

REPORT NUMBER: CAL-00-9

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

**TOYOTA MOTOR CORPORATION
2000 TOYOTA CAMRY
4-DOOR SEDAN**

3251

NHTSA NUMBER: MY5101

VERIDIAN TEST NUMBER: 8413-48

VERIDIAN ENGINEERING
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January 14, 2000

FINAL REPORT

PREPARED FOR:

U. S. DEPARTMENT OF TRANSPORTATION
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Safety Performance Standards
Office of Crashworthiness Standards
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16. <i>Abstract</i> A frontal load cell barrier test of a 2000 Toyota Camry 4-Door Sedan was performed at Veridian Engineering crash test facility in Buffalo, New York, on January 14, 2000. The impact velocity was 56.49 kph and the temperature at the barrier face was 21 °C. The maximum post-test vehicle crush was 518.9 mm. The test vehicle was equipped with 3-point restraint systems with electronic 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)	525.0	45.6	24.1	3037.9	3281.3
Passenger (064)	428.5	37.0	28.1	2681.3	1765.2
17. <i>Key Words</i> 56 kph Frontal Barrier Impact test New Car Assessment Program (NCAP)			18. <i>Distribution Statement</i> <u>Copies of this report are available from:</u> NHTSA Technical Reference Division National Highway Traffic Safety Admin. 400 Seventh St., SW, Room 5108 Washington, DC 20590		
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SECTION 1

PURPOSE AND SUMMARY OF TEST MY5101

PURPOSE

This 56.49 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 56.49 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 2000 Toyota Camry 4-Door Sedan at a velocity of 56.49 kph. The test was performed at Veridian Engineering on January 14, 2000. Pre- and post-test photographs of the vehicle and dummies can be found in Appendix A.

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

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

Both ATDs were fully instrumented with head, chest, and pelvis triaxial accelerometers, chest displacement potentiometers, upper neck transducers, right/left femur load cells, and lower leg instrumentation. 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 (MY5701) and (MY0213) previous to this test where they did not exceed FMVSS 208 head, chest and femur criteria. Certification details, along with instrumentation calibration data, are found in Appendix C.

The 127 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 525.0. The maximum chest deceleration over 3 milliseconds was 45.6 g's and maximum chest deflection was 24.1 mm. Compressive femur loads were 3037.9 Newtons on the left and 3281.3 Newtons on the right.

The right front passenger's HIC was 428.5. Maximum chest deceleration over 3 milliseconds was 37.0 g's and maximum chest deflection was 28.1 mm. Compressive femur loads were 2681.3 Newtons on the left and 1765.2 Newtons on the right.

The P1 (driver) left tibia Mx data did not record. The P1 right foot fore Az data is not accurate after 70 ms. The P1 right foot aft Ax data was not accurate after 122 ms. The left rear crossmember (accelerometer #1) data is not accurate after 107 ms. The right disc brake (accelerometer # 5) data is not accurate after 61 ms. The left disc brake (accelerometer # 7) data is not accurate after 75 ms. The passenger belt view camera mount pitched down during the event, this view is not available. This vehicle was equipped with driver and passenger electronic seat belt pretensioners. As a result, torso belt load, torso belt spool out and belt elongation could not be measured.

SECTION 2

GENERAL TEST AND VEHICLE PARAMETER DATA

DATA SHEET NO. 1 CRASH TEST SUMMARY

Vehicle NHTSA No. : MY5101 Test Mode : 56.3 kph Frontal Barrier
 Test Date : January 14, 2000 Time: 13:40 Temperature : -7 °C
 Vehicle Make/Model/Body Style : 2000 Toyota Camry 4-Door Sedan
 Vehicle Test Weight : 1656.0 kg
 Vehicle/Barrier Impact Angle : 0 °
 Impact Velocity : 56.49 kph
 Maximum Static Crush : 518.9 mm
 Vehicle Rebound : 1052 mm

DUMMIES:

	<u>DRIVER</u>	<u>PASSENGER</u>
Type :	<u>572E</u>	<u>572E</u>
Restraint System :	<u>Seatbelt, Airbag, Knee Bolster</u>	<u>Seatbelt, Airbag, Knee Bolster</u>
Number of Data Channels :	<u>127</u>	
Number of Cameras :	<u>1</u> Real Time	
	<u>16</u> High Speed	

DOOR OPENING DATA :

Closed/Operable - Left Front
Closed/Operable - Right Front

Front Seat(s) Data :

	<u>DRIVER</u>	<u>PASSENGER</u>
Seat Track Failure :(mm of shift)	<u>0</u>	<u>0</u>
Seat Back Failure :	<u>None</u>	<u>None</u>

VISIBLE DUMMY CONTACT POINTS :

	<u>DRIVER</u>	<u>PASSENGER</u>
Head :	The face to the center of the airbag; The back of the head to the center of the headrest.	The face to the center of the airbag; The back of the head to the center of the headrest; The top of the head to the sun visor.
Abdomen :	<u>None</u>	<u>None</u>
Chest	<u>Airbag</u>	<u>Airbag</u>
Knees	<u>Knee Bolster</u>	<u>Knee Bolster</u>

DATA SHEET NO. 2 GENERAL TEST AND VEHICLE PARAMETER DATA

TEST VEHICLE INFORMATION :

Year/Make/Model/Body Style : 2000 Toyota Camry 4-Door Sedan
NHTSA No. : MY5101 ; VIN: 4T1BG22K9YU922698 ; Color : Grey
Engine Data: 4 cylinders; - CID; 2.2 Liters; - cc
Placement : - Longitudinal or In-Line; X Transverse or Lateral
Transmission Data : 4 speeds; - Manual; X Automatic; X Overdrive
Final Drive : - Rear Wheel Drive; X Front Wheel Drive; - Four Wheel Drive
Major Options : X A/C; X Pwr.Strg.; X Pwr. Brakes
X Pwr. Windows; X Pwr. Door Locks; X Tilt Wheel
Date Received : 1-10-2000 ; Odometer Reading 111 km
Selling Dealer : Culligan Toyota
& Address: 8135 Main Street Williamsville, New York 14221

DATA FROM TIRE VEHICLE'S CERTIFICATION LABEL:

Vehicle Manufactured by : Toyota Motor Corporation
Date of Manufacture 8-99
GVWR : 1896 kg; GAWR: 1089 kg FRONT; 1089 kg REAR

DATA FROM TIRE PLACARD:

Tire Pressure with Maximum Capacity Vehicle Load : 275 kpa FRONT
275 kpa REAR
Recommended Tire Size : 205/65R15
* Recommended Cold Tire Pressure : 220 kpa FRONT; 220 kpa REAR
Size of Tires on Test Vehicle: 205/65R15 ; Manufacturer: General
Vehicle Capacity Data :
Type of Front Seats: - Bench; X Bucket; - Split Bench
Number of Occupants: 2 Front; 3 Rear; 5 Total
Vehicle Capacity Weight (VCW) = 410.0 kg
No. of Occupants x 68 kg = 340.2 kg
Rated Cargo/Luggage Weight (RCLW) = 69.8 kg

*Tire pressure used for test

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

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

Right Front	=	<u>441.0</u>	kg	Right Rear	=	<u>274.5</u>	kg
Left Front	=	<u>438.0</u>	kg	Left Rear	=	<u>286.5</u>	kg
TOTAL FRONT	=	<u>879.0</u>	kg	TOTAL REAR	=	<u>561.0</u>	kg
TOTAL DELIVERED WEIGHT	=	<u>1440.0</u>	kg				
% of Total Front of Vehicle Weight	=	<u>61.0</u>	%	% of Total Rear Weight	=	<u>39.0</u>	%

CALCULATION OF VEHICLE'S TARGET TEST WEIGHT :

Total Delivered Weight (UDW)	=	<u>1440.0</u>	kg
Rated Cargo/Luggage Weight (RCLW)	=	<u>69.8</u>	kg
Weight of 2 p.572 Dummies @ 76 each	=	<u>152.0</u>	kg
TARGET TEST WEIGHT	=	<u>1661.8</u>	kg

WEIGHT OF TEST VEHICLE WITH TWO DUMMIES AND 64 KG OF CARGO WEIGHT:

Right Front	=	<u>466.5</u>	kg	Right Rear	=	<u>354.0</u>	kg
Left Front	=	<u>464.5</u>	kg	Left Rear	=	<u>371.0</u>	kg
TOTAL FRONT	=	<u>931.0</u>	kg	TOTAL REAR	=	<u>725.0</u>	kg
TOTAL TEST WEIGHT	=	<u>1656.0</u>	kg				
% of Total Front Weight	=	<u>56.2</u>	%	% of Total Rear Weight	=	<u>43.8</u>	%
Weight of Ballast Secured in Vehicle Trunk Area	=	<u>0</u>	kg				
Vehicle Components Removed for Weight Reduction:		<u>None</u>					

VEHICLE ATTITUDE (all dimension in millimeters):

AS DELIVERED :	RF	<u>712</u>	LF	<u>707</u>	RR	<u>705</u>	LR	<u>690</u>
FULLY LOADED :	RF	<u>690</u>	LF	<u>682</u>	RR	<u>662</u>	LR	<u>655</u>
AS TESTED :	RF	<u>695</u>	LF	<u>690</u>	RR	<u>671</u>	LR	<u>661</u>
Vehicle's Wheel Base :		<u>2670</u>	mm					
Location of Vehicle's C.G. :		<u>1168.9</u>	mm rearward of front wheel center.					

FUEL SYSTEM DATA :

Fuel System Capacity From Owner's Manual	=	<u>70.0</u>	liters
Usable Capacity Figure Furnished by COTR	=	<u>70.0</u>	liters
Test Volume Range (92 to 94% of Usable Capacity)	=	<u>64.4</u>	to <u>65.8</u> liters
ACTUAL TEST VOLUME	=	<u>64.4</u>	liters (with entire fuel system filled)
Test Fluid Type:	<u>Stoddard Solution</u> ;	Spec. Grav. =	<u>0.764</u>
	Kinematic Viscosity =	<u>0.96</u> centistokes;	Color = <u>Orange</u>
Type of Fuel Pump:	Electric- <u>X</u> ;	Mechanical-	<u>-</u>
Does Electric Pump operate with ignition switch "ON" & engine "OFF"		Yes- <u>X</u>	No- <u>-</u>
Details of Fuel System	<u>Fuel Tank - Centered ahead of rear axle; Fuel Lines - Inside of left frame rail;</u>		
	<u>Filler Neck - Left side behind rear axle.</u>		

DATA SHEET NO. 3 POST IMPACT DATA

TYPE OF TEST:

Type of Test : Frontal Barrier Impact Angle : 0°
Test Date : January 14, 2000 Time: 13:40 Temperature: -7 °C
Vehicle NHTSA No. : MY5101
Required Impact Velocity Range : 55.5 to 57.1 kph

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

Trap No. 1 = 56.49 kph; Trap No. 2 = 56.49 kph
Distance from vehicle to barrier : (1) entering trap = 813 mm
(2) exiting trap = 305 mm

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

Vehicle Length:

Pre-Test Right = 4794.9 ; C/L = 4784.4 ; Left = 4723.0
Post-Test Right = 4276.0 ; C/L = 4274.5 ; Left = 4306.7
Crush Right = 518.9 ; C/L = 509.9 ; Left = 416.3
AVERAGE = 481.7 mm

VEHICLE REBOUND: (From rigid barrier only.)

Distance from front of test vehicle to impact point :

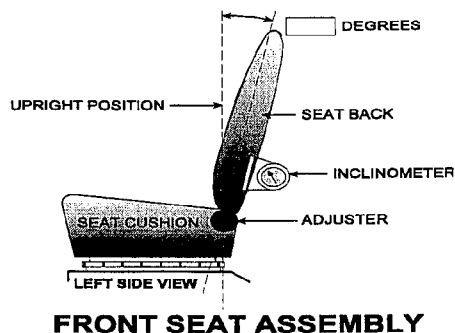
Right = 1046.0 ; C/L = 1062.0 ; Left = 1048.0
AVERAGE = 1052.0 mm

DATA SHEET NO. 4 TEST VEHICLE INFORMATION

VEHICLE IDENTIFICATION:

Model Year : 2000 Vehicle Model: Toyota Camry Body Style : 4-Door Sedan

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



Seat back angle for driver's seat: 19° HR

Measurement instructions: Recline seat back 7.4° from most upright with seat cushion in full down position.

Seat back angle for passenger's seat: 19.6° HR

Measurement instructions: Recline seat back 9° rearward from most upright.

2. Seat Fore and Aft Positioning

Positioning of the driver's seat: Electronic seat has 225 mm of travel, place in mid-position, 112.5 mm rearward of full forward position.

Positioning of the passenger's seat: The seat has 15 detents. Test position is detent number 8 from forwardmost position. Travel is 225 mm, test position is 120 mm rearward from full forward.

3. Fuel Tank Capacity Data

3.1 A. "Usable Capacity" of the standard equipment fuel tank is 70.0 liters

B. "Usable Capacity" of the optional equipment fuel tank is N/A liters

C. "Usable Capacity" of the vehicle(s) used for certification testing to requirements of FMVSS 301 = 70.0 liters

3.2 Amount of Stoddard solvent added to vehicle(s) used for certification test(s) = 64.4 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.

The fuel pump is activated only when the engine is running.

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

4. STEERING COLUMN ADJUSTMENTS :

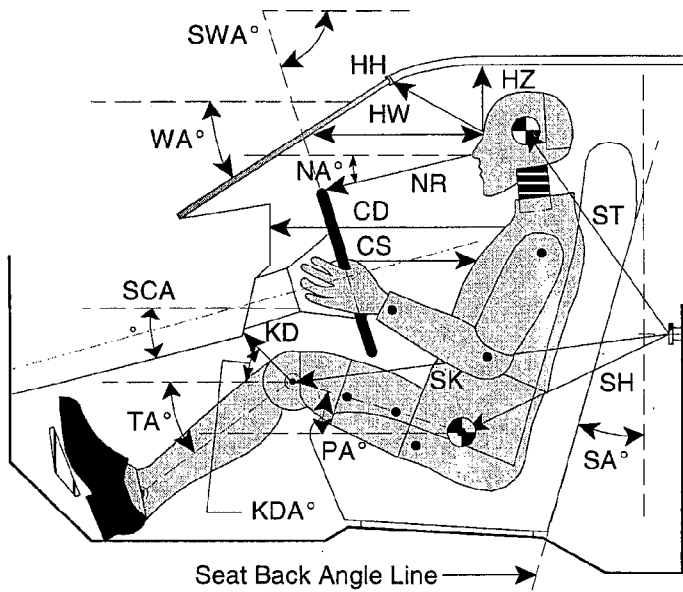
Steering wheel and column adjustments are made so that the steering wheel hub is at the geometric center of the locus it describes when it is moved through its full range of driving positions. If the tested vehicle has any of these adjustments, does your company use any specific procedures to determine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

Operational Instructions: There are 6 detents. Test position is 2 detents up from full down position.

5. SEAT BELT UPPER ANCHORAGE

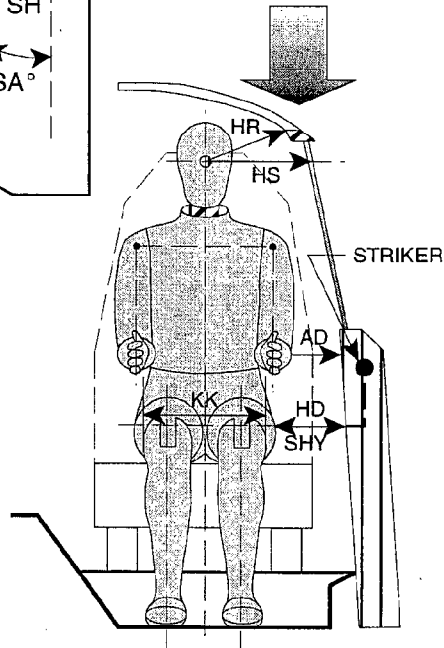
Nominal design riding position: There are five detents. Test position is one detent below the uppermost position.

DUMMY MEASUREMENT FOR FRONT SEAT PASSENGERS

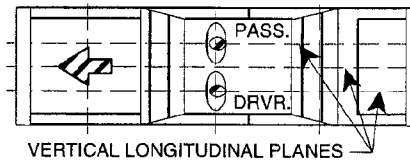


- AD - Arm to Door
- HD - H-Point to Door
- HR - Head to Side Header
- HS - Head to Side Window
- KK - Knee to Knee
- SHY- Striker to H-Point (Y Direction)

- 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



← VERTICAL TRANSVERSE PLANE



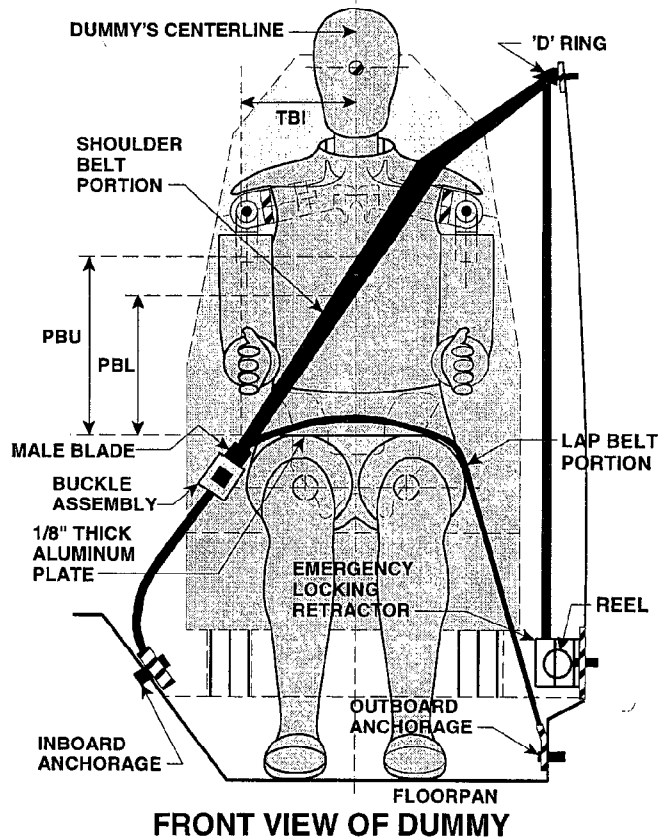
DATA SHEET NO. 5 FRONT SEAT DUMMY POSITIONING MEASUREMENTS IN VEHICLE

	DRIVER (Serial #061)			PASS. (Serial # 064)		
WA ^o	28.8 deg.			N/A		
SWA ^o	25.5 deg.			N/A		
SCA ^o	65.5 deg.			N/A		
SA ^o	19.0 deg.			19.6 deg.		
HZ	168			150		
HH	339			295		
HW	583			530		
HR	186			201		
NR	384	Angle	-10 deg.	N/A		
CD	543			514		
CS	313			N/A		
RA	190			N/A		
KDL	175	Angle (KDA)	25 deg.	148		
KDR	178			148	Angle (KDA)	35 deg.
PA ^o	22.5 deg.			23.3 deg.		
TA ^o	37.9 deg.			49.0 deg.		
KK	273			270		
ST	450	Angle	11.3 deg.	480	Angle	10.5 deg.
SK	605	Angle	98.3 deg.	596	Angle	94.0 deg.
SH	300	Angle	133 deg.	280	Angle	130.9 deg.
SHY	245			258		
HS	296			304		
HD	146			130		
AD	85			98		

Dimensions in millimeters

DATA SHEET NO. 6 SEAT BELT POSITIONING DATA

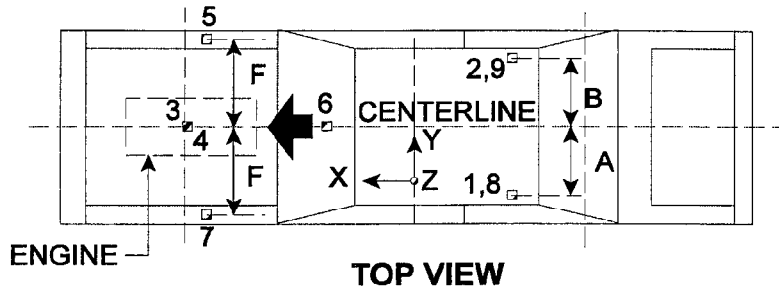
SEAT BELT POSITIONING DATA



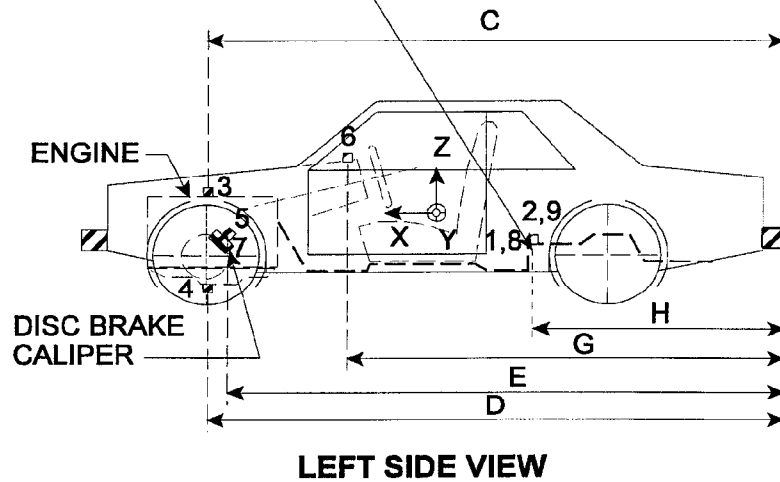
FRONT VIEW OF DUMMY

	DRIVER DUMMY (mm)	PASSENGER DUMMY (mm)
PBU -- Top surface of alum. plate to upper edge	370	346
PBL-- Top surface of alum. plate to belt lower edge	295	270
<u>LAP BELT TENSION</u>	10 N	10 N
<u>SHOULDER BELT TENSION</u>	Retractor	Retractor

VEHICLE ACCELEROMETER LOCATION AND DATA SUMMARY



REAR SEAT CUSHION
ASSY. FRONT ATTACHMENT
BRACKET SUPPORT



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

DATA SHEET NO. 7 VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY

DIMENSION	LENGTH (mm)
	PRE-TEST VALUES
A Left Rear Seat Crossmember Y	-622.4
B Right Rear Seat Crossmember Y	581.7
C Top of Engine X	3904.0
D Bottom of Engine X	3722.3
E Disc Brake Calipers X	3779.6
F Disc Brake Calipers Y	-10.5
G Instrument Panel X	2999.6
H Rear Seat Crossmembers X	1997.0

LOCATION NUMBER	DESCRIPTION	MAXIMUM VALUE (g's)			
		Pos.	msec.	Neg.	msec.
1	Rear Seat X-Member @ Left Side	*	*	*	*
2	Rear Seat X-Member @ Right Side	1.7	133.6	-32.5	42.3
3	Top of Engine Block	51.3	49.5	-122.1	33.4
4	Bottom of Engine	33.7	48.5	-95.4	36.0
5	Disc Brake Caliper @ Right Side	**	**	**	**
6	Instrument Panel	7.1	30.8	-33.7	44.2
7	Disc Brake Caliper @Left Side	***	***	***	***
8	Rear Seat X-Member @ Left-Redundant	1.7	132.3	-30.7	41.2
9	Rear Seat X-Member @ Right-Redundant	1.7	134.3	-31.9	42.1

* Data is not accurate after 107 ms.

** Data is not accurate after 61 ms.

*** Data is not accurate after 75 ms.

DATA SHEET NO. 8 DUMMY INJURY CRITERIA VALUES

Vehicle Year/Make/Model/Body Style: 2000 Toyota Camry 4-Door Sedan

NHTSA Test No.: MY5101 Test Date: January 14, 2000

		MAXIMUM VALUE							
		Driver				Passenger			
DESCRIPTION	Unit	Pos	msec	Neg	msec	Pos	msec	Neg	msec
Head X	g	10.2	228.3	-61.7	73.9	12.4	227.5	-53.9	83.1
Head Y	g	7.6	87.6	-3.7	280.8	3.8	44.9	-5.4	88.7
Head Z	g	14.9	73.6	-0.9	18.8	12.8	53.0	-2.7	497.7
Head Resultant	g	63.5	74.0	0.0	-66.3	54.5	83.1	0.0	8.4
Redundant Head X	g	10.1	228.0	-60.9	74.2	13.0	226.1	-55.8	82.8
Redundant Head Y	g	7.9	85.9	-4.5	284.8	7.2	44.5	-7.6	56.7
Redundant Head Z	g	19.5	88.6	-1.3	18.8	15.7	53.0	-2.9	498.2
Redundant Head Resultant	g	62.7	74.2	0.0	-20.8	56.8	83.3	0.0	-49.4
Upper Neck Fx	N	324.8	74.1	-431.9	51.6	66.2	223.5	-401.1	52.5
Upper Neck Fy	N	221.7	98.7	-150.4	70.5	89.0	45.1	-95.5	58.8
Upper Neck Fz	N	1121.4	70.7	-39.5	18.8	1109.2	66.0	-139.1	497.7
Upper Neck F Resultant	N	1170.9	70.7	0.1	-20.5	1112.1	66.0	0.3	-78.3
Upper Neck Mx	N-m	16.9	108.7	-9.3	88.6	6.1	76.9	-12.3	45.0
Upper Neck My	N-m	41.0	64.7	-12.1	43.2	18.5	131.7	-29.5	87.8
Upper Neck Mz	N-m	5.1	122.8	-10.6	280.5	5.7	105.8	-5.2	54.6
Upper Neck M Resultant	N-m	42.5	64.8	0.0	-17.1	30.2	87.8	0.0	-83.3
Chest X	g	3.7	249.7	-45.9	72.9	3.8	254.8	-37.8	82.2
Chest Y	g	8.9	82.4	-2.6	43.0	2.6	72.7	-5.3	94.7
Chest Z	g	4.3	90.9	-9.8	61.0	3.7	43.0	-4.9	56.6
Chest Resultant	g	46.6	72.9	0.0	-95.8	37.8	82.2	0.0	-57.0
Redundant Chest X	g	3.7	250.6	-46.5	72.8	3.4	254.4	-36.3	65.6
Redundant Chest Y	g	10.0	82.1	-2.3	48.0	2.7	72.2	-4.8	94.2
Redundant Chest Z	g	5.3	91.0	-11.0	61.0	3.4	97.2	-5.5	60.1
Redundant Chest Resultant	g	47.1	72.8	0.0	-88.5	36.4	65.6	0.0	-59.7
Chest Displacement	mm	0.0	-9.3	-24.1	83.0	0.0	-74.8	-28.1	82.8

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

Vehicle Year/Make/Model/Body Style: 2000 Toyota Camry 4-Door Sedan

NHTSA Test No.: MY5101 Test Date: January 14, 2000

DESCRIPTION	Unit	MAXIMUM VALUE							
		Driver				Passenger			
		Pos	msec	Neg	msec	Pos	msec	Neg	msec
Pelvic X	g	1.5	226.6	-65.0	59.5	3.6	143.1	-53.1	57.5
Pelvic Y	g	9.6	70.1	-6.5	64.3	6.7	39.8	-5.7	69.6
Pelvic Z	g	2.8	257.4	-29.6	70.9	2.1	269.6	-22.9	63.9
Pelvic Resultant	g	70.2	59.5	0.0	-100.0	56.9	57.5	0.0	-58.3
Left Femur	N	600.4	51.8	-3037.9	63.6	735.6	52.4	-2681.3	60.2
Right Femur	N	640.2	46.1	-3281.3	59.6	568.5	45.4	-1765.2	55.8
Left Upper Tibia Mx	N-m	*	*	*	*	31.9	62.9	-26.1	77.7
Left Upper Tibia My	N-m	13.2	134.5	-127.7	59.8	14.3	147.1	-169.2	58.8
Left Lower Tibia Fz	N	94.6	134.0	-2193.8	29.1	316.4	134.1	-3982.4	41.0
Left Lower Tibia Mx	N-m	56.0	57.0	-3.3	195.9	7.5	44.6	-37.2	69.8
Left Lower Tibia My	N-m	42.2	29.8	-19.9	53.1	160.5	78.6	-35.6	52.4
Right Upper Tibia Mx	N-m	33.0	67.5	-27.9	64.8	10.8	483.2	-53.5	63.4
Right Upper Tibia My	N-m	13.6	123.8	-210.8	66.5	13.1	144.7	-117.1	52.7
Right Lower Tibia Fz	N	96.5	163.2	-6101.8	66.6	94.6	162.6	-3008.6	36.8
Right Lower Tibia Mx	N-m	125.0	67.4	-63.6	35.3	29.2	56.6	-20.8	36.7
Right Lower Tibia My	N-m	46.6	70.2	-27.4	50.1	44.3	74.7	-63.5	52.0
Left Foot Aft Ax	g	10.5	31.9	-50.3	56.8	29.8	77.1	-80.2	46.2
Left Foot Aft Az	g	4.8	231.3	-30.3	28.4	23.1	70.3	-63.5	40.1
Left Foot Fore Az	g	11.2	62.5	-72.4	59.6	70.4	69.4	-117.5	35.7
Right Foot Aft Ax	g	**	**	**	**	33.9	66.5	-78.6	52.1
Right Foot Aft Az	g	27.3	59.2	-69.9	36.4	9.4	70.7	-44.6	36.9
Right Foot Fore Az	g	***	***	***	***	33.8	76.7	-70.7	55.6
Lap Belt Load	N	5880.5	58.8	-13.4	192.3	6141.5	58.6	-8.2	401.1
Torso Belt	N	-	-	-	-	-	-	-	-

* Did not record.

** Data not accurate after 122 ms.

*** Data not accurate after 70 ms.

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

Vehicle Year/Make/Model/Body Style: 2000 Toyota Camry 4-Door Sedan

NHTSA Test No.: MY5101 Test Date: January 14, 2000

HEAD INJURY CRITERIA (HIC)				
	HIC**	t ₁ (msec)	t ₂ (msec)	Average Acceleration t ₁ to t ₂
Position #1 - Driver	525.0	56.7	92.1	46.6
Position #2 - Passenger	428.5	62.3	98.3	42.7

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

CLIP SUMMARY*				
	CLIP (g's)	t ₁ (msec)	t ₂ (msec)	CSI
Position #1 - Driver	45.6	71.8	74.8	425.7
Position #2 - Passenger	37.0	80.7	83.7	325.9

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

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

Vehicle Year/Make/Model/Body Style: 2000 Toyota Camry 4-Door Sedan

NHTSA Test No.: MY5101 Test Date: January 14, 2000

HEAD INJURY CRITERIA (HIC) REDUNDANT				
	HIC**	t ₁ (msec)	t ₂ (msec)	Average Acceleration t ₁ to t ₂
Position #1 - Driver	533.1	56.3	92.3	46.6
Position #2 - Passenger	469.0	62.2	98.2	44.3

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

CLIP SUMMARY* REDUNDANT				
	CLIP (g's)	t ₁ (msec)	t ₂ (msec)	CSI
Position #1 - Driver	45.9 g	71.7	74.7	442.4
Position #2 - Passenger	34.7 g	80.5	83.5	300.7

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

DATA SHEET NO. 9 SEAT BELT PERFORMANCE ASSESSMENT TEST DATA

BELT LENGTH DATA:

	<u>Driver</u>	<u>Passenger</u>
Belt length from trim panel exit to bolt hole anchor point for continuous webbing systems.	1885	1915
Shoulder belt length as measured on Part 572 Dummy.	860	860
Lap belt length as measured on Part 572 Dummy.	810	840

SHOULDER BELT SPOOL-OFF DATA:

As determined by film analysis.	76.2	N/A*
As determined mechanically.	**	**
As determined electronically.	**	**

BELT STRETCH DATA:

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

* The camera mount pitched during the event and the view was lost, spool-out could not be determined.

** This vehicle was equipped with electronic seat belt pretensioners, therefore instrumentation was not placed on the shoulder belts so as to not interfere.

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 13 mm molding.

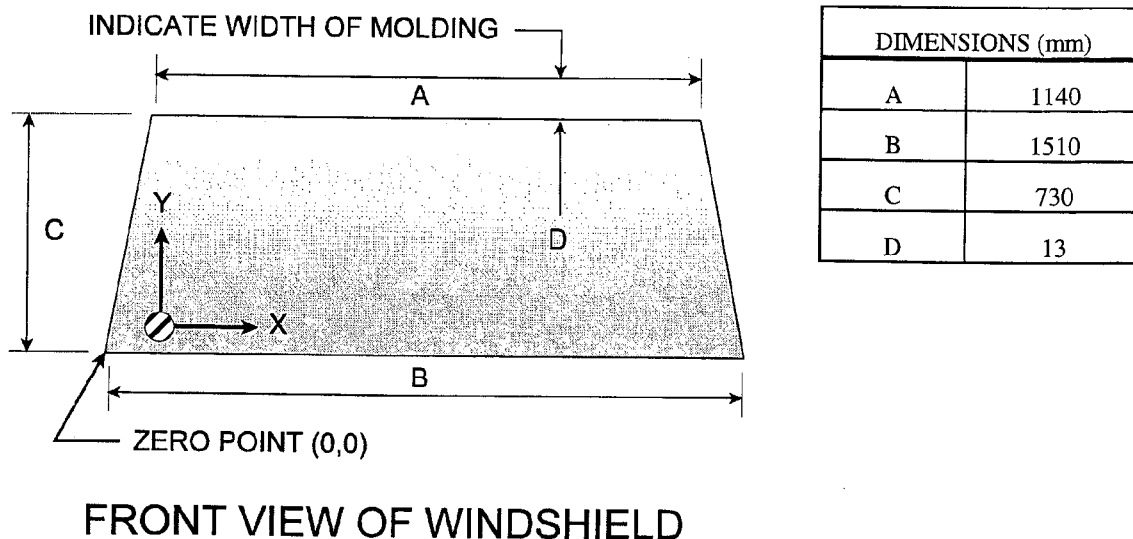
FMVSS 212 REQUIREMENTS:

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	2055	2055	100
LEFT SIDE	2055	2055	100
TOTAL	4,110	4,110	100

AREA OF RETENTION FAILURE: None



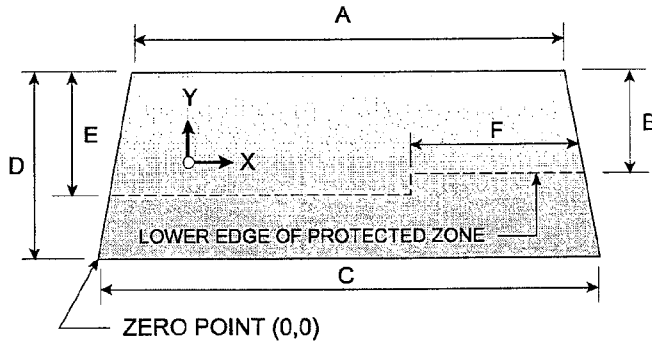
FAILURE DETAILS: None

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

PROTECTED ZONE LOWER EDGE REQUIREMENT:

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

FMVSS 219 TEST DATA:



DIMENSIONS (mm)	
A	1140
B	425
C	1510
D	730
E	460
F	730

FRONT VIEW OF WINDSHIELD

DETAILS OF WINDSHIELD GLASS PENETRATION GREATER THAN 6 mm: None

(Show location of penetration on the above sketch)

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

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

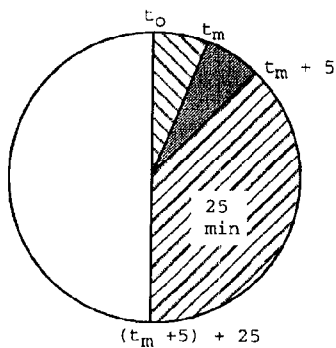
NHTSA TEST No.: MY5101 TEST DATE: January 14, 2000
VEHICLE MAKE/MODEL: 2000 Toyota Camry

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

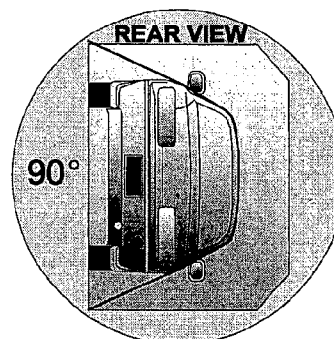
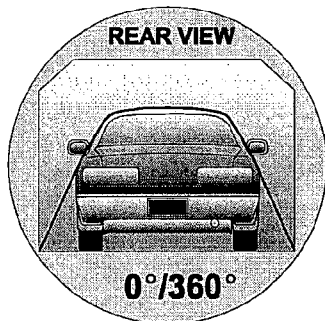
DATA SHEET 13

FMVSS NO. 301 STATIC ROLLOVER DATA SHEET

Vehicle: 2000 Toyota Camry

NHTSA No. MY5101

0 - 90 Degrees



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD :

Rollover Fixture 90° Rotation Time (Spec. Range = 1 to 3 minutes)	<u>1</u> minutes	<u>20</u> seconds
FMVSS 301 Position Hold Time +	<u>5</u> minutes	<u>0</u> seconds
TOTAL	<u>6</u> minutes	<u>20</u> seconds
Next whole minute interval	<u>7</u> minutes	

II. FMVSS 301 REQUIREMENTS :

(1) Time Period

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

(2) Maximum Allowable Solvent Spillage

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

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

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

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

IV. SOLVENT SPILLAGE LOCATION(S) :

None

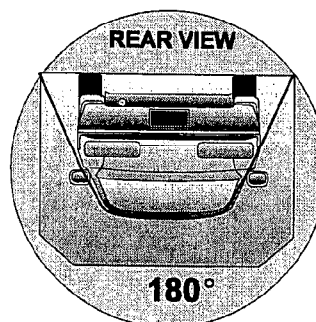
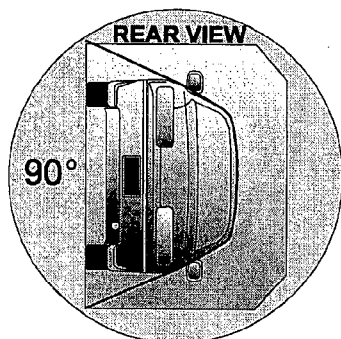
DATA SHEET 13

FMVSS NO. 301 STATIC ROLLOVER DATA SHEET (CONTINUED)

Vehicle: 2000 Toyota Camry

NHTSA No. MY5101

90 - 180 Degrees



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD :

Rollover Fixture 90° Rotation Time (Spec. Range = 1 to 3 minutes)	<u>1</u> minutes	<u>04</u> seconds
FMVSS 301 Position Hold Time +	<u>5</u> minutes	<u>0</u> seconds
TOTAL	<u>6</u> minutes	<u>4</u> seconds
Next whole minute interval	<u>7</u> minutes	

II. FMVSS 301 REQUIREMENTS :

(1) Time Period

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

(2) Maximum Allowable Solvent Spillage

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

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

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

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

IV. SOLVENT SPILLAGE LOCATION(S) :

None

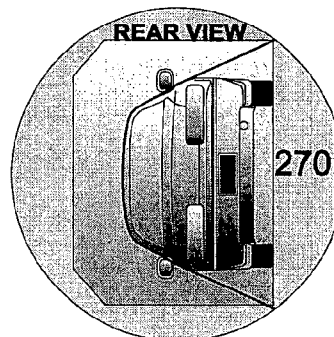
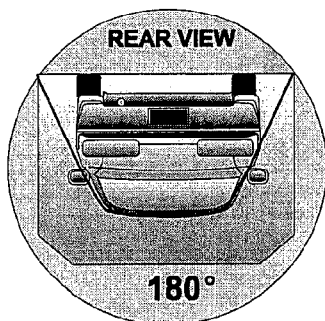
DATA SHEET 13

FMVSS NO. 301 STATIC ROLLOVER DATA SHEET (CONTINUED)

Vehicle: 2000 Toyota Camry

NHTSA No. MY5101

180 - 270 Degrees



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD :

Rollover Fixture 90° Rotation Time	<u>1</u> minutes	<u>02</u> seconds
(Spec. Range = 1 to 3 minutes)		
FMVSS 301 Position Hold Time +	<u>5</u> minutes	<u>0</u> seconds
TOTAL	<u>6</u> minutes	<u>2</u> seconds
Next whole minute interval	<u>7</u> minutes	

II. FMVSS 301 REQUIREMENTS :

(1) Time Period

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

(2) Maximum Allowable Solvent Spillage

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

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

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

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

IV. SOLVENT SPILLAGE LOCATION(S) :

None

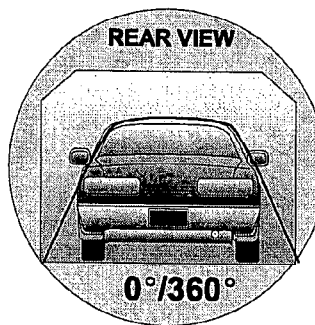
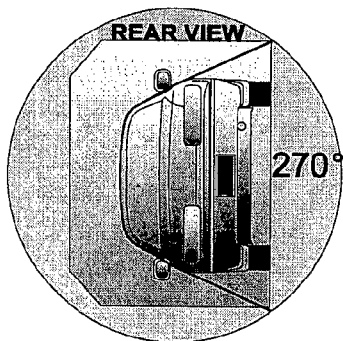
DATA SHEET 13

FMVSS NO. 301 STATIC ROLLOVER DATA SHEET (CONTINUED)

Vehicle: 2000 Toyota Camry

NHTSA No. MY5101

270 - 360 Degrees



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD :

Rollover Fixture 90° Rotation Time (Spec. Range = 1 to 3 minutes)	<u>1</u> minutes	<u>27</u> seconds
FMVSS 301 Position Hold Time +	<u>5</u> minutes	<u>0</u> seconds
TOTAL	<u>6</u> minutes	<u>27</u> seconds
Next whole minute interval	<u>7</u> minutes	

II. FMVSS 301 REQUIREMENTS :

(1) Time Period

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

(2) Maximum Allowable Solvent Spillage

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

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

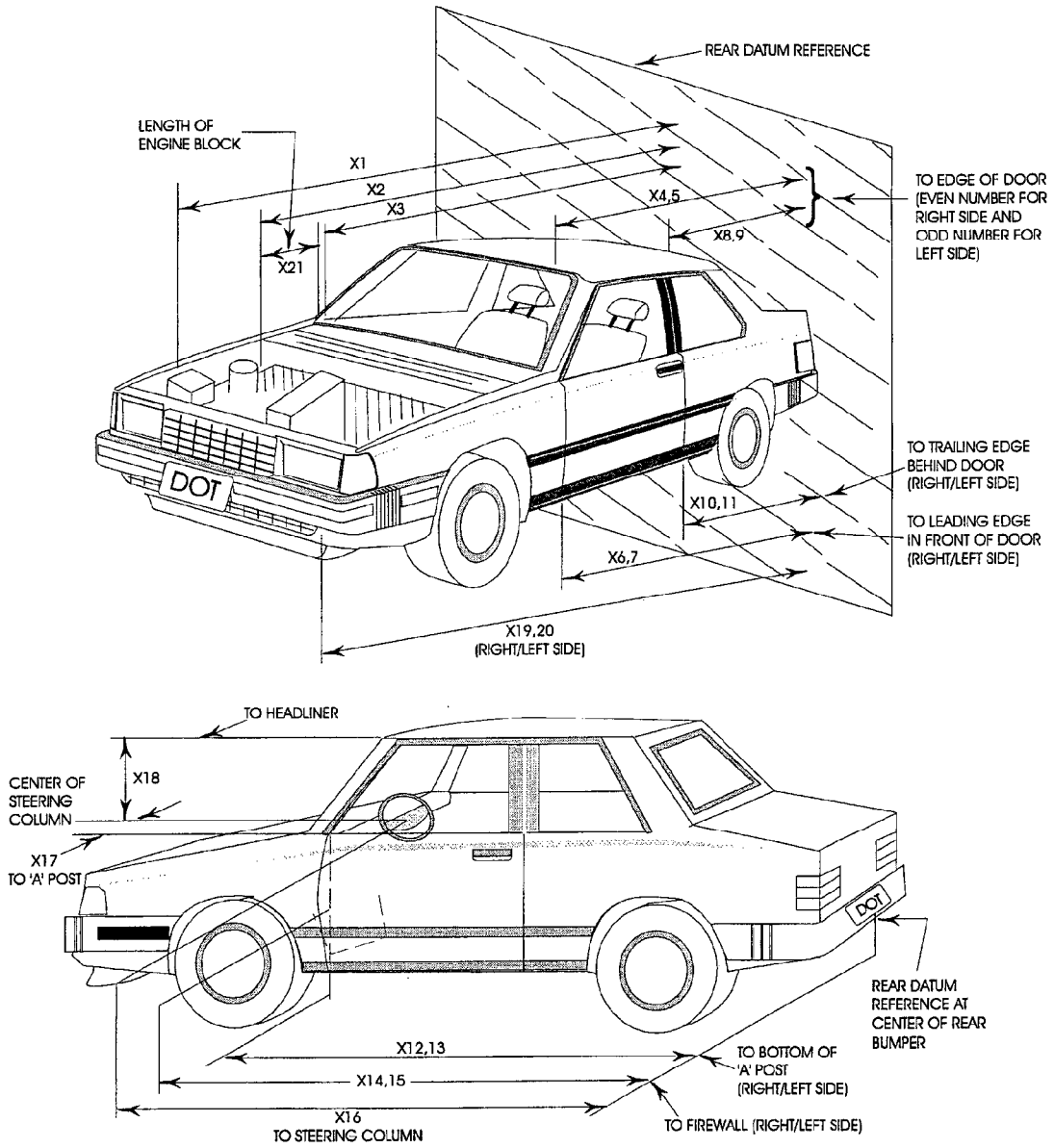
0 g	0 g	0 g	N/A
-----	-----	-----	-----

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

IV. SOLVENT SPILLAGE LOCATION(S) :

None

TEST VEHICLE MEASUREMENTS

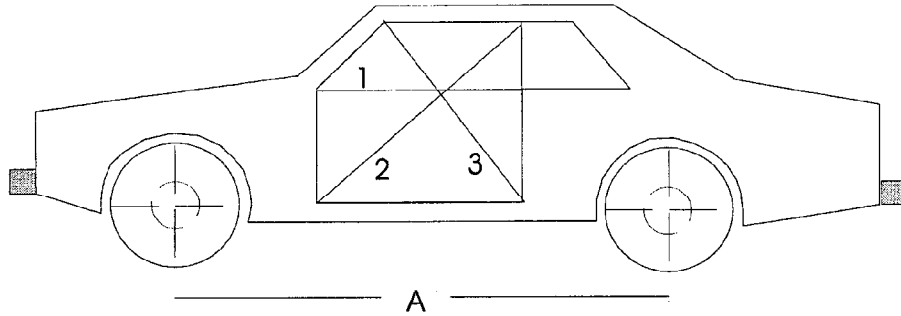


DATA SHEET NO.14 VEHICLE MEASUREMENTS

No.		Pre-Test	Post-Test	Differences
X1	Total Length of Vehicle at Centerline	4784.4	4274.5	509.9
X2	Rear Surface of Vehicle to Front of Engine	3955.6	3782.4	173.2
X3	Rear Surface of Vehicle to Firewall	3610.8	3622.9	-12.1
X4	Rear Surface of Vehicle to Upper Leading Edge of Right Door	3277.0	3306.9	-29.9
X5	Rear Surface of Vehicle to Upper Leading Edge of Left Door	3272.9	3206.0	66.9
X6	Rear Surface of Vehicle to Lower Leading Edge of Right Door	3277.5	3308.3	-30.8
X7	Rear Surface of Vehicle to Lower Leading Edge of Left Door	3275.0	3217.8	57.2
X8	Rear Surface of Vehicle to Upper Trailing Edge of Right Door	2230.3	2254.0	-23.7
X9	Rear Surface of Vehicle to Upper Trailing Edge of Left Door	2231.3	2167.7	63.6
X10	Rear Surface of Vehicle to Lower Trailing Edge of Right Door	2225.7	2252.0	-26.3
X11	Rear Surface of Vehicle to Lower Trailing Edge of Left Door	2228.4	2150.1	78.3
X12	Rear Surface of Vehicle to Bottom of "A" Post of Right Side	3372.7	3405.7	-33.0
X13	Rear Surface of Vehicle to Bottom of "A" Post of Left Side	3377.8	3307.1	70.7
X14	Rear Surface of Vehicle to Firewall, Right Side	3564.4	3566.6	-2.2
X15	Rear Surface of Vehicle to Firewall, Left Side	3598.4	3622.9	-24.5
X16	Rear Surface of Vehicle to Steering Column	2832.6	2760.9	71.7
X17	Center of Steering Column to "A" Post	303.5	298.1	5.4
X18	Center of Steering Column to Headliner	410.3	430.9	-20.6
X19	Rear Surface of Vehicle to Right Side of Front Bumper	4794.9	4276.0	518.9
X20	Rear Surface of Vehicle to Left Side of Front Bumper	4723.0	4306.7	416.3
X21	Length of Engine Block	276.2	260.5	15.7
RD	Rear Surface of Vehicle to Right Side of Dash Panel	2999.6	2766.4	233.2
CD	Rear Surface of Vehicle to Center of Dash Panel	3023.5	2967.4	56.1
LD	Rear Surface of Vehicle to Left Side of Dash Panel	2999.9	2924.3	75.6

All Dimensions in mm

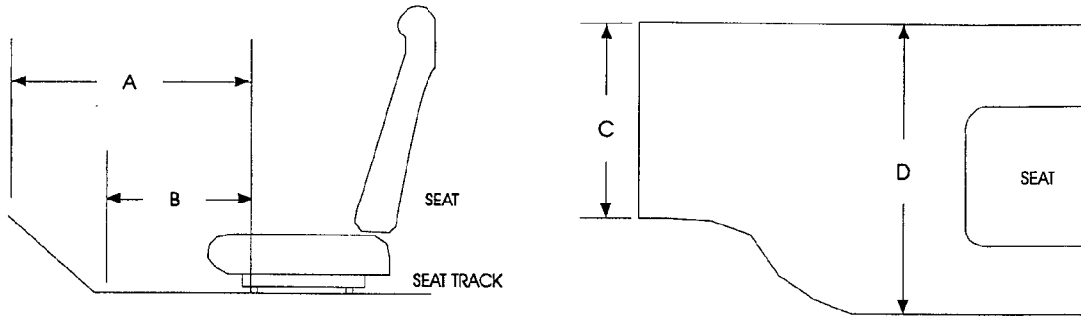
DATA SHEET NO.14 VEHICLE MEASUREMENTS (cont.)
 VEHICLE INTRUSION MEASUREMENTS
 DOOR OPENING WIDTH



UNITS (mm)	LEFT			RIGHT		
MEASUREMENT	1	2	3	1	2	3
BEFORE TEST	975.1	1419.1	938.9	953.6	1427.2	922.0
AFTER TEST	950.9	1406.7	928.0	952.2	1455.6	918.6
DIFFERENCE	24.2	12.4	10.9	1.4	-28.4	3.4

UNITS (mm)	A = WHEELBASE LEFT	A = WHEELBASE RIGHT
BEFORE TEST	2675.3	2670.7
AFTER TEST	2594.2	2598.2
DIFFERENCE	81.1	72.5

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



DRIVER

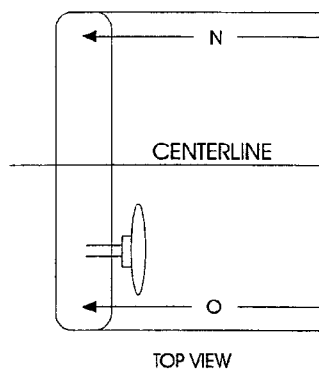
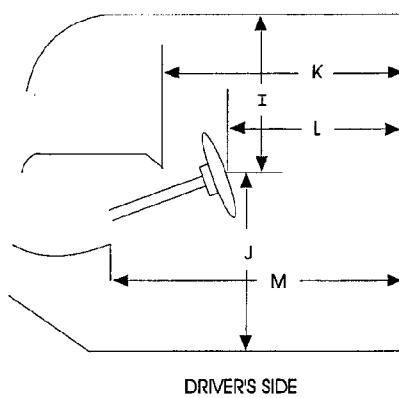
Measurement	Pre-Test	Post-Test	Difference
A	763.0	679.8	83.2
B	617.8	535.9	81.9
C	509.7	480.4	29.3
D	513.4	508.0	5.4

PASSENGER

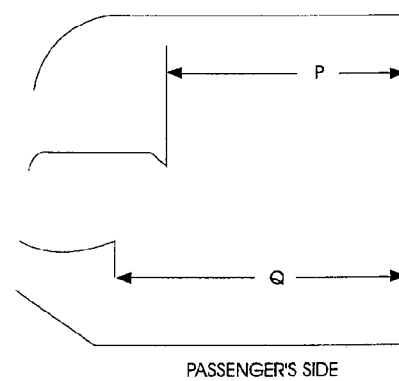
Measurement	Pre-Test	Post-Test	Difference
A	734.9	600.6	134.3
B	613.7	480.8	132.9
C	463.8	468.2	-4.4
D	507.0	478.2	28.8

Units = mm

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



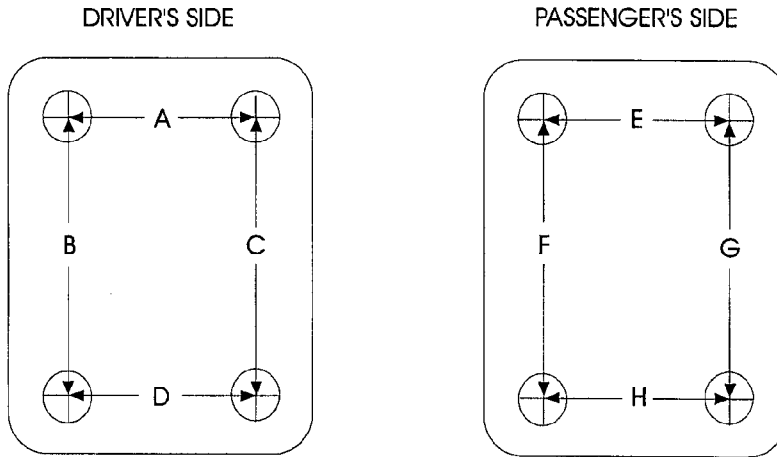
MEASUREMENTS
 FROM C-PILLAR
 BELT ANCHORAGE



Measurement	Pre-Test	Post-Test	Difference
I	410.3	430.9	-20.6
J	648.2	646.0	2.2
K	1799.5	1766.3	33.2
L	1578.5	1550.3	28.2
M	1781.2	1757.2	24.0
N	1793.3	N/A	N/A
O	1745.9	1713.7	32.2
P = K (PASS.)	1886.4	N/A	N/A
Q = M (PASS.)	1824.7	N/A	N/A

Units = mm

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

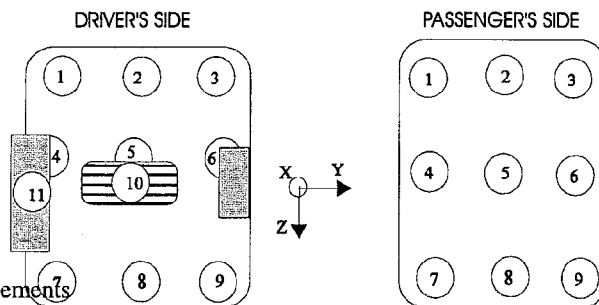


TOP VIEW THROUGH FLOOR PAN

Measurement	Pre-Test	Post-Test	Difference
A	136	138	-2
B	268	252	16
C	265	267	-2
D	129	130	-1
E	165	170	-5
F	274	282	-8
G	290	259	31
H	204	200	4

Units = mm

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



Driver Side Floorpan Measurements
Reference: X = Rear Bumper; Z = Ground

Floorpan Location	X Deformation			Z Deformation		
	Pre-Test	Post-Test	Difference	Pre-Test	Post-Test	Difference
1	3494.0	3478.6	15.4	-376.5	-404.3	27.8
2	3485.8	3429.6	56.2	-379.1	-409.4	30.3
3	3462.4	3417.3	45.1	-350.4	-379.6	29.2
4	3407.2	3369.1	38.1	-318.4	-346.5	28.1
5	3403.0	3330.4	72.6	-310.5	-363.4	52.9
6	3427.9	3352.5	75.4	-309.4	-349.8	40.4
7	3337.1	3320.6	16.5	-255.5	-291.1	35.6
8	3340.6	3285.7	54.9	-256.6	-287.0	30.4
9	3365.9	3291.0	74.9	-248.8	-280.5	31.7
10	3321.0	3295.5	25.5	-429.4	-429.2	-0.2
11	3365.3	3371.1	-5.8	-347.8	-361.6	13.8

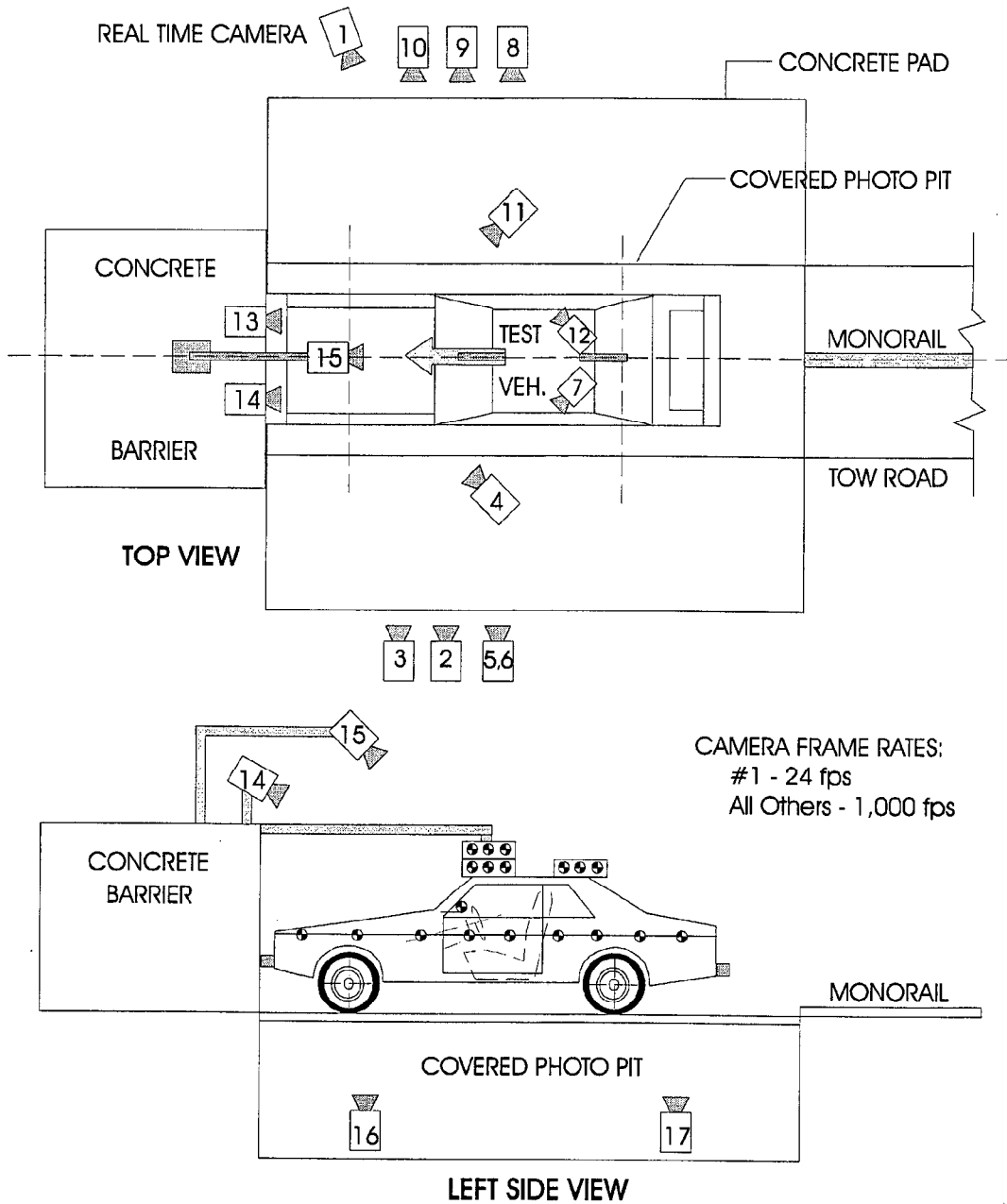
Passenger Side Floorpan Measurements
Reference: X = Rear Bumper; Z = Ground

Floorpan Location	X Deformation			Z Deformation		
	Pre-Test	Post-Test	Difference	Pre-Test	Post-Test	Difference
1	3466.5	3338.5	128.0	-369.9	-401.0	31.1
2	3476.0	3368.7	107.3	-382.2	-370.0	-12.2
3	3465.7	3369.1	96.6	-370.1	-393.0	22.9
4	3399.9	3295.4	104.5	-299.7	-335.1	35.4
5	3427.5	3323.0	104.5	-329.4	-321.0	-8.4
6	3438.9	3337.8	101.1	-335.8	-367.8	32.0
7	3335.8	3213.4	122.4	-258.7	-235.6	-23.1
8	3354.8	3248.9	105.9	-271.7	-287.7	16.0
9	3372.3	3259.3	113.0	-281.3	-314.9	33.6

Units in mm

CAMERA POSITIONS FOR FRONTAL IMPACTS

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



DATA SHEET NO.15 HIGH-SPEED CAMERA LOCATIONS

NHTSA Test No.: MY5101 Vehicle: 2000 Toyota Camry 4-Door Sedan

CAMERA NO.	VIEW	CAMERA POSITIONS (mm)*			ANGLE (deg)**	FILM PLANE TO HEAD TARGET	LENS (mm)	SPEED (fps)
		X	Y	Z				
1	Real-Time Camera	-	-	-	-	-	-	24
2	Overall Left Side	6810	1640	1040	-3	6374	12.5	1015
3	Left Side View	8035	915	1086	-2	7599	25	1010
4	Driver and Interior View	6910	2827	1962	-10	-	25	1055
5	Steering Column (Bottom)	7745	1855	1182	-3	7309	25	1010
6	Steering Column (Top)	7745	1855	1784	-8	7309	25	1020
7	Left Belt	-	-	-	-	-	13	1020
8	Overall Right Side	6791	1902	1042	-3	6355	12.5	1010
9	Right Side View	8174	1254	1098	-2	7738	25	1000
10	Right Passenger View	7776	1918	1300	-2	7340	35	1010
11	Passenger and Interior View	6267	3040	1864	-10	-	25	1015
12	Right Belt	-	-	-	-	-	13	N/A
13	Passenger Front View	592	-112	1982	-40	-	13	1015
14	Driver Front View	592	-122	1982	-36	-	13	1010
15	Windshield View	0	-533	3374	-50	-	13	1005
16	Pit View of Engine	0	1216	-3048	90	-	13	1050
17	Pit View of Fuel Tank	0	2926	-3048	90	-	13	1005

*X = film plane to monorail centerline

** = referenced to horizontal plane

Y = film plane to impact location

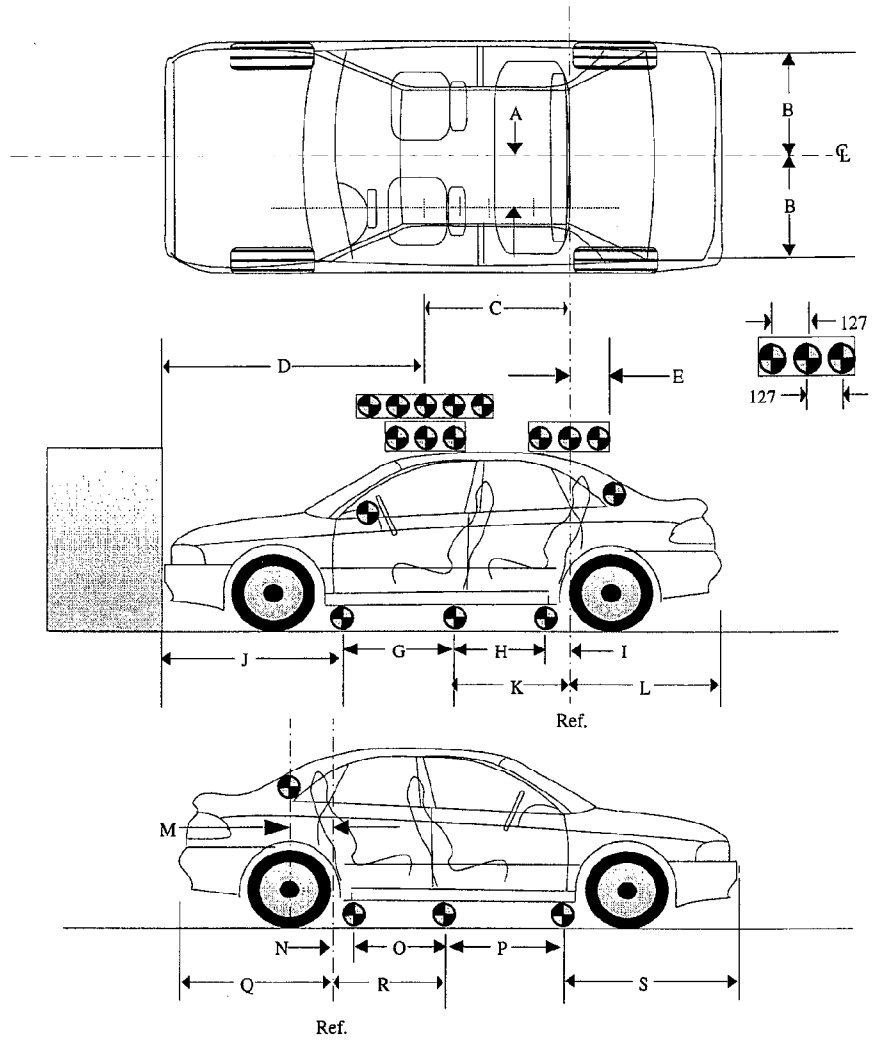
N.T. indicates No Timing

Z = film plane to ground

DATA SHEET NO. 16 VEHICLE REFERENCE PHOTO TARGET LOCATIONS

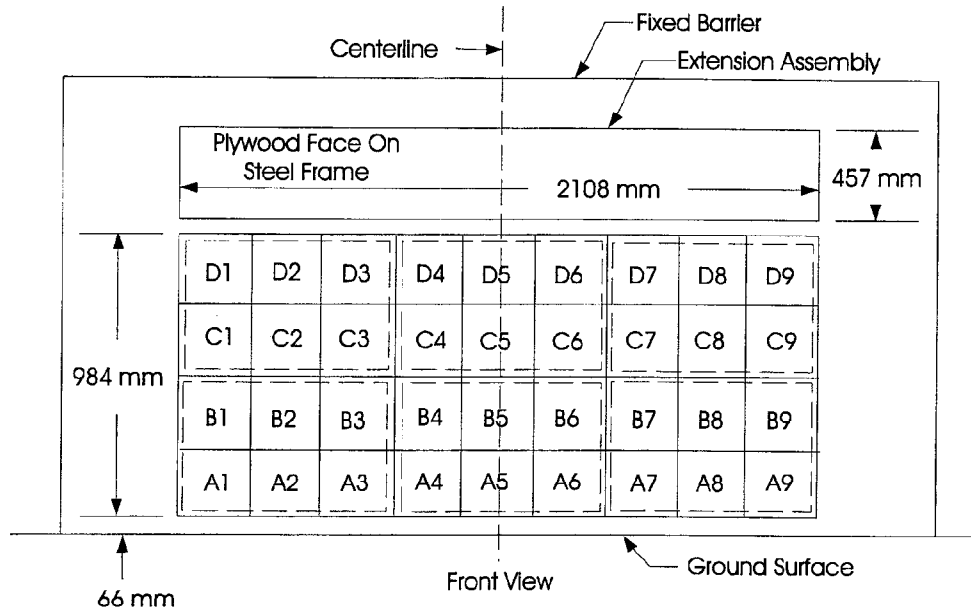
(Dimensions in millimeters)

A	360.0
B	623.8
C	1213.4
D	2039.2
E	363.2
F	1444.2
G	902.6
H	897.3
I	90.1
J	1419.2
K	987.4
L	1475.1
M	357.0
N	92.5
O	881.6
P	889.8
Q	1485.3
R	974.1
S	1435.2



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)

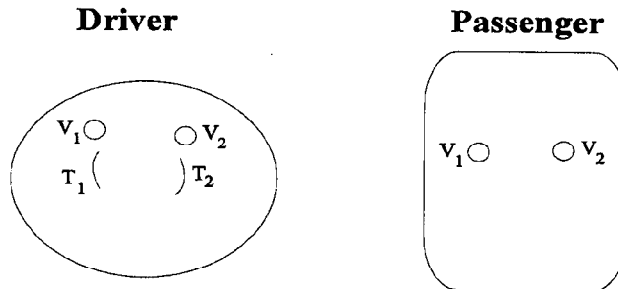
DATA SHEET NO. 18 POST TEST AIR BAG DATA

NHTSA No. : MY5101; Test Date: January 14, 2000; Technician: P. MacDiarmid

Vehicle Model Year/Make/Model: 2000 Toyota Camry

- A. No. of vent holes: 2 -Driver 2 -Passenger
- B. Size of vent holes: (mm²) 707 -Driver 177 -Passenger
- C. Total vent area: (mm²) 1414 -Driver 354 -Passenger
- D. Deflated air bag length and width dimensions or, if round, diameter. (mm)
- Driver: 510 -Height; 645 -Width; 280 -Depth
- Passenger: 700 -Height; 400 -Width; 785 -Depth
- E. Is the air bag tethered?
- Driver: X -Yes; - -No; If yes, record length of tether- 175
- 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: 4516507020-0A 0006752E015 A890B5240 20 07 99 Assembled in Mexico
Generator: 40029299A20 138W
- Passenger: Air bag: P5204352-00AA02 TAC197N11113
Generator: TOYOTA: 73970-06060-B0 Autoliv: 5204347-00 CFU K7V G99 PKY LH
TEY K7V 4G BDH

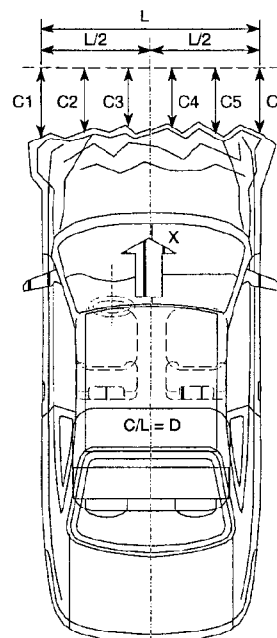
DATA SHEET NO. 19 ACCIDENT INVESTIGATION DIVISION DATA

FOR 56.3 KPH FRONTAL BARRIER IMPACT

Vehicle Make/Model/Body Style: Toyota Camry 4-Door Sedan
 NHTSA Test No.: MY5101 VIN: 4T1BG22K9YU922698
 Model Year: 2000 Build Date: 8-99 Test Date: January 14, 2000
 Vehicle Size Category: Mid-Size Test Weight: 1656.0 kg
 Vehicle Wheelbase: 2670 mm; Front Overhang: 1419 mm; Overall Width: 1785 mm
 Collision Deformation Classification (CDC) Code: 12FDEW2

Crush Depth Dimensions:

	PRE	POST	DIFF	
C1 =	4601.5	4270.9	-330.6	mm
C2 =	4732.1	4281.0	-451.1	mm
C3 =	4769.3	4258.8	-510.5	mm
C4 =	4771.1	4253.6	-517.5	mm
C5 =	4734.2	4252.2	-482	mm
C6 =	4604.7	4207.6	-397.1	mm



Midpoint of Damage: D = Vehicle Centerline (Longitudinal)

Length of Damaged Region:

L1= 1500 mm
 L2= 750 mm
 L3= 500 mm

APPENDIX A
PHOTOGRAPHS

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A-5	POST-TEST LEFT SIDE VIEW	A-7
A-6	PRE-TEST RIGHT SIDE VIEW	A-8
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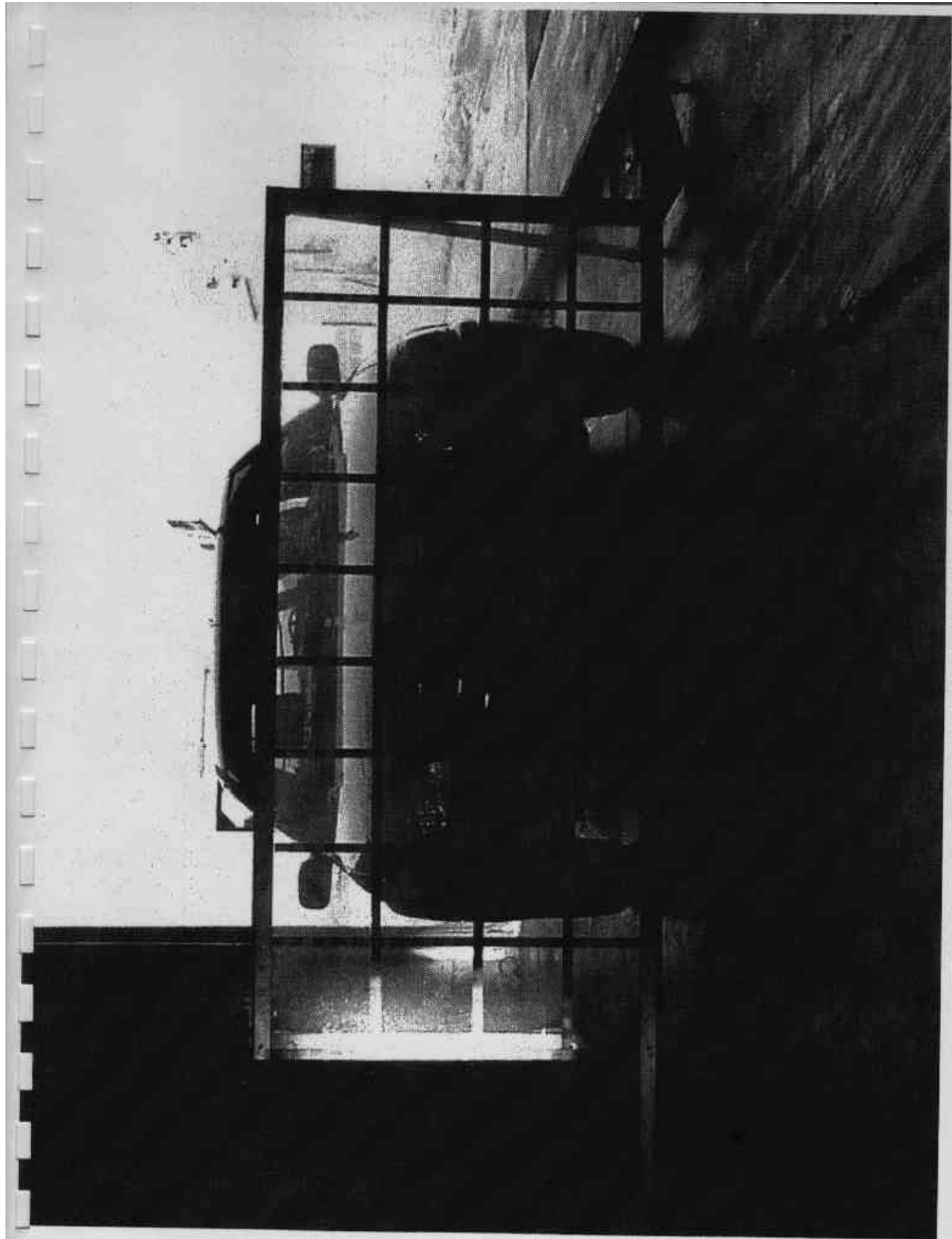


