

3295

REPORT NUMBER: CAL-00-16

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

**FORD MOTOR COMPANY
2000 FORD FOCUS
4-DOOR SEDAN**

NHTSA NUMBER: MY0206

VERIDIAN TEST NUMBER: 8413-54

VERIDIAN ENGINEERING
TRANSPORTATION SCIENCES CENTER
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March 22, 2000

FINAL REPORT

PREPARED FOR:

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Office of Crashworthiness Standards
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15. <i>Supplementary Notes</i>					
16. <i>Abstract</i> A frontal load cell barrier test of a 2000 Ford Focus 4-Door Sedan was performed at Veridian Engineering crash test facility in Buffalo, New York, on March 22, 2000. The impact velocity was 56.32 kph and the temperature at the barrier face was 21 °C. The maximum post-test vehicle crush was 505 mm. The test vehicle was equipped with load limiting 3-point restraint systems with a driver's torso belt pretensioner and a passenger lap pre-tensioner, knee bolsters, and depowered 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 (245)	583.4	44.3	39.4	4770.2	3165.3
Passenger (064)	387.2	45.9	30.0	5270.7	5757.5
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 MY0206

PURPOSE

This 56.32 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 56.32 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 Ford Focus 4-Door Sedan at a velocity of 56.32 kph. The test was performed at Veridian Engineering on March 22, 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. 245) was calibrated previous to this test. The right-front passenger (position 2) ATD (Serial No. 064) was used in one test (MY0111) previous to this test where it did not exceed FMVSS 208 head, chest and femur requirements. Certification details, along with instrumentation calibration data, are found in Appendix C.

The 125 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 583.4. The maximum chest deceleration over 3 milliseconds was 44.3 g's and maximum chest deflection was 39.4 mm. Compressive femur loads were 4770.2 Newtons on the left and 3165.3 Newtons on the right.

The right front passenger's HIC was 387.2. Maximum chest deceleration over 3 milliseconds was 45.9 g's and maximum chest deflection was 30.0 mm. Compressive femur loads were 5270.7 Newtons on the left and 5757.5 Newtons on the right.

The front outboard passenger seat belts were equipped with seat belt load limiters. The driver's seat is equipped with a torso belt pretensioner while the right front passenger seat is equipped with a lap belt pretensioner. At the request of Ford Motor Company representatives lap and torso seat belt load cells, seat belt displacement and stretch pots were not used in this test. In addition, the Ford representative requested that the steering column target be removed prior to the test to avoid interference with steering column stroke.

SECTION 2

GENERAL TEST AND VEHICLE PARAMETER DATA

DATA SHEET NO. 1 CRASH TEST SUMMARY

Vehicle NHTSA No. : MY0206 Test Mode : 56.3 kph Frontal Barrier

Test Date : March 22, 2000 Time: 14:00 Temperature : 17 °C

Vehicle Make/Model/Body Style : 2000 Ford Focus 4-Door Sedan

Vehicle Test Weight : 1428.5 kg

Vehicle/Barrier Impact Angle : 0 °

Impact Velocity : 56.32 kph

Maximum Static Crush : 505 mm

Vehicle Rebound : 1126.3 mm

DUMMIES: DRIVER PASSENGER

Type : 572E 572E

Restraint System : Seatbelt, Airbag, Knee Bolster Seathelt, Airbag, Knee Bolster

Number of Data Channels : 125

Number of Cameras : 1 Real Time

16 High Speed

DOOR OPENING DATA : Closed/Operable - Left Front

Closed/Operable - Right Front

Front Seat(s) Data : DRIVER PASSENGER

Seat Track Failure :(mm of shift) 0 0

Seat Back Failure : None None

VISIBLE DUMMY CONTACT POINTS : DRIVER PASSENGER

Head : Face to the center of the airbag;
The back of the head to the
center of the headrest. Face to the top center of the
airbag; The back of the head to
the center of the headrest.

Abdomen : None None

Chest Airbag Airbag

Knees Left knee to knee bolster;
Right knee to knee bolster. Left knee to knee bolster and
center of dash panel;
Right knee to knee bolster.

DATA SHEET NO. 2 GENERAL TEST AND VEHICLE PARAMETER DATA

TEST VEHICLE INFORMATION :

Year/Make/Model/Body Style : 2000 Ford Focus 4-Door Sedan

NHTSA No. : MY0206 ; VIN: 1FAFP33P6YW269330 ; Color : Red

Engine Data: 4 cylinders; - CID; 2.0 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

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

Date Received : 3-8-2000 ; Odometer Reading 40 km

Selling Dealer : West Herr Ford

& Address: 5025 Camp Road Hamburg, New York 14075

DATA FROM TIRE VEHICLE'S CERTIFICATION LABEL:

Vehicle Manufactured by : Ford Motor Company

Date of Manufacture 2-2000

GVWR : 1651 kg; GAWR: 899 kg FRONT; 791 kg REAR

DATA FROM TIRE PLACARD:

Tire Pressure with Maximum Capacity Vehicle Load : 300 kpa FRONT

300 kpa REAR

Recommended Tire Size : P185/65R14

* Recommended Cold Tire Pressure : 221 kpa FRONT; 221 kpa REAR

Size of Tires on Test Vehicle: P185/65R14 ; Manufacturer: Goodyear

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) = 400.0 kg

No. of Occupants x 68 kg = 340.2 kg

Rated Cargo/Luggage Weight (RCLW) = 59.8 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>374.5</u>	kg	Right Rear	=	<u>237.5</u>	kg
Left Front	=	<u>369.0</u>	kg	Left Rear	=	<u>241.0</u>	kg
TOTAL FRONT	=	<u>743.5</u>	kg	TOTAL REAR	=	<u>478.5</u>	kg
TOTAL DELIVERED WEIGHT	=	<u>1222.0</u>	kg				
% of Total Front of Vehicle Weight	=	<u>60.8</u>	%	% of Total Rear Weight	=	<u>39.2</u>	%

CALCULATION OF VEHICLE'S TARGET TEST WEIGHT :

Total Delivered Weight (UDW)	=	<u>1222.0</u>	kg
Rated Cargo/Luggage Weight (RCLW)	=	<u>59.8</u>	kg
Weight of 2 p.572 Dummies @ 76 each	=	<u>152.0</u>	kg
TARGET TEST WEIGHT	=	<u>1433.8</u>	kg

WEIGHT OF TEST VEHICLE WITH TWO DUMMIES AND 55 KG OF CARGO WEIGHT:

Right Front	=	<u>405.5</u>	kg	Right Rear	=	<u>307.5</u>	kg
Left Front	=	<u>409.5</u>	kg	Left Rear	=	<u>306.0</u>	kg
TOTAL FRONT	=	<u>815.0</u>	kg	TOTAL REAR	=	<u>613.5</u>	kg
TOTAL TEST WEIGHT	=	<u>1428.5</u>	kg				
% of Total Front Weight	=	<u>57.1</u>	%	% of Total Rear Weight	=	<u>42.9</u>	%
Weight of Ballast Secured in Vehicle Trunk Area	=	<u>0</u>	kg				
Vehicle Components Removed for Weight Reduction:				Trunk lid and hinges; tail lights, side mirrors, wheel covers, and rear door trim panels			

VEHICLE ATTITUDE (all dimension in millimeters):

AS DELIVERED :	RF	<u>668</u>	LF	<u>662</u>	RR	<u>677</u>	LR	<u>672</u>
FULLY LOADED :	RF	<u>651</u>	LF	<u>644</u>	RR	<u>651</u>	LR	<u>645</u>
AS TESTED :	RF	<u>652</u>	LF	<u>650</u>	RR	<u>652</u>	LR	<u>648</u>
Vehicle's Wheel Base :		<u>2619</u>	mm					
Location of Vehicle's C.G. :		<u>1124.8</u>	mm rearward of front wheel center.					

FUEL SYSTEM DATA :

Fuel System Capacity From Owner's Manual	=	<u>49.97</u>	liters
Usable Capacity Figure Furnished by COTR	=	<u>49.97</u>	liters
Test Volume Range (92 to 94% of Usable Capacity)	=	<u>45.97</u>	to <u>46.97</u> liters
ACTUAL TEST VOLUME	=	<u>45.97</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>Filler neck - Right side behind rear axle; Fuel Tank - Right of center ahead of rear axle;</u>		
	<u>Fuel lines - Inside right "frame rail."</u>		

DATA SHEET NO. 3 POST IMPACT DATA

TYPE OF TEST:

Type of Test : Frontal Barrier Impact Angle : 0°
Test Date : March 22, 2000 Time: 14:00 Temperature: 17 °C
Vehicle NHTSA No. : MY0206
Required Impact Velocity Range : 55.5 to 57.1 kph

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

Trap No. 1 = 56.32 kph; Trap No. 2 = 56.32 kph
Distance from vehicle to barrier : (1) entering trap = 813 mm
(2) exiting trap = 305 mm

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

Vehicle Length:

Pre-Test	Right =	<u>4357</u>	; C/L =	<u>4370</u>	; Left =	<u>4353</u>
Post-Test	Right =	<u>3880</u>	; C/L =	<u>3908</u>	; Left =	<u>3912</u>
Crush	Right =	<u>477.0</u>	; C/L =	<u>462.0</u>	; Left =	<u>441.0</u>
AVERAGE	=	<u>460.0</u>	mm			

VEHICLE REBOUND: (From rigid barrier only.)

Distance from front of test vehicle to impact point :

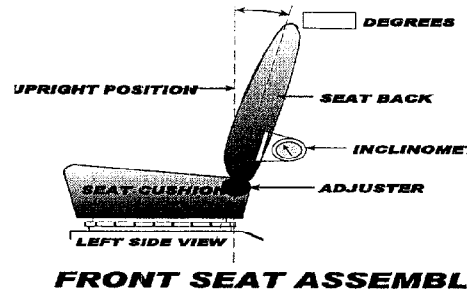
	Right =	<u>1137.0</u>	; C/L =	<u>1107.0</u>	; Left =	<u>1135.0</u>
AVERAGE	=	<u>1126.3</u>	mm			

DATA SHEET NO. 4 TEST VEHICLE INFORMATION

VEHICLE IDENTIFICATION:

Model Year : 2000 Vehicle Model: Ford Focus 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: 24°

Measurement instructions: Recline seatback to measure 24° on rear seat frame 330 mm above the seatback pivot

Seat back angle for passenger's seat: 24°

Measurement instructions: Same as the driver's seat

2. Seat Fore and Aft Positioning

Positioning of the driver's seat: Place seat in mid position; 8 detents from the rearmost position

Positioning of the passenger's seat: Same as the driver's seat

3. Fuel Tank Capacity Data

3.1 A. "Usable Capacity" of the standard equipment fuel tank is 49.97 liters

B. "Usable Capacity" of the optional equipment fuel tank is - liters

C. "Usable Capacity" of the vehicle(s) used for certification testing to requirements of FMVSS 301 = 45.97 liters

3.2 Amount of Stoddard solvent added to vehicle(s) used for certification test(s) = 45.97 liters

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

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

With the ignition on, the fuel pump runs for a maximum of 3 seconds to build up fuel pressure. Fuel pump operates during engine operation.

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

4. STEERING COLUMN ADJUSTMENTS :

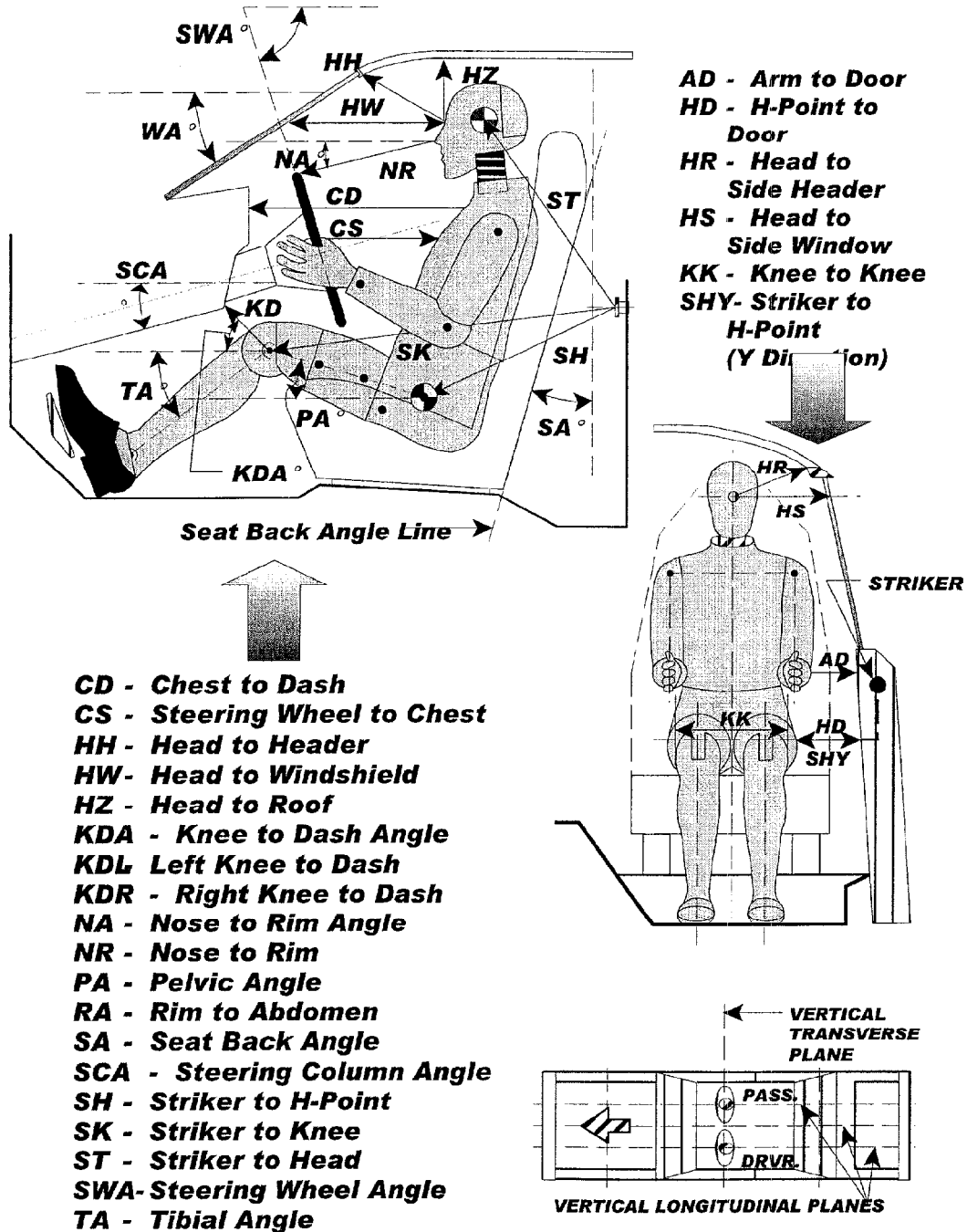
Steering wheel and column adjustments are made so that the steering wheel hub is at the geometric center of the locus it describes when it is moved through its full range of driving positions. If the tested vehicle has any of these adjustments, does your company use any specific procedures to determine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

Operational Instructions: Vehicle was not equipped with a tilt wheel.

5. SEAT BELT UPPER ANCHORAGE

Nominal design riding position: Seat belt anchorage was placed one detent below uppermost position.

DUMMY MEASUREMENT FOR FRONT SEAT PASSENGER

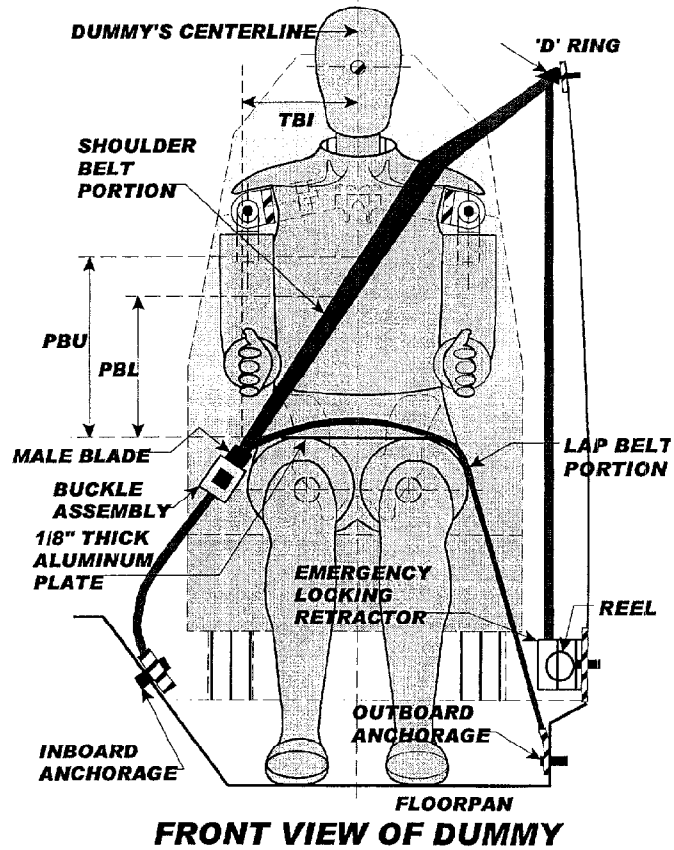


DATA SHEET NO. 5 FRONT SEAT DUMMY POSITIONING MEASUREMENTS IN VEHICLE (cont.)

	DRIVER (Serial #245)			PASS. (Serial # 064)		
WA°	28.8 deg.			N/A		
SWA°	64.8 deg.			N/A		
SCA°	25.2 deg.			N/A		
SA°	24 deg.			24 deg.		
HZ	180			175		
HH	330			337		
HW	628			565		
HR	175			205		
NR	415	Angle	-12 deg.	N/A		
CD	537			502		
CS	321			N/A		
RA	223			N/A		
KDL	164	Angle (KDA)	21 deg.	100		
KDR	120 (dash panel)			149	Angle (KDA)	25 deg.
PA°	21.0 deg.			22.5 deg.		
TA°	44.3 deg.			45.0 deg.		
KK	311			265		
ST	534	Angle	2 deg.	543	Angle	0 deg.
SK	534	Angle	90 deg.	553	Angle	90 deg.
SH	217	Angle	127 deg.	213	Angle	128 deg.
SHY	231			235		
HS	290			311		
HD	96			93		
AD	73			95		

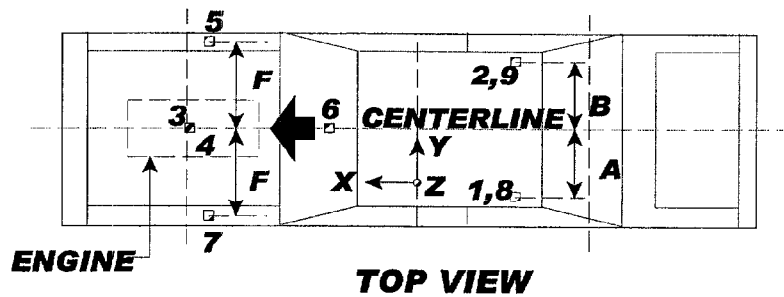
Dimensions in millimeters

SEAT BELT POSITIONING DATA

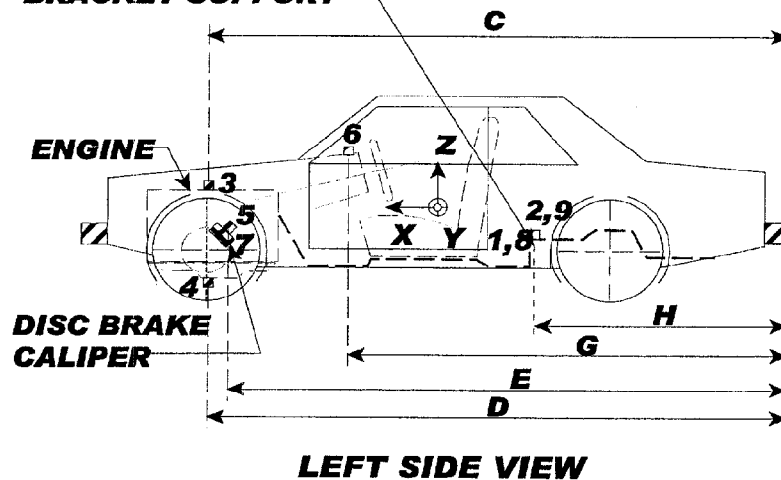


	DRIVER DUMMY (mm)	PASSENGER DUMMY (mm)
PBU -- Top surface of alum. plate to upper edge	315	325
PBL-- Top surface of alum. plate to belt lower edge	230	235
<u>LAP BELT TENSION</u>	10 N	10 N
<u>SHOULDER BELT TENSION</u>	Retractor	Retractor

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 (cont.)

DIMENSION	LENGTH (mm)
	PRE-TEST VALUES
A Left Rear Seat Crossmember Y	-476
B Right Rear Seat Crossmember Y	469
C Top of Engine X	3736
D Bottom of Engine X	3190
E Disc Brake Calipers X	3497
F Disc Brake Calipers Y	555
G Instrument Panel X	2746
H Rear Seat Crossmembers X	1886

LOCATION NUMBER	DESCRIPTION	MAXIMUM VALUE (g's)			
		Pos.	msec.	Neg.	msec.
1	Rear Seat X-Member @ Left Side	2.0	139.7	-47.8	53.0
2	Rear Seat X-Member @ Right Side	2.2	139.3	-43.4	47.5
3	Top of Engine Block	34.5	41.2	-137.0	34.6
4	Bottom of Engine	*	*	*	*
5	Disc Brake Caliper @ Right Side	15.4	71.2	-82.1	39.1
6	Instrument Panel	45.4	74.7	-67.0	45.1
7	Disc Brake Caliper @Left Side	25.1	68.9	-136.5	49.2
8	Rear Seat X-Member @ Left-Redundant	2.2	139.8	-52.5	53.1
9	Rear Seat X-Member @ Right-Redundant	2.0	139.3	-44.4	47.2

* Not accurate after 60 ms.

DATA SHEET NO. 8 DUMMY INJURY CRITERIA VALUES

Vehicle Year/Make/Model/Body Style: 2000 Ford Focus 4-Door Sedan
 NHTSA Test No.: MY0206 Test Date: March 22, 2000

		MAXIMUM VALUE							
		Driver				Passenger			
DESCRIPTION	Unit	Pos	msec	Neg	msec	Pos	msec	Neg	msec
Head X	g	18.5	219.3	-68.2	84.9	3.4	29.1	-43.4	95.2
Head Y	g	11.9	92.1	-3.3	71.3	3.1	45.8	-5.5	57.6
Head Z	g	23.9	61.8	-3.6	105.6	28.0	62.8	-0.6	28.4
Head Resultant	g	69.3	84.8	0.0	13.6	48.1	77.5	0.0	12.8
Redundant Head X	g	18.4	219.8	-69.5	85.0	3.2	253.1	-52.3	98.3
Redundant Head Y	g	13.1	90.7	-3.7	48.2	4.4	45.7	-10.6	57.7
Redundant Head Z	g	26.8	62.1	-5.7	133.1	29.8	77.3	-2.9	120.0
Redundant Head Resultant	g	70.8	85.0	0.0	-31.9	53.7	77.4	0.0	-17.0
Upper Neck Fx	N	699.8	80.8	-358.8	116.3	250.9	68.8	-655.3	128.6
Upper Neck Fy	N	160.6	129.5	-76.9	56.8	220.1	78.6	-165.7	133.2
Upper Neck Fz	N	1221.3	77.4	-588.9	252.4	1340.5	66.9	-134.6	119.2
Upper Neck F Resultant	N	1366.5	77.4	1.6	-30.3	1361.0	66.9	3.2	-23.0
Upper Neck Mx	N-m	10.7	118.0	-28.0	90.6	13.1	51.8	-14.3	63.1
Upper Neck My	N-m	37.4	79.2	-34.1	254.0	46.6	120.0	-34.7	79.2
Upper Neck Mz	N-m	6.9	144.8	-17.6	99.8	14.8	85.1	-1.3	62.4
Upper Neck M Resultant	N-m	42.5	93.0	0.1	-25.7	47.3	120.1	0.0	-40.1
Chest X	g	45.4	81.2	-3.5	258.8	1.0	152.4	-47.9	71.6
Chest Y	g	3.0	103.3	-5.4	57.8	7.1	71.4	-1.5	108.1
Chest Z	g	9.1	103.8	-10.2	48.5	14.7	61.8	-8.0	103.9
Chest Resultant	g	45.4	81.2	0.0	-29.4	49.3	71.6	0.0	-22.1
Redundant Chest X	g	45.0	81.0	-3.4	253.2	1.2	152.6	-44.8	71.5
Redundant Chest Y	g	3.4	103.3	-5.0	58.0	8.0	73.6	-0.9	99.6
Redundant Chest Z	g	8.9	104.2	-10.0	48.5	13.8	61.9	-7.4	103.6
Redundant Chest Resultant	g	45.1	81.0	0.0	-29.1	47.0	71.4	0.0	-22.6
Chest Displacement	mm	0.0	12.5	-39.4	76.0	0.0	11.0	-30.0	88.9

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

Vehicle Year/Make/Model/Body Style: 2000 Ford Focus 4-Door Sedan
 NHTSA Test No.: MY0206 Test Date: March 22, 2000

		MAXIMUM VALUE							
		Driver				Passenger			
DESCRIPTION	Unit	Pos	msec	Neg	msec	Pos	msec	Neg	msec
Pelvic X	g	3.2	99.1	-80.1	52.5	1.4	124.7	-73.9	48.3
Pelvic Y	g	12.2	64.3	-4.8	18.4	8.4	44.8	-6.7	70.2
Pelvic Z	g	2.9	252.1	-23.7	70.7	2.0	147.0	-21.8	68.8
Pelvic Resultant	g	81.1	52.5	0.0	-25.7	74.1	48.3	0.1	-10.1
Left Femur	N	1158.6	46.8	-4770.2	52.8	191.6	39.0	-5270.7	47.9
Right Femur	N	1103.6	43.7	-3165.3	56.2	319.6	42.8	-5757.5	52.9
Left Upper Tibia Mx	N-m	27.3	52.1	-37.9	58.0	119.1	71.6	-23.3	40.9
Left Upper Tibia My	N-m	9.4	188.9	-180.6	58.7	6.0	164.7	-135.5	45.1
Left Lower Tibia Fz	N	126.2	189.3	-3484.1	59.4	144.7	10.8	-3729.4	75.6
Left Lower Tibia Mx	N-m	156.7	58.2	-5.1	40.2	113.2	78.9	-11.6	46.2
Left Lower Tibia My	N-m	50.6	85.2	-32.1	52.7	61.6	73.9	-53.8	45.9
Right Upper Tibia Mx	N-m	41.7	53.0	-49.3	59.3	14.7	56.5	-50.8	71.9
Right Upper Tibia My	N-m	19.1	51.4	-80.2	57.2	8.2	296.5	-109.0	52.9
Right Lower Tibia Fz	N	158.0	126.7	-4138.2	56.9	67.4	220.1	-2497.0	63.3
Right Lower Tibia Mx	N-m	17.1	47.1	-126.8	58.0	66.4	54.8	-12.0	36.5
Right Lower Tibia My	N-m	70.6	59.4	-52.0	51.0	60.1	78.7	-31.9	46.1
Left Foot Aft Ax	g	17.8	89.3	-64.1	55.8	28.9	71.6	-85.2	44.5
Left Foot Aft Az	g	16.9	66.7	-49.5	56.6	18.0	56.9	-35.1	45.9
Left Foot Fore Az	g	17.3	52.8	-66.8	56.6	37.9	57.9	-65.5	44.3
Right Foot Aft Ax	g	21.7	81.5	-167.5	49.7	25.2	83.3	-70.0	44.5
Right Foot Aft Az	g	13.5	68.8	-99.4	51.5	3.7	216.5	-26.3	34.0
Right Foot Fore Az	g	*	*	*	*	15.8	48.6	-71.5	31.4
Lap Belt Load	N	**	**	**	**	**	**	**	**
Torso Belt	N	**	**	**	**	**	**	**	**

* Not accurate after 59 ms.

** Due to the driver torso belt and passenger lap belt seat belt pretensioner systems, seat belt load cells were not used at the request of Ford Motor Company representatives.

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

Vehicle Year/Make/Model/Body Style: 2000 Ford Focus 4-Door Sedan

NHTSA Test No.: MY0206 Test Date: March 22, 2000

HEAD INJURY CRITERIA (HIC)				
	HIC**	t ₁ (msec)	t ₂ (msec)	Average Acceleration t ₁ to t ₂
Position #1 - Driver	583.4	65.9	96.7	51.4
Position #2 - Passenger	387.2	70.9	106.9	41.0

** 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	44.3	79.9	82.9	389.6
Position #2 - Passenger	45.9	69.7	72.7	392.3

* 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 Ford Focus 4-Door Sedan
 NHTSA Test No.: MY0206 Test Date: March 22, 2000

HEAD INJURY CRITERIA (HIC) REDUNDANT				
	HIC**	t ₁ (msec)	t ₂ (msec)	Average Acceleration t ₁ to t ₂
Position #1 - Driver	620.9	64.5	97.1	51.5
Position #2 - Passenger	587.7	72.8	108.8	48.4 g

** 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	43.9	79.8	82.8	402.4
Position #2 - Passenger	44.1	69.5	72.5	345.0

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

DATA SHEET NO. 9 SEAT BELT PERFORMANCE ASSESSMENT TEST DATA

BELT LENGTH DATA:

	<u>Driver</u>	<u>Passenger</u>
Belt length from trim panel exit to bolt hole anchor point for continuous webbing systems.	<u>1815</u>	<u>1815</u>
Shoulder belt length as measured on Part 572 Dummy.	<u>840</u>	<u>840</u>
Lap belt length as measured on Part 572 Dummy.	<u>975</u>	<u>975</u>

SHOULDER BELT SPOOL-OFF DATA:

As determined by film analysis.	<u>165.1</u>	<u>254</u>
As determined mechanically.	<u>*</u>	<u>*</u>
As determined electronically.	<u>*</u>	<u>*</u>

BELT STRETCH DATA:

Measured electronically between shoulder belt load cell and the "D" ring.	<u>*</u>	<u>*</u>
Measured mechanically.	<u>*</u>	<u>*</u>

Dimensions in millimeters

* This vehicle was equipped with electronic seat belt pretensioners and load limiters. At the request of Ford Motor Company representatives seat belt instrumentation was not used.

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 12 mm molding.

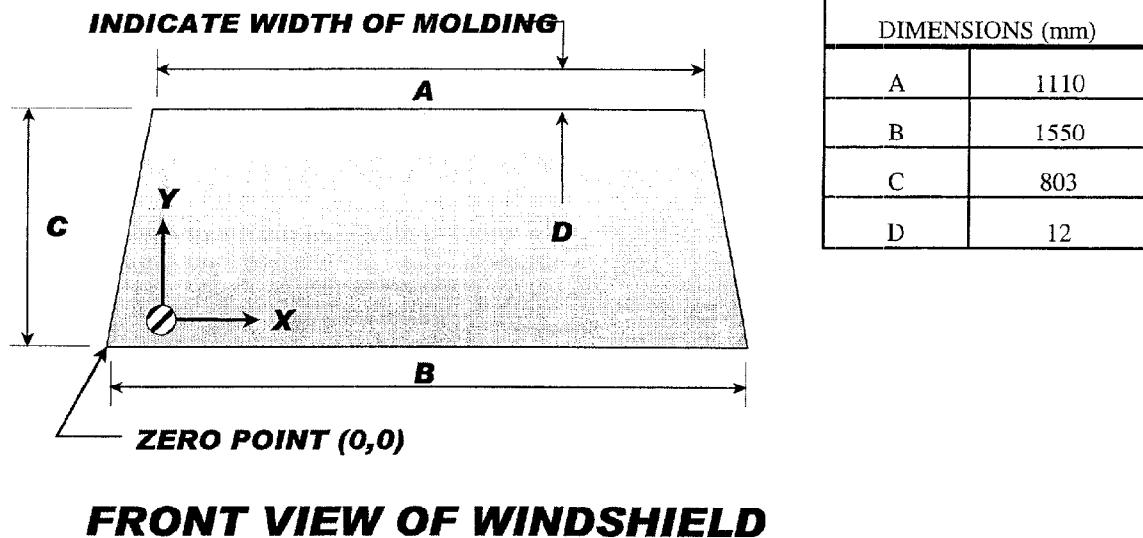
FMVSS 212 REQUIREMENTS:

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

FMVSS 212 TEST DATA

	WINDSHIELD PERIPHERY		% OF RETENTION
	PRE-TEST (mm)	POST-TEST(mm)	
RIGHT SIDE	2133	2133	100
LEFT SIDE	2133	2133	100
TOTAL	4,266	4,266	100

AREA OF RETENTION FAILURE: None



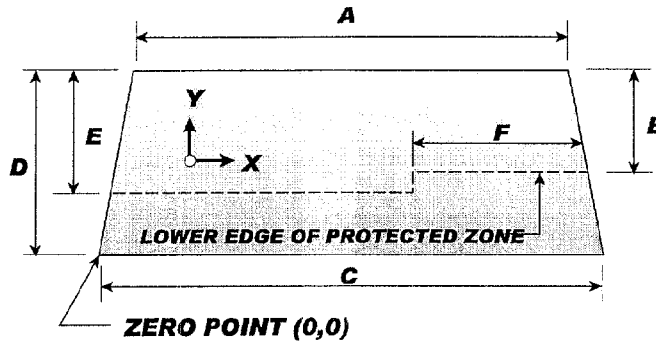
FAILURE DETAILS: None

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	1110
B	470
C	1550
D	803
E	533
F	713

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

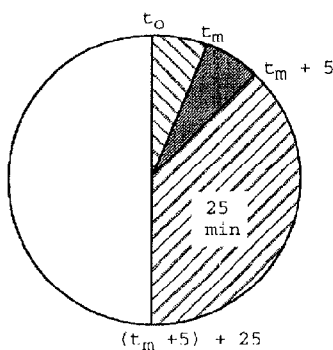
NHTSA TEST No.: MY0206 TEST DATE: March 22, 2000
 VEHICLE MAKE/MODEL: 2000 Ford Focus

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

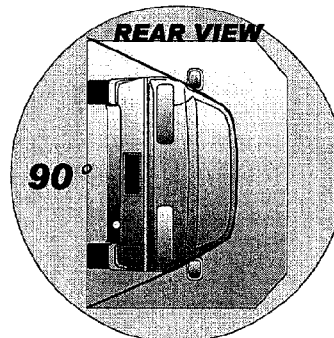
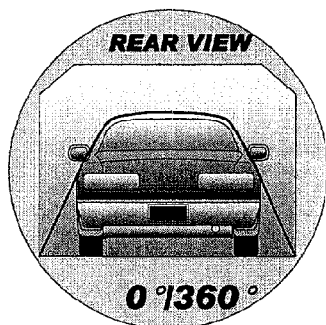
DATA SHEET 13

FMVSS NO. 301 STATIC ROLLOVER DATA SHEET

Vehicle: 2000 Ford Focus

NHTSA No. MY0206

0 - 90 Degrees



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD :

Rollover Fixture 90° Rotation Time	<u>1</u>	minutes	<u>18</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>18</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

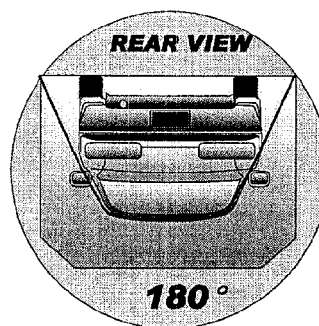
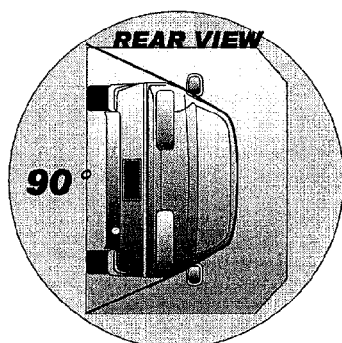
DATA SHEET 13

FMVSS NO. 301 STATIC ROLLOVER DATA SHEET (CONTINUED)

Vehicle: 2000 Ford Focus

NHTSA No. MY0206

90 - 180 Degrees



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD :

Rollover Fixture 90° Rotation Time	<u>1</u> minutes	<u>04</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>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

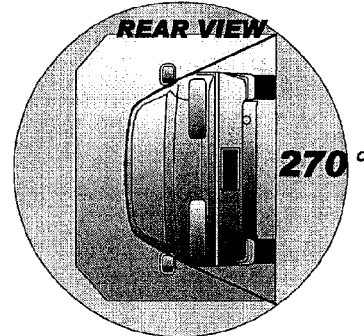
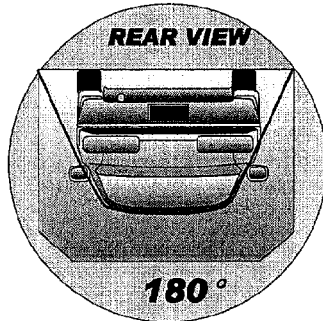
DATA SHEET 13

FMVSS NO. 301 STATIC ROLLOVER DATA SHEET (CONTINUED)

Vehicle: 2000 Ford Focus

NHTSA No. MY0206

180 - 270 Degrees



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD :

Rollover Fixture 90° Rotation Time	<u>1</u>	minutes	<u>04</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>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

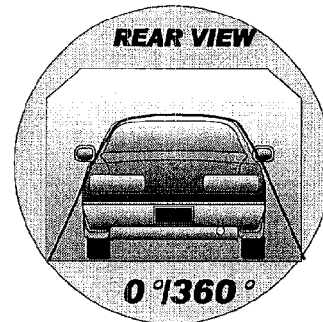
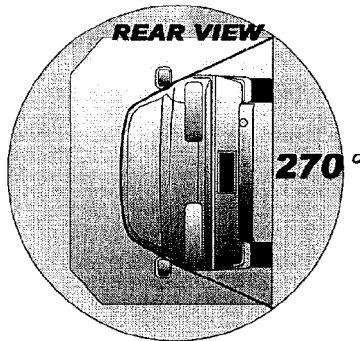
DATA SHEET 13

FMVSS NO. 301 STATIC ROLLOVER DATA SHEET (CONTINUED)

Vehicle: 2000 Ford Focus

NHTSA No. MY0206

270 - 360 Degrees



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD :

Rollover Fixture 90° Rotation Time	<u>1</u>	minutes	<u>12</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>12</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

<u>142 g</u>	<u>28 g</u>	<u>28 g</u>	<u>28 g</u>
--------------	-------------	-------------	-------------

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

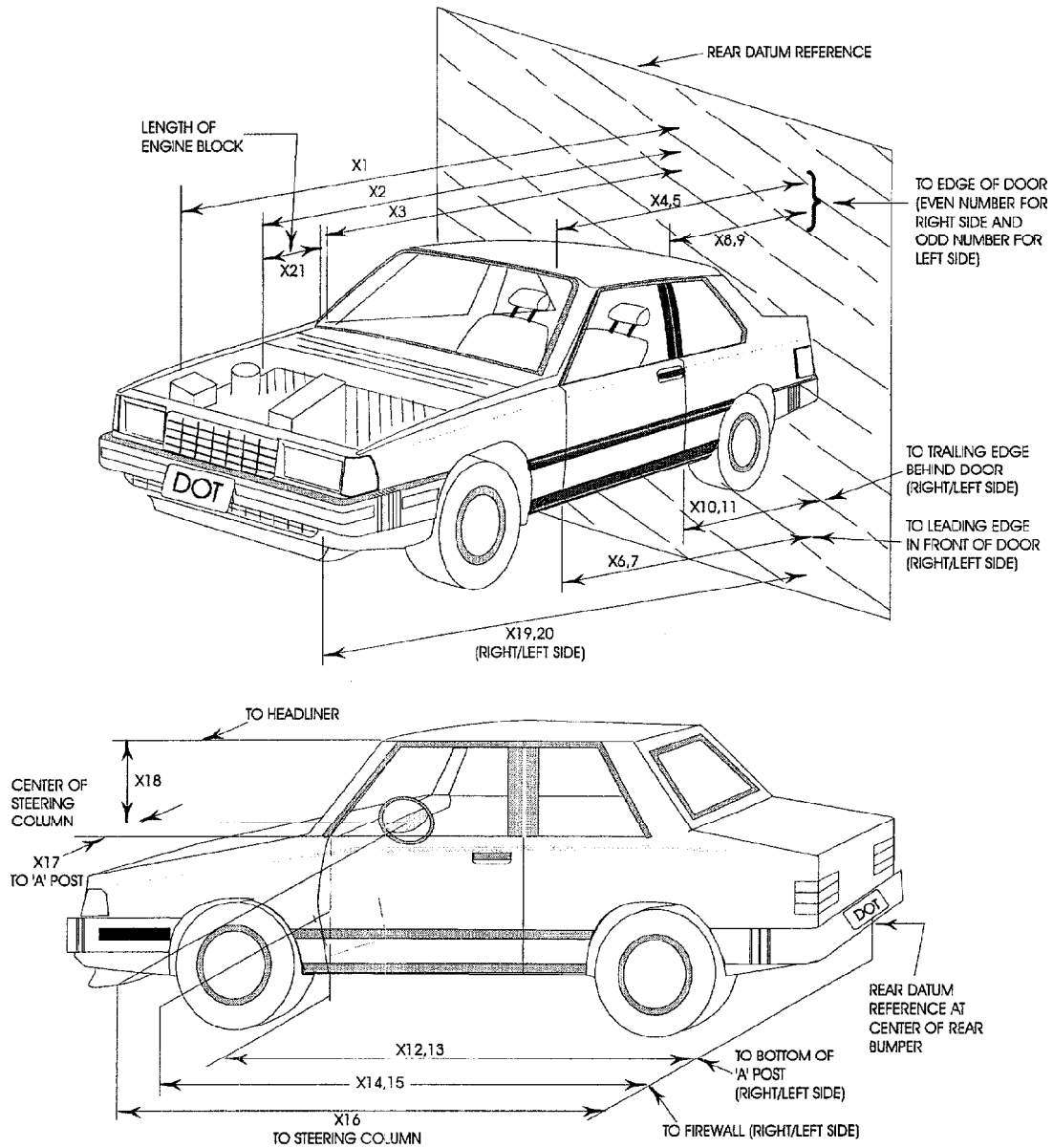
<u>0 g</u>	<u>0 g</u>	<u>0 g</u>	<u>N/A</u>
------------	------------	------------	------------

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

IV. SOLVENT SPILLAGE LOCATION(S) :

None

DATA SHEET NO. 14 TEST VEHICLE MEASUREMENTS

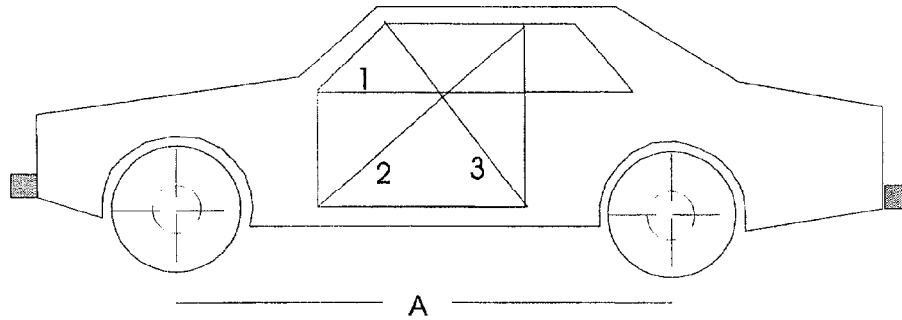


DATA SHEET NO.14 VEHICLE MEASUREMENTS (cont.)

No.		Pre-Test	Post-Test	Differences
X1	Total Length of Vehicle at Centerline	4370	3908	462
X2	Rear Surface of Vehicle to Front of Engine	3839	3609	230
X3	Rear Surface of Vehicle to Firewall	3460	3409	51
X4	Rear Surface of Vehicle to Upper Leading Edge of Right Door	3070	3064	6
X5	Rear Surface of Vehicle to Upper Leading Edge of Left Door	3081	3069	12
X6	Rear Surface of Vehicle to Lower Leading Edge of Right Door	3044	3038	6
X7	Rear Surface of Vehicle to Lower Leading Edge of Left Door	3058	3041	17
X8	Rear Surface of Vehicle to Upper Trailing Edge of Right Door	2012	2017	-5
X9	Rear Surface of Vehicle to Upper Trailing Edge of Left Door	2032	2020	12
X10	Rear Surface of Vehicle to Lower Trailing Edge of Right Door	2035	2010	25
X11	Rear Surface of Vehicle to Lower Trailing Edge of Left Door	2033	2025	8
X12	Rear Surface of Vehicle to Bottom of "A" Post of Right Side	3174	3175	-1
X13	Rear Surface of Vehicle to Bottom of "A" Post of Left Side	3188	3177	11
X14	Rear Surface of Vehicle to Firewall, Right Side	3434	3375	59
X15	Rear Surface of Vehicle to Firewall, Left Side	3441	3351	90
X16	Rear Surface of Vehicle to Steering Column	2616	2627	-11
X17	Center of Steering Column to "A" Post	296	306	-10
X18	Center of Steering Column to Headliner	392	404	-12
X19	Rear Surface of Vehicle to Right Side of Front Bumper	4357	3880	477
X20	Rear Surface of Vehicle to Left Side of Front Bumper	4353	3912	441
X21	Length of Engine Block	160	160	0
RD	Rear Surface of Vehicle to Right Side of Dash Panel	2751	2746	5
CD	Rear Surface of Vehicle to Center of Dash Panel	2871	2841	30
LD	Rear Surface of Vehicle to Left Side of Dash Panel	2768	2758	10

All Dimensions in mm

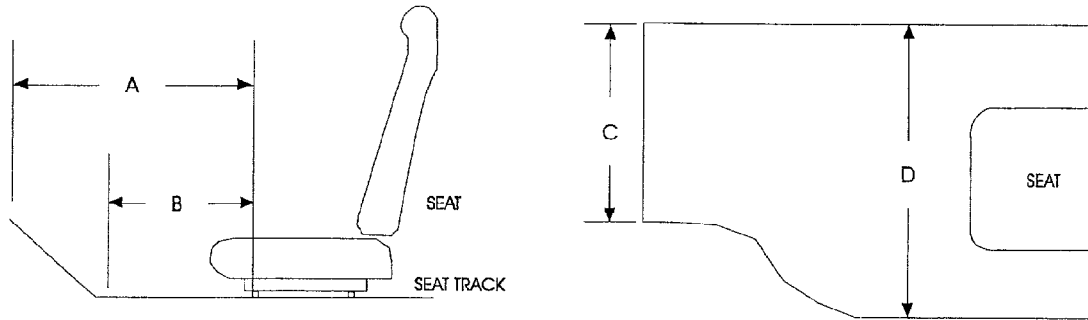
DATA SHEET NO.14 VEHICLE MEASUREMENTS (cont.)
VEHICLE INTRUSION MEASUREMENTS
DOOR OPENING WIDTH



UNITS (mm)	LEFT			RIGHT		
MEASUREMENT	1	2	3	1	2	3
BEFORE TEST	897	1408	1008	915	1400	1015
AFTER TEST	886	1400	1004	901	1370	1019
DIFFERENCE	11	8	4	14	30	-4

UNITS (mm)	A = WHEELBASE LEFT	A = WHEELBASE RIGHT
BEFORE TEST	2619	2619
AFTER TEST	2555	2549
DIFFERENCE	64	70

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



DRIVER

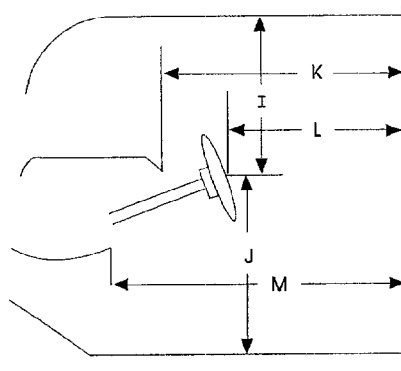
Measurement	Pre-Test	Post-Test	Difference
A	706	619	87
B	539	480	59
C	465	496	-31
D	456	471	-15

PASSENGER

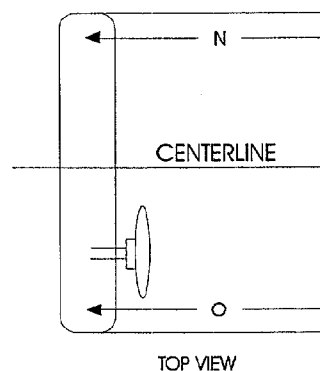
Measurement	Pre-Test	Post-Test	Difference
A	676	624	52
B	560	544	16
C	441	454	-13
D	467	472	-5

Units = mm

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

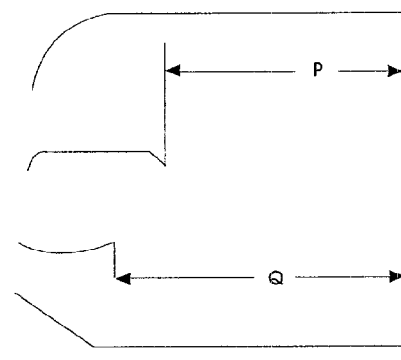


DRIVER'S SIDE



TOP VIEW

MEASUREMENTS
FROM C-PILLAR
BELT ANCHORAGE

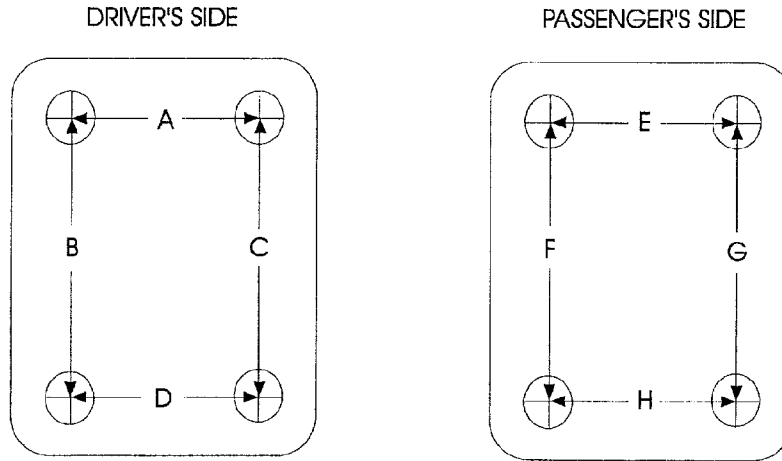


PASSENGER'S SIDE

Measurement	Pre-Test	Post-Test	Difference
I	392	404	-12
J	700	729	-29
K	1642	1652	-10
L	1440	1483	-43
M	1635	1661	-26
N	2046	1656	390
O	1592	1614	-22
P = K (PASS.)	2178	1793	385
Q = M (PASS.)	2093	1707	386

Units = mm

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

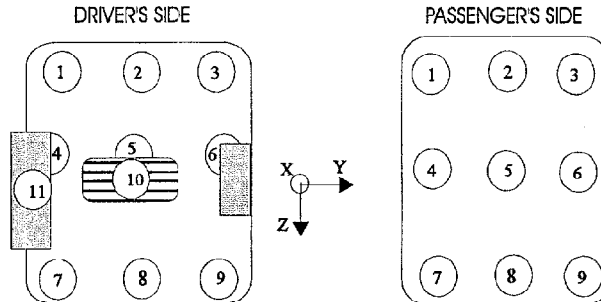


TOP VIEW THROUGH FLOOR PAN

Measurement	Pre-Test	Post-Test	Difference
A	132	135	-3
B	303	300	3
C	285	273	12
D	152	144	8
E	137	126	11
F	325	329	-4
G	338	330	8
H	173	168	5

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	3271	3177	94	-398	-485	87
2	3275	3183	92	-431	-487	56
3	3281	3170	111	-390	-455	65
4	3207	3143	64	-346	-395	49
5	3222	3150	72	-350	-380	30
6	3217	3132	85	-323	-380	57
7	3113	3051	62	-271	-309	38
8	3108	3043	65	-269	-296	27
9	3104	3050	54	-277	-280	3
10	3087	2954	133	-407	-493	86
11	3137	3065	72	-365	-402	37

Passenger Side Floorpan Measurements

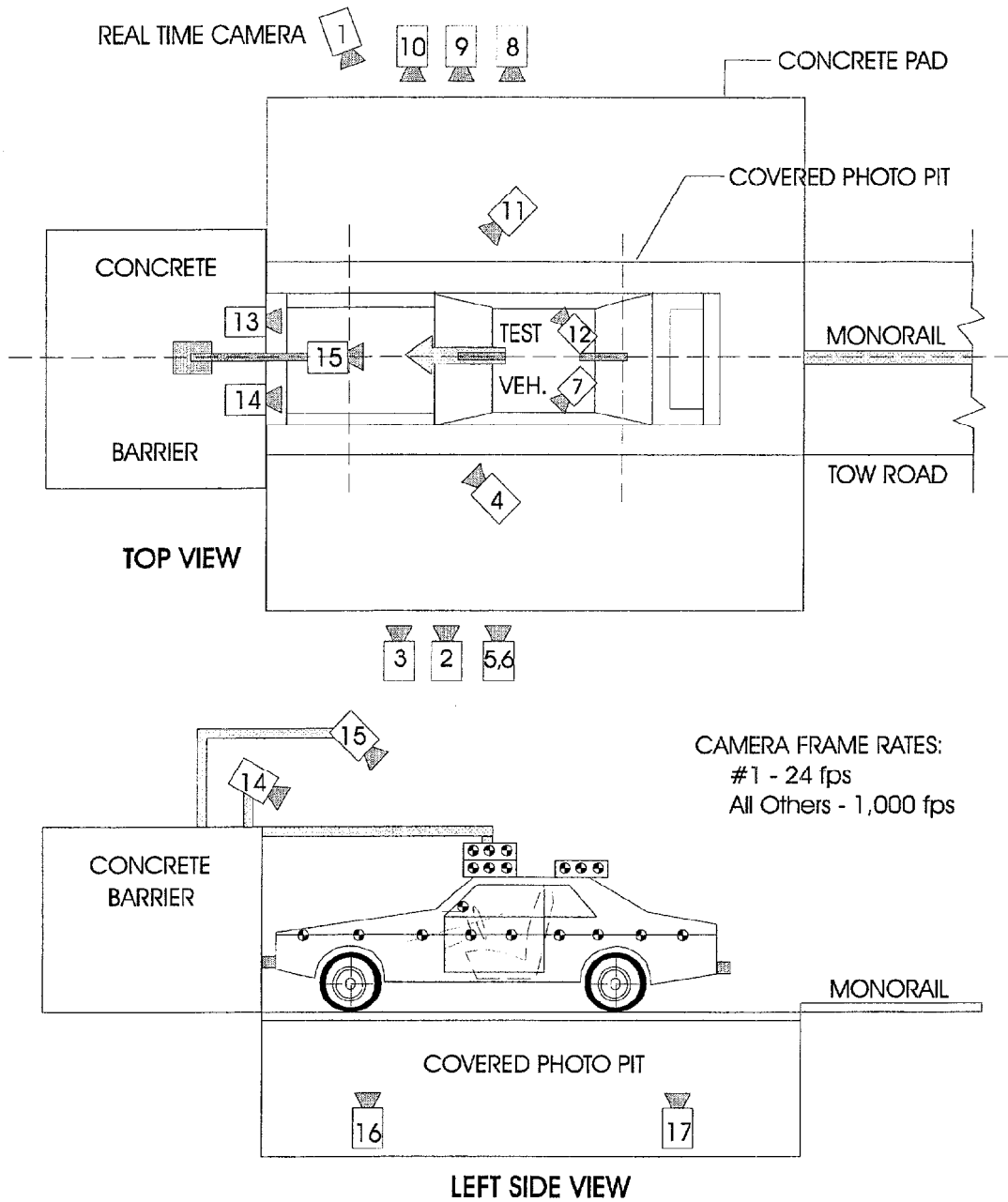
Reference: X = Rear Bumper; Z = Ground

Floorpan Location	X Deformation			Z Deformation		
	Pre-Test	Post-Test	Difference	Pre-Test	Post-Test	Difference
1	3227	3162	65	-376	-398	22
2	3227	3158	69	-389	-400	11
3	3214	3163	51	-393	-425	32
4	3147	3099	48	-323	-334	11
5	3160	3117	43	-335	-349	14
6	3185	3131	54	-365	-381	16
7	3075	3051	24	-290	-295	5
8	3111	3079	32	-294	-324	30
9	3134	3076	58	-318	-344	26

Units in mm

DATA SHEET NO.15 HIGH-SPEED CAMERA LOCATIONS

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



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

NHTSA Test No.: MY0206 Vehicle: 2000 Ford Focus 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	6705	1554	1036	-2	6289	12.5	1010
3	Left Side View	7842	1037	1089	-3	7426	25	1015
4	Driver and Interior View	7040	2550	1923	-9	-	25	1055
5	Steering Column (Bottom)	7307	1868	1179	-2	6891	25	1025
6	Steering Column (Top)	7307	1868	1179	-10	6891	25	1020
7	Left Belt	-	-	-	-	-	13	1015
8	Overall Right Side	6530	1743	1030	-3	6114	12.5	1015
9	Right Side View	8162	1283	1045	-1	7746	25	1000
10	Right Passenger View	7795	1638	1410	-3	7379	35	1020
11	Passenger and Interior View	6535	2638	1880	-8	-	25	1015
12	Right Belt	-	-	-	-	-	13	1025
13	Passenger Front View	614	-67	1987	-40	-	13	1025
14	Driver Front View	614	-67	1993	-39	-	13	1020
15	Windshield View	0	-512	3374	-53	-	13	1005
16	Pit View of Engine	0	865	-3048	90	-	13	1050
17	Pit View of Fuel Tank	0	2748	-3048	90	-	13	1005

*X = film plane to monorail centerline

** = referenced to horizontal plane

Y = film plane to impact location

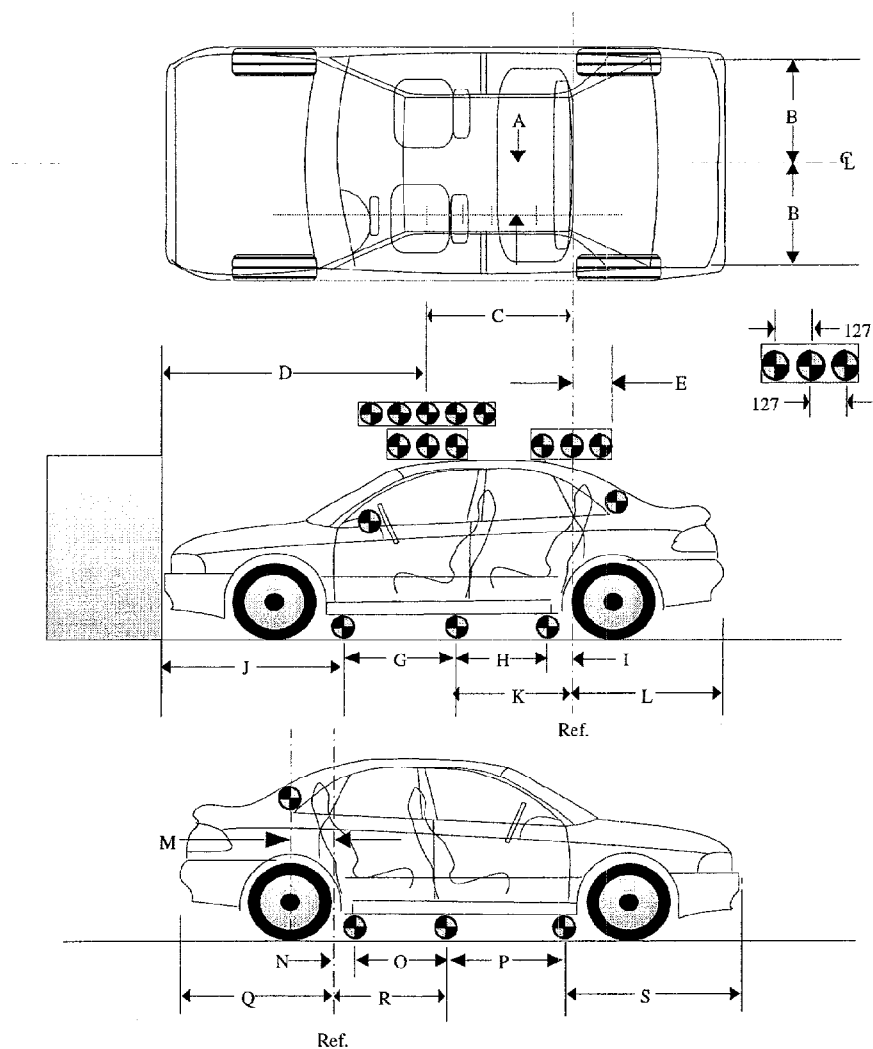
N.T. indicates No Timing

Z = film plane to ground

DATA SHEET NO. 16 VEHICLE REFERENCE PHOTO TARGET LOCATIONS

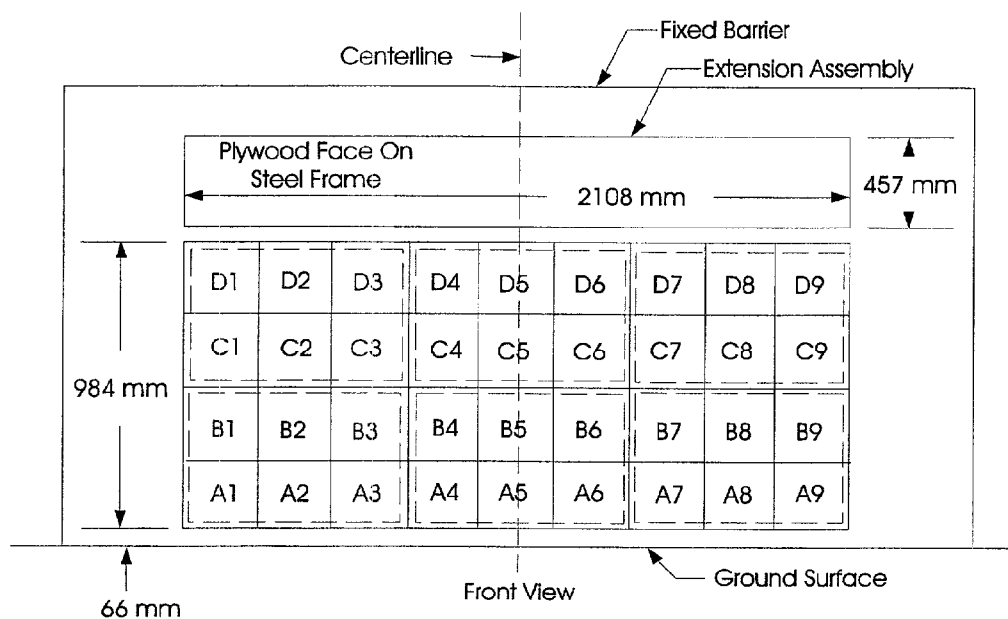
(Dimensions in millimeters)

A	340
B	612
C	1220
D	1929
E	221
F	1544
G	889
H	874
I	123
J	1279
K	997
L	1244
M	249
N	122
O	868
P	898
Q	1231
R	990
S	1291



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)

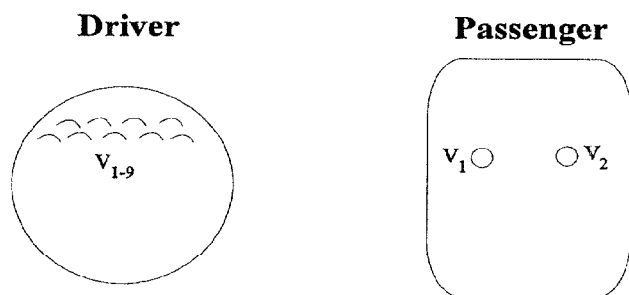
DATA SHEET NO. 18 POST TEST AIR BAG DATA

NHTSA No. : MY0206; Test Date: March 22, 2000; Technician: Patrick G. MacDiarmid, Jr.

Vehicle Model Year/Make/Model: 2000 Ford Focus

- A. No. of vent holes: 9 ** -Driver 2 -Passenger
- B. Size of vent holes: (mm²) 88.35 -Driver 706.9 -Passenger
- C. Total vent area: (mm²) 397.6 -Driver 1413.7 -Passenger
- D. Deflated air bag length and width dimensions or, if round, diameter. (mm)
- Driver: 560 -Height; 500 -Width; 540 -Depth
- Passenger: 600 -Height; 560 -Width; 800 -Depth
- E. Is the air bag tethered?
- Driver: - -Yes; X -No; If yes, record length of tether- -
- 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: 990509-03
- Generator: YS41-A04B85-ABYYFY Ford FBM L2G54CFL
- Passenger: Air bag: T1KX046N10430 30325289B
- Generator: YS41 A14B425 AD HERSTELLINGSJAHR: 2000 Ford DP

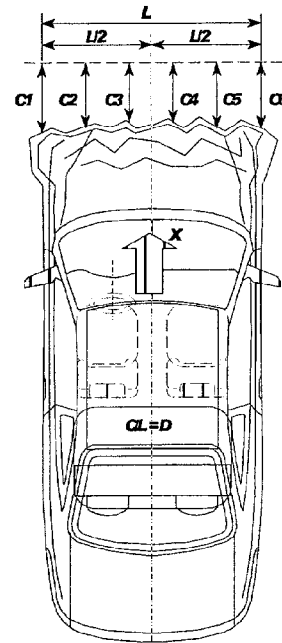
** Driver Bag had an array of 9 semi-circular vents.

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

Vehicle Make/Model/Body Style: Ford Focus 4-Door Sedan
 NHTSA Test No.: MY0206 VIN: 1FAFP33P6YW269330
 Model Year: 2000 Build Date: 2-2000 Test Date: March 22, 2000
 Vehicle Size Category: Compact Test Weight: 1428.5 kg
 Vehicle Wheelbase: 2619 mm; Front Overhang: 1279 mm; Overall Width: 1998 mm
 Collision Deformation Classification (CDC) Code: 12FDEW2

Crush Depth Dimensions:

	PRE	POST	DIFF	
C1 =	4348	3892	-456.0	mm
C2 =	4397	3919	-478.0	mm
C3 =	4408	3911	-497.0	mm
C4 =	4410	3905	-505.0	mm
C5 =	4401	3896	-505.0	mm
C6 =	4349	3845	-504.0	mm



Midpoint of Damage: D = Vehicle Centerline
(Longitudinal)

Length of Damaged Region:

L1= 1200 mm
 L2= 600.0 mm
 L3= 400.0 mm

APPENDIX A
PHOTOGRAPHS

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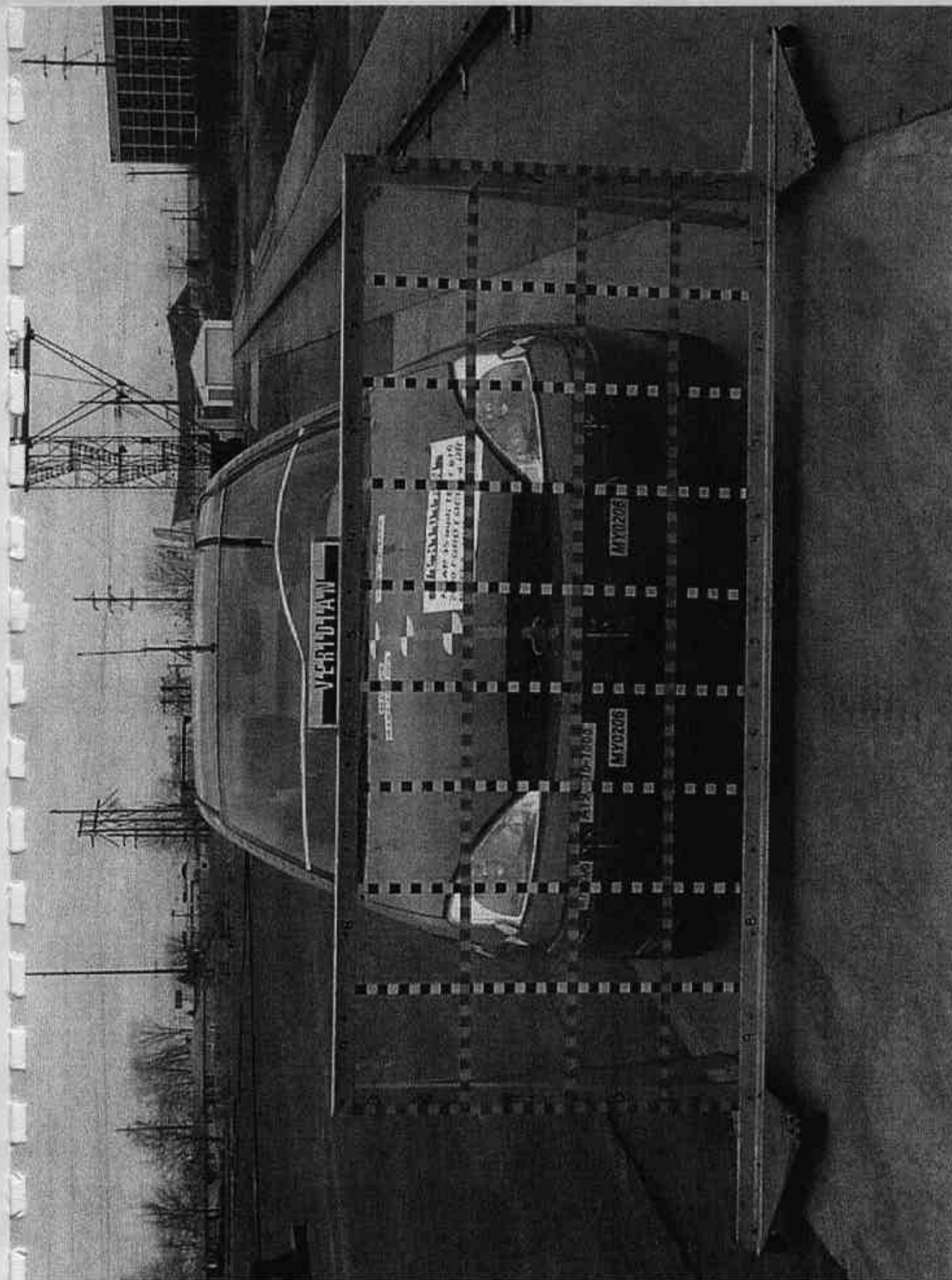


