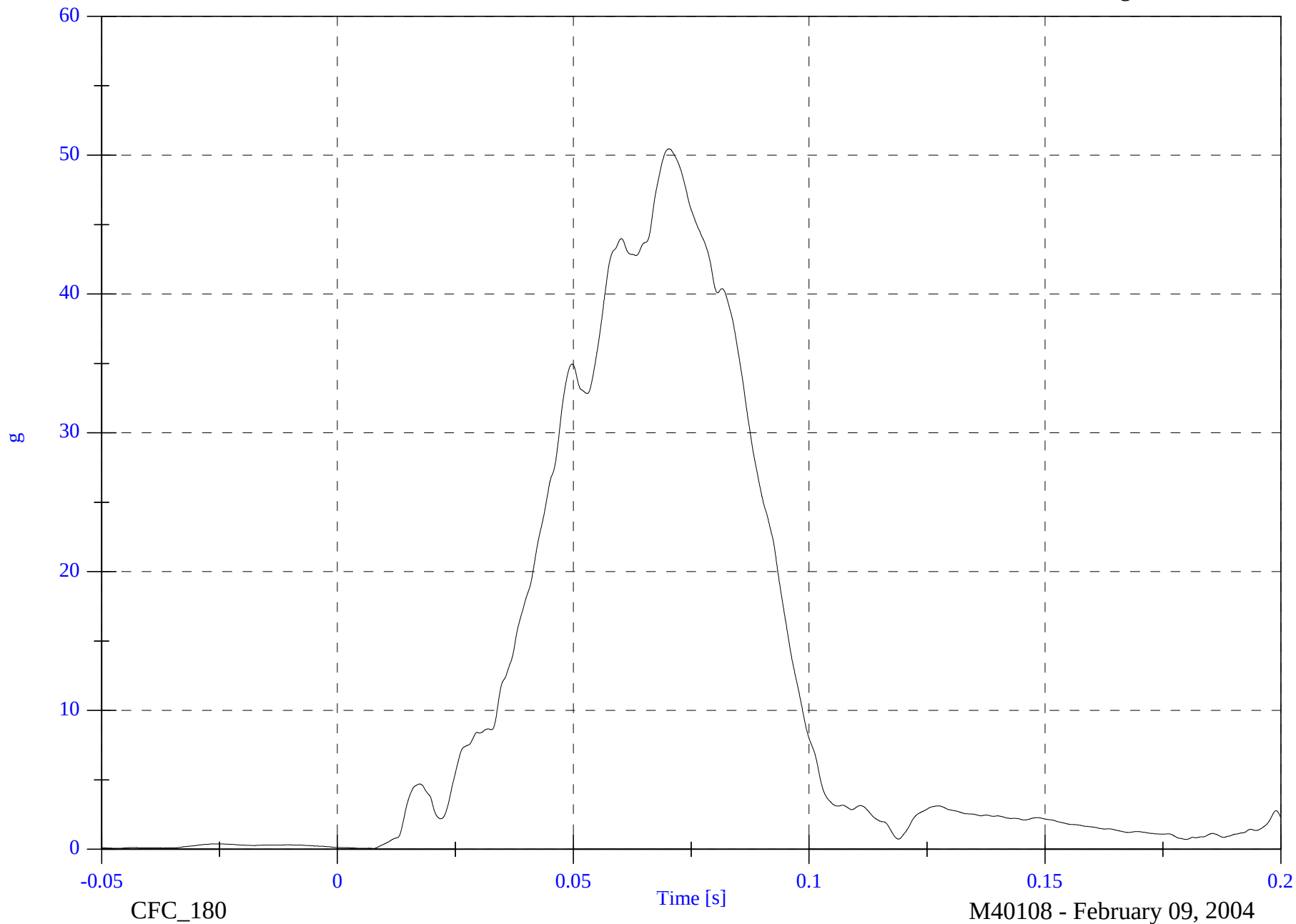
V1P1 Chest Resultant

Max: 50.5 [g] at 0.070 [s]

Min: 0.1 [g] at 0.008 [s]

B-33

8642-NCAP-44



CFC_180

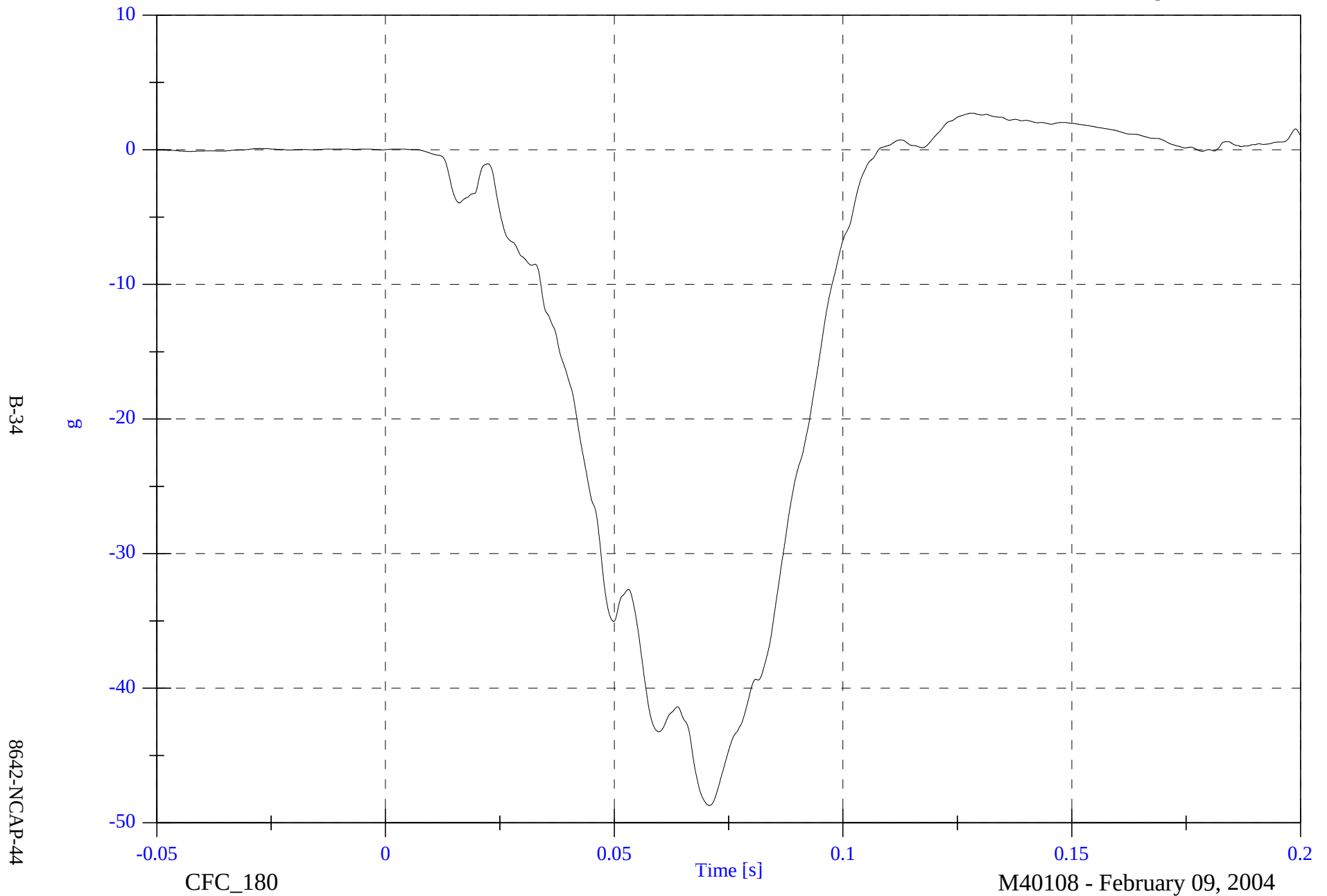
M40108 - February 09, 2004

2004 NCAP Test 8 2004 Cadillac SRX

V1P1 Chest Red x

Max: 2.7 [g] at 0.128 [s]

Min: -48.7 [g] at 0.071 [s]

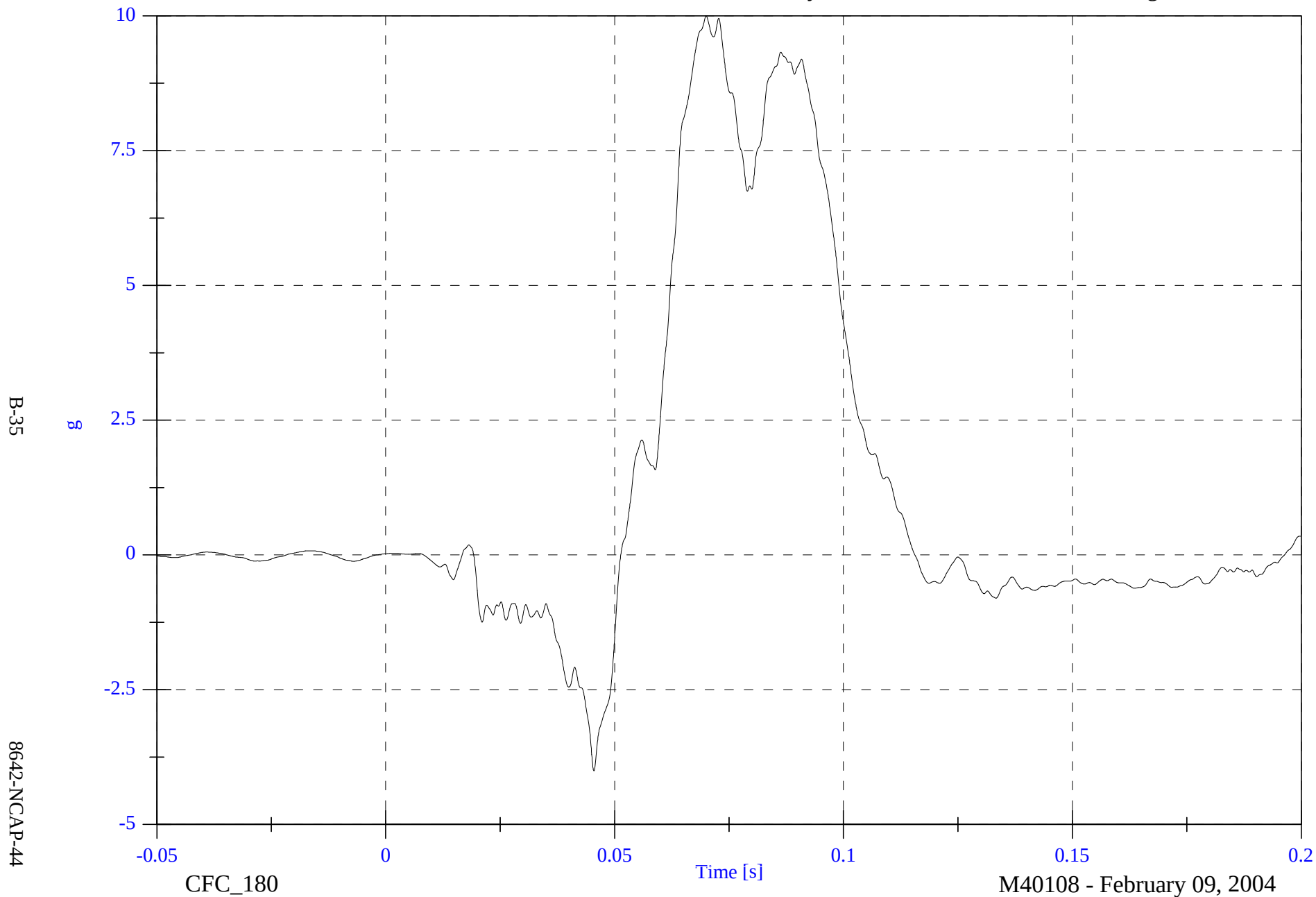


2004 NCAP Test 8 2004 Cadillac SRX

Max: 10.0 [g] at 0.070 [s]

Min: -4.0 [g] at 0.045 [s]

V1P1 Chest Red y

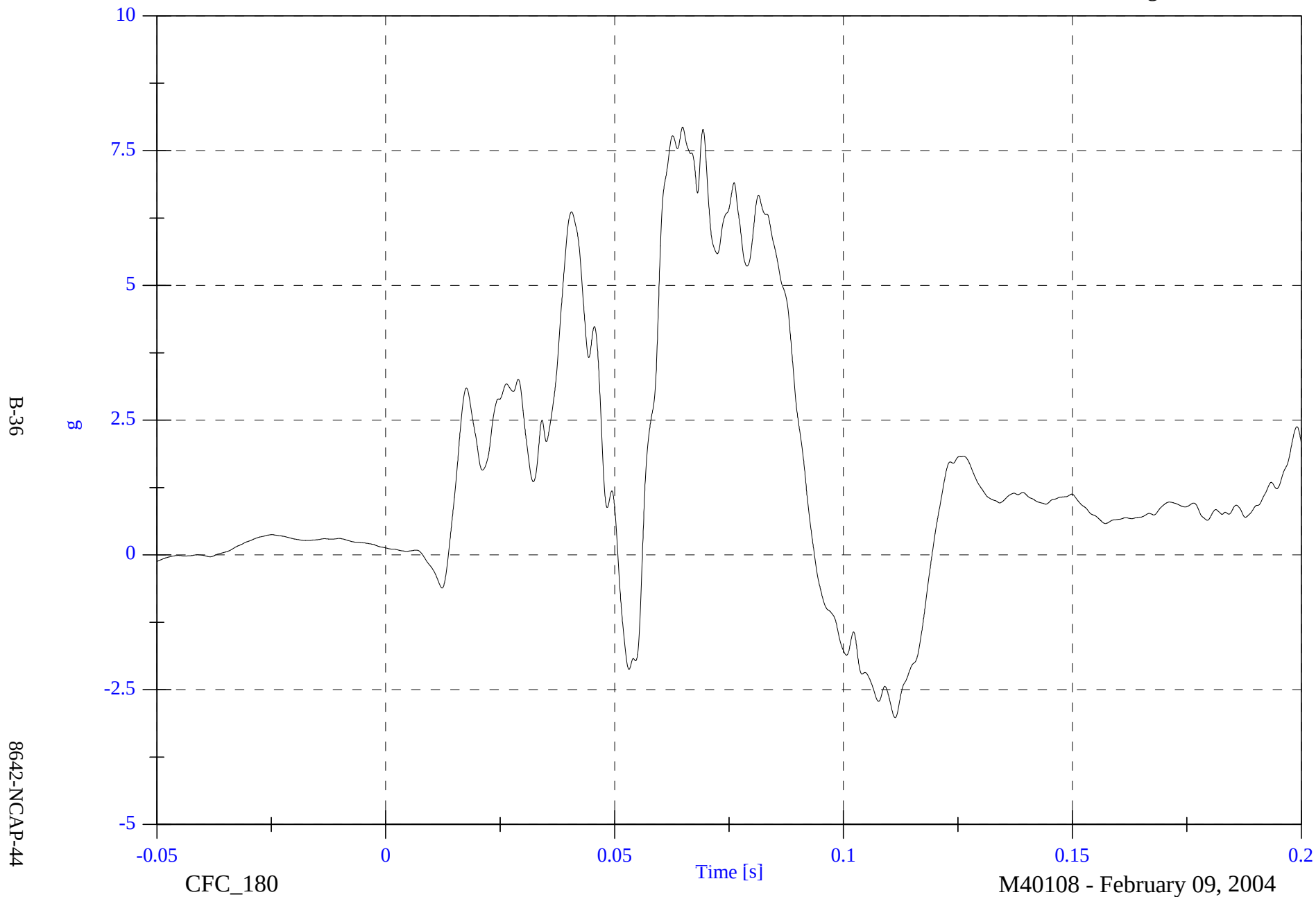


2004 NCAP Test 8 2004 Cadillac SRX

V1P1 Chest Red z

Max: 7.9 [g] at 0.065 [s]

Min: -3.0 [g] at 0.111 [s]



2004 NCAP Test 8 2004 Cadillac SRX

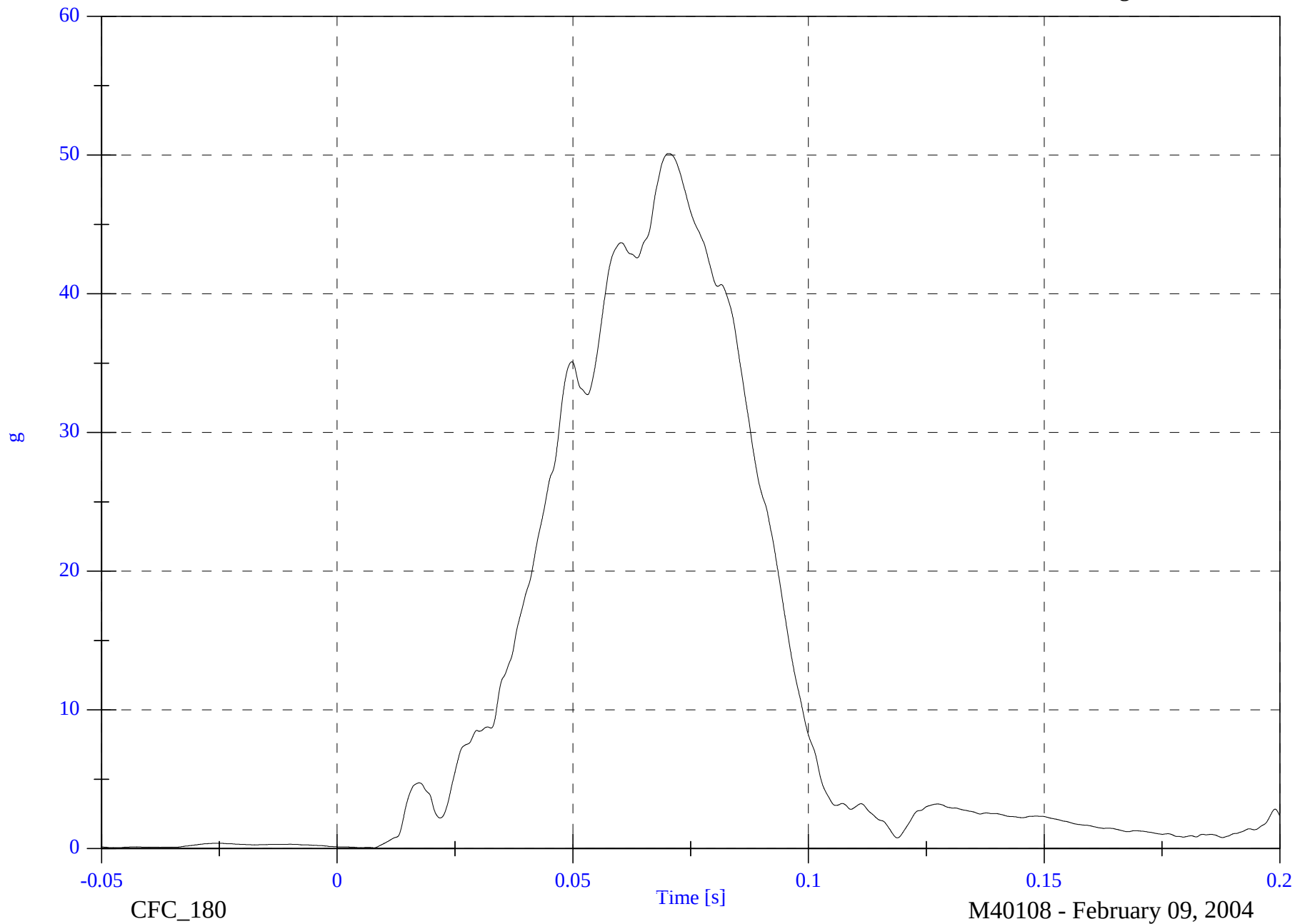
V1P1 Chest Red Resultant

Max: 50.1 [g] at 0.070 [s]

Min: 0.1 [g] at 0.008 [s]

B-37

8642-NCAP-44



2004 NCAP Test 8 2004 Cadillac SRX

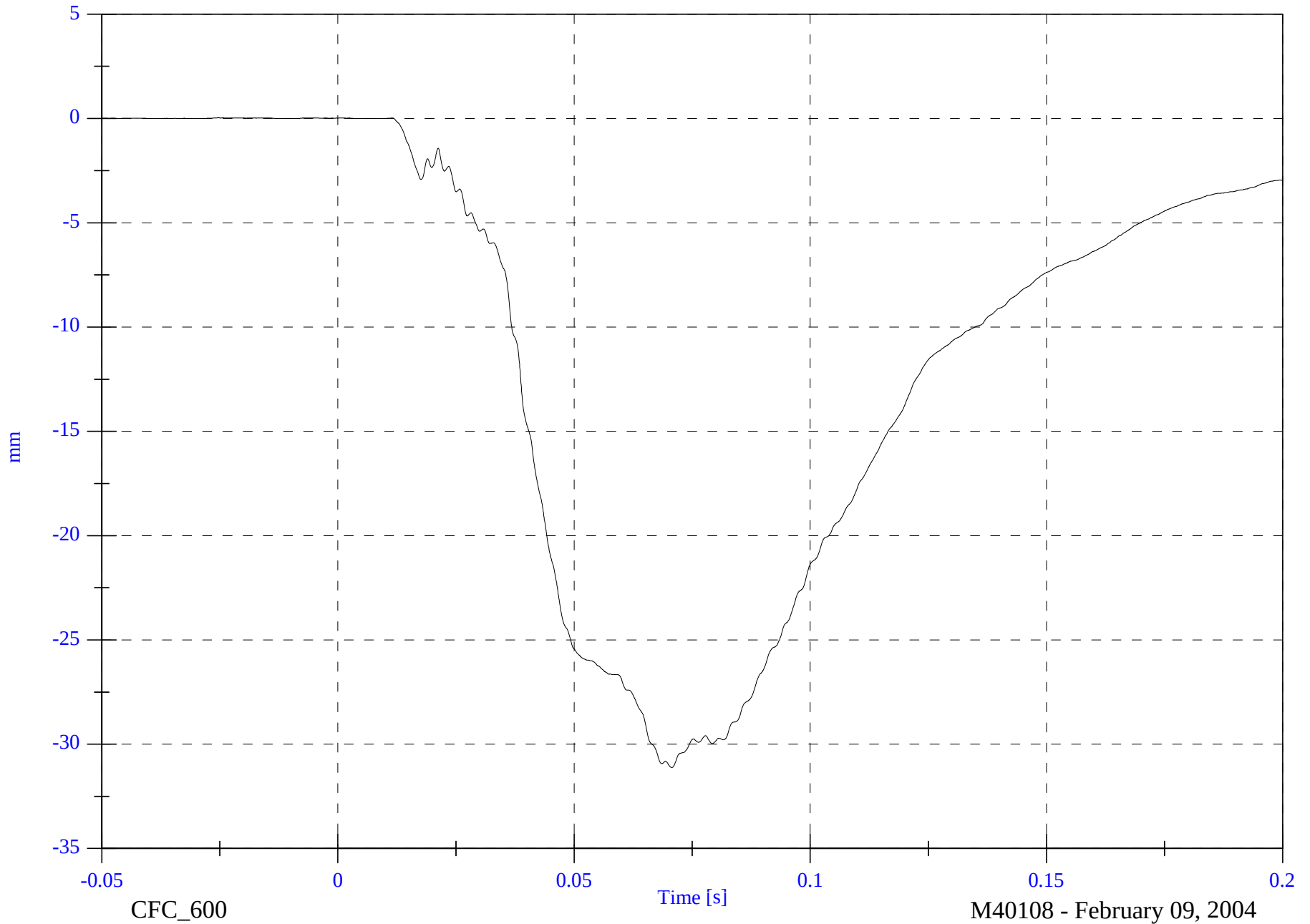
V1P1 Chest Compression

Max: 0.0 [mm] at -0.025 [s]

Min: -31.1 [mm] at 0.071 [s]

B-38

8642-NCAP-44



2004 NCAP Test 8 2004 Cadillac SRX

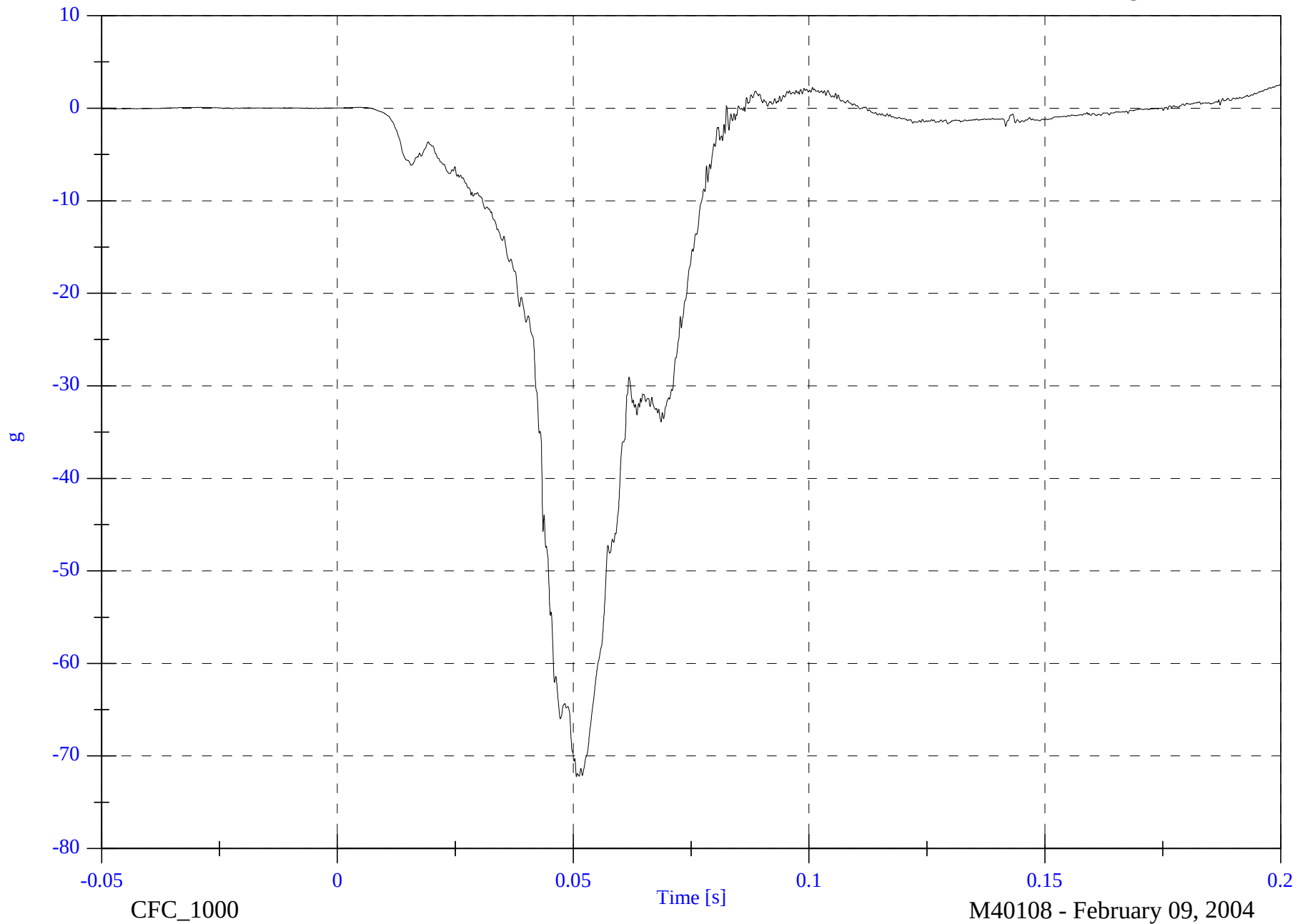
V1P1 Pelvic x

Max: 2.6 [g] at 0.200 [s]

Min: -72.2 [g] at 0.051 [s]

B-39

8642-NCAP-44

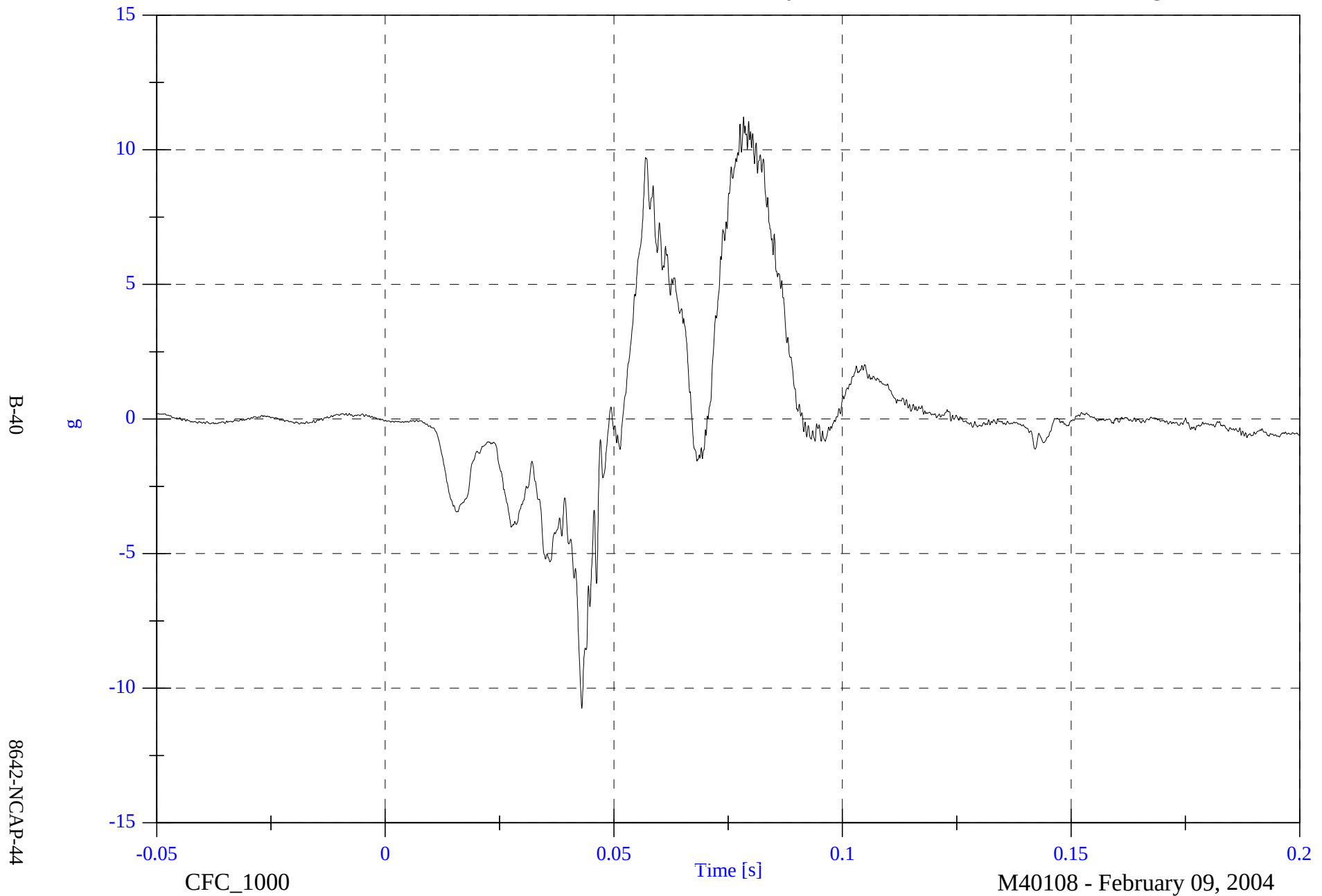


2004 NCAP Test 8 2004 Cadillac SRX

V1P1 Pelvic y

Max: 11.2 [g] at 0.078 [s]

Min: -10.7 [g] at 0.043 [s]



2004 NCAP Test 8 2004 Cadillac SRX

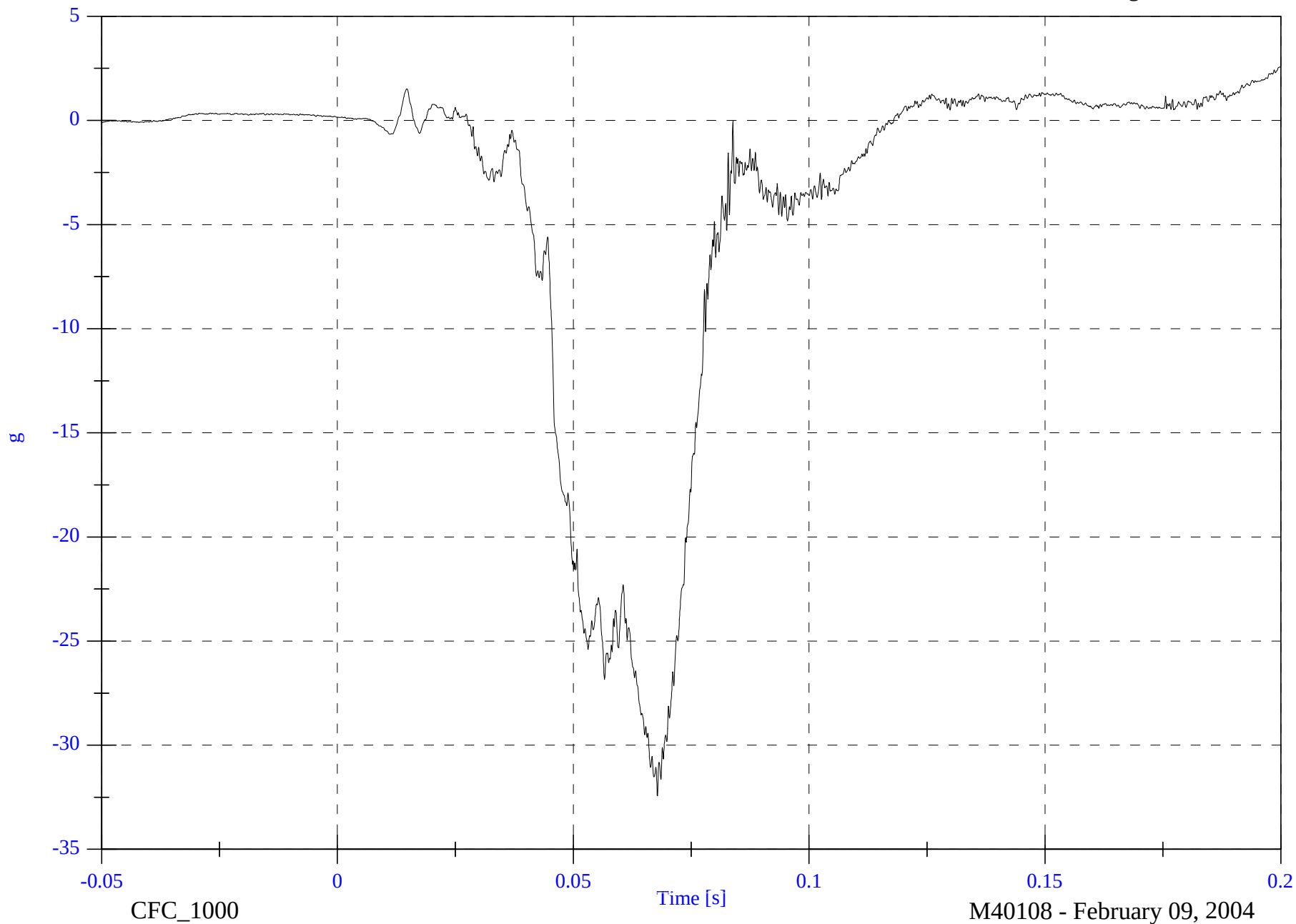
V1P1 Pelvic z

Max: 2.6 [g] at 0.200 [s]

Min: -32.4 [g] at 0.068 [s]

B-41

8642-NCAP-44



CFC_1000

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2004 NCAP Test 8 2004 Cadillac SRX

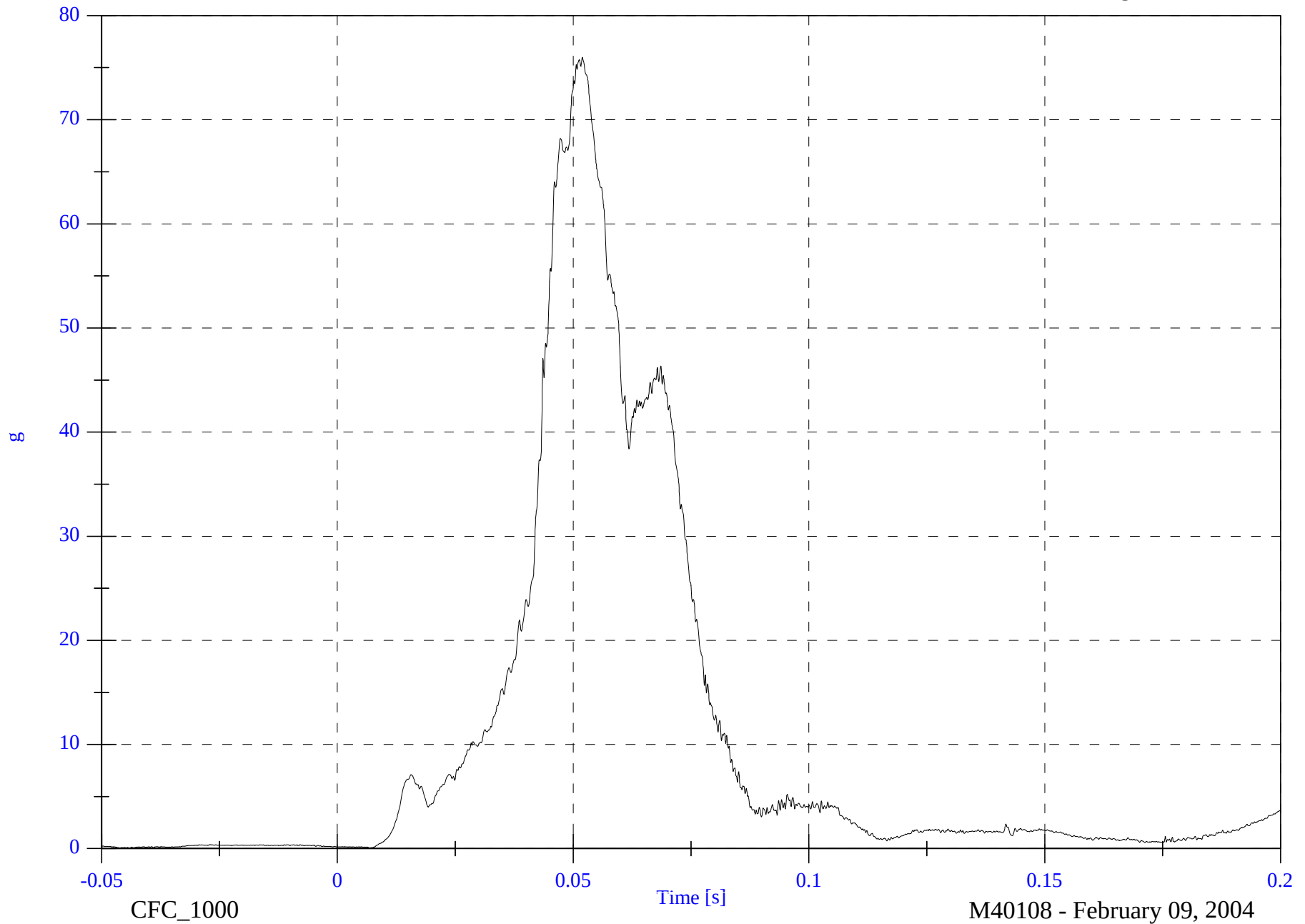
V1P1 Pelvic Resultant

Max: 76.0 [g] at 0.052 [s]

Min: 0.1 [g] at 0.007 [s]

B-42

8642-NCAP-44

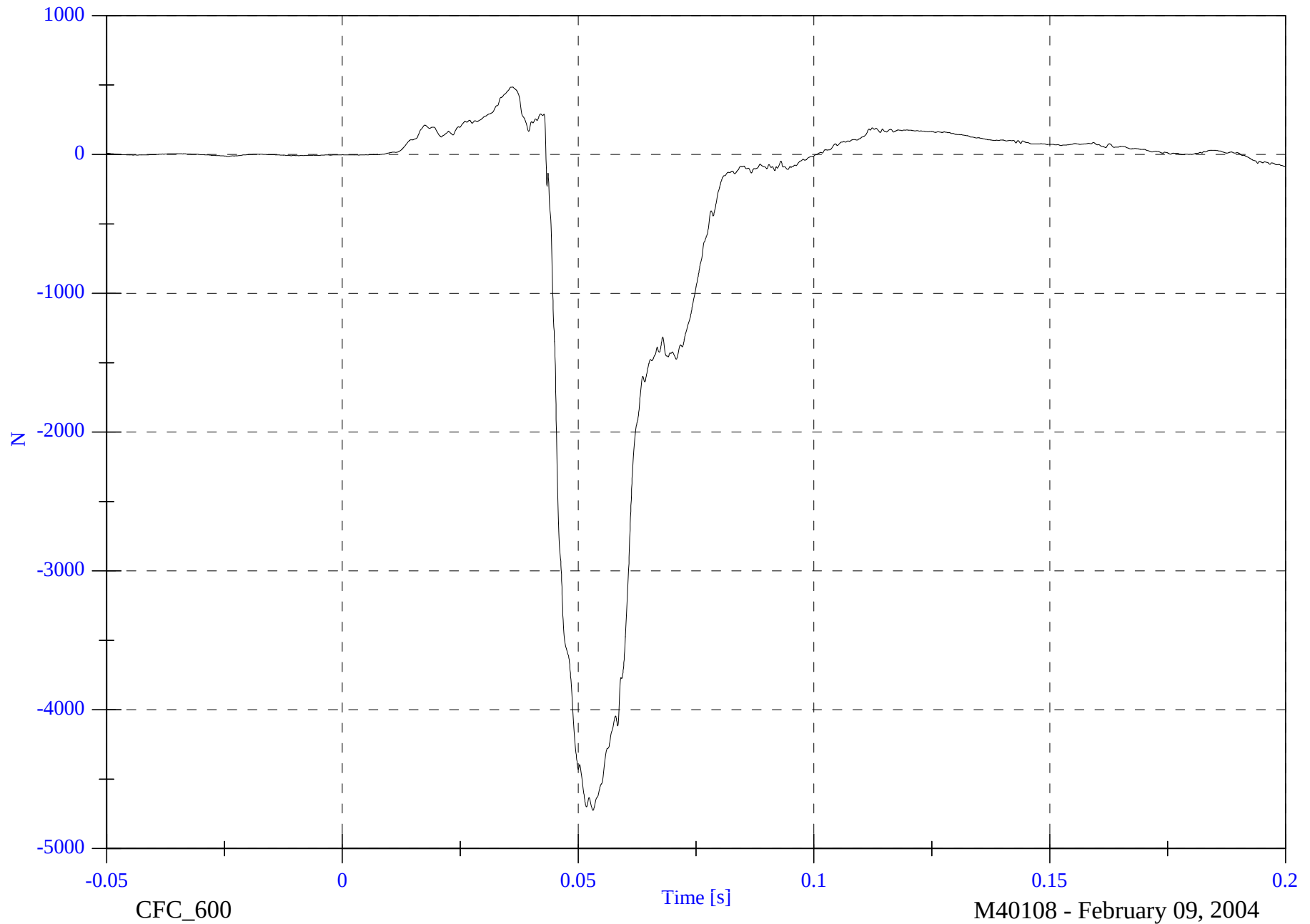


2004 NCAP Test 8 2004 Cadillac SRX

V1P1 Left Femur

Max: 485.5 [N] at 0.036 [s]

Min: -4725.0 [N] at 0.053 [s]

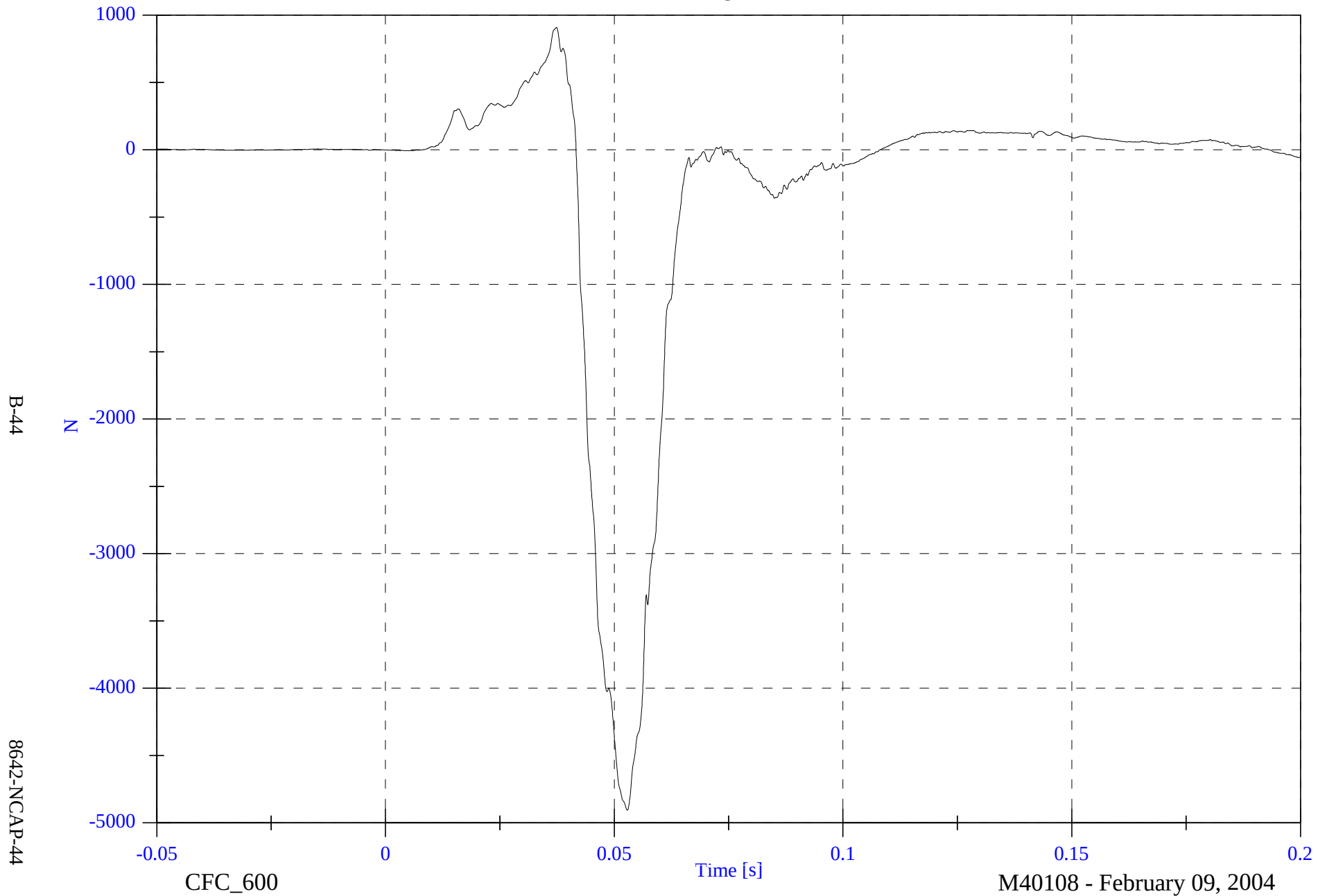


2004 NCAP Test 8 2004 Cadillac SRX

V1P1 Right Femur

Max: 908.6 [N] at 0.037 [s]

Min: -4906.2 [N] at 0.053 [s]



2004 NCAP Test 8 2004 Cadillac SRX

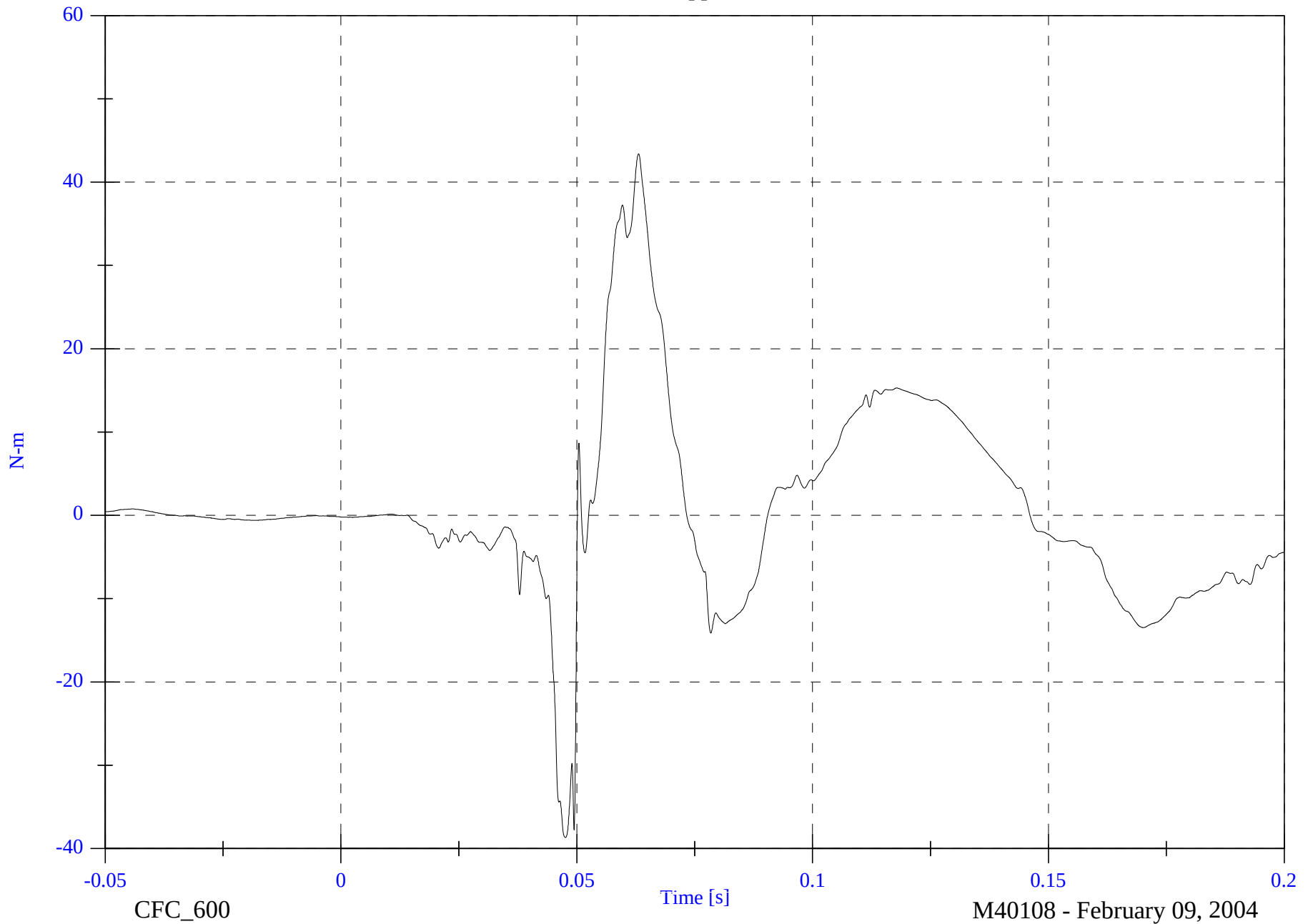
V1P1 Left Upper Tibia Mx

Max: 43.4 [N-m] at 0.063 [s]

Min: -38.7 [N-m] at 0.048 [s]

B-45

8642-NCAP-44

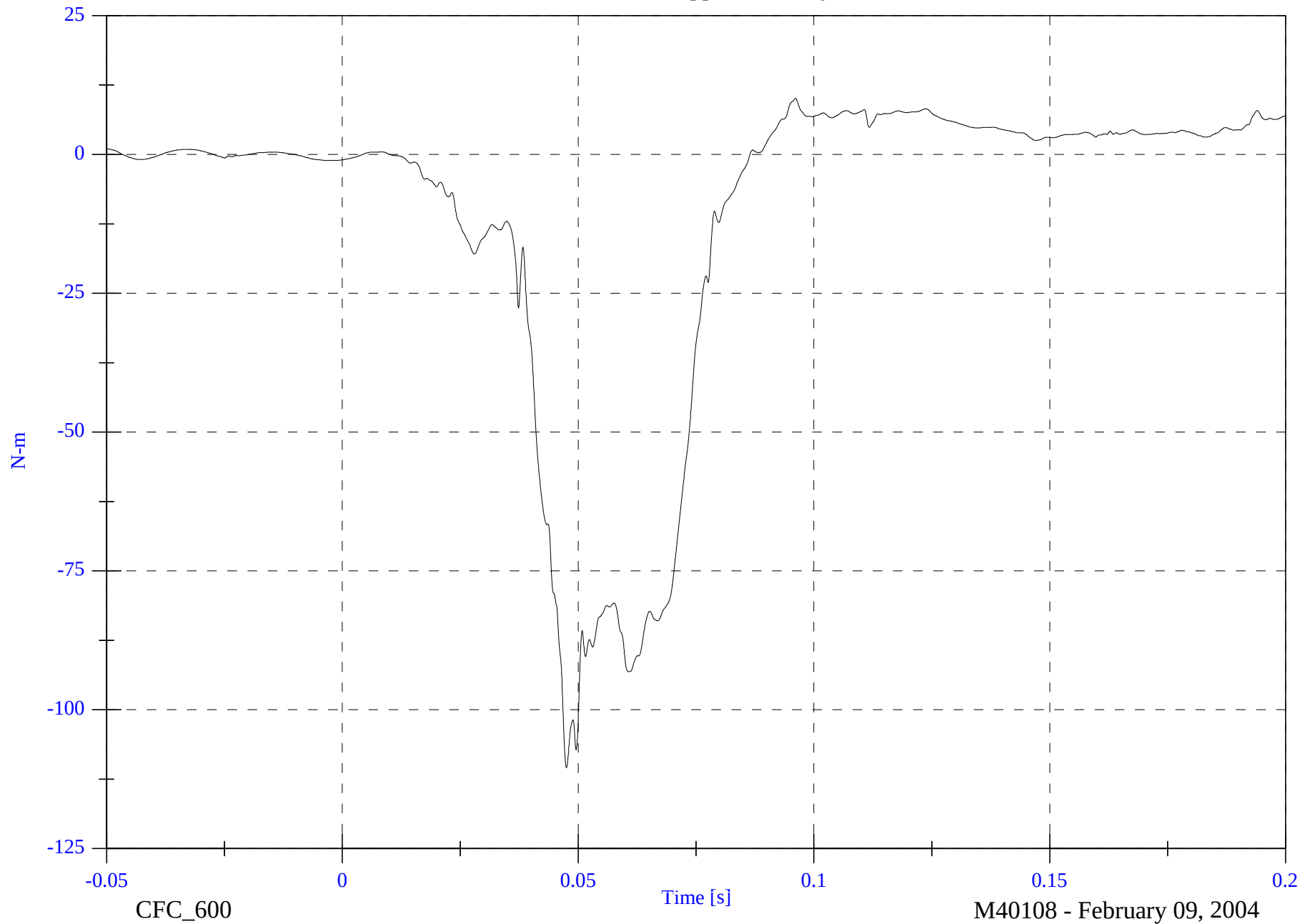


2004 NCAP Test 8 2004 Cadillac SRX

V1P1 Left Upper Tibia My

Max: 10.1 [N-m] at 0.096 [s]

Min: -110.5 [N-m] at 0.047 [s]



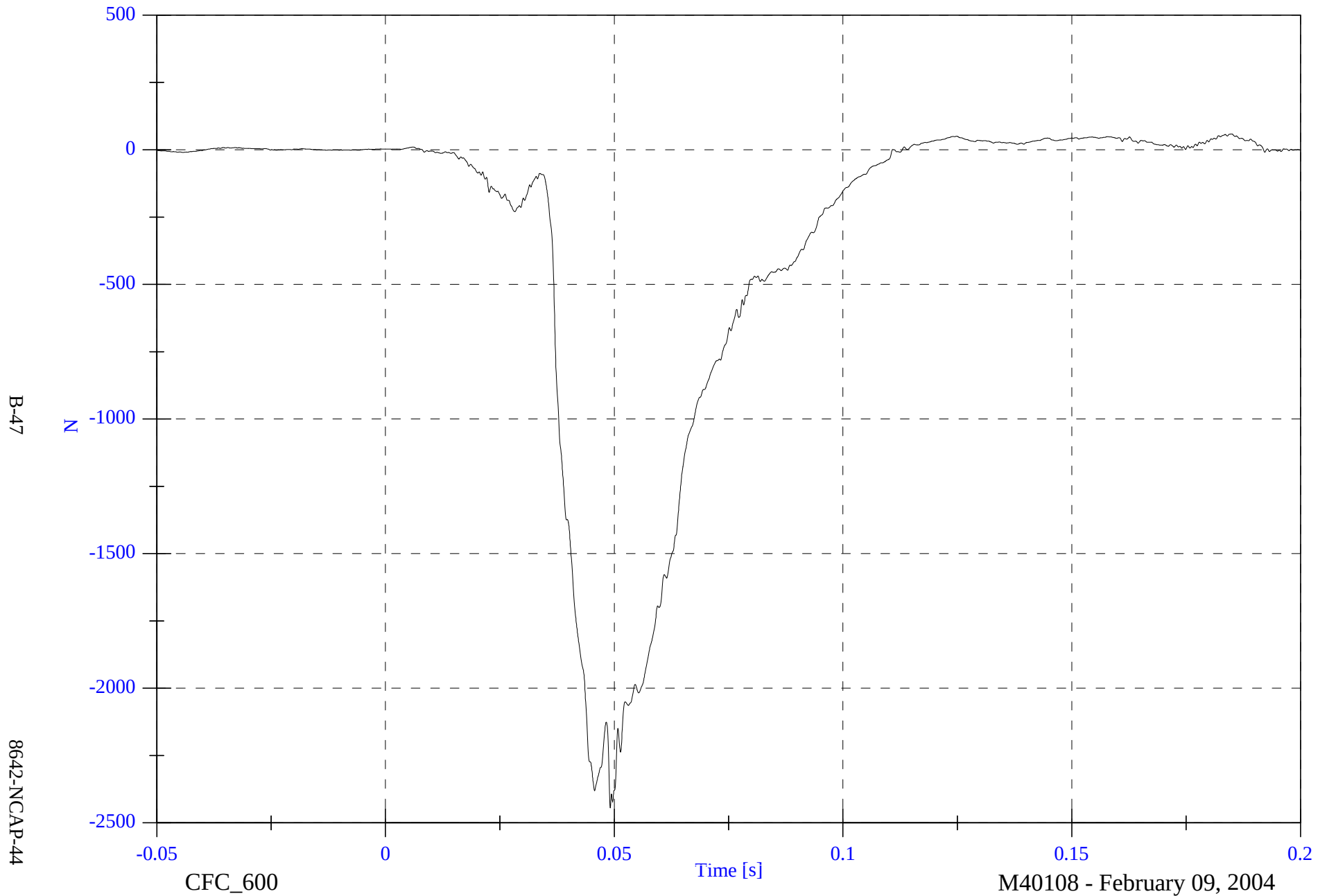
B-46

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2004 NCAP Test 8 2004 Cadillac SRX

V1P1 Left Lower Tibia Fz

Max: 58.8 [N] at 0.185 [s]
Min: -2444.0 [N] at 0.049 [s]

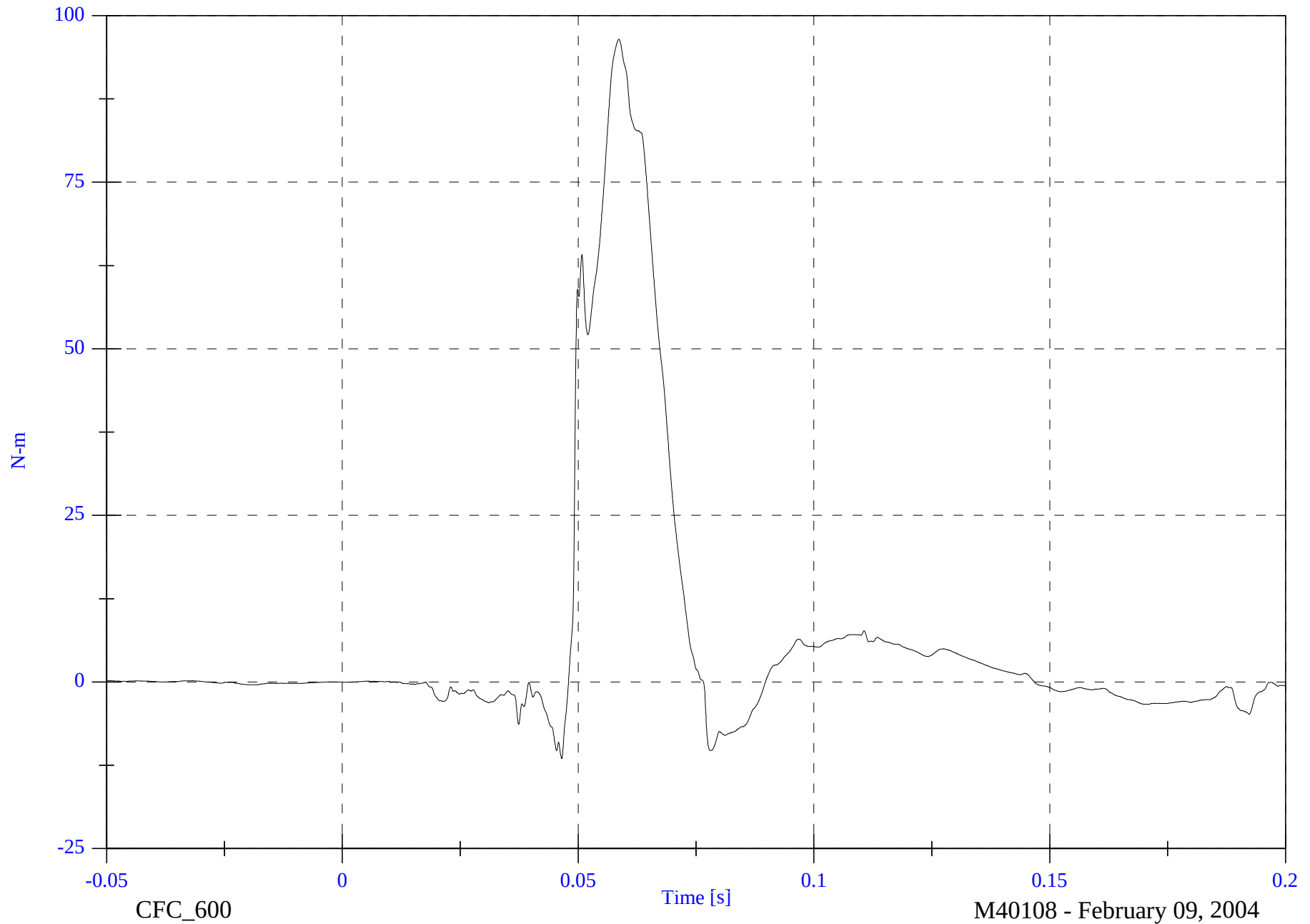


2004 NCAP Test 8 2004 Cadillac SRX

V1P1 Left Lower Tibia Mx

Max: 96.5 [N-m] at 0.059 [s]

Min: -11.5 [N-m] at 0.047 [s]

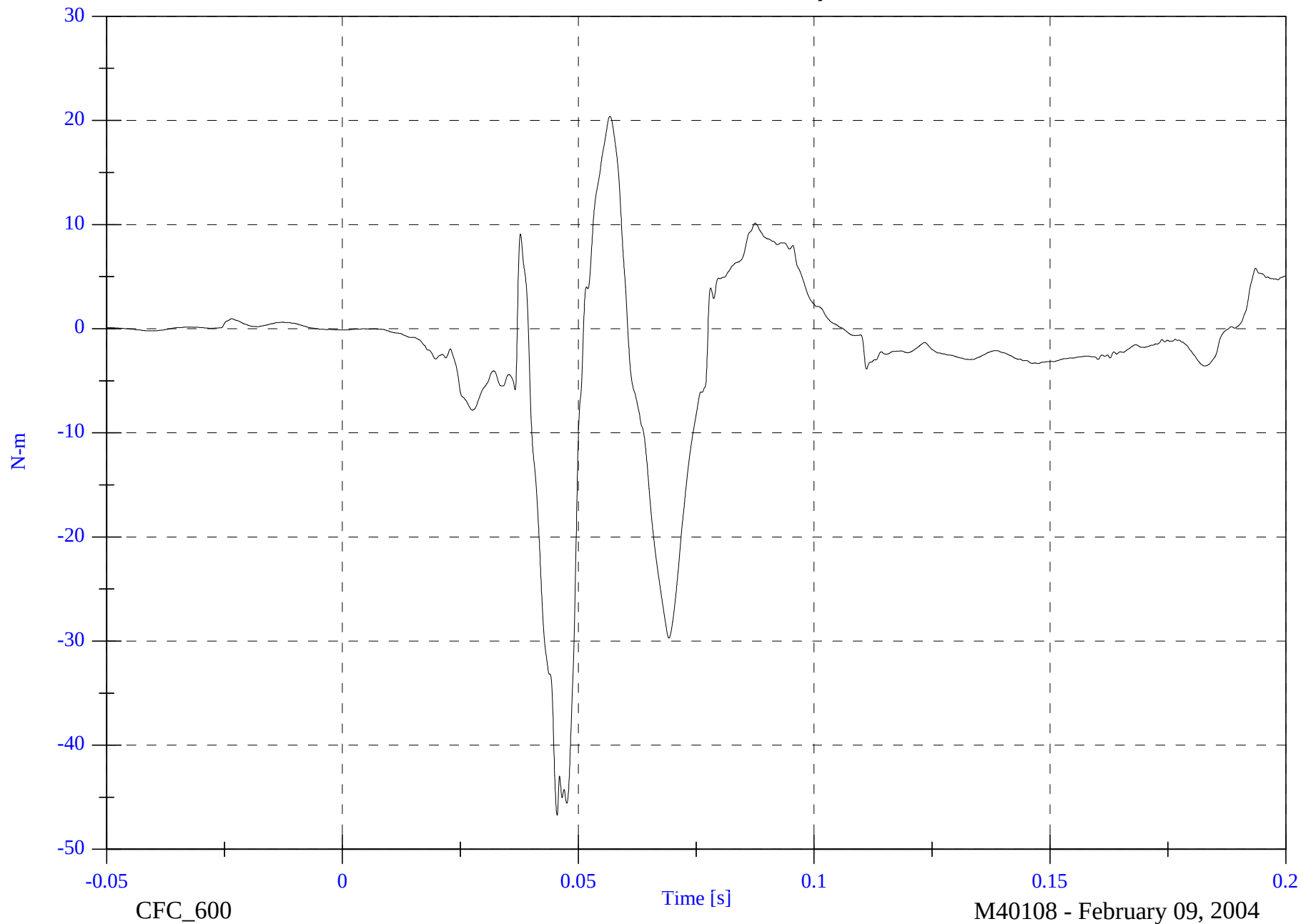


2004 NCAP Test 8 2004 Cadillac SRX

V1P1 Left Lower tibia My

Max: 20.4 [N-m] at 0.057 [s]

Min: -46.7 [N-m] at 0.045 [s]



B-49

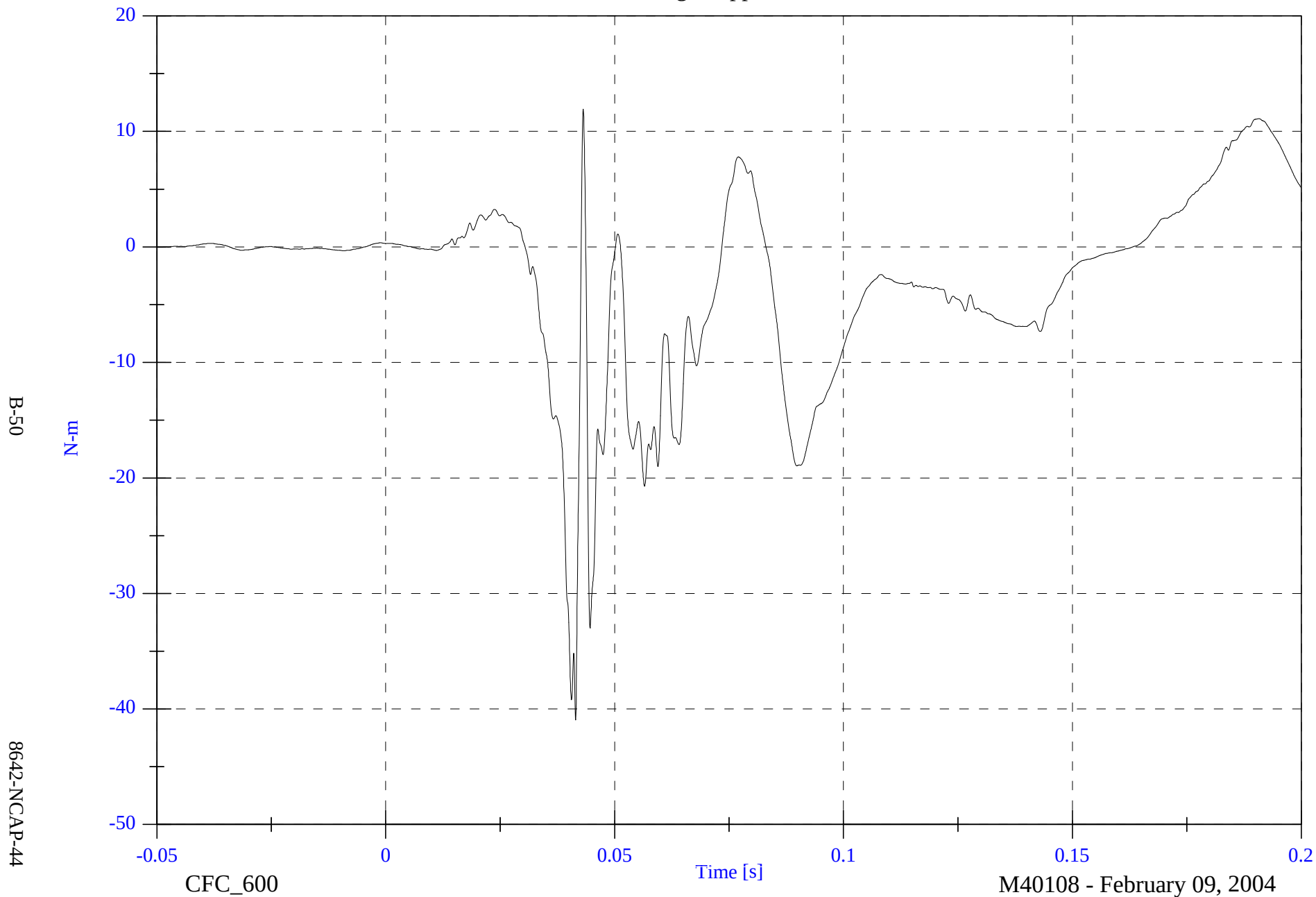
8642-NCAP-44

2004 NCAP Test 8 2004 Cadillac SRX

V1P1 Right Upper Tibia Mx

Max: 11.9 [N-m] at 0.043 [s]

Min: -41.0 [N-m] at 0.041 [s]

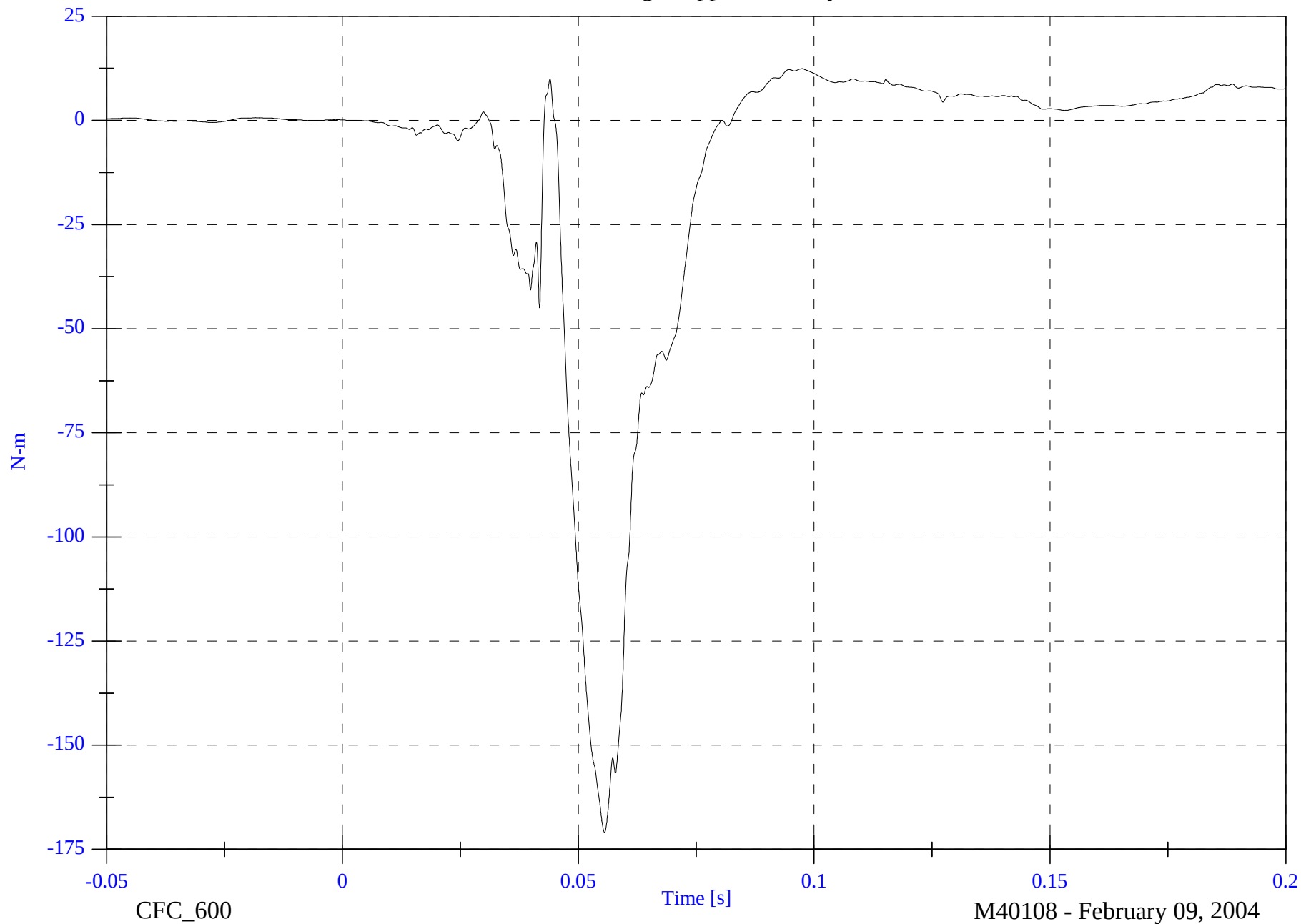


2004 NCAP Test 8 2004 Cadillac SRX

V1P1 Right Upper Tibia My

Max: 12.4 [N-m] at 0.097 [s]

Min: -171.0 [N-m] at 0.056 [s]



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8642-NCAP-44

CFC_600

Time [s]

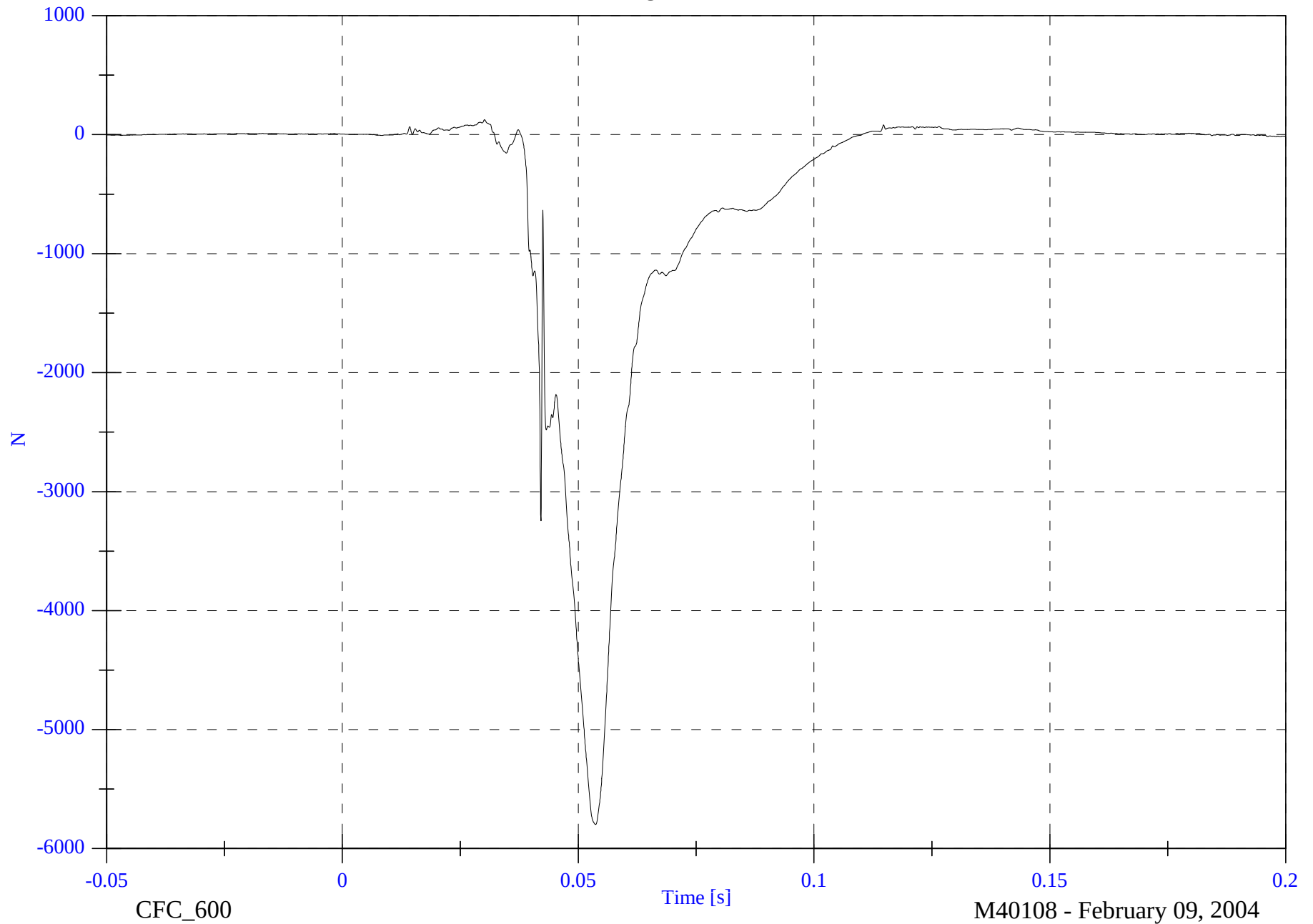
M40108 - February 09, 2004

2004 NCAP Test 8 2004 Cadillac SRX

V1P1 Right Lower Tibia Fz

Max: 125.3 [N] at 0.030 [s]

Min: -5797.9 [N] at 0.054 [s]

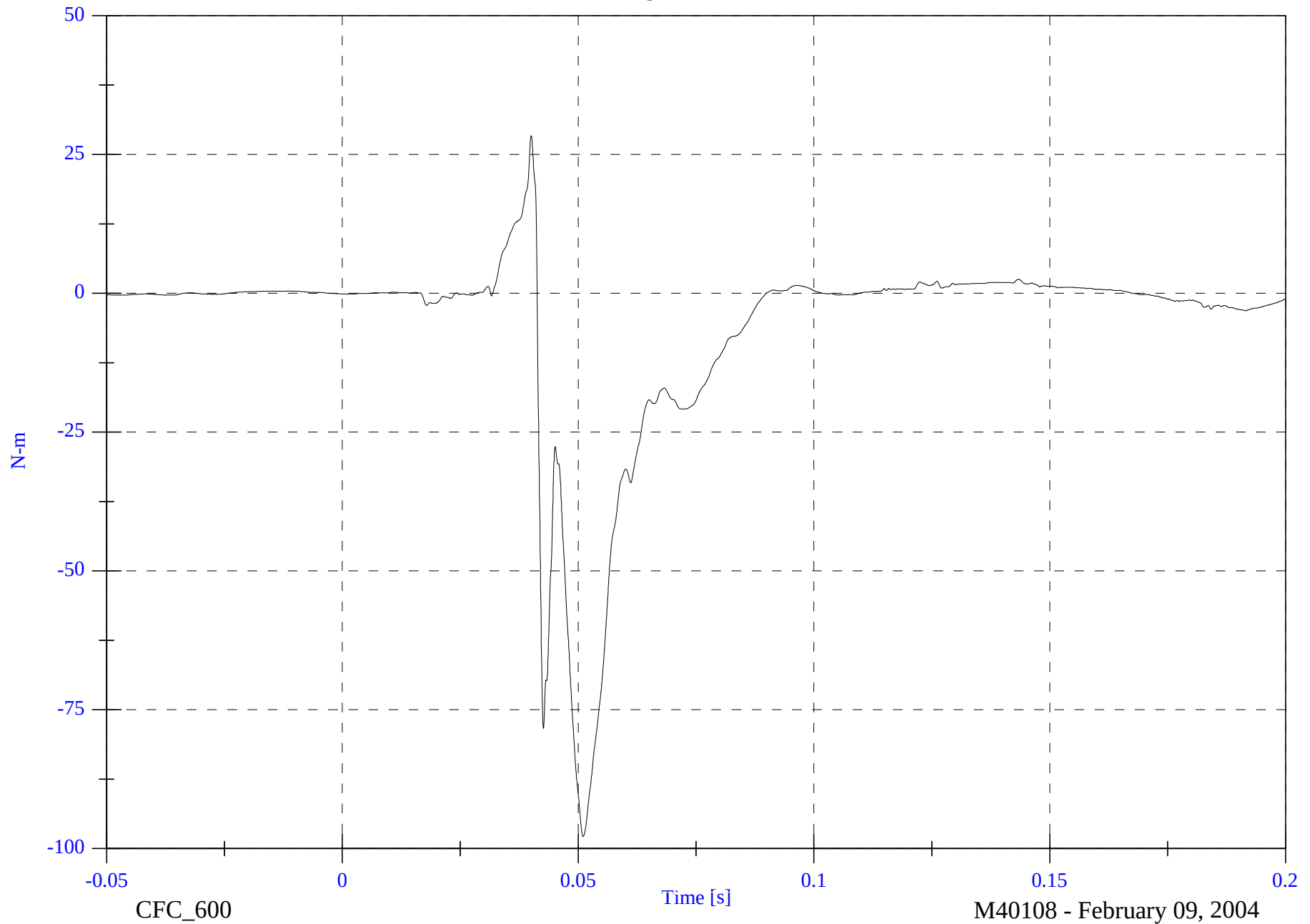


2004 NCAP Test 8 2004 Cadillac SRX

V1P1 Right Lower tibia Mx

Max: 28.4 [N-m] at 0.040 [s]

Min: -97.8 [N-m] at 0.051 [s]

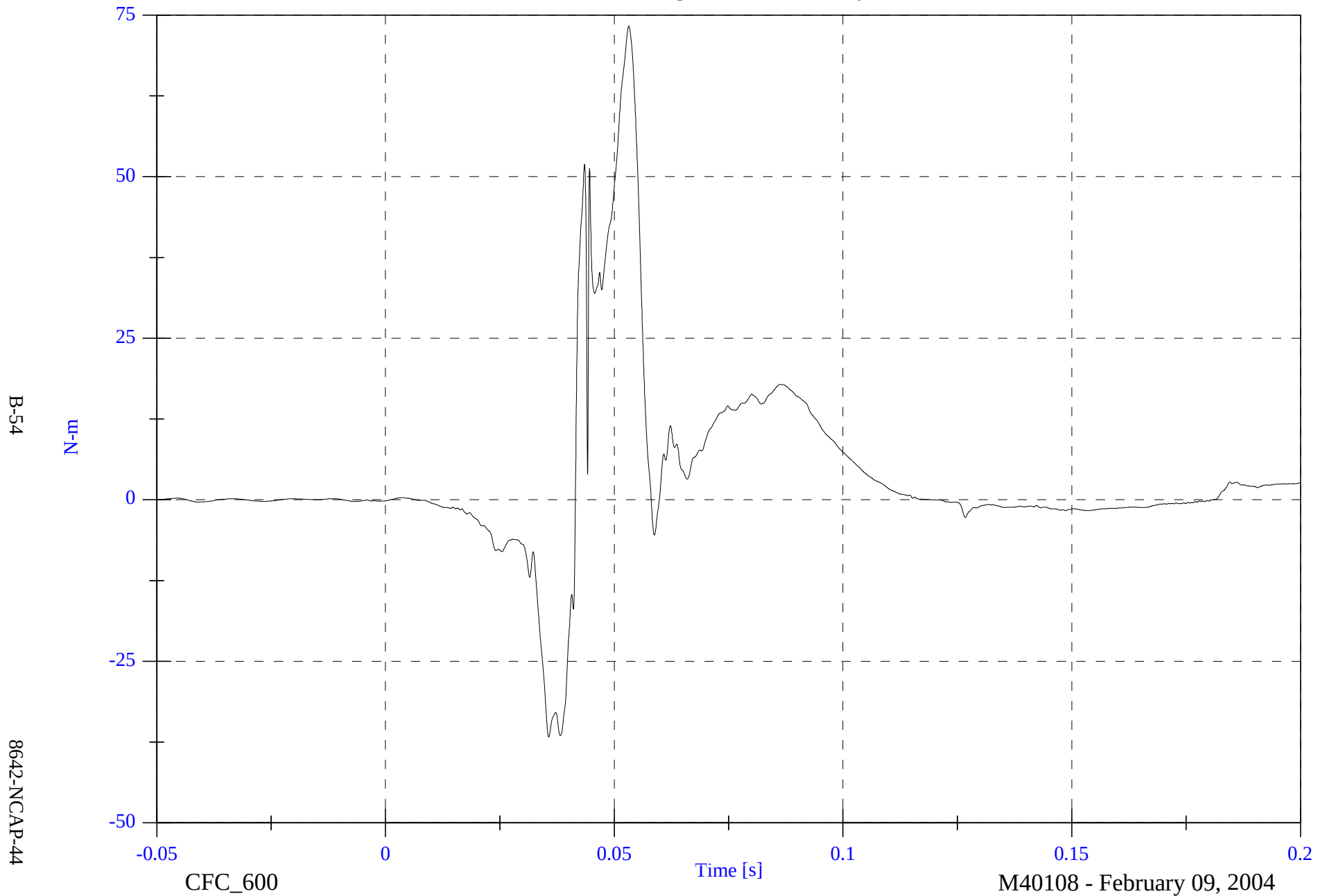


2004 NCAP Test 8 2004 Cadillac SRX

Max: 73.3 [N-m] at 0.053 [s]

Min: -36.7 [N-m] at 0.036 [s]

V1P1 Right Lower Tibia My



2004 NCAP Test 8 2004 Cadillac SRX

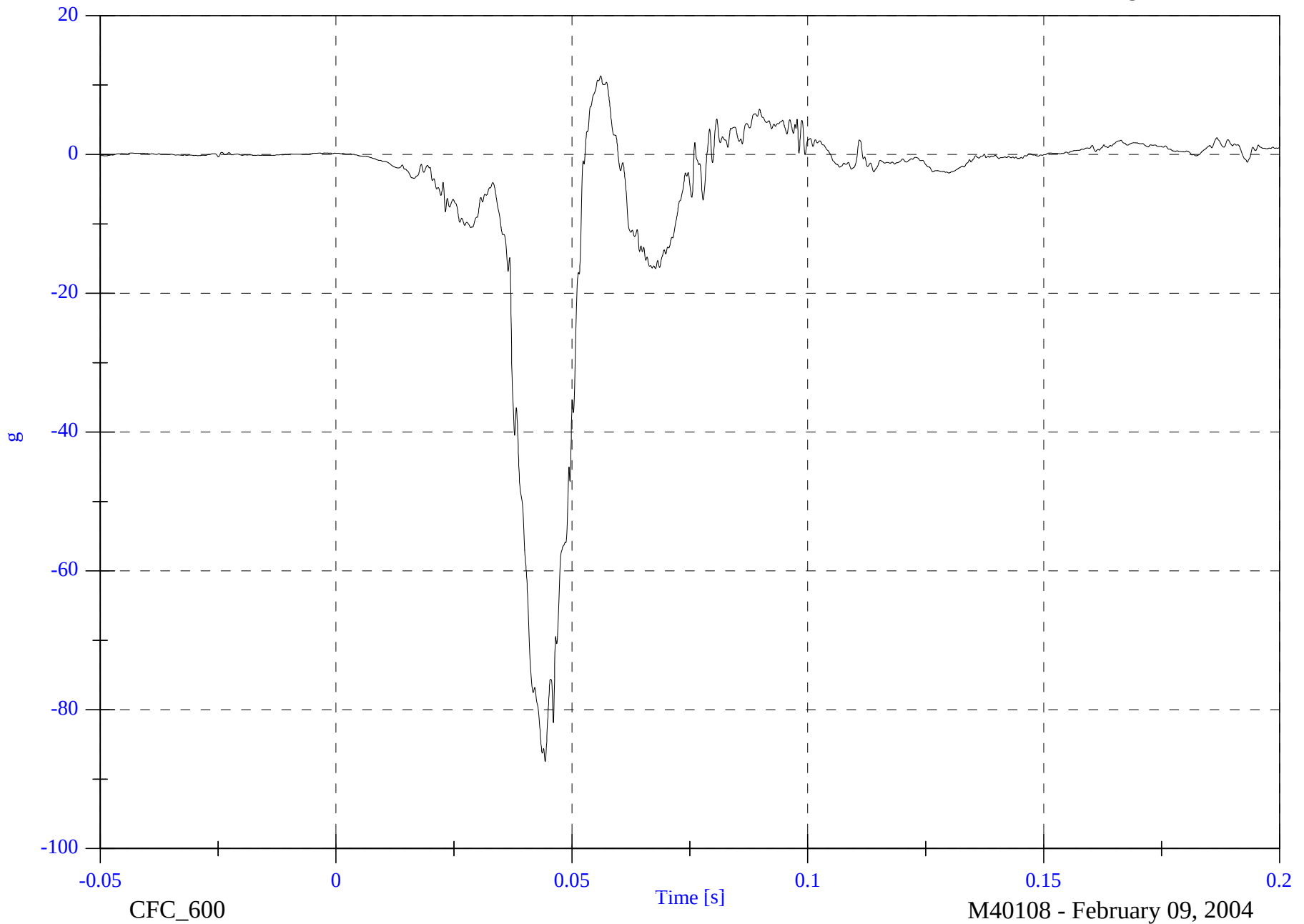
V1P1 Left Foot Aft Ax

Max: 11.3 [g] at 0.056 [s]

Min: -87.5 [g] at 0.044 [s]

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8642-NCAP-44



2004 NCAP Test 8 2004 Cadillac SRX

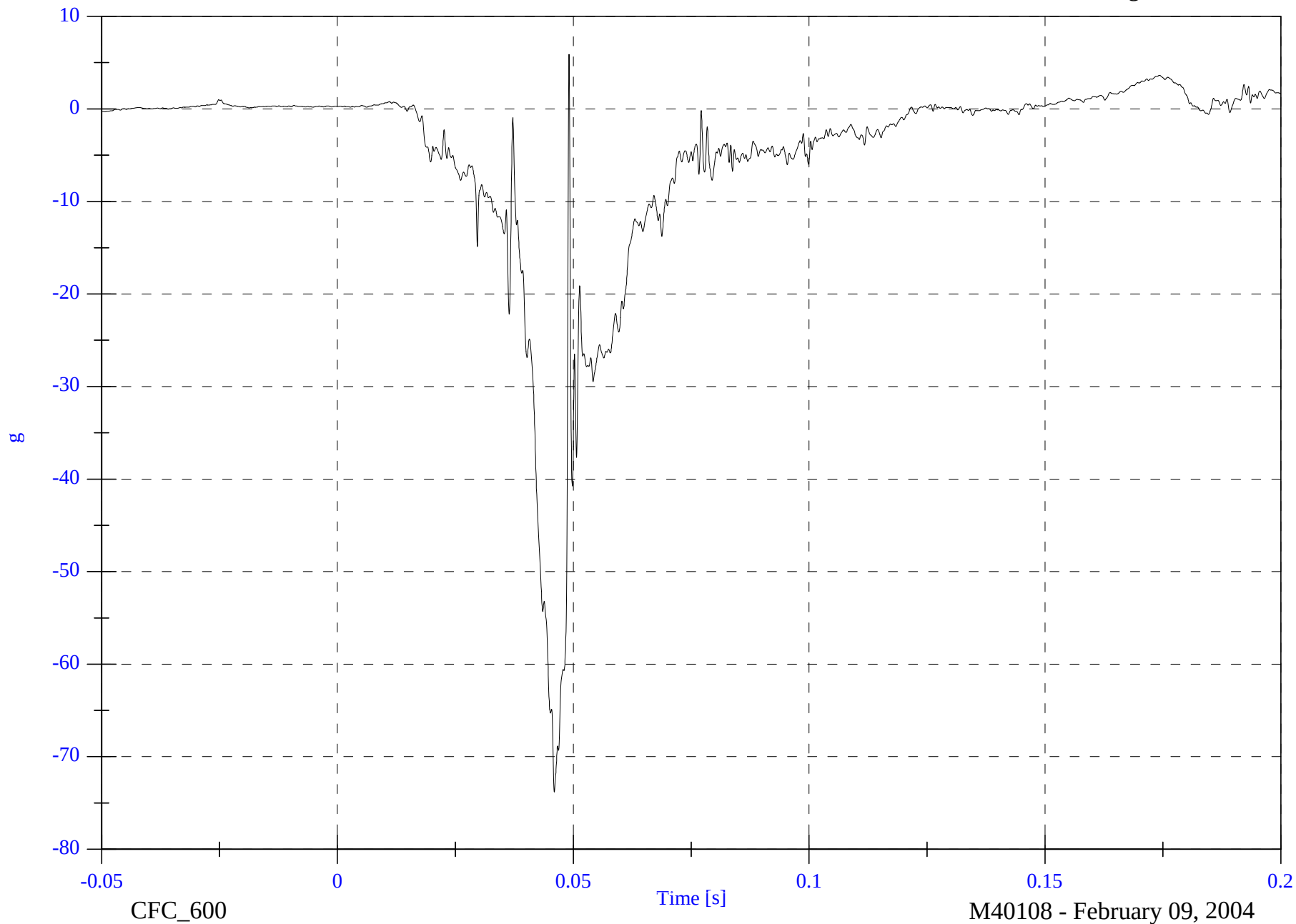
V1P1 Left Foot Aft Az

Max: 5.9 [g] at 0.049 [s]

Min: -73.8 [g] at 0.046 [s]

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8642-NCAP-44



CFC_600

Time [s]

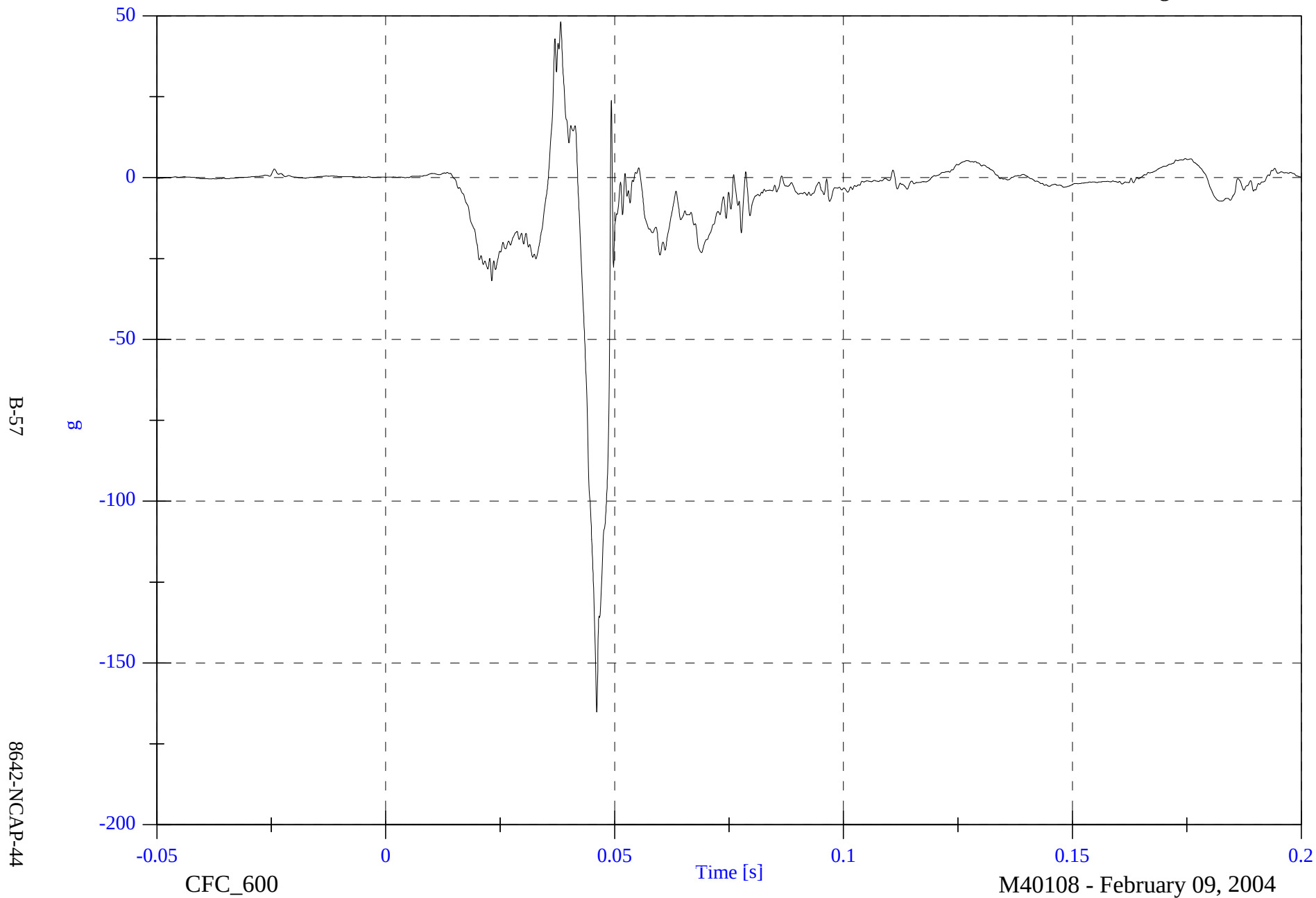
M40108 - February 09, 2004

2004 NCAP Test 8 2004 Cadillac SRX

V1P1 Left Foot Fore Az

Max: 48.2 [g] at 0.038 [s]

Min: -165.2 [g] at 0.046 [s]

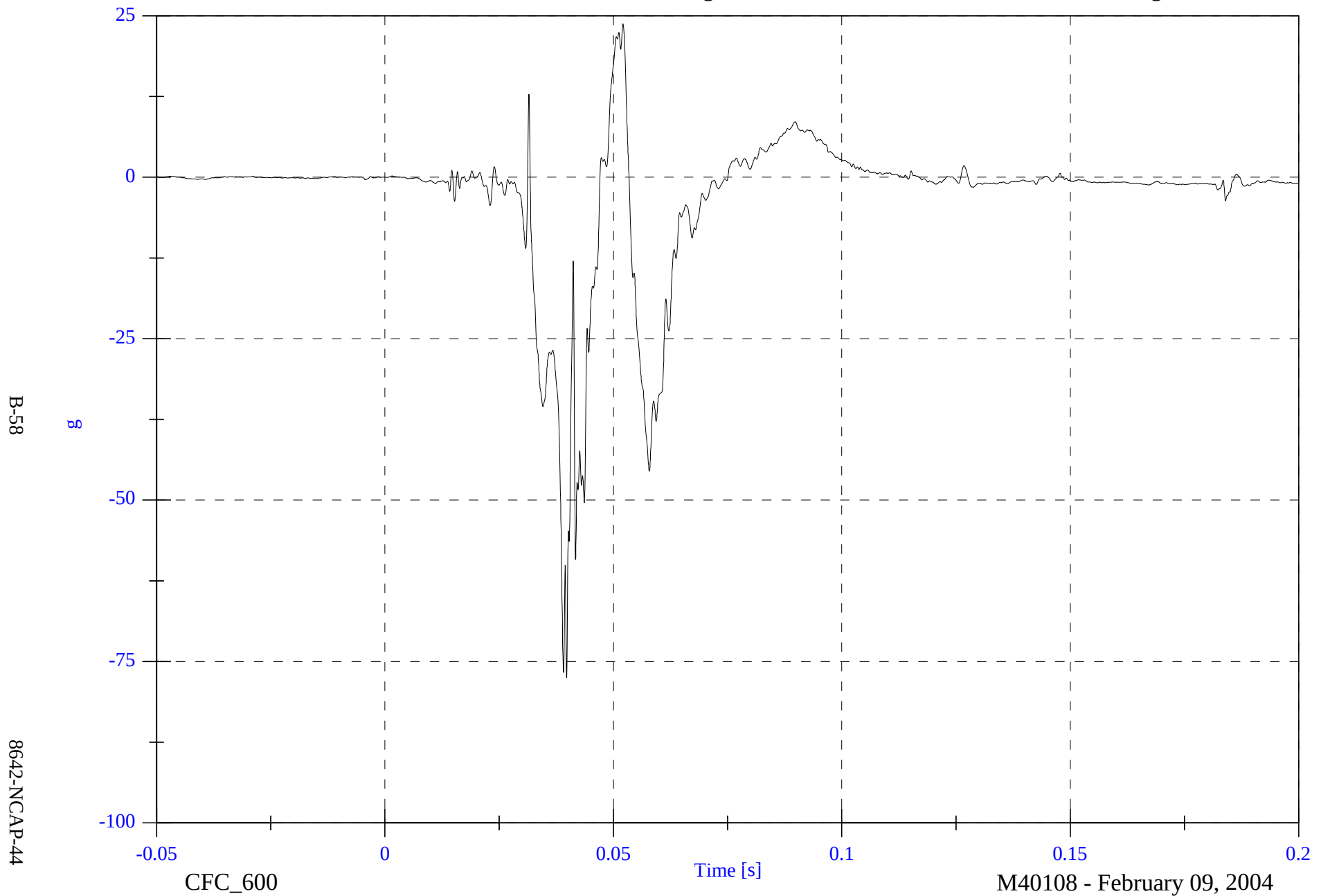


2004 NCAP Test 8 2004 Cadillac SRX

Max: 23.8 [g] at 0.052 [s]

Min: -77.5 [g] at 0.040 [s]

V1P1 Right Foot Aft x

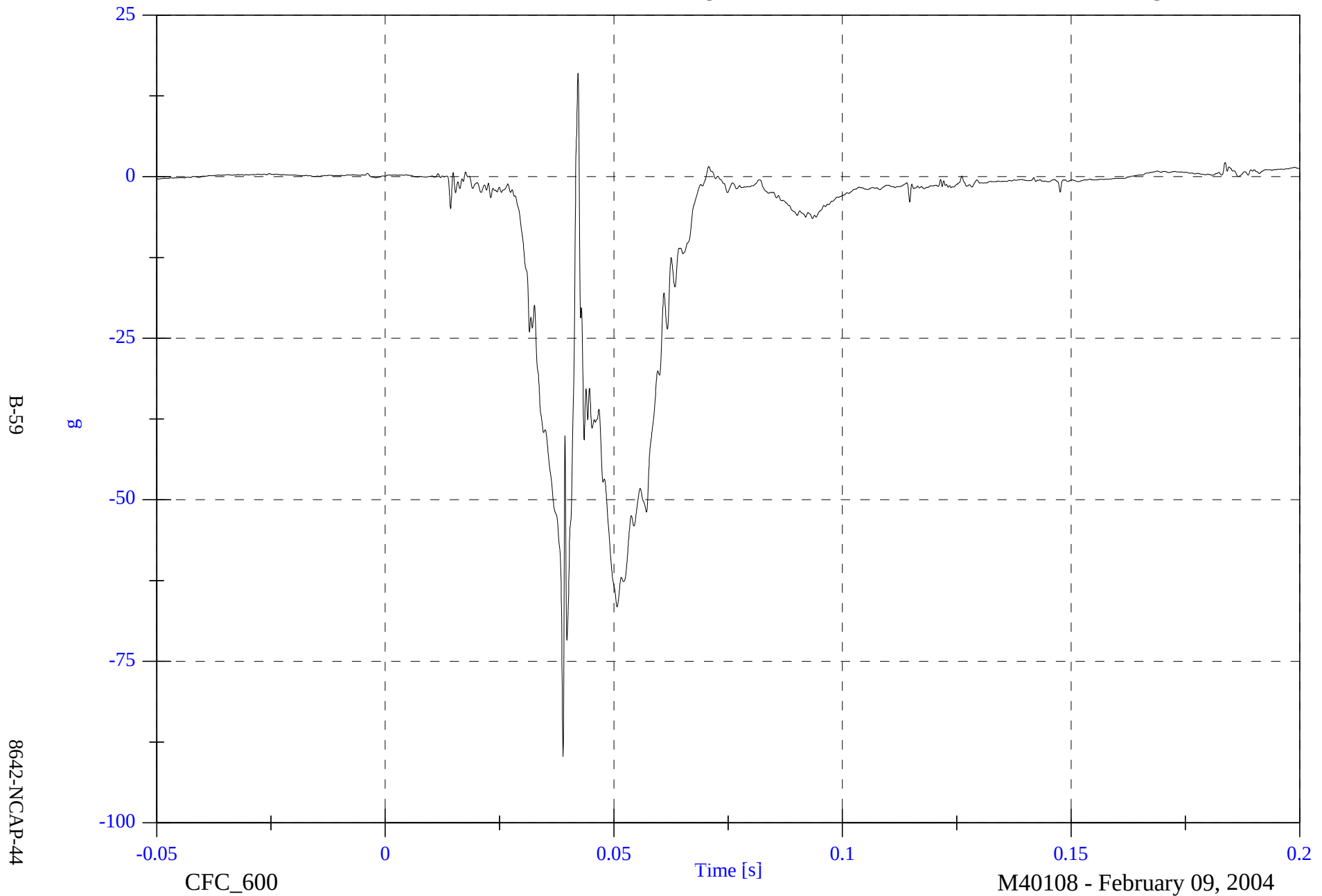


2004 NCAP Test 8 2004 Cadillac SRX

V1P1 Right Foot Aft z

Max: 16.0 [g] at 0.042 [s]

Min: -89.7 [g] at 0.039 [s]

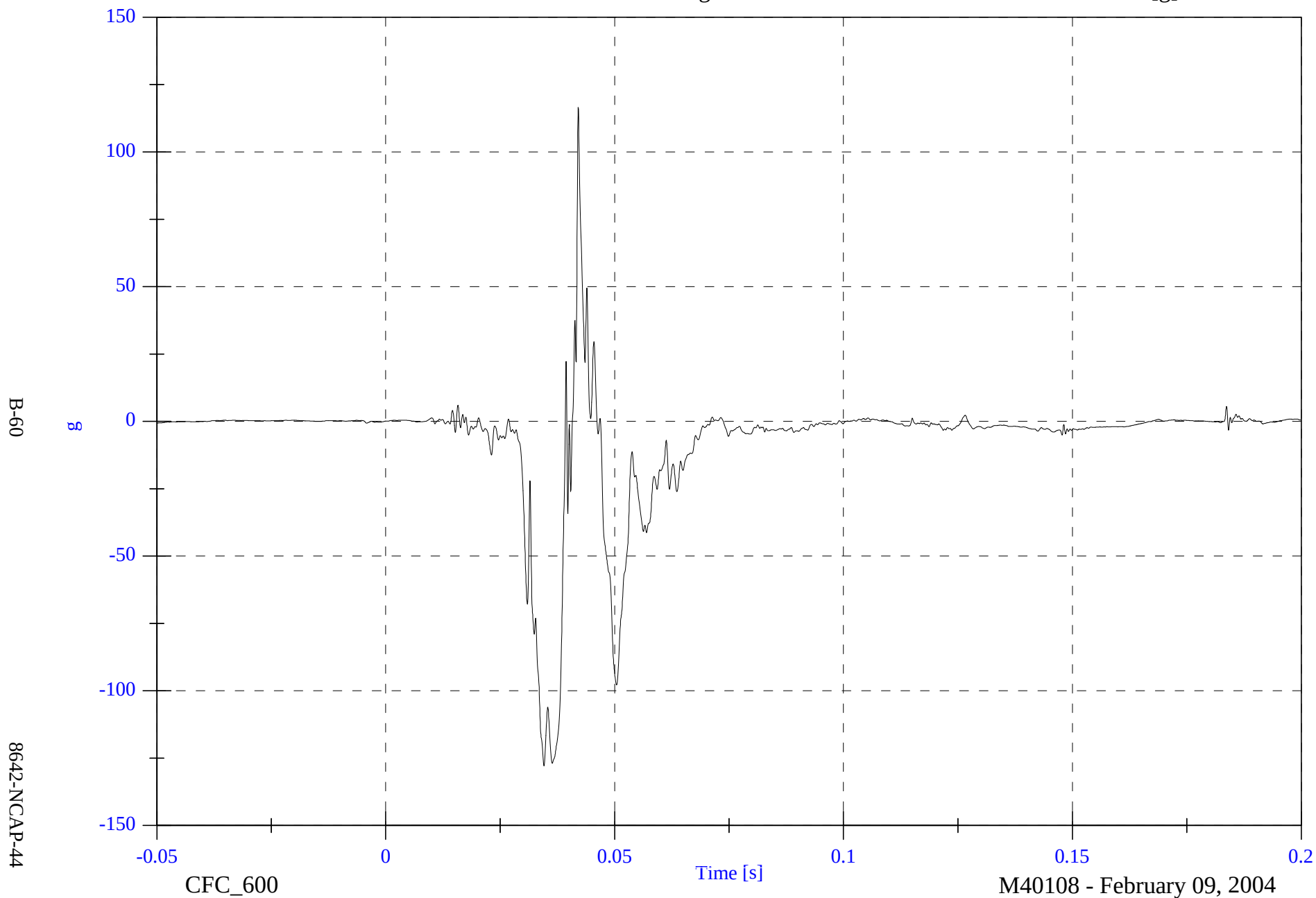


2004 NCAP Test 8 2004 Cadillac SRX

Max: 116.5 [g] at 0.042 [s]

Min: -127.9 [g] at 0.035 [s]

V1P1 Right Foot Fore z

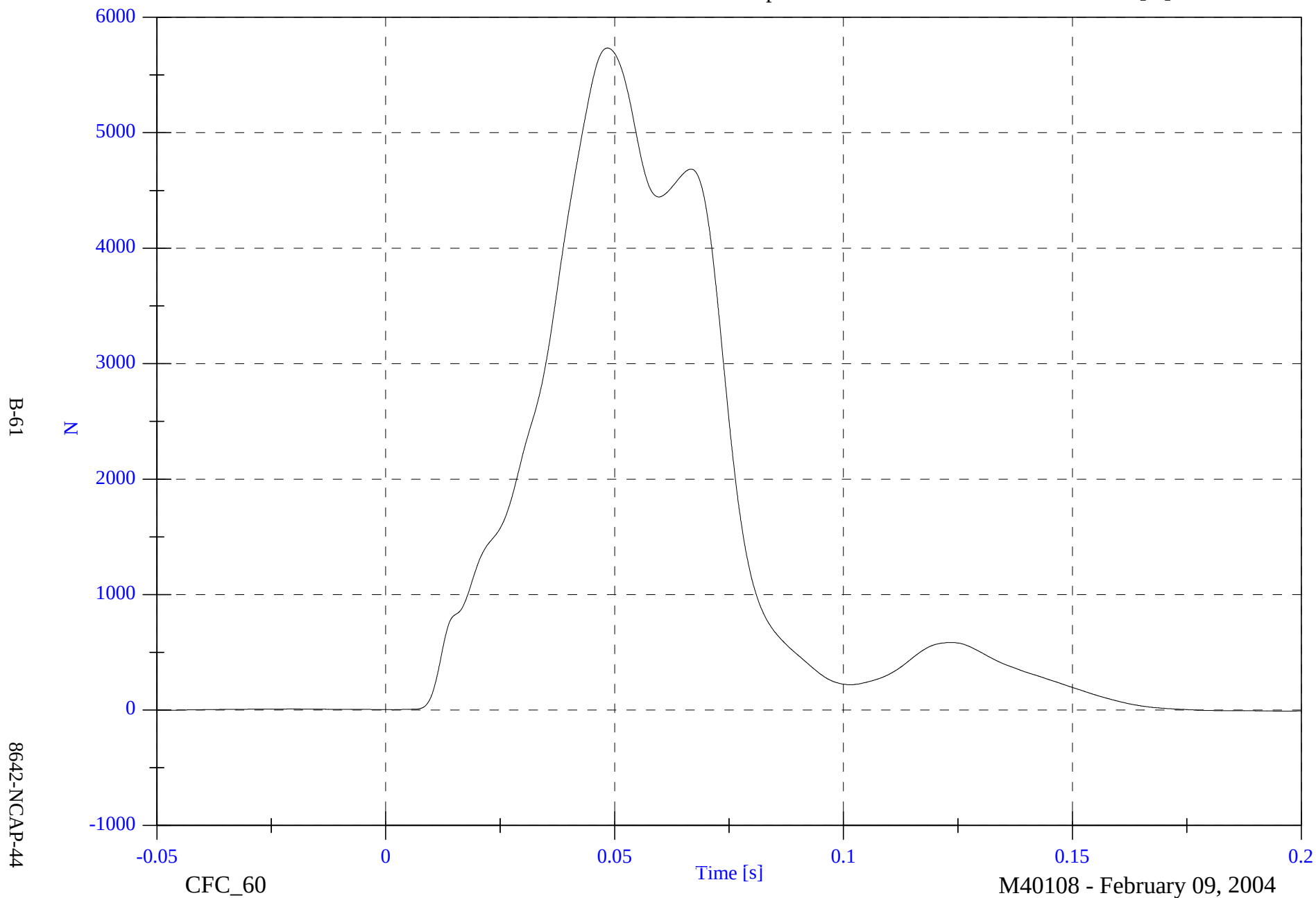


2004 NCAP Test 8 2004 Cadillac SRX

Max: 5733.1 [N] at 0.048 [s]

Min: -9.7 [N] at 0.196 [s]

V1 Driver Lap Belt



2004 NCAP Test 8 2004 Cadillac SRX

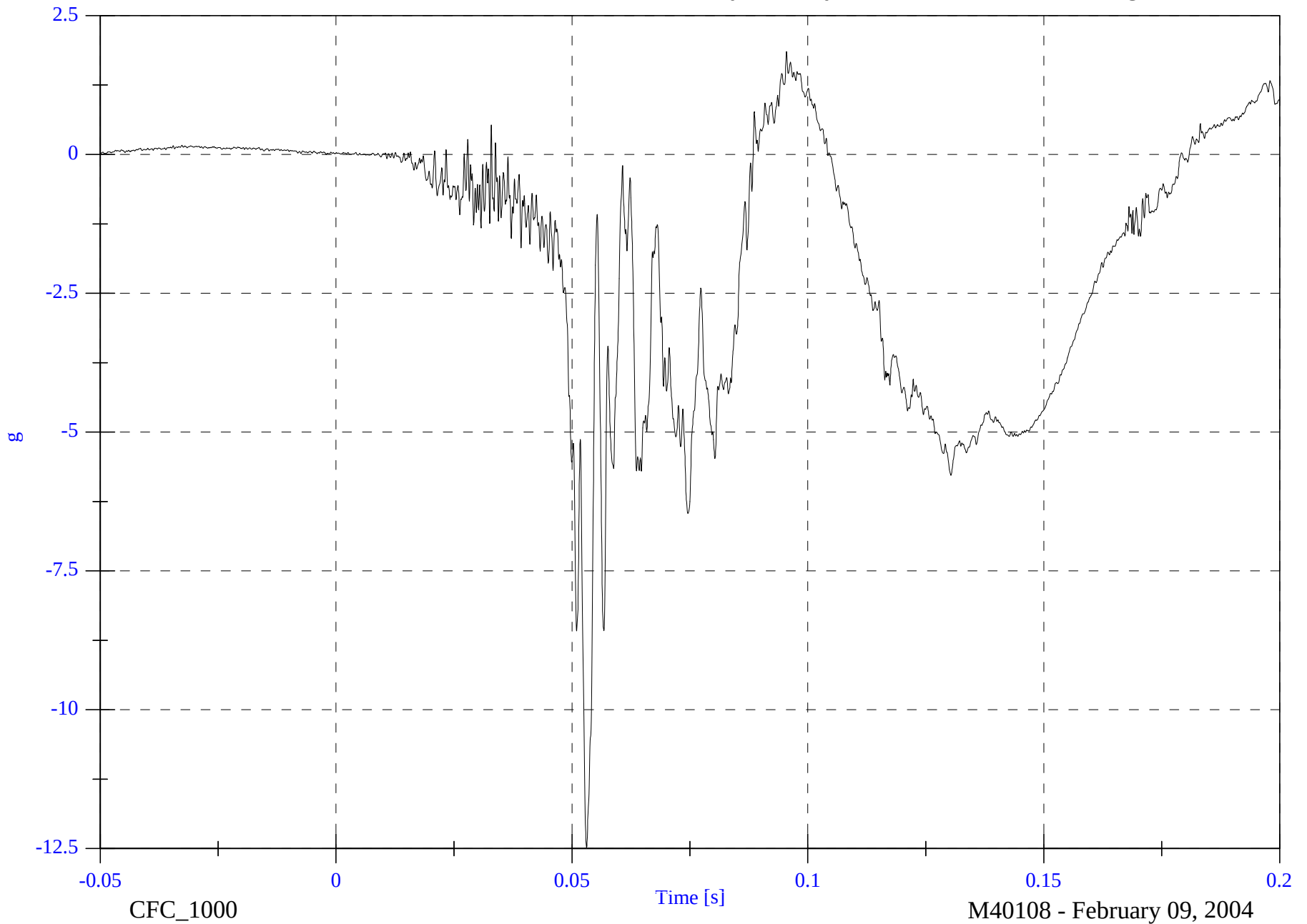
V1P2 Head 9 Array X Arm y

Max: 1.9 [g] at 0.095 [s]

Min: -12.5 [g] at 0.053 [s]

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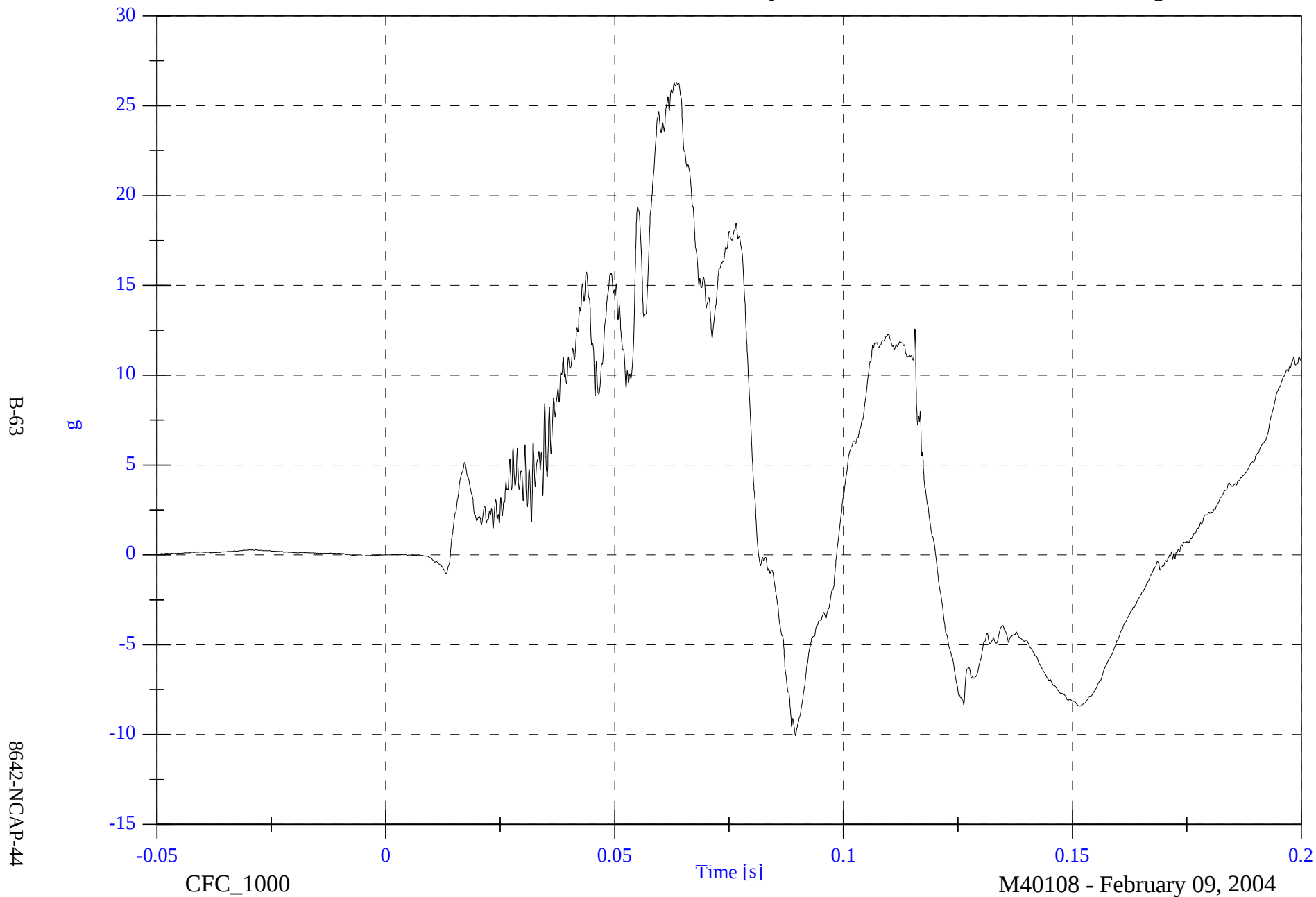
M40108 - February 09, 2004

2004 NCAP Test 8 2004 Cadillac SRX

V1P2 Head 9 Array X Arm z

Max: 26.3 [g] at 0.063 [s]

Min: -10.0 [g] at 0.089 [s]

