REPORT NUMBER: CAL-01-21

NEW CAR ASSESSMENT PROGRAM (NCAP)
FRONTAL BARRIER IMPACT TEST

MAZDA MOTOR CORP.
2001 MAZDA MIATA
CONVERTIBLE 2-DOOR COUPE

NHTSA NUMBER: M15401

VERIDIAN TEST NUMBER: 8602-21

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

February 5, 2001

FINAL REPORT

PREPARED FOR:

U. S. DEPARTMENT OF TRANSPORTATION
National Highway Traffic Safety Administration
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Office of Crashworthiness Standards
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Approval Date: _____

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_____

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

_____

Date of Report Acceptance

_____

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NHTSA, Office of Crashworthiness Standards

_____

Date of Report Acceptance

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15. *Supplementary Notes*

16. *Abstract*

A frontal load cell barrier test of a 2001 Mazda Miata Convertible 2-Door Coupe was performed at Veridian Engineering crash test facility in Buffalo, New York, on February 5, 2001.

The impact velocity was 56.33 kph and the temperature at the barrier face was 20EC. The maximum post-test vehicle crush was 463 mm. The test vehicle was equipped with 3-point restraint systems with torso belt pretensioners, knee bolsters, and airbags at both the driver and right outboard passenger seating positions.

With respect to FMVSS 208 "Occupant Crash Protection - Injury Criteria" both the driver and passenger appeared to comply with head, chest, and femur requirements.

ATD Position	HIC	Clip (g's)	Chest Disp (mm)	Left Femur (N)	Right Femur (N)
Driver (061)	531.3	45.0	32.1	2938.6	5630.9
Passenger (064)	403.0	43.7	27.3	4644.4	2558.9

17. *Key Words* 56 kph Frontal Barrier Impact test New Car Assessment Program (NCAP)	18. *Distribution Statement* Copies of this report are available from: NHTSA Technical Reference Division National Highway Traffic Safety Admin. 400 Seventh St., SW, Room 5108 Washington, DC 20590

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SECTION 1

PURPOSE AND SUMMARY OF TEST M15401

PURPOSE

This 56.33 kph frontal barrier impact test is part of the Vehicle Barrier Impact Testing Program sponsored by the National Highway Traffic Safety Administration (NHTSA) under Contract No. DTNH22-96-D-02010. The purpose of this test was to obtain vehicle crashworthiness and occupant restraint system performance data for an impact speed in excess of the current 48.3 kph requirements.

The 56.33 kph frontal barrier impact test was conducted in accordance with the Office of Crashworthiness Standards Laboratory Indicant Test procedure.

SUMMARY

A load cell barrier consisting of 36 load cells was impacted by a 2001 Mazda Miata Convertible 2-Door Coupe at a velocity of 56.33 kph. The test was performed at Veridian Engineering on February 5, 2001. Pre- and post-test photographs of the vehicle and dummies can be found in Appendix A.

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

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

Both ATDs were fully instrumented with head, chest, and pelvis triaxial accelerometers, chest displacement potentiometers, upper neck transducers, right/left femur load cells, and lower leg instrumentation. Seat belt load cells were also on the driver's and passenger's lap and shoulder belts to measure dummy torso and pelvic section loading. The driver (position 1) ATD (Serial No. 061) and the right-front passenger (position 2) ATD (Serial No. 064) were used in two tests (M10315 and M15110) previous to this test. Certification details, along with instrumentation calibration data, are found in Appendix C.

The 129 channels of data were recorded on an on-board data acquisition system. Appendix B contains the vehicle, load cell barrier and dummy response data traces.

The driver's HIC was 531.3. The maximum chest deceleration over 3 milliseconds was 45.0 g's and maximum chest deflection was 32.1 mm. Compressive femur loads were 2938.6 Newtons on the left and 5630.9 Newtons on the right.

The right front passenger's HIC was 403.0. Maximum chest deceleration over 3 milliseconds was 43.7 g's and maximum chest deflection was 27.3 mm. Compressive femur loads were 4644.4 Newtons on the left and 2558.9 Newtons on the right.

SECTION 2

GENERAL TEST AND VEHICLE PARAMETER DATA

DATA SHEET NO. 1 CRASH TEST SUMMARY

Vehicle NHTSA No. : M15401 Test Mode : 56.3 kph Frontal Barrier

Test Date : February 5, 2001 Time: 14:30 Temperature : 3 °C

Vehicle Make/Model/Body Style : 2001 Mazda Miata Convertible 2-Door Coupe

Vehicle Test Weight : 1246.0 kg

Vehicle/Barrier Impact Angle : 0 °

Impact Velocity : 56.33 kph

Maximum Static Crush : 463 mm

Vehicle Rebound : 345 mm

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

Number of Data Channels : 129

Number of Cameras : 1 Real Time

16 High Speed

DOOR OPENING DATA : Closed / Operable - Left Front

Closed / Operable - Right Front

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

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

DATA SHEET NO. 2 GENERAL TEST AND VEHICLE PARAMETER DATA

TEST VEHICLE INFORMATION :

Year/Make/Model/Body Style : 2001 Mazda Miata Convertible 2-Door Coupe

NHTSA No. : M15401 ; VIN: JM1NB353510202368 ; Color : Blue

Engine Data: 4 cylinders; - CID; 1.8 Liters; - cc

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

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

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

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

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

Date Received : 1/31/01 ; Odometer Reading 180 km

Selling Dealer : Ricart Mazda

& Address: 4255 S. Hamilton Rd. Groveport, Oh 43125

DATA FROM TIRE VEHICLE'S CERTIFICATION LABEL:

Vehicle Manufactured by : Mazda Motor Corp.

Date of Manufacture 8/00

GVWR : 1335 kg; GAWR: 685 kg FRONT; 670 kg REAR

DATA FROM TIRE PLACARD:

Tire Pressure with Maximum Capacity Vehicle Load : 300 kpa FRONT

300 kpa REAR

Recommended Tire Size : P195/50R15

* Recommended Cold Tire Pressure : 180 kpa FRONT; 180 kpa REAR

Size of Tires on Test Vehicle: P195/50R15 ; Manufacturer: Toyo

Vehicle Capacity Data :

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

Number of Occupants: 2 Front; - Rear; 2 Total

Vehicle Capacity Weight (VCW) = 154.0 kg

No. of Occupants x 68 kg = 136.1 kg

Rated Cargo/Luggage Weight (RCLW) = 17.9 kg

*Tire pressure used for test

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

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

Right Front = 284.5 kg Right Rear = 257.5 kg

Left Front = 279.5 kg Left Rear = 260.5 kg

TOTAL FRONT = 564.0 kg TOTAL REAR = 518.0 kg

TOTAL DELIVERED WEIGHT = 1082.0 kg

% of Total Front of Vehicle Weight = 52.1 % of Total Rear Weight = 47.9 %

CALCULATION OF VEHICLE'S TARGET TEST WEIGHT :

Total Delivered Weight (UDW) = 1082.0 kg

Rated Cargo/Luggage Weight (RCLW) = 17.9 kg

Weight of 2 p.572 Dummies @ 76 each = 152.0 kg

TARGET TEST WEIGHT = 1251.9 kg

WEIGHT OF TEST VEHICLE WITH TWO DUMMIES AND 12 KG OF CARGO WEIGHT:

Right Front = 313 kg Right Rear = 315 kg

Left Front = 301 kg Left Rear = 317 kg

TOTAL FRONT = 614.0 kg TOTAL REAR = 632.0 kg

TOTAL TEST WEIGHT = 1246.0 kg

% of Total Front Weight = 49.3 % % of Total Rear Weight = 50.7 %

Weight of Ballast Secured in Vehicle Trunk Area = 0 kg

Vehicle Components Removed for Weight Reduction: Trunk lid, mirrors, hubcaps, muffler

VEHICLE ATTITUDE (all dimension in millimeters):

AS DELIVERED :	RF	626	LF	630	RR	649	LR	650
FULLY LOADED :	RF	615	LF	620	RR	619	LR	620
AS TESTED :	RF	616	LF	621	RR	623	LR	624

Vehicle's Wheel Base : 2264 mm

Location of Vehicle's C.G. : 1148 mm rearward of front wheel center.

FUEL SYSTEM DATA :

Fuel System Capacity From Owner's Manual = 48 liters

Usable Capacity Figure Furnished by COTR = 48 liters

Test Volume Range (92 to 94% of Usable Capacity) = 44.2 to 45.1 liters

ACTUAL TEST VOLUME= 44.5 liters (with entire fuel system filled)

Test Fluid Type: Stoddard Solution ; Spec. Grav. = 0.764

Kinematic Viscosity = 0.96 centistokes; Color = Orange

Type of Fuel Pump: Electric- x ; Mechanical- -

Does Electric Pump operate with ignition switch "ON" & engine "OFF" Yes- x No- -

Details of Fuel System Fuel filler on left side fore of rear axle and fuel tank centered over rear axle.

DATA SHEET NO. 3 POST IMPACT DATA

TYPE OF TEST:

Type of Test : Frontal Barrier Impact Angle : 0°

Test Date : February 5, 2001 Time: 14:30 Temperature: 3 °C

Vehicle NHTSA No. : M15401

Required Impact Velocity Range : 55.5 to 57.1 kph

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

Trap No. 1 = 56.33 kph; Trap No. 2 = 56.33 kph

Distance from vehicle to barrier : (1) entering trap = 813 mm

(2) exiting trap = 305 mm

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

Vehicle Length:

Pre-Test	Left =	3850	; C/L =	3941	; Right =	3830
Post-Test	Left =	3431	; C/L =	3479	; Right =	3418
Crush	Left =	419	; C/L =	462	; Right =	412

AVERAGE = 431 mm

VEHICLE REBOUND: (From rigid barrier only.)

Distance from front of test vehicle to impact point :

	Left =	361	; C/L =	322	; Right =	351

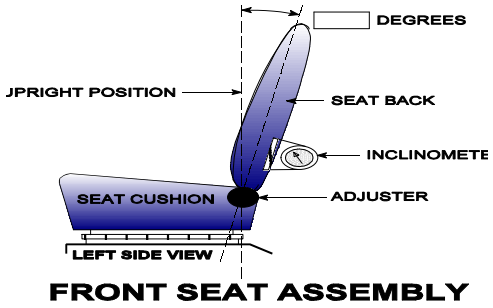
AVERAGE = 345 mm

DATA SHEET NO. 4 TEST VEHICLE INFORMATION

VEHICLE IDENTIFICATION:

Model Year : 2001 Vehicle Model: Mazda Miata Body Style : Convertible 2-Door Coupe

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: 20

Measurement instructions: Inclinometer on seat back frame measured angle relative to sill

Seat back angle for passenger's seat: 20

Measurement instructions: Inclinometer on seat back frame measured angle relative to sill

2. Seat Fore and Aft Positioning

Positioning of the driver's seat: Located 13 detents, placed in 7th notch (mechanical middle).

Positioning of the passenger's seat: Located 19 detents, placed in 10th notch (mechanical middle).

3. Fuel Tank Capacity Data

3.1 A. "Usable Capacity" of the standard equipment fuel tank is 48 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 = 48 liters

3.2 Amount of Stoddard solvent added to vehicle(s) used for certification test(s) = 44.5 liters

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

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

With ignition turned on to make fuel pump operational.

4. STEERING COLUMN ADJUSTMENTS :

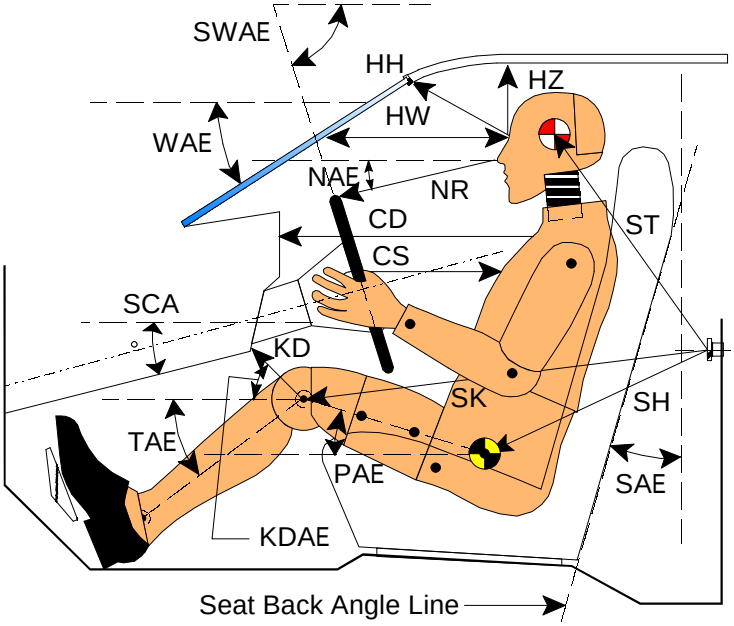
Steering wheel and column adjustments are made so that the steering wheel hub is at the geometric center of the locus it describes when it is moved through its full range of driving positions. If the tested vehicle has any of these adjustments, does your company use any specific procedures to determine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

Operational Instructions: Fixed

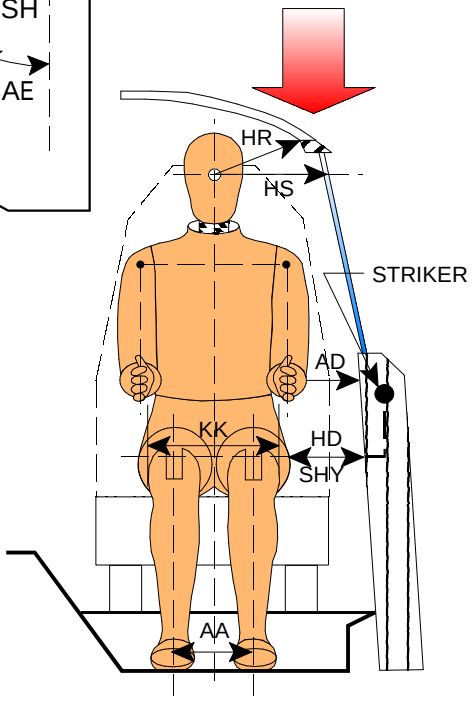
5. SEAT BELT UPPER ANCHORAGE

Nominal design riding position: Fixed

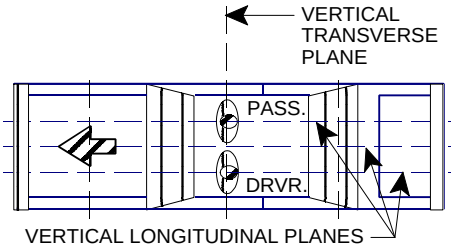
DUMMY MEASUREMENT FOR FRONT SEAT PASSENGERS



AD - Arm to Door
HD - H-Point to Door
HR - Head to Side Header
HS - Head to Side Window
KK - Knee to Knee
AA - Ankle to Ankle
SHY- Striker to H-Point (Y Direction)



CD - Chest to Dash
CS - Steering Wheel to Chest
HH - Head to Header
HW - Head to Windshield
HZ - Head to Roof
KDA - Knee to Dash Angle
KDL- Left Knee to Dash
KDR - Right Knee to Dash
NA - Nose to Rim Angle
NR - Nose to Rim
PA - Pelvic Angle
RA - Rim to Abdomen
SA - Seat Back Angle
SCA - Steering Column Angle
SH - Striker to H-Point
SK - Striker to Knee
ST - Striker to Head
SWA- Steering Wheel Angle
TA - Tibial Angle
WA - Windshield Angle



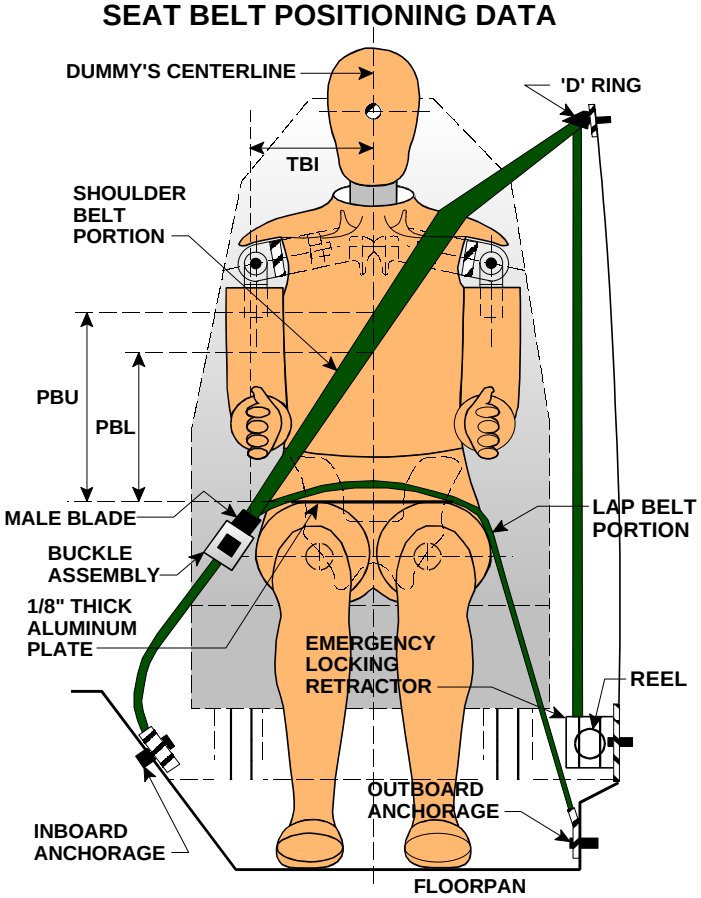
DATA SHEET NO. 5 FRONT SEAT DUMMY POSITIONING MEASUREMENTS IN VEHICLE (cont.)

	DRIVER (Serial #061)			PASS. (Serial # 064)		
WA^{O}	30 deg.			N/A		
SWA^{O}	71 deg.			N/A		
SCA^{O}	19 deg.			N/A		
SA^{O}	20 deg.			20 deg.		
HZ	149			154		
HH	359			345		
HW	521			491		
HR	215			214		
NR	381	Angle	12 deg.	N/A		
CD	487			474		
CS	281			N/A		
RA	201			N/A		
KDL	195	Angle (KDA)	37 deg.	151		
KDR	191			158	Angle (KDA)	40 deg.
PA^{O}	20 deg.			24 deg.		
TA^{O}	35 deg.			27 deg.		
KK	296			252		
AA	265			183		
ST	509	Angle	19 deg.	508	Angle	19 deg.
SK	630	Angle	100 deg.	696	Angle	99 deg.
SH	322	Angle	129 deg.	333	Angle	129 deg.
SHY	181			155		
HS	255			271		
HD	150			140		
AD	40			0		

Dimensions in millimeters

DATA SHEET NO. 6 SEAT BELT POSITIONING DATA

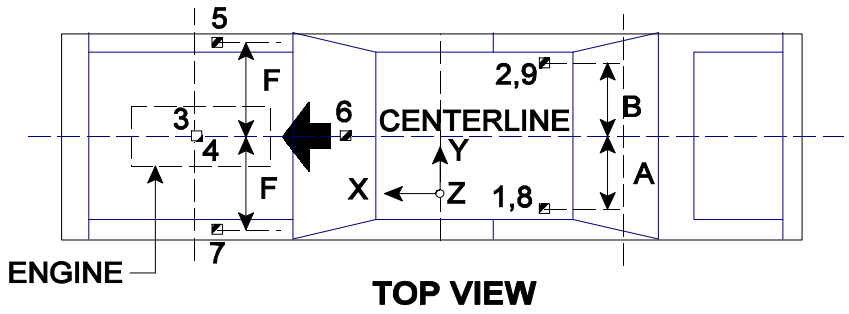
SEAT BELT POSITIONING DATA



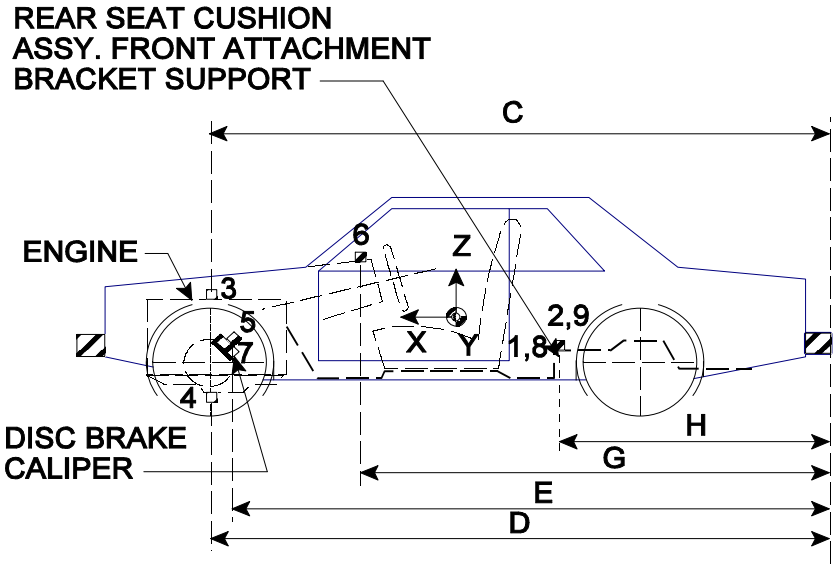
FRONT VIEW OF DUMMY

	DRIVER DUMMY (mm)	PASSENGER DUMMY (mm)
PBU -- Top surface of alum. plate to upper edge	375	350
PBL-- Top surface of alum. plate to belt lower edge	270	265
LAP BELT TENSION	10 N	10 N
SHOULDER BELT TENSION	Retractor	Retractor

VEHICLE ACCELEROMETER LOCATION AND DATA SUMMARY



TOP VIEW



LEFT SIDE VIEW

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

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

DIMENSION	PRE-TEST LENGTH (mm)
A Left Rear Seat Crossmember Y	-520
B Right Rear Seat Crossmember Y	527
C Top of Engine X	3260
D Bottom of Engine X	3000
E Disc Brake Calipers X	2871
F Disc Brake Calipers Y	494
G Instrument Panel X	2500
H Rear Seat Crossmembers X	1529

LOCATION NUMBER	DESCRIPTION	MAXIMUM VALUE (g's)			
		Pos.	msec.	Neg.	msec.
1	Rear Seat X-Member @ Left Side	1.3	117.2	-37.4	42.0
2	Rear Seat X-Member @ Right Side	1.1	104.5	-34.1	43.0
3	Top of Engine Block	13.7	53.4	-78.4	40.2
4	Bottom of Engine	‡‡	‡‡	‡‡	‡‡
5	Disc Brake Caliper @ Right Side	74.7	58.8	-101.7	48.4
6	Instrument Panel	20.6	60.5	-67.9	67.2
7	Disc Brake Caliper @Left Side	‡	‡	‡	‡
8	Rear Seat X-Member @ Left-Redundant	1.3	117.6	-36.9	41.3
9	Rear Seat X-Member @ Right-Redundant	1.1	104.5	-34.9	43.1

‡‡ -Wire cut at 90 ms.
‡ - Wire cut with no data recorded

DATA SHEET NO. 8 DUMMY INJURY CRITERIA VALUES

Vehicle Year/Make/Model/Body Style: 2001 Mazda Miata Convertible 2-Door Coupe

NHTSA Test No.: M15401 Test Date: February 5, 2001

		MAXIMUM VALUE							
		Driver				Passenger			
DESCRIPTION	**Unit**	**Pos**	**msec**	**Neg**	**msec**	**Pos**	**msec**	**Neg**	**msec**
Head X	**g**	11.8	190.5	-60.2	72.4	6.1	233.9	-47.1	75.1
Head Y	**g**	3.4	41.7	-7.2	90.7	6.9	26.2	-22.4	83.2
Head Z	**g**	21.1	48.1	-0.8	16.6	22.4	50.8	-11.0	80.9
Head Resultant	**g**	60.5	72.4	0.0	-43.0	50.2	75.1	0.0	-31.9
Redundant Head X	**g**	11.7	191.4	-59.6	73.7	6.4	234.0	-48.1	75.1
Redundant Head Y	**g**	2.9	25.6	-7.1	88.8	6.9	27.1	-21.5	83.2
Redundant Head Z	**g**	22.5	48.1	-1.0	16.7	22.4	50.5	-10.7	80.9
Redundant Head Resultant	**g**	59.9	73.7	0.0	-44.2	51.0	75.2	0.0	-28.5
Upper Neck Fx	**N**	572.2	75.7	-302.2	39.3	308.7	72.3	-369.6	123.3
Upper Neck Fy	**N**	68.4	163.6	-287.4	87.8	211.5	53.5	*	*
Upper Neck Fz	**N**	1421.7	54.4	-288.8	220.6	1439.2	48.8	-408.7	81.0
Upper Neck F Resultant	**N**	1471.2	54.5	0.5	-43.0	1477.6	48.8	2.4	-29.5
Upper Neck Mx	**N-m**	6.1	141.9	-11.7	98.7	26.5	87.9	-19.0	118.0
Upper Neck My	**N-m**	61.5	56.7	-35.0	218.8	27.2	109.7	-21.5	242.7
Upper Neck Mz	**N-m**	3.1	96.8	-11.1	63.3	32.5	93.2	-10.2	143.6
Upper Neck M Resultant	**N-m**	62.1	56.7	0.0	-35.6	43.9	88.3	0.0	-26.5
Chest X	**g**	4.0	230.0	-45.8	55.1	4.1	259.9	-43.6	69.5
Chest Y	**g**	3.6	91.3	-8.1	49.6	13.6	82.9	-11.9	41.9
Chest Z	**g**	7.7	43.3	-12.2	72.7	5.0	87.8	-6.8	65.6
Chest Resultant	**g**	46.7	60.1	0.0	-31.5	45.2	69.6	0.1	-30.0
Redundant Chest X	**g**	4.0	215.6	-45.9	55.4	4.1	259.9	-43.5	69.5
Redundant Chest Y	**g**	3.5	91.2	-7.8	49.7	13.6	83.0	-11.6	41.6
Redundant Chest Z	**g**	7.6	48.5	-12.6	72.4	4.9	88.5	-6.8	65.6
Redundant Chest Resultant	**g**	47.1	60.2	0.0	-30.8	45.1	69.6	0.1	-29.9
Chest Displacement	**mm**	0.0	6.0	-32.1	81.1	0.0	10.2	-27.3	80.9

* Data questionable after 110 ms.

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

Vehicle Year/Make/Model/Body Style: 2001 Mazda Miata Convertible 2-Door Coupe

NHTSA Test No.: M15401 Test Date: February 5, 2001

		MAXIMUM VALUE							
		Driver				Passenger			
DESCRIPTION	**Unit**	**Pos**	**msec**	**Neg**	**msec**	**Pos**	**msec**	**Neg**	**msec**
Pelvic X	**g**	2.5	183.4	-78.3	51.6	2.5	209.8	-62.7	51.9
Pelvic Y	**g**	11.6	77.5	-7.7	46.6	5.4	54.3	-7.4	68.0
Pelvic Z	**g**	3.5	231.6	-35.1	63.2	3.7	30.5	-35.3	69.0
Pelvic Resultant	**g**	79.0	51.6	0.0	-35.5	65.6	53.2	0.0	-35.6
Left Femur	**N**	1219.8	47.4	-2938.6	54.6	185.5	18.9	-4644.4	54.2
Right Femur	**N**	536.1	39.5	-5630.9	51.7	93.4	150.8	-2558.9	61.5
Left Upper Tibia Mx	**N-m**	21.5	25.6	-43.9	63.6	7.0	60.7	-57.4	43.5
Left Upper Tibia My	**N-m**	22.3	194.4	-82.4	53.0	8.5	122.4	-183.4	56.7
Left Lower Tibia Fz	**N**	146.1	150.2	-2250.2	67.9	269.3	125.4	-5489.9	57.8
Left Lower Tibia Mx	**N-m**	126.3	63.4	-13.6	24.3	127.3	59.4	-23.4	42.9
Left Lower Tibia My	**N-m**	46.6	68.0	-76.2	52.6	61.0	61.4	-45.8	47.1
Right Upper Tibia Mx	**N-m**	146.4	51.9	-5.6	116.0	56.7	51.6	-44.3	38.4
Right Upper Tibia My	**N-m**	17.8	115.7	-285.4	51.1	14.2	139.3	-162.8	57.9
Right Lower Tibia Fz	**N**	‡	‡	‡	‡	154.6	137.8	-4256.0	60.0
Right Lower Tibia Mx	**N-m**	72.5	50.8	-143.0	59.0	118.3	53.7	-26.5	36.4
Right Lower Tibia My	**N-m**	62.5	60.5	-46.3	48.9	89.4	61.9	-51.2	49.4
Left Foot Aft Ax	**g**	29.3	67.7	-114.5	50.5	40.1	60.5	-77.5	47.8
Left Foot Aft Az	**g**	61.1	28.6	-37.1	54.6	27.1	47.8	-81.1	56.6
Left Foot Fore Az	**g**	42.3	28.7	-127.3	54.5	73.7	47.9	-155.6	49.4
Right Foot Aft Ax	**g**	38.7	53.5	-133.2	49.3	88.7	37.0	-41.4	62.6
Right Foot Aft Az	**g**	62.6	52.4	-224.2	50.0	60.7	34.5	-5.5	64.0
Right Foot Fore Az	**g**	152.7	52.6	-298.0	49.9	27.5	64.4	-139.0	34.3
Lap Belt Load	**N**	7605.7	53.6	-9.4	283.2	6985.5	53.5	-41.6	11.3

‡ - Data questionable

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

Vehicle Year/Make/Model/Body Style: 2001 Mazda Miata Convertible 2-Door Coupe

NHTSA Test No.: M15401 Test Date: February 5, 2001

	HEAD INJURY CRITERIA (HIC)			
	HIC**	t_1 (msec)	t_2 (msec)	Average Acceleration t_1 to t_2
Position #1 - Driver	531.3	57.0	90.4	48.0
Position #2 - Passenger	403.0	53.6	89.6	41.6

** HIC is as defined in FMVSS 208. The maximum time interval from t_1 to t_2 is 36 milliseconds.

	CLIP SUMMARY*			
	CLIP (g's)	t_1 (msec)	t_2 (msec)	CSI
Position #1 - Driver	45.0	58.6	61.6	464.7
Position #2 - Passenger	43.7	68.0	71.0	463.7

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

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

Vehicle Year/Make/Model/Body Style: 2001 Mazda Miata Convertible 2-Door Coupe

NHTSA Test No.: M15401 Test Date: February 5, 2001

	HEAD INJURY CRITERIA (HIC) **REDUNDANT**			
	HIC**	t_1 (msec)	t_2 (msec)	Average Acceleration t_1 to t_2
Position #1 - Driver	527.0	56.8	90.4	47.7
Position #2 - Passenger	413.4	53.4	89.4	42.1

** HIC is as defined in FMVSS 208. The maximum time interval from t_1 to t_2 is 36 milliseconds.

	CLIP SUMMARY* **REDUNDANT**			
	CLIP (g's)	t_1 (msec)	t_2 (msec)	CSI
Position #1 - Driver	45.0	58.7	61.7	463.4
Position #2 - Passenger	43.9	68.2	71.2	472.9

* 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:	Driver	Passenger
Belt length from trim panel exit to bolt hole anchor point for continuous webbing systems.	1480	1480
Shoulder belt length as measured on Part 572 Dummy.	920	920
Lap belt length as measured on Part 572 Dummy.	560	560
SHOULDER BELT SPOOL-OFF DATA:		
As determined by film analysis.	‡	‡
As determined mechanically.	‡	‡
As determined electronically.	‡	‡
BELT STRETCH DATA:		
Measured electronically between shoulder belt load cell and the "D" ring.	‡	‡
Measured mechanically.	‡	‡

‡ Vehicle was equipped with seat belt pretensioners therefore, instrumentation was not attached to the belt systems.

Dimensions in millimeters

DATA SHEET NO.10 SUMMARY OF FMVSS 212 DATA

FMVSS NO. 212 - "WINDSHIELD MOUNTING" DATA

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

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

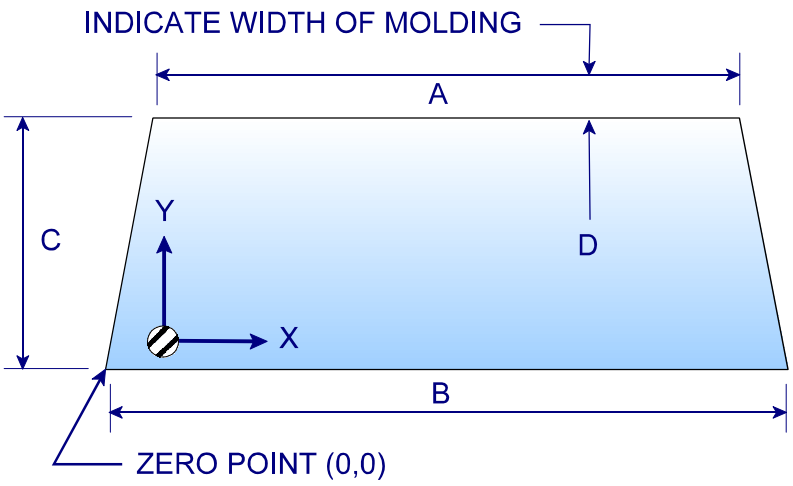
FMVSS 212 REQUIREMENTS:

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

FMVSS 212 TEST DATA

	WINDSHIELD PERIPHERY		
	PRE-TEST (mm)	POST-TEST(mm)	% OF RETENTION
RIGHT SIDE	1735	1735	100
LEFT SIDE	1735	1735	100
TOTAL	3470	3470	100

AREA OF RETENTION FAILURE:



FRONT VIEW OF WINDSHIELD

DIMENSIONS (mm)	
A	1056
B	1404
C	505
D	15

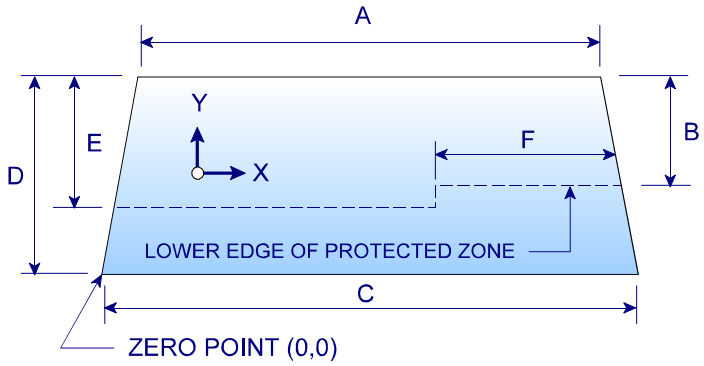
FAILURE DETAILS: None

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

DIMENSIONS (mm)	
A	1056
B	241
C	1404
D	505
E	304
F	456

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

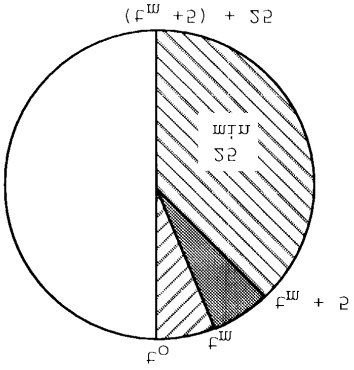
NHTSA TEST No.:	M15401	TEST DATE:	February 5, 2001
VEHICLE MAKE/MODEL:	2001 Mazda Miata		

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

= =

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

FUEL SPILLAGE MEASUREMENT:



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

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

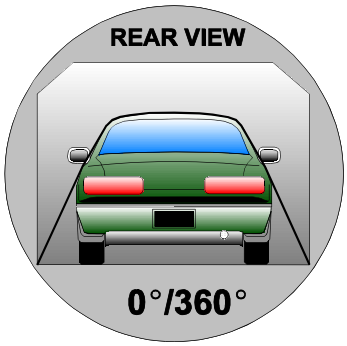
SOLVENT SPILLAGE DETAILS: None

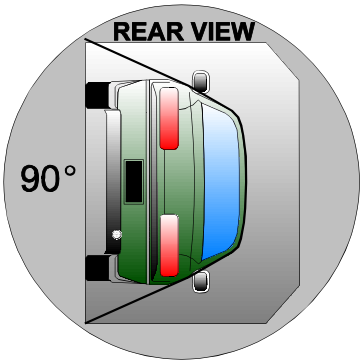
DATA SHEET 13

FMVSS NO. 301 STATIC ROLLOVER DATA SHEET

Vehicle: 2001 Mazda Miata NHTSA No. M15401

0 - 90 Degrees





I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD :

Rollover Fixture 90° Rotation Time	1	minutes	10	seconds
(Spec. Range = 1 to 3 minutes)				
FMVSS 301 Position Hold Time +	5	minutes	0	seconds
TOTAL	6	minutes	10	seconds
Next whole minute interval	7	minutes		

II. FMVSS 301 REQUIREMENTS :

(1) Time Period

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

(2) Maximum Allowable Solvent Spillage

142 g	28 g	28 g	28 g

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

0 g	0 g	0 g	N/A

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

IV. SOLVENT SPILLAGE LOCATION(S) :

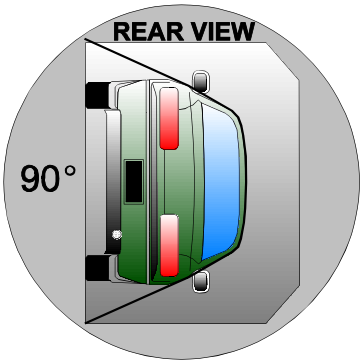
None

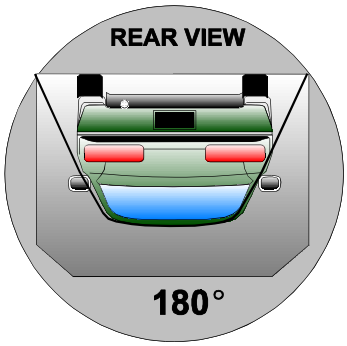
DATA SHEET 13

FMVSS NO. 301 STATIC ROLLOVER DATA SHEET (CONTINUED)

Vehicle: 2001 Mazda Miata NHTSA No. M15401

90 - 180 Degrees





I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD :

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

II. FMVSS 301 REQUIREMENTS :

(1) Time Period

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

(2) Maximum Allowable Solvent Spillage

142 g	28 g	28 g	28 g

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

0 g	0 g	0 g	N/A

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

IV. SOLVENT SPILLAGE LOCATION(S) :

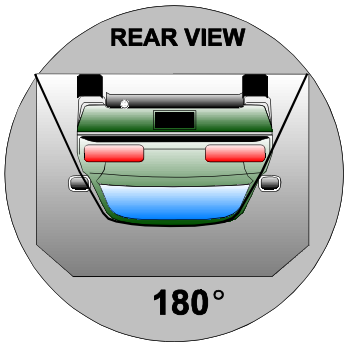
None

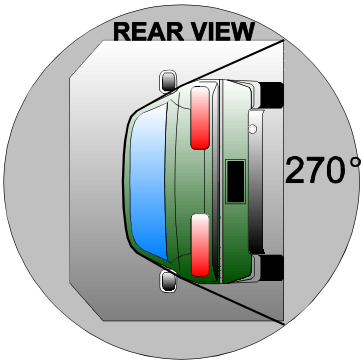
DATA SHEET 13

FMVSS NO. 301 STATIC ROLLOVER DATA SHEET (CONTINUED)

Vehicle: 2001 Mazda Miata NHTSA No. M15401

180 - 270 Degrees





I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD :

Rollover Fixture 90° Rotation Time	1	minutes	19	seconds
(Spec. Range = 1 to 3 minutes)				
FMVSS 301 Position Hold Time +	5	minutes	0	seconds
TOTAL	6	minutes	19	seconds
Next whole minute interval	7	minutes		

II. FMVSS 301 REQUIREMENTS :

(1) Time Period

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

(2) Maximum Allowable Solvent Spillage

142 g	28 g	28 g	28 g

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

0 g	0 g	0 g	N/A

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

IV. SOLVENT SPILLAGE LOCATION(S) :

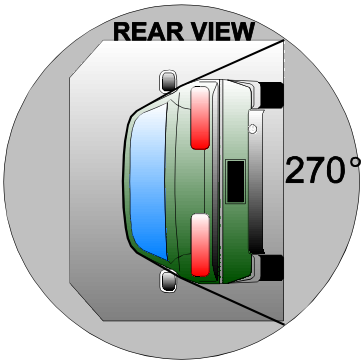
None

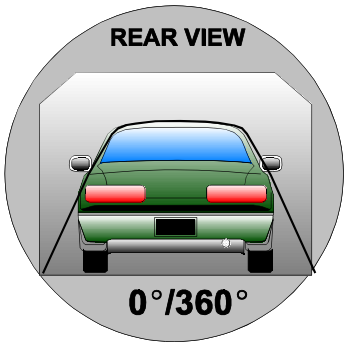
DATA SHEET 13

FMVSS NO. 301 STATIC ROLLOVER DATA SHEET (CONTINUED)

Vehicle: 2001 Mazda Miata NHTSA No. M15401

270 - 360 Degrees





I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD :

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

II. FMVSS 301 REQUIREMENTS :

(1) Time Period

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

(2) Maximum Allowable Solvent Spillage

142 g	28 g	28 g	28 g

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

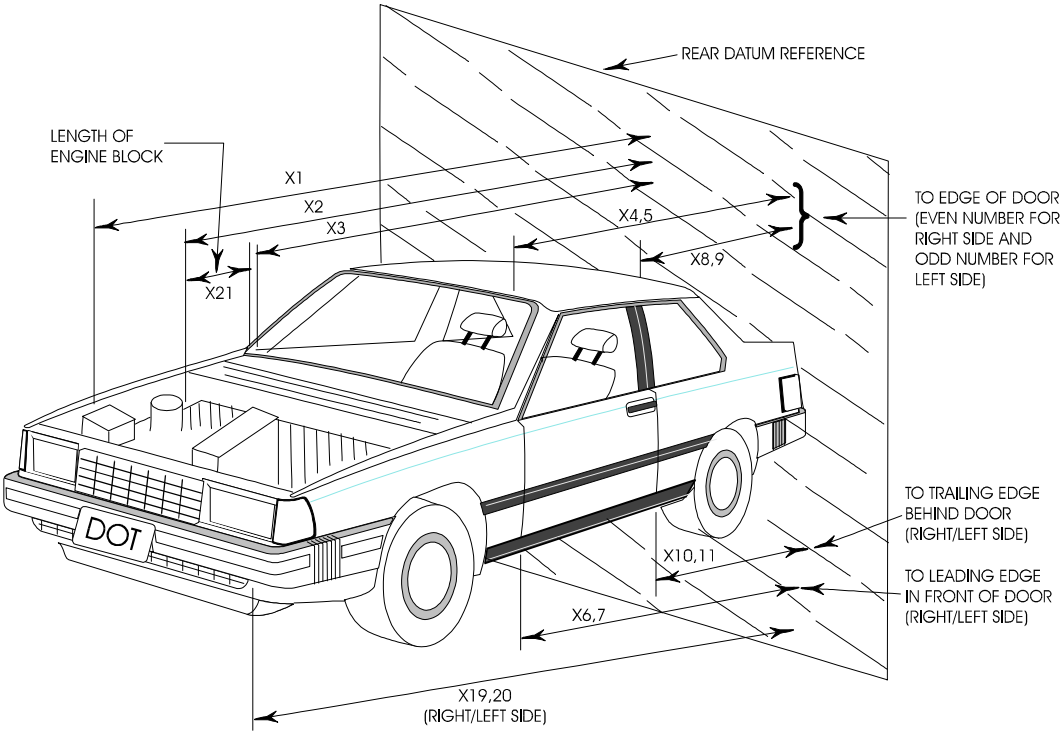
0 g	0 g	0 g	N/A

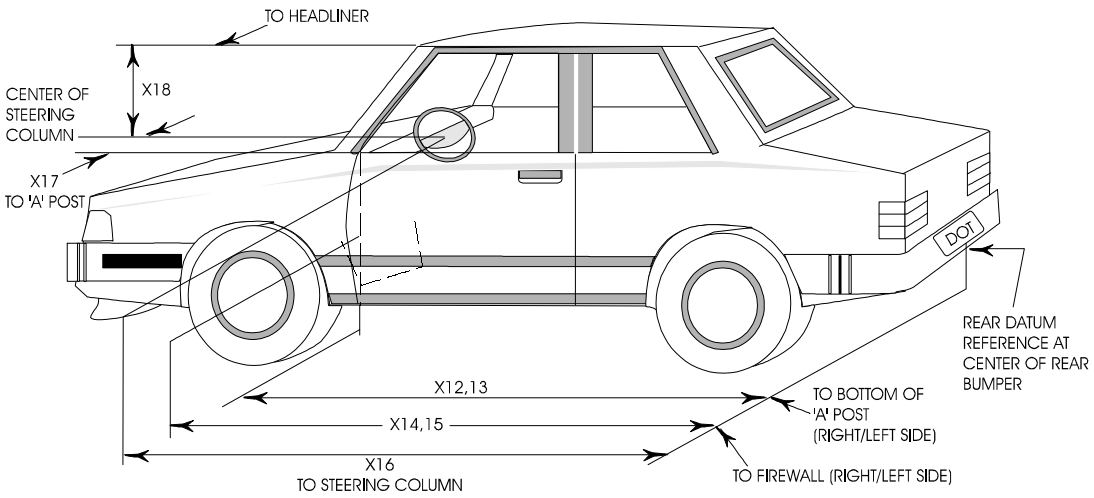
Note: Record spillage for whole minute intervals only as determined above.

IV. SOLVENT SPILLAGE LOCATION(S) :

None

DATA SHEET NO. 14 TEST VEHICLE MEASUREMENTS





DATA SHEET NO.14 VEHICLE MEASUREMENTS (cont.)

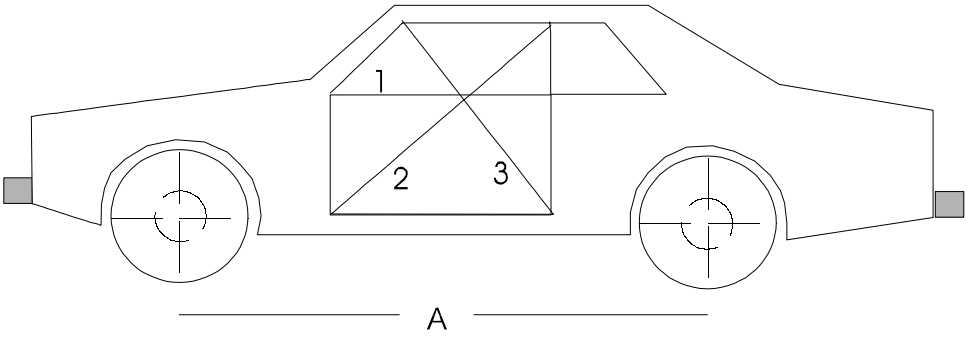
No.		Pre-Test	Post-Test	Difference
X1	Total Length of Vehicle at Centerline	3941	3479	462
X2	Rear Surface of Vehicle to Front of Engine	3313	3151	162
X3	Rear Surface of Vehicle to Firewall	2772	2685	87
X4	Rear Surface of Vehicle to Upper Leading Edge of Right Door	2400	2391	9
X5	Rear Surface of Vehicle to Upper Leading Edge of Left Door	2402	2379	23
X6	Rear Surface of Vehicle to Lower Leading Edge of Right Door	2500	2515	-15
X7	Rear Surface of Vehicle to Lower Leading Edge of Left Door	2516	2502	14
X8	Rear Surface of Vehicle to Upper Trailing Edge of Right Door	1417	1409	8
X9	Rear Surface of Vehicle to Upper Trailing Edge of Left Door	1418	1410	8
X10	Rear Surface of Vehicle to Lower Trailing Edge of Right Door	1445	1466	-21
X11	Rear Surface of Vehicle to Lower Trailing Edge of Left Door	1450	1449	1
X12	Rear Surface of Vehicle to Bottom of "A" Post of Right Side	2386	2369	17
X13	Rear Surface of Vehicle to Bottom of "A" Post of Left Side	2392	2370	22
X14	Rear Surface of Vehicle to Firewall, Right Side	2763	2723	40
X15	Rear Surface of Vehicle to Firewall, Left Side	2775	2695	80
X16	Rear Surface of Vehicle to Steering Column	2030	2017	13
X17	Center of Steering Column to "A" Post	251	222	29
X18	Center of Steering Column to Headliner	376	361	15
X19	Rear Surface of Vehicle to Right Side of Front Bumper	3830	3418	412
X20	Rear Surface of Vehicle to Left Side of Front Bumper	3850	3431	419
X21	Length of Engine Block	660	479	181
RD	Rear Surface of Vehicle to Right Side of Dash Panel	2251	2239	12
CD	Rear Surface of Vehicle to Center of Dash Panel	2208	2211	-3
LD	Rear Surface of Vehicle to Left Side of Dash Panel	2248	2232	16

All Dimensions in mm

DATA SHEET NO.14 VEHICLE MEASUREMENTS (cont.)

VEHICLE INTRUSION MEASUREMENTS

DOOR OPENING WIDTH



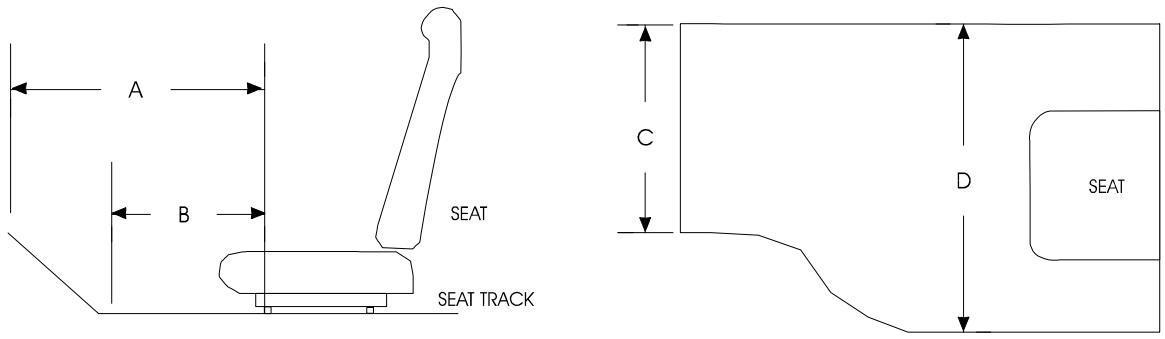
UNITS (mm)	LEFT			RIGHT		
MEASUREMENT	1	2	3	1	2	3
BEFORE TEST	1026	1295	848	1044	850	1279
AFTER TEST	1010	1291	850	1021	855	1283
DIFFERENCE	16	4	-2	23	-5	-4

UNITS (mm)	A = WHEELBASE LEFT	A = WHEELBASE RIGHT
BEFORE TEST	2265	2261
AFTER TEST	2166	2141
DIFFERENCE	99	120

DATA SHEET NO.14 VEHICLE MEASUREMENTS (cont.)

VEHICLE INTRUSION MEASUREMENTS

STATIC FOOTWELL DEFORMATION



DRIVER

Measurement	Pre-Test	Post-Test	Difference
A	661	613	48
B	581	556	25
C	323	328	-5
D	322	357	-35

PASSENGER

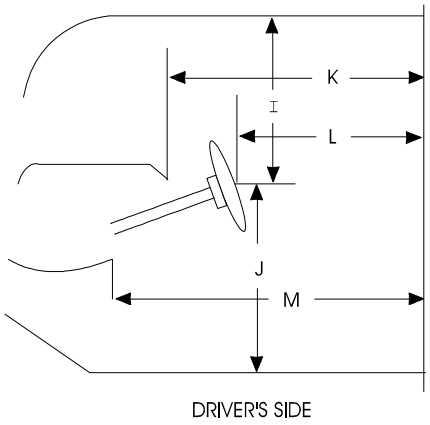
Measurement	Pre-Test	Post-Test	Difference
A	686	615	71
B	585	569	16
C	371	335	36
D	409	409	0

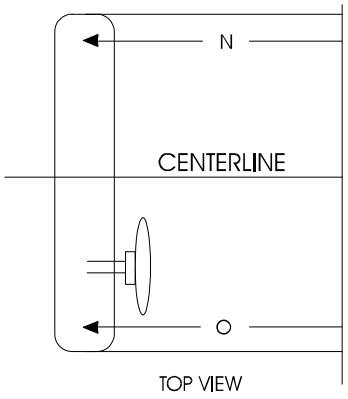
Units = mm

DATA SHEET NO.14 VEHICLE MEASUREMENTS (cont.)

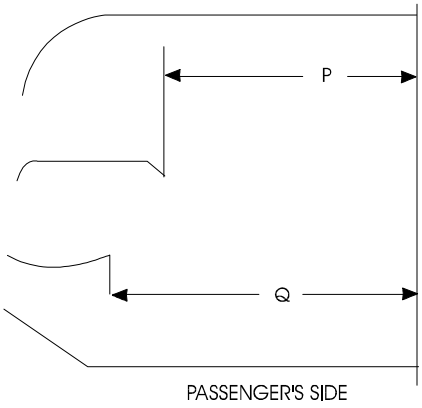
VEHICLE INTRUSION MEASUREMENTS

STATIC PASSENGER COMPARTMENT INTRUSION





MEASUREMENTS
FROM C-PILLAR
BELT ANCHORAGE

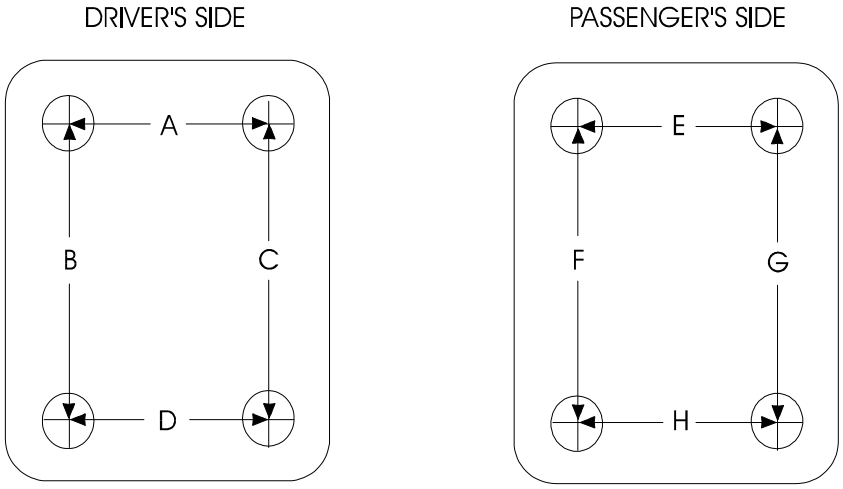


Measurement	Pre-Test	Post-Test	Difference
I	376	361	15
J	567	573	-6
K	937	895	42
L	757	722	35
M	974	937	37
N	965	938	27
O	975	936	39
P = K (PASS.)	949	924	25
Q = M (PASS.)	974	950	24

Units = mm

DATA SHEET NO.14 VEHICLE MEASUREMENTS (cont.)

FLOORBOARD DEFORMATION



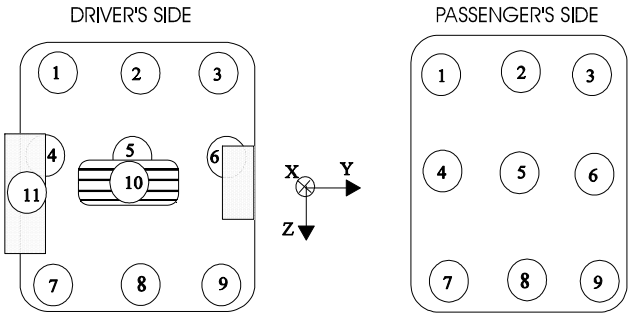
TOP VIEW THROUGH FLOOR PAN

Measurement	Pre-Test	Post-Test	Difference
A	299	291	8
B	679	669	10
C	660	649	11
D	270	270	0
E	299	295	4
F	660	652	8
G	679	676	3
H	270	270	0

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	2684	2662	22	-285	-309	-24
2	2694	2644	50	-288	-324	-36
3	2693	2638	55	-306	-339	-33
4	2649	2663	-14	-249	-258	-9
5	2662	2621	41	-251	-265	-14
6	2651	2549	102	-259	-266	-7
7	2610	2616	-6	-183	-224	-41
8	2615	2588	27	-223	-209	14
9	2589	2567	22	-219	-218	1
10	2565	2492	73	-386	-401	-15
11	2596	2556	40	-320	-322	-2

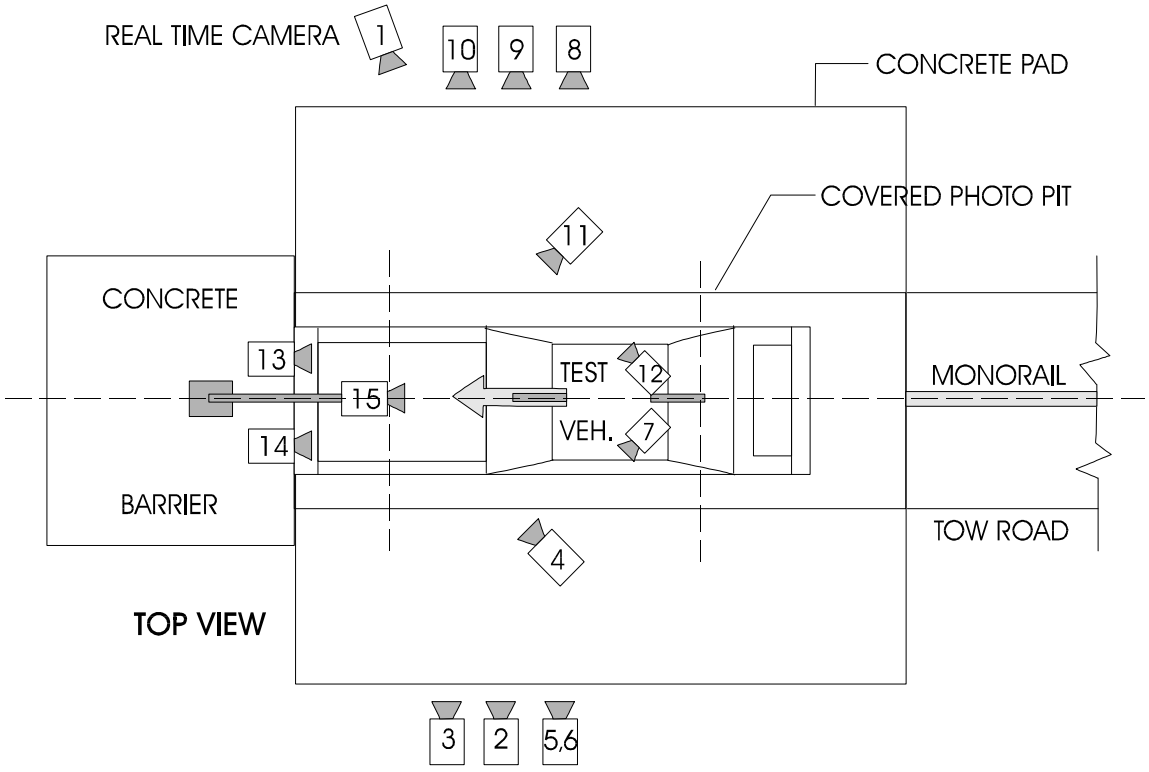
Passenger Side Toe-pan Measurements

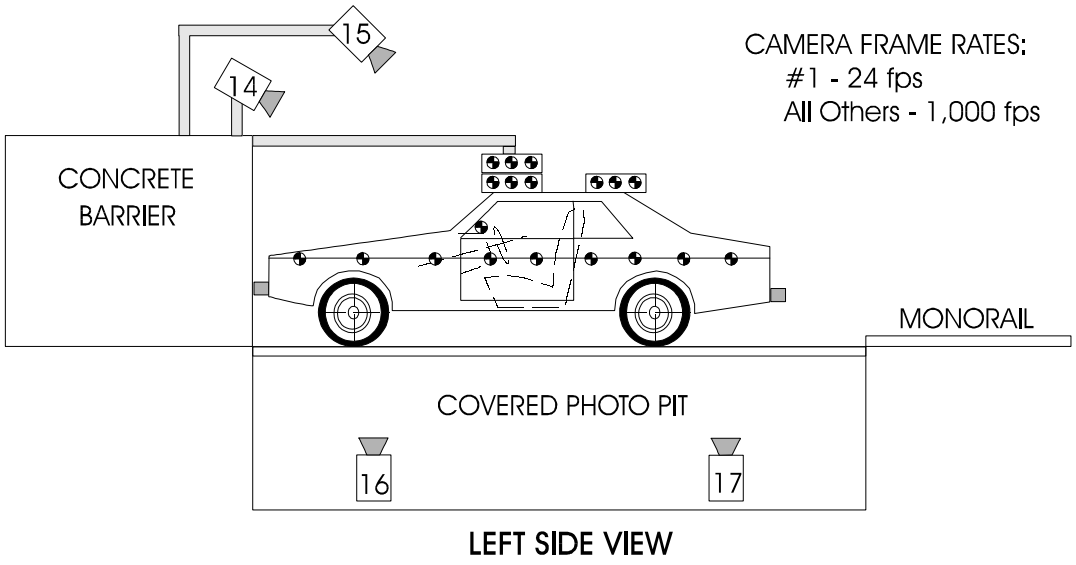
Toe-pan Location	X Deformation (mm)			Z Deformation (mm)		
	Pre-Test	Post-Test	Difference	Pre-Test	Post-Test	Difference
1	2701	2649	52	-304	-399	-95
2	2710	2669	41	-306	-400	-94
3	2701	2664	37	-301	-361	-60
4	2672	2621	51	-263	-340	-77
5	2625	2629	-4	-247	-335	-88
6	2655	2671	-16	-233	-313	-80
7	2578	2587	-9	-224	-276	-52
8	2609	2623	-14	-218	-272	-54
9	2615	2648	-33	-211	-279	-68

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.: M15401 Vehicle: 2001 Mazda Miata Convertible 2-Door Coupe

CAMERA NO.	VIEW	CAMERA POSITIONS (mm)* X	Y	Z	ANGLE (deg)**	FILM PLANE TO HEAD TARGET	LENS (mm)	SPEED (fps)
1	Real-Time Camera	-	-	-	-	-	-	24
2	Overall Left Side	5983	1582	1061	-5	5531	12.5	1005
3	Left Side View	7866	959	1096	-3	7414	25	1010
4	Driver and Interior View	7086	2647	1951	-11	-	25	1055
5	Steering Column (Bottom)	6639	1856	1159	-5	6187	25	1015
6	Steering Column (Top)	6639	1856	1771	-9	6187	25	1020
7	Left Belt	-	-	-	-	-	13	-
8	Overall Right Side	6159	1539	1074	-3	5707	12.5	1020
9	Right Side View	8131	1002	1097	-2	7679	25	1015
10	Right Passenger View	7643	1846	1046	-4	7191	35	1010
11	Passenger and Interior View	6805	2544	1949	-10	-	25	1000
12	Right Belt	-	-	-	-	-	13	-
13	Passenger Front View	620	-92	1987	-39	-	13	1025
14	Driver Front View	620	-92	1987	-36	-	13	1005
15	Windshield View	0	-530	3374	-53	-	13	1005
16	Pit View of Engine	0	615	-3048	90	-	13	1005
17	Pit View of Fuel Tank	0	2692	-3048	90	-	13	1005

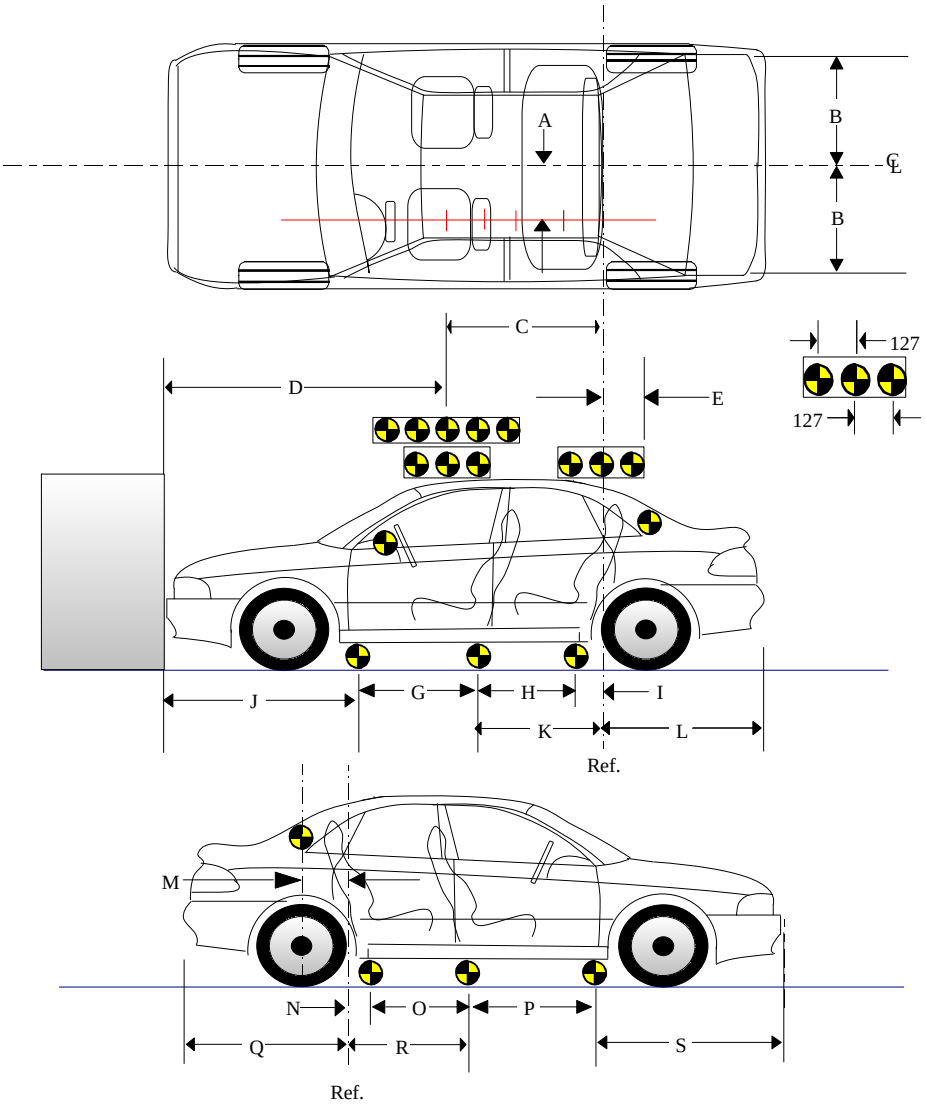
*X = film plane to monorail centerline ** = referenced to horizontal plane

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

Z = film plane to ground

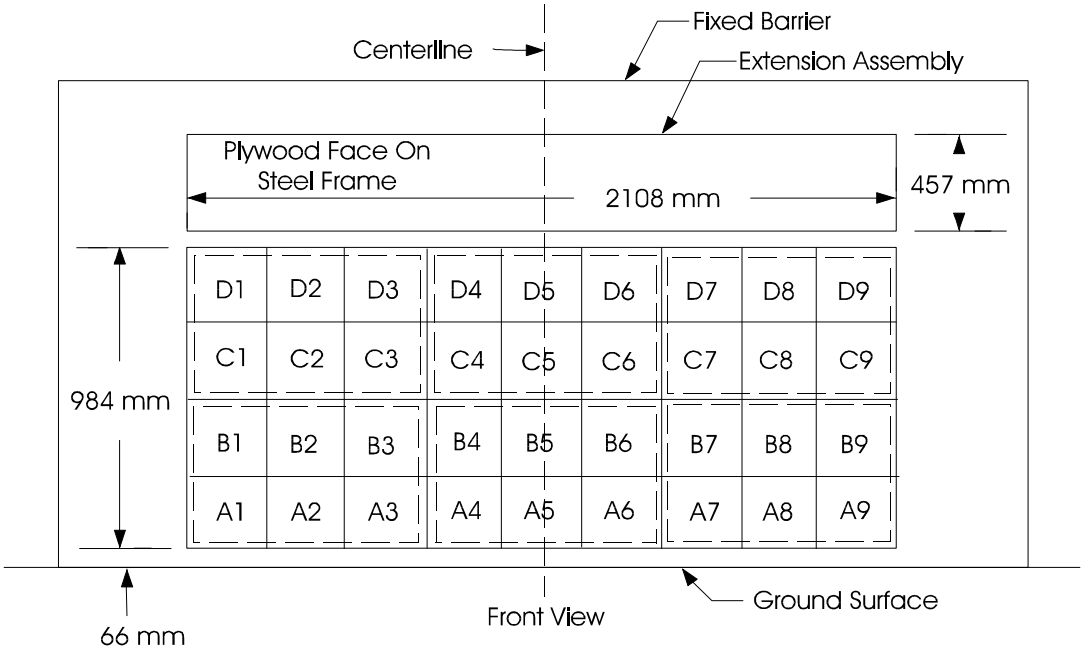
(Dimensions in millimeters)

A	376
B	509
C	229
D	2267
E	1446
F	715
G	736
H	727
I	101
J	1215
K	828
L	1159
M	1446
N	107
O	727
P	722
Q	1159
R	834
S	1220



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. : M15401; Test Date: February 5, 2001; Technician: James A. Czarnecki

Vehicle Model Year/Make/Model: 2001 Mazda Miata

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

B. Size of vent holes: (mm^2) 35 -Driver 50 -Passenger

C. Total vent area: (mm^2) 70 -Driver 100 -Passenger

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

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

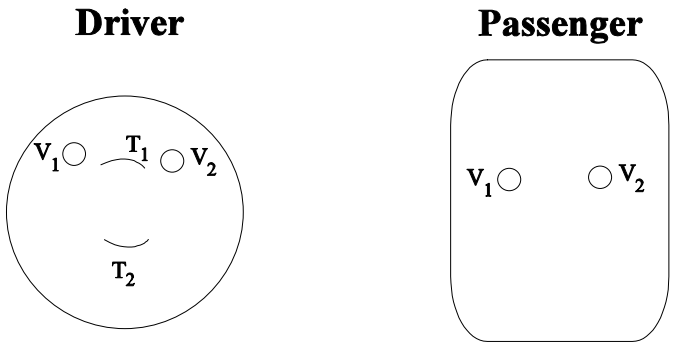
Passenger: 600 -Height; 550 -Width; 350 -Depth

E. Is the air bag tethered?

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

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

Sketch the air bag showing the location of the vent holes, how the bag is tethered, and where the bag is tethered. Also describe how the tethers are attached to the bag and the steering wheel.
(Note: Not to scale; V_n = Vent hole$_n$, T_n = Tether$_n$).



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

Driver: Air bag: -

Generator: -

Passenger: Air bag: -

Generator: -

DATA SHEET NO. 19 ACCIDENT INVESTIGATION DIVISION DATA

FOR 56.3 KPH FRONTAL BARRIER IMPACT

Vehicle Make/Model/Body Style: Mazda Miata Convertible 2-Door Coupe

NHTSA Test No.: M15401 VIN: JM1NB353510202368

Model Year: 2001 Build Date: 8/00 Test Date: February 5, 2001

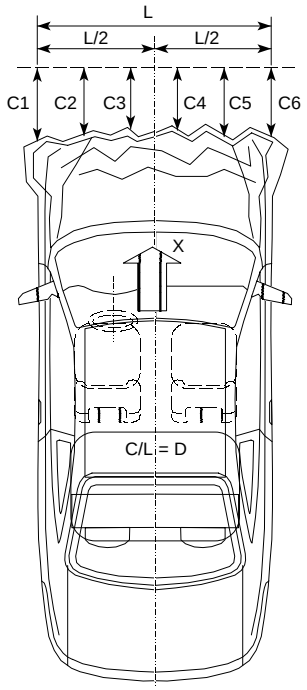
Vehicle Size Category: Coupe Test Weight: 1246 kg

Vehicle Wheelbase: 2264 mm; Front Overhang: 1220 mm; Overall Width: 1678 mm

Collision Deformation Classification (CDC) Code: 12FDEW3

Crush Depth Dimensions;

	PRE	POST	DIFF	
C1 =	3802	3437	365	mm
C2 =	3897	3417	480	mm
C3 =	3939	3476	463	mm
C4 =	3930	3476	454	mm
C5 =	3879	3450	429	mm
C6 =	3770	3395	375	mm



Midpoint of Damage: D = Vehicle Centerline (Longitudinal)

Length of Damaged Region: L1= 1678 mm

L2= 839 mm

L5= 336 mm

APPENDIX A

PHOTOGRAPHS

TABLE OF PHOTOGRAPHS

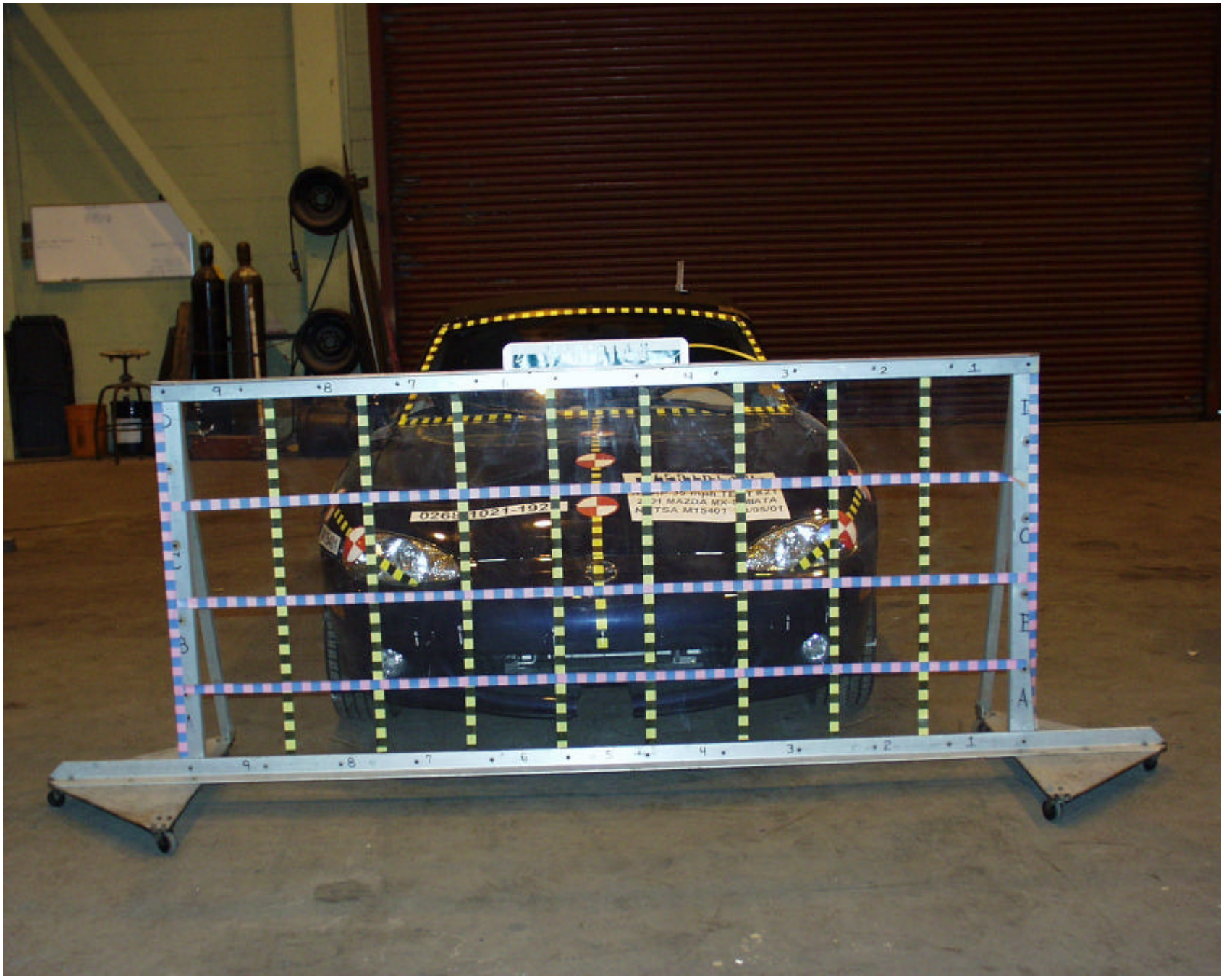


Figure A-1: LOAD CELL LOCATIONS.

Figure A-2: PRE-TEST FRONT VIEW

Figure A-3: POST-TEST FRONT VIEW.

Figure A-4: PRE-TEST LEFT SIDE VIEW

Figure A-5: POST-TEST LEFT SIDE VIEW

Figure A-6: PRE-TEST RIGHT SIDE VIEW

Figure A-7: POST-TEST RIGHT SIDE VIEW

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

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

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

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

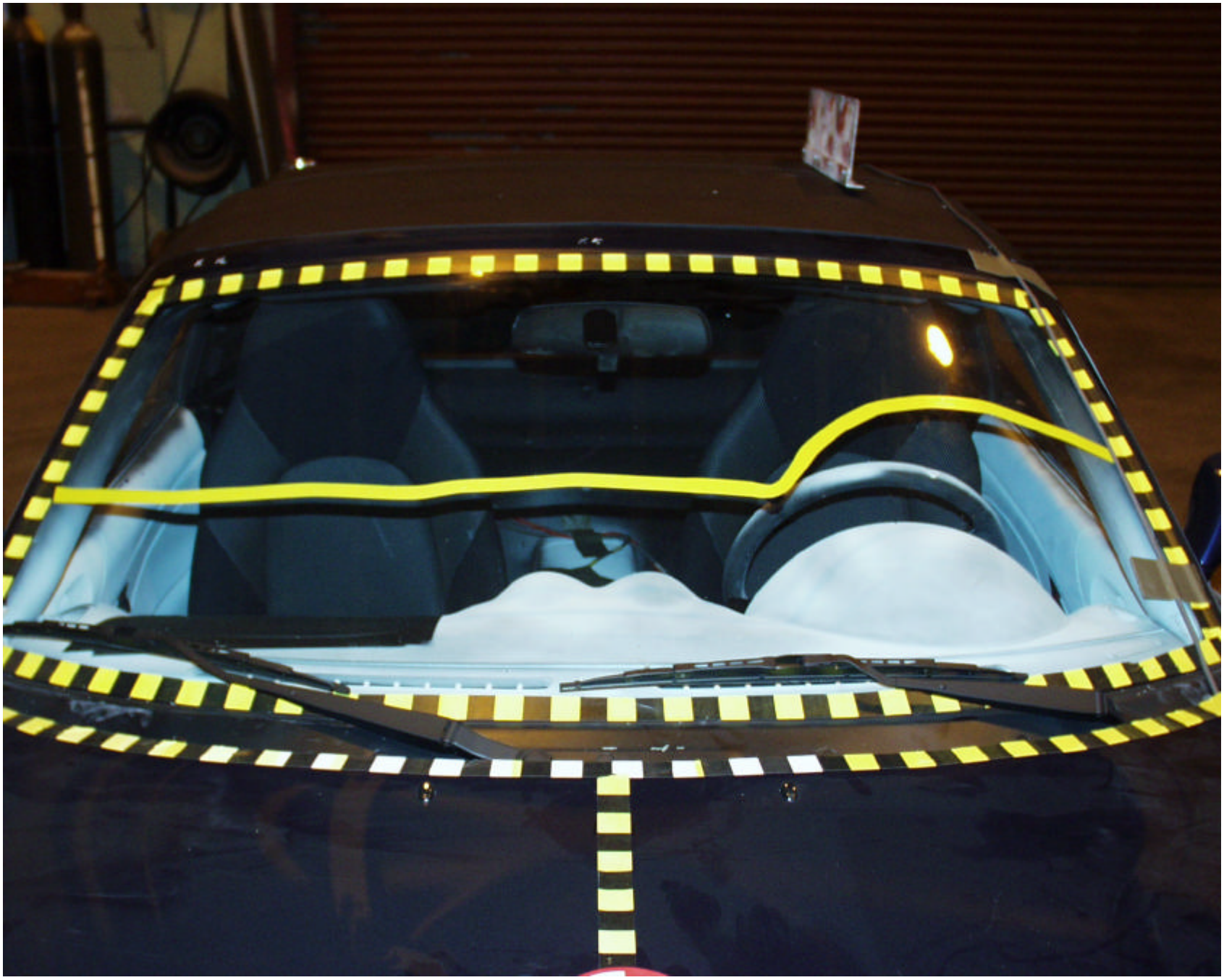


Figure A-12: PRE-TEST WINDSHIELD VIEW

Figure A-13: POST-TEST WINDSHIELD VIEW

Figure A-14: PRE-TEST ENGINE COMPARTMENT VIEW

Figure A-15: FUEL CAP VIEW

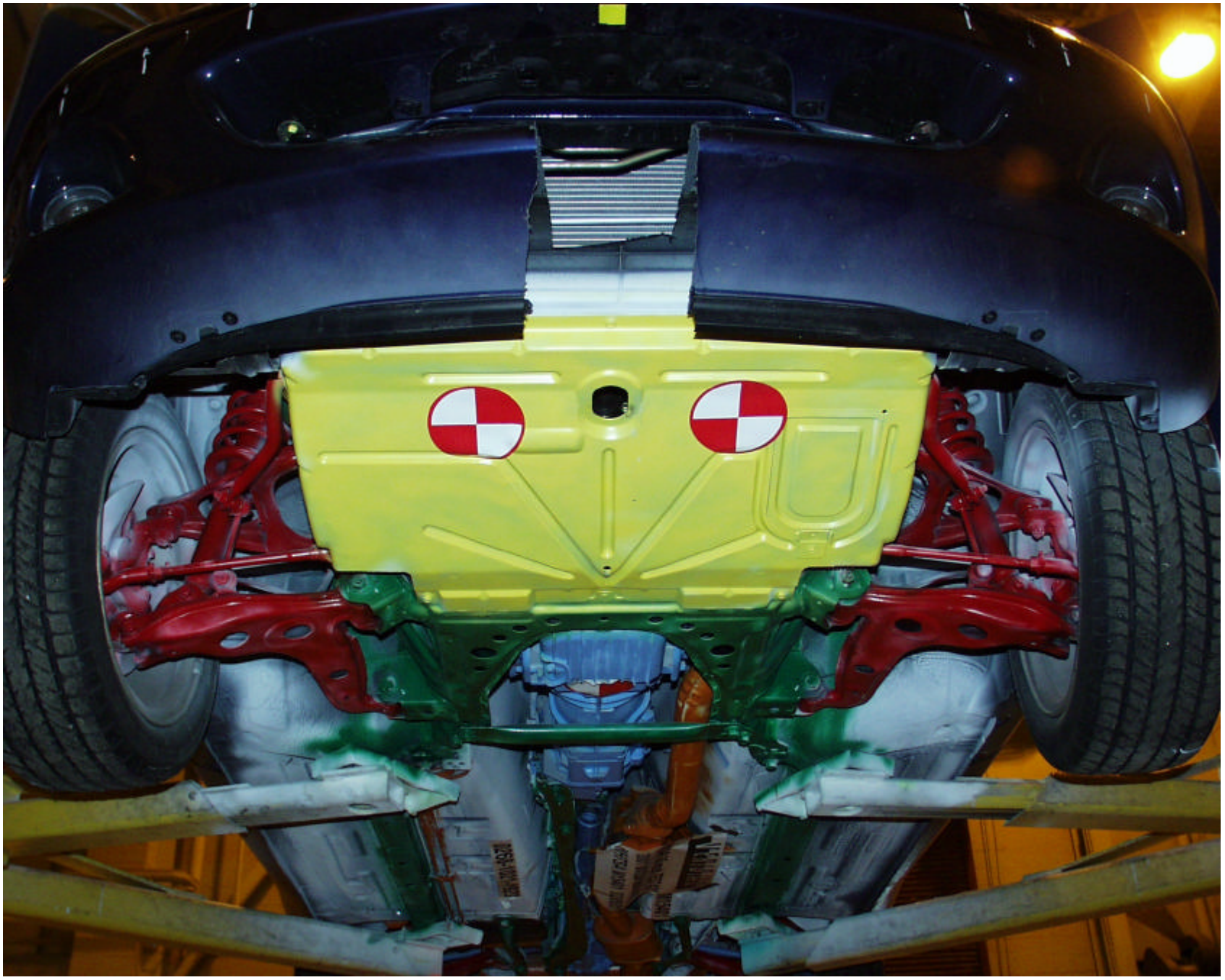


Figure A-16: PRE-TEST FRONT UNDERBODY VIEW

Figure A-17: POST-TEST FRONT UNDERBODY VIEW

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

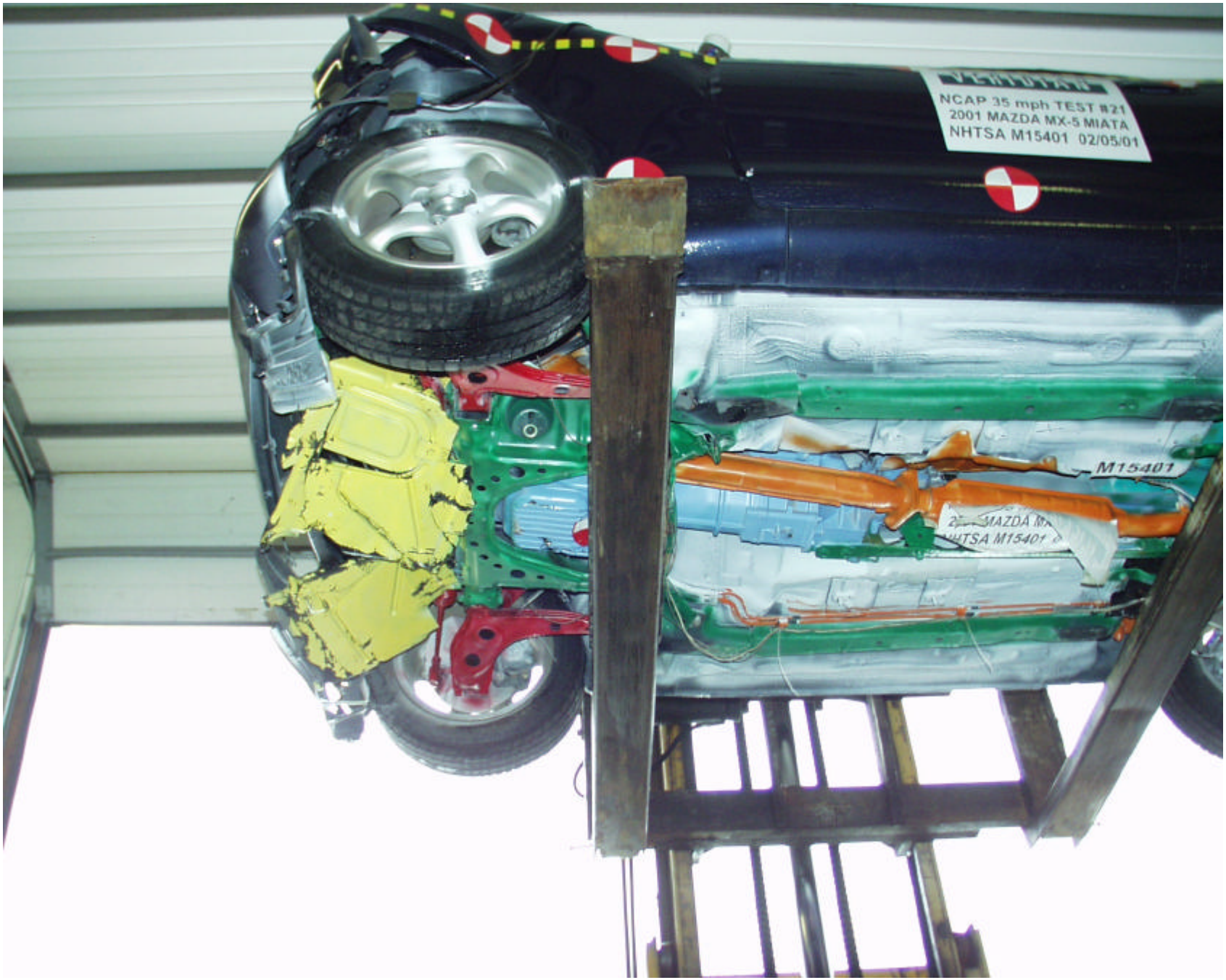


Figure A-19: POST-TEST FRONT SIDE UNDERBODY VIEW

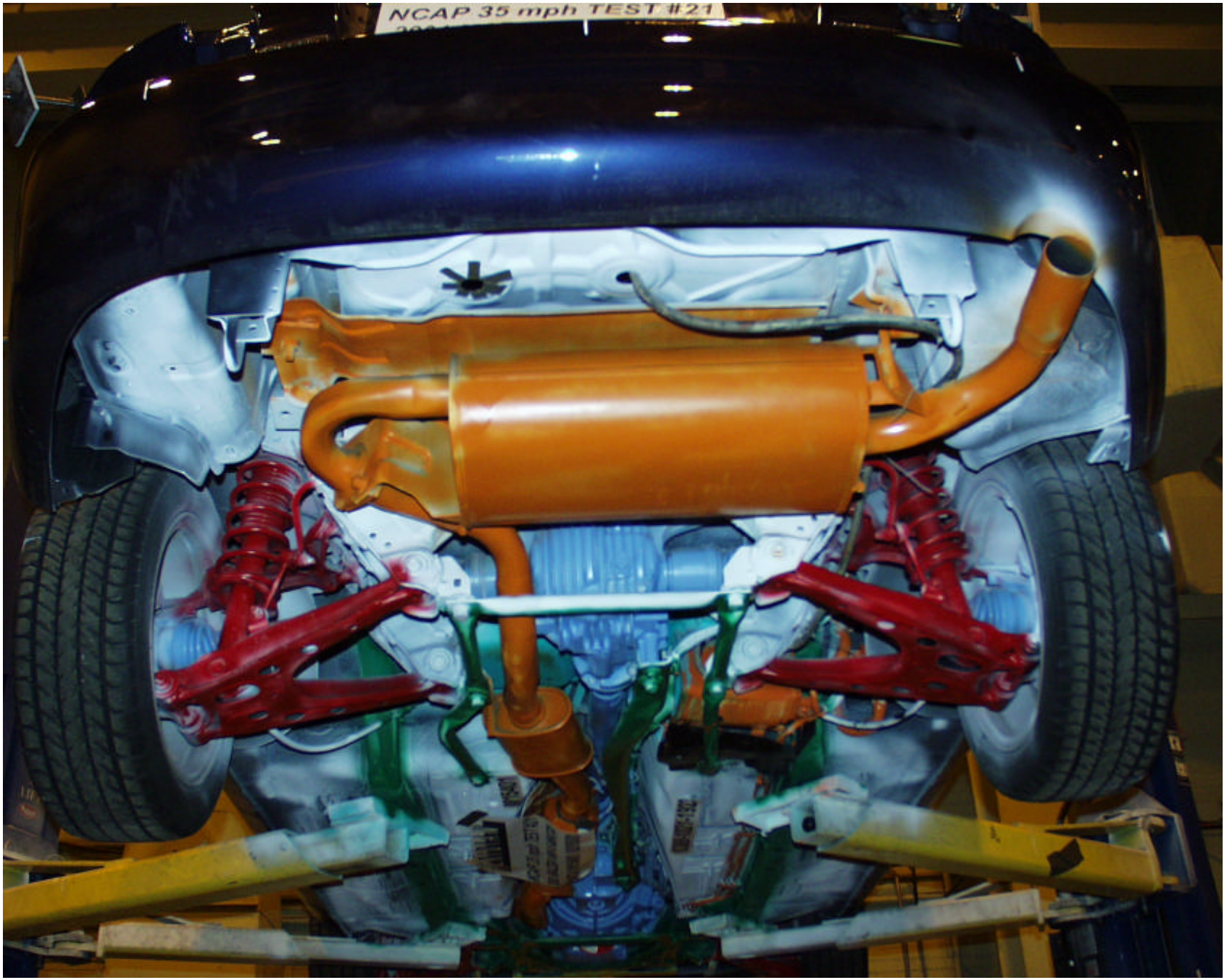


Figure A-20: PRE-TEST REAR UNDERBODY VIEW

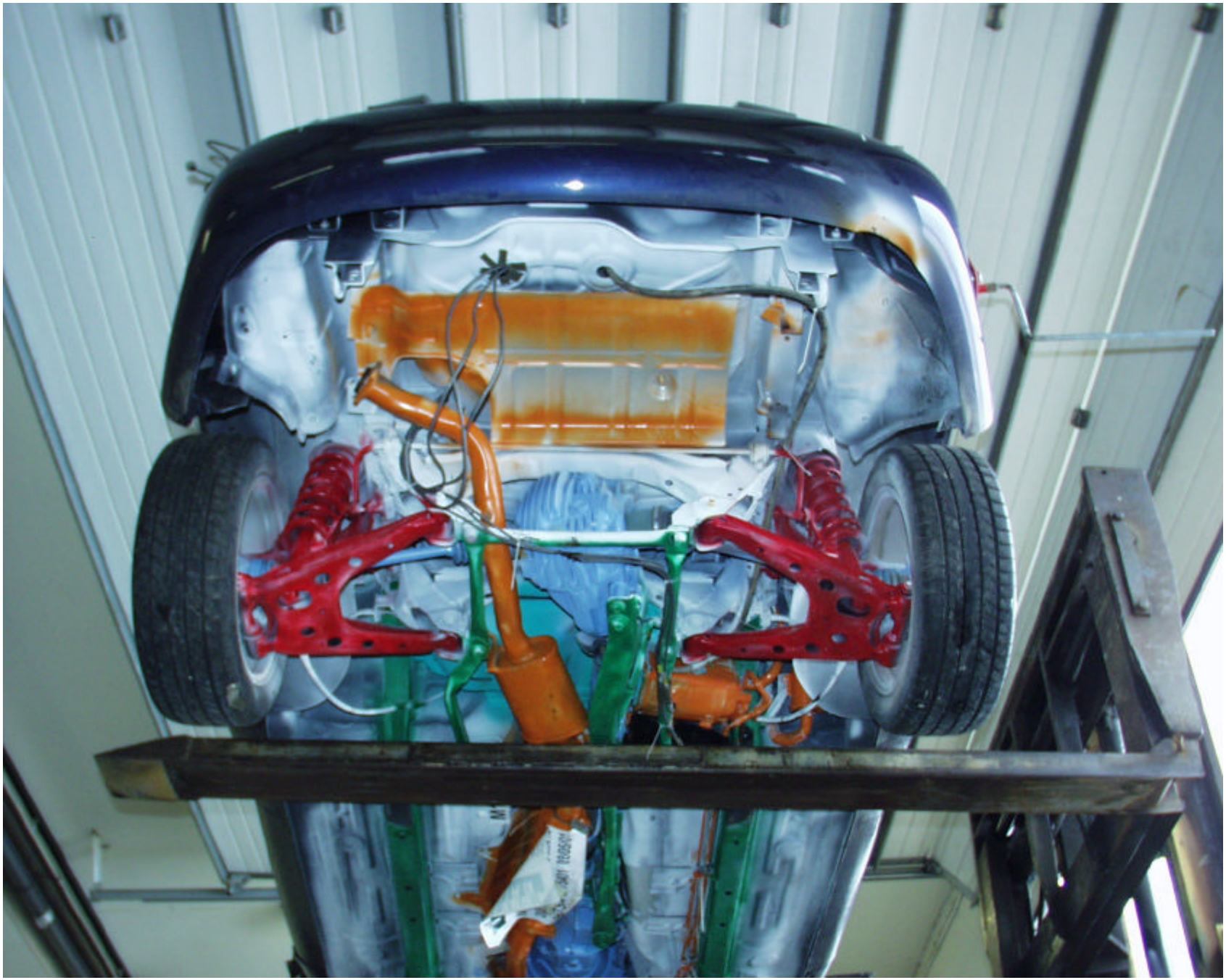


Figure A-21: POST-TEST REAR UNDERBODY VIEW

Figure A-22: PRE-TEST DRIVER POSITION VIEW

Figure A-23: POST-TEST DRIVER POSITION VIEW

Figure A-24: PRE-TEST PASSENGER POSITION VIEW

Figure A-25: POST-TEST PASSENGER POSITION VIEW

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

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

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

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

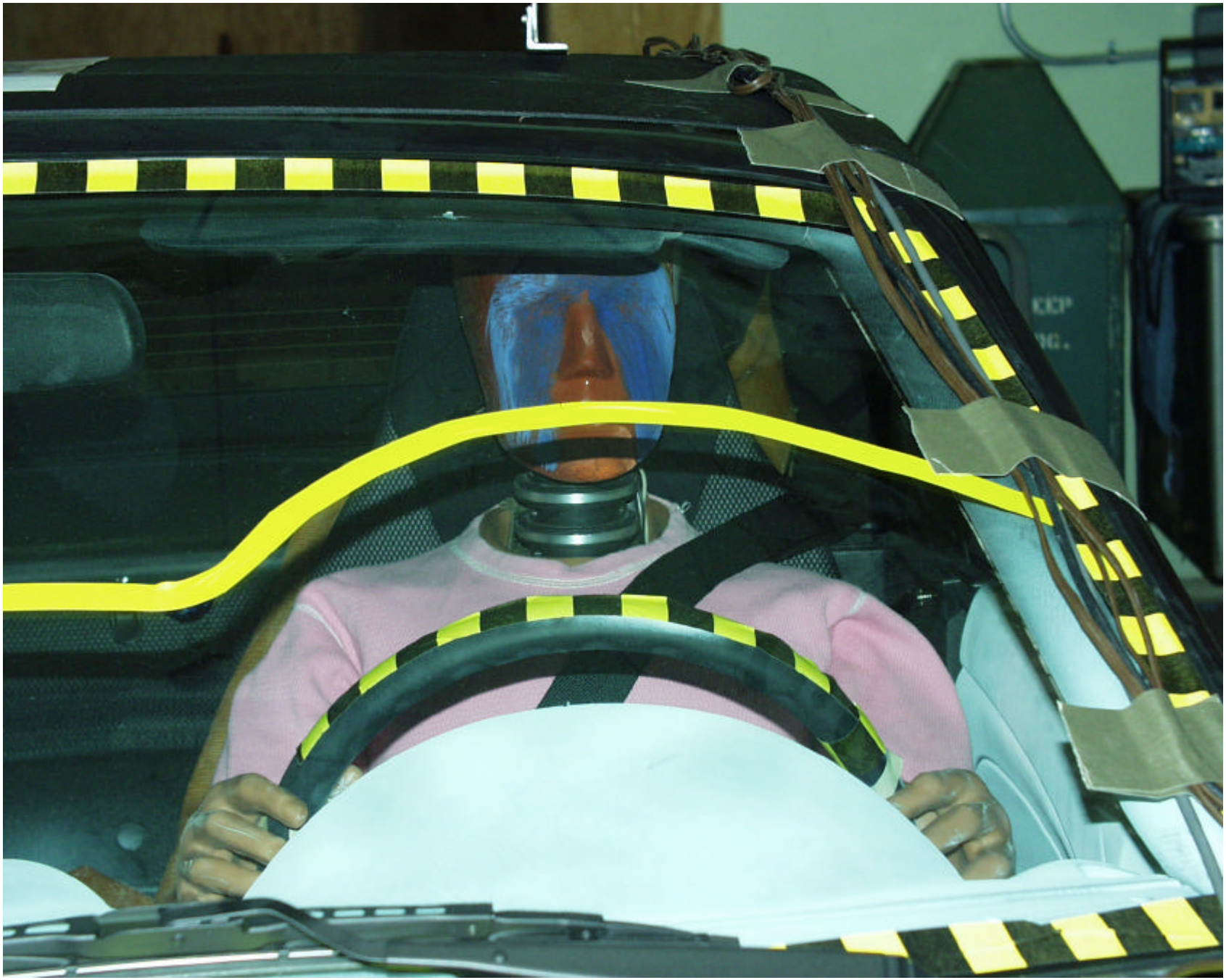


Figure A-30: PRE-TEST DRIVER HEAD LOCATION

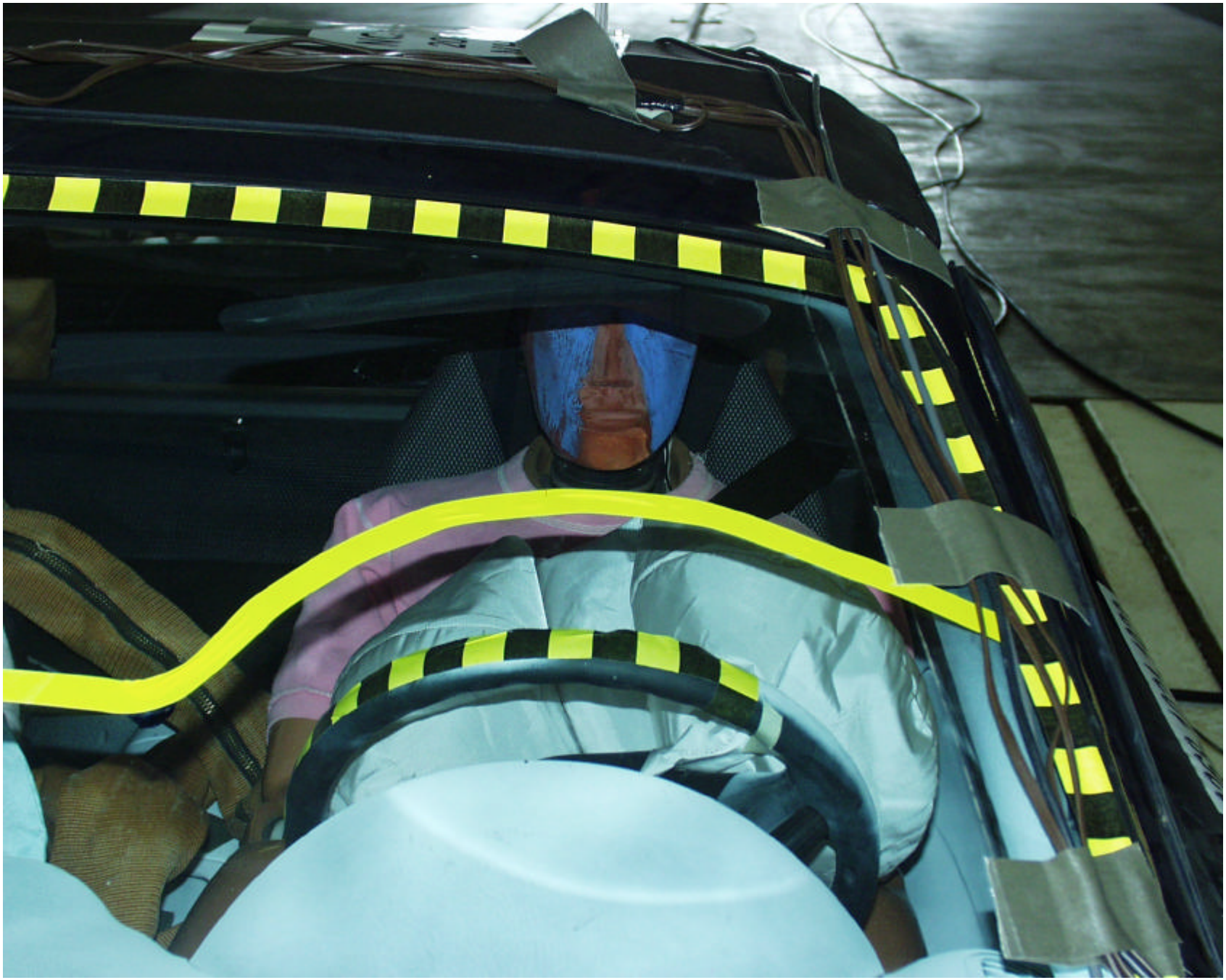


Figure A-31: POST-TEST DRIVER HEAD LOCATION

Figure A-32: PRE-TEST PASSENGER HEAD LOCATION

Figure A-33: POST-TEST PASSENGER HEAD LOCATION

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

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

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

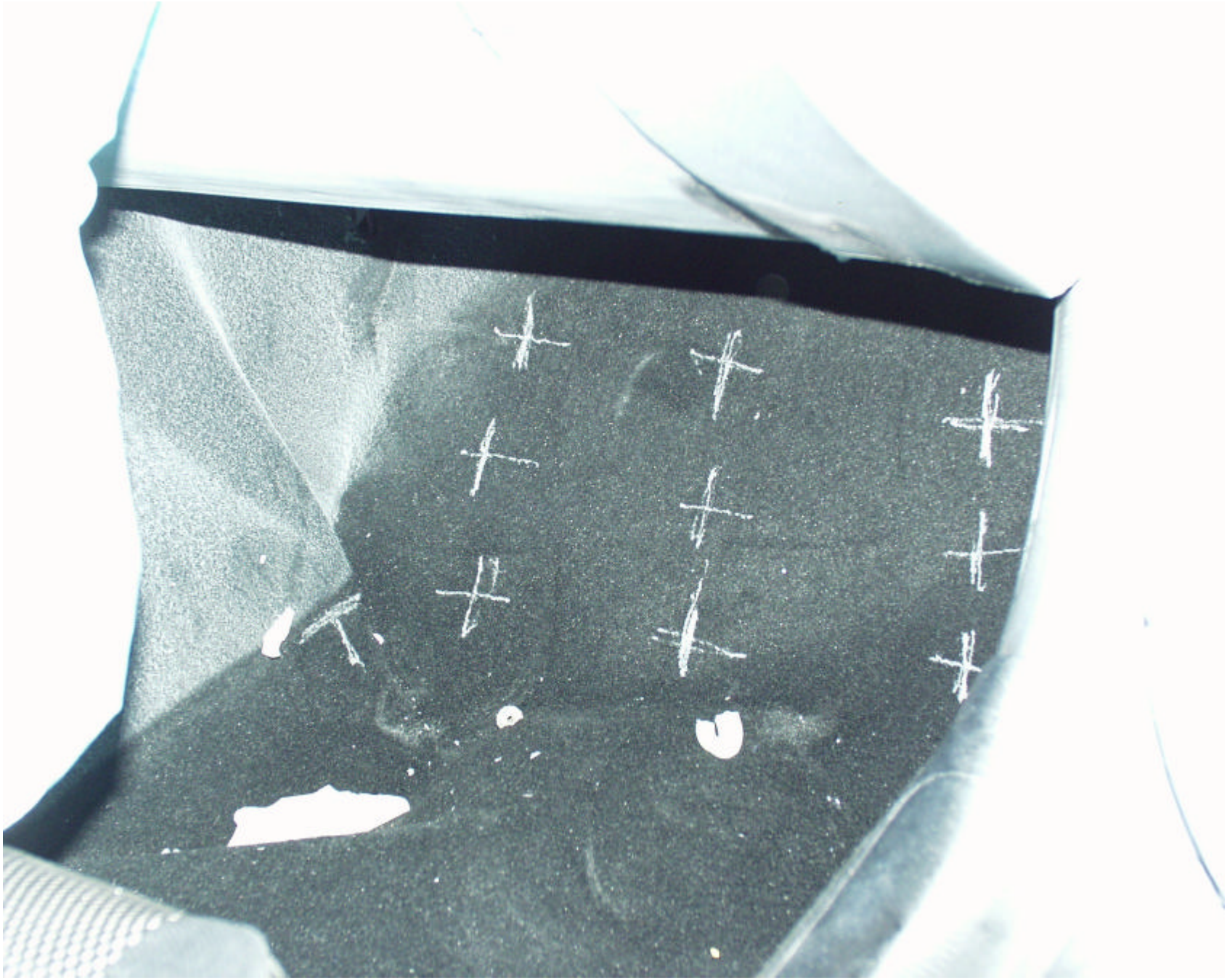


Figure A-37: POST-TEST PASSENGER FLOOR PAN VIEW

Figure A-38: ROLLOVER VIEW

Figure A-39: IMPACT VIEW

APPENDIX B

DUMMY, VEHICLE AND LOAD CELL BARRIER RESPONSE DATA

Hybrid III Dummy Sign Conventions
Load Cells and Special Transducers

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

DATA CHANNEL FILTER CLASS SUMMARY

NHTSA TEST NO. M15401

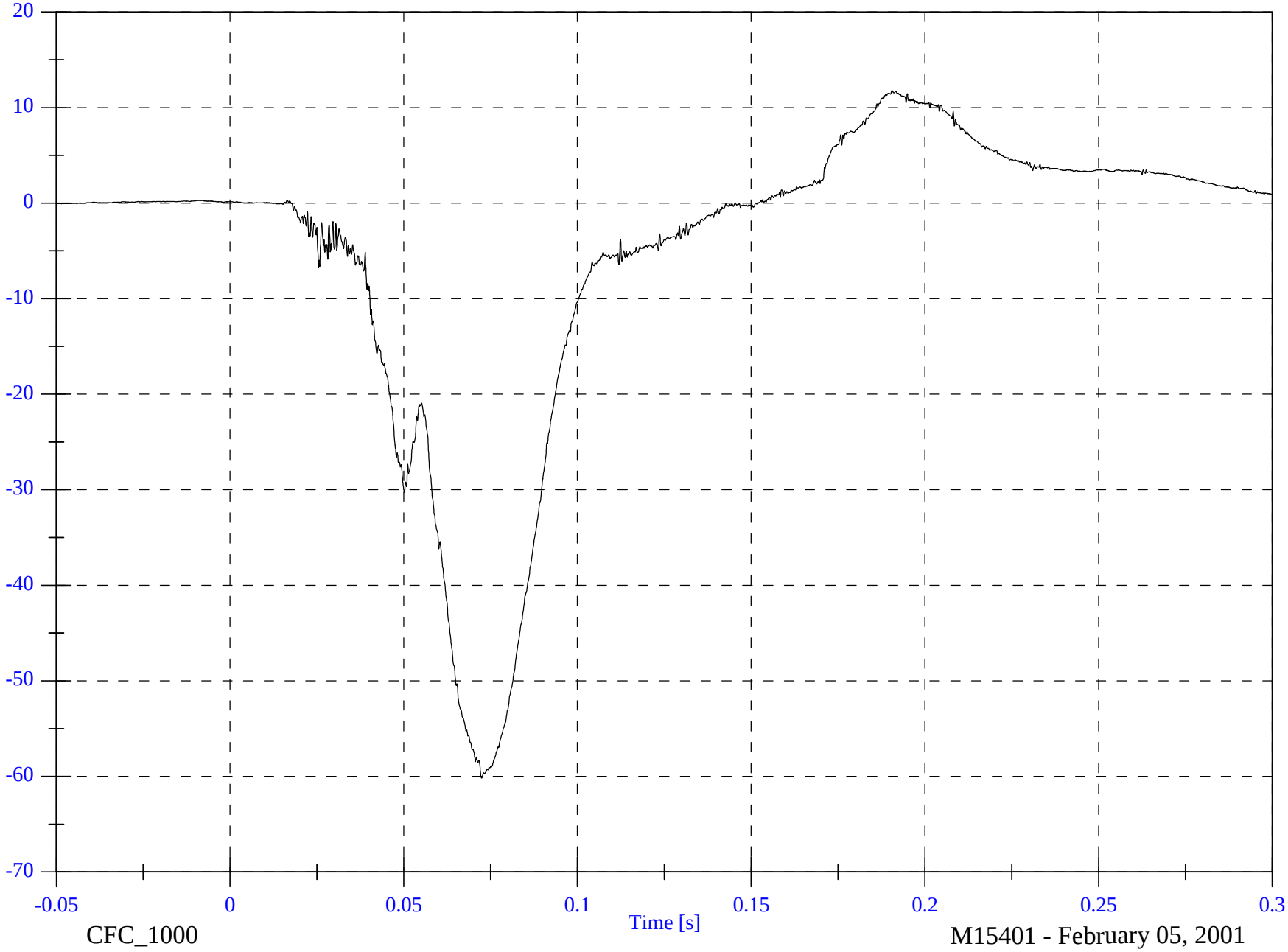
DATA TYPE	**SAE FILTER CLASS (Hz)**
Dummy Head Accelerations	1000
Dummy Chest Accelerations	180
Dummy Chest Displacements	60
Dummy Femur Forces	600
Dummy Belt Loads	60
Dummy Belt Displacements	180
Dummy Neck Forces	1000
Dummy Neck Moments	600
Vehicle Accelerations	60
Vehicle Velocity Integrations	180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