Figure A-1 LOAD CELL LOCATIONS

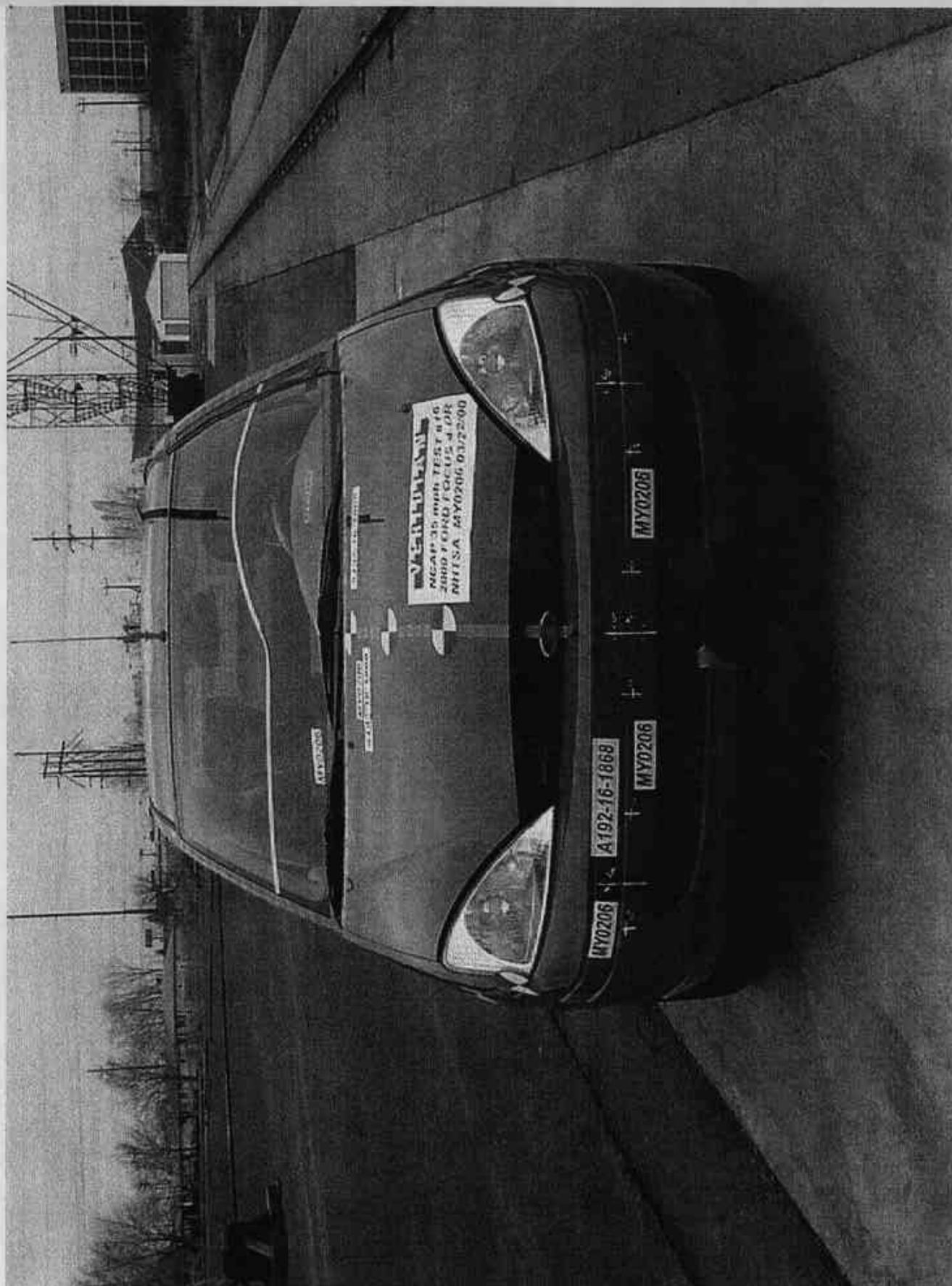


Figure A-2 PRE-TEST FRONT VIEW

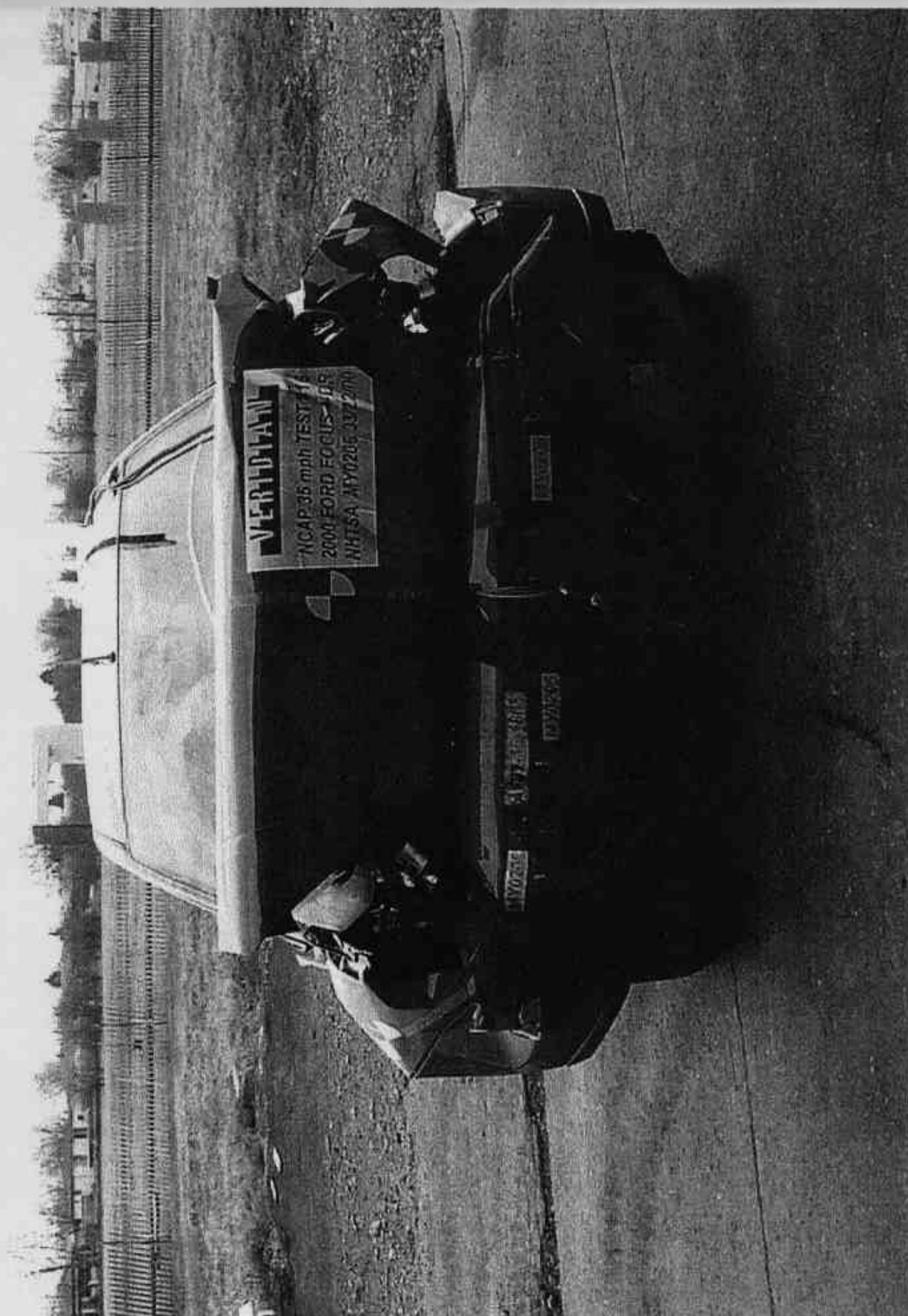


Figure A-3 POST-TEST FRONT VIEW

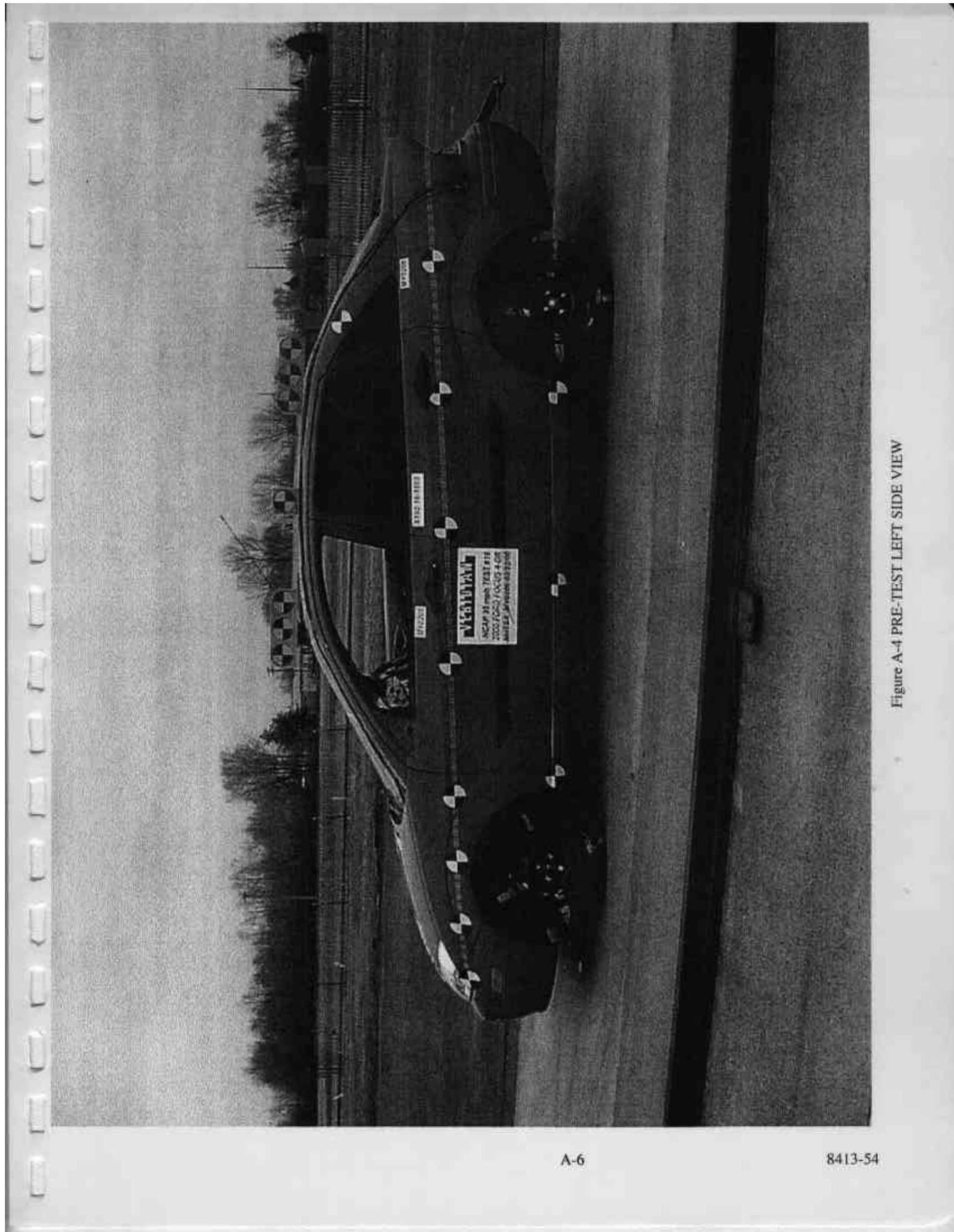


Figure A-4 PRE-TEST LEFT SIDE VIEW

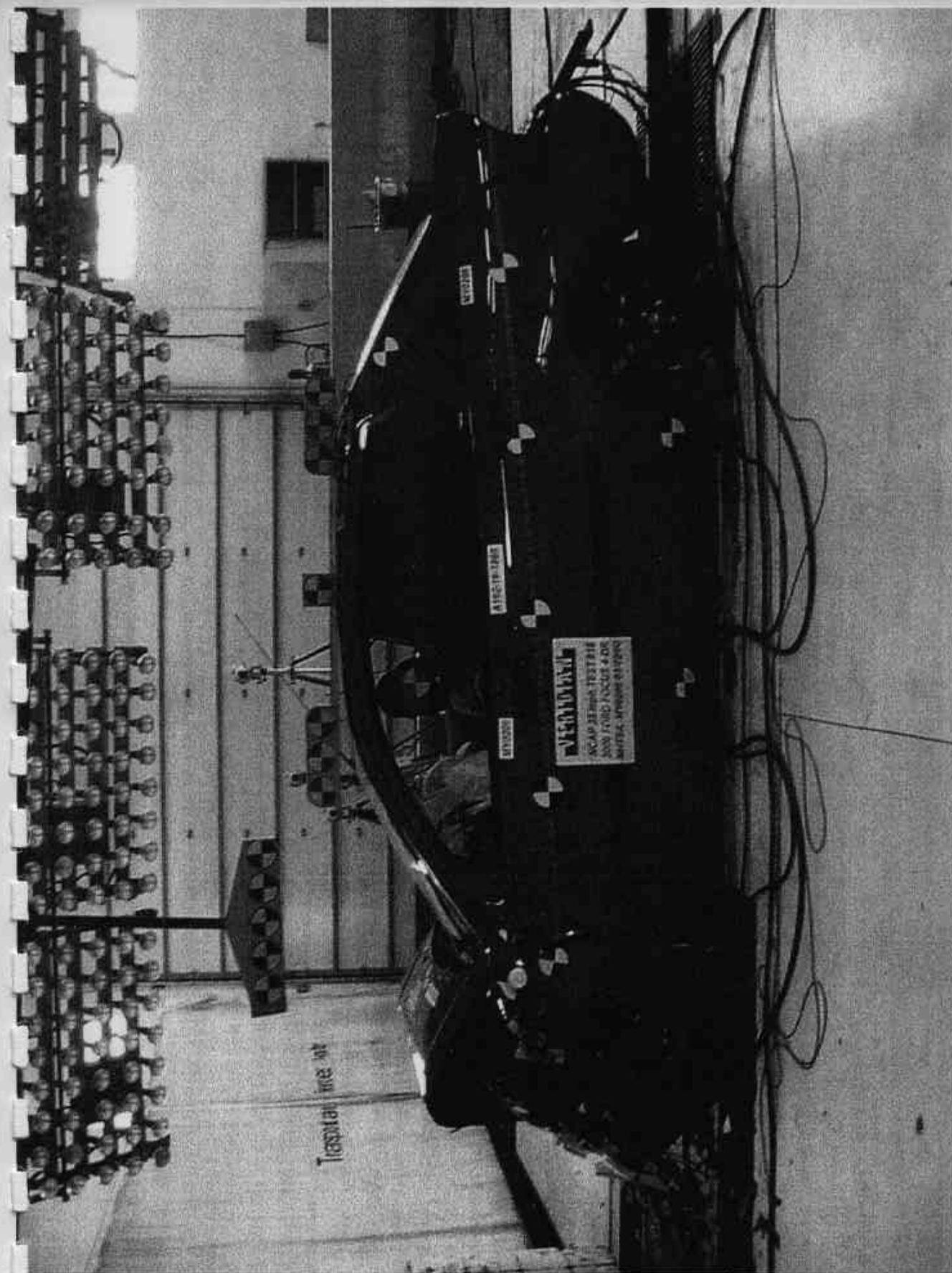


Figure A-5 POST-TEST LEFT SIDE VIEW

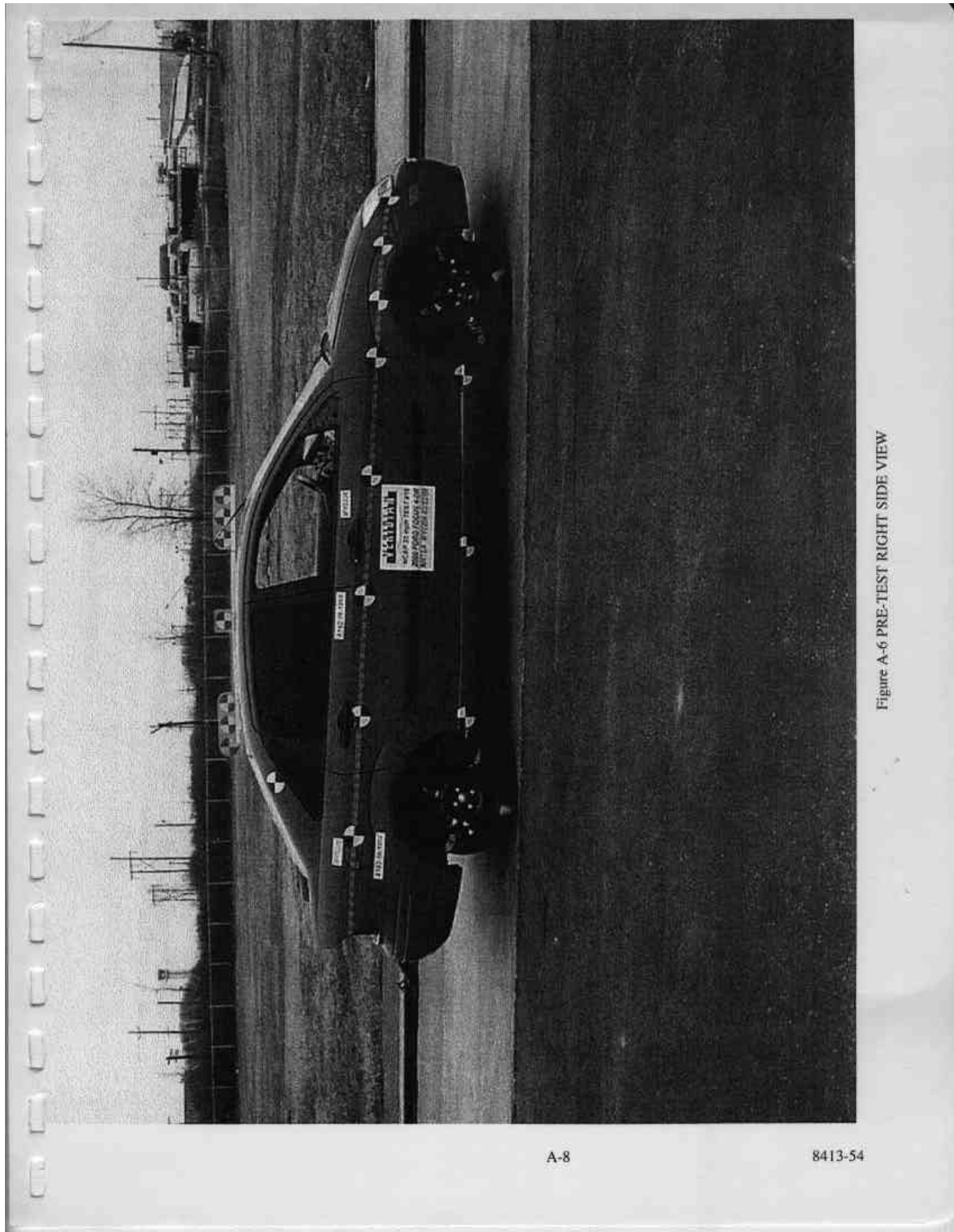


Figure A-6 PRE-TEST RIGHT SIDE VIEW

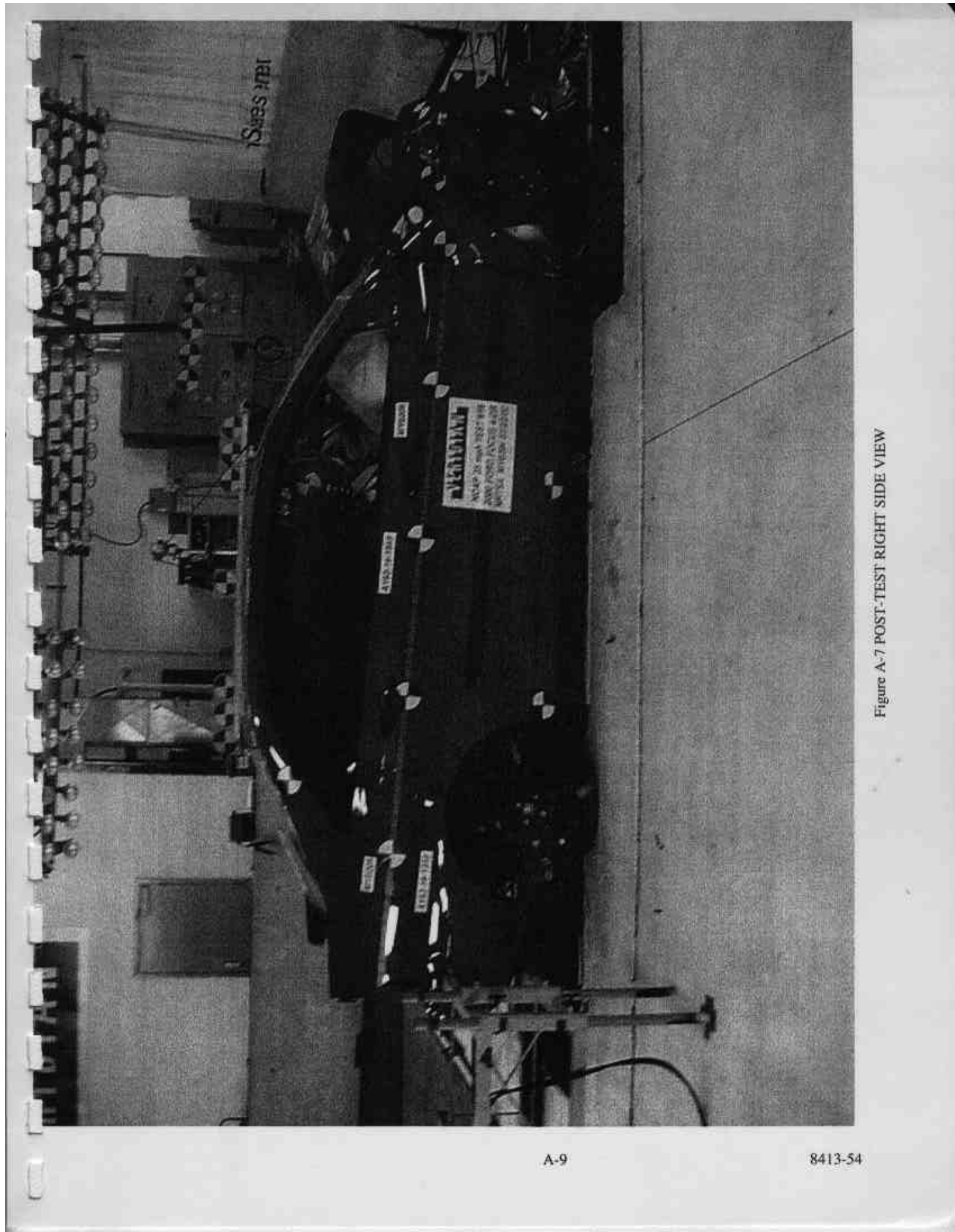


Figure A-7 POST-TEST RIGHT SIDE VIEW



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



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

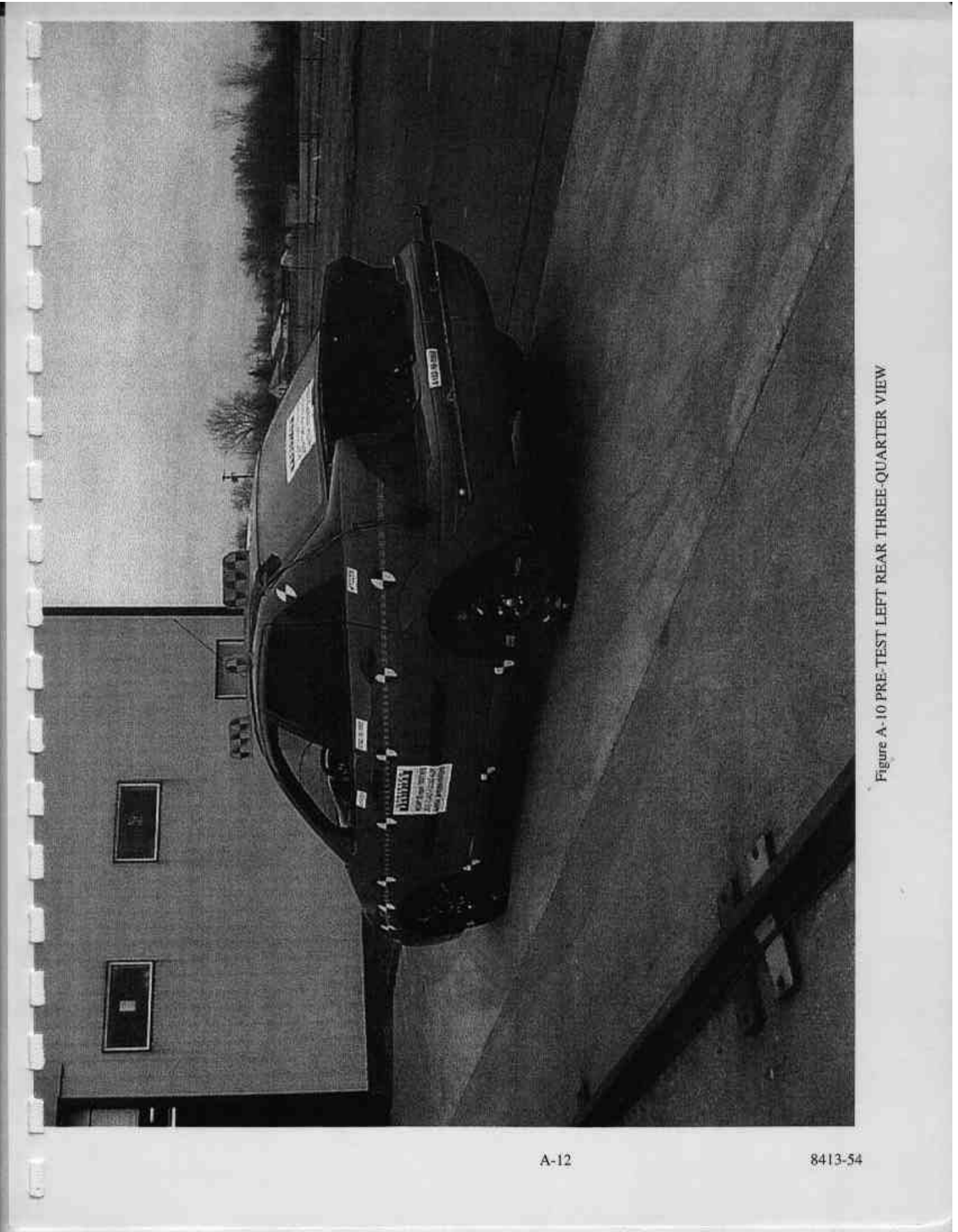


Figure A-10 PRE-TEST LEFT REAR THREE-QUARTER VIEW

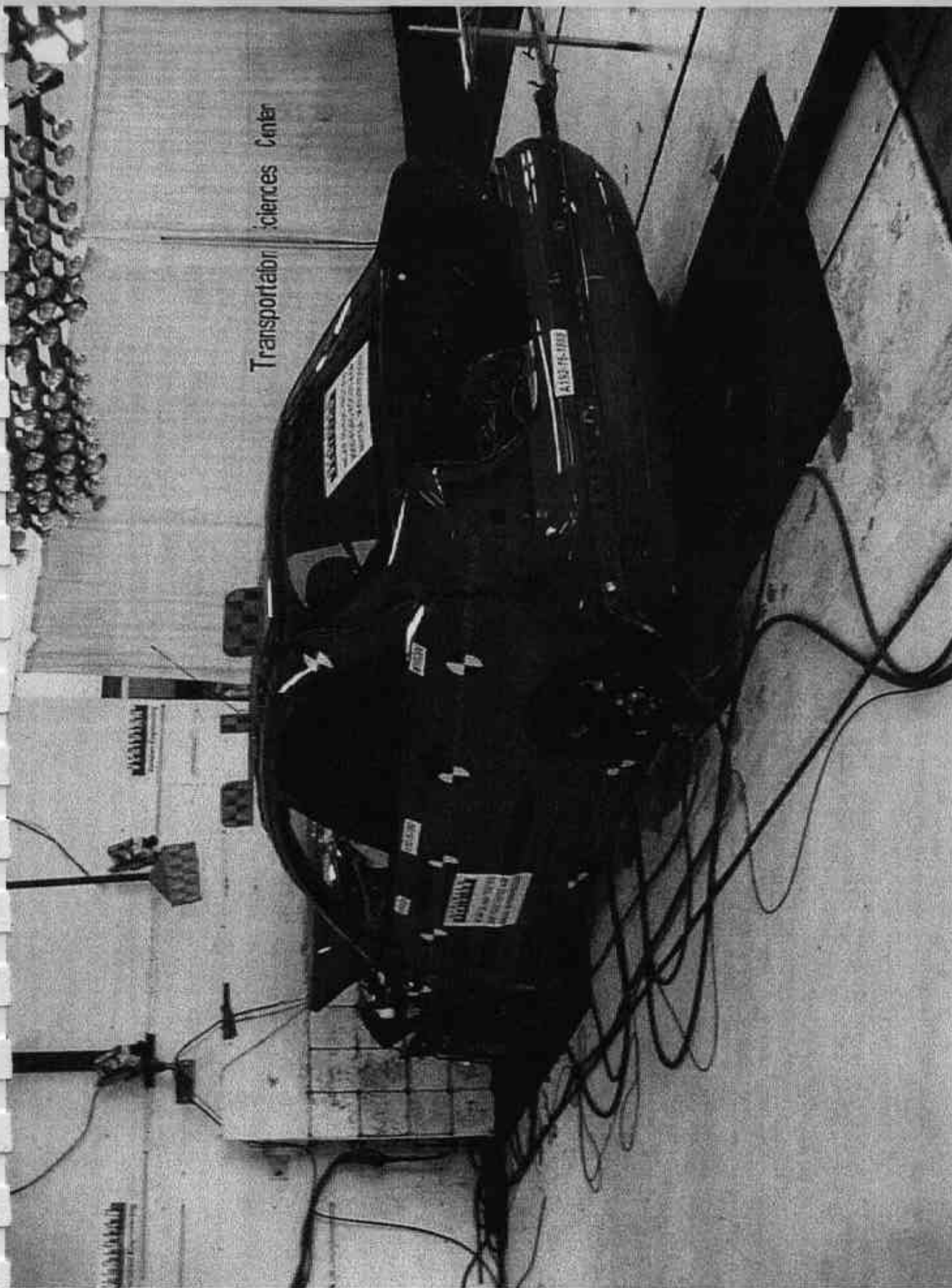


Figure A-11 POST-TEST LEFT REAR THREE-QUARTER VIEW

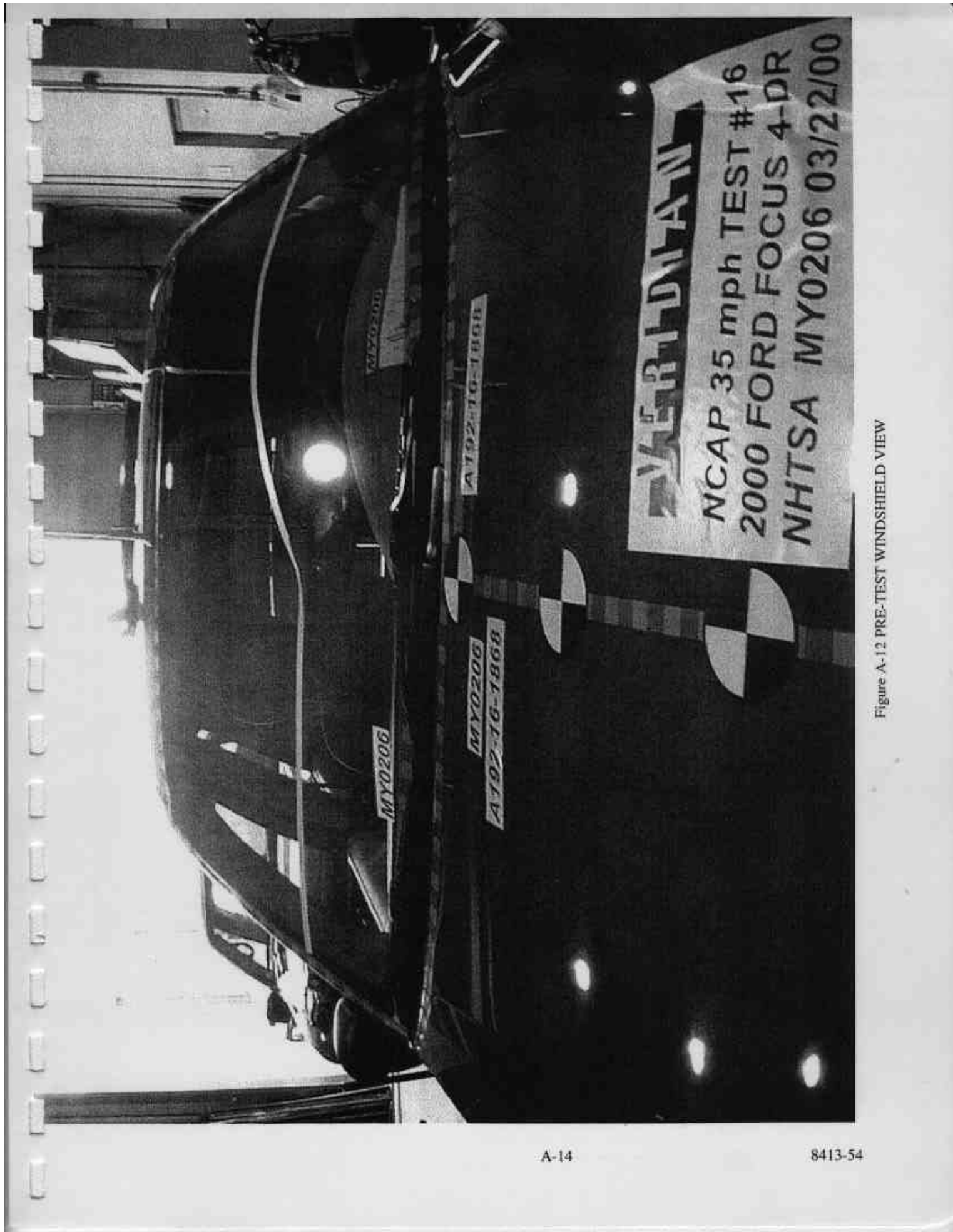


Figure A-12 PRE-TEST WINDSHIELD VIEW

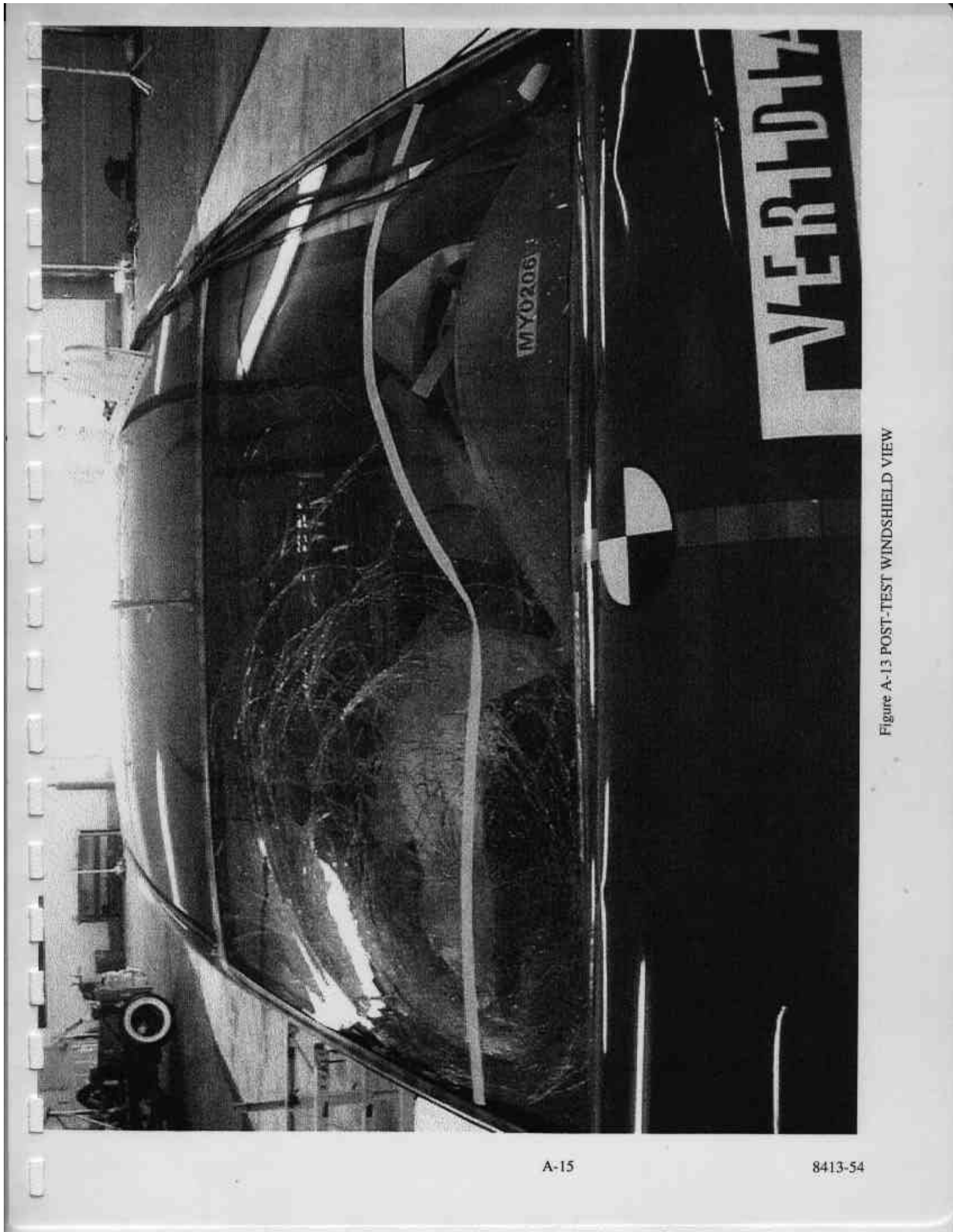


Figure A-13 POST-TEST WINDSHIELD VIEW

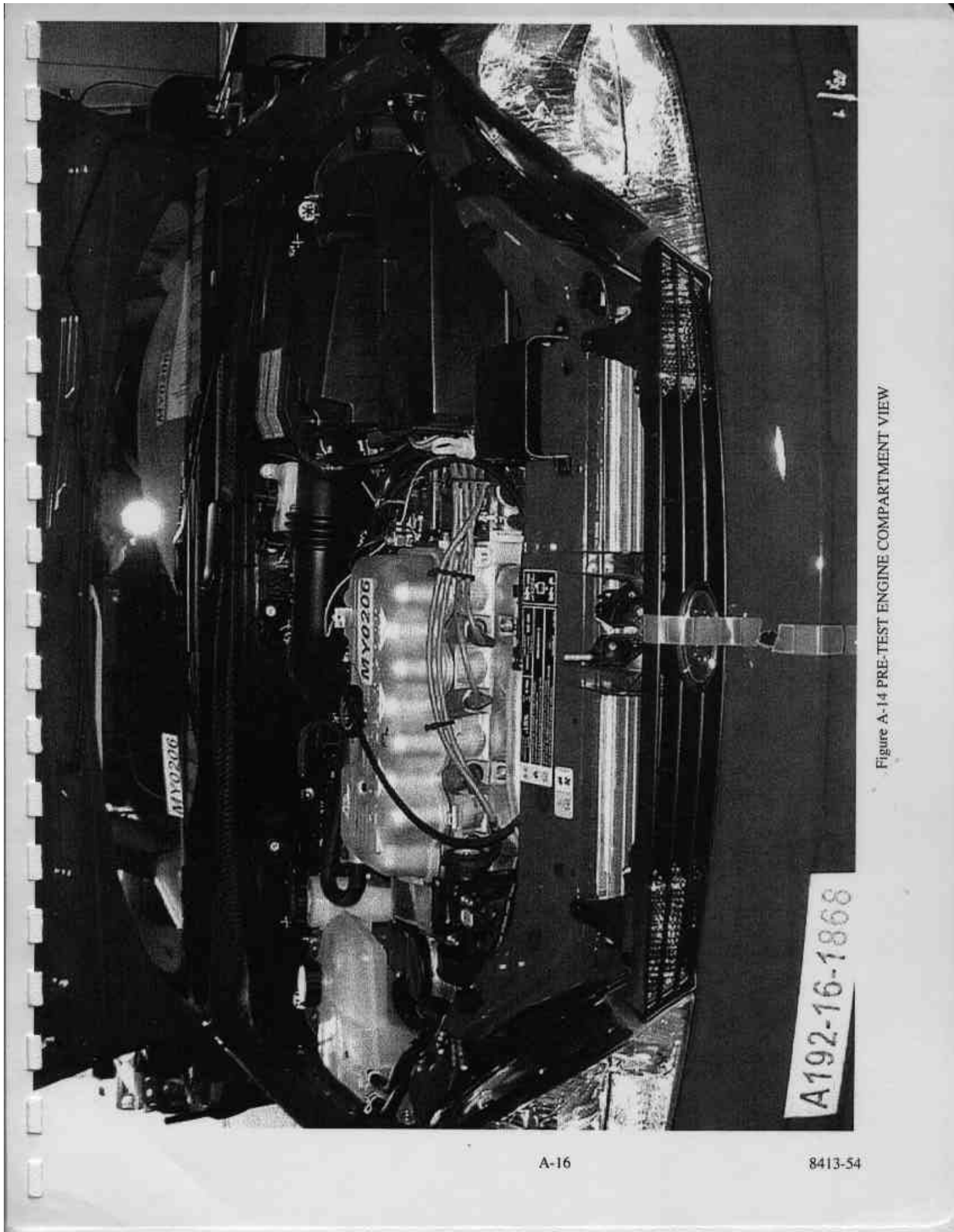


Figure A-14 PRE-TEST ENGINE COMPARTMENT VIEW

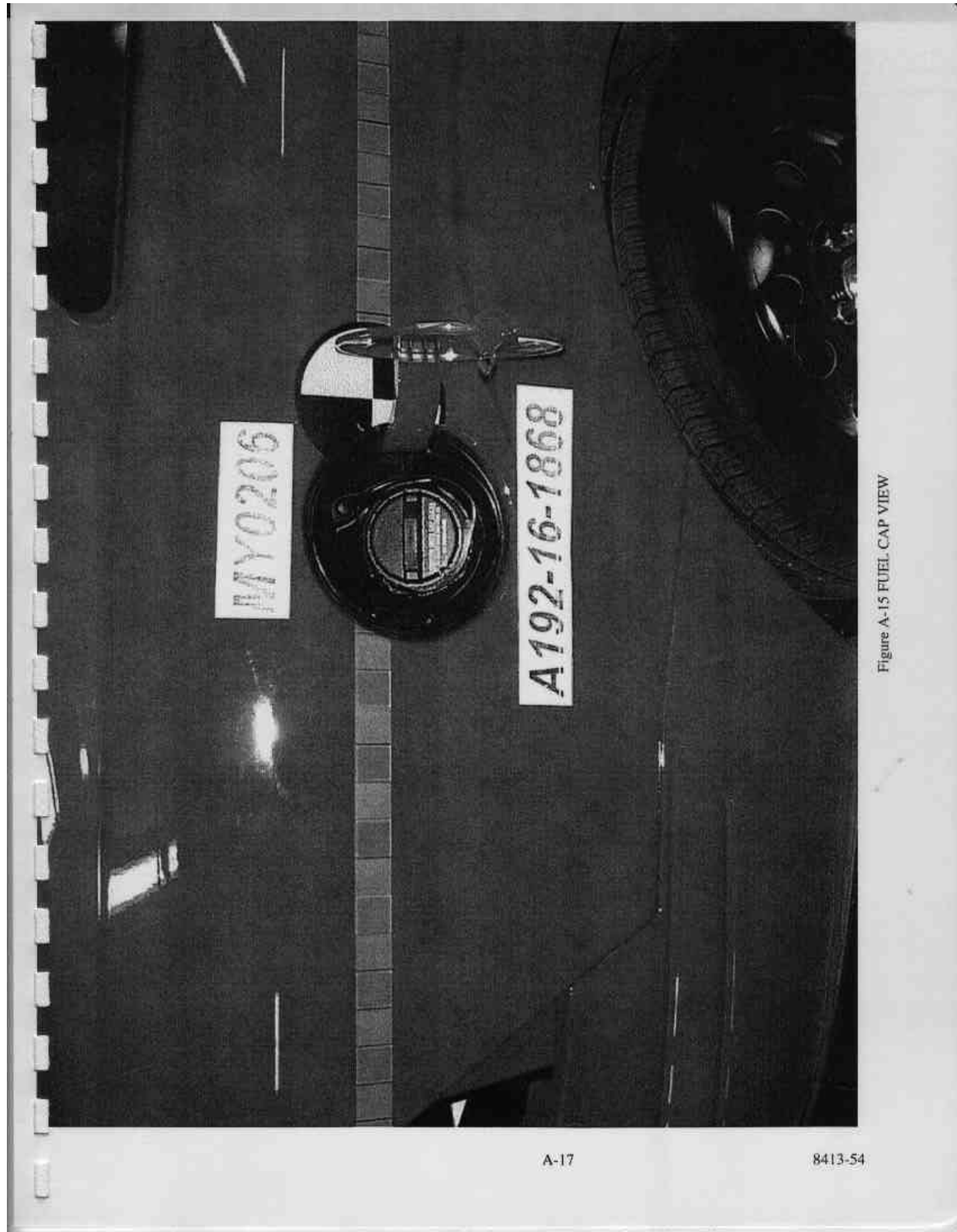


Figure A-15 FUEL CAP VIEW

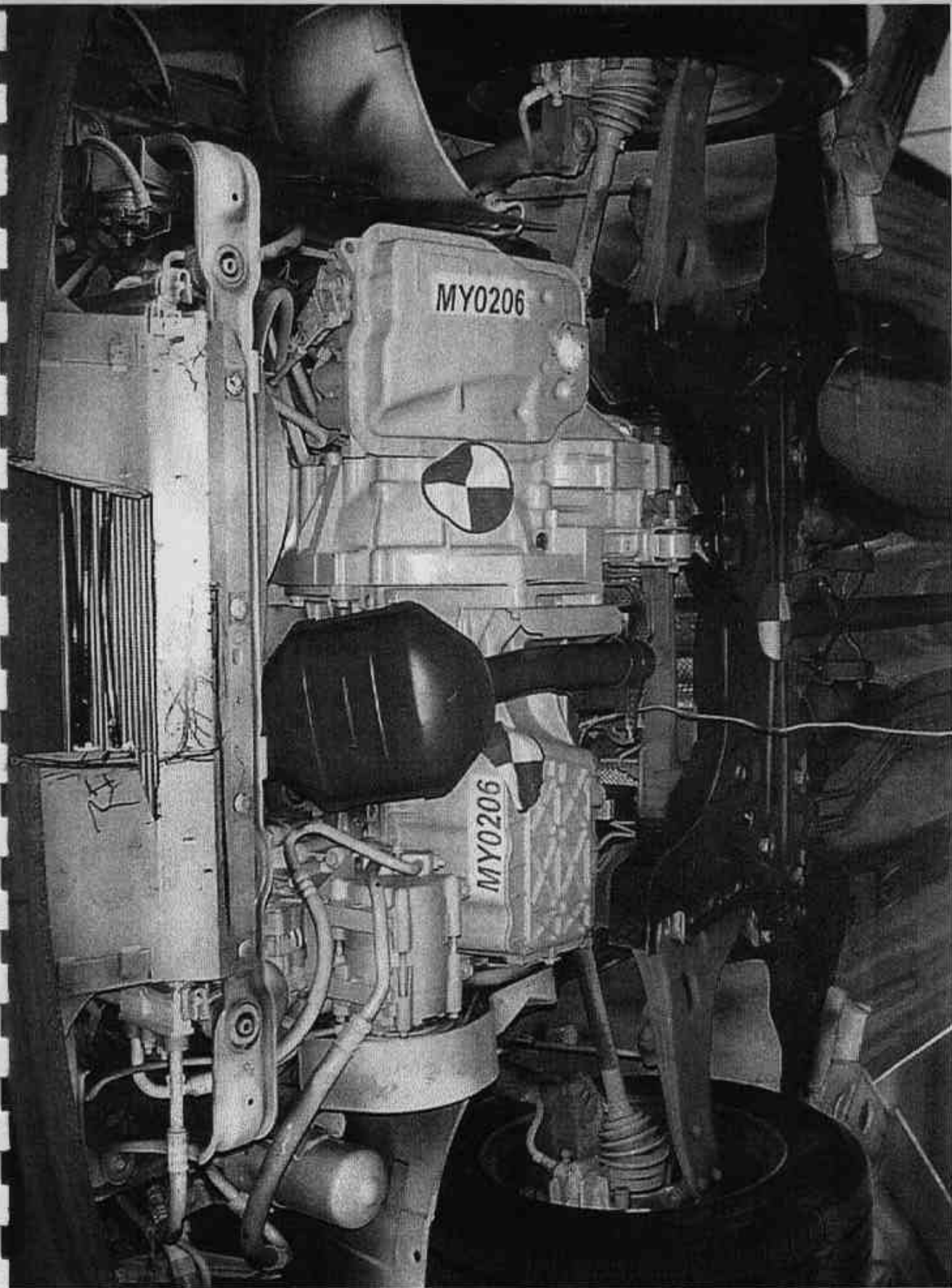


Figure A-16 PRE-TEST FRONT UNDERBODY VIEW

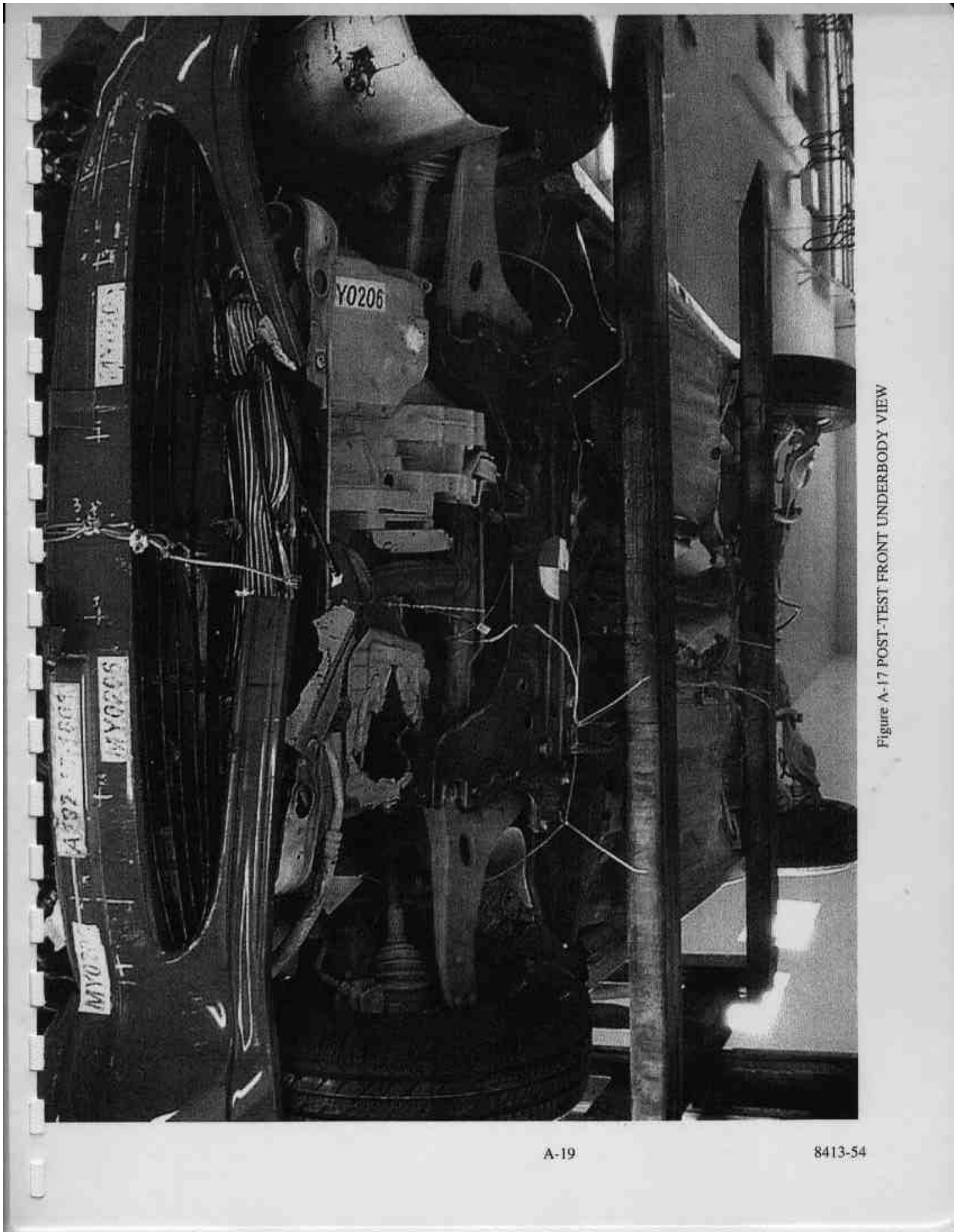


Figure A-17 POST-TEST FRONT UNDERBODY VIEW

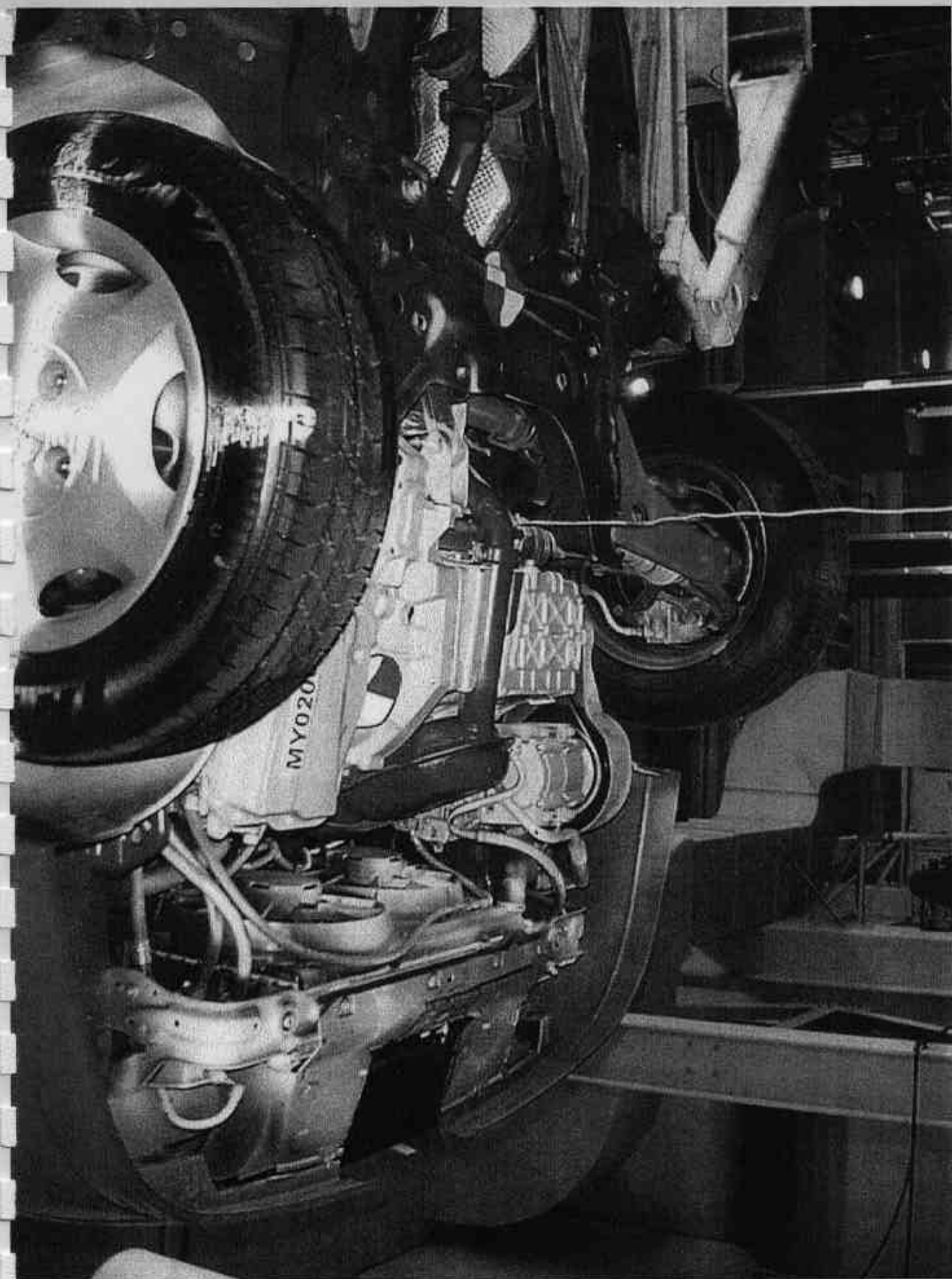


Figure A-18 PRE-TEST FRONT SIDE UNDERBODY VIEW

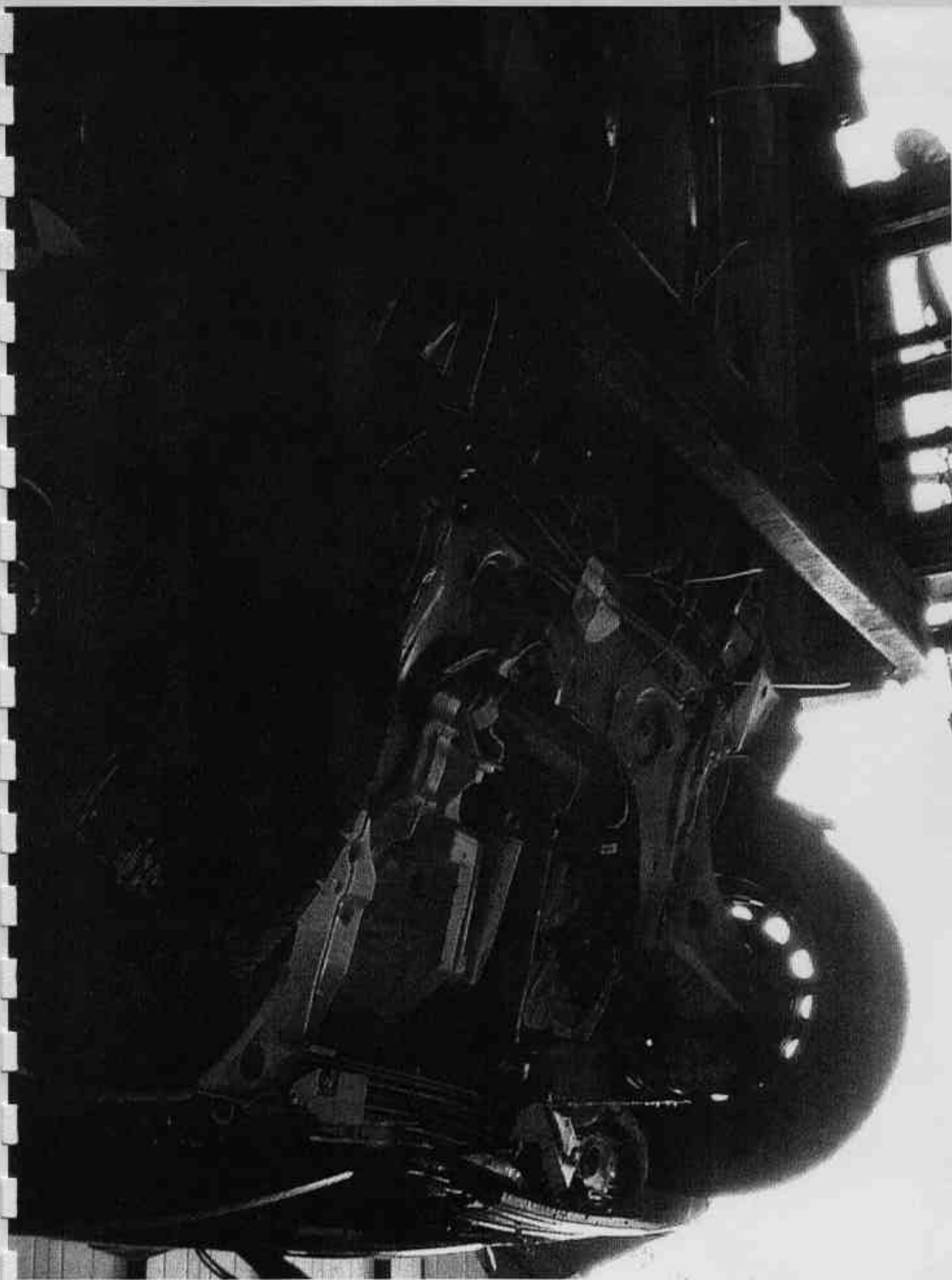


Figure A-19 POST-TEST FRONT SIDE UNDERBODY VIEW

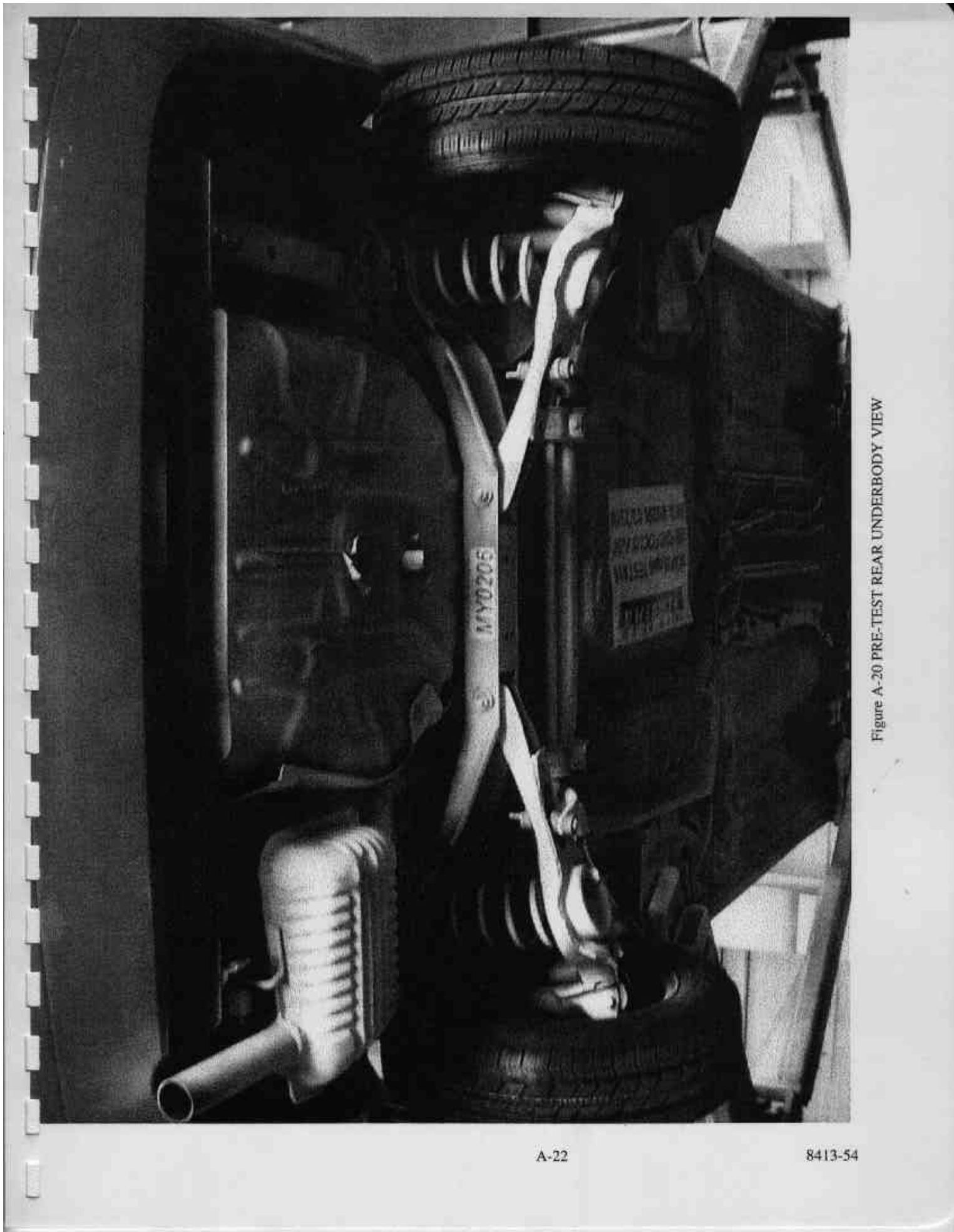


Figure A-20 PRE-TEST REAR UNDERBODY VIEW



Figure A-21 POST-TEST REAR UNDERBODY VIEW



Figure A-22 PRE-TEST DRIVER POSITION VIEW



Figure A-23 POST-TEST DRIVER POSITION VIEW



Figure A-24 PRE-TEST PASSENGER POSITION VIEW



Figure A-25 POST-TEST PASSENGER POSITION VIEW

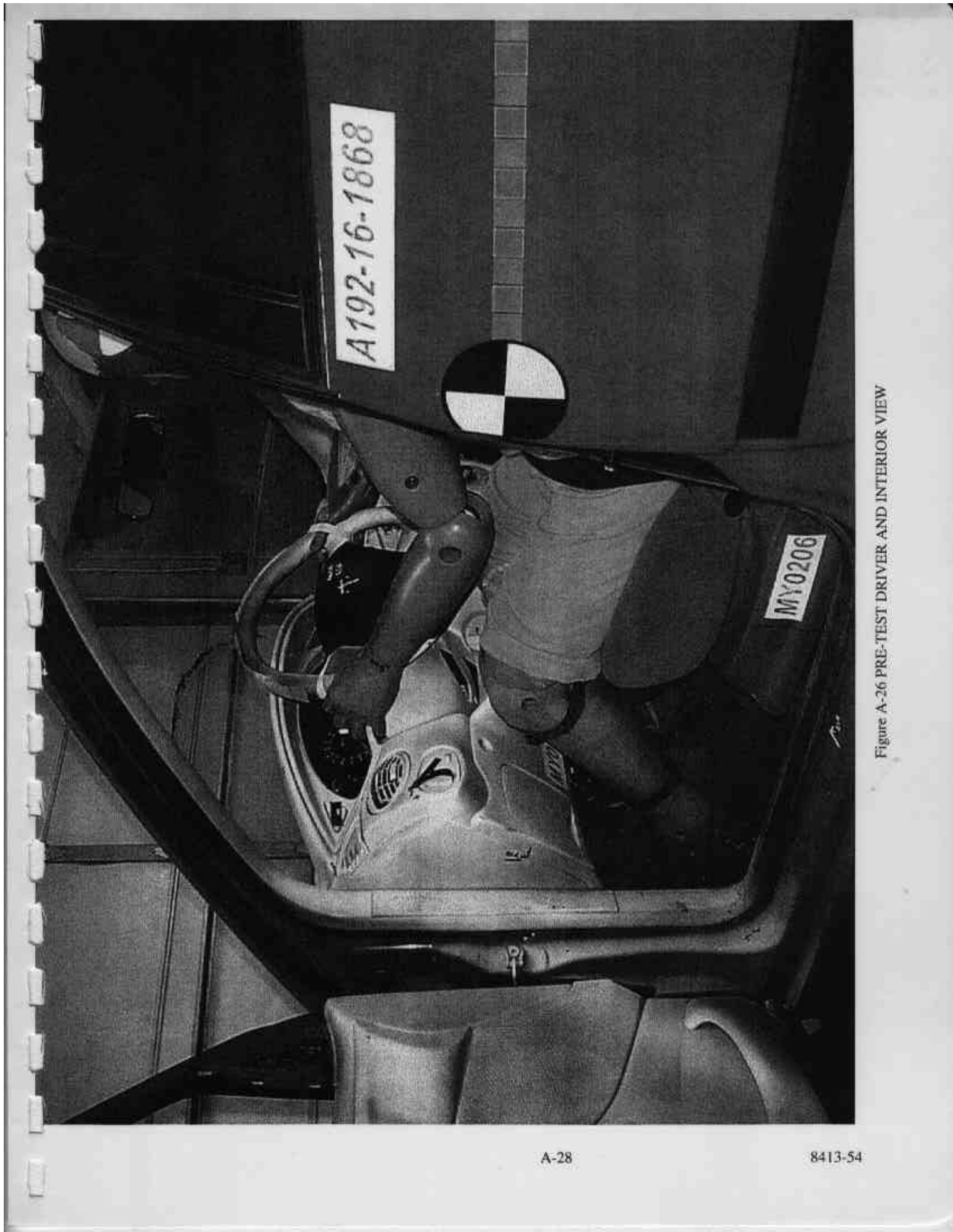


Figure A-26 PRE-TEST DRIVER AND INTERIOR VIEW



Figure A-27 POST-TEST DRIVER AND INTERIOR VIEW



Figure A-28 PRE-TEST PASSENGER AND INTERIOR VIEW



Figure A-29 POST-TEST PASSENGER AND INTERIOR VIEW

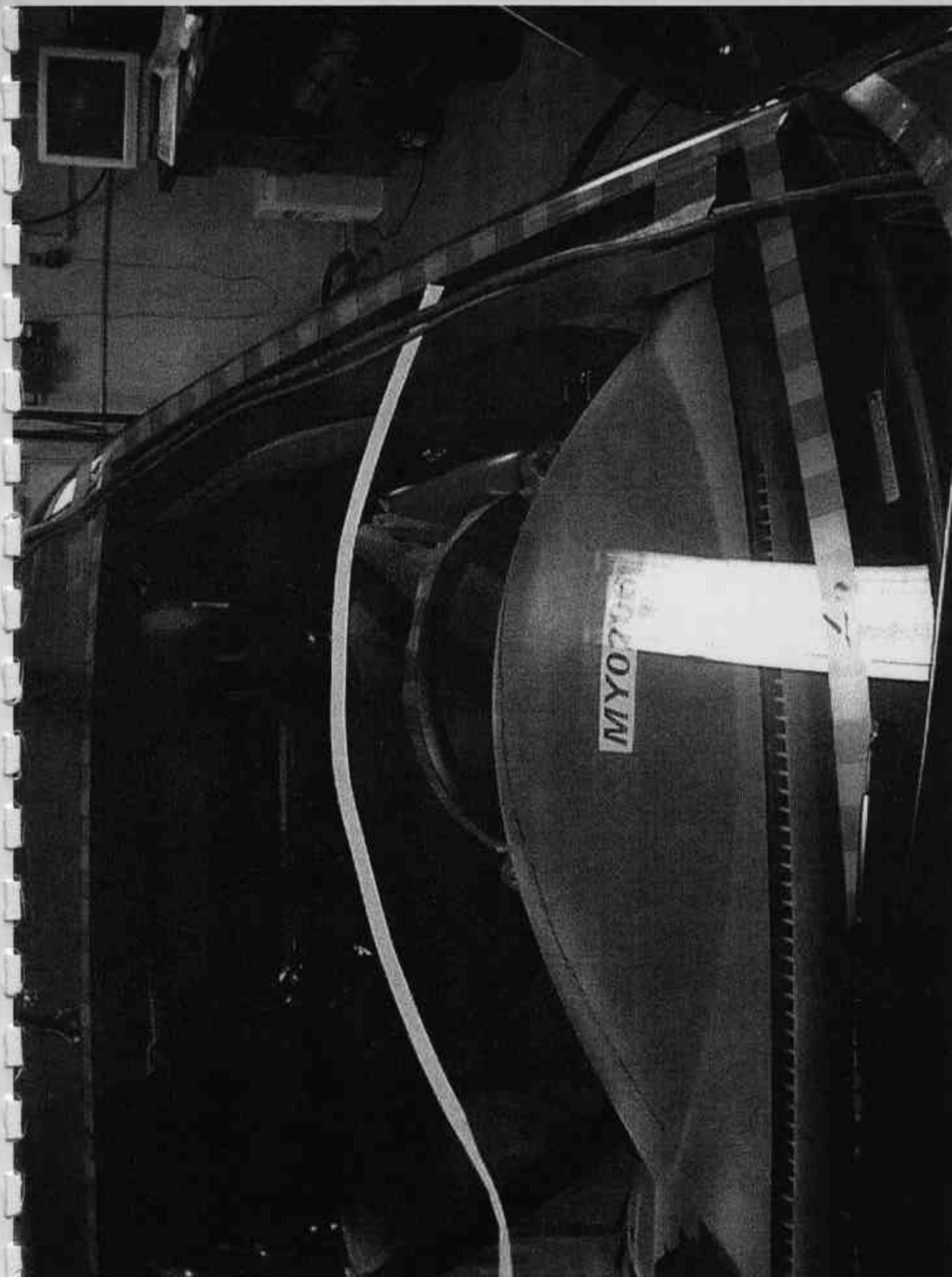


Figure A-30 PRE-TEST DRIVER HEAD LOCATION

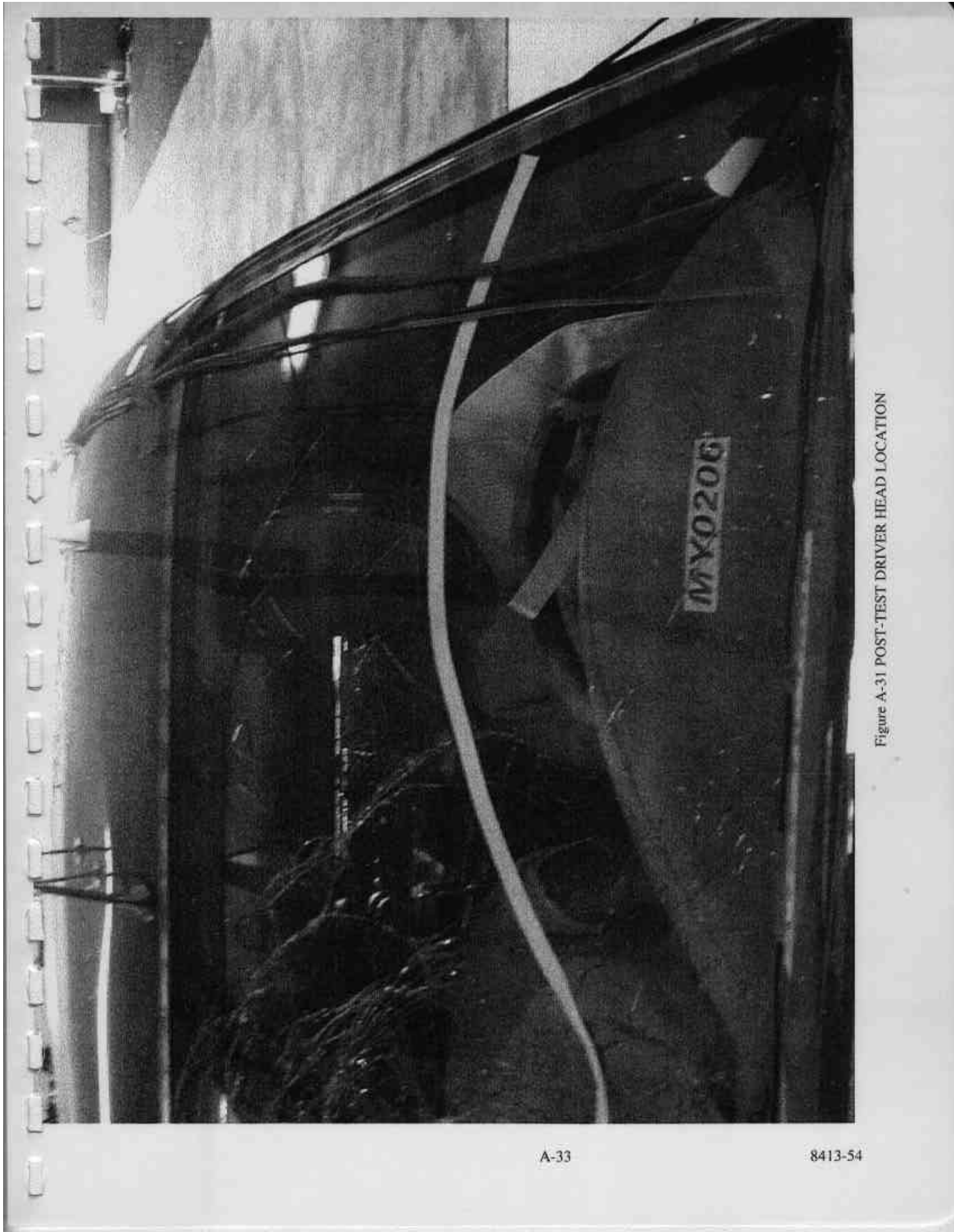


Figure A-31 POST-TEST DRIVER HEAD LOCATION



Figure A-32 PRE-TEST PASSENGER HEAD LOCATION



Figure A-33 POST-TEST PASSENGER HEAD LOCATION



Figure A-34 PRE-TEST DRIVER FLOOR PAN VIEW

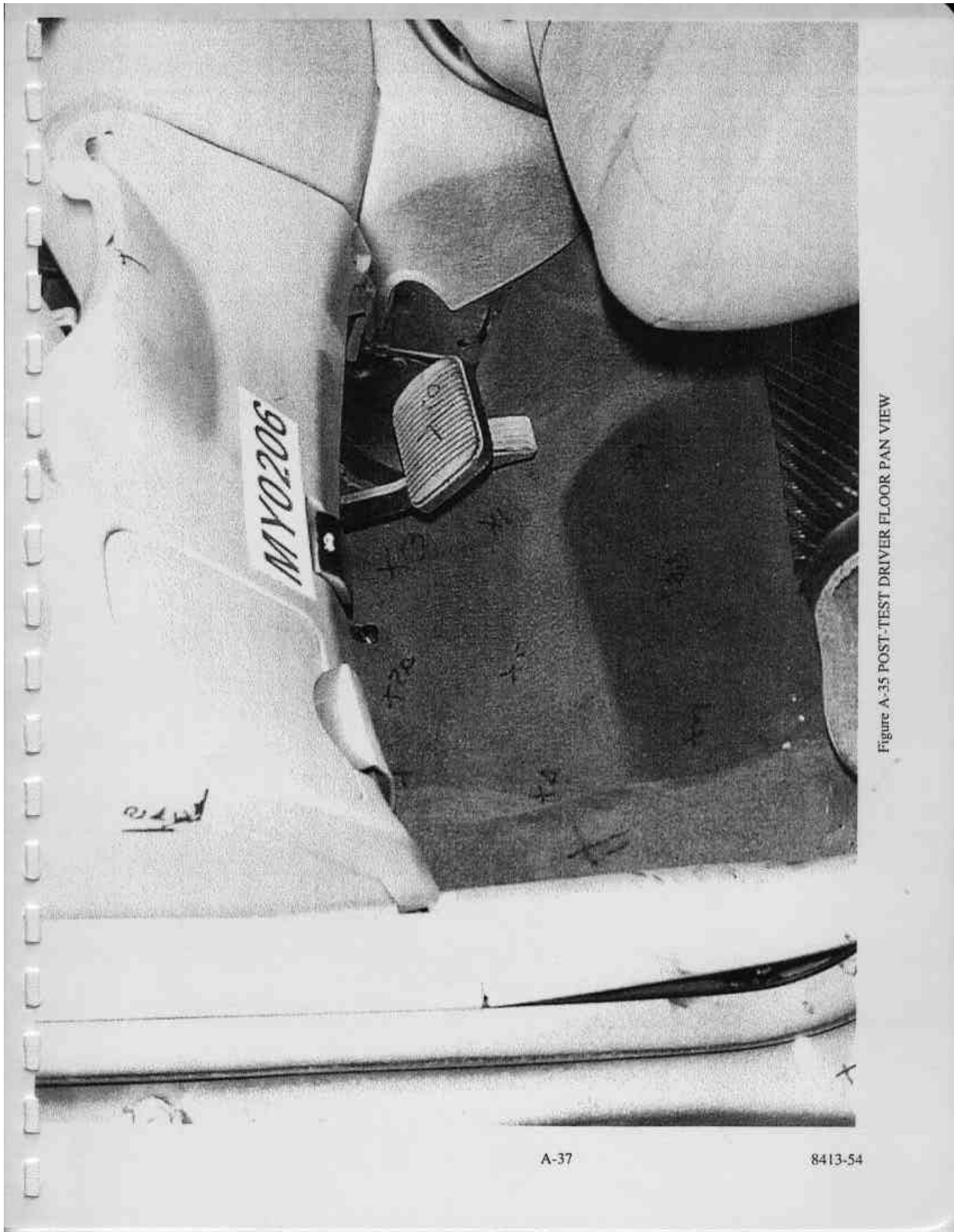


Figure A-35 POST-TEST DRIVER FLOOR PAN VIEW



Figure A-36 PRE-TEST PASSENGER FLOOR PAN VIEW

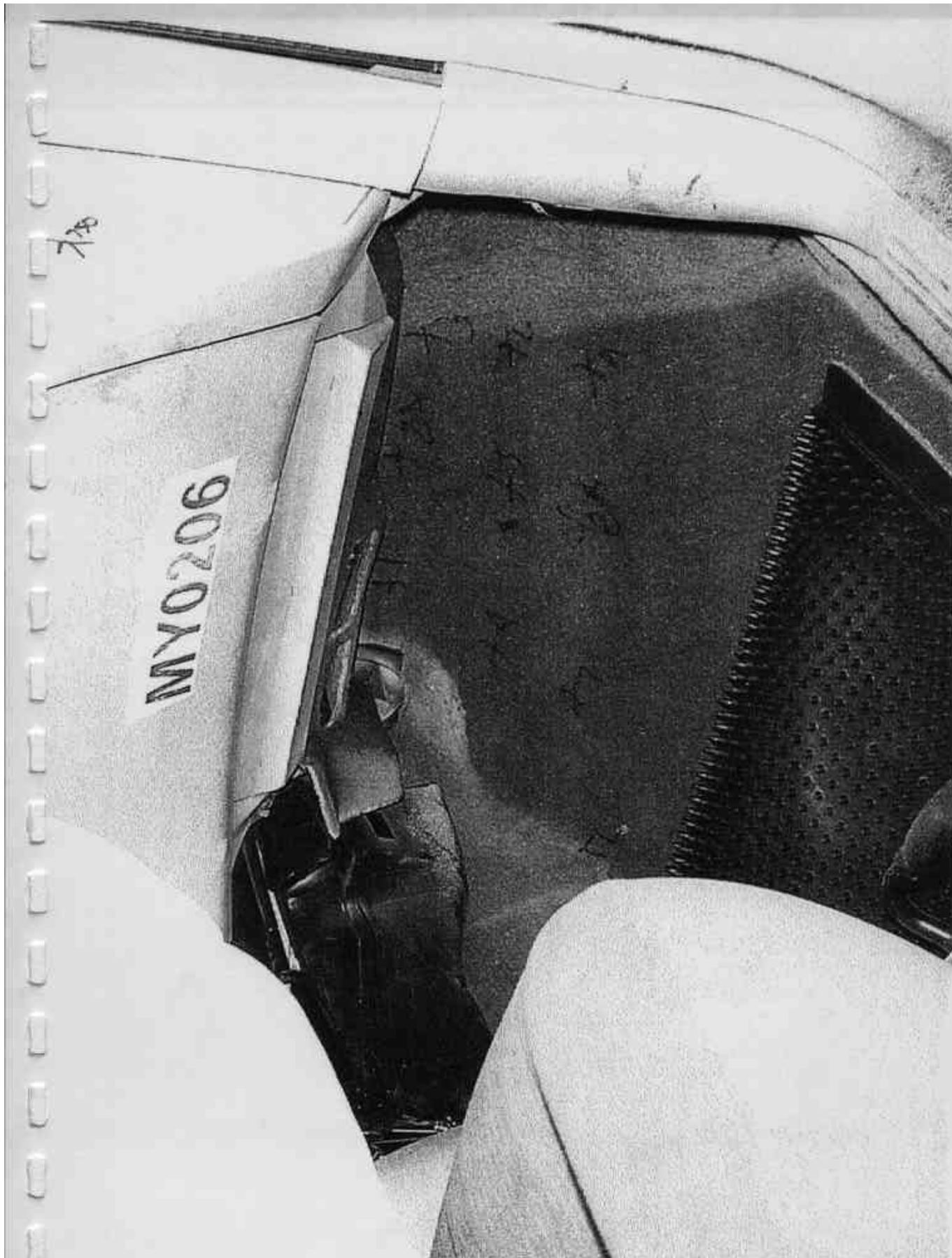


Figure A-37 POST-TEST PASSENGER FLOOR PAN VIEW



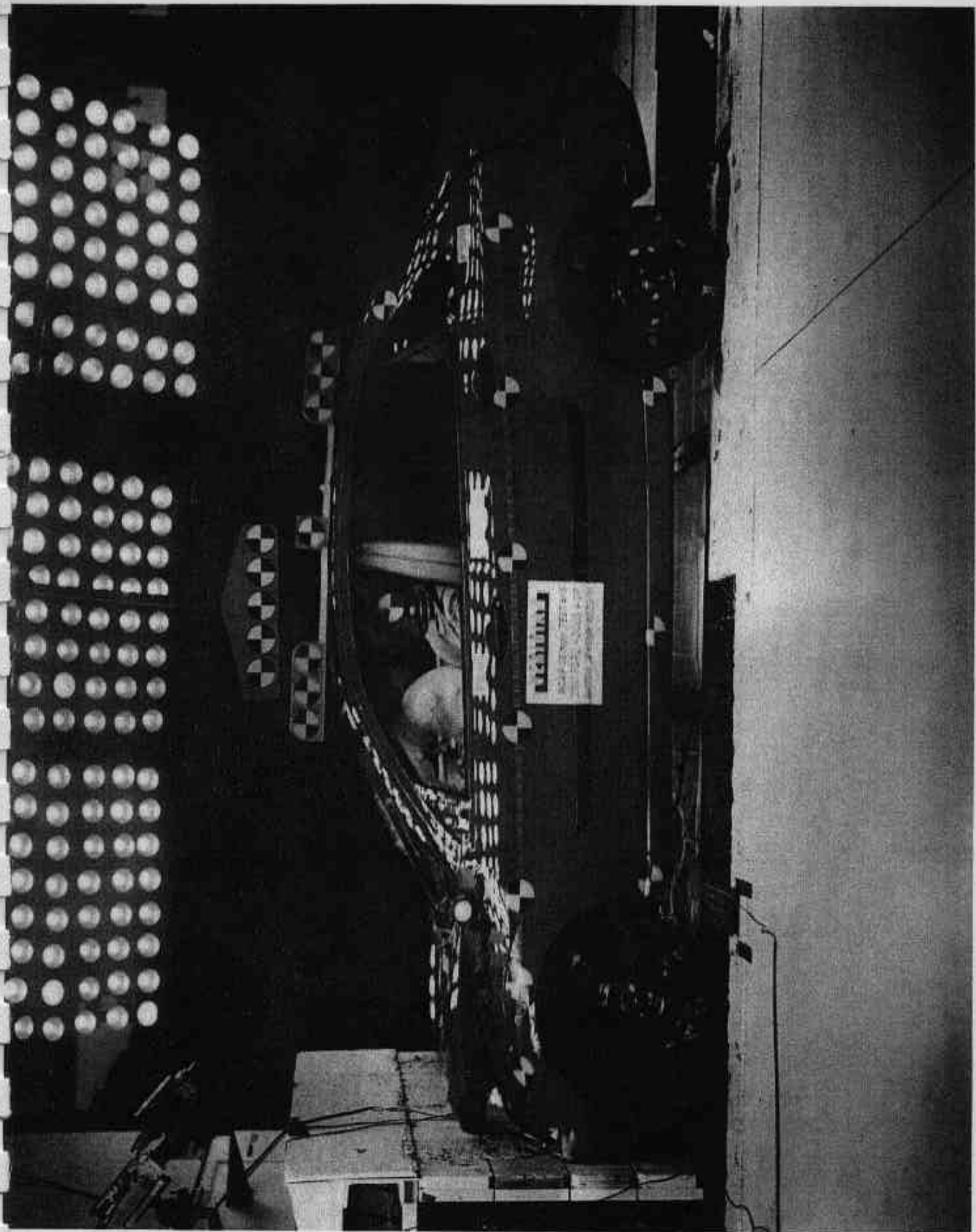


Figure A-39 IMPACT VIEW

APPENDIX B

DUMMY, VEHICLE AND LOAD CELL BARRIER RESPONSE DATA

Hybrid III Dummy Sign Conventions
Load Cells and Special Transducers

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

DATA CHANNEL FILTER CLASS SUMMARY

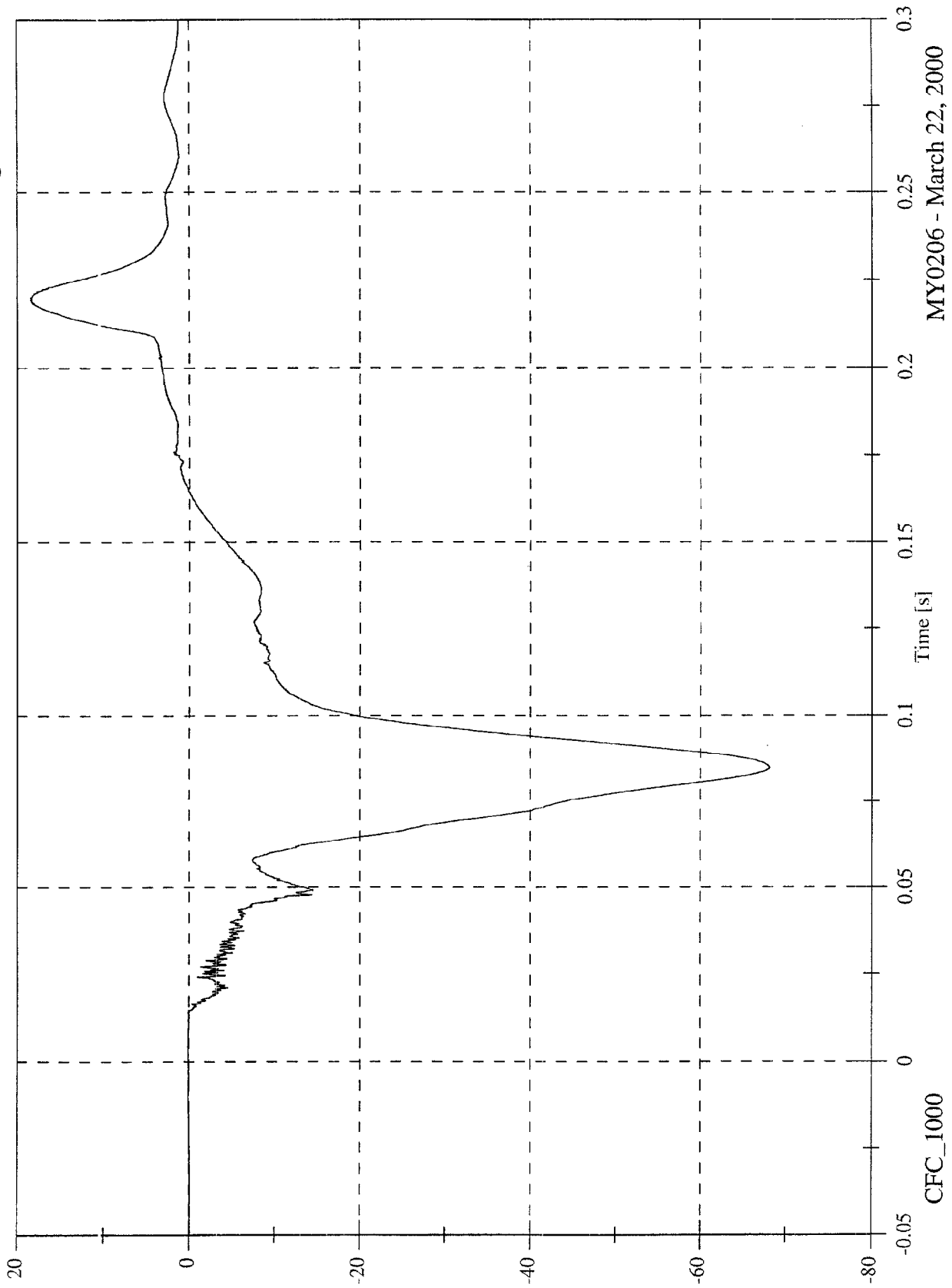
NHTSA TEST NO. MY0206

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 #16 - 2000 Ford Focus 4-Door

Max: 18.5 [g] at 0.219 [s]
Min: -68.2 [g] at 0.085 [s]

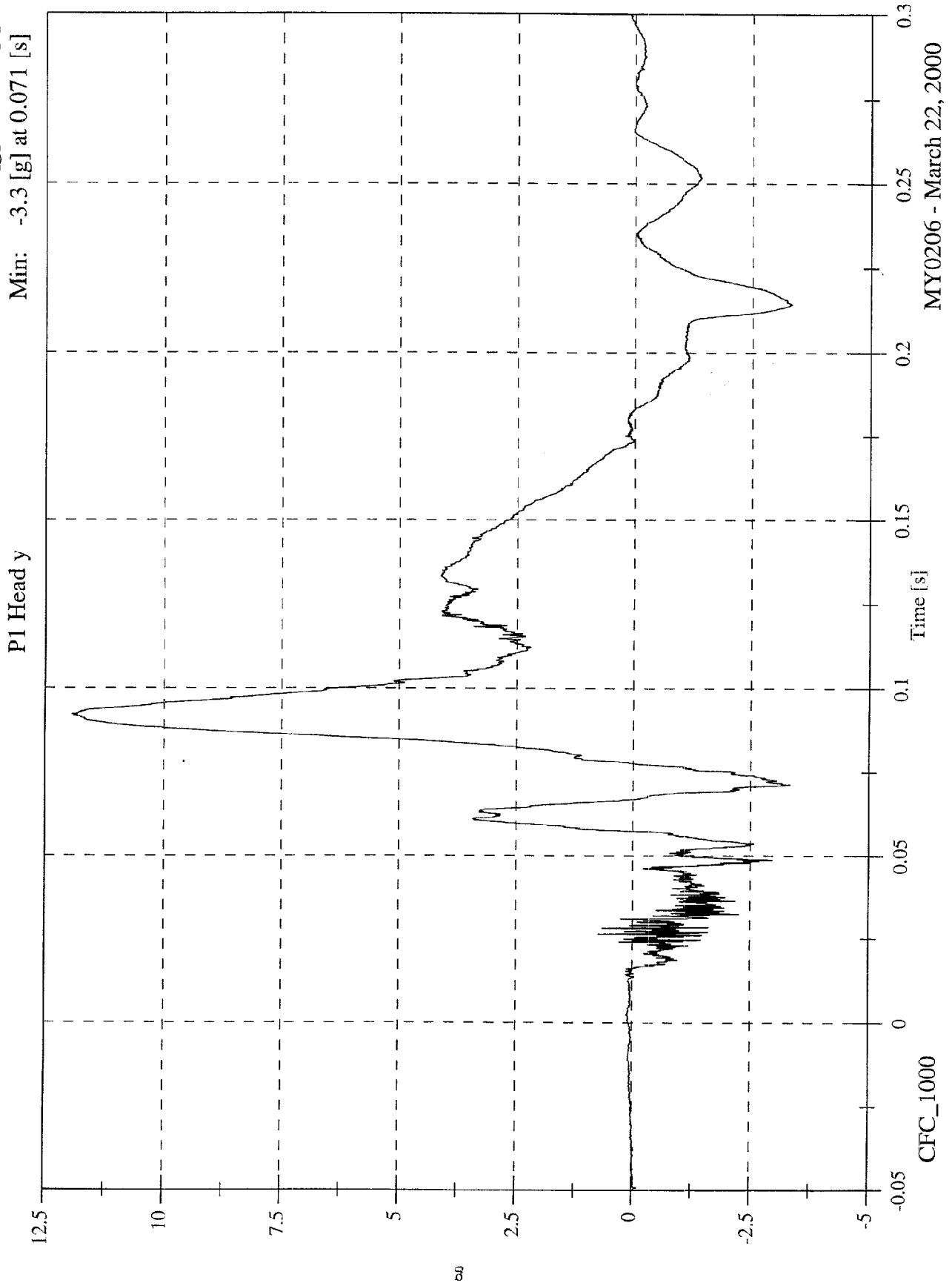
P1 Head x



MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

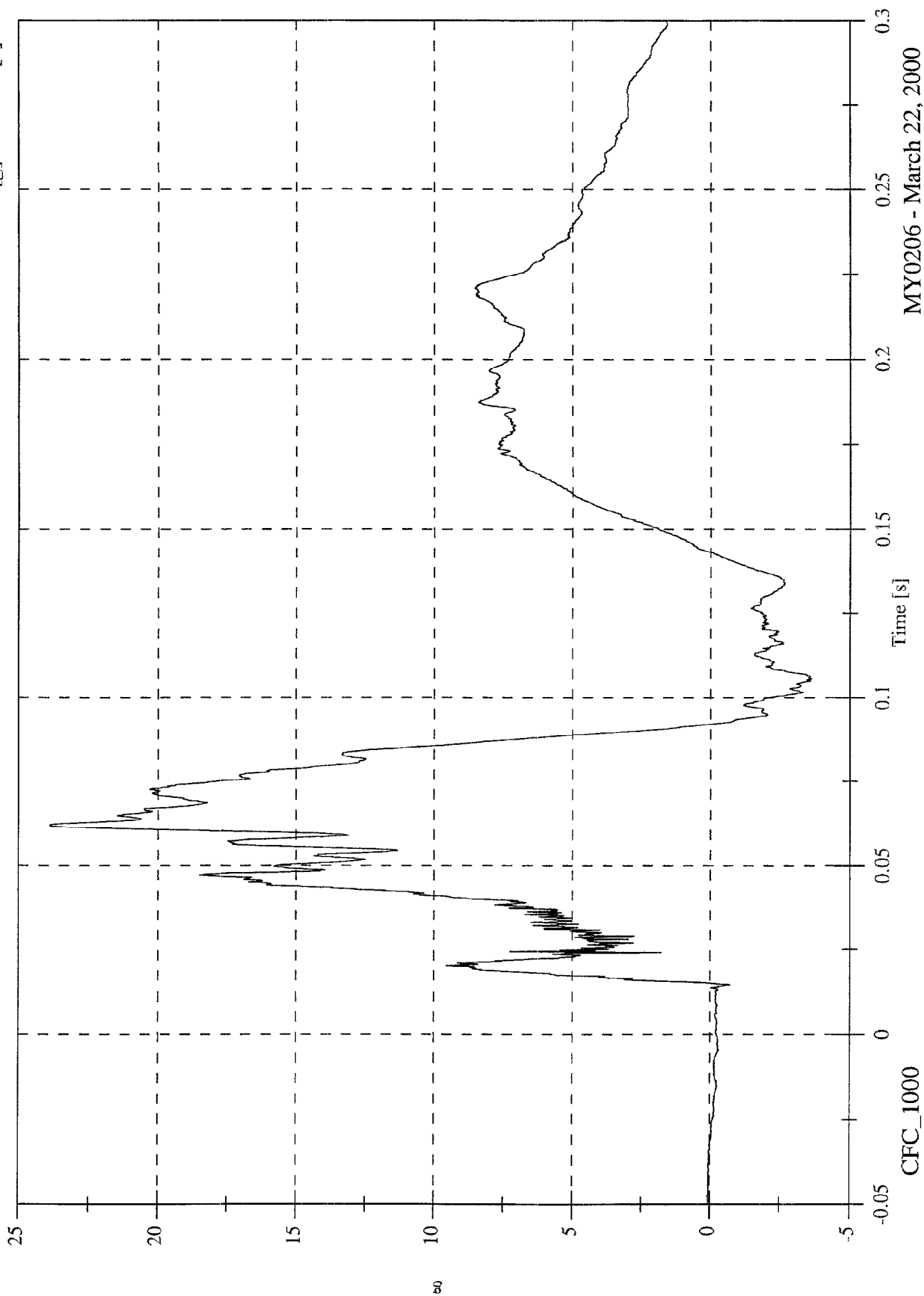
Max: 11.9 [g] at 0.092 [s]
Min: -3.3 [g] at 0.071 [s]



NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 23.9 [g] at 0.062 [s]
 Min: -3.6 [g] at 0.106 [s]

P1 Head z

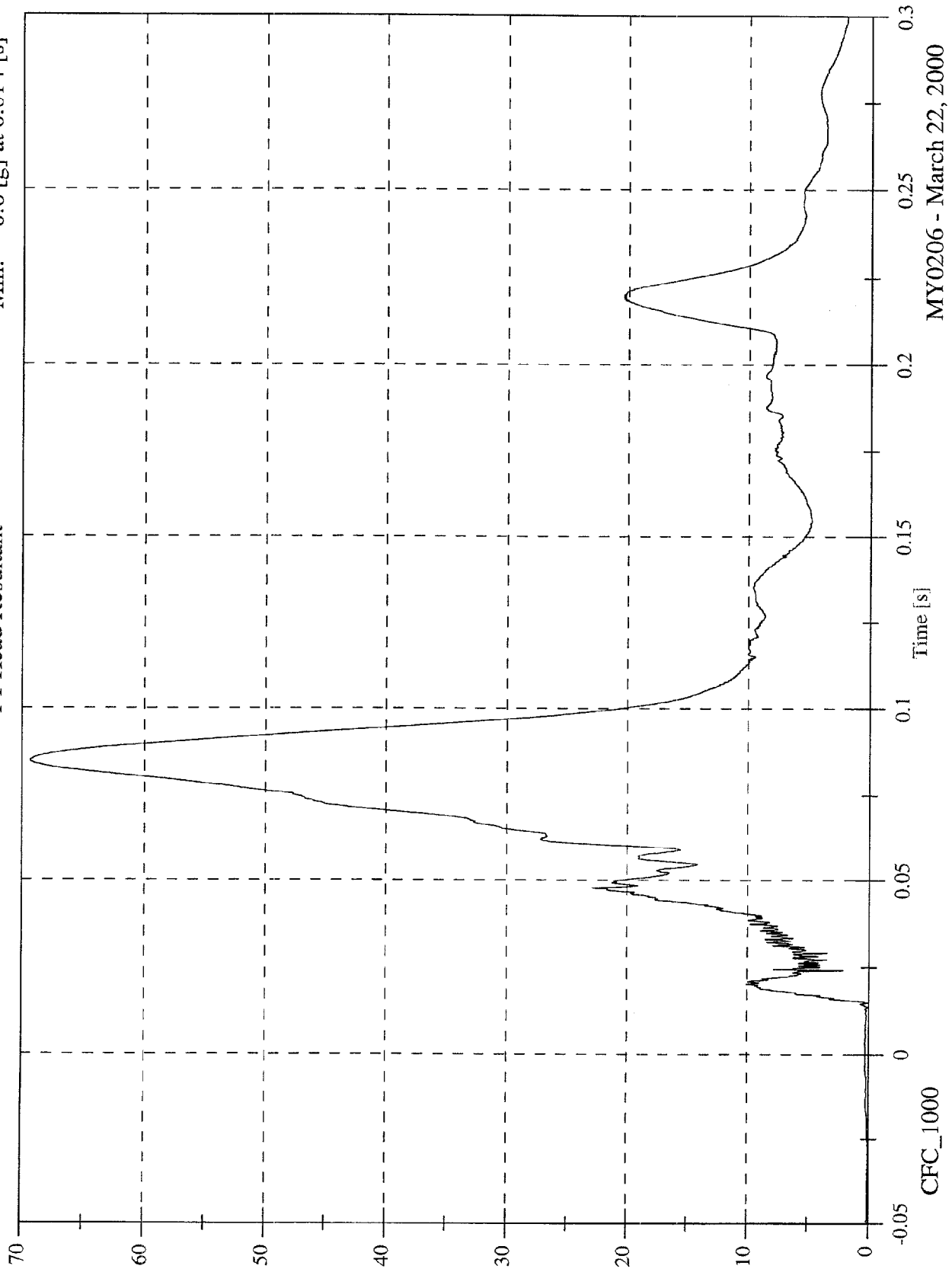


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 69.3 [g] at 0.085 [s]
Min: 0.0 [g] at 0.014 [s]

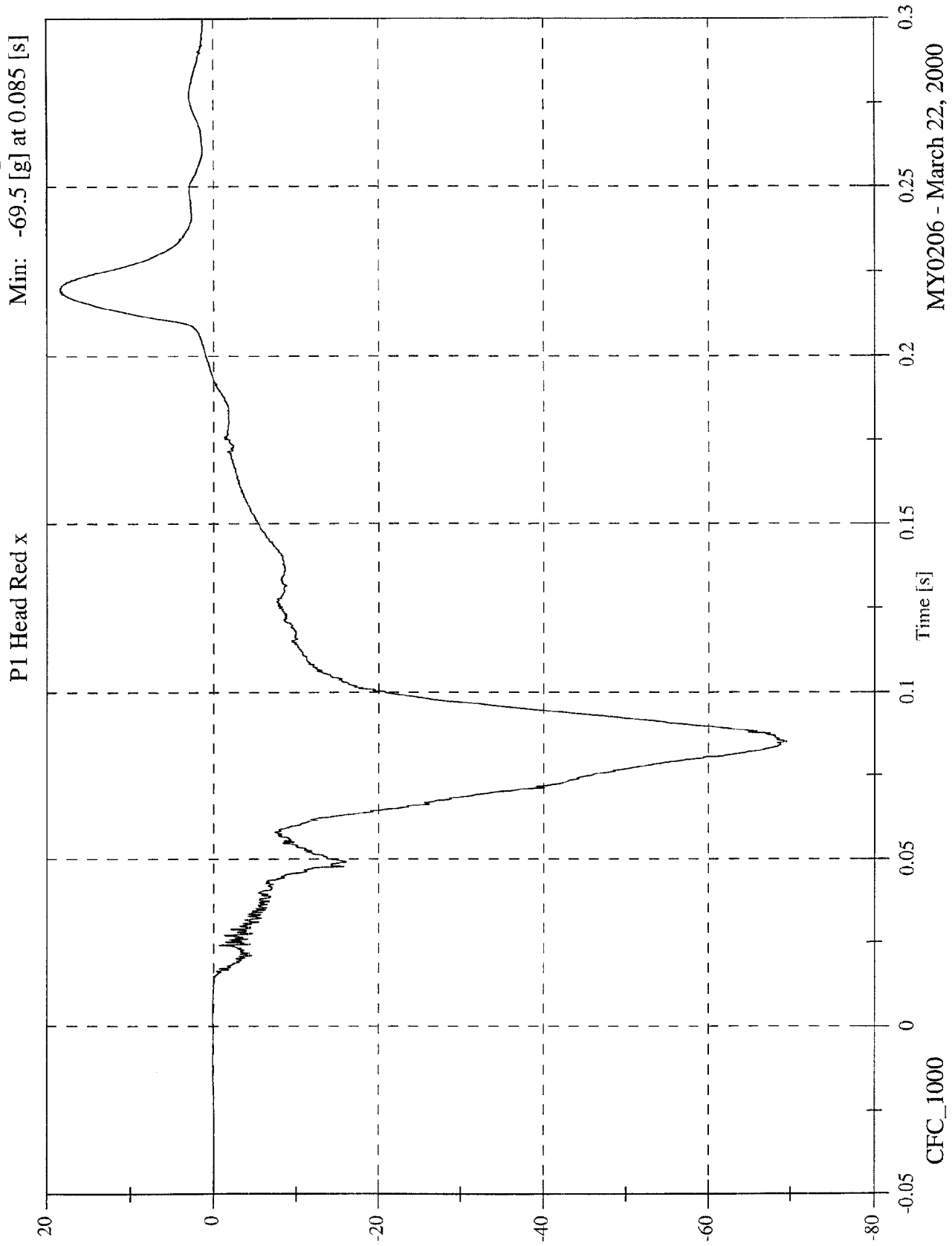
P1 Head Resultant



MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 18.4 [g] at 0.220 [s]
Min: -69.5 [g] at 0.085 [s]

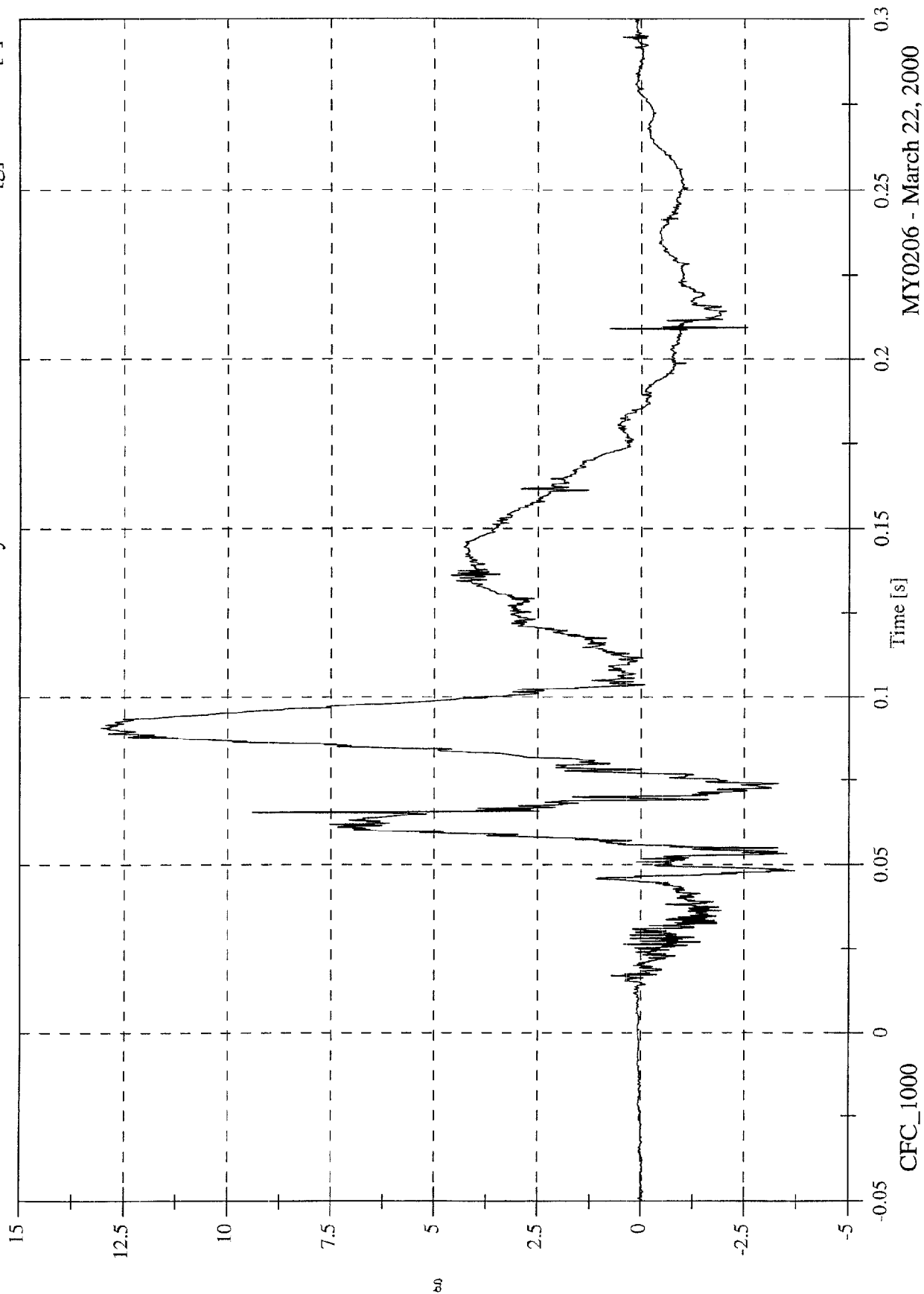


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 13.1 [g] at 0.091 [s]
Min: -3.7 [g] at 0.048 [s]

P1 Head Red y

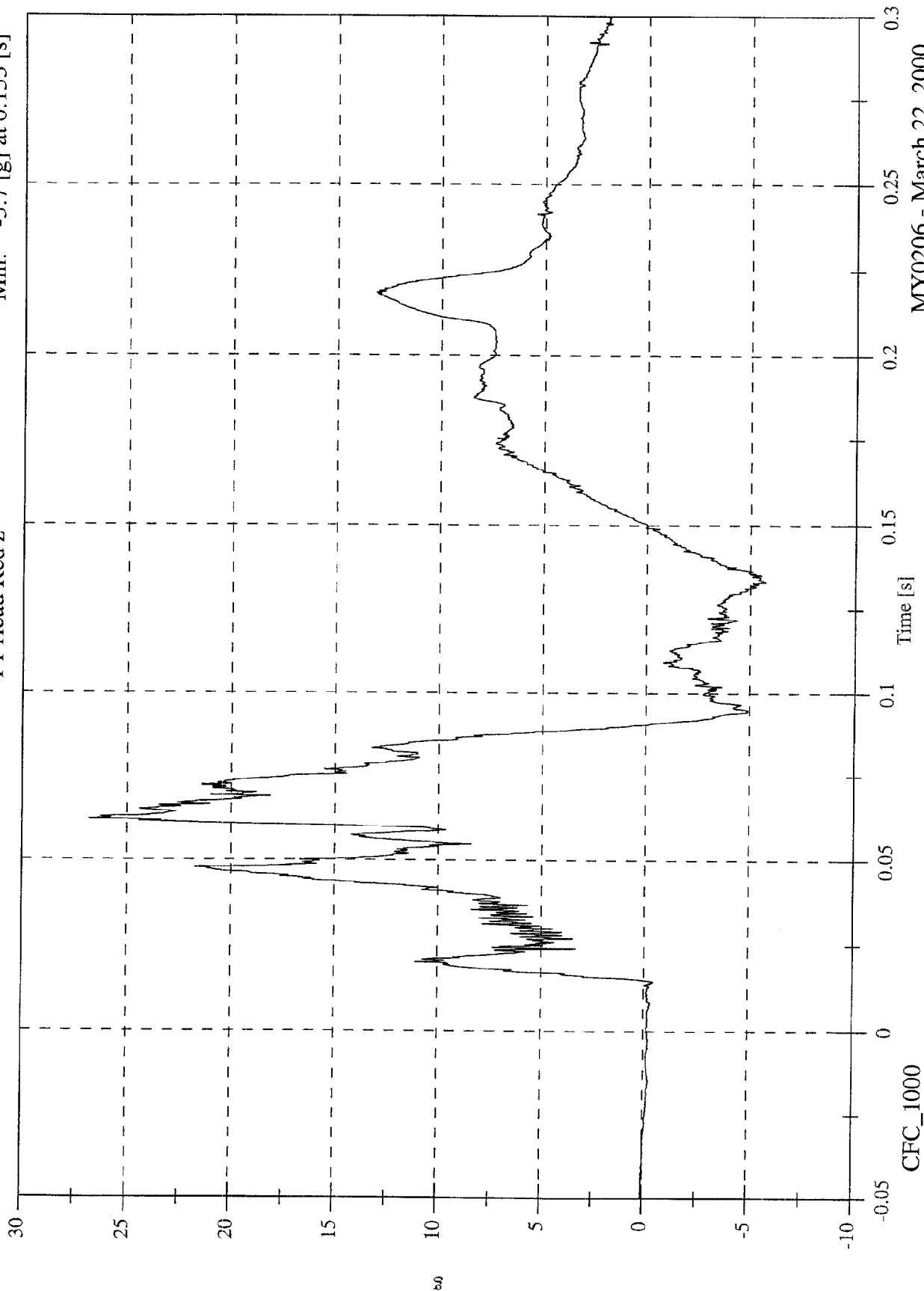


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 26.8 [g] at 0.062 [s]
Min: -5.7 [g] at 0.133 [s]

P1 Head Red z

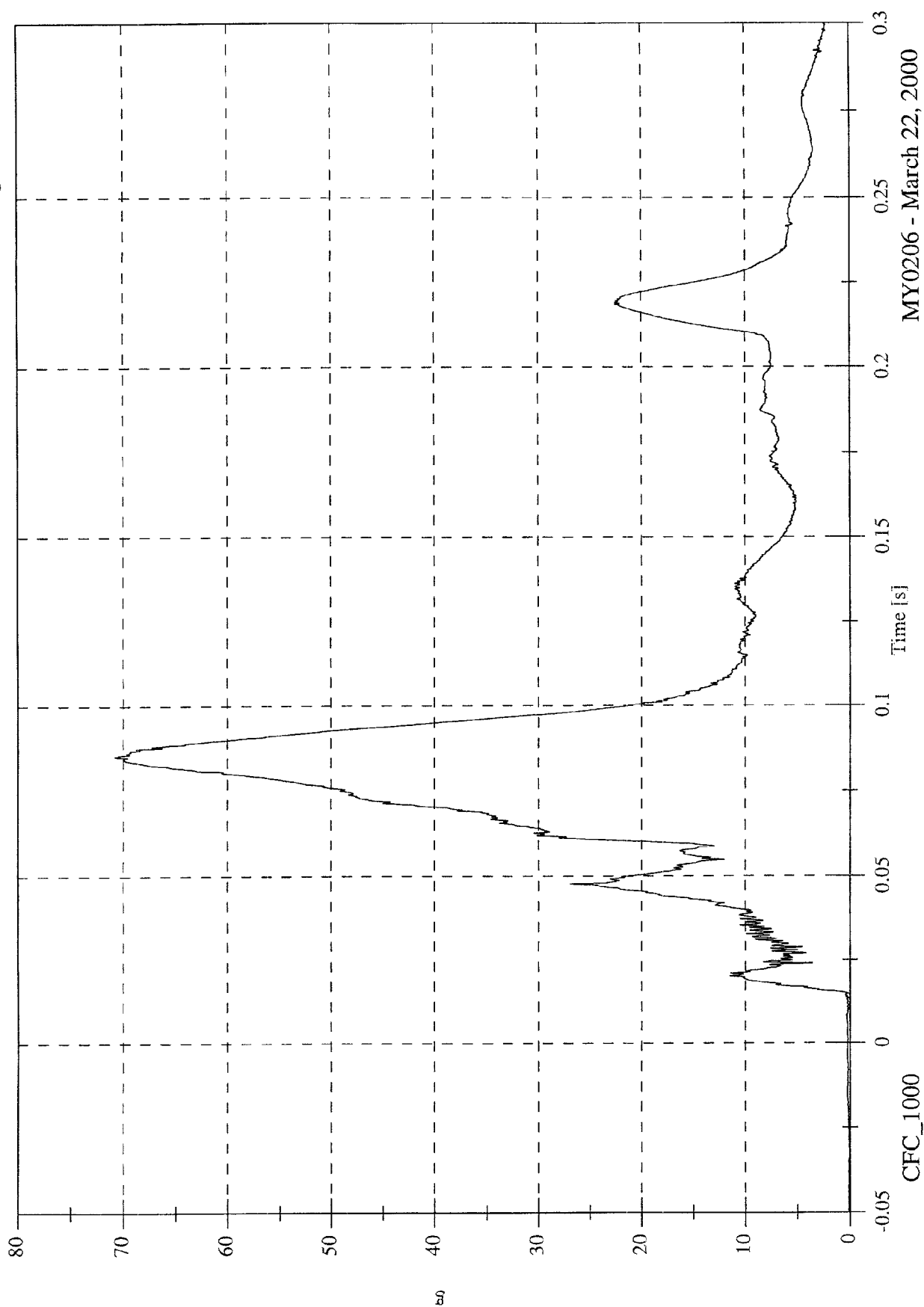


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

P1 Head Red Resultant

Max: 70.8 [g] at 0.085 [s]
Min: 0.0 [g] at -0.032 [s]

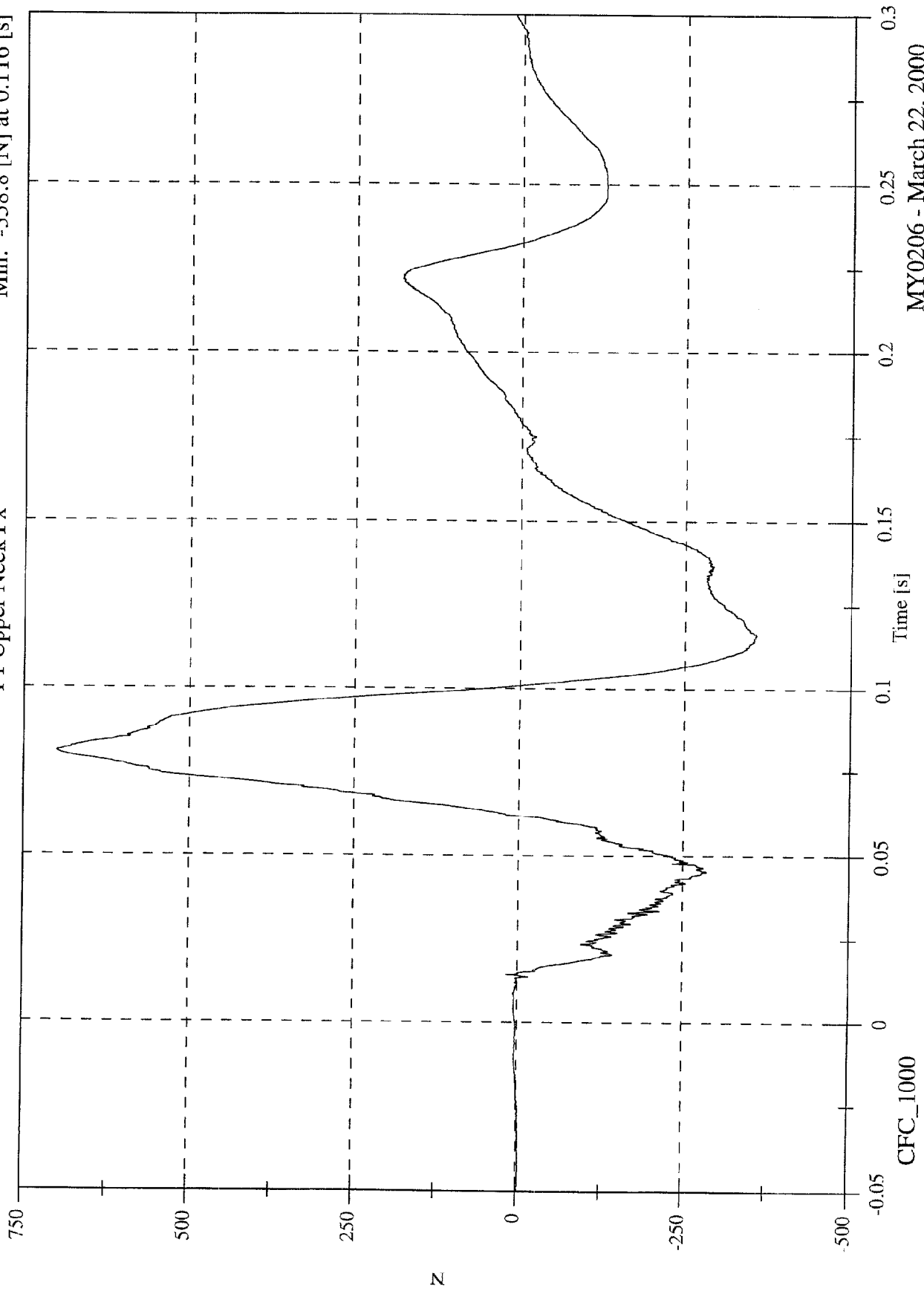


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 699.8 [N] at 0.081 [s]
Min: -358.8 [N] at 0.116 [s]

P1 Upper Neck Fx

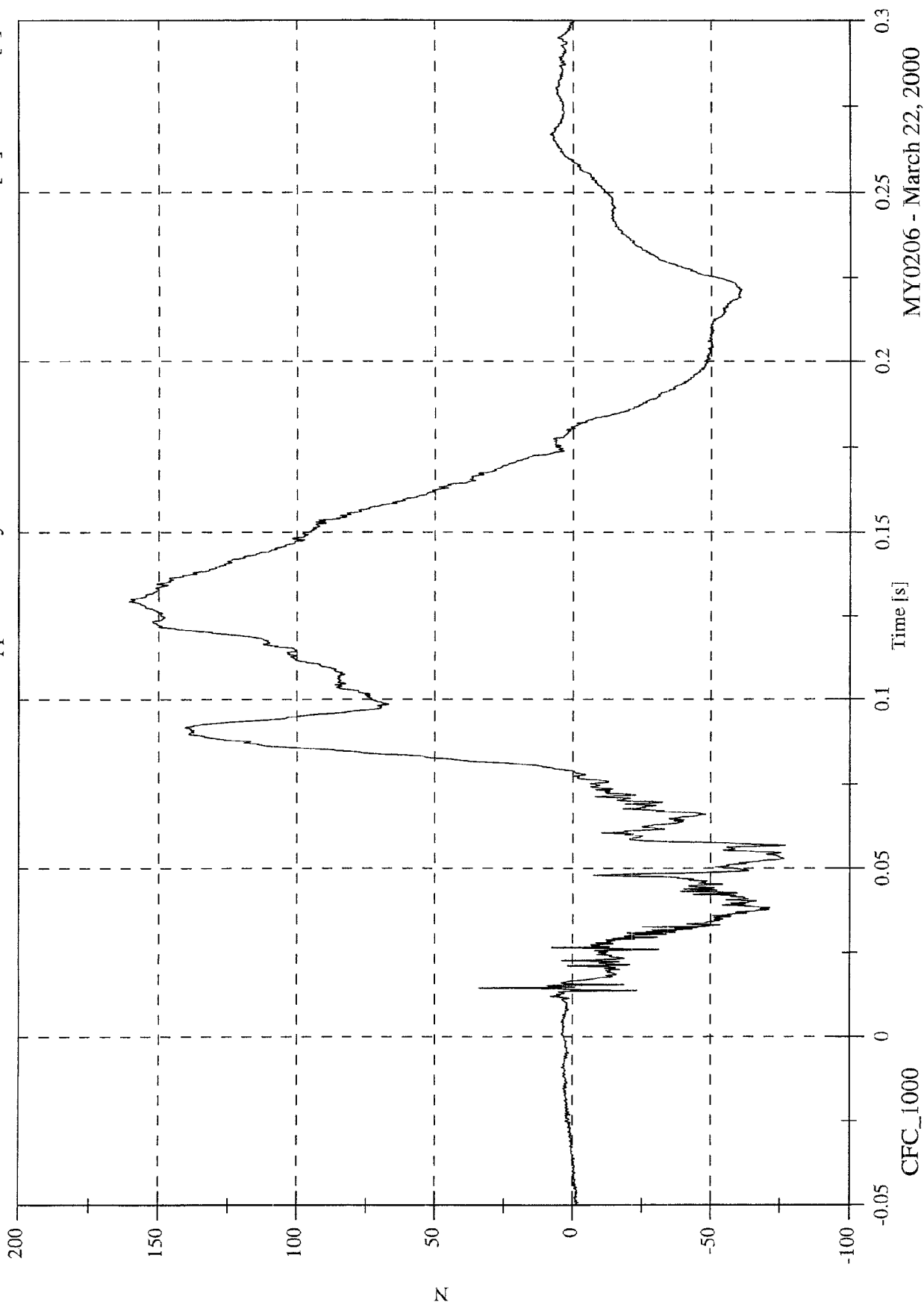


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 160.6 [N] at 0.130 [s]
Min: -76.9 [N] at 0.057 [s]

P1 Upper Neck Fy

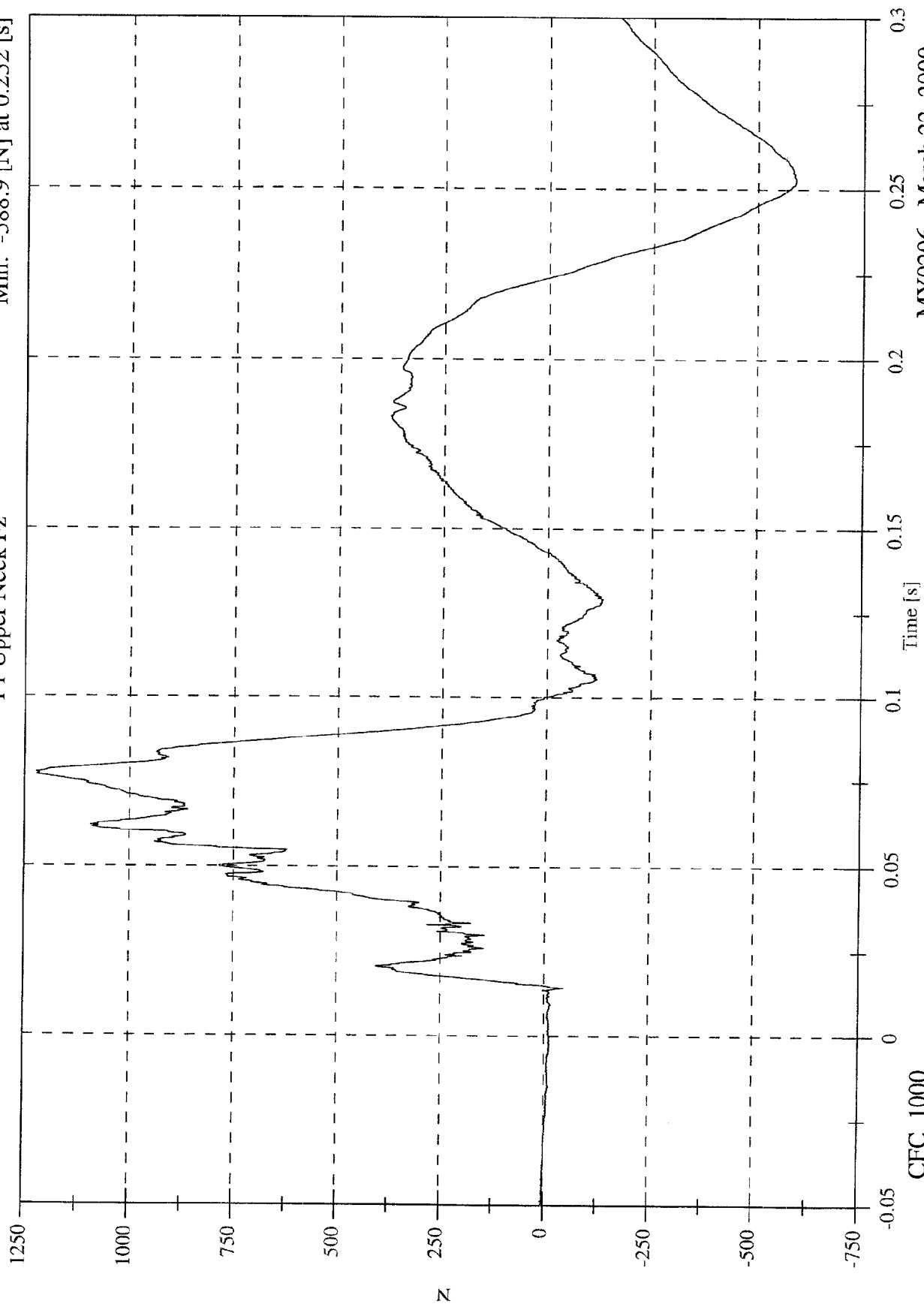


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

P1 Upper Neck Fz

Max: 1221.3 [N] at 0.077 [s]
Min: -588.9 [N] at 0.252 [s]

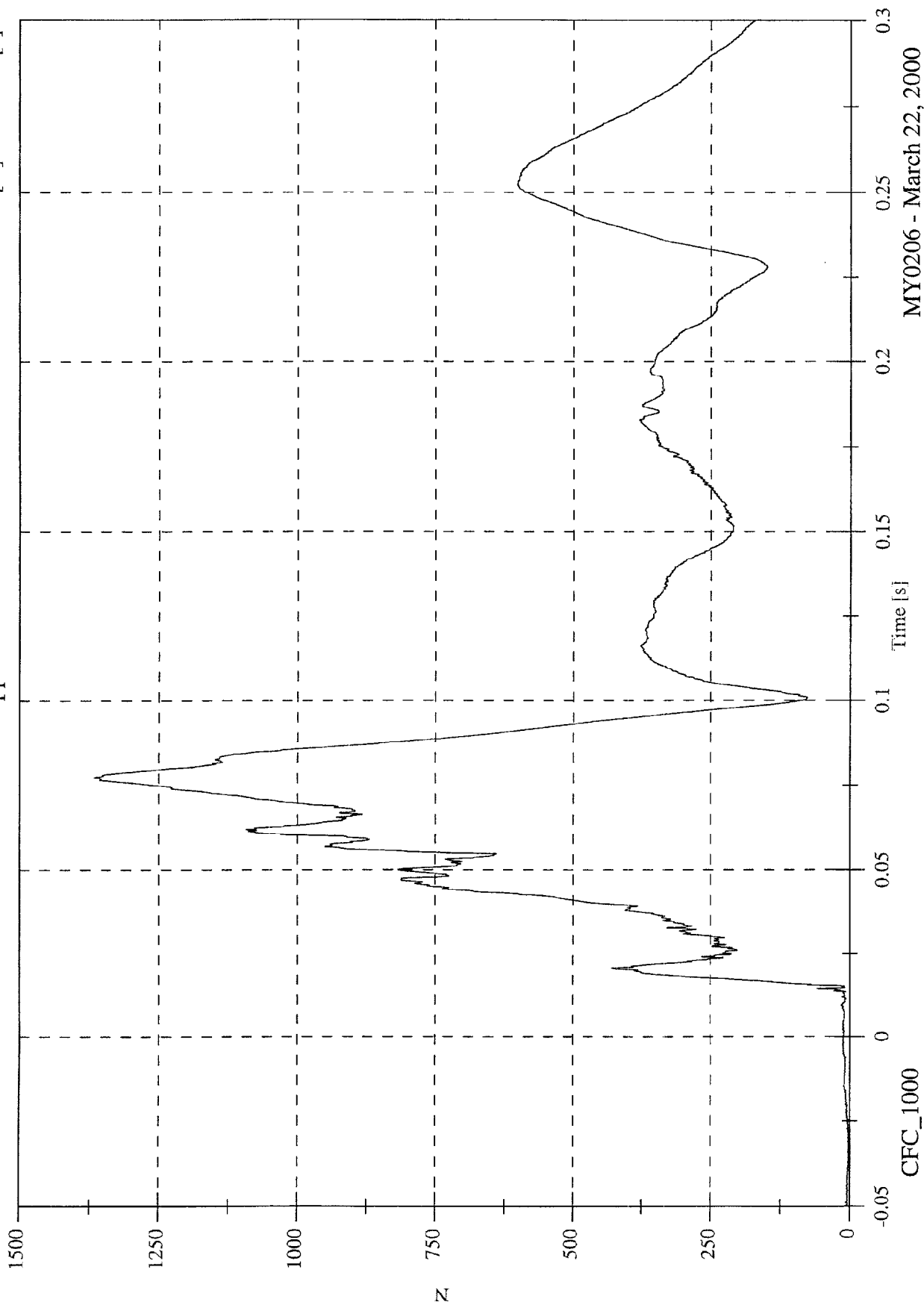


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 1366.5 [N] at 0.077 [s]
Min: 1.6 [N] at -0.030 [s]