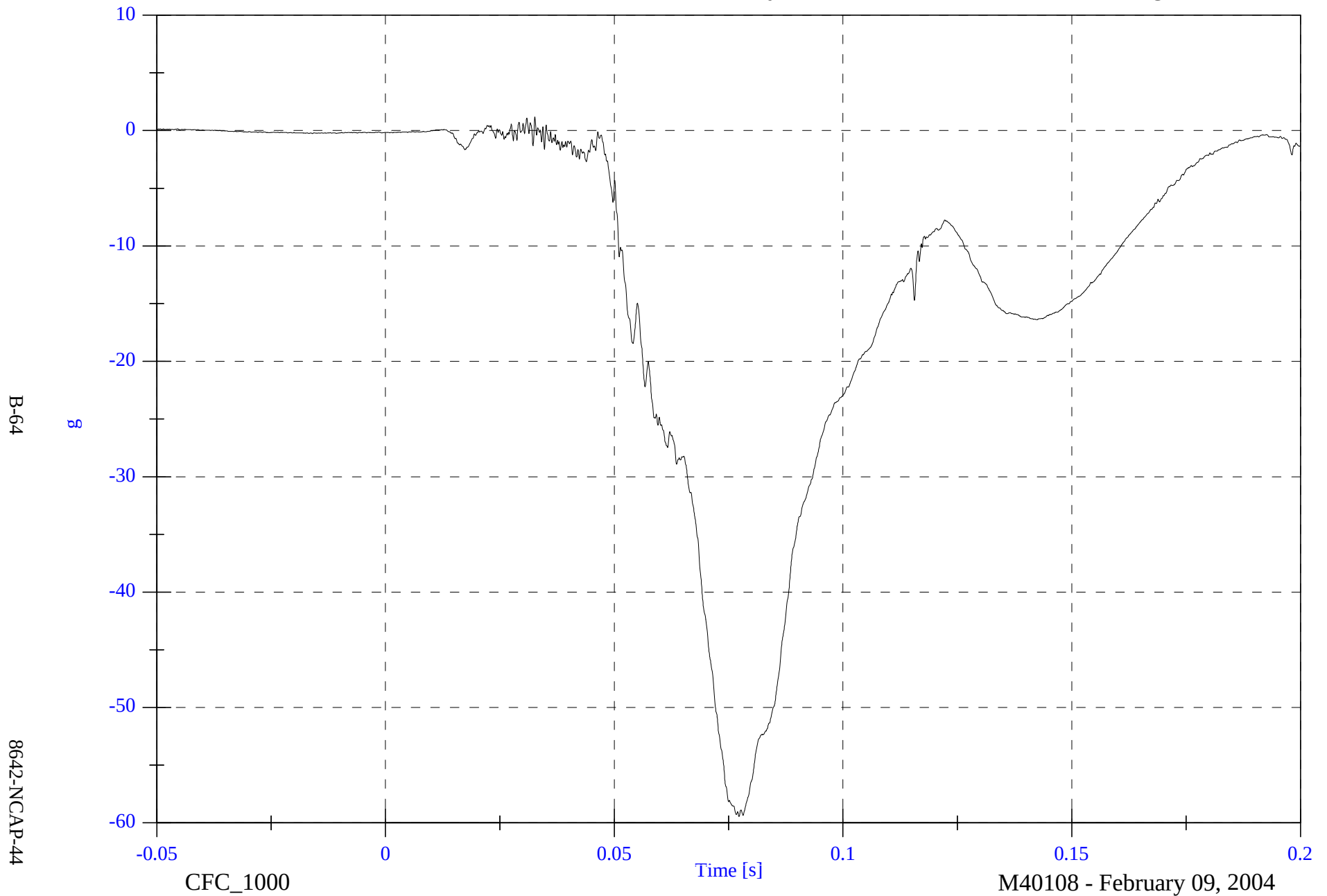


2004 NCAP Test 8 2004 Cadillac SRX

V1P2 Head 9 Array Y Arm x

Max: 1.2 [g] at 0.033 [s]

Min: -59.4 [g] at 0.077 [s]

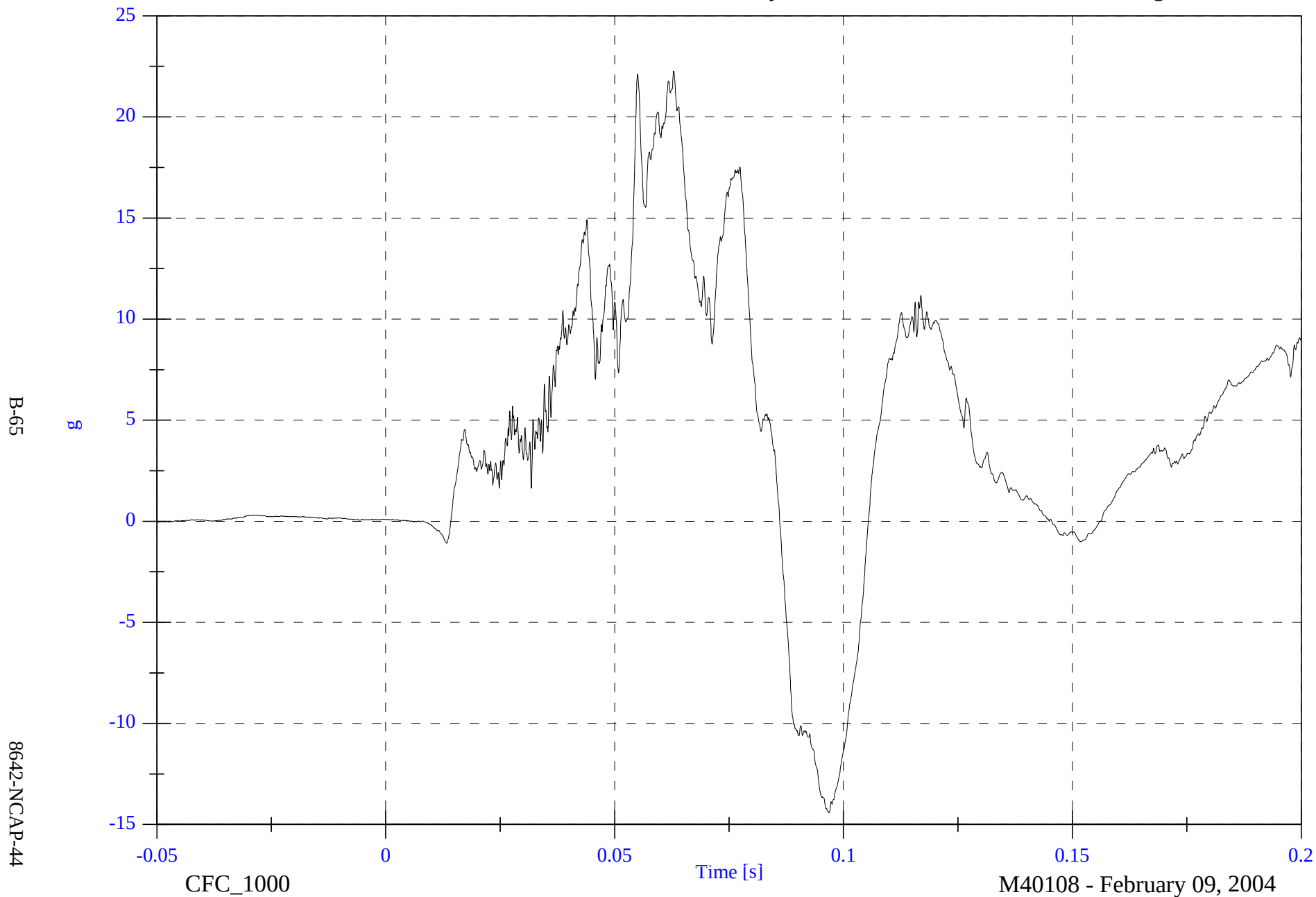


2004 NCAP Test 8 2004 Cadillac SRX

V1P2 Head 9 Array Y Arm z

Max: 22.3 [g] at 0.063 [s]

Min: -14.4 [g] at 0.097 [s]

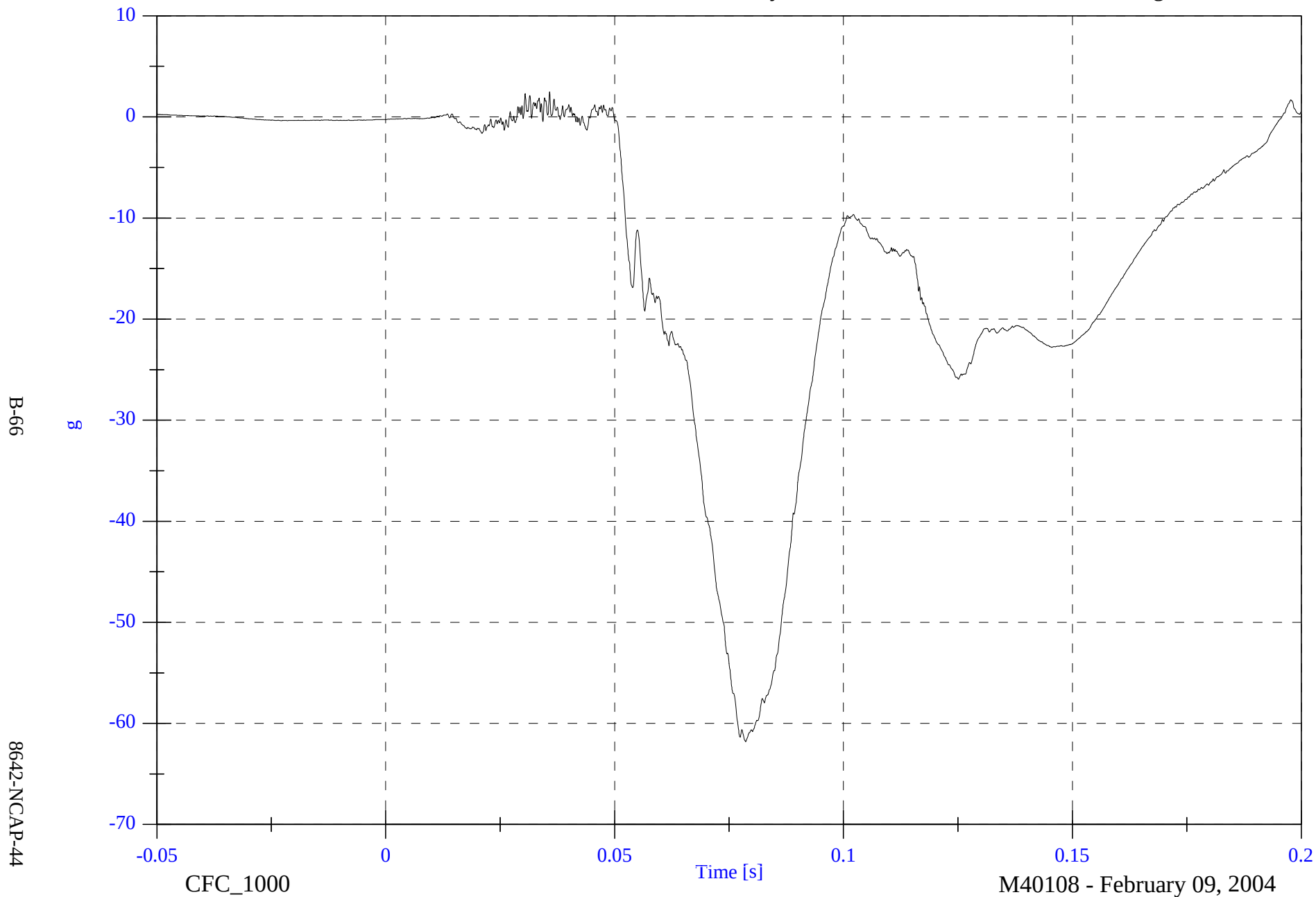


2004 NCAP Test 8 2004 Cadillac SRX

V1P2 Head 9 Array Z Arm x

Max: 2.5 [g] at 0.036 [s]

Min: -61.8 [g] at 0.079 [s]

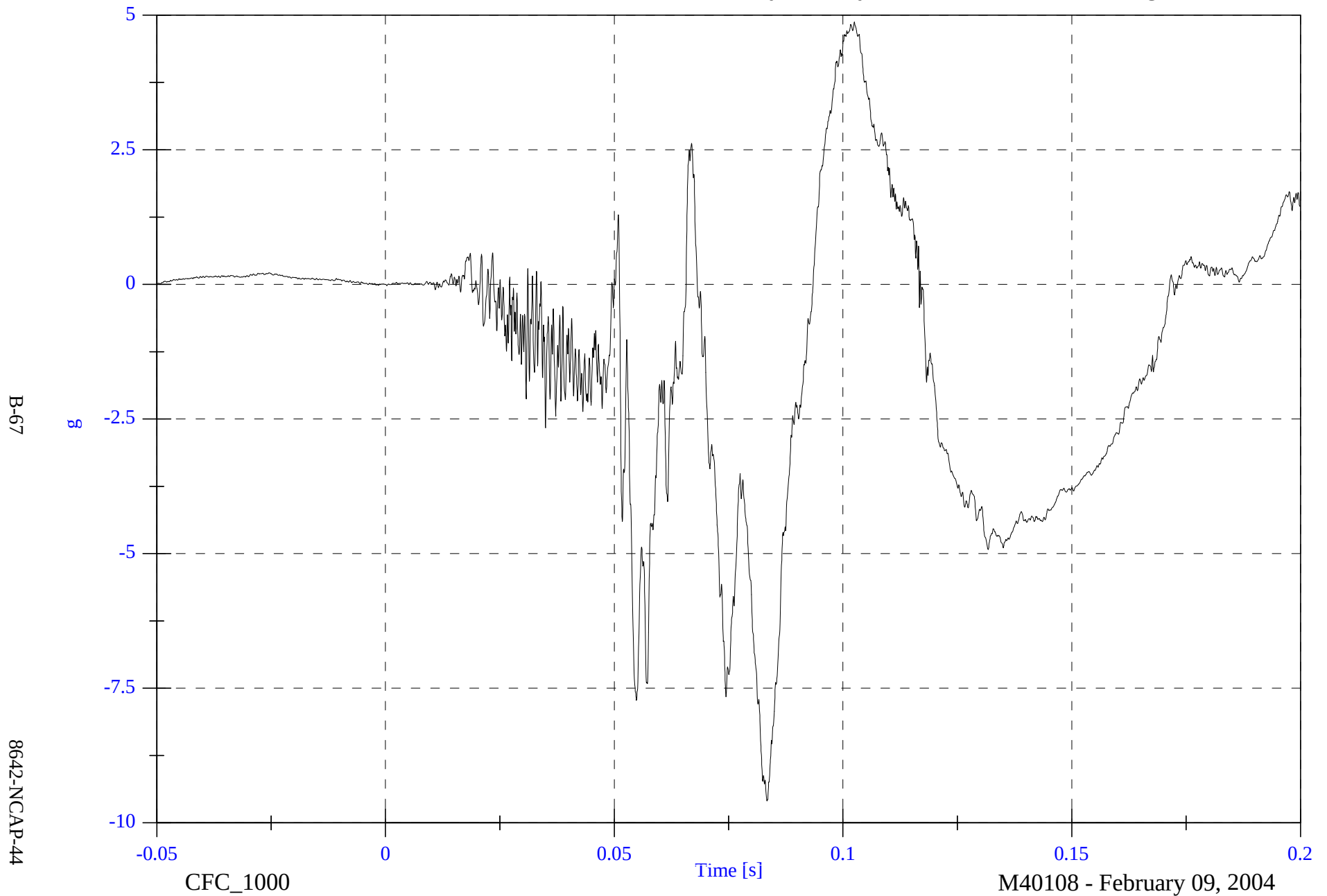


2004 NCAP Test 8 2004 Cadillac SRX

V1P2 Head 9 Array Z Arm y

Max: 4.9 [g] at 0.102 [s]

Min: -9.6 [g] at 0.083 [s]

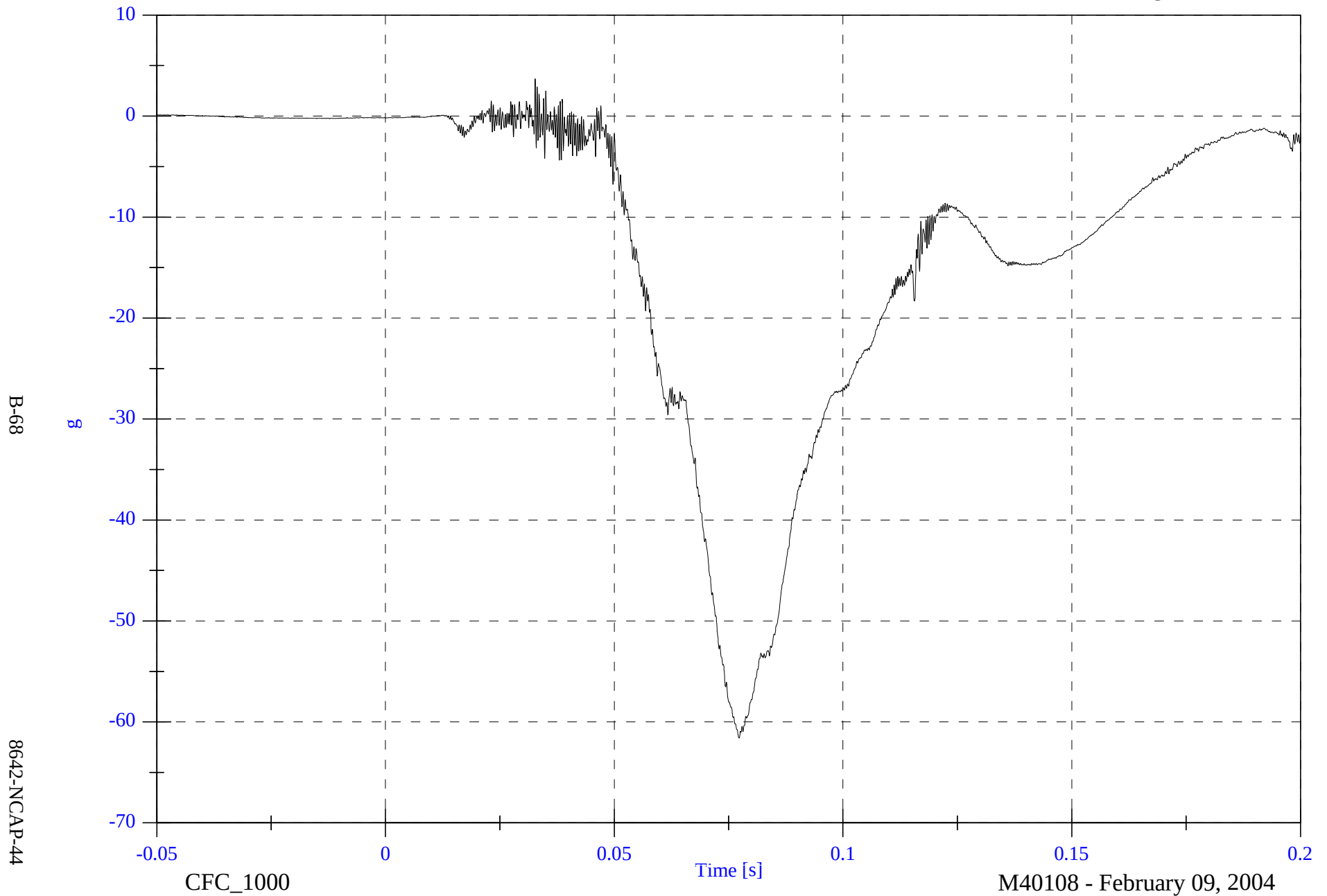


2004 NCAP Test 8 2004 Cadillac SRX

V1P2 Head CG x

Max: 3.7 [g] at 0.033 [s]

Min: -61.6 [g] at 0.077 [s]



2004 NCAP Test 8 2004 Cadillac SRX

V1P2 Head CG y

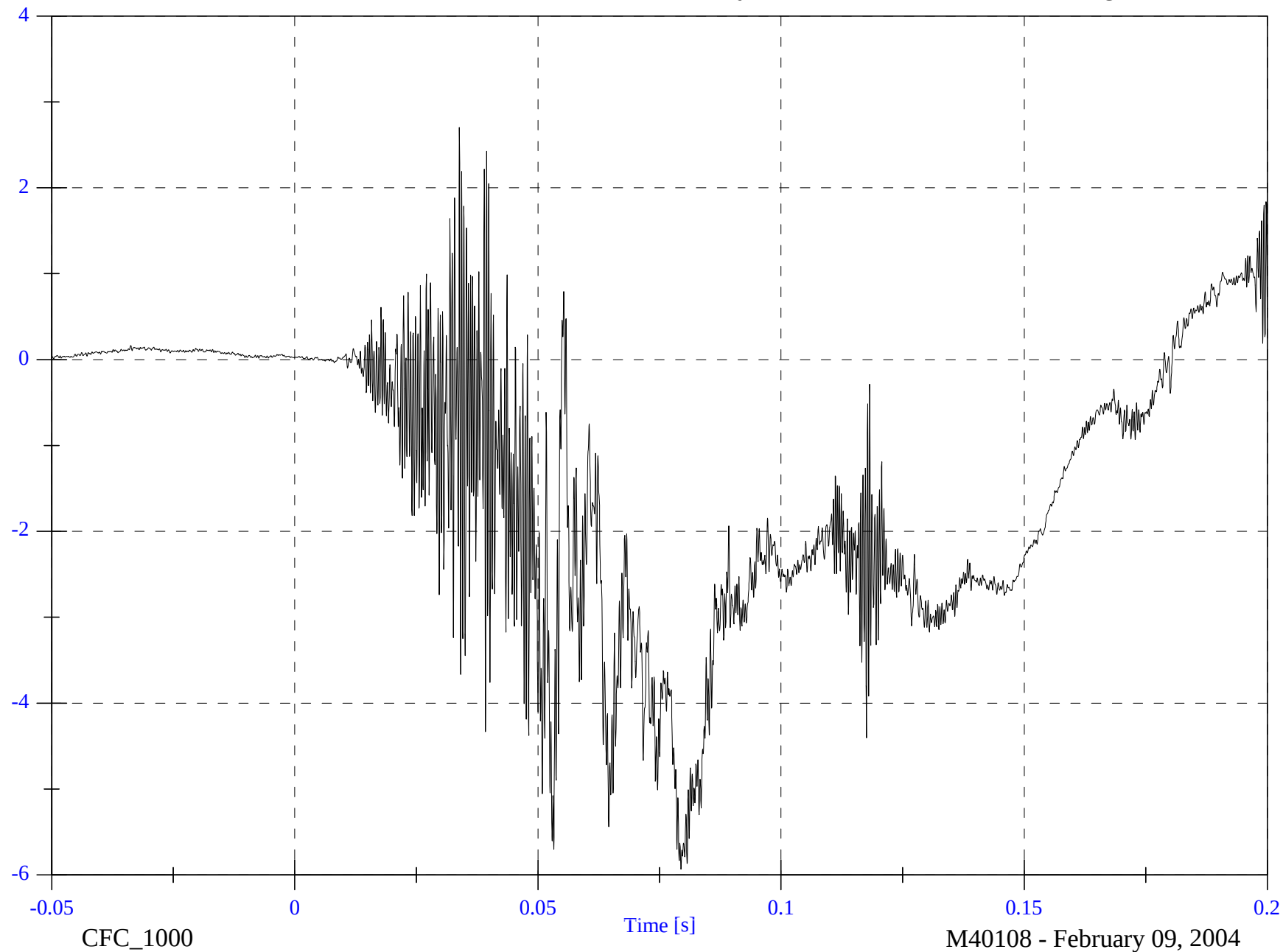
Max: 2.7 [g] at 0.034 [s]

Min: -5.9 [g] at 0.079 [s]

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8642-NCAP-44

g



-0.05

0

0.05

Time [s]

0.1

0.15

0.2

CFC_1000

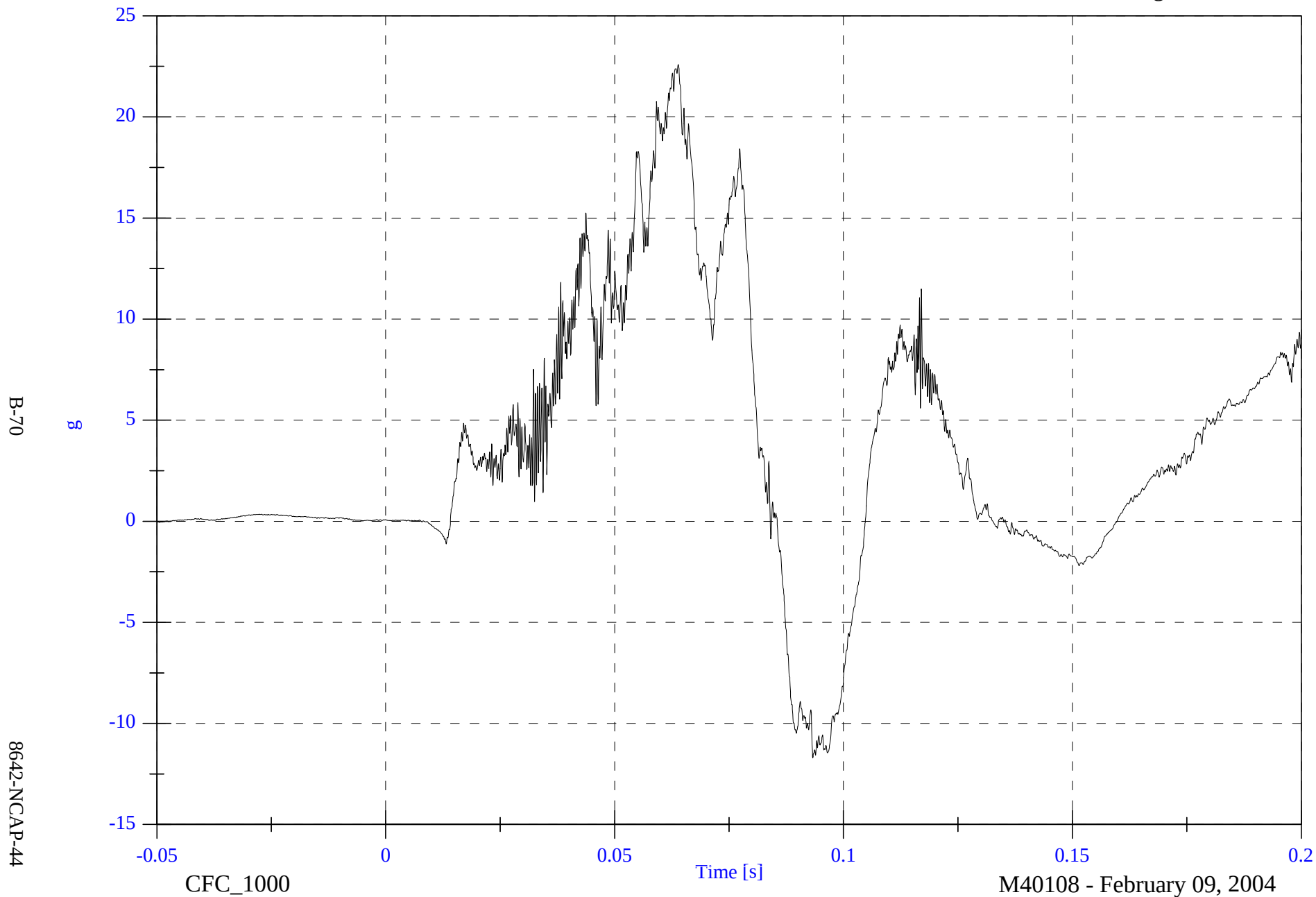
M40108 - February 09, 2004

2004 NCAP Test 8 2004 Cadillac SRX

V1P2 Head CG z

Max: 22.6 [g] at 0.064 [s]

Min: -11.7 [g] at 0.093 [s]



2004 NCAP Test 8 2004 Cadillac SRX

V1P2 Head CG Resultant

Max: 64.4 [g] at 0.077 [s]

Min: 0.1 [g] at 0.009 [s]

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8642-NCAP-44

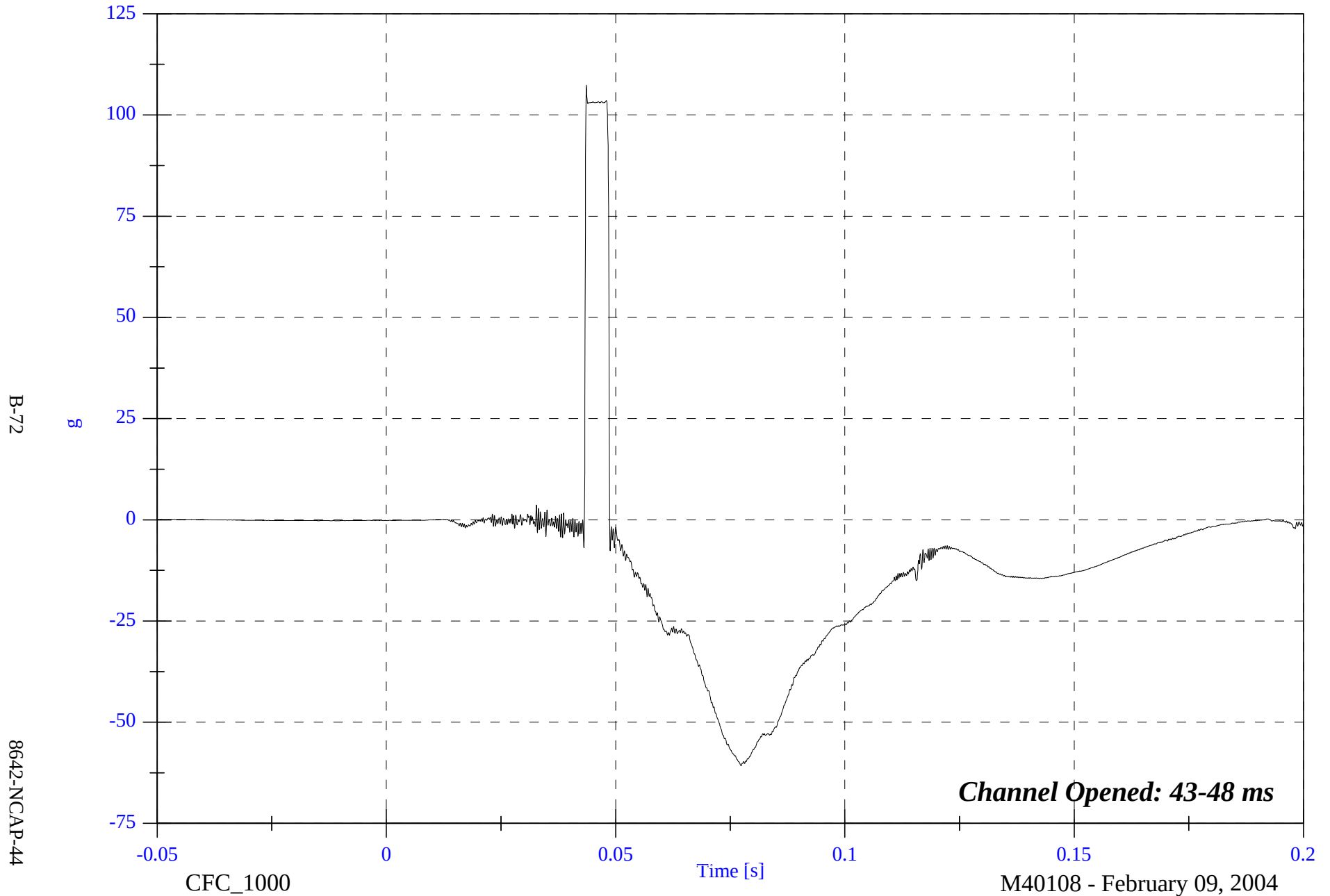


2004 NCAP Test 8 2004 Cadillac SRX

Max: 107.4 [g] at 0.044 [s]

Min: -60.8 [g] at 0.077 [s]

V1P2 Head CG Red x

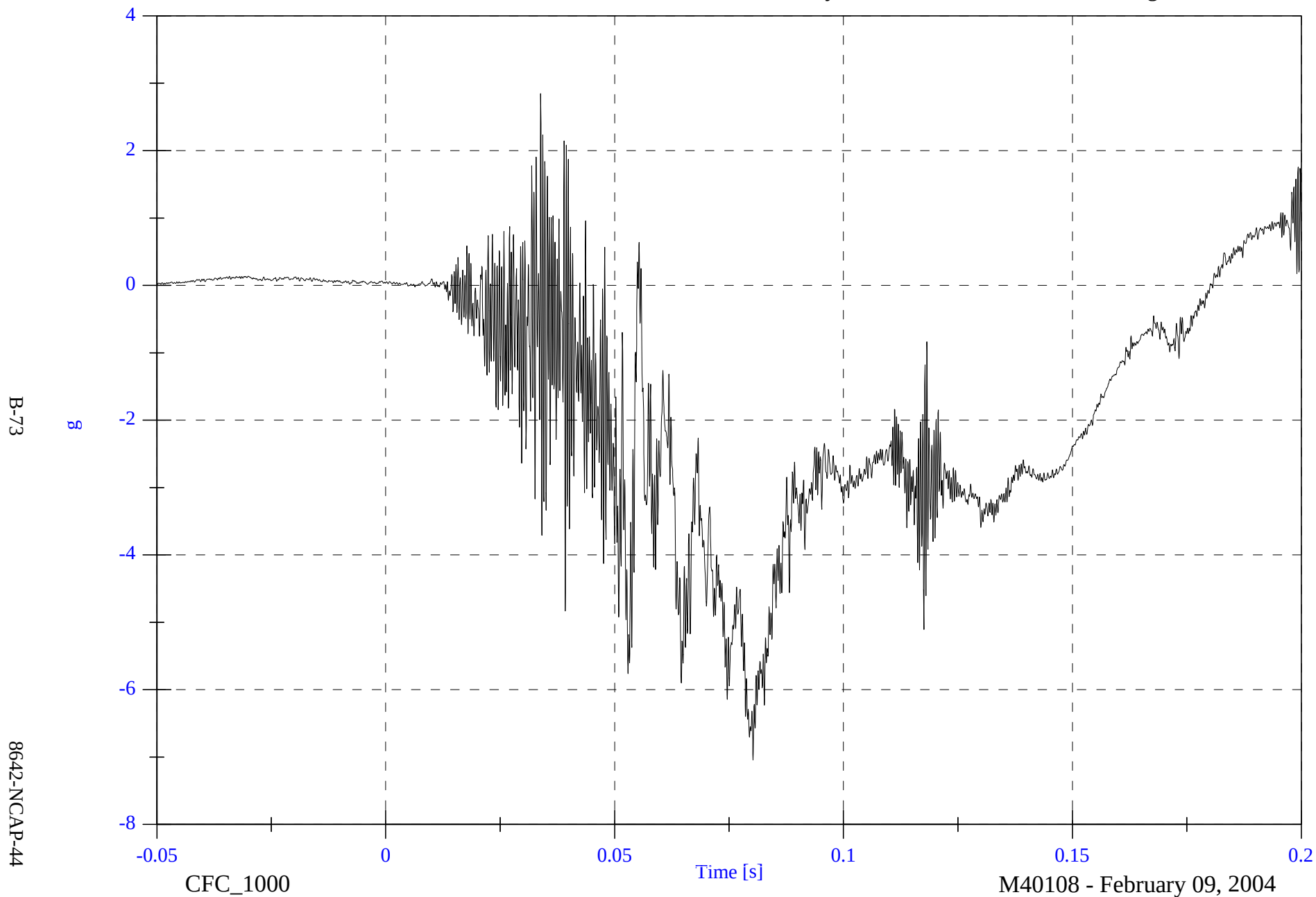


2004 NCAP Test 8 2004 Cadillac SRX

Max: 2.8 [g] at 0.034 [s]

Min: -7.0 [g] at 0.080 [s]

V1P2 Head CG Red y

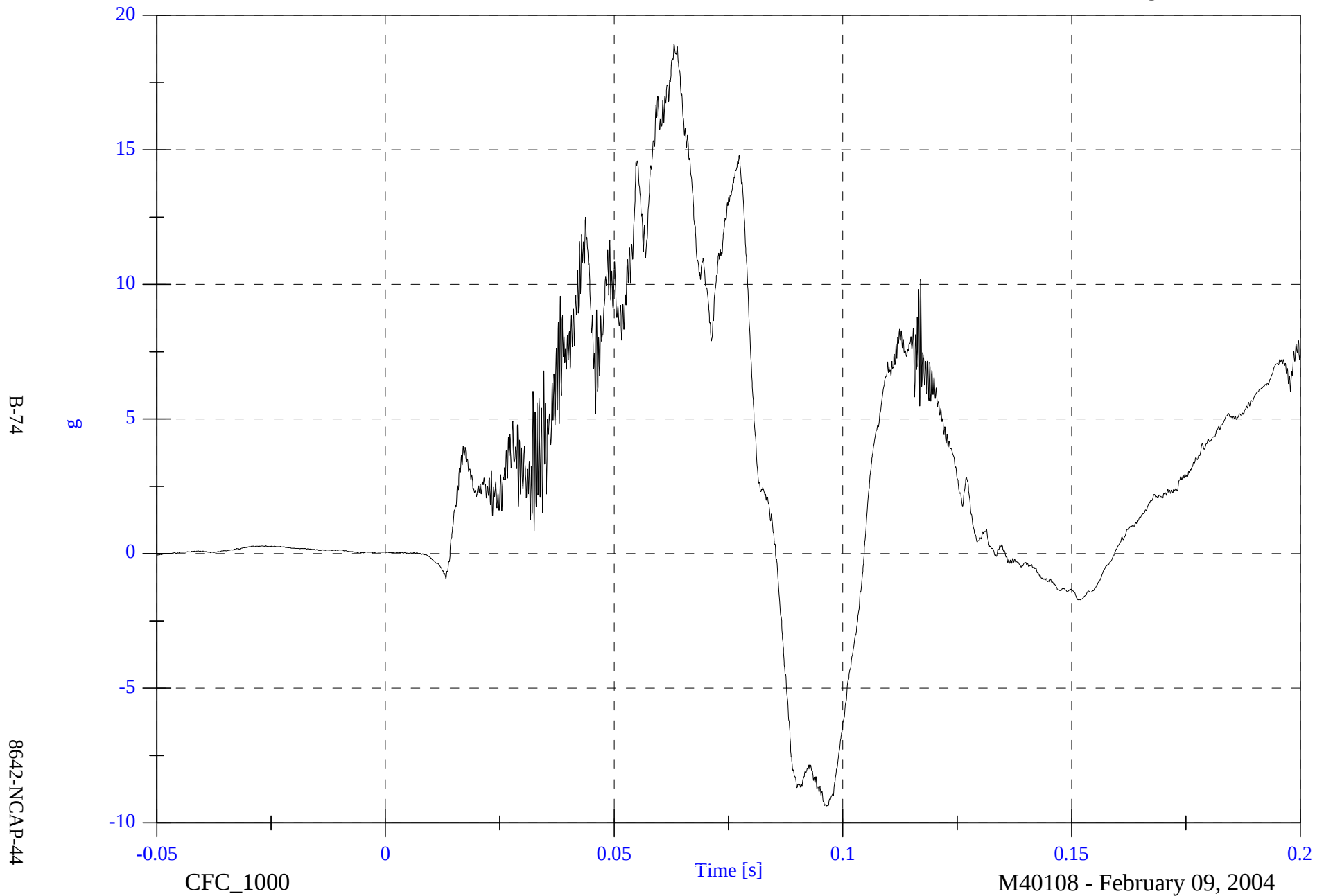


2004 NCAP Test 8 2004 Cadillac SRX

Max: 18.9 [g] at 0.063 [s]

Min: -9.4 [g] at 0.096 [s]

V1P2 Head CG Red z



2004 NCAP Test 8 2004 Cadillac SRX

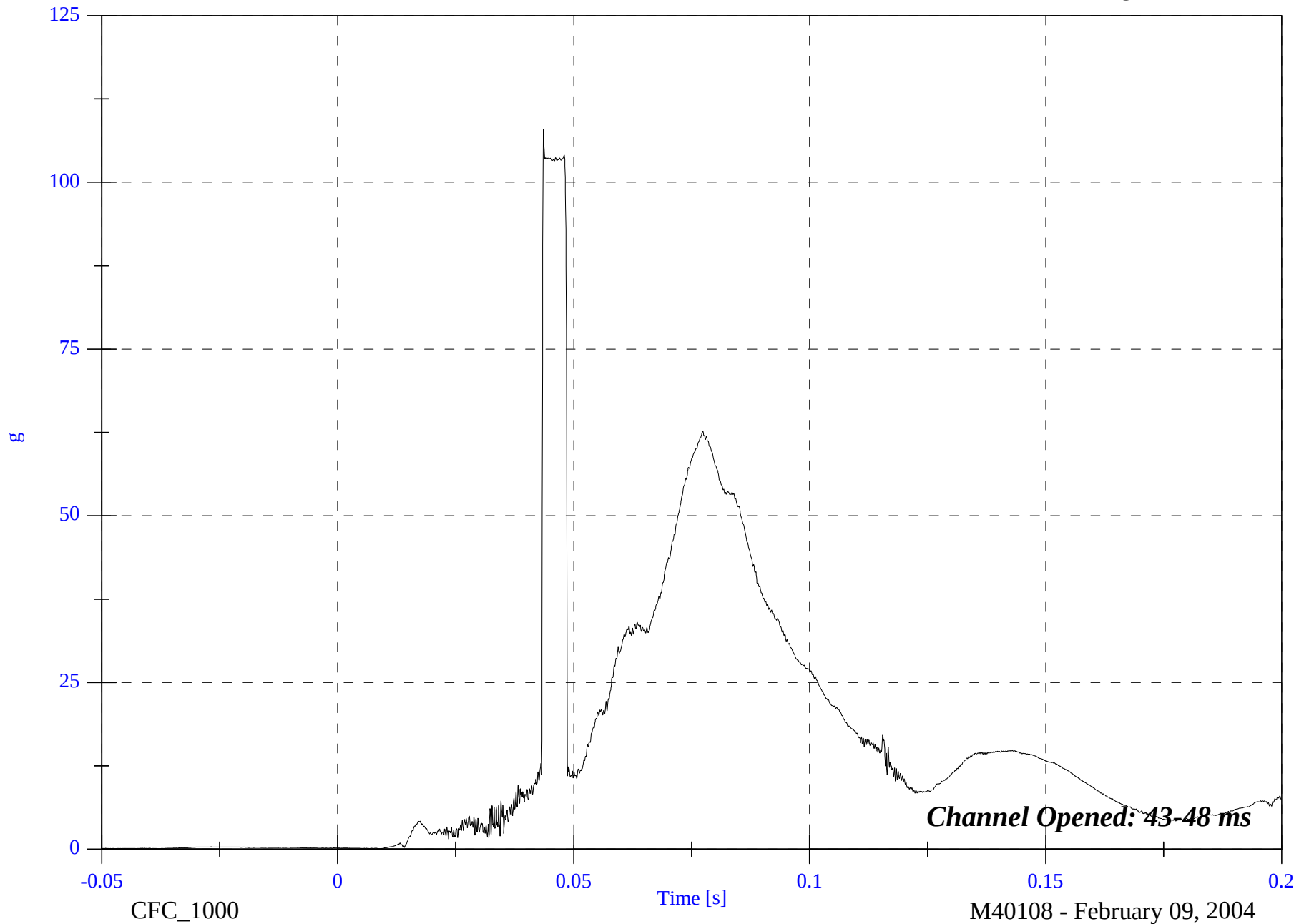
V1P2 Head CG Red Resultant

Max: 108.0 [g] at 0.044 [s]

Min: 0.1 [g] at 0.009 [s]

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8642-NCAP-44

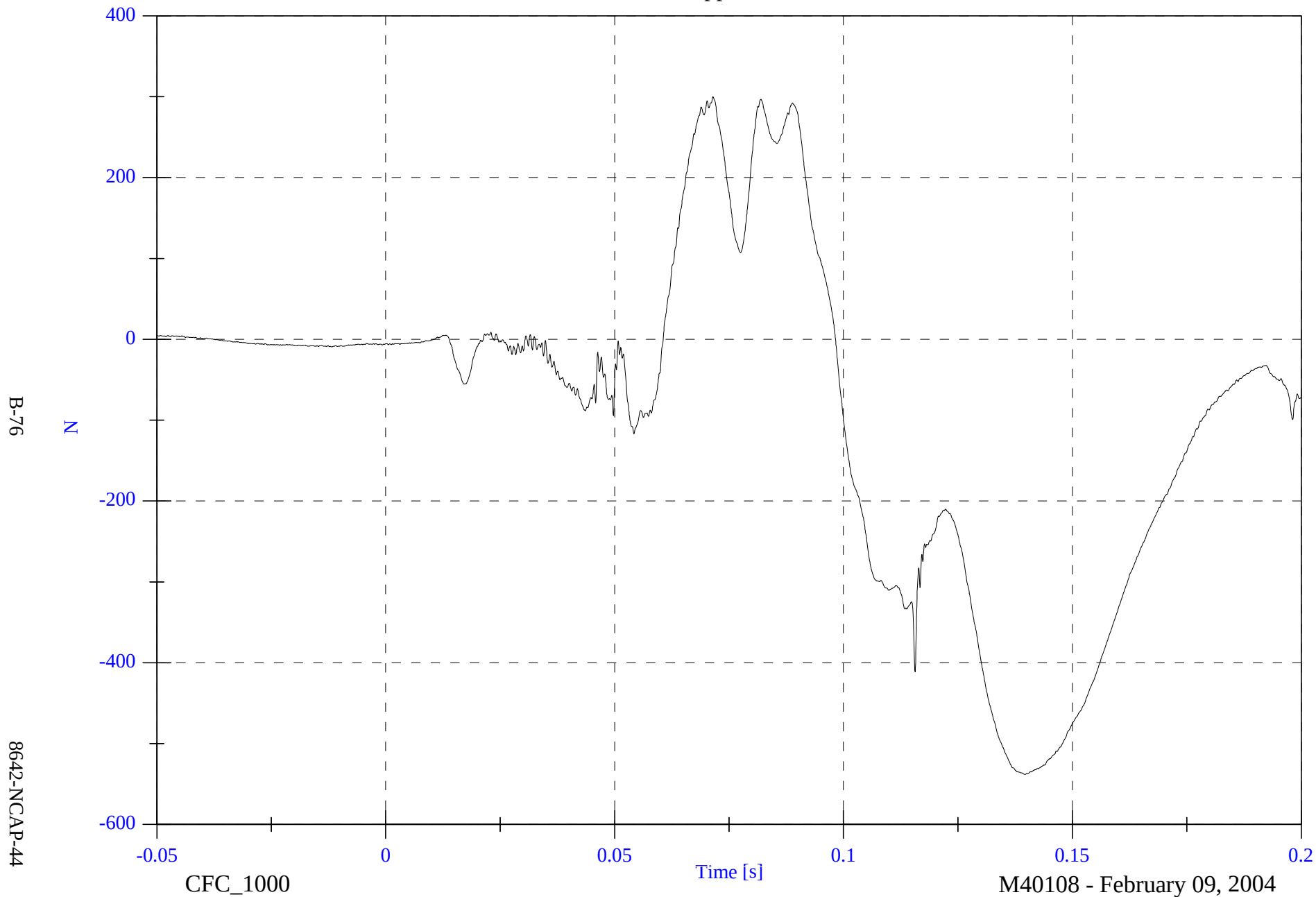


2004 NCAP Test 8 2004 Cadillac SRX

Max: 300.0 [N] at 0.071 [s]

Min: -538.1 [N] at 0.140 [s]

V1P2 Upper Neck Fx

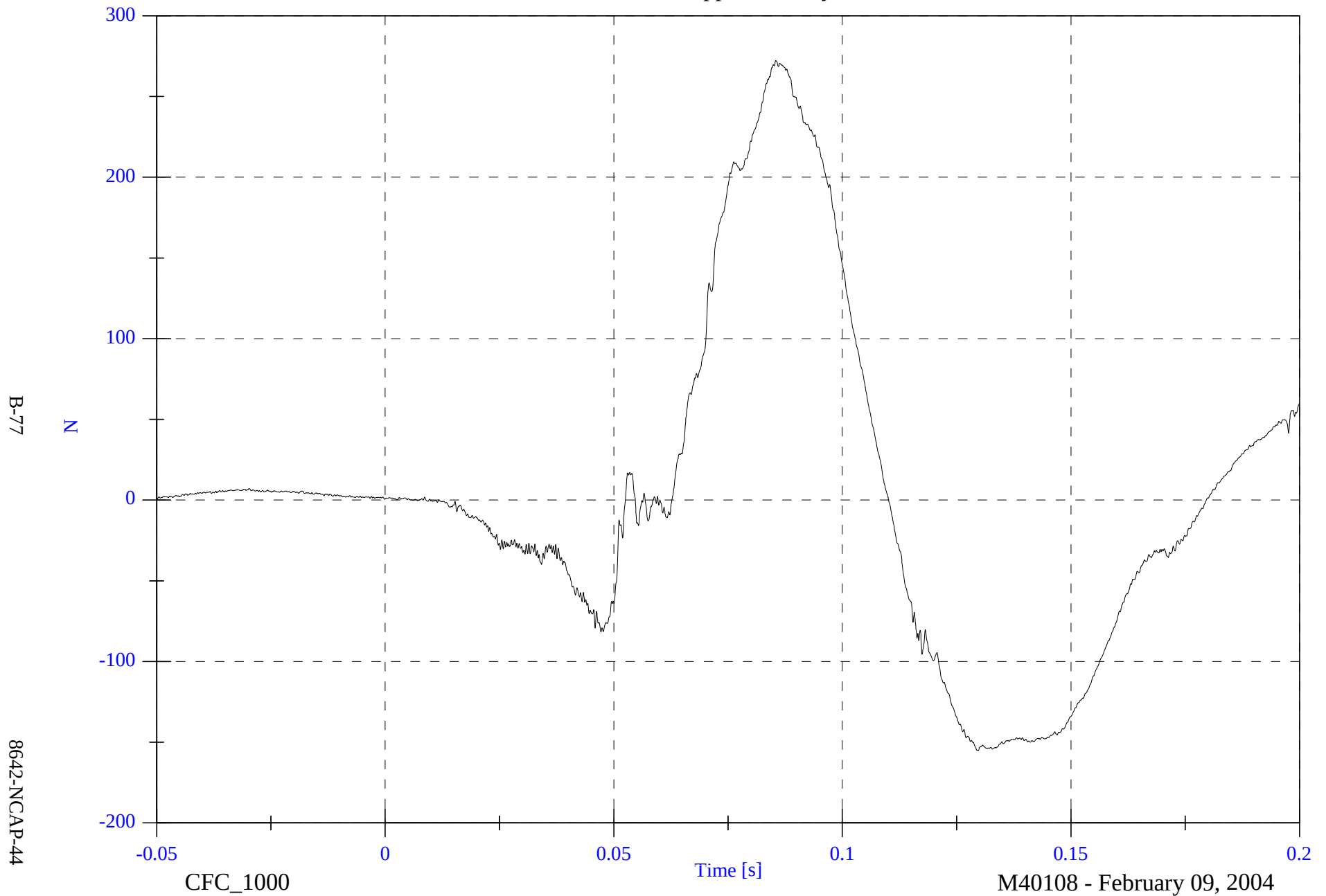


2004 NCAP Test 8 2004 Cadillac SRX

Max: 272.2 [N] at 0.085 [s]

Min: -155.2 [N] at 0.130 [s]

V1P2 Upper Neck Fy



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8642-NCAP-44

CFC_1000

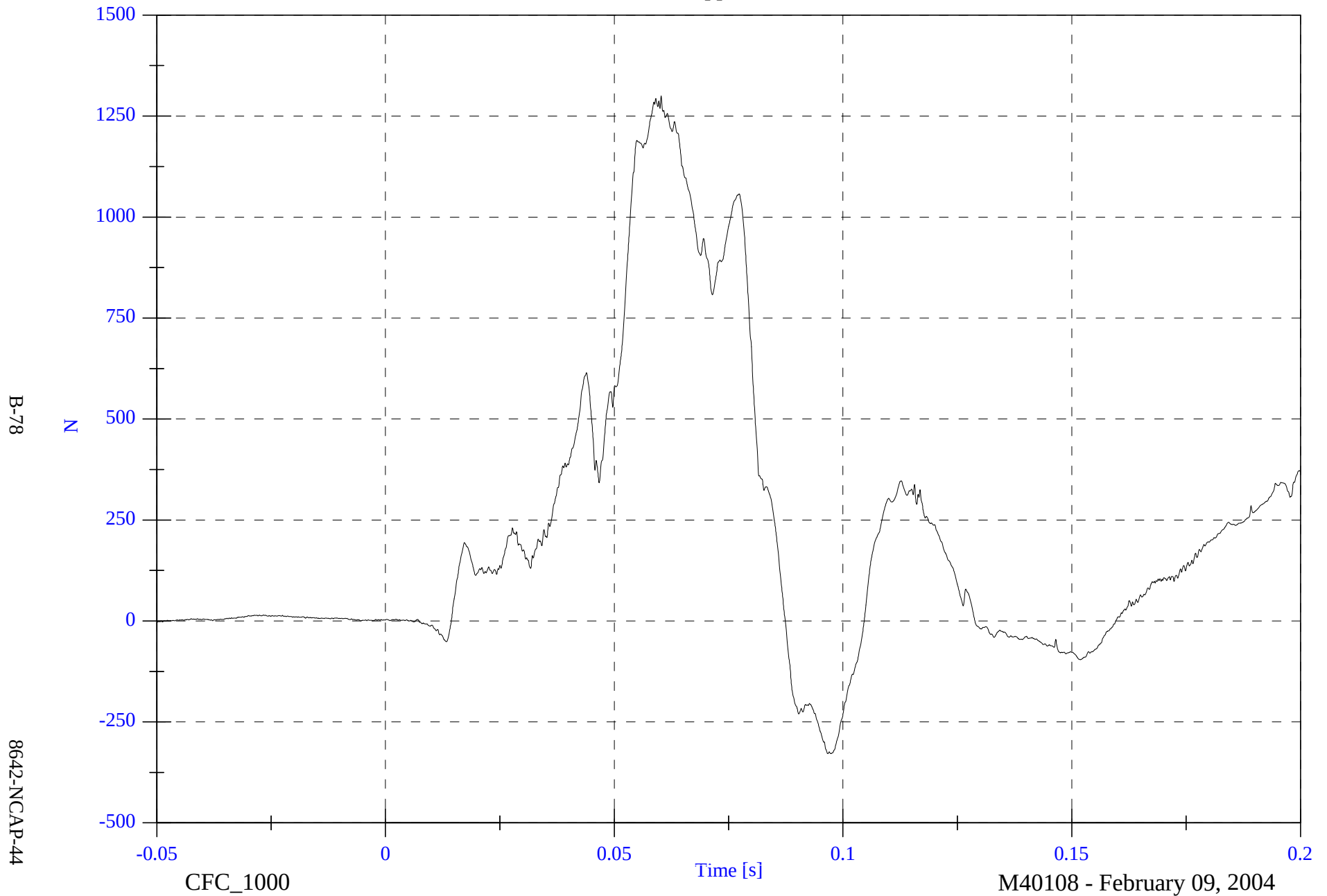
M40108 - February 09, 2004

2004 NCAP Test 8 2004 Cadillac SRX

Max: 1299.7 [N] at 0.060 [s]

Min: -328.6 [N] at 0.097 [s]

V1P2 Upper Neck Fz

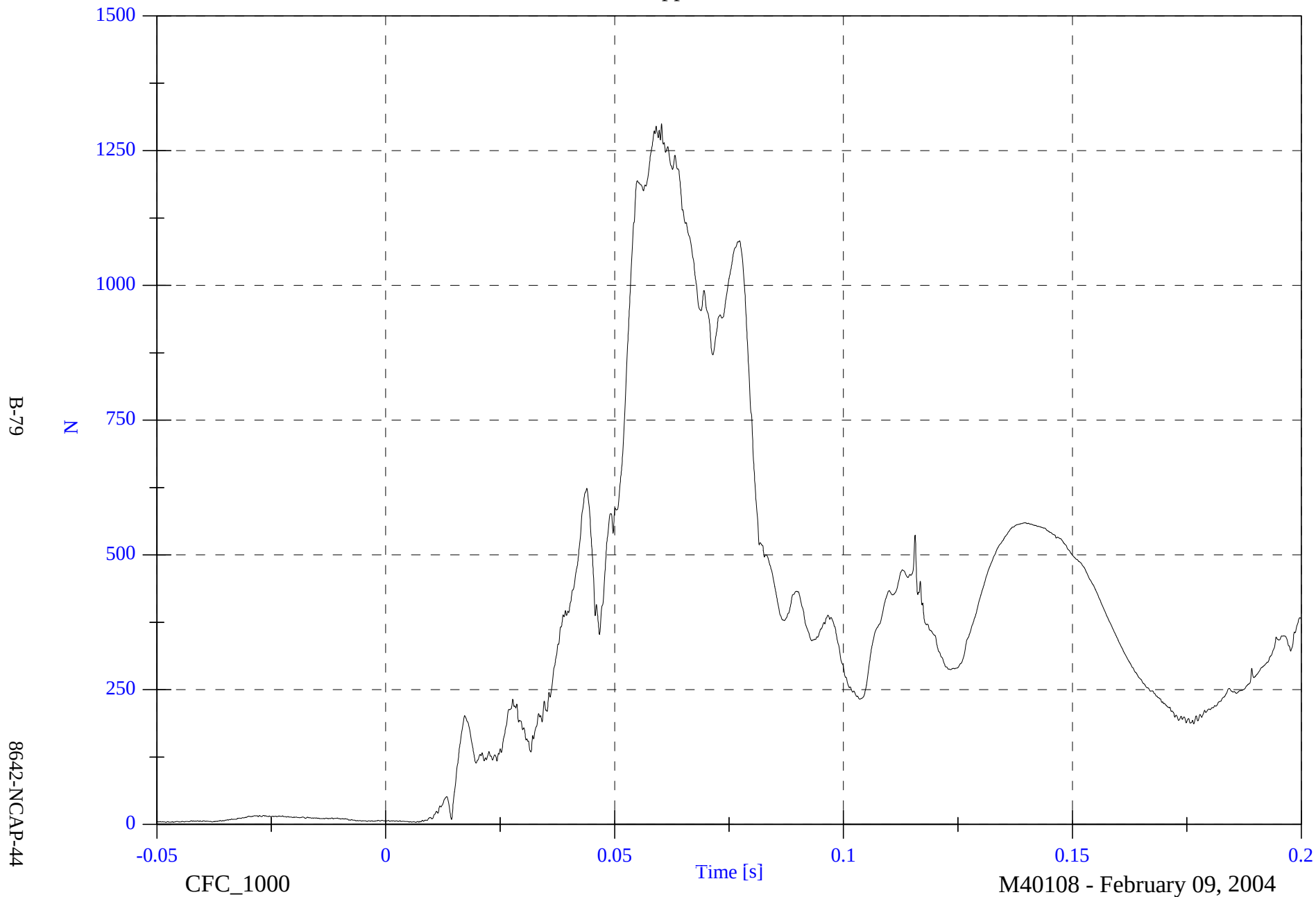


2004 NCAP Test 8 2004 Cadillac SRX

V1P2 Upper Neck F Resultant

Max: 1299.8 [N] at 0.060 [s]

Min: 3.9 [N] at 0.007 [s]

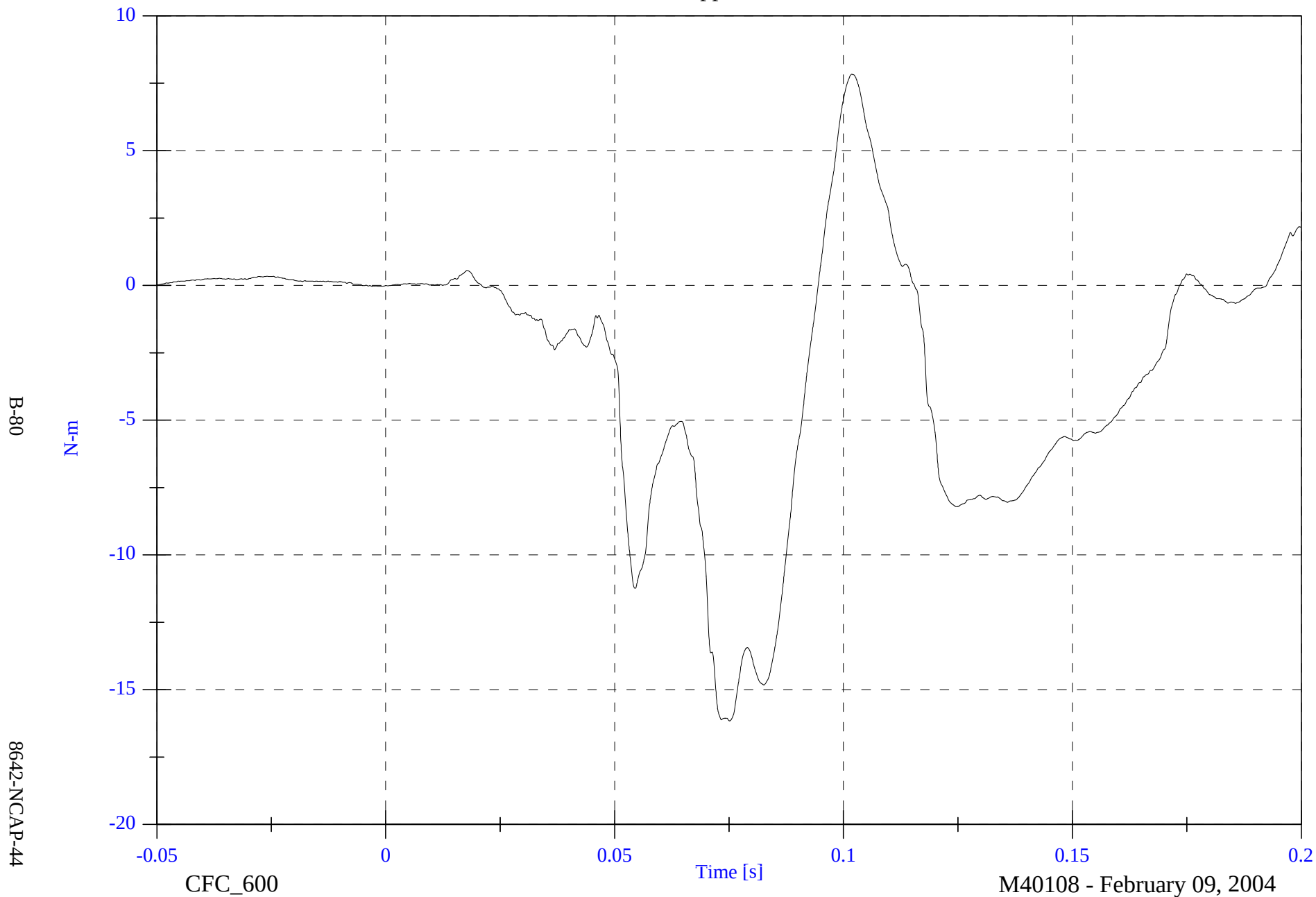


2004 NCAP Test 8 2004 Cadillac SRX

V1P2 Upper Neck Mx

Max: 7.8 [N-m] at 0.102 [s]

Min: -16.2 [N-m] at 0.075 [s]



2004 NCAP Test 8 2004 Cadillac SRX

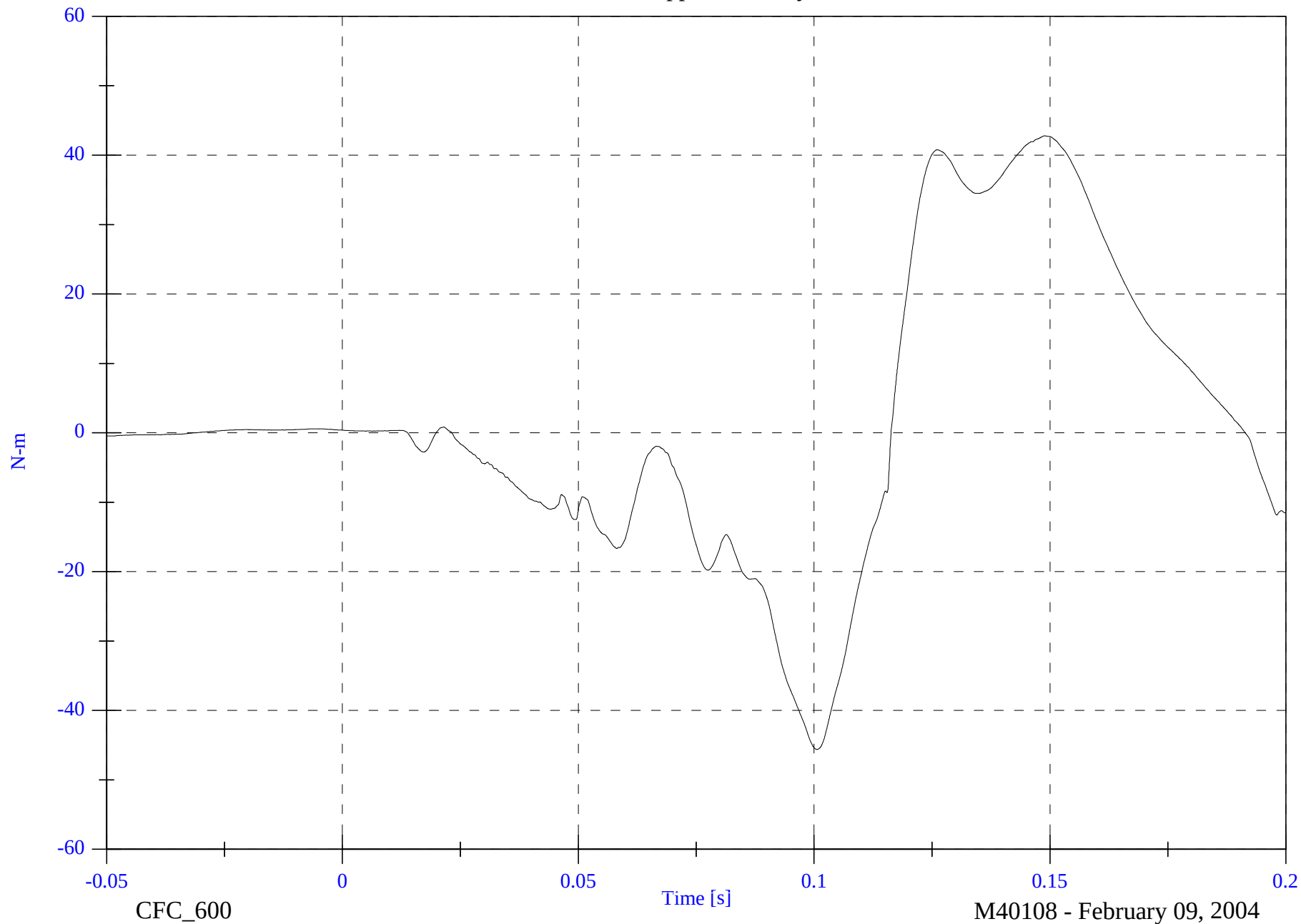
V1P2 Upper Neck My

Max: 42.8 [N-m] at 0.149 [s]

Min: -45.6 [N-m] at 0.101 [s]

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8642-NCAP-44

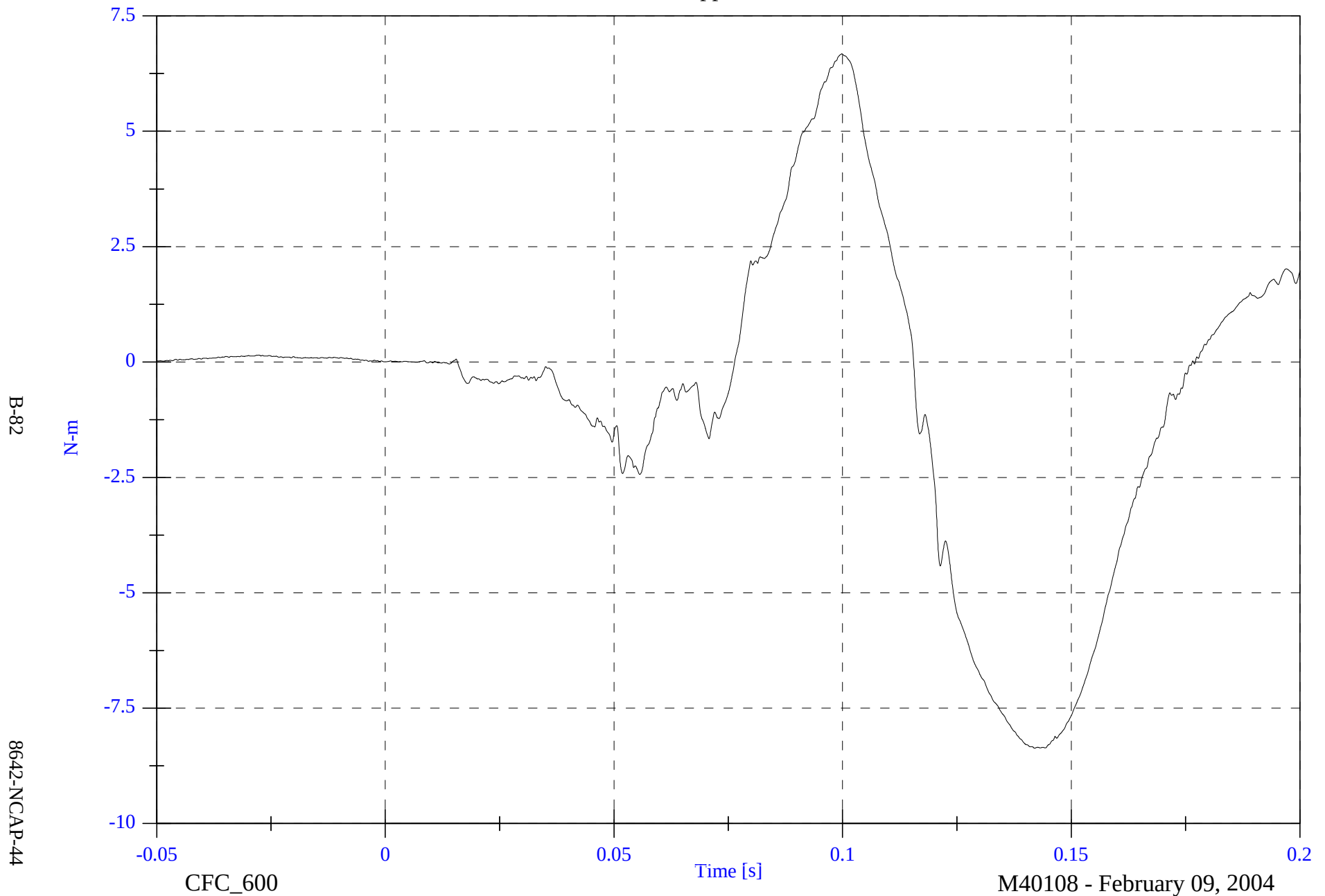


2004 NCAP Test 8 2004 Cadillac SRX

Max: 6.7 [N-m] at 0.100 [s]

Min: -8.4 [N-m] at 0.142 [s]

V1P2 Upper Neck Mz

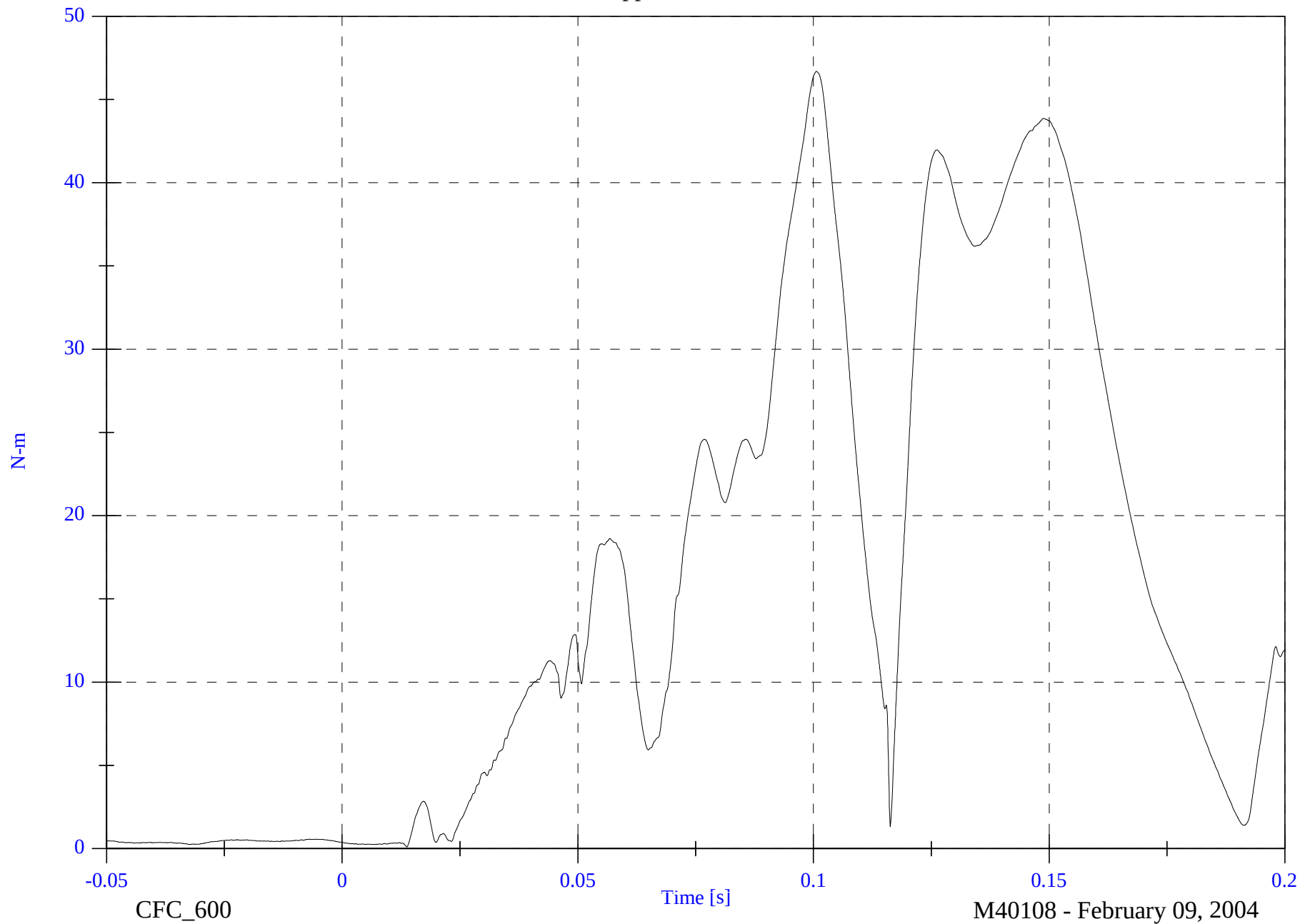


2004 NCAP Test 8 2004 Cadillac SRX

V1P2 Upper Neck M Resultant

Max: 46.7 [N-m] at 0.101 [s]

Min: 0.1 [N-m] at 0.014 [s]



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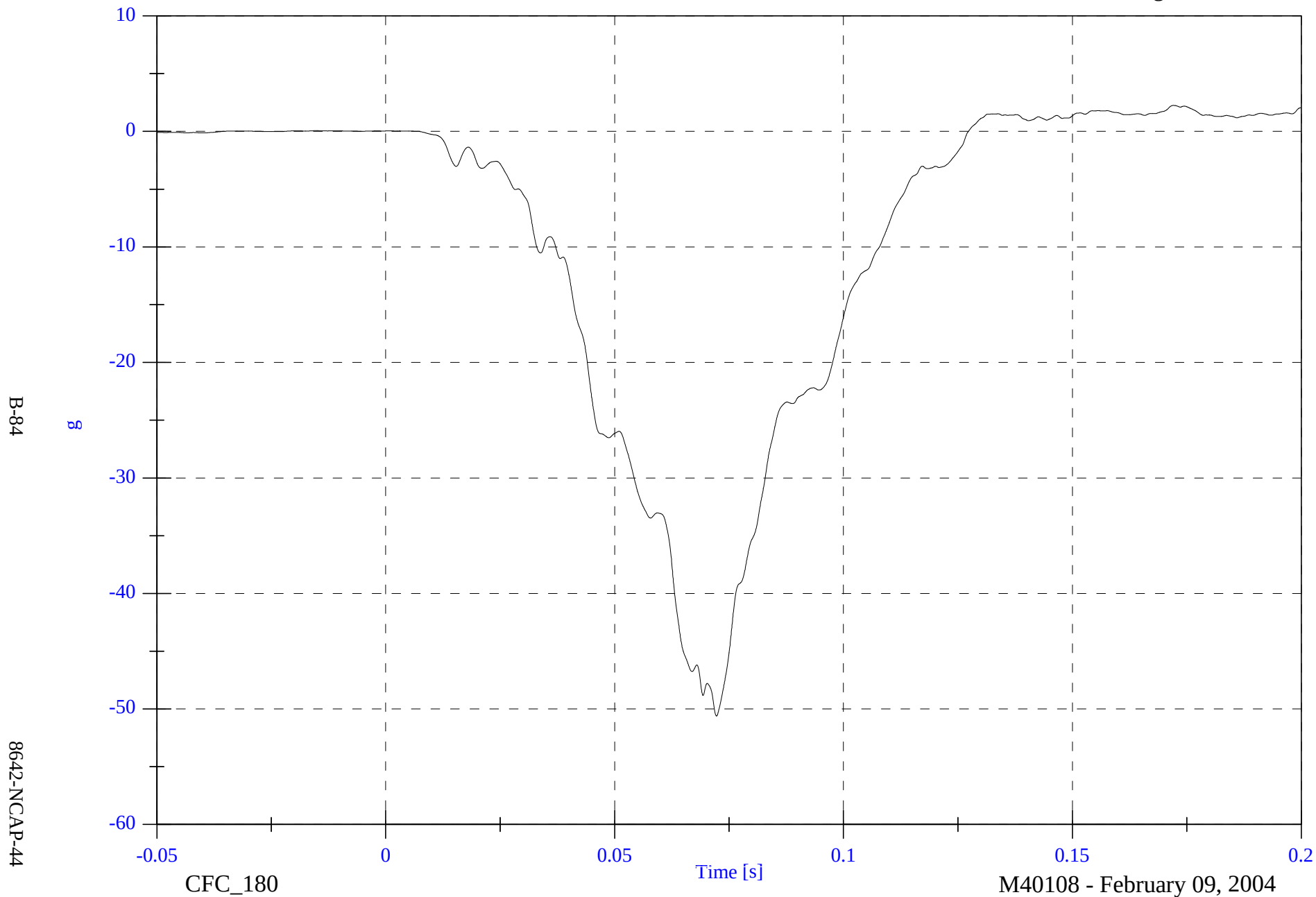
8642-NCAP-44

2004 NCAP Test 8 2004 Cadillac SRX

V1P2 Chest x

Max: 2.2 [g] at 0.172 [s]

Min: -50.6 [g] at 0.072 [s]

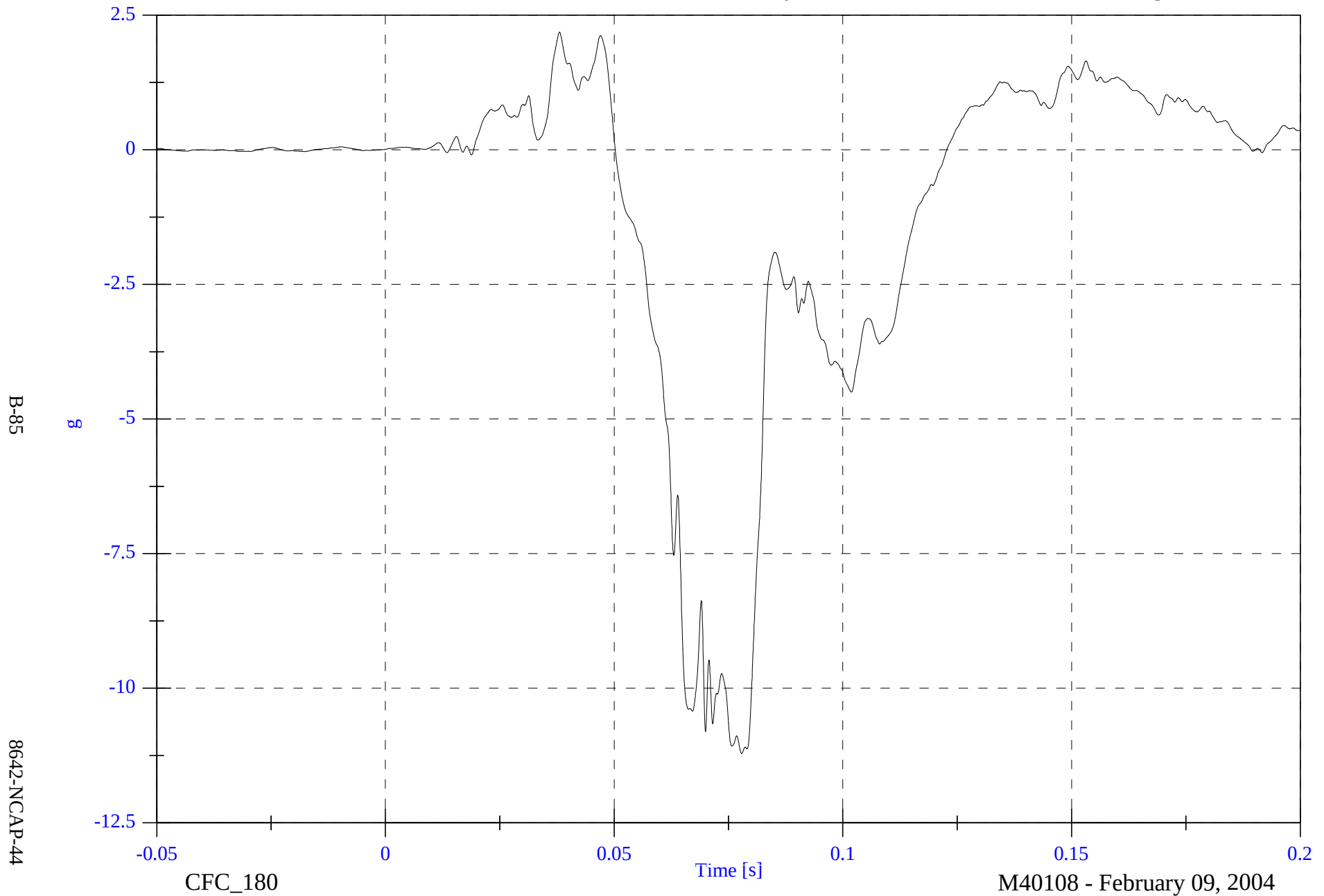


2004 NCAP Test 8 2004 Cadillac SRX

V1P2 Chest y

Max: 2.2 [g] at 0.038 [s]

Min: -11.2 [g] at 0.078 [s]

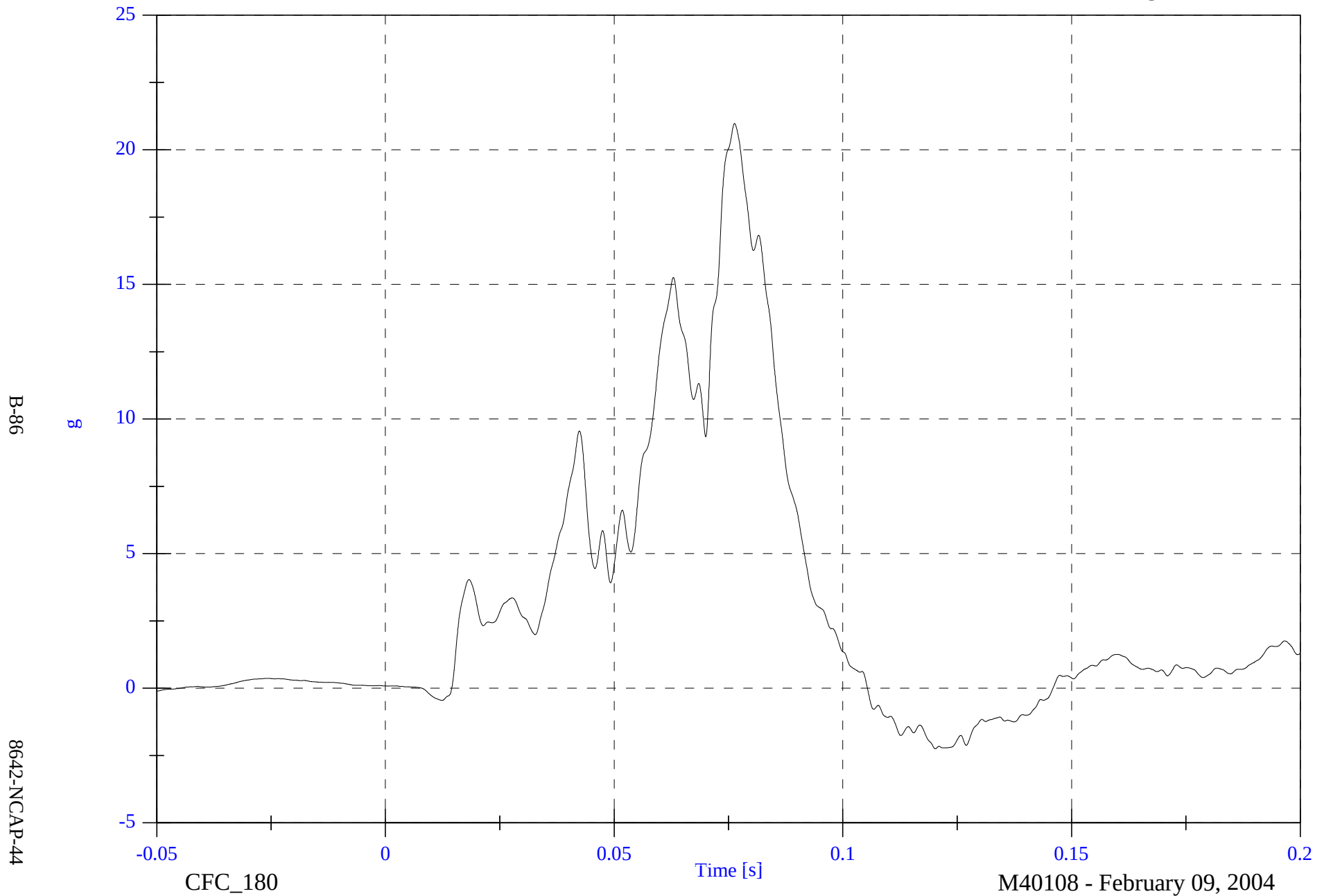


2004 NCAP Test 8 2004 Cadillac SRX

V1P2 Chest z

Max: 21.0 [g] at 0.076 [s]

Min: -2.2 [g] at 0.120 [s]



2004 NCAP Test 8 2004 Cadillac SRX

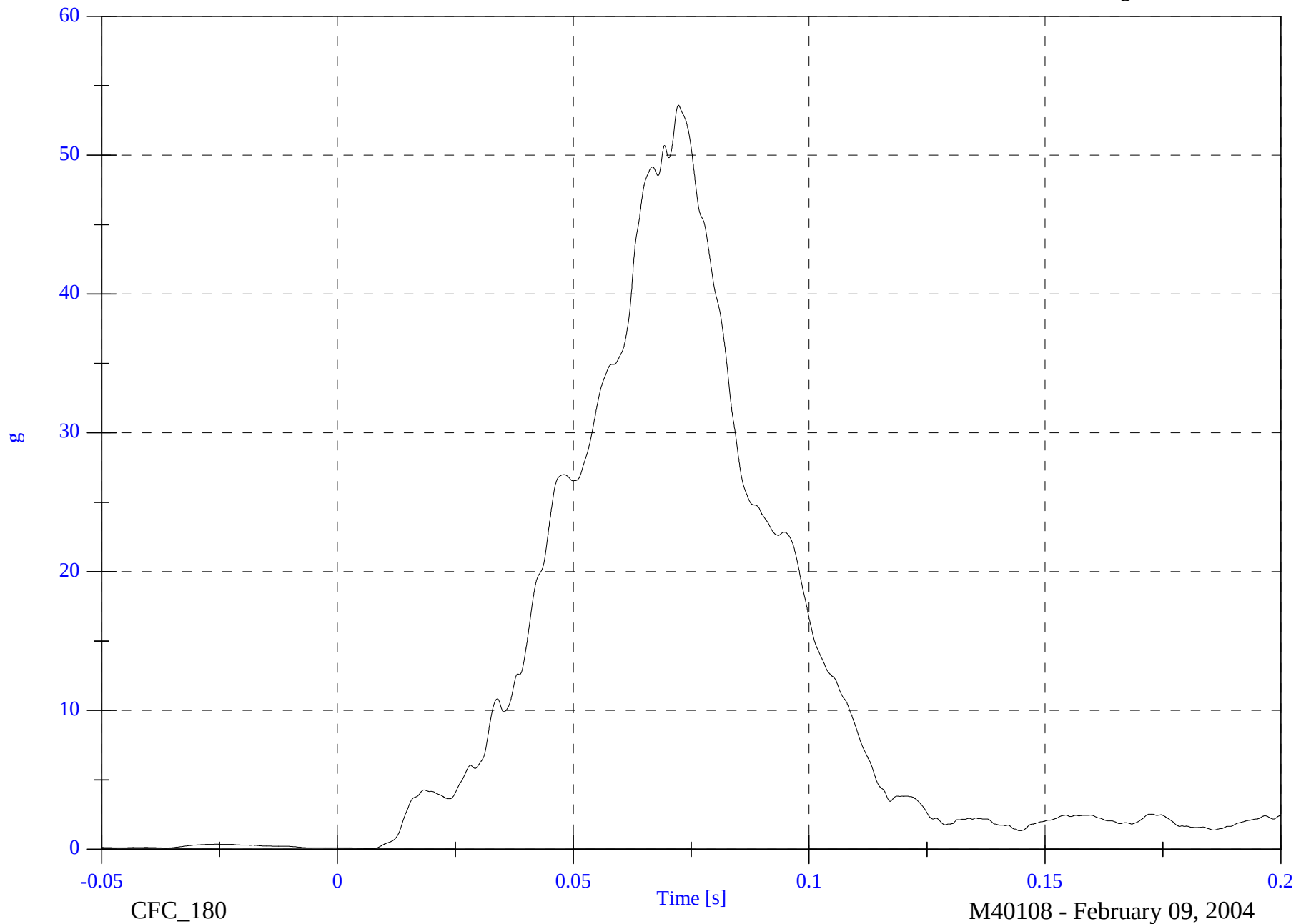
V1P2 Chest Resultant

Max: 53.6 [g] at 0.072 [s]

Min: 0.0 [g] at 0.007 [s]

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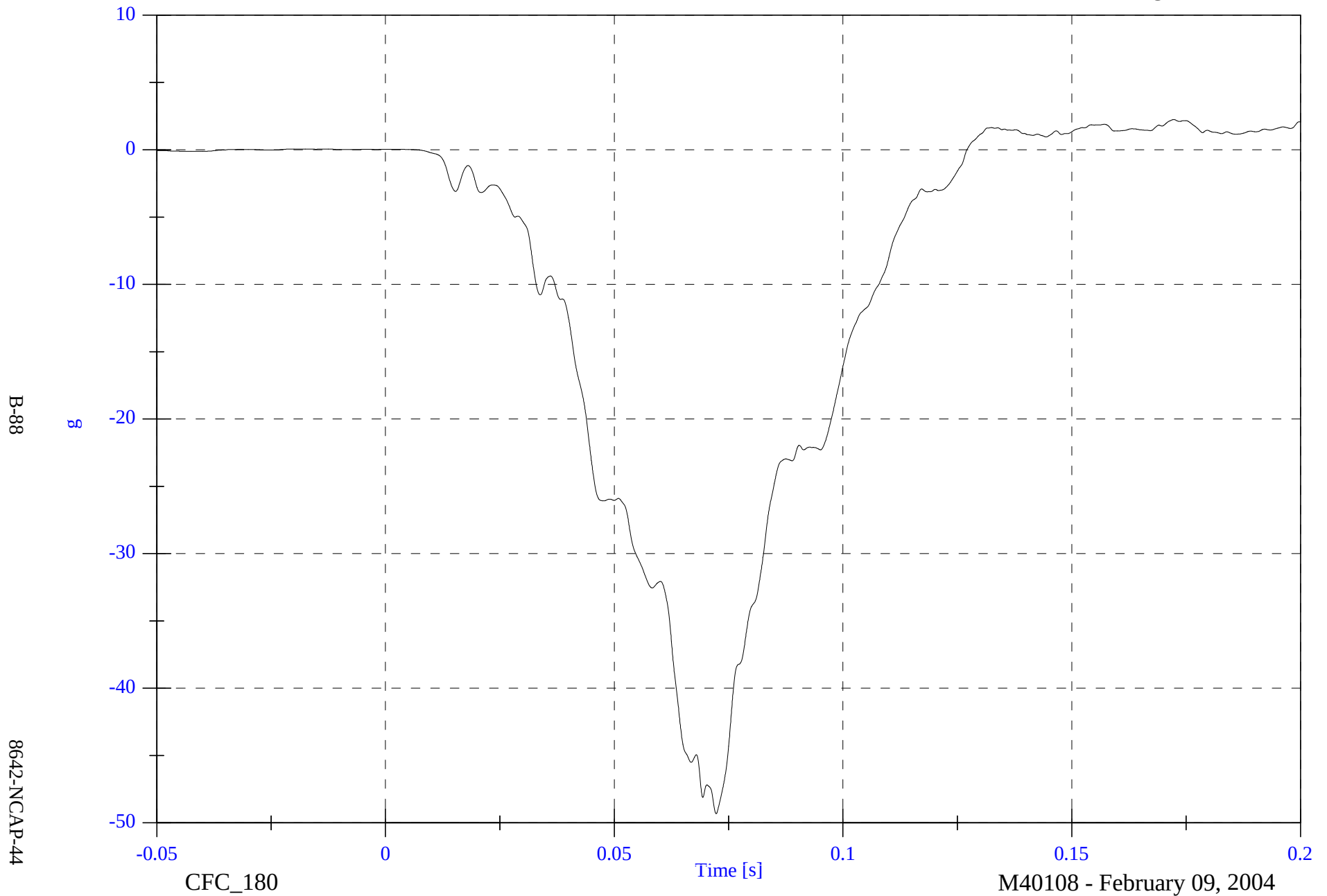


2004 NCAP Test 8 2004 Cadillac SRX

V1P2 Chest Red x

Max: 2.2 [g] at 0.172 [s]

Min: -49.3 [g] at 0.072 [s]

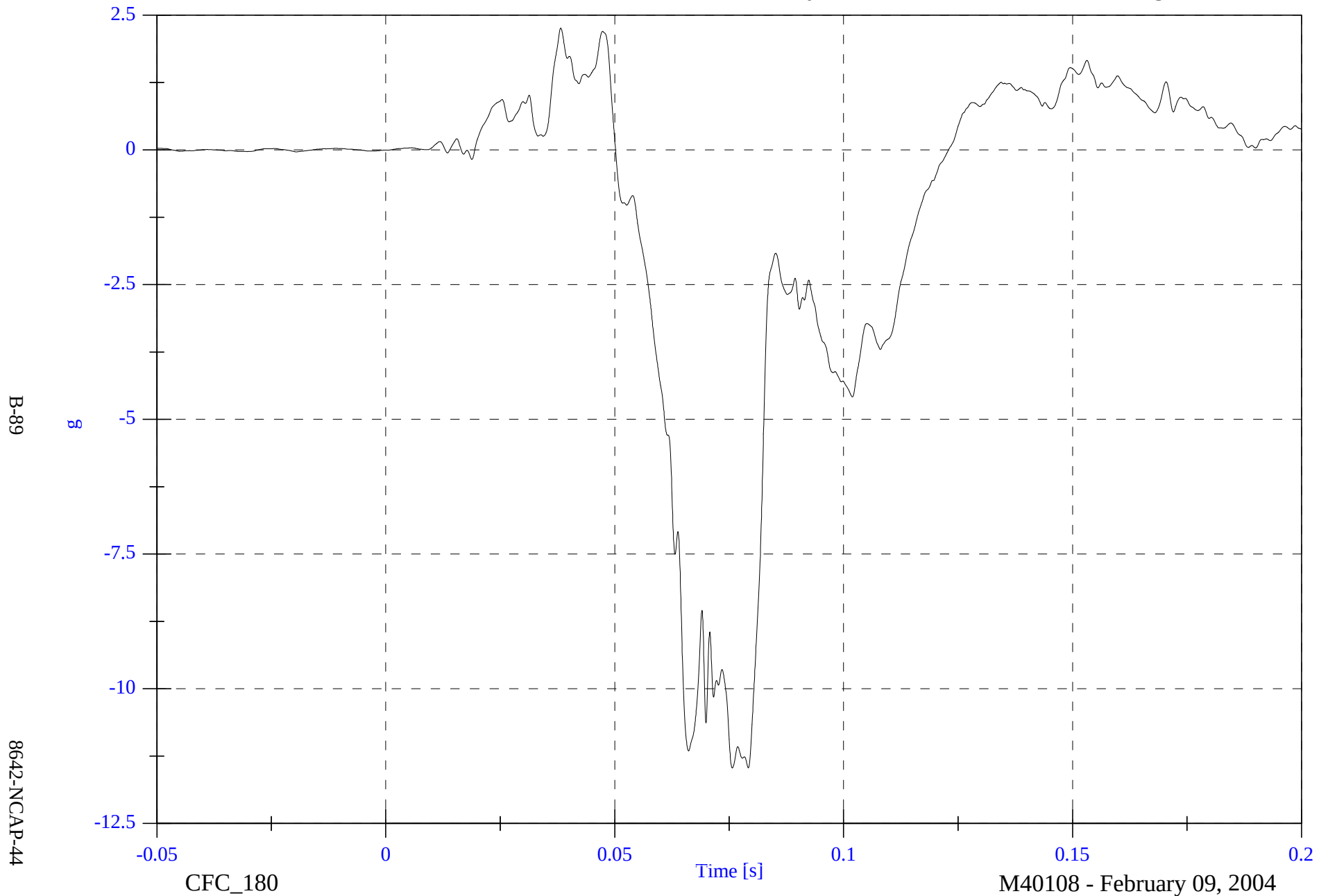


2004 NCAP Test 8 2004 Cadillac SRX

V1P2 Chest Red y

Max: 2.3 [g] at 0.038 [s]

Min: -11.5 [g] at 0.076 [s]

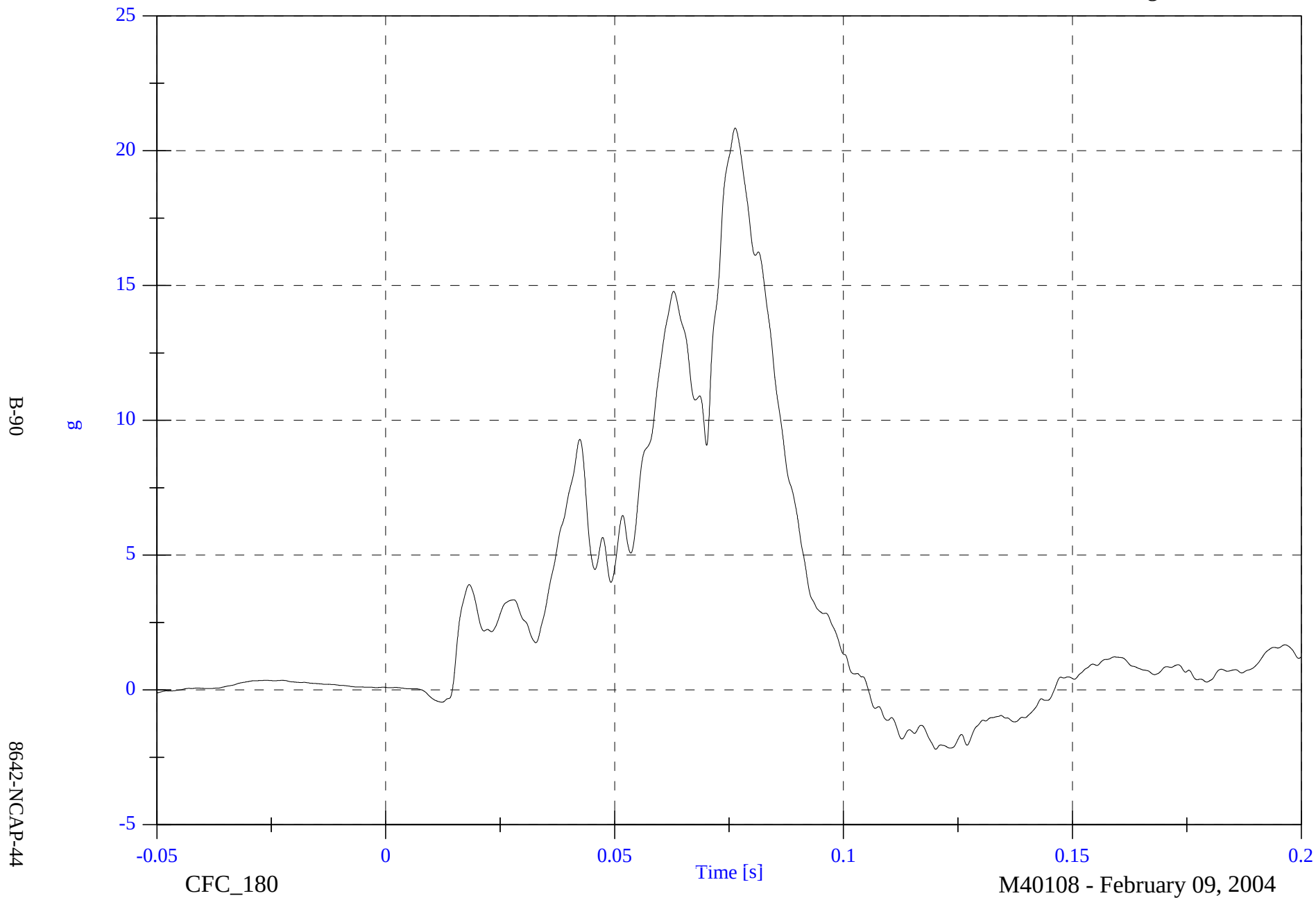


2004 NCAP Test 8 2004 Cadillac SRX

V1P2 Chest Red z

Max: 20.8 [g] at 0.076 [s]

Min: -2.2 [g] at 0.120 [s]



2004 NCAP Test 8 2004 Cadillac SRX

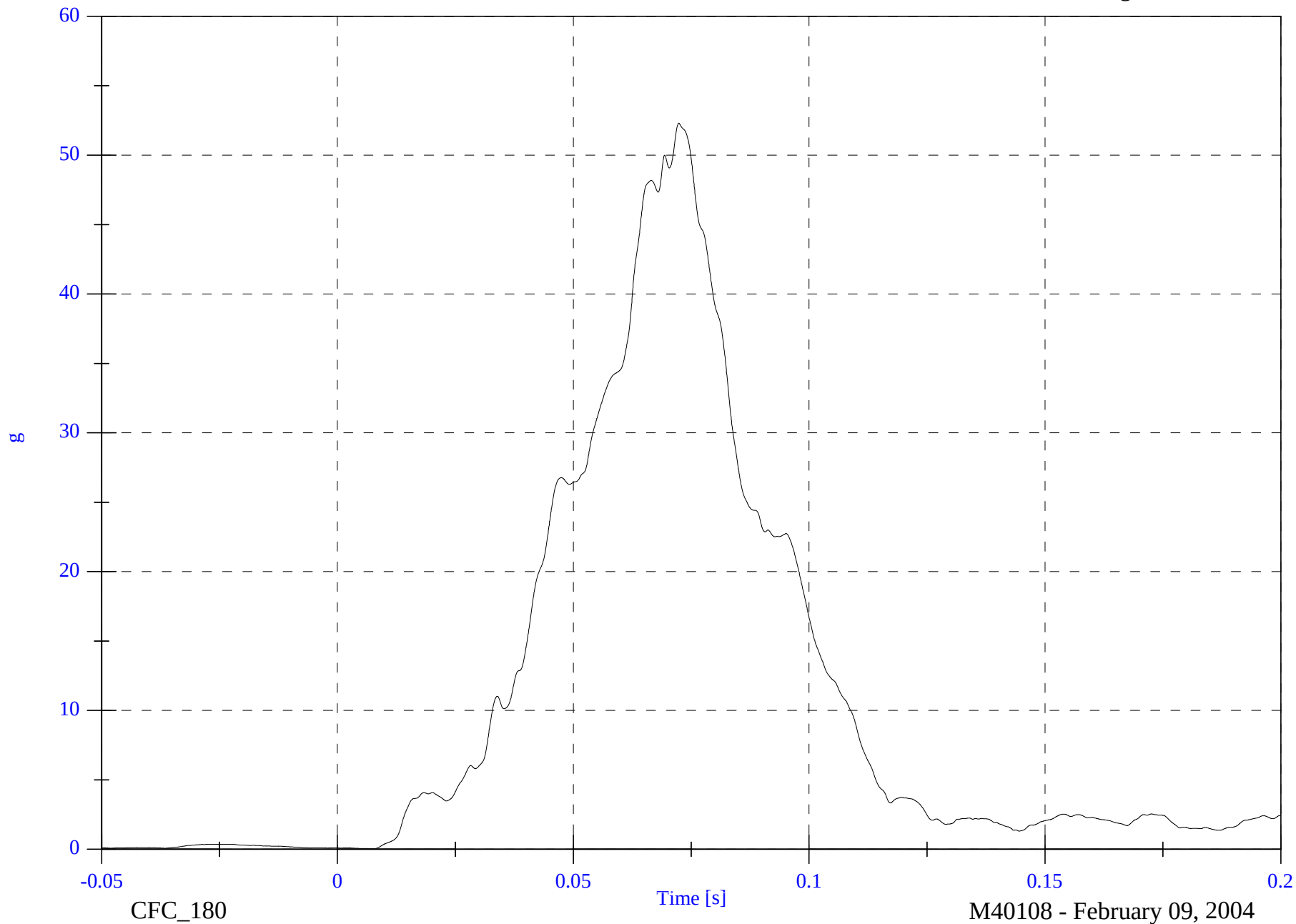
V1P2 Chest Red Resultant

Max: 52.3 [g] at 0.072 [s]

Min: 0.0 [g] at 0.007 [s]

B-91

8642-NCAP-44

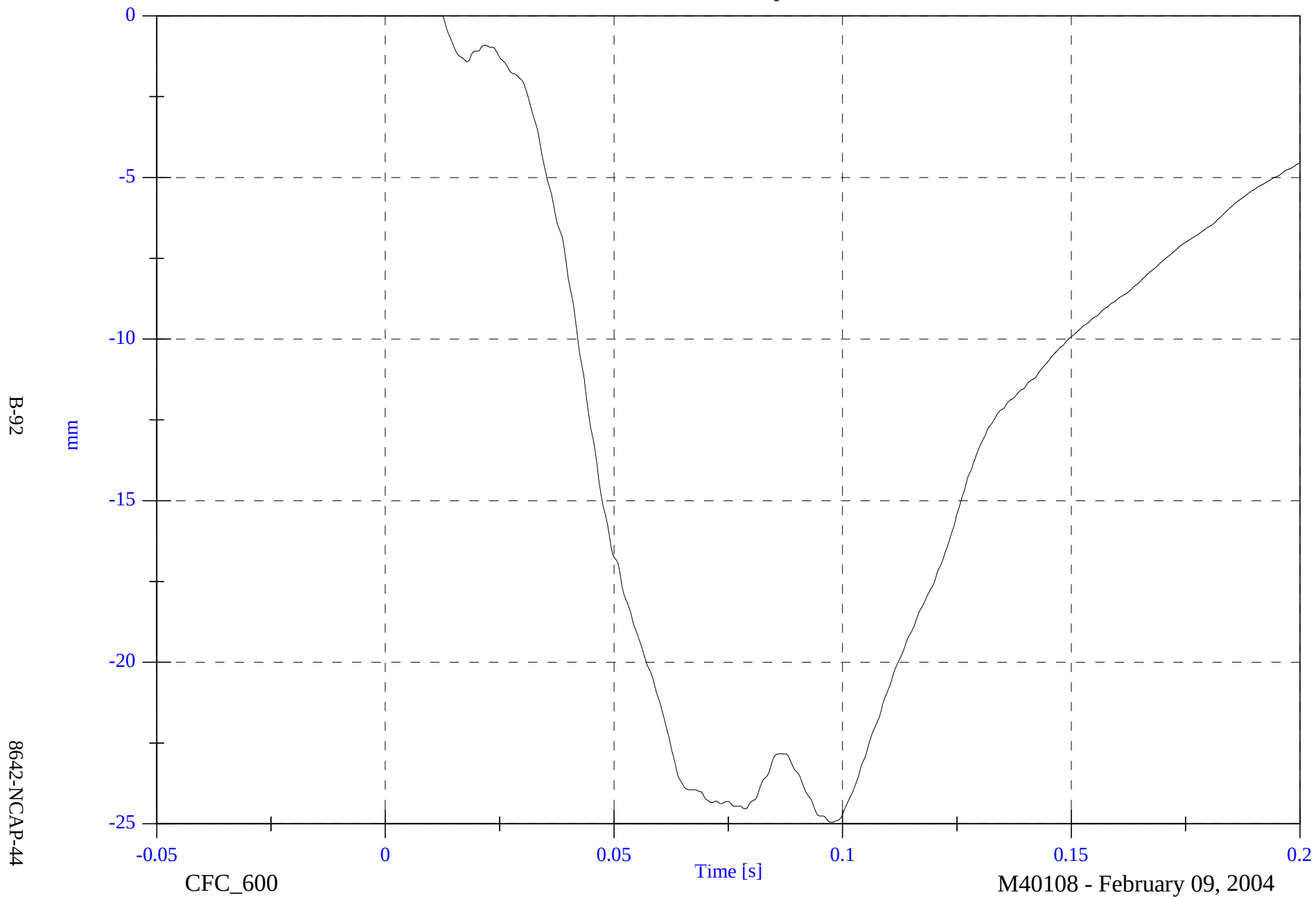


2004 NCAP Test 8 2004 Cadillac SRX

V1P2 Chest Compression

Max: 0.0 [mm] at -0.041 [s]

Min: -24.9 [mm] at 0.097 [s]



2004 NCAP Test 8 2004 Cadillac SRX

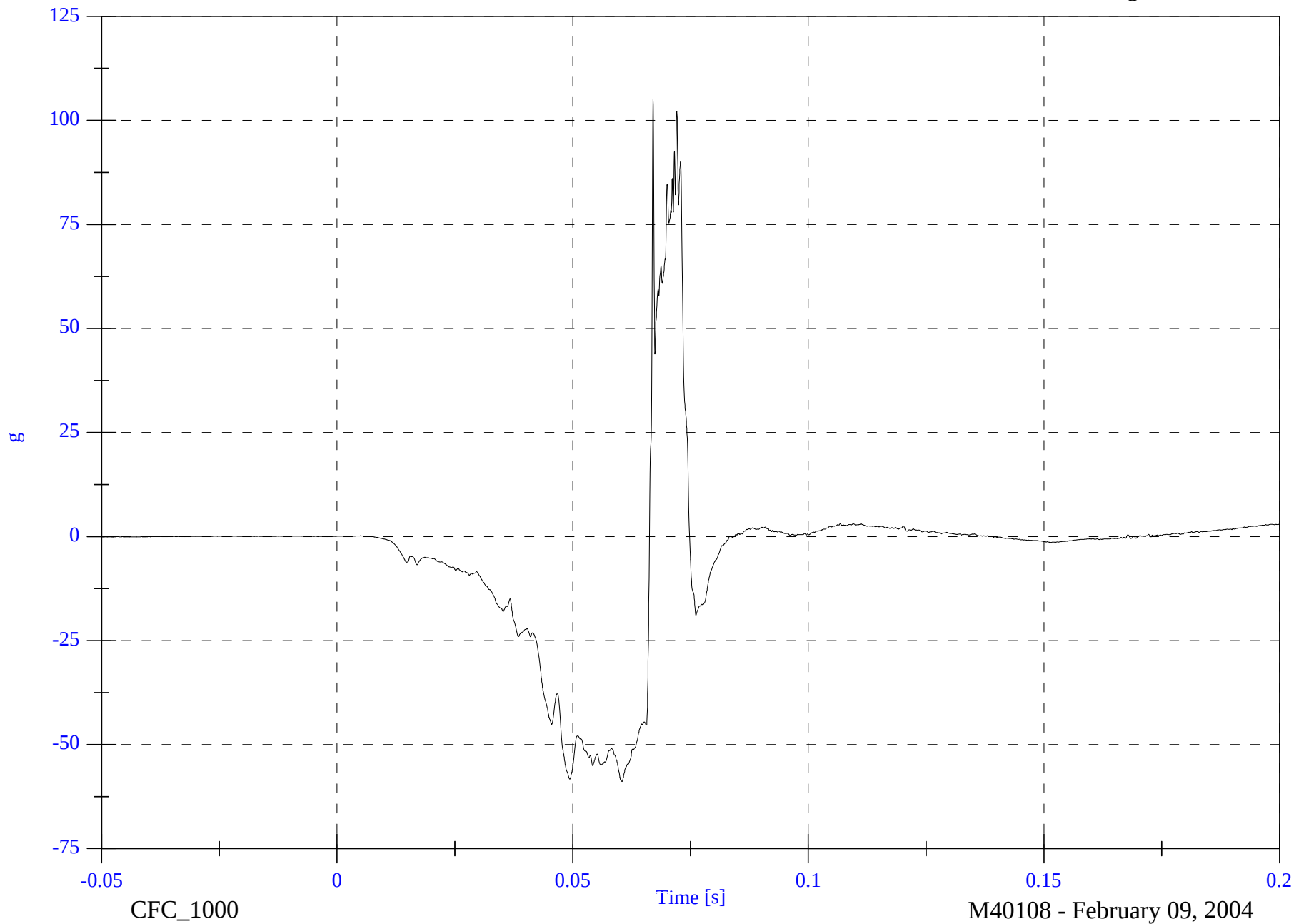
Max: 105.0 [g] at 0.067 [s]

Min: -58.9 [g] at 0.060 [s]

V1P2 Pelvic x

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8642-NCAP-44



2004 NCAP Test 8 2004 Cadillac SRX

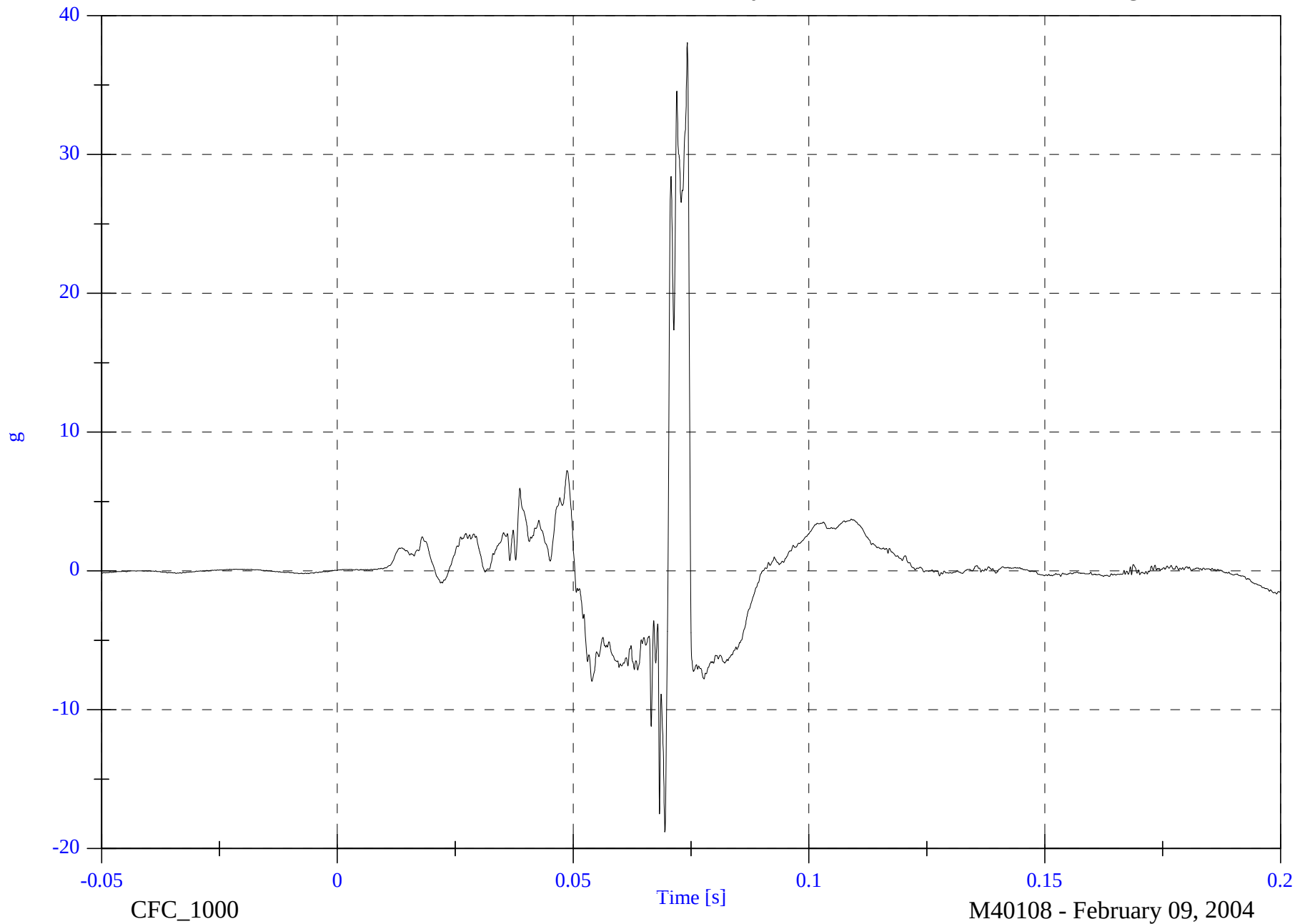
V1P2 Pelvic y

Max: 38.1 [g] at 0.074 [s]

Min: -18.8 [g] at 0.069 [s]

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8642-NCAP-44



2004 NCAP Test 8 2004 Cadillac SRX

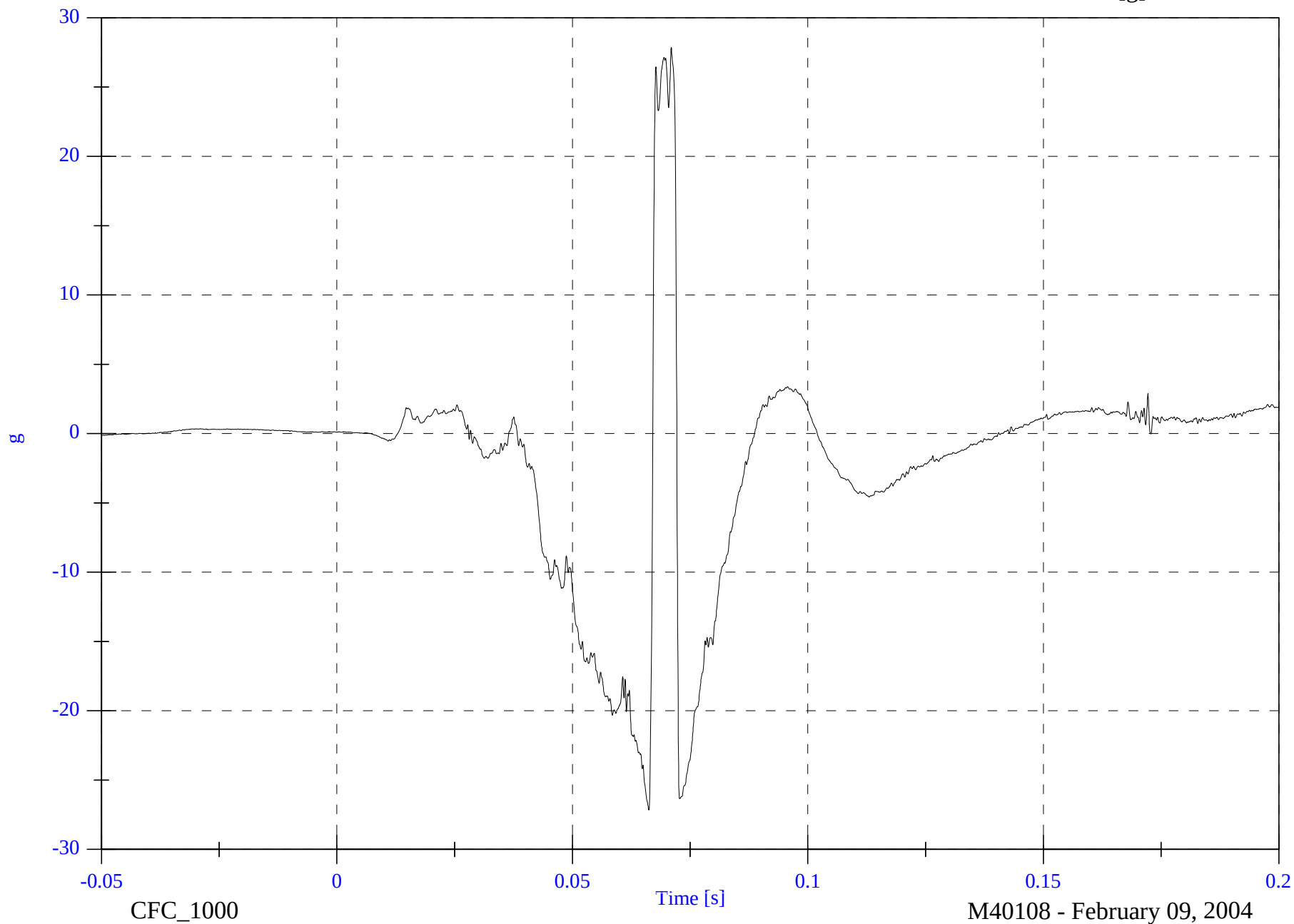
V1P2 Pelvic z

Max: 27.9 [g] at 0.071 [s]

Min: -27.2 [g] at 0.066 [s]

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2004 NCAP Test 8 2004 Cadillac SRX