Figure A-1 LOAD CELL LOCATIONS

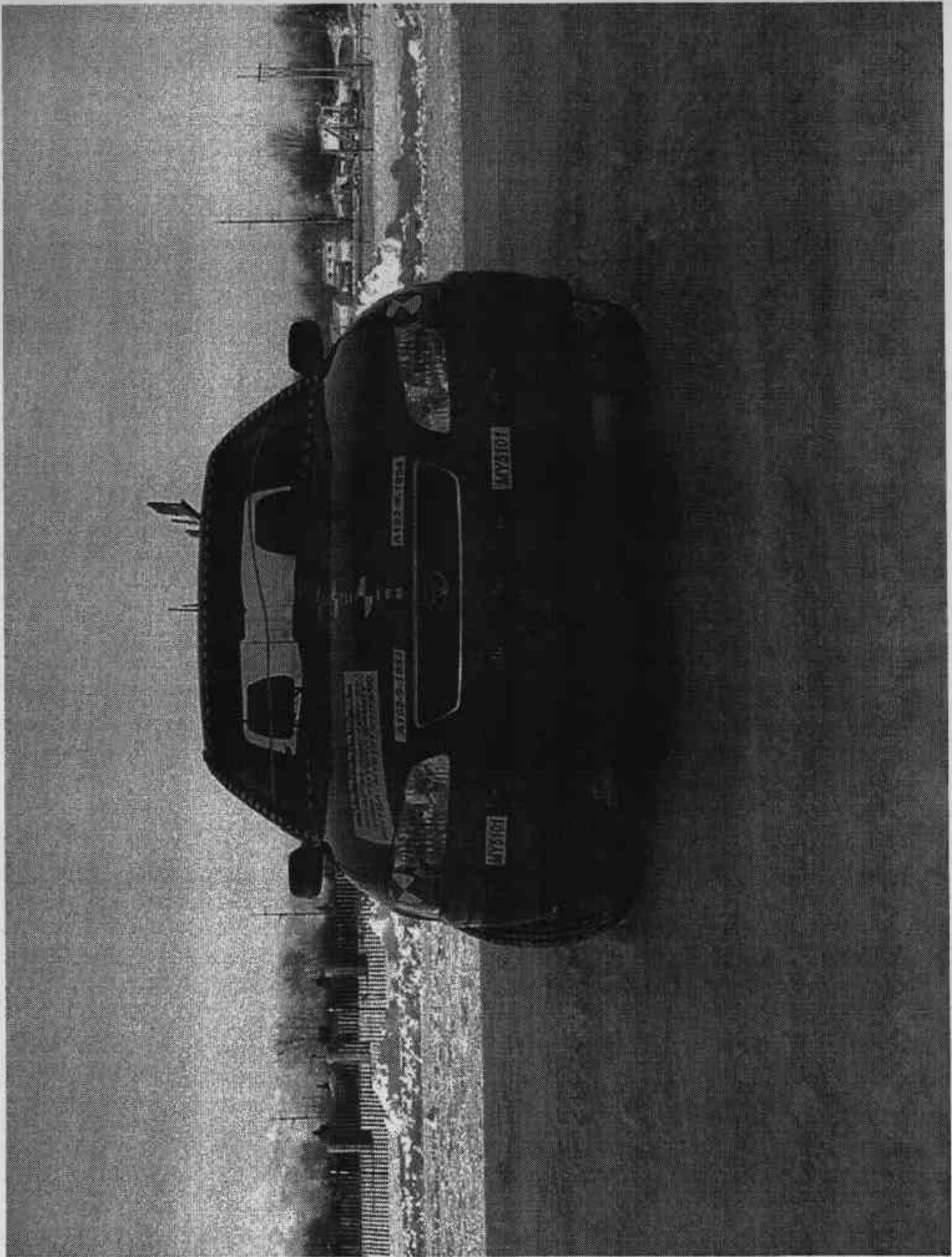


Figure A-2 PRE-TEST FRONT VIEW



Figure A-3 POST-TEST FRONT VIEW

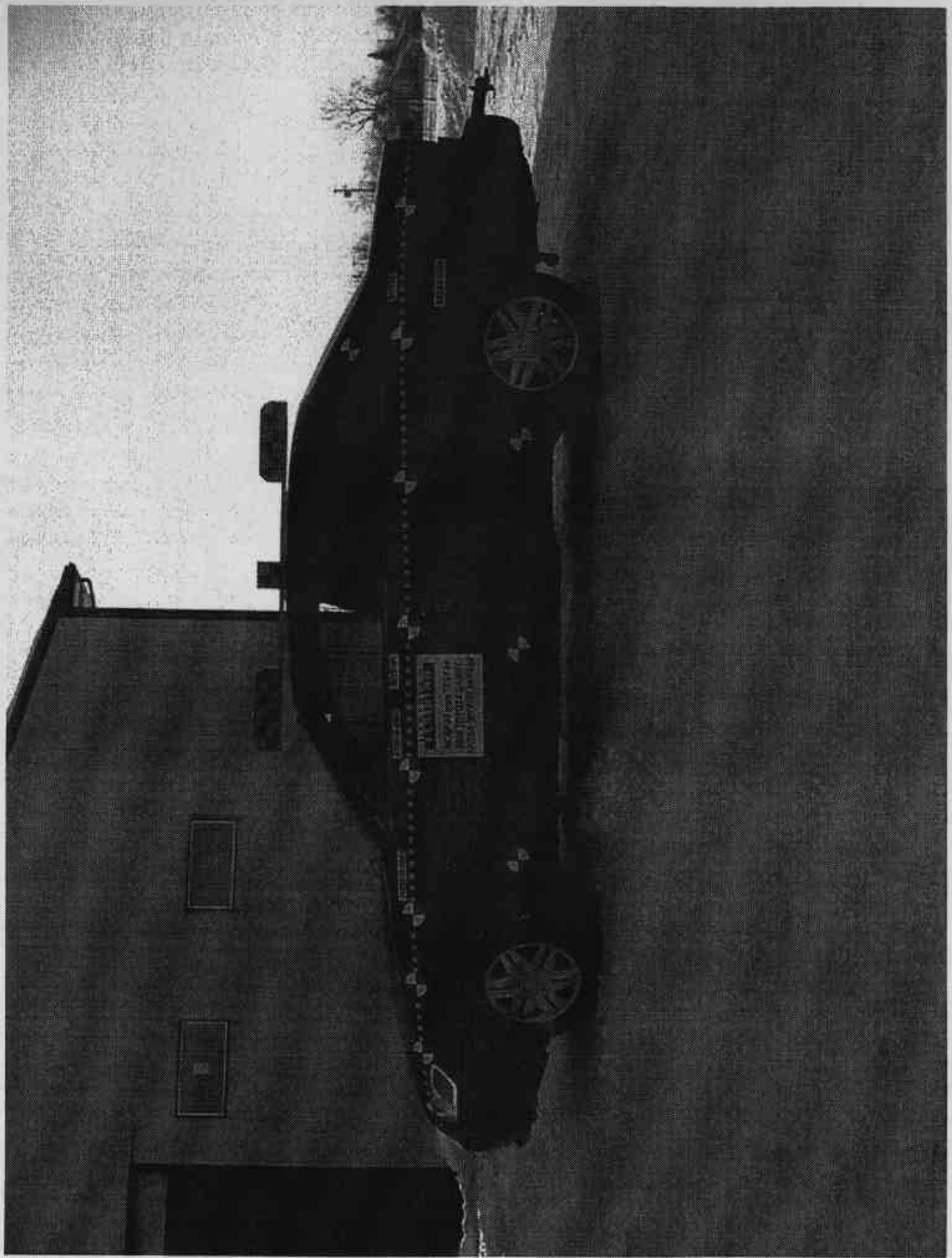


Figure A-4 PRE-TEST LEFT SIDE VIEW

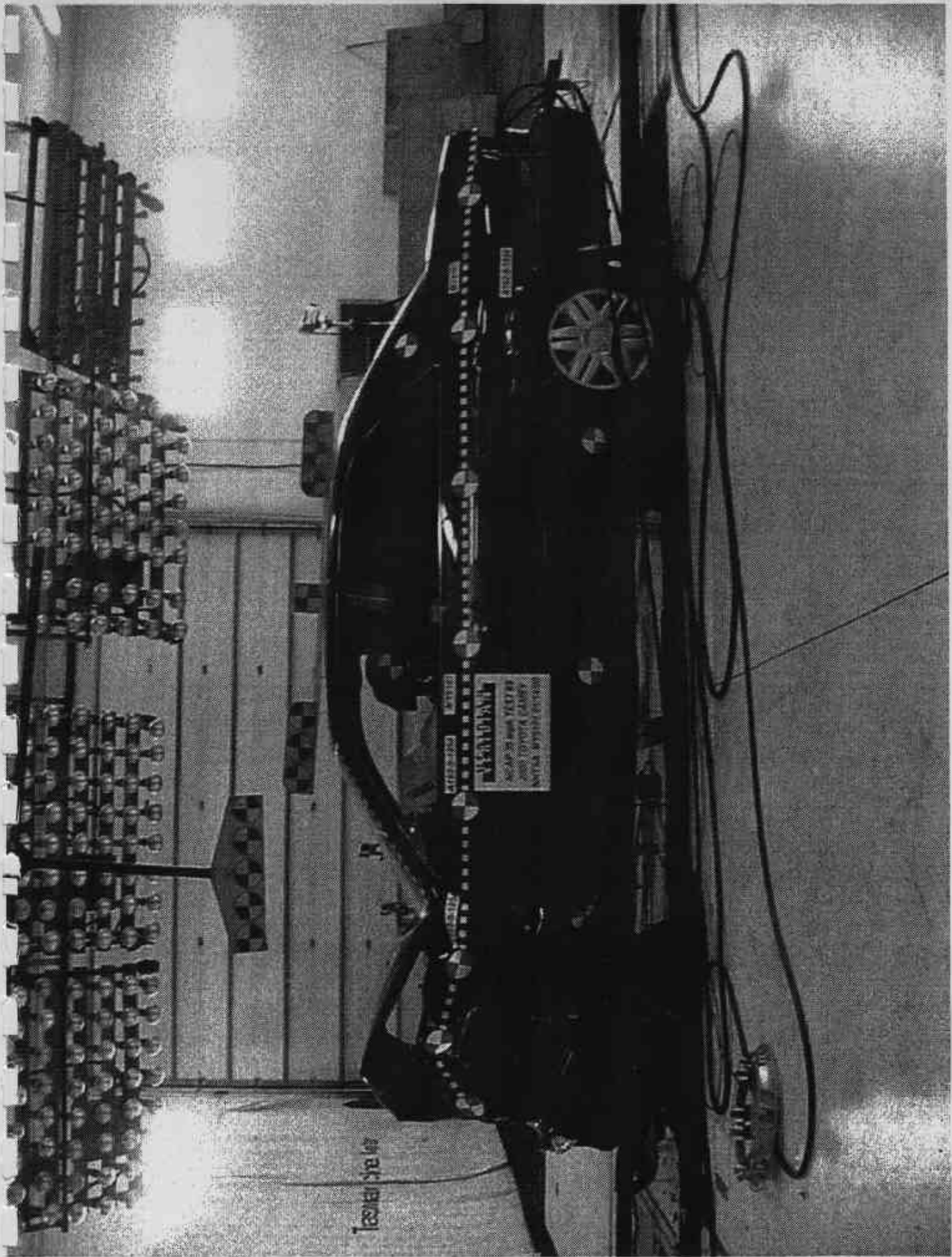


Figure A-5 POST-TEST LEFT SIDE VIEW

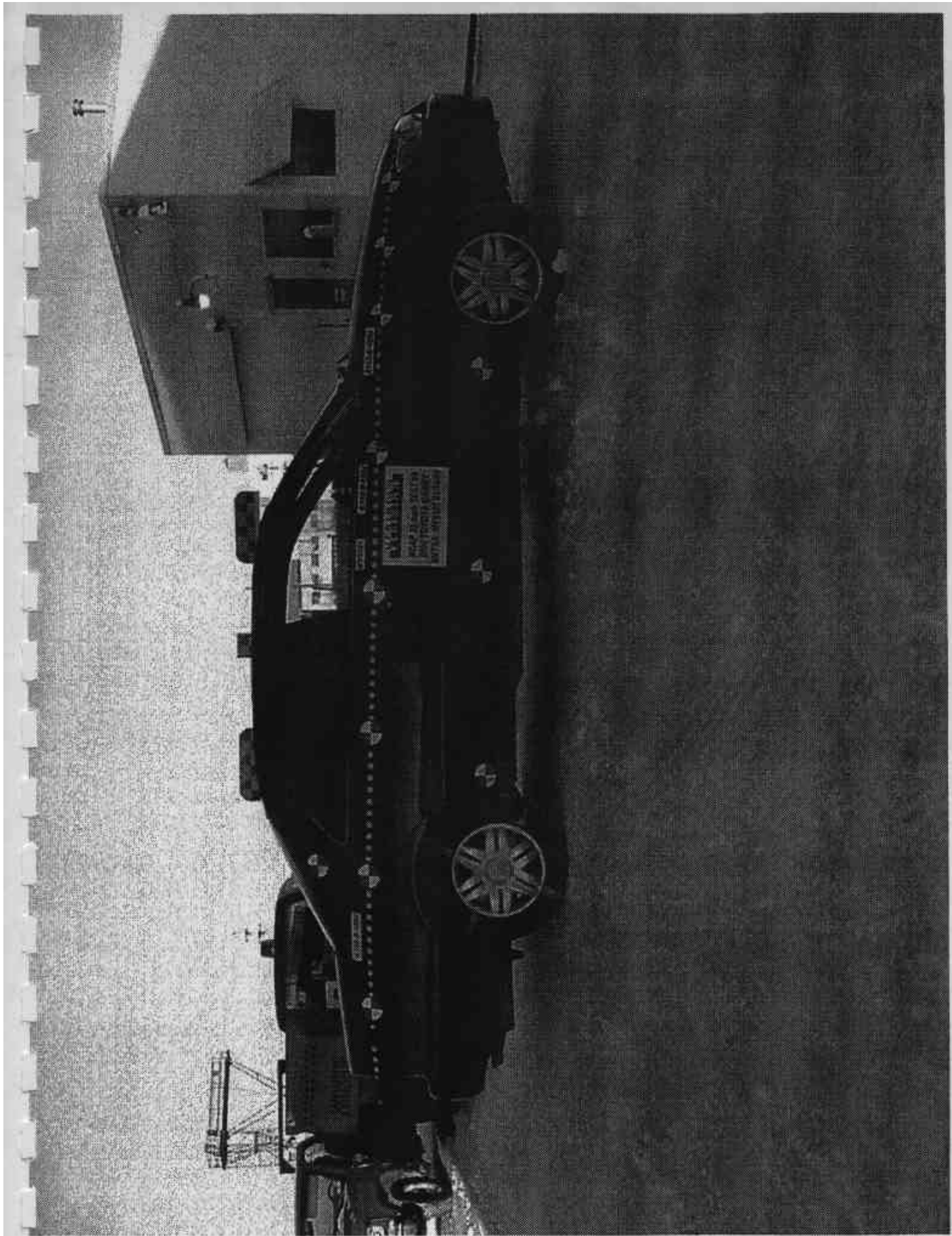


Figure A-6 PRE-TEST RIGHT SIDE VIEW

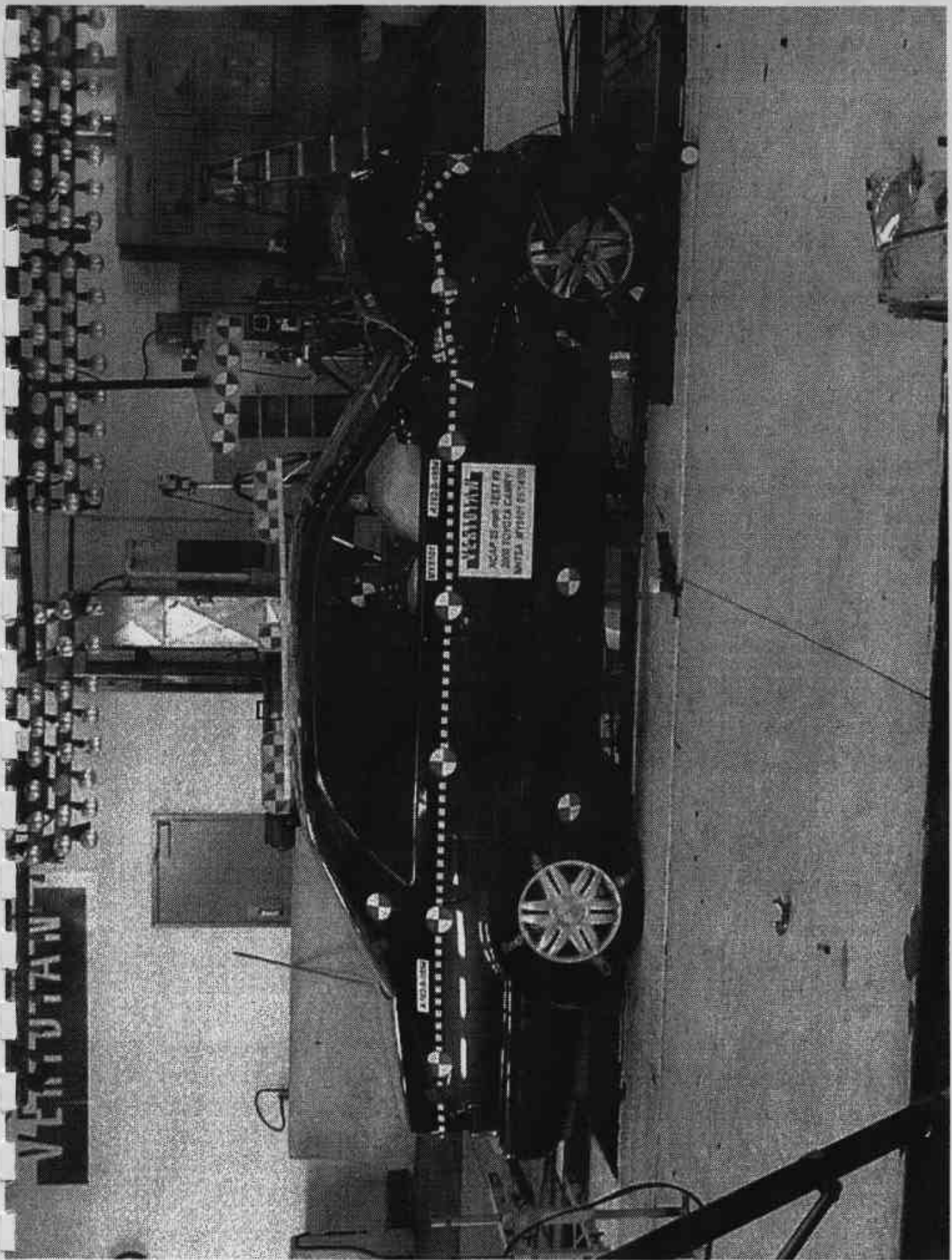


Figure A-7 POST-TEST RIGHT SIDE VIEW

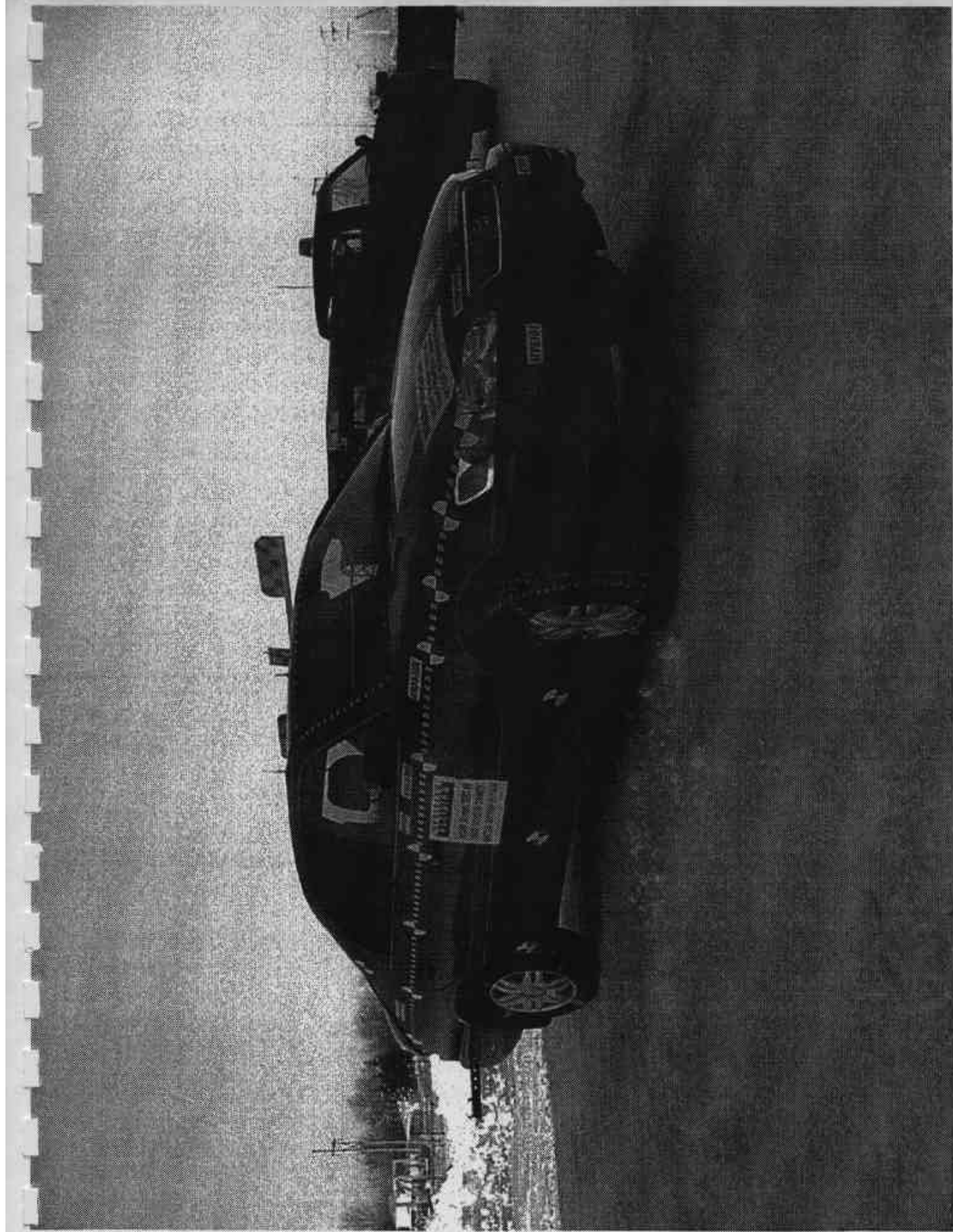


Figure A-8 PRE-TEST RIGHT FRONT THREE-QUARTER VIEW

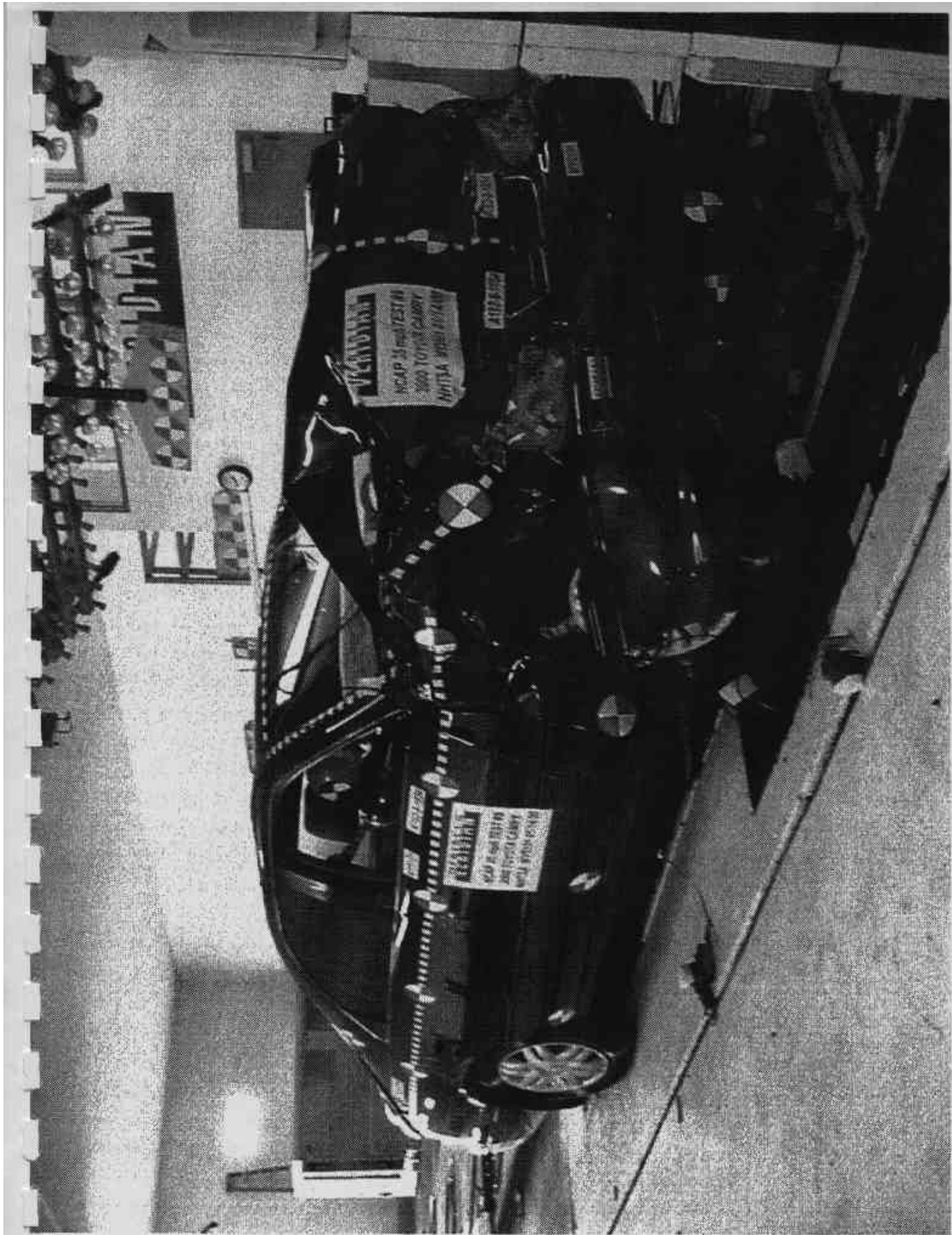


Figure A-9 POST-TEST RIGHT FRONT THREE-QUARTER VIEW

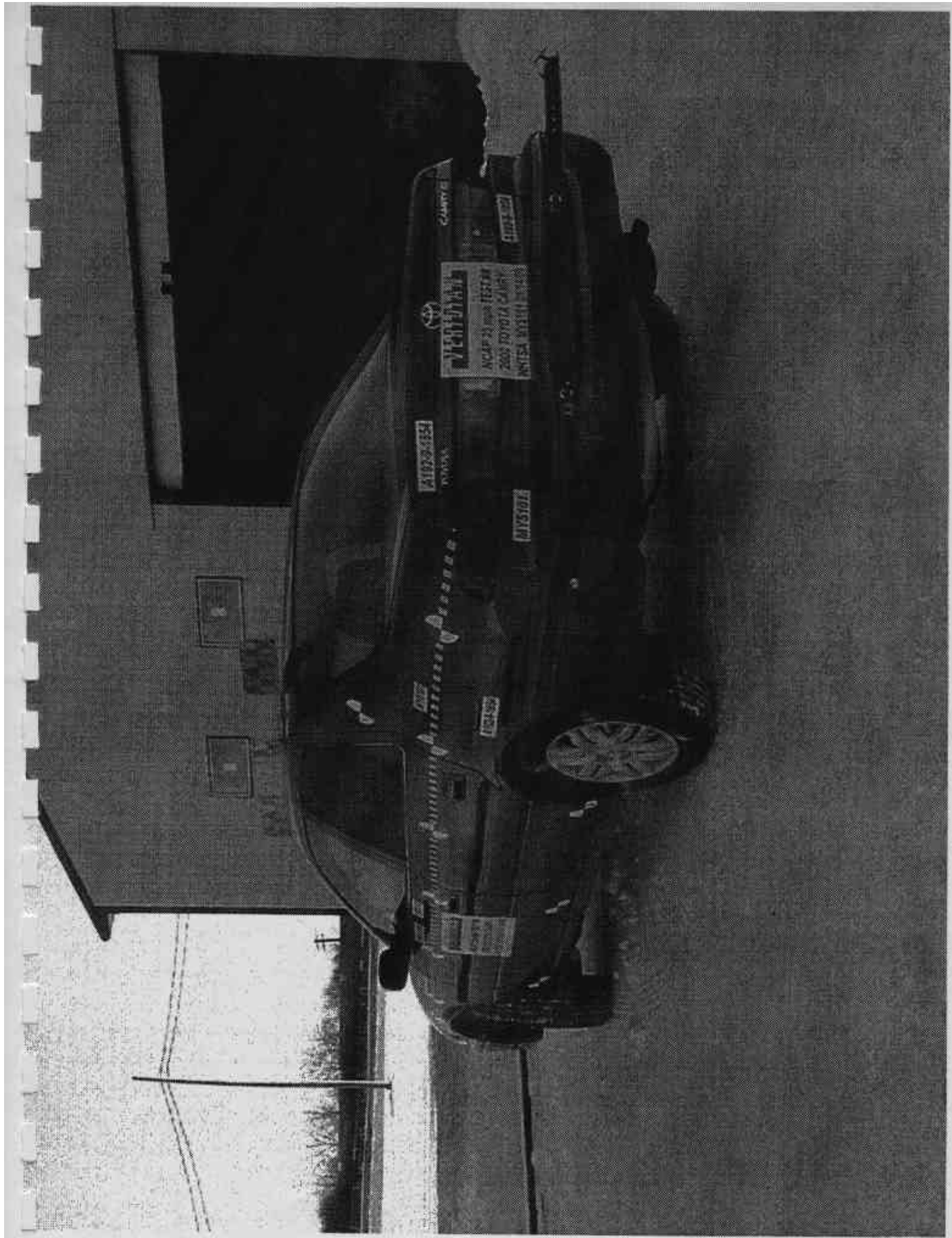


Figure A-10 PRE-TEST LEFT REAR THREE-QUARTER VIEW

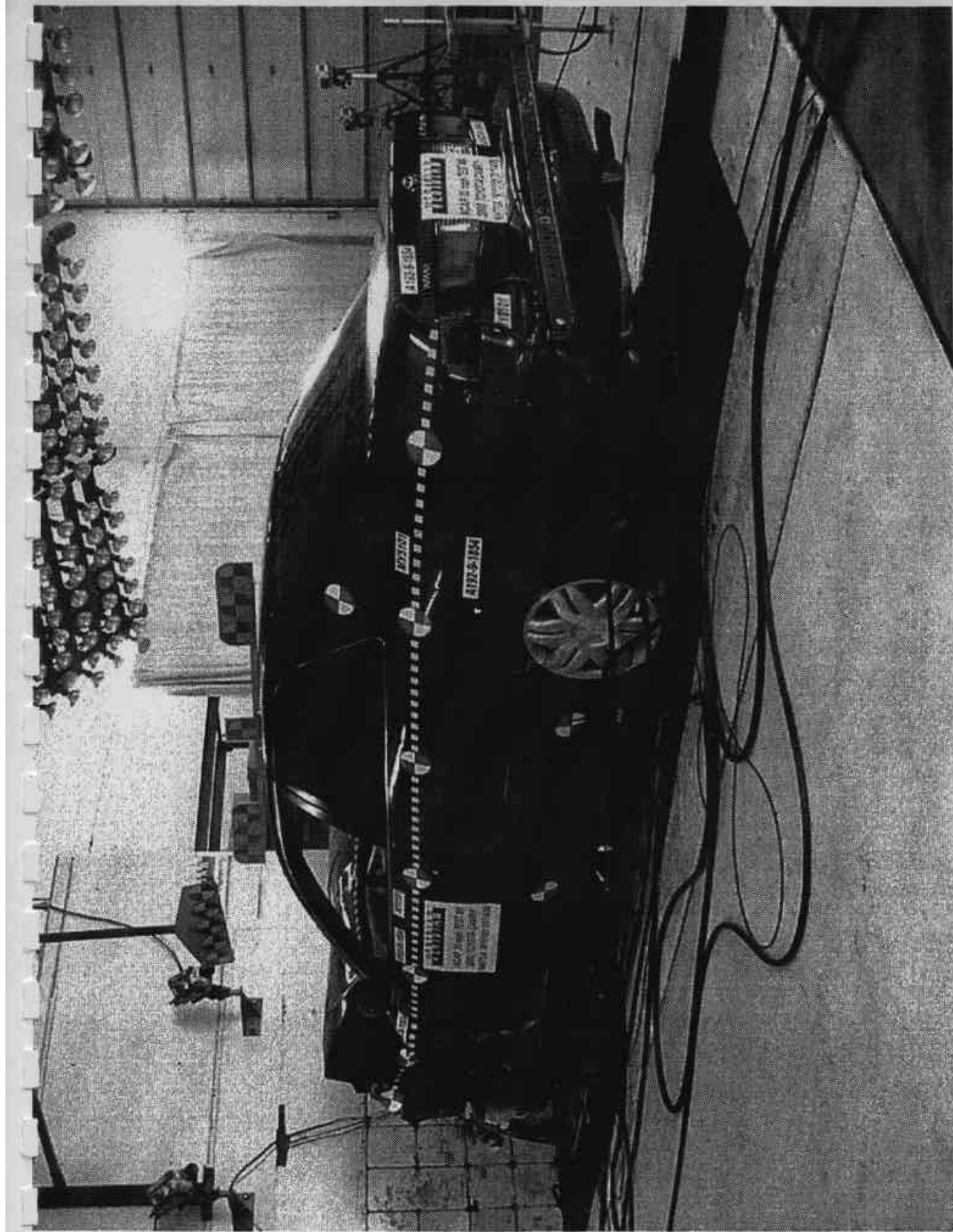


Figure A-11 POST-TEST LEFT REAR THREE-QUARTER VIEW

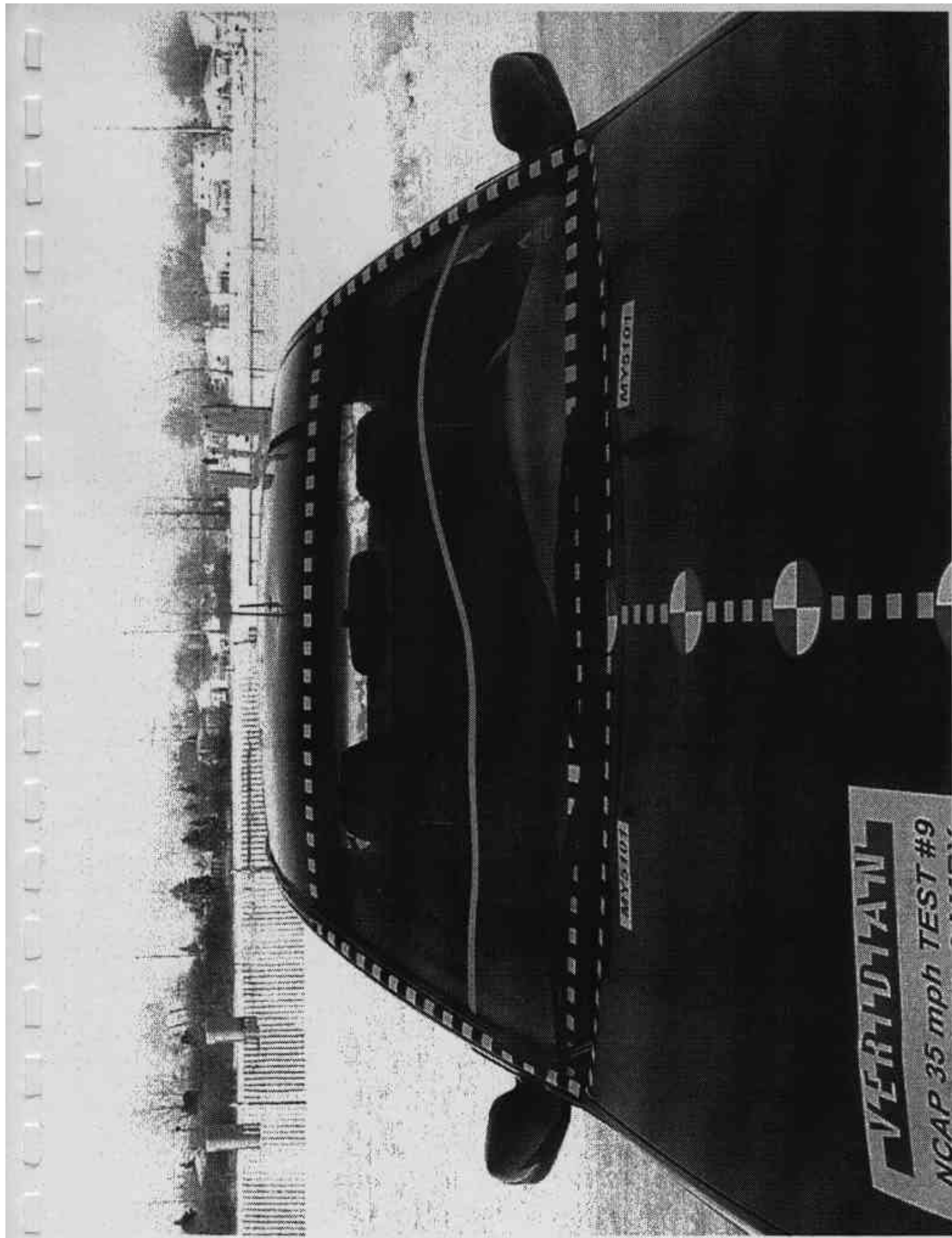


Figure A-12 PRE-TEST WINDSHIELD VIEW

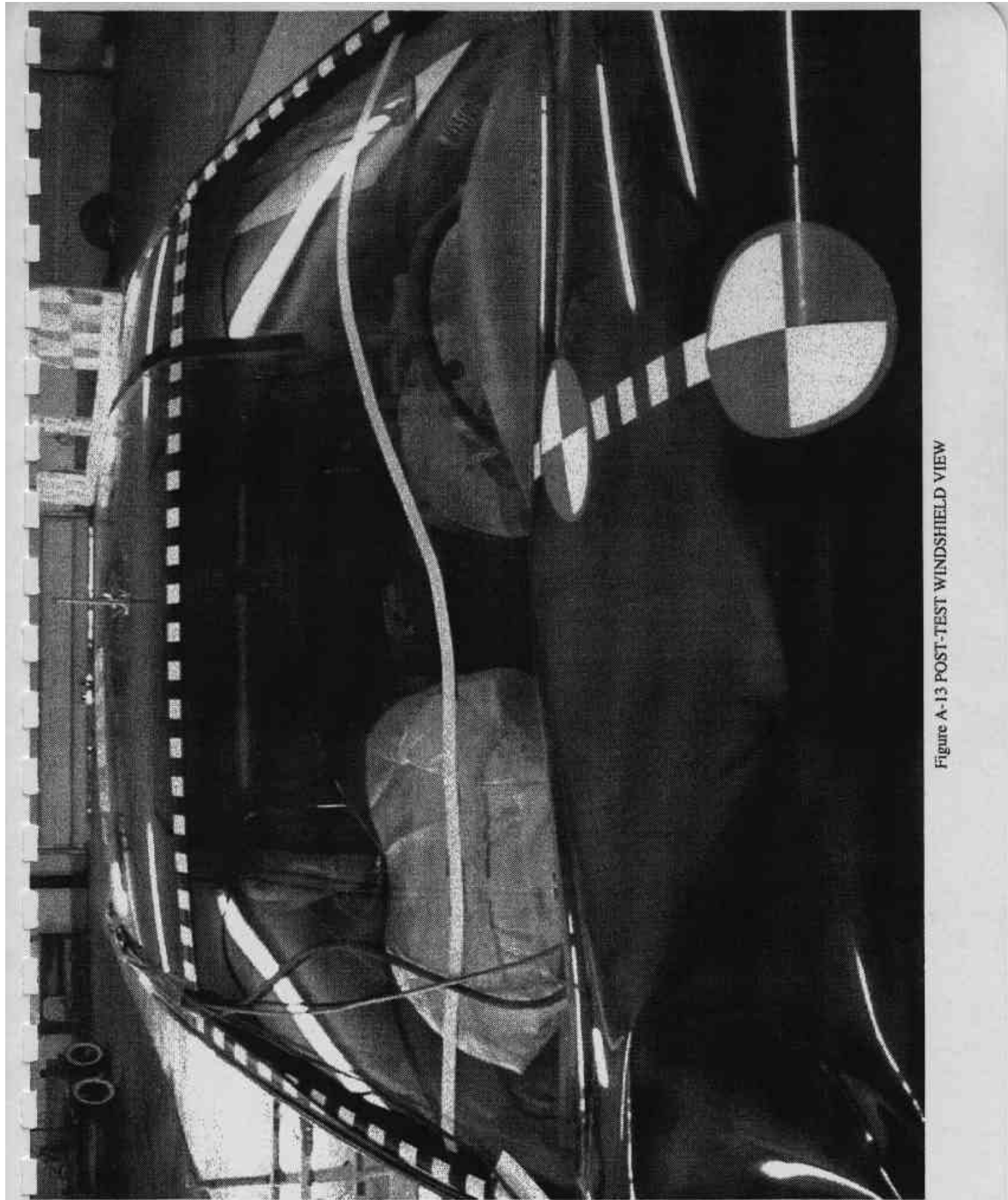


Figure A-13 POST-TEST WINDSHIELD VIEW

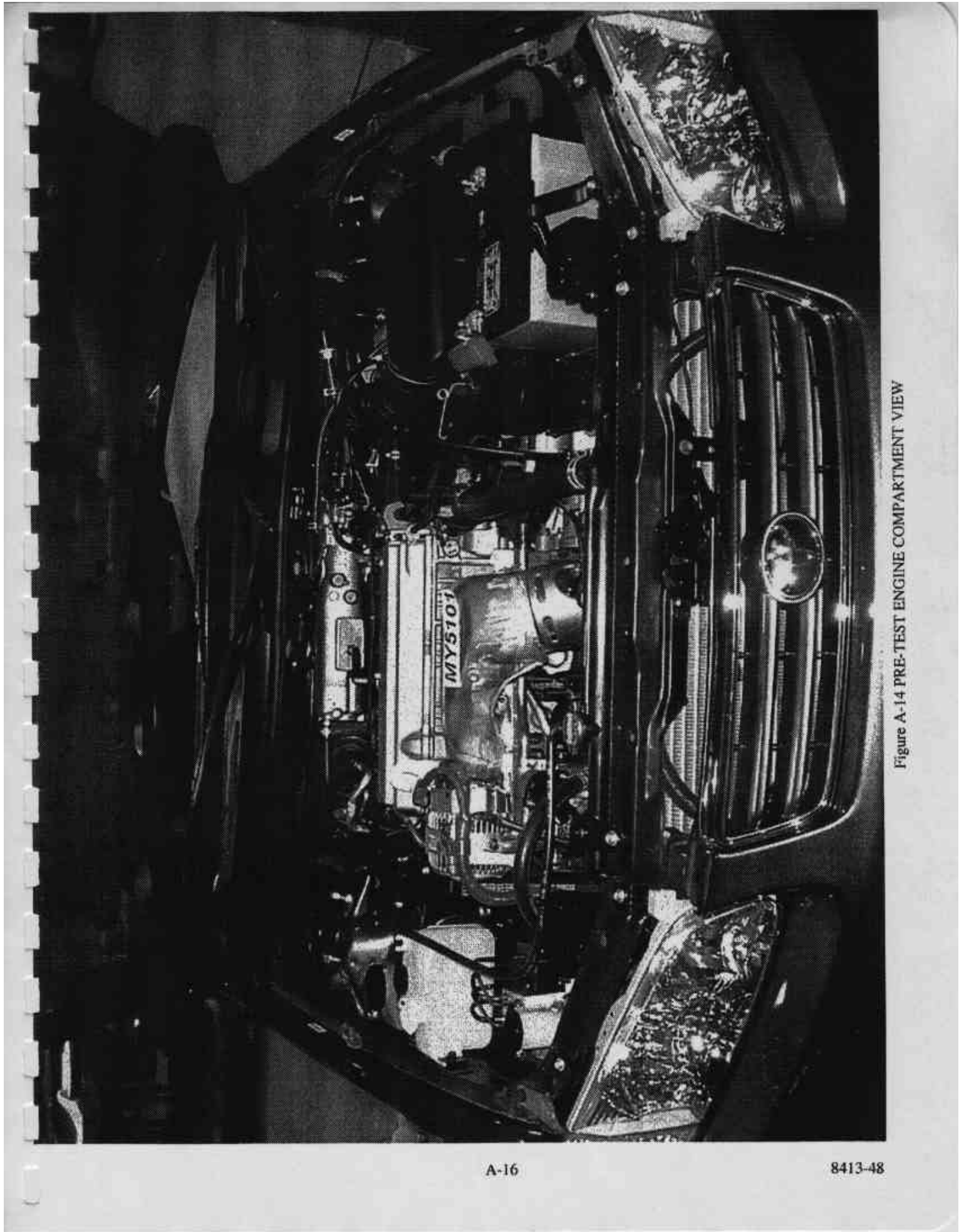
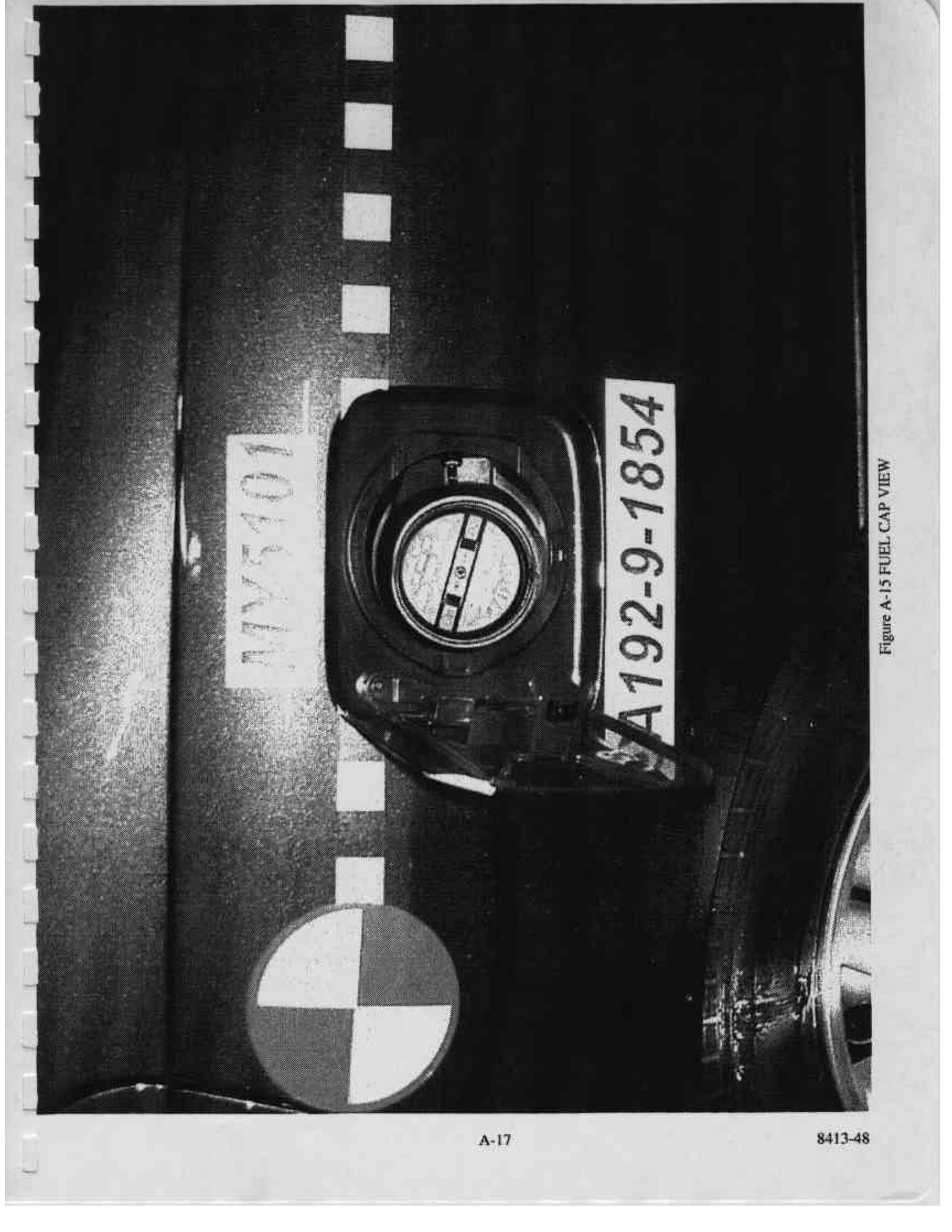


Figure A-14 PRE-TEST ENGINE COMPARTMENT VIEW



MTV5101

A192-9-1854

Figure A-15 FUEL CAP VIEW



Figure A-16 PRE-TEST FRONT UNDERBODY VIEW

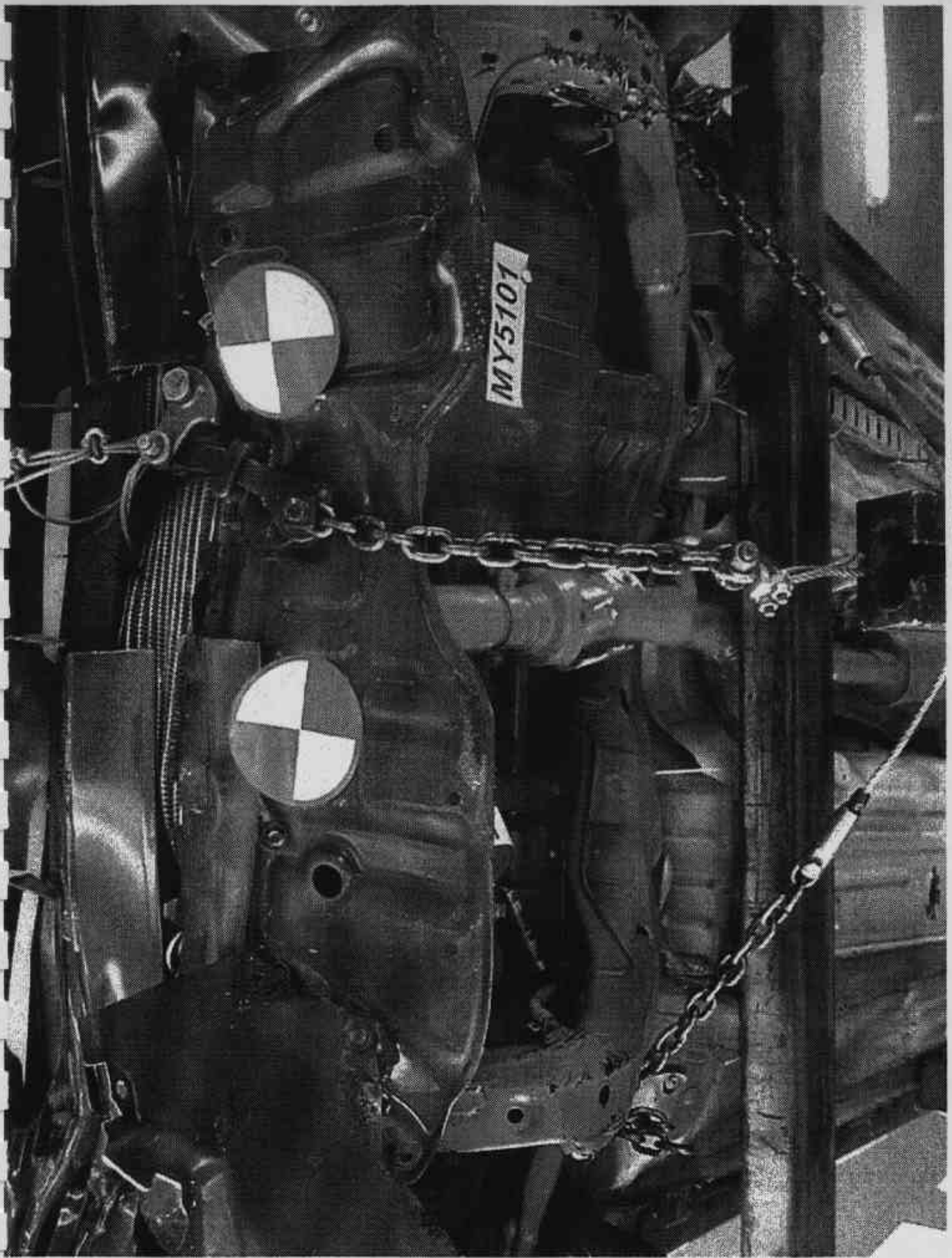


Figure A-17 POST-TEST FRONT UNDERBODY VIEW

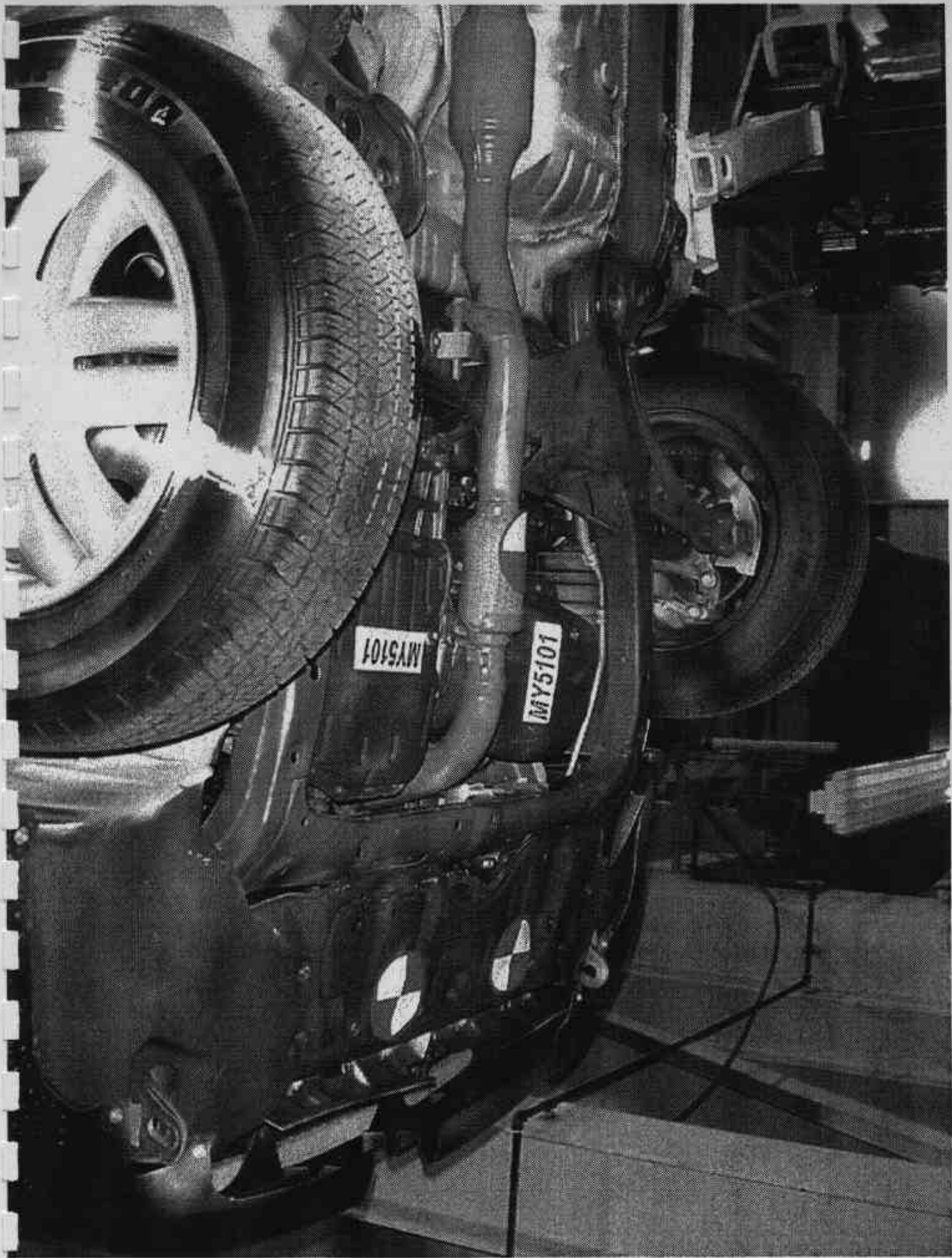


Figure A-18 PRE-TEST FRONT SIDE UNDERBODY VIEW

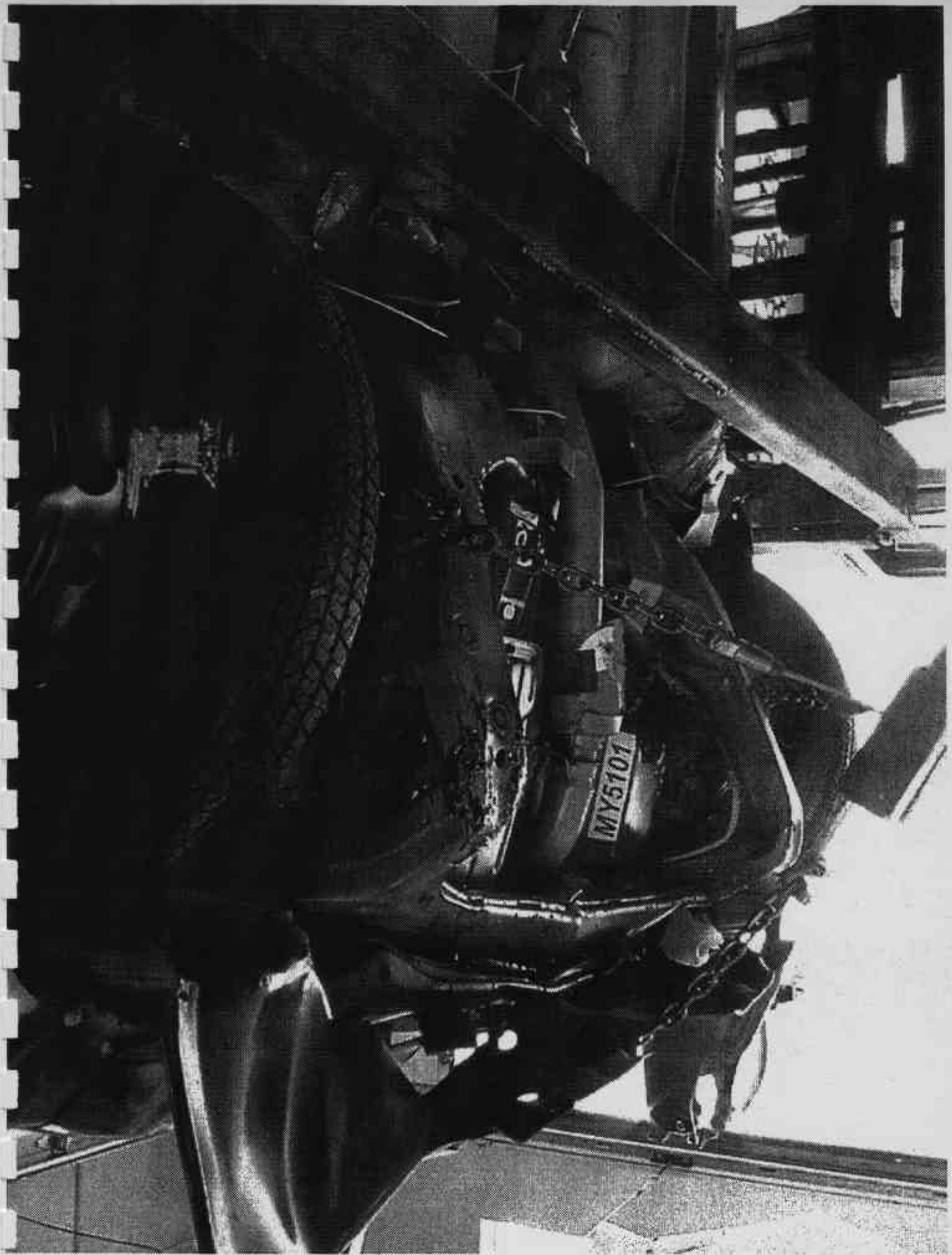


Figure A-19 POST-TEST FRONT SIDE UNDERBODY VIEW

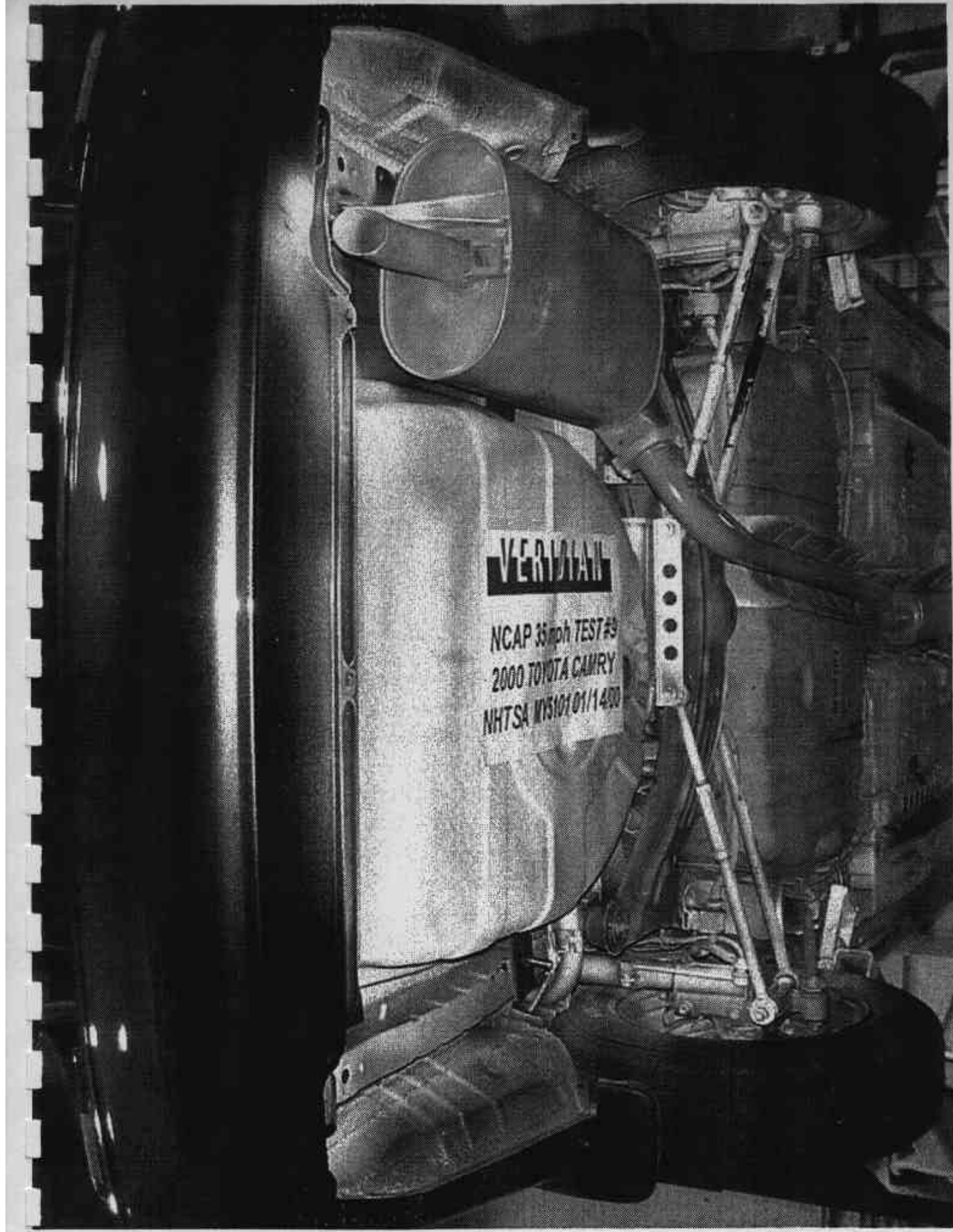


Figure A-20 PRE-TEST REAR UNDERBODY VIEW

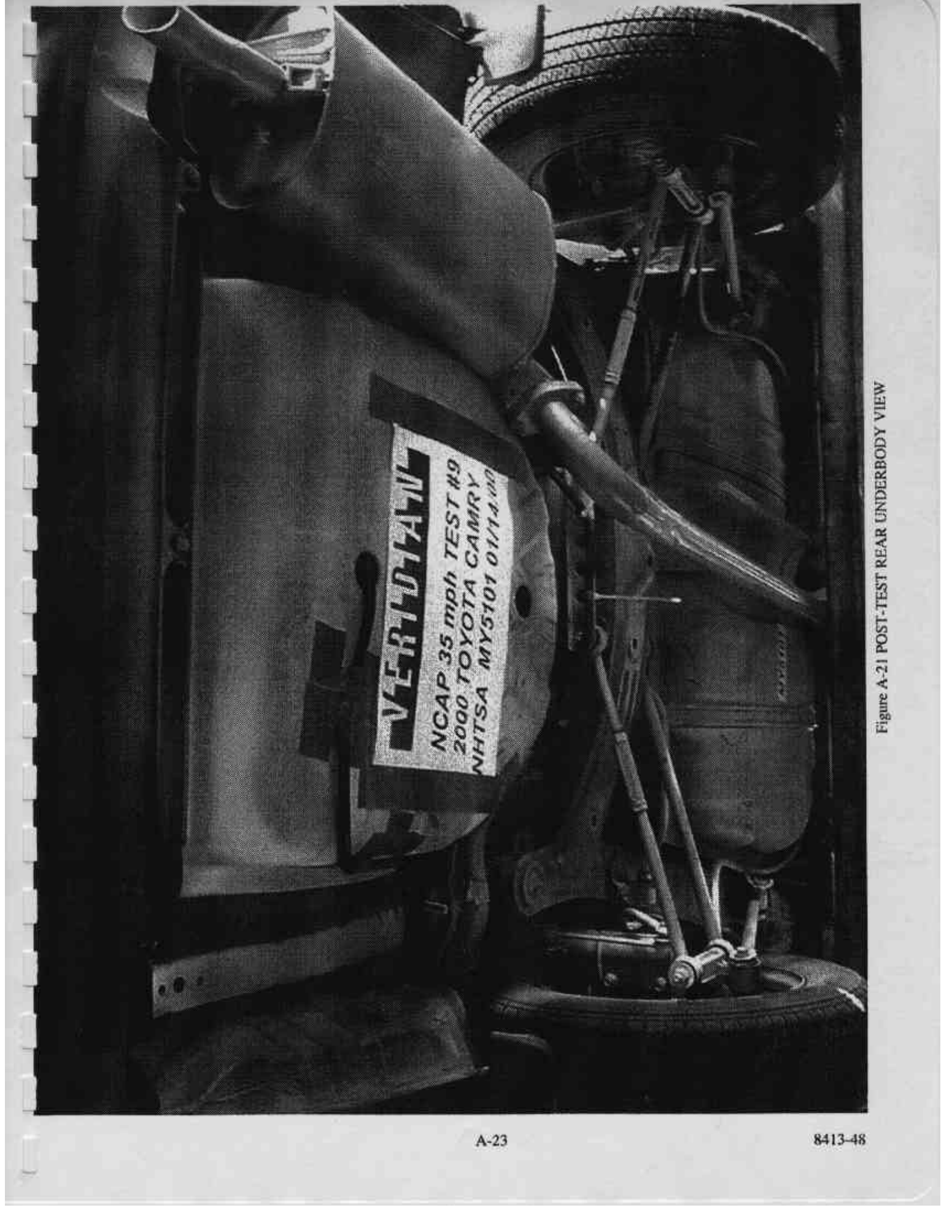


Figure A-21 POST-TEST REAR UNDERBODY VIEW

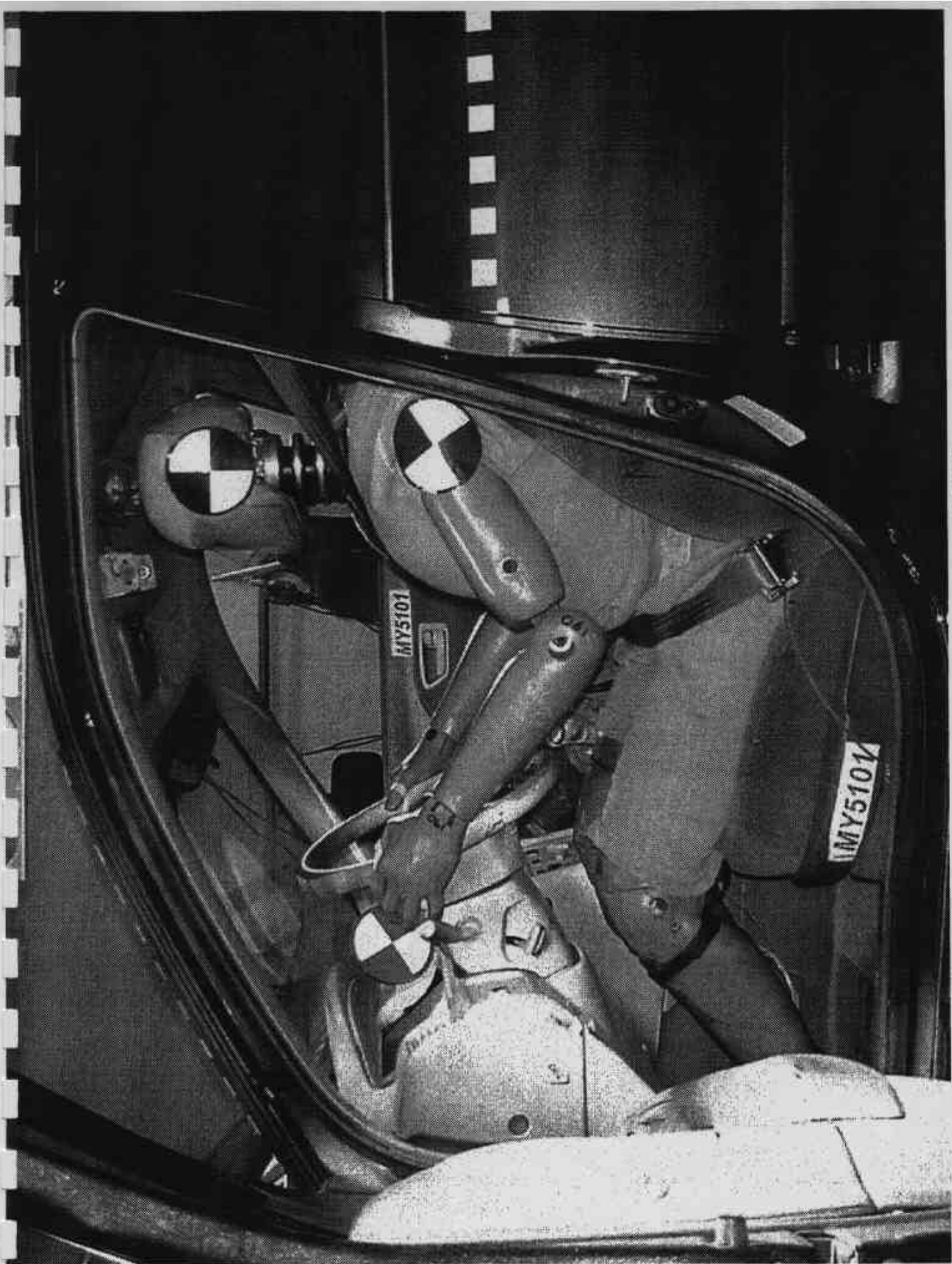


Figure A-22 PRE-TEST DRIVER POSITION VIEW



Figure A-23 POST-TEST DRIVER POSITION VIEW



Figure A-24 PRE-TEST PASSENGER POSITION VIEW

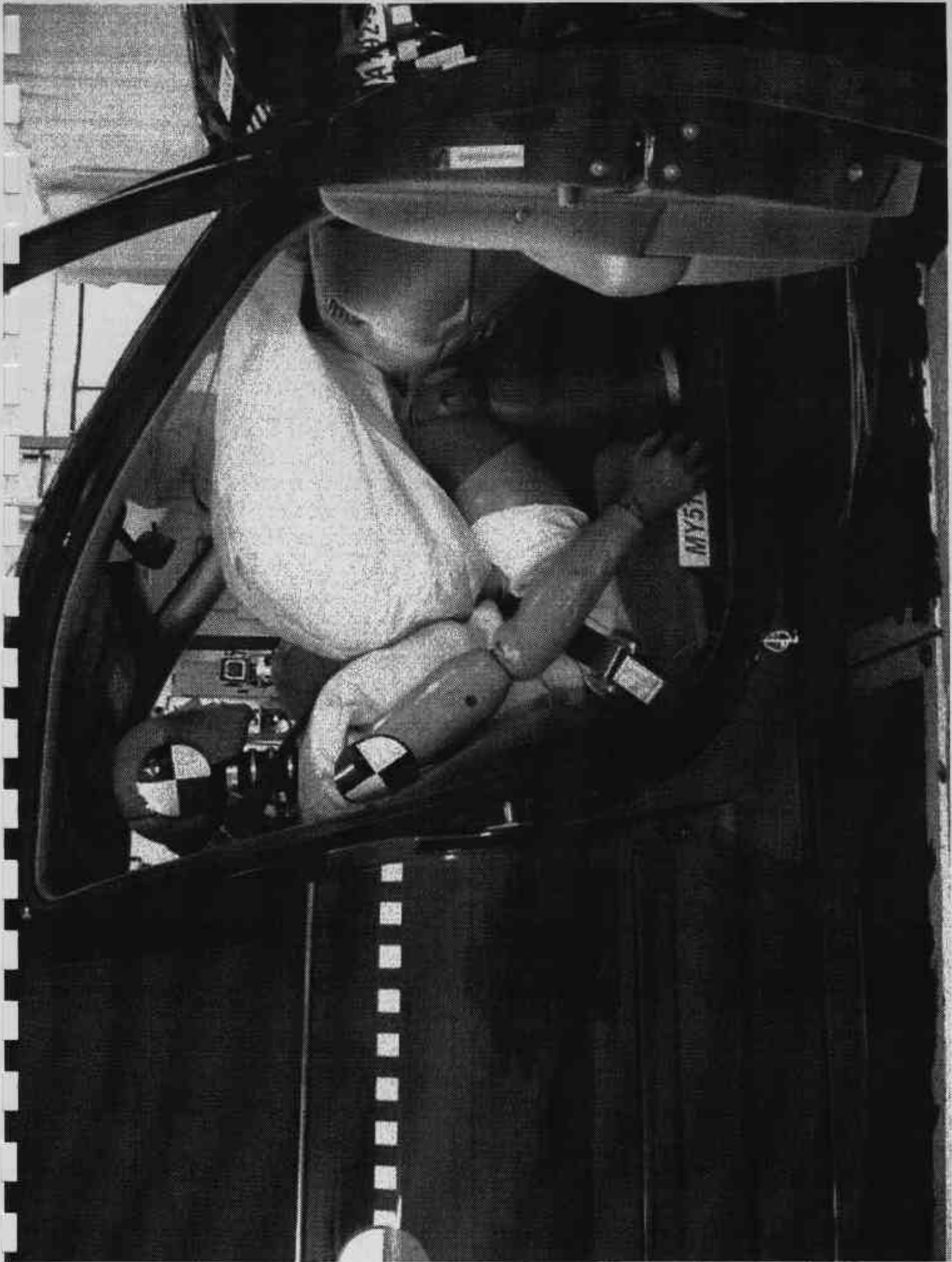


Figure A-25 POST-TEST PASSENGER POSITION VIEW

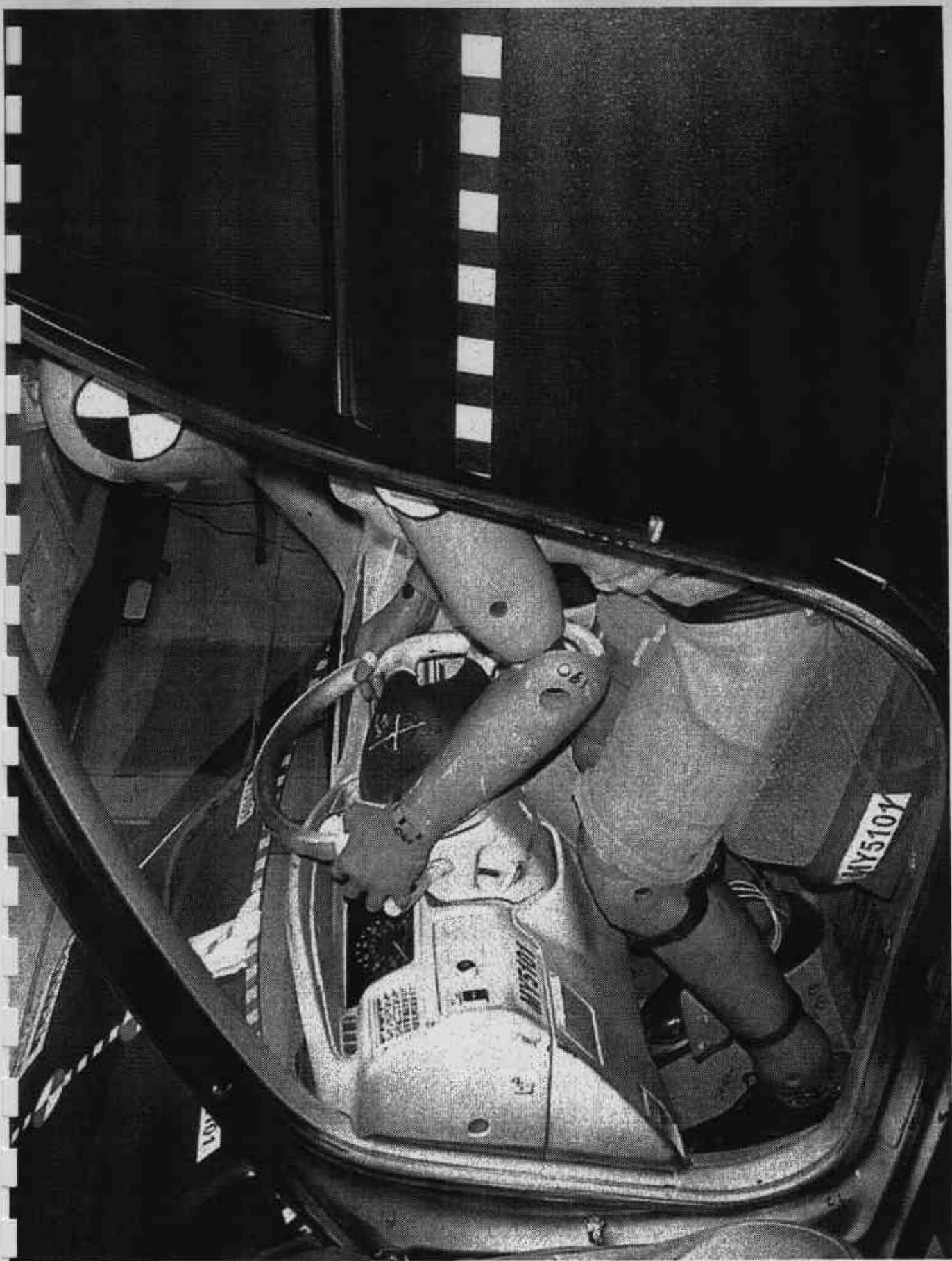


Figure A-26 PRE-TEST DRIVER AND INTERIOR VIEW



Figure A-27 POST-TEST DRIVER AND INTERIOR VIEW



Figure A-28 PRE-TEST PASSENGER AND INTERIOR VIEW

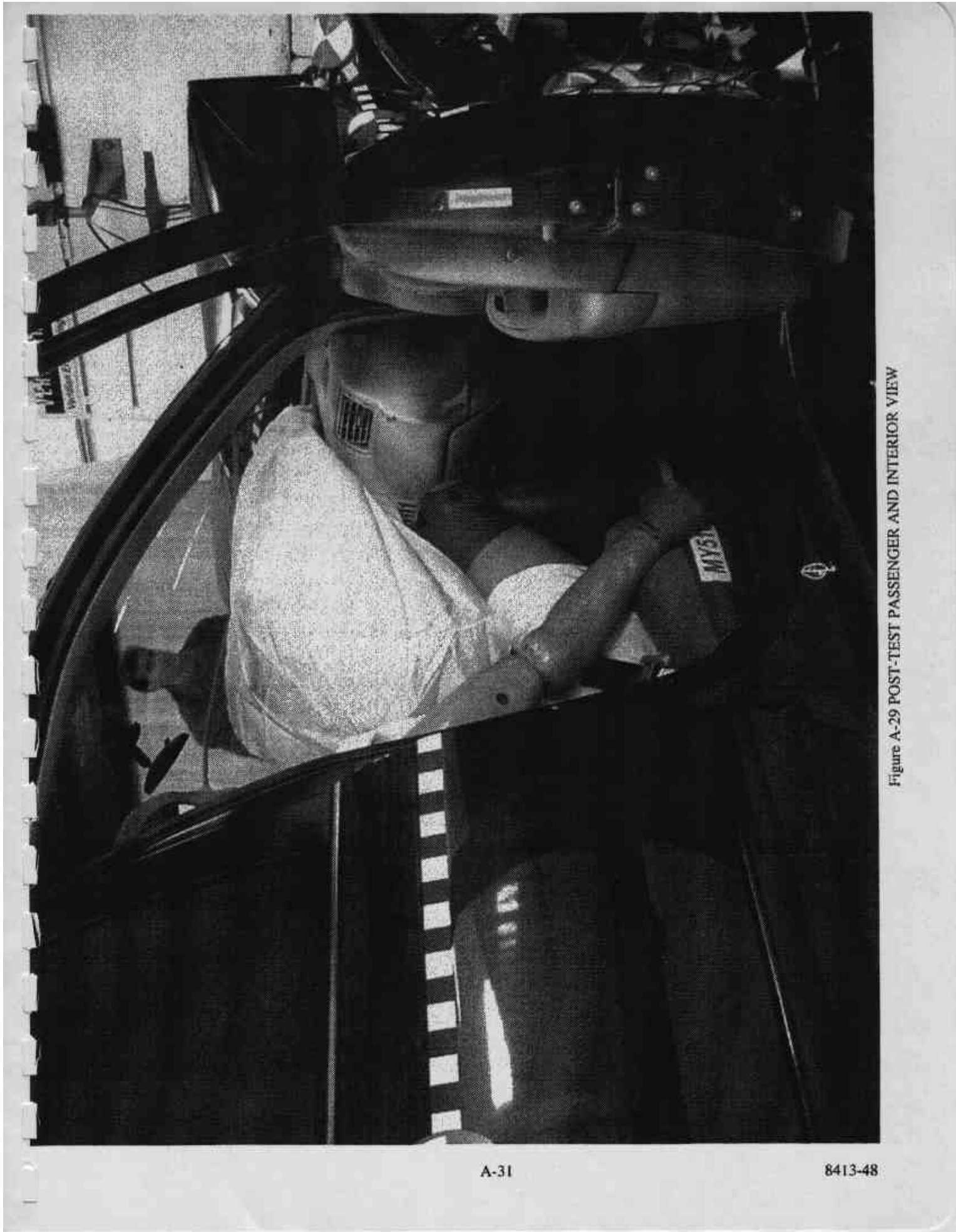


Figure A-29 POST-TEST PASSENGER AND INTERIOR VIEW

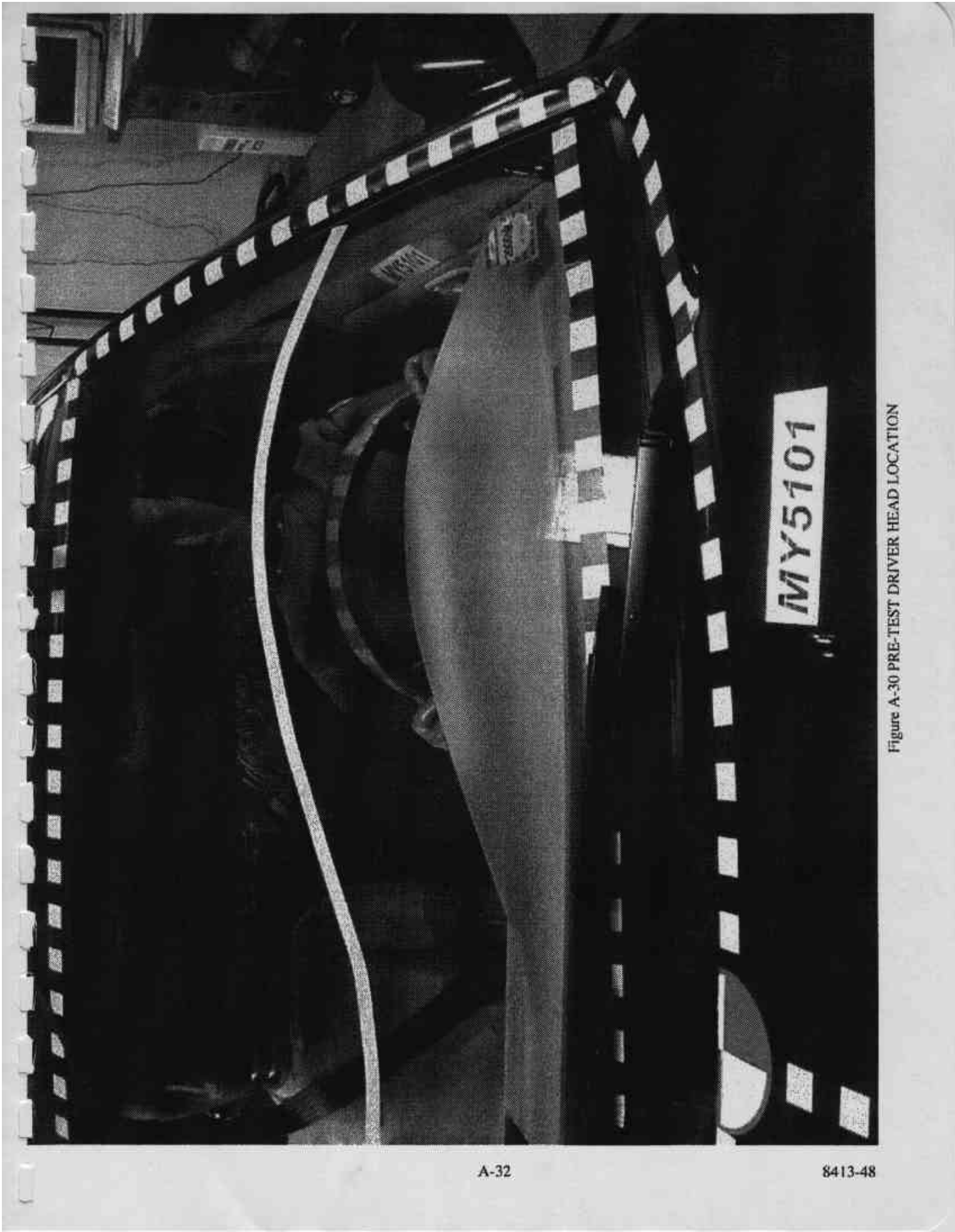


Figure A-30 PRE-TEST DRIVER HEAD LOCATION

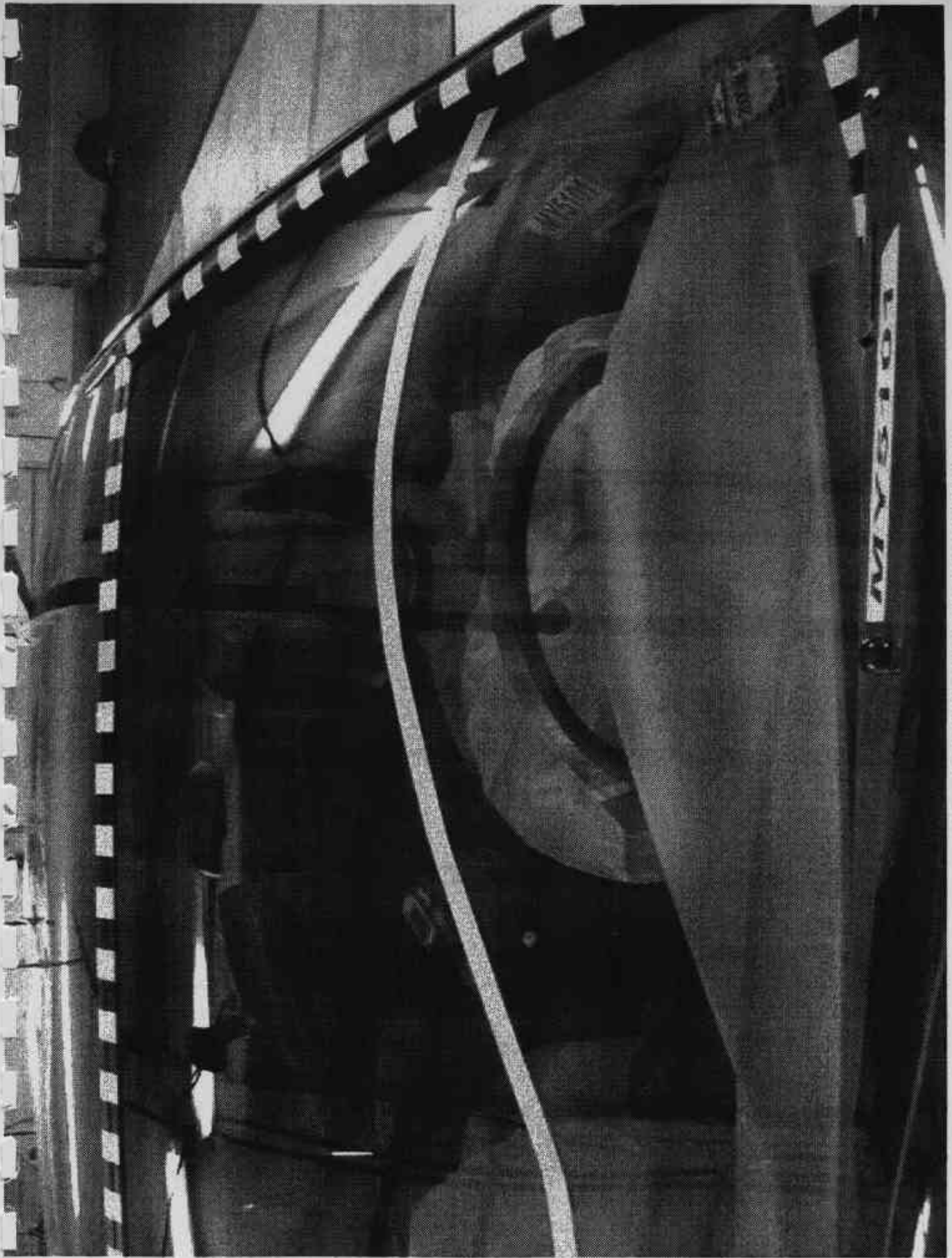


Figure A-31 POST-TEST DRIVER HEAD LOCATION

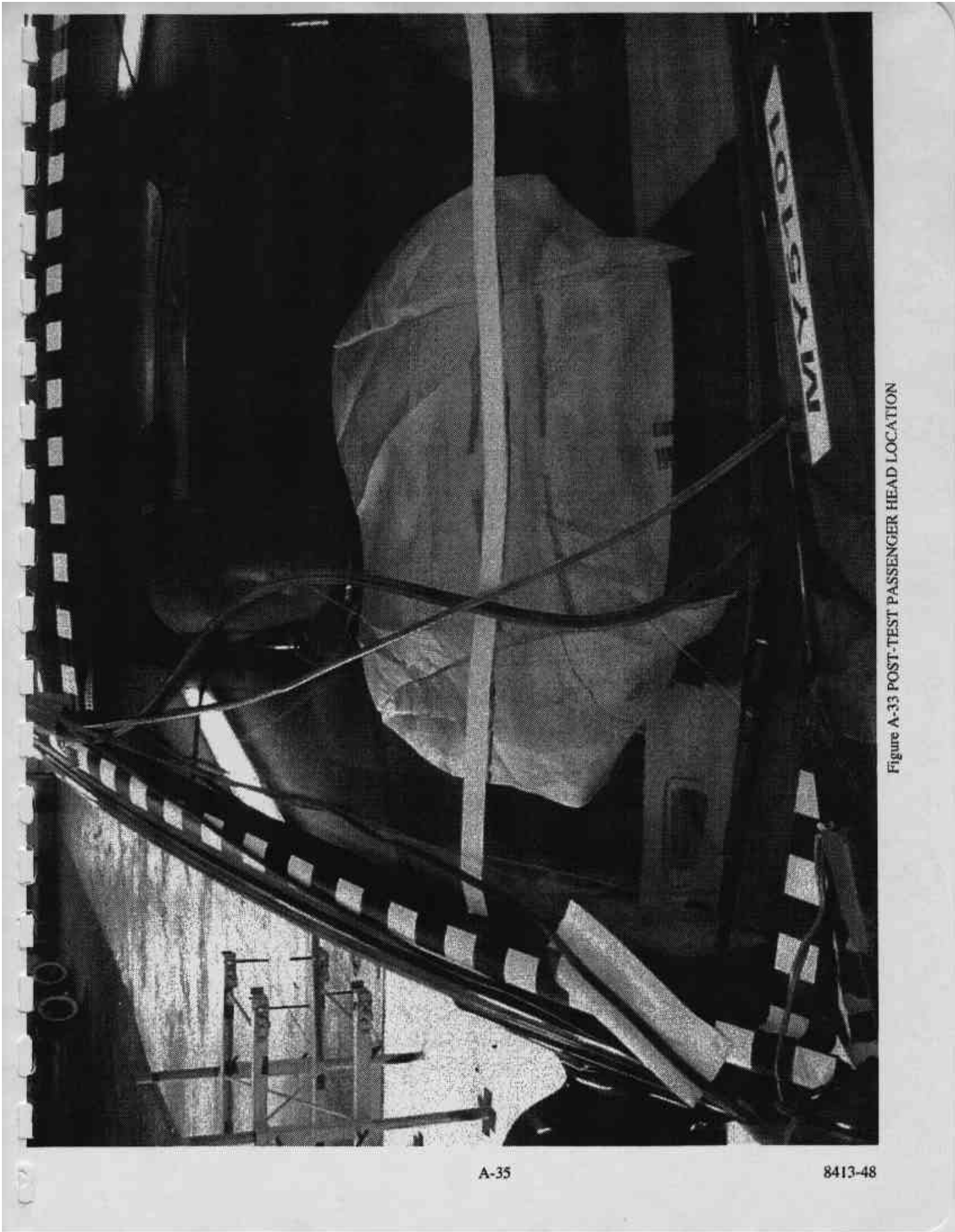


Figure A-33 POST-TEST PASSENGER HEAD LOCATION

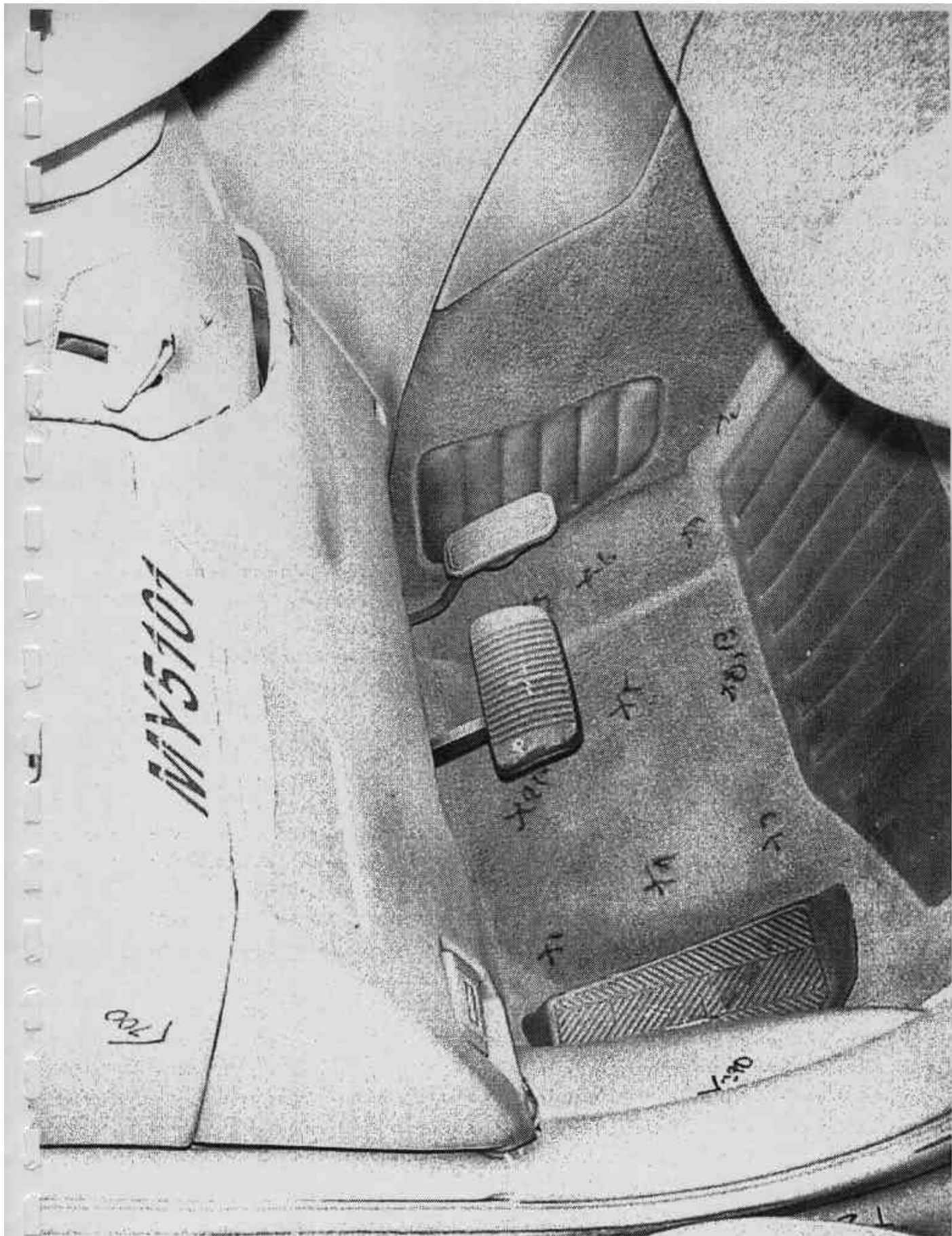


Figure A-34 PRE-TEST DRIVER FLOOR PAN VIEW

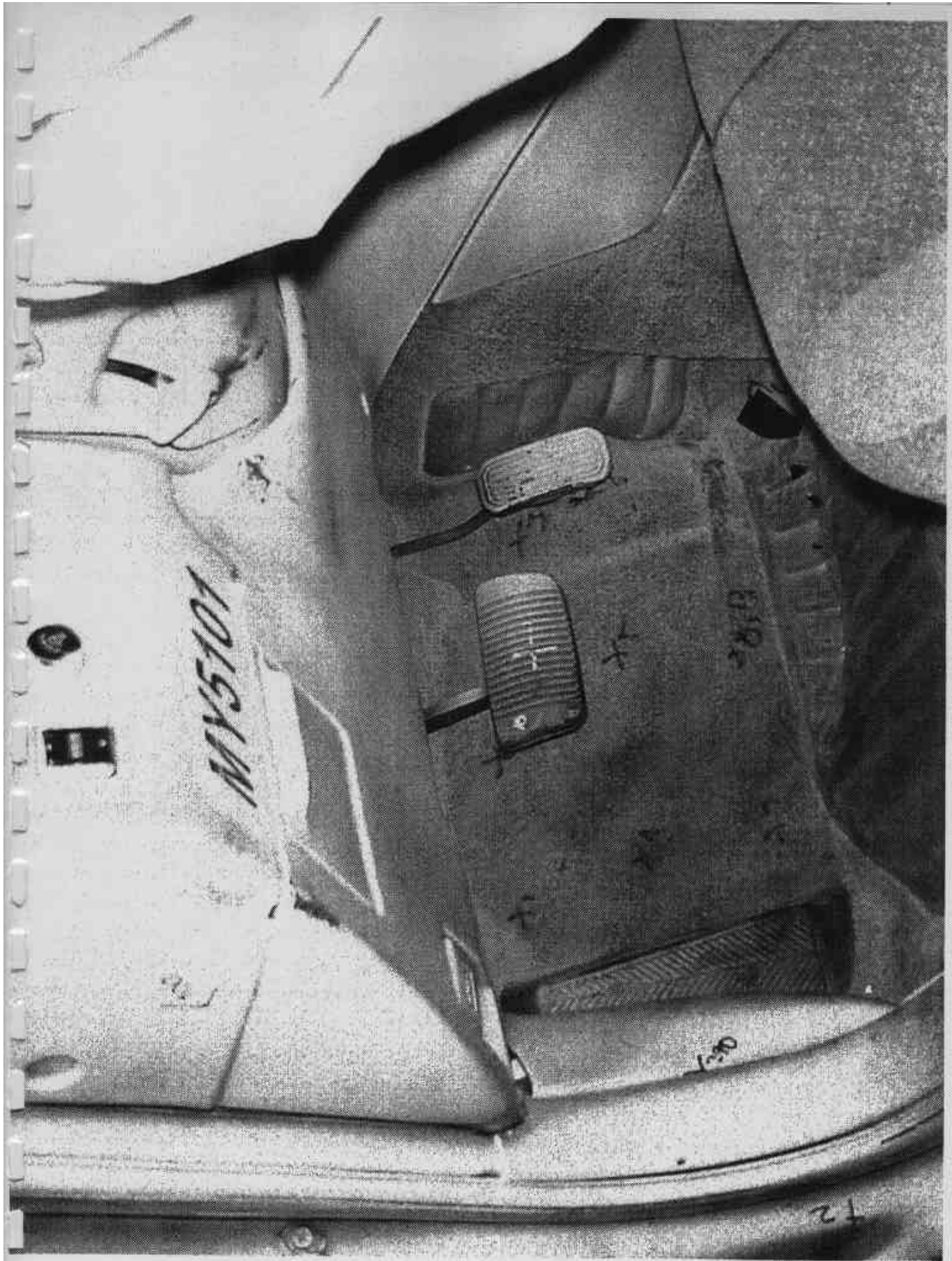
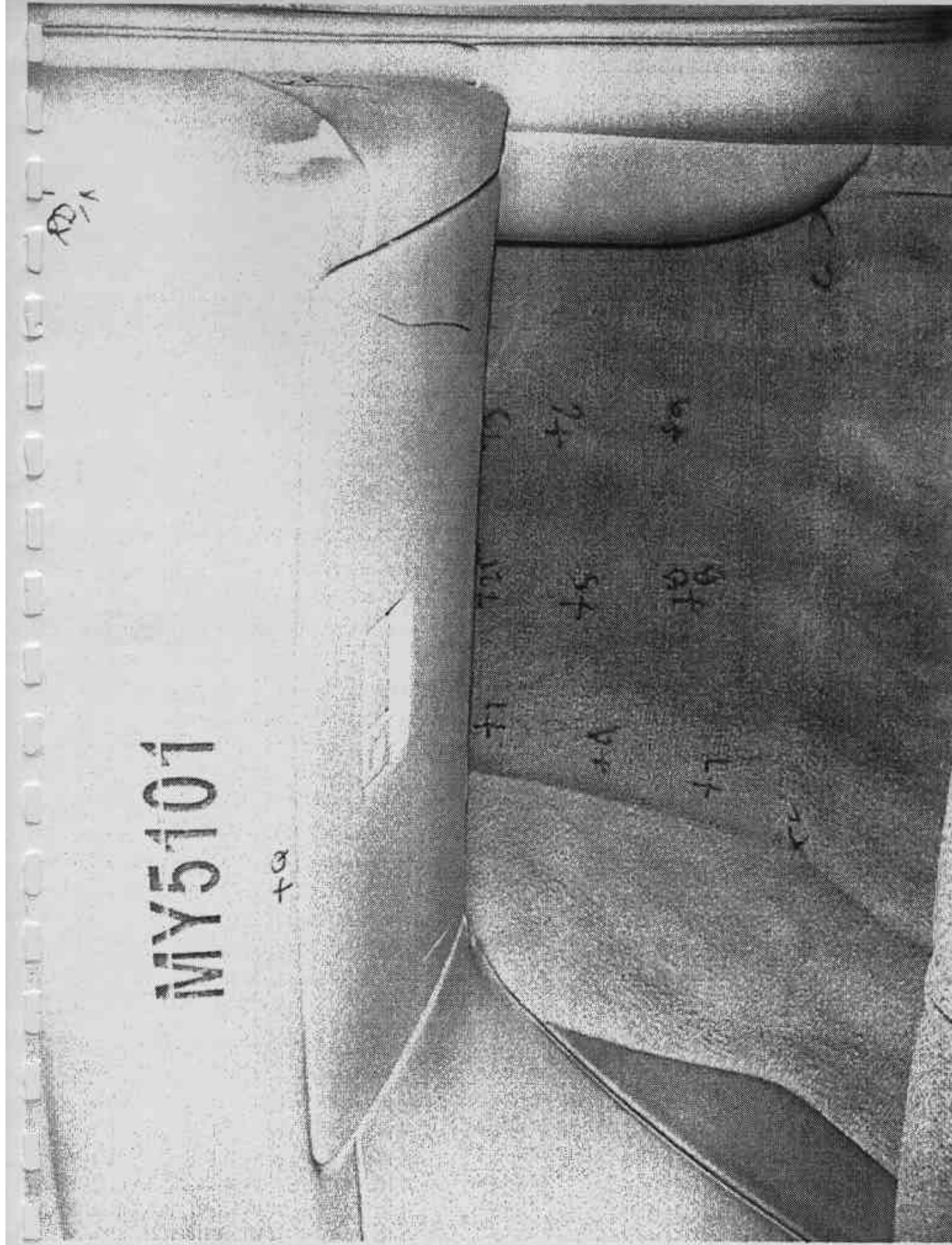


Figure A-35 POST-TEST DRIVER FLOOR PAN VIEW



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47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

Figure A-36 PRE-TEST PASSENGER FLOOR PAN VIEW

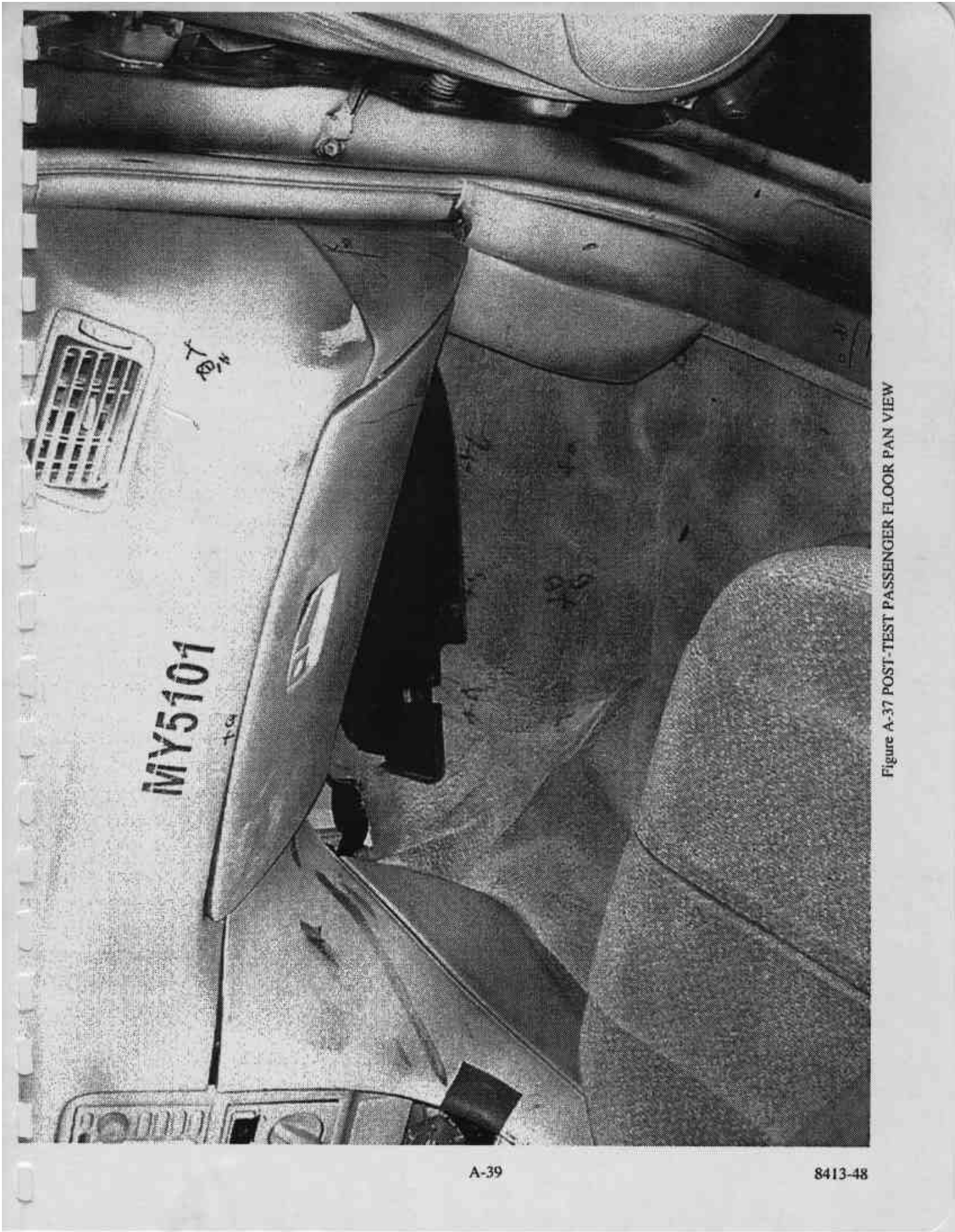


Figure A-37 POST-TEST PASSENGER FLOOR PAN VIEW



Figure A-38 ROLLOVER 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

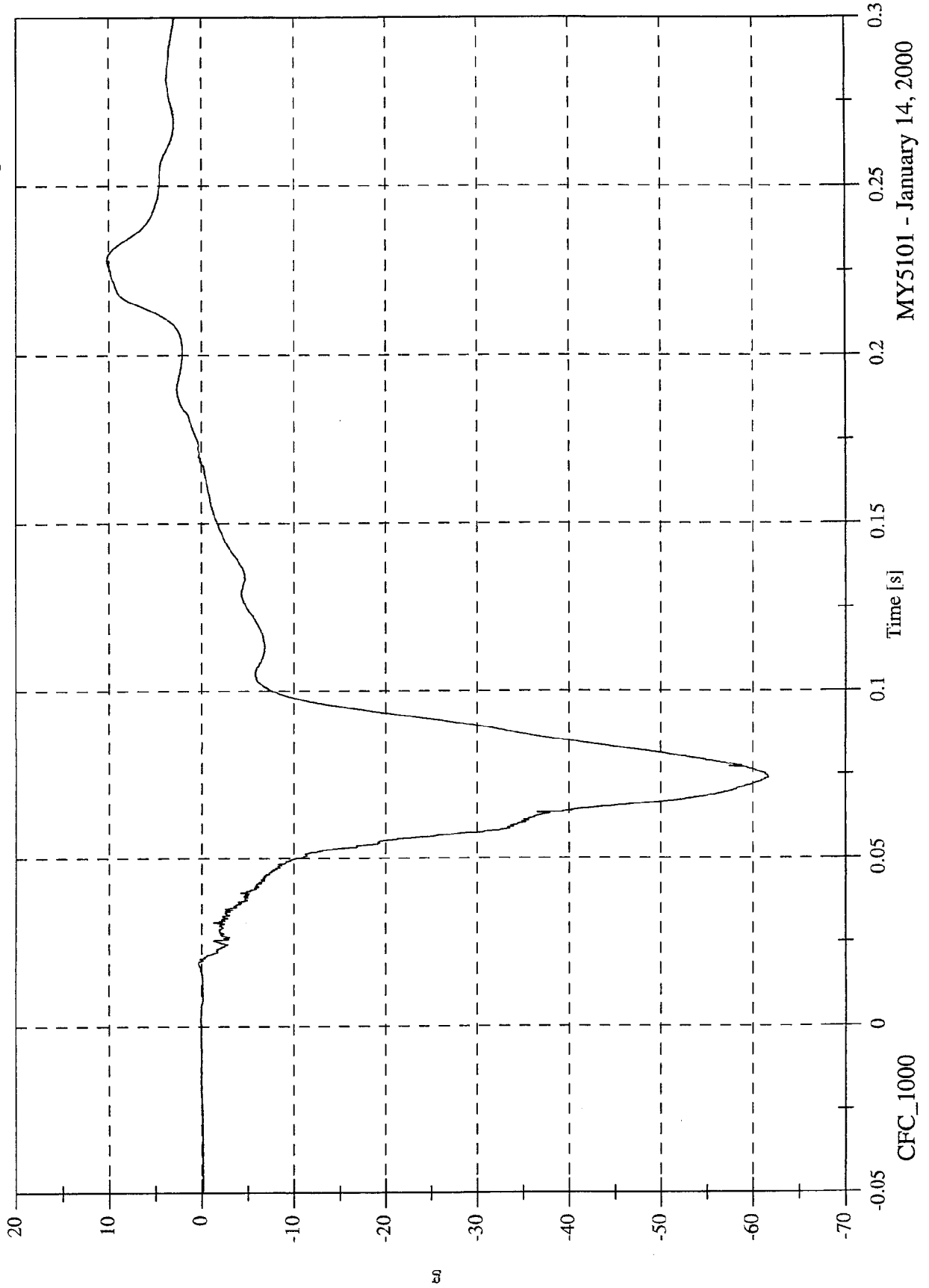
NHTSA TEST NO. MY5101

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 Test #9 - 2000 Toyota Camry

Max: 10.2 [g] at 0.228 [s]
Min: -61.7 [g] at 0.074 [s]

P1 Head x

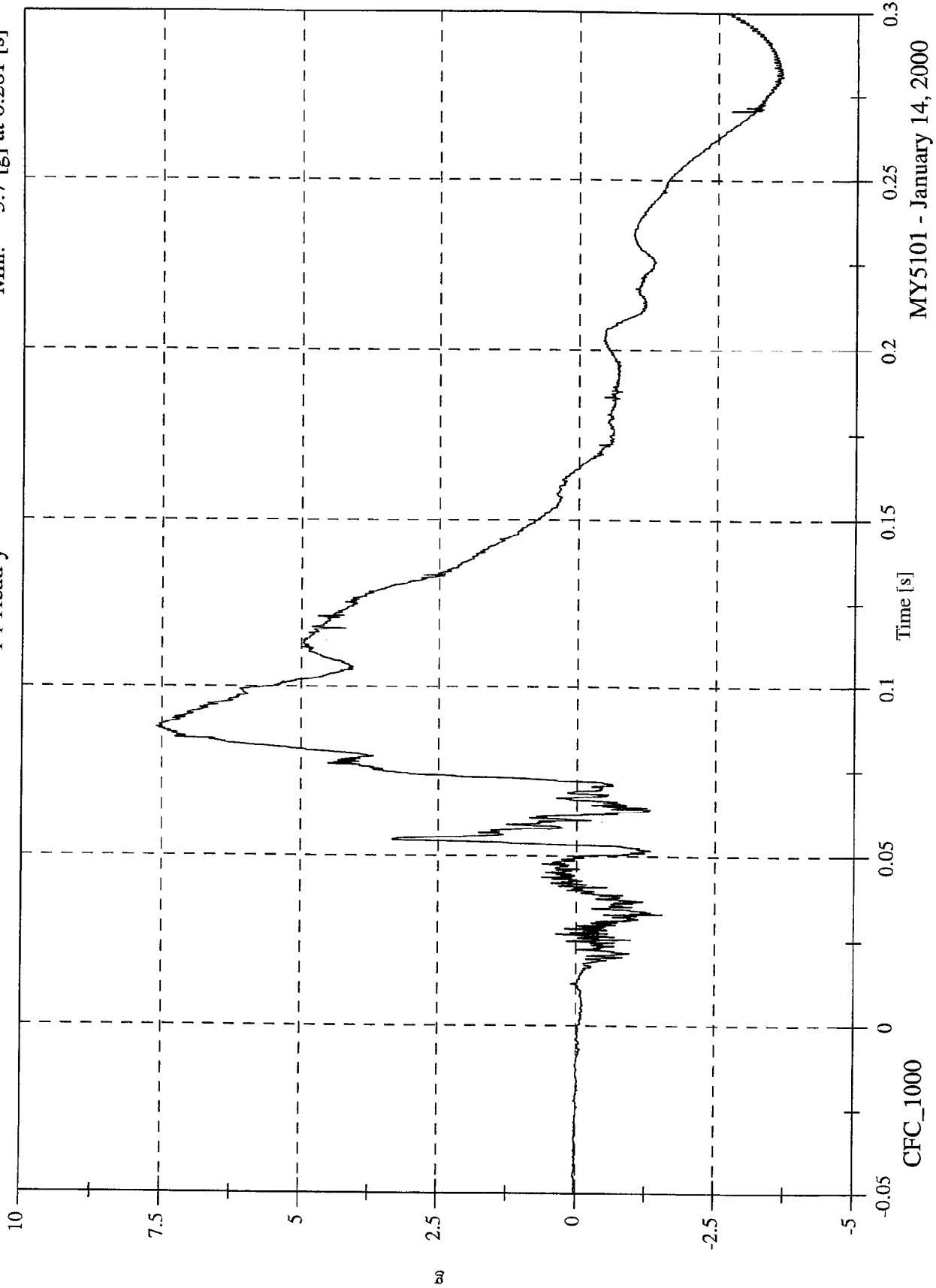


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 7.6 [g] at 0.088 [s]
Min: -3.7 [g] at 0.281 [s]

P1 Head y

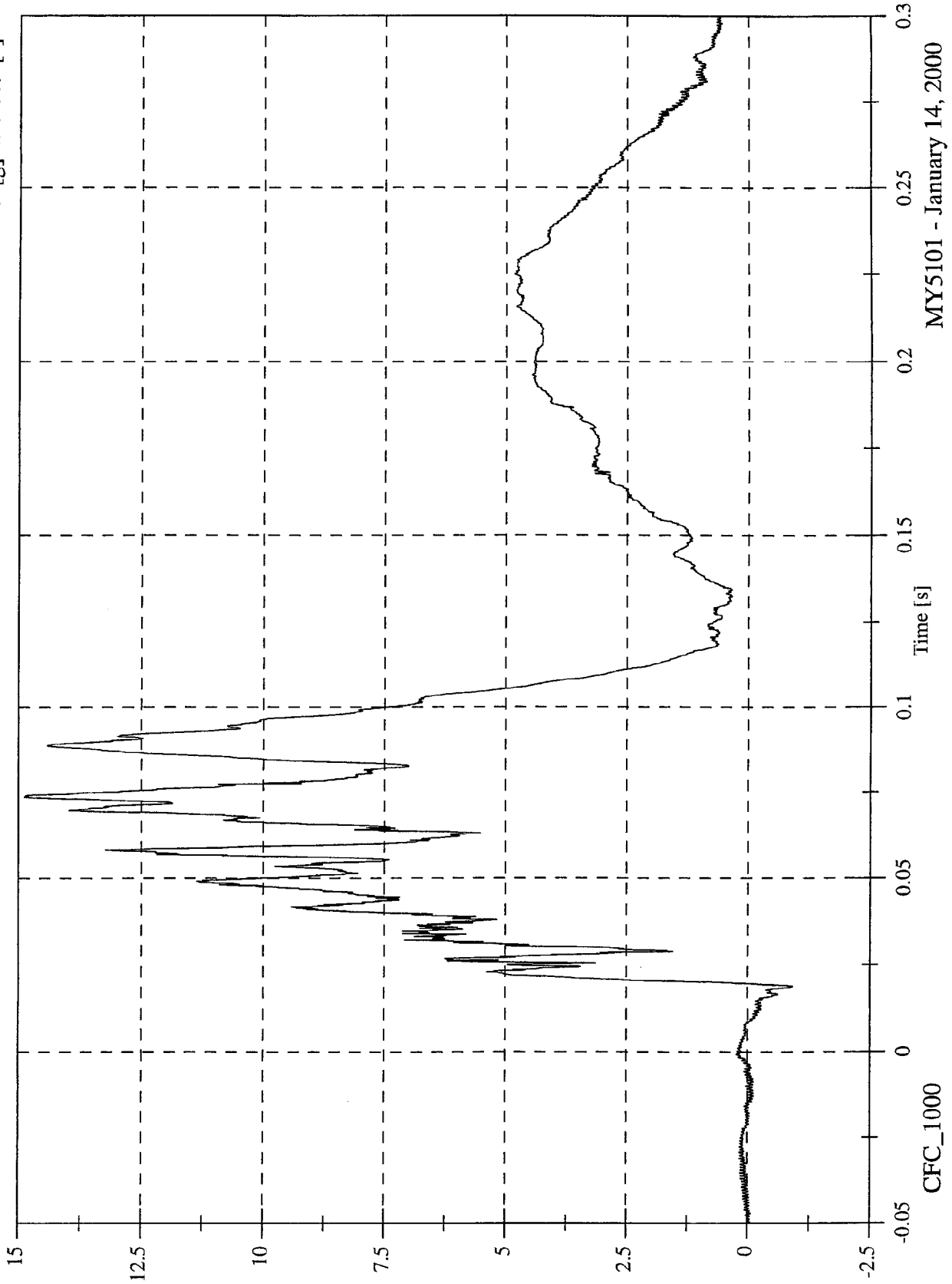


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 14.9 [g] at 0.074 [s]
Min: -0.9 [g] at 0.019 [s]

P1 Head z



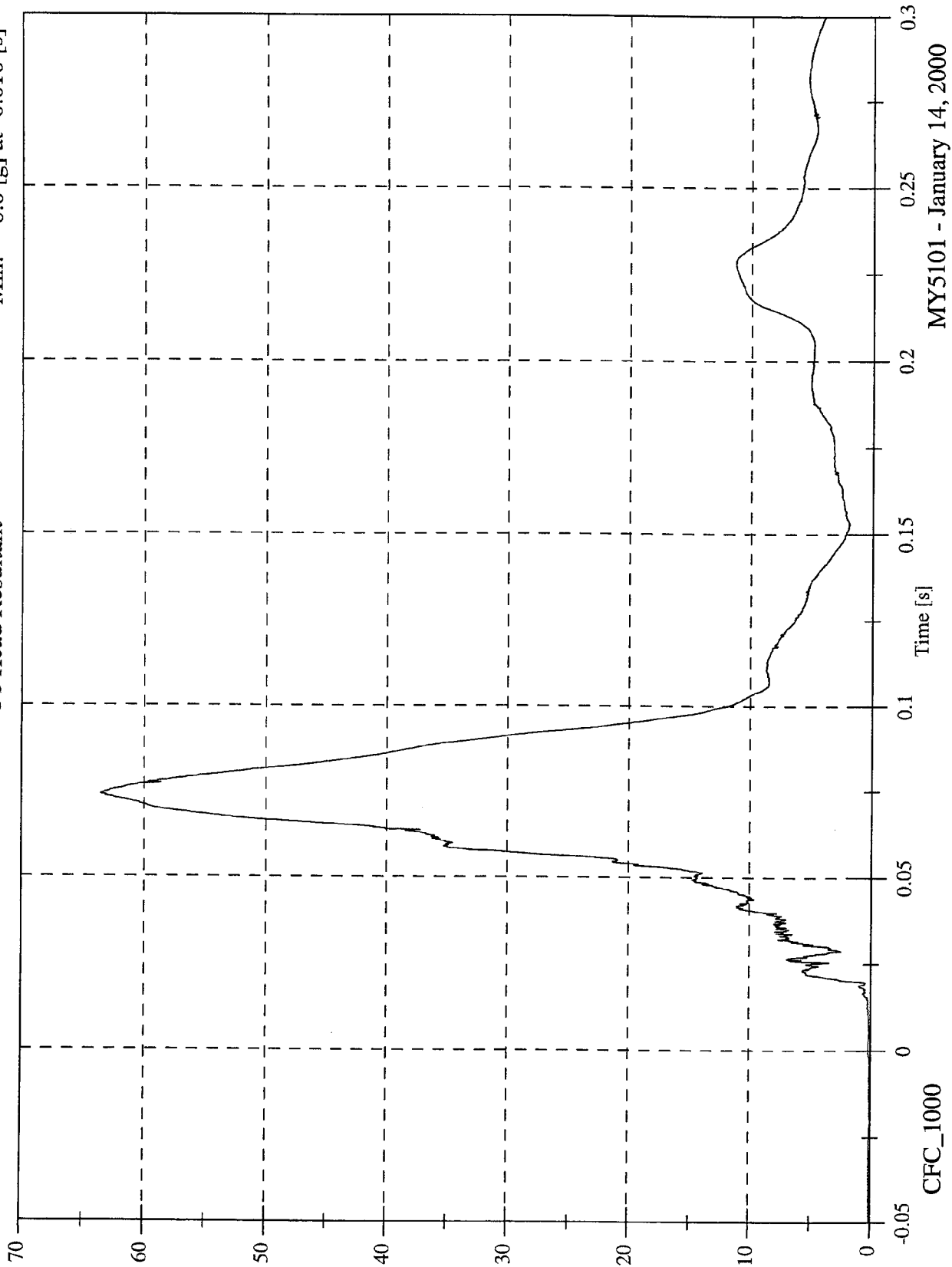
MY5101 - January 14, 2000

CFC_1000

NCAP Test #9 - 2000 Toyota Camry

Max: 63.5 [g] at 0.074 [s]
Min: 0.0 [g] at -0.010 [s]

P1 Head Resultant

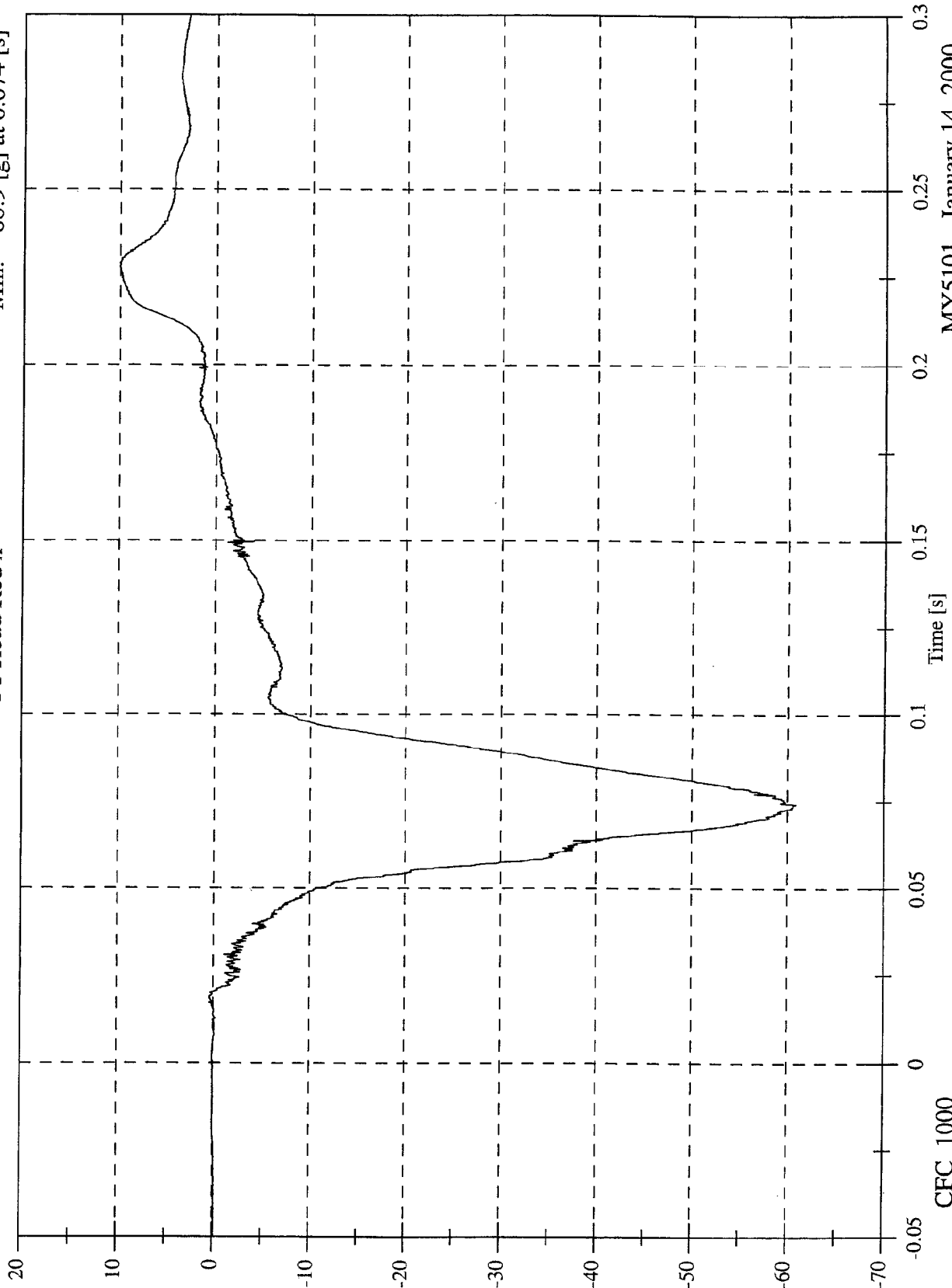


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 10.1 [g] at 0.228 [s]
Min: -60.9 [g] at 0.074 [s]

P1 Head Red x



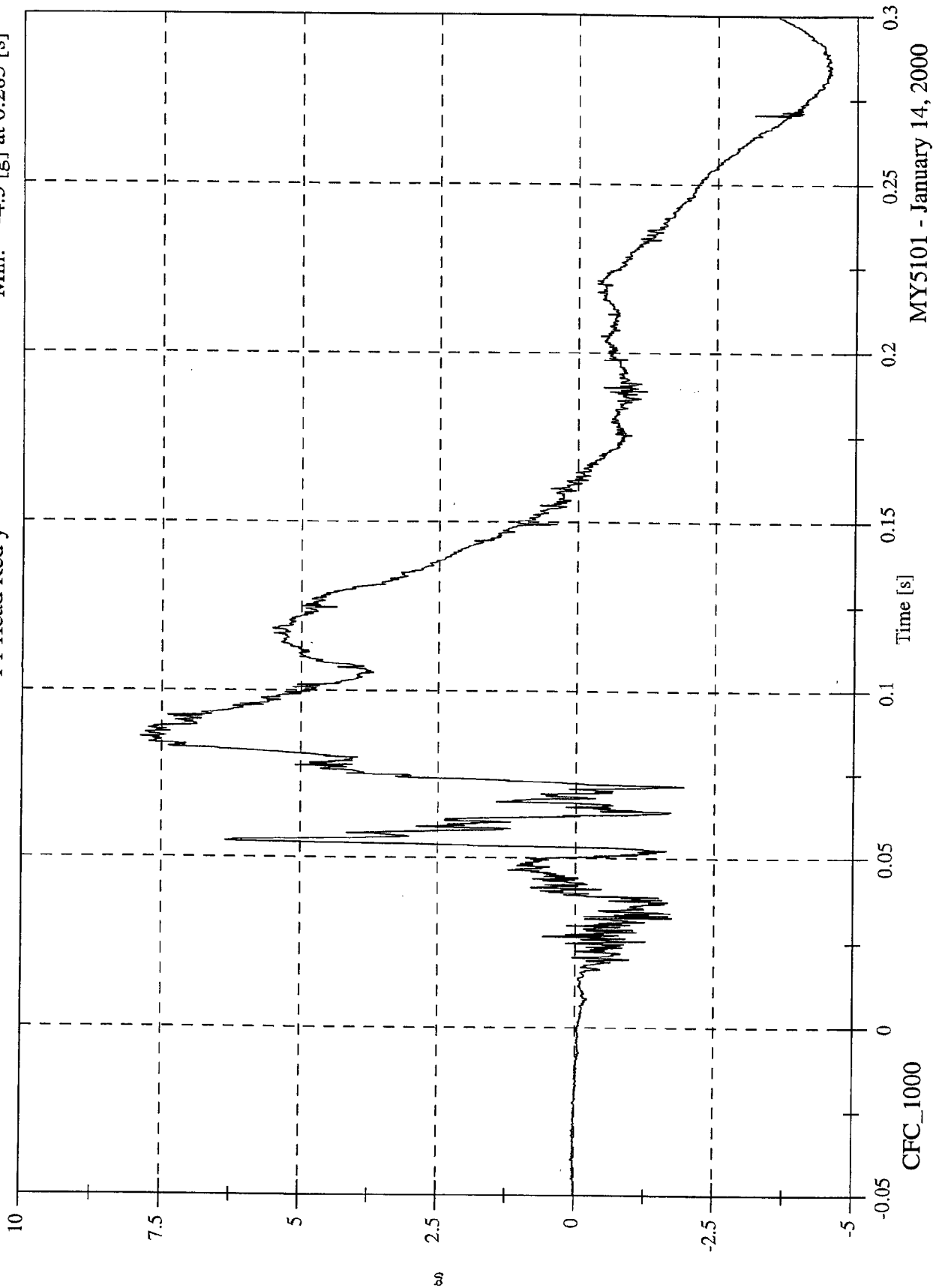
MY5101 - January 14, 2000

a

NCAP Test #9 - 2000 Toyota Camry

Max: 7.9 [g] at 0.086 [s]
Min: -4.5 [g] at 0.285 [s]

P1 Head Red y

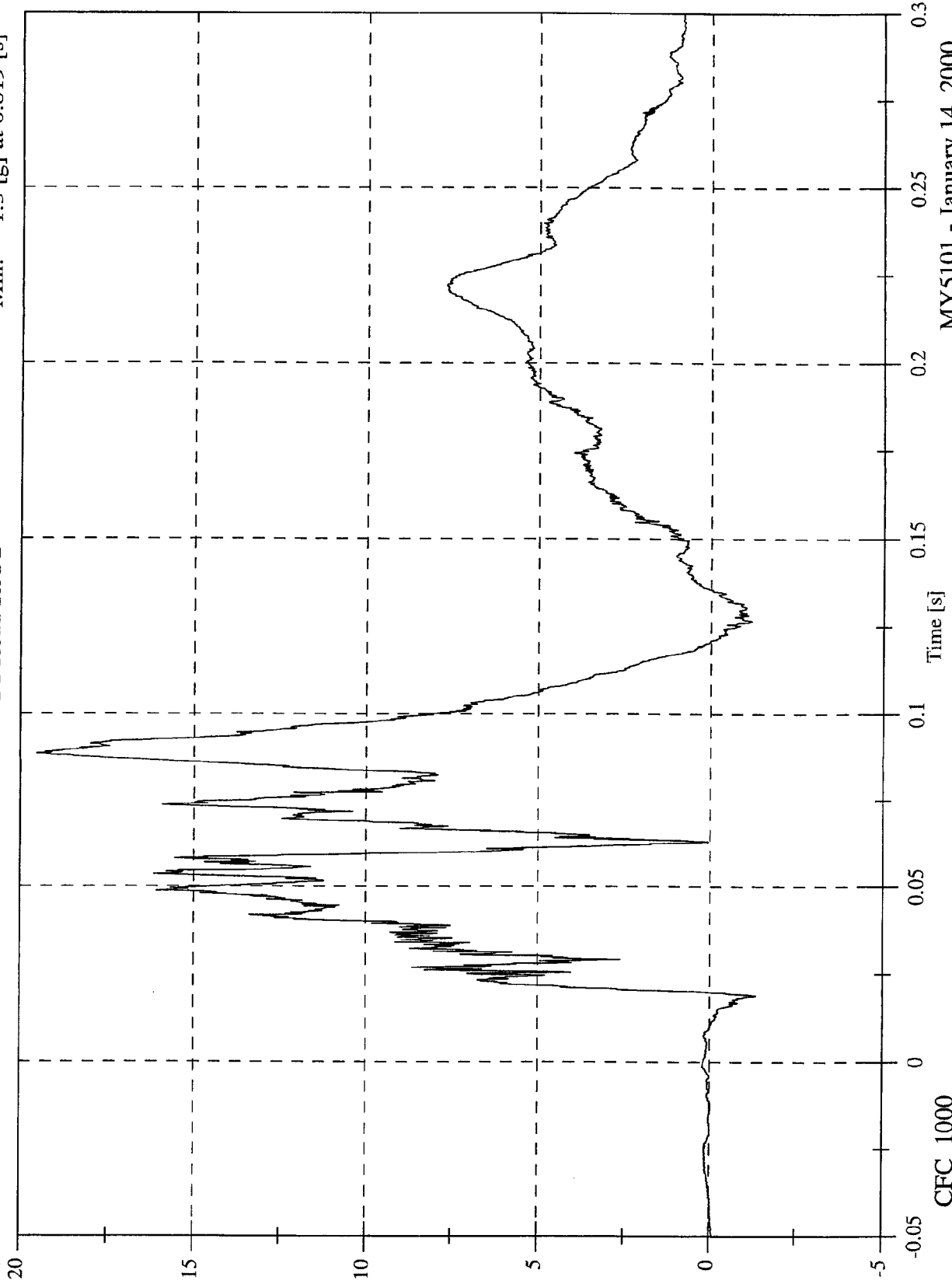


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 19.5 [g] at 0.089 [s]
Min: -1.3 [g] at 0.019 [s]

P1 Head Red z

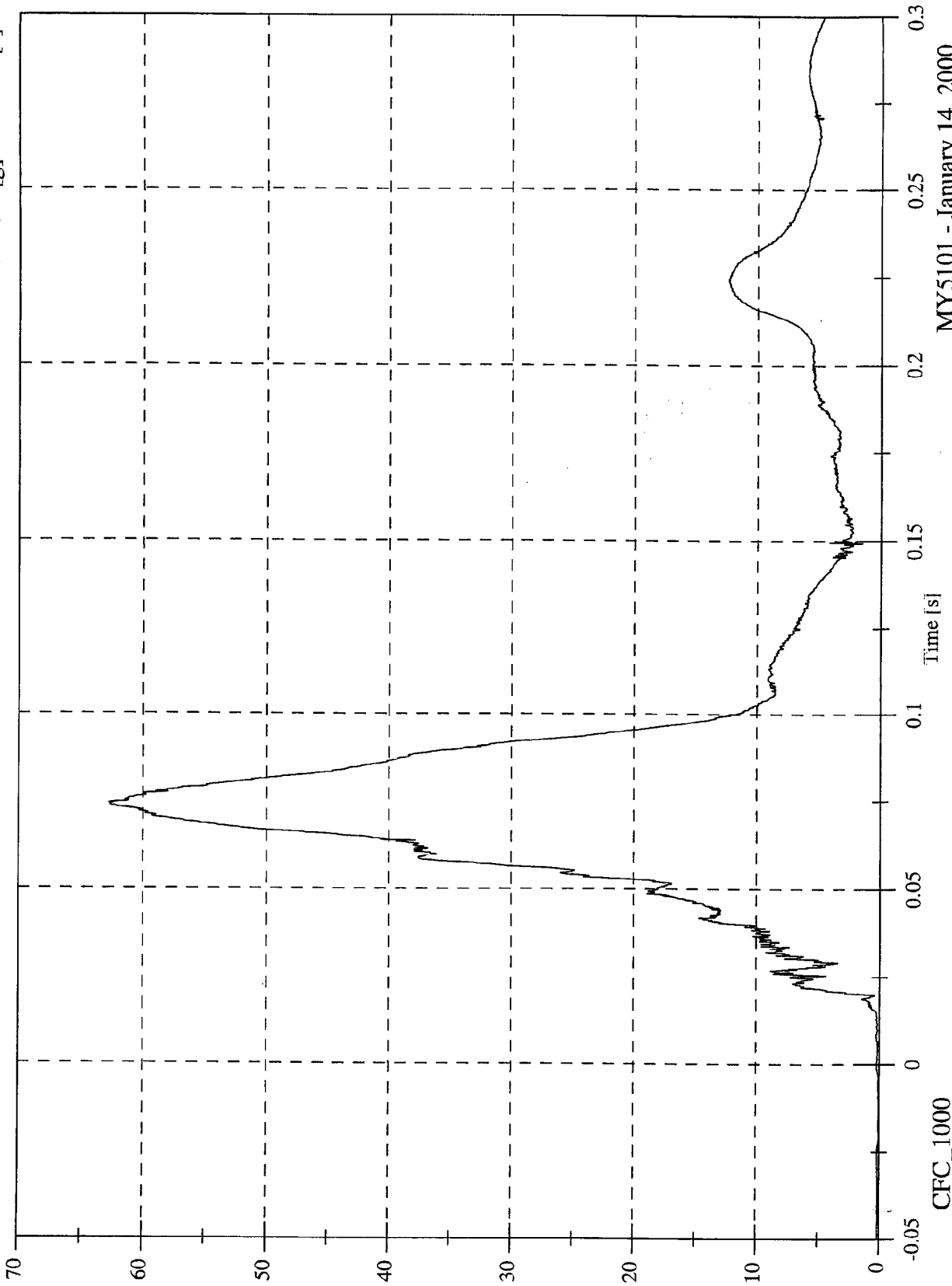


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 62.7 [g] at 0.074 [s]
Min: 0.0 [g] at -0.021 [s]