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P1 Head x

Max: 11.8 [g] at 0.190 [s]

Min: -60.2 [g] at 0.072 [s]



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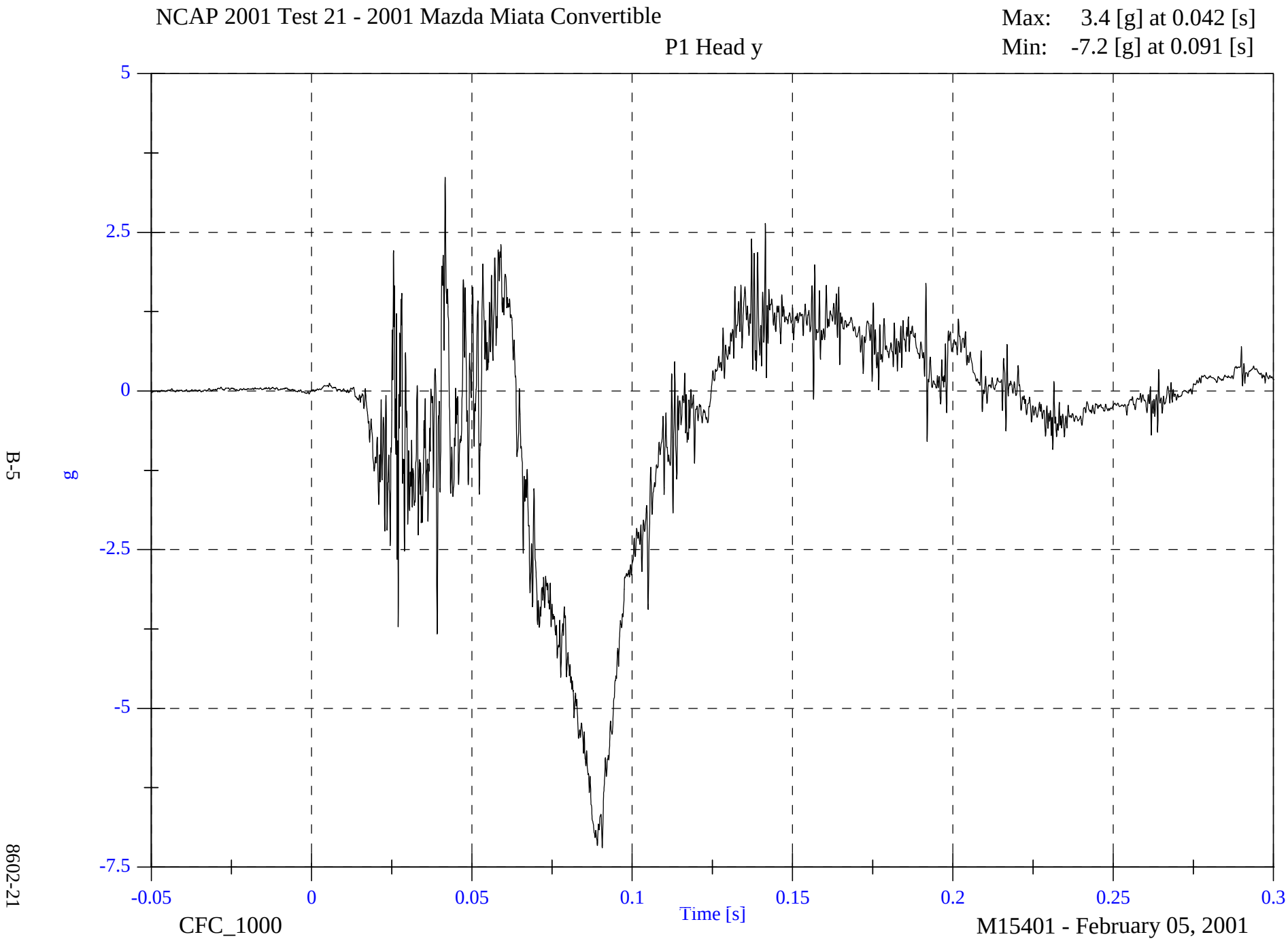
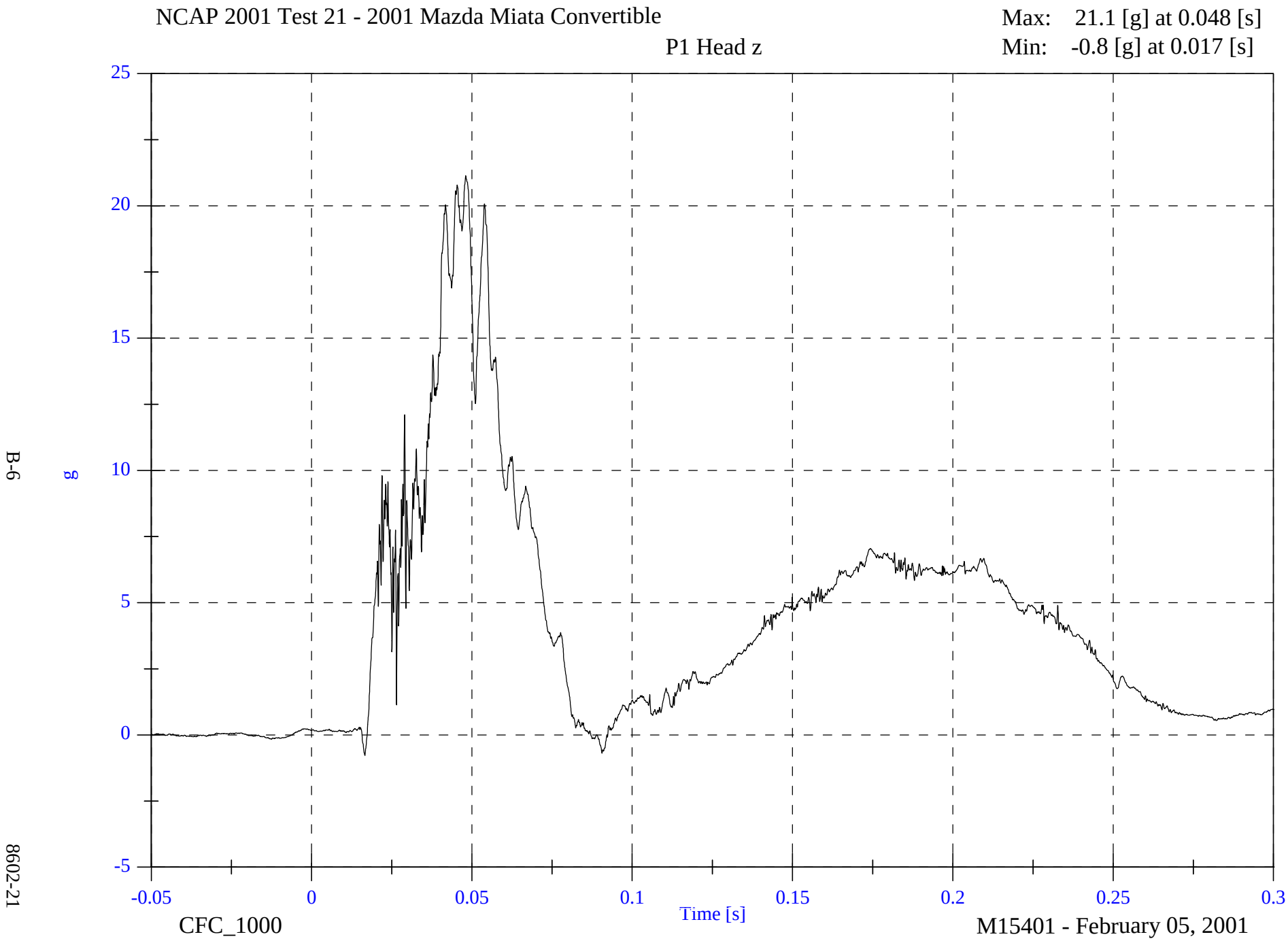
CFC_1000

M15401 - February 05, 2001


NCAP 2001 Test 21 - 2001 Mazda Miata Convertible
P1 Head y
Max: 3.4 [g] at 0.042 [s]
Min: -7.2 [g] at 0.091 [s]
5
2.5
0
-2.5
-5
-7.5
g
-0.05
0
0.05
0.1
0.15
0.2
0.25
0.3
Time [s]
B-5
8602-21
CFC_1000
M15401 - February 05, 2001

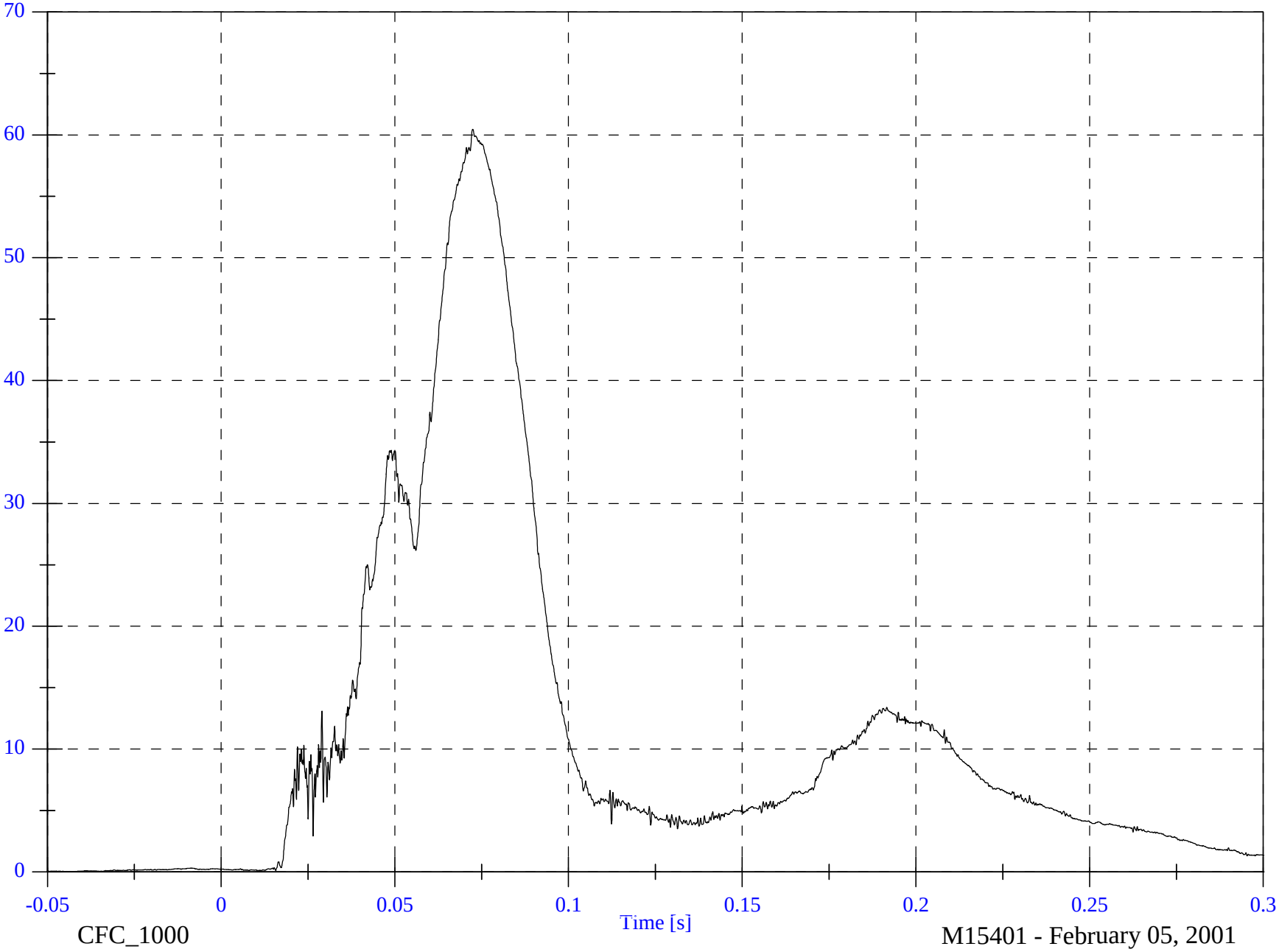

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible
P1 Head z
Max: 21.1 [g] at 0.048 [s]
Min: -0.8 [g] at 0.017 [s]
25
20
15
10
5
0
-5
g
-0.05
0
0.05
0.1
0.15
0.2
0.25
0.3
Time [s]
CFC_1000
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P1 Head Resultant

Max: 60.5 [g] at 0.072 [s]

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



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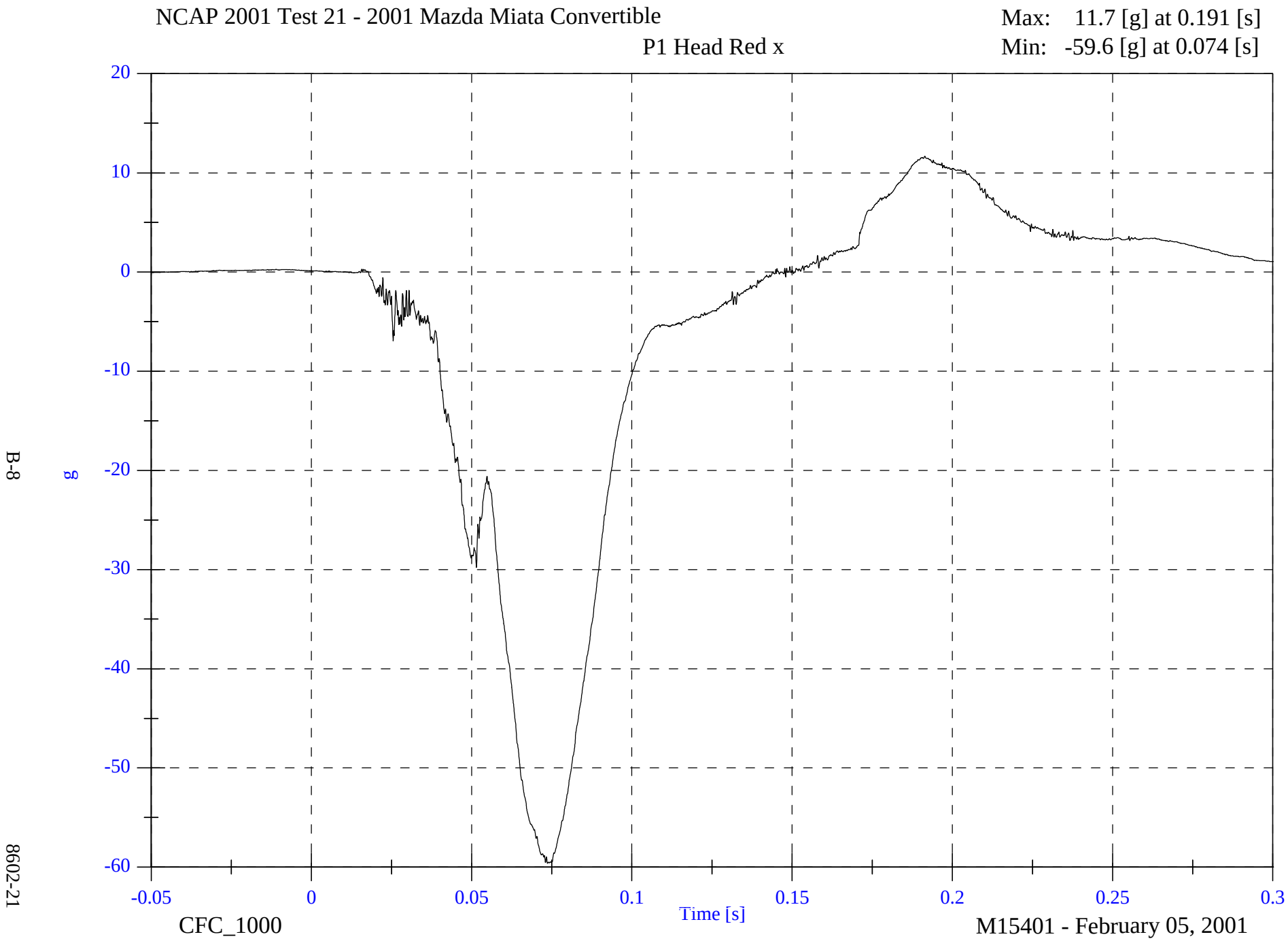
M15401 - February 05, 2001

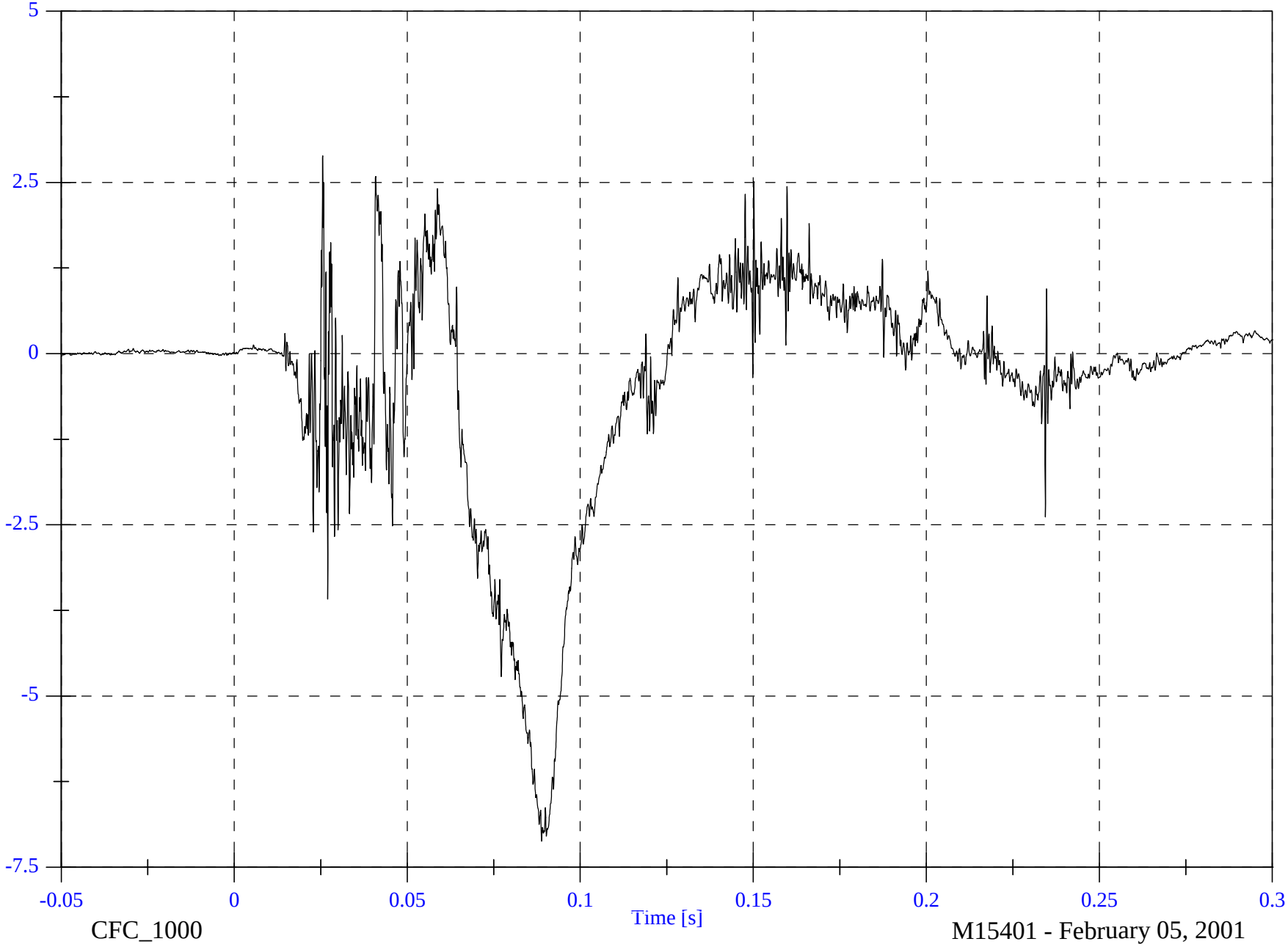

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible
P1 Head Red x
Max: 11.7 [g] at 0.191 [s]
Min: -59.6 [g] at 0.074 [s]
20
10
0
-10
-20
-30
-40
-50
-60
g
-0.05
0
0.05
0.1
0.15
0.2
0.25
0.3
Time [s]
CFC_1000
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P1 Head Red y

Max: 2.9 [g] at 0.026 [s]

Min: -7.1 [g] at 0.089 [s]



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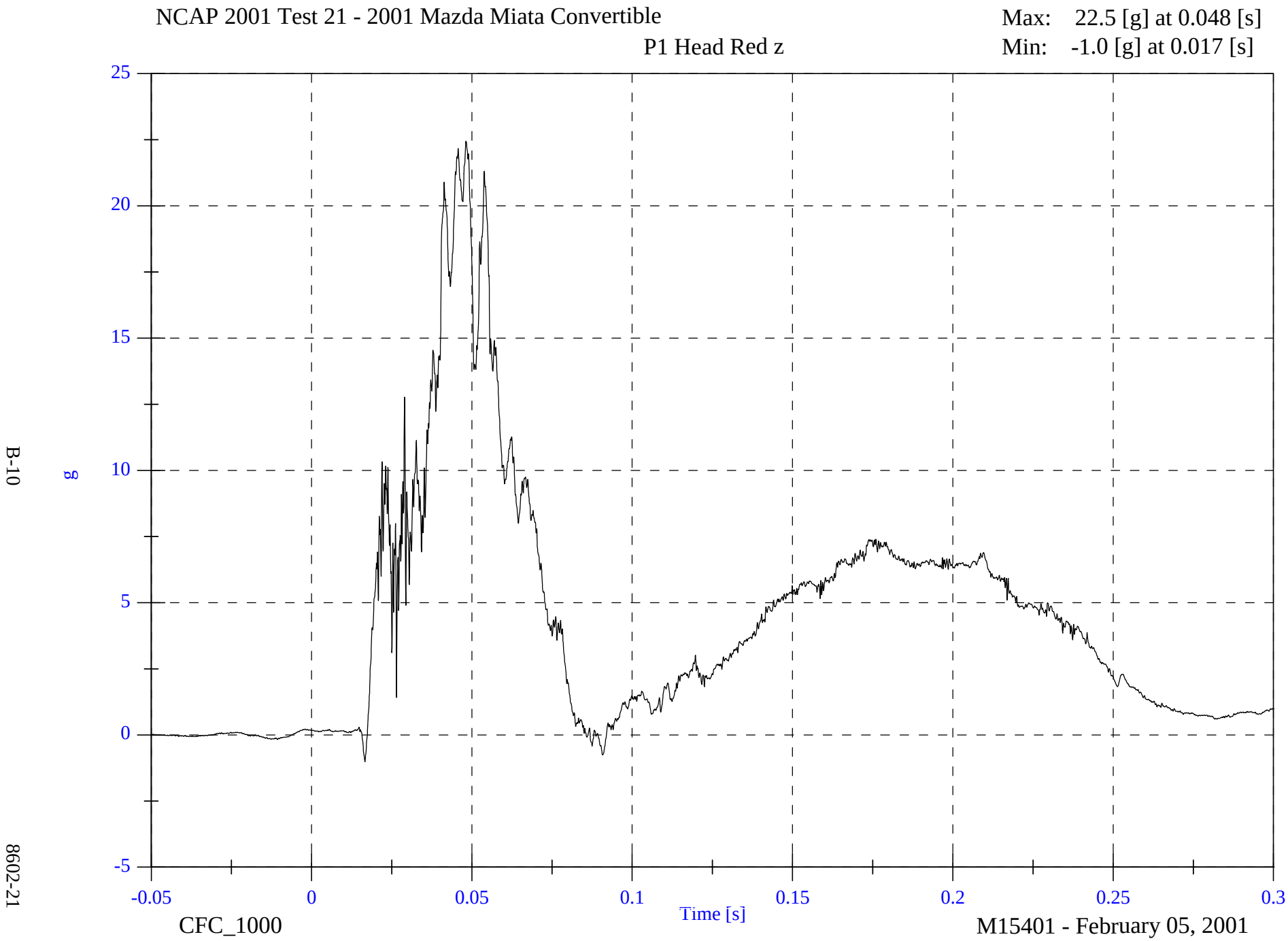
CFC_1000

M15401 - February 05, 2001


NCAP 2001 Test 21 - 2001 Mazda Miata Convertible
P1 Head Red z
Max: 22.5 [g] at 0.048 [s]
Min: -1.0 [g] at 0.017 [s]
25
20
15
10
5
0
-5
g
-0.05
0
0.05
0.1
0.15
0.2
0.25
0.3
Time [s]
CFC_1000
M15401 - February 05, 2001

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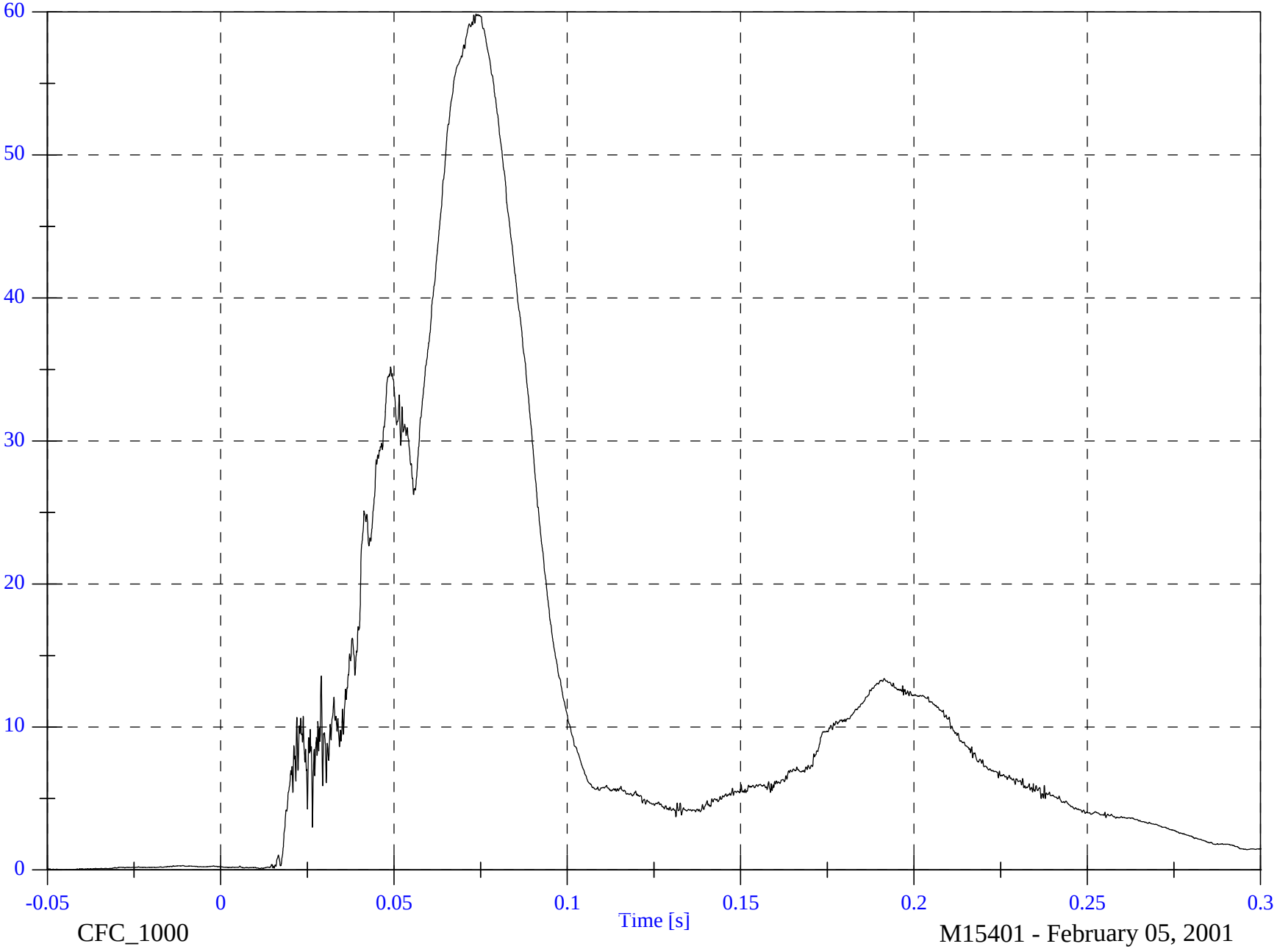
NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P1 Head Red Resultant

Max: 59.9 [g] at 0.074 [s]

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



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CFC_1000

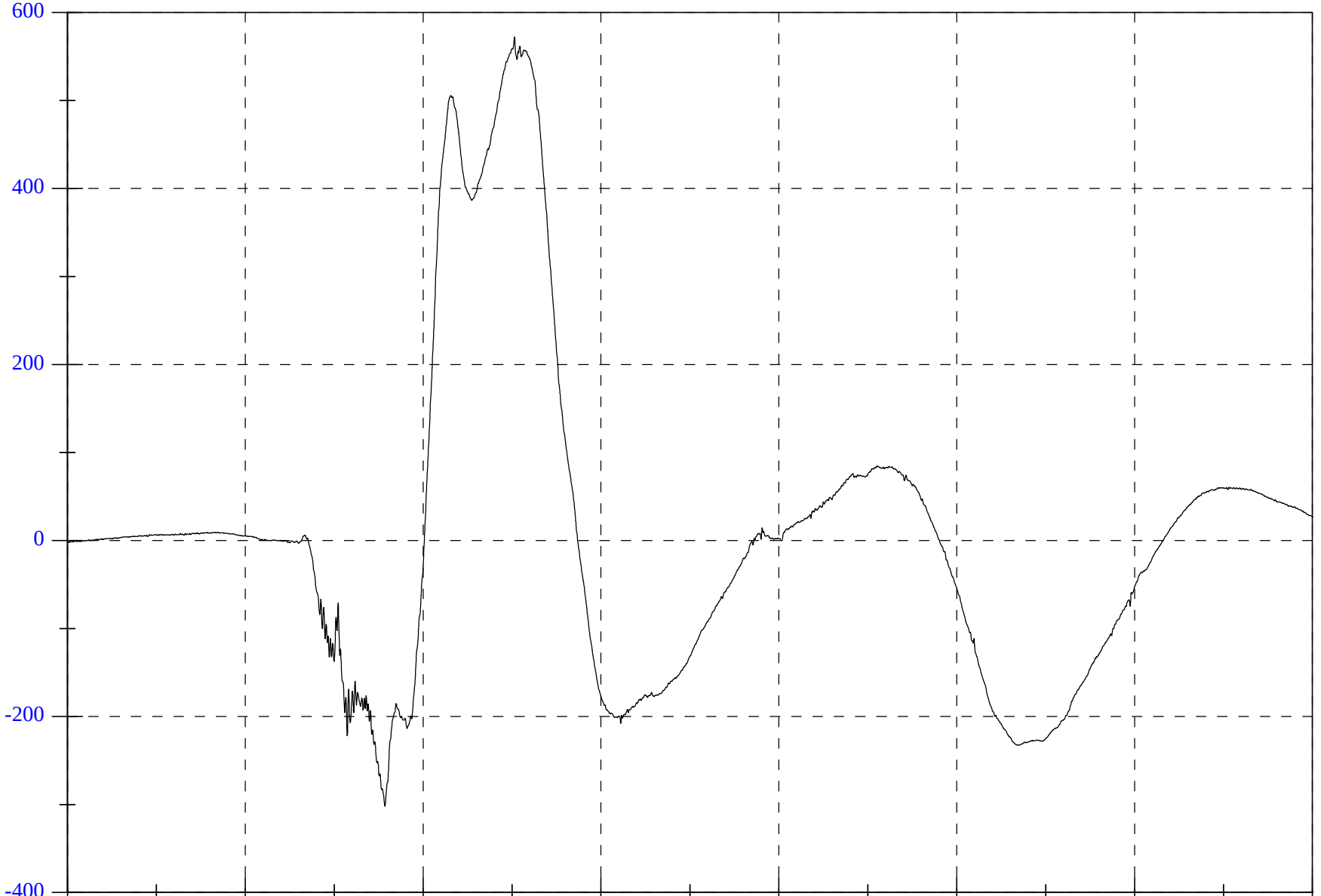
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P1 Upper Neck Fx

Max: 572.2 [N] at 0.076 [s]

Min: -302.2 [N] at 0.039 [s]



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CFC_1000

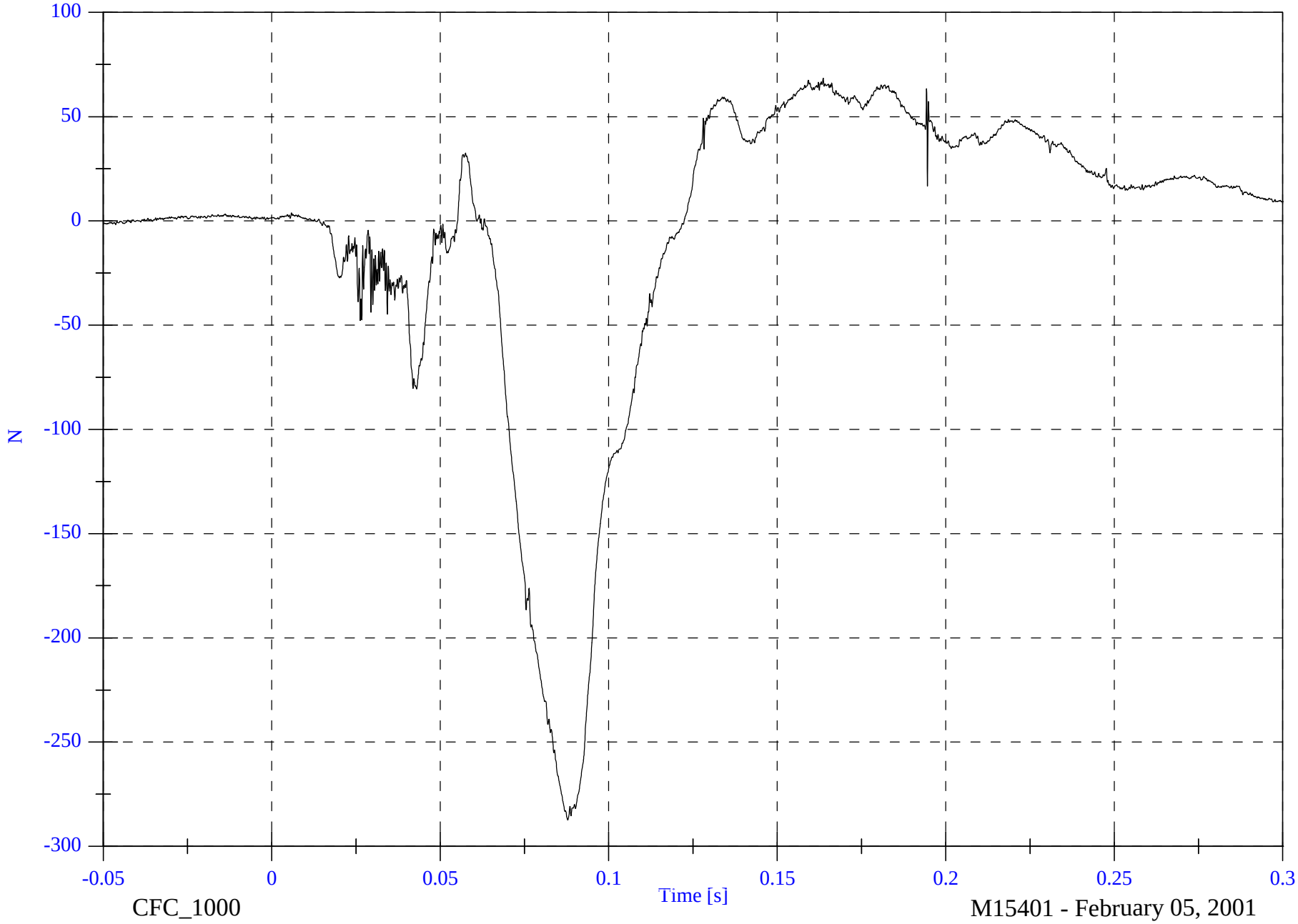
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P1 Upper Neck Fy

Max: 68.4 [N] at 0.164 [s]

Min: -287.4 [N] at 0.088 [s]



CFC_1000

M15401 - February 05, 2001

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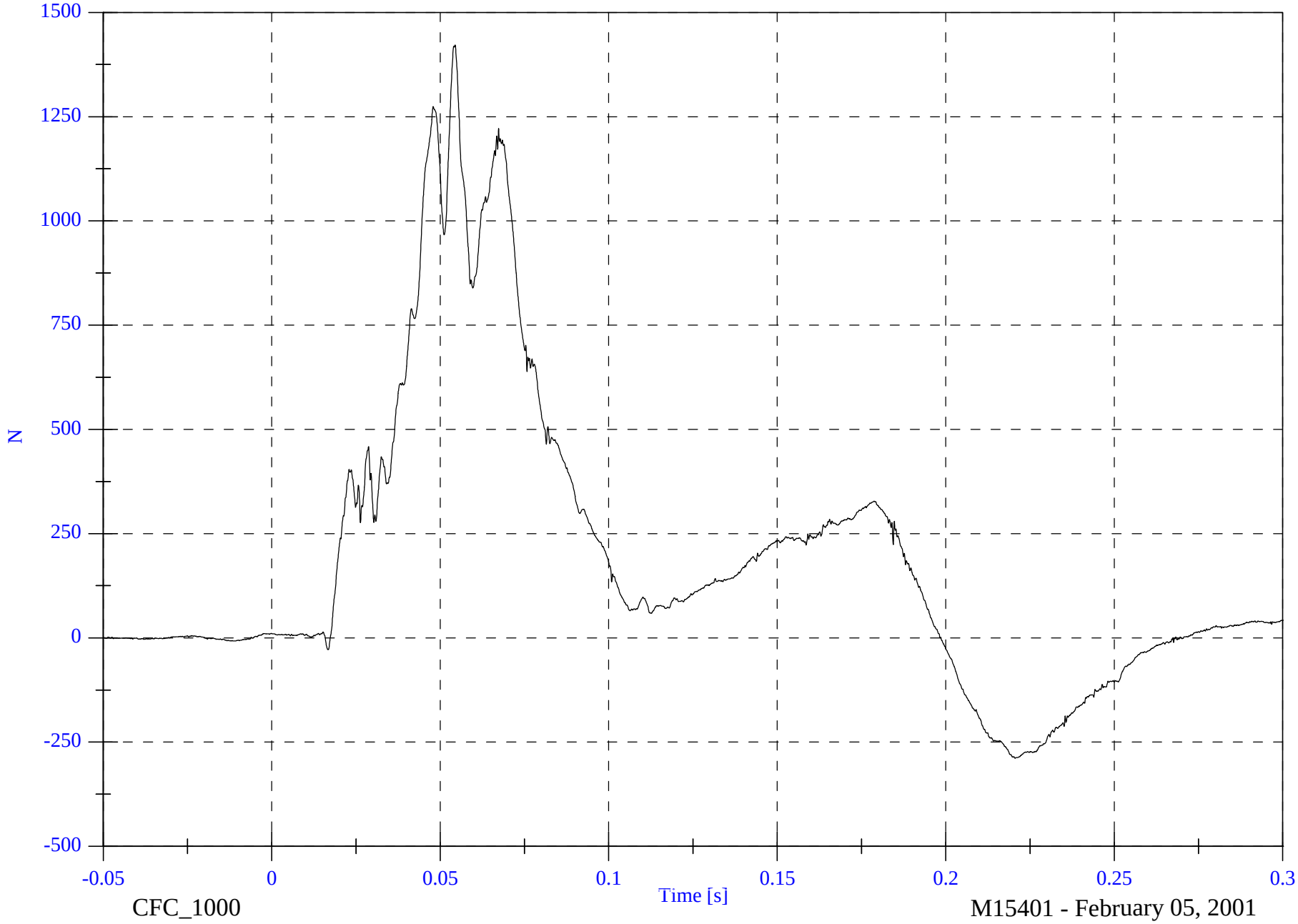
8602-21

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P1 Upper Neck Fz

Max: 1421.7 [N] at 0.054 [s]

Min: -288.8 [N] at 0.221 [s]



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8602-21

CFC_1000

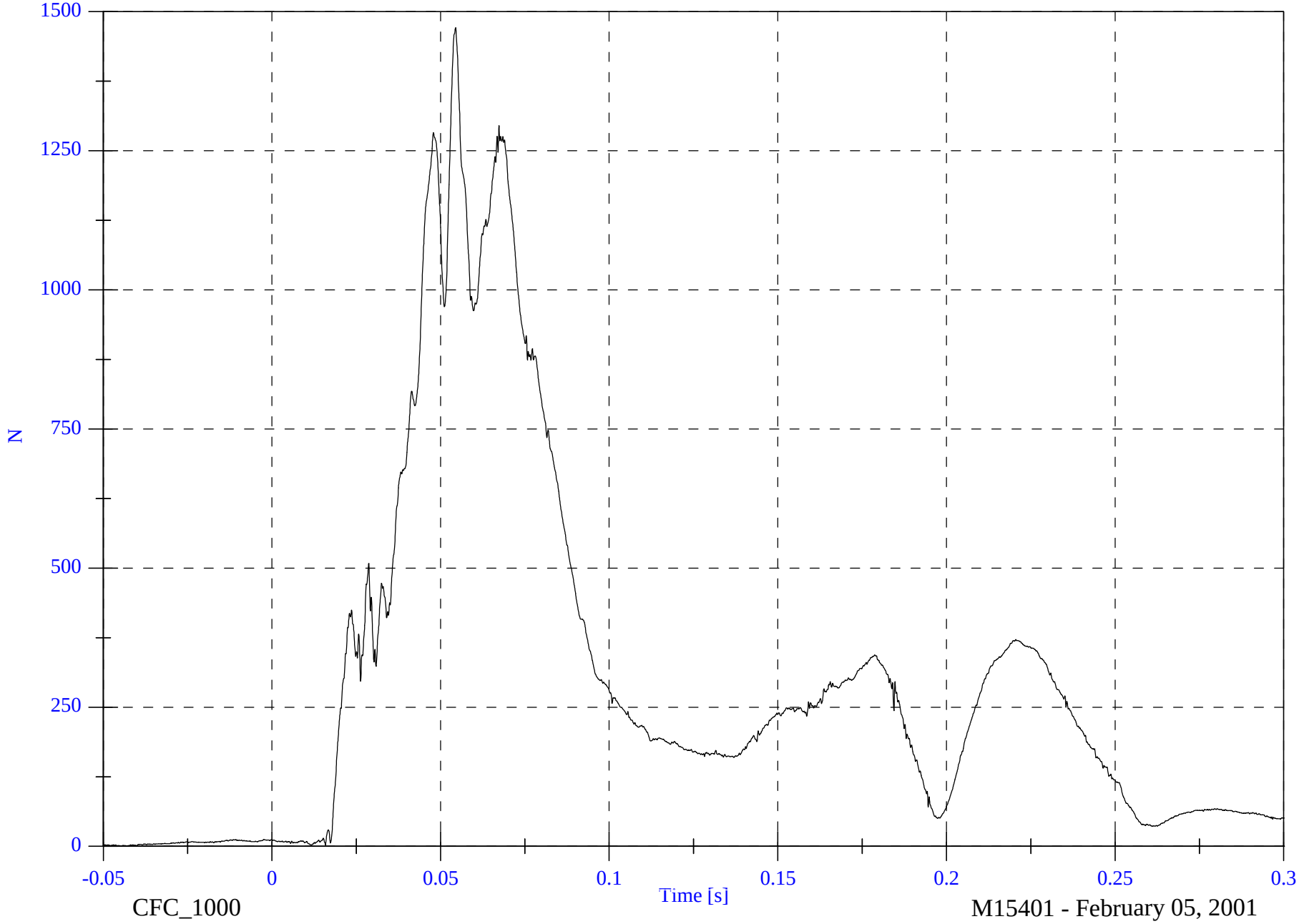
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P1 Upper Neck F Resultant

Max: 1471.2 [N] at 0.054 [s]

Min: 0.5 [N] at -0.043 [s]



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8602-21

CFC_1000

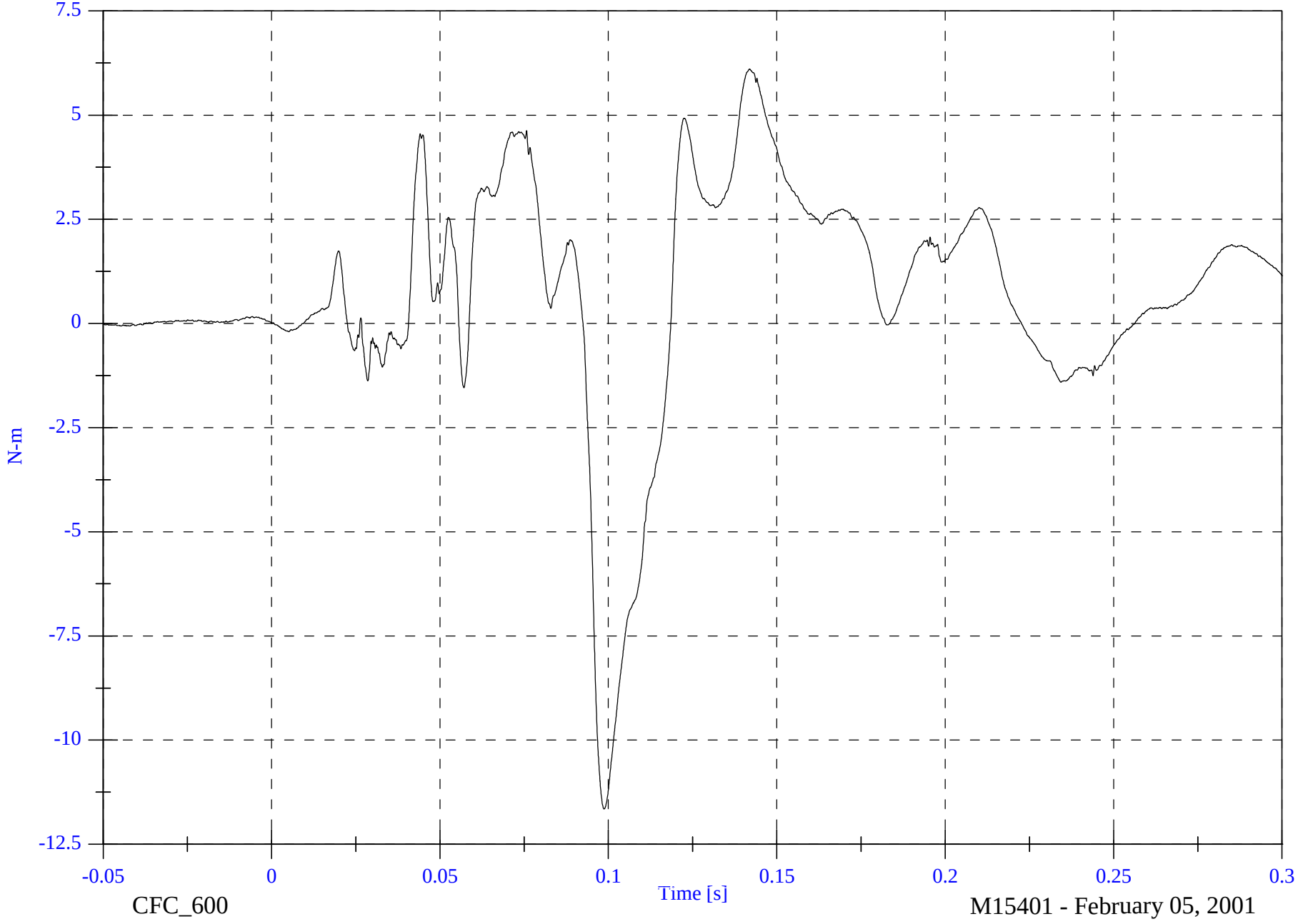
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P1 Upper Neck Mx

Max: 6.1 [N-m] at 0.142 [s]

Min: -11.7 [N-m] at 0.099 [s]



CFC_600

M15401 - February 05, 2001

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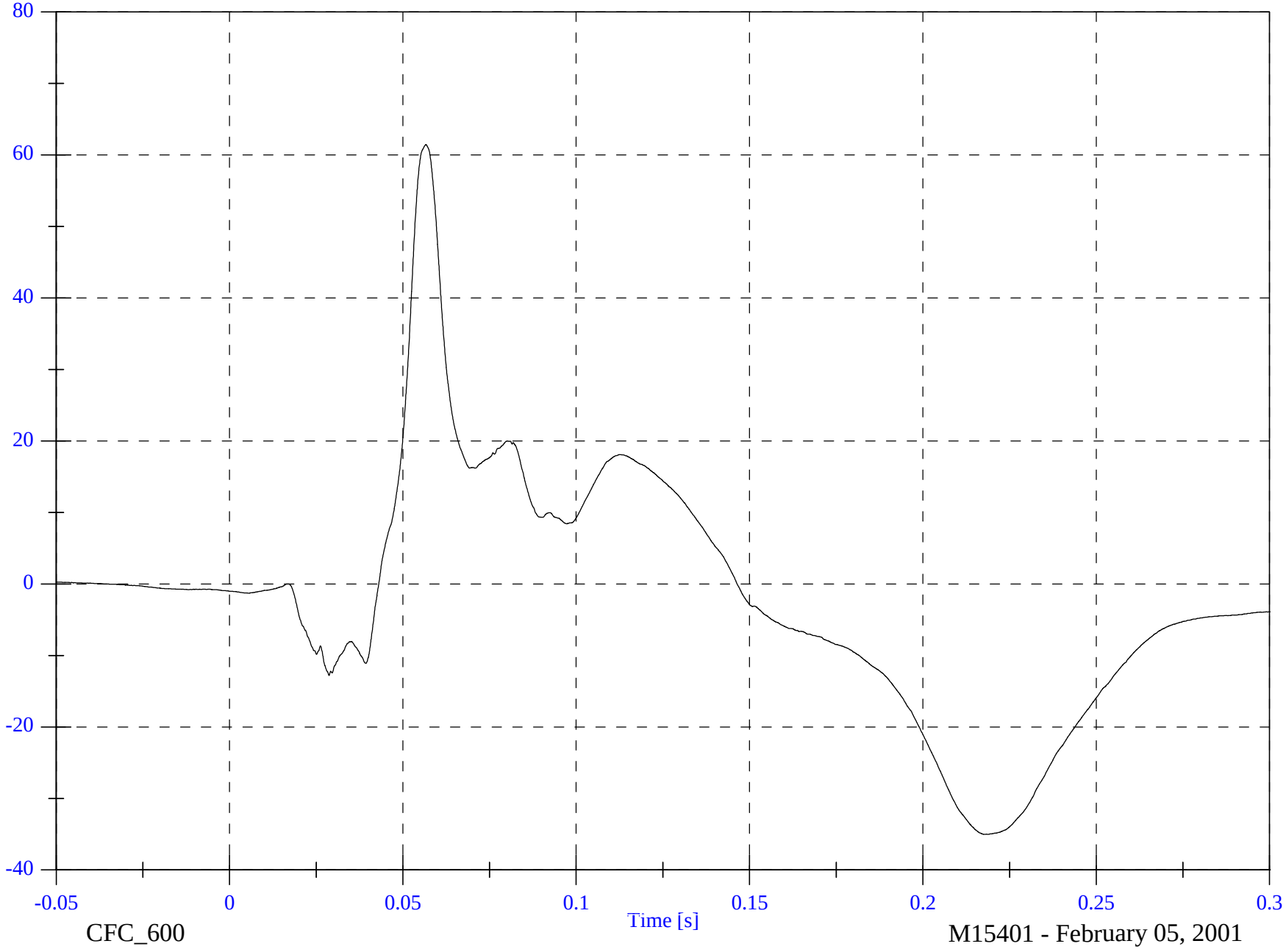
8602-21

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P1 Upper Neck My

Max: 61.5 [N-m] at 0.057 [s]

Min: -35.0 [N-m] at 0.219 [s]



CFC_600

M15401 - February 05, 2001

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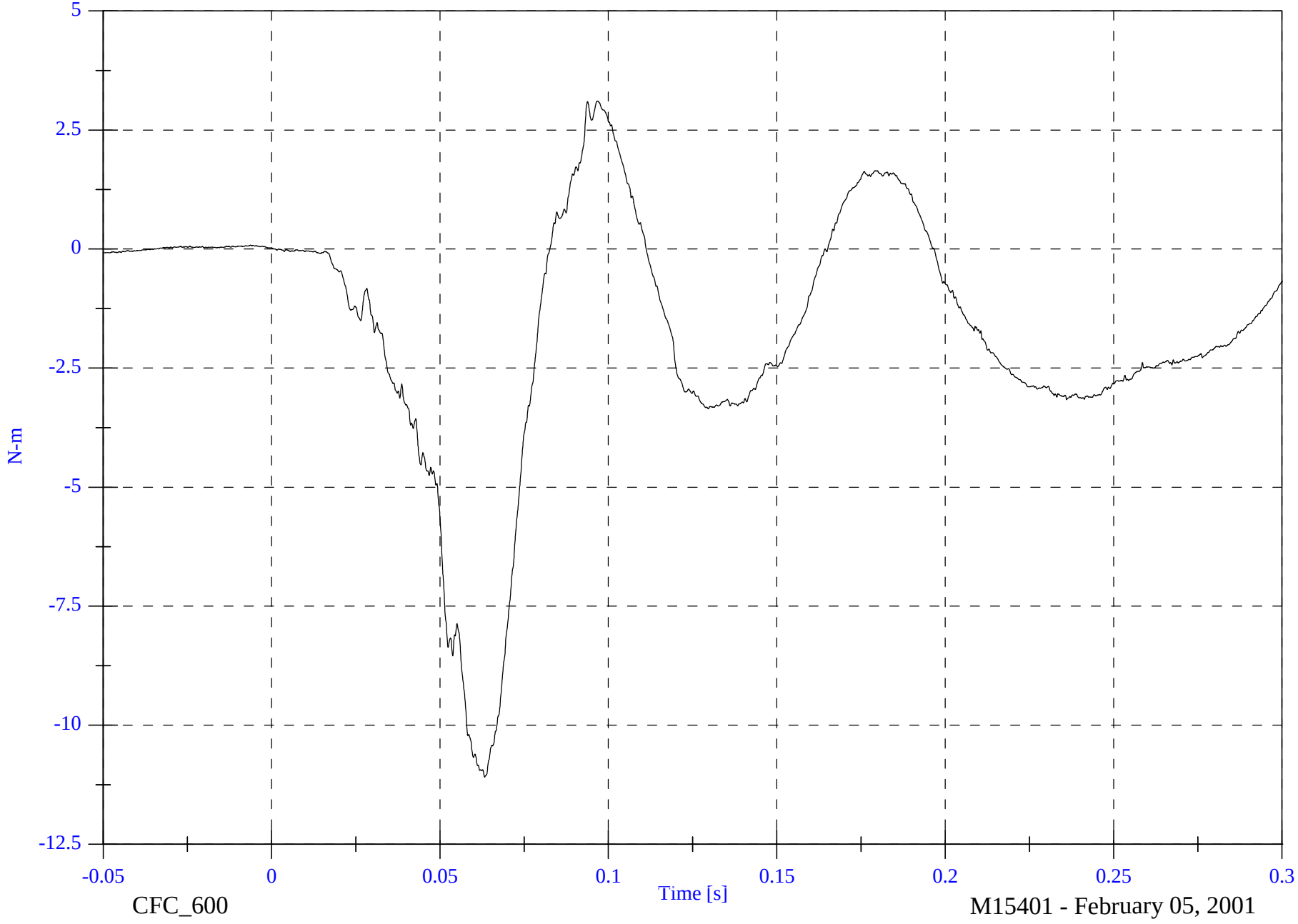
8602-21

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P1 Upper Neck Mz

Max: 3.1 [N-m] at 0.097 [s]

Min: -11.1 [N-m] at 0.063 [s]



CFC_600

M15401 - February 05, 2001

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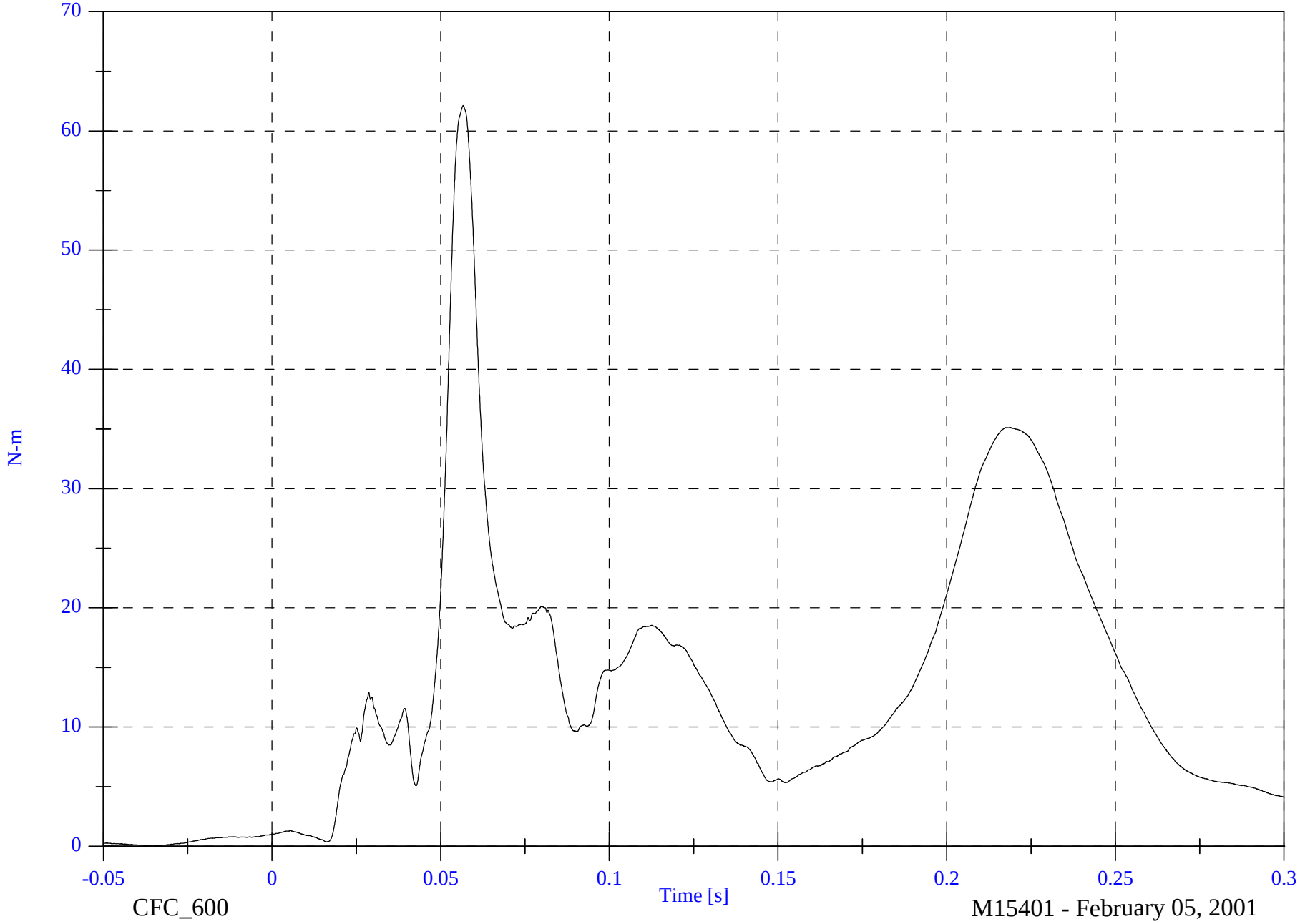
8602-21

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P1 Upper Neck M Resultant

Max: 62.1 [N-m] at 0.057 [s]

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



CFC_600

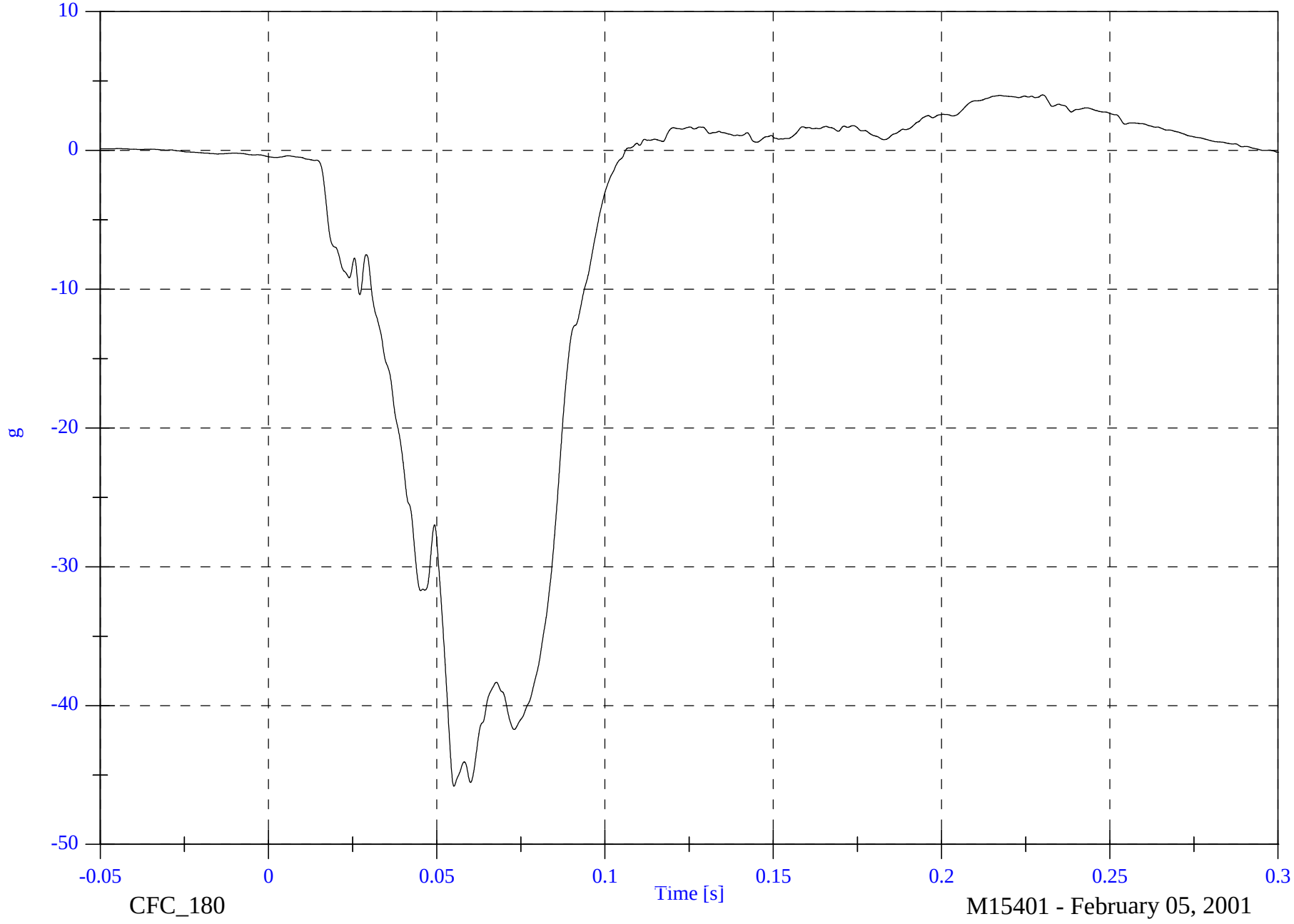
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P1 Chest x

Max: 4.0 [g] at 0.230 [s]

Min: -45.8 [g] at 0.055 [s]



B-20

8602-21

CFC_180

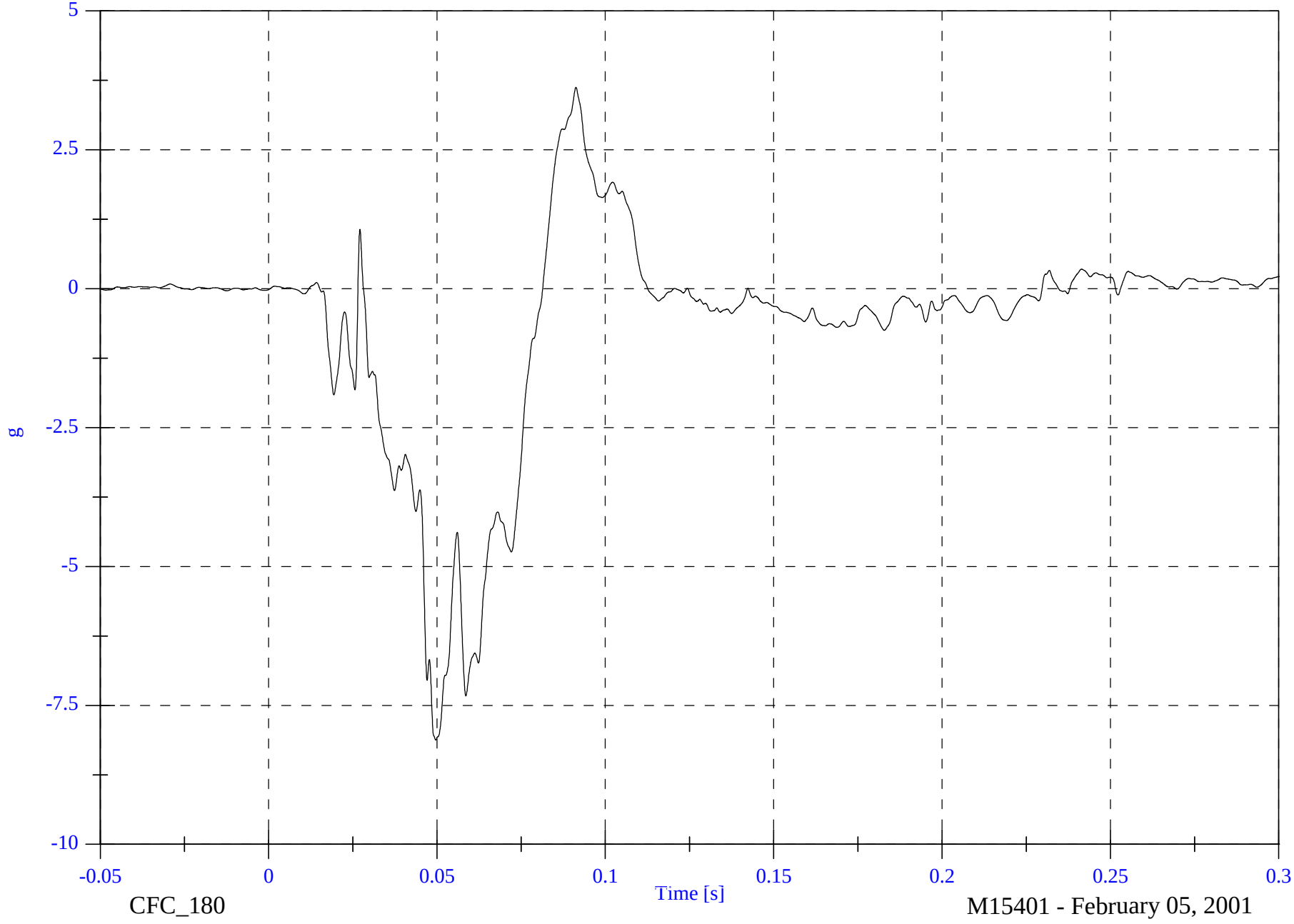
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P1 Chest y

Max: 3.6 [g] at 0.091 [s]

Min: -8.1 [g] at 0.050 [s]



B-21

8602-21

CFC_180

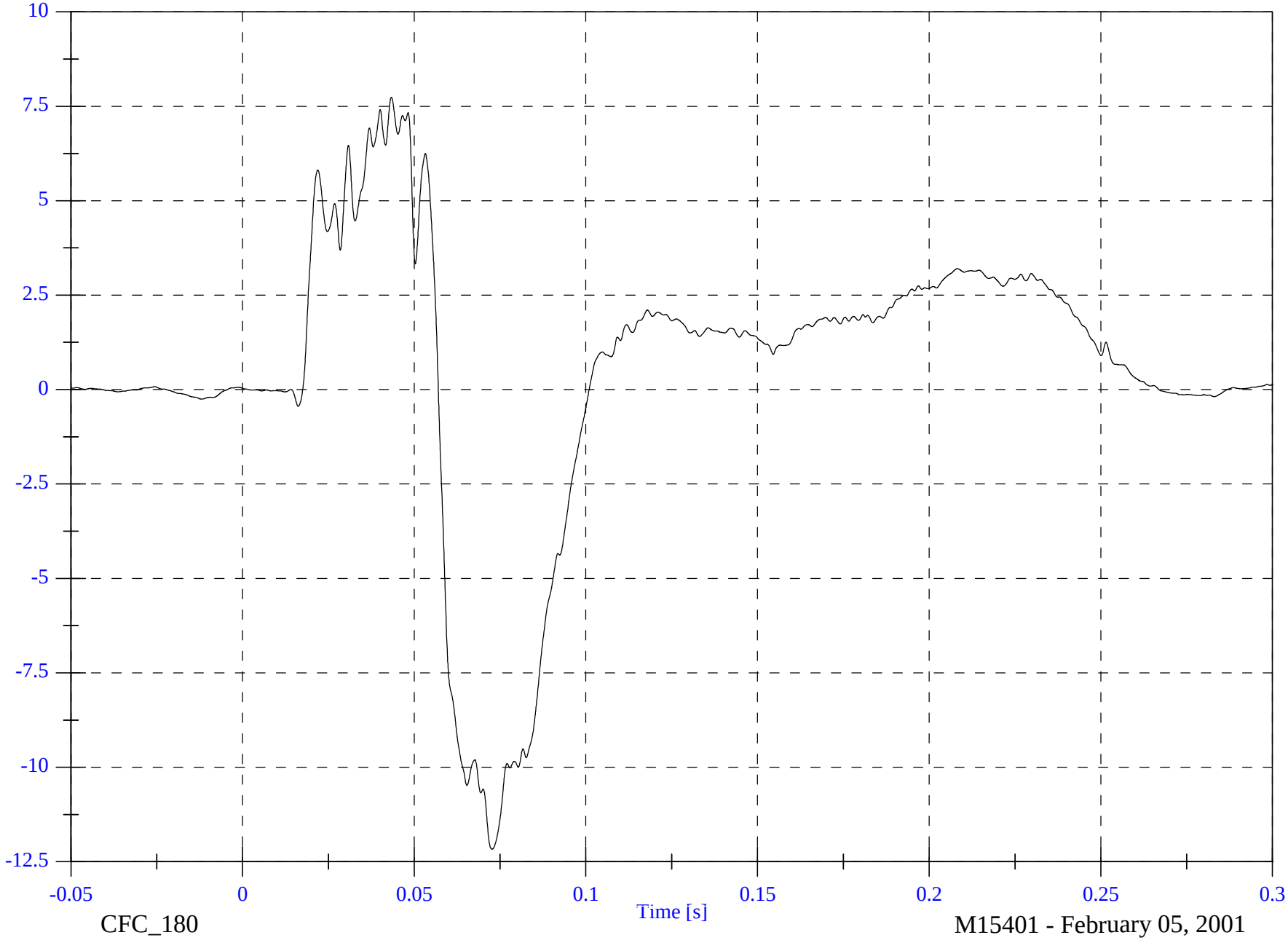
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P1 Chest z

Max: 7.7 [g] at 0.043 [s]

Min: -12.2 [g] at 0.073 [s]



B-22

8602-21

CFC_180

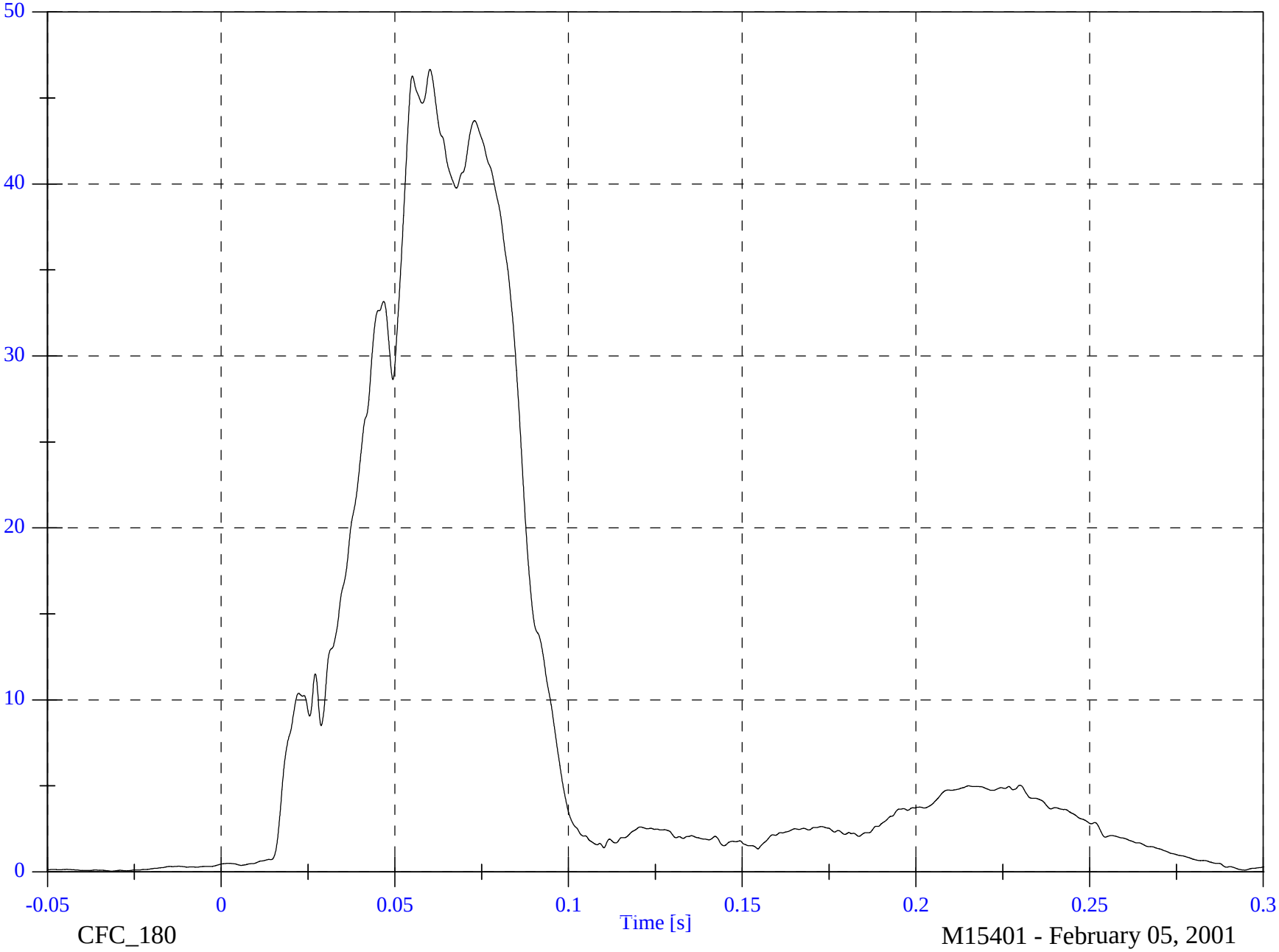
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P1 Chest Resultant

Max: 46.7 [g] at 0.060 [s]

Min: 0.0 [g] at -0.031 [s]



B-23

8602-21

CFC_180

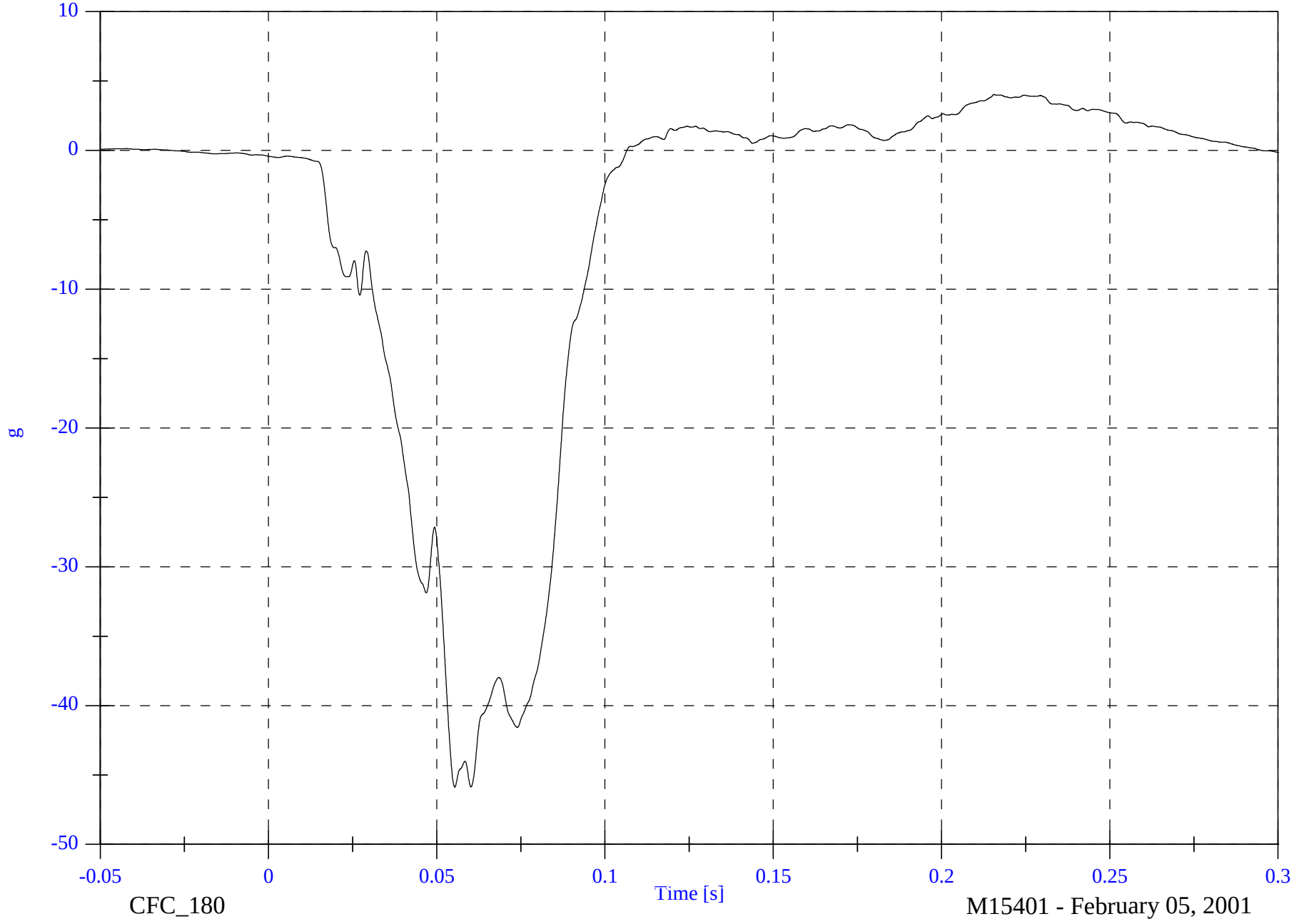
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P1 Chest Red x

Max: 4.0 [g] at 0.216 [s]

Min: -45.9 [g] at 0.055 [s]



B-24

8602-21

CFC_180

M15401 - February 05, 2001

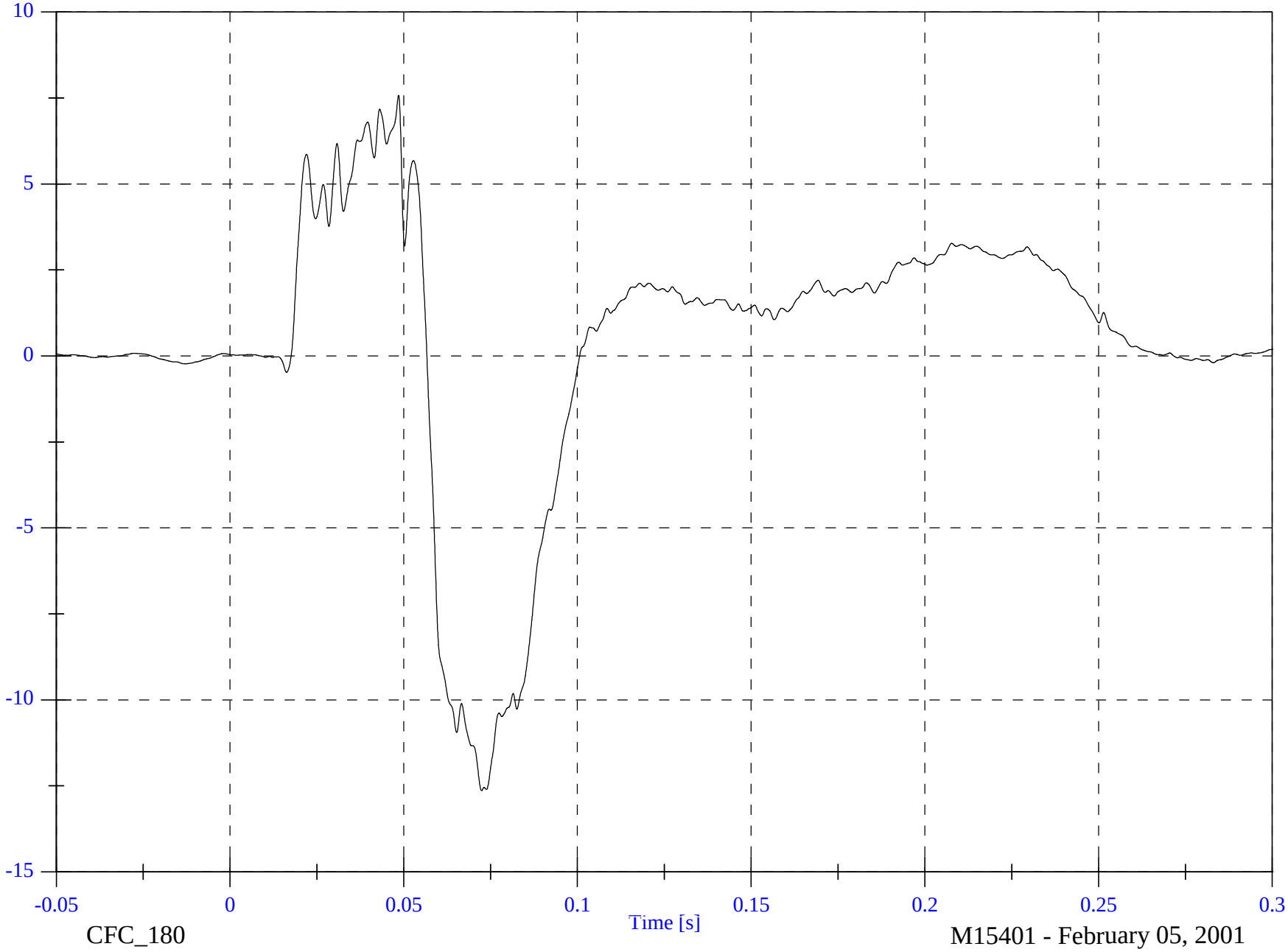

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible
P1 Chest Red y
Max: 3.5 [g] at 0.091 [s]
Min: -7.8 [g] at 0.050 [s]
5
2.5
0
-2.5
-5
-7.5
-10
g
-0.05
0
0.05
0.1
0.15
0.2
0.25
0.3
Time [s]
CFC_180
M15401 - February 05, 2001
B-25
8602-21