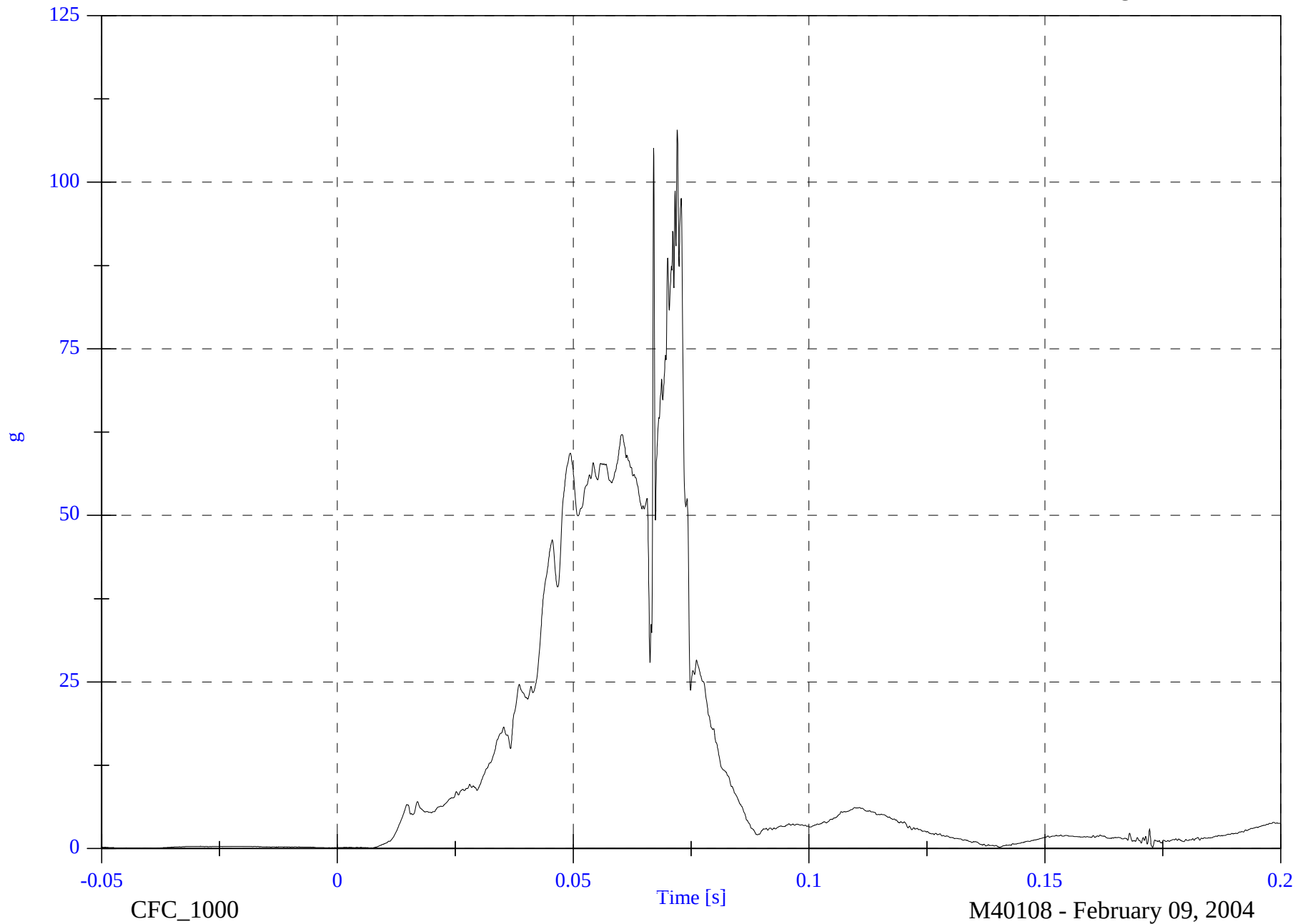
V1P2 Pelvic Resultant

Max: 107.9 [g] at 0.072 [s]

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

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8642-NCAP-44

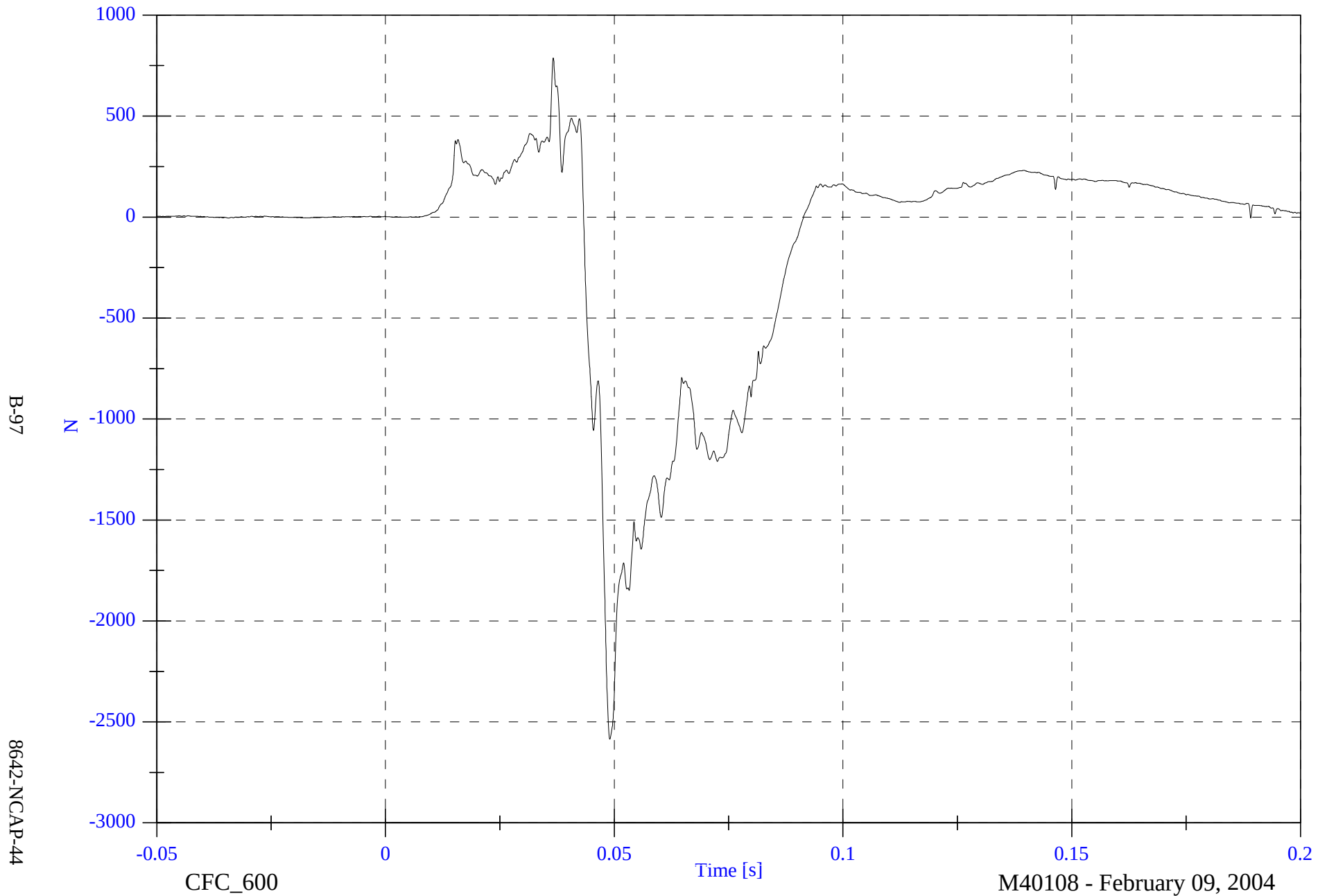


2004 NCAP Test 8 2004 Cadillac SRX

V1P2 Left Femur

Max: 788.3 [N] at 0.037 [s]

Min: -2586.1 [N] at 0.049 [s]

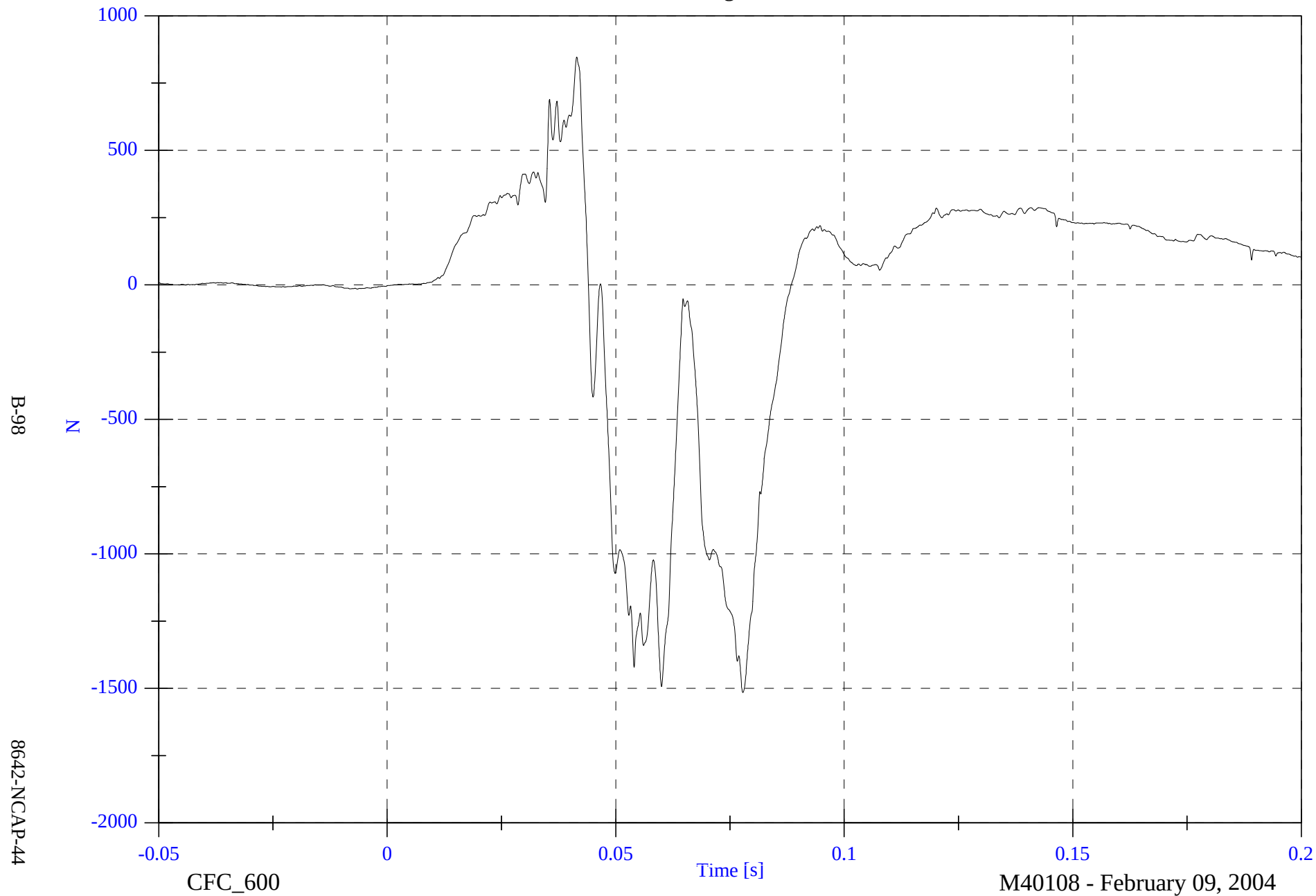


2004 NCAP Test 8 2004 Cadillac SRX

V1P2 Right Femur

Max: 847.1 [N] at 0.041 [s]

Min: -1515.4 [N] at 0.078 [s]

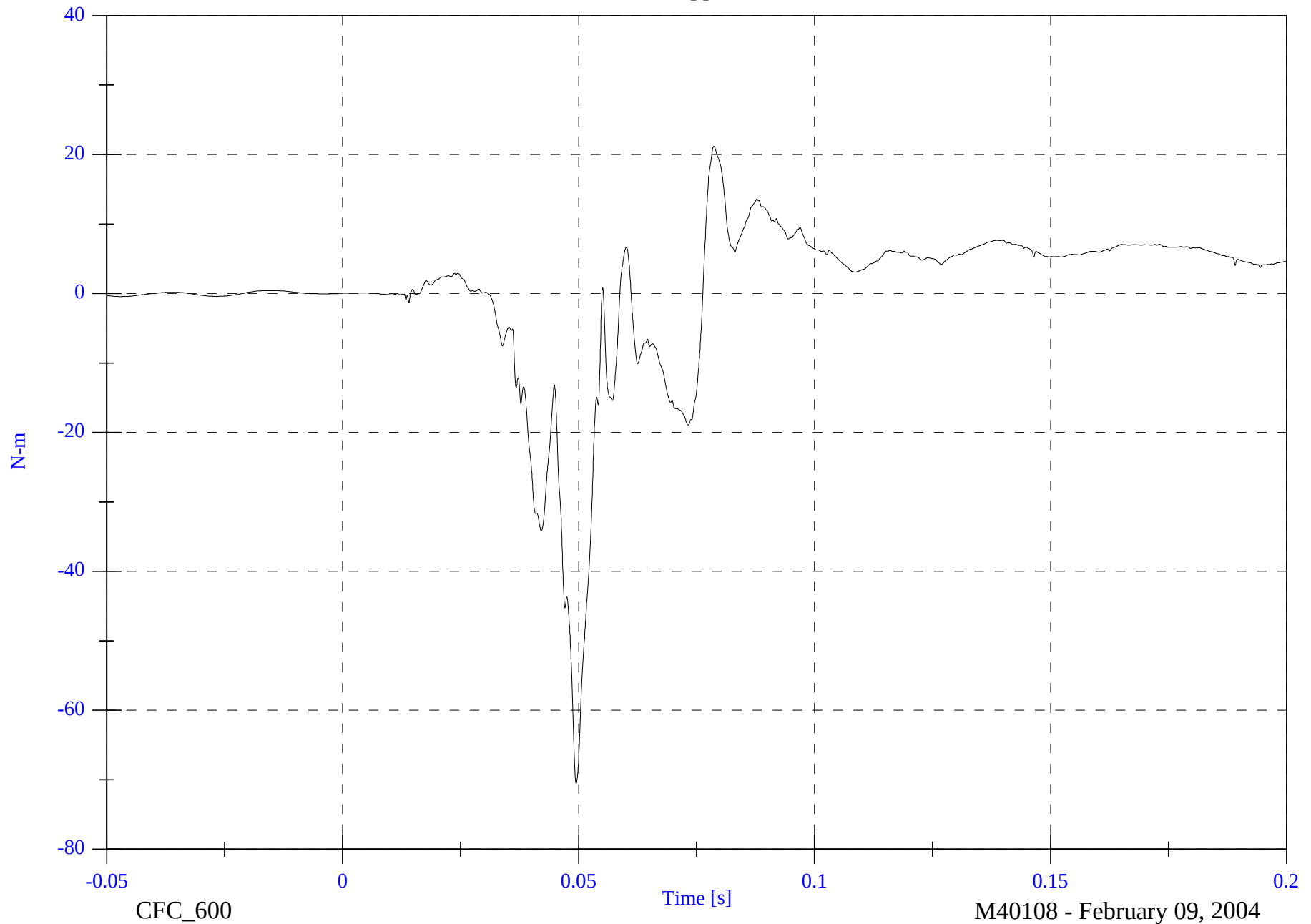


2004 NCAP Test 8 2004 Cadillac SRX

V1P2 Left Upper Tibia Mx

Max: 21.2 [N-m] at 0.079 [s]

Min: -70.5 [N-m] at 0.049 [s]



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CFC_600

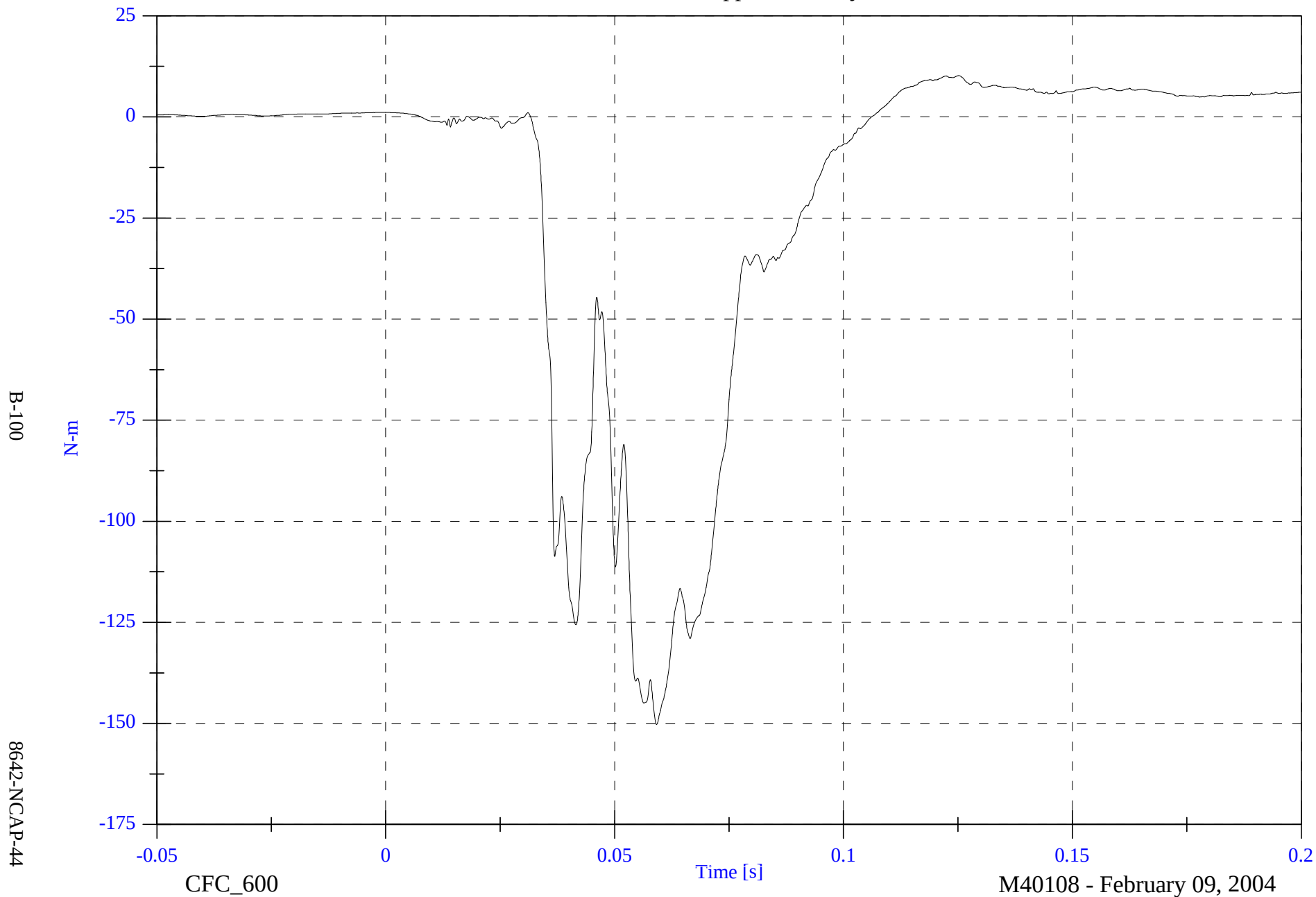
M40108 - February 09, 2004

2004 NCAP Test 8 2004 Cadillac SRX

V1P2 Left Upper Tibia My

Max: 10.2 [N-m] at 0.125 [s]

Min: -150.3 [N-m] at 0.059 [s]

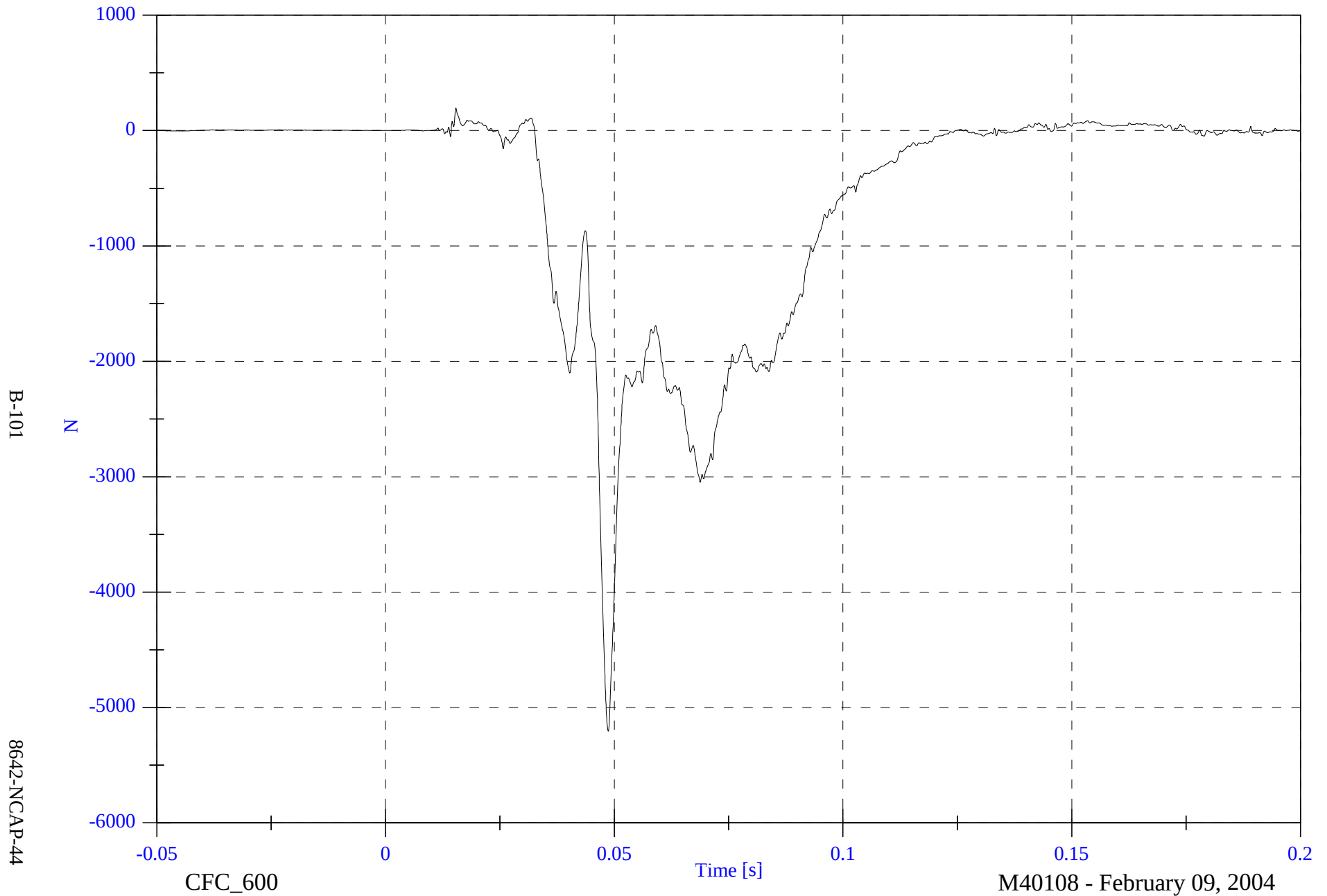


2004 NCAP Test 8 2004 Cadillac SRX

V1P2 Left Lower Tibia Fz

Max: 195.1 [N] at 0.015 [s]

Min: -5205.1 [N] at 0.049 [s]

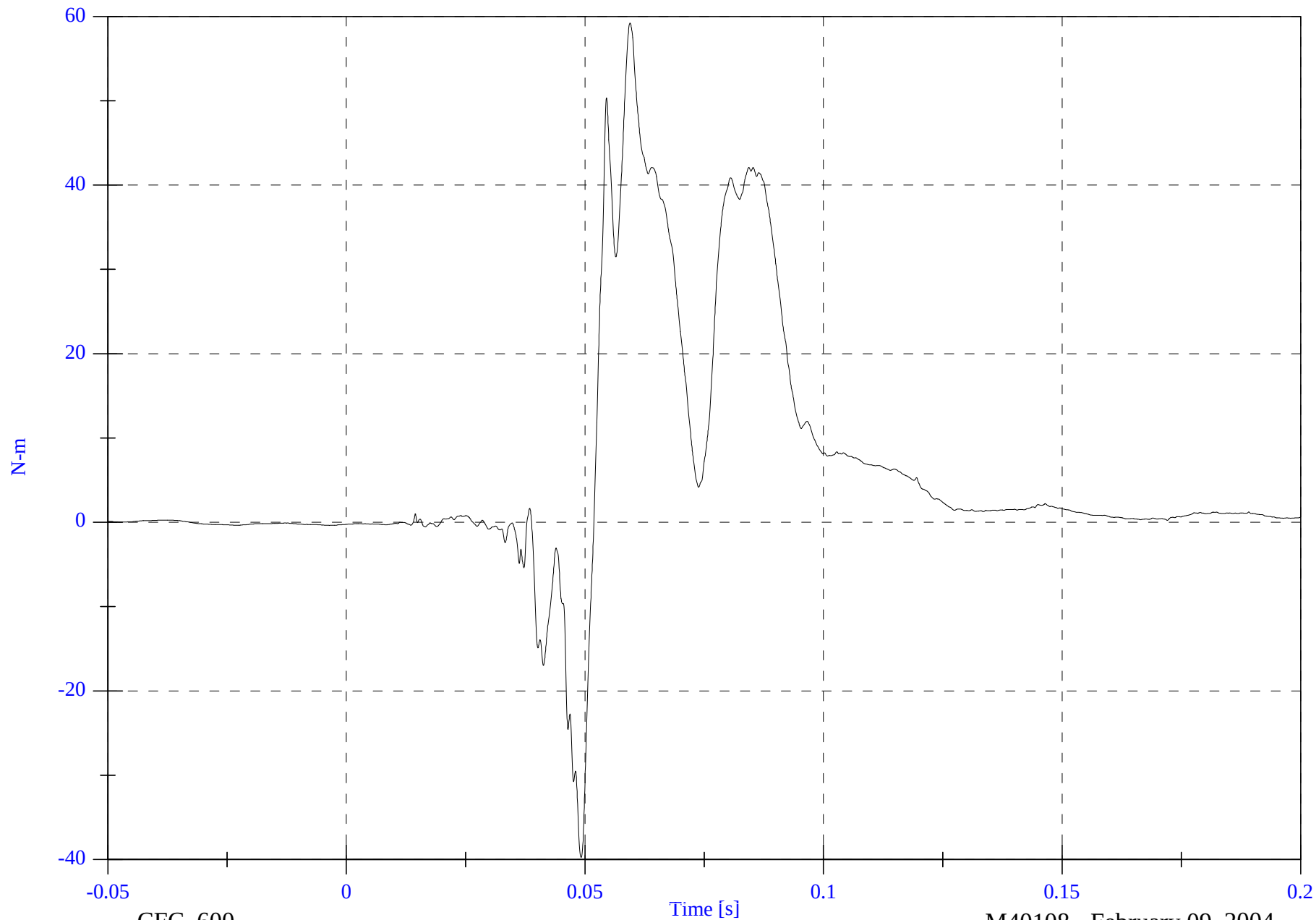


2004 NCAP Test 8 2004 Cadillac SRX

V1P2 Left Lower Tibia Mx

Max: 59.2 [N-m] at 0.059 [s]

Min: -39.7 [N-m] at 0.049 [s]



B-102

8642-NCAP-44

CFC_600

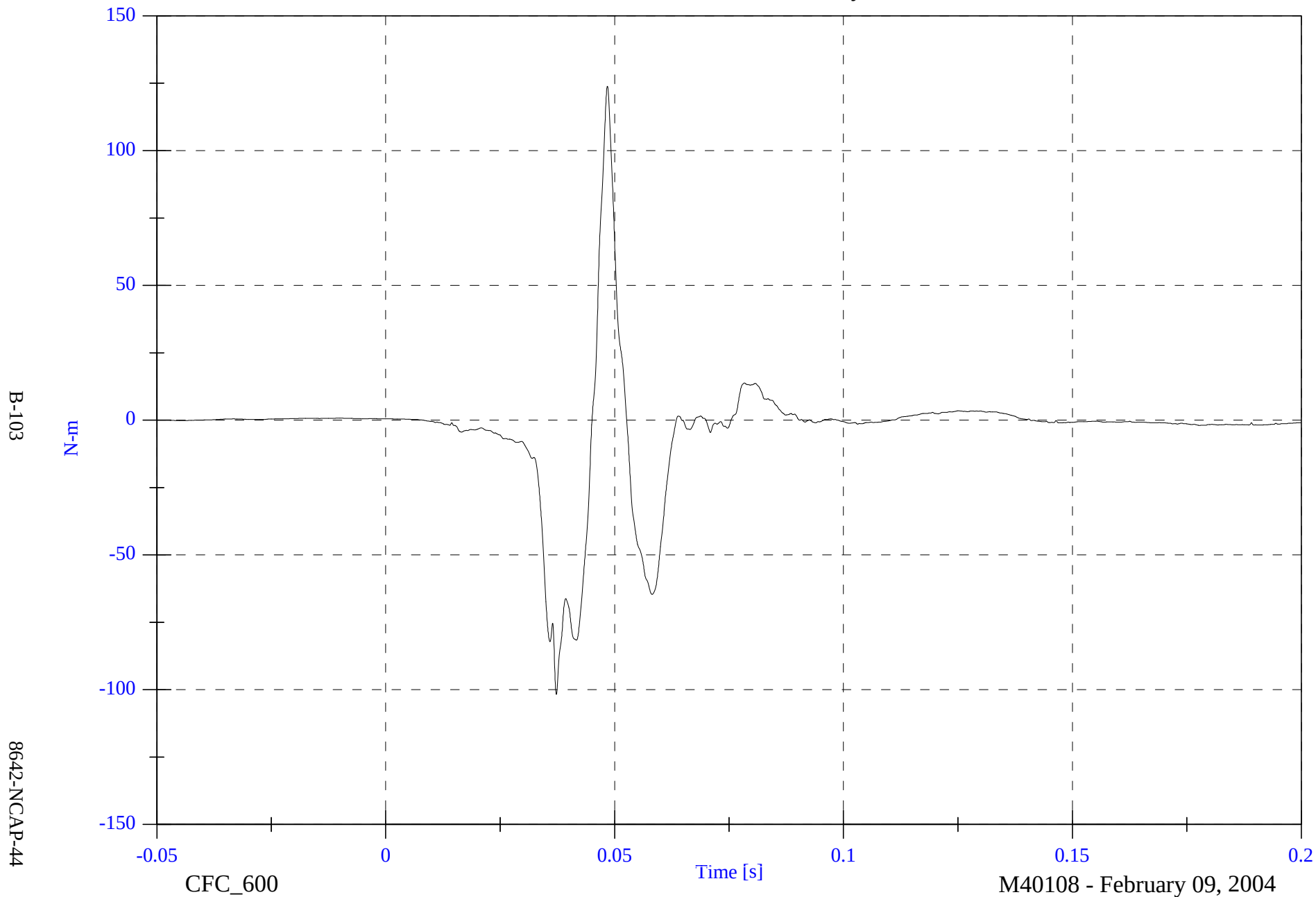
M40108 - February 09, 2004

2004 NCAP Test 8 2004 Cadillac SRX

Max: 123.9 [N-m] at 0.048 [s]

Min: -101.7 [N-m] at 0.037 [s]

V1P2 Left Lower Tibia My



2004 NCAP Test 8 2004 Cadillac SRX

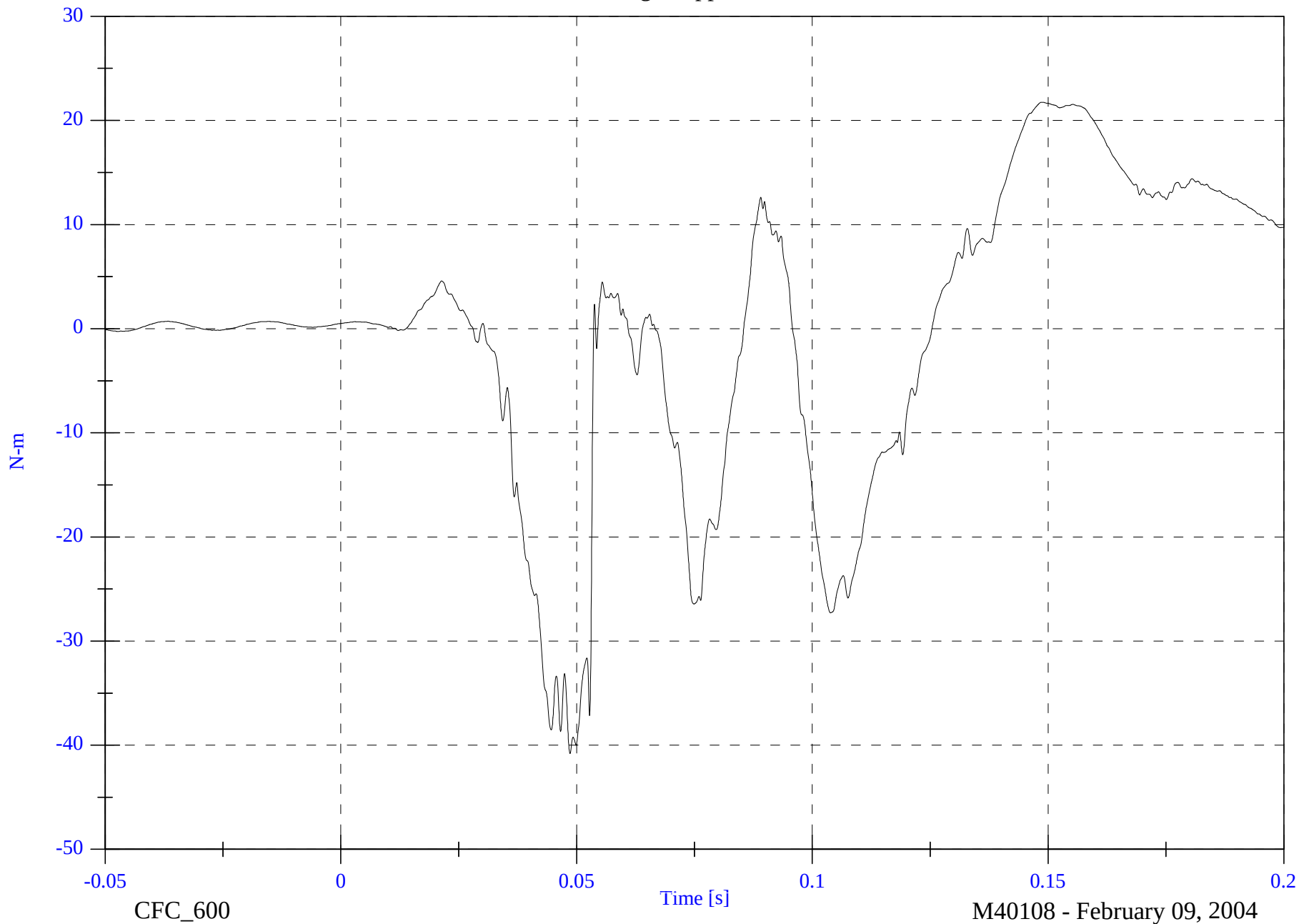
V1P2 Right Upper Tibia Mx

Max: 21.7 [N-m] at 0.149 [s]

Min: -40.8 [N-m] at 0.049 [s]

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8642-NCAP-44

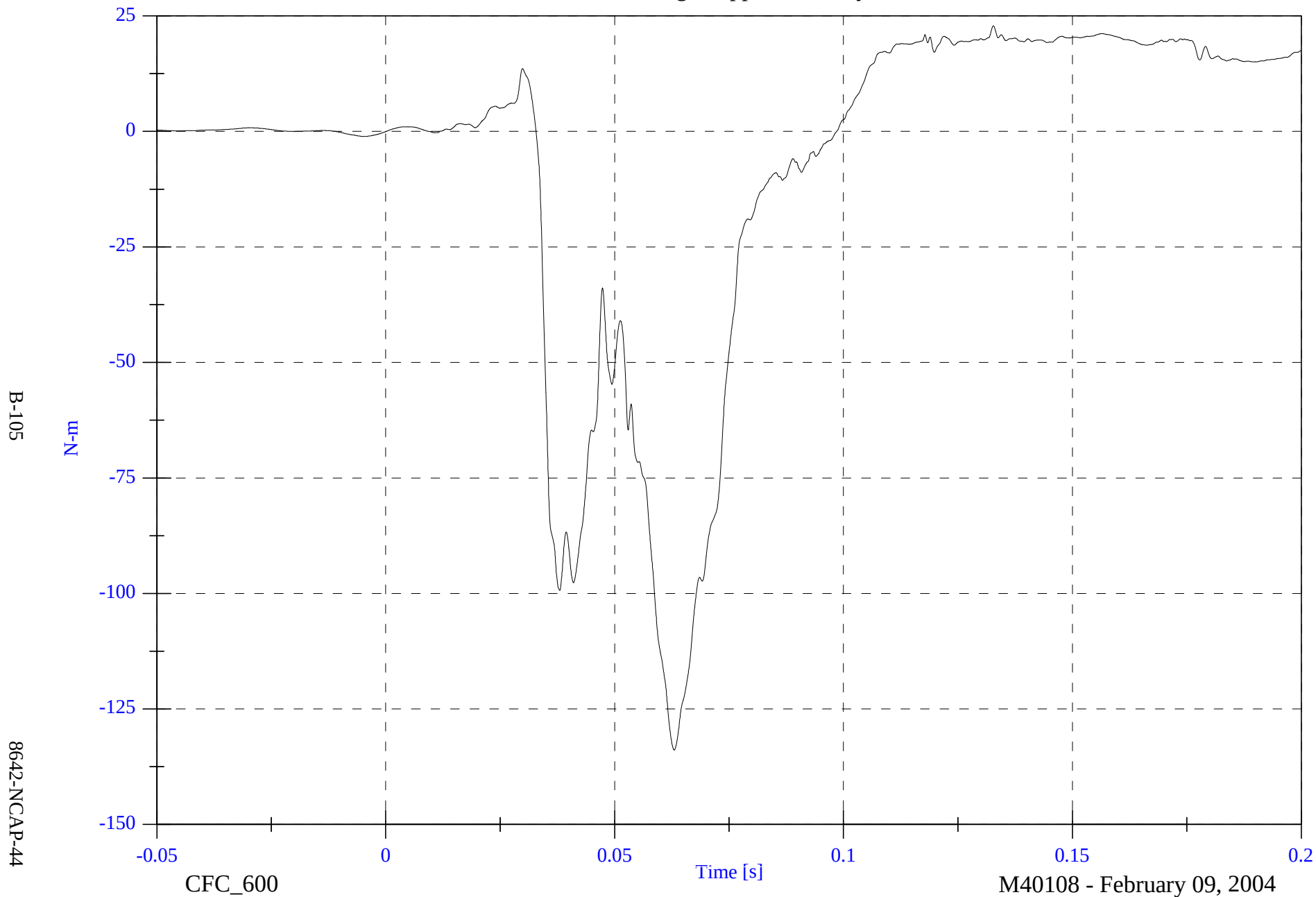


2004 NCAP Test 8 2004 Cadillac SRX

V1P2 Right Upper Tibia My

Max: 22.8 [N-m] at 0.133 [s]

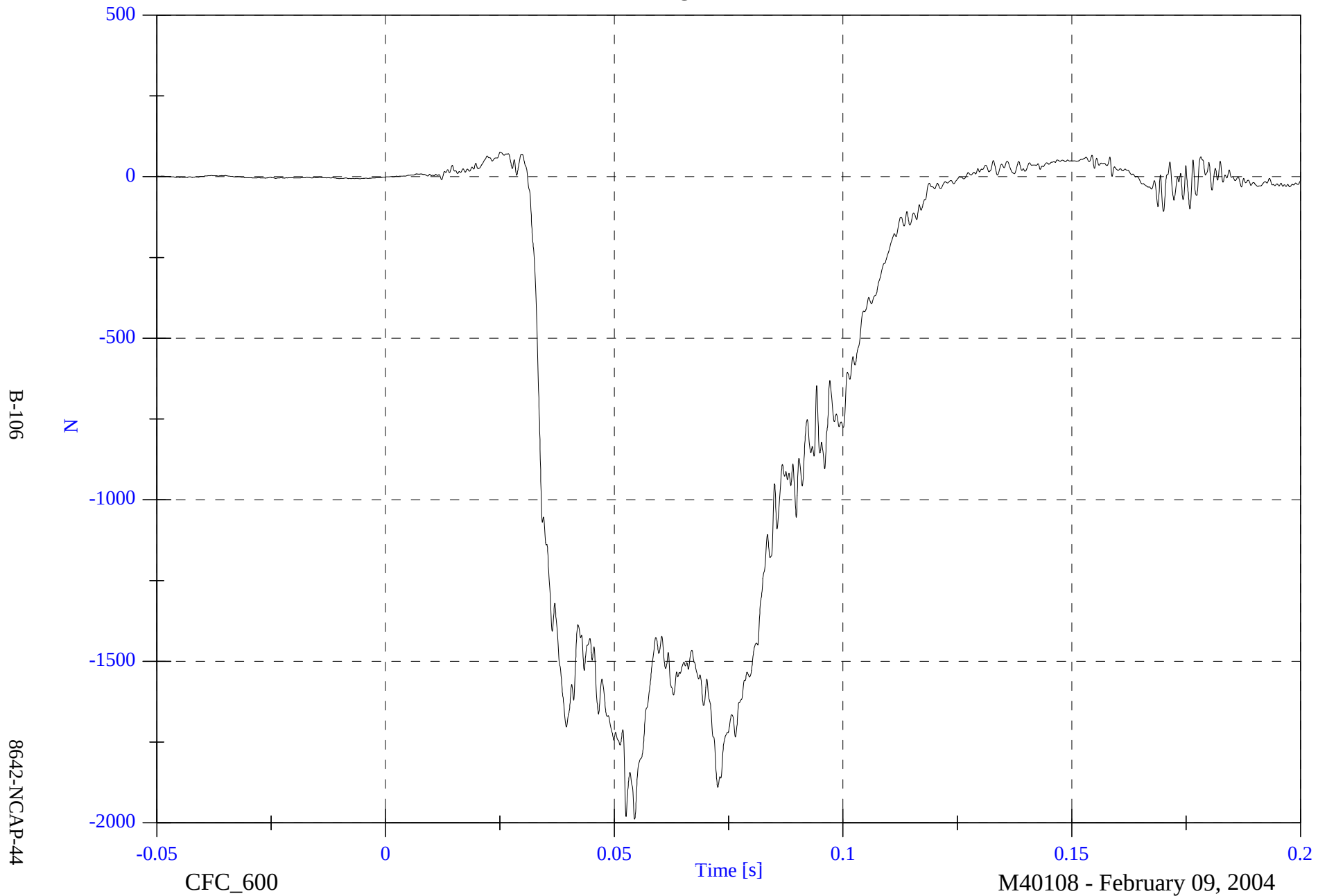
Min: -133.9 [N-m] at 0.063 [s]



2004 NCAP Test 8 2004 Cadillac SRX

V1P2 Right Lower Tibia Fz

Max: 76.0 [N] at 0.025 [s]
Min: -1989.1 [N] at 0.054 [s]

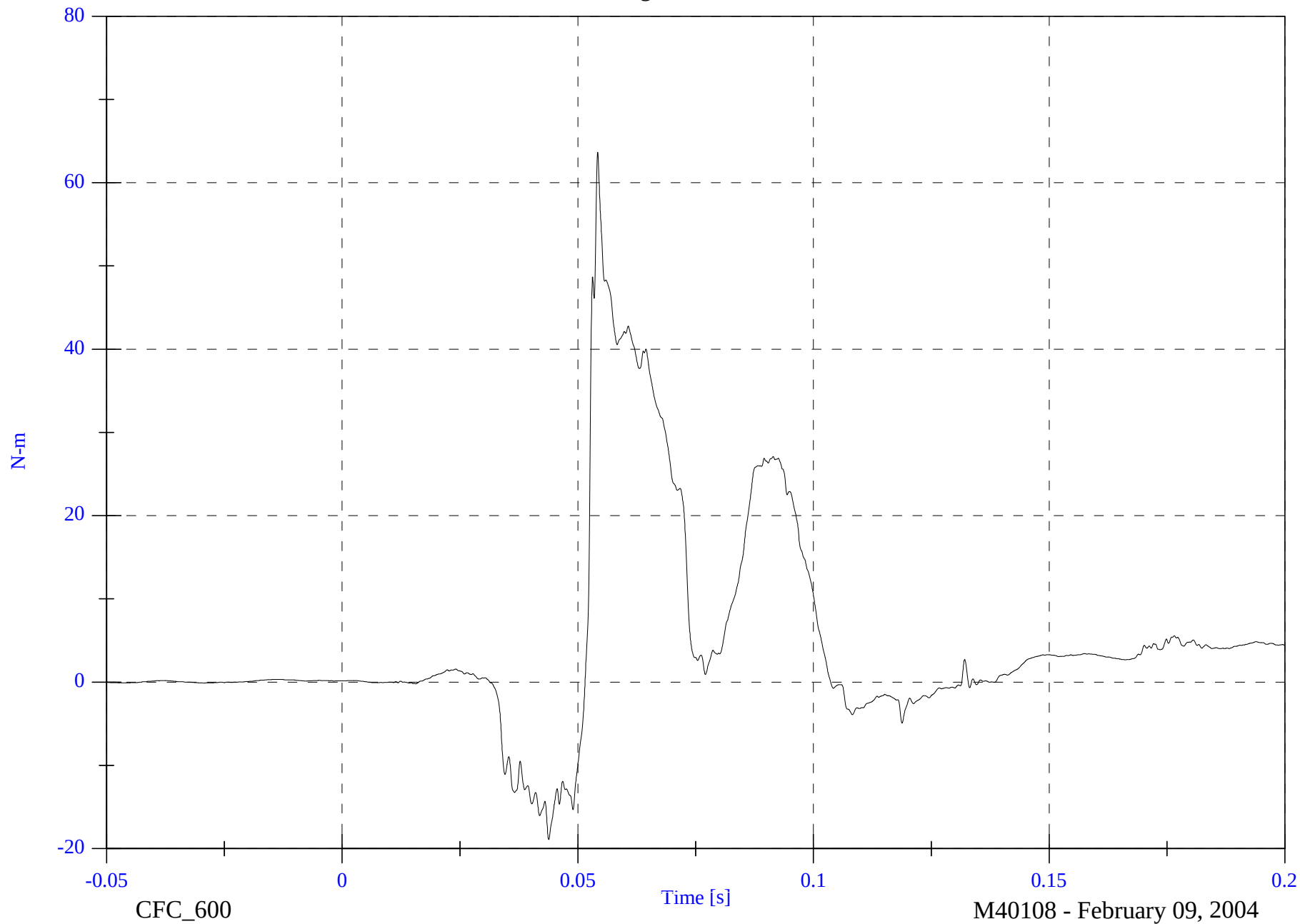


2004 NCAP Test 8 2004 Cadillac SRX

Max: 63.7 [N-m] at 0.054 [s]

V1P2 Right Lower Tibia Mx

Min: -18.9 [N-m] at 0.044 [s]



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8642-NCAP-44

CFC_600

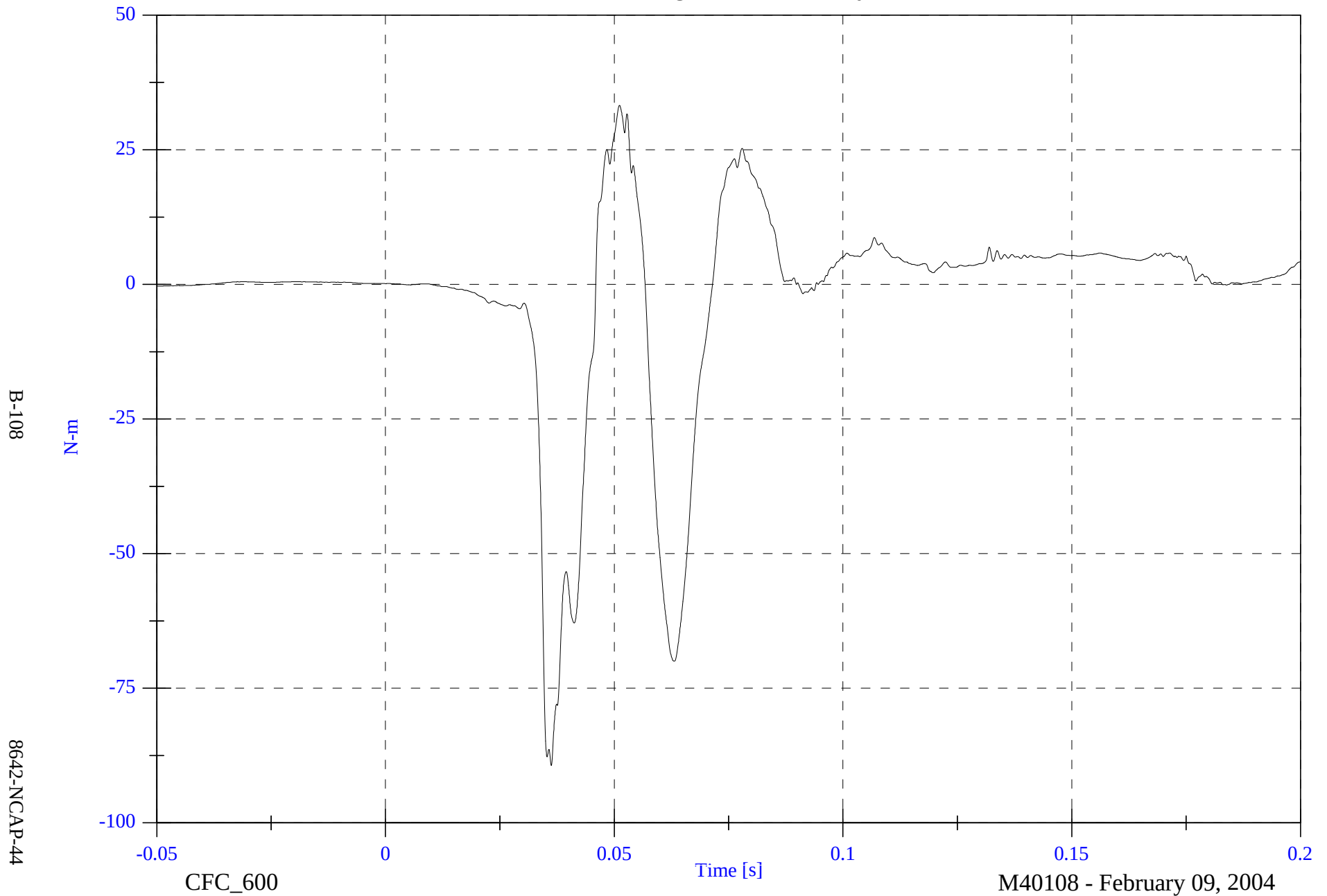
M40108 - February 09, 2004

2004 NCAP Test 8 2004 Cadillac SRX

V1P2 Right Lower Tibia My

Max: 33.2 [N-m] at 0.051 [s]

Min: -89.4 [N-m] at 0.036 [s]

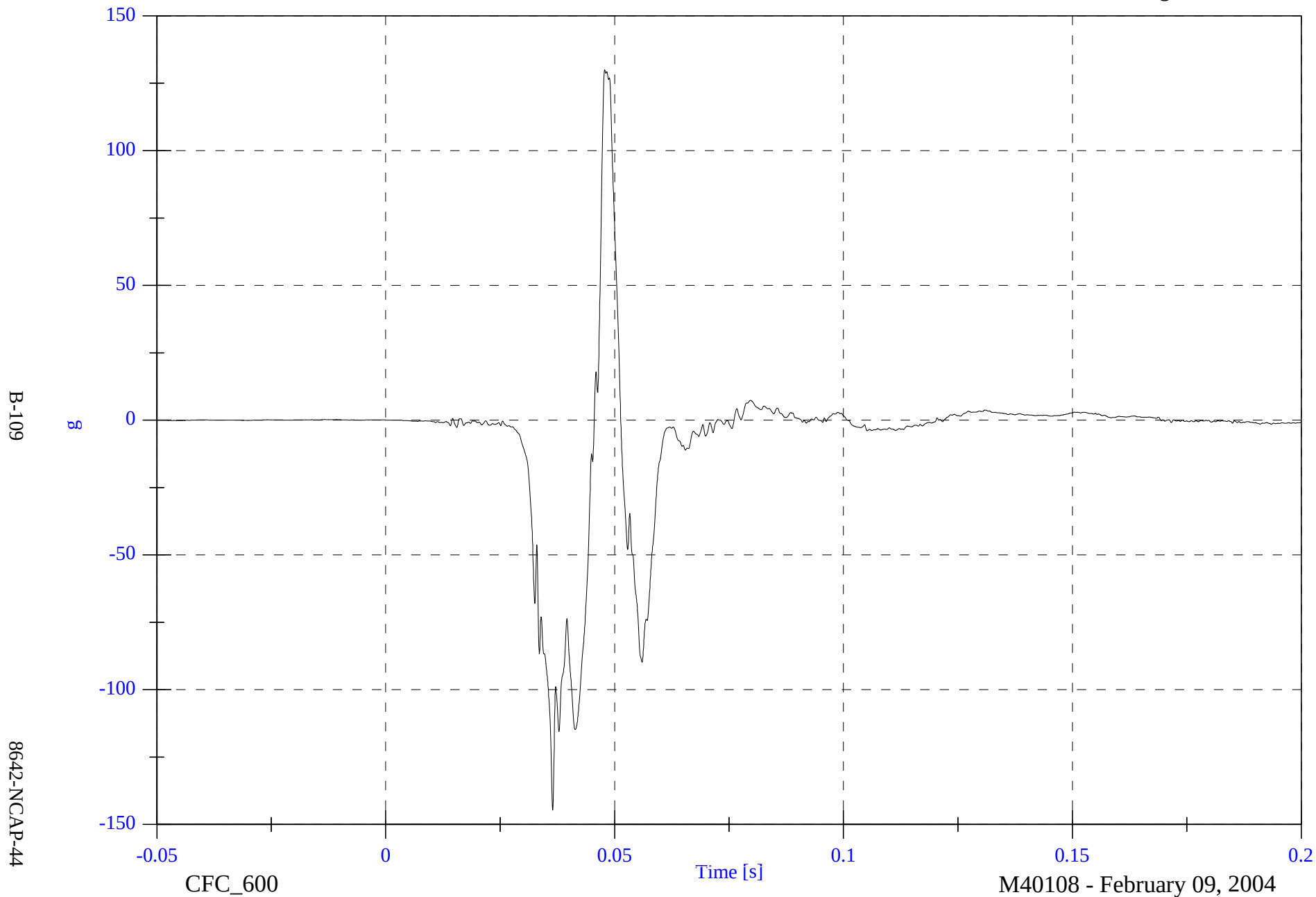


2004 NCAP Test 8 2004 Cadillac SRX

Max: 130.0 [g] at 0.048 [s]

Min: -144.7 [g] at 0.036 [s]

V1P2 Left Foot Aft x

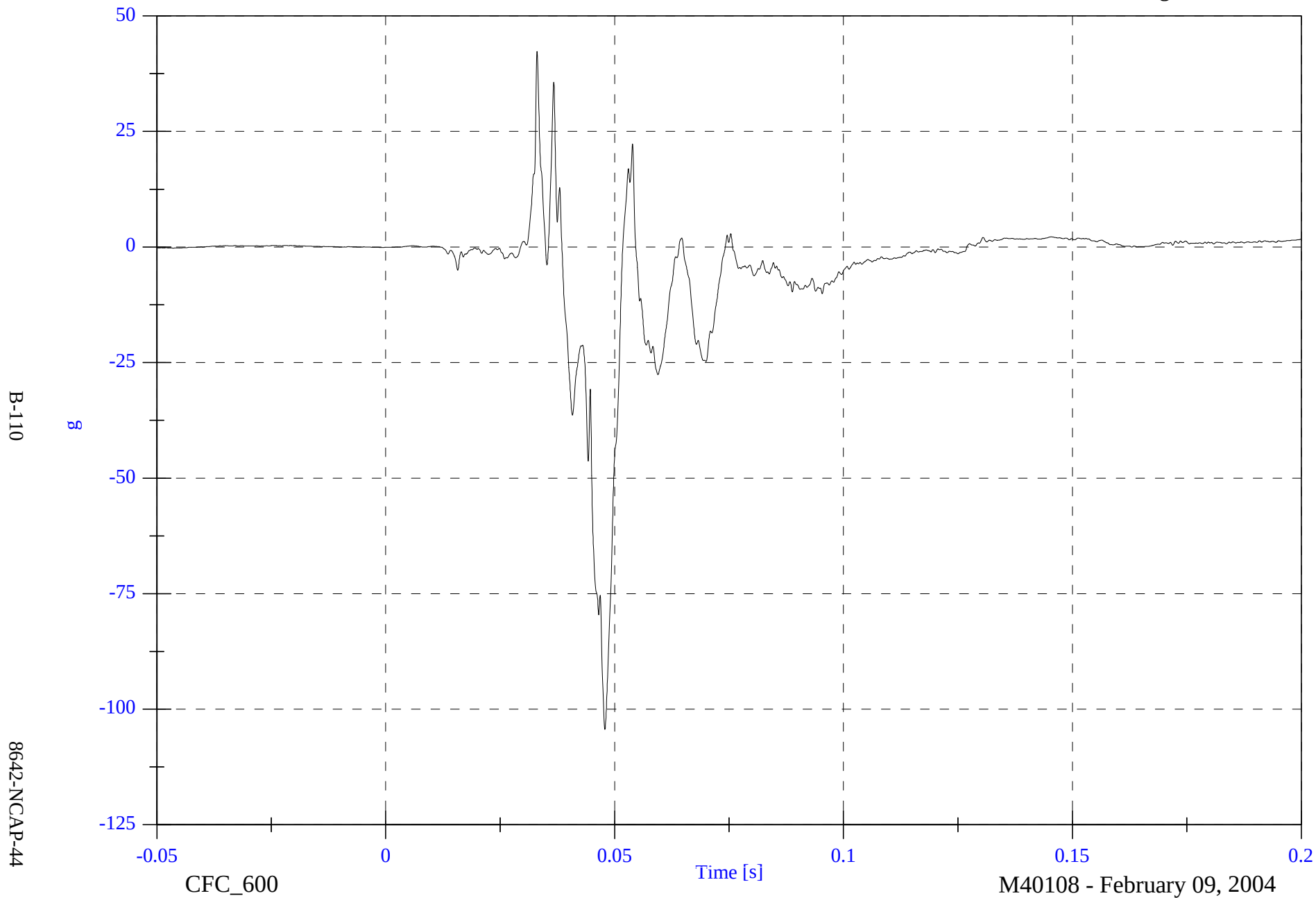


2004 NCAP Test 8 2004 Cadillac SRX

V1P2 Left Foot Aft z

Max: 42.3 [g] at 0.033 [s]

Min: -104.4 [g] at 0.048 [s]

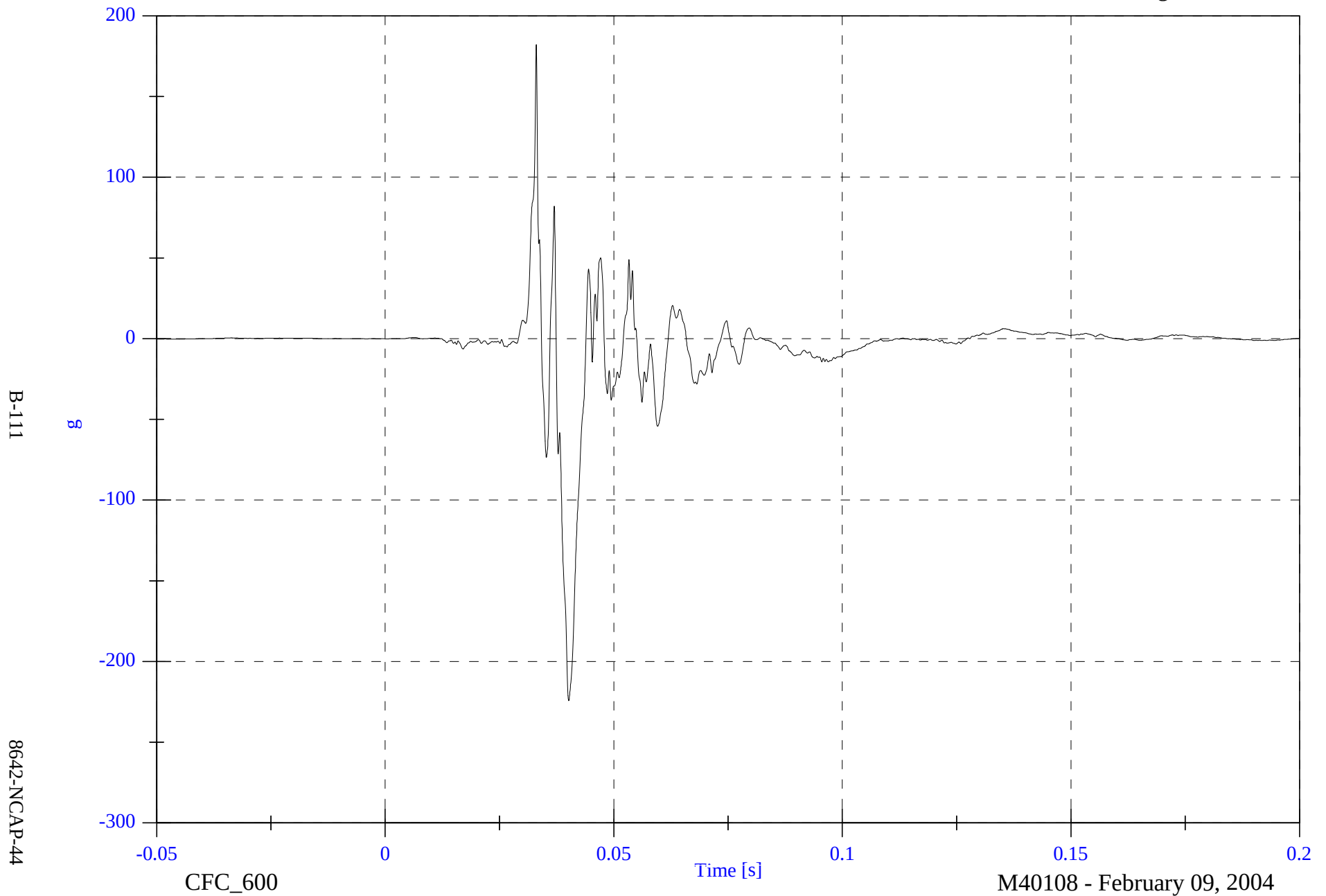


2004 NCAP Test 8 2004 Cadillac SRX

Max: 182.1 [g] at 0.033 [s]

Min: -224.3 [g] at 0.040 [s]

V1P2 Left Foot Fore z

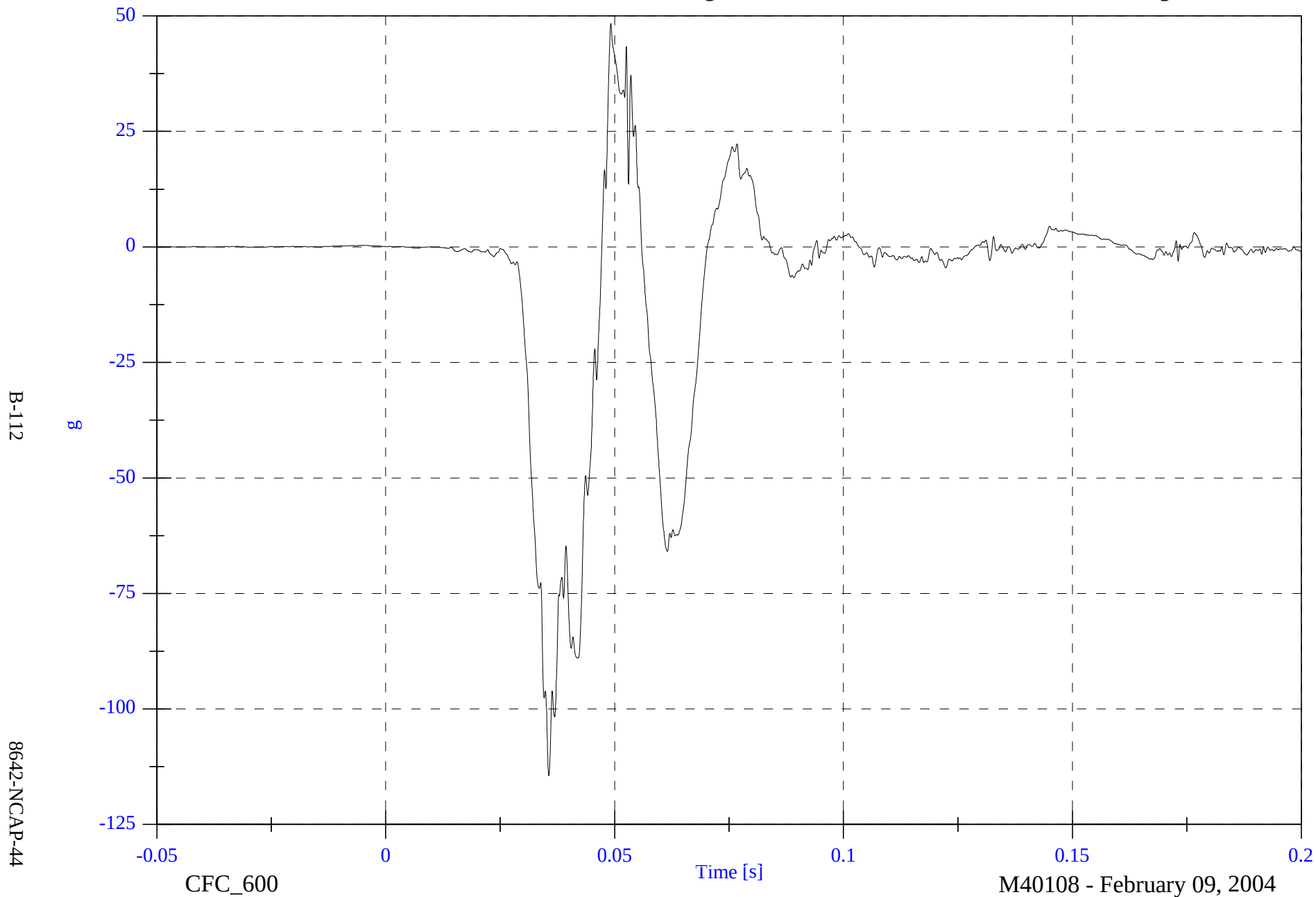


2004 NCAP Test 8 2004 Cadillac SRX

Max: 48.4 [g] at 0.049 [s]

Min: -114.5 [g] at 0.036 [s]

V1P2 Right Foot Aft x

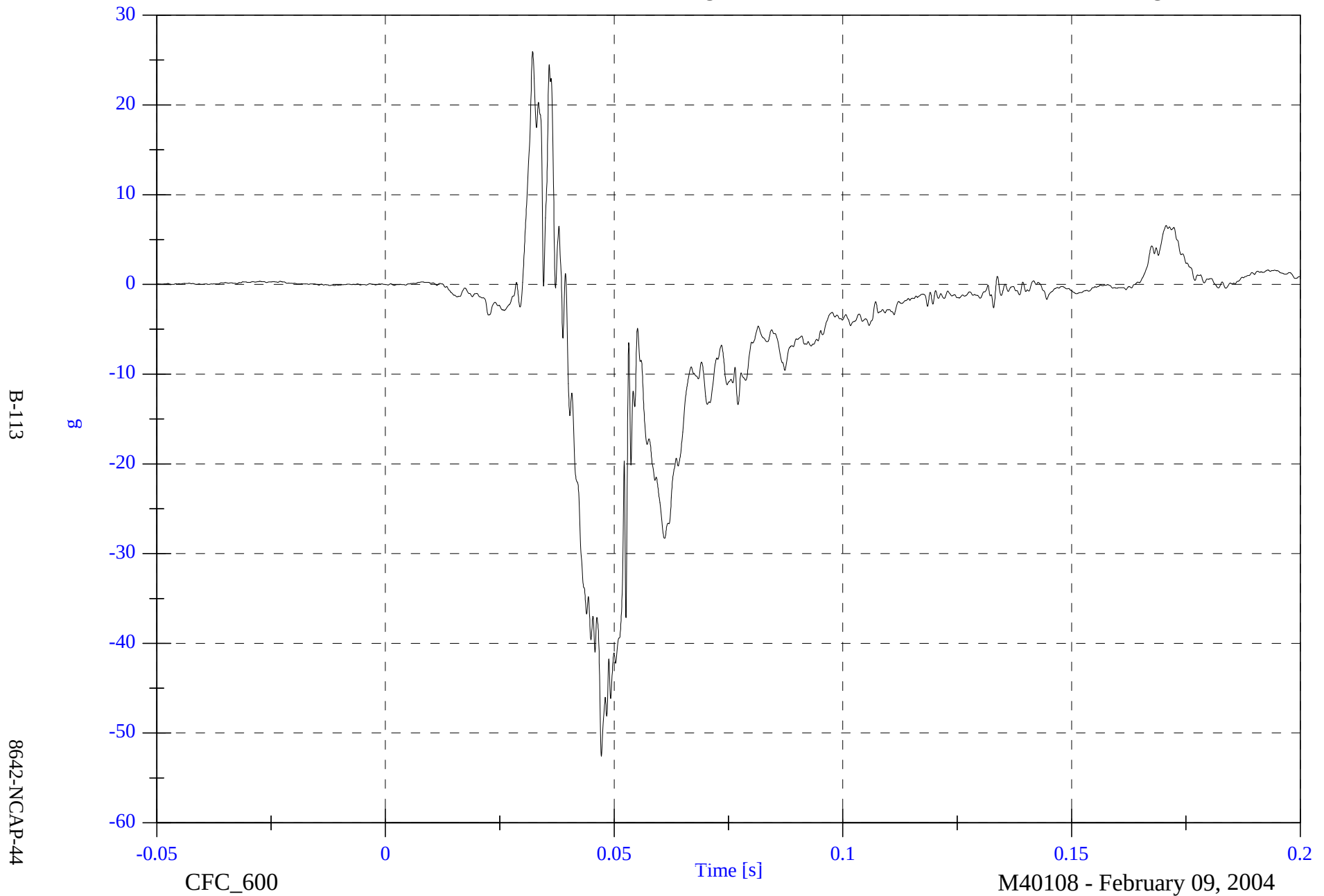


2004 NCAP Test 8 2004 Cadillac SRX

V1P2 Right Foot Aft z

Max: 25.9 [g] at 0.032 [s]

Min: -52.6 [g] at 0.047 [s]

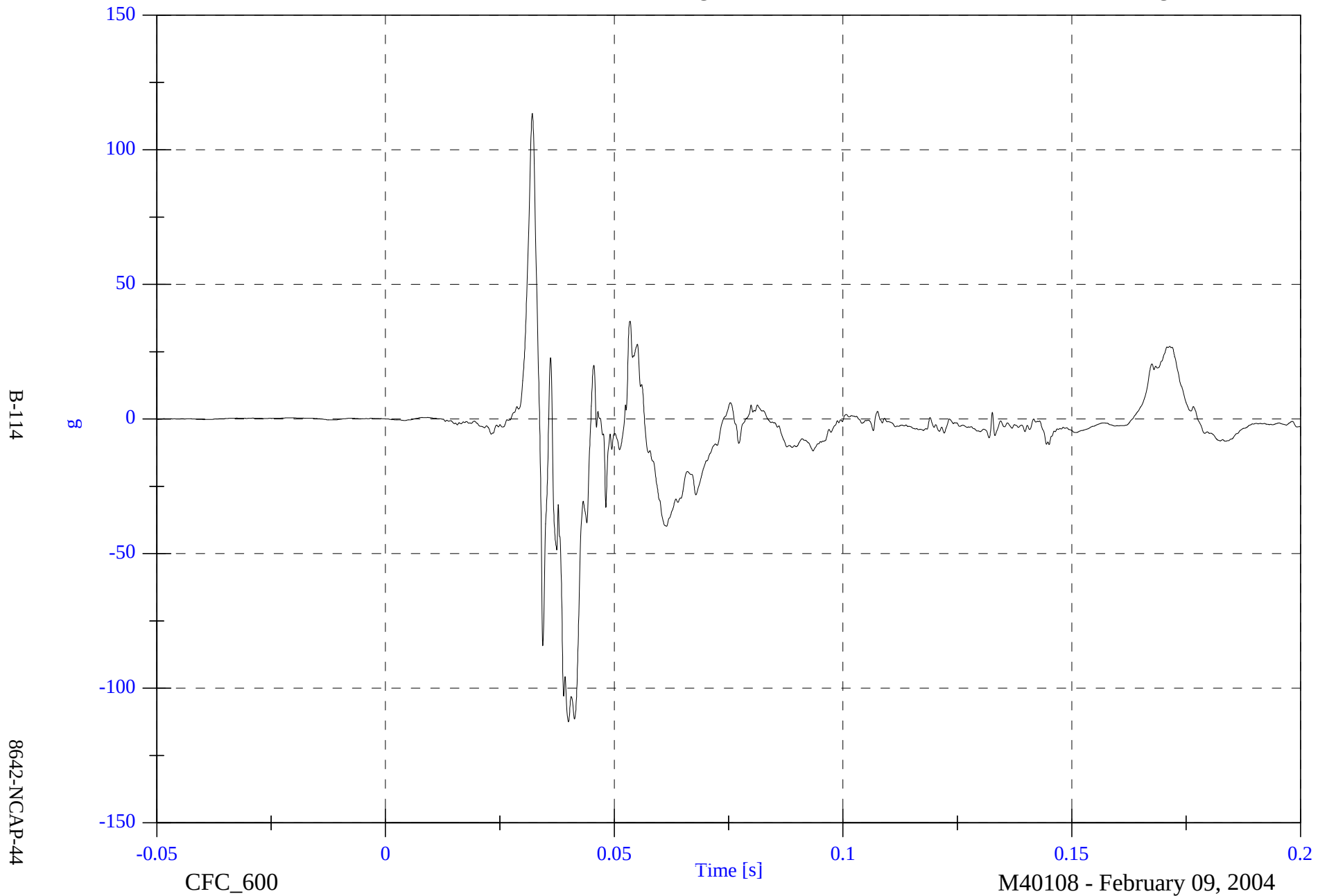


2004 NCAP Test 8 2004 Cadillac SRX

V1P2 Right Foot Fore z

Max: 113.5 [g] at 0.032 [s]

Min: -112.5 [g] at 0.040 [s]

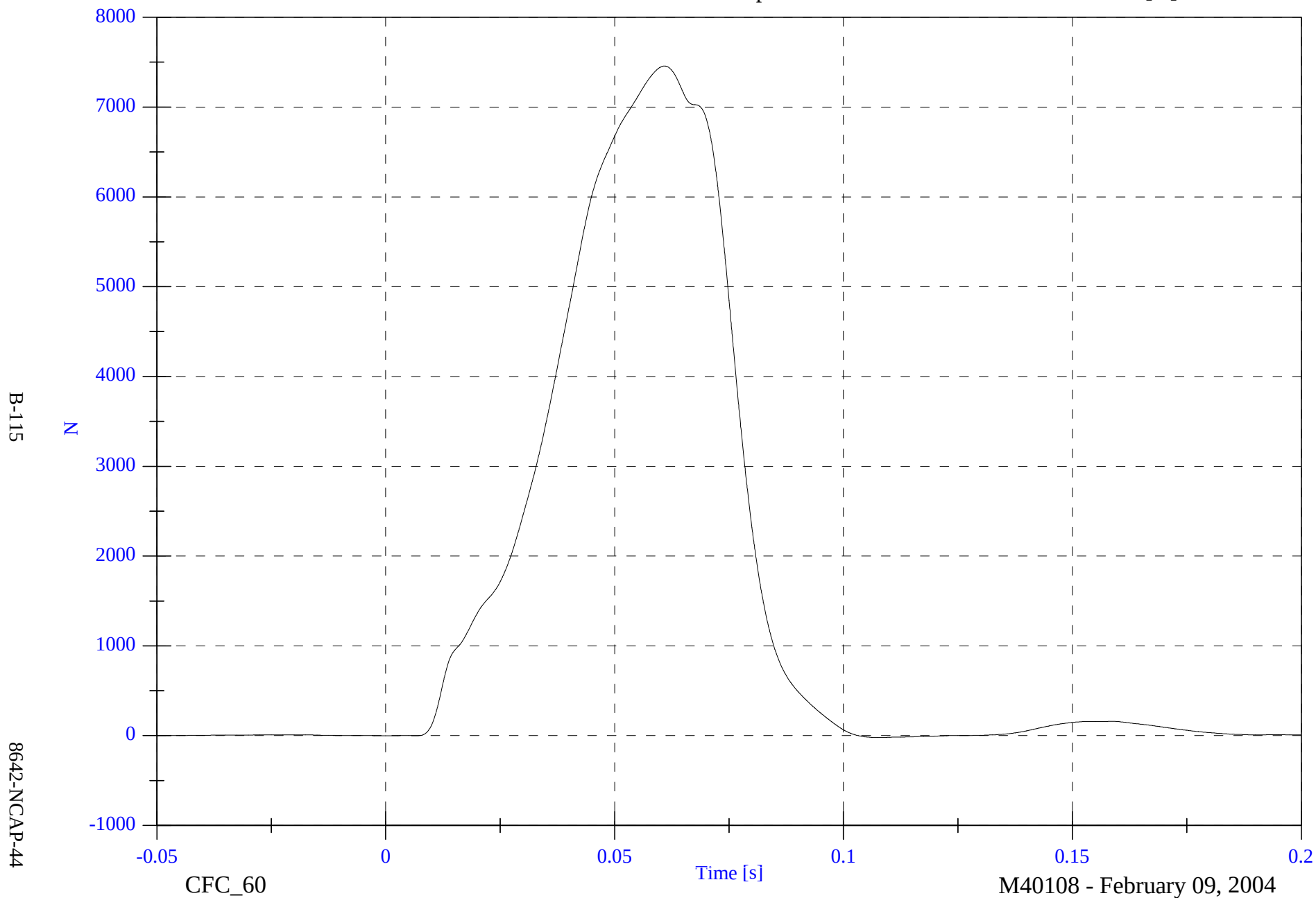


2004 NCAP Test 8 2004 Cadillac SRX

Max: 7457.0 [N] at 0.061 [s]

Min: -20.7 [N] at 0.108 [s]

V1 RFP Lap Belt

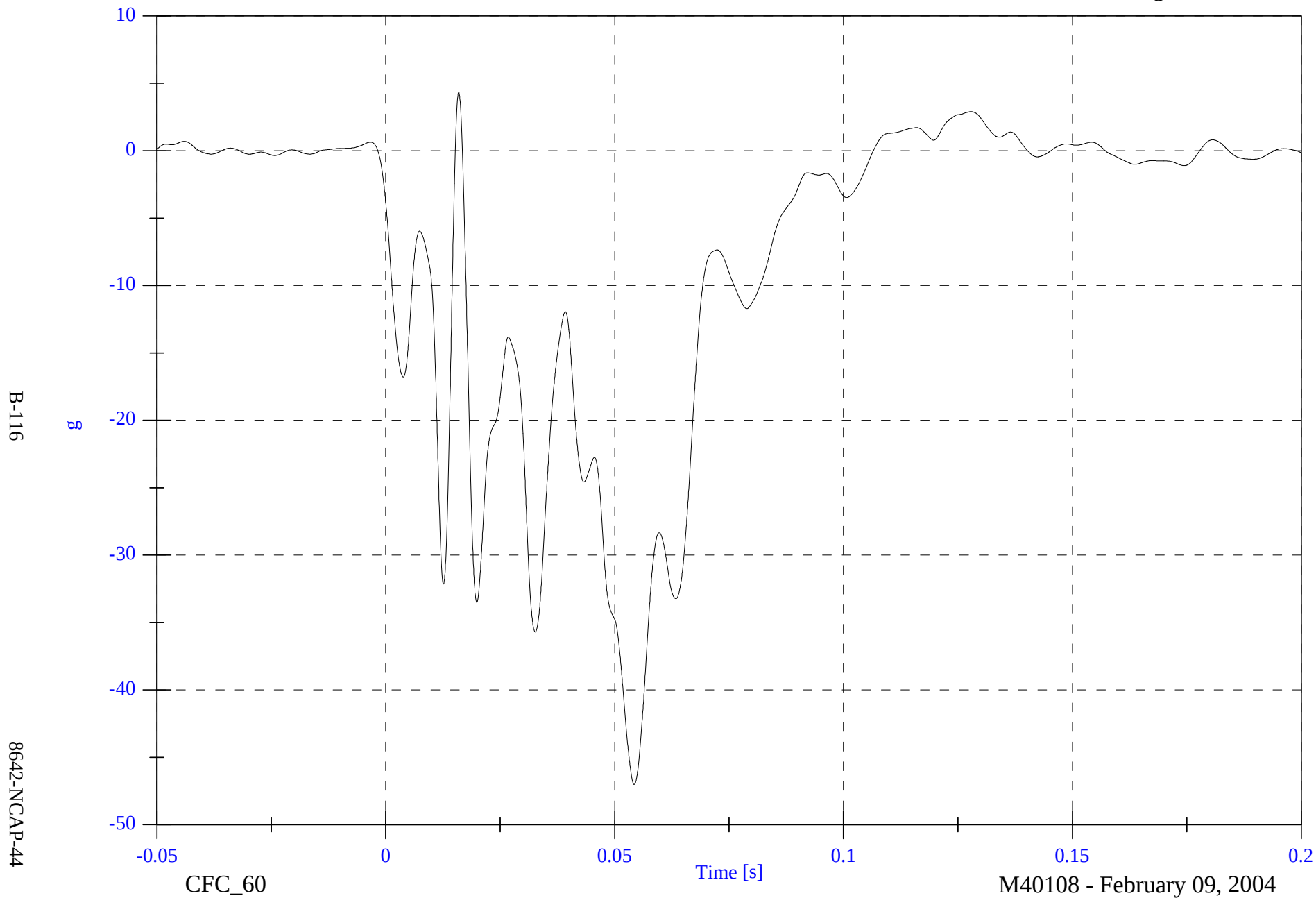


2004 NCAP Test 8 2004 Cadillac SRX

V1 Left Rear #1x

Max: 4.3 [g] at 0.016 [s]

Min: -47.0 [g] at 0.054 [s]

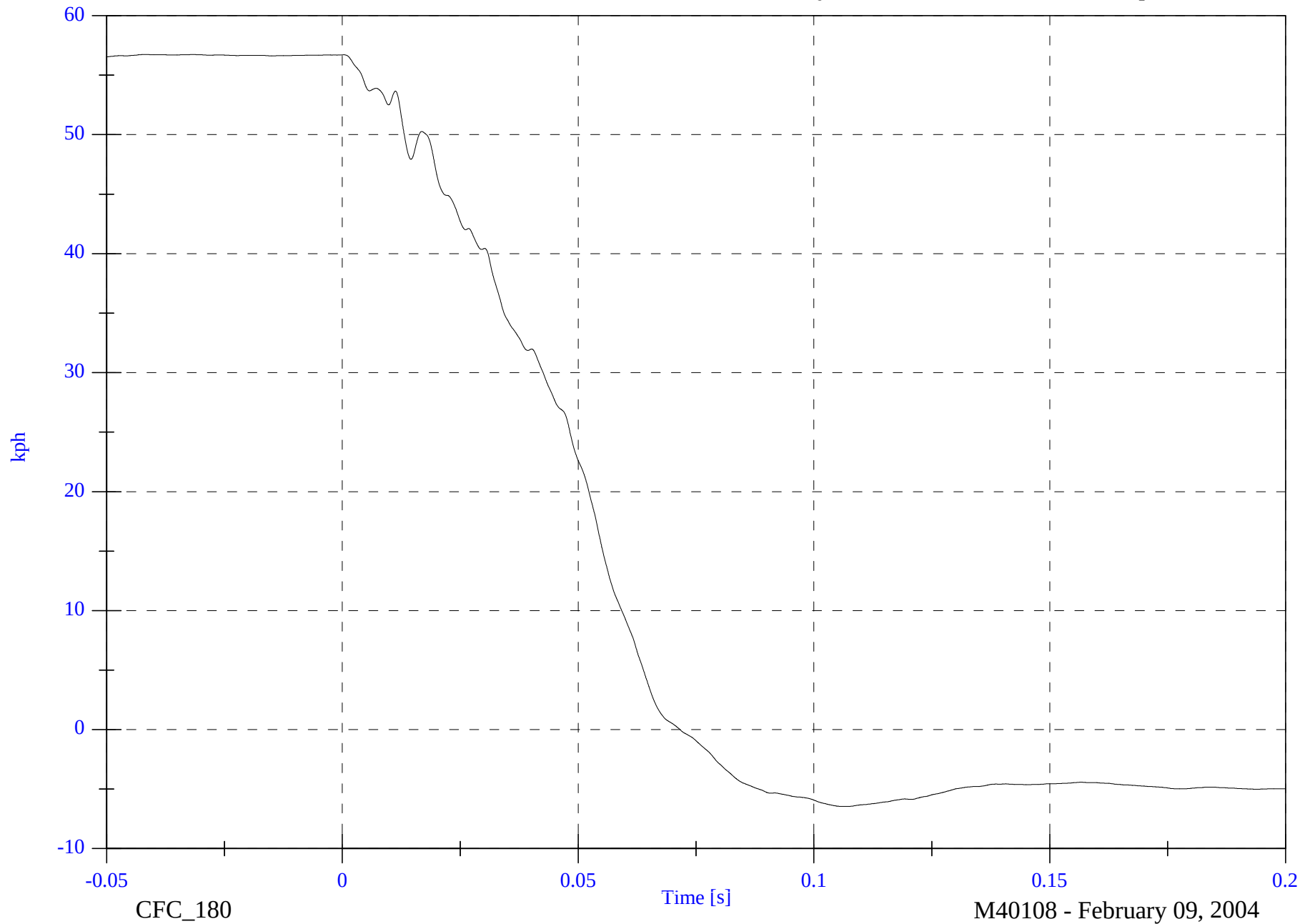


2004 NCAP Test 8 2004 Cadillac SRX

V1 Left Rear #1x Velocity

Max: 56.7 [kph] at -0.042 [s]

Min: -6.5 [kph] at 0.106 [s]



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8642-NCAP-44

CFC_180

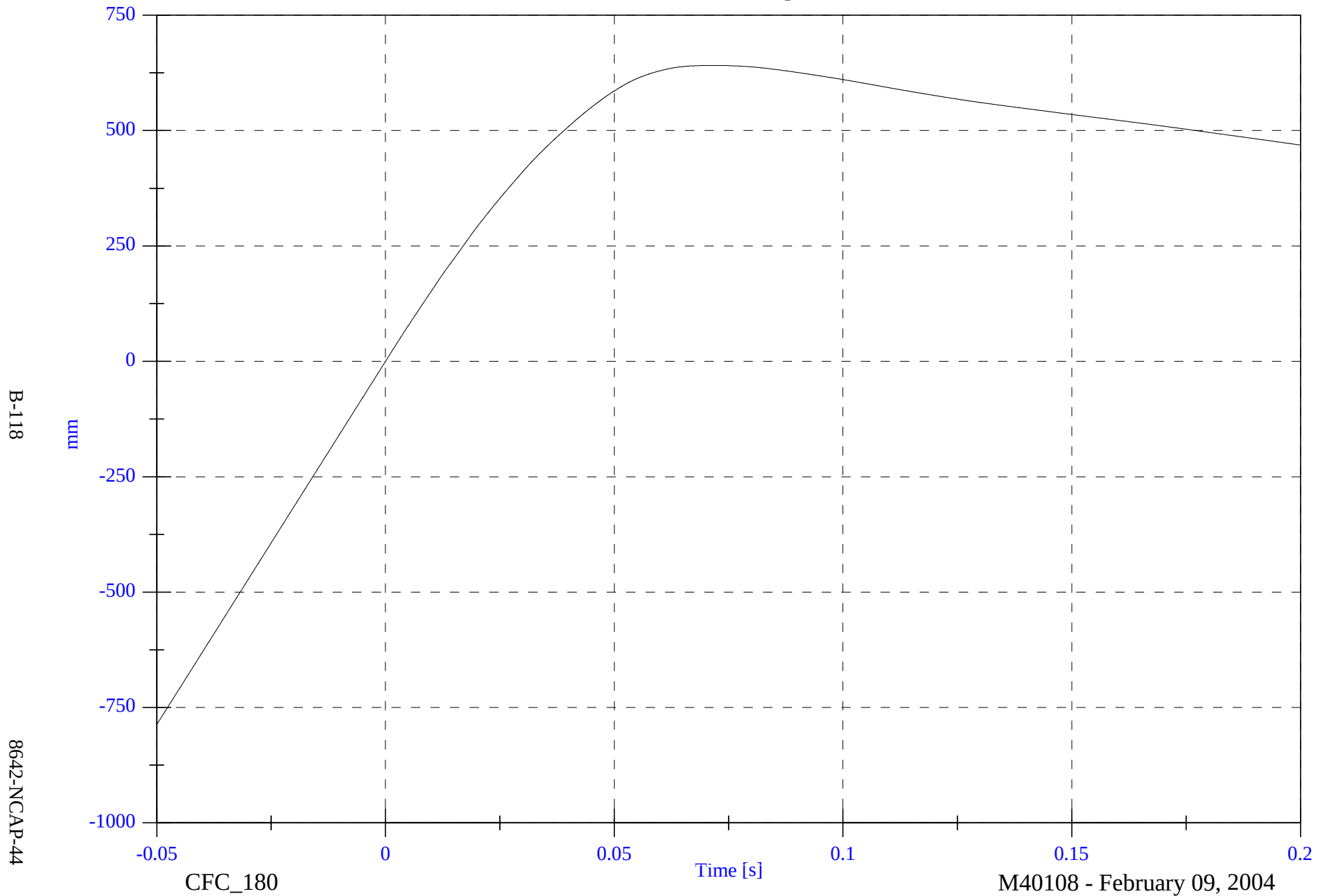
M40108 - February 09, 2004

2004 NCAP Test 8 2004 Cadillac SRX

V1 Left Rear #1x Displacement

Max: 640.9 [mm] at 0.072 [s]

Min: -787.1 [mm] at -0.050 [s]



2004 NCAP Test 8 2004 Cadillac SRX

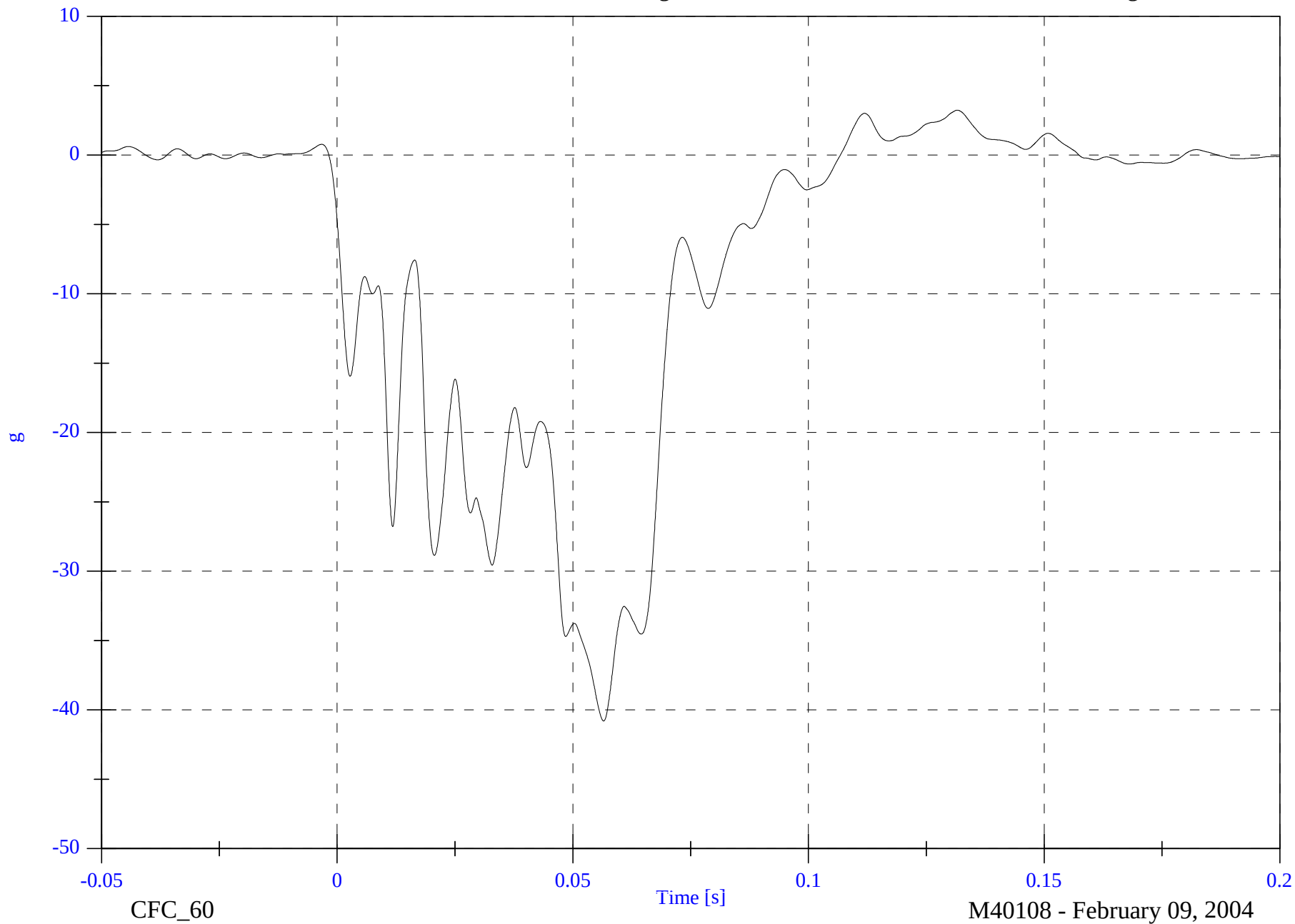
V1 Right Rear #2x

Max: 3.2 [g] at 0.132 [s]

Min: -40.8 [g] at 0.057 [s]

B-119

8642-NCAP-44



2004 NCAP Test 8 2004 Cadillac SRX

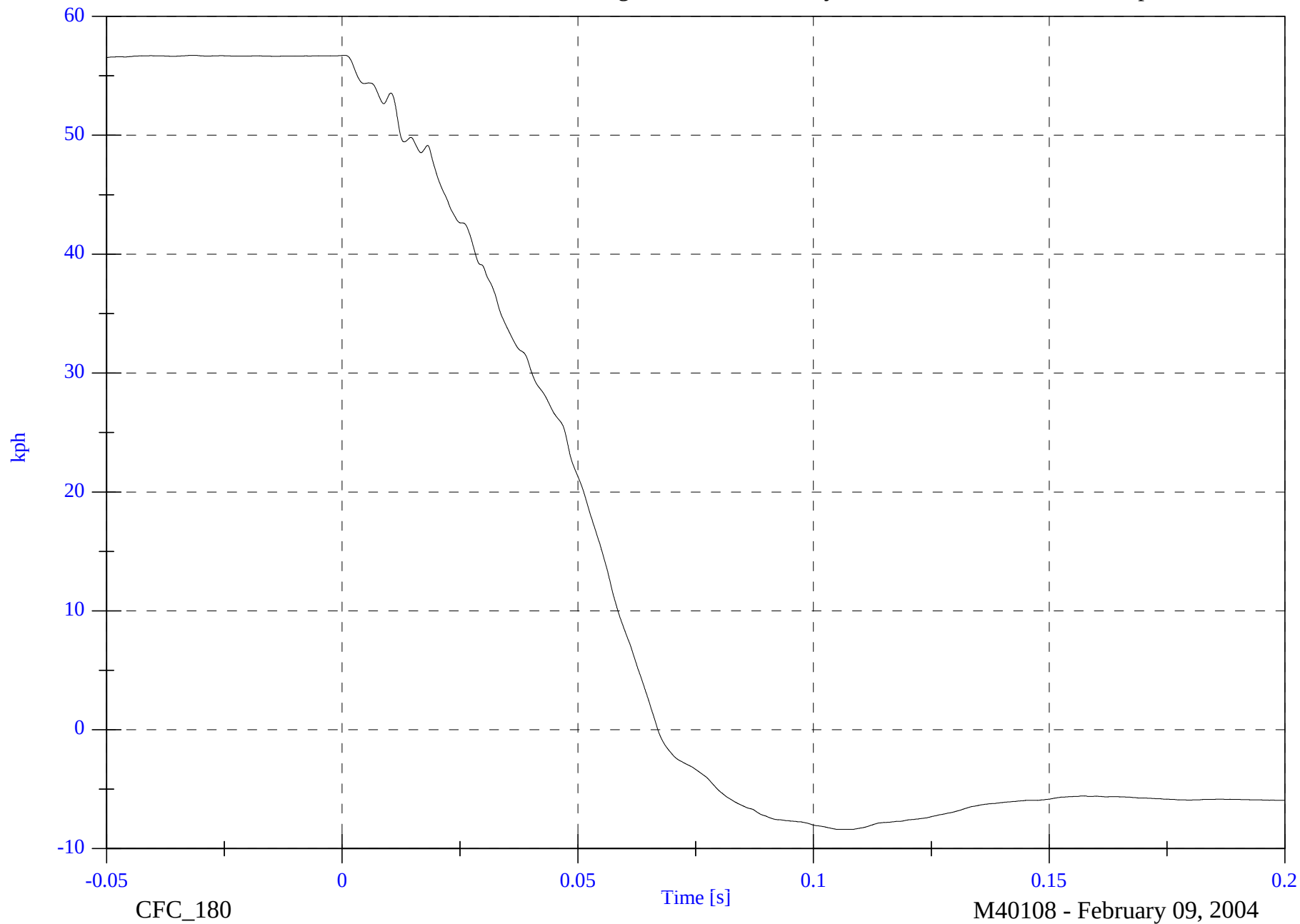
V1 Right Rear #2x Velocity

Max: 56.7 [kph] at 0.001 [s]

Min: -8.4 [kph] at 0.105 [s]

B-120

8642-NCAP-44



CFC_180

Time [s]

M40108 - February 09, 2004

2004 NCAP Test 8 2004 Cadillac SRX

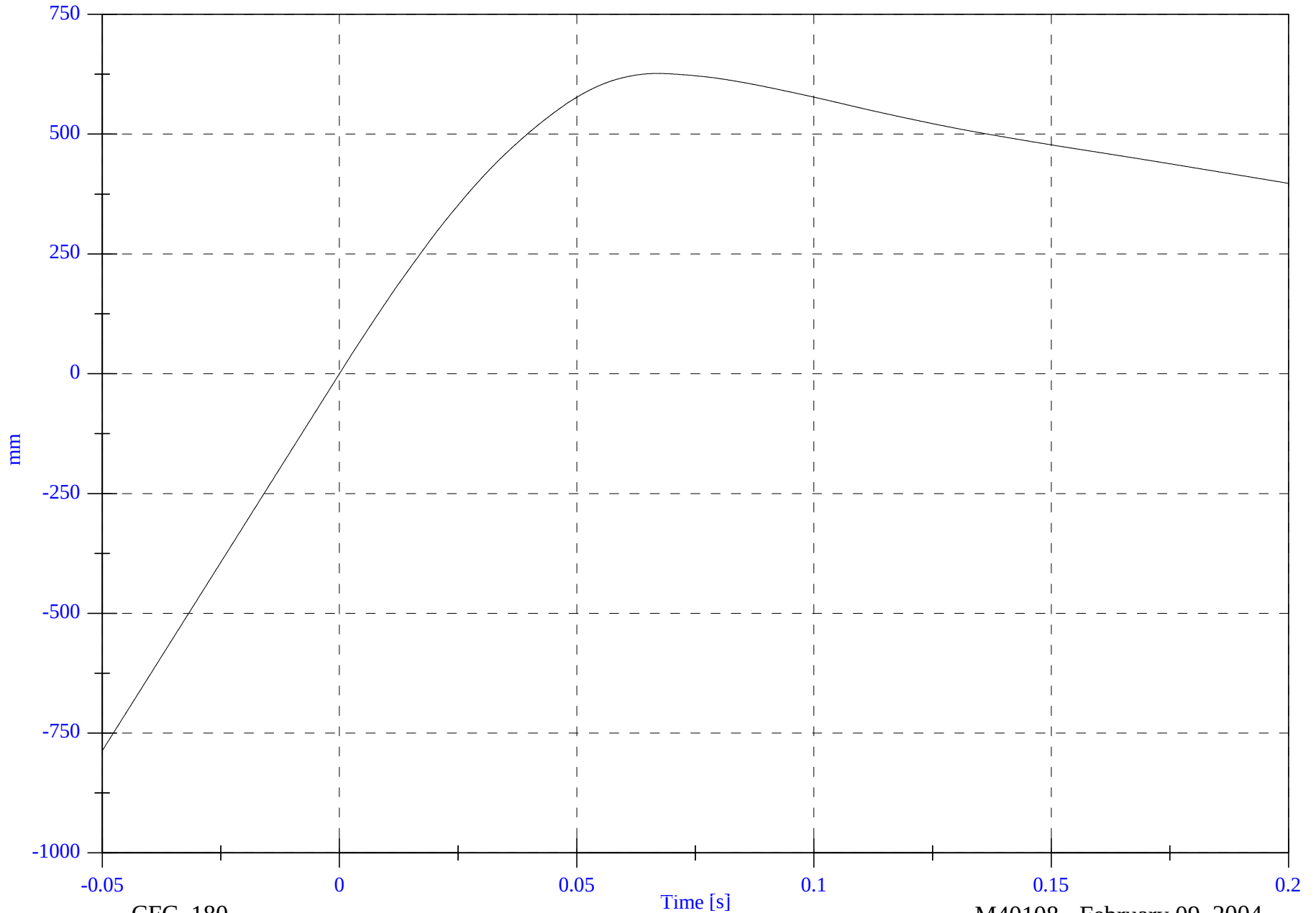
V1 Right Rear #2x Displacement

Max: 626.5 [mm] at 0.067 [s]

Min: -786.9 [mm] at -0.050 [s]

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CFC_180

M40108 - February 09, 2004

2004 NCAP Test 8 2004 Cadillac SRX

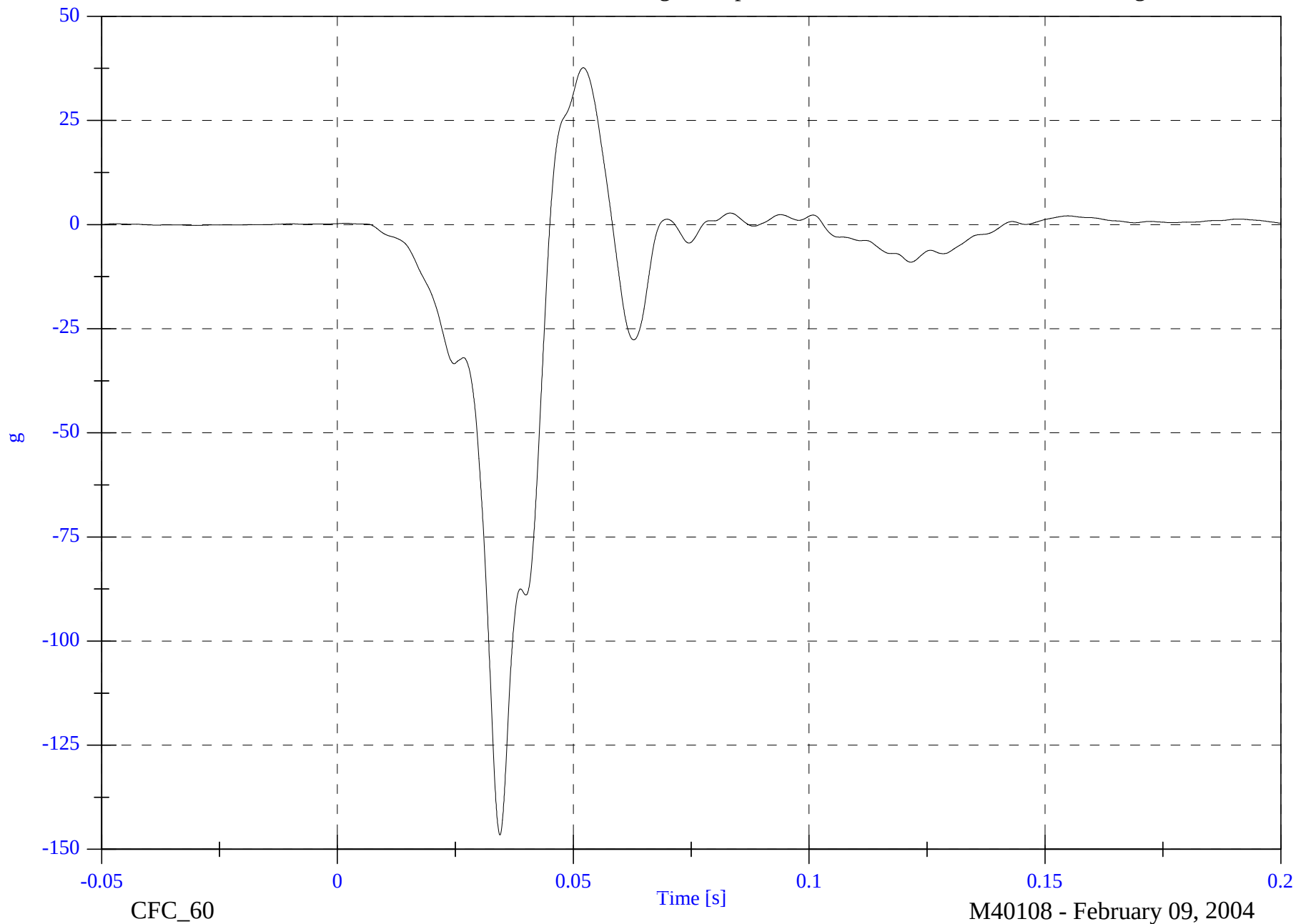
V1 Engine Top #3x

Max: 37.7 [g] at 0.052 [s]

Min: -146.6 [g] at 0.034 [s]

B-122

8642-NCAP-44



2004 NCAP Test 8 2004 Cadillac SRX

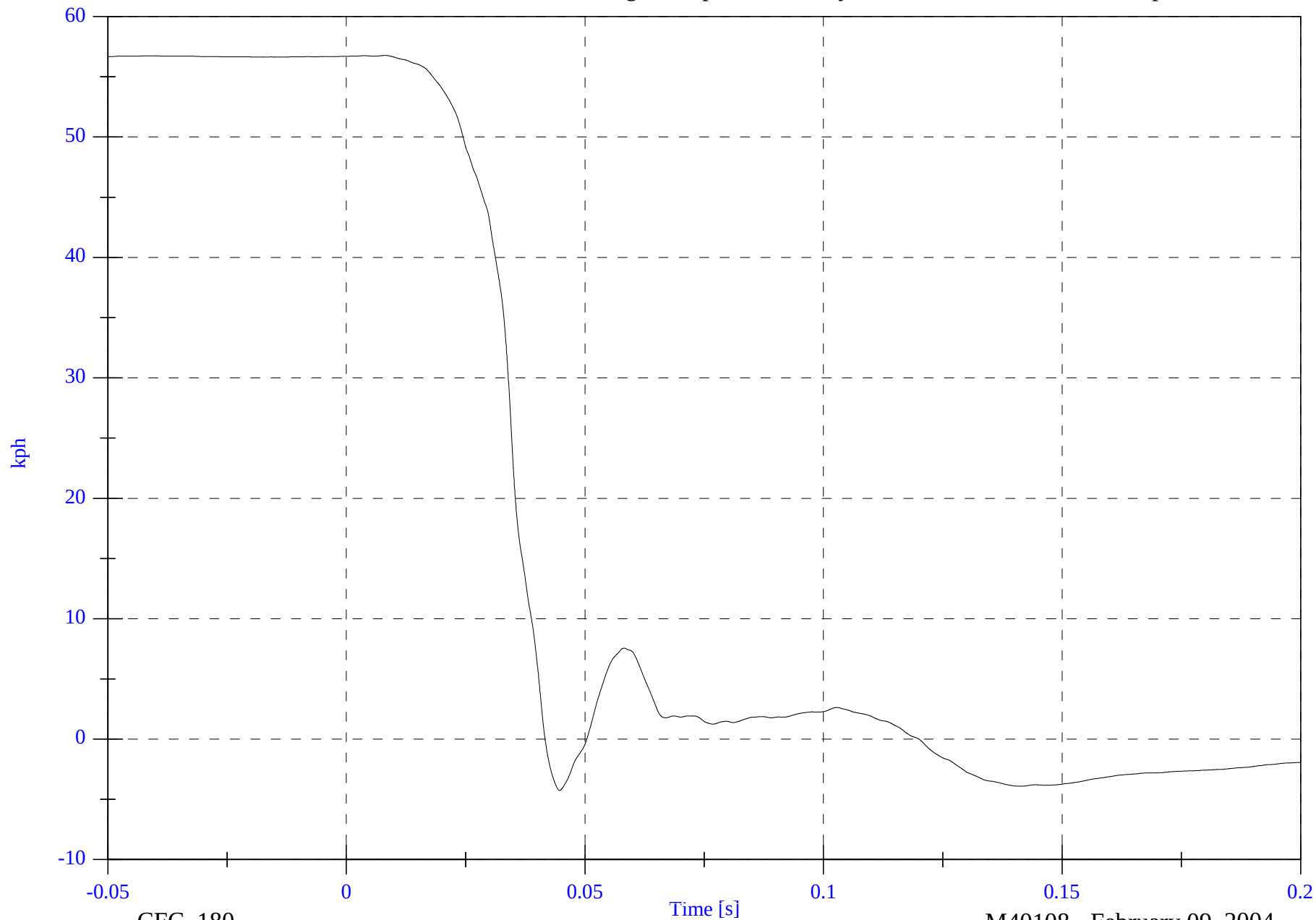
V1 Engine Top #3x Velocity

Max: 56.8 [kph] at 0.008 [s]

Min: -4.3 [kph] at 0.045 [s]

B-123

8642-NCAP-44



CFC_180

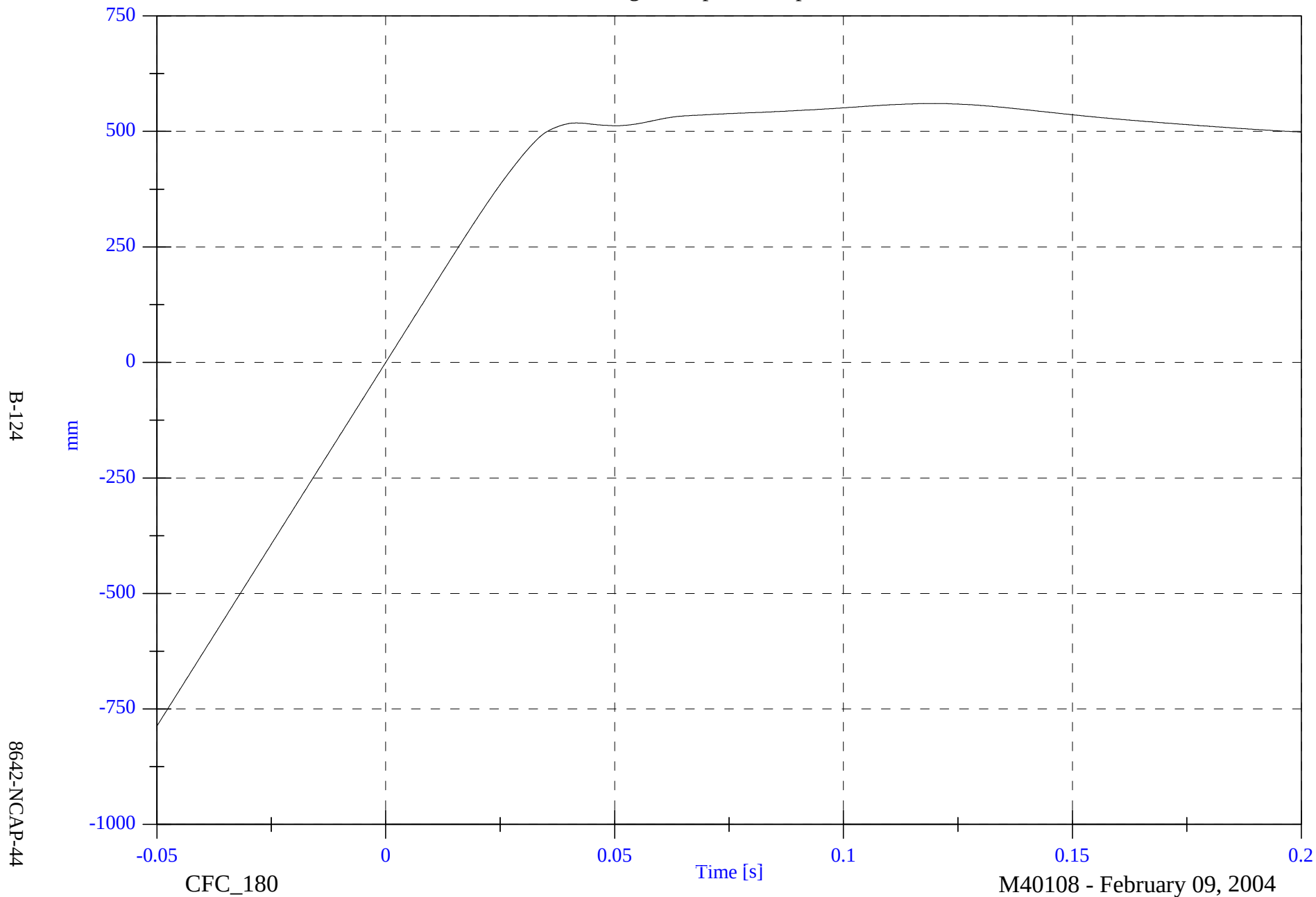
M40108 - February 09, 2004

2004 NCAP Test 8 2004 Cadillac SRX

V1 Engine Top #3x Displacement

Max: 560.2 [mm] at 0.120 [s]

Min: -787.2 [mm] at -0.050 [s]

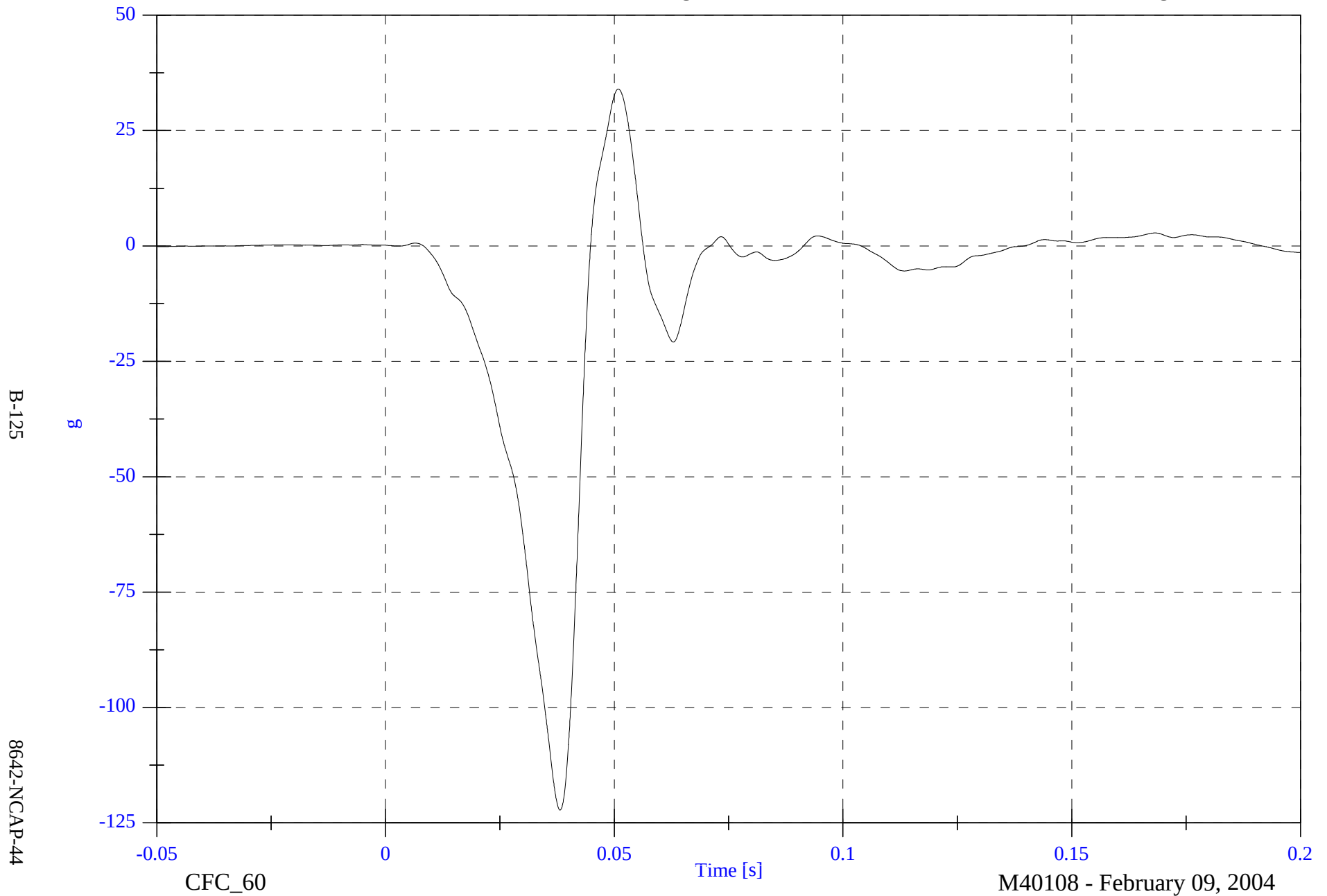


2004 NCAP Test 8 2004 Cadillac SRX

V1 Engine Bottom #4x

Max: 34.0 [g] at 0.051 [s]

Min: -122.2 [g] at 0.038 [s]



2004 NCAP Test 8 2004 Cadillac SRX

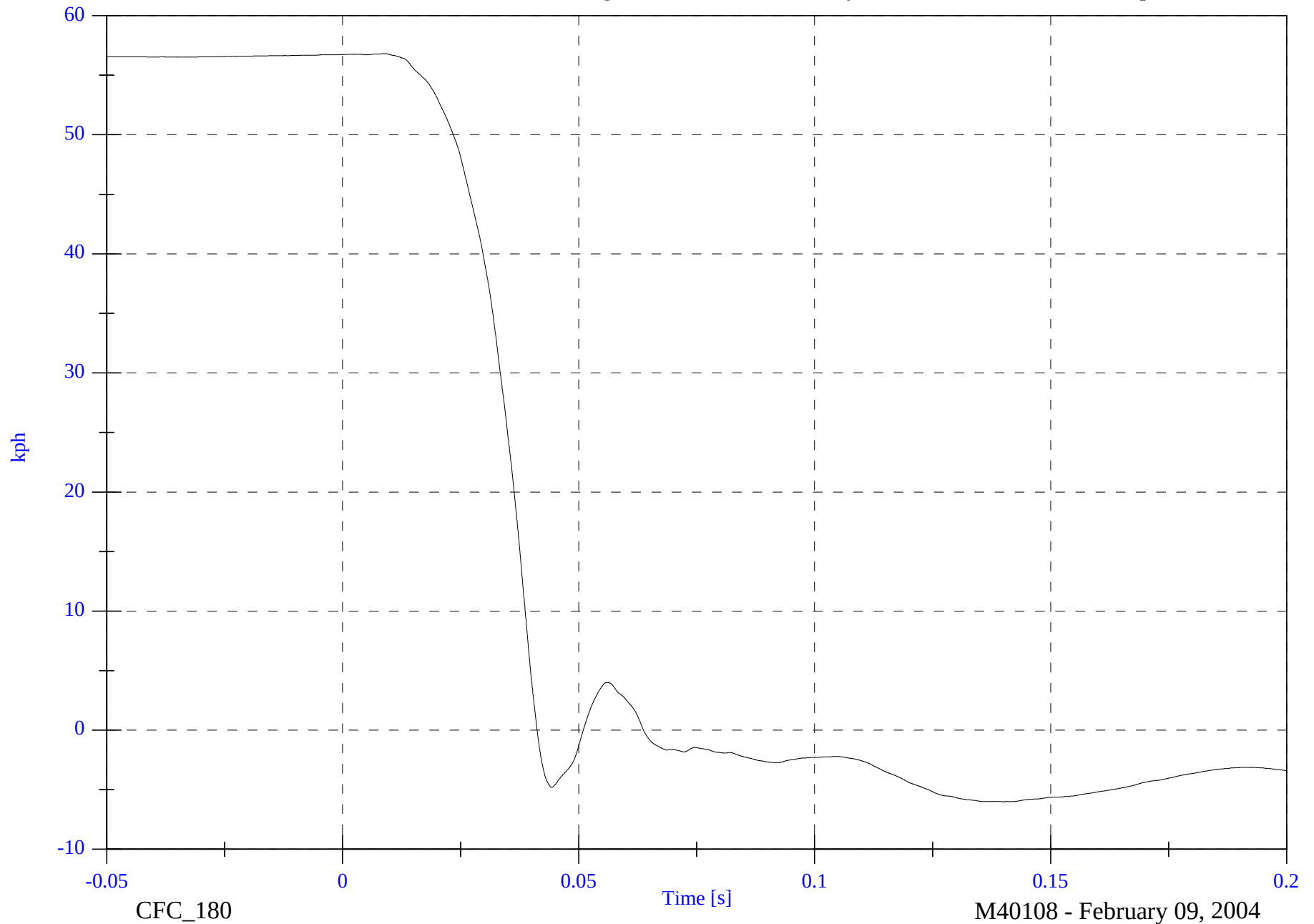
V1 Engine Bottom #4x Velocity

Max: 56.8 [kph] at 0.009 [s]

Min: -6.0 [kph] at 0.140 [s]

B-126

8642-NCAP-44

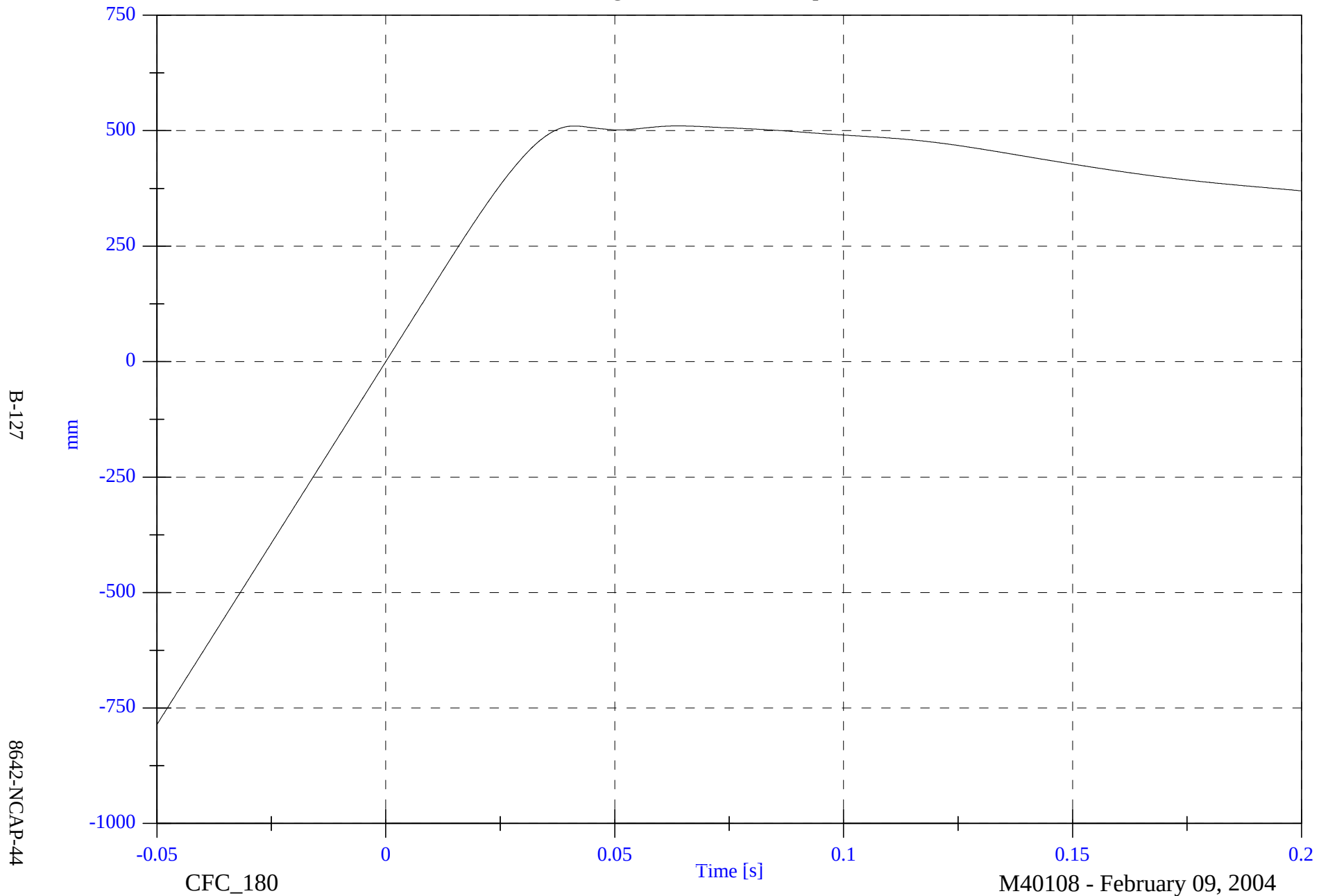


2004 NCAP Test 8 2004 Cadillac SRX

Max: 510.4 [mm] at 0.064 [s]