P1 Upper Neck F Resultant

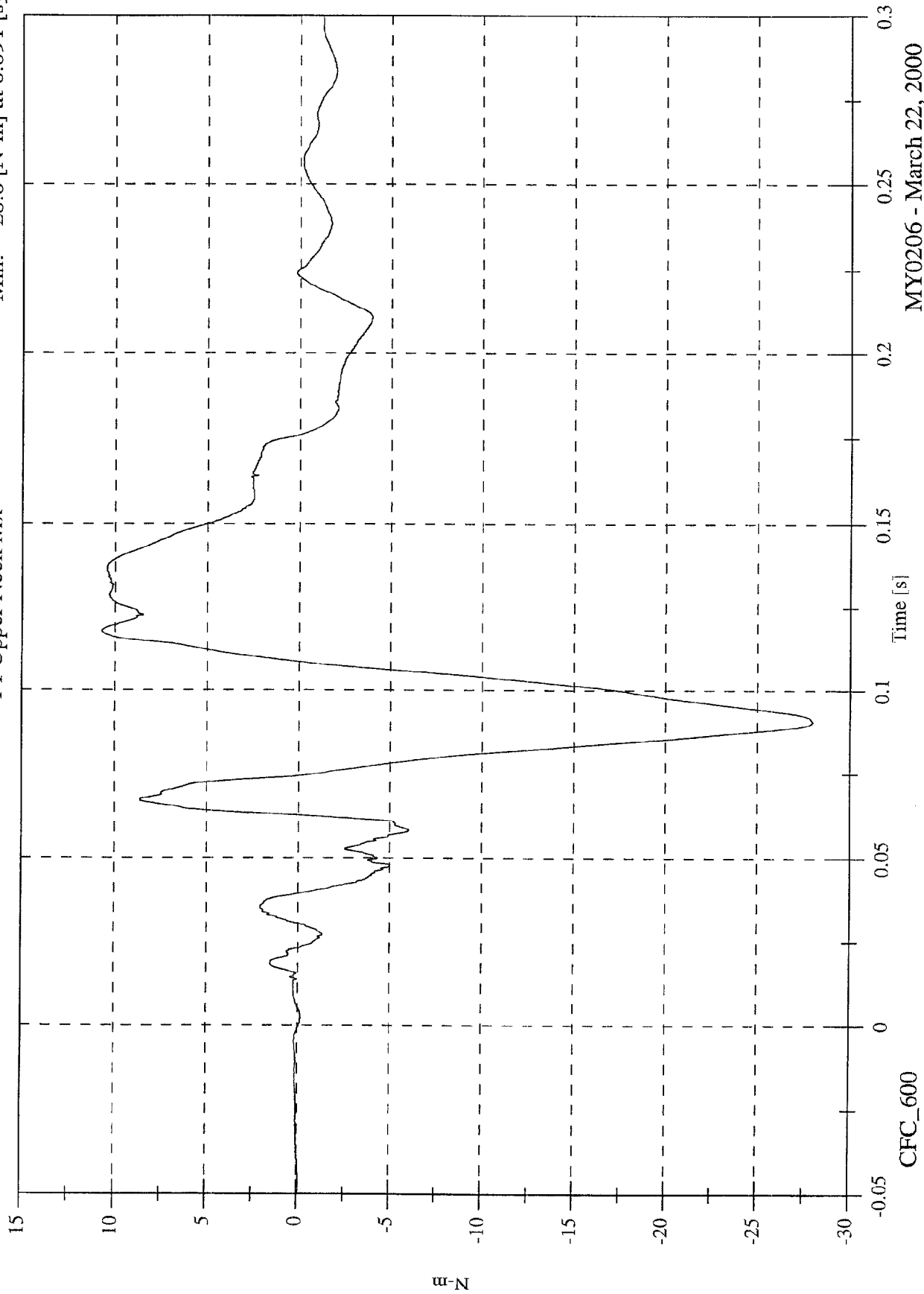


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

P1 Upper Neck Mx

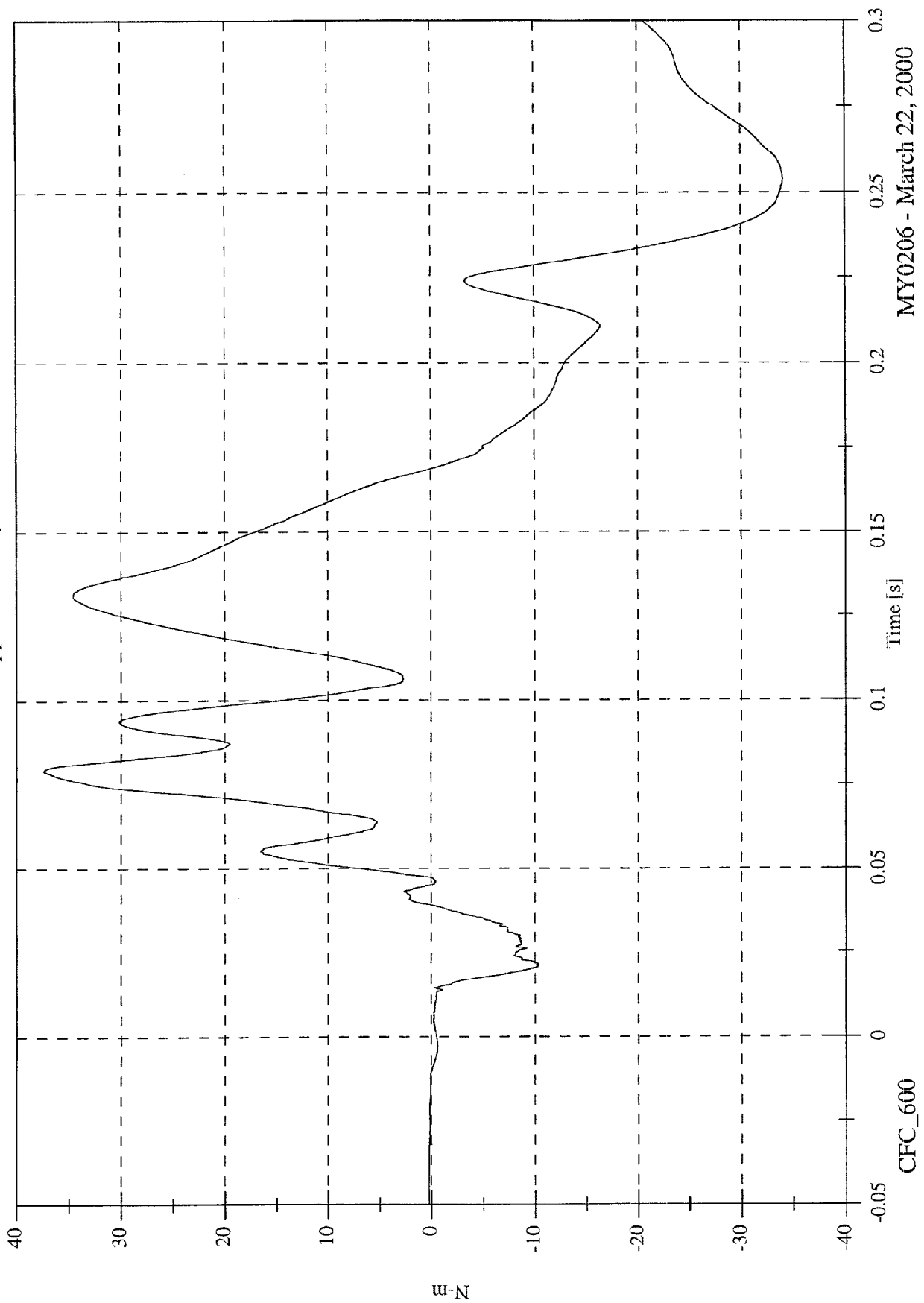
Max: 10.7 [N-m] at 0.118 [s]
Min: -28.0 [N-m] at 0.091 [s]



NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 37.4 [N-m] at 0.079 [s]
 Min: -34.1 [N-m] at 0.254 [s]

P1 Upper Neck My

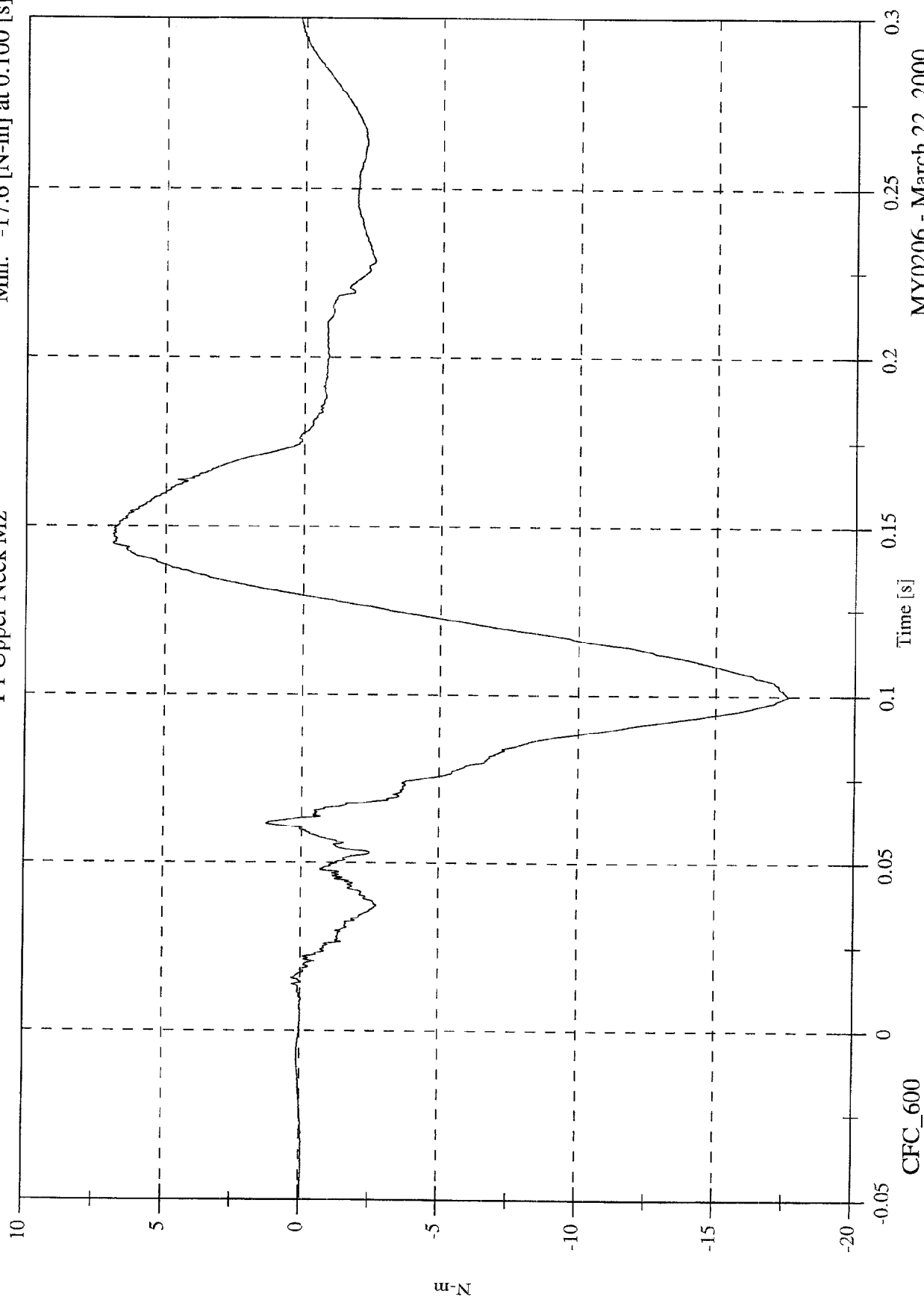


CFC_600

NCAP Test #16 - 2000 Ford Focus 4-Door

P1 Upper Neck Mz

Max: 6.9 [N-m] at 0.145 [s]
Min: -17.6 [N-m] at 0.100 [s]

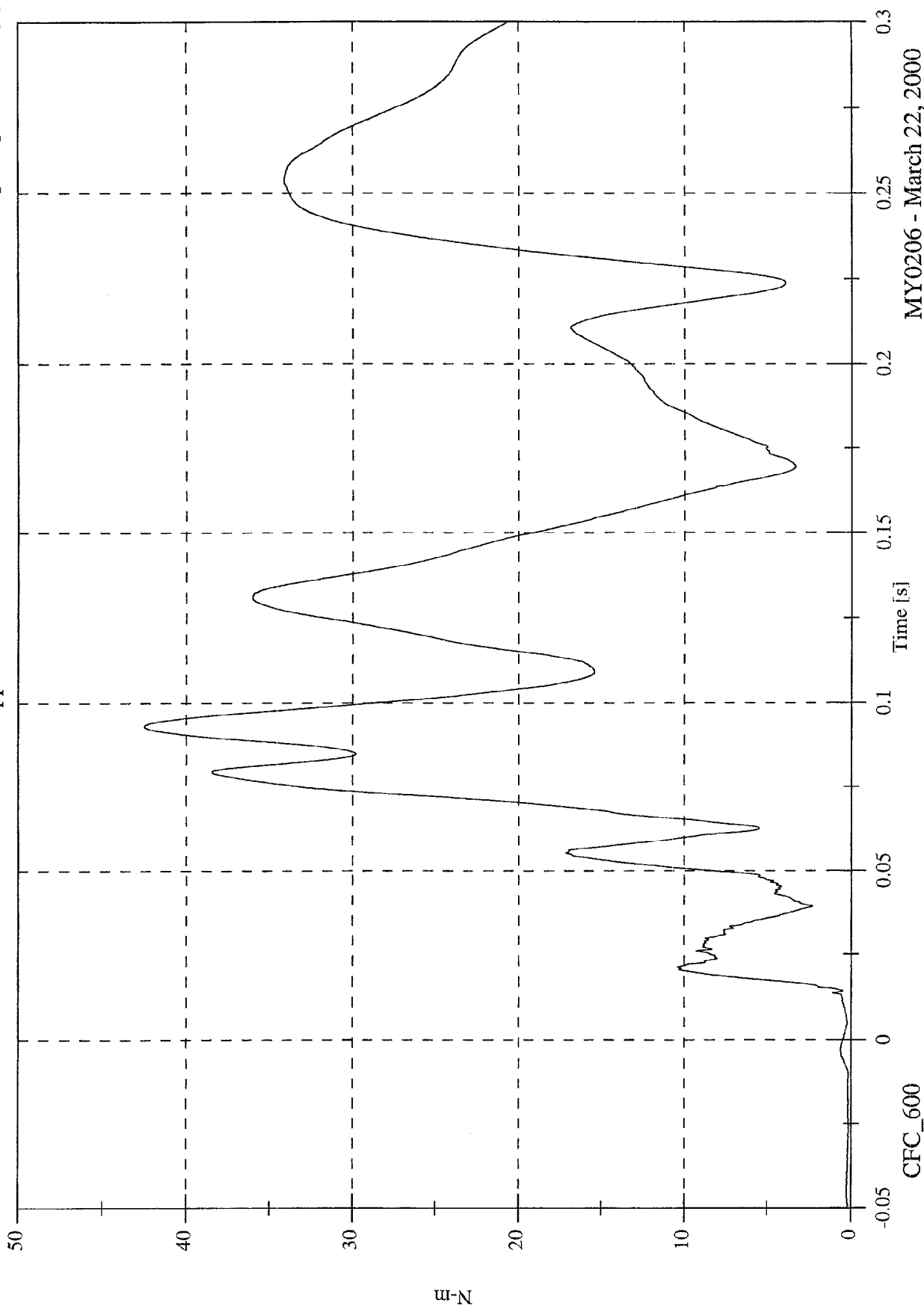


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 42.5 [N-m] at 0.093 [s]
 Min: 0.1 [N-m] at -0.026 [s]

P1 Upper Neck M Resultant

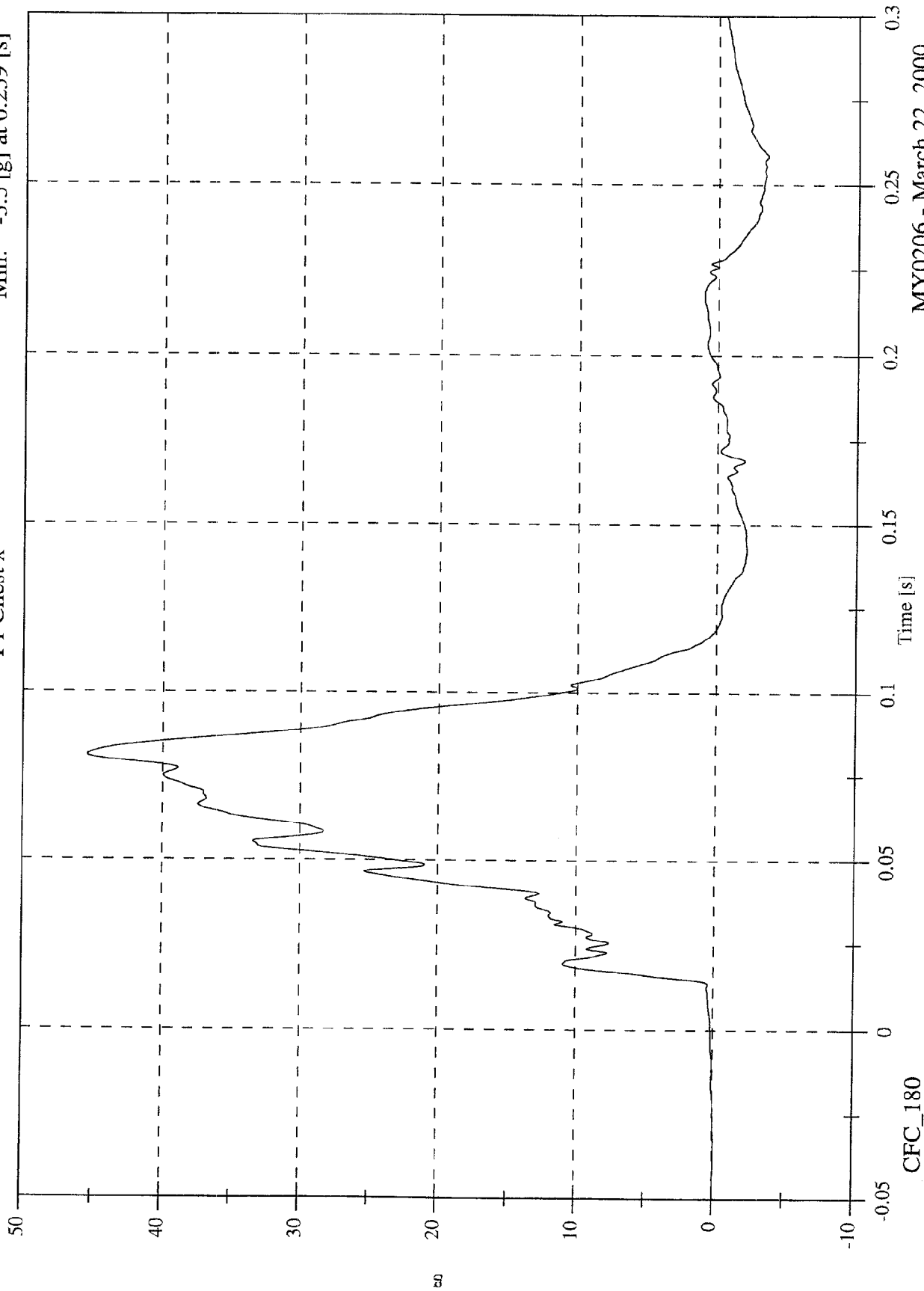


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 45.4 [g] at 0.081 [s]
 Min: -3.5 [g] at 0.259 [s]

P1 Chest x

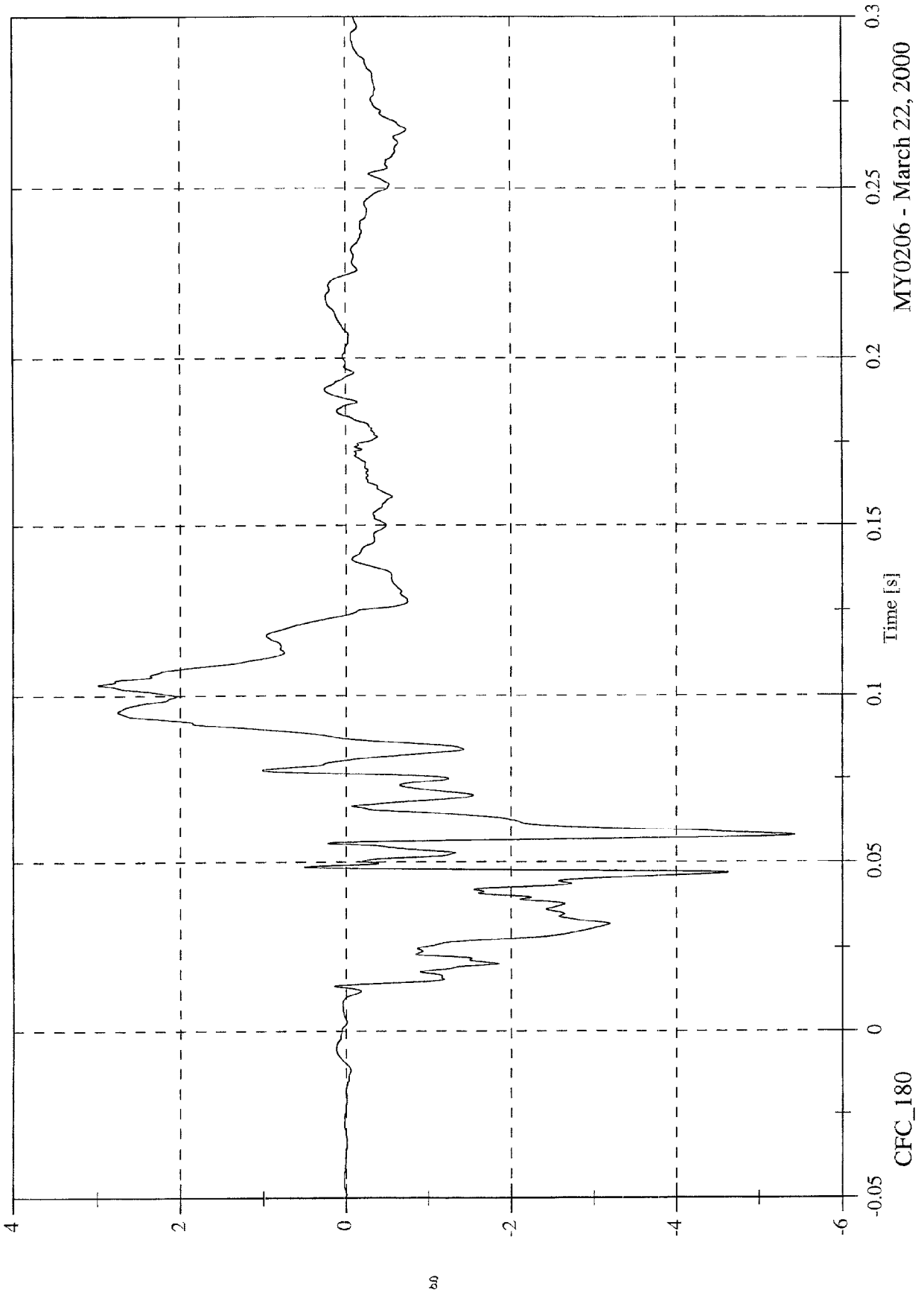


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 3.0 [g] at 0.103 [s]
Min: -5.4 [g] at 0.058 [s]

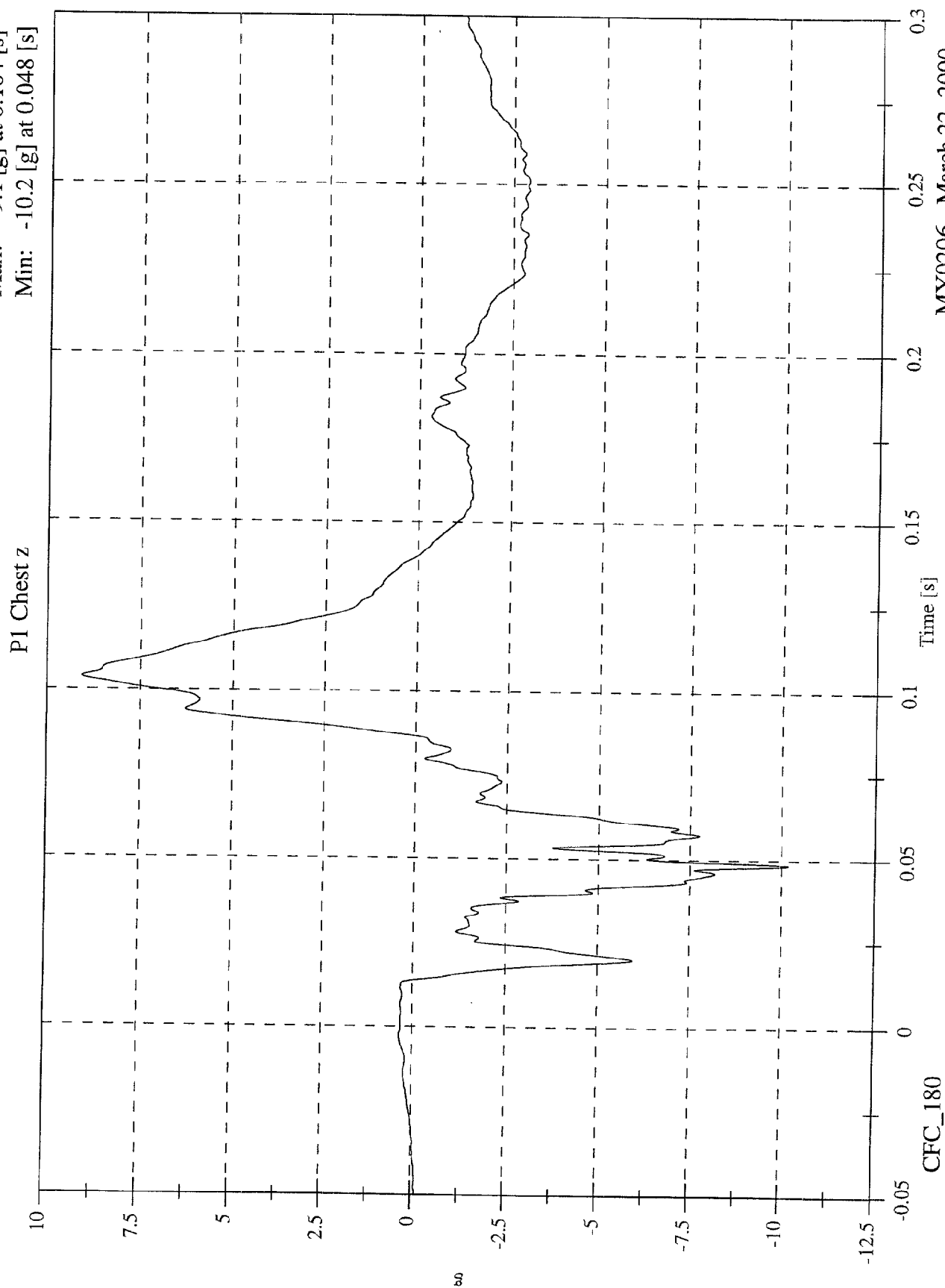
P1 Chest y



MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 9.1 [g] at 0.104 [s]
 Min: -10.2 [g] at 0.048 [s]

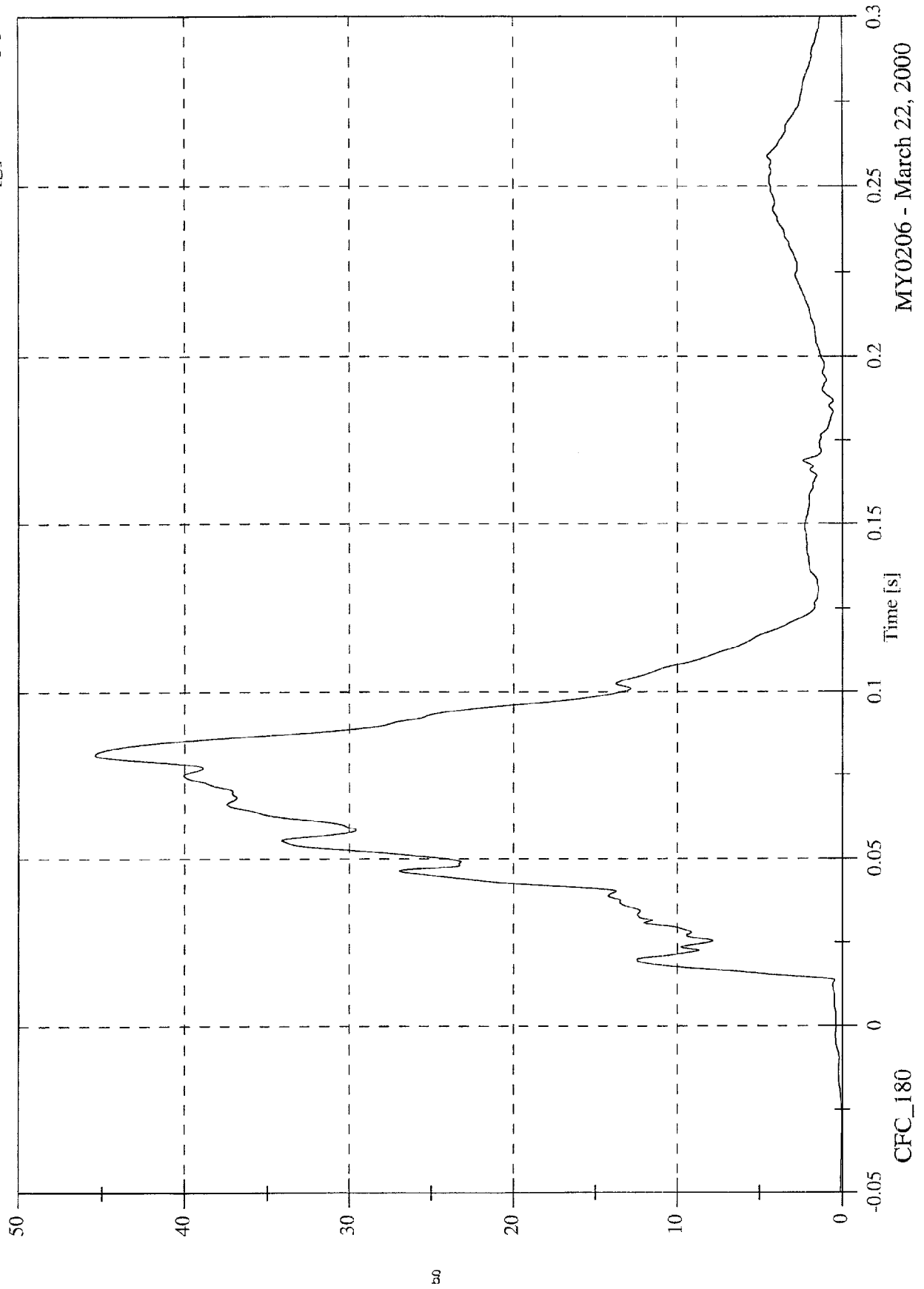


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 45.4 [g] at 0.081 [s]
 Min: 0.0 [g] at -0.029 [s]

P1 Chest Resultant



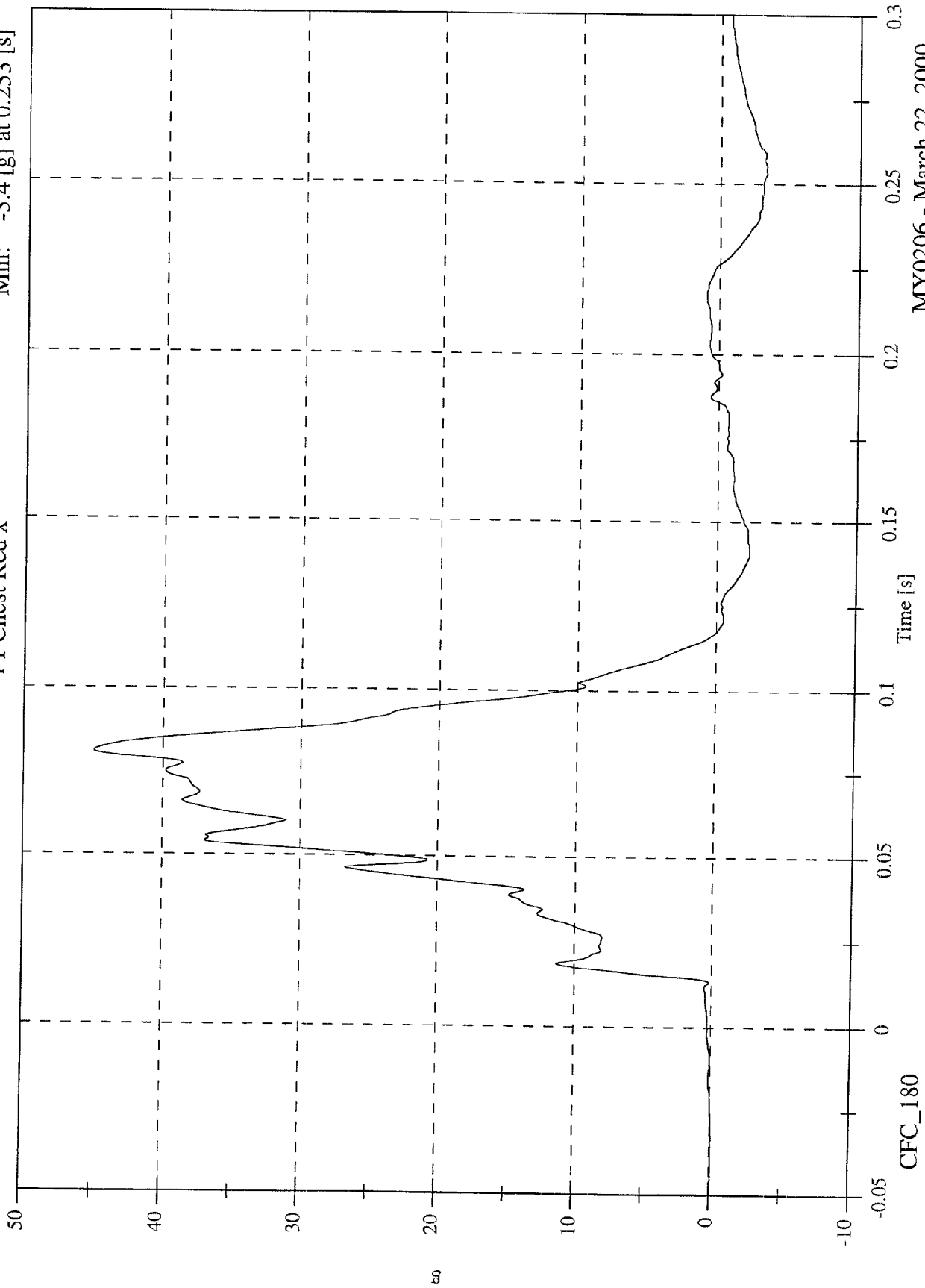
CFC_180

MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

P1 Chest Red x

Max: 45.0 [g] at 0.081 [s]
Min: -3.4 [g] at 0.253 [s]

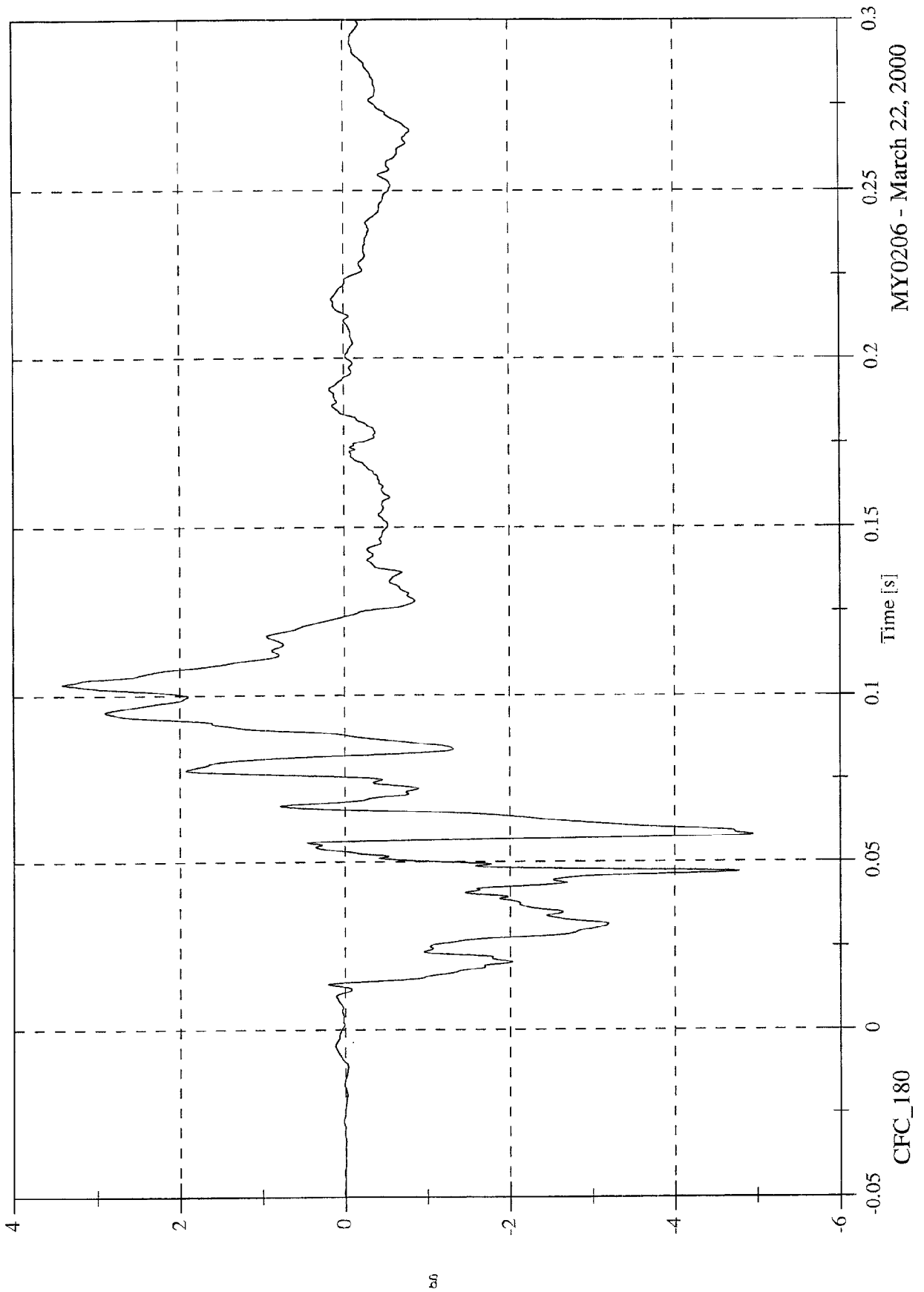


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 3.4 [g] at 0.103 [s]
 Min: -5.0 [g] at 0.058 [s]

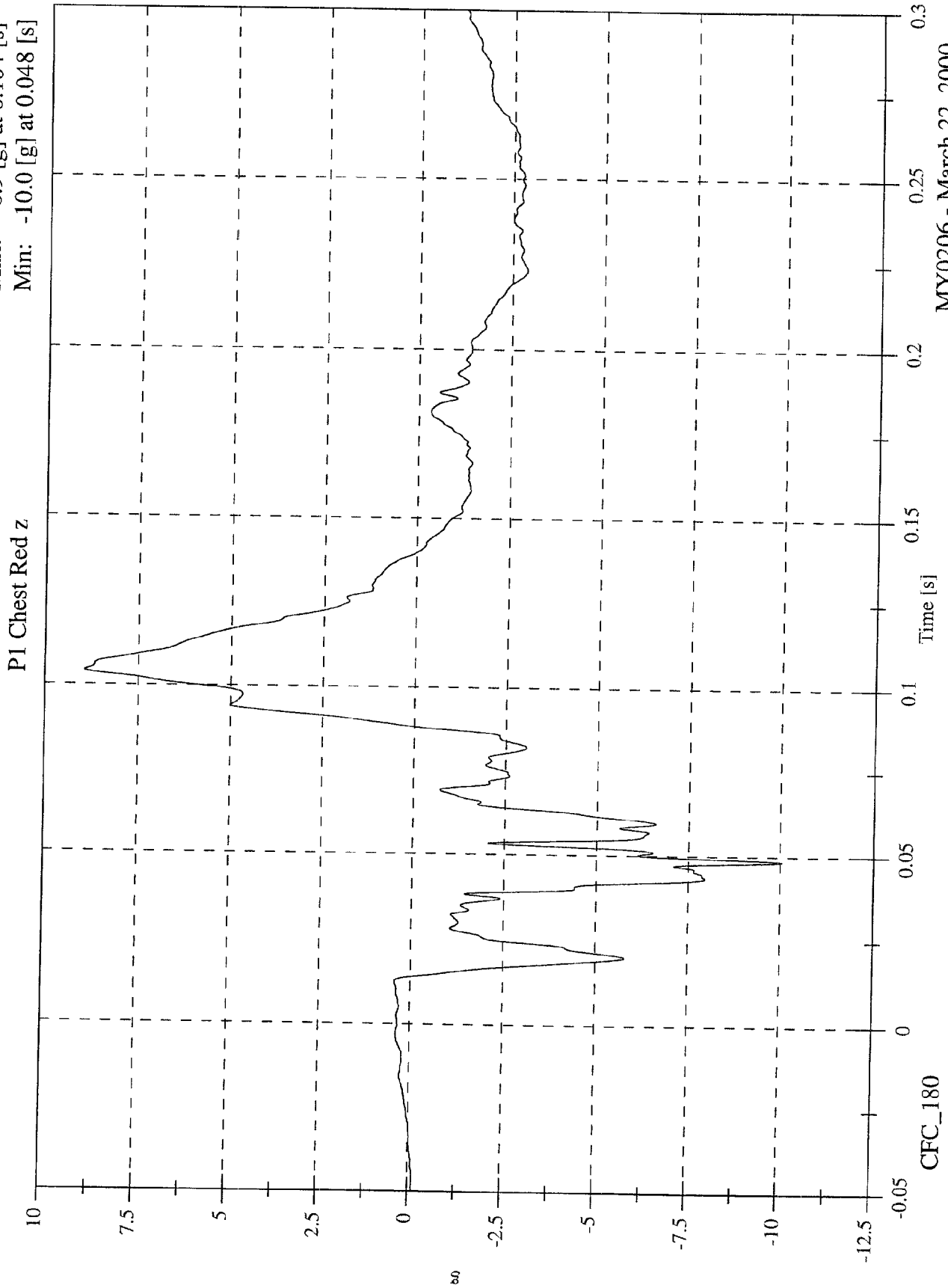
P1 Chest Red y



MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 8.9 [g] at 0.104 [s]
Min: -10.0 [g] at 0.048 [s]

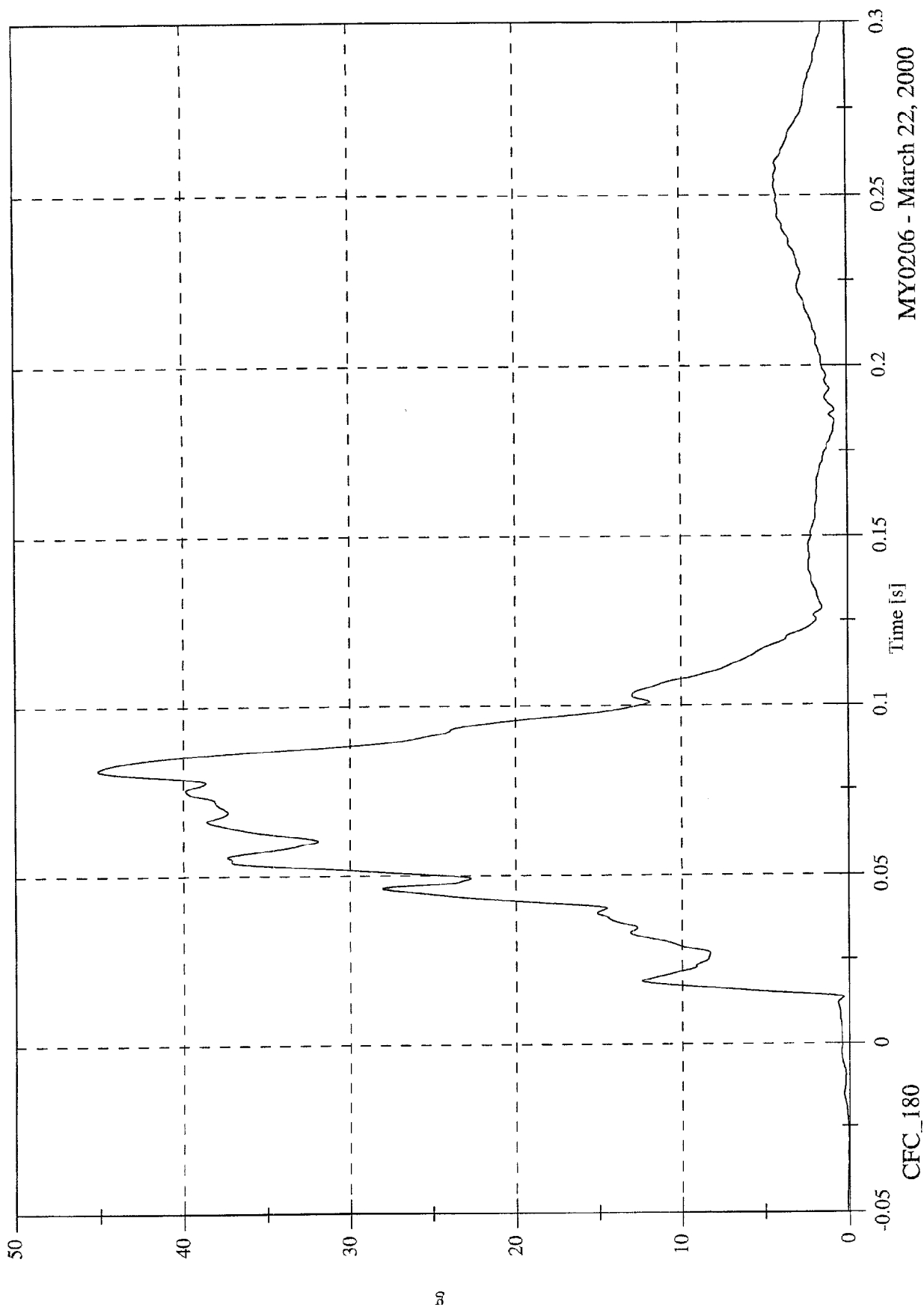


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

P1 Chest Red Resultant

Max: 45.1 [g] at 0.081 [s]
Min: 0.0 [g] at -0.029 [s]

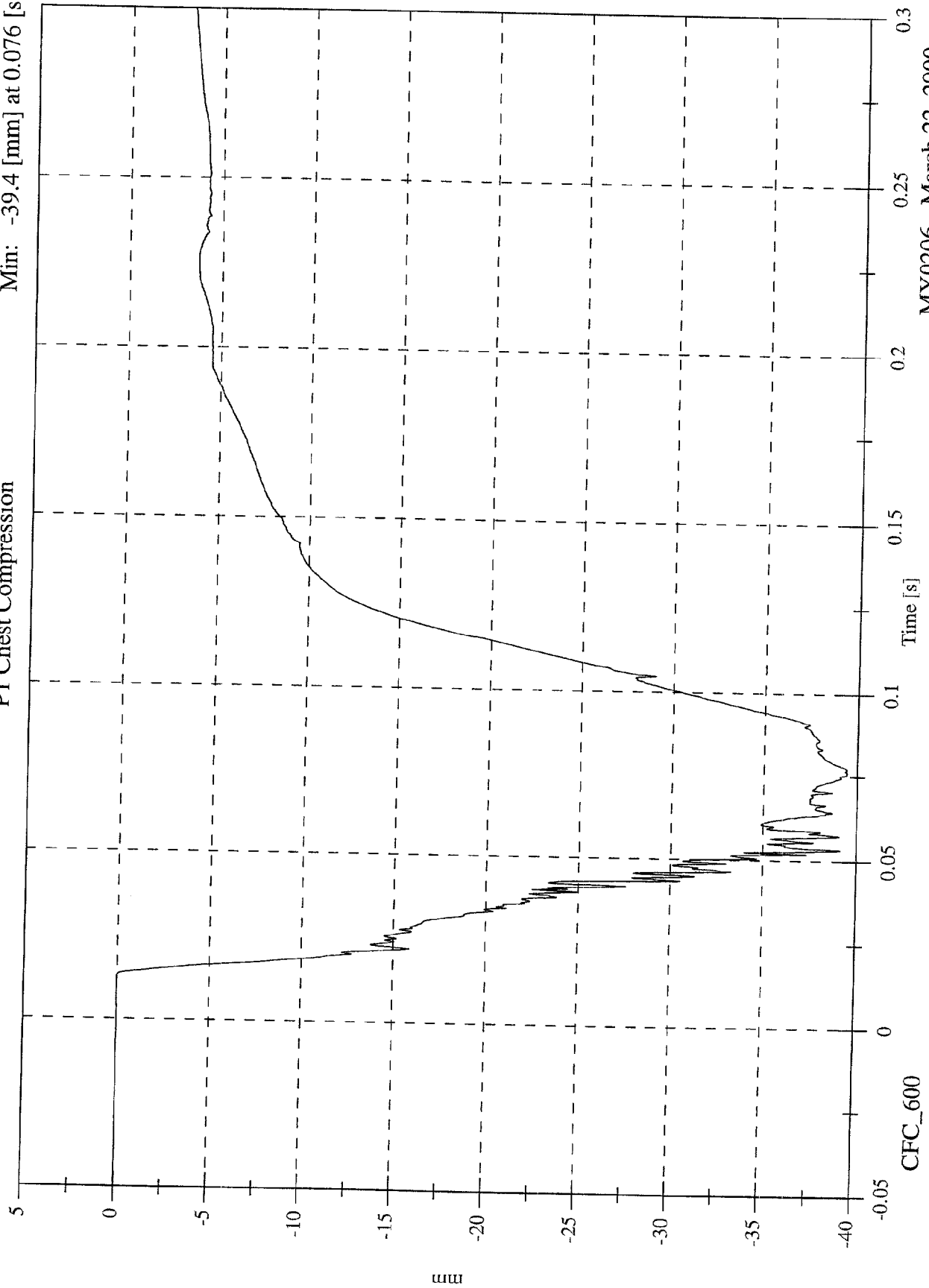


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 0.0 [mm] at 0.013 [s]
 Min: -39.4 [mm] at 0.076 [s]

P1 Chest Compression

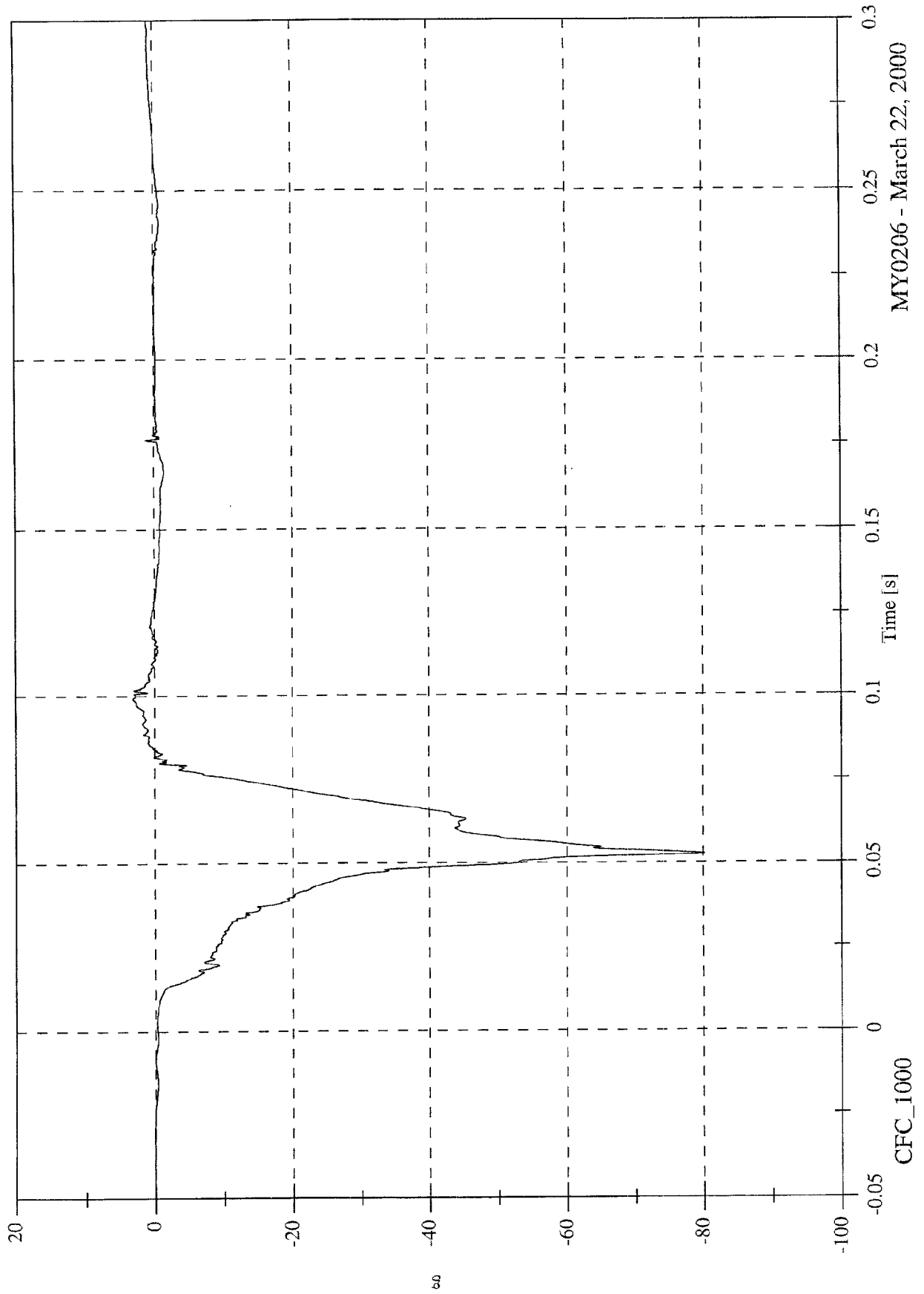


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 3.2 [g] at 0.099 [s]
 Min: -80.1 [g] at 0.053 [s]

P1 Pelvic x



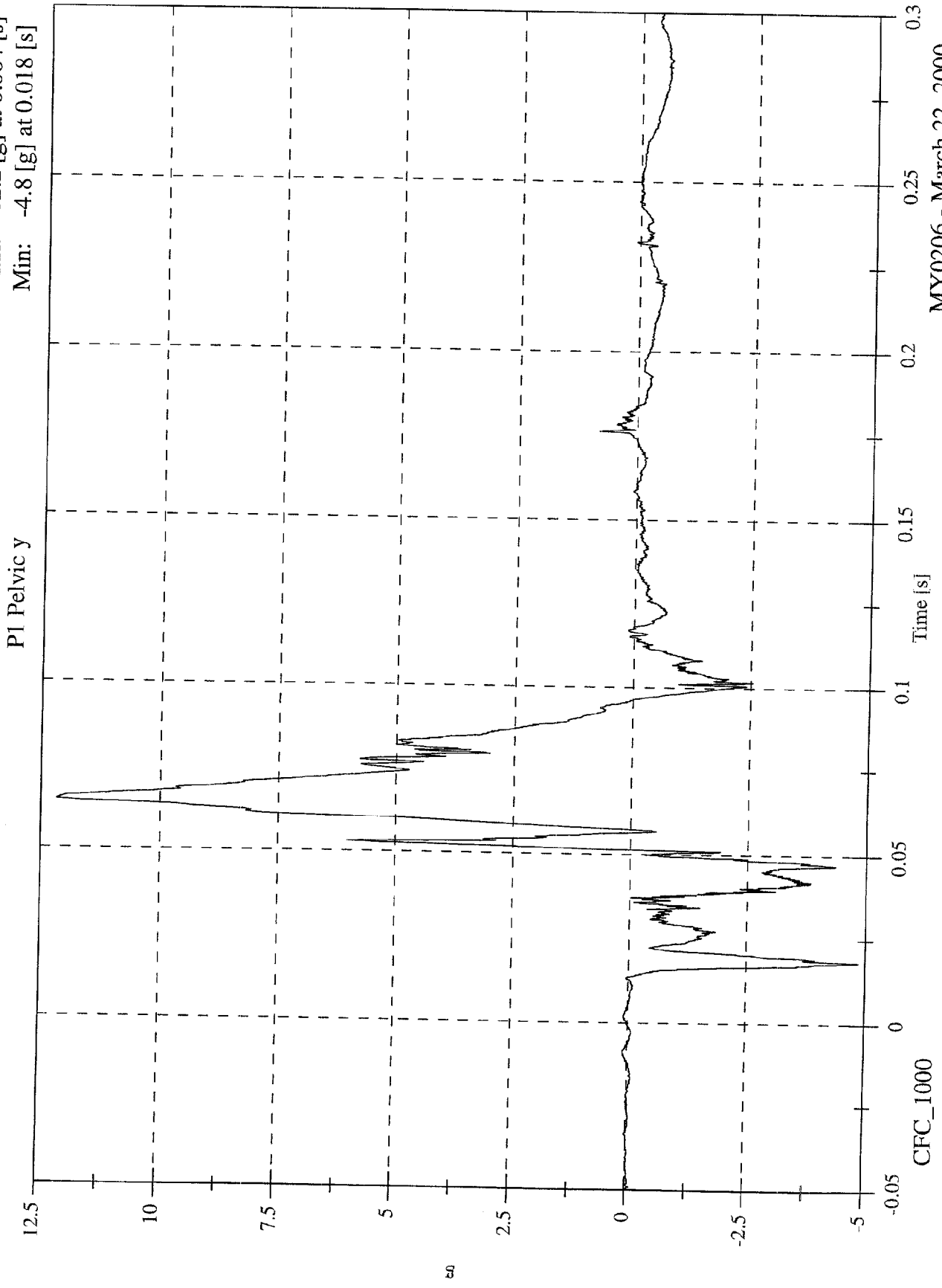
CFC_1000

Time [s]

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NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 12.2 [g] at 0.064 [s]
 Min: -4.8 [g] at 0.018 [s]

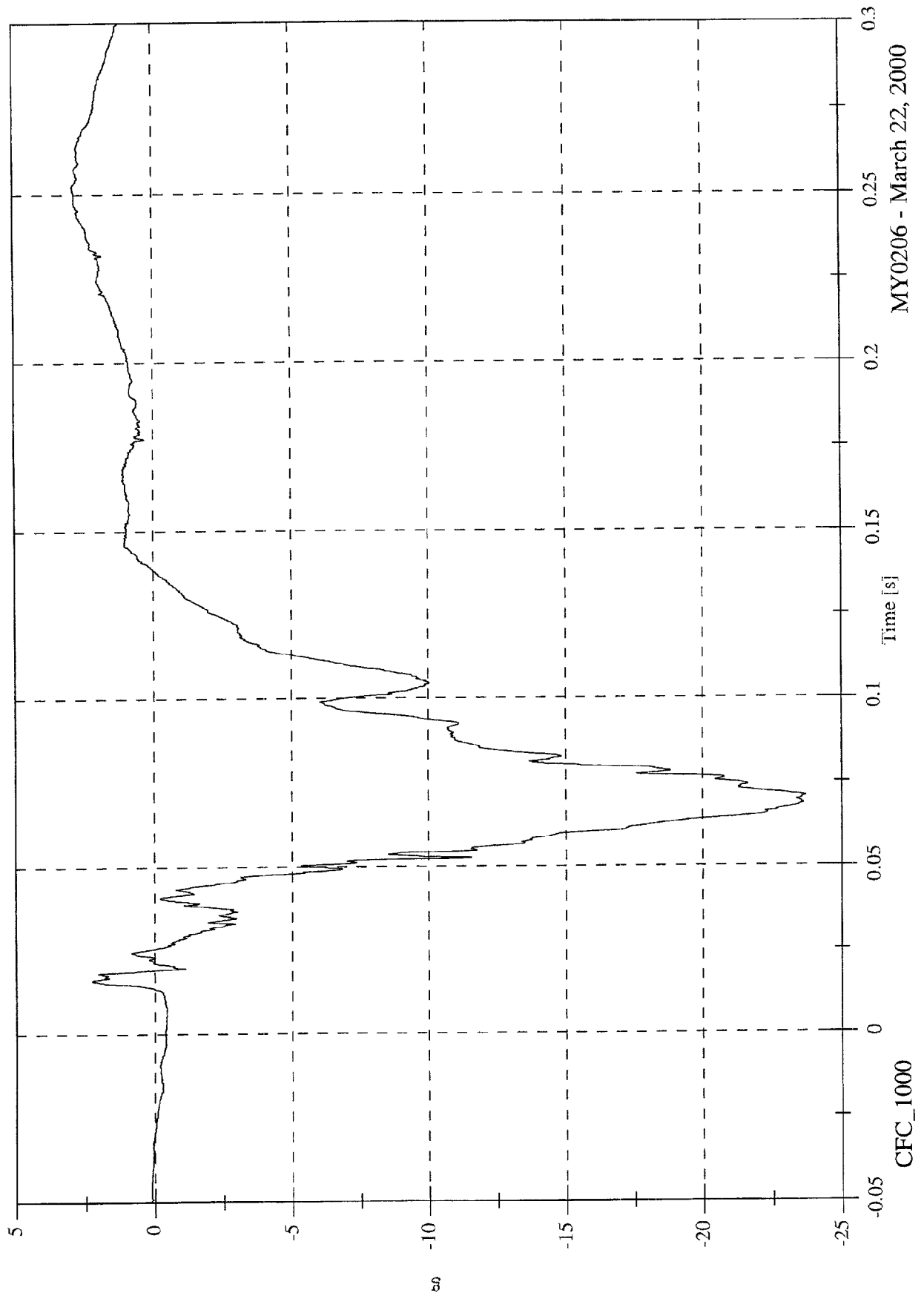


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NCAP Test #16 - 2000 Ford Focus 4-Door

P1 Pelvic z

Max: 2.9 [g] at 0.252 [s]
Min: -23.7 [g] at 0.071 [s]

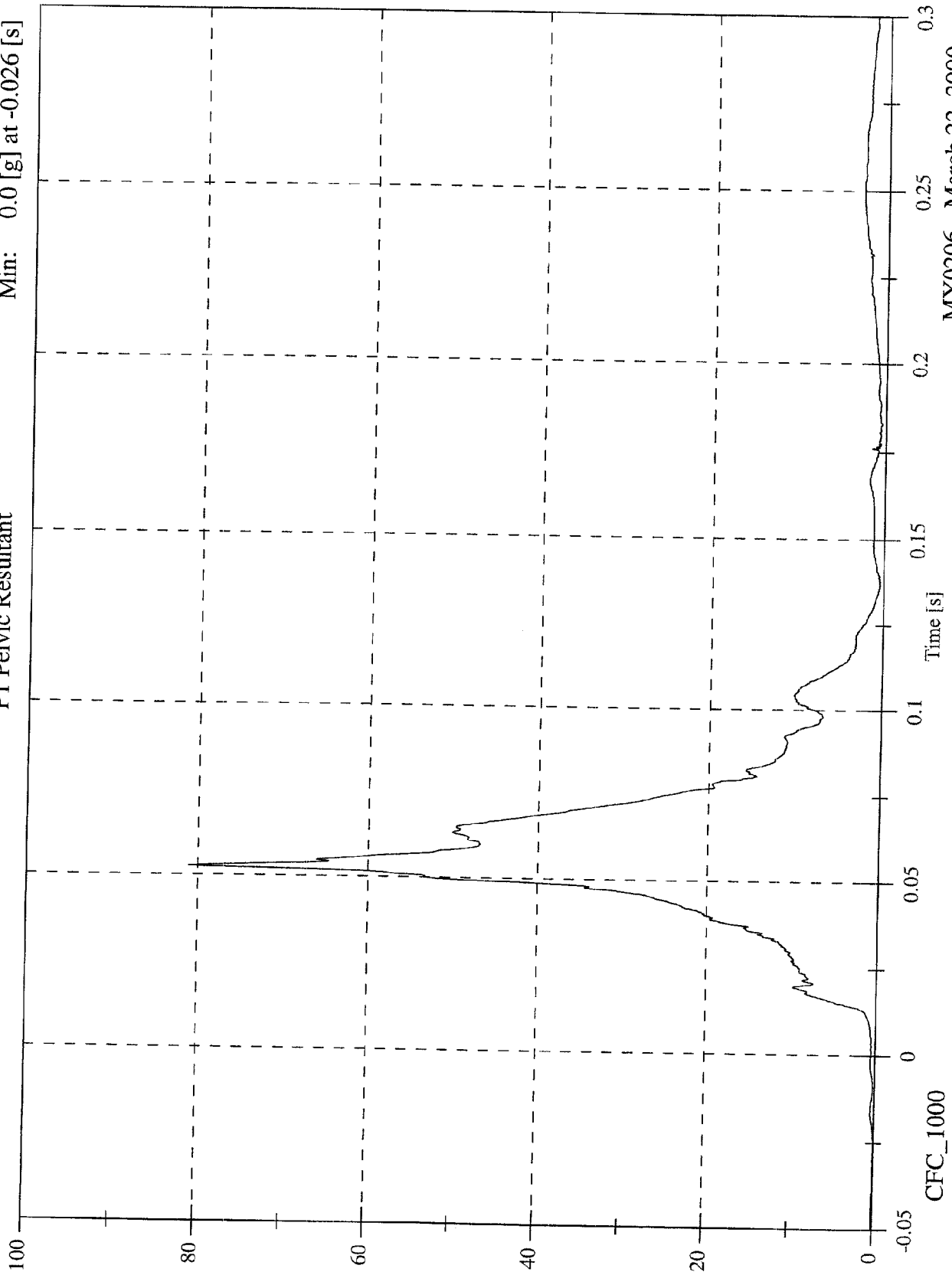


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 81.1 [g] at 0.053 [s]
 Min: 0.0 [g] at -0.026 [s]

P1 Pelvic Resultant

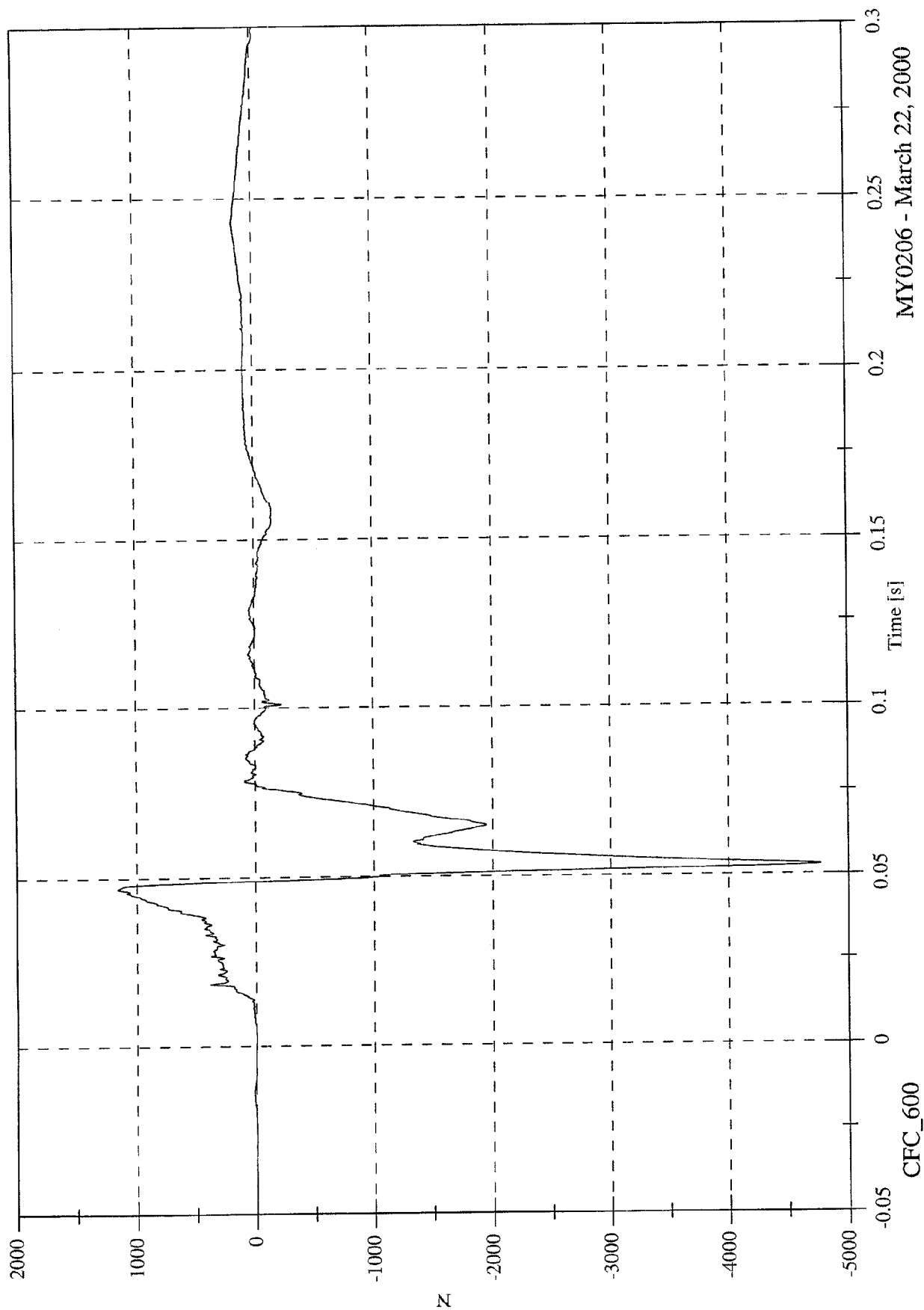


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Max: 1158.6 [N] at 0.047 [s]
Min: -4770.2 [N] at 0.053 [s]

NCAP Test #16 - 2000 Ford Focus 4-Door

P1 Left Femur

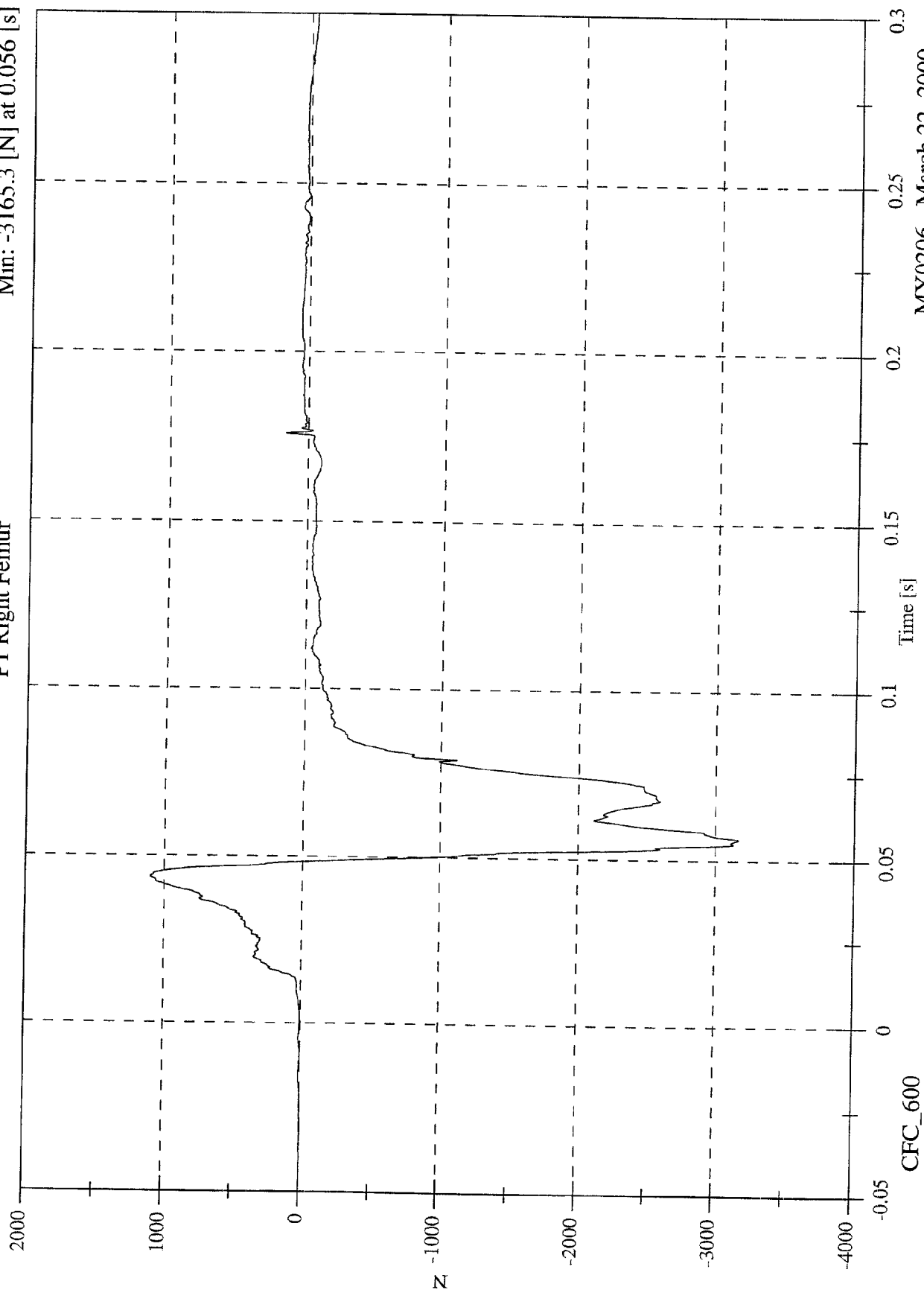


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

P1 Right Femur

Max: 1103.6 [N] at 0.044 [s]
Min: -3165.3 [N] at 0.056 [s]

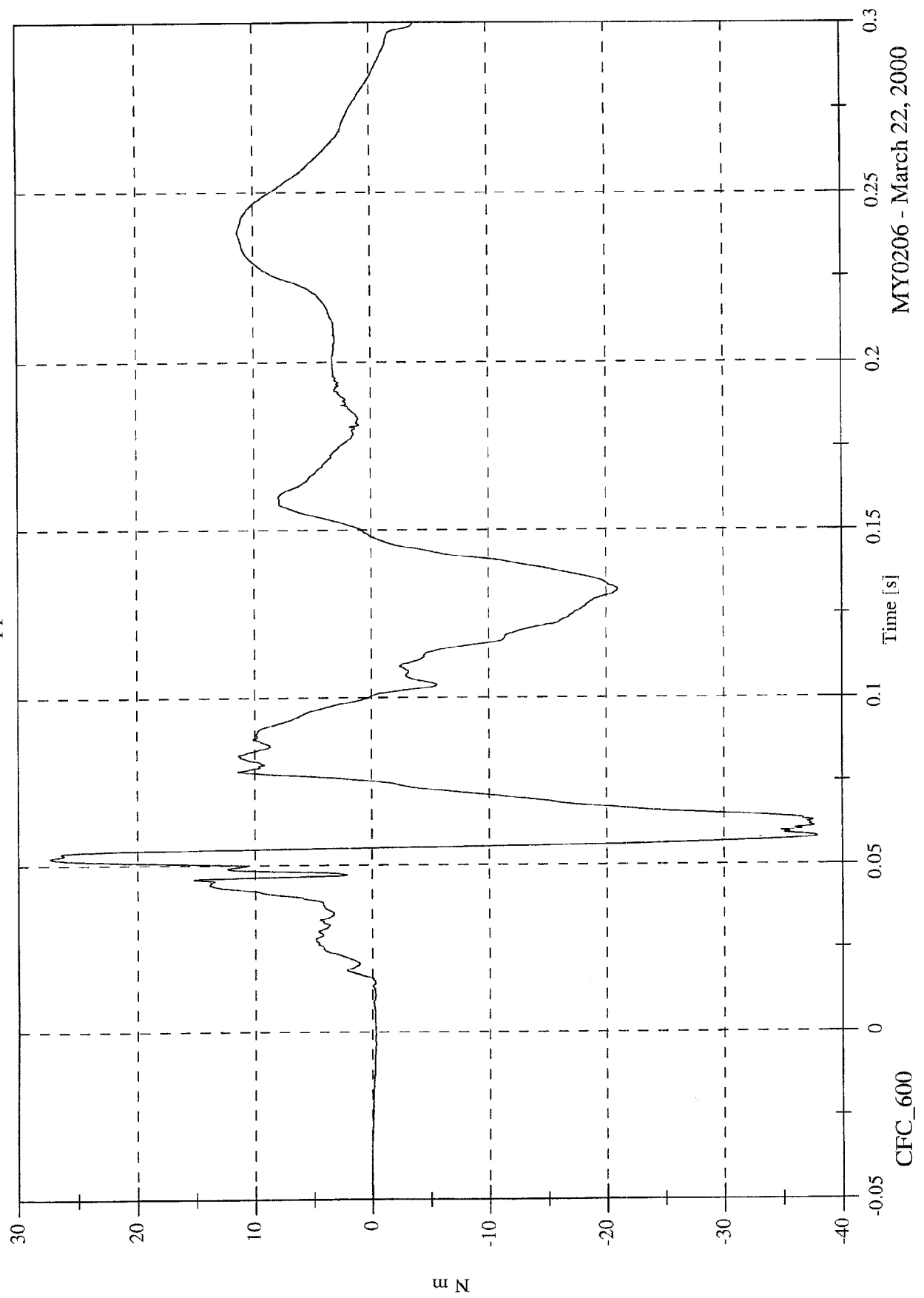


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 27.3 [N-m] at 0.052 [s]
Min: -37.9 [N-m] at 0.058 [s]

P1 Left Upper Tibia Mx

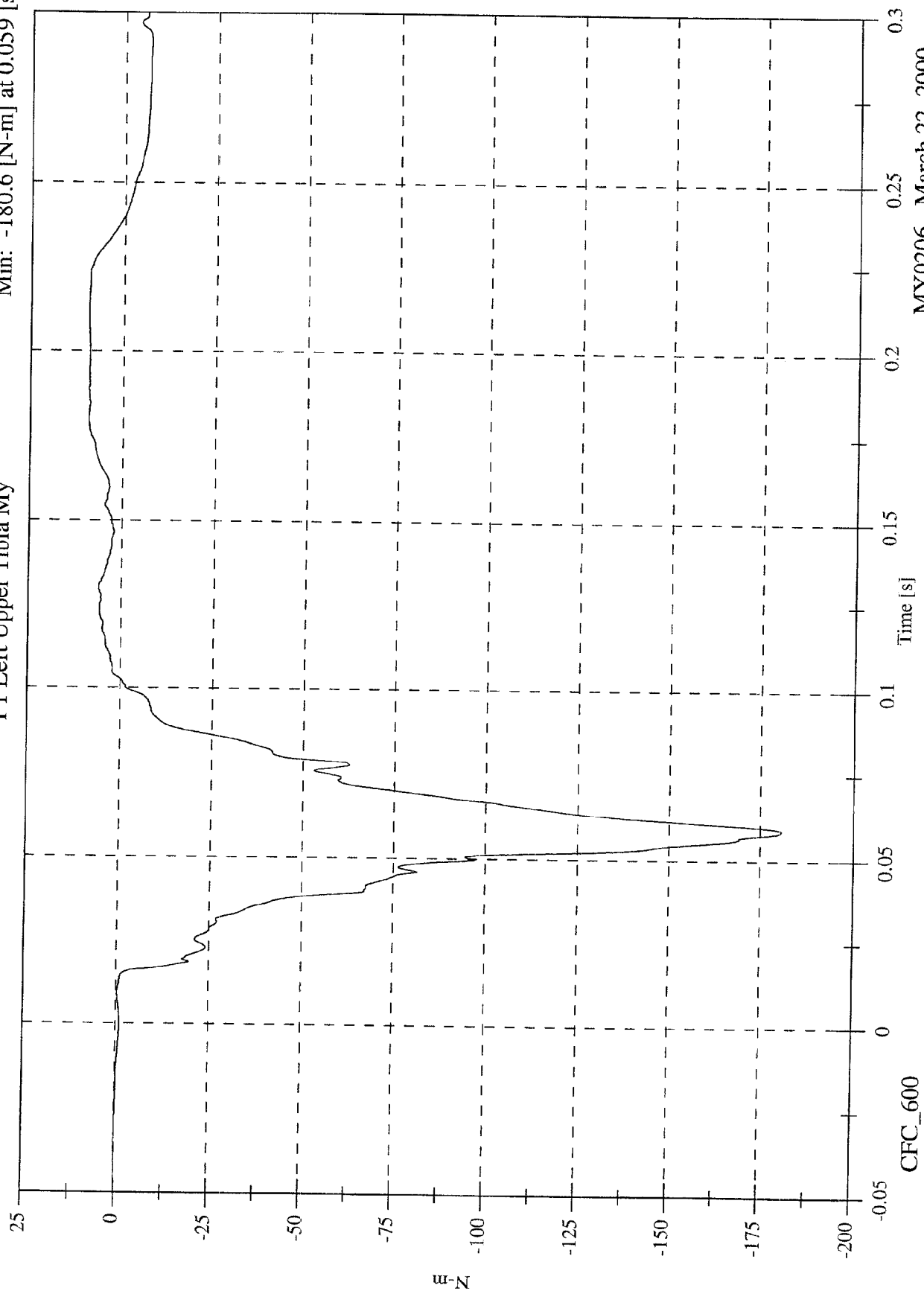


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 9.4 [N-m] at 0.189 [s]
 Min: -180.6 [N-m] at 0.059 [s]

P1 Left Upper Tibia My

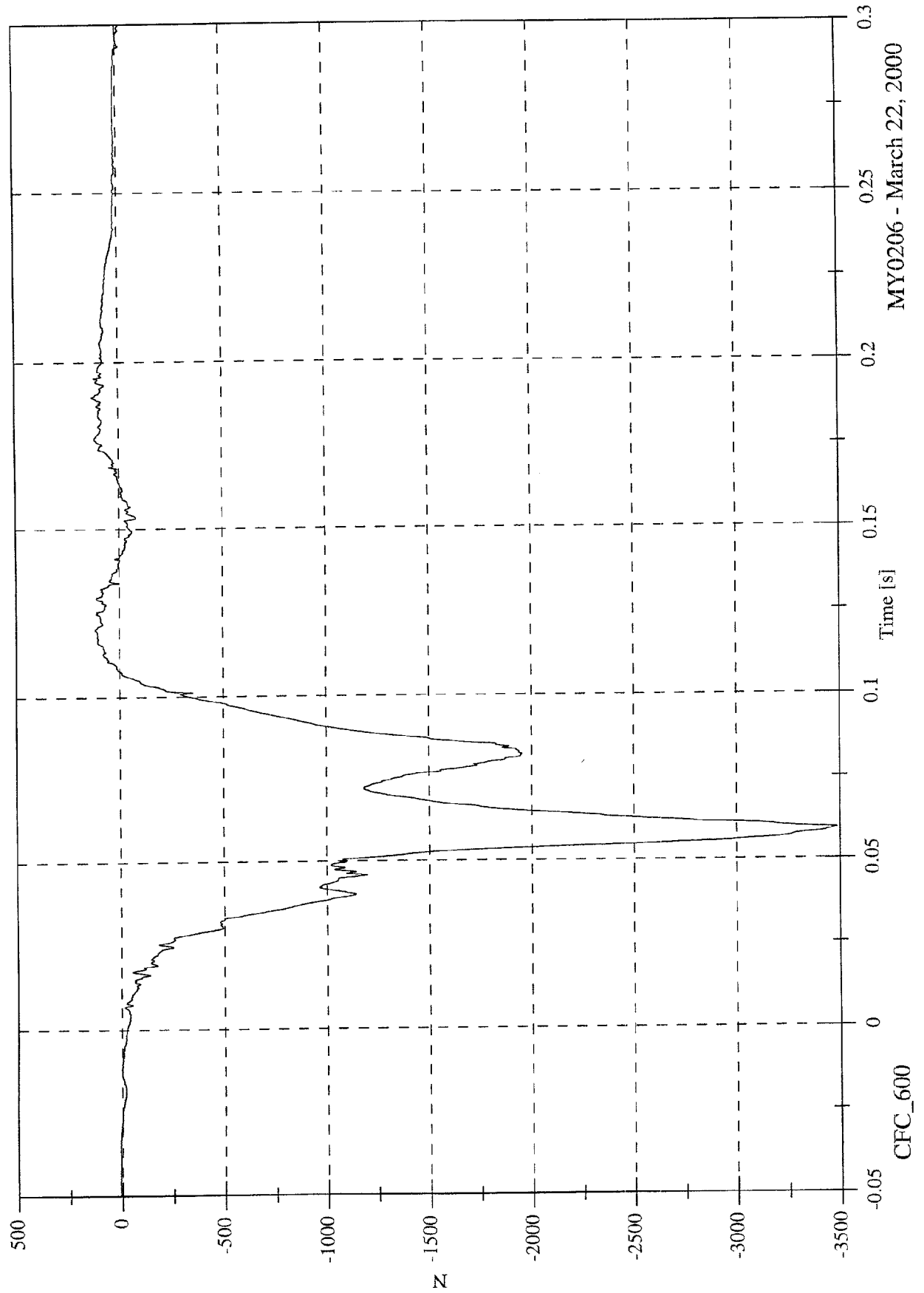


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 126.2 [N] at 0.189 [s]
Min: -3484.1 [N] at 0.059 [s]

P1 Left Lower Tibia Fz

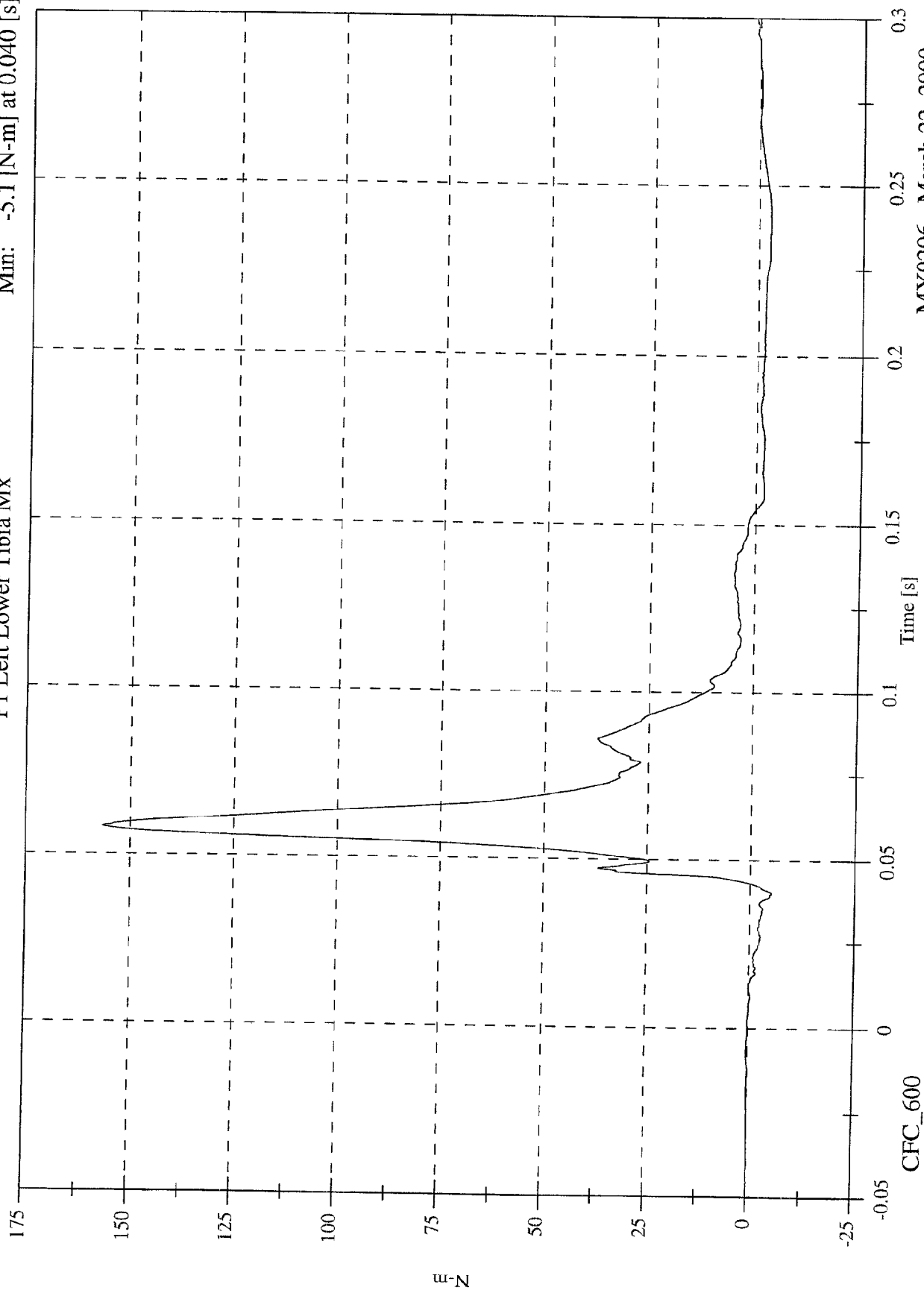


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

P1 Left Lower Tibia Mx

Max: 156.7 [N-m] at 0.058 [s]
Min: -5.1 [N-m] at 0.040 [s]

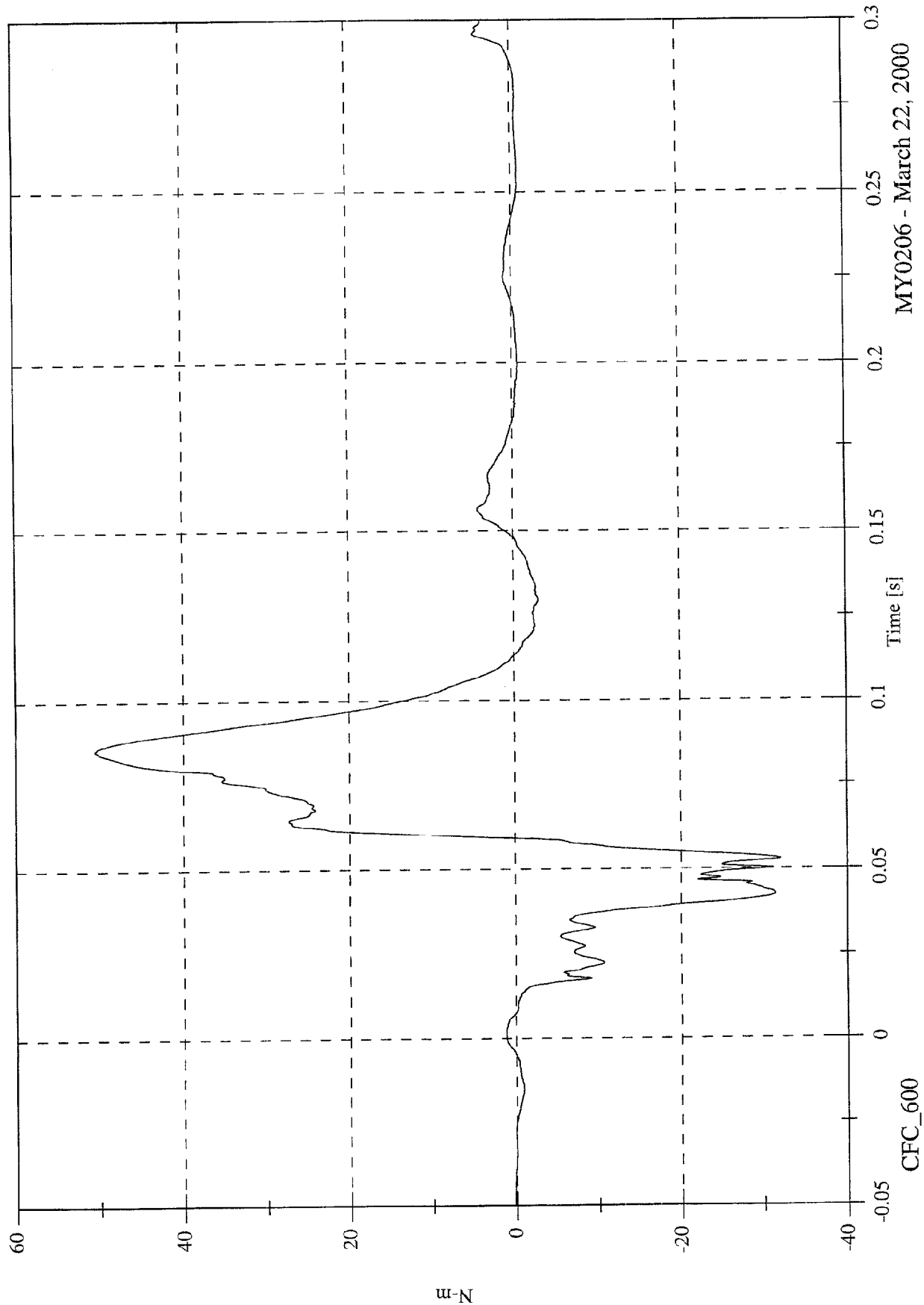


MY0206 - March 22, 2000

Max: 50.6 [N-m] at 0.085 [s]
 Min: -32.1 [N-m] at 0.053 [s]

NCAP Test #16 - 2000 Ford Focus 4-Door

P1 Left Lower Tibia My

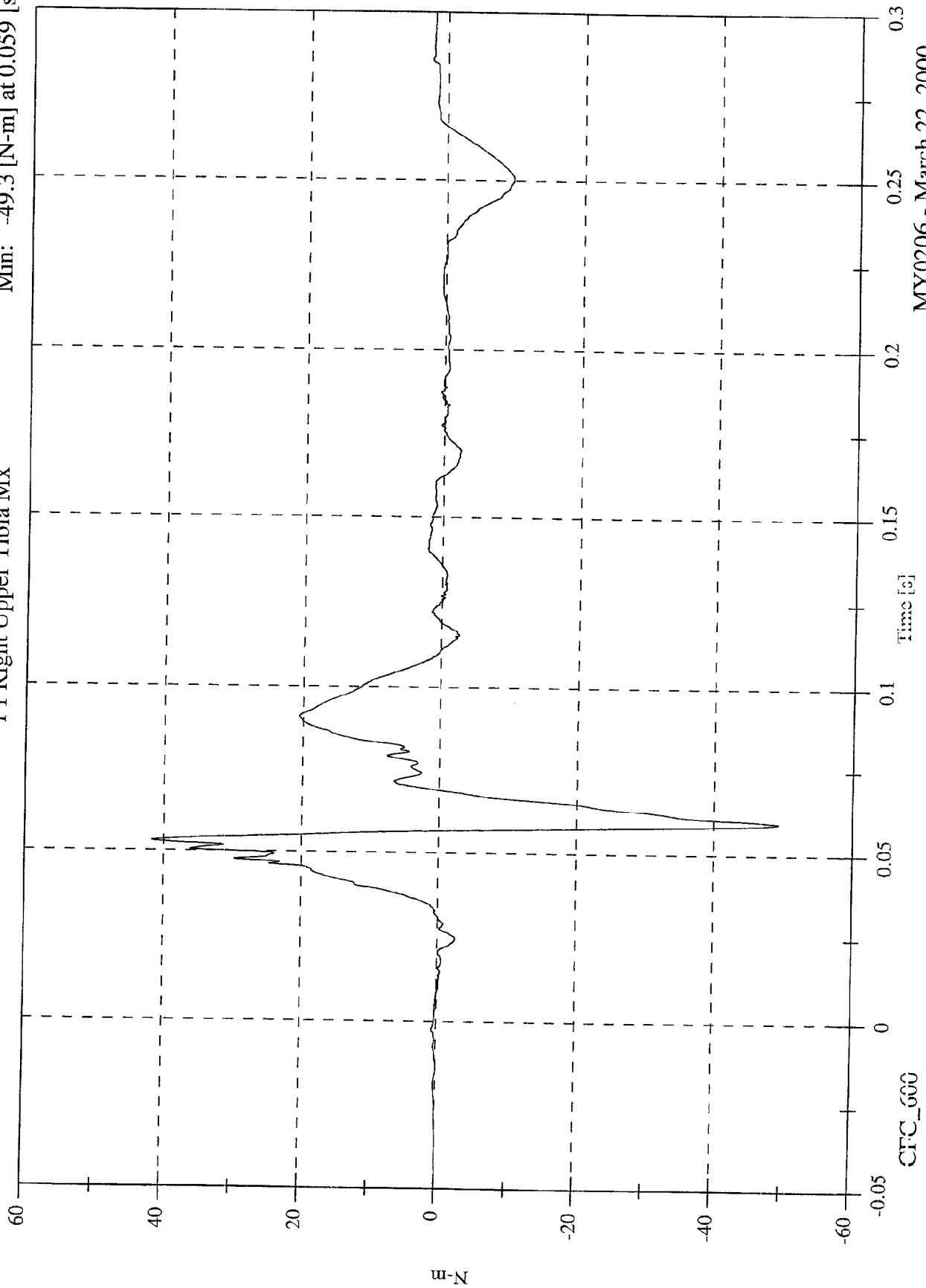


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 41.7 [N-m] at 0.053 [s]
 Min: -49.3 [N-m] at 0.059 [s]

P1 Right Upper Tibia Mx

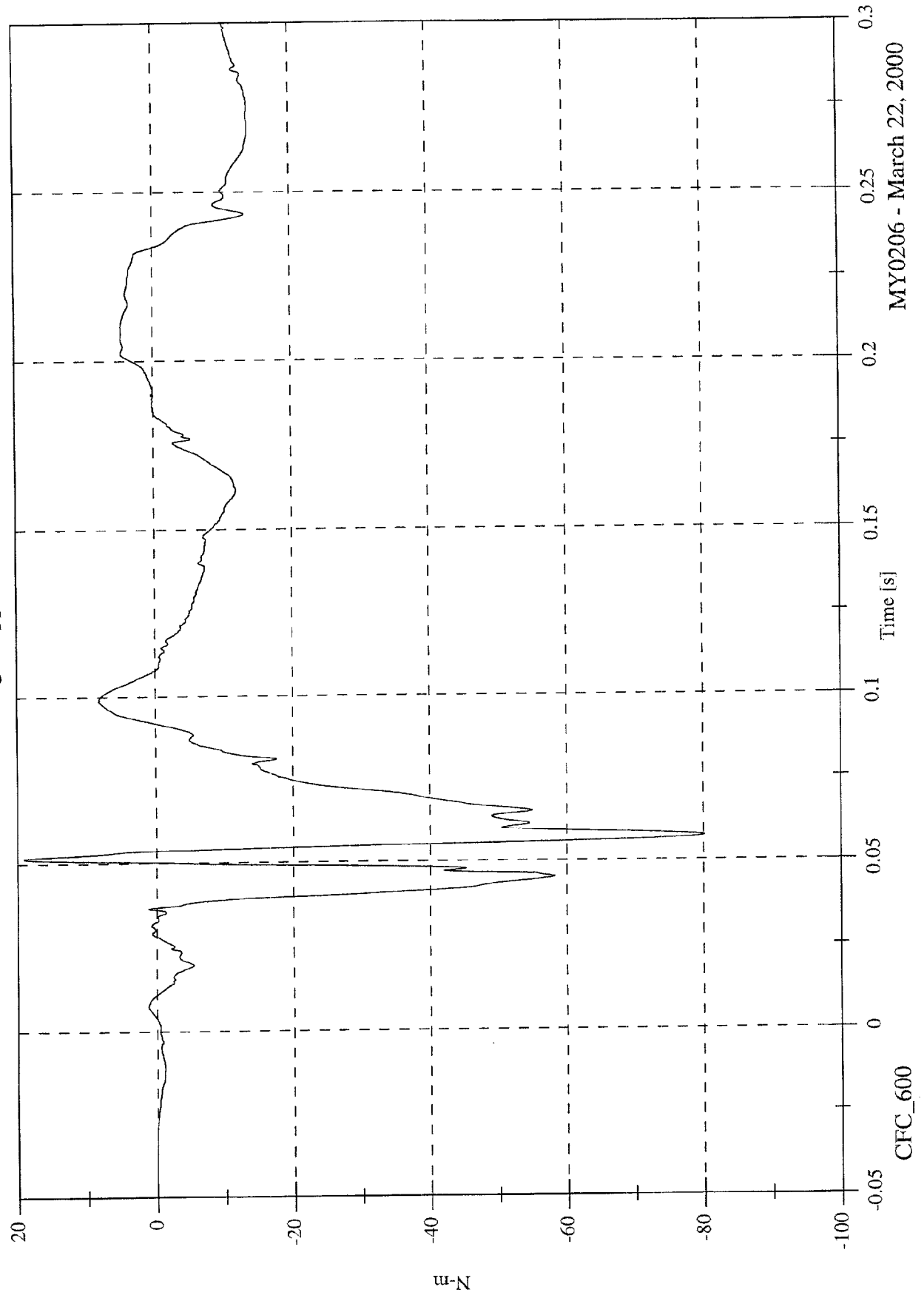


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 19.1 [N-m] at 0.051 [s]
Min: -80.2 [N-m] at 0.057 [s]