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P1 Chest Red z

Max: 7.6 [g] at 0.049 [s]

Min: -12.6 [g] at 0.072 [s]



B-26

8602-21

CFC_180

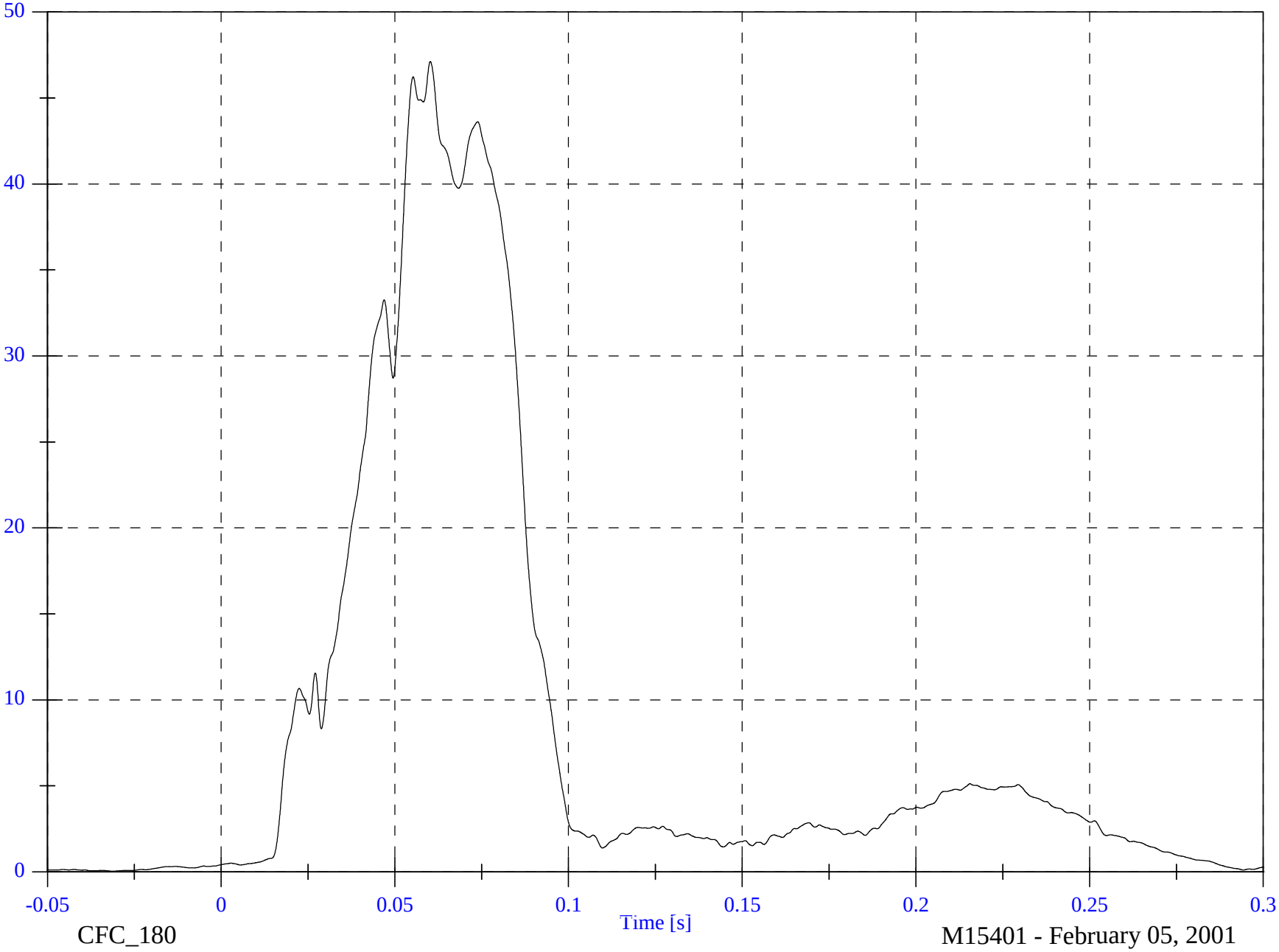
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P1 Chest Red Resultant

Max: 47.1 [g] at 0.060 [s]

Min: 0.0 [g] at -0.031 [s]



B-27

8602-21

CFC_180

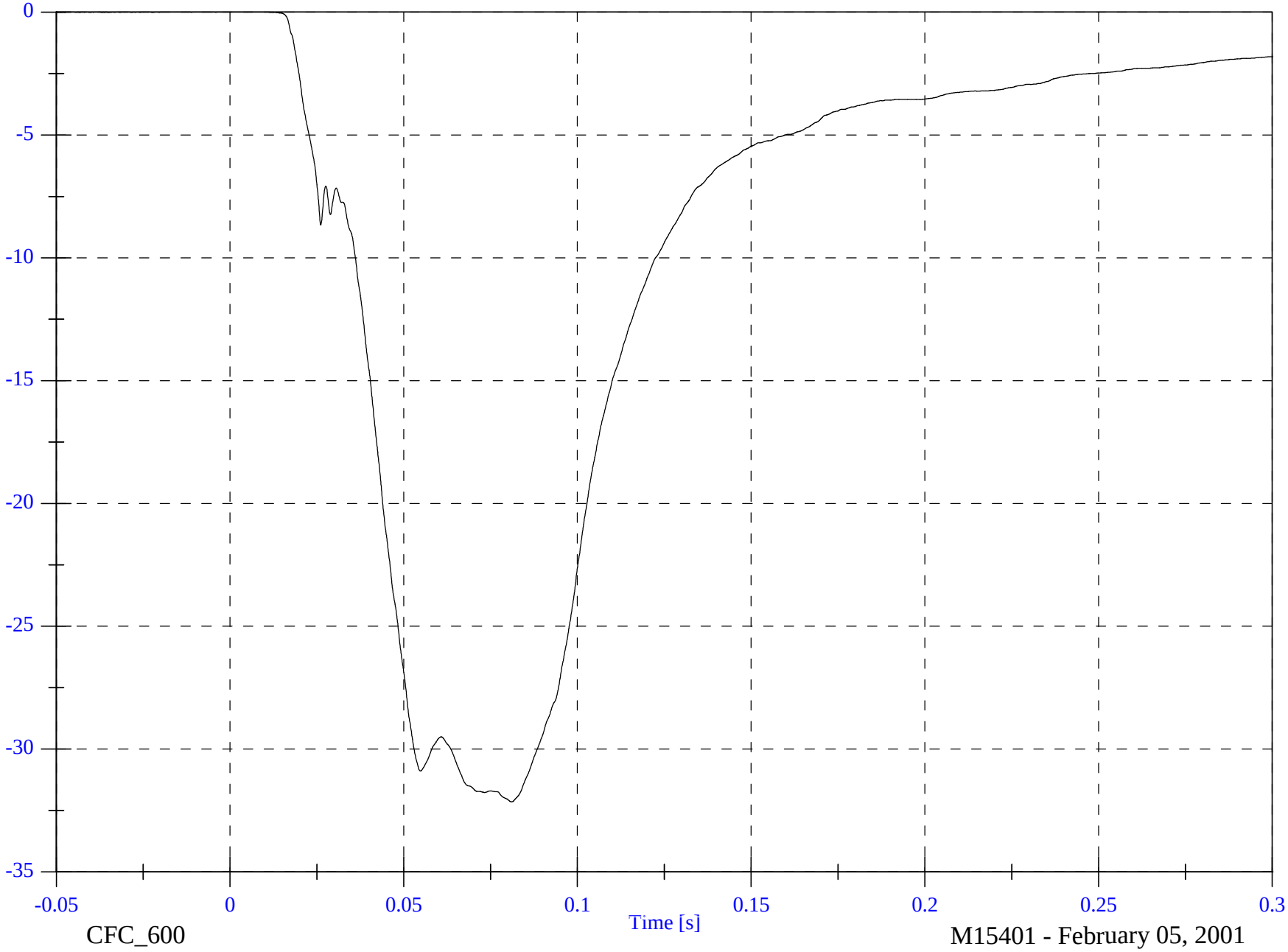
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P1 Chest Compression x

Max: 0.0 [mm] at 0.006 [s]

Min: -32.1 [mm] at 0.081 [s]



CFC_600

M15401 - February 05, 2001

B-28

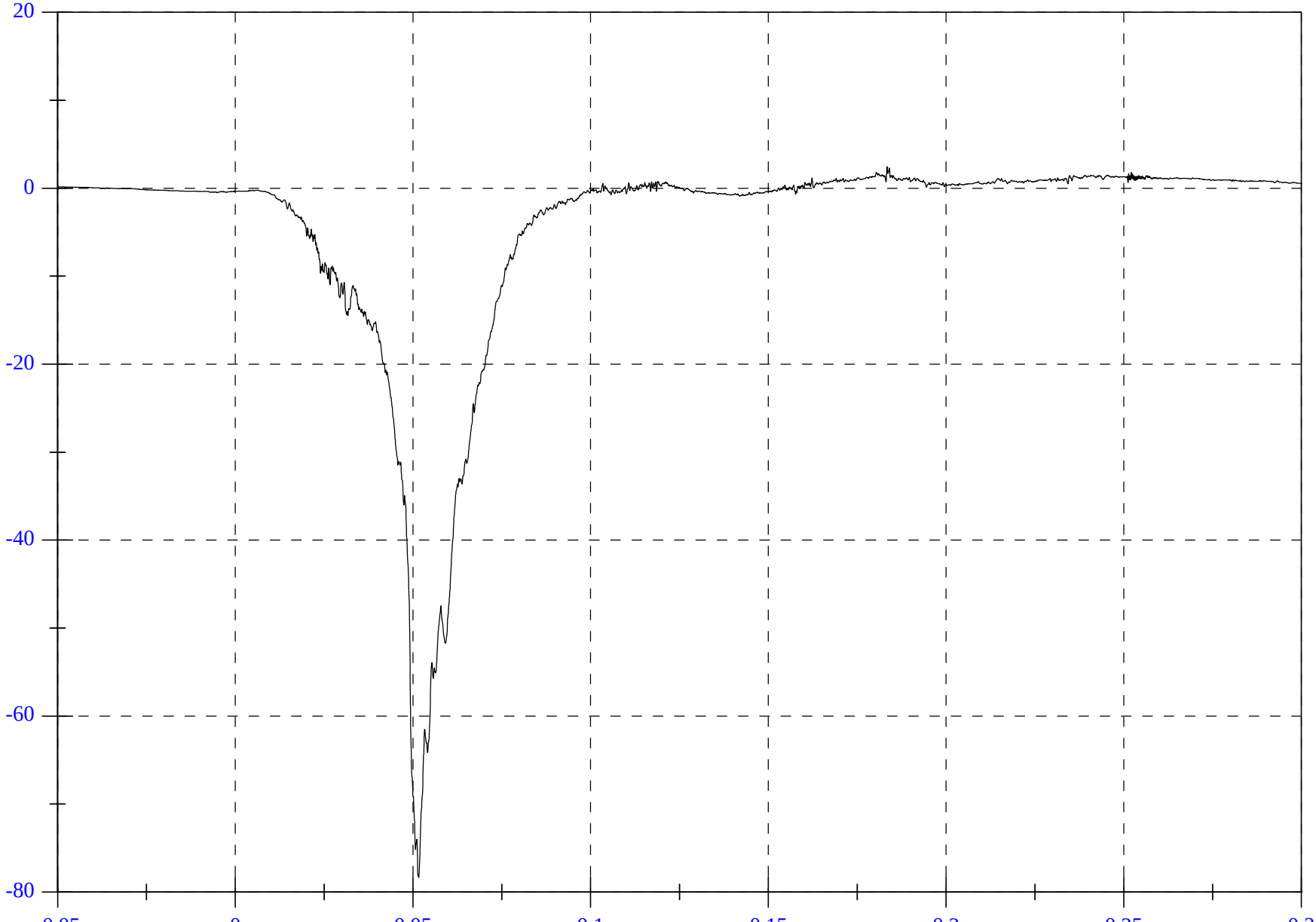
8602-21

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P1 Pelvic x

Max: 2.5 [g] at 0.183 [s]

Min: -78.3 [g] at 0.052 [s]



B-29

8602-21

CFC_1000

M15401 - February 05, 2001

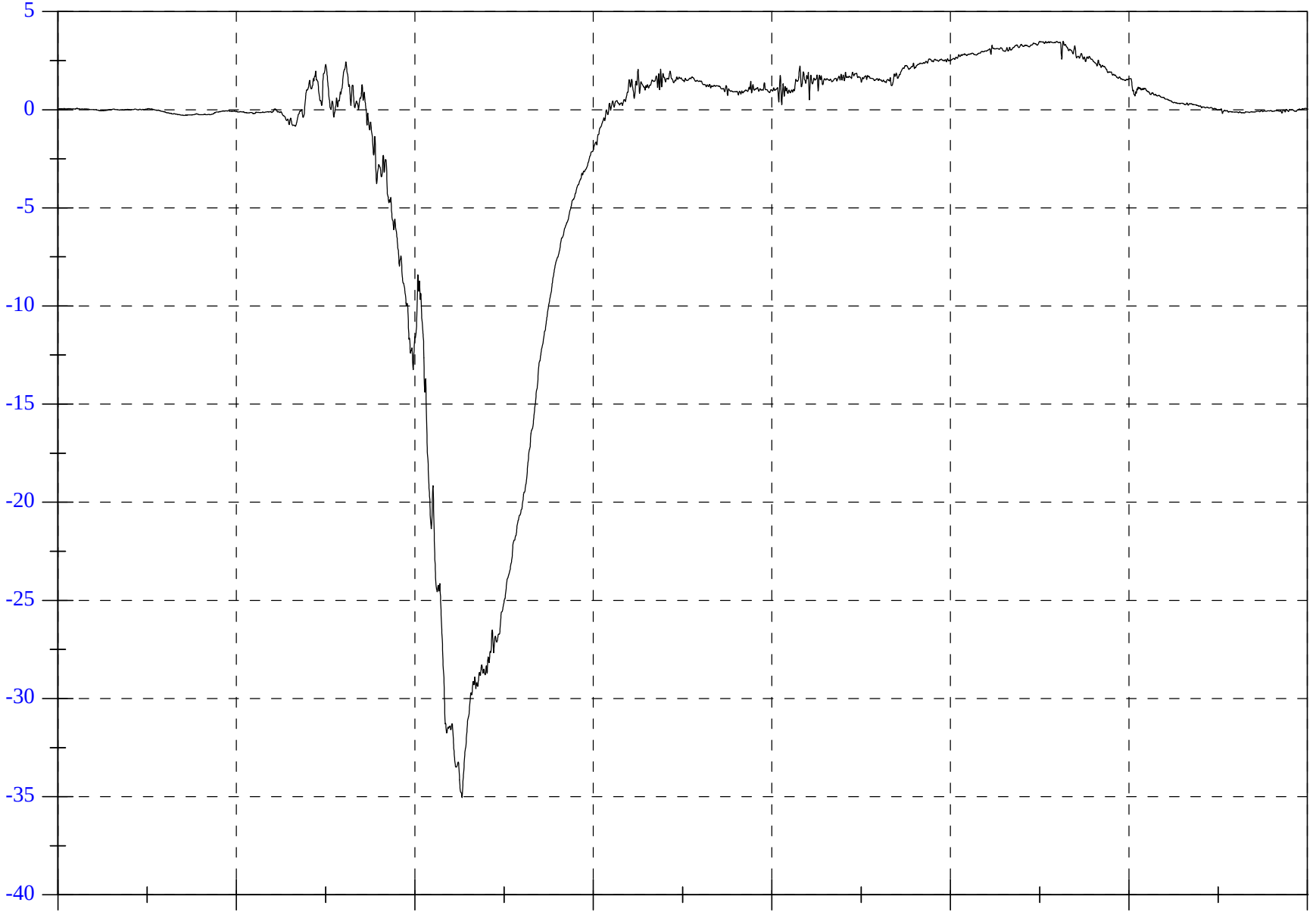

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible
P1 Pelvic y
Max: 11.6 [g] at 0.078 [s]
Min: -7.7 [g] at 0.047 [s]
12.5
10
7.5
5
2.5
0
-2.5
-5
-7.5
-10
g
-0.05
0
0.05
0.1
0.15
0.2
0.25
0.3
Time [s]
B-30
8602-21
CFC_1000
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P1 Pelvic z

Max: 3.5 [g] at 0.232 [s]

Min: -35.1 [g] at 0.063 [s]



B-31

8602-21

CFC_1000

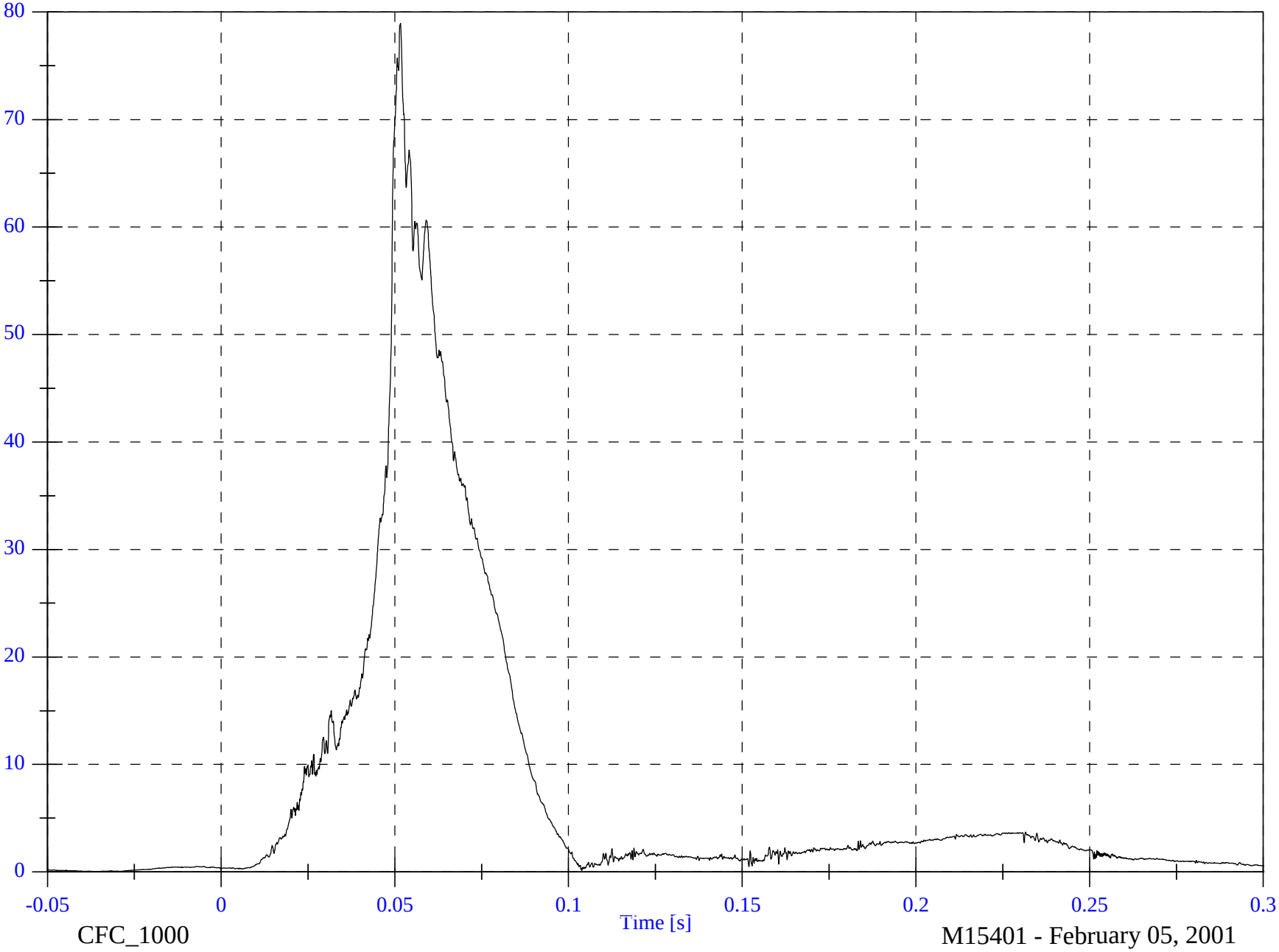
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P1 Pelvic Resultant

Max: 79.0 [g] at 0.052 [s]

Min: 0.0 [g] at -0.035 [s]



B-32

8602-21

CFC_1000

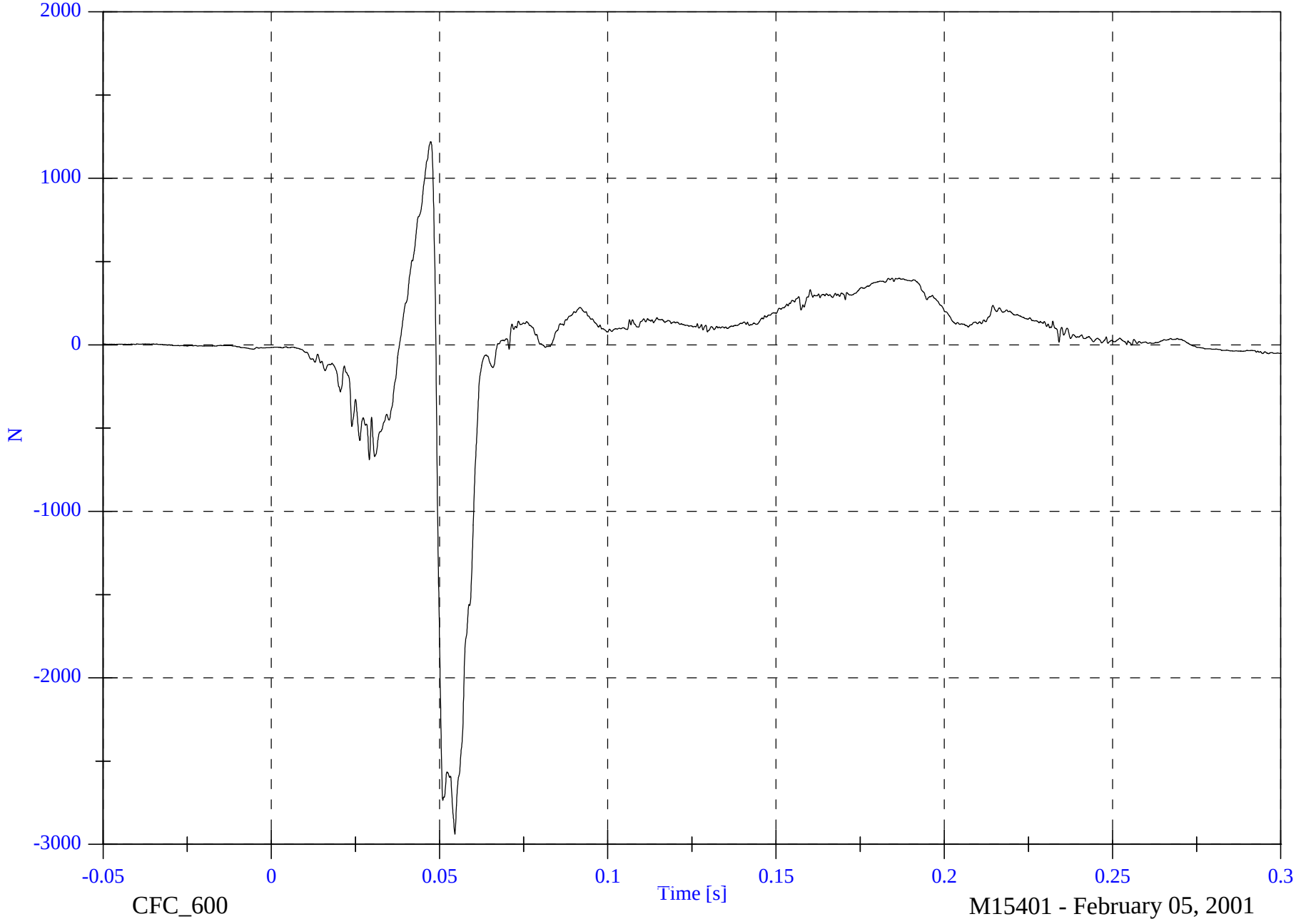
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P1 Left Femur z

Max: 1219.8 [N] at 0.047 [s]

Min: -2938.6 [N] at 0.055 [s]



B-33

8602-21

CFC_600

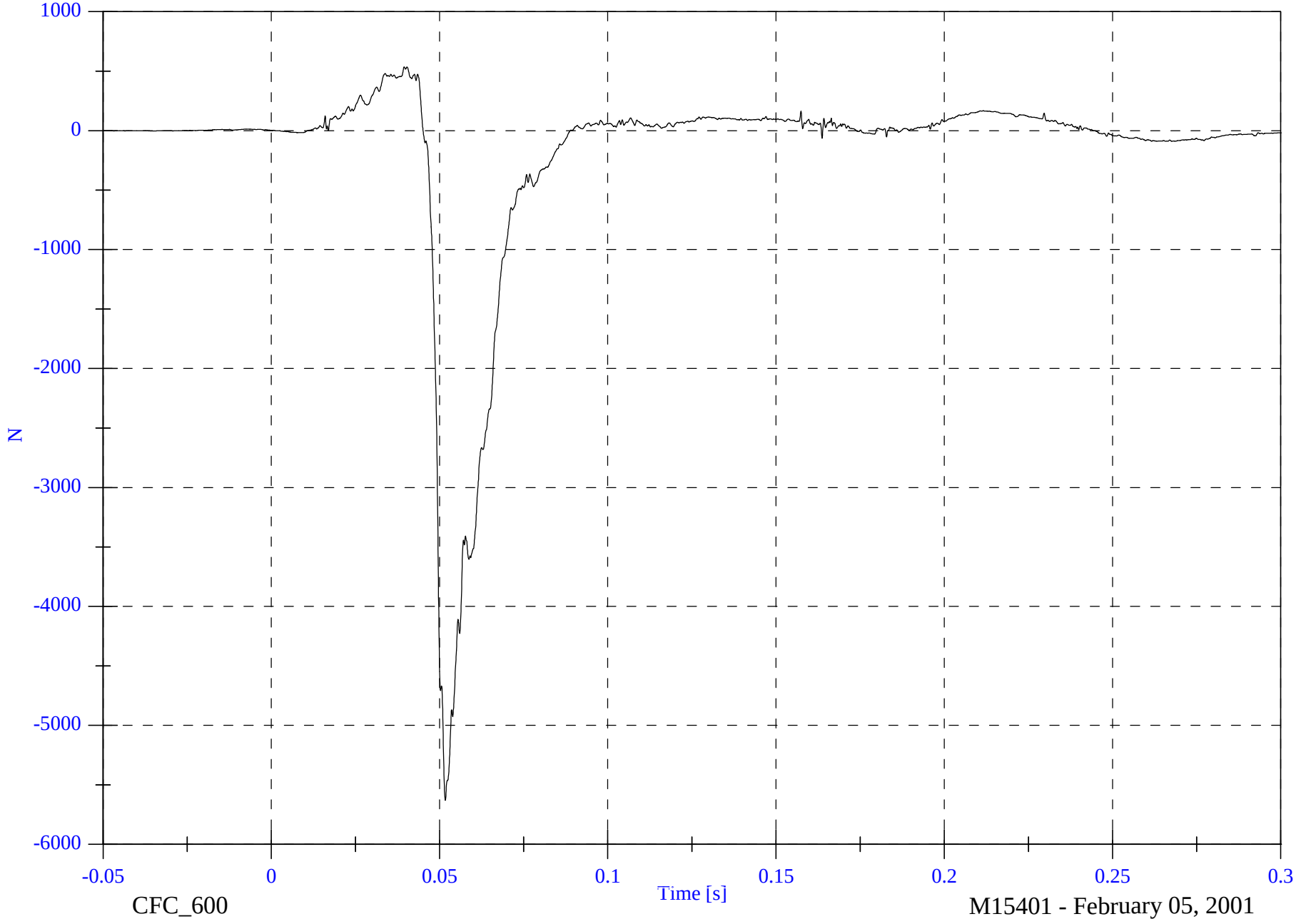
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P1 Right Femur z

Max: 536.1 [N] at 0.039 [s]

Min: -5630.9 [N] at 0.052 [s]



CFC_600

M15401 - February 05, 2001

B-34

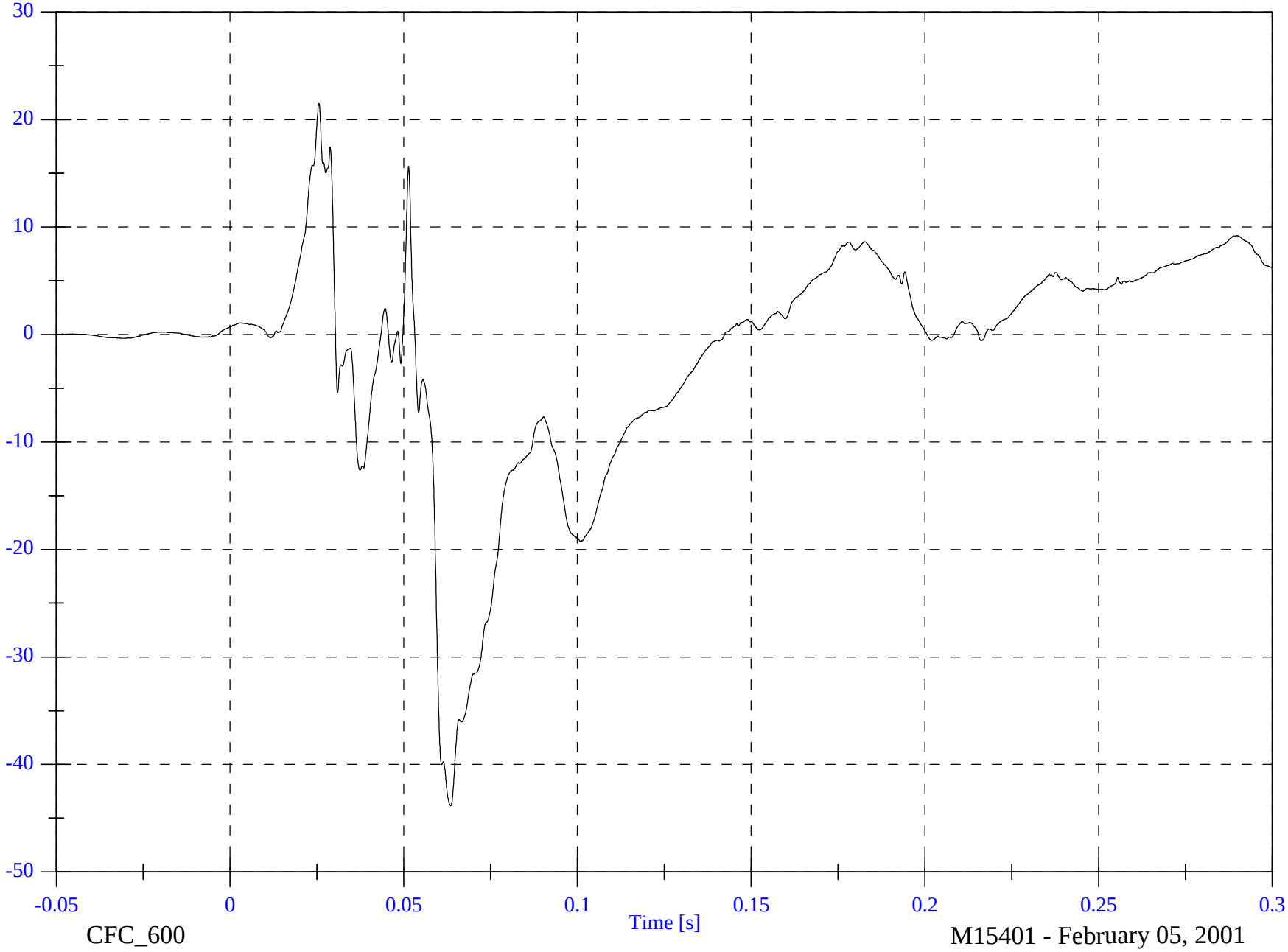
8602-21

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P1 Left Upper Tibia Mx

Max: 21.5 [N-m] at 0.026 [s]

Min: -43.9 [N-m] at 0.064 [s]



CFC_600

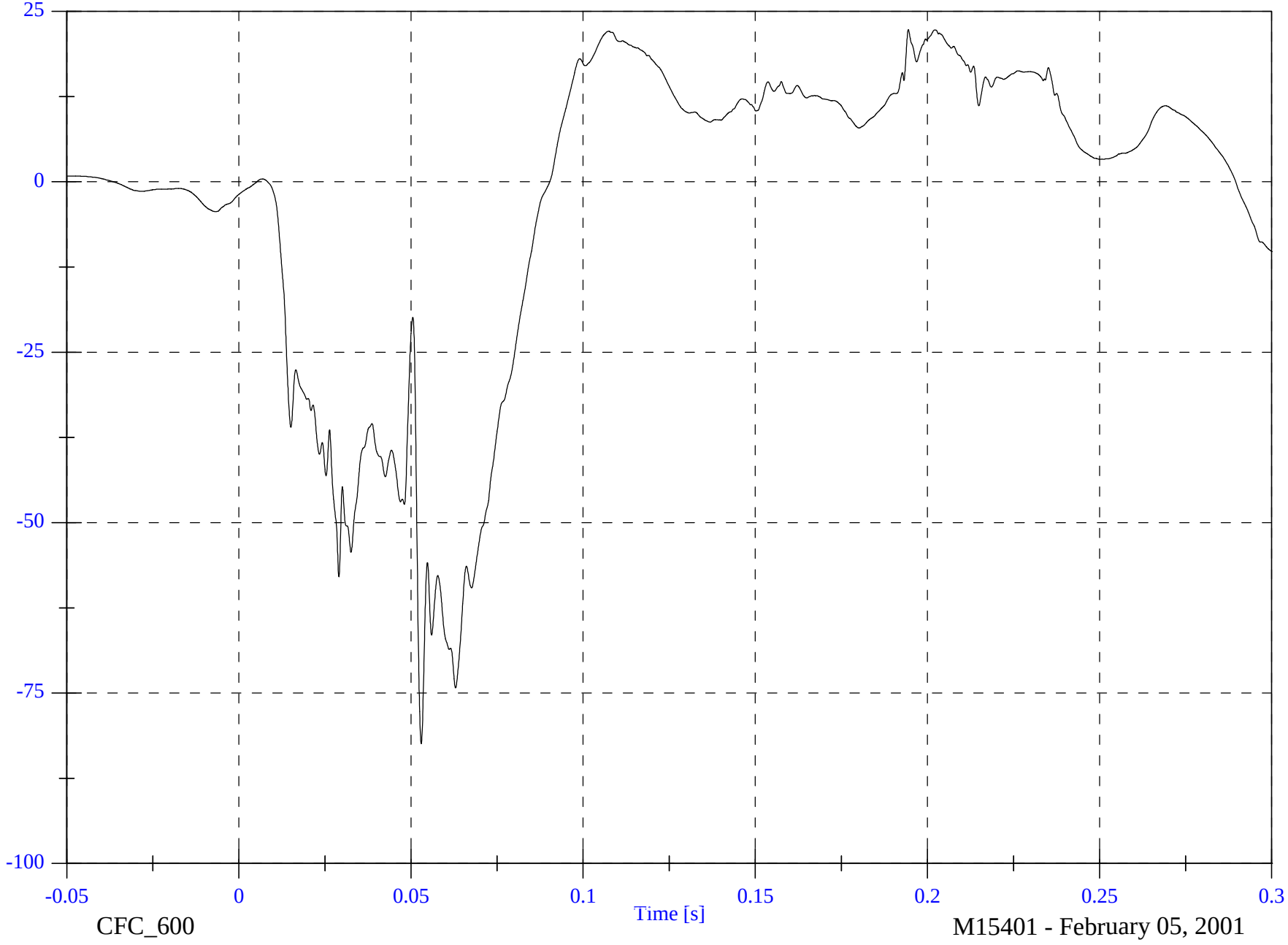
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P1 Left Upper Tibia My

Max: 22.3 [N-m] at 0.194 [s]

Min: -82.4 [N-m] at 0.053 [s]



B-36

8602-21

CFC_600

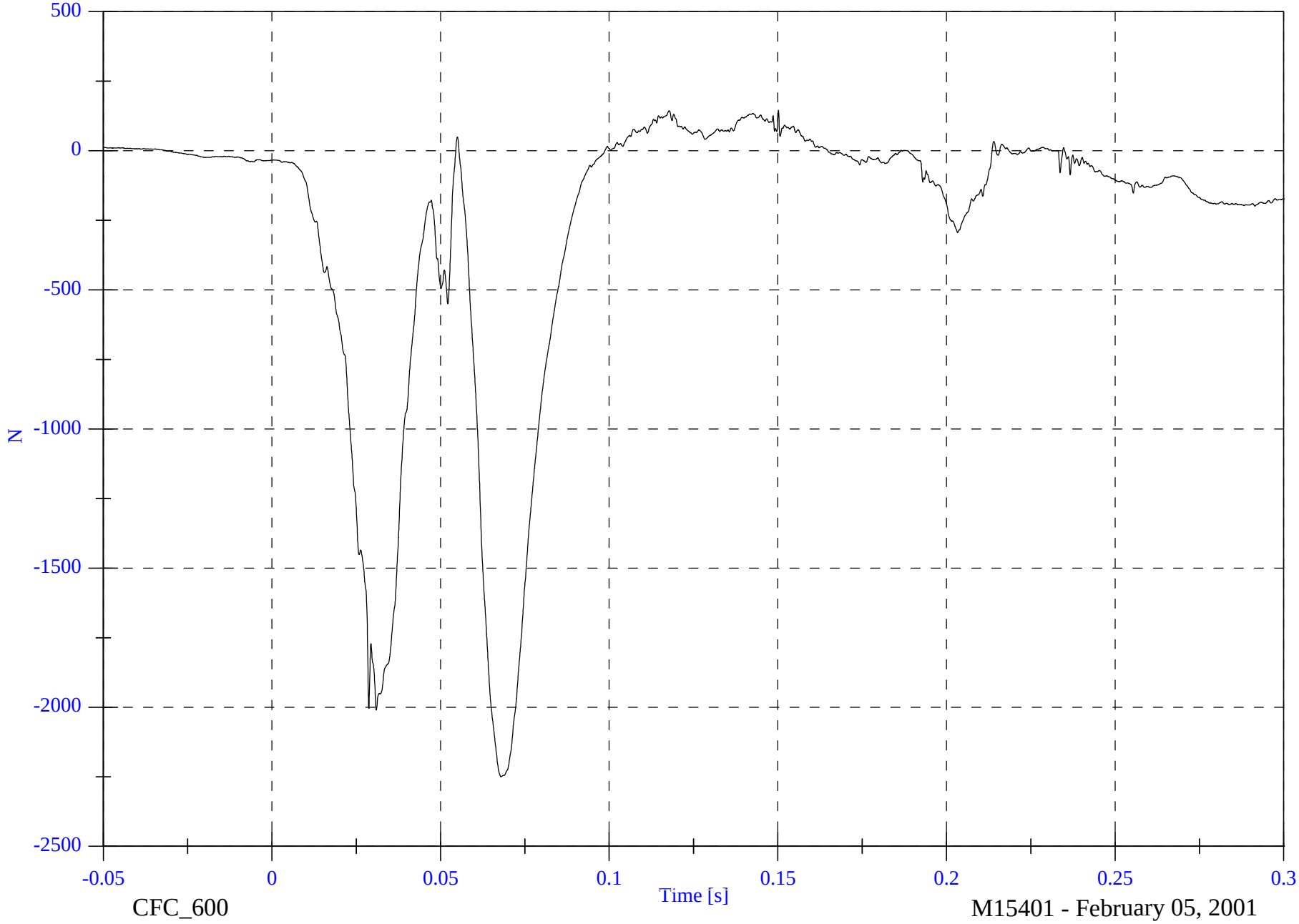
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P1 Left Lower Tibia Fz

Max: 146.1 [N] at 0.150 [s]

Min: -2250.2 [N] at 0.068 [s]



CFC_600

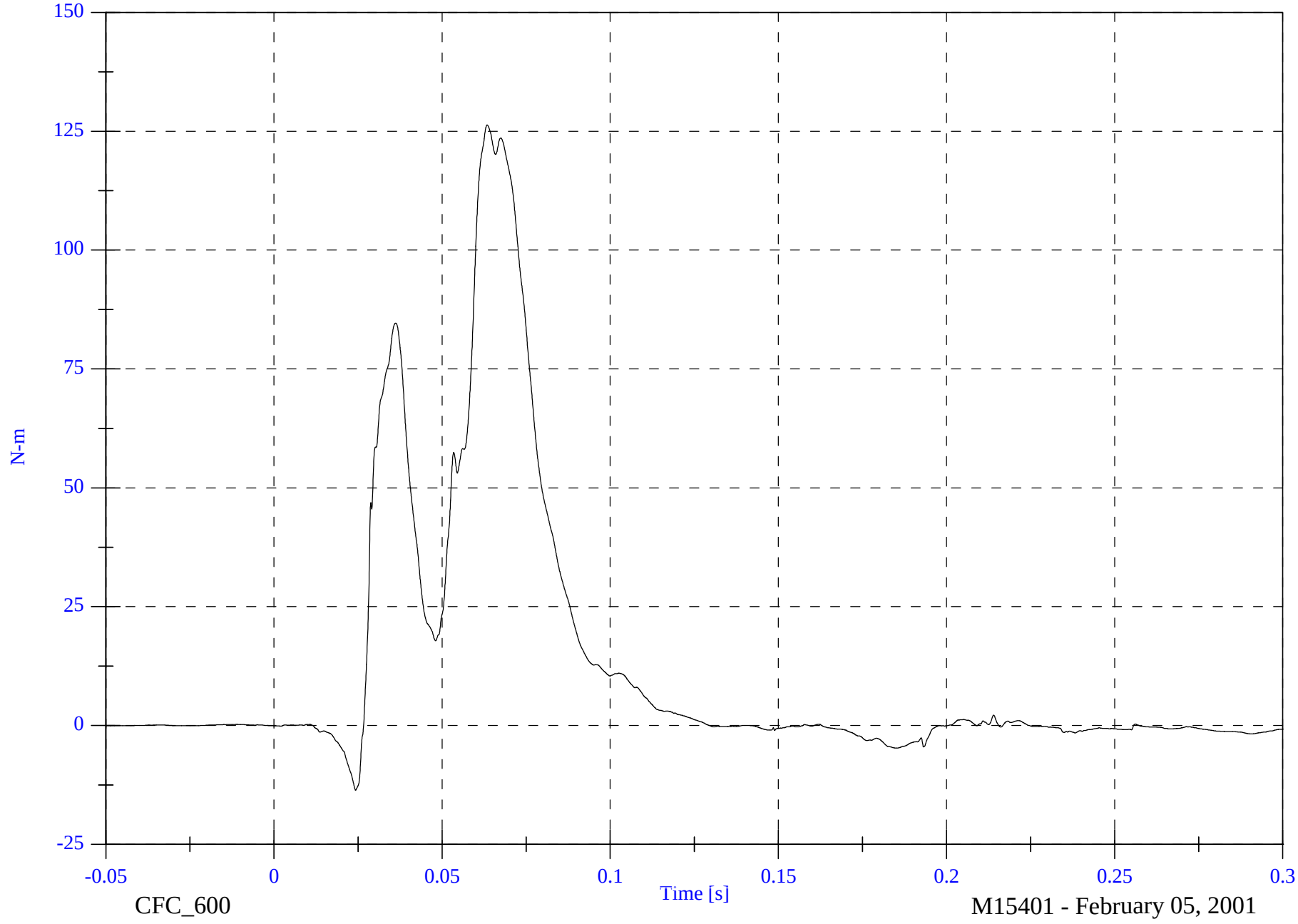
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P1 Left Lower Tibia Mx

Max: 126.3 [N-m] at 0.063 [s]

Min: -13.6 [N-m] at 0.024 [s]



CFC_600

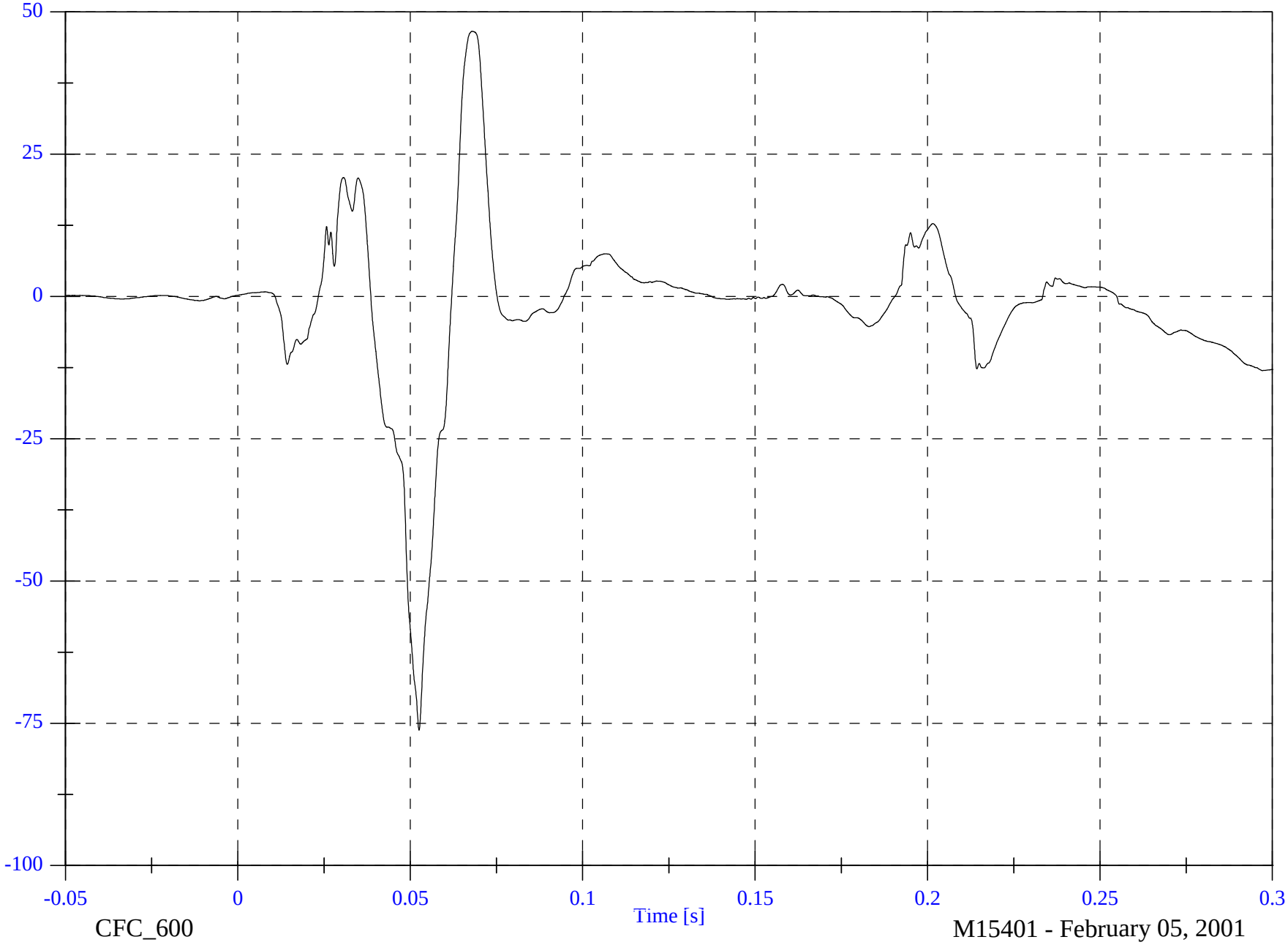
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P1 Left Lower Tibia My

Max: 46.6 [N-m] at 0.068 [s]

Min: -76.2 [N-m] at 0.053 [s]



CFC_600

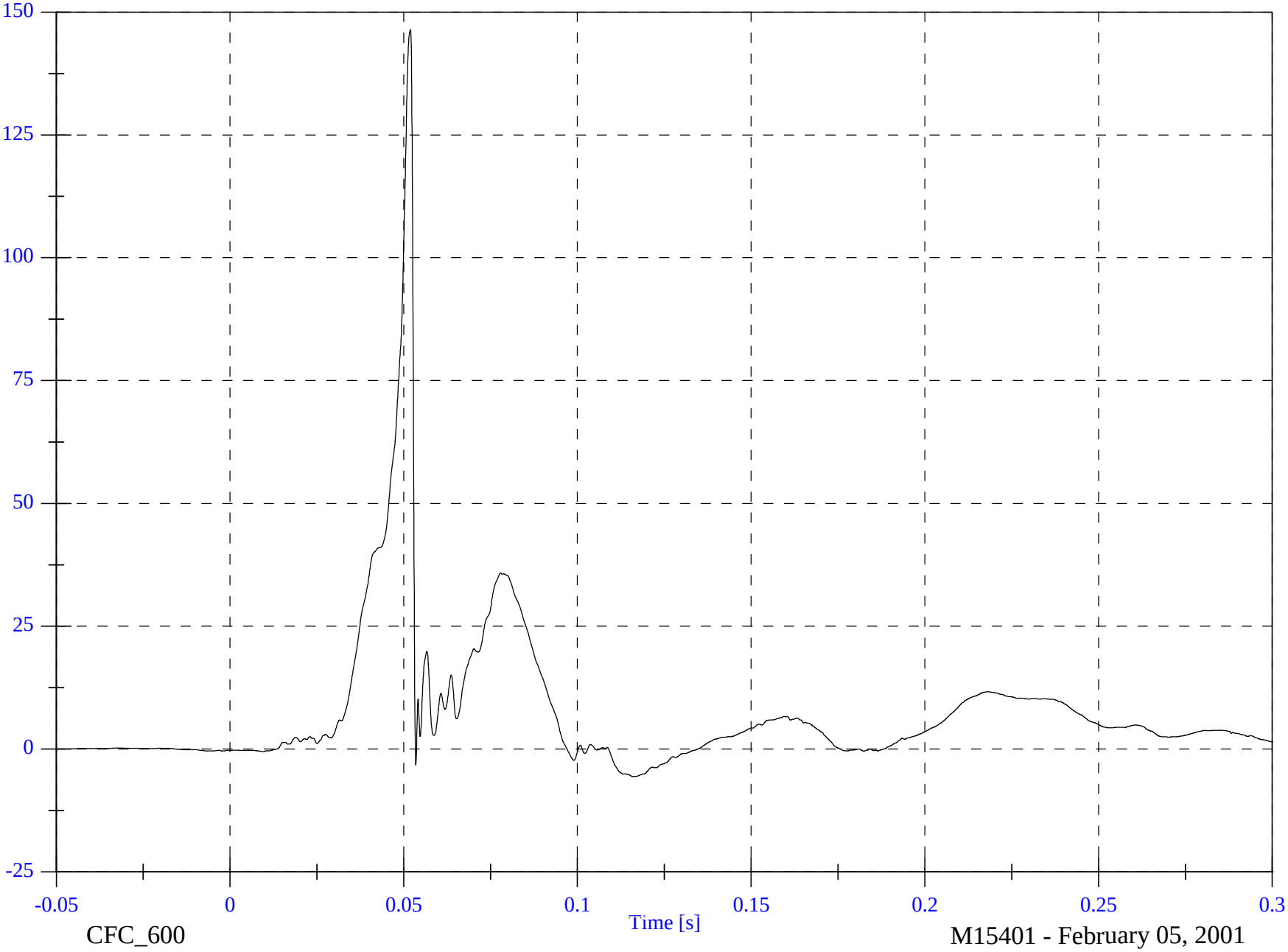
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P1 Right Upper Tibia Mx

Max: 146.4 [N-m] at 0.052 [s]

Min: -5.6 [N-m] at 0.116 [s]



B-40

8602-21

CFC_600

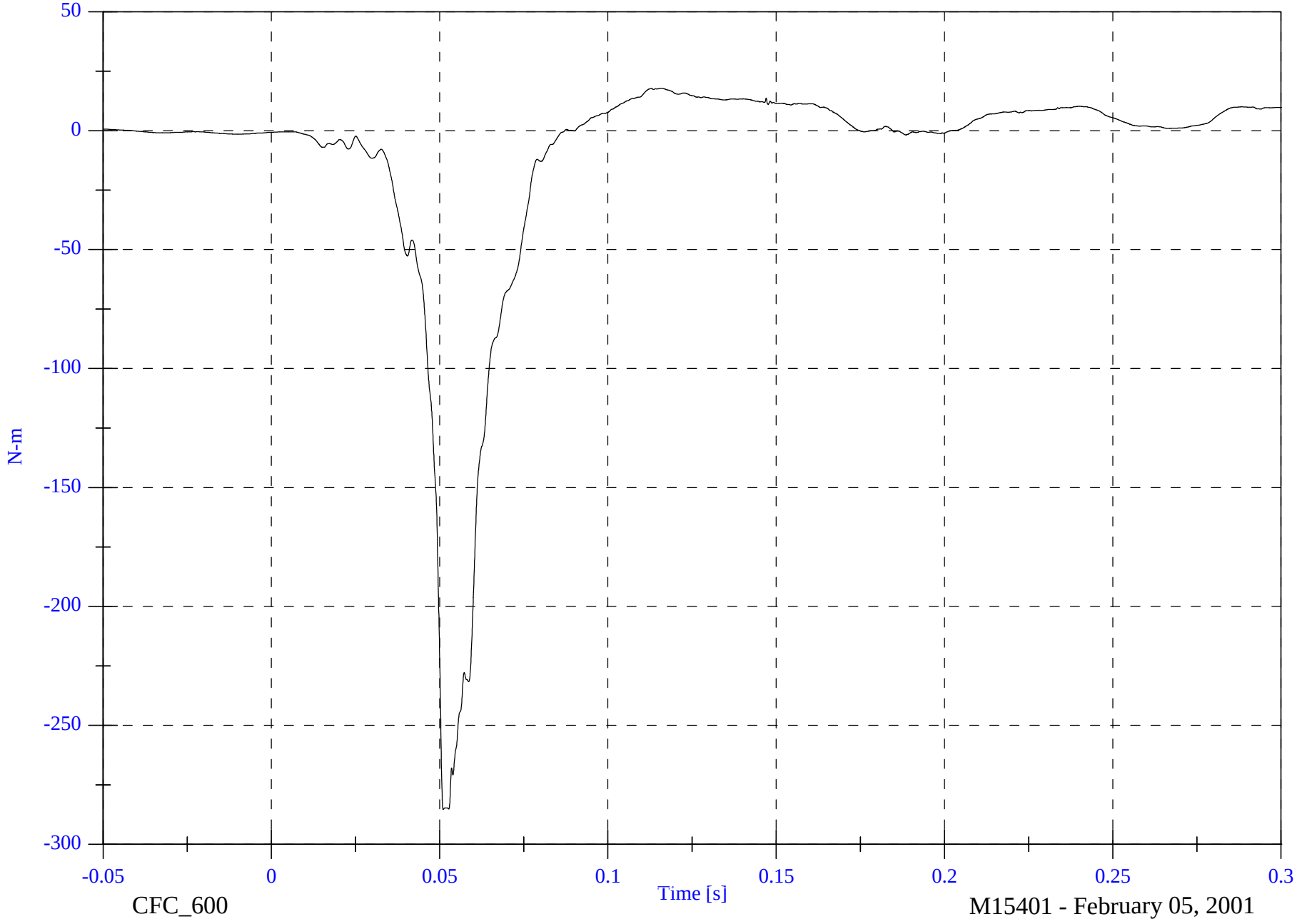
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P1 Right Upper Tibia My

Max: 17.8 [N-m] at 0.116 [s]

Min: -285.4 [N-m] at 0.051 [s]



CFC_600

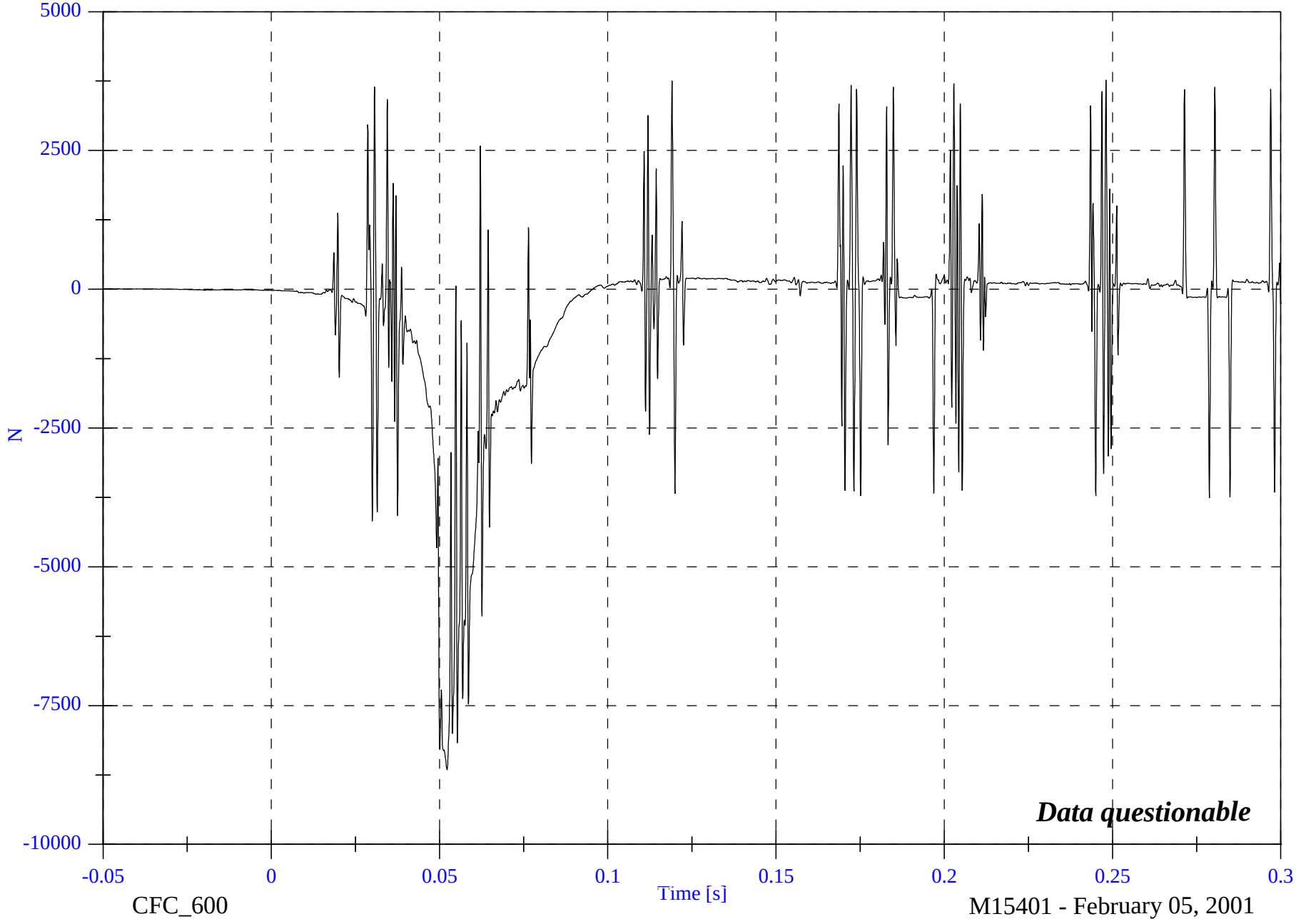
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P1 Right Lower Tibia Fz

Max: 3770.0 [N] at 0.248 [s]

Min: -8656.5 [N] at 0.052 [s]



CFC_600

M15401 - February 05, 2001

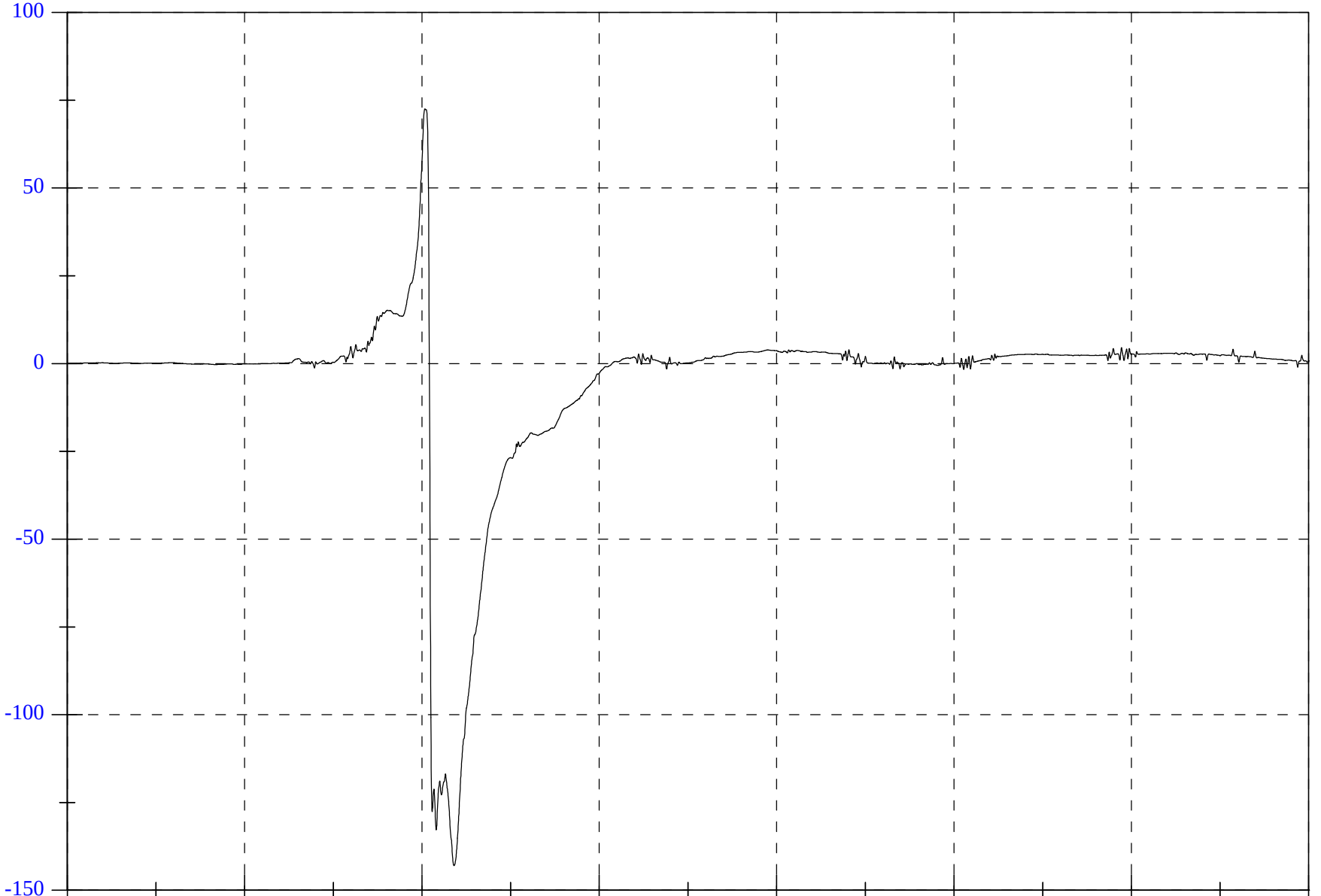
8602-21

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P1 Right Lower Tibia Mx

Max: 72.5 [N-m] at 0.051 [s]

Min: -143.0 [N-m] at 0.059 [s]



CFC_600

M15401 - February 05, 2001

B-43

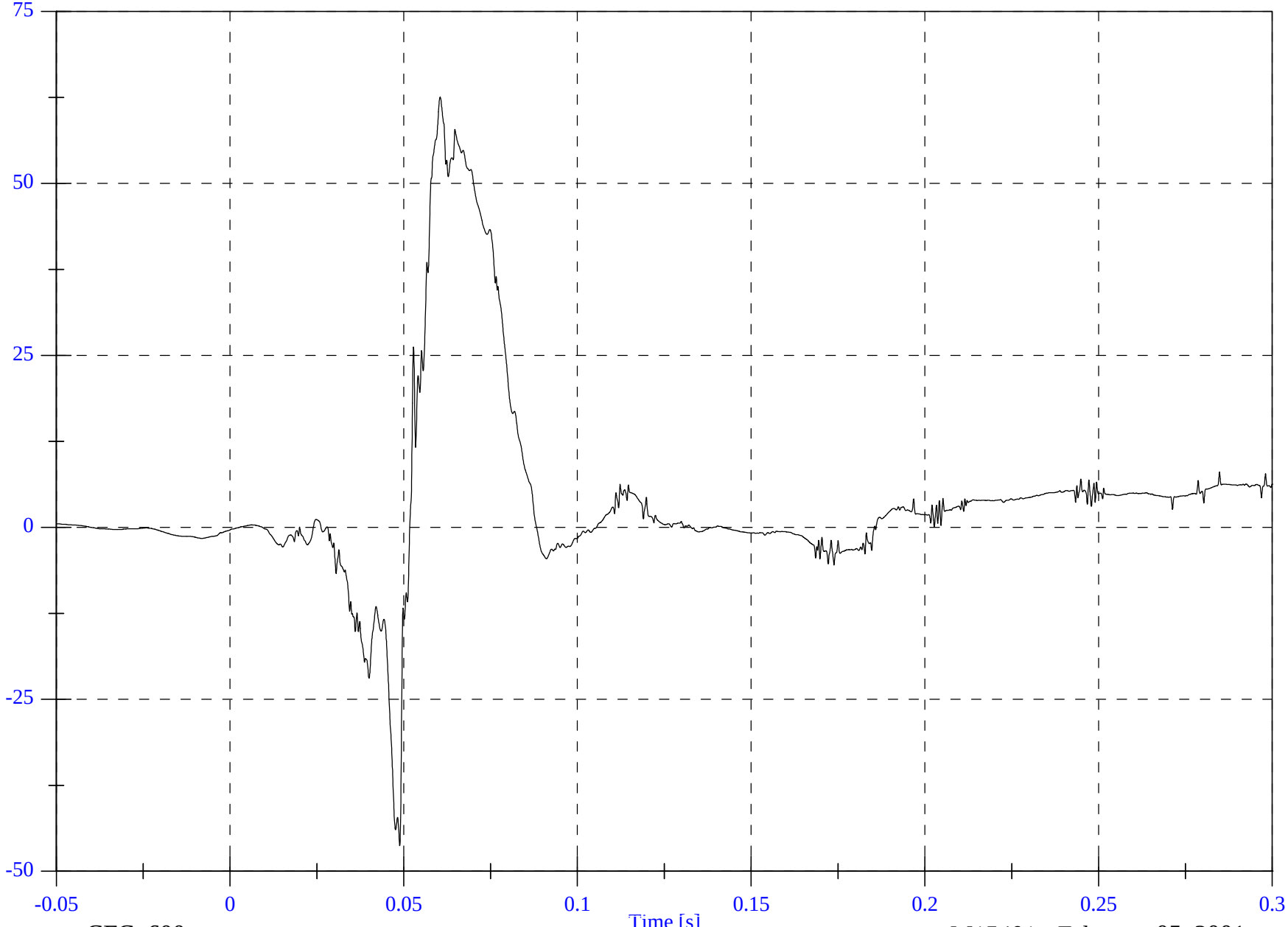
8602-21

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P1 Right Lower Tibia My

Max: 62.5 [N-m] at 0.061 [s]

Min: -46.3 [N-m] at 0.049 [s]



B-44

8602-21

CFC_600

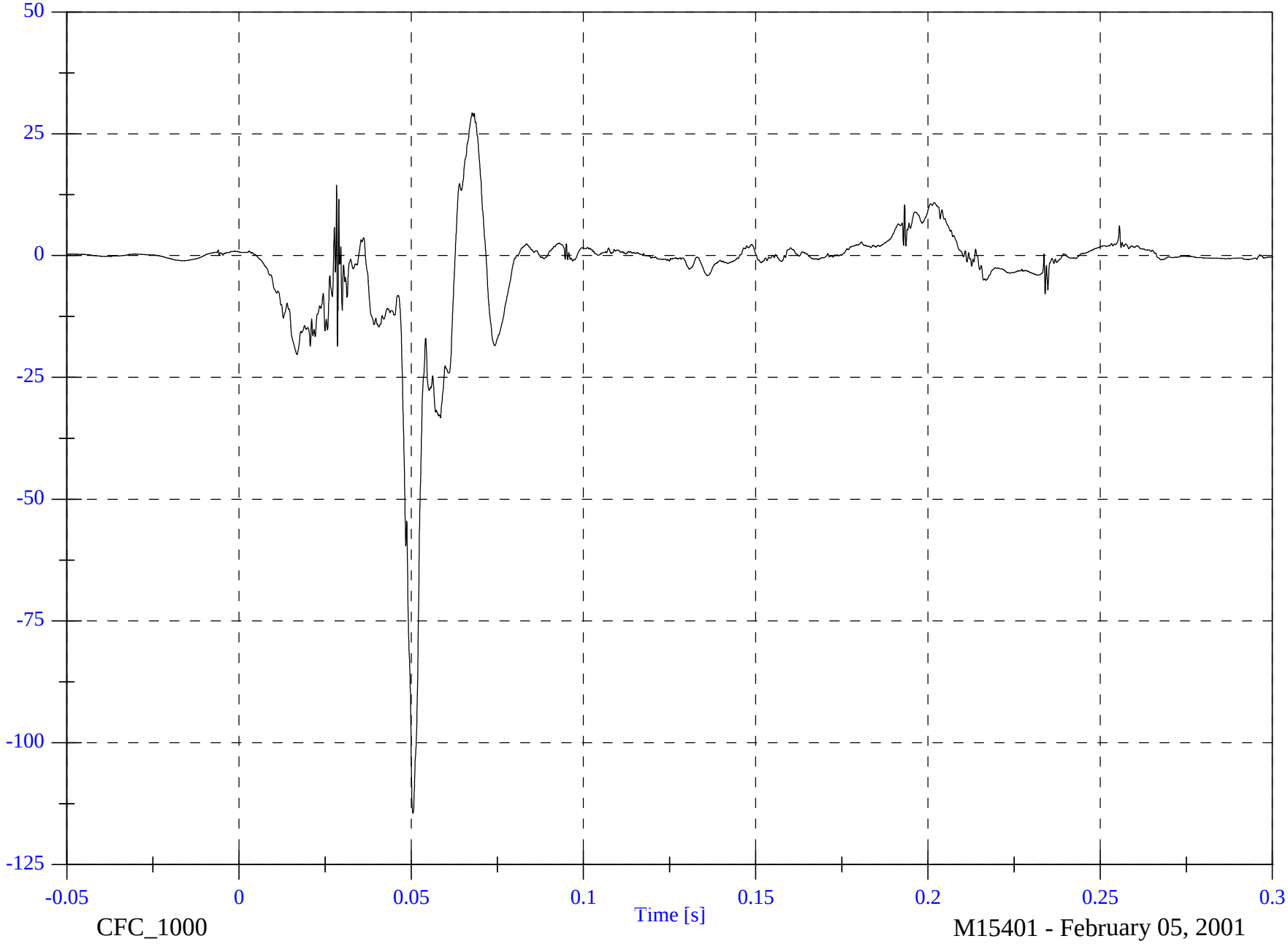
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P1 Left Foot Aft x

Max: 29.3 [g] at 0.068 [s]

Min: -114.5 [g] at 0.051 [s]



CFC_1000

M15401 - February 05, 2001

B-45

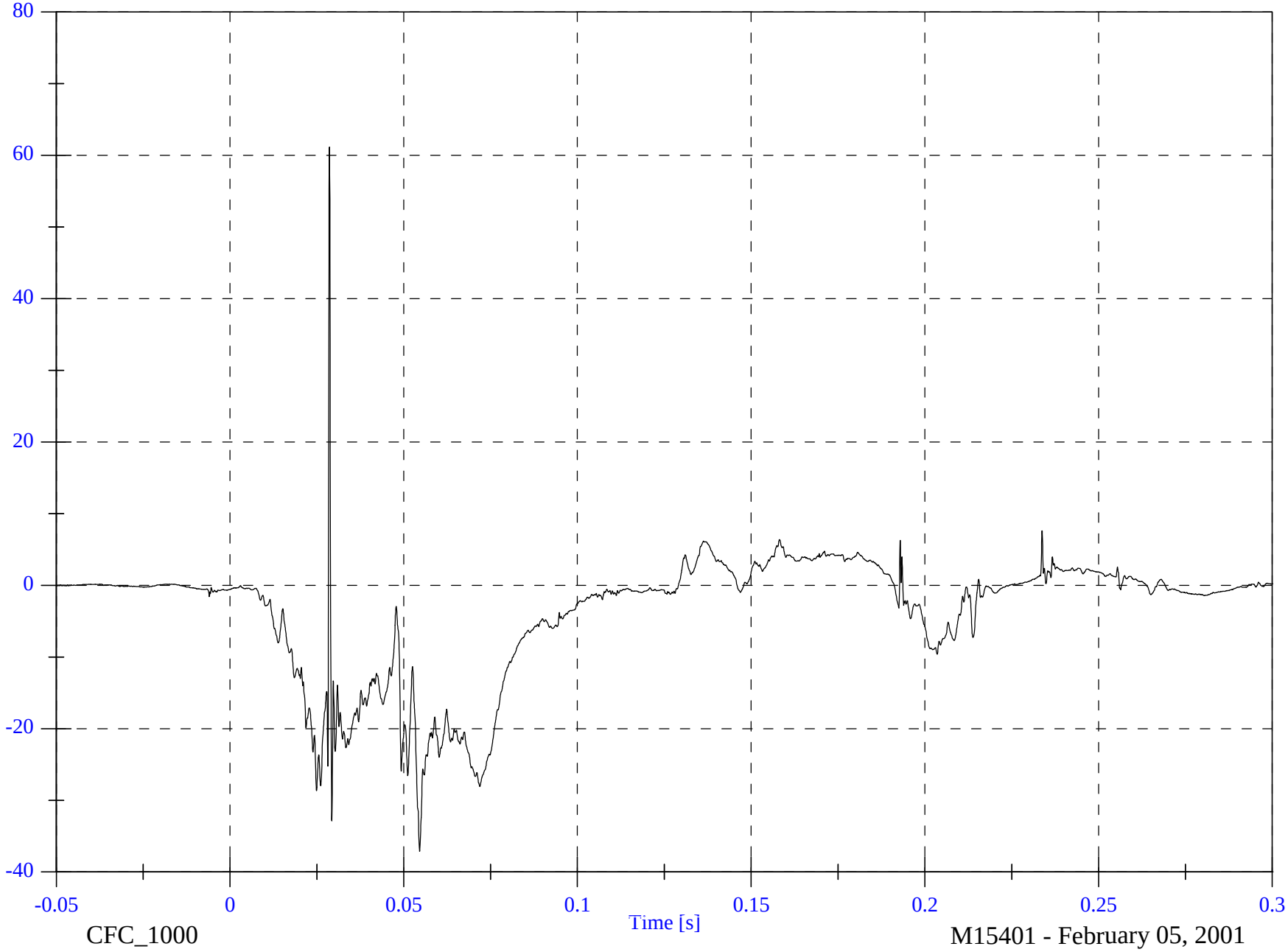
8602-21

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P1 Left Foot Aft z

Max: 61.1 [g] at 0.029 [s]

Min: -37.1 [g] at 0.055 [s]



CFC_1000

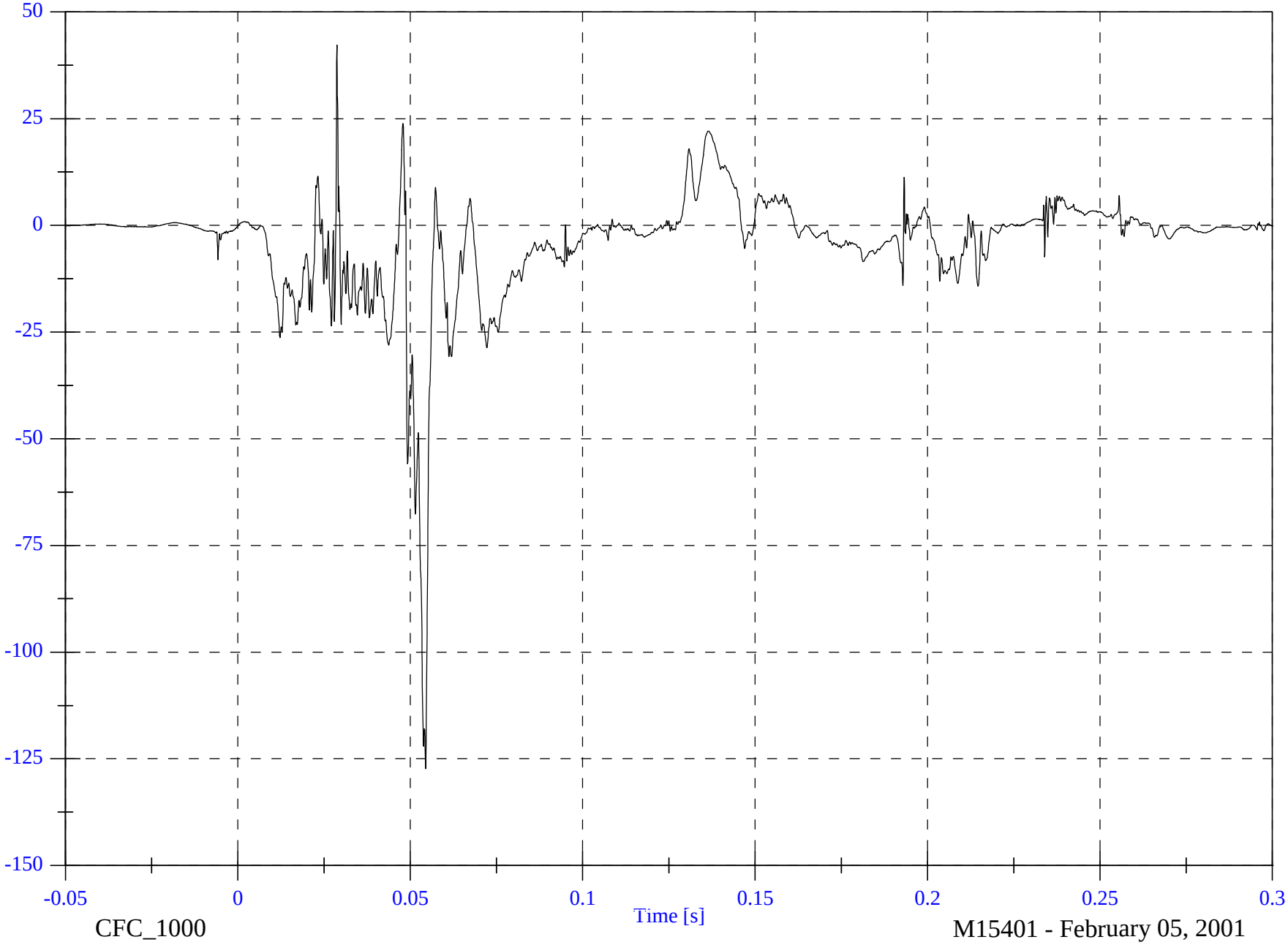
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P1 Left Foot Fore z

Max: 42.3 [g] at 0.029 [s]

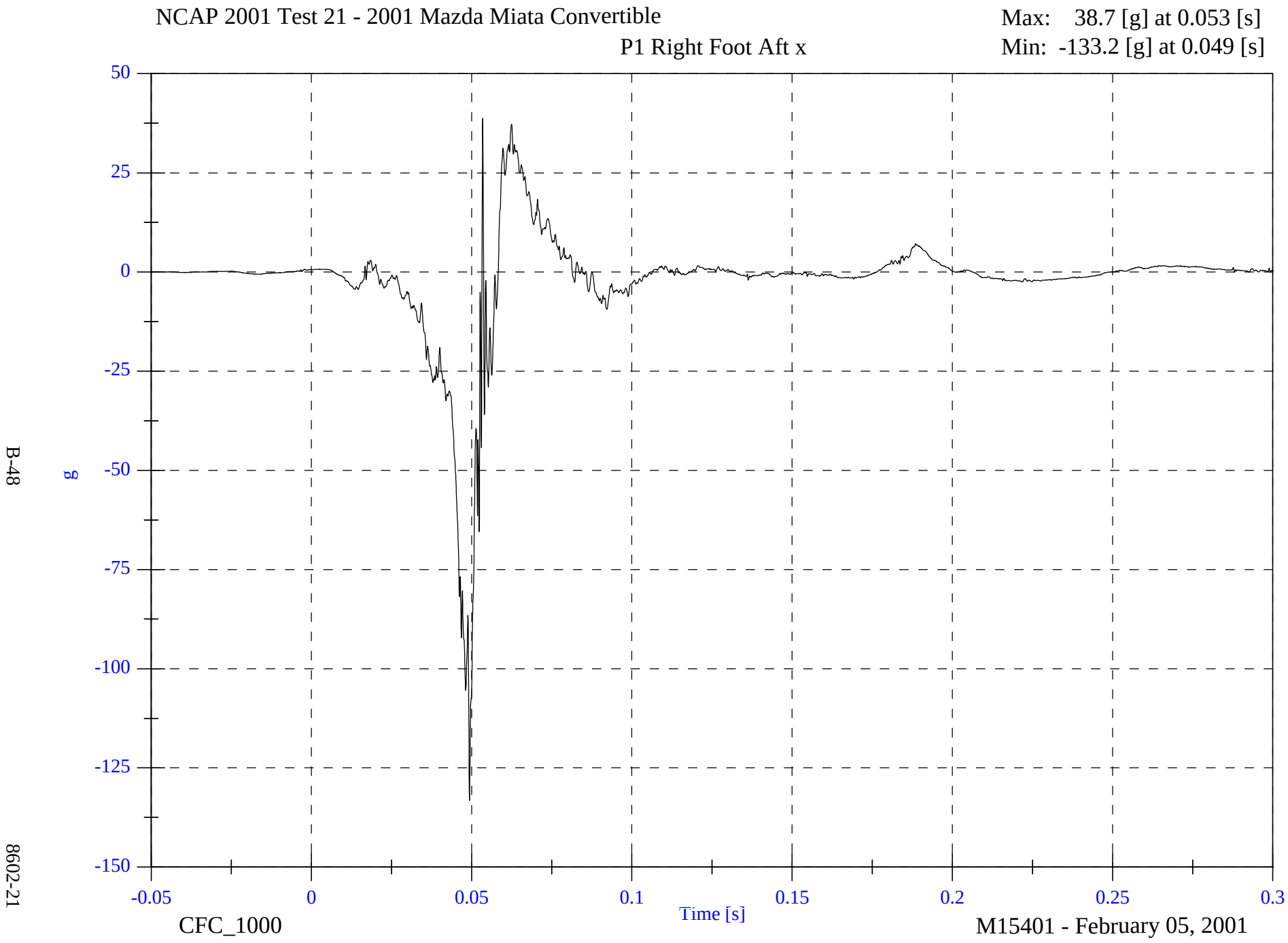
Min: -127.3 [g] at 0.054 [s]

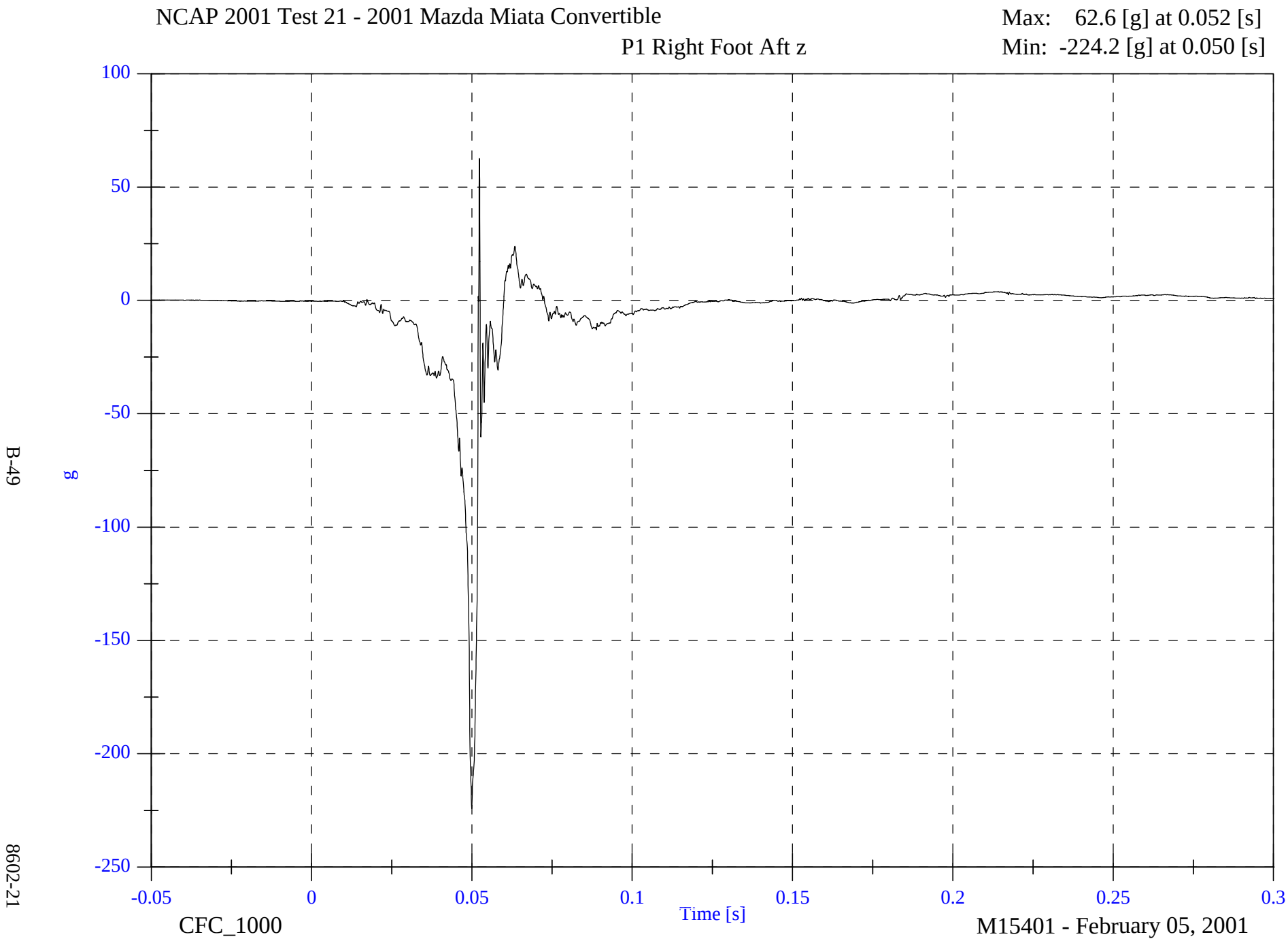


CFC_1000

M15401 - February 05, 2001

8602-21


NCAP 2001 Test 21 - 2001 Mazda Miata Convertible
P1 Right Foot Aft x
Max: 38.7 [g] at 0.053 [s]
Min: -133.2 [g] at 0.049 [s]
50
25
0
-25
-50
-75
-100
-125
-150
g
-0.05
0
0.05
0.1
0.15
0.2
0.25
0.3
Time [s]
CFC_1000
M15401 - February 05, 2001

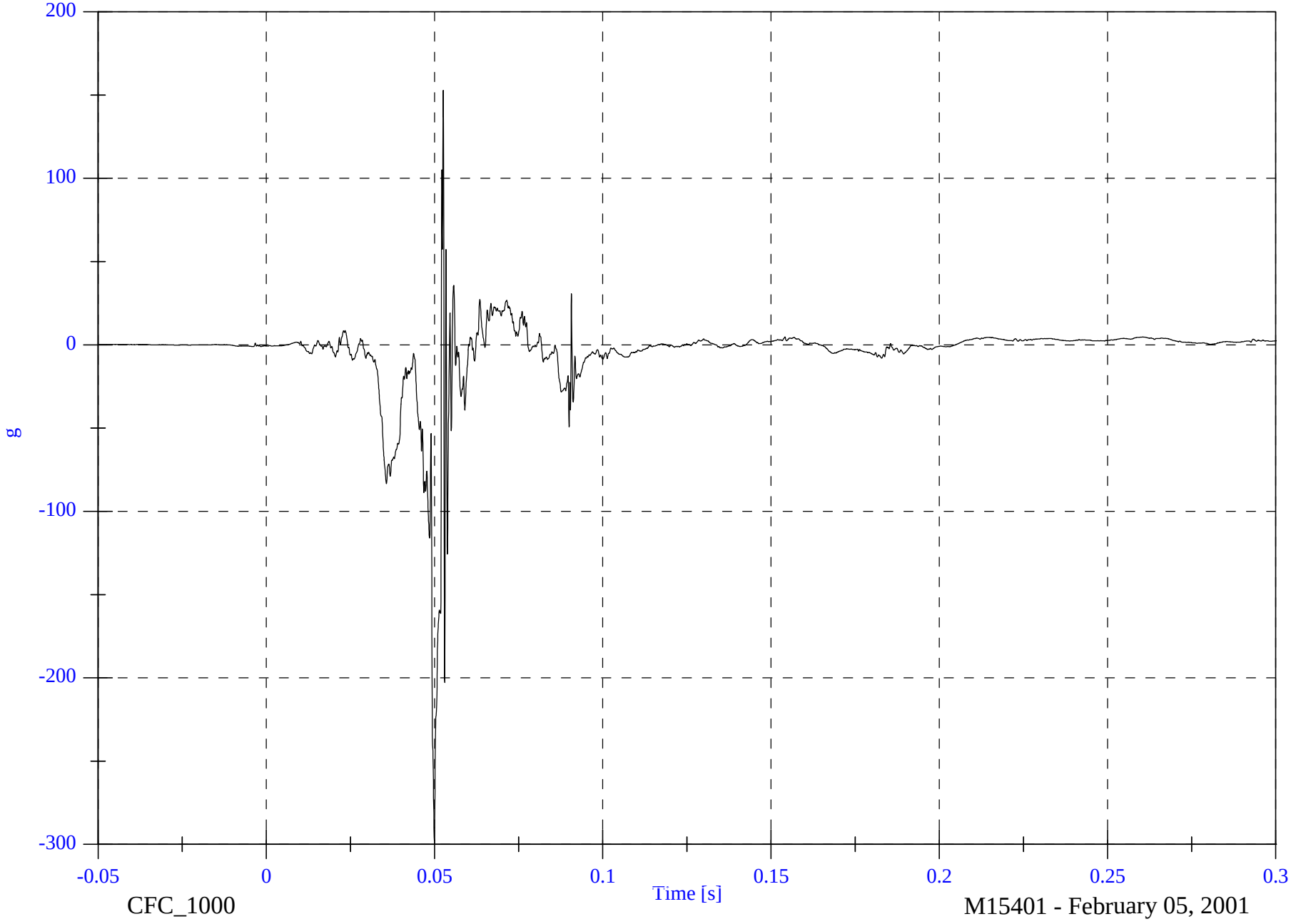

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible
P1 Right Foot Aft z
Max: 62.6 [g] at 0.052 [s]
Min: -224.2 [g] at 0.050 [s]
100
50
0
-50
-100
-150
-200
-250
g
-0.05
0
0.05
0.1
0.15
0.2
0.25
0.3
Time [s]
CFC_1000
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P1 Right Foot Fore z

Max: 152.7 [g] at 0.053 [s]

Min: -298.0 [g] at 0.050 [s]



B-50

8602-21

CFC_1000

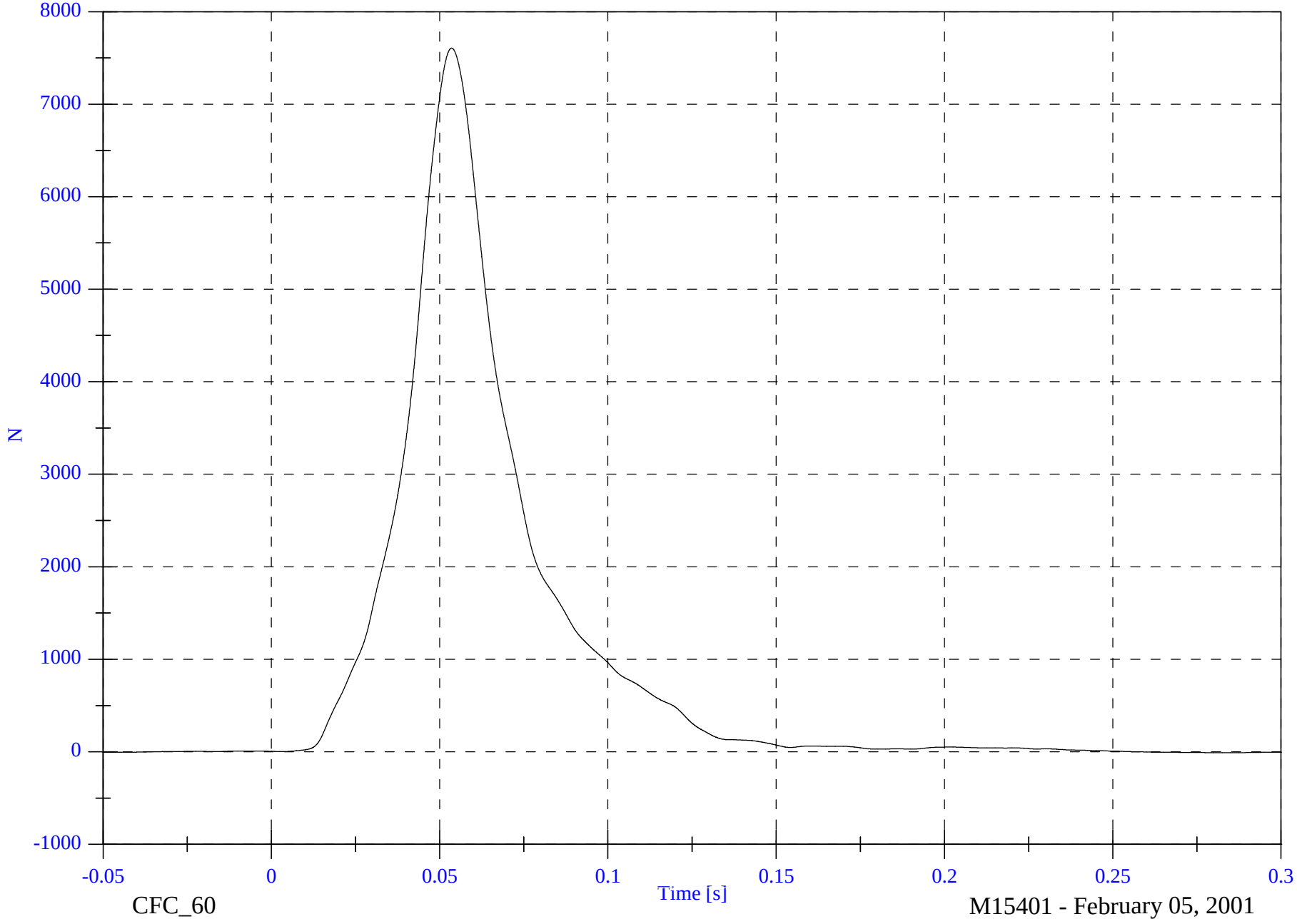
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P1 Lap Belt Force

Max: 7605.7 [N] at 0.054 [s]

Min: -9.4 [N] at 0.283 [s]