P1 Head Red Resultant



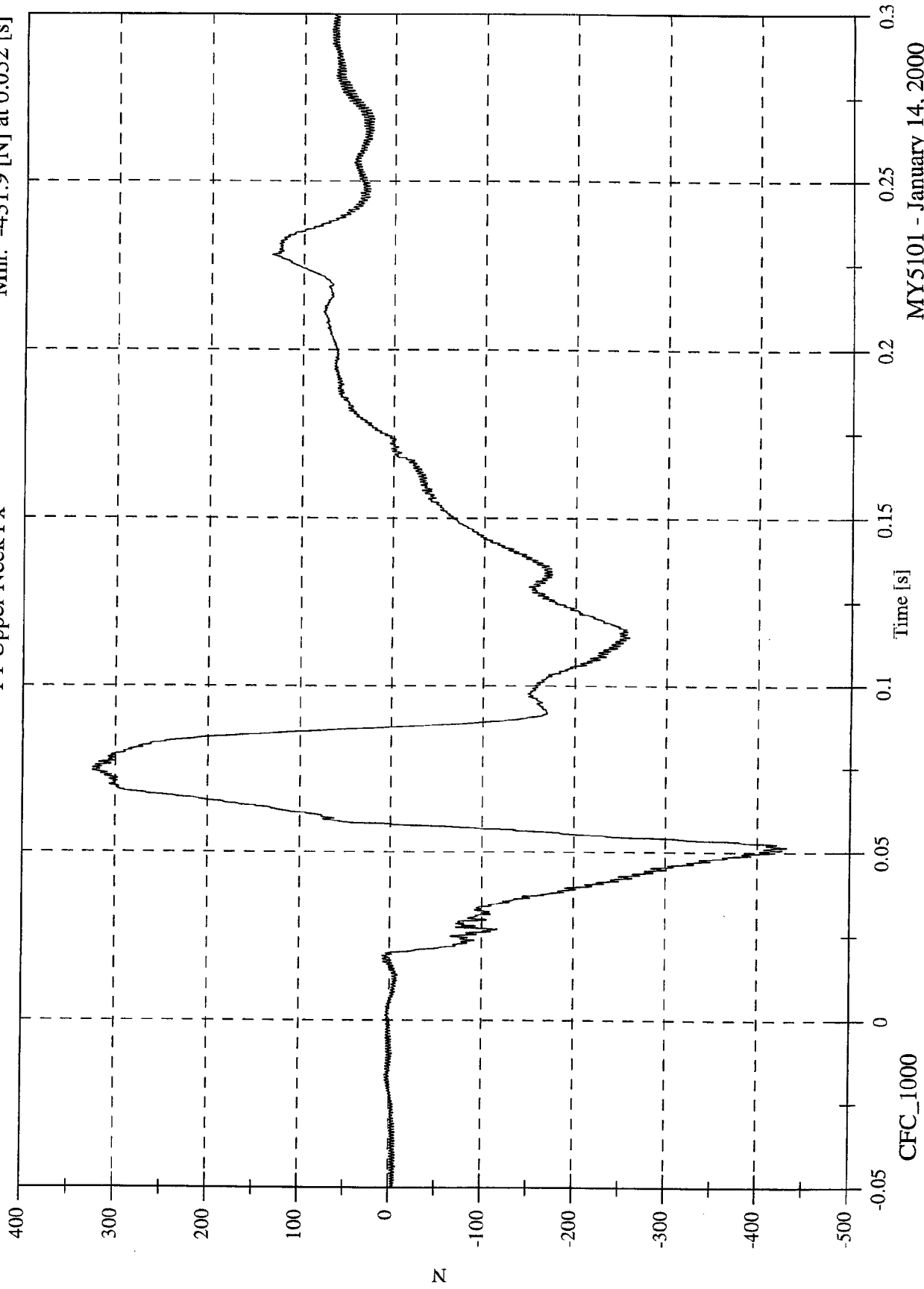
MY5101 - January 14, 2000

80

NCAP Test #9 - 2000 Toyota Camry

Max: 324.8 [N] at 0.074 [s]
Min: -431.9 [N] at 0.052 [s]

P1 Upper Neck Fx

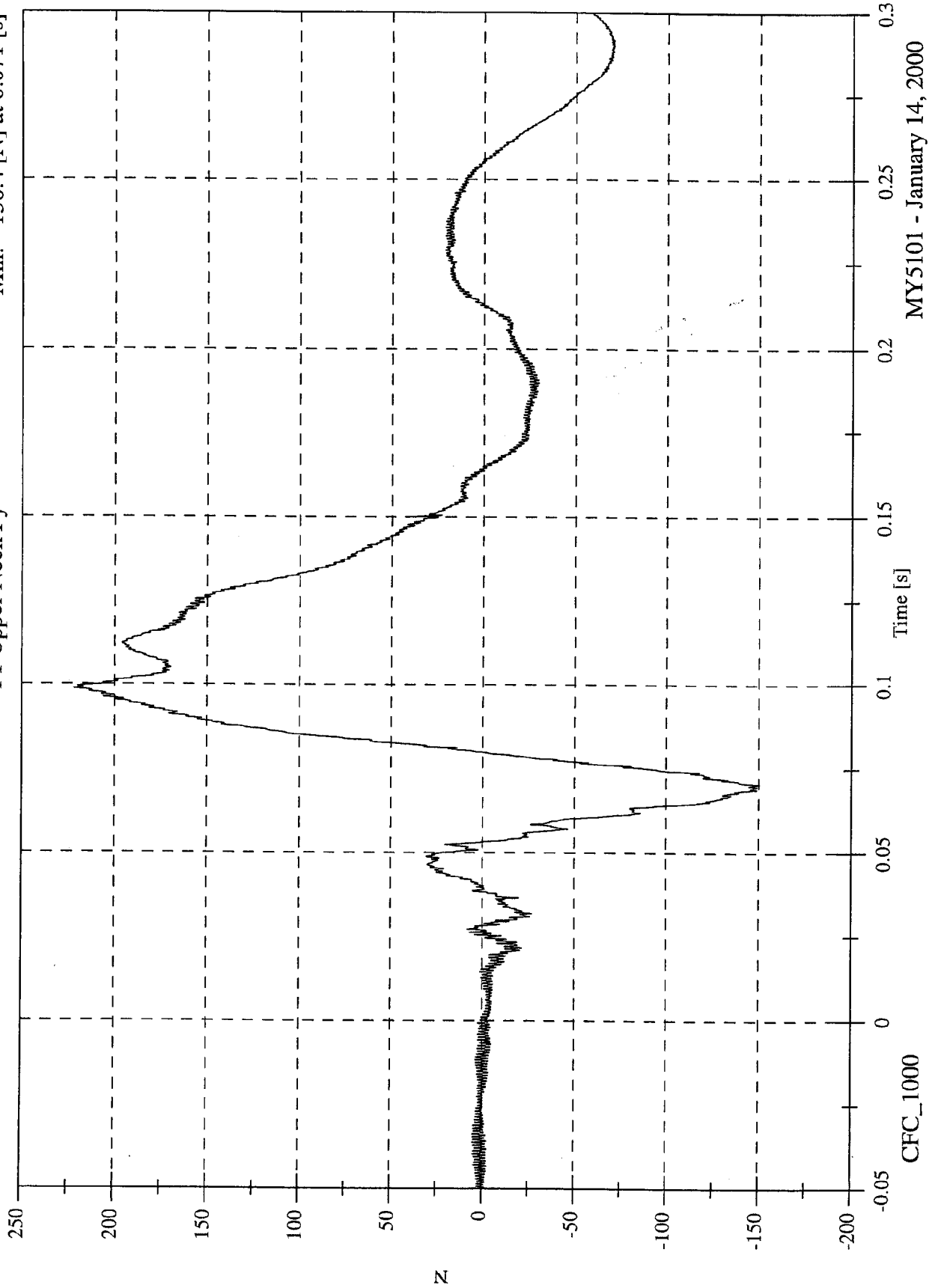


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 221.7 [N] at 0.099 [s]
Min: -150.4 [N] at 0.071 [s]

P1 Upper Neck Fy

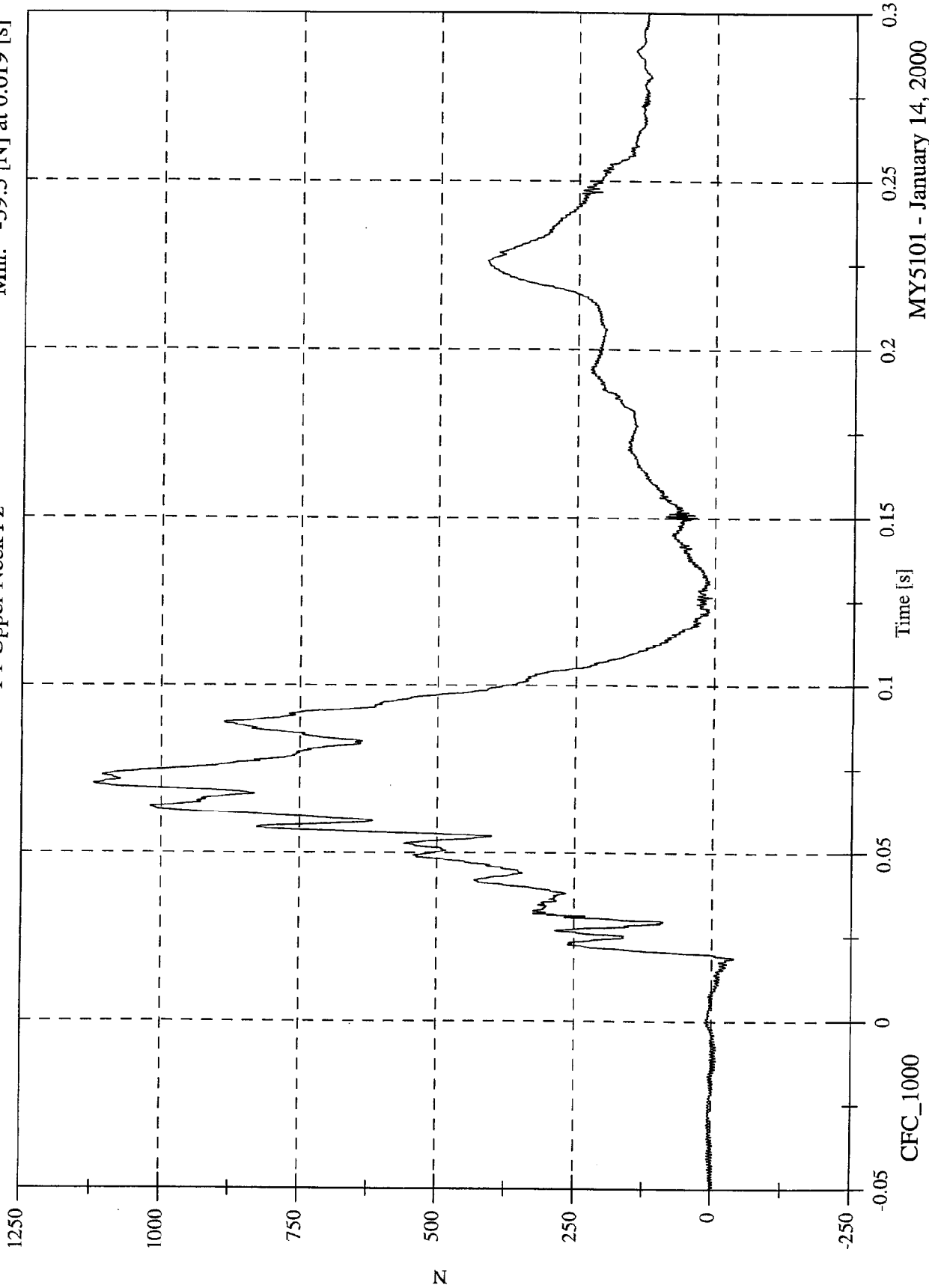


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 1121.4 [N] at 0.071 [s]
Min: -39.5 [N] at 0.019 [s]

P1 Upper Neck Fz



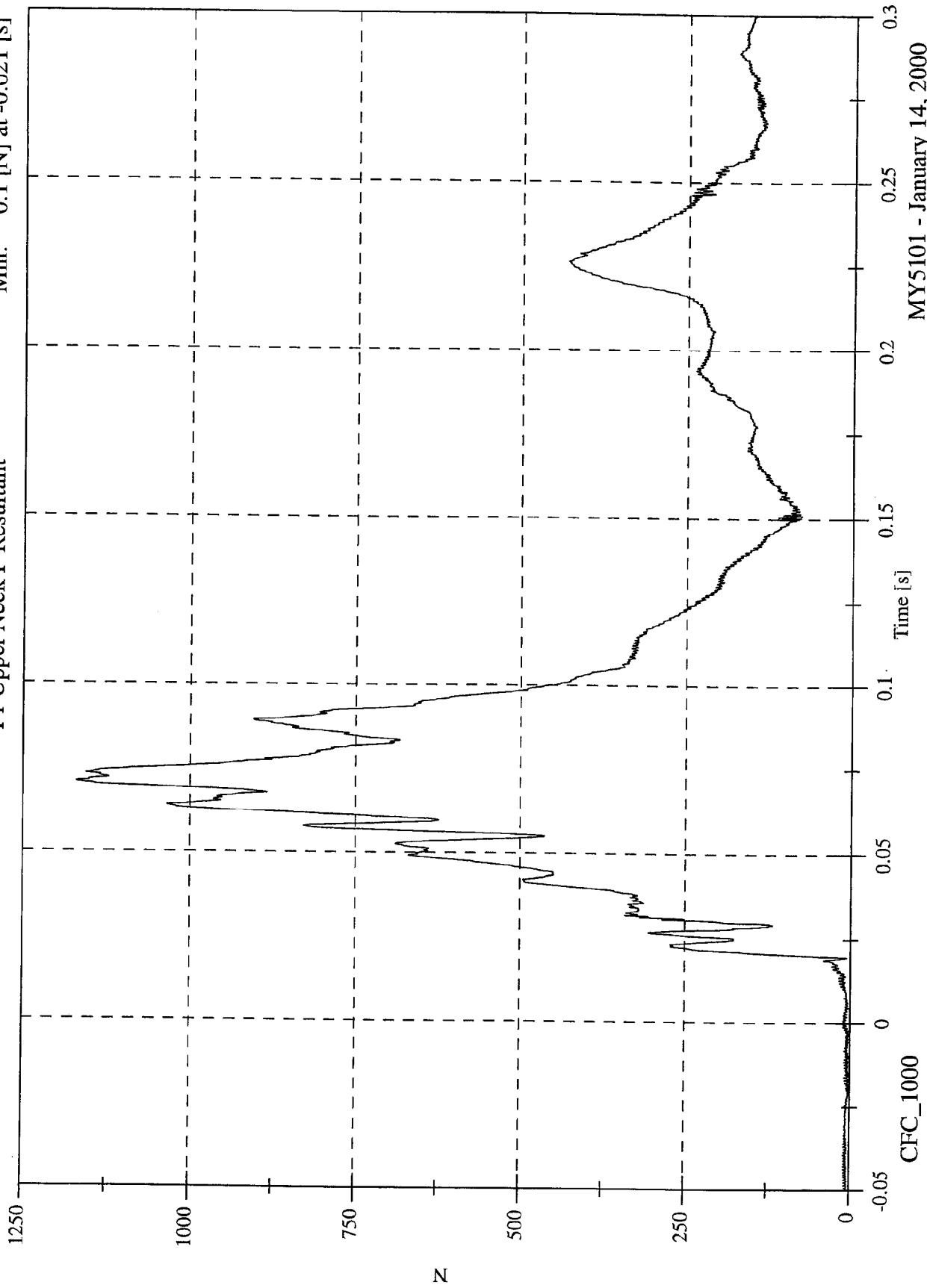
MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

P1 Upper Neck F Resultant

Max: 1170.9 [N] at 0.071 [s]

Min: 0.1 [N] at -0.021 [s]

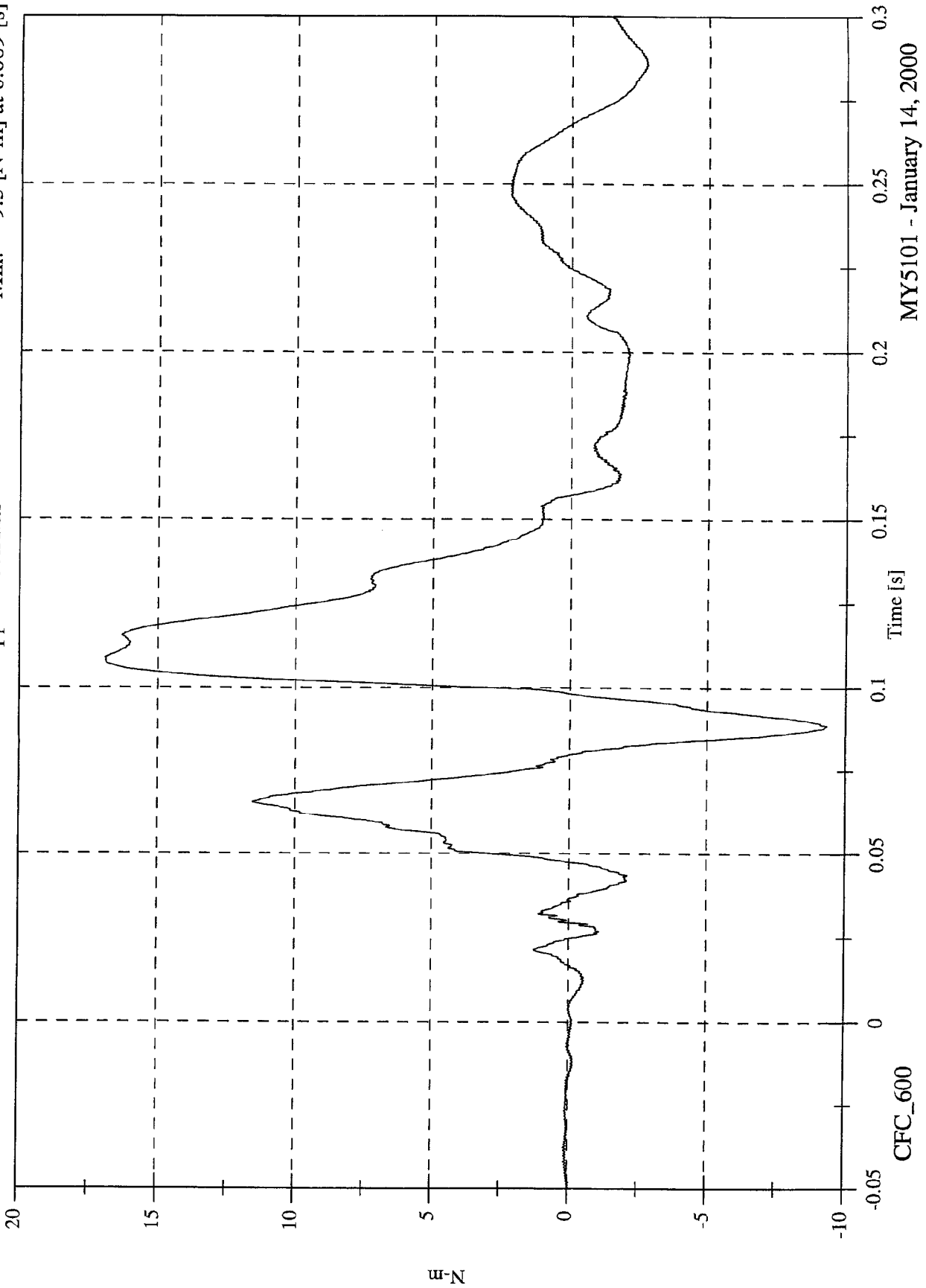


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 16.9 [N-m] at 0.109 [s]
Min: -9.3 [N-m] at 0.089 [s]

P1 Upper Neck Mx

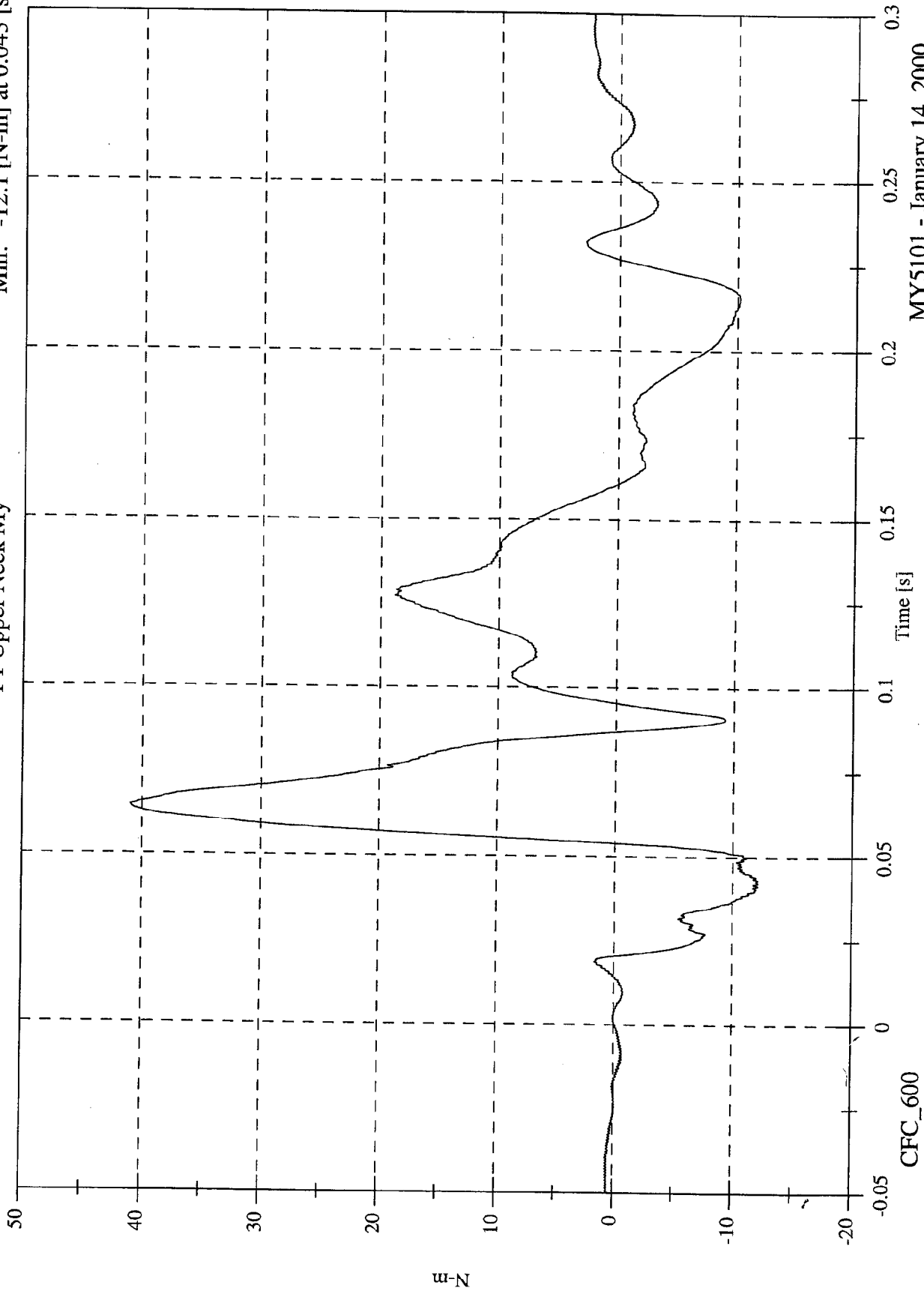


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 41.0 [N-m] at 0.065 [s]
Min: -12.1 [N-m] at 0.043 [s]

P1 Upper Neck My

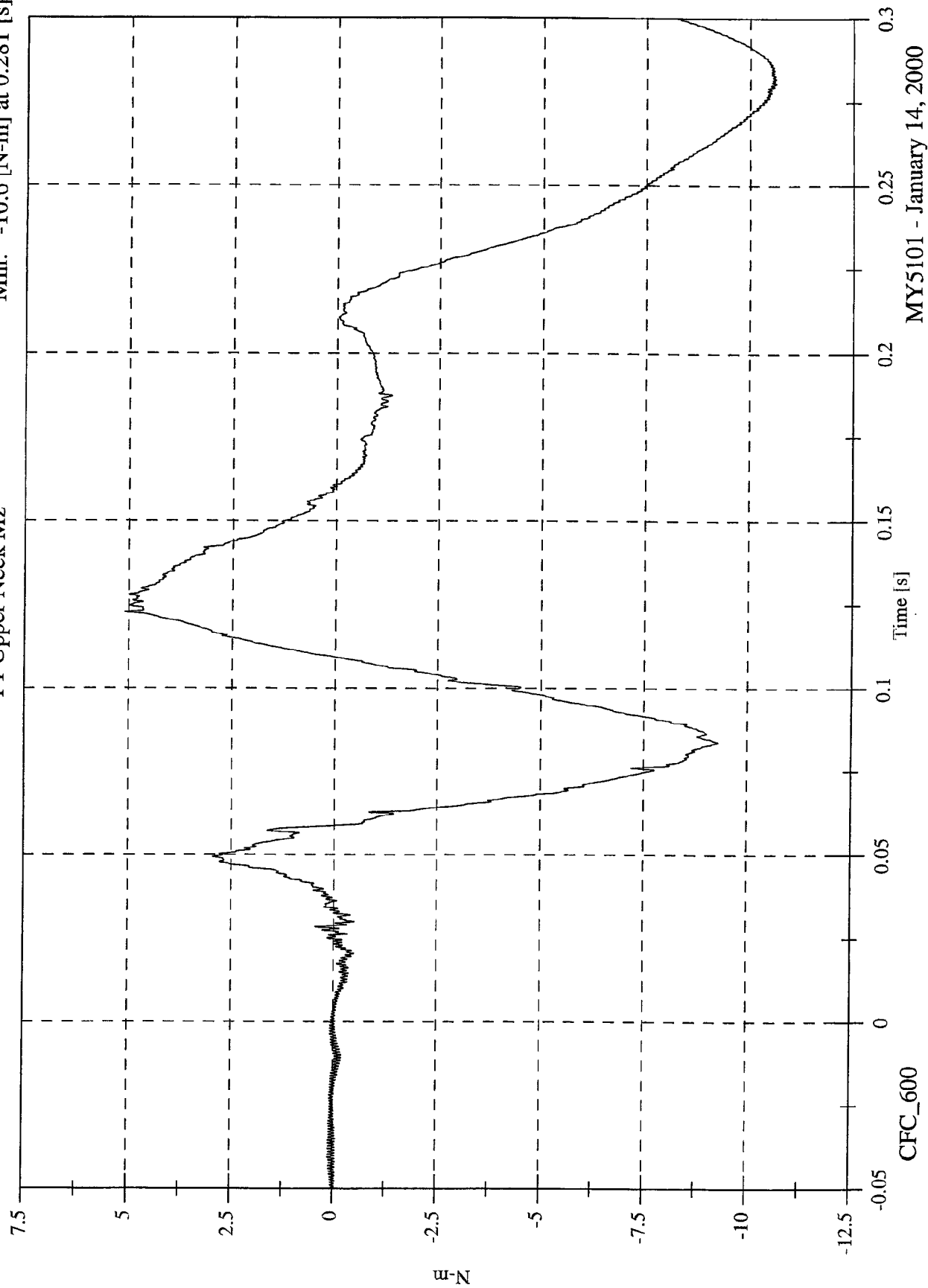


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 5.1 [N-m] at 0.123 [s]
Min: -10.6 [N-m] at 0.281 [s]

P1 Upper Neck Mz



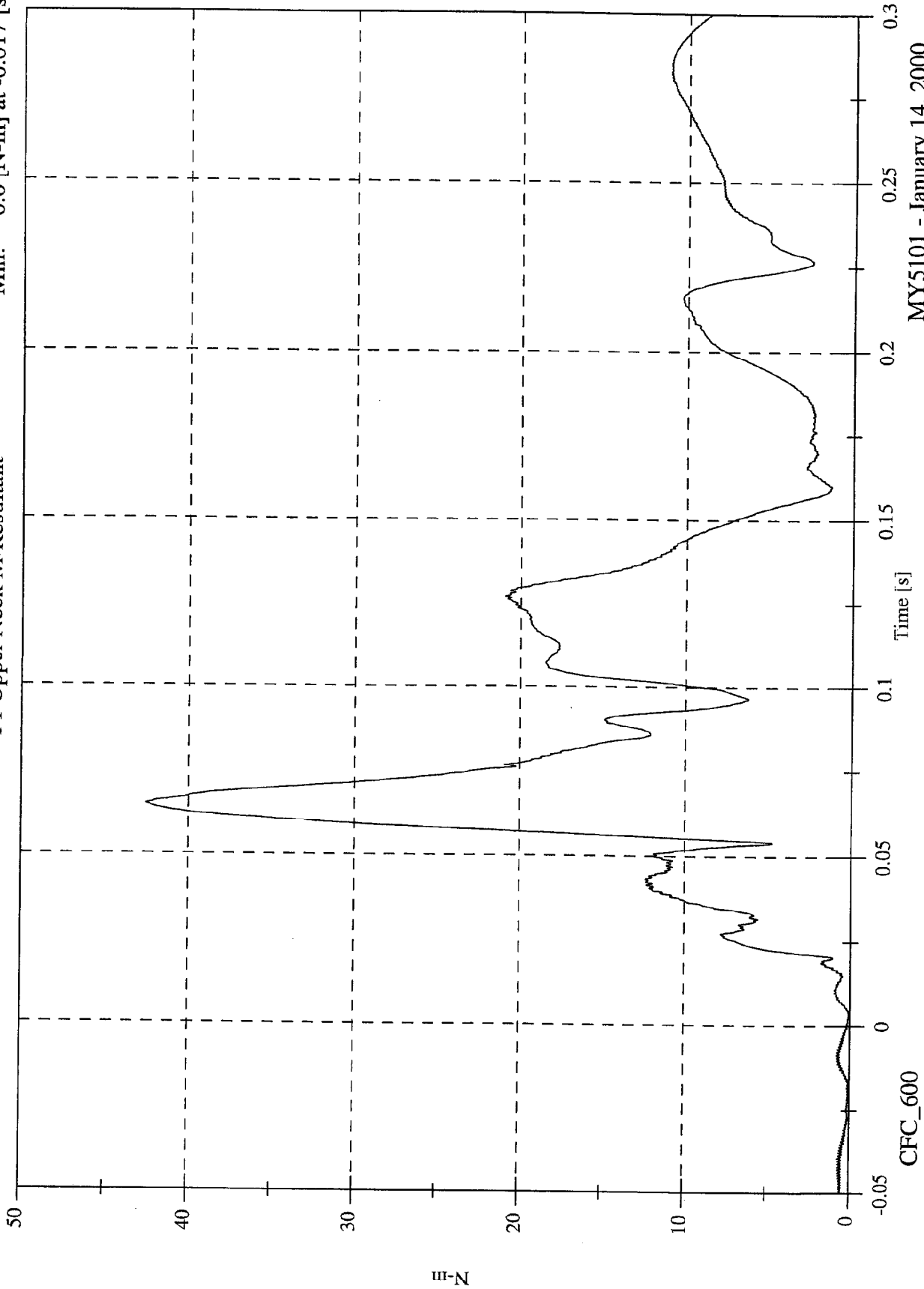
MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 42.5 [N-m] at 0.065 [s]

Min: 0.0 [N-m] at -0.017 [s]

P1 Upper Neck M Resultant

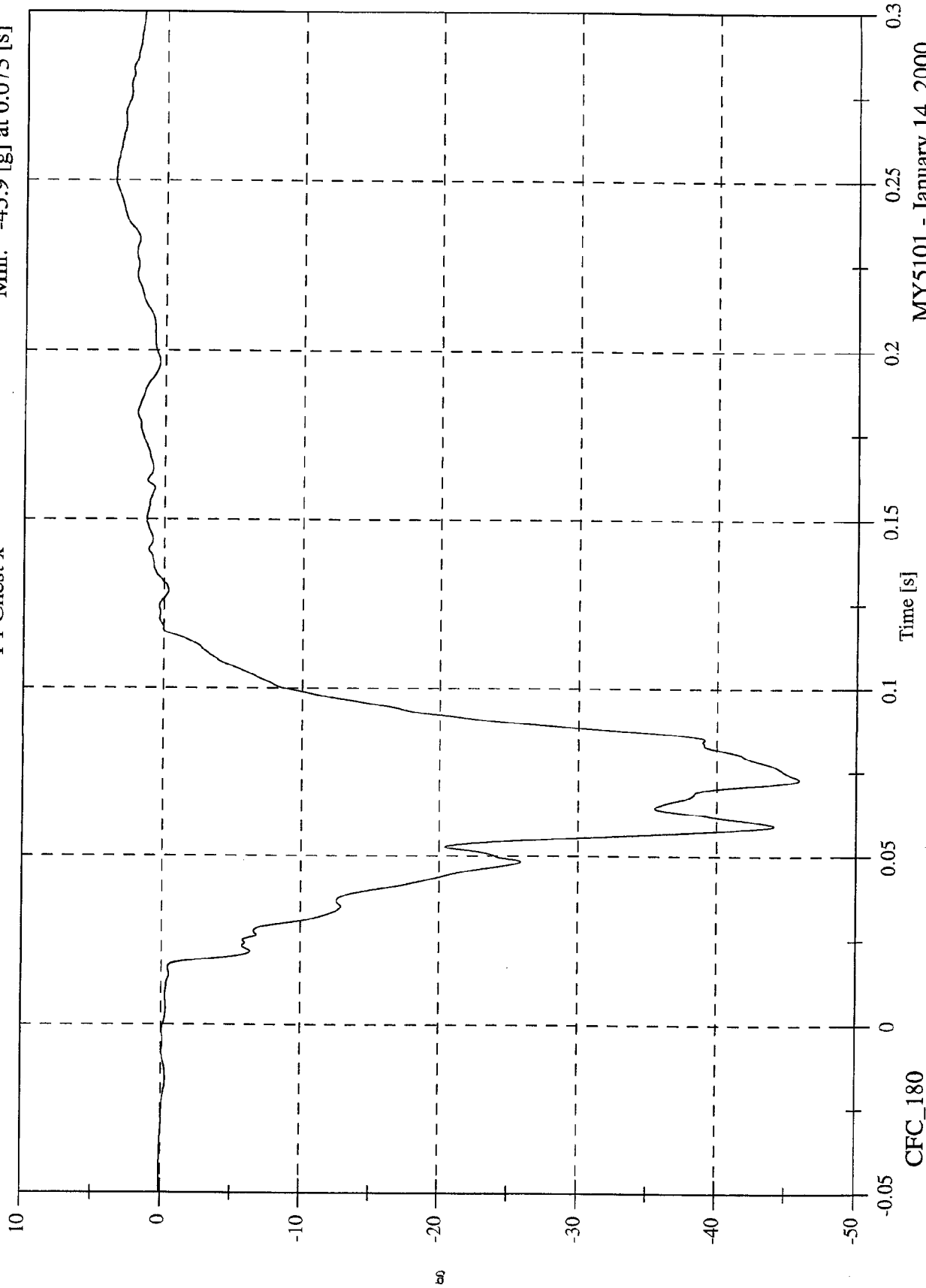


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 3.7 [g] at 0.250 [s]
Min: -45.9 [g] at 0.073 [s]

P1 Chest x

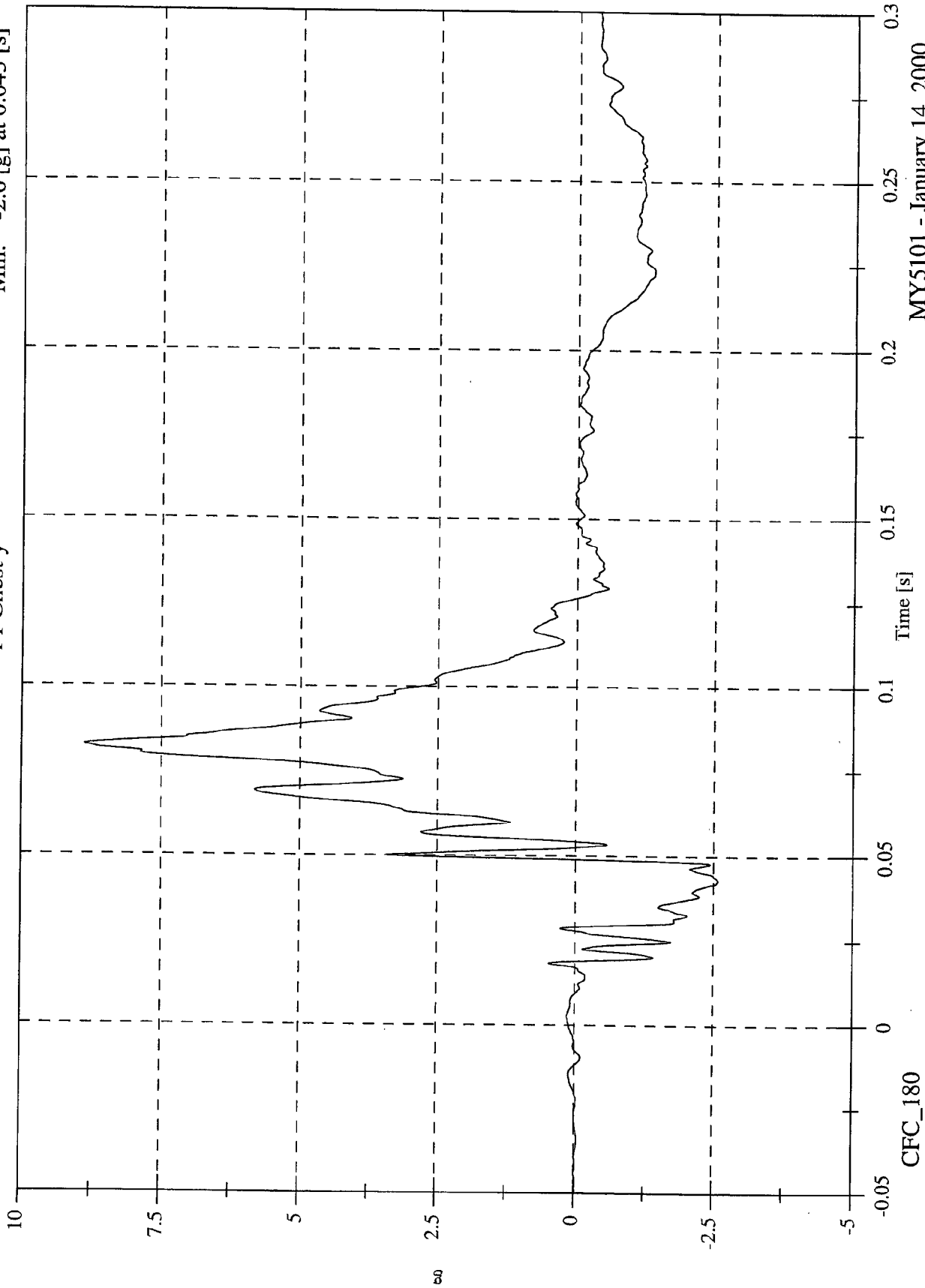


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 8.9 [g] at 0.082 [s]
Min: -2.6 [g] at 0.043 [s]

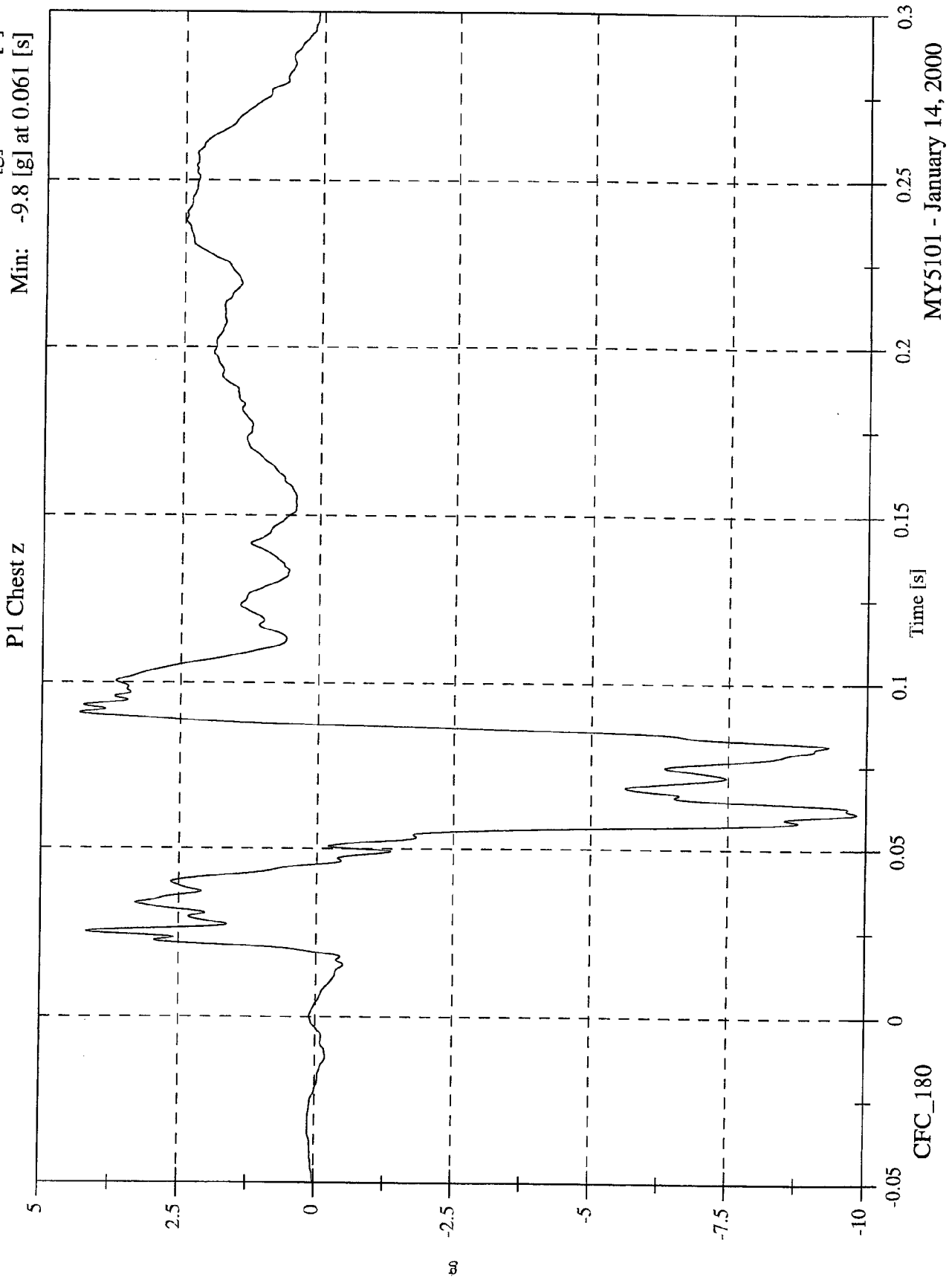
P1 Chest y



MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 4.3 [g] at 0.091 [s]
Min: -9.8 [g] at 0.061 [s]

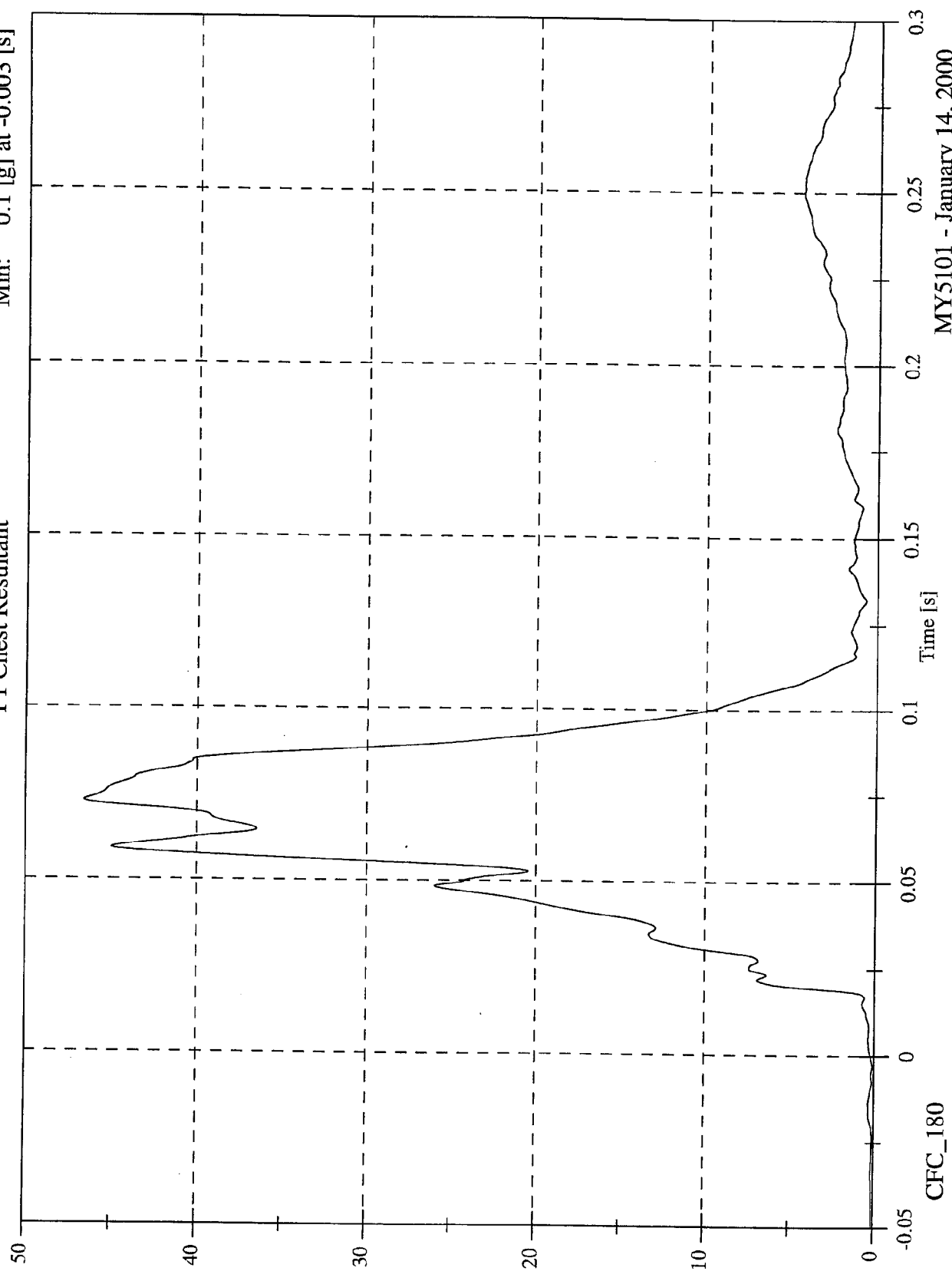


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 46.6 [g] at 0.073 [s]
Min: 0.1 [g] at -0.003 [s]

P1 Chest Resultant



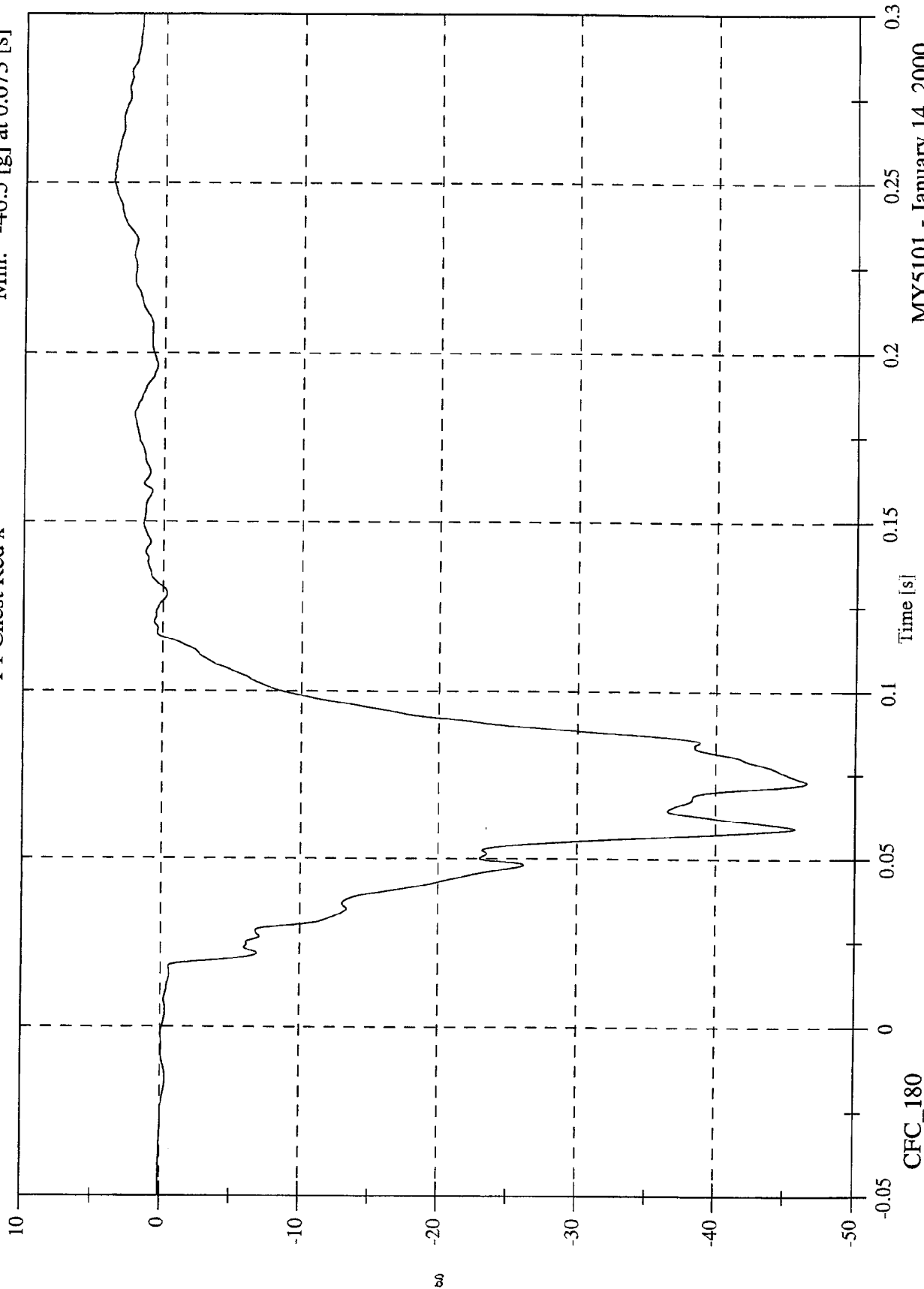
MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 3.7 [g] at 0.251 [s]

Min: -46.5 [g] at 0.073 [s]

P1 Chest Red x

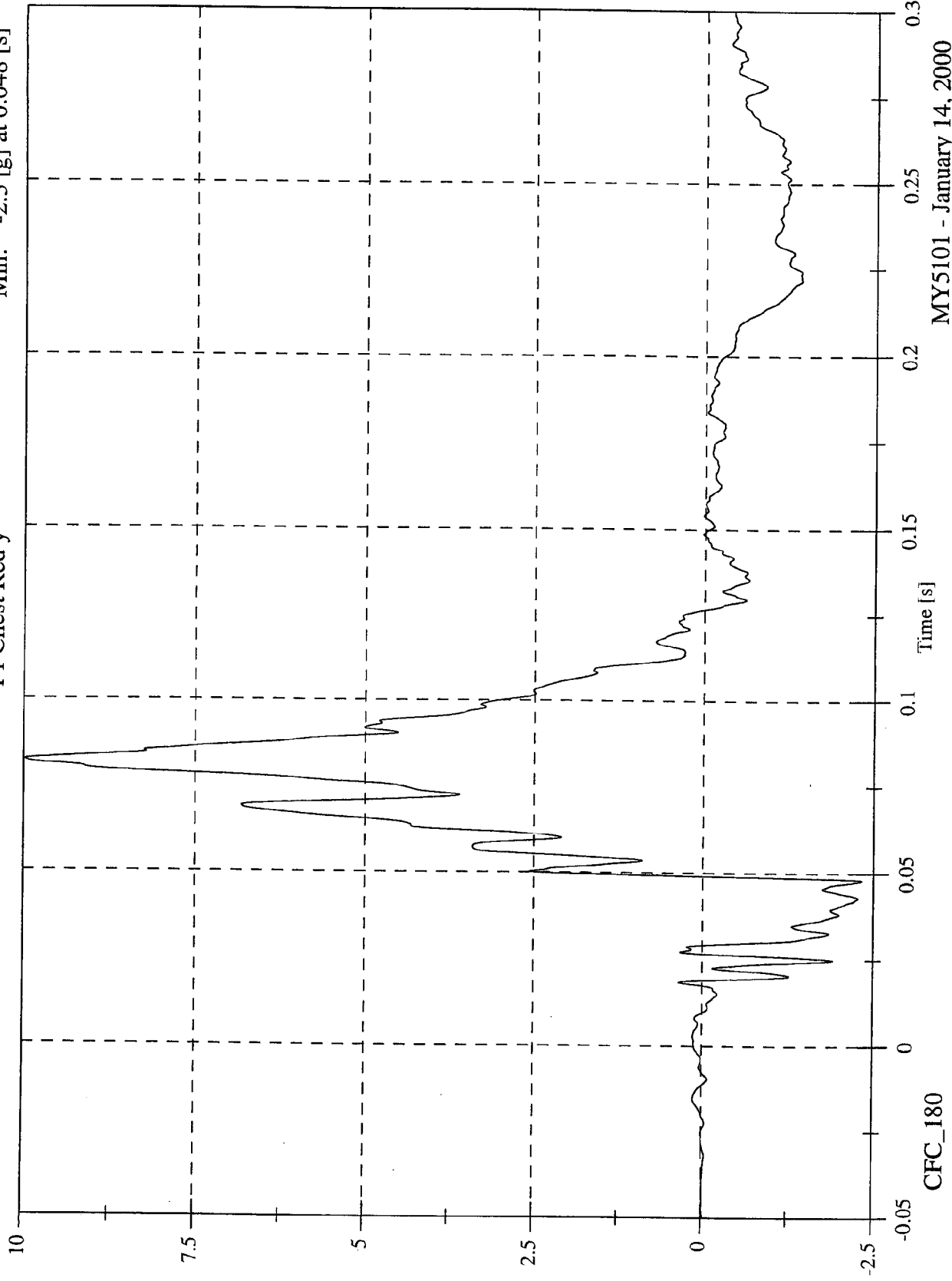


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 10.0 [g] at 0.082 [s]
Min: -2.3 [g] at 0.048 [s]

P1 Chest Red y

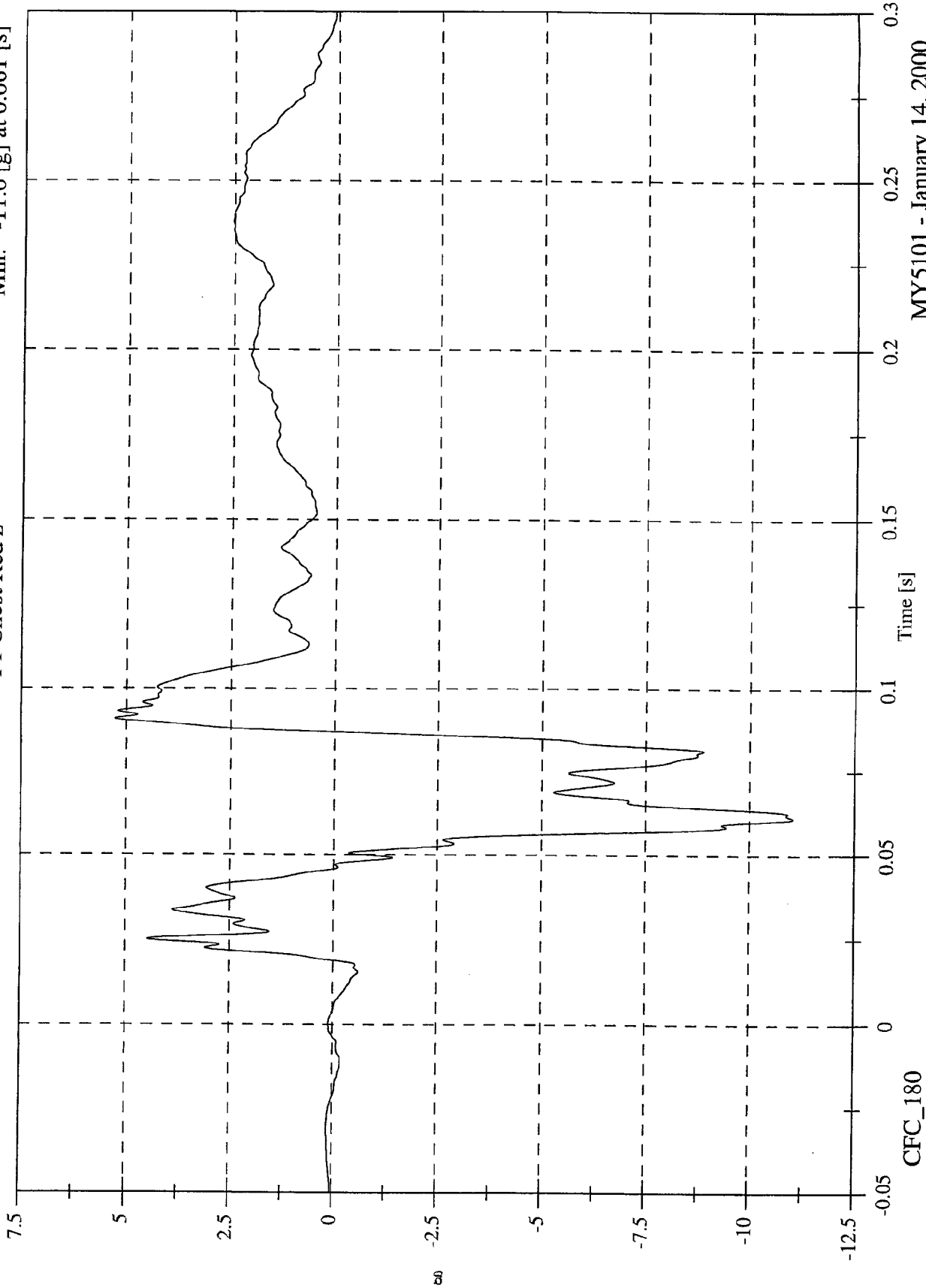


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

P1 Chest Red z

Max: 5.3 [g] at 0.091 [s]
Min: -11.0 [g] at 0.061 [s]

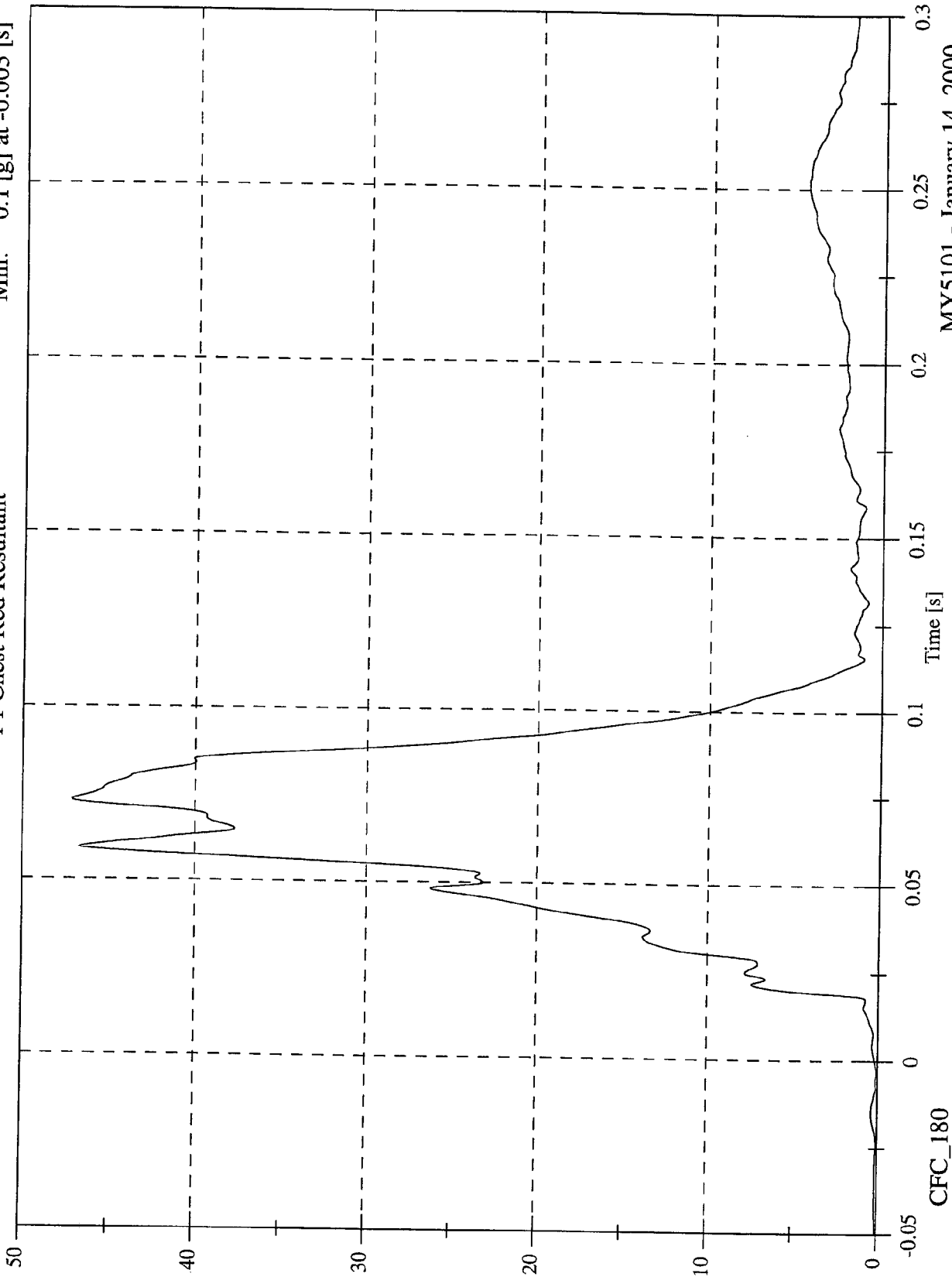


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 47.1 [g] at 0.073 [s]
Min: 0.1 [g] at -0.003 [s]

P1 Chest Red Resultant

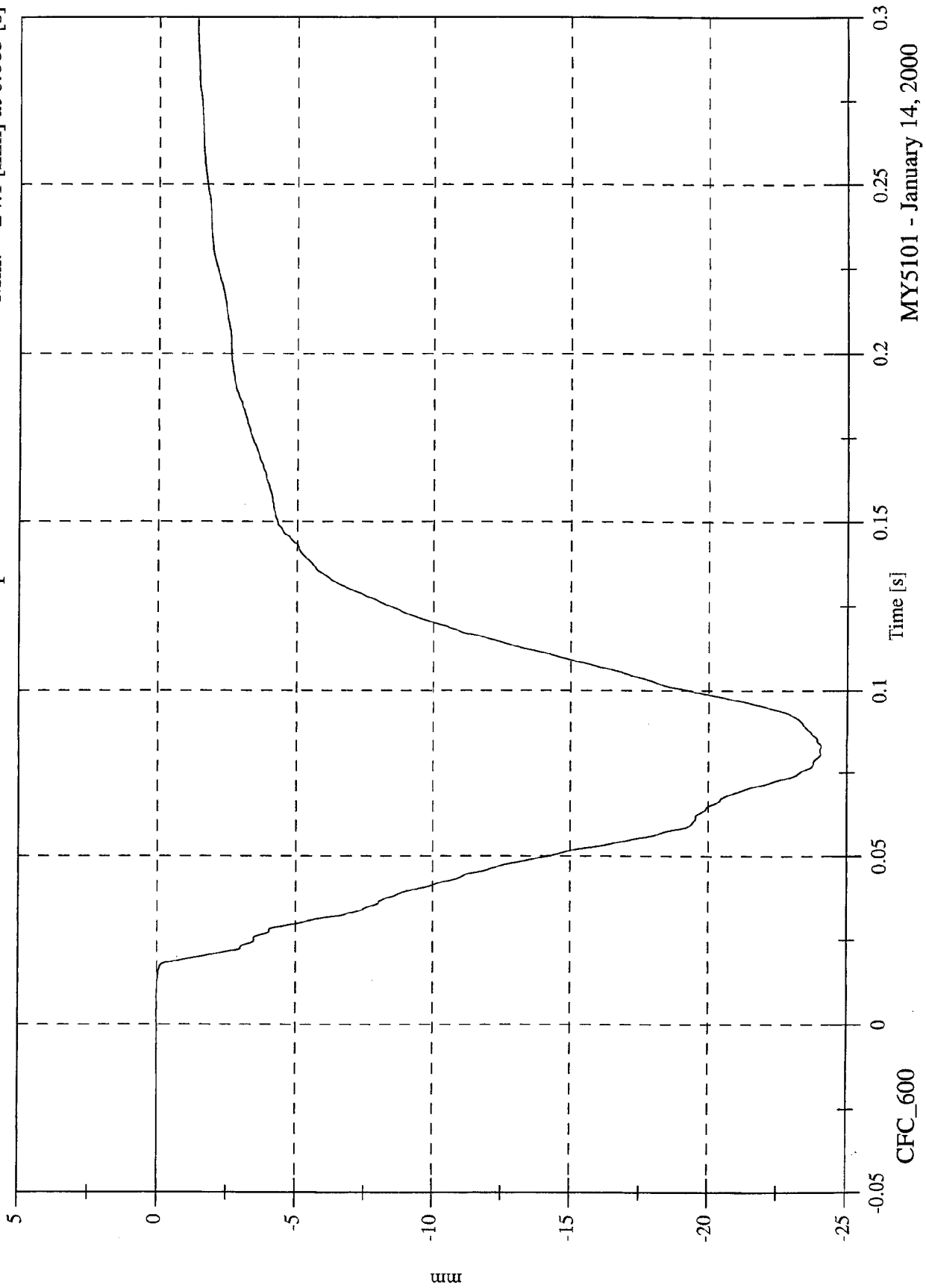


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 0.0 [mm] at -0.009 [s]
Min: -24.1 [mm] at 0.083 [s]

P1 Chest Compression x

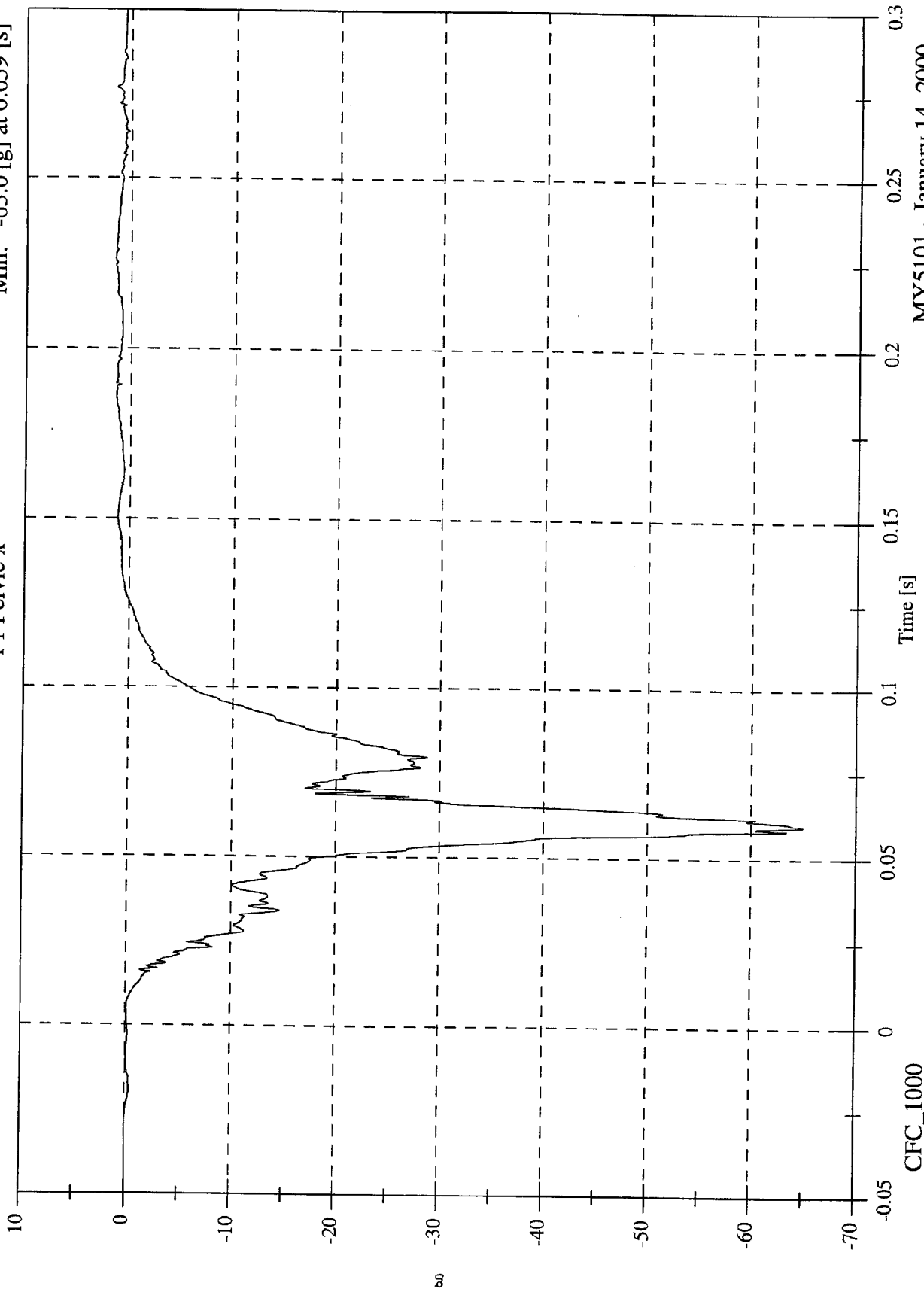


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 1.5 [g] at 0.227 [s]
Min: -65.0 [g] at 0.059 [s]

P1 Pelvic x

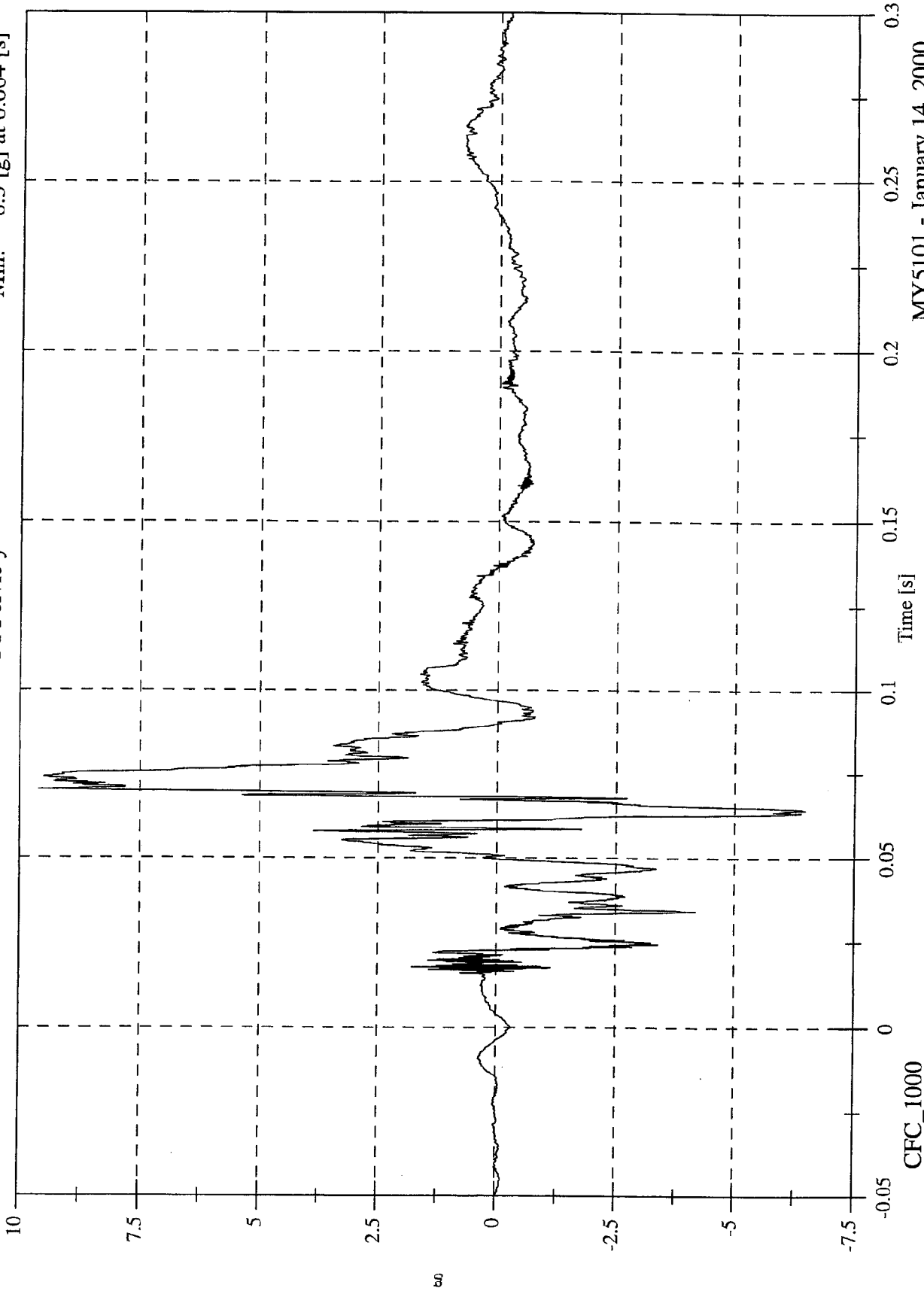


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 9.6 [g] at 0.070 [s]
Min: -6.5 [g] at 0.064 [s]

P1 Pelvic y

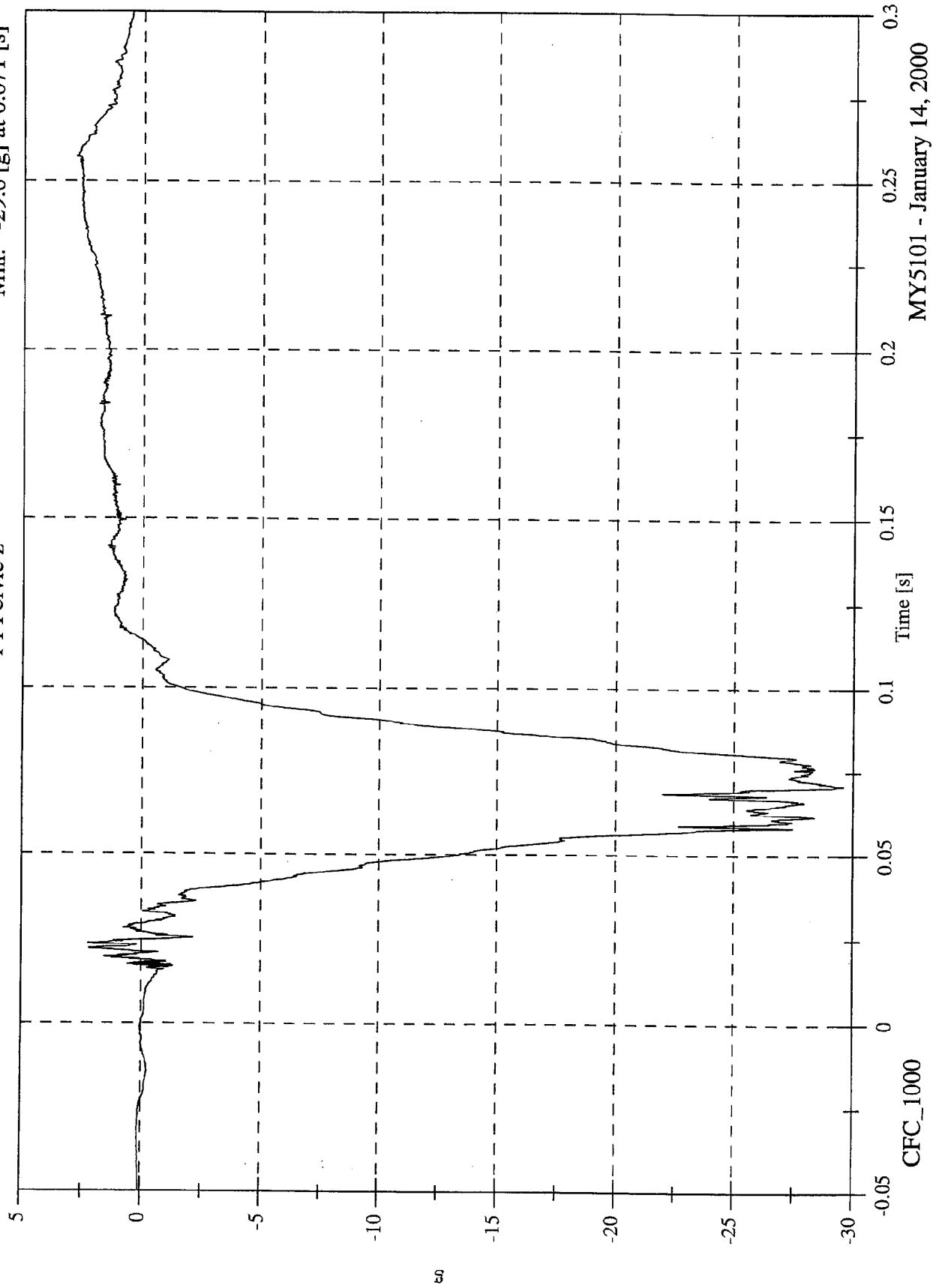


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 2.8 [g] at 0.257 [s]
Min: -29.6 [g] at 0.071 [s]

P1 Pelvic z



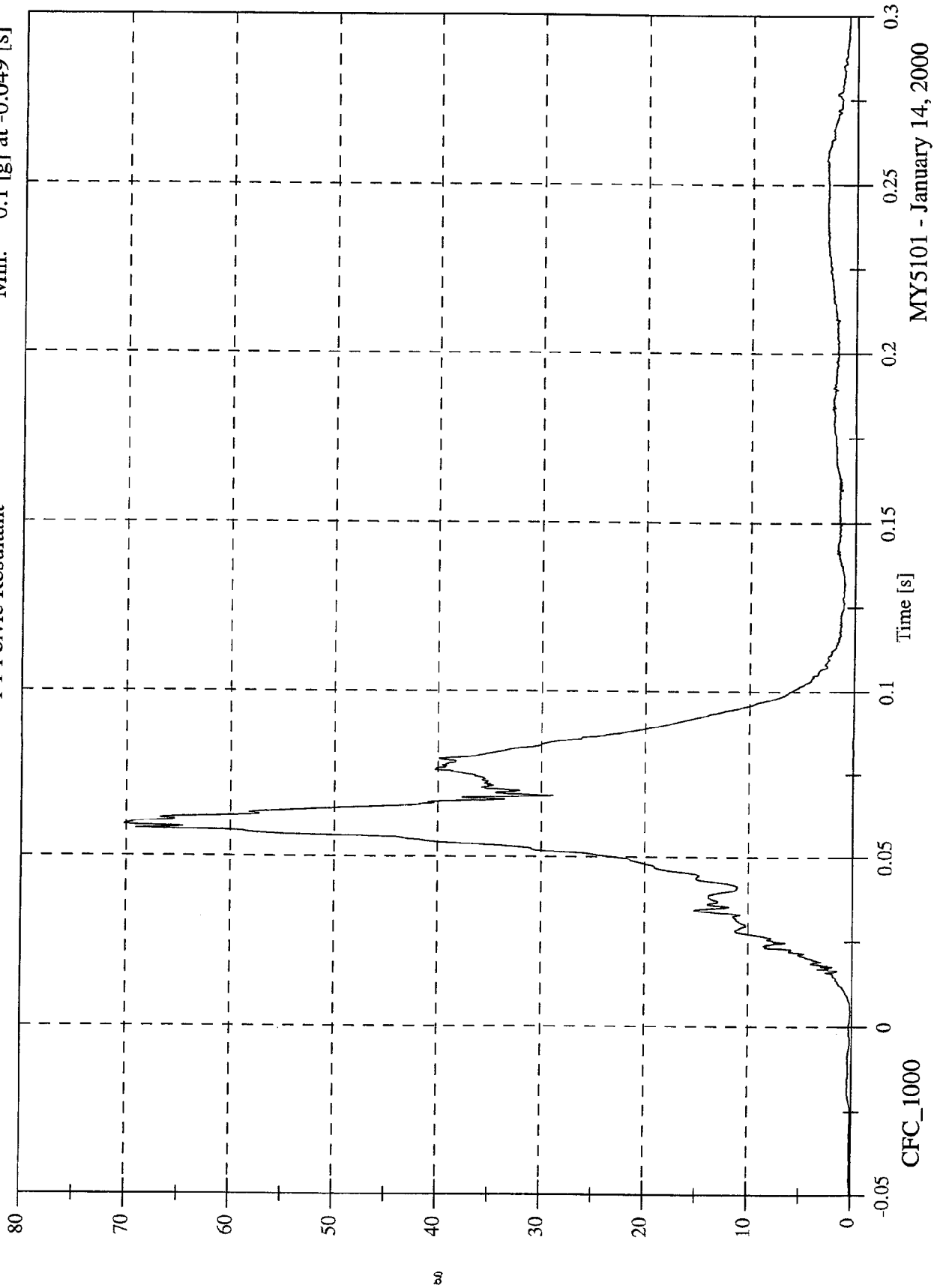
MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 70.2 [g] at 0.059 [s]

Min: 0.1 [g] at -0.049 [s]

P1 Pelvic Resultant

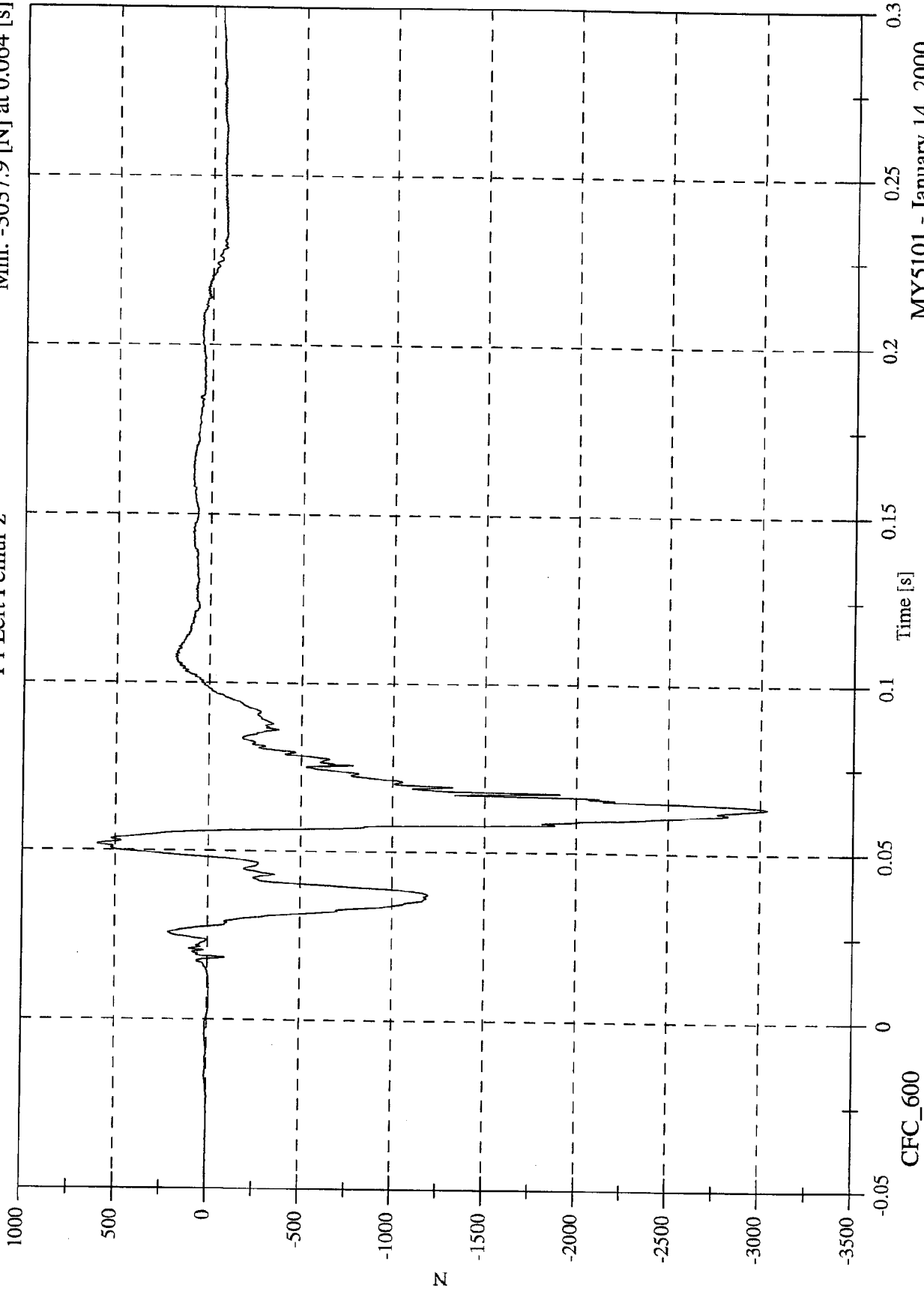


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 600.4 [N] at 0.052 [s]
Min: -3037.9 [N] at 0.064 [s]

P1 Left Femur z

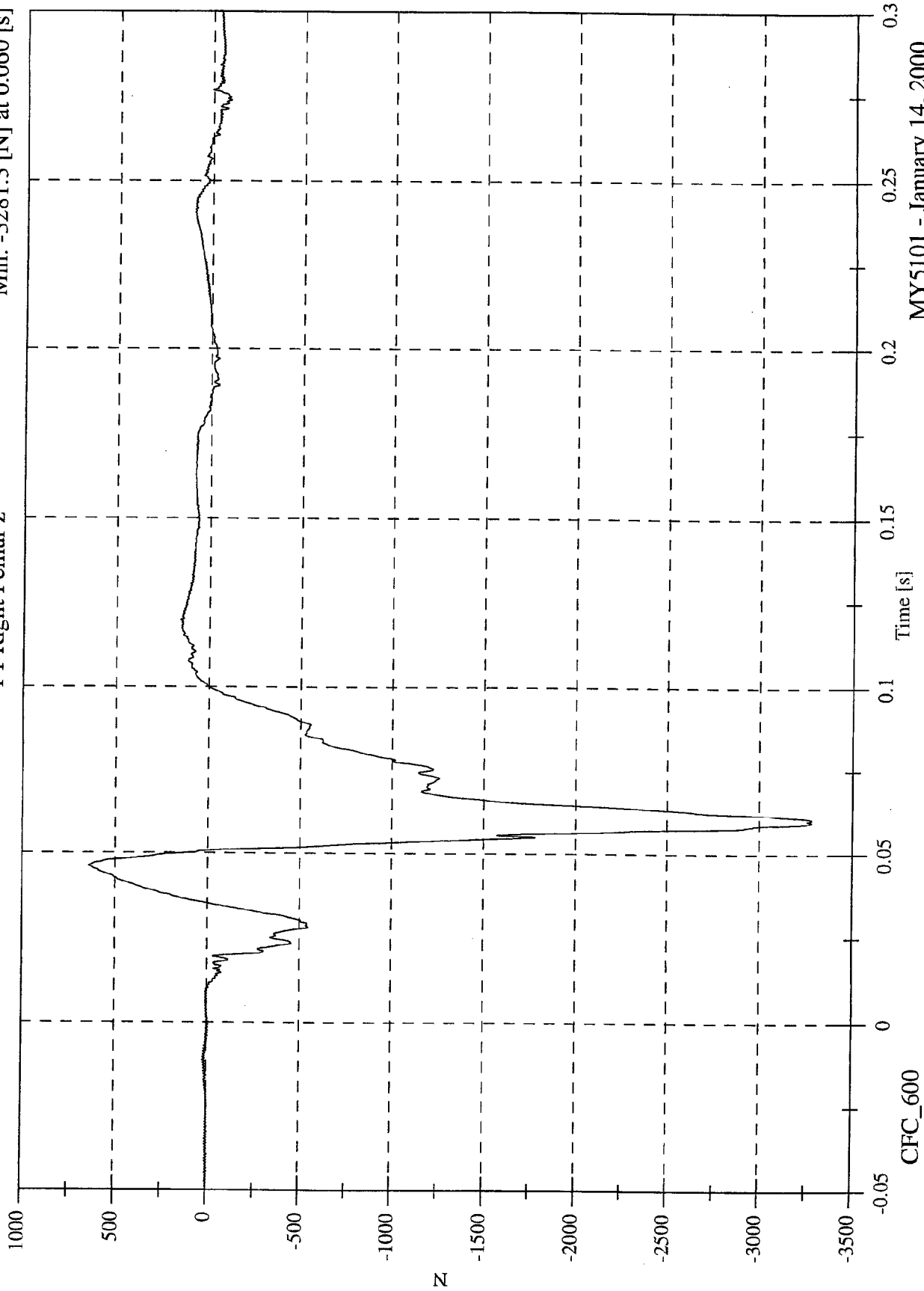


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

P1 Right Femur z

Max: 640.2 [N] at 0.046 [s]
Min: -3281.3 [N] at 0.060 [s]

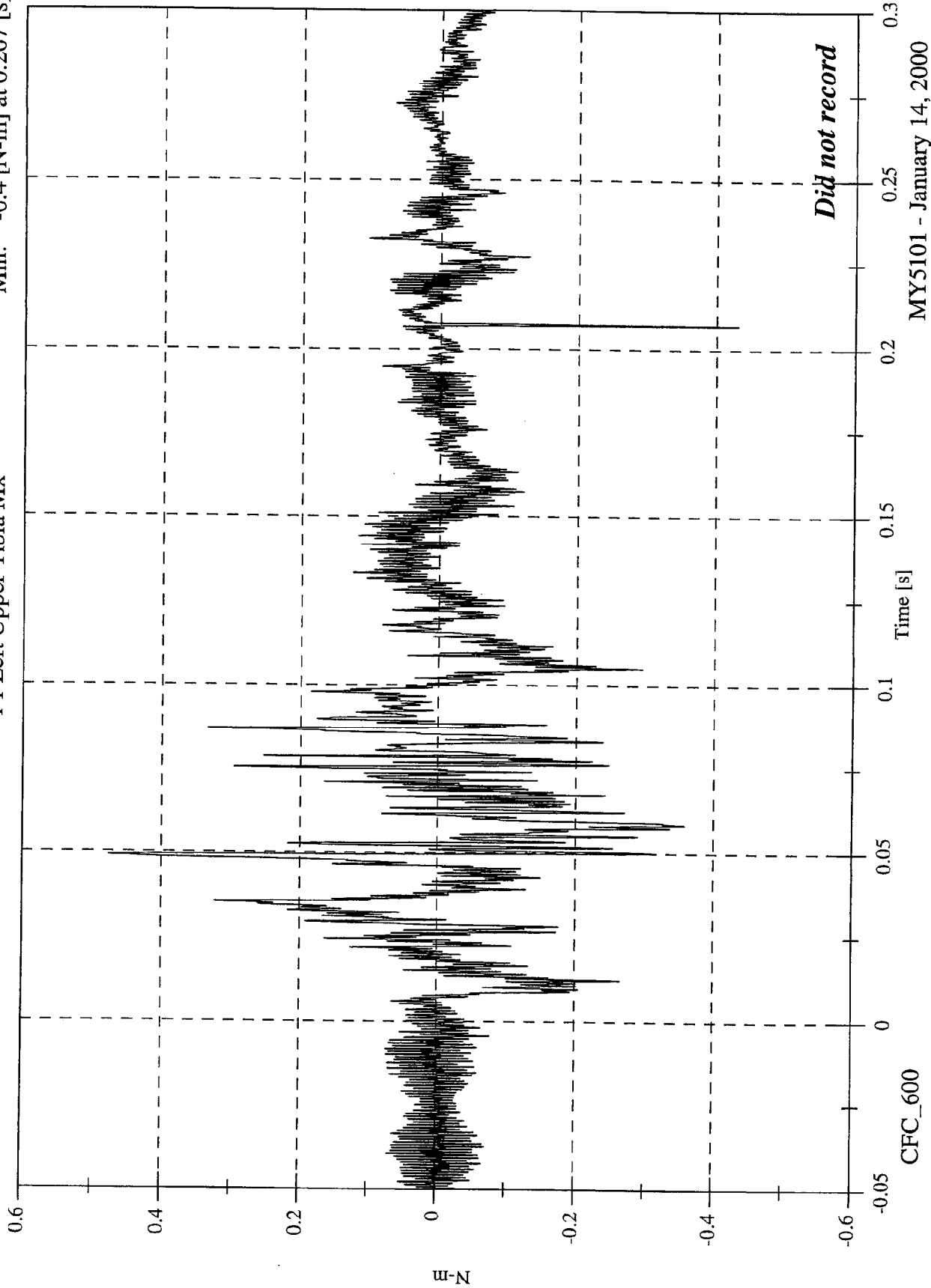


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 0.5 [N-m] at 0.049 [s]
Min: -0.4 [N-m] at 0.207 [s]

P1 Left Upper Tibia Mx

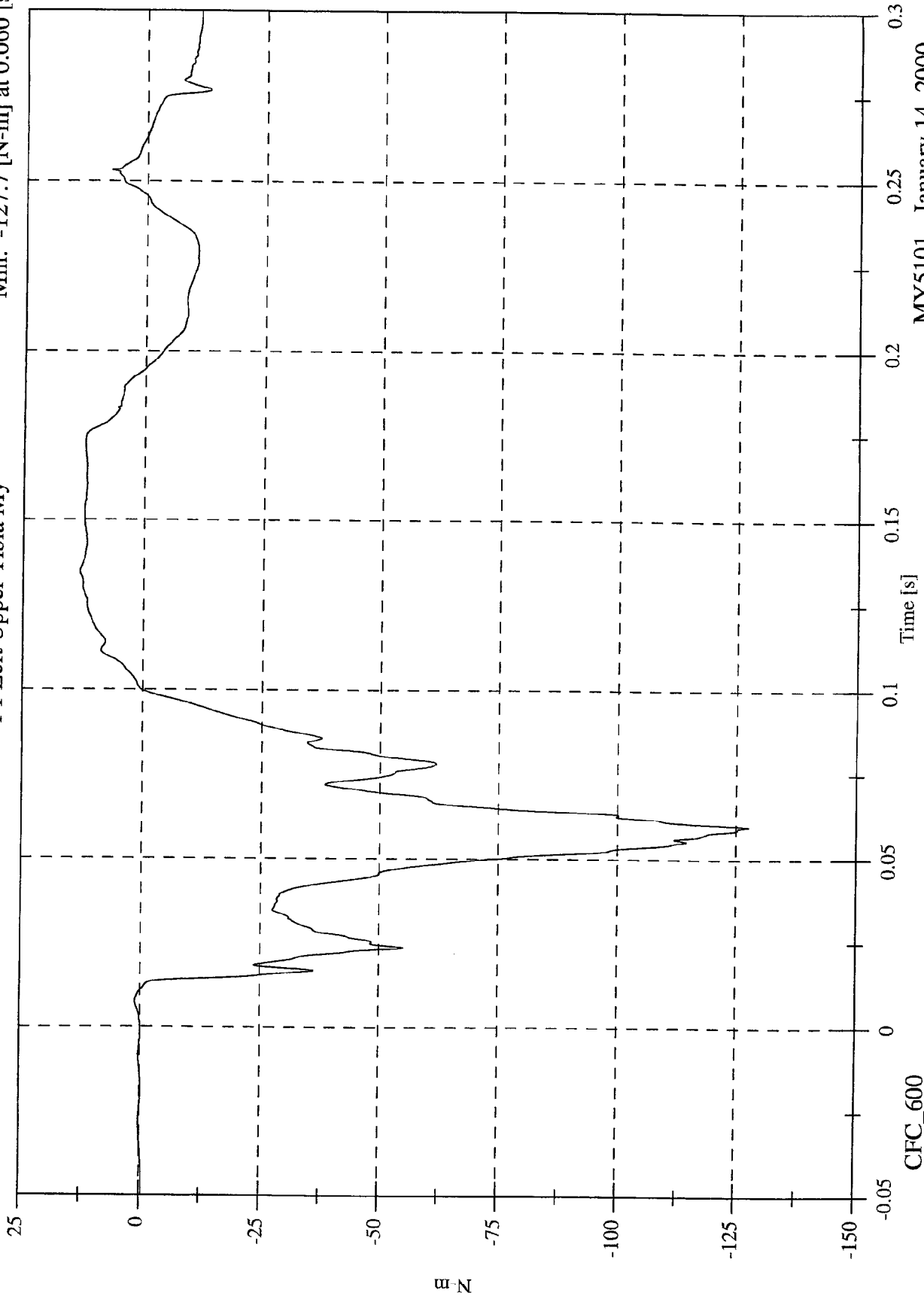


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NCAP Test #9 - 2000 Toyota Camry

P1 Left Upper Tibia My

Max: 13.2 [N-m] at 0.134 [s]
Min: -127.7 [N-m] at 0.060 [s]

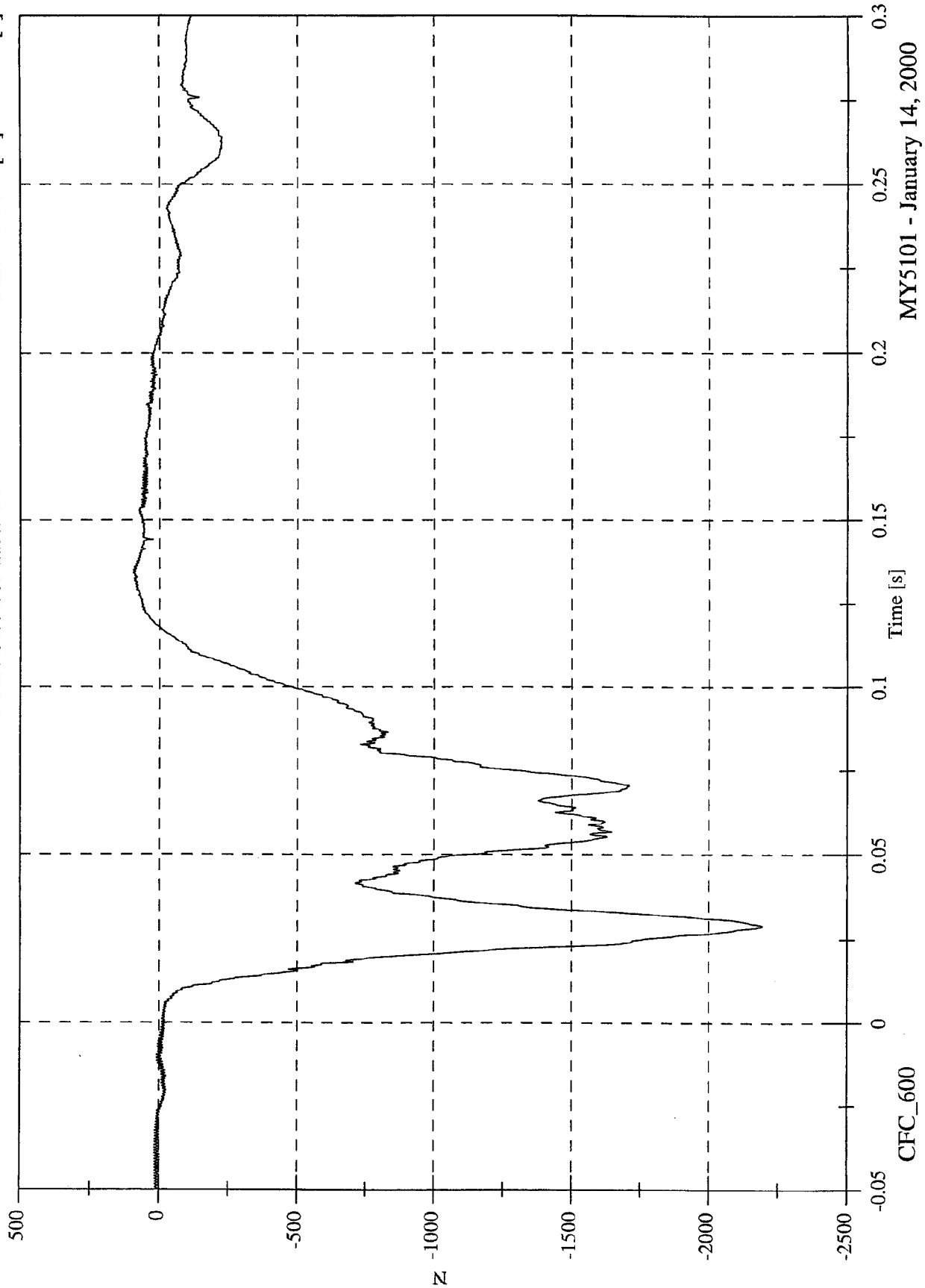


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 94.6 [N] at 0.134 [s]
Min: -2193.8 [N] at 0.029 [s]

P1 Left Lower Tibia Fz

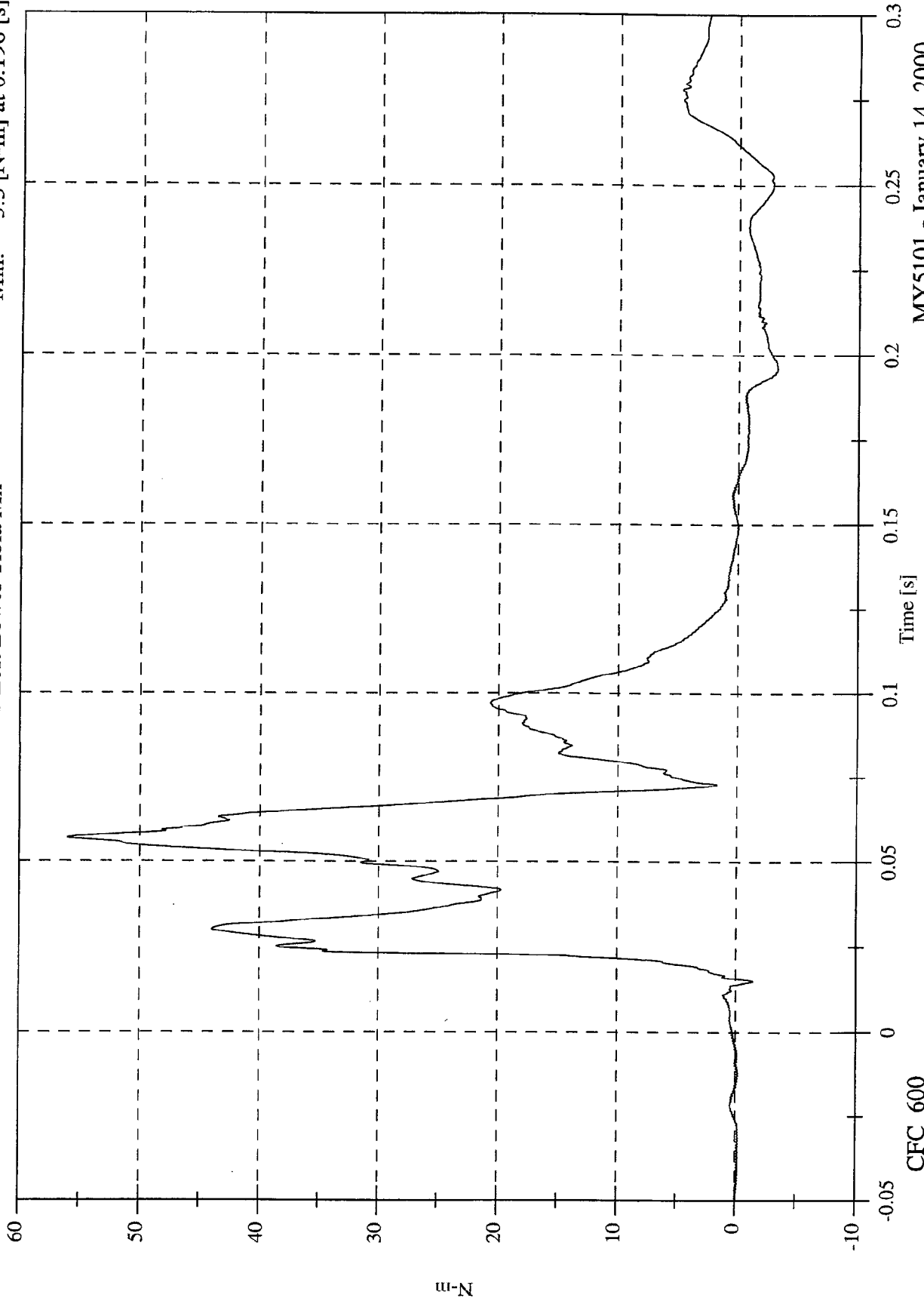


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 56.0 [N-m] at 0.057 [s]
Min: -3.3 [N-m] at 0.196 [s]