V1 Engine Bottom #4x Displacement

Min: -786.0 [mm] at -0.050 [s]

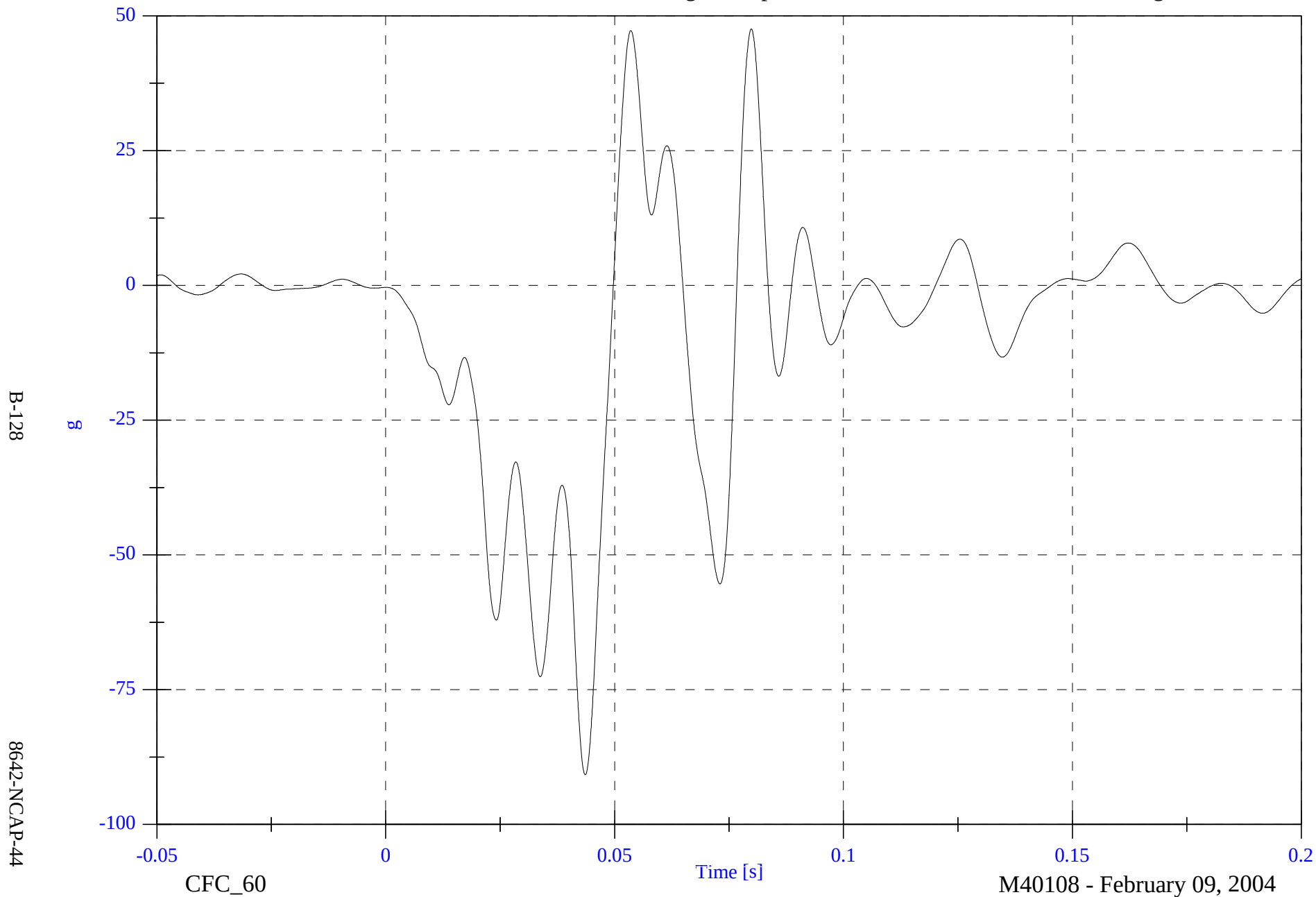


2004 NCAP Test 8 2004 Cadillac SRX

V1 Right Caliper #5x

Max: 47.6 [g] at 0.080 [s]

Min: -90.8 [g] at 0.044 [s]



2004 NCAP Test 8 2004 Cadillac SRX

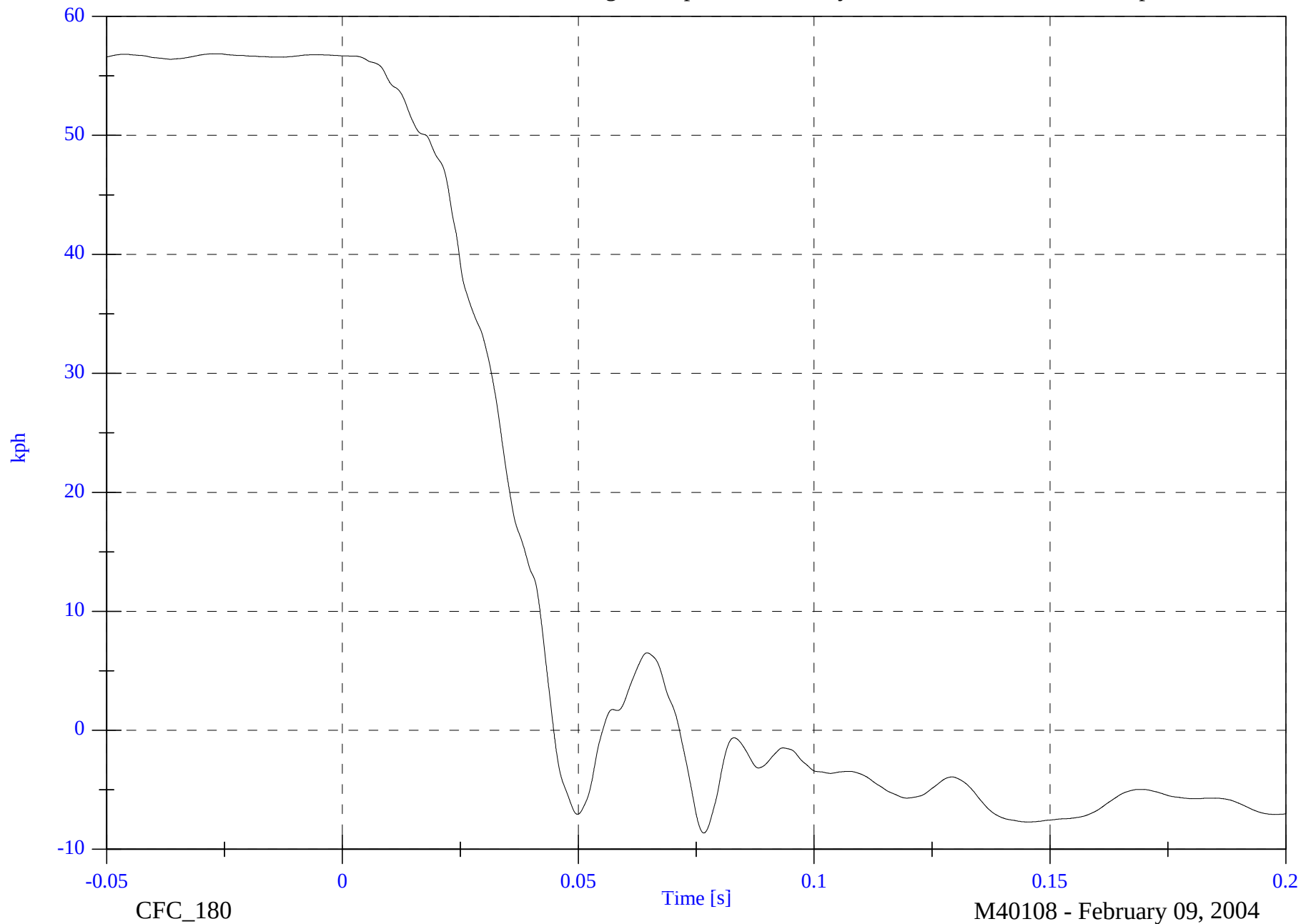
Max: 56.9 [kph] at -0.026 [s]

V1 Right Caliper #5x Velocity

Min: -8.6 [kph] at 0.077 [s]

B-129

8642-NCAP-44



CFC_180

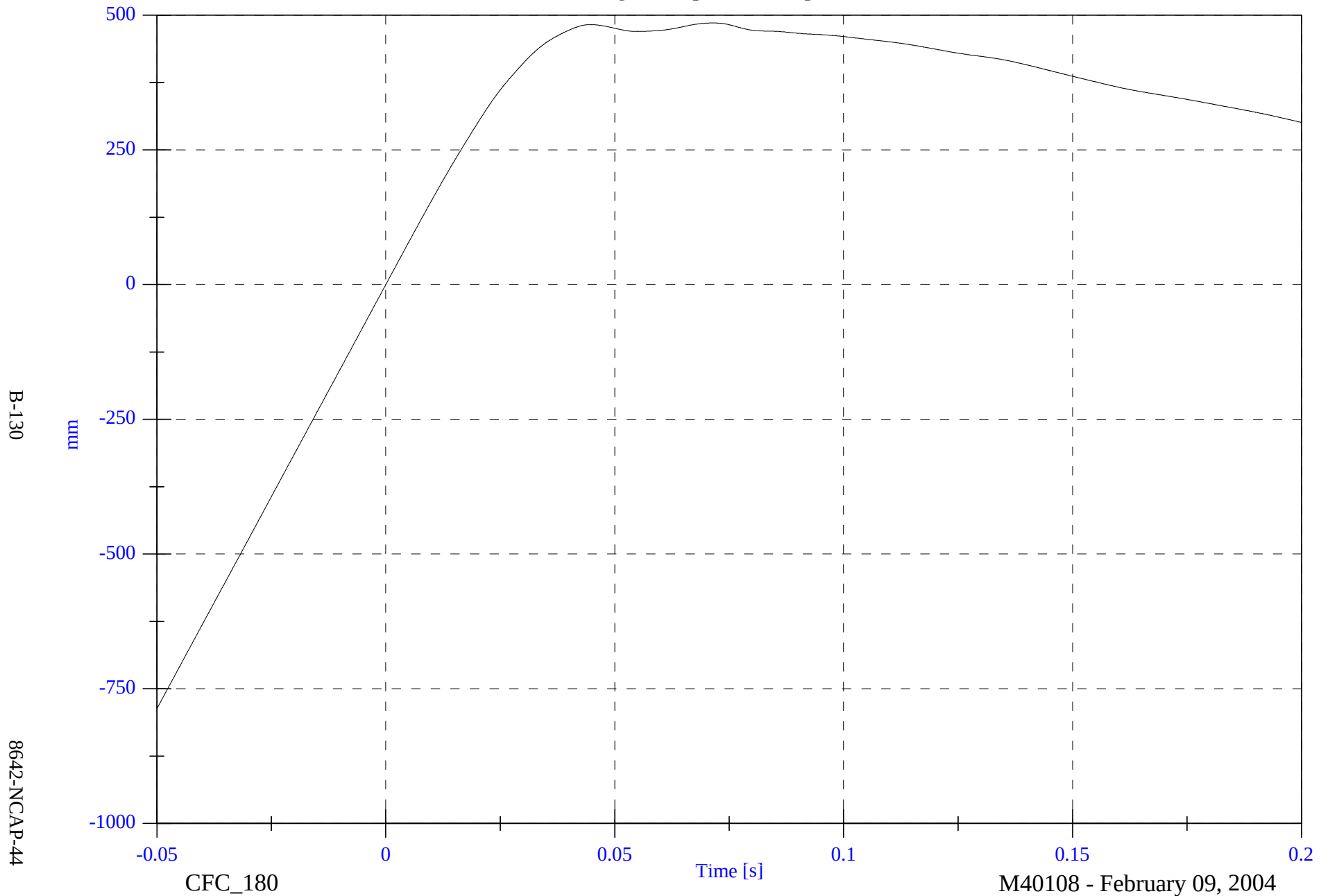
M40108 - February 09, 2004

2004 NCAP Test 8 2004 Cadillac SRX

Max: 485.6 [mm] at 0.071 [s]

V1 Right Caliper #5x Displacement

Min: -787.1 [mm] at -0.050 [s]

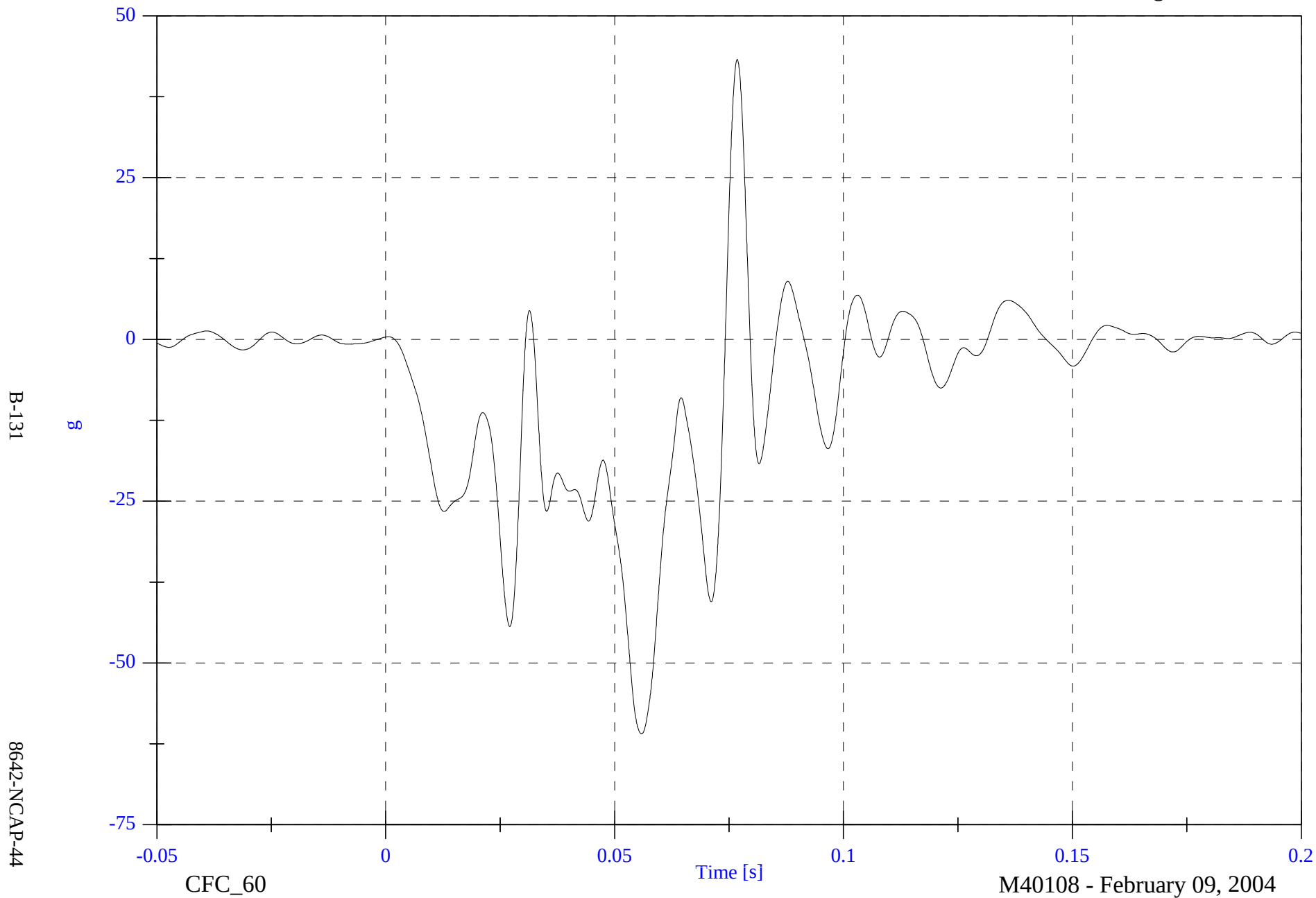


2004 NCAP Test 8 2004 Cadillac SRX

V1 Instrument Panel #6x

Max: 43.3 [g] at 0.077 [s]

Min: -60.9 [g] at 0.056 [s]

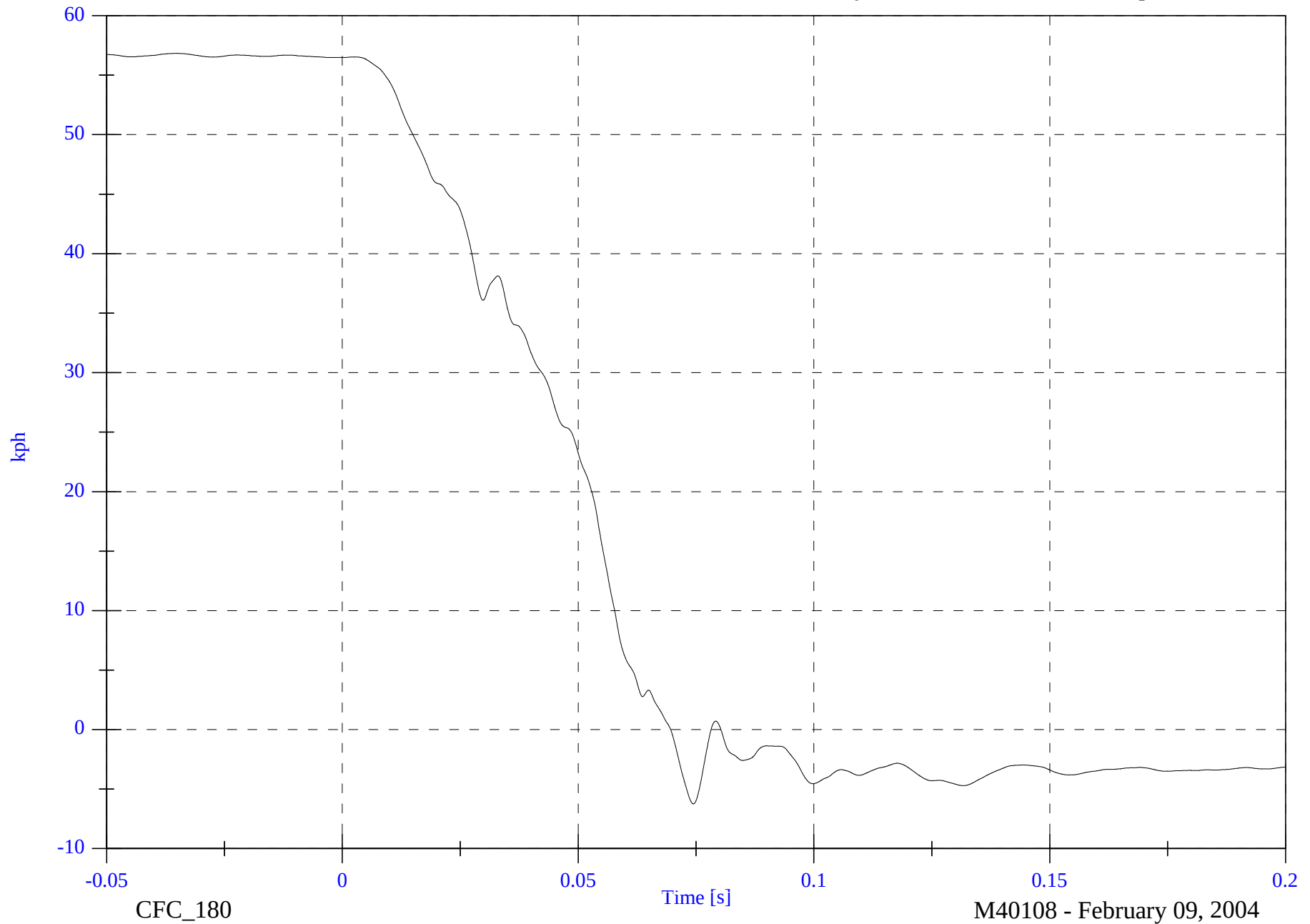


2004 NCAP Test 8 2004 Cadillac SRX

V1 Instrument Panel #6x Velocity

Max: 56.8 [kph] at -0.035 [s]

Min: -6.2 [kph] at 0.074 [s]

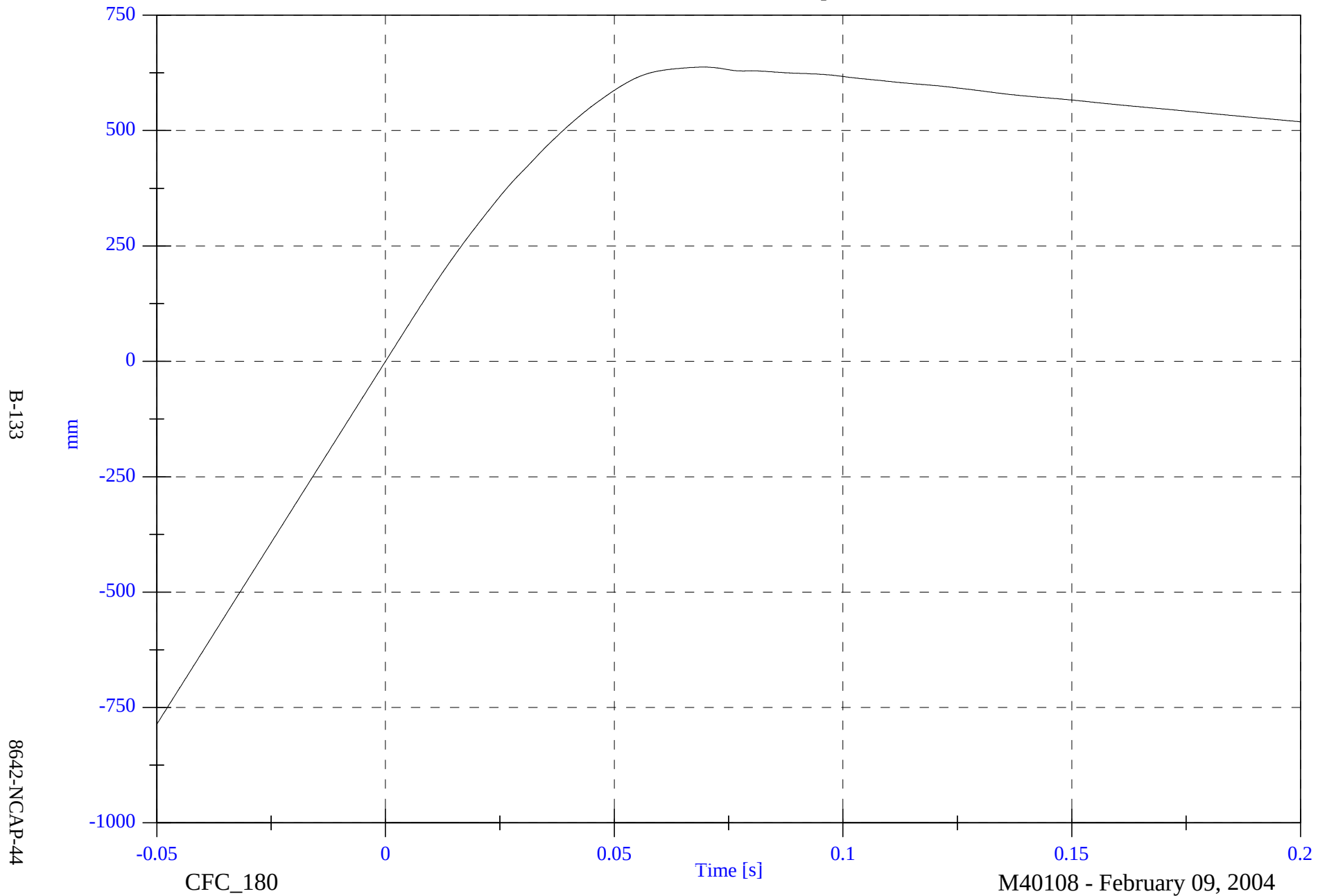


2004 NCAP Test 8 2004 Cadillac SRX

V1 Instrument Panel #6x Displacement

Max: 637.3 [mm] at 0.070 [s]

Min: -786.5 [mm] at -0.050 [s]

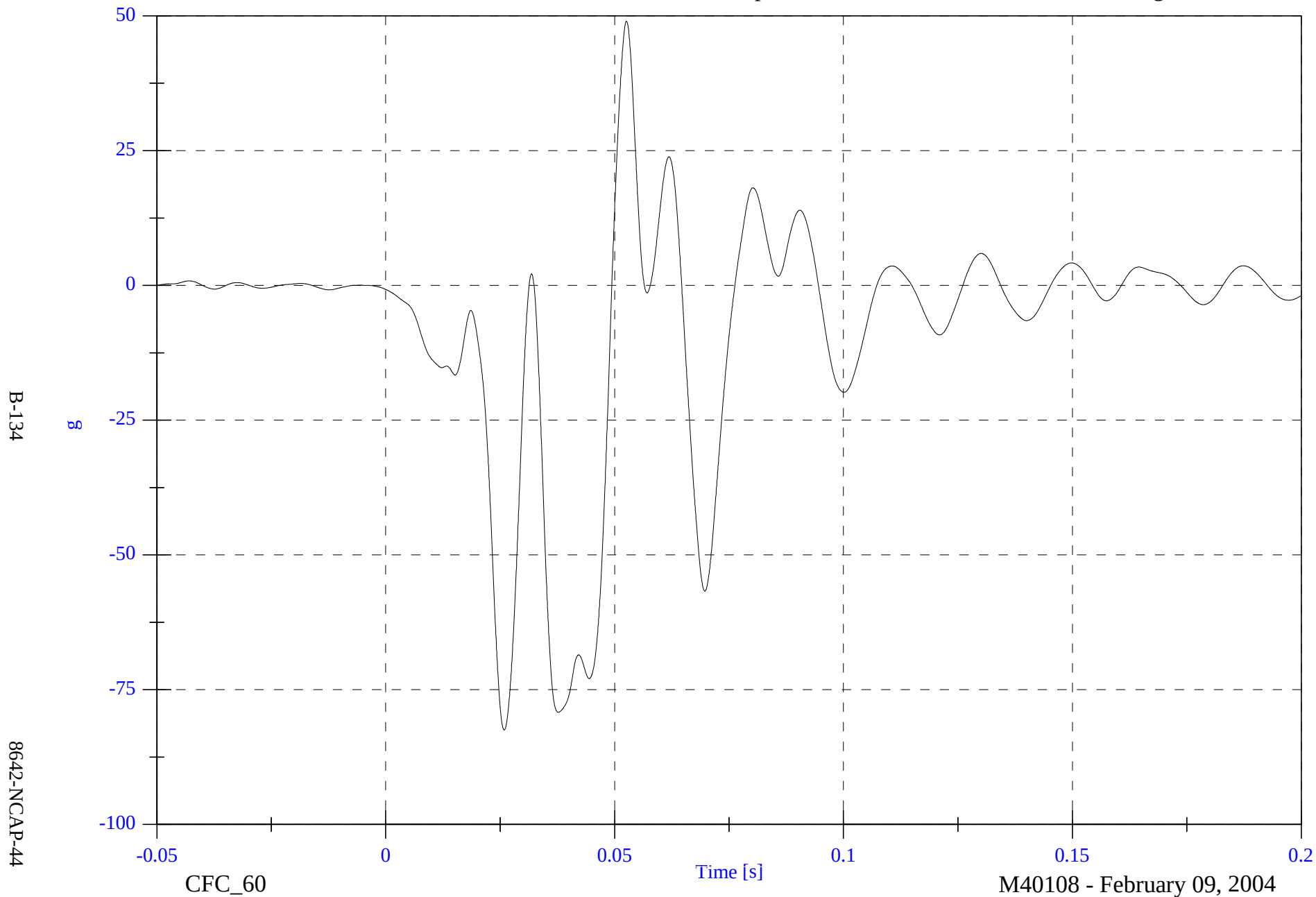


2004 NCAP Test 8 2004 Cadillac SRX

V1 Left Caliper #7x

Max: 49.0 [g] at 0.053 [s]

Min: -82.5 [g] at 0.026 [s]



2004 NCAP Test 8 2004 Cadillac SRX

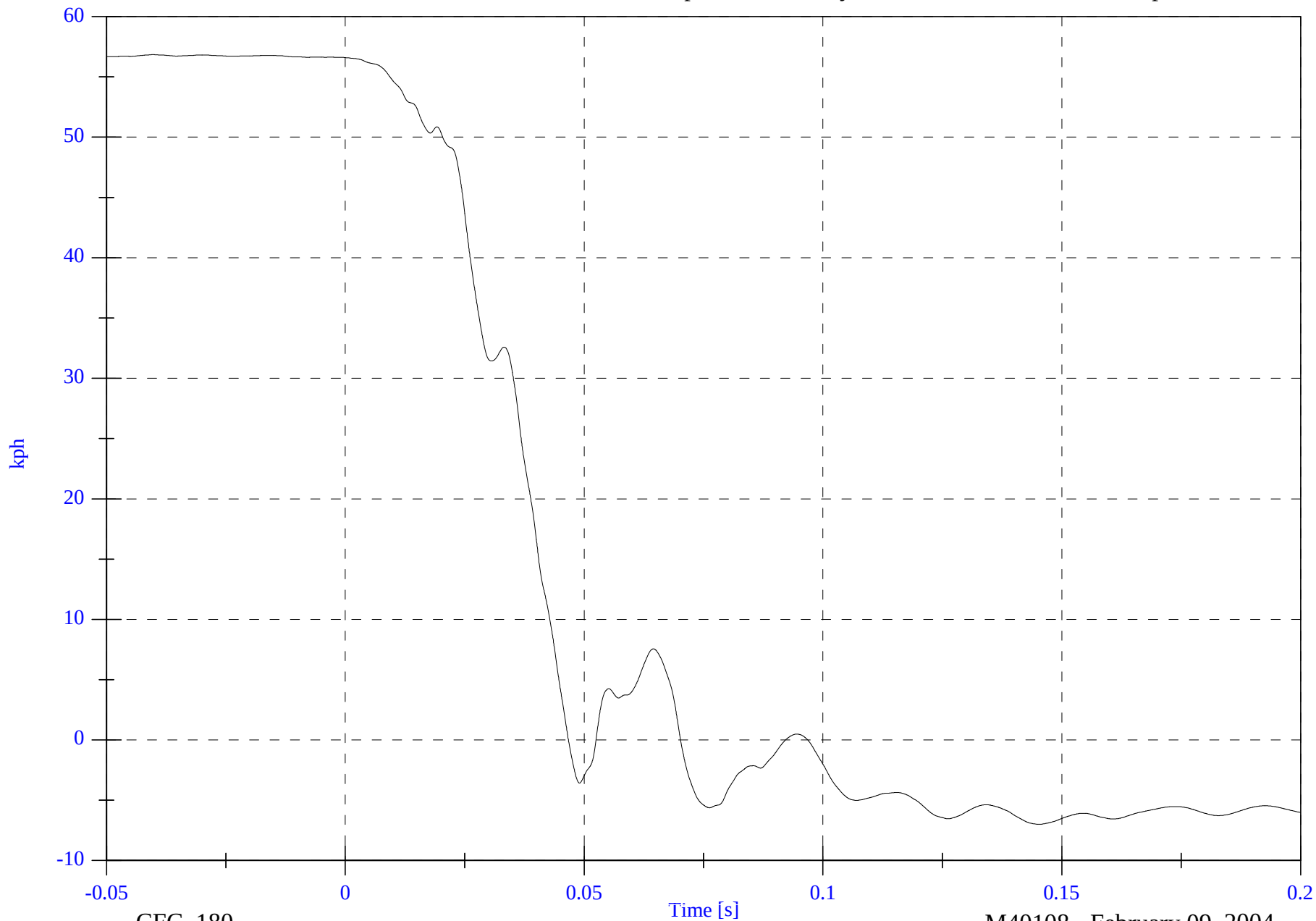
V1 Left Caliper #7x Velocity

Max: 56.8 [kph] at -0.040 [s]

Min: -7.0 [kph] at 0.145 [s]

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8642-NCAP-44



CFC_180

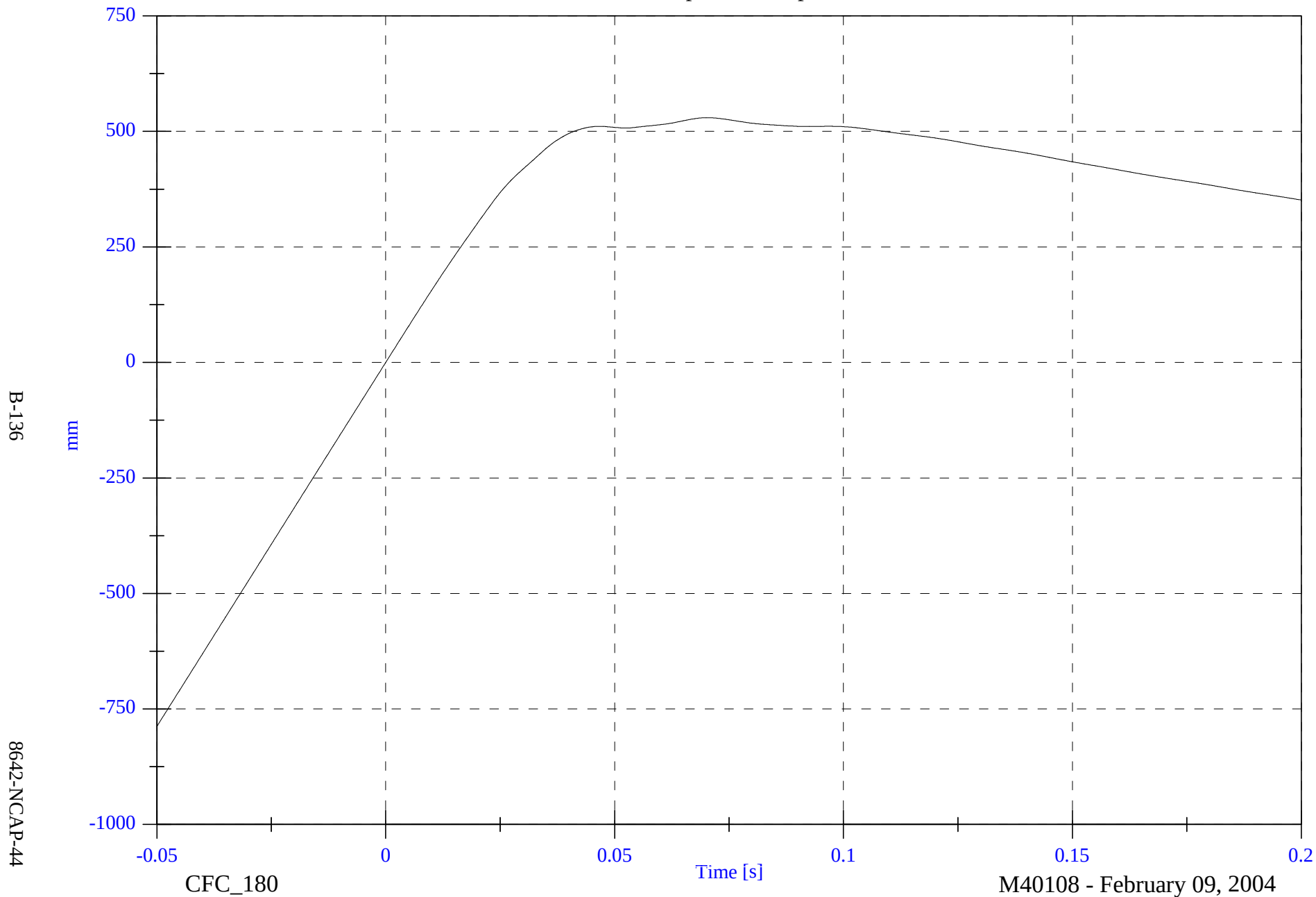
M40108 - February 09, 2004

2004 NCAP Test 8 2004 Cadillac SRX

V1 Left Caliper #7x Displacement

Max: 529.7 [mm] at 0.070 [s]

Min: -787.8 [mm] at -0.050 [s]

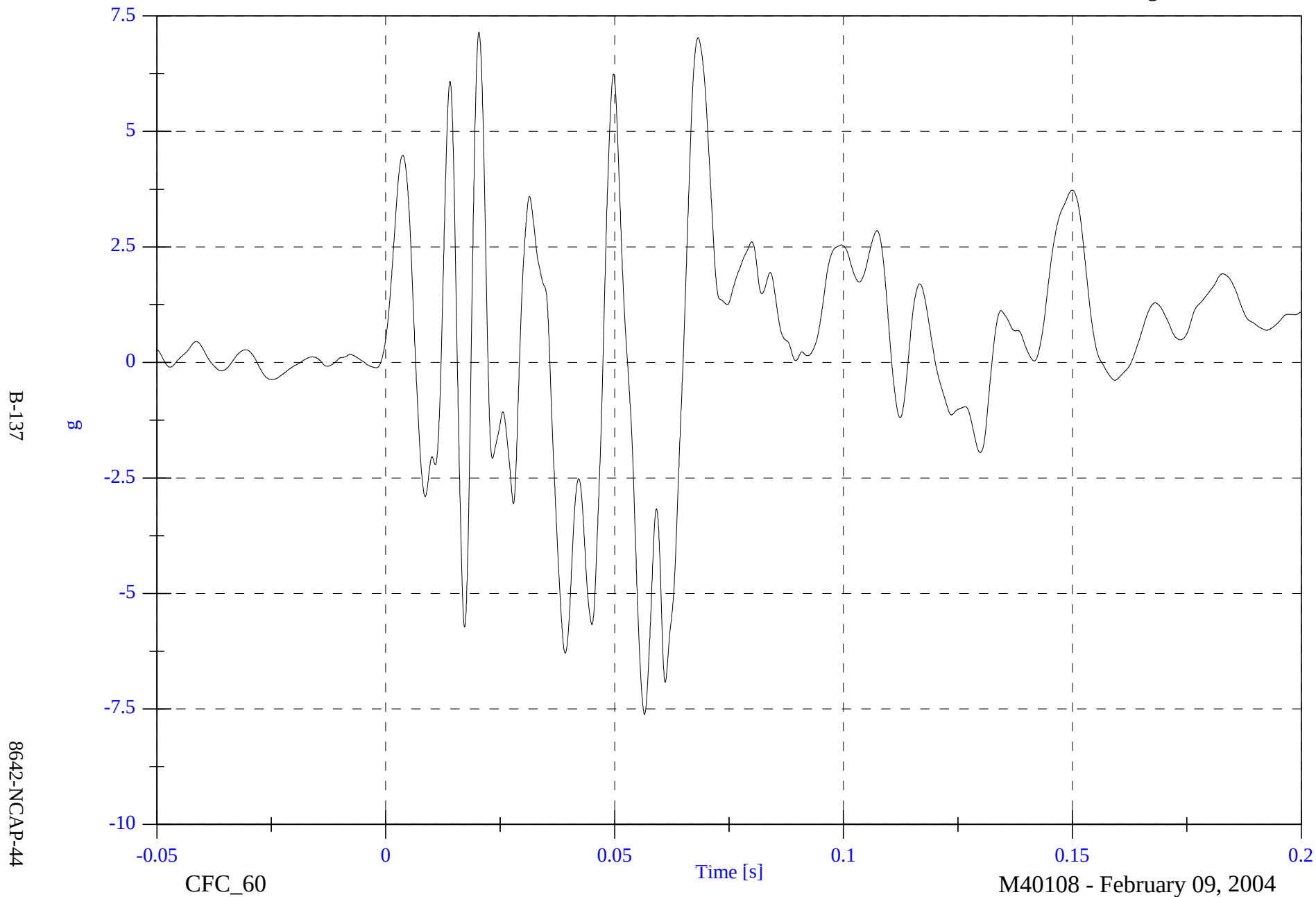


2004 NCAP Test 8 2004 Cadillac SRX

V1 Left Rear #8z

Max: 7.2 [g] at 0.020 [s]

Min: -7.6 [g] at 0.056 [s]



2004 NCAP Test 8 2004 Cadillac SRX

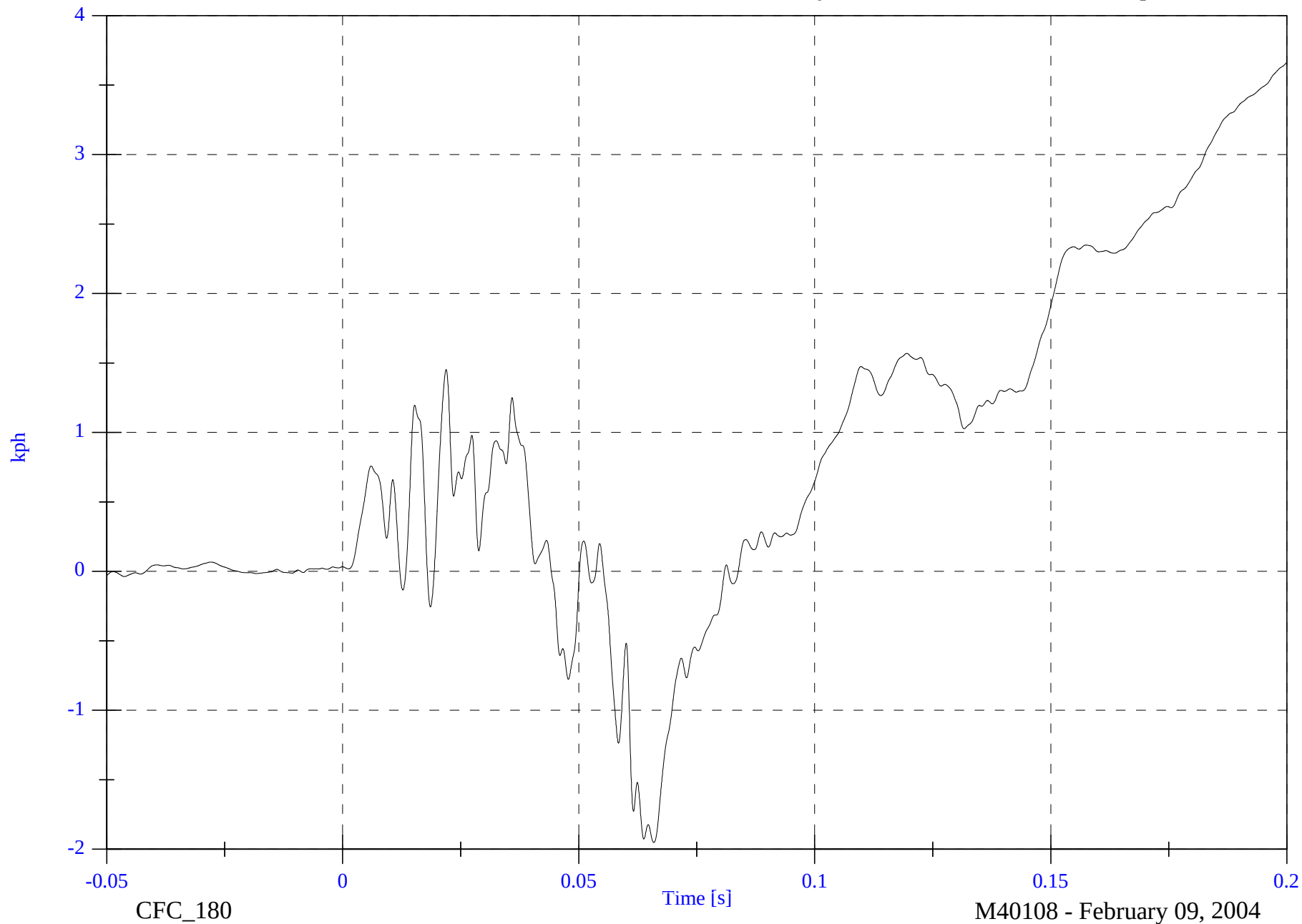
V1 Left Rear #8z Velocity

Max: 3.7 [kph] at 0.200 [s]

Min: -2.0 [kph] at 0.066 [s]

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2004 NCAP Test 8 2004 Cadillac SRX

V1 Left Rear #8z Displacement

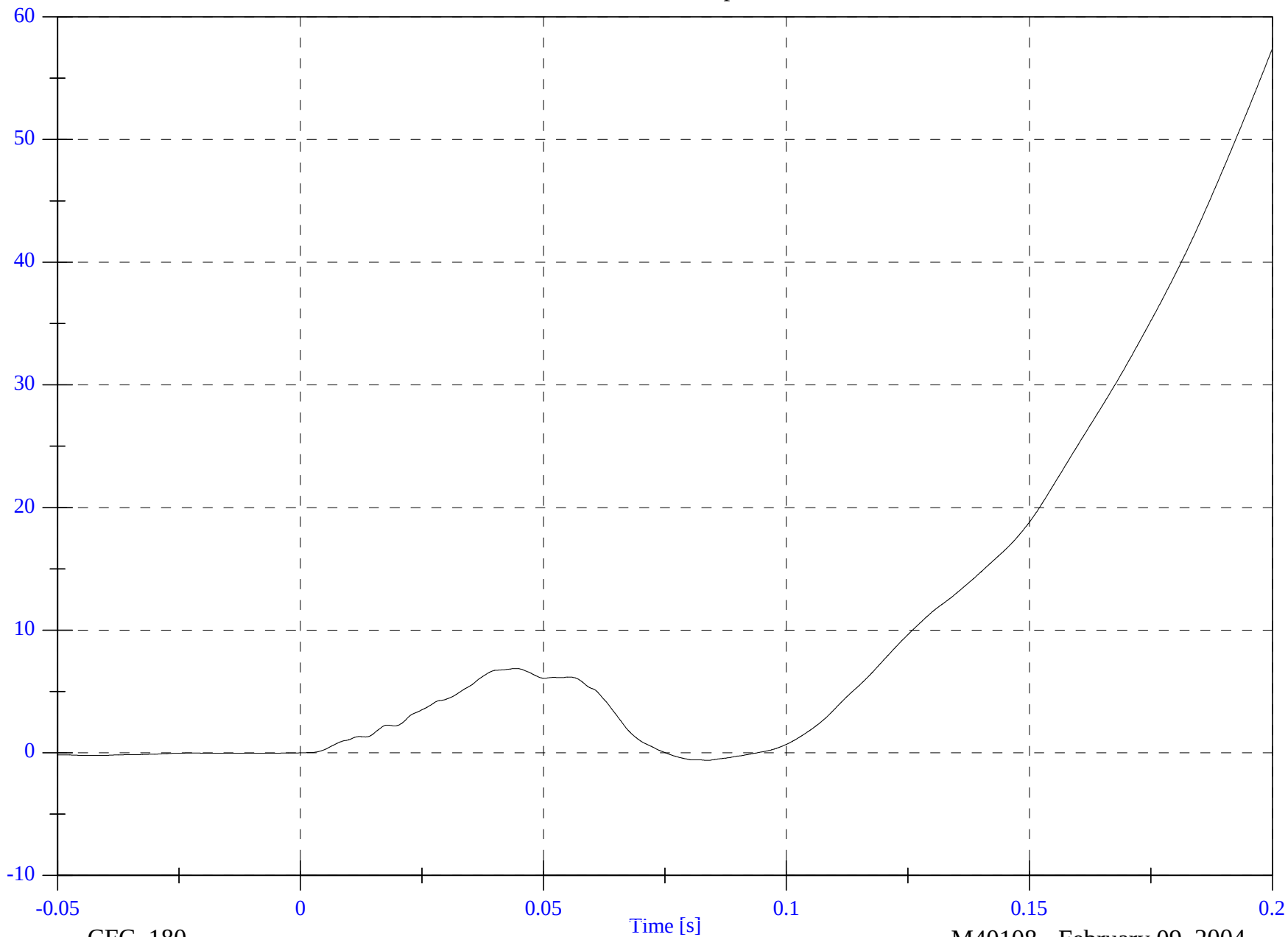
Max: 57.4 [mm] at 0.200 [s]

Min: -0.6 [mm] at 0.084 [s]

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8642-NCAP-44

mm



CFC_180

M40108 - February 09, 2004

2004 NCAP Test 8 2004 Cadillac SRX

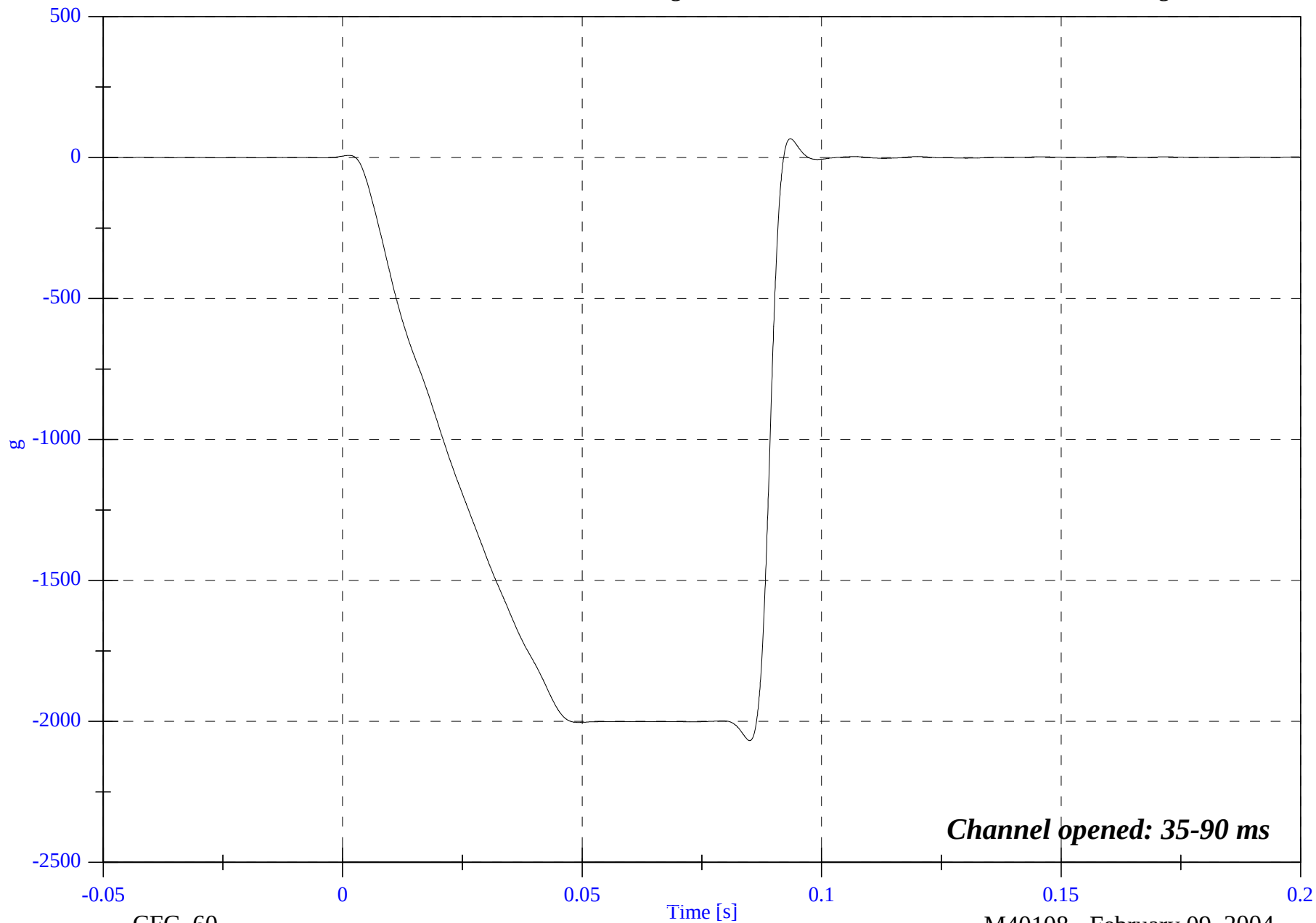
V1 Right Rear #9z

Max: 66.6 [g] at 0.093 [s]

Min: -2068.0 [g] at 0.085 [s]

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Channel opened: 35-90 ms

CFC_60

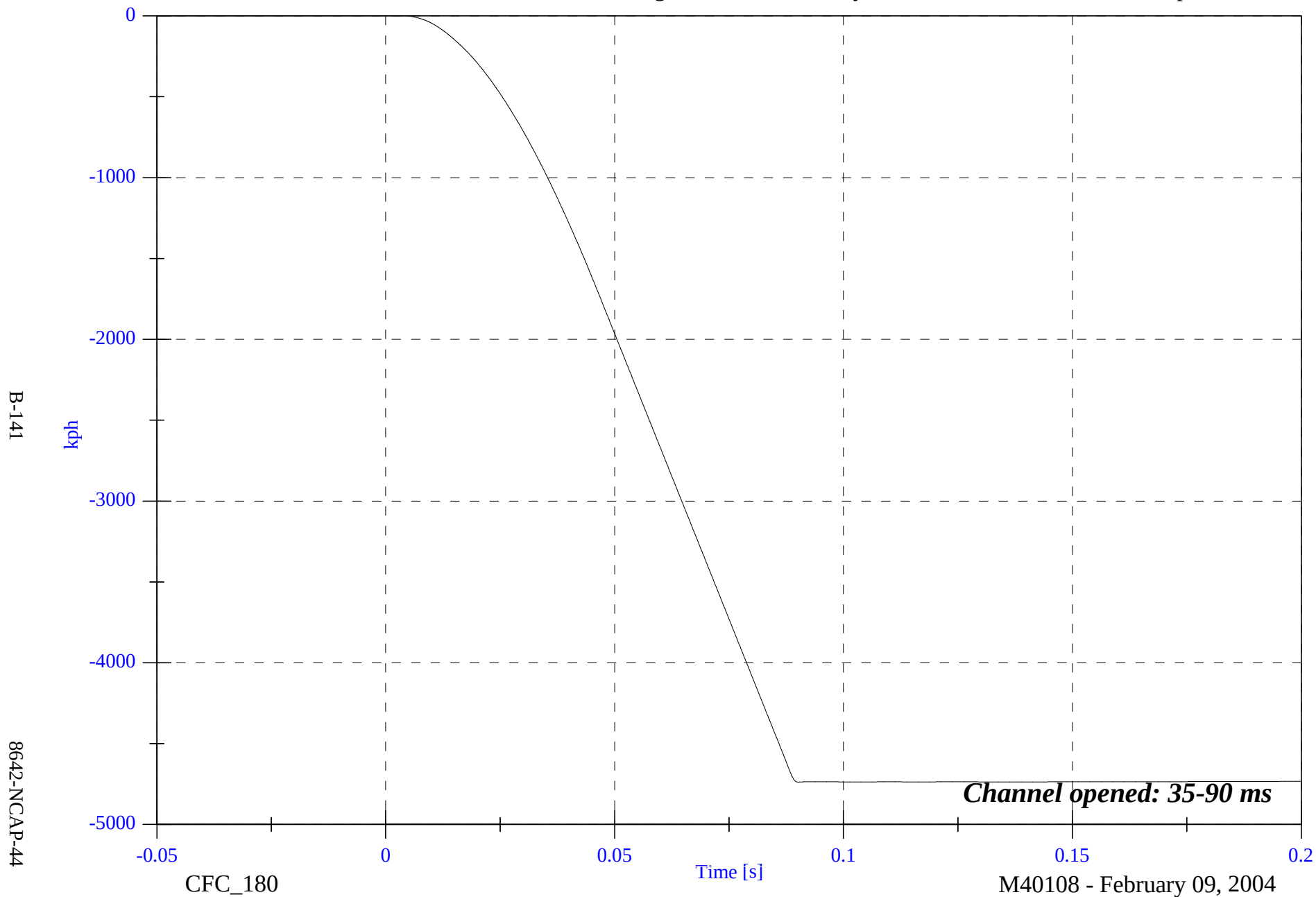
M40108 - February 09, 2004

2004 NCAP Test 8 2004 Cadillac SRX

Max: 0.5 [kph] at 0.004 [s]

Min: -4738.4 [kph] at 0.090 [s]

V1 Right Rear #9z Velocity

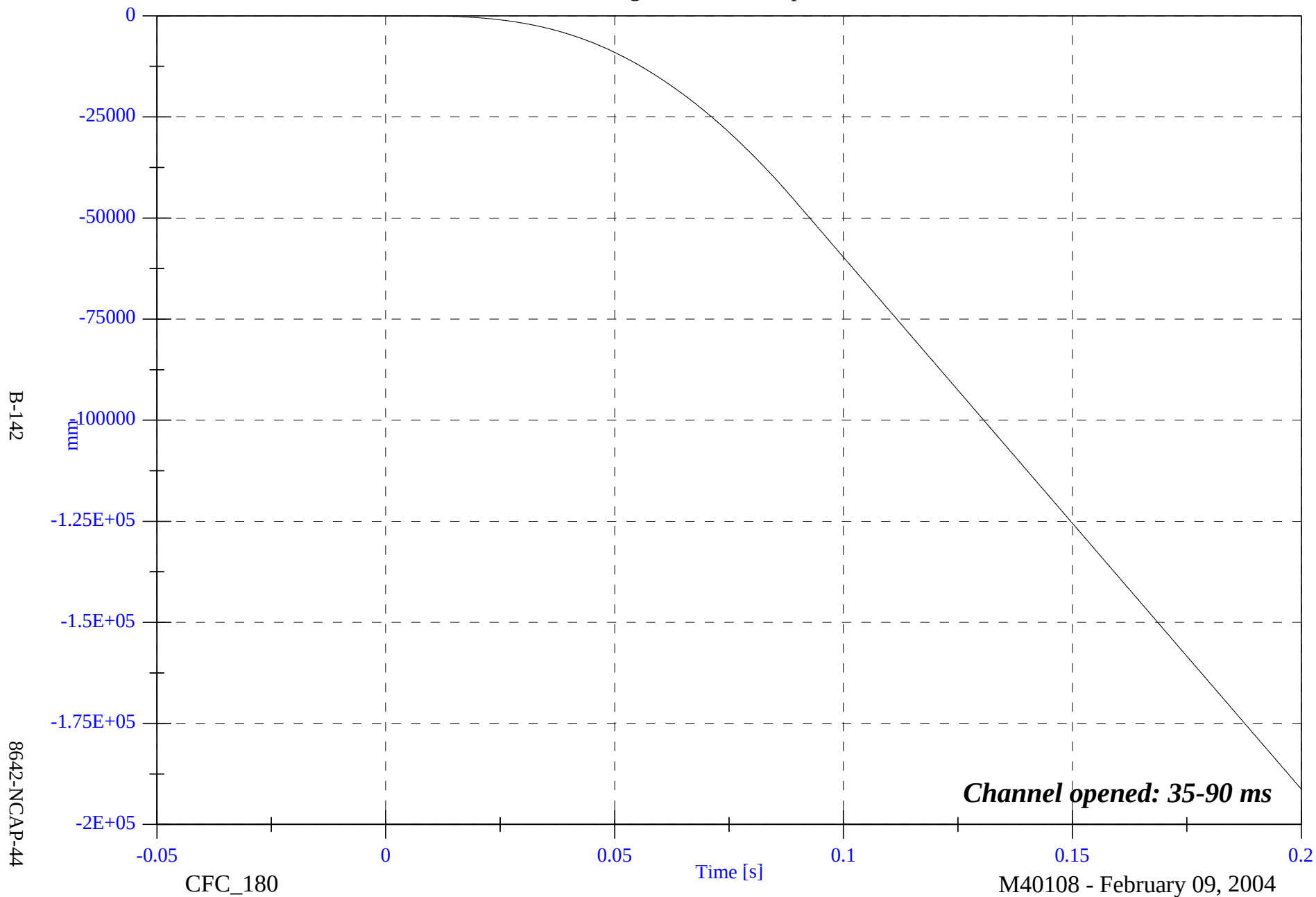


2004 NCAP Test 8 2004 Cadillac SRX

V1 Right Rear #9z Displacement

Max: 0.1 [mm] at 0.004 [s]

Min: -191192.2 [mm] at 0.200 [s]

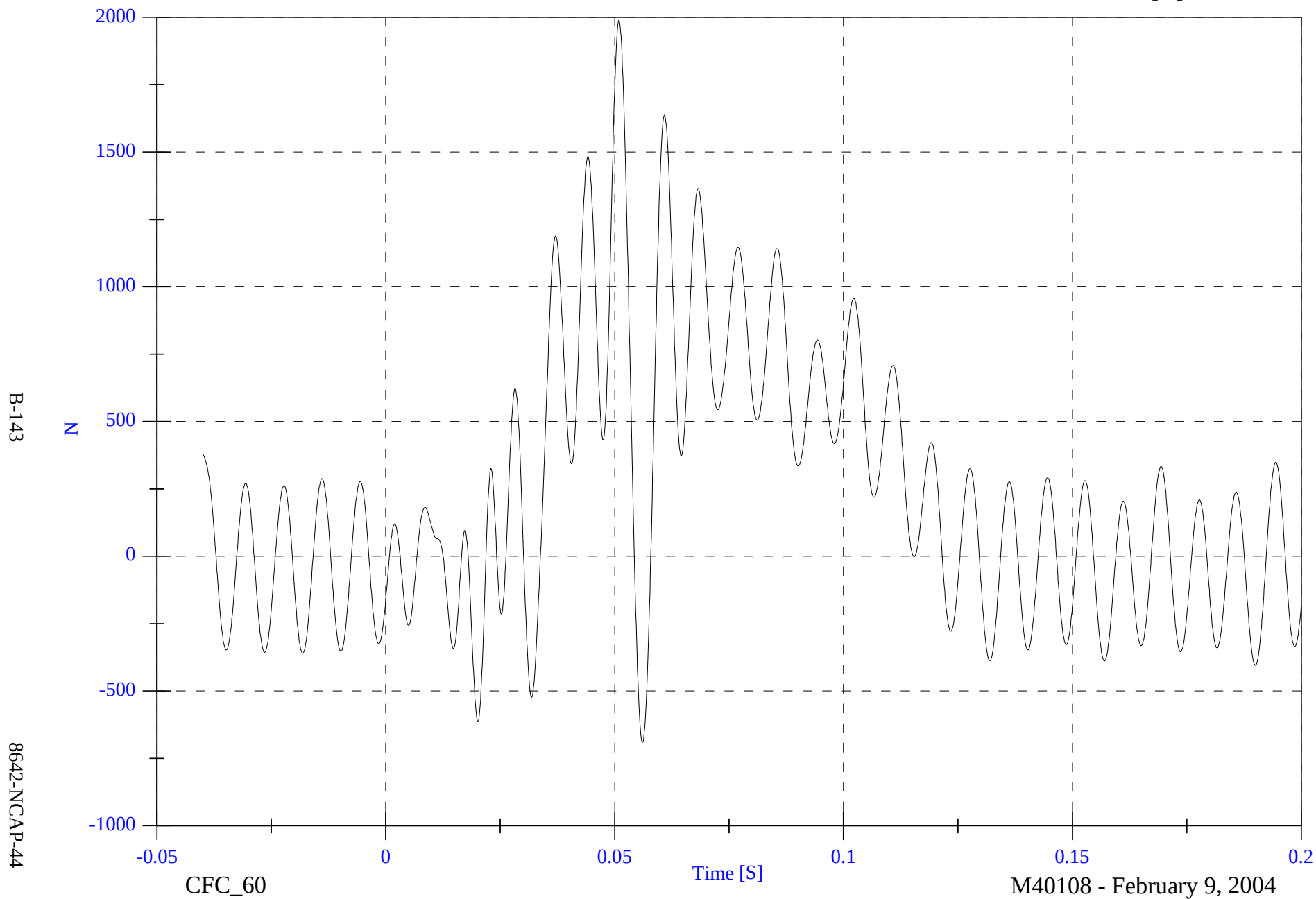


2004 NCAP Test 8 2004 Cadillac SRX

Max: 1988.2 [N] at 0.051 [S]

Min: -691.0 [N] at 0.056 [S]

Barrier Load Cell A1 Fx

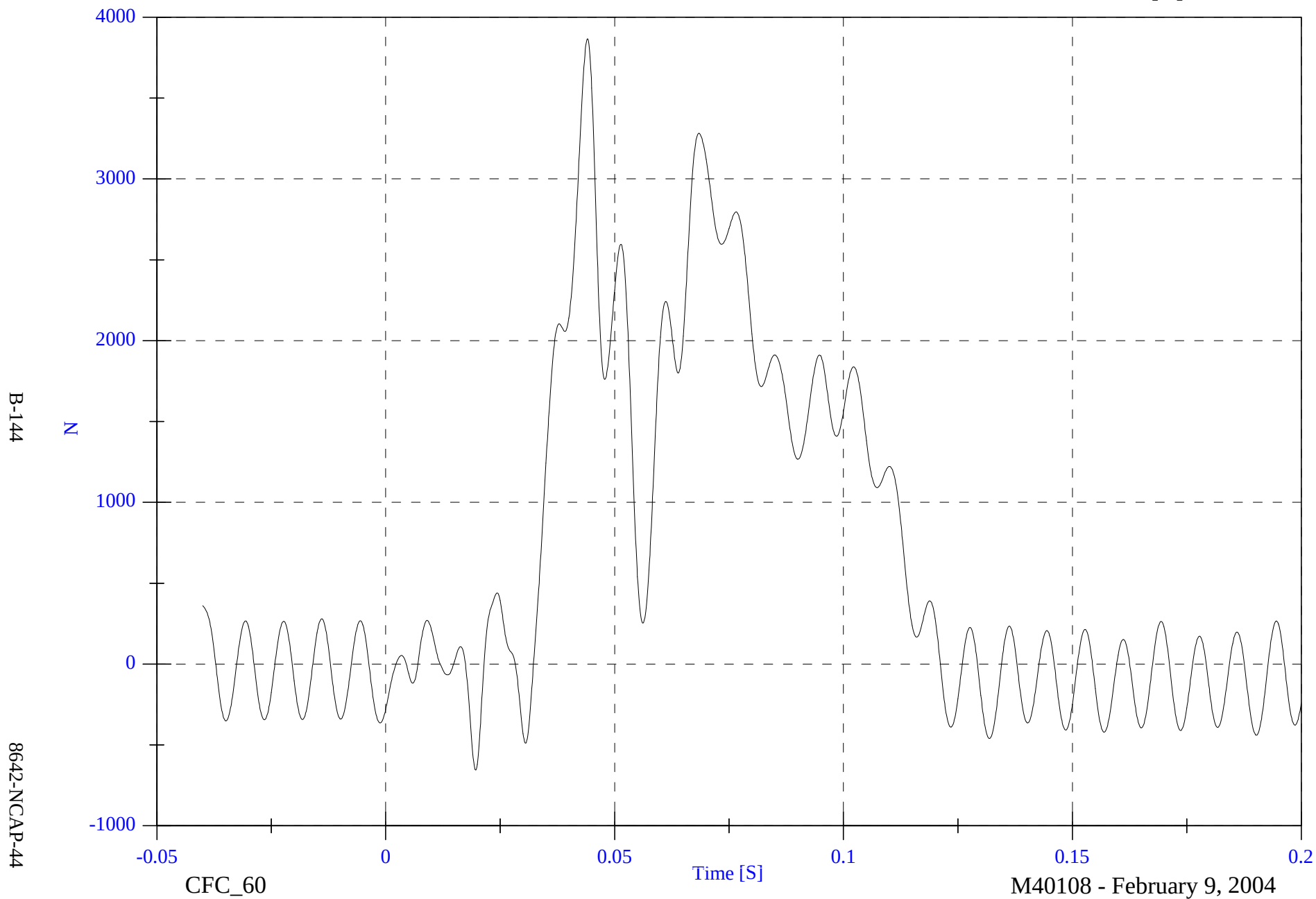


2004 NCAP Test 8 2004 Cadillac SRX

Max: 3867.3 [N] at 0.044 [S]

Min: -655.3 [N] at 0.020 [S]

Barrier Load Cell A2 Fx

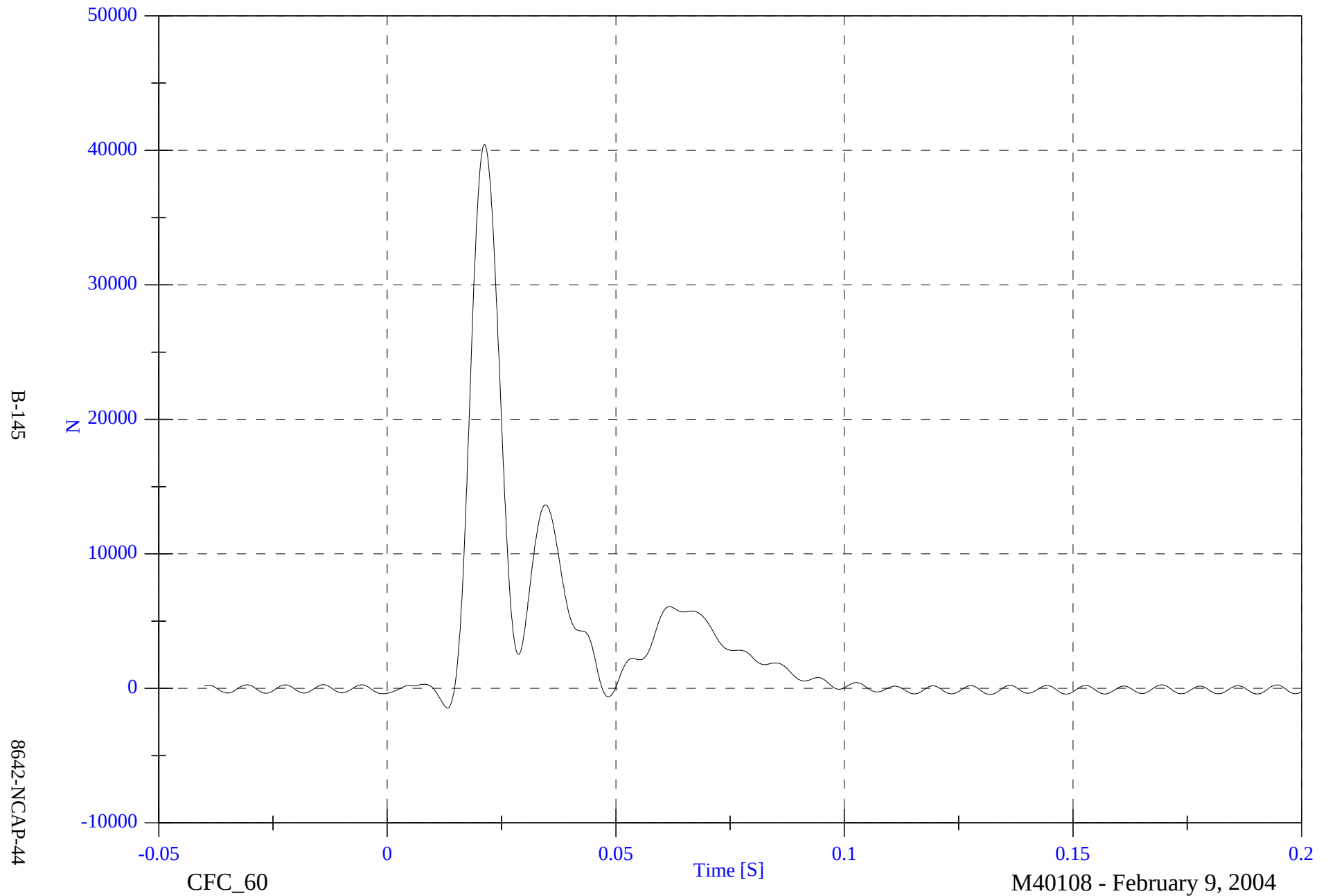


2004 NCAP Test 8 2004 Cadillac SRX

Max: 40433.6 [N] at 0.021 [S]

Min: -1455.5 [N] at 0.013 [S]

Barrier Load Cell A3 Fx

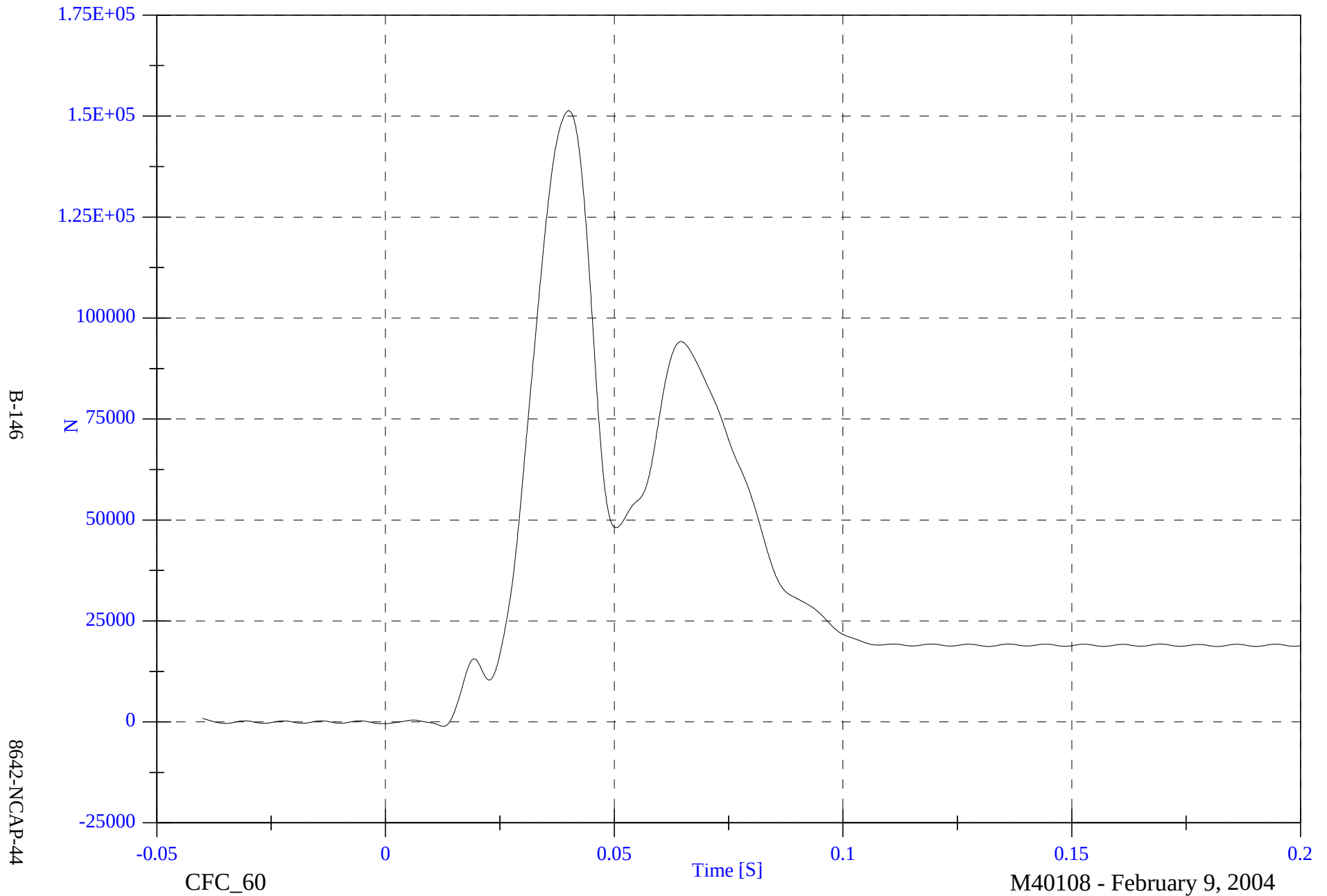


2004 NCAP Test 8 2004 Cadillac SRX

Barrier Load Cell A4 Fx

Max: 151296.2 [N] at 0.040 [S]

Min: -1094.4 [N] at 0.013 [S]

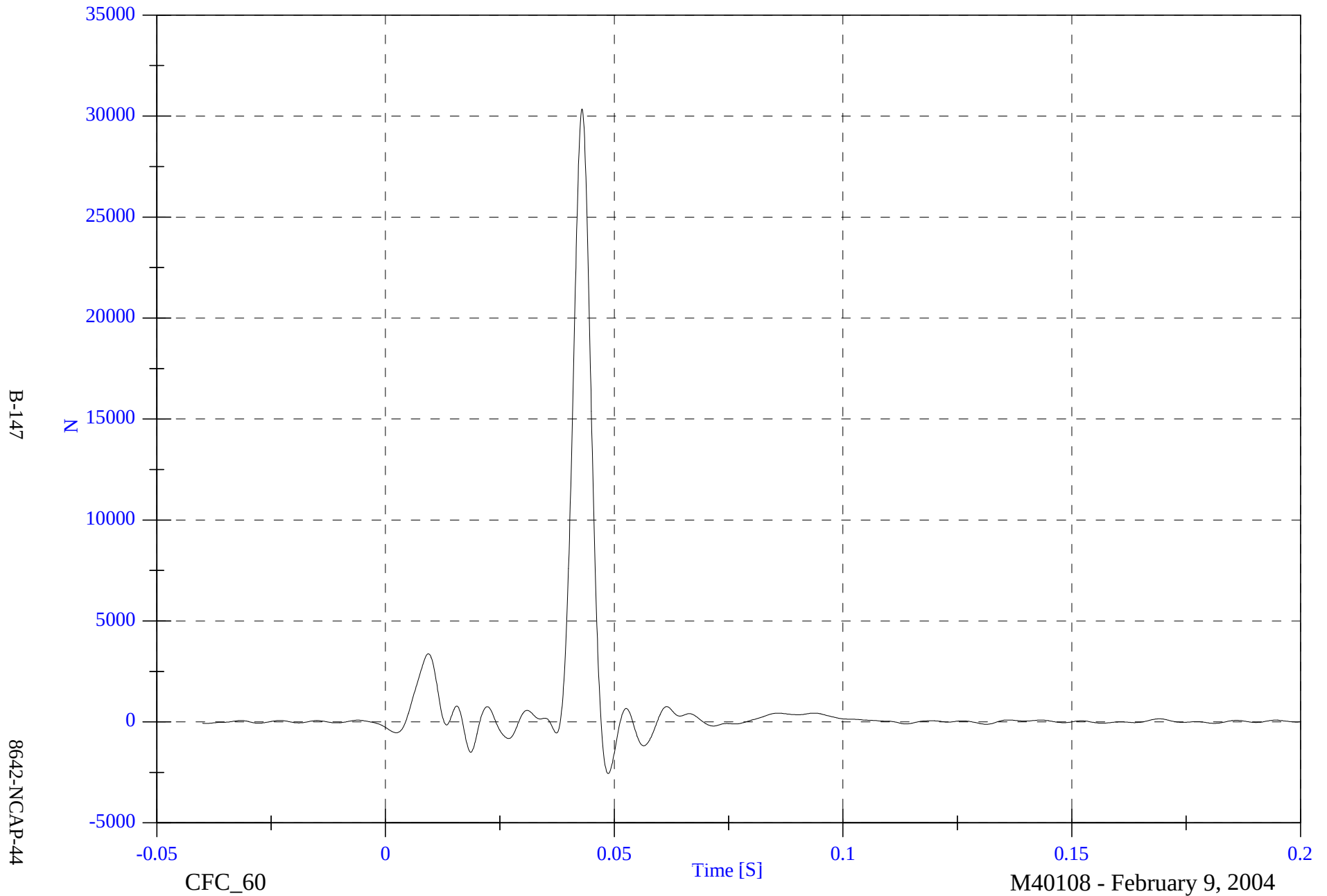


2004 NCAP Test 8 2004 Cadillac SRX

Barrier Load Cell A5 Fx

Max: 30348.8 [N] at 0.043 [S]

Min: -2558.0 [N] at 0.049 [S]

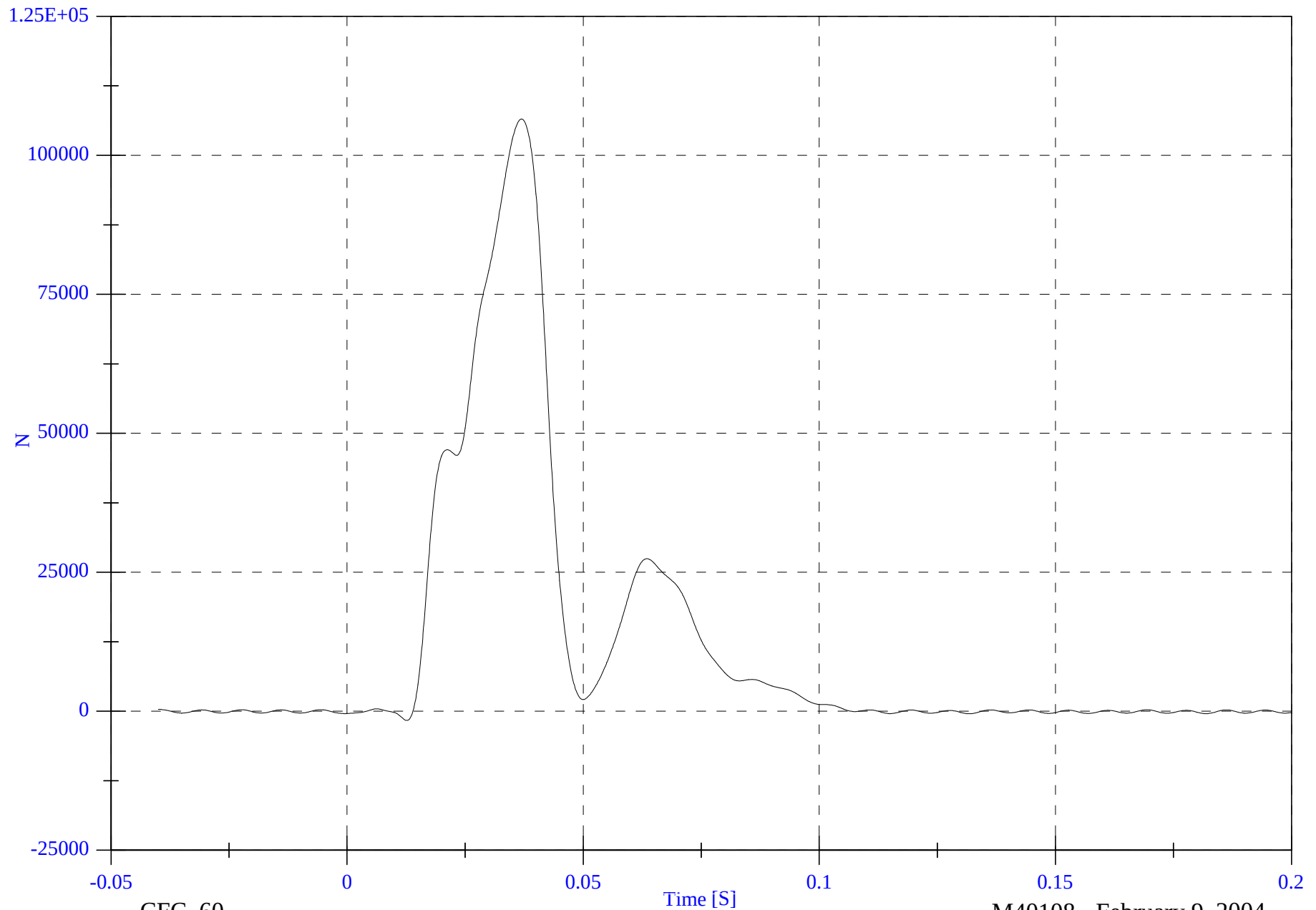


2004 NCAP Test 8 2004 Cadillac SRX

Max: 106518.6 [N] at 0.037 [S]

Min: -1653.4 [N] at 0.013 [S]

Barrier Load Cell A6 Fx



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CFC_60

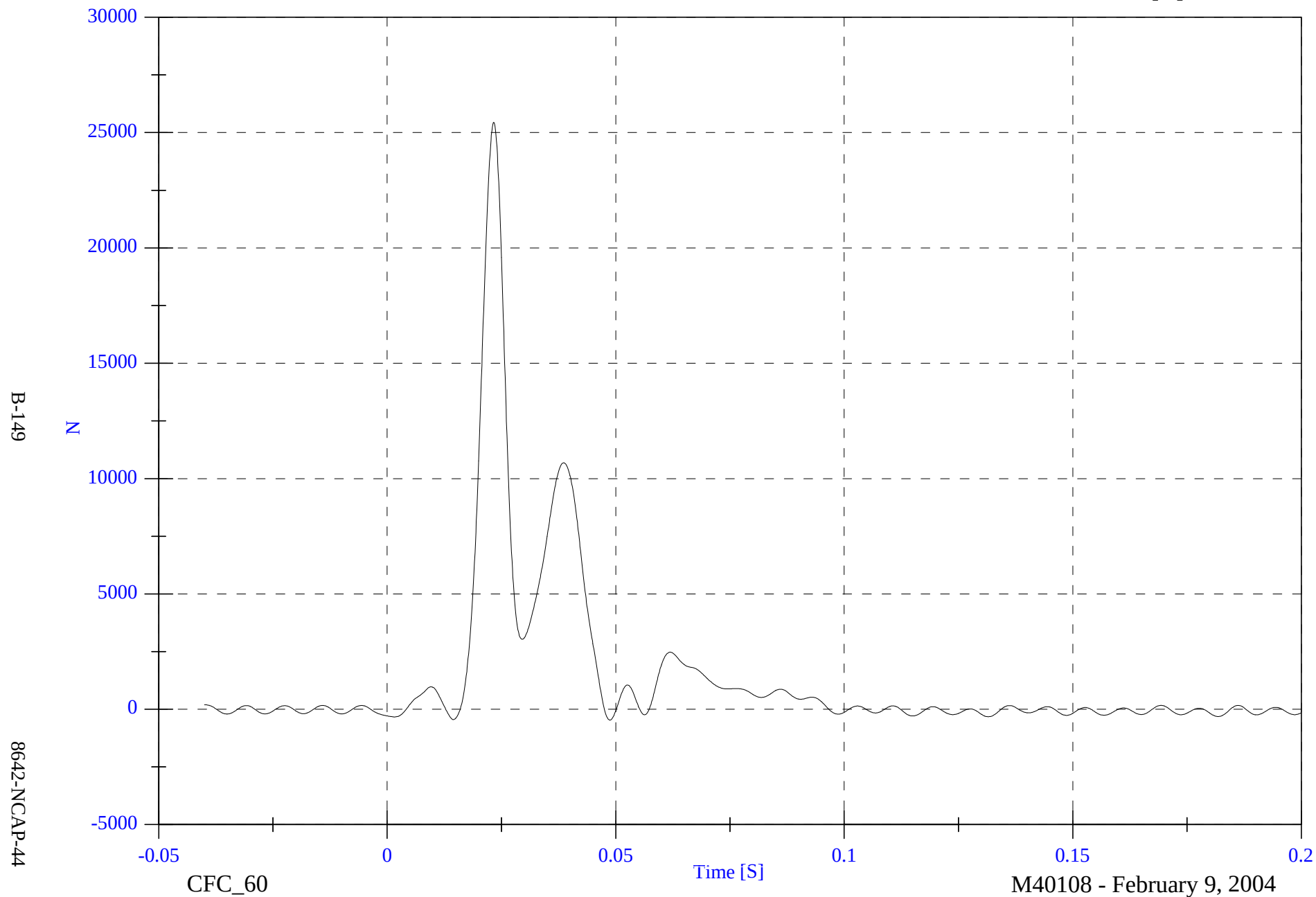
M40108 - February 9, 2004

2004 NCAP Test 8 2004 Cadillac SRX

Barrier Load Cell A7 Fx

Max: 25448.0 [N] at 0.023 [S]

Min: -467.3 [N] at 0.049 [S]

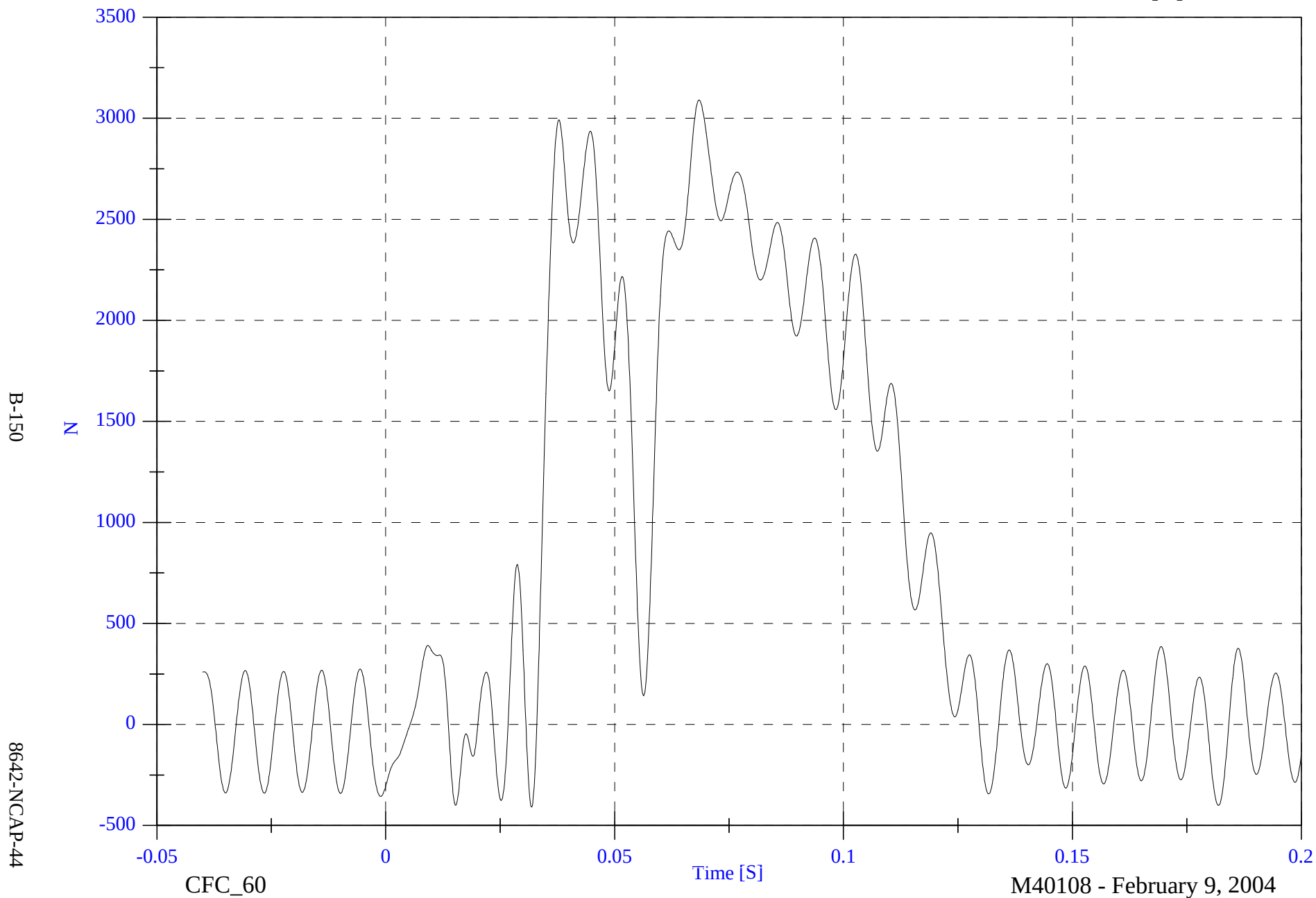


2004 NCAP Test 8 2004 Cadillac SRX

Max: 3090.7 [N] at 0.068 [S]

Min: -408.5 [N] at 0.032 [S]

Barrier Load Cell A8 Fx

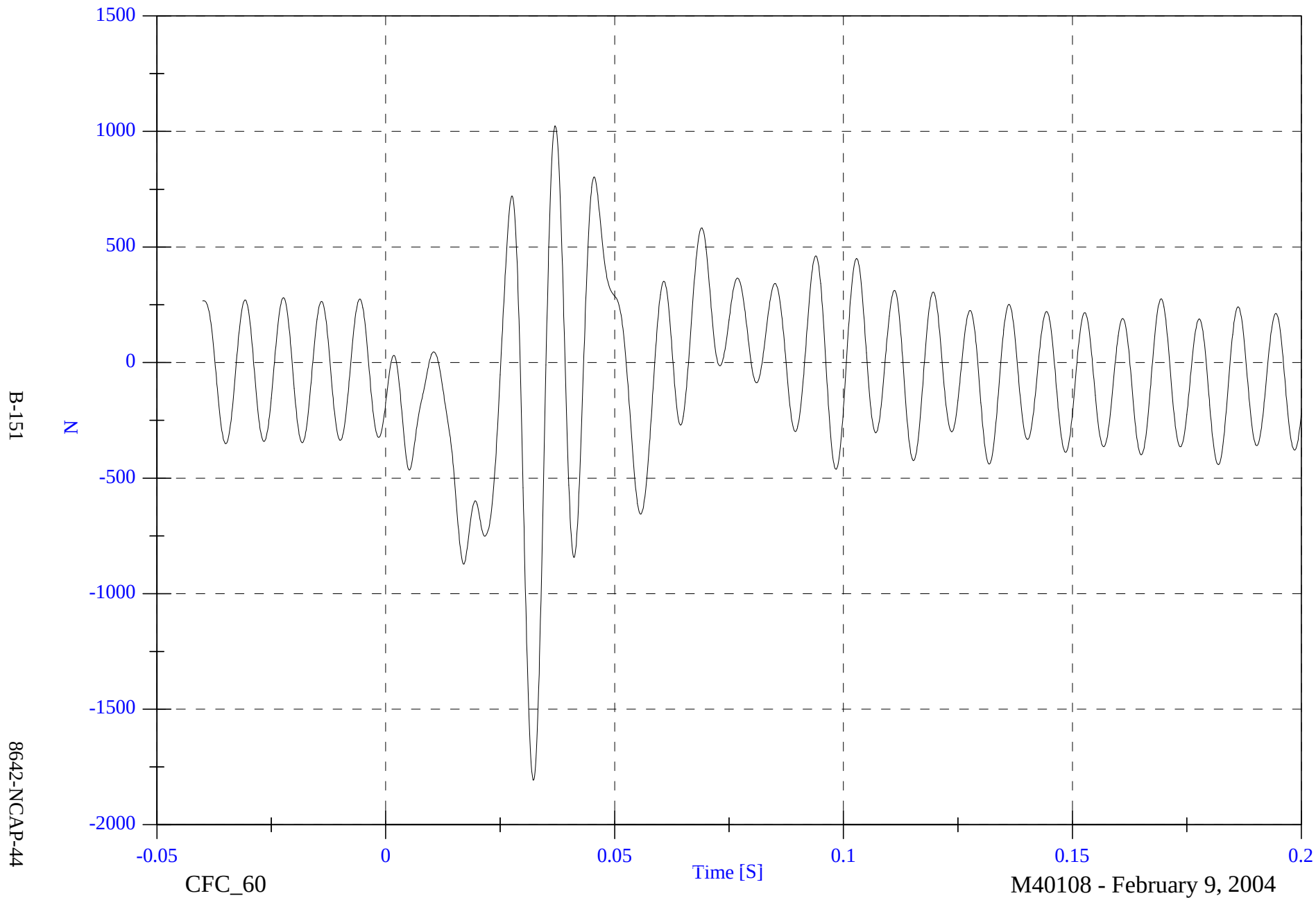


2004 NCAP Test 8 2004 Cadillac SRX

Barrier Load Cell A9 Fx

Max: 1023.9 [N] at 0.037 [S]

Min: -1807.2 [N] at 0.032 [S]

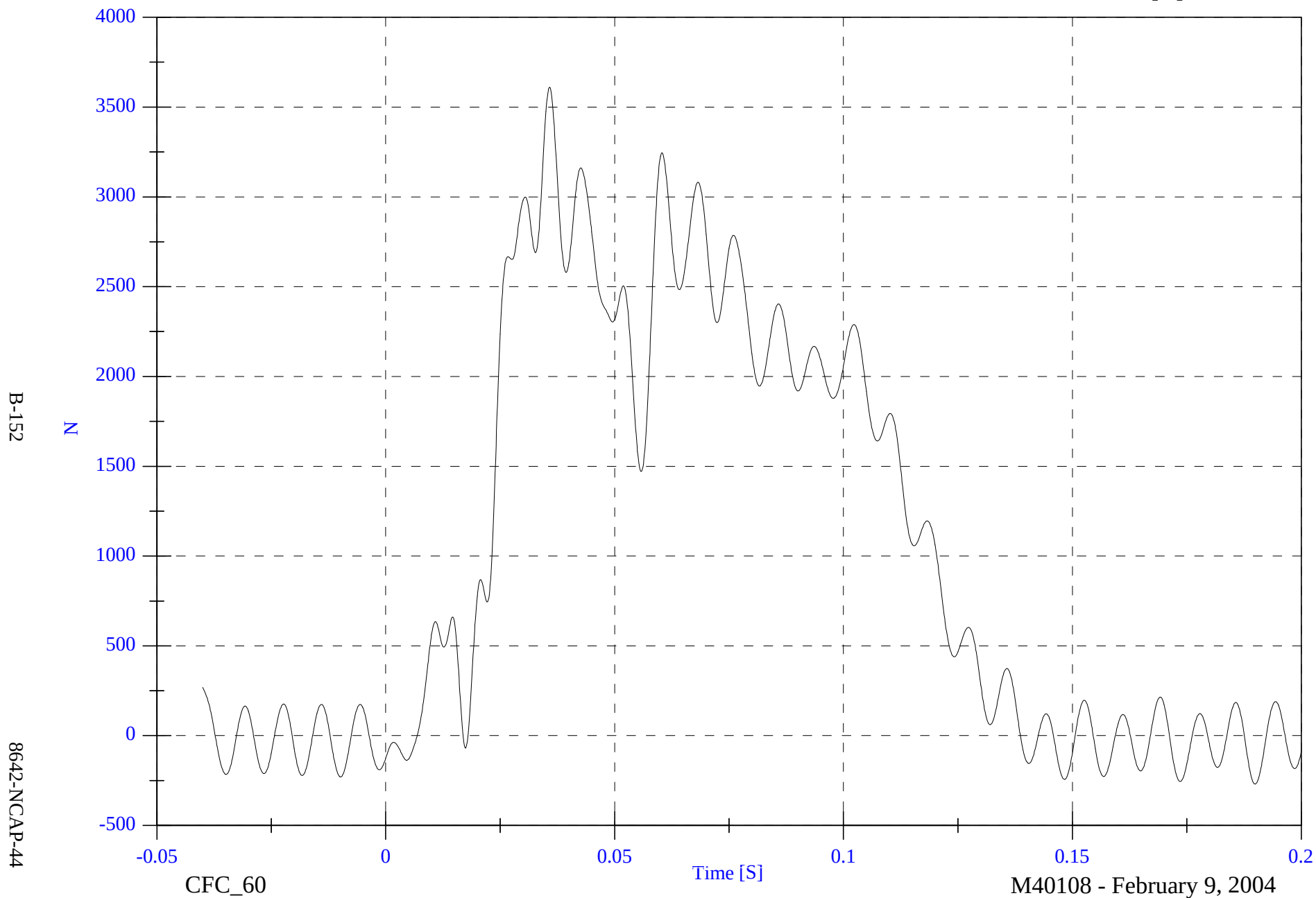


2004 NCAP Test 8 2004 Cadillac SRX

Max: 3610.9 [N] at 0.036 [S]

Min: -269.4 [N] at 0.190 [S]

Barrier Load Cell B1 Fx

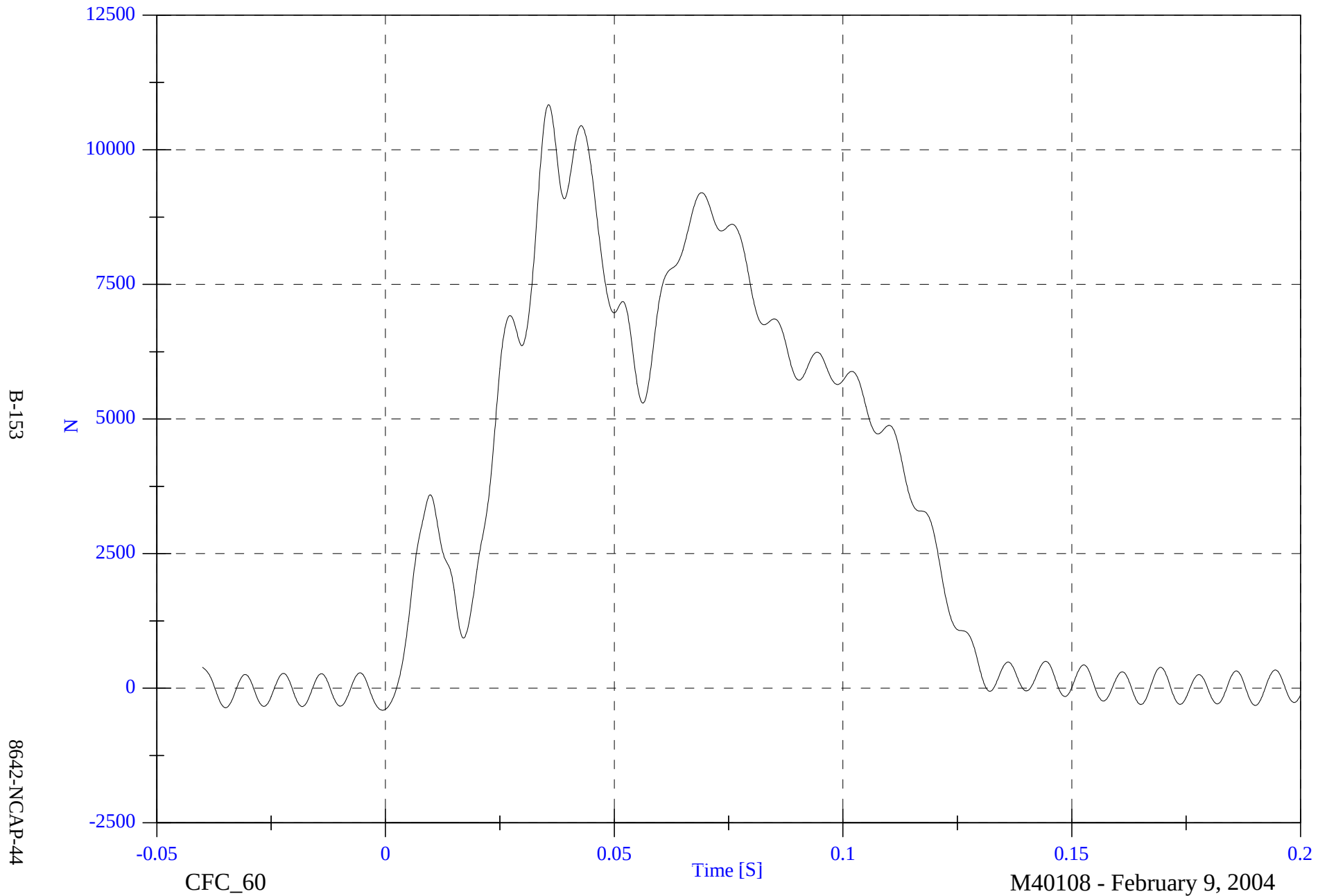


2004 NCAP Test 8 2004 Cadillac SRX

Max: 10837.5 [N] at 0.036 [S]

Min: -407.9 [N] at -0.001 [S]

Barrier Load Cell B2 Fx

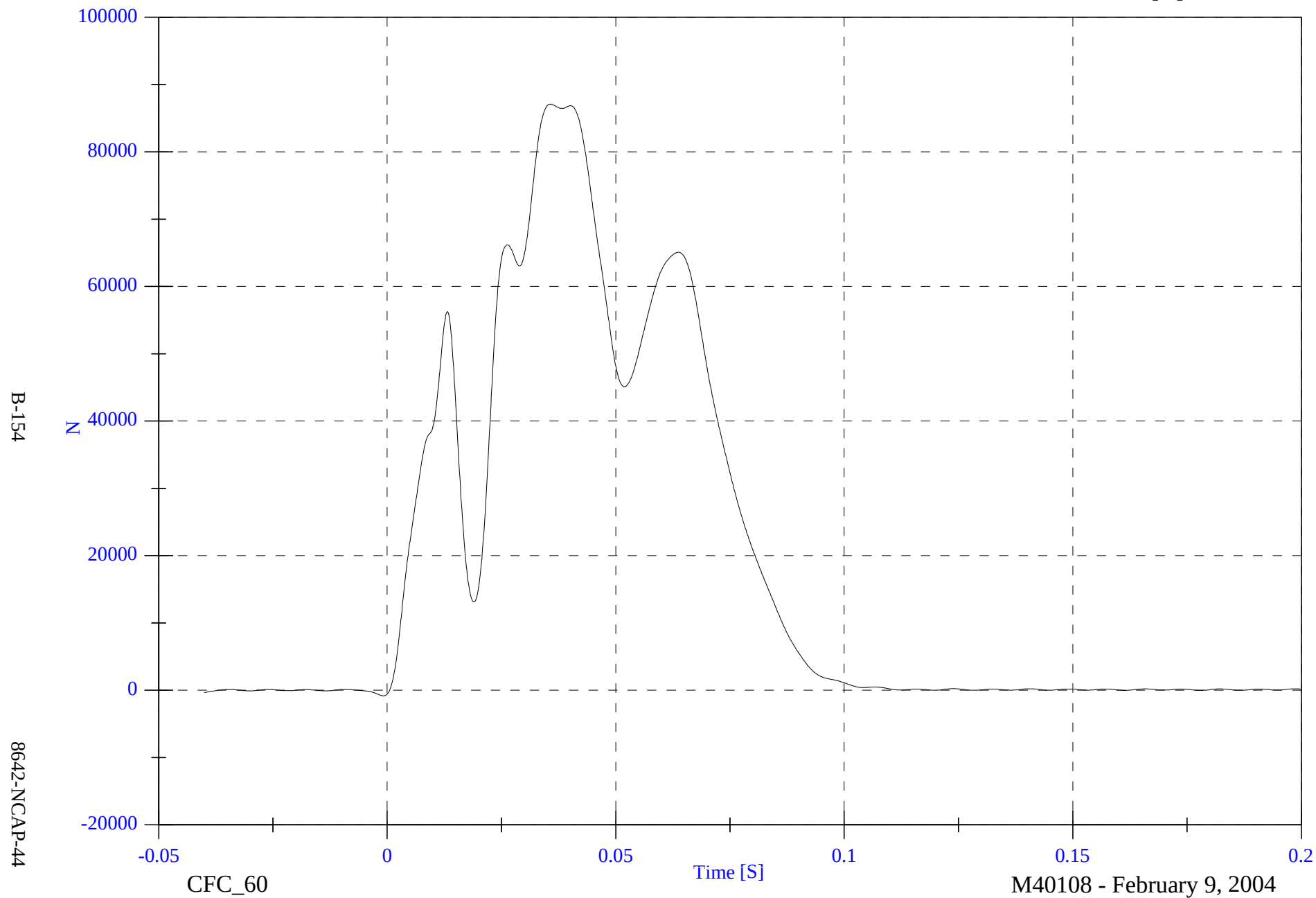


2004 NCAP Test 8 2004 Cadillac SRX

Max: 87082.7 [N] at 0.036 [S]

Min: -825.5 [N] at -0.001 [S]

Barrier Load Cell B3 Fx

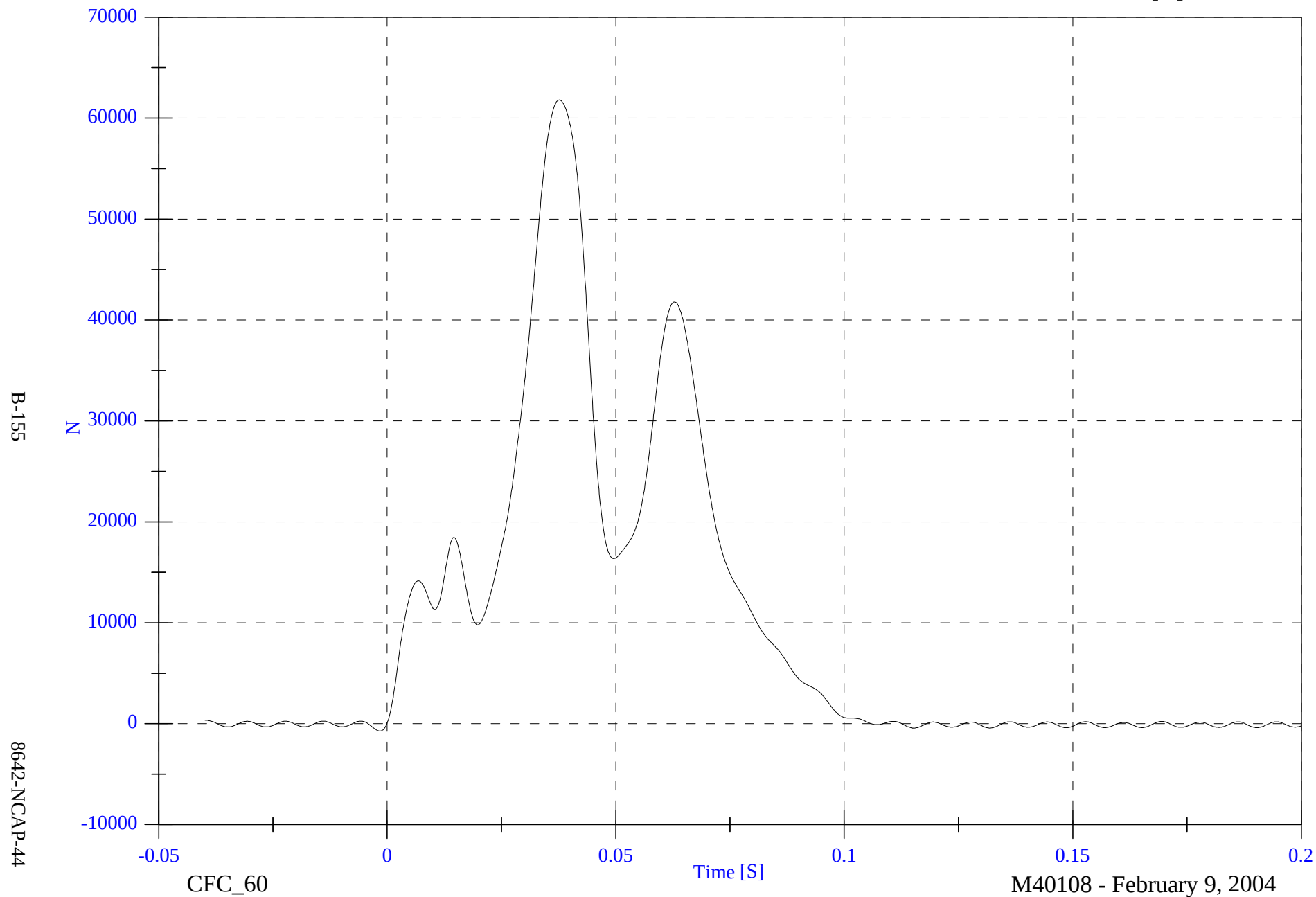


2004 NCAP Test 8 2004 Cadillac SRX

Max: 61803.1 [N] at 0.038 [S]

Min: -720.4 [N] at -0.002 [S]

Barrier Load Cell B4 Fx

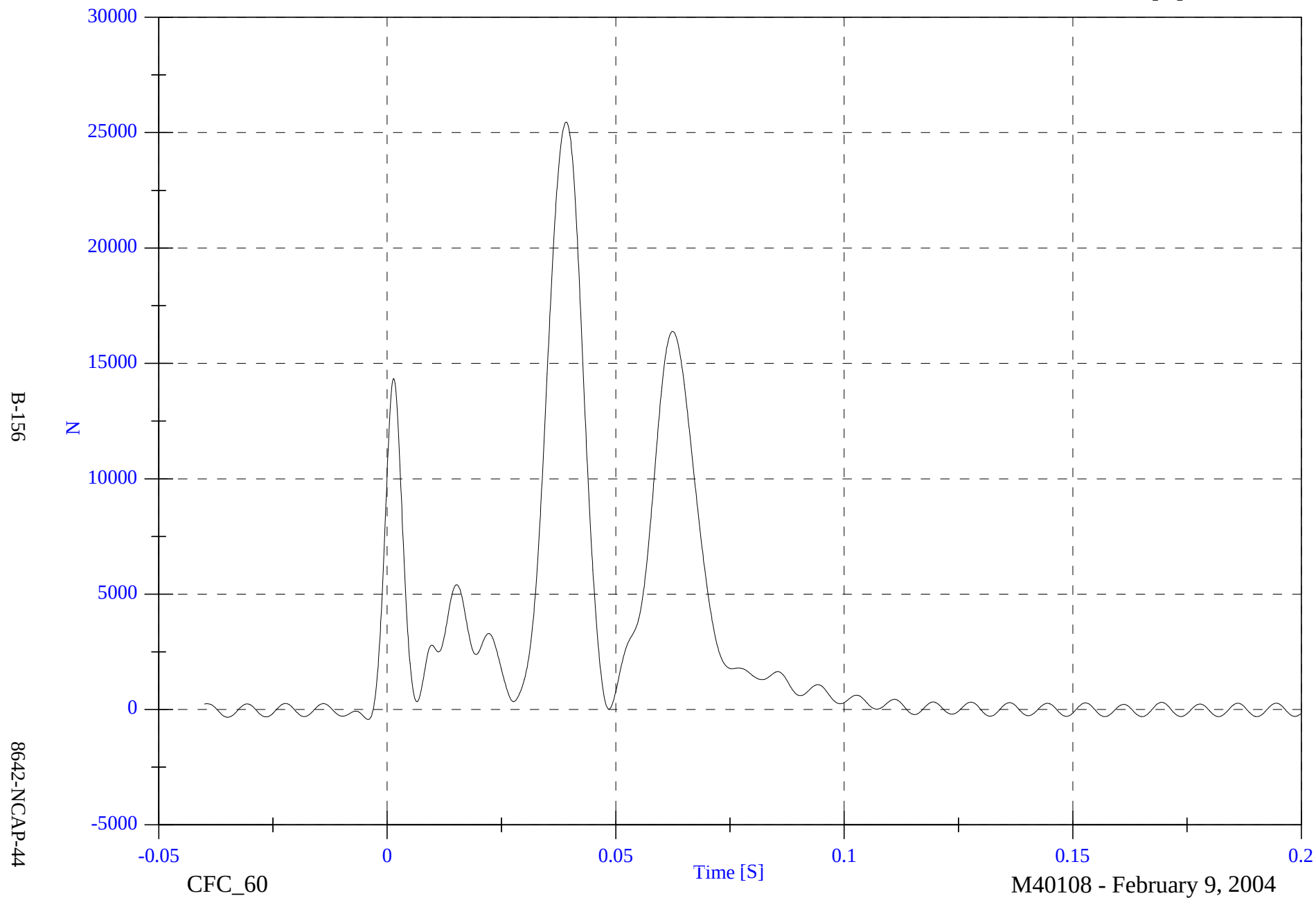


2004 NCAP Test 8 2004 Cadillac SRX

Barrier Load Cell B5 Fx

Max: 25454.8 [N] at 0.039 [S]

Min: -436.2 [N] at -0.004 [S]

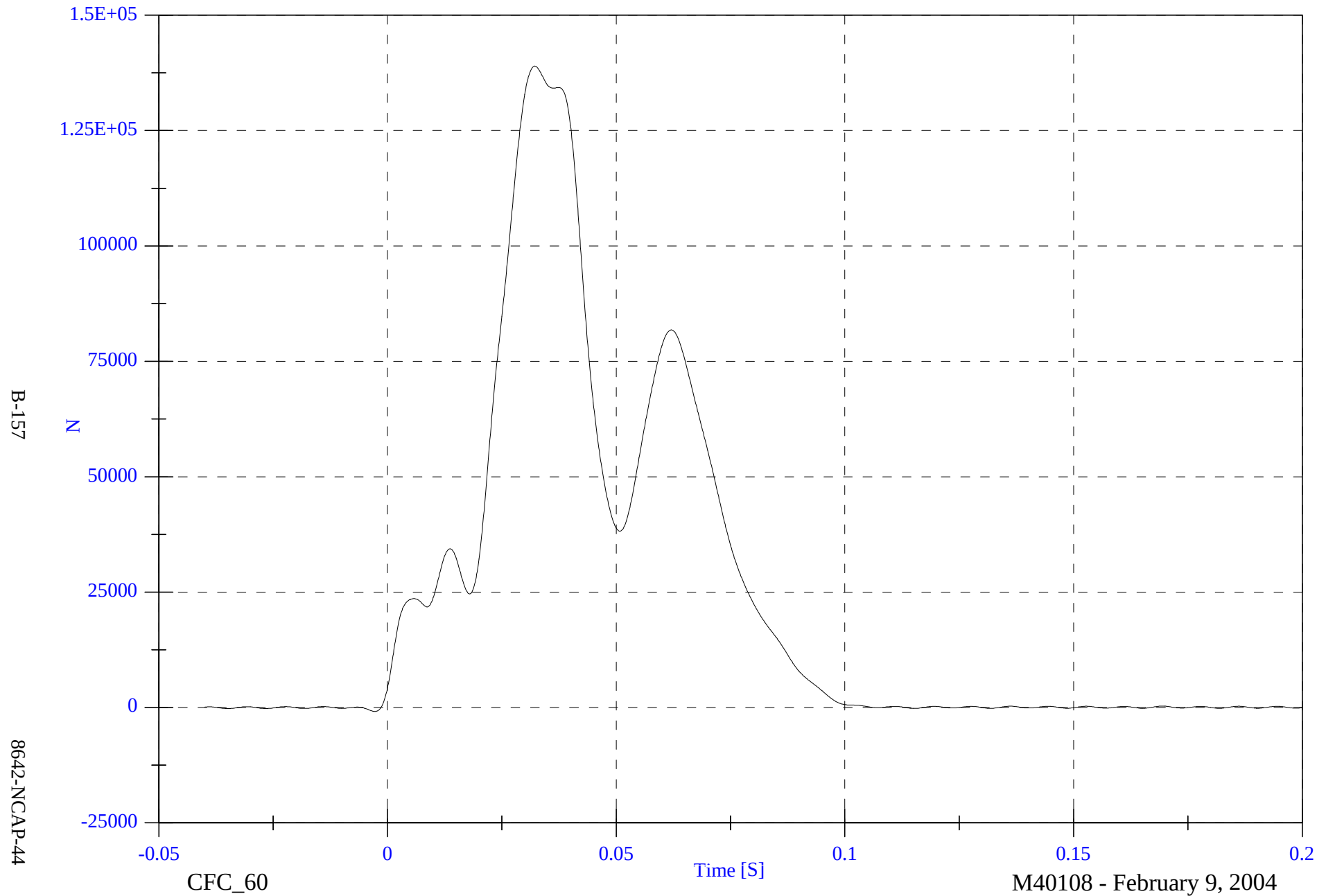


2004 NCAP Test 8 2004 Cadillac SRX

Max: 138966.2 [N] at 0.032 [S]

Min: -874.0 [N] at -0.003 [S]

Barrier Load Cell B6 Fx

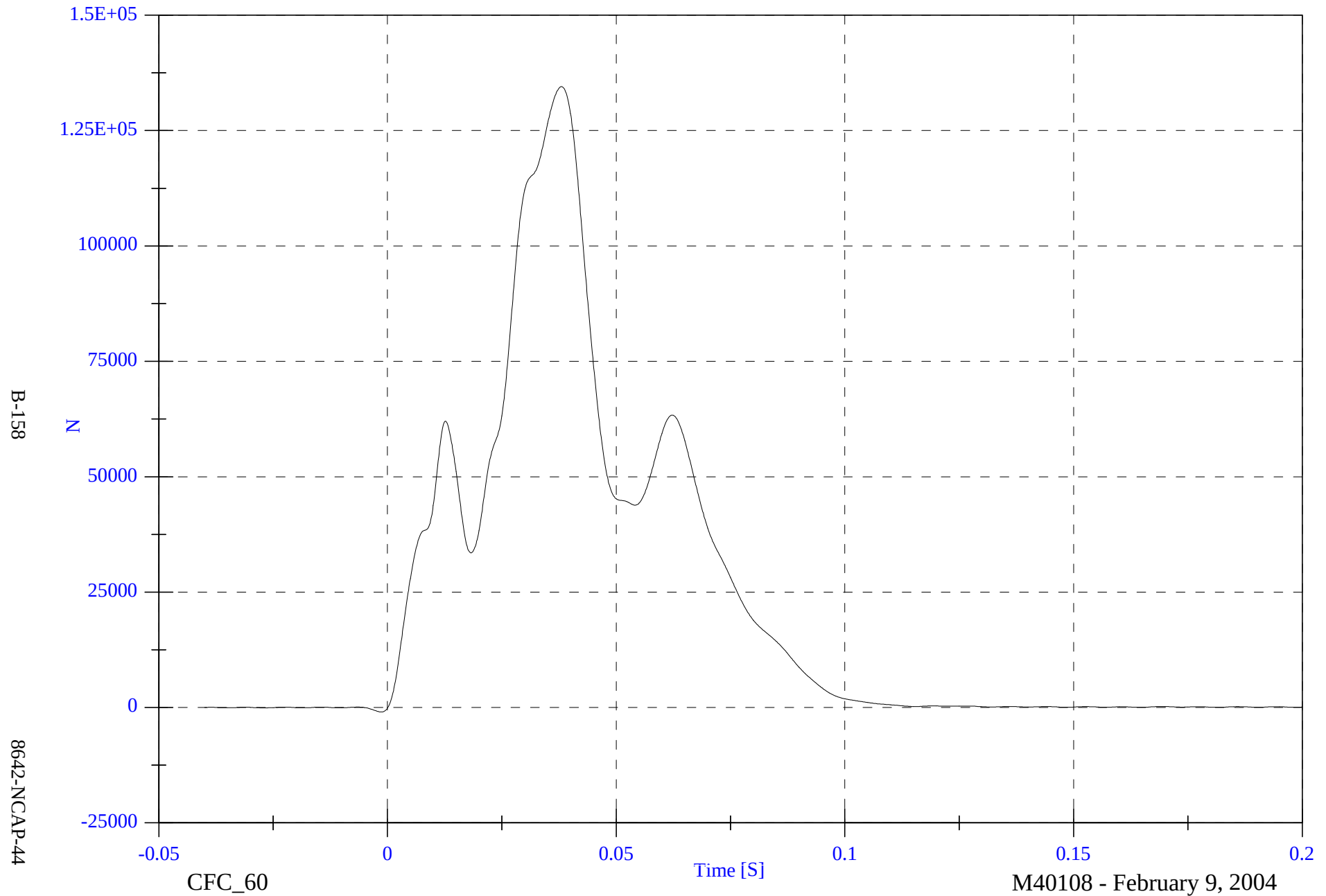


2004 NCAP Test 8 2004 Cadillac SRX

Max: 134511.2 [N] at 0.038 [S]