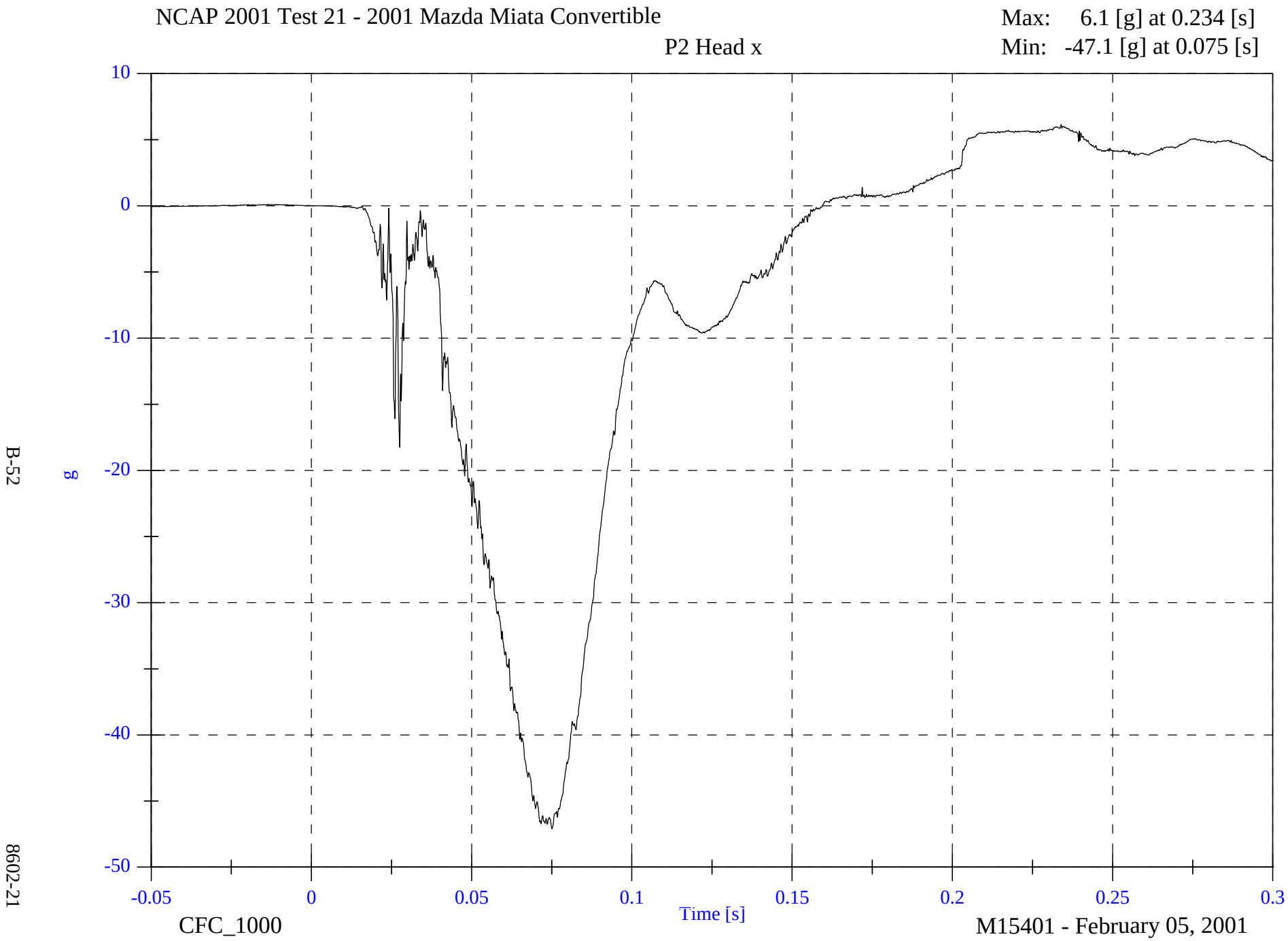


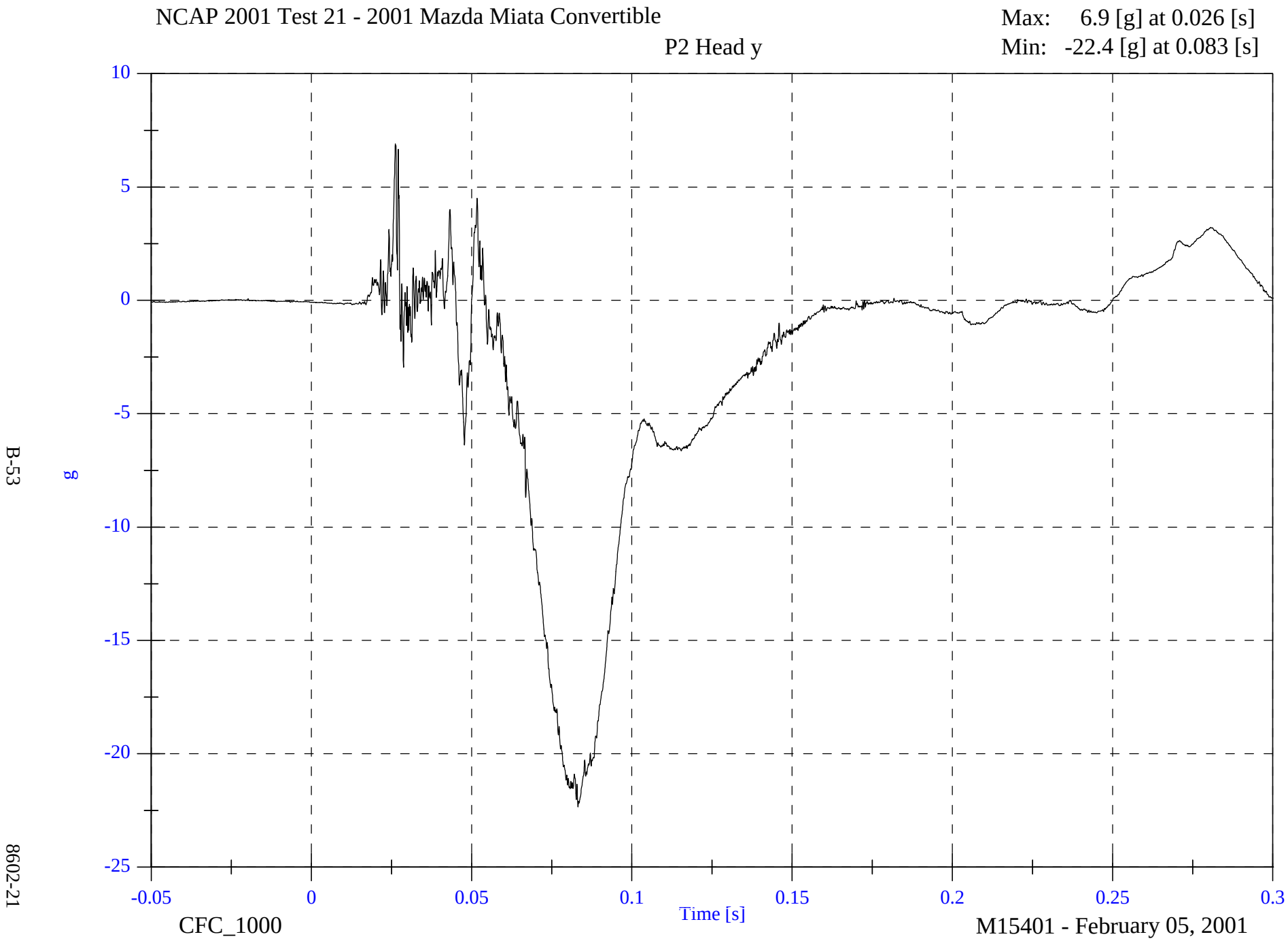
B-51

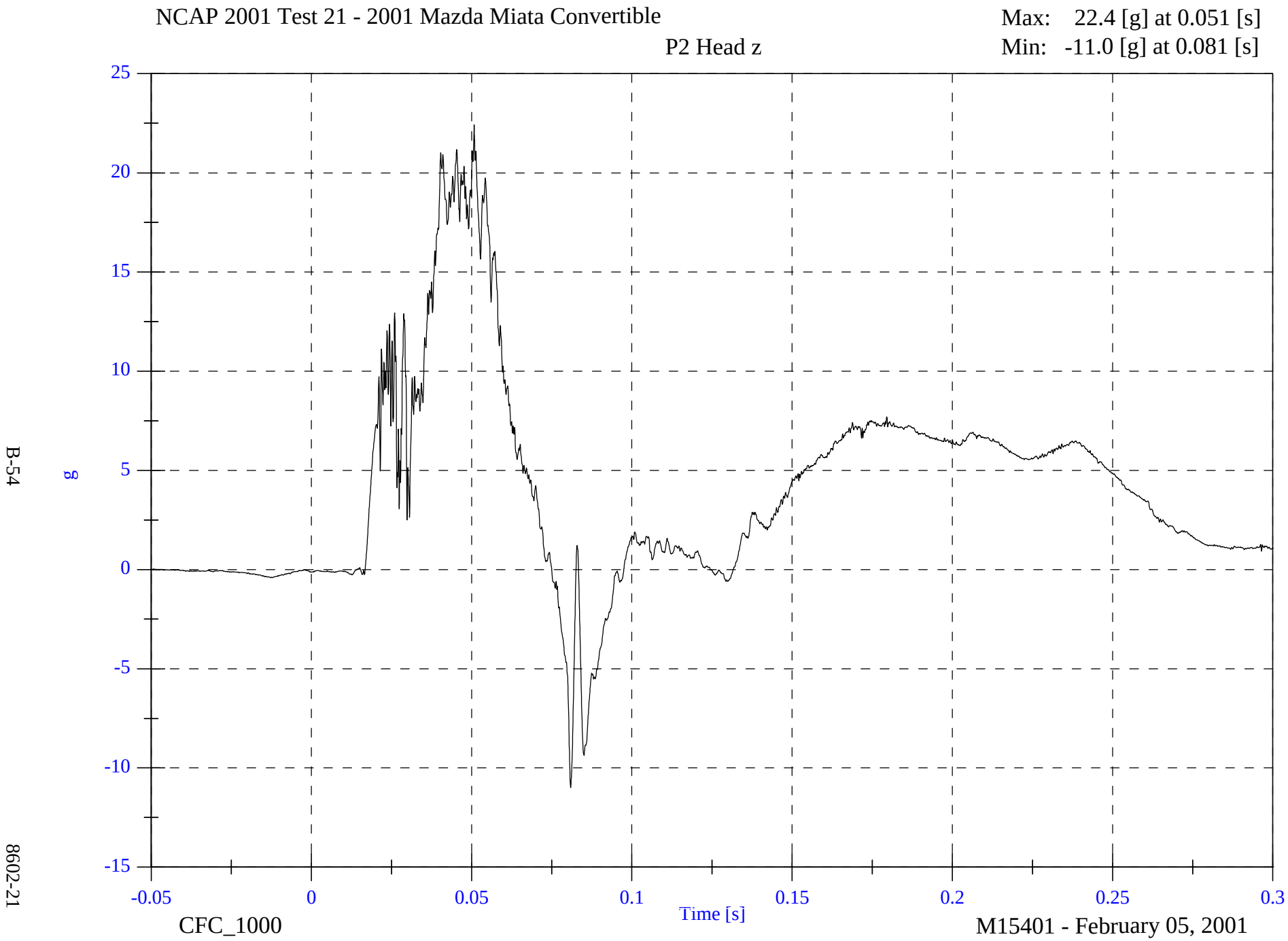
8602-21

CFC_60

M15401 - February 05, 2001


NCAP 2001 Test 21 - 2001 Mazda Miata Convertible
P2 Head x
Max: 6.1 [g] at 0.234 [s]
Min: -47.1 [g] at 0.075 [s]
10
0
-10
-20
-30
-40
-50
g
-0.05
0
0.05
0.1
0.15
0.2
0.25
0.3
Time [s]
CFC_1000
M15401 - February 05, 2001


NCAP 2001 Test 21 - 2001 Mazda Miata Convertible
P2 Head y
Max: 6.9 [g] at 0.026 [s]
Min: -22.4 [g] at 0.083 [s]
10
5
0
-5
-10
-15
-20
-25
g
-0.05
0
0.05
0.1
0.15
0.2
0.25
0.3
Time [s]
CFC_1000
M15401 - February 05, 2001

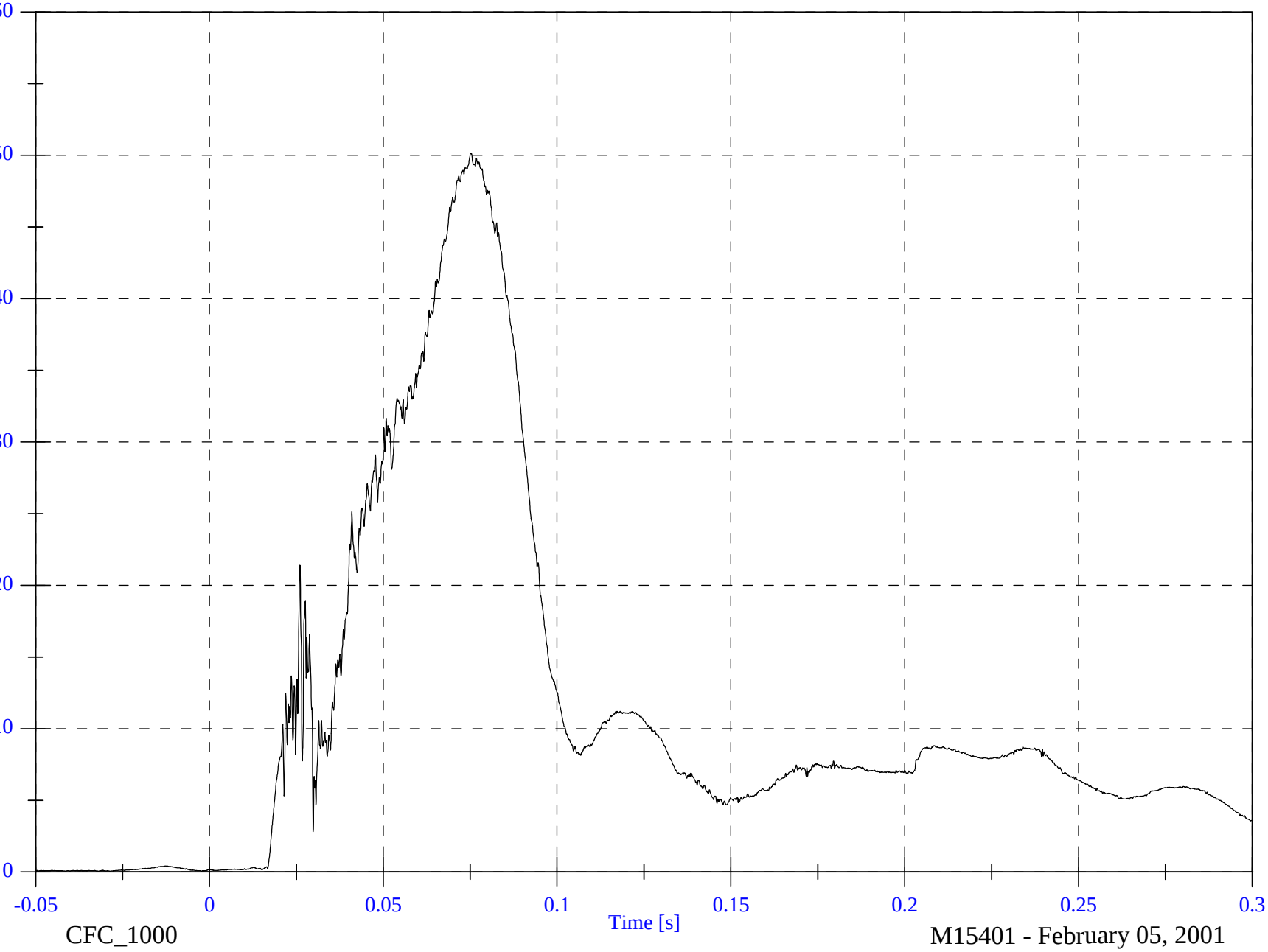

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible
P2 Head z
Max: 22.4 [g] at 0.051 [s]
Min: -11.0 [g] at 0.081 [s]
25
20
15
10
5
0
-5
-10
-15
g
-0.05
0
0.05
0.1
0.15
0.2
0.25
0.3
Time [s]
CFC_1000
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P2 Head Resultant

Max: 50.2 [g] at 0.075 [s]

Min: 0.0 [g] at -0.032 [s]



CFC_1000

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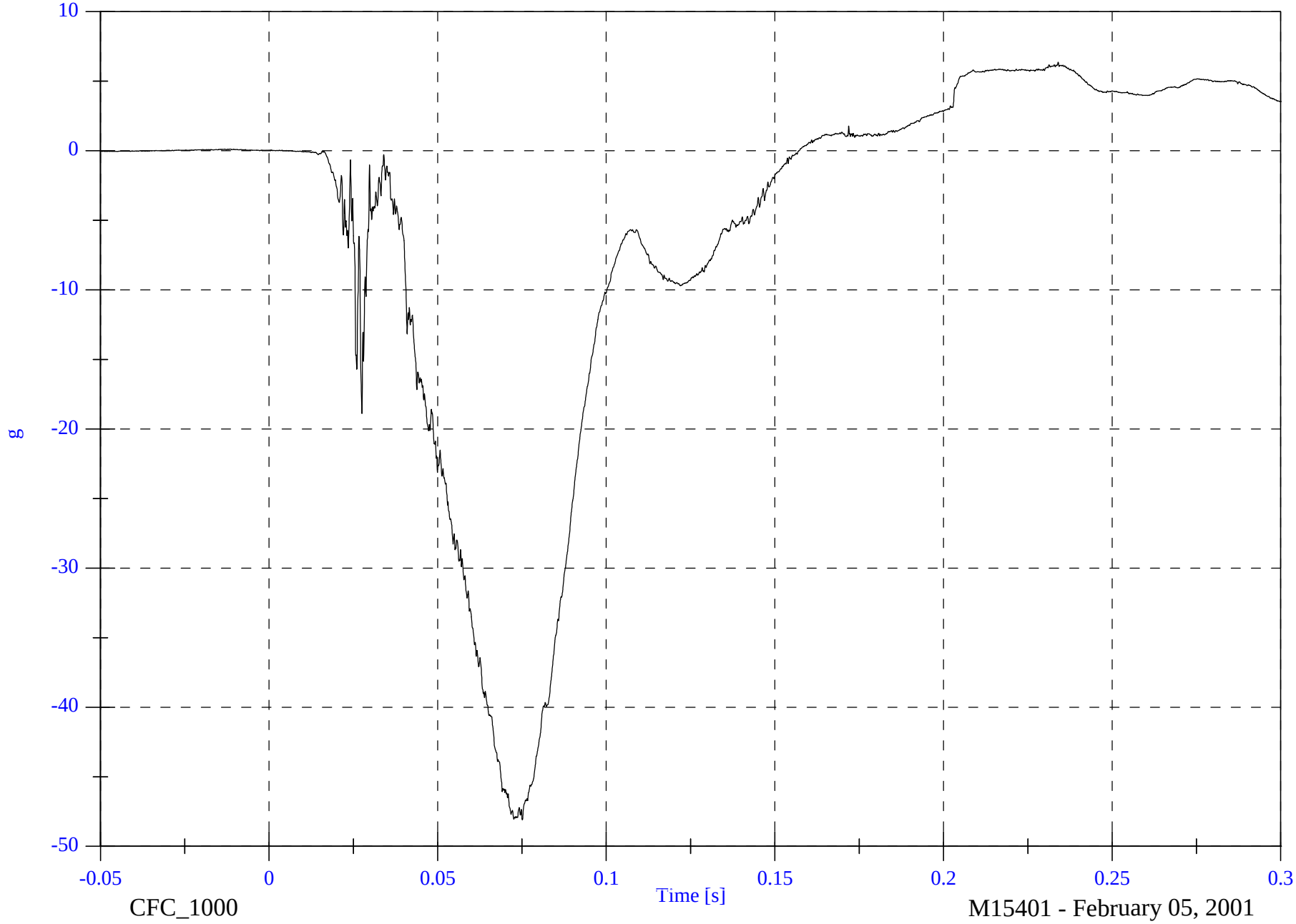
NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P2 Head Red x

Max: 6.4 [g] at 0.234 [s]

Min: -48.1 [g] at 0.075 [s]



CFC_1000

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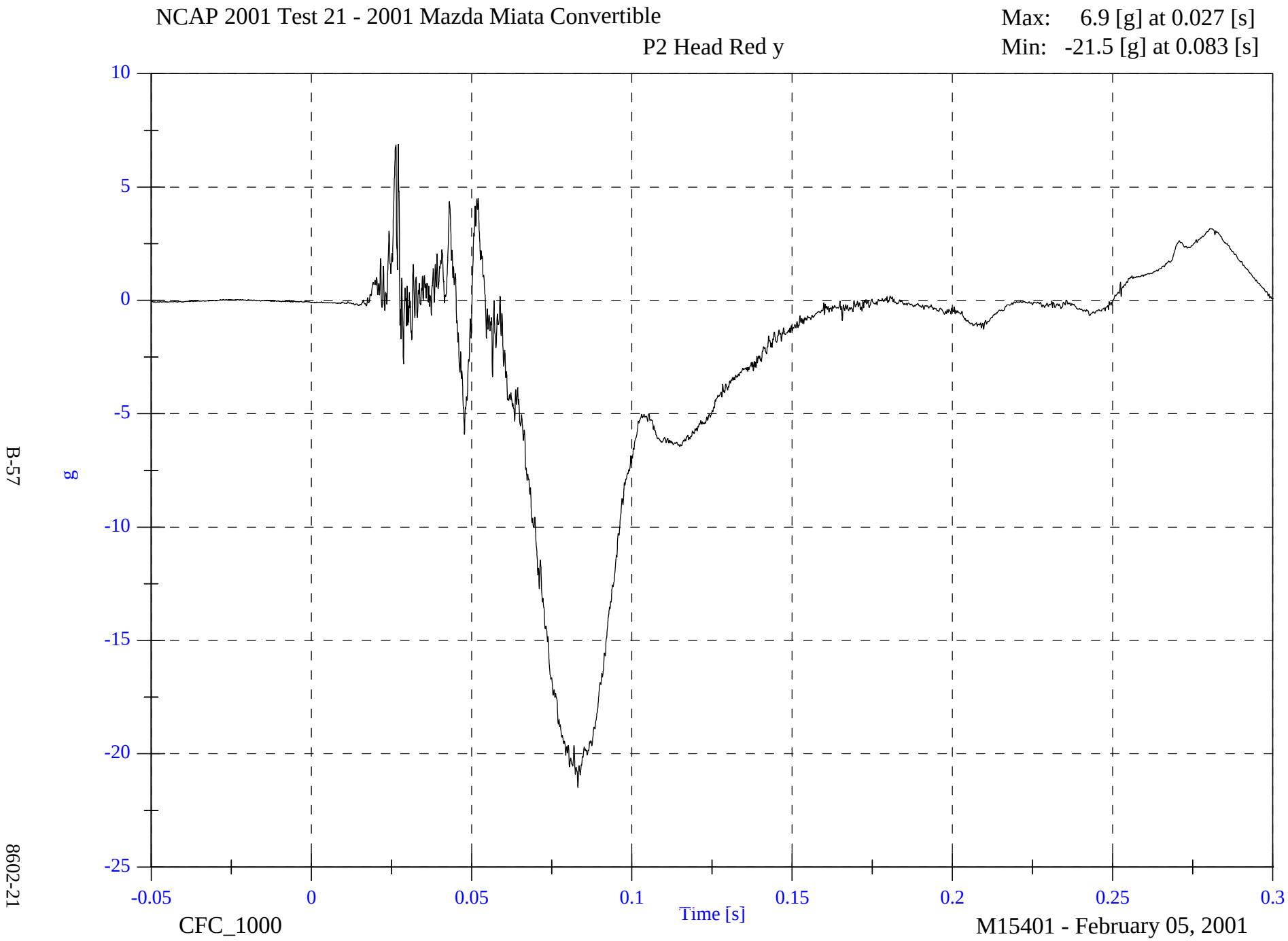
NCAP 2001 Test 21 - 2001 Mazda Miata Convertible
P2 Head Red y
Max: 6.9 [g] at 0.027 [s]
Min: -21.5 [g] at 0.083 [s]
10
5
0
-5
-10
-15
-20
-25
g
-0.05
0
0.05
0.1
0.15
0.2
0.25
0.3
Time [s]
CFC_1000
M15401 - February 05, 2001
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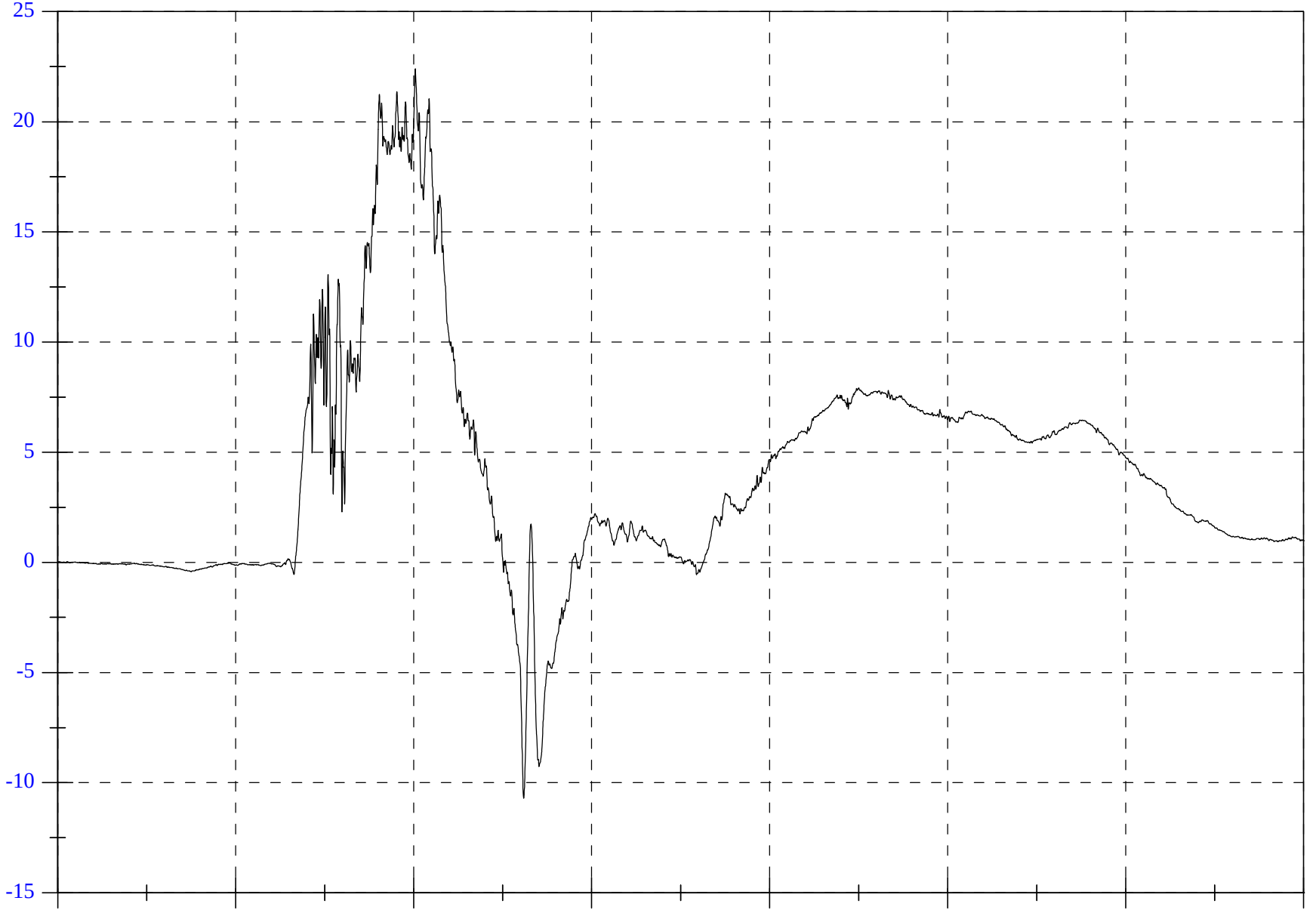
NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P2 Head Red z

Max: 22.4 [g] at 0.050 [s]

Min: -10.7 [g] at 0.081 [s]



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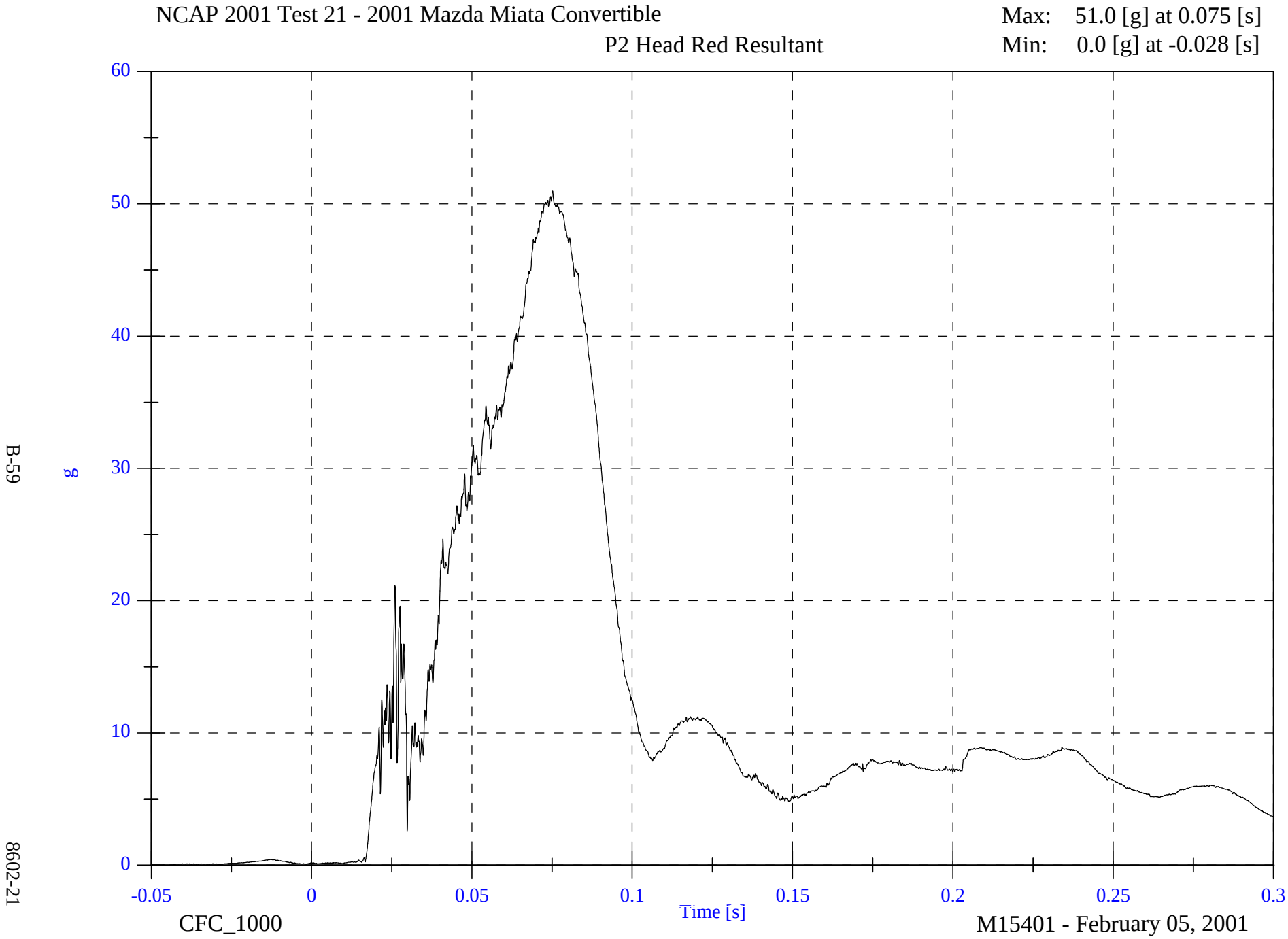
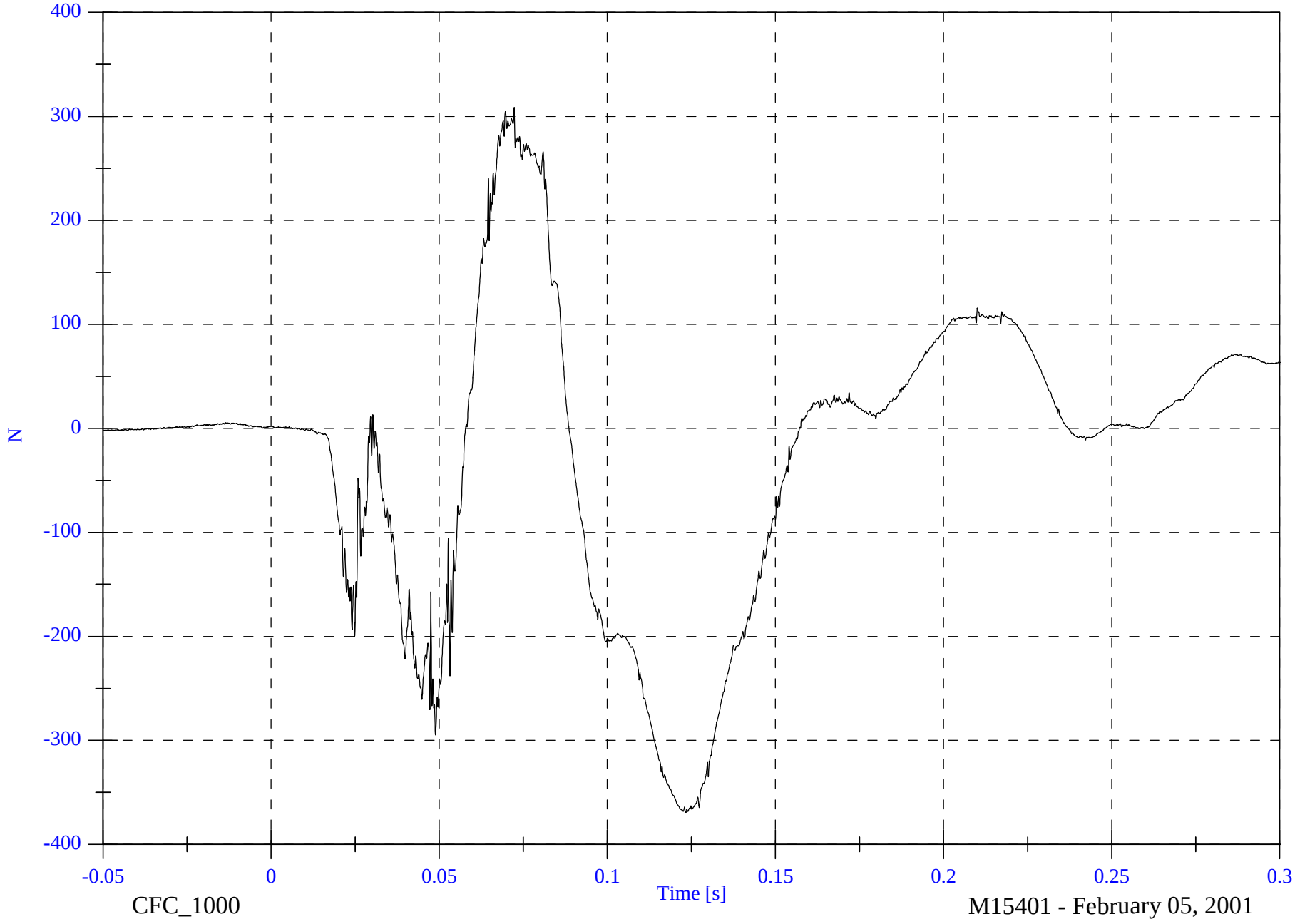

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible
P2 Head Red Resultant
Max: 51.0 [g] at 0.075 [s]
Min: 0.0 [g] at -0.028 [s]
60
50
40
30
20
10
0
g
-0.05
0
0.05
0.1
0.15
0.2
0.25
0.3
Time [s]
CFC_1000
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P2 Upper Neck Fx

Max: 308.7 [N] at 0.072 [s]

Min: -369.6 [N] at 0.123 [s]



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CFC_1000

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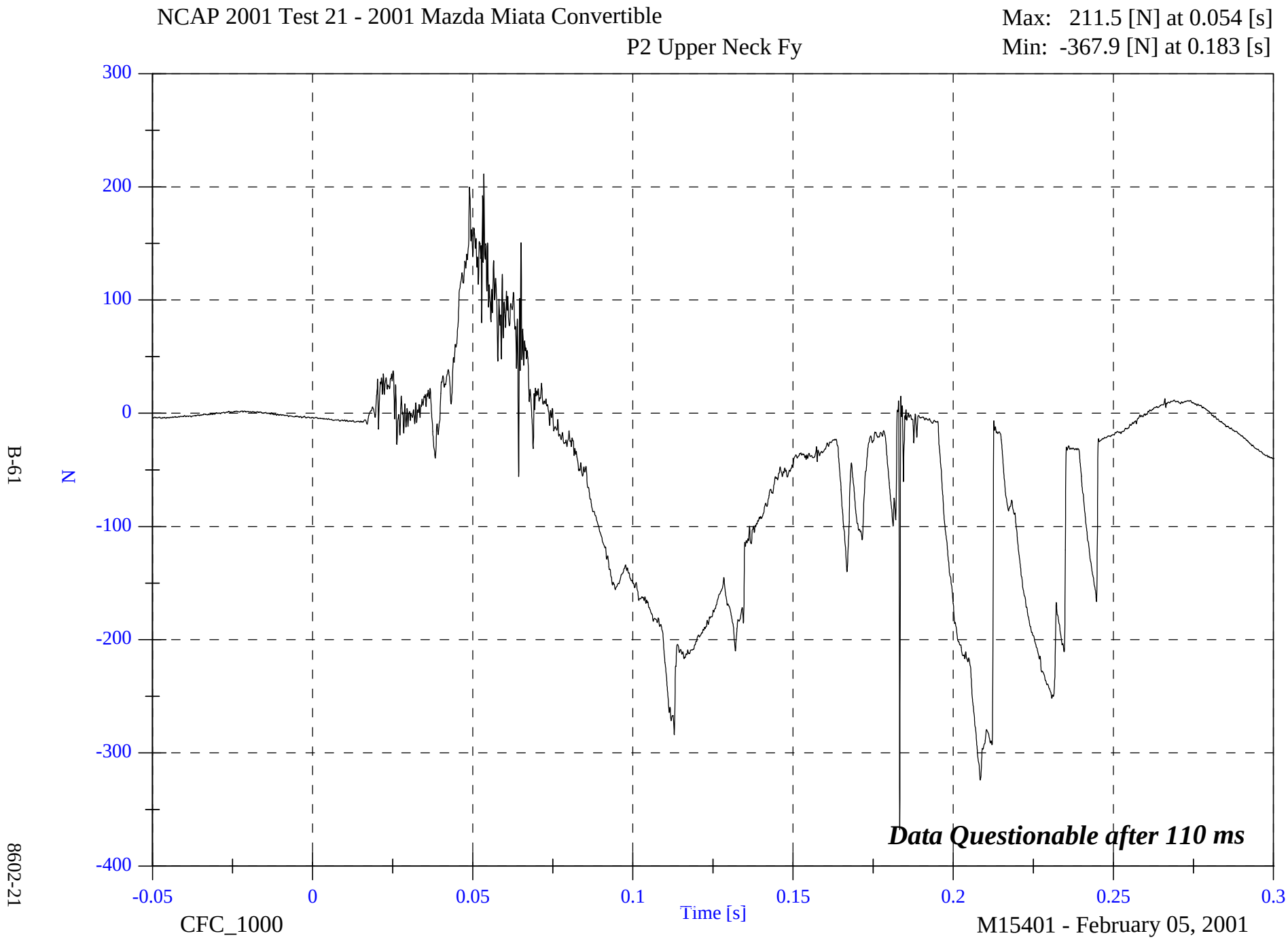
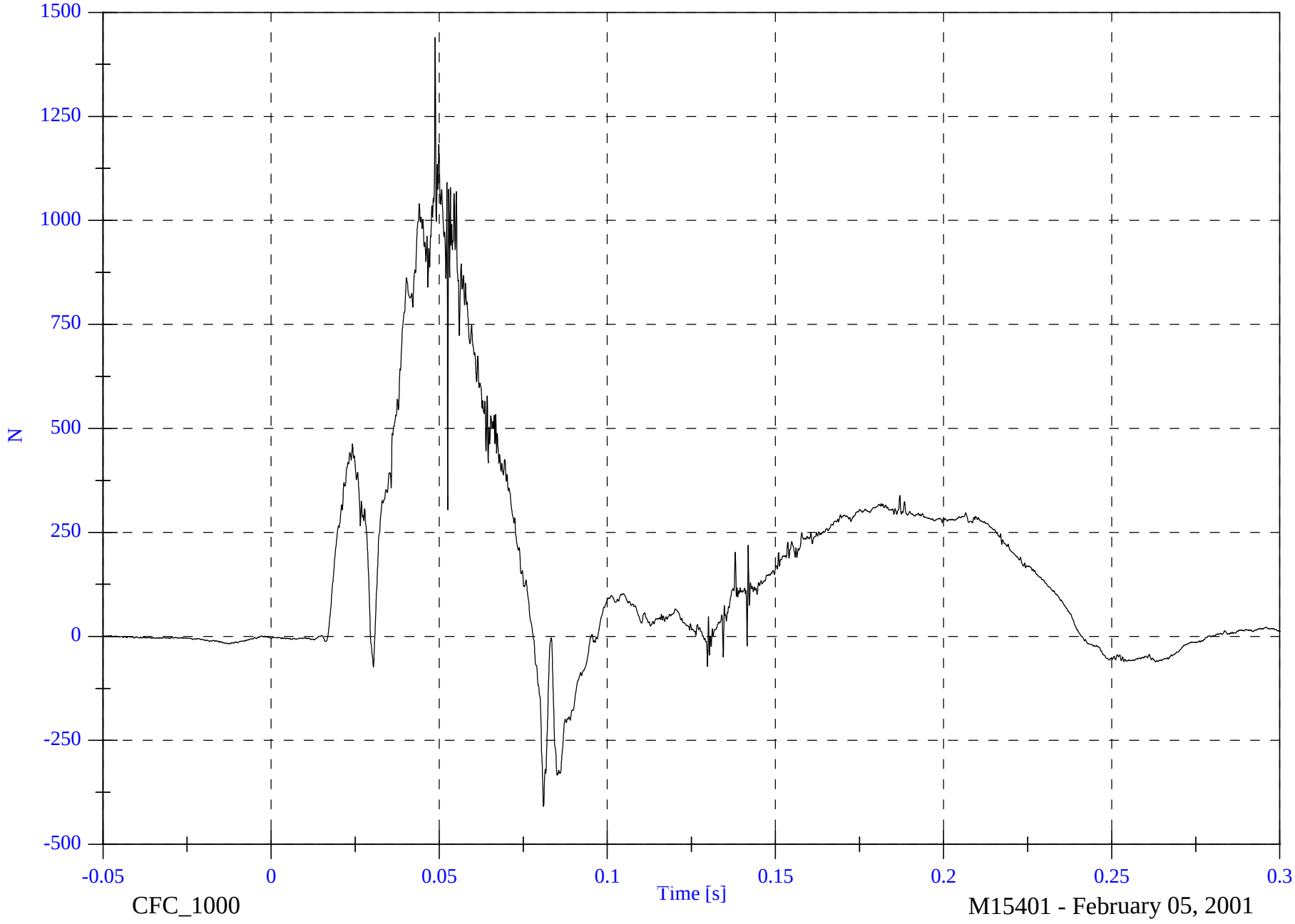

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible
P2 Upper Neck Fy
Max: 211.5 [N] at 0.054 [s]
Min: -367.9 [N] at 0.183 [s]
300
200
100
0
-100
-200
-300
-400
N
-0.05
0
0.05
0.1
0.15
0.2
0.25
0.3
Time [s]
Data Questionable after 110 ms
CFC_1000
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P2 Upper Neck Fz

Max: 1439.2 [N] at 0.049 [s]

Min: -408.7 [N] at 0.081 [s]



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8602-21

CFC_1000

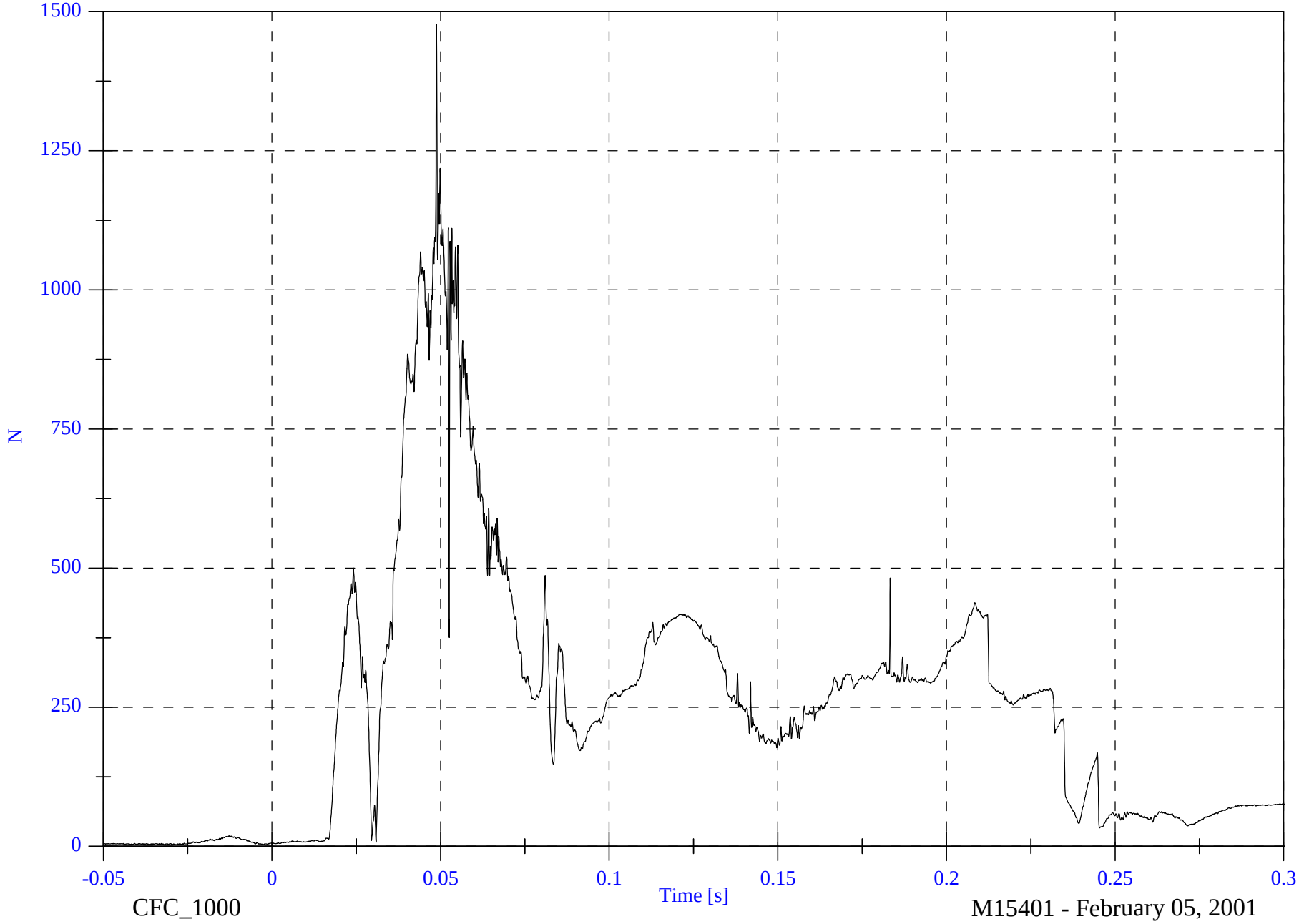
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P2 Upper Neck F Resultant

Max: 1477.6 [N] at 0.049 [s]

Min: 2.4 [N] at -0.030 [s]



CFC_1000

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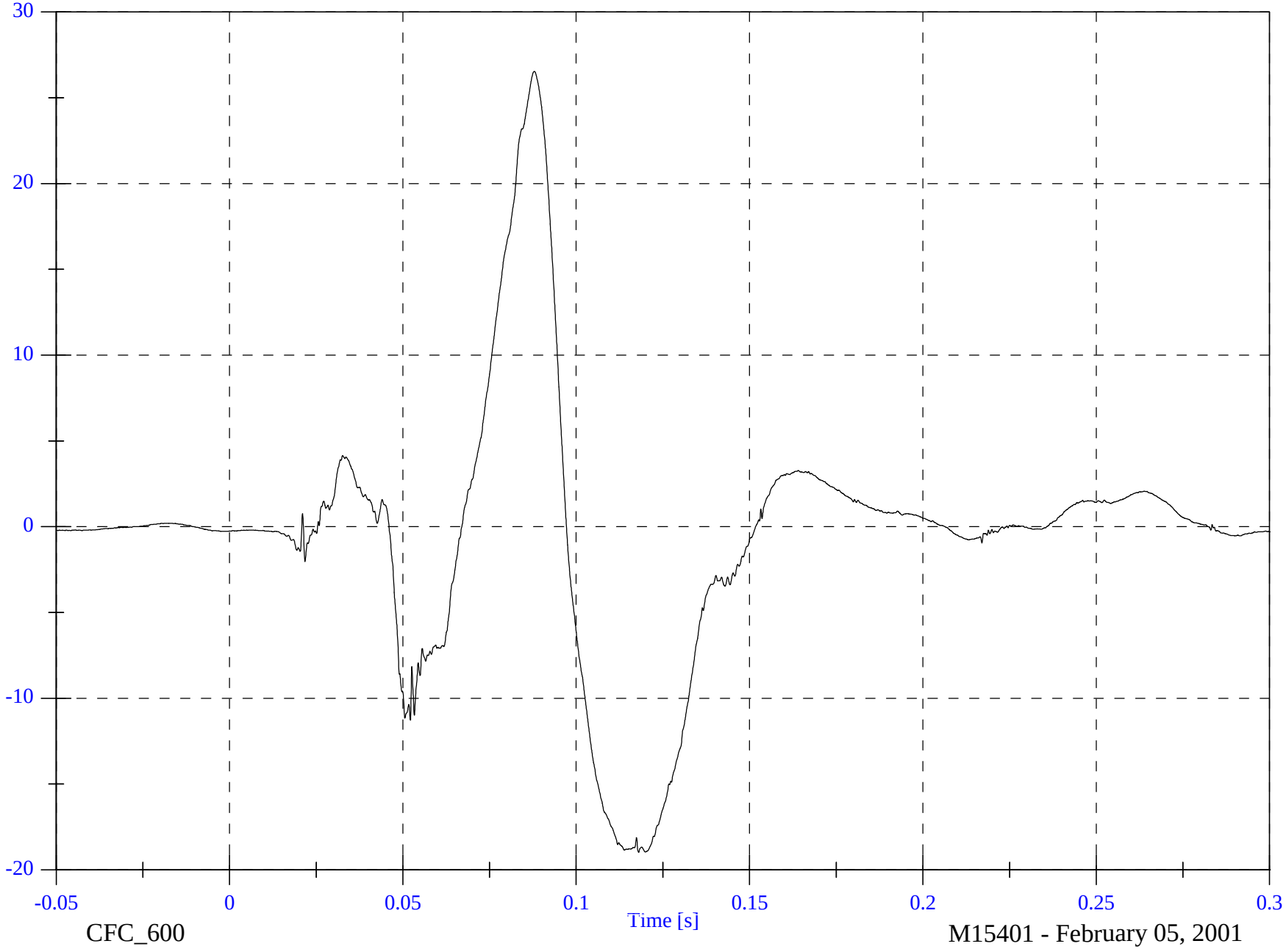
NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P2 Upper Neck Mx

Max: 26.5 [N-m] at 0.088 [s]

Min: -19.0 [N-m] at 0.118 [s]



CFC_600

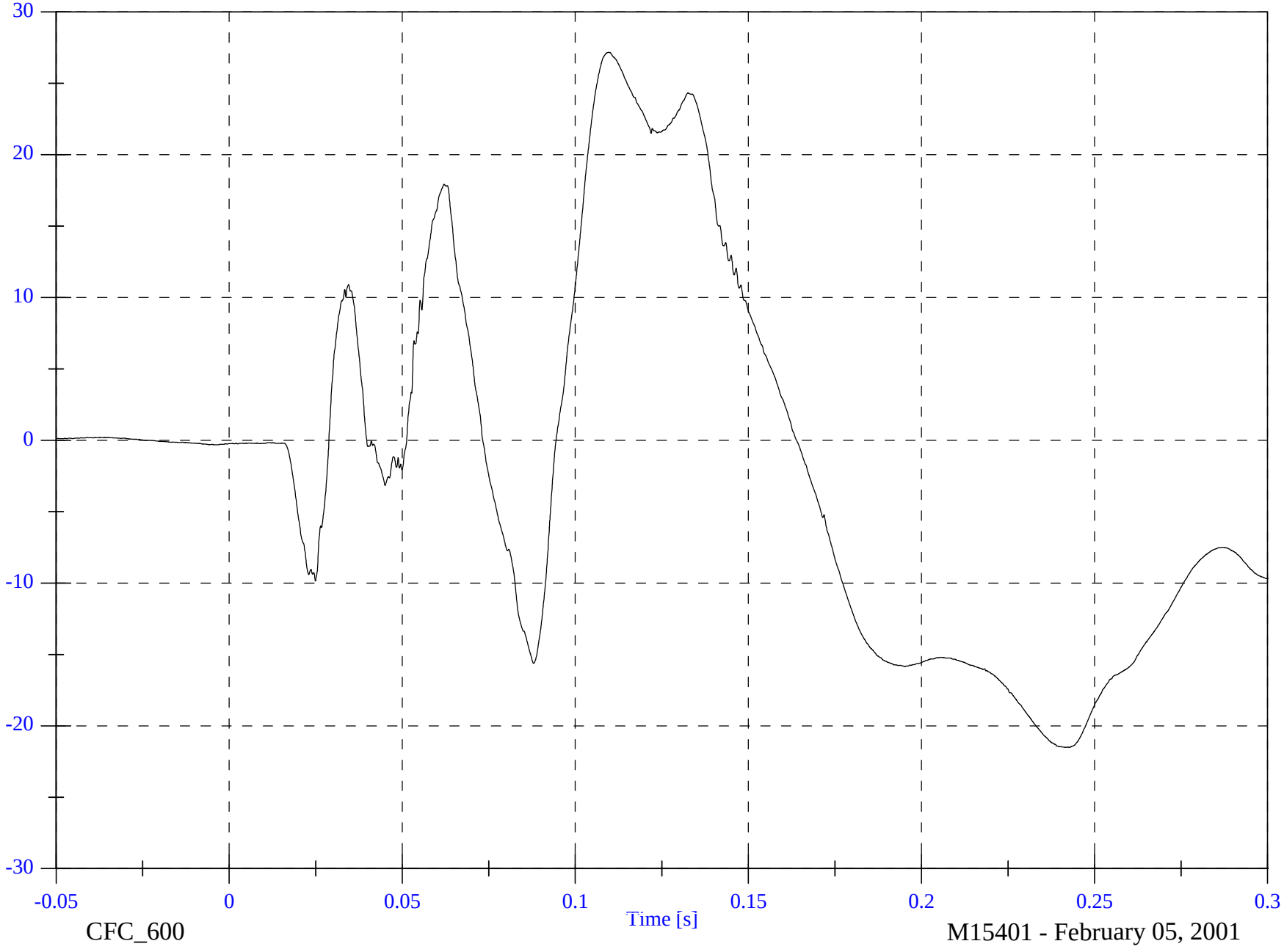
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P2 Upper Neck My

Max: 27.2 [N-m] at 0.110 [s]

Min: -21.5 [N-m] at 0.243 [s]



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CFC_600

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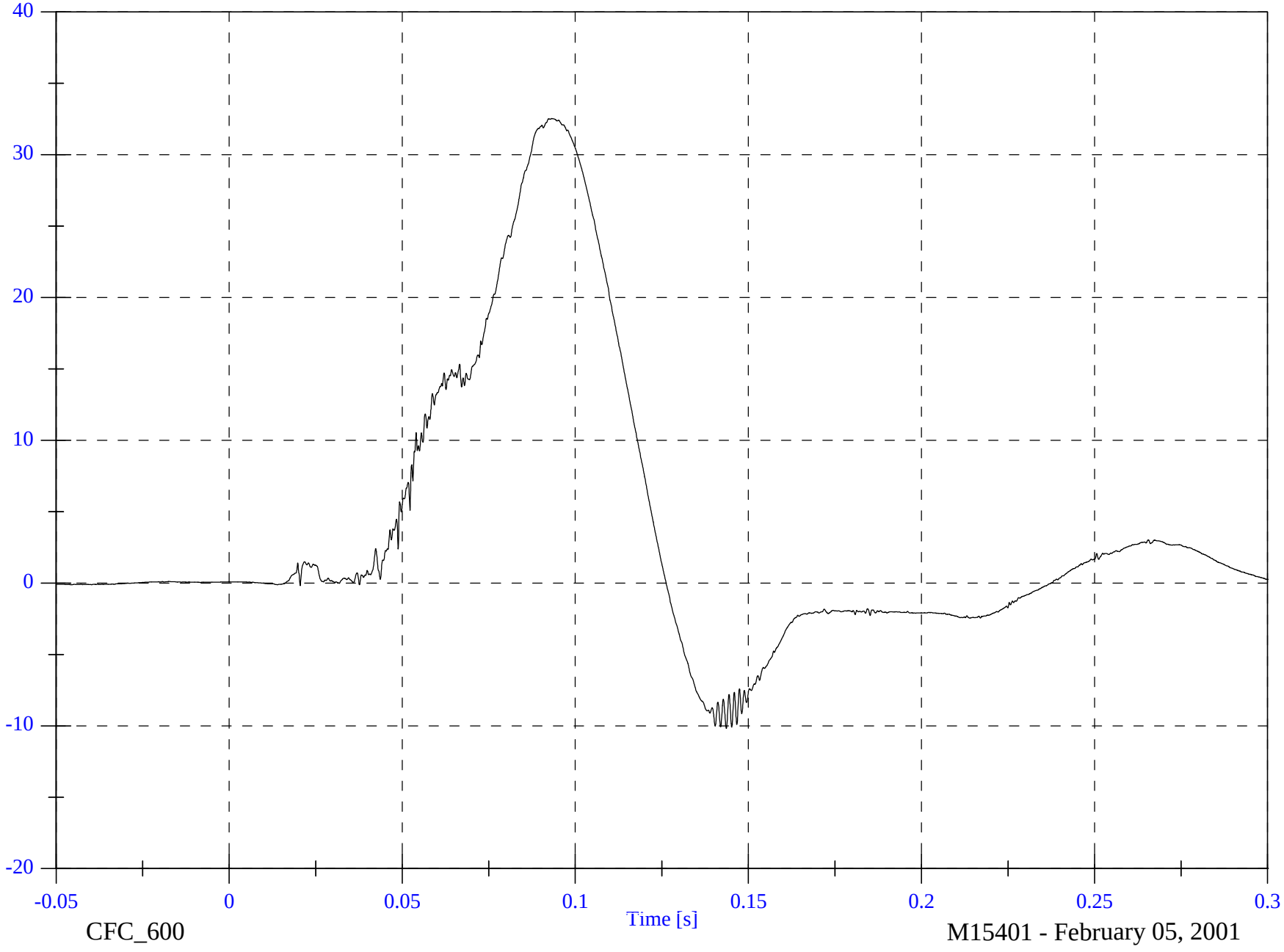
NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P2 Upper Neck Mz

Max: 32.5 [N-m] at 0.093 [s]

Min: -10.2 [N-m] at 0.144 [s]



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CFC_600

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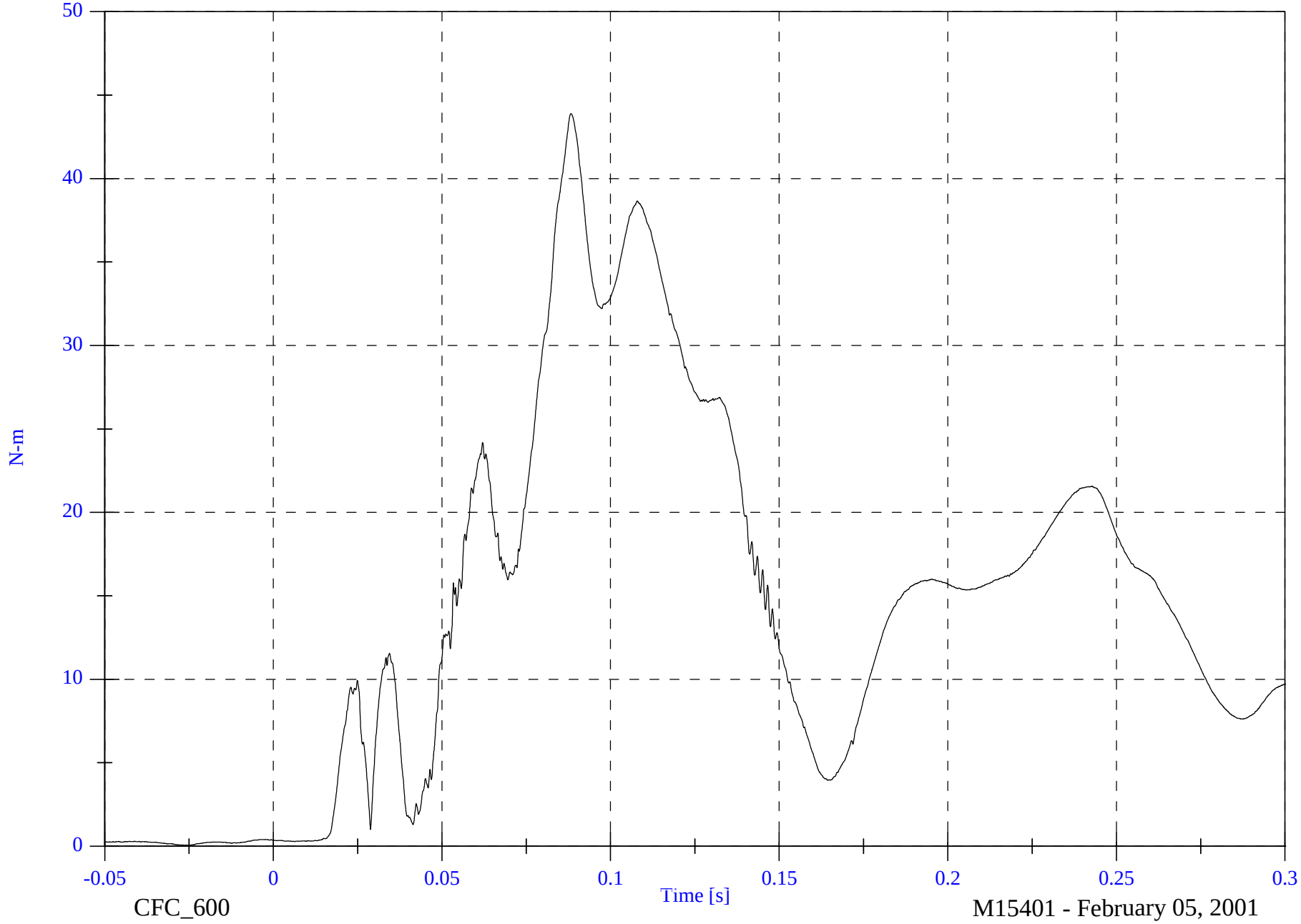
NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P2 Upper Neck M Resultant

Max: 43.9 [N-m] at 0.088 [s]

Min: 0.0 [N-m] at -0.026 [s]



CFC_600

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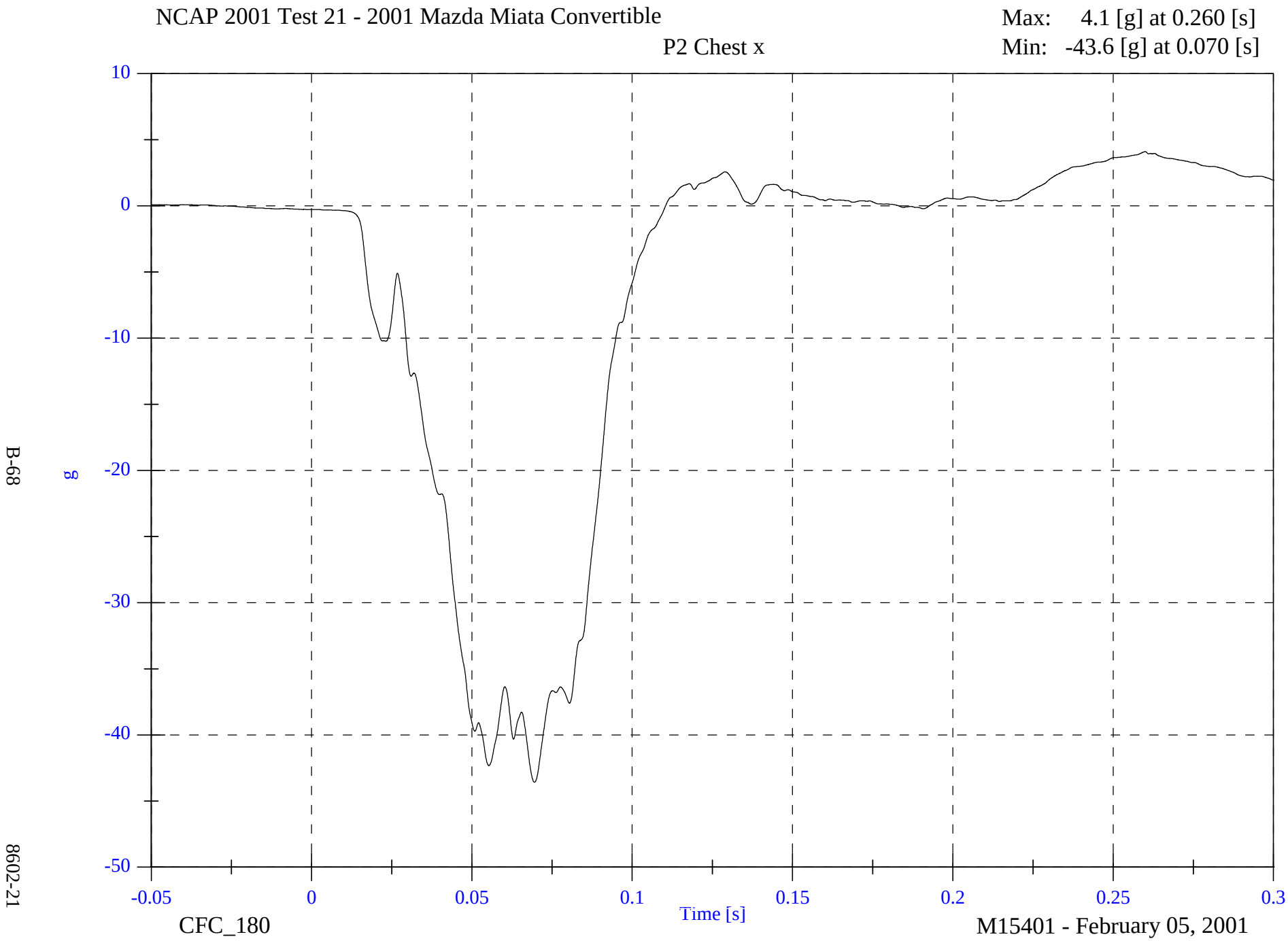
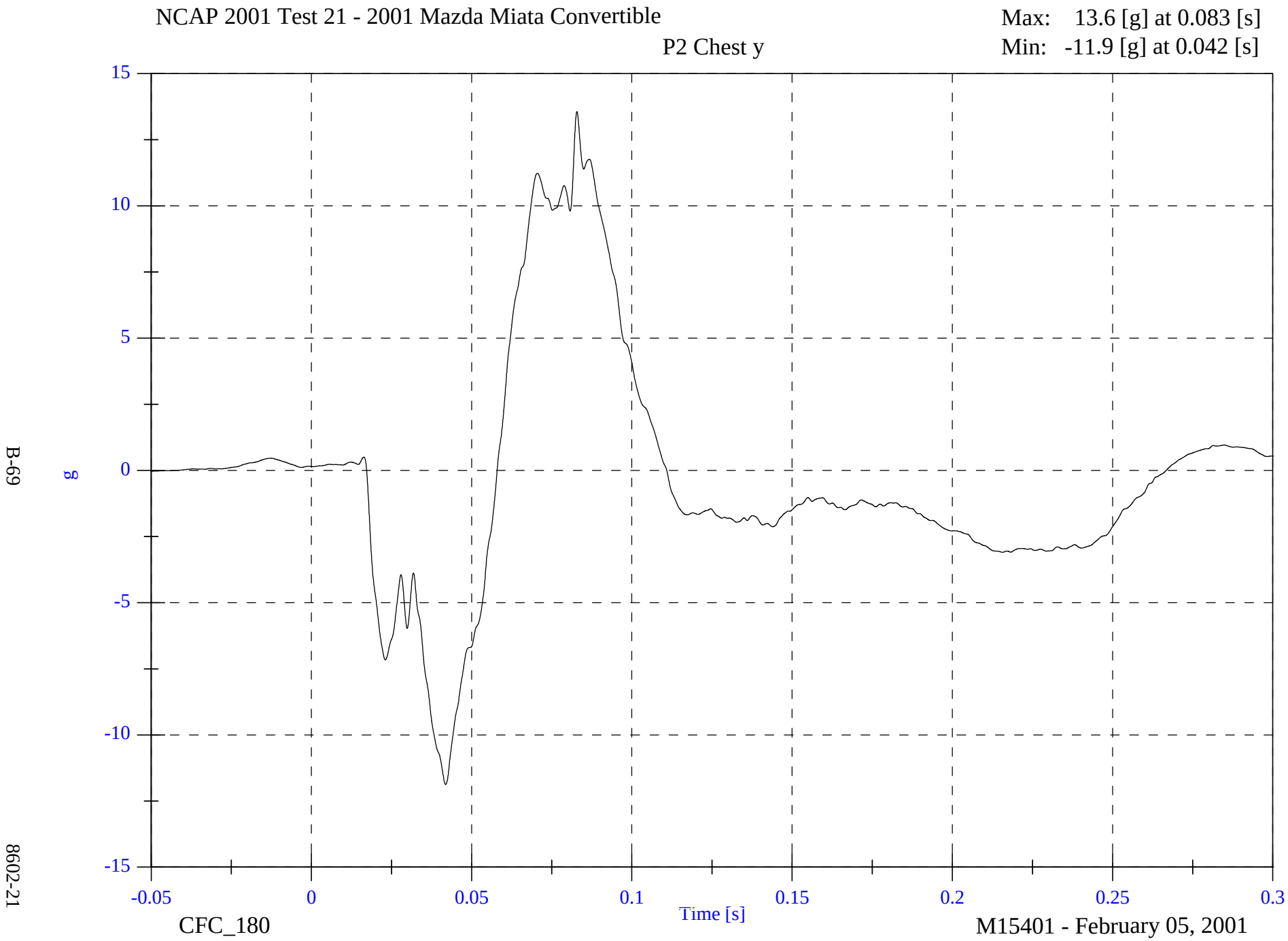
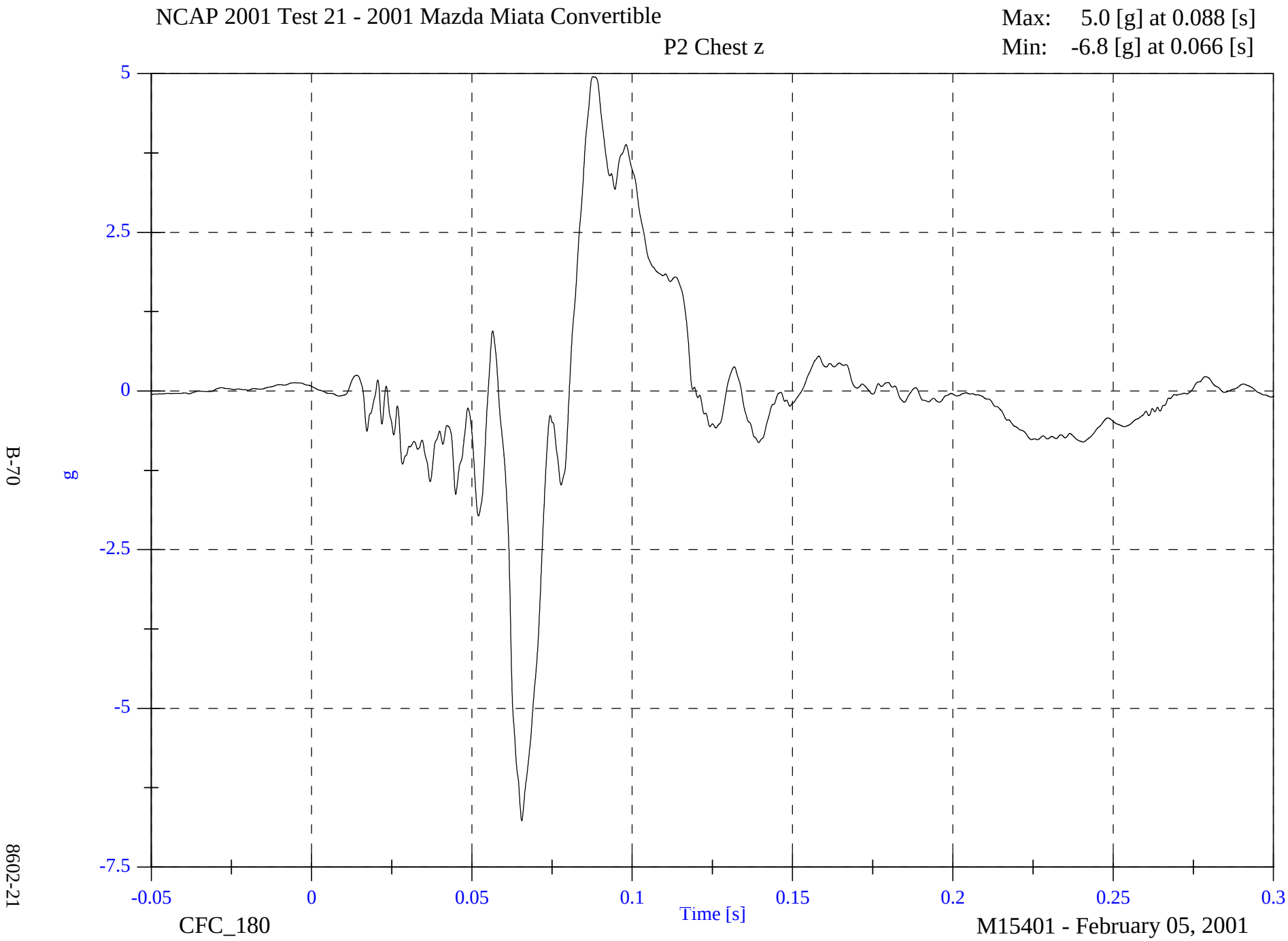
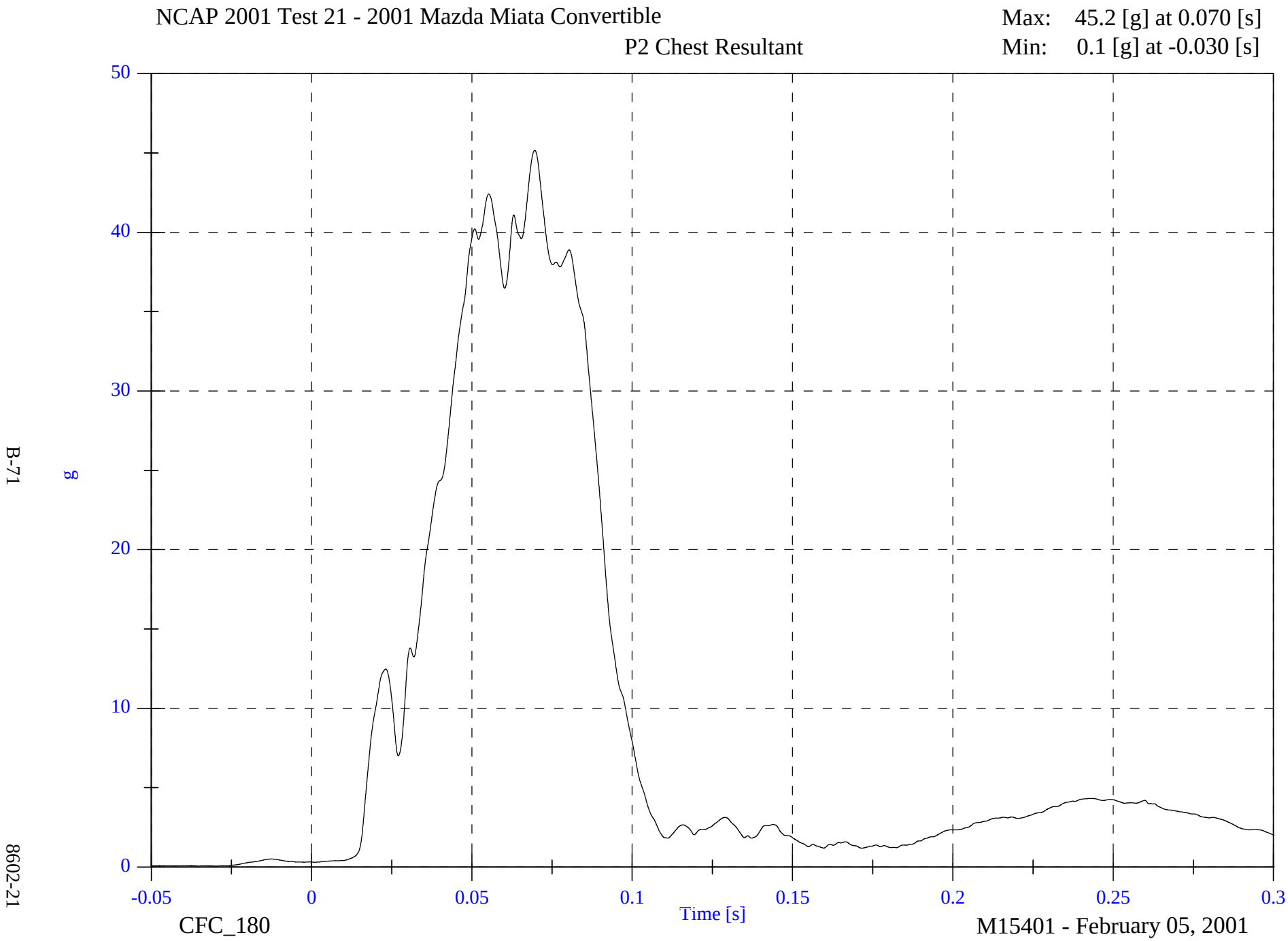

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible
P2 Chest x
Max: 4.1 [g] at 0.260 [s]
Min: -43.6 [g] at 0.070 [s]
10
0
-10
-20
-30
-40
-50
g
-0.05
0
0.05
0.1
0.15
0.2
0.25
0.3
Time [s]
B-68
8602-21
CFC_180
M15401 - February 05, 2001


NCAP 2001 Test 21 - 2001 Mazda Miata Convertible
P2 Chest y
Max: 13.6 [g] at 0.083 [s]
Min: -11.9 [g] at 0.042 [s]
15
10
5
0
-5
-10
-15
g
-0.05
0
0.05
0.1
0.15
0.2
0.25
0.3
Time [s]
B-69
8602-21
CFC_180
M15401 - February 05, 2001


NCAP 2001 Test 21 - 2001 Mazda Miata Convertible
P2 Chest z
Max: 5.0 [g] at 0.088 [s]
Min: -6.8 [g] at 0.066 [s]
5
2.5
0
-2.5
-5
-7.5
g
-0.05
0
0.05
0.1
0.15
0.2
0.25
0.3
Time [s]
B-70
8602-21
CFC_180
M15401 - February 05, 2001


NCAP 2001 Test 21 - 2001 Mazda Miata Convertible
P2 Chest Resultant
Max: 45.2 [g] at 0.070 [s]
Min: 0.1 [g] at -0.030 [s]
50
40
30
20
10
0
g
-0.05
0
0.05
0.1
0.15
0.2
0.25
0.3
Time [s]
CFC_180
M15401 - February 05, 2001

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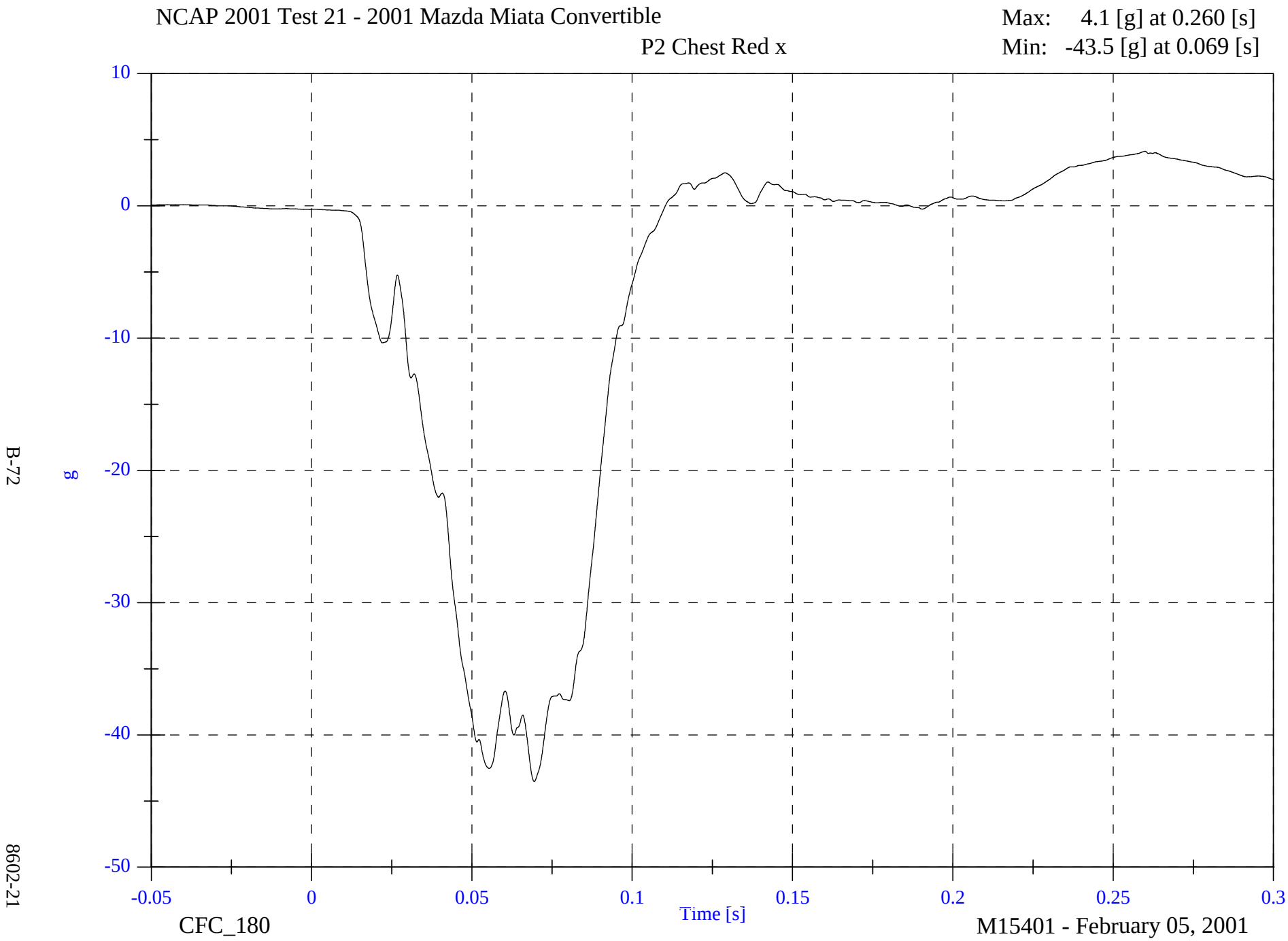
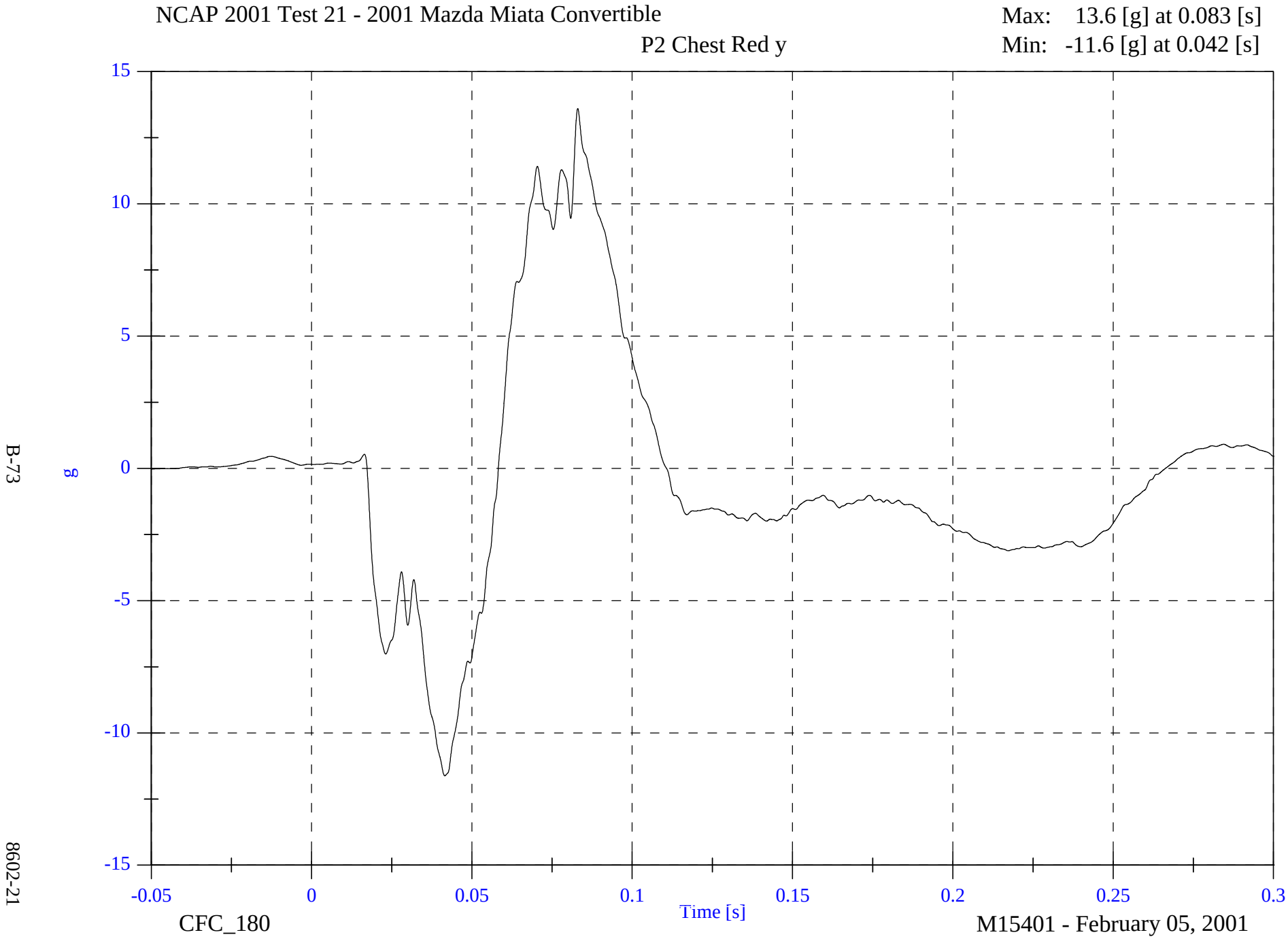
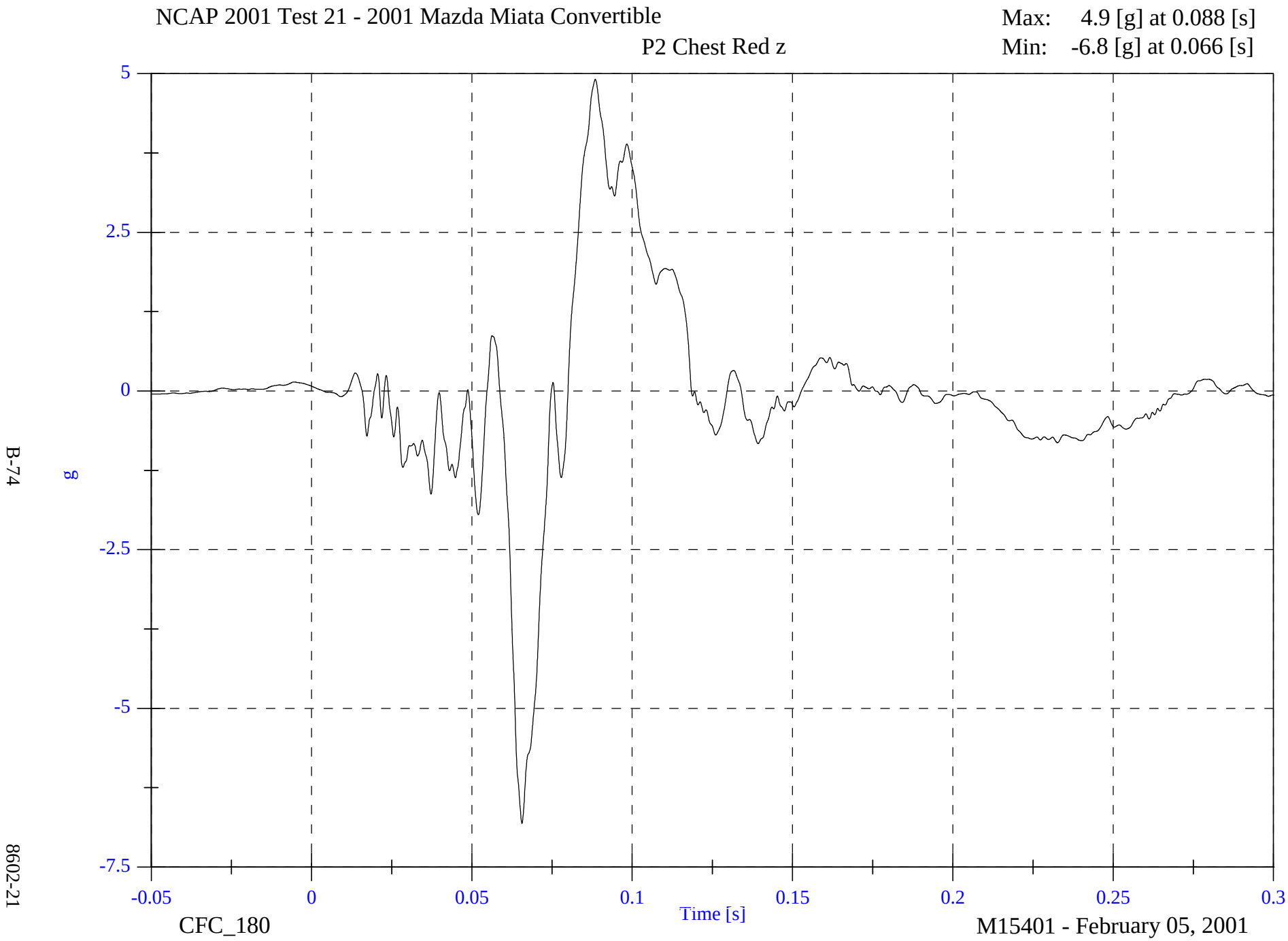
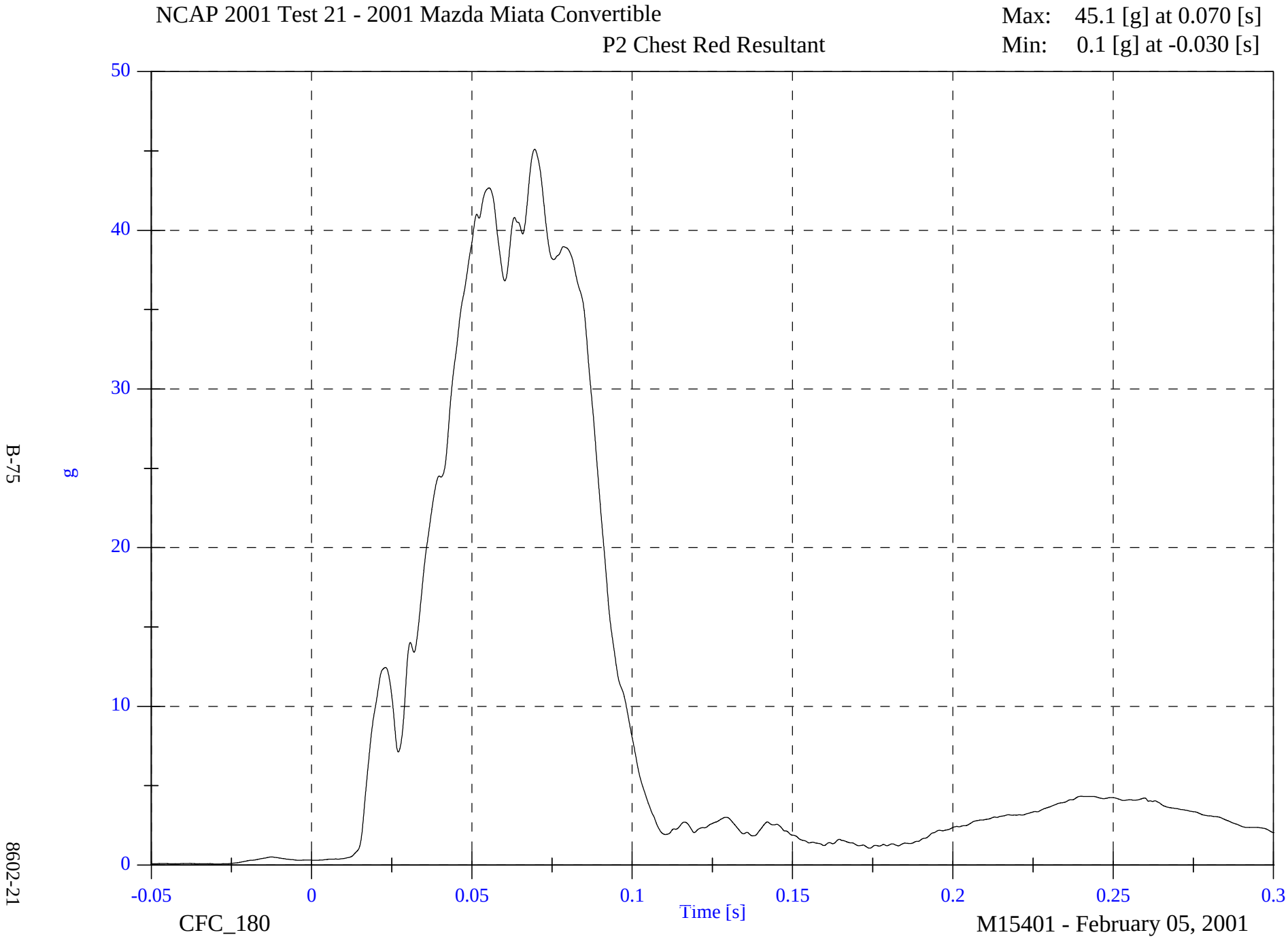
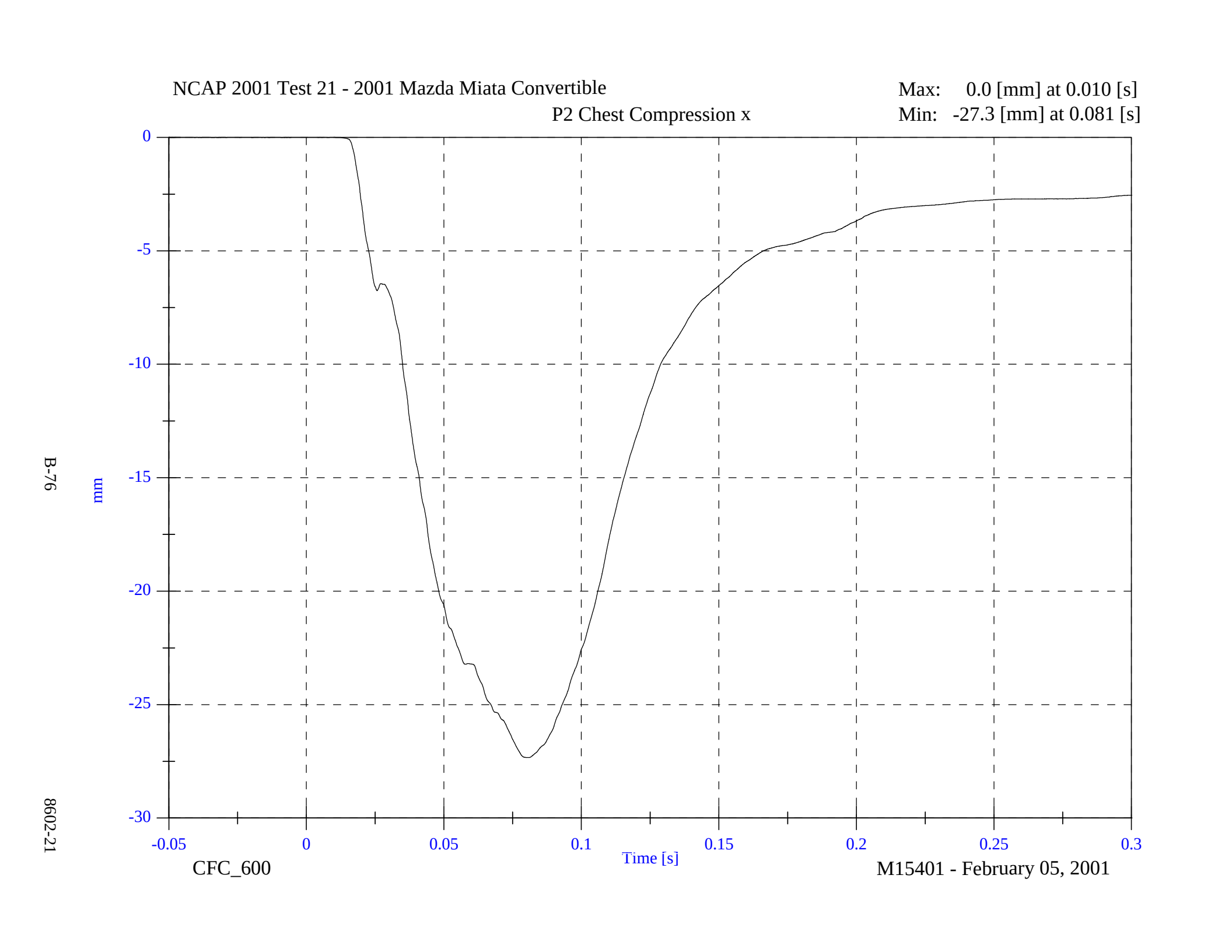

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible
P2 Chest Red x
Max: 4.1 [g] at 0.260 [s]
Min: -43.5 [g] at 0.069 [s]
10
0
-10
-20
-30
-40
-50
g
-0.05
0
0.05
0.1
0.15
0.2
0.25
0.3
Time [s]
CFC_180
M15401 - February 05, 2001


NCAP 2001 Test 21 - 2001 Mazda Miata Convertible
P2 Chest Red y
Max: 13.6 [g] at 0.083 [s]
Min: -11.6 [g] at 0.042 [s]
15
10
5
0
-5
-10
-15
g
-0.05
0
0.05
0.1
0.15
0.2
0.25
0.3
Time [s]
B-73
8602-21
CFC_180
M15401 - February 05, 2001