P1 Left Lower Tibia Mx



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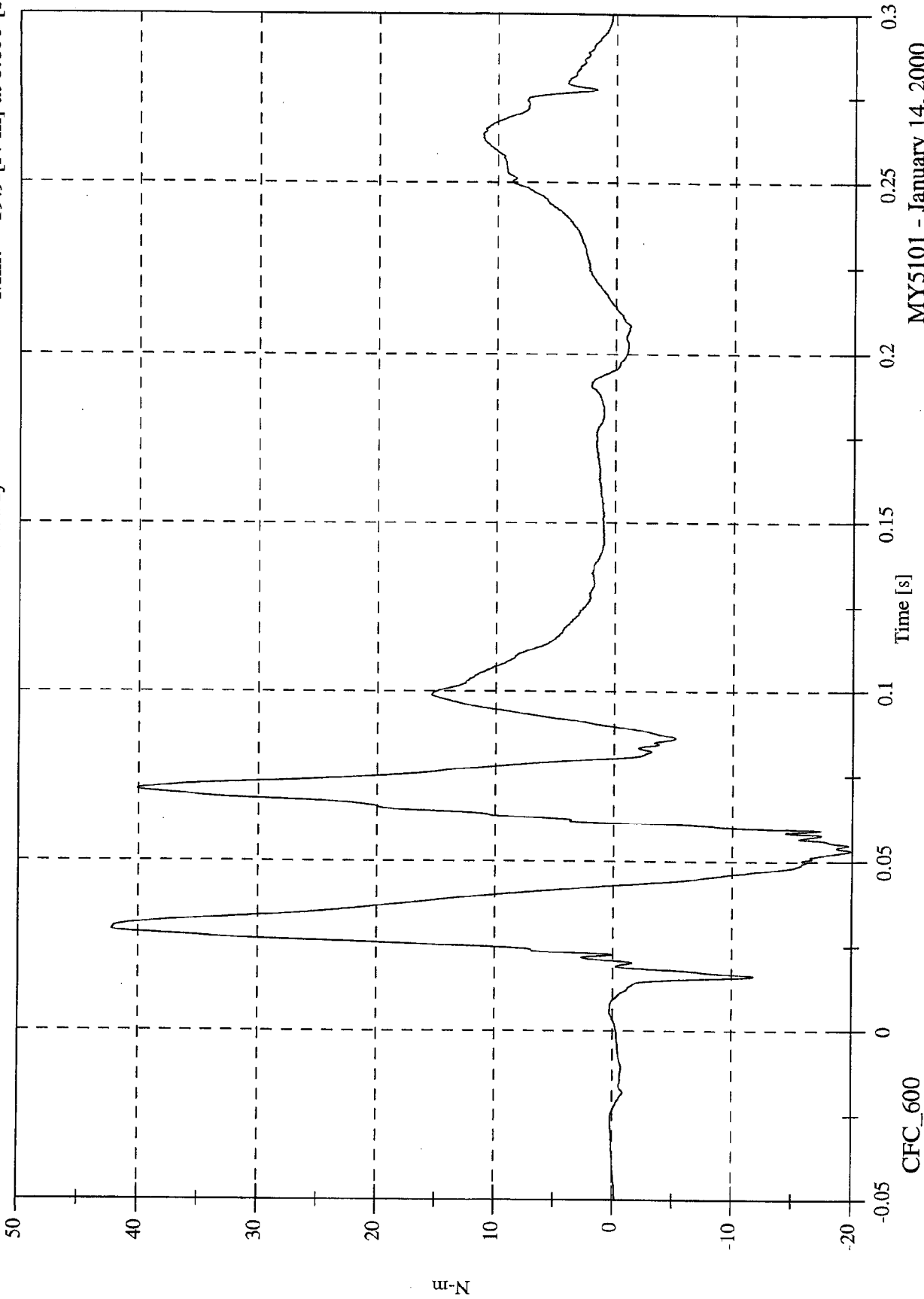
CFC_600

NCAP Test #9 - 2000 Toyota Camry

P1 Left Lower Tibia My

Max: 42.2 [N-m] at 0.030 [s]

Min: -19.9 [N-m] at 0.053 [s]

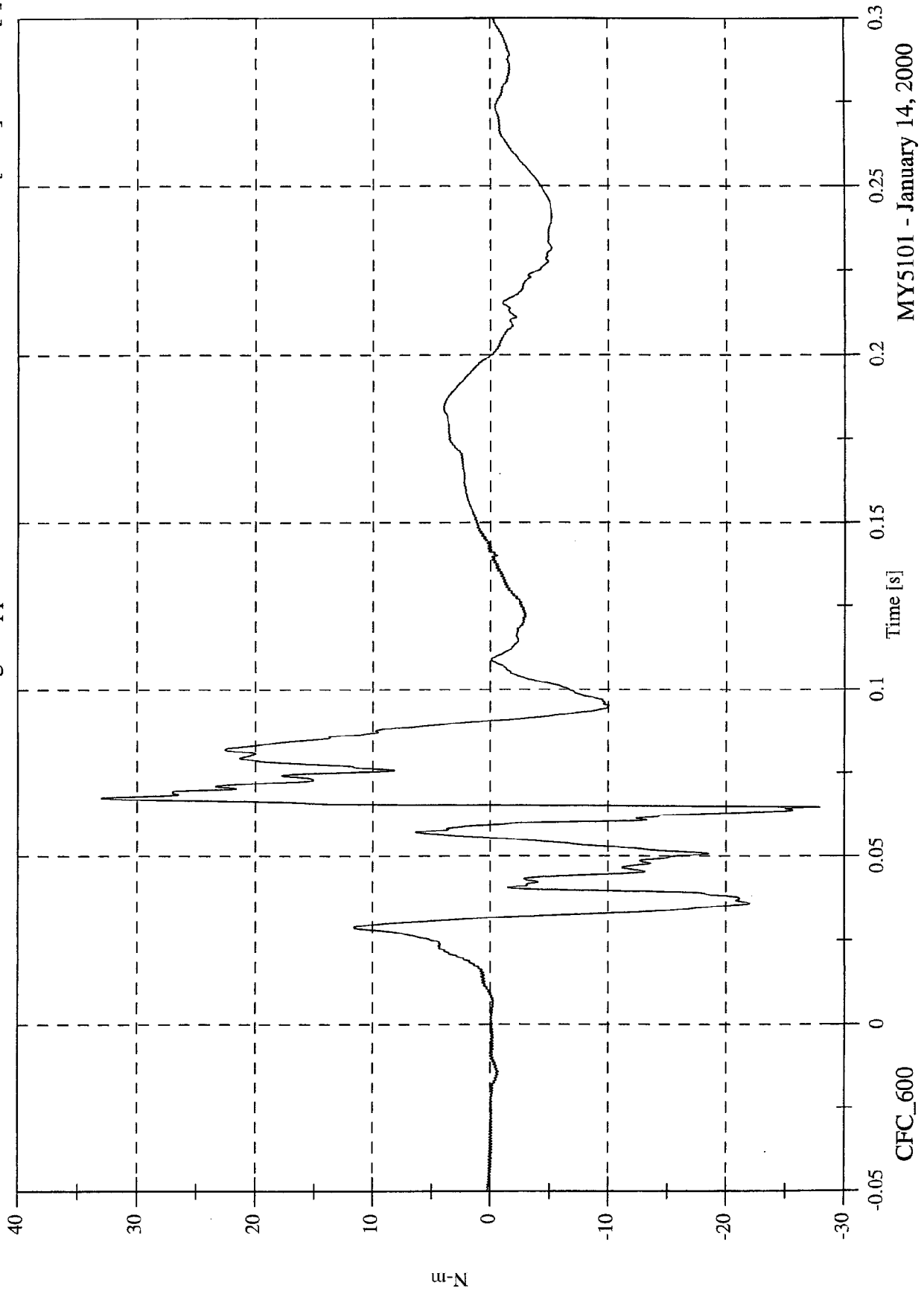


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 33.0 [N-m] at 0.068 [s]
Min: -27.9 [N-m] at 0.065 [s]

P1 Right Upper Tibia Mx



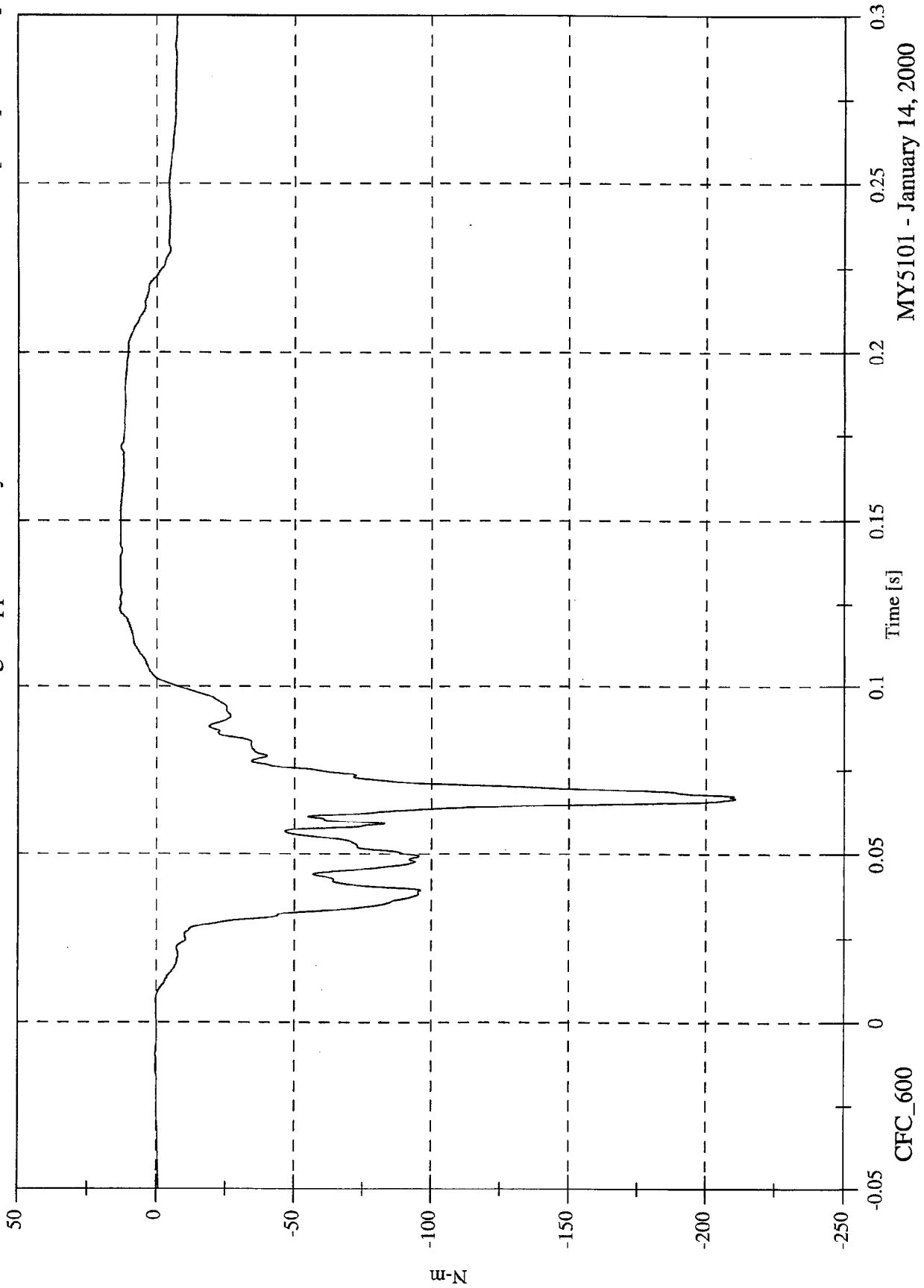
MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

P1 Right Upper Tibia My

Max: 13.6 [N-m] at 0.124 [s]

Min: -210.8 [N-m] at 0.067 [s]

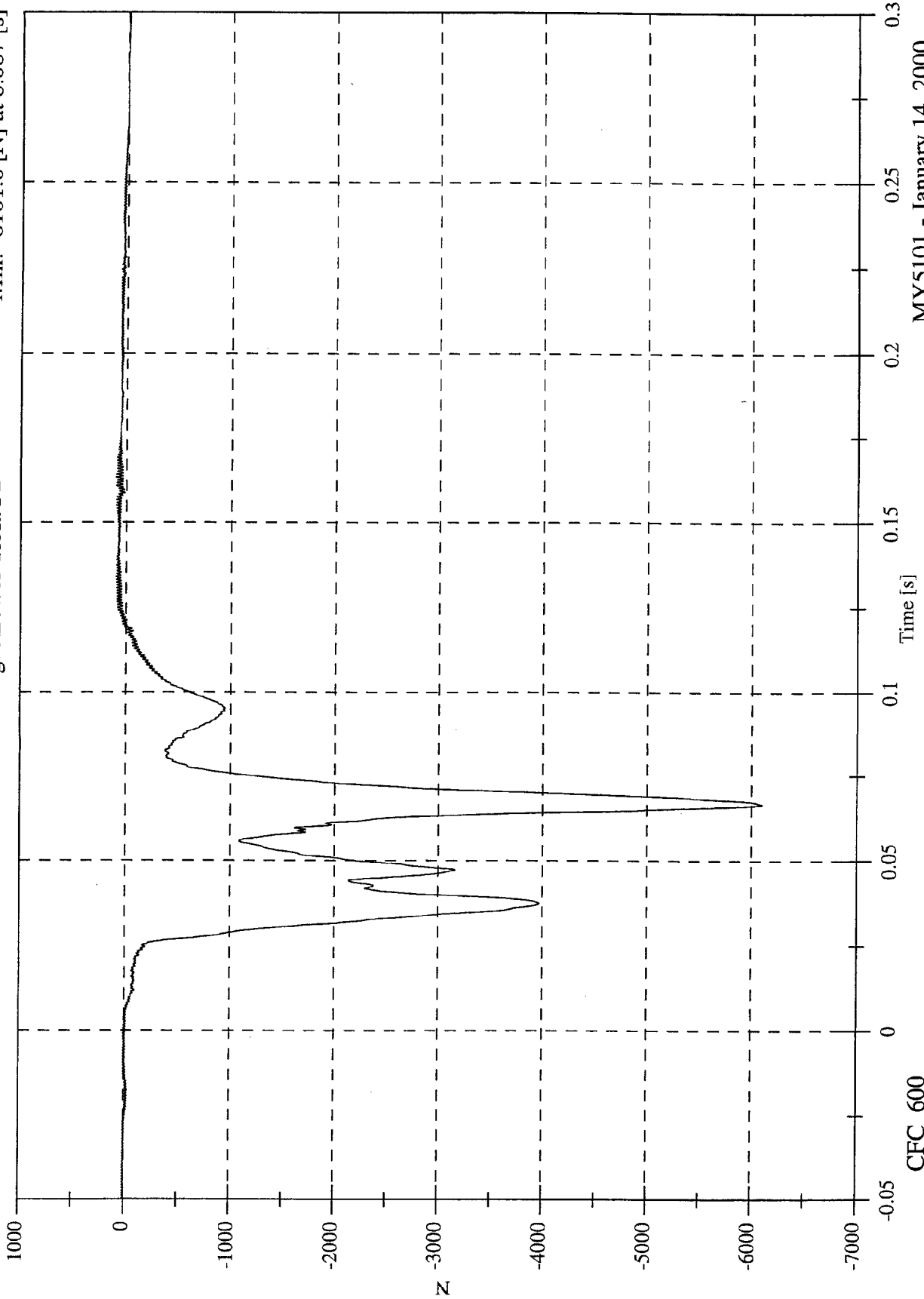


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 96.5 [N] at 0.163 [s]
Min: -6101.8 [N] at 0.067 [s]

P1 Right Lower Tibia Fz



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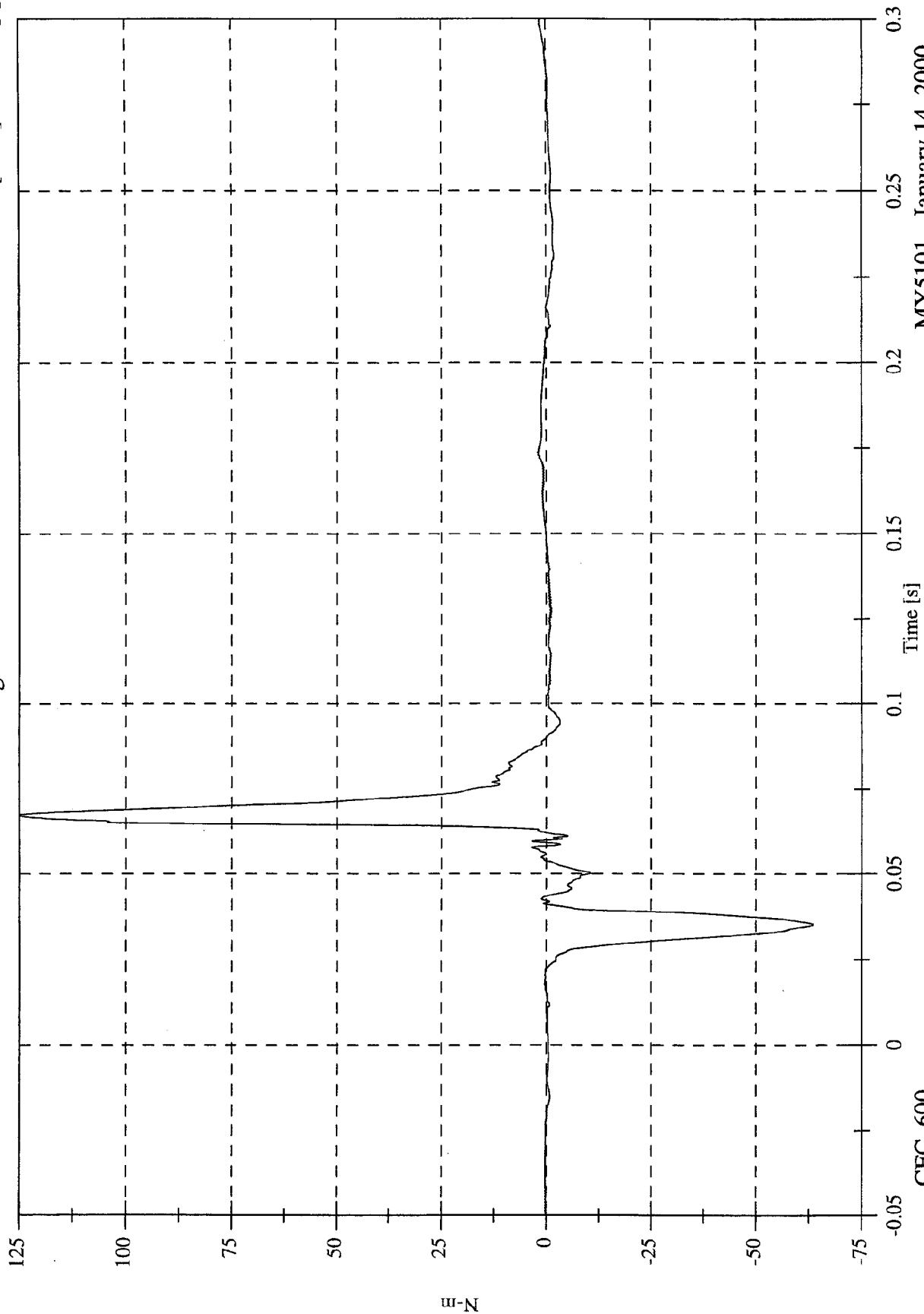
CFC_600

NCAP Test #9 - 2000 Toyota Camry

Max: 125.0 [N-m] at 0.067 [s]

Min: -63.6 [N-m] at 0.035 [s]

P1 Right Lower Tibia Mx



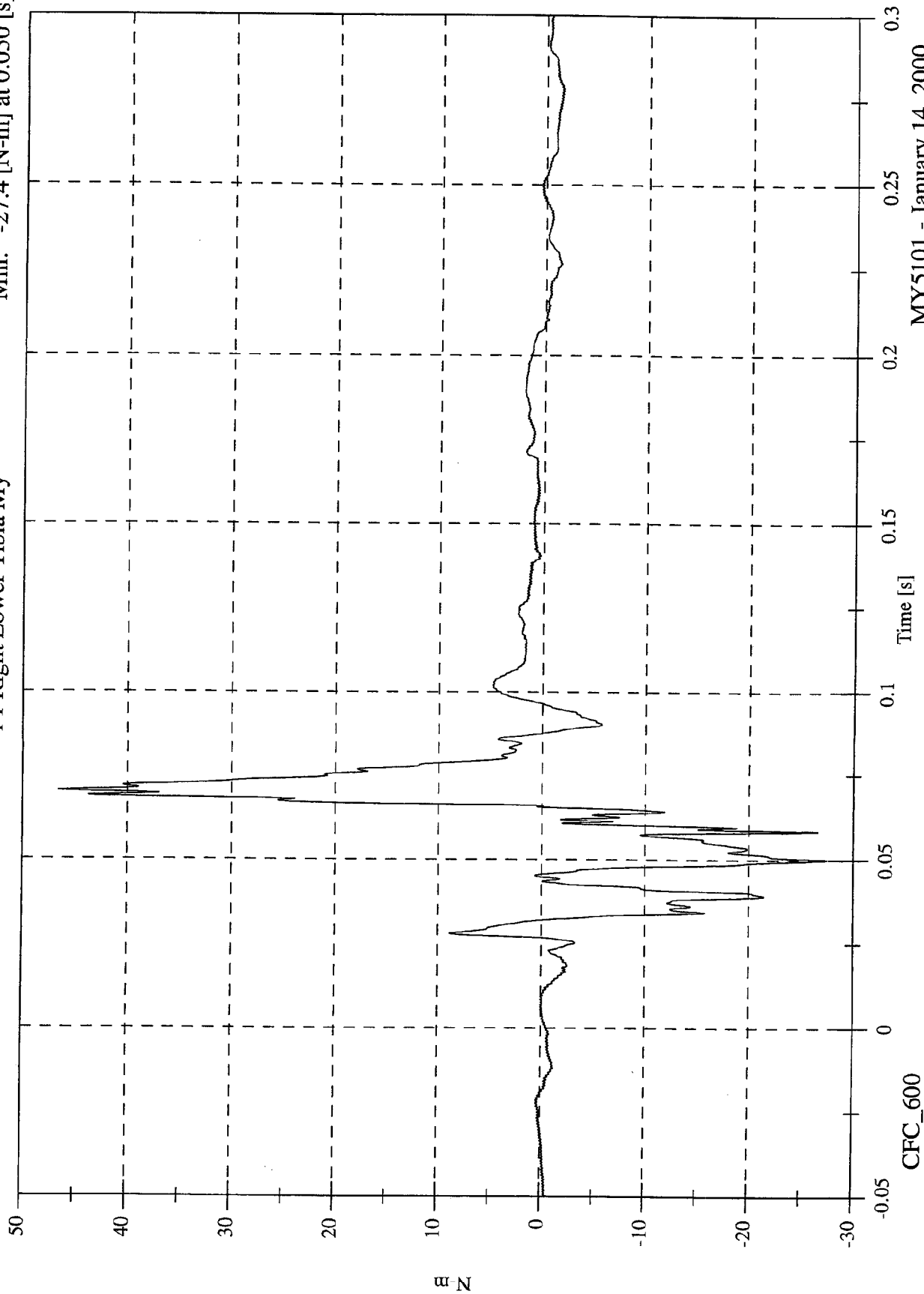
MY5101 - January 14, 2000

CFC_600

NCAP Test #9 - 2000 Toyota Camry

P1 Right Lower Tibia My

Max: 46.6 [N-m] at 0.070 [s]
Min: -27.4 [N-m] at 0.050 [s]

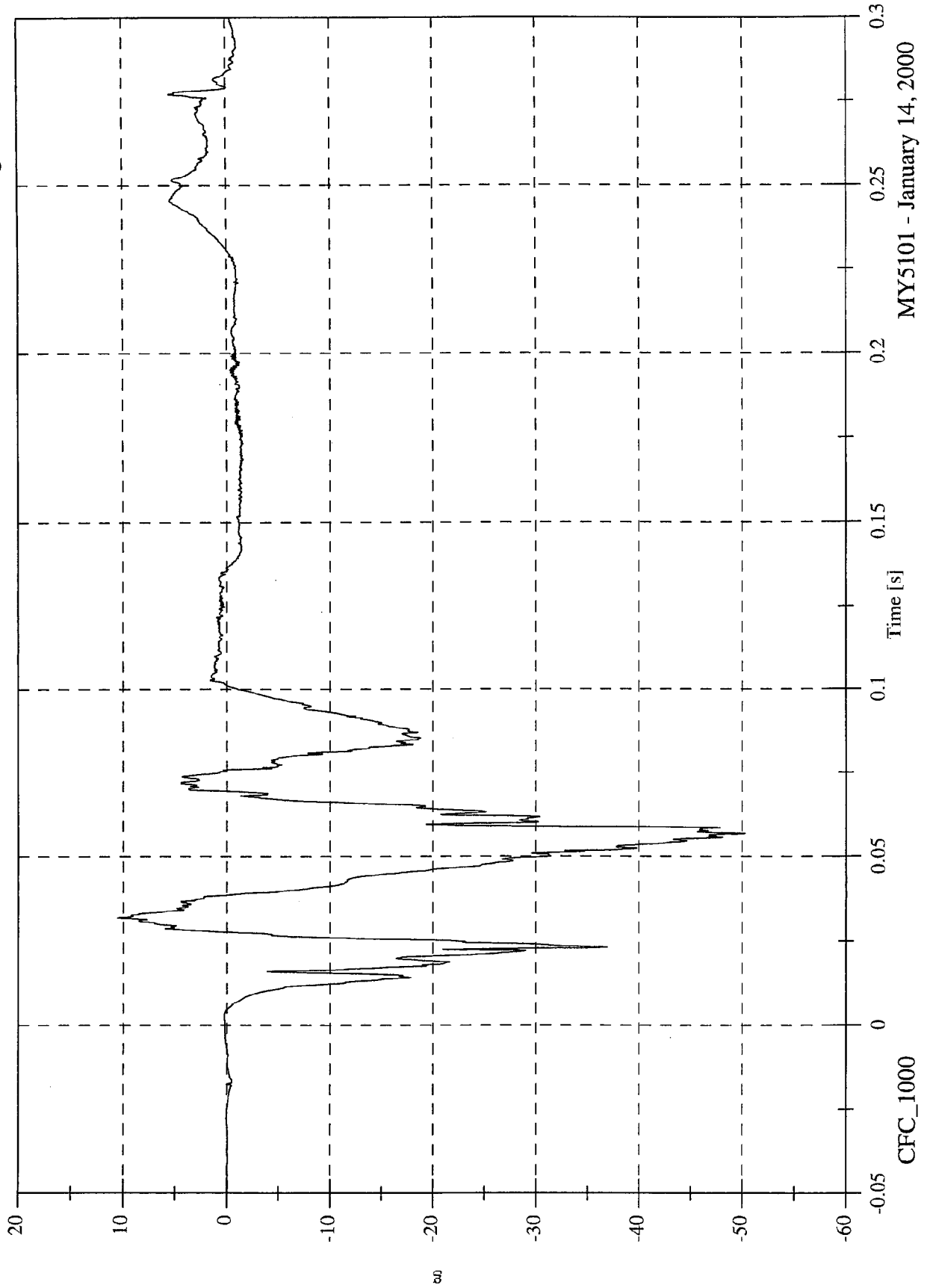


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 10.5 [g] at 0.032 [s]
Min: -50.3 [g] at 0.057 [s]

P1 Left Foot Aft x

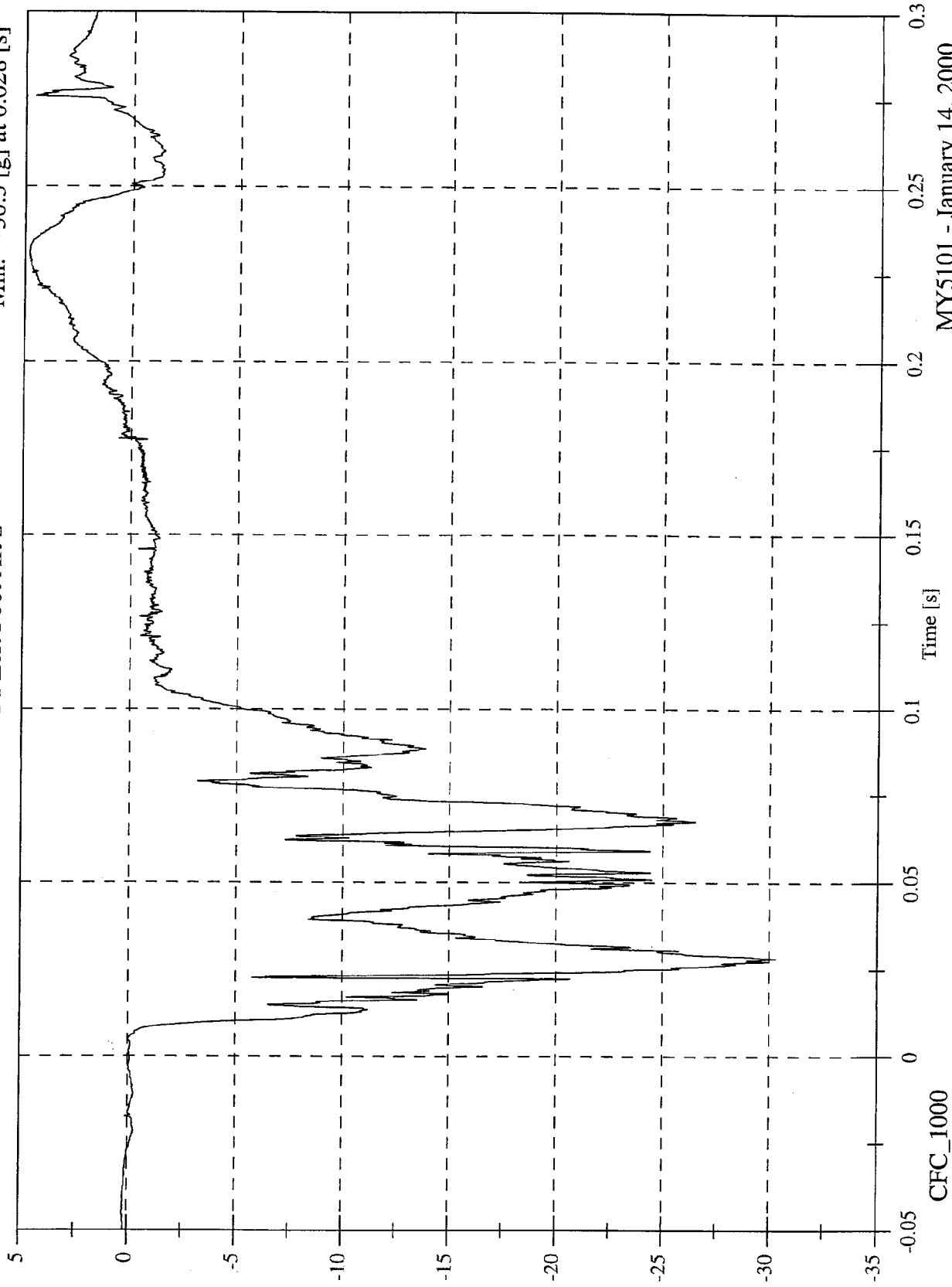


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 4.8 [g] at 0.231 [s]
Min: -30.3 [g] at 0.028 [s]

P1 Left Foot Aft z

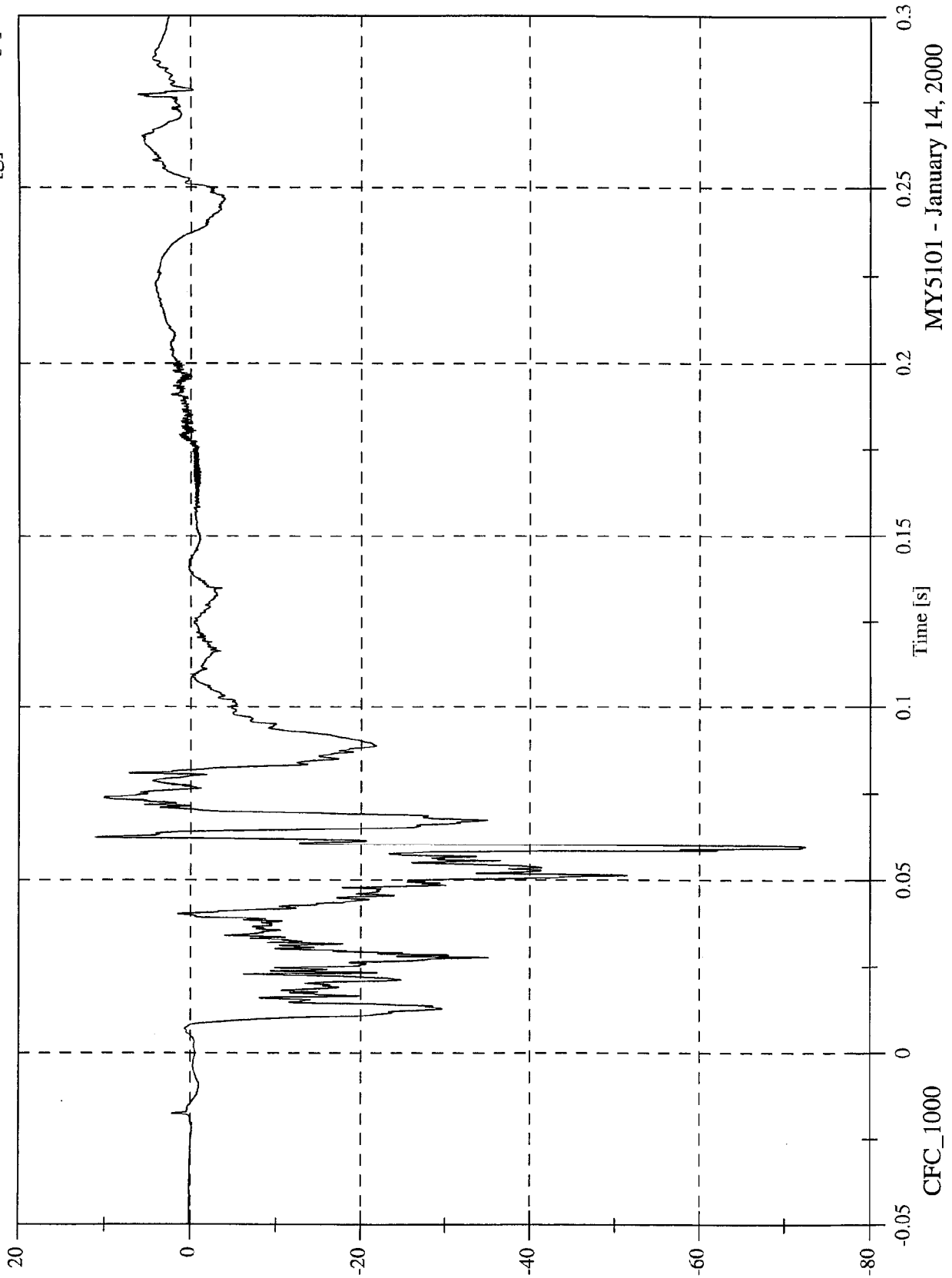


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 11.2 [g] at 0.063 [s]
Min: -72.4 [g] at 0.060 [s]

P1 left Foot Fore z

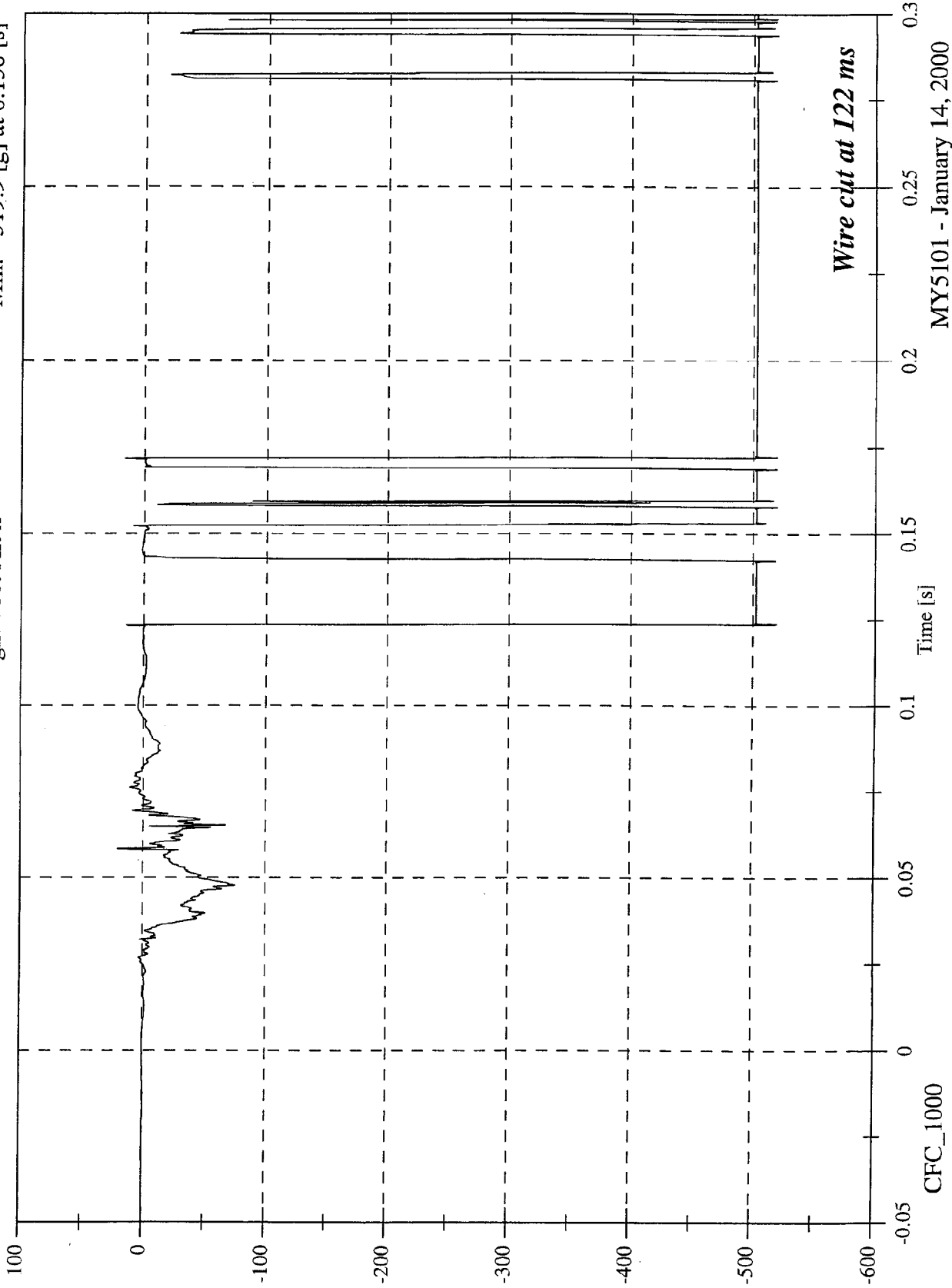


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 20.8 [g] at 0.058 [s]
Min: -519.9 [g] at 0.158 [s]

P1 Right Foot Aft x

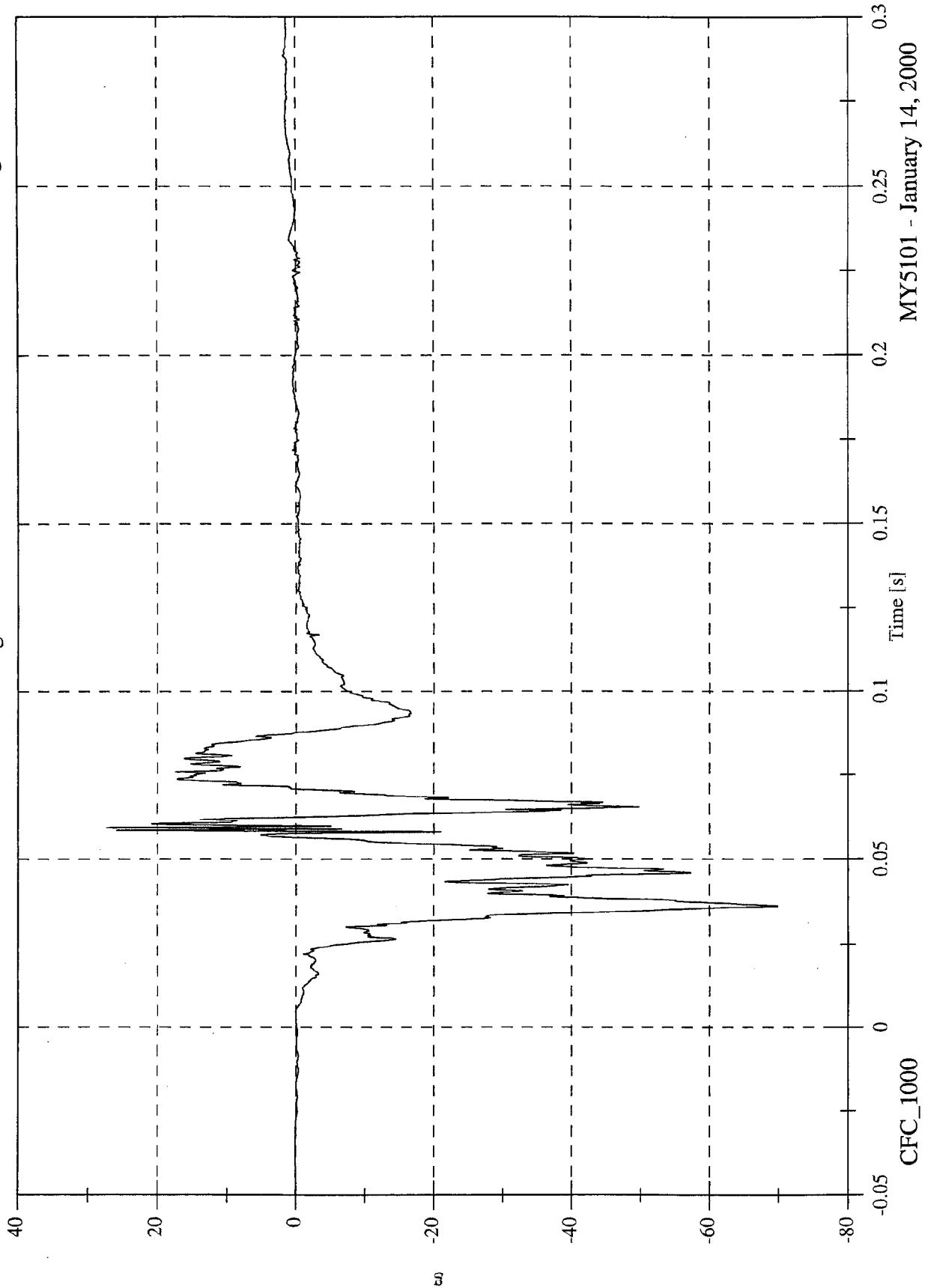


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 27.3 [g] at 0.059 [s]
Min: -69.9 [g] at 0.036 [s]

P1 Right Foot Aft z

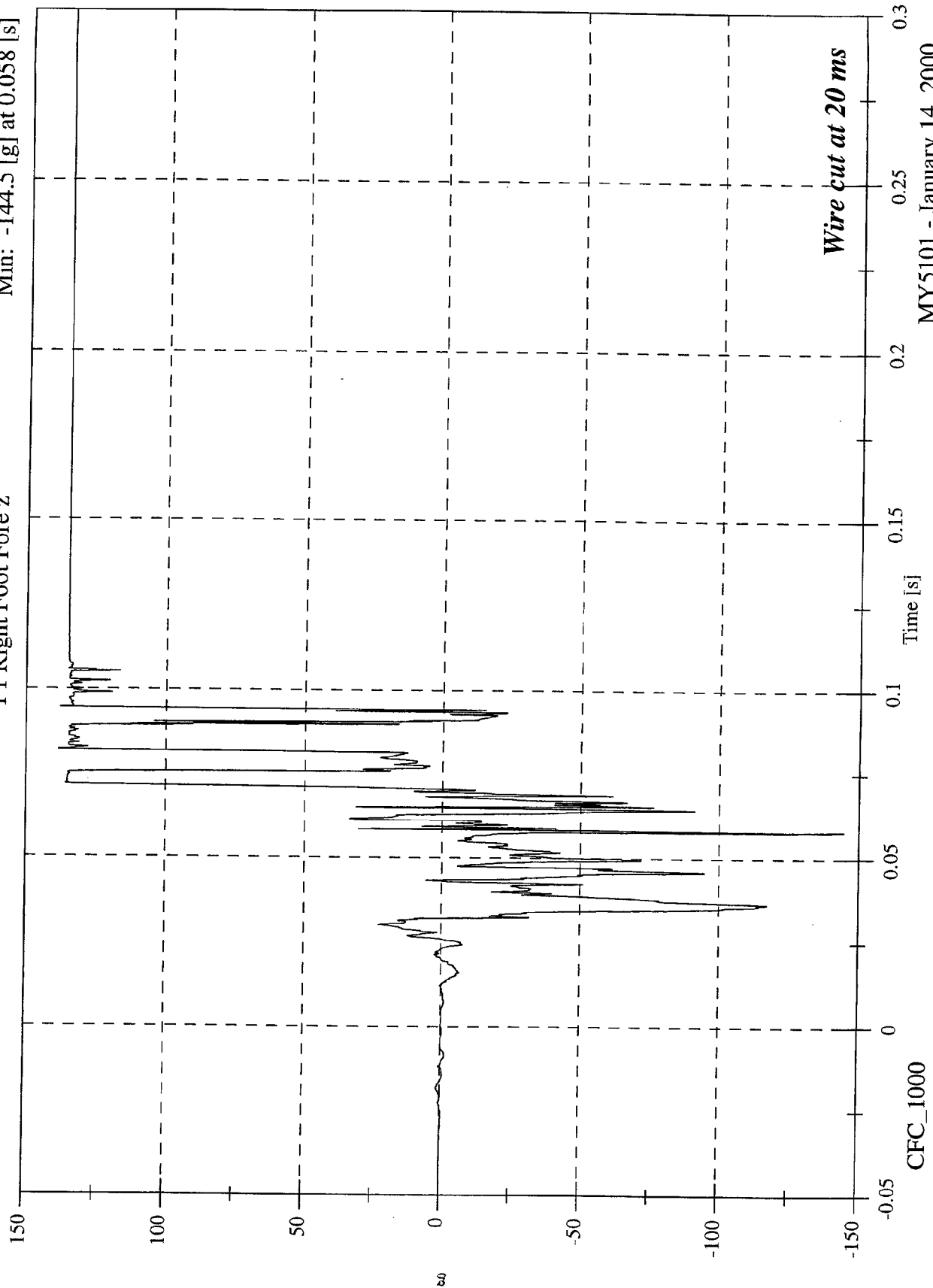


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 138.3 [g] at 0.082 [s]
Min: -144.5 [g] at 0.058 [s]

P1 Right Foot Fore z



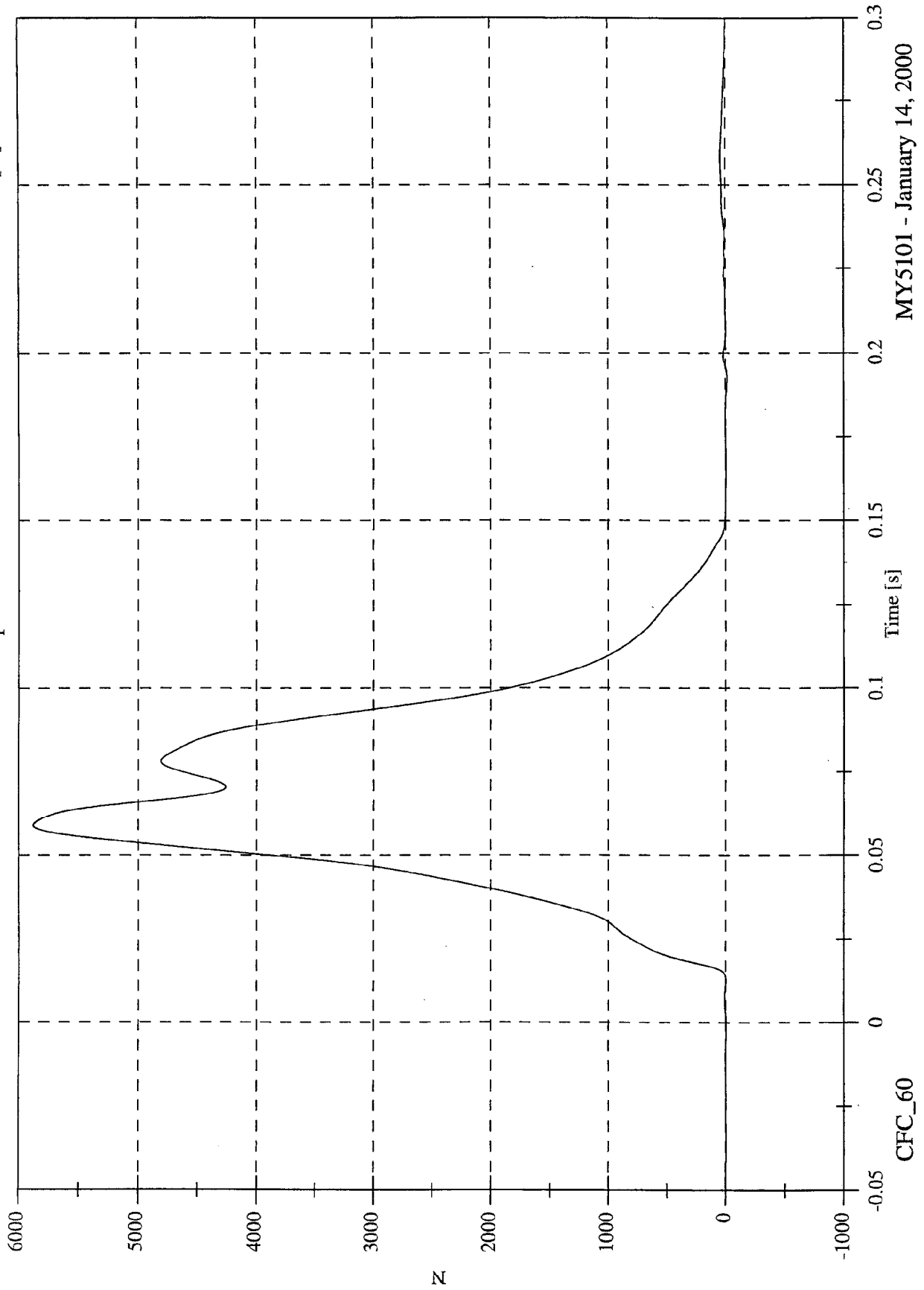
MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 5880.5 [N] at 0.059 [s]

Min: -13.4 [N] at 0.192 [s]

P1 Lap Belt Force



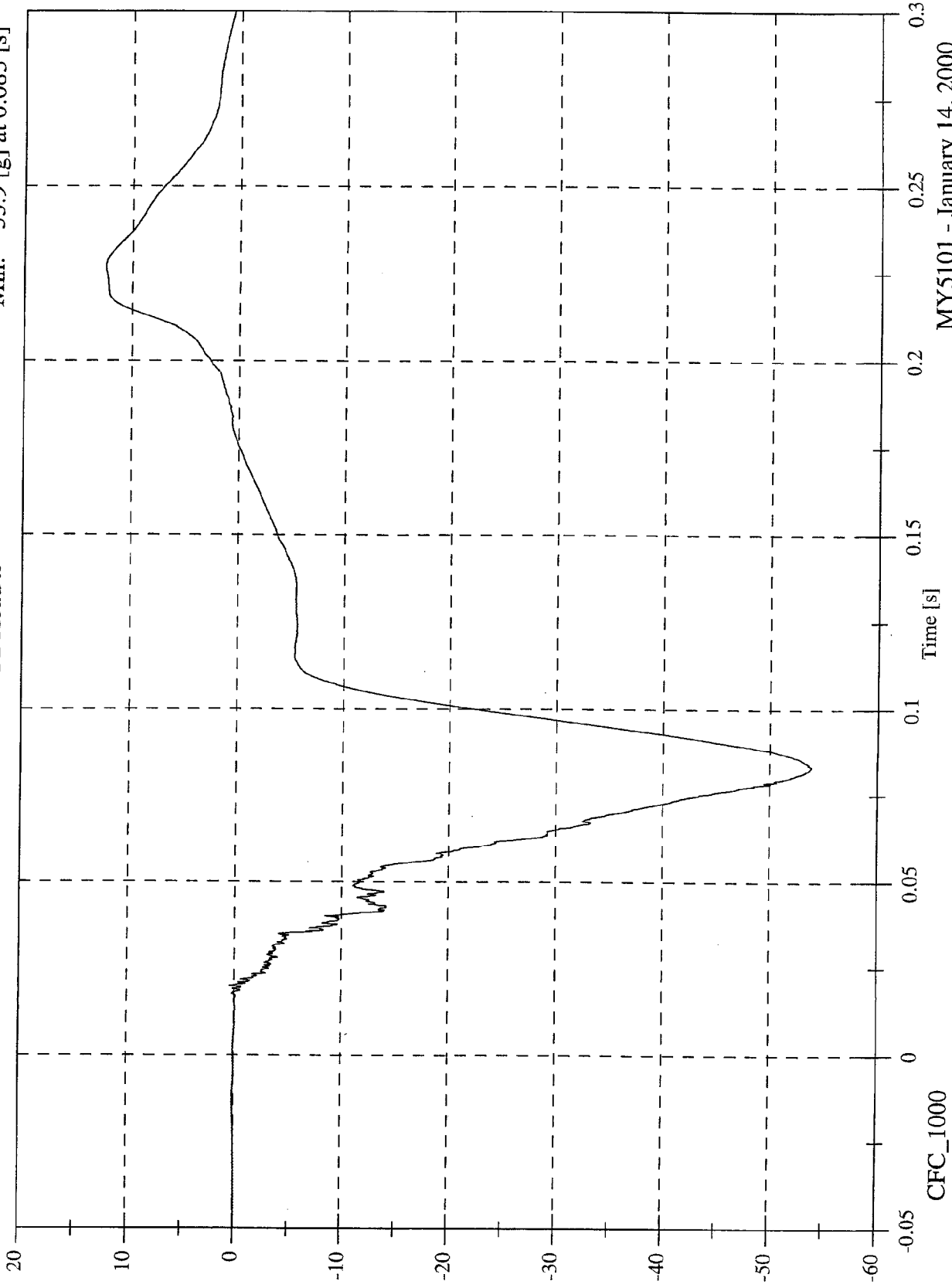
MY5101 - January 14, 2000

CFC_60

NCAP Test #9 - 2000 Toyota Camry

Max: 12.4 [g] at 0.227 [s]
Min: -53.9 [g] at 0.083 [s]

P2 Head x

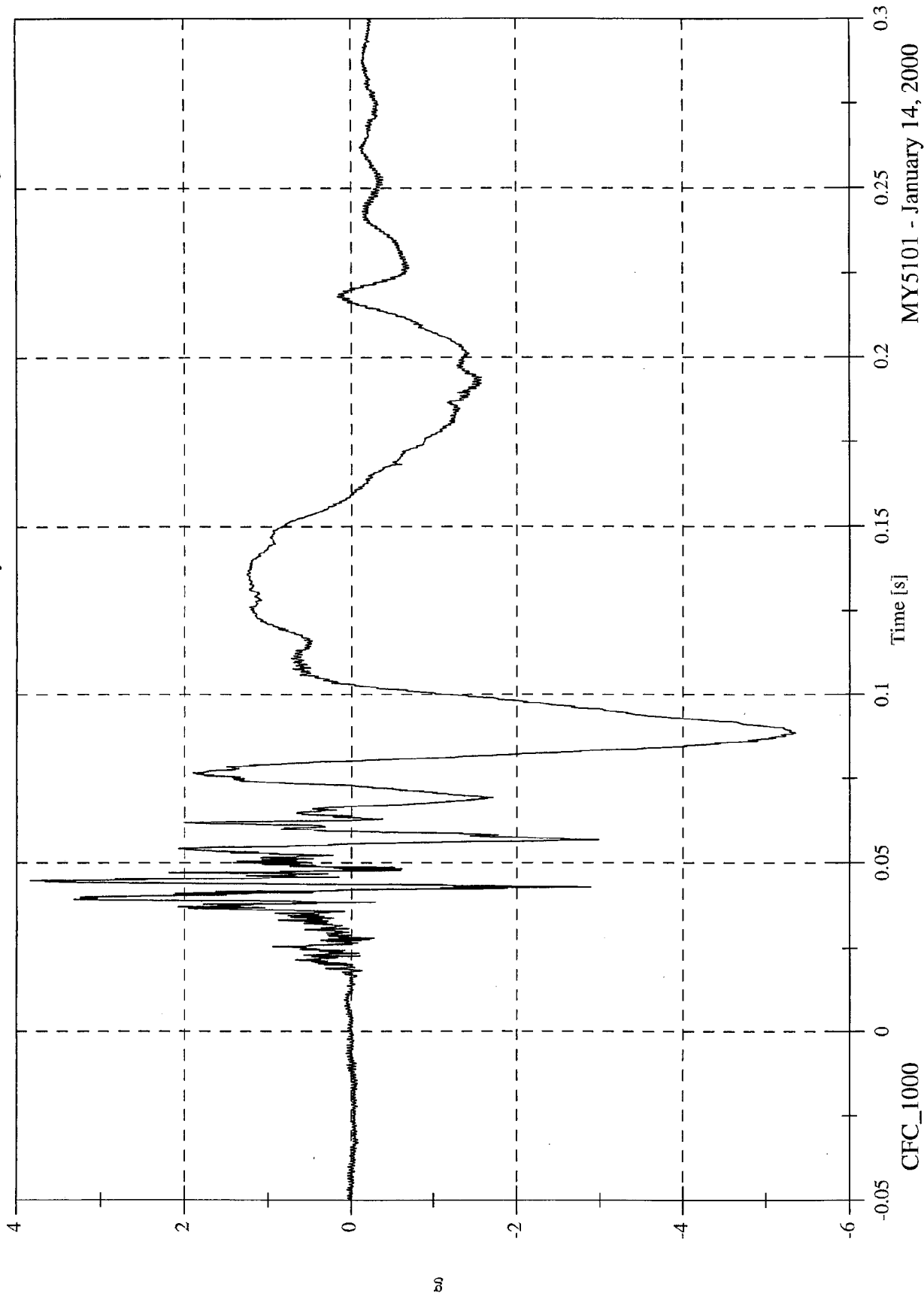


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 3.8 [g] at 0.045 [s]
Min: -5.4 [g] at 0.089 [s]

P2 Head y

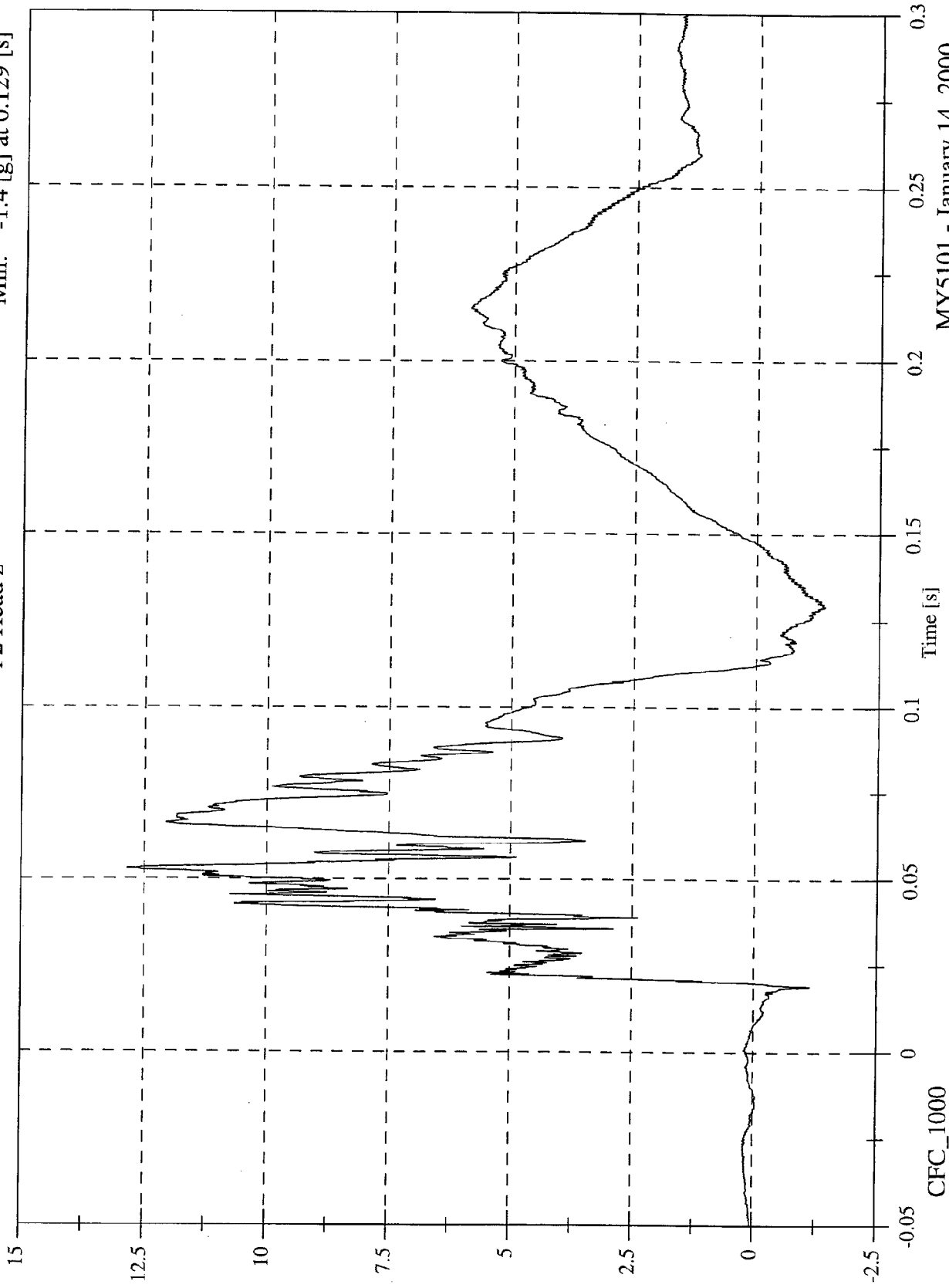


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 12.8 [g] at 0.053 [s]
Min: -1.4 [g] at 0.129 [s]

P2 Head z



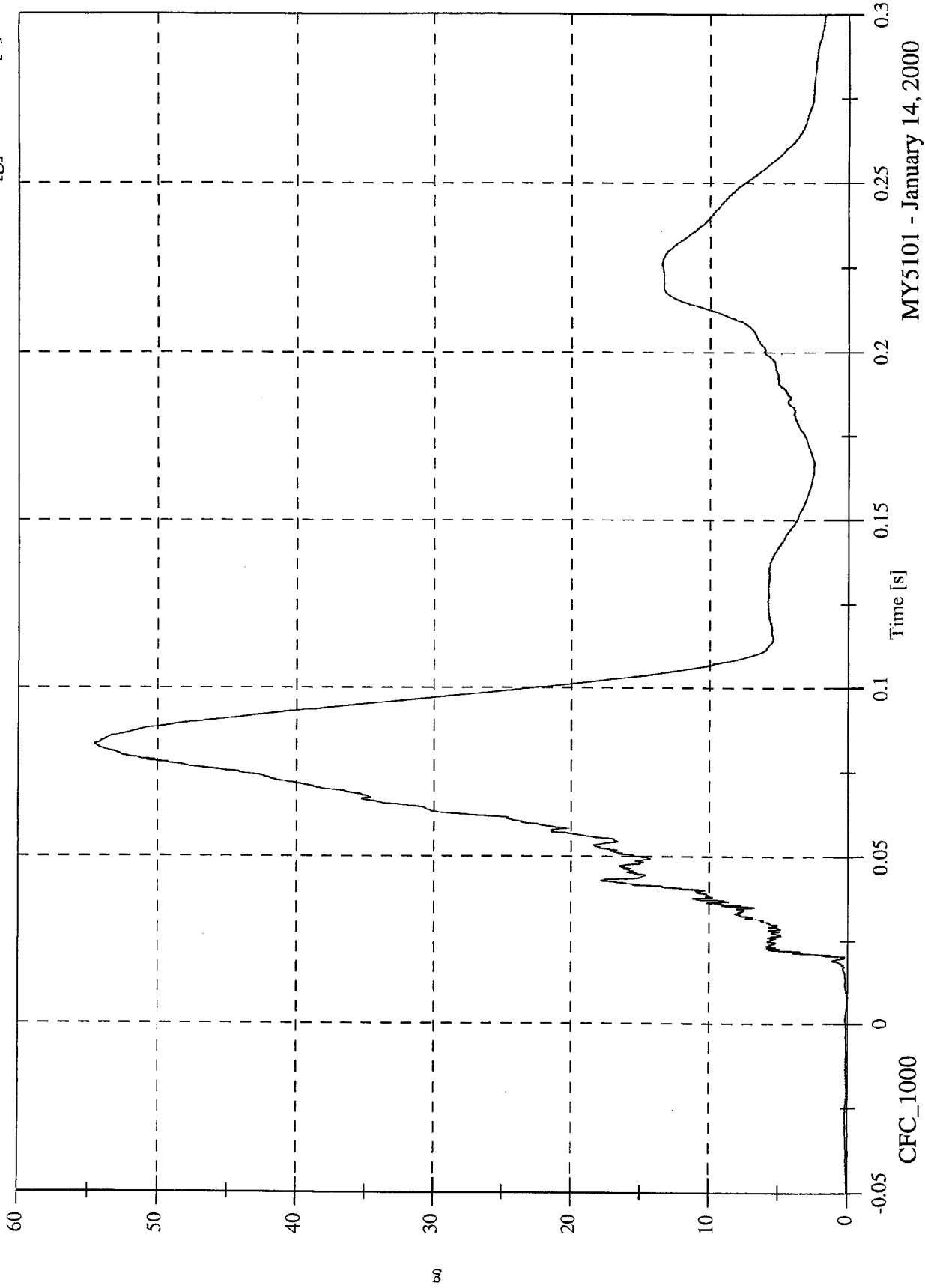
CFC_1000

MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 54.5 [g] at 0.083 [s]
Min: 0.0 [g] at 0.008 [s]

P2 Head Resultant

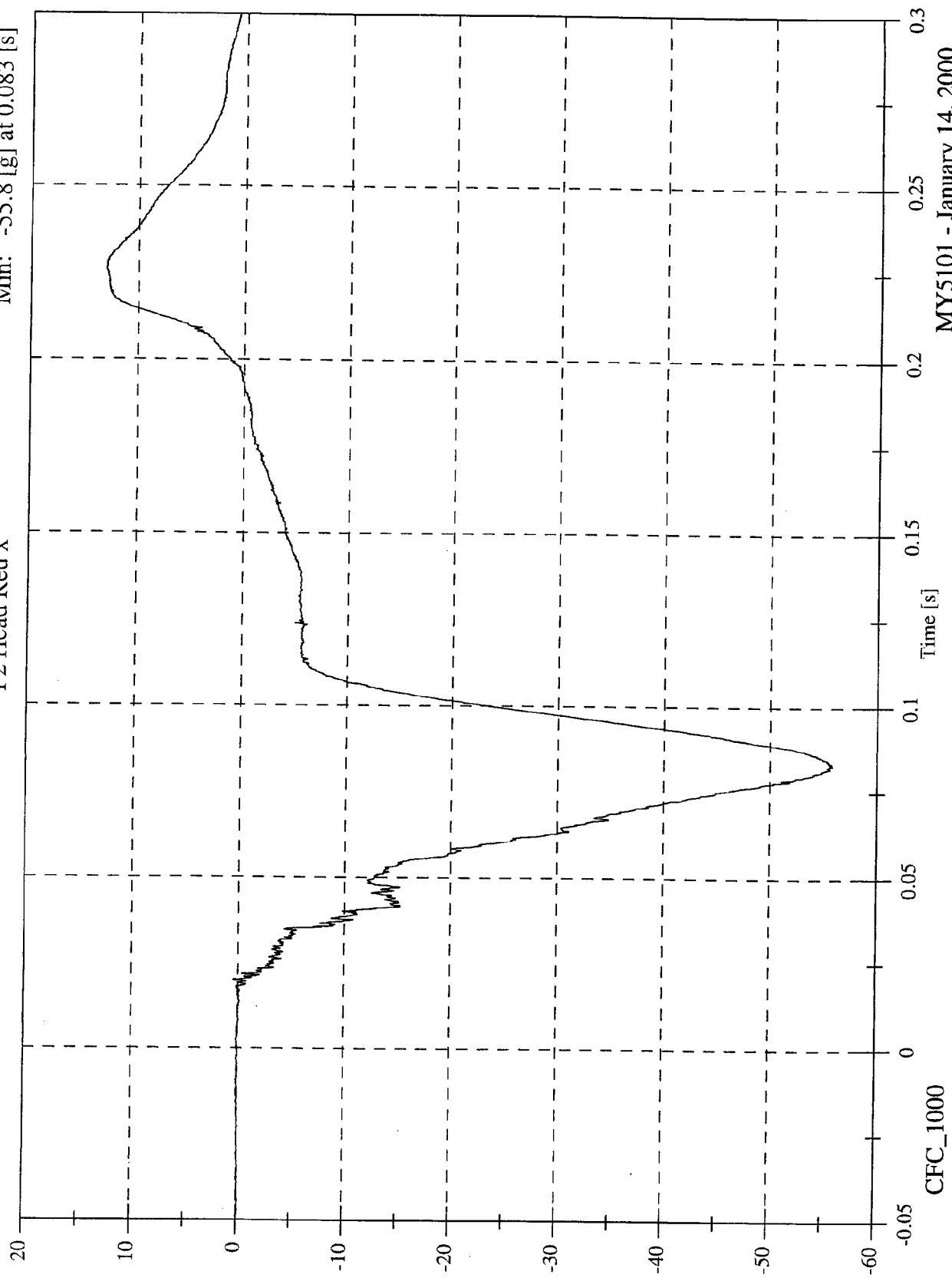


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 13.0 [g] at 0.226 [s]
Min: -55.8 [g] at 0.083 [s]

P2 Head Red x



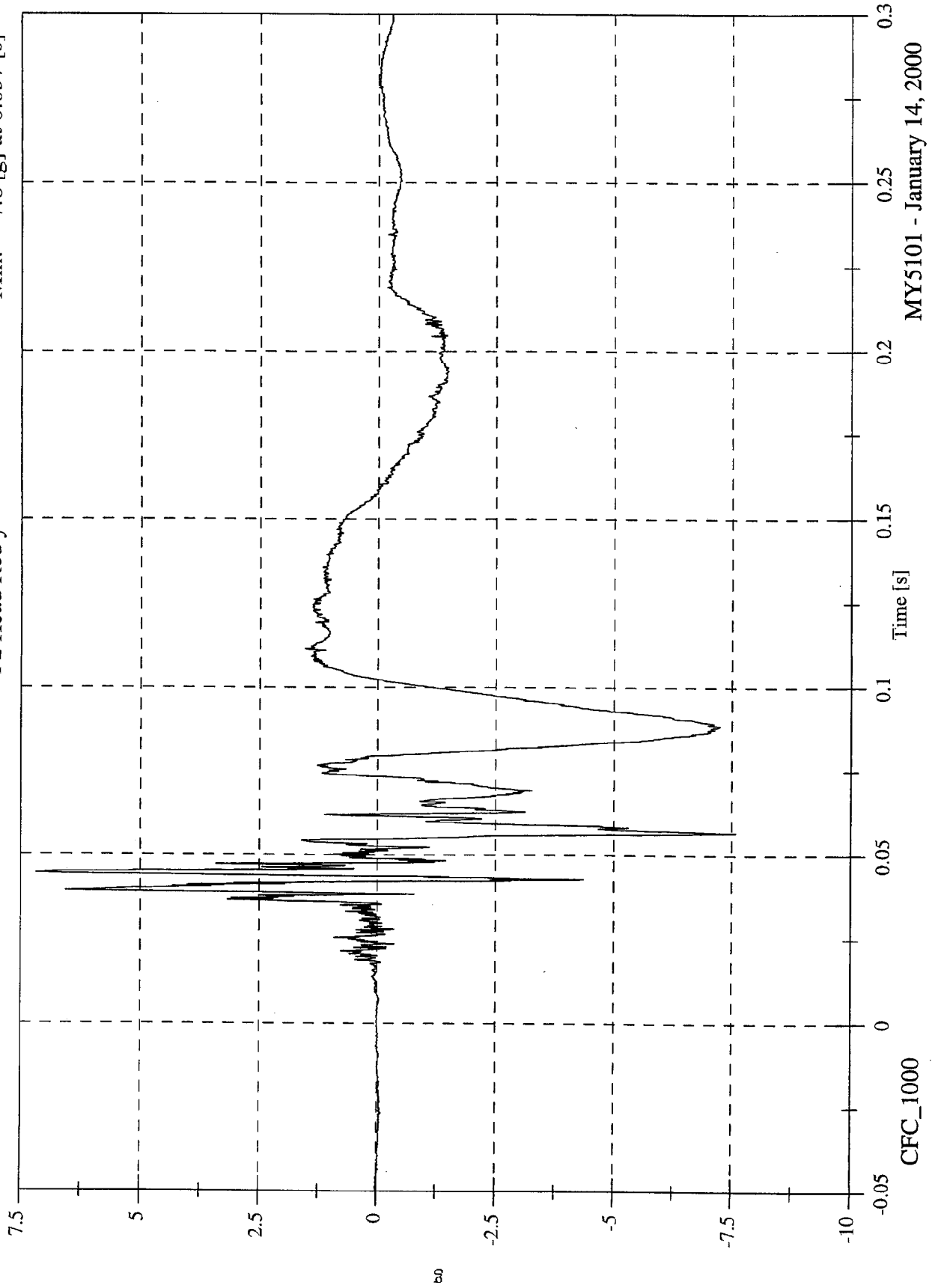
CFC_1000
MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 7.2 [g] at 0.045 [s]

Min: -7.6 [g] at 0.057 [s]

P2 Head Red y

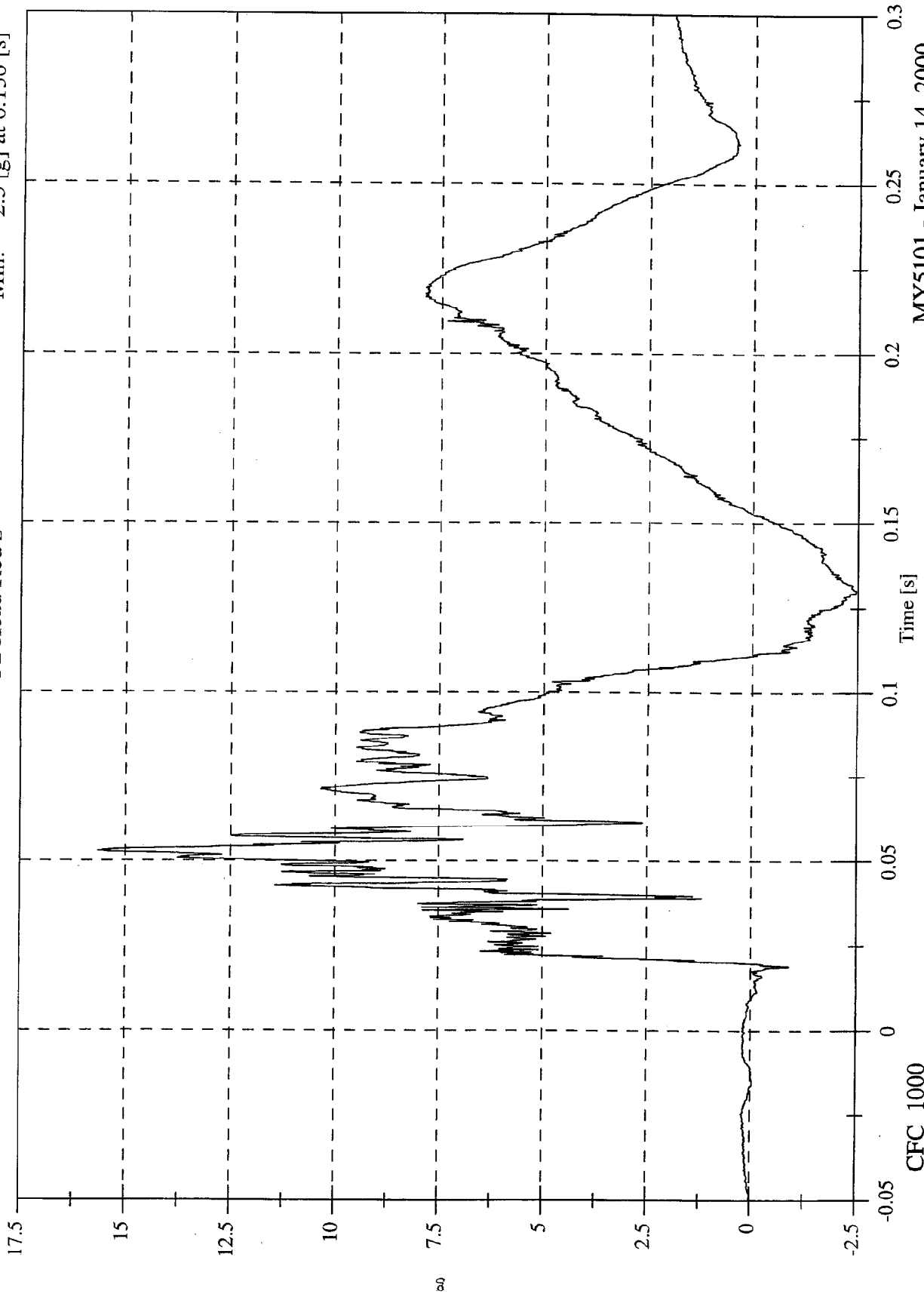


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 15.7 [g] at 0.053 [s]
Min: -2.5 [g] at 0.130 [s]

P2 Head Red z

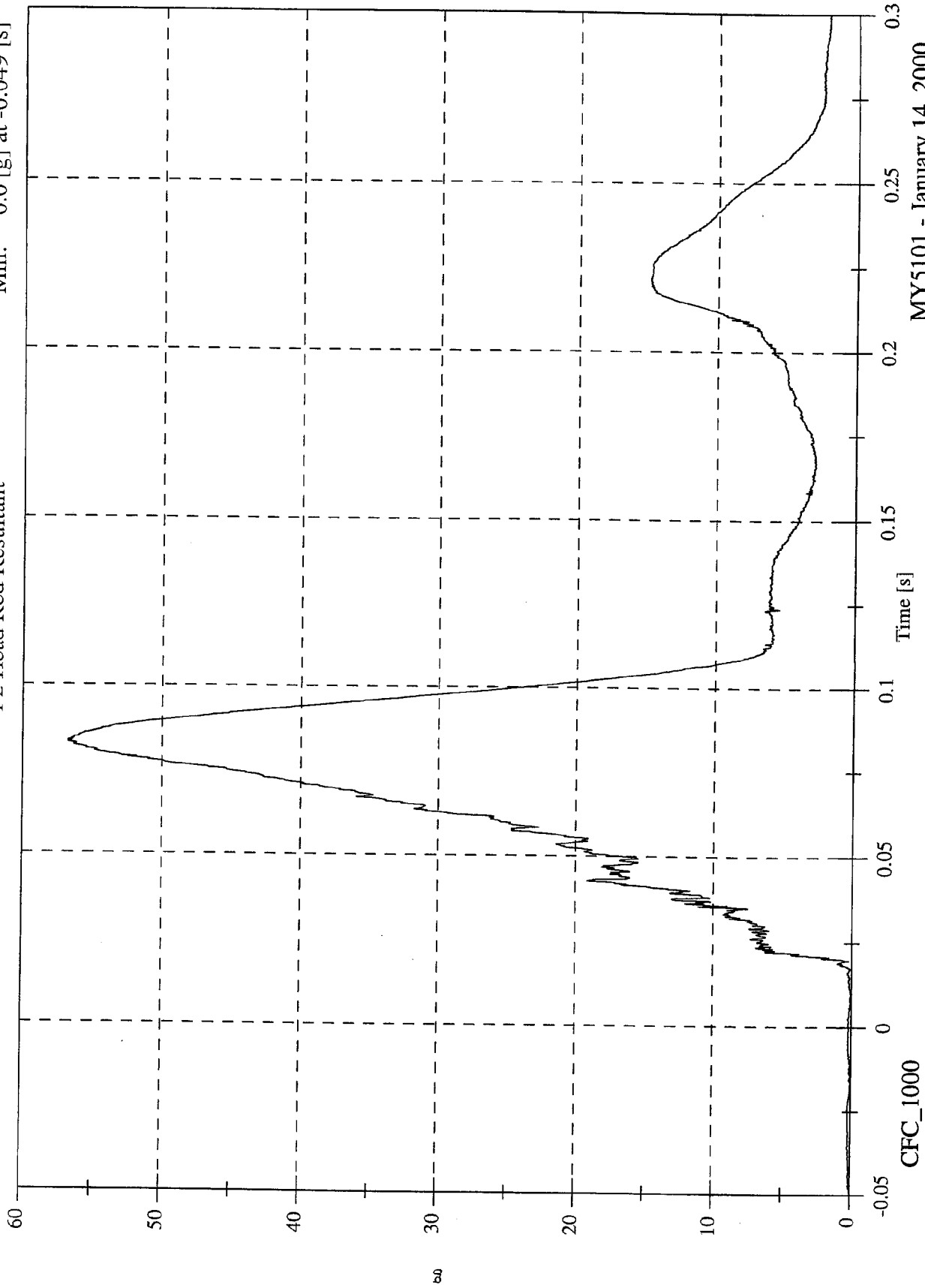


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 56.8 [g] at 0.083 [s]
Min: 0.0 [g] at -0.049 [s]

P2 Head Red Resultant

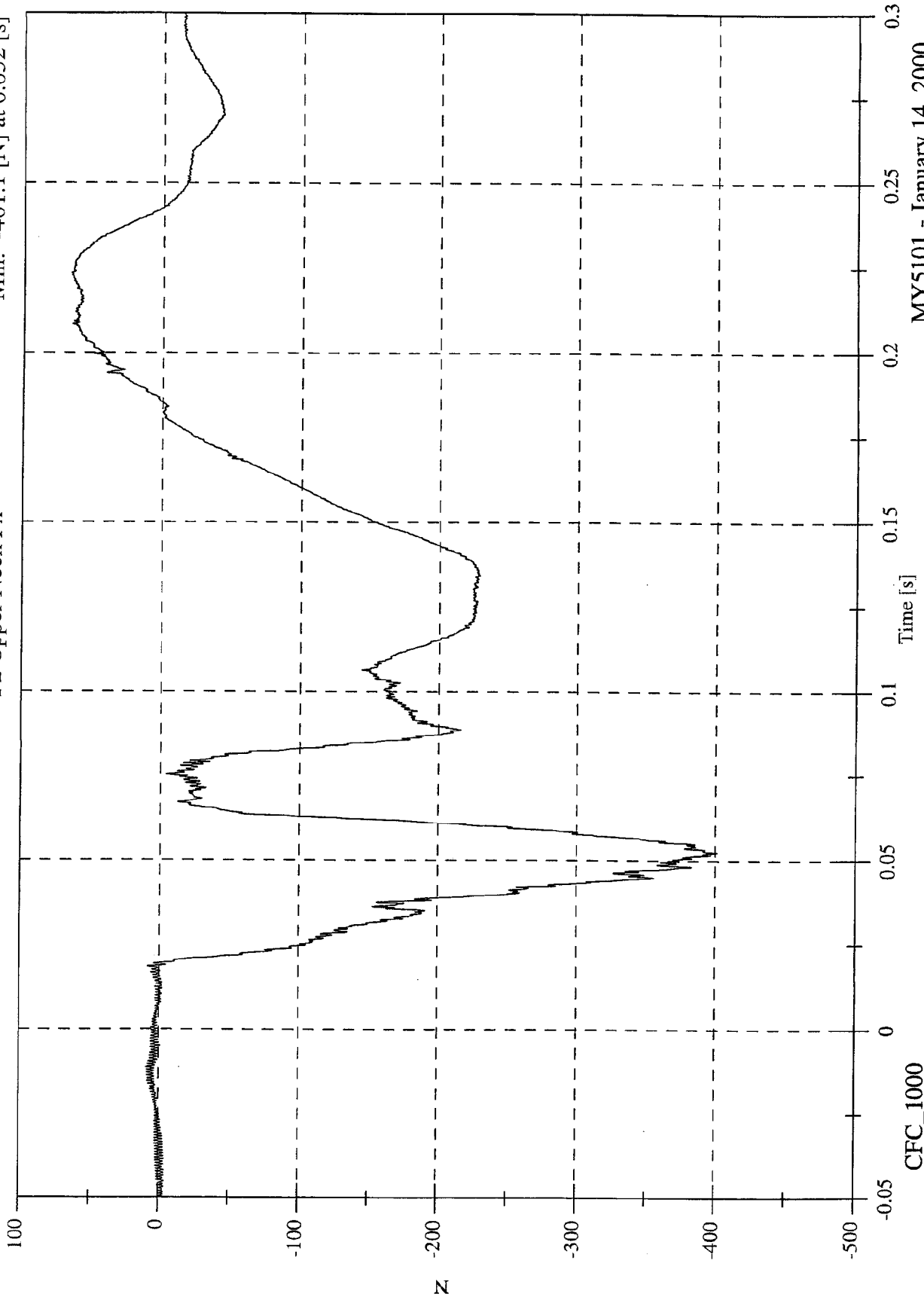


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 66.2 [N] at 0.224 [s]
Min: -401.1 [N] at 0.052 [s]

P2 Upper Neck Fx

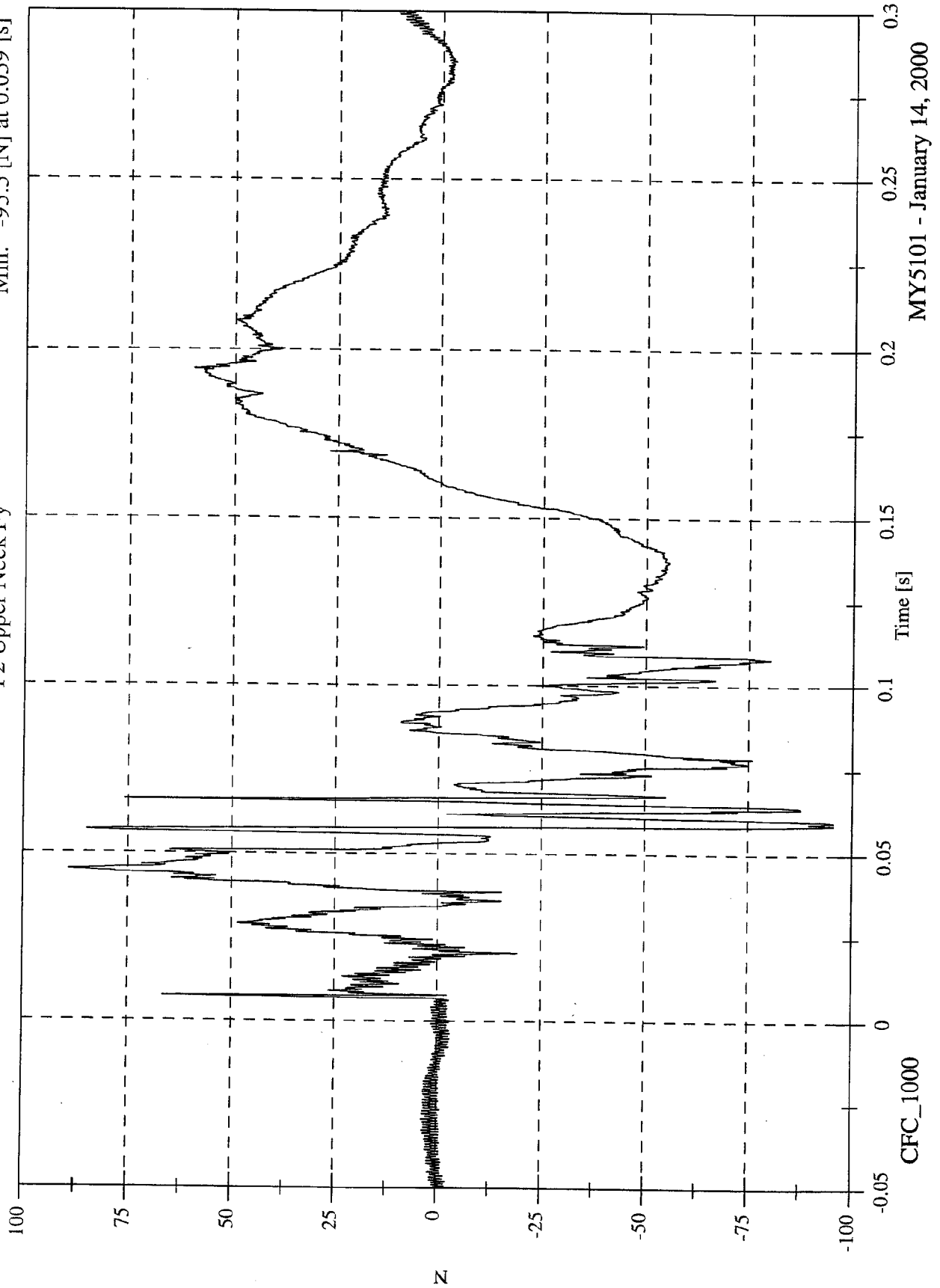


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 89.0 [N] at 0.045 [s]
Min: -95.5 [N] at 0.059 [s]

P2 Upper Neck Fy

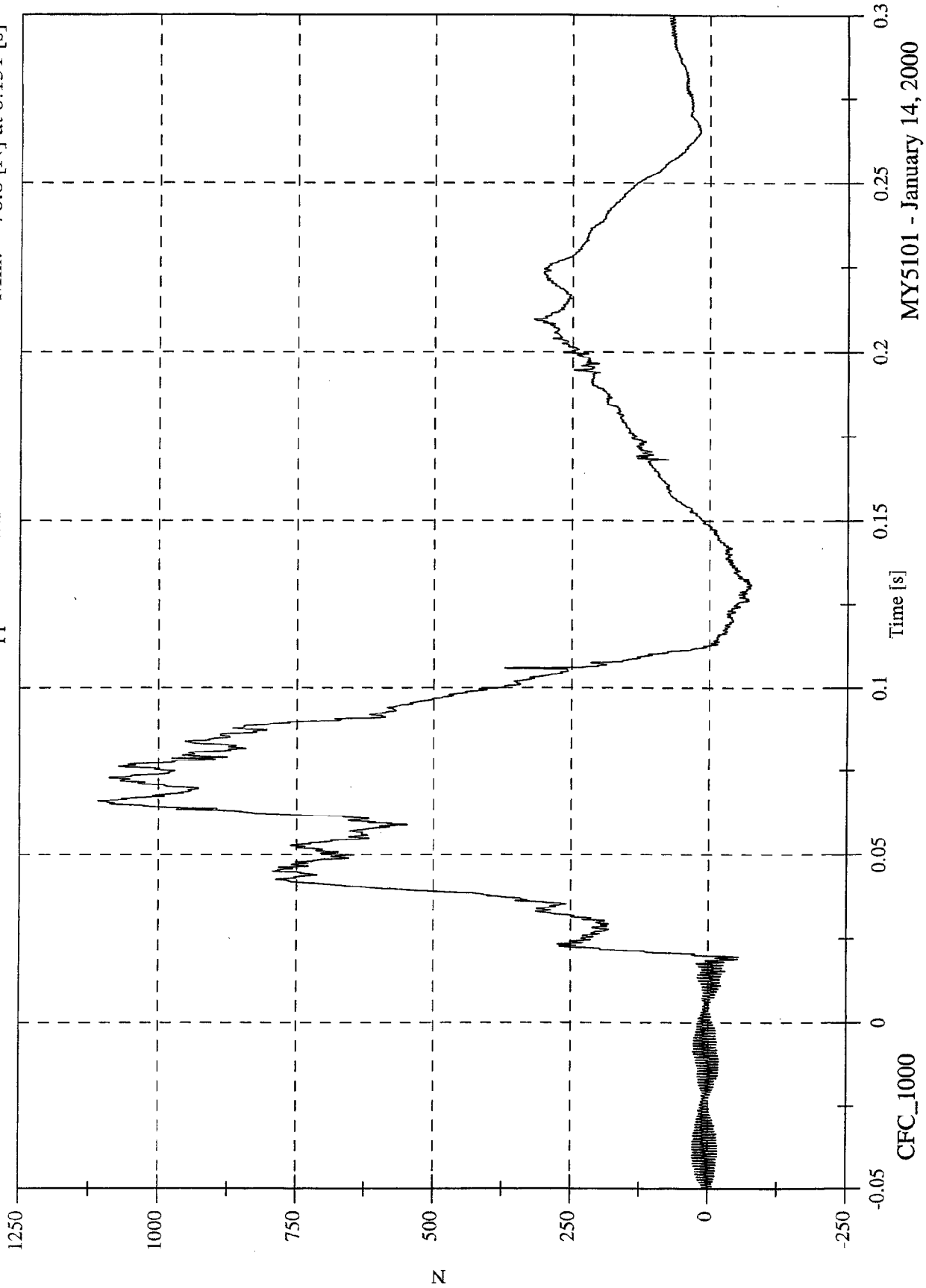


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 1109.2 [N] at 0.066 [s]
Min: -76.8 [N] at 0.131 [s]

P2 Upper Neck Fz

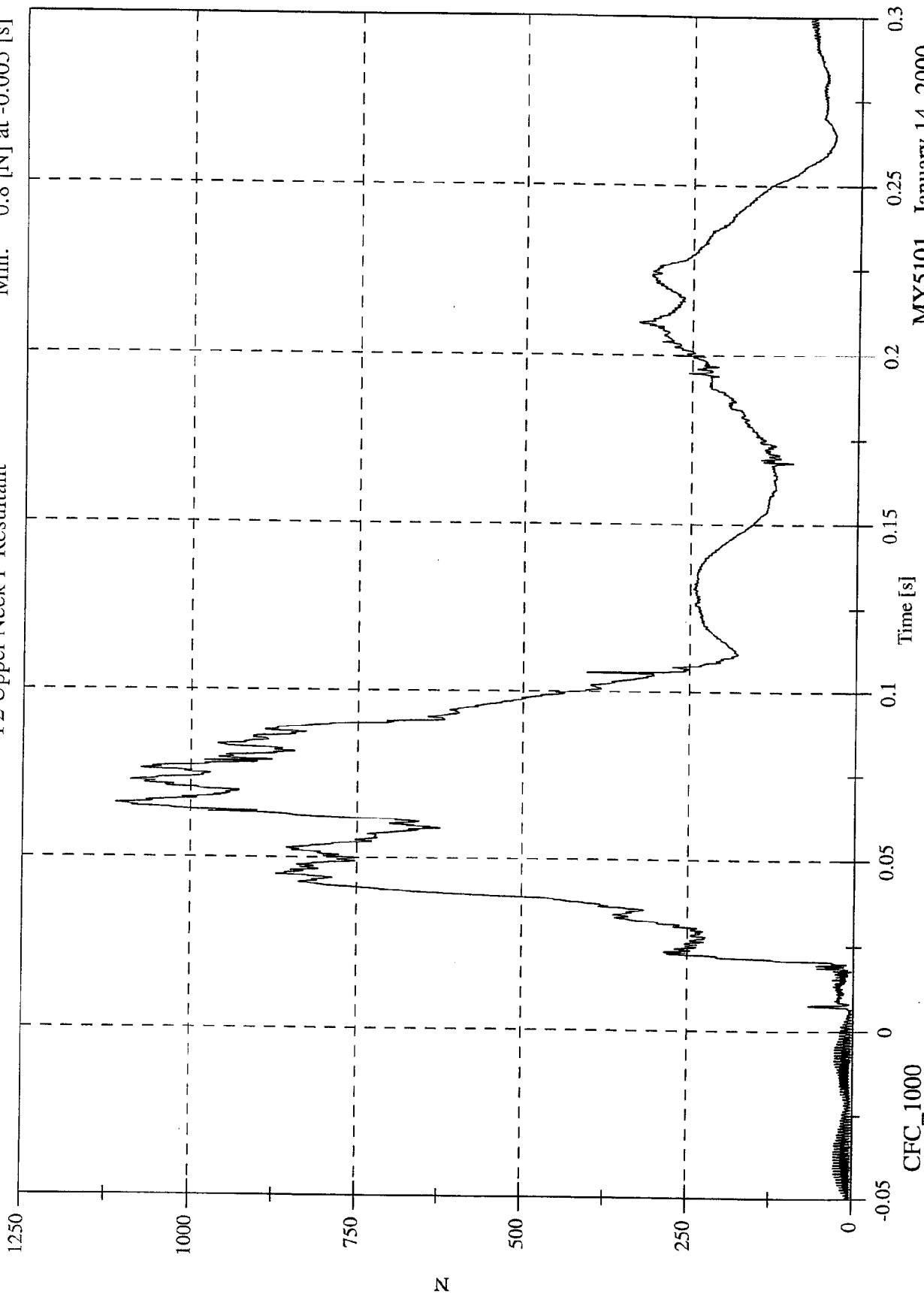


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

P2 Upper Neck F Resultant

Max: 1112.1 [N] at 0.066 [s]
Min: 0.8 [N] at -0.005 [s]

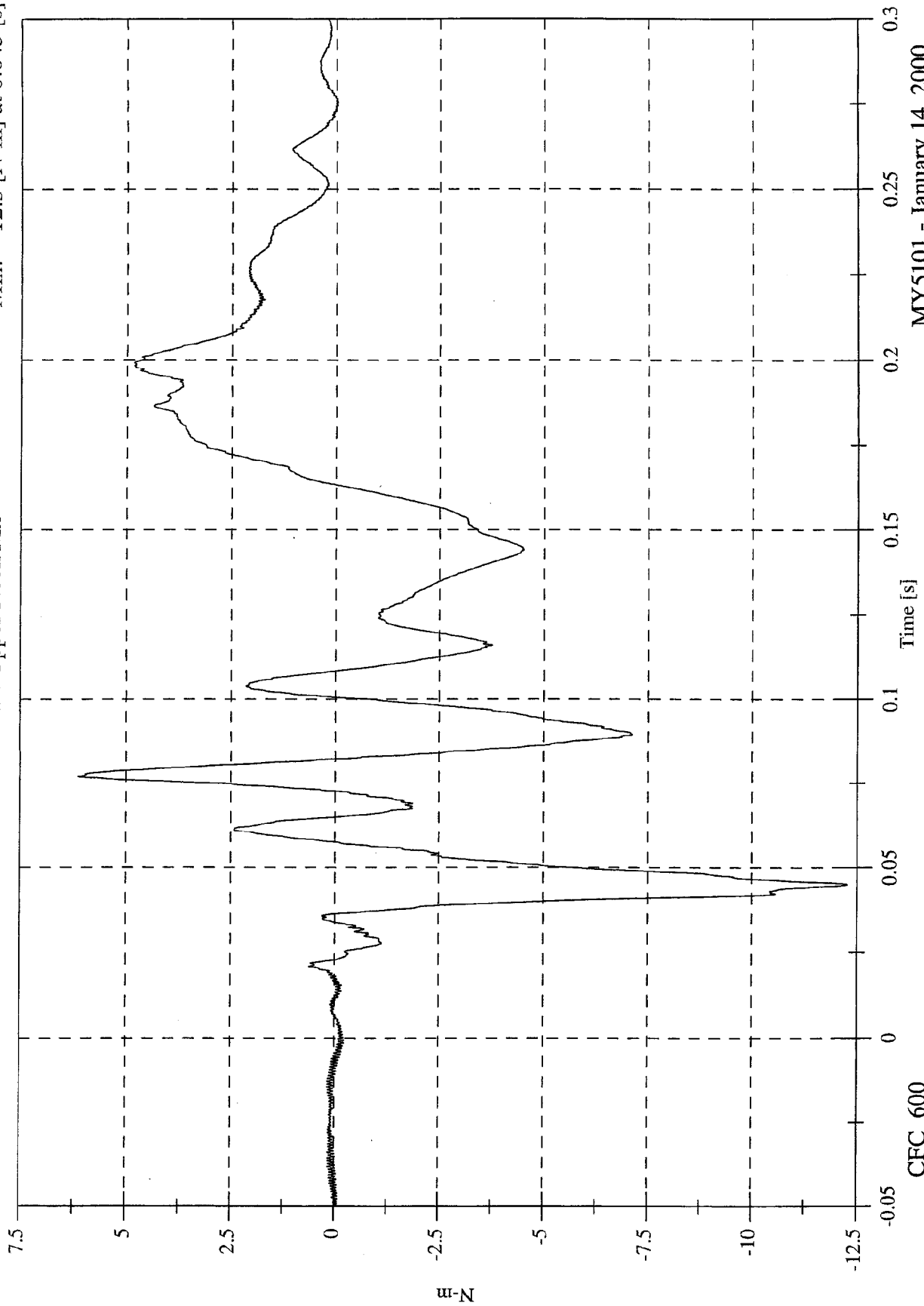


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 6.1 [N-m] at 0.077 [s]
Min: -12.3 [N-m] at 0.045 [s]

P2 Upper Neck Mx

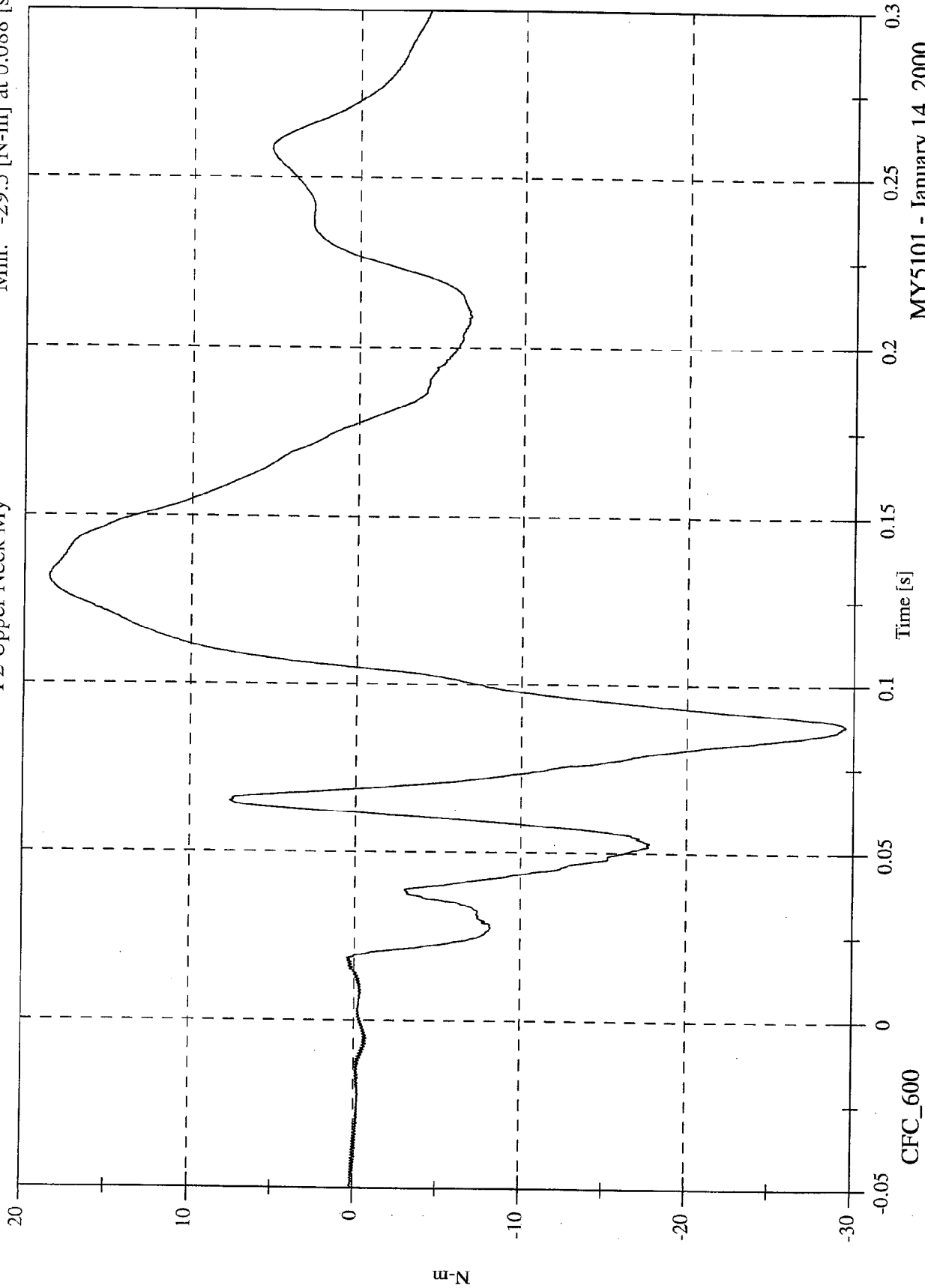


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 18.5 [N-m] at 0.132 [s]
Min: -29.5 [N-m] at 0.088 [s]

P2 Upper Neck My

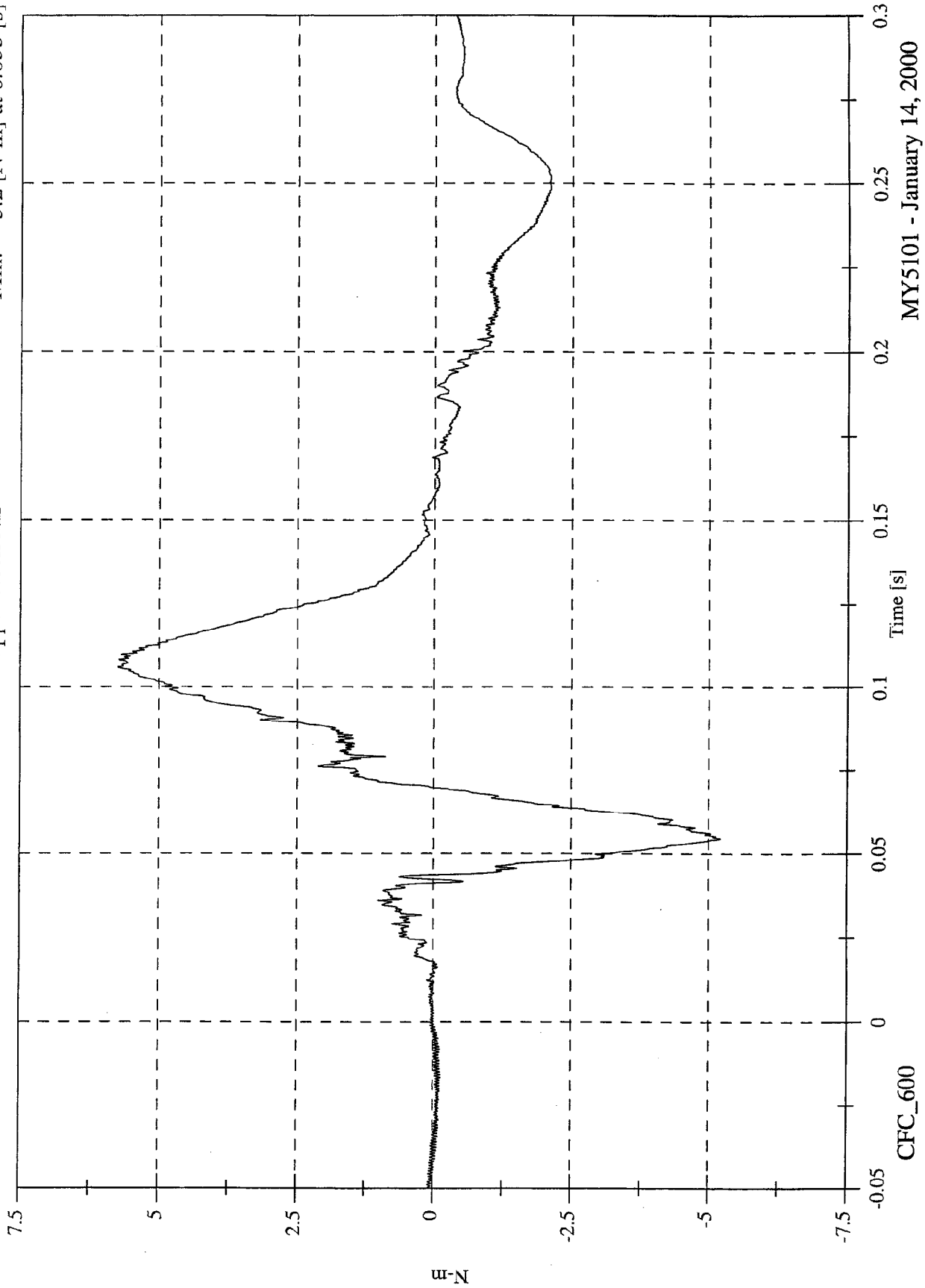


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 5.7 [N-m] at 0.106 [s]
Min: -5.2 [N-m] at 0.055 [s]