P1 Right Upper Tibia My

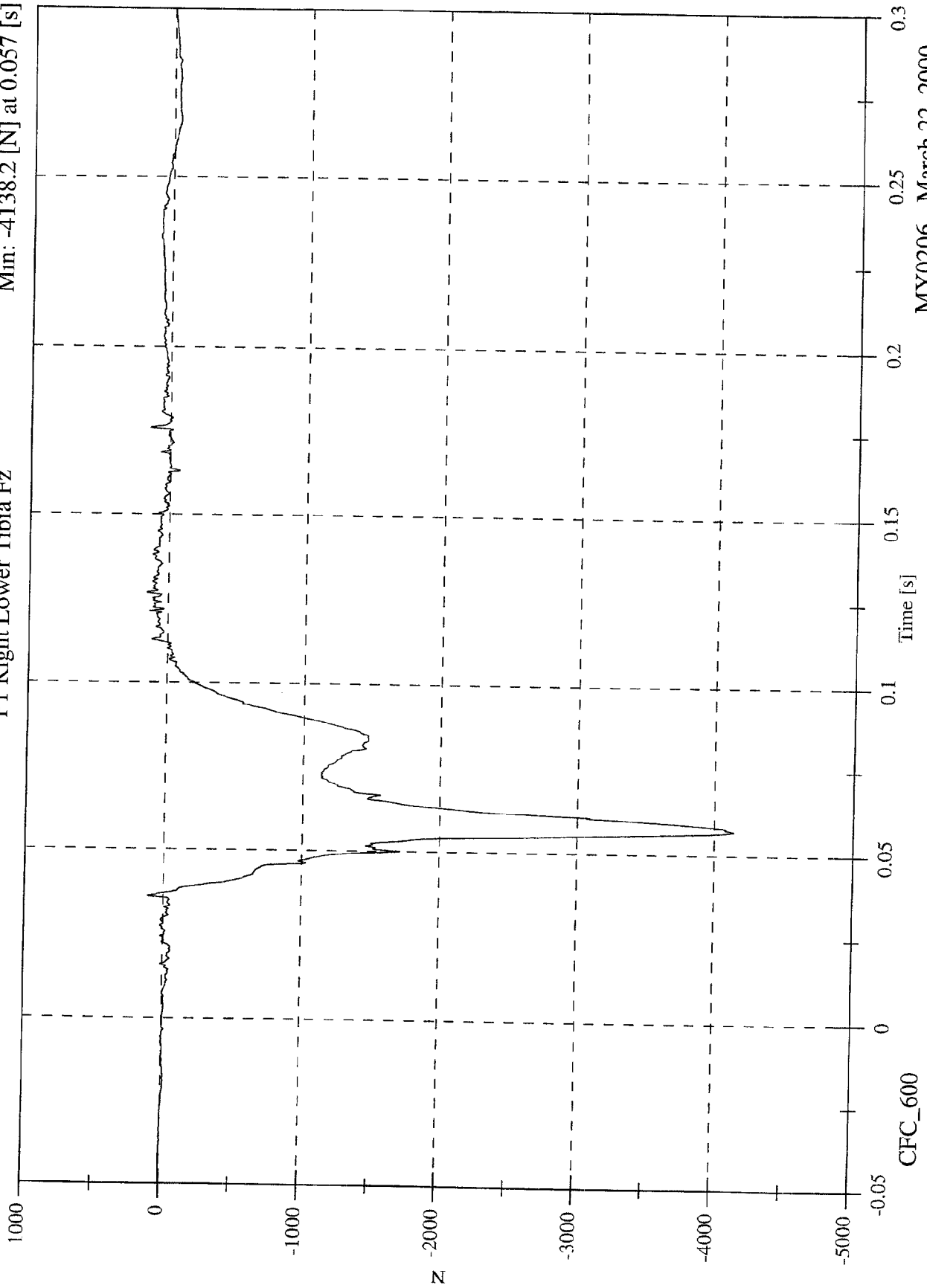


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

P1 Right Lower Tibia Fz

Max: 158.0 [N] at 0.127 [s]
Min: -4138.2 [N] at 0.057 [s]

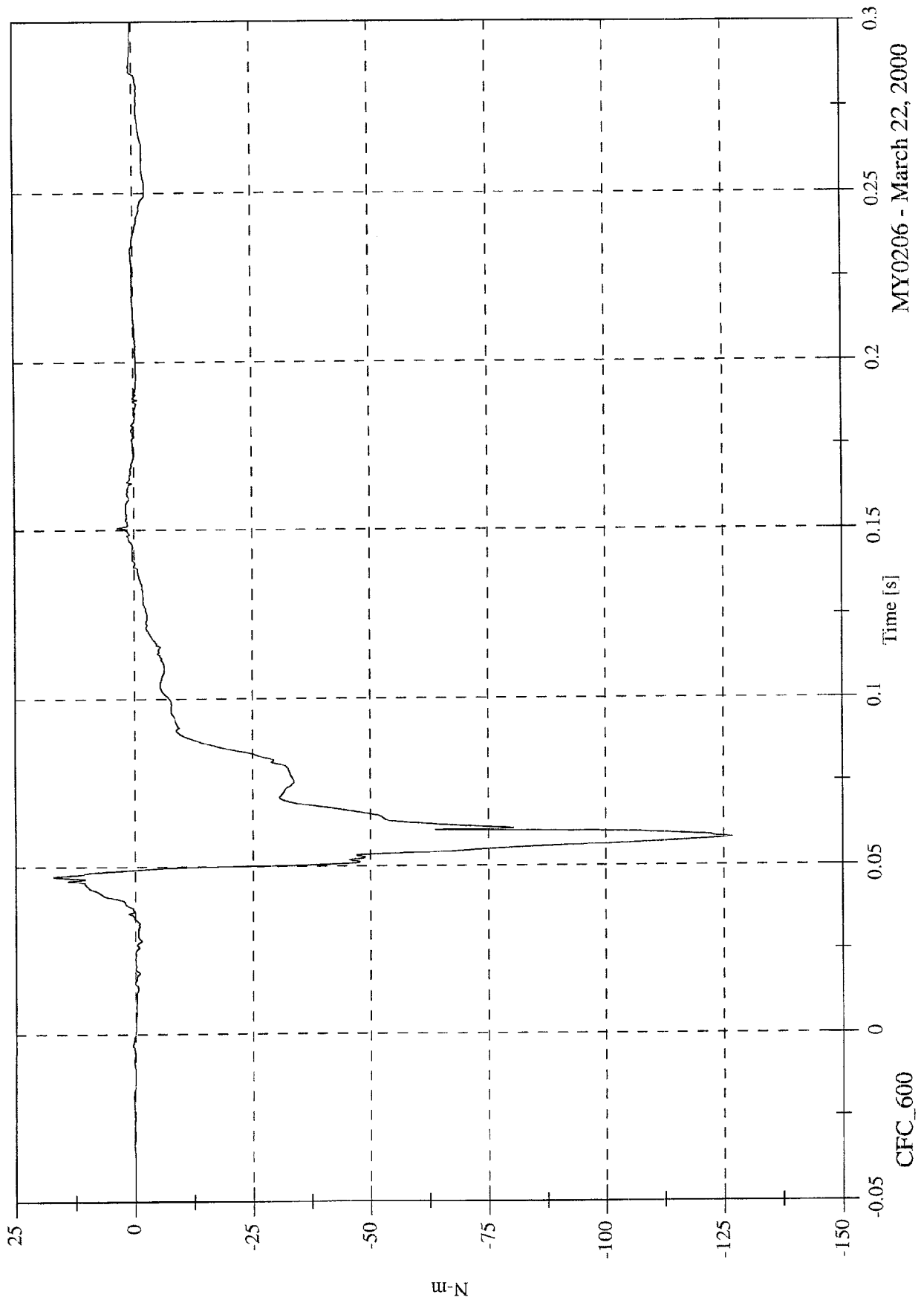


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 17.1 [N-m] at 0.047 [s]
 Min: -126.8 [N-m] at 0.058 [s]

P1 Right Lower Tibia Mx



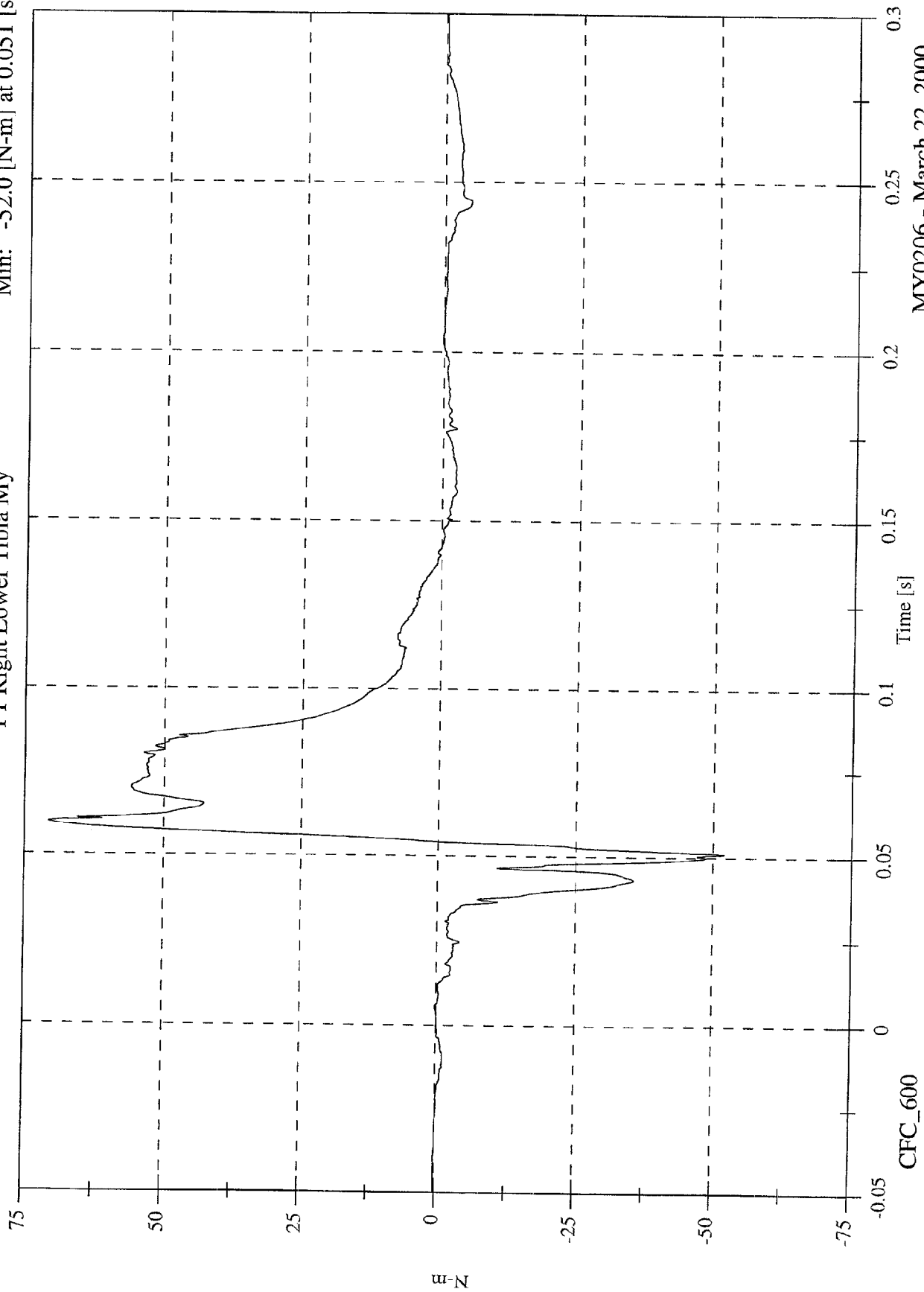
CFC_600

MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

P1 Right Lower Tibia My

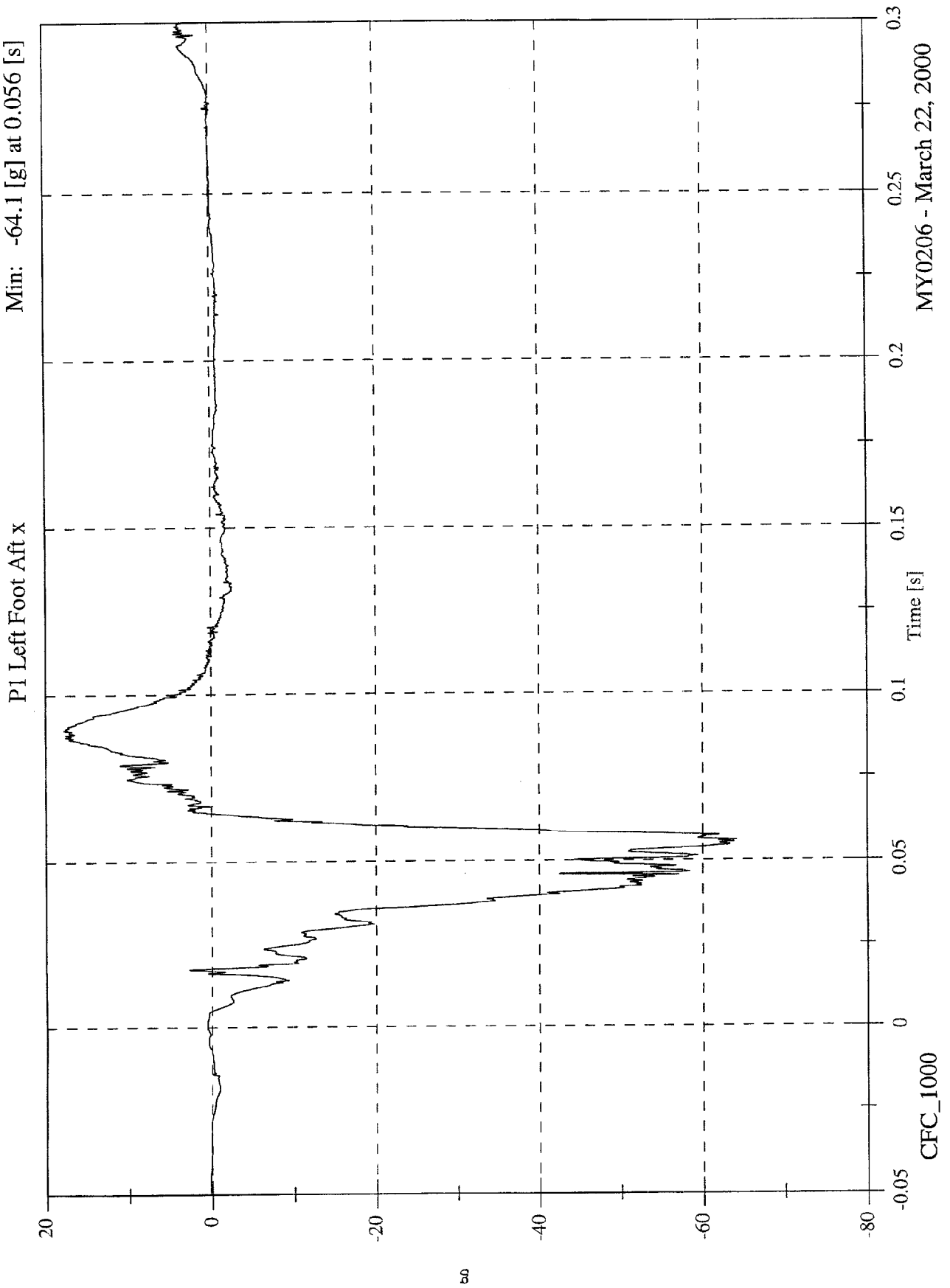
Max: 70.6 [N-m] at 0.059 [s]
Min: -52.0 [N-m] at 0.051 [s]



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NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 17.8 [g] at 0.089 [s]
Min: -64.1 [g] at 0.056 [s]

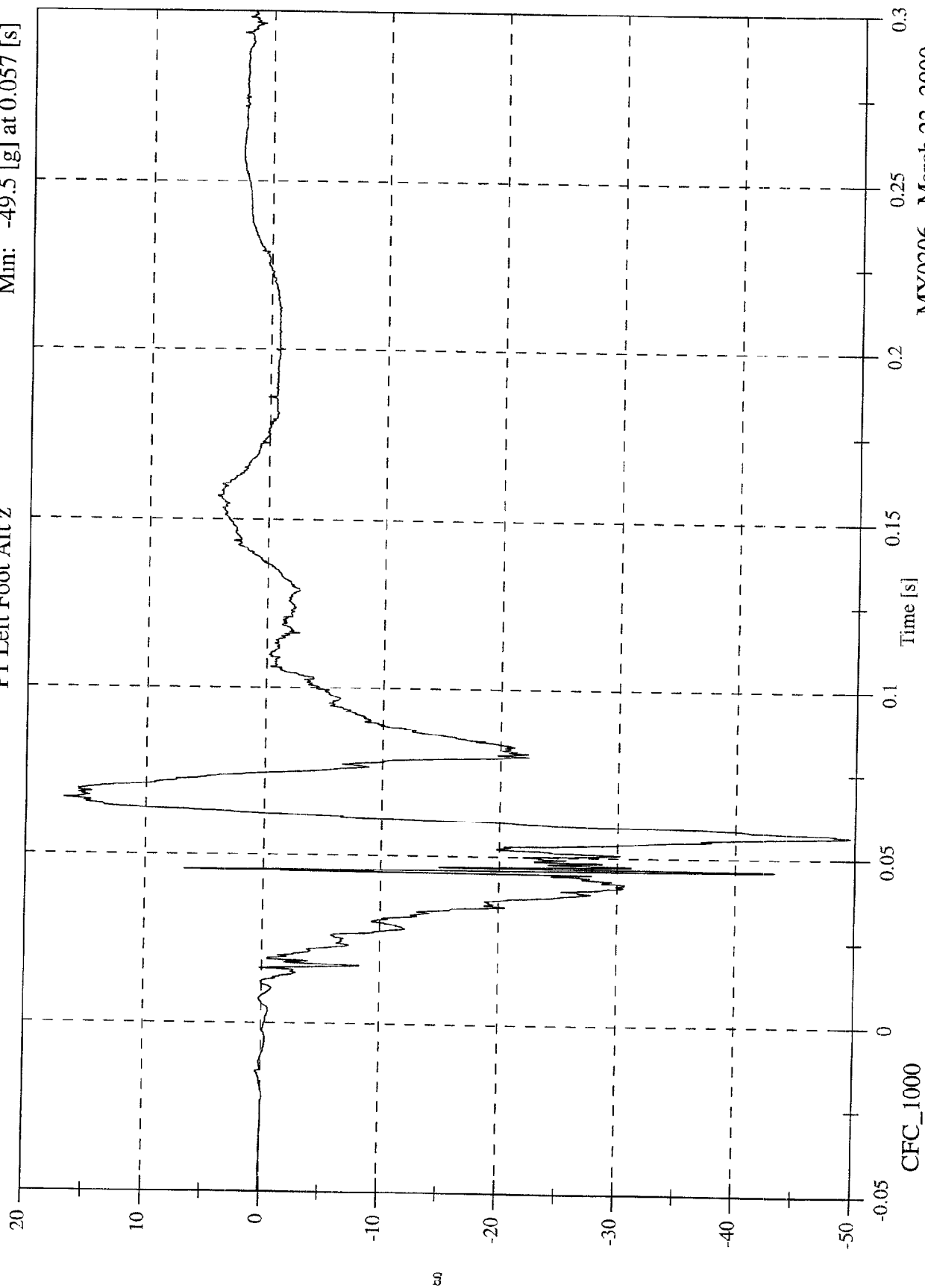


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 16.9 [g] at 0.067 [s]
 Min: -49.5 [g] at 0.057 [s]

P1 Left Foot Aft z

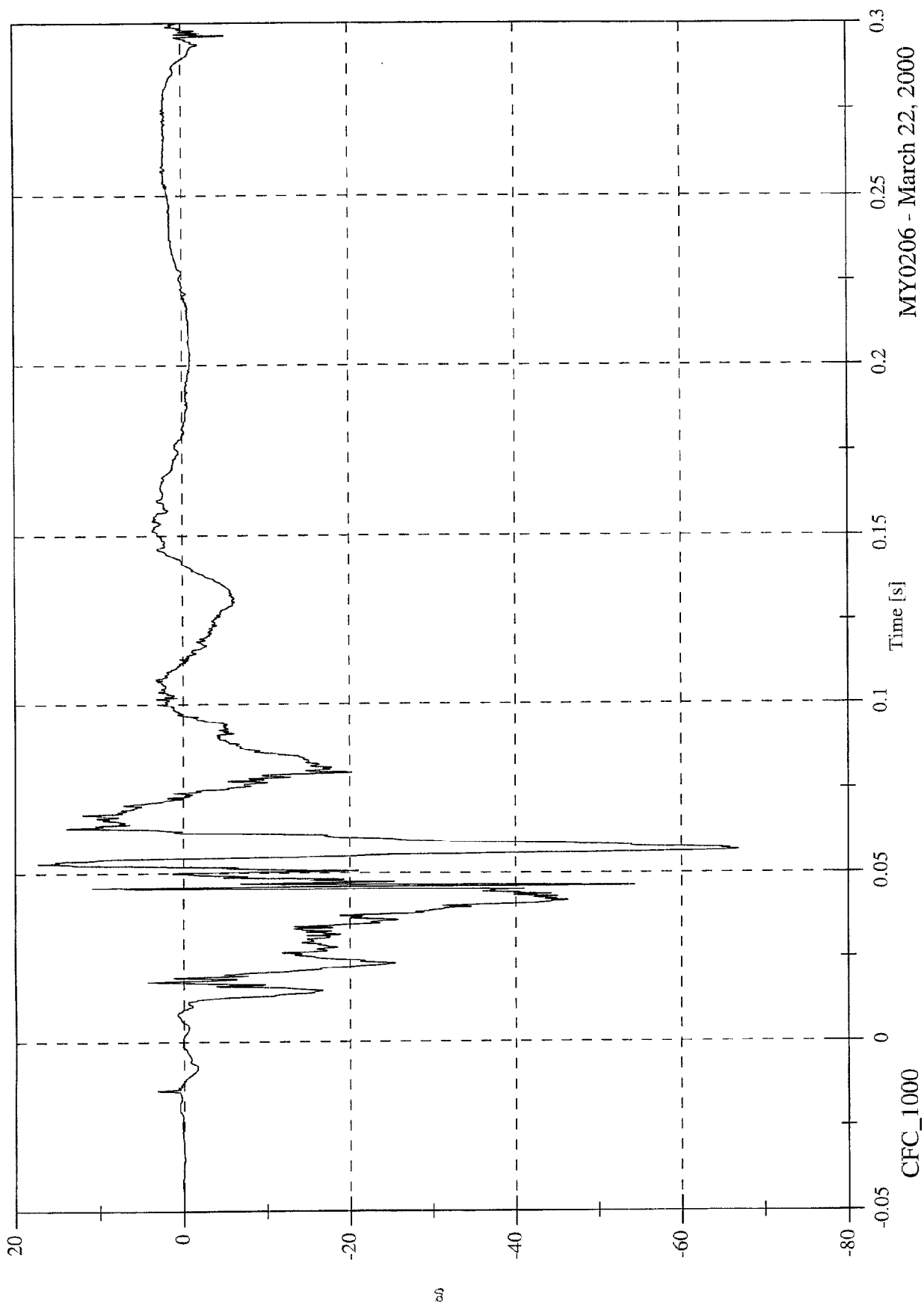


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 17.3 [g] at 0.053 [s]
 Min: -66.8 [g] at 0.057 [s]

P1 left Foot Fore z

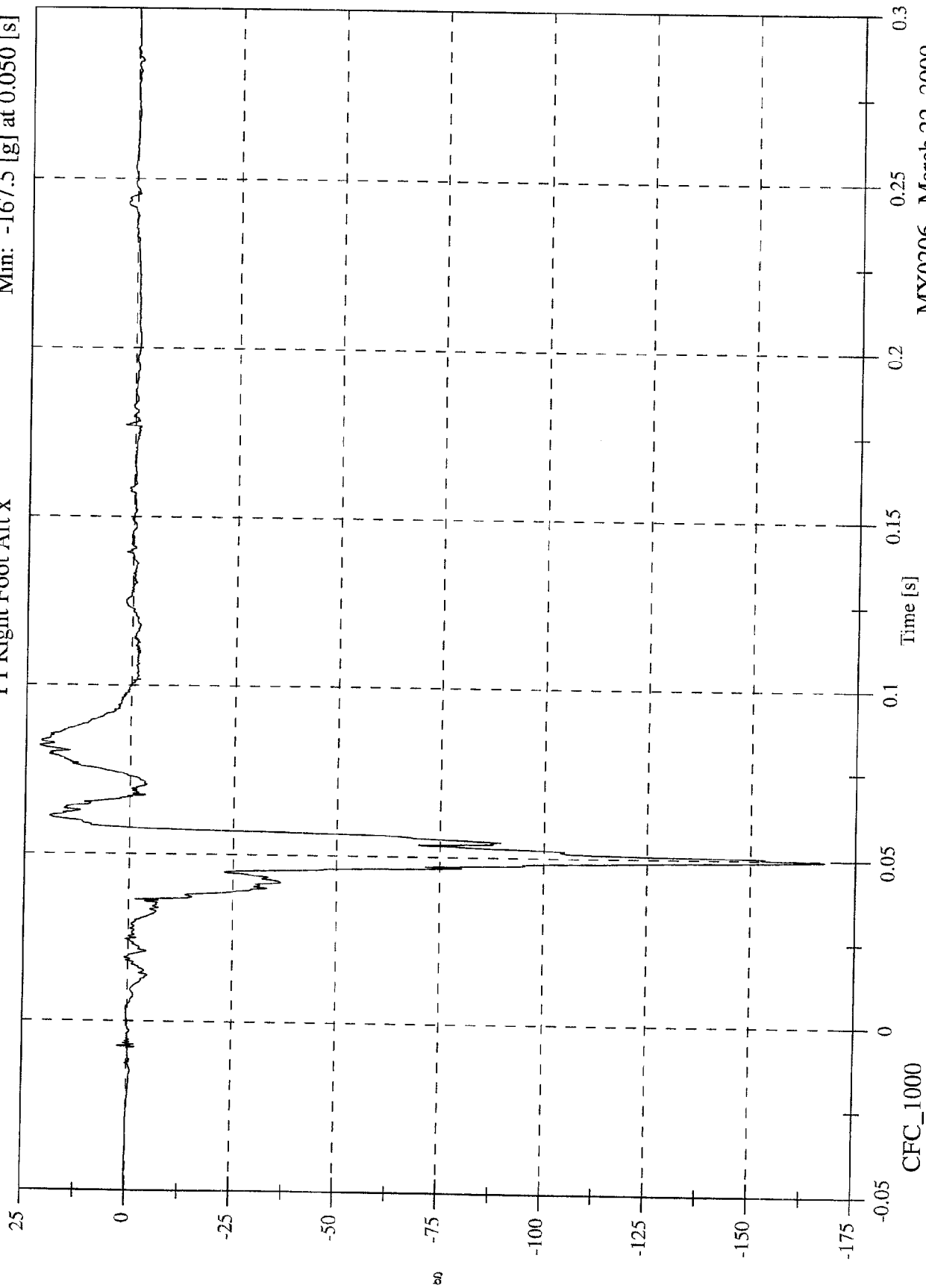


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 21.7 [g] at 0.082 [s]
Min: -167.5 [g] at 0.050 [s]

P1 Right Foot Aft x

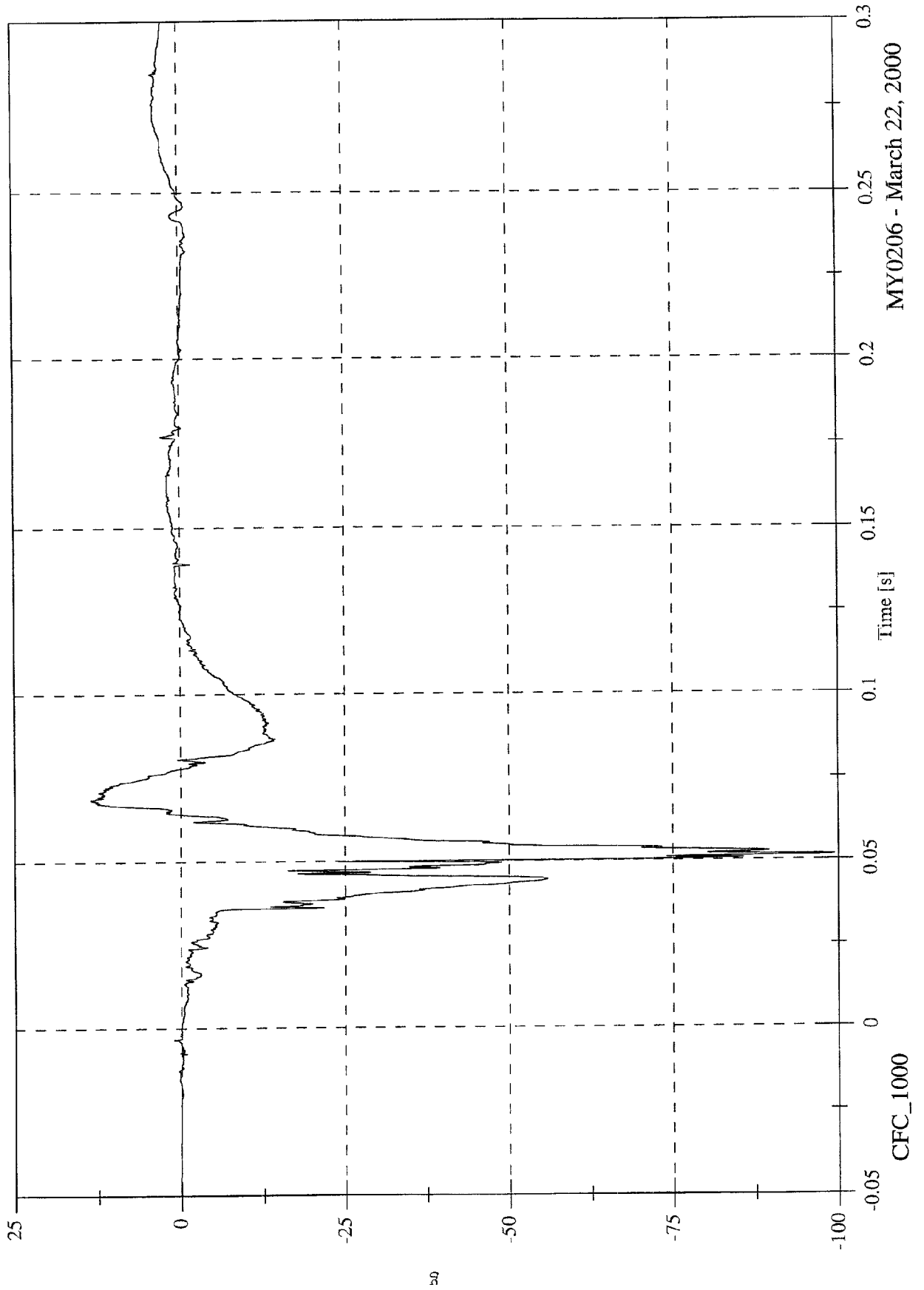


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NCAP Test #16 - 2000 Ford Focus 4-Door

P1 Right Foot Aft z

Max: 13.5 [g] at 0.069 [s]
Min: -99.4 [g] at 0.052 [s]

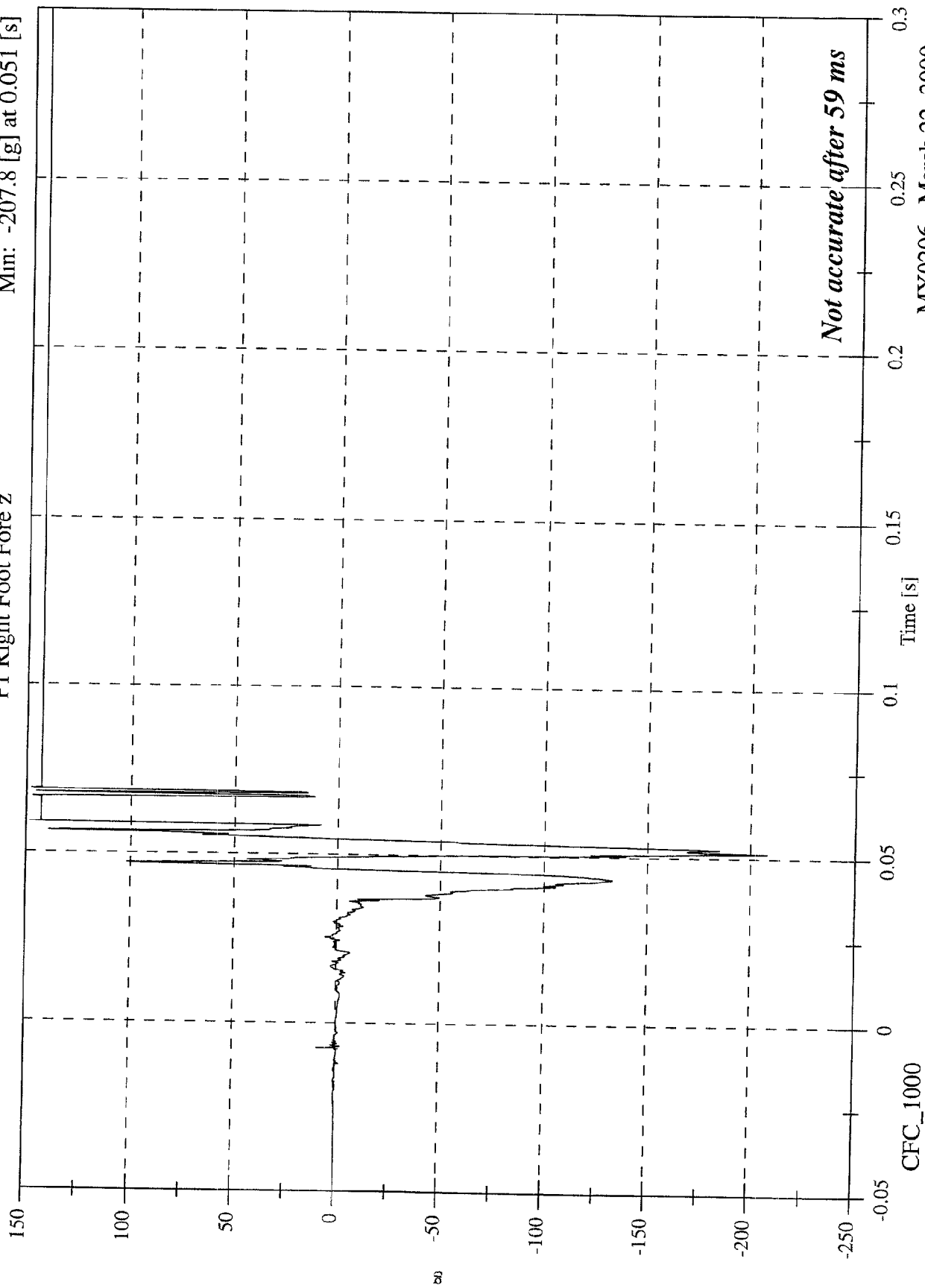


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 148.3 [g] at 0.059 [s]
Min: -207.8 [g] at 0.051 [s]

P1 Right Foot Fore z

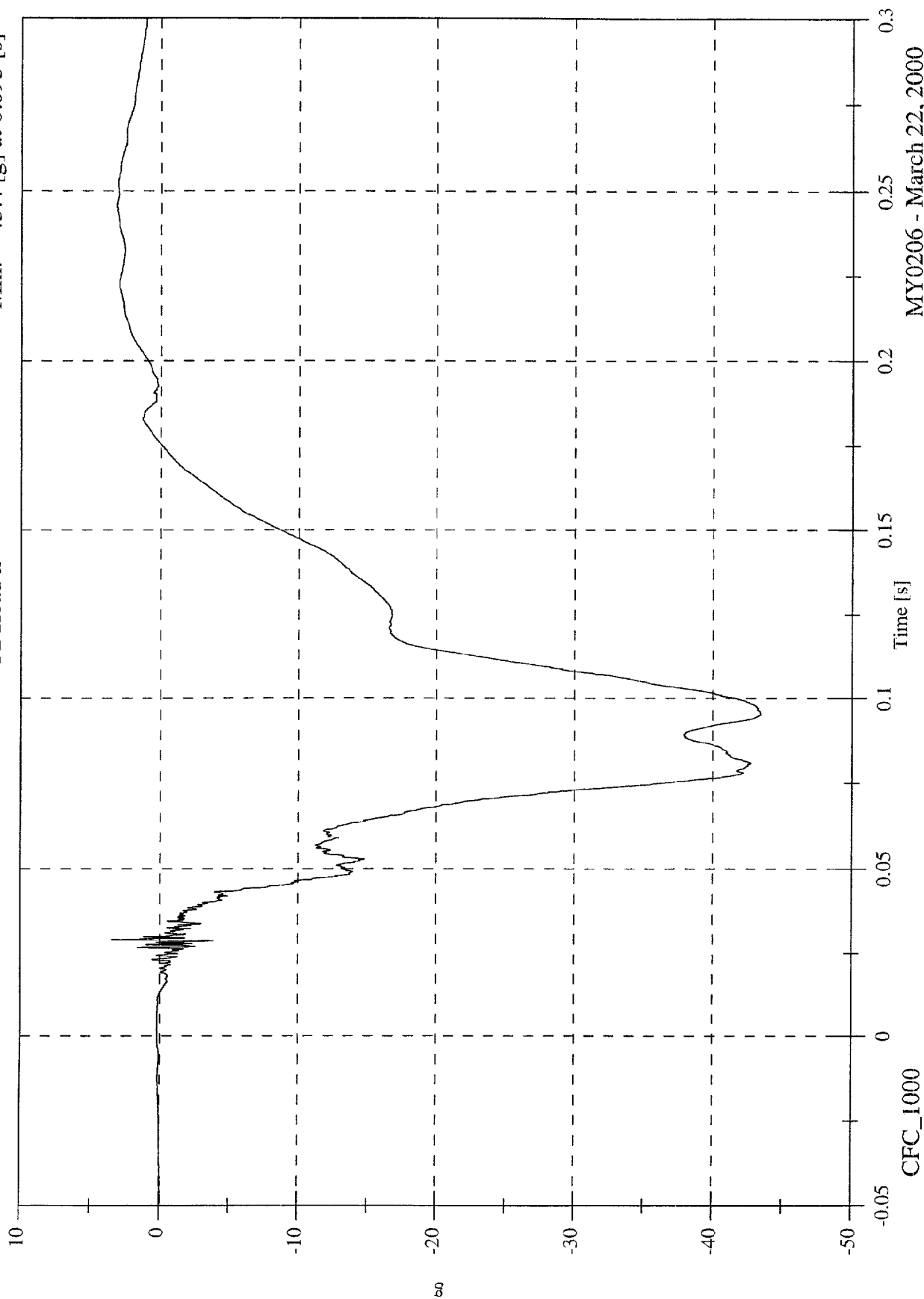


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NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 3.4 [g] at 0.029 [s]
Min: -43.4 [g] at 0.095 [s]

P2 Head x

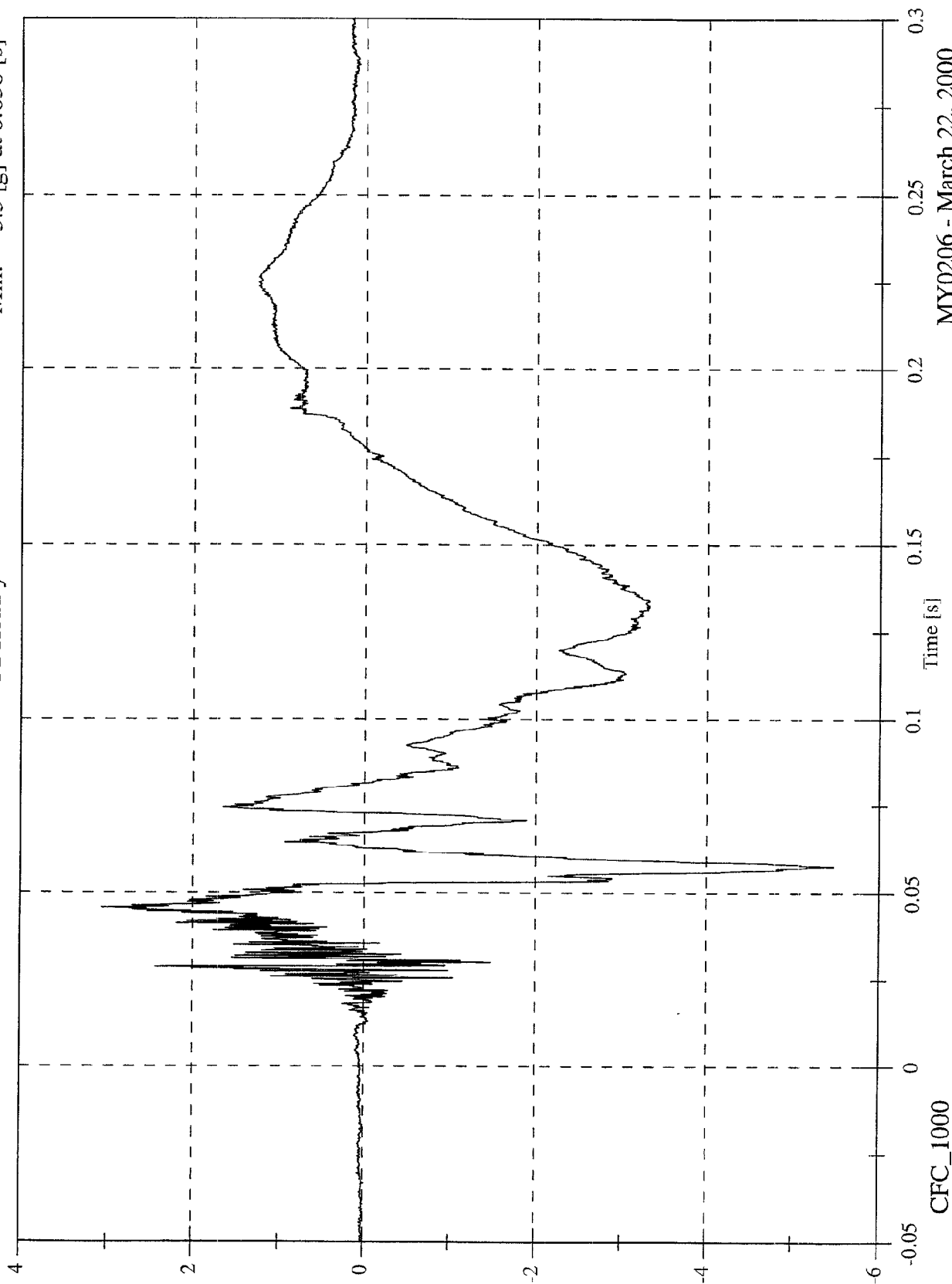


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NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 3.1 [g] at 0.046 [s]
 Min: -5.5 [g] at 0.058 [s]

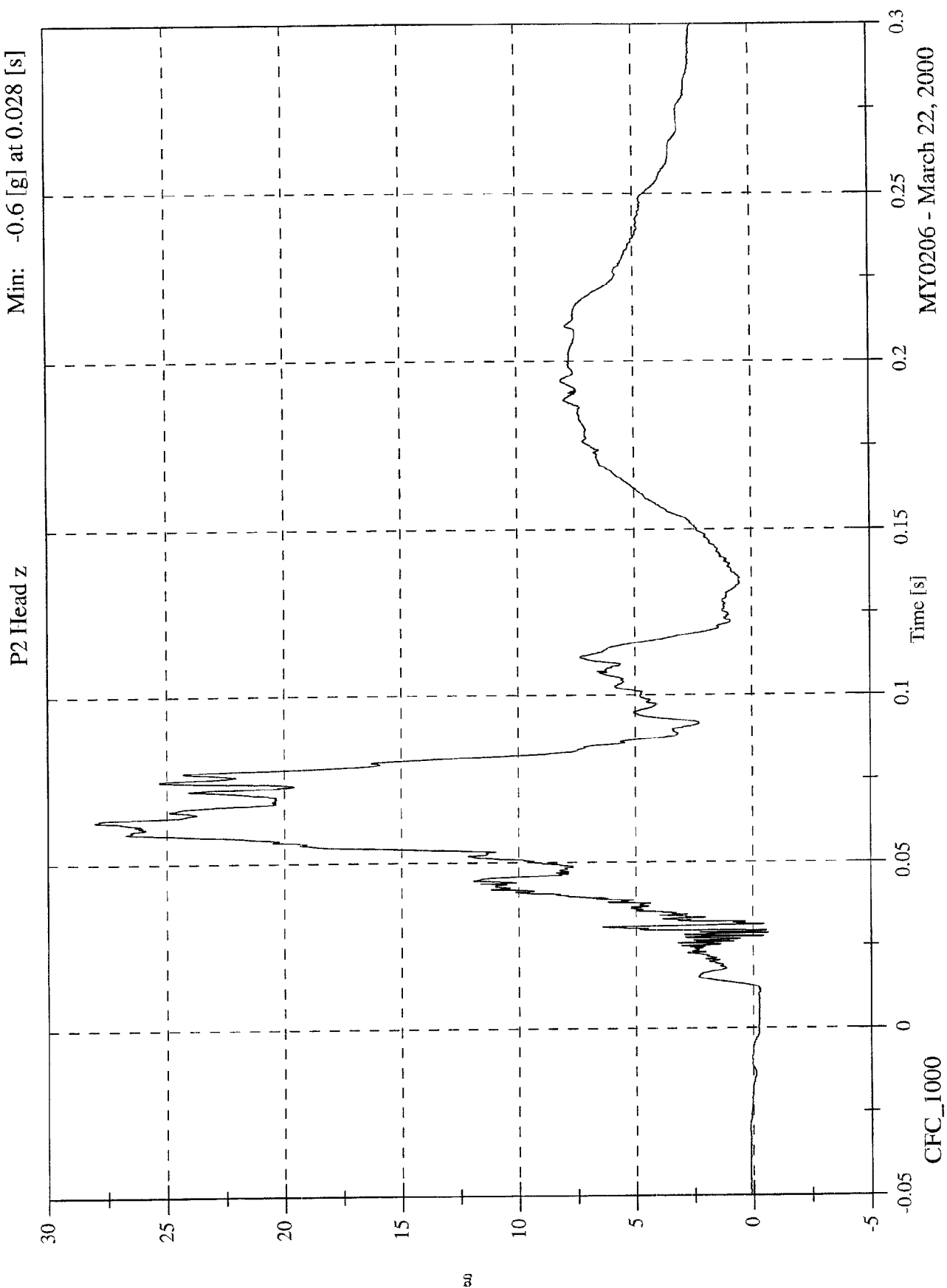
P2 Head y



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NCAP Test #16 - 2000 Ford Focus 4-Door

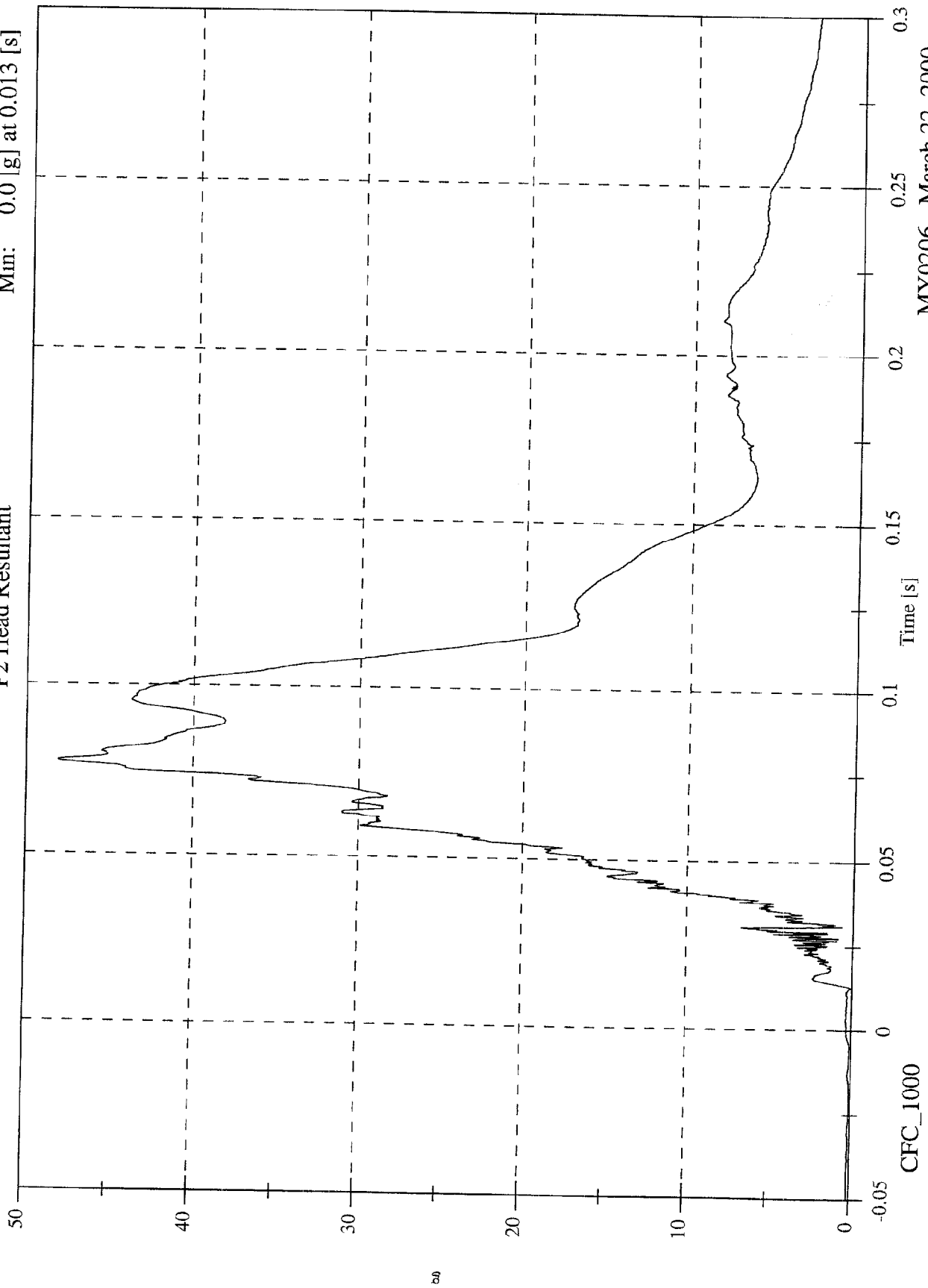
Max: 28.0 [g] at 0.063 [s]
 Min: -0.6 [g] at 0.028 [s]



NCAP Test #16 - 2000 Ford Focus 4-Door

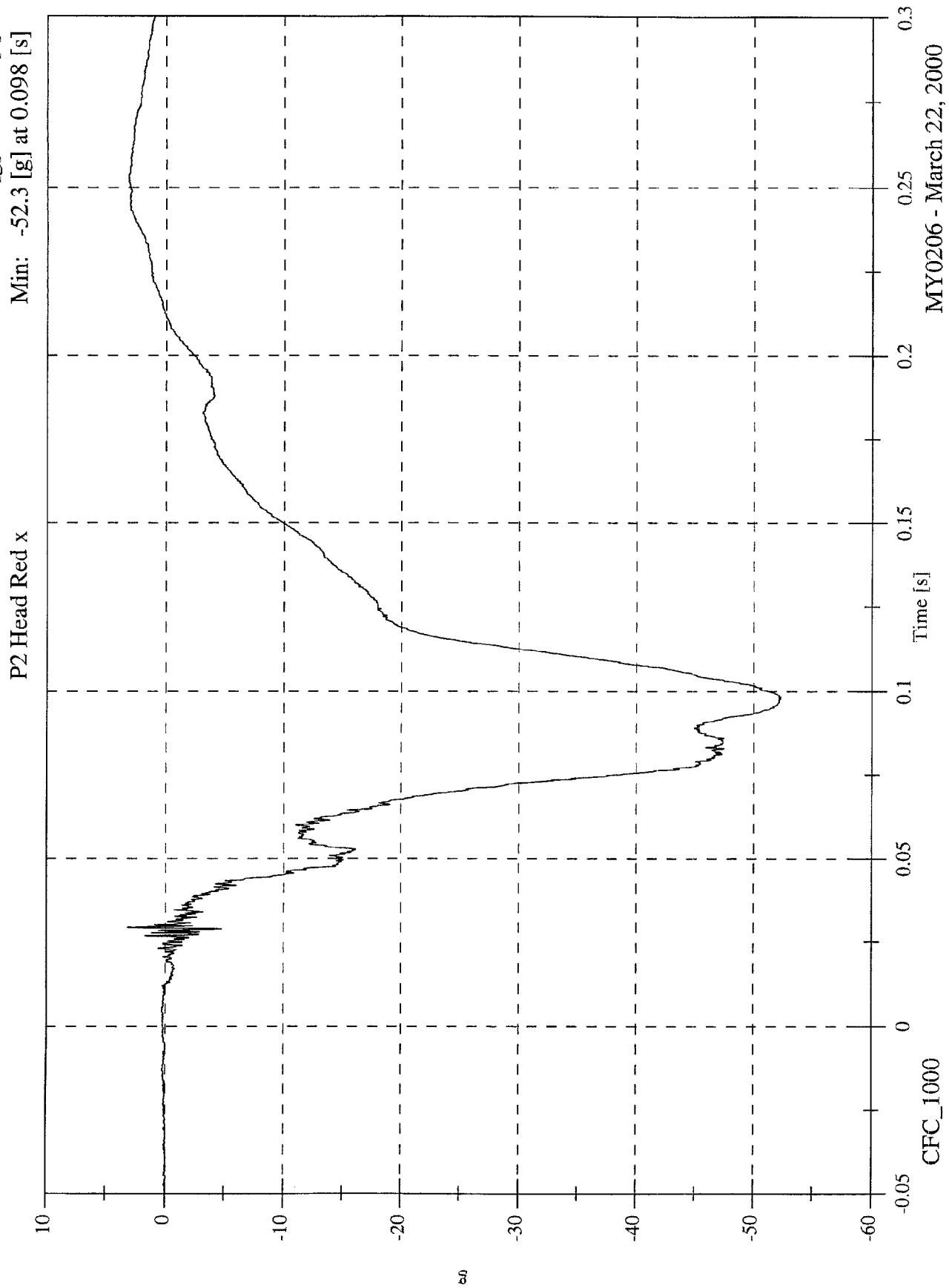
P2 Head Resultant

Max: 48.1 [g] at 0.077 [s]
Min: 0.0 [g] at 0.013 [s]



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NCAP Test #16 - 2000 Ford Focus 4-Door

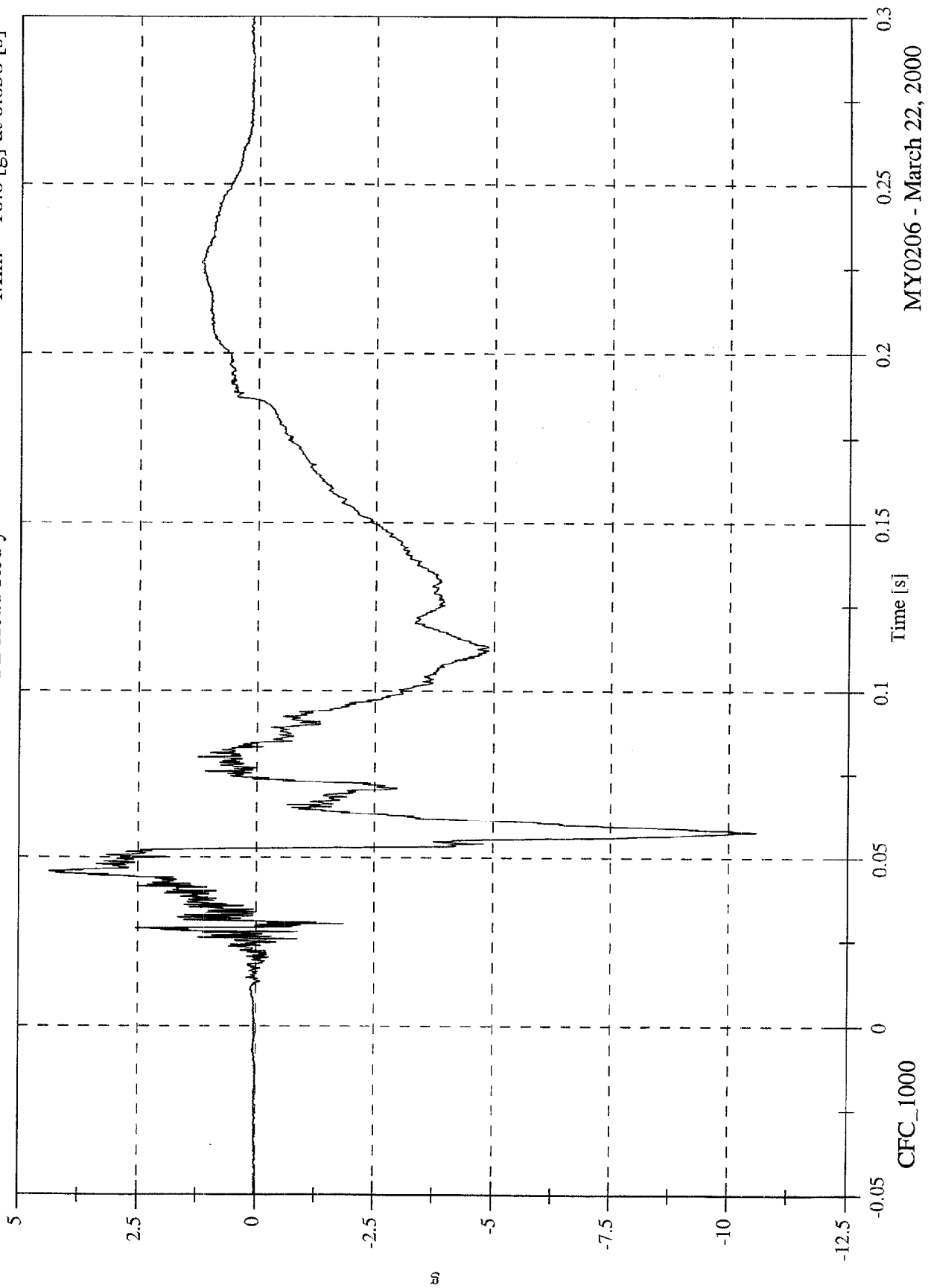


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 4.4 [g] at 0.046 [s]
Min: -10.6 [g] at 0.058 [s]

P2 Head Red y

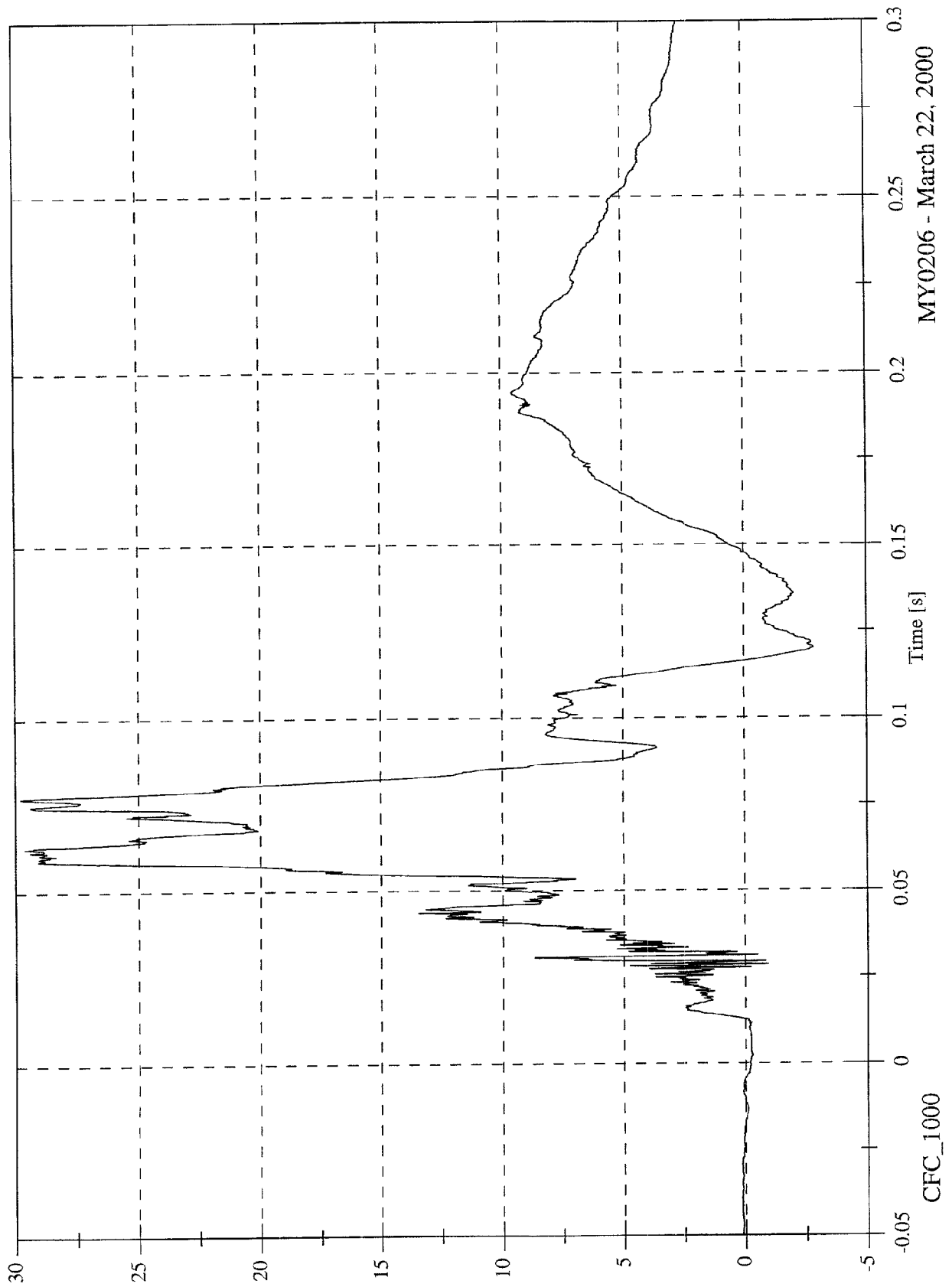


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

P2 Head Red z

Max: 29.8 [g] at 0.077 [s]
Min: -2.9 [g] at 0.120 [s]

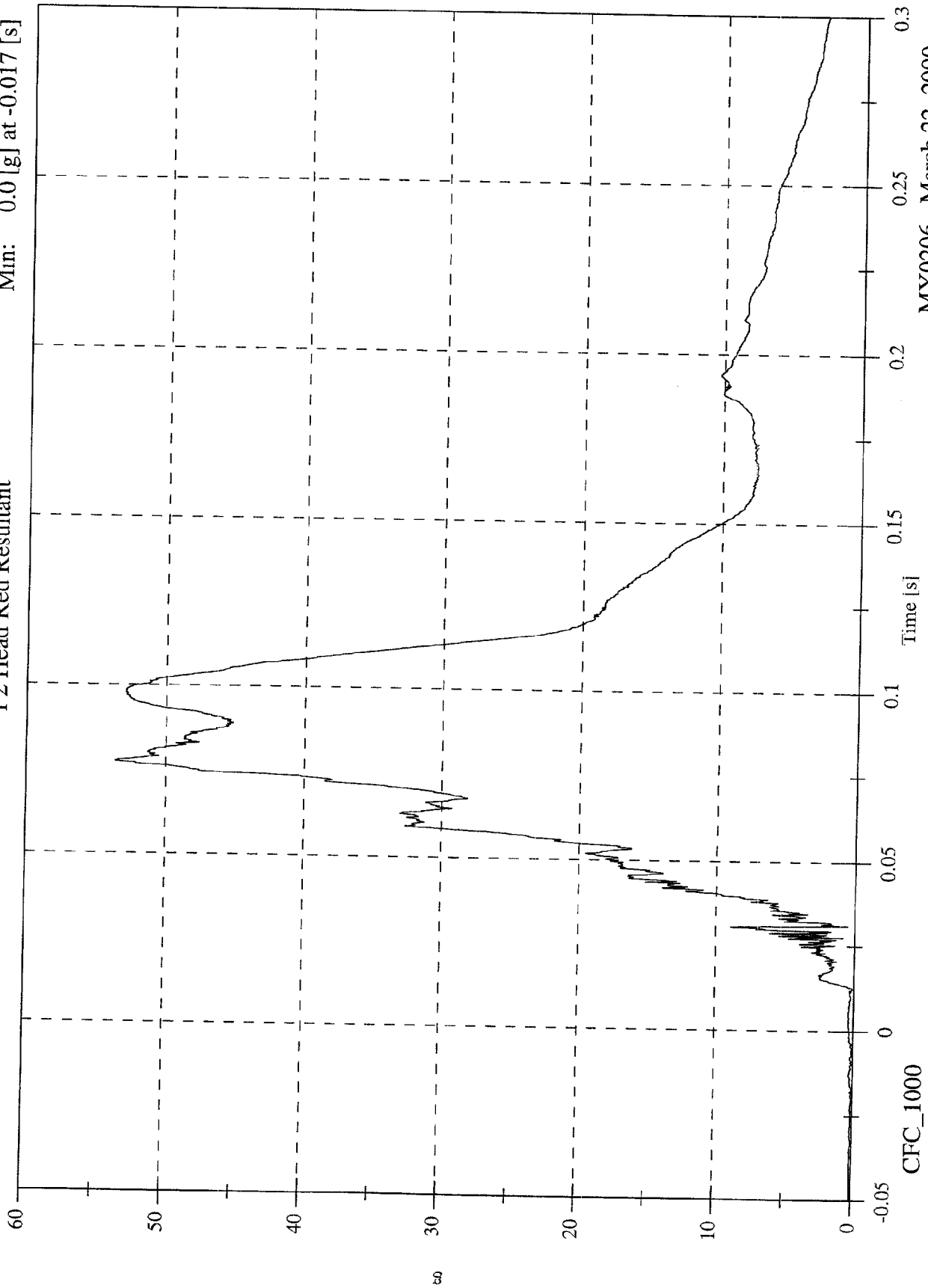


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 53.7 [g] at 0.077 [s]
 Min: 0.0 [g] at -0.017 [s]

P2 Head Red Resultant

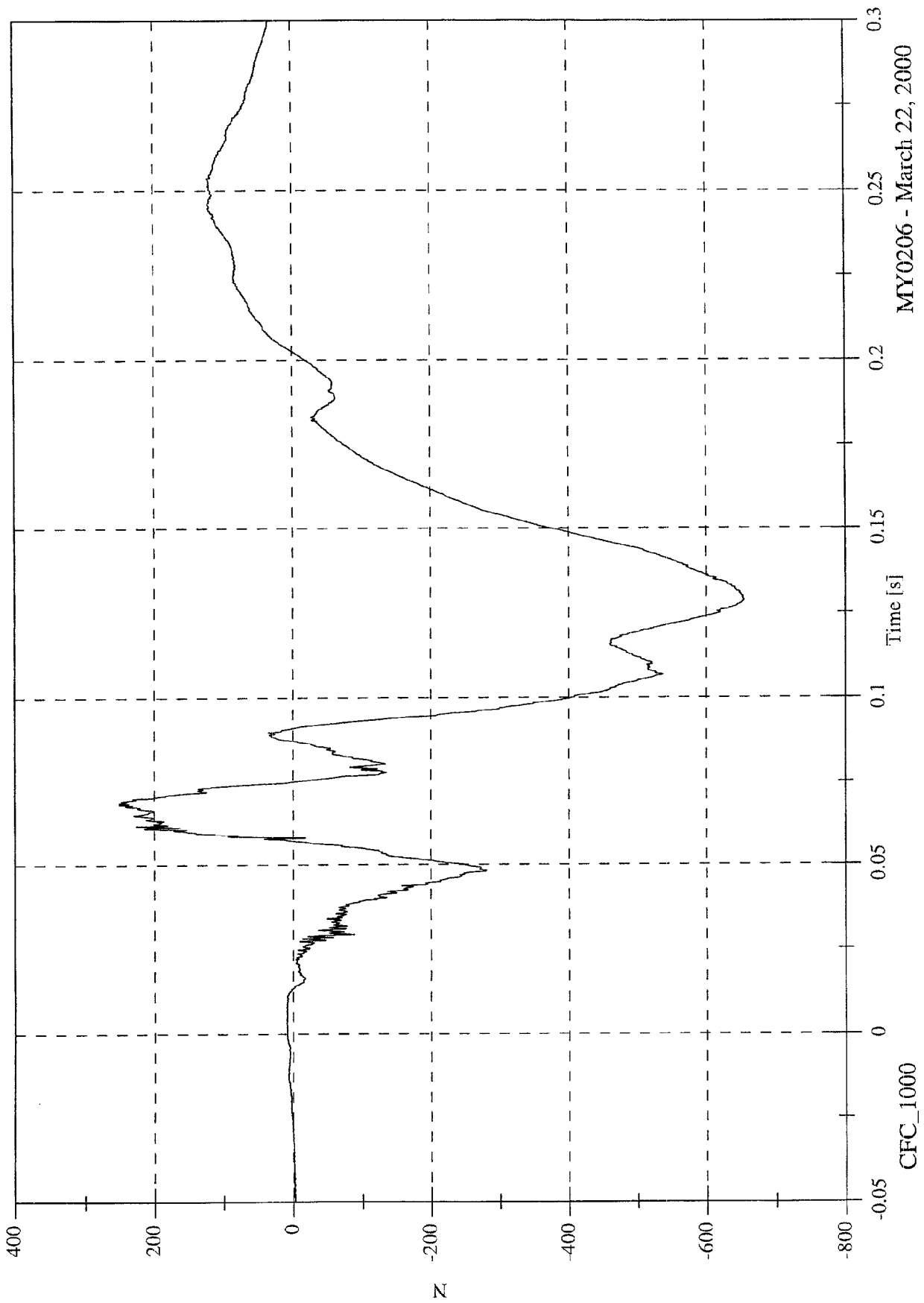


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NCAP Test #16 - 2000 Ford Focus 4-Door

P2 Upper Neck Fx

Max: 250.9 [N] at 0.069 [s]
Min: -655.3 [N] at 0.129 [s]

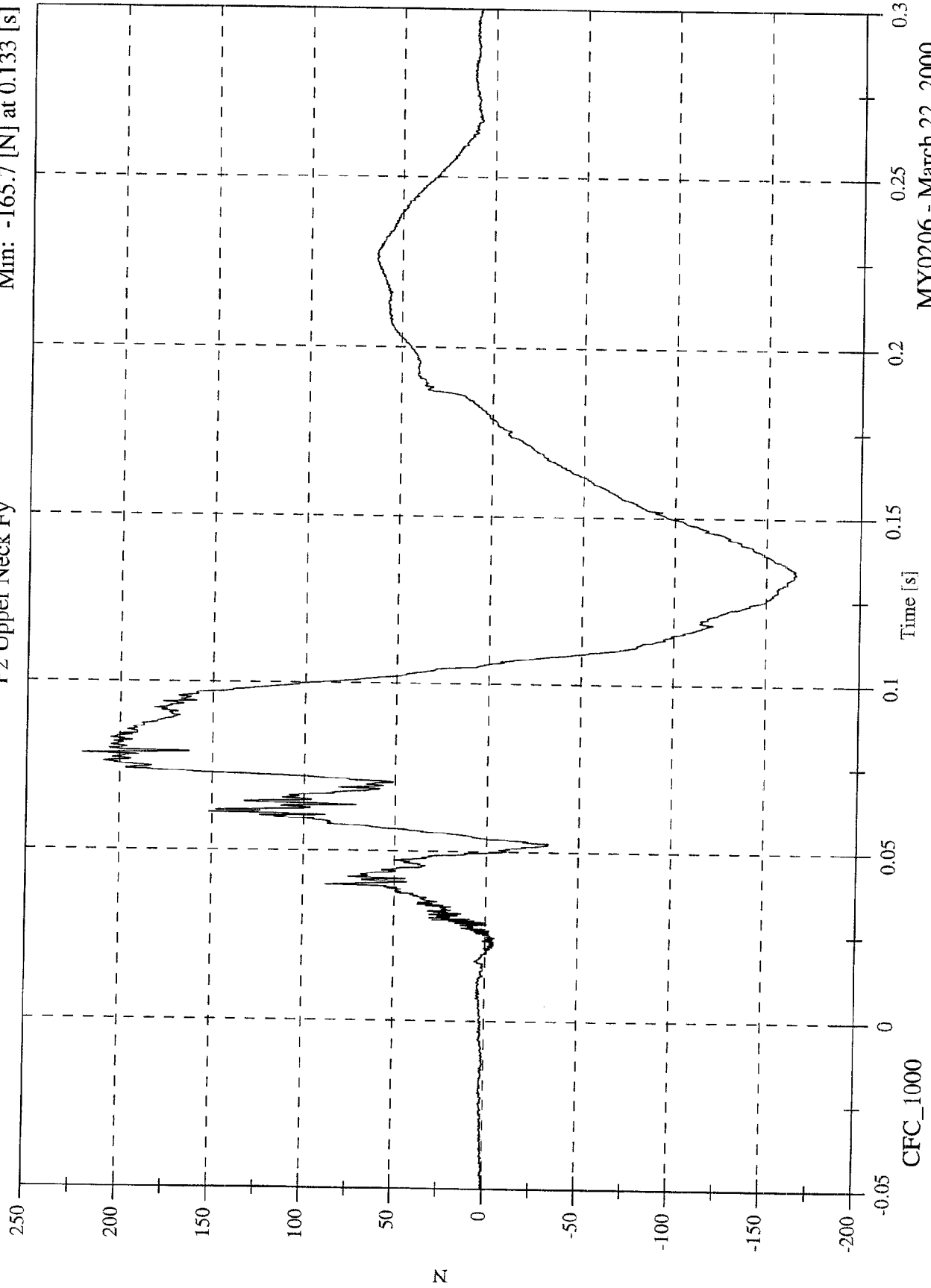


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 220.1 [N] at 0.079 [s]
Min: -165.7 [N] at 0.133 [s]

P2 Upper Neck Fy

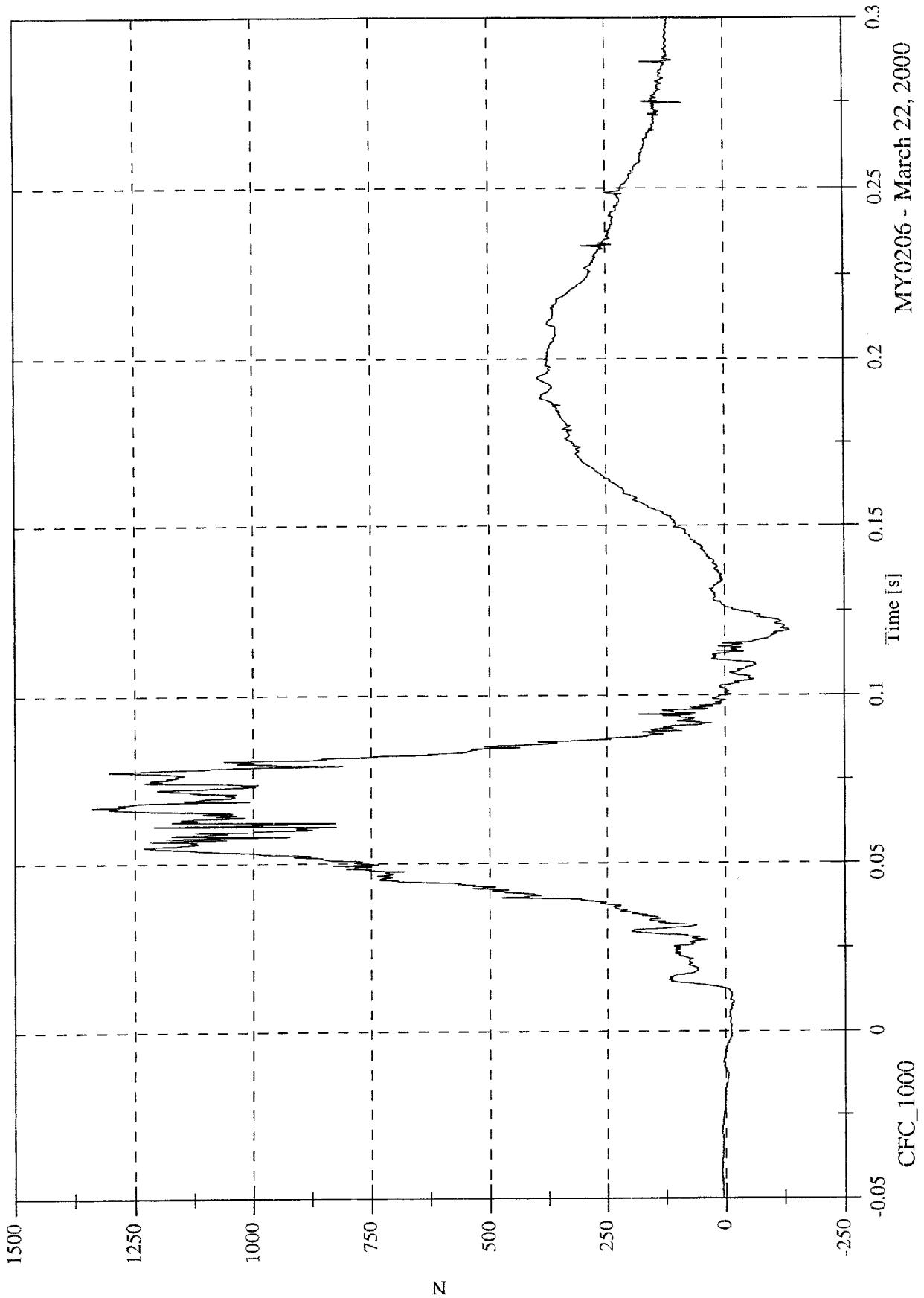


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 1340.5 [N] at 0.067 [s]
Min: -134.6 [N] at 0.119 [s]

P2 Upper Neck Fz

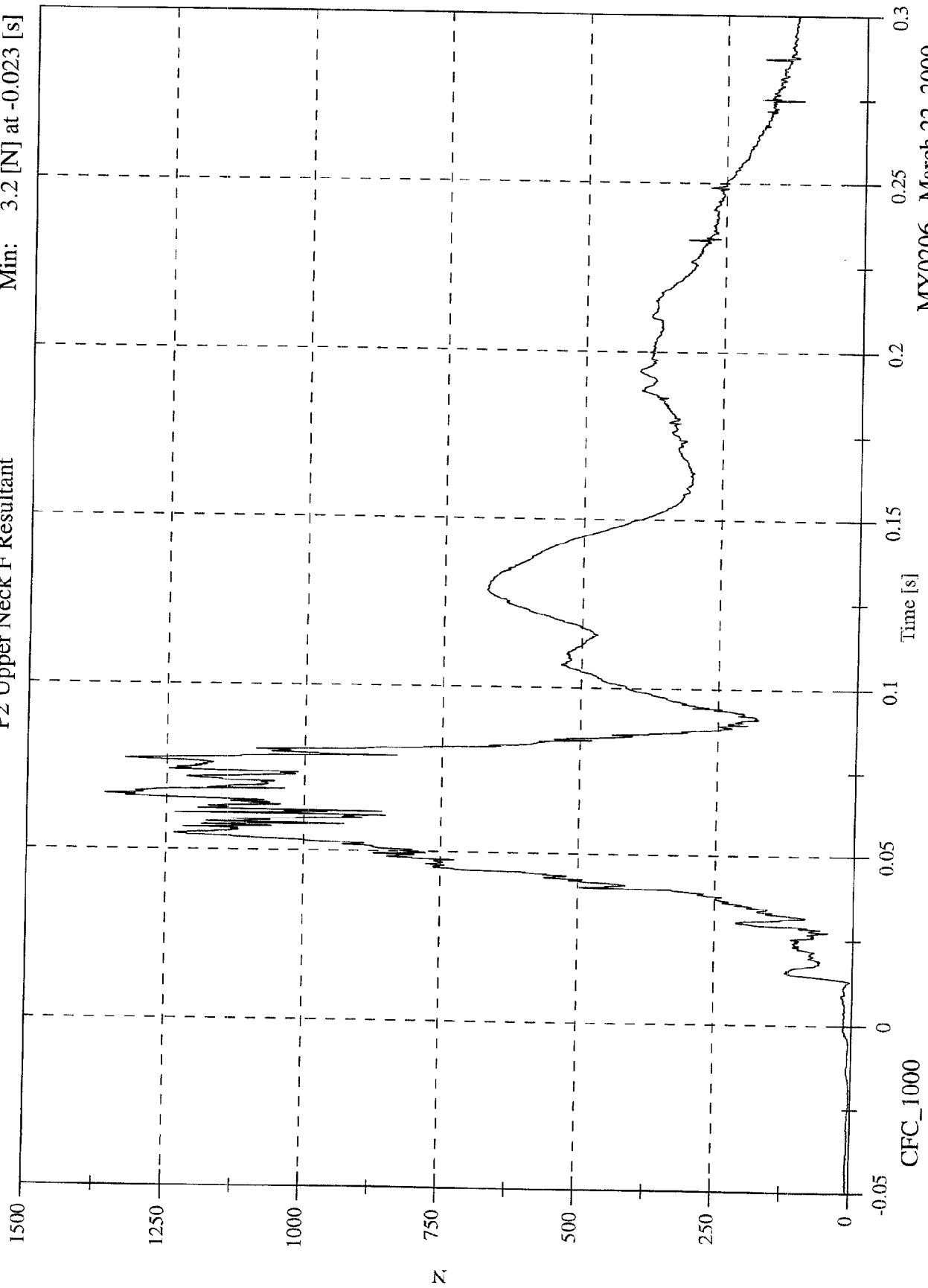


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NCAP Test #16 - 2000 Ford Focus 4-Door

P2 Upper Neck F Resultant

Max: 1361.0 [N] at 0.067 [s]
Min: 3.2 [N] at -0.023 [s]

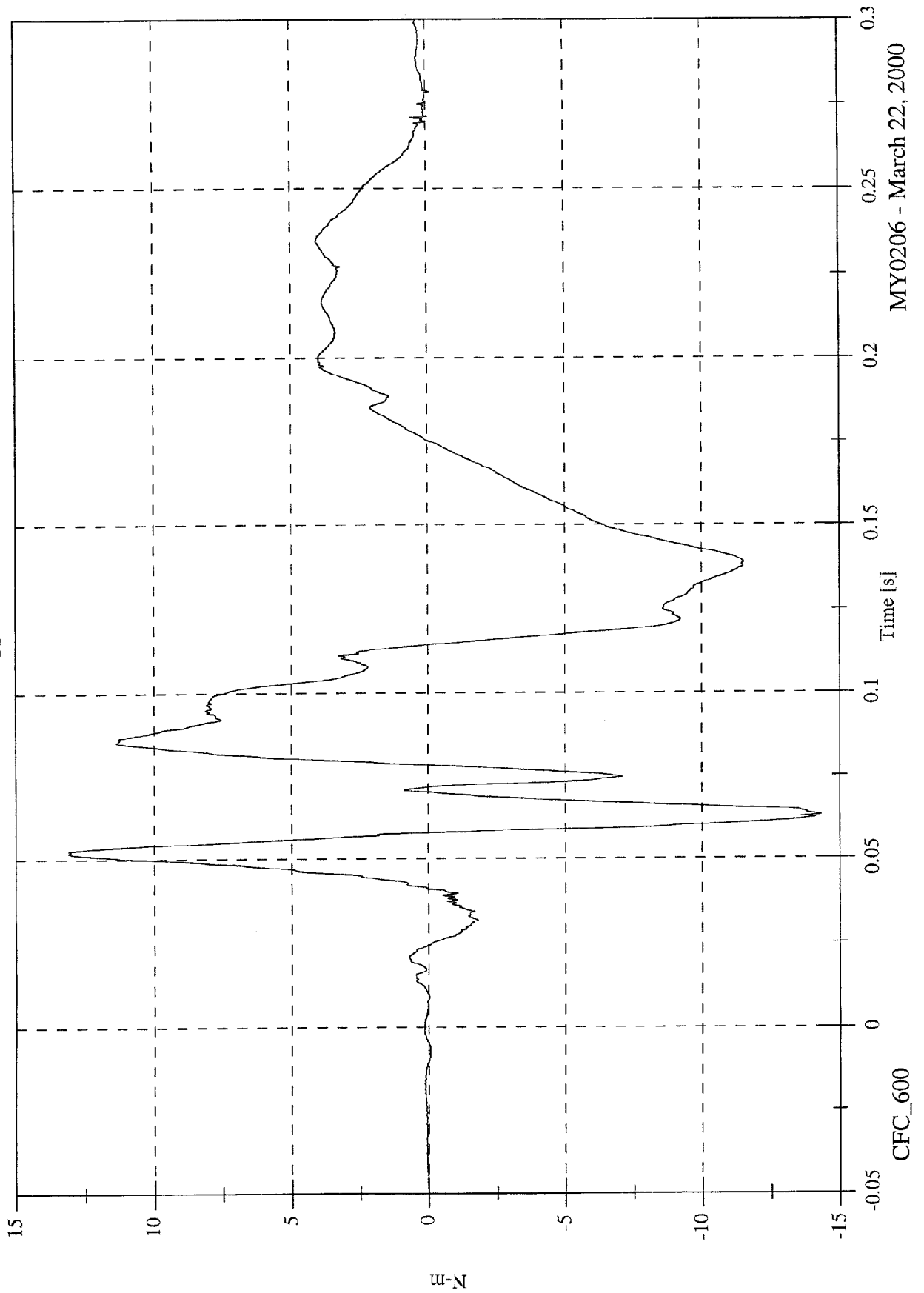


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NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 13.1 [N-m] at 0.052 [s]
 Min: -14.3 [N-m] at 0.063 [s]

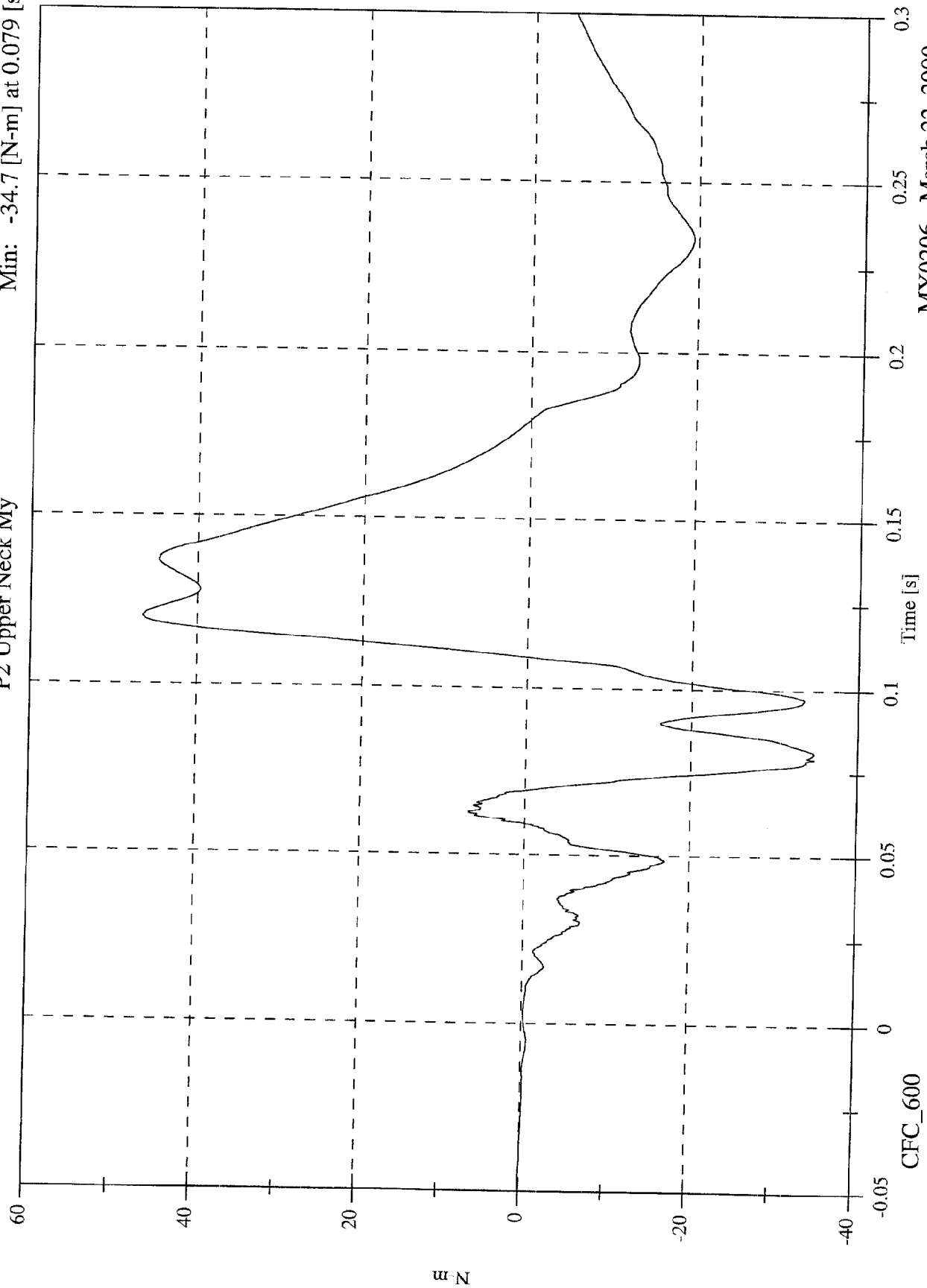
P2 Upper Neck Mx



NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 46.6 [N-m] at 0.120 [s]
 Min: -34.7 [N-m] at 0.079 [s]

P2 Upper Neck My

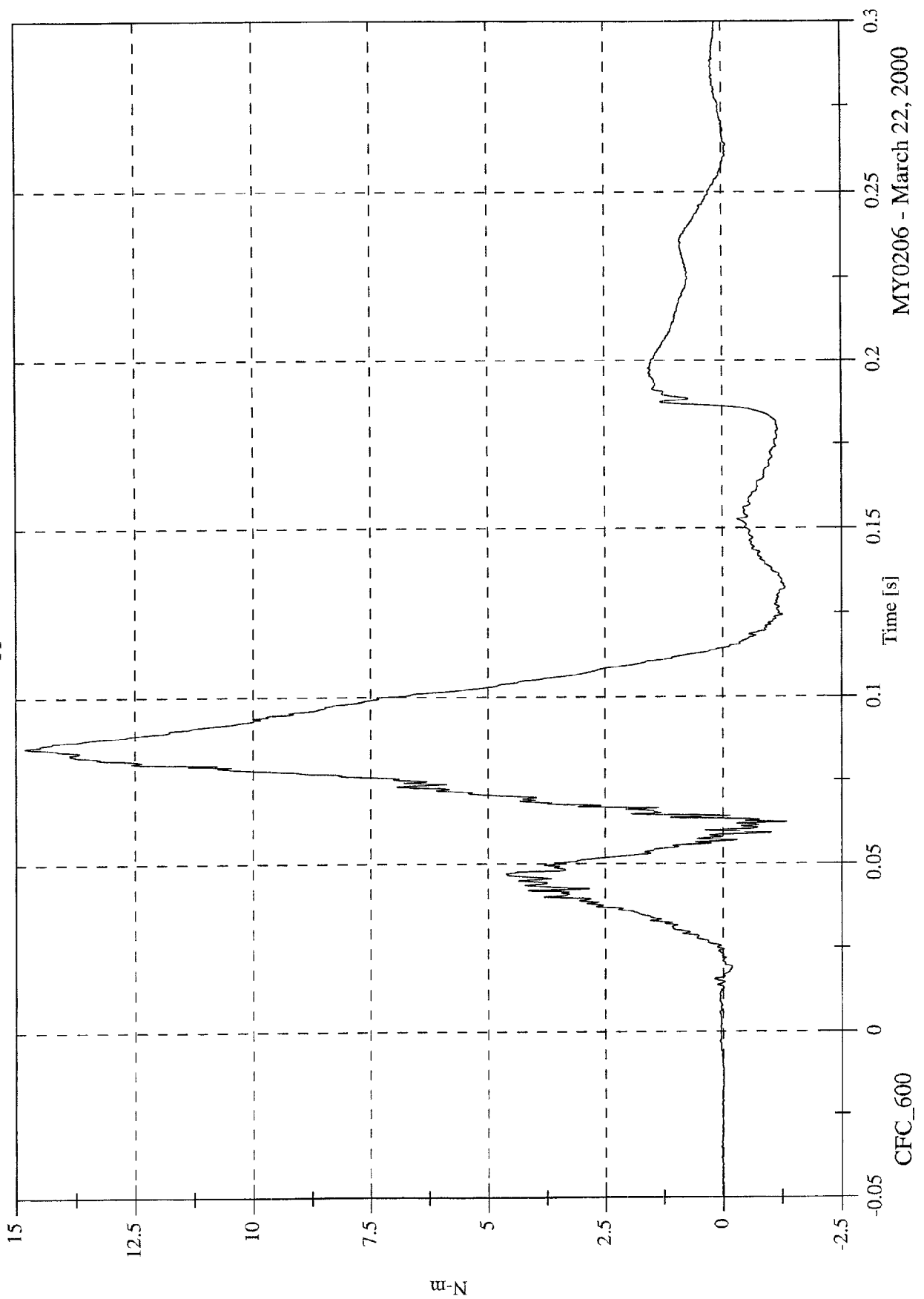


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NCAP Test #16 - 2000 Ford Focus 4-Door

P2 Upper Neck Mz

Max: 14.8 [N-m] at 0.085 [s]
Min: -1.3 [N-m] at 0.062 [s]

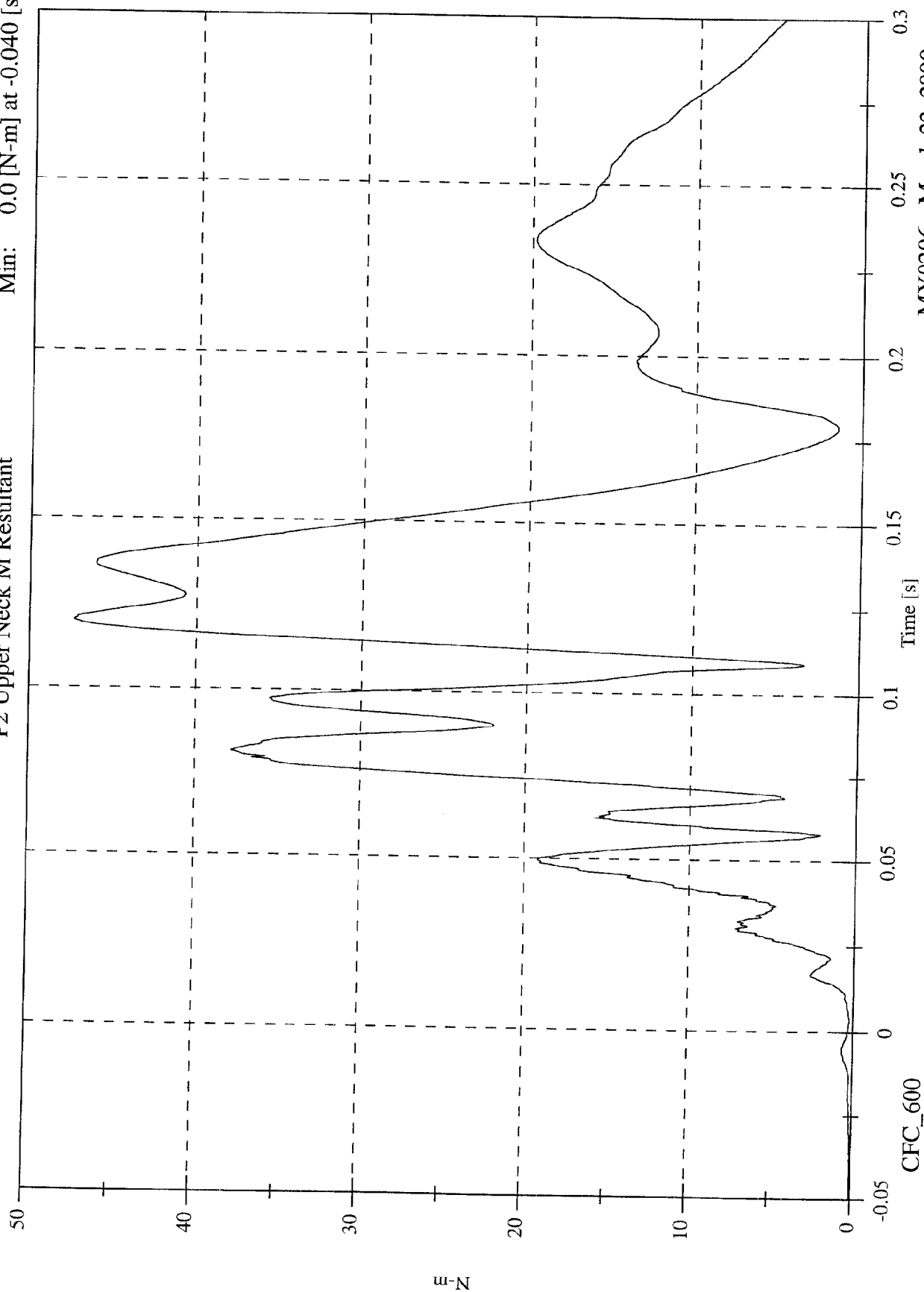


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

P2 Upper Neck M Resultant

Max: 47.3 [N-m] at 0.120 [s]
Min: 0.0 [N-m] at -0.040 [s]

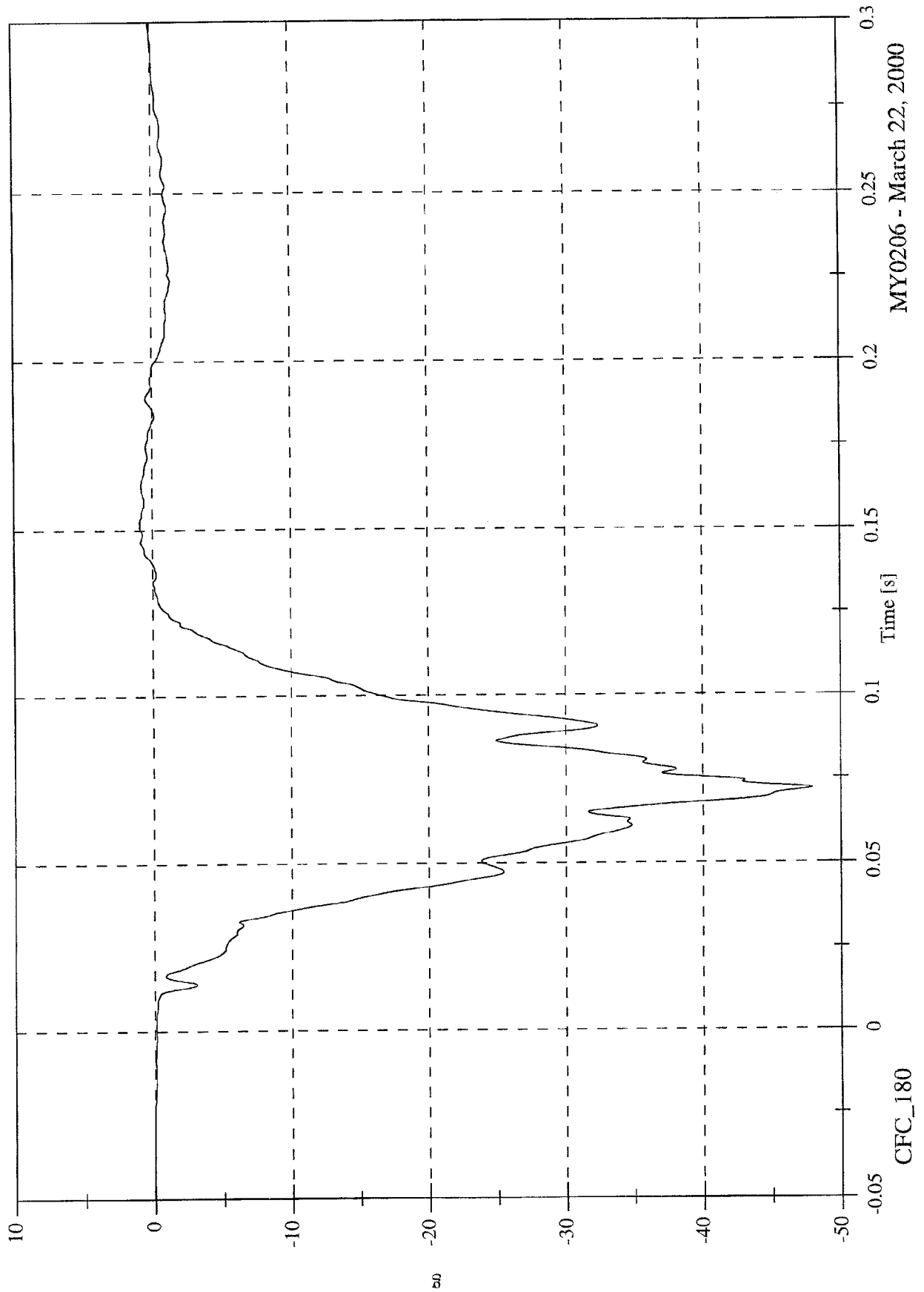


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 1.0 [g] at 0.152 [s]
Min: -47.9 [g] at 0.072 [s]

P2 Chest x



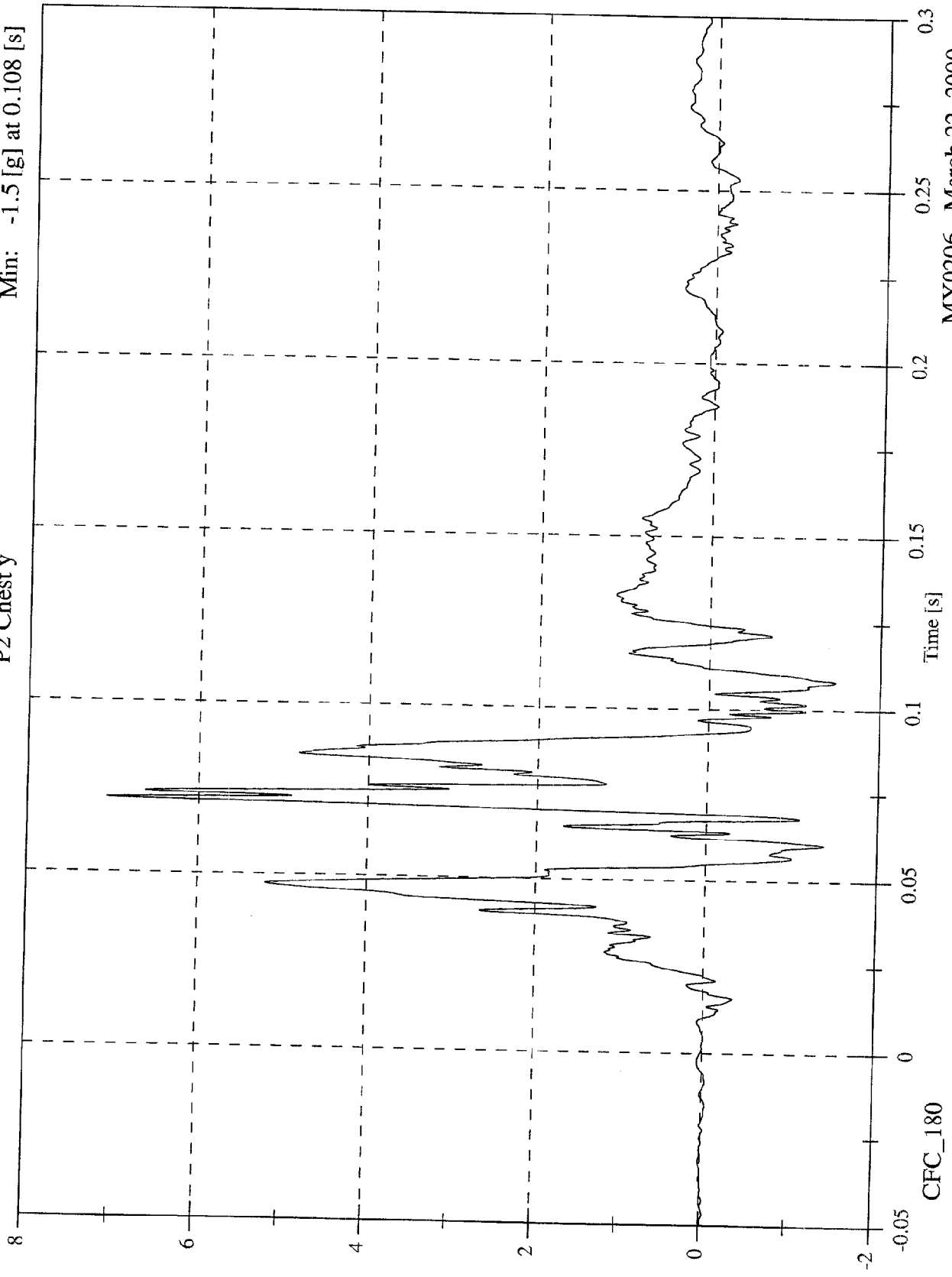
CFC_180

MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

P2 Chest y

Max: 7.1 [g] at 0.071 [s]
Min: -1.5 [g] at 0.108 [s]