Min: -977.6 [N] at -0.001 [S]

Barrier Load Cell B7 Fx

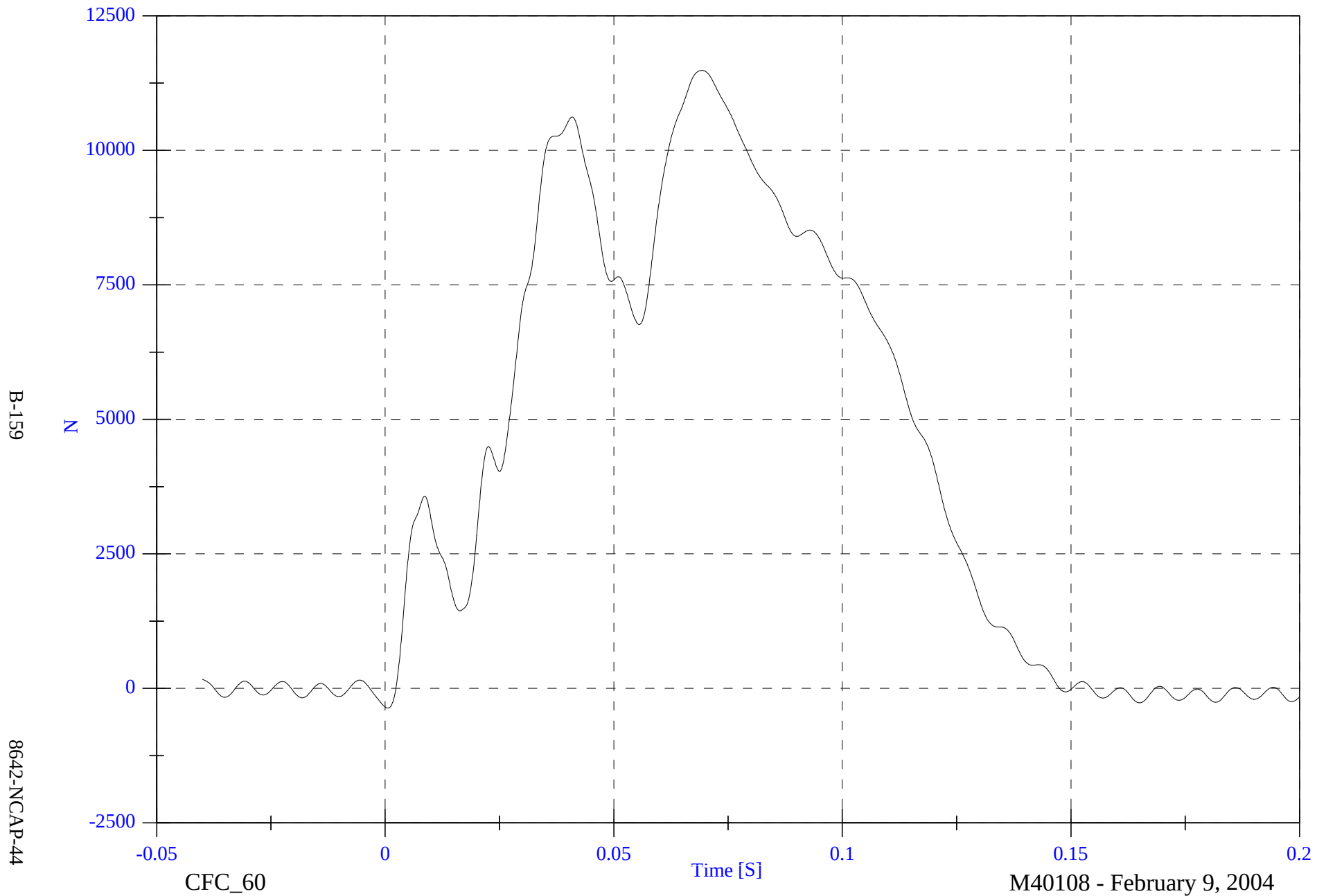


2004 NCAP Test 8 2004 Cadillac SRX

Max: 11484.7 [N] at 0.069 [S]

Min: -366.7 [N] at 0.001 [S]

Barrier Load Cell B8 Fx

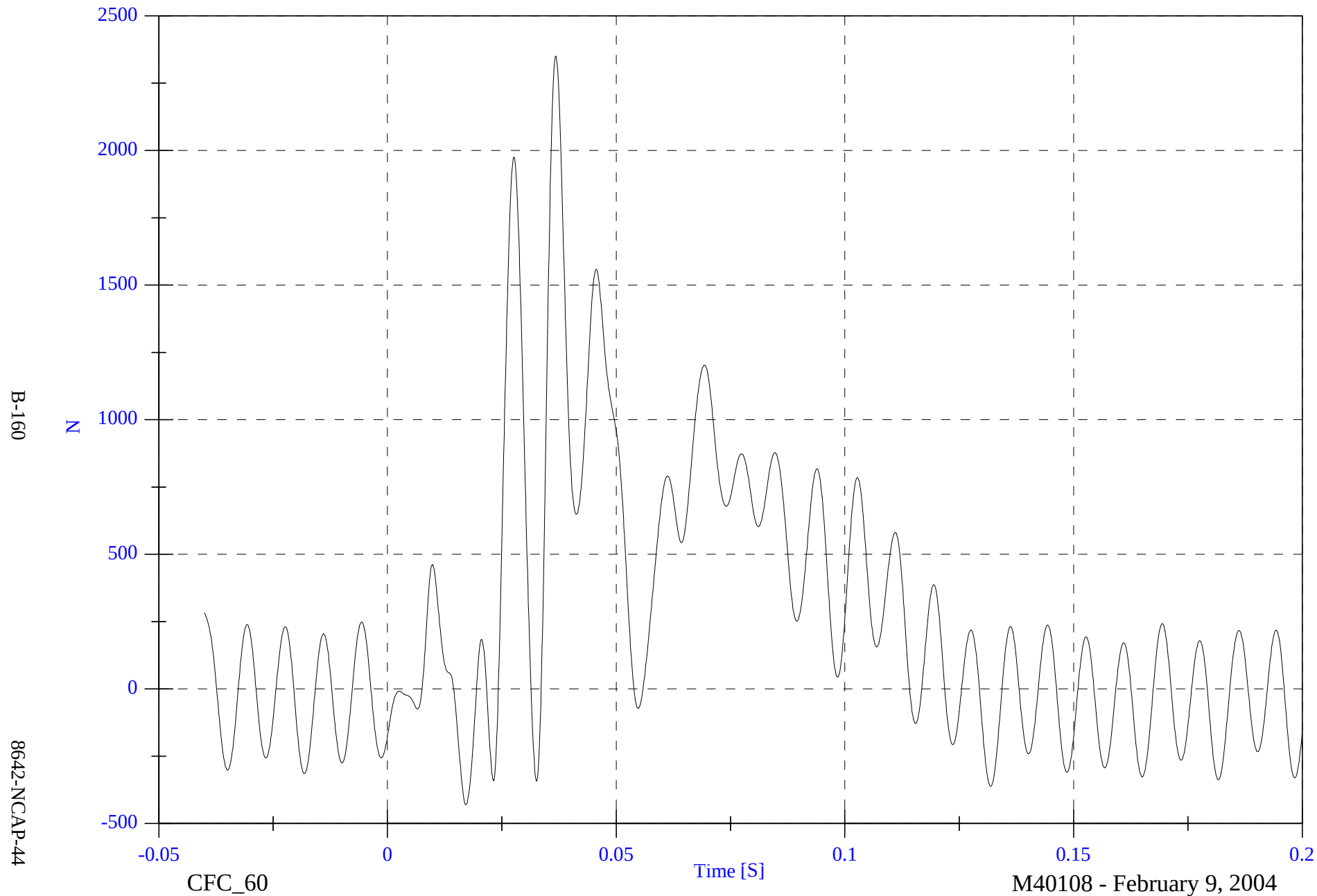


2004 NCAP Test 8 2004 Cadillac SRX

Barrier Load Cell B9 Fx

Max: 2350.7 [N] at 0.037 [S]

Min: -430.5 [N] at 0.017 [S]

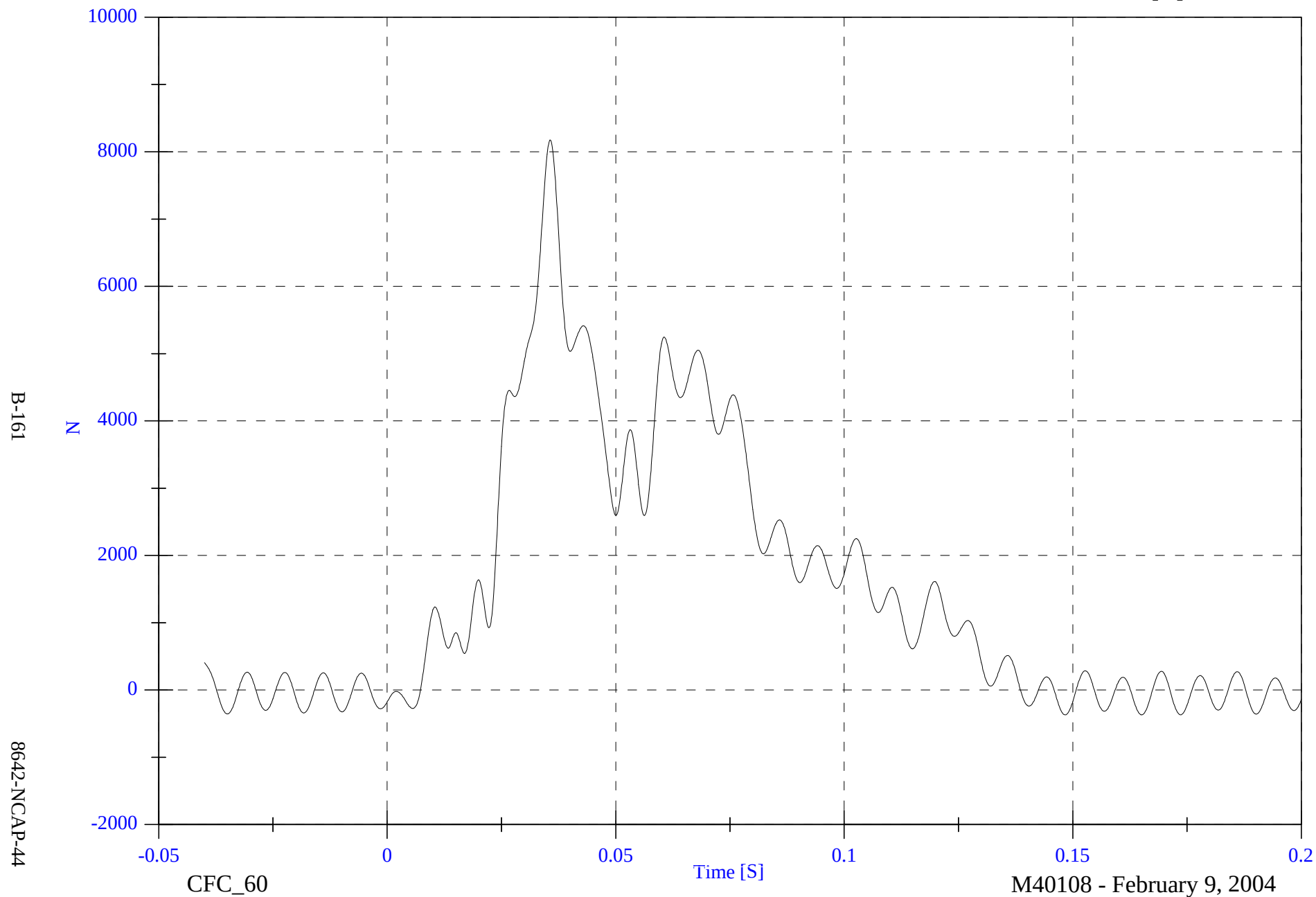


2004 NCAP Test 8 2004 Cadillac SRX

Max: 8175.2 [N] at 0.036 [S]

Min: -379.5 [N] at 0.207 [S]

Barrier Load Cell C1 Fx

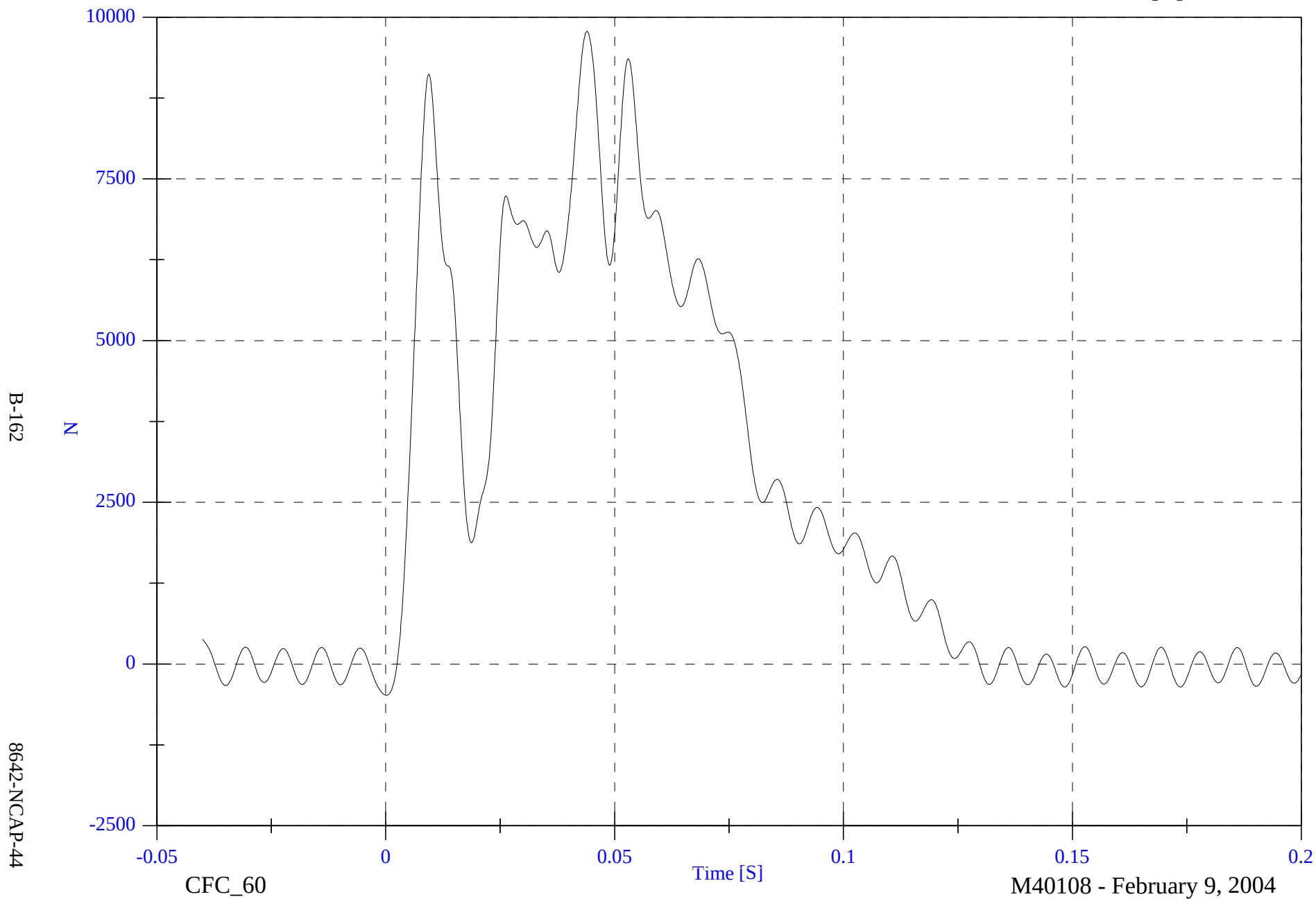


2004 NCAP Test 8 2004 Cadillac SRX

Max: 9781.6 [N] at 0.044 [S]

Min: -481.2 [N] at 0.000 [S]

Barrier Load Cell C2 Fx

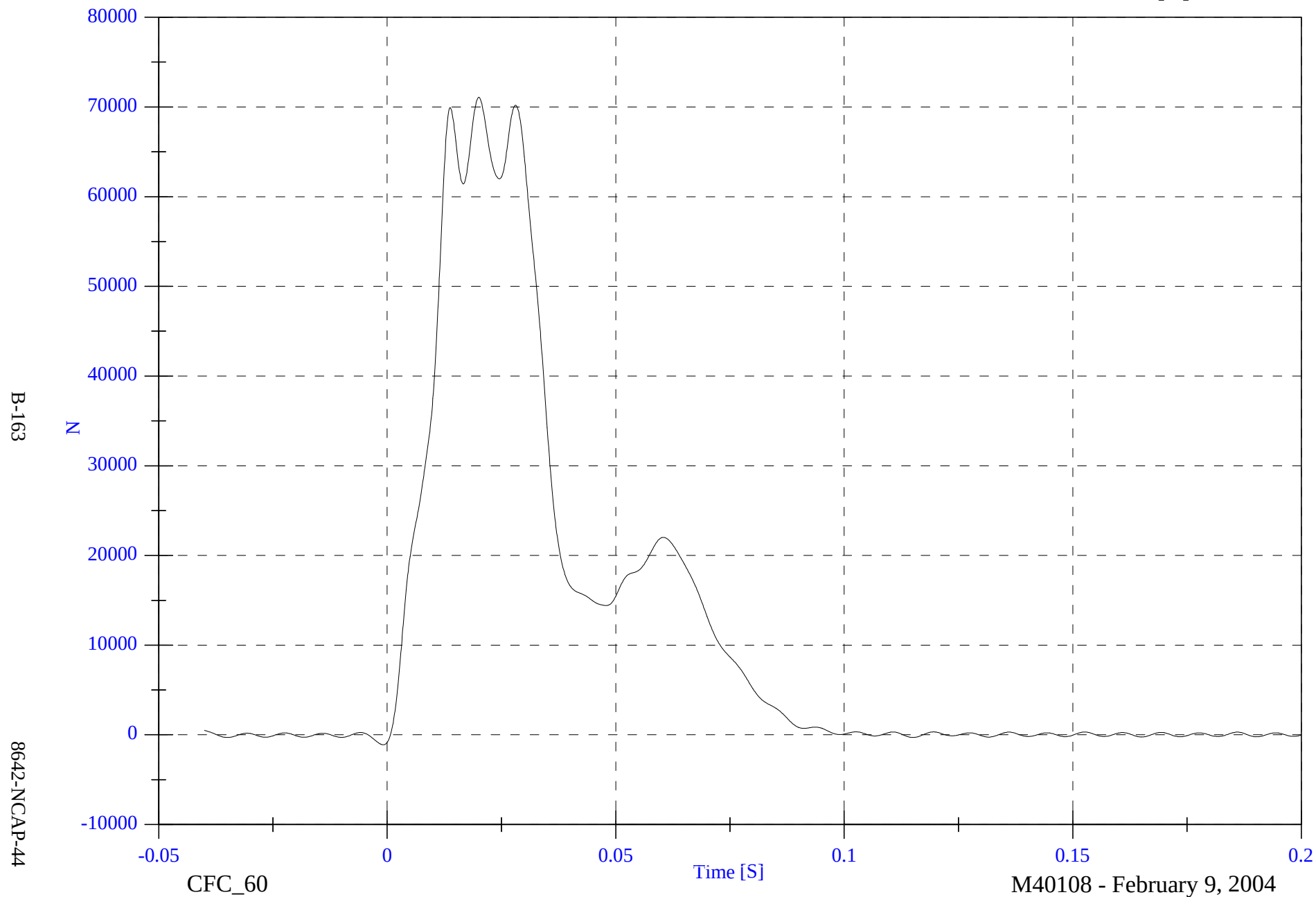


2004 NCAP Test 8 2004 Cadillac SRX

Barrier Load Cell C3 Fx

Max: 71068.6 [N] at 0.020 [S]

Min: -1105.9 [N] at -0.001 [S]

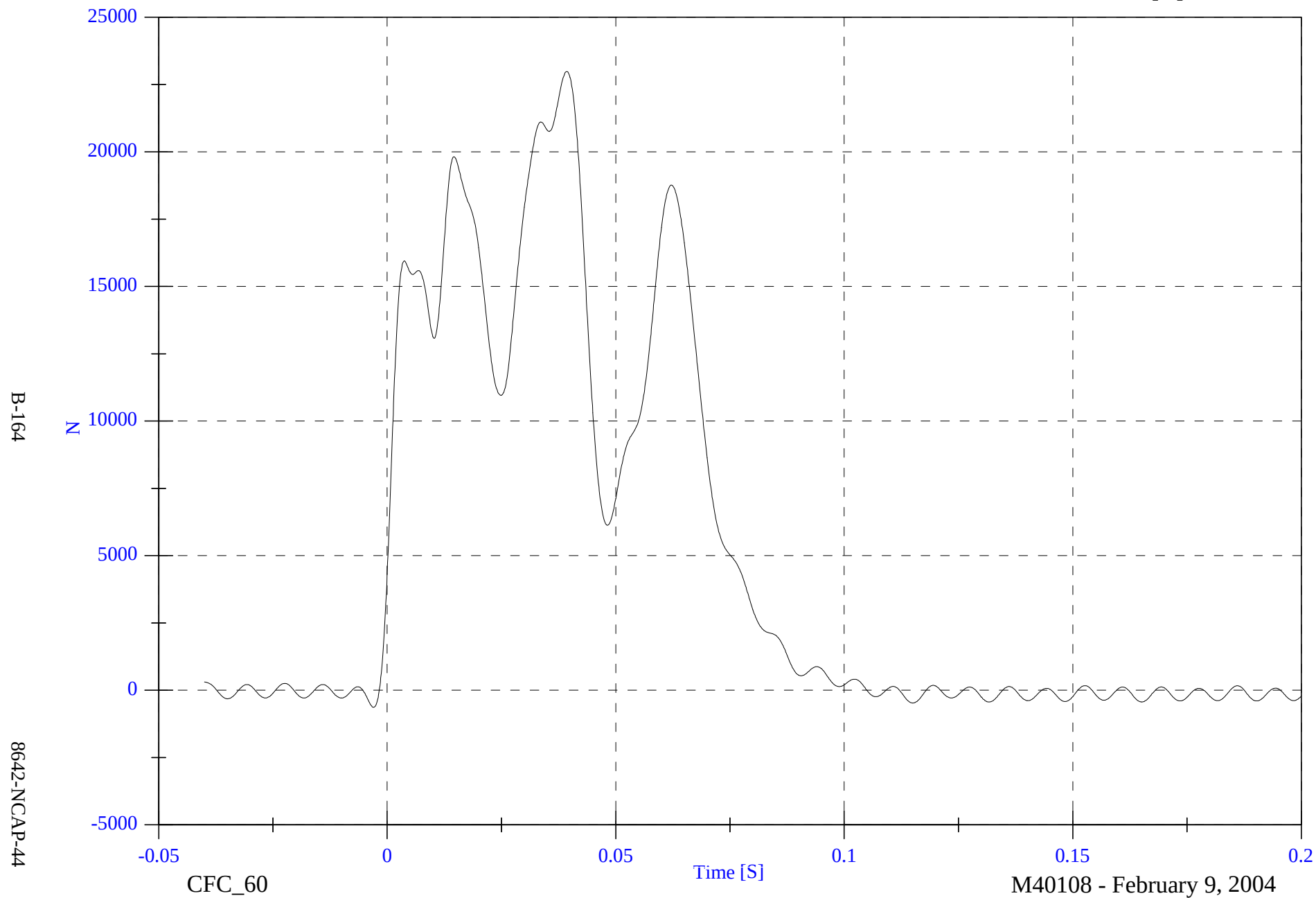


2004 NCAP Test 8 2004 Cadillac SRX

Max: 22987.8 [N] at 0.039 [S]

Min: -635.9 [N] at -0.003 [S]

Barrier Load Cell C4 Fx

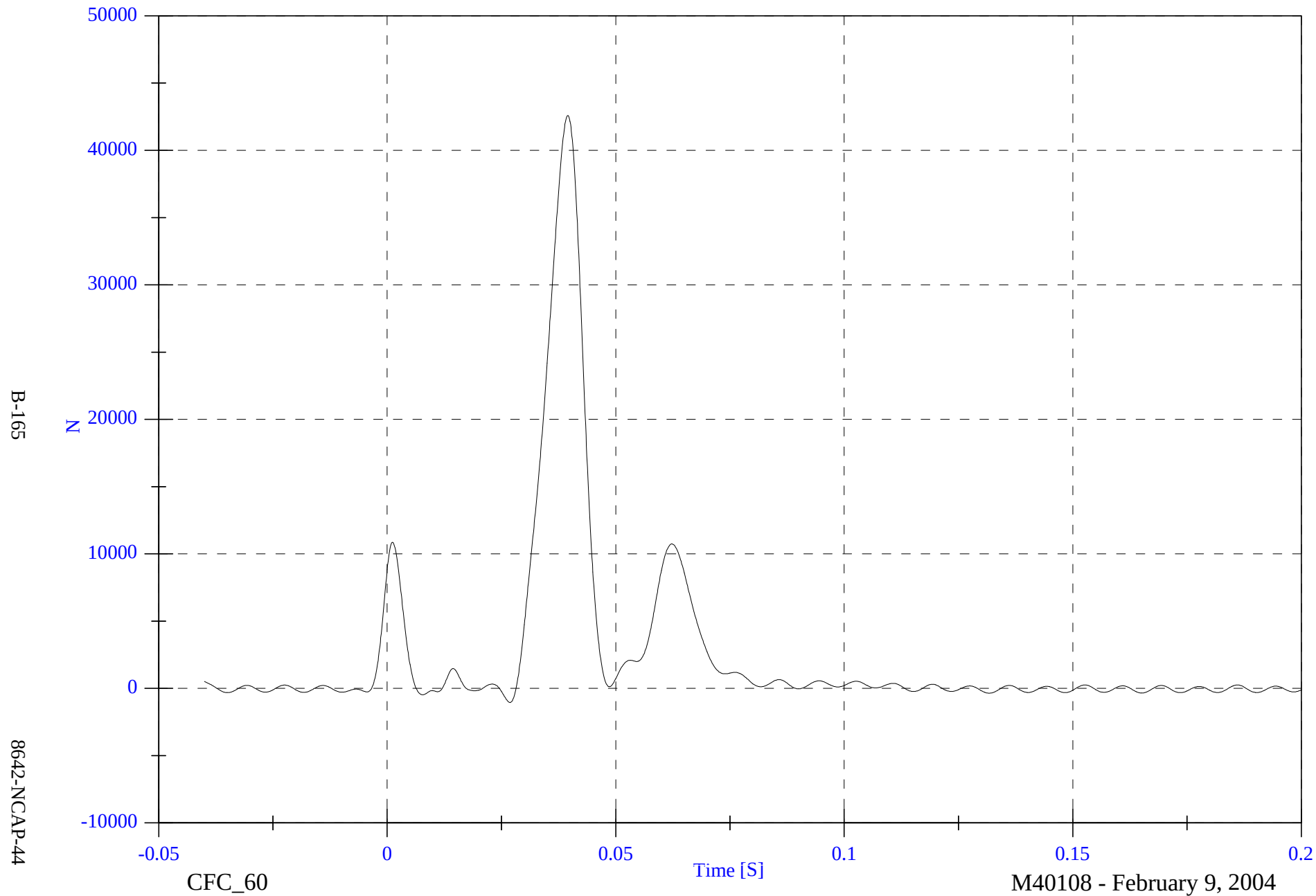


2004 NCAP Test 8 2004 Cadillac SRX

Max: 42593.4 [N] at 0.039 [S]

Min: -1045.2 [N] at 0.027 [S]

Barrier Load Cell C5 Fx

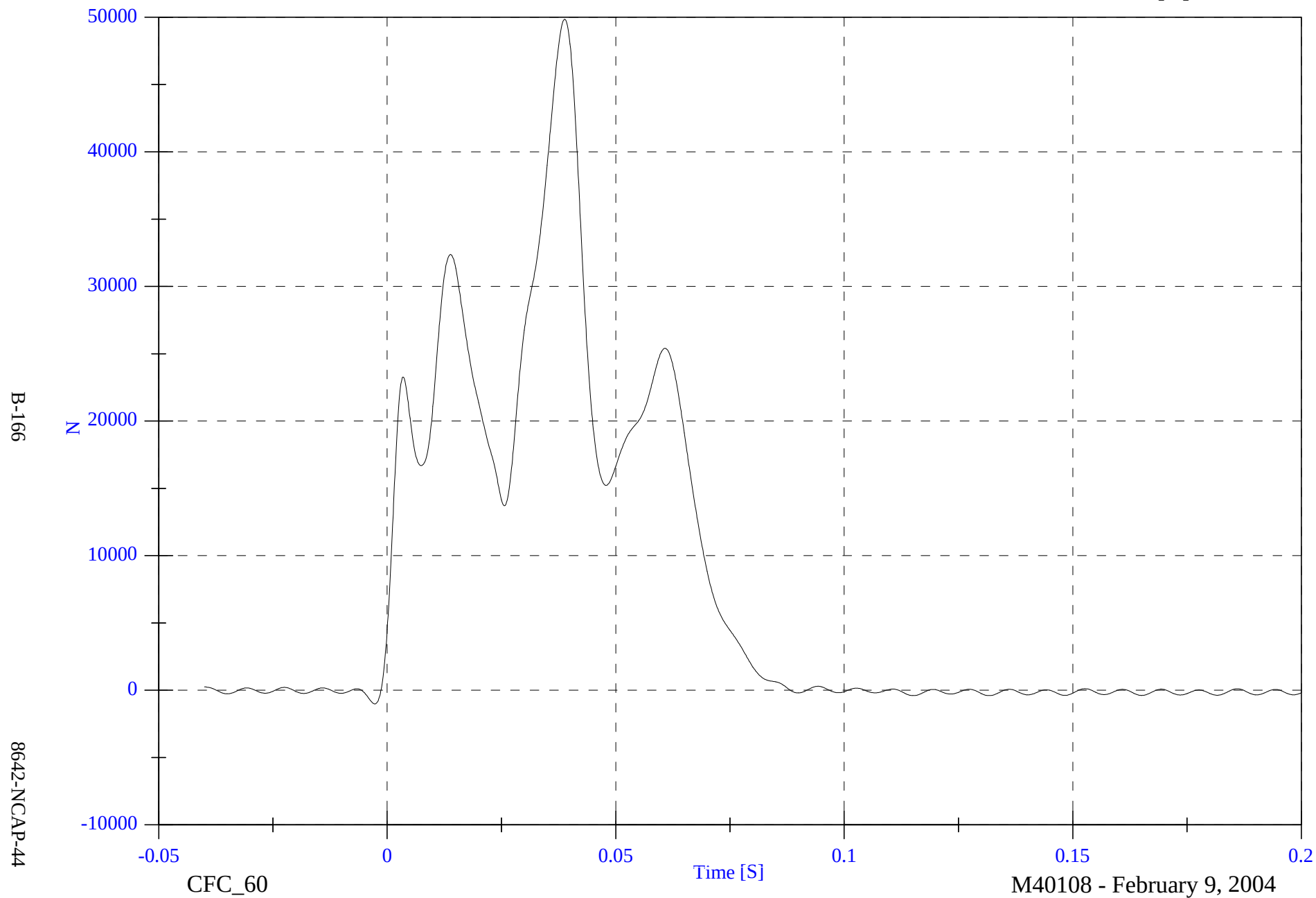


2004 NCAP Test 8 2004 Cadillac SRX

Max: 49848.6 [N] at 0.039 [S]

Min: -1012.9 [N] at -0.003 [S]

Barrier Load Cell C6 Fx

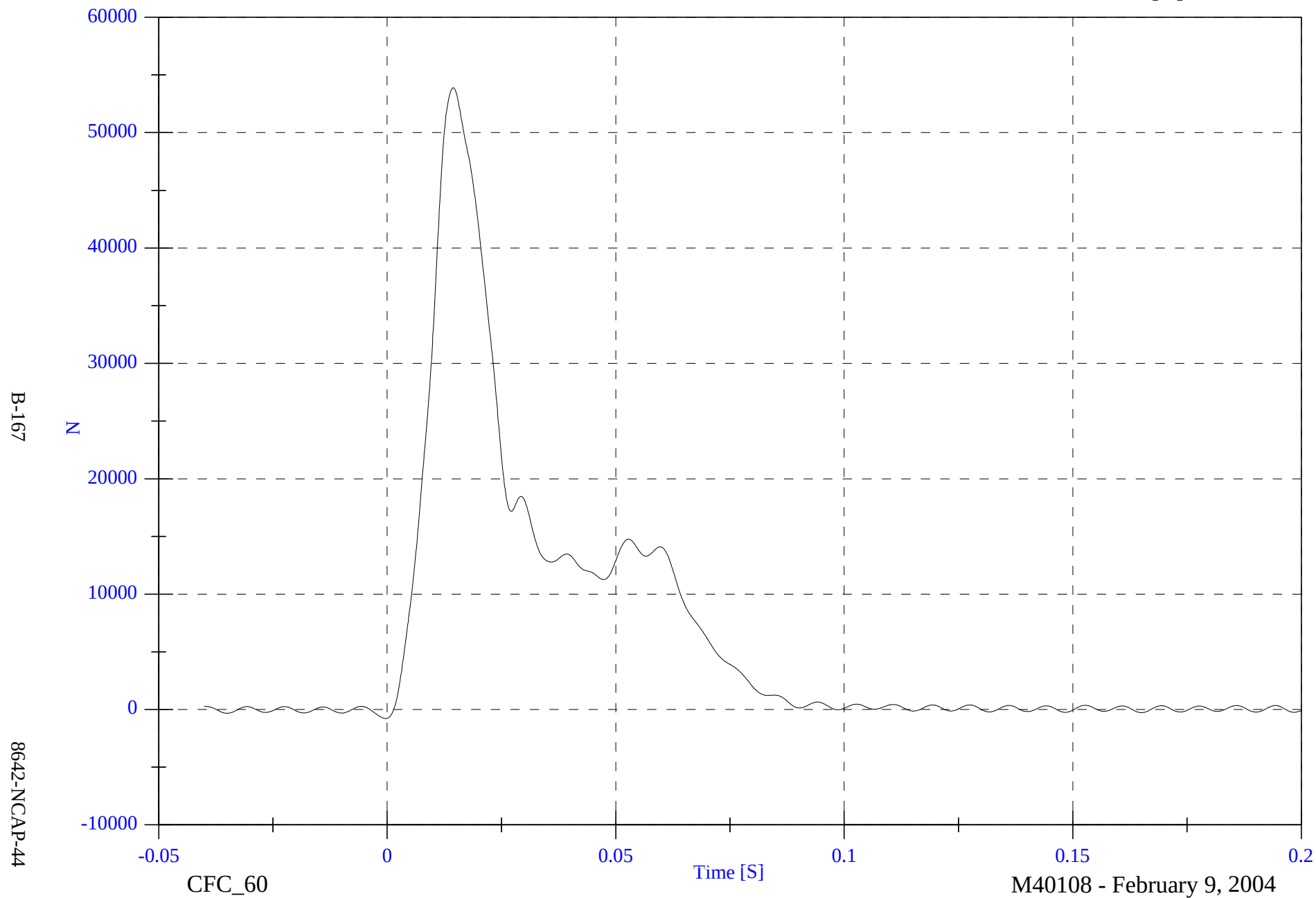


2004 NCAP Test 8 2004 Cadillac SRX

Max: 53879.2 [N] at 0.014 [S]

Min: -785.0 [N] at -0.000 [S]

Barrier Load Cell C7 Fx

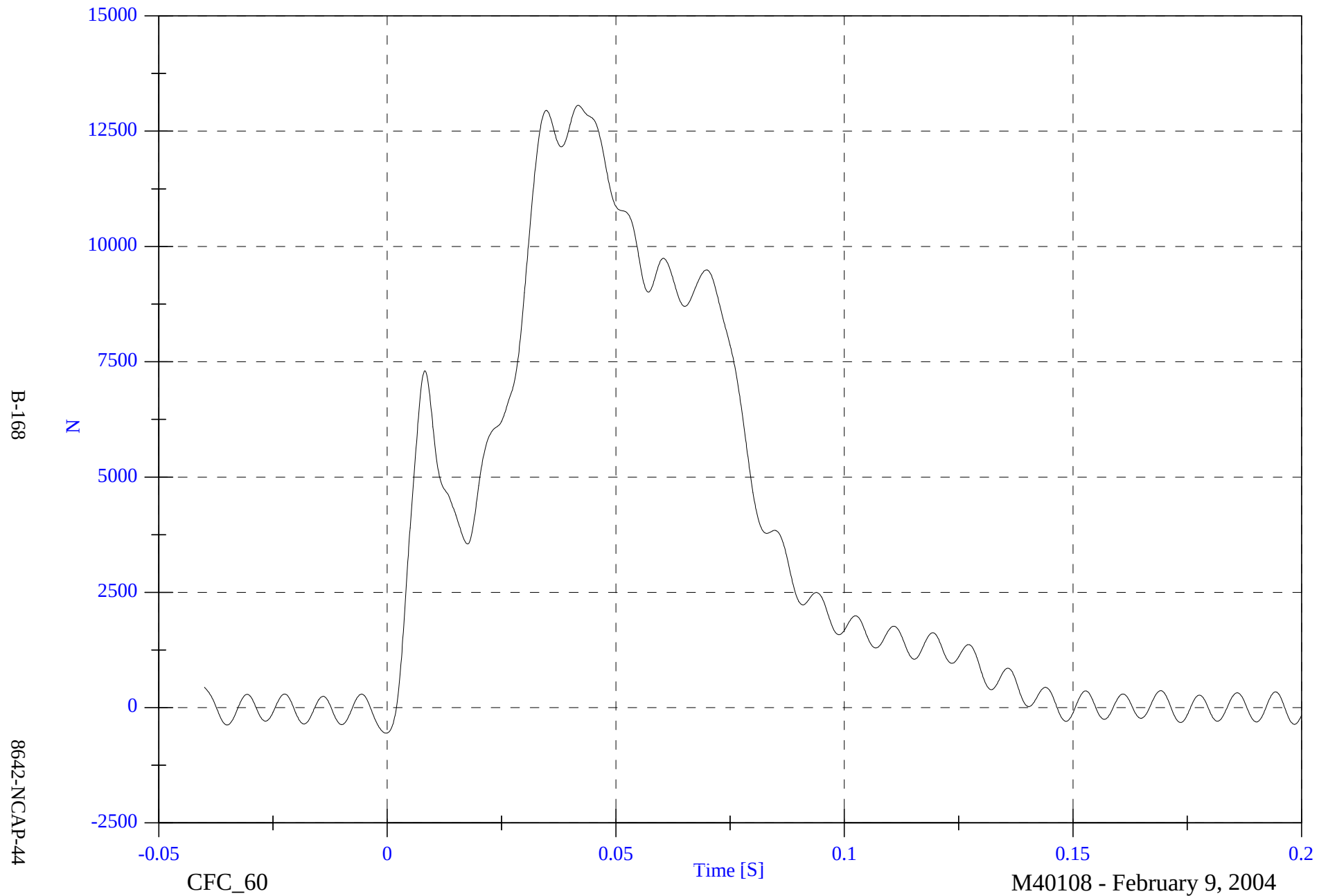


2004 NCAP Test 8 2004 Cadillac SRX

Max: 13059.8 [N] at 0.042 [S]

Min: -554.2 [N] at -0.000 [S]

Barrier Load Cell C8 Fx

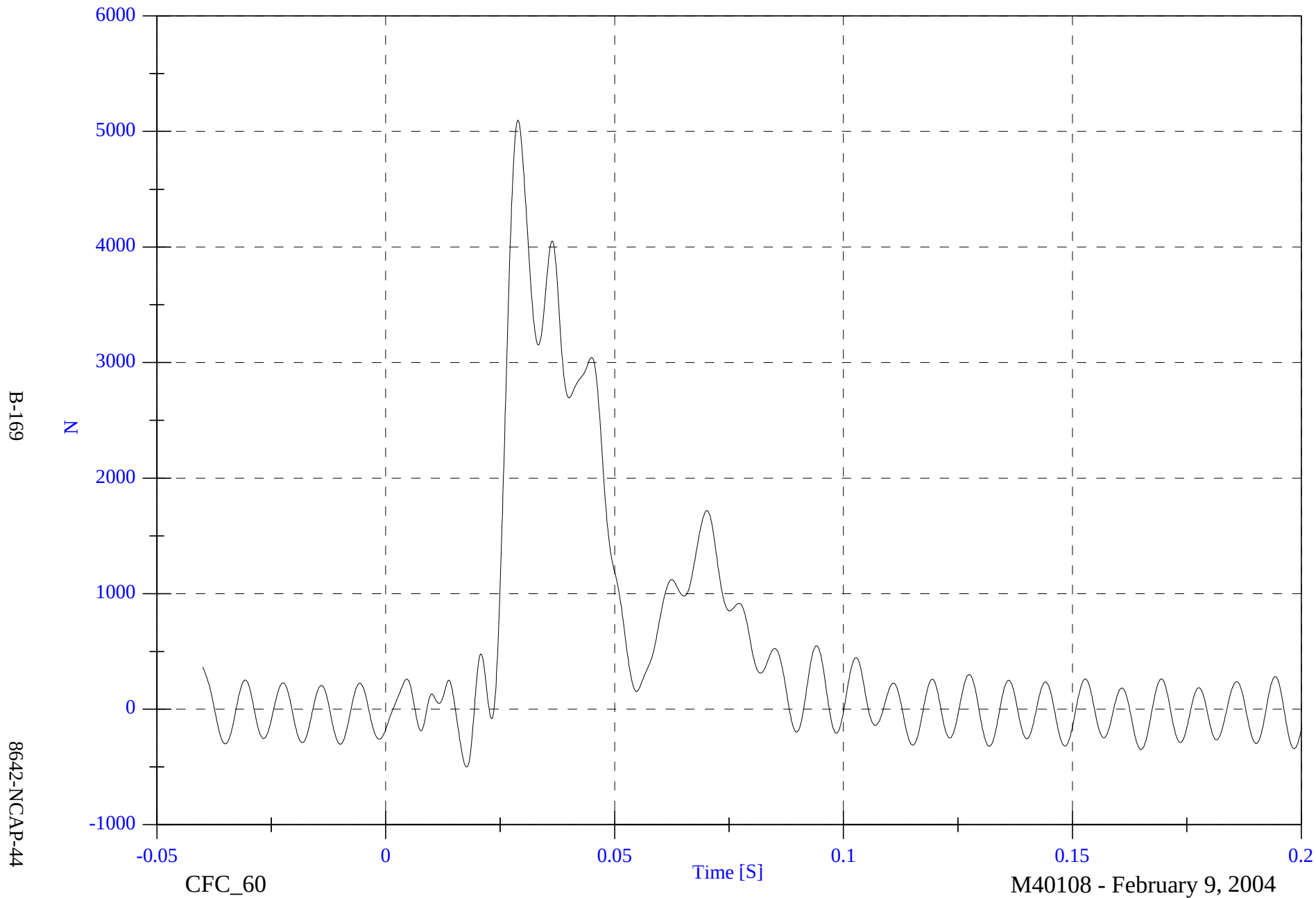


2004 NCAP Test 8 2004 Cadillac SRX

Barrier Load Cell C9 Fx

Max: 5098.6 [N] at 0.029 [S]

Min: -499.9 [N] at 0.018 [S]

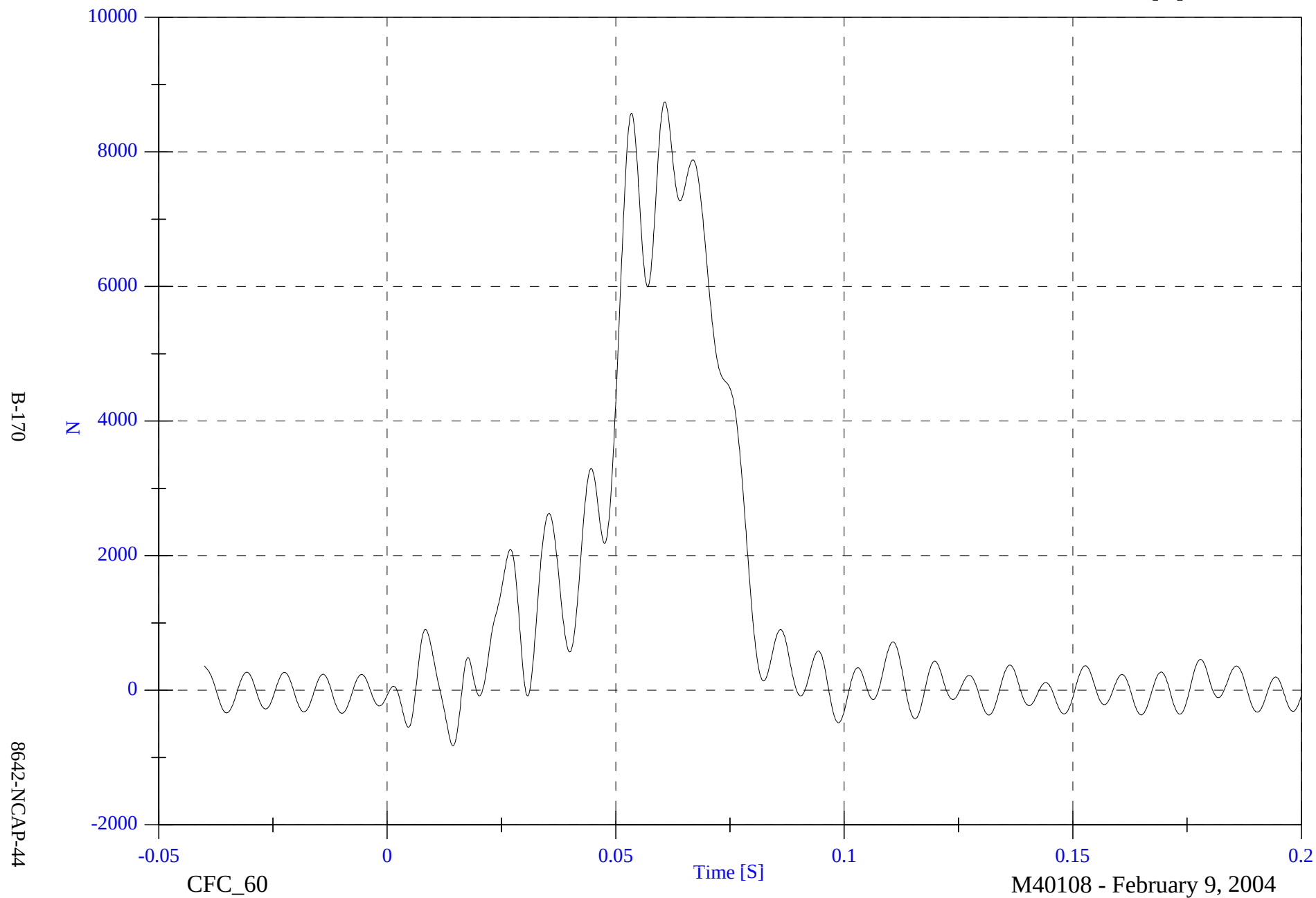


2004 NCAP Test 8 2004 Cadillac SRX

Max: 8742.7 [N] at 0.061 [S]

Min: -825.1 [N] at 0.014 [S]

Barrier Load Cell D1 Fx

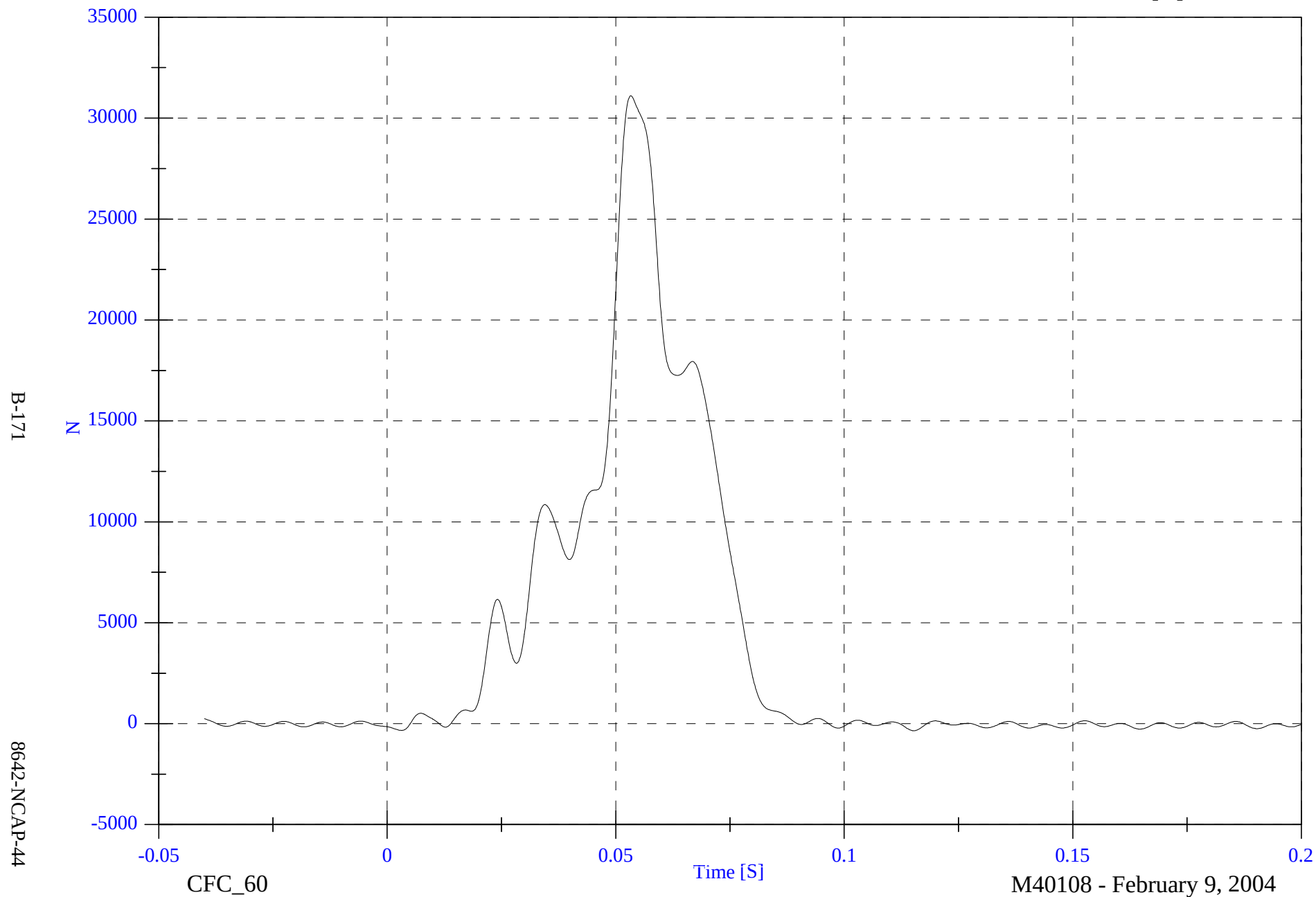


2004 NCAP Test 8 2004 Cadillac SRX

Max: 31104.9 [N] at 0.053 [S]

Min: -349.8 [N] at 0.115 [S]

Barrier Load Cell D2 Fx

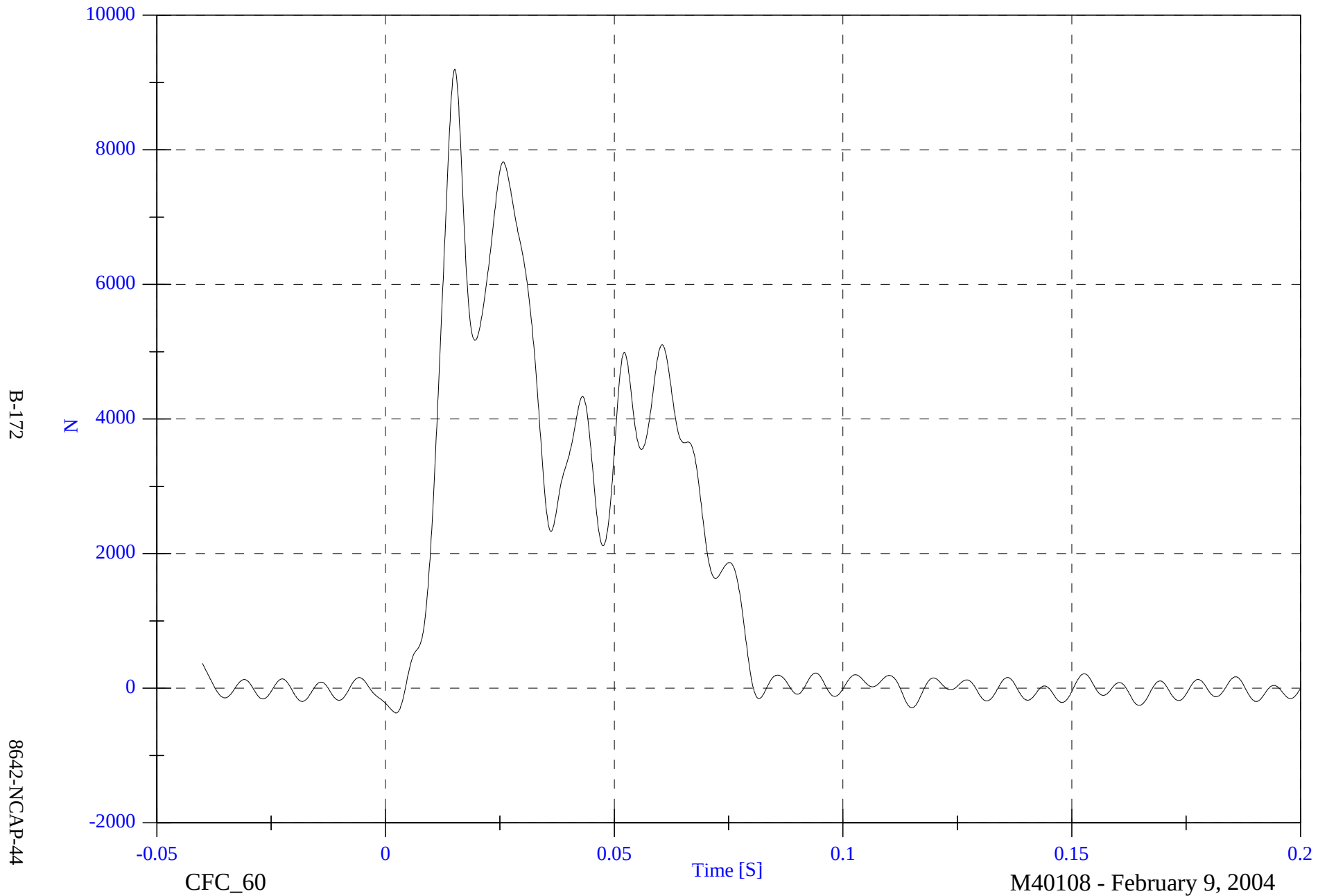


2004 NCAP Test 8 2004 Cadillac SRX

Barrier Load Cell D3 Fx

Max: 9196.9 [N] at 0.015 [S]

Min: -366.4 [N] at 0.002 [S]

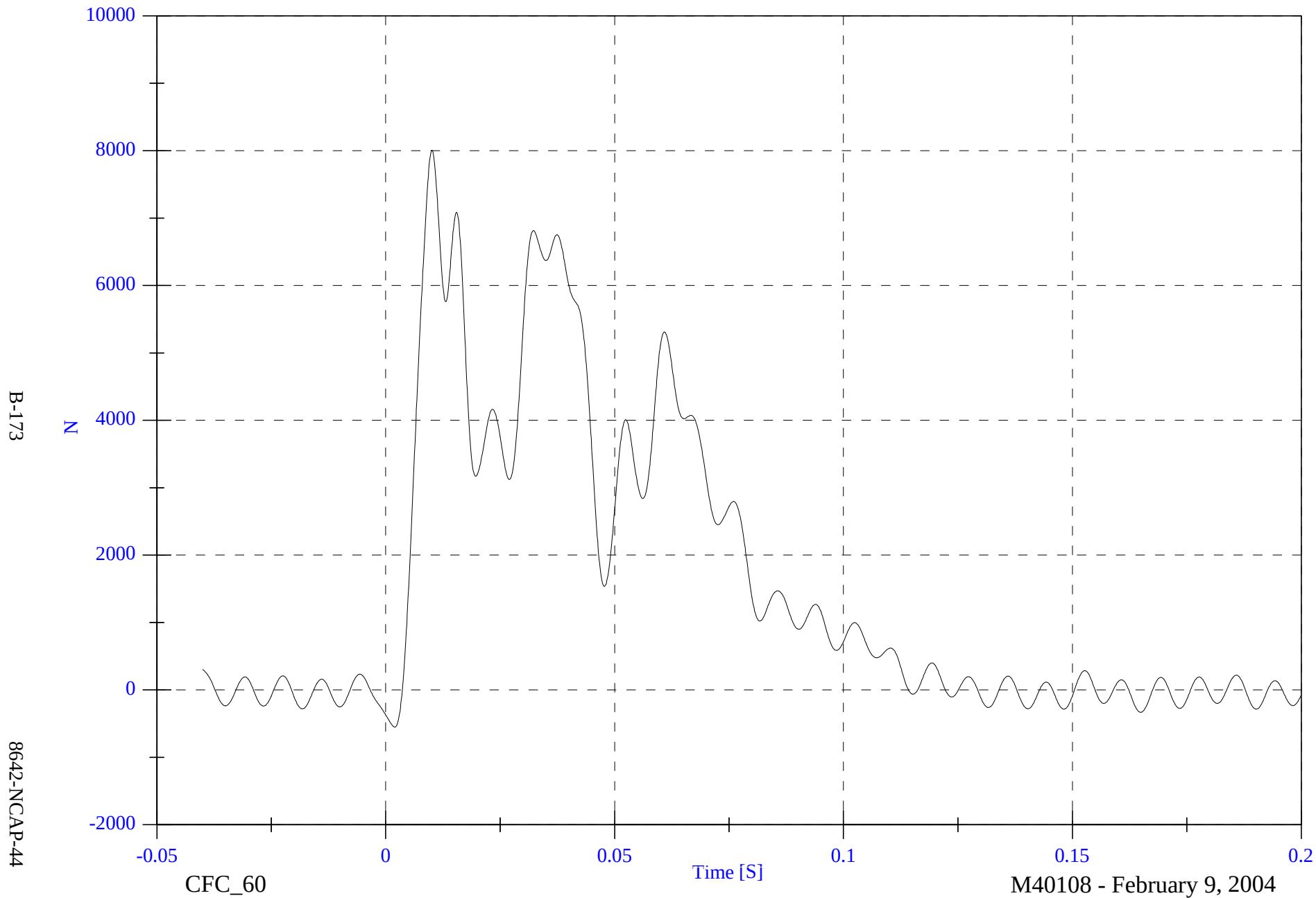


2004 NCAP Test 8 2004 Cadillac SRX

Barrier Load Cell D4 Fx

Max: 8007.6 [N] at 0.010 [S]

Min: -551.8 [N] at 0.002 [S]

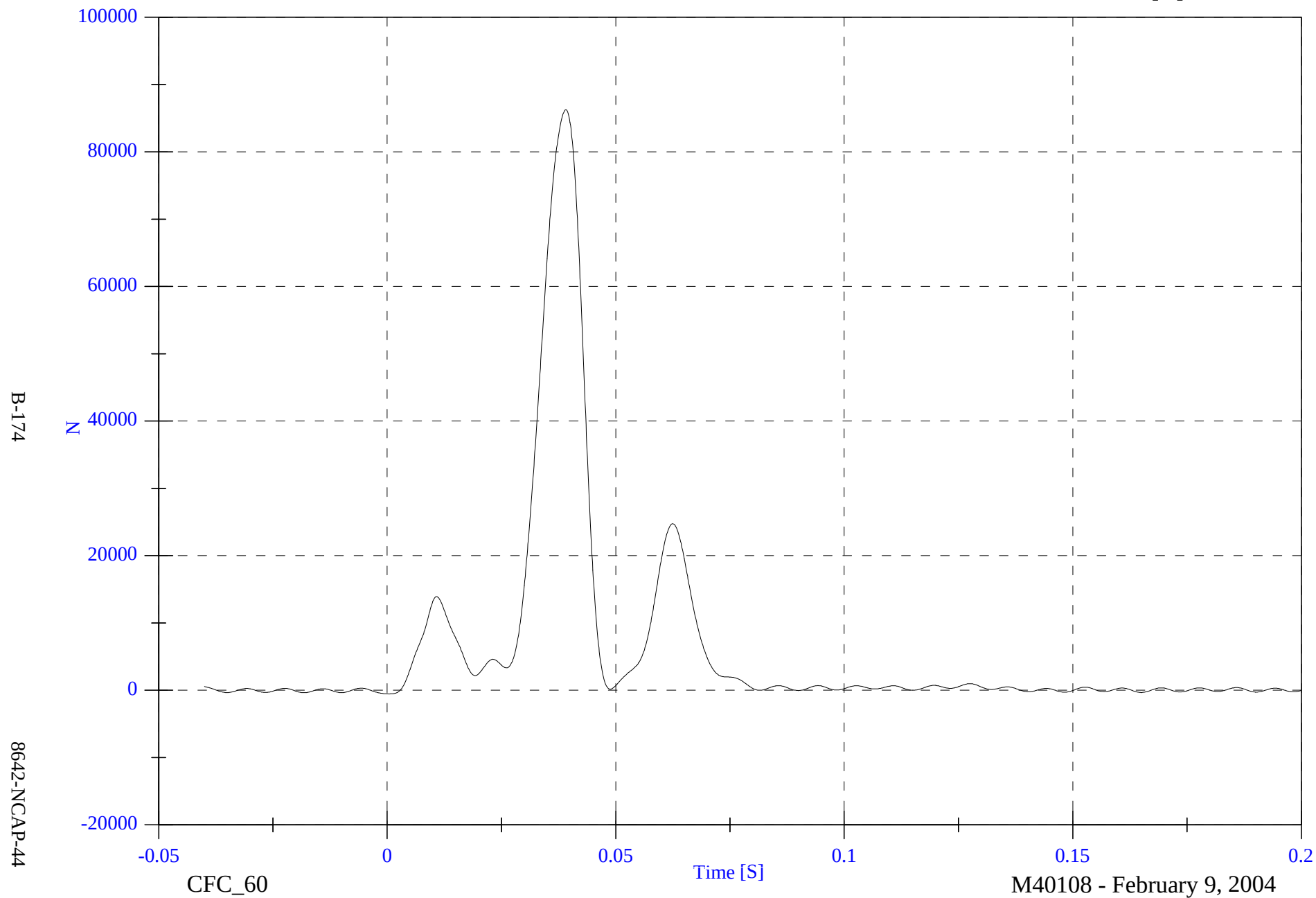


2004 NCAP Test 8 2004 Cadillac SRX

Max: 86259.0 [N] at 0.039 [S]

Min: -536.0 [N] at 0.000 [S]

Barrier Load Cell D5 Fx

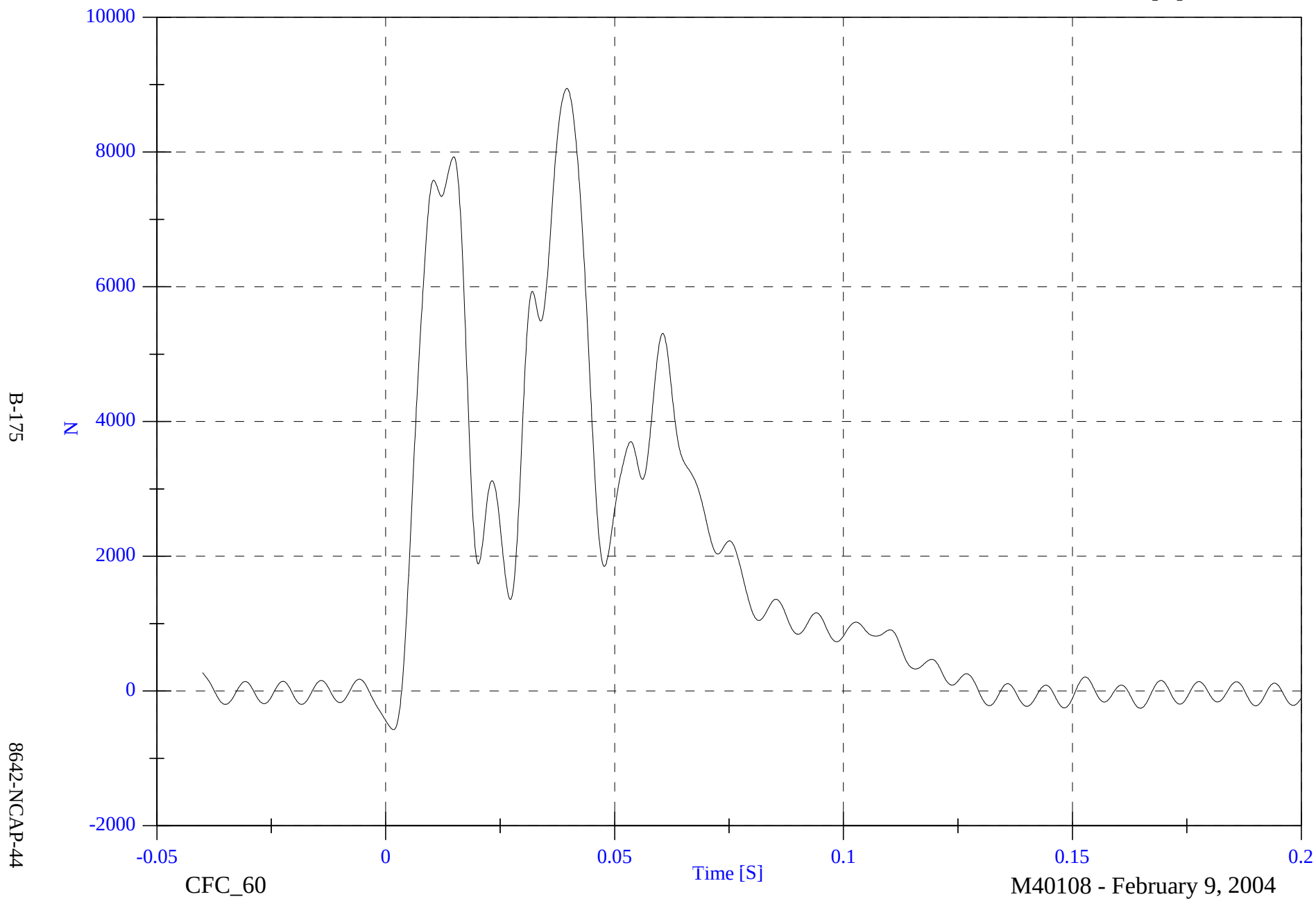


2004 NCAP Test 8 2004 Cadillac SRX

Max: 8943.6 [N] at 0.040 [S]

Min: -573.2 [N] at 0.002 [S]

Barrier Load Cell D6 Fx

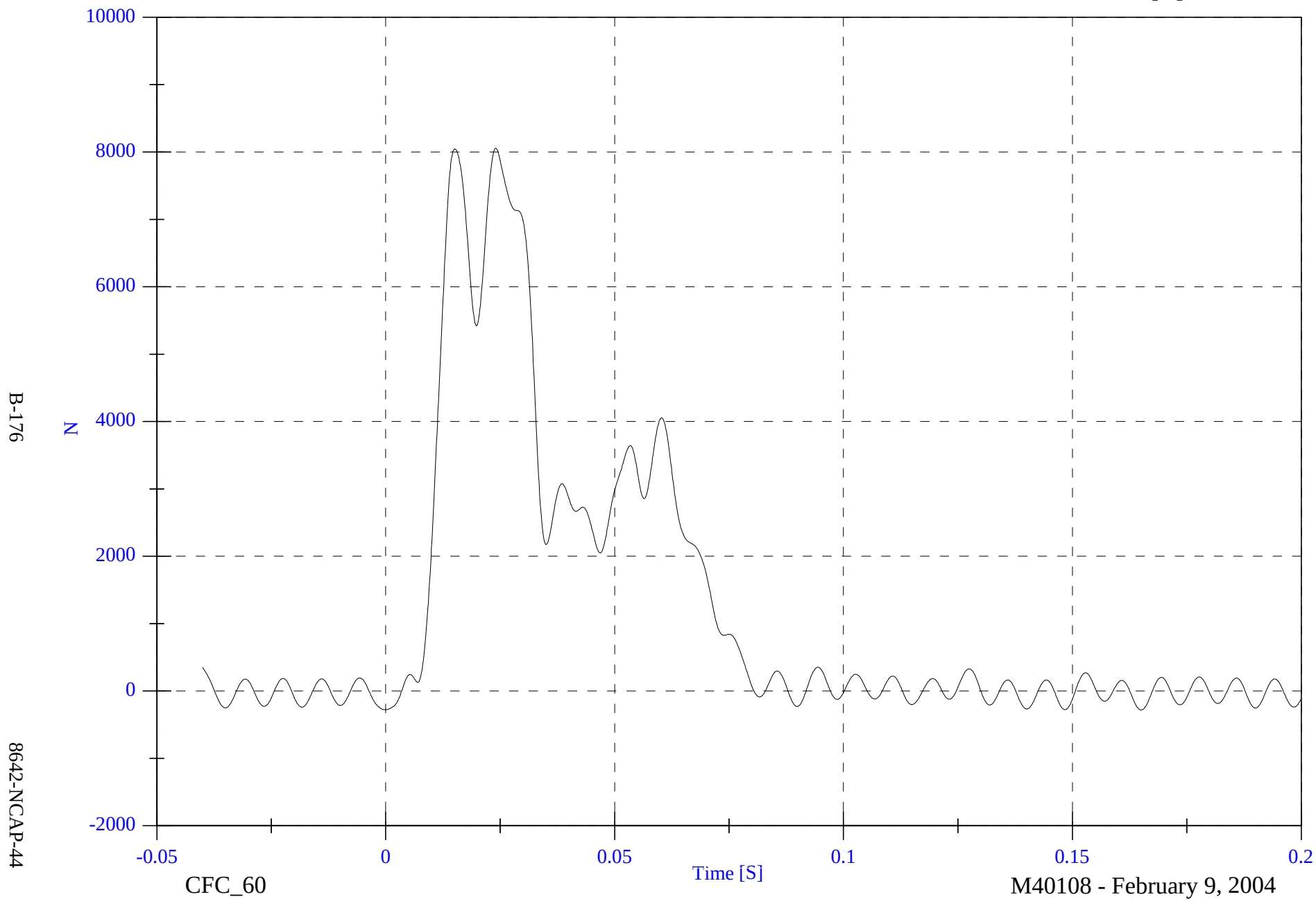


2004 NCAP Test 8 2004 Cadillac SRX

Barrier Load Cell D7 Fx

Max: 8056.3 [N] at 0.024 [S]

Min: -281.9 [N] at 0.165 [S]

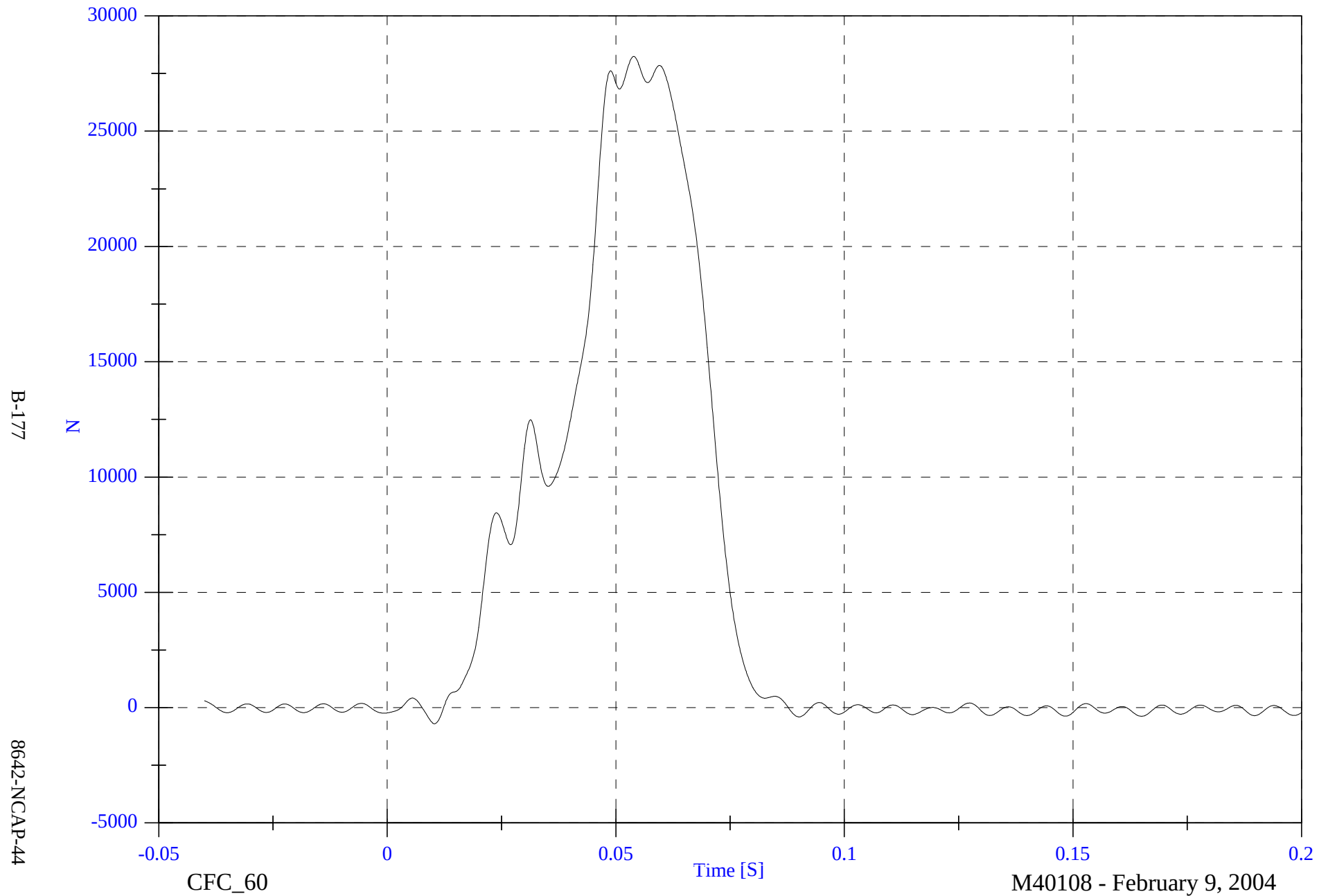


2004 NCAP Test 8 2004 Cadillac SRX

Max: 28240.3 [N] at 0.054 [S]

Min: -697.7 [N] at 0.010 [S]

Barrier Load Cell D8 Fx

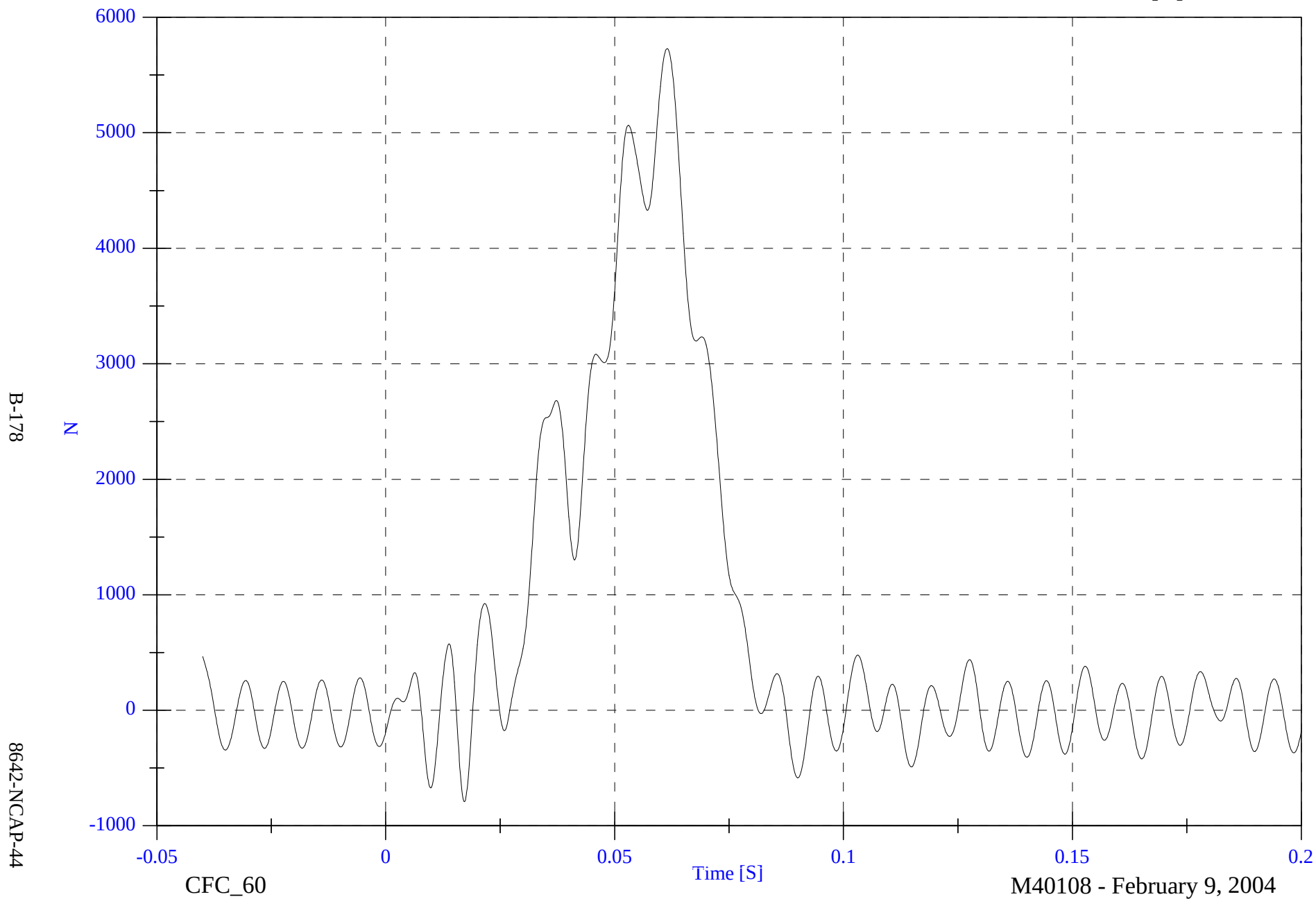


2004 NCAP Test 8 2004 Cadillac SRX

Max: 5729.2 [N] at 0.061 [S]

Min: -791.8 [N] at 0.017 [S]

Barrier Load Cell D9 Fx

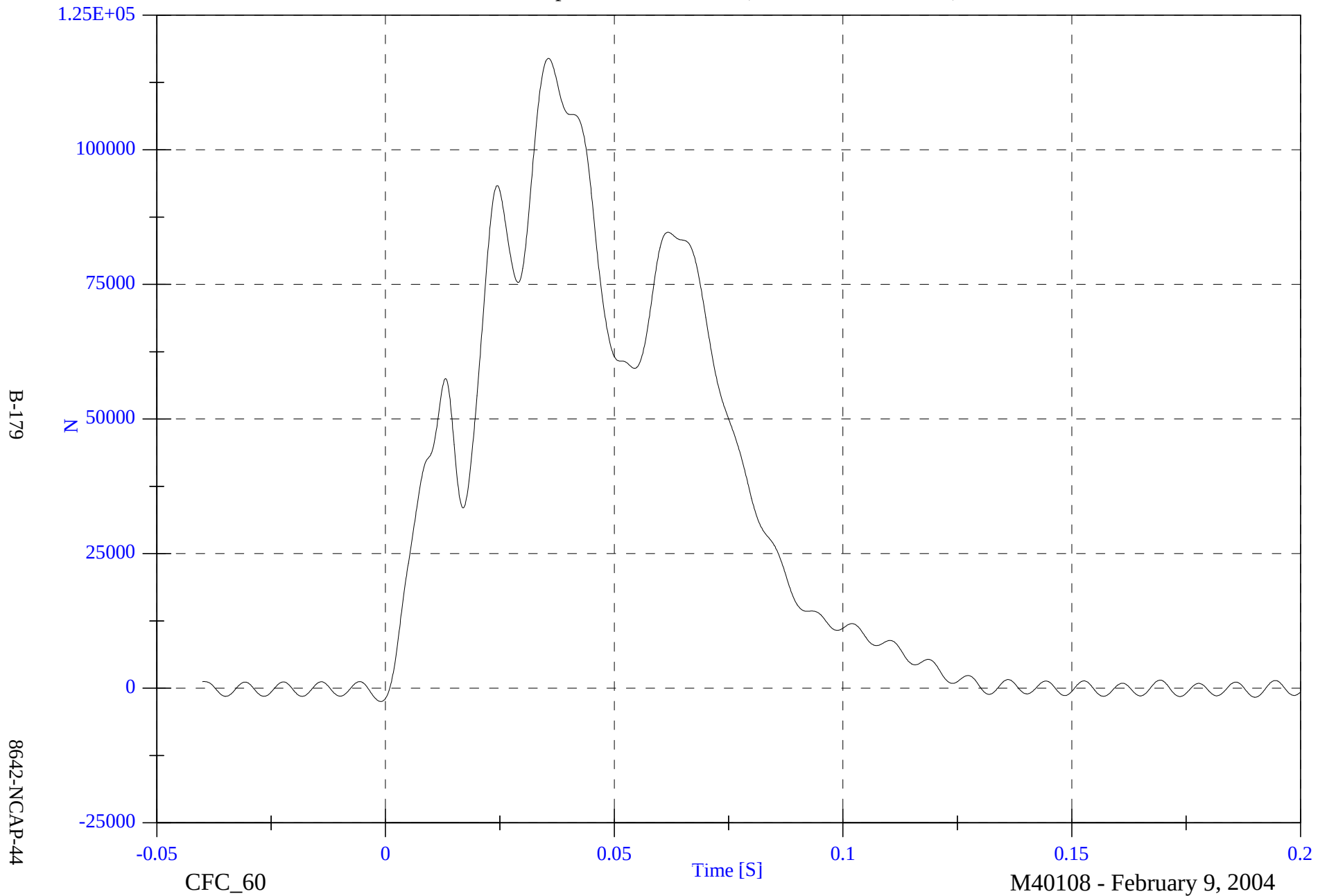


2004 NCAP Test 8 2004 Cadillac SRX

Max: 116971.8 [N] at 0.036 [S]

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

Min: -2467.9 [N] at -0.001 [S]

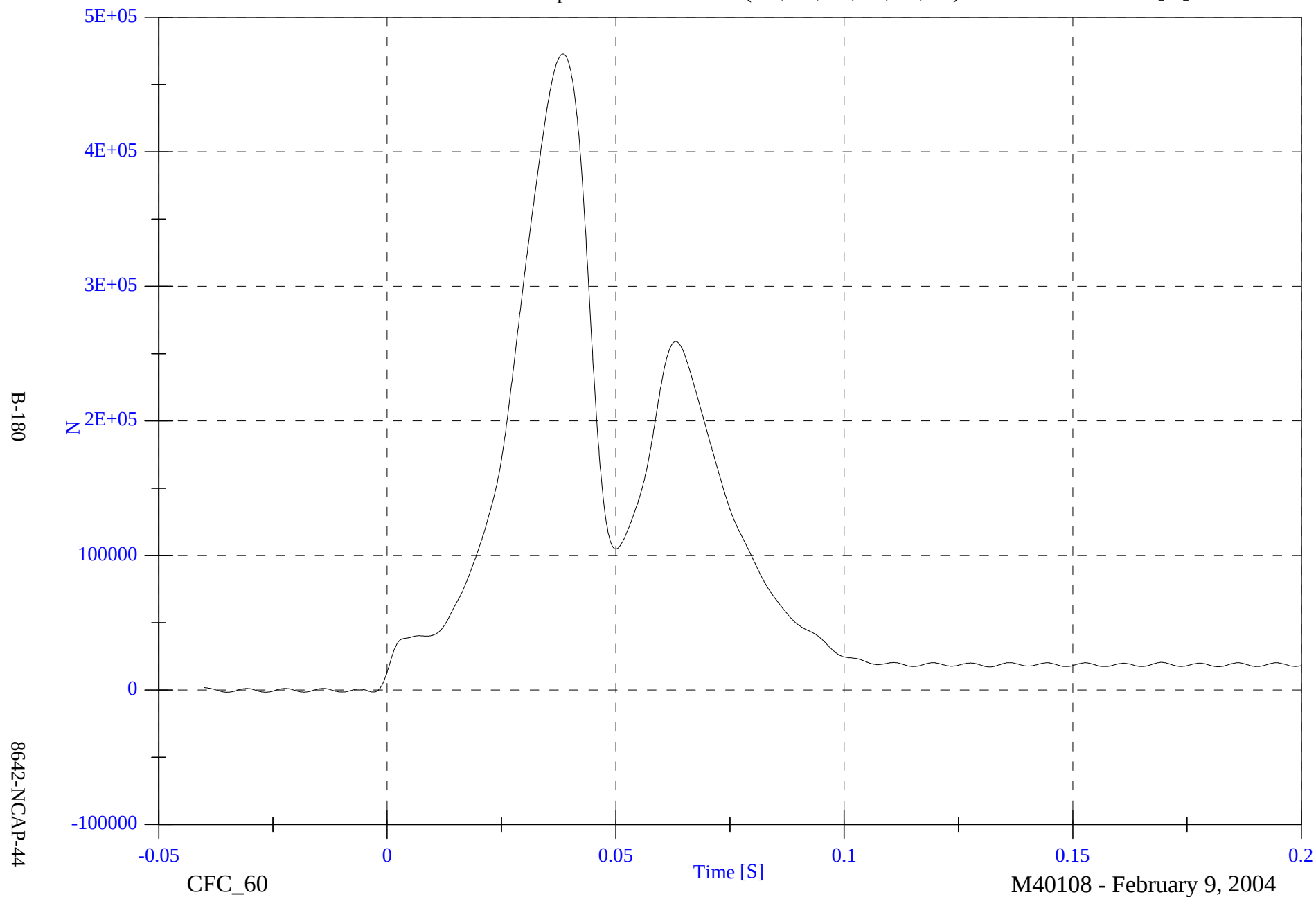


2004 NCAP Test 8 2004 Cadillac SRX

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

Max: 472631.2 [N] at 0.038 [S]

Min: -1628.2 [N] at -0.035 [S]

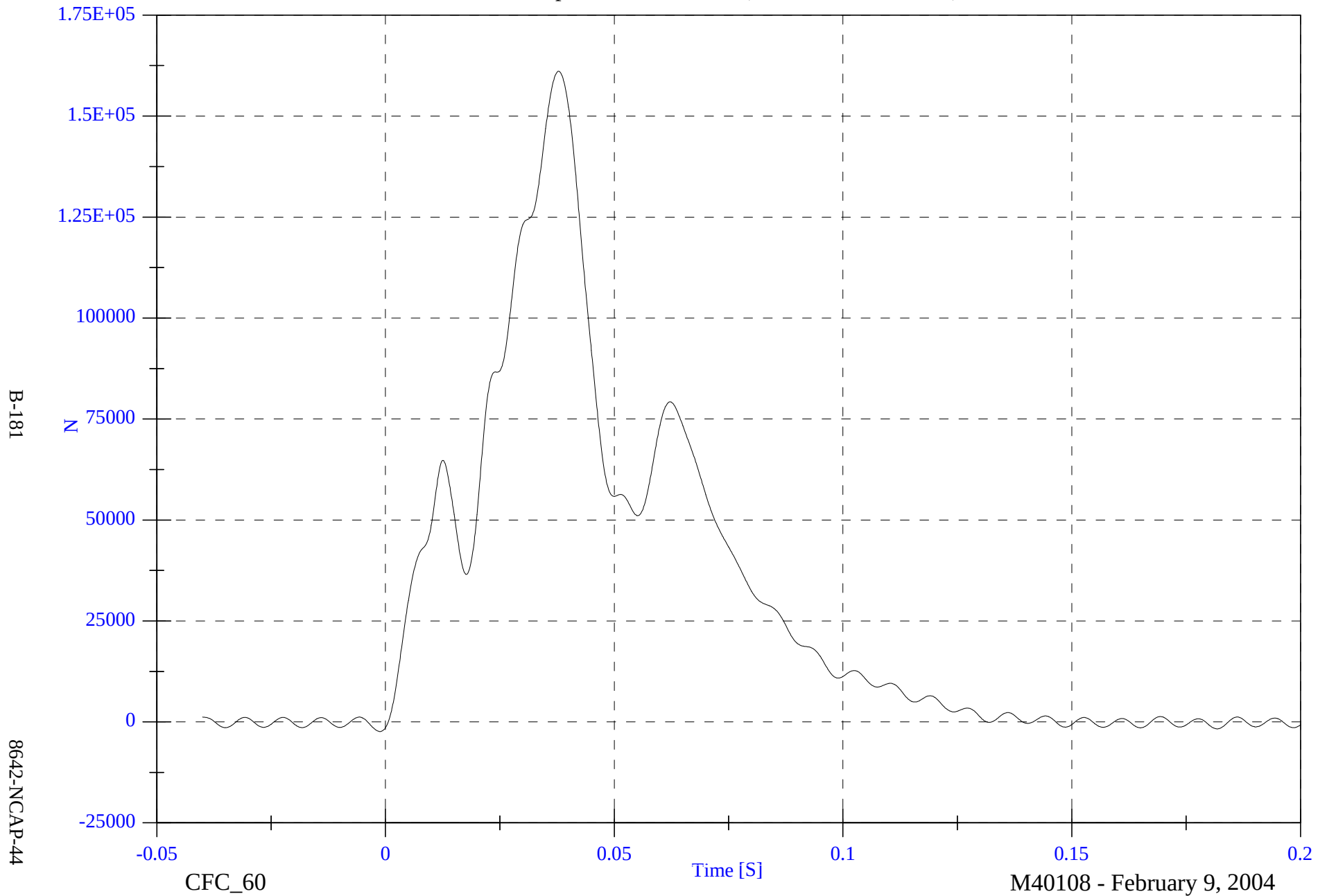


2004 NCAP Test 8 2004 Cadillac SRX

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

Max: 161112.8 [N] at 0.038 [S]

Min: -2372.6 [N] at -0.001 [S]

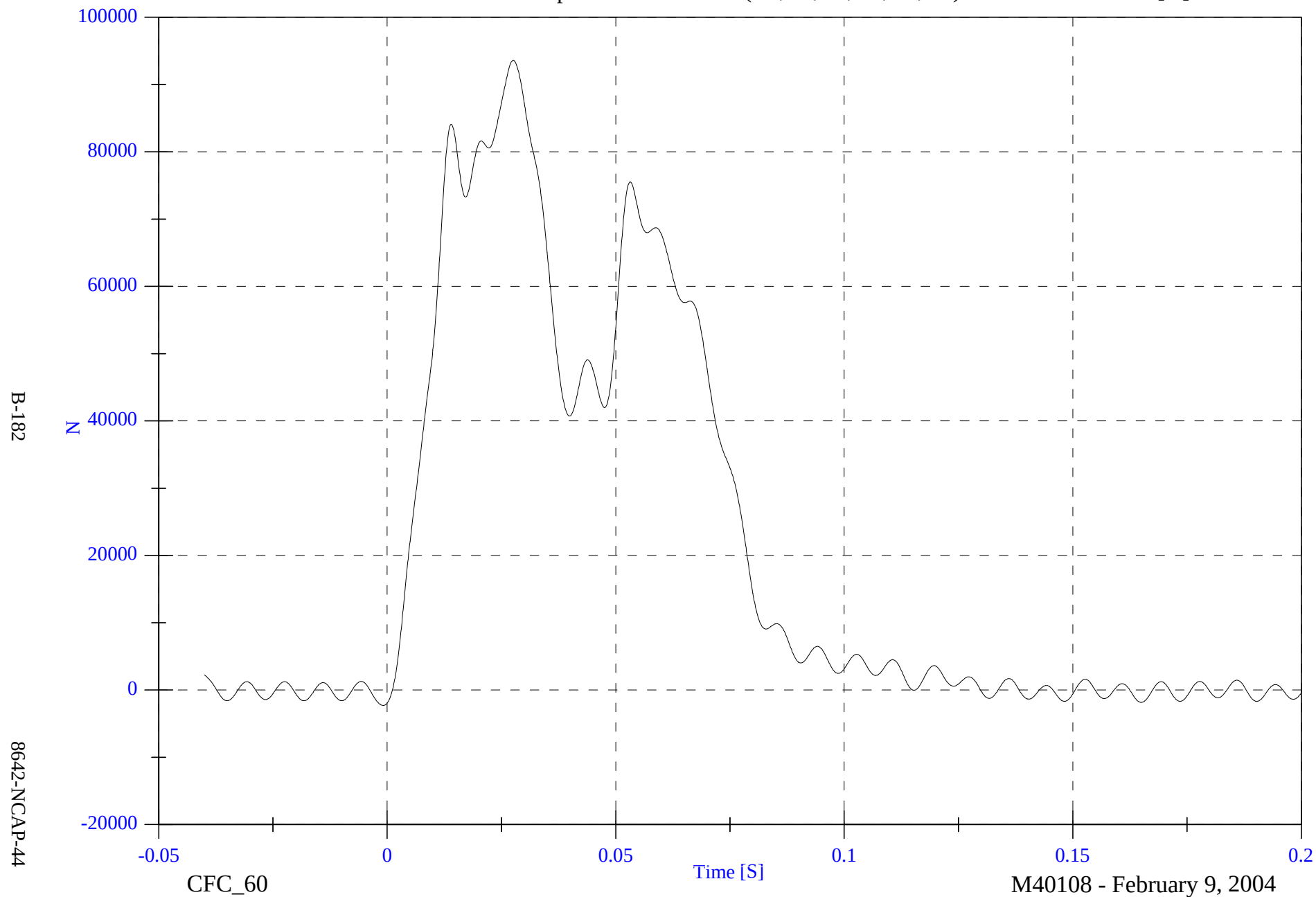


2004 NCAP Test 8 2004 Cadillac SRX

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

Max: 93587.3 [N] at 0.028 [S]

Min: -2293.9 [N] at -0.001 [S]

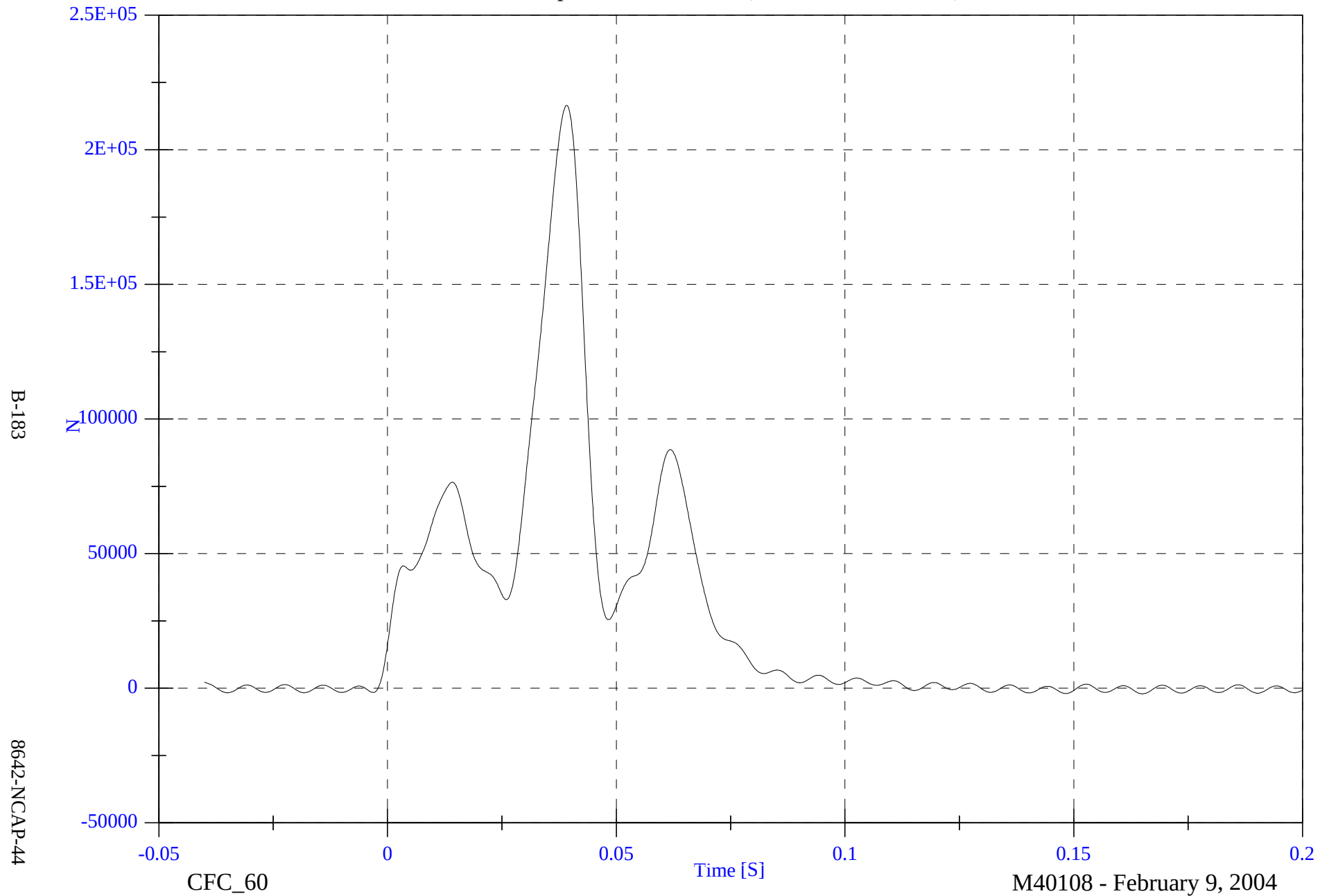


2004 NCAP Test 8 2004 Cadillac SRX

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

Max: 216512.6 [N] at 0.039 [S]

Min: -2072.4 [N] at 0.165 [S]

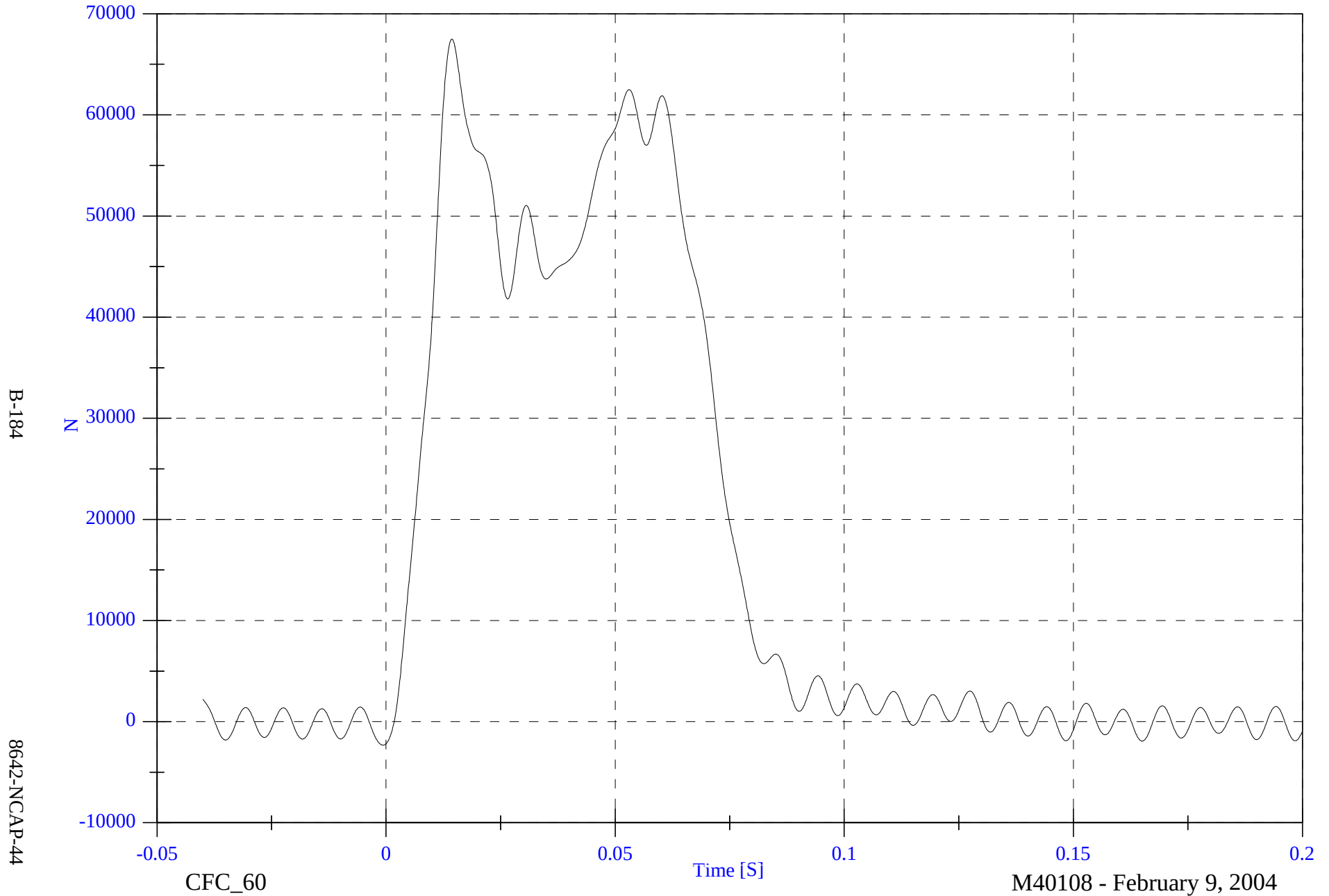


2004 NCAP Test 8 2004 Cadillac SRX

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

Max: 67490.8 [N] at 0.014 [S]

Min: -2331.8 [N] at -0.001 [S]

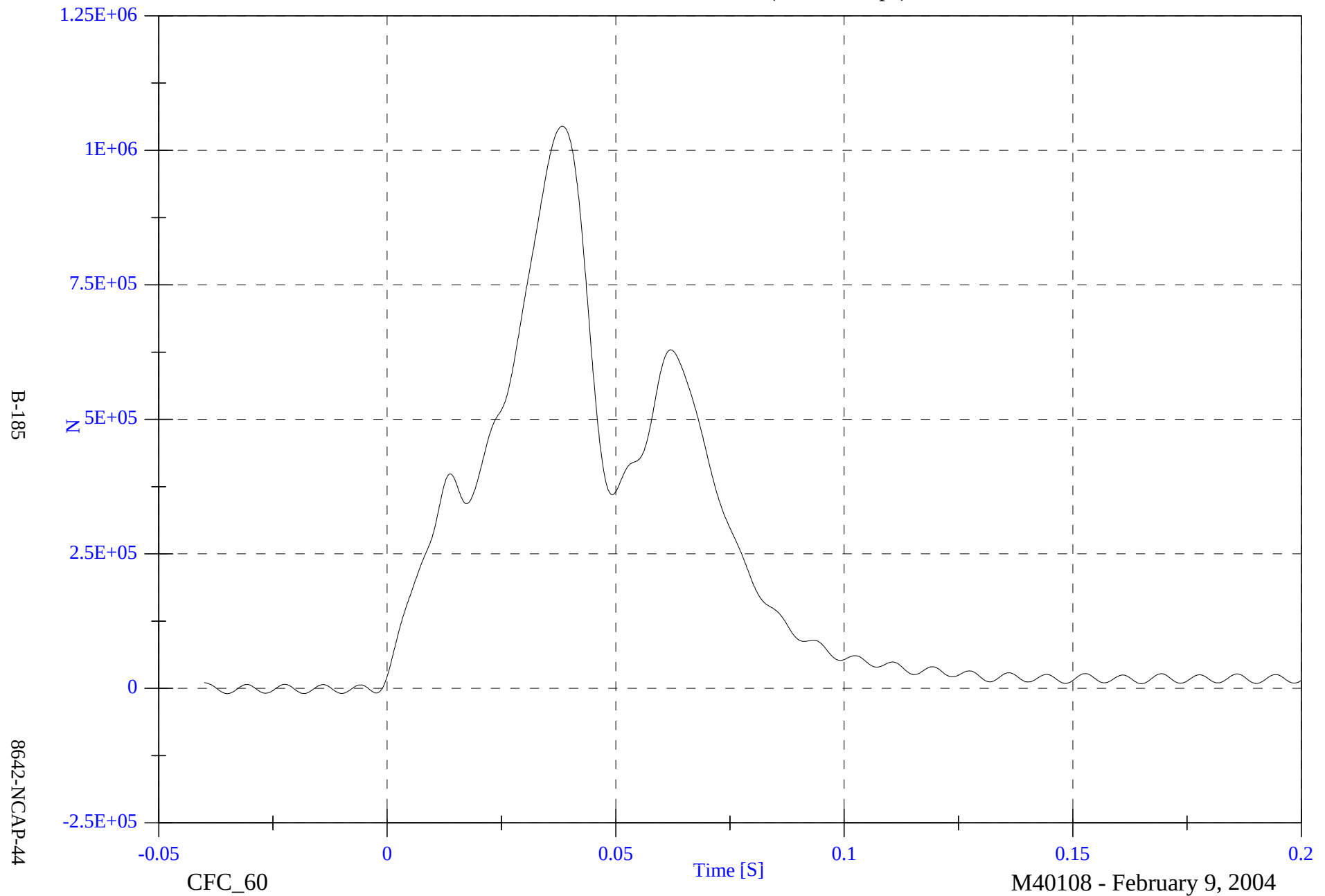


2004 NCAP Test 8 2004 Cadillac SRX

Max: 1044824.7 [N] at 0.038 [S]

Min: -9636.4 [N] at -0.035 [S]

Total Load Cell Sum (All 6 Groups)



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 General Dynamics . A summary of the test results, and Part 572 specifications are included in this Appendix.

Dummy serial numbers and certification dates are:

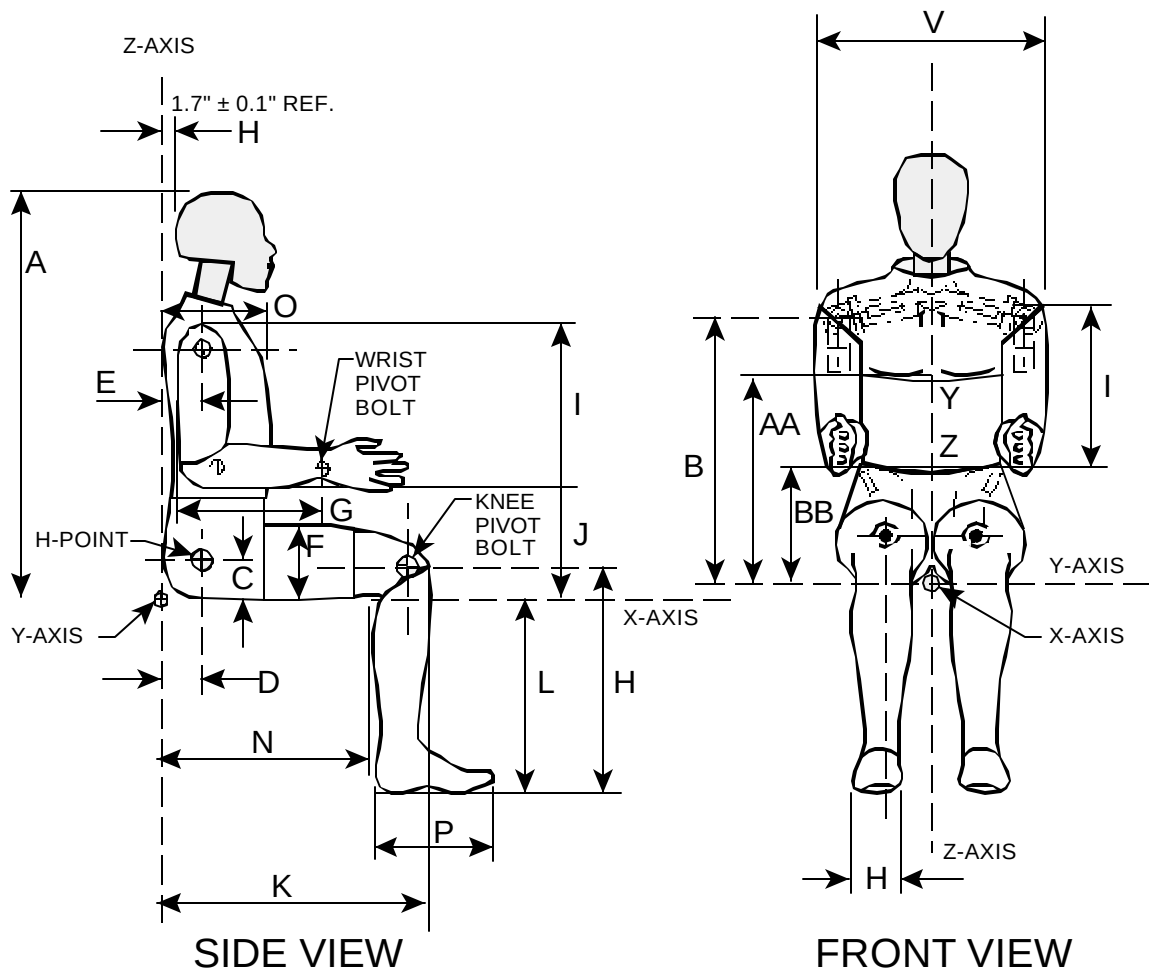
<u>Position No./Location</u>	<u>Serial No.</u>	<u>Completion Date</u>
#1/Driver	150	01/29/2004
#2/Right Front Passenger	245	01/29/2004

Electronic Test Equipment

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

DUMMY CONFIGURATION DIMENSIONS

EXTERNAL DIMENSIONS SPECIFICATIONS



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

PART 572E
HEAD DROP TEST

Dummy Serial Number 150
Sequential Test Number 1
Date 01-23-04
Workfile 150H 01-23-04

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	66-78 Deg F	70.0
Relative Humidity	10% - 70%	36.0
Peak Resultant Acceleration	225-275 G's	262.43
Peak Lateral Acceleration	15 G's Max	5.82
Is Acceleration Curve Unimodal?	YES	YES

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572E
NECK FLEXION TEST

Dummy Serial Number	150	
Sequential Test Number	1	
Date	01-28-04	6 Axis Neck Transducer
Workfile	150NF 01-28-04	

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature		69-72 Deg F	70.00
Relative Humidity		10% - 70%	36.00
Impact Velocity		22.60 - 23.40 Ft/s	23.13
Pendulum Deceleration	10 ms	22.50 - 27.50 G's	23.63
	20 ms	17.60 - 22.60 G's	22.27
	30 ms	12.50 - 18.50 G's	17.32
Max Pendulum G's Above 30 ms		29 G's Max	17.32
Deceleration - Time Curve Decay Time to 5 G's		34 - 42 ms	40.40
D Plane Rotation	Max	64 - 78 Deg	65.81
	Time	57 - 64 ms	59.10
Moment About Occipital Condyle	Max	65 - 80 Ft-Lbs	72.8
	Time	47 - 58 ms	52.50
Rotation Angle - Time Curve Decay Time to Zero		113 - 128 ms	113.60
Positive Moment - Time Curve Decay Time to Zero		97 - 107 ms	100.20

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
NECK EXTENSION TEST

Dummy Serial Number	150	
Sequential Test Number	1	
Date	01-28-04	6 Axis Neck Transducer
Workfile	150NE 01-28-04	

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature		69-72 Deg F	70.00
Relative Humidity		10% - 70%	36.00
Impact Velocity		19.50 - 20.30 Ft/s	19.70
Pendulum Deceleration	10 ms	17.20 - 21.20 G's	18.86
	20 ms	14.00 - 19.00 G's	16.93
	30 ms	11.00 - 16.00 G's	13.69
Max Pendulum G's Above 30 ms		22 G's Max	13.69
Deceleration - Time Curve Decay Time to 5 G's		38 - 46 ms	40.10
D Plane Rotation	Max	81 - 106 Deg	92.49
	Time	72 - 82 ms	77.00
Moment About Occipital Condyle	Max	-59.0 - -39.0 Ft-Lbs	-44.17
	Time	65 - 79 ms	72.00
Rotation Angle - Time Curve Decay Time to Zero		147 - 174 ms	155.60
Positive Moment - Time Curve Decay Time to Zero		120 - 148 ms	137.00

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572E
THORAX IMPACT TEST

Dummy Serial Number 150
Sequential Test Number 1
Date 01-29-04
Workfile 150T 01-29-04

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	69-72 Deg F	70.0
Relative Humidity	10% - 70%	33.00
Pendulum Velocity	21.6 - 22.4 Ft/s	22.23
Maximum Deflection	2.50 - 2.86 in	2.57
Maximum Resistive Force	1160 - 1325 Lbs	1298.51
Internal Hysteresis	69 - 85 %	72.64

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572E
KNEE IMPACT TEST

Dummy Serial Number 150
Sequential Test Number 1
Date 01-29-04
Workfile 150lf 01-29-04/150rf 01-29-04

TEST PARAMETER	SPECIFICATION	TEST RESULTS
LEFT KNEE		
Temperature	66 - 78 Deg F	70.00
Relative Humidity	10% - 70%	30.00
Probe Velocity	6.8 - 7.0 Ft/s	7.00
Peak Knee Impact Force	1060 - 1300 Lbs	1191.36
RIGHT KNEE		
Temperature	66 - 78 Deg F	70.00
Relative Humidity	10% - 70%	33.00
Probe Velocity	6.8 - 7.0 Ft/s	7.00
Peak Knee Impact Force	1060 - 1300 Lbs	1144.70

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572E
EXTERNAL DIMENSIONS

Dummy Serial Number 150
Sequential Test Number 1
Date 01-29-04

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature			70
Relative Humidity			33
Location for Chest Circumference	AA	16.9 - 17.1 in	17.0
Location for Waist Circumference	BB	8.9 - 9.1 in	9.0
Chest Circumference (With Jacket)	Y	38.2 - 39.4 in	39.2
Waist Circumference	Z	32.9 - 34.1 in	34.0
Chest Depth	O	8.4 - 9.0 in	8.5
H-Point Height	C	3.3 - 3.5 in	3.4
H-Point from Backline	D	5.3 - 5.5 in	5.4
Skull Cap to Backline	H	1.6 - 1.8 in	1.7
Total Sitting Height	A	34.6 - 35.0 in	34.8
Thigh Clearance	F	5.5 - 6.1 in	6.0
Buttock Knee Length	K	22.8 - 23.8 in	23.4
Buttock Popliteal Length	N	17.8 - 18.8 in	18.4
Popliteal Height	L	16.9 - 17.9 in	17.8
Knee Pivot Height	M	19.1 - 19.7 in	19.6
Foot Length	P	9.9 - 10.5 in	10.2
Foot Breadth	W	3.6 - 4.2 in	3.8
Shoulder Pivot from Backline	E	3.3 - 3.7 in	3.7
Shoulder Breadth	V	16.6 - 17.2 in	16.8
Shoulder Pivot Height	B	19.9 - 20.5 in	20.1
Elbow Rest Height	J	7.5 - 8.3 in	8.1
Shoulder - Elbow Length	I	13.0 - 13.6 in	13.2
Back of Elbow to Wrist Pivot	G	11.4 - 12.0 in	11.6

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572E
HEAD DROP TEST

Dummy Serial Number 245
Sequential Test Number 3
Date 01-26-04
Workfile 245H3 01-26-04

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	66-78 Deg F	70.0
Relative Humidity	10% - 70%	37.00
Peak Resultant Acceleration	225-275 G's	268.84
Peak Lateral Acceleration	15 G's Max	2.69
Is Acceleration Curve Unimodal?	YES	YES

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572E
NECK FLEXION TEST

Dummy Serial Number	245	
Sequential Test Number	5	
Date	01-27-04	6 Axis Neck Transducer
Workfile	245NF5 01-27-04	

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature		69-72 Deg F	70.00
Relative Humidity		10% - 70%	38.00
Impact Velocity		22.60 - 23.40 Ft/s	23.12
Pendulum Deceleration	10 ms	22.50 - 27.50 G's	24.94
	20 ms	17.60 - 22.60 G's	21.92
	30 ms	12.50 - 18.50 G's	16.68
Max Pendulum G's Above 30 ms		29 G's Max	16.68
Deceleration - Time Curve Decay Time to 5 G's		34 - 42 ms	41.90
D Plane Rotation	Max	64 - 78 Deg	67.98
	Time	57 - 64 ms	59.00
Moment About Occipital Condyle	Max	65 - 80 Ft-Lbs	76.94
	Time	47 - 58 ms	51.70
Rotation Angle - Time Curve Decay Time to Zero		113 - 128 ms	113.00
Positive Moment - Time Curve Decay Time to Zero		97 - 107 ms	98.20

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
NECK EXTENSION TEST

Dummy Serial Number	245	
Sequential Test Number	2	
Date	01-27-04	6 Axis Neck Transducer
Workfile	245NE2 01-27-04	

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature		69-72 Deg F	70.00
Relative Humidity		10% - 70%	38.00
Impact Velocity		19.50 - 20.30 Ft/s	19.69
Pendulum Deceleration	10 ms	17.20 - 21.20 G's	20.73
	20 ms	14.00 - 19.00 G's	18.80
	30 ms	11.00 - 16.00 G's	15.04
Max Pendulum G's Above 30 ms		22 G's Max	15.04
Deceleration - Time Curve Decay Time to 5 G's		38 - 46 ms	38.60
D Plane Rotation	Max	81 - 106 Deg	88.01
	Time	72 - 82 ms	73.40
Moment About Occipital Condyle	Max	-59.0 - -39.0 Ft-Lbs	-53.93
	Time	65 - 79 ms	67.90
Rotation Angle - Time Curve Decay Time to Zero		147 - 174 ms	149.10
Positive Moment - Time Curve Decay Time to Zero		120 - 148 ms	129.40

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572E
THORAX IMPACT TEST

Dummy Serial Number 245
Sequential Test Number 1
Date 01-29-04
Workfile 245T 01-29-04

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	69-72 Deg F	70.0
Relative Humidity	10% - 70%	33.00
Pendulum Velocity	21.6 - 22.4 Ft/s	22.29
Maximum Deflection	2.50 - 2.86 in	2.59
Maximum Resistive Force	1160 - 1325 Lbs	1278.23
Internal Hysteresis	69 - 85 %	74.19

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572E
KNEE IMPACT TEST

Dummy Serial Number 245
Sequential Test Number 1
Date 01-29-04
Workfile 245lf 01-29-04/245rf 01-29-04

TEST PARAMETER	SPECIFICATION	TEST RESULTS
LEFT KNEE		
Temperature	66 - 78 Deg F	70.00
Relative Humidity	10% - 70%	33.00
Probe Velocity	6.8 - 7.0 Ft/s	7.00
Peak Knee Impact Force	1060 - 1300 Lbs	1092.68
RIGHT KNEE		
Temperature	66 - 78 Deg F	70.00
Relative Humidity	10% - 70%	33.00
Probe Velocity	6.8 - 7.0 Ft/s	7.00
Peak Knee Impact Force	1060 - 1300 Lbs	1131.28

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572E
EXTERNAL DIMENSIONS

Dummy Serial Number 245
Sequential Test Number 1
Date 01-29-04

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature			70
Relative Humidity			33
Location for Chest Circumference	AA	16.9 - 17.1 in	17.0
Location for Waist Circumference	BB	8.9 - 9.1 in	9.0
Chest Circumference (With Jacket)	Y	38.2 - 39.4 in	39.2
Waist Circumference	Z	32.9 - 34.1 in	34.0
Chest Depth	O	8.4 - 9.0 in	8.5
H-Point Height	C	3.3 - 3.5 in	3.4
H-Point from Backline	D	5.3 - 5.5 in	5.4
Skull Cap to Backline	H	1.6 - 1.8 in	1.7
Total Sitting Height	A	34.6 - 35.0 in	34.8
Thigh Clearance	F	5.5 - 6.1 in	6.0
Buttock Knee Length	K	22.8 - 23.8 in	23.4
Buttock Popliteal Length	N	17.8 - 18.8 in	18.4
Popliteal Height	L	16.9 - 17.9 in	17.5
Knee Pivot Height	M	19.1 - 19.7 in	19.2
Foot Length	P	9.9 - 10.5 in	10.2
Foot Breadth	W	3.6 - 4.2 in	3.8
Shoulder Pivot from Backline	E	3.3 - 3.7 in	3.6
Shoulder Breadth	V	16.6 - 17.2 in	16.8
Shoulder Pivot Height	B	19.9 - 20.5 in	20.2
Elbow Rest Height	J	7.5 - 8.3 in	8.0
Shoulder - Elbow Length	I	13.0 - 13.6 in	13.2
Back of Elbow to Wrist Pivot	G	11.4 - 12.0 in	11.6

Remarks:

Laboratory Technician:

B. Swiecicki

APPENDIX D

DUMMY, VEHICLE AND LABORATORY INSTRUMENT CALIBRATION

INSTRUMENT CALIBRATION FOR DRIVER DUMMY
(Six Month Calibration Minimum)

DRIVER DUMMY (S/N 150)		Manufacturer	Serial #	Calibration	
				Last	Next
Head 9 Array	X Arm Y	ENDEVCO	AC-P17531	21-Nov-03	21-May-04
	X Arm Z	ENDEVCO	AC-P14965	21-Nov-03	21-May-04
	Y Arm X	ENDEVCO	AC-P17563	21-Nov-03	21-May-04
	Y Arm Z	ENDEVCO	AC-P18551	21-Nov-03	21-May-04
	Z Arm X	ENDEVCO	AC-P17539	21-Nov-03	21-May-04
	Z Arm Y	ENDEVCO	AC-P18718	21-Nov-03	21-May-04
Head	X	ENDEVCO	AC-P16832	20-Nov-03	20-May-04
	Y	ENDEVCO	AC-P16591	20-Nov-03	20-May-04
	Z	ENDEVCO	AC-P16286	20-Nov-03	20-May-04
Head	X (R)	ENDEVCO	AC-P17141	20-Nov-03	20-May-04
	Y (R)	ENDEVCO	AC-P17242	20-Nov-03	20-May-04
	Z (R)	ENDEVCO	AC-P17152	20-Nov-03	20-May-04
Neck Load Cell	X	DENTON	LC-1633Fx	13-Aug-03	13-Feb-04
	Y	DENTON	LC-1633Fy	13-Aug-03	13-Feb-04
	Z	DENTON	LC-1633Fz	13-Aug-03	13-Feb-04
Neck Moment	X	DENTON	LC-1633Mx	13-Aug-03	13-Feb-04
	Y	DENTON	LC-1633My	13-Aug-03	13-Feb-04
	Z	DENTON	LC-1633Mz	13-Aug-03	13-Feb-04
Chest	X	ENDEVCO	AC-P19216	26-Nov-03	26-May-04
	Y	ENDEVCO	AC-P16576	01-Dec-03	01-Jun-04
	Z	ENDEVCO	AC-P15534	26-Nov-03	26-May-04
Chest	X (R)	ENDEVCO	AC-P23303	26-Nov-03	26-May-04
	Y (R)	ENDEVCO	AC-P15526	01-Dec-03	01-Jun-04
	Z (R)	ENDEVCO	AC-P19255	01-Dec-03	01-Jun-04
Chest Deflection	X	SERVO	DS-150	19-Dec-03	19-Jun-04
Pelvic	X	ENDEVCO	AC-P21393	04-Dec-03	04-Jun-04
	Y	ENDEVCO	AC-P23788	04-Dec-03	04-Jun-04
	Z	ENDEVCO	AC-P16845	04-Dec-03	04-Jun-04

INSTRUMENT CALIBRATION FOR DRIVER DUMMY
(Six Month Calibration Minimum)

DRIVER DUMMY (S/N 150)		Manufacturer	Serial#	Calibration	
				Last	Next
Left Femur Load Cell	Fz	DENTON	LC-255	03-Dec-03	03-Jun-04
Right Femur Load Cell	Fz	GSE	LC-420	03-Dec-03	03-Jun-04
Left Upper Tibia	Mx	DENTON	LC-199Mx	26-Sep-03	26-Mar-04
	My	DENTON	LC-199My	26-Sep-03	26-Mar-04
Left Lower Tibia	Fz	DENTON	LC-128Fz	26-Sep-03	26-Mar-04
	Mx	DENTON	LC-128Mx	26-Sep-03	26-Mar-04
	My	DENTON	LC-128My	26-Sep-03	26-Mar-04
Right Upper Tibia	Mx	DENTON	LC-200Mx	26-Sep-03	26-Mar-04
	My	DENTON	LC-200My	26-Sep-03	26-Mar-04
Right Lower Tibia	Fz	DENTON	LC-129Fz	26-Sep-03	26-Mar-04
	Mx	DENTON	LC-129Mx	26-Sep-03	26-Mar-04
	My	DENTON	LC-129My	26-Sep-03	26-Mar-04
Left Foot Rear	X	ENDEVCO	AC-J30491	16-Jan-04	16-Jan-04
	Z	ENDEVCO	AC-J31026	16-Jan-04	16-Jan-04
Left Foot Front	Z	ENDEVCO	AC-J32831	16-Jan-04	16-Jan-04
Right Foot Rear	X	ENDEVCO	AC-J32838	16-Jan-04	16-Jan-04
	Z	ENDEVCO	AC-J32174	24-Sep-03	24-Mar-04
Right Foot Front	Z	ENDEVCO	AC-J32143	24-Sep-03	24-Mar-04
Lap Belt Load Cell		First Technology	LC-170	10-Oct-03	10-Apr-04

INSTRUMENT CALIBRATION FOR PASSENGER DUMMY
(Six Month Calibration Minimum)

PASSENGER DUMMY (S/N 245)		Manufacturer	Serial #	Calibration	
				Last	Next
Head 9 Array	X Arm Y	ENDEVCO	AC-P32453	22-Jan-04	22-Jan-04
	X Arm Z	ENDEVCO	AC-P32289	22-Jan-04	22-Jan-04
	Y Arm X	ENDEVCO	AC-P32146	23-Jan-04	23-Jan-04
	Y Arm Z	ENDEVCO	AC-P32225	23-Jan-04	23-Jan-04
	Z Arm X	ENDEVCO	AC-P32217	23-Jan-04	23-Jan-04
	Z Arm Y	ENDEVCO	AC-P32276	23-Jan-04	23-Jan-04
Head	X	ENDEVCO	AC-P32464	22-Jan-04	22-Jan-04
	Y	ENDEVCO	AC-P32295	22-Jan-04	22-Jan-04
	Z	ENDEVCO	AC-P32227	22-Jan-04	22-Jan-04
Head	X (R)	ENDEVCO	AC-P32139	22-Jan-04	22-Jan-04
	Y (R)	ENDEVCO	AC-P32197	22-Jan-04	22-Jan-04
	Z (R)	ENDEVCO	AC-P32455	12-Sep-03	12-Mar-04
Neck Load Cell	X	DENTON	LC-1634Fx	18-Aug-03	18-Feb-04
	Y	DENTON	LC-1634Fy	18-Aug-03	18-Feb-04
	Z	DENTON	LC-1634Fz	18-Aug-03	18-Feb-04
Neck Moment	X	DENTON	LC-1634Mx	18-Aug-03	18-Feb-04
	Y	DENTON	LC-1634My	18-Aug-03	18-Feb-04
	Z	DENTON	LC-1634Mz	18-Aug-03	18-Feb-04
Chest	X	ENDEVCO	AC-P17235	26-Nov-03	26-May-04
	Y	ENDEVCO	AC-P23640	24-Nov-03	24-May-04
	Z	ENDEVCO	AC-P17285	26-Nov-03	26-May-04
Chest	X (R)	ENDEVCO	AC-P17283	26-Nov-03	26-May-04
	Y (R)	ENDEVCO	AC-P16863	24-Nov-03	24-May-04
	Z (R)	ENDEVCO	AC-P14393	26-Nov-03	26-May-04
Chest Deflection	X	SERVO	DS-245	19-Dec-03	19-Jun-04
Pelvic	X	ENDEVCO	AC-P18739	26-Nov-03	26-May-04
	Y	ENDEVCO	AC-P19212	26-Nov-03	26-May-04
	Z	ENDEVCO	AC-P18738	26-Nov-03	26-May-04

INSTRUMENT CALIBRATION FOR PASSENGER DUMMY
(Six Month Calibration Minimum)

PASSENGER DUMMY (S/N 245)		Manufacturer	Serial #	Calibration	
				Last	Next
Left Femur Load Cell	Fz	GSE	LC-657	03-Dec-03	03-Jun-04
Right Femur Load Cell	Fz	GSE	LC-653	03-Dec-03	03-Jun-04
Left Upper Tibia	Mx	DENTON	LC-265Mx	26-Sep-03	26-Mar-04
	My	DENTON	LC-265My	26-Sep-03	26-Mar-04
Left Lower Tibia	Fz	DENTON	LC-178Fz	26-Sep-03	26-Mar-04
	Mx	DENTON	LC-178Mx	26-Sep-03	26-Mar-04
	My	DENTON	LC-178My	26-Sep-03	26-Mar-04
Right Upper Tibia	Mx	DENTON	LC-264Mx	26-Sep-03	26-Mar-04
	My	DENTON	LC-264My	26-Sep-03	26-Mar-04
Right Lower Tibia	Fz	DENTON	LC-177Fz	26-Sep-03	26-Mar-04
	Mx	DENTON	LC-177Mx	26-Sep-03	26-Mar-04
	My	DENTON	LC-177My	26-Sep-03	26-Mar-04
Left Foot Rear	X	ENDEVCO	AC-J20084	30-Jan-04	30-Jul-04
	Z	ENDEVCO	AC-AGRP4	30-Jan-04	30-Jul-04
Left Foot Front	Z	ENDEVCO	AC-J28727	30-Jan-04	30-Jul-04
Right Foot Rear	X	ENDEVCO	AC-AJ7F6	30-Jan-04	30-Jul-04
	Z	ENDEVCO	AC-J27079	30-Jan-04	30-Jul-04
Right Foot Front	Z	ENDEVCO	AC-J23997	30-Jan-04	30-Jul-04
Lap Belt Load Cell		First Technology	LC-180	10-Oct-03	10-Apr-04

INSTRUMENT CALIBRATION FOR VEHICLE ACCELEROMETERS
(Six Month Calibration Minimum)

	Manufacturer	Serial #	Calibration	
			Last	Next
Left Seat Rear Crossmember X	GS SENSORS	AC-9440-023	03-Dec-03	03-Jun-04
Right Rear Seat Crossmember X	GS SENSORS	AC-9444-038	03-Dec-03	03-Jun-04
Top of Engine	GS SENSORS	AC-9440-036	03-Dec-03	03-Jun-04
Bottom of Engine	GS SENSORS	AC-9440-017	01-Dec-03	01-Jun-04
Right Disc Brake Caliper	ICS	AC-9026-042	19-Jan-04	19-Jul-04
Instrument Panel	GS SENSORS	AC-9440-039	03-Dec-03	03-Jun-04
Left Disc Brake Caliper	ICS	AC-8084-045	11-Dec-03	11-Jun-04
Left Seat Rear Crossmember Z	GS SENSORS	AC-9440-046	03-Dec-03	03-Jun-04
Right Seat Rear Crossmember Z	GS SENSORS	AC-9440-029	03-Dec-03	03-Jun-04

REPORT NUMBER: CAL-04-08

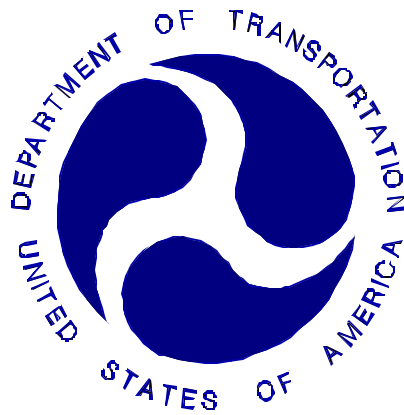
NEW CAR ASSESSMENT PROGRAM (NCAP)
FRONTAL BARRIER IMPACT TEST

EVENFLO VANGUARD 5 WITH LATCH AND TOP TETHER
CENTURY STE 1500 WITH LATCH AND TOP TETHER

NHTSA NUMBER: M40108

GENERAL DYNAMICS REPORT NUMBER: 8642-NCAP-44

GENERAL DYNAMICS
ADVANCED INFORMATION ENGINEERING SERVICES
TRANSPORTATION SCIENCES CENTER
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BUFFALO, NEW YORK 14225



February 9, 2004

FINAL REPORT

U. S. DEPARTMENT OF TRANSPORTATION
National Highway Traffic Safety Administration
Rulemaking
Office of Crashworthiness Standards
Mail Code: NVS-111
400 Seventh Street, SW, Room No. 5313
Washington, DC 20590

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

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15. Supplementary Notes					
16. Abstract This CRS test was performed in conjunction with a New Car Assessment Program (NCAP) load cell barrier test. An Evenflo Vanguard 5 forward facing convertible was secured in Position 3 (P3) with the LATCH system and top tether. A Century STE 1500 forward facing convertible was secured in Position 4 (P4) with the LATCH system and top tether. This test was conducted at the General Dynamics Crash Test Facility in Buffalo, New York, on February 9, 2004.					
ATD Position		HIC 15		HIC 36	
P3 (Right Rear) (044)		§		§	
P4 (Left Rear) (142)		607.1		1109.8	
§ Head Ax accelerometer opened during the event – HIC data is invalid					
17. Key Words New Car Assessment Program (NCAP)				18. Distribution Statement <u>Copies of this report are available from:</u> National Highway Traffic Safety Administration Technical Reference Division Room 5111 (NAD-52) 400 Seventh St., S.W. Washington, D.C. 20590 Telephone No. (202) 366-4946 ATTN: Robert Hornicle	
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SECTION 1

PURPOSE AND SUMMARY OF TEST M40108

The purpose of this test was to obtain CRS performance data in a frontal impact NCAP condition. The 56.65 kph NCAP frontal impact test was conducted in accordance with the Office of Crashworthiness Standards (OCS) NCAP Laboratory Test Procedure.

