

V3784

**Vehicle Research and Test Center
2001 Ford Escape XLT into
Flat Frontal Barrier at 30.0 mph
TRC Inc. Test Number: 010827**

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Section 1.0

Purpose and Test Procedure

Purpose

This 48 km/h (30 mph) frontal barrier impact test was conducted for the National Highway Traffic Safety Administration (NHTSA) and Vehicle Research and Test Center (VRTC) by Transportation Research Center Inc (TRC Inc)

The purpose of this test was to evaluate frontal crash protection in a full frontal barrier impact test. The subject vehicle was a 2001 Ford Escape XLT MPV.

Test Procedure

This test was conducted in accordance with VRTC instructions for a full frontal car to stationary barrier test. Data was obtained relative to FMVSS 208, "Occupant Crash Protection" and FMVSS 301 (partial), "Fuel System Integrity," performance. An additional fuel line leakage test was also conducted per VRTC instructions.

The test vehicle, a 2001 Ford Escape XLT, was instrumented with six (6) accelerometers to measure longitudinal, lateral, and vertical axis accelerations. The driver's and passenger's primary and secondary airbag signals were monitored with inductive pickups. The vehicle impacted a flat frontal barrier. The vehicle's specified impact velocity range was 47.5 to 49.1 km/h.

The test vehicle contained two (2) Part 572O small adult female Hybrid III anthropomorphic test devices (dummies). The dummies were positioned in the front outboard designated seating positions according to a small female dummy placement draft procedure provided by VRTC and included in Appendix D. The driver dummy and the passenger dummy were both unbelted and were restrained with front dual stage airbags. The test vehicle also contained a Part 572N Hybrid III six-year-old child dummy in a Century Metro belt positioning booster seat in the right rear passenger designated seating position.

Both adult dummies were instrumented with an array of twelve (12) accelerometers in the head, plus three (3) chest, and three (3) pelvis, accelerometers to measure longitudinal, lateral, and vertical accelerations, and the adult dummies were also instrumented with upper and lower neck moment and force load cells, left and right femur load cells to measure axial forces, and chest deflection potentiometers. Both adult dummies were also equipped with THOR-FLX legs, which included upper and lower tibia load cells to measure forces and moments, tibia and foot accelerometers in two axes, and three (3) rotary potentiometers at each ankle to measure foot rotations about three axes. The right front passenger dummy also had redundant chest accelerometers. The child dummy was instrumented with three (3) head and three (3) chest accelerometers to measure longitudinal, lateral, and vertical accelerations, neck moment and force load cells, and a chest deflection potentiometer.

The 179 data channels were digitally sampled and recorded at 12,500 samples per second and processed per SAE J211 March 1995

The crash event was recorded by one (1) real-time panning motion picture camera and twelve (12) high-speed motion picture cameras. The pre- and post-test conditions were recorded by one (1) real-time motion picture camera.

The barrier test summary data are presented in Section 2.0. The summary of FMVSS 208 data are presented in Section 3.0. The occupant, camera, and vehicle measurements are presented in Section 4.0. The fuel system data, including a special fuel line siphoning test procedure and data, are presented in Section 5.0. Appendix A contains the still photographic prints. Appendix B contains the dummy and vehicle data plots. Appendix C contains the dummy verification data. Appendix D contains miscellaneous test information.

Section 2.0

Full Frontal Barrier Test Summary

Test Results Summary

This frontal barrier test was conducted by TRC Inc on August 27, 2001

The test vehicle, a 2001 Ford Escape XLT MPV, was equipped with a 3-liter transverse engine, automatic transmission, power steering, power brakes and dual stage front airbags. The vehicle's test weight was 1780.8 kg. The vehicle's impact speed was 48.2 km/h. The vehicle sustained 416 mm of static crush during the impact.

The driver's 36 millisecond Head Injury Criteria (HIC) was 177. The driver's 15 millisecond HIC was 135. The driver's chest maximum resultant acceleration with three (3) milliseconds minimum duration was 50.3 g. The driver's maximum chest deflection was 59 mm. The driver's left and right femur maximum axial compressive forces were 2546 N and 4163 N, respectively. The driver dummy's neck injury calculations were as follows: NTF, 0.35; NTE, 1.23; NCF, 0.30; NCE, 0.01.