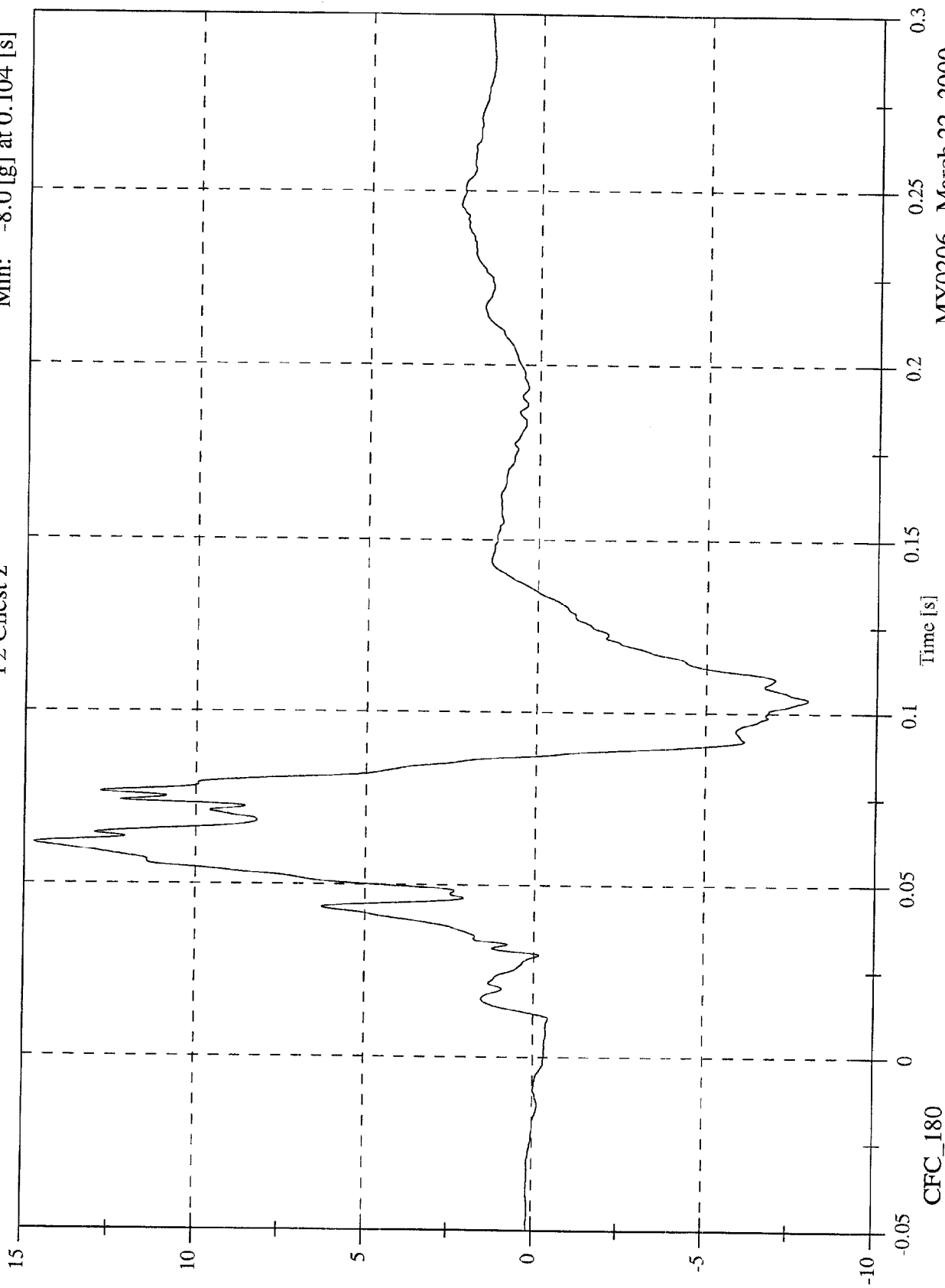


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 14.7 [g] at 0.062 [s]
 Min: -8.0 [g] at 0.104 [s]

P2 Chest z

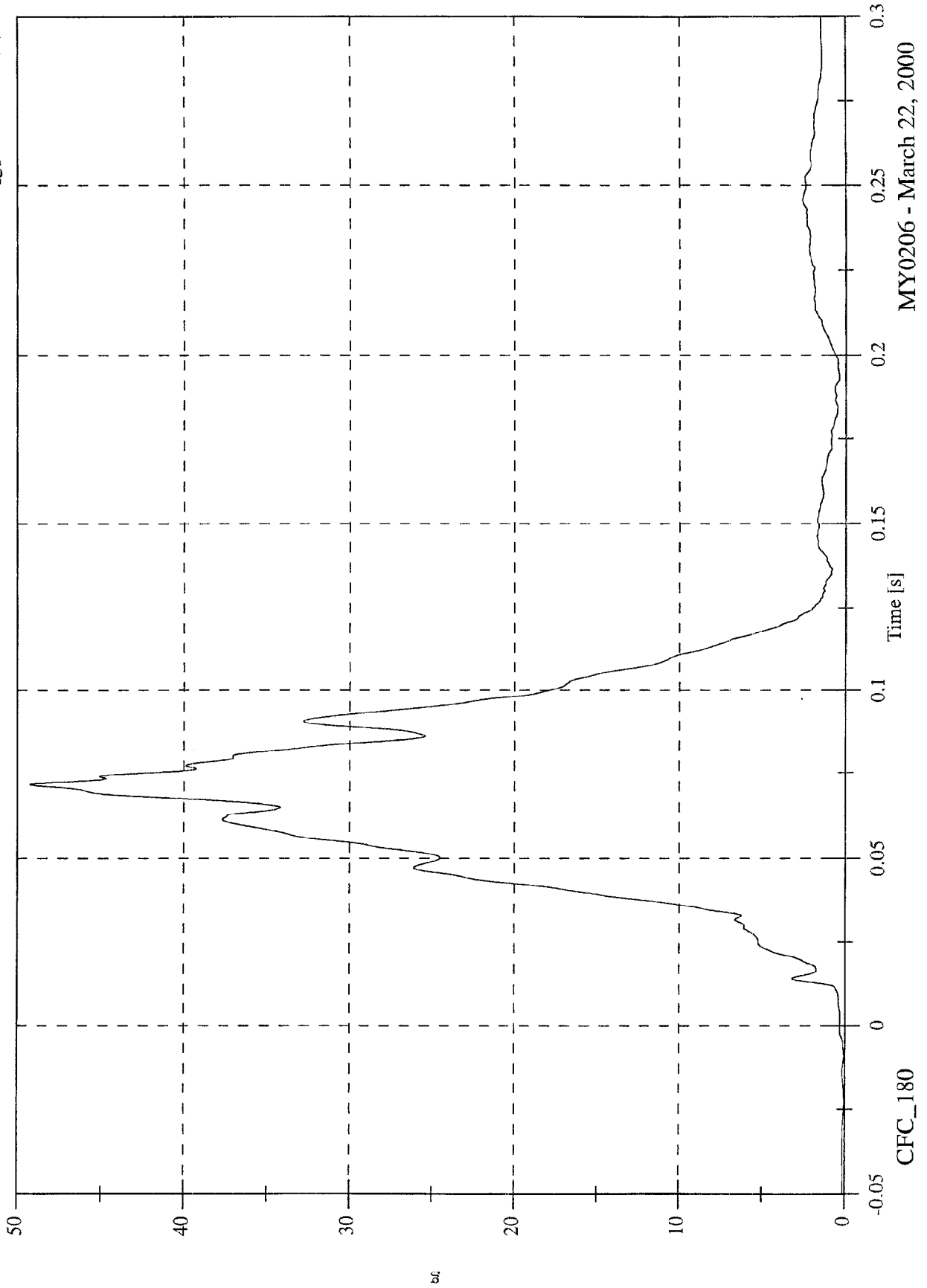


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 49.3 [g] at 0.072 [s]
 Min: 0.0 [g] at -0.022 [s]

P2 Chest Resultant

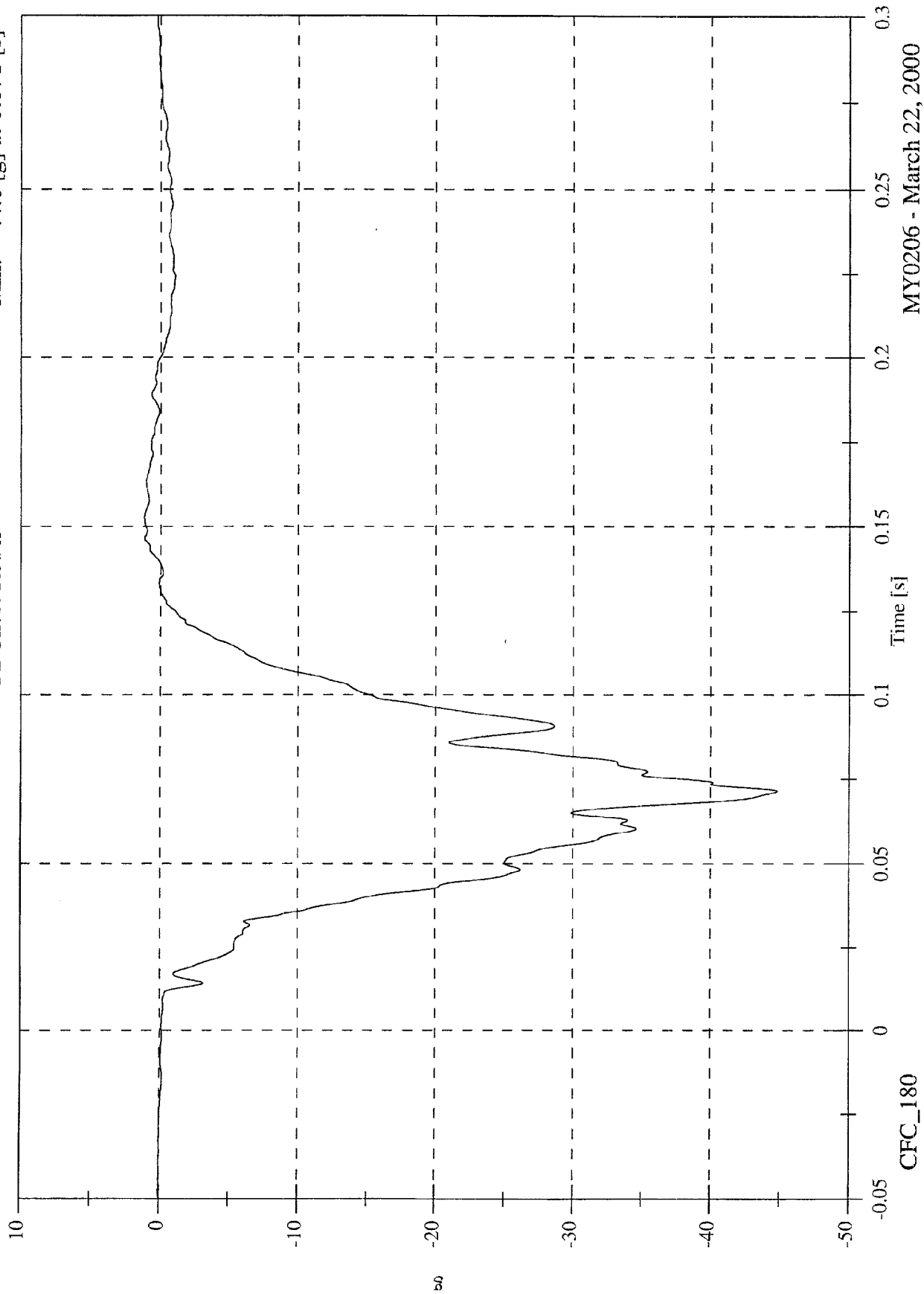


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

P2 Chest Red x

Max: 1.2 [g] at 0.153 [s]
Min: -44.8 [g] at 0.071 [s]



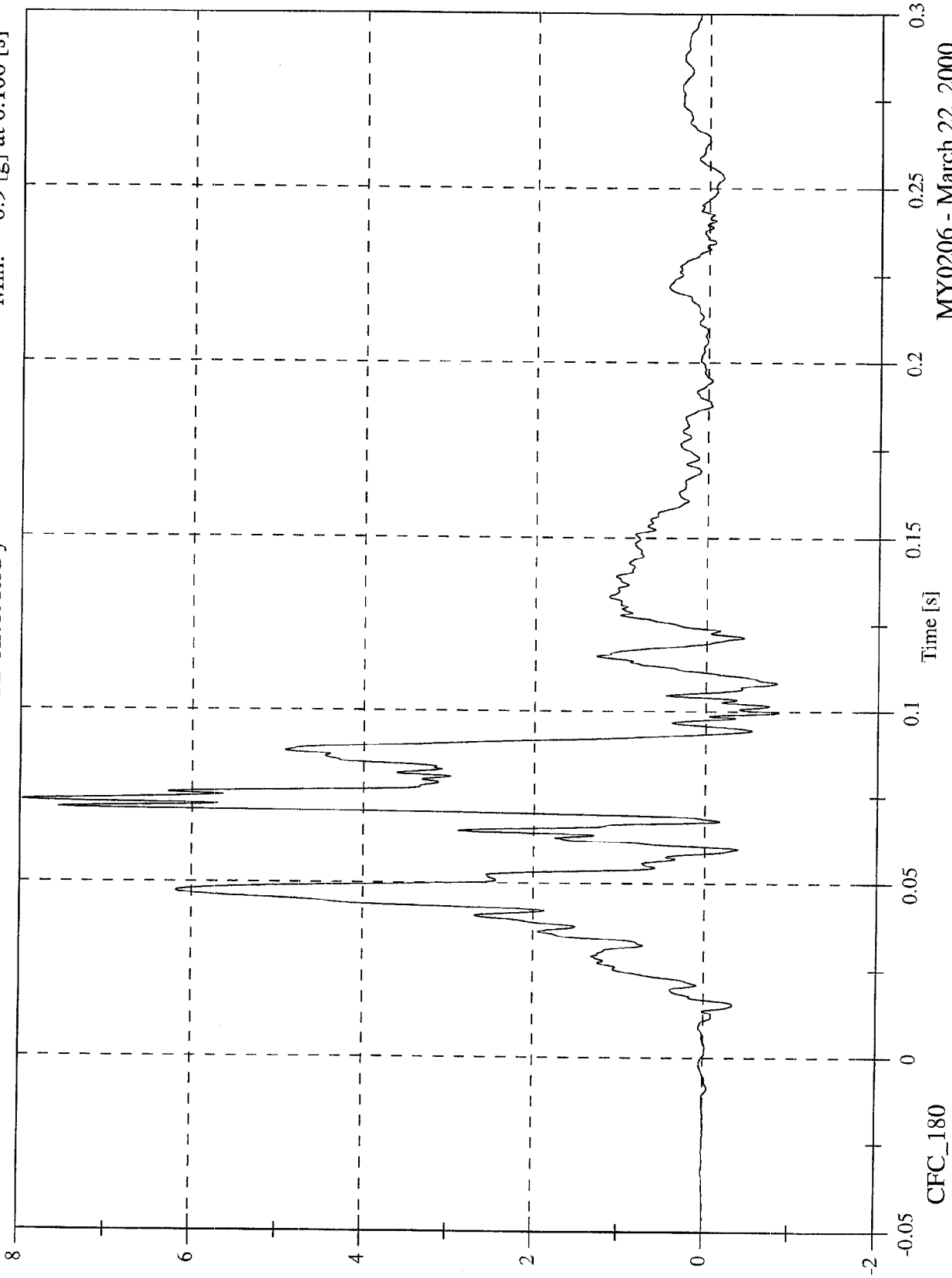
CFC_180

MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 8.0 [g] at 0.074 [s]
Min: -0.9 [g] at 0.100 [s]

P2 Chest Red y

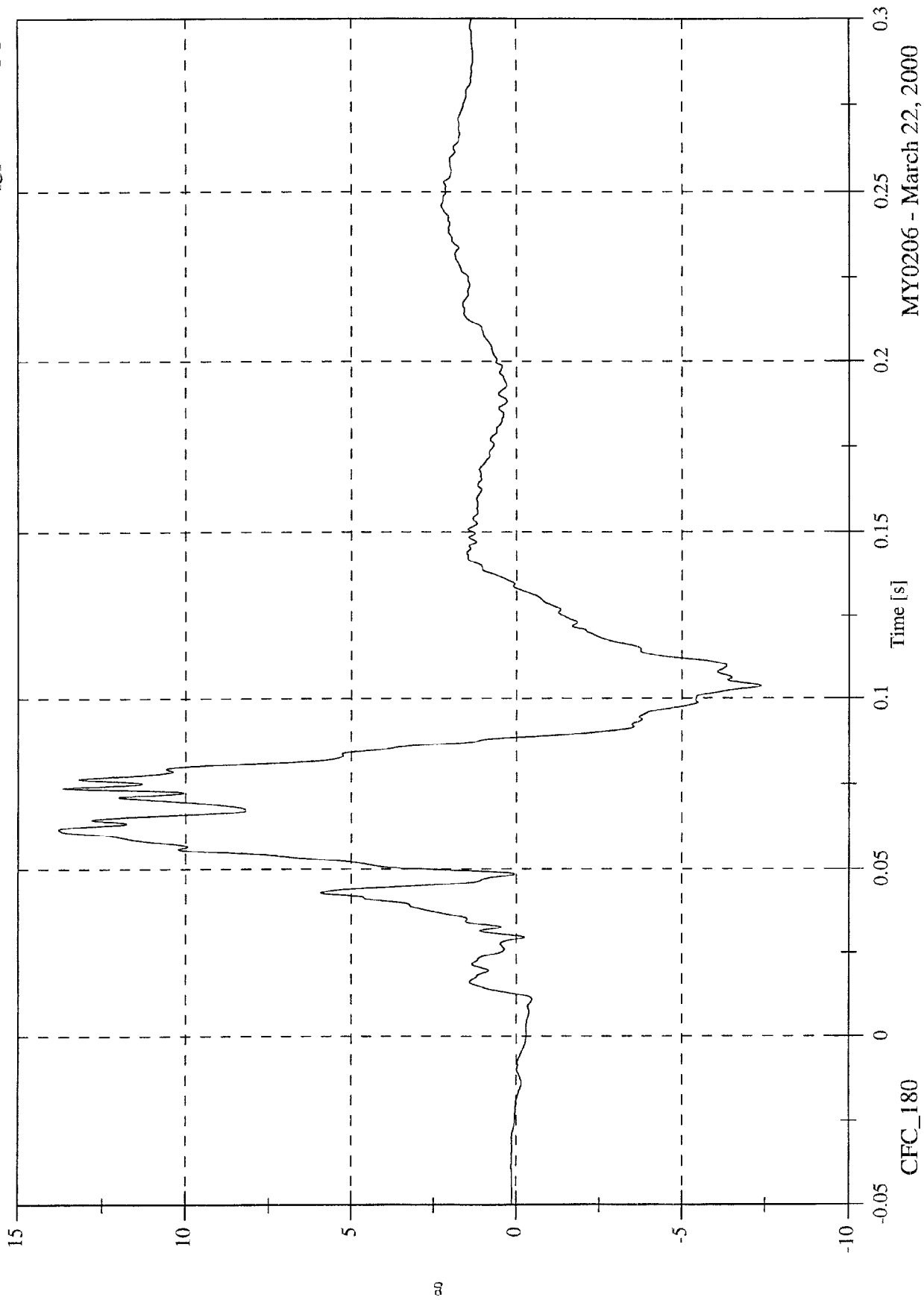


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 13.8 [g] at 0.062 [s]
 Min: -7.4 [g] at 0.104 [s]

P2 Chest Red z

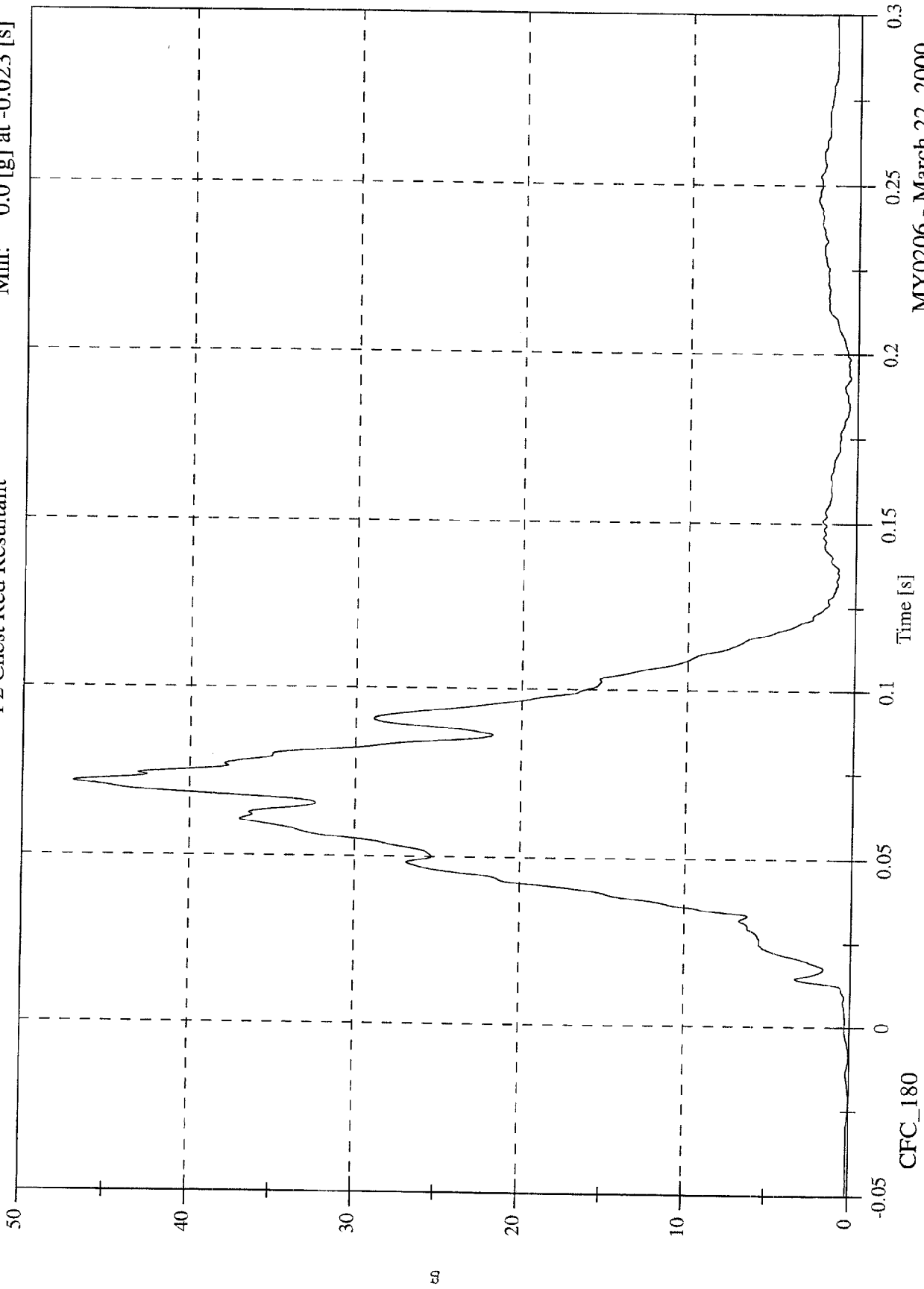


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 47.0 [g] at 0.071 [s]
 Min: 0.0 [g] at -0.023 [s]

P2 Chest Red Resultant

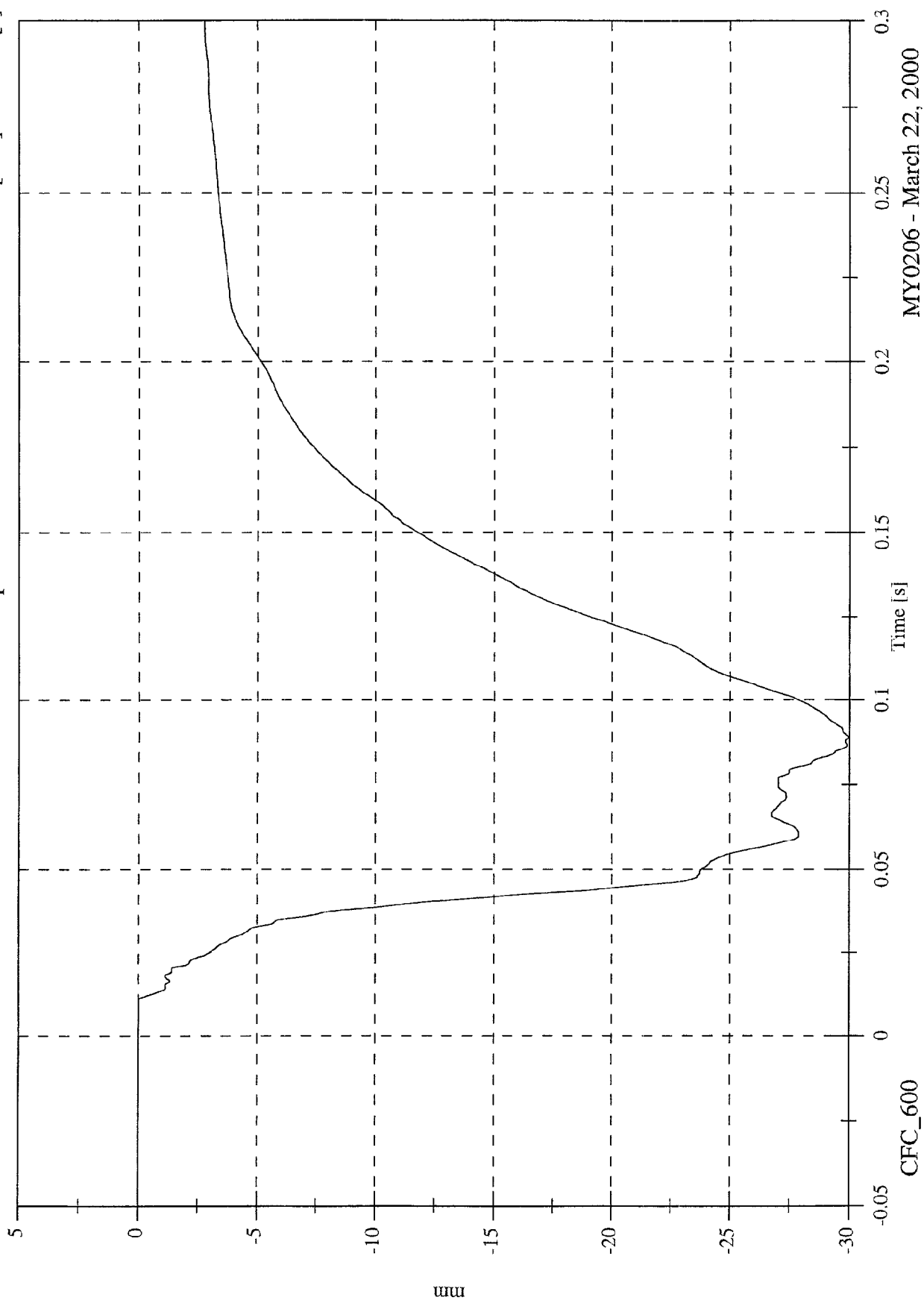


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 0.0 [mm] at 0.011 [s]
 Min: -30.0 [mm] at 0.089 [s]

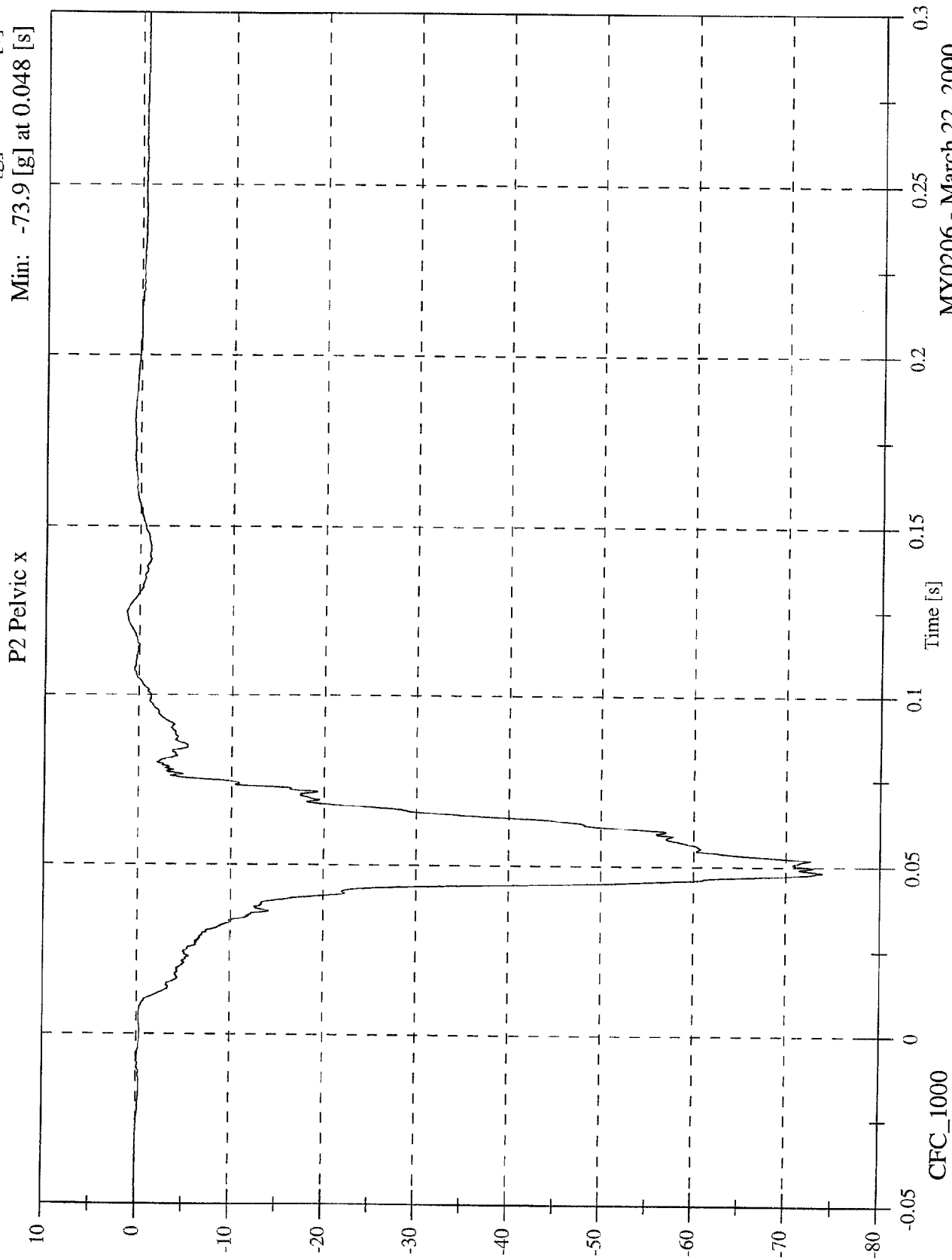
P2 Chest Compression x



MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 1.4 [g] at 0.125 [s]
Min: -73.9 [g] at 0.048 [s]

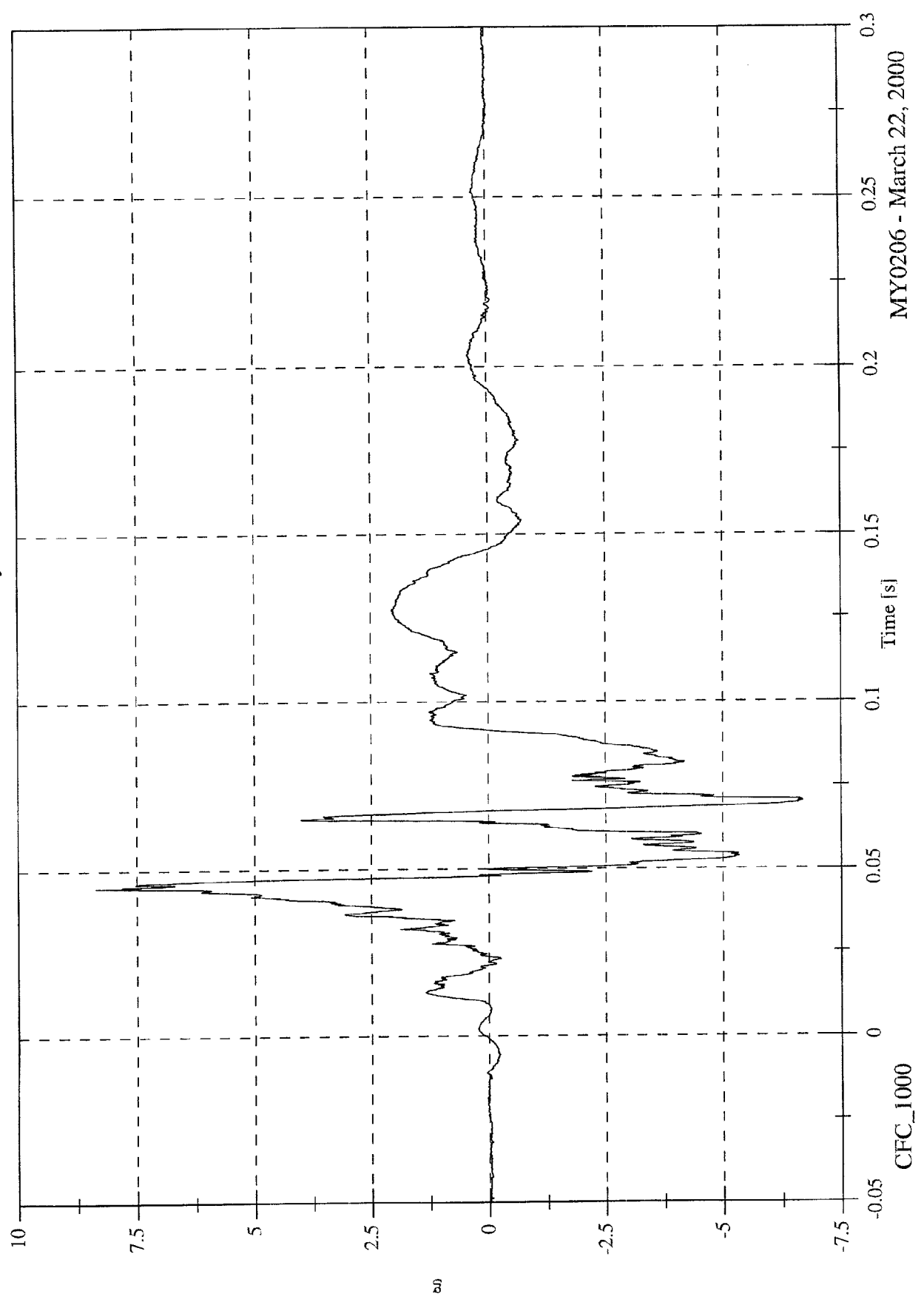


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 8.4 [g] at 0.045 [s]
Min: -6.7 [g] at 0.070 [s]

P2 Pelvic y

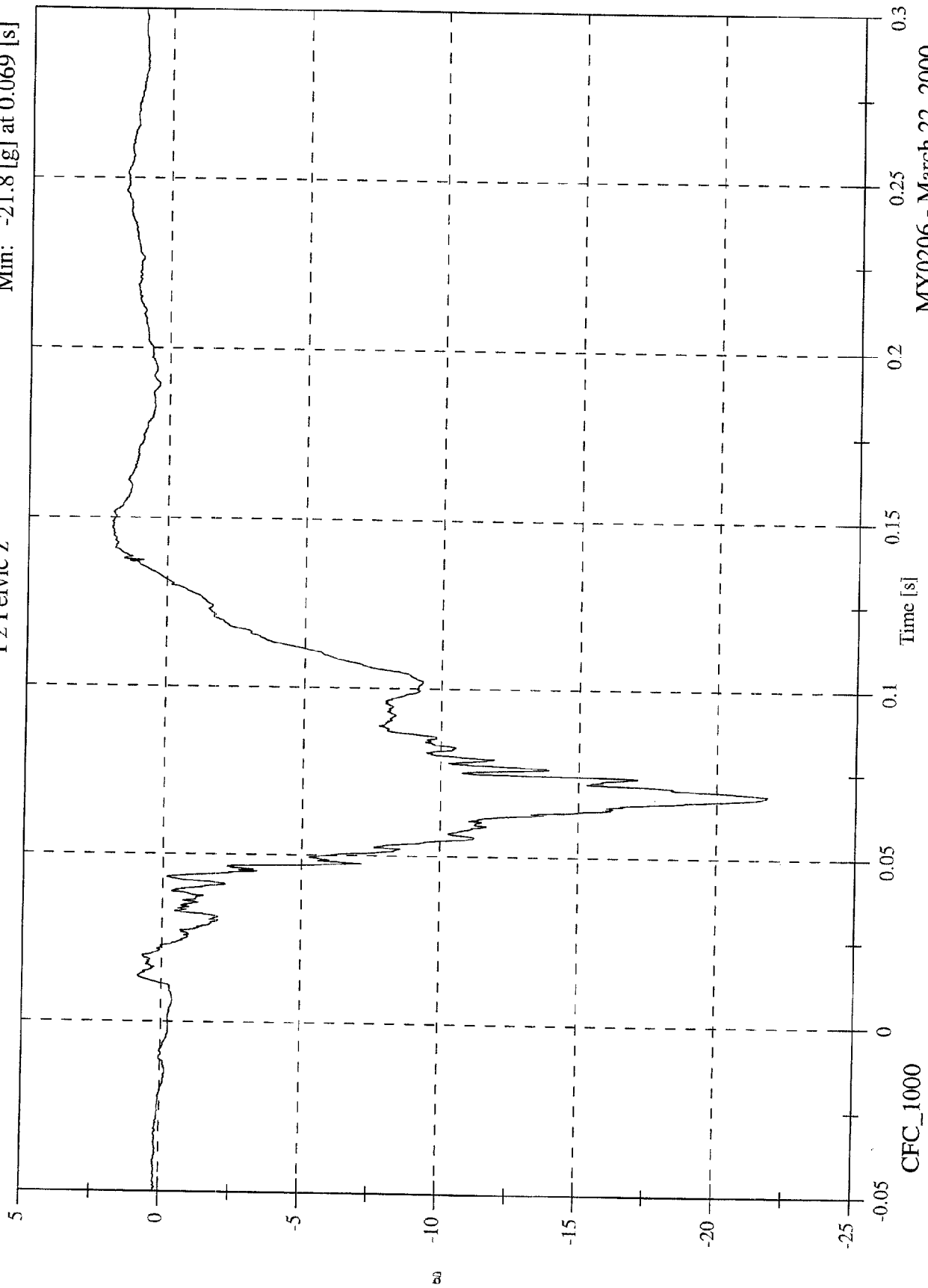


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 2.0 [g] at 0.147 [s]
Min: -21.8 [g] at 0.069 [s]

P2 Pelvic z

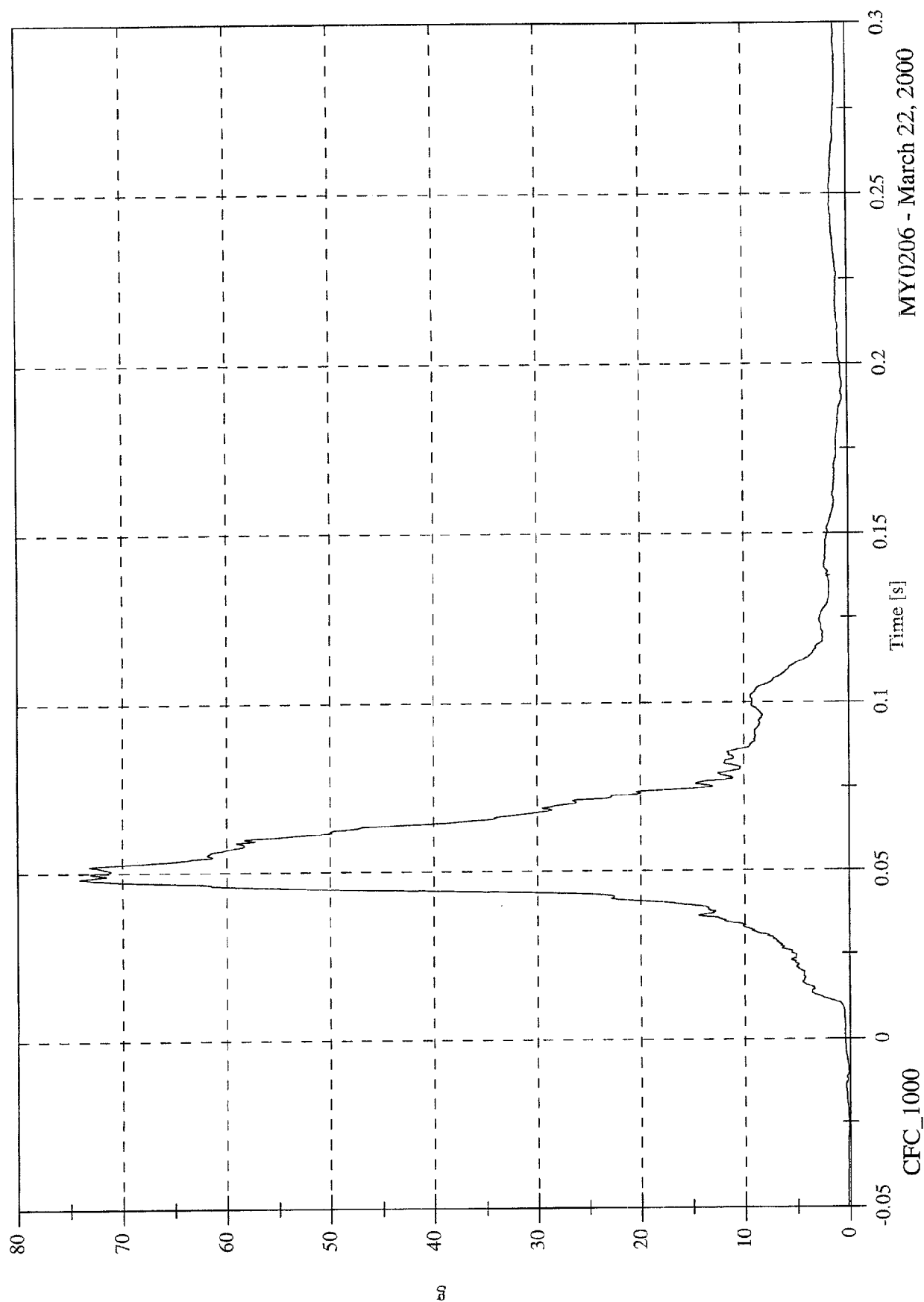


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 74.1 [g] at 0.048 [s]
 Min: 0.1 [g] at -0.010 [s]

P2 Pelvic Resultant

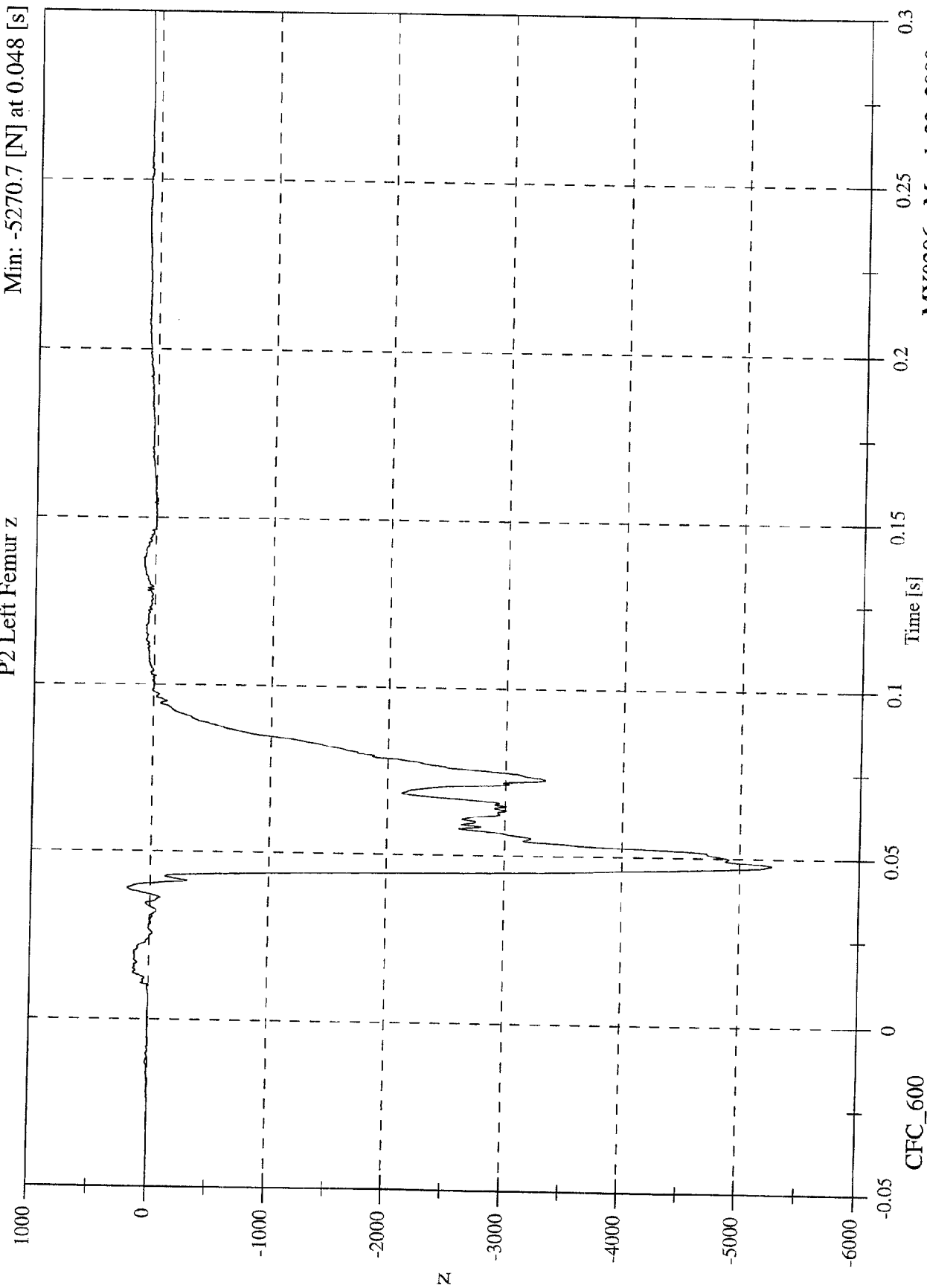


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 191.6 [N] at 0.039 [s]
Min: -5270.7 [N] at 0.048 [s]

P2 Left Femur z

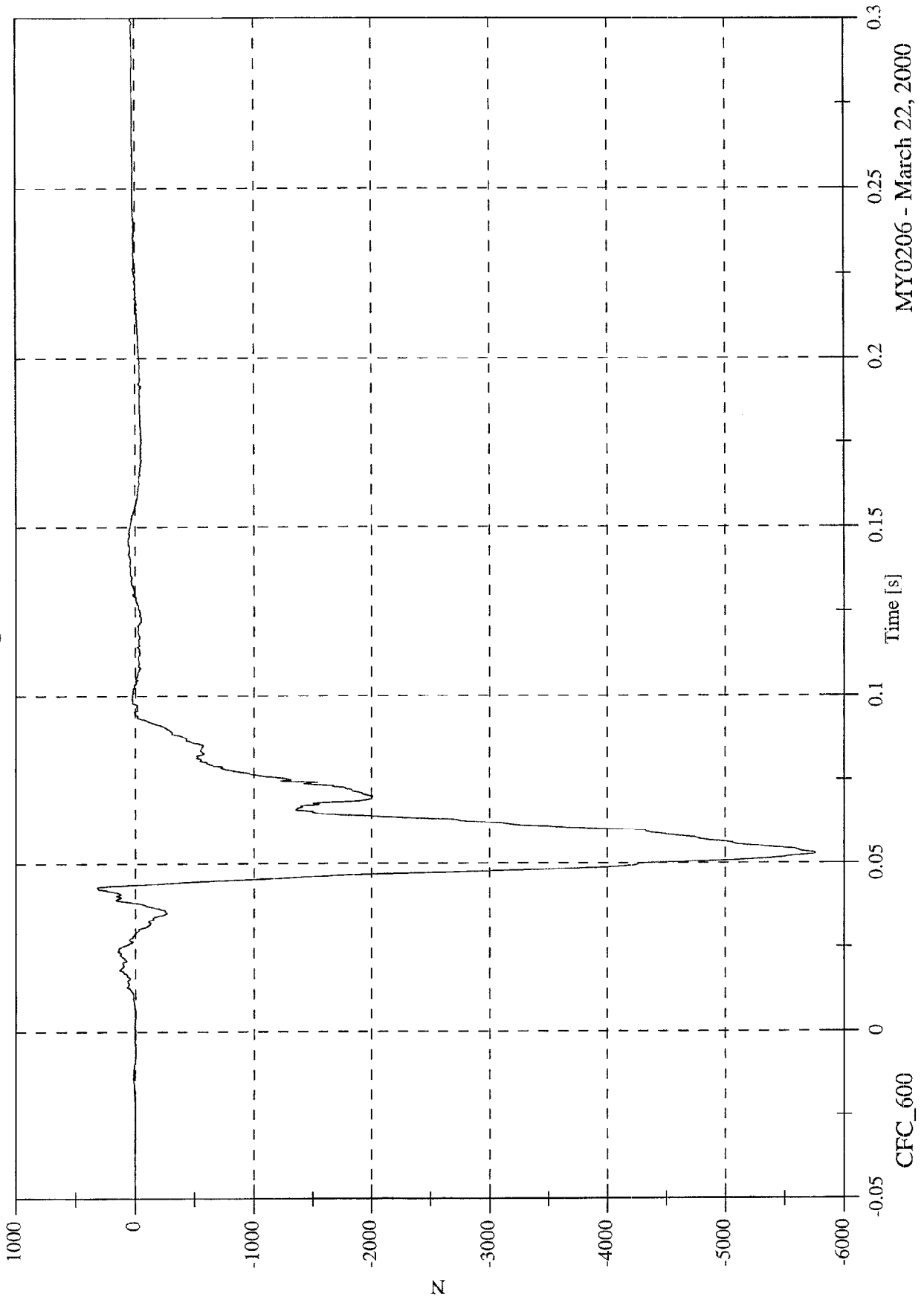


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 319.6 [N] at 0.043 [s]
Min: -5757.5 [N] at 0.053 [s]

P2 Right Femur z

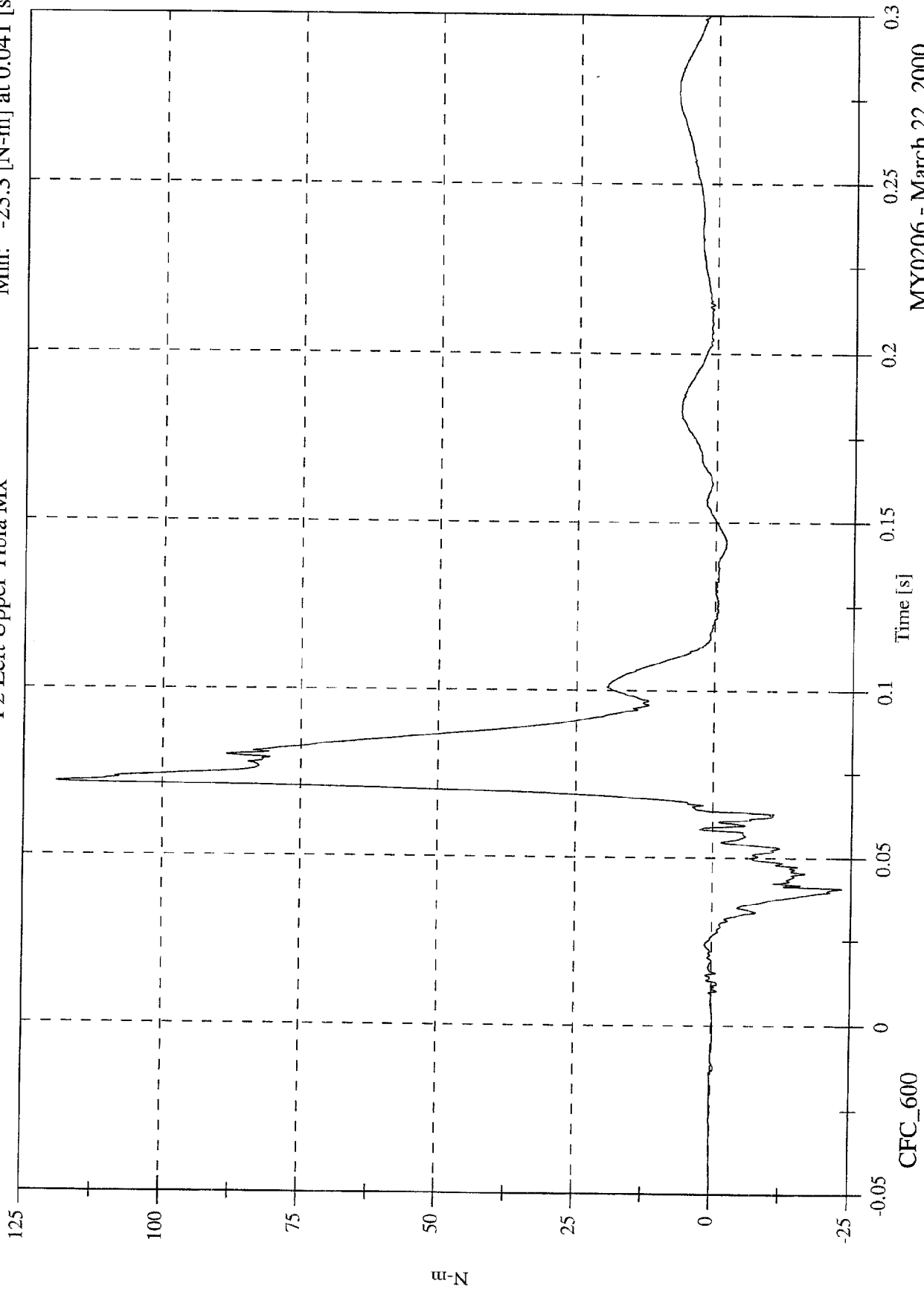


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NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 119.1 [N-m] at 0.072 [s]
 Min: -23.3 [N-m] at 0.041 [s]

P2 Left Upper Tibia Mx

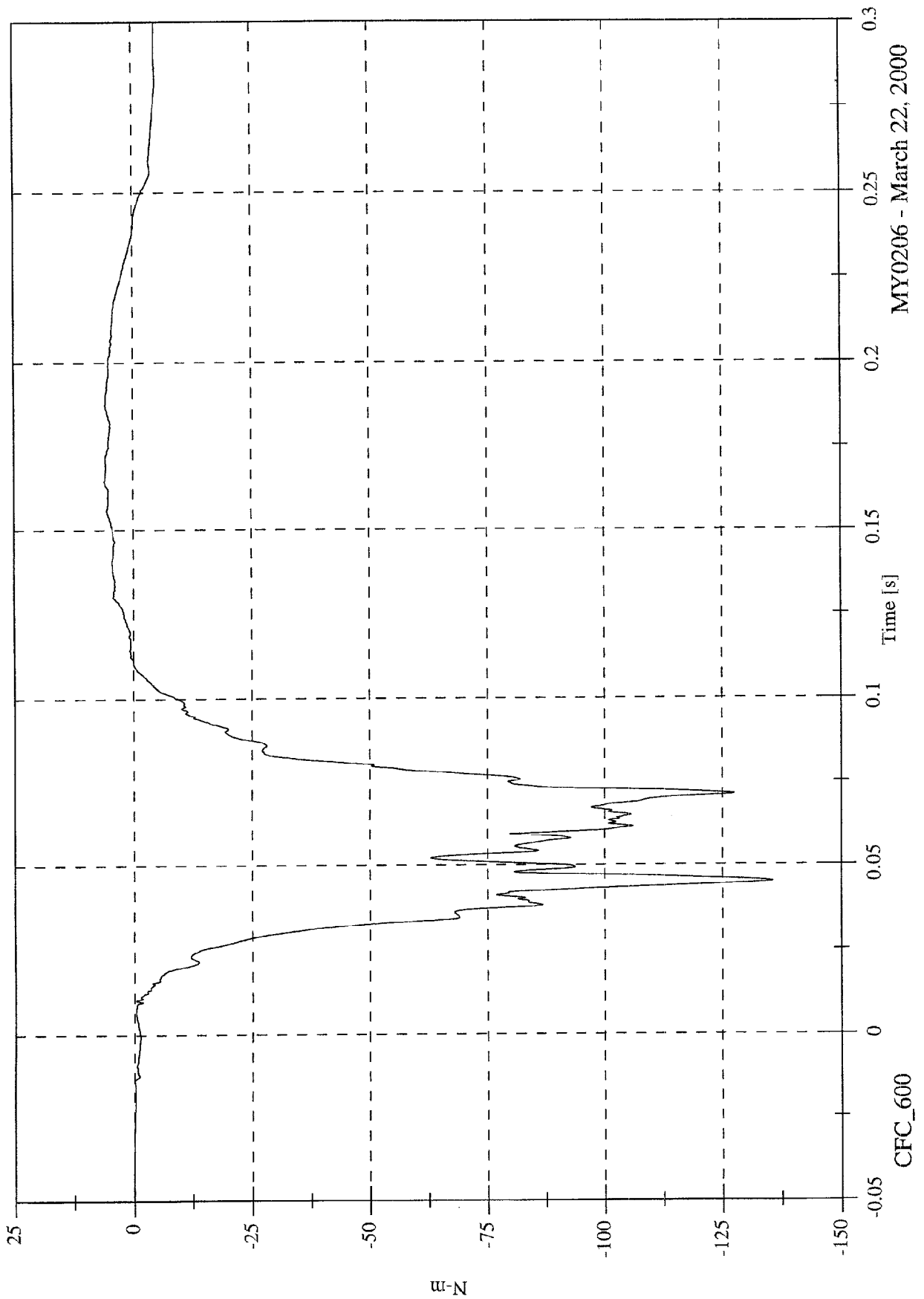


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NCAP Test #16 - 2000 Ford Focus 4-Door

P2 Left Upper Tibia My

Max: 6.0 [N-m] at 0.165 [s]
Min: -135.5 [N-m] at 0.045 [s]

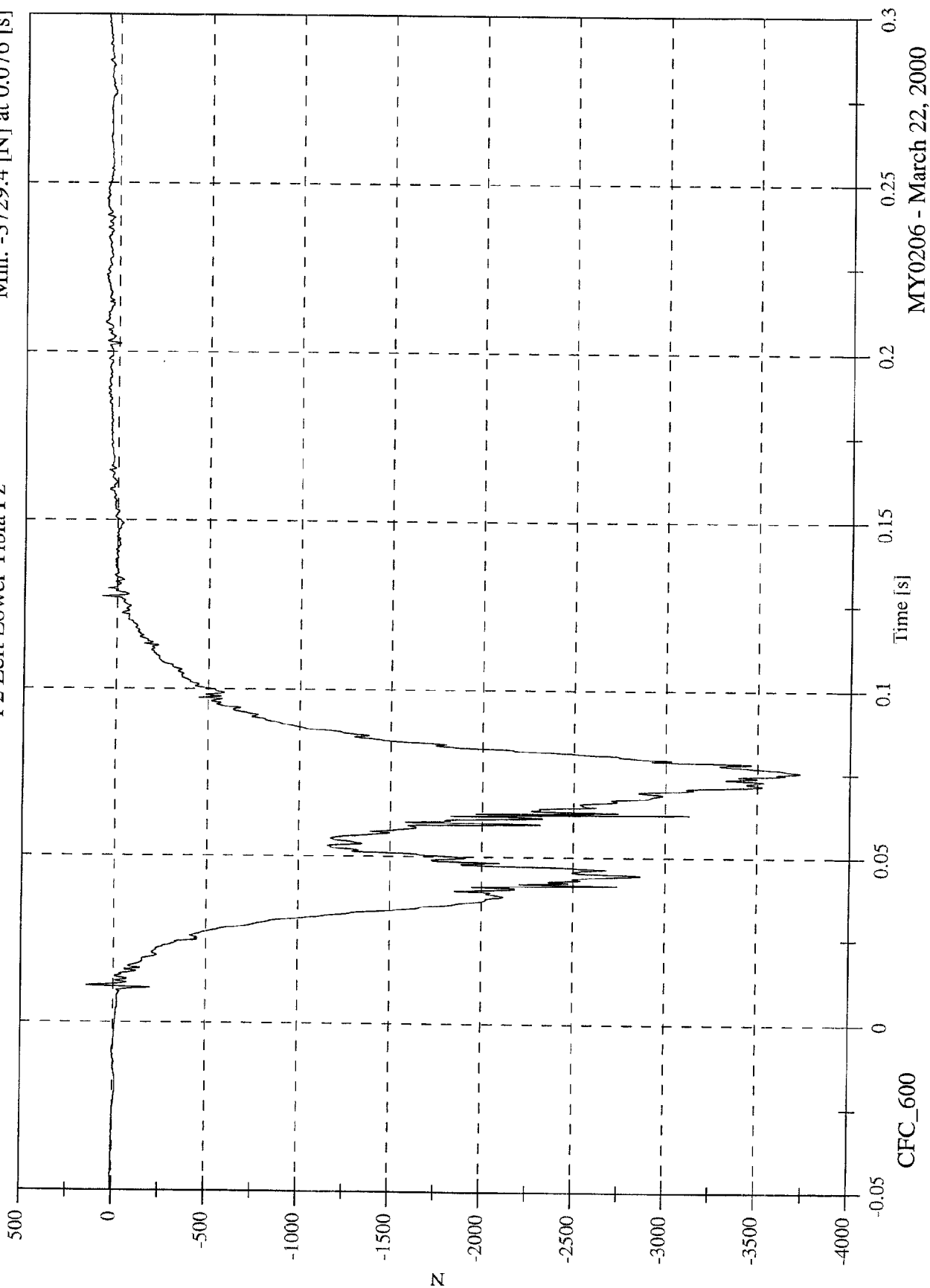


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NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 144.7 [N] at 0.011 [s]
Min: -3729.4 [N] at 0.076 [s]

P2 Left Lower Tibia Fz

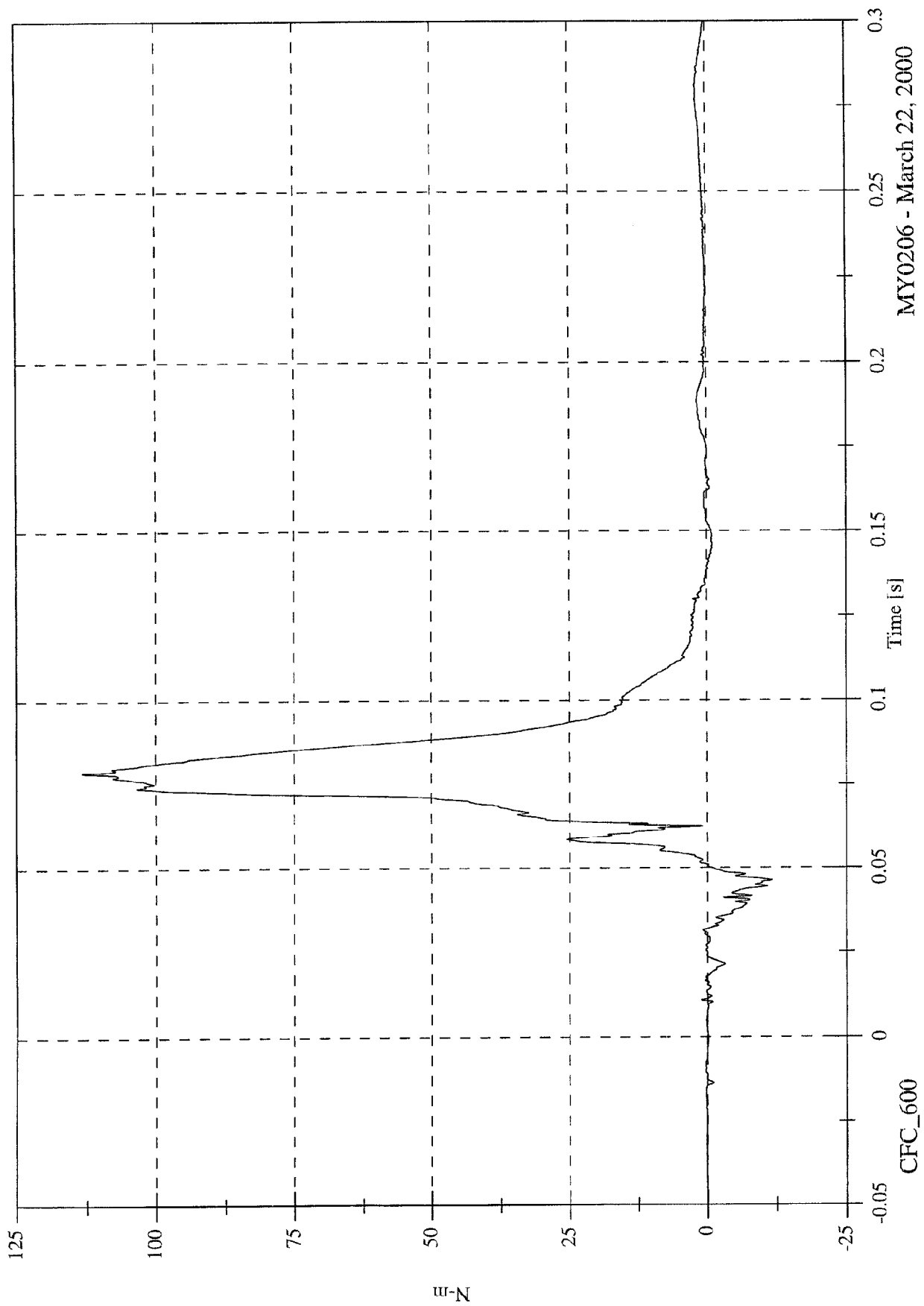


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NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 113.2 [N-m] at 0.079 [s]
Min: -11.6 [N-m] at 0.046 [s]

P2 Left Lower Tibia Mx



CFC_600

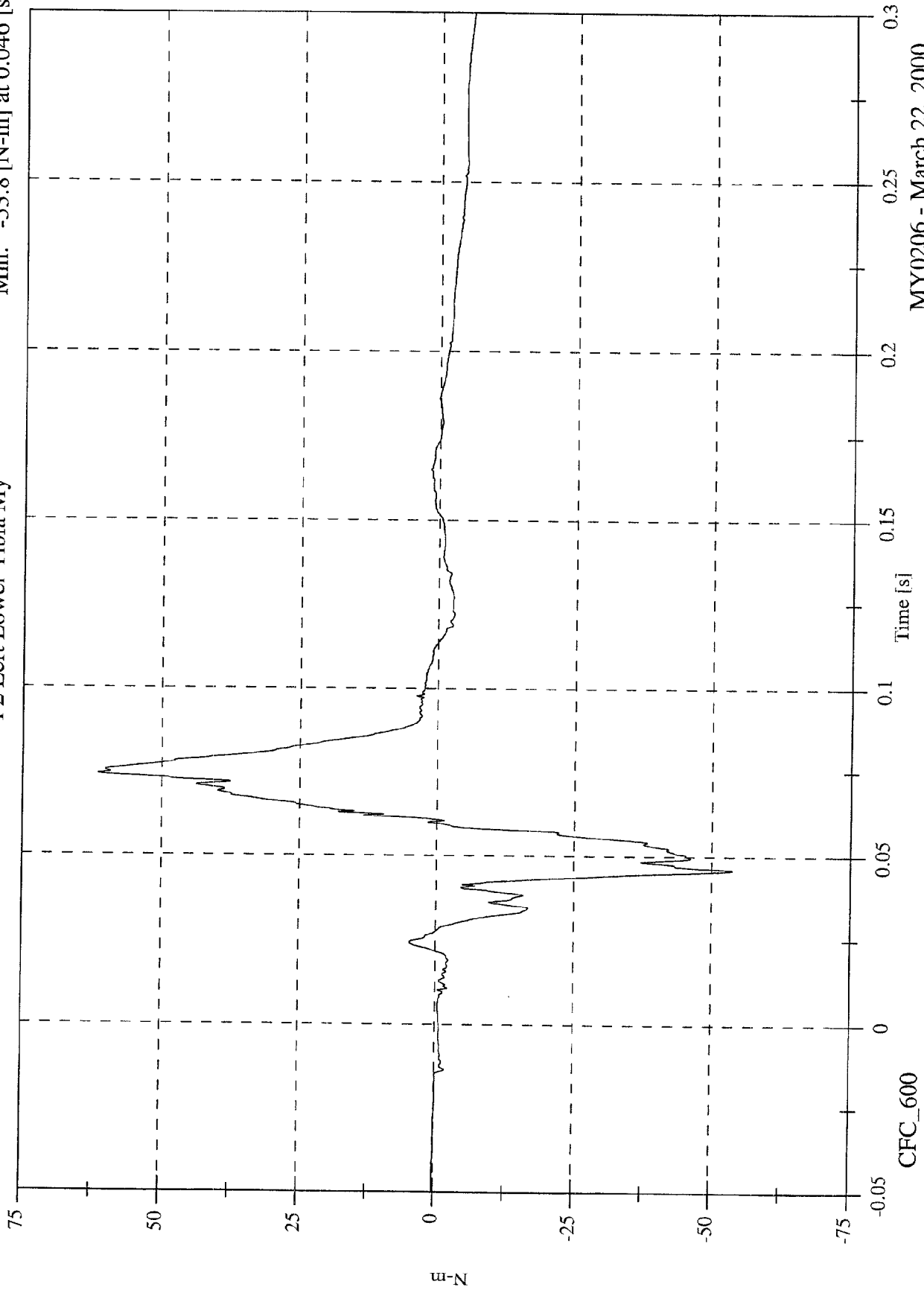
Time [s]

MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 61.6 [N-m] at 0.074 [s]
 Min: -53.8 [N-m] at 0.046 [s]

P2 Left Lower Tibia My

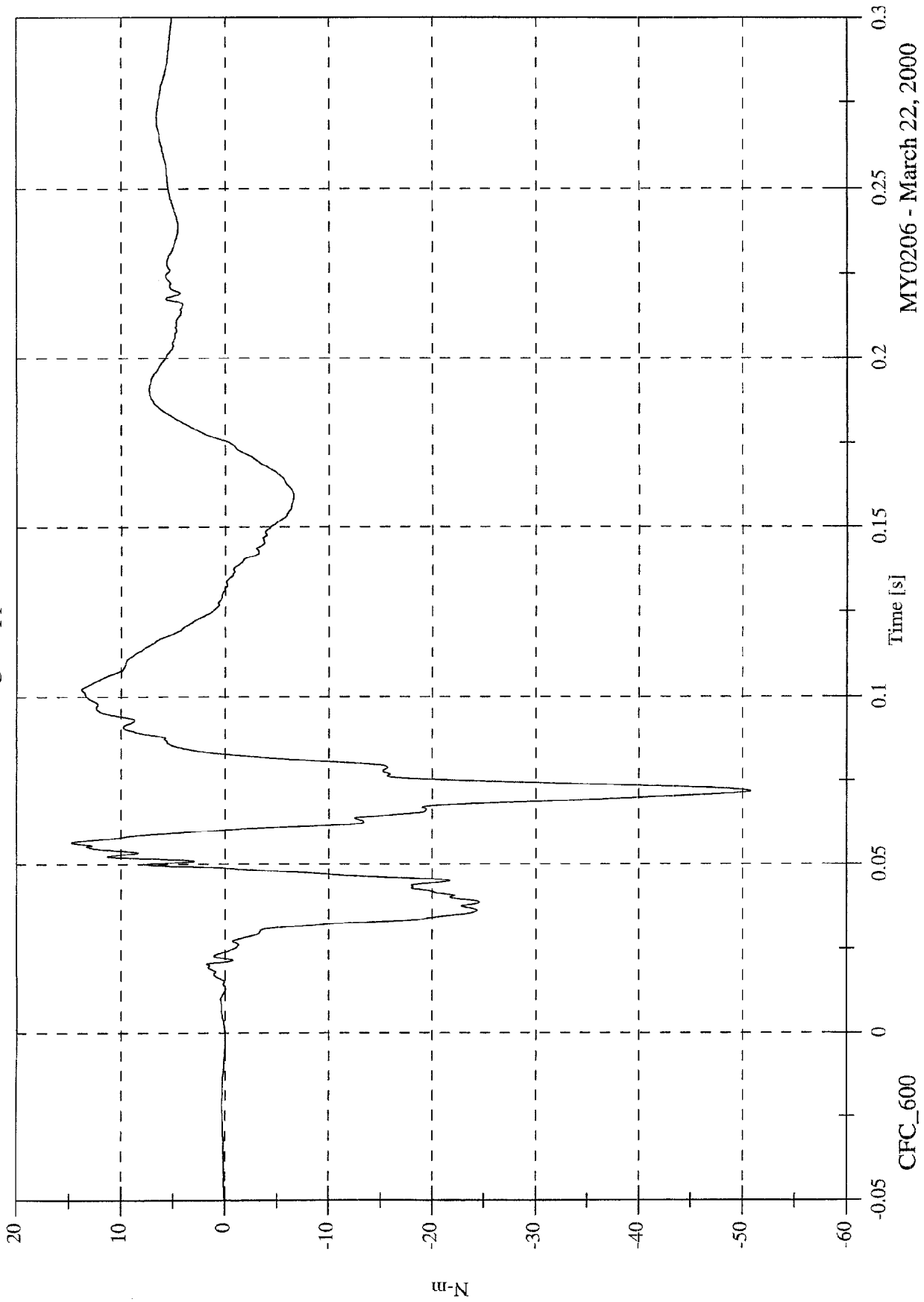


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 14.7 [N-m] at 0.057 [s]
 Min: -50.8 [N-m] at 0.072 [s]

P2 Right Upper Tibia Mx

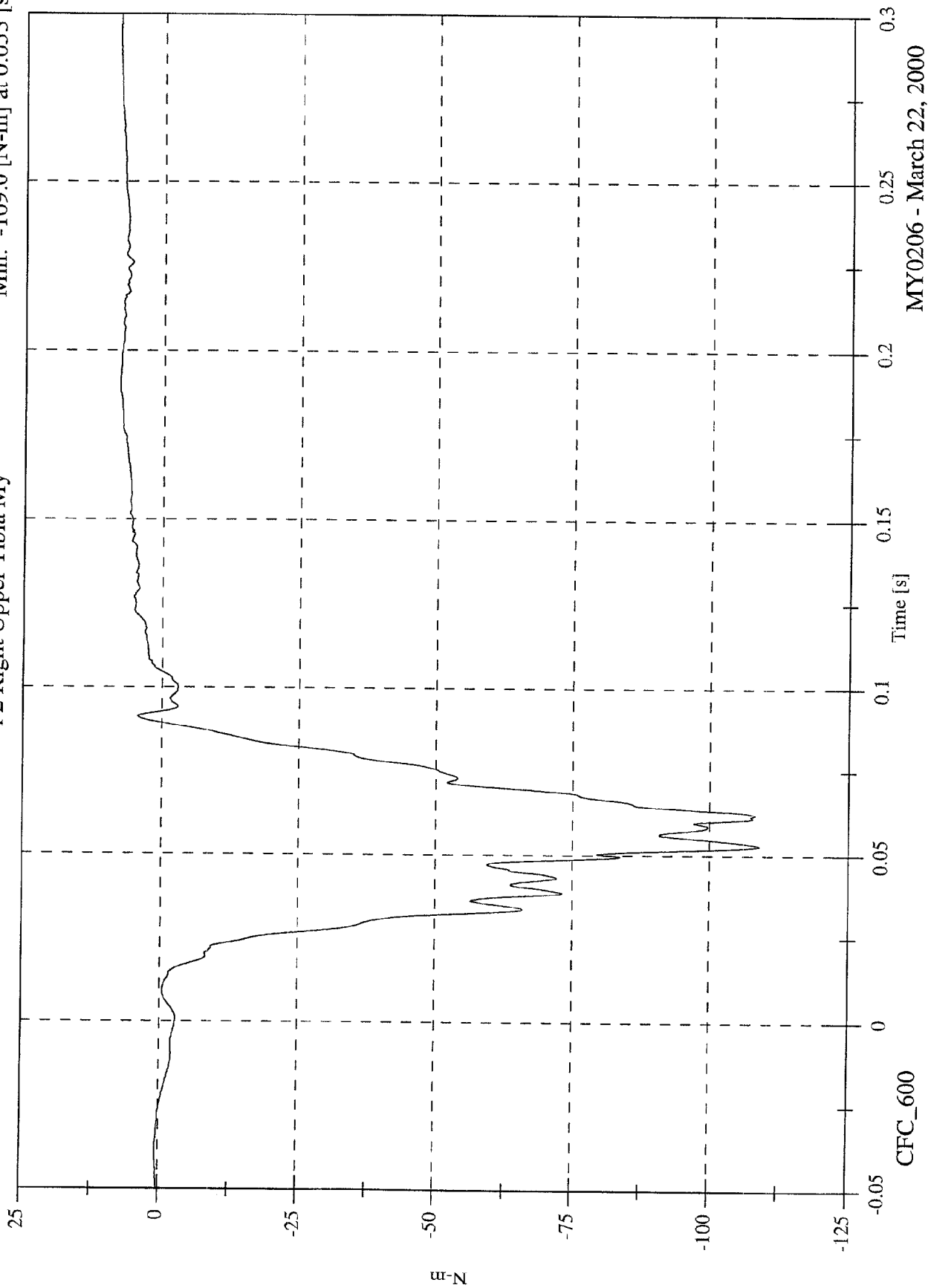


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

P2 Right Upper Tibia My

Max: 8.2 [N-m] at 0.297 [s]
Min: -109.0 [N-m] at 0.053 [s]

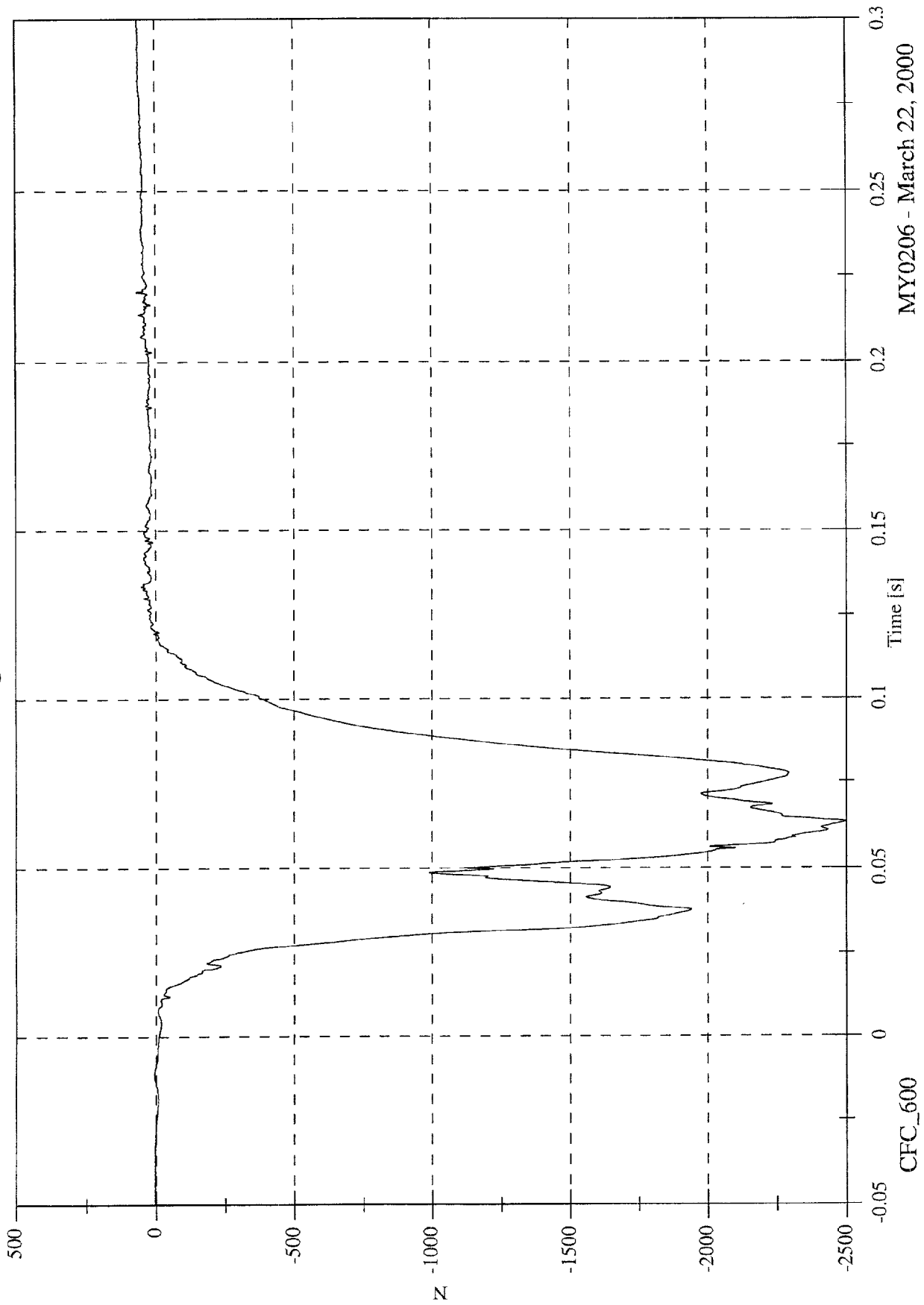


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

P2 Right Lower Tibia Fz

Max: 67.4 [N] at 0.220 [s]
Min: -2497.0 [N] at 0.063 [s]

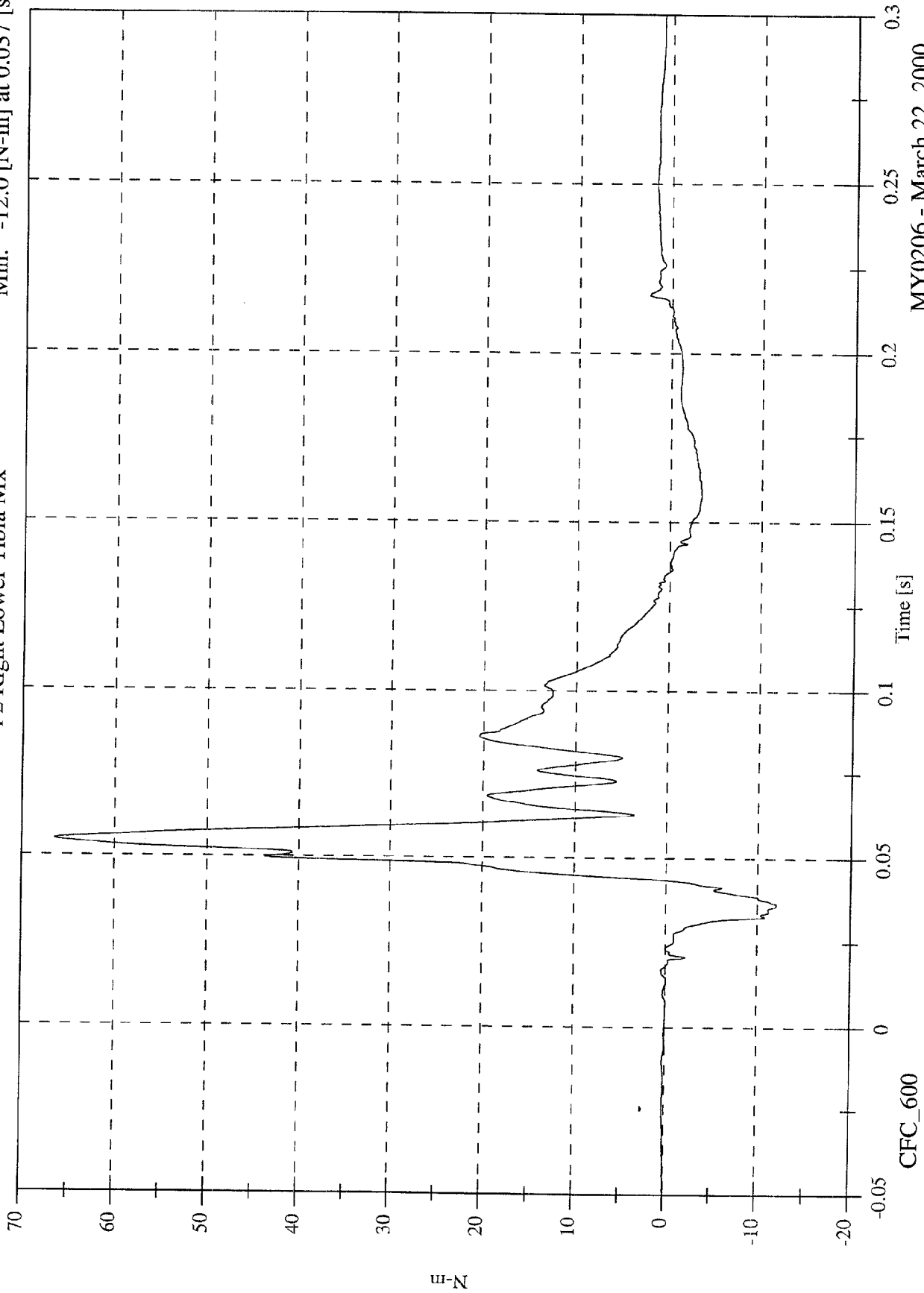


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 66.4 [N-m] at 0.055 [s]
 Min: -12.0 [N-m] at 0.037 [s]

P2 Right Lower Tibia Mx

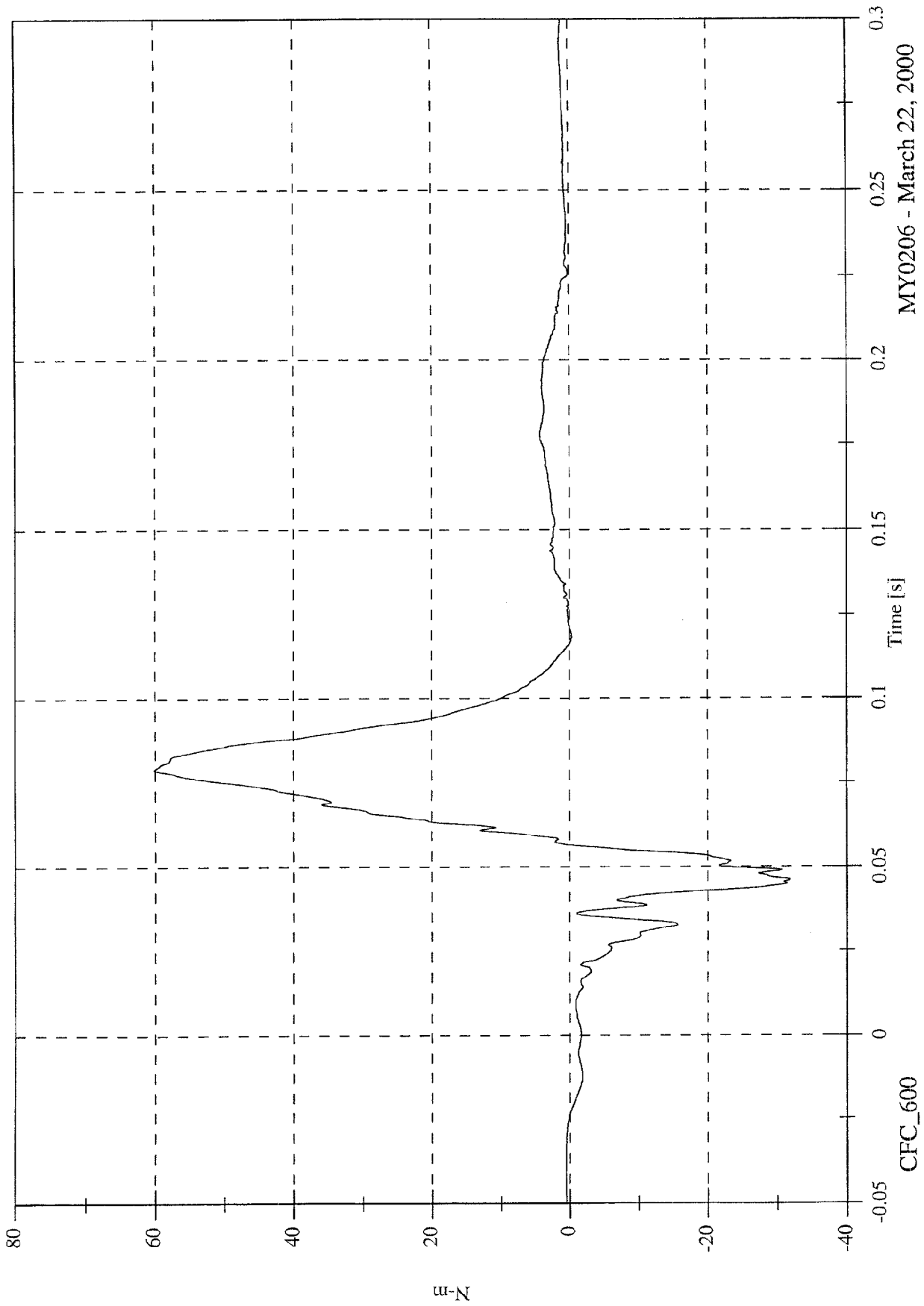


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

P2 Right Lower Tibia My

Max: 60.1 [N-m] at 0.079 [s]
Min: -31.9 [N-m] at 0.046 [s]

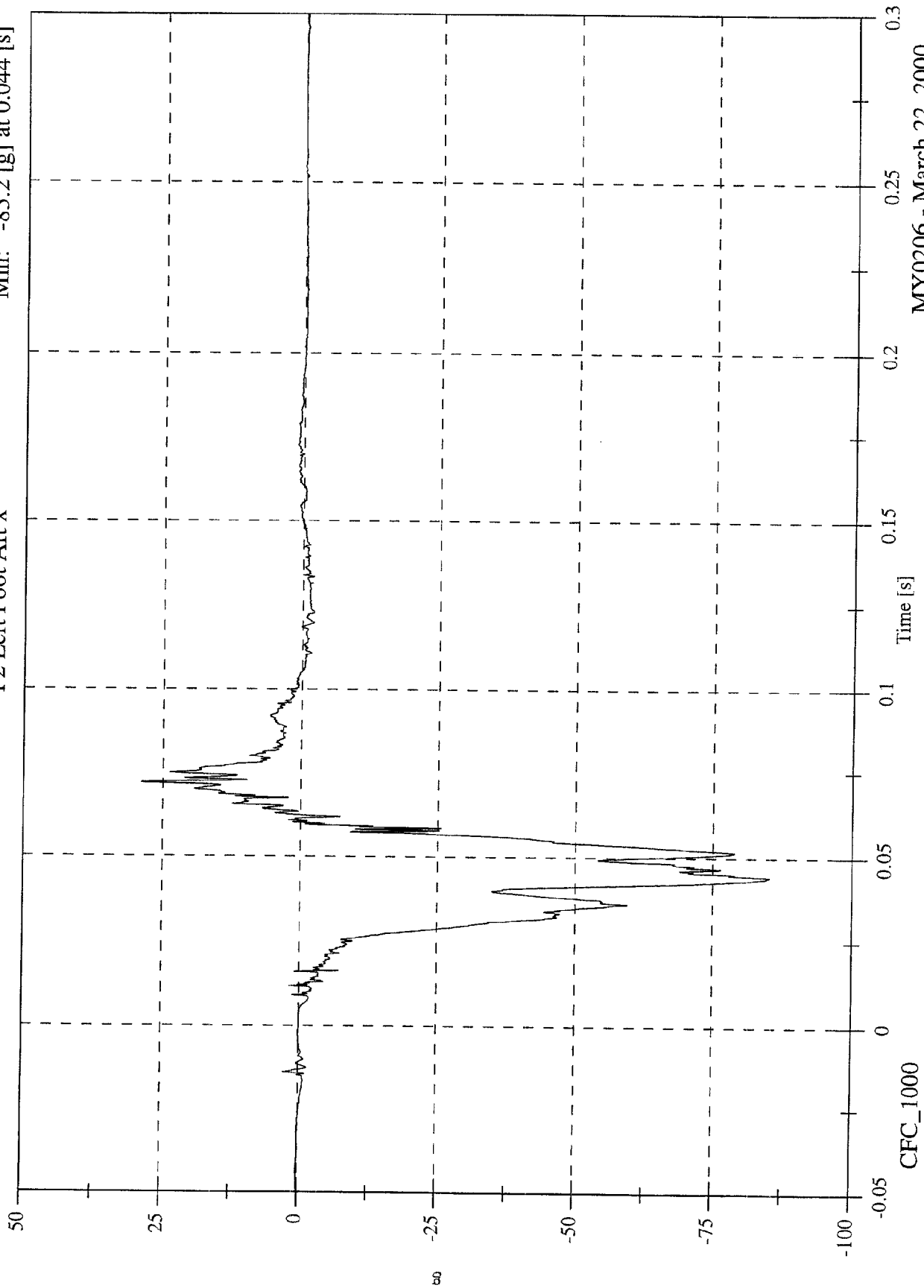


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 28.9 [g] at 0.072 [s]
 Min: -85.2 [g] at 0.044 [s]

P2 Left Foot Aft x

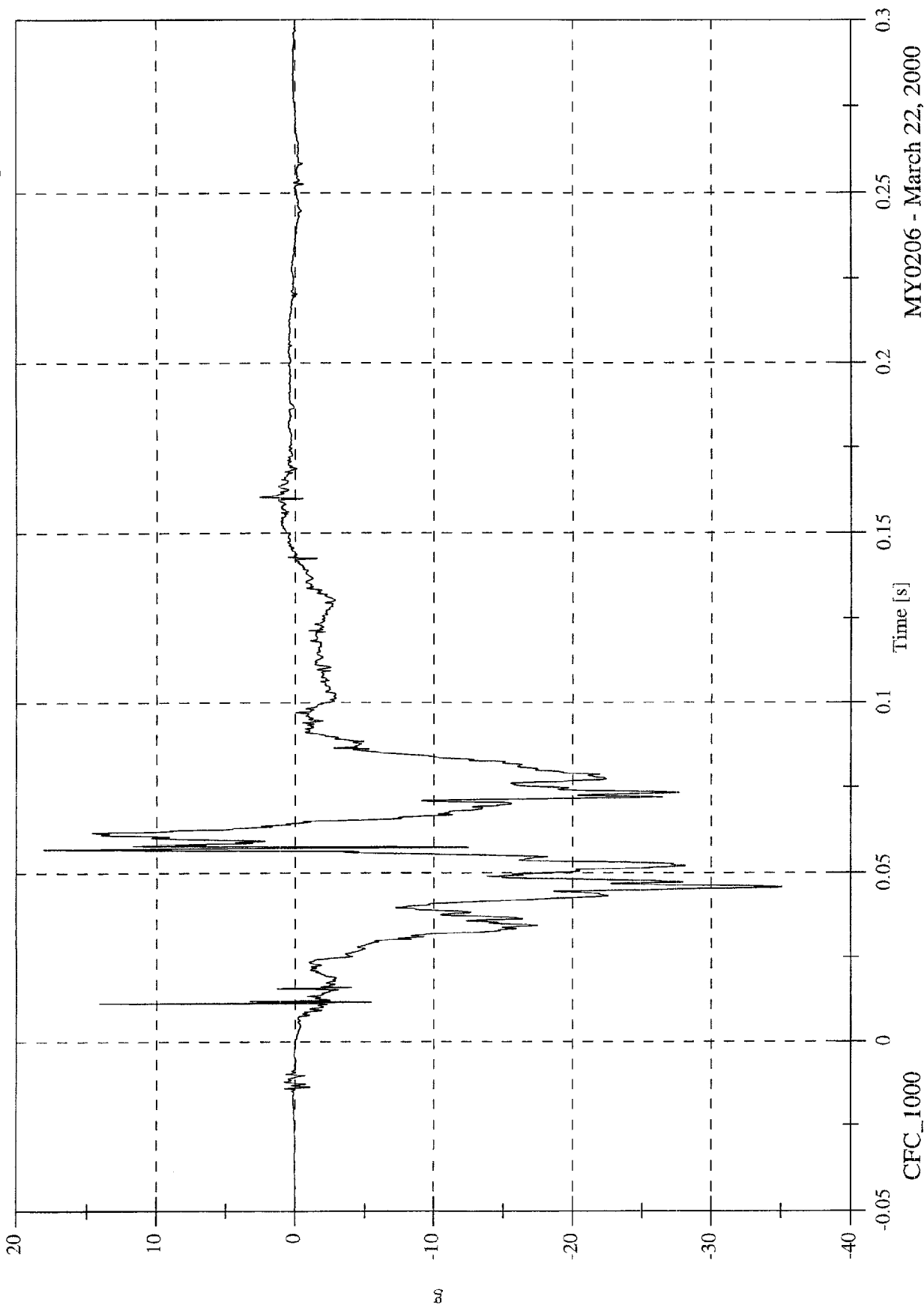


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

P2 Left Foot Aft z

Max: 18.0 [g] at 0.057 [s]
Min: -35.1 [g] at 0.046 [s]

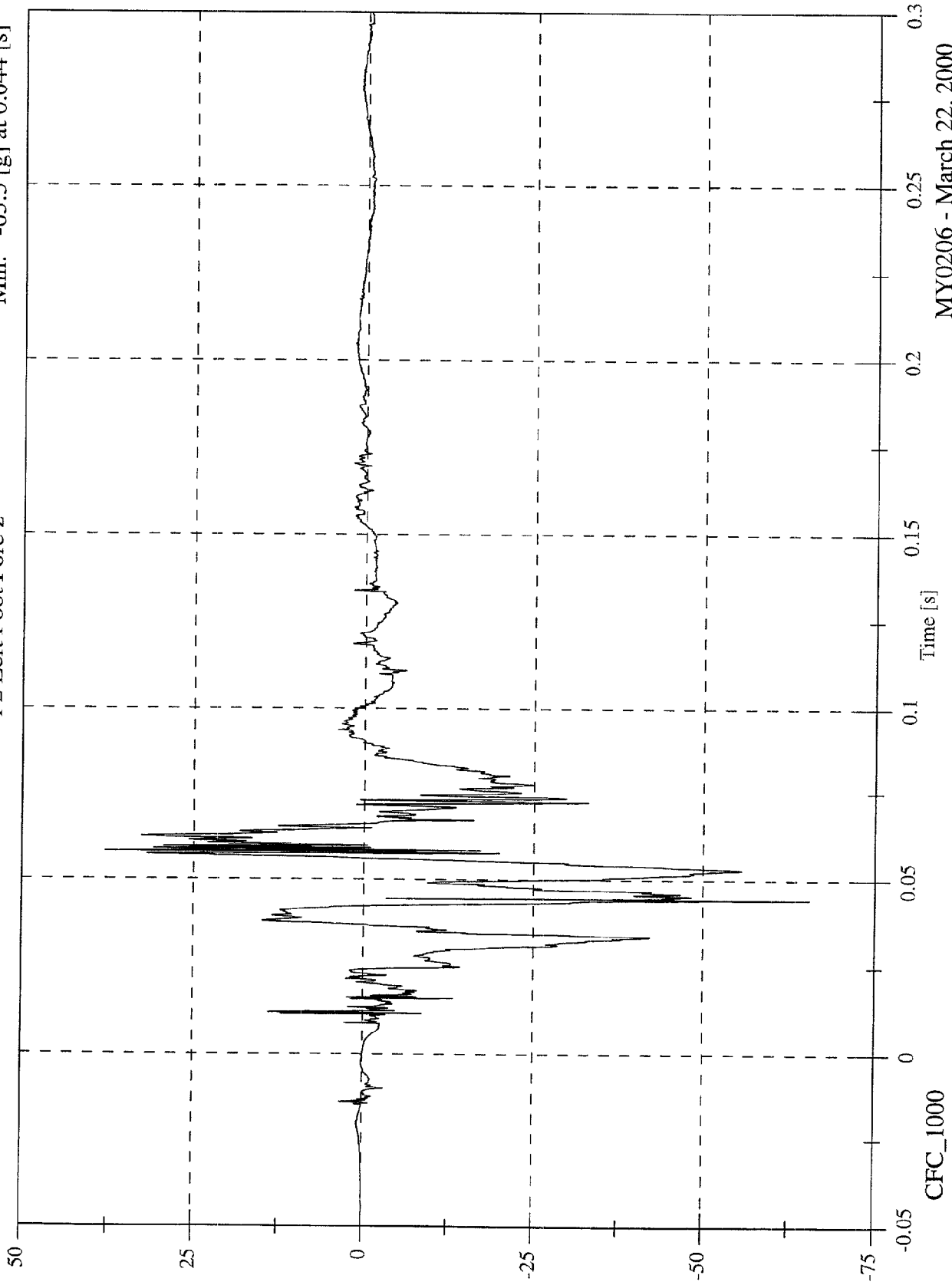


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4Door

Max: 37.9 [g] at 0.058 [s]
Min: -65.5 [g] at 0.044 [s]