NCAP 2001 Test 21 - 2001 Mazda Miata Convertible
P2 Chest Red z
Max: 4.9 [g] at 0.088 [s]
Min: -6.8 [g] at 0.066 [s]
5
2.5
0
-2.5
-5
-7.5
g
-0.05
0
0.05
0.1
0.15
0.2
0.25
0.3
Time [s]
CFC_180
M15401 - February 05, 2001


NCAP 2001 Test 21 - 2001 Mazda Miata Convertible
P2 Chest Red Resultant
Max: 45.1 [g] at 0.070 [s]
Min: 0.1 [g] at -0.030 [s]
50
40
30
20
10
0
g
-0.05
0
0.05
0.1
0.15
0.2
0.25
0.3
Time [s]
CFC_180
M15401 - February 05, 2001


NCAP 2001 Test 21 - 2001 Mazda Miata Convertible
P2 Chest Compression x
Max: 0.0 [mm] at 0.010 [s]
Min: -27.3 [mm] at 0.081 [s]
0
-5
-10
-15
-20
-25
-30
mm
-0.05
0
0.05
0.1
0.15
0.2
0.25
0.3
Time [s]
CFC_600
M15401 - February 05, 2001
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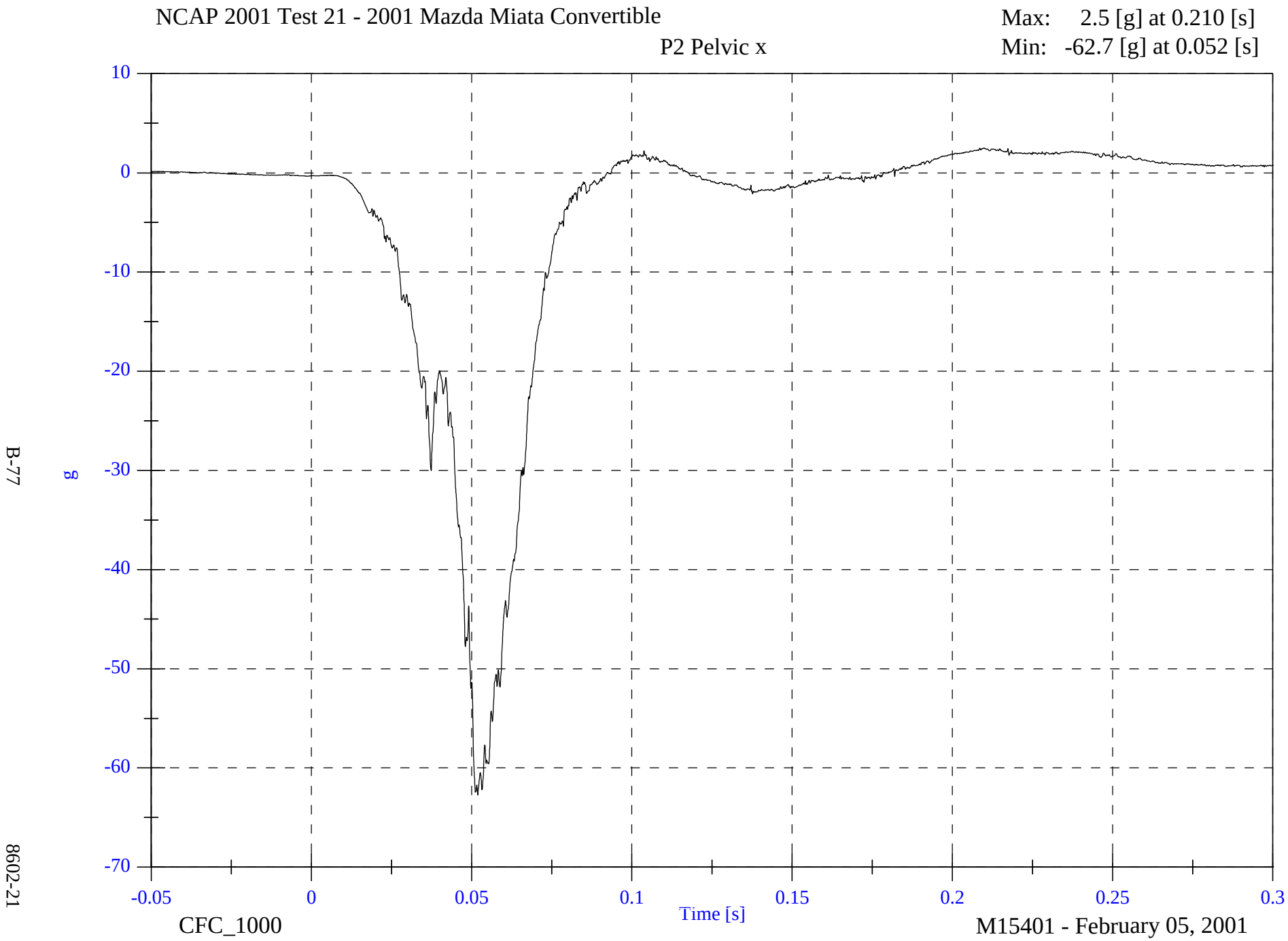
NCAP 2001 Test 21 - 2001 Mazda Miata Convertible
P2 Pelvic x
Max: 2.5 [g] at 0.210 [s]
Min: -62.7 [g] at 0.052 [s]
10
0
-10
-20
-30
-40
-50
-60
-70
g
-0.05
0
0.05
0.1
0.15
0.2
0.25
0.3
Time [s]
CFC_1000
M15401 - February 05, 2001

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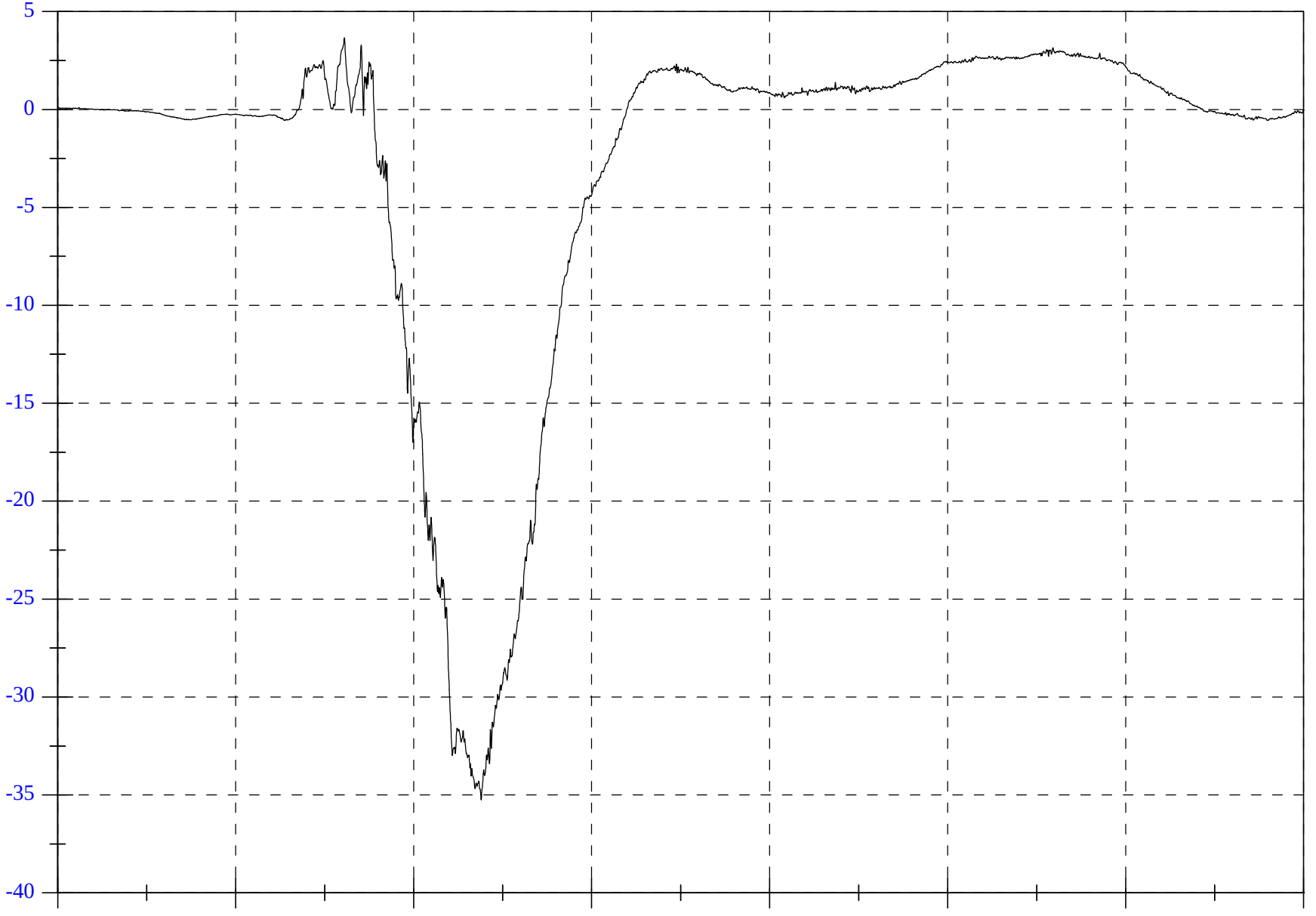
NCAP 2001 Test 21 - 2001 Mazda Miata Convertible
P2 Pelvic y
Max: 5.4 [g] at 0.054 [s]
Min: -7.4 [g] at 0.068 [s]
7.5
5
2.5
0
-2.5
-5
-7.5
g
-0.05
0
0.05
0.1
0.15
0.2
0.25
0.3
Time [s]
CFC_1000
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P2 Pelvic z

Max: 3.7 [g] at 0.031 [s]

Min: -35.3 [g] at 0.069 [s]



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CFC_1000

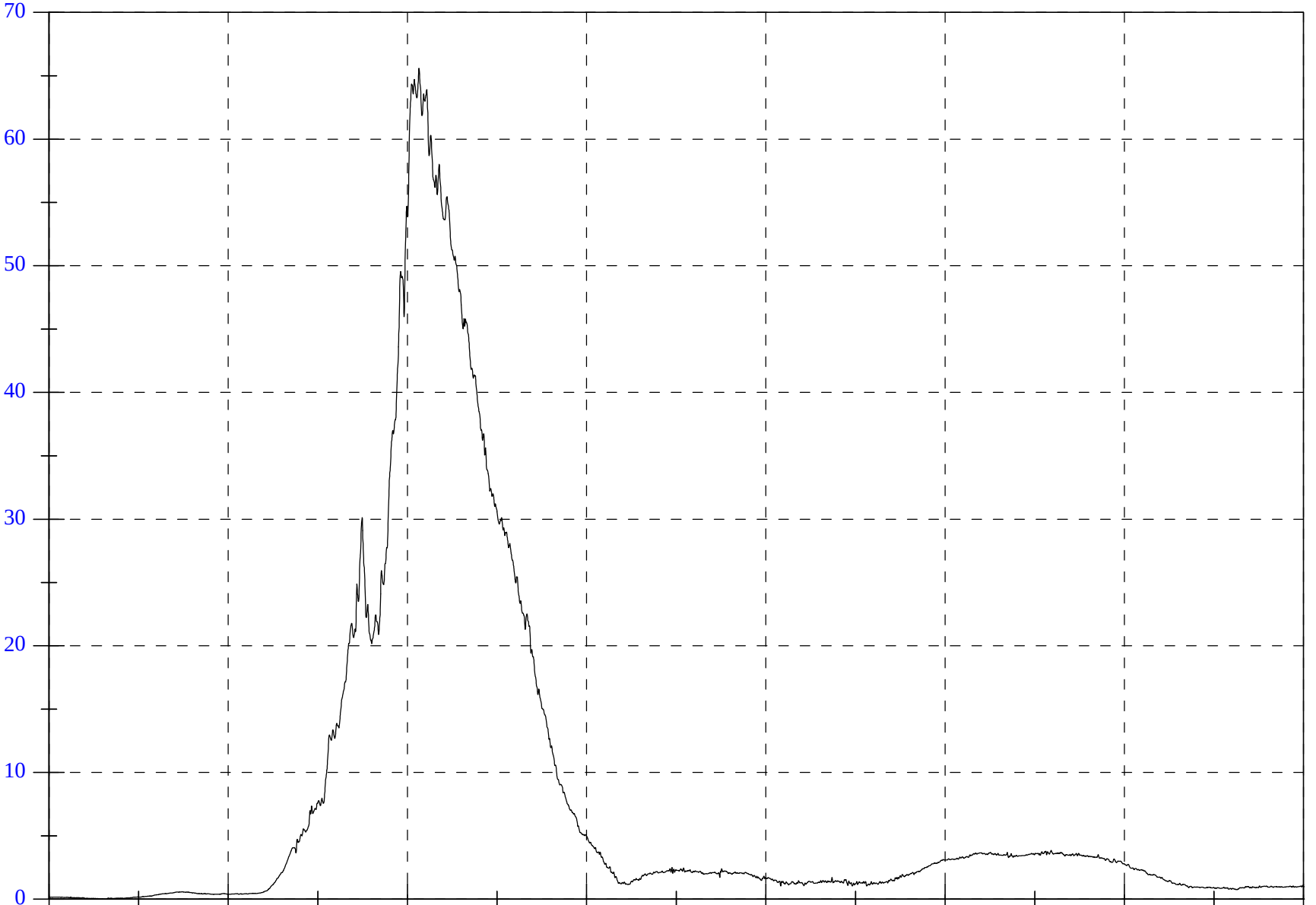
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P2 Pelvic Resultant

Max: 65.6 [g] at 0.053 [s]

Min: 0.0 [g] at -0.036 [s]



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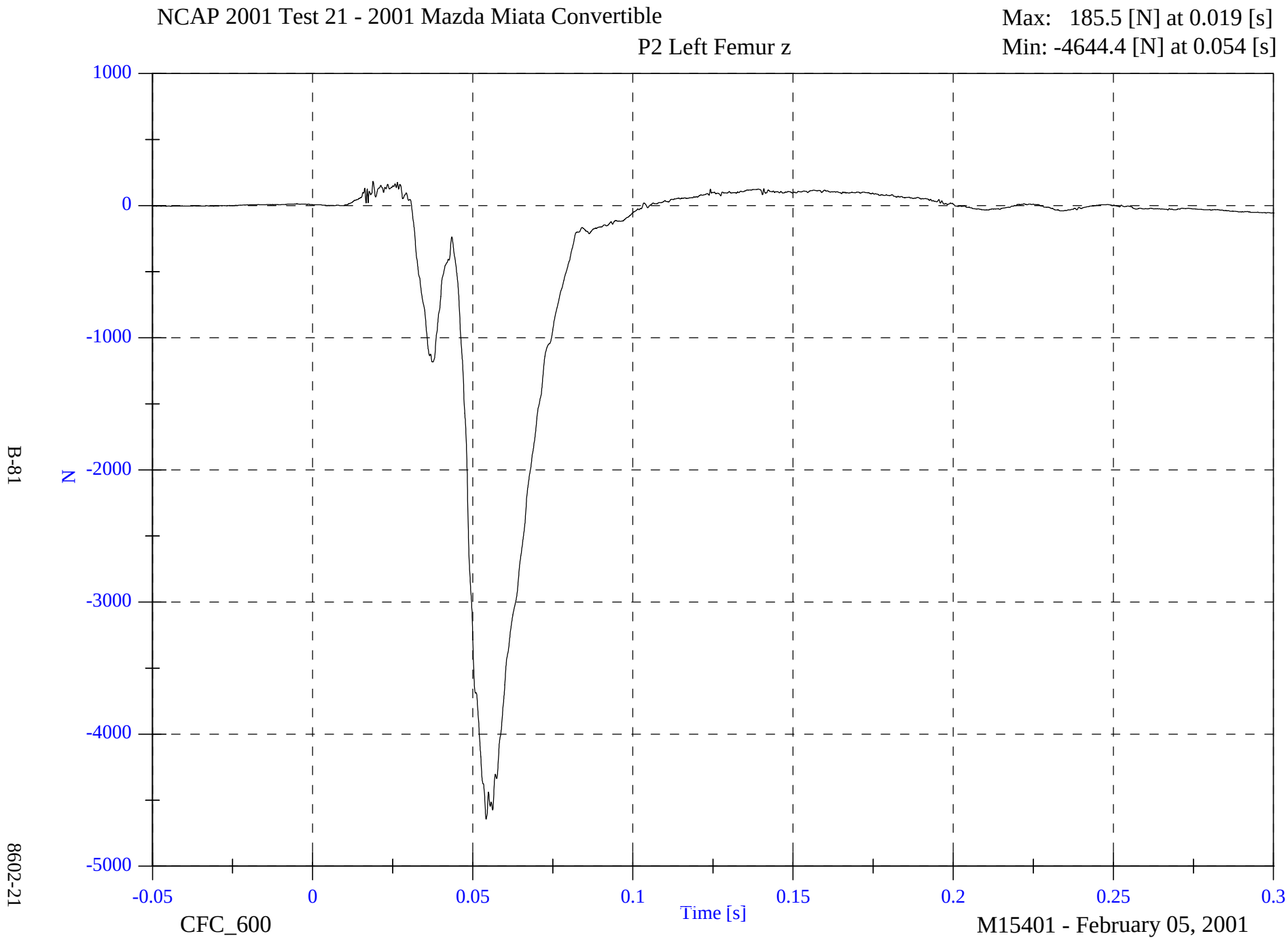
CFC_1000

M15401 - February 05, 2001

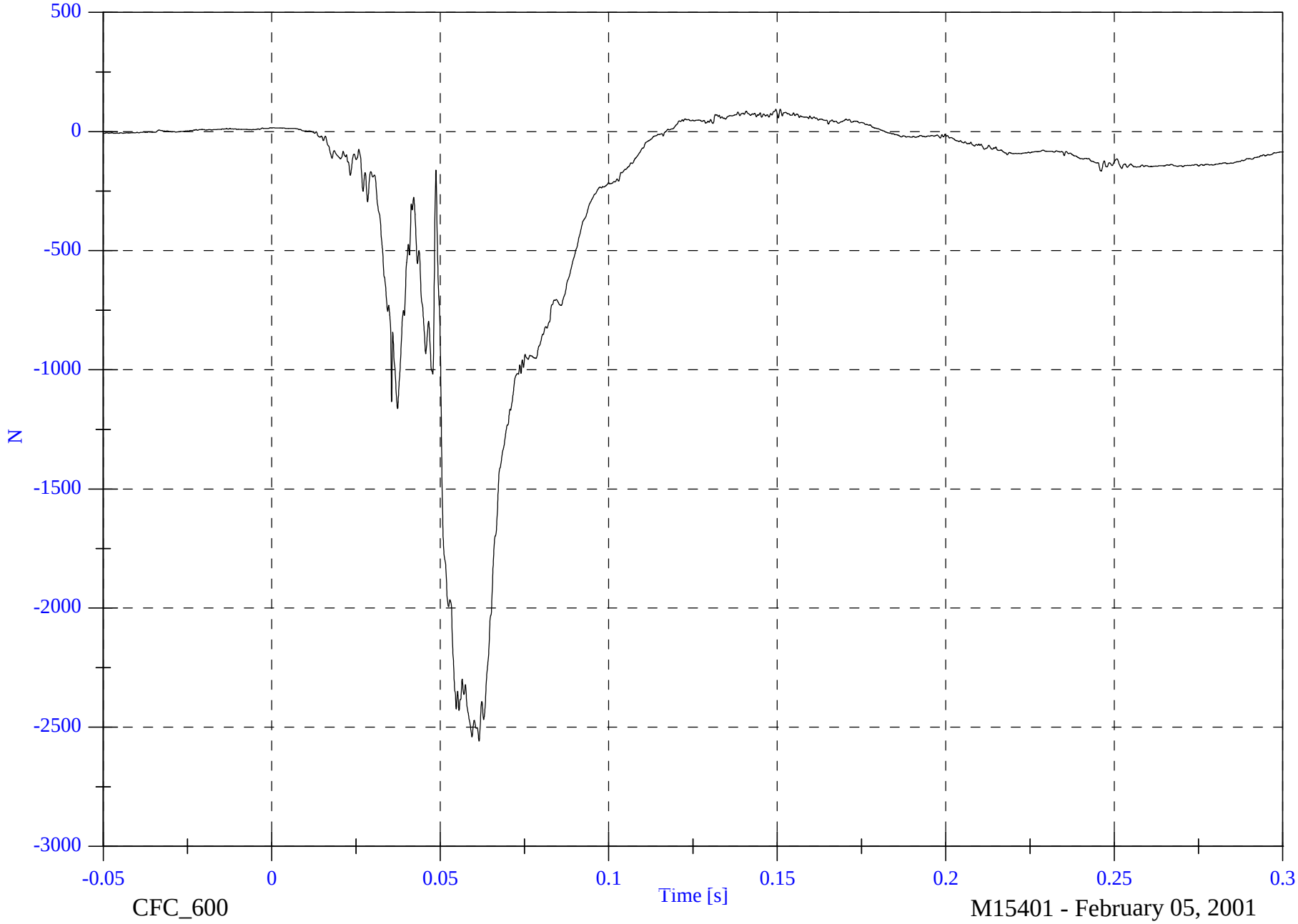

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible
P2 Left Femur z
Max: 185.5 [N] at 0.019 [s]
Min: -4644.4 [N] at 0.054 [s]
1000
0
-1000
-2000
-3000
-4000
-5000
N
-0.05
0
0.05
0.1
0.15
0.2
0.25
0.3
Time [s]
CFC_600
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P2 Right Femur z

Max: 93.4 [N] at 0.151 [s]

Min: -2558.9 [N] at 0.062 [s]



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CFC_600

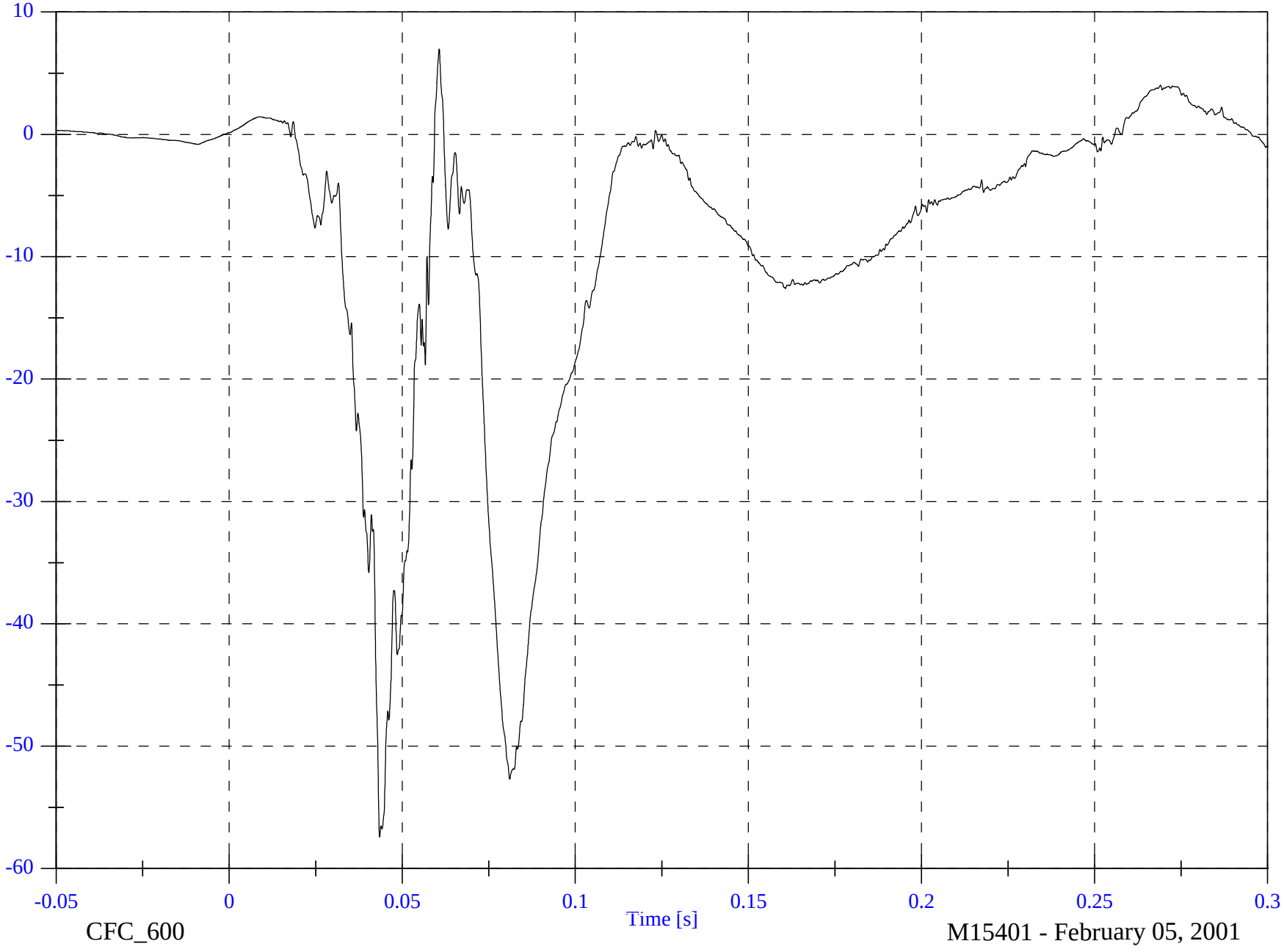
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P2 Left Upper Tibia Mx

Max: 7.0 [N-m] at 0.061 [s]

Min: -57.4 [N-m] at 0.043 [s]



CFC_600

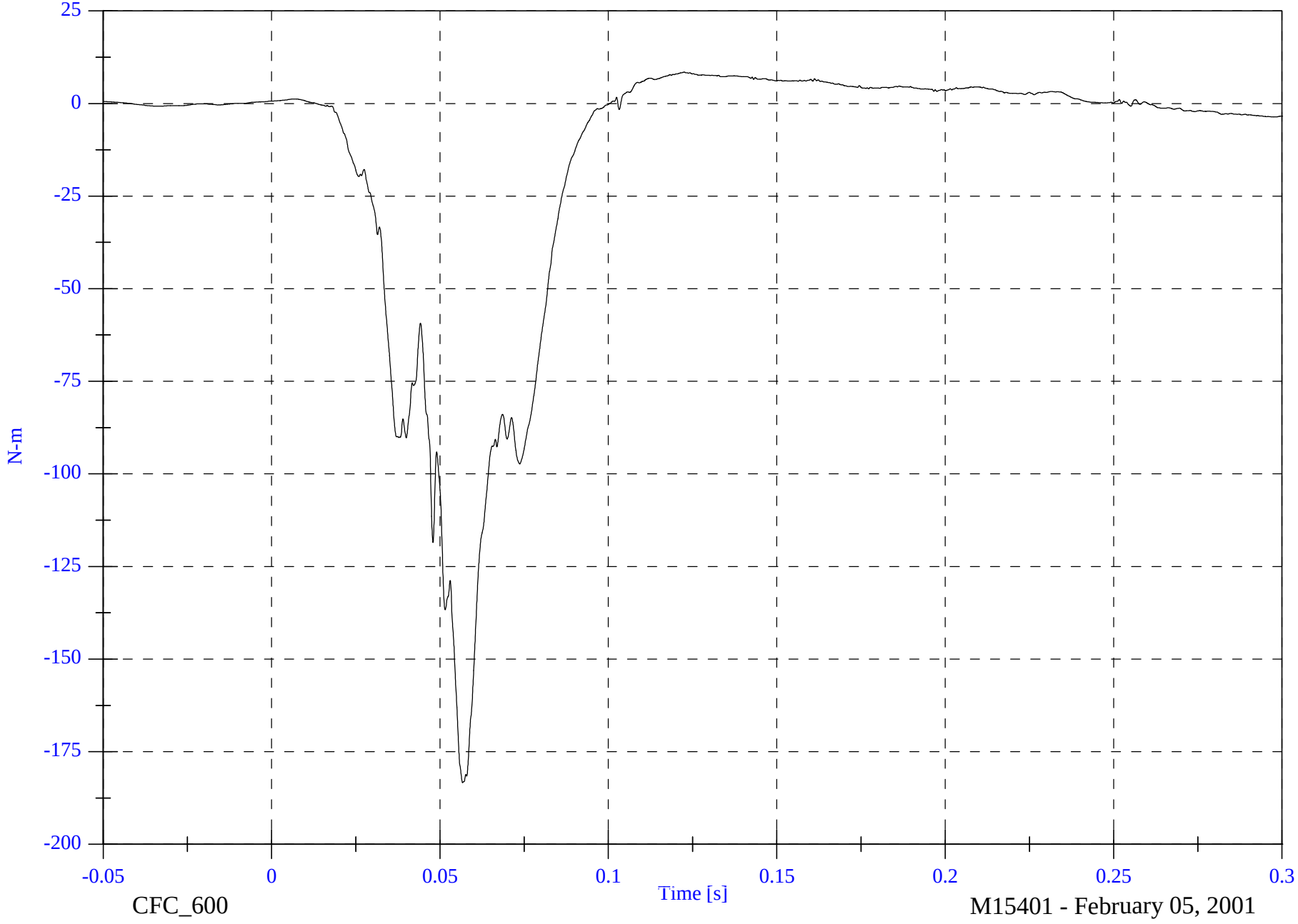
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P2 Left Upper Tibia My

Max: 8.5 [N-m] at 0.122 [s]

Min: -183.4 [N-m] at 0.057 [s]



CFC_600

M15401 - February 05, 2001

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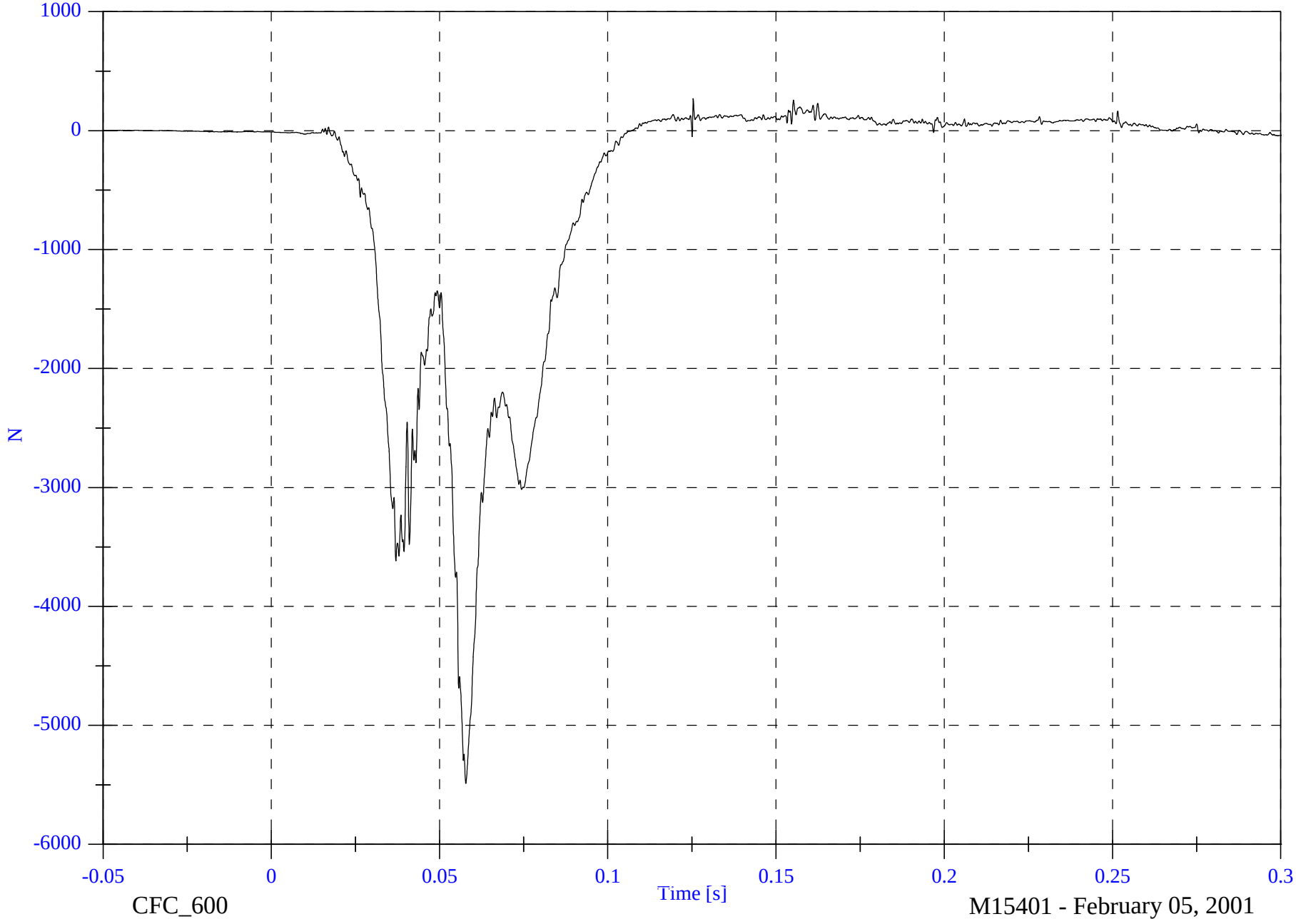
NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P2 Left Lower Tibia Fz

Max: 269.3 [N] at 0.125 [s]

Min: -5489.9 [N] at 0.058 [s]



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8602-21

CFC_600

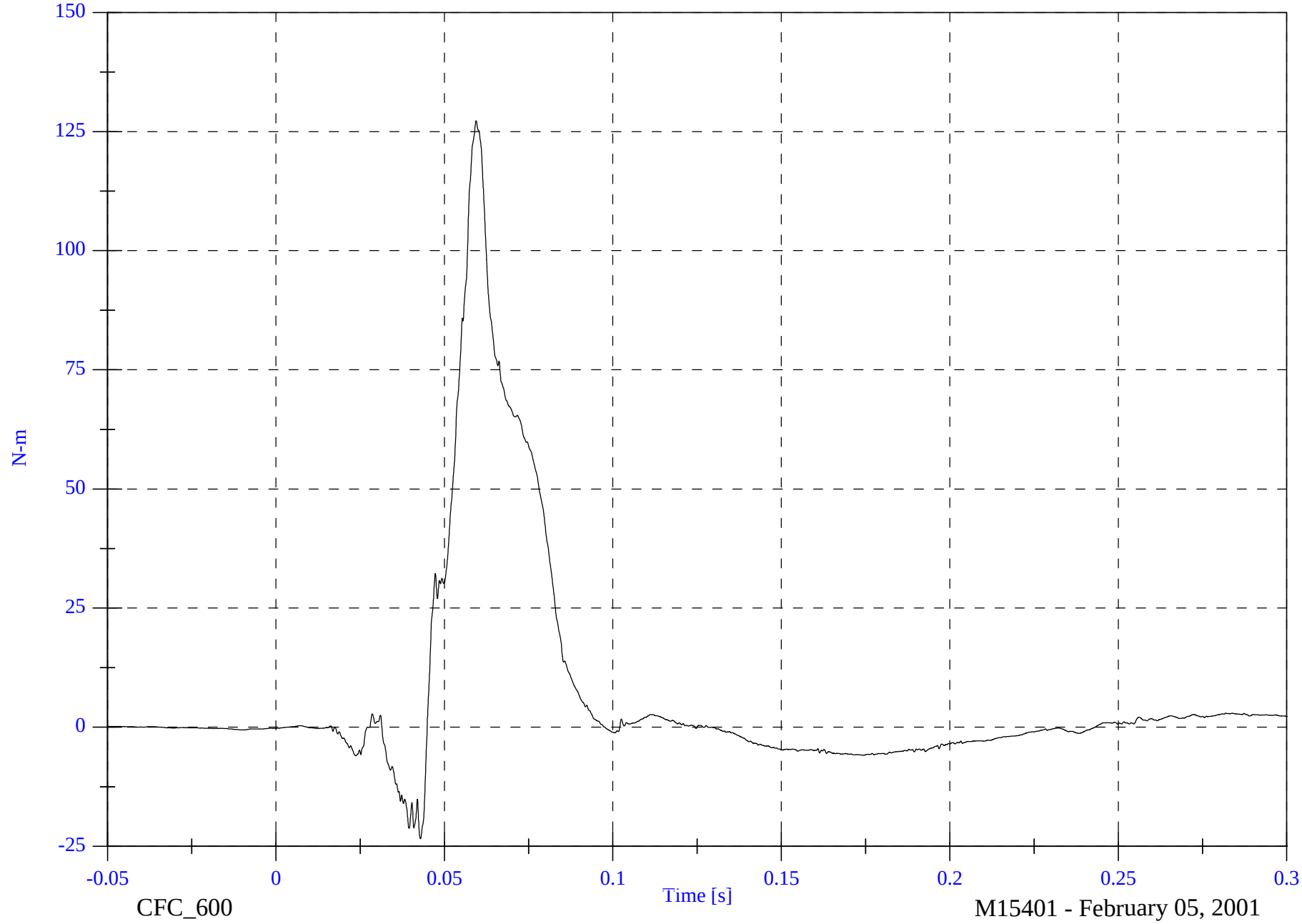
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P2 Left Lower Tibia Mx

Max: 127.3 [N-m] at 0.059 [s]

Min: -23.4 [N-m] at 0.043 [s]



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CFC_600

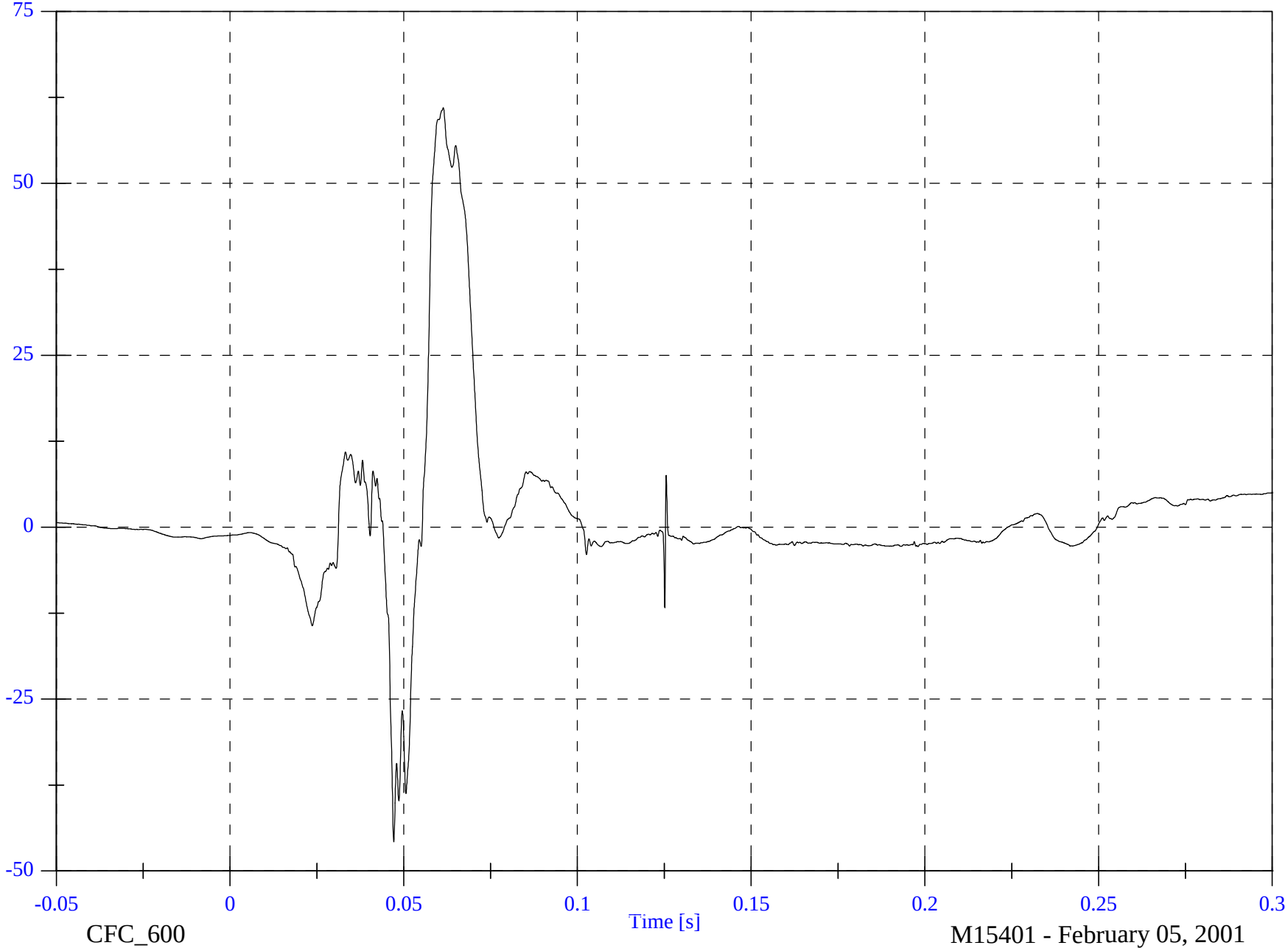
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P2 Left Lower Tibia My

Max: 61.0 [N-m] at 0.061 [s]

Min: -45.8 [N-m] at 0.047 [s]



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CFC_600

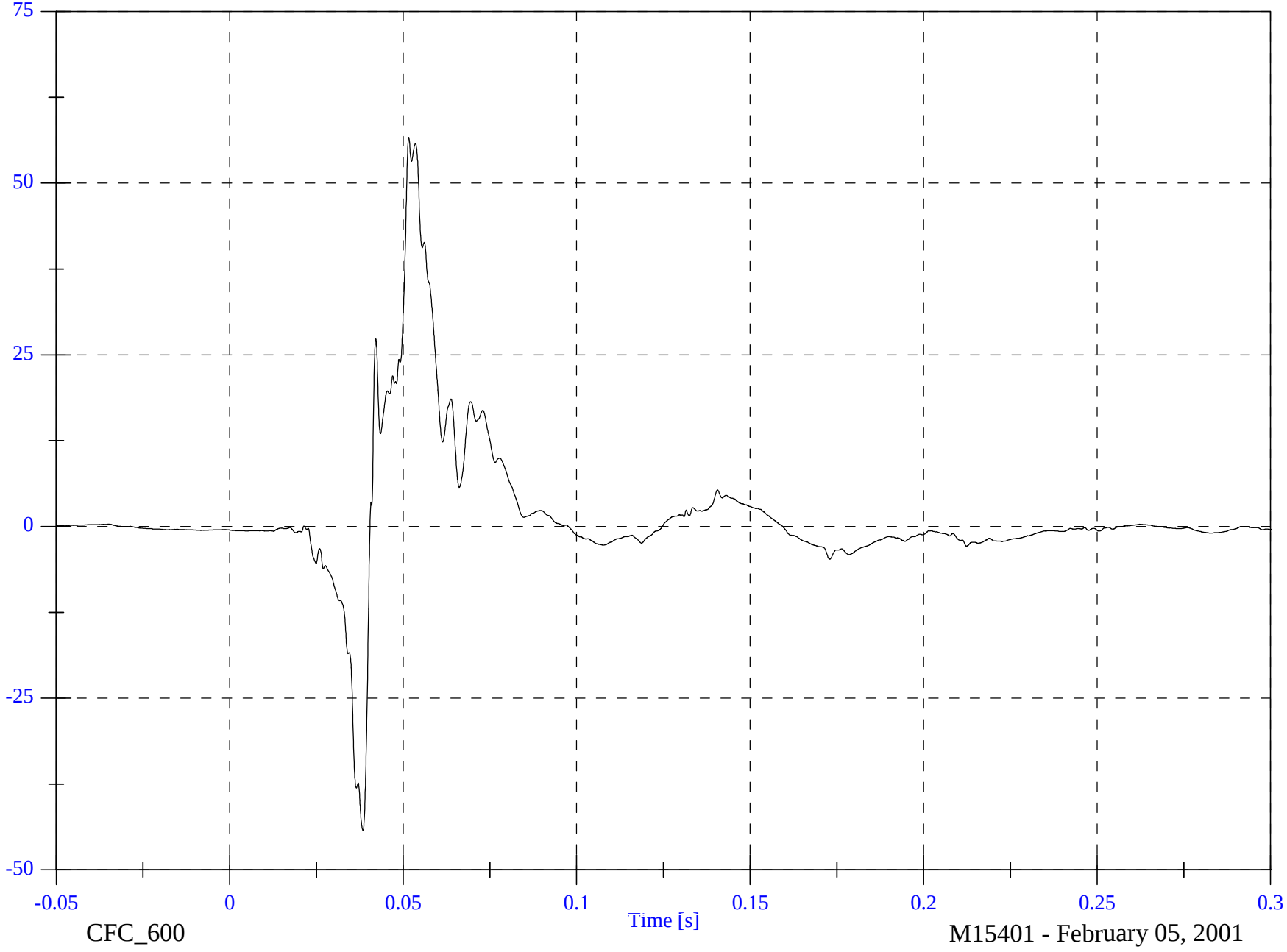
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P2 Right Upper Tibia Mx

Max: 56.7 [N-m] at 0.052 [s]

Min: -44.3 [N-m] at 0.038 [s]



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8602-21

CFC_600

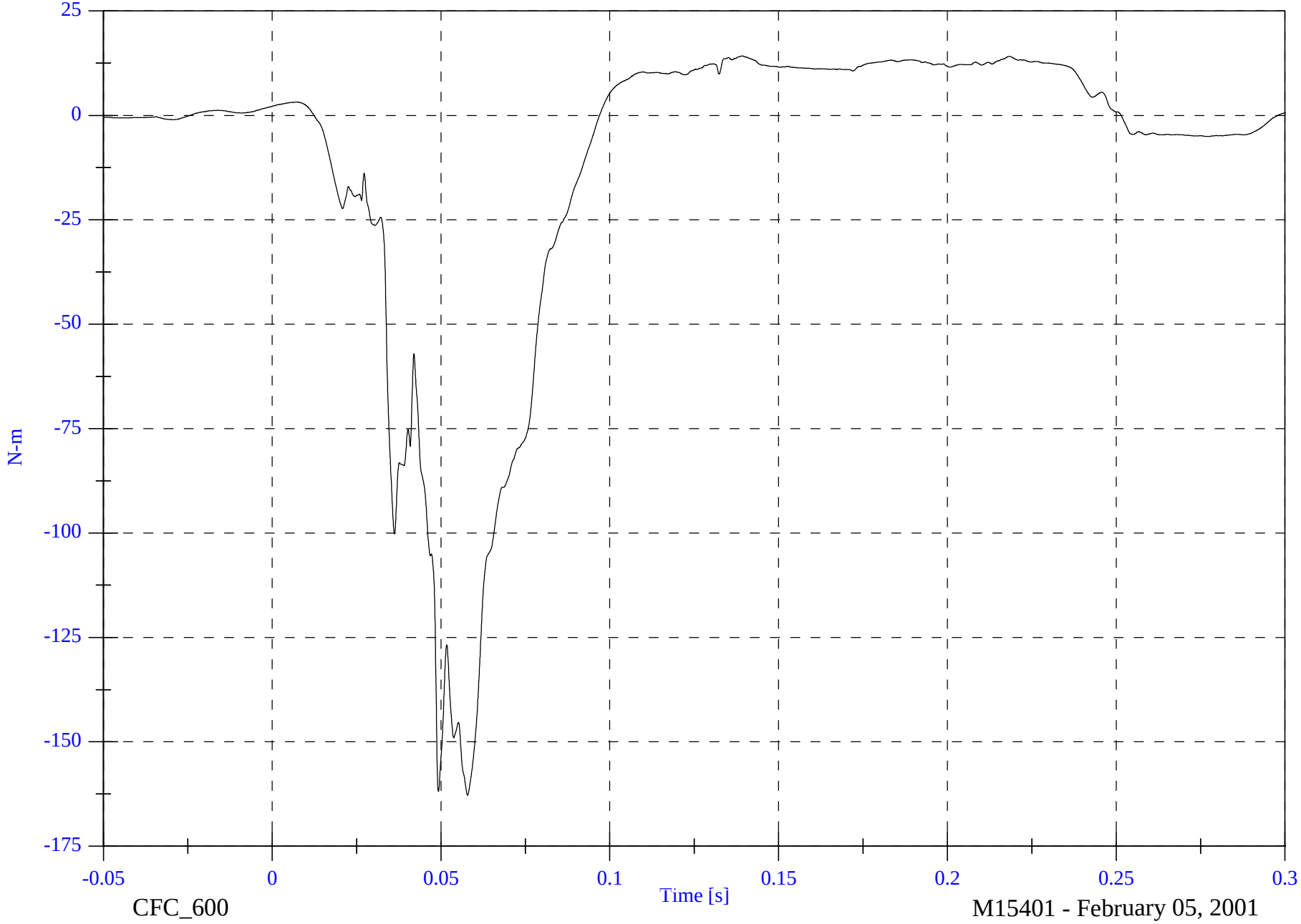
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P2 Right Upper Tibia My

Max: 14.2 [N-m] at 0.139 [s]

Min: -162.8 [N-m] at 0.058 [s]



CFC_600

M15401 - February 05, 2001

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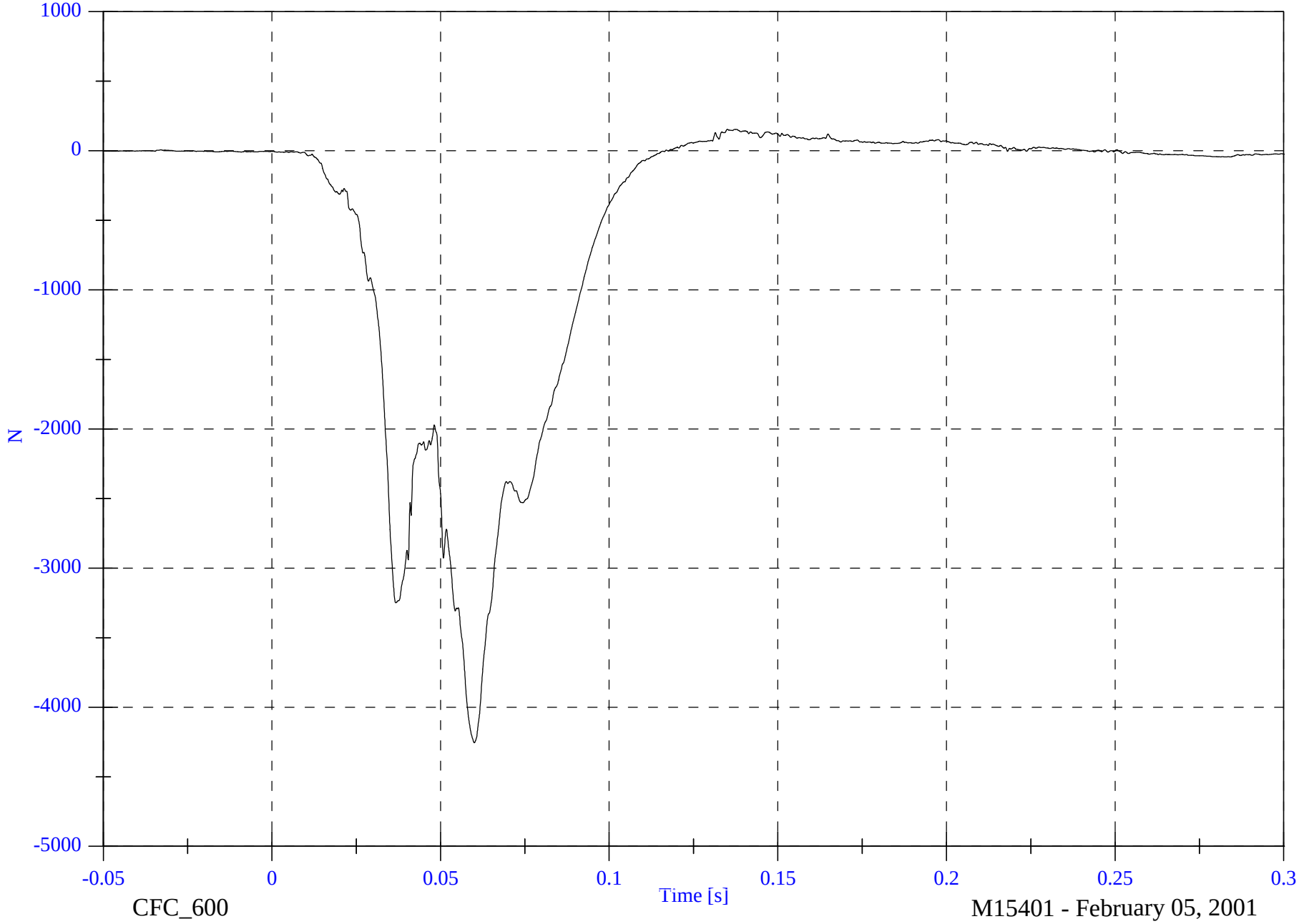
8602-21

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P2 Right Lower Tibia Fz

Max: 154.6 [N] at 0.138 [s]

Min: -4256.0 [N] at 0.060 [s]



CFC_600

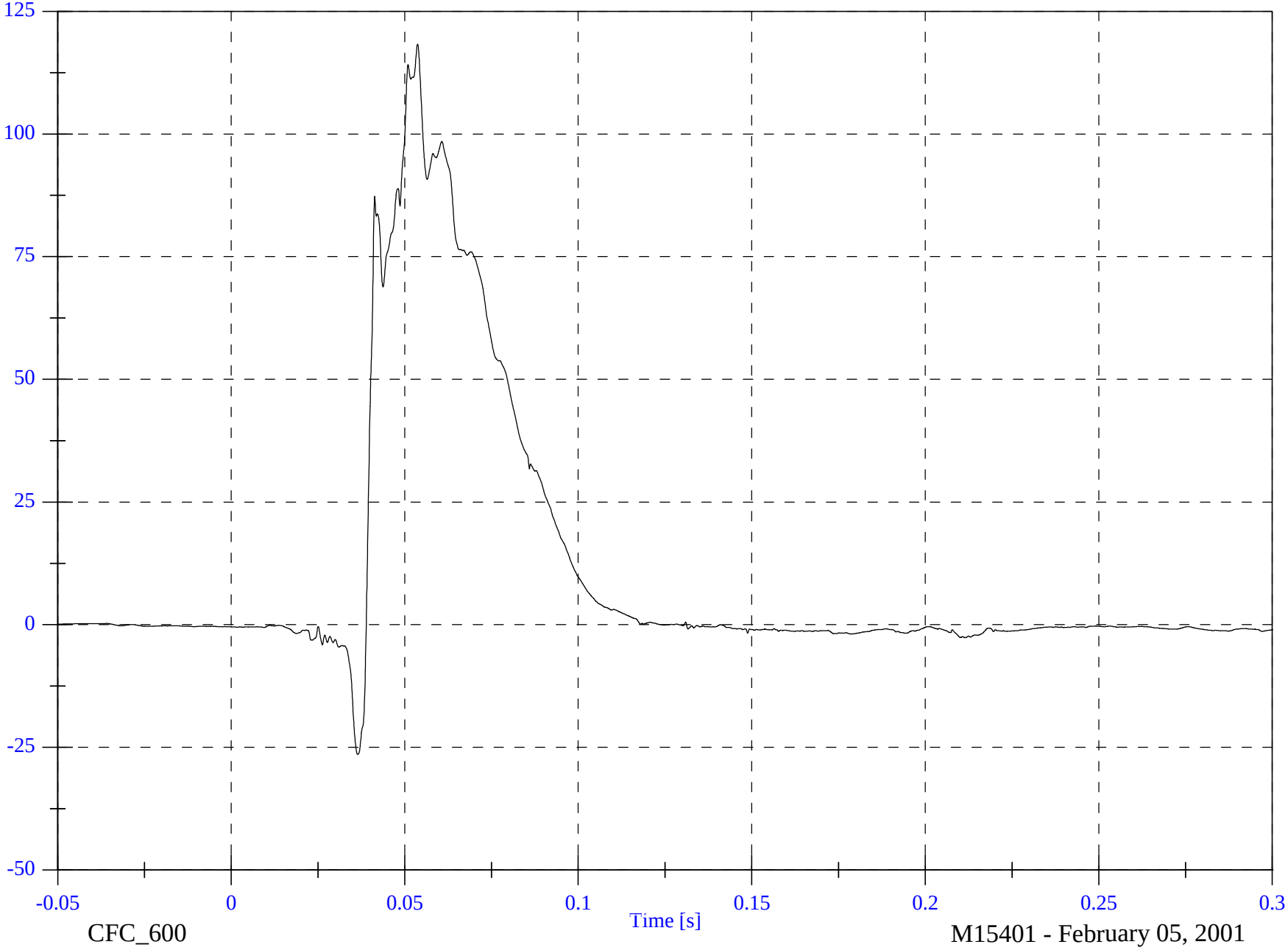
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P2 Right Lower Tibia Mx

Max: 118.3 [N-m] at 0.054 [s]

Min: -26.5 [N-m] at 0.036 [s]



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8602-21

CFC_600

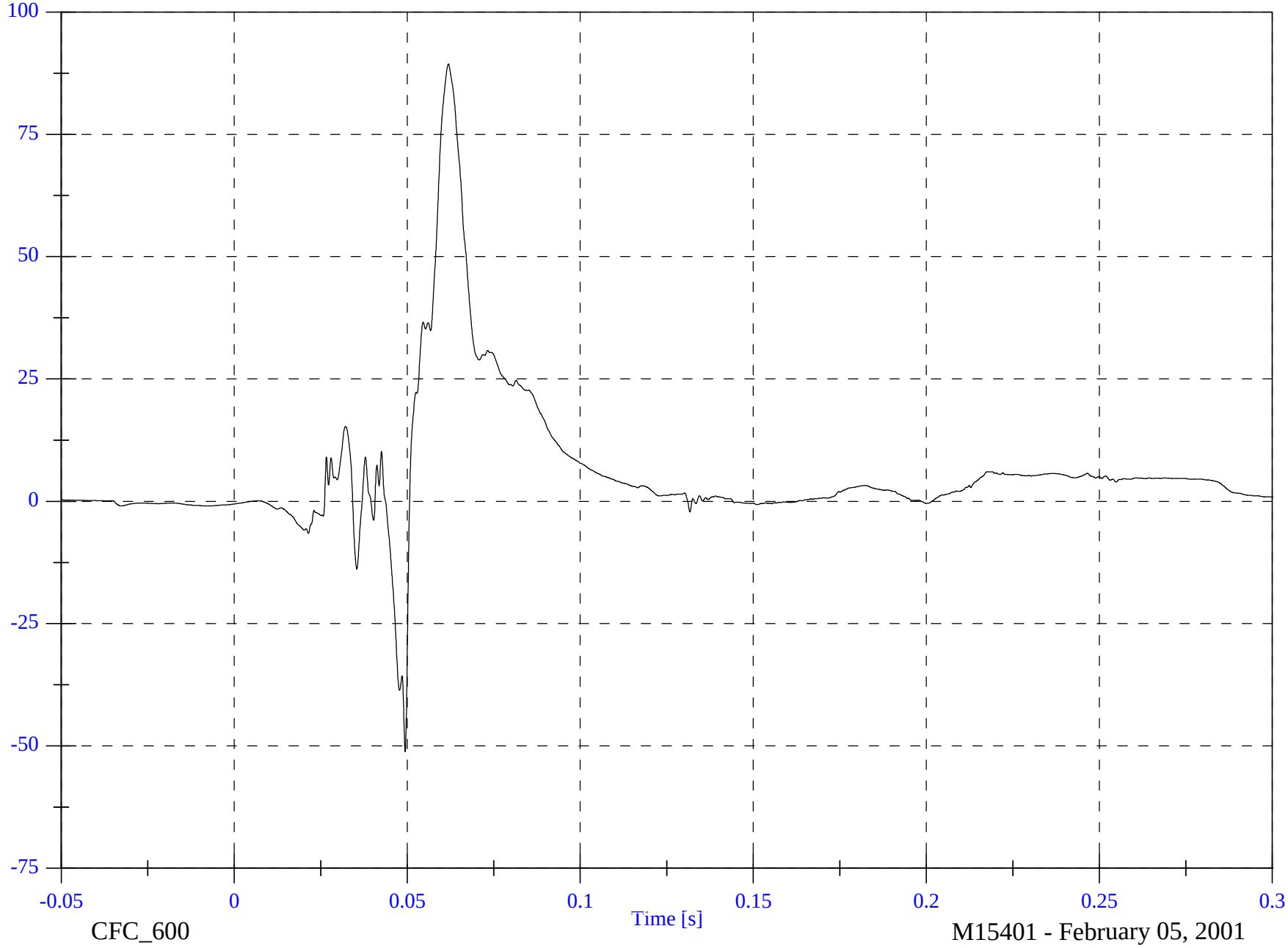
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P2 Right Lower Tibia My

Max: 89.4 [N-m] at 0.062 [s]

Min: -51.2 [N-m] at 0.049 [s]



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8602-21

CFC_600

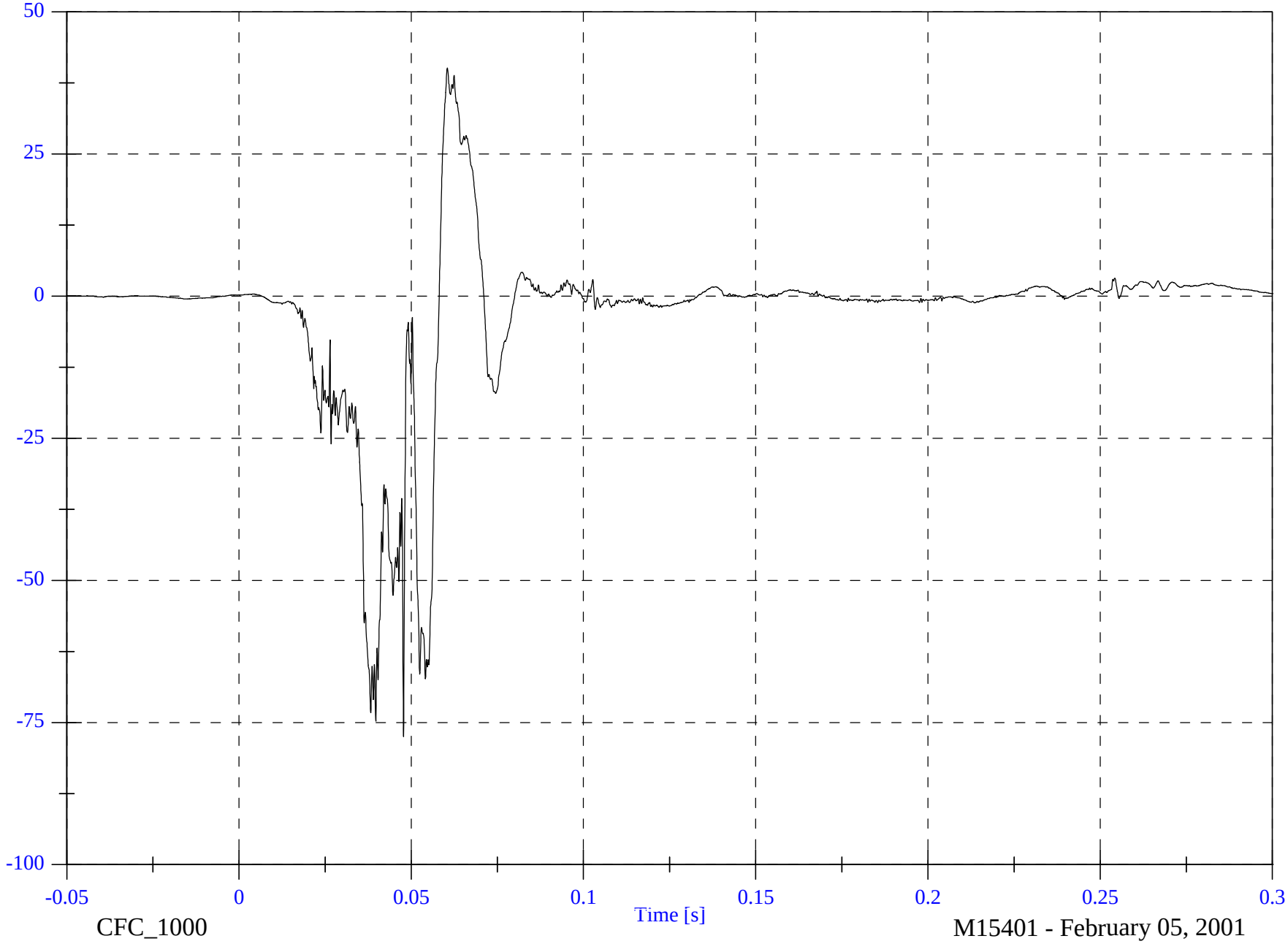
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P2 Left Foot Aft x

Max: 40.1 [g] at 0.060 [s]

Min: -77.5 [g] at 0.048 [s]



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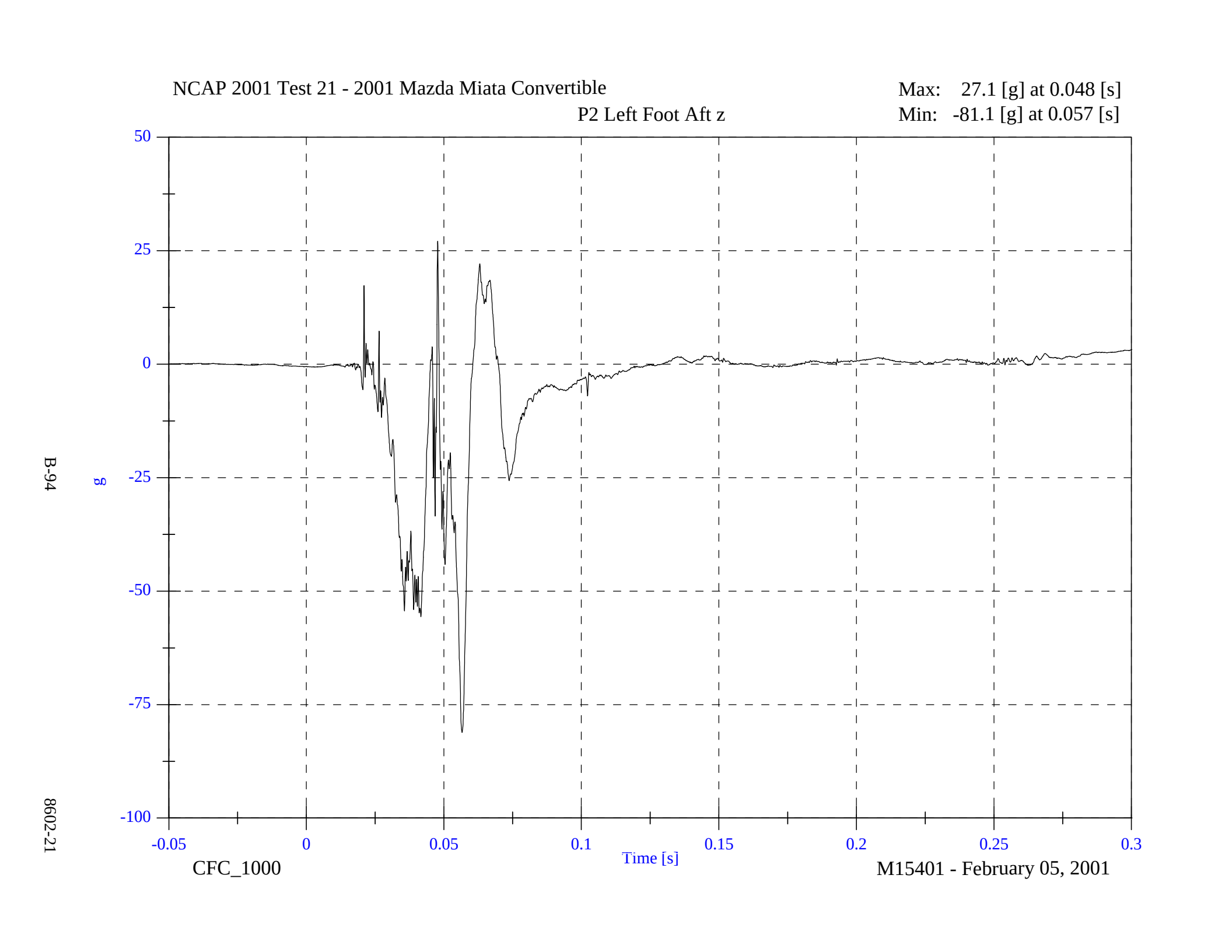
8602-21

CFC_1000

M15401 - February 05, 2001


NCAP 2001 Test 21 - 2001 Mazda Miata Convertible
P2 Left Foot Aft z
Max: 27.1 [g] at 0.048 [s]
Min: -81.1 [g] at 0.057 [s]
50
25
0
-25
-50
-75
-100
g
-0.05
0
0.05
0.1
0.15
0.2
0.25
0.3
Time [s]
CFC_1000
M15401 - February 05, 2001
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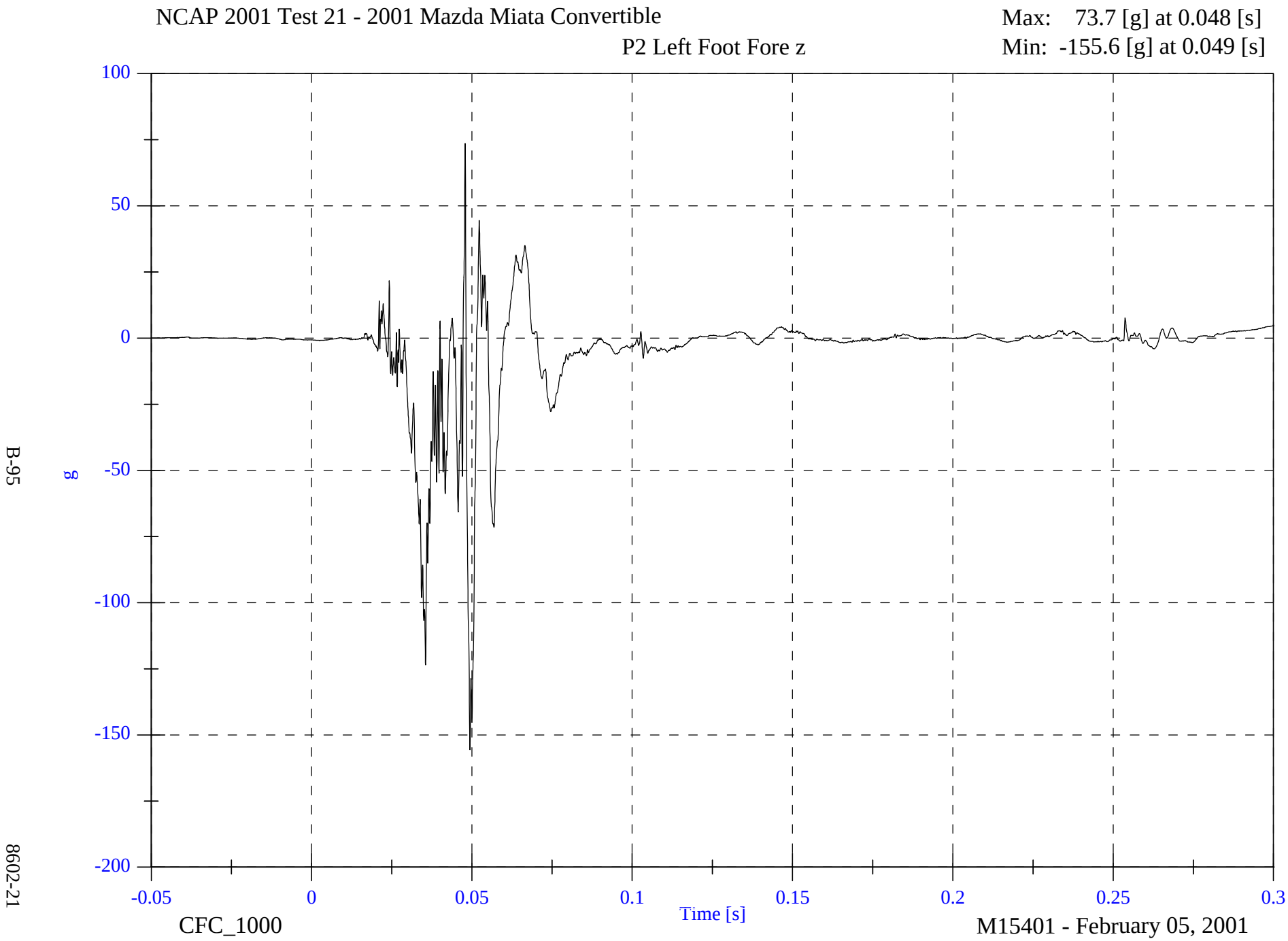
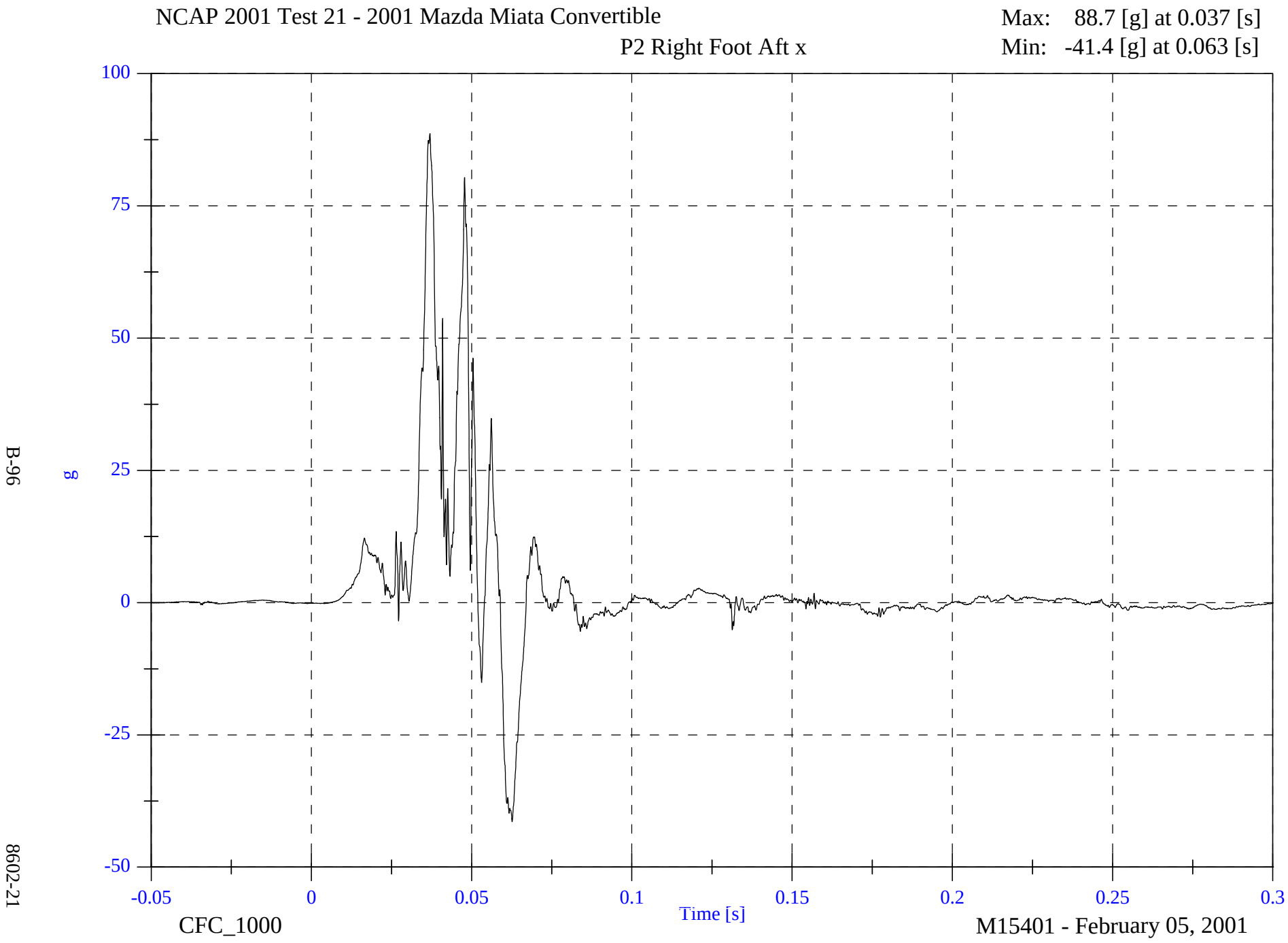
8602-21


NCAP 2001 Test 21 - 2001 Mazda Miata Convertible
P2 Left Foot Fore z
Max: 73.7 [g] at 0.048 [s]
Min: -155.6 [g] at 0.049 [s]
100
50
0
-50
-100
-150
-200
g
-0.05
0
0.05
0.1
0.15
0.2
0.25
0.3
Time [s]
CFC_1000
M15401 - February 05, 2001

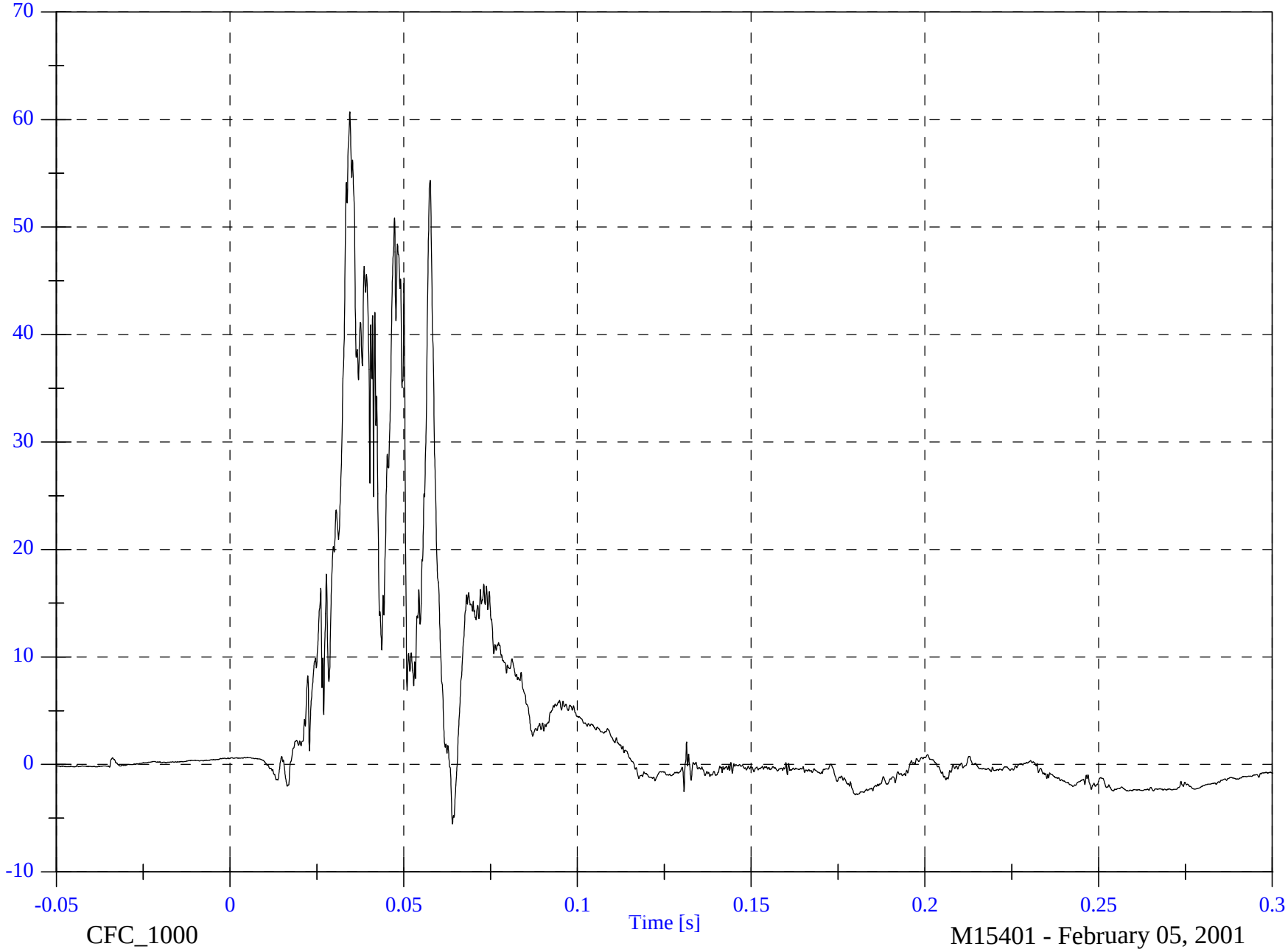

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible
P2 Right Foot Aft x
Max: 88.7 [g] at 0.037 [s]
Min: -41.4 [g] at 0.063 [s]
100
75
50
25
0
-25
-50
g
-0.05
0
0.05
0.1
0.15
0.2
0.25
0.3
Time [s]
CFC_1000
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P2 Right Foot Aft z

Max: 60.7 [g] at 0.034 [s]

Min: -5.5 [g] at 0.064 [s]



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8602-21

CFC_1000

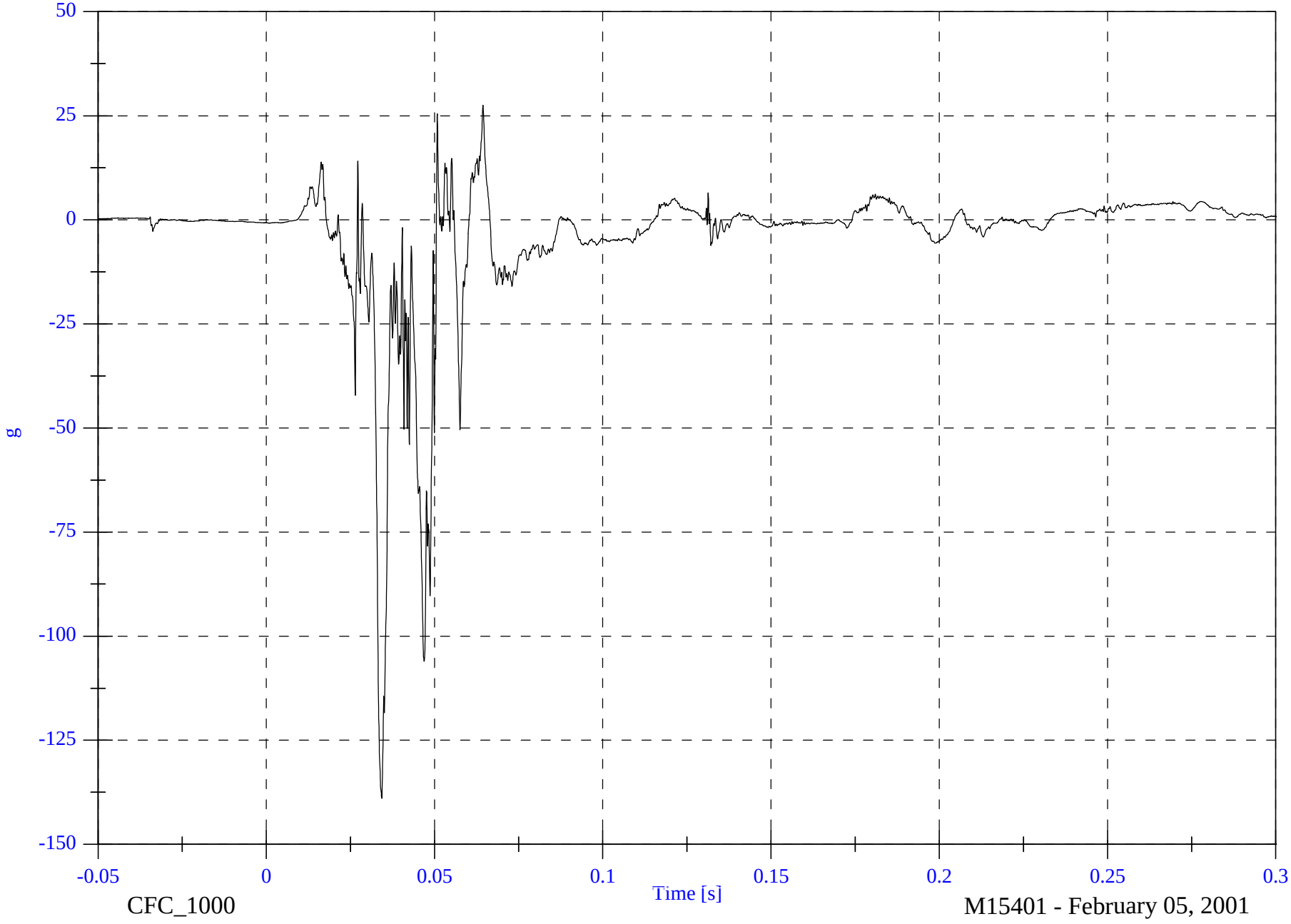
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P2 Right Foot Fore z

Max: 27.5 [g] at 0.064 [s]

Min: -139.0 [g] at 0.034 [s]



B-98

8602-21

CFC_1000

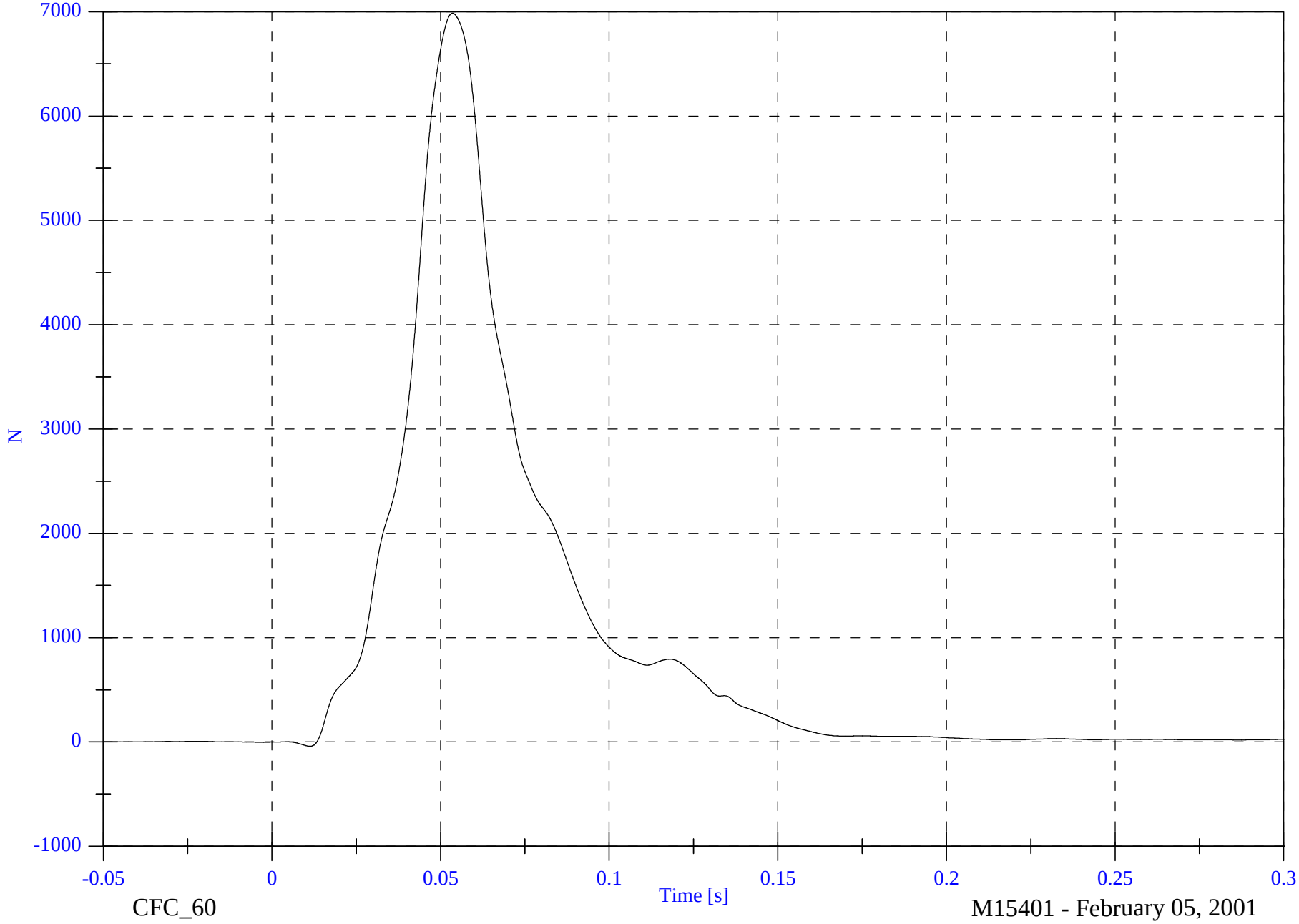
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

P2 Lap Belt Force

Max: 6985.5 [N] at 0.054 [s]

Min: -41.6 [N] at 0.011 [s]



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8602-21

CFC_60

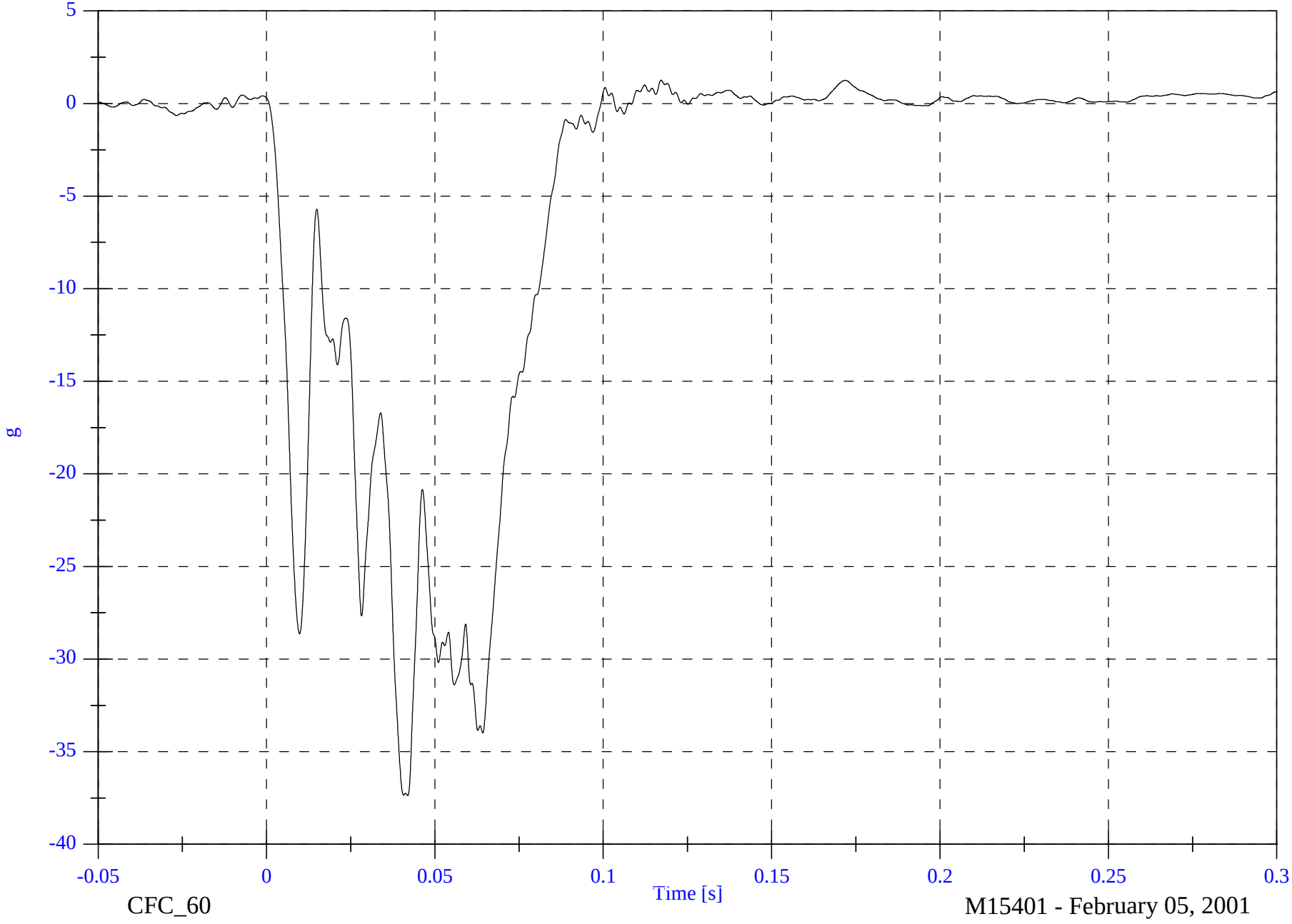
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

Left Rear #1x

Max: 1.3 [g] at 0.117 [s]

Min: -37.4 [g] at 0.042 [s]



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8602-21

CFC_60

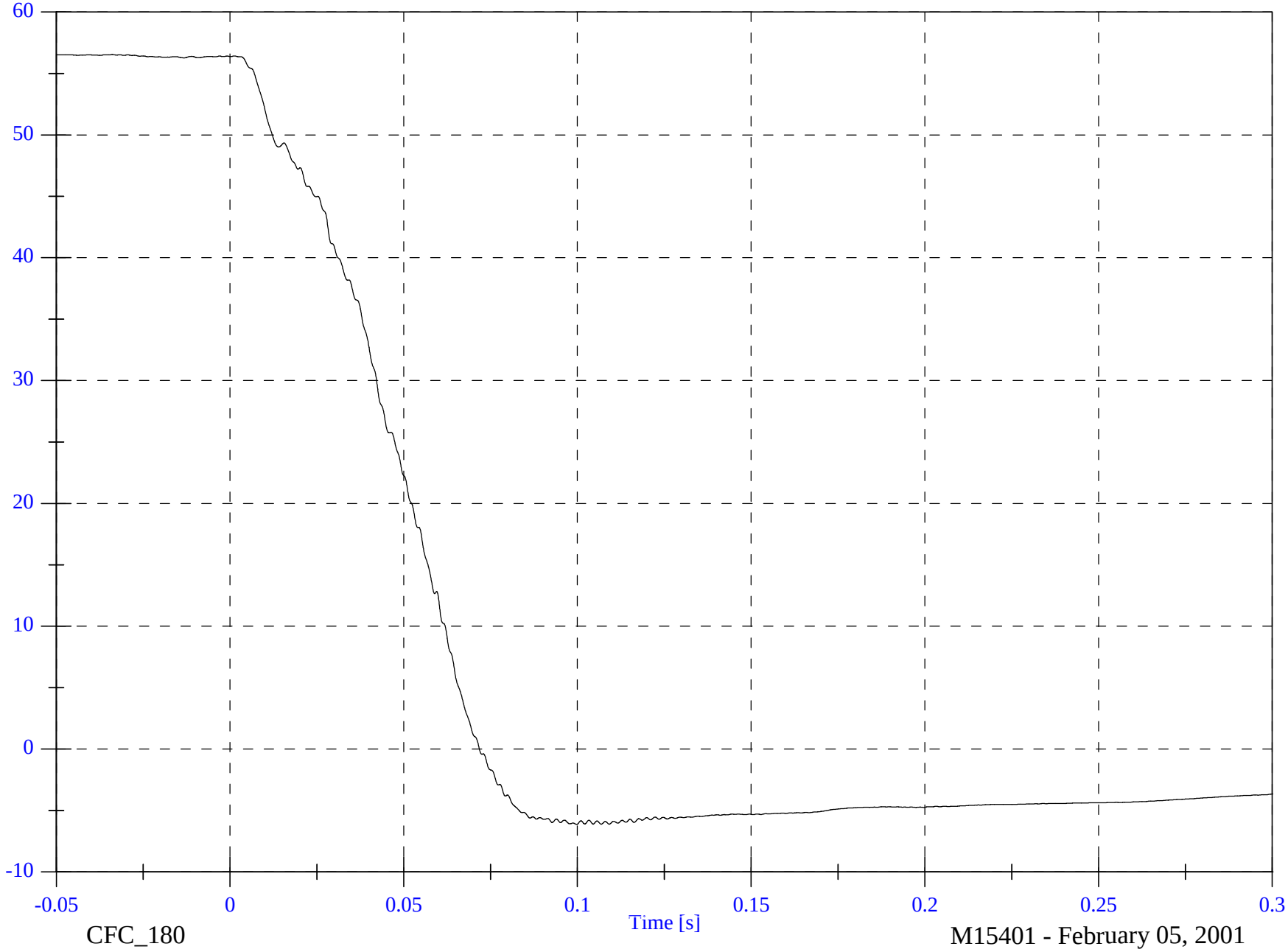
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

Left Rear #1x Velocity

Max: 56.5 [kph] at -0.034 [s]

Min: -6.1 [kph] at 0.100 [s]