SUMMARY

A forward facing convertible 5-point belt CRS and a 3 year old child dummy (serial no. 044) was secured in the right rear occupant position (Position 3 or P3). A forward facing convertible 5-point belt CRS and a 3 year old child dummy (serial no. 142) was secured in the left rear occupant position (Position 4 or P4). Both 3 Year Old Hybrid III (P572 P) child dummies were instrumented with head, chest, and pelvic triaxial accelerometers, a head rear Z-direction accelerometer, a chest displacement sensor, and upper and lower six axial neck load cells. The dummies were calibrated previous to this test and the certification information is found in section 5.

The right rear child dummy's HIC (15 ms) was not calculated due to the Head X accelerometer opening during the event, maximum chest deceleration over 3 ms was 54.5 g's. The left rear child dummy's HIC (15 ms) was 607.1, the HIC over 36 ms was 1109.8 and the maximum chest deceleration over 3 ms was 49.7 g's.

SECTION 2
DATA SHEET NO. 1
CRASH TEST SUMMARY

TEST DUMMY INFORMATION:

DESCRIPTION	Position #3 CRS	Position #4 CRS
ATD Type/Serial No.	Hybrid III 3C/044	Hybrid III 3C/142
Restraint System:	Vanguard 5 with LATCH and top tether	Century 1500 STE with LATCH and top tether

Number of Data Channels 55

Number of Cameras: 1 Real Time

2 High Speed

POST TEST DOOR OPENING †

†Vehicle was equipped with automatic door locks; vehicle was tested with door locks activated

DESCRIPTION	FRONT	REAR
Left Side Doors	Closed, Latched and Operable without tools	Closed, Latched and Operable without tools
Right Side Doors	Closed, Latched and Operable without tools	Closed, Latched and Operable without tools
Hatch/Other Door	N/A	Closed, Latched and Operable without tools

POST TEST SEAT DATA

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

VISIBLE DUMMY CONTACT POINTS

	Position #3 CRS	Position #4 CRS
Head Contact:	The face and chin to the chest and the back of the head to the child restraint	The face and chin to the chest and the back of the head to the child restraint
Upper Torso Contact:	None	None
Lower Torso Contact:	None	None
Left Knee Contact:	None	None
Right Knee Contact:	None	None

DATA SHEET NO. 2

CRS PARAMETER DATA

CRS: Evenflo Vanguard 5 and Century 1500 STE both secured using LATCH and top tether

NHTSA No. M40108

CALCULATION OF VEHICLE'S TARGET TEST WEIGHT:

Delivered Weight of Vehicle with Maximum Fluids = 2014.5 kg (A)

AS TESTED WEIGHT OF VEHICLE

(2 P572E + 2 P572P w/ CRS + CARGO + EQUIPMENT & INSTRUMENTATION):

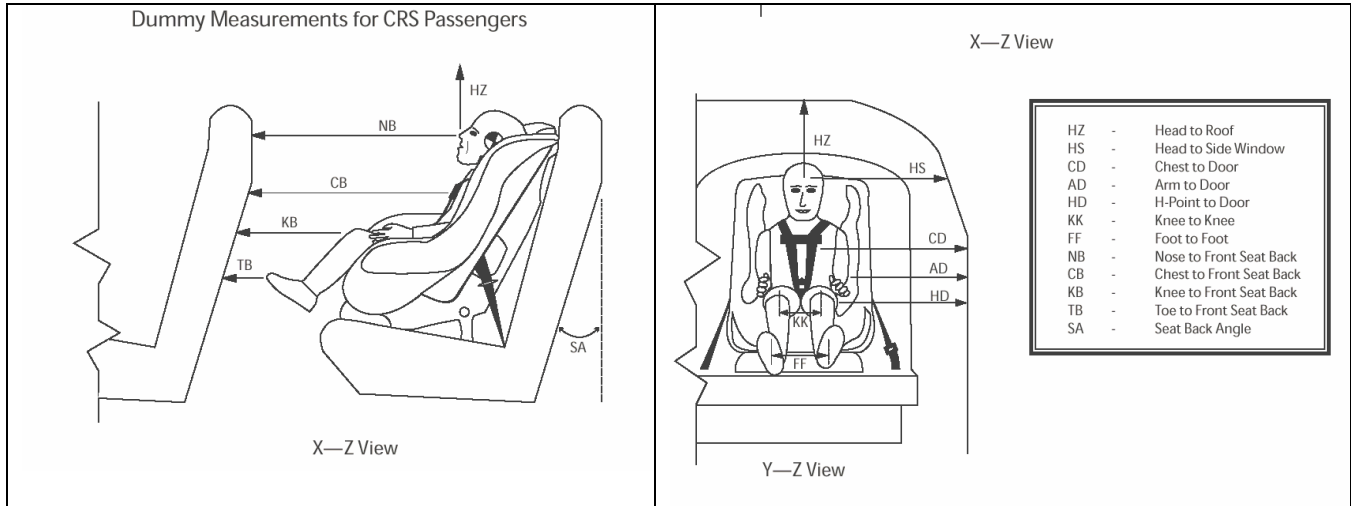
Left Front	=	<u>556.5</u>	kg	Left Rear	=	<u>586.0</u>	kg
Right Front	=	<u>558.5</u>	kg	Right Rear	=	<u>593.0</u>	kg
TOTAL FRONT	=	<u>1115.0</u>	kg	TOTAL REAR	=	<u>1179.0</u>	kg
TOTAL TEST WEIGHT =		<u>2294.0</u>	kg				

DATA SHEET NO. 3

CHILD DUMMY POSITIONING IN VEHICLE

CRS: Evenflo Vanguard 5 and Century 1500 STE both secured using LATCH and top tether

NHTSA No. M40108



Measurement	P3 CRS (044)	P4 CRS (142)
SA	29	40
HS	365	381
CD	345	350
AD	212	248
HD	265	195
HZ	348	410
NB	600	565
CB	580	563
KK	140	120
FF	120	120
KB – LEFT	415	336
KB – RIGHT	415	343
TB – LEFT	130	114
TB – RIGHT	125	135

All dimensions in mm (unless noted)

P3 – Right Rear Passenger (CRS #1)

P4 – Left Rear Passenger (CRS #2)

DATA SHEET 4

CHILD DUMMY INJURY CRITERIA VALUES

CRS: Evenflo Vanguard 5 and Century 1500 STE both secured using LATCH and top tether

NHTSA No. M40108

		MAXIMUM VALUE							
		Position #3				Position #4			
DESCRIPTION	Unit	Pos	msec	Neg	msec	Pos	msec	Neg	msec
Head X	g	§	§	§	§	70.7	185.7	-40.0	104.3
Head Y	g	7.3	196.4	-13.9	107.7	38.1	113.8	-16.3	185.5
Head Z	g	77.2	90.1	-9.2	48.8	68.3	81.8	-6.5	43.9
Head Resultant	g	§	§	§	§	91.4	185.7	0.2	-49.7
Head Rear Z	g	80.7	107.0	-17.8	52.1	92.6	87.2	-30.5	182.0
Upper Neck Fx	N	13.1	22.3	-1295.7	112.9	40.7	166.3	-857.2	100.5
Upper Neck Fy	N	148.7	108.6	-48.5	181.1	133.7	101.9	-18.4	66.1
Upper Neck Fz	N	1953.6	90.2	-267.4	50.0	2203.5	90.6	-203.4	45.8
Upper Neck F Resultant	N	2105.7	109.2	2.1	-50.0	2337.3	91.0	2.6	-49.4
Upper Neck Mx	N-m	3.0	139.3	-9.5	119.4	9.3	102.4	-2.0	189.9
Upper Neck My	N-m	4.6	156.7	-24.8	114.8	3.8	144.8	-22.2	191.6
Upper Neck Mz	N-m	2.3	156.5	-1.3	192.6	3.5	186.6	-2.2	105.5
Upper Neck M Resultant	N-m	26.2	114.8	0.1	-33.1	22.5	191.6	0.0	-36.4
Lower Neck Fx	N	158.4	196.0	-1398.4	85.6	127.7	183.9	-2232.1	93.5
Lower Neck Fy	N	83.7	109.9	-94.5	167.5	248.9	105.6	-129.3	66.9
Lower Neck Fz	N	1822.0	90.1	-302.3	50.0	1013.5	86.1	-222.8	46.5
Lower Neck F Resultant	N	2092.0	86.5	3.1	-50.0	2357.1	93.4	3.0	-45.9
Lower Neck Mx	N-m	6.1	109.8	-7.3	180.5	28.8	102.8	-1.4	37.0
Lower Neck My	N-m	145.7	110.8	-9.8	195.2	152.0	93.5	-13.2	183.5
Lower Neck Mz	N-m	2.6	137.7	-7.3	117.3	14.6	100.7	-0.1	-22.3
Lower Neck M Resultant	N-m	145.8	110.8	0.2	14.3	153.9	93.5	0.3	-47.5
Chest X	g	6.5	181.0	-53.6	80.9	4.3	199.9	-41.3	70.3
Chest Y	g	4.1	101.7	-4.5	67.6	6.9	114.7	-2.2	67.2
Chest Z	g	22.6	199.9	-27.8	67.5	28.3	187.2	-30.2	63.9
Chest Resultant	g	55.8	81.0	0.2	-28.5	50.1	67.2	0.0	-26.8
Chest Displacement	g	0.1	-45.6	-24.4	116.1	0.0	19.4	-24.2	102.4

§ - Channel Opened during the event

DATA SHEET 4

CHILD DUMMY INJURY CRITERIA VALUES (CONTINUED)

CRS: Evenflo Vanguard 5 and Century 1500 STE both secured using LATCH and top tether

NHTSA No. M40108

		MAXIMUM VALUE							
		Position #3				Position #4			
DESCRIPTION	Unit	Pos	msec	Neg	msec	Pos	msec	Neg	msec
Pelvic X	g	13.2	136.2	-72.9	73.5	19.6	110.0	-51.0	62.1
Pelvic Y	g	5.3	69.0	-10.0	76.0	7.6	68.6	-5.5	86.9
Pelvic Z	g	26.6	199.9	-31.3	83.4	30.8	187.3	-44.8	74.9
Pelvic Resultant	g	73.3	73.5	0.1	-46.4	66.7	62.2	0.1	-24.6
Tether Belt Load	N	*	*	*	*	5452.7	76.5	-69.0	188.8

* Data is Questionable

DATA SHEET 4

CHILD DUMMY INJURY CRITERIA VALUES (CONTINUED)

CRS: Evenflo Vanguard 5 and Century 1500 STE both secured using LATCH and top tether

NHTSA No. M40108

	HEAD INJURY CRITERIA (HIC)							
	HIC15				HIC36			
	HIC	t ₁ (msec)	t ₂ (msec)	Average Acceleration t ₁ to t ₂	HIC	t ₁ (msec)	t ₂ (msec)	Average Acceleration t ₁ to t ₂
Position #3 - Right	§	§	§	§	§	§	§	§
Position #4 - Left	607.1	76.8	91.8	69.6 g	1109.8	70.1	106.1	62.5 g

§ - Head Ax sensor opened during the event – HIC data is invalid

	CLIP SUMMARY*			
	CLIP (g's)	t ₁ (msec)	t ₂ (msec)	CSI
Position #3 - Right	54.5	79.7	82.7	615.4
Position #4 - Left	49.7	66.2	69.2	540.8

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

DATA SHEET NO. 5

CRS PERFORMANCE DATA

CRS: Evenflo Vanguard 5 and Century 1500 STE both secured using LATCH and top tether

NHTSA No. M40108

		MAXIMUM VALUE			
DESCRIPTION	Unit	Positive	Time (ms)	Negative	Time (ms)
P3 CRS X	g	32.5	127.7	-48.3	61.6
P3 CRS Y	g	6.7	106.4	-51.0	169.6
P3 CRS Z	g	50.3	99.2	-9.2	175.6
P3 CRS Resultant	g	65.4	99.5	0.1	-23.0
P4 CRS X	g	16.0	95.7	-46.3	75.3
P4 CRS Y	g	16.7	56.9	-7.4	170.9
P4 CRS Z	g	25.5	194.3	-12.6	186.9
P4 CRS Resultant	g	47.8	75.2	0.1	-14.4

DATA SHEET NO. 5**CRS PERFORMANCE DATA (CONTINUED)**CRS: Evenflo Vanguard 5 and Century 1500 STE both secured using LATCH and top tetherNHTSA No. M40108**POSITION #3 CRS POST-TEST INSPECTION (Serial No. 3691261 P1 22NOV03)**

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

POSITION #4 CRS POST-TEST INSPECTION (Serial No. 4416ELM 1500 STE MG 2002 10 02 M)

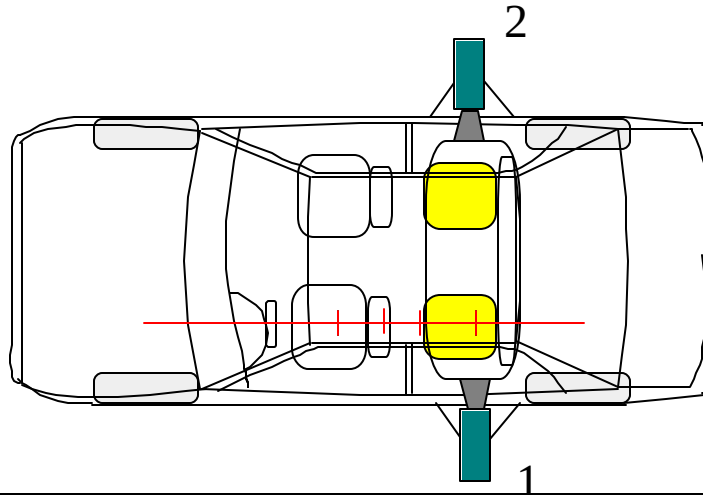
LOCATION	DAMAGE	REMARKS
Upper Tether Strap	No	None
Upper Tether Buckle	No	None
Upper Tether Hook	No	None
Vehicle Upper Tether Anchor	No	None
Lower Anchor Strap	No	None
Lower Anchor Buckle	No	None
Lower Anchor Hooks	No	None
Vehicle Lower CRS Anchors	No	None
Five Point Harness Connections	No	None
Cracks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

DATA SHEET NO. 6

CRS CAMERA DATA

CRS: Evenflo Vanguard 5 and Century 1500 STE both secured using LATCH and top tether

NHTSA No. M40108



Camera No.	View	Coordinates (millimeters)			Angle** (deg.)	Lens (mm)	Film Speed (fps)
		X*	Y*	Z*			
1	Left side CRS lateral view	1002	3156	1256	-11	8	1030
2	Right side CRS lateral view	1002	3149	1261	-9	8	1025

* Reference (from point of impact); all measurements accurate to within ± 6 mm

** = referenced to horizontal plane

X = film plane to monorail centerline

Y = film plane to impact location

Z = film plane to ground

SECTION 3

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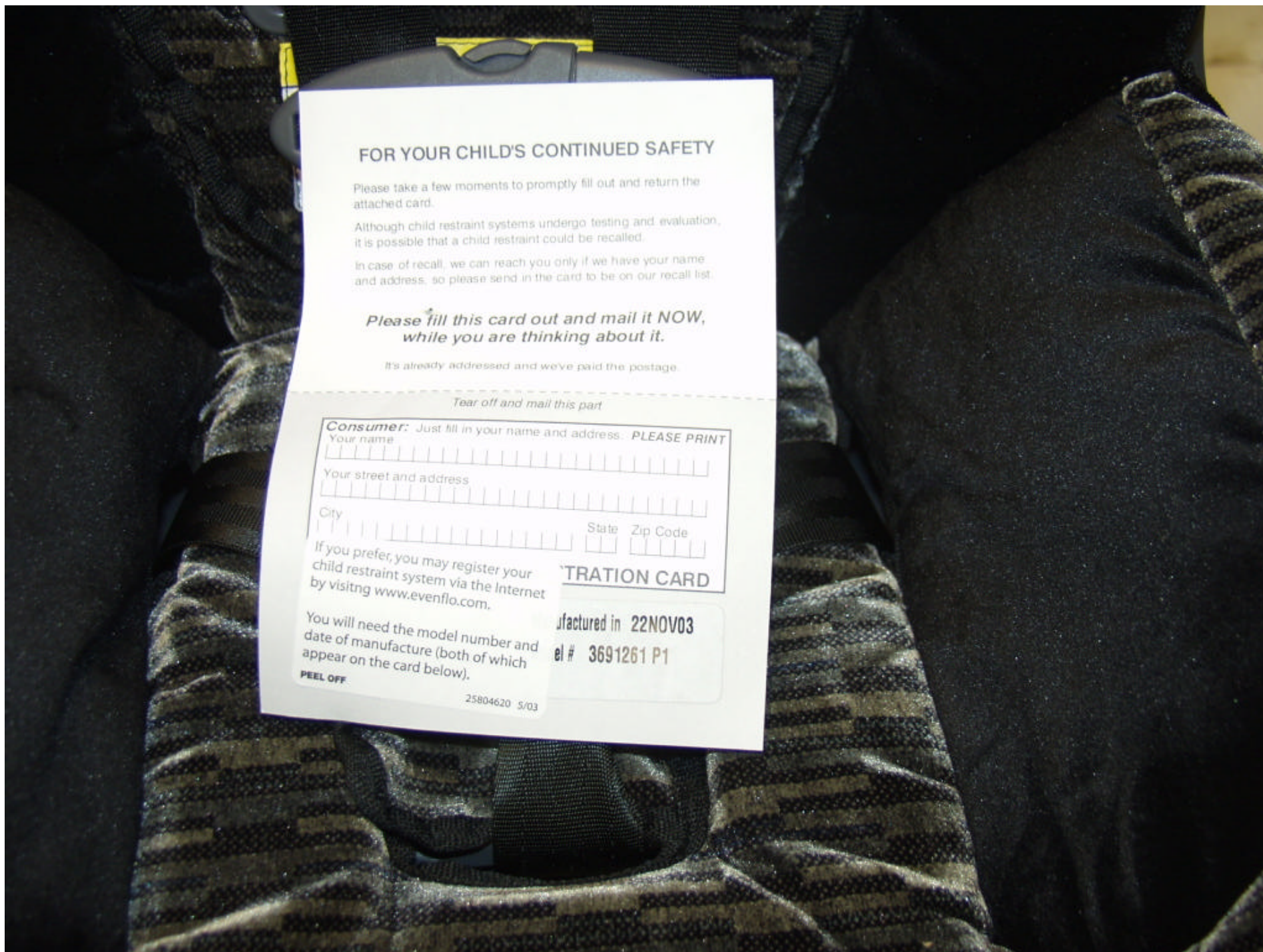


Figure 3-1 CLOSE-UP VIEW OF POSITION 3 CRS LABEL



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



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



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



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



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



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



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



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

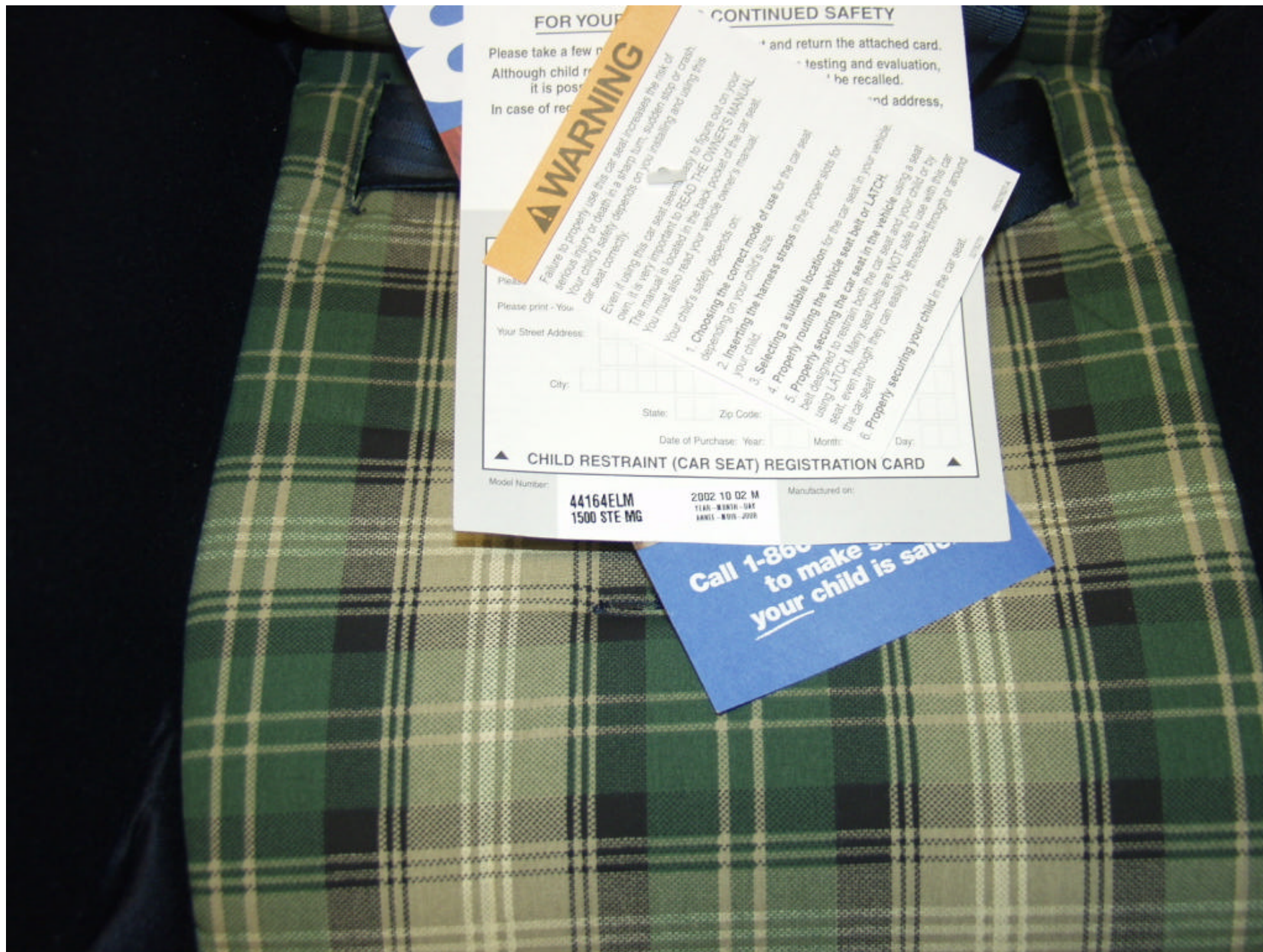


Figure 3-10 CLOSE-UP VIEW OF POSITION 4 CRS LABEL



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



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



Figure 3-13 PRE-TEST REAR VIEW OF POSITION 4 CRS



Figure 3-14 POST-TEST REAR VIEW OF POSITION 4 CRS



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



Figure 3-16 POST-TEST LEFT SIDE VIEW OF POSITION 4 CRS



Figure 3-17 PRE-TEST RIGHT SIDE VIEW OF POSITION 4 CRS



Figure 3-18 POST-TEST RIGHT SIDE VIEW OF POSITION 4 CRS



Figure 3-19 PRE-TEST POSITION 3 LEFT SIDE VIEW



Figure 3-20 POST-TEST POSITION 3 LEFT SIDE VIEW



Figure 3-21 PRE-TEST POSITION 4 LEFT SIDE VIEW



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



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



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



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



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



Figure 3-27 PRE-TEST POSITION 3 FRONT VIEW



Figure 3-28 POST-TEST POSITION 3 FRONT VIEW



Figure 3-29 PRE-TEST POSITION 4 FRONT VIEW



Figure 3-30 POST-TEST POSITION 4 FRONT VIEW

SECTION 4

CHILD DUMMY RESPONSE AND CRS DATA TRACES

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2	V1P3 Head y [g, CFC_1000]	4-5
3	V1P3 Head z [g, CFC_1000]	4-6
4	V1P3 Head Resultant [g, CFC_1000]	4-7
5	V1P3 Head Rear z [g, CFC_1000]	4-8
6	V1P3 Upper Neck Fx [N, CFC_1000]	4-9
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8	V1P3 Upper Neck Fz [N, CFC_1000]	4-11
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11	V1P3 Upper Neck My [N-m, CFC_600]	4-14
12	V1P3 Upper Neck Mz [N-m, CFC_600]	4-15
13	V1P3 Upper Neck M Resultant [N-m, CFC_600]	4-16
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17	V1P3 Lower Neck F Resultant [N, CFC_1000]	4-20
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19	V1P3 Lower Neck My [N-m, CFC_600]	4-22
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35	V1P4 Head Resultant [g, CFC_1000]	4-38
36	V1P4 Head Rear z [g, CFC_1000]	4-39
37	V1P4 Upper Neck Fx [N, CFC_1000]	4-40
38	V1P4 Upper Neck Fy [N, CFC_1000]	4-41
39	V1P4 Upper Neck Fz [N, CFC_1000]	4-42
40	V1P4 Upper Neck F Resultant [N, CFC_1000]	4-43
41	V1P4 Upper Neck Mx [N-m, CFC_600]	4-44
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PLOT	PLOT NAME[UNITS, CHANNEL FILTER CLASS]	PAGE
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48	V1P4 Lower Neck F Resultant [N, CFC_1000]	4-51
49	V1P4 Lower Neck Mx [N-m, CFC_600]	4-52
50	V1P4 Lower Neck My [N-m, CFC_600]	4-53
51	V1P4 Lower Neck Mz [N-m, CFC_600]	4-54
52	V1P4 Lower Neck M Resultant [N-m, CFC_600]	4-55
53	V1P4 Chest x [g, CFC_180]	4-56
54	V1P4 Chest y [g, CFC_180]	4-57
55	V1P4 Chest z [g, CFC_180]	4-58
56	V1P4 Chest Resultant [g, CFC_180]	4-59
57	V1P4 Chest Compression [mm, CFC_600]	4-60
58	V1P4 Pelvic x [g, CFC_1000]	4-61
59	V1P4 Pelvic y [g, CFC_1000]	4-62
60	V1P4 Pelvic z [g, CFC_1000]	4-63
61	V1P4 Pelvic Resultant [g, CFC_1000]	4-64
62	V1P4 Tether Belt [N, CFC_60]	4-65
63	V1P3 CRS x [g, CFC_60]	4-66
64	V1P3 CRS y [g, CFC_60]	4-67
65	V1P3 CRS z [g, CFC_60]	4-68
66	V1P3 CRS Resultant [g, CFC_60]	4-69
67	V1P3 CRS x Velocity [kph, CFC_180]	4-70
68	V1P3 CRS y Velocity [kph, CFC_180]	4-71
69	V1P3 CRS z Velocity [kph, CFC_180]	4-72
70	V1P3 CRS x Displacement [mm, CFC_180]	4-73
71	V1P3 CRS y Displacement [mm, CFC_180]	4-74
72	V1P3 CRS z Displacement [mm, CFC_180]	4-75
73	V1P4 CRS x [g, CFC_60]	4-76
74	V1P4 CRS y [g, CFC_60]	4-77
75	V1P4 CRS z [g, CFC_60]	4-78
76	V1P4 CRS Resultant [g, CFC_60]	4-79
77	V1P4 CRS x Velocity [kph, CFC_180]	4-80
78	V1P4 CRS y Velocity [kph, CFC_180]	4-81
79	V1P4 CRS z Velocity [kph, CFC_180]	4-82
80	V1P4 CRS x Displacement [mm, CFC_180]	4-83
81	V1P4 CRS y Displacement [mm, CFC_180]	4-84
82	V1P4 CRS z Displacement [mm, CFC_180]	4-85

2004 NCAP Test 8 2004 Cadillac SRX

V1P3 Head x

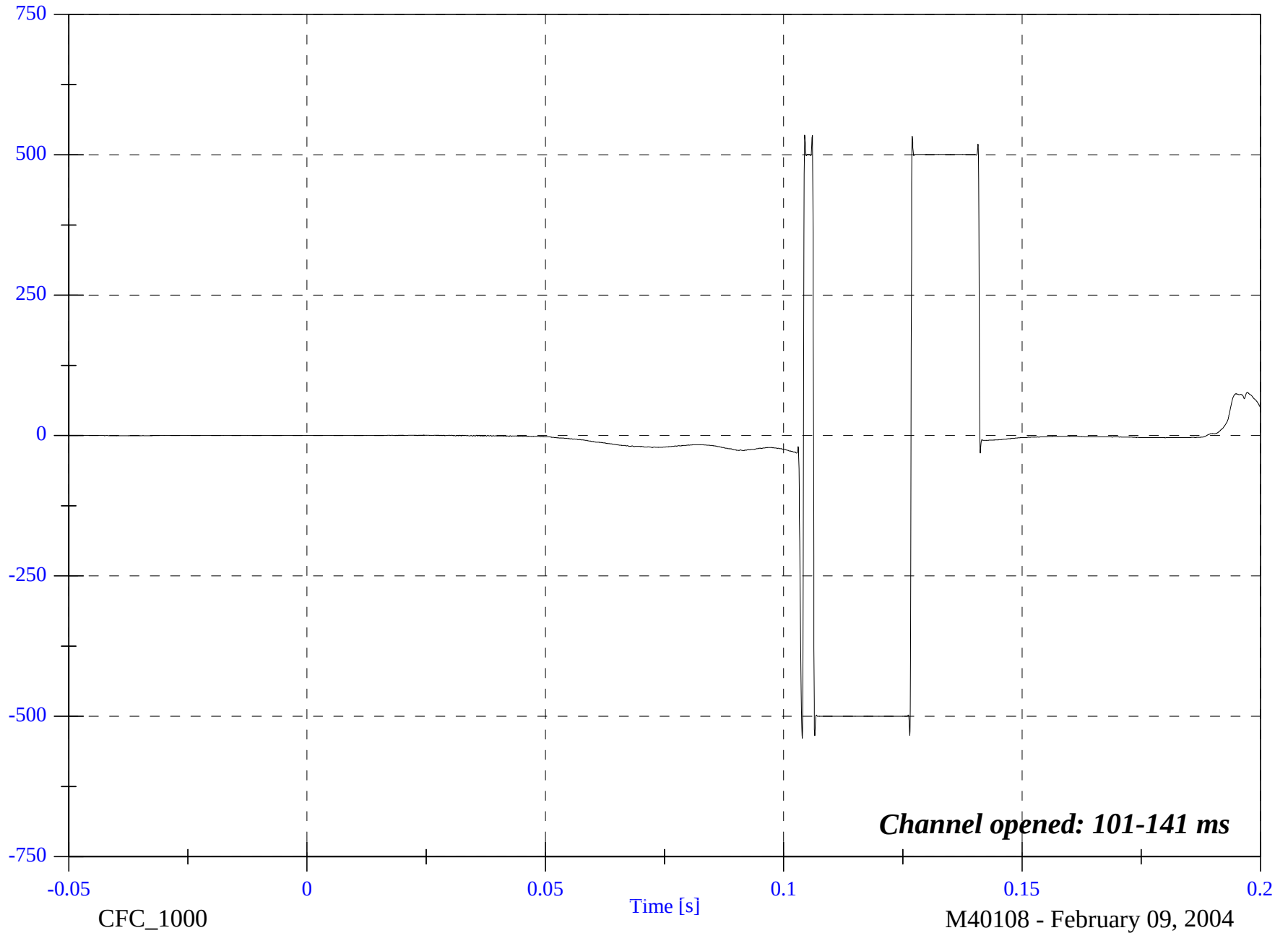
Max: 534.8 [g] at 0.104 [s]

Min: -538.9 [g] at 0.104 [s]

4-4

g

8642-NCAP-44

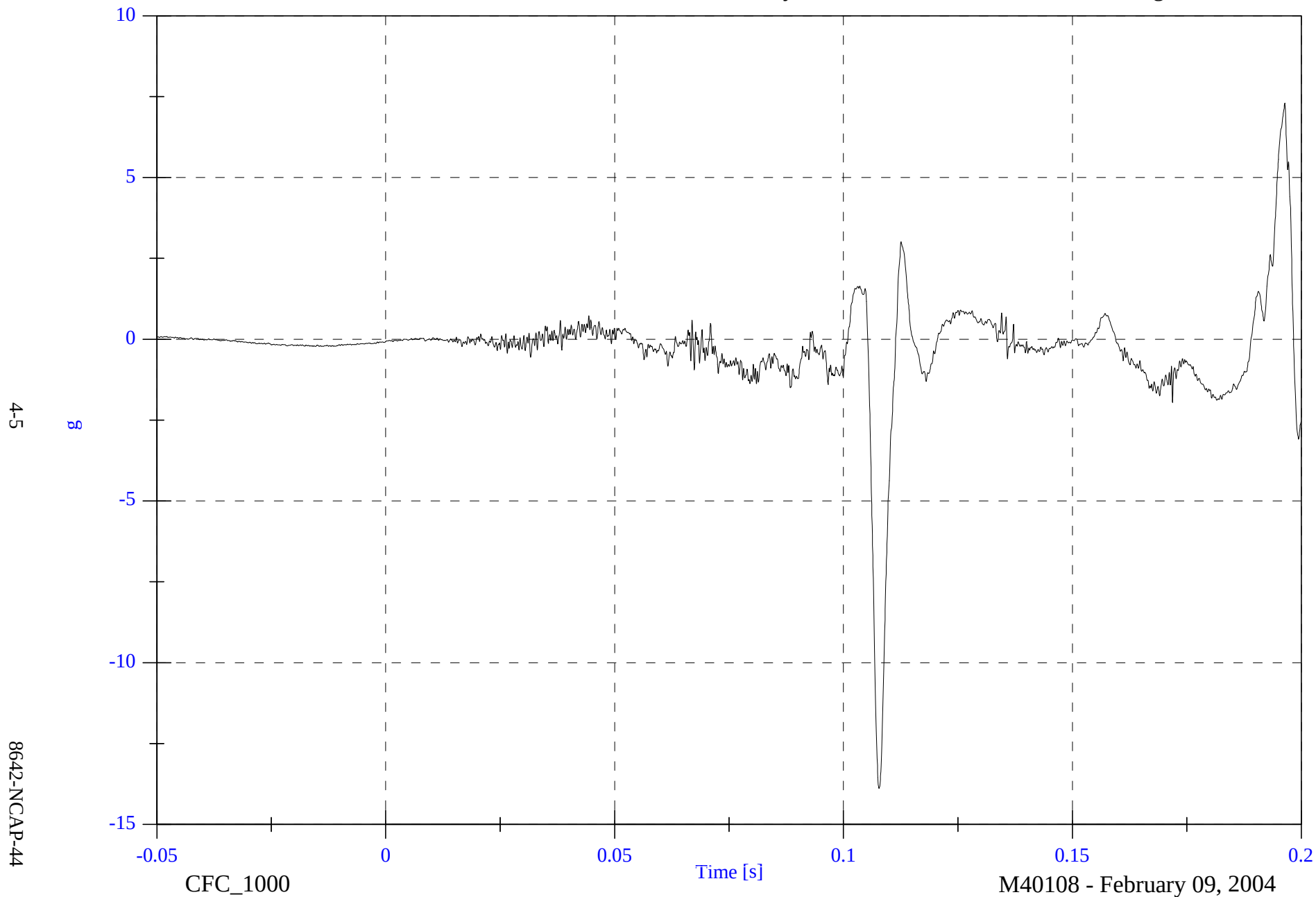


2004 NCAP Test 8 2004 Cadillac SRX

V1P3 Head y

Max: 7.3 [g] at 0.196 [s]

Min: -13.9 [g] at 0.108 [s]

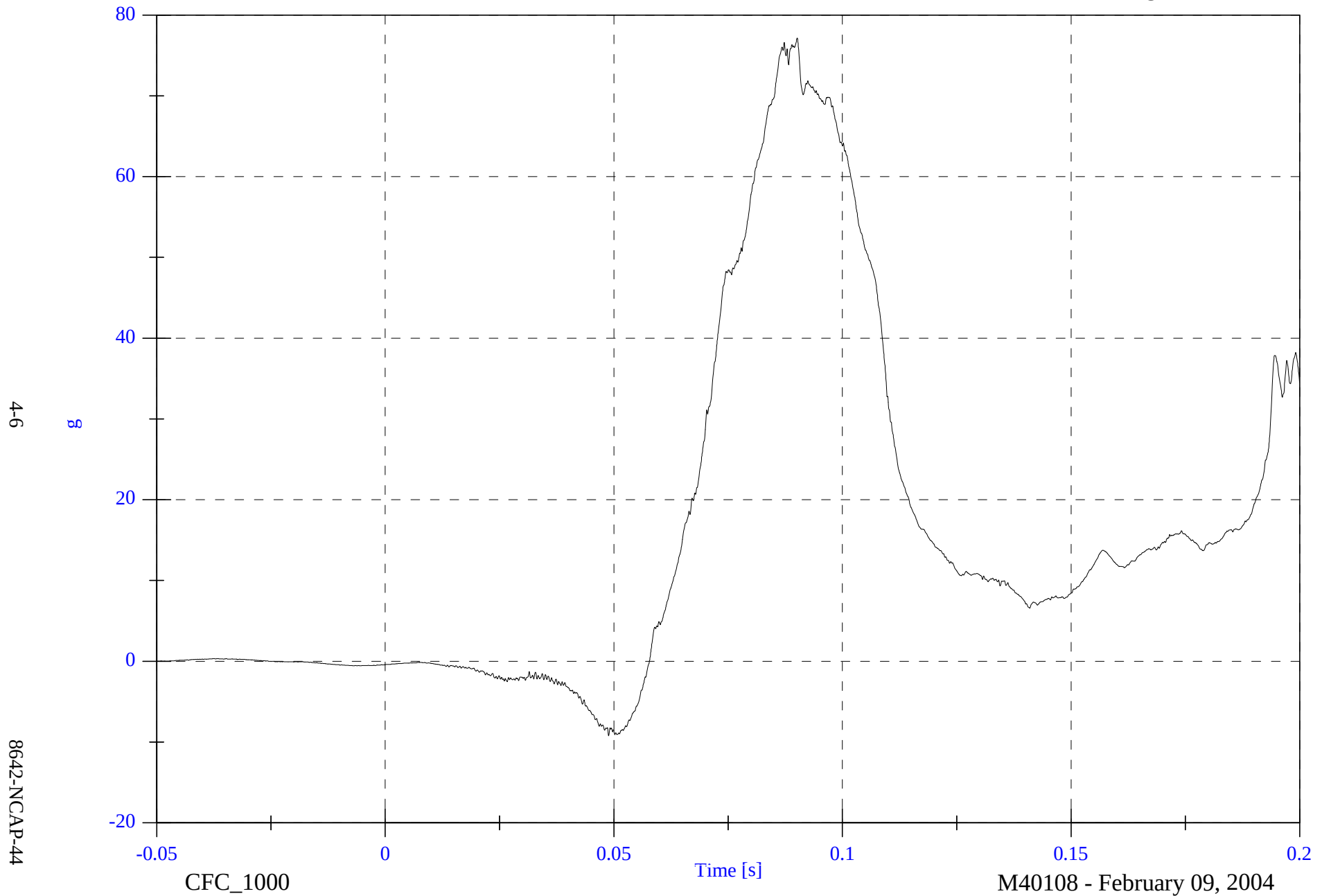


2004 NCAP Test 8 2004 Cadillac SRX

Max: 77.2 [g] at 0.090 [s]

Min: -9.2 [g] at 0.049 [s]

V1P3 Head z



2004 NCAP Test 8 2004 Cadillac SRX

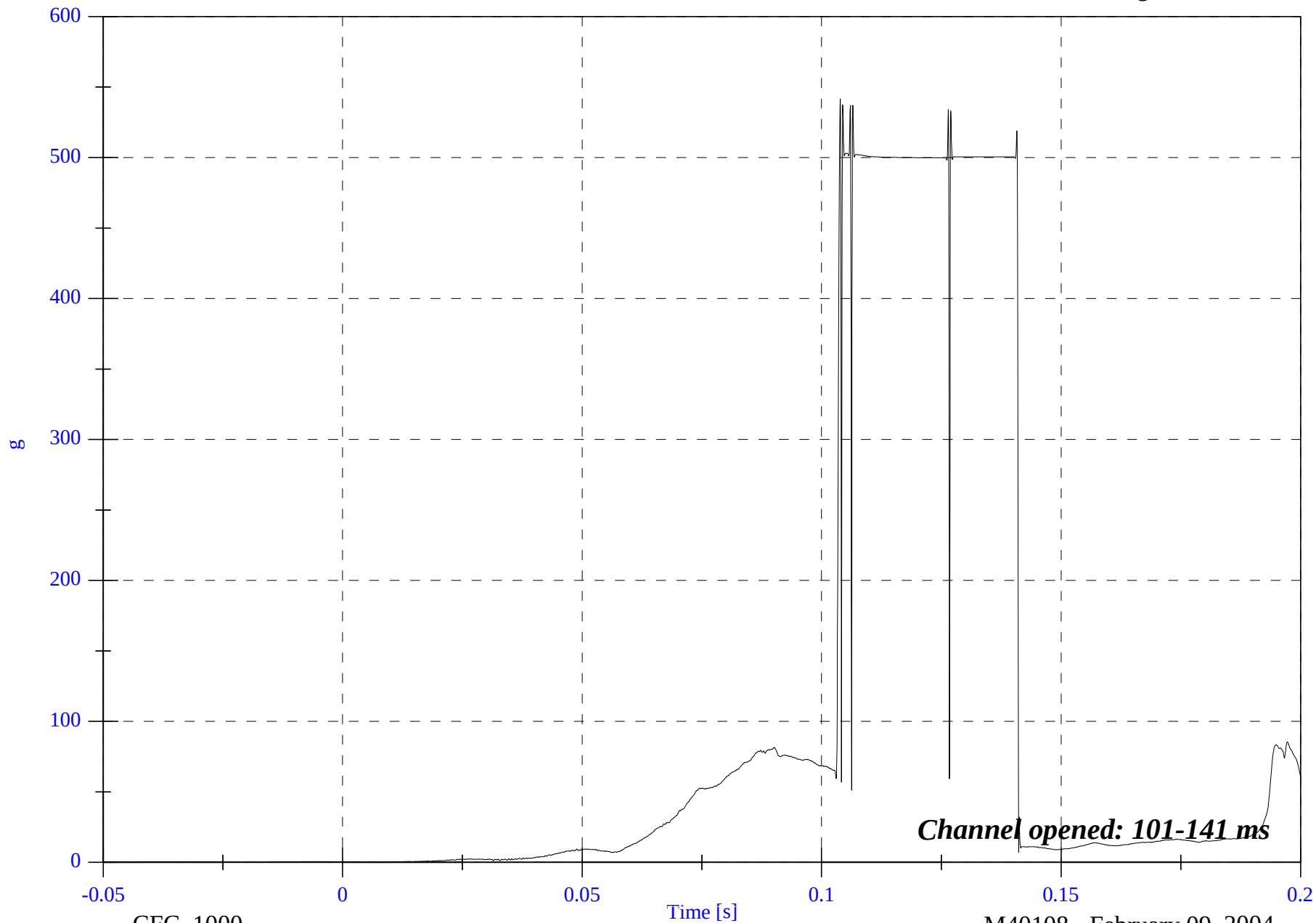
V1P3 Head Resultant

Max: 541.6 [g] at 0.104 [s]

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

4-7

8642-NCAP-44



Channel opened: 101-141 ms

CFC_1000

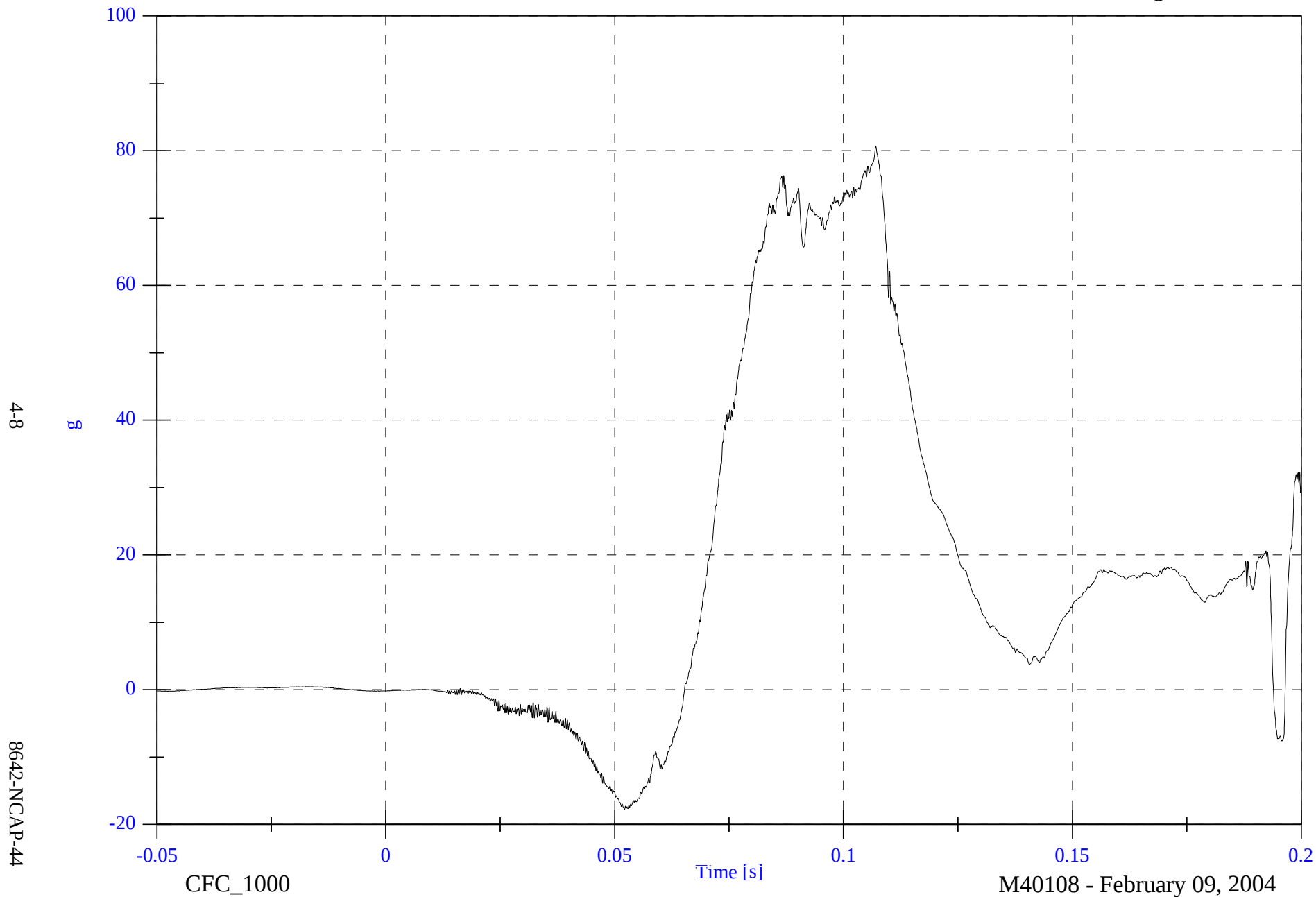
M40108 - February 09, 2004

2004 NCAP Test 8 2004 Cadillac SRX

V1P3 Head Rear z

Max: 80.7 [g] at 0.107 [s]

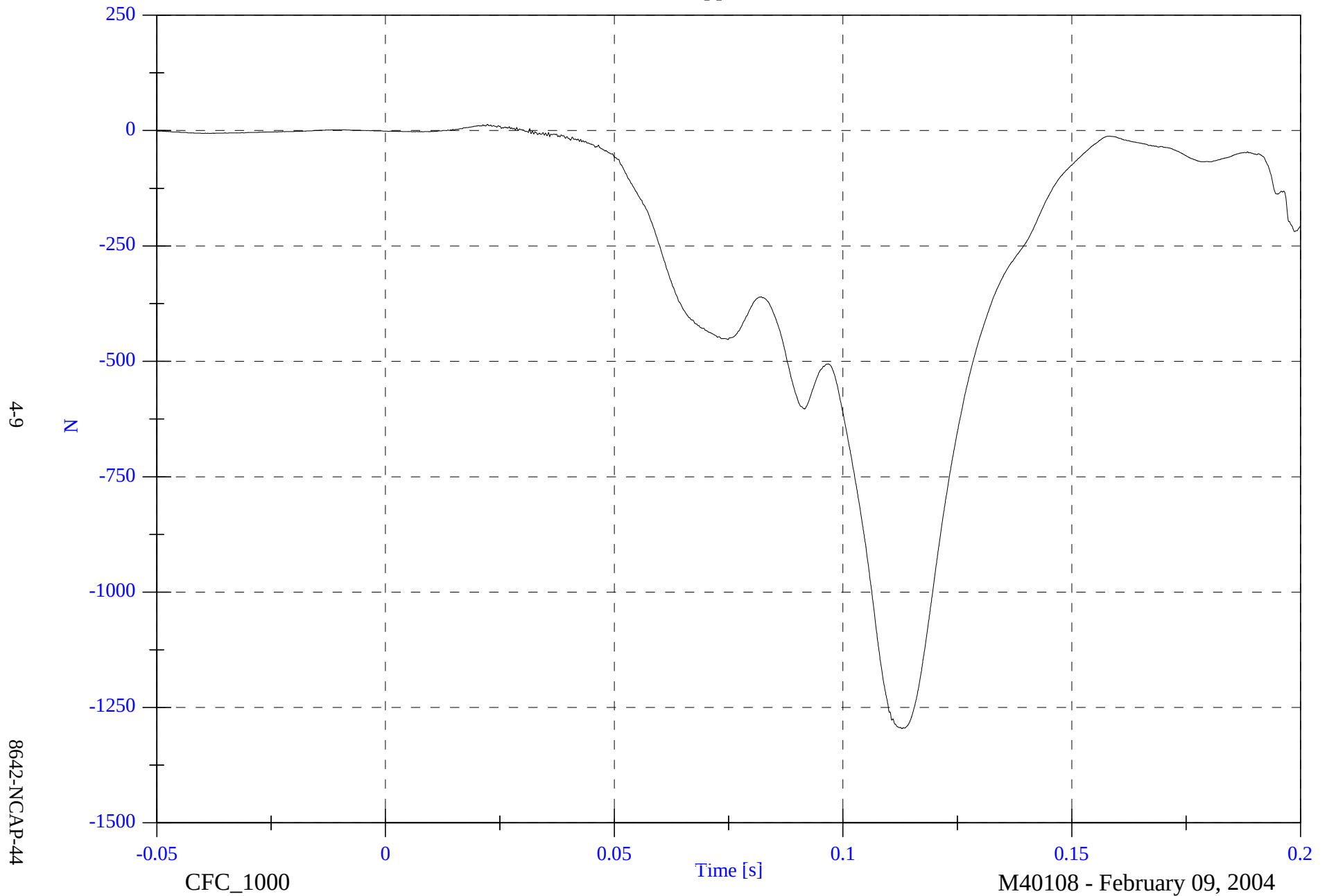
Min: -17.8 [g] at 0.052 [s]



2004 NCAP Test 8 2004 Cadillac SRX

Max: 13.1 [N] at 0.022 [s]
Min: -1295.7 [N] at 0.113 [s]

V1P3 Upper Neck Fx

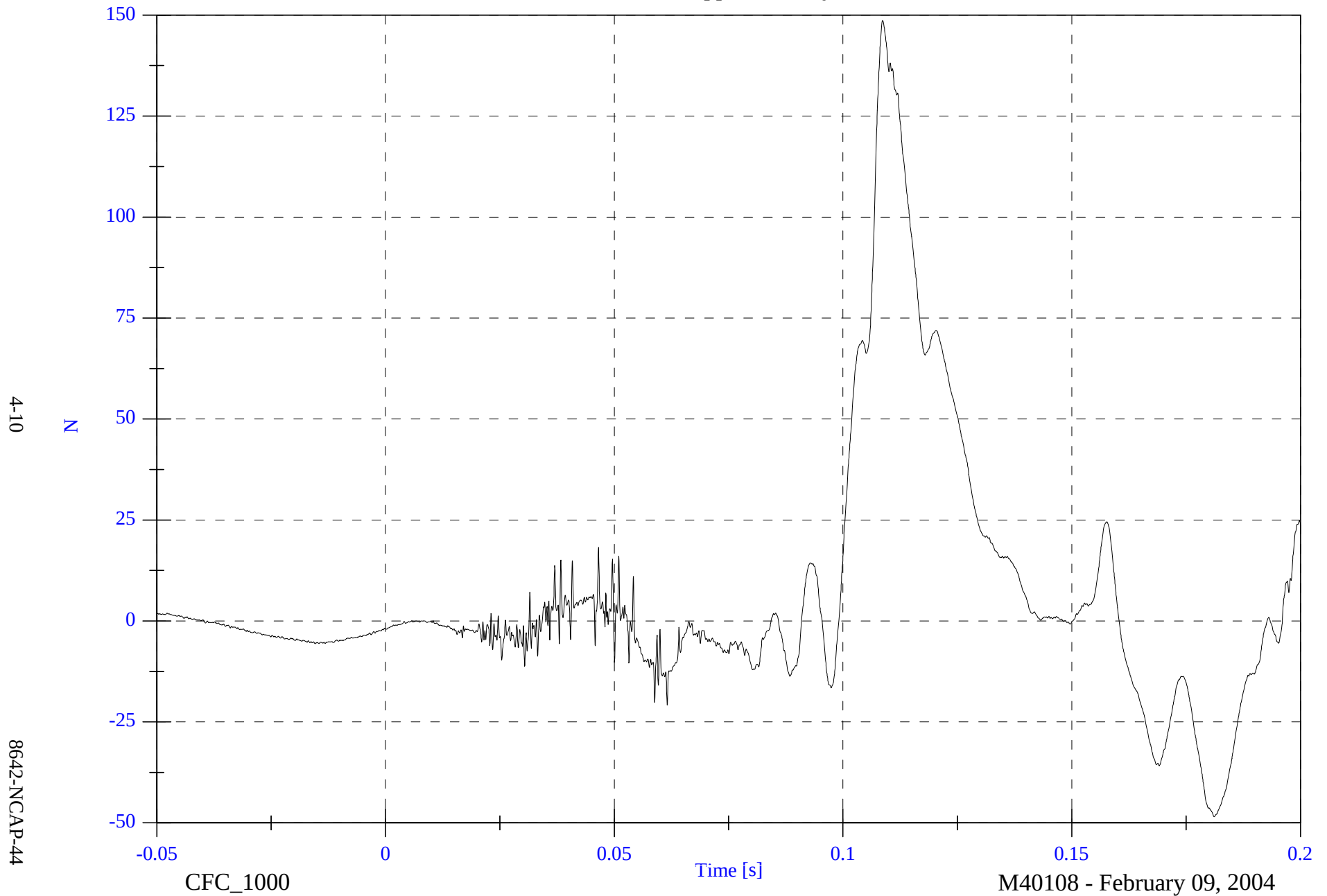


2004 NCAP Test 8 2004 Cadillac SRX

Max: 148.7 [N] at 0.109 [s]

Min: -48.5 [N] at 0.181 [s]

V1P3 Upper Neck Fy

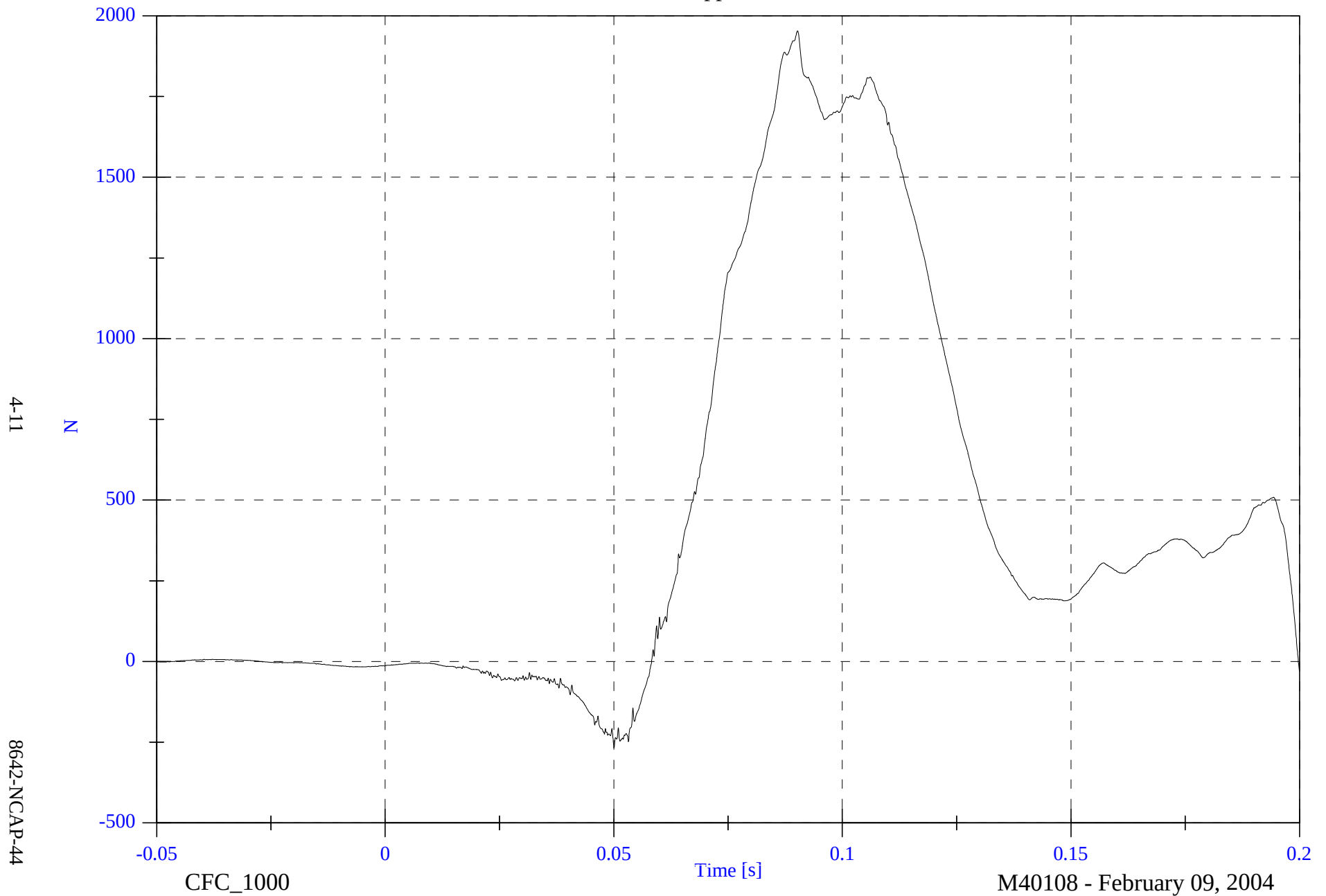


2004 NCAP Test 8 2004 Cadillac SRX

Max: 1953.6 [N] at 0.090 [s]

Min: -267.4 [N] at 0.050 [s]

V1P3 Upper Neck Fz



2004 NCAP Test 8 2004 Cadillac SRX

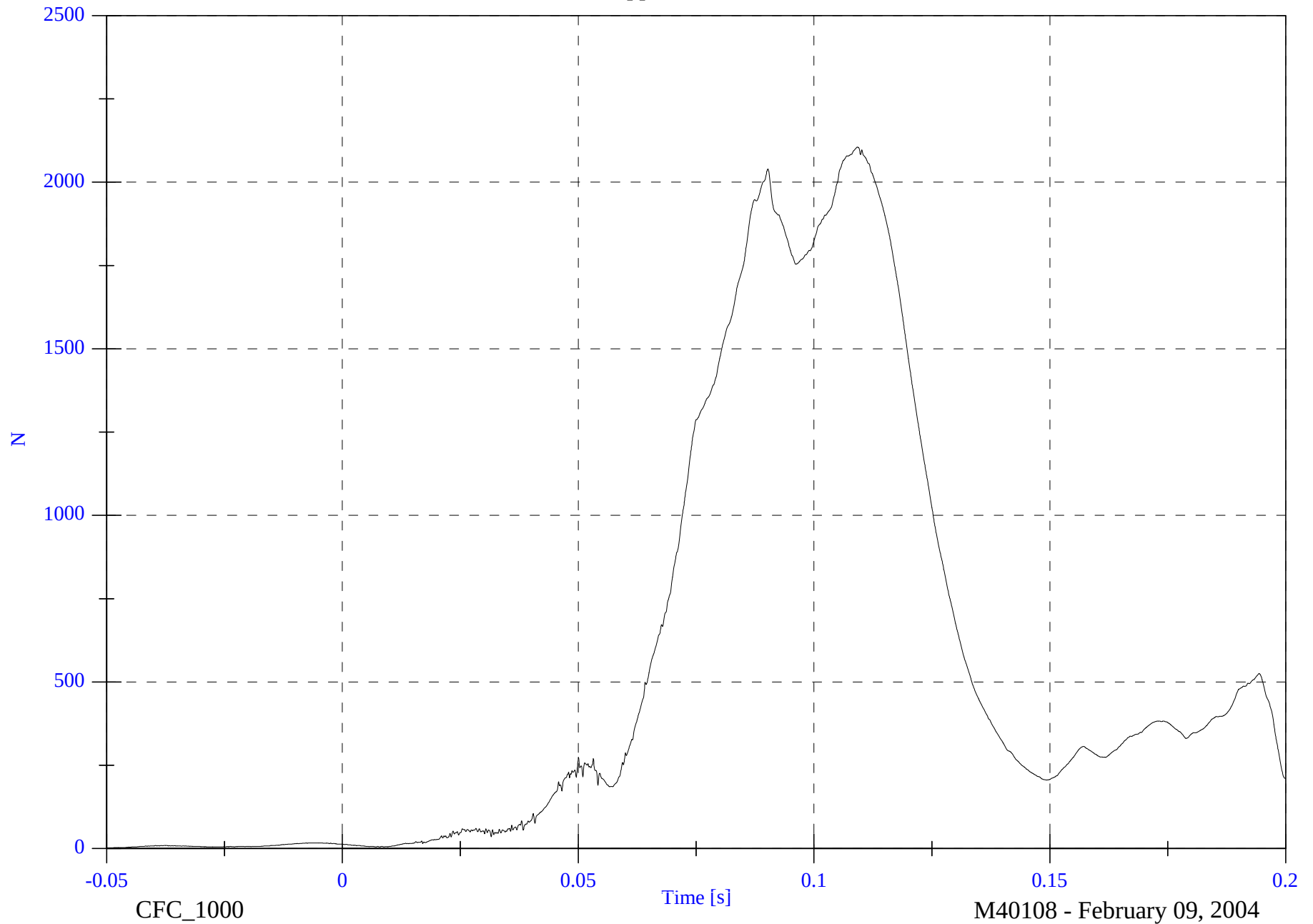
V1P3 Upper Neck F Resultant

Max: 2105.7 [N] at 0.109 [s]

Min: 2.1 [N] at -0.050 [s]

4-12

8642-NCAP-44

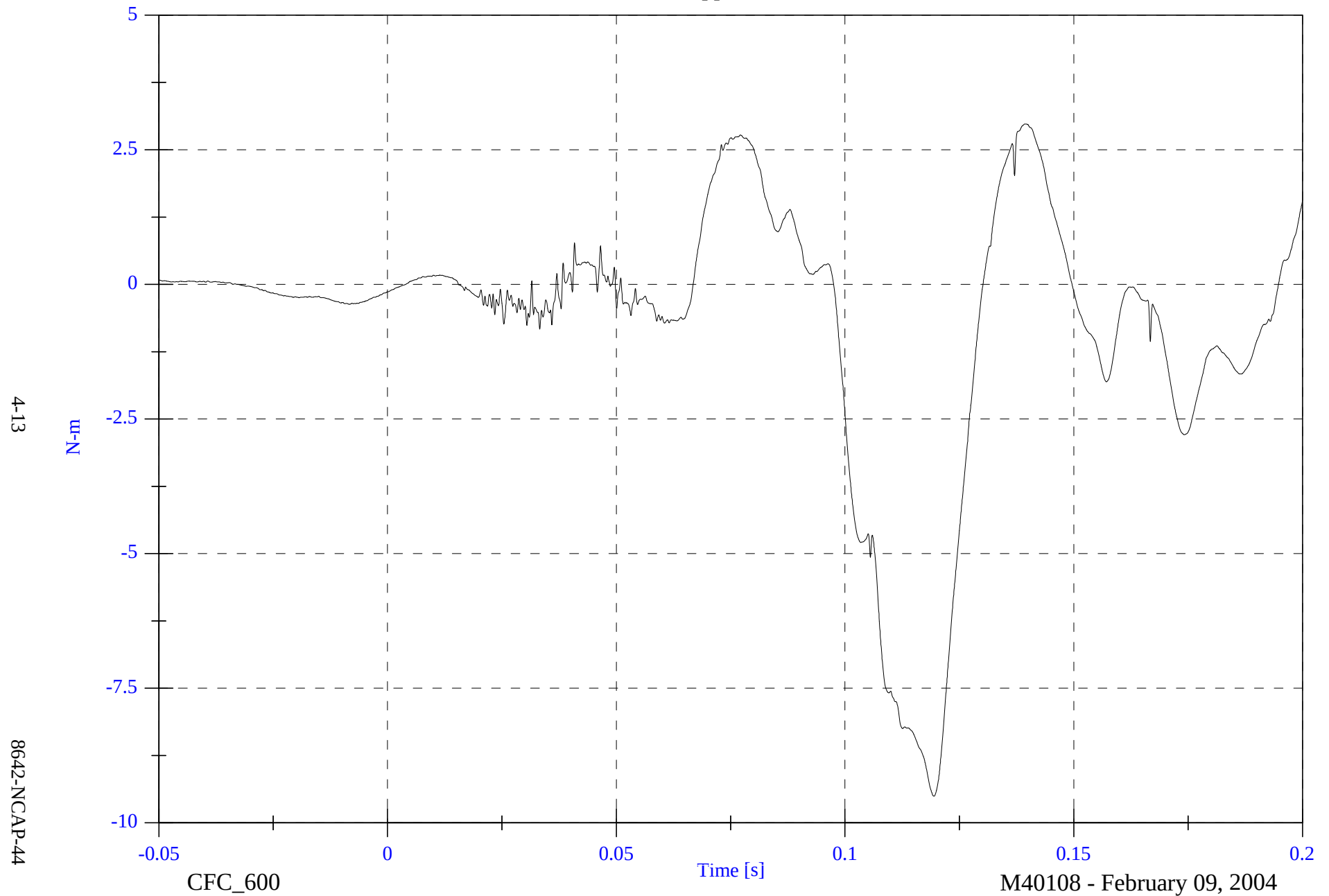


2004 NCAP Test 8 2004 Cadillac SRX

V1P3 Upper Neck Mx

Max: 3.0 [N-m] at 0.139 [s]

Min: -9.5 [N-m] at 0.119 [s]

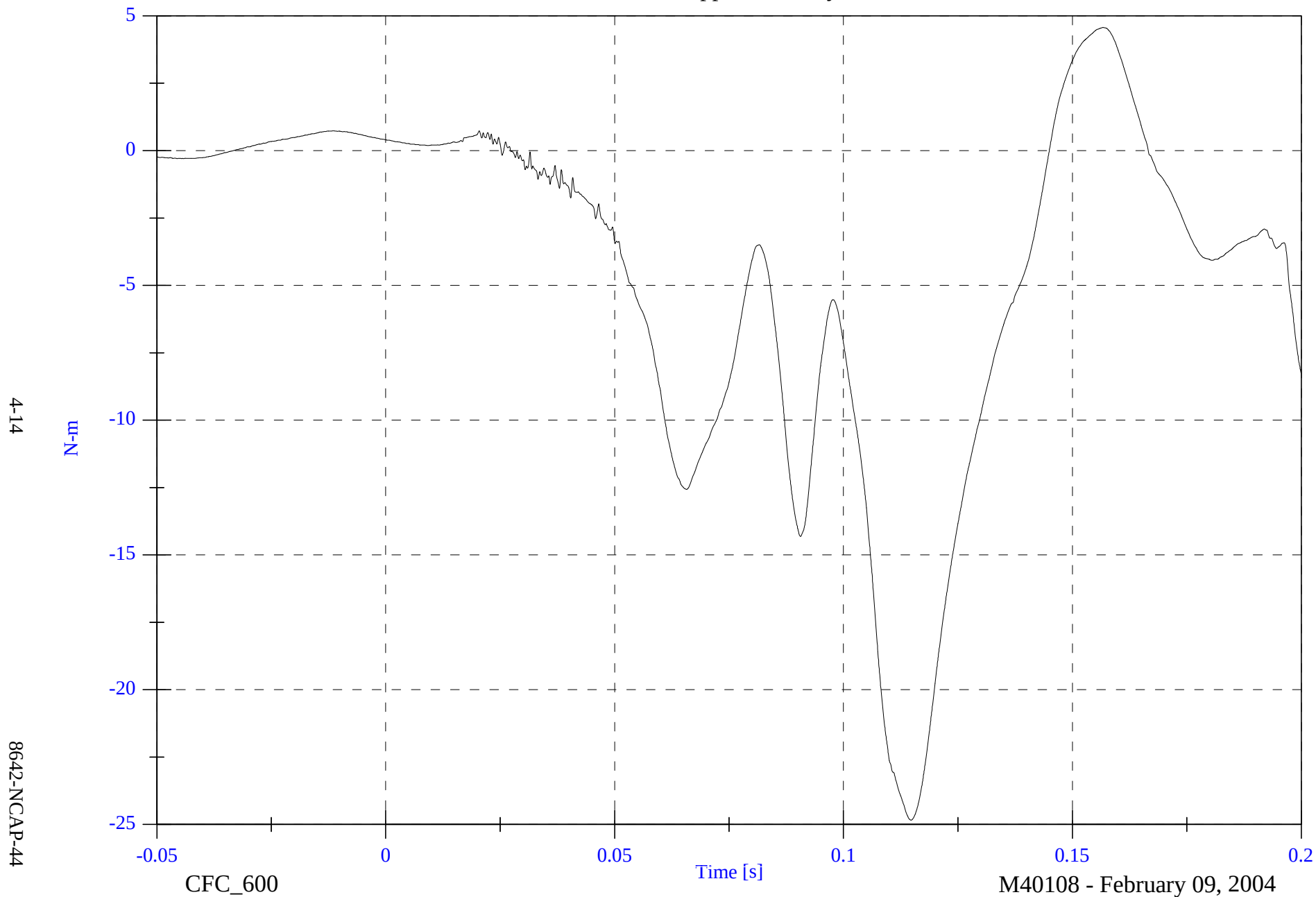


2004 NCAP Test 8 2004 Cadillac SRX

V1P3 Upper Neck My

Max: 4.6 [N-m] at 0.157 [s]

Min: -24.8 [N-m] at 0.115 [s]



2004 NCAP Test 8 2004 Cadillac SRX

V1P3 Upper Neck Mz

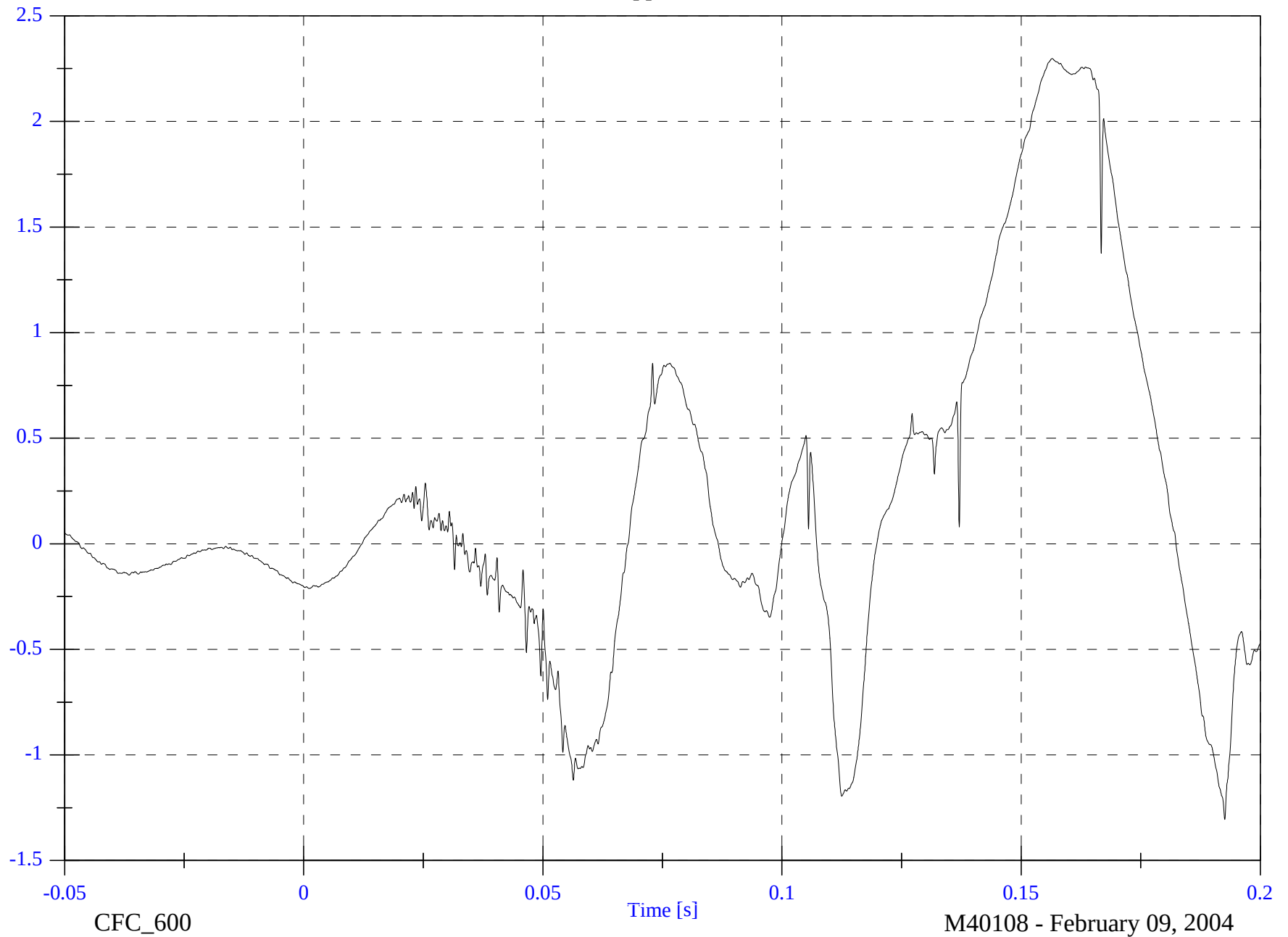
Max: 2.3 [N-m] at 0.156 [s]

Min: -1.3 [N-m] at 0.193 [s]

4-15

N-m

8642-NCAP-44

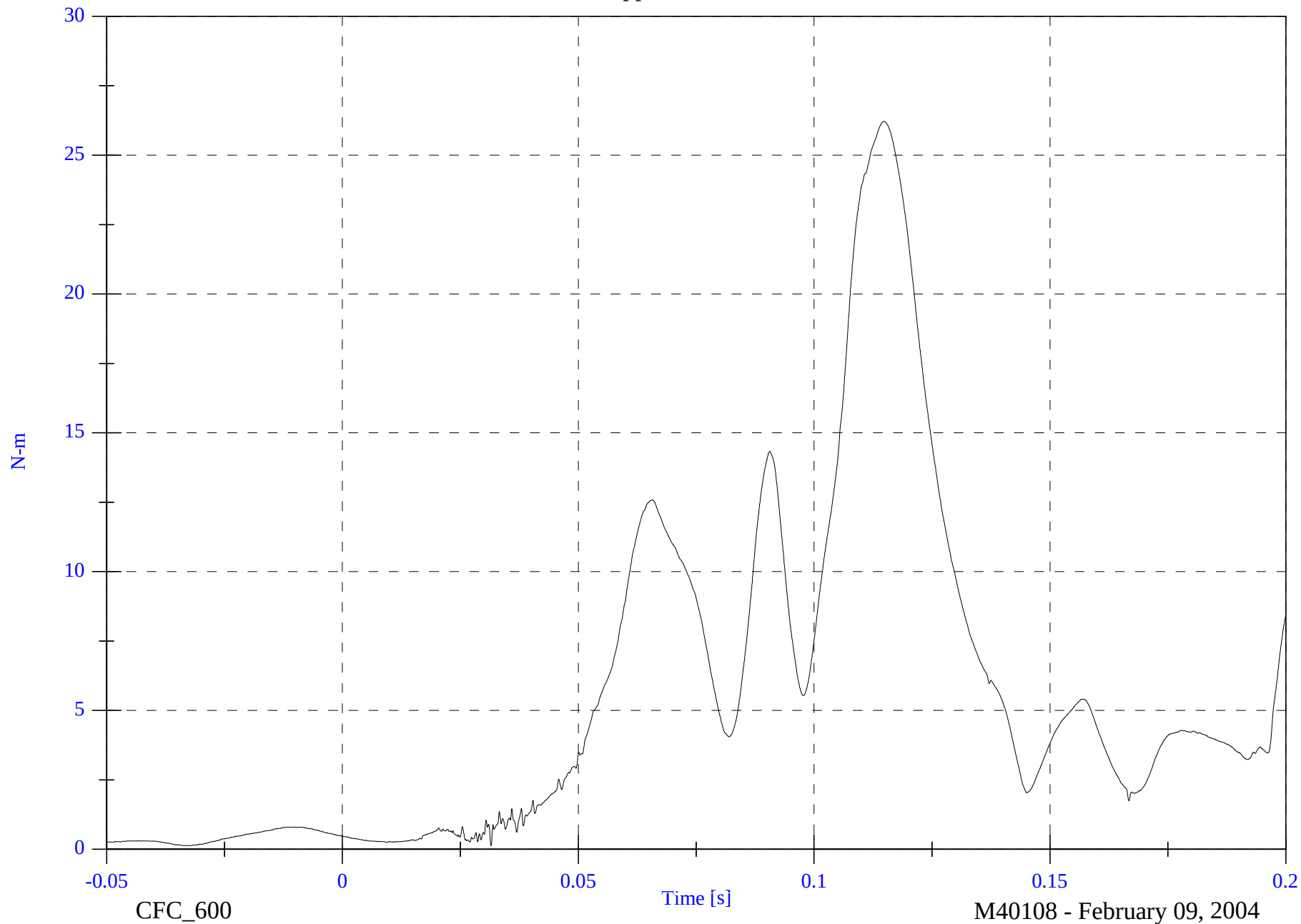


2004 NCAP Test 8 2004 Cadillac SRX

V1P3 Upper Neck M Resultant

Max: 26.2 [N-m] at 0.115 [s]

Min: 0.1 [N-m] at -0.033 [s]



4-16

8642-NCAP-44

CFC_600

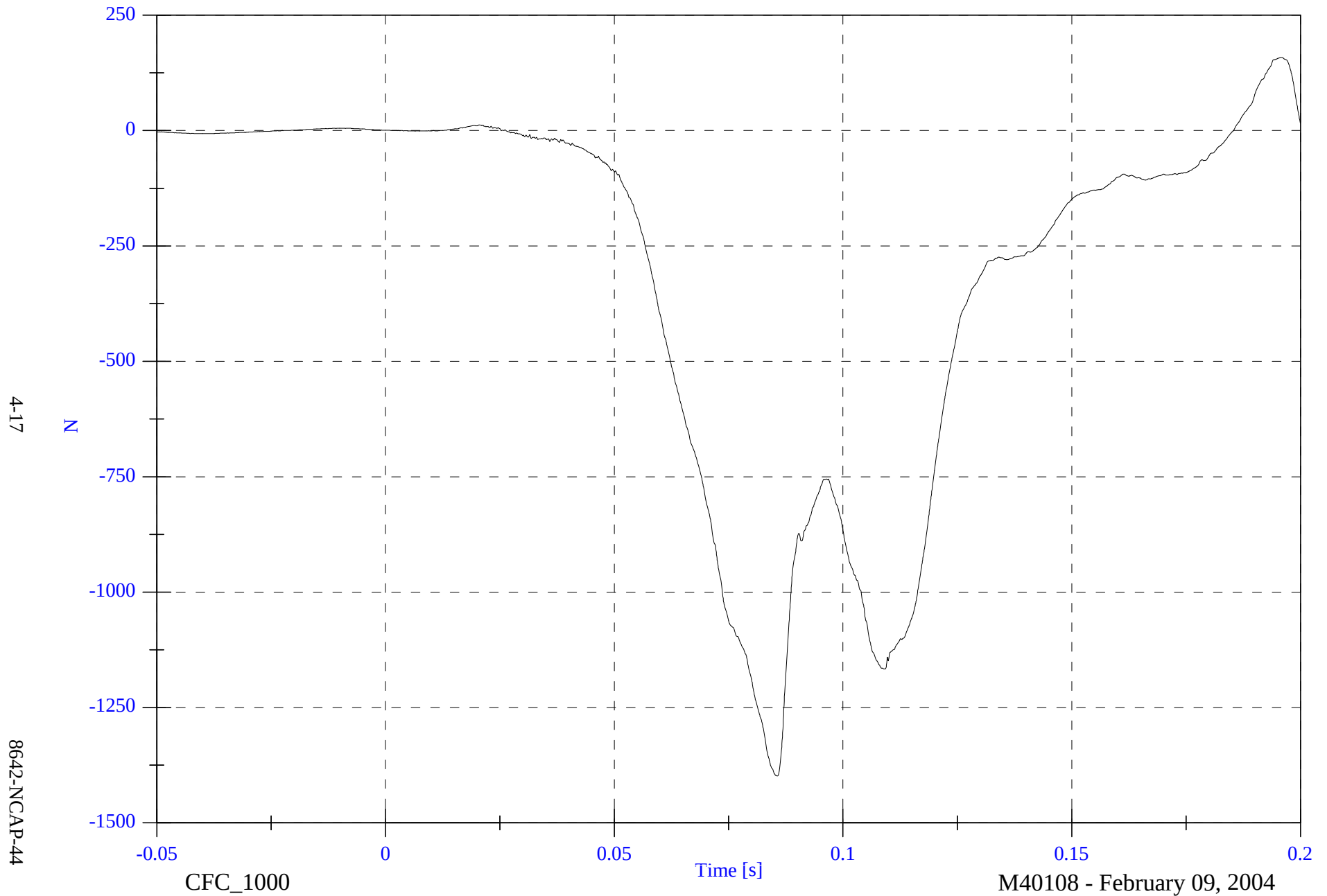
M40108 - February 09, 2004

2004 NCAP Test 8 2004 Cadillac SRX

V1P3 Lower Neck Fx

Max: 158.4 [N] at 0.196 [s]

Min: -1398.4 [N] at 0.086 [s]

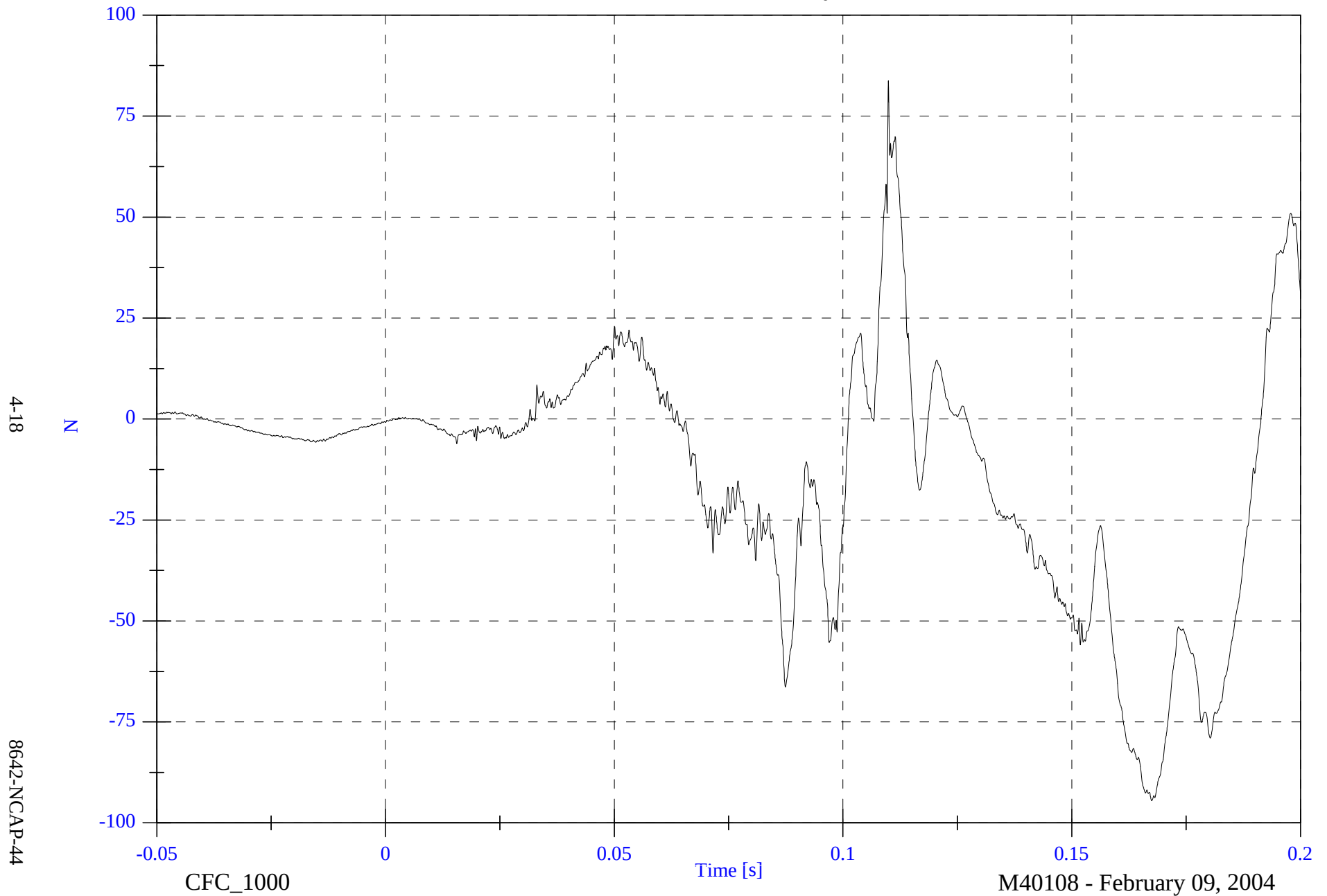


2004 NCAP Test 8 2004 Cadillac SRX

V1P3 Lower Neck Fy

Max: 83.7 [N] at 0.110 [s]

Min: -94.5 [N] at 0.168 [s]

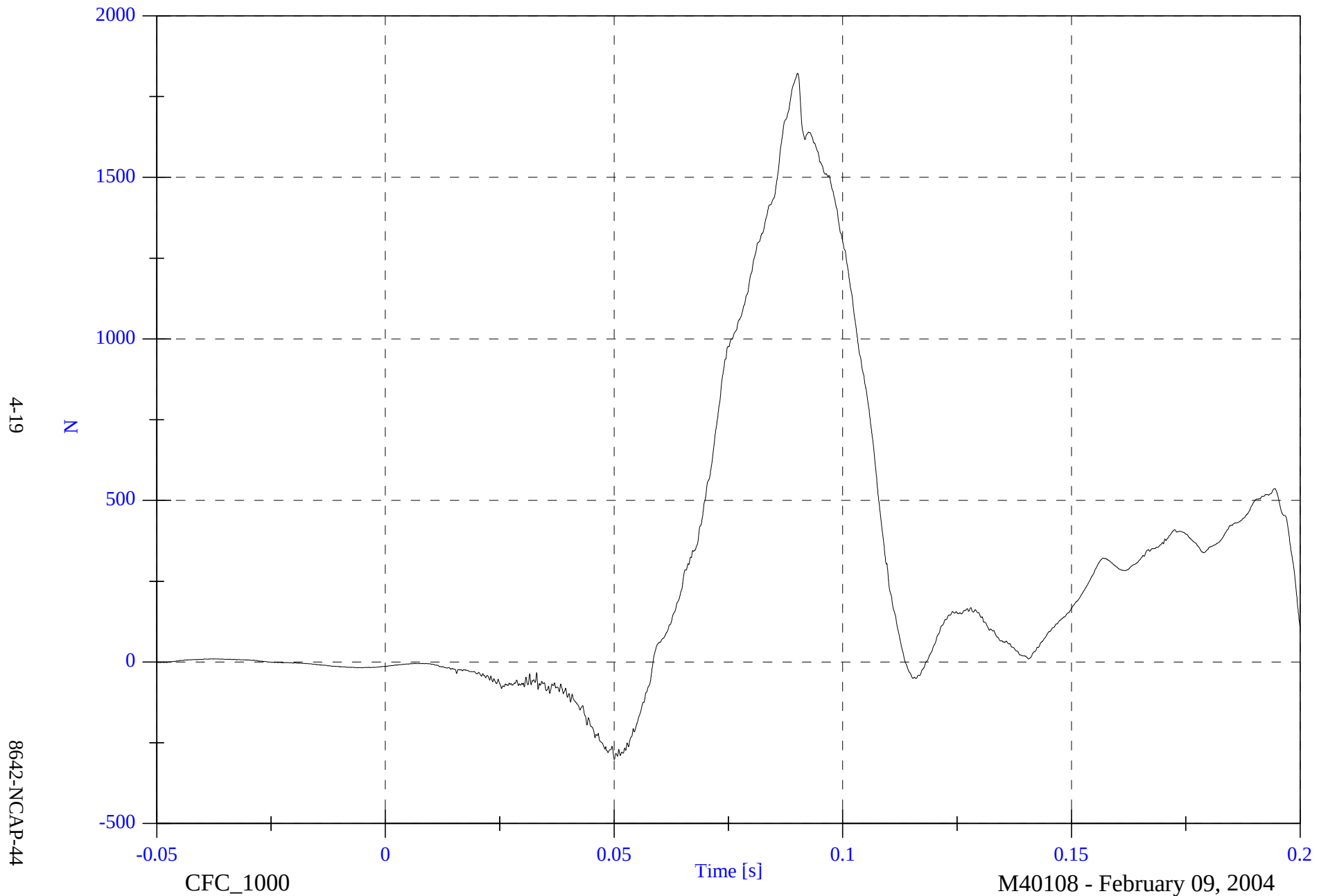


2004 NCAP Test 8 2004 Cadillac SRX

Max: 1822.0 [N] at 0.090 [s]

Min: -302.3 [N] at 0.050 [s]

V1P3 Lower Neck Fz

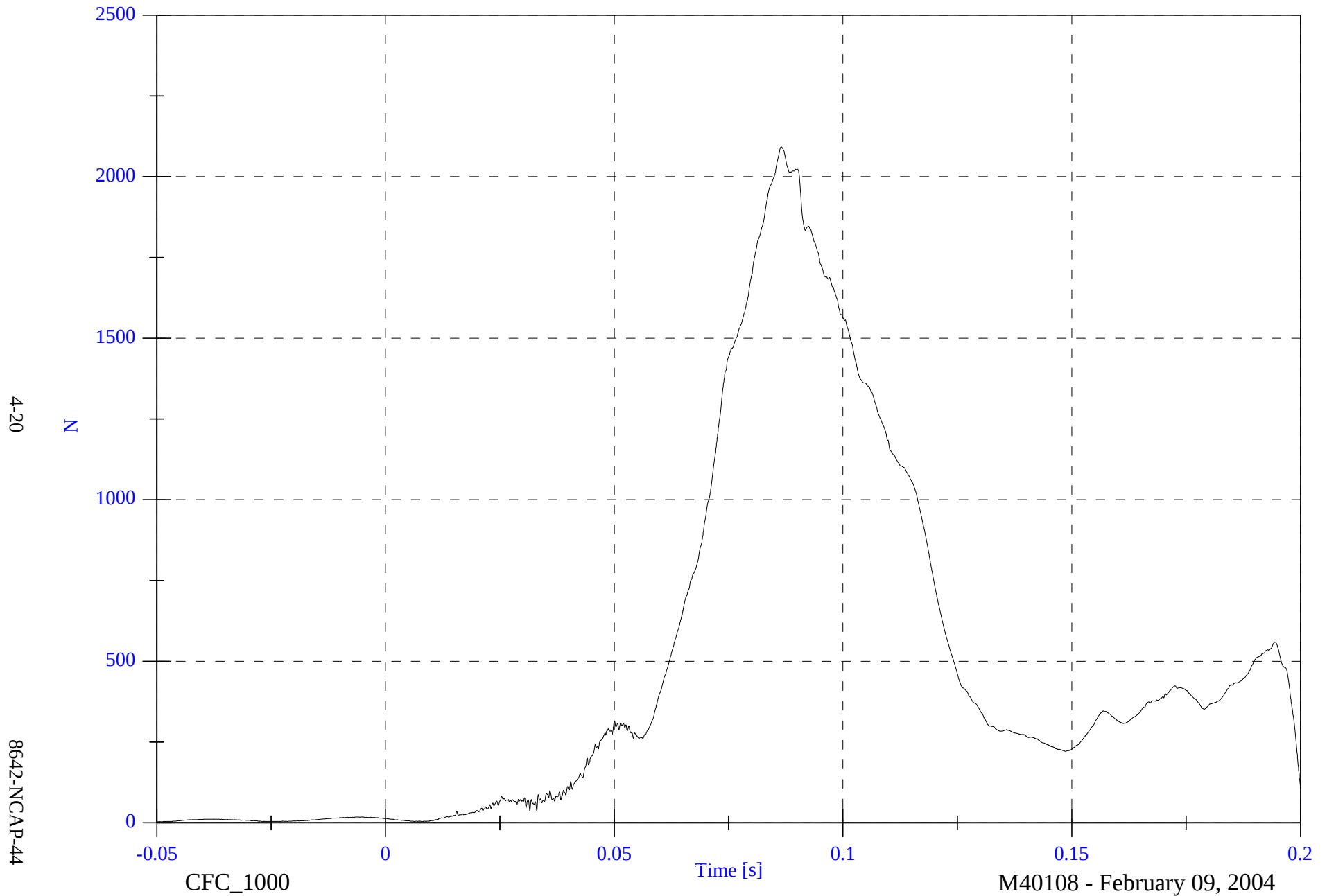


2004 NCAP Test 8 2004 Cadillac SRX

V1P3 Lower Neck F Resultant

Max: 2092.0 [N] at 0.086 [s]

Min: 3.1 [N] at -0.050 [s]

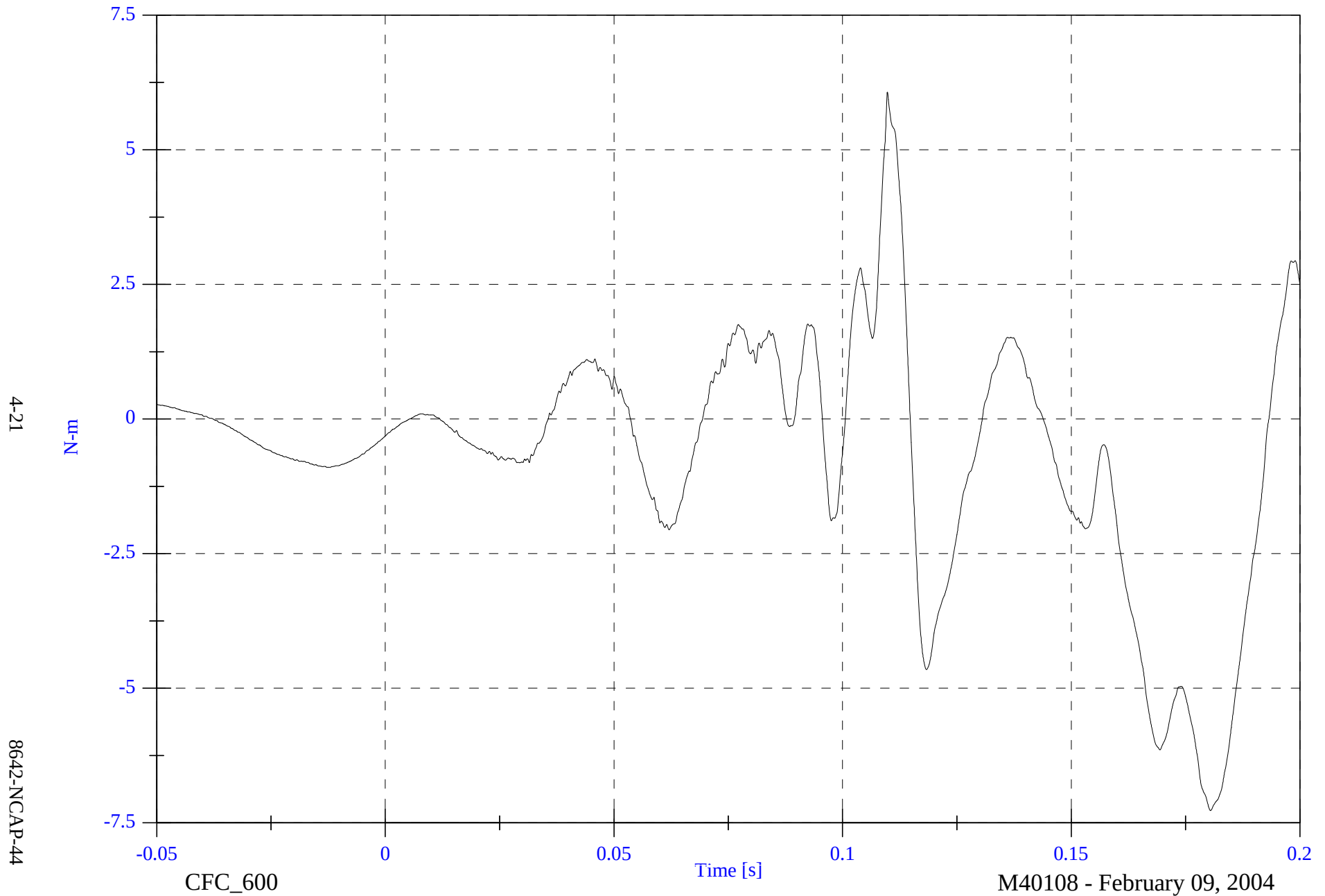


2004 NCAP Test 8 2004 Cadillac SRX

V1P3 Lower Neck Mx

Max: 6.1 [N-m] at 0.110 [s]

Min: -7.3 [N-m] at 0.180 [s]

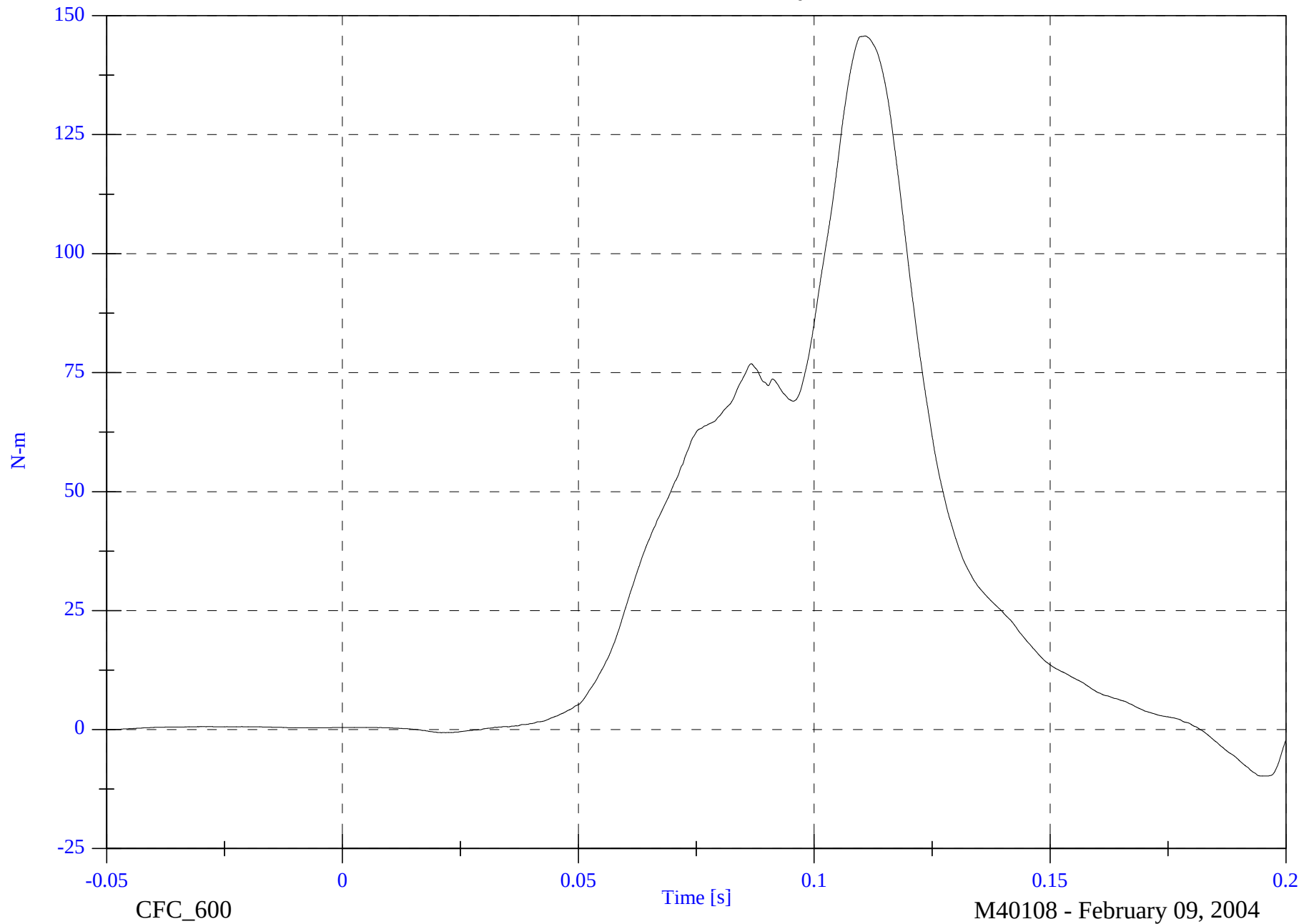


2004 NCAP Test 8 2004 Cadillac SRX

V1P3 Lower Neck My

Max: 145.7 [N-m] at 0.111 [s]

Min: -9.8 [N-m] at 0.195 [s]



4-22

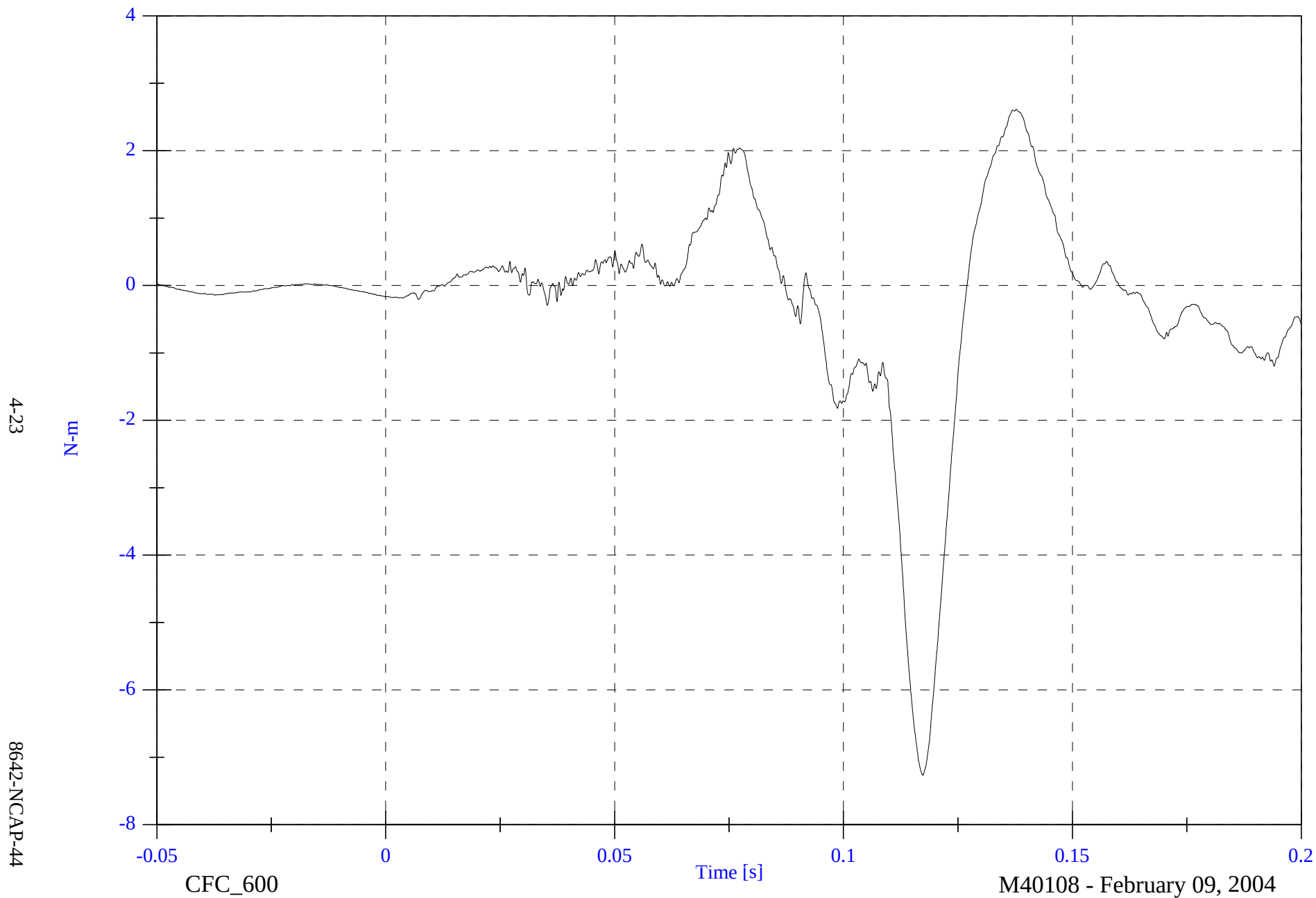
8642-NCAP-44

2004 NCAP Test 8 2004 Cadillac SRX

Max: 2.6 [N-m] at 0.138 [s]

Min: -7.3 [N-m] at 0.117 [s]

V1P3 Lower Neck Mz



4-23

8642-NCAP-44

CFC_600

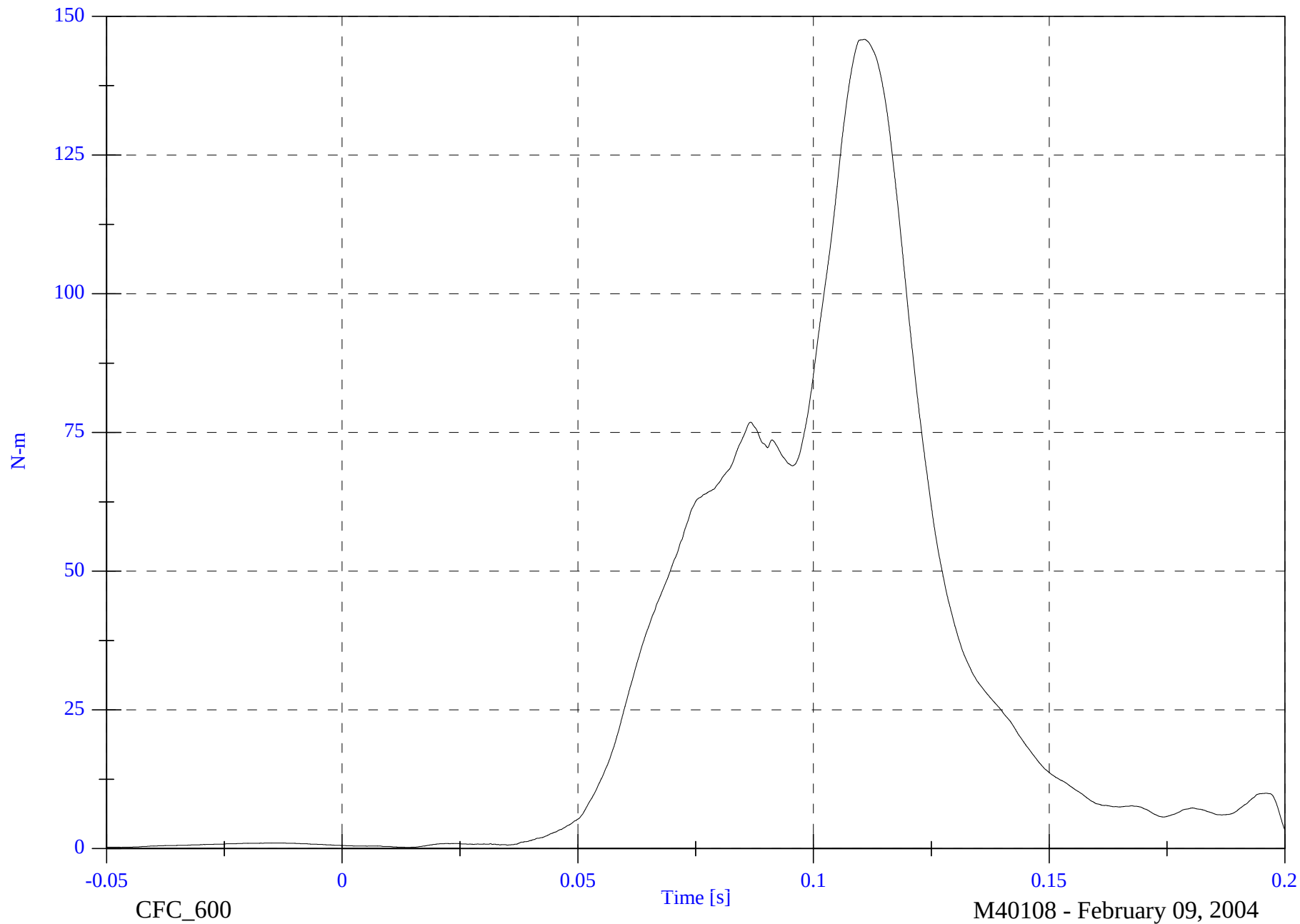
M40108 - February 09, 2004

2004 NCAP Test 8 2004 Cadillac SRX

V1P3 Lower Neck M Resultant

Max: 145.8 [N-m] at 0.111 [s]

Min: 0.2 [N-m] at 0.014 [s]