P2 Upper Neck Mz



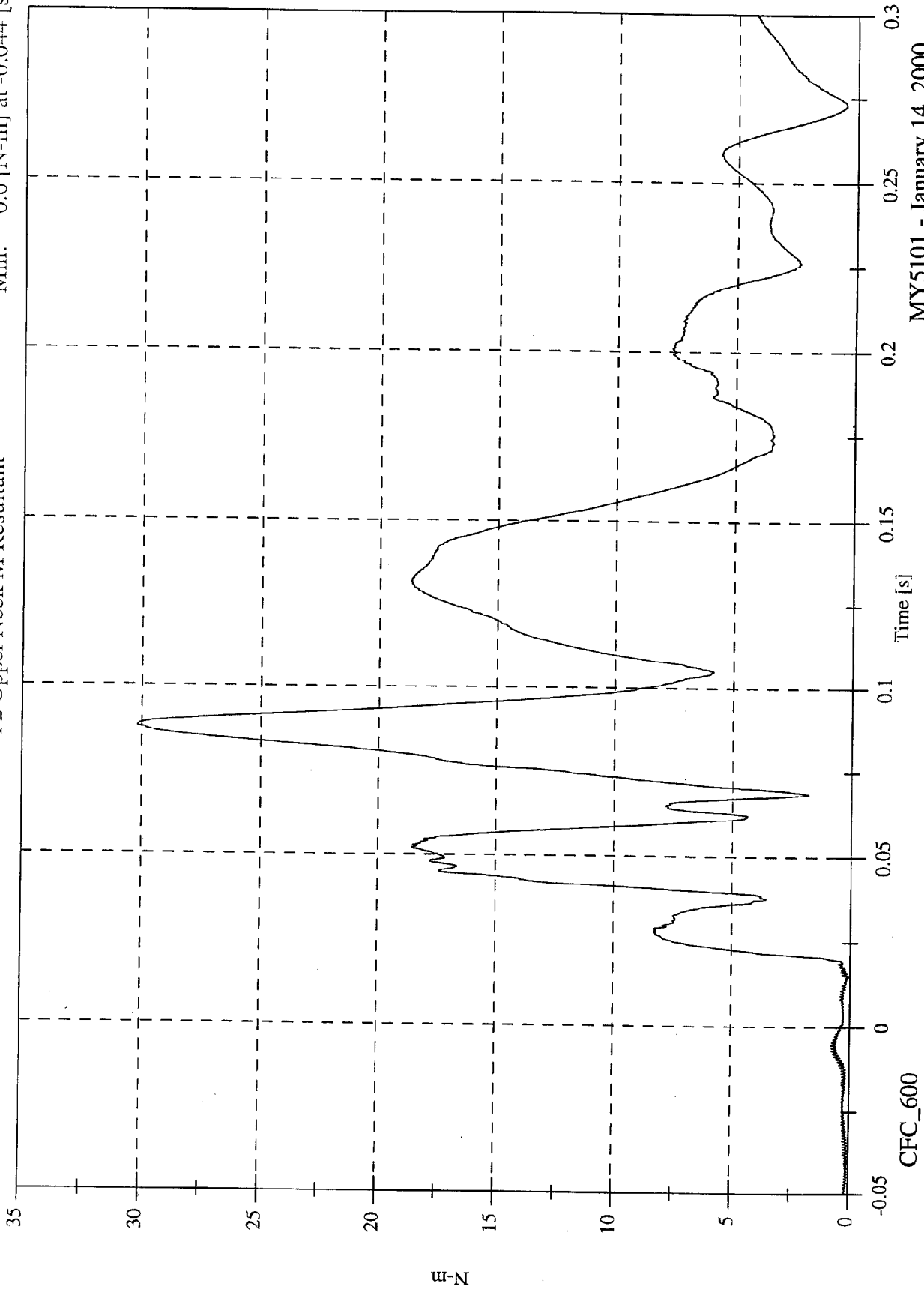
MY5101 - January 14, 2000

CFC_600

NCAP Test #9 - 2000 Toyota Camry

Max: 30.2 [N-m] at 0.088 [s]
Min: 0.0 [N-m] at -0.044 [s]

P2 Upper Neck M Resultant

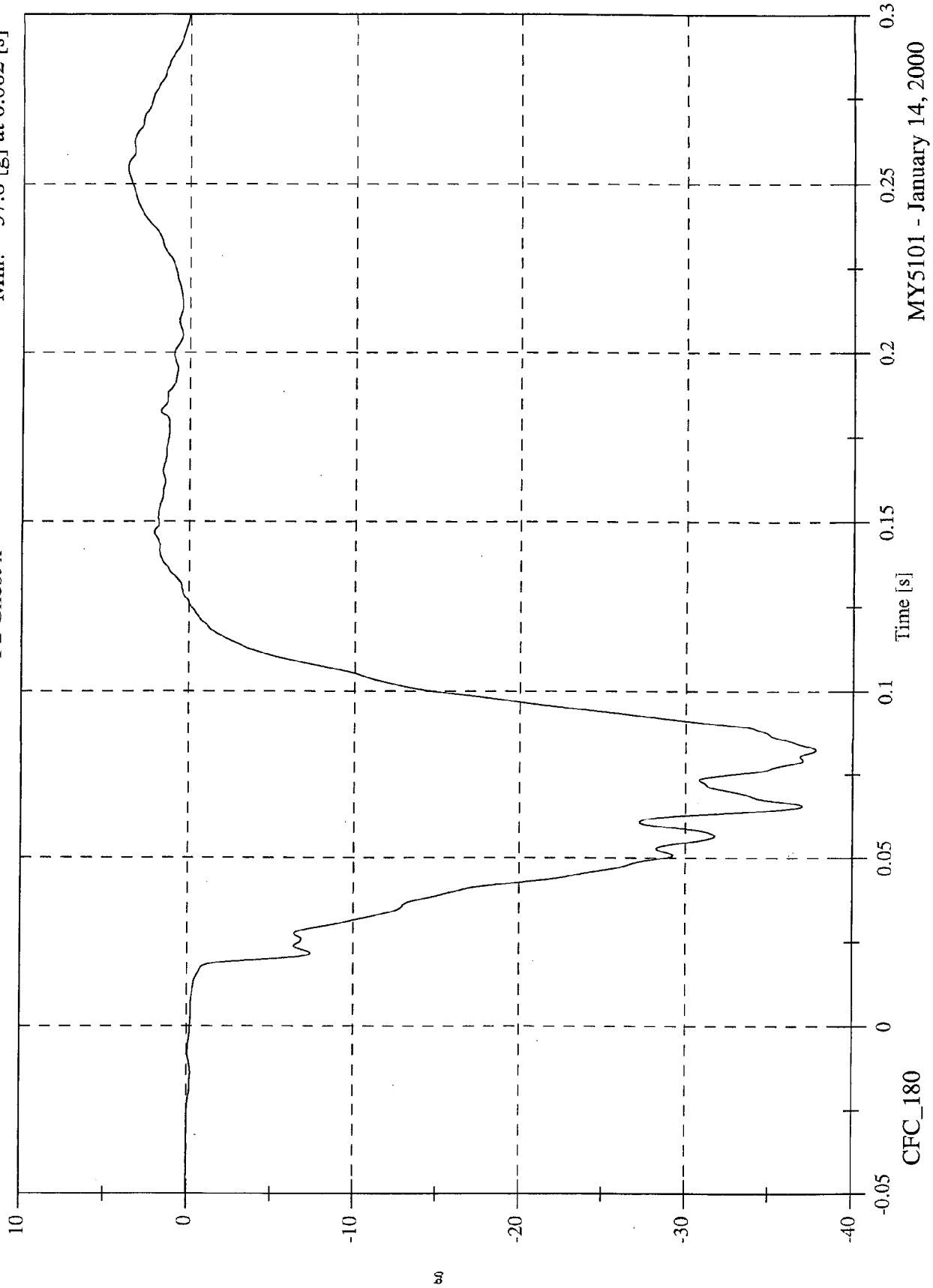


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 3.8 [g] at 0.255 [s]
Min: -37.8 [g] at 0.082 [s]

P2 Chest x

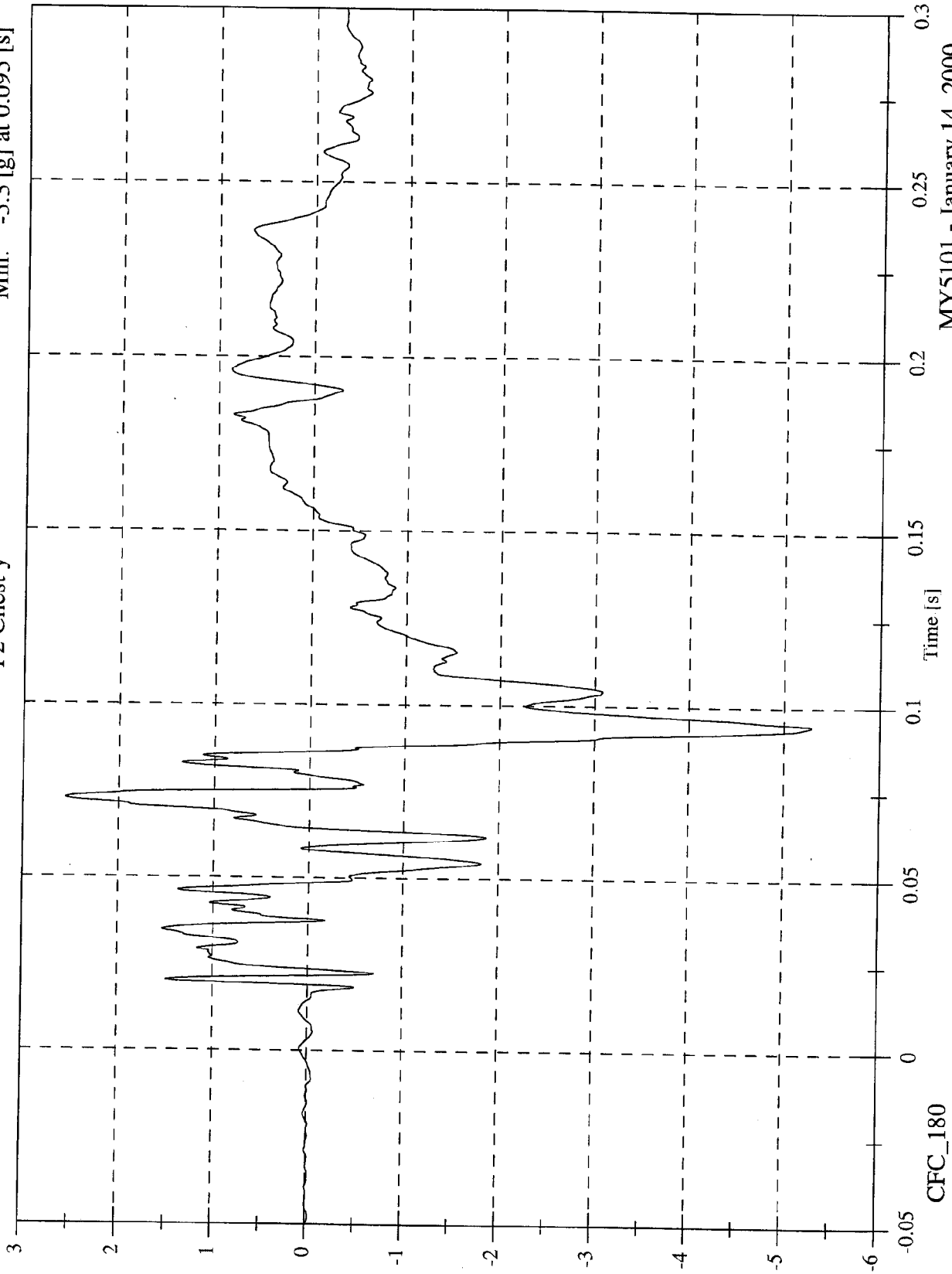


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 2.6 [g] at 0.073 [s]
Min: -5.3 [g] at 0.095 [s]

P2 Chest y

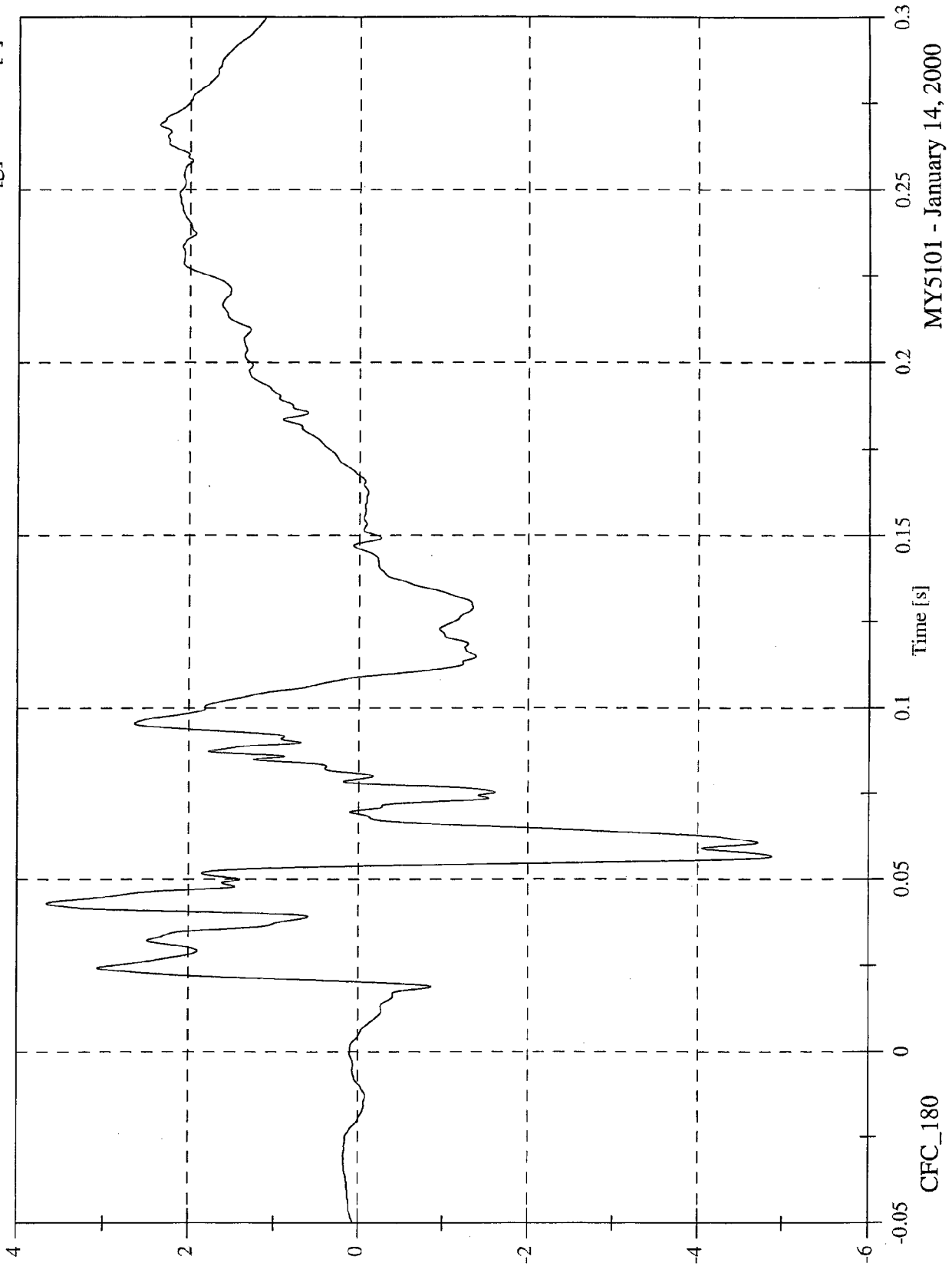


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 3.7 [g] at 0.043 [s]
Min: -4.9 [g] at 0.057 [s]

P2 Chest z

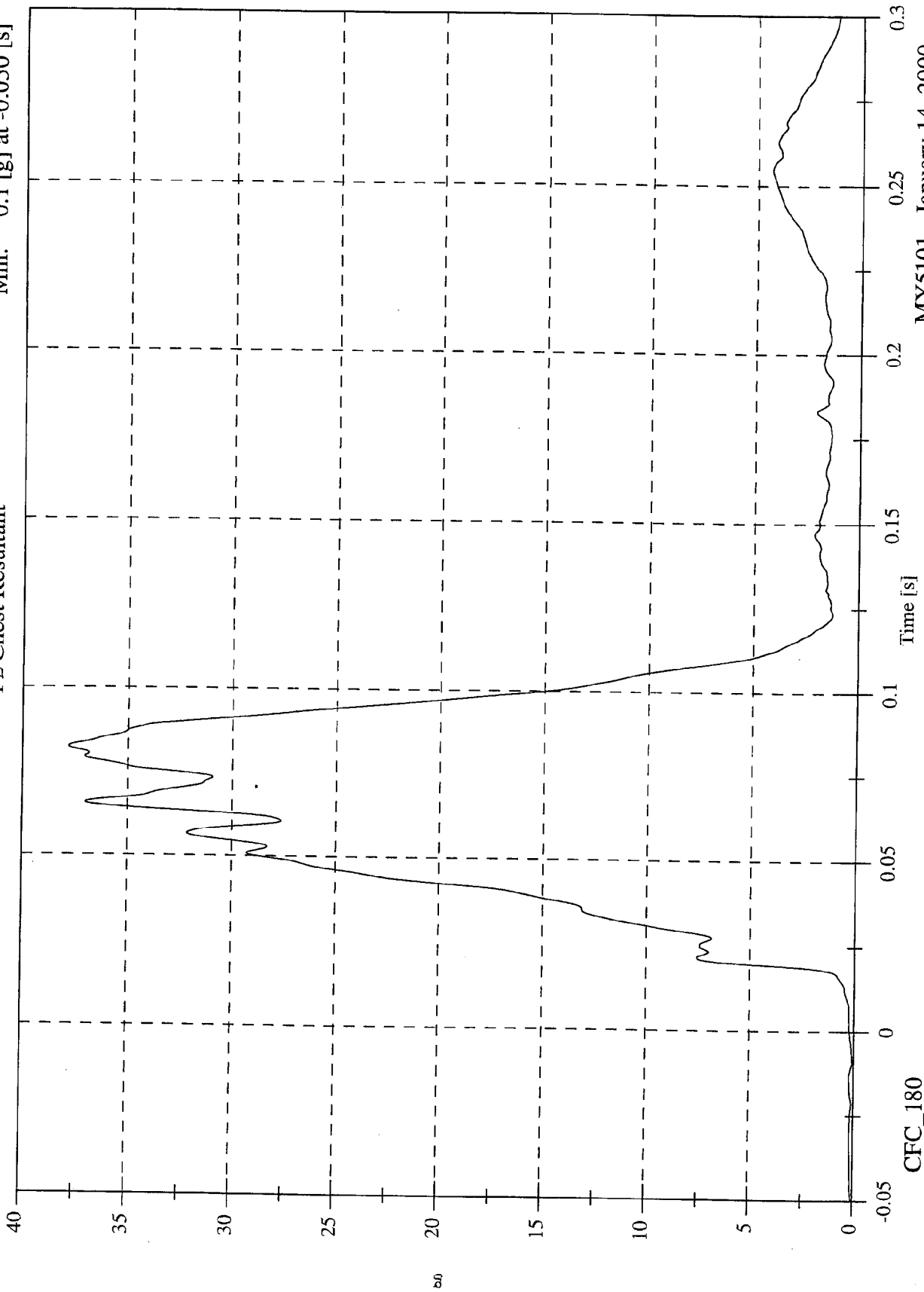


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 37.8 [g] at 0.082 [s]
Min: 0.1 [g] at -0.050 [s]

P2 Chest Resultant

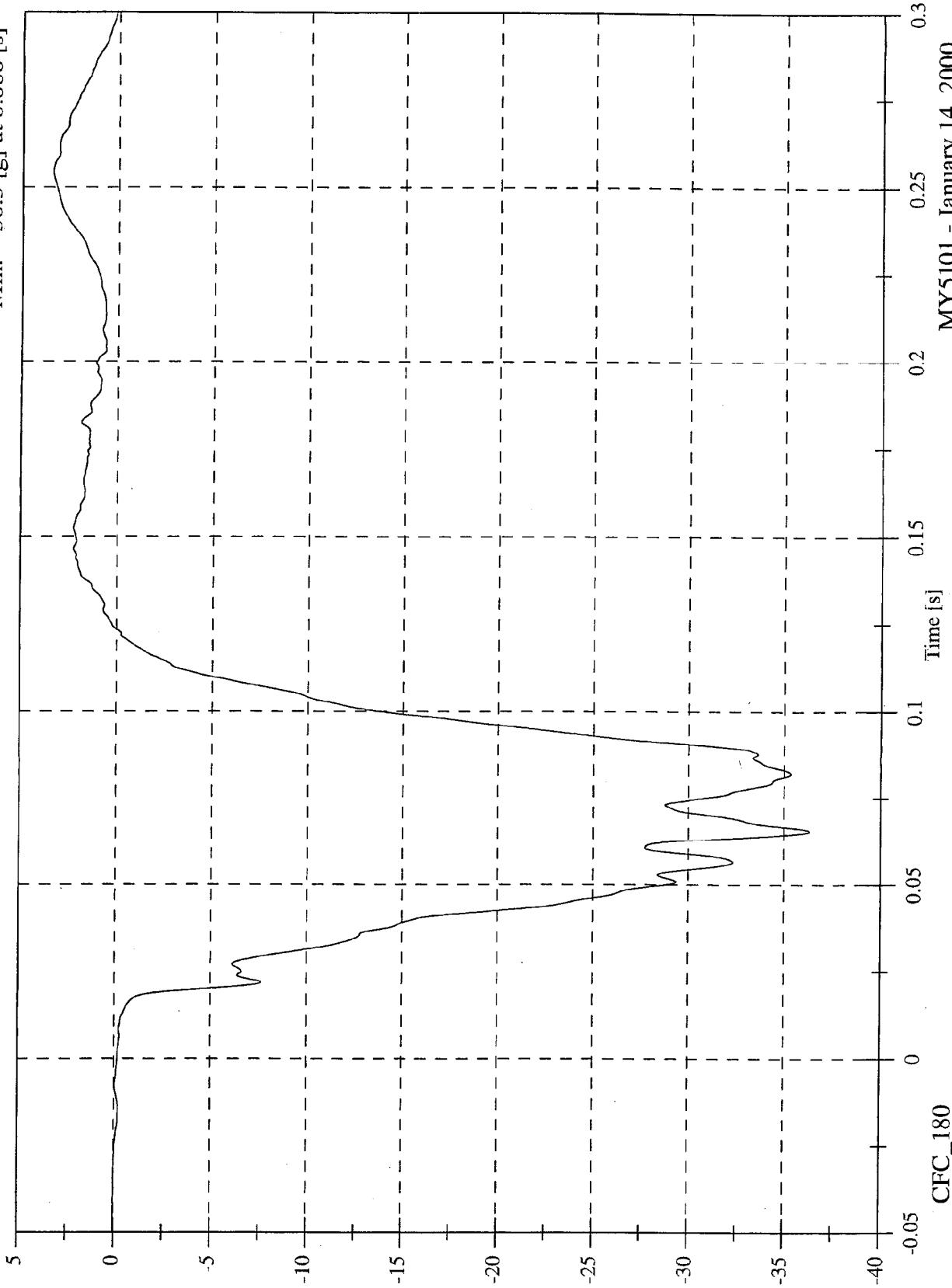


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 3.4 [g] at 0.254 [s]
Min: -36.3 [g] at 0.066 [s]

P2 Chest Red x

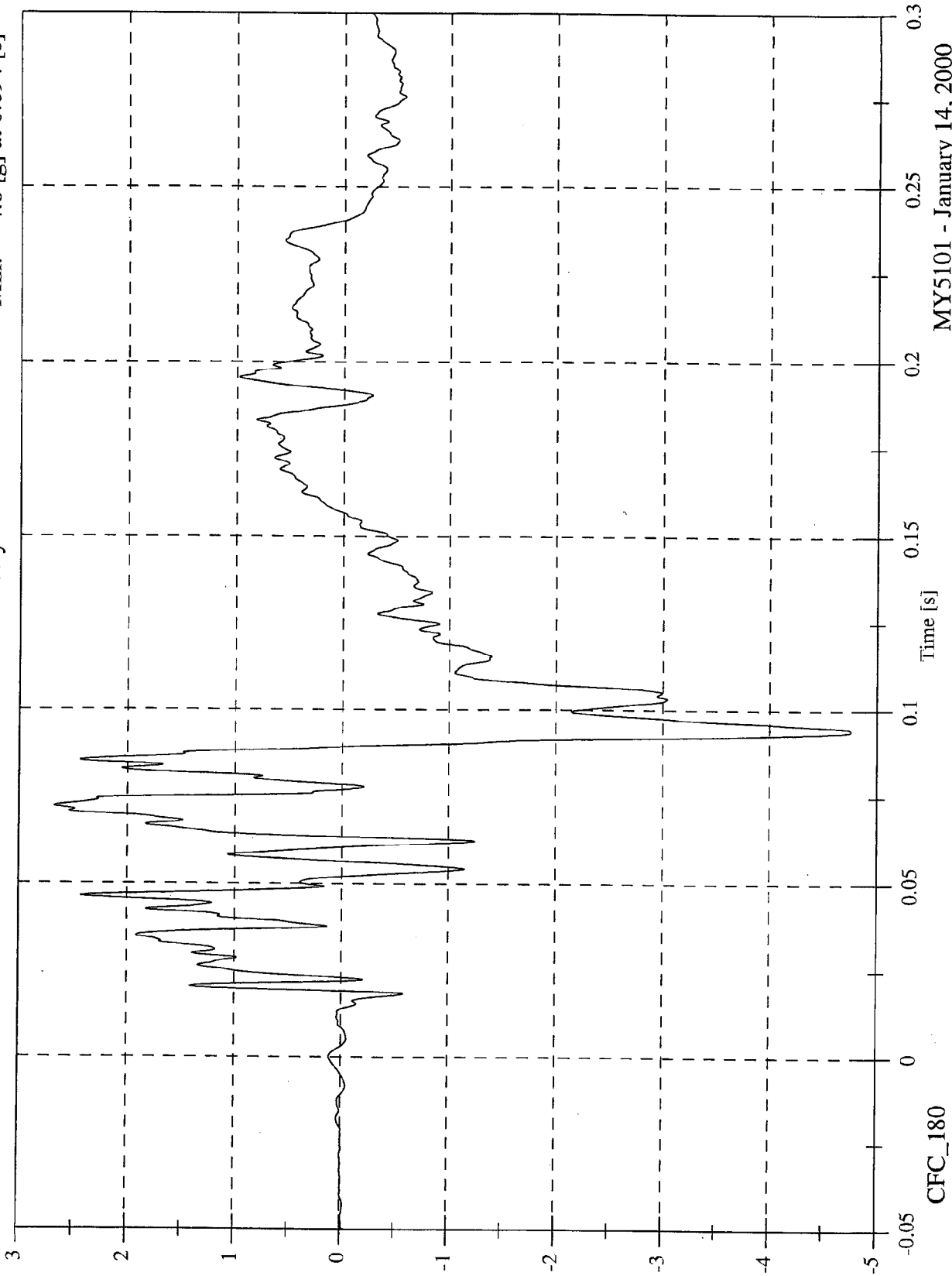


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

P2 Chest Red y

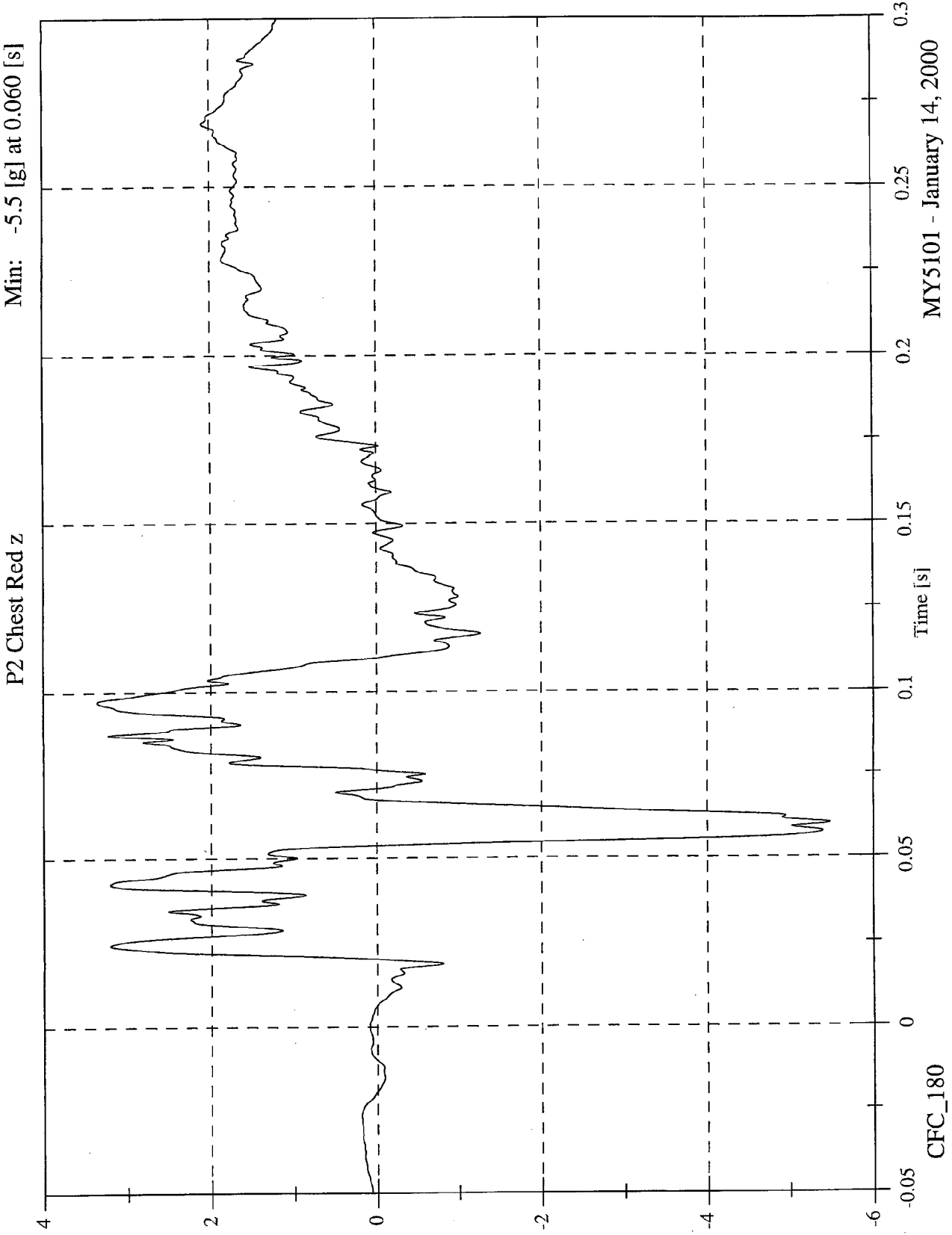
Max: 2.7 [g] at 0.072 [s]
Min: -4.8 [g] at 0.094 [s]



MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 3.4 [g] at 0.097 [s]
Min: -5.5 [g] at 0.060 [s]



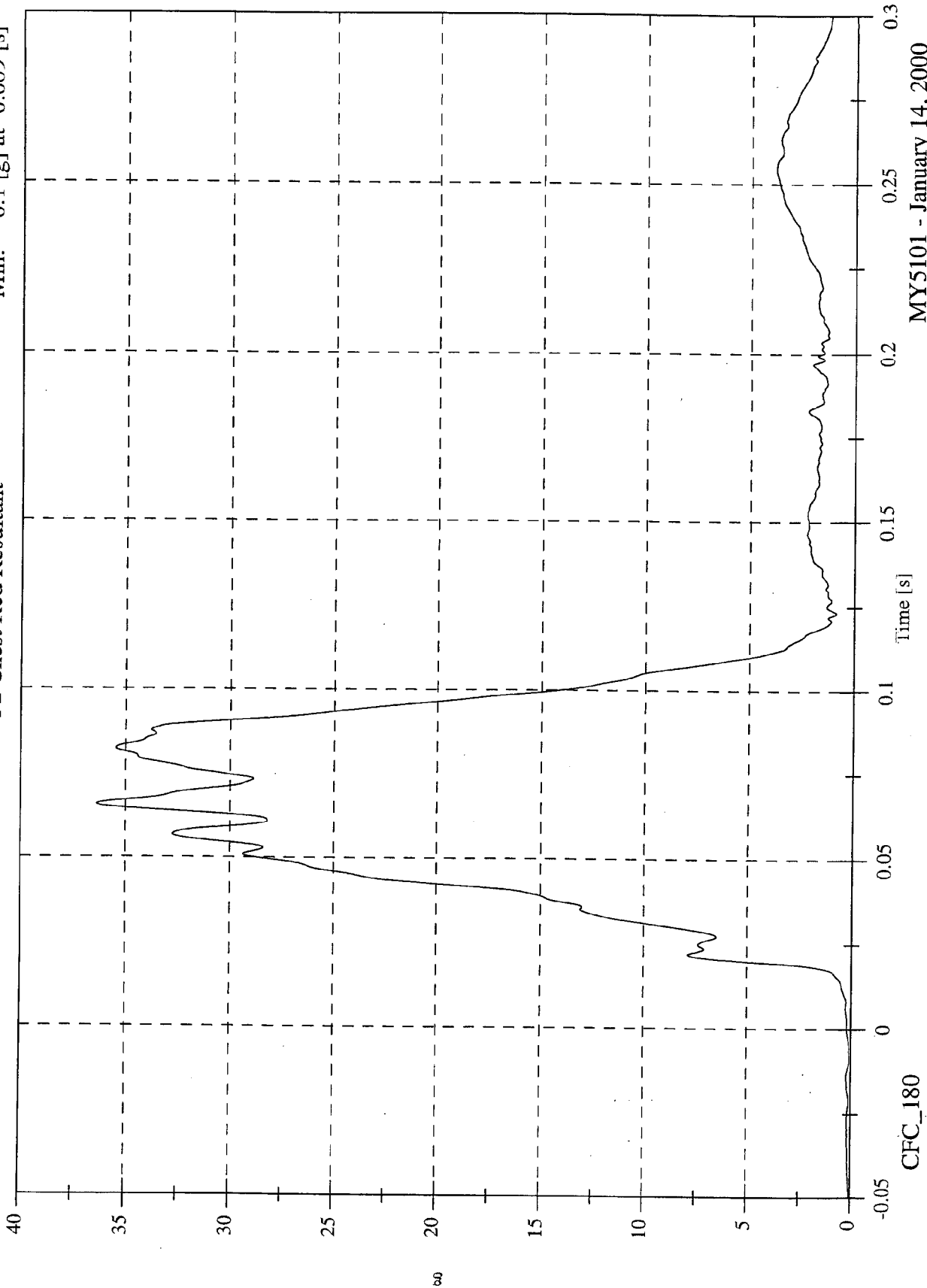
MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

P2 Chest Red Resultant

Max: 36.4 [g] at 0.066 [s]

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

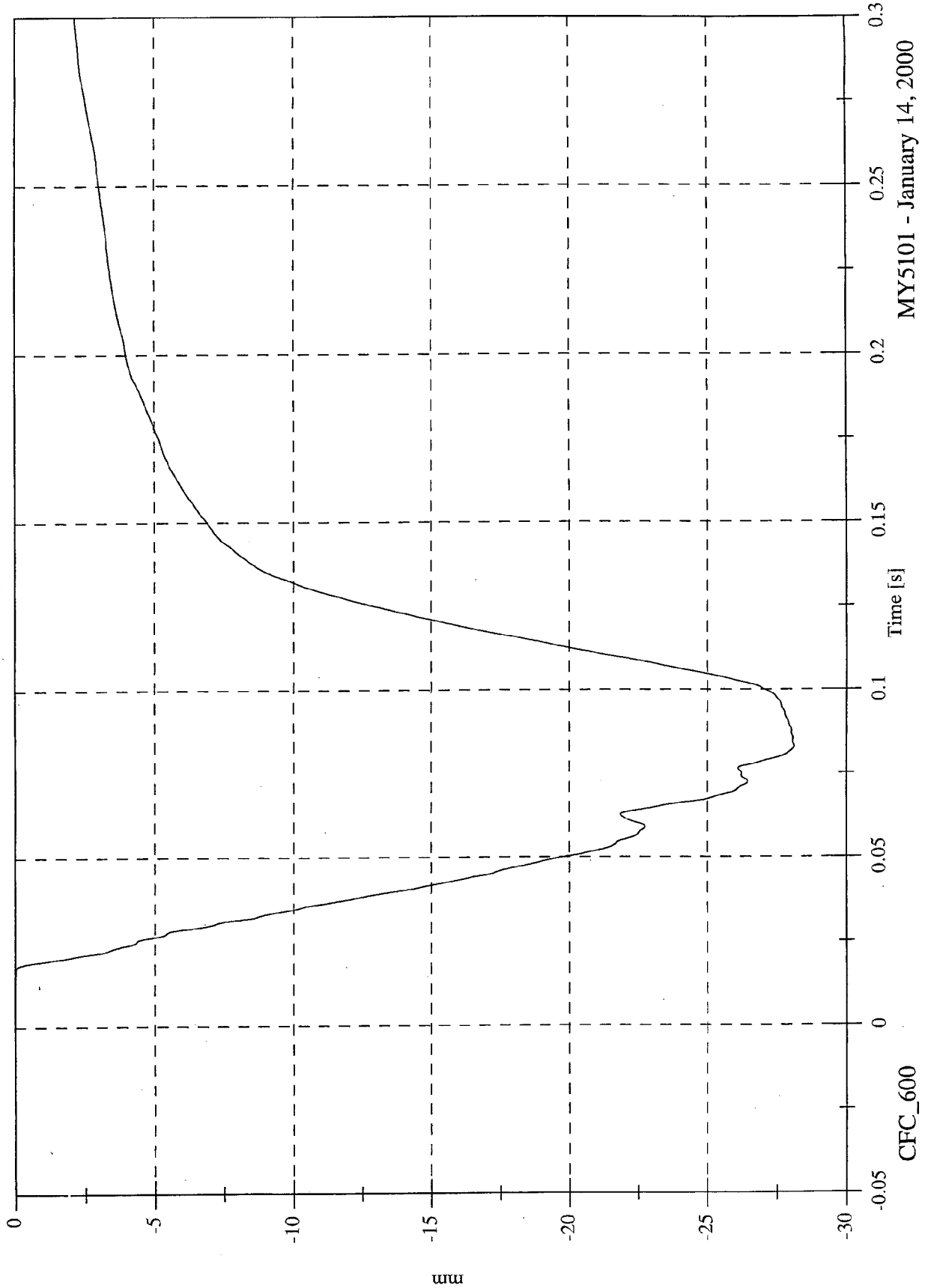


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 0.0 [mm] at -0.040 [s]
Min: -28.1 [mm] at 0.083 [s]

P2 Chest Compression x



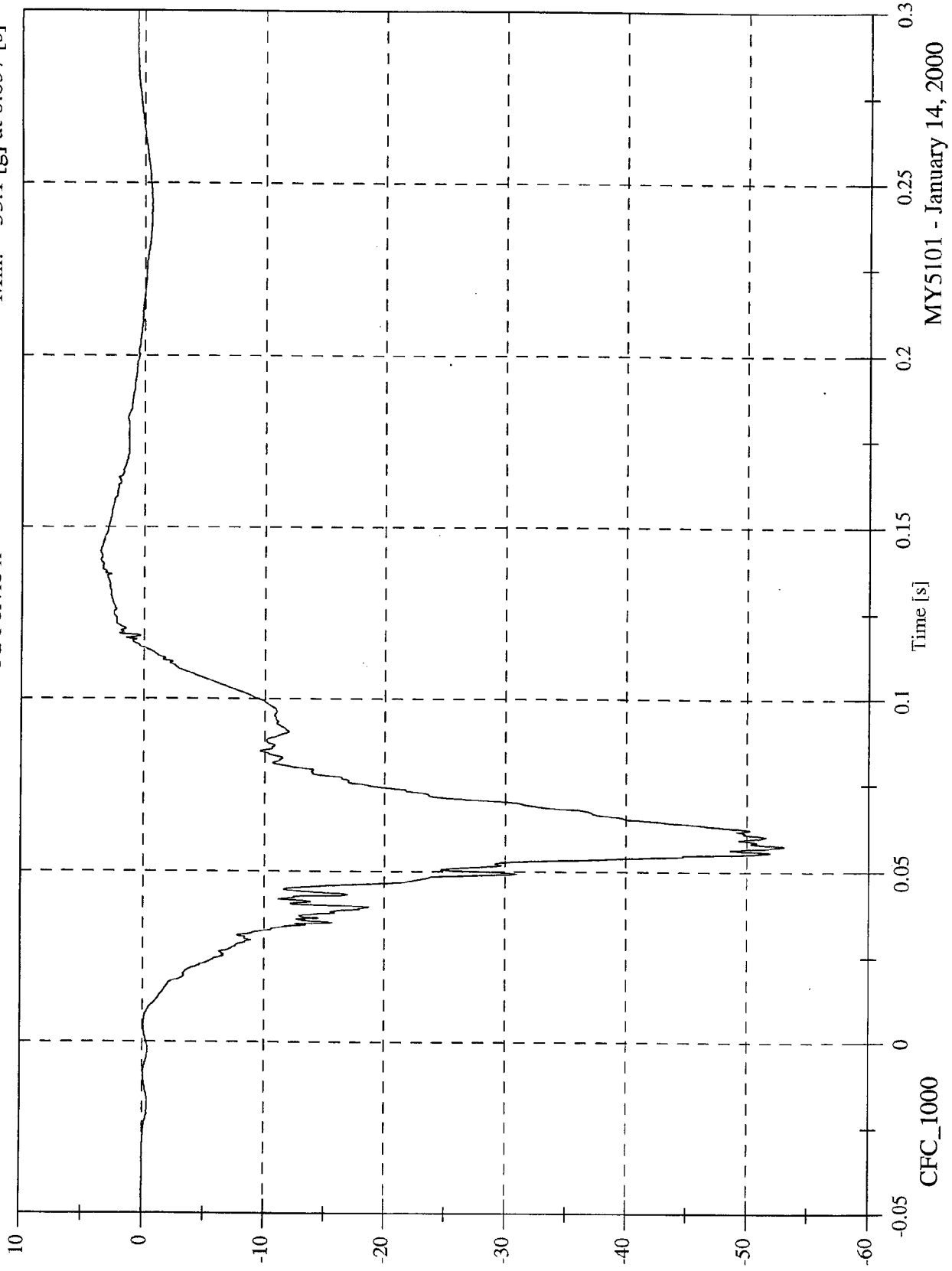
MY5101 - January 14, 2000

CFC_600

NCAP Test #9 - 2000 Toyota Camry

Max: 3.6 [g] at 0.143 [s]
Min: -53.1 [g] at 0.057 [s]

P2 Pelvic x

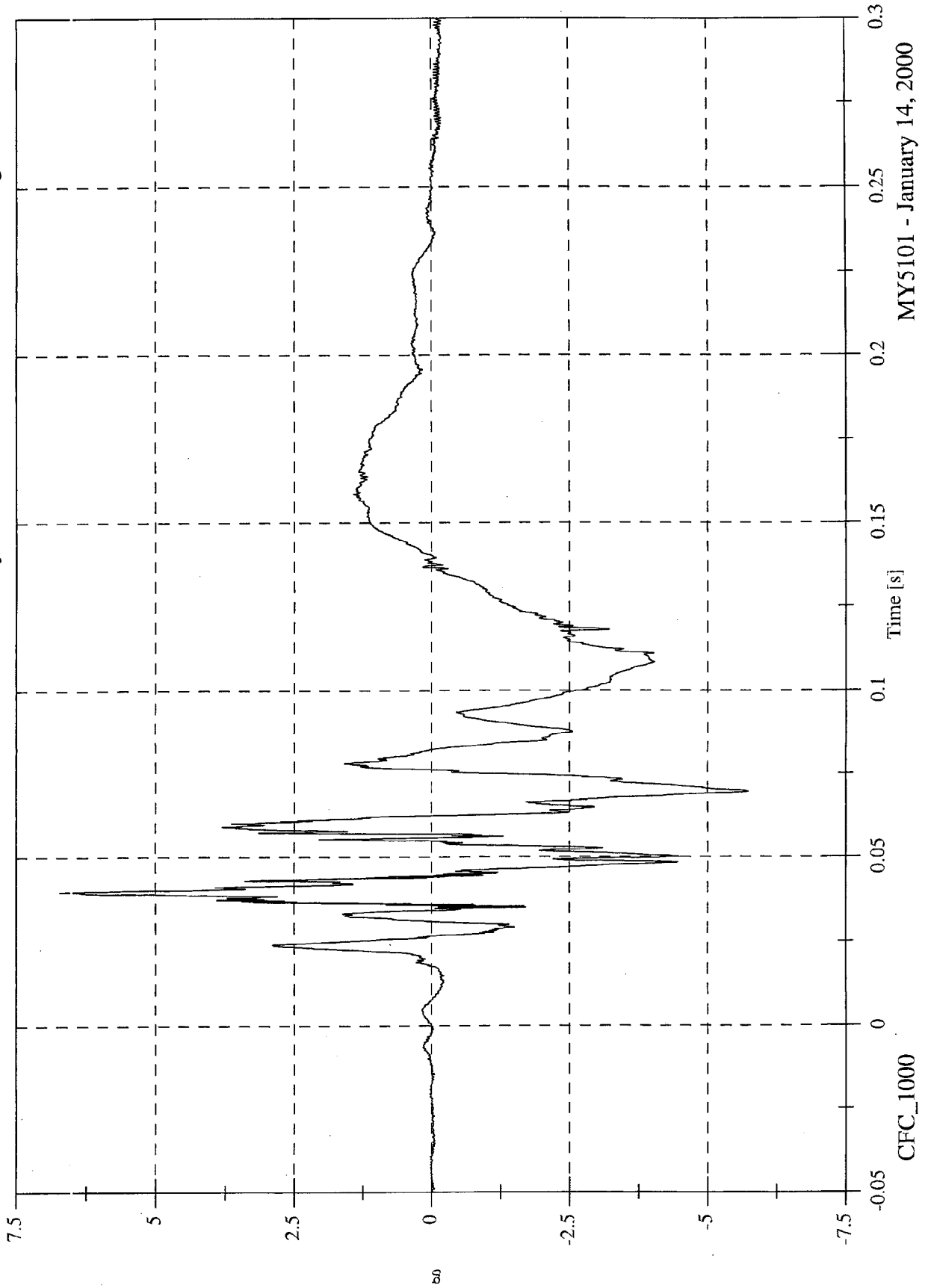


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 6.7 [g] at 0.040 [s]
Min: -5.7 [g] at 0.070 [s]

P2 Pelvic y

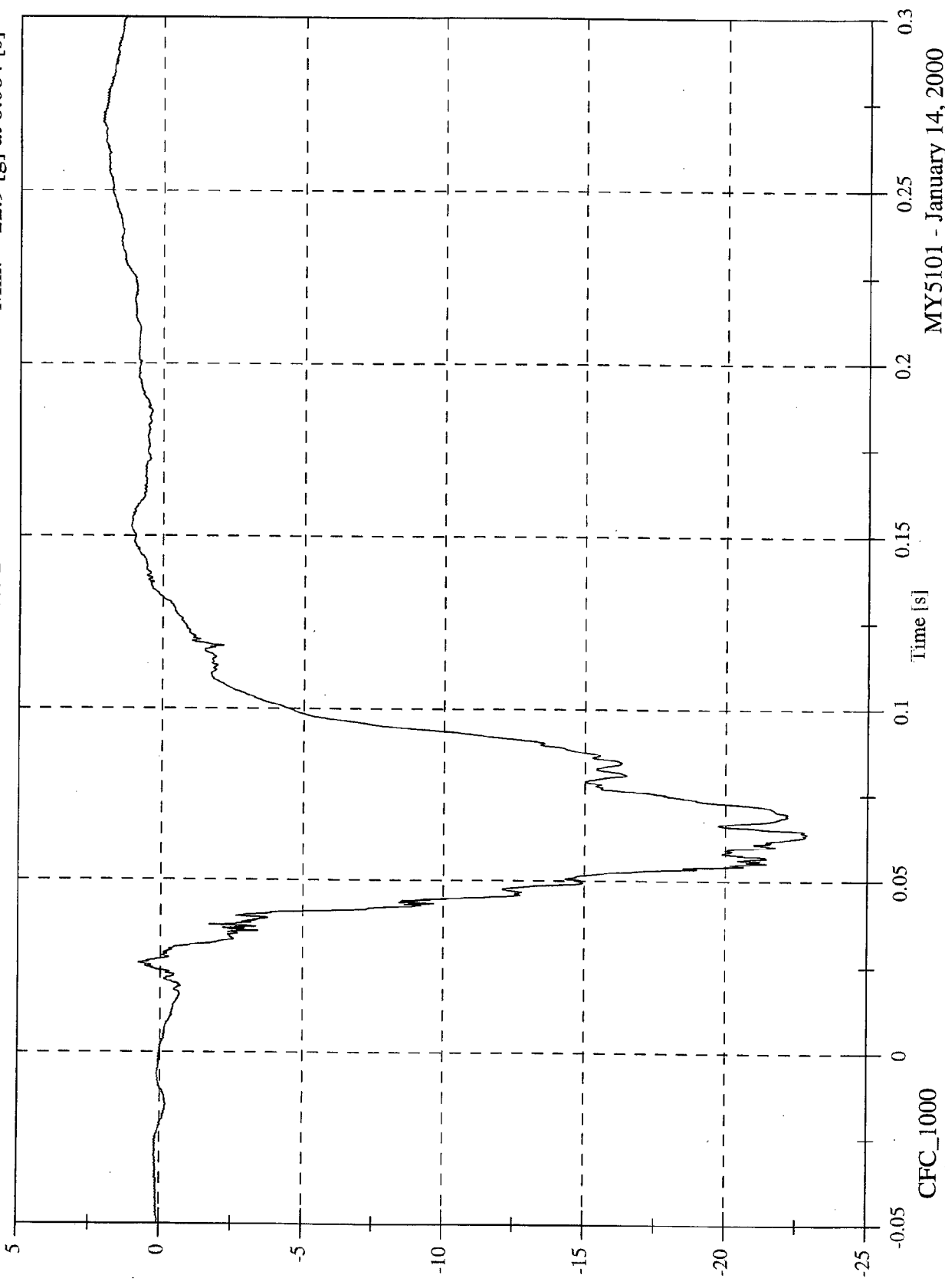


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 2.1 [g] at 0.270 [s]
Min: -22.9 [g] at 0.064 [s]

P2 Pelvic z



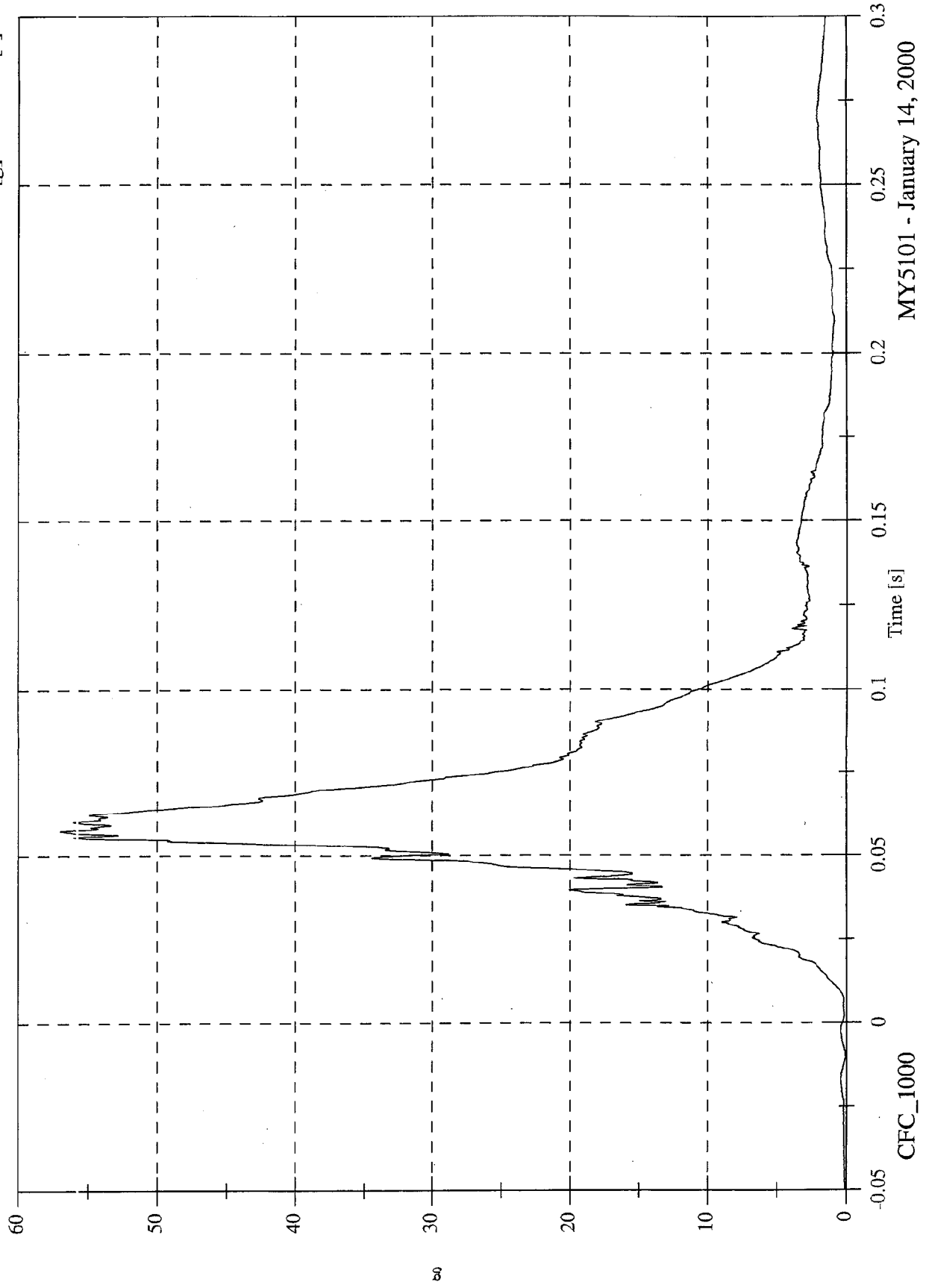
CFC_1000

MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 56.9 [g] at 0.058 [s]
Min: 0.1 [g] at -0.010 [s]

P2 Pelvic Resultant

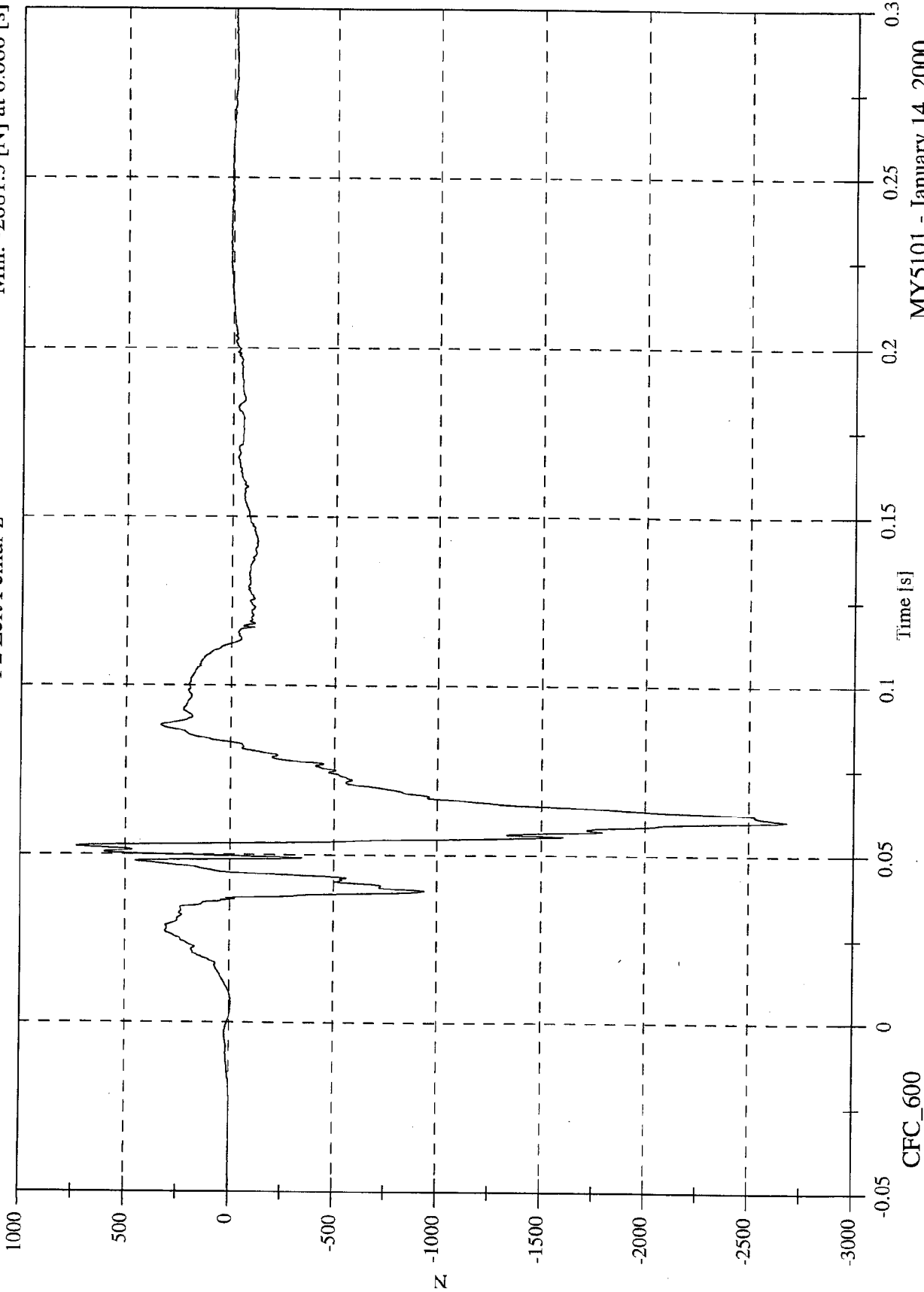


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 735.6 [N] at 0.052 [s]
Min: -2681.3 [N] at 0.060 [s]

P2 Left Femur z

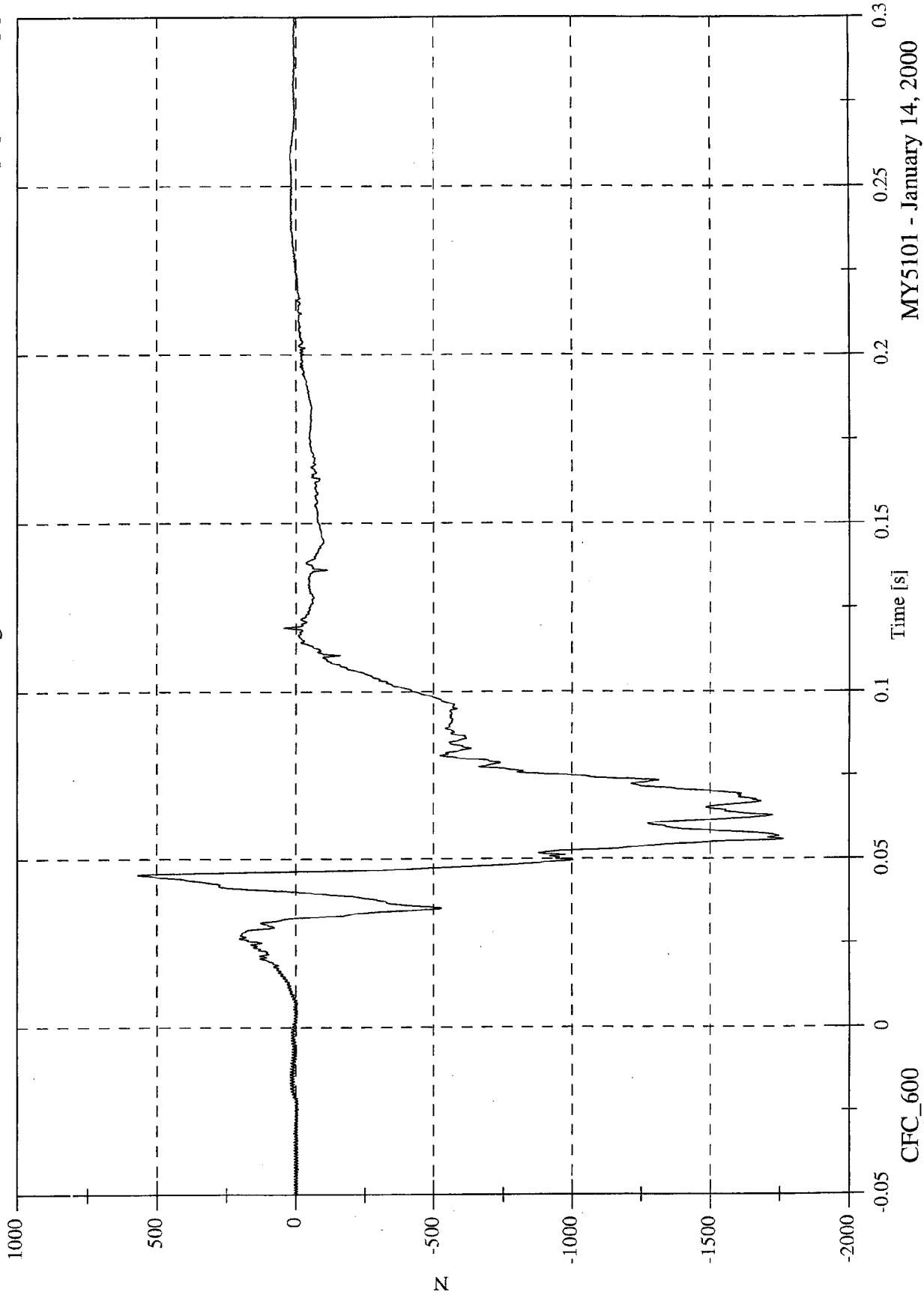


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 568.5 [N] at 0.045 [s]
Min: -1765.2 [N] at 0.056 [s]

P2 Right Femur z



MY5101 - January 14, 2000

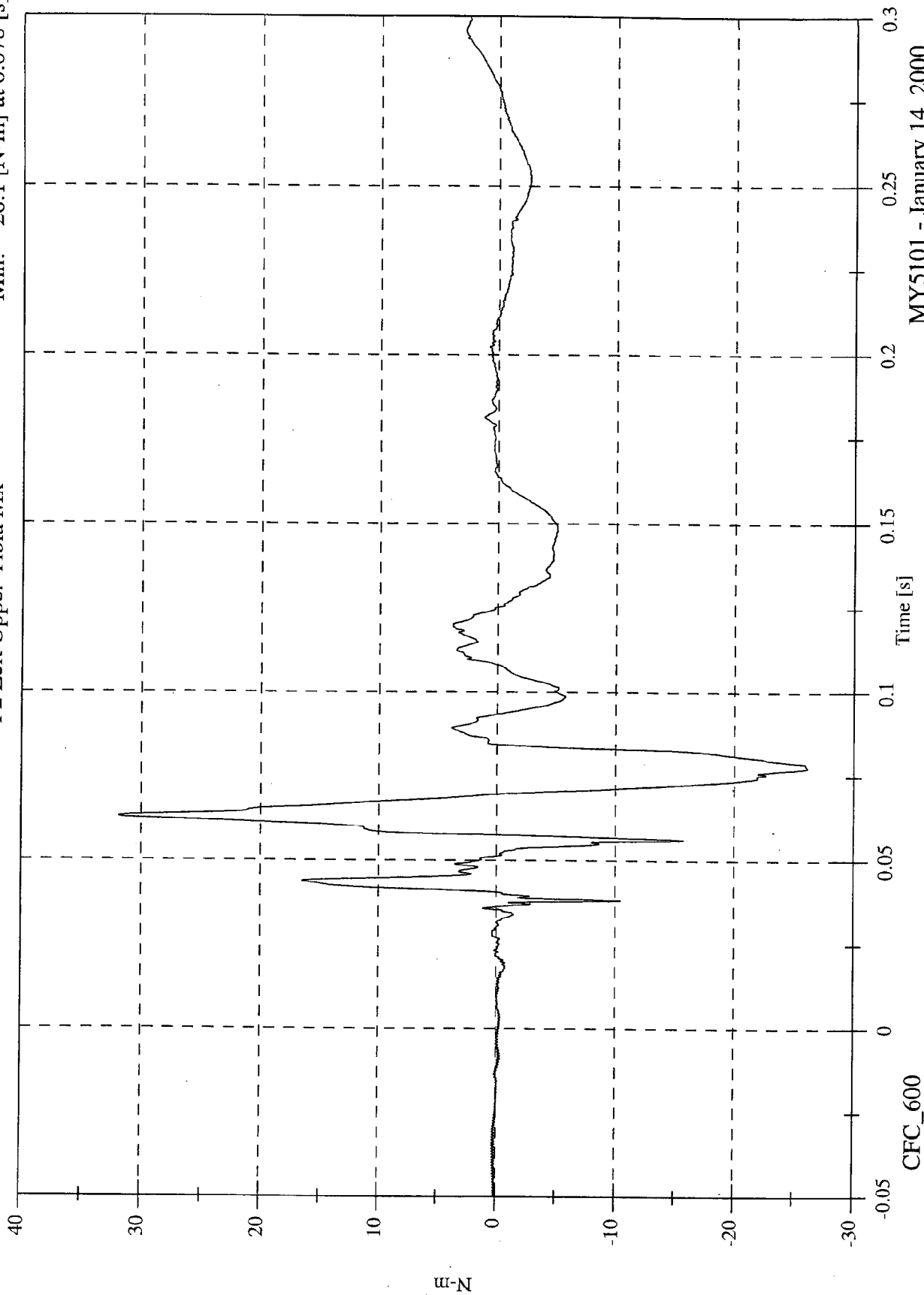
CFC_600

NCAP Test #9 - 2000 Toyota Camry

P2 Left Upper Tibia Mx

Max: 31.9 [N-m] at 0.063 [s]

Min: -26.1 [N-m] at 0.078 [s]

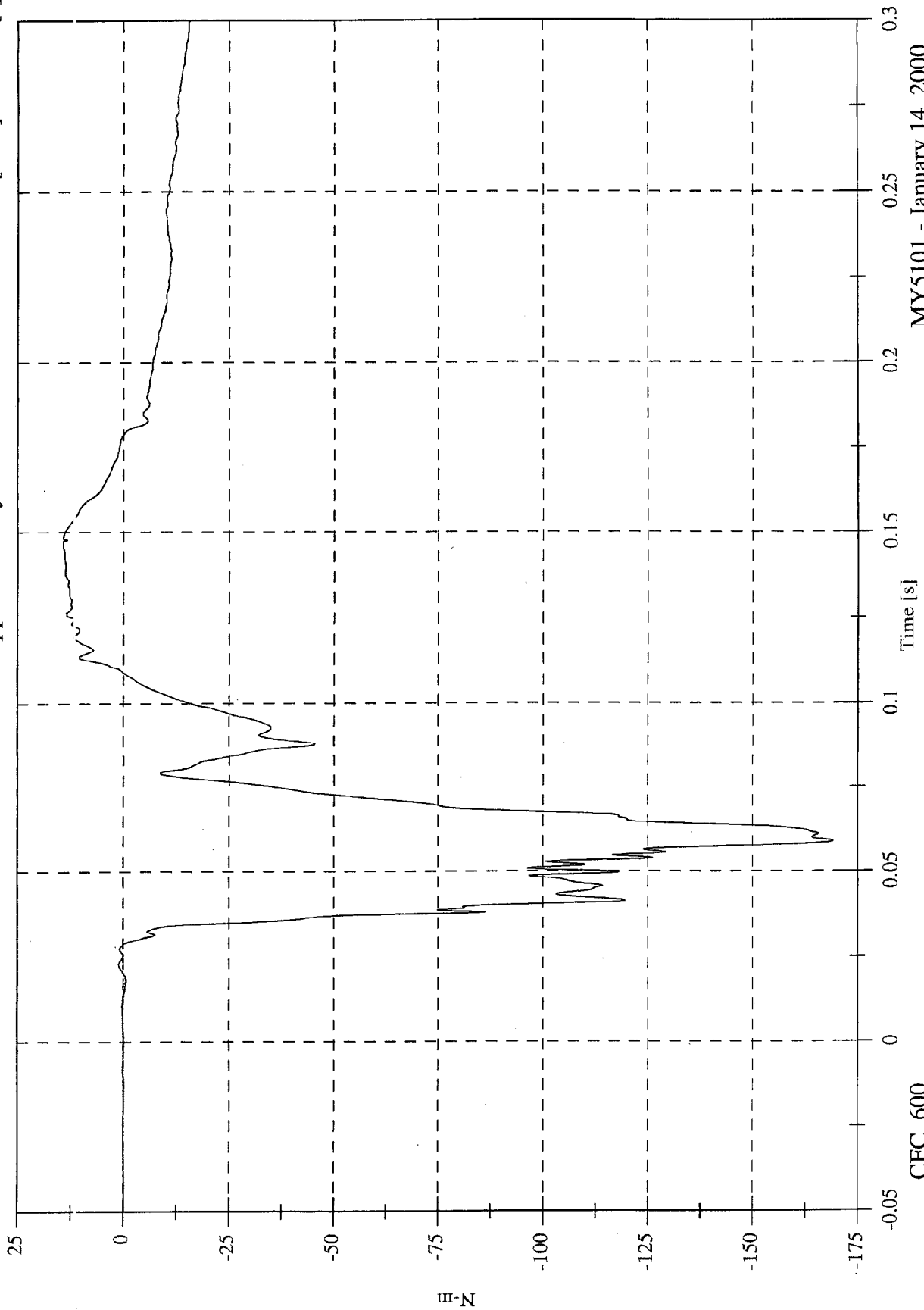


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 14.3 [N-m] at 0.147 [s]
Min: -169.2 [N-m] at 0.059 [s]

P2 Left Upper Tibia My

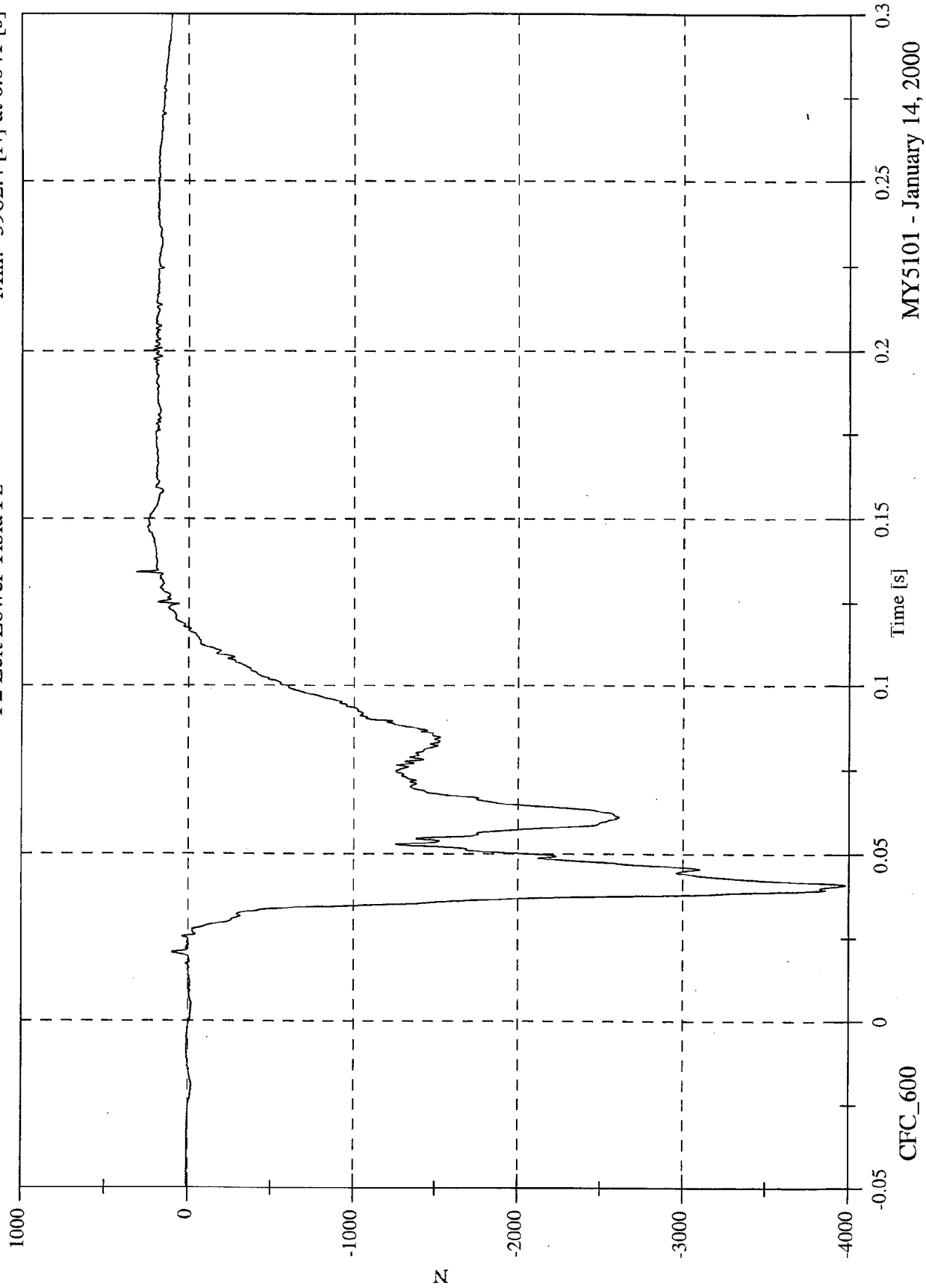


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 316.4 [N] at 0.134 [s]
Min: -3982.4 [N] at 0.041 [s]

P2 Left Lower Tibia Fz



MY5101 - January 14, 2000

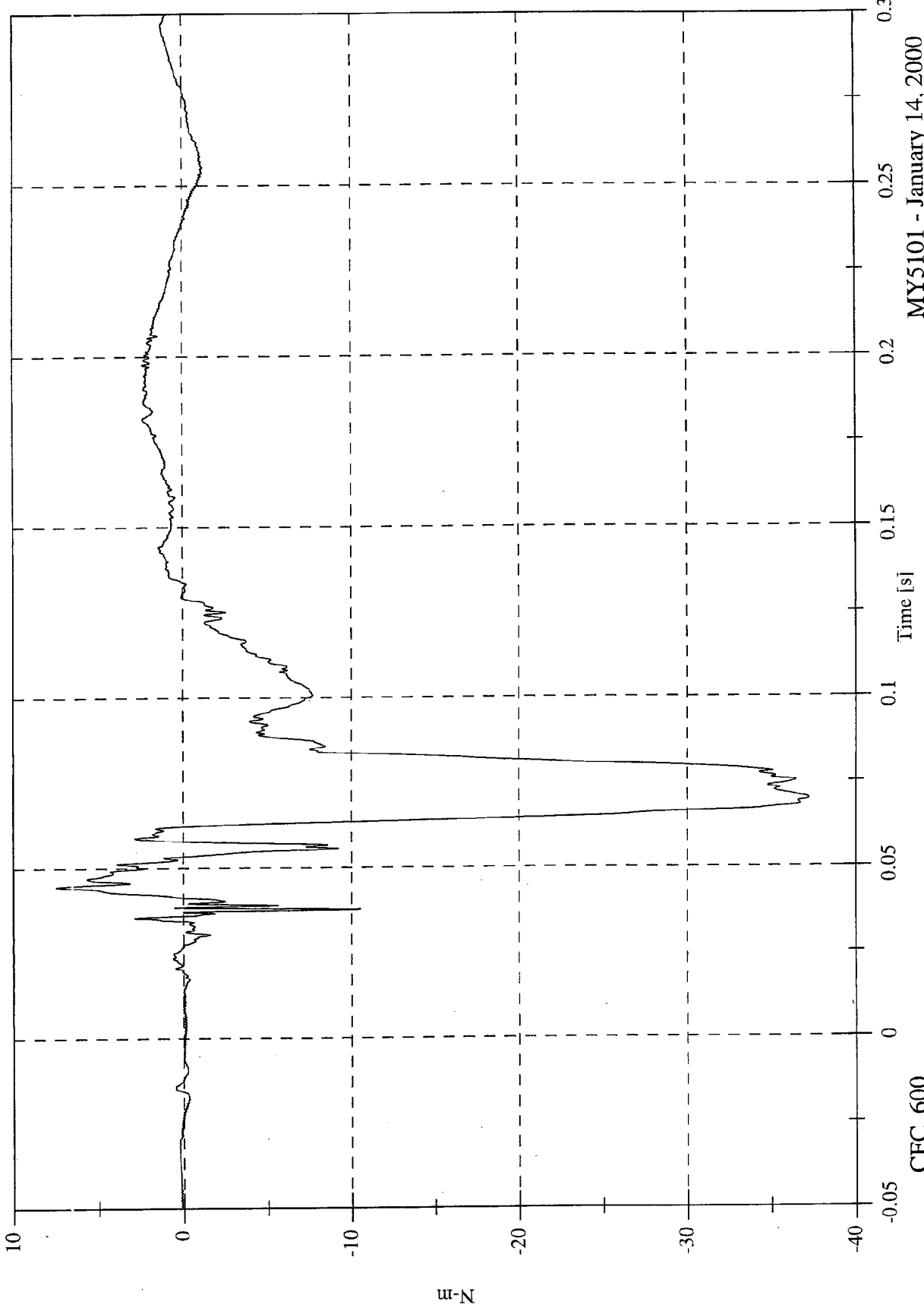
CFC_600

NCAP Test #9 - 2000 Toyota Camry

Max: 7.5 [N-m] at 0.045 [s]

Min: -37.2 [N-m] at 0.070 [s]

P2 Left Lower Tibia Mx



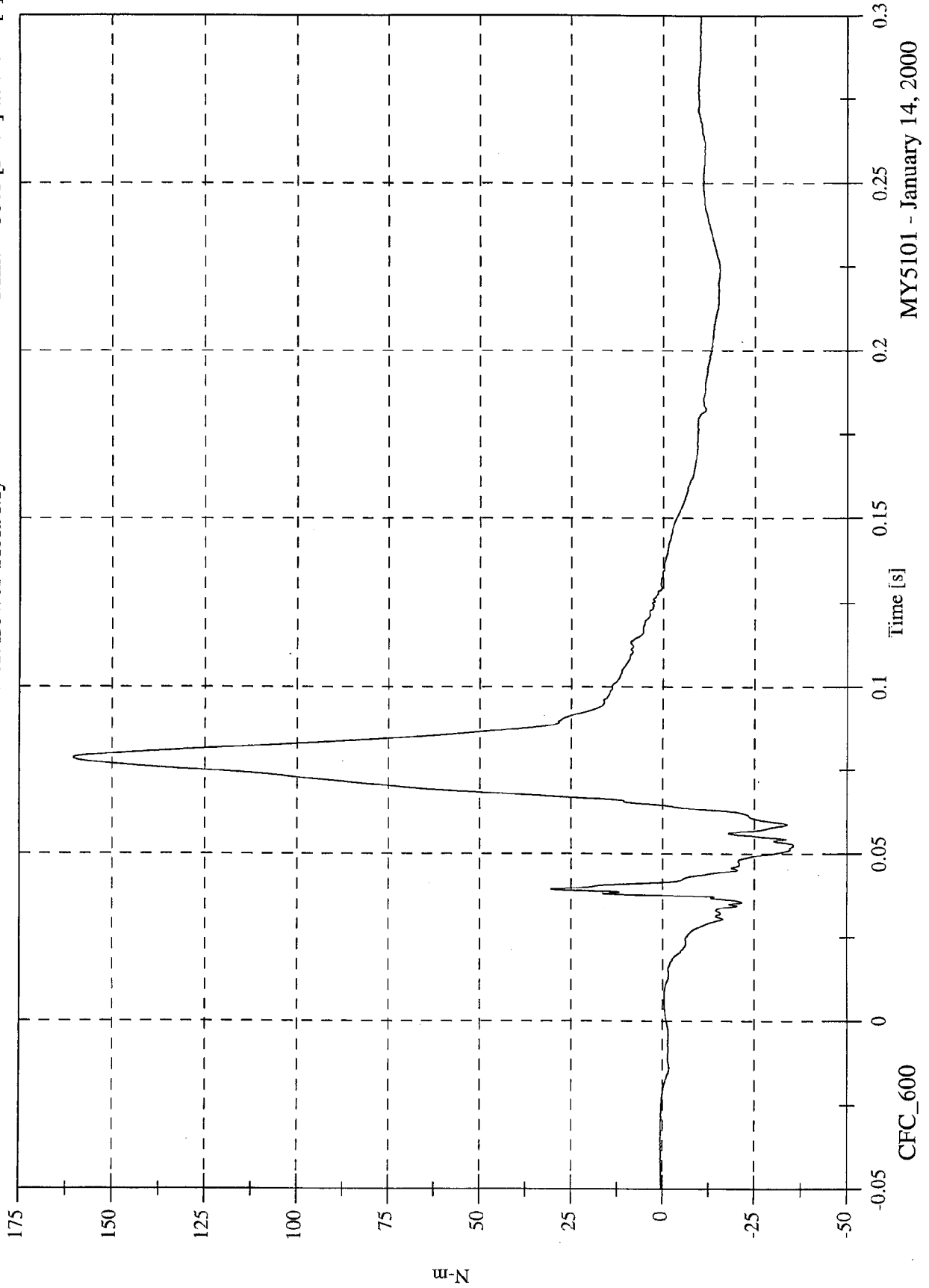
MY5101 - January 14, 2000

CFC_600

NCAP Test #9 - 2000 Toyota Camry

Max: 160.5 [N-m] at 0.079 [s]
Min: -35.6 [N-m] at 0.052 [s]

P2 Left Lower Tibia My

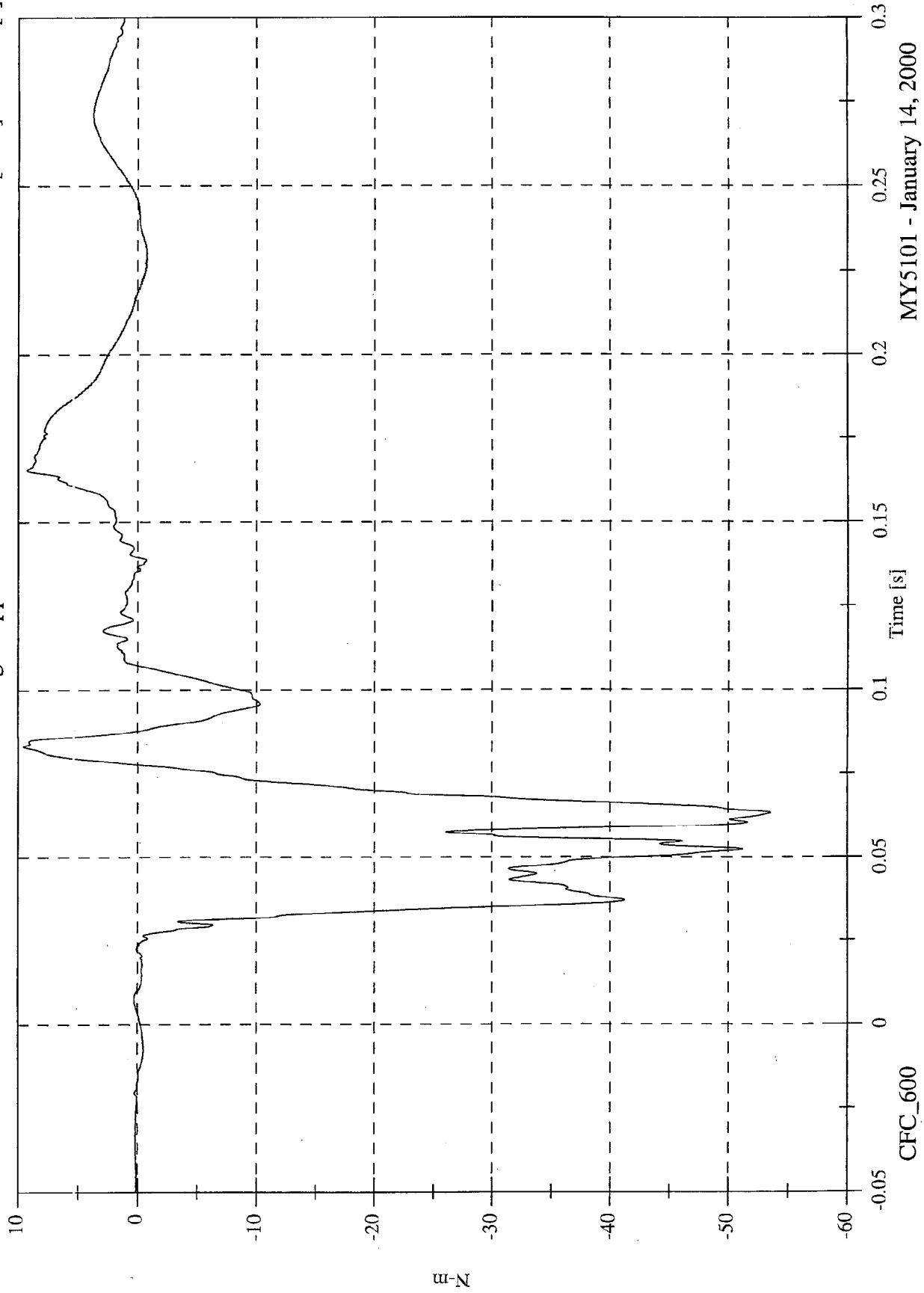


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 9.6 [N-m] at 0.083 [s]
Min: -53.5 [N-m] at 0.063 [s]

P2 Right Upper Tibia Mx

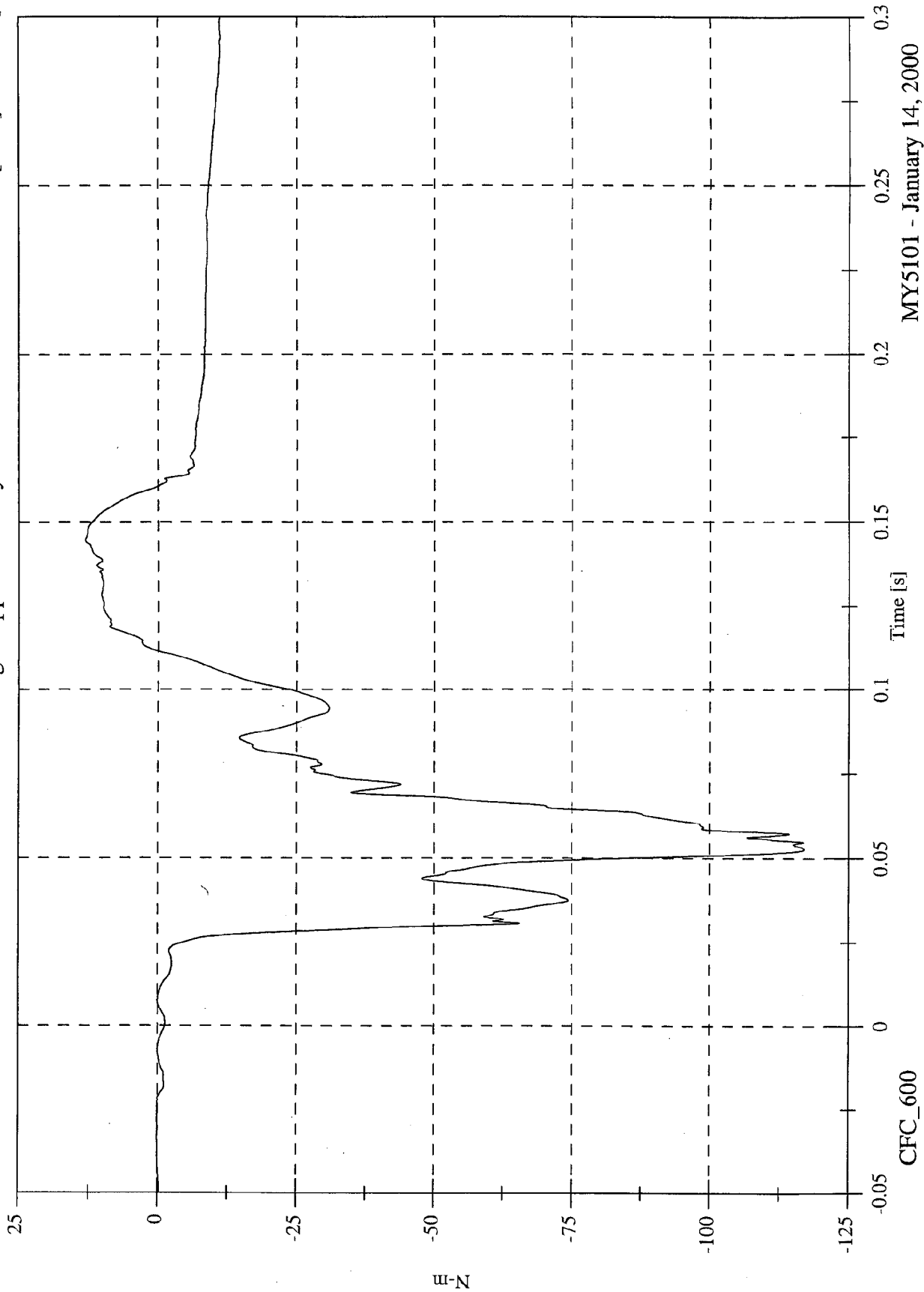


MYS101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

P2 Right Upper Tibia My

Max: 13.1 [N-m] at 0.145 [s]
Min: -117.1 [N-m] at 0.053 [s]

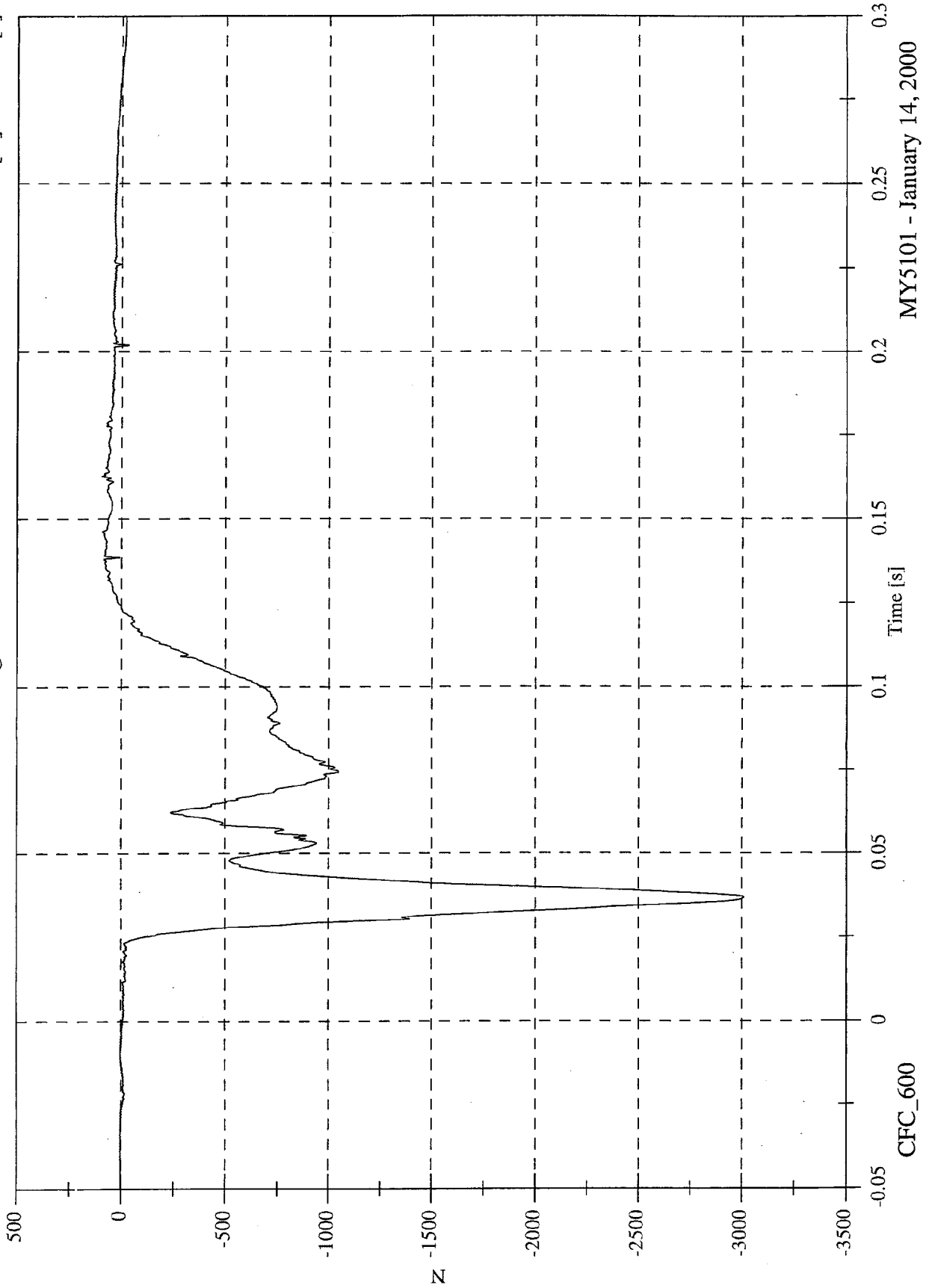


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 94.6 [N] at 0.163 [s]
Min: -3008.6 [N] at 0.037 [s]

P2 Right Lower Tibia Fz



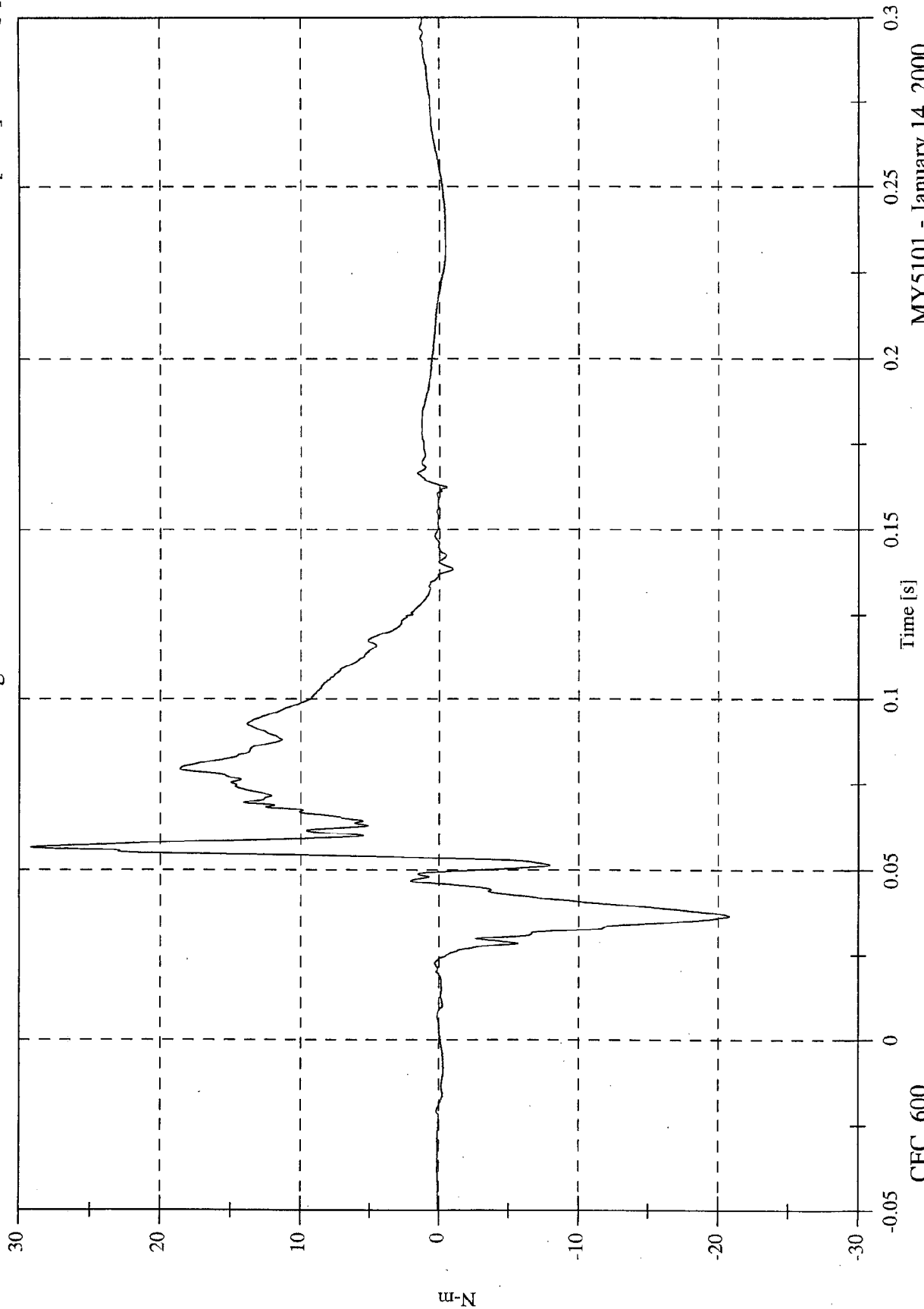
MY5101 - January 14, 2000

CFC_600

NCAP Test #9 - 2000 Toyota Camry

Max: 29.2 [N-m] at 0.057 [s]
Min: -20.8 [N-m] at 0.037 [s]

P2 Right Lower Tibia Mx



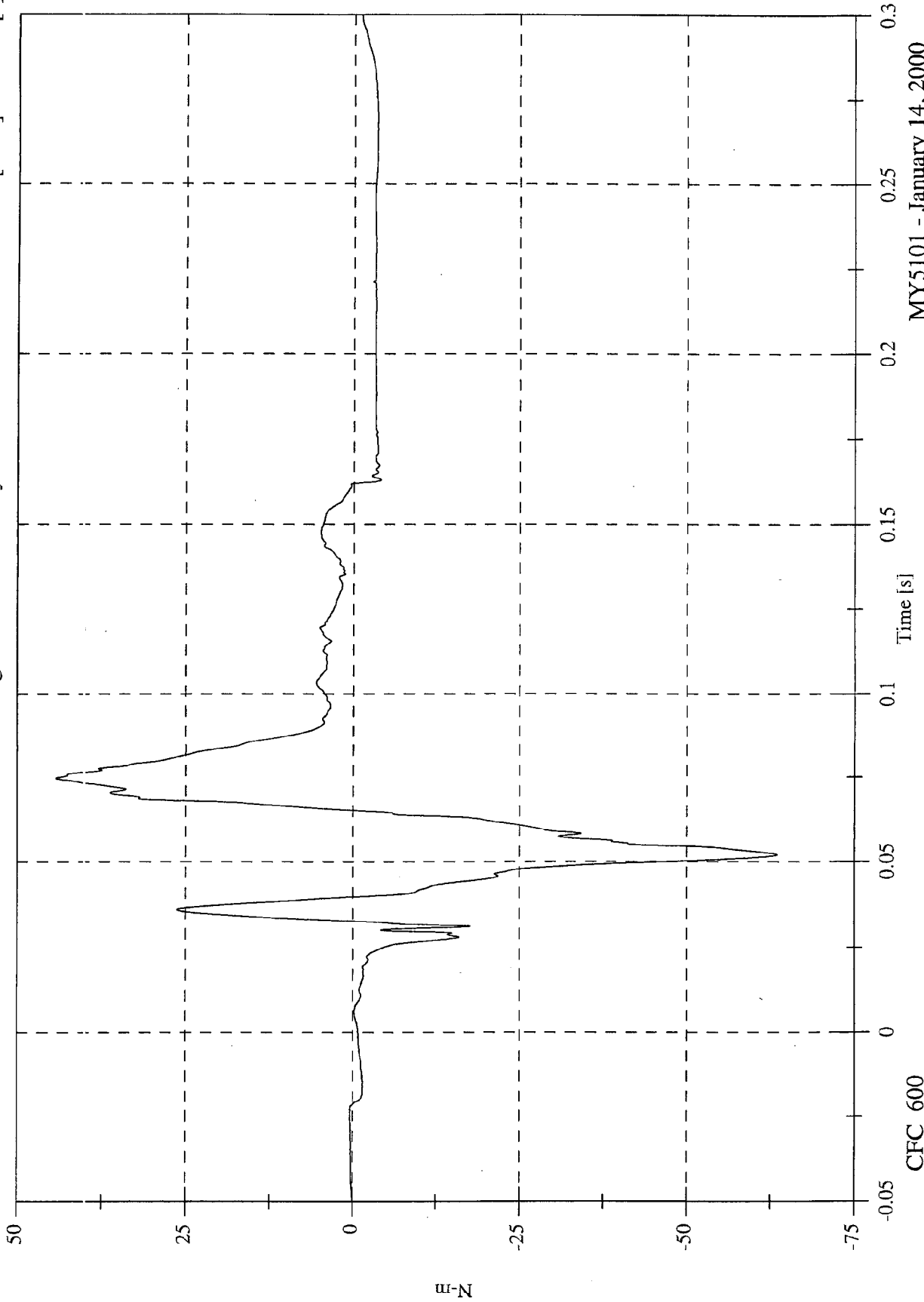
MY5101 - January 14, 2000

CFC_600

NCAP Test #9 - 2000 Toyota Camry

Max: 44.3 [N-m] at 0.075 [s]
Min: -63.5 [N-m] at 0.052 [s]

P2 Right Lower Tibia My

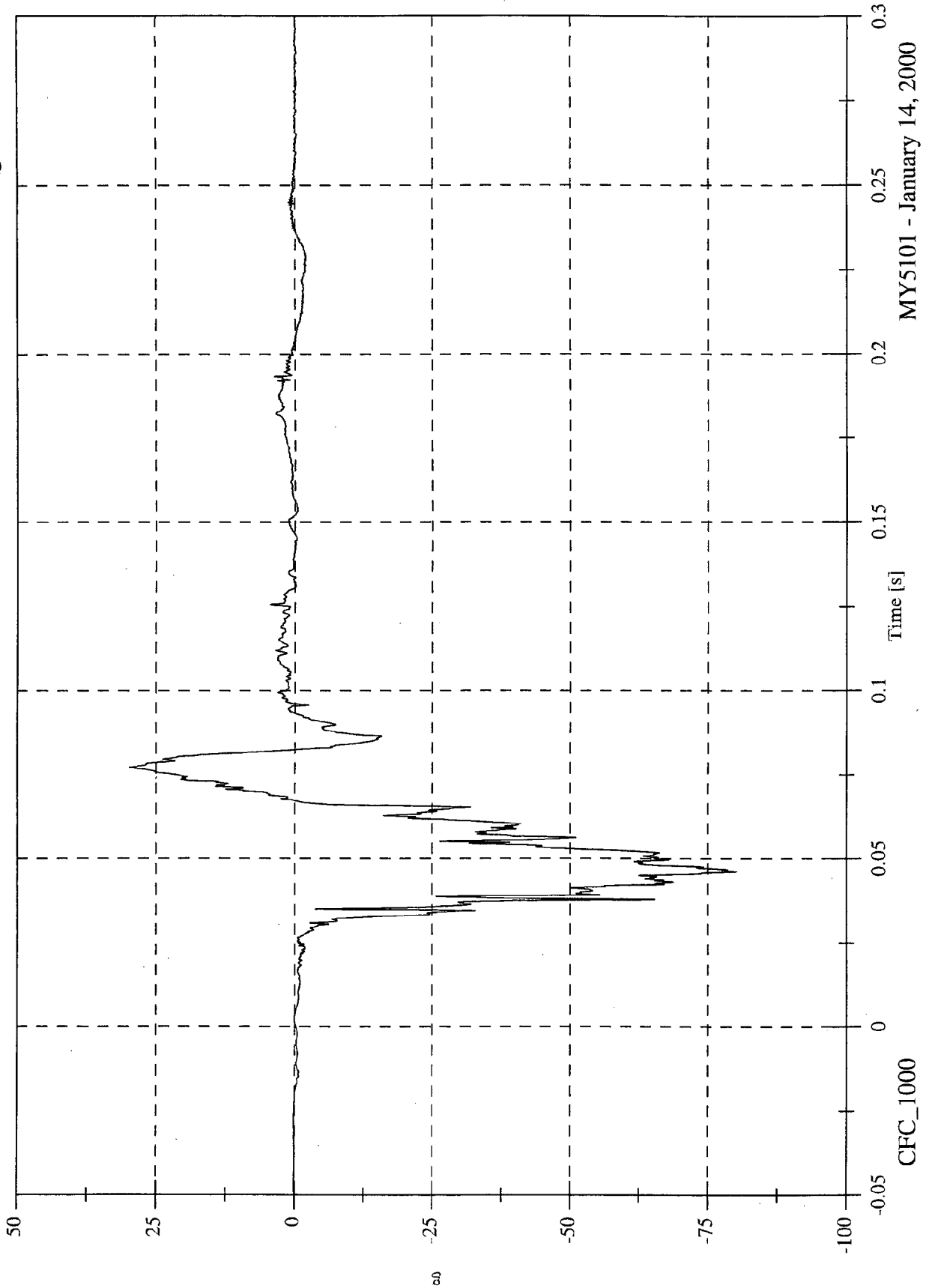


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 29.8 [g] at 0.077 [s]
Min: -80.2 [g] at 0.046 [s]