The right front passenger's 36 millisecond HIC was 212. The passenger's 15 millisecond HIC was 121. The right front passenger's chest maximum resultant acceleration with three (3) milliseconds minimum duration was 37.9 g. The right front passenger's maximum chest deflection was 11 mm. The passenger's left and right femur maximum axial compressive forces were 4038 N and 3933 N, respectively. The right front passenger's neck injury calculations were as follows: NTF, 0.26; NTE, 0.27; NCF, 0.68; NCE, 0.23.

The right rear passenger's 36 millisecond HIC was 1210. The right rear passenger's 15 millisecond HIC was 765. The right rear passenger's chest maximum resultant acceleration with three (3) milliseconds minimum duration was 69.3 g. The right rear passenger's maximum chest deflection was 40 mm. The right rear passenger's neck injury calculations were as follows: NTF, 0.14; NTE, 0.27; NCF, 0.13; NCE, 0.10.

Following the impact, no fluid spilled from the vehicle's fuel system prior to the static rollover test. No static rollover test was performed. A special fuel line siphoning test was performed by severing the fuel lines subsequent to the impact test and 87 g of fluid were collected in 30 minutes.

Data Acquisition Explanations

The driver dummy's pelvis Z-axis acceleration data channel, PEVZG1, had a questionable data spike at approximately 120 to 125 milliseconds

The vehicle's center of gravity X-, Y-, and Z-axis accelerometers, VCGXG1, VXGYG1, and VCGZG1, recorded no valid data after approximately 67 milliseconds because the glued-on accelerometer mount dislodged during the test

Table 1 Crash Test Summary

Test mode	Flat frontal barrier			
Test date	08/27/01			
Test time	1321			
Ambient temperature	24° C			
Vehicle year/make/ model/body style	2001/Ford/Escape XLT/MPV			
Vehicle test weight	1780.8 kg			
Impact angle ¹	0°			
Impact velocity ²	48.2 km/h			
Maximum static crush	416 mm			
Average rebound	202 mm			
Number of data channels	166			
Number of cameras	High-speed	12	Real-time	1
<u>Dummies</u>	<u>Driver #416</u>	<u>Right Front Passenger #421</u>	<u>Right Rear Passenger #088</u>	
Type	Part 572O	Part 572O	Part 572N	
Location	Left front	Right front	Right rear	
Restraint	Airbag, dual stage	Airbag, dual stage	3-point seat belt with Century Metro BPB	
<u>Seat track position for test</u>				
Driver	2 notches rear of full forward			
Right Front Passenger	1 notch rear of full forward			
<u>Seat back position for test</u>				
Driver	14.2°			
Right Front Passenger	16.7°			
<u>Head restraint position for test</u>				
Driver	Fixed			
Right Front Passenger	Fixed			
Steering column position	Mid			

¹ With respect to tow track centerline.

² Speed trap measurement (± 0.8 km/h accuracy)

Table 2 General Test and Vehicle Parameter Data

Vehicle year/make/ model/body style	2001/Ford/Escape XLT/MPV
VIN	1FMYU04181KB41393
Model year	2001
Body style	4-door
Color	Blue
Engine data	
Cylinders	6
Displacement	3 liters
Cylinder placement	V
Engine placement	Transverse
Transmission data	<u>4</u> speed, ___ manual, <u>X</u> automatic, <u>X</u> overdrive
Final drive	___ FWD, ___ RWD, <u>X</u> 4WD
Date vehicle received	08/23/2001
Odometer reading	147
Dealer's name	Ricart
and address	N/A
	Columbus, Ohio 43327

Accessories:

Power steering	Yes	Automatic transmission	Yes
Power brakes	Yes	Automatic speed control	Yes
Power seats	No	Tilting steering wheel	Yes
Power windows	Yes	Telescoping steering wheel	No
Tinted glass	Yes	Air conditioning	Yes
Radio	Yes	Anti-skid brake	Yes
Clock	Yes	Rear window defroster	Yes
Other	Sunroof	Power door locks	Yes