B-101

8602-21

CFC_180

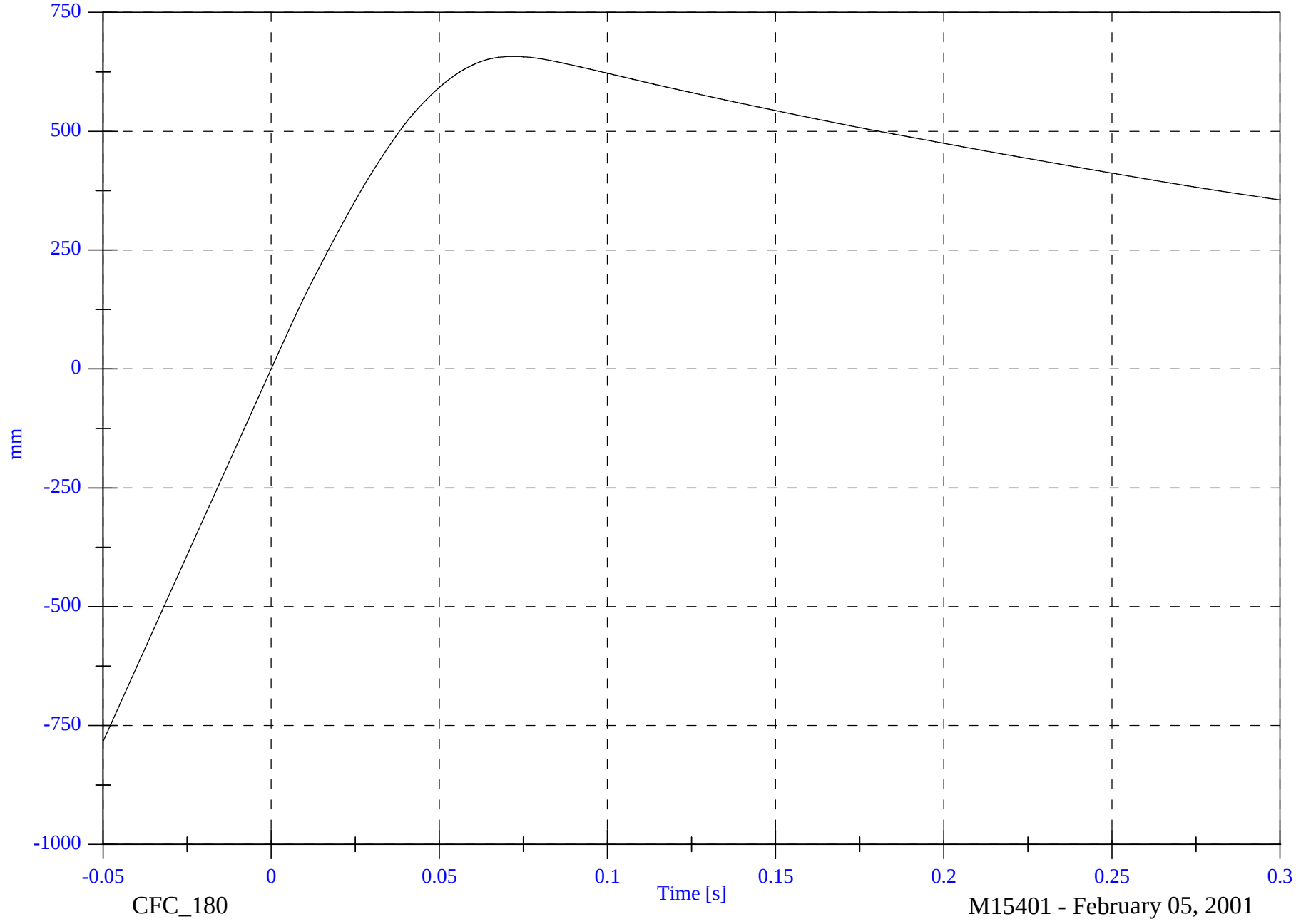
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

Left Rear #1x Displacement

Max: 657.3 [mm] at 0.072 [s]

Min: -783.7 [mm] at -0.050 [s]



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8602-21

CFC_180

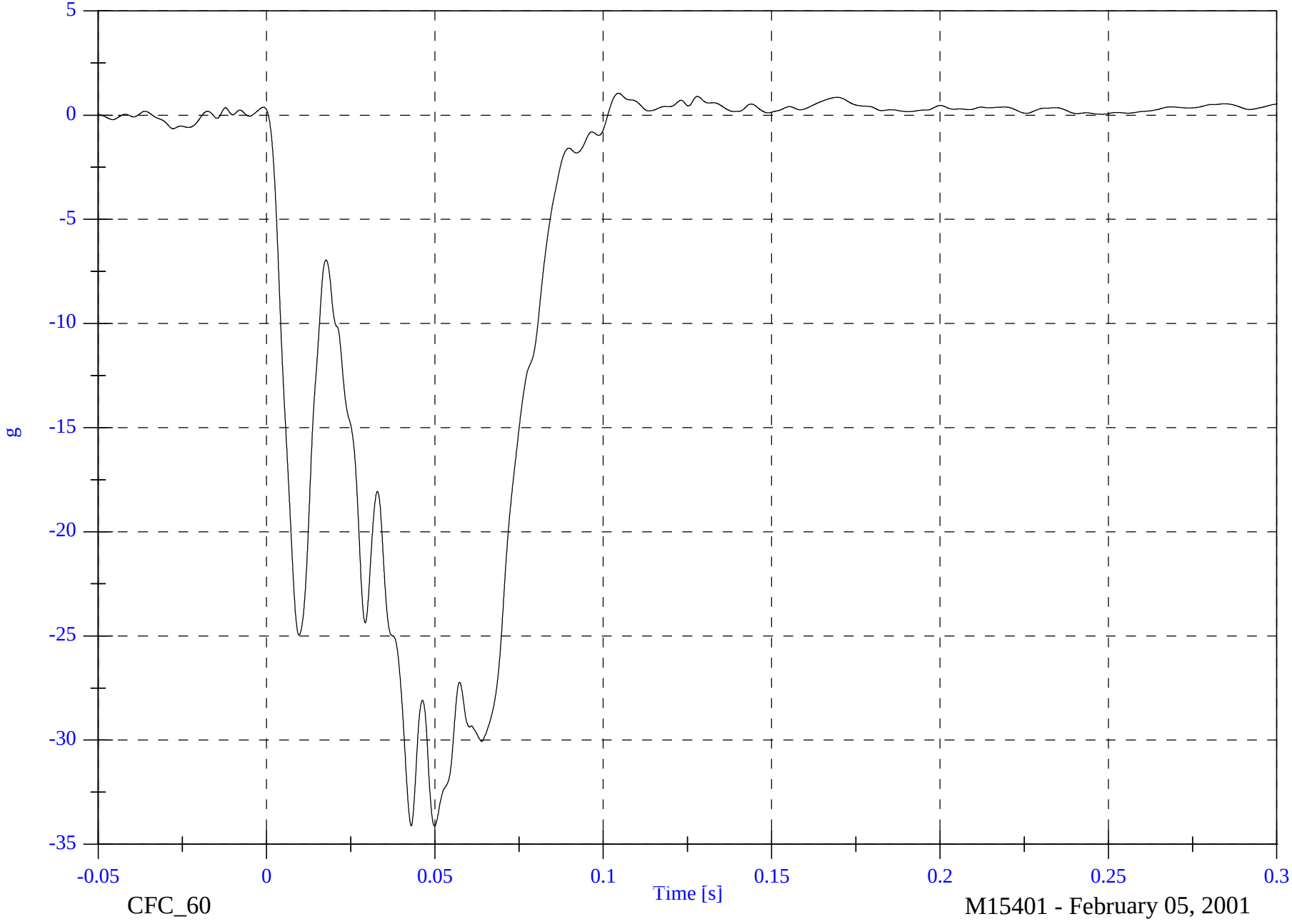
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

Right Rear #2x

Max: 1.1 [g] at 0.105 [s]

Min: -34.1 [g] at 0.043 [s]



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8602-21

CFC_60

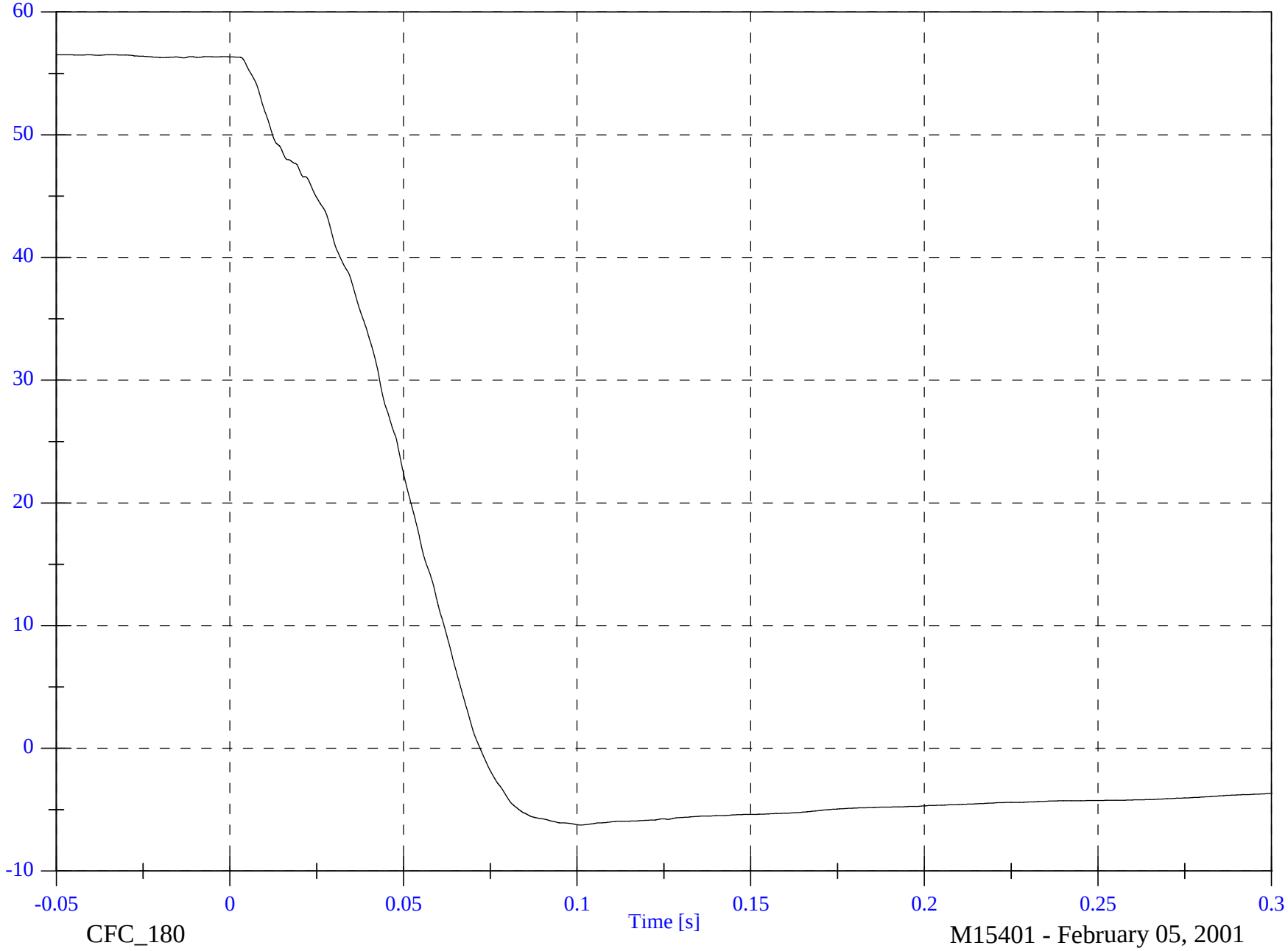
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

Right Rear #2x Velocity

Max: 56.5 [kph] at -0.048 [s]

Min: -6.2 [kph] at 0.101 [s]



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8602-21

CFC_180

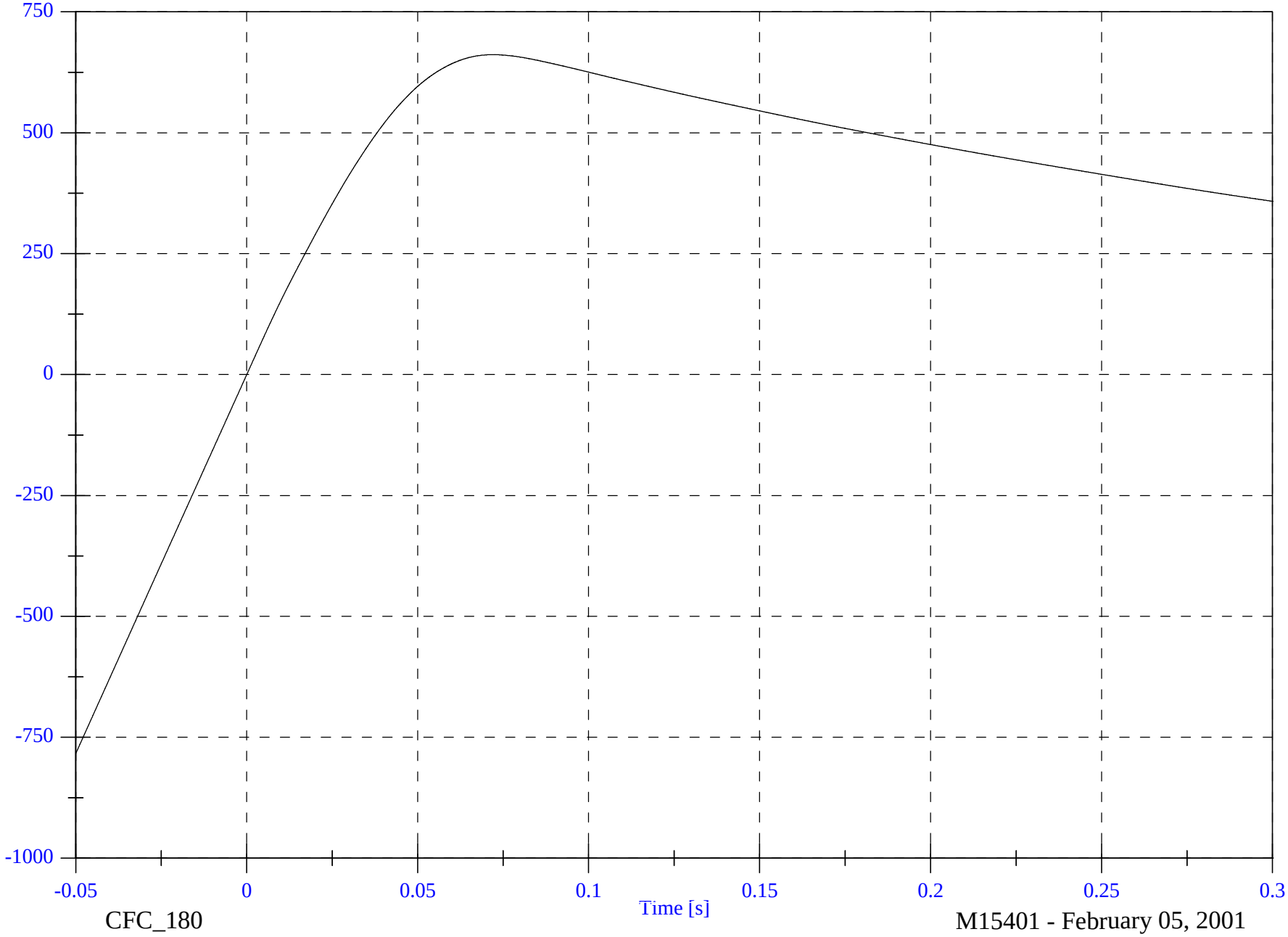
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

Right Rear #2x Displacement

Max: 661.4 [mm] at 0.072 [s]

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



B-105

8602-21

CFC_180

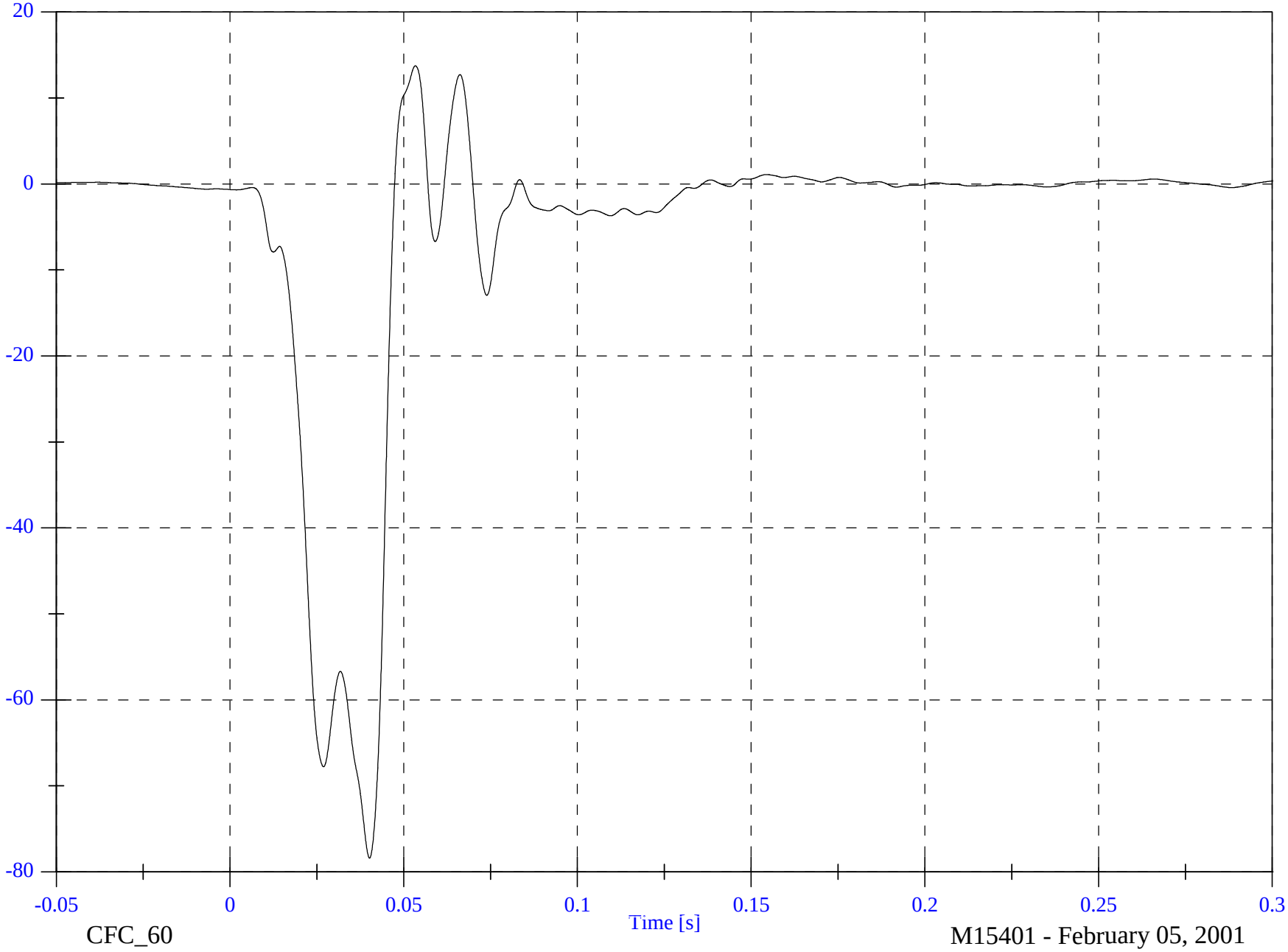
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

Engine Top #3x

Max: 13.7 [g] at 0.053 [s]

Min: -78.4 [g] at 0.040 [s]



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8602-21

CFC_60

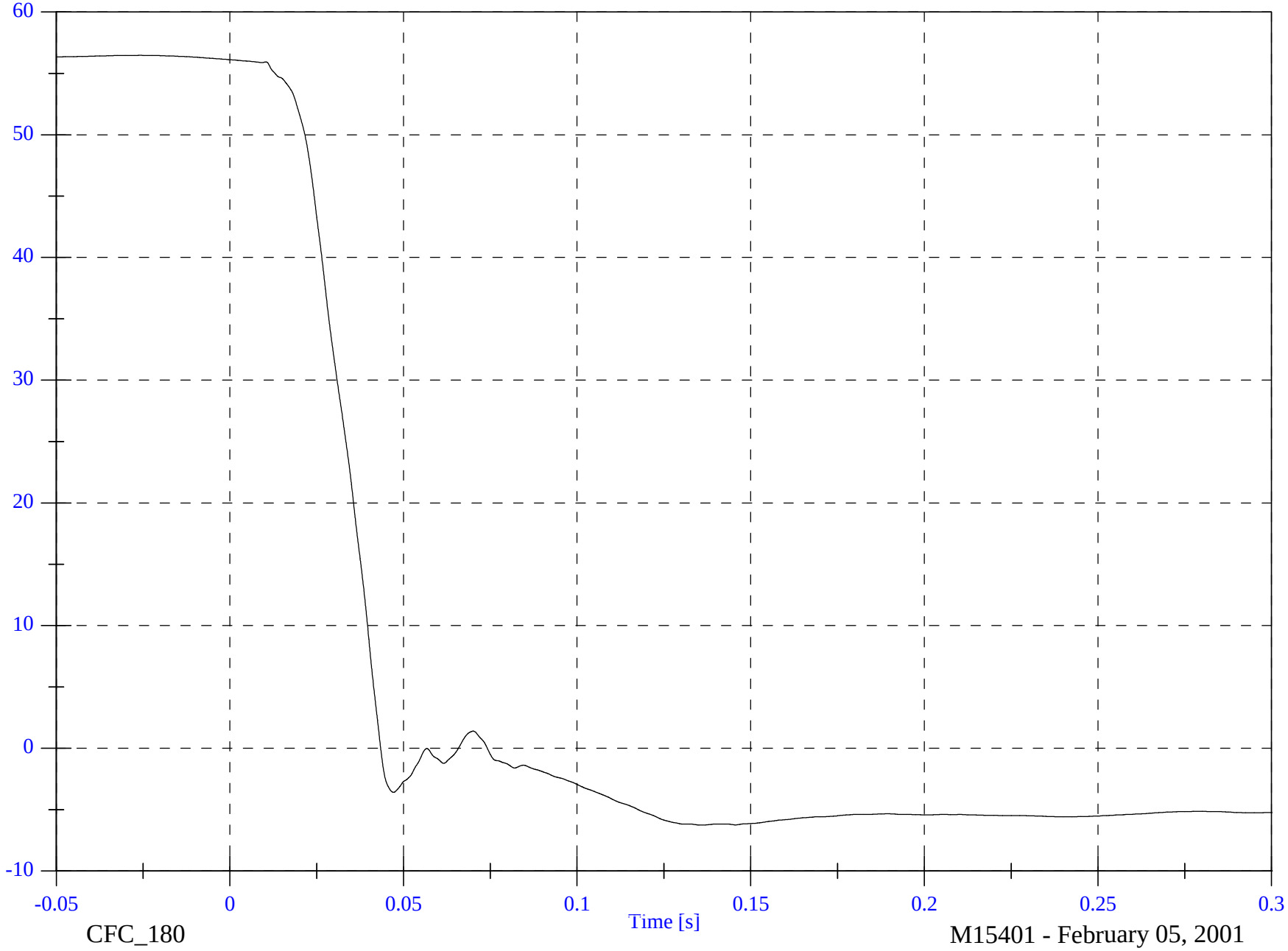
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

Engine Top #3x Velocity

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

Min: -6.3 [kph] at 0.136 [s]



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8602-21

CFC_180

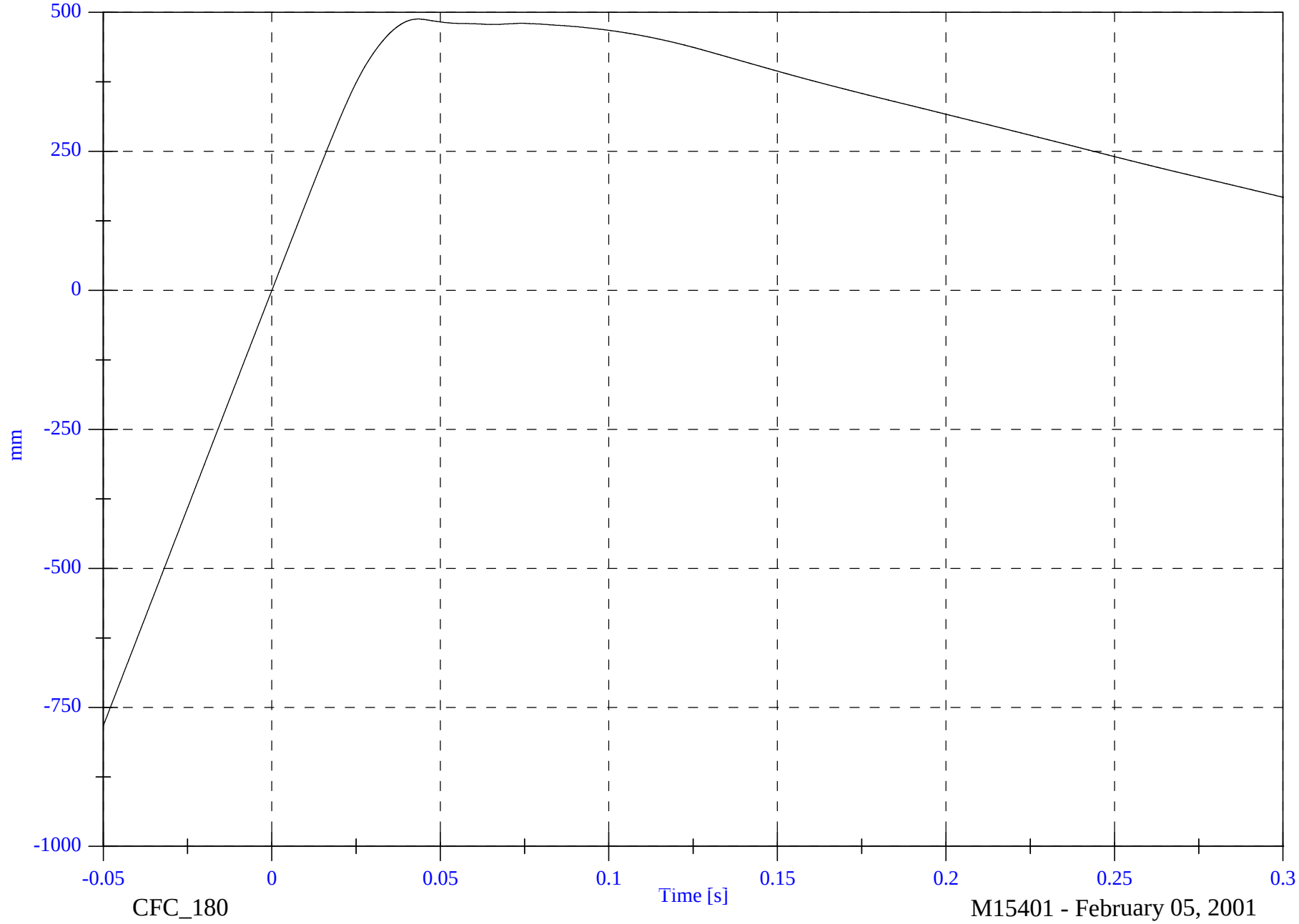
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

Engine Top #3x Displacement

Max: 488.1 [mm] at 0.043 [s]

Min: -783.0 [mm] at -0.050 [s]



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8602-21

CFC_180

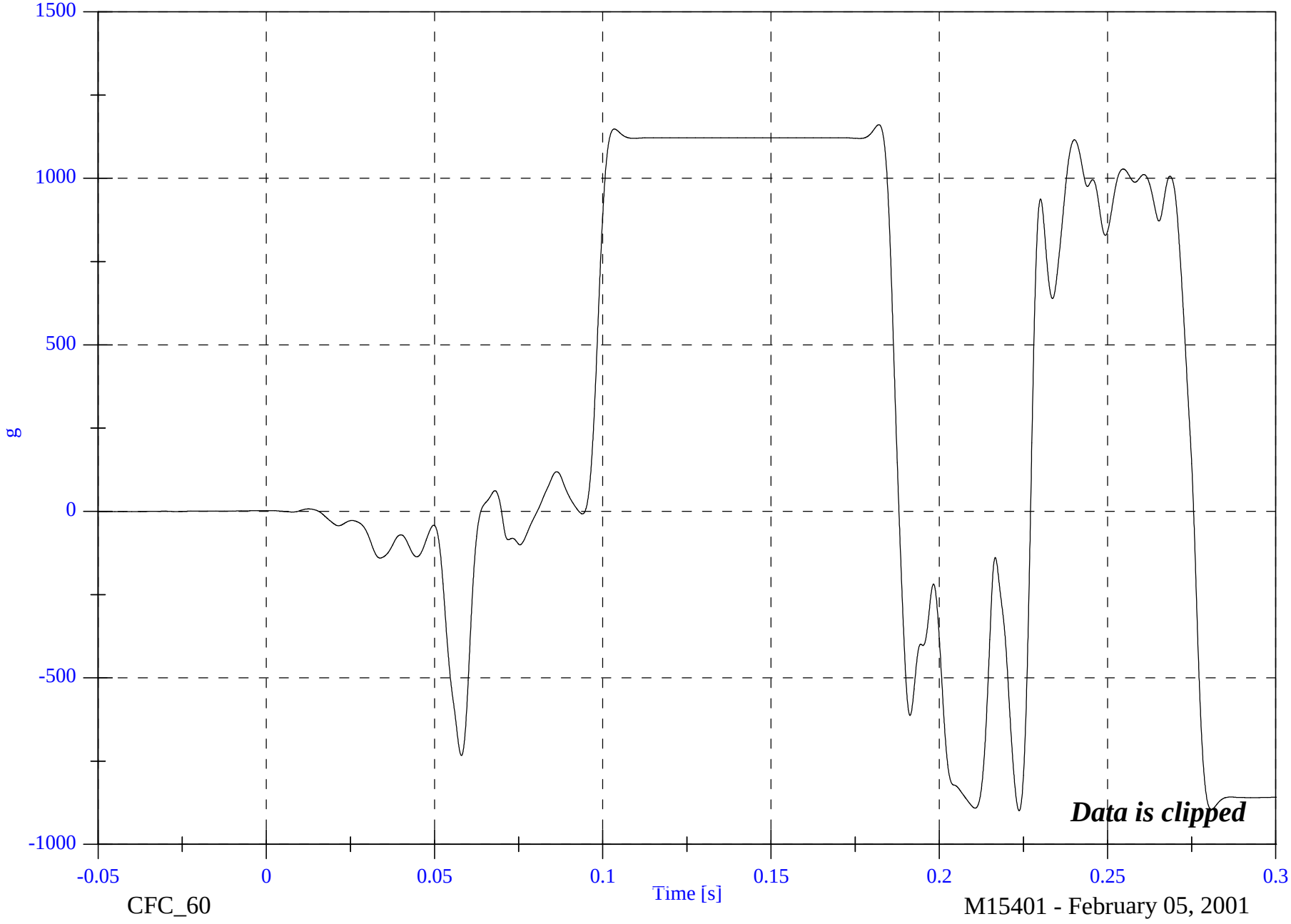
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

Engine Bottom #4x

Max: 1160.7 [g] at 0.182 [s]

Min: -899.4 [g] at 0.224 [s]



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8602-21

CFC_60

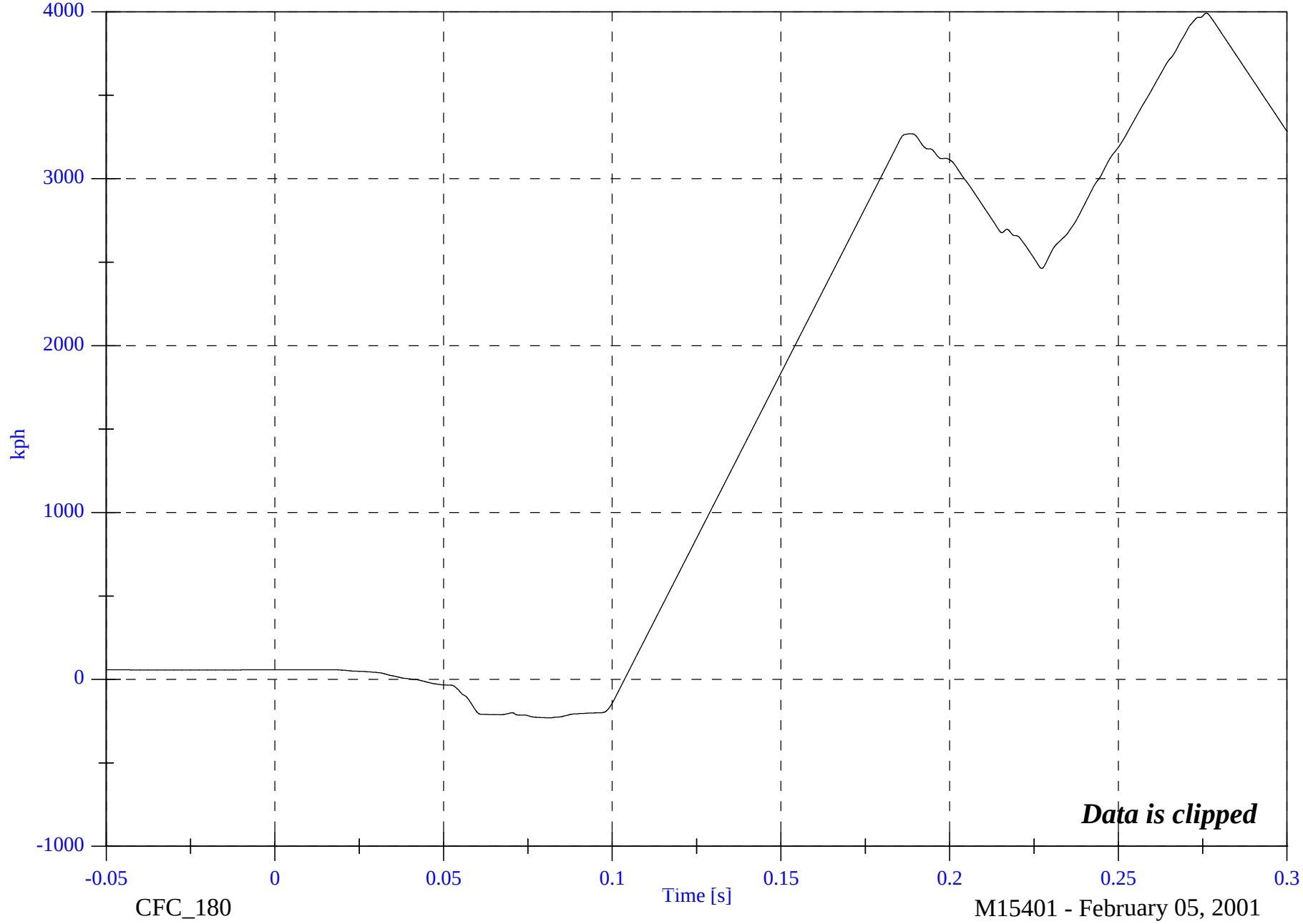
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

Engine Bottom #4x Velocity

Max: 3991.4 [kph] at 0.276 [s]

Min: -230.1 [kph] at 0.081 [s]



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8602-21

CFC_180

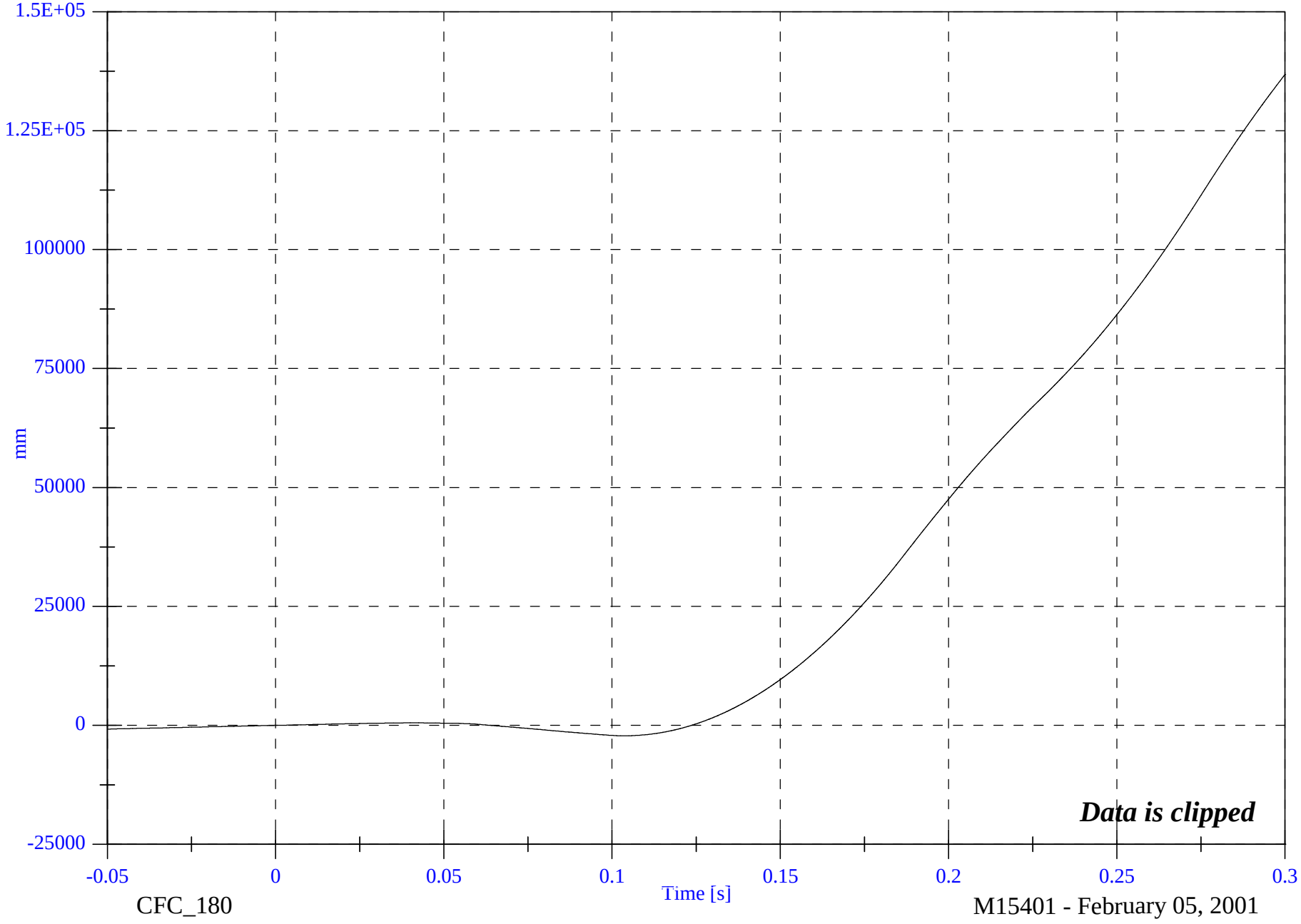
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

Engine Bottom #4x Displacement

Max: 136781.0 [mm] at 0.300 [s]

Min: -2189.9 [mm] at 0.104 [s]



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8602-21

CFC_180

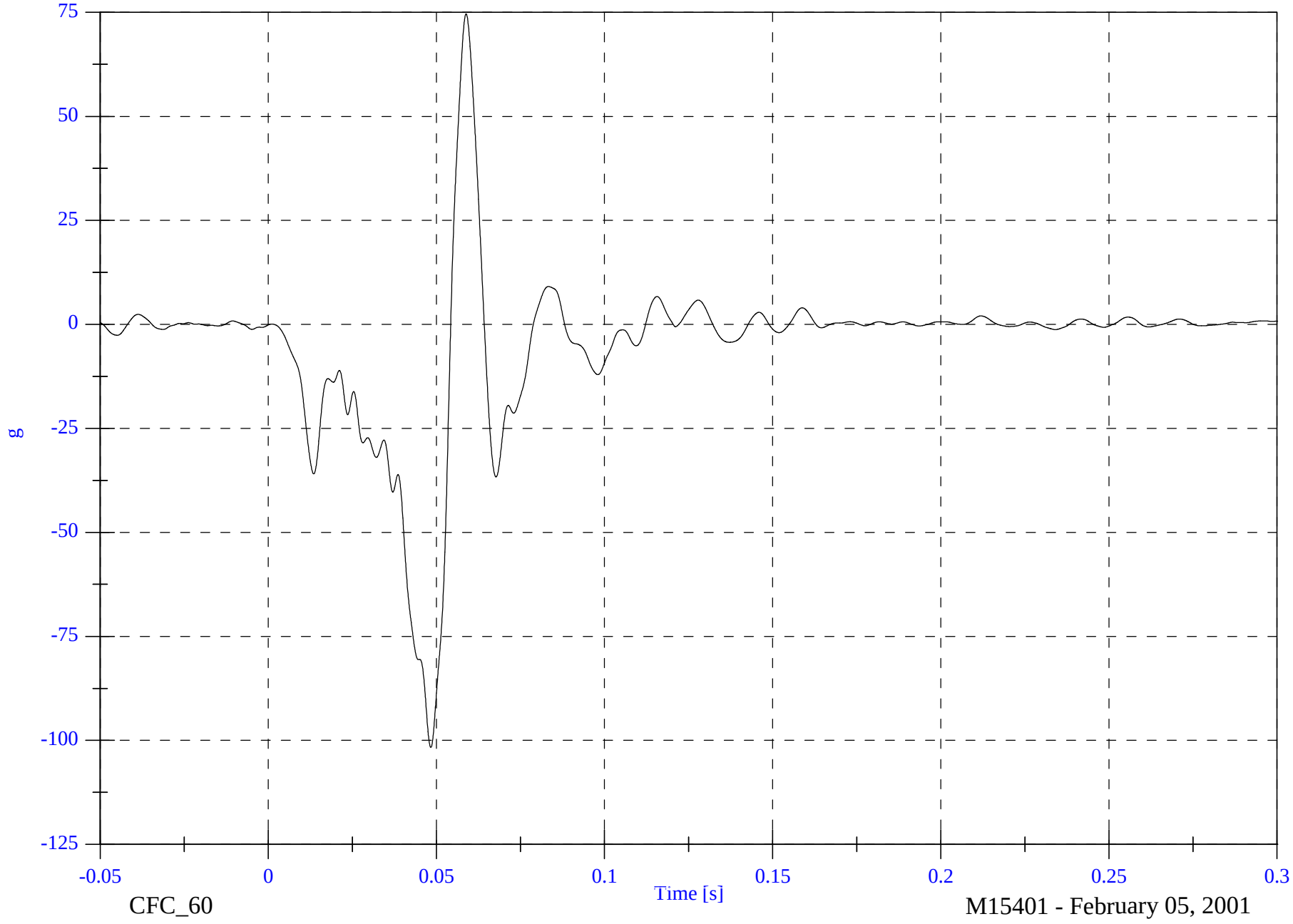
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

Right Caliper #5x

Max: 74.7 [g] at 0.059 [s]

Min: -101.7 [g] at 0.048 [s]



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8602-21

CFC_60

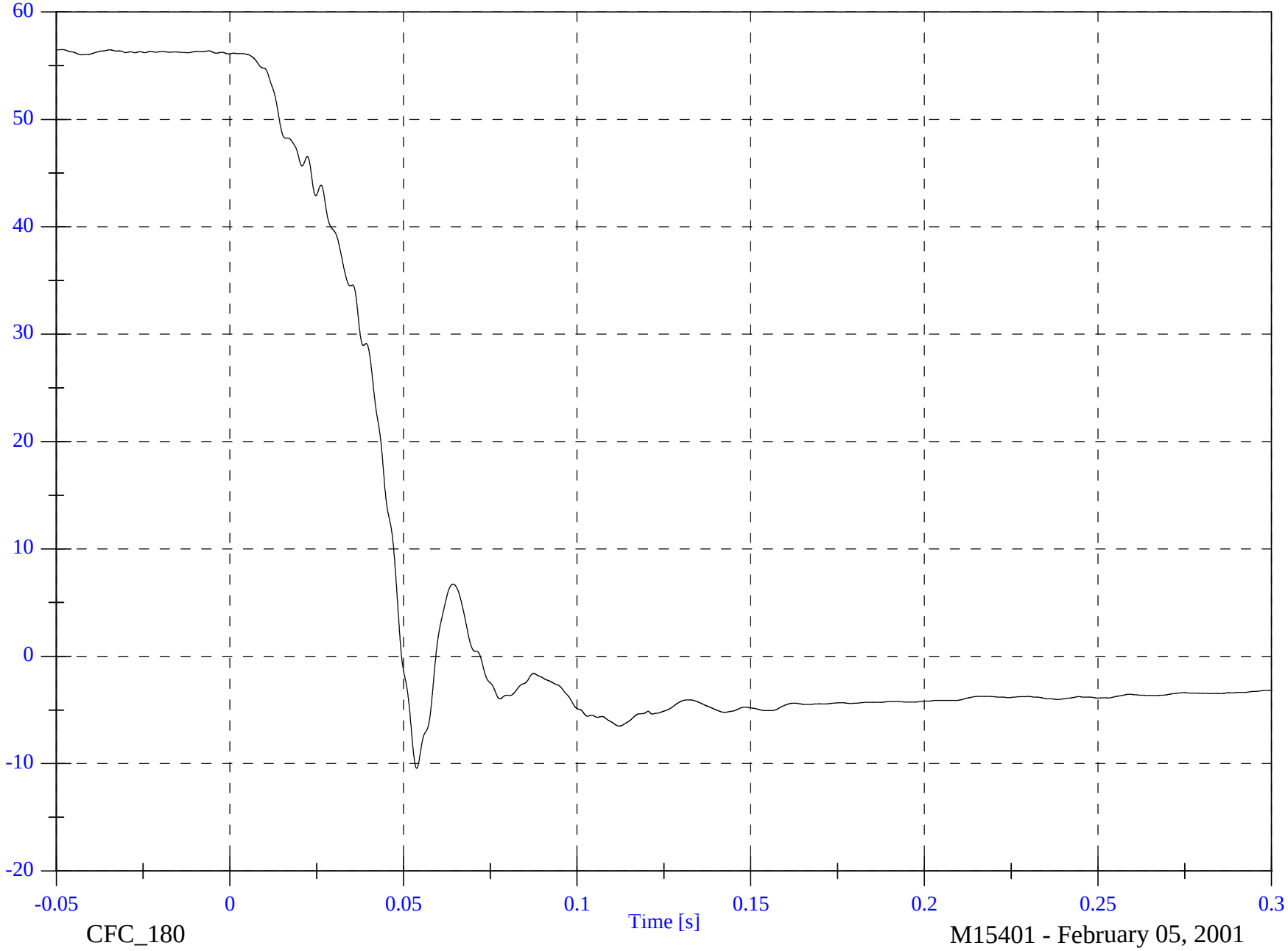
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

Right Caliper #5x Velocity

Max: 56.5 [kph] at -0.048 [s]

Min: -10.4 [kph] at 0.054 [s]



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8602-21

CFC_180

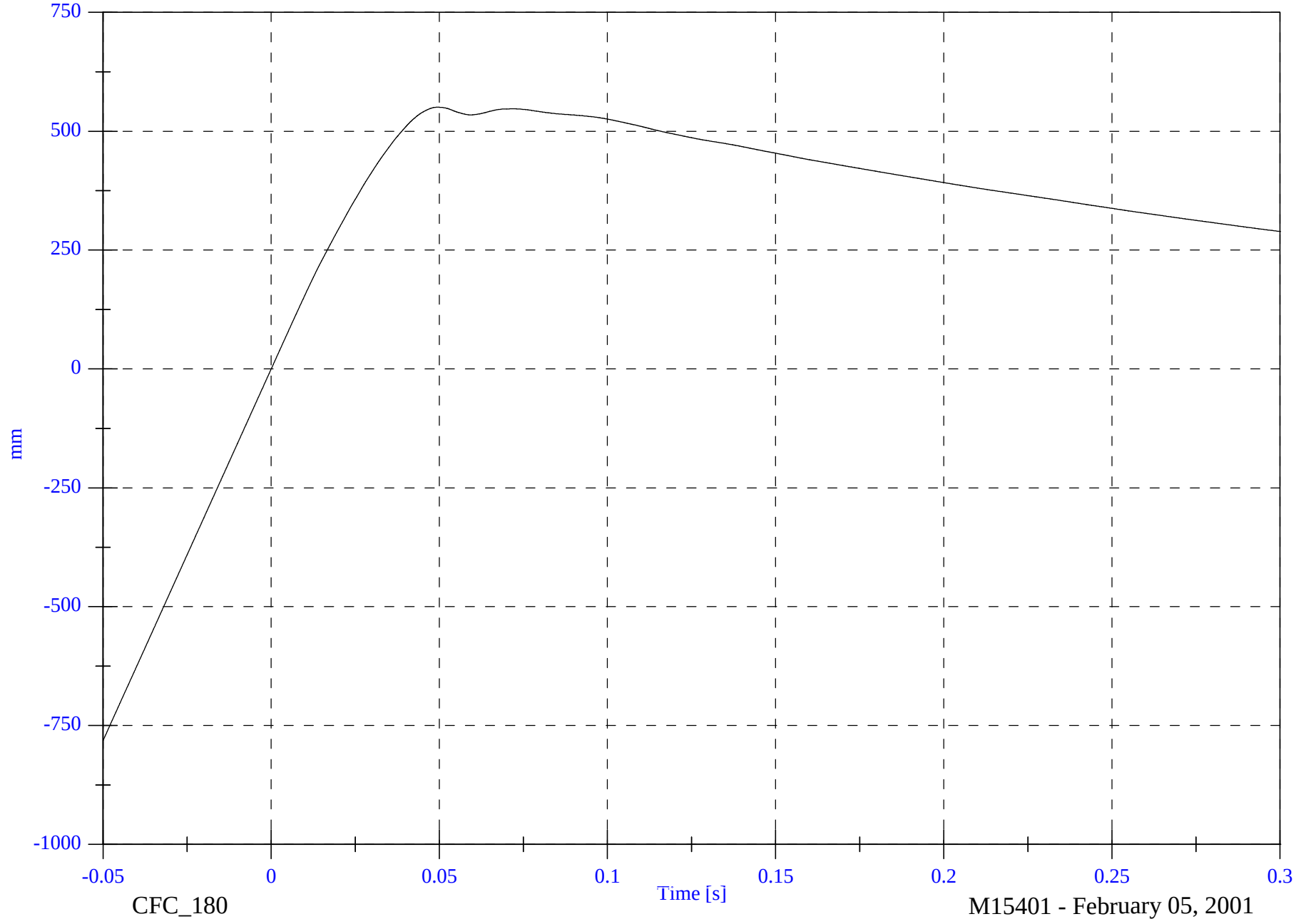
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

Right Caliper #5x Displacement

Max: 550.6 [mm] at 0.049 [s]

Min: -781.7 [mm] at -0.050 [s]



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8602-21

CFC_180

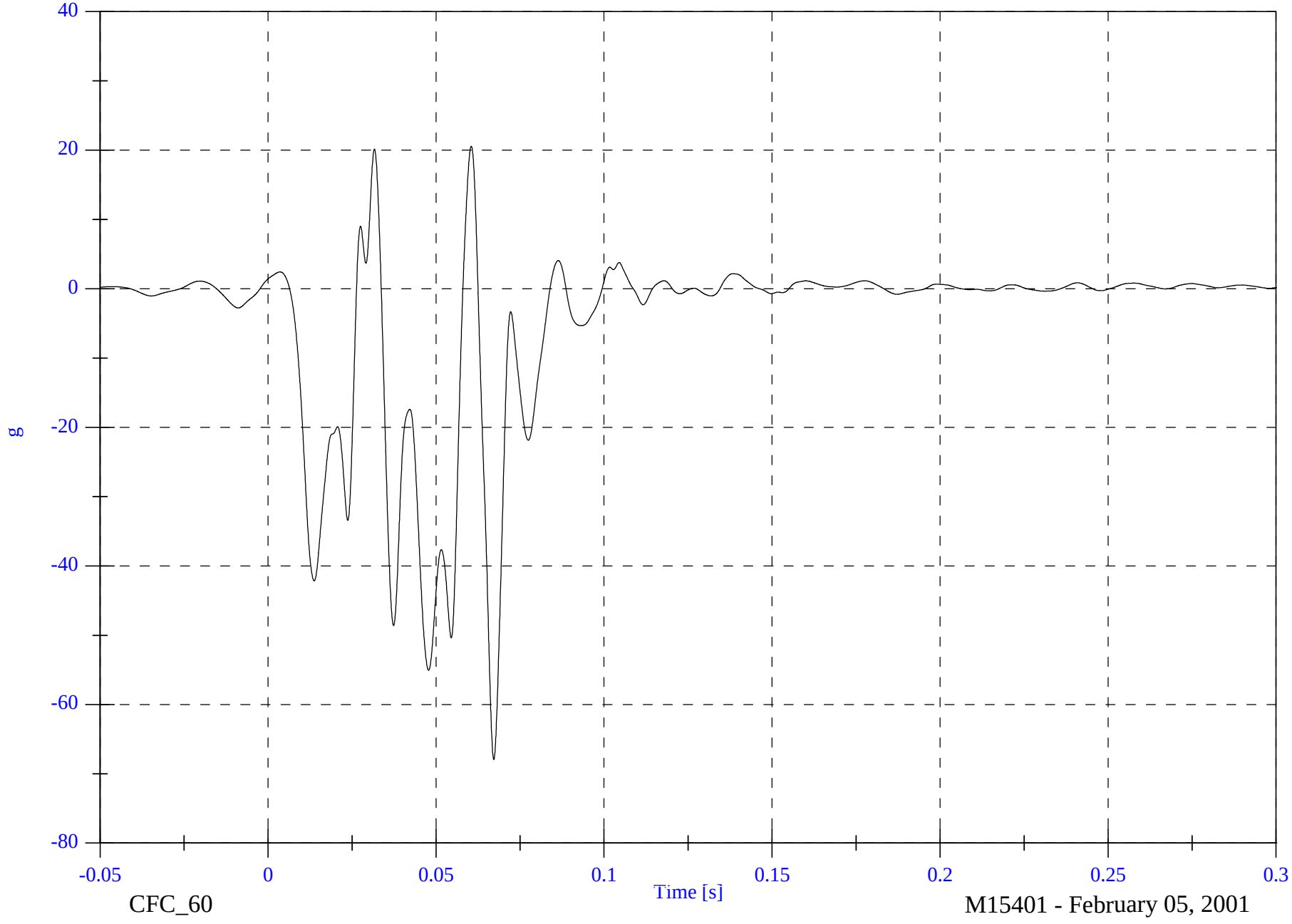
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

Instrument Panel #6x

Max: 20.6 [g] at 0.060 [s]

Min: -67.9 [g] at 0.067 [s]



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8602-21

CFC_60

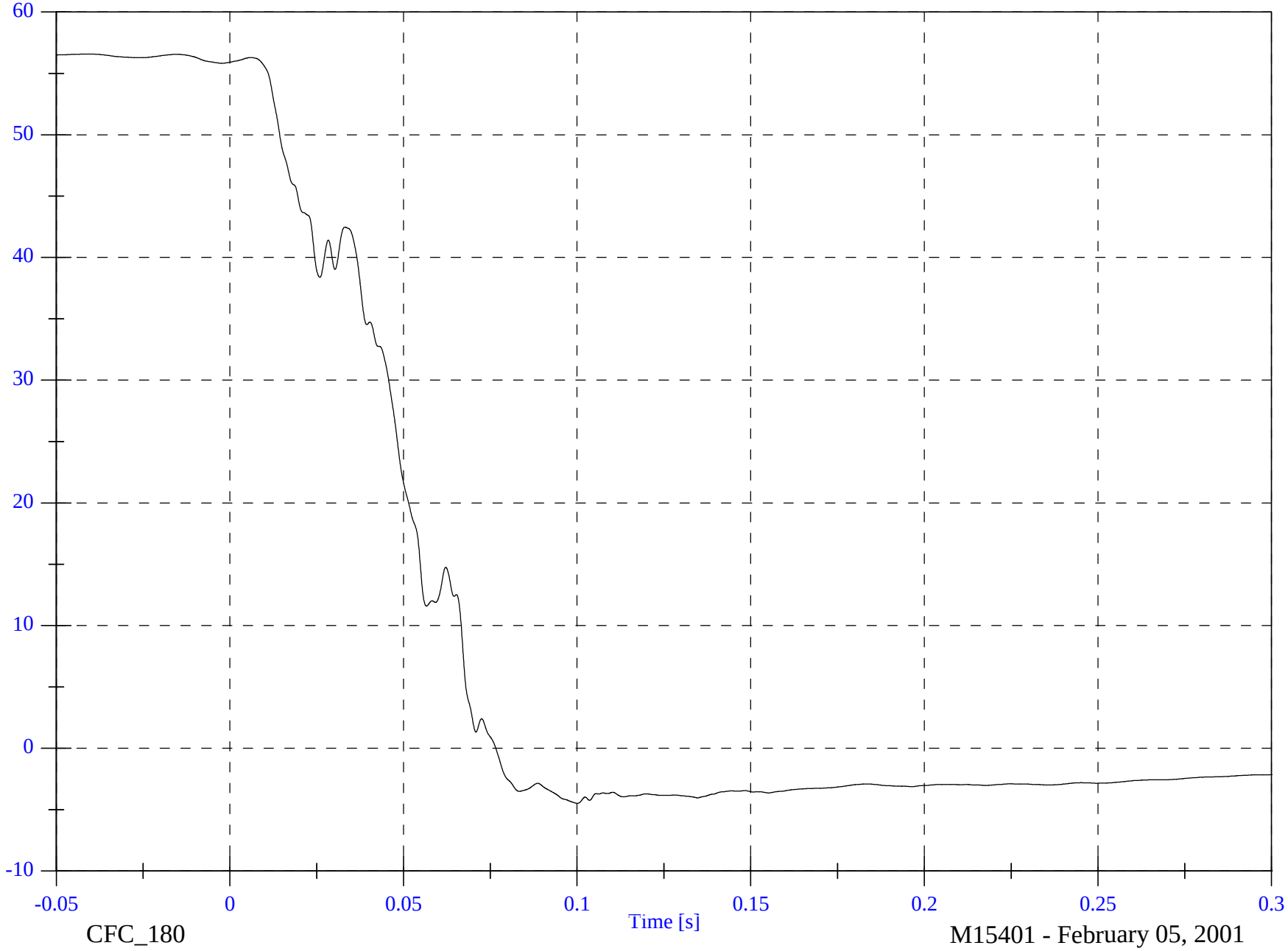
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

Instrument Panel #6x Velocity

Max: 56.6 [kph] at -0.041 [s]

Min: -4.5 [kph] at 0.100 [s]



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8602-21

CFC_180

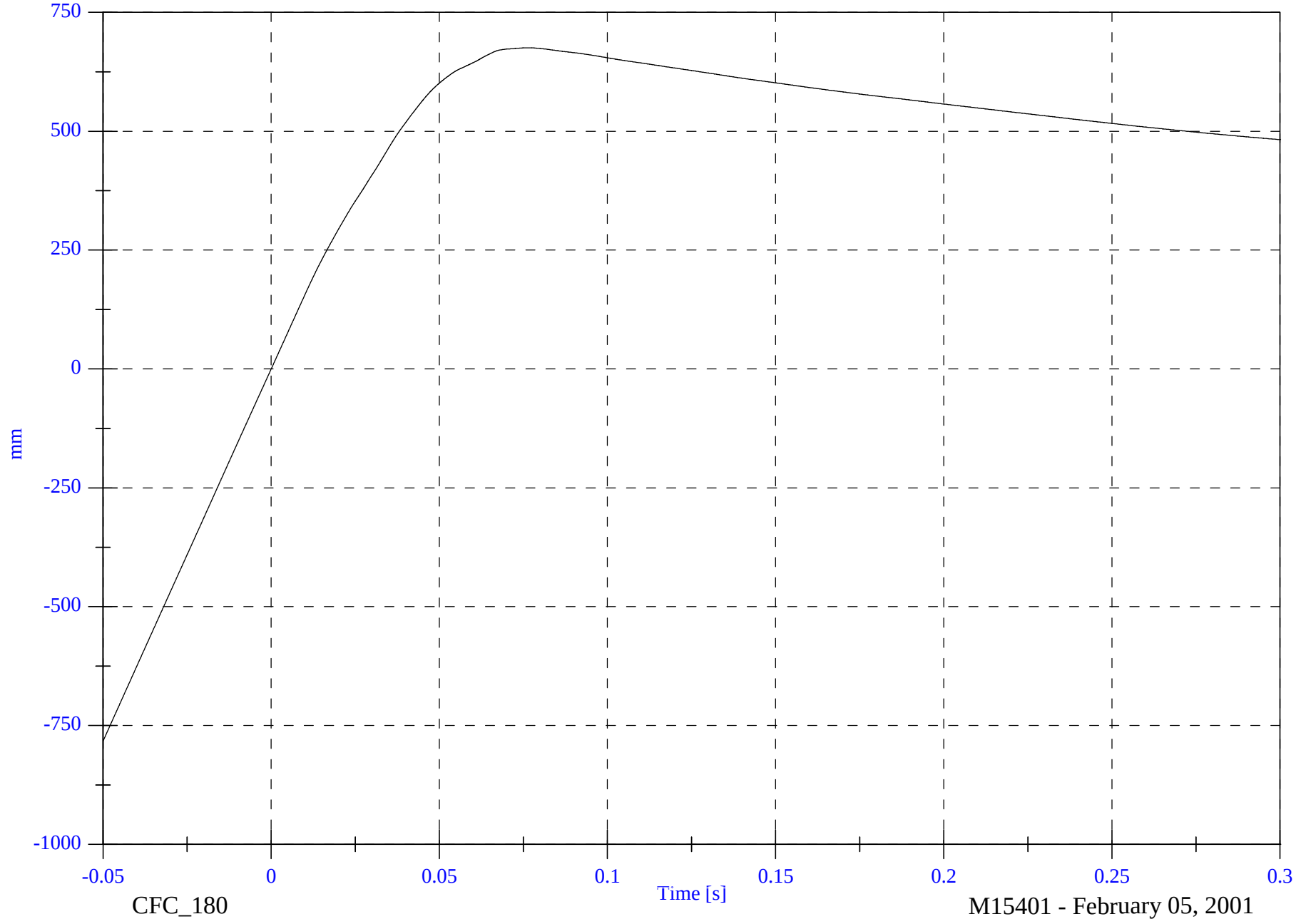
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

Instrument Panel #6x Displacement

Max: 675.4 [mm] at 0.077 [s]

Min: -782.7 [mm] at -0.050 [s]



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8602-21

CFC_180

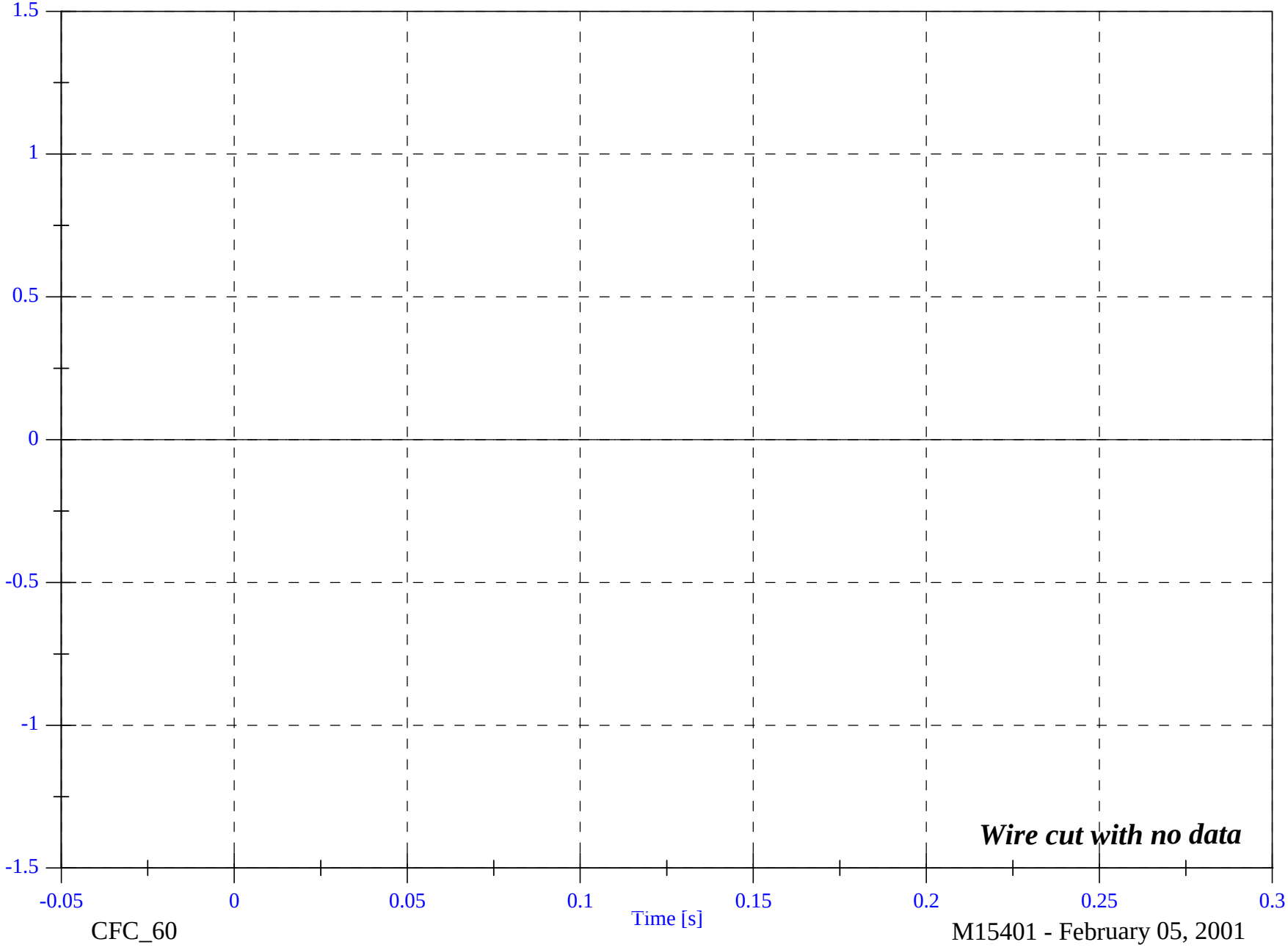
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

Left Caliper #7x

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

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



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8602-21

CFC_60

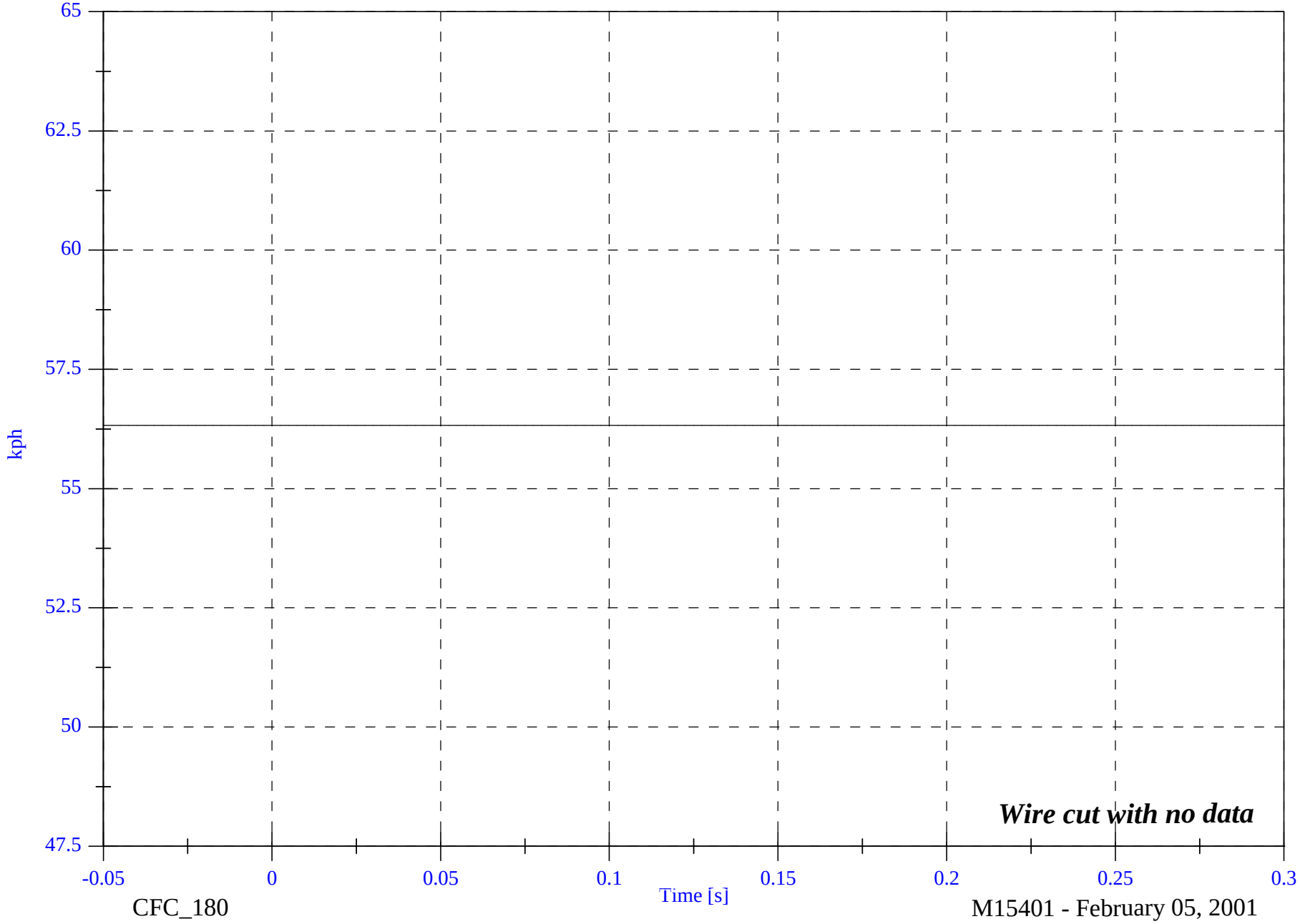
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

Left Caliper #7x Velocity

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

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



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8602-21

CFC_180

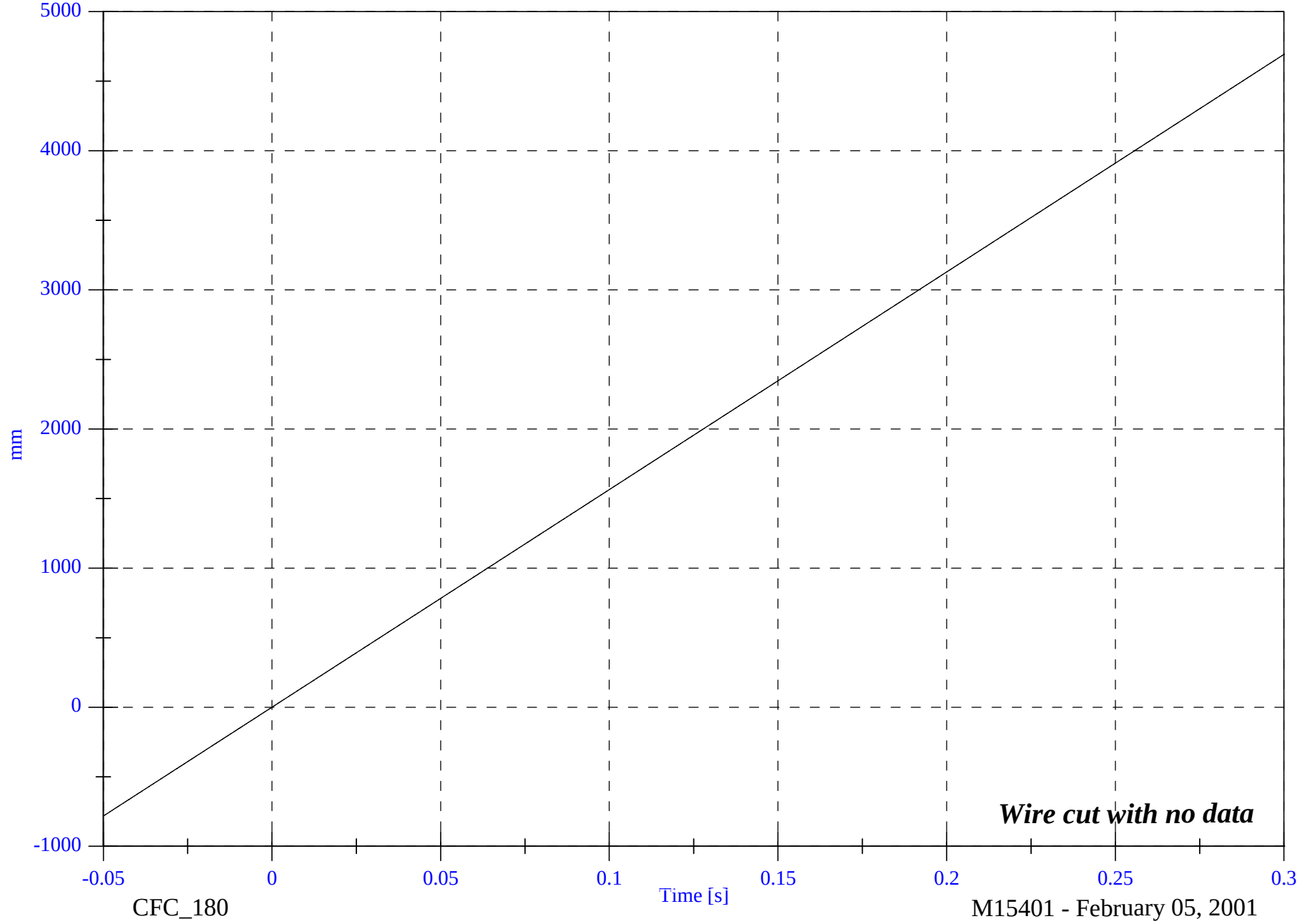
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

Left Caliper #7x Displacement

Max: 4693.0 [mm] at 0.300 [s]

Min: -782.3 [mm] at -0.050 [s]



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8602-21

CFC_180

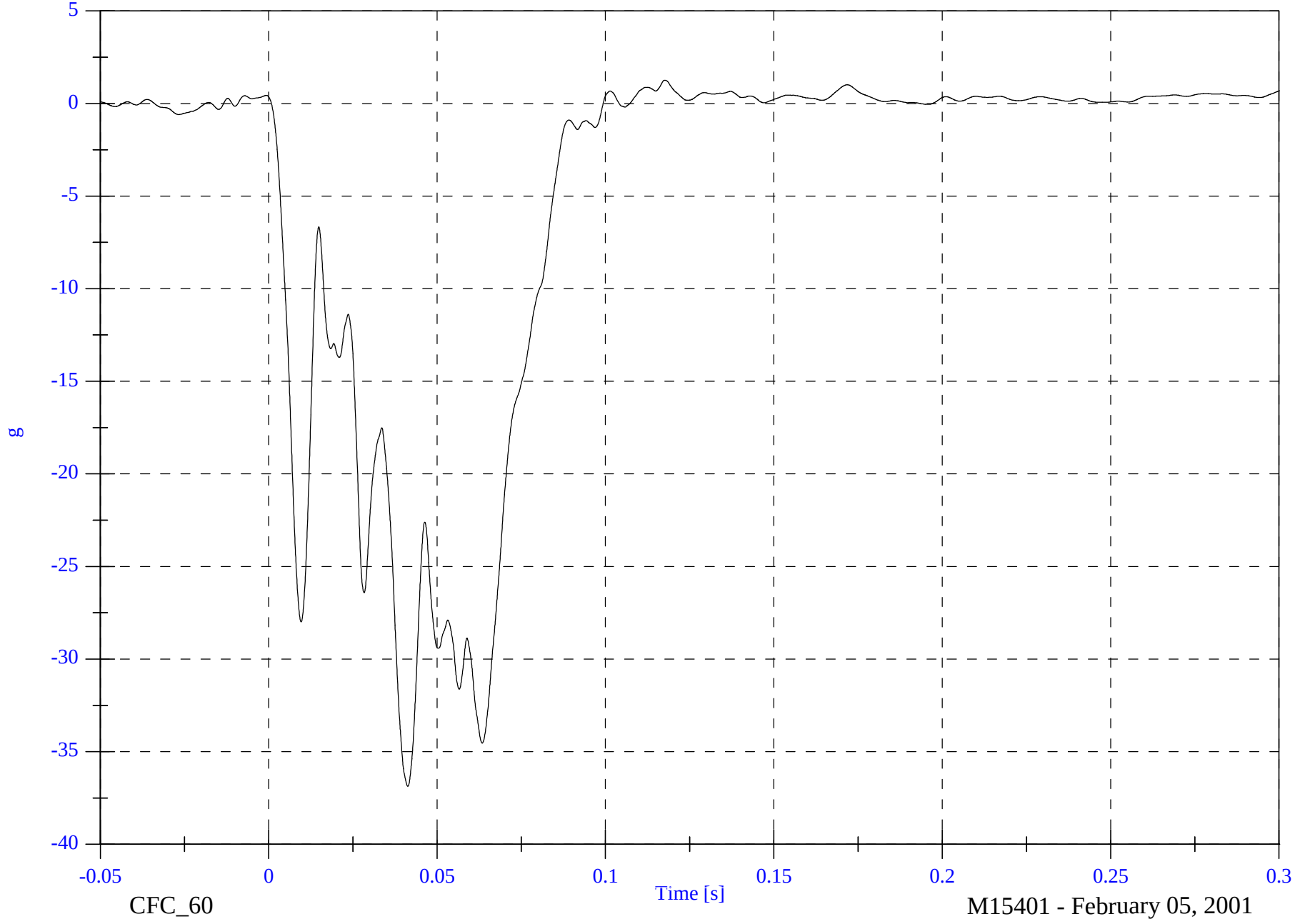
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

Left Rear Red #8x

Max: 1.3 [g] at 0.118 [s]

Min: -36.9 [g] at 0.041 [s]



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8602-21

CFC_60

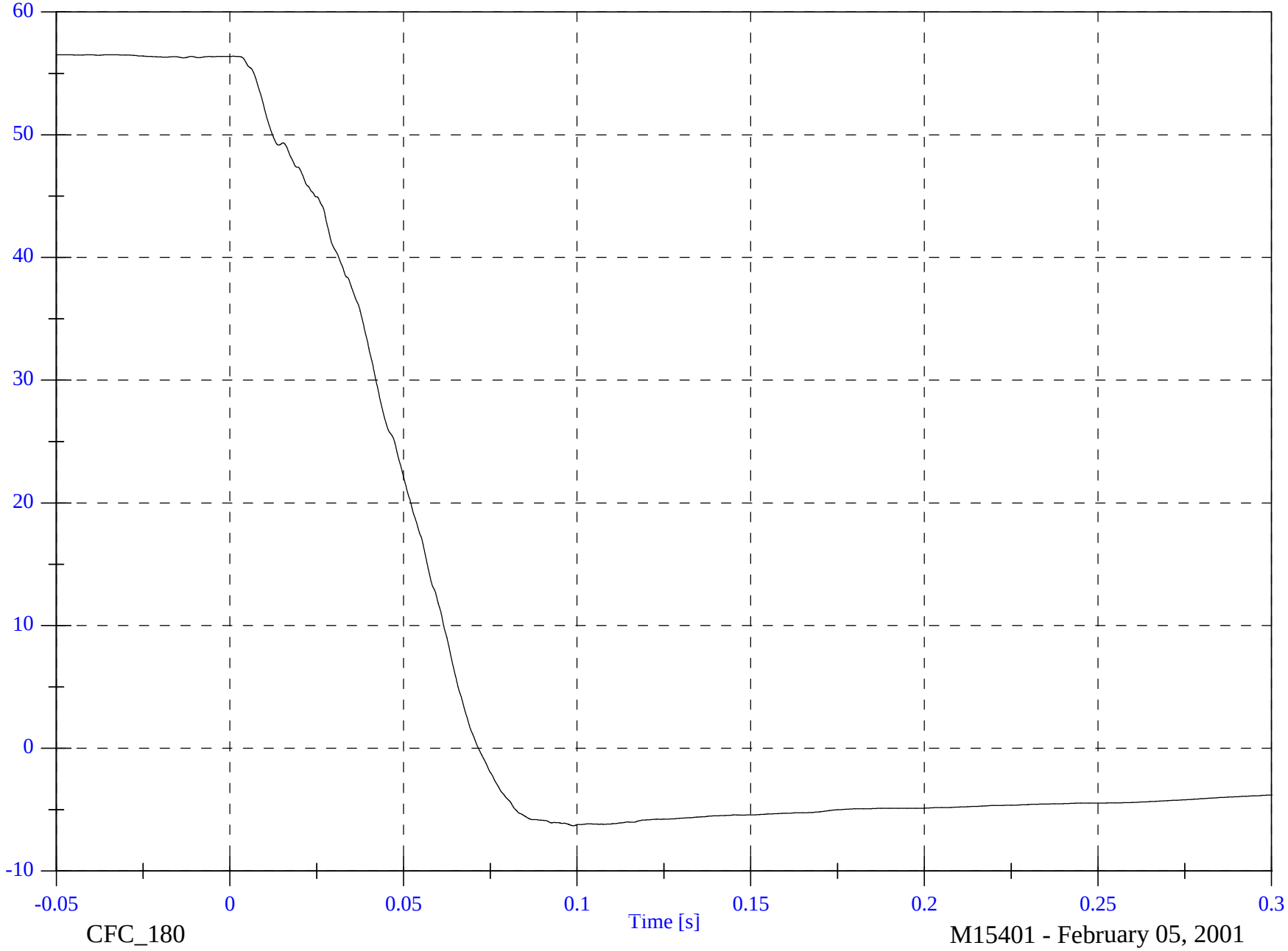
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

Left Rear Red #8x Velocity

Max: 56.5 [kph] at -0.034 [s]

Min: -6.3 [kph] at 0.099 [s]



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8602-21

CFC_180

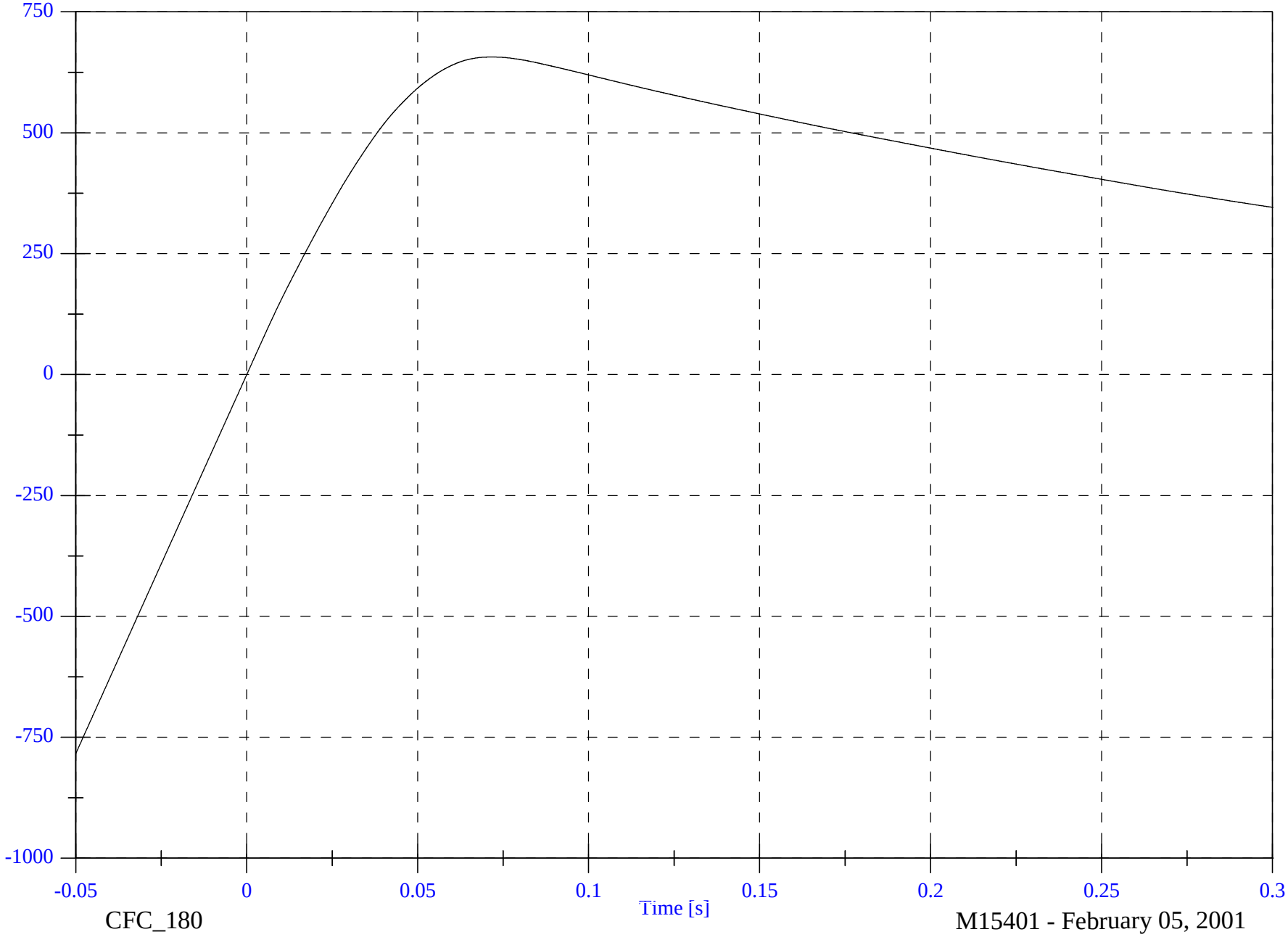
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

Left Rear Red #8x Displacement

Max: 656.8 [mm] at 0.072 [s]

Min: -783.7 [mm] at -0.050 [s]



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8602-21

CFC_180

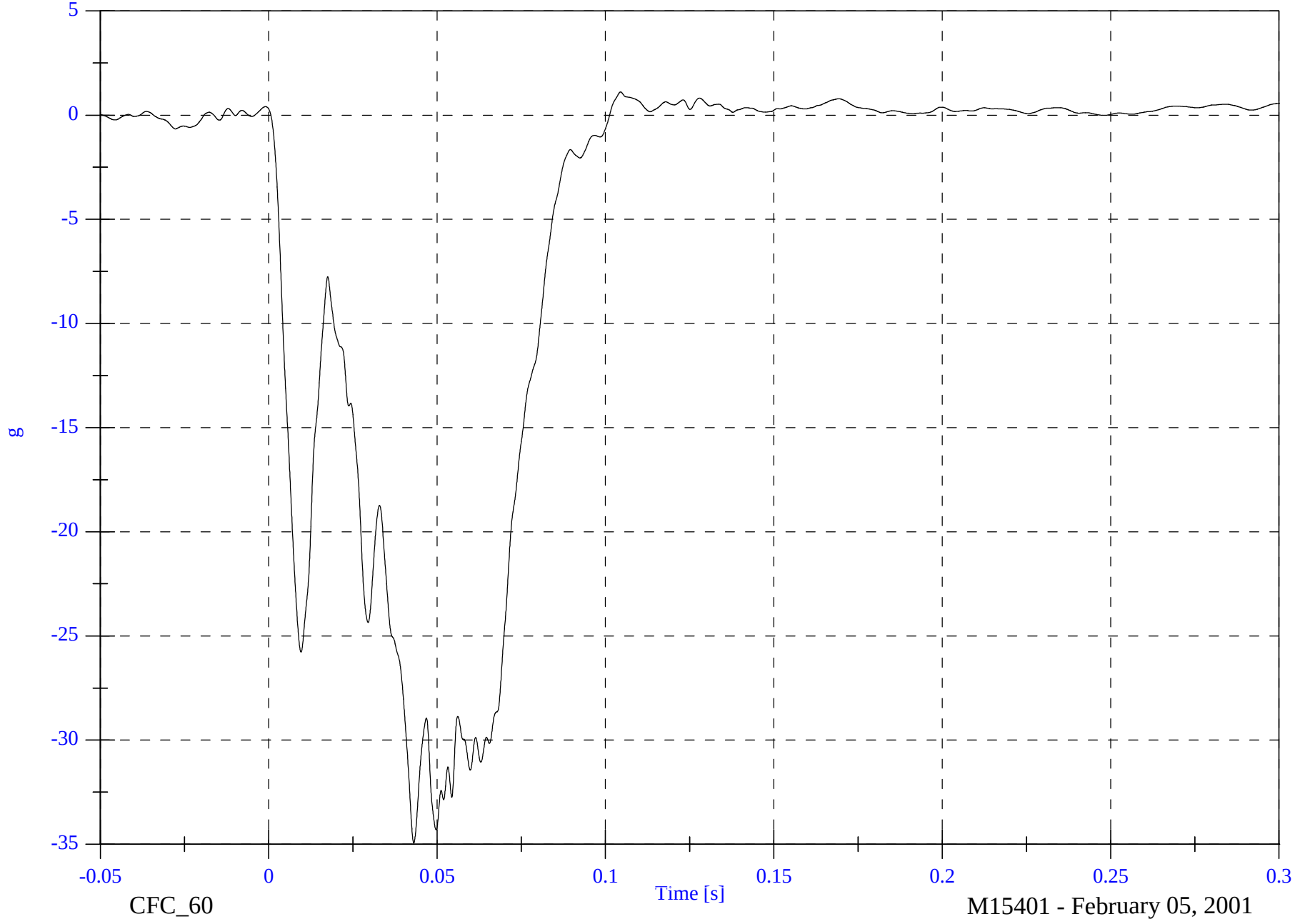
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

Right Rear Red #9x

Max: 1.1 [g] at 0.104 [s]

Min: -34.9 [g] at 0.043 [s]



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8602-21

CFC_60

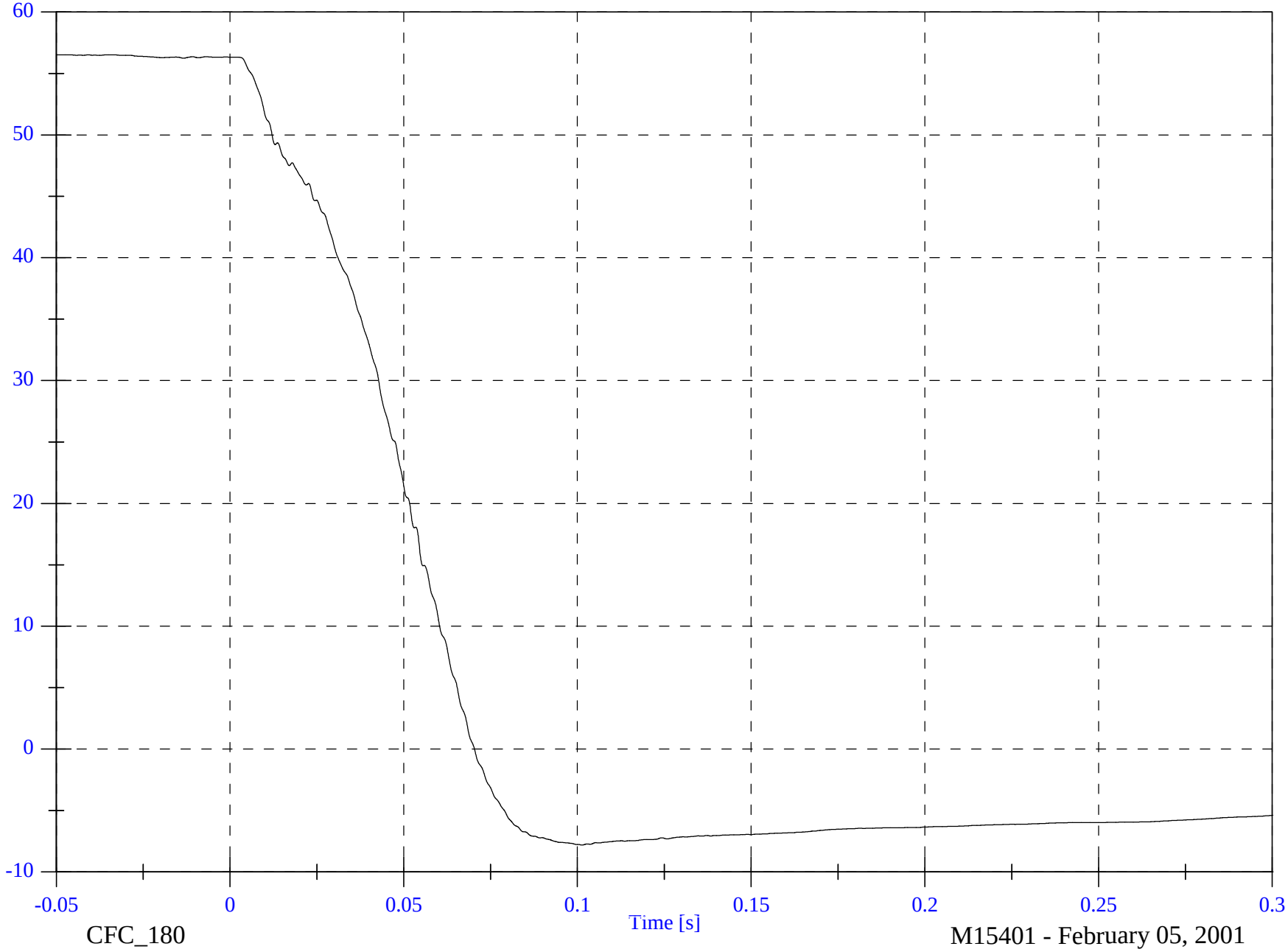
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

Right Rear Red #9x Velocity

Max: 56.5 [kph] at -0.048 [s]

Min: -7.8 [kph] at 0.101 [s]



B-125

8602-21

CFC_180

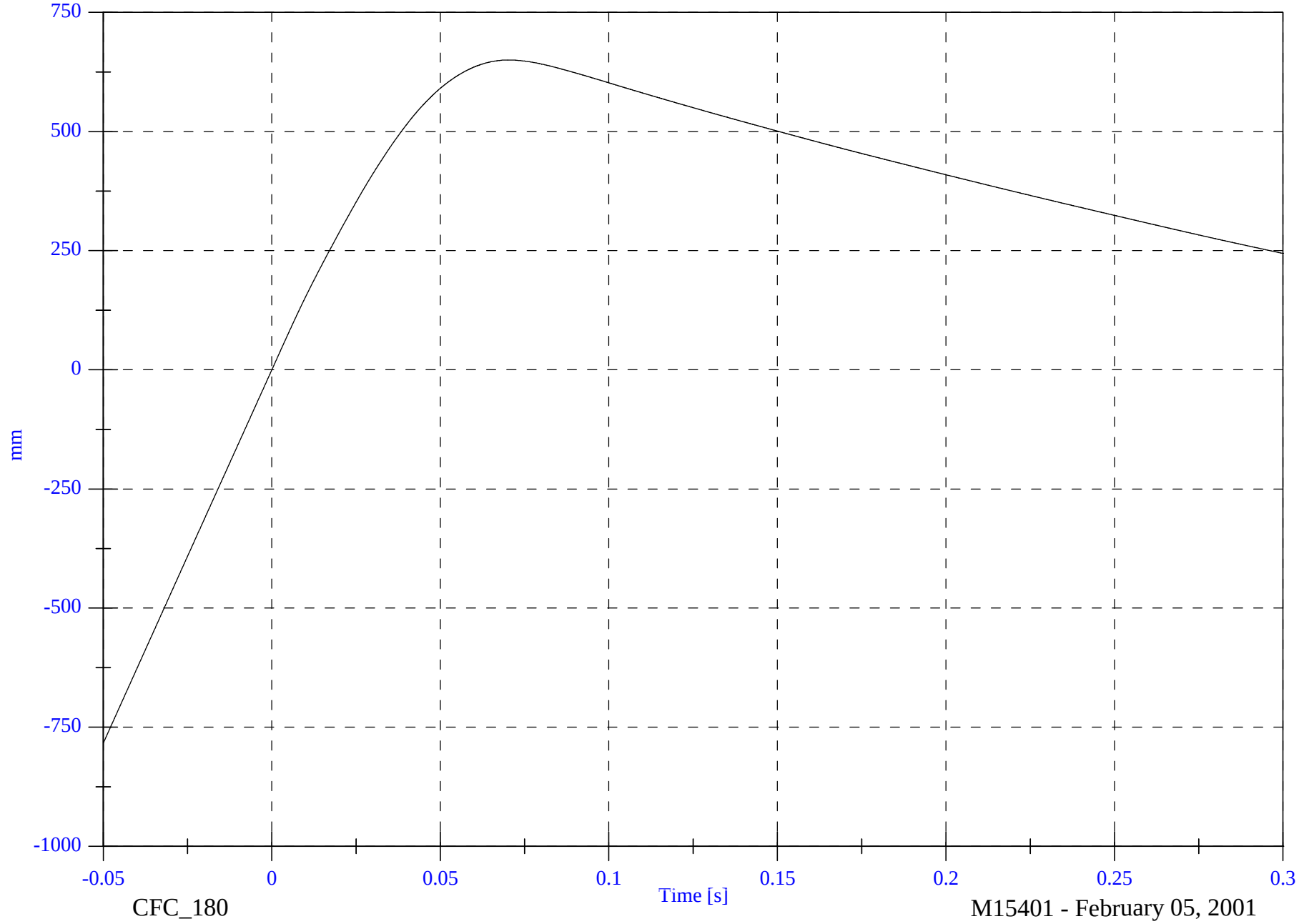
M15401 - February 05, 2001

NCAP 2001 Test 21 - 2001 Mazda Miata Convertible

Right Rear Red #9x Displacement

Max: 650.1 [mm] at 0.070 [s]

Min: -783.4 [mm] at -0.050 [s]