P2 Left Foot Aft x

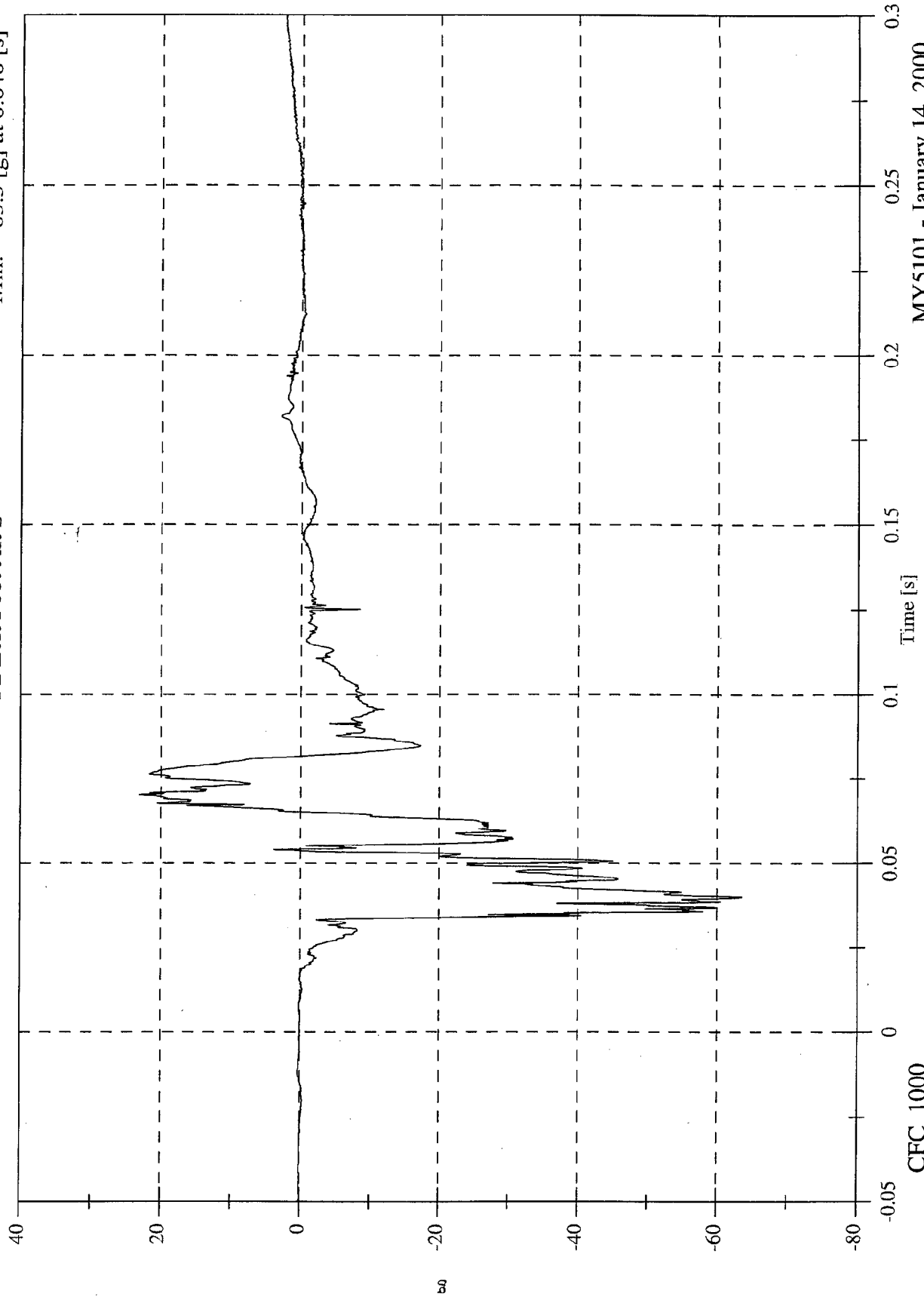


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 23.1 [g] at 0.070 [s]
Min: -63.5 [g] at 0.040 [s]

P2 Left Foot Aft z



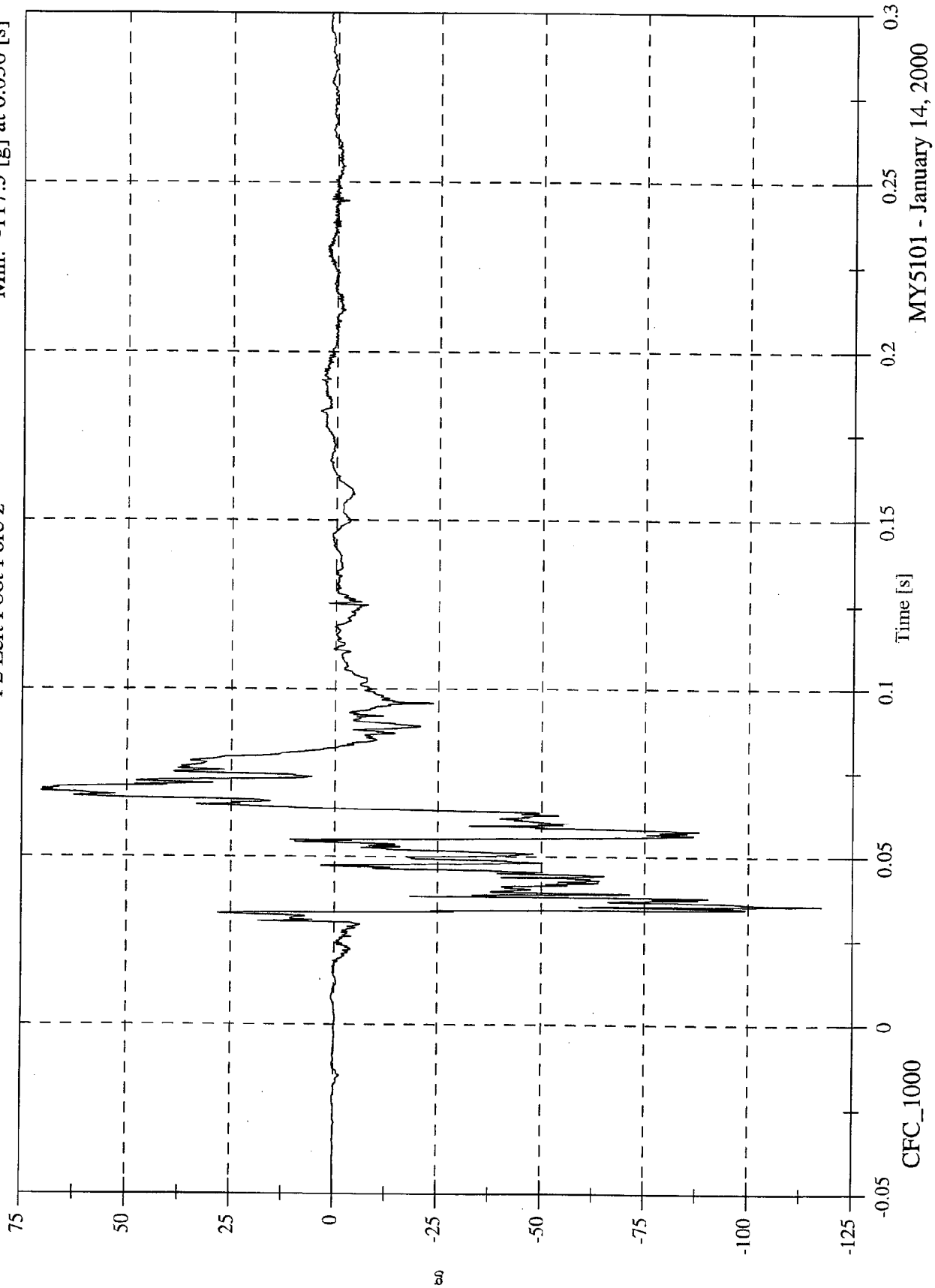
CFC_1000

MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 70.4 [g] at 0.069 [s]
Min: -117.5 [g] at 0.036 [s]

P2 Left Foot Fore z

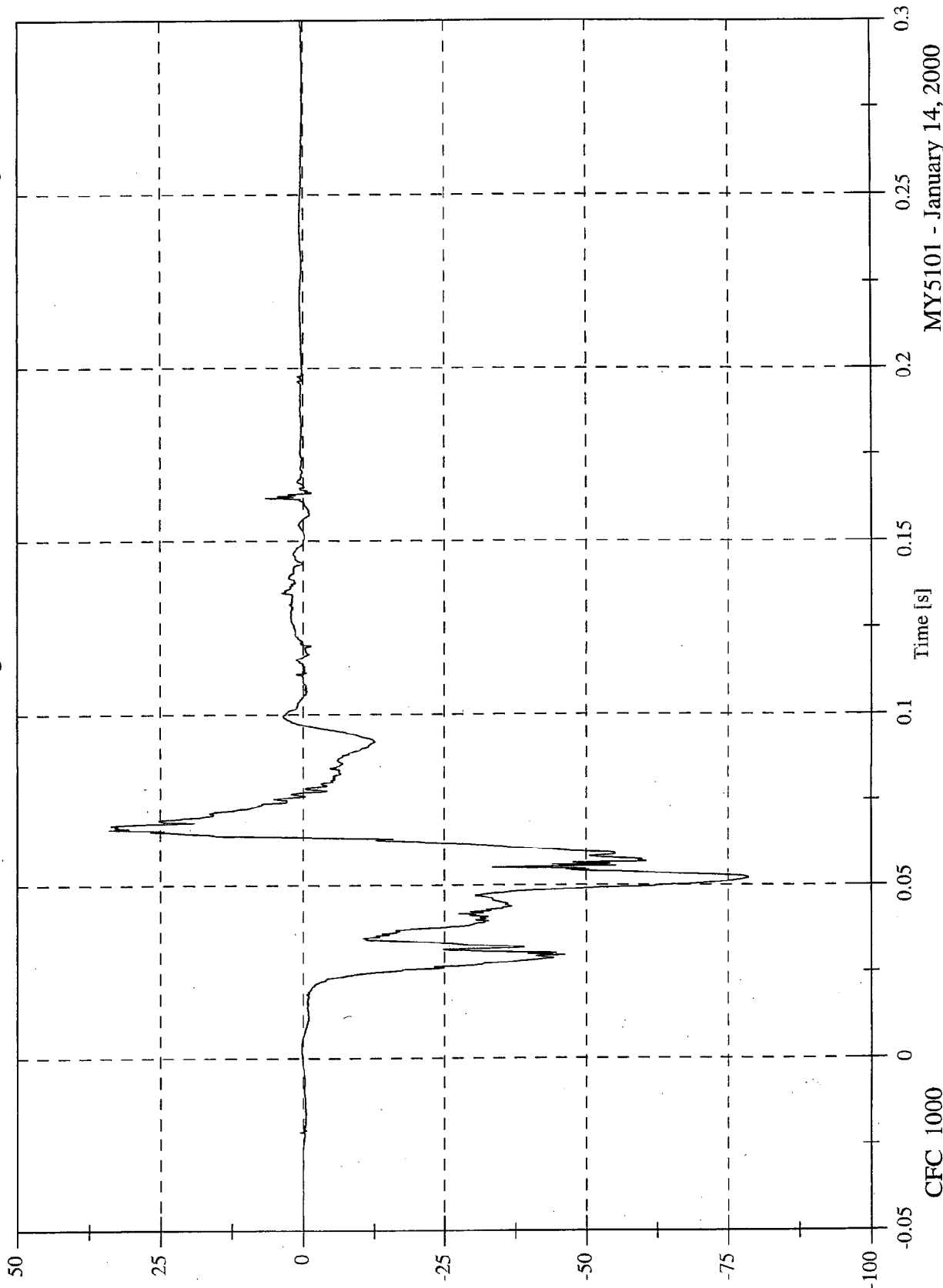


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 33.9 [g] at 0.067 [s]
Min: -78.6 [g] at 0.052 [s]

P2 Right Foot Aft x

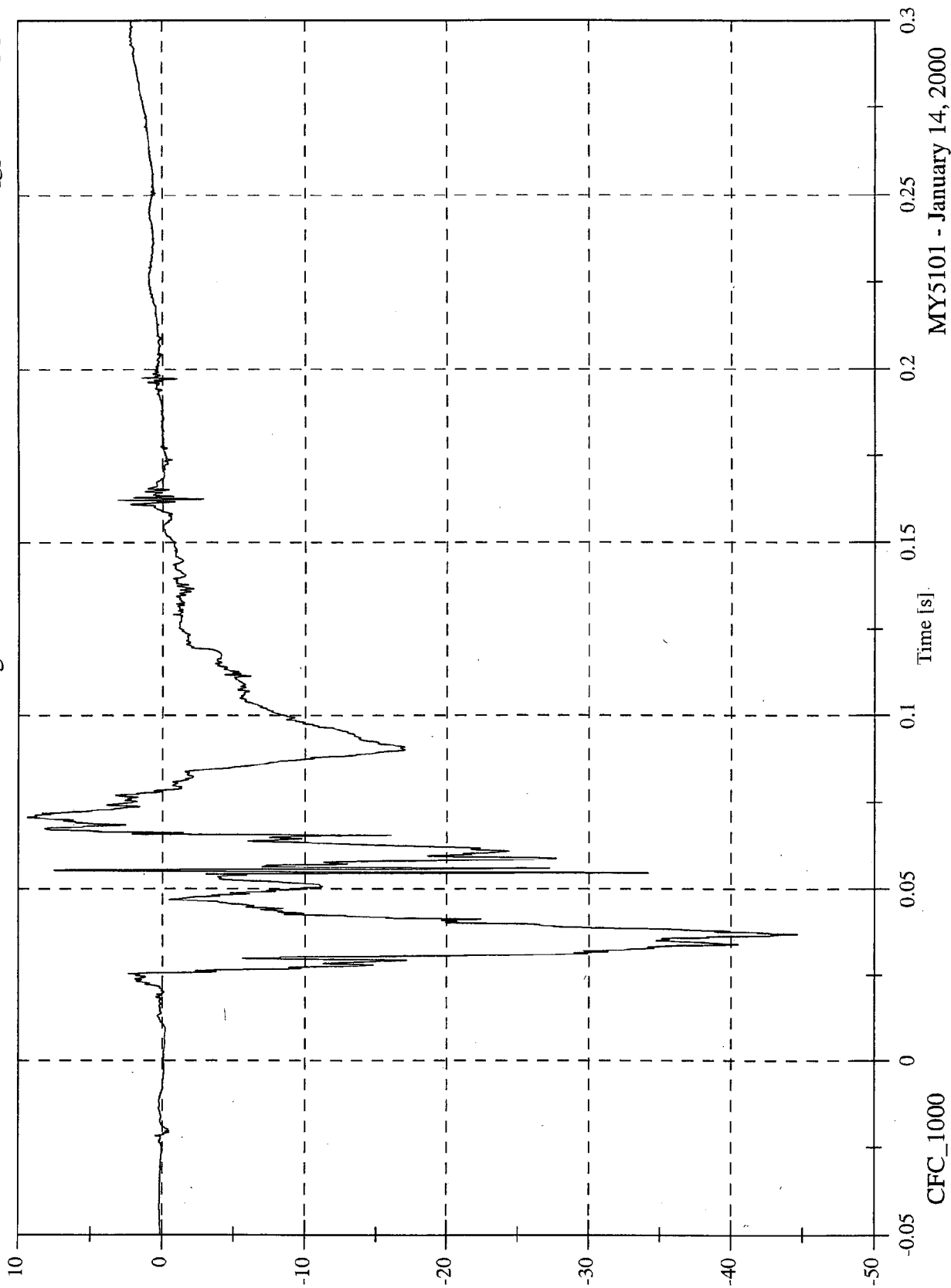


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 9.4 [g] at 0.071 [s]
Min: -44.6 [g] at 0.037 [s]

P2 Right Foot Aft z



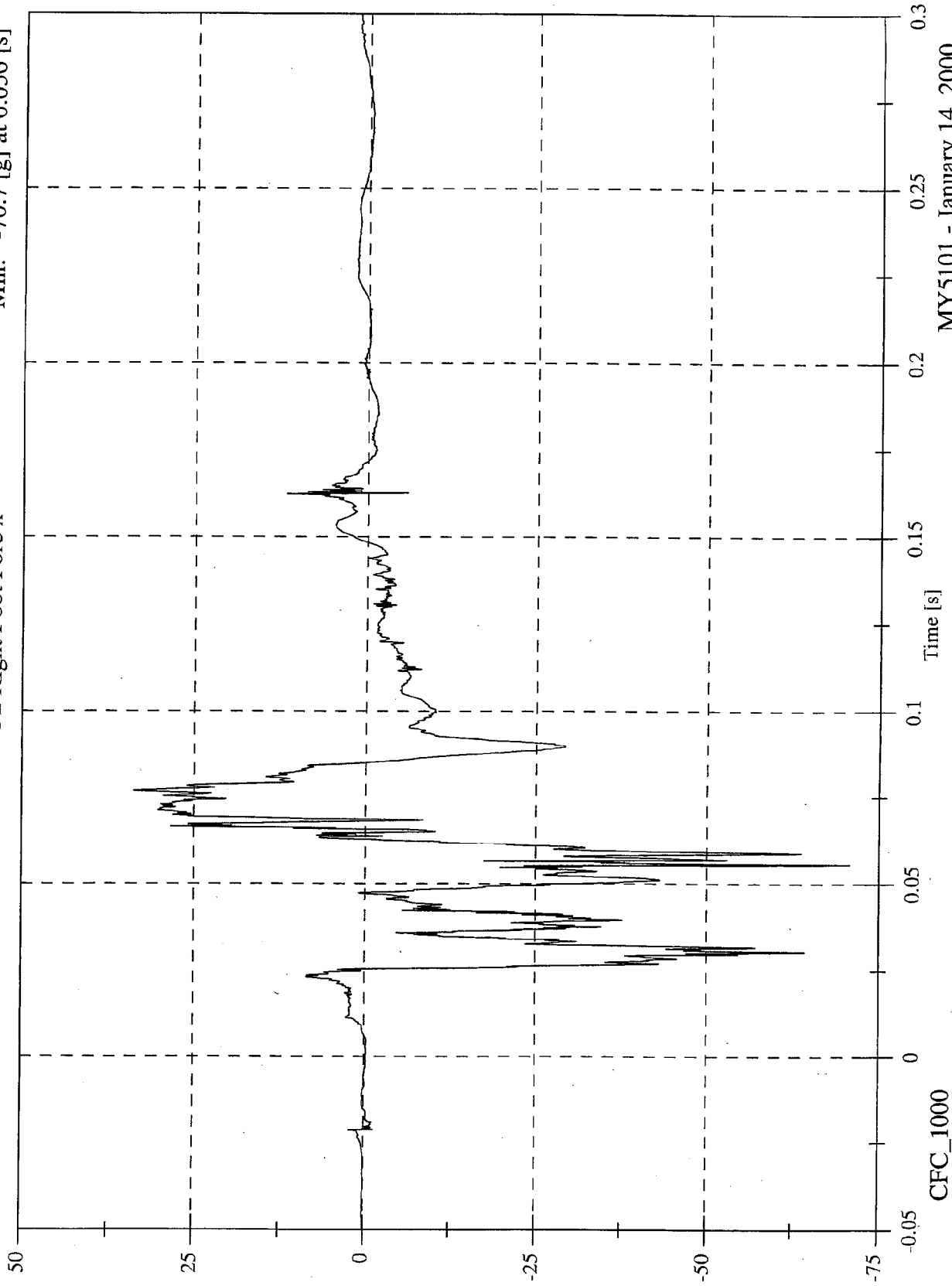
MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 33.8 [g] at 0.077 [s]

Min: -70.7 [g] at 0.056 [s]

P2 Right Foot Fore x

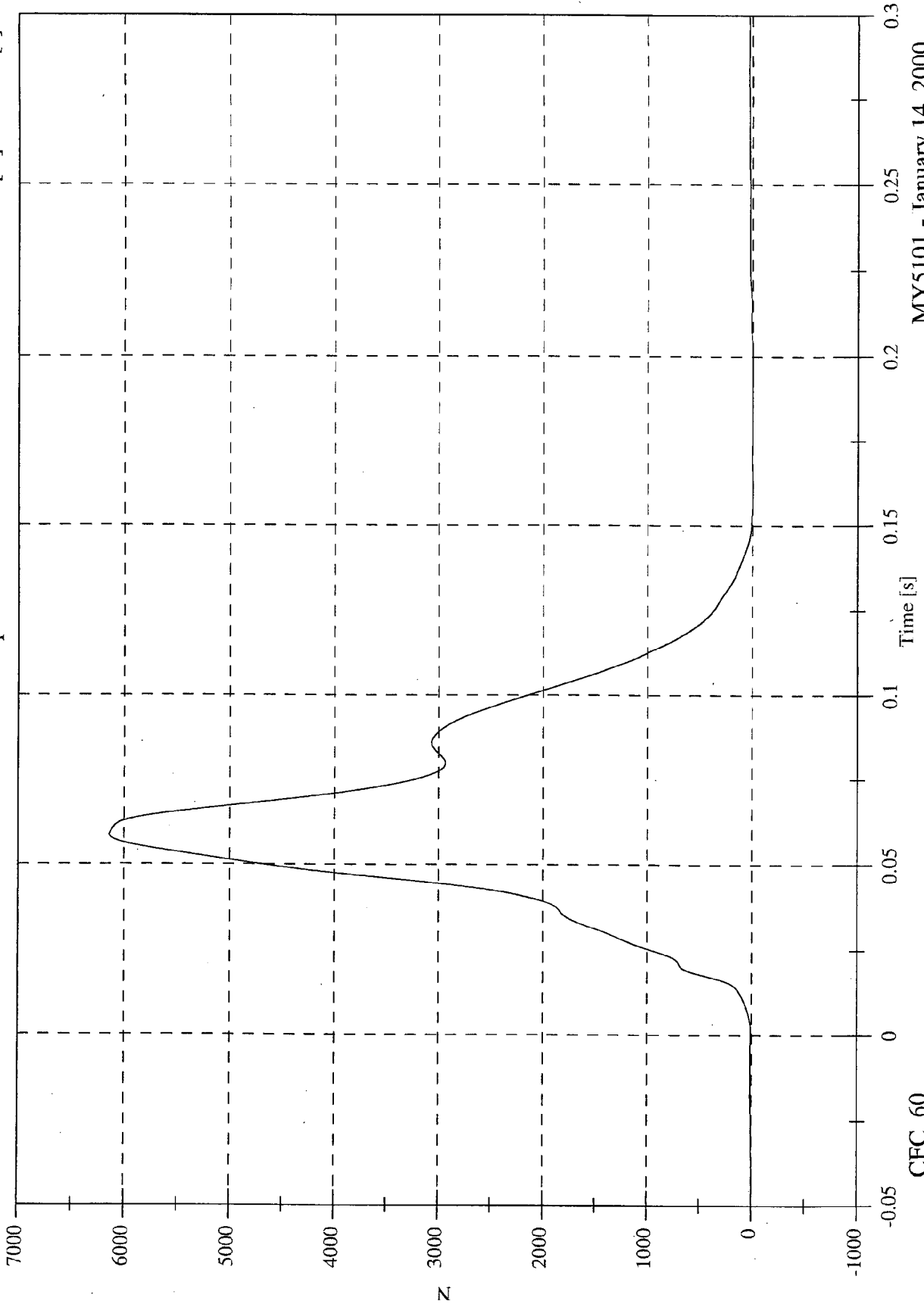


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 6141.5 [N] at 0.059 [s]
Min: -5.1 [N] at 0.160 [s]

P2 Lap Belt Force

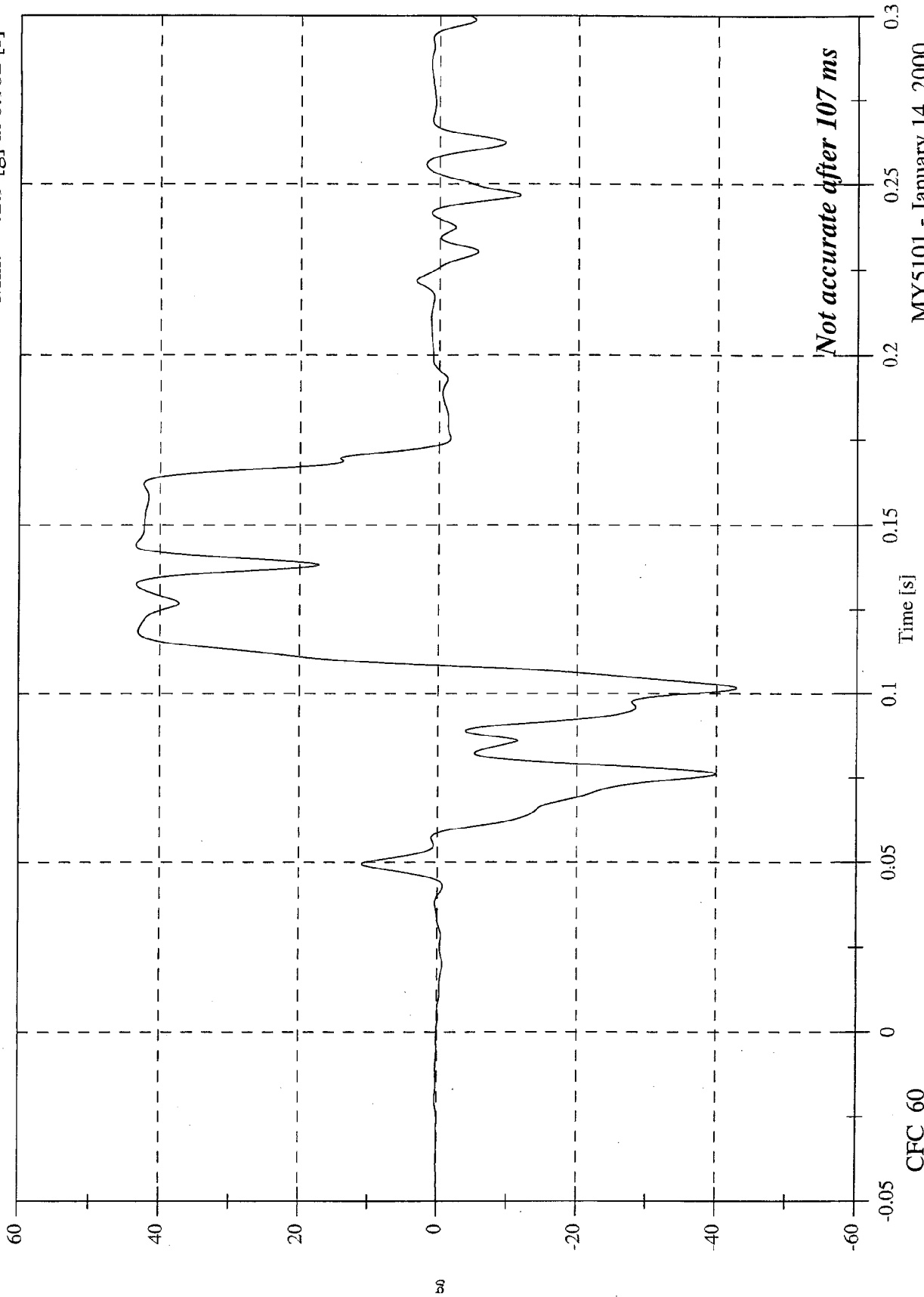


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 43.5 [g] at 0.144 [s]
Min: -42.9 [g] at 0.102 [s]

Left Rear #1x



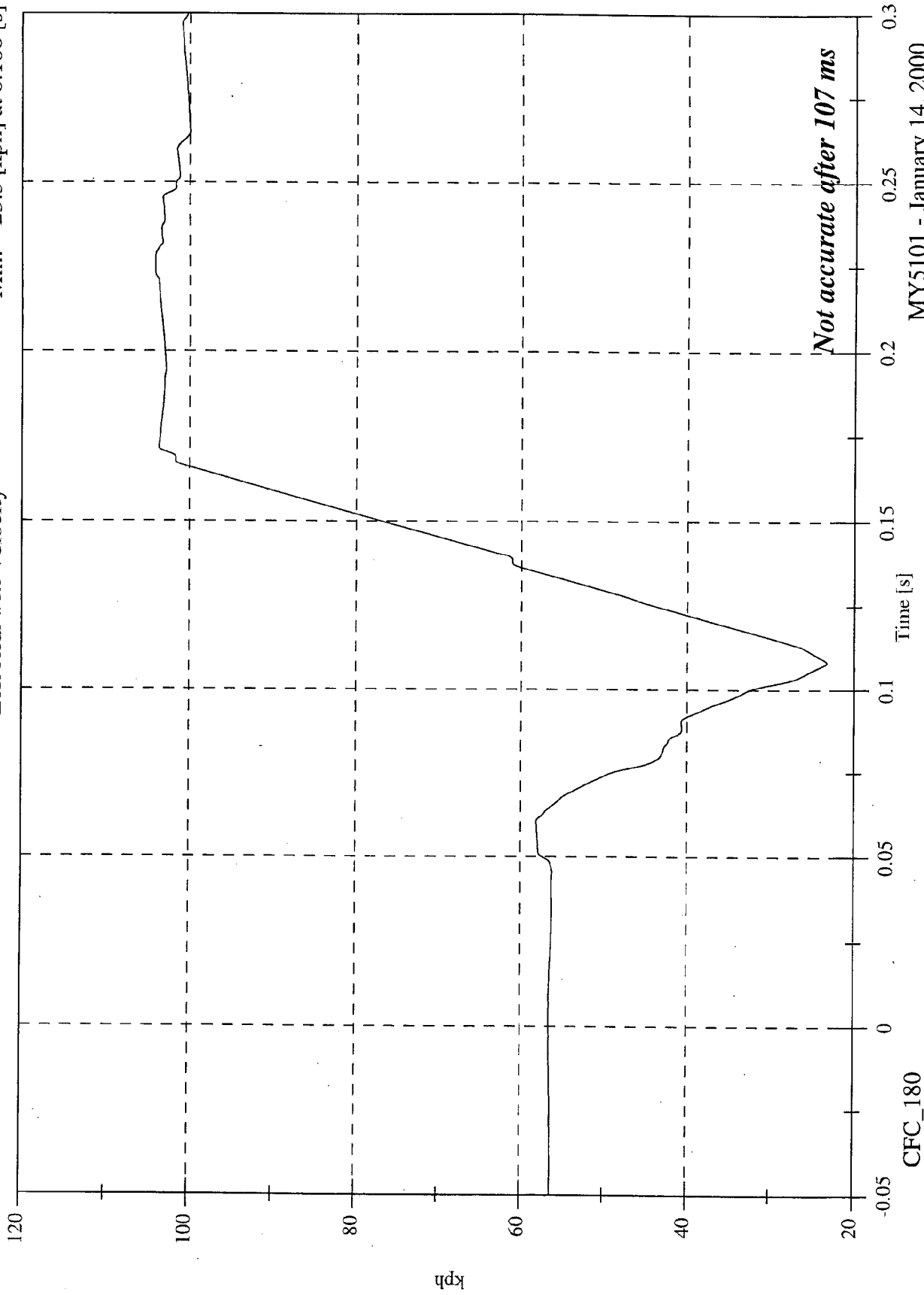
Not accurate after 107 ms

MYS5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 104.1 [kph] at 0.228 [s]
Min: 23.3 [kph] at 0.108 [s]

Left Rear #1x Velocity



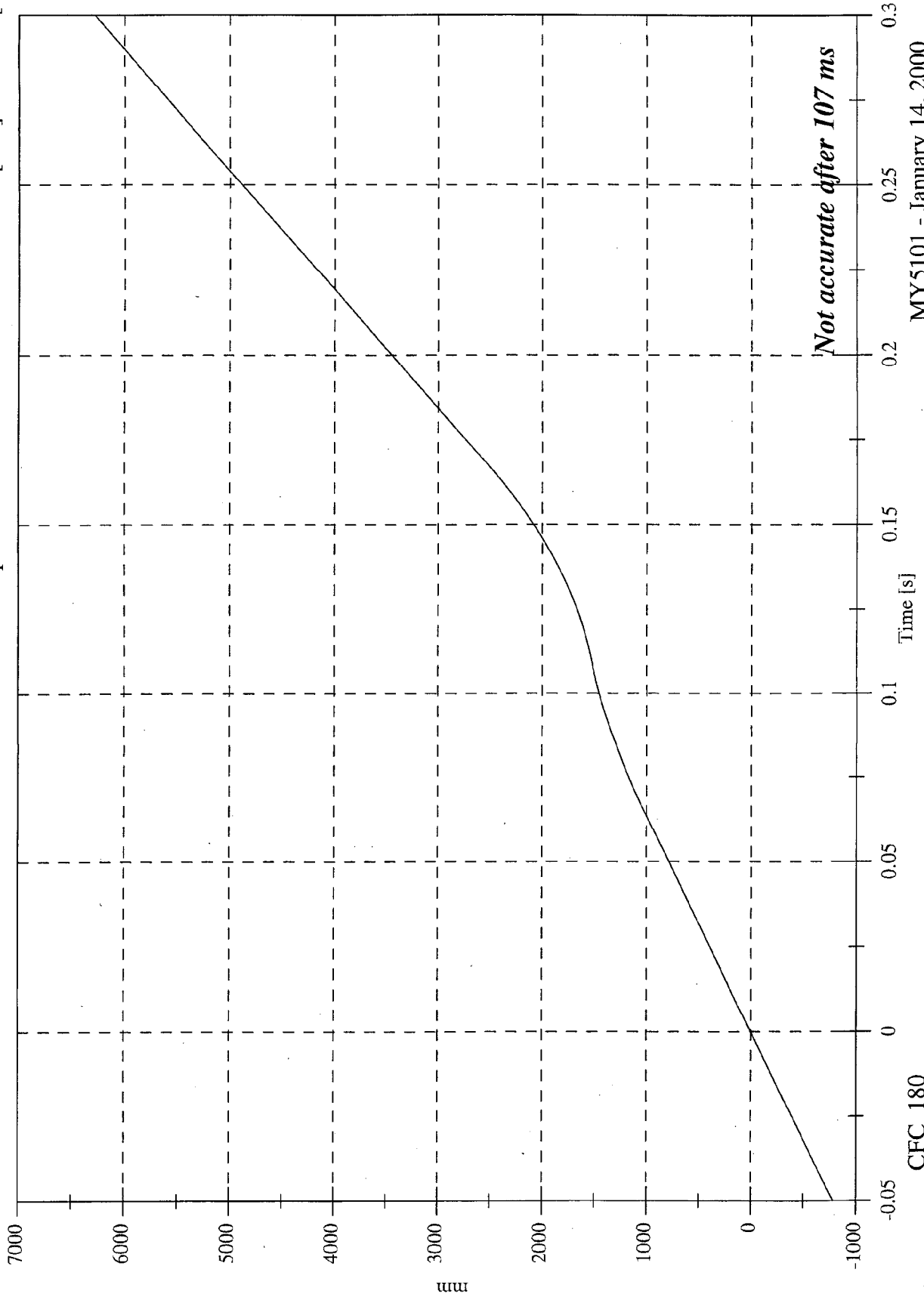
Not accurate after 107 ms

MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Left Rear #1x Displacement

Max: 6280.4 [mm] at 0.300 [s]
Min: -783.4 [mm] at -0.050 [s]



Not accurate after 107 ms

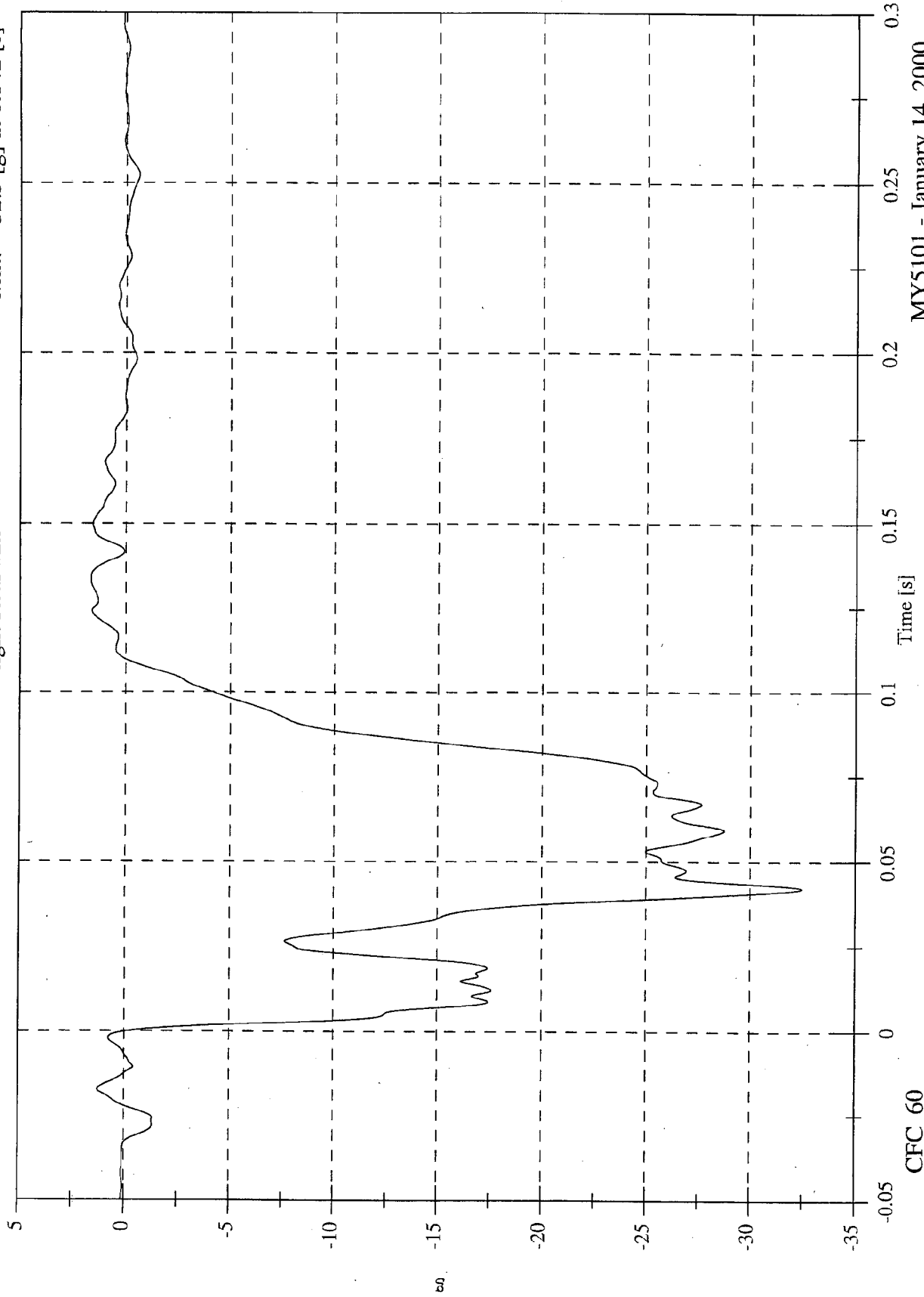
MY5101 - January 14, 2000

CFC_180

NCAP Test #9 - 2000 Toyota Camry

Max: 1.7 [g] at 0.134 [s]
Min: -32.5 [g] at 0.042 [s]

Right Rear #2x



CFC_60

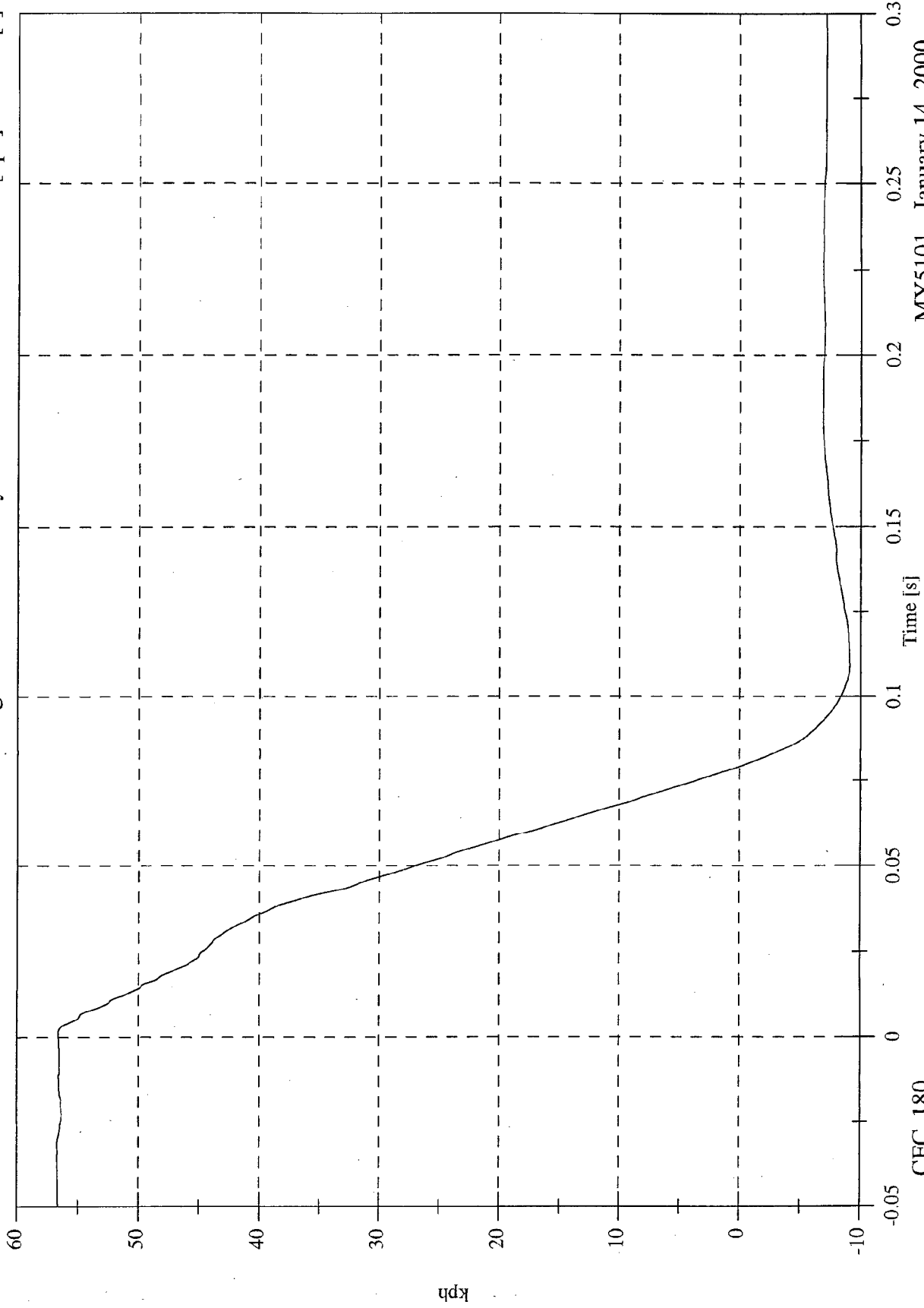
Time [s]

MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 56.7 [kph] at -0.031 [s]
Min: -9.1 [kph] at 0.109 [s]

Right Rear #2x Velocity



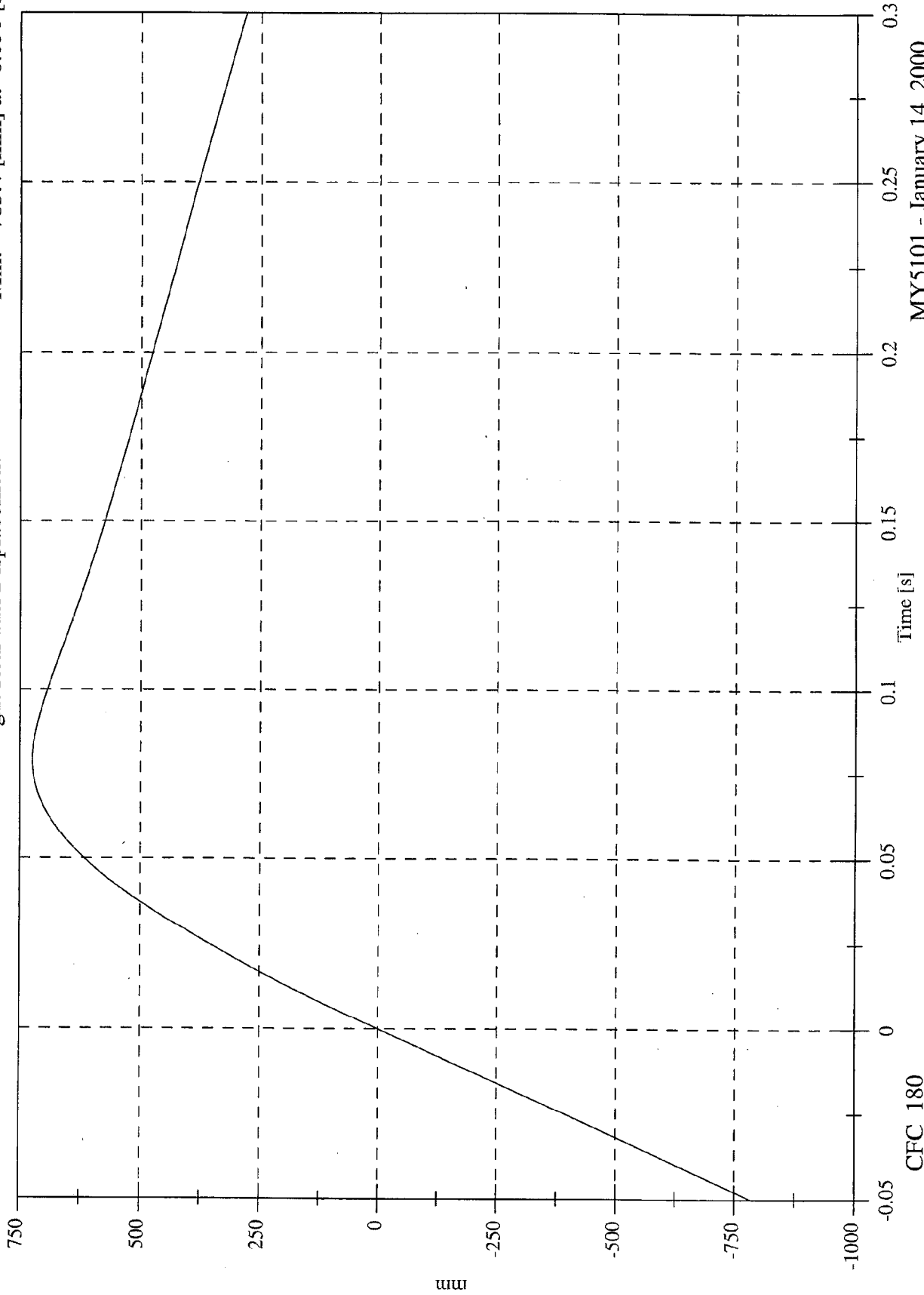
MY5101 - January 14, 2000

CFC_180

NCAP Test #9 - 2000 Toyota Camry

Max: 724.4 [mm] at 0.079 [s]
Min: -785.4 [mm] at -0.050 [s]

Right Rear #2x Displacement

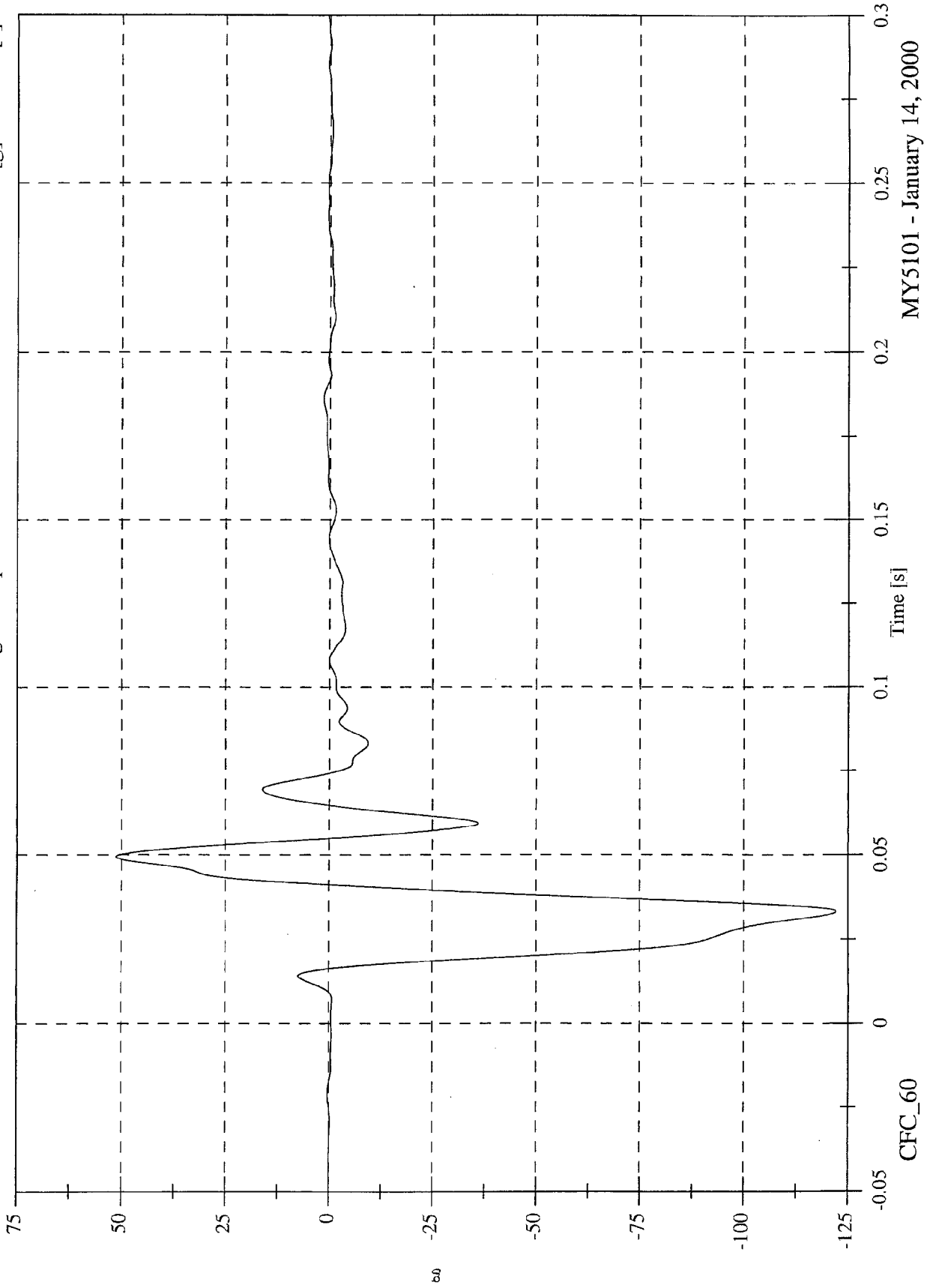


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Engine Top #3x

Max: 51.3 [g] at 0.049 [s]
Min: -122.1 [g] at 0.033 [s]

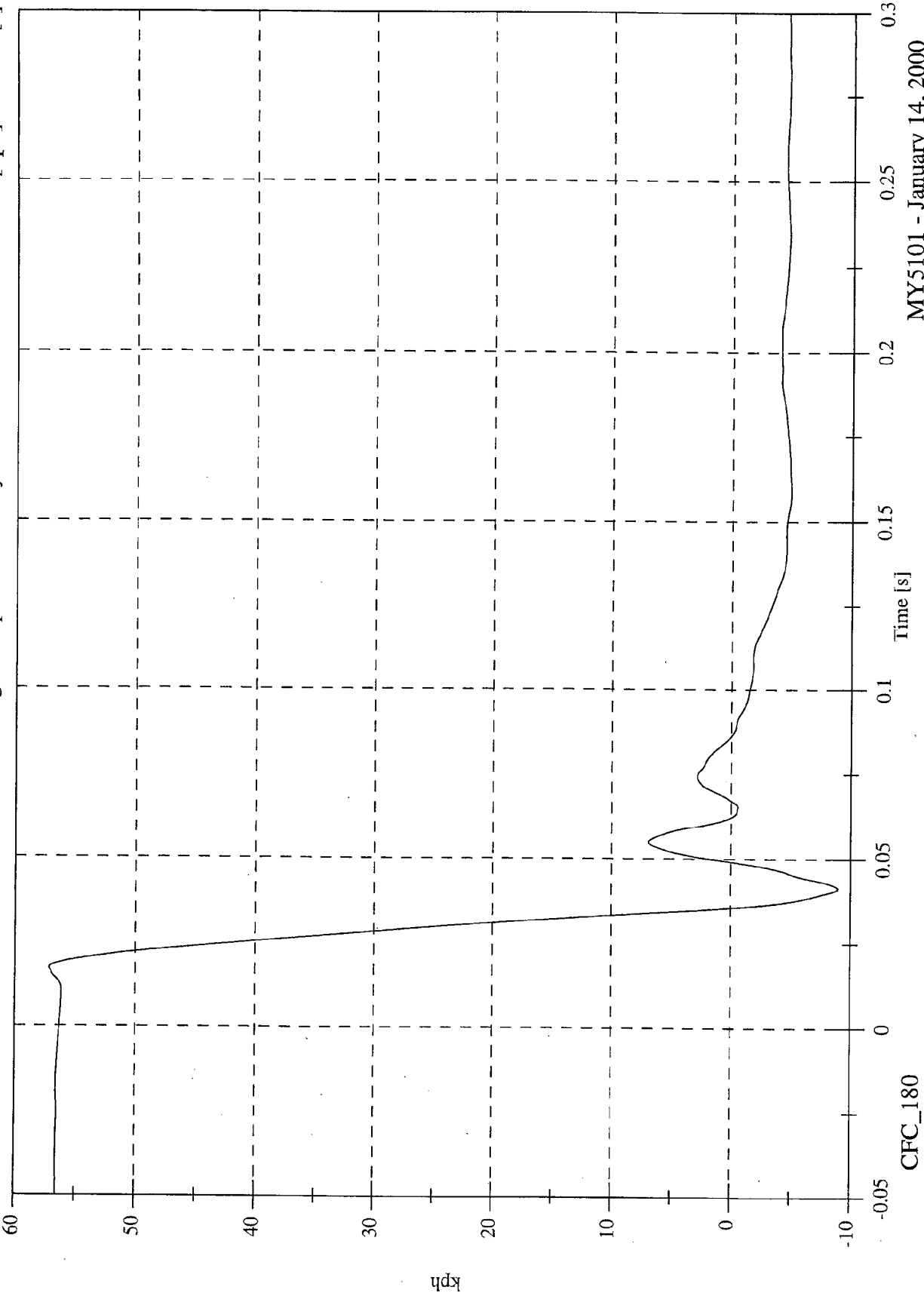


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 57.2 [kph] at 0.017 [s]
Min: -8.9 [kph] at 0.041 [s]

Engine Top #3x Velocity

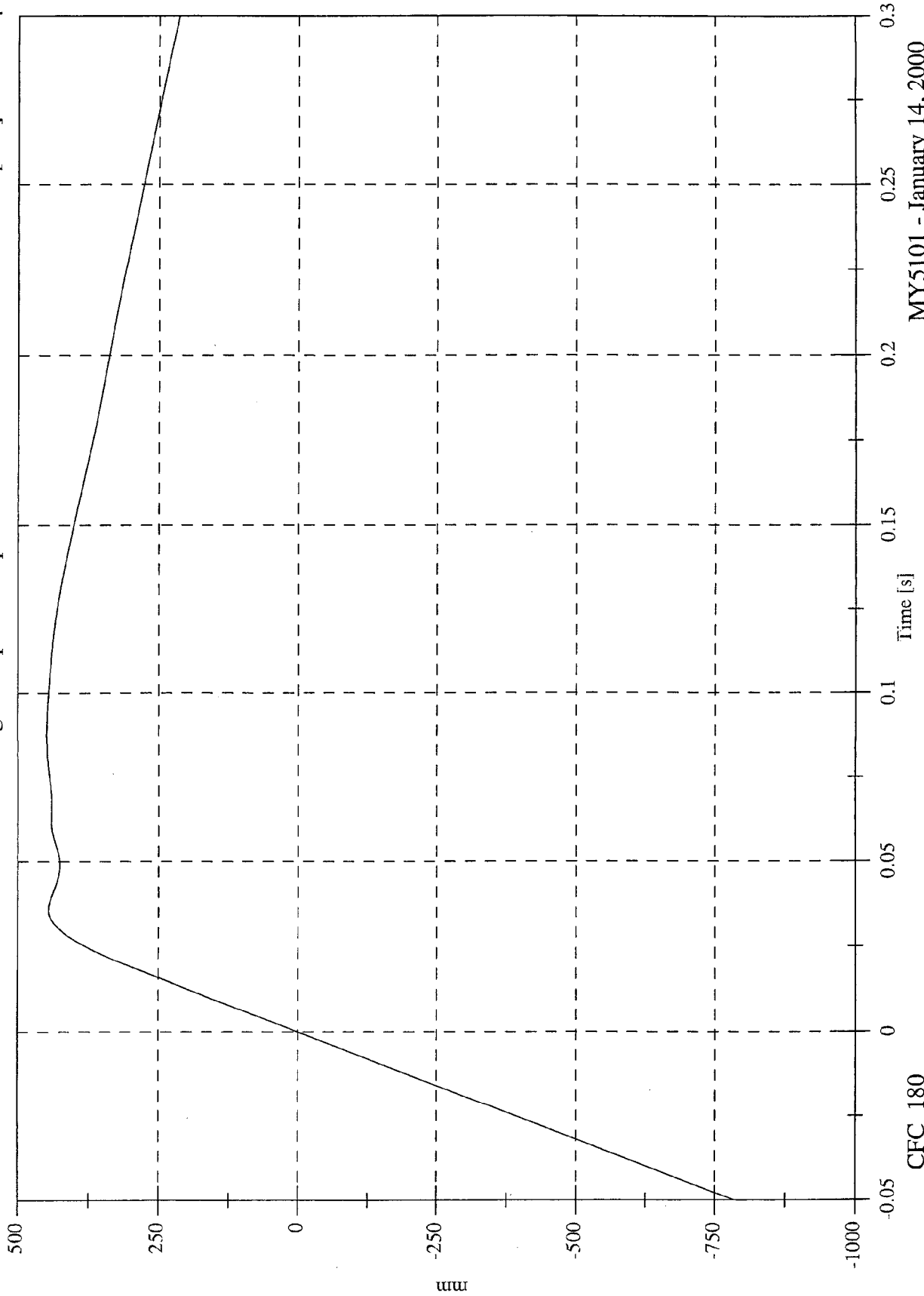


CFC_180
MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 448.6 [mm] at 0.086 [s]
Min: -785.0 [mm] at -0.050 [s]

Engine Top #3x Displacement

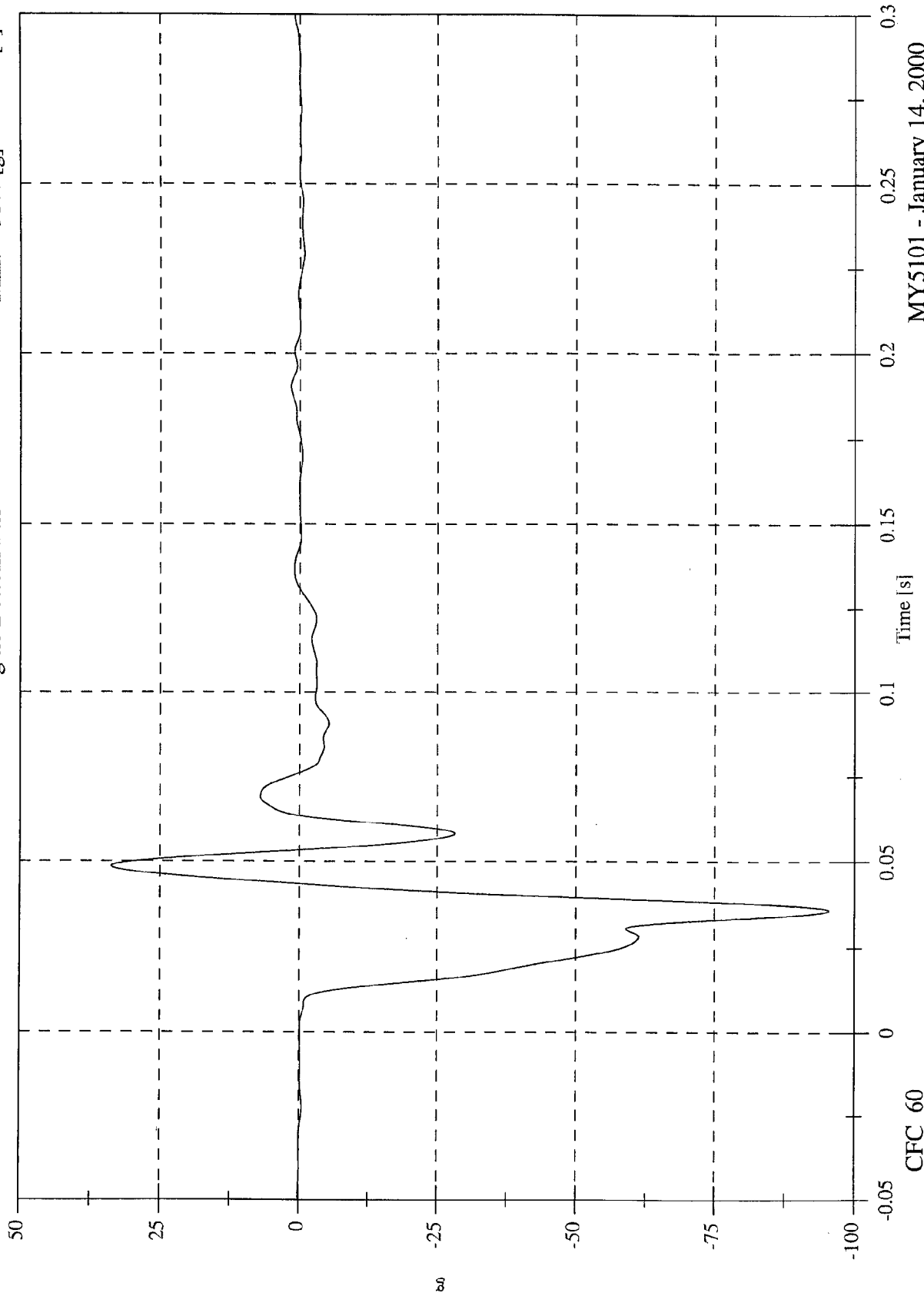


CFC_180
MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 33.7 [g] at 0.049 [s]
Min: -95.4 [g] at 0.036 [s]

Engine Bottom #4x



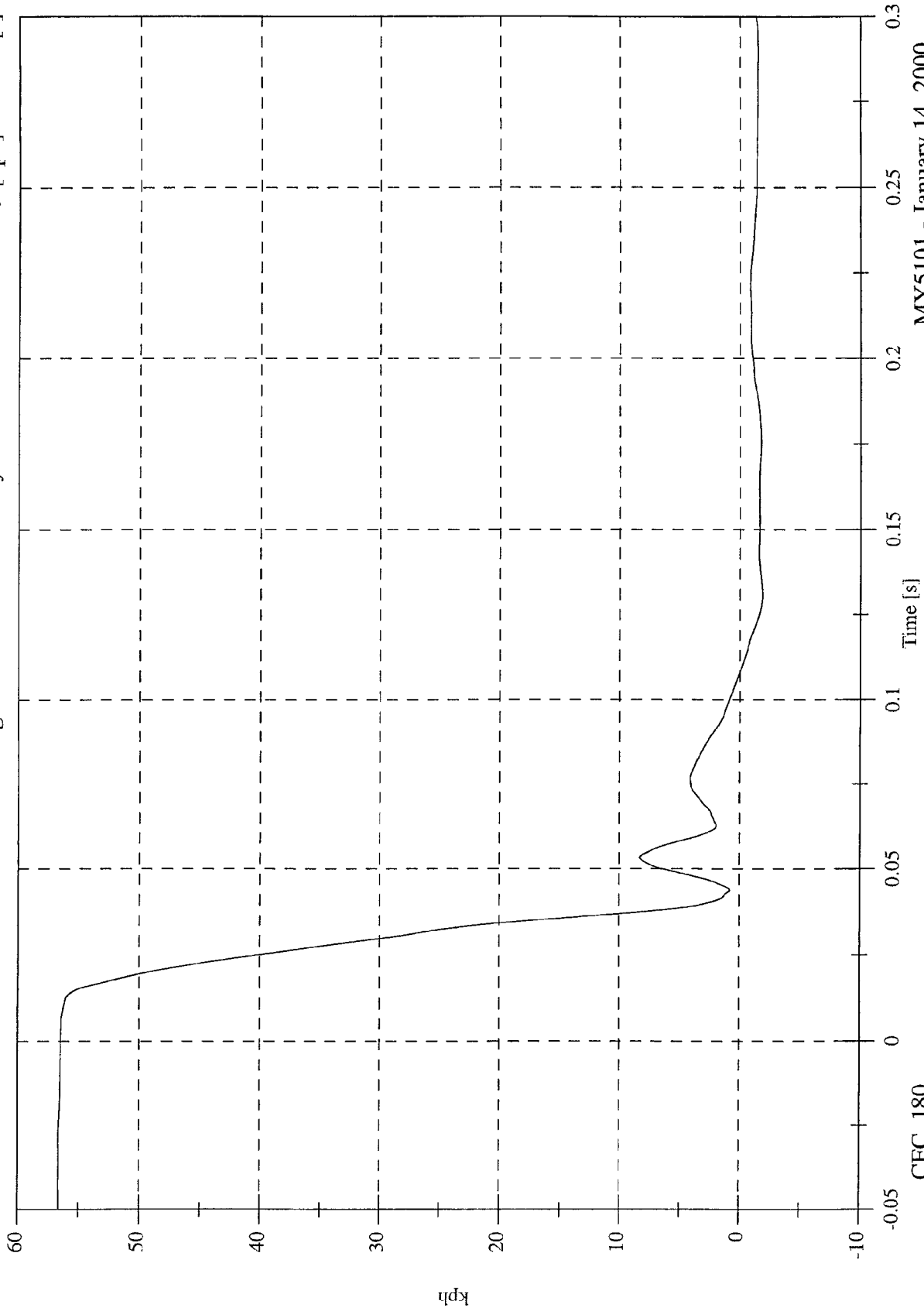
MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Engine Bottom #4x Velocity

Max: 56.7 [kph] at -0.029 [s]

Min: -1.9 [kph] at 0.131 [s]



MY5101 - January 14, 2000

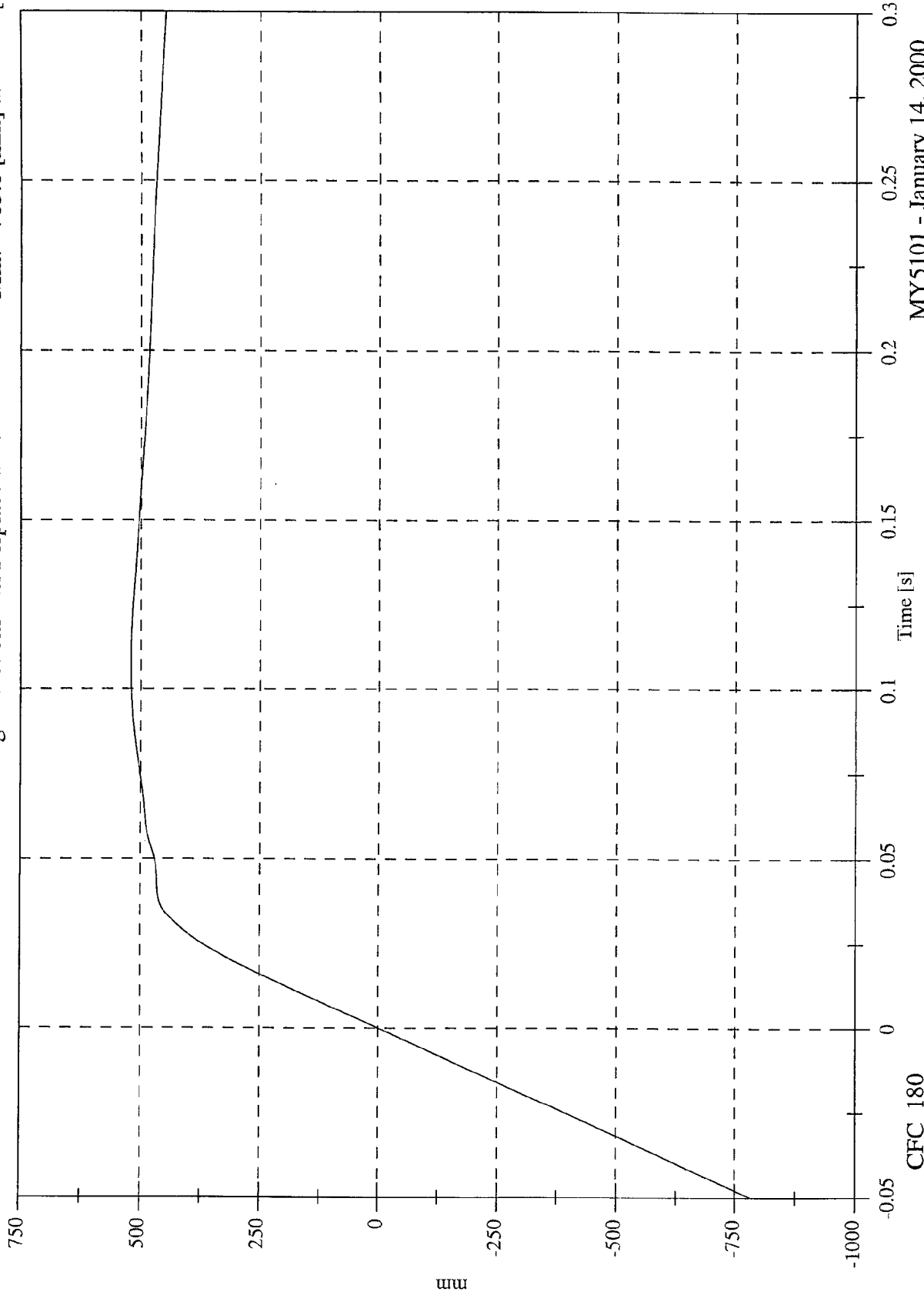
CFC_180

NCAP Test #9 - 2000 Toyota Camry

Engine Bottom #4x Displacement

Max: 520.1 [mm] at 0.108 [s]

Min: -785.8 [mm] at -0.050 [s]



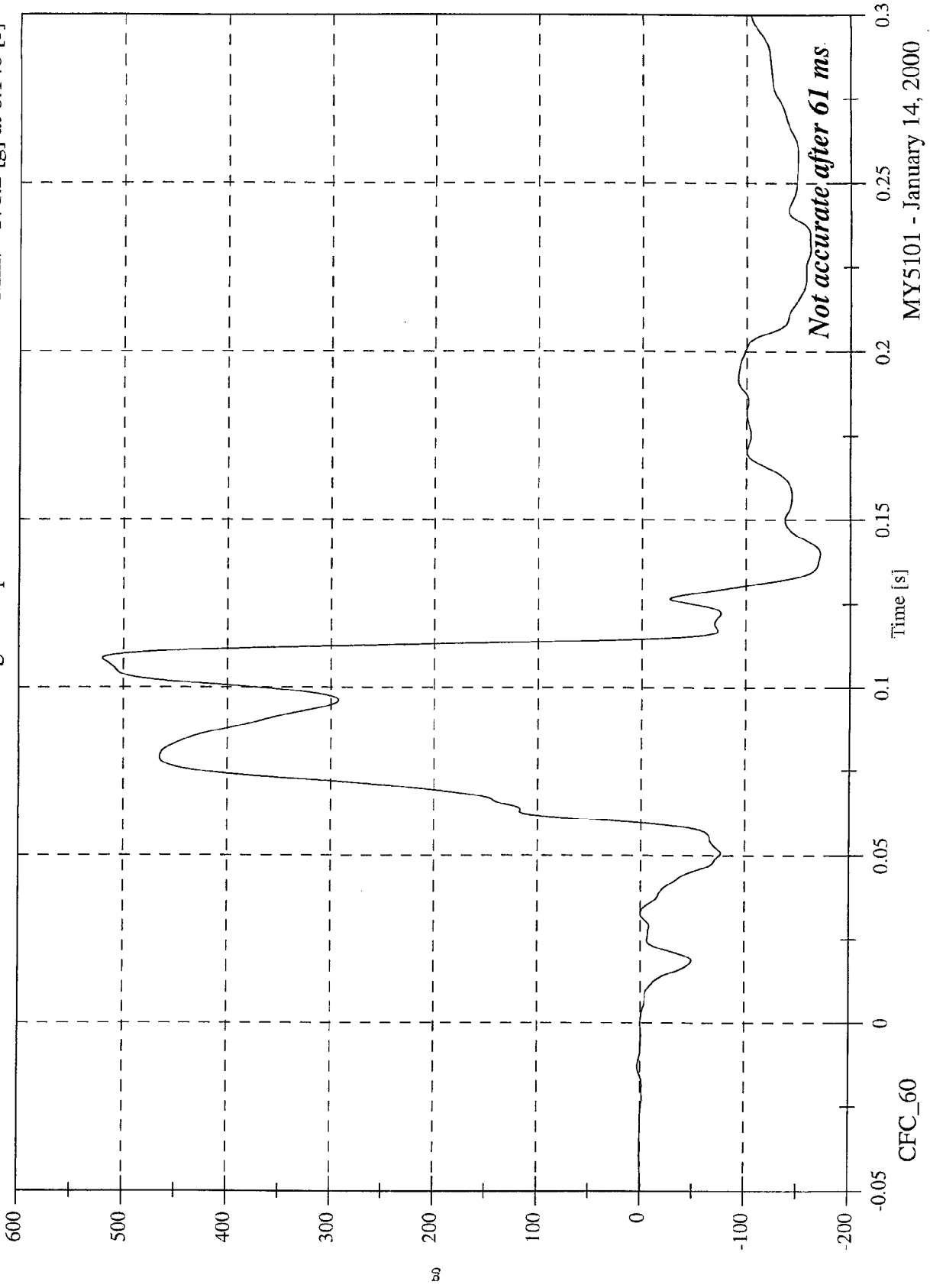
CFC_180

MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Right Caliper #5x

Max: 519.9 [g] at 0.109 [s]
Min: -171.2 [g] at 0.140 [s]

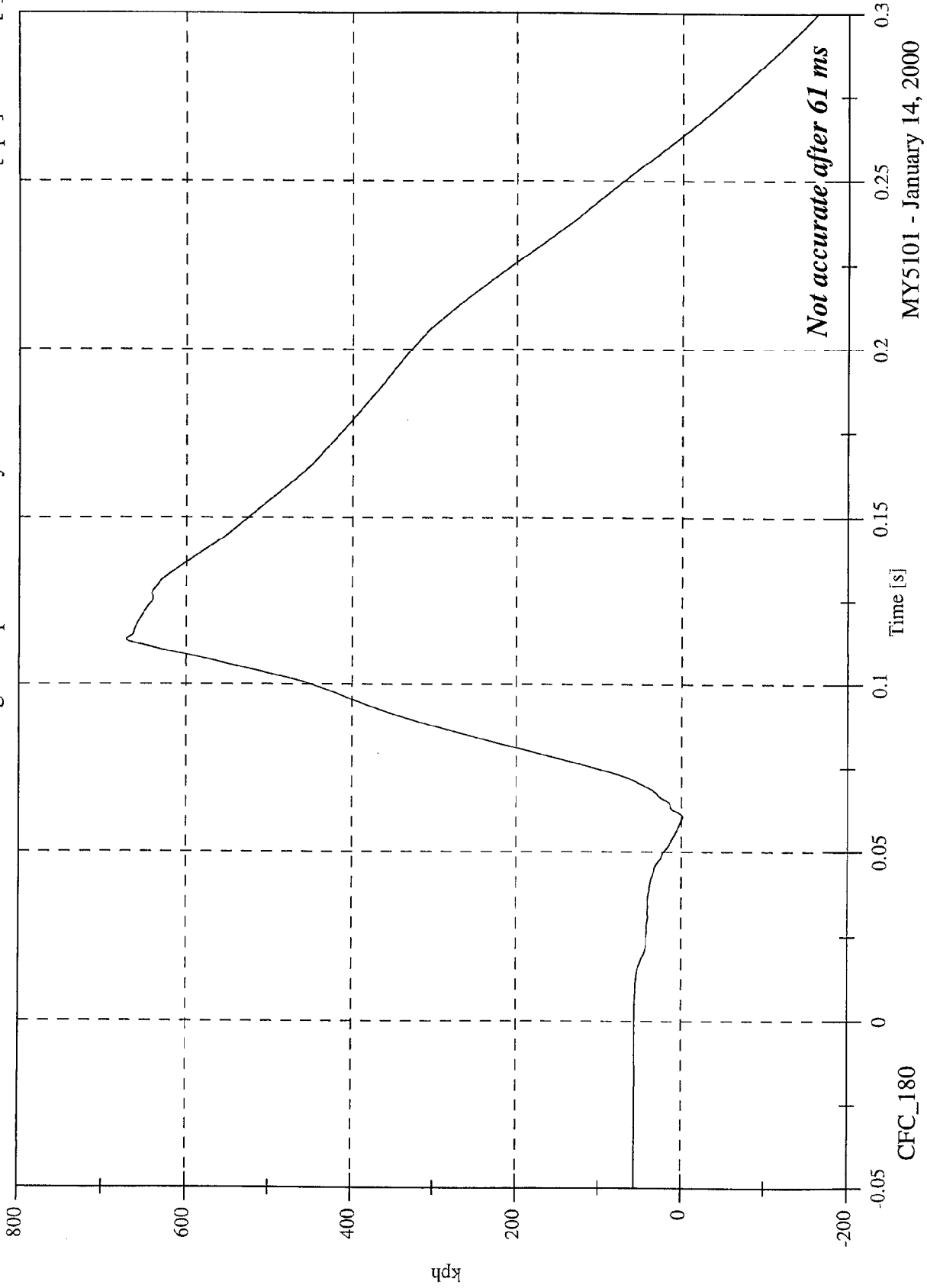


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 672.1 [kph] at 0.113 [s]
Min: -162.2 [kph] at 0.300 [s]

Right Caliper #5x Velocity



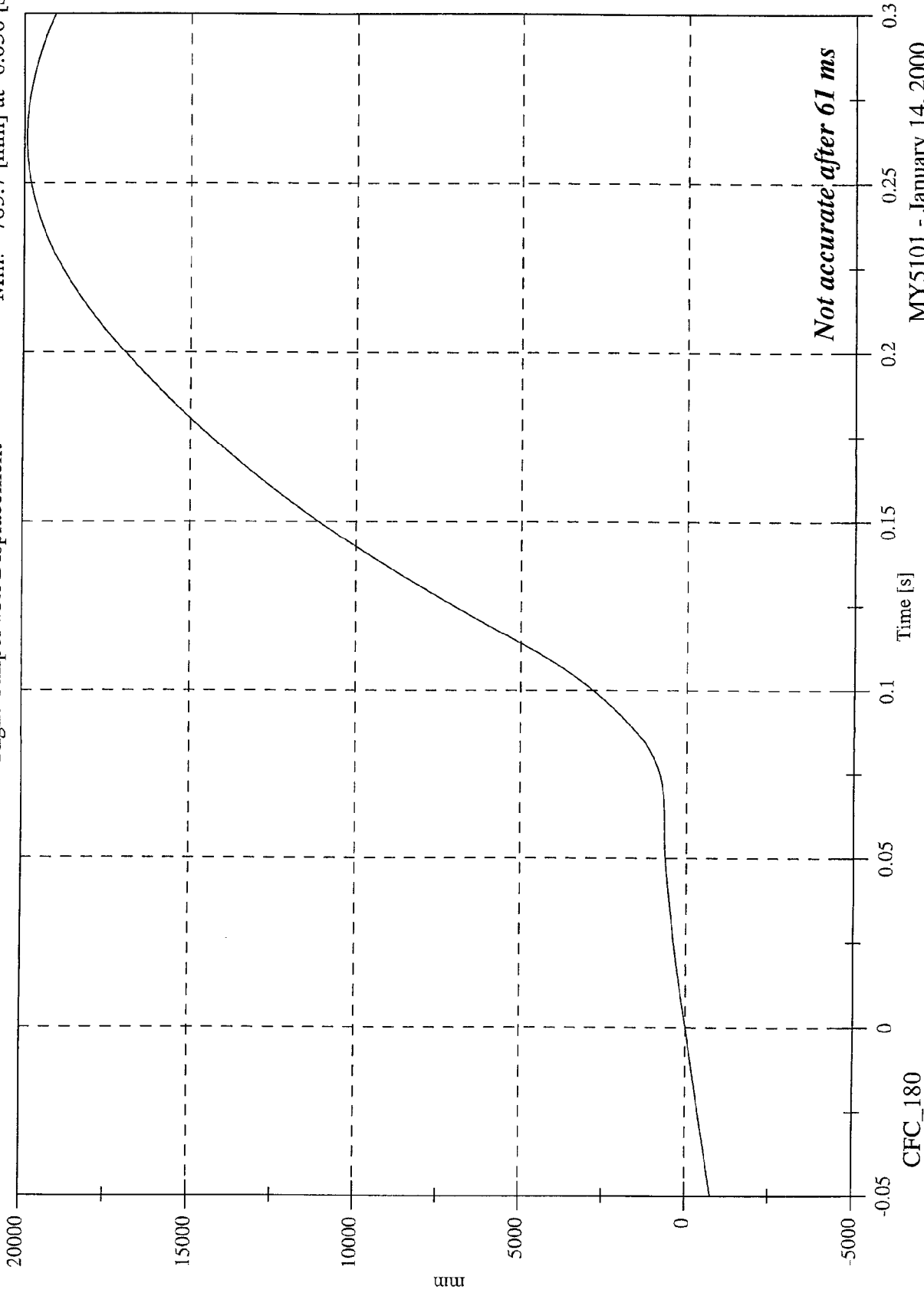
Not accurate after 61 ms

MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Right Caliper #5x Displacement

Max: 19916.0 [mm] at 0.263 [s]
Min: -783.7 [mm] at -0.050 [s]



Not accurate after 61 ms

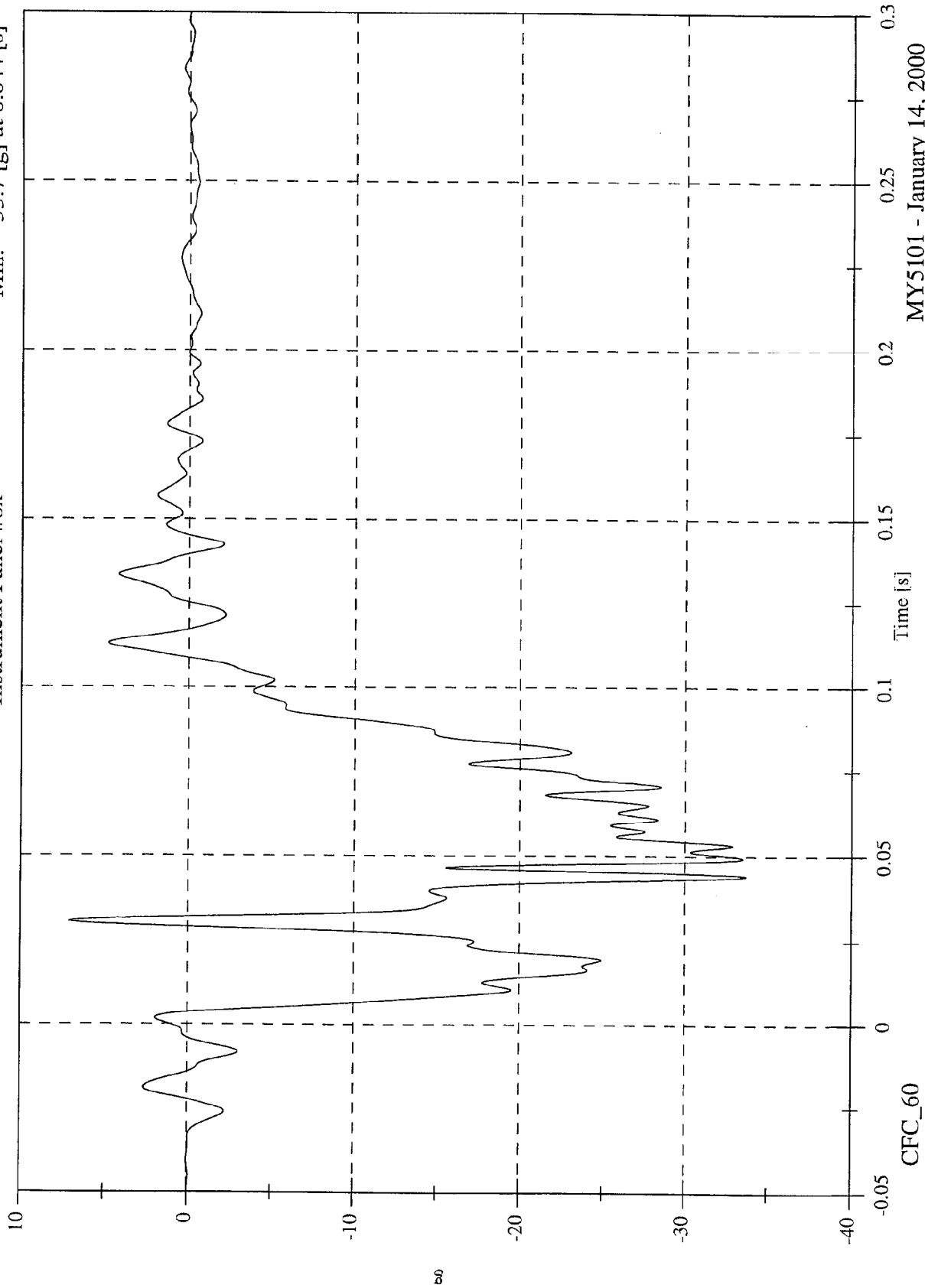
MY5101 - January 14, 2000

CFC_180

NCAP Test #9 - 2000 Toyota Camry

Max: 7.1 [g] at 0.031 [s]
Min: -33.7 [g] at 0.044 [s]

Instrument Panel #6x



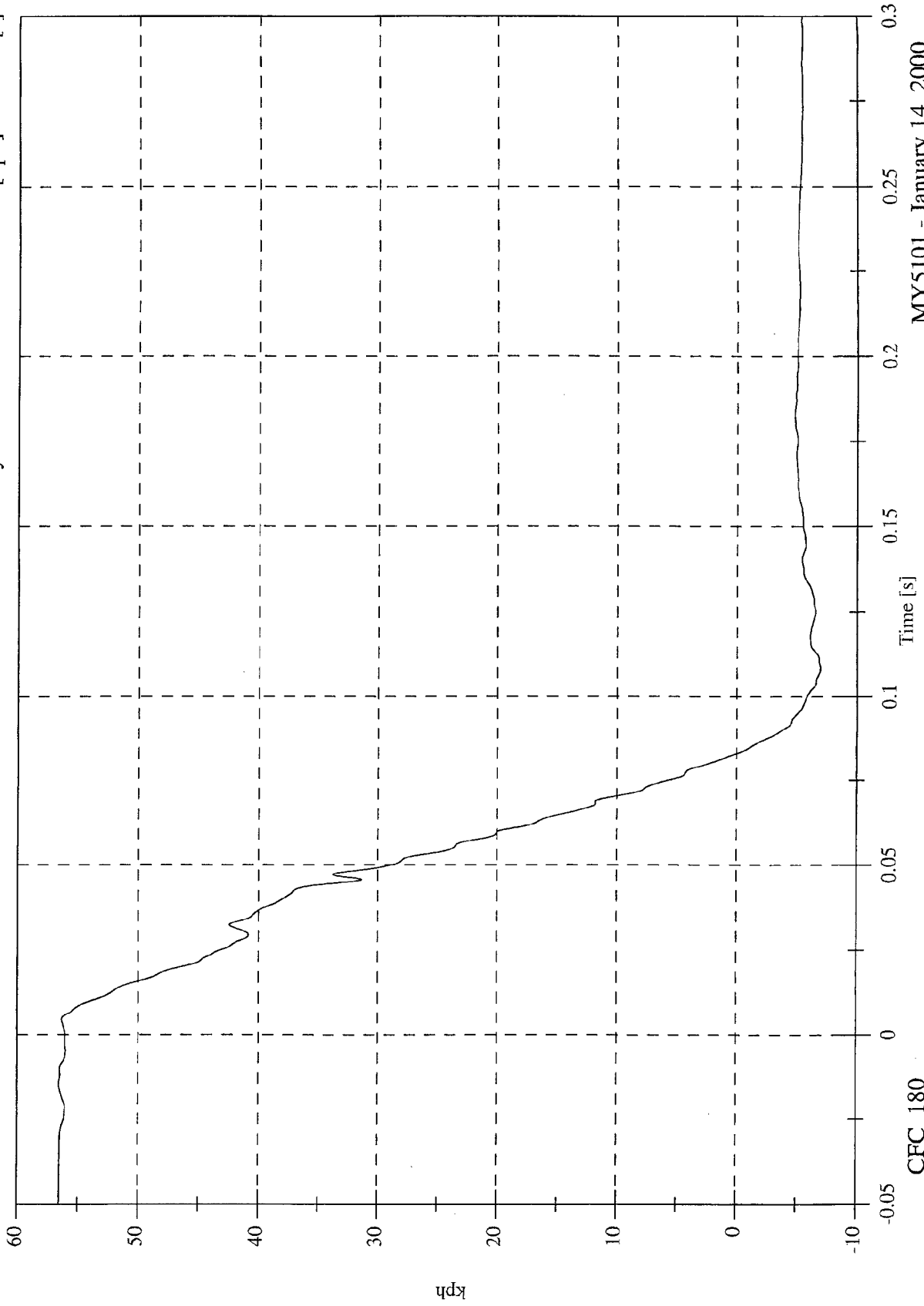
MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Instrument Panel #6x Velocity

Max: 56.5 [kph] at -0.015 [s]

Min: -7.0 [kph] at 0.108 [s]



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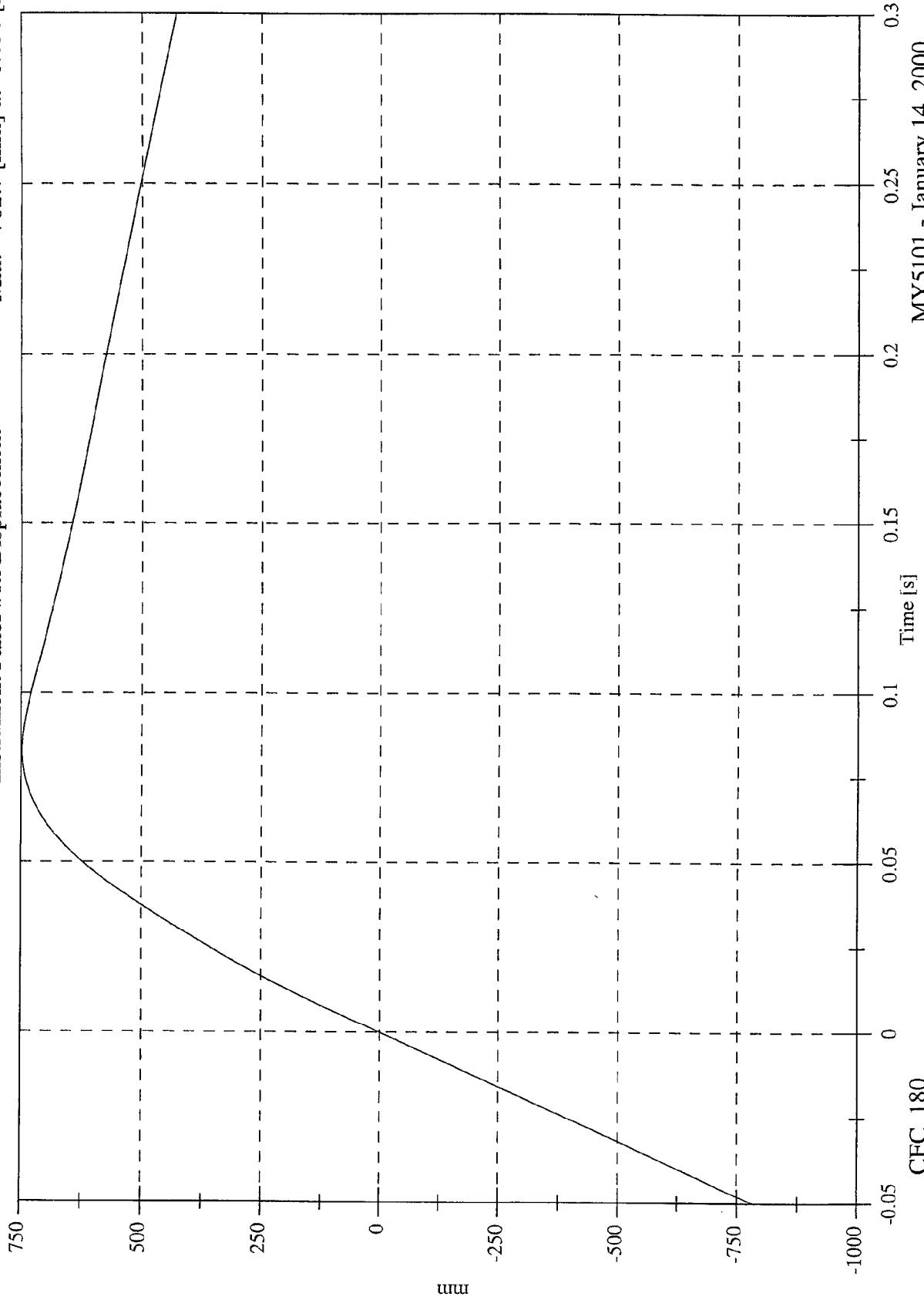
CFC_180

NCAP Test #9 - 2000 Toyota Camry

Max: 747.5 [mm] at 0.083 [s]

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

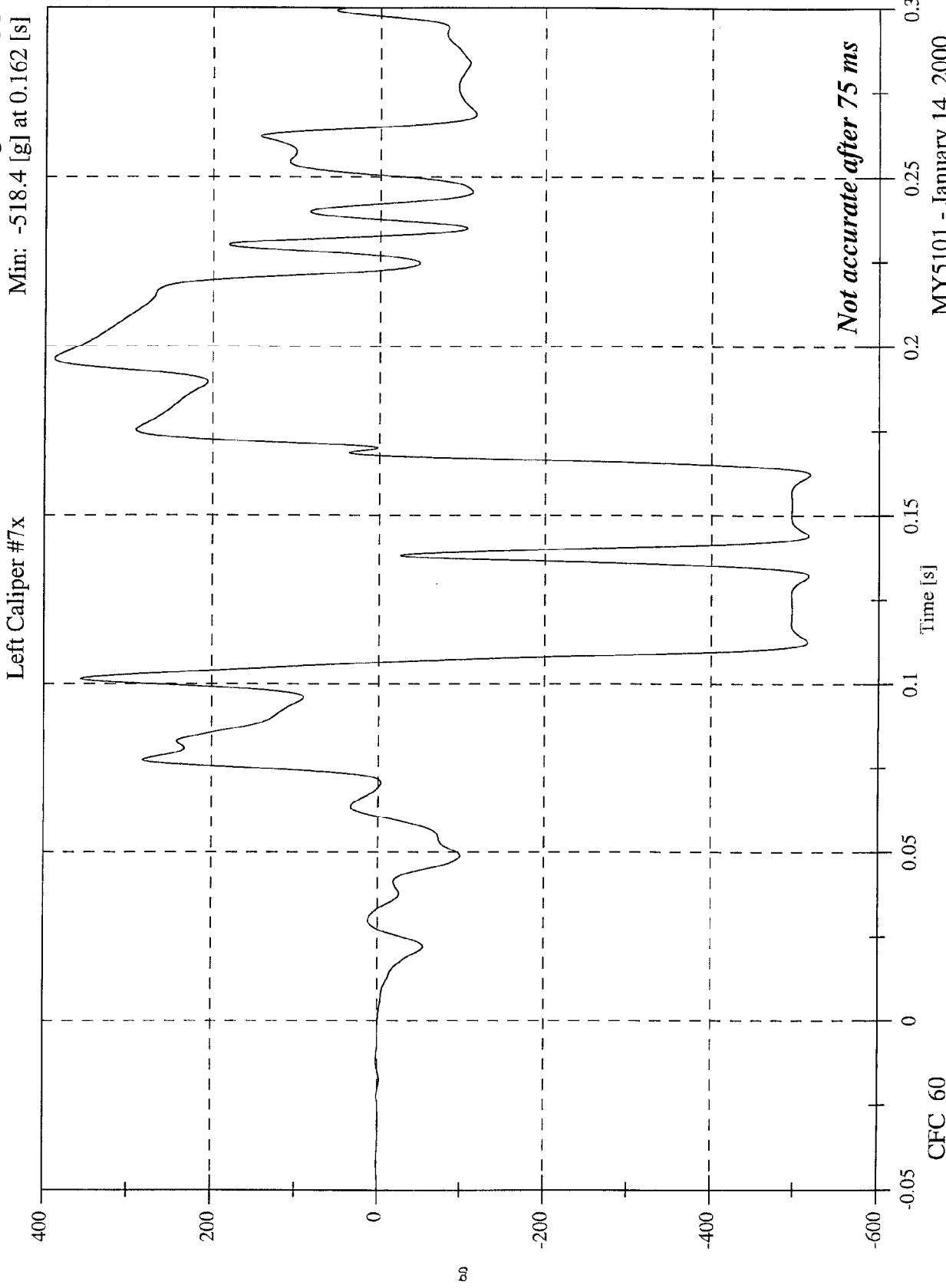
Instrument Panel #6x Displacement



MY5101 - January 14, 2000

CFC_180

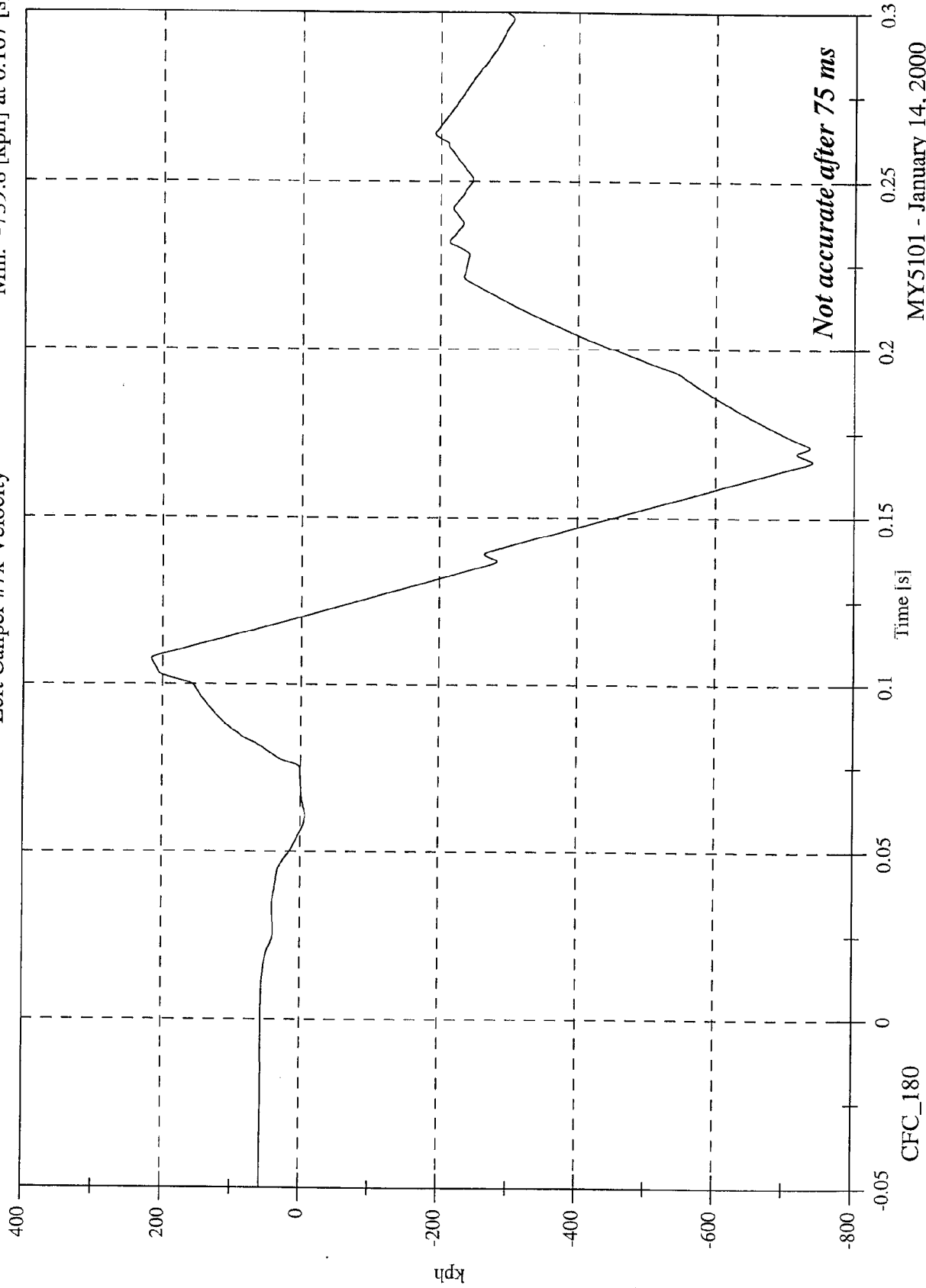
NCAP Test #9 - 2000 Toyota Camry



NCAP Test #9 - 2000 Toyota Camry

Max: 215.9 [kph] at 0.108 [s]
Min: -739.8 [kph] at 0.167 [s]

Left Caliper #7x Velocity



Not accurate after 75 ms

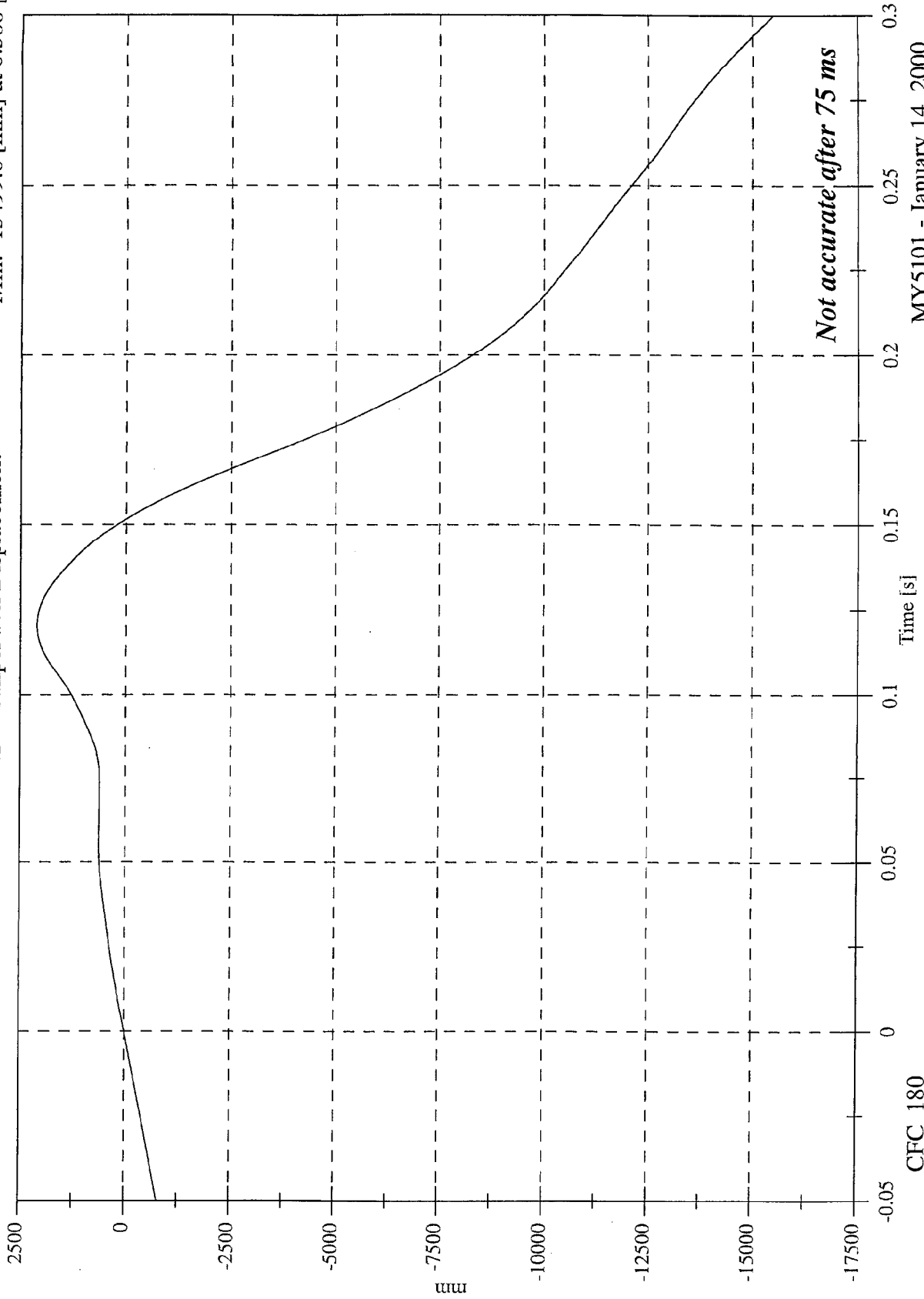
MY5101 - January 14, 2000

CFC_180

NCAP Test #9 - 2000 Toyota Camry

Left Caliper #7x Displacement

Max: 2107.7 [mm] at 0.120 [s]
Min: -15499.0 [mm] at 0.300 [s]



Not accurate after 75 ms

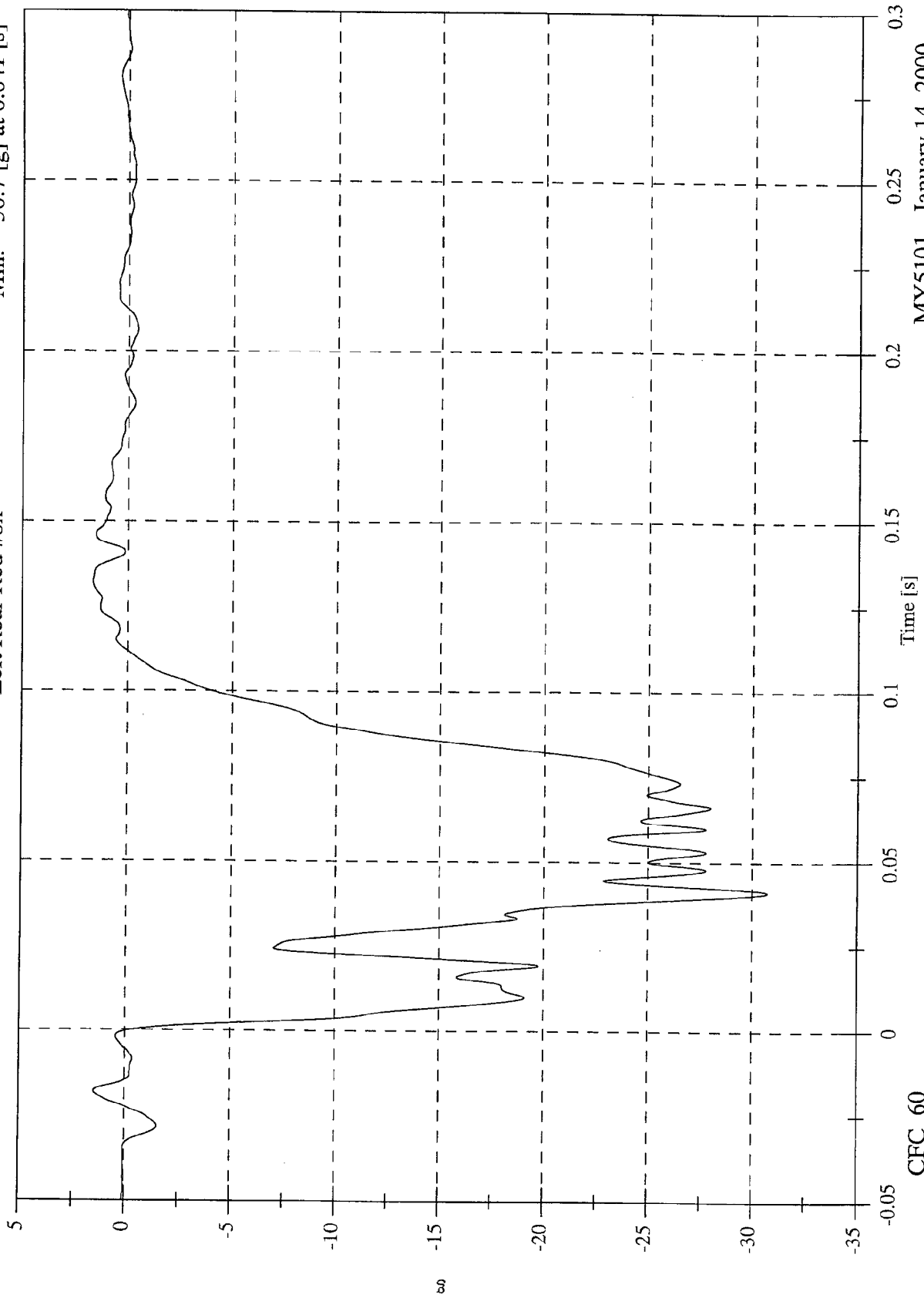
MY5101 - January 14, 2000

CFC_180

NCAP Test #9 - 2000 Toyota Camry

Max: 1.7 [g] at 0.132 [s]
Min: -30.7 [g] at 0.041 [s]