Certification data from vehicle's label:

Vehicle manufactured by	Ford Motor Co
Date of manufacture	4/01
VIN	1FMYU04181KB41393
GVWR	4528 lbs. (2053 kg)
GAWR Front:	2398 lbs. (1087 kg)
Rear:	2319 lbs. (1051 kg)

Table 2 General Test and Vehicle Parameter Data, Cont'd

Tires on vehicle (mfr , line, size) Firestone, Wilderness HT, P235/70R16

Tire pressure with maximum capacity vehicle load

Front 44 psi (300 kPa)

Rear: 44 psi (300 kPa)

Spare tire (mfr , line, size) Firestone, Temporary, T145/90R17

Type of seats:

Front Bucket

Rear Split bench

Maximum width: 1737 mm

Wheelbase:	2614 mm
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Location of “Recommended Tire Pressure” label:

The label was located on driver door

Data from vehicle's "Recommended Tire Pressure" label".

Recommended tire size: P215/70R16

Recommended cold tire pressure*

Front: 30 psi (207 kPa)

Rear: 30 psi (207 kPa)

Vehicle Capacity Data:

Number of Occupants (Designated seating capacity)

Front 2

Mid N/A

Rear 3

Total	5
-------	---

Vehicle capacity weight: 408 kg

Rated cargo/luggage weight 68 kg

Test vehicle attitude:

Delivered attitude: LF 804 mm; RF 811 mm; LR 846 mm; RR 845 mm

Fully loaded attitude: LF 785 mm; RF 793 mm, LR 816 mm; RR 819 mm

Pre-test attitude: LF 794 mm; RF 804 mm; LR 809 mm; RR 820 mm

Post-test attitude: LF 792 mm; RF 750 mm; LR 810 mm, RR 801 mm

Table 2 General Test and Vehicle Parameter Data Cont'd

Weight of test vehicle as received (with maximum fluids)=UDW

Right front	446.5 kg	Right rear	327.0 kg
Left front	486.5 kg	Left rear	315.0 kg
Total front weight	933.0 kg	(59.2 % of total vehicle weight)	
Total rear weight	642.0 kg	(40.8 % of total vehicle weight)	
Total delivered weight	1575.0 kg		

Calculation of test vehicle's target test weight:

Total Delivered Weight (UDW) =	1575 kg
Rated Cargo/Luggage Weight (RCLW) ¹ =	68 kg
Weight of 2 Part 572O Dummies @ 49 kg each =	98 kg
Weight of 1 Part 572N Dummy @ 22 kg =	22 kg
Target test weight =	1763.0 kg

Weight of test vehicle with required dummies and 85.8 kg of cargo weight:

Right front	461.0 kg	Right rear	410.8 kg
Left front	494.0 kg	Left rear	415.0 kg
Total front weight	955.0 kg	(53.6 % of total vehicle weight)	
Total rear weight	825.8 kg	(46.4 % of total vehicle weight)	
Total test weight	1780.8 kg	(1.0 % over target test weight)	

Weight of ballast secured in vehicle: None

Components removed to meet target test weight: Rear bumper fascia, door glass, taillights, rear door skin, muffler, three door speakers, and trailer hitch.

Location of Vehicle's CG 1212 mm rearward of front wheel centerline

¹ Cargo weight for multipurpose passenger vehicles, trucks, and buses is the vehicle's rated cargo and luggage weight from the vehicle's label or 136 kilograms, whichever is less.