P2 Left Foot Fore z

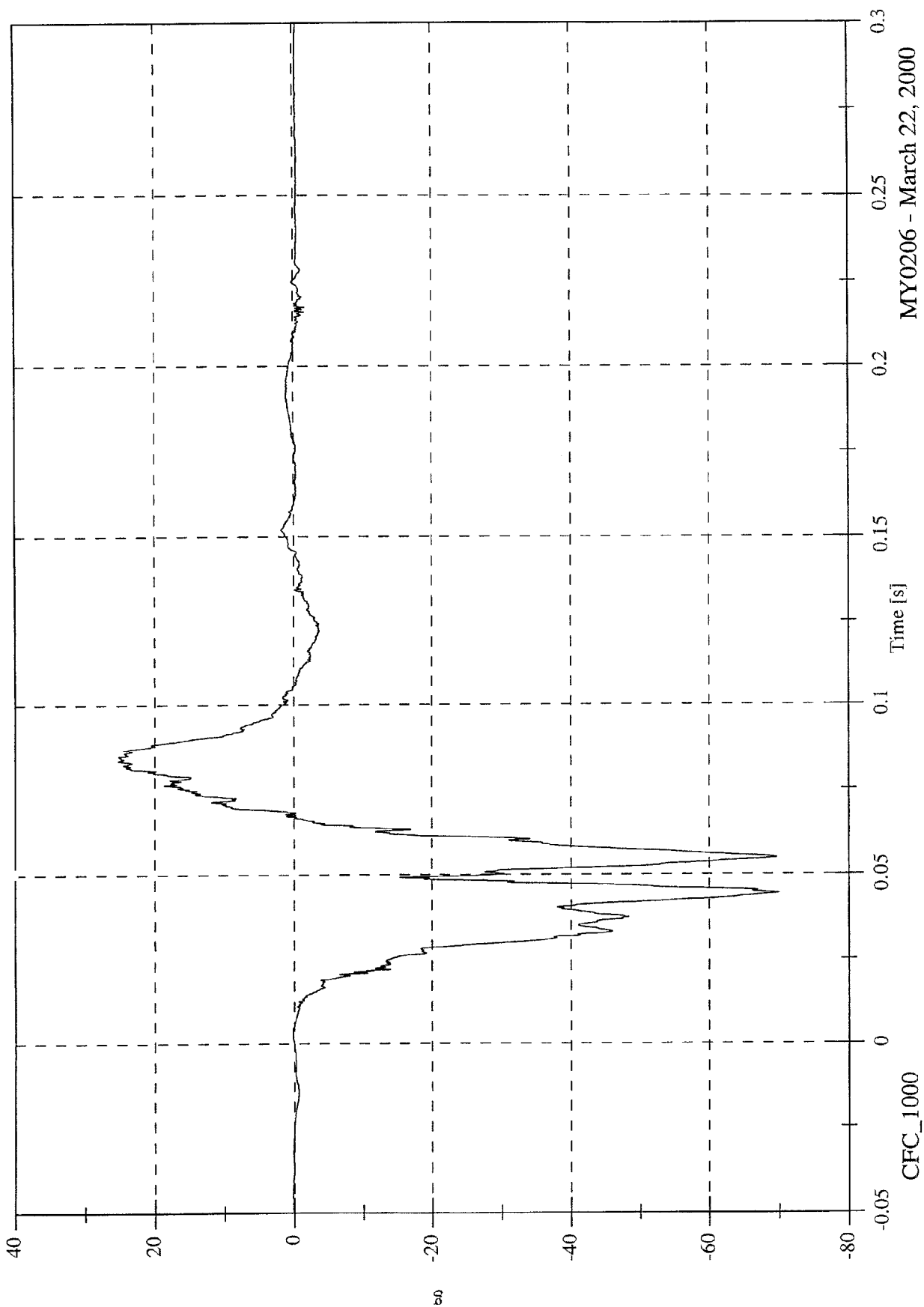


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 25.2 [g] at 0.083 [s]
 Min: -70.0 [g] at 0.045 [s]

P2 Right Foot Aft x

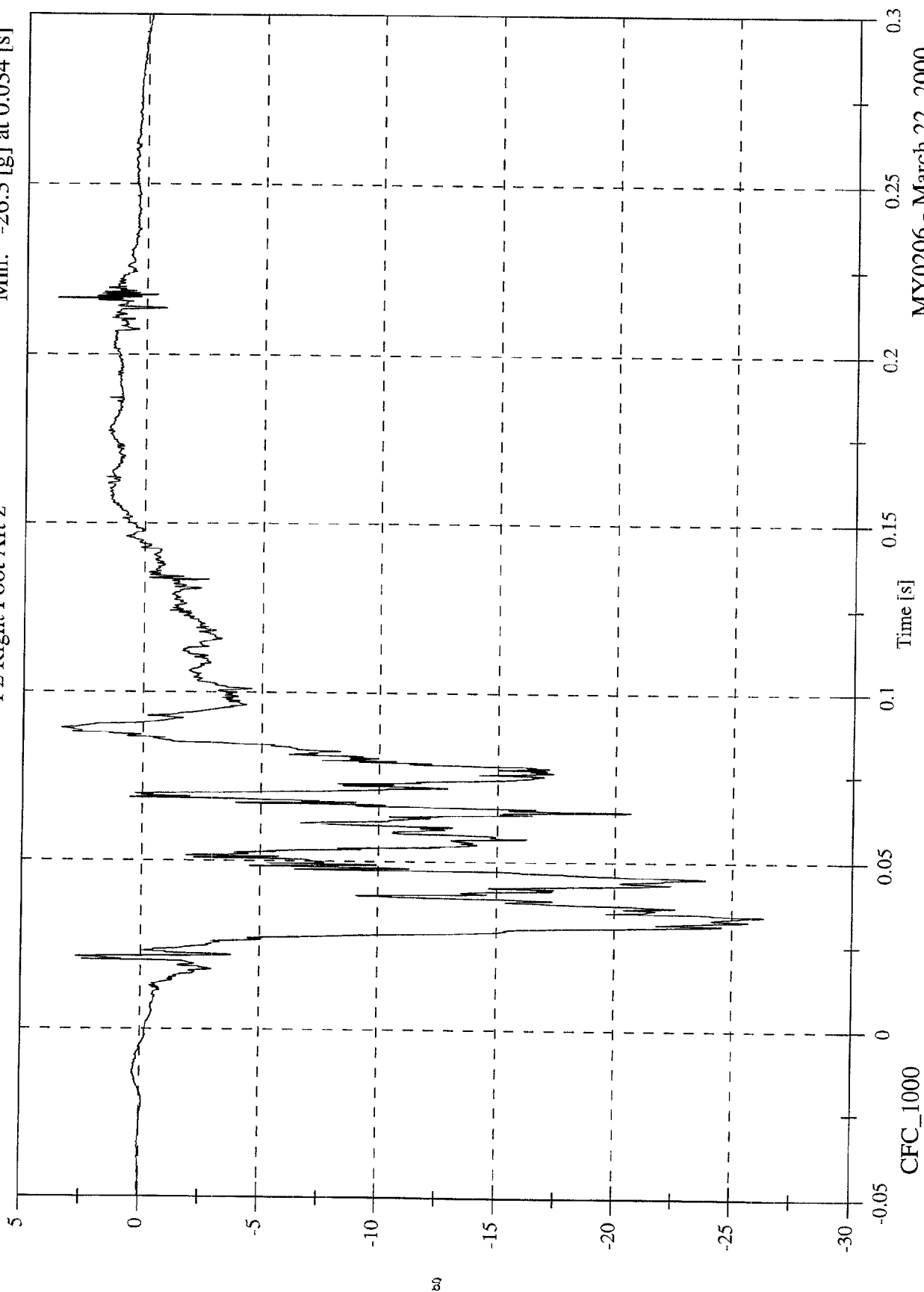


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 3.7 [g] at 0.217 [s]
 Min: -26.3 [g] at 0.034 [s]

P2 Right Foot Aft z

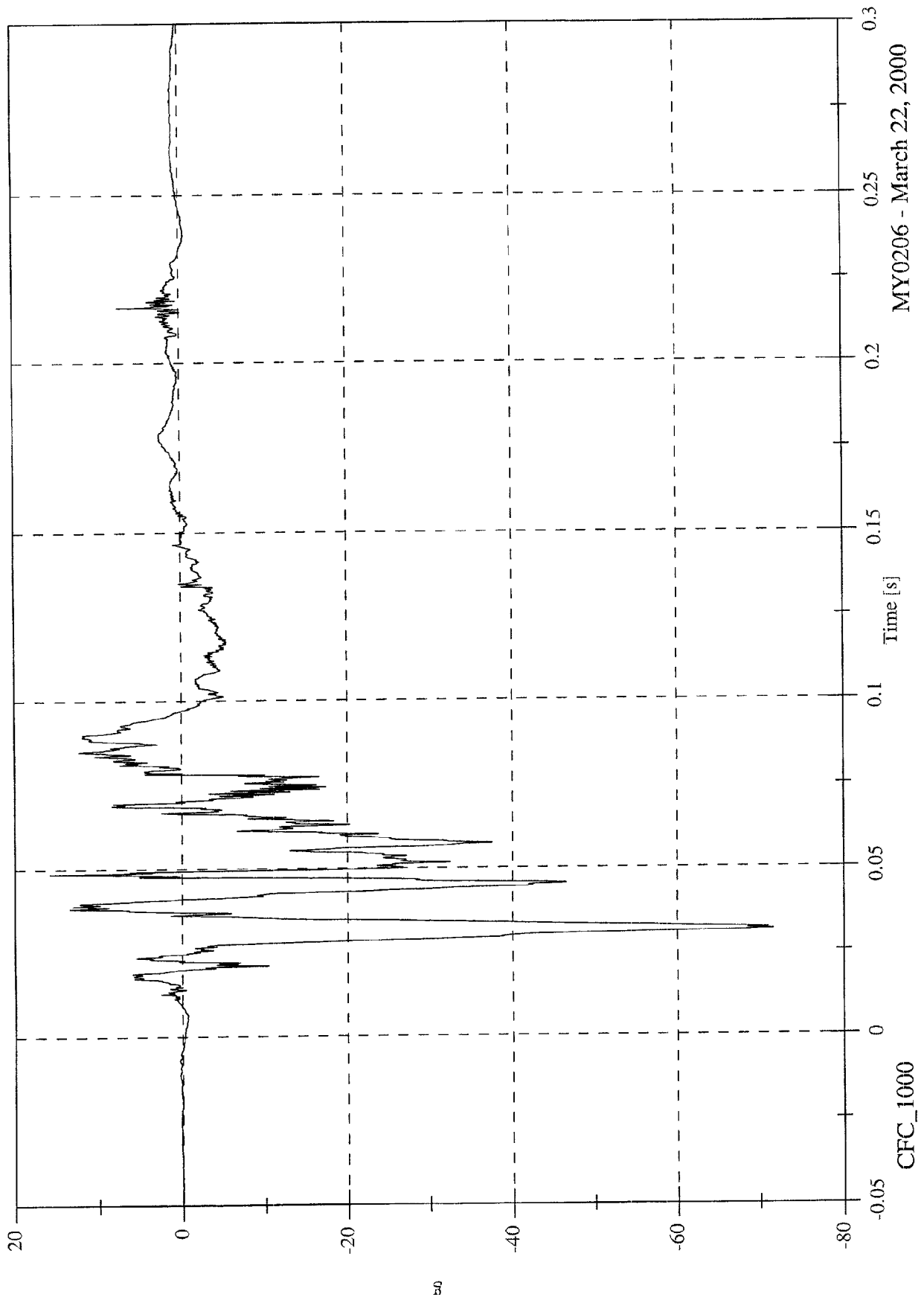


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

P2 Right Foot Fore x

Max: 15.8 [g] at 0.049 [s]
Min: -71.5 [g] at 0.031 [s]

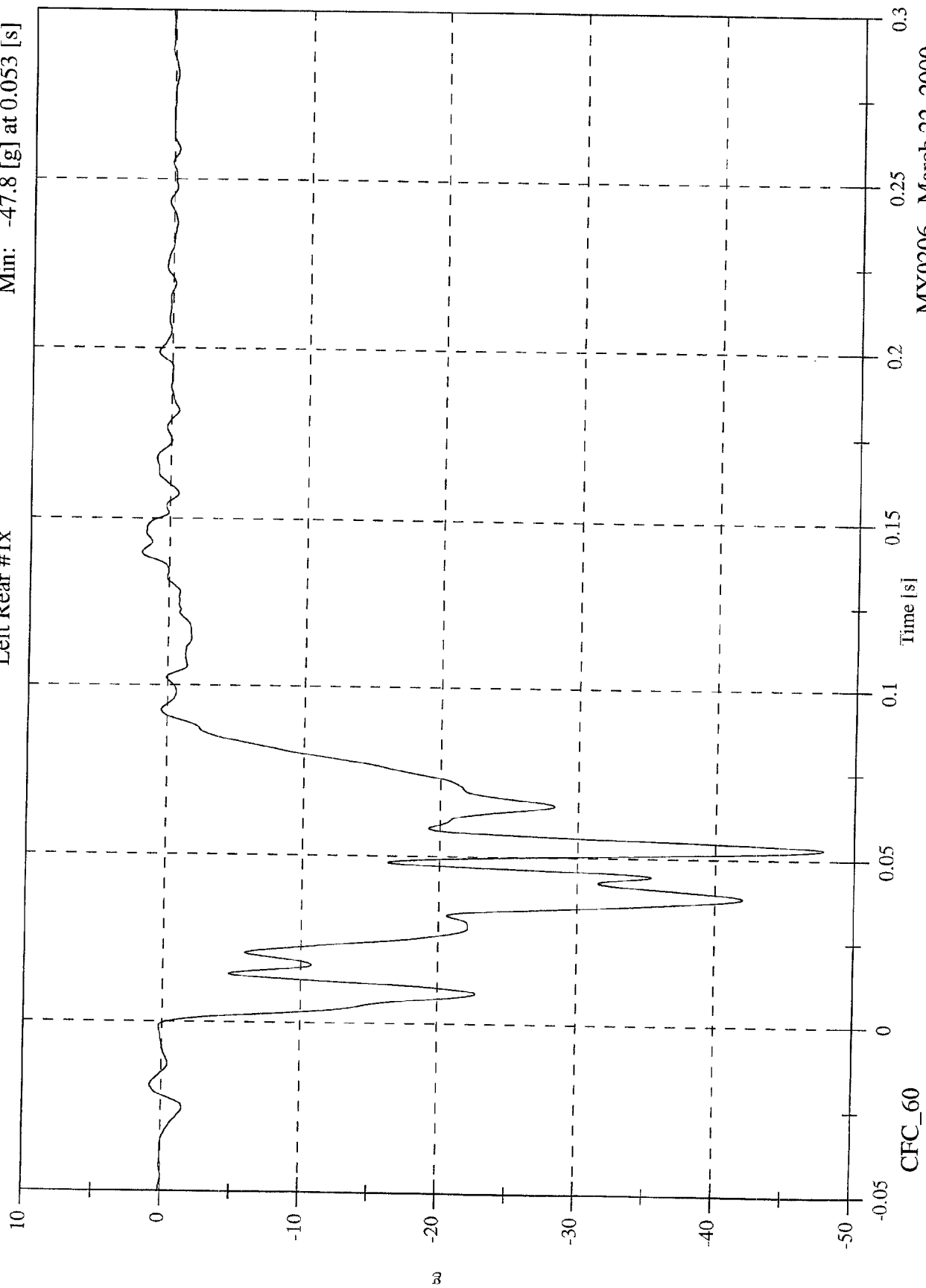


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 2.0 [g] at 0.140 [s]
Min: -47.8 [g] at 0.053 [s]

Left Rear #1x

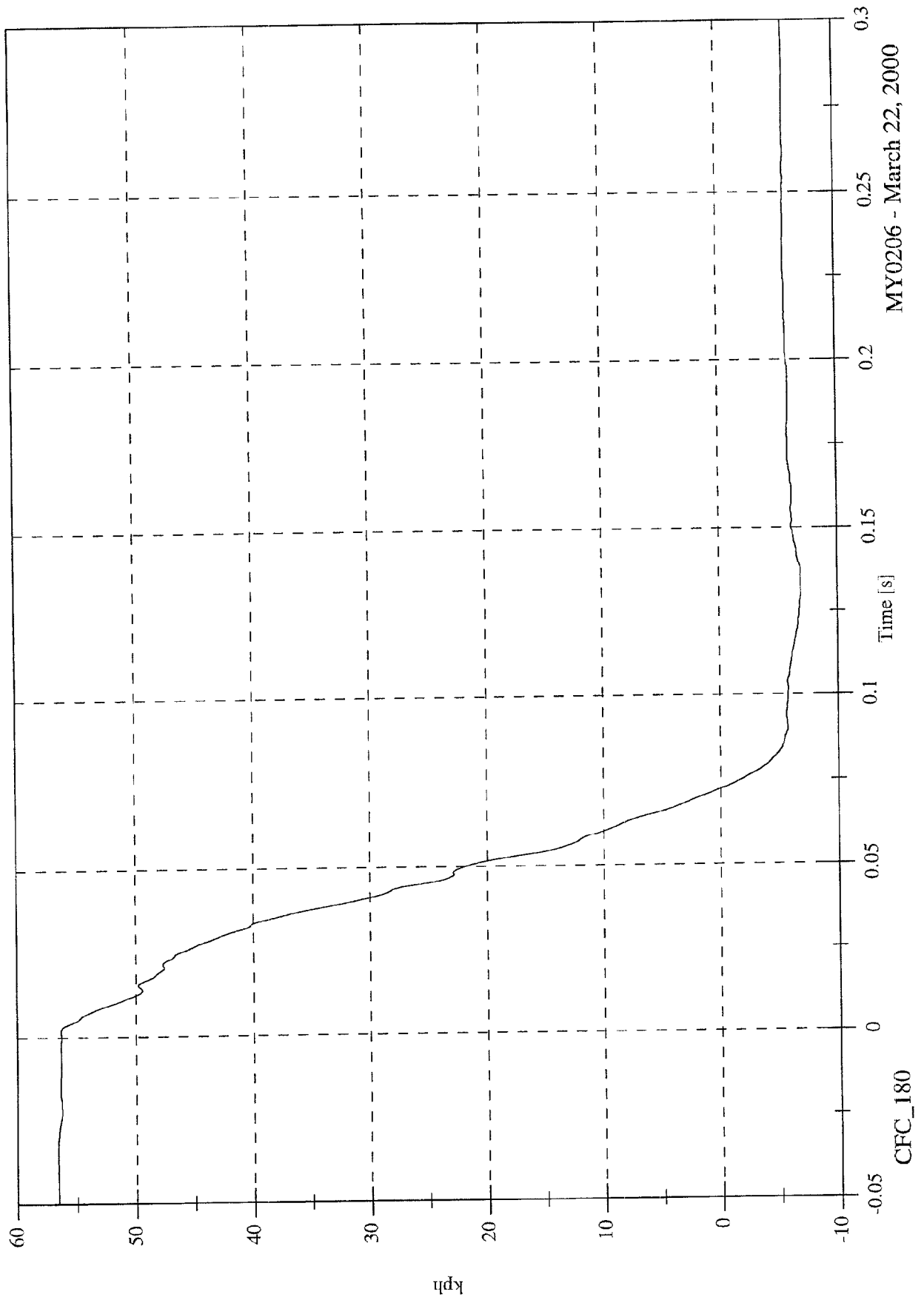


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NCAP Test #16 - 2000 Ford Focus 4-Door

Left Rear #1x Velocity

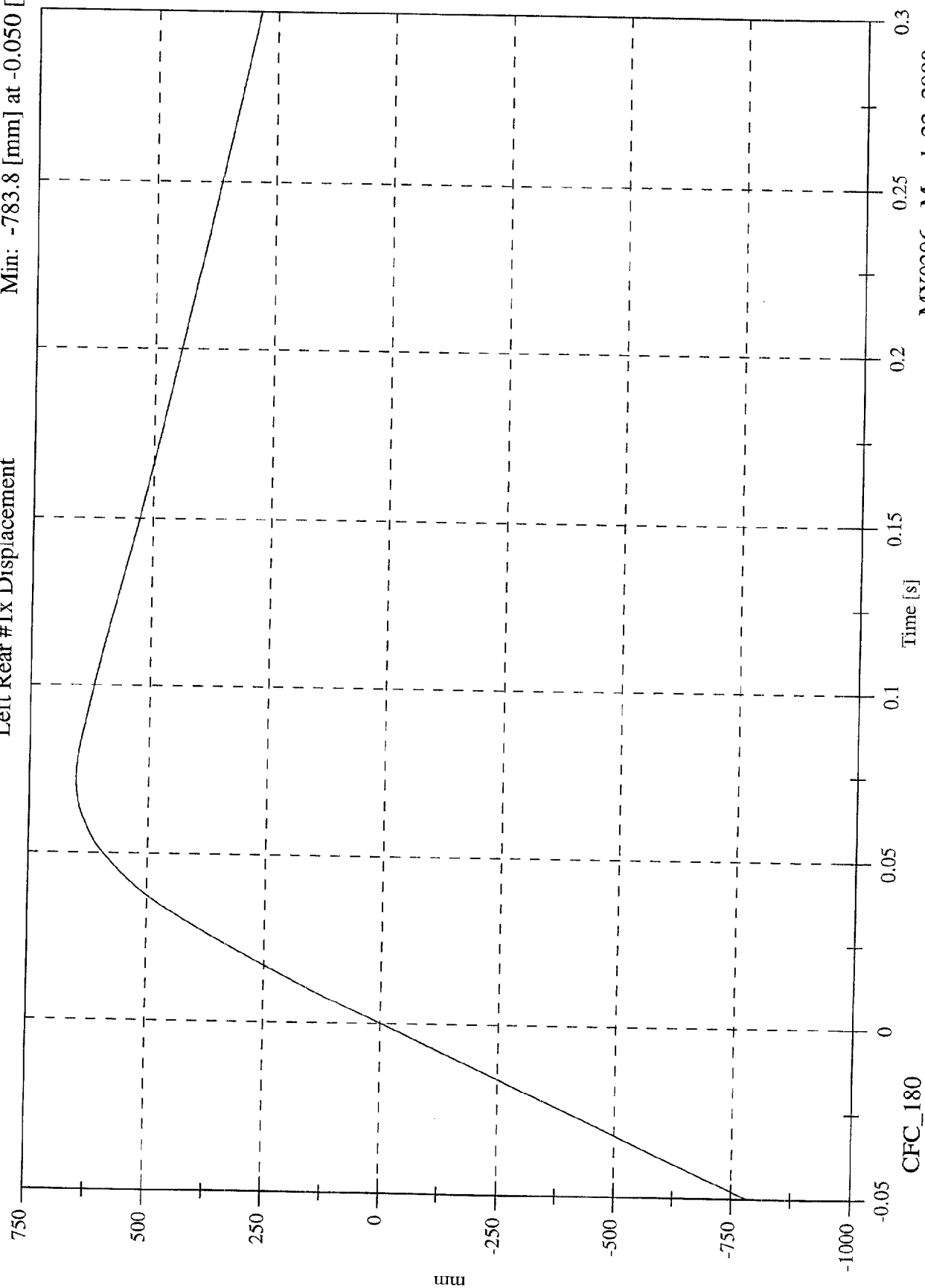
Max: 56.6 [kph] at -0.034 [s]
Min: -6.9 [kph] at 0.131 [s]



NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 652.7 [mm] at 0.072 [s]
Min: -783.8 [mm] at -0.050 [s]

Left Rear #1x Displacement

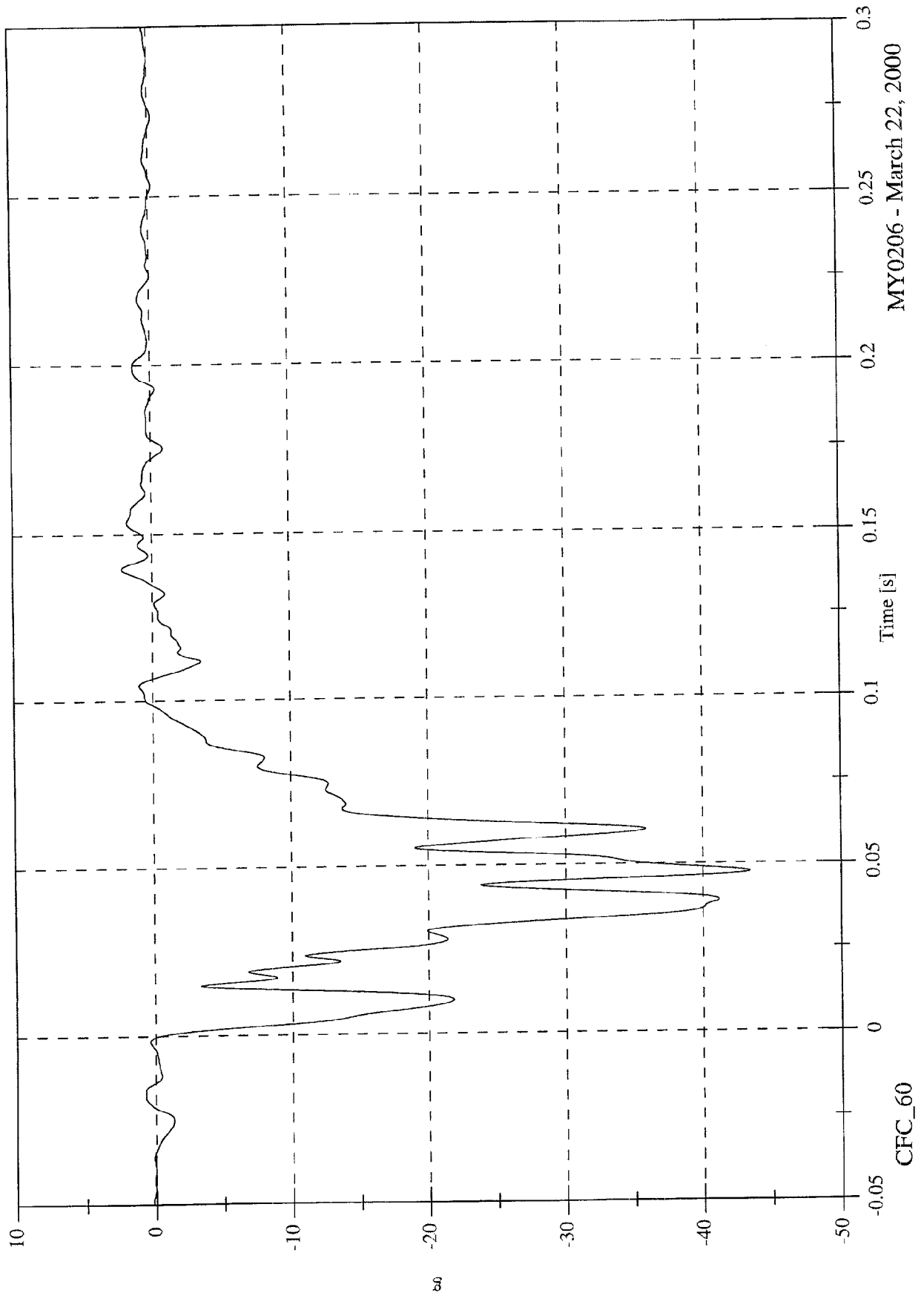


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 2.2 [g] at 0.139 [s]
Min: -43.4 [g] at 0.048 [s]

Right Rear #2x



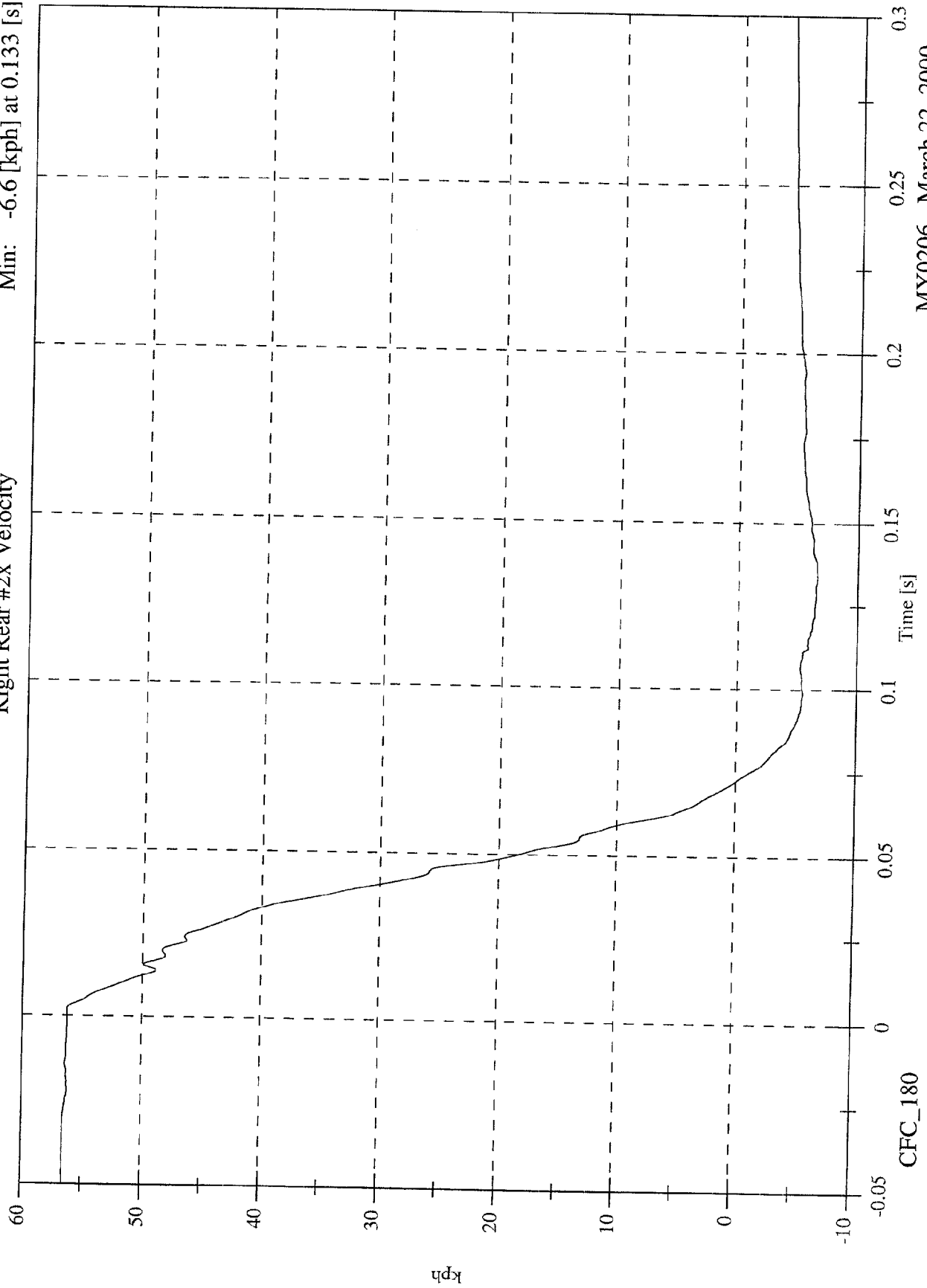
CFC_60

MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 56.6 [kph] at -0.035 [s]
Min: -6.6 [kph] at 0.133 [s]

Right Rear #2x Velocity

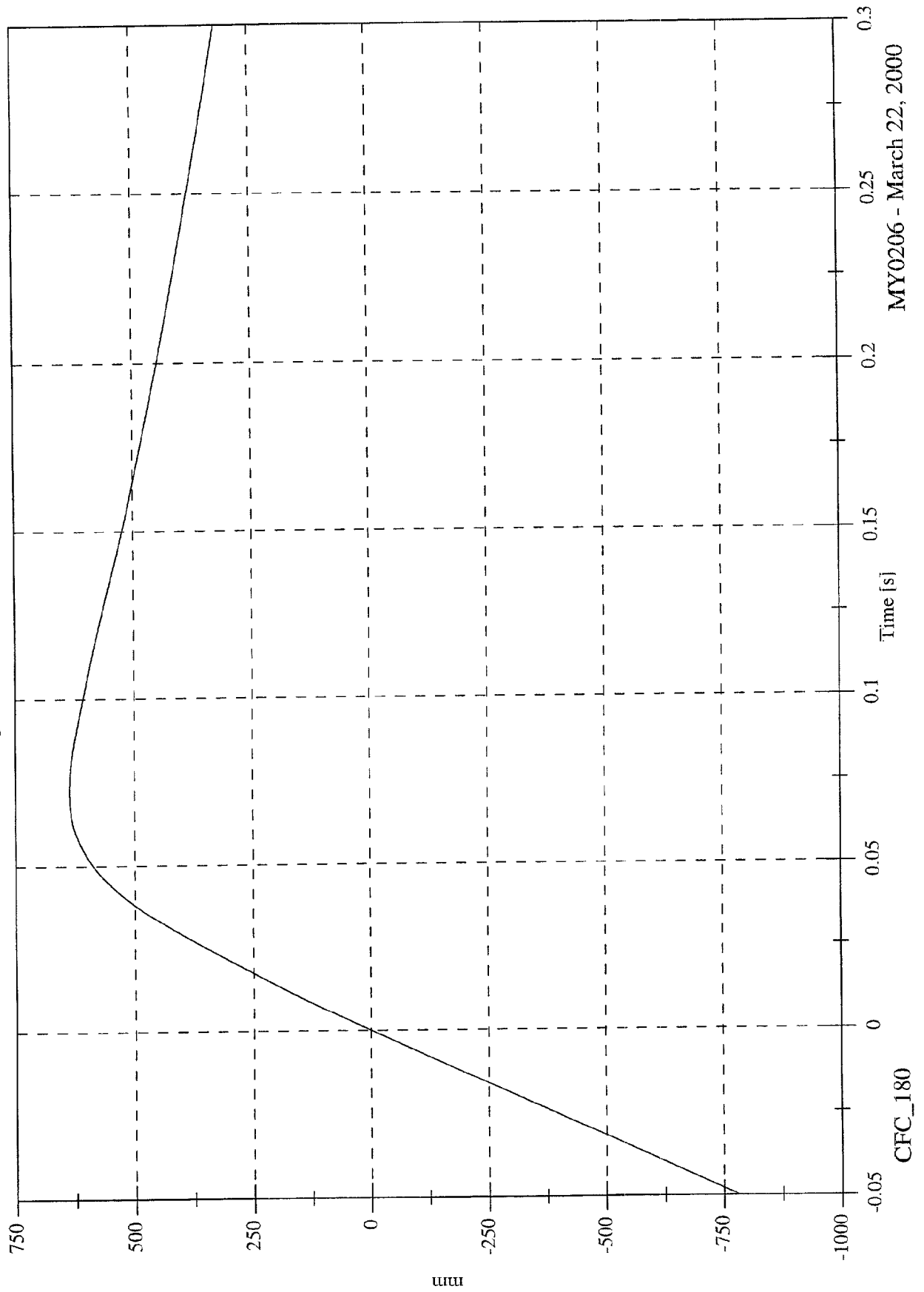


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 636.7 [mm] at 0.073 [s]
 Min: -783.5 [mm] at -0.050 [s]

Right Rear #2x Displacement

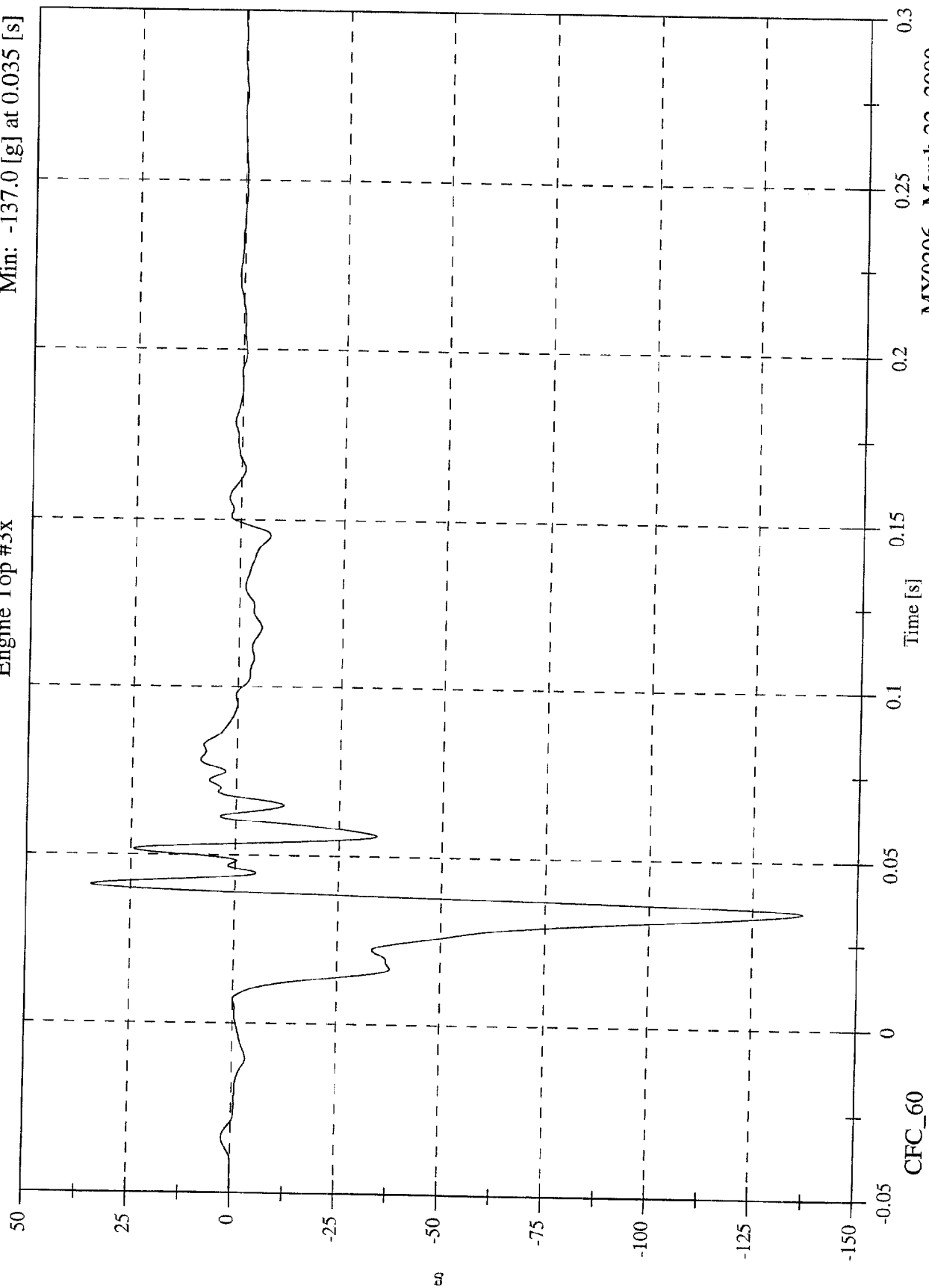


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NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 34.5 [g] at 0.041 [s]
Min: -137.0 [g] at 0.035 [s]

Engine Top #3x

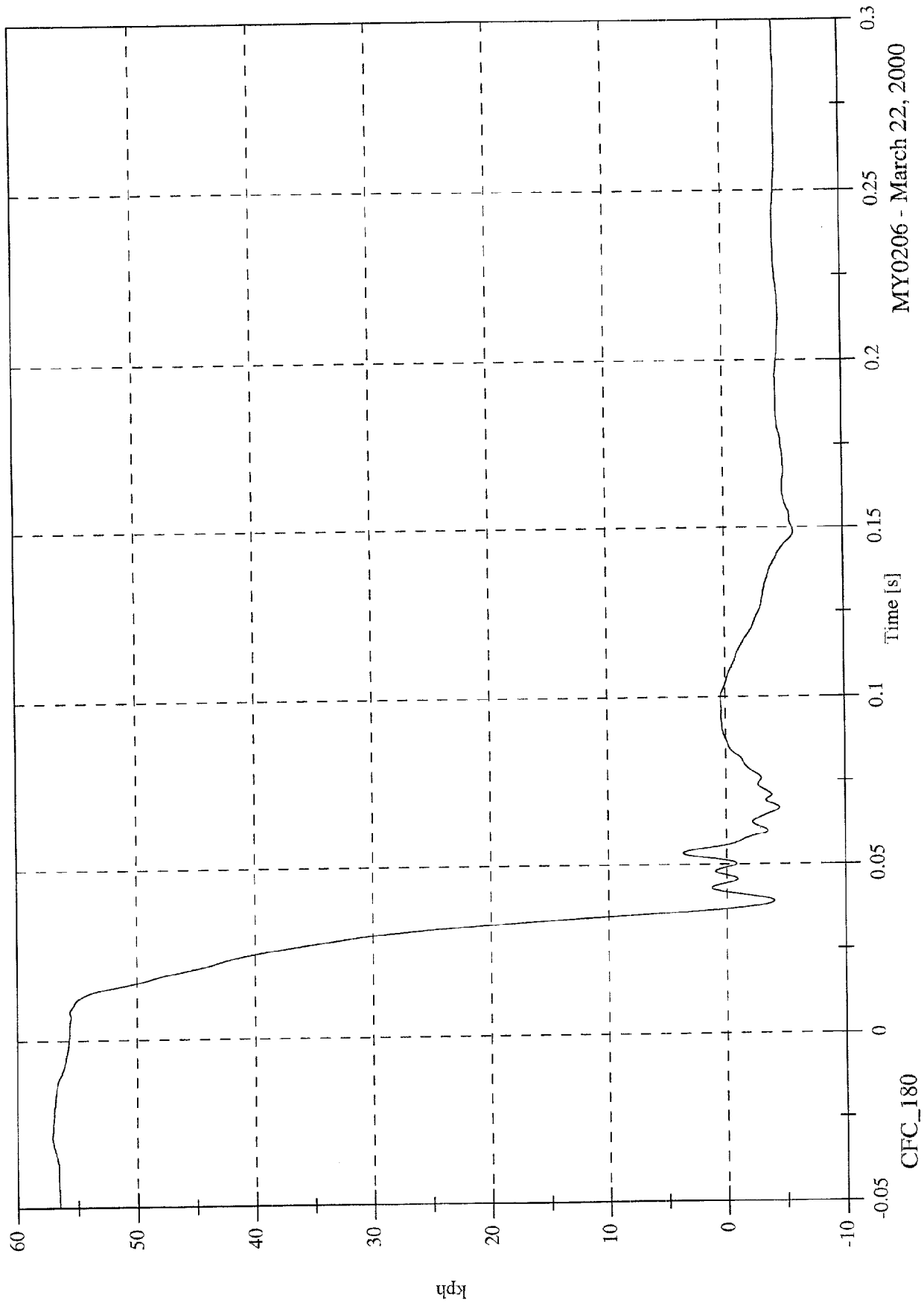


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NCAP Test #16 - 2000 Ford Focus 4-Door

Engine Top #3x Velocity

Max: 57.1 [kph] at -0.029 [s]
Min: -5.9 [kph] at 0.149 [s]

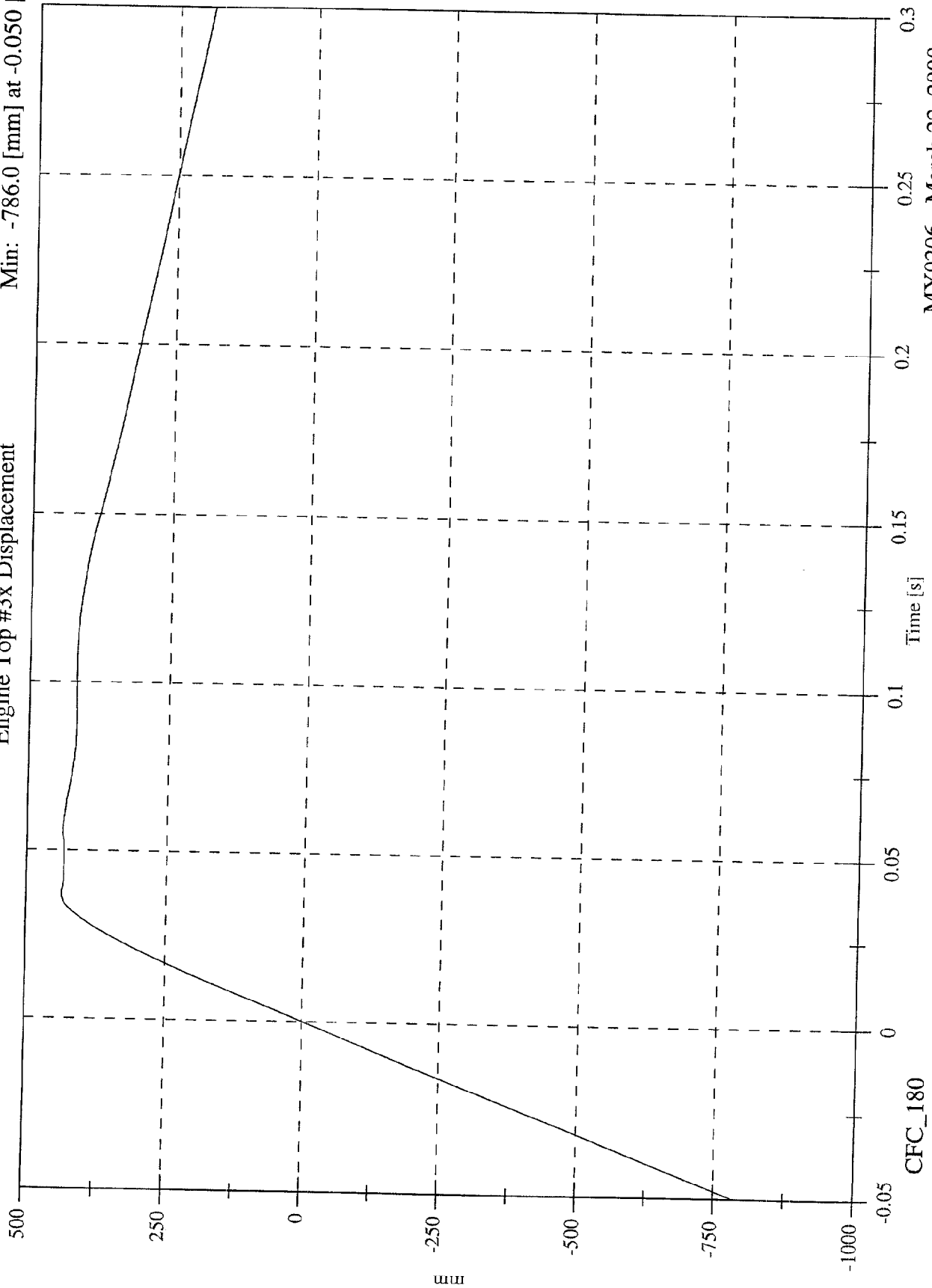


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NCAP Test #16 - 2000 Ford Focus 4-Door

Engine Top #3x Displacement

Max: 436.8 [mm] at 0.037 [s]
Min: -786.0 [mm] at -0.050 [s]

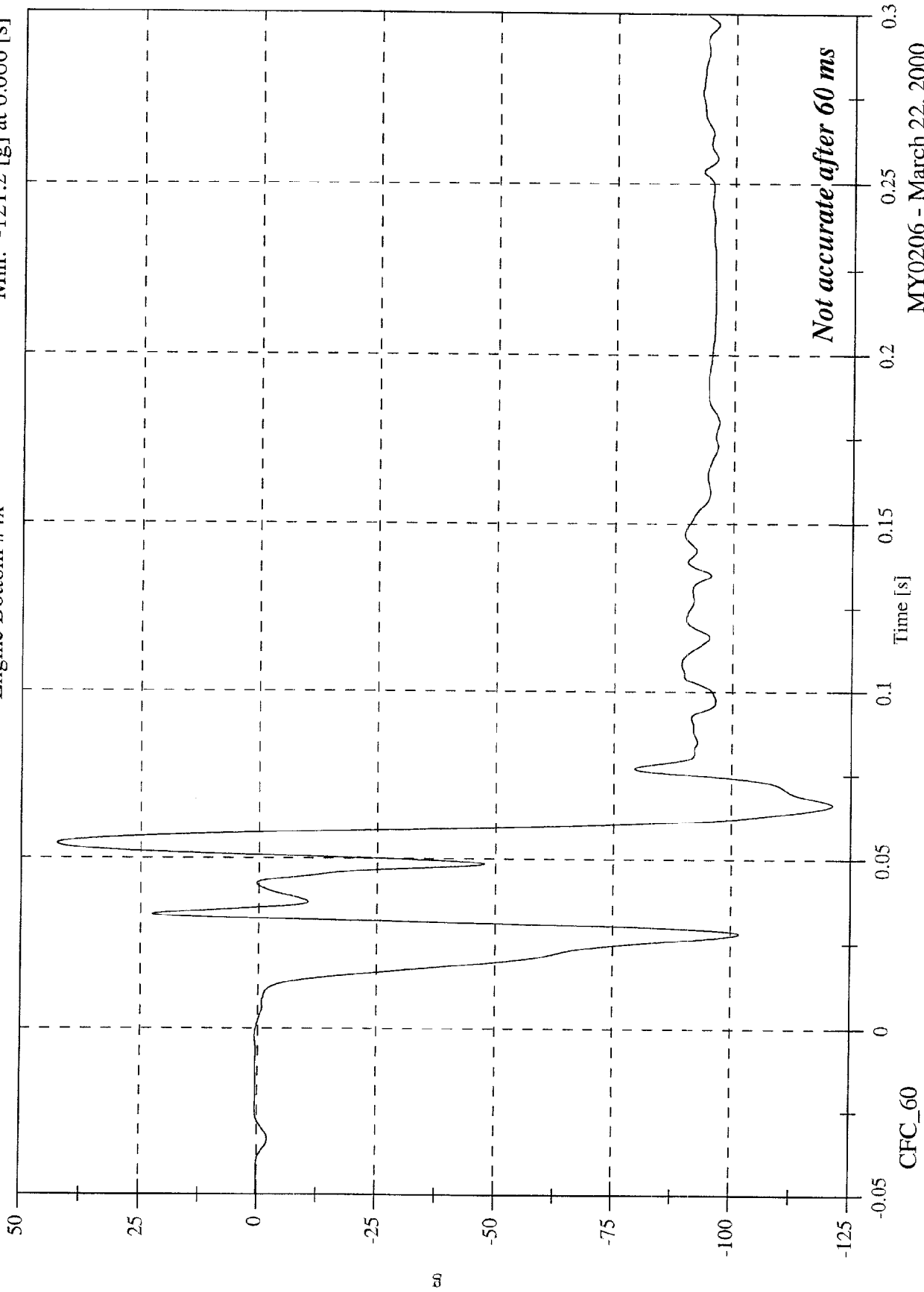


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Engine Bottom #4x

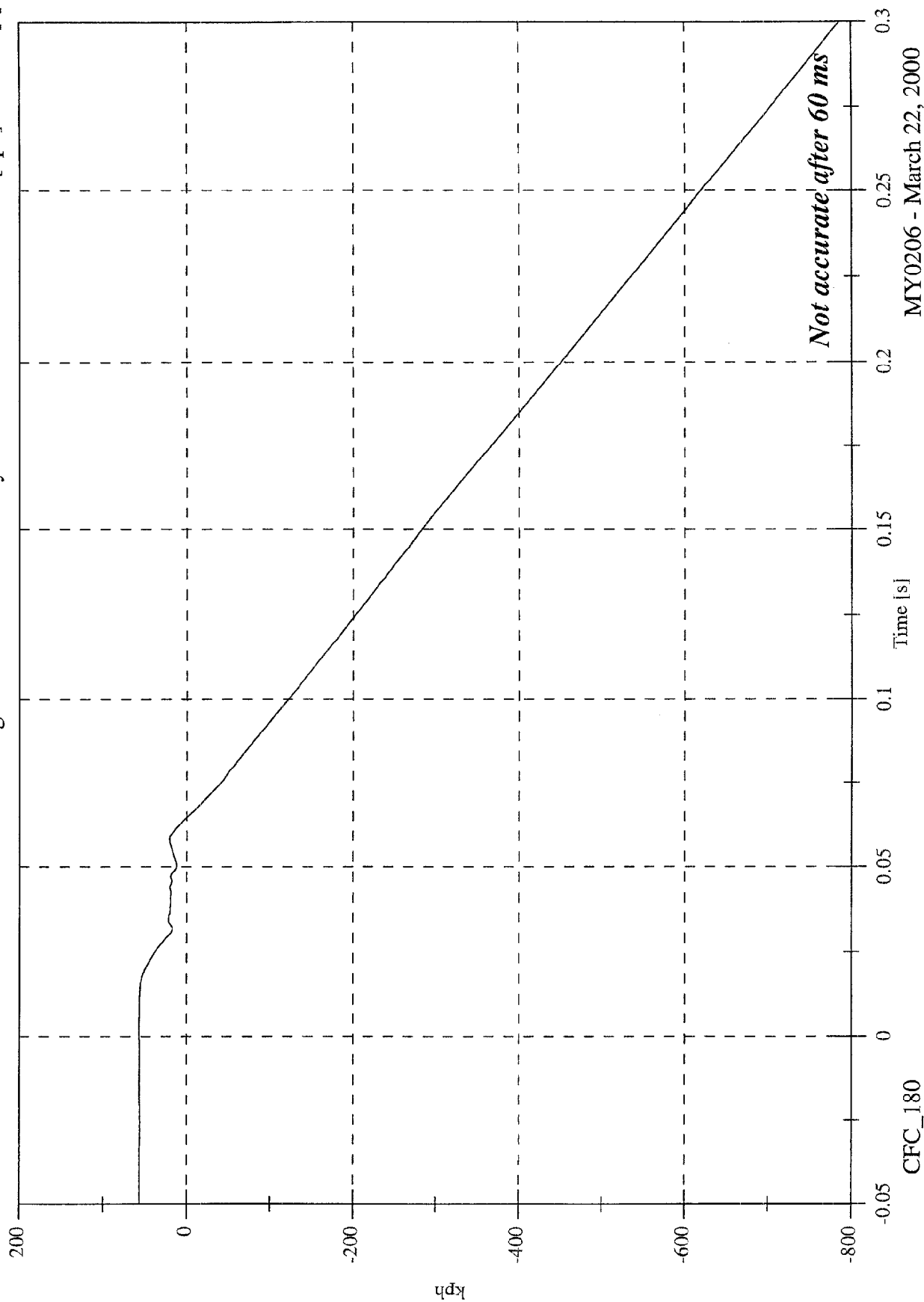
Max: 42.4 [g] at 0.054 [s]
Min: -121.2 [g] at 0.066 [s]



NCAP Test #16 - 2000 Ford Focus 4-Door

Engine Bottom #4x Velocity

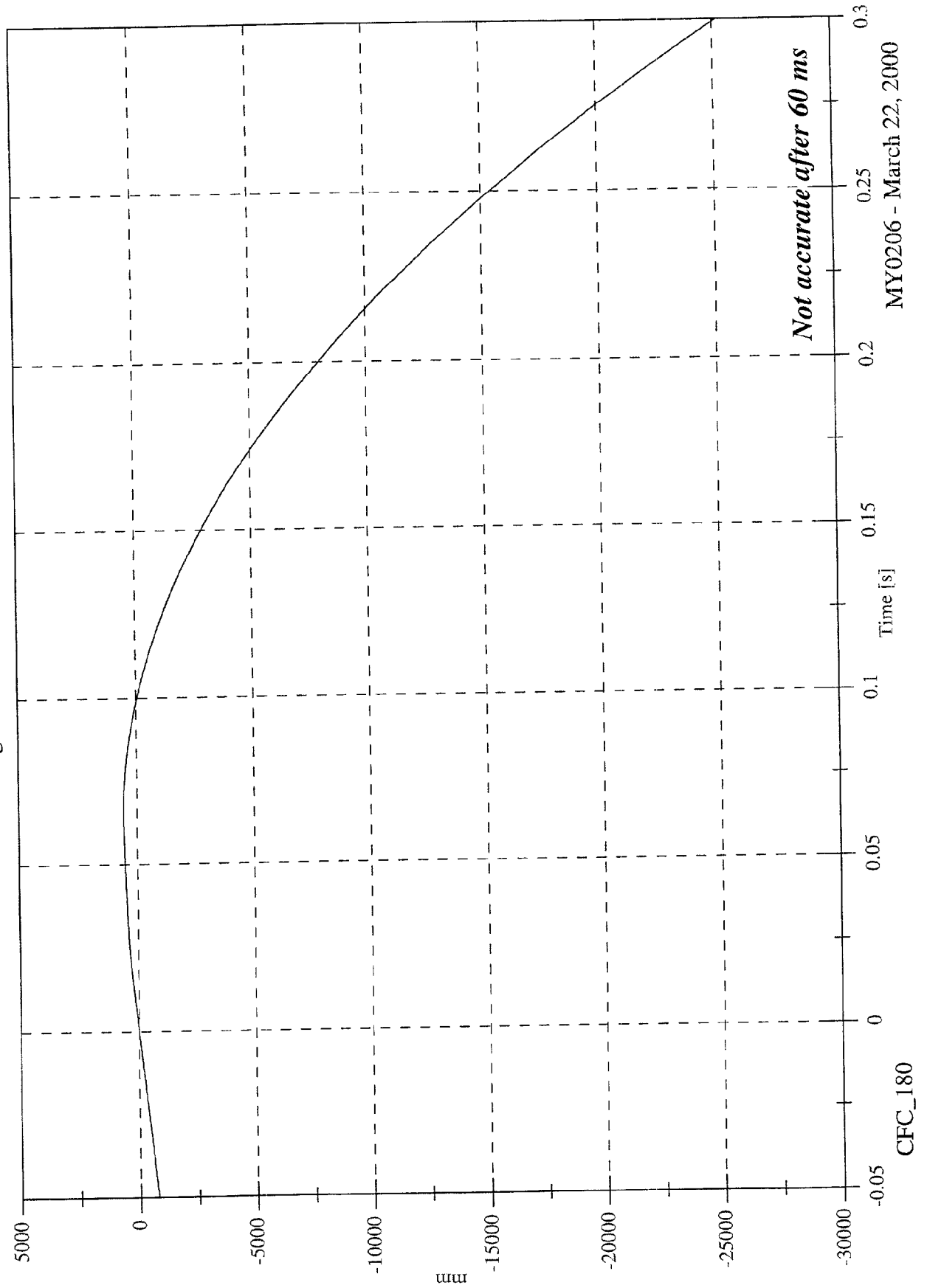
Max: 56.5 [kph] at 0.005 [s]
Min: -786.1 [kph] at 0.300 [s]



Max: 572.9 [mm] at 0.065 [s]
Min: -25152.4 [mm] at 0.300 [s]

NCAP Test #16 - 2000 Ford Focus 4-Door

Engine Bottom #4x Displacement



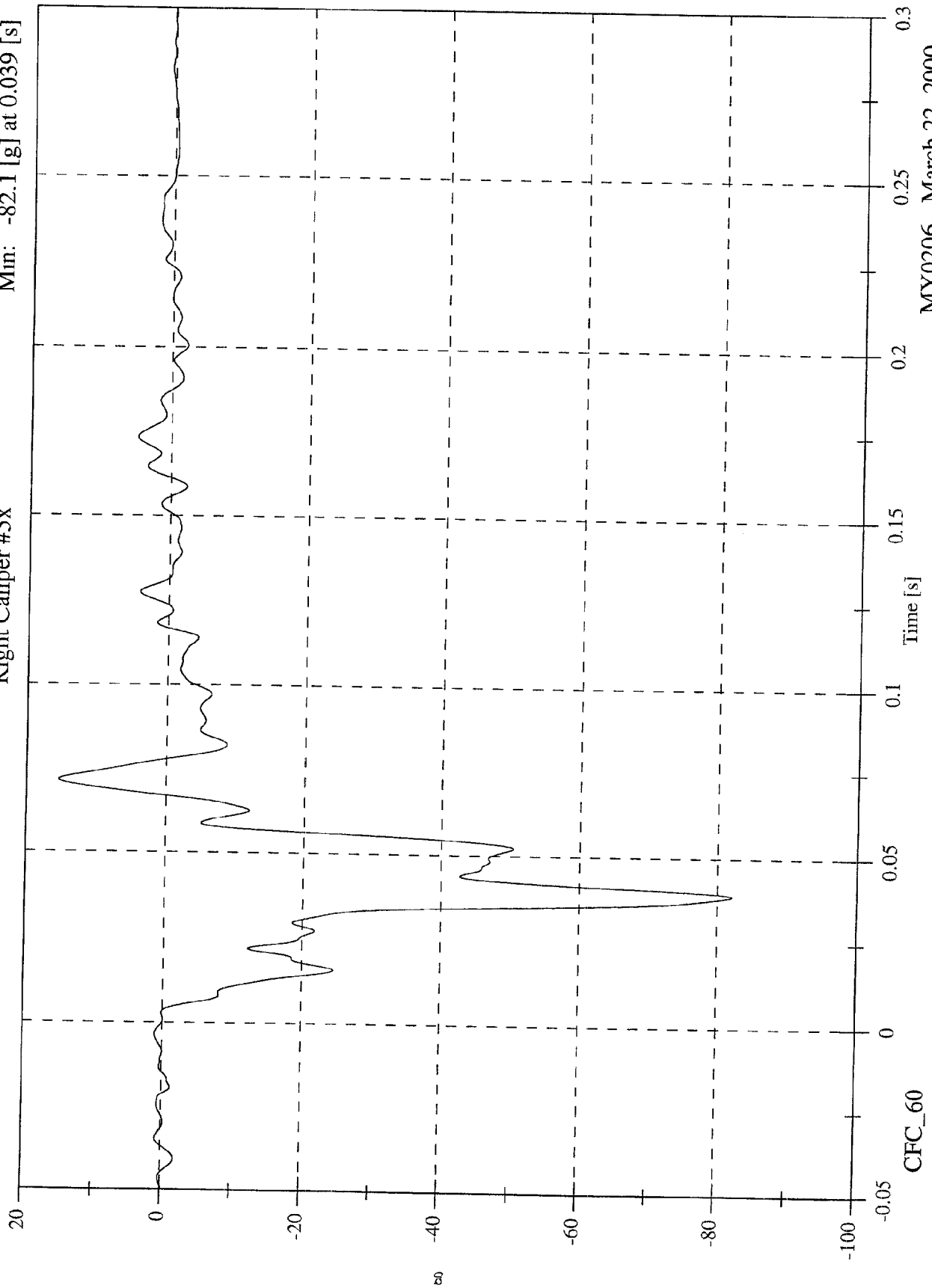
CFC_180

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NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 15.4 [g] at 0.071 [s]
 Min: -82.1 [g] at 0.039 [s]

Right Caliper #5x

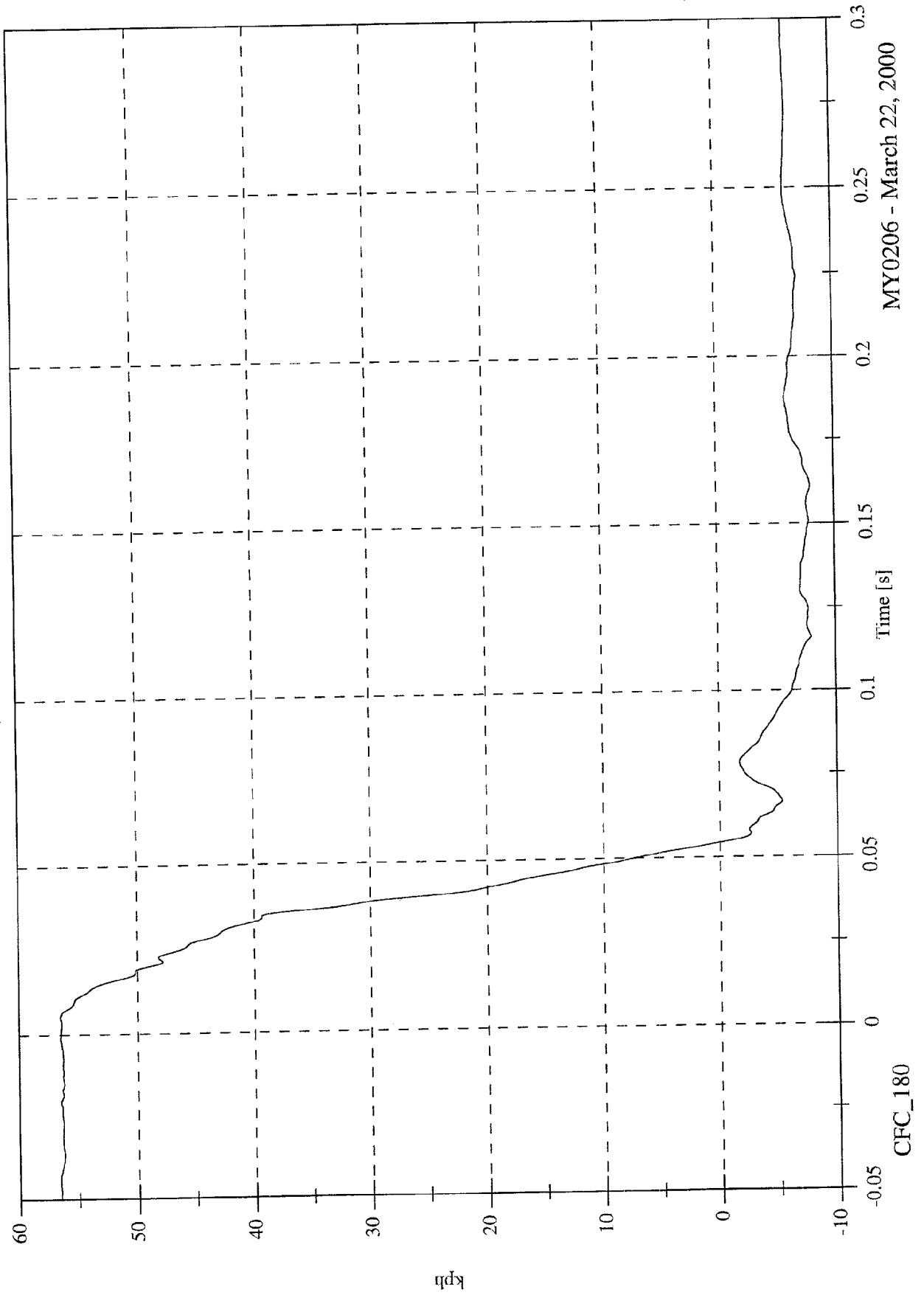


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Right Caliper #5x Velocity

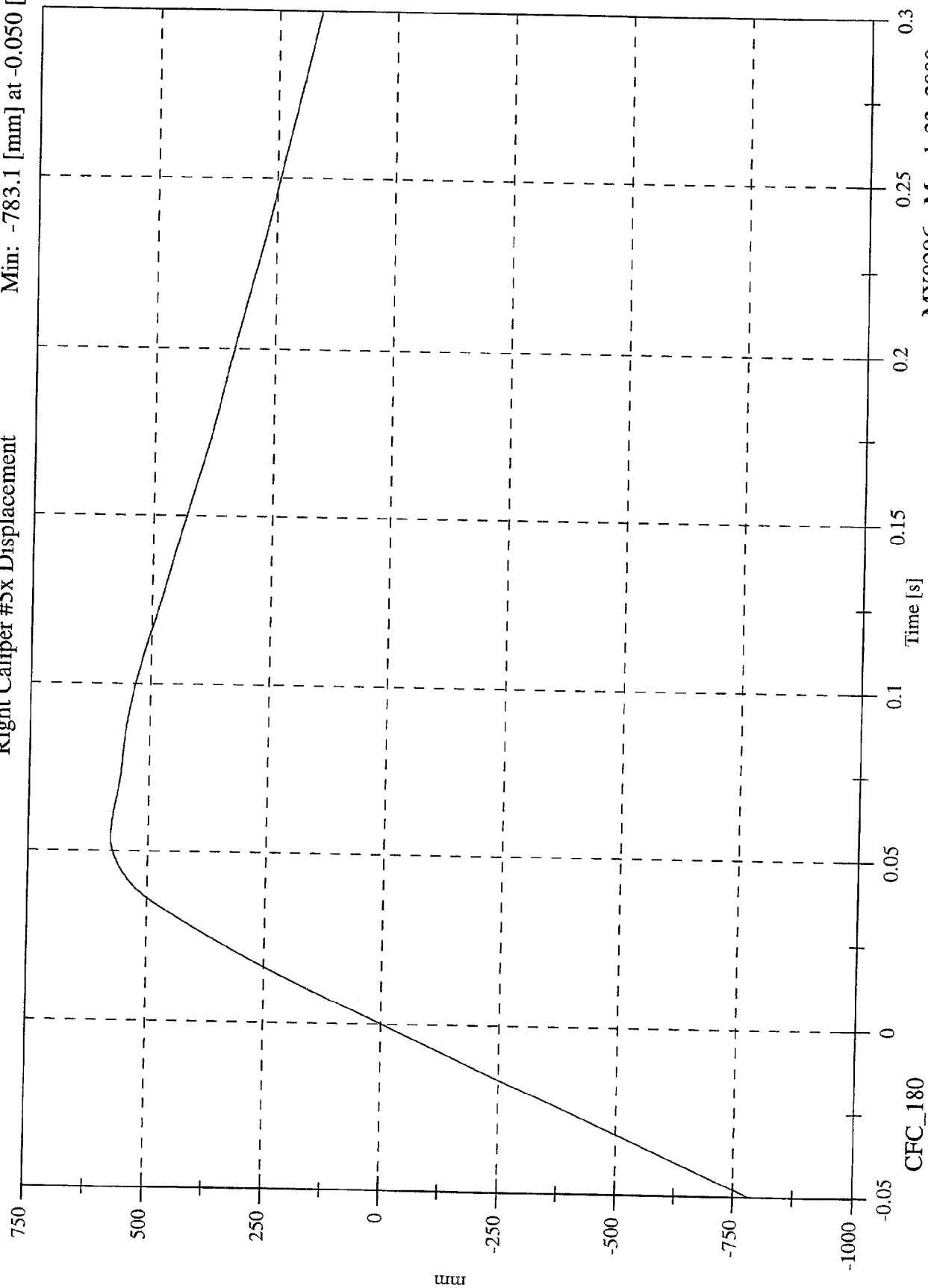
Max: 56.6 [kph] at -0.044 [s]
Min: -8.0 [kph] at 0.161 [s]



NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 578.3 [mm] at 0.054 [s]
Min: -783.1 [mm] at -0.050 [s]

Right Caliper #5x Displacement



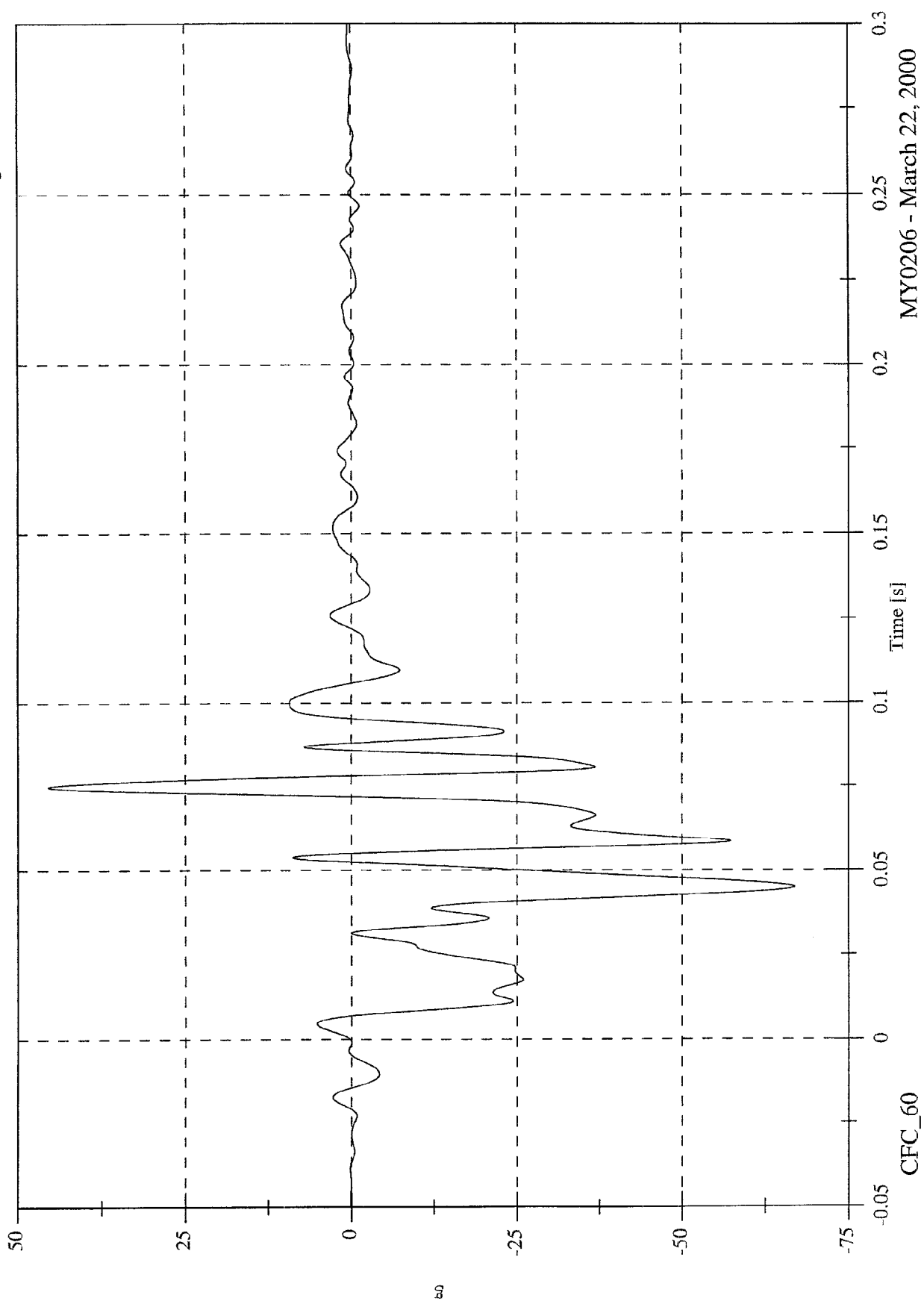
MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Instrument Panel #6x

Max: 45.4 [g] at 0.075 [s]

Min: -67.0 [g] at 0.045 [s]

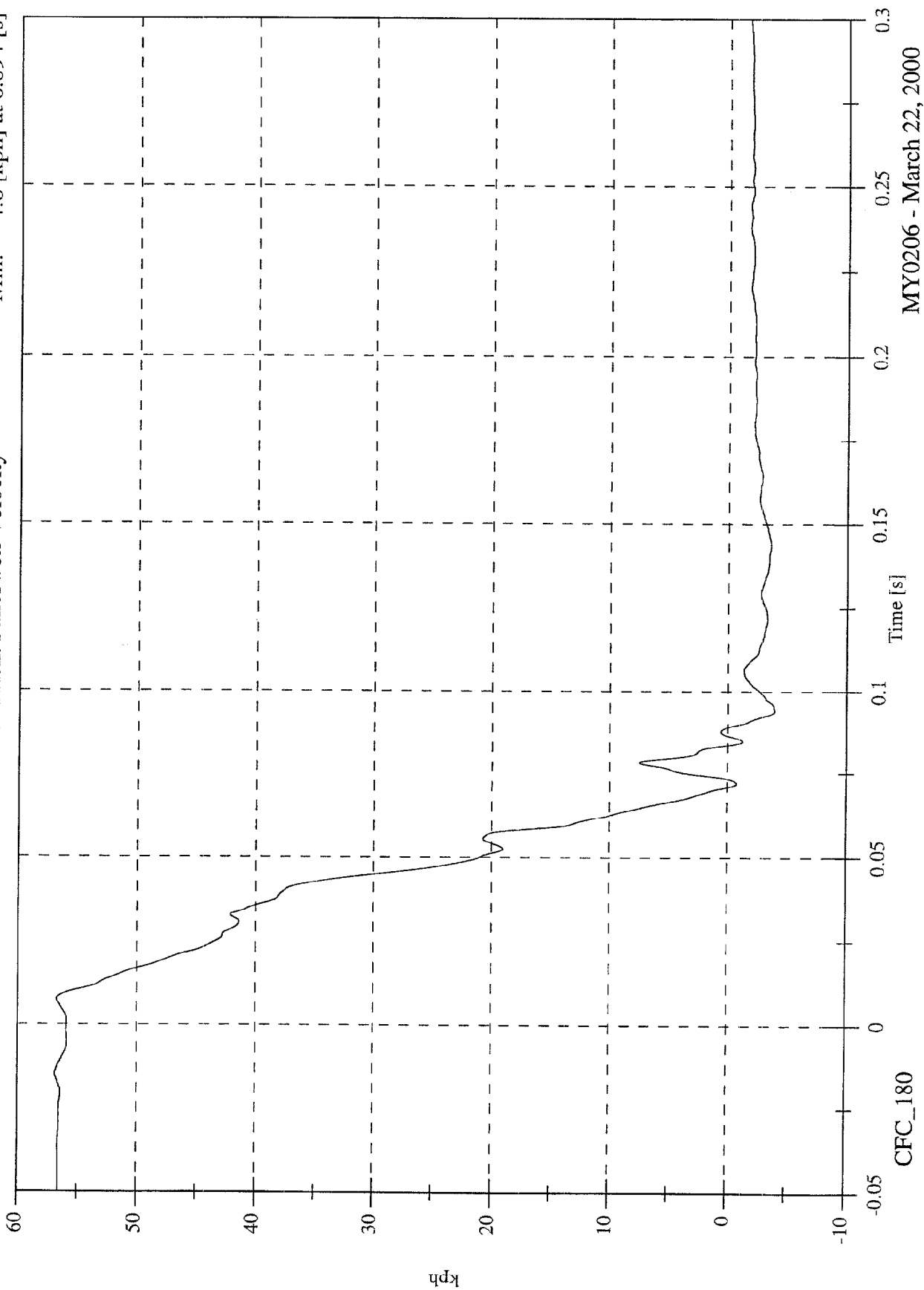


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 56.9 [kph] at -0.015 [s]
 Min: -4.0 [kph] at 0.094 [s]

Instrument Panel #6x Velocity

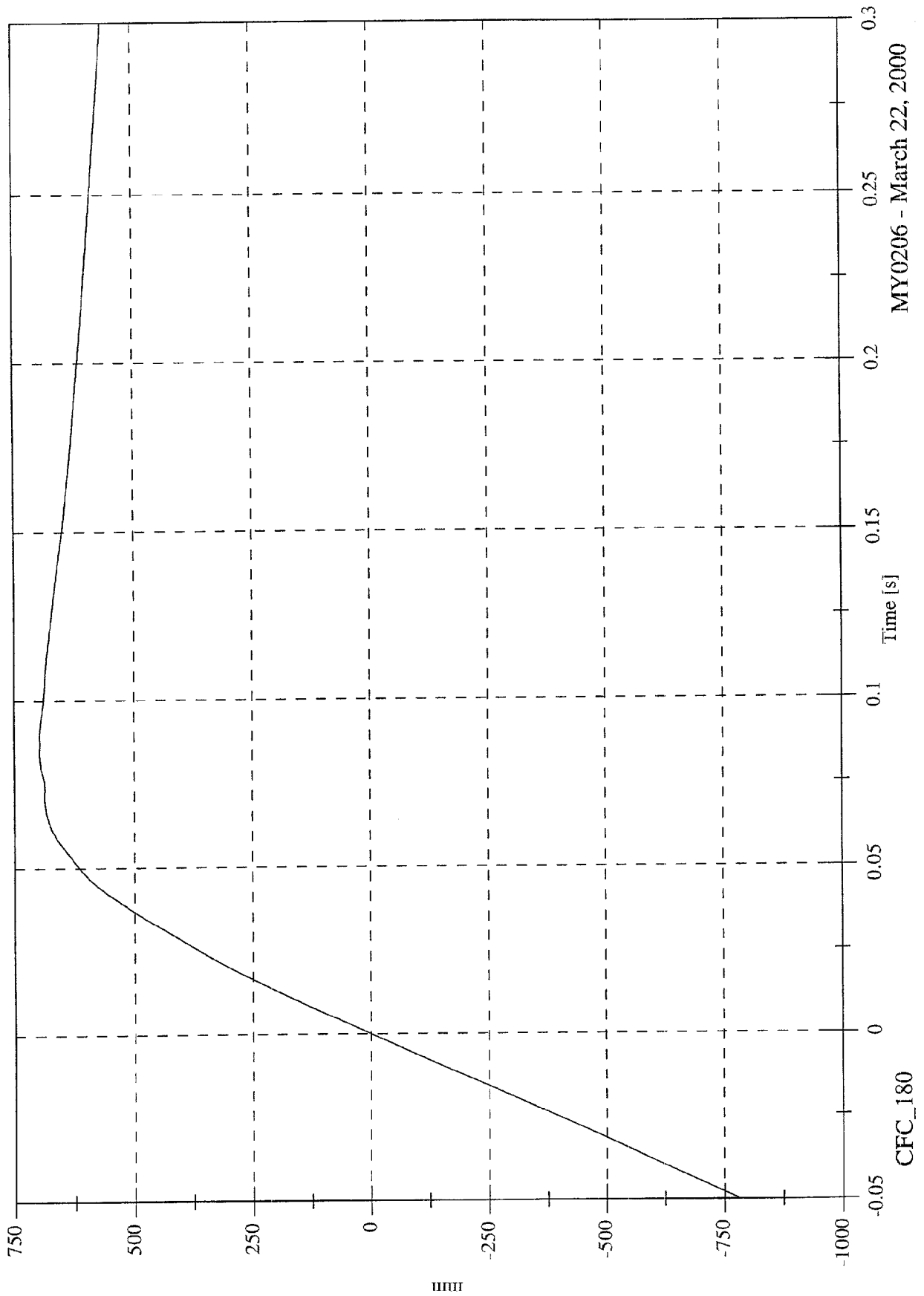


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Instrument Panel #6x Displacement

Max: 697.7 [mm] at 0.084 [s]
Min: -784.1 [mm] at -0.050 [s]

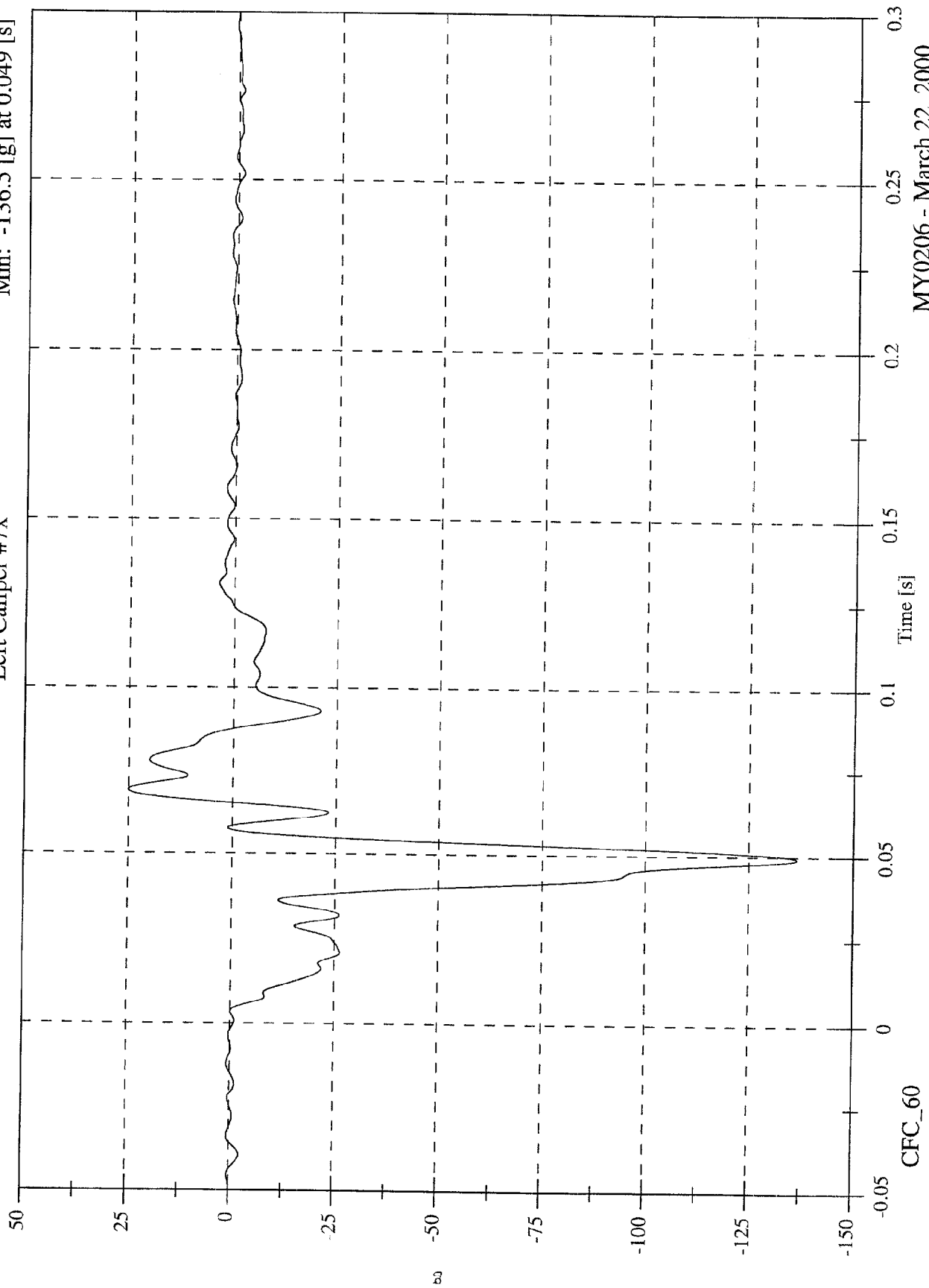


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Left Caliper #7x

Max: 25.1 [g] at 0.069 [s]
Min: -136.5 [g] at 0.049 [s]

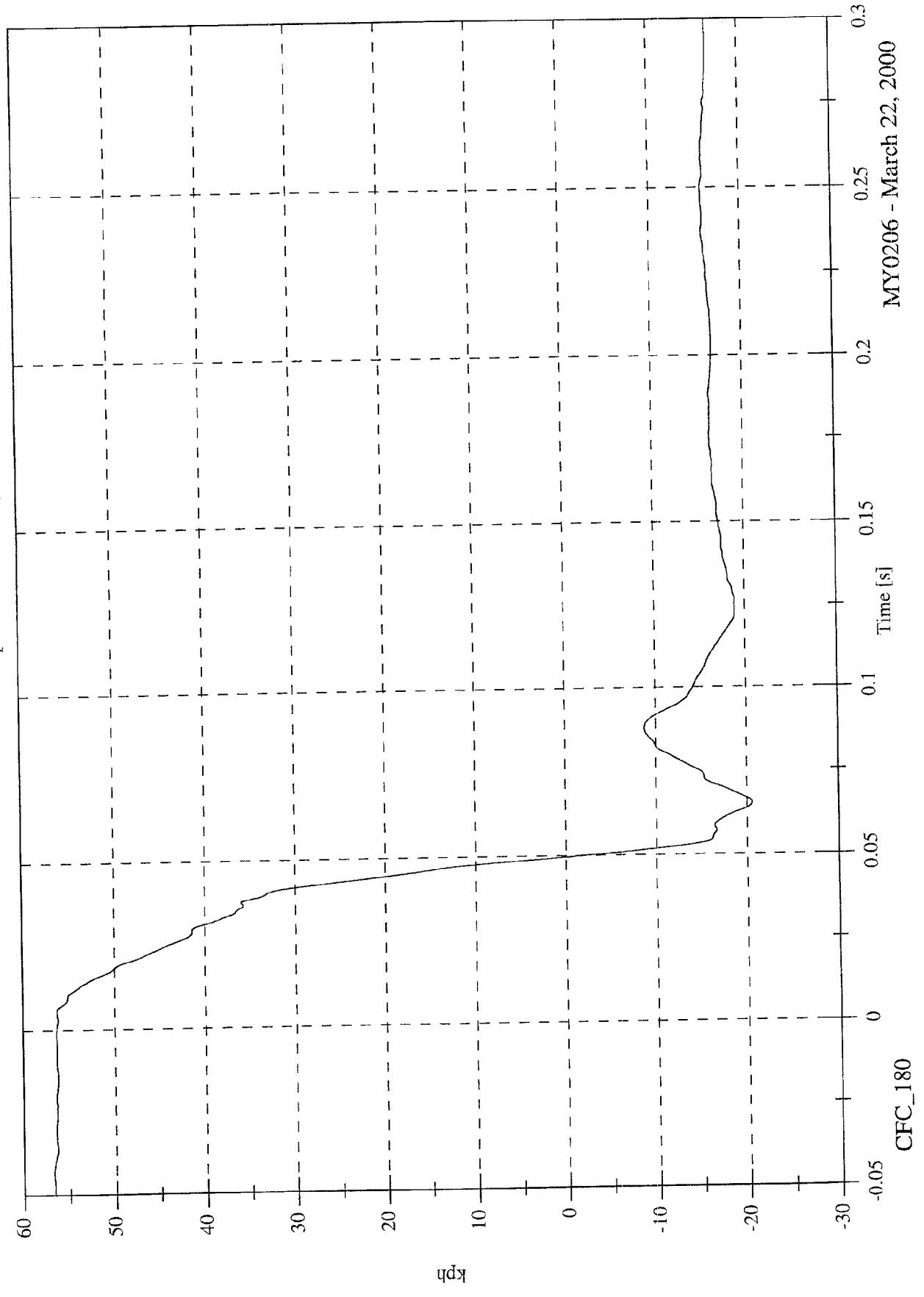


MY0206 - March 22, 2000

Max: 56.7 [kph] at -0.043 [s]
Min: -20.6 [kph] at 0.065 [s]

NCAP Test #16 - 2000 Ford Focus 4-Door

Left Caliper #7x Velocity

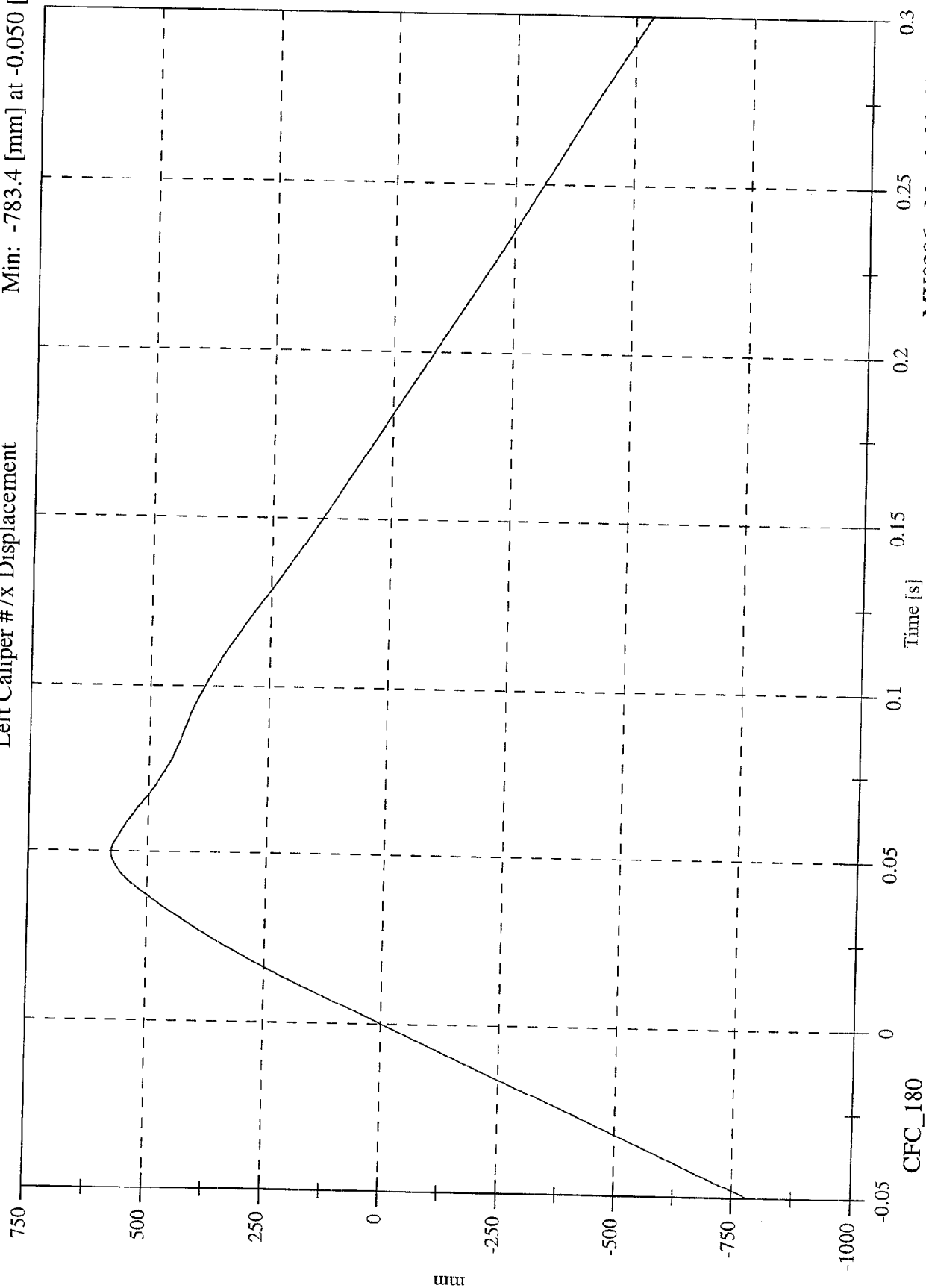


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 576.3 [mm] at 0.050 [s]
 Min: -783.4 [mm] at -0.050 [s]

Left Caliper #7x Displacement

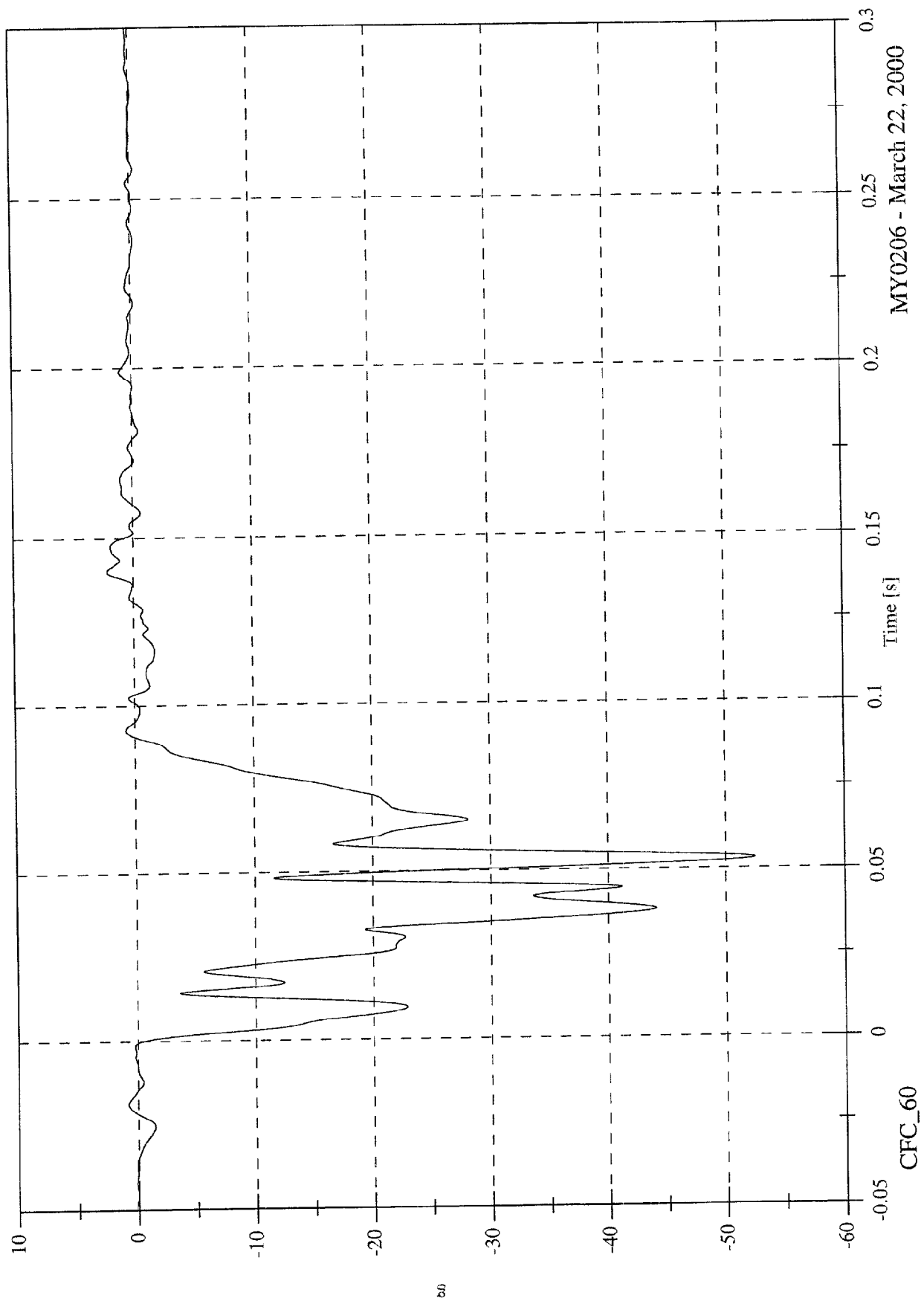


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 2.2 [g] at 0.140 [s]
Min: -52.5 [g] at 0.053 [s]

Left Rear Red #8x

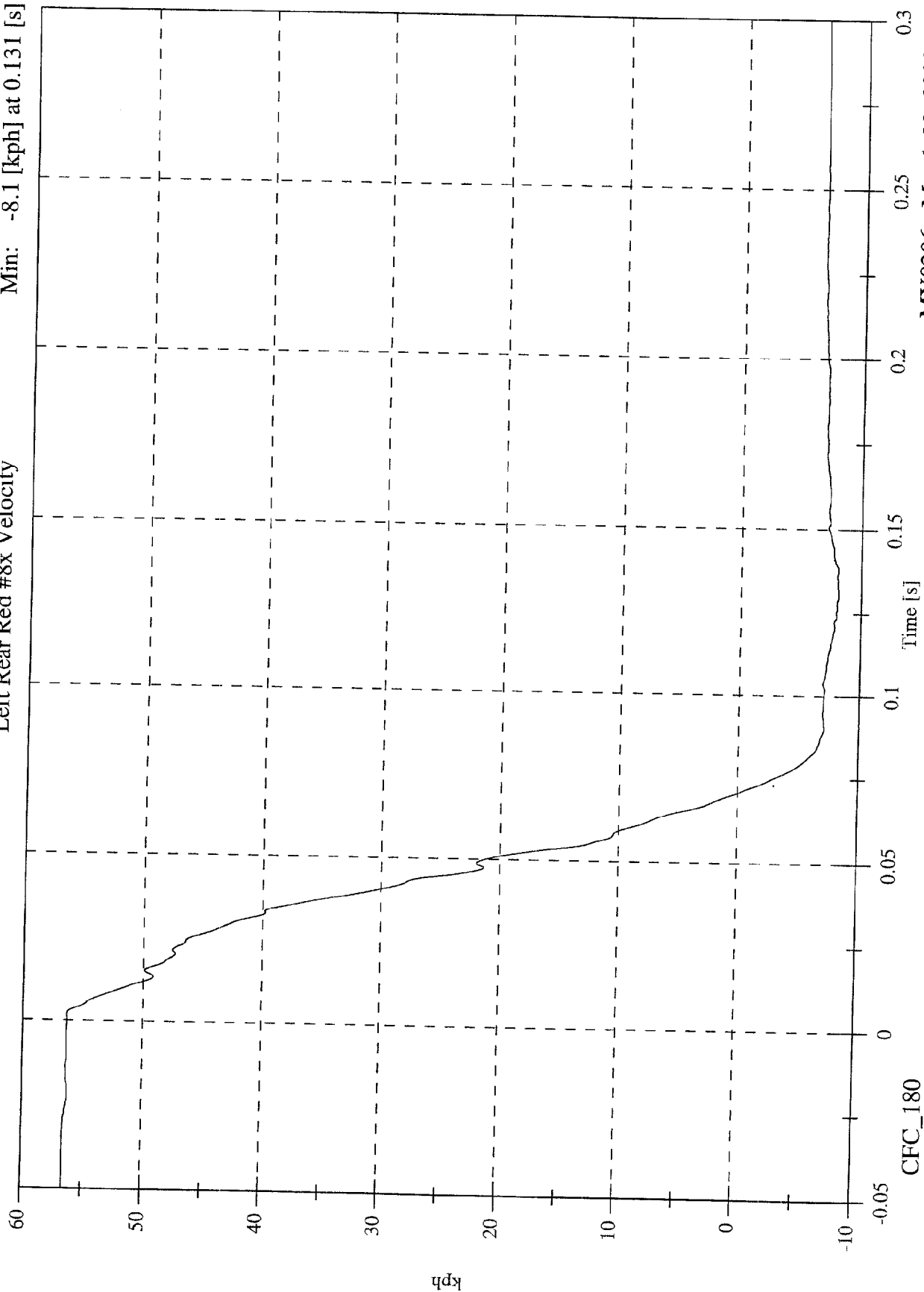


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 56.6 [kph] at -0.035 [s]
Min: -8.1 [kph] at 0.131 [s]