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8602-21

CFC_180

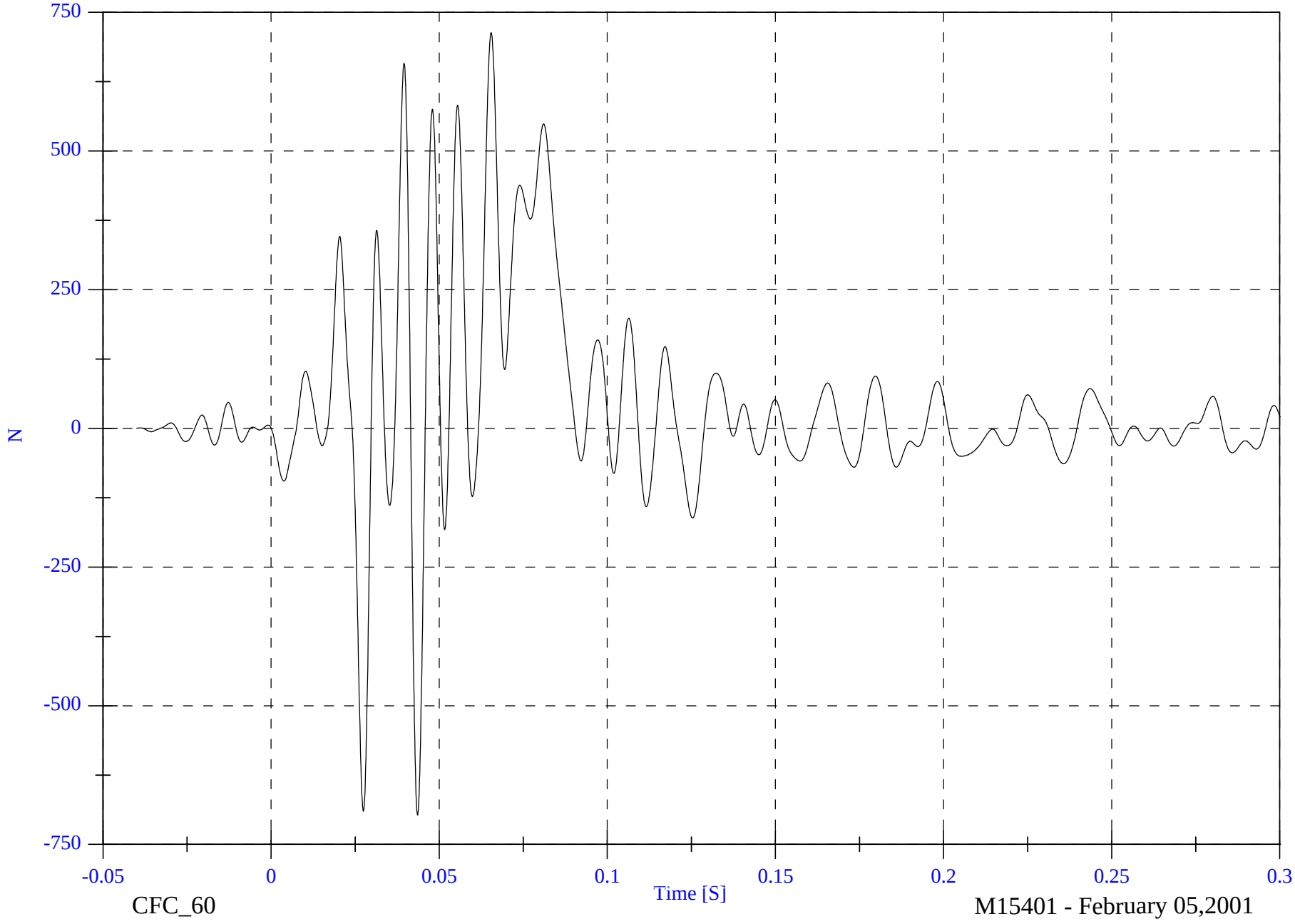
M15401 - February 05, 2001

NCAP TEST #21 - 2001 Mazda Miata Convertible

Barrier Load Cell A1 Fx

Max: 713.6 [N] at 0.065 [S]

Min: -697.2 [N] at 0.043 [S]



B-127

8602-21

CFC_60

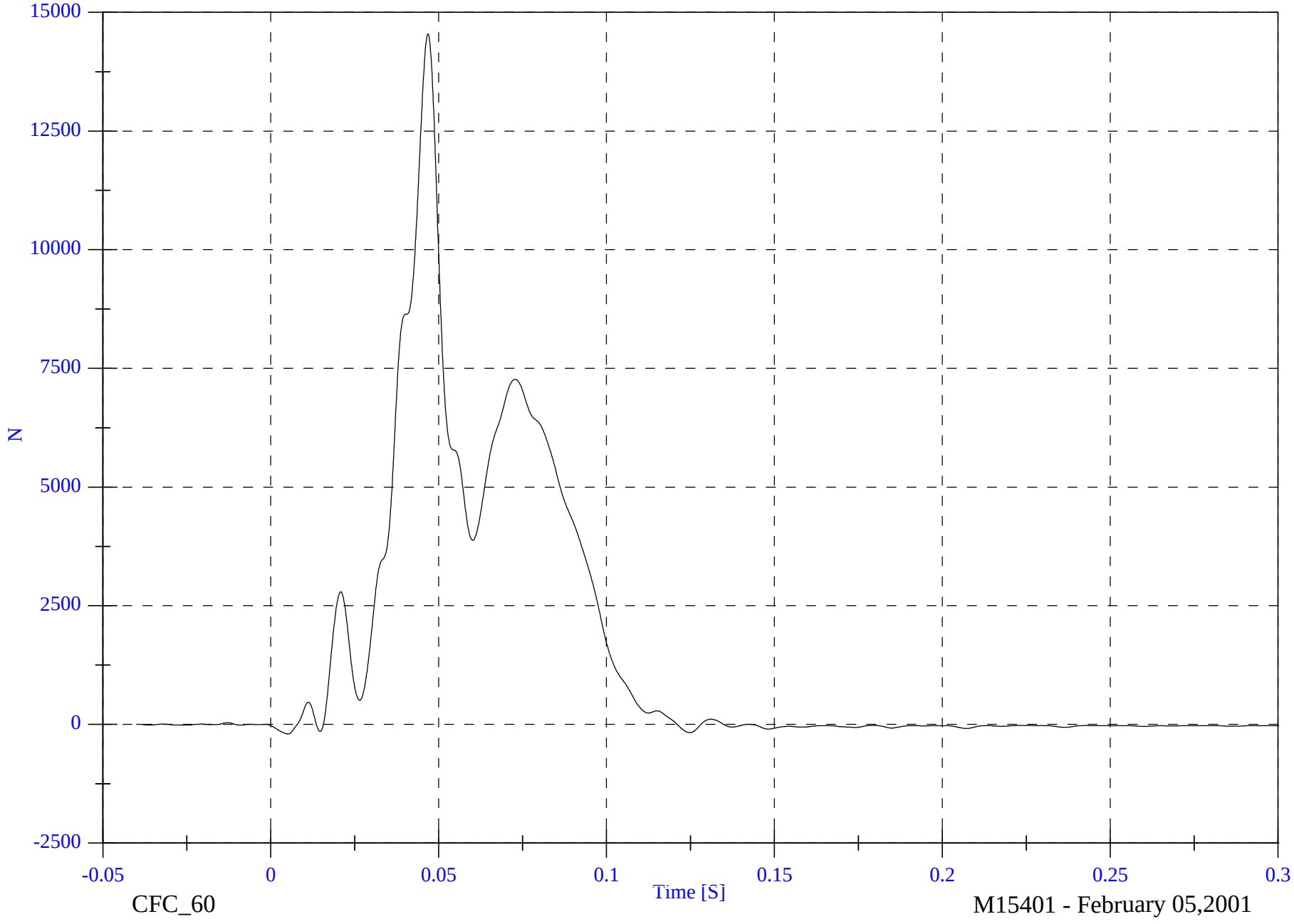
M15401 - February 05,2001

NCAP TEST #21 - 2001 Mazda Miata Convertible

Barrier Load Cell A2 Fx

Max: 14546.2 [N] at 0.047 [S]

Min: -200.3 [N] at 0.005 [S]



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8602-21

CFC_60

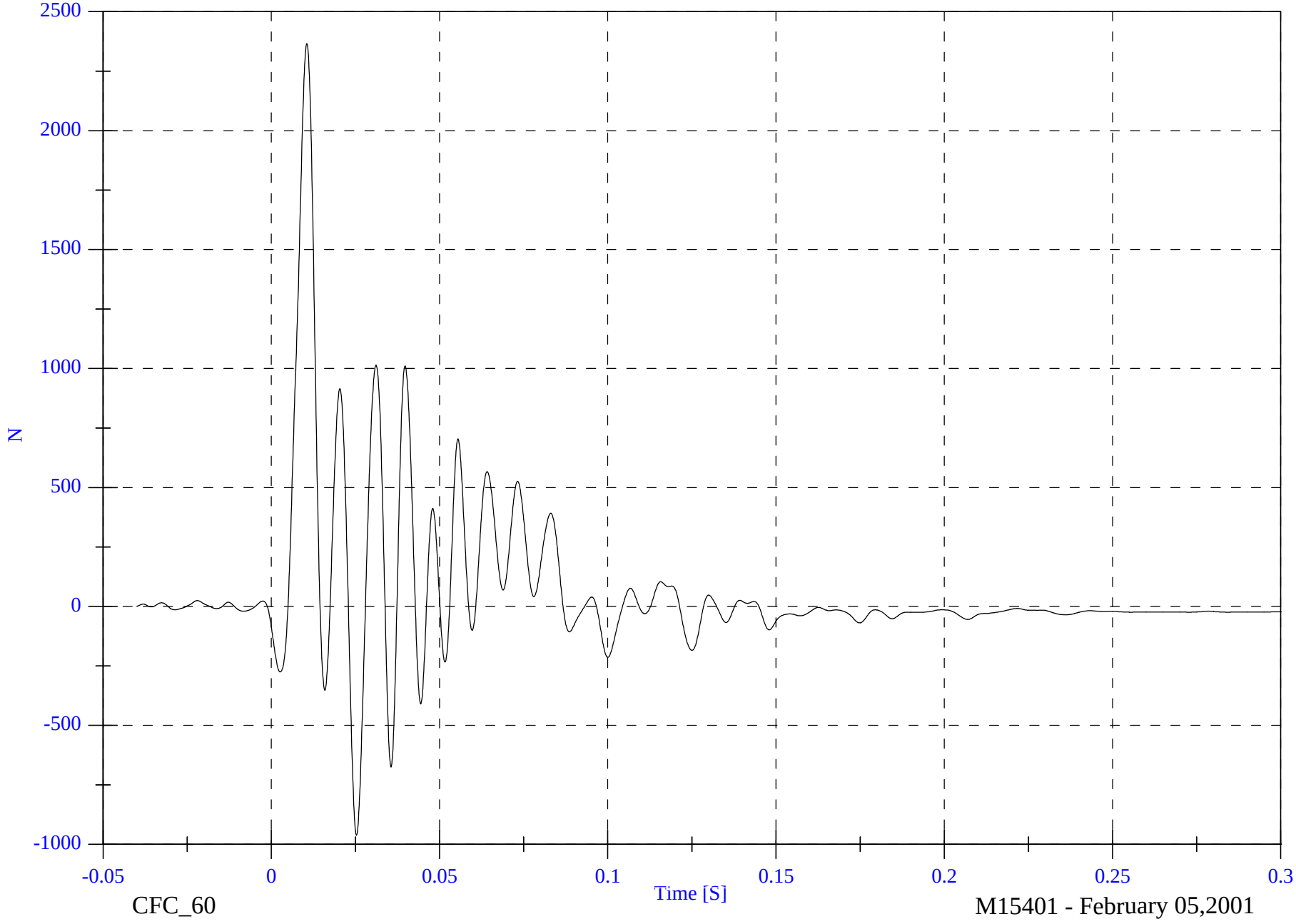
M15401 - February 05,2001

NCAP TEST #21 - 2001 Mazda Miata Convertible

Barrier Load Cell A3 Fx

Max: 2366.4 [N] at 0.010 [S]

Min: -962.7 [N] at 0.025 [S]



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8602-21

CFC_60

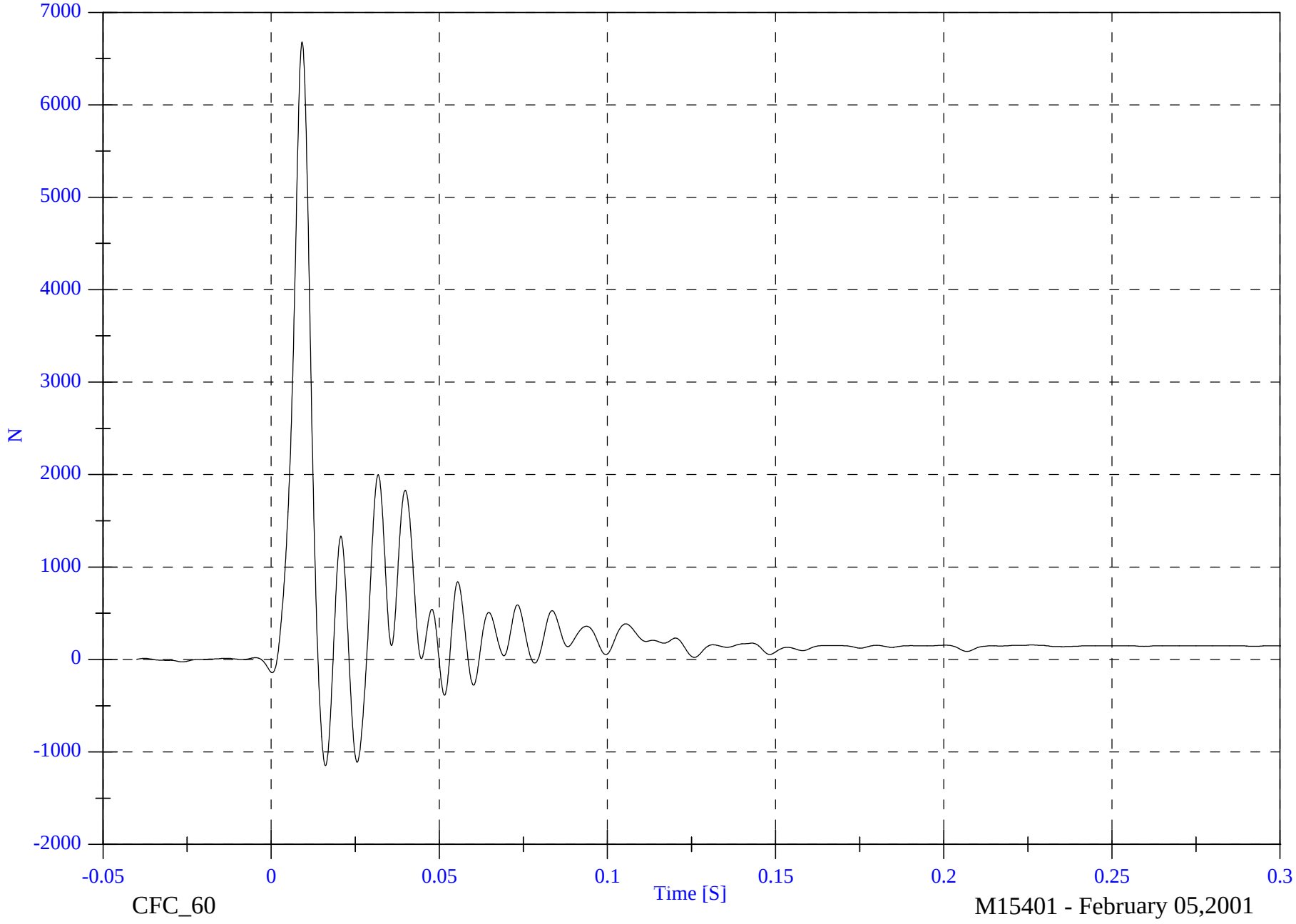
M15401 - February 05,2001

NCAP TEST #21 - 2001 Mazda Miata Convertible

Barrier Load Cell A4 Fx

Max: 6679.8 [N] at 0.009 [S]

Min: -1148.9 [N] at 0.016 [S]



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8602-21

CFC_60

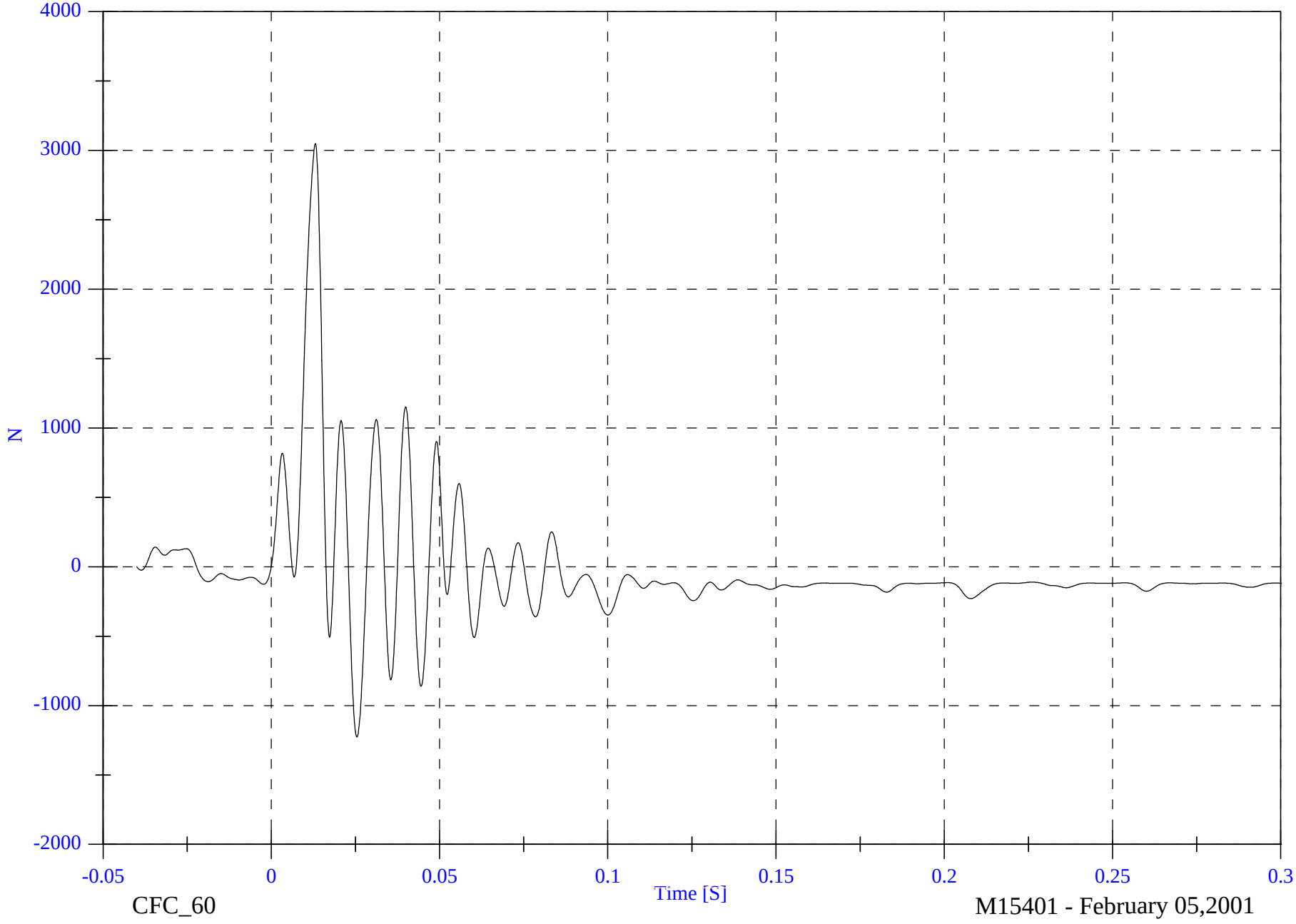
M15401 - February 05,2001

NCAP TEST #21 - 2001 Mazda Miata Convertible

Barrier Load Cell A5 Fx

Max: 3049.8 [N] at 0.013 [S]

Min: -1226.6 [N] at 0.025 [S]



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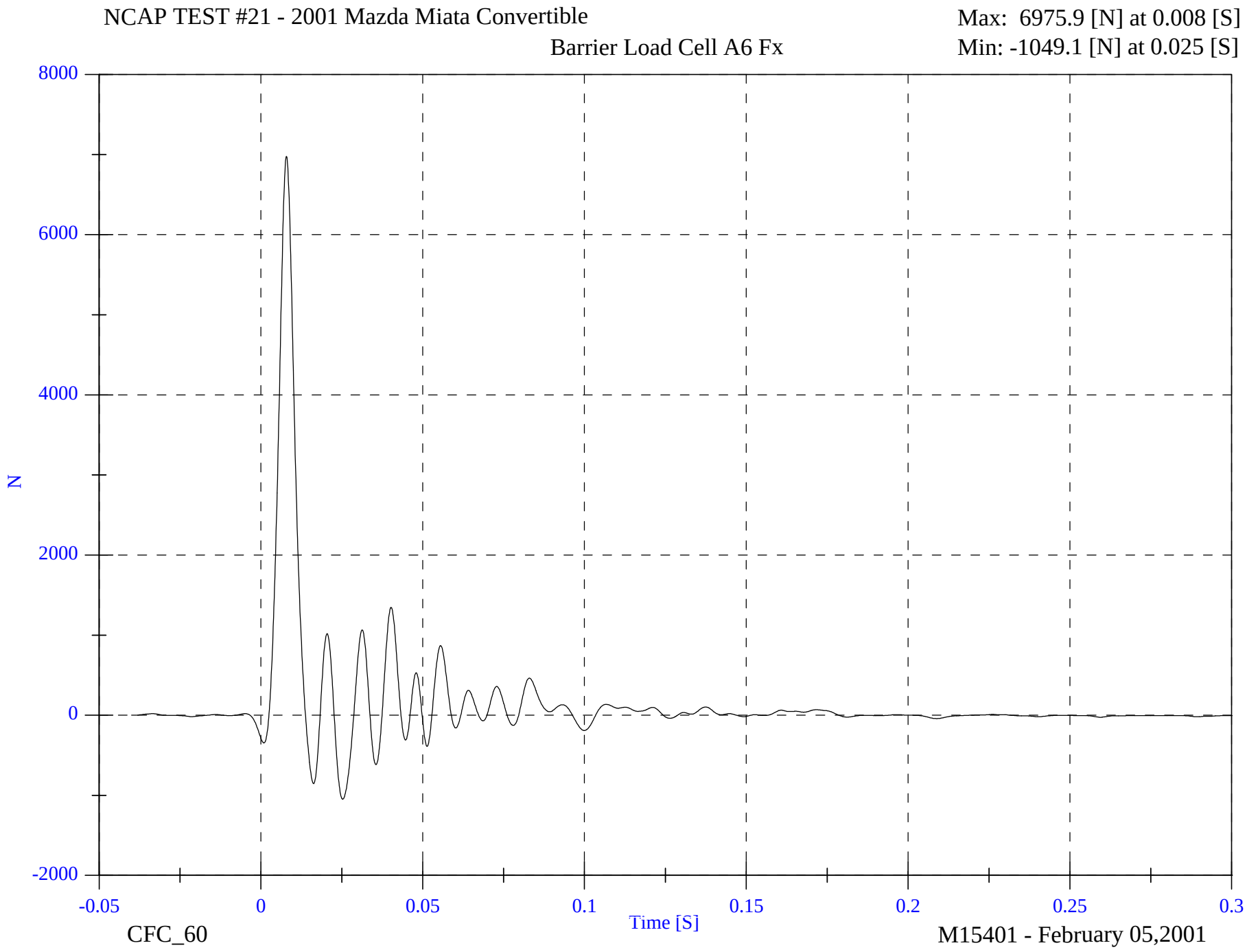
8602-21

CFC_60

M15401 - February 05,2001

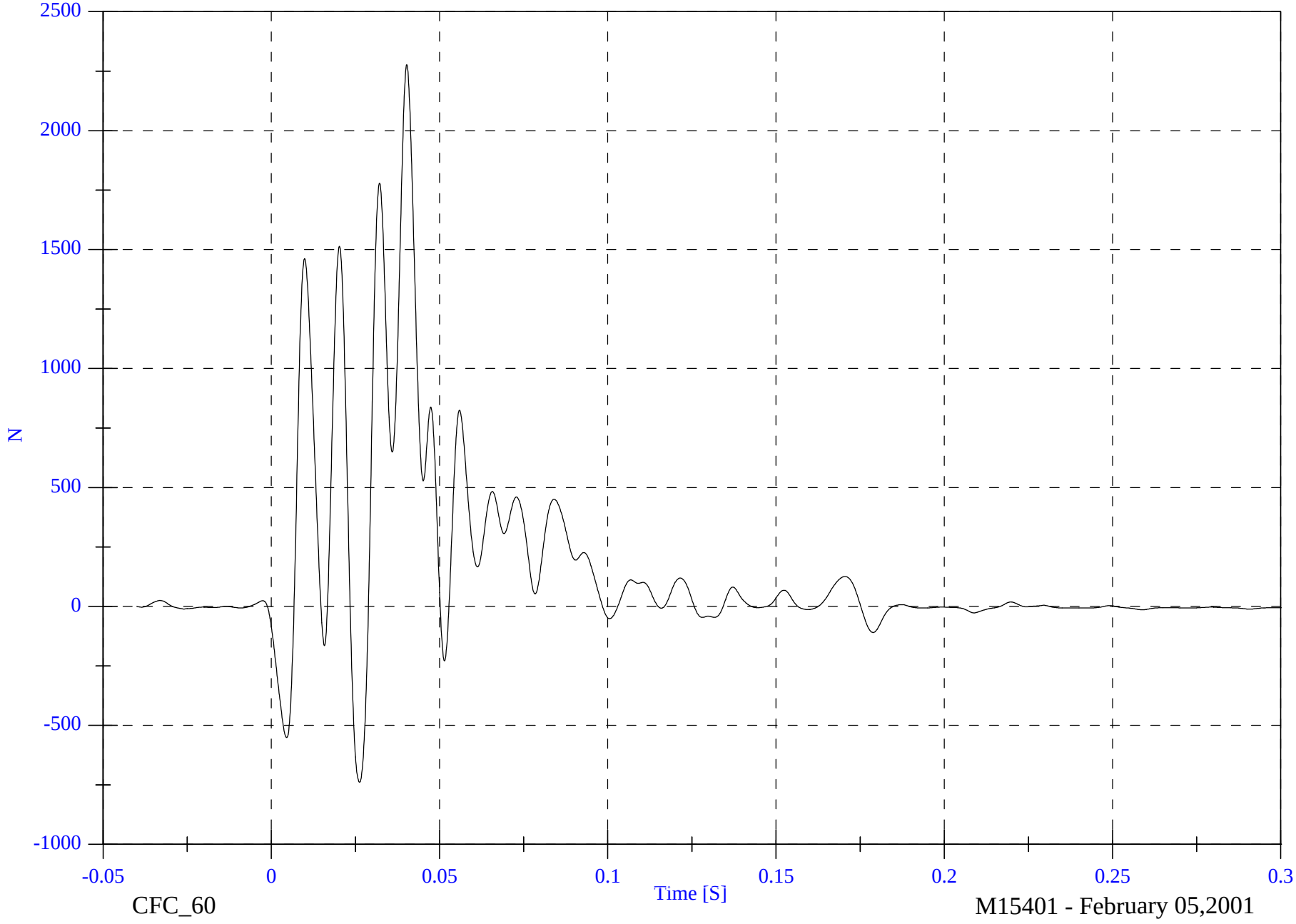

NCAP TEST #21 - 2001 Mazda Miata Convertible
Barrier Load Cell A6 Fx
Max: 6975.9 [N] at 0.008 [S]
Min: -1049.1 [N] at 0.025 [S]
8000
6000
4000
2000
0
-2000
N
-0.05
0
0.05
0.1
0.15
0.2
0.25
0.3
Time [S]
B-132
8602-21
CFC_60
M15401 - February 05,2001

NCAP TEST #21 - 2001 Mazda Miata Convertible

Barrier Load Cell A7 Fx

Max: 2277.1 [N] at 0.040 [S]

Min: -739.0 [N] at 0.026 [S]



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8602-21

CFC_60

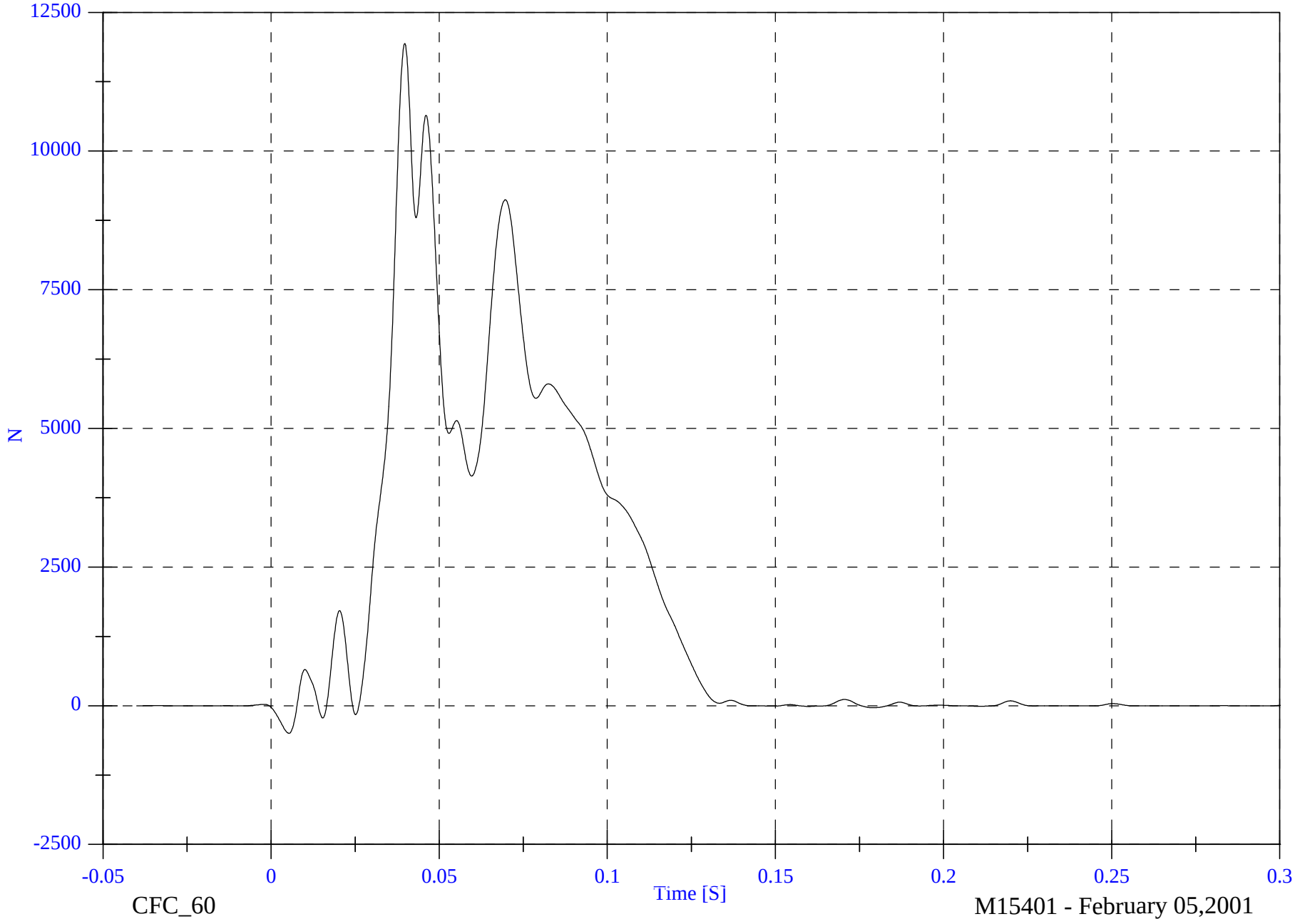
M15401 - February 05,2001

NCAP TEST #21 - 2001 Mazda Miata Convertible

Barrier Load Cell A8 Fx

Max: 11940.3 [N] at 0.040 [S]

Min: -498.7 [N] at 0.005 [S]



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8602-21

CFC_60

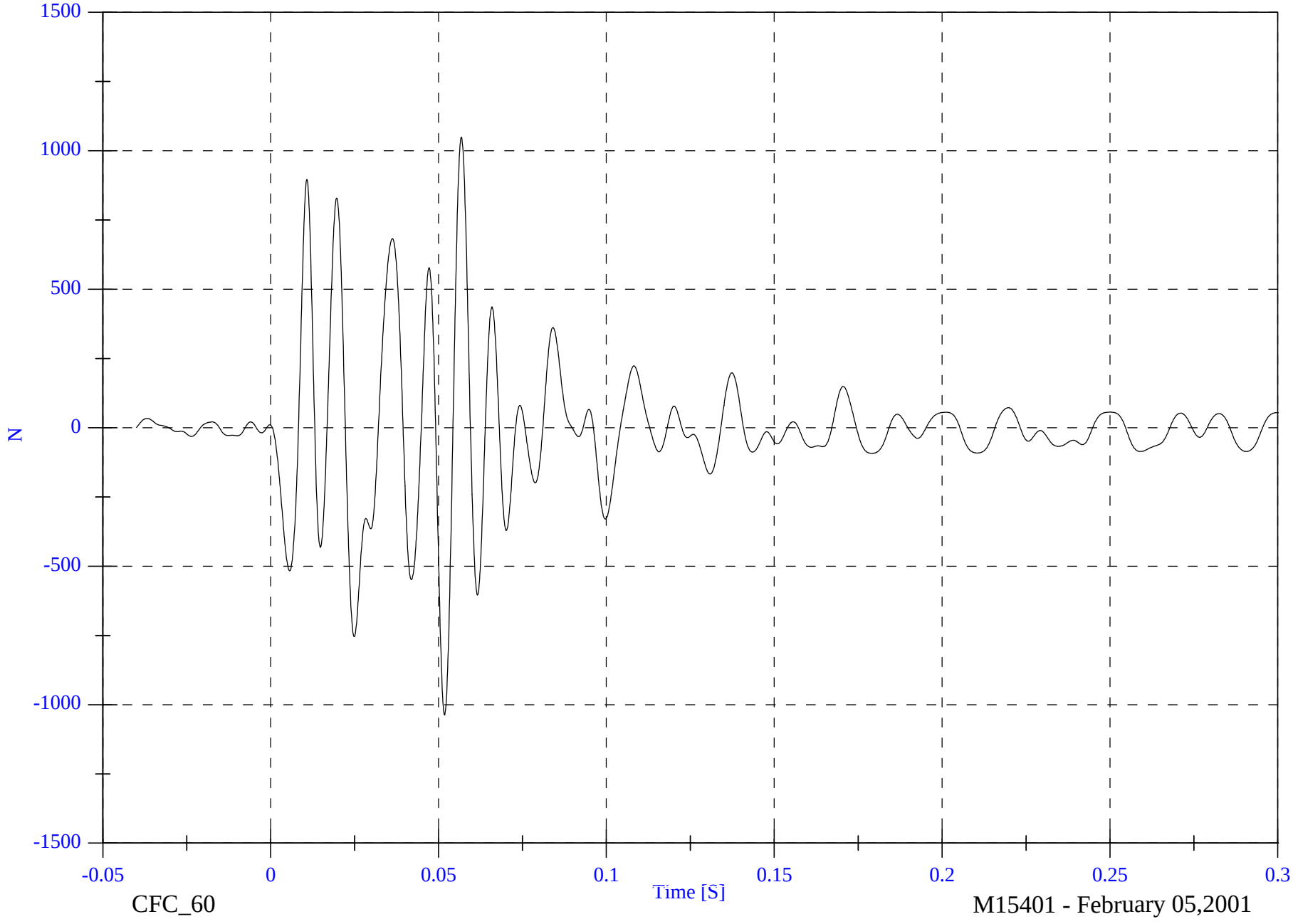
M15401 - February 05,2001

NCAP TEST #21 - 2001 Mazda Miata Convertible

Barrier Load Cell A9 Fx

Max: 1050.0 [N] at 0.057 [S]

Min: -1037.3 [N] at 0.052 [S]



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8602-21

CFC_60

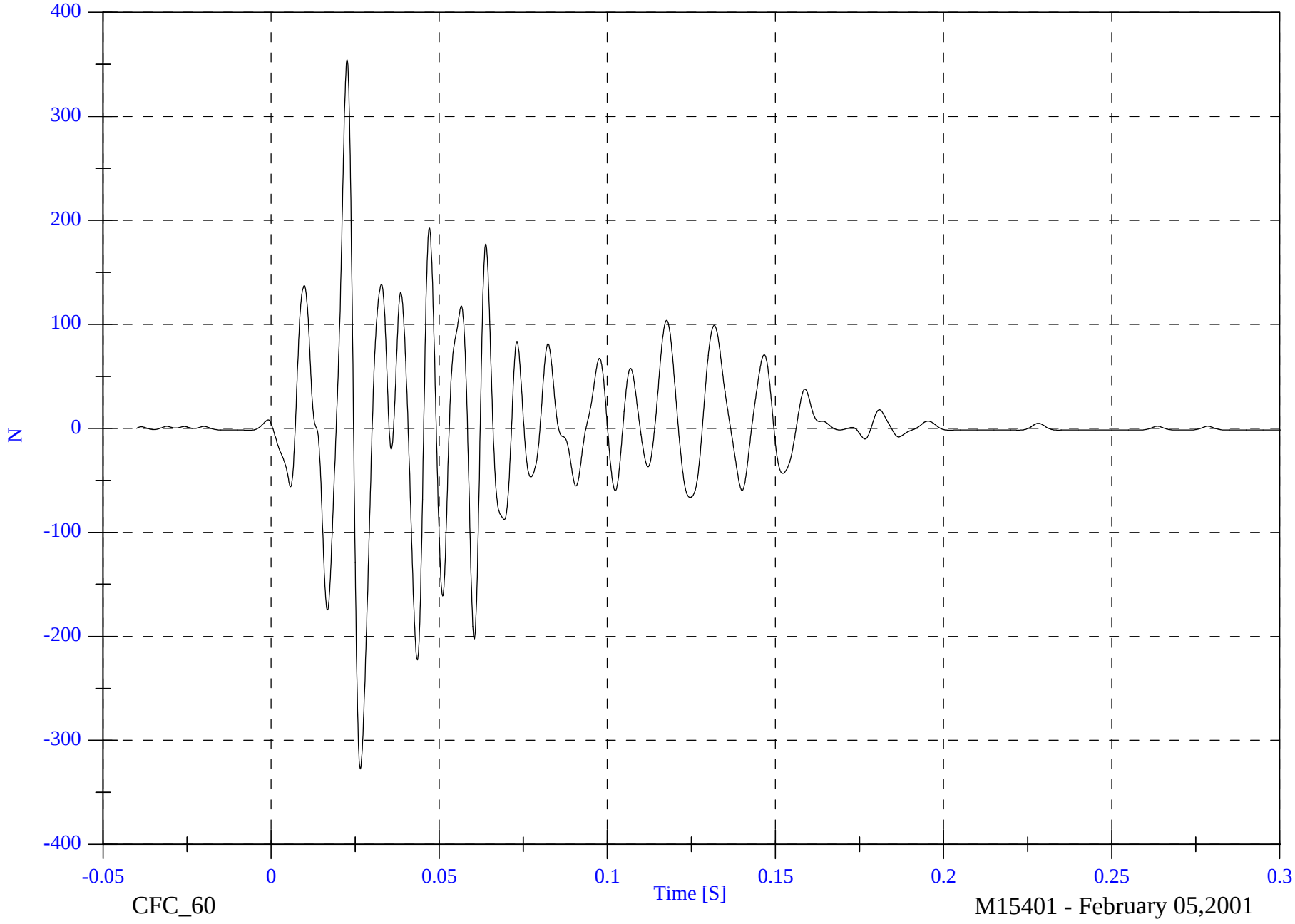
M15401 - February 05,2001

NCAP TEST #21 - 2001 Mazda Miata Convertible

Barrier Load Cell B1 Fx

Max: 354.5 [N] at 0.023 [S]

Min: -327.6 [N] at 0.026 [S]



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8602-21

CFC_60

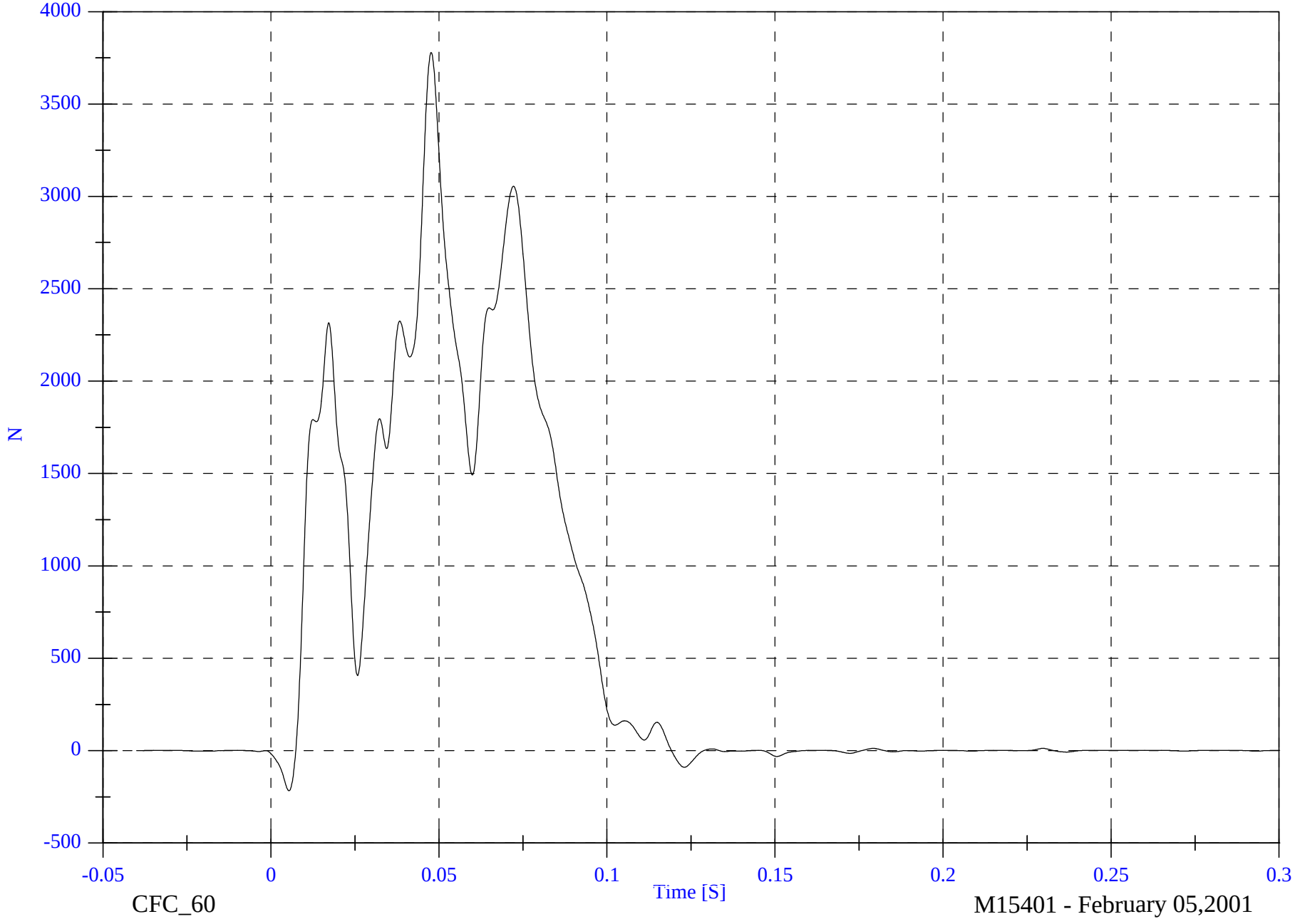
M15401 - February 05,2001

NCAP TEST #21 - 2001 Mazda Miata Convertible

Barrier Load Cell B2 Fx

Max: 3778.5 [N] at 0.048 [S]

Min: -217.3 [N] at 0.005 [S]



B-137

8602-21

CFC_60

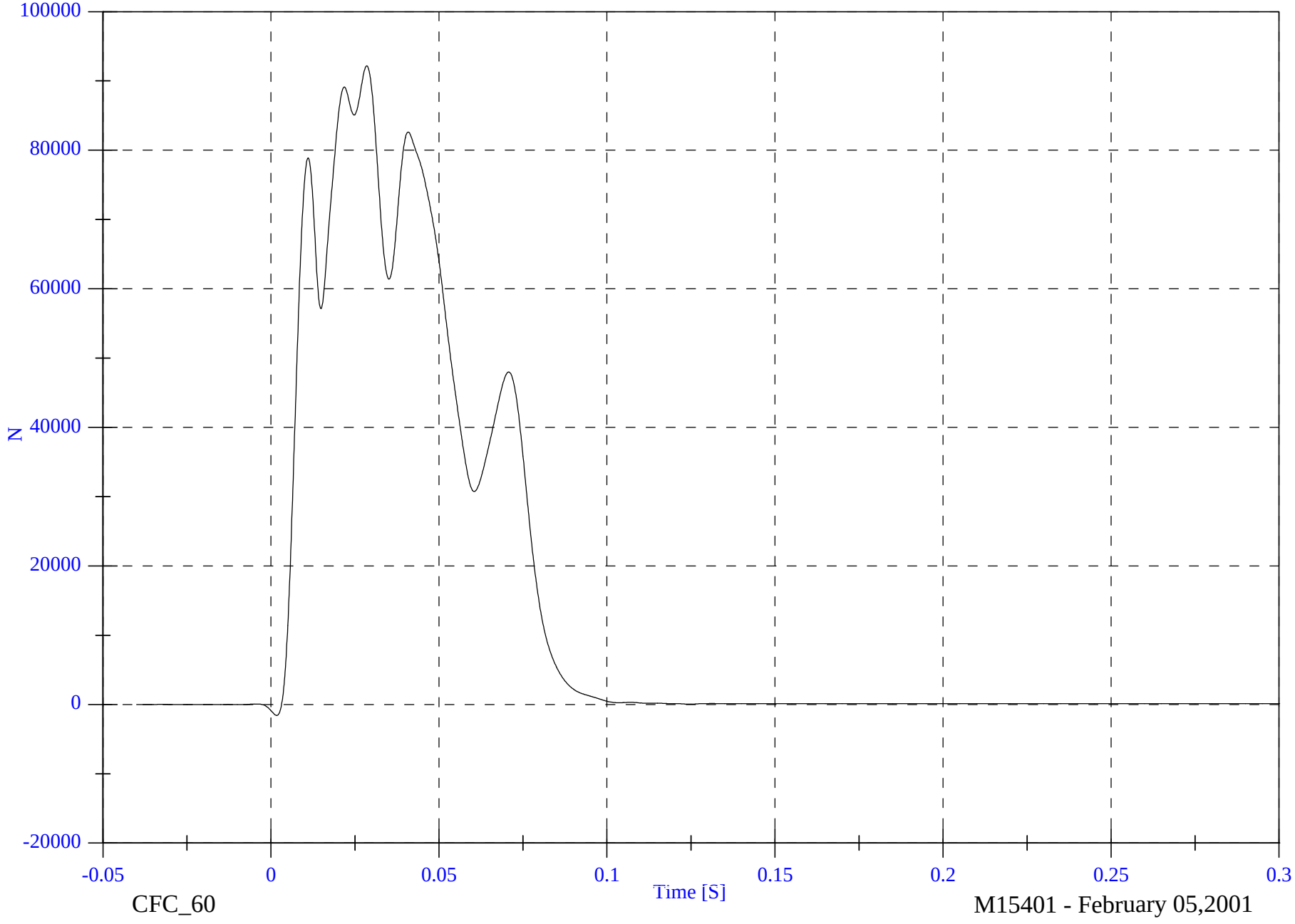
M15401 - February 05,2001

NCAP TEST #21 - 2001 Mazda Miata Convertible

Barrier Load Cell B3 Fx

Max: 92184.6 [N] at 0.028 [S]

Min: -1585.2 [N] at 0.002 [S]



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8602-21

CFC_60

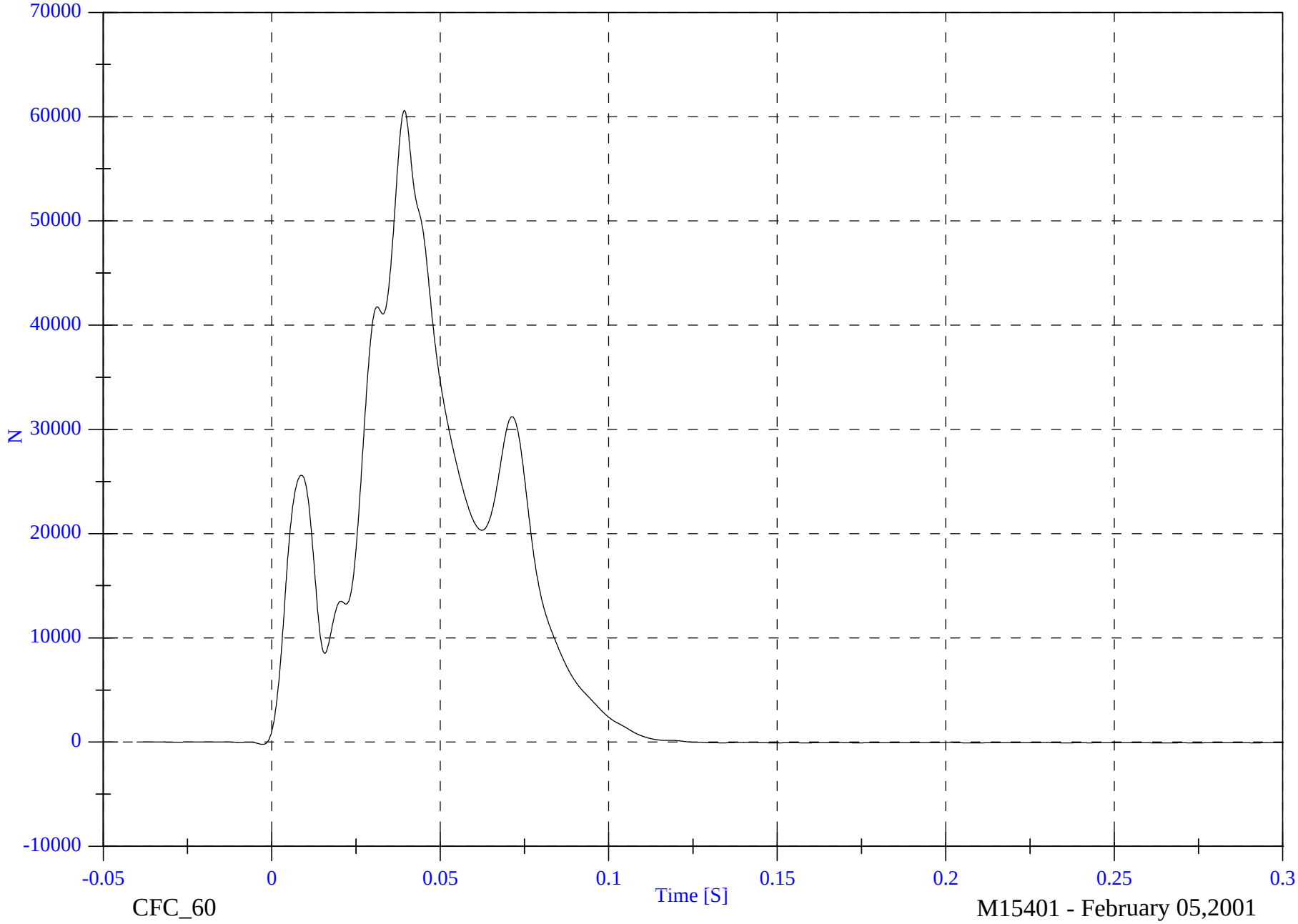
M15401 - February 05,2001

NCAP TEST #21 - 2001 Mazda Miata Convertible

Barrier Load Cell B4 Fx

Max: 60593.1 [N] at 0.039 [S]

Min: -224.5 [N] at -0.003 [S]



B-139

8602-21

CFC_60

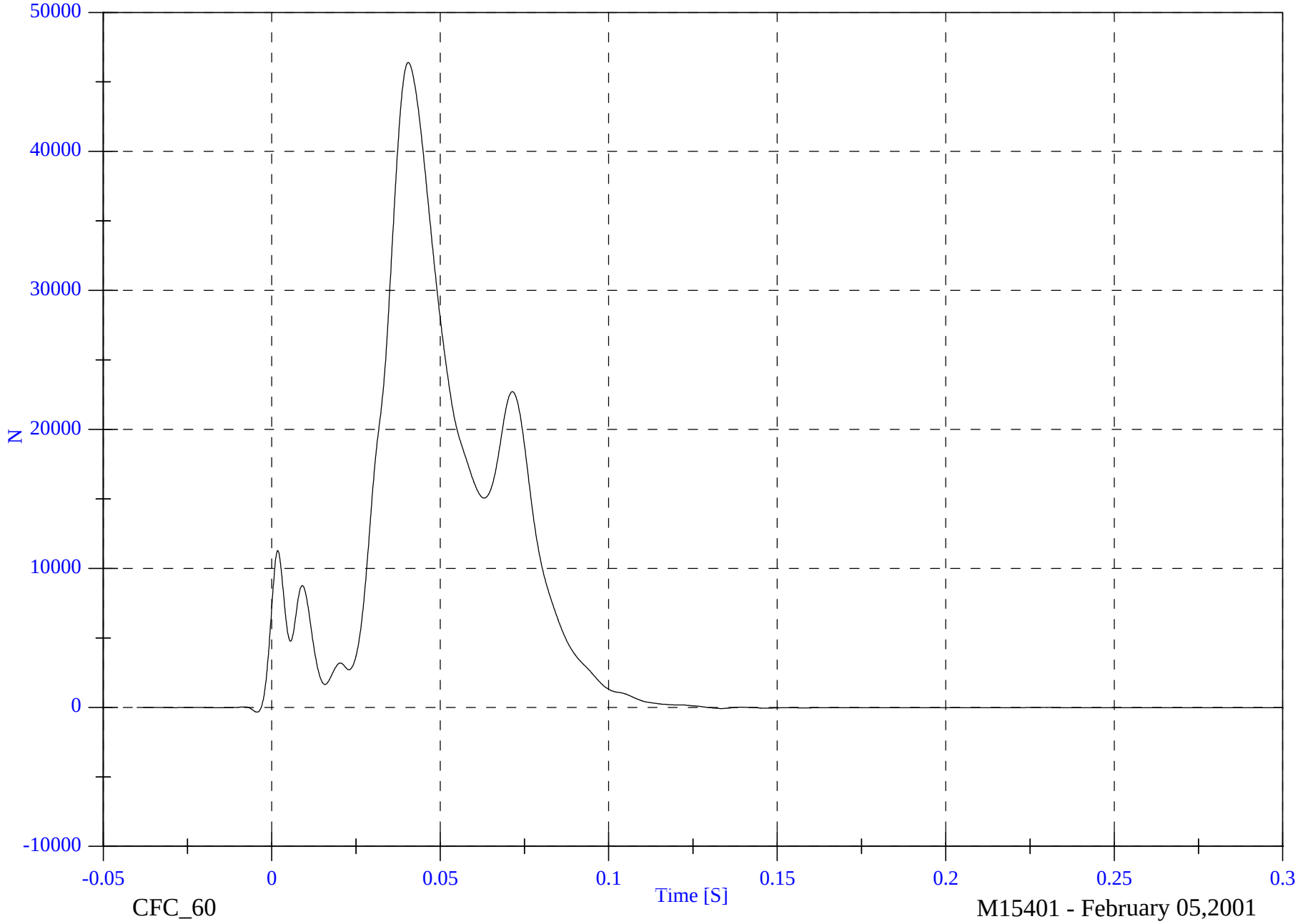
M15401 - February 05,2001

NCAP TEST #21 - 2001 Mazda Miata Convertible

Barrier Load Cell B5 Fx

Max: 46403.4 [N] at 0.040 [S]

Min: -345.4 [N] at -0.004 [S]



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8602-21

CFC_60

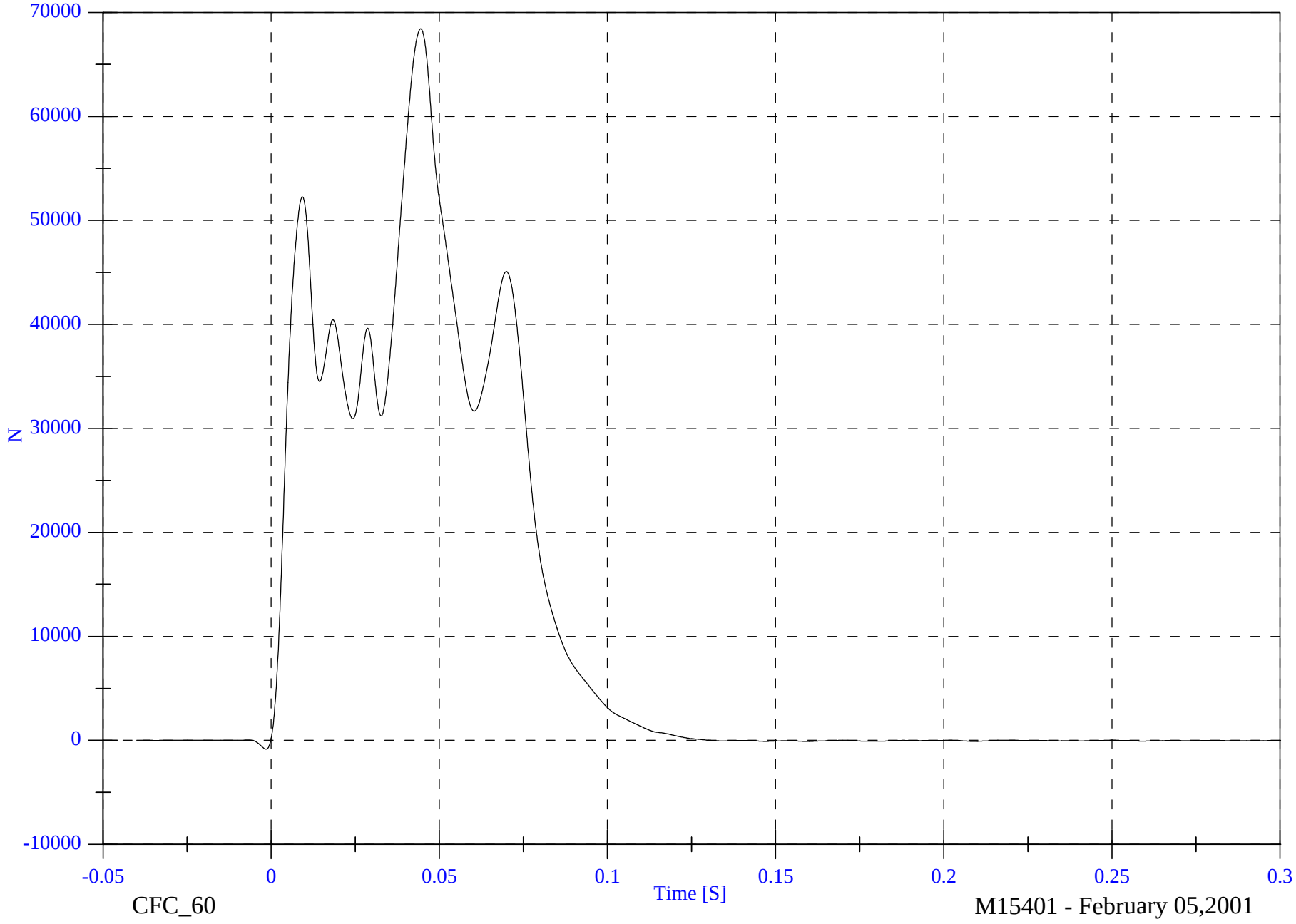
M15401 - February 05,2001

NCAP TEST #21 - 2001 Mazda Miata Convertible

Barrier Load Cell B6 Fx

Max: 68424.5 [N] at 0.044 [S]

Min: -845.3 [N] at -0.002 [S]



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8602-21

CFC_60

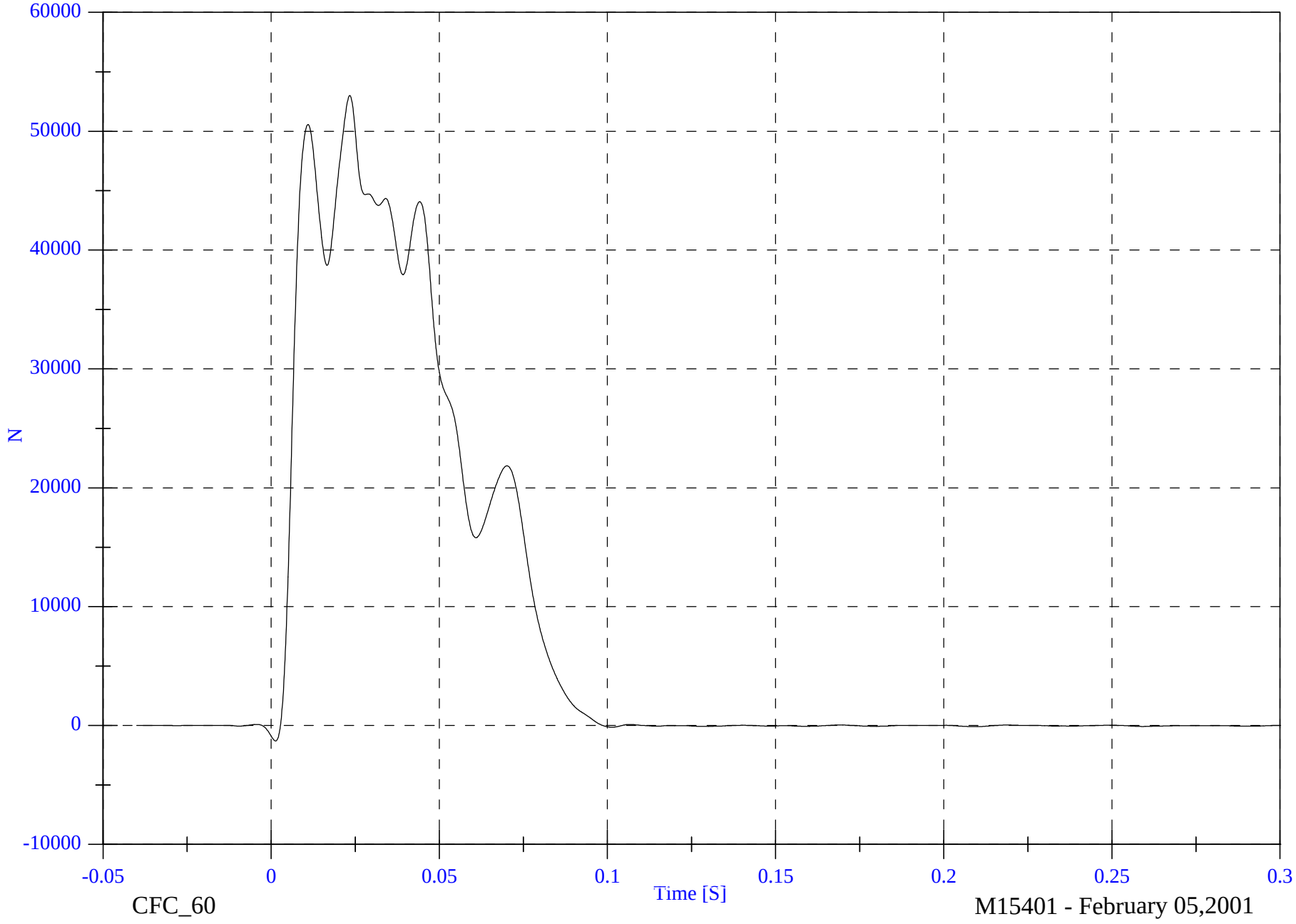
M15401 - February 05,2001

NCAP TEST #21 - 2001 Mazda Miata Convertible

Barrier Load Cell B7 Fx

Max: 53007.5 [N] at 0.023 [S]

Min: -1301.8 [N] at 0.001 [S]



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8602-21

CFC_60

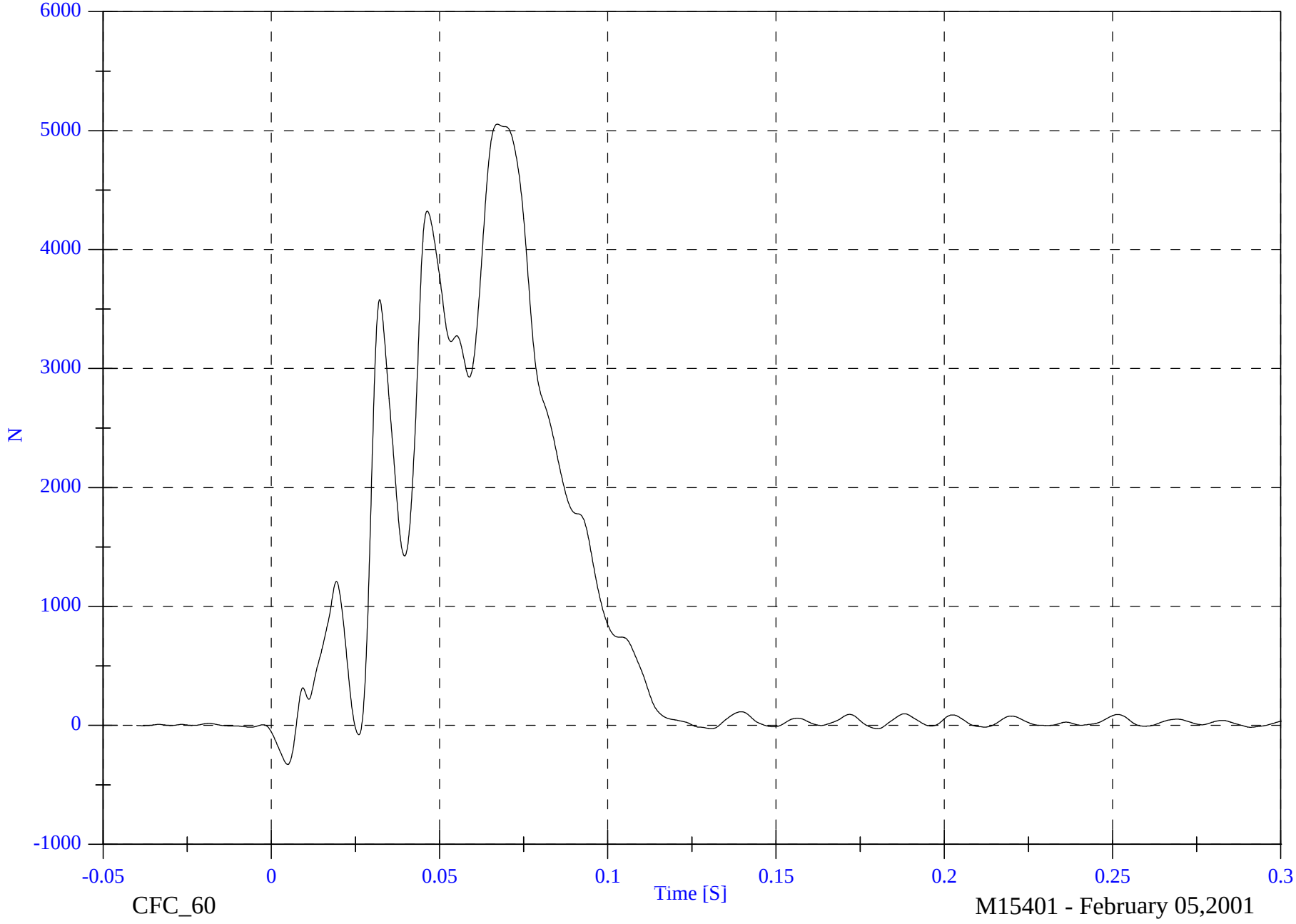
M15401 - February 05,2001

NCAP TEST #21 - 2001 Mazda Miata Convertible

Barrier Load Cell B8 Fx

Max: 5053.9 [N] at 0.067 [S]

Min: -329.3 [N] at 0.005 [S]



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8602-21

CFC_60

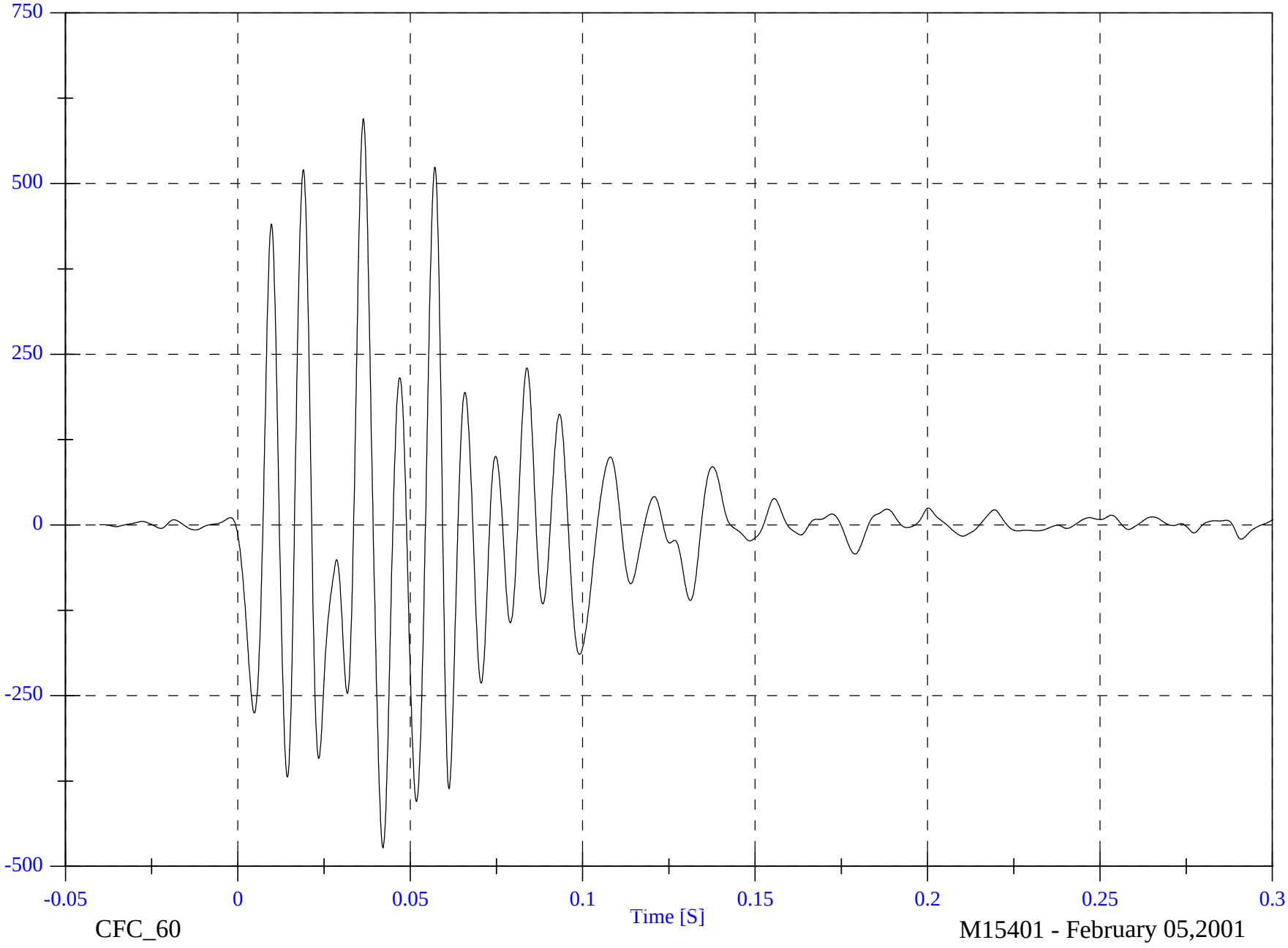
M15401 - February 05,2001

NCAP TEST #21 - 2001 Mazda Miata Convertible

Barrier Load Cell B9 Fx

Max: 594.9 [N] at 0.036 [S]

Min: -473.0 [N] at 0.042 [S]



CFC_60

M15401 - February 05,2001

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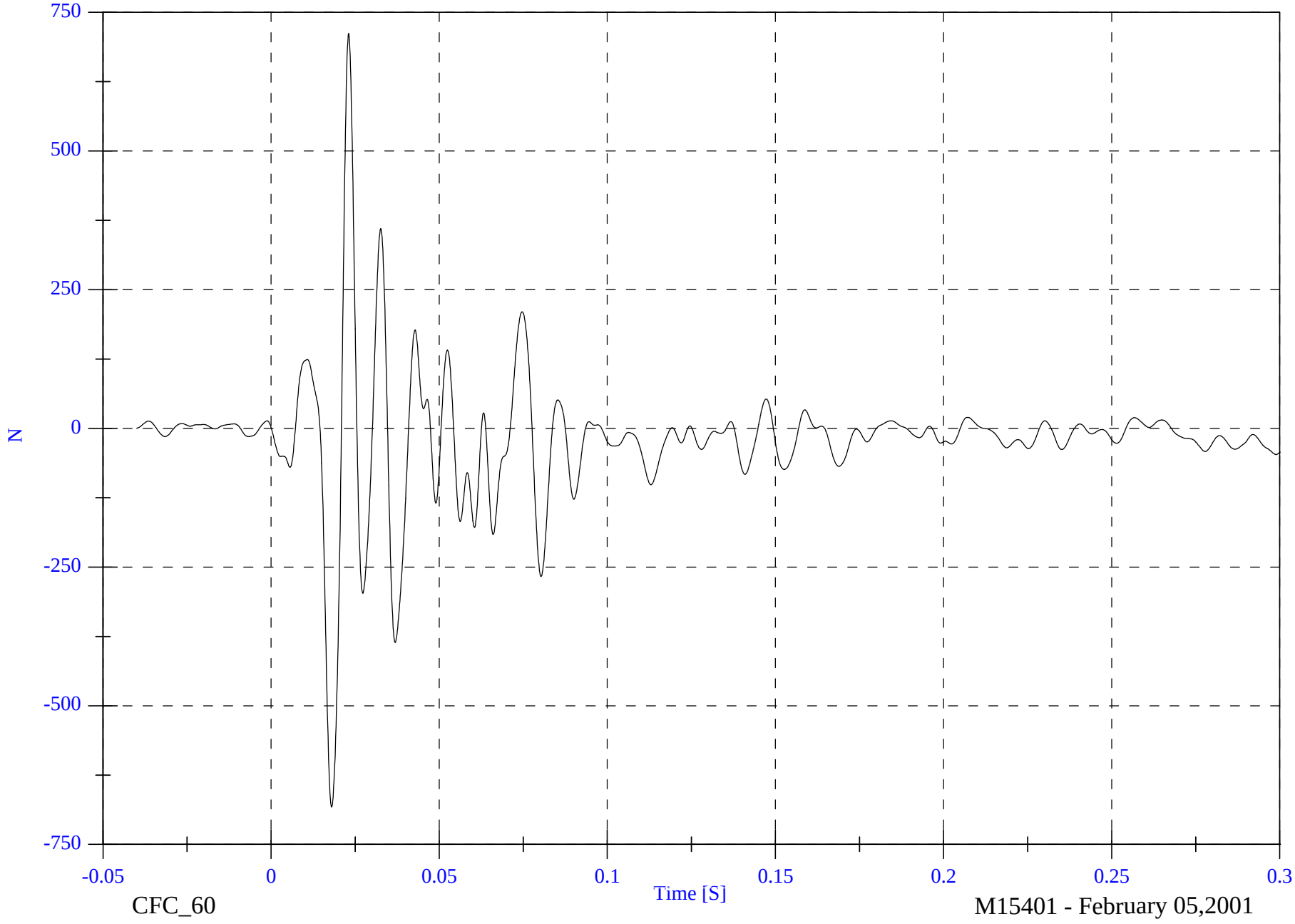
8602-21

NCAP TEST #21 - 2001 Mazda Miata Convertible

Barrier Load Cell C1 Fx

Max: 712.3 [N] at 0.023 [S]

Min: -682.8 [N] at 0.018 [S]



CFC_60

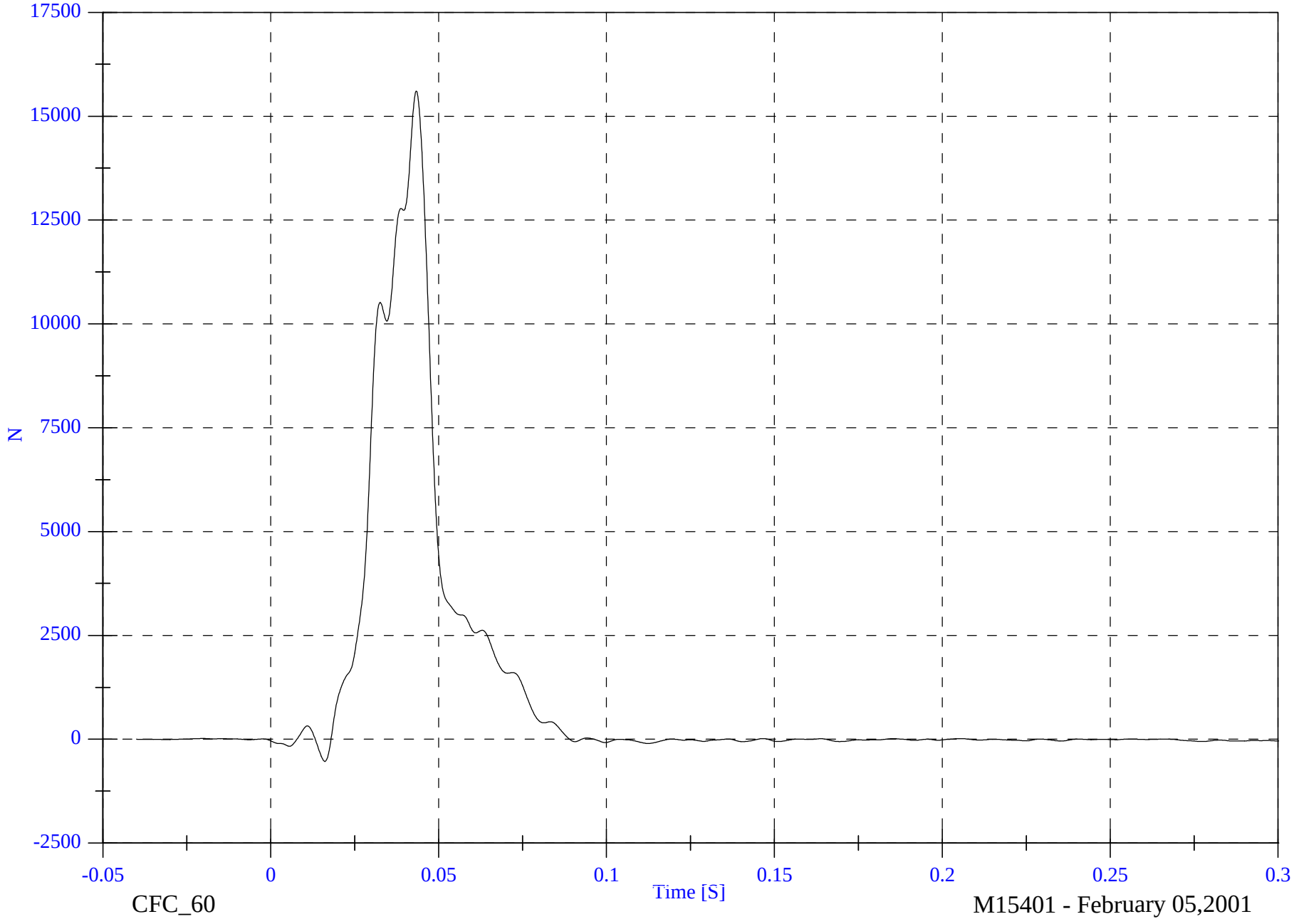
M15401 - February 05,2001

NCAP TEST #21 - 2001 Mazda Miata Convertible

Barrier Load Cell C2 Fx

Max: 15604.3 [N] at 0.043 [S]

Min: -532.8 [N] at 0.016 [S]



CFC_60

M15401 - February 05,2001

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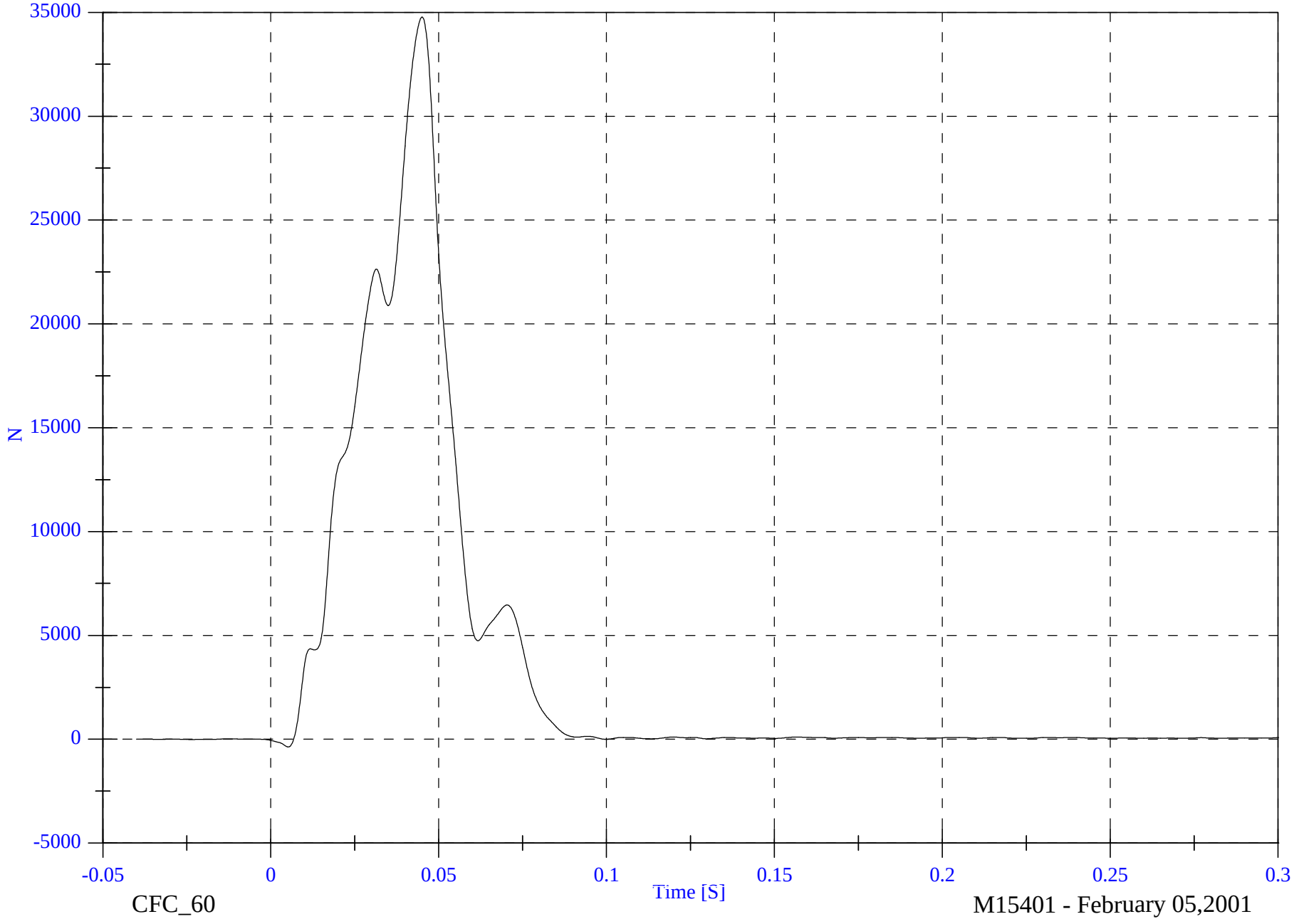
8602-21

NCAP TEST #21 - 2001 Mazda Miata Convertible

Barrier Load Cell C3 Fx

Max: 34776.3 [N] at 0.045 [S]

Min: -373.6 [N] at 0.005 [S]



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8602-21

CFC_60

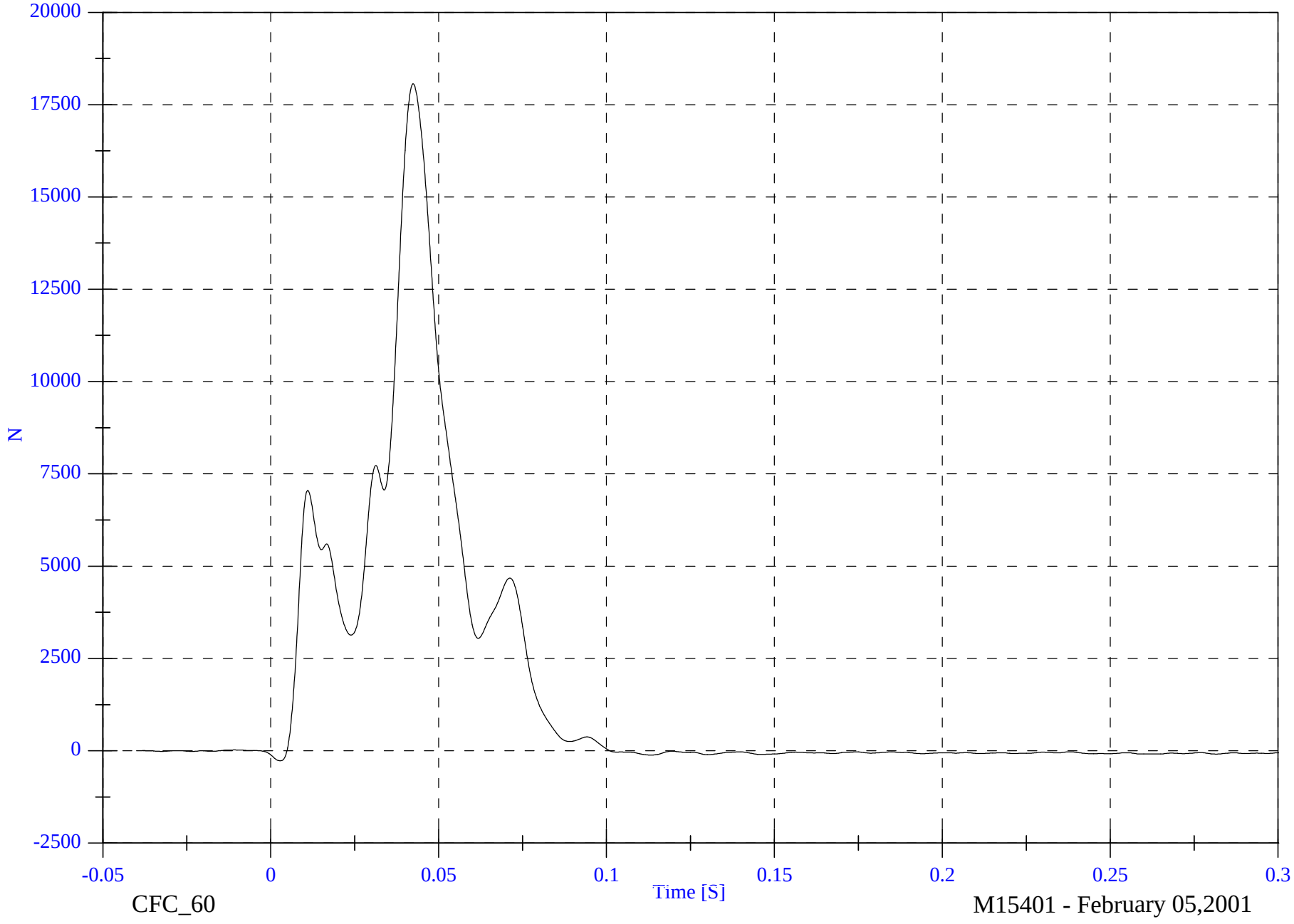
M15401 - February 05,2001

NCAP TEST #21 - 2001 Mazda Miata Convertible

Barrier Load Cell C4 Fx

Max: 18064.8 [N] at 0.042 [S]

Min: -270.9 [N] at 0.003 [S]



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8602-21

CFC_60

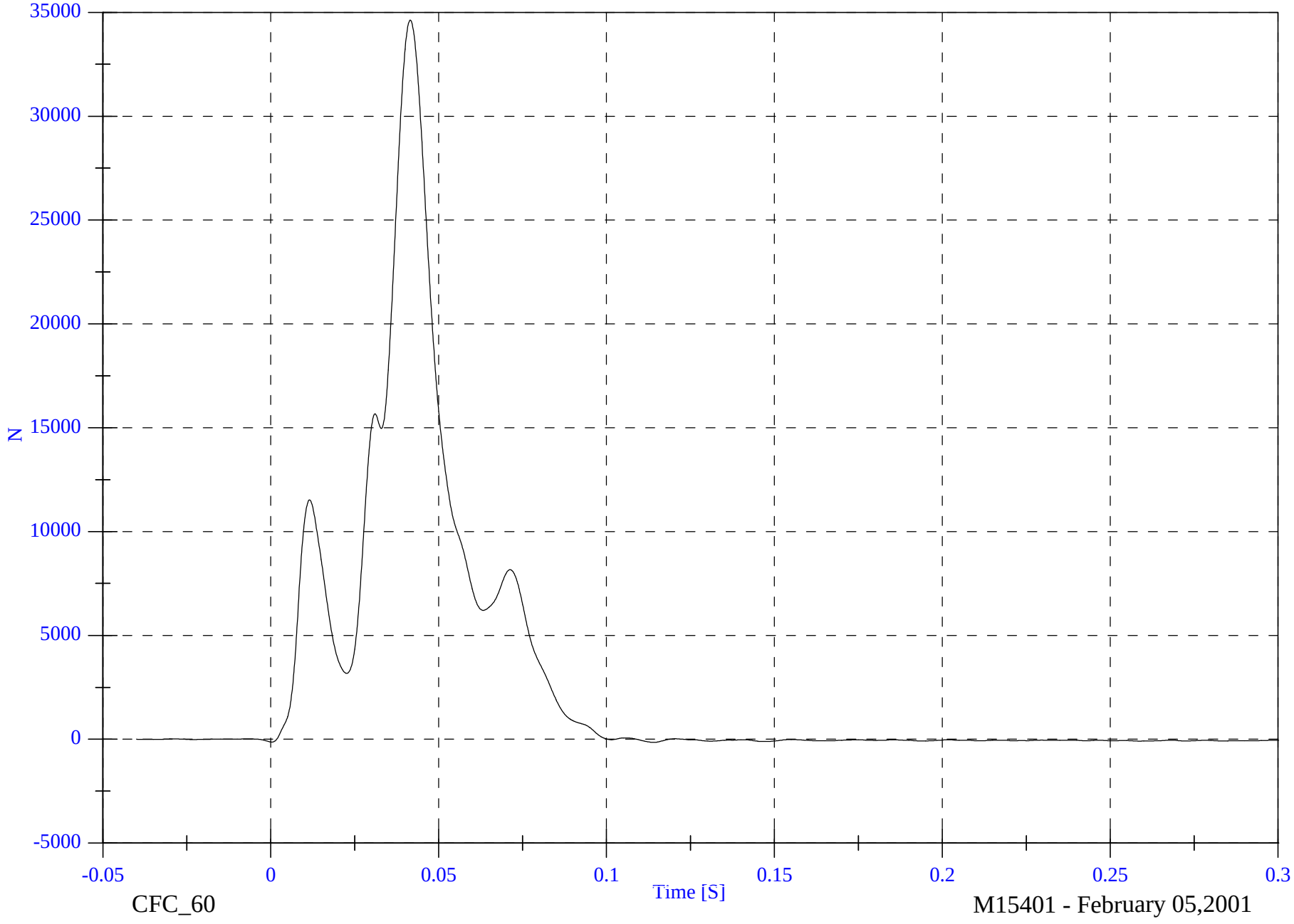
M15401 - February 05,2001

NCAP TEST #21 - 2001 Mazda Miata Convertible

Barrier Load Cell C5 Fx

Max: 34626.9 [N] at 0.041 [S]

Min: -150.7 [N] at 0.114 [S]



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8602-21

CFC_60

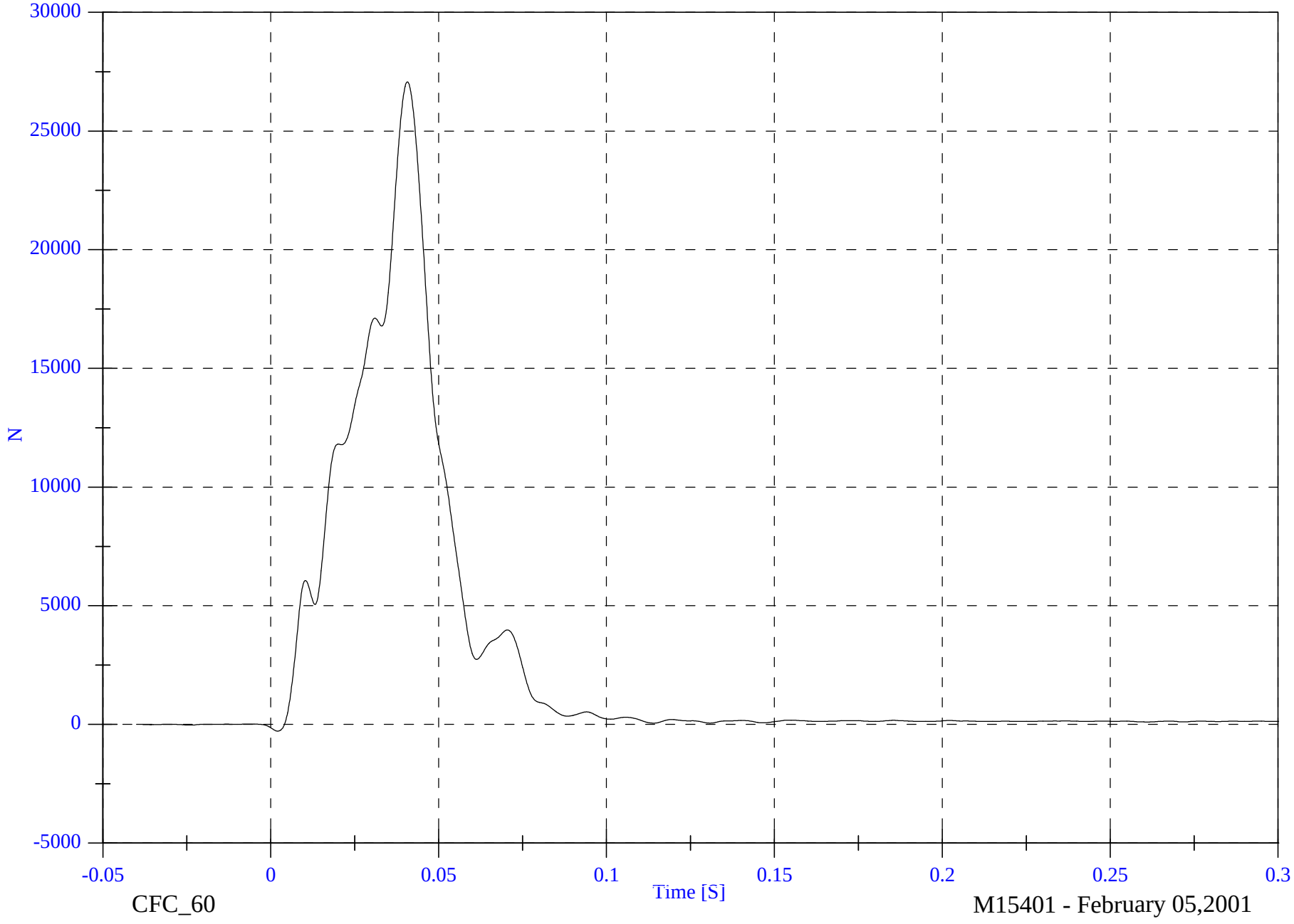
M15401 - February 05,2001

NCAP TEST #21 - 2001 Mazda Miata Convertible

Barrier Load Cell C6 Fx

Max: 27071.6 [N] at 0.041 [S]

Min: -283.5 [N] at 0.002 [S]