4-24

8642-NCAP-44

CFC_600

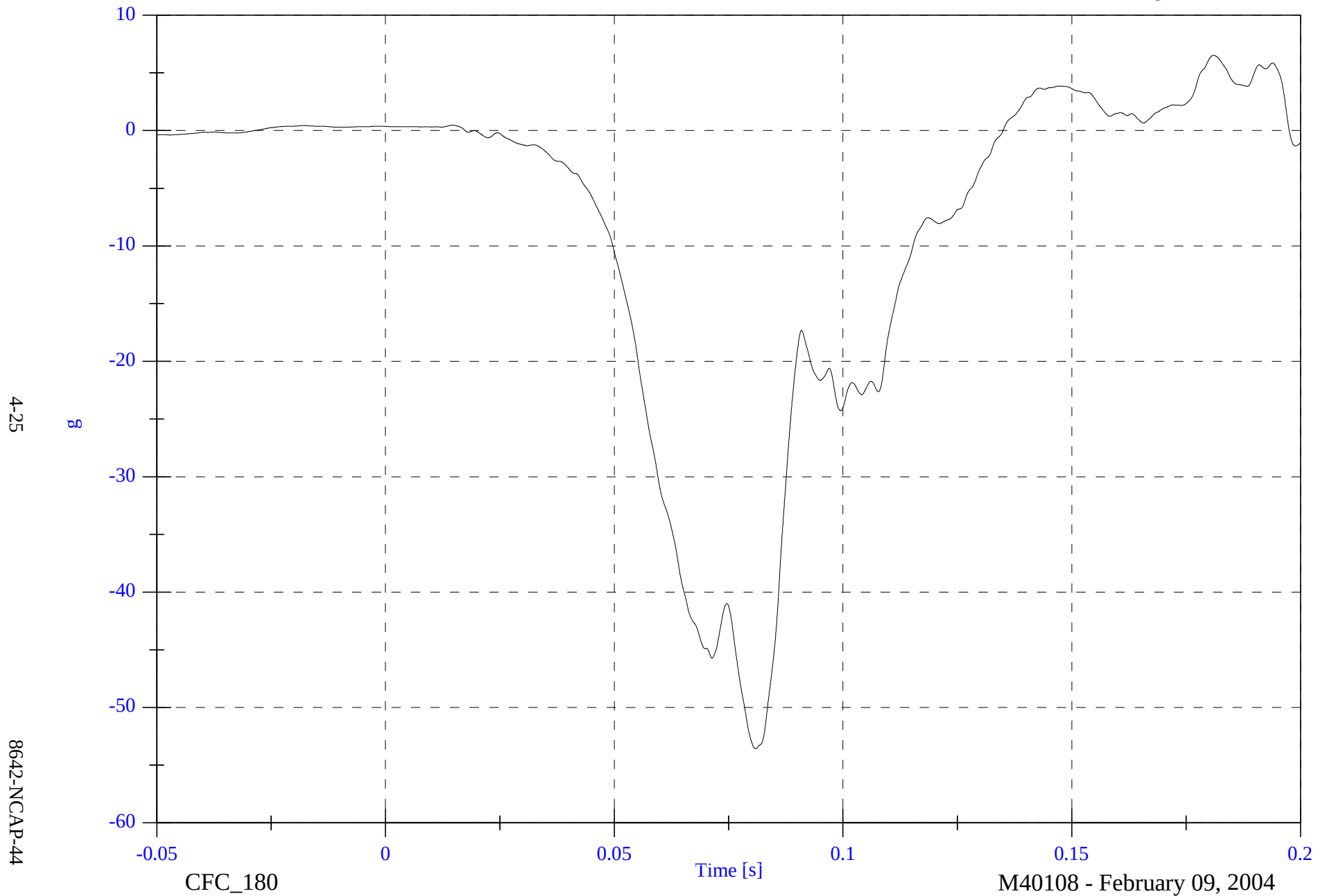
M40108 - February 09, 2004

2004 NCAP Test 8 2004 Cadillac SRX

V1P3 Chest x

Max: 6.5 [g] at 0.181 [s]

Min: -53.6 [g] at 0.081 [s]

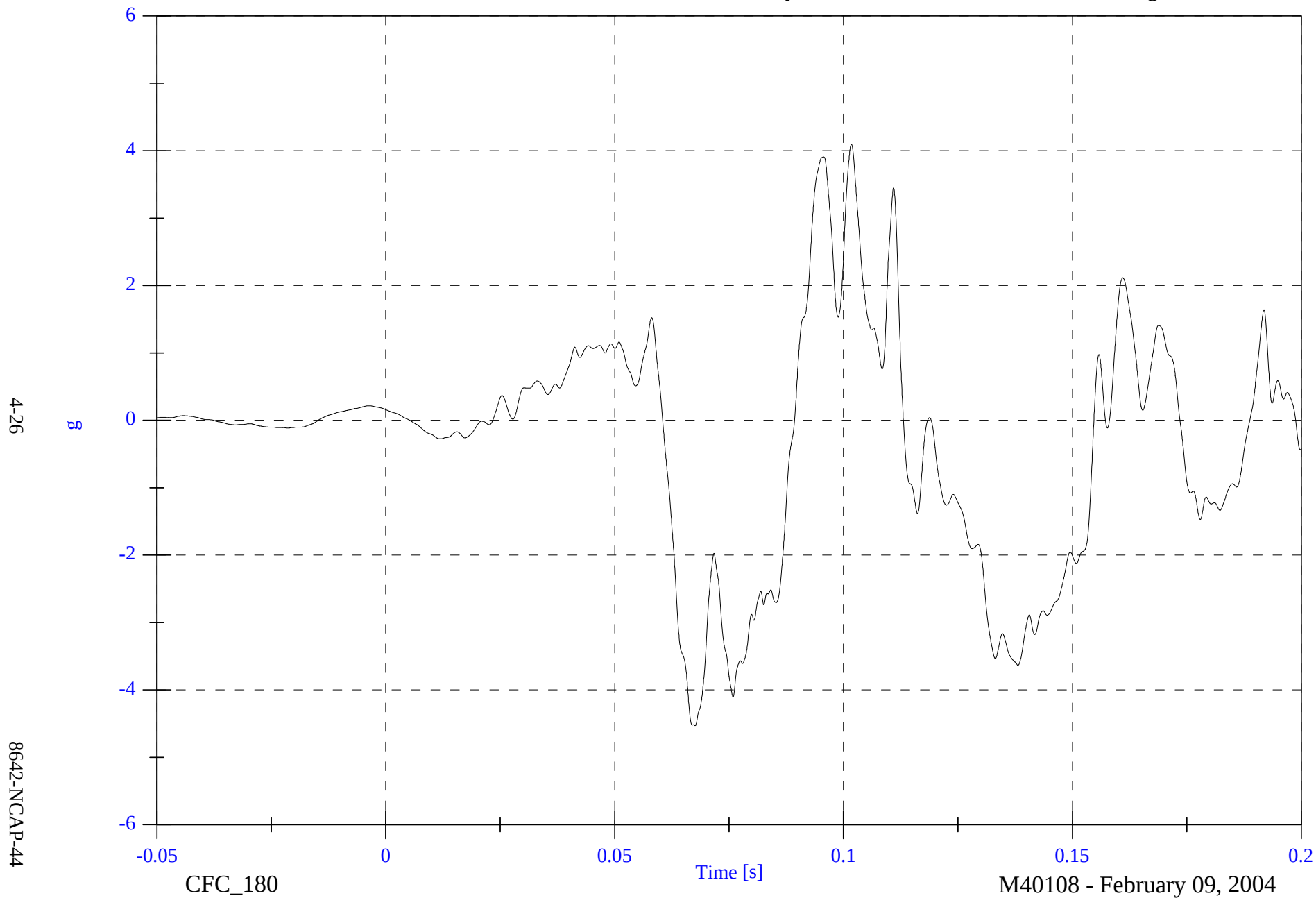


2004 NCAP Test 8 2004 Cadillac SRX

V1P3 Chest y

Max: 4.1 [g] at 0.102 [s]

Min: -4.5 [g] at 0.068 [s]



2004 NCAP Test 8 2004 Cadillac SRX

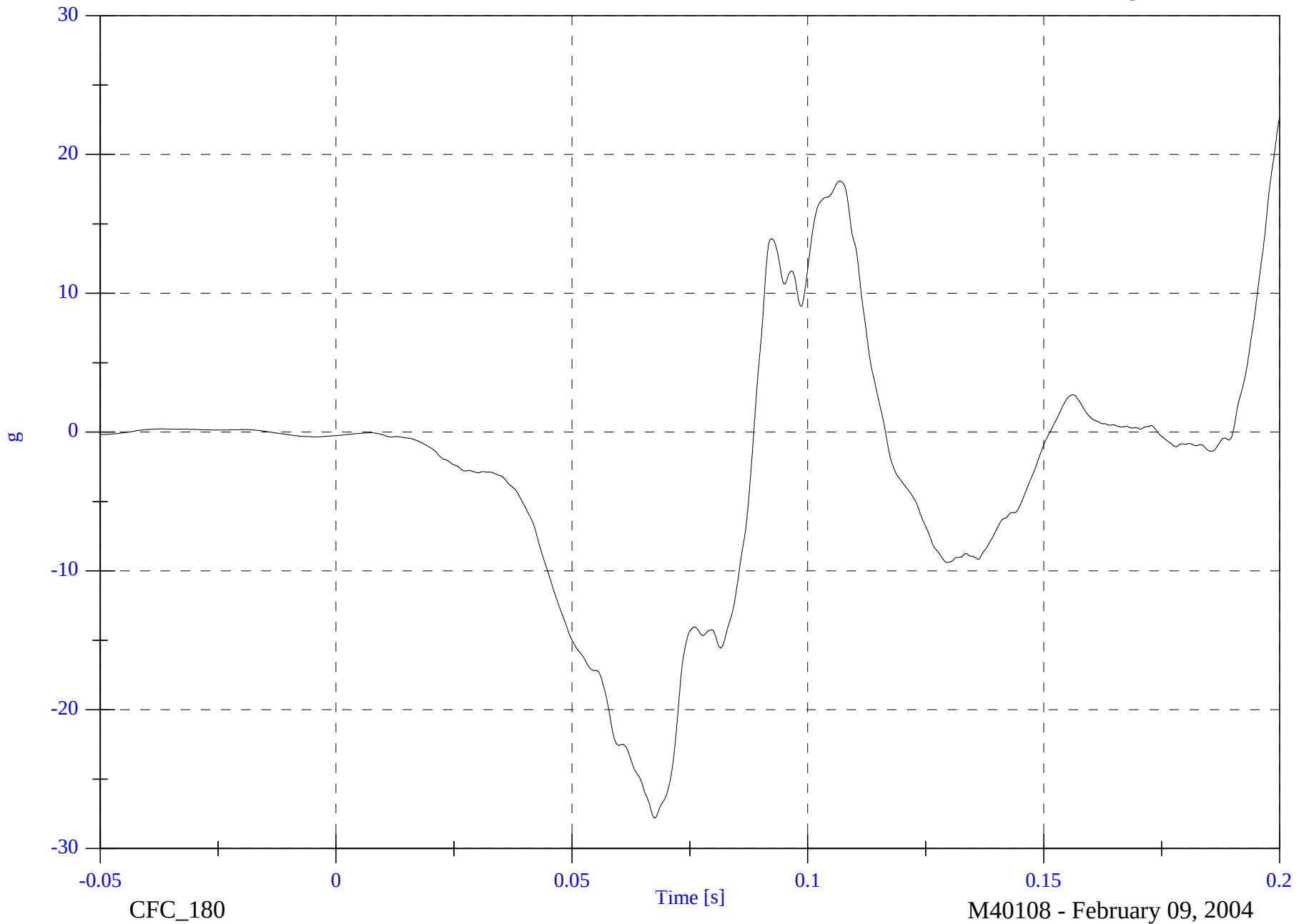
V1P3 Chest z

Max: 22.6 [g] at 0.200 [s]

Min: -27.8 [g] at 0.068 [s]

4-27

8642-NCAP-44



2004 NCAP Test 8 2004 Cadillac SRX

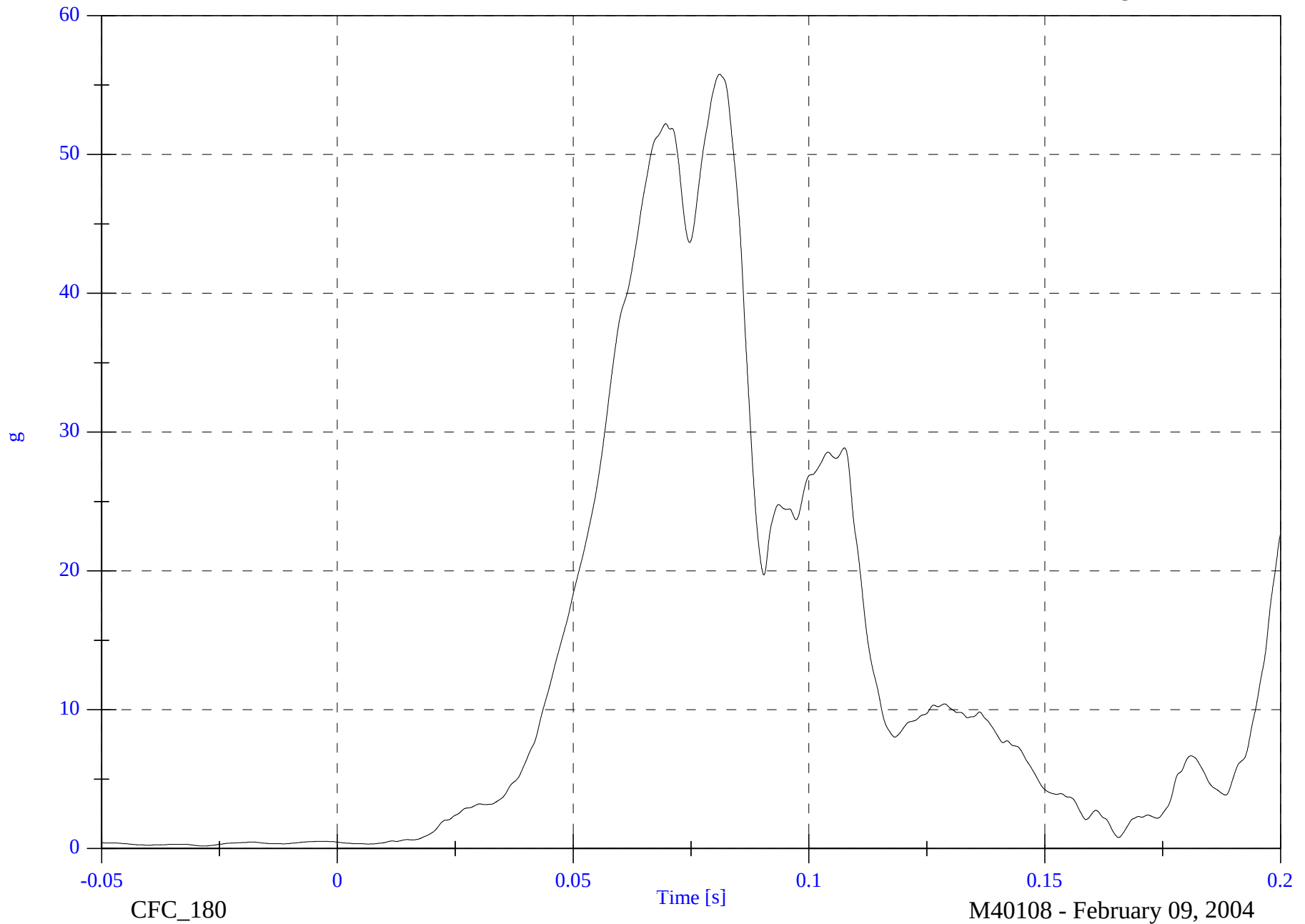
V1P3 Chest Resultant

Max: 55.8 [g] at 0.081 [s]

Min: 0.2 [g] at -0.028 [s]

4-28

8642-NCAP-44

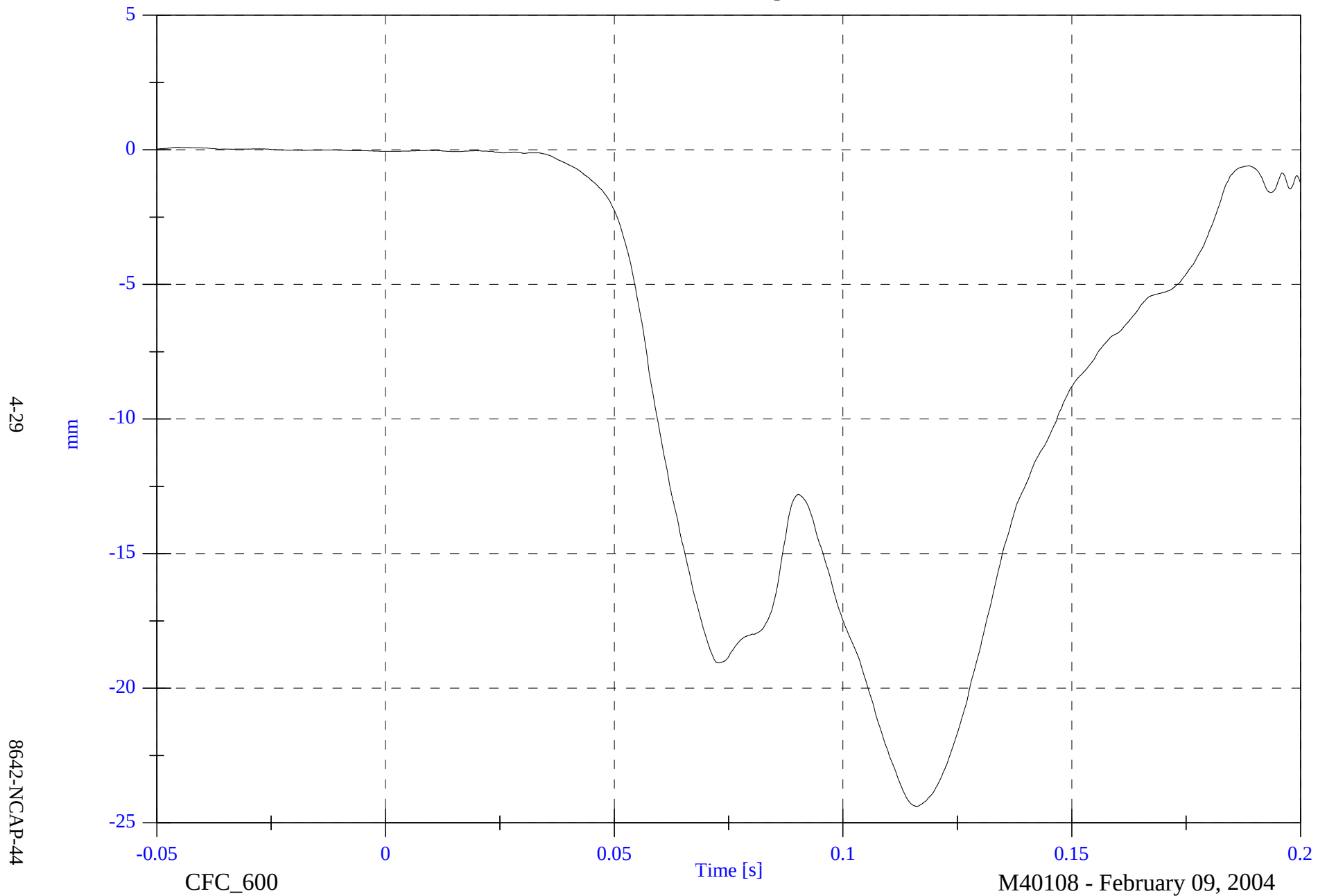


2004 NCAP Test 8 2004 Cadillac SRX

V1P3 Chest Compression

Max: 0.1 [mm] at -0.046 [s]

Min: -24.4 [mm] at 0.116 [s]

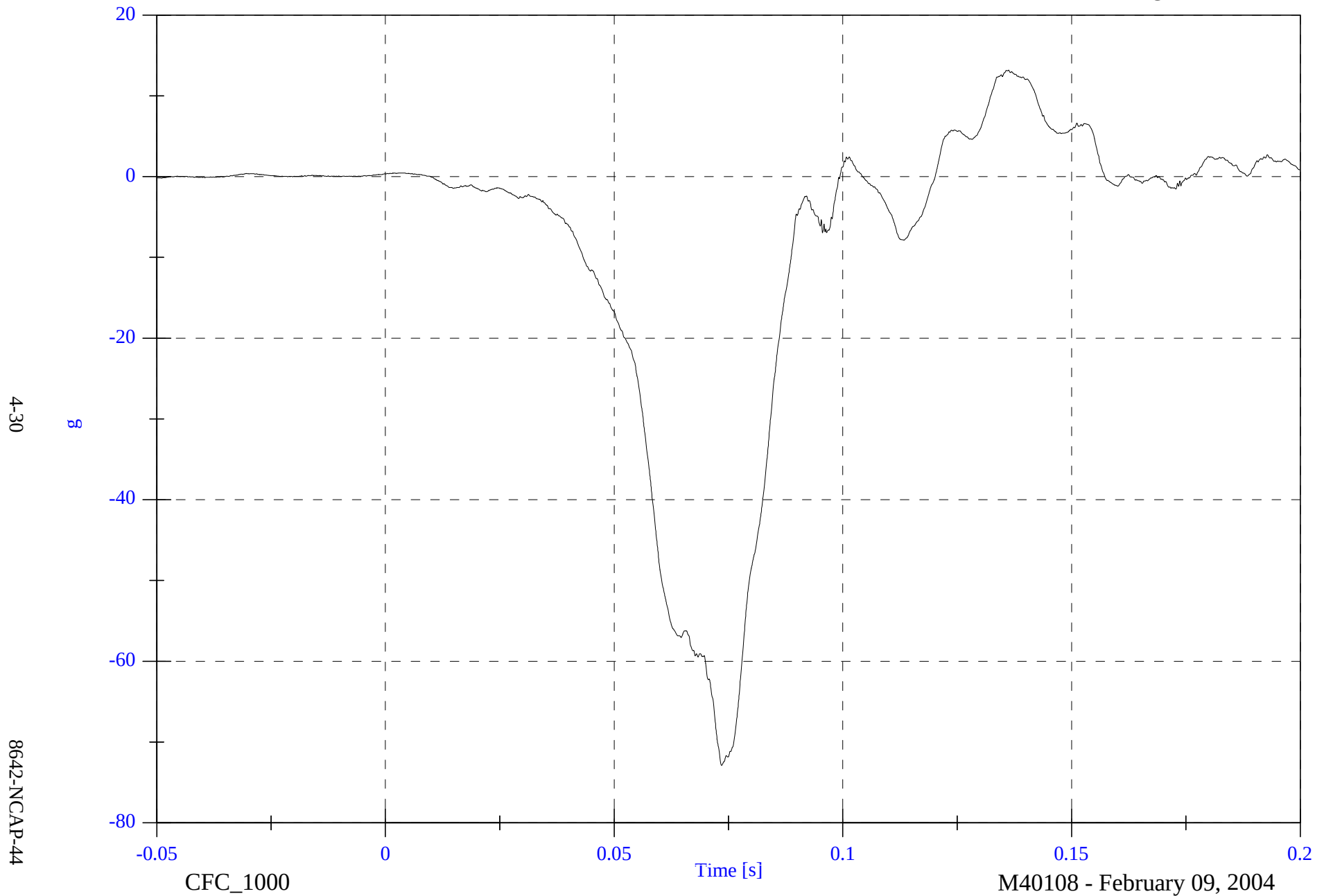


2004 NCAP Test 8 2004 Cadillac SRX

V1P3 Pelvic x

Max: 13.2 [g] at 0.136 [s]

Min: -72.9 [g] at 0.073 [s]



2004 NCAP Test 8 2004 Cadillac SRX

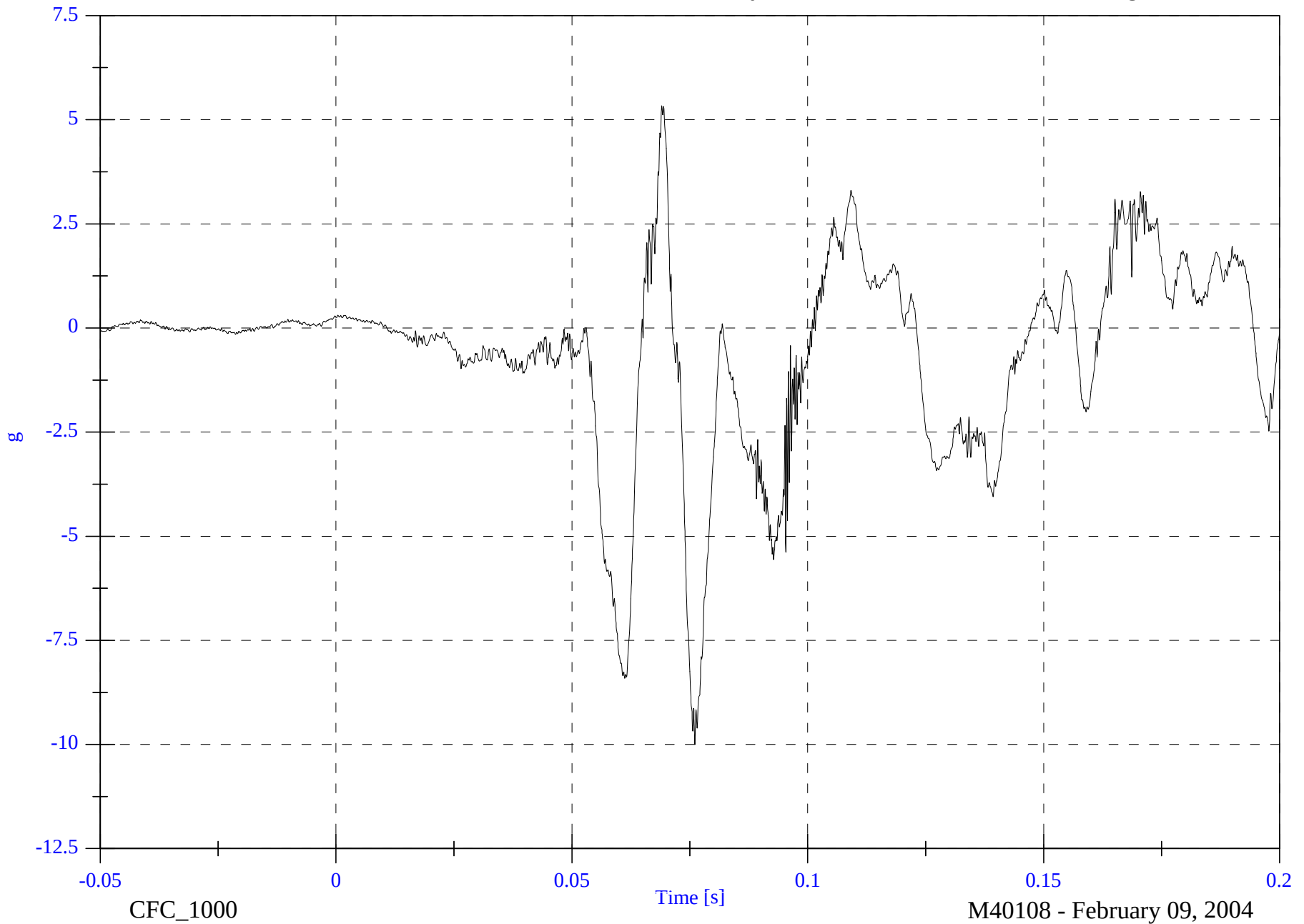
V1P3 Pelvic y

Max: 5.3 [g] at 0.069 [s]

Min: -10.0 [g] at 0.076 [s]

4-31

8642-NCAP-44

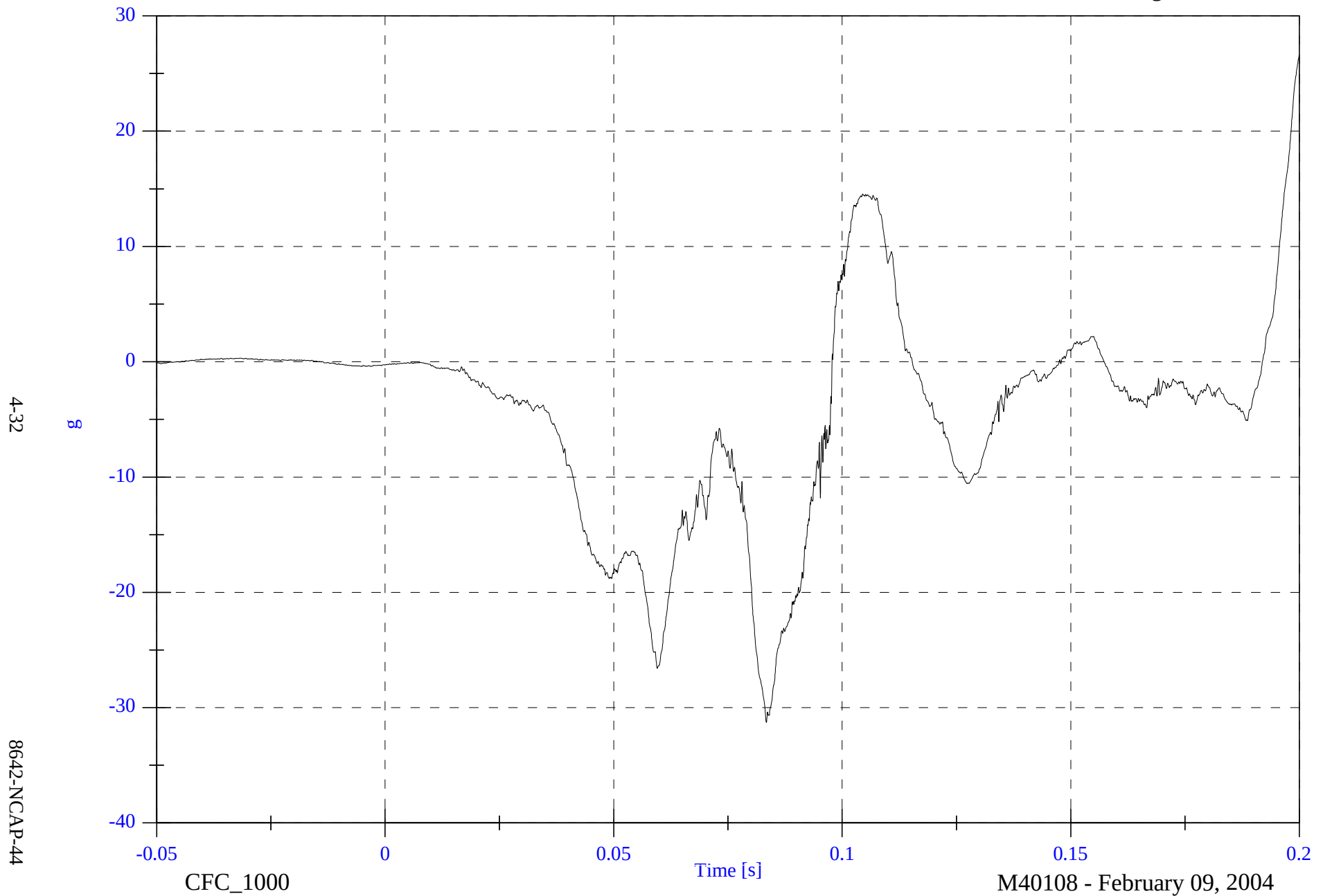


2004 NCAP Test 8 2004 Cadillac SRX

V1P3 Pelvic z

Max: 26.6 [g] at 0.200 [s]

Min: -31.3 [g] at 0.083 [s]



2004 NCAP Test 8 2004 Cadillac SRX

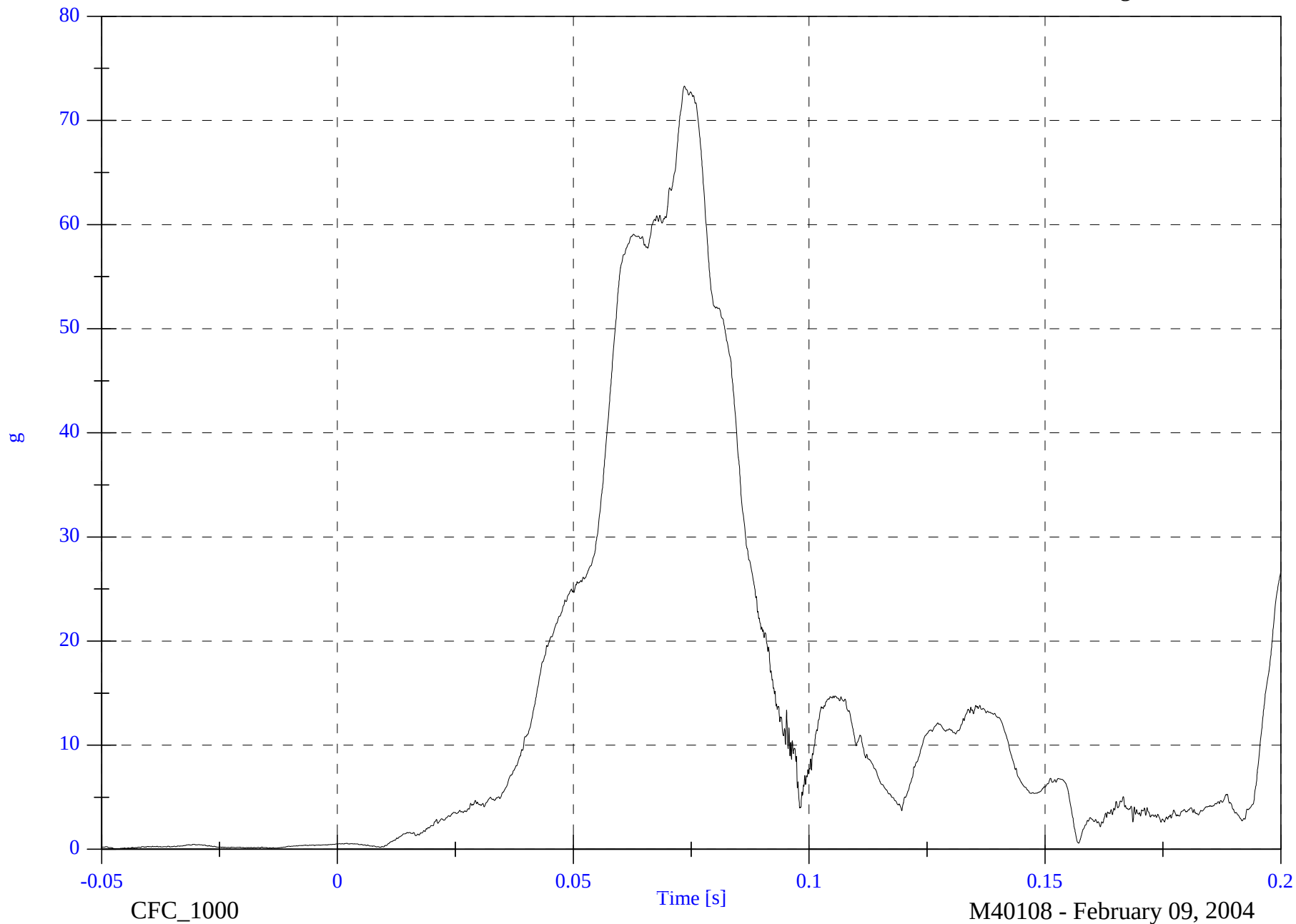
V1P3 Pelvic Resultant

Max: 73.3 [g] at 0.074 [s]

Min: 0.1 [g] at -0.046 [s]

4-33

8642-NCAP-44

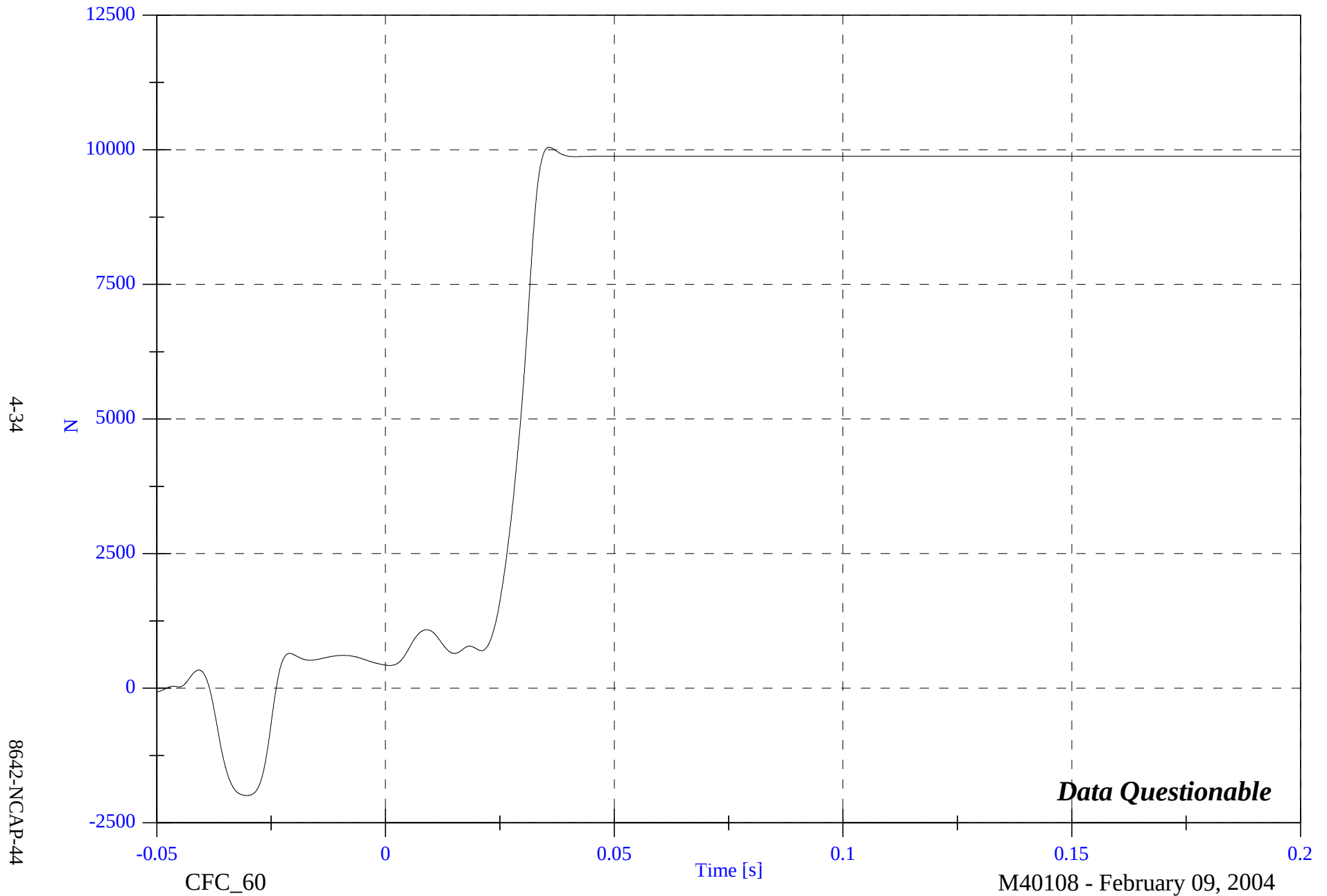


2004 NCAP Test 8 2004 Cadillac SRX

V1P3 Tether Belt

Max: 10045.0 [N] at 0.036 [s]

Min: -1992.4 [N] at -0.030 [s]



2004 NCAP Test 8 2004 Cadillac SRX

V1P4 Head x

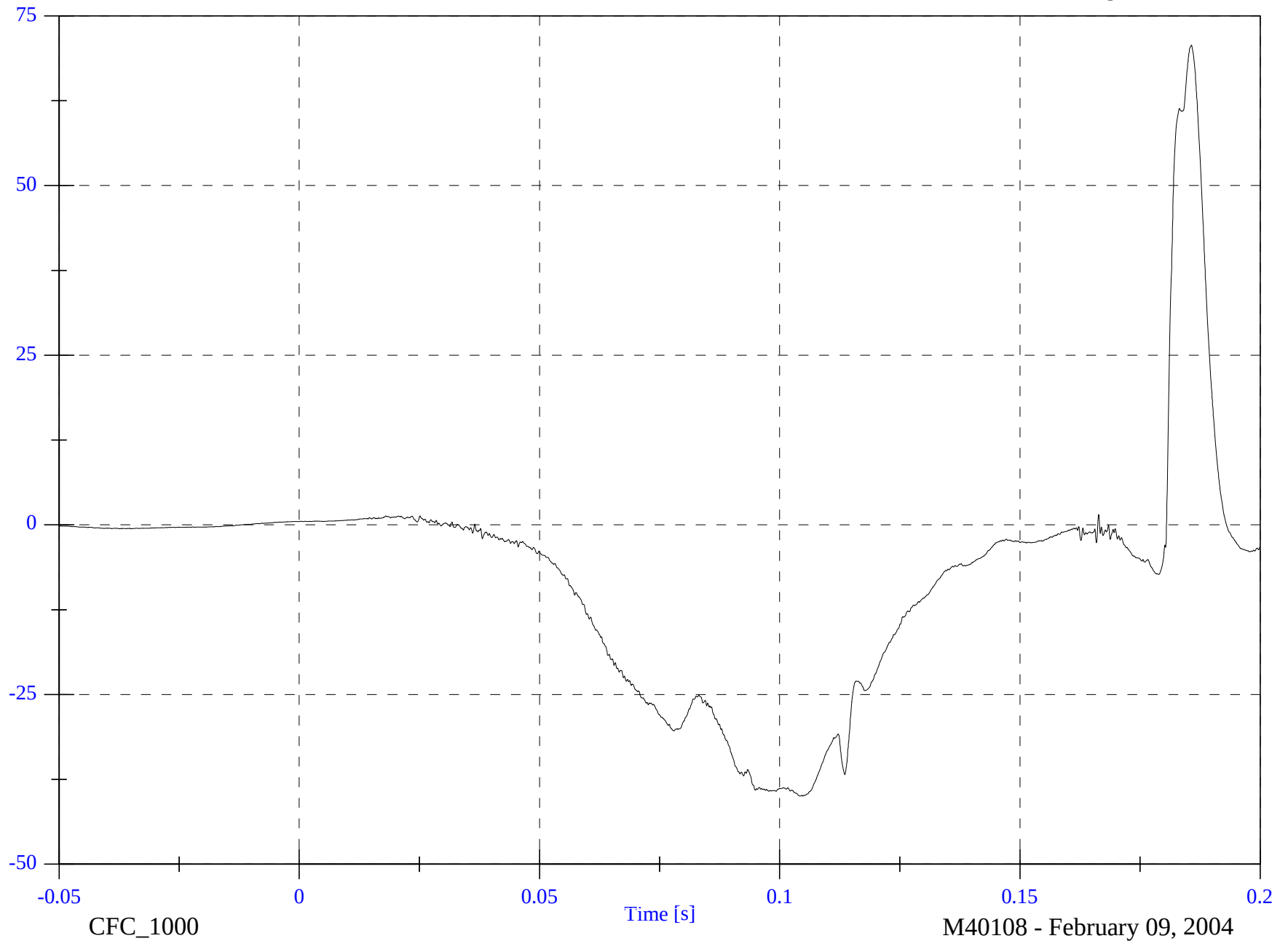
Max: 70.7 [g] at 0.186 [s]

Min: -40.0 [g] at 0.104 [s]

4-35

g

8642-NCAP-44



2004 NCAP Test 8 2004 Cadillac SRX

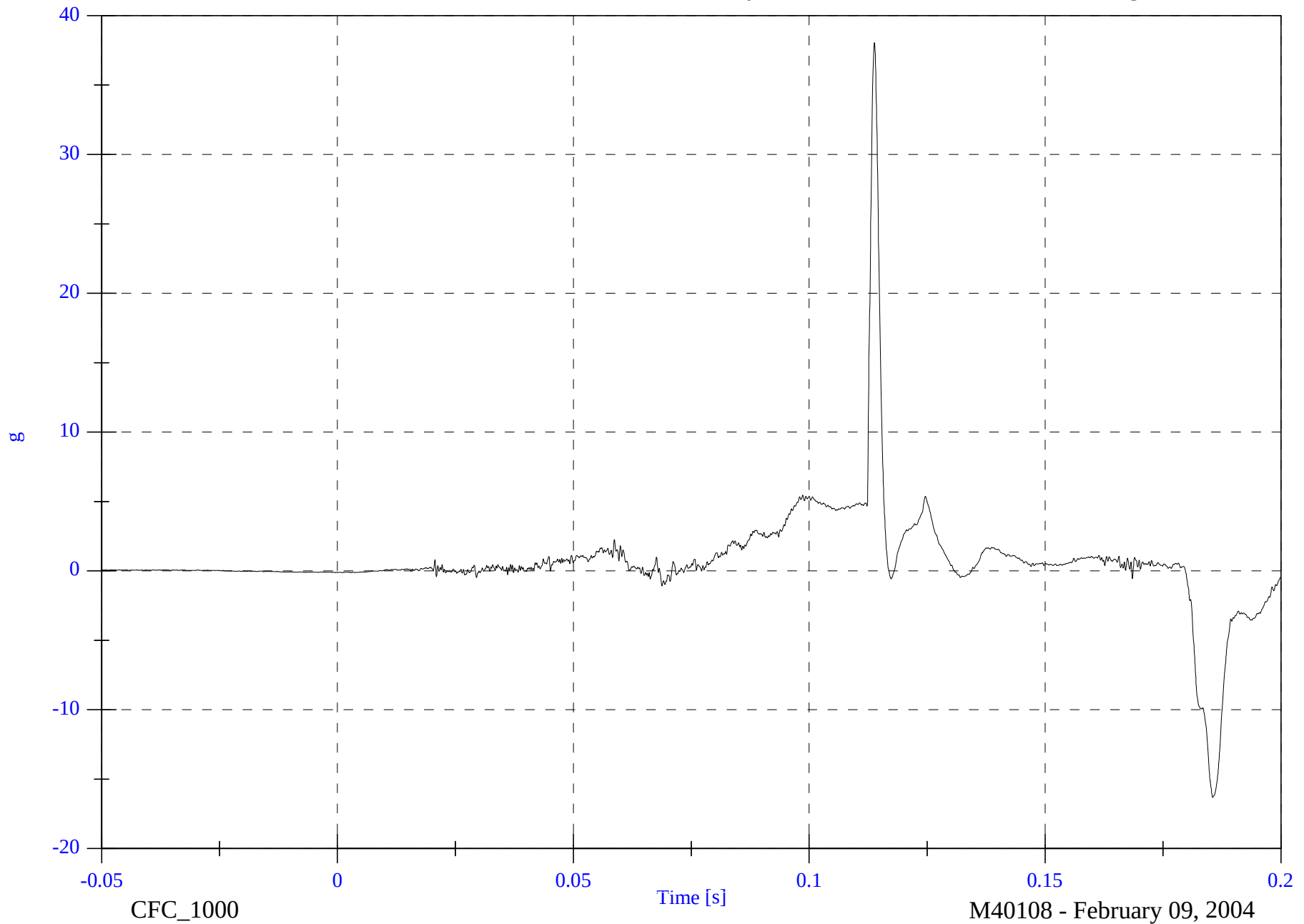
V1P4 Head y

Max: 38.1 [g] at 0.114 [s]

Min: -16.3 [g] at 0.186 [s]

4-36

8642-NCAP-44

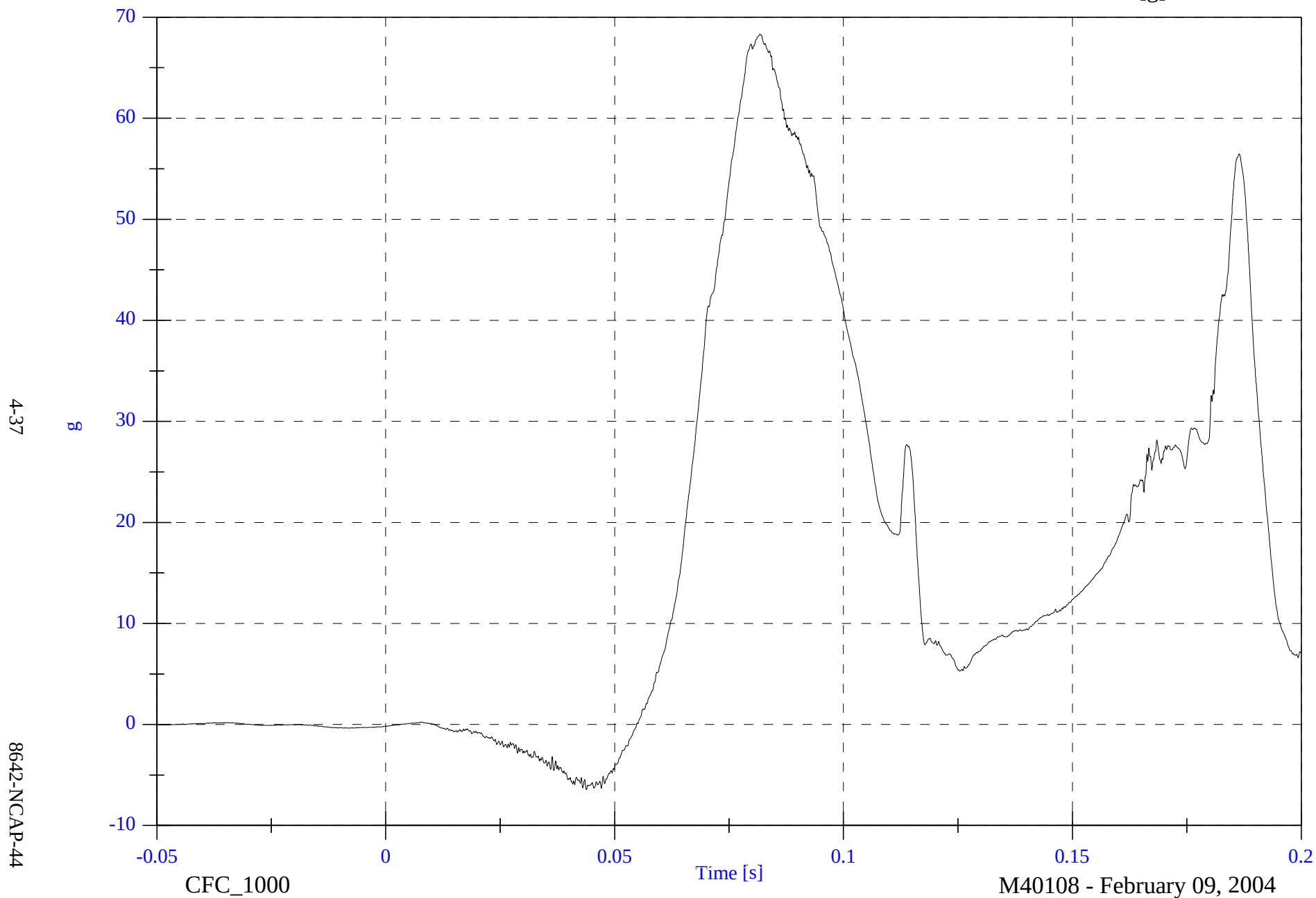


2004 NCAP Test 8 2004 Cadillac SRX

Max: 68.3 [g] at 0.082 [s]

Min: -6.5 [g] at 0.044 [s]

V1P4 Head z

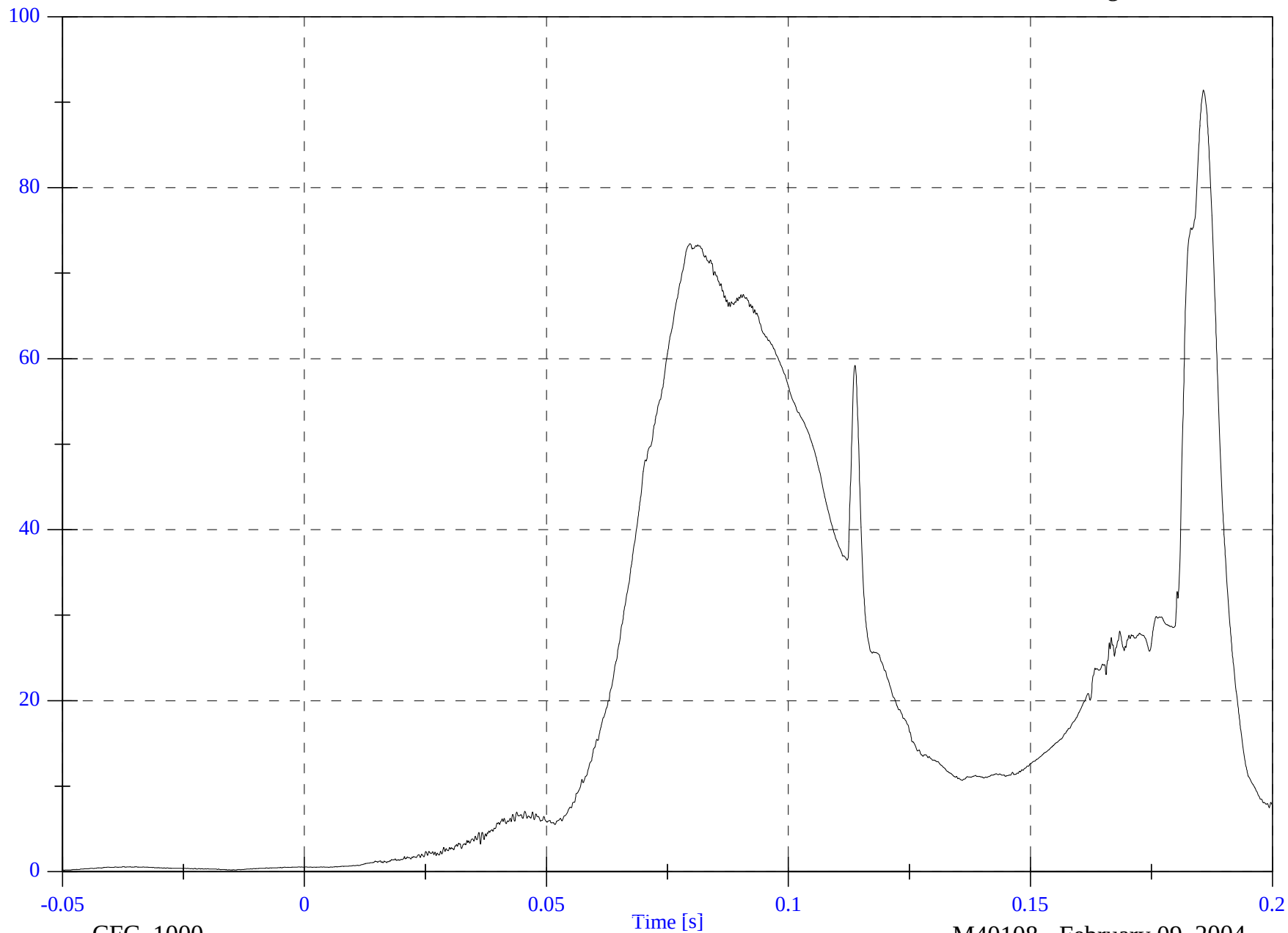


2004 NCAP Test 8 2004 Cadillac SRX

V1P4 Head Resultant

Max: 91.4 [g] at 0.186 [s]

Min: 0.2 [g] at -0.050 [s]



4-38

8642-NCAP-44

CFC_1000

M40108 - February 09, 2004

2004 NCAP Test 8 2004 Cadillac SRX

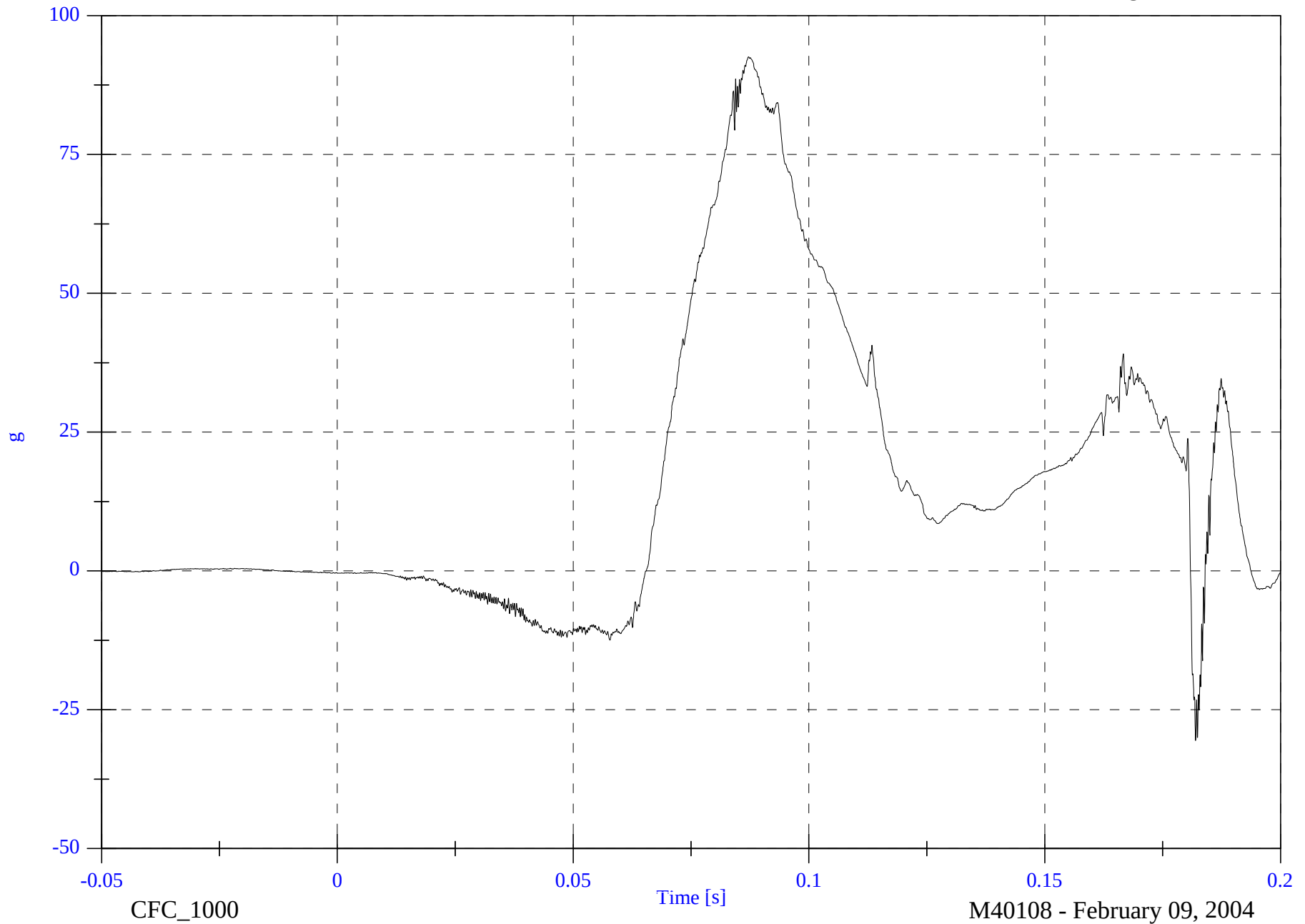
V1P4 Head Rear z

Max: 92.6 [g] at 0.087 [s]

Min: -30.5 [g] at 0.182 [s]

4-39

8642-NCAP-44

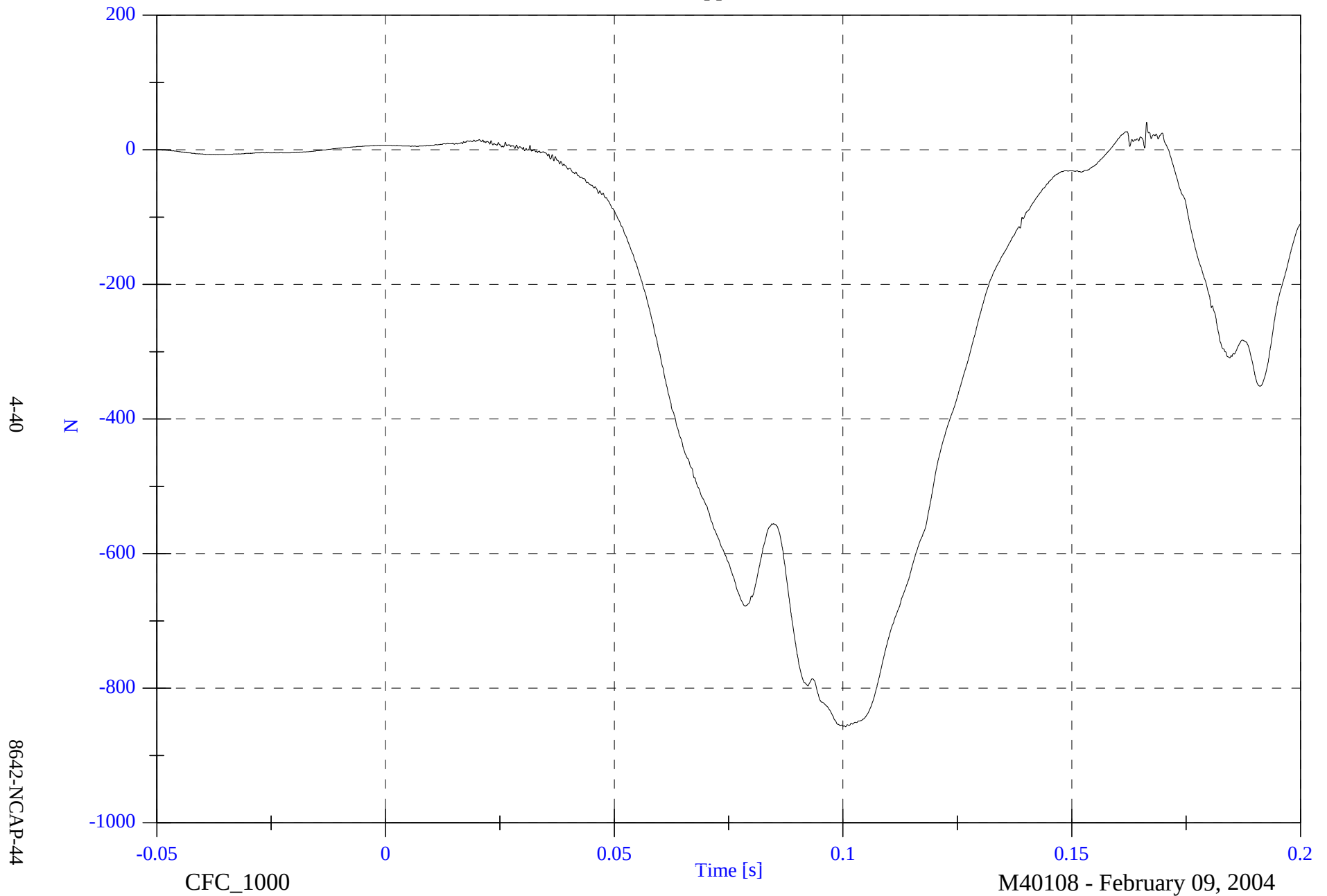


2004 NCAP Test 8 2004 Cadillac SRX

V1P4 Upper Neck Fx

Max: 40.7 [N] at 0.166 [s]

Min: -857.2 [N] at 0.101 [s]

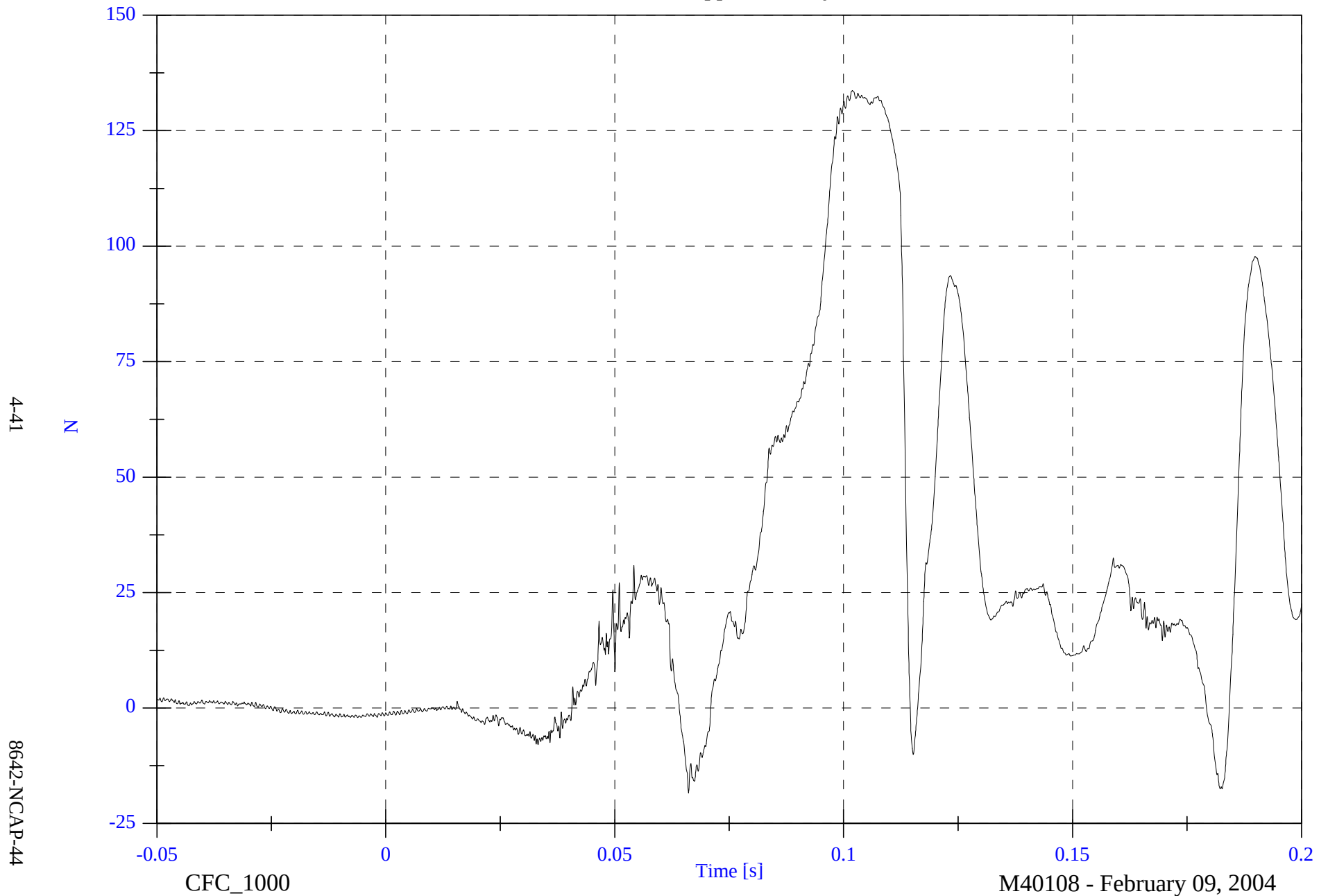


2004 NCAP Test 8 2004 Cadillac SRX

V1P4 Upper Neck Fy

Max: 133.7 [N] at 0.102 [s]

Min: -18.4 [N] at 0.066 [s]

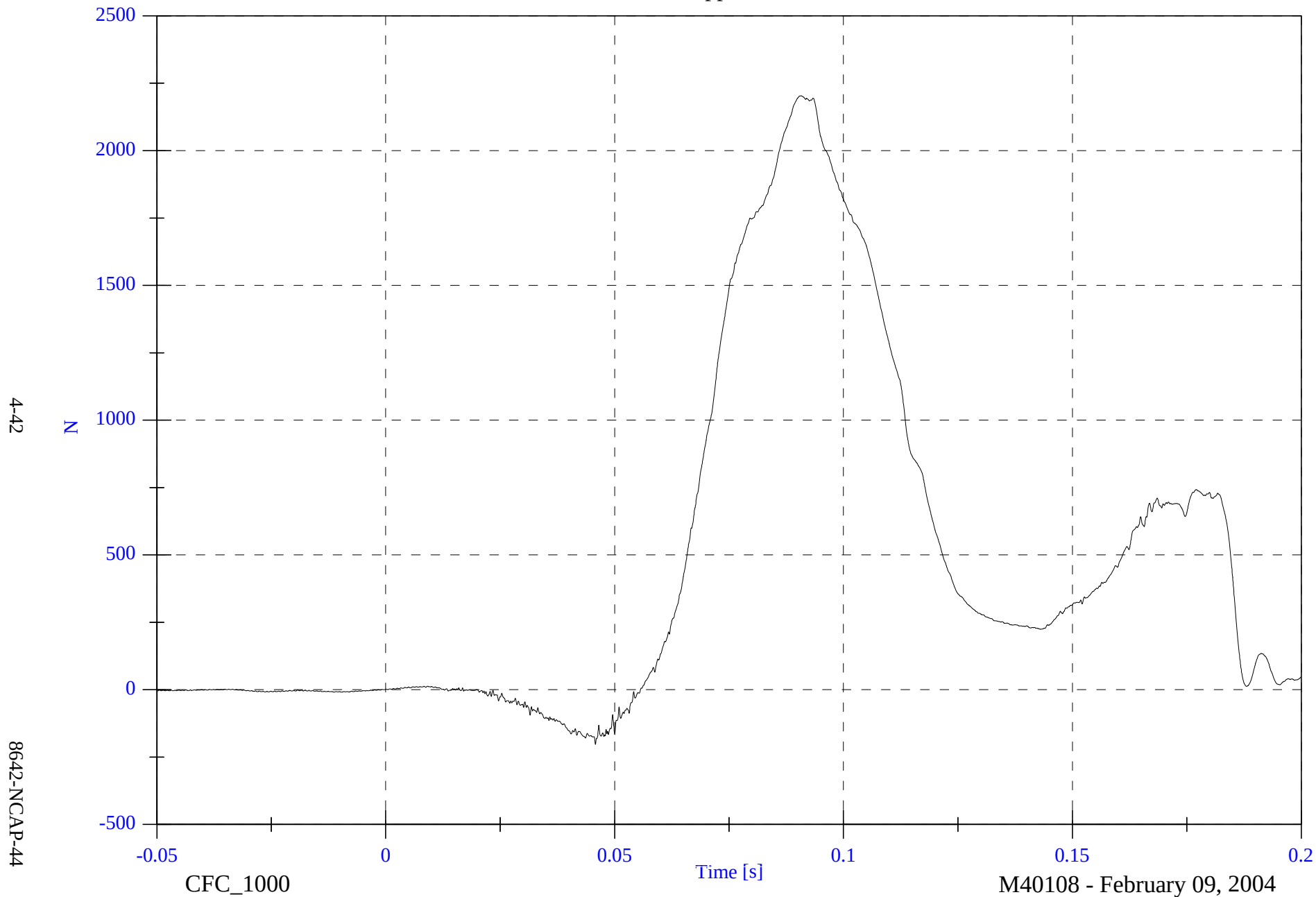


2004 NCAP Test 8 2004 Cadillac SRX

Max: 2203.5 [N] at 0.091 [s]

Min: -203.4 [N] at 0.046 [s]

V1P4 Upper Neck Fz

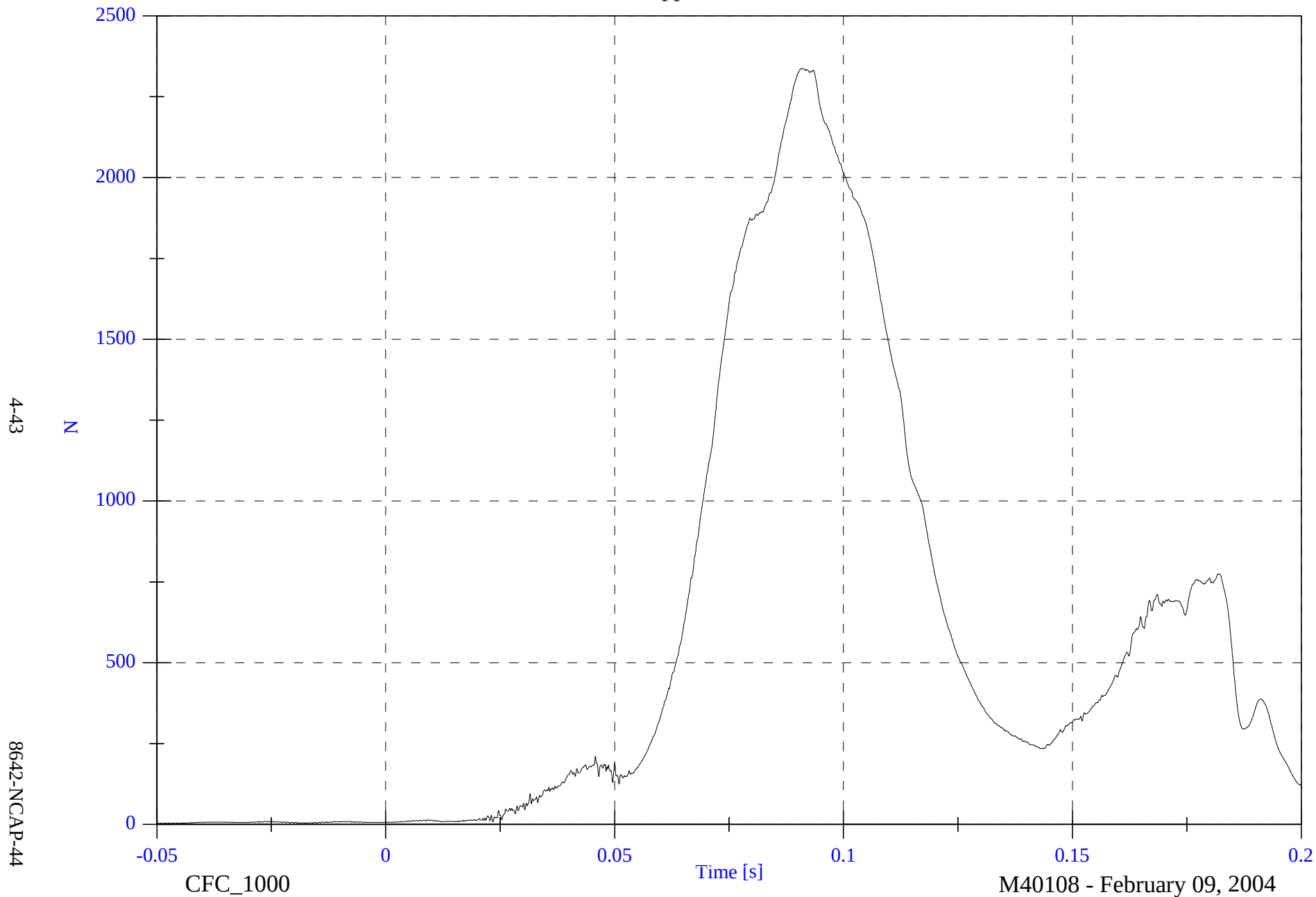


2004 NCAP Test 8 2004 Cadillac SRX

V1P4 Upper Neck F Resultant

Max: 2337.3 [N] at 0.091 [s]

Min: 2.6 [N] at -0.049 [s]

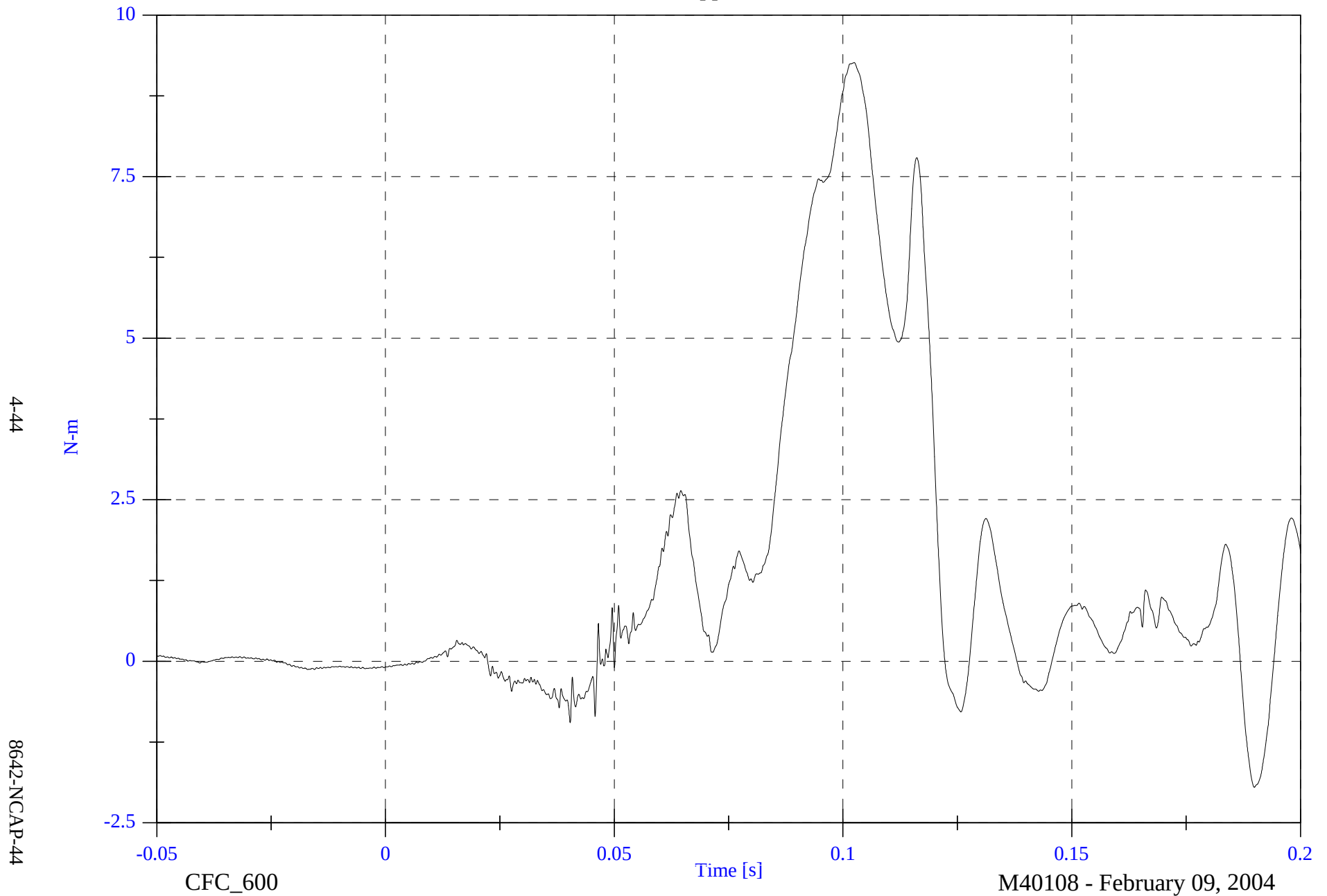


2004 NCAP Test 8 2004 Cadillac SRX

V1P4 Upper Neck Mx

Max: 9.3 [N-m] at 0.102 [s]

Min: -2.0 [N-m] at 0.190 [s]

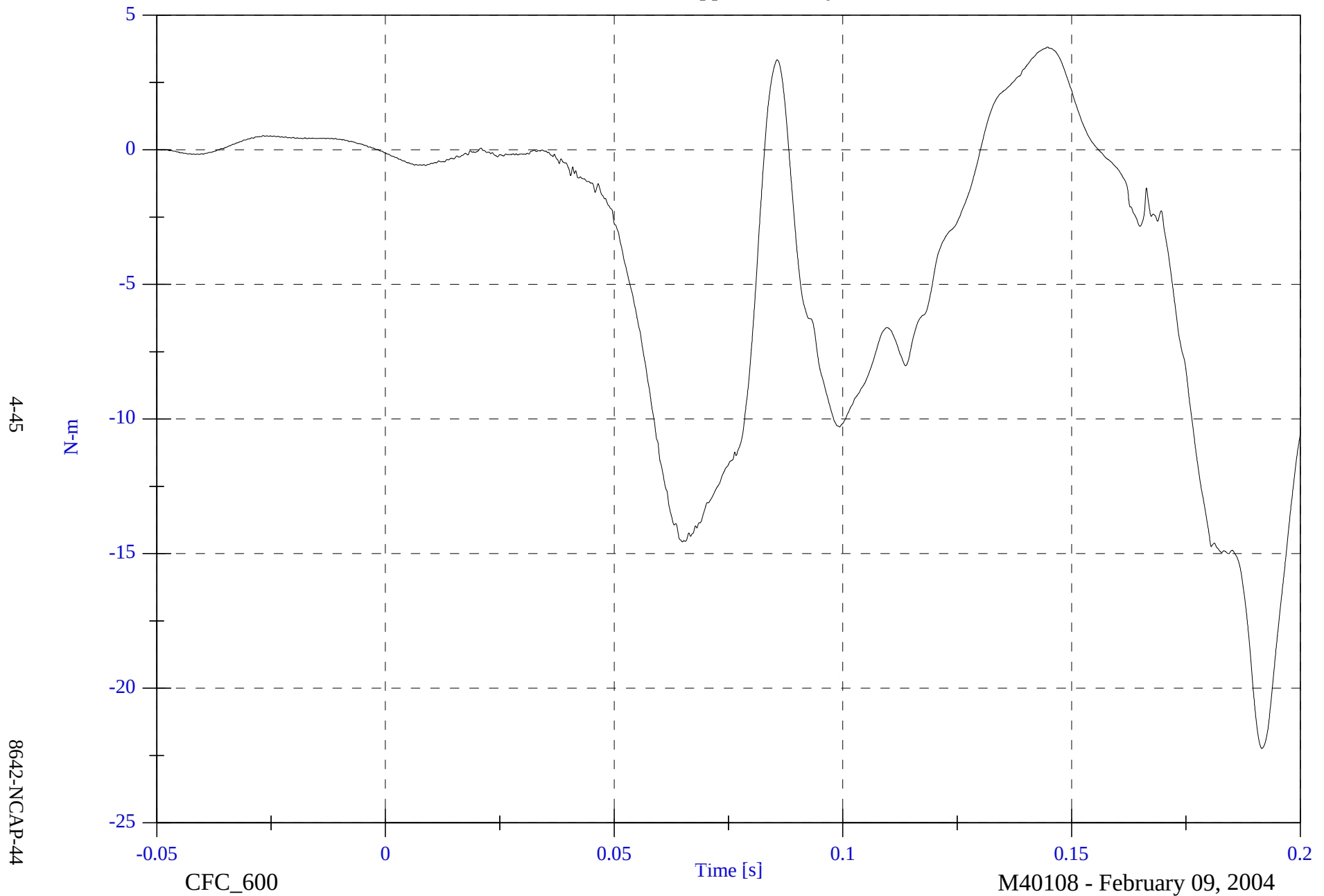


2004 NCAP Test 8 2004 Cadillac SRX

V1P4 Upper Neck My

Max: 3.8 [N-m] at 0.145 [s]

Min: -22.2 [N-m] at 0.192 [s]



2004 NCAP Test 8 2004 Cadillac SRX

V1P4 Upper Neck Mz

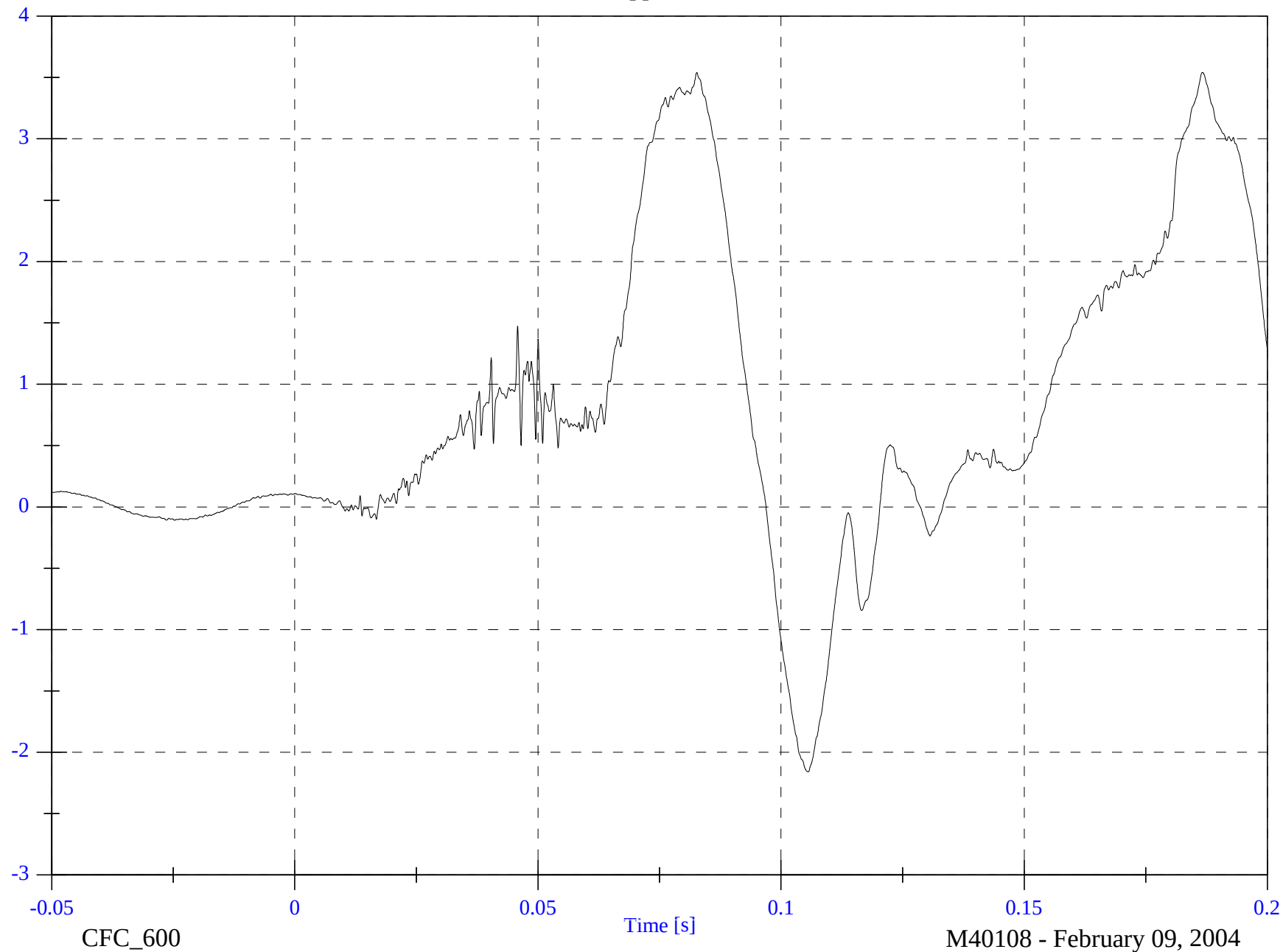
Max: 3.5 [N-m] at 0.187 [s]

Min: -2.2 [N-m] at 0.106 [s]

4-46

N-m

8642-NCAP-44



CFC_600

Time [s]

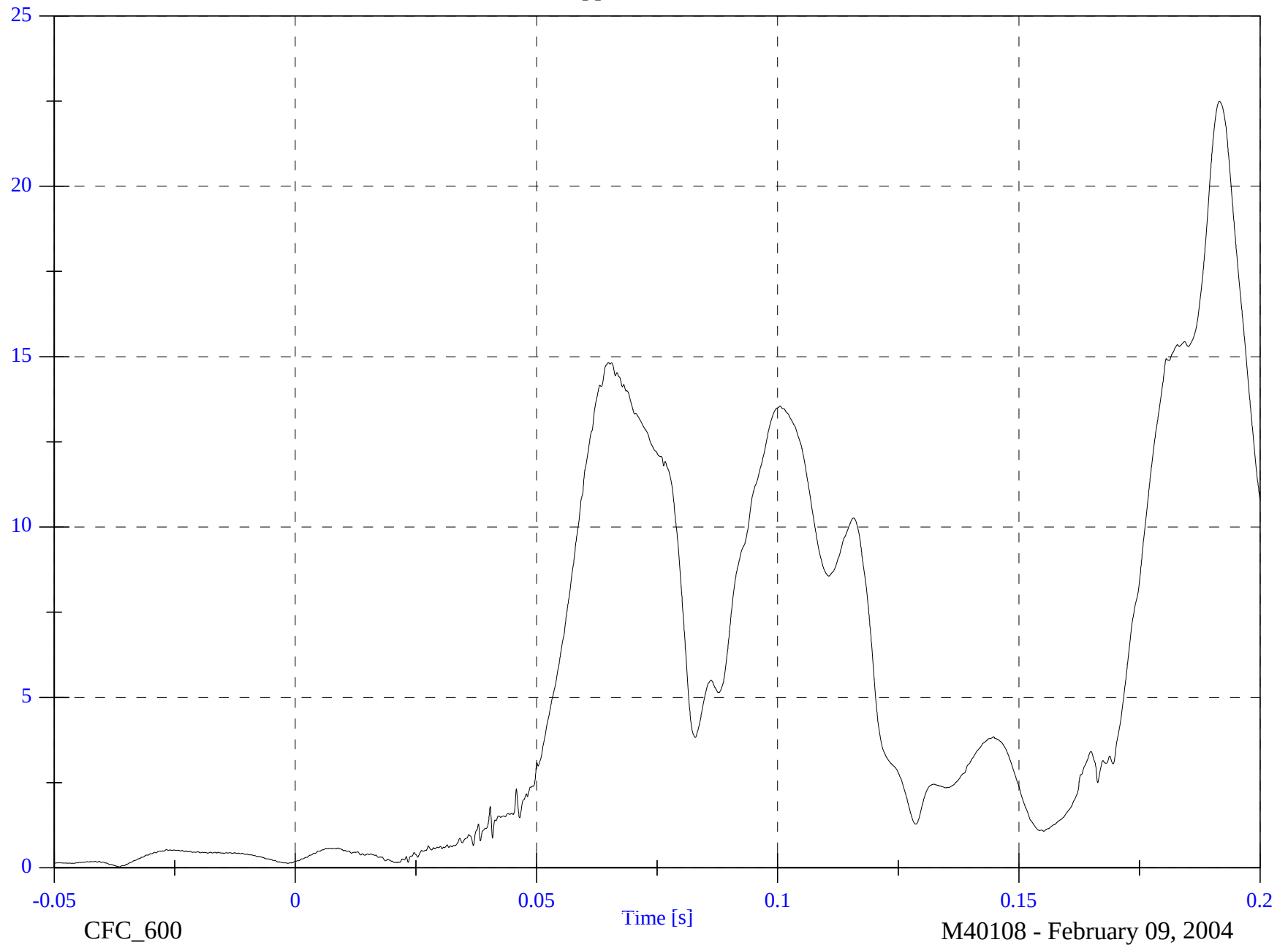
M40108 - February 09, 2004

2004 NCAP Test 8 2004 Cadillac SRX

V1P4 Upper Neck M Resultant

Max: 22.5 [N-m] at 0.192 [s]

Min: 0.0 [N-m] at -0.036 [s]

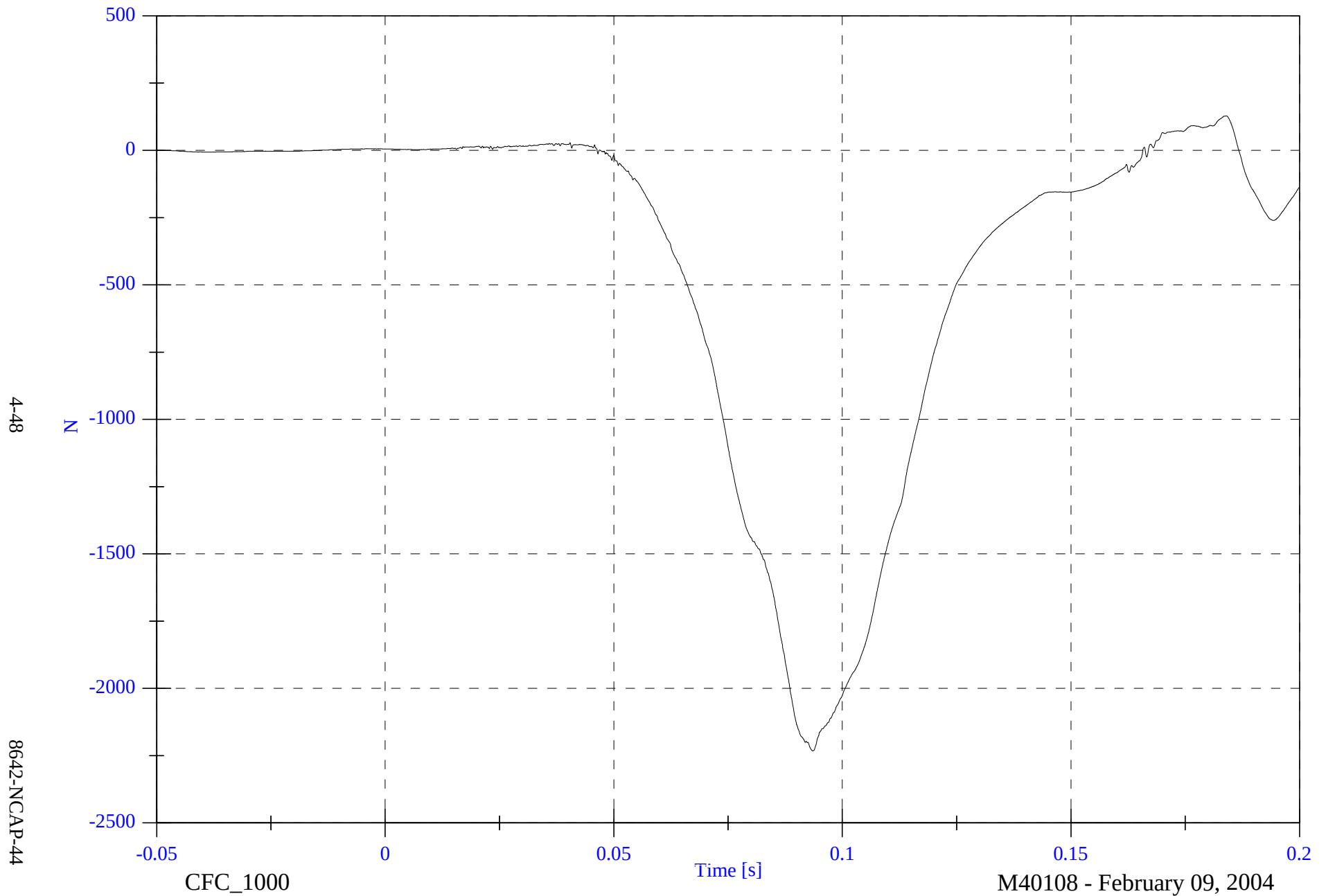


2004 NCAP Test 8 2004 Cadillac SRX

V1P4 Lower Neck Fx

Max: 127.7 [N] at 0.184 [s]

Min: -2232.1 [N] at 0.093 [s]

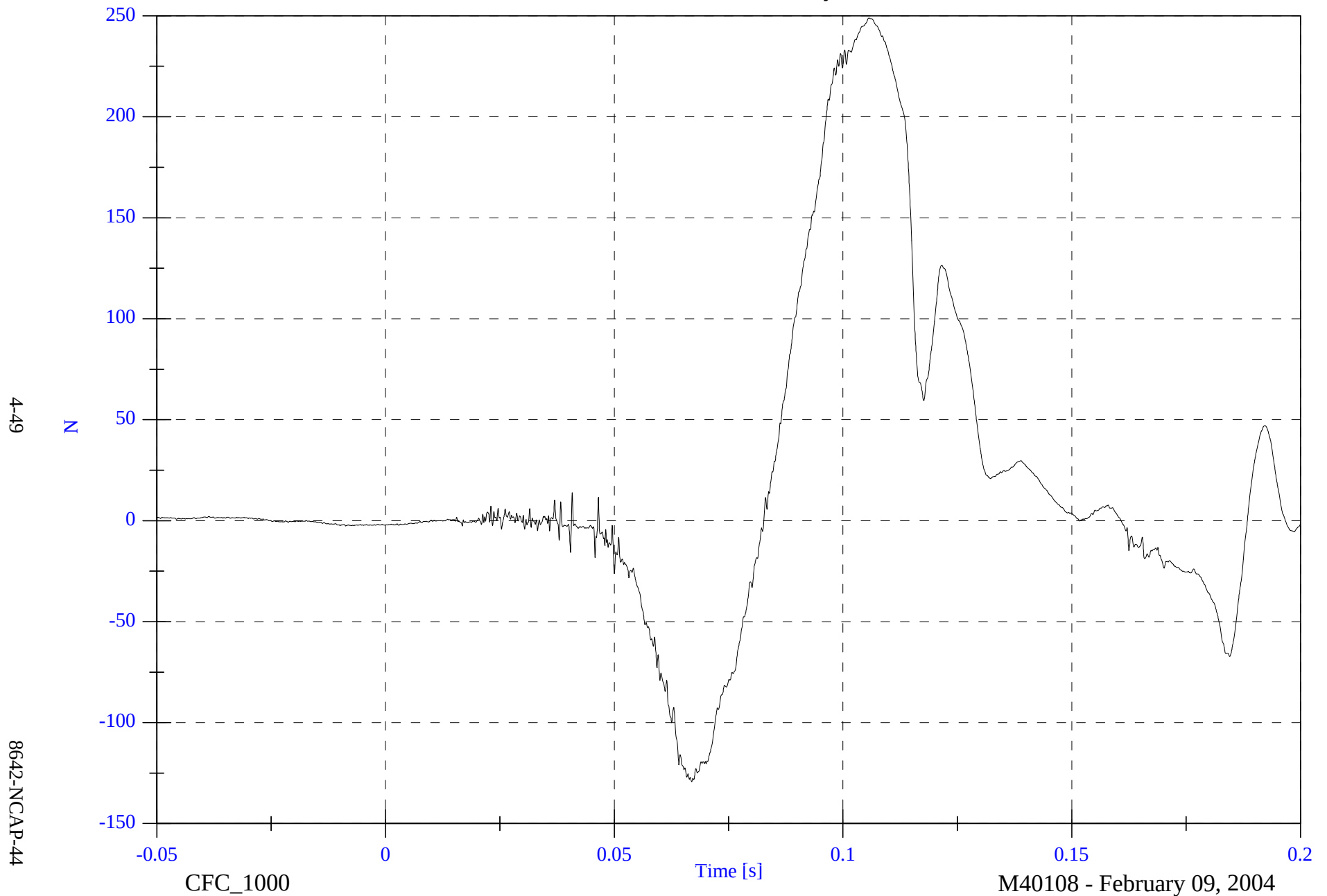


2004 NCAP Test 8 2004 Cadillac SRX

Max: 248.9 [N] at 0.106 [s]

Min: -129.3 [N] at 0.067 [s]

V1P4 Lower Neck Fy

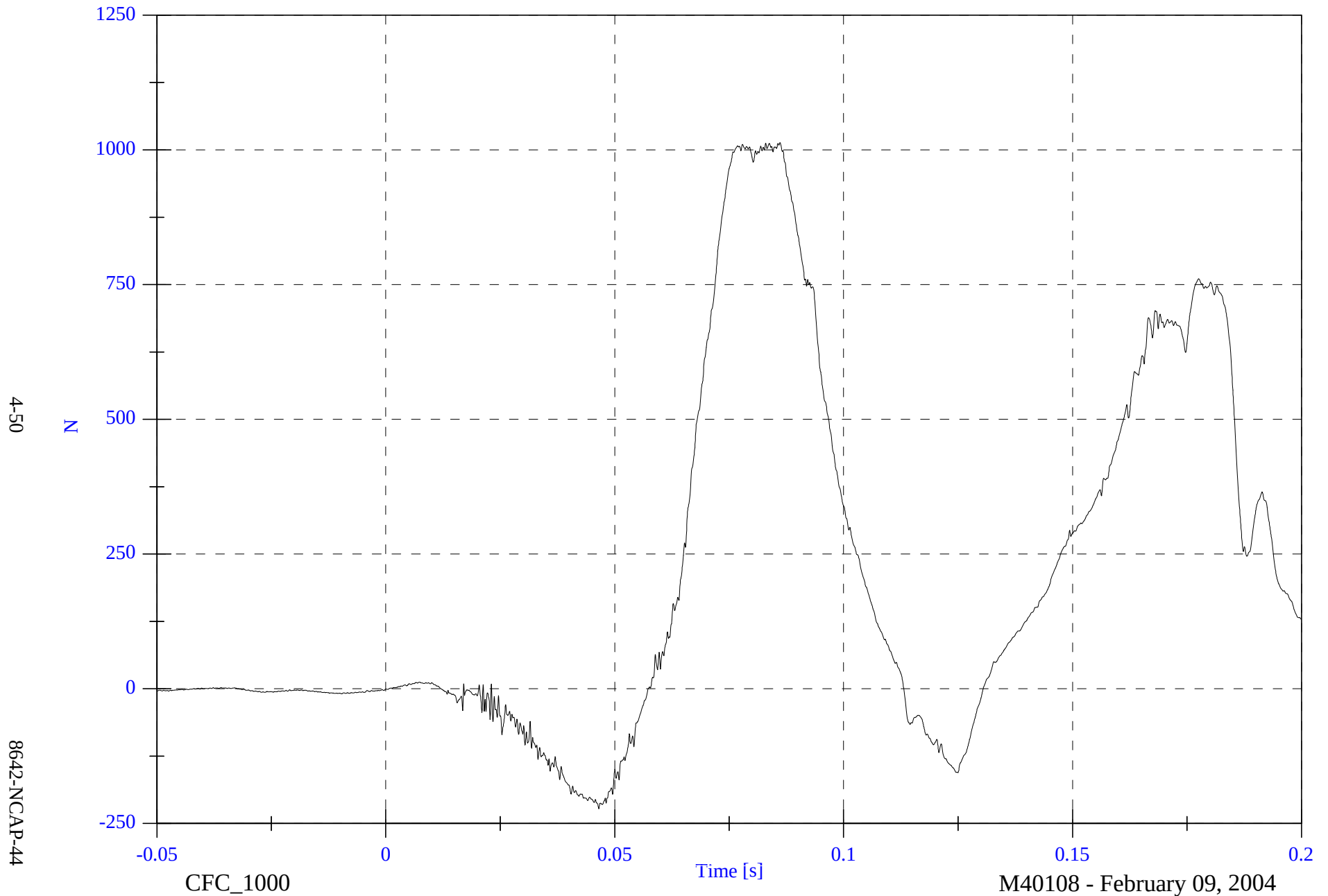


2004 NCAP Test 8 2004 Cadillac SRX

Max: 1013.5 [N] at 0.086 [s]

Min: -222.8 [N] at 0.047 [s]

V1P4 Lower Neck Fz



2004 NCAP Test 8 2004 Cadillac SRX

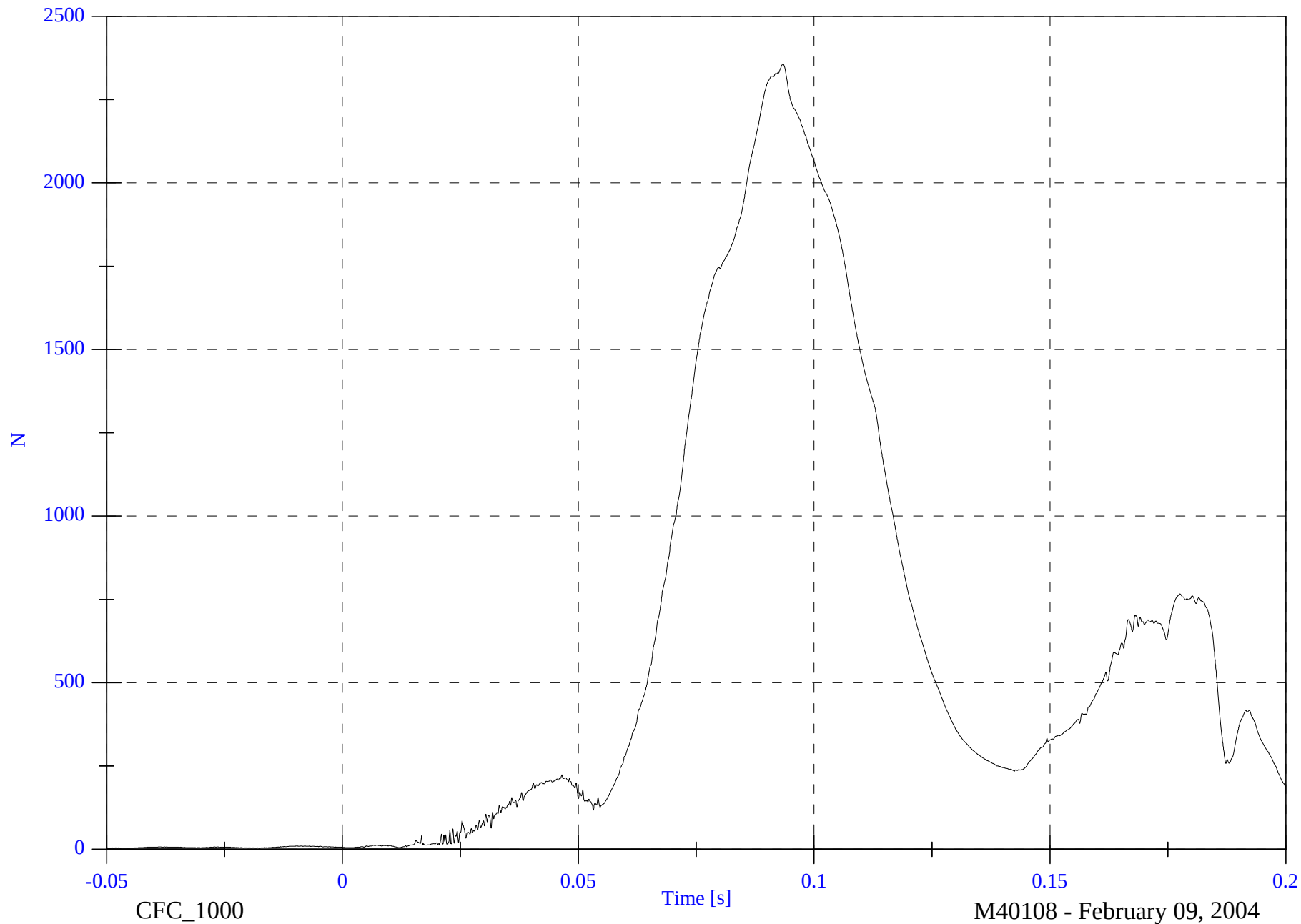
V1P4 Lower Neck F Resultant

Max: 2357.1 [N] at 0.093 [s]

Min: 3.0 [N] at -0.046 [s]

4-51

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2004 NCAP Test 8 2004 Cadillac SRX

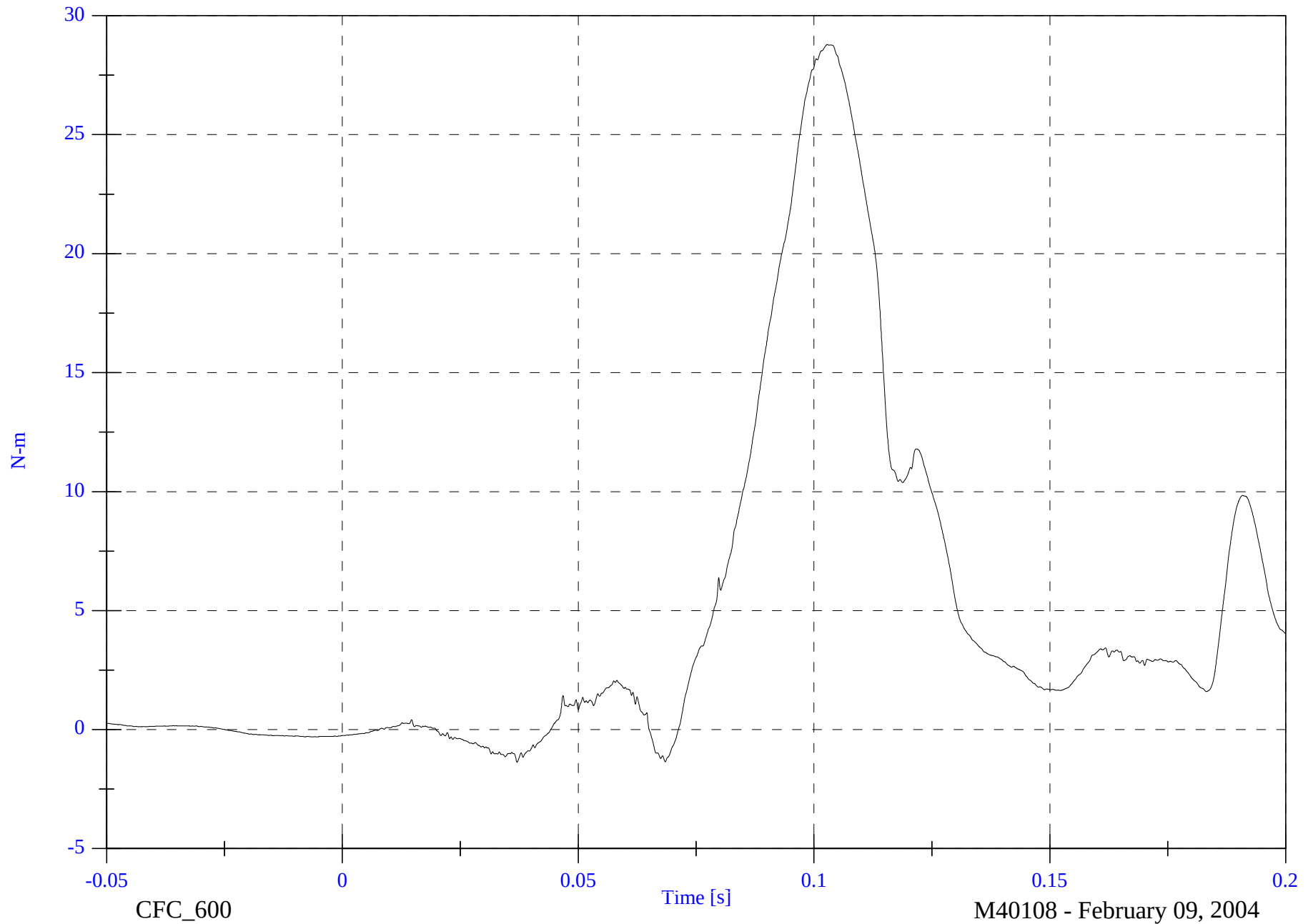
V1P4 Lower Neck Mx

Max: 28.8 [N-m] at 0.103 [s]

Min: -1.4 [N-m] at 0.037 [s]

4-52

8642-NCAP-44



CFC_600

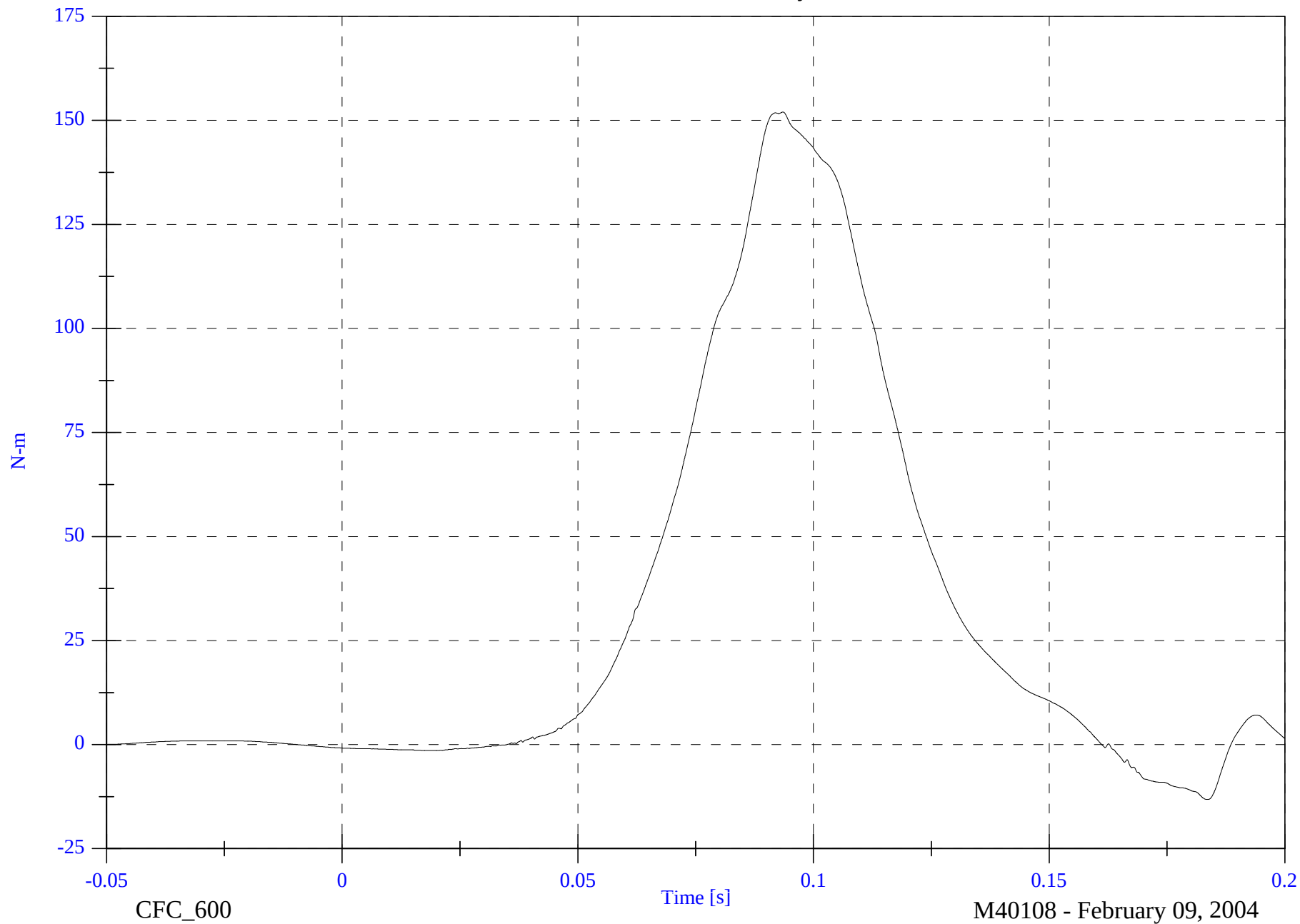
M40108 - February 09, 2004

2004 NCAP Test 8 2004 Cadillac SRX

V1P4 Lower Neck My

Max: 152.0 [N-m] at 0.093 [s]

Min: -13.2 [N-m] at 0.184 [s]



4-53

8642-NCAP-44

CFC_600

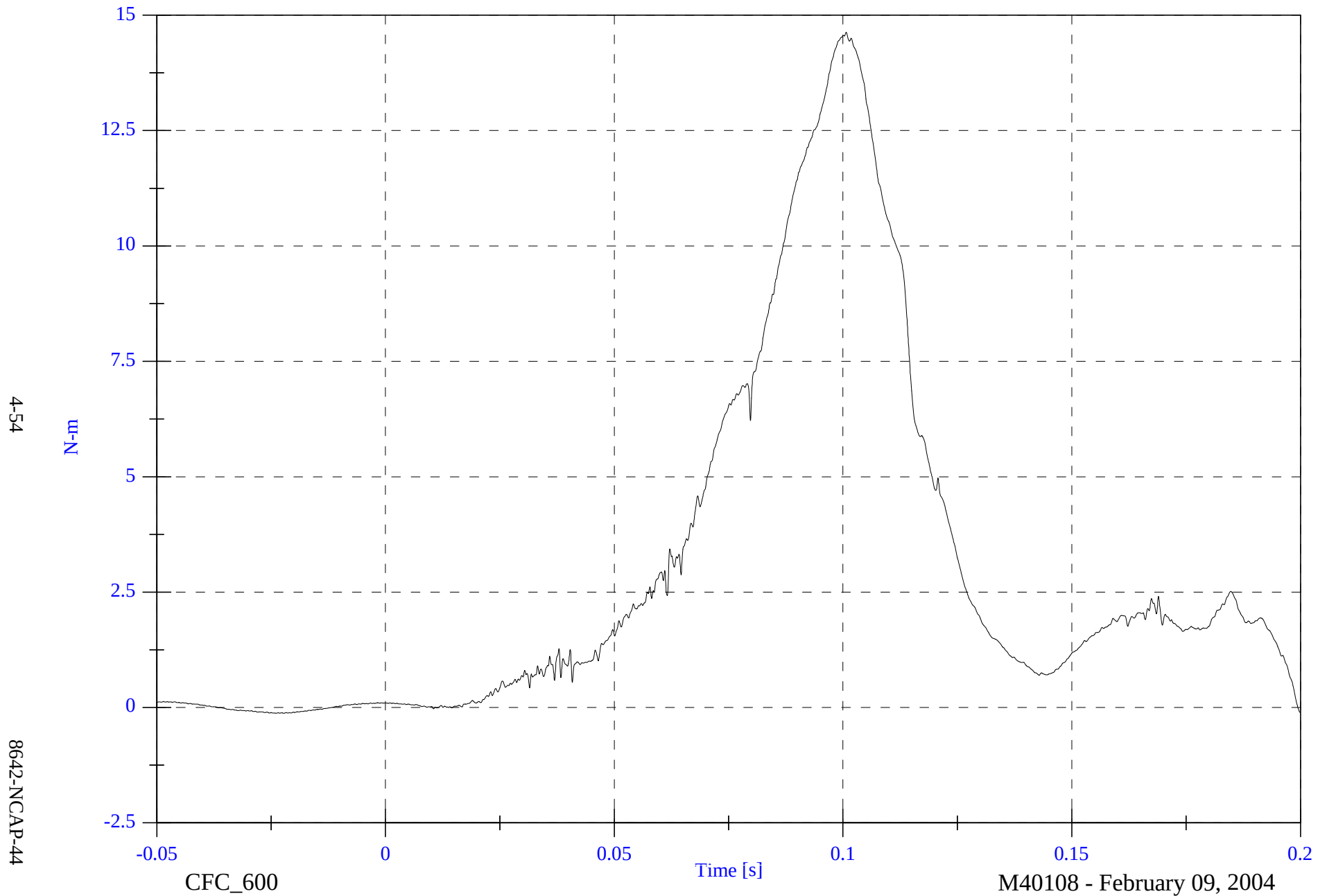
M40108 - February 09, 2004

2004 NCAP Test 8 2004 Cadillac SRX

Max: 14.6 [N-m] at 0.101 [s]

Min: -0.1 [N-m] at -0.022 [s]

V1P4 Lower Neck Mz



2004 NCAP Test 8 2004 Cadillac SRX

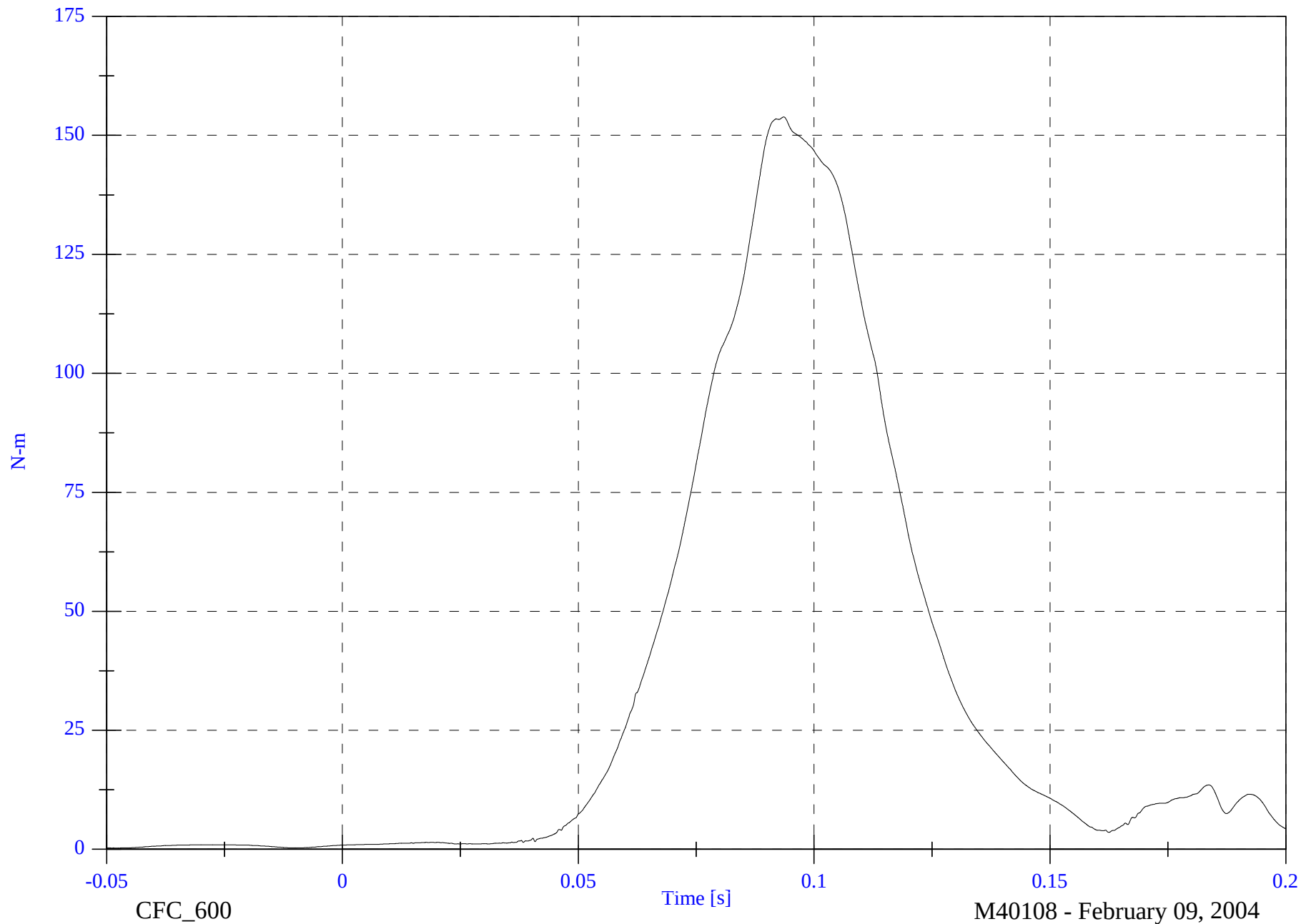
V1P4 Lower Neck M Resultant

Max: 153.9 [N-m] at 0.094 [s]

Min: 0.3 [N-m] at -0.047 [s]