Left Rear Red #8x



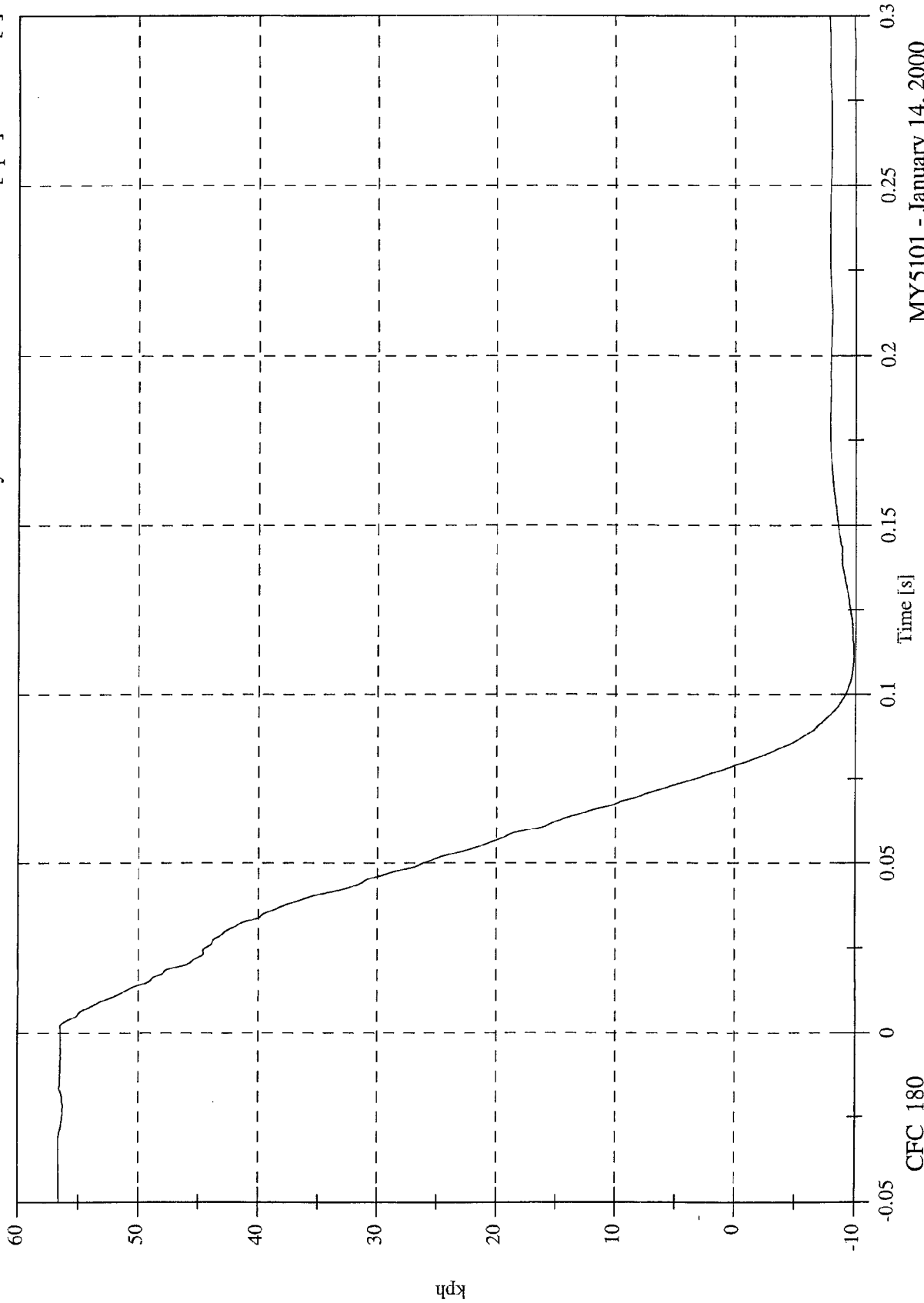
MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 56.6 [kph] at -0.031 [s]

Min: -9.8 [kph] at 0.111 [s]

Left Rear Red #8x Velocity

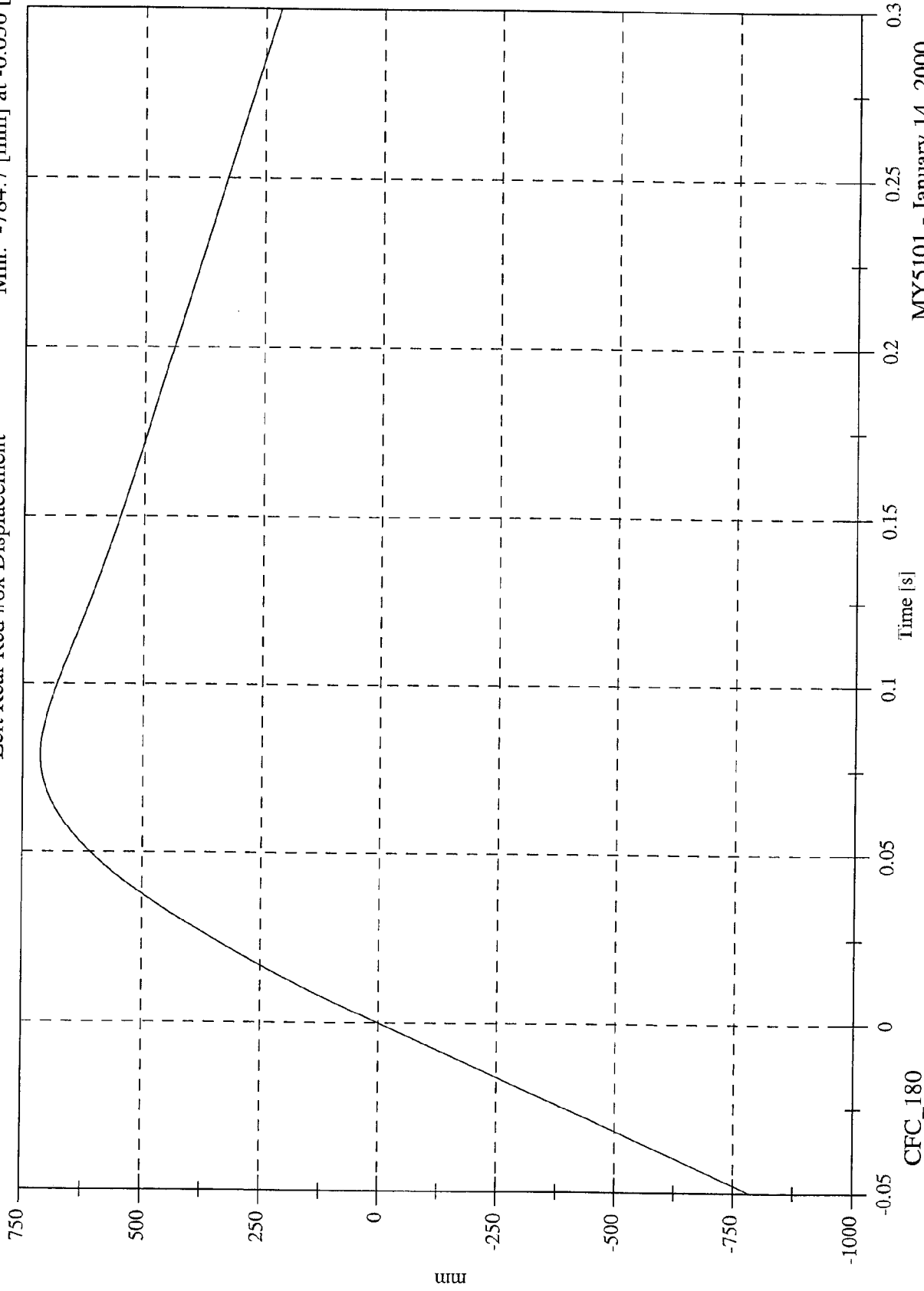


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 713.6 [mm] at 0.079 [s]
Min: -784.7 [mm] at -0.050 [s]

Left Rear Red #8x Displacement

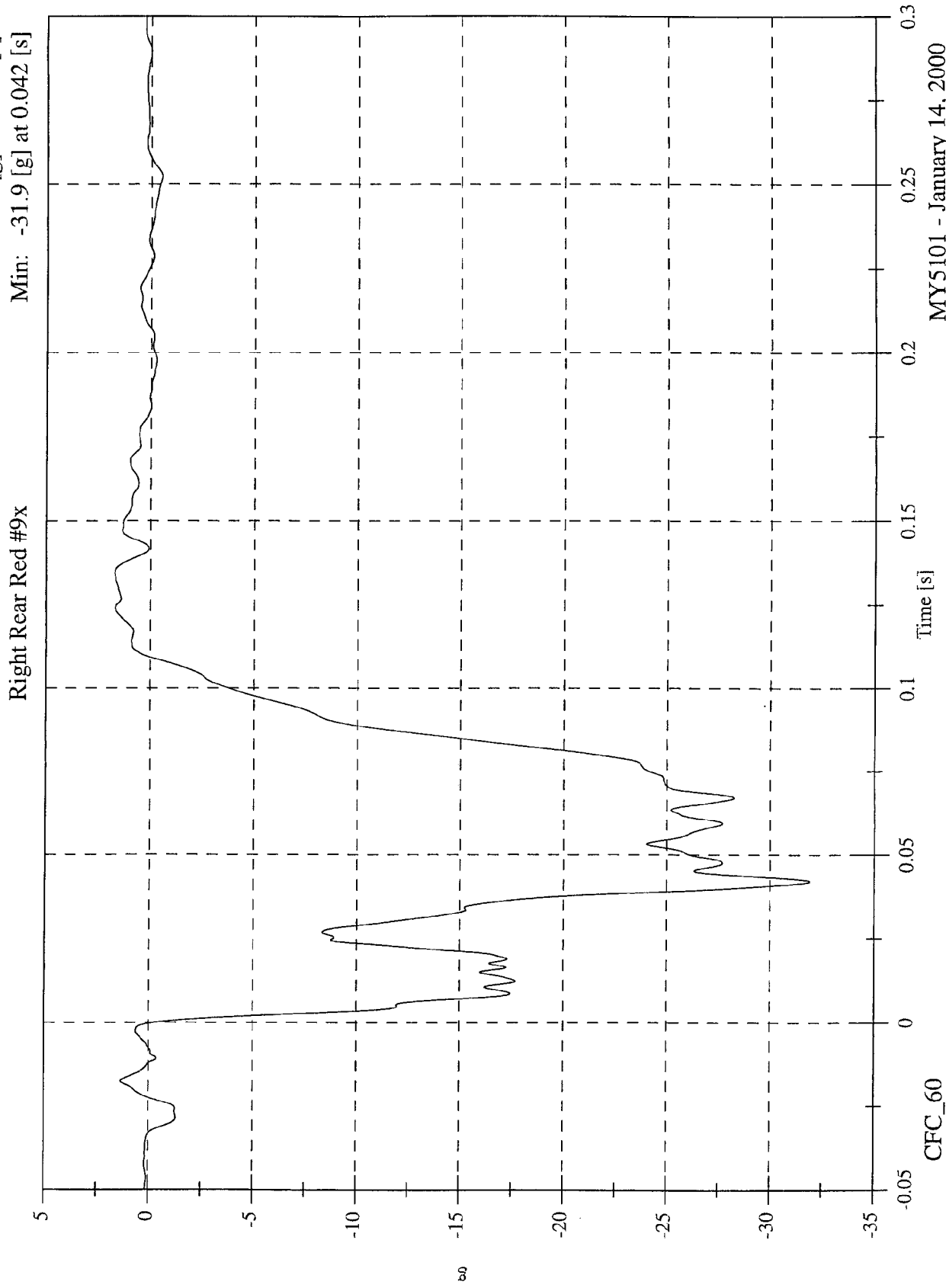


MY5101 - January 14, 2000

CFC_180

NCAP Test #9 - 2000 Toyota Camry

Max: 1.7 [g] at 0.134 [s]
Min: -31.9 [g] at 0.042 [s]



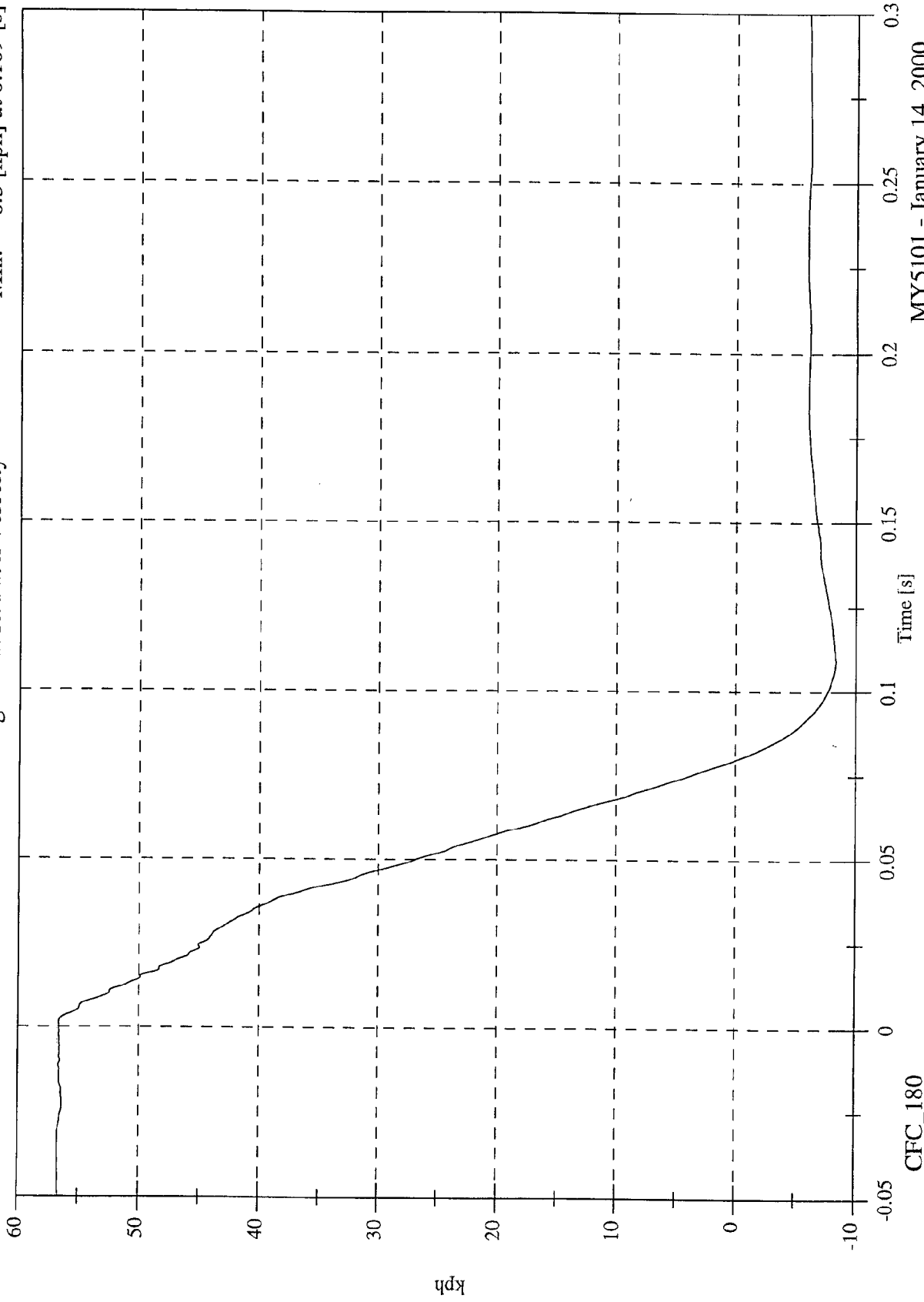
MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

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

Min: -8.3 [kph] at 0.109 [s]

Right Rear Red #9x Velocity

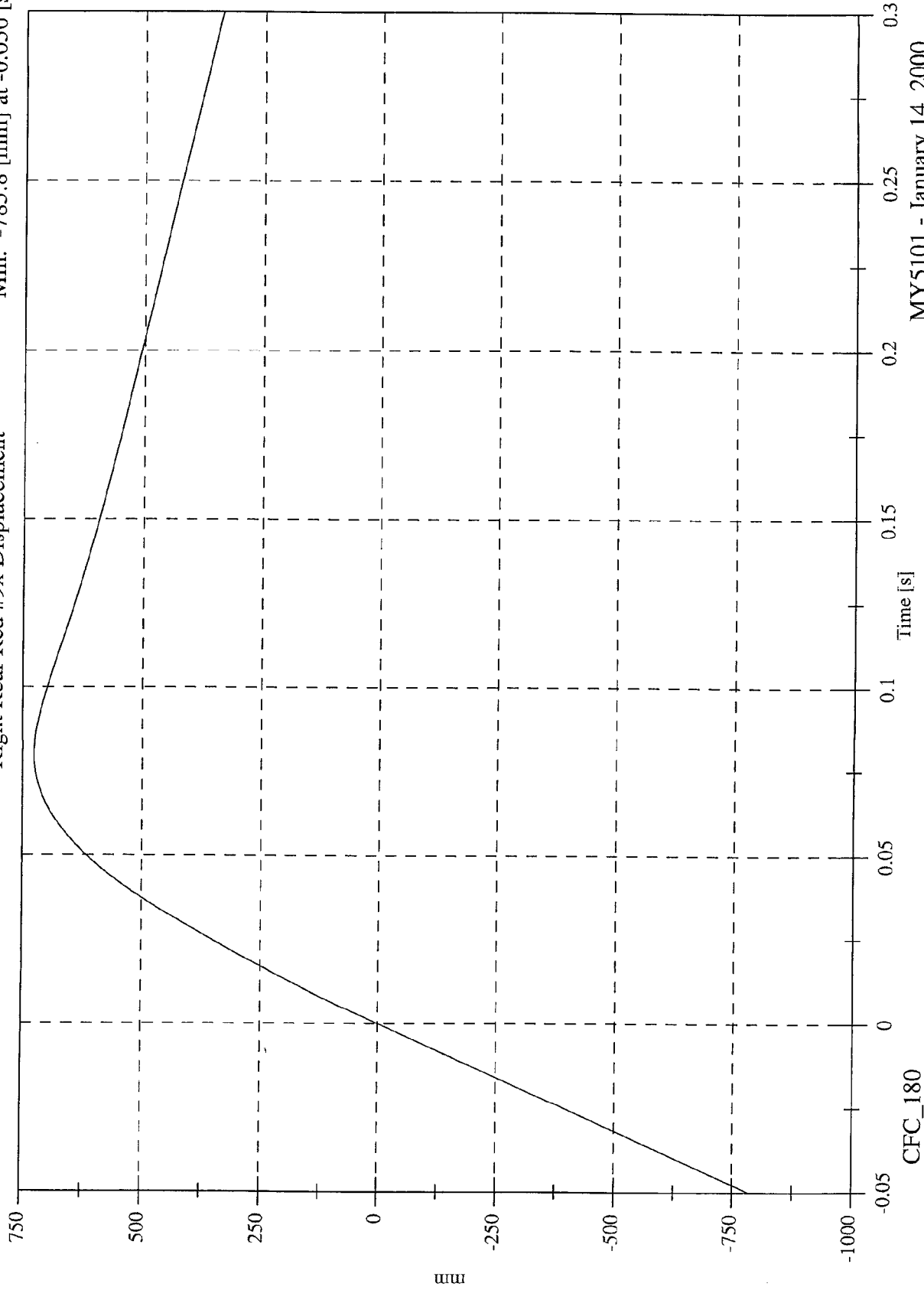


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 725.8 [mm] at 0.080 [s]
Min: -785.8 [mm] at -0.050 [s]

Right Rear Red #9x Displacement

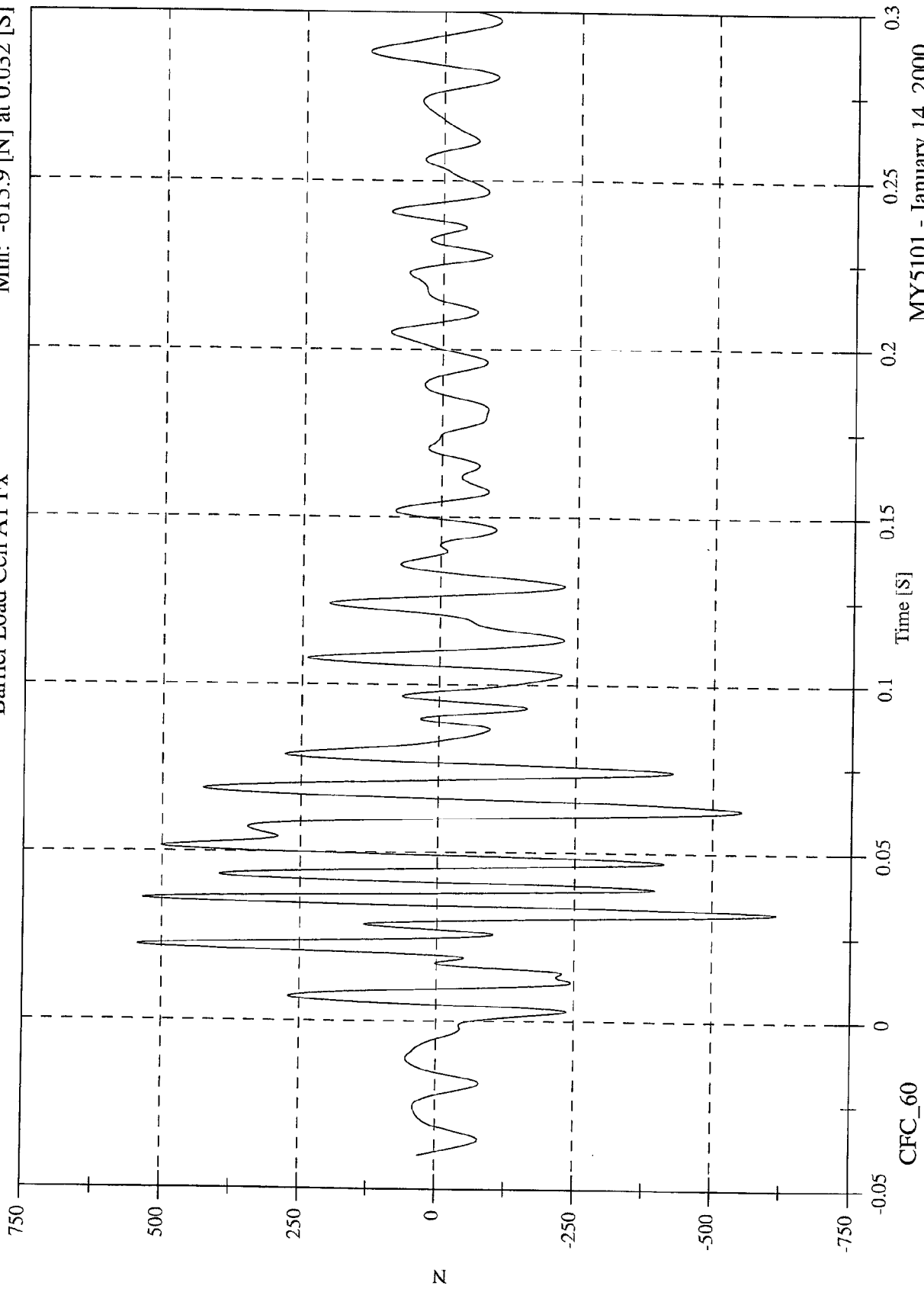


MYS101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 543.5 [N] at 0.022 [S]
Min: -615.9 [N] at 0.032 [S]

Barrier Load Cell A1 Fx



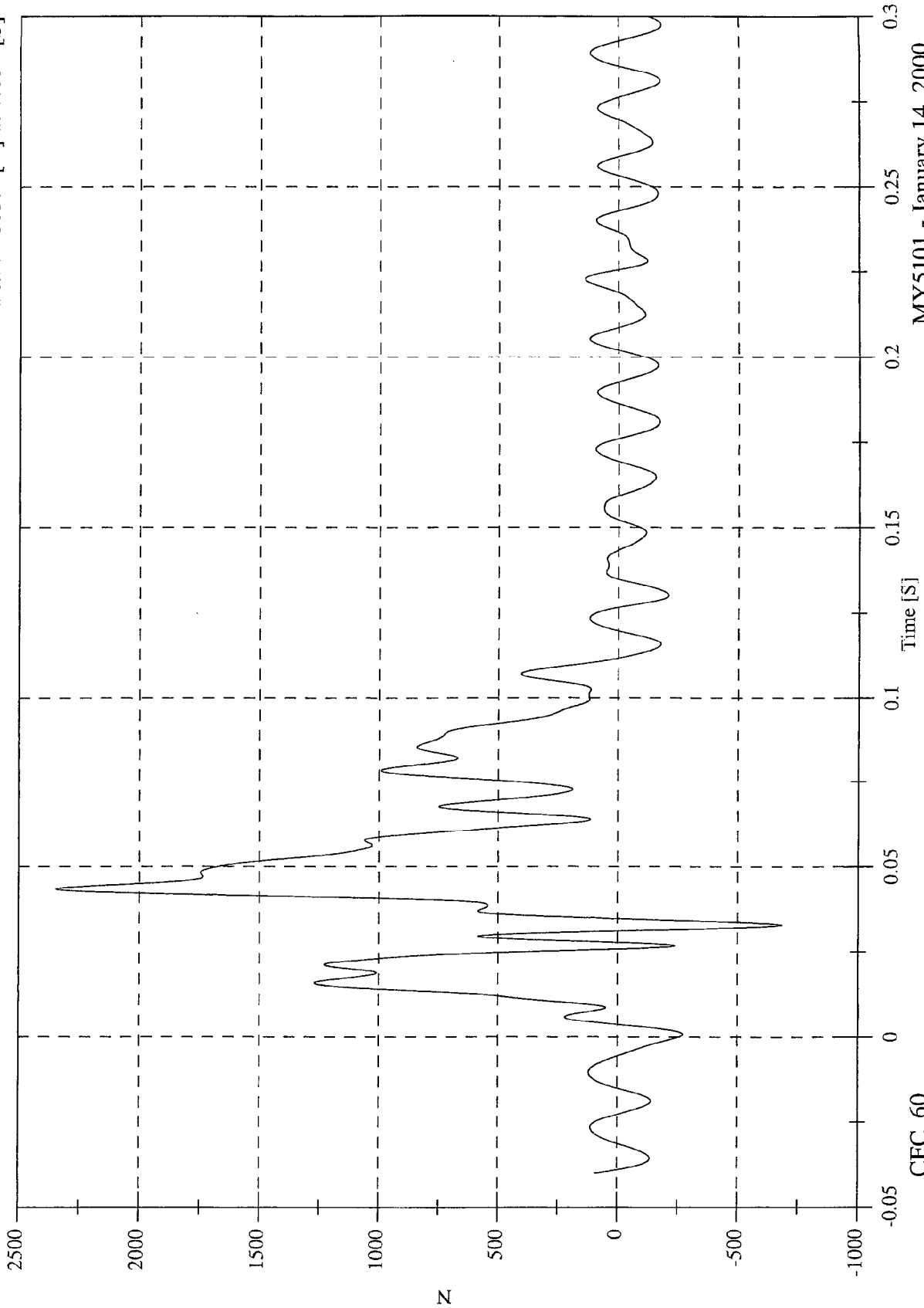
MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Barrier Load Cell A2 Fx

Max: 2344.0 [N] at 0.043 [S]

Min: -685.1 [N] at 0.033 [S]



MY5101 - January 14, 2000

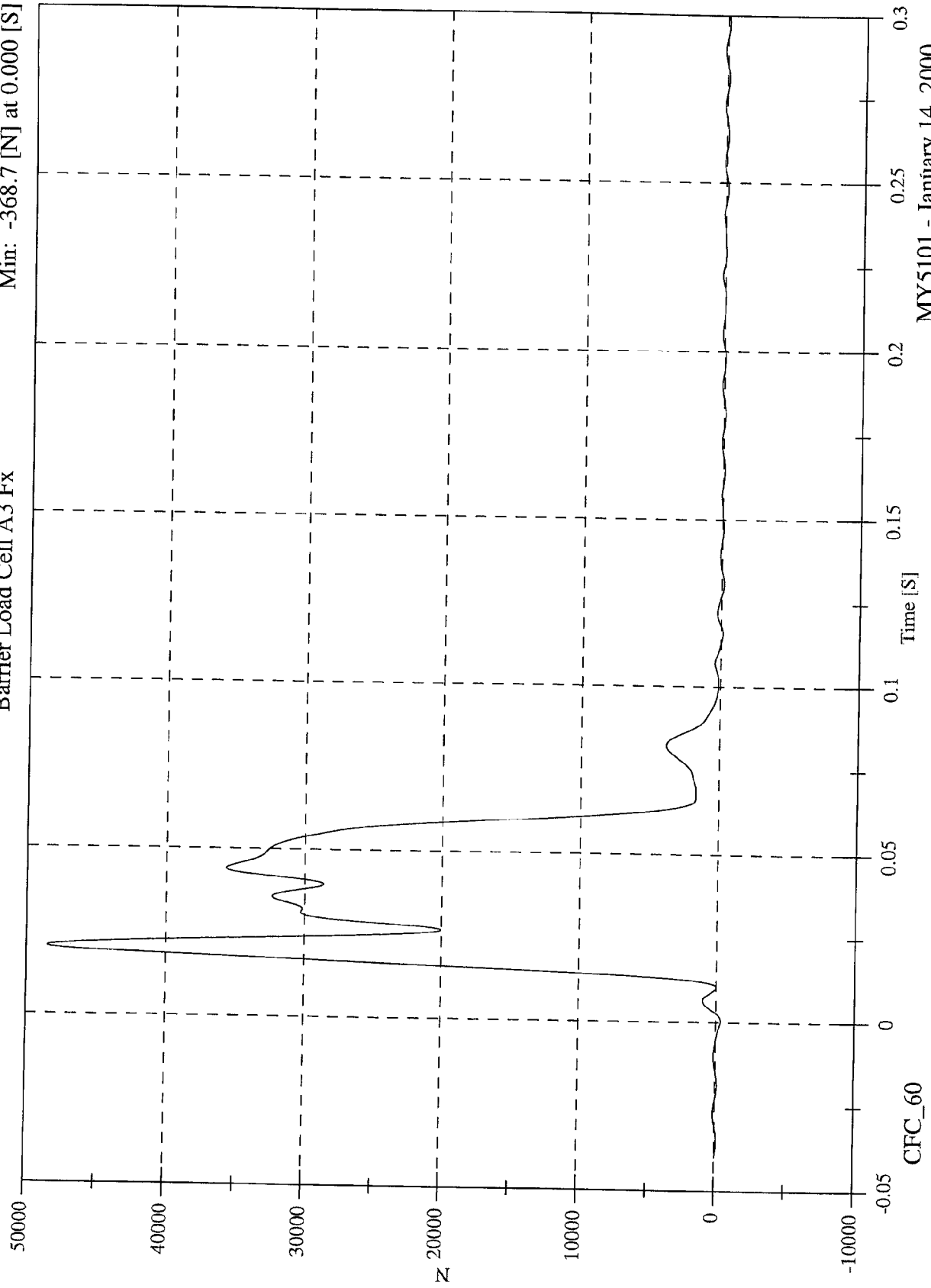
CFC_60

NCAP Test #9 - 2000 Toyota Camry

Barrier Load Cell A3 Fx

Max: 48496.3 [N] at 0.020 [S]

Min: -368.7 [N] at 0.000 [S]

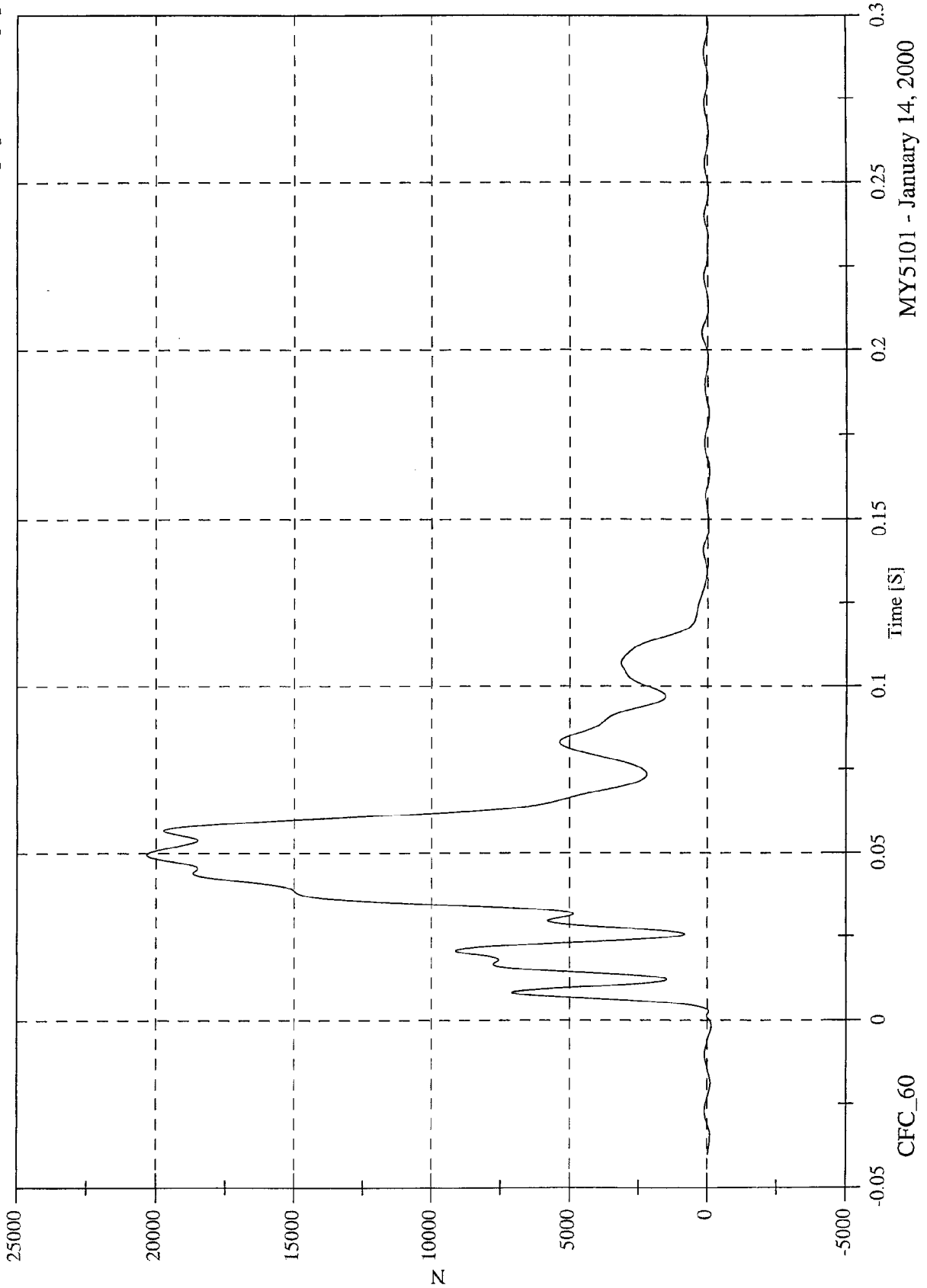


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 20345.5 [N] at 0.049 [S]
Min: -138.3 [N] at -0.002 [S]

Barrier Load Cell A4 Fx

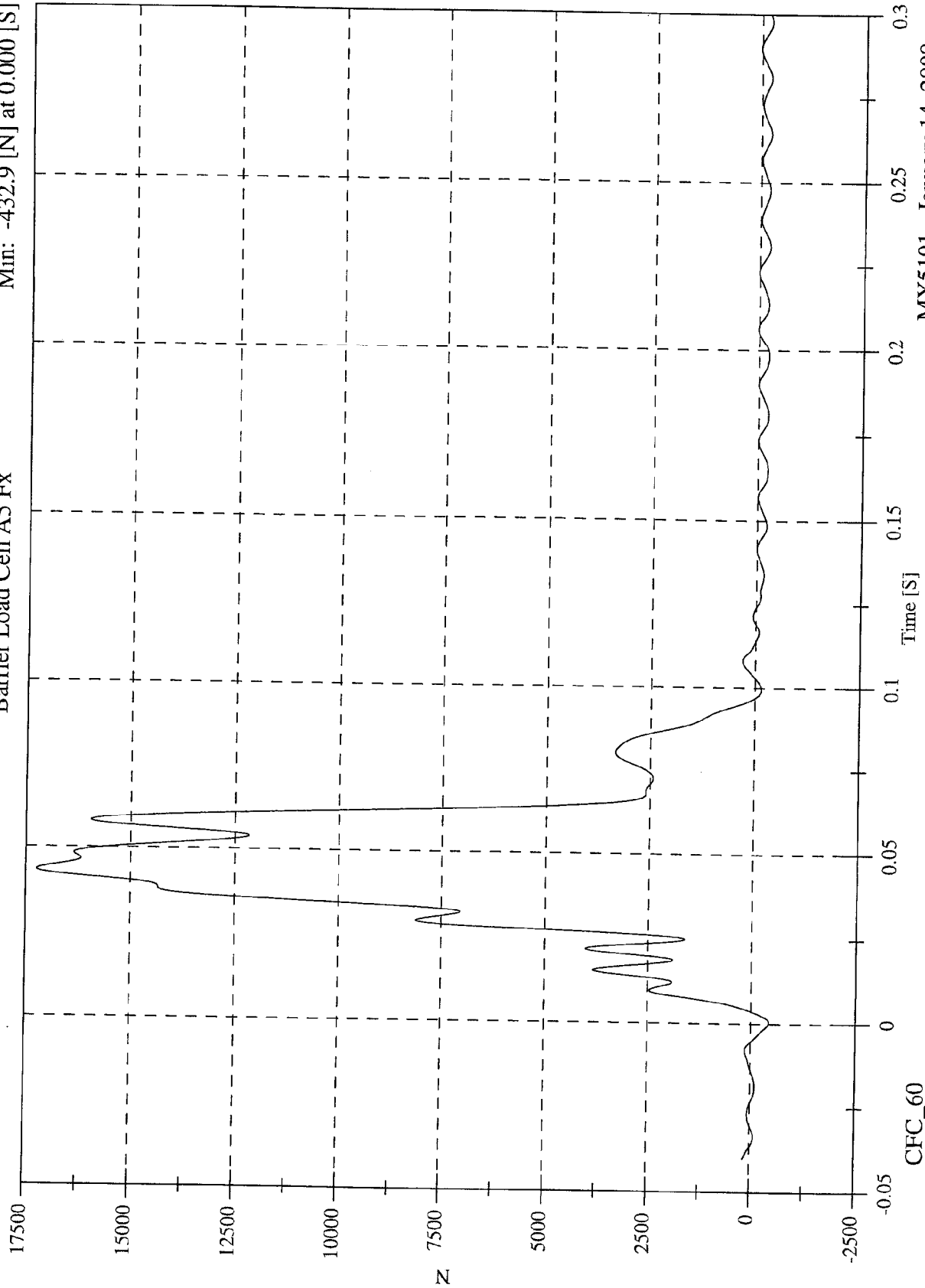


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Barrier Load Cell A5 Fx

Max: 17245.4 [N] at 0.043 [S]
Min: -432.9 [N] at 0.000 [S]

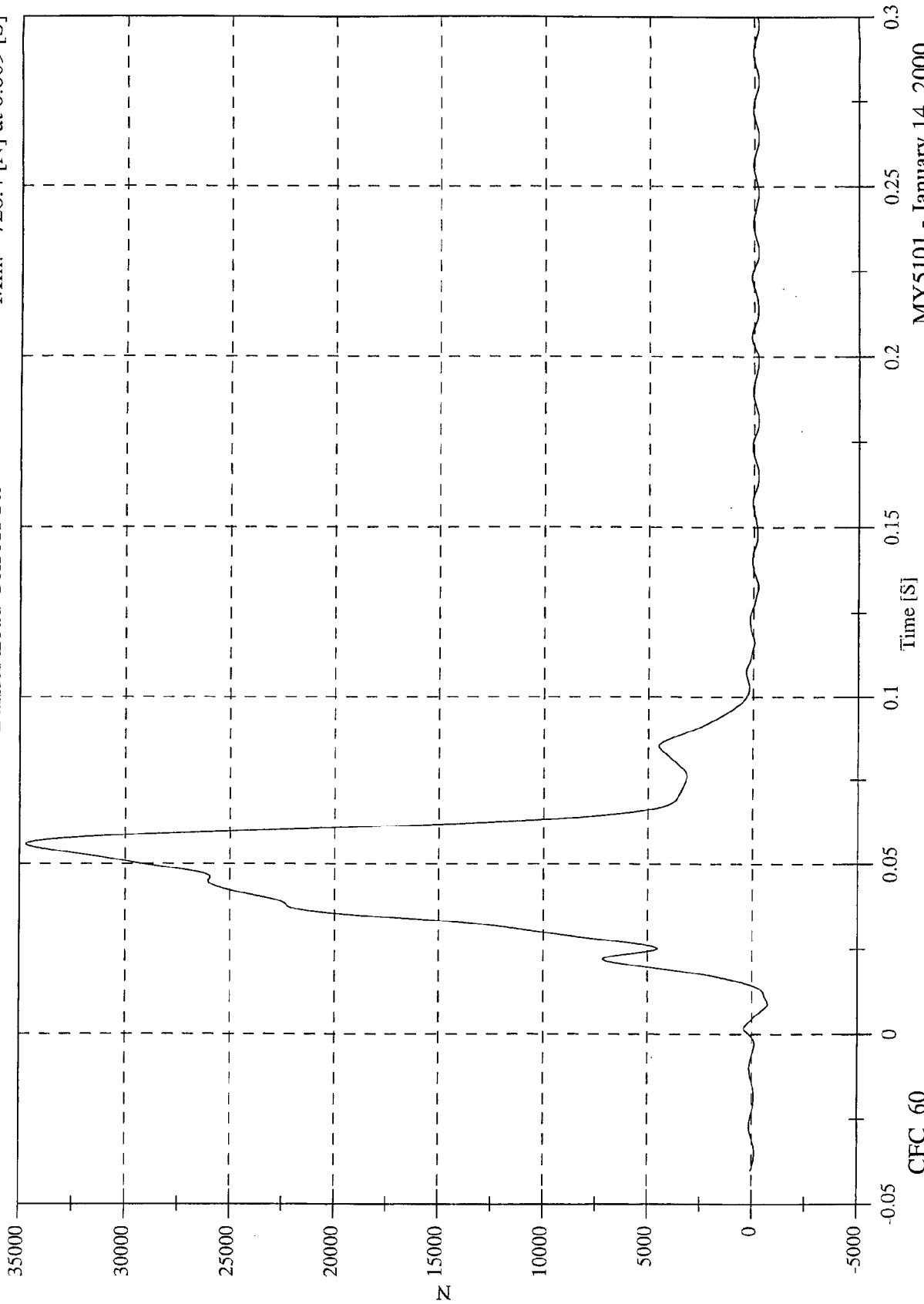


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 34703.6 [N] at 0.056 [S]
Min: -726.4 [N] at 0.009 [S]

Barrier Load Cell A6 Fx



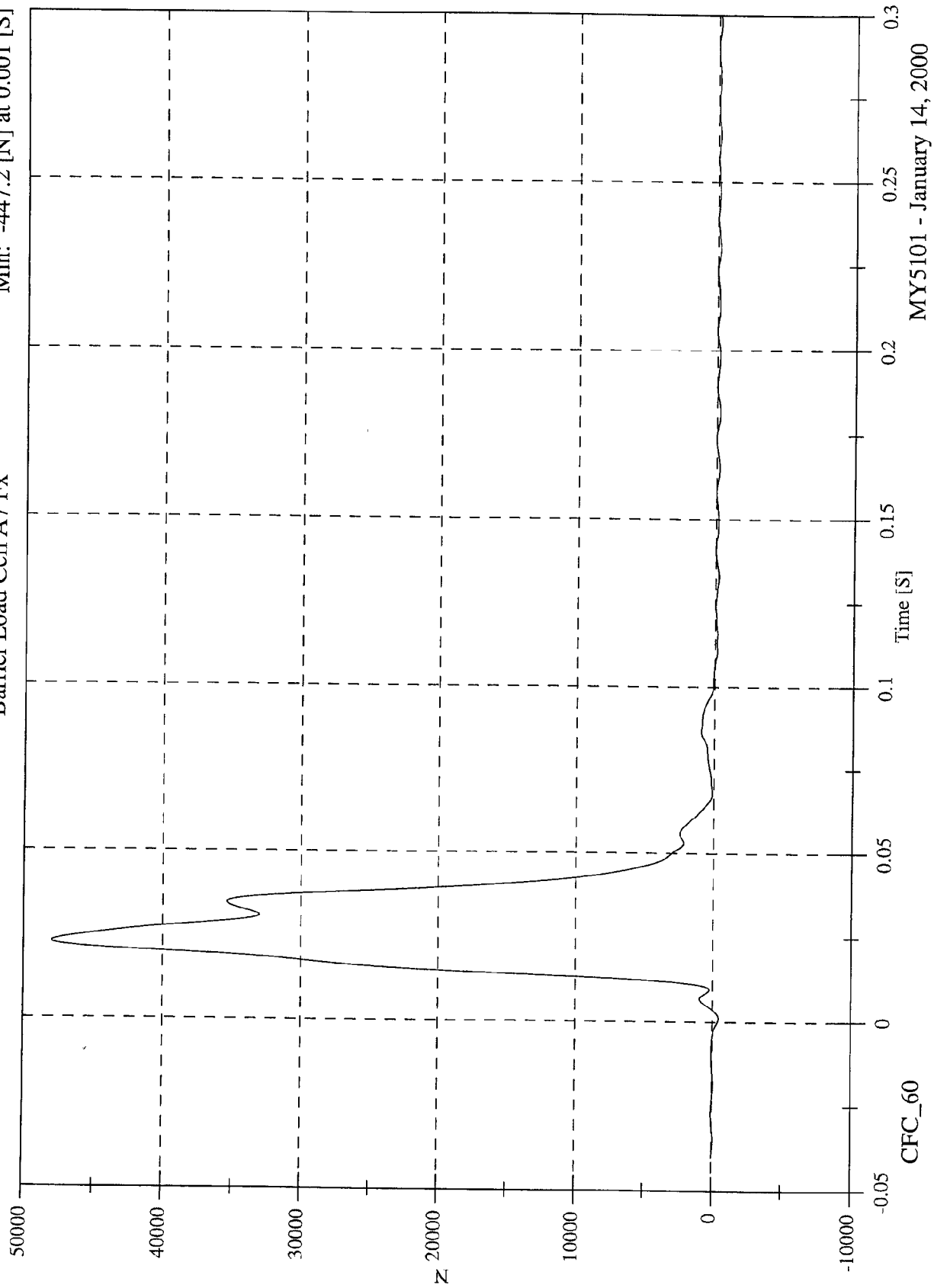
MY5101 - January 14, 2000

CFC_60

NCAP Test #9 - 2000 Toyota Camry

Barrier Load Cell A7 Fx

Max: 47967.7 [N] at 0.023 [S]
Min: -447.2 [N] at 0.001 [S]



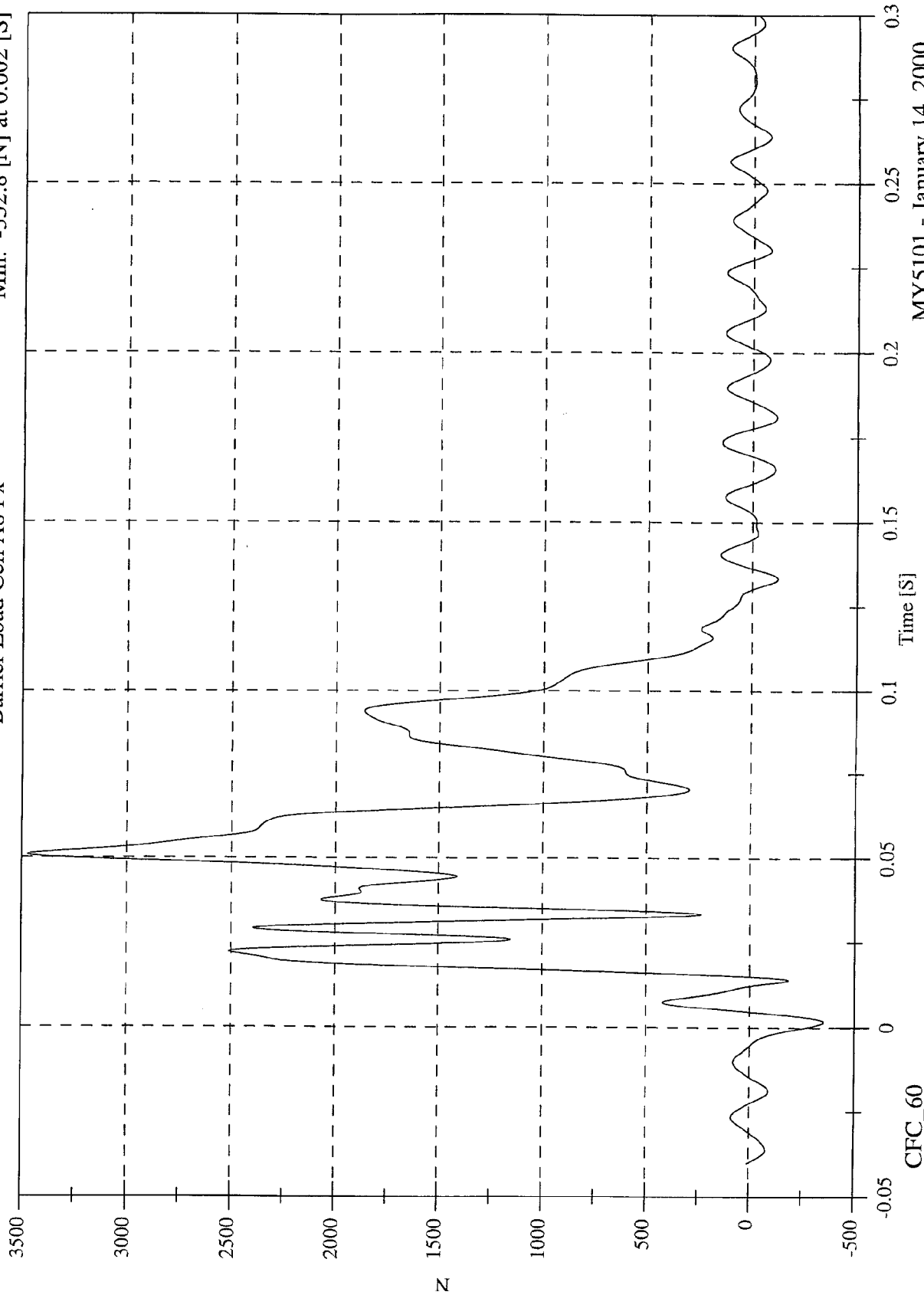
MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 3474.6 [N] at 0.051 [S]

Min: -352.8 [N] at 0.002 [S]

Barrier Load Cell A8 Fx



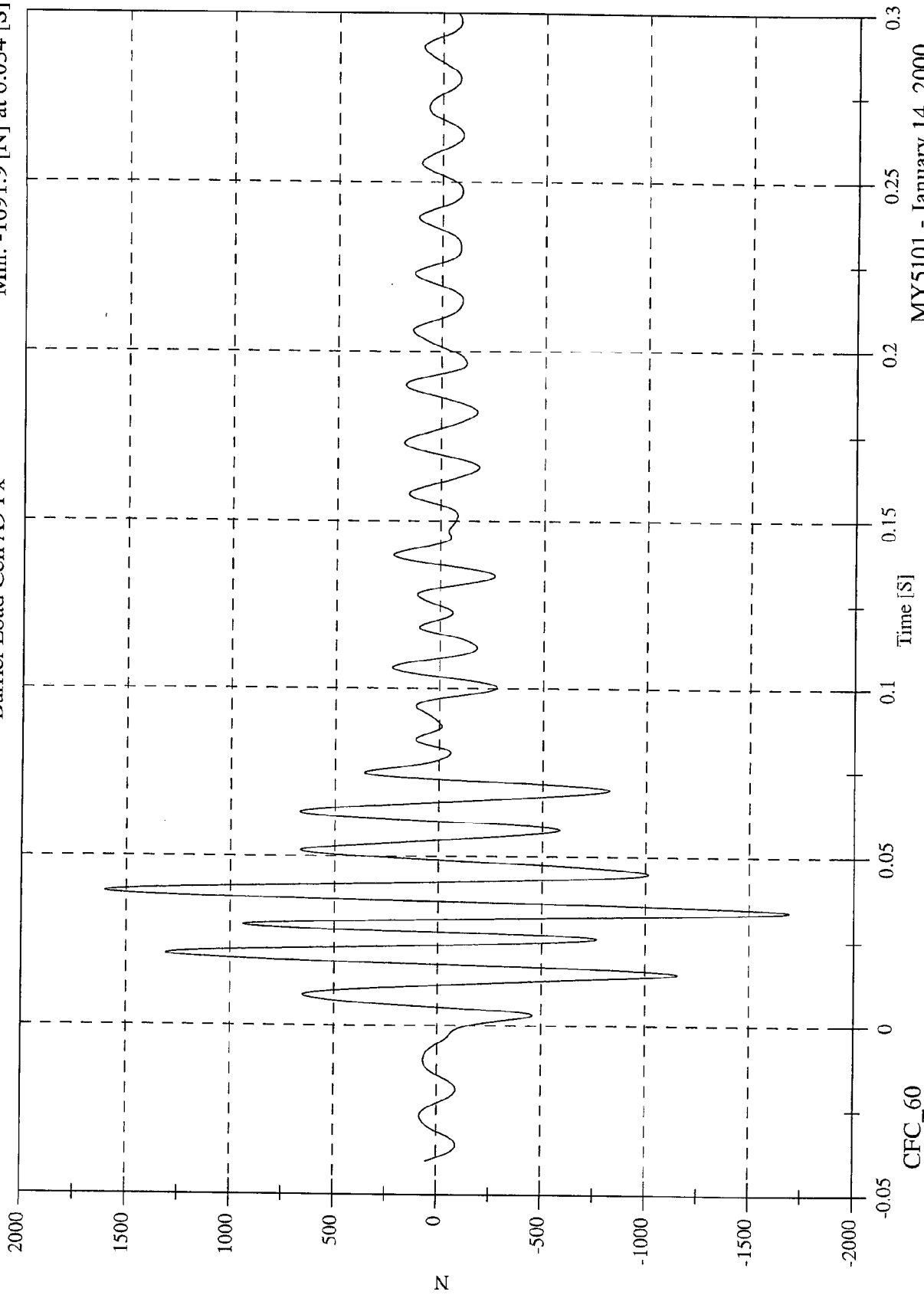
MY5101 - January 14, 2000

CFC_60

NCAP Test #9 - 2000 Toyota Camry

Max: 1603.6 [N] at 0.039 [S]
Min: -1691.9 [N] at 0.034 [S]

Barrier Load Cell A9 Fx



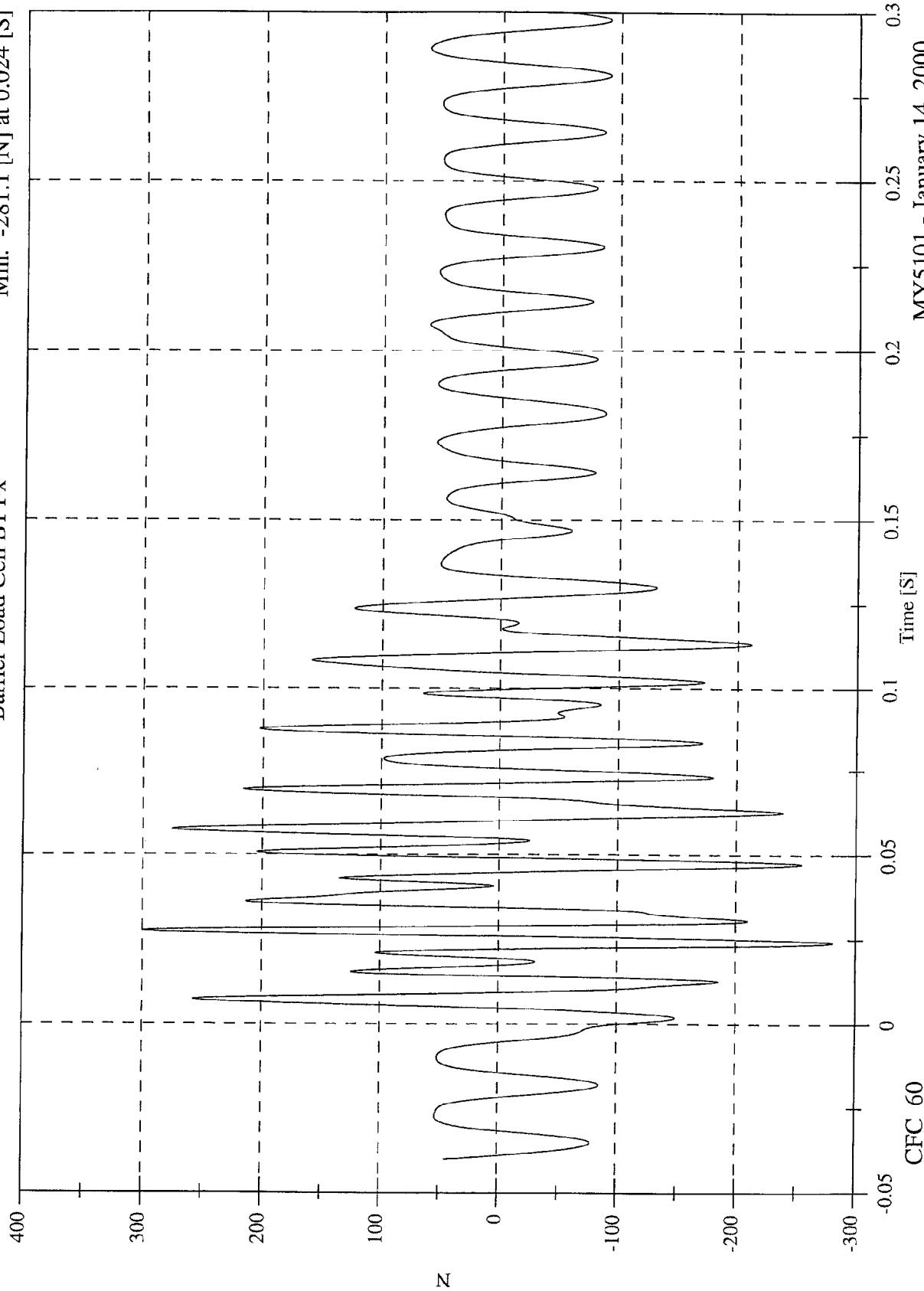
MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 300.3 [N] at 0.027 [S]

Min: -281.1 [N] at 0.024 [S]

Barrier Load Cell B1 Fx

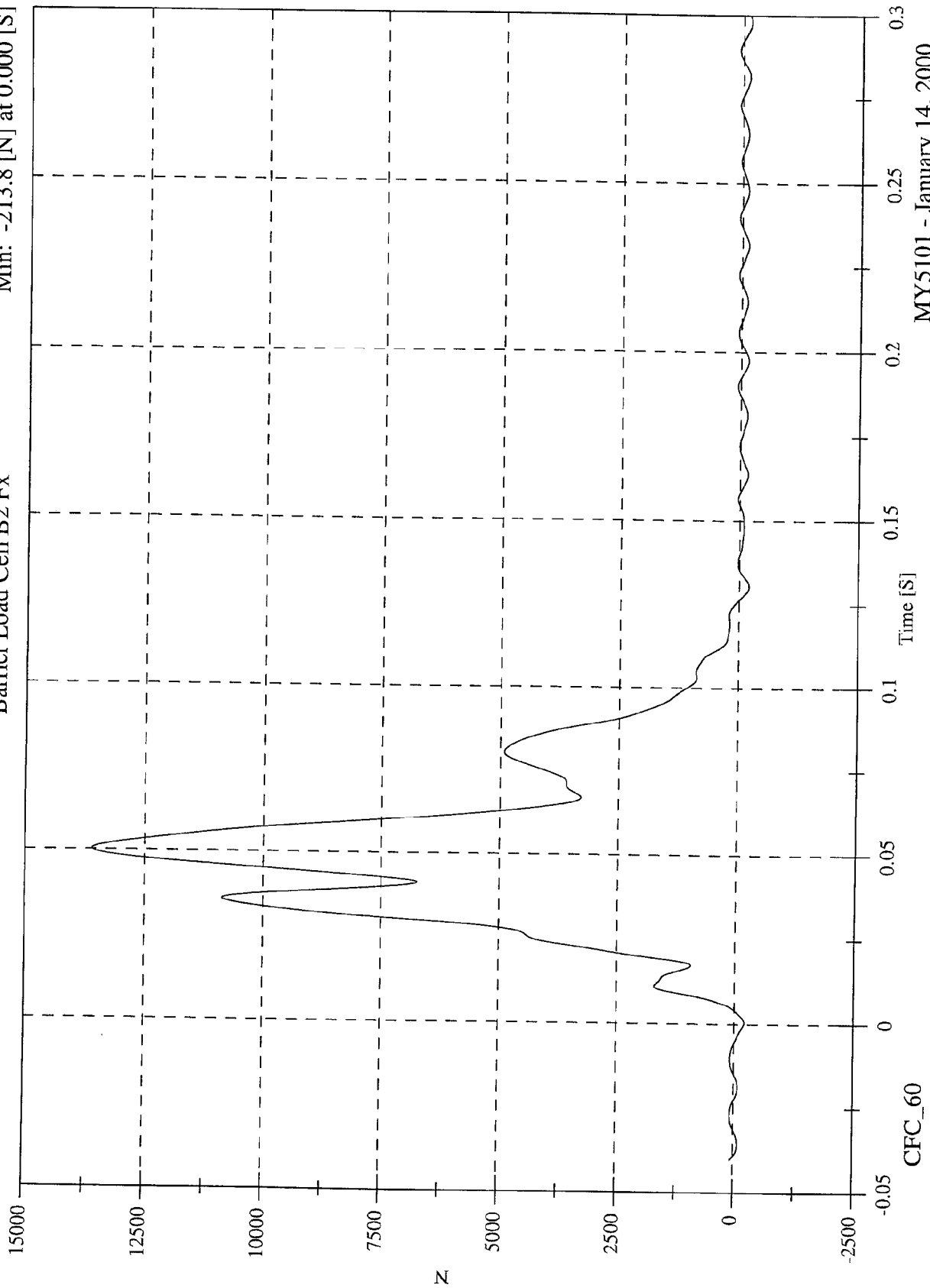


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Barrier Load Cell B2 Fx

Max: 13599.5 [N] at 0.050 [S]
Min: -213.8 [N] at 0.000 [S]



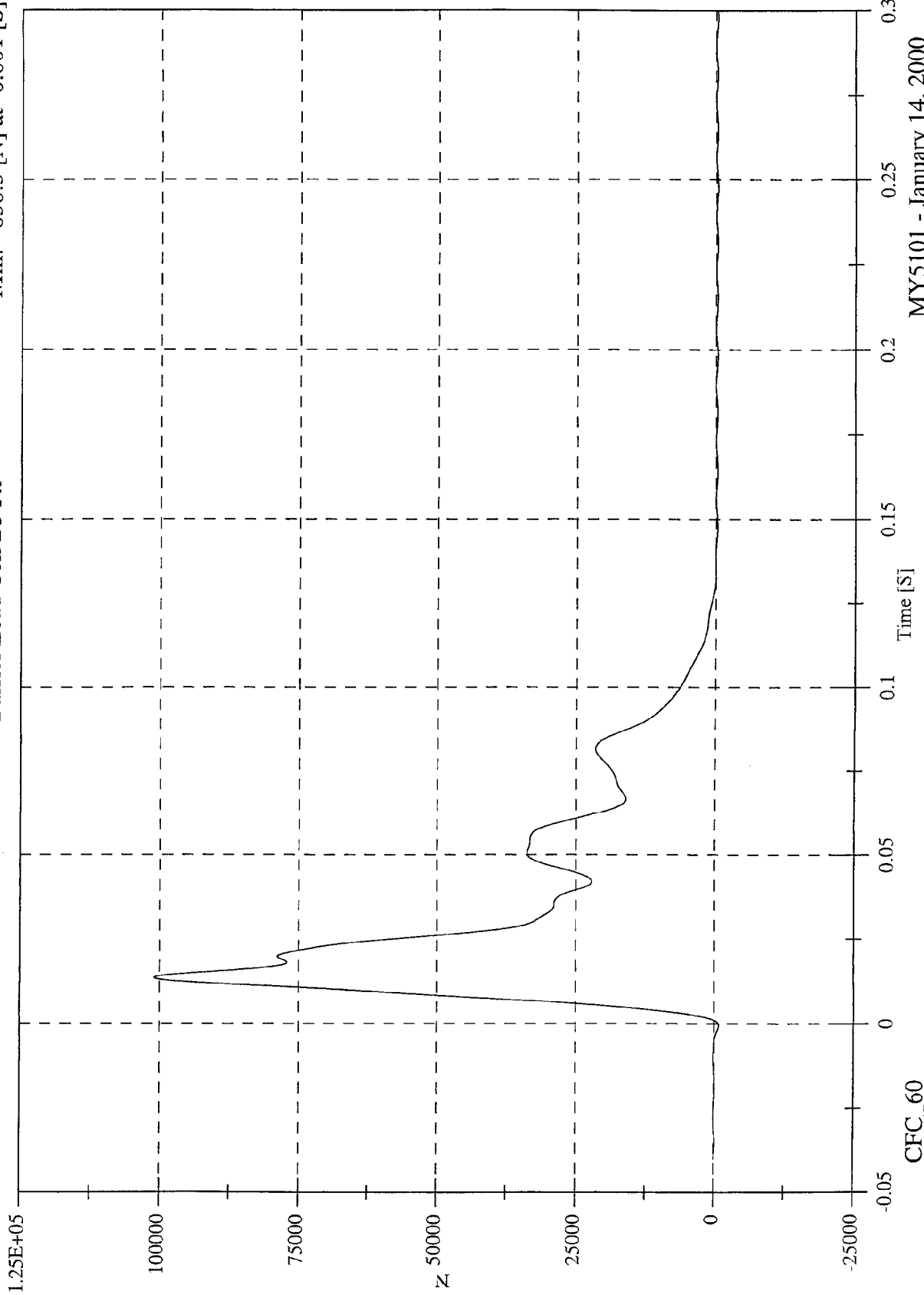
MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Barrier Load Cell B3 Fx

Max: 100976.6 [N] at 0.014 [S]

Min: -850.3 [N] at -0.001 [S]



MY5101 - January 14, 2000

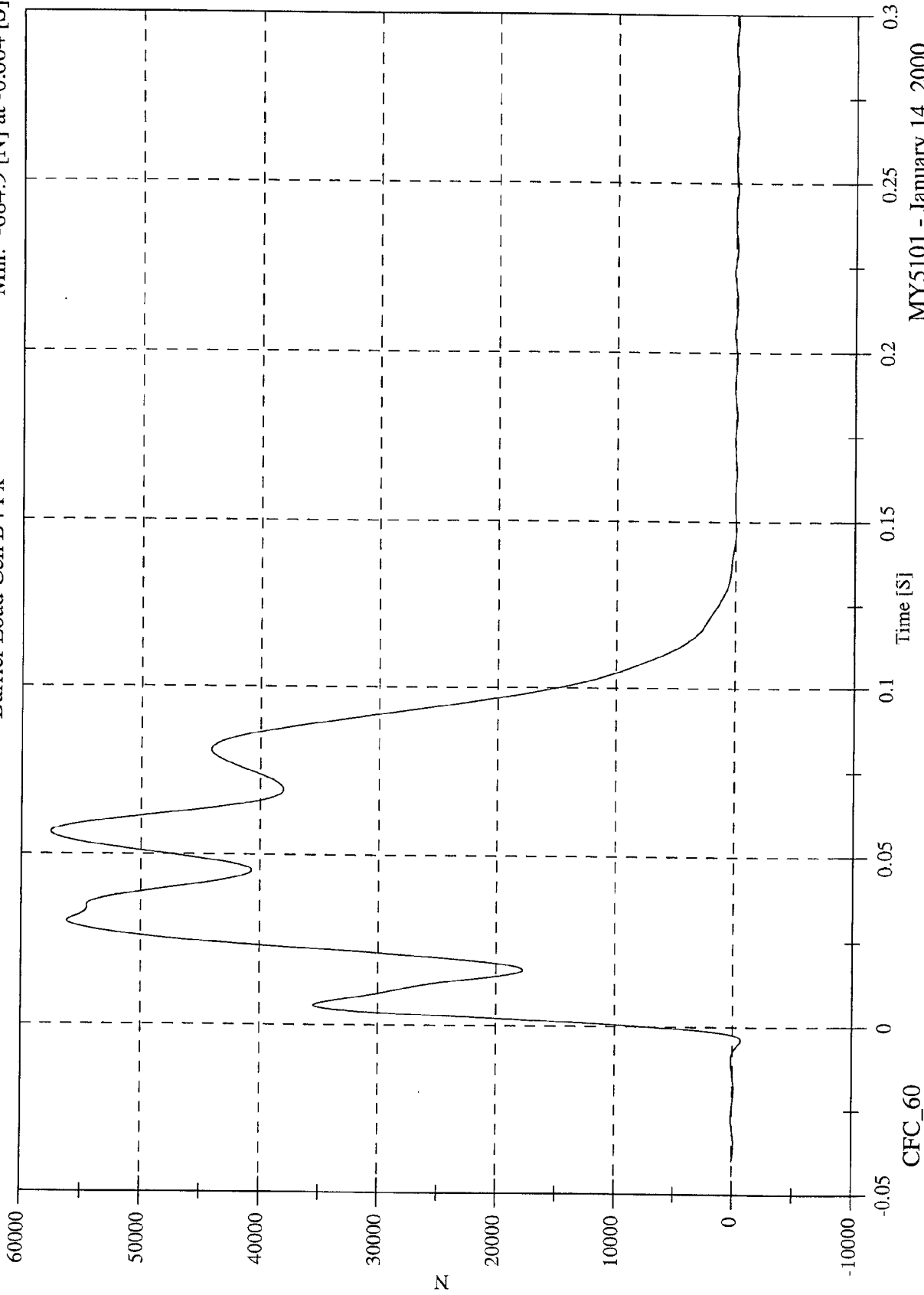
CFC_60

NCAP Test #9 - 2000 Toyota Camry

Barrier Load Cell B4 Fx

Max: 57512.1 [N] at 0.057 [S]

Min: -684.9 [N] at -0.004 [S]

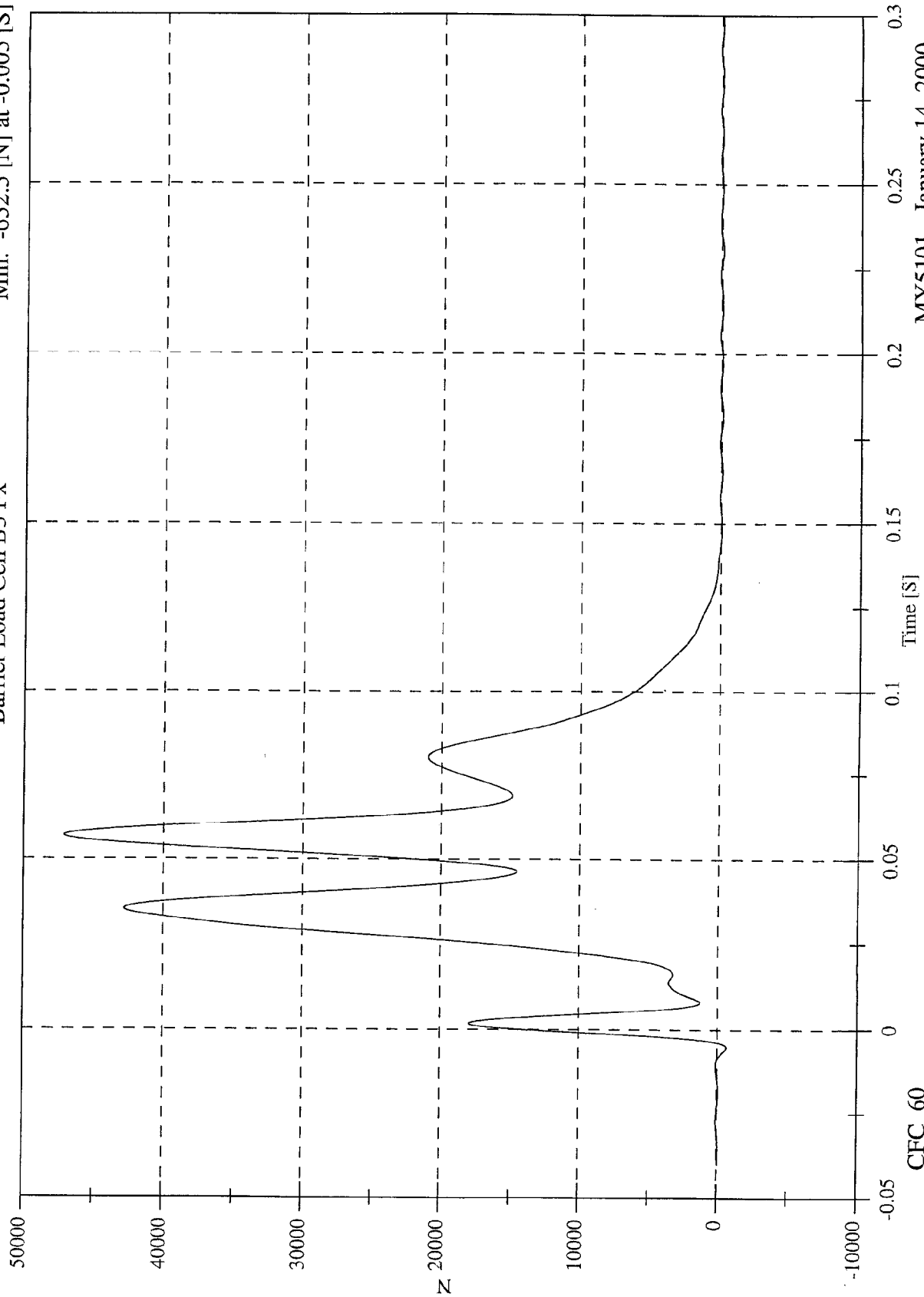


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 47105.7 [N] at 0.057 [S]
Min: -652.5 [N] at -0.005 [S]

Barrier Load Cell B5 Fx



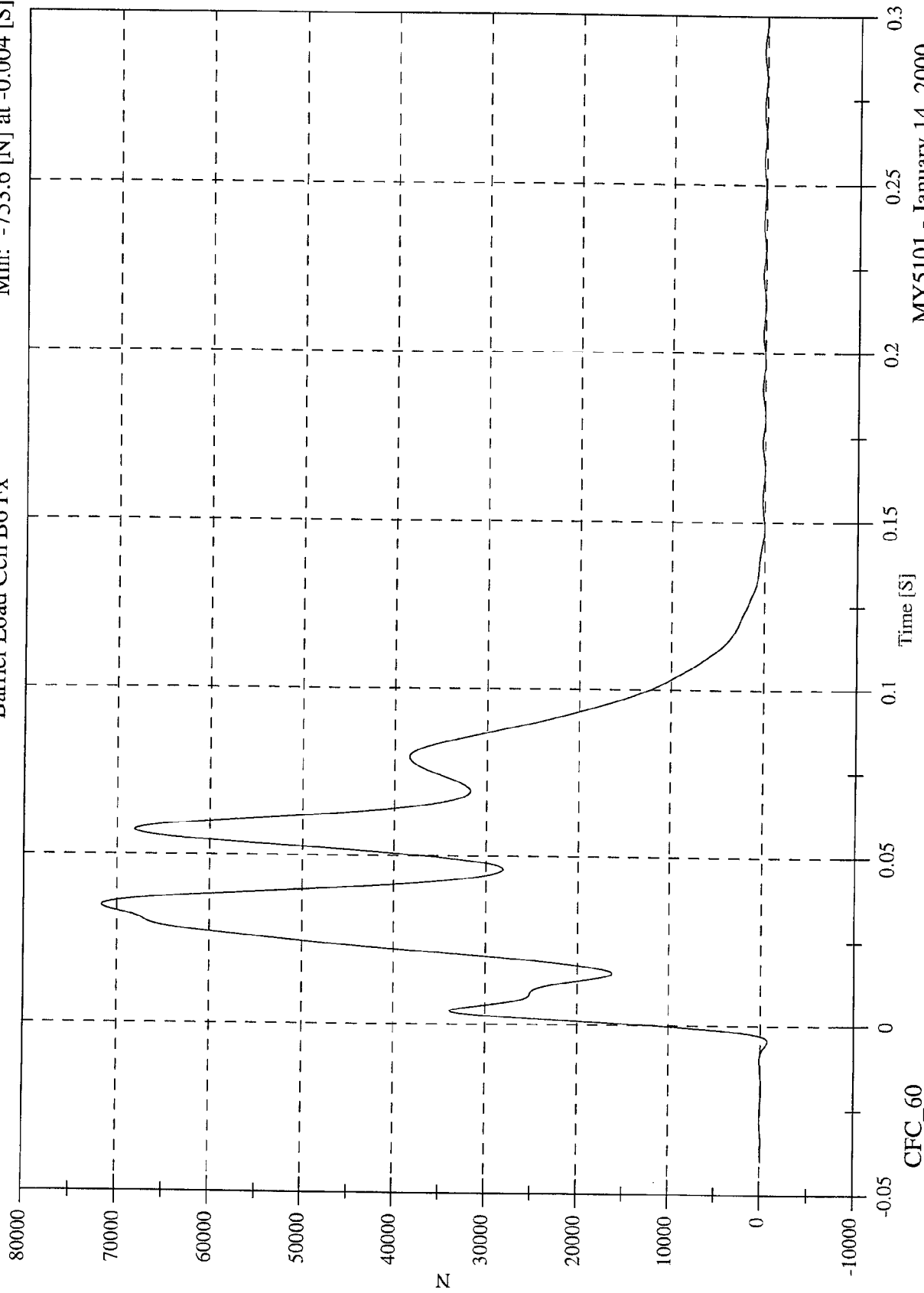
MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Barrier Load Cell B6 Fx

Max: 71700.6 [N] at 0.035 [S]

Min: -753.6 [N] at -0.004 [S]



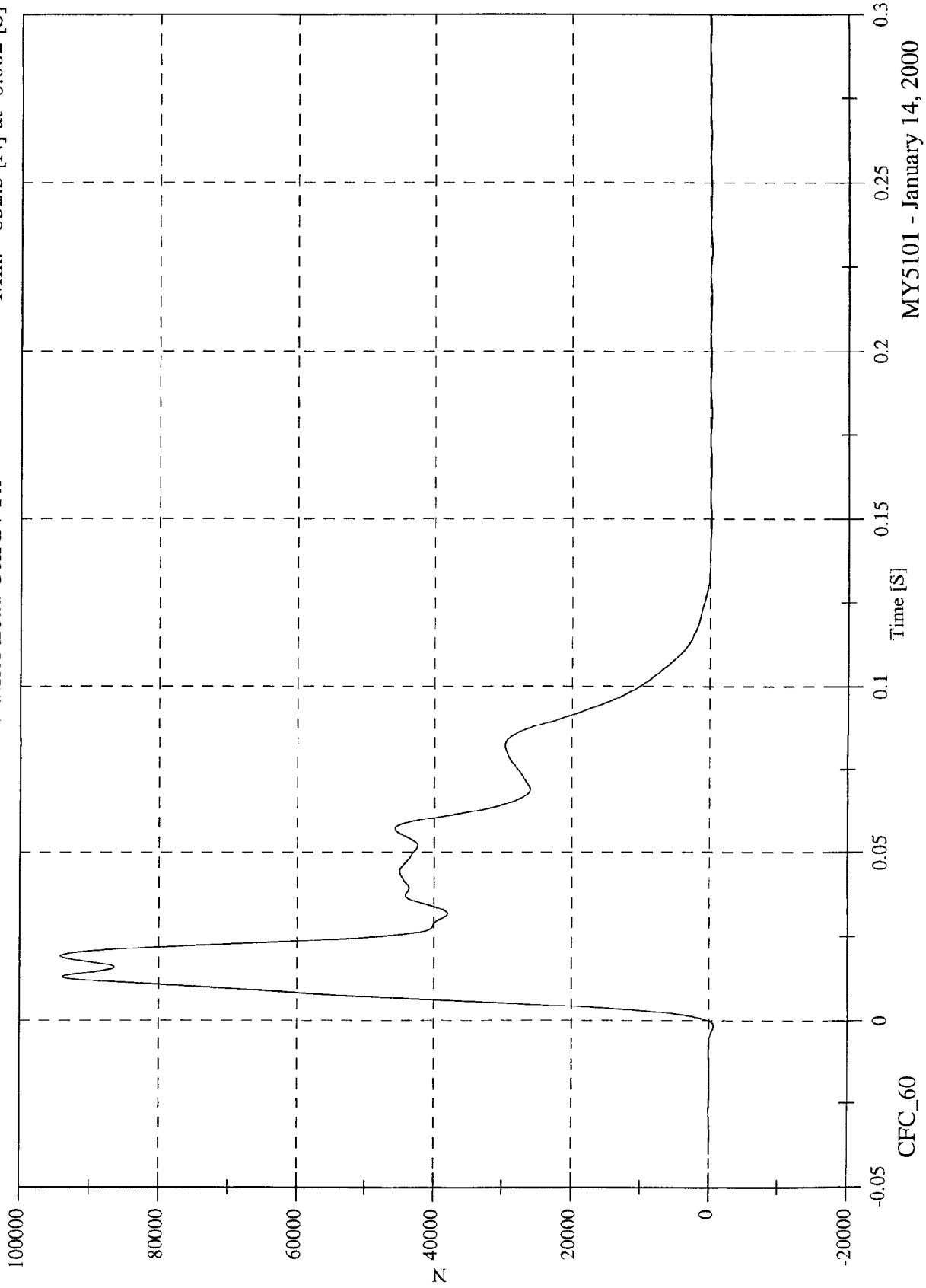
MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Barrier Load Cell B7 Fx

Max: 94093.3 [N] at 0.019 [S]

Min: -632.3 [N] at -0.002 [S]

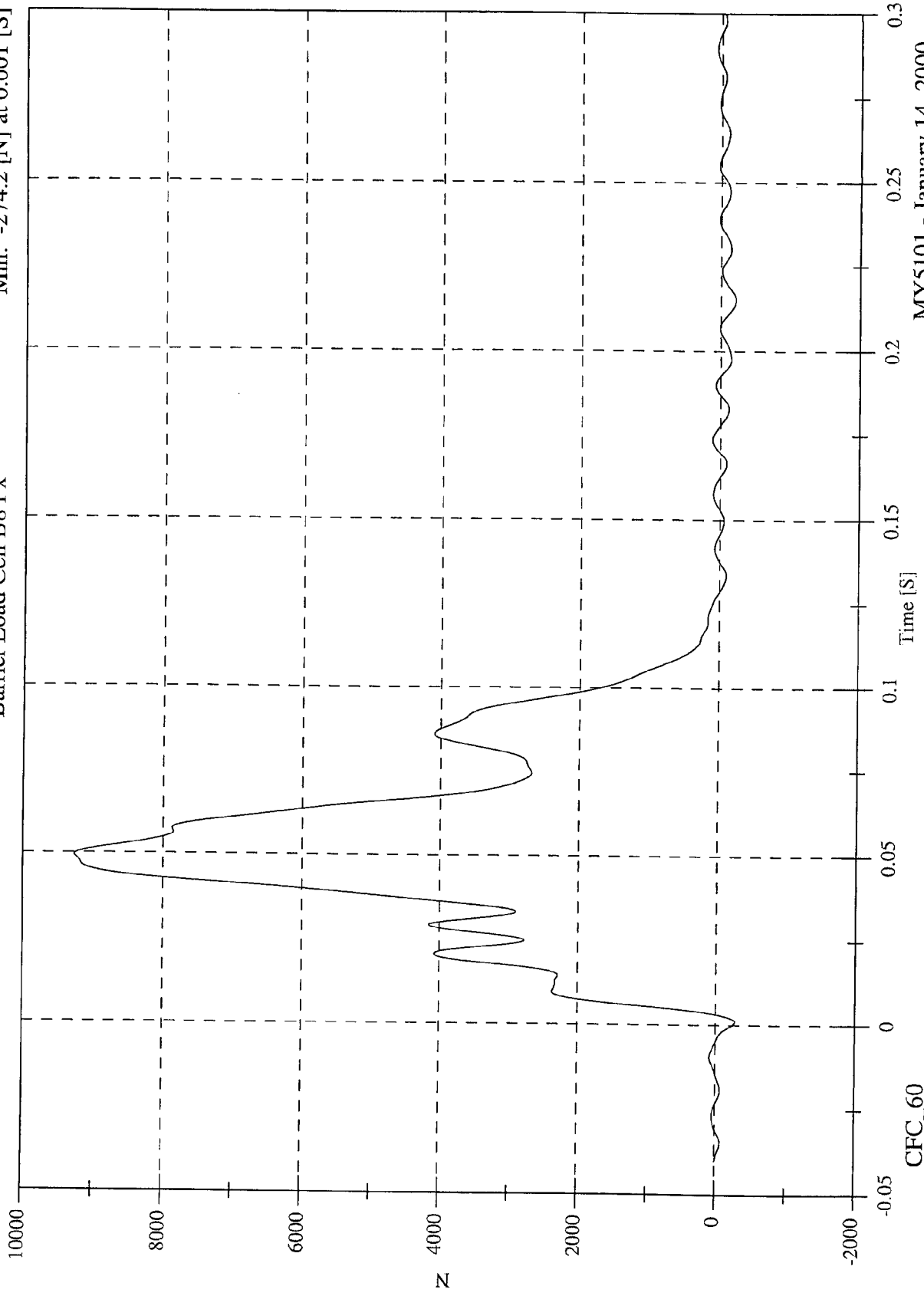


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Barrier Load Cell B8 Fx

Max: 9267.9 [N] at 0.049 [S]
Min: -274.2 [N] at 0.001 [S]

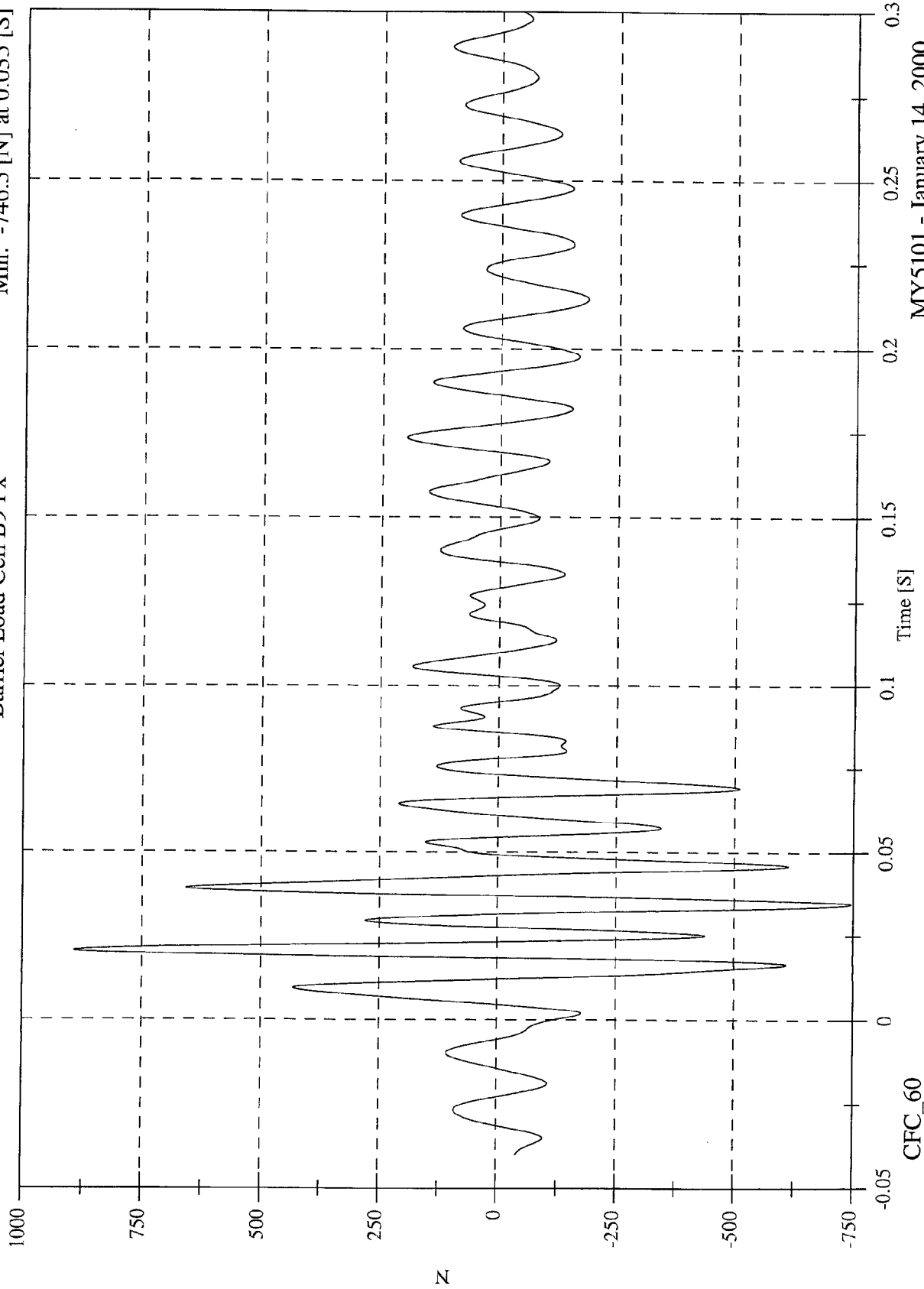


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Barrier Load Cell B9 Fx

Max: 892.0 [N] at 0.020 [S]
Min: -746.3 [N] at 0.035 [S]



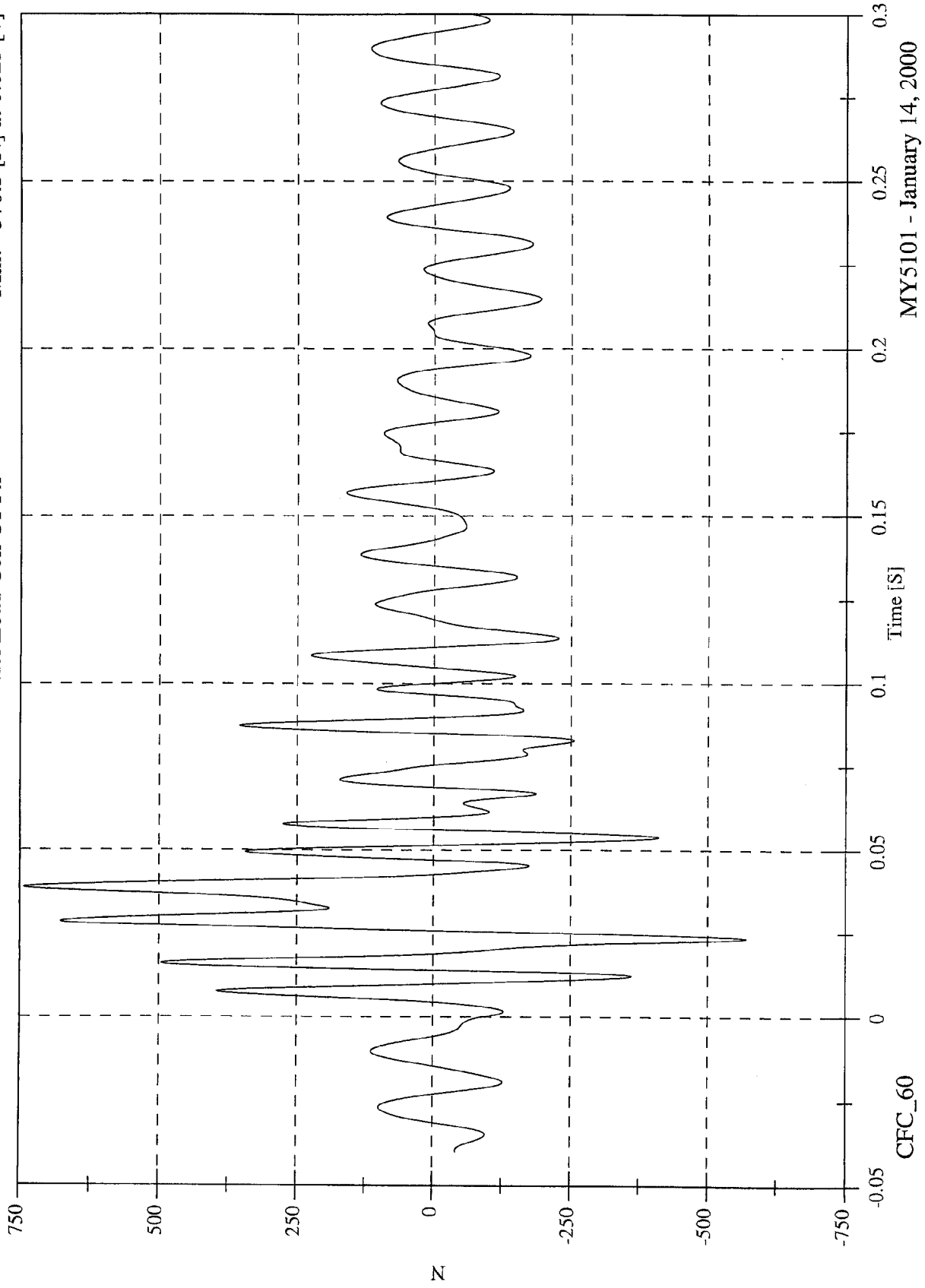
MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 743.9 [N] at 0.039 [S]

Min: -570.3 [N] at 0.023 [S]

Barrier Load Cell C1 Fx

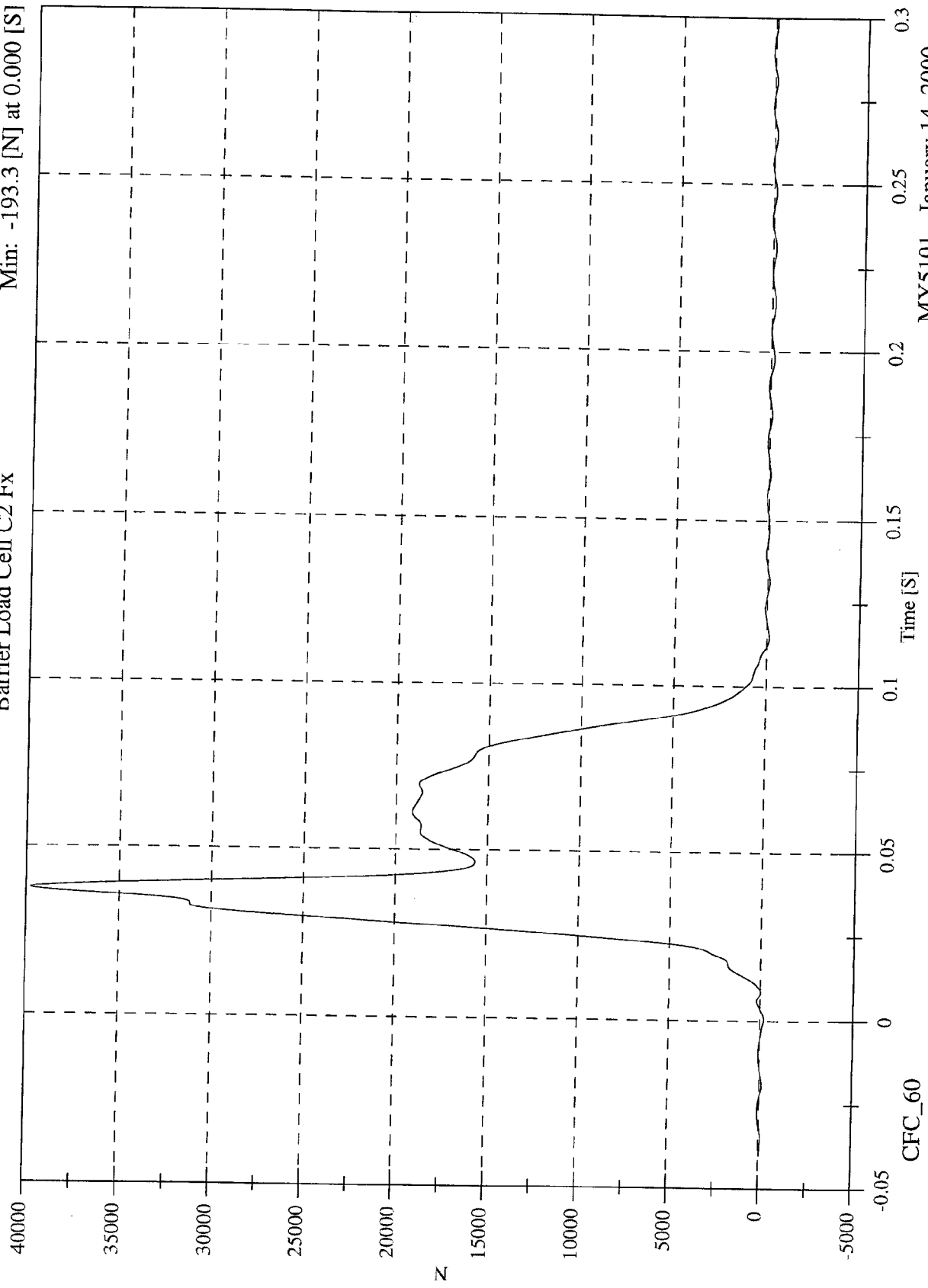


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Barrier Load Cell C2 Fx

Max: 39757.9 [N] at 0.038 [S]
Min: -193.3 [N] at 0.000 [S]

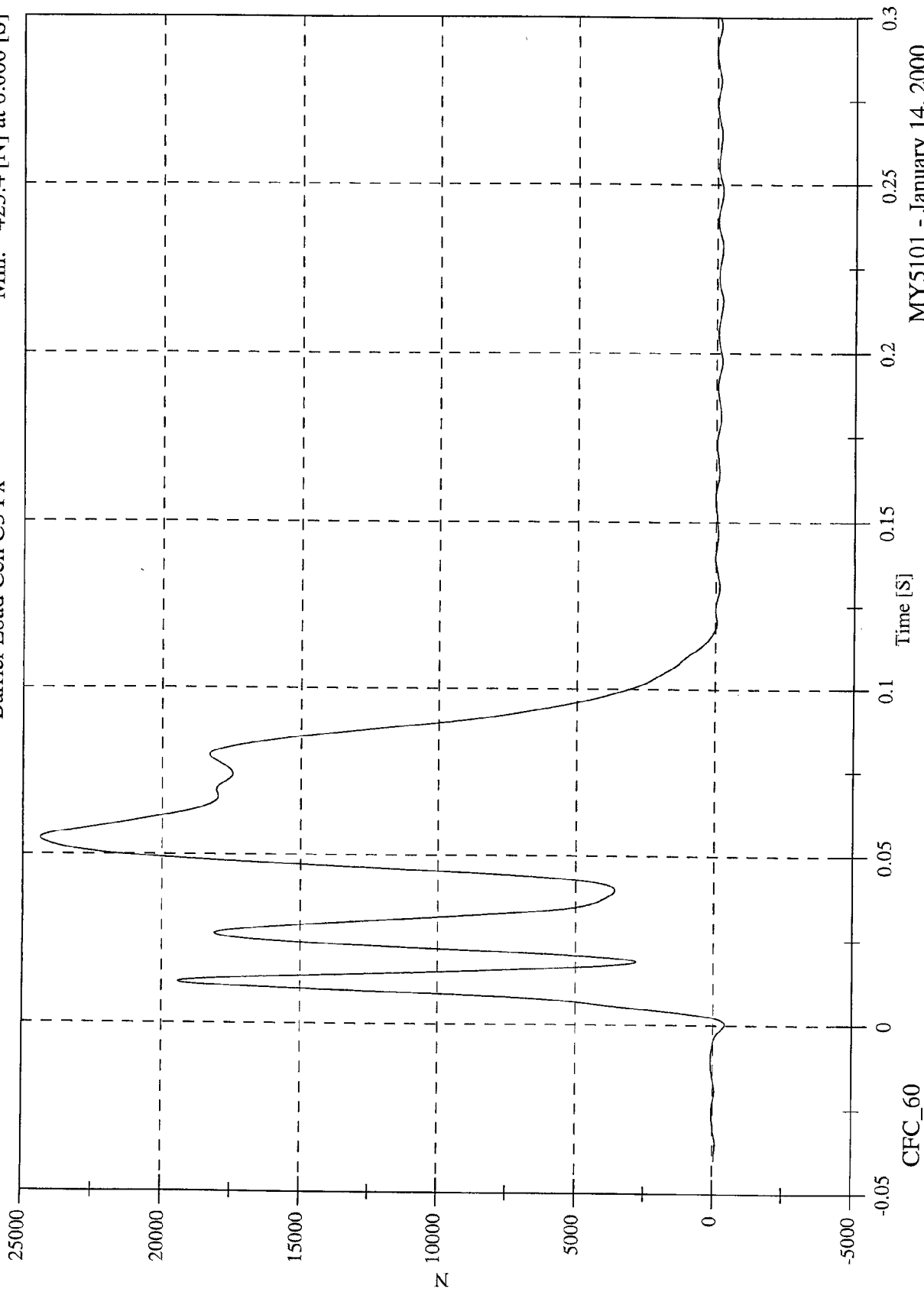


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Barrier Load Cell C3 Fx

Max: 24360.5 [N] at 0.055 [S]
Min: -423.4 [N] at 0.000 [S]



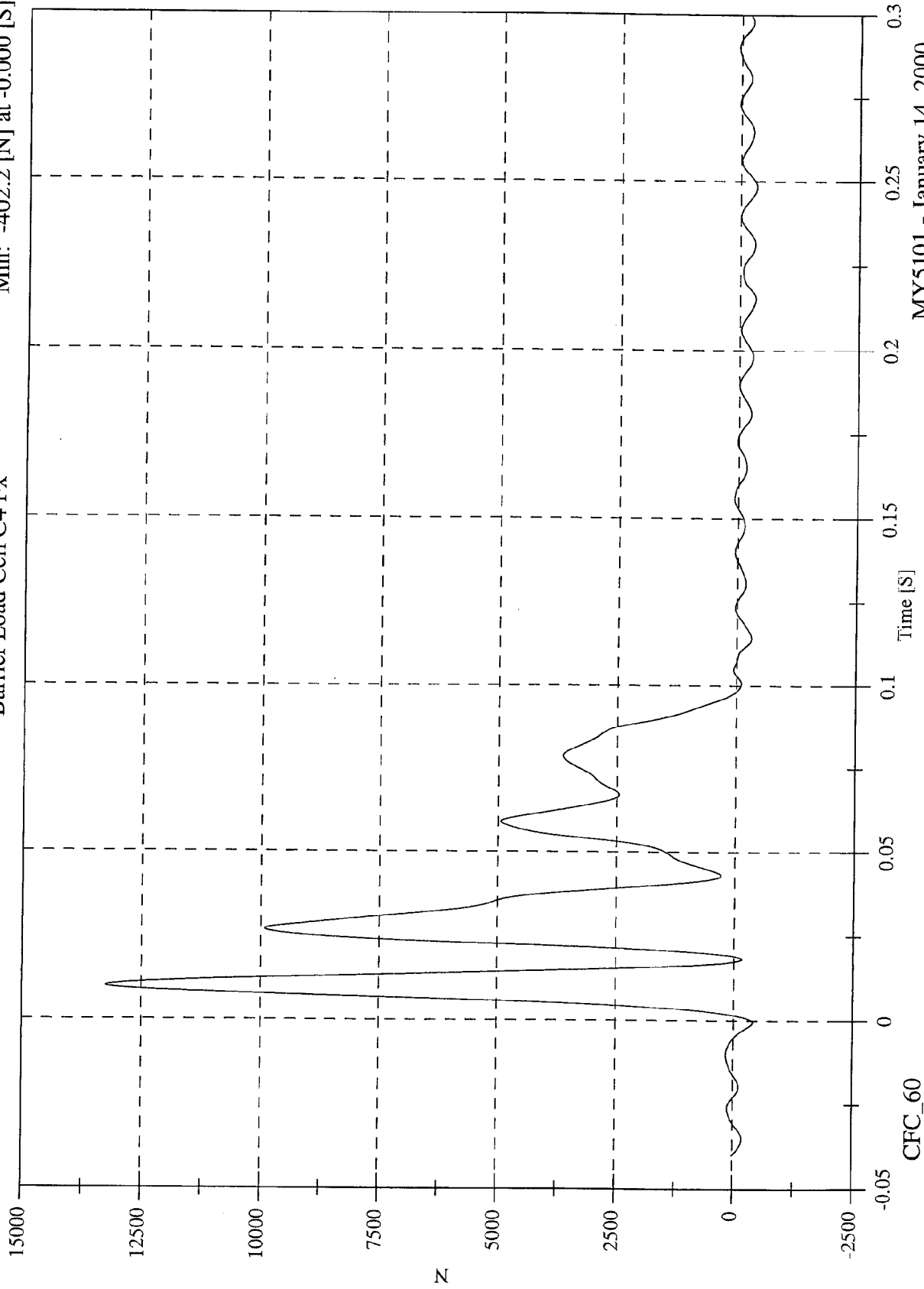
MY5101 - January 14, 2000

CFC_60

NCAP Test #9 - 2000 Toyota Camry

Barrier Load Cell C4 Fx

Max: 13249.6 [N] at 0.010 [S]
Min: -402.2 [N] at -0.000 [S]