Left Rear Red #8x Velocity

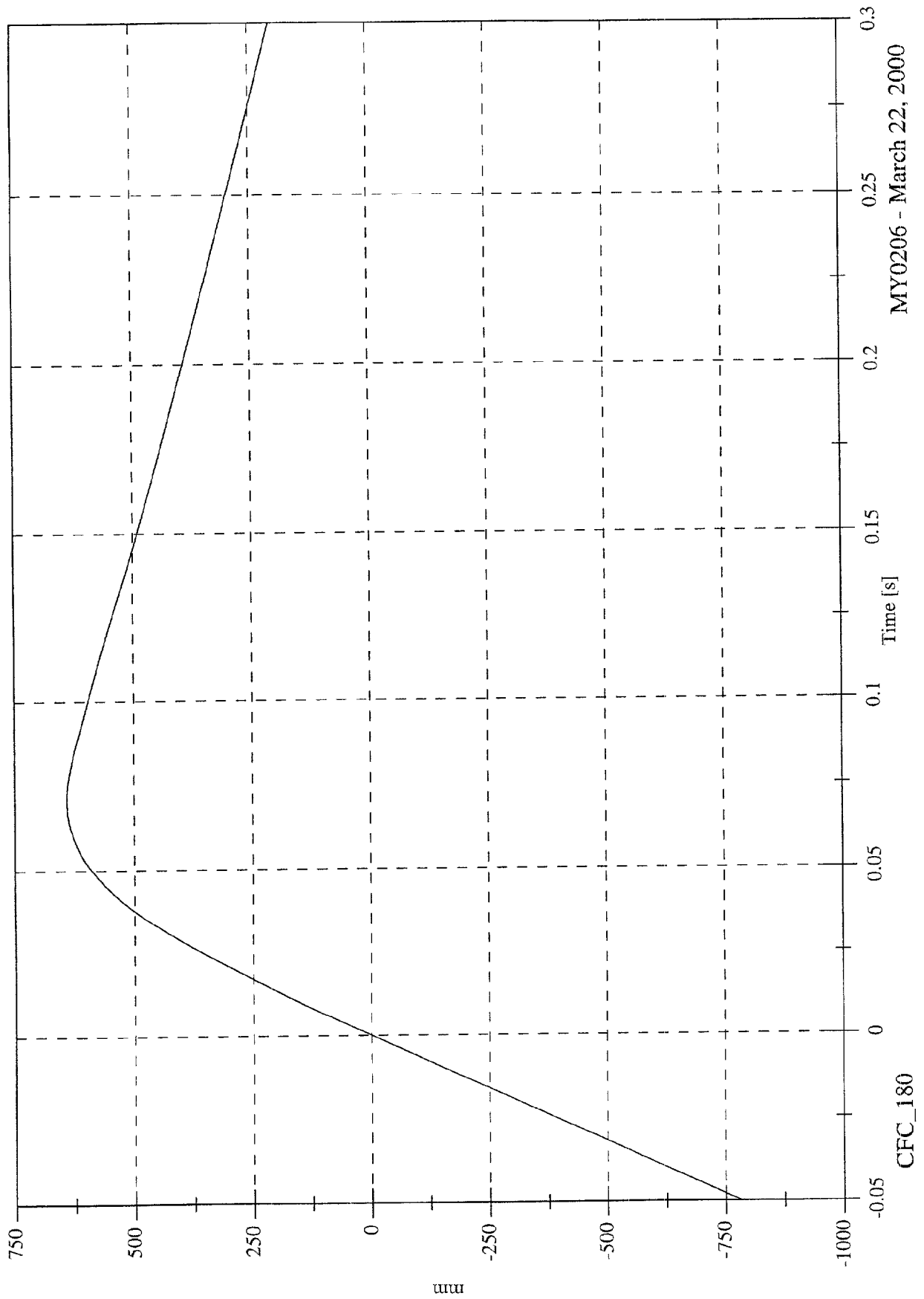


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Left Rear Red #8x Displacement

Max: 641.2 [mm] at 0.071 [s]
Min: -783.9 [mm] at -0.050 [s]

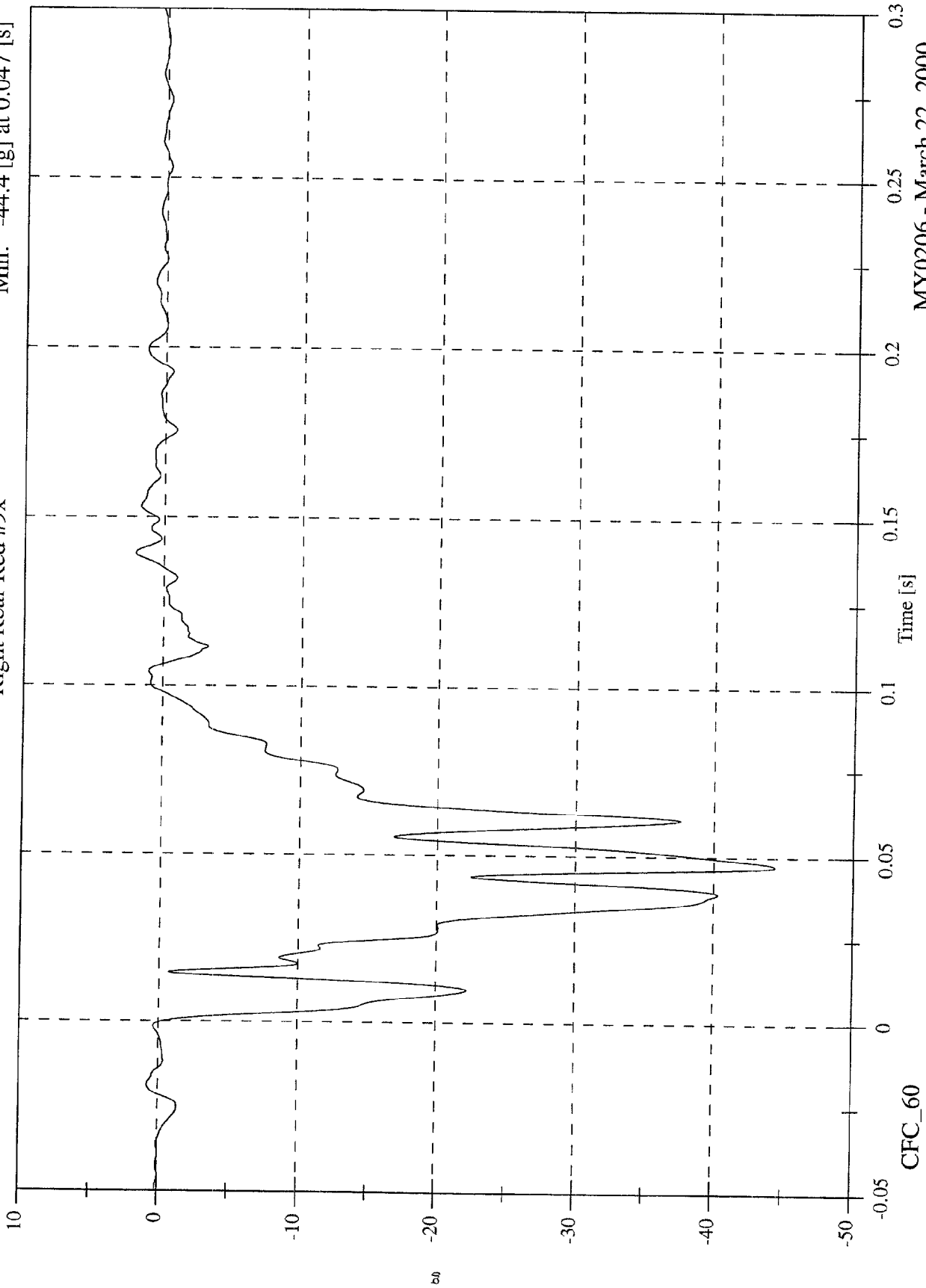


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 2.0 [g] at 0.139 [s]
Min: -44.4 [g] at 0.047 [s]

Right Rear Red #9x



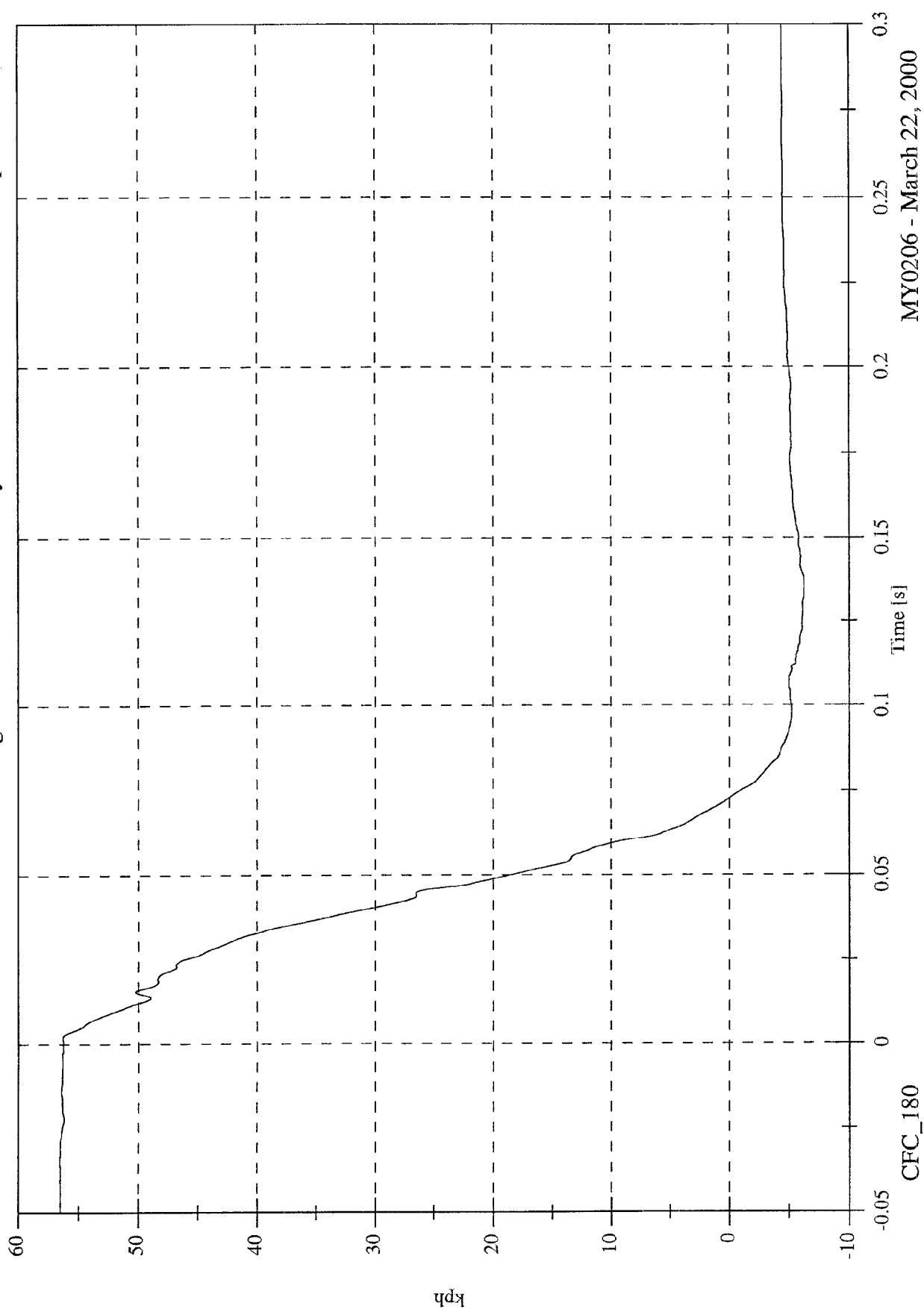
MY0206 - March 22, 2000

Max: 56.6 [kph] at -0.035 [s]

Min: -6.3 [kph] at 0.133 [s]

NCAP Test #16 - 2000 Ford Focus 4-Door

Right Rear Red #9x Velocity

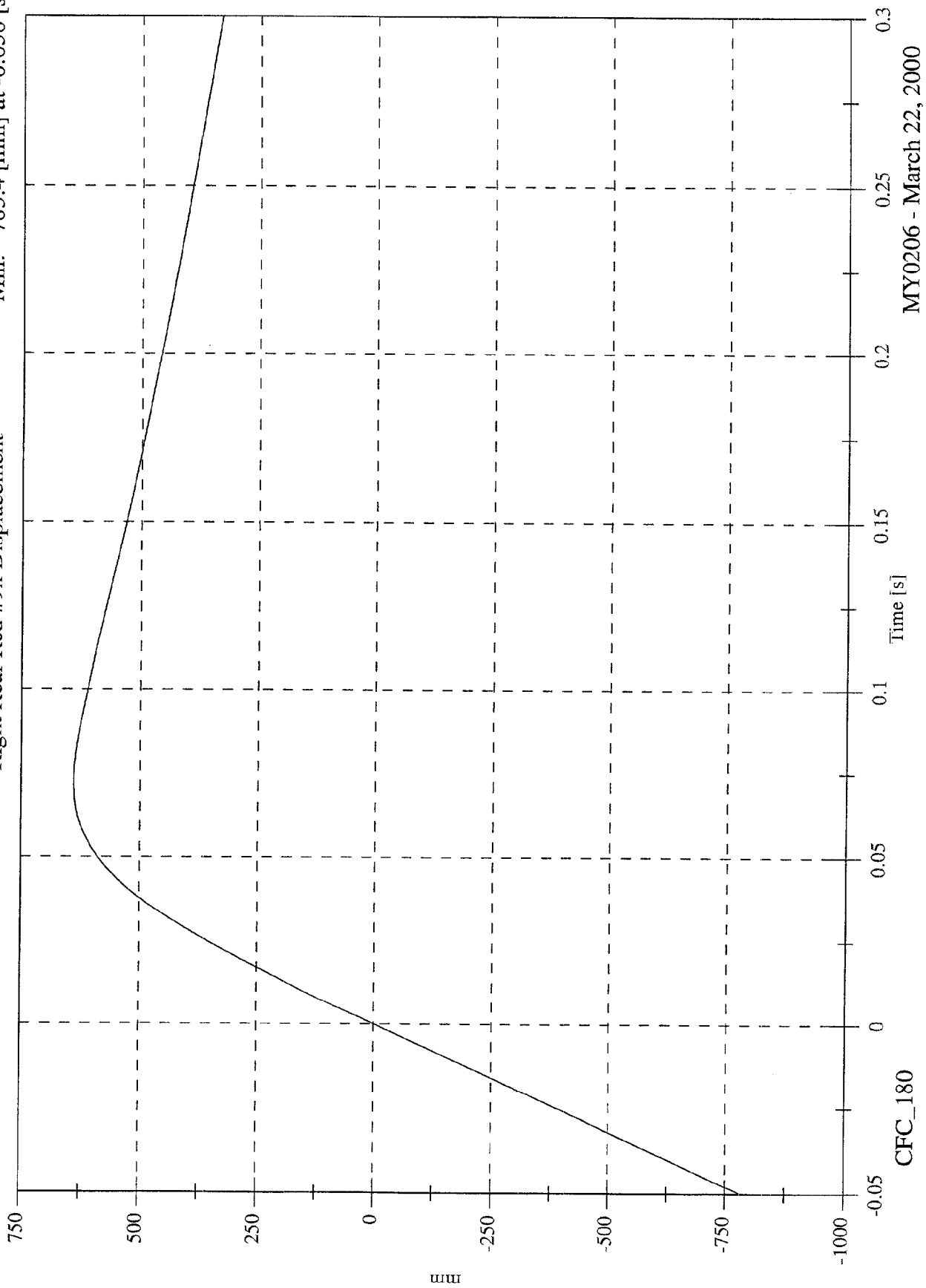


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 639.6 [mm] at 0.073 [s]
 Min: -783.4 [mm] at -0.050 [s]

Right Rear Red #9x Displacement

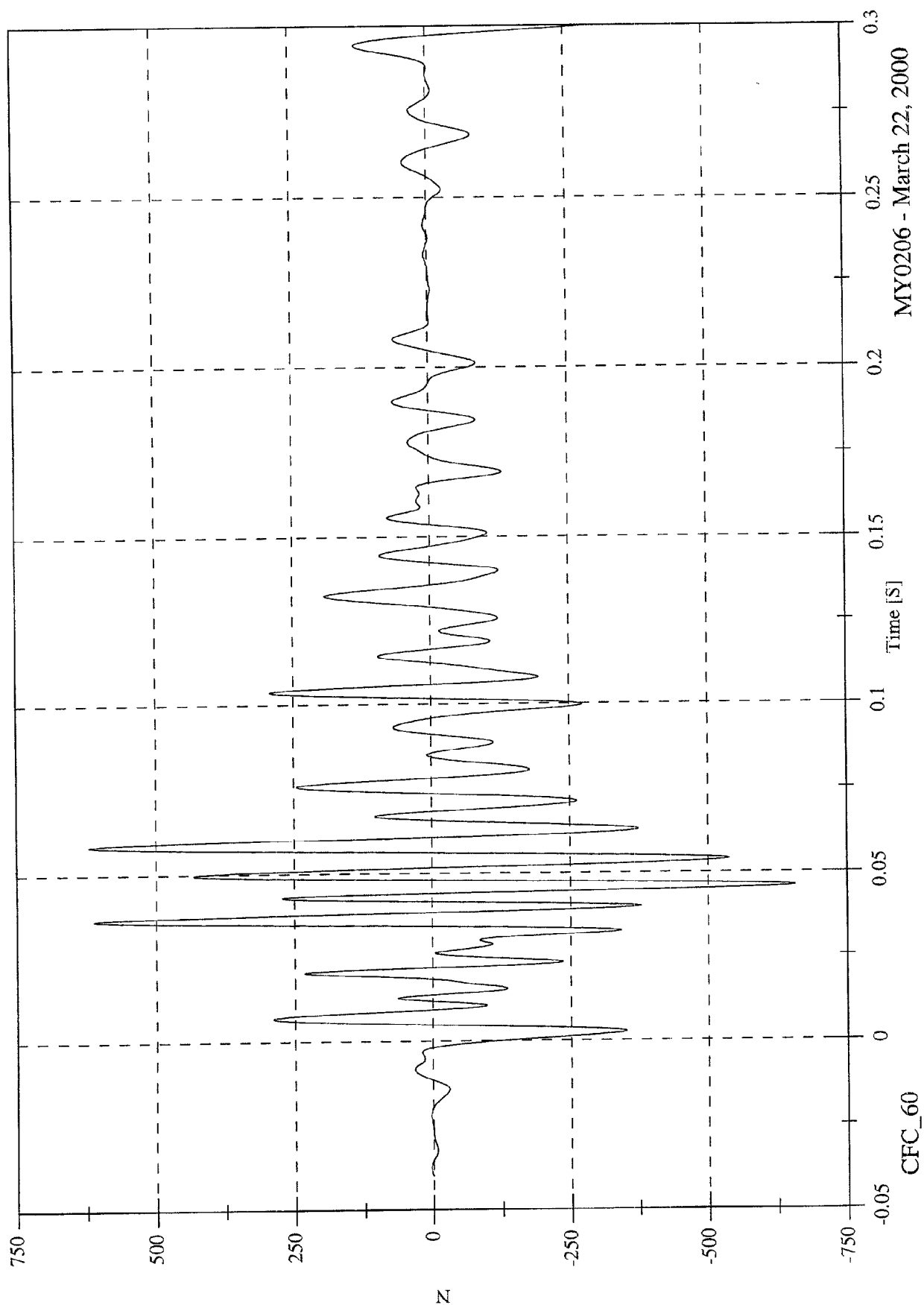


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 620.7 [N] at 0.058 [S]
Min: -656.3 [N] at 0.046 [S]

Barrier Load Cell A1 Fx

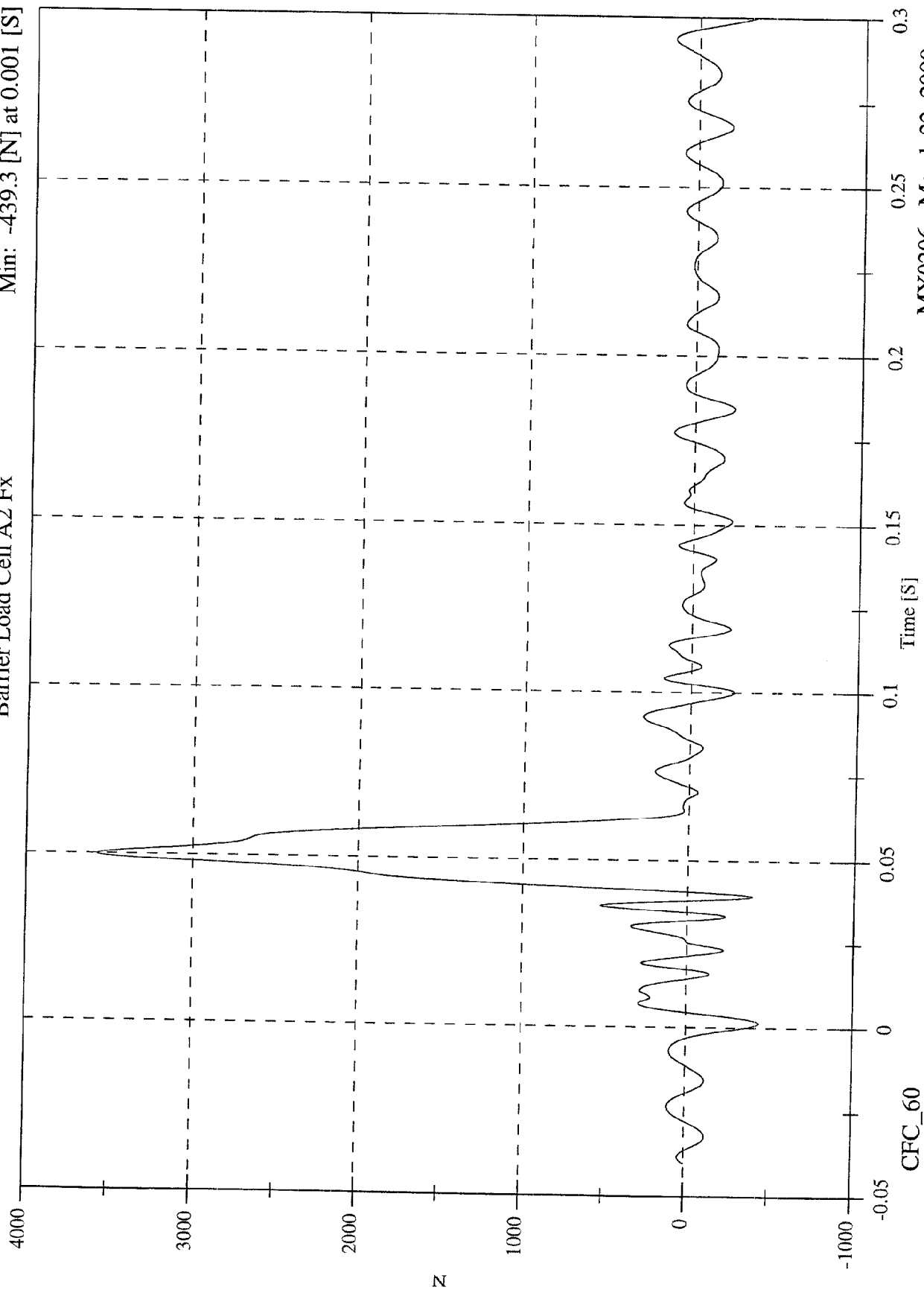


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 3575.3 [N] at 0.050 [S]
Min: -439.3 [N] at 0.001 [S]

Barrier Load Cell A2 Fx

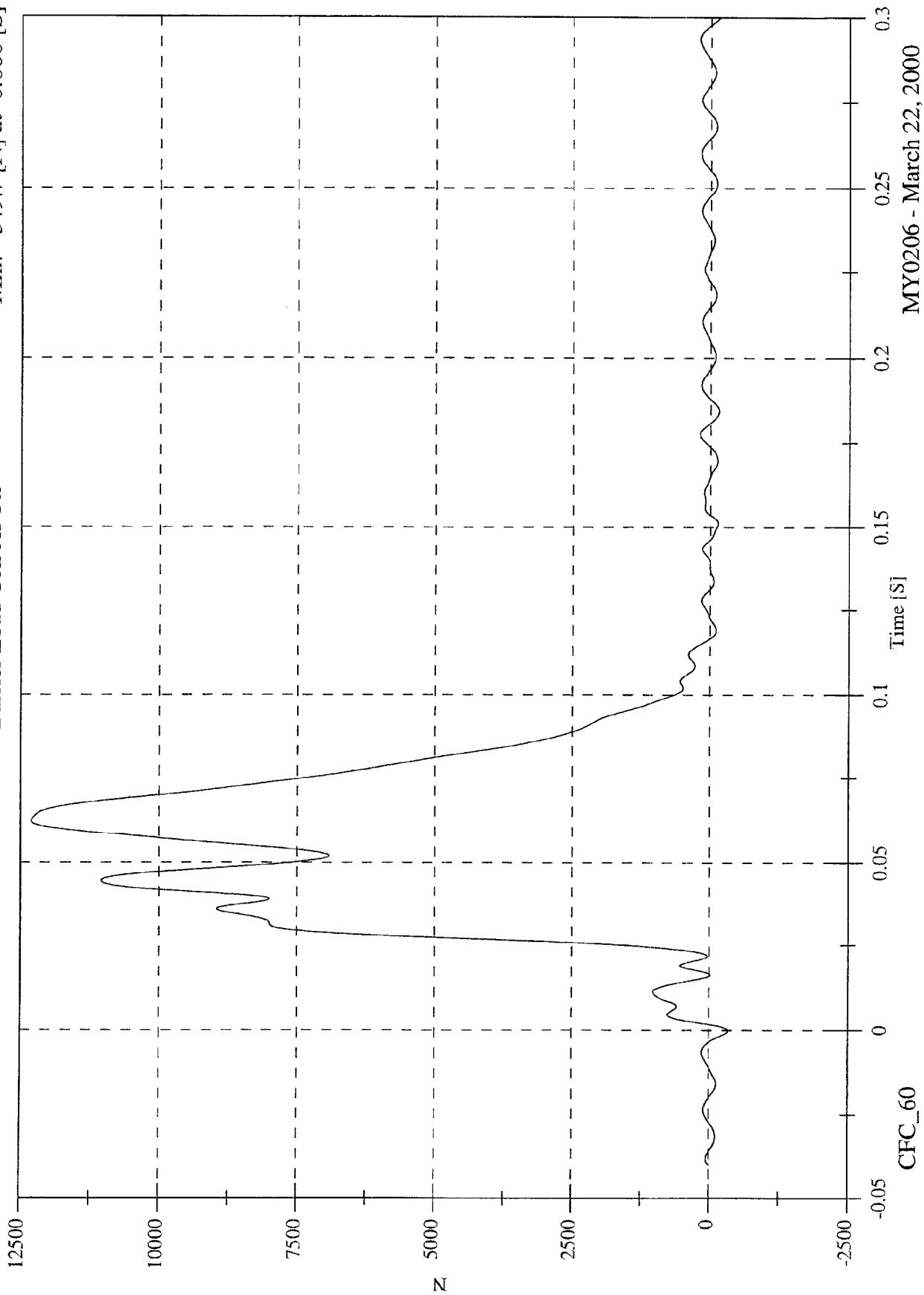


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 12297.9 [N] at 0.062 [S]
 Min: -349.7 [N] at -0.000 [S]

Barrier Load Cell A3 Fx

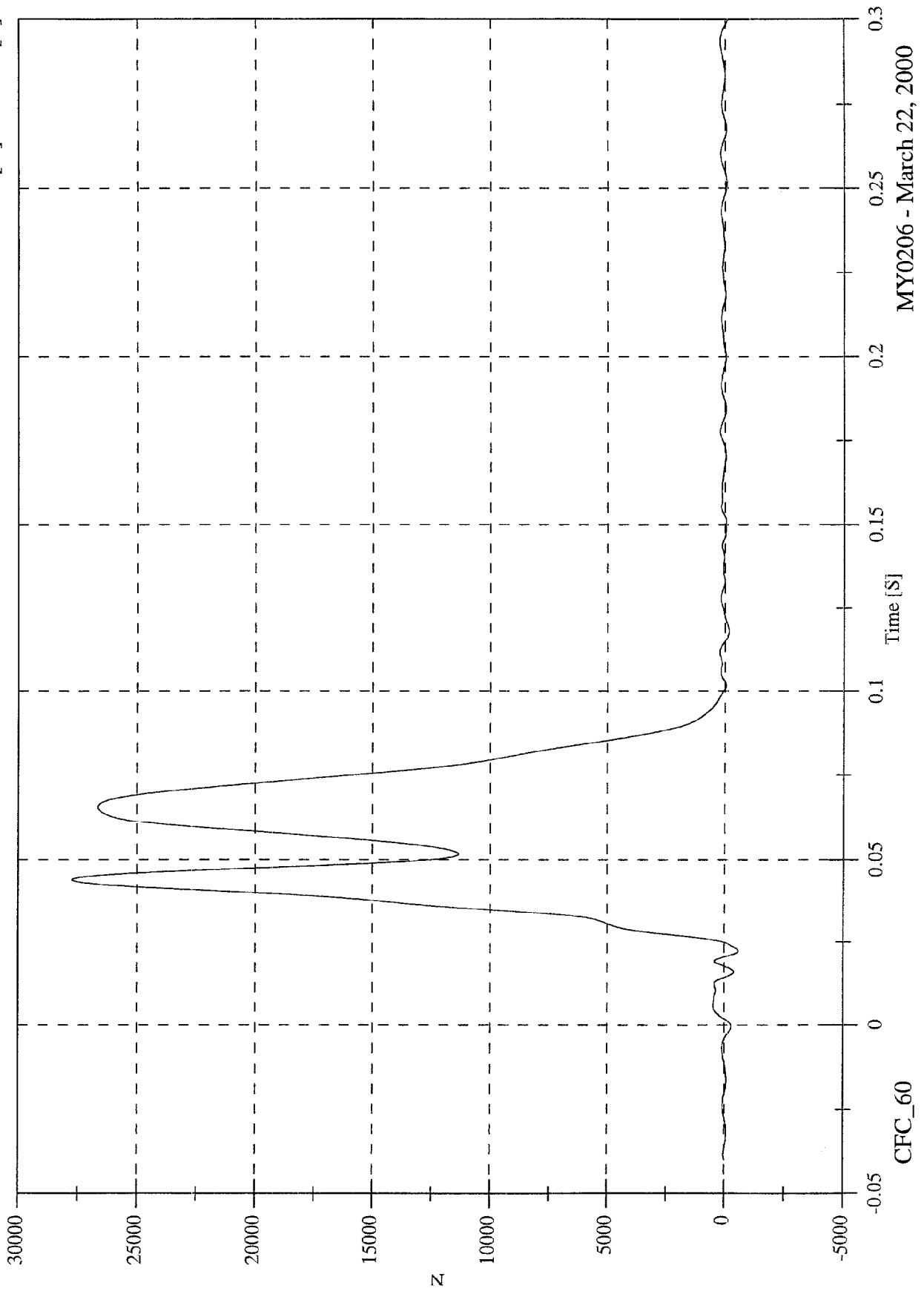


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 27728.9 [N] at 0.044 [S]
Min: -579.0 [N] at 0.022 [S]

Barrier Load Cell A4 Fx

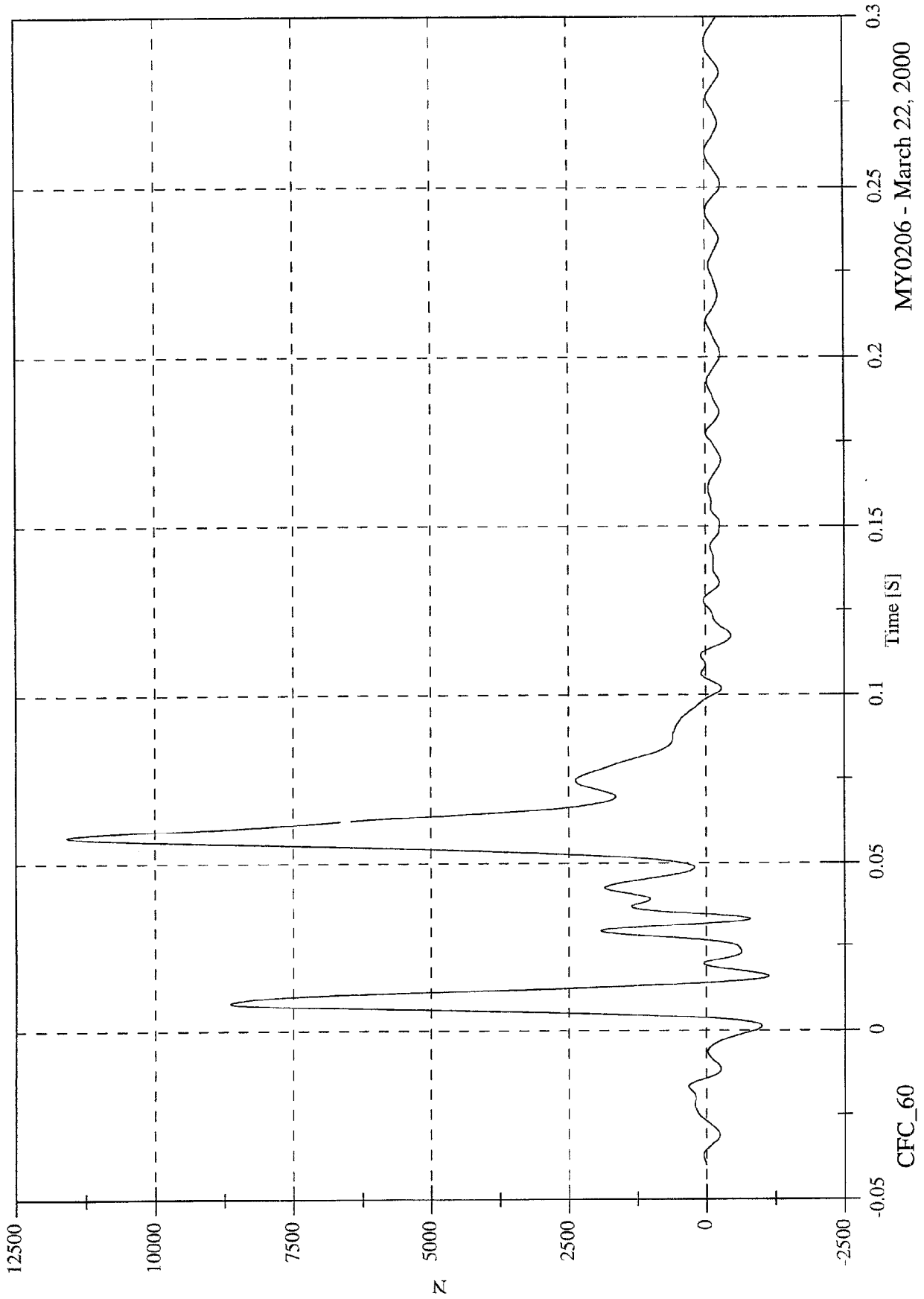


MY0206 - March 22, 2000

Max: 11578.4 [N] at 0.058 [S]
Min: -1136.0 [N] at 0.016 [S]

Barrier Load Cell A5 Fx

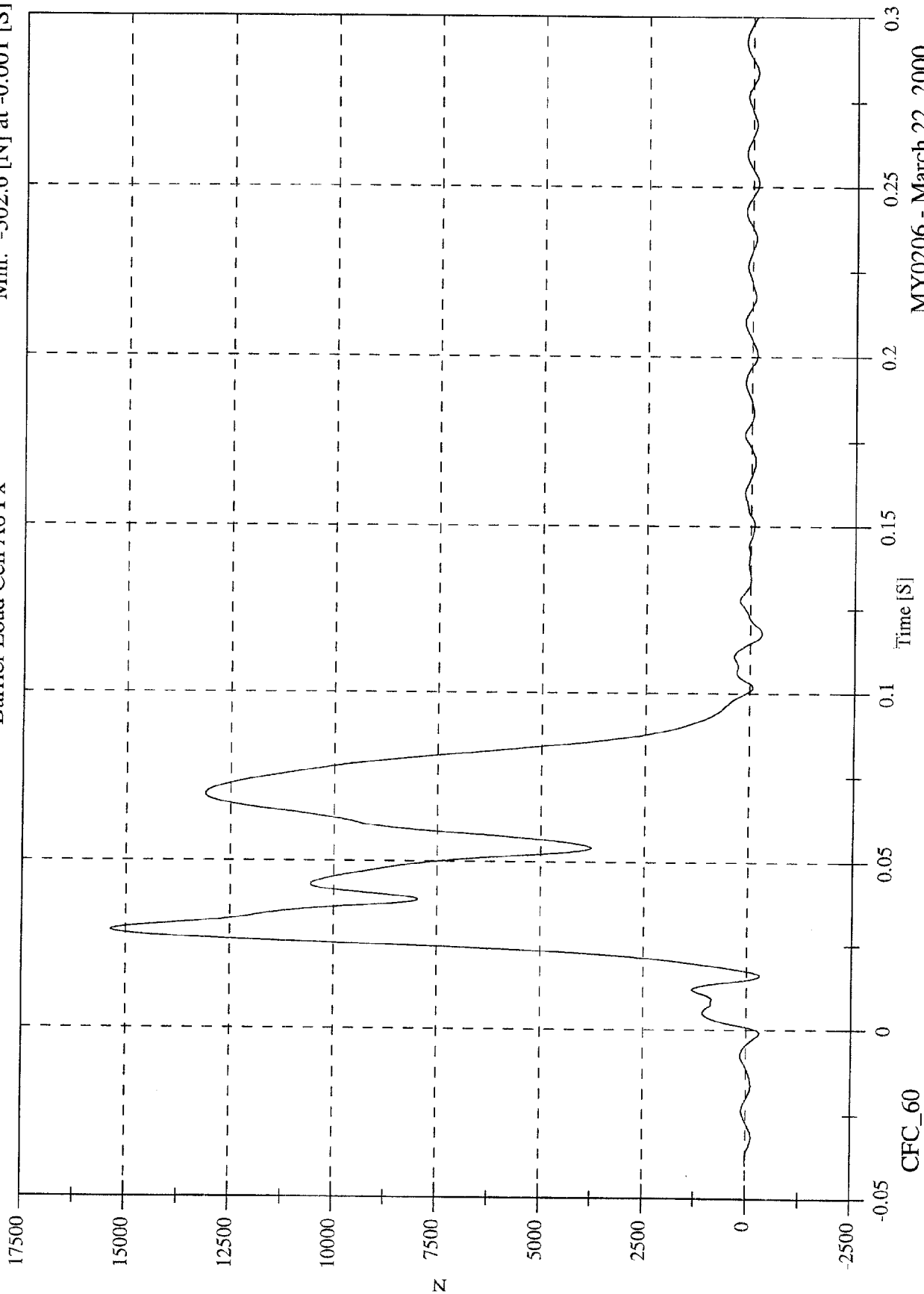
NCAP Test #16 - 2000 Ford Focus 4-Door



NCAP Test #16 - 2000 Ford Focus 4-Door

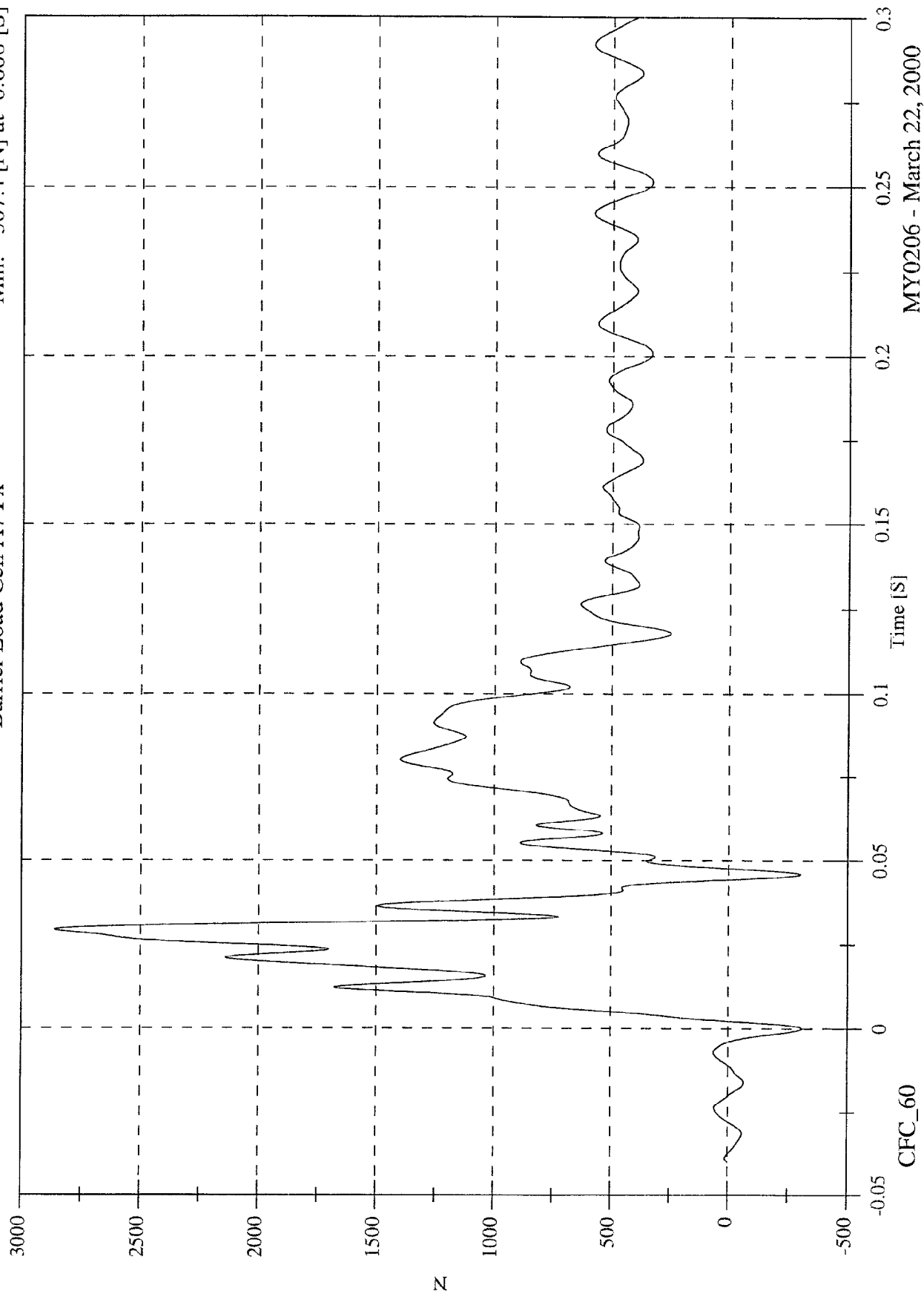
Max: 15369.2 [N] at 0.029 [S]
 Min: -302.6 [N] at -0.001 [S]

Barrier Load Cell A6 Fx



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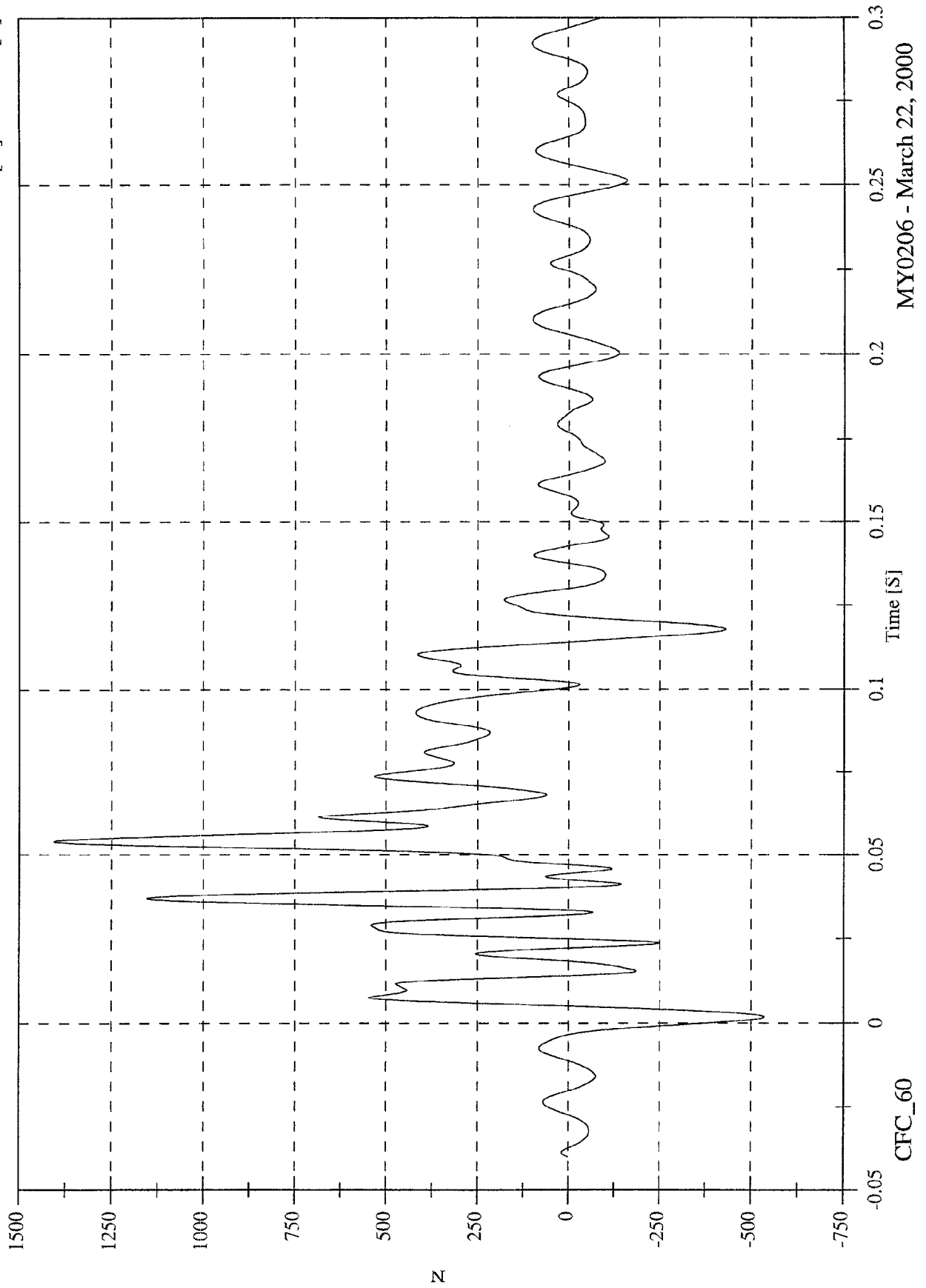
Barrier Load Cell A7 Fx



NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 1406.4 [N] at 0.054 [S]
Min: -535.6 [N] at 0.002 [S]

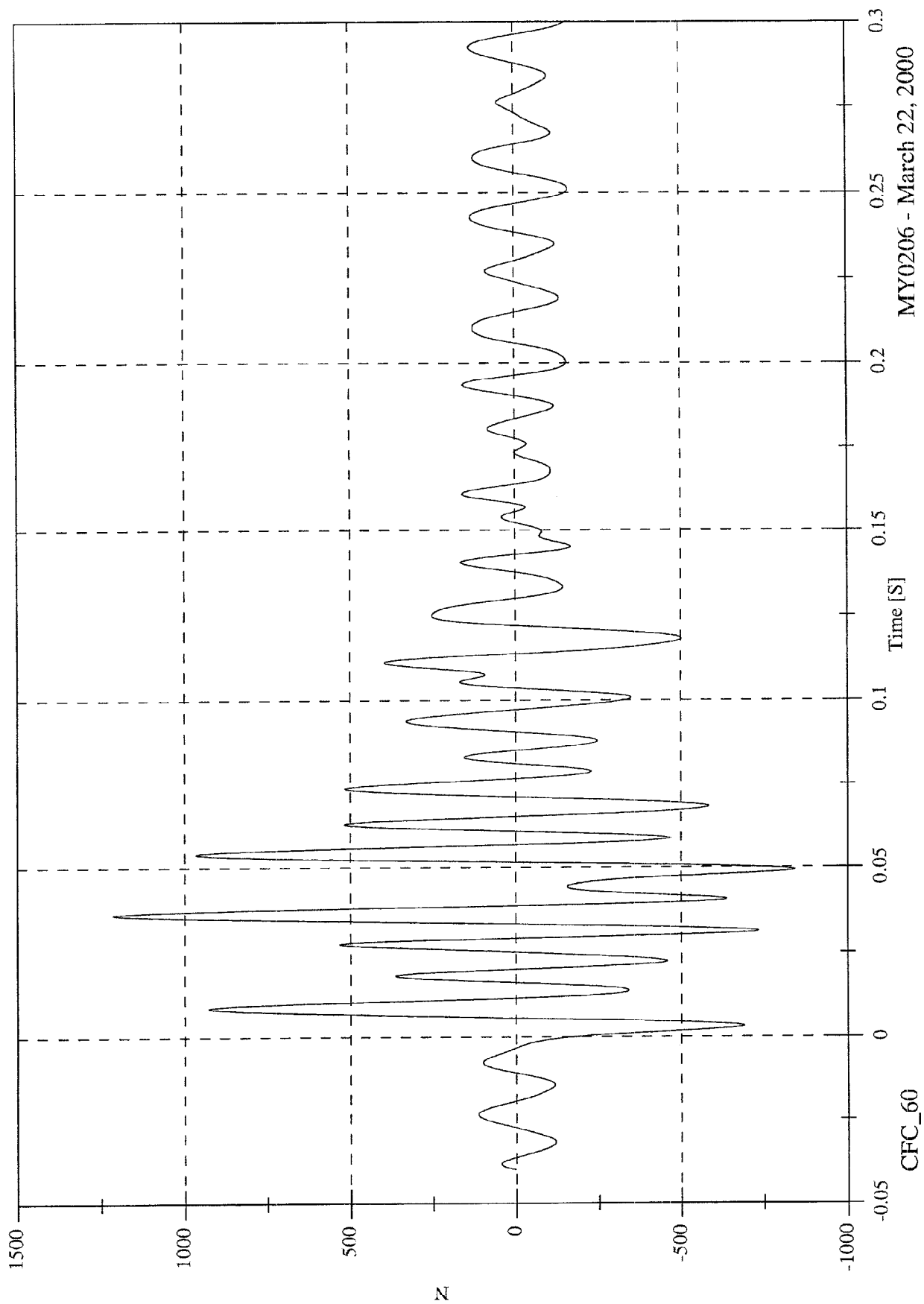
Barrier Load Cell A8 Fx



NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 1212.7 [N] at 0.036 [S]
 Min: -842.7 [N] at 0.049 [S]

Barrier Load Cell A9 Fx

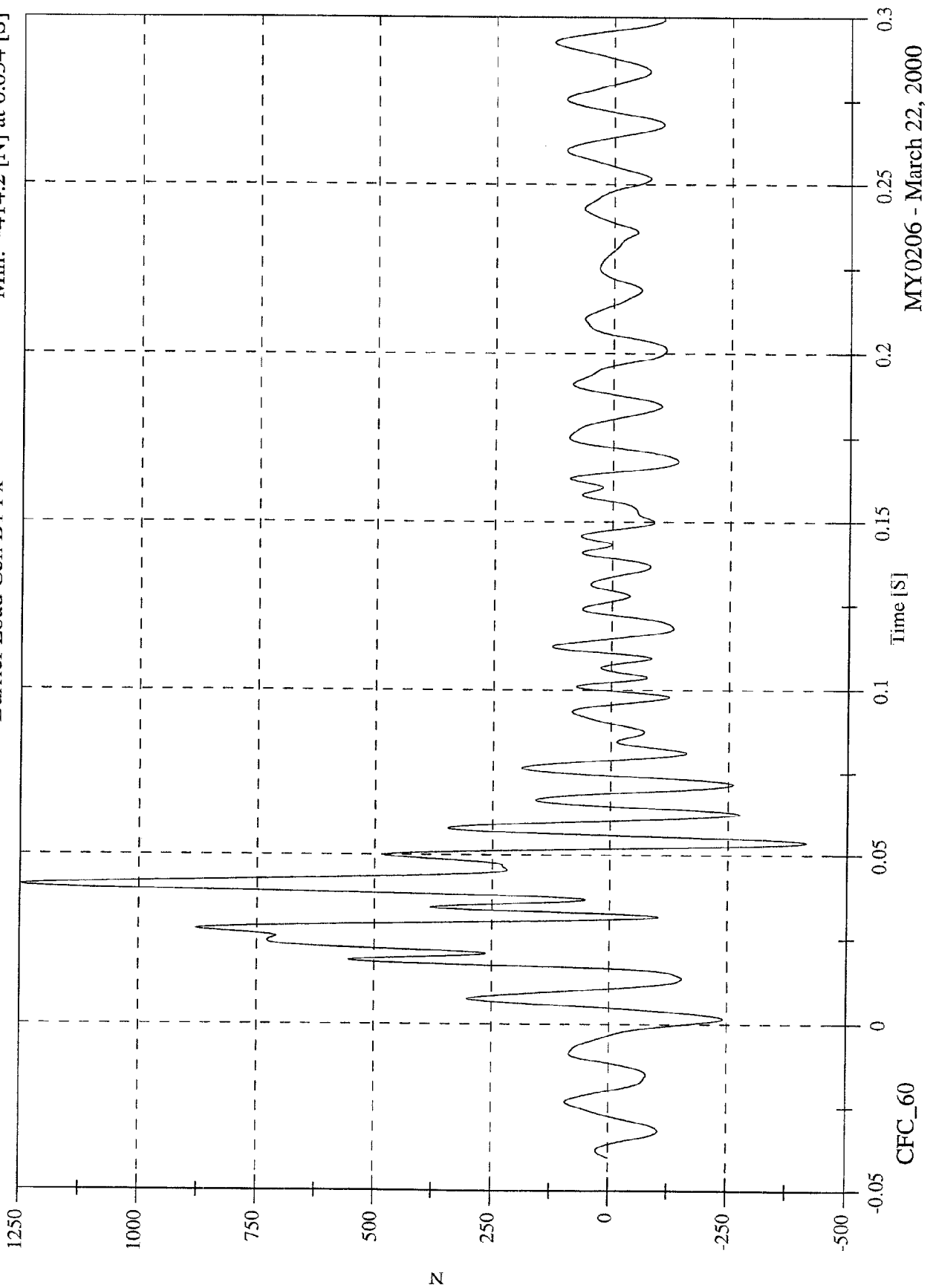


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Barrier Load Cell B1 Fx

Max: 1247.2 [N] at 0.041 [S]
Min: -414.2 [N] at 0.054 [S]

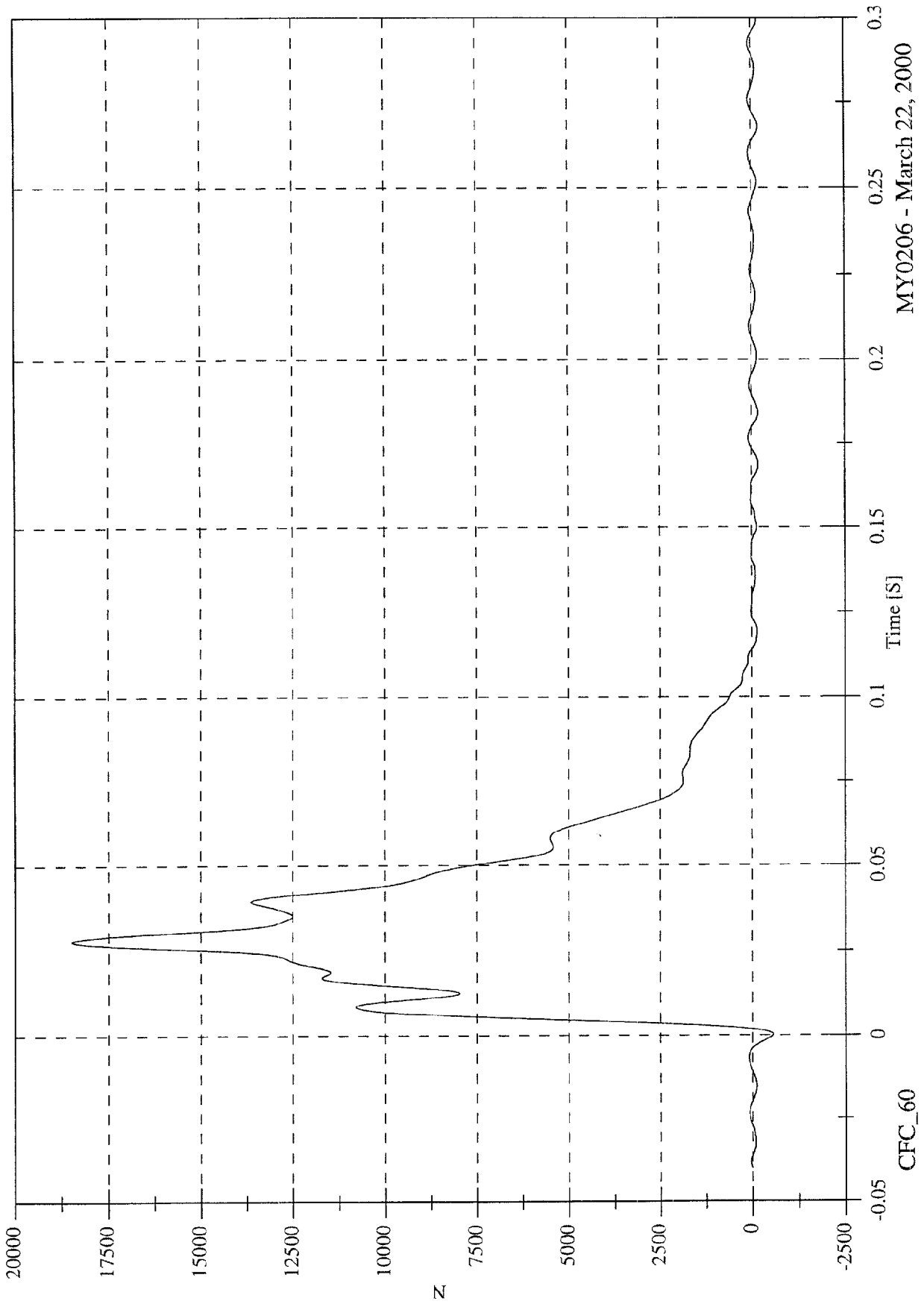


MY0206 - March 22, 2000

Max: 18469.0 [N] at 0.028 [S]
Min: -550.6 [N] at 0.000 [S]

Barrier Load Cell B2 Fx

NCAP Test #16 - 2000 Ford Focus 4-Door

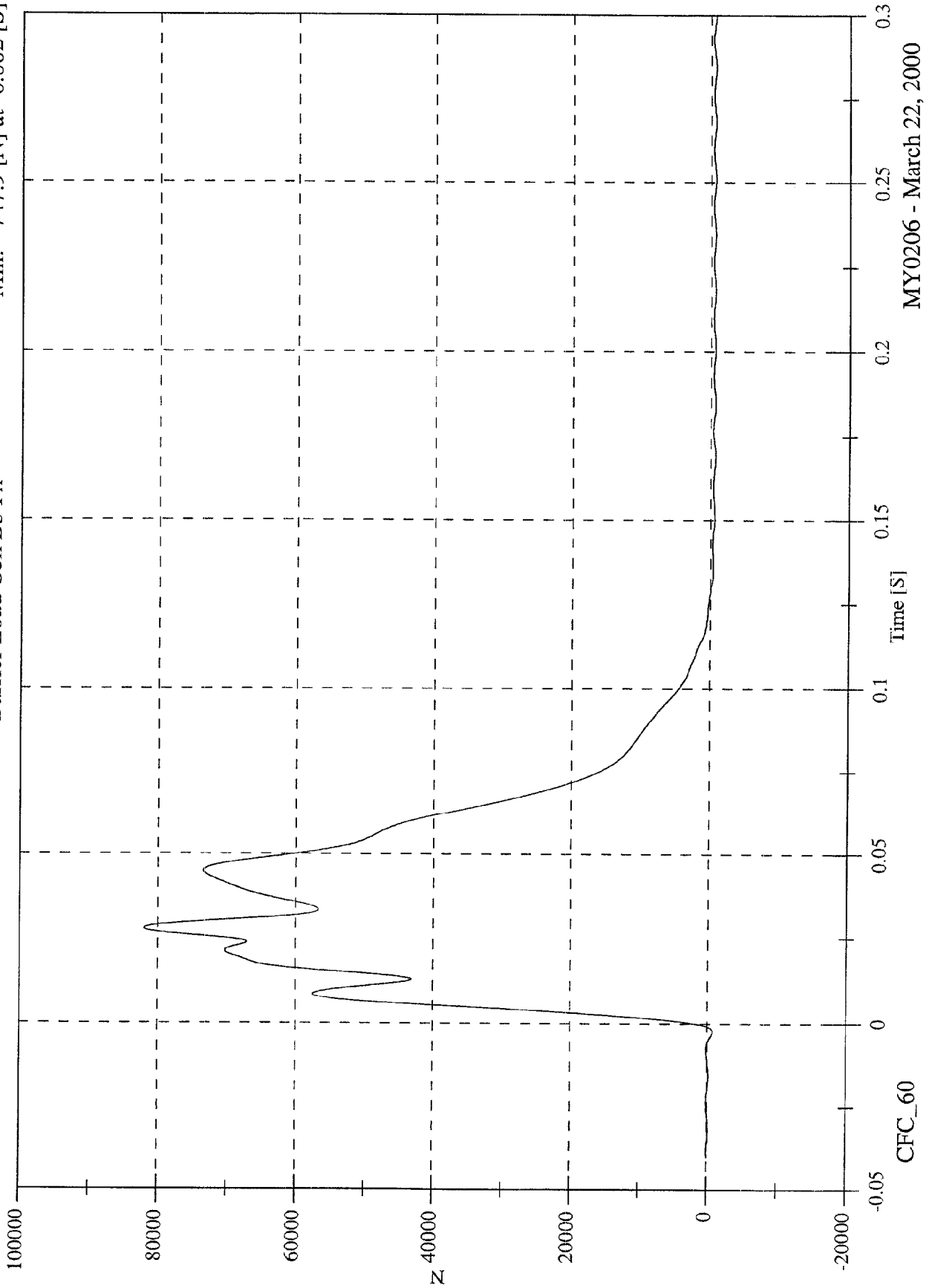


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 82022.4 [N] at 0.028 [S]
 Min: -747.9 [N] at -0.002 [S]

Barrier Load Cell B3 Fx

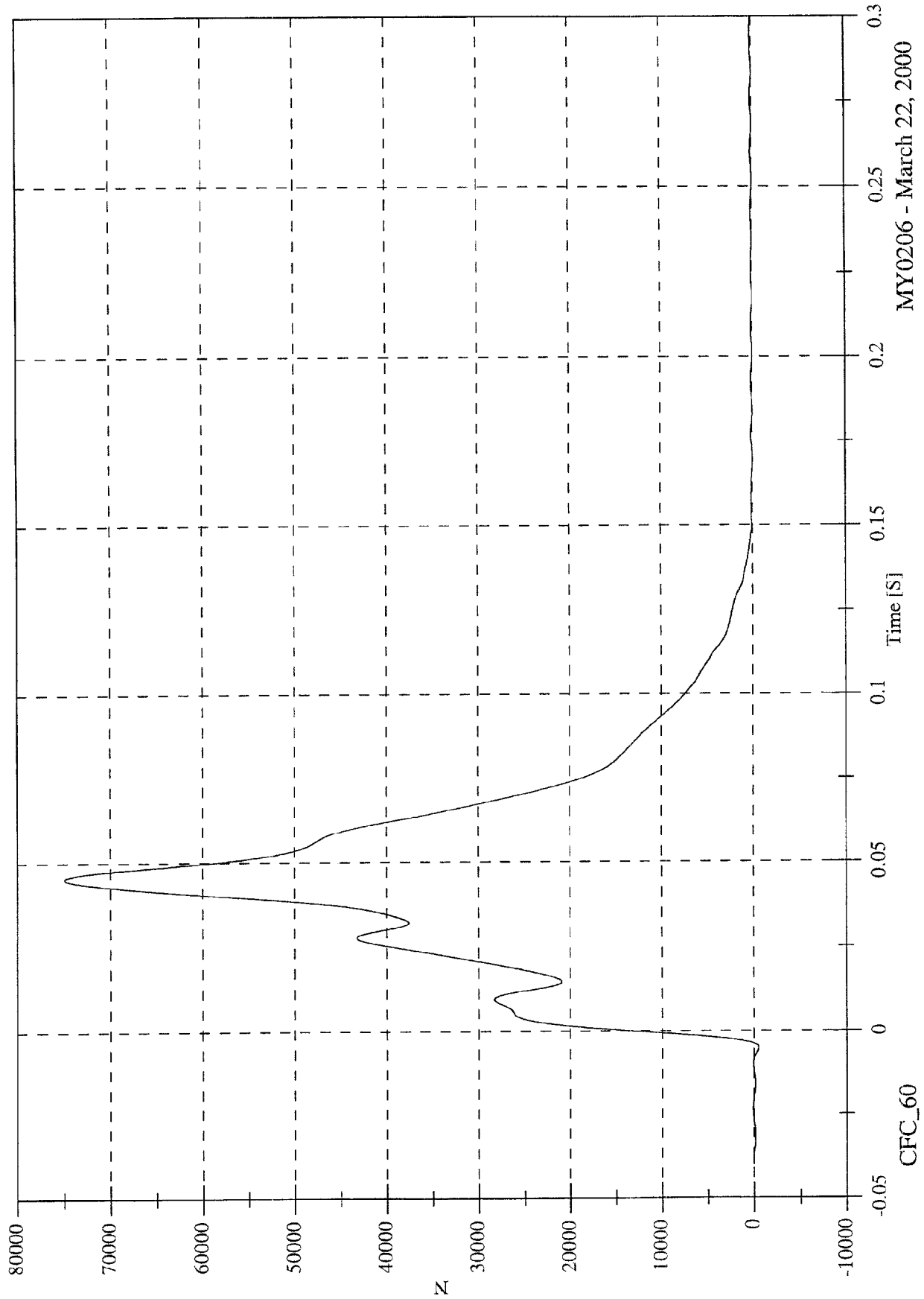


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Barrier Load Cell B4 Fx

Max: 74952.1 [N] at 0.045 [S]
Min: -494.2 [N] at -0.005 [S]

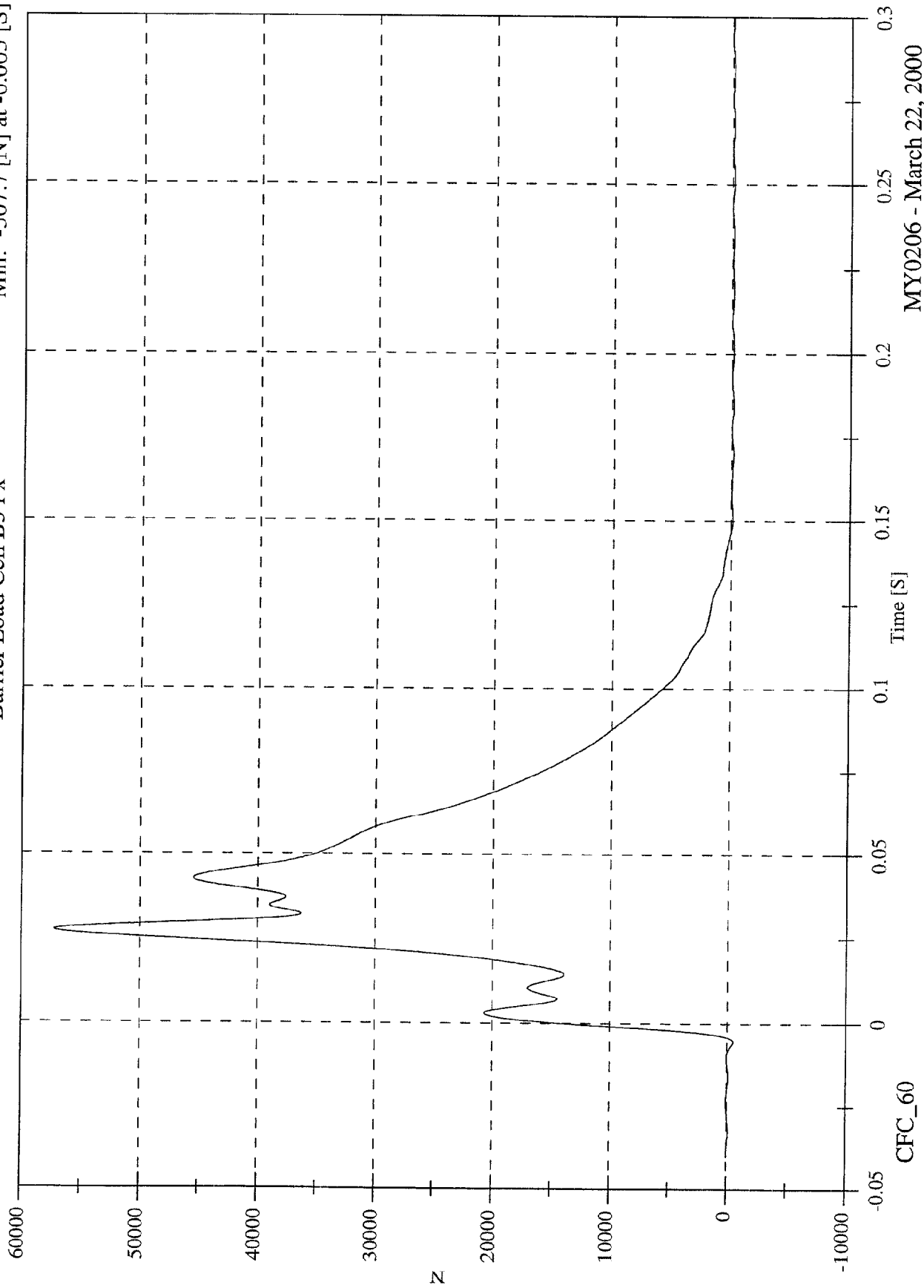


MY0206 - March 22, 2000

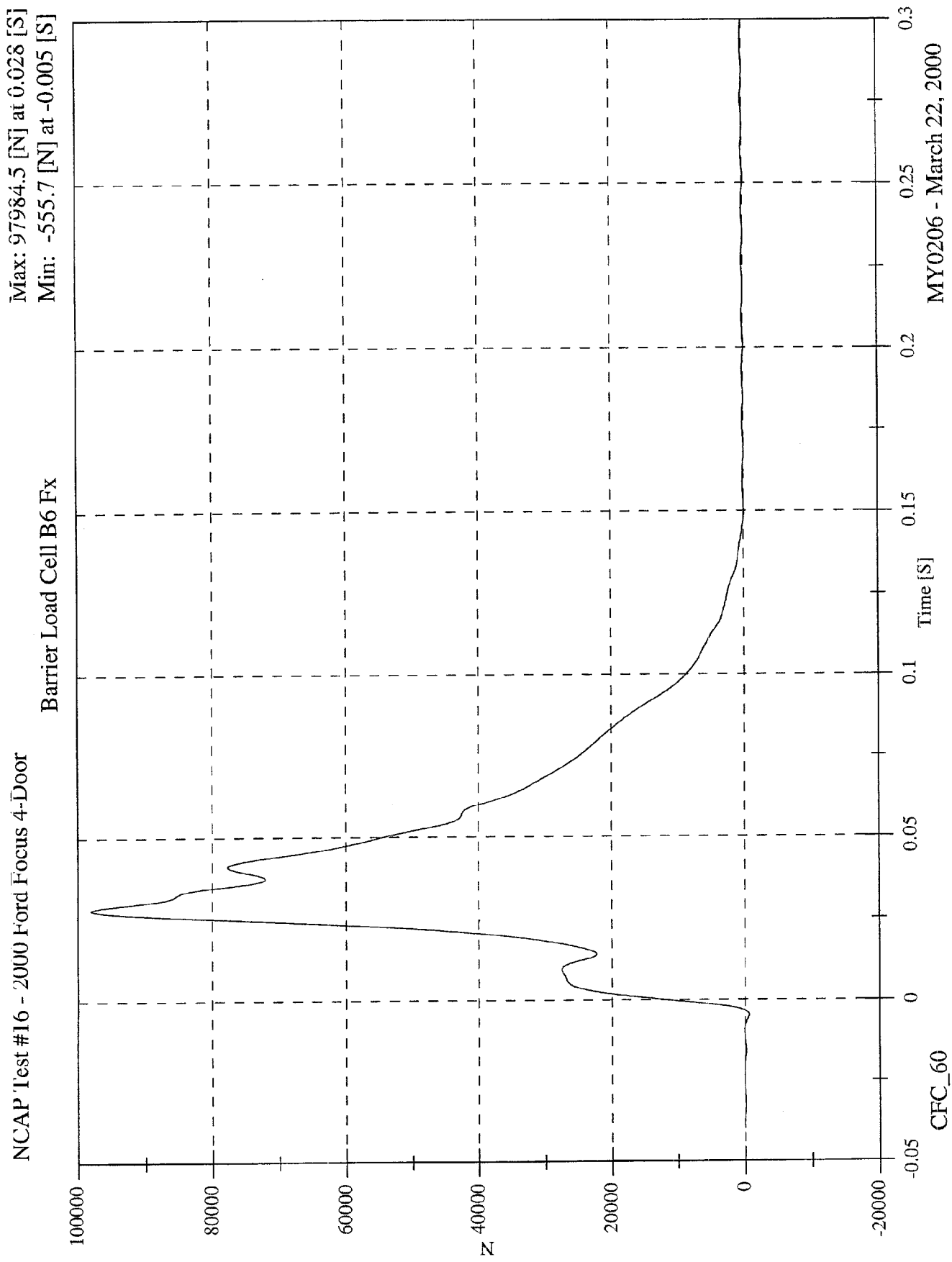
NCAP Test #16 - 2000 Ford Focus 4-Door

Barrier Load Cell B5 Fx

Max: 57209.9 [N] at 0.027 [S]
Min: -507.7 [N] at -0.005 [S]



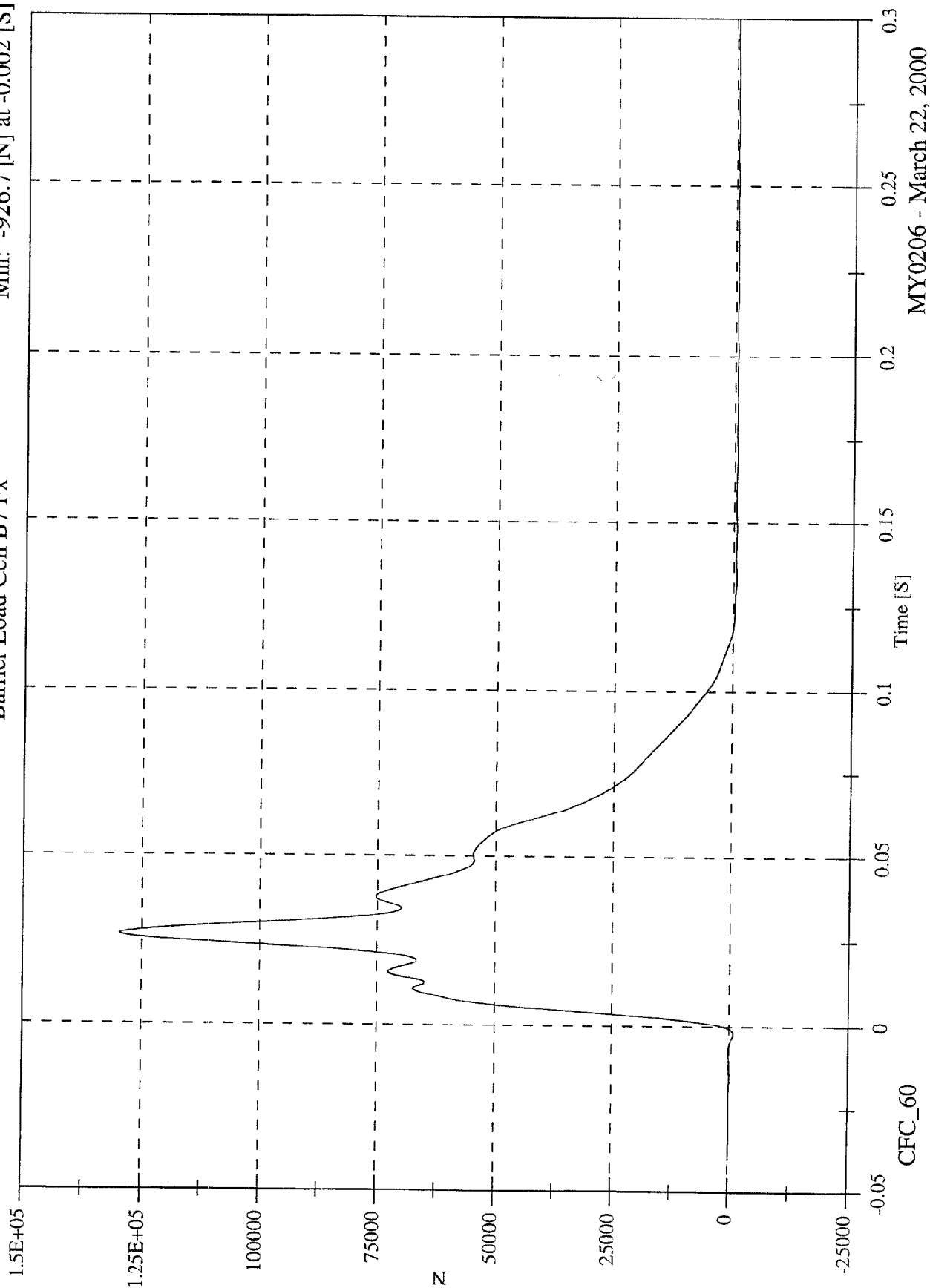
MY0206 - March 22, 2000



NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 129656.8 [N] at 0.027 [S]
 Min: -926.7 [N] at -0.002 [S]

Barrier Load Cell B7 Fx

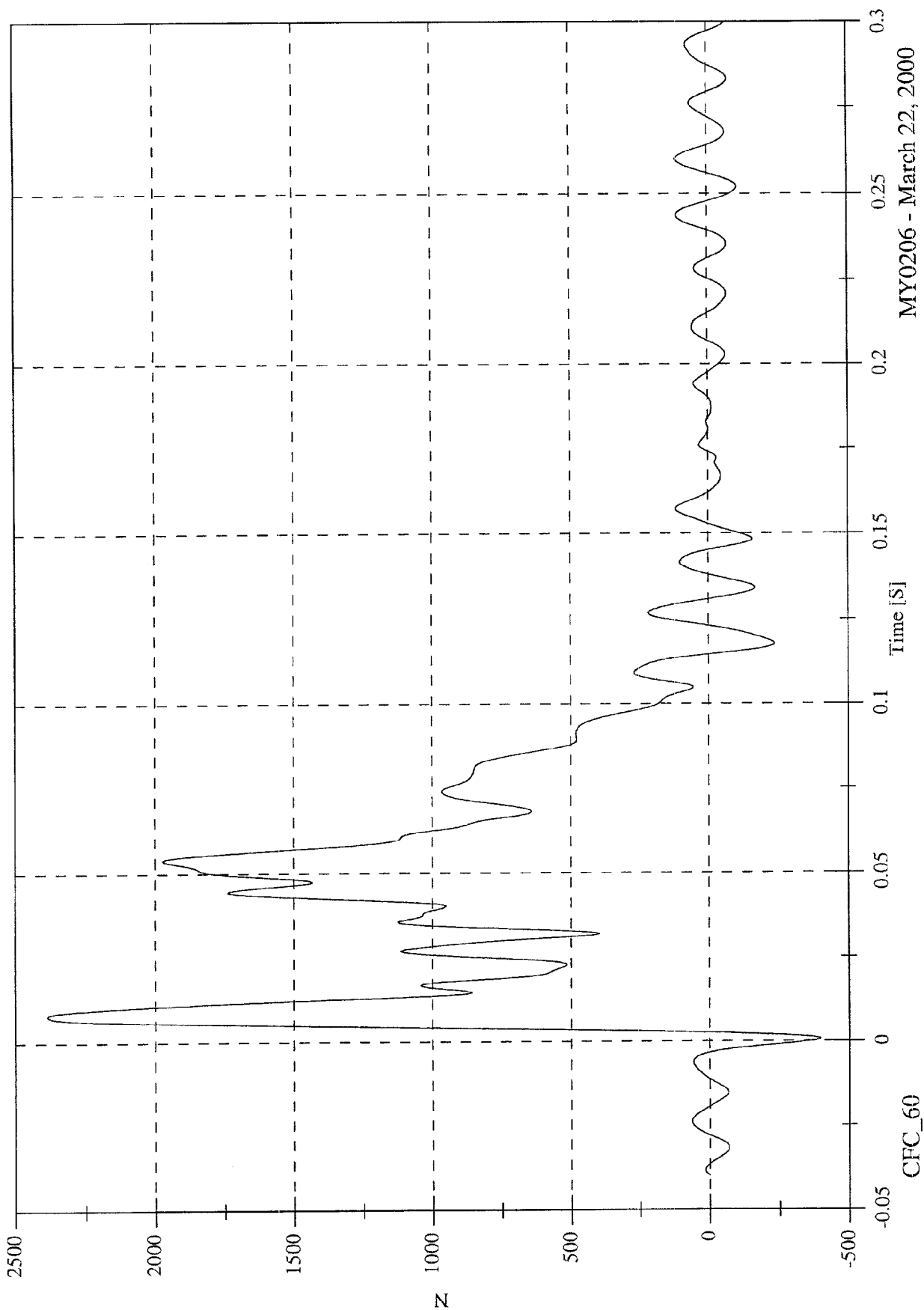


MY0206 - March 22, 2000

Max: 2385.3 [N] at 0.008 [S]
Min: -396.4 [N] at 0.001 [S]

Barrier Load Cell B8 Fx

NCAP Test #16 - 2000 Ford Focus 4-Door

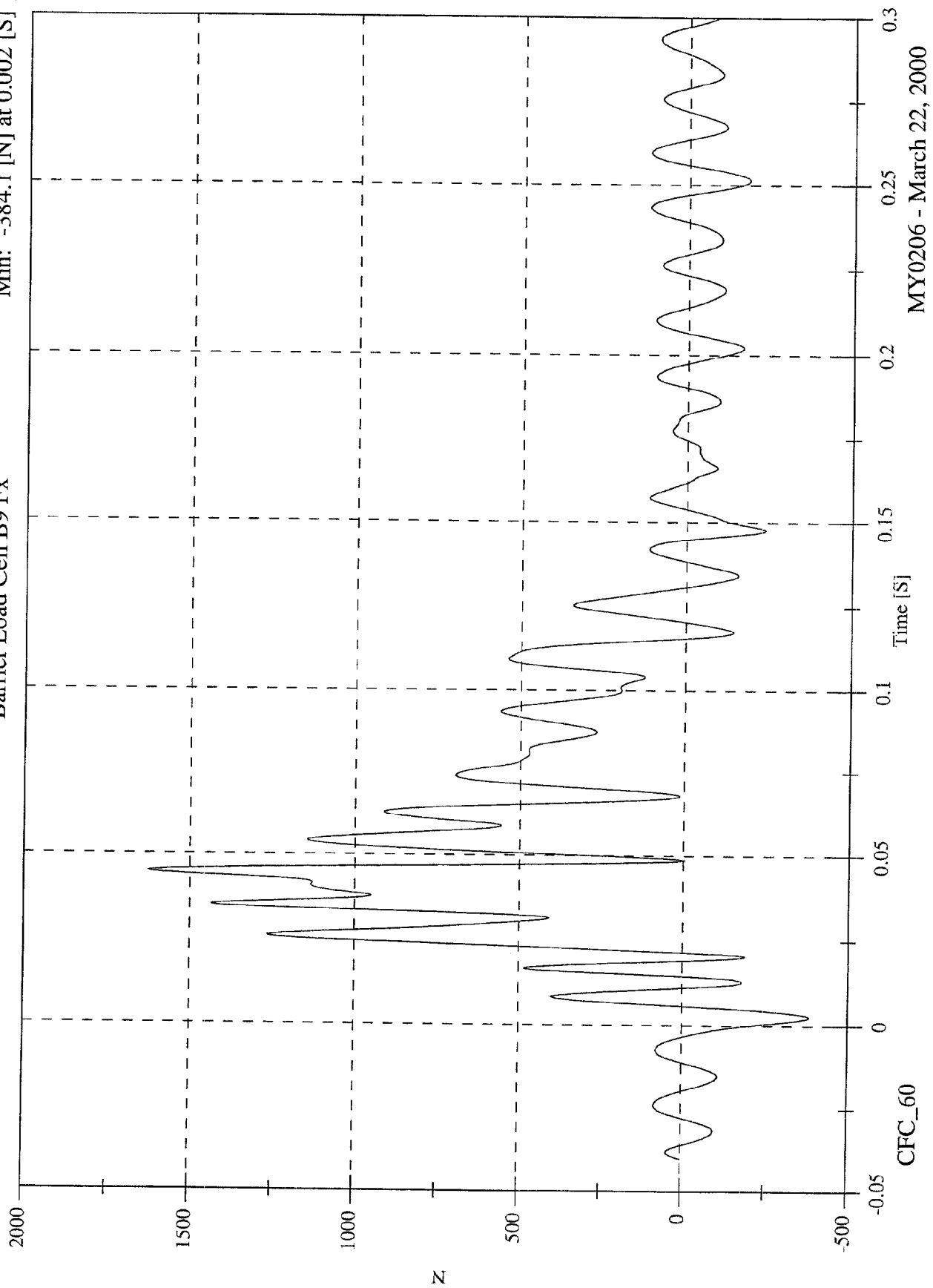


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 1625.2 [N] at 0.045 [S]
Min: -384.1 [N] at 0.002 [S]

Barrier Load Cell B9 Fx

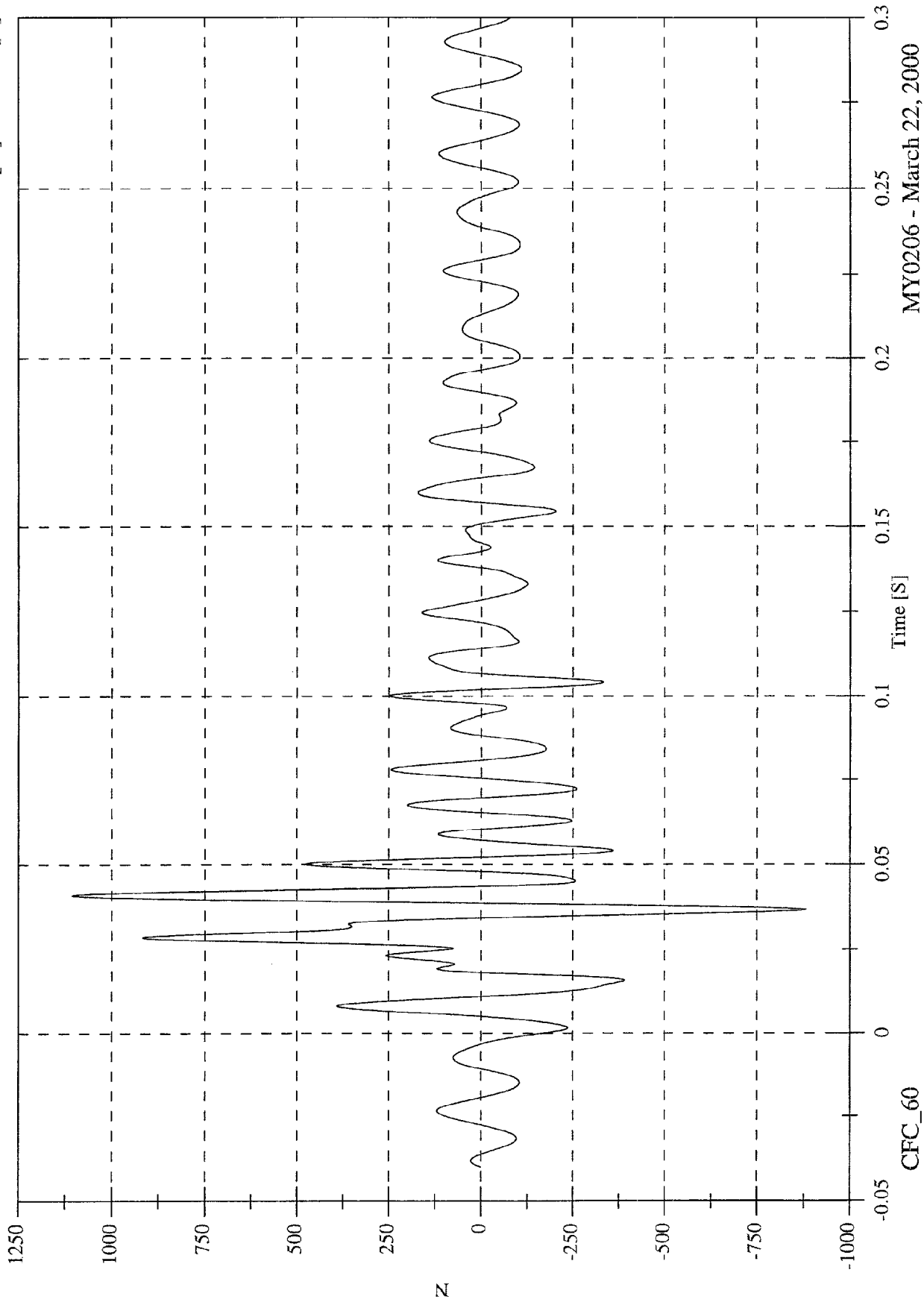


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Barrier Load Cell C1 Fx

Max: 1105.7 [N] at 0.041 [S]
Min: -881.5 [N] at 0.037 [S]

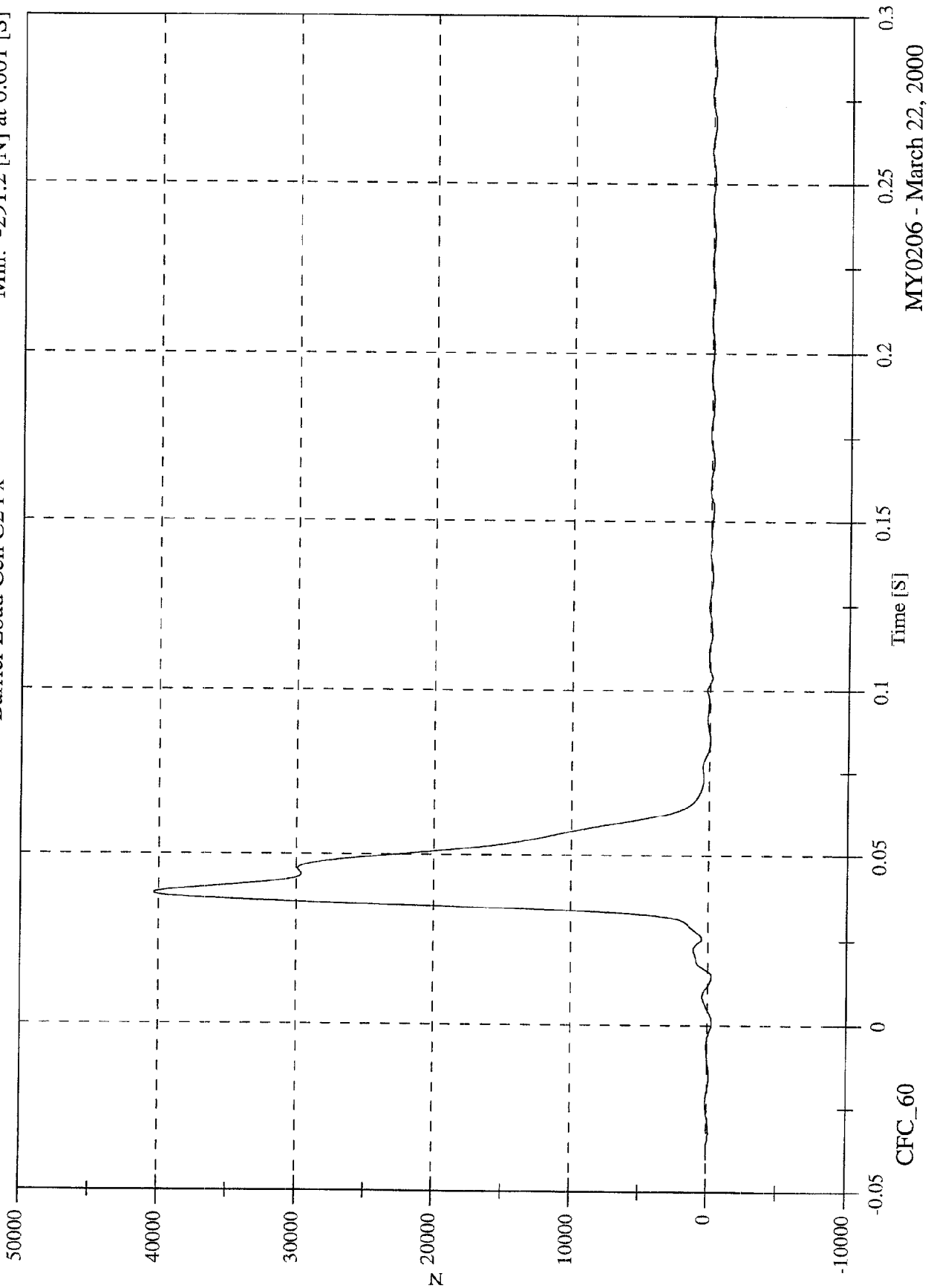


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 40366.3 [N] at 0.039 [S]
 Min: -291.2 [N] at 0.001 [S]

Barrier Load Cell C2 Fx

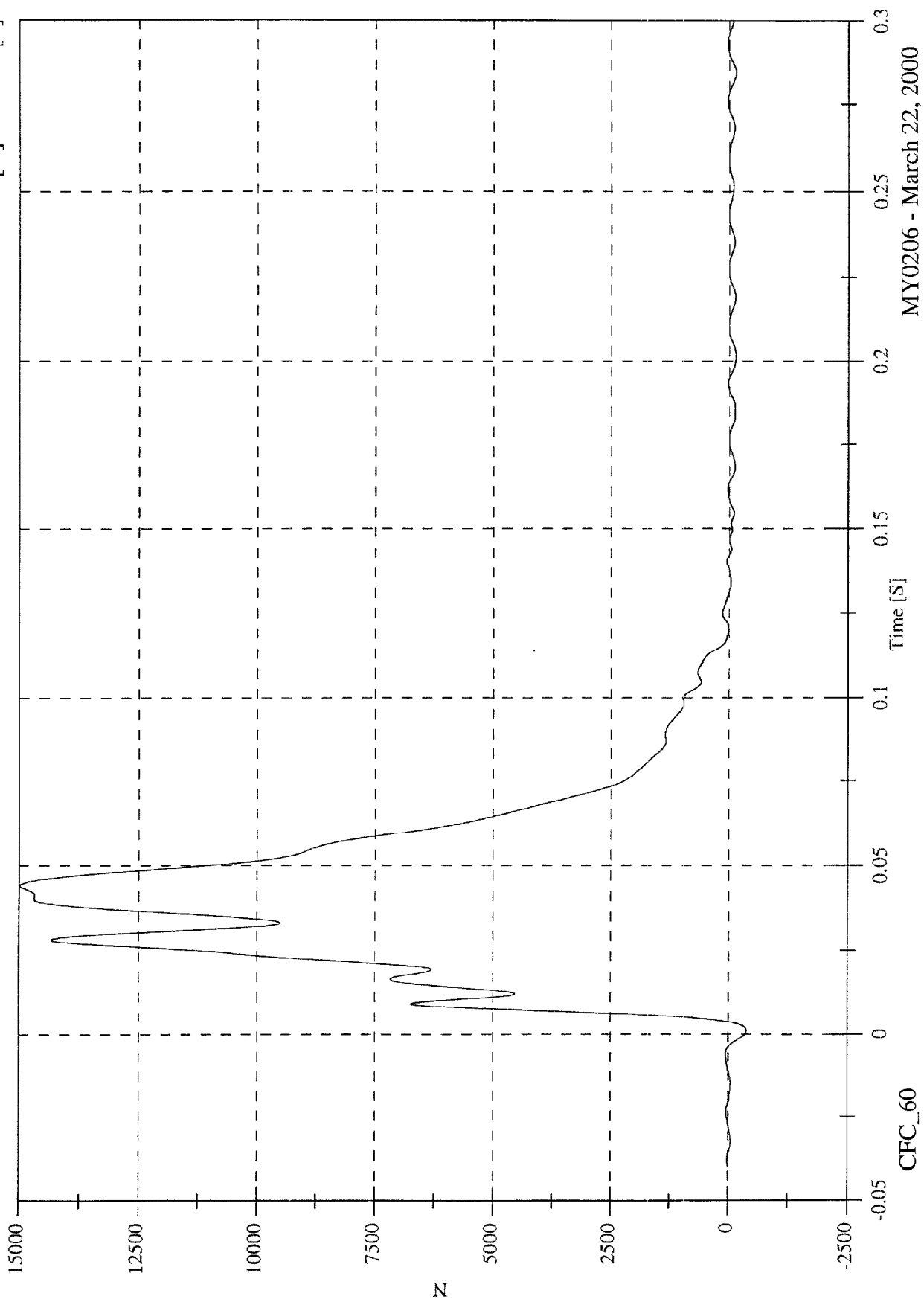


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 14981.1 [N] at 0.044 [S]
Min: -383.5 [N] at 0.001 [S]

Barrier Load Cell C3 Fx

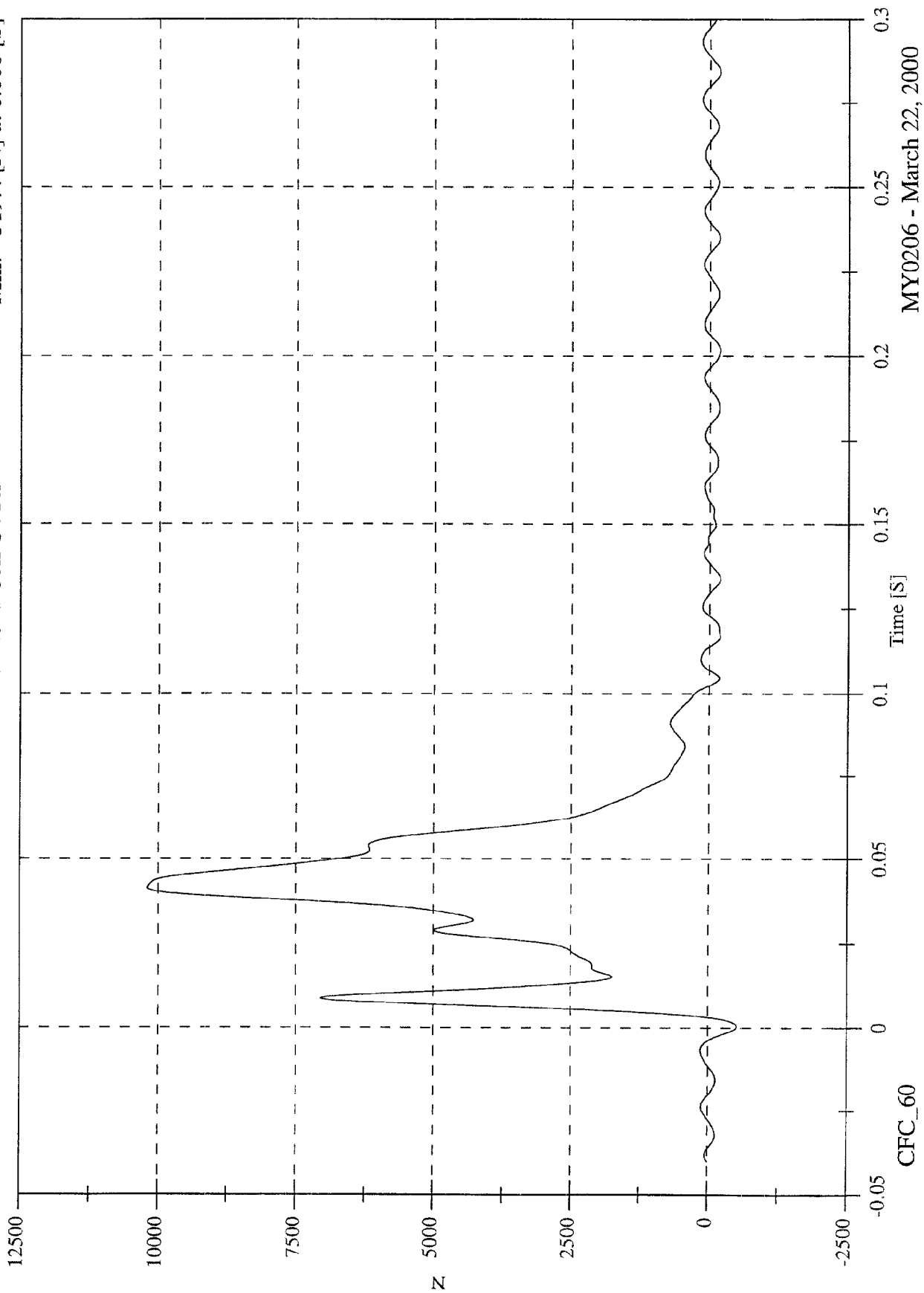


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 10195.4 [N] at 0.041 [S]
 Min: -519.4 [N] at 0.000 [S]

Barrier Load Cell C4 Fx

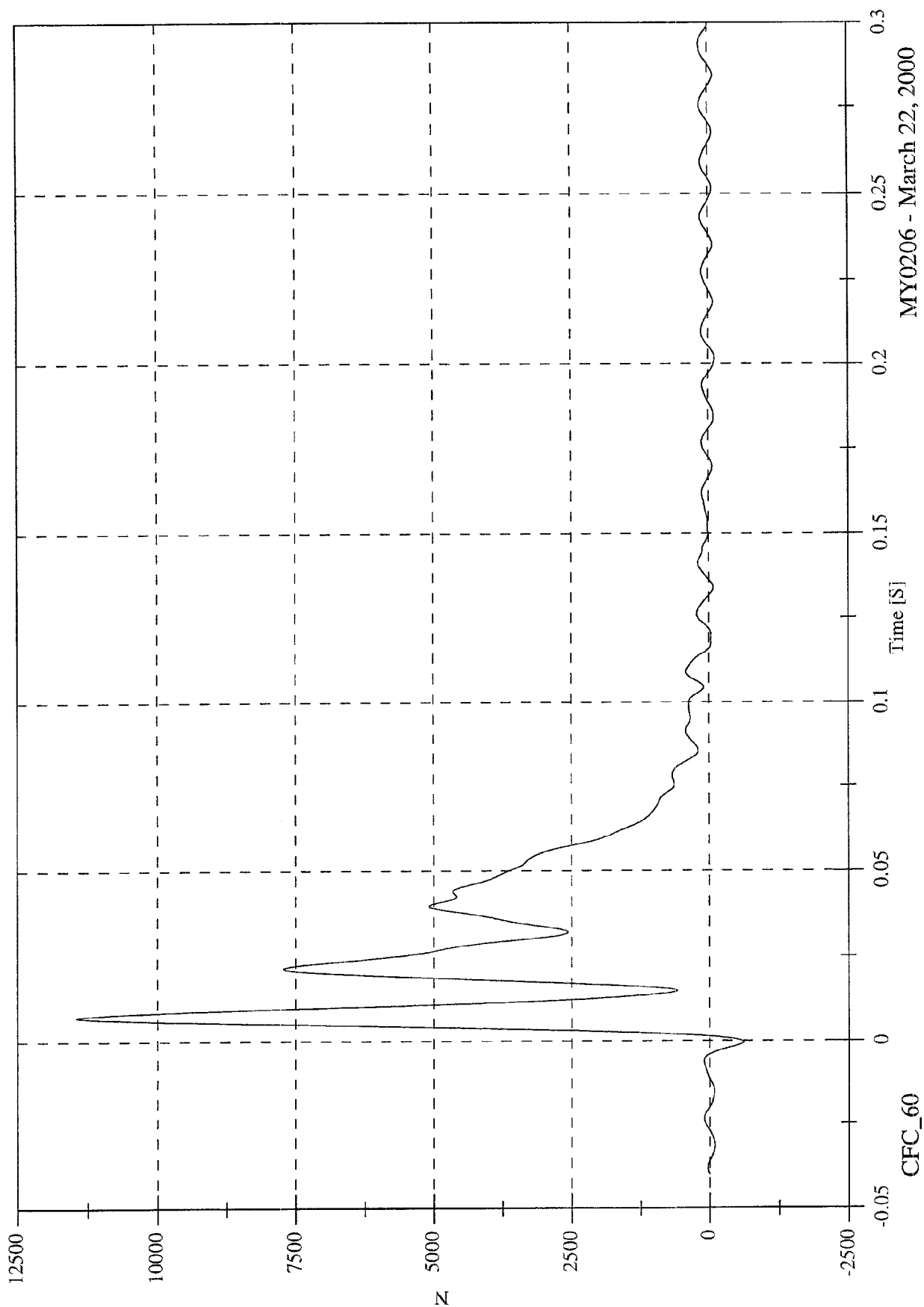


MY0206 - March 22, 2000

Max: 11456.2 [N] at 0.007 [S]
Min: -614.9 [N] at -0.000 [S]