4-55

8642-NCAP-44

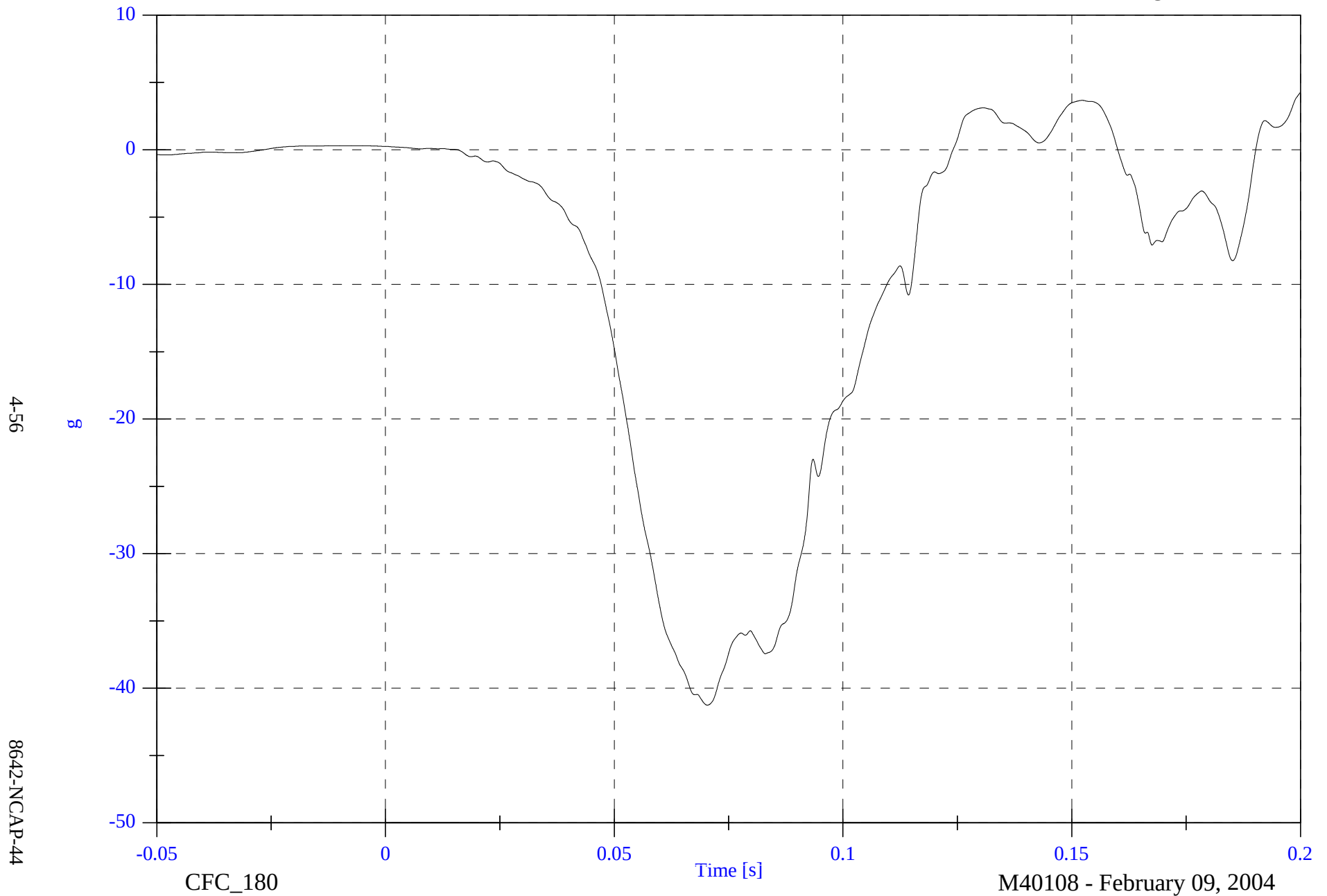


2004 NCAP Test 8 2004 Cadillac SRX

V1P4 Chest x

Max: 4.3 [g] at 0.200 [s]

Min: -41.3 [g] at 0.070 [s]

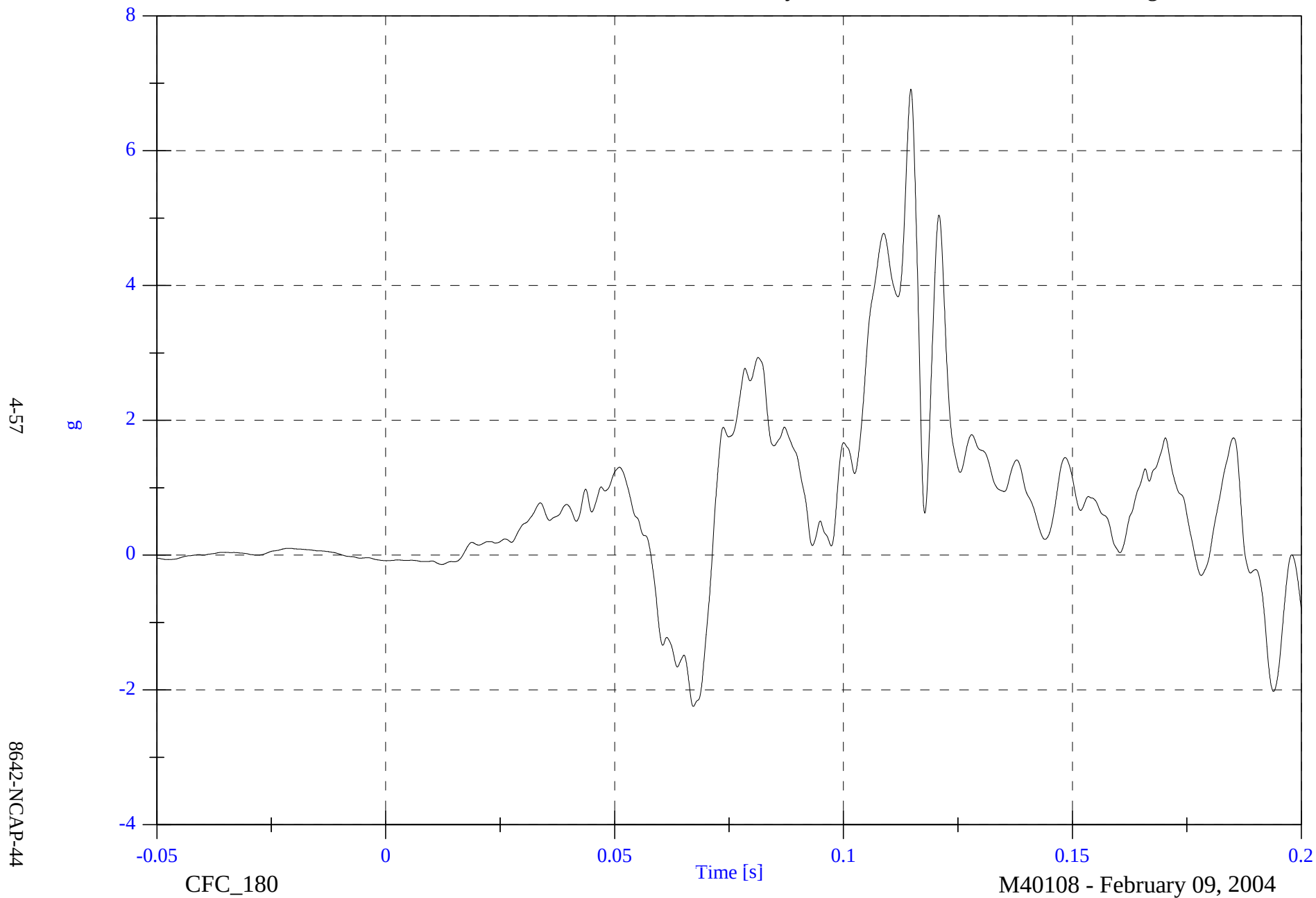


2004 NCAP Test 8 2004 Cadillac SRX

V1P4 Chest y

Max: 6.9 [g] at 0.115 [s]

Min: -2.2 [g] at 0.067 [s]

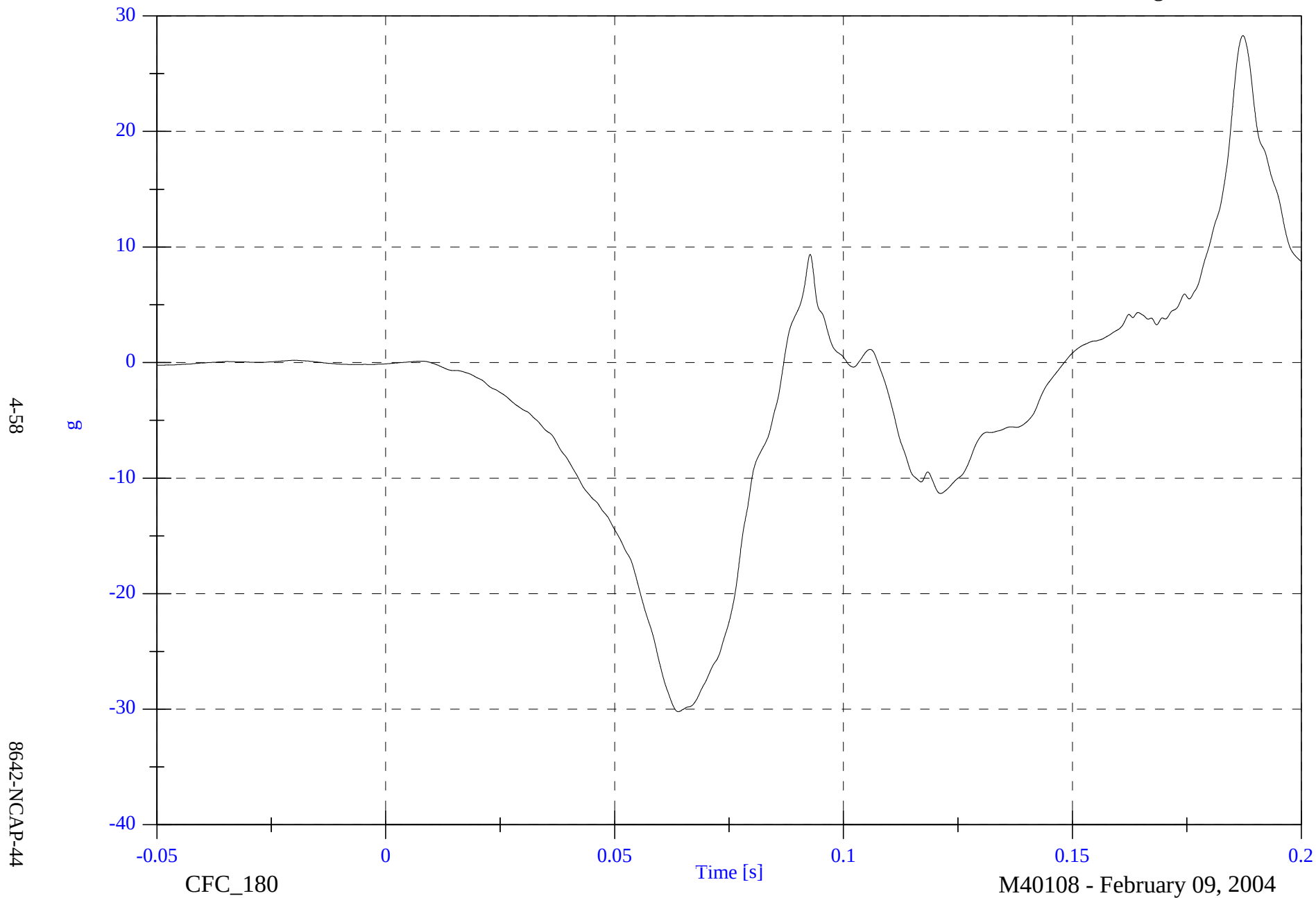


2004 NCAP Test 8 2004 Cadillac SRX

V1P4 Chest z

Max: 28.3 [g] at 0.187 [s]

Min: -30.2 [g] at 0.064 [s]



2004 NCAP Test 8 2004 Cadillac SRX

V1P4 Chest Resultant

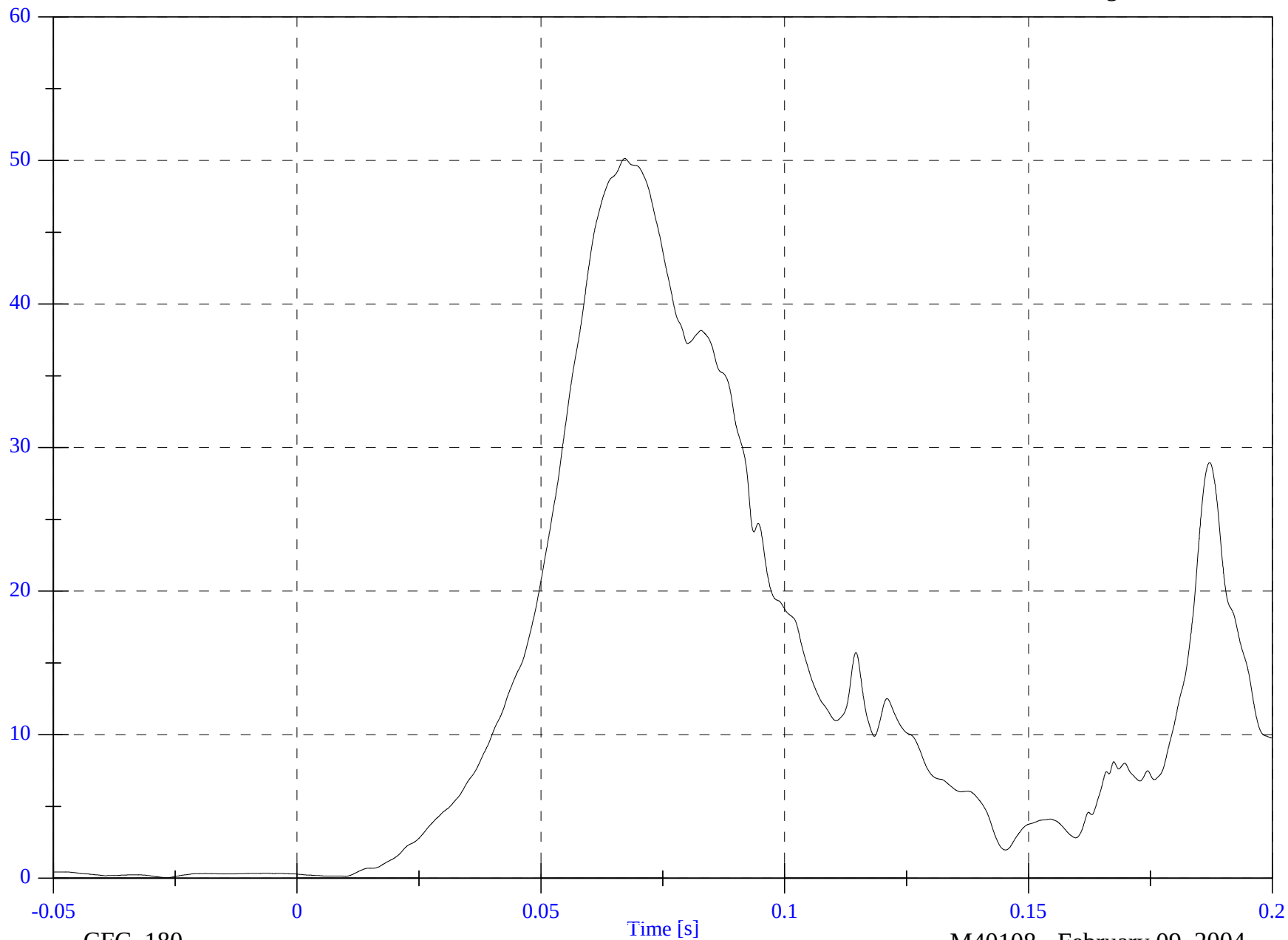
Max: 50.1 [g] at 0.067 [s]

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

4-59

8642-NCAP-44

g



CFC_180

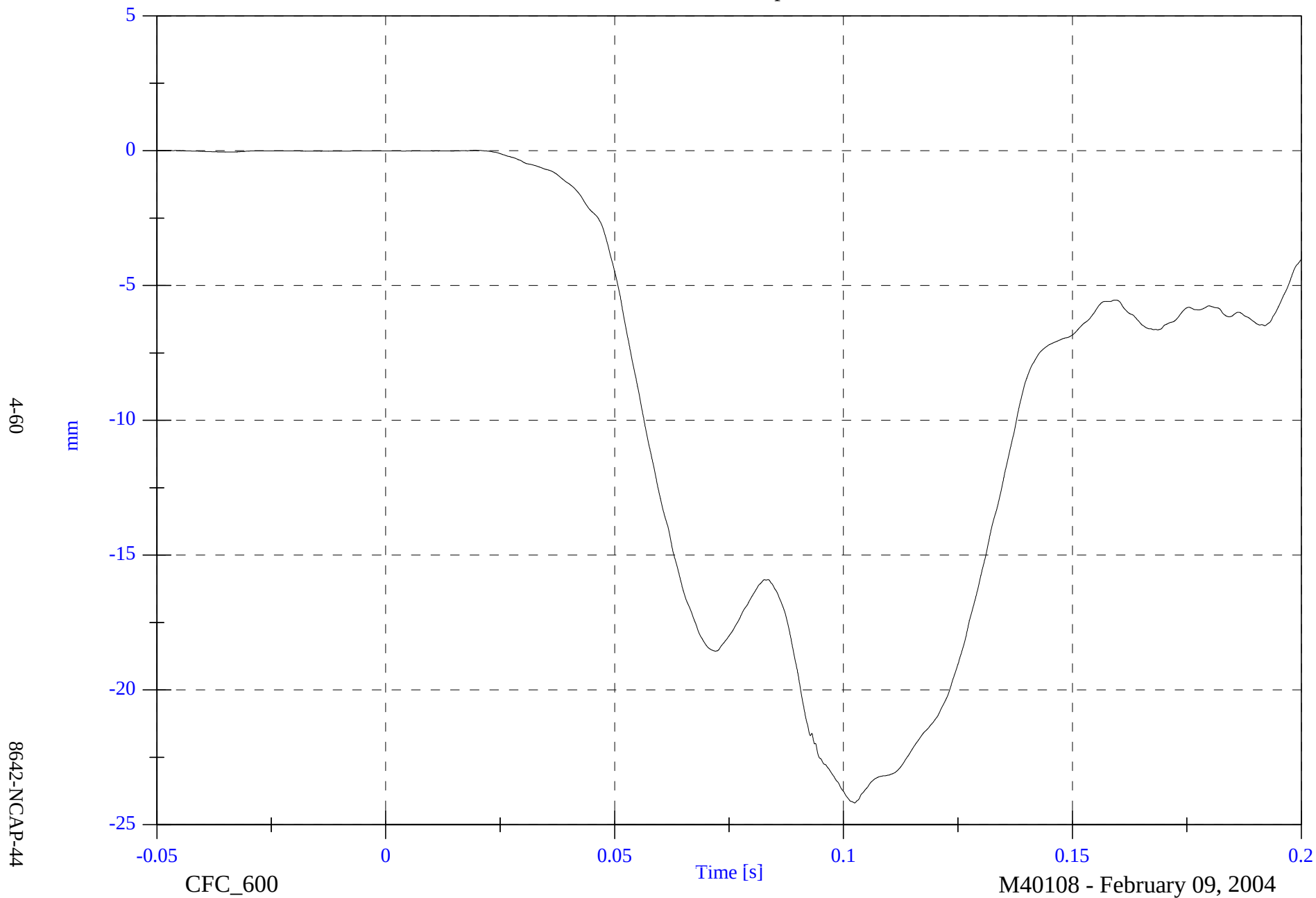
M40108 - February 09, 2004

2004 NCAP Test 8 2004 Cadillac SRX

V1P4 Chest Compression

Max: 0.0 [mm] at 0.019 [s]

Min: -24.2 [mm] at 0.102 [s]



2004 NCAP Test 8 2004 Cadillac SRX

V1P4 Pelvic x

Max: 19.6 [g] at 0.110 [s]

Min: -51.0 [g] at 0.062 [s]

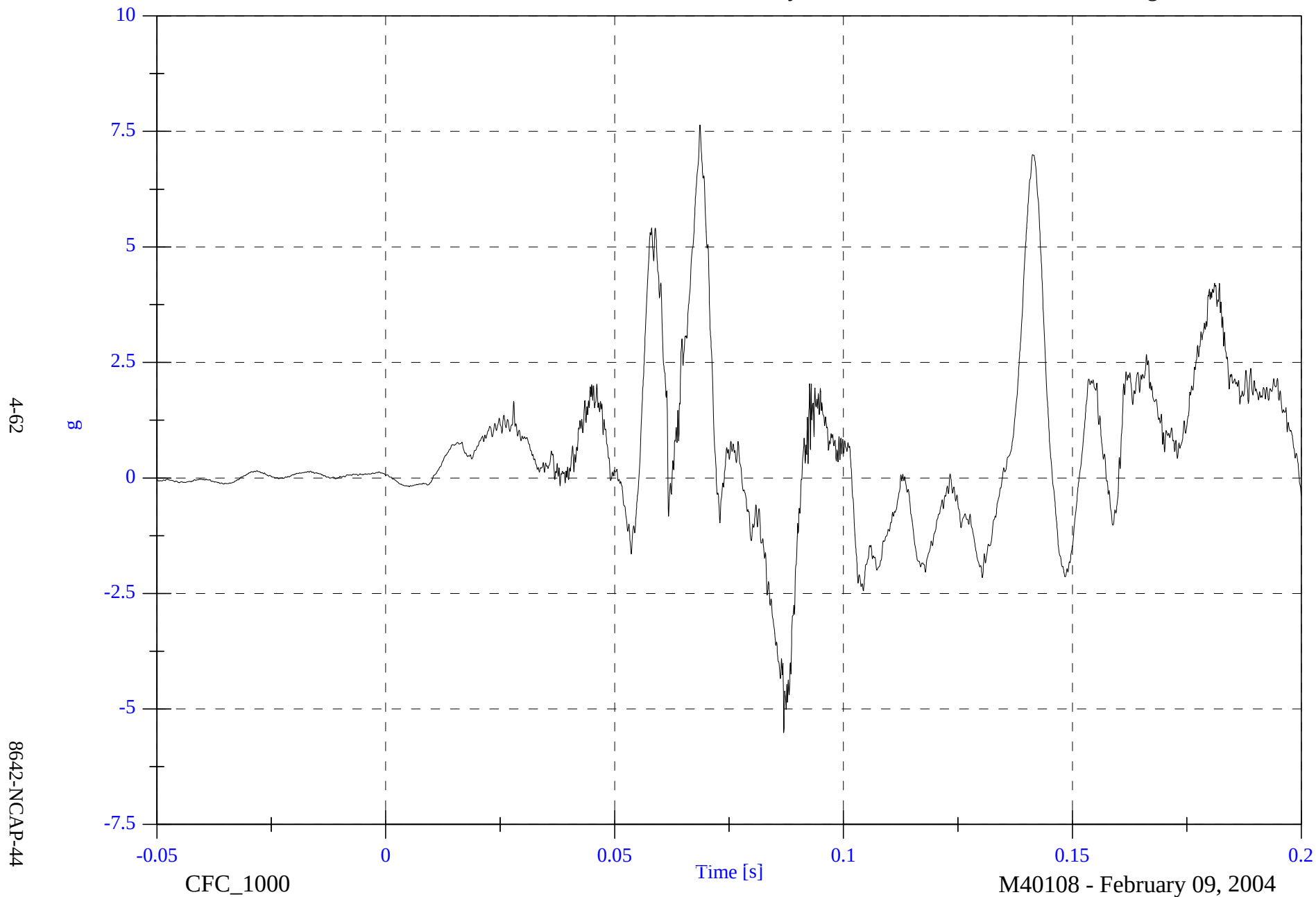


2004 NCAP Test 8 2004 Cadillac SRX

V1P4 Pelvic y

Max: 7.6 [g] at 0.069 [s]

Min: -5.5 [g] at 0.087 [s]

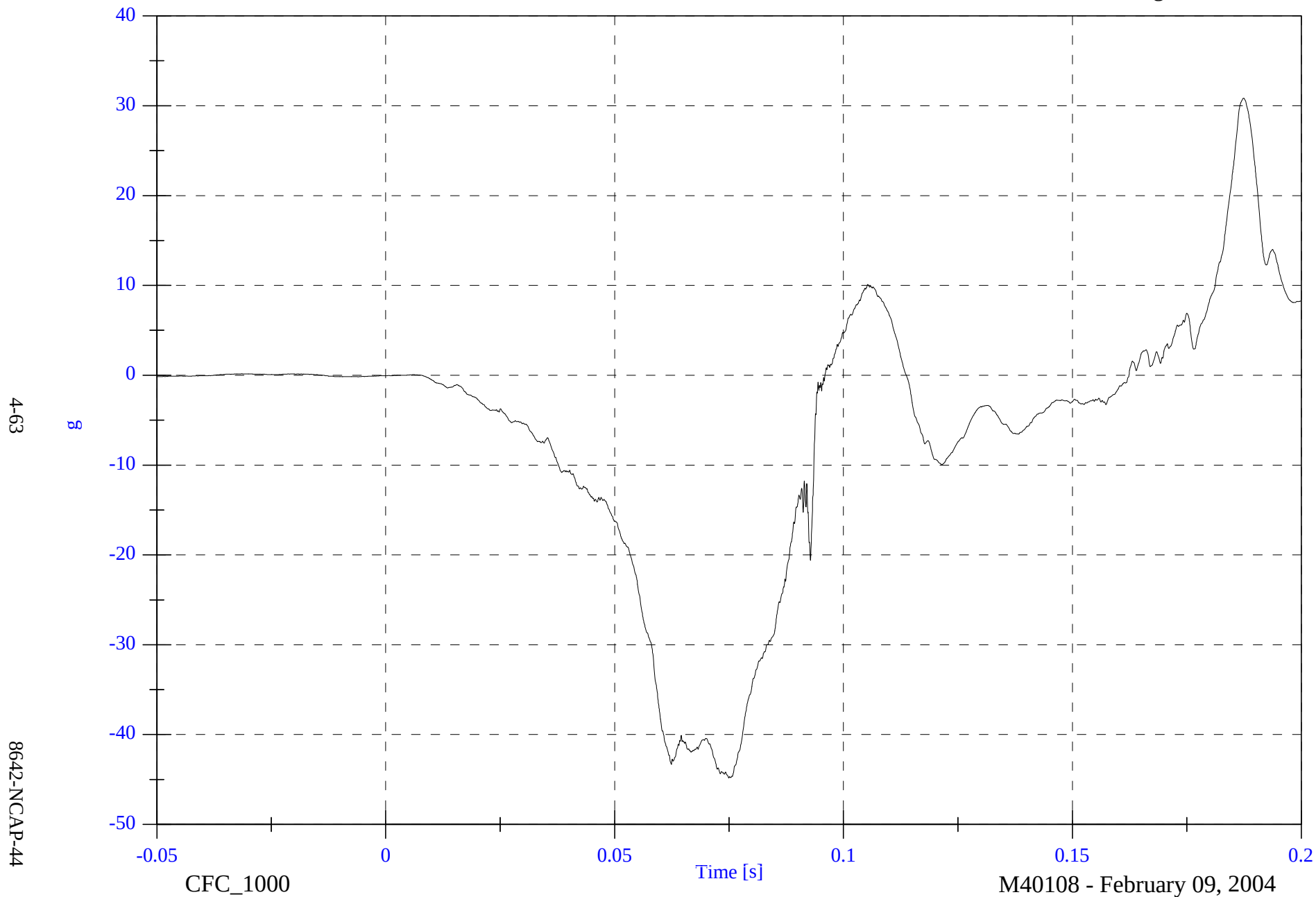


2004 NCAP Test 8 2004 Cadillac SRX

V1P4 Pelvic z

Max: 30.8 [g] at 0.187 [s]

Min: -44.8 [g] at 0.075 [s]



2004 NCAP Test 8 2004 Cadillac SRX

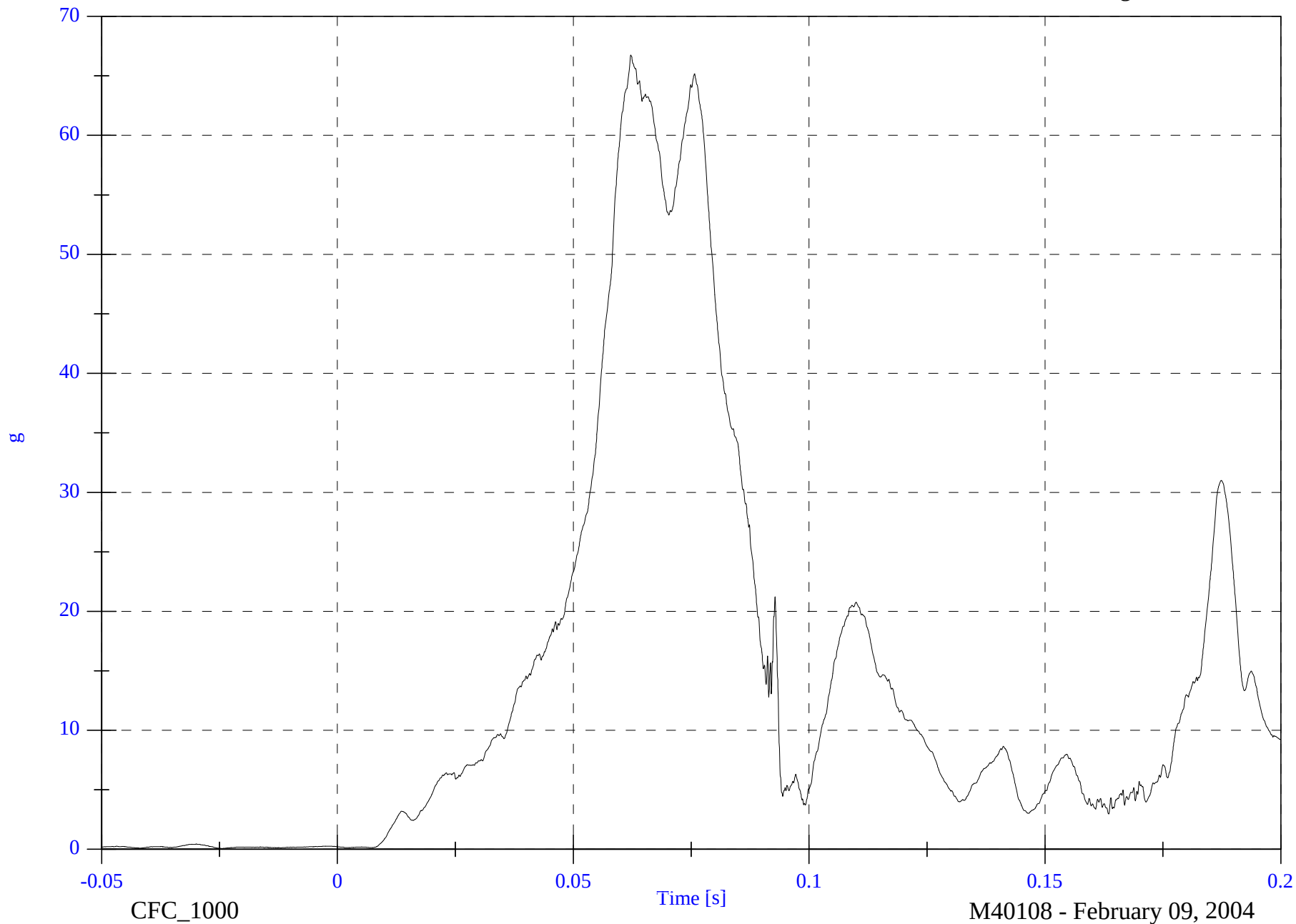
V1P4 Pelvic Resultant

Max: 66.7 [g] at 0.062 [s]

Min: 0.1 [g] at -0.025 [s]

4-64

8642-NCAP-44



CFC_1000

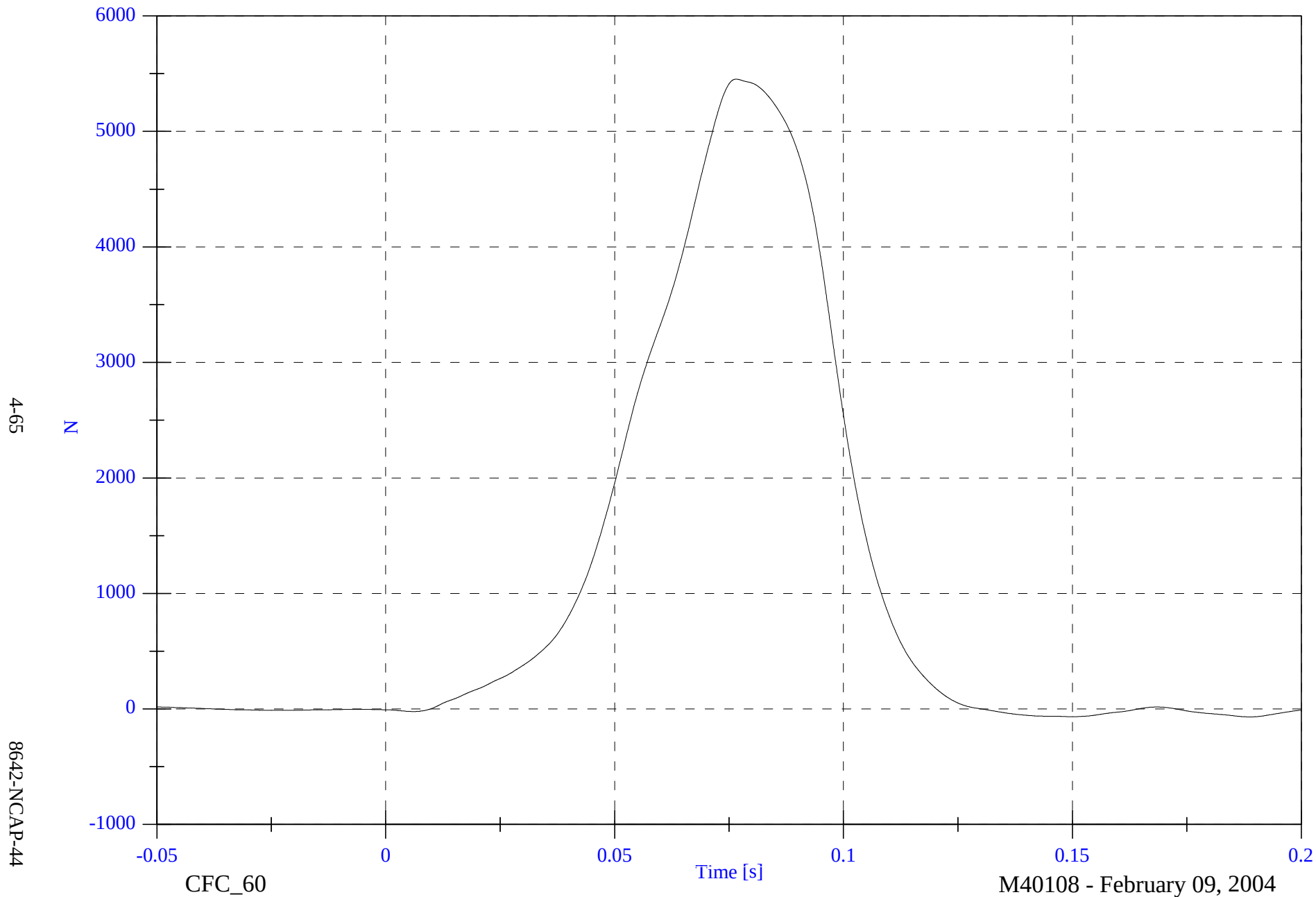
M40108 - February 09, 2004

2004 NCAP Test 8 2004 Cadillac SRX

V1P4 Tether Belt

Max: 5452.7 [N] at 0.077 [s]

Min: -69.0 [N] at 0.189 [s]

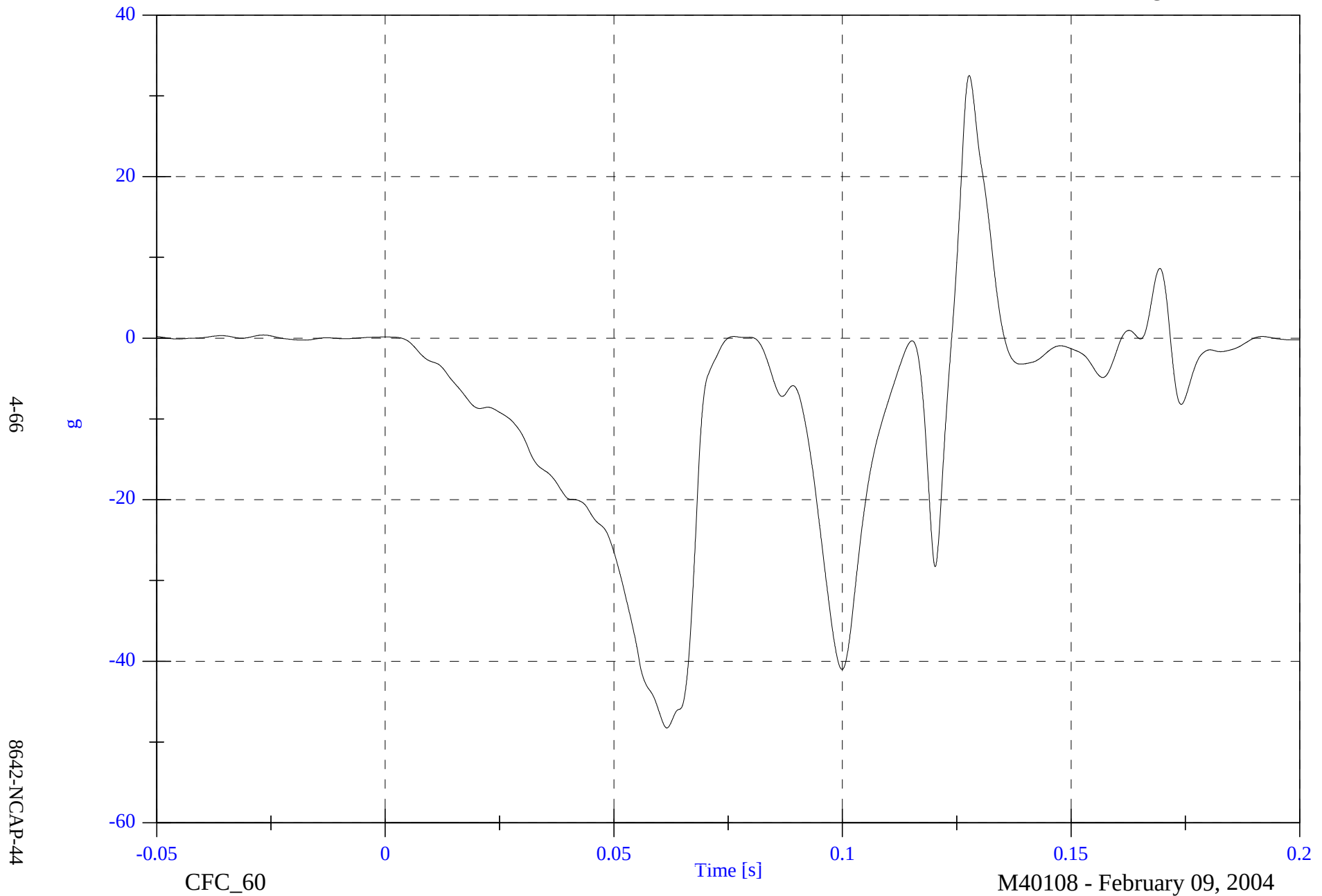


2004 NCAP Test 8 2004 Cadillac SRX

Max: 32.5 [g] at 0.128 [s]

Min: -48.3 [g] at 0.062 [s]

V1P3 CRS x

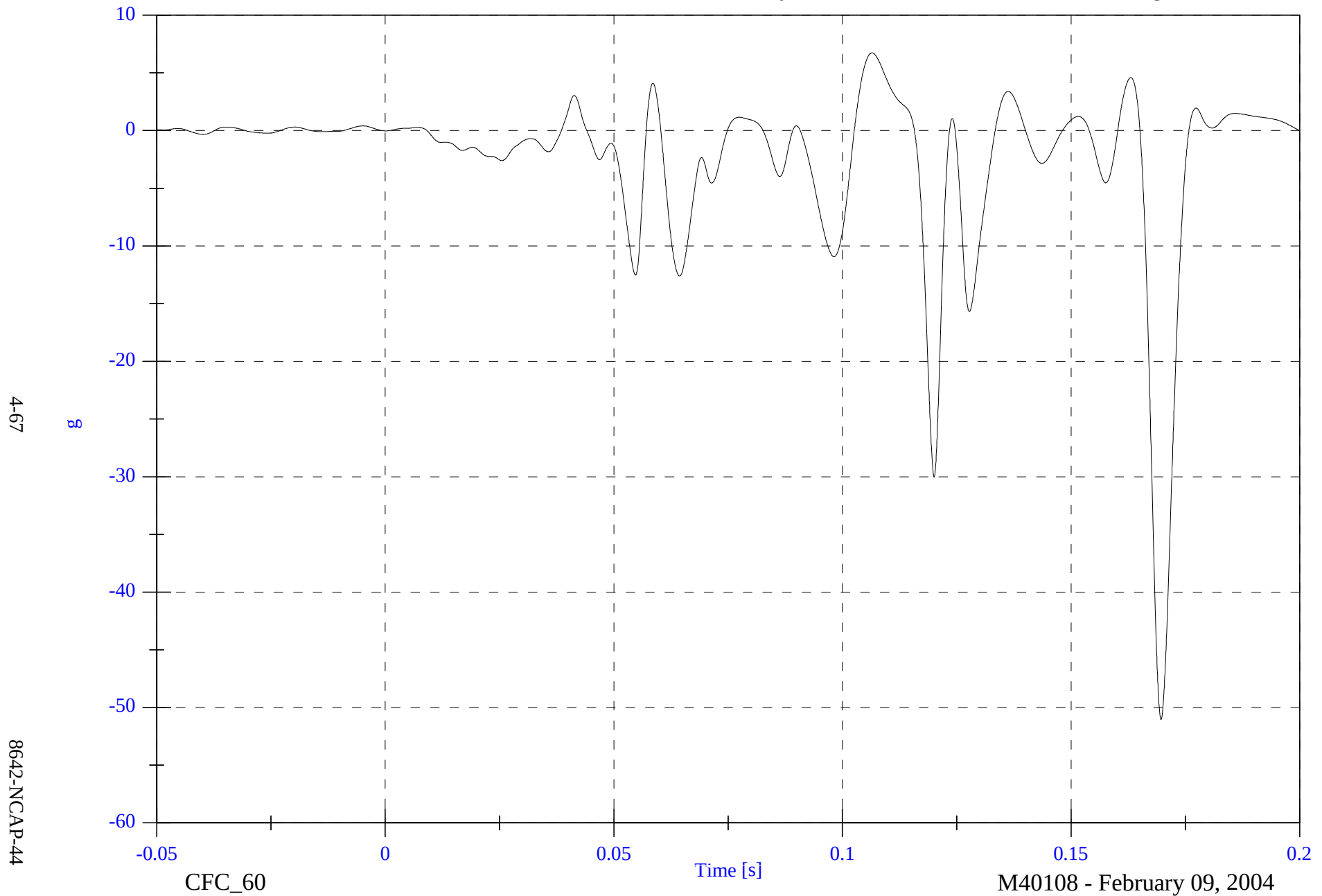


2004 NCAP Test 8 2004 Cadillac SRX

Max: 6.7 [g] at 0.106 [s]

Min: -51.0 [g] at 0.170 [s]

V1P3 CRS y

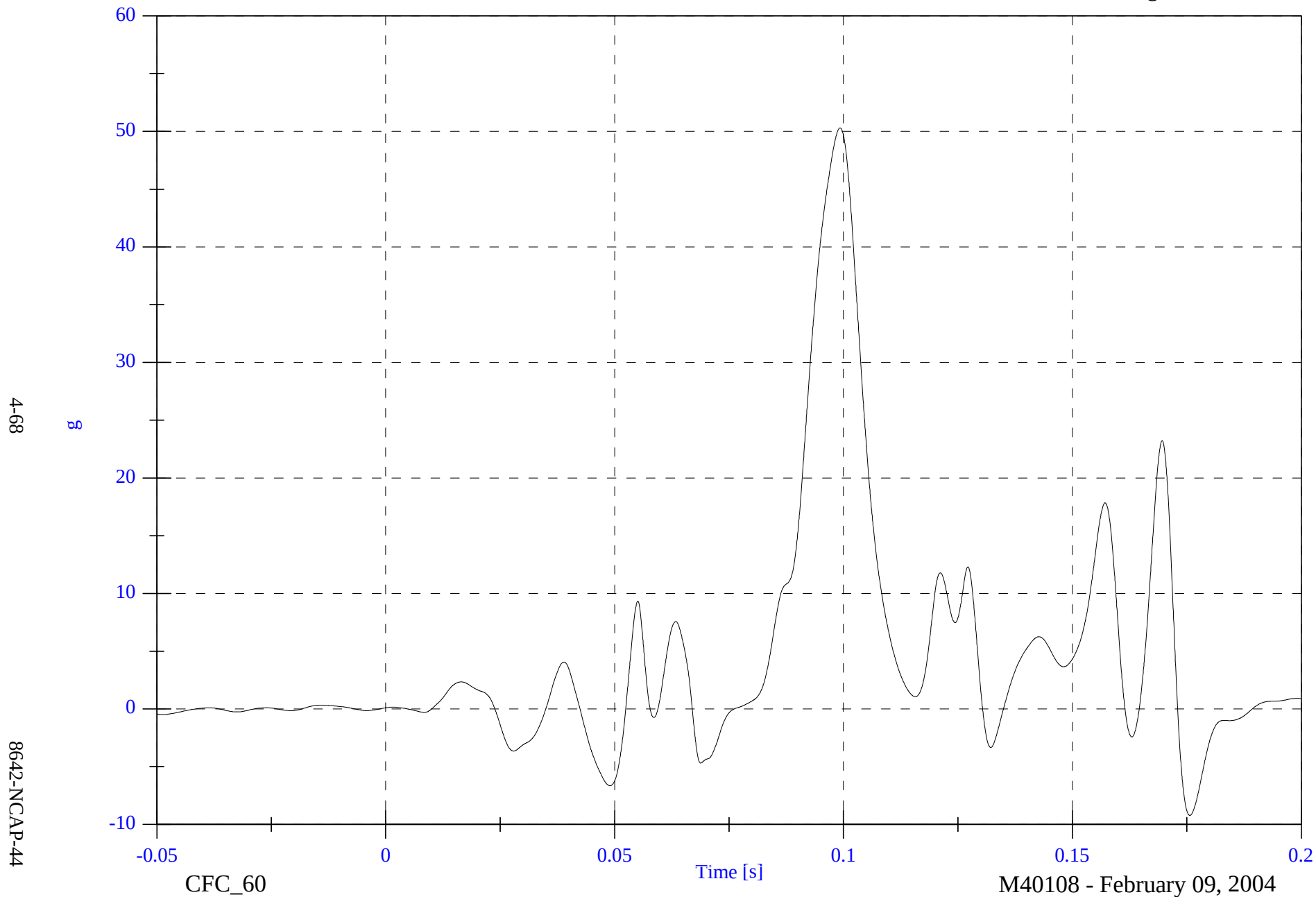


2004 NCAP Test 8 2004 Cadillac SRX

V1P3 CRS z

Max: 50.3 [g] at 0.099 [s]

Min: -9.2 [g] at 0.176 [s]

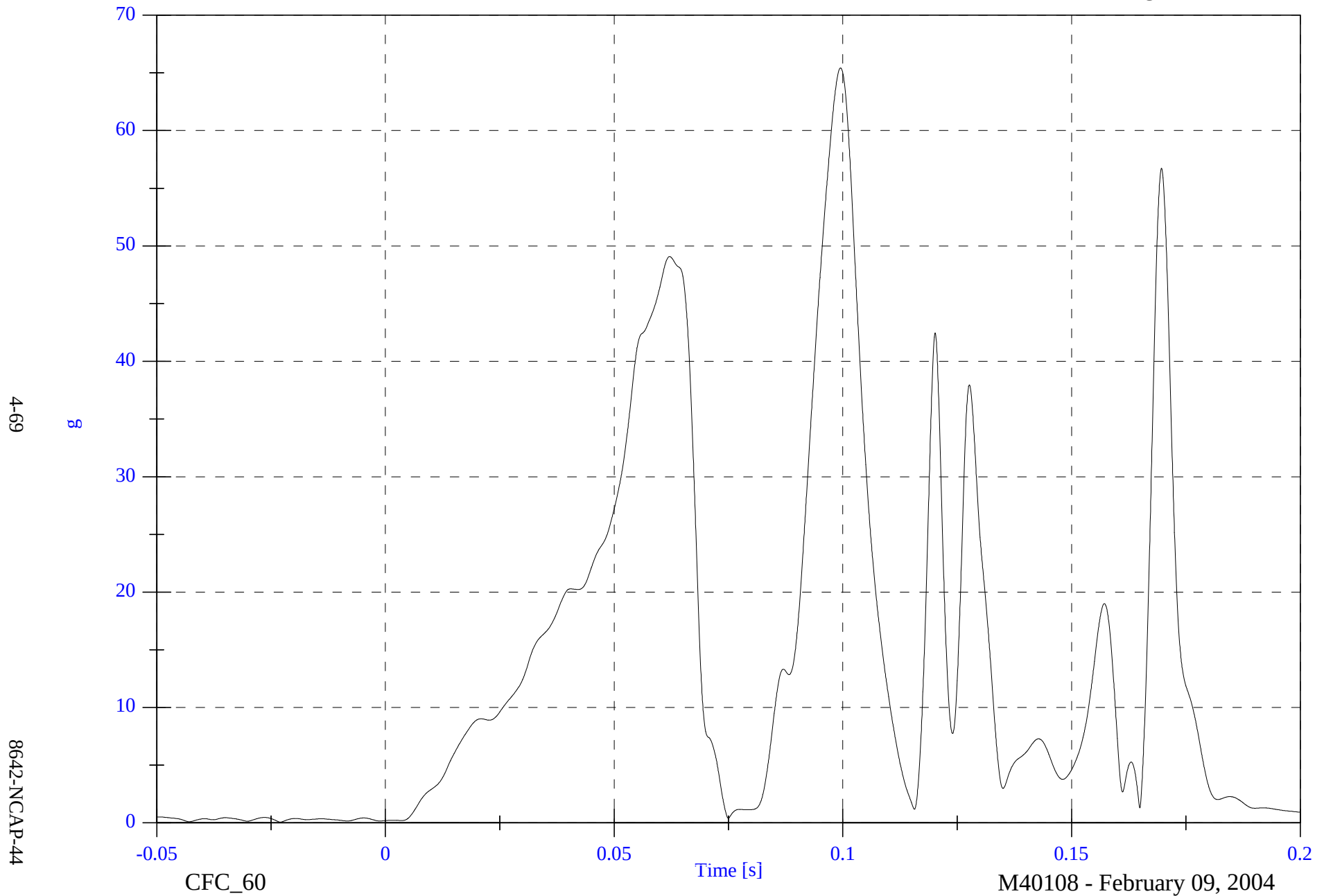


2004 NCAP Test 8 2004 Cadillac SRX

V1P3 CRS Resultant

Max: 65.4 [g] at 0.099 [s]

Min: 0.1 [g] at -0.023 [s]

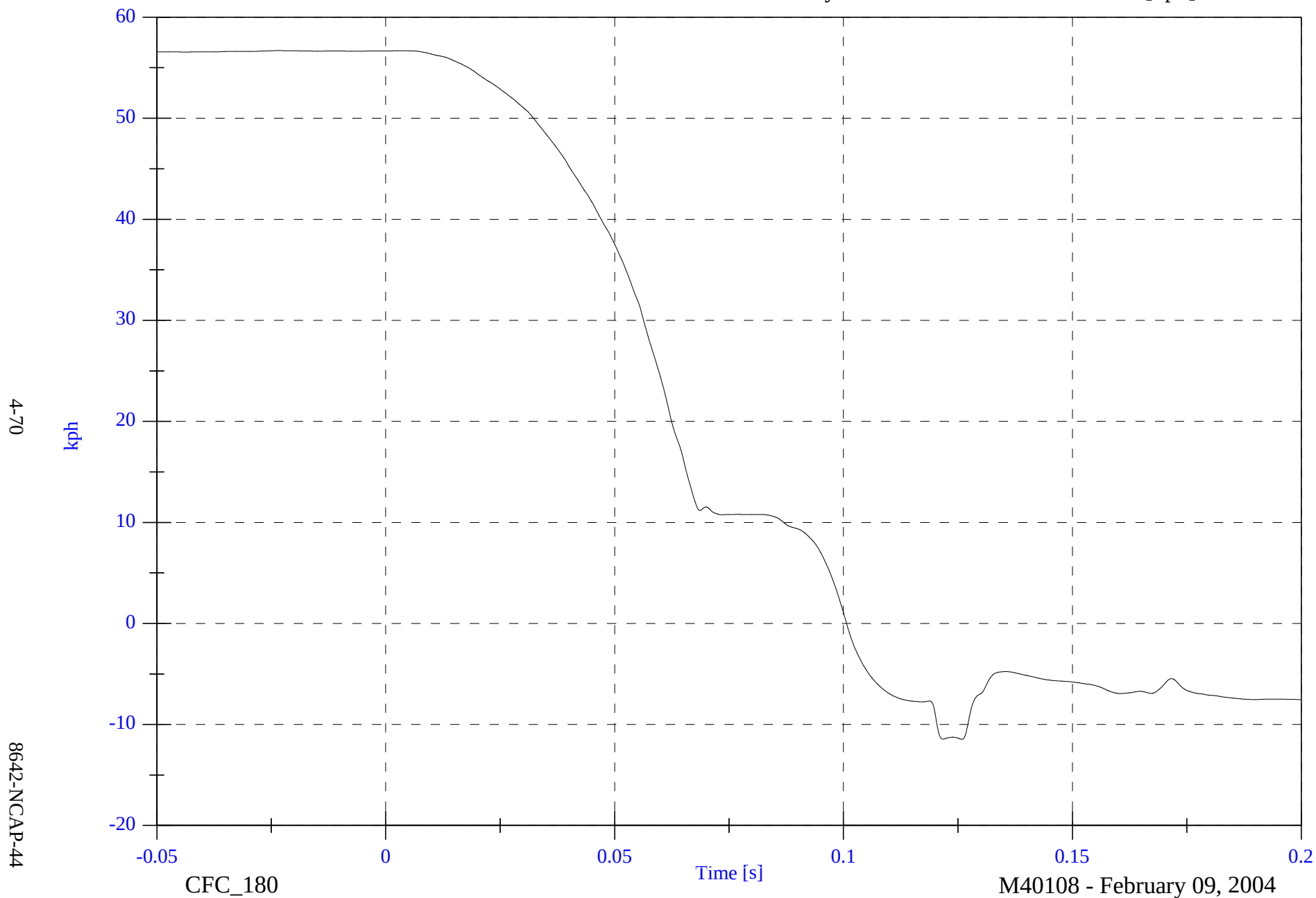


2004 NCAP Test 8 2004 Cadillac SRX

Max: 56.7 [kph] at -0.024 [s]

Min: -11.5 [kph] at 0.126 [s]

V1P3 CRS x Velocity



2004 NCAP Test 8 2004 Cadillac SRX

Max: 0.1 [kph] at 0.010 [s]

Min: -22.5 [kph] at 0.175 [s]

V1P3 CRS y Velocity



2004 NCAP Test 8 2004 Cadillac SRX

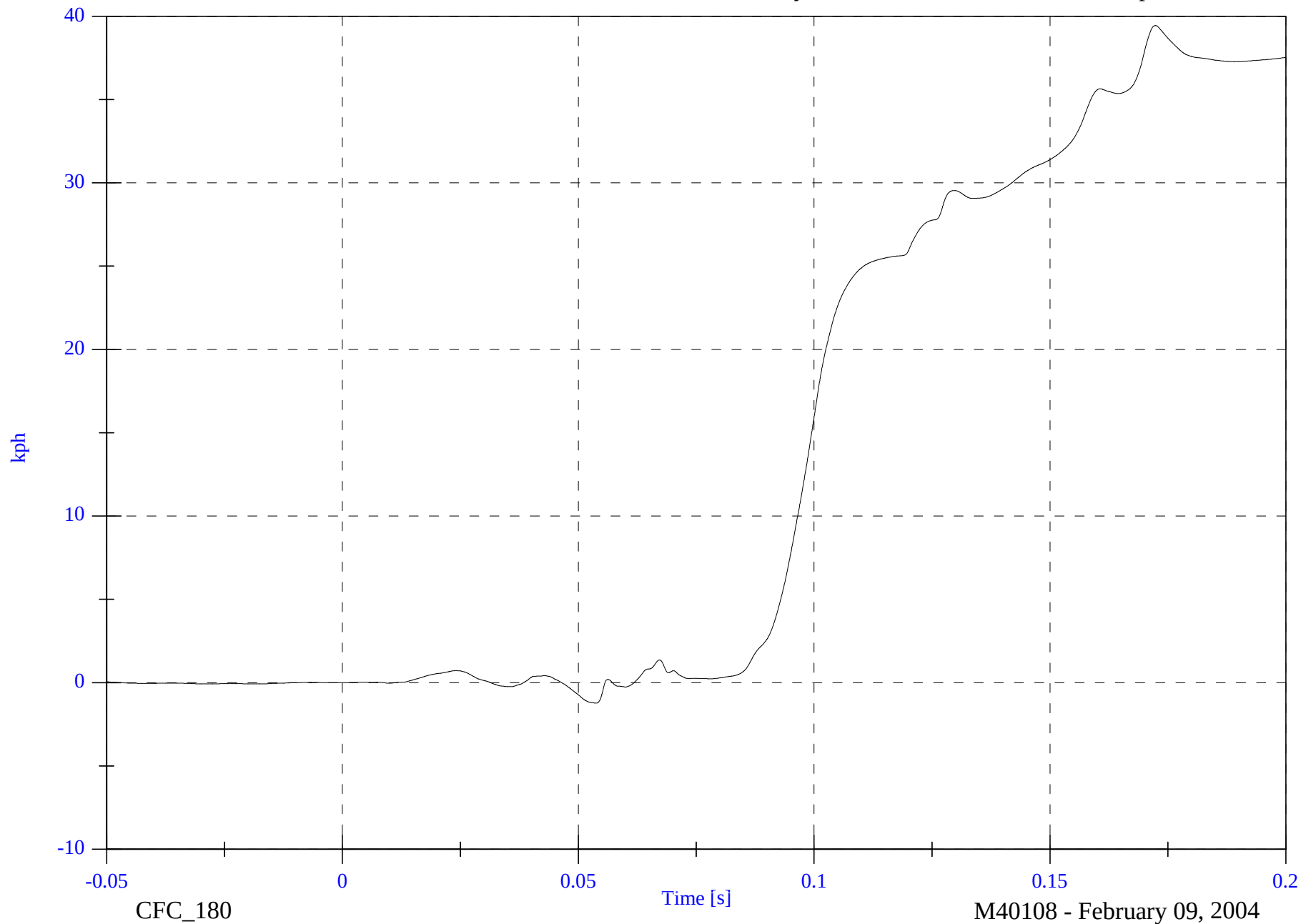
V1P3 CRS z Velocity

Max: 39.5 [kph] at 0.172 [s]

Min: -1.2 [kph] at 0.054 [s]

4-72

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2004 NCAP Test 8 2004 Cadillac SRX

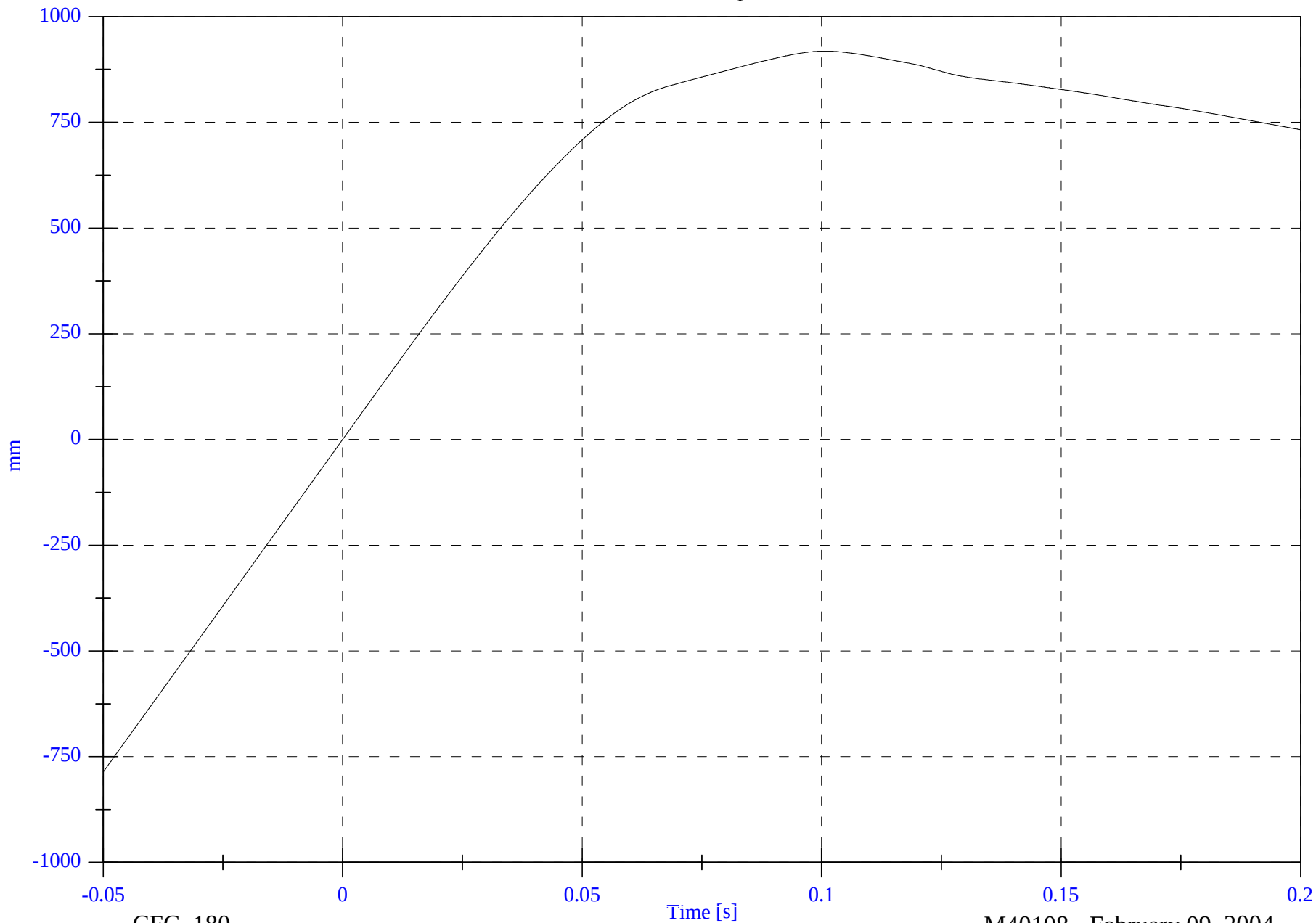
V1P3 CRS x Displacement

Max: 918.4 [mm] at 0.101 [s]

Min: -786.5 [mm] at -0.050 [s]

4-73

8642-NCAP-44



CFC_180

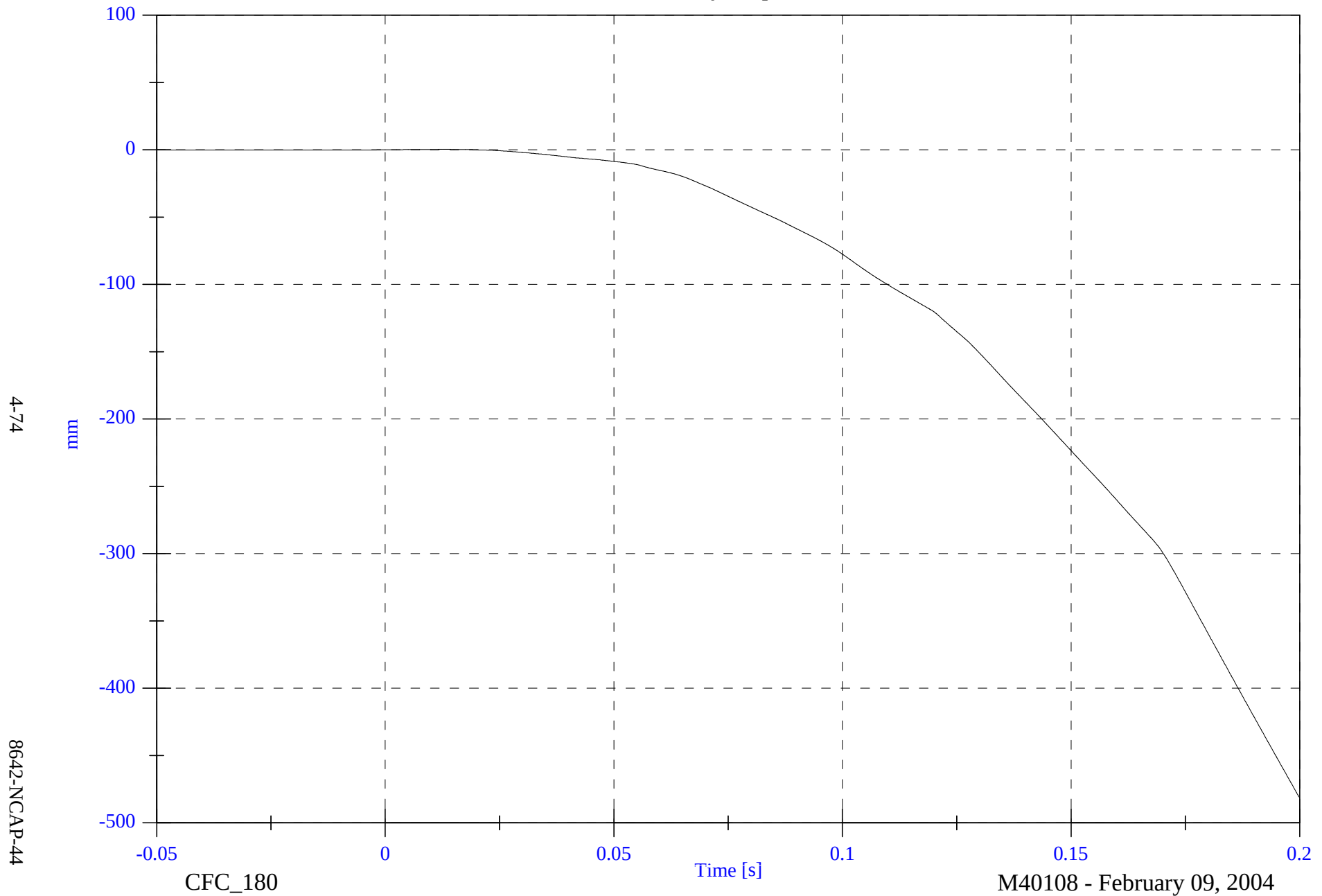
M40108 - February 09, 2004

2004 NCAP Test 8 2004 Cadillac SRX

V1P3 CRS y Displacement

Max: 0.3 [mm] at 0.013 [s]

Min: -481.3 [mm] at 0.200 [s]

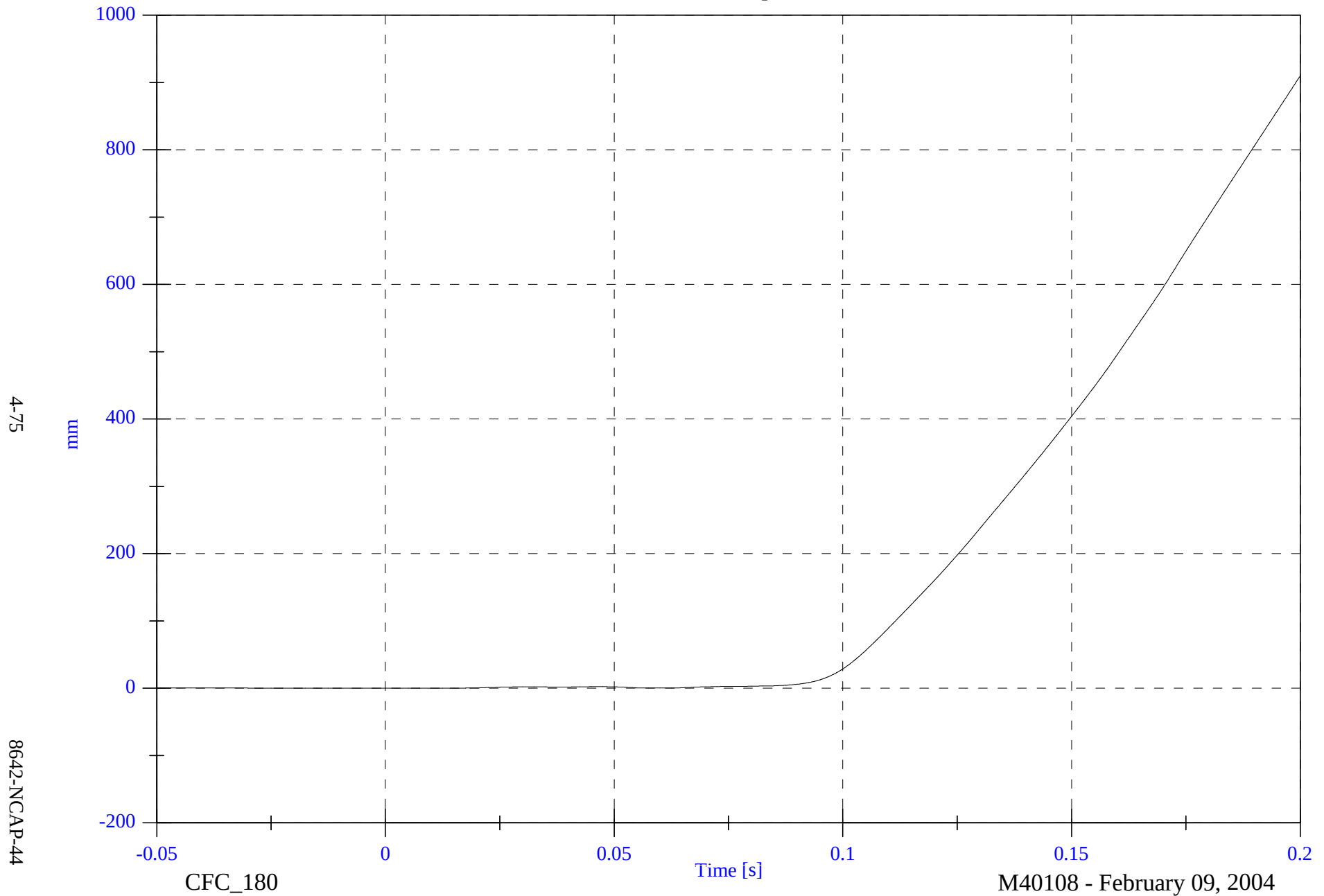


2004 NCAP Test 8 2004 Cadillac SRX

V1P3 CRS z Displacement

Max: 909.5 [mm] at 0.200 [s]

Min: -0.0 [mm] at -0.010 [s]

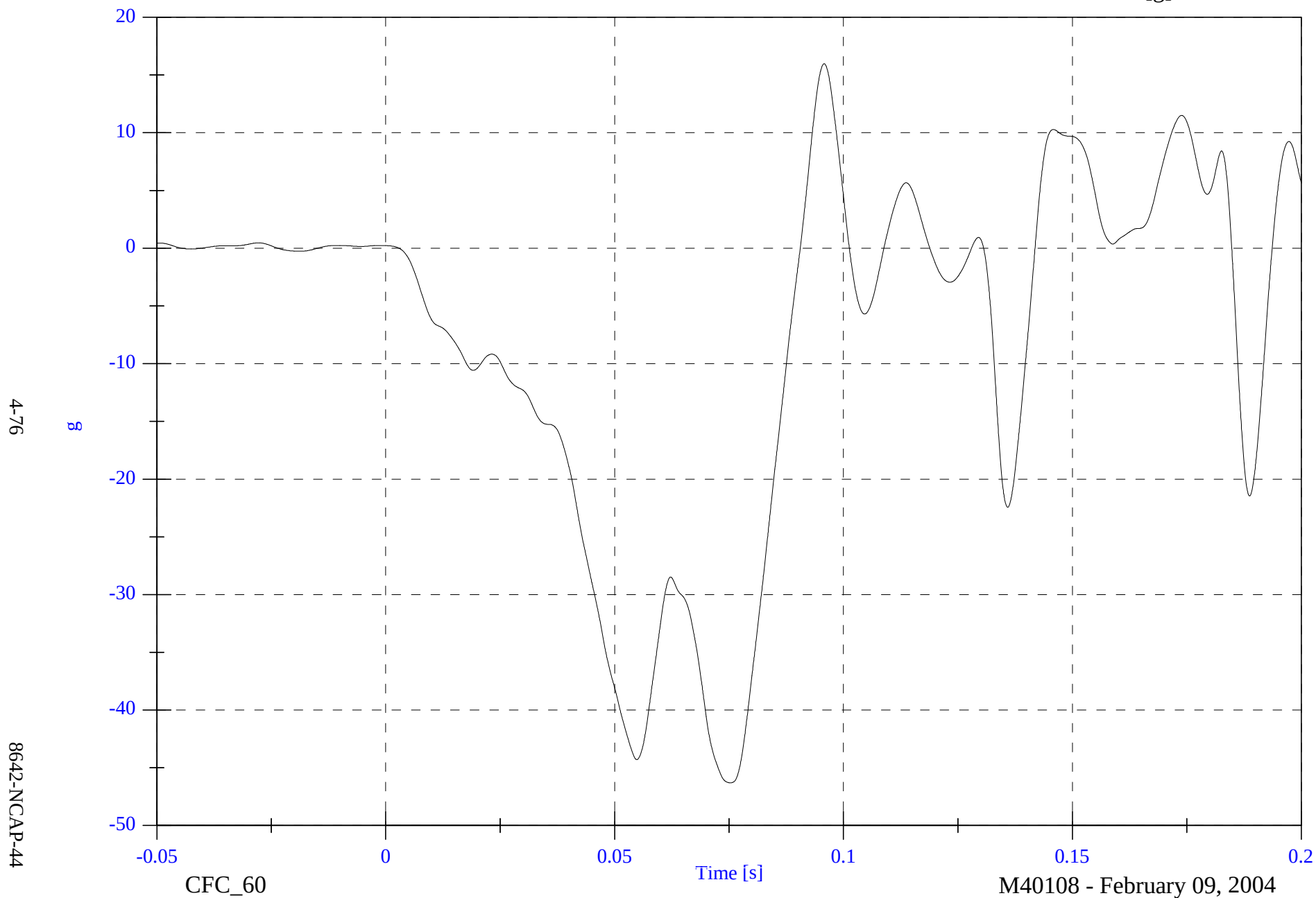


2004 NCAP Test 8 2004 Cadillac SRX

V1P4 CRS x

Max: 16.0 [g] at 0.096 [s]

Min: -46.3 [g] at 0.075 [s]



2004 NCAP Test 8 2004 Cadillac SRX

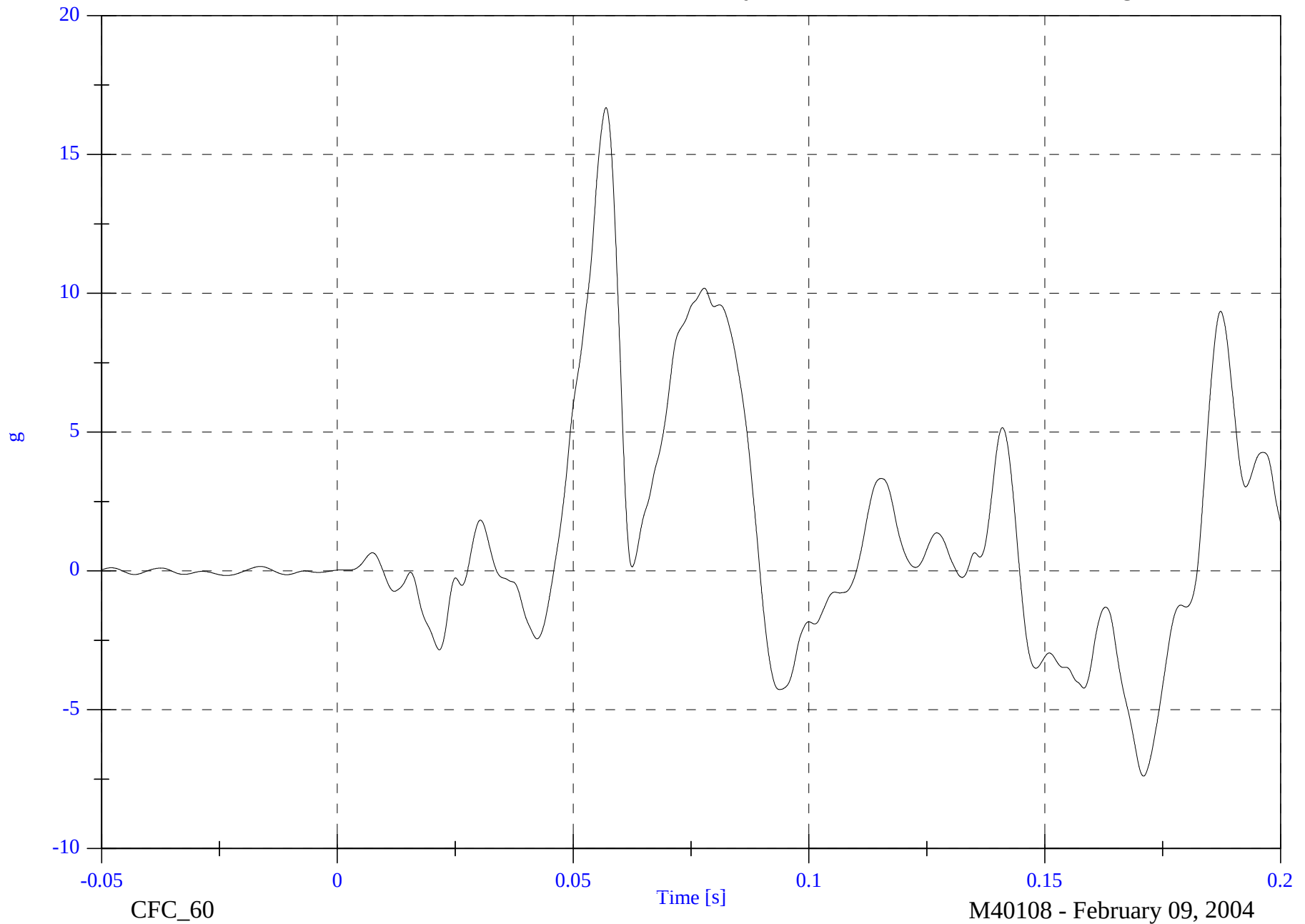
V1P4 CRS y

Max: 16.7 [g] at 0.057 [s]

Min: -7.4 [g] at 0.171 [s]

4-77

8642-NCAP-44



2004 NCAP Test 8 2004 Cadillac SRX

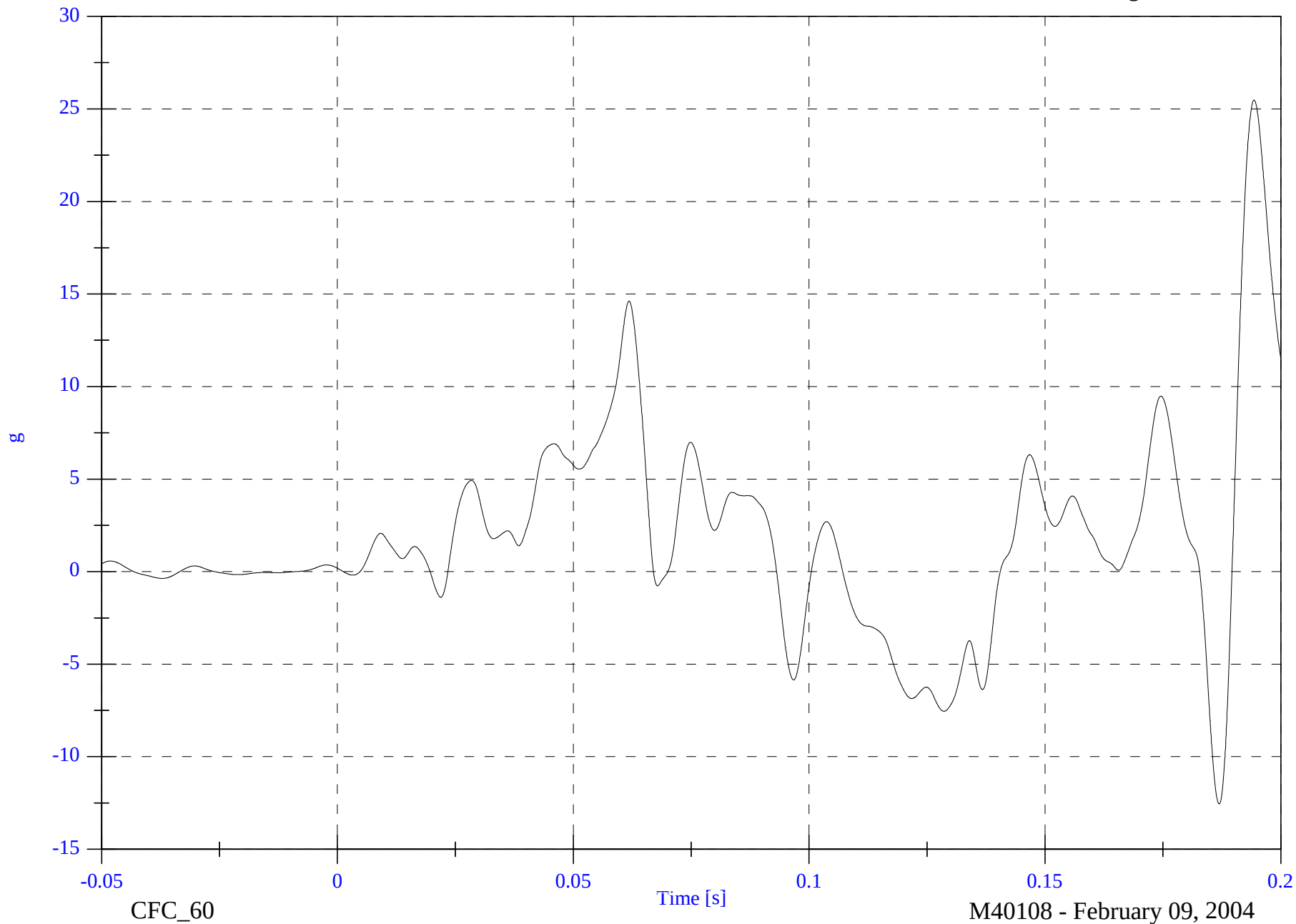
V1P4 CRS z

Max: 25.5 [g] at 0.194 [s]

Min: -12.6 [g] at 0.187 [s]

4-78

8642-NCAP-44

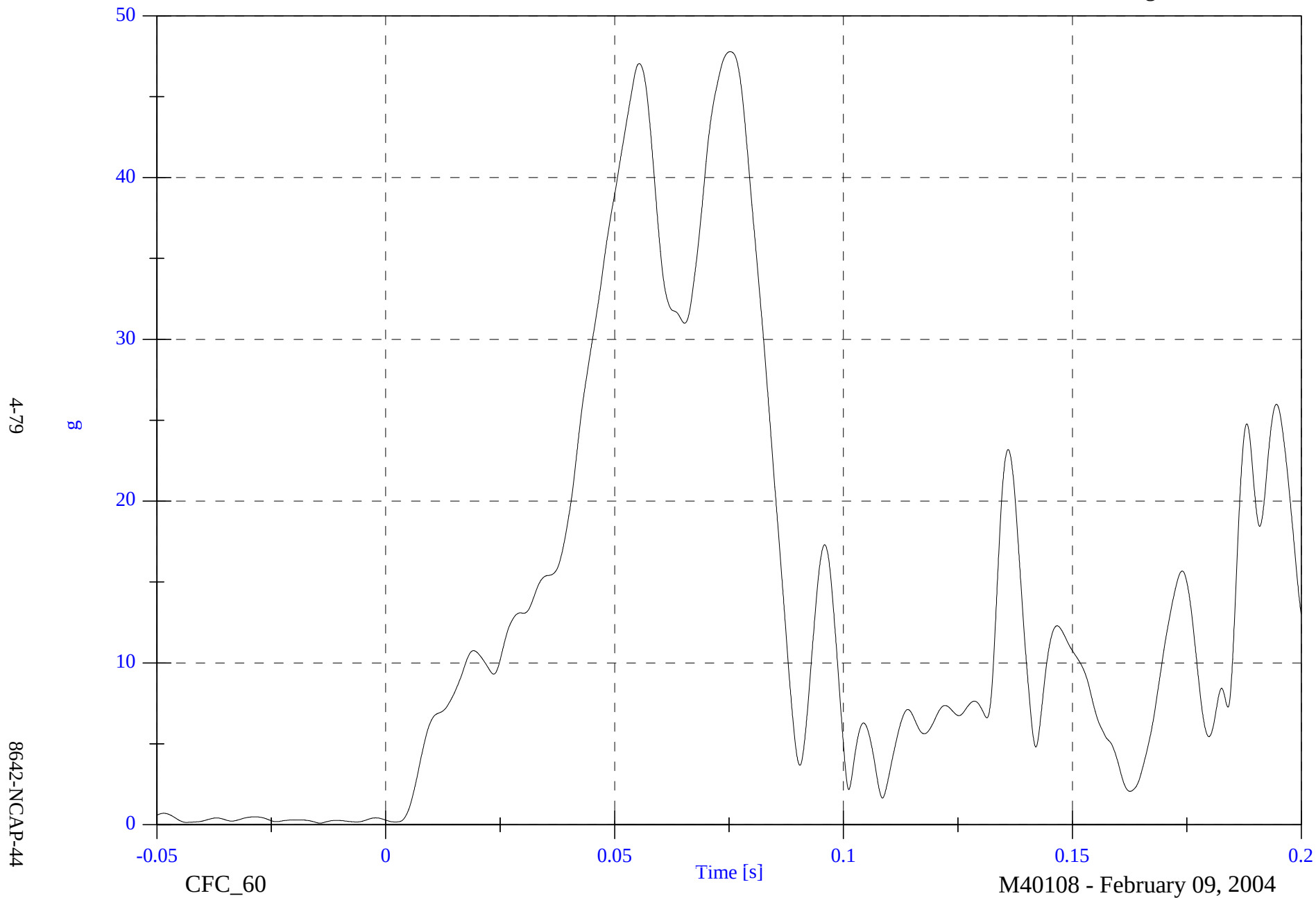


2004 NCAP Test 8 2004 Cadillac SRX

V1P4 CRS Resultant

Max: 47.8 [g] at 0.075 [s]

Min: 0.1 [g] at -0.014 [s]

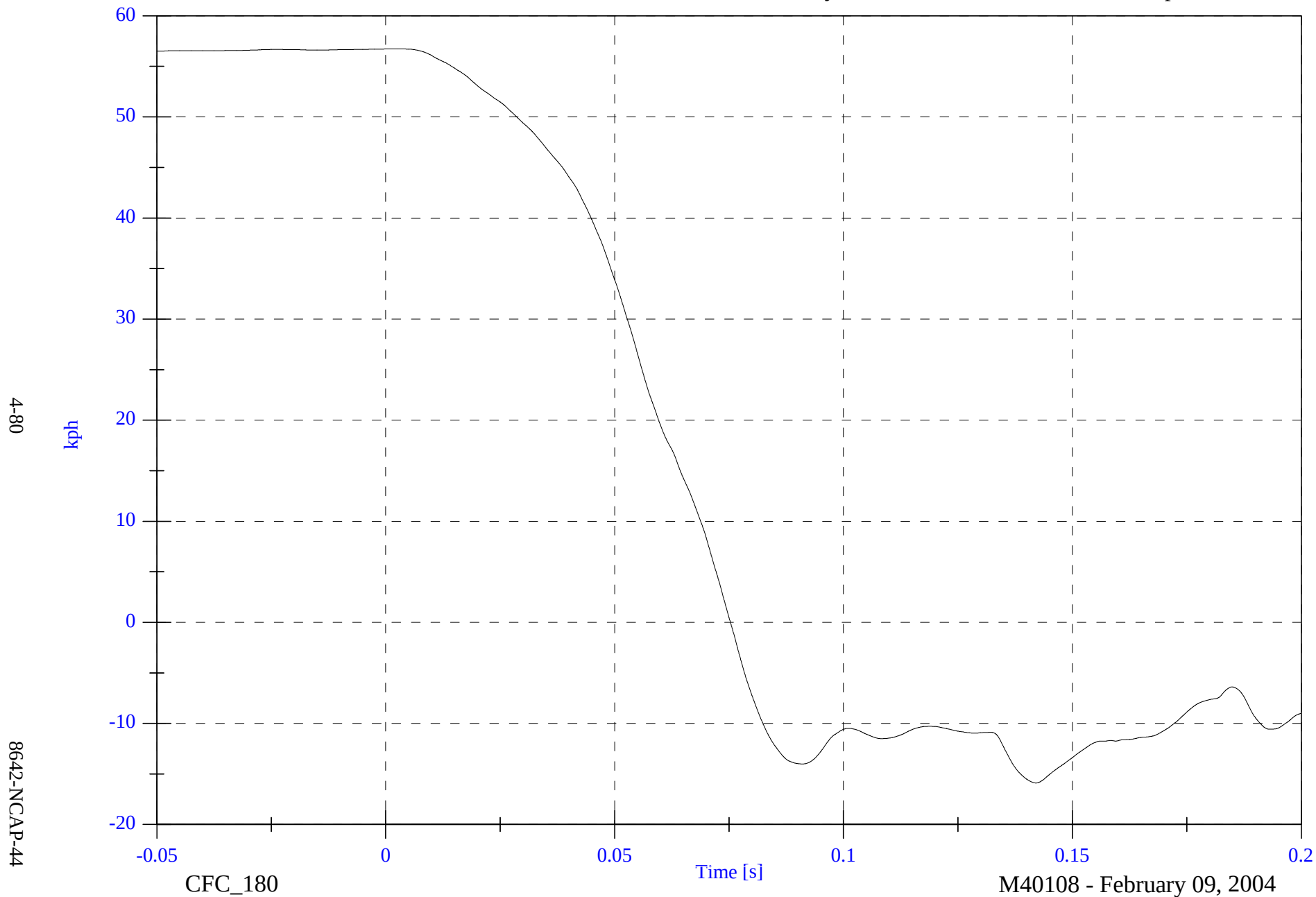


2004 NCAP Test 8 2004 Cadillac SRX

Max: 56.7 [kph] at 0.003 [s]

Min: -15.9 [kph] at 0.142 [s]

V1P4 CRS x Velocity

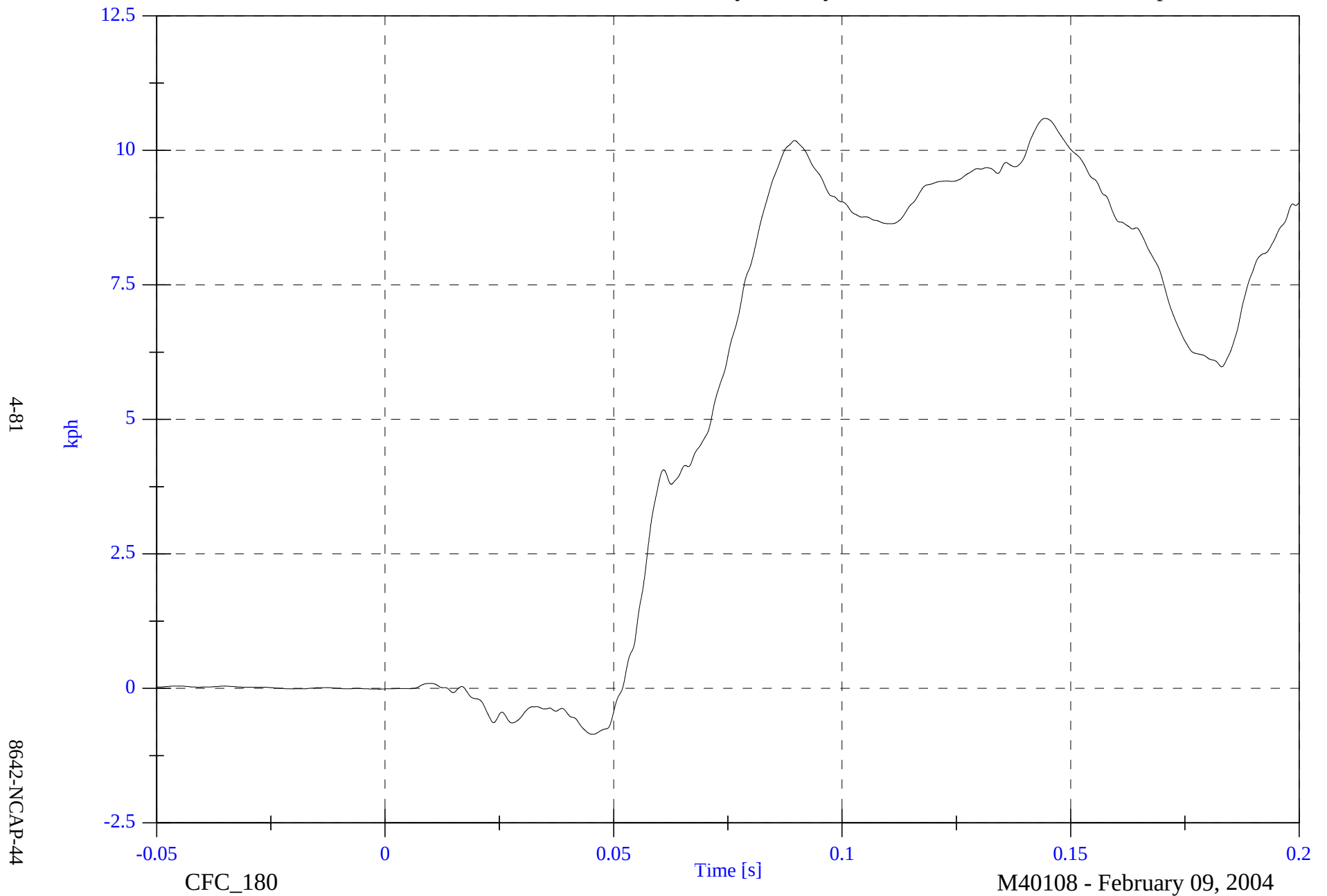


2004 NCAP Test 8 2004 Cadillac SRX

Max: 10.6 [kph] at 0.144 [s]

Min: -0.9 [kph] at 0.045 [s]

V1P4 CRS y Velocity



4-81

8642-NCAP-44

CFC_180

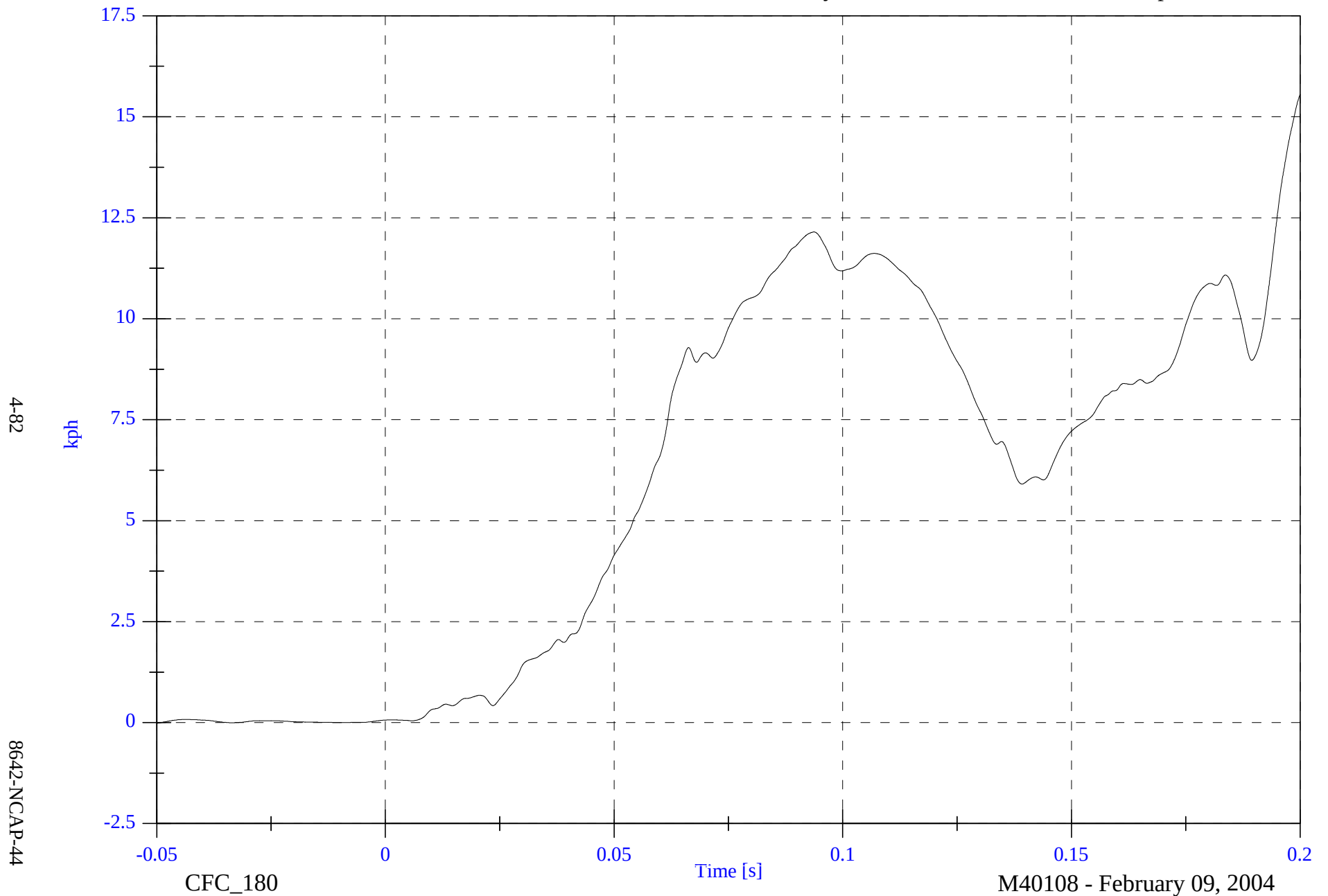
M40108 - February 09, 2004

2004 NCAP Test 8 2004 Cadillac SRX

Max: 15.6 [kph] at 0.200 [s]

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

V1P4 CRS z Velocity



2004 NCAP Test 8 2004 Cadillac SRX

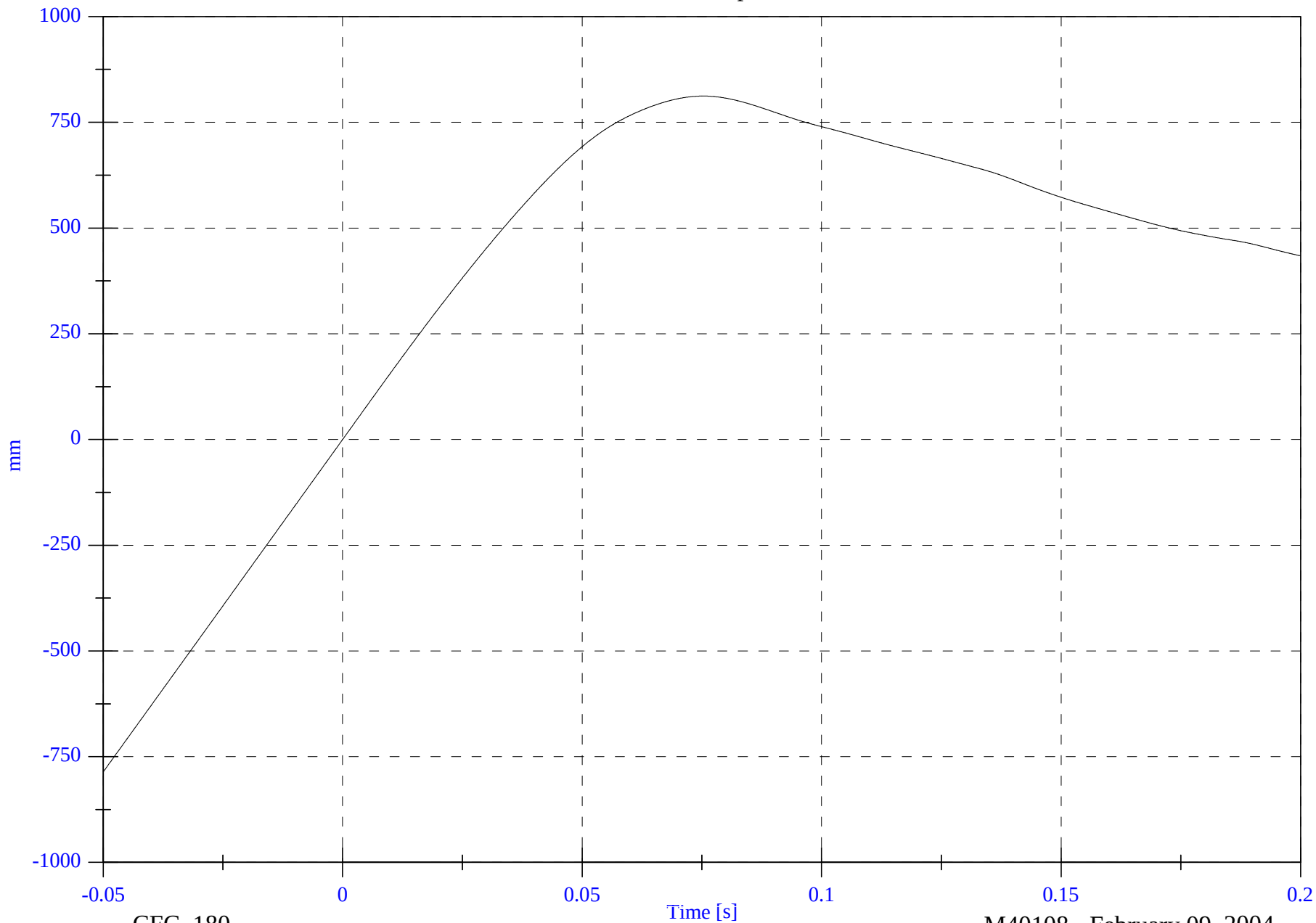
V1P4 CRS x Displacement

Max: 812.0 [mm] at 0.075 [s]

Min: -786.3 [mm] at -0.050 [s]

4-83

8642-NCAP-44



CFC_180

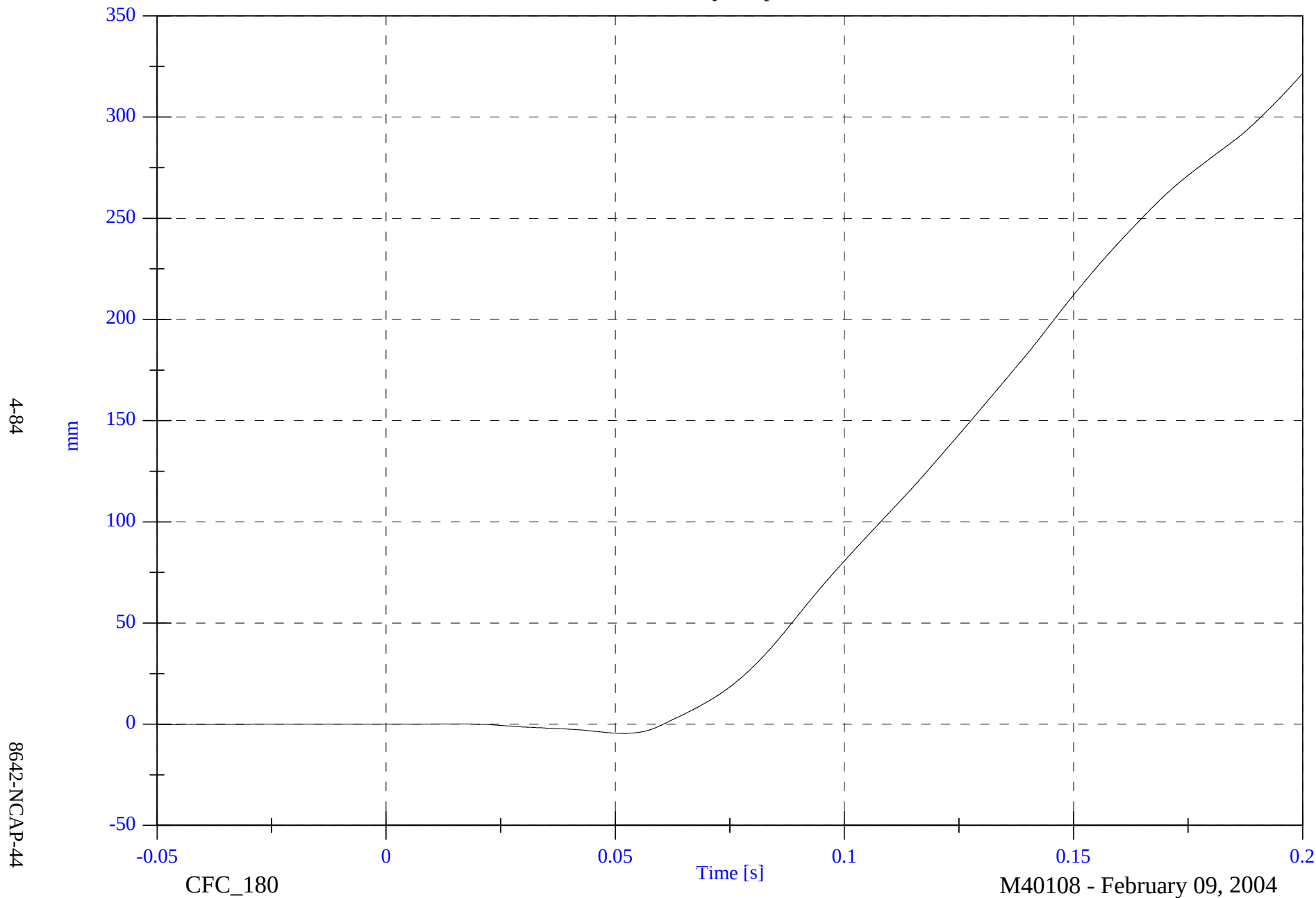
M40108 - February 09, 2004

2004 NCAP Test 8 2004 Cadillac SRX

V1P4 CRS y Displacement

Max: 321.4 [mm] at 0.200 [s]

Min: -4.5 [mm] at 0.052 [s]

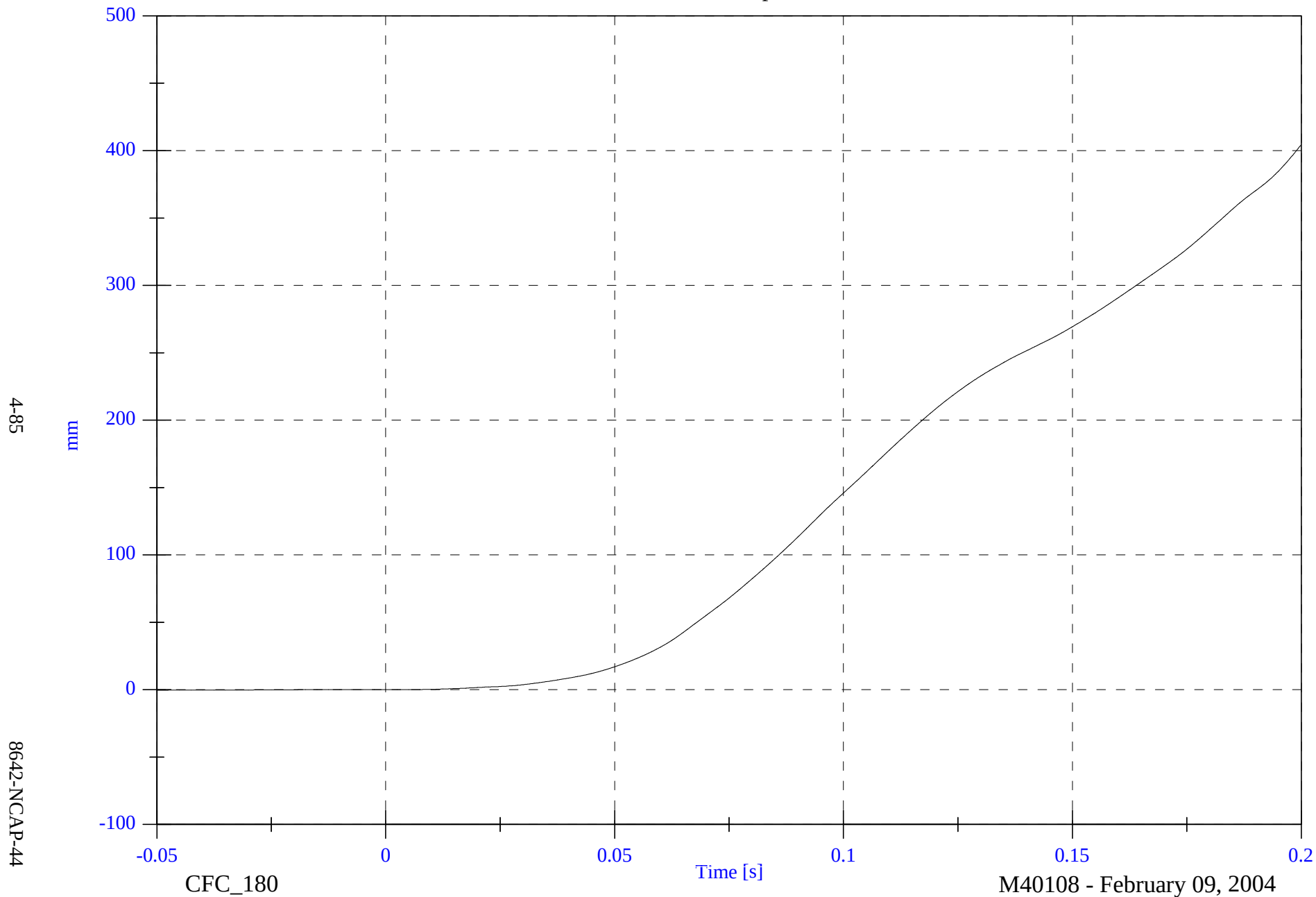


2004 NCAP Test 8 2004 Cadillac SRX

V1P4 CRS z Displacement

Max: 404.3 [mm] at 0.200 [s]

Min: -0.4 [mm] at -0.049 [s]



SECTION 5

CHILD DUMMY CALIBRATION INFORMATION

PART 572P
HEAD DROP TEST

Dummy Serial Number 044
Sequential Test Number 1
Date 01-21-2004
Workfile 044H 01-21-04

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	66-78 Deg F	70.0 F
Relative Humidity	10% - 70%	35.00 %
Peak Resultant Acceleration	250-280 G's	271.45 Gs
Peak Lateral Acceleration	15 G's Max	6.74 Gs
Is Acceleration Curve Unimodal?	<10%	4.71 %

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572P
NECK FLEXION TEST

Dummy Serial Number 044
Sequential Test Number 1
Date 10-22-03
Workfile 044NF 10-22-03

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature		20.6 – 22.2 Deg C	21.11
Relative Humidity		10% - 70%	38.00
Pendulum Speed		5.40-5.60 m/s	5.46
Pendulum Pulse	10 ms	2.00 – 2.70 m/s	2.14
	15 ms	3.00 – 4.00 m/s	3.13
	20 ms	4.00 – 5.10 m/s	4.30
D Plane Rotation	Max	70.0 – 82.0 Deg	75.72
Maximum Occipital Moment		42.00 - 53.00 N-m	52.40
Occipital Moment Decay		60.0 - 80.0 ms	74.60

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572P
NECK EXTENSION TEST

Dummy Serial Number 044
Sequential Test Number 2
Date 10-22-03
Workfile 044NE2 10-22-03

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature		20.6 – 22.2 Deg C	21.11
Relative Humidity		10% - 70%	38.00
Pendulum Speed		3.55 – 3.75 m/s	3.72
Pendulum Pulse	10 ms	1.00 – 1.40 m/s	1.05
	15 ms	1.90 – 2.50 m/s	1.98
	20 ms	2.80 – 3.50 m/s	2.82
D Plane Rotation	Max	83.0 – 93.0 Deg	85.02
Maximum Occipital Moment		-53.30 - -43.70 N-m	-45.28
Occipital Moment Decay		60.0 - 80.0 ms	67.60

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572P
THORAX IMPACT TEST

Dummy Serial Number 044
Sequential Test Number 3
Date 01-22-2004
Workfile 044T3 01-22-04

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	69-72 Deg F	70.0 F
Relative Humidity	10% - 70%	35.00 %
Pendulum Velocity	19.40 – 20.00 Ft/s	19.67 ft/s
Maximum Deflection	1.30 – 1.50 in	1.35 in
Maximum Resistive Force	152.90 – 182.10 Lbs	168.03 lbf
Internal Hysteresis	65 - 85 %	72.89 %
Sternum Force Criteria	193.30 lbf	186.73 lbf

Remarks:

Laboratory Technician:

_____ B. Swiecicki

PART 572P
EXTERNAL DIMENSIONS

Dummy Serial Number 044
Sequential Test Number 1
Date 10-22-2003

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Total Sitting Height	A	21.2 – 21.8 in	21.4
Shoulder Pivot Height	B	12.1 - 12.7 in	12.4
H-Point Height	C	1.35 – 1.75 in	1.57
H-Point from Backline	D	2.24 – 2.64 in	2.76
Shoulder Pivot from Backline	E	2.40 – 2.80 in	2.76
Thigh Clearance	F	3.19 – 3.59 in	3.27
Back of Elbow to Fingertip	G	9.74 – 10.34 in	10.04
Head back from Backline	H	1.9 – 2.3 in	2.17
Shoulder - Elbow Length	I	7.3 – 7.9 in	7.87
Elbow Rest Height	J	5.26 – 5.86 in	5.31
Buttock to Knee Length	K	11.21 – 11.81 in	11.41
Popliteal Height	L	8.60 – 9.20 in	8.86
Knee Pivot Height	M	9.51 – 10.11 in	9.84
Buttock Popliteal Length	N	8.58 - 9.18 in	8.86
Chest Depth with Jacket	O	5.45 - 6.05 in	5.98
Foot Length	P	5.42 – 5.82 in	5.47
Stature	Q	36.7 – 37.7 in	37.01
Buttock to Knee Pivot Length	R	9.9 - 10.3 in	10.04
Head Breadth	S	5.15 – 5.55 in	5.16
Head Depth	T	6.59 -7.19 in	6.81
Hip Breadth	U	7.9 – 8.5 in	8.15
Shoulder Breadth	V	9.31 – 9.91in	9.49
Foot Breadth	W	2.11 – 2.51 in	2.32
Head Circumference	X	19.7 – 20.3 in	20.0
Chest Circumference (With Jacket)	Y	20.75 – 21.75 in	21.65
Waist Circumference	Z	20.75 – 21.75 in	21.66
Location for Chest Circumference	AA	9.8 – 10.2 in	10.04
Location for Waist Circumference	BB	6.3 – 6.7 in	6.50

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572P
HEAD DROP TEST

Dummy Serial Number 142
Sequential Test Number 1
Date 01-12-2004
Workfile 142H2 01-12-04

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	66-78 Deg F	70.00 F
Relative Humidity	10% - 70%	33.00 %
Peak Resultant Acceleration	250-280 G's	263.52 Gs
Peak Lateral Acceleration	15 G's Max	12.48 Gs
Is Acceleration Curve Unimodal?	<10%	4.38 %

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572P
NECK FLEXION TEST

Dummy Serial Number 142
Sequential Test Number 1
Date 12-11-03
Workfile 142nf 12-11-03

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature		20.6 – 22.2 Deg C	21.11
Relative Humidity		10% - 70%	27.0
Pendulum Speed		5.40-5.60 m/s	5.55
Pendulum Pulse	10 ms	2.00 – 2.70 m/s	2.05
	15 ms	3.00 – 4.00 m/s	3.03
	20 ms	4.00 – 5.10 m/s	4.13
D Plane Rotation	Max	70.0 – 82.0 Deg	80.64
Maximum Occipital Moment		42.00 - 53.00 N-m	42.46
Occipital Moment Decay		60.0 - 80.0 ms	69.60

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572P
NECK EXTENSION TEST

Dummy Serial Number 142
Sequential Test Number 2
Date 12-11-03
Workfile 142ne2 12-11-03

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature		20.6 – 22.2 Deg C	21.11
Relative Humidity		10% - 70%	27.00
Pendulum Speed		3.55 – 3.75 m/s	3.60
Pendulum Pulse	10 ms	1.00 – 1.40 m/s	1.10
	15 ms	1.90 – 2.50 m/s	2.02
	20 ms	2.80 – 3.50 m/s	2.85
D Plane Rotation	Max	83.0 – 93.0 Deg	83.64
Maximum Occipital Moment		-53.30 - -43.70 N-m	-52.76
Occipital Moment Decay		60.0 - 80.0 ms	72.40

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572P
THORAX IMPACT TEST

Dummy Serial Number 142
Sequential Test Number 1
Date 12-12-03
Workfile 142T 12-12-03

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	69-72 Deg F	70.0
Relative Humidity	10% - 70%	35.0
Pendulum Velocity	19.40 – 20.00 Ft/s	19.70
Maximum Deflection	1.30 – 1.50 in	1.30
Maximum Resistive Force	152.90 – 182.10 Lbs	167.53
Internal Hysteresis	65 - 85 %	76.46
Sternum Force Criteria	193.30 lbf	179.91

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572P
EXTERNAL DIMENSIONS

Dummy Serial Number 142
Sequential Test Number 1
Date 12-11-03

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Total Sitting Height	A	21.2 – 21.8 in	21.2
Shoulder Pivot Height	B	12.1 - 12.7 in	12.4
H-Point Height	C	1.35 – 1.75 in	1.55
H-Point from Backline	D	2.24 – 2.64 in	2.5
Shoulder Pivot from Backline	E	2.40 – 2.80 in	2.6
Thigh Clearance	F	3.19 – 3.59 in	3.5
Back of Elbow to Fingertip	G	9.74 – 10.34 in	10.1
Head back from Backline	H	1.9 – 2.3 in	2.1
Shoulder - Elbow Length	I	7.3 – 7.9 in	7.7
Elbow Rest Height	J	5.26 – 5.86 in	5.5
Buttock to Knee Length	K	11.21 – 11.81 in	11.5
Popliteal Height	L	8.60 – 9.20 in	8.9
Knee Pivot Height	M	9.51 – 10.11 in	9.75
Buttock Popliteal Length	N	8.58 - 9.18 in	9.0
Chest Depth with Jacket	O	5.45 - 6.05 in	5.8
Foot Length	P	5.42 – 5.82 in	5.8
Stature	Q	36.7 – 37.7 in	37.0
Buttock to Knee Pivot Length	R	9.9 - 10.3 in	10.25
Head Breadth	S	5.15 – 5.55 in	5.4
Head Depth	T	6.59 -7.19 in	6.9
Hip Breadth	U	7.9 – 8.5 in	8.1
Shoulder Breadth	V	9.31 – 9.91in	9.9
Foot Breadth	W	2.11 – 2.51 in	2.3
Head Circumference	X	19.7 – 20.3 in	20.3
Chest Circumference (With Jacket)	Y	20.75 – 21.75 in	21.4
Waist Circumference	Z	20.75 – 21.75 in	21.4
Location for Chest Circumference	AA	9.8 – 10.2 in	10.00
Location for Waist Circumference	BB	6.3 – 6.7 in	6.50

Remarks:

Laboratory Technician:

B. Swiecicki

SECTION 6

TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

HYBRID III INSTRUMENTATION

	POSITION #3 (RIGHT) SERIAL NO.: 044		
	SERIAL NUMBER	MANUFACTURER	CALIBRATION DATE
HEAD AX	AC-P17912	ENDEVCO	21-Oct-03
HEAD AY	AC-P17743	ENDEVCO	21-Oct-03
HEAD AZ	AC-P15319	ENDEVCO	21-Oct-03
HEAD REAR AZ	AC-02I02I10-N06	ENTRAN	8-Dec-03
UPPER NECK FX	LC-248-FX	DENTON	1-Oct-03
UPPER NECK FY	LC-248-FY	DENTON	1-Oct-03
UPPER NECK FZ	LC-248-Fz	DENTON	1-Oct-03
UPPER NECK MX	LC-248-Mx	DENTON	1-Oct-03
UPPER NECK MY	LC-248-My	DENTON	1-Oct-03
UPPER NECK MZ	LC-248-Mz	DENTON	1-Oct-03
LOWER NECK FX	LC-249Fx	DENTON	1-Oct-03
LOWER NECK FY	LC-249Fy	DENTON	1-Oct-03
LOWER NECK FZ	LC-249Fz	DENTON	1-Oct-03
LOWER NECK MX	LC-249Mx	DENTON	1-Oct-03
LOWER NECK MY	LC-249My	DENTON	1-Oct-03
LOWER NECK MZ	LC-249Mz	DENTON	1-Oct-03
CHEST AX	AC-P15334	ENDEVCO	21-Oct-03
CHEST AY	AC-P15321	ENDEVCO	21-Oct-03
CHEST AZ	AC-P17758	ENDEVCO	21-Oct-03
CHEST DISPLACEMENT X	DS-044	SERVO	22-Nov-03
PELVIS AX	AC-P16755	ENDEVCO	21-Oct-03
PELVIS AY	AC-P15591	ENDEVCO	21-Oct-03
PELVIS AZ	AC-P16155	ENDEVCO	21-Oct-03
TETHER BELT LOAD	LC-173	First Technology	10-Oct-03

TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

HYBRID III INSTRUMENTATION

	POSITION #4 (LEFT) SERIAL NO.: 142		
	SERIAL NUMBER	MANUFACTURER	CALIBRATION DATE
HEAD AX	AC-P23804	ENDEVCO	18-Sep-03
HEAD AY	AC-99102-F12	ENTRAN	18-Aug-03
HEAD AZ	AC-00L13-F03	ENDEVCO	18-Aug-03
HEAD REAR AZ	AC-P23926	ENDEVCO	10-Sep-03
UPPER NECK FX	LC-213Fx	DENTON	1-Oct-03
UPPER NECK FY	LC-213Fy	DENTON	1-Oct-03
UPPER NECK FZ	LC-213Fz	DENTON	1-Oct-03
UPPER NECK MX	LC-213Mx	DENTON	1-Oct-03
UPPER NECK MY	LC-213My	DENTON	1-Oct-03
UPPER NECK MZ	LC-213Mz	DENTON	1-Oct-03
LOWER NECK FX	LC-214Fx	DENTON	1-Oct-03
LOWER NECK FY	LC-214Fy	DENTON	1-Oct-03
LOWER NECK FZ	LC-214Fz	DENTON	1-Oct-03
LOWER NECK MX	LC-214Mx	DENTON	1-Oct-03
LOWER NECK MY	LC-214My	DENTON	1-Oct-03
LOWER NECK MZ	LC-214Mz	DENTON	1-Oct-03
CHEST AX	AC-99108-F30	ENTRAN	18-Aug-03
CHEST AY	AC-99108-F28	ENTRAN	18-Aug-03
CHEST AZ	AC-99H30-Z04	ENTRAN	18-Aug-03
CHEST DISPLACEMENT X	DS-142	SERVO	18-Aug-03
PELVIS AX	AC-99102-F06	ENTRAN	18-Aug-03
PELVIS AY	AC-99102-F15	ENTRAN	18-Aug-03
PELVIS AZ	AC-99G29-Q13	ENTRAN	18-Aug-03
TETHER BELT LOAD	LC-174	First Technology	10-Oct-03

TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

CRS INSTRUMENTATION

	CRS ACCELEROMETERS		
	SERIAL NUMBER	MANUFACTURER	CALIBRATION DATE
P3 CRS AX	AC-P19246	ENDEVCO	16-Jan-04
P3 CRS AY	AC-P18682	ENDEVCO	16-Jan-04
P3 CRS AZ	AC-P23873	ENDEVCO	16-Jan-04
P4 CRS AX	AC-J33198	ENDEVCO	24-Sep-03
P4 CRS AY	AC-BB14	ENDEVCO	25-Aug-03
P4 CRS AZ	AC-J33843	ENDEVCO	25-Aug-03