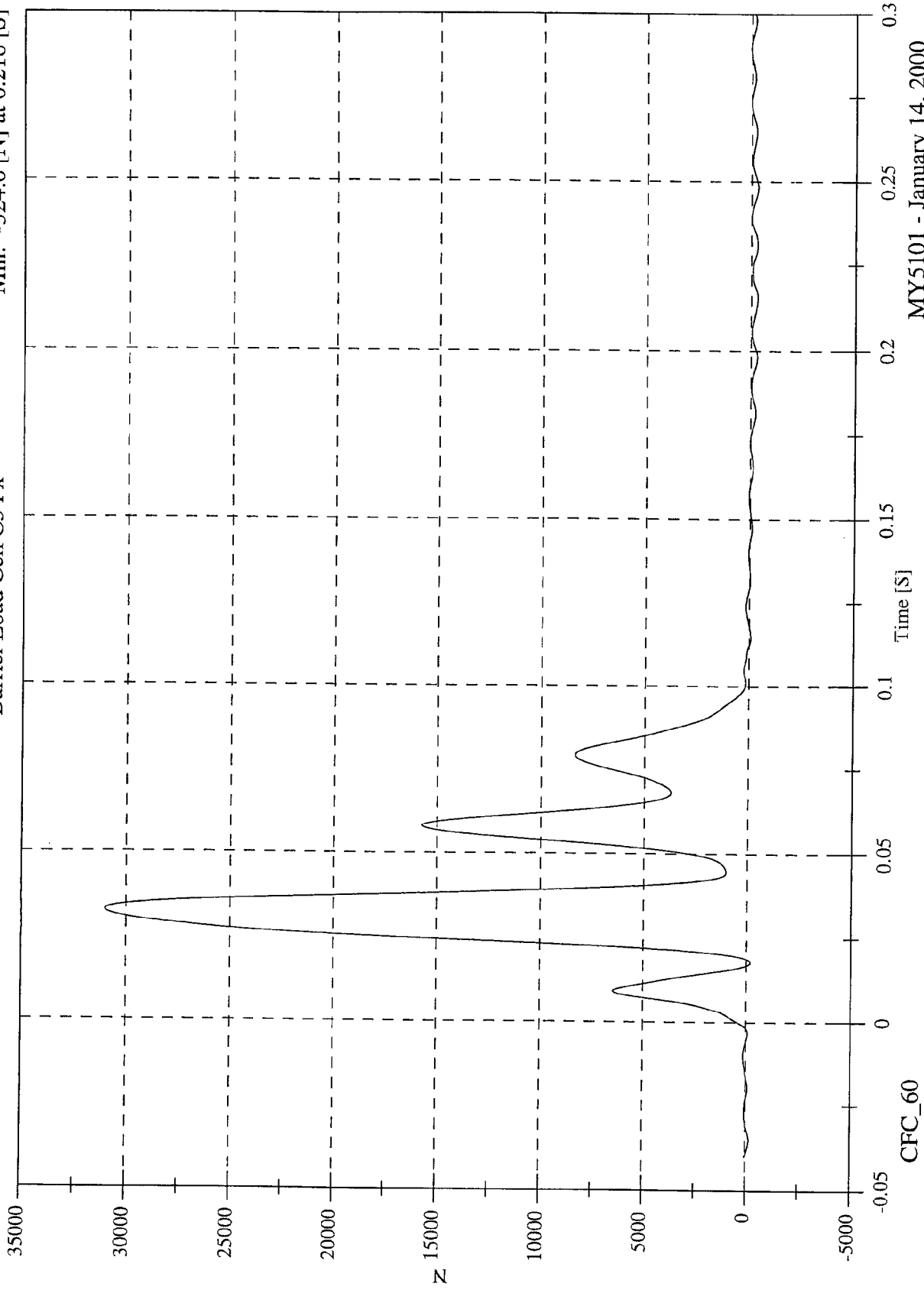
MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Barrier Load Cell C5 Fx

Max: 31018.8 [N] at 0.033 [S]

Min: -324.0 [N] at 0.216 [S]



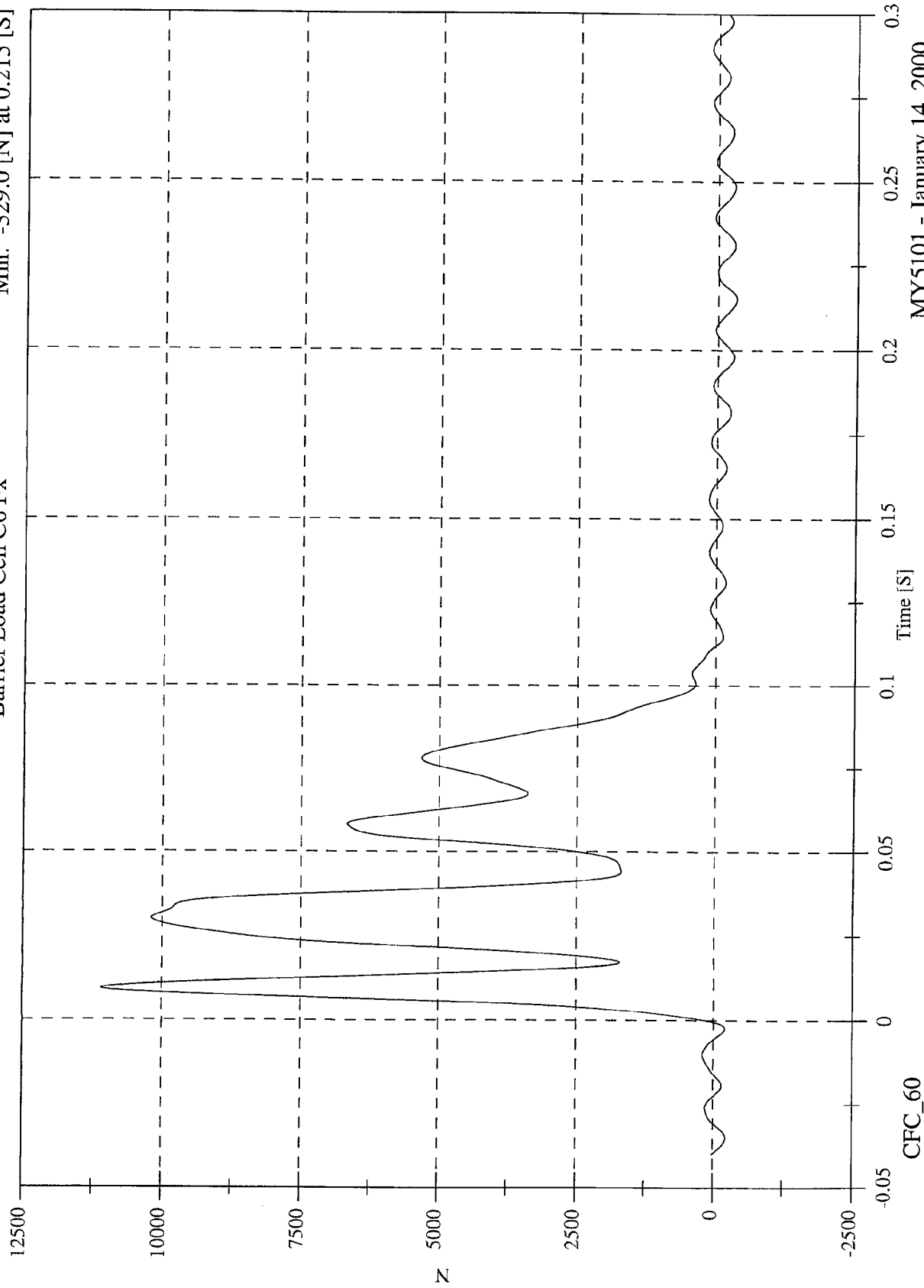
MY5101 - January 14, 2000

CFC_60

NCAP Test #9 - 2000 Toyota Camry

Barrier Load Cell C6 Fx

Max: 11085.2 [N] at 0.010 [S]
Min: -329.0 [N] at 0.215 [S]



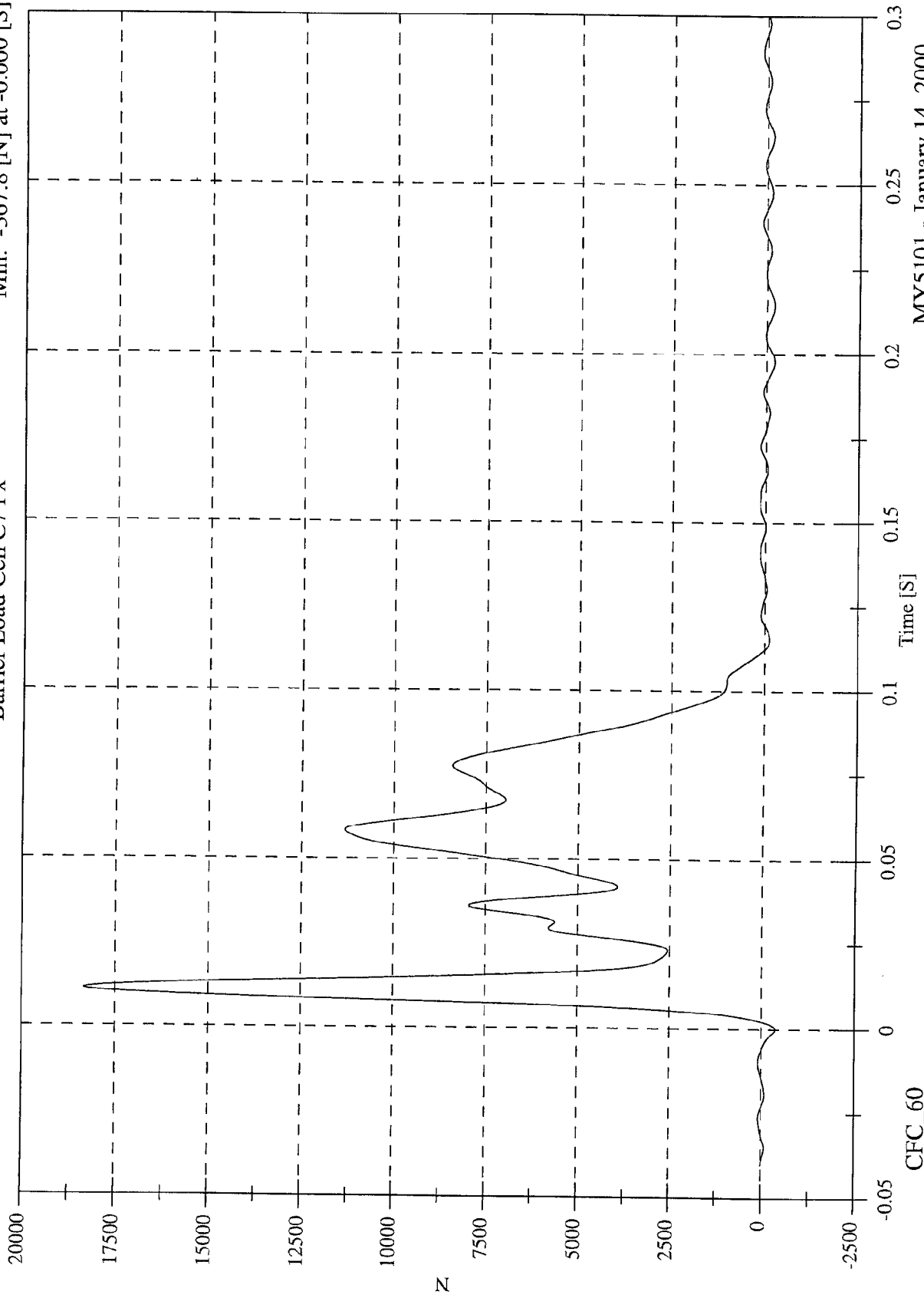
MY5101 - January 14, 2000

CFC_60

NCAP Test #9 - 2000 Toyota Camry

Barrier Load Cell C7 Fx

Max: 18340.8 [N] at 0.011 [S]
Min: -367.8 [N] at -0.000 [S]



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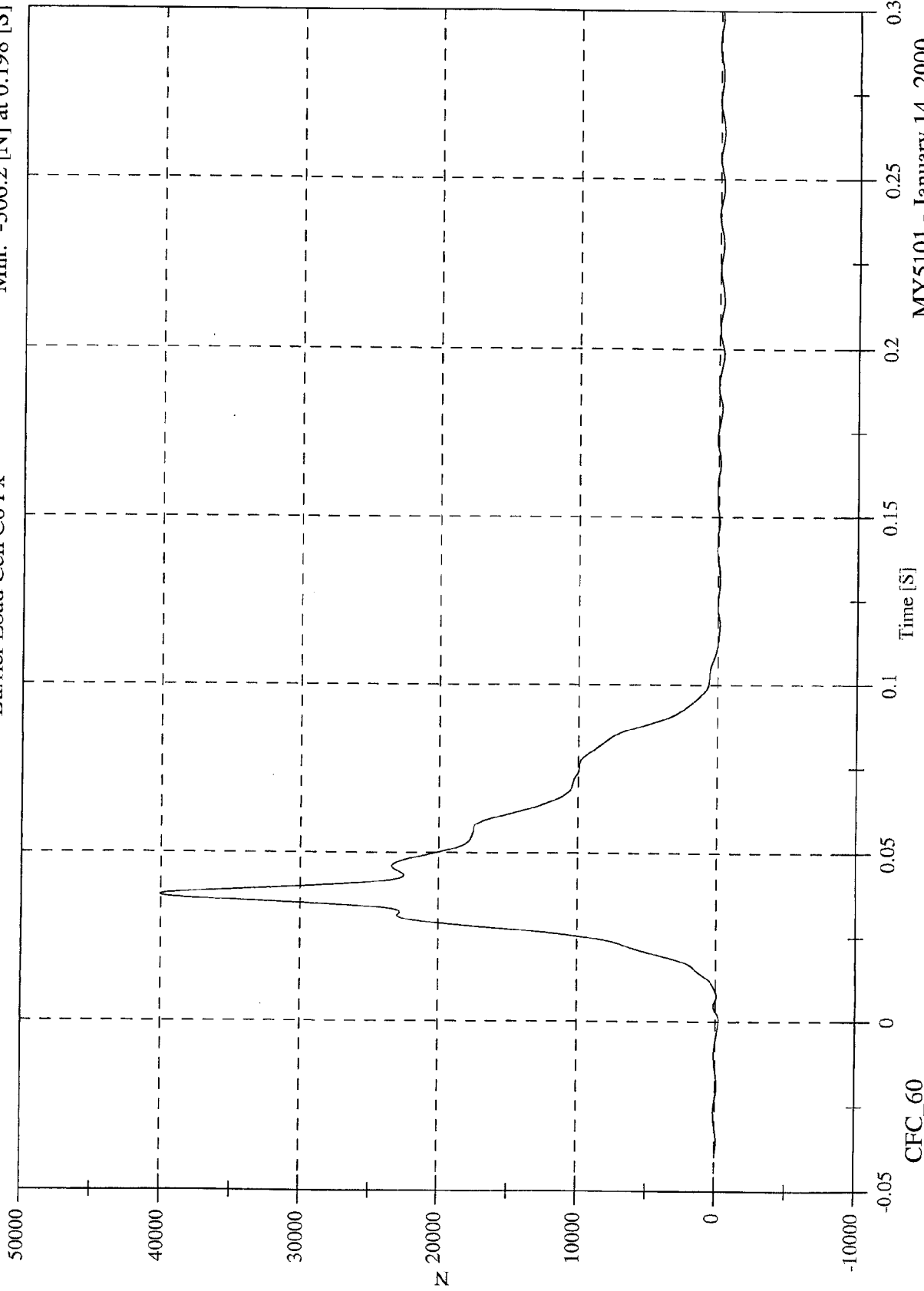
CFC_60

NCAP Test #9 - 2000 Toyota Camry

Barrier Load Cell C8 Fx

Max: 40063.8 [N] at 0.038 [S]

Min: -306.2 [N] at 0.198 [S]

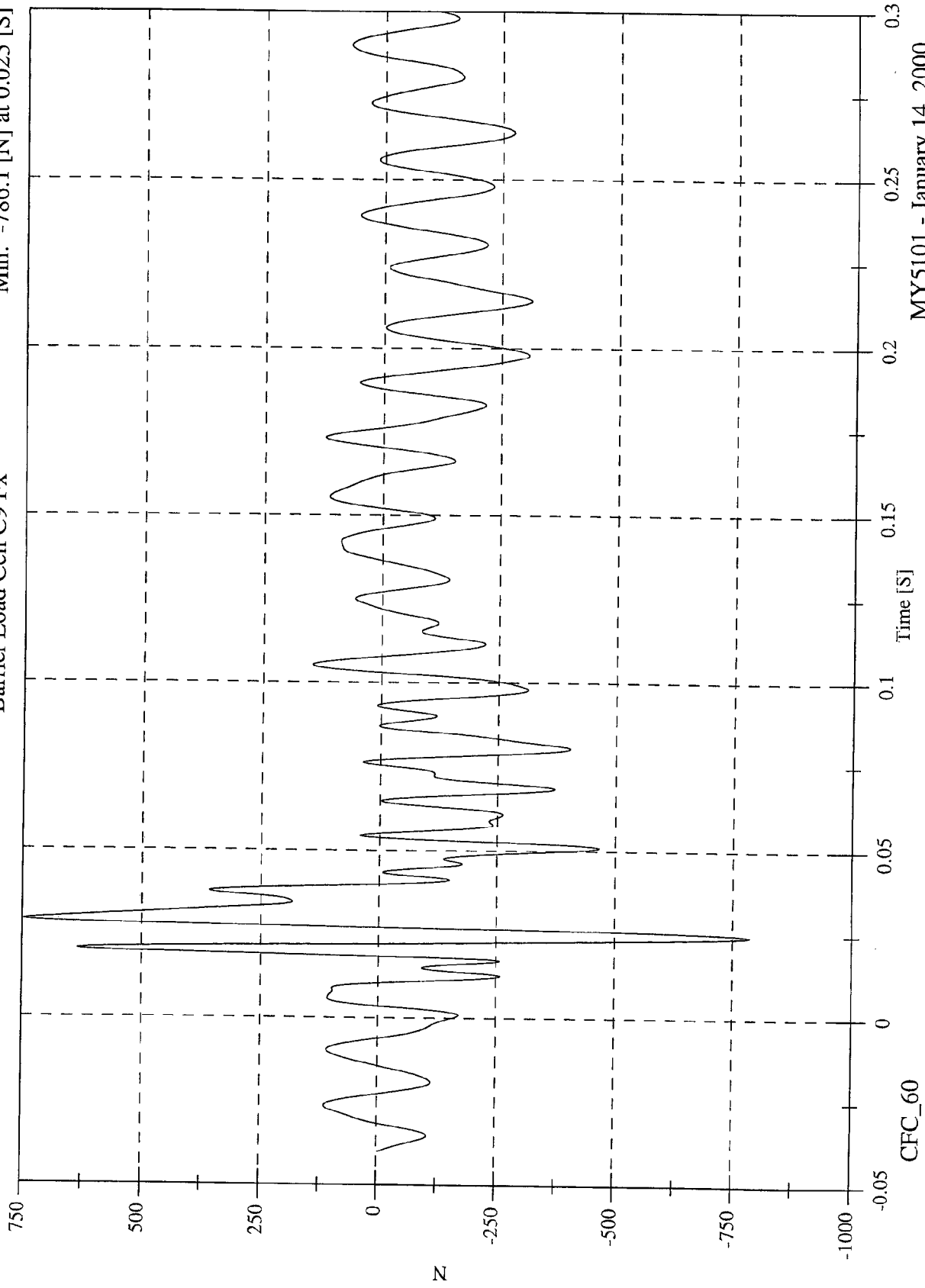


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Barrier Load Cell C9 Fx

Max: 746.6 [N] at 0.029 [S]
Min: -786.1 [N] at 0.025 [S]

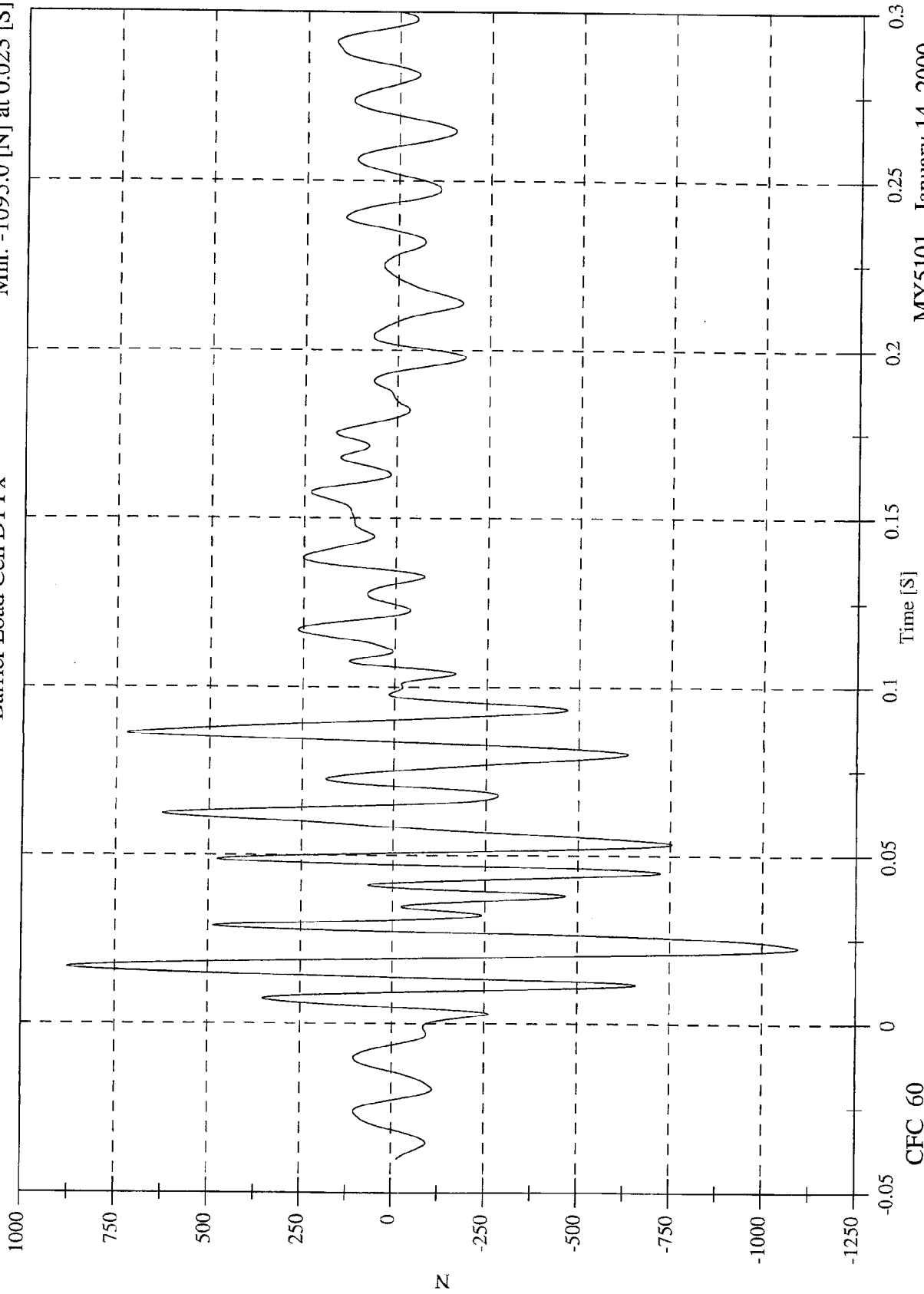


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Barrier Load Cell D1 Fx

Max: 877.7 [N] at 0.017 [S]
Min: -1095.0 [N] at 0.023 [S]



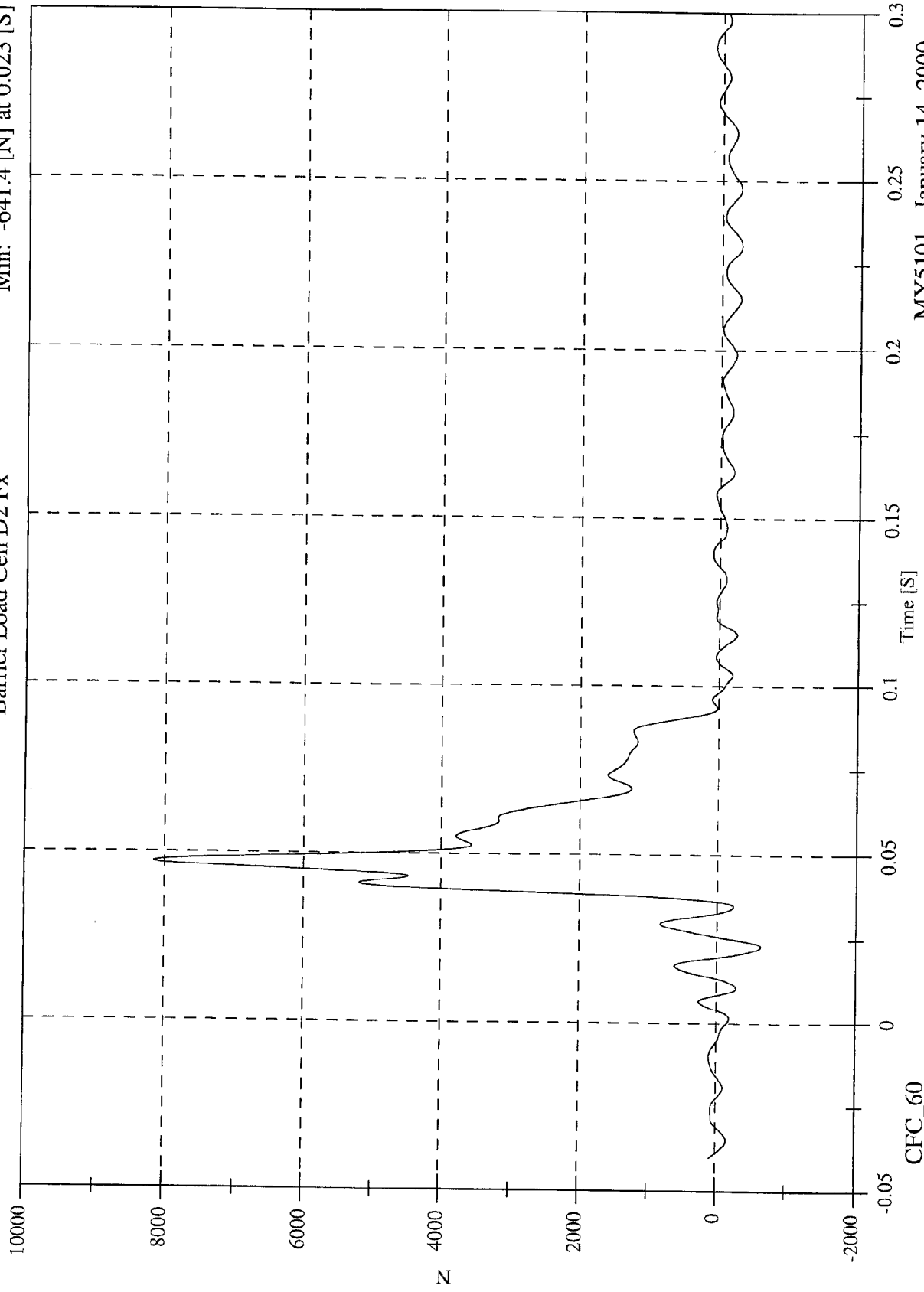
MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 8153.6 [N] at 0.047 [S]

Min: -641.4 [N] at 0.023 [S]

Barrier Load Cell D2 Fx



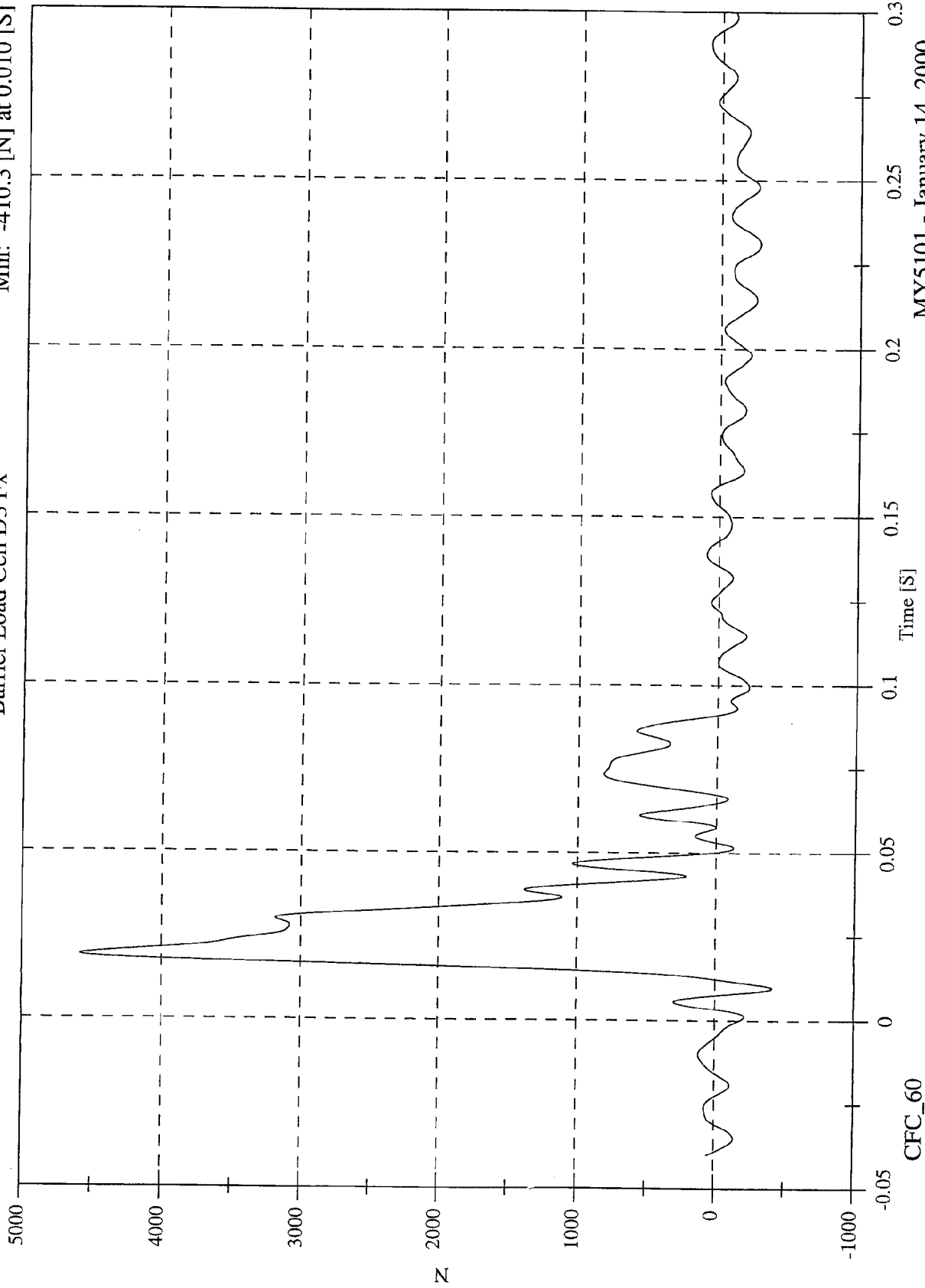
MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 4583.4 [N] at 0.019 [S]

Min: -410.3 [N] at 0.010 [S]

Barrier Load Cell D3 Fx



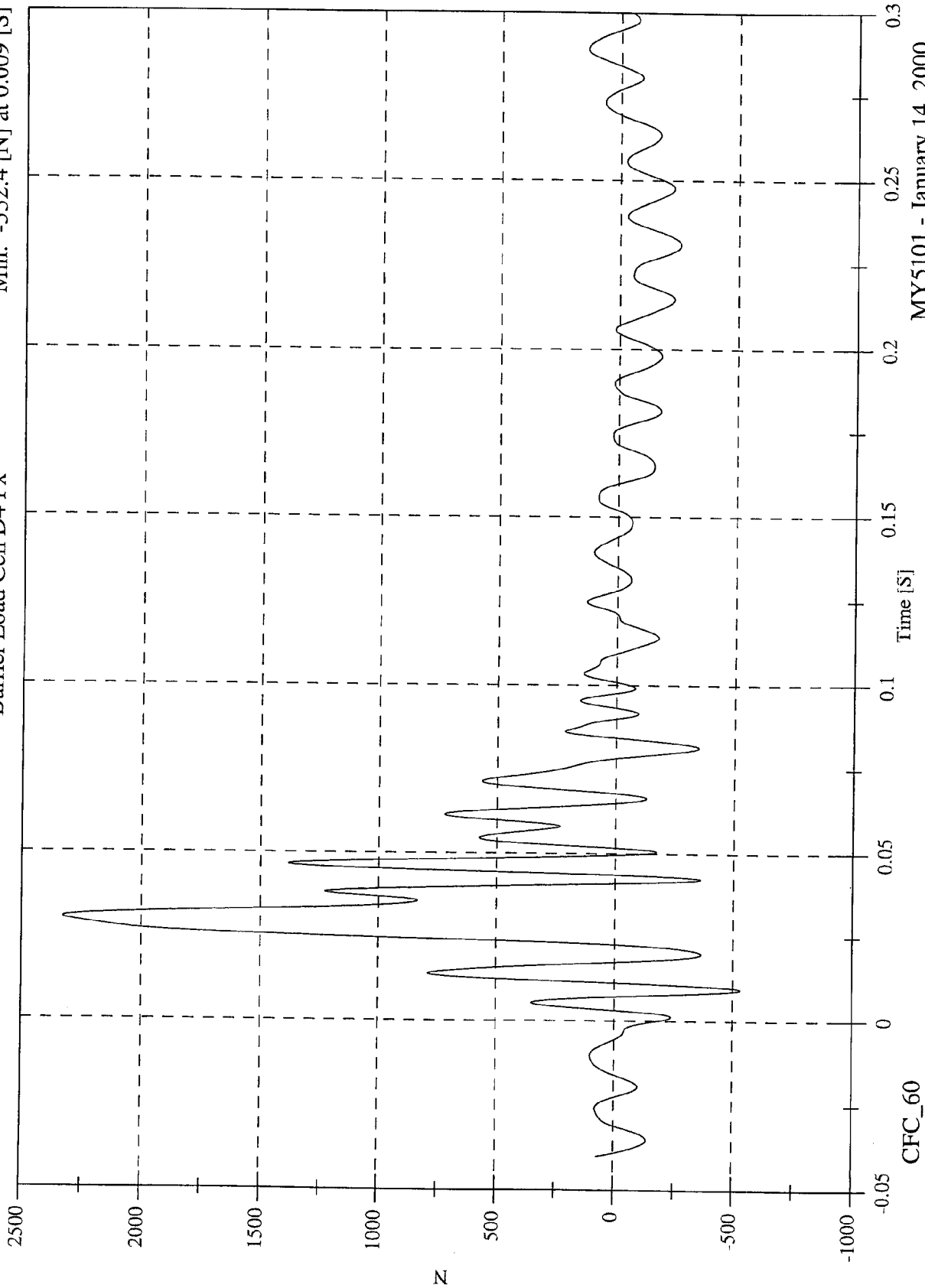
MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Barrier Load Cell D4 Fx

Max: 2328.5 [N] at 0.030 [S]

Min: -532.4 [N] at 0.009 [S]

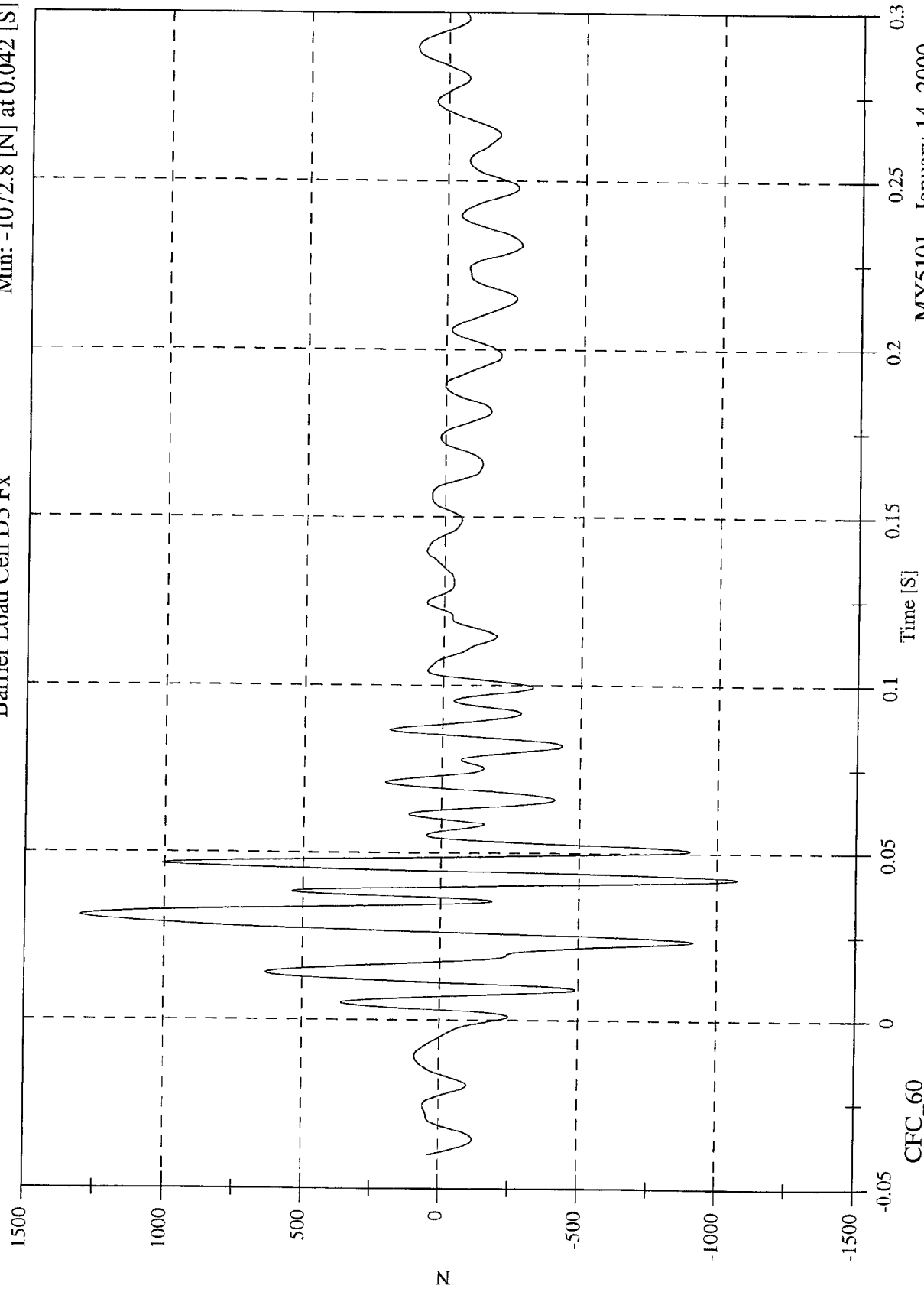


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Barrier Load Cell D5 Fx

Max: 1301.7 [N] at 0.031 [S]
Min: -1072.8 [N] at 0.042 [S]

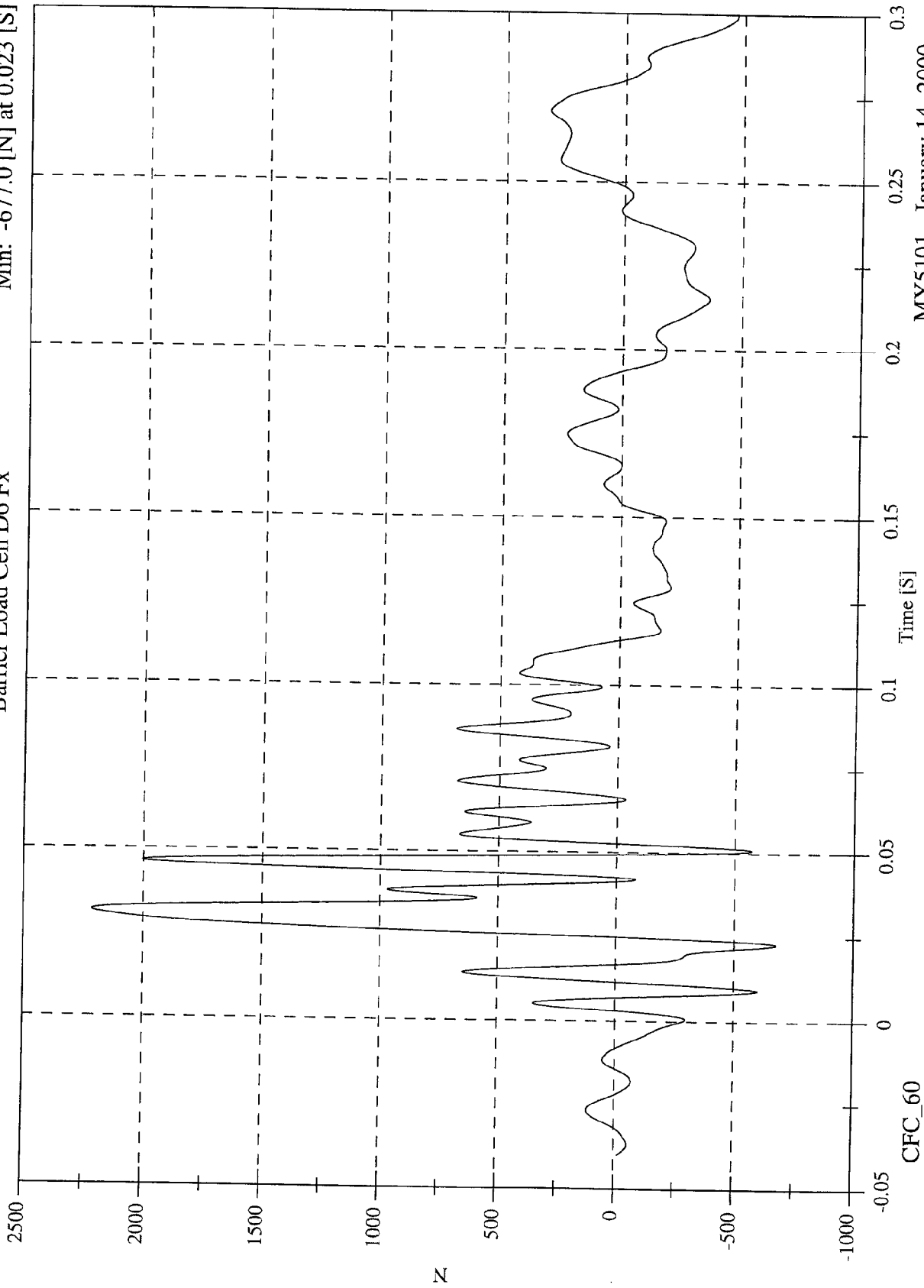


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 2214.4 [N] at 0.032 [S]
Min: -677.0 [N] at 0.023 [S]

Barrier Load Cell D6 Fx

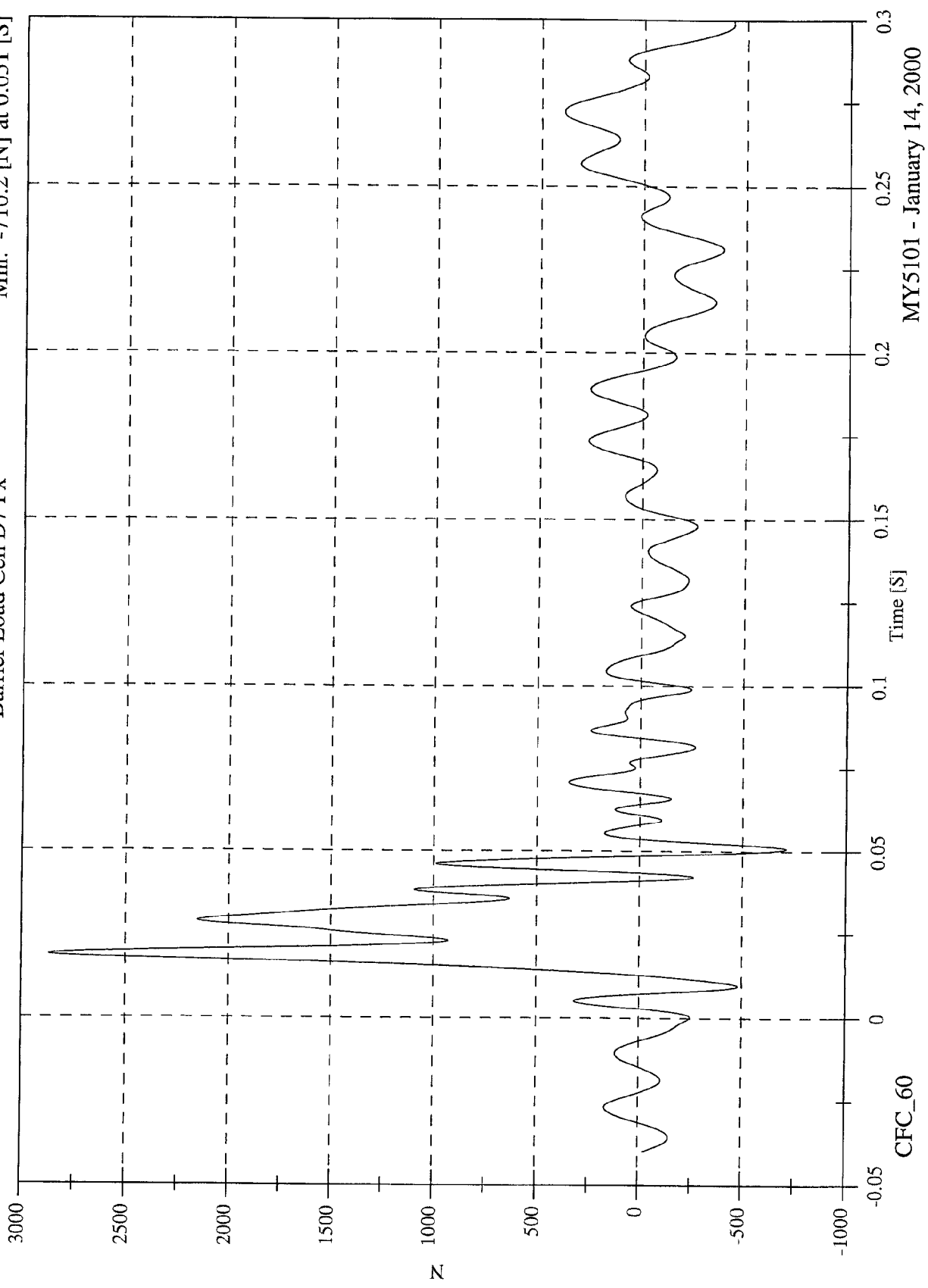


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Barrier Load Cell D7 Fx

Max: 2868.1 [N] at 0.019 [S]
Min: -710.2 [N] at 0.051 [S]

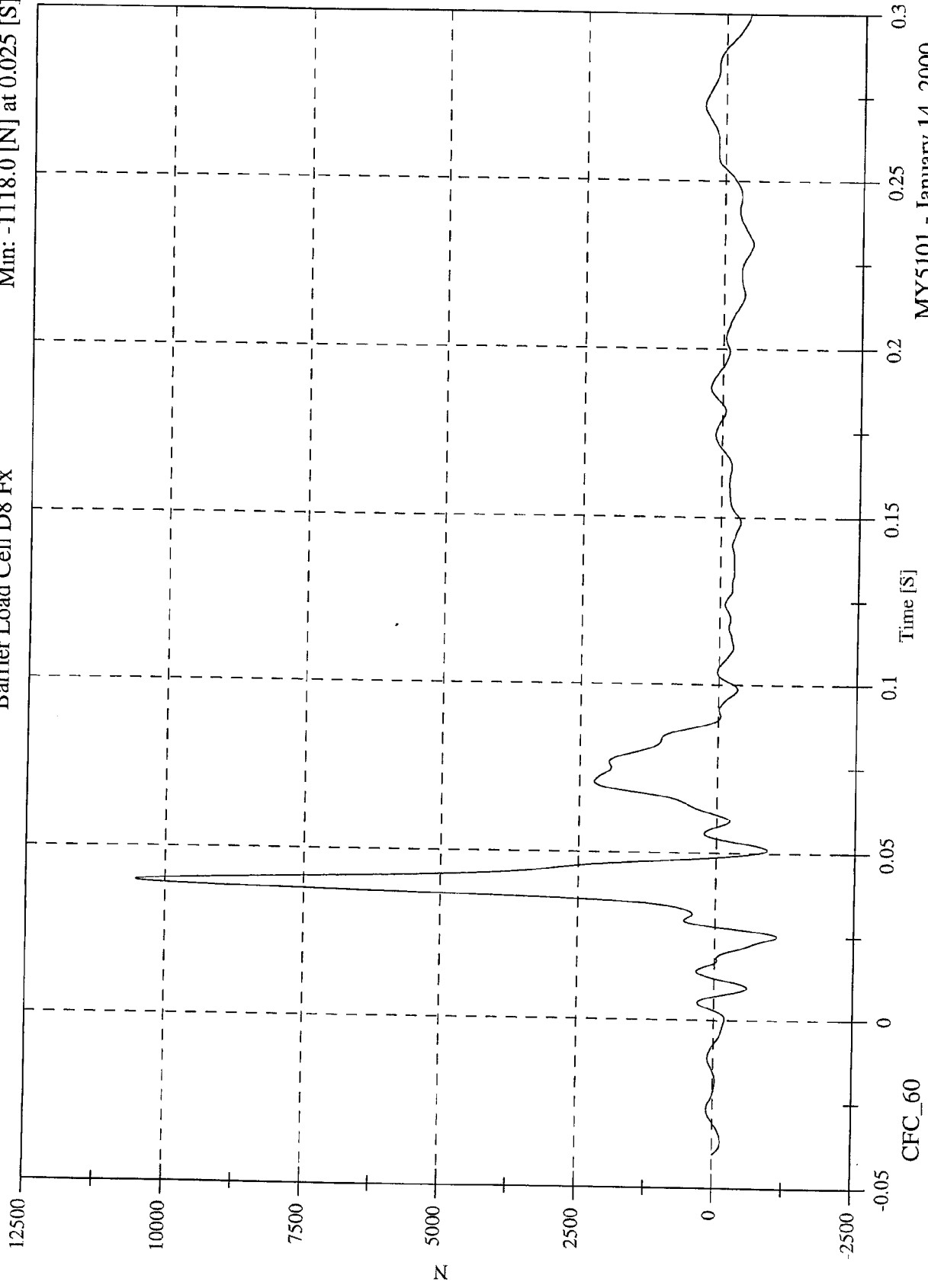


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 10536.9 [N] at 0.040 [S]
Min: -1118.0 [N] at 0.025 [S]

Barrier Load Cell D8 Fx

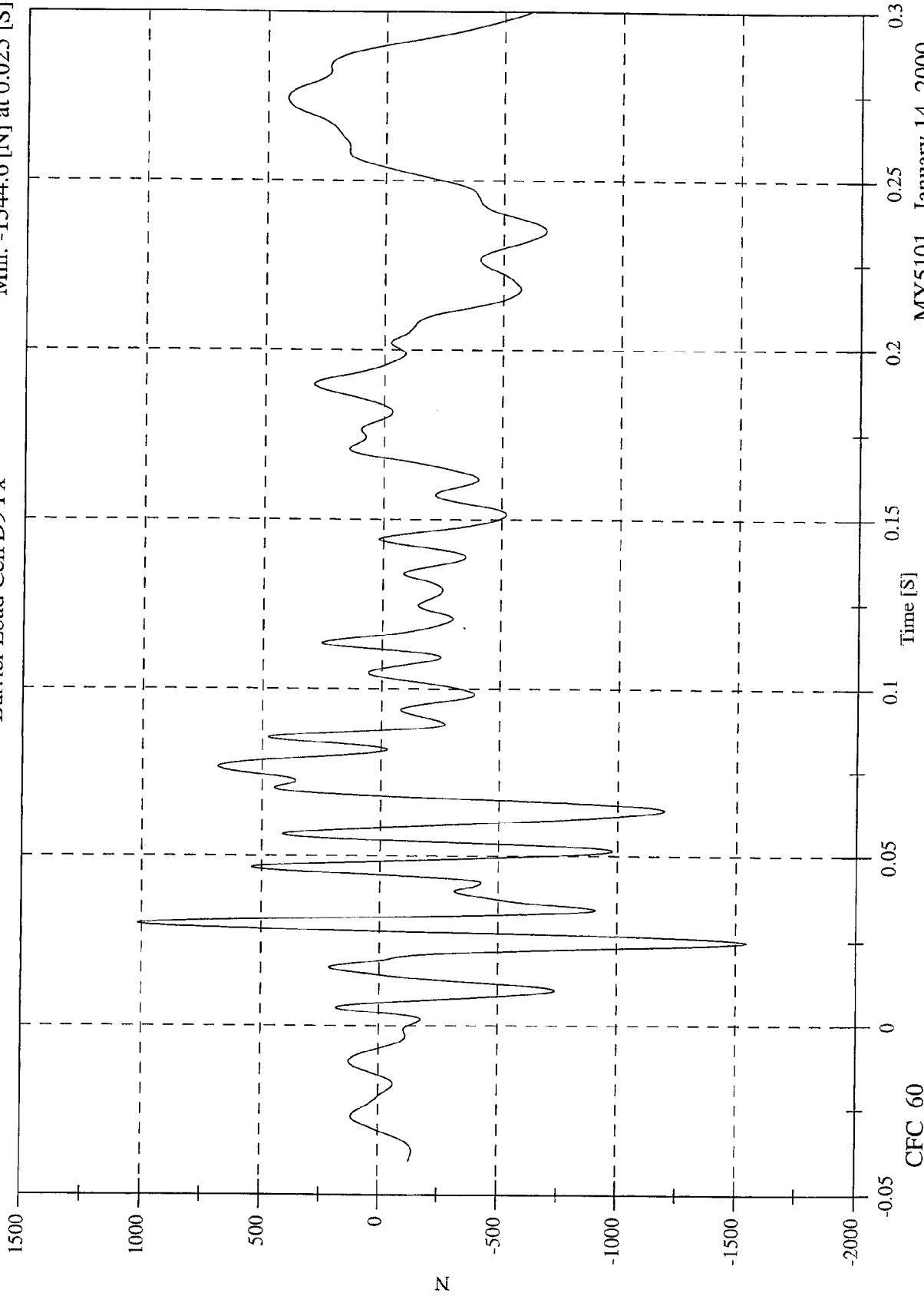


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Barrier Load Cell D9 Fx

Max: 1016.1 [N] at 0.030 [S]
Min: -1544.6 [N] at 0.025 [S]

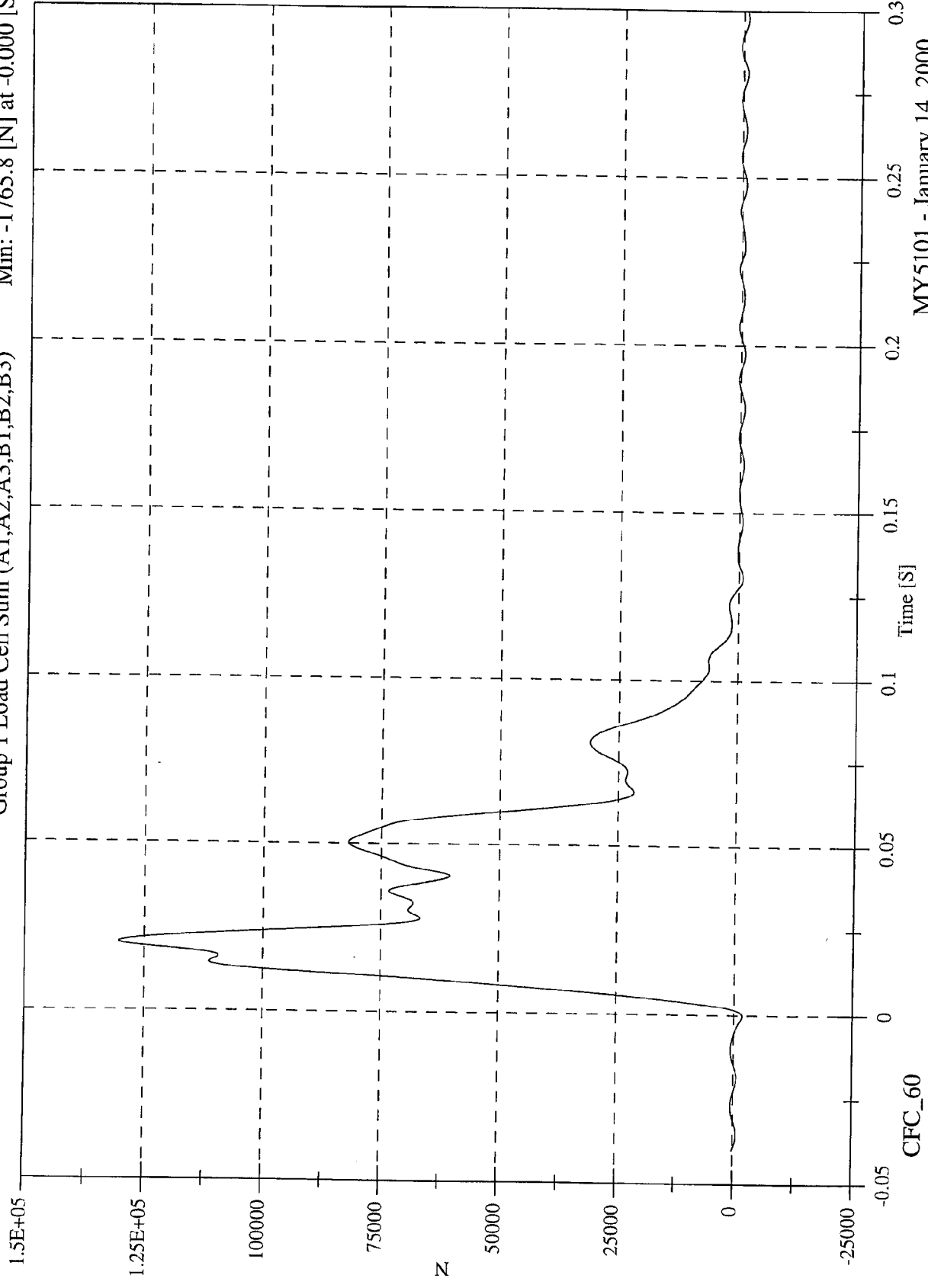


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 130392.2 [N] at 0.020 [S]
Min: -1765.8 [N] at -0.000 [S]

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



MY5101 - January 14, 2000

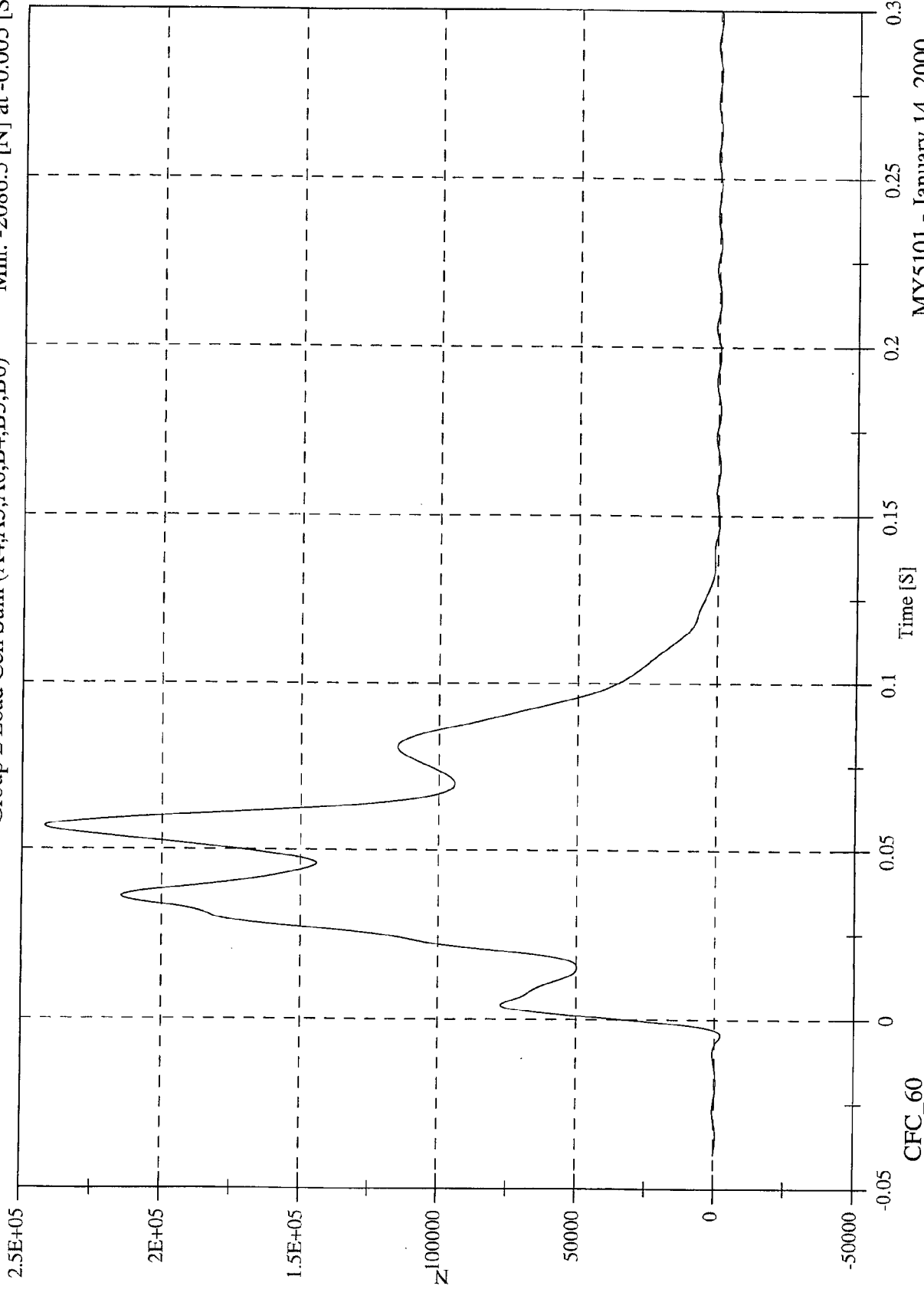
CFC_60

NCAP Test #9 - 2000 Toyota Camry

Max: 241788.7 [N] at 0.057 [S]

Min: -2086.5 [N] at -0.005 [S]

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

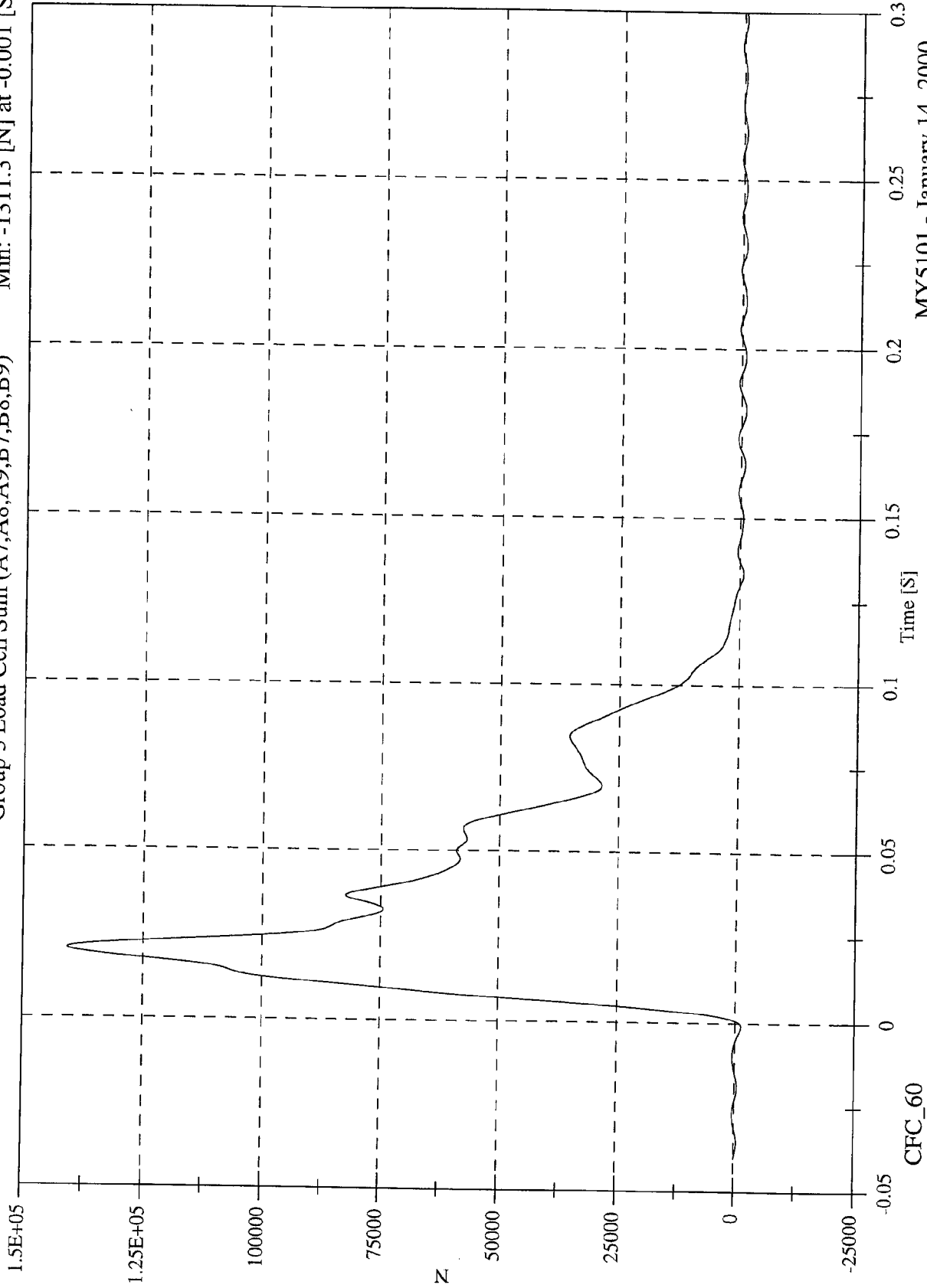


MYS101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

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

Max: 140706.0 [N] at 0.020 [S]
Min: -1311.3 [N] at -0.001 [S]



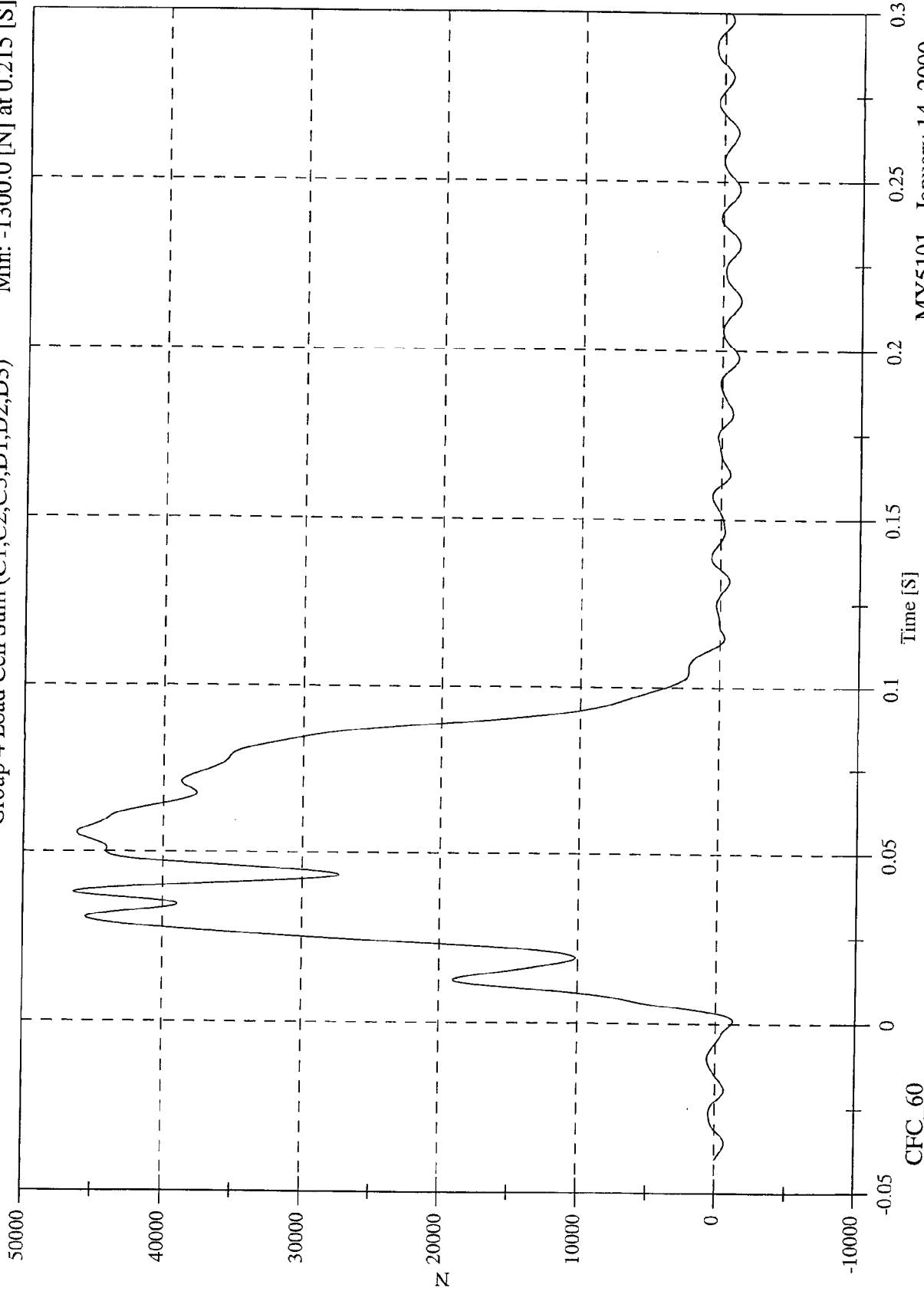
MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 46370.0 [N] at 0.038 [S]

Min: -13000.0 [N] at 0.215 [S]

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



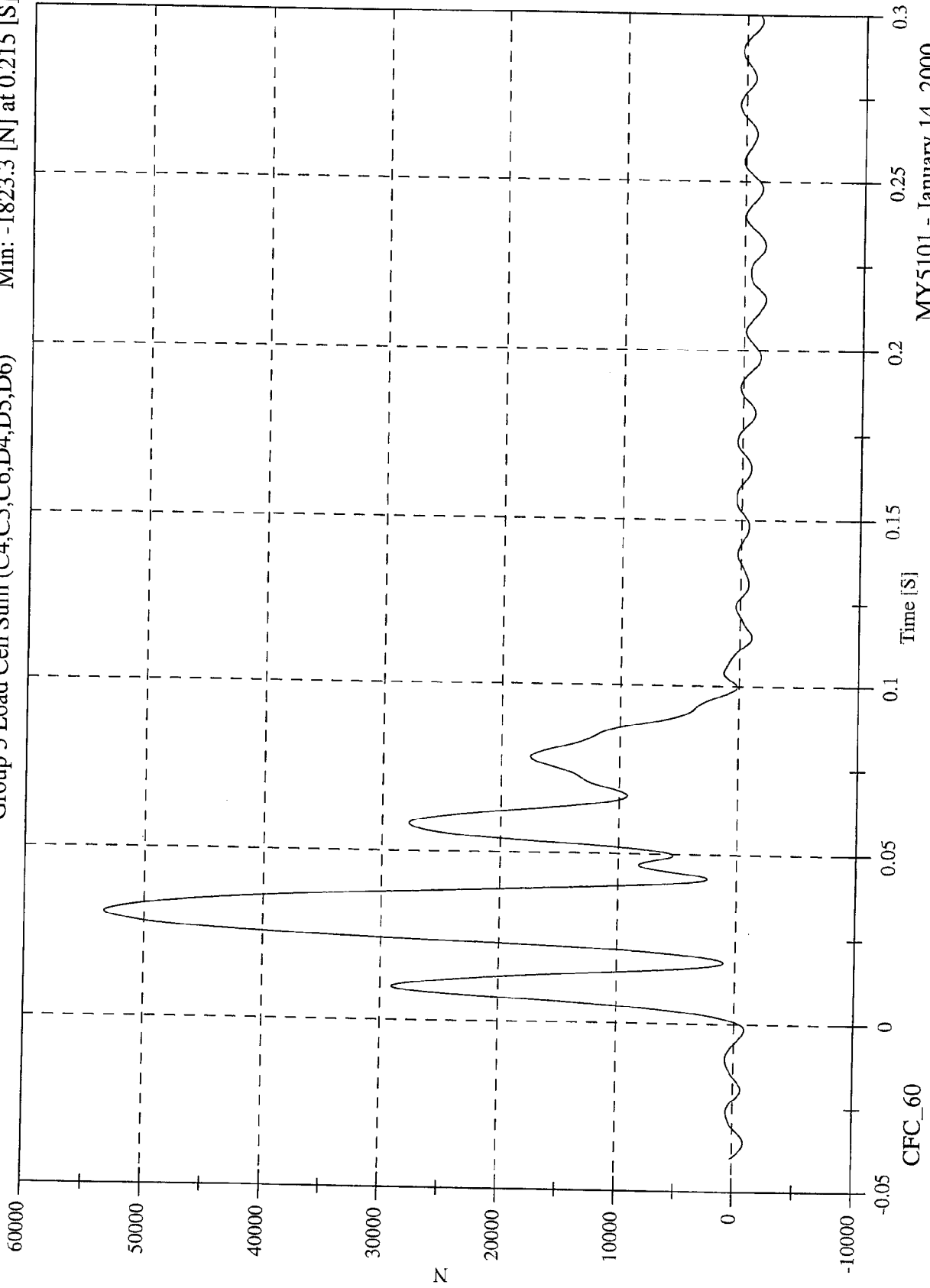
MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 53366.7 [N] at 0.031 [S]

Min: -1823.3 [N] at 0.215 [S]

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

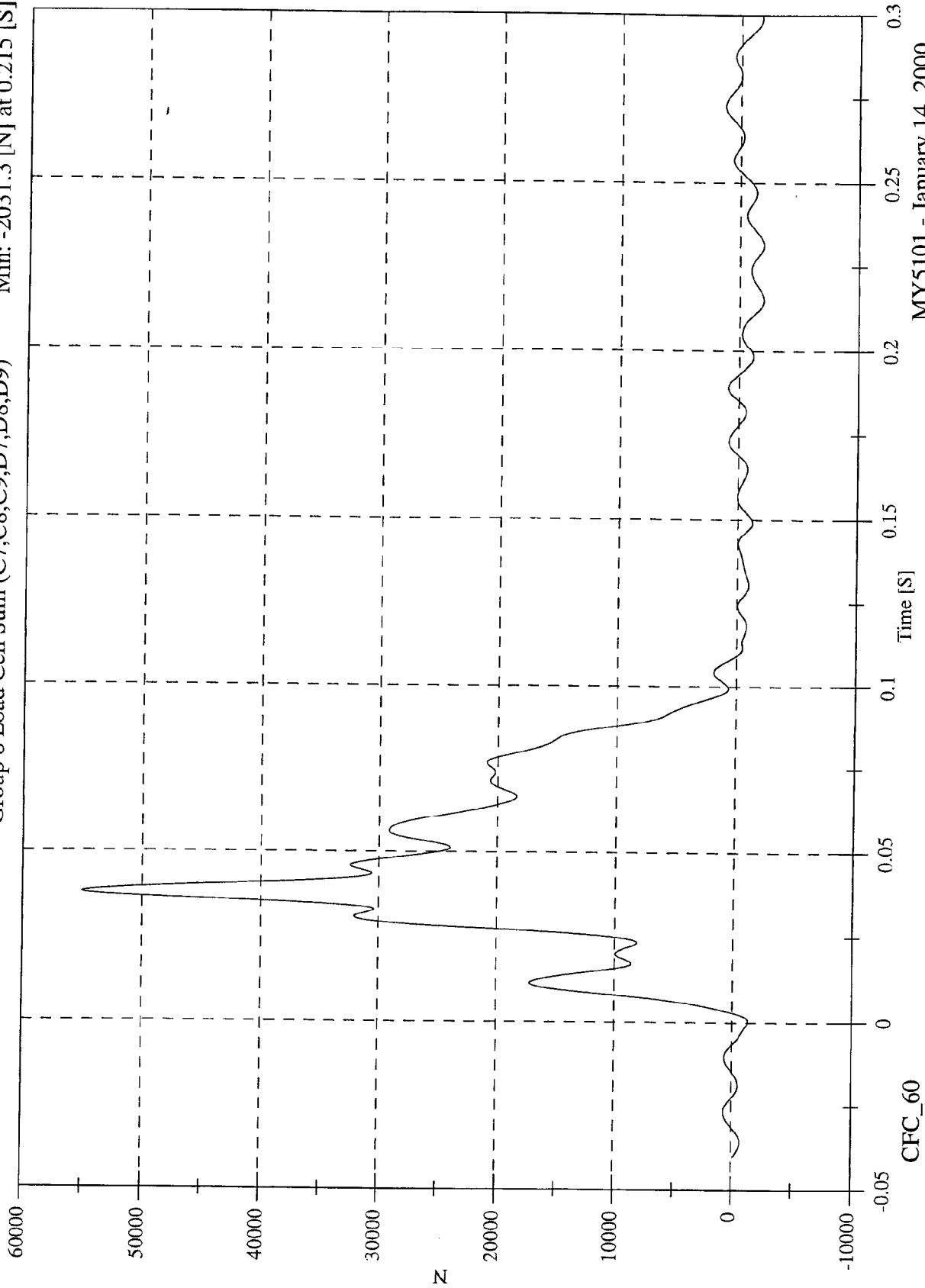


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 55064.4 [N] at 0.038 [S]
Min: -2031.3 [N] at 0.215 [S]

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

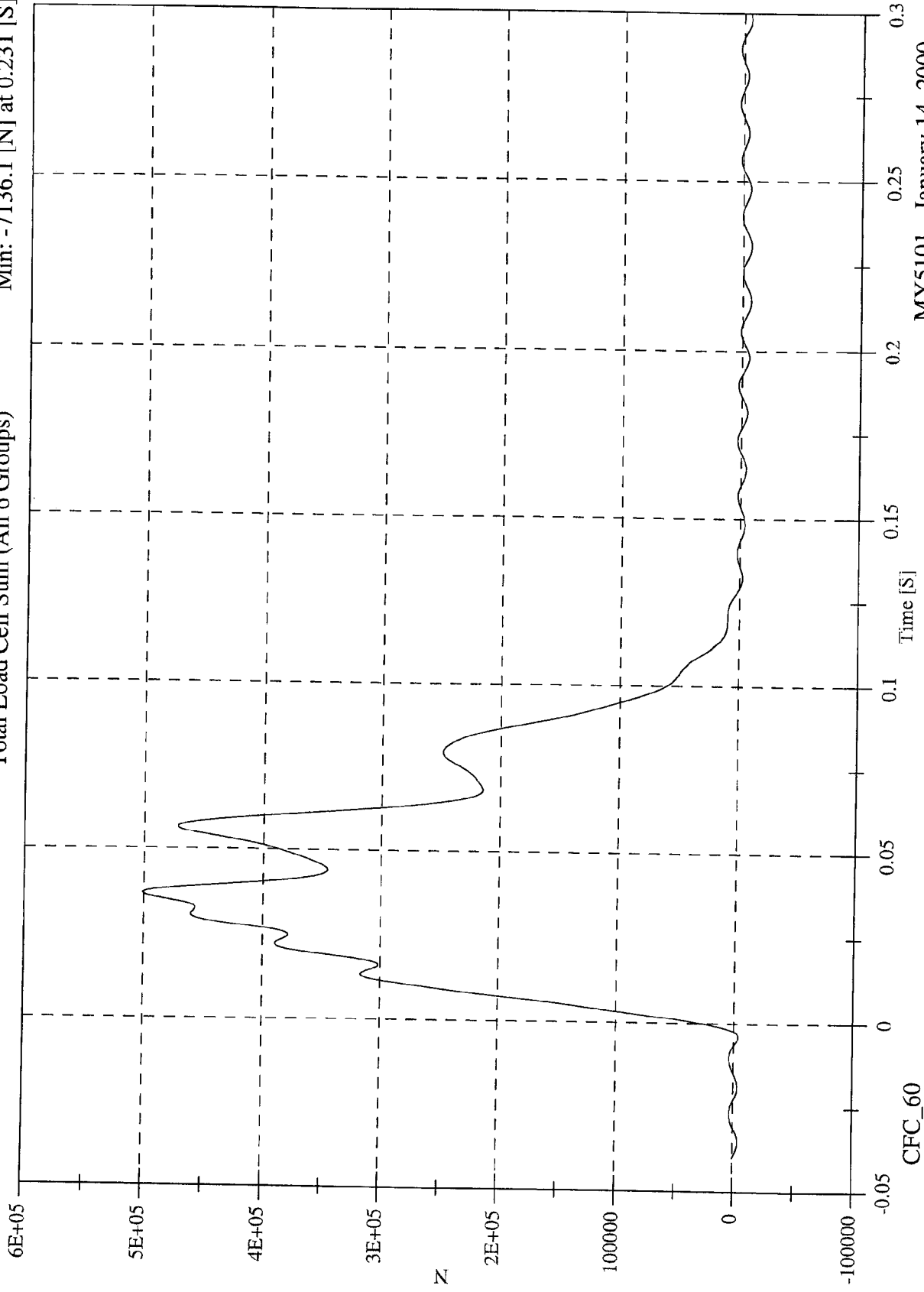


MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 501005.1 [N] at 0.037 [S]
Min: -7136.1 [N] at 0.231 [S]

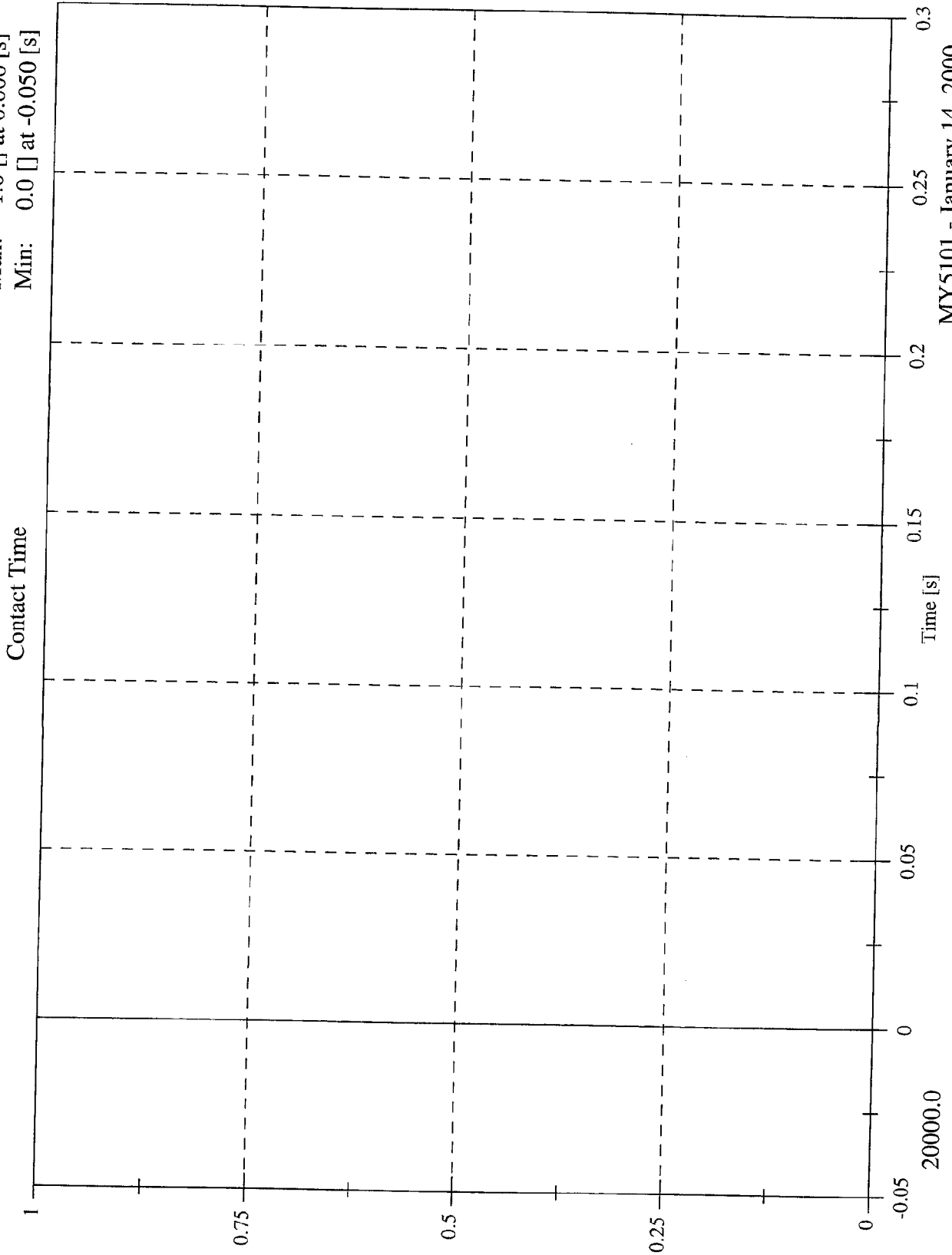
Total Load Cell Sum (All 6 Groups)



MY5101 - January 14, 2000

NCAP Test #9 - 2000 Toyota Camry

Max: 1.0 [] at 0.000 [s]
Min: 0.0 [] at -0.050 [s]



MY5101 - January 14, 2000

APPENDIX C

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

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

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

Dummy serial numbers and certification dates are:

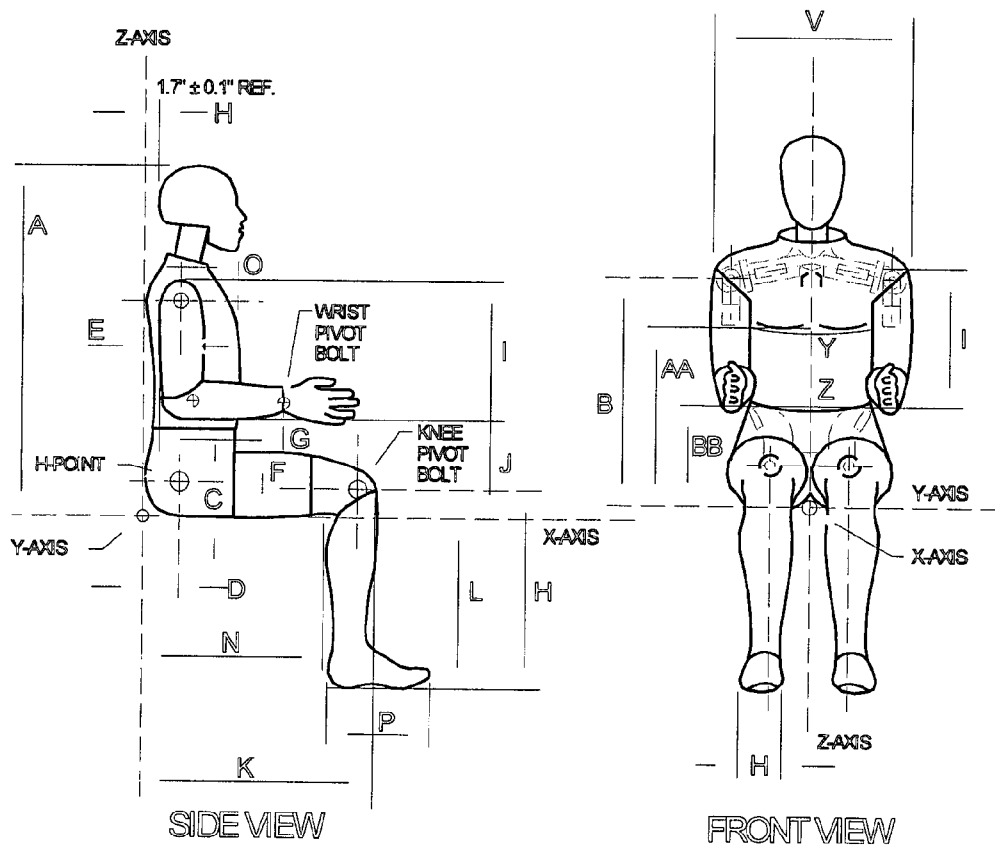
<u>Position No./Location</u>	<u>Serial No.</u>	<u>Completion Date</u>
#1/Driver	061	12/10/99
#2/Right Front Passenger	064	12/10/99

Electronic Test Equipment

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

DUMMY CONFIGURATION DIMENSIONS

EXTERNAL DIMENSIONS SPECIFICATIONS



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

PART 572E
HEAD DROP TEST

Dummy Serial Number 061
Sequential Test Number 6
Date December 6, 1999
Workfile 061699.hdp

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	66-78 Deg F	71
Relative Humidity	10% - 70%	32
Peak Resultant Acceleration	225-275 G's	237.2
Peak Lateral Acceleration	15 G's Max	10.0
Is Acceleration Curve Unimodal?	YES	YES

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
NECK FLEXION TEST

Dummy Serial Number	061	
Sequential Test Number	6	
Date	December 6, 1999	6 Axis Neck Transducer
Workfile	061699.nfl	

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature		69-72 Deg F	71
Relative Humidity		10% - 70%	32
Impact Velocity		22.60 - 23.40 Ft/s	22.70
Pendulum Deceleration	10 ms	22.50 - 27.50 G's	24.58
	20 ms	17.60 - 22.60 G's	20.41
	30 ms	12.50 - 18.50 G's	14.35
Max Pendulum G's Above 30 ms		29 G's Max	14.35
Deceleration - Time Curve Decay Time to 5 G's		34 - 42 ms	40.63
D Plane Rotation	Max	64 - 78 Deg	76.03
	Time	57 - 64 ms	63.25
Moment About Occipital Condyle	Max	65 - 80 Ft-Lbs	76.29
	Time	47 - 58 ms	54.63
Rotation Angle - Time Curve Decay Time to Zero		113 - 128 ms	119.00
Positive Moment - Time Curve Decay Time to Zero		97 - 107 ms	100.88

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
NECK EXTENSION TEST

Dummy Serial Number 061
 Sequential Test Number 6
 Date December 6, 1999
 Workfile 061699.nex

6 Axis Neck Transducer

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature		69-72 Deg F	70
Relative Humidity		10% - 70%	31
Impact Velocity		19.50 - 20.30 Ft/s	19.77
Pendulum Deceleration	10 ms	17.20 - 21.20 G's	19.35
	20 ms	14.00 - 19.00 G's	18.69
	30 ms	11.00 - 16.00 G's	15.04
Max Pendulum G's Above 30 ms		22 G's Max	15.04
Deceleration - Time Curve Decay Time to 5 G's		38 - 46 ms	39.00
D Plane Rotation	Max	81 - 106 Deg	96.52
	Time	72 - 82 ms	74.25
Moment About Occipital Condyle	Max	-59.0 - -39.0 Ft-Lbs	-50.42
	Time	65 - 79 ms	70.00
Rotation Angle - Time Curve Decay Time to Zero		147 - 174 ms	155.25
Positive Moment - Time Curve Decay Time to Zero		120 - 148 ms	129.63

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
THORAX IMPACT TEST

Dummy Serial Number 061
Sequential Test Number 6
Date December 6, 1999
Workfile 061699.th3

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	69-72 Deg F	70
Relative Humidity	10% - 70%	31
Pendulum Velocity	21.6 - 22.4 Ft/s	22.65
Maximum Deflection	2.50 - 2.86 in	2.52
Maximum Resistive Force	1160 - 1325 Lbs	1243.47
Internal Hysteresis	69 - 85 %	74.03

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
KNEE IMPACT TEST

Dummy Serial Number 061
Sequential Test Number 6
Date December 6, 1999
Workfile 061699.lf/061699.rf

TEST PARAMETER	SPECIFICATION	TEST RESULTS
LEFT KNEE		
Temperature	66 - 78 Deg F	70
Relative Humidity	10% - 70%	30
Probe Velocity	6.8 - 7.0 Ft/s	7.00
Peak Knee Impact Force	1060 - 1300 Lbs	1265.0
RIGHT KNEE		
Temperature	66 - 78 Deg F	70
Relative Humidity	10% - 70%	30
Probe Velocity	6.8 - 7.0 Ft/s	7.00
Peak Knee Impact Force	1060 - 1300 Lbs	1246.0

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
EXTERNAL DIMENSIONS

Dummy Serial Number 061
 Sequential Test Number 6
 Date December 10, 1999

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature			70
Relative Humidity			32
Location for Chest Circumference	AA	16.9 - 17.1 in	17.0
Location for Waist Circumference	BB	8.9 - 9.1 in	9.0
Chest Circumference (With Jacket)	Y	38.2 - 39.4 in	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 6
Date December 6, 1999
Workfile 064699.hdp

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	66-78 Dcg F	71
Relative Humidity	10% - 70%	32
Peak Resultant Acceleration	225-275 G's	239.5
Peak Lateral Acceleration	15 G's Max	12.0
Is Acceleration Curve Unimodal?	YES	YES

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
NECK FLEXION TEST

Dummy Serial Number 064
 Sequential Test Number 6
 Date December 6, 1999
 Workfile 064699.nfl

6 Axis Neck Transducer

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature		69-72 Deg F	70
Relative Humidity		10% - 70%	31
Impact Velocity		22.60 - 23.40 Ft/s	22.64
Pendulum Deceleration	10 ms	22.50 - 27.50 G's	23.65
	20 ms	17.60 - 22.60 G's	19.38
	30 ms	12.50 - 18.50 G's	15.62
Max Pendulum G's Above 30 ms		29 G's Max	15.62
Deceleration - Time Curve Decay Time to 5 G's		34 - 42 ms	40.75
D Plane Rotation	Max	64 - 78 Deg	72.67
	Time	57 - 64 ms	58.13
Moment About Occipital Condyle	Max	65 - 80 Ft-Lbs	78.61
	Time	47 - 58 ms	53.88
Rotation Angle - Time Curve Decay Time to Zero		113 - 128 ms	121.00
Positive Moment - Time Curve Decay Time to Zero		97 - 107 ms	101.63

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
NECK EXTENSION TEST

Dummy Serial Number
Sequential Test Number
Date
Workfile

064
6
December 6, 1999
064699.nex

6 Axis Neck Transducer

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature		69-72 Deg F	70
Relative Humidity		10% - 70%	31
Impact Velocity		19.50 - 20.30 Ft/s	19.67
Pendulum Deceleration	10 ms	17.20 - 21.20 G's	20.00
	20 ms	14.00 - 19.00 G's	18.38
	30 ms	11.00 - 16.00 G's	15.32
Max Pendulum G's Above 30 ms		22 G's Max	15.32
Deceleration - Time Curve Decay Time to 5 G's		38 - 46 ms	39.13
D Plane Rotation	Max	81 - 106 Deg	97.84
	Time	72 - 82 ms	73.38
Moment About Occipital Condyle	Max	-59.0 - -39.0 Ft-Lbs	-55.90
	Time	65 - 79 ms	69.13
Rotation Angle - Time Curve Decay Time to Zero		147 - 174 ms	147.75
Positive Moment - Time Curve Decay Time to Zero		120 - 148 ms	135.50

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
THORAX IMPACT TEST

Dummy Serial Number 064
Sequential Test Number 6
Date December 6, 1999
Workfile 064699.th3

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	69-72 Deg F	70
Relative Humidity	10% - 70%	30
Pendulum Velocity	21.6 - 22.4 Ft/s	21.68
Maximum Deflection	2.50 - 2.86 in	2.50
Maximum Resistive Force	1160 - 1325 Lbs	1300.05
Internal Hysteresis	69 - 85 %	76.8

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
KNEE IMPACT TEST

Dummy Serial Number 064
Sequential Test Number 6
Date December 6, 1999
Workfile 064699.lf/064699.rf

TEST PARAMETER	SPECIFICATION	TEST RESULTS
LEFT KNEE		
Temperature	66 - 78 Deg F	70
Relative Humidity	10% - 70%	30
Probe Velocity	6.8 - 7.0 Ft/s	7.00
Peak Knee Impact Force	1060 - 1300 Lbs	1134.0
RIGHT KNEE		
Temperature	66 - 78 Deg F	70
Relative Humidity	10% - 70%	30
Probe Velocity	6.8 - 7.0 Ft/s	7.00
Peak Knee Impact Force	1060 - 1300 Lbs	1135.0

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
EXTERNAL DIMENSIONS

Dummy Serial Number 064
 Sequential Test Number 6
 Date December 10, 1999

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature			70
Relative Humidity			30
Location for Chest Circumference	AA	16.9 - 17.1 in	17.0
Location for Waist Circumference	BB	8.9 - 9.1 in	9.0
Chest Circumference (With Jacket)	Y	38.2 - 39.4 in	38.8
Waist Circumference	Z	32.9 - 34.1 in	33.4
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	23.5
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-A1553	08-Nov-99	08-May-00
	Y	ENDEVCO	AC-A83G	08-Nov-99	08-May-00
	Z	ENDEVCO	AC-C14901	08-Nov-99	08-May-00
Head	X (R)	ENDEVCO	AC-A13939	08-Nov-99	08-May-00
	Y (R)	ENDEVCO	AC-A14181	08-Nov-99	08-May-00
	Z (R)	ENDEVCO	AC-A14124	08-Nov-99	08-May-00
Neck Load Cell	X	DENTON	LC-205Fx	06-Aug-99	06-Feb-00
	Y	DENTON	LC-205Fy	06-Aug-99	06-Feb-00
	Z	DENTON	LC-205Fz	06-Aug-99	06-Feb-00
Neck Moment	X	DENTON	LC-205Mx	06-Aug-99	06-Feb-00
	Y	DENTON	LC-205My	06-Aug-99	06-Feb-00
	Z	DENTON	LC-205Mz	06-Aug-99	06-Feb-00
Chest	X	ENDEVCO	AC-FP90	08-Nov-99	08-May-00
	Y	ENDEVCO	AC-A26A	08-Nov-99	08-May-00
	Z	ENDEVCO	AC-AL6H7	08-Nov-99	08-May-00
Chest	X (R)	ENDEVCO	AC-B11407	08-Nov-99	08-May-00
	Y (R)	ENDEVCO	AC-B11408	08-Nov-99	08-May-00
	Z (R)	ENDEVCO	AC-B10827	08-Nov-99	08-May-00
Chest Deflection Gauge Hybrid III Use Only	SERVO	DS-061	06-Aug-99	06-Feb-00	
Pelvic	X	ENDEVCO	AC-ADMB8	08-Nov-99	08-May-00
	Y	ENDEVCO	AC-ADL44	08-Nov-99	08-May-00
	Z	ENDEVCO	AC-ACT12	08-Nov-99	08-May-00

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-418	20-Oct-99	20-Apr-00	
Right Femur Load Cell	GSE	LC-420	19-Oct-99	19-Apr-00	
Left Upper Tibia	Mx	DENTON	LC-045Mx	16-Sep-99	16-Mar-00
	My	DENTON	LC-045My	16-Sep-99	16-Mar-00
Left Lower Tibia	Fz	DENTON	LC-125Fz	16-Sep-99	16-Mar-00
	Mx	DENTON	LC-125Mx	16-Sep-99	16-Mar-00
	My	DENTON	LC-125My	16-Sep-99	16-Mar-00
Right Upper Tibia	Mx	DENTON	LC-038Mx	16-Sep-99	16-Mar-00
	My	DENTON	LC-038My	16-Sep-99	16-Mar-00
Right Lower Tibia	Fz	DENTON	LC-124Fz	16-Sep-99	16-Mar-00
	Mx	DENTON	LC-124Mx	16-Sep-99	16-Mar-00
	My	DENTON	LC-124My	16-Sep-99	16-Mar-00
Left Foot Rear	X	ENDEVCO	AC-J32176	11-Oct-99	11-Apr-00
	Z	ENDEVCO	AC-J31042	11-Oct-99	11-Apr-00
Left Foot Front	Z	ENDEVCO	AC-J31009	11-Oct-99	11-Apr-00
Right Foot Rear	X	ENDEVCO	AC-J31050	11-Oct-99	11-Apr-00
	Z	ENDEVCO	AC-J31060	11-Oct-99	11-Apr-00
Right Foot Front	Z	ENDEVCO	AC-J32143	11-Oct-99	11-Apr-00
Lap Belt Load Cells	LEBOW	LC-635	19-Oct-99	19-Apr-00	
Shoulder Belt Load Cells	-	-	-	-	
Spool-Out Potentiometer	-	-	-	-	
Belt Stretch Transducer	-	-	-	-	

INSTRUMENT CALIBRATION FOR PASSENGER DUMMY

(6 Month Calibration Minimum)

PASSENGER DUMMY (S/N 064)	Manufacturer	Serial #	Calibration		
			Last	Next	
Head	X	ENDEVCO	AC-C15021	12-Nov-99	12-May-00
	Y	ENDEVCO	AC-C15007	12-Nov-99	12-May-00
	Z	ENDEVCO	AC-AH5N0	12-Nov-99	12-May-00
Head	X (R)	ENDEVCO	AC-P13329	05-Oct-99	05-Apr-00
	Y (R)	ENDEVCO	AC-P13355	05-Oct-99	05-Apr-00
	Z (R)	ENDEVCO	AC-J31026	17-Nov-99	17-May-00
Neck Load Cell	X	DENTON	LC-440Fx	06-Aug-99	06-Feb-00
	Y	DENTON	LC-440Fy	06-Aug-99	06-Feb-00
	Z	DENTON	LC-440Fz	06-Aug-99	06-Feb-00
Neck Moment	X	DENTON	LC-440Mx	06-Aug-99	06-Feb-00
	Y	DENTON	LC-440My	06-Aug-99	06-Feb-00
	Z	DENTON	LC-440Mz	06-Aug-99	06-Feb-00
Chest	X	ENDEVCO	AC-A08A	17-Dec-99	17-Jun-00
	Y	ENDEVCO	AC-ADL42	17-Dec-99	17-Jun-00
	Z	ENDEVCO	AC-A28F	17-Dec-99	17-Jun-00
Chest	X (R)	ENDEVCO	AC-A14077	17-Dec-99	17-Jun-00
	Y (R)	ENDEVCO	AC-A13882	17-Dec-99	17-Jun-00
	Z (R)	ENDEVCO	AC-ACCW0	17-Dec-99	17-Jun-00
Chest Deflection Gauge Hybrid III Use Only	SERVO	DS-064	06-Aug-99	06-Feb-00	
Pelvic	X	ENDEVCO	AC-AF480	17-Dec-99	17-Jun-00
	Y	ENDEVCO	AC-AC2M6	17-Dec-99	17-Jun-00
	Z	ENDEVCO	AC-AF5C1	17-Dec-99	17-Jun-00

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	20-Oct-99	20-Apr-00	
Right Femur Load Cell	GSE	LC-955	19-Oct-99	19-Apr-00	
Left Upper Tibia	Mx	DENTON	LC-016Mx	16-Sep-99	16-Mar-00
	My	DENTON	LC-016My	16-Sep-99	16-Mar-00
Left Lower Tibia	Fz	DENTON	LC-123Fz	16-Sep-99	16-Mar-00
	Mx	DENTON	LC-123Mx	16-Sep-99	16-Mar-00
	My	DENTON	LC-123My	16-Sep-99	16-Mar-00
Right Upper Tibia	Mx	DENTON	LC-023Mx	12-Oct-99	12-Apr-00
	My	DENTON	LC-023My	12-Oct-99	12-Apr-00
Right Lower Tibia	Fz	DENTON	LC-111Fz	12-Oct-99	12-Apr-00
	Mx	DENTON	LC-111Mx	12-Oct-99	12-Apr-00
	My	DENTON	LC-111My	12-Oct-99	12-Apr-00
Left Foot Rear	X	ENDEVCO	AC-J32184	11-Oct-99	11-Apr-00
	Z	ENDEVCO	AC-J31011	11-Oct-99	11-Apr-00
Left Foot Front	Z	ENDEVCO	AC-J32185	11-Oct-99	11-Apr-00
Right Foot Rear	X	ENDEVCO	AC-J31101	11-Oct-99	11-Apr-00
	Z	ENDEVCO	AC-J31020	11-Oct-99	11-Apr-00
Right Foot Front	Z	ENDEVCO	AC-J31059	11-Oct-99	11-Apr-00
Lap Belt Load Cells	LEBOW	LC-775	19-Oct-99	19-Apr-00	
Shoulder Belt Load Cells	-	-	-	-	
Spool-Out Potentiometer	-	-	-	-	
Belt Stretch Transducer	-	-	-	-	

INSTRUMENT CALIBRATION FOR VEHICLE ACCELEROMETERS

(6 Month Calibration Minimum)

	Manufacturer	Serial #	Calibration	
			Last	Next
Left Seat Rear Crossmember	ICS	AC-D34	01-Sep-99	01-Mar-00
Right Rear Seat Crossmember	ICS	AC-Y151	01-Sep-99	01-Mar-00
Top of Engine	ICS	AC-D88	01-Sep-99	01-Mar-00
Bottom of Engine	ENDEVCO	AC-AP1A0	03-Sep-99	03-Mar-00
Right Disc Brake Caliper	ICS	AC-D78	23-Nov-99	23-May-00
Instrument Panel	ICS	AC-D61	02-Sep-99	02-Mar-00
Left Disc Brake Caliper	ENDEVCO	AC-AA35	14-Sep-99	14-Mar-00
Left Seat Rear Crossmember (R)	ICS	AC-D29	14-Sep-99	14-Mar-00
Right Seat Rear Crossmember (R)	ICS	AC-Y112	01-Sep-99	01-Mar-00

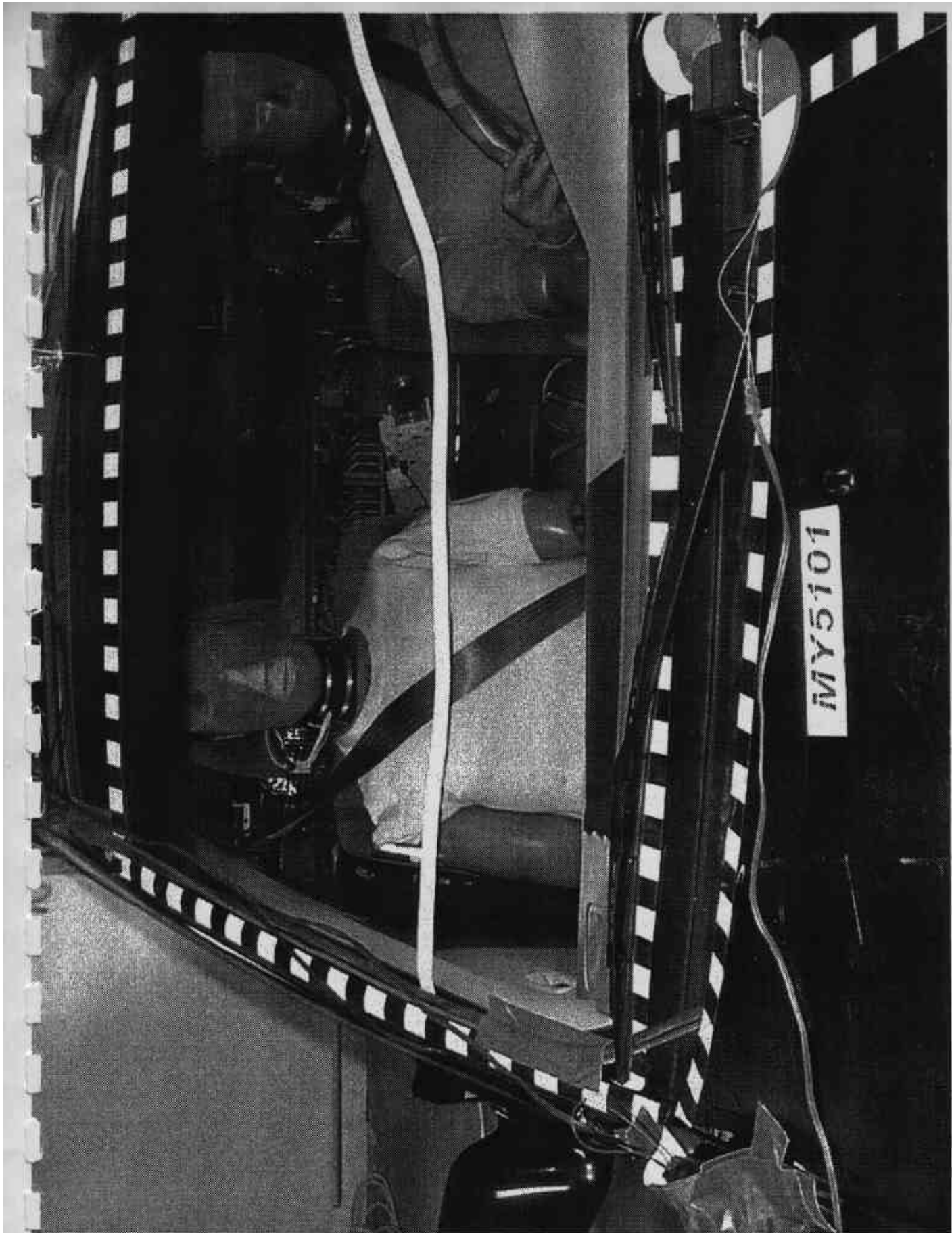


Figure A-32 PRE-TEST PASSENGER HEAD LOCATION