Barrier Load Cell C5 Fx

NCAP Test #16 - 2000 Ford Focus 4-Door

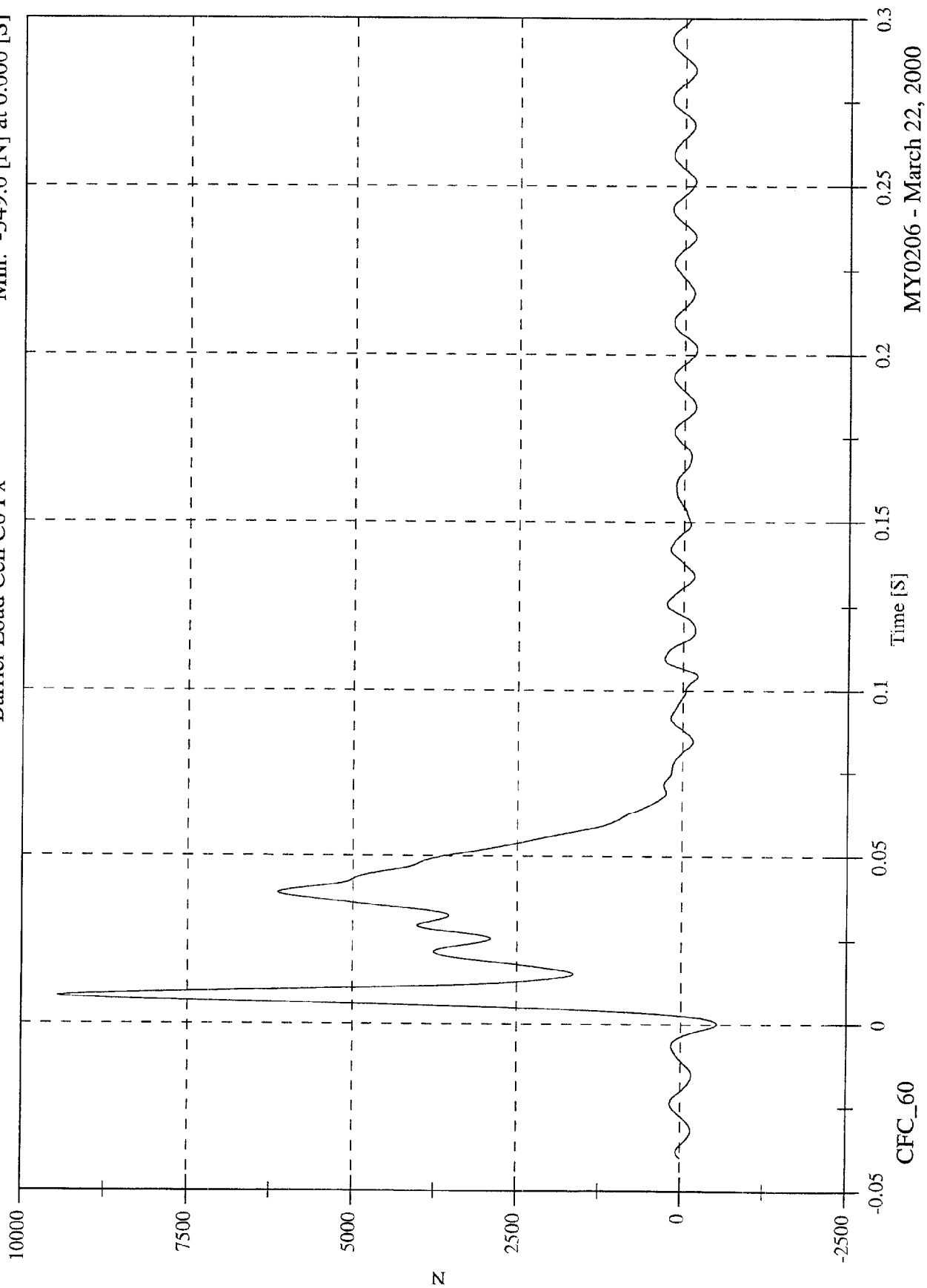


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 9456.1 [N] at 0.008 [S]
 Min: -549.0 [N] at 0.000 [S]

Barrier Load Cell C6 Fx

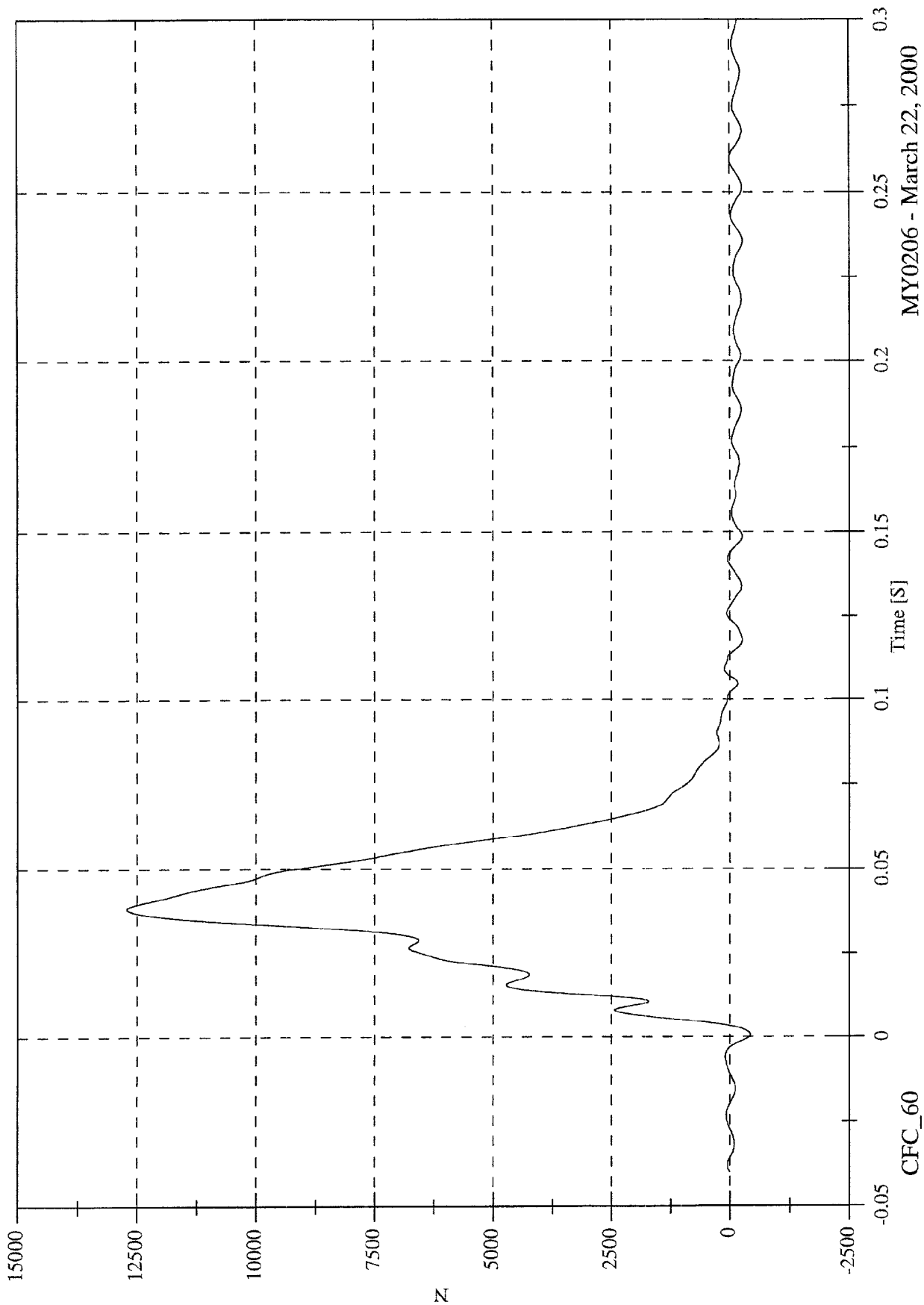


MY0206 - March 22, 2000

Max: 12713.9 [N] at 0.038 [S]
Min: -428.2 [N] at 0.001 [S]

Barrier Load Cell C7 Fx

NCAP Test #16 - 2000 Ford Focus 4 Door

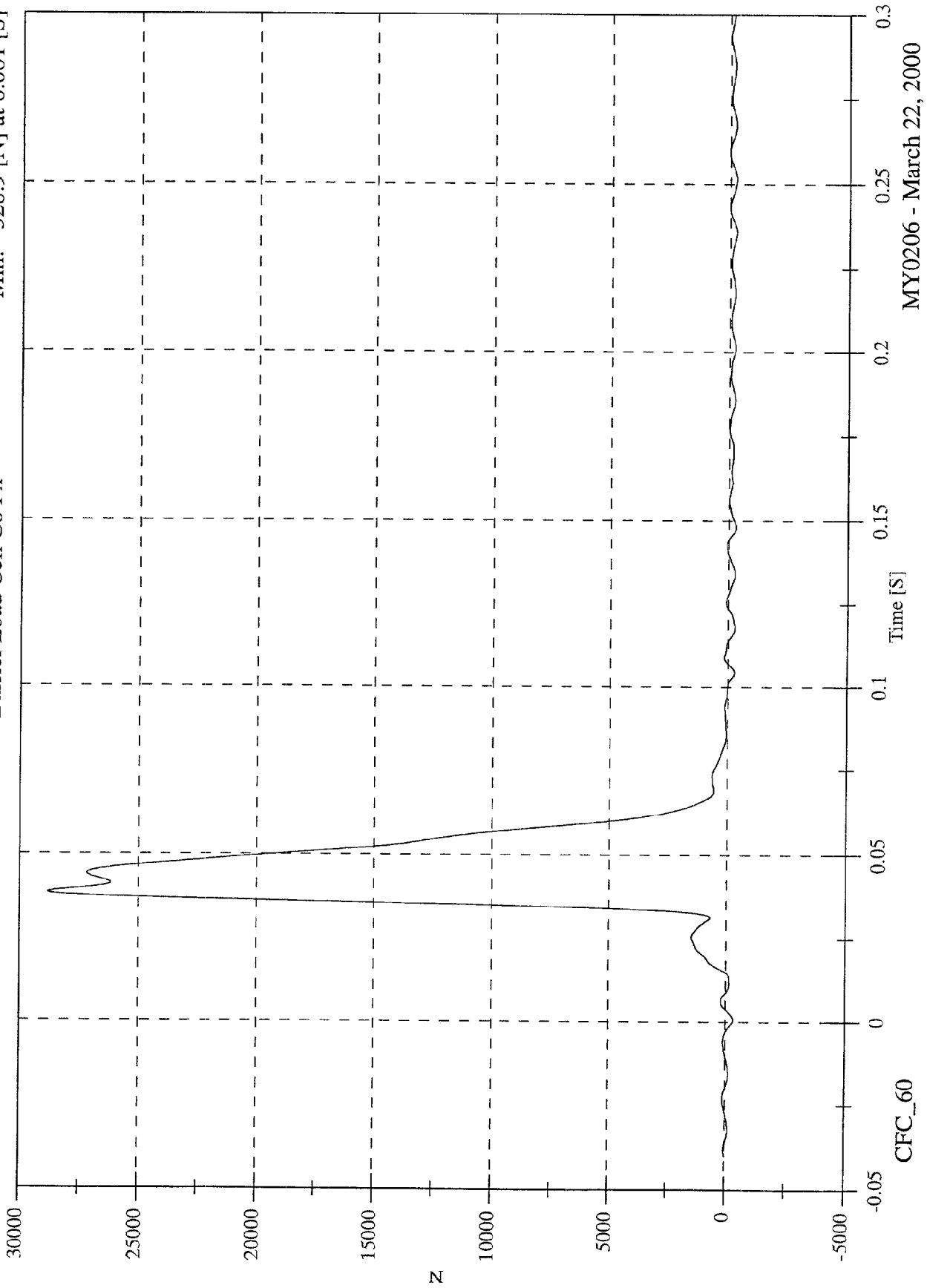


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 28807.2 [N] at 0.038 [S]
Min: -328.9 [N] at 0.001 [S]

Barrier Load Cell C8 Fx

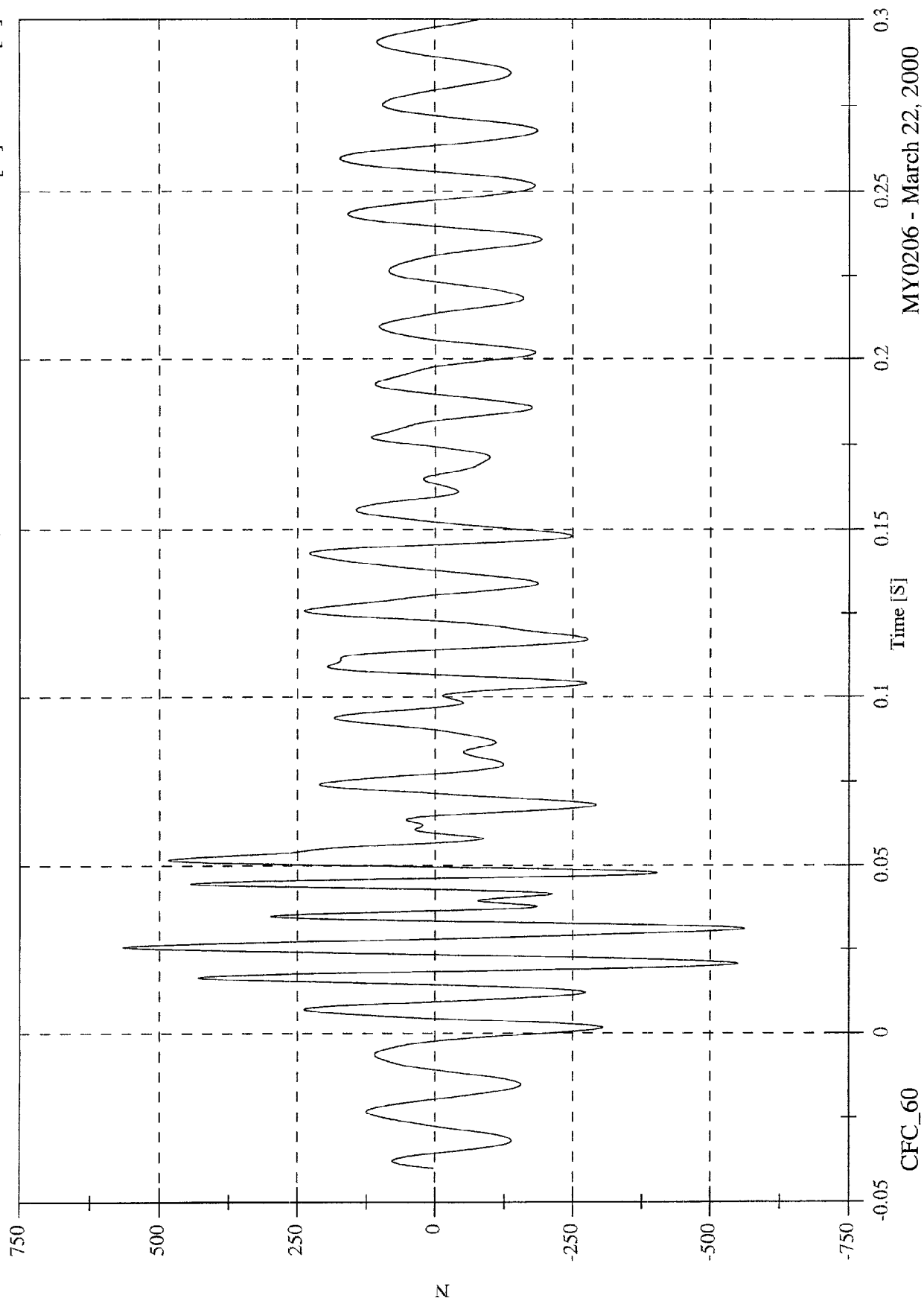


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 565.3 [N] at 0.026 [S]
Min: -561.4 [N] at 0.031 [S]

Barrier Load Cell C9 Fx

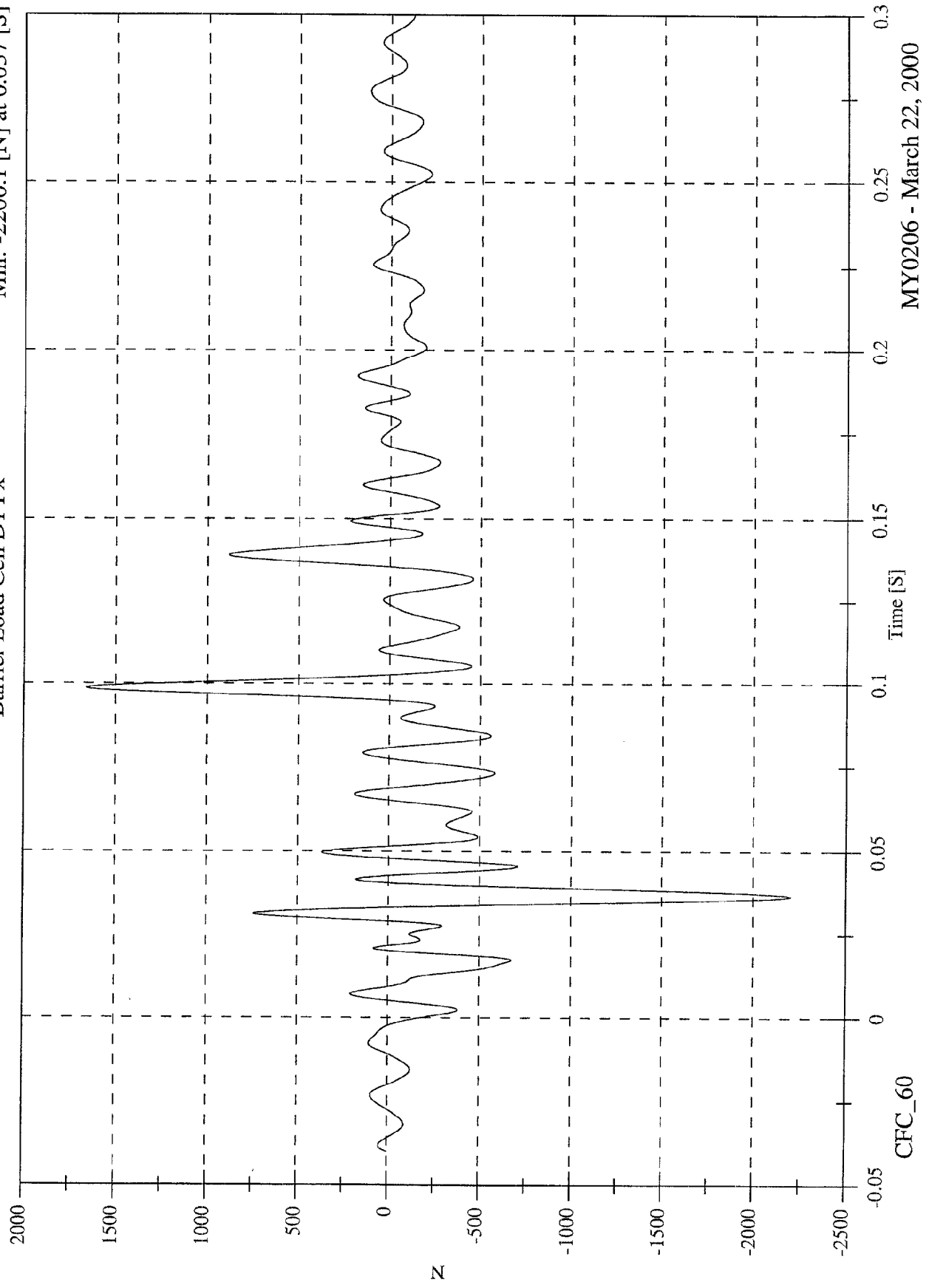


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 1661.8 [N] at 0.099 [S]
Min: -2200.1 [N] at 0.037 [S]

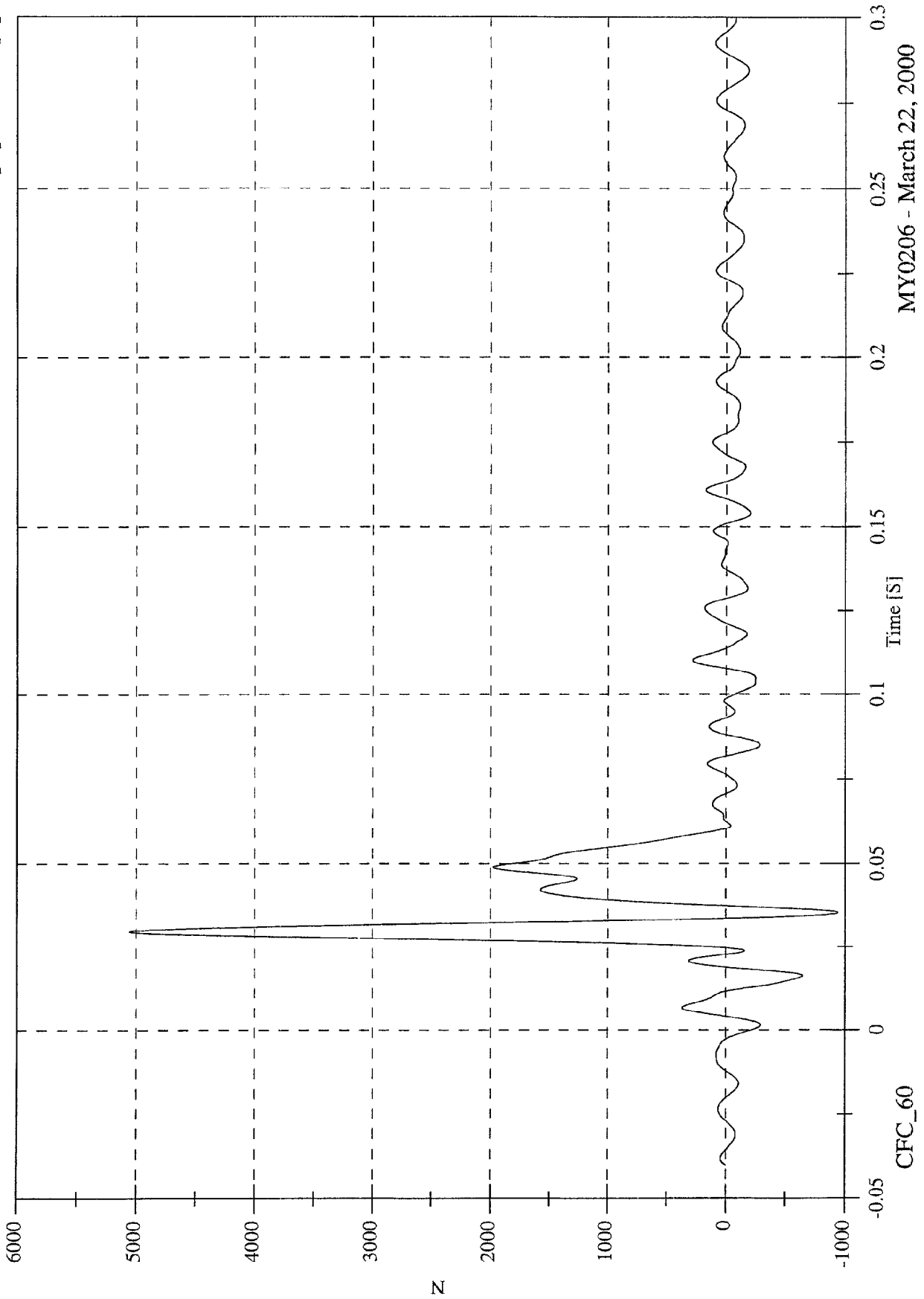
Barrier Load Cell D1 Fx



MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door
Max: 5053.4 [N] at 0.030 [S]
Min: -945.1 [N] at 0.035 [S]

Barrier Load Cell D2 Fx

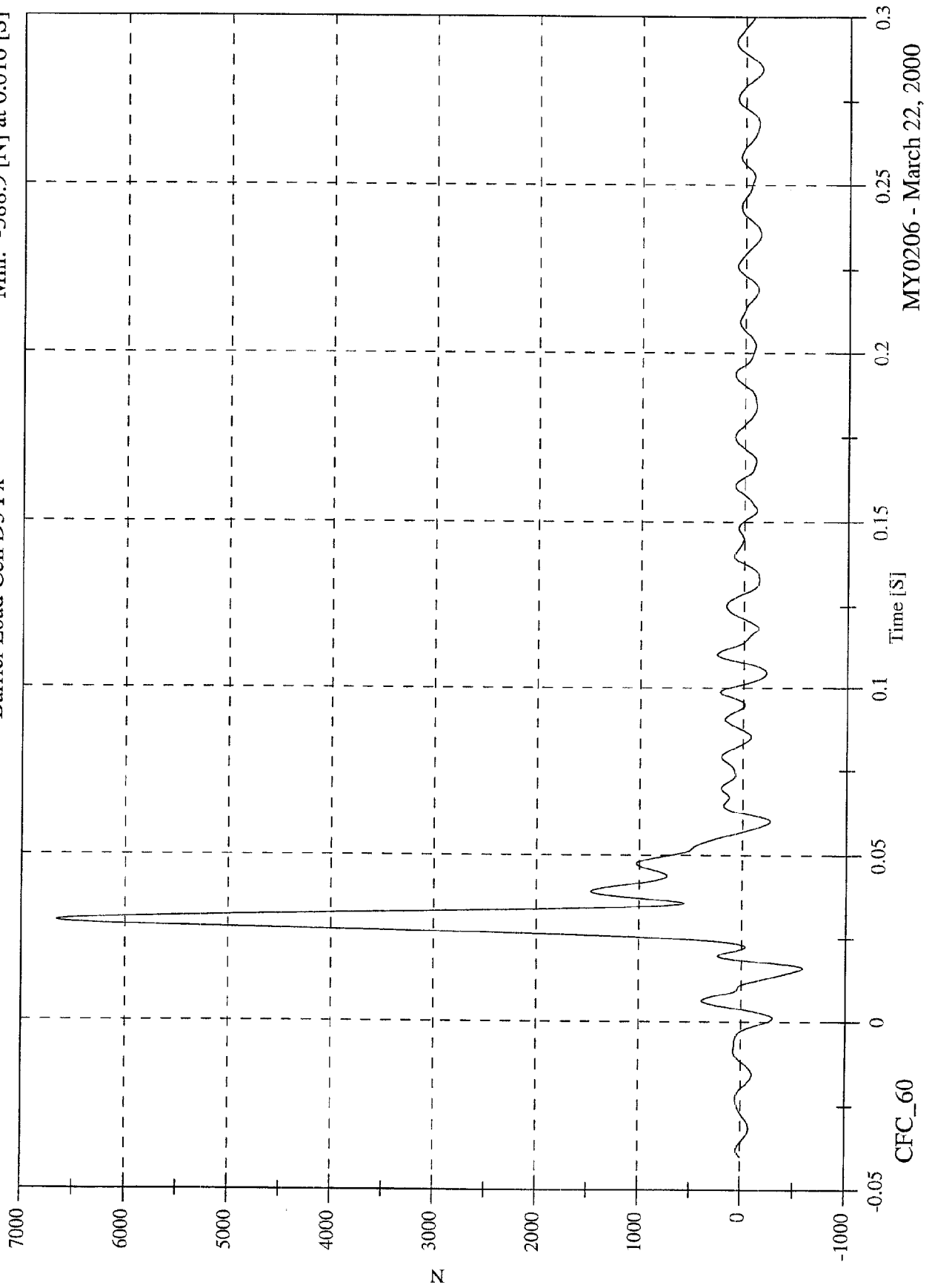


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 6656.2 [N] at 0.030 [S]
Min: -588.9 [N] at 0.016 [S]

Barrier Load Cell D3 Fx

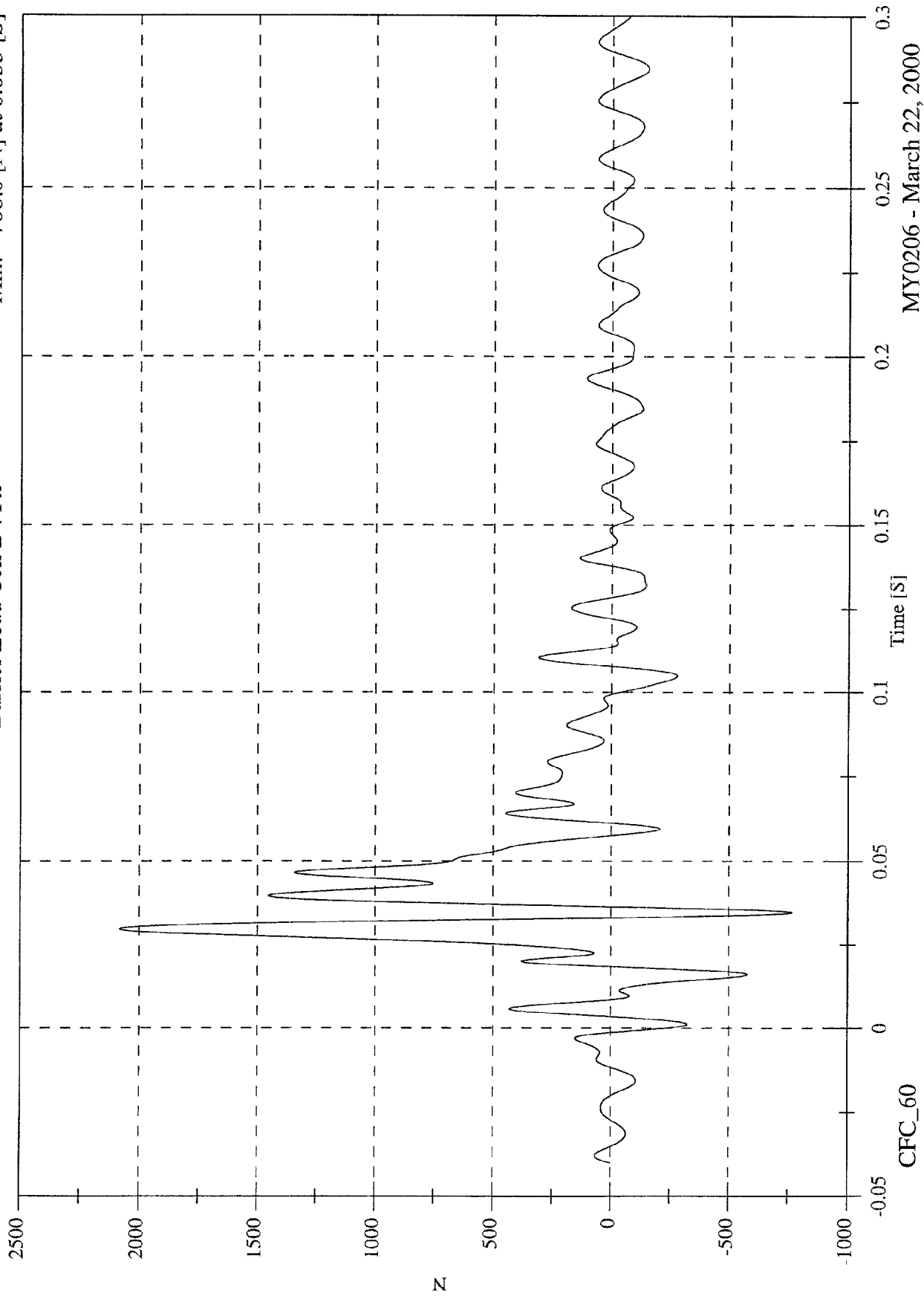


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 2083.2 [N] at 0.030 [S]
Min: -766.0 [N] at 0.035 [S]

Barrier Load Cell D4 Fx

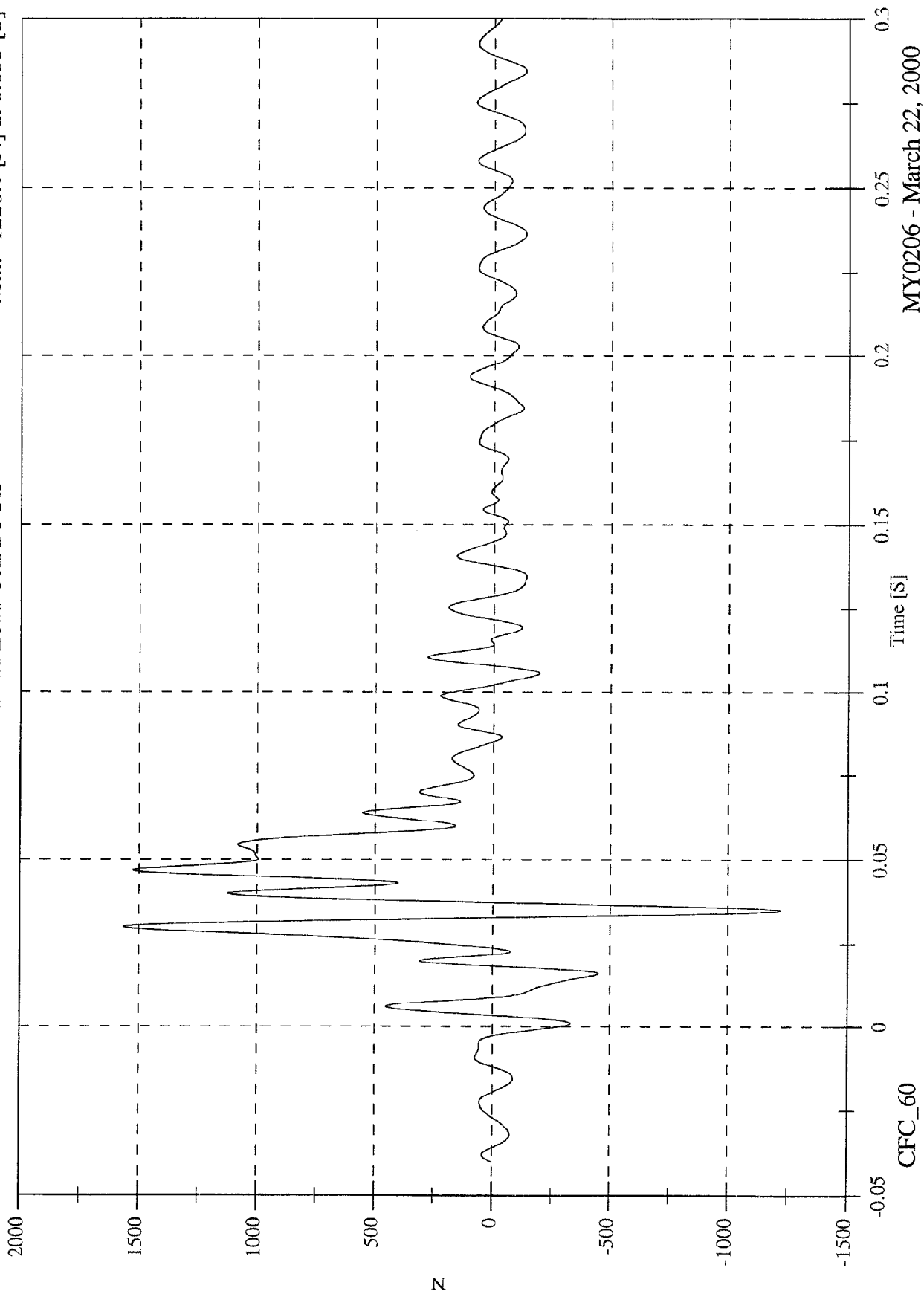


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Barrier Load Cell D5 Fx

Max: 1565.8 [N] at 0.030 [S]
Min: -1220.1 [N] at 0.035 [S]

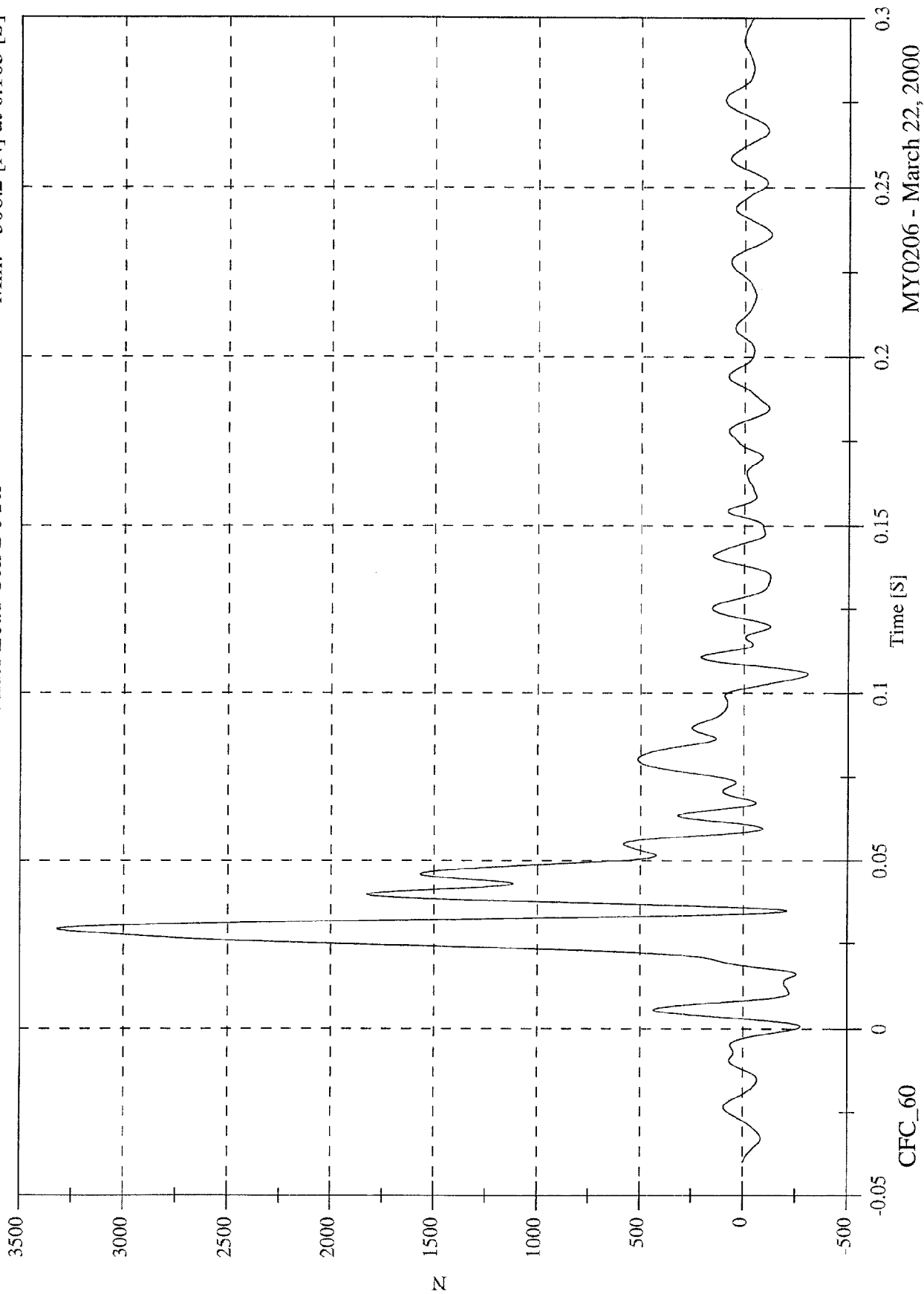


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 3321.1 [N] at 0.029 [S]
 Min: -306.2 [N] at 0.105 [S]

Barrier Load Cell D6 Fx

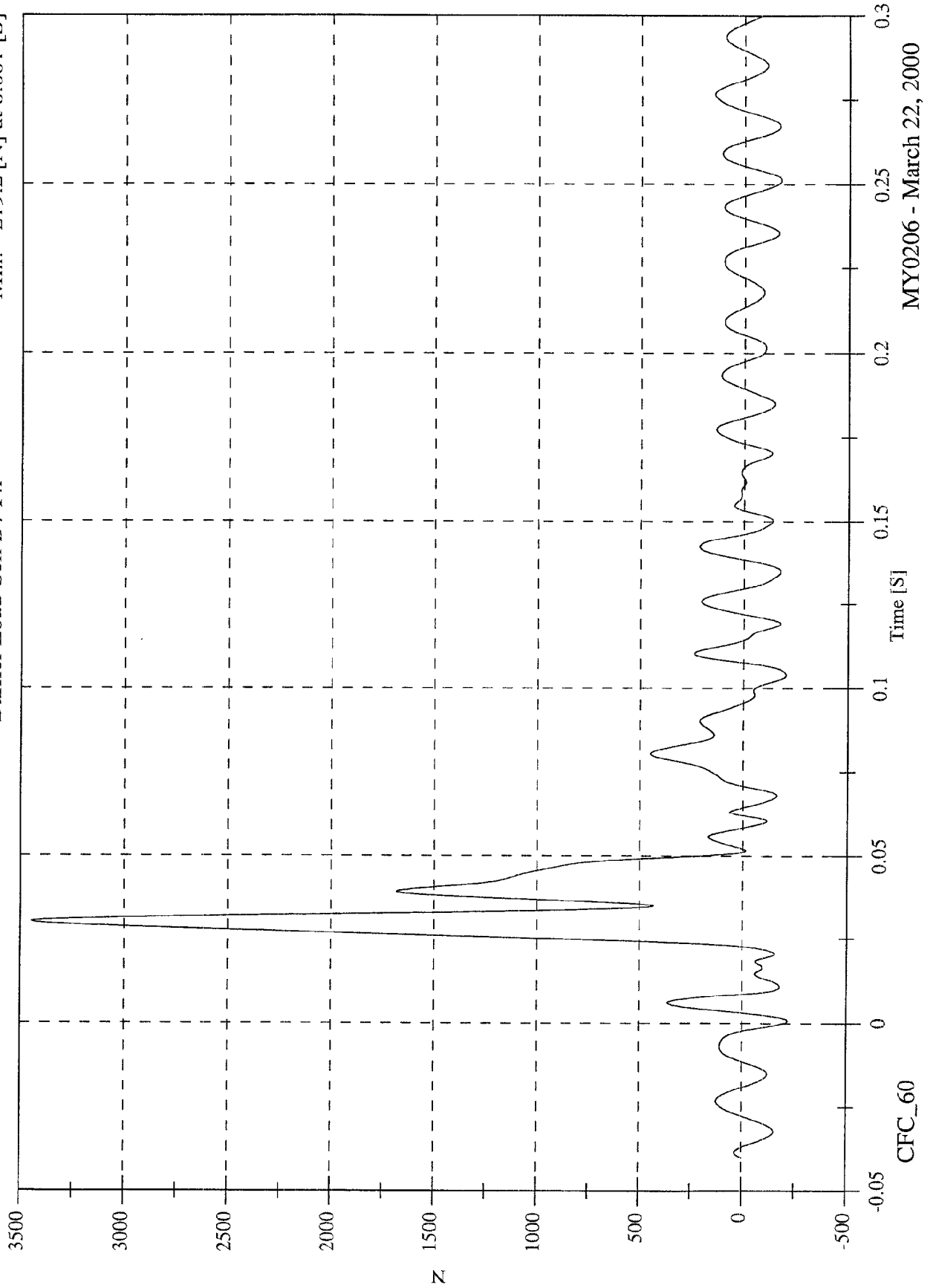


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 3444.8 [N] at 0.030 [S]
 Min: -219.2 [N] at 0.001 [S]

Barrier Load Cell D7 Fx

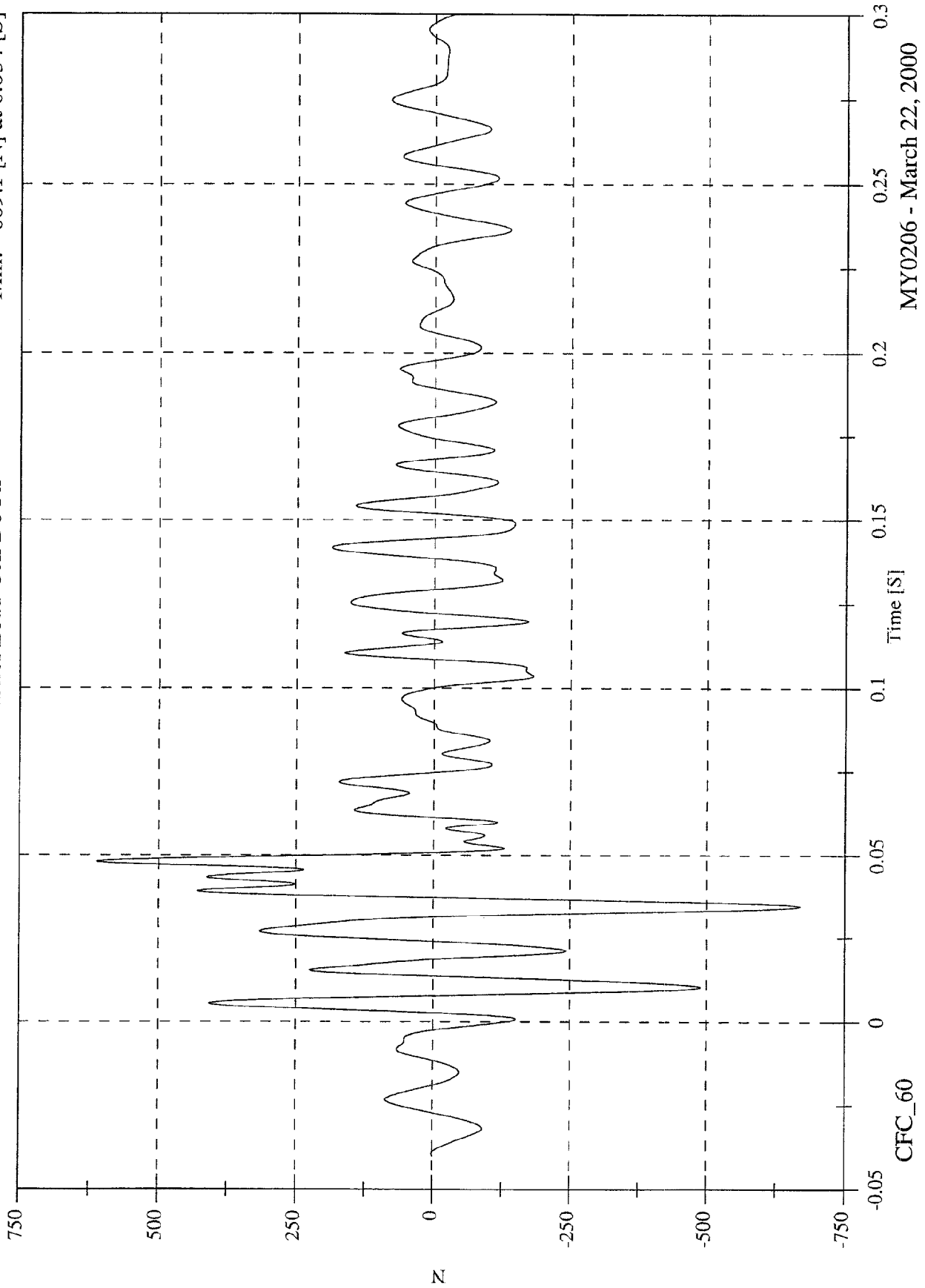


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 611.8 [N] at 0.048 [S]
 Min: -669.1 [N] at 0.034 [S]

Barrier Load Cell D8 Fx

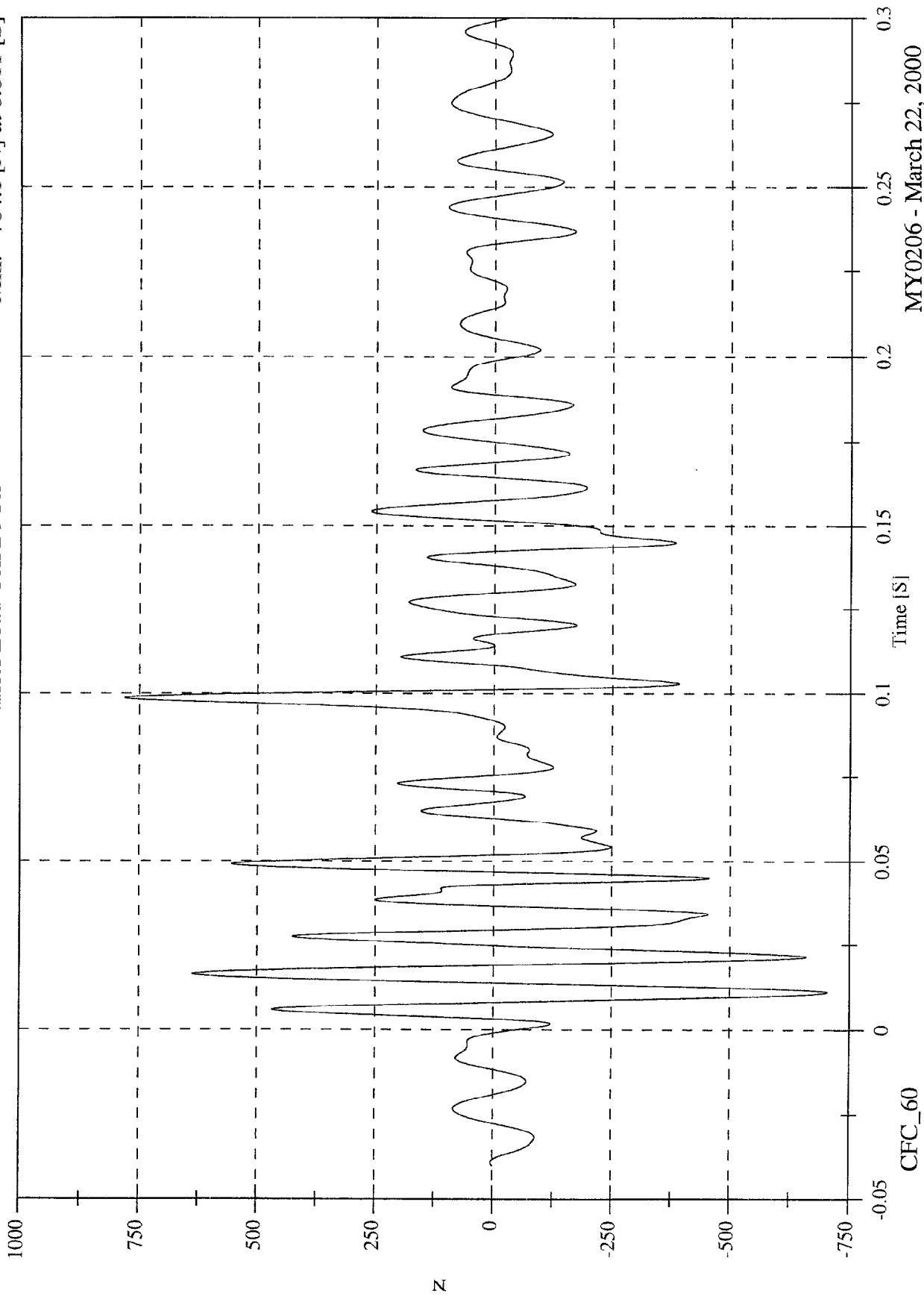


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 781.1 [N] at 0.099 [S]
Min: -704.1 [N] at 0.011 [S]

Barrier Load Cell D9 Fx

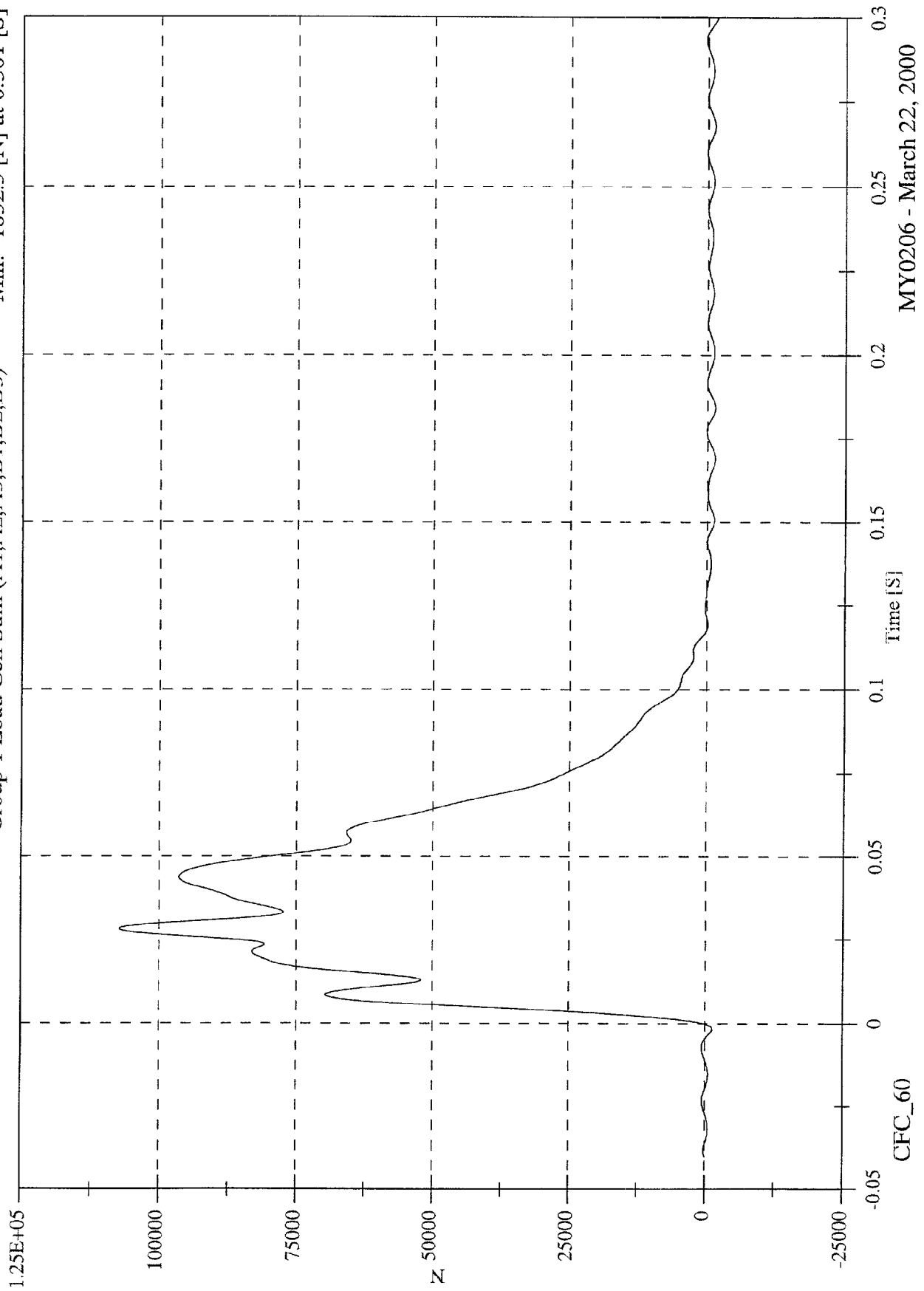


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 107266.4 [N] at 0.028 [S]
Min: -1832.3 [N] at 0.301 [S]

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

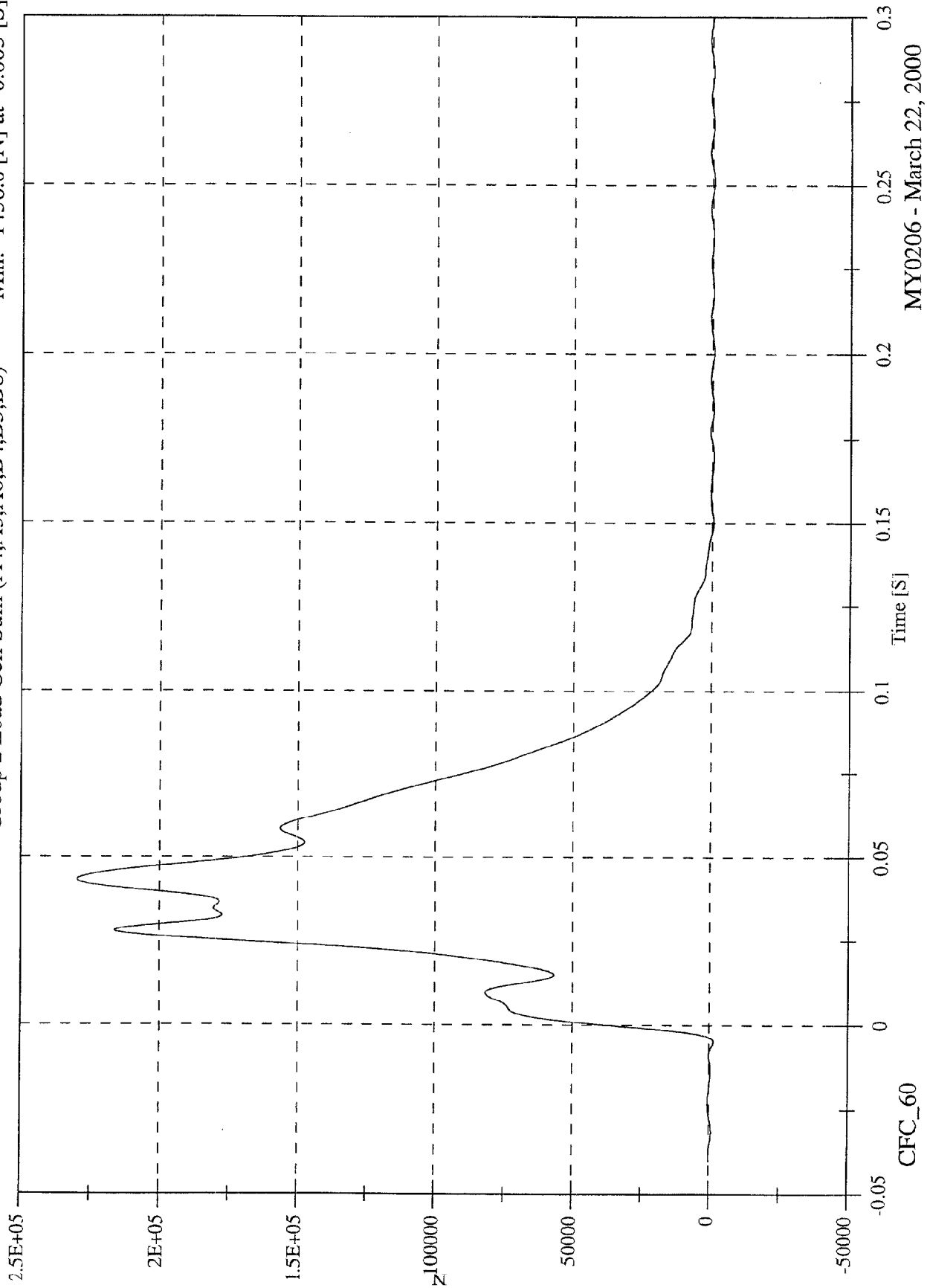


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

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

Max: 229688.2 [N] at 0.043 [S]
Min: -1456.8 [N] at -0.005 [S]

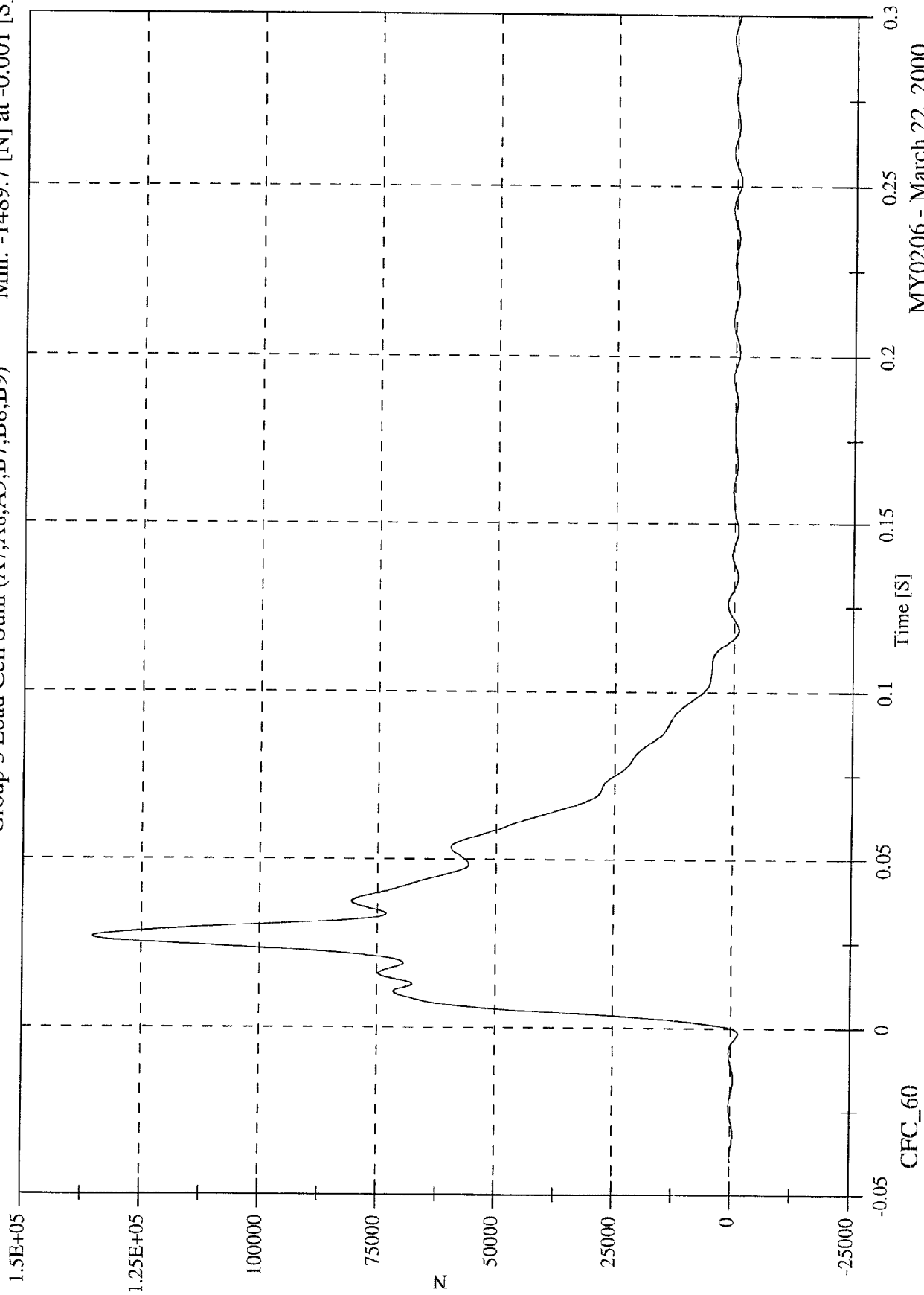


MY0206 - March 22, 2000

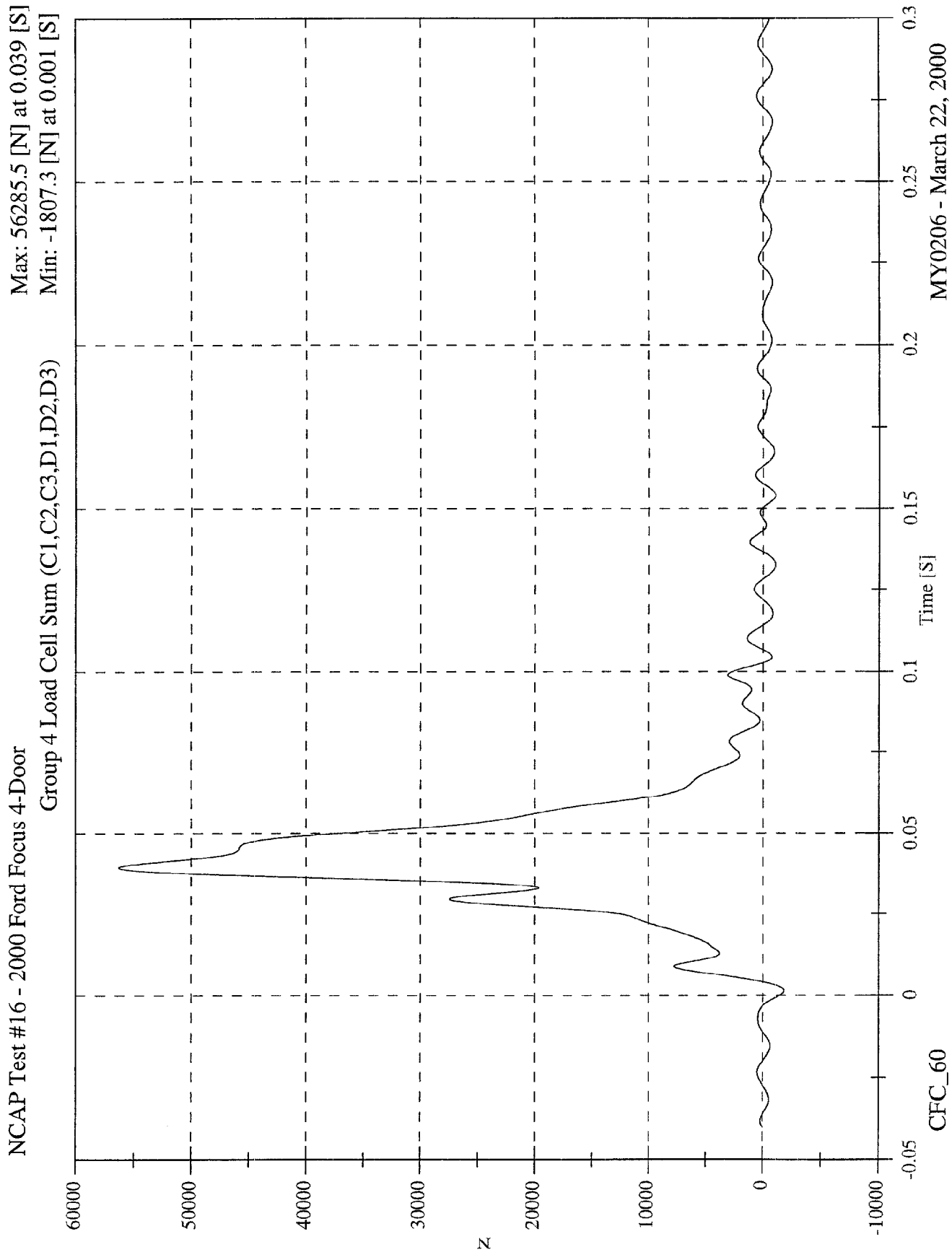
NCAP Test #16 - 2000 Ford Focus 4-Door

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

Max: 135389.5 [N] at 0.027 [S]
Min: -1489.7 [N] at -0.001 [S]



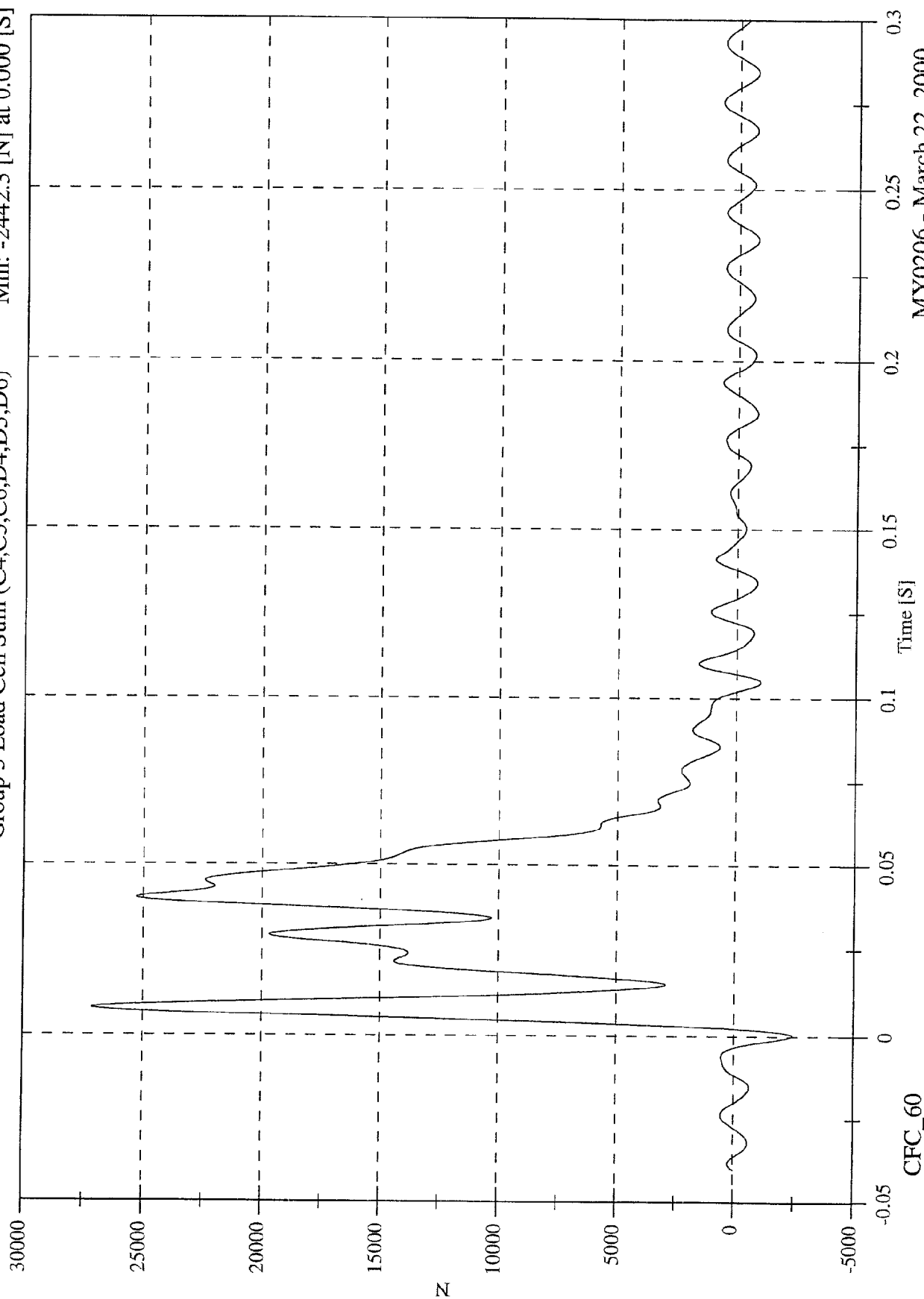
MY0206 - March 22, 2000



NCAP Test #16 - 2000 Ford Focus 4-Door

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

Max: 27113.9 [N] at 0.008 [S]
Min: -2442.3 [N] at 0.000 [S]

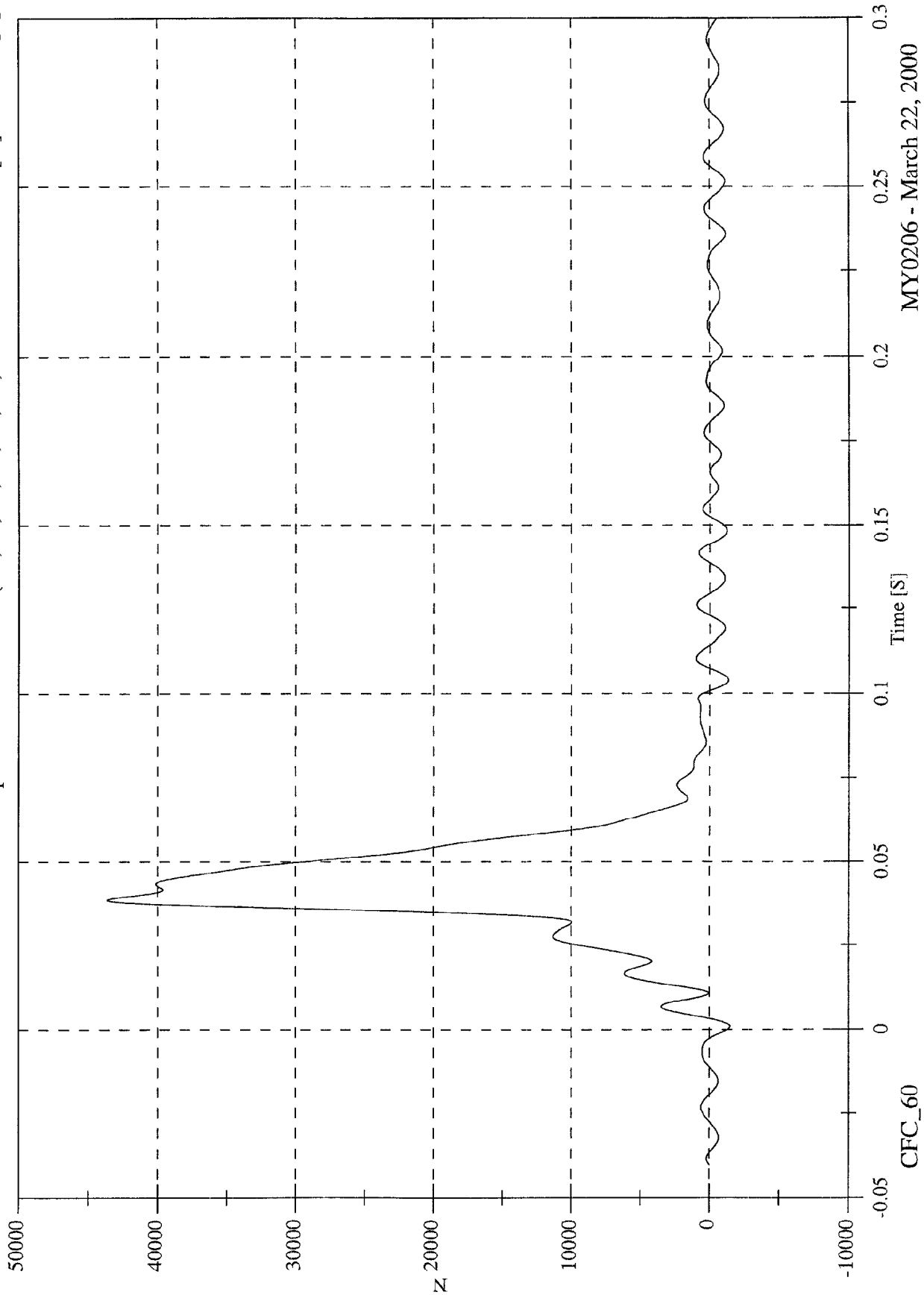


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 43632.6 [N] at 0.039 [S]
 Min: -1495.6 [N] at 0.001 [S]

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

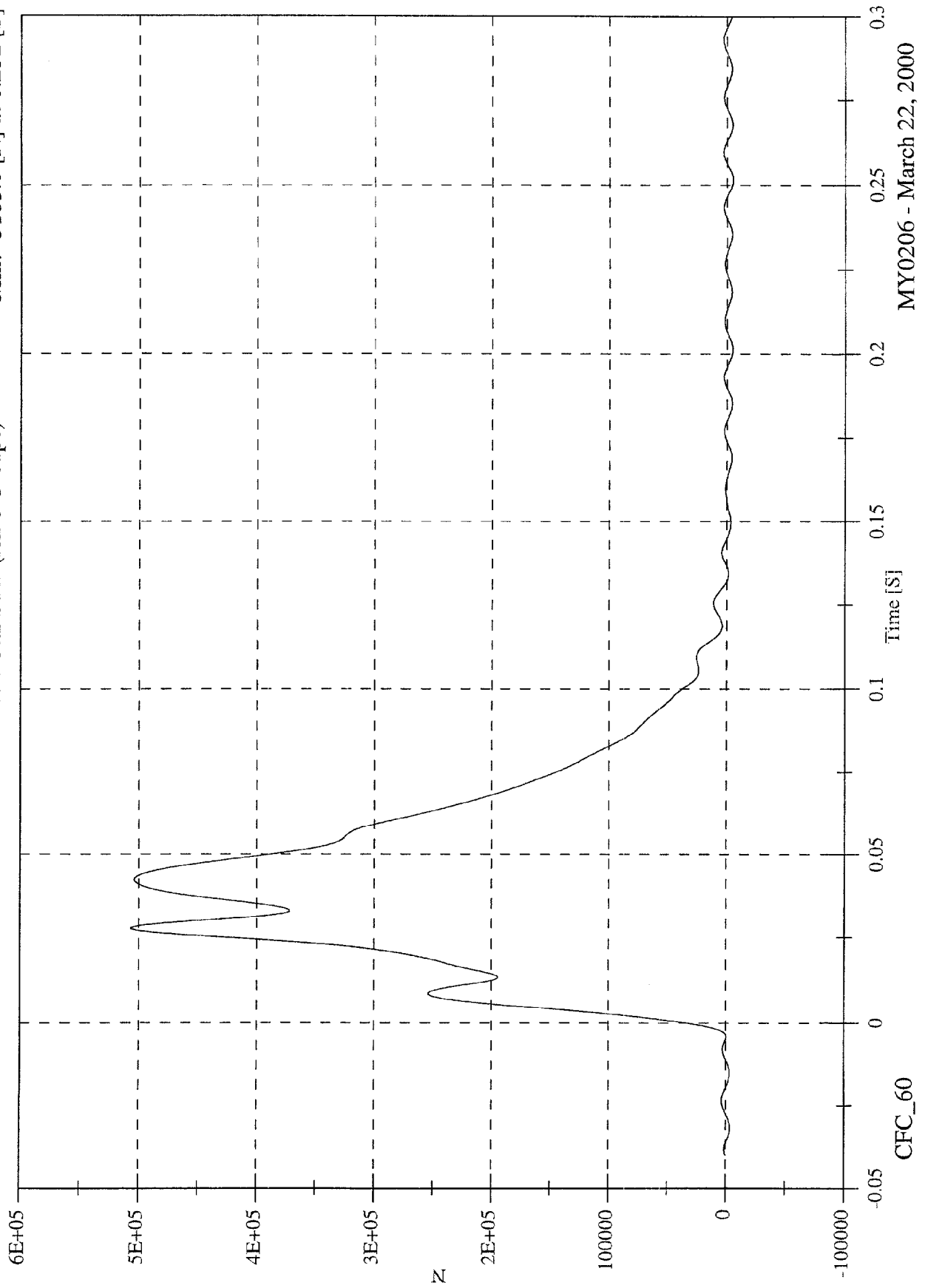


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

Max: 507037.1 [N] at 0.028 [S]
Min: -5183.0 [N] at 0.252 [S]

Total Load Cell Sum (All 6 Groups)

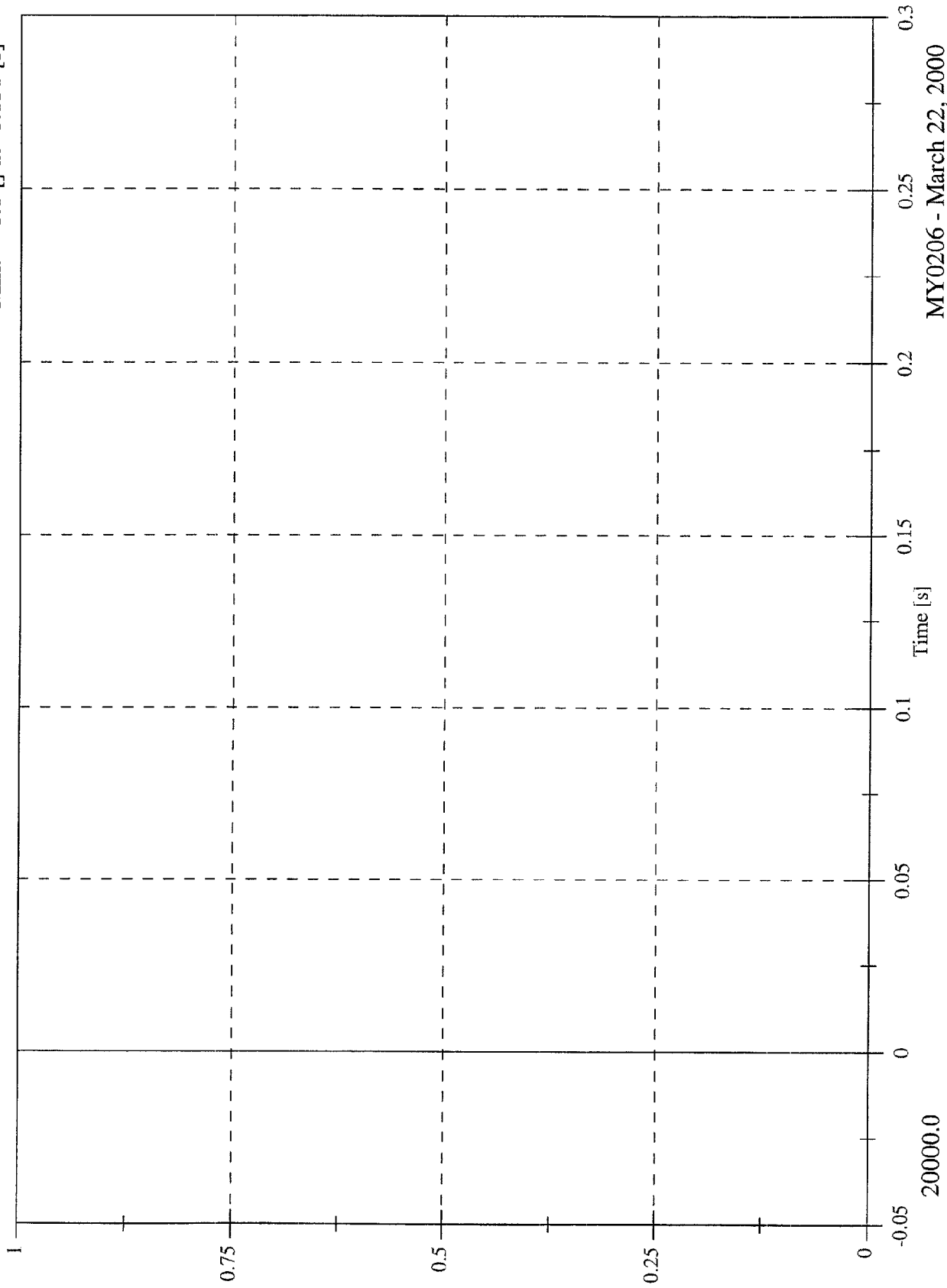


MY0206 - March 22, 2000

NCAP Test #16 - 2000 Ford Focus 4-Door

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

Contact Time



MY0206 - March 22, 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:

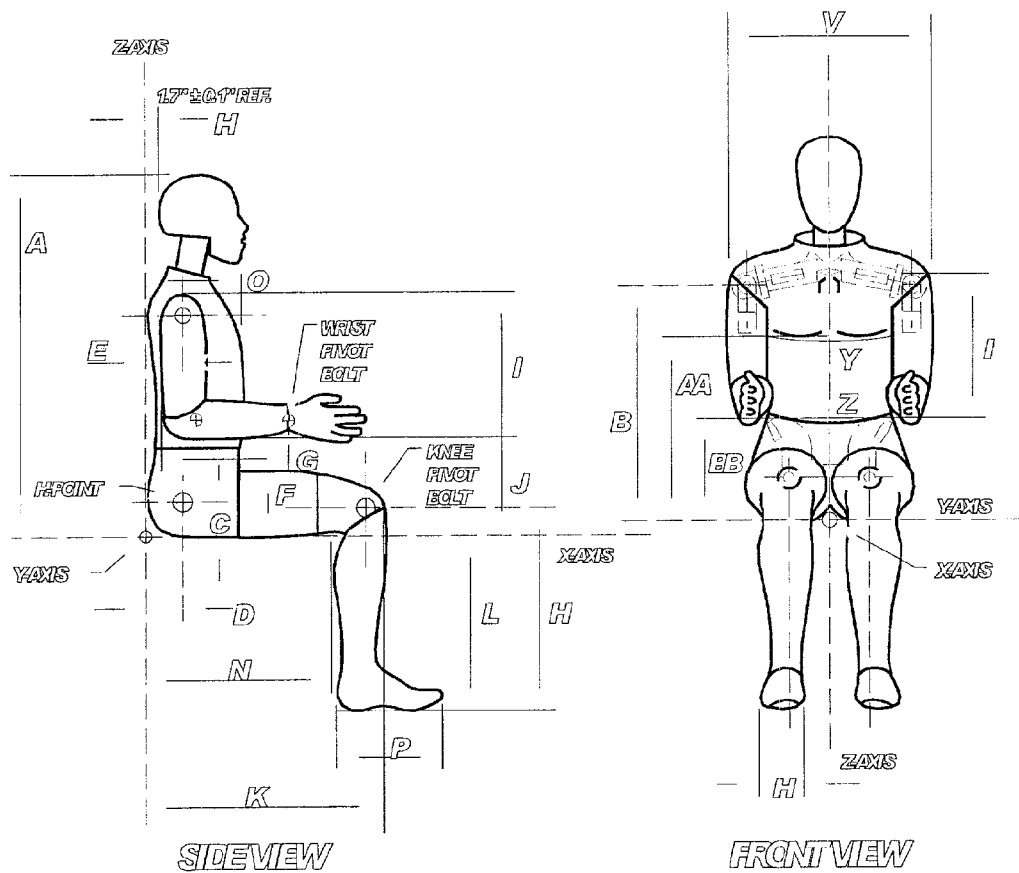
<u>Position No./Location</u>	<u>Serial No.</u>	<u>Completion Date</u>
#1/Driver	245	2-22-2000
#2/Right Front Passenger	064	2-22-2000

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 S57231(4)(6))

PART 572E
HEAD DROP TEST

Dummy Serial Number 245
Sequential Test Number 2
Date 2/14/200
Workfile 245200.hdp

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	66-78 Deg F	71
Relative Humidity	10% - 70%	31
Peak Resultant Acceleration	225-275 G's	246.3
Peak Lateral Acceleration	15 G's Max	14.9
Is Acceleration Curve Unimodal?	YES	YES

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
NECK FLEXION TEST

Dummy Serial Number 245
Sequential Test Number 2
Date 2/18/2000
Workfile 245200.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	22.83
Pendulum Deceleration	10 ms	22.50 - 27.50 G's	22.71
	20 ms	17.60 - 22.60 G's	19.67
	30 ms	12.50 - 18.50 G's	15.65
Max Pendulum G's Above 30 ms		29 G's Max	15.65
Deceleration - Time Curve Decay Time to 5 G's		34 - 42 ms	40.50
D Plane Rotation	Max	64 - 78 Deg	71.41
	Time	57 - 64 ms	59.13
Moment About Occipital Condyle	Max	65 - 80 Ft-Lbs	71.02
	Time	47 - 58 ms	54.25
Rotation Angle - Time Curve Decay Time to Zero		113 - 128 ms	127.88
Positive Moment - Time Curve Decay Time to Zero		97 - 107 ms	99.00

Remarks:

Laboratory Technician: B. Swicicki

PART 572E
NECK EXTENSION TEST

Dummy Serial Number 245
Sequential Test Number 2
Date 2/18/2000
Workfile 245200.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	19.86
Pendulum Deceleration	10 ms	17.20 - 21.20 G's	19.50
	20 ms	14.00 - 19.00 G's	17.66
	30 ms	11.00 - 16.00 G's	14.60
Max Pendulum G's Above 30 ms		22 G's Max	14.60
Deceleration - Time Curve Decay Time to 5 G's		38 - 46 ms	38.75
D Plane Rotation	Max	81 - 106 Deg	99.43
	Time	72 - 82 ms	72.38
Moment About Occipital Condyle	Max	-59.0 - -39.0 Ft-Lbs	-56.87
	Time	65 - 79 ms	68.75
Rotation Angle - Time Curve Decay Time to Zero		147 - 174 ms	148.13
Positive Moment - Time Curve Decay Time to Zero		120 - 148 ms	128.00

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
THORAX IMPACT TEST

Dummy Serial Number 245
Sequential Test Number 2
Date 2/22/2000
Workfile 245200.th3

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	69-72 Deg F	71
Relative Humidity	10% - 70%	30
Pendulum Velocity	21.6 - 22.4 Ft/s	21.76
Maximum Deflection	2.50 - 2.86 in	2.83
Maximum Resistive Force	1160 - 1325 Lbs	1240.24
Internal Hysteresis	69 - 85 %	70.78

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
KNEE IMPACT TEST

Dummy Serial Number 245
Sequential Test Number 2
Date 2/22/2000
Workfile 245200.lf/245200.rf

TEST PARAMETER	SPECIFICATION	TEST RESULTS
LEFT KNEE		
Temperature	66 - 78 Deg F	70
Relative Humidity	10% - 70%	29
Probe Velocity	6.8 - 7.0 Ft/s	7.00
Peak Knee Impact Force	1060 - 1300 Lbs	1299.0
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	1243.0

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
EXTERNAL DIMENSIONS

Dummy Serial Number 245
Sequential Test Number 2
Date 2/22/2000

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	39.0
Waist Circumference	Z	32.9 - 34.1 in	33.7
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	6.0
Buttock Knee Length	K	22.8 - 23.8 in	23.4
Buttock Popliteal Length	N	17.8 - 18.8 in	18.3
Popliteal Height	L	16.9 - 17.9 in	17.5
Knee Pivot Height	M	19.1 - 19.7 in	19.2
Foot Length	P	9.9 - 10.5 in	10.2
Foot Breadth	W	3.6 - 4.2 in	3.8
Shoulder Pivot from Backline	E	3.3 - 3.7 in	3.6
Shoulder Breadth	V	16.6 - 17.2 in	16.8
Shoulder Pivot Height	B	19.9 - 20.5 in	20.2
Elbow Rest Height	J	7.5 - 8.3 in	8.0
Shoulder - Elbow Length	I	13.0 - 13.6 in	13.2
Back of Elbow to Wrist Pivot	G	11.4 - 12.0 in	11.6

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
HEAD DROP TEST

Dummy Serial Number 064
Sequential Test Number 2
Date 2/14/200
Workfile 064200.hdp

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	66-78 Deg F	71.0
Relative Humidity	10% - 70%	31.0
Peak Resultant Acceleration	225-275 G's	241.39
Peak Lateral Acceleration	15 G's Max	2.98
Is Acceleration Curve Unimodal?	YES	YES

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
NECK FLEXION TEST

Dummy Serial Number 064
Sequential Test Number 2
Date 2/18/2000
Workfile 064200.nfl

6 Axis Neck Transducer

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature		69-72 Deg F	70.0
Relative Humidity		10% - 70%	32.0
Impact Velocity		22.60 - 23.40 Ft/s	22.77
Pendulum Deceleration	10 ms	22.50 - 27.50 G's	22.61
	20 ms	17.60 - 22.60 G's	18.40
	30 ms	12.50 - 18.50 G's	14.94
Max Pendulum G's Above 30 ms		29 G's Max	14.94
Deceleration - Time Curve Decay Time to 5 G's		34 - 42 ms	41.75
D Plane Rotation	Max	64 - 78 Deg	69.74
	Time	57 - 64 ms	57.00
Moment About Occipital Condyle	Max	65 - 80 Ft-Lbs	76.38
	Time	47 - 58 ms	54.38
Rotation Angle - Time Curve Decay Time to Zero		113 - 128 ms	121.62
Positive Moment - Time Curve Decay Time to Zero		97 - 107 ms	103.00

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
NECK EXTENSION TEST

Dummy Serial Number 064
Sequential Test Number 2
Date 2/18/2000
Workfile 064200.nex

6 Axis Neck Transducer

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature		69-72 Deg F	70
Relative Humidity		10% - 70%	29
Impact Velocity		19.50 - 20.30 Ft/s	19.86
Pendulum Deceleration	10 ms	17.20 - 21.20 G's	19.90
	20 ms	14.00 - 19.00 G's	17.71
	30 ms	11.00 - 16.00 G's	14.34
Max Pendulum G's Above 30 ms		22 G's Max	14.34
Deceleration - Time Curve Decay Time to 5 G's		38 - 46 ms	39.25
D Plane Rotation	Max	81 - 106 Deg	96.45
	Time	72 - 82 ms	72.12
Moment About Occipital Condyle	Max	-59.0 - -39.0 Ft-Lbs	-53.89
	Time	65 - 79 ms	66.38
Rotation Angle - Time Curve Decay Time to Zero		147 - 174 ms	147.38
Positive Moment - Time Curve Decay Time to Zero		120 - 148 ms	132.88

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
THORAX IMPACT TEST

Dummy Serial Number 064
Sequential Test Number 2
Date 2/22/2000
Workfile 064200.th3

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	69-72 Deg F	70.0
Relative Humidity	10% - 70%	32.0
Pendulum Velocity	21.6 - 22.4 Ft/s	22.0
Maximum Deflection	2.50 - 2.86 in	2.58
Maximum Resistive Force	1160 - 1325 Lbs	1227.57
Internal Hysteresis	69 - 85 %	79.51

Remarks:

Laboratory Technician: B. Swiccicki

PART 572E
KNEE IMPACT TEST

Dummy Serial Number 064
Sequential Test Number 2
Date 2/22/2000
Workfile 064200.1f/064200.rf

TEST PARAMETER	SPECIFICATION	TEST RESULTS
LEFT KNEE		
Temperature	66 - 78 Deg F	70.0
Relative Humidity	10% - 70%	31.0
Probe Velocity	6.8 - 7.0 Ft/s	7.0
Peak Knee Impact Force	1060 - 1300 Lbs	1241.41
RIGHT KNEE		
Temperature	66 - 78 Deg F	70.0
Relative Humidity	10% - 70%	31.0
Probe Velocity	6.8 - 7.0 Ft/s	7.0
Peak Knee Impact Force	1060 - 1300 Lbs	1258.87

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
EXTERNAL DIMENSIONS

Dummy Serial Number 064
Sequential Test Number 2
Date 2/22/2000

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature			70
Relative Humidity			31
Location for Chest Circumference	AA	16.9 - 17.1 in	17.0
Location for Waist Circumference	BB	8.9 - 9.1 in	9.0
Chest Circumference (With Jacket)	Y	38.2 - 39.4 in	38.9
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	23.6
Buttock Popliteal Length	N	17.8 - 18.8 in	18.4
Popliteal Height	L	16.9 - 17.9 in	17.3
Knee Pivot Height	M	19.1 - 19.7 in	19.4
Foot Length	P	9.9 - 10.5 in	10.1
Foot Breadth	W	3.6 - 4.2 in	3.8
Shoulder Pivot from Backline	E	3.3 - 3.7 in	3.6
Shoulder Breadth	V	16.6 - 17.2 in	16.8
Shoulder Pivot Height	B	19.9 - 20.5 in	20.4
Elbow Rest Height	J	7.5 - 8.3 in	8.0
Shoulder - Elbow Length	I	13.0 - 13.6 in	13.3
Back of Elbow to Wrist Pivot	G	11.4 - 12.0 in	11.6

Remarks:

Laboratory Technician: B. Swiecicki

APPENDIX D

DUMMY, VEHICLE AND LABORATORY INSTRUMENT CALIBRATION

INSTRUMENT CALIBRATION FOR DRIVER DUMMY

(6 Month Calibration Minimum)

DRIVER DUMMY (S/N 245)		Manufacturer	Serial #	Calibration	
				Last	Next
Head	X	ENDEVCO	AC-A57G	9/27/99	7/28/00
	Y	ENDEVCO	AC-AGHF5	9/27/99	7/28/00
	Z	ENDEVCO	AC-AL6K2	9/27/99	7/28/00
Head	X (R)	ENDEVCO	AC-J31058	10/7/99	7/8/00
	Y (R)	ENDEVCO	AC-J31010	10/7/99	7/8/00
	Z (R)	ENDEVCO	AC-J31034	10/7/99	7/8/00
Neck Load Cell	X	DENTON	LC-076Fx	2/14/00	7/15/00
	Y	DENTON	LC-076Fy	2/14/00	7/15/00
	Z	DENTON	LC-076Fz	2/14/00	7/15/00
Neck Moment	X	DENTON	LC-076Mx	2/14/00	7/15/00
	Y	DENTON	LC-076My	2/14/00	7/15/00
	Z	DENTON	LC-076Mz	2/14/00	7/15/00
Chest	X	ENDEVCO	AC-FB32L	9/27/99	7/28/00
	Y	ENDEVCO	AC-AE8W7	9/27/99	7/28/00
	Z	ENDEVCO	AC-AL508	9/27/99	7/28/00
Chest	X (R)	ENDEVCO	AC-P13331	10/5/99	7/6/00
	Y (R)	ENDEVCO	AC-P13356	10/5/99	7/6/00
	Z (R)	ENDEVCO	AC-P13323	10/5/99	7/6/00
Chest Deflection Gauge		SERVO	DS-245	11/23/99	7/24/00
Hybrid III Use Only					
Pelvic	X	ENDEVCO	AC-C14953	9/27/99	7/28/00
	Y	ENDEVCO	AC-C14966	9/27/99	7/28/00
	Z	ENDEVCO	AC-C14968	9/27/99	7/28/00

INSTRUMENT CALIBRATION FOR DRIVER DUMMY

(6 Month Calibration Minimum)

DRIVER DUMMY (S/N 245)		Manufacturer	Serial #	Calibration	
				Last	Next
Left Femur Load Cell		GSE	LC-723	10/20/99	4/19/00
Right Femur Load Cell		GSE	LC-419	10/20/99	4/19/00
Left Upper Tibia	Mx	DENTON	LC-045Mx	9/16/99	3/16/00
	My	DENTON	LC-045My	9/16/99	3/16/00
Left Lower Tibia	Fz	DENTON	LC-125Fz	9/16/99	3/16/00
	Mx	DENTON	LC-125Mx	9/16/99	3/16/00
	My	DENTON	LC-125My	9/16/99	3/16/00
Right Upper Tibia	Mx	DENTON	LC-038Mx	9/16/99	3/16/00
	My	DENTON	LC-038My	9/16/99	3/16/00
Right Lower Tibia	Fz	DENTON	LC-124Fz	9/16/99	3/16/00
	Mx	DENTON	LC-124Mx	9/16/99	3/16/00
	My	DENTON	LC-124My	9/16/99	3/16/00
Left Foot Rear	X	ENDEVCO	AC-J32176	10/11/99	4/10/00
	Z	ENDEVCO	AC-J31042	10/11/99	4/10/00
Left Foot Front	Z	ENDEVCO	AC-J31009	10/11/99	4/10/00
Right Foot Rear	X	ENDEVCO	AC-J31050	10/11/99	4/10/00
	Z	ENDEVCO	AC-J31060	10/11/99	4/10/00
Right Foot Front	Z	ENDEVCO	AC-J32143	10/11/99	4/10/00
Lap Belt Load Cells		-	-	-	-
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	11/12/99	7/13/00
	Y	ENDEVCO	AC-C15007	11/12/99	7/13/00
	Z	ENDEVCO	AC-AH5N0	11/12/99	7/13/00
Head	X (R)	ENDEVCO	AC-P13329	10/5/99	7/6/00
	Y (R)	ENDEVCO	AC-P13355	10/5/99	7/6/00
	Z (R)	ENDEVCO	AC-J32774	1/26/00	7/27/00
Neck Load Cell	X	DENTON	LC-440Fx	2/8/00	7/9/00
	Y	DENTON	LC-440Fy	2/8/00	7/9/00
	Z	DENTON	LC-440Fz	2/8/00	7/9/00
Neck Moment	X	DENTON	LC-440Mx	2/8/00	7/9/00
	Y	DENTON	LC-440My	2/8/00	7/9/00
	Z	DENTON	LC-440Mz	2/8/00	7/9/00
Chest	X	ENDEVCO	AC-A08A	12/17/99	7/18/00
	Y	ENDEVCO	AC-ADL42	12/17/99	7/18/00
	Z	ENDEVCO	AC-A28F	12/17/99	7/18/00
Chest	X (R)	ENDEVCO	AC-A14077	12/17/99	7/18/00
	Y (R)	ENDEVCO	AC-A13882	12/17/99	7/18/00
	Z (R)	ENDEVCO	AC-ACCW0	12/17/99	7/18/00
Chest Deflection Gauge		SERVO	DS-064	2/9/00	7/10/00
Hybrid III Use Only					
Pelvic	X	ENDEVCO	AC-AF480	12/17/99	7/18/00
	Y	ENDEVCO	AC-AC2M6	12/17/99	7/18/00
	Z	ENDEVCO	AC-AF5C1	12/17/99	7/18/00

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	10/20/99	4/19/00
Right Femur Load Cell		GSE	LC-955	10/19/99	4/18/00
Left Upper Tibia	Mx	DENTON	LC-016Mx	9/16/99	3/16/00
	My	DENTON	LC-016My	9/16/99	3/16/00
Left Lower Tibia	Fz	DENTON	LC-123Fz	9/16/99	3/16/00
	Mx	DENTON	LC-123Mx	9/16/99	3/16/00
	My	DENTON	LC-123My	9/16/99	3/16/00
Right Upper Tibia	Mx	DENTON	LC-023Mx	10/12/99	4/11/00
	My	DENTON	LC-023My	10/12/99	4/11/00
Right Lower Tibia	Fz	DENTON	LC-111Fz	10/12/99	4/11/00
	Mx	DENTON	LC-111Mx	10/12/99	4/11/00
	My	DENTON	LC-111My	10/12/99	4/11/00
Left Foot Rear	X	ENDEVCO	AC-J32184	10/11/99	4/10/00
	Z	ENDEVCO	AC-J31011	10/11/99	4/10/00
Left Foot Front	Z	ENDEVCO	AC-J32185	10/11/99	4/10/00
Right Foot Rear	X	ENDEVCO	AC-J31101	10/11/99	4/10/00
	Z	ENDEVCO	AC-J31020	10/11/99	4/10/00
Right Foot Front	Z	ENDEVCO	AC-J31059	10/11/99	4/10/00
Lap Belt Load Cells		-	-	-	-
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-Y17	2/8/00	8/8/00
Right Rear Seat Crossmember	ICS	AC-Y13	2/28/00	8/28/00
Top of Engine	ICS	AC-D82	3/2/00	8/31/00
Bottom of Engine	ENTRAN	AC-D03	2/29/00	8/29/00
Right Disc Brake Caliper	ENDEVCO	AC-J18650	10/27/98	4/27/99
Instrument Panel	ICS	AC-D60	12/13/99	6/12/00
Left Disc Brake Caliper	ENDEVCO	AC-AP065	1/26/00	7/26/00
Left Seat Rear Crossmember (R)	ICS	AC-D61	2/28/00	8/28/00
Right Seat Rear Crossmember (R)	ICS	AC-D29	2/28/00	8/28/00