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8602-21

CFC_60

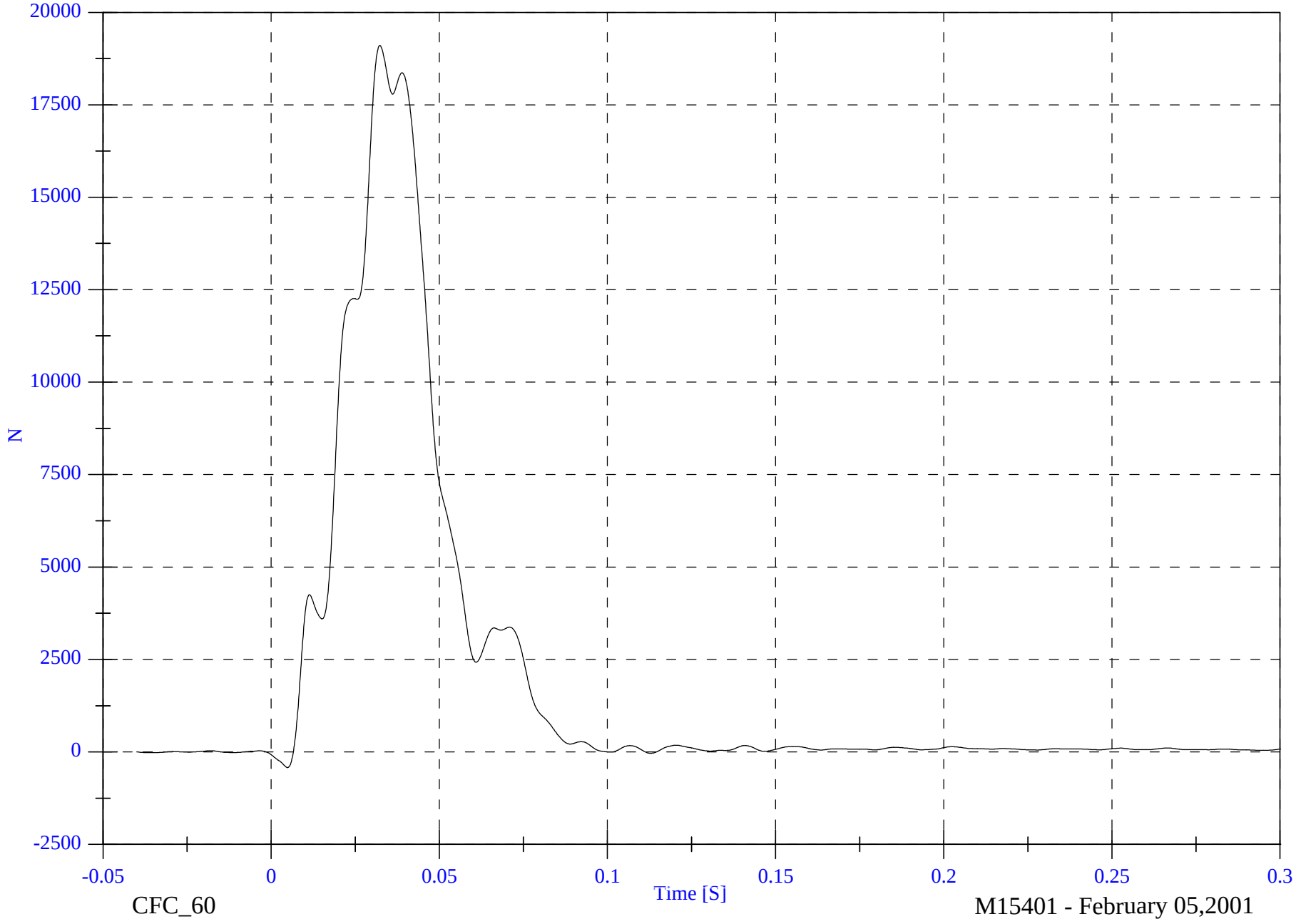
M15401 - February 05,2001

NCAP TEST #21 - 2001 Mazda Miata Convertible

Barrier Load Cell C7 Fx

Max: 19107.3 [N] at 0.032 [S]

Min: -422.3 [N] at 0.005 [S]



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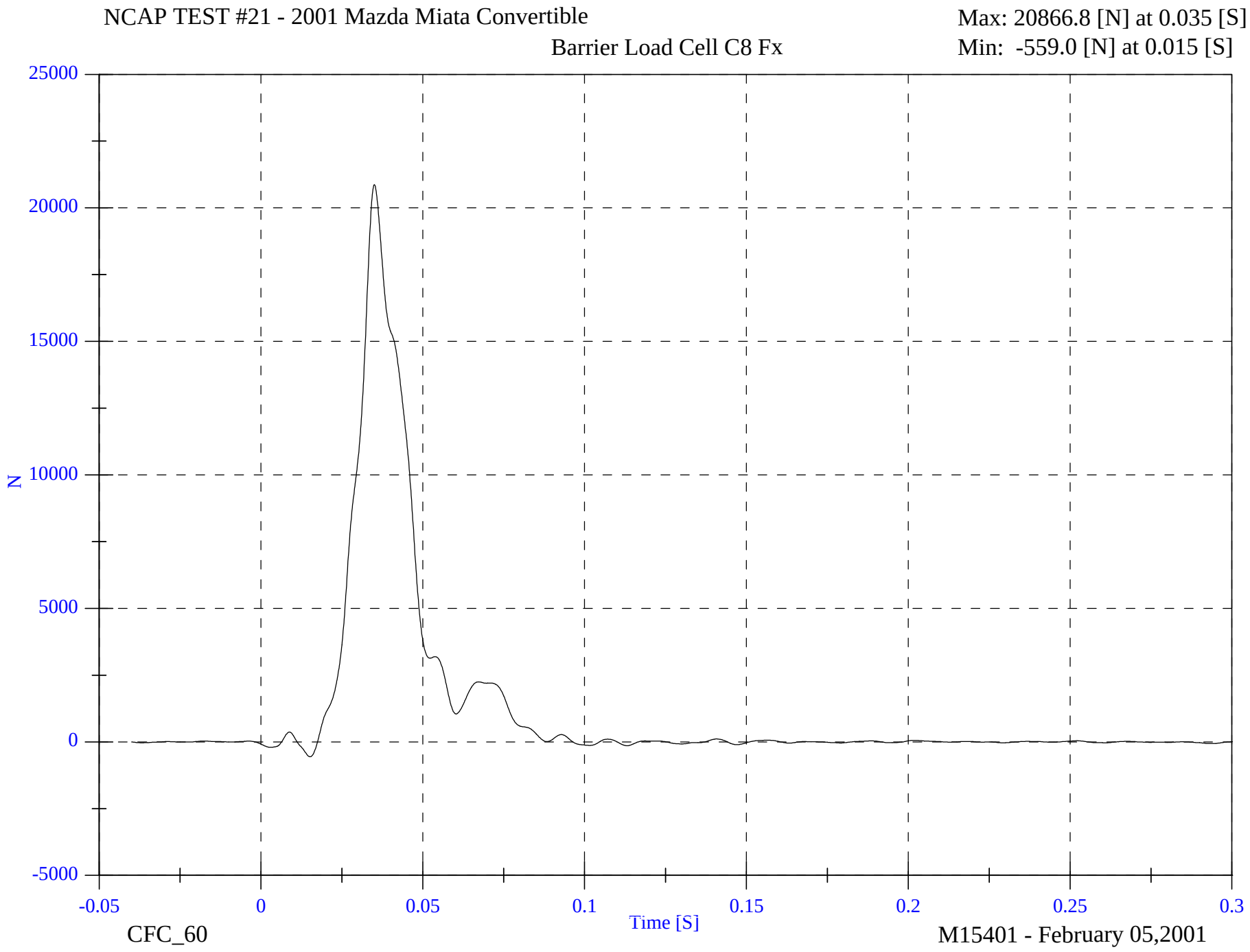
8602-21

CFC_60

M15401 - February 05,2001


NCAP TEST #21 - 2001 Mazda Miata Convertible
Barrier Load Cell C8 Fx
Max: 20866.8 [N] at 0.035 [S]
Min: -559.0 [N] at 0.015 [S]
25000
20000
15000
10000
5000
0
-5000
N
-0.05
0
0.05
0.1
0.15
0.2
0.25
0.3
Time [S]
CFC_60
M15401 - February 05,2001

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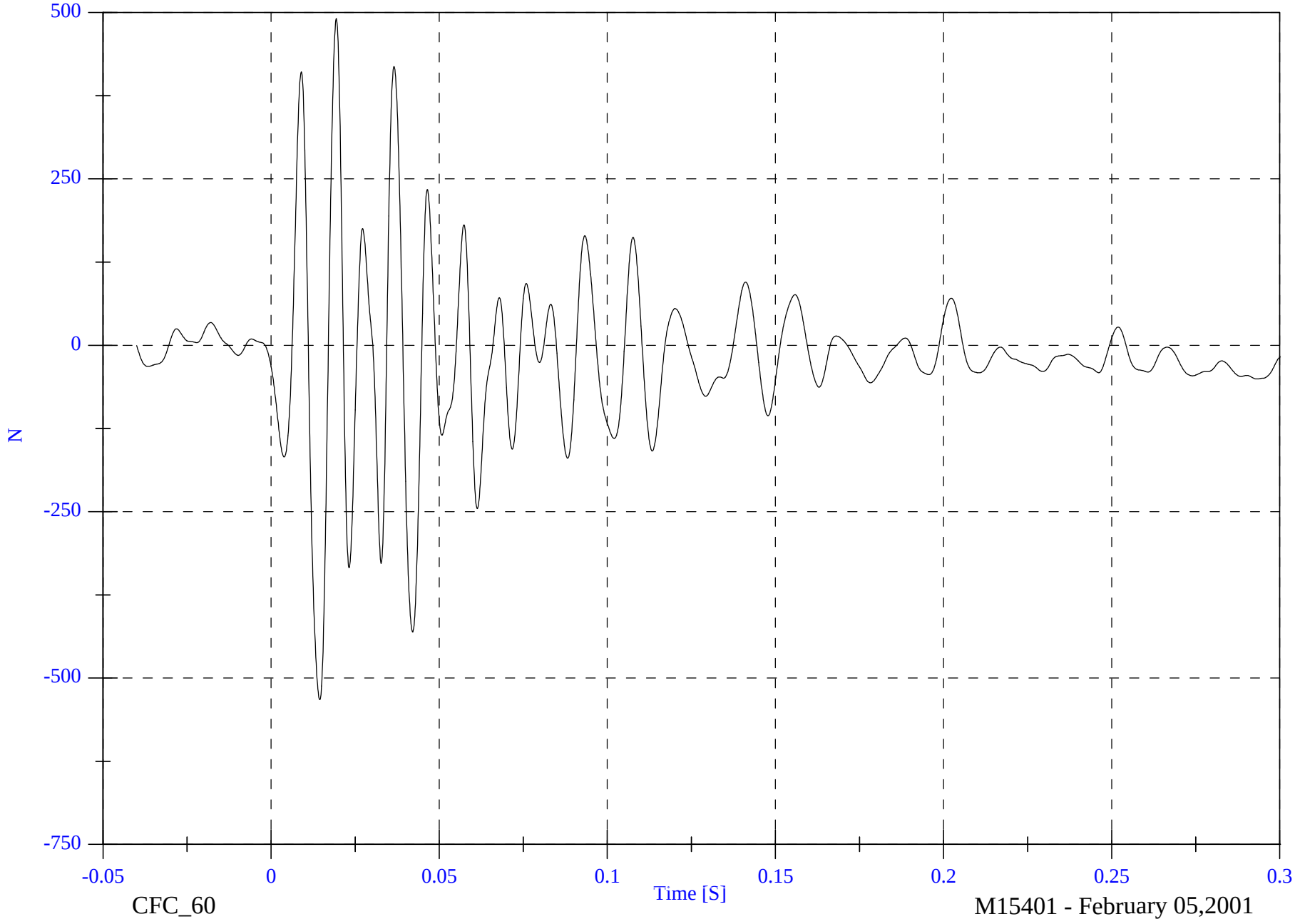
NCAP TEST #21 - 2001 Mazda Miata Convertible

Barrier Load Cell C9 Fx

Max: 490.7 [N] at 0.019 [S]

Min: -532.5 [N] at 0.014 [S]



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8602-21

CFC_60

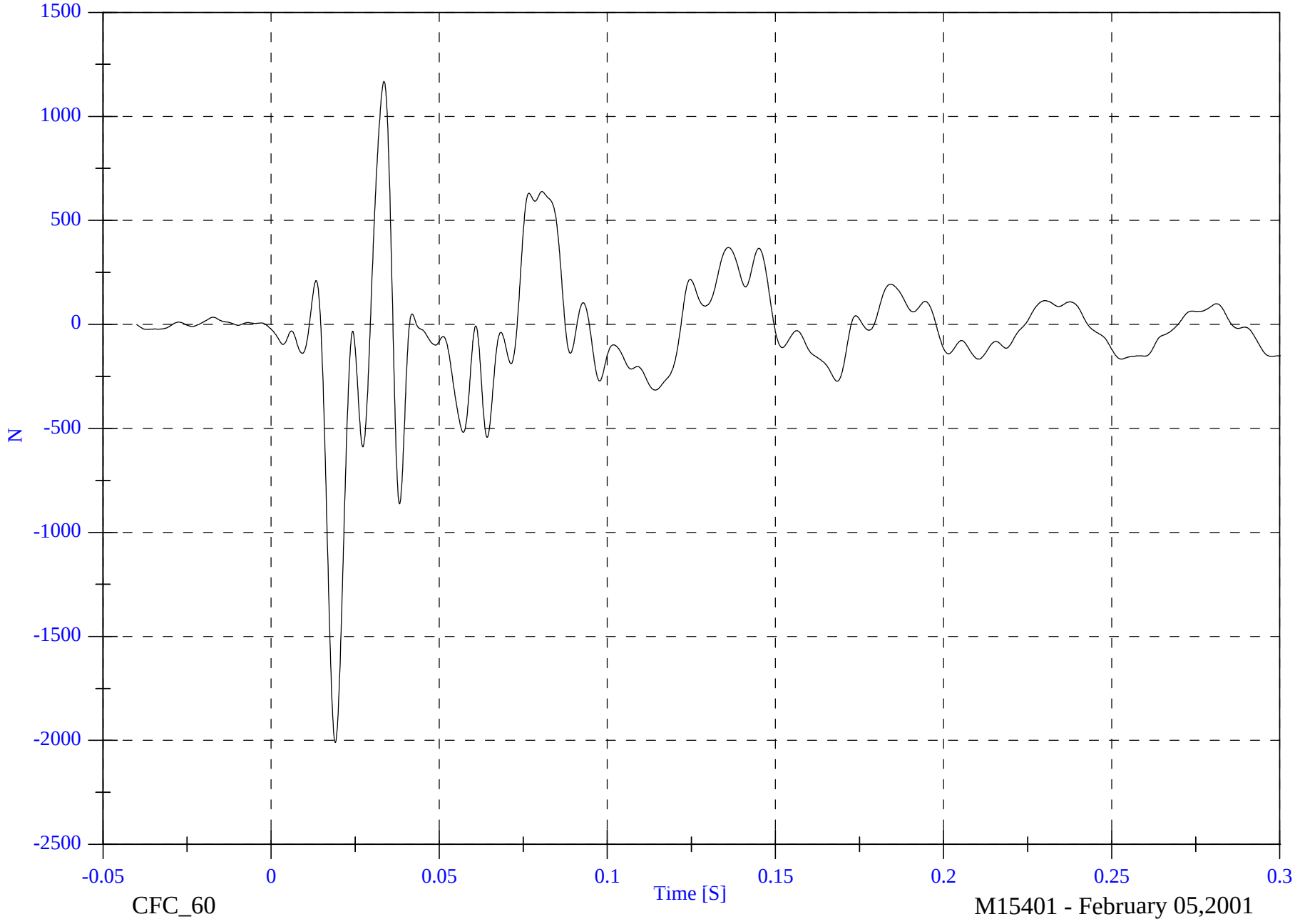
M15401 - February 05,2001

NCAP TEST #21 - 2001 Mazda Miata Convertible

Barrier Load Cell D1 Fx

Max: 1168.4 [N] at 0.034 [S]

Min: -2011.1 [N] at 0.019 [S]



CFC_60

M15401 - February 05,2001

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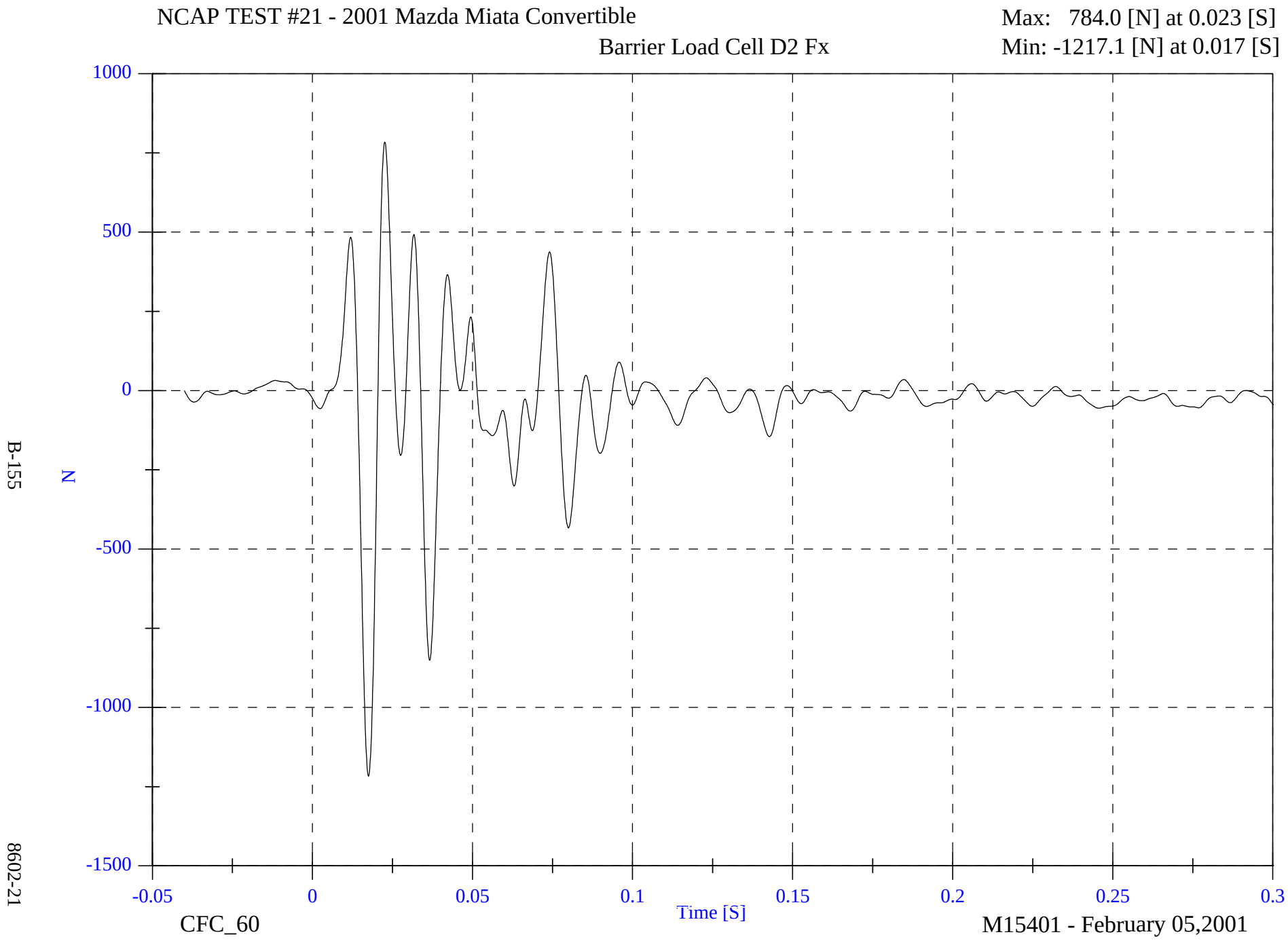
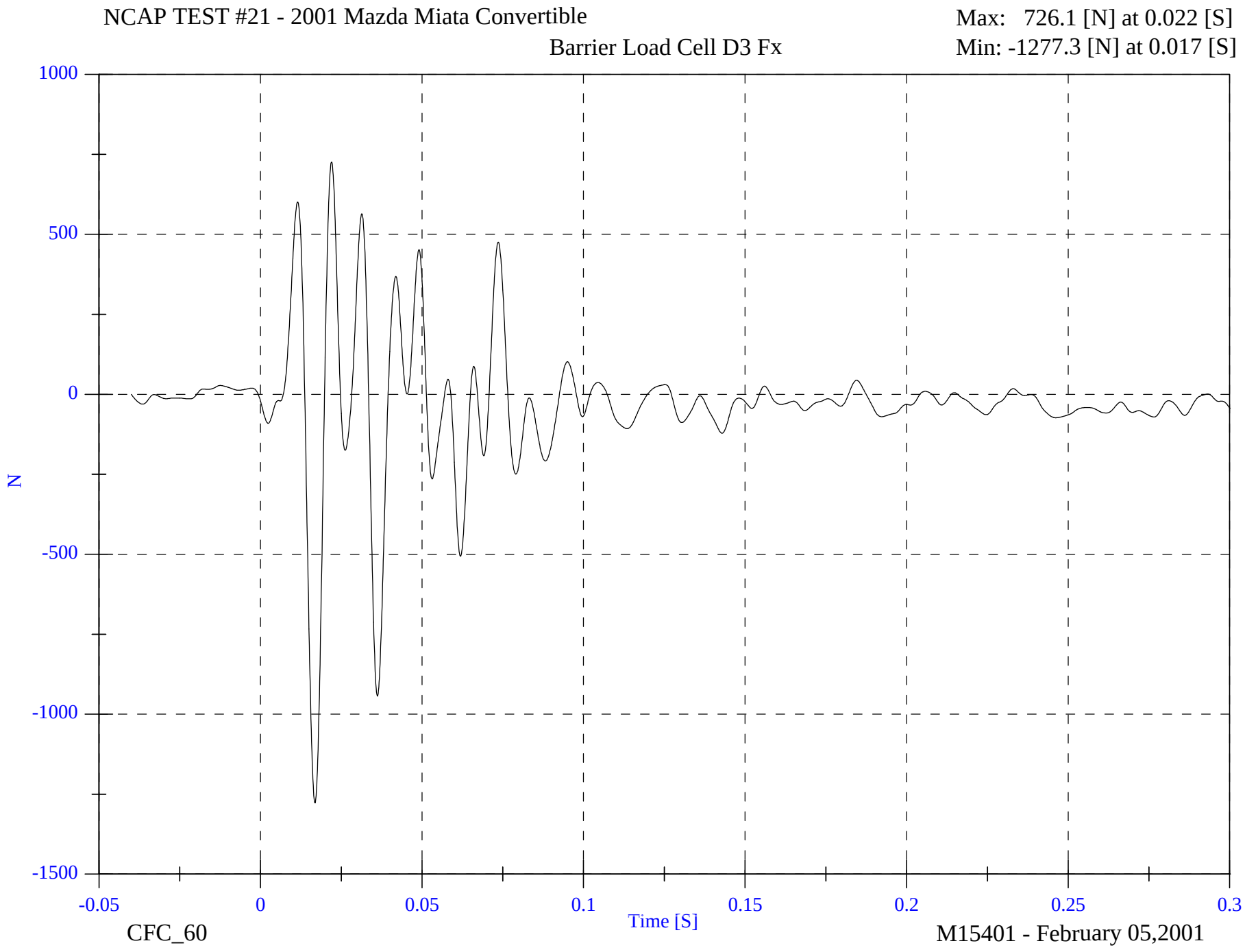
8602-21


NCAP TEST #21 - 2001 Mazda Miata Convertible
Barrier Load Cell D2 Fx
Max: 784.0 [N] at 0.023 [S]
Min: -1217.1 [N] at 0.017 [S]
1000
500
0
-500
-1000
-1500
N
-0.05
0
0.05
0.1
0.15
0.2
0.25
0.3
Time [S]
CFC_60
M15401 - February 05,2001

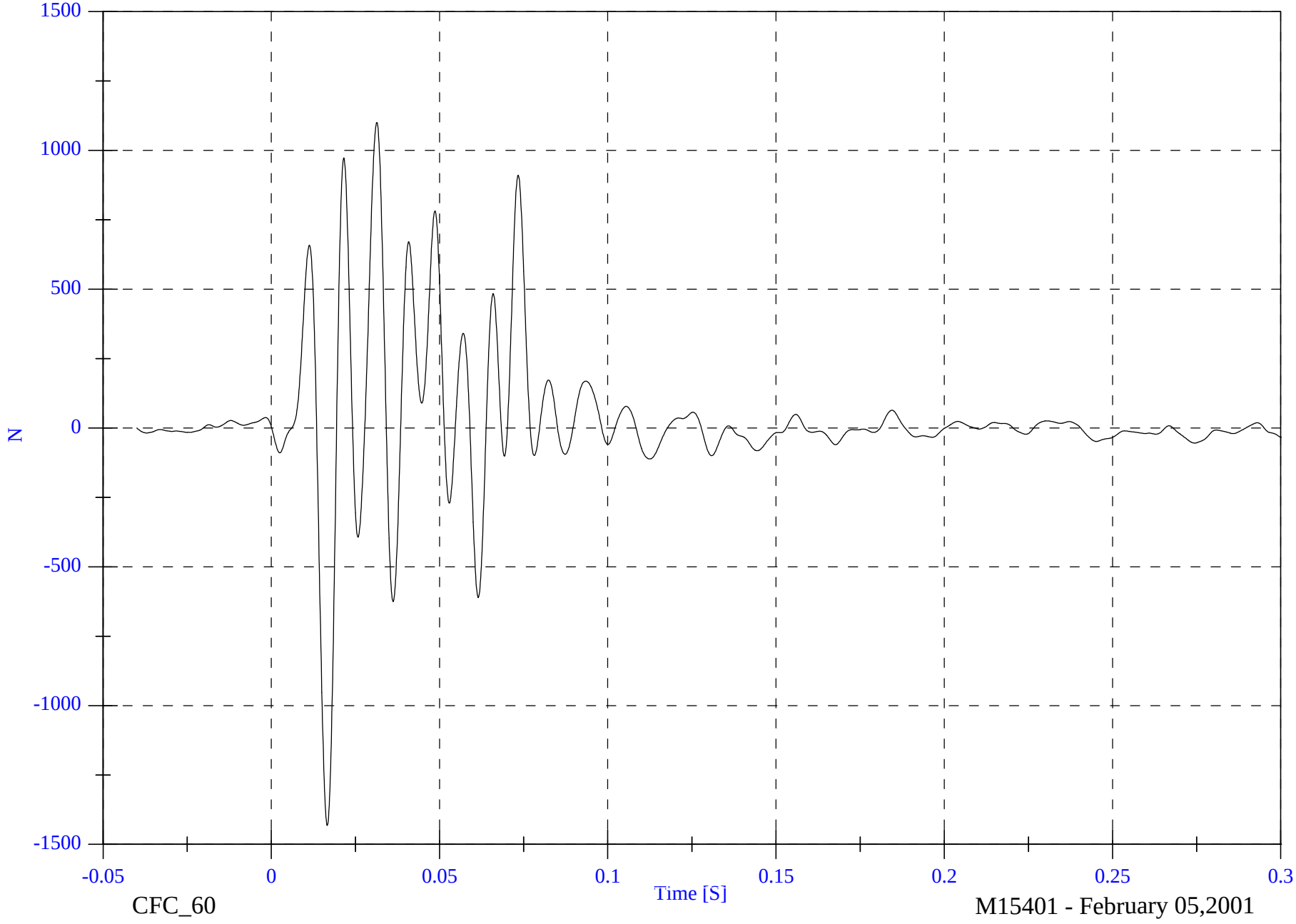

NCAP TEST #21 - 2001 Mazda Miata Convertible
Barrier Load Cell D3 Fx
Max: 726.1 [N] at 0.022 [S]
Min: -1277.3 [N] at 0.017 [S]
1000
500
0
-500
-1000
-1500
N
-0.05
0
0.05
0.1
0.15
0.2
0.25
0.3
Time [S]
CFC_60
M15401 - February 05,2001

NCAP TEST #21 - 2001 Mazda Miata Convertible

Barrier Load Cell D4 Fx

Max: 1101.2 [N] at 0.031 [S]

Min: -1432.2 [N] at 0.017 [S]



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8602-21

CFC_60

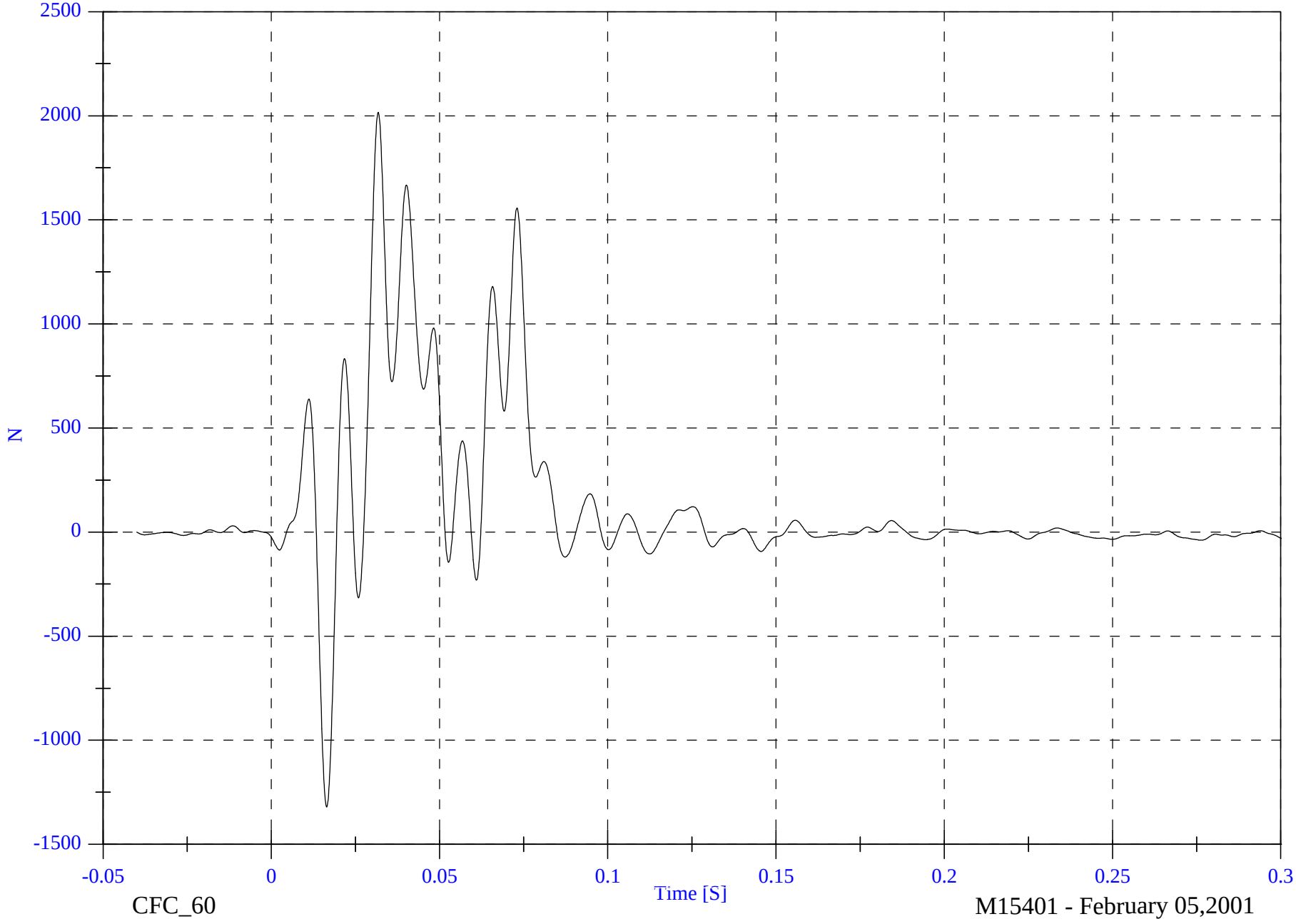
M15401 - February 05,2001

NCAP TEST #21 - 2001 Mazda Miata Convertible

Barrier Load Cell D5 Fx

Max: 2016.1 [N] at 0.032 [S]

Min: -1320.9 [N] at 0.016 [S]



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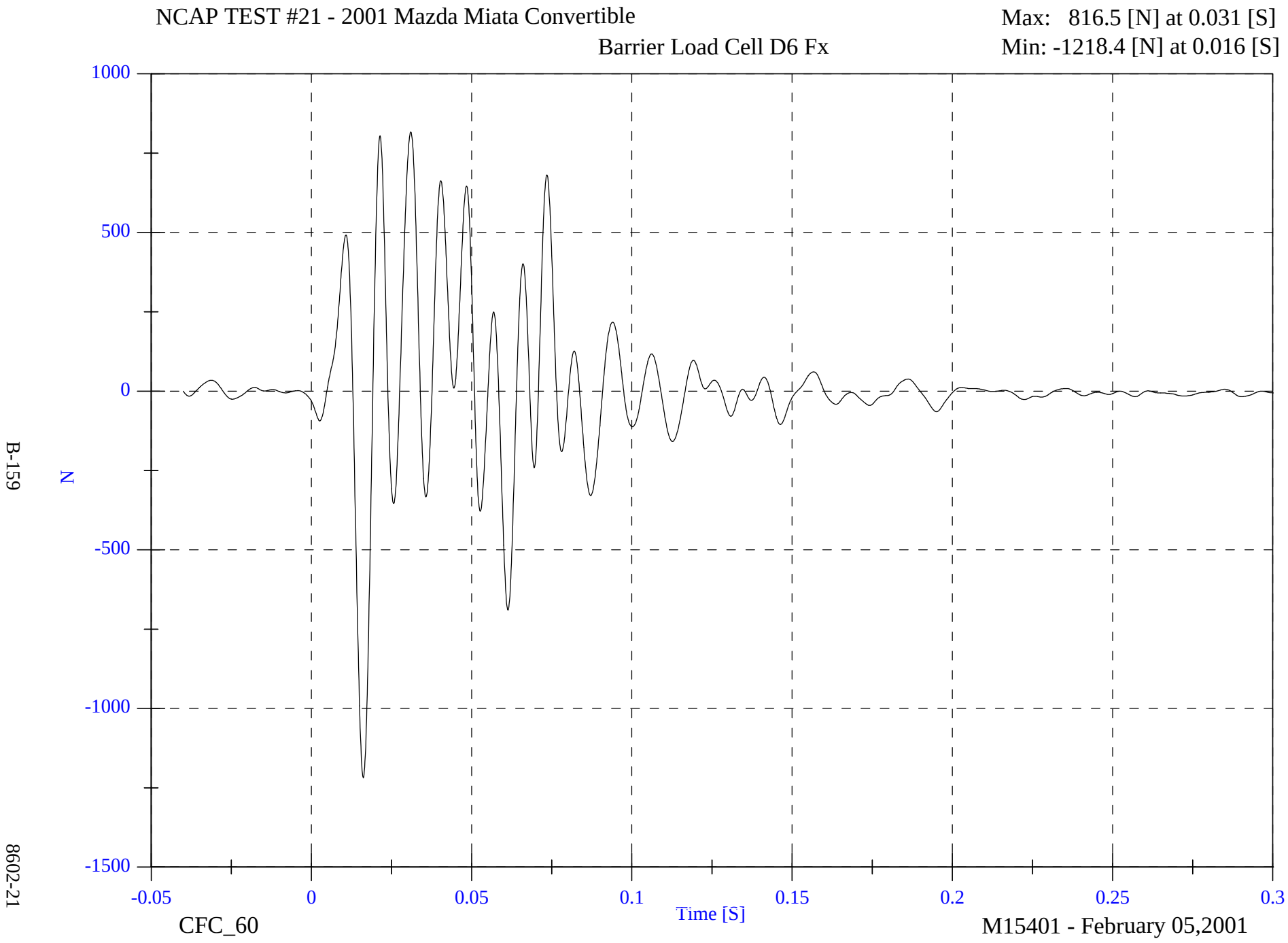
8602-21

CFC_60

M15401 - February 05,2001

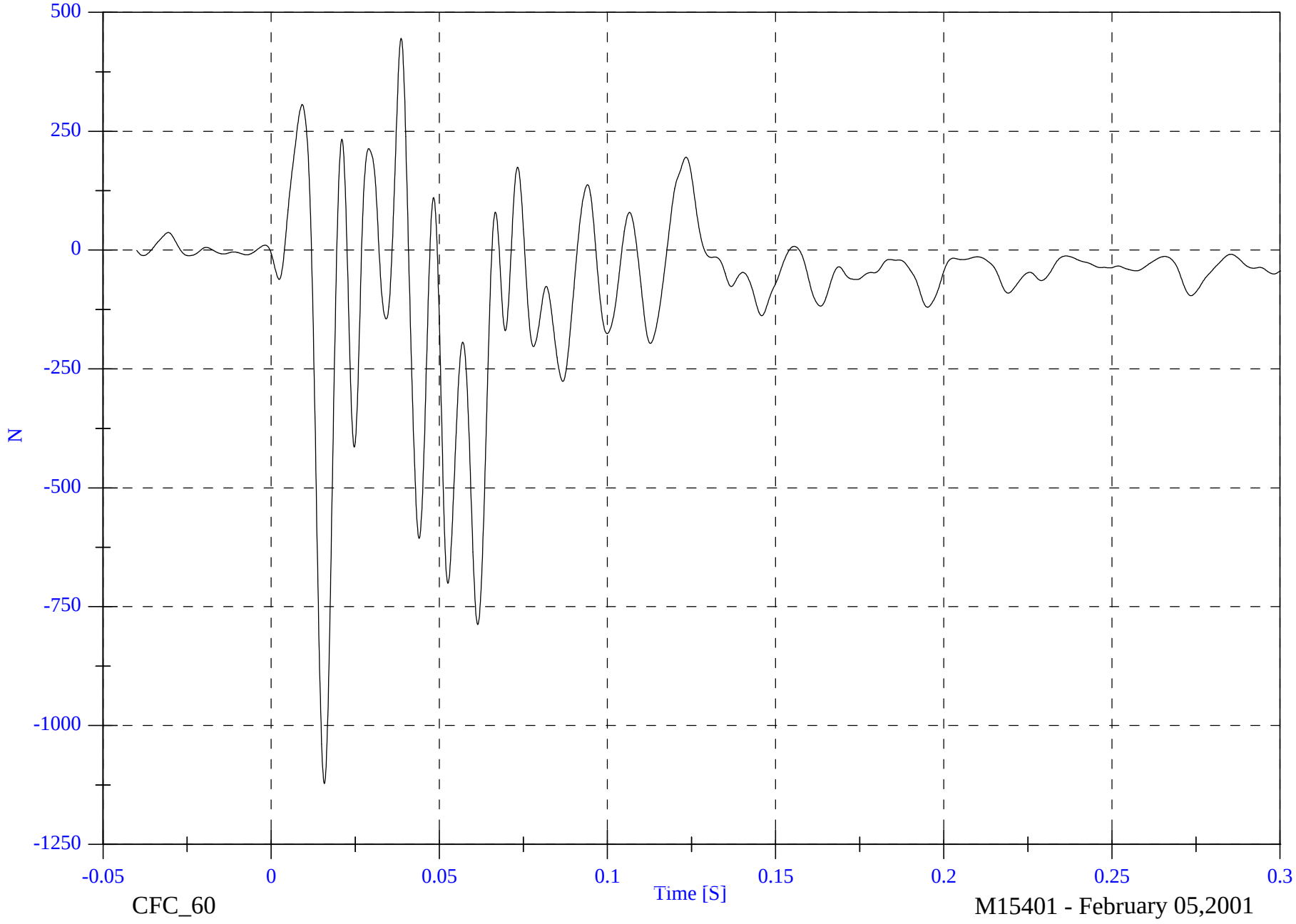

NCAP TEST #21 - 2001 Mazda Miata Convertible
Barrier Load Cell D6 Fx
Max: 816.5 [N] at 0.031 [S]
Min: -1218.4 [N] at 0.016 [S]
1000
500
0
-500
-1000
-1500
N
-0.05
0
0.05
0.1
0.15
0.2
0.25
0.3
Time [S]
CFC_60
M15401 - February 05,2001

NCAP TEST #21 - 2001 Mazda Miata Convertible

Barrier Load Cell D7 Fx

Max: 445.6 [N] at 0.039 [S]

Min: -1122.2 [N] at 0.016 [S]



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8602-21

CFC_60

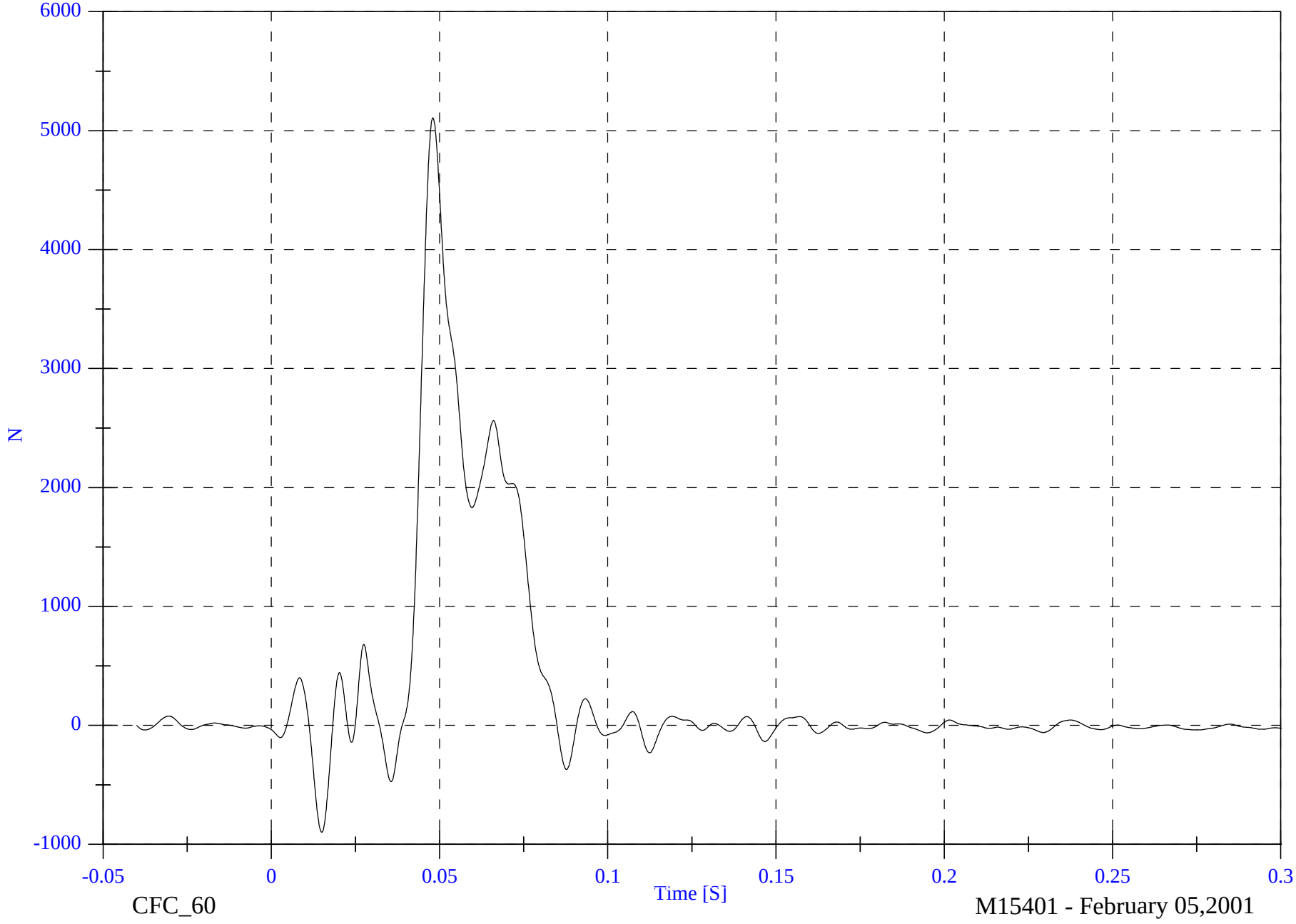
M15401 - February 05,2001

NCAP TEST #21 - 2001 Mazda Miata Convertible

Barrier Load Cell D8 Fx

Max: 5107.4 [N] at 0.048 [S]

Min: -898.6 [N] at 0.015 [S]



B-161

8602-21

CFC_60

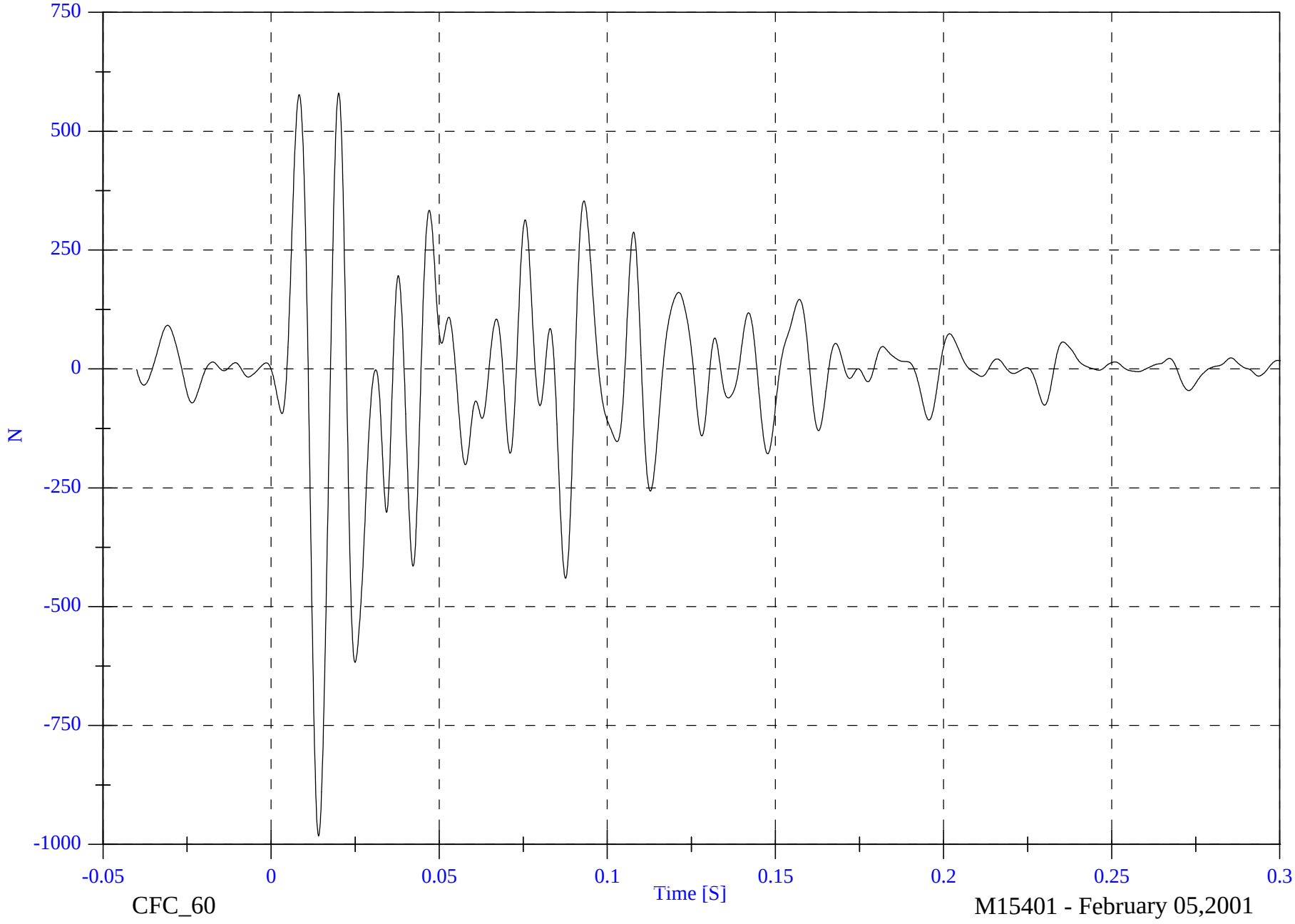
M15401 - February 05,2001

NCAP TEST #21 - 2001 Mazda Miata Convertible

Barrier Load Cell D9 Fx

Max: 580.4 [N] at 0.020 [S]

Min: -982.6 [N] at 0.014 [S]



B-162

8602-21

CFC_60

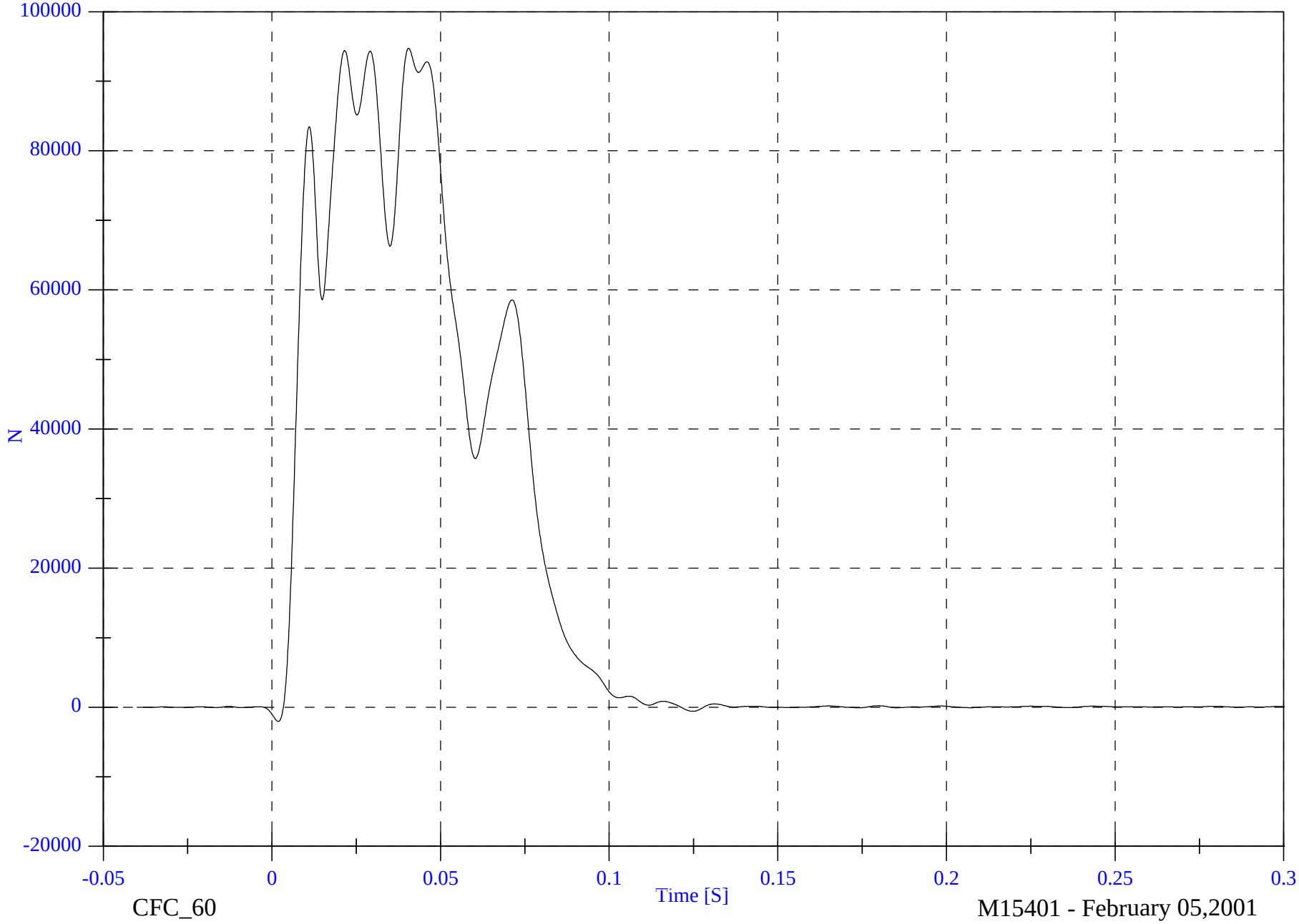
M15401 - February 05,2001

NCAP TEST #21 - 2001 Mazda Miata Convertible

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

Max: 94746.6 [N] at 0.040 [S]

Min: -2057.3 [N] at 0.002 [S]



B-163

8602-21

CFC_60

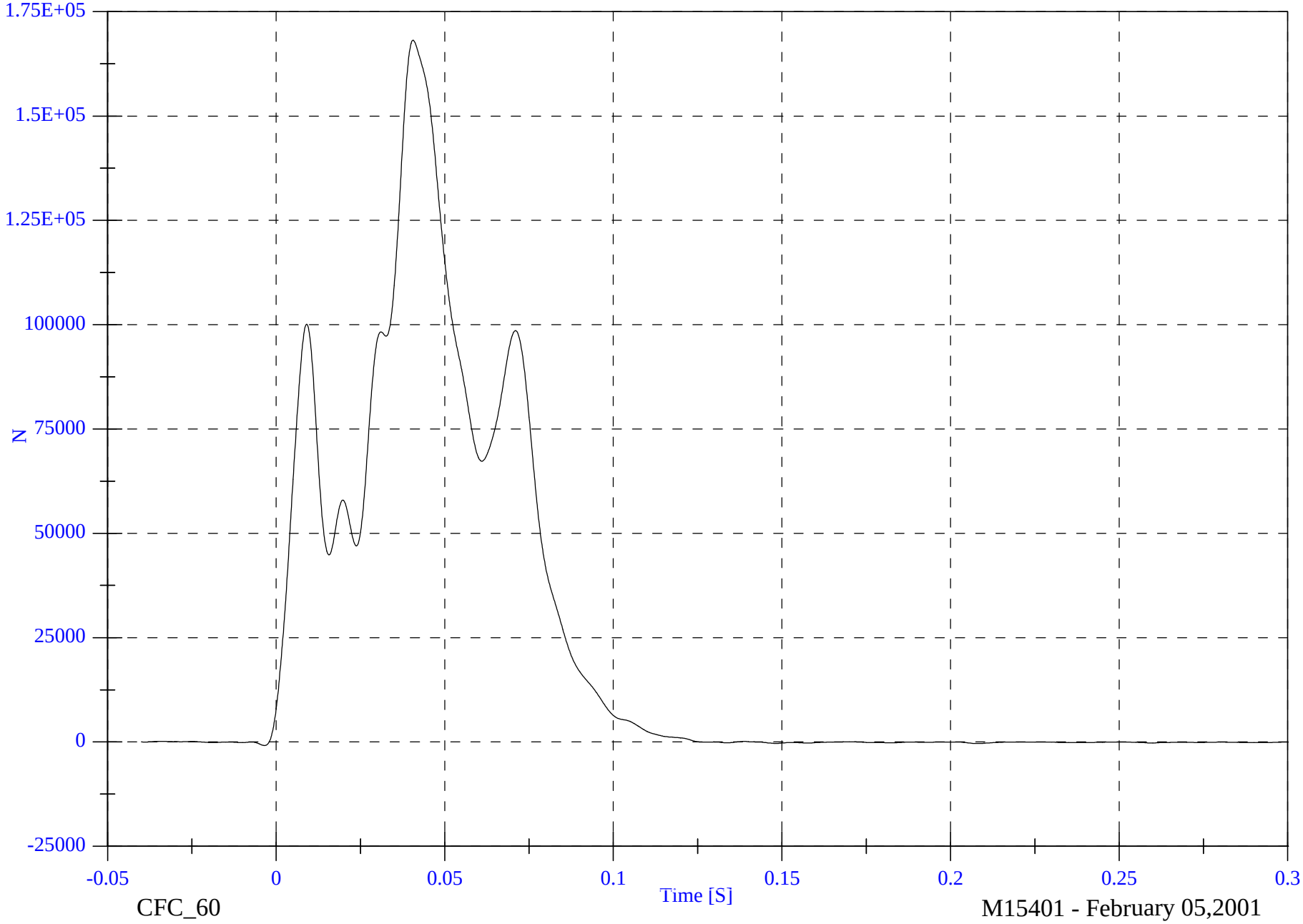
M15401 - February 05,2001

NCAP TEST #21 - 2001 Mazda Miata Convertible

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

Max: 168166.7 [N] at 0.041 [S]

Min: -857.7 [N] at -0.004 [S]

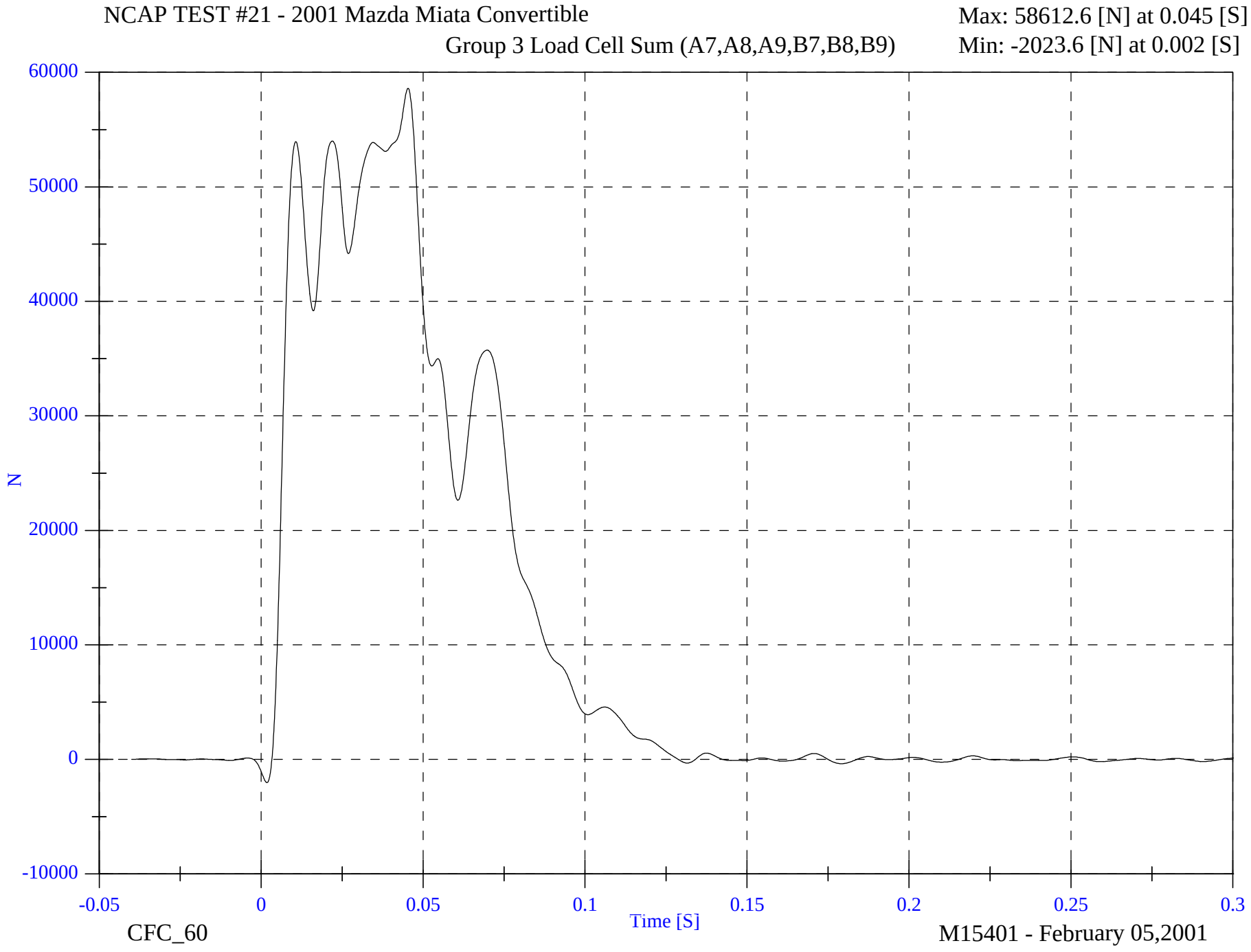


B-164

8602-21

CFC_60

M15401 - February 05,2001

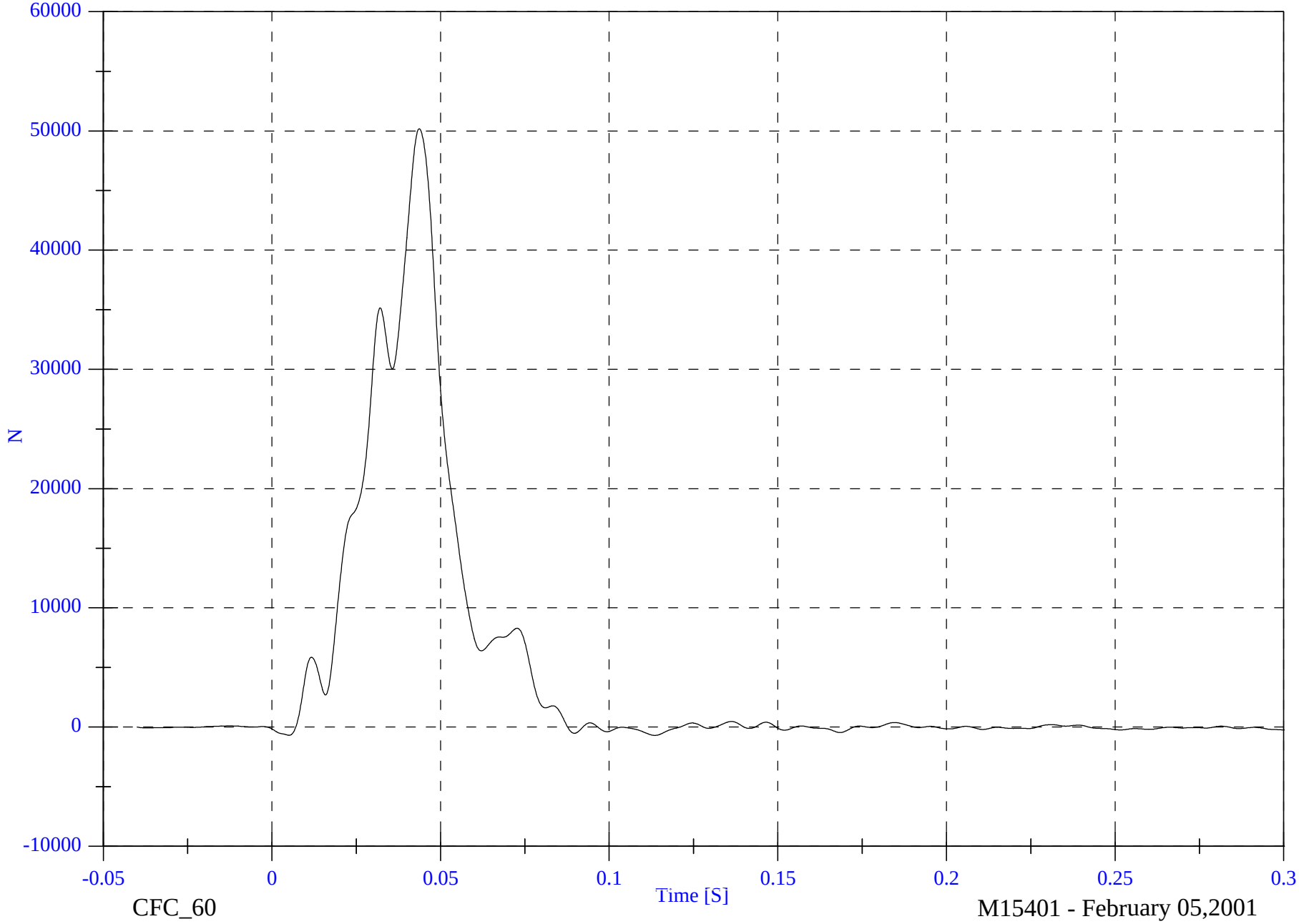

NCAP TEST #21 - 2001 Mazda Miata Convertible
Group 3 Load Cell Sum (A7,A8,A9,B7,B8,B9)
Max: 58612.6 [N] at 0.045 [S]
Min: -2023.6 [N] at 0.002 [S]
60000
50000
40000
30000
20000
10000
0
-10000
N
-0.05
0
0.05
0.1
0.15
0.2
0.25
0.3
Time [S]
CFC_60
M15401 - February 05,2001

NCAP TEST #21 - 2001 Mazda Miata Convertible

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

Max: 50186.2 [N] at 0.044 [S]

Min: -698.9 [N] at 0.113 [S]



B-166

8602-21

CFC_60

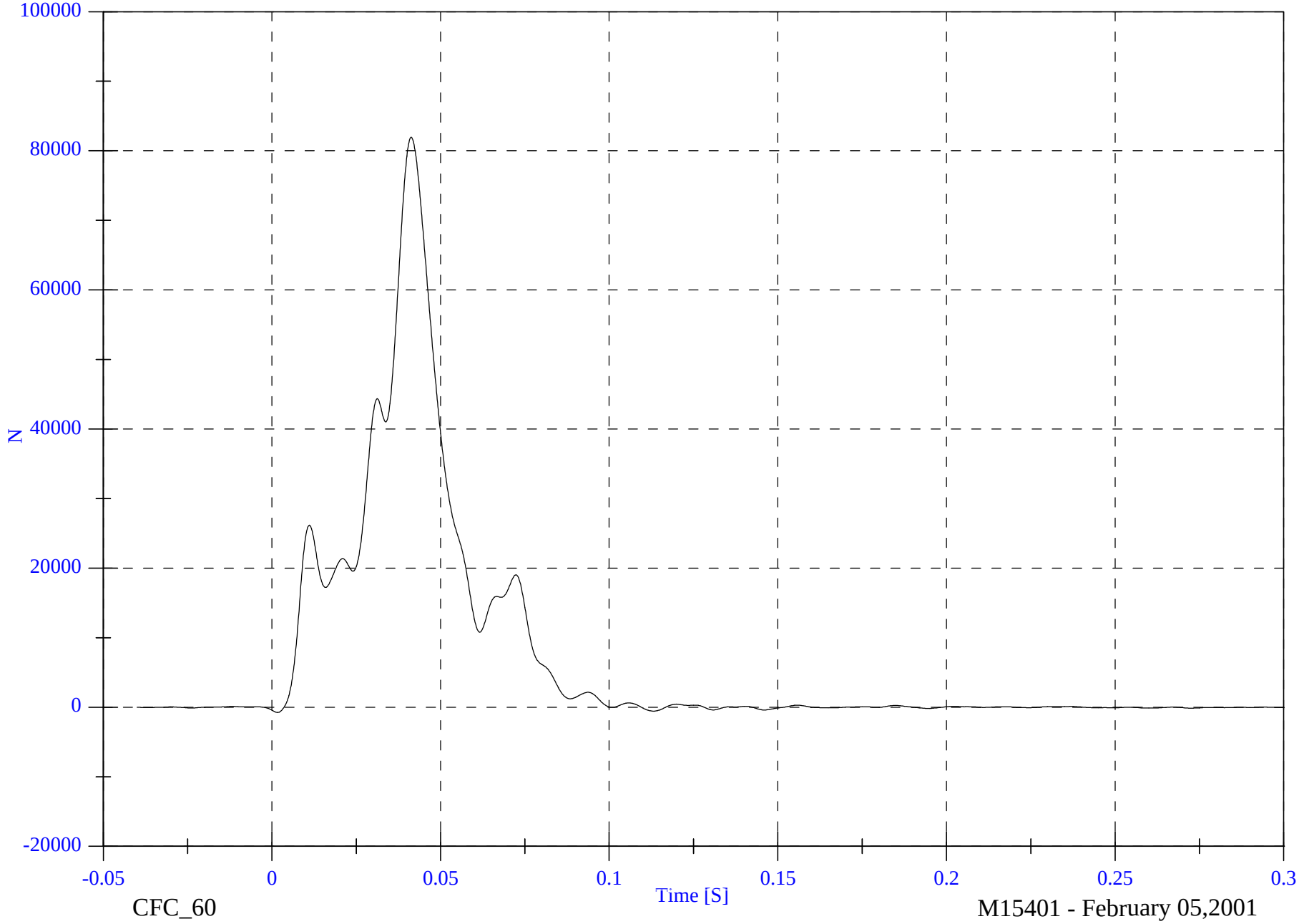
M15401 - February 05,2001

NCAP TEST #21 - 2001 Mazda Miata Convertible

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

Max: 81939.3 [N] at 0.041 [S]

Min: -764.4 [N] at 0.002 [S]



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8602-21

CFC_60

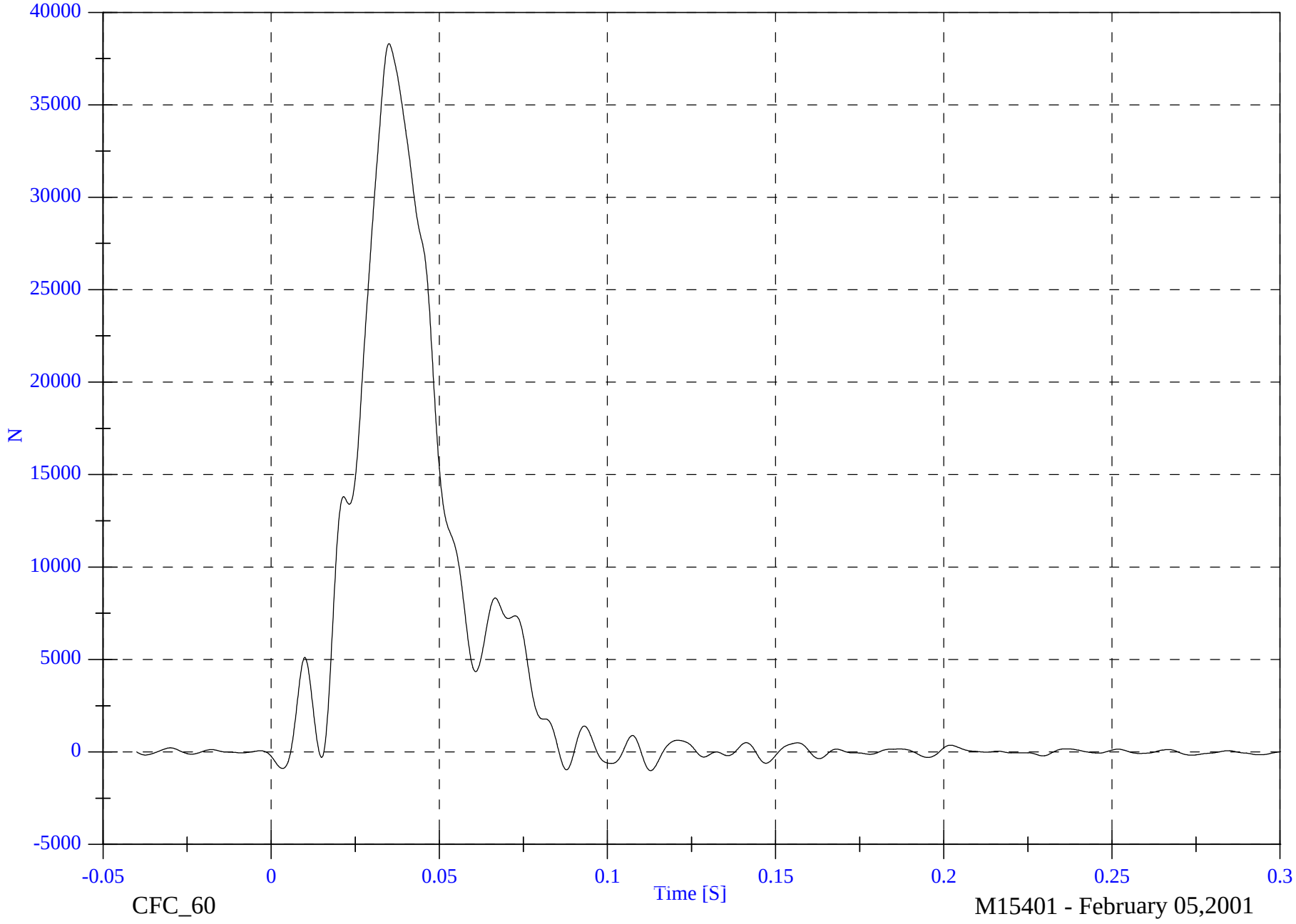
M15401 - February 05,2001

NCAP TEST #21 - 2001 Mazda Miata Convertible

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

Max: 38306.4 [N] at 0.035 [S]

Min: -1012.1 [N] at 0.113 [S]



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8602-21

CFC_60

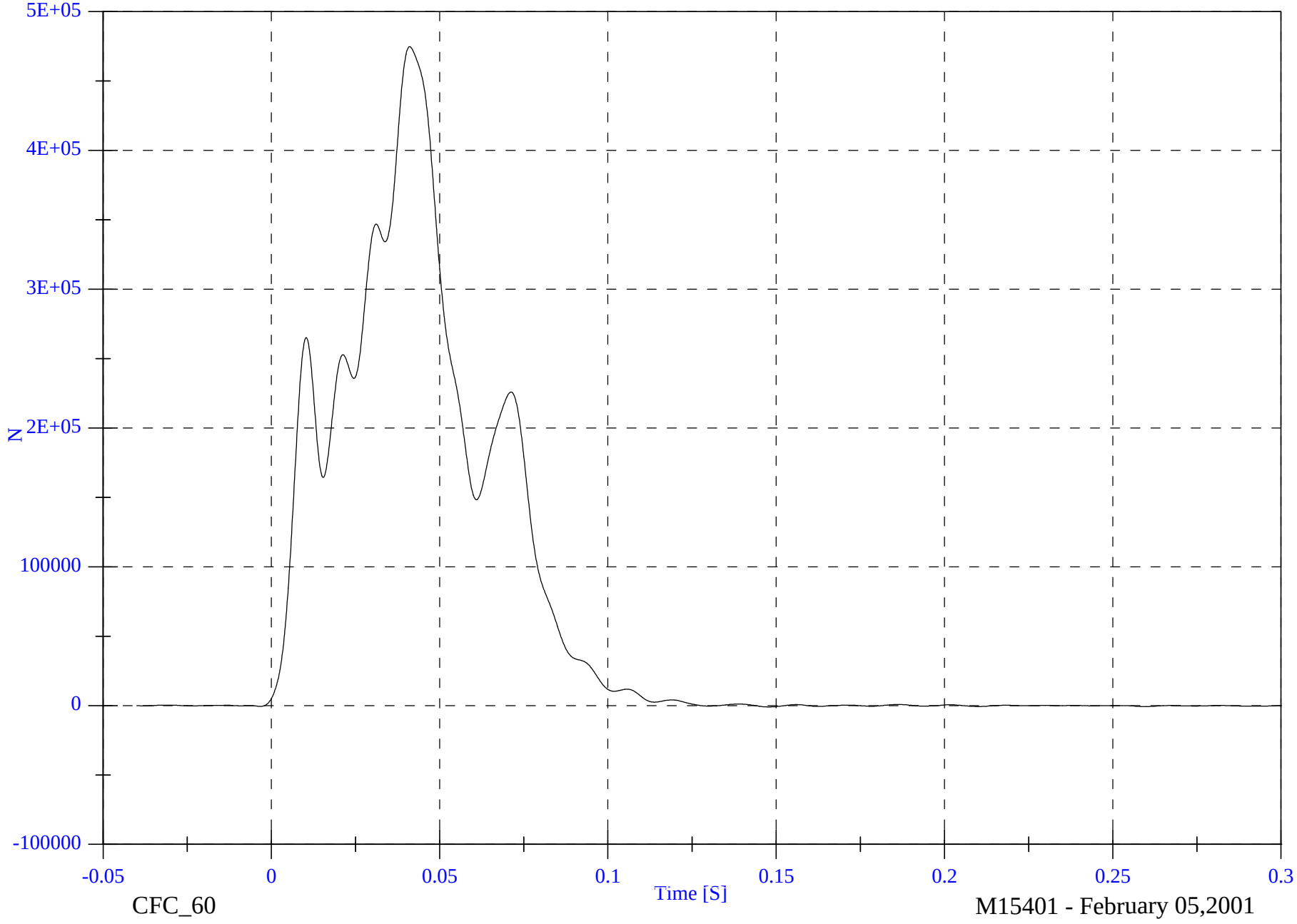
M15401 - February 05,2001

NCAP TEST #21 - 2001 Mazda Miata Convertible

Total Load Cell Sum (All 6 Groups)

Max: 474796.7 [N] at 0.041 [S]

Min: -1022.3 [N] at 0.148 [S]



B-169

8602-21

CFC_60

M15401 - February 05,2001

APPENDIX C

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

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

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

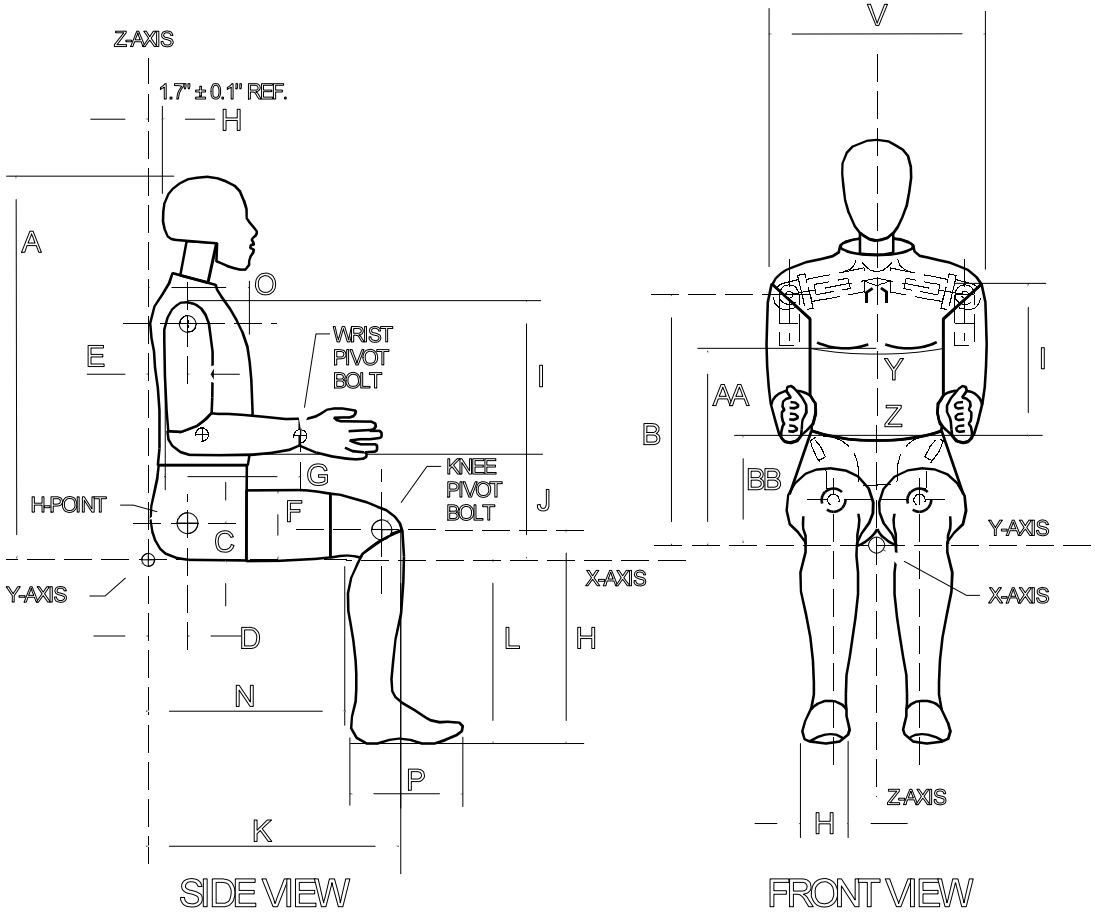
Dummy serial numbers and certification dates are:

Position No./Location	Serial No.	Completion Date
#1/Driver	061	February 1, 2001
#2/Right Front Passenger	064	January 19, 2001

Electronic Test Equipment

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

EXTERNAL DIMENSIONS SPECIFICATIONS



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

PART 572E
HEAD DROP TEST

Dummy Serial Number	061
Sequential Test Number	1
Date	January 18, 2001
Workfile	061101.hdp

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	66-78 Deg F	71.0
Relative Humidity	10% - 70%	32.0
Peak Resultant Acceleration	225-275 G's	252.18
Peak Lateral Acceleration	15 G's Max	5.55
Is Acceleration Curve Unimodal?	YES	YES

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
NECK FLEXION TEST

Dummy Serial Number	061	
Sequential Test Number	1	
Date	January 18, 2001	6 Axis Neck Transducer
Workfile	061101.nfl	

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature		69-72 Deg F	70.0
Relative Humidity		10% - 70%	32.0
Impact Velocity		22.60 - 23.40 Ft/s	22.70
Pendulum Deceleration	10 ms	22.50 - 27.50 G's	22.89
	20 ms	17.60 - 22.60 G's	19.47
	30 ms	12.50 - 18.50 G's	15.85
Max Pendulum G's Above 30 ms		29 G's Max	15.85
Deceleration - Time Curve Decay Time to 5 G's		34 - 42 ms	38.50
D Plane Rotation	Max	64 - 78 Deg	69.51
	Time	57 - 64 ms	62.38
Moment About Occipital Condyle	Max	65 - 80 Ft-Lbs	78.38
	Time	47 - 58 ms	51.62
Rotation Angle - Time Curve Decay Time to Zero		113 - 128 ms	118.62
Positive Moment - Time Curve Decay Time to Zero		97 - 107 ms	97.38

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
NECK EXTENSION TEST

Dummy Serial Number	061	
Sequential Test Number	1	
Date	January 18, 2001	6 Axis Neck Transducer
Workfile	061101.nex	

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature		69-72 Deg F	70.0
Relative Humidity		10% - 70%	32.0
Impact Velocity		19.50 - 20.30 Ft/s	19.63
Pendulum Deceleration	10 ms	17.20 - 21.20 G's	19.01
	20 ms	14.00 - 19.00 G's	16.92
	30 ms	11.00 - 16.00 G's	13.52
Max Pendulum G's Above 30 ms		22 G's Max	13.52
Deceleration - Time Curve Decay Time to 5 G's		38 - 46 ms	40.25
D Plane Rotation	Max	81 - 106 Deg	95.26
	Time	72 - 82 ms	75.50
Moment About Occipital Condyle	Max	-59.0 - -39.0 Ft-Lbs	-46.41
	Time	65 - 79 ms	71.50
Rotation Angle - Time Curve Decay Time to Zero		147 - 174 ms	147.75
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	061
Sequential Test Number	1
Date	February 1, 2001
Workfile	061101a.th3

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	69-72 Deg F	71.0
Relative Humidity	10% - 70%	32.0
Pendulum Velocity	21.6 - 22.4 Ft/s	21.6
Maximum Deflection	2.50 - 2.86 in	2.61
Maximum Resistive Force	1160 - 1325 Lbs	1238.6
Internal Hysteresis	69 - 85 %	69

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
KNEE IMPACT TEST

Dummy Serial Number	061
Sequential Test Number	1
Date	January 19, 2001
Workfile	061101.lf/061101.rf

TEST PARAMETER	SPECIFICATION	TEST RESULTS
LEFT KNEE		
Temperature	66 - 78 Deg F	70.0
Relative Humidity	10% - 70%	30.0
Probe Velocity	6.8 - 7.0 Ft/s	7.00
Peak Knee Impact Force	1060 - 1300 Lbs	1207.61
RIGHT KNEE		
Temperature	66 - 78 Deg F	70.0
Relative Humidity	10% - 70%	30.0
Probe Velocity	6.8 - 7.0 Ft/s	7.00
Peak Knee Impact Force	1060 - 1300 Lbs	1198.30

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
EXTERNAL DIMENSIONS

Dummy Serial Number 061
Sequential Test Number 1
Date January 19, 2001

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature			71
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	33.5
Chest Depth	O	8.4 - 9.0 in	8.4
H-Point Height	C	3.3 - 3.5 in	3.4
H-Point from Backline	D	5.3 - 5.5 in	5.4
Skull Cap to Backline	H	1.6 - 1.8 in	1.7
Total Sitting Height	A	34.6 - 35.0 in	34.9
Thigh Clearance	F	5.5 - 6.1 in	6.1
Buttock Knee Length	K	22.8 - 23.8 in	23.6
Buttock Popliteal Length	N	17.8 - 18.8 in	18.4
Popliteal Height	L	16.9 - 17.9 in	17.7
Knee Pivot Height	M	19.1 - 19.7 in	19.4
Foot Length	P	9.9 - 10.5 in	10.1
Foot Breadth	W	3.6 - 4.2 in	3.8
Shoulder Pivot from Backline	E	3.3 - 3.7 in	3.5
Shoulder Breadth	V	16.6 - 17.2 in	16.8
Shoulder Pivot Height	B	19.9 - 20.5 in	20.1
Elbow Rest Height	J	7.5 - 8.3 in	7.7
Shoulder - Elbow Length	I	13.0 - 13.6 in	13.4
Back of Elbow to Wrist Pivot	G	11.4 - 12.0 in	11.6

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
HEAD DROP TEST

Dummy Serial Number	064
Sequential Test Number	1
Date	January 18, 2001
Workfile	064101.hdp

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	66-78 Deg F	70.0
Relative Humidity	10% - 70%	32.0
Peak Resultant Acceleration	225-275 G's	240.04
Peak Lateral Acceleration	15 G's Max	11.82
Is Acceleration Curve Unimodal?	YES	YES

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
NECK FLEXION TEST

Dummy Serial Number	064	
Sequential Test Number	1	
Date	January 18, 2001	6 Axis Neck Transducer
Workfile	064101.nfl	

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature		69-72 Deg F	70.0
Relative Humidity		10% - 70%	32.0
Impact Velocity		22.60 - 23.40 Ft/s	22.76
Pendulum Deceleration	10 ms	22.50 - 27.50 G's	22.52
	20 ms	17.60 - 22.60 G's	20.22
	30 ms	12.50 - 18.50 G's	15.54
Max Pendulum G's Above 30 ms		29 G's Max	15.54
Deceleration - Time Curve Decay Time to 5 G's		34 - 42 ms	39.62
D Plane Rotation	Max	64 - 78 Deg	70.83
	Time	57 - 64 ms	61.88
Moment About Occipital Condyle	Max	65 - 80 Ft-Lbs	73.70
	Time	47 - 58 ms	53.62
Rotation Angle - Time Curve Decay Time to Zero		113 - 128 ms	117.50
Positive Moment - Time Curve Decay Time to Zero		97 - 107 ms	99.12

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
NECK EXTENSION TEST

Dummy Serial Number	064	
Sequential Test Number	1	
Date	January 18, 2001	6 Axis Neck Transducer
Workfile	064101.nex	

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature		69-72 Deg F	70.0
Relative Humidity		10% - 70%	32.0
Impact Velocity		19.50 - 20.30 Ft/s	19.67
Pendulum Deceleration	10 ms	17.20 - 21.20 G's	19.56
	20 ms	14.00 - 19.00 G's	16.97
	30 ms	11.00 - 16.00 G's	13.62
Max Pendulum G's Above 30 ms		22 G's Max	13.62
Deceleration - Time Curve Decay Time to 5 G's		38 - 46 ms	39.50
D Plane Rotation	Max	81 - 106 Deg	99.41
	Time	72 - 82 ms	73.62
Moment About Occipital Condyle	Max	-59.0 - -39.0 Ft-Lbs	-52.20
	Time	65 - 79 ms	70.75
Rotation Angle - Time Curve Decay Time to Zero		147 - 174 ms	148.25
Positive Moment - Time Curve Decay Time to Zero		120 - 148 ms	139.50

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
THORAX IMPACT TEST

Dummy Serial Number	064
Sequential Test Number	1
Date	January 19, 2001
Workfile	064101.th3

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	69-72 Deg F	70.0
Relative Humidity	10% - 70%	30.0
Pendulum Velocity	21.6 - 22.4 Ft/s	21.9
Maximum Deflection	2.50 - 2.86 in	2.69
Maximum Resistive Force	1160 - 1325 Lbs	1214.31
Internal Hysteresis	69 - 85 %	76.88

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
KNEE IMPACT TEST

Dummy Serial Number	064
Sequential Test Number	1
Date	January 19, 2001
Workfile	064101.lf / 064101.rf

TEST PARAMETER	SPECIFICATION	TEST RESULTS
LEFT KNEE		
Temperature	66 - 78 Deg F	70.0
Relative Humidity	10% - 70%	30.0
Probe Velocity	6.8 - 7.0 Ft/s	7.00
Peak Knee Impact Force	1060 - 1300 Lbs	1126.33
RIGHT KNEE		
Temperature	66 - 78 Deg F	70.0
Relative Humidity	10% - 70%	30.0
Probe Velocity	6.8 - 7.0 Ft/s	7.00
Peak Knee Impact Force	1060 - 1300 Lbs	1128.48

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
EXTERNAL DIMENSIONS

Dummy Serial Number 064
Sequential Test Number 1
Date January 19, 2001

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature			71
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	39.1
Waist Circumference	Z	32.9 - 34.1 in	33.5
Chest Depth	O	8.4 - 9.0 in	8.6
H-Point Height	C	3.3 - 3.5 in	3.4
H-Point from Backline	D	5.3 - 5.5 in	5.4
Skull Cap to Backline	H	1.6 - 1.8 in	1.7
Total Sitting Height	A	34.6 - 35.0 in	34.8
Thigh Clearance	F	5.5 - 6.1 in	6.0
Buttock Knee Length	K	22.8 - 23.8 in	23.6
Buttock Popliteal Length	N	17.8 - 18.8 in	18.4
Popliteal Height	L	16.9 - 17.9 in	17.3
Knee Pivot Height	M	19.1 - 19.7 in	19.4
Foot Length	P	9.9 - 10.5 in	10.1
Foot Breadth	W	3.6 - 4.2 in	3.8
Shoulder Pivot from Backline	E	3.3 - 3.7 in	3.6
Shoulder Breadth	V	16.6 - 17.2 in	16.8
Shoulder Pivot Height	B	19.9 - 20.5 in	20.4
Elbow Rest Height	J	7.5 - 8.3 in	8.0
Shoulder - Elbow Length	I	13.0 - 13.6 in	13.3
Back of Elbow to Wrist Pivot	G	11.4 - 12.0 in	11.6

Remarks:

Laboratory Technician: B. Swiecicki

APPENDIX D

DUMMY, VEHICLE AND LABORATORY INSTRUMENT CALIBRATION

INSTRUMENT CALIBRATION FOR DRIVER DUMMY

(6 Month Calibration Minimum)

DRIVER DUMMY (S/N 061)		Manufacturer	Serial #	Calibration	
				Last	Next
Head	X	ENDEVCO	AC-J33019	30-Nov-00	30-May-01
	Y	ENDEVCO	AC-J33127	30-Nov-00	30-May-01
	Z	ENDEVCO	AC-J32782	30-Nov-00	30-May-01
Head	X (R)	ENDEVCO	AC-J31060	30-Nov-00	30-May-01
	Y (R)	ENDEVCO	AC-J31050	30-Nov-00	30-May-01
	Z (R)	ENDEVCO	AC-P16593	13-Sep-00	13-Mar-01
Neck Load Cell	X	DENTON	LC-205Fx	28-Aug-00	28-Feb-01
	Y	DENTON	LC-205Fy	28-Aug-00	28-Feb-01
	Z	DENTON	LC-205Fz	28-Aug-00	28-Feb-01
Neck Moment	X	DENTON	LC-205Mx	28-Aug-00	28-Feb-01
	Y	DENTON	LC-205My	28-Aug-00	28-Feb-01
	Z	DENTON	LC-205Mz	28-Aug-00	28-Feb-01
Chest	X	ENDEVCO	AC-J33351	30-Nov-00	30-May-01
	Y	ENDEVCO	AC-J32787	30-Nov-00	30-May-01
	Z	ENDEVCO	AC-J32838	30-Nov-00	30-May-01
Chest	X (R)	ENDEVCO	AC-J32791	30-Nov-00	30-May-01
	Y (R)	ENDEVCO	AC-J33156	30-Nov-00	30-May-01
	Z (R)	ENDEVCO	AC-J33020	30-Nov-00	30-May-01
Chest Deflection Gauge		SERVO	DS-061	10-Nov-00	10-May-01
Pelvic	X	ENDEVCO	AC-J32383	4-Aug-00	4-Feb-01
	Y	ENDEVCO	AC-J32186	4-Aug-00	4-Feb-01
	Z	ENDEVCO	AC-J32098	4-Aug-00	4-Feb-01

INSTRUMENT CALIBRATION FOR DRIVER DUMMY

(6 Month Calibration Minimum)

DRIVER DUMMY (S/N 061)		Manufacturer	Serial #	Calibration	
				Last	Next
Left Femur Load Cell		GSE	LC-419	1-Dec-00	1-Jun-01
Right Femur Load Cell		GSE	LC-723	1-Dec-00	1-Jun-01
Left Upper Tibia	Mx	DENTON	LC-045Mx	4-Nov-00	4-May-01
	My	DENTON	LC-045My	4-Nov-00	4-May-01
Left Lower Tibia	Fz	DENTON	LC-125Fz	4-Nov-00	4-May-01
	Mx	DENTON	LC-125Mx	4-Nov-00	4-May-01
	My	DENTON	LC-125My	4-Nov-00	4-May-01
Right Upper Tibia	Mx	DENTON	LC-038Mx	9-Nov-00	9-May-01
	My	DENTON	LC-038My	9-Nov-00	9-May-01
Right Lower Tibia	Fz	DENTON	LC-124Fz	9-Nov-00	9-May-01
	Mx	DENTON	LC-124Mx	9-Nov-00	9-May-01
	My	DENTON	LC-124My	9-Nov-00	9-May-01
Left Foot Rear	X	ENDEVCO	AC-P16951	2-Oct-00	2-Apr-01
	Z	ENDEVCO	AC-P17152	2-Oct-00	2-Apr-01
Left Foot Front	Z	ENDEVCO	AC-P16975	2-Oct-00	2-Apr-01
Right Foot Rear	X	ENDEVCO	AC-J31042	7-Nov-00	7-May-01
	Z	ENDEVCO	AC-J32176	7-Nov-00	7-May-01
Right Foot Front	Z	ENDEVCO	AC-J31009	8-Nov-00	8-May-01
Lap Belt Load Cells		LEBOW	LC-706	1-Dec-00	1-Jun-01

INSTRUMENT CALIBRATION FOR PASSENGER DUMMY

(6 Month Calibration Minimum)

PASSENGER DUMMY (S/N 064)		Manufacturer	Serial #	Calibration	
				Last	Next
Head	X	ENDEVCO	AC-P12587	15-Sep-00	15-Mar-01
	Y	ENDEVCO	AC-P16625	21-Nov-00	21-May-01
	Z	ENDEVCO	AC-P16662	13-Sep-00	13-Mar-01
Head	X (R)	ENDEVCO	AC-P14388	15-Sep-00	15-Mar-01
	Y (R)	ENDEVCO	AC-P16597	21-Nov-00	21-May-01
	Z (R)	ENDEVCO	AC-P17236	13-Sep-00	13-Mar-01
Neck Load Cell	X	DENTON	LC-440Fx	16-Nov-00	16-May-01
	Y	DENTON	LC-440Fy	15-Nov-00	15-May-01
	Z	DENTON	LC-440Fz	16-Nov-00	16-May-01
Neck Moment	X	DENTON	LC-440Mx	16-Nov-00	16-May-01
	Y	DENTON	LC-440My	16-Nov-00	16-May-01
	Z	DENTON	LC-440Mz	16-Nov-00	16-May-01
Chest	X	ENDEVCO	AC-P16583	6-Sep-00	6-Mar-01
	Y	ENDEVCO	AC-P16585	6-Sep-00	6-Mar-01
	Z	ENDEVCO	AC-P16576	6-Sep-00	6-Mar-01
Chest	X (R)	ENDEVCO	AC-P15526	6-Sep-00	6-Mar-01
	Y (R)	ENDEVCO	AC-P16587	6-Sep-00	6-Mar-01
	Z (R)	ENDEVCO	AC-P15534	6-Sep-00	6-Mar-01
Chest Deflection Gauge		SERVO	DS-064	7-Dec-00	7-Jun-01
Pelvic	X	ENDEVCO	AC-P13323	20-Nov-00	20-May-01
	Y	ENDEVCO	AC-P13331	20-Nov-00	20-May-01
	Z	ENDEVCO	AC-P13356	20-Nov-00	20-May-01

INSTRUMENT CALIBRATION FOR PASSENGER DUMMY

(6 Month Calibration Minimum)

PASSENGER DUMMY (S/N 064)		Manufacturer	Serial #	Calibration	
				Last	Next
Left Femur Load Cell		GSE	LC-954	1-Dec-00	1-Jun-01
Right Femur Load Cell		GSE	LC-955	1-Dec-00	1-Jun-01
Left Upper Tibia	Mx	DENTON	LC-016Mx	9-Nov-00	9-May-01
	My	DENTON	LC-016My	9-Nov-00	9-May-01
Left Lower Tibia	Fz	DENTON	LC-123Fz	9-Nov-00	9-May-01
	Mx	DENTON	LC-123Mx	9-Nov-00	9-May-01
	My	DENTON	LC-123My	9-Nov-00	9-May-01
Right Upper Tibia	Mx	DENTON	LC-023Mx	9-Nov-00	9-May-01
	My	DENTON	LC-023My	9-Nov-00	9-May-01
Right Lower Tibia	Fz	DENTON	LC-111Fz	9-Nov-00	9-May-01
	Mx	DENTON	LC-111Mx	9-Nov-00	9-May-01
	My	DENTON	LC-111My	9-Nov-00	9-May-01
Left Foot Rear	X	ENDEVCO	AC-J30491	12-Jan-01	12-Jul-01
	Z	ENDEVCO	AC-J31026	22-Jan-01	22-Jul-01
Left Foot Front	Z	ENDEVCO	AC-J32831	22-Jan-01	22-Jul-01
Right Foot Rear	X	ENDEVCO	AC-J33376	22-Jan-01	22-Jul-01
	Z	ENDEVCO	AC-J32832	22-Jan-01	22-Jul-01
Right Foot Front	Z	ENDEVCO	AC-J31095	12-Jan-01	12-Jul-01
Lap Belt Load Cells		LEBOW	LC-712	1-Dec-00	1-Jun-01

INSTRUMENT CALIBRATION FOR VEHICLE ACCELEROMETERS

(6 Month Calibration Minimum)

	Manufacturer	Serial #	Calibration	
			Last	Next
Left Seat Rear Crossmember	ICS	AC-Y30	11-Aug-00	11-Feb-01
Right Rear Seat Crossmember	ICS	AC-D82	17-Aug-00	17-Feb-01
Top of Engine	ICS	AC-D36	14-Aug-00	14-Feb-01
Bottom of Engine	ENDEVCO	AC-AA35	10-Dec-00	10-Jun-01
Right Disc Brake Caliper	ENDEVCO	AC-A14321	5-Sep-00	5-Mar-01
Instrument Panel	ENDEVCO	AC-A14433	5-Sep-00	5-Mar-01
Left Disc Brake Caliper	ENDEVCO	AC-A13921	12-Jan-01	12-Jul-01
Left Seat Rear Crossmember (R)	ICS	AC-D77	14-Aug-00	14-Feb-01
Right Seat Rear Crossmember (R)	ICS	AC-X33	25-Aug-00	25-Feb-01