Table 3 Post-Impact Data

Test number	010827
Test date	08/27/01
Test time	1321
Test type	Flat Frontal barrier
Impact angle	0°
Ambient temperature at impact area	24° C
Required impact velocity range	47.6 to 49.2 km/h

Barrier impact velocity

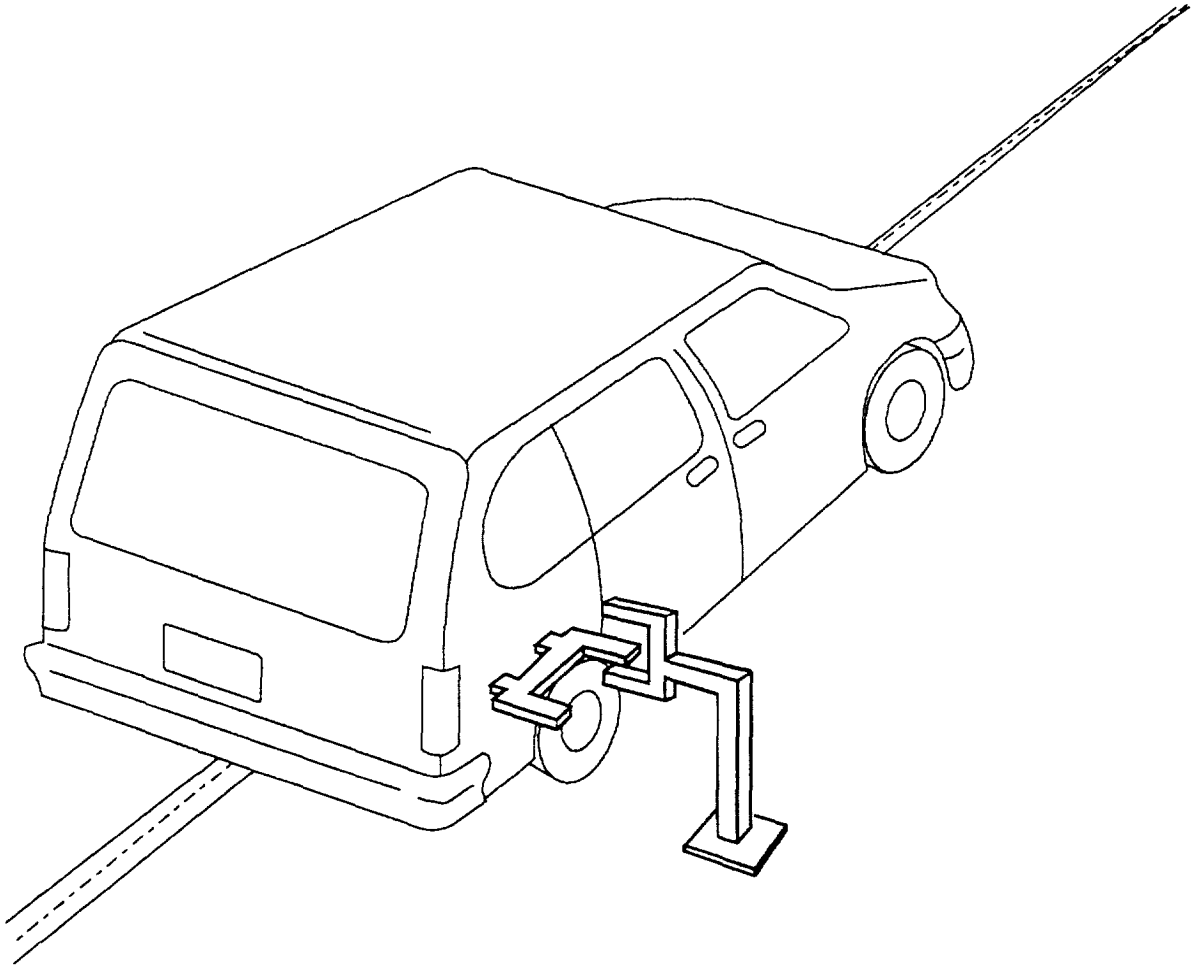
Primary	48.2 km/h
Secondary	48.2 km/h
Distance from vehicle to barrier	
Entering velocity trap	661 mm
Exiting velocity trap	51 mm

Vehicle rebound from flat rigid barrier:

Distance from test vehicle to barrier impact point:

Post-test.	L 180 mm,	C 210 mm;	R 215 mm
Average rebound:	202 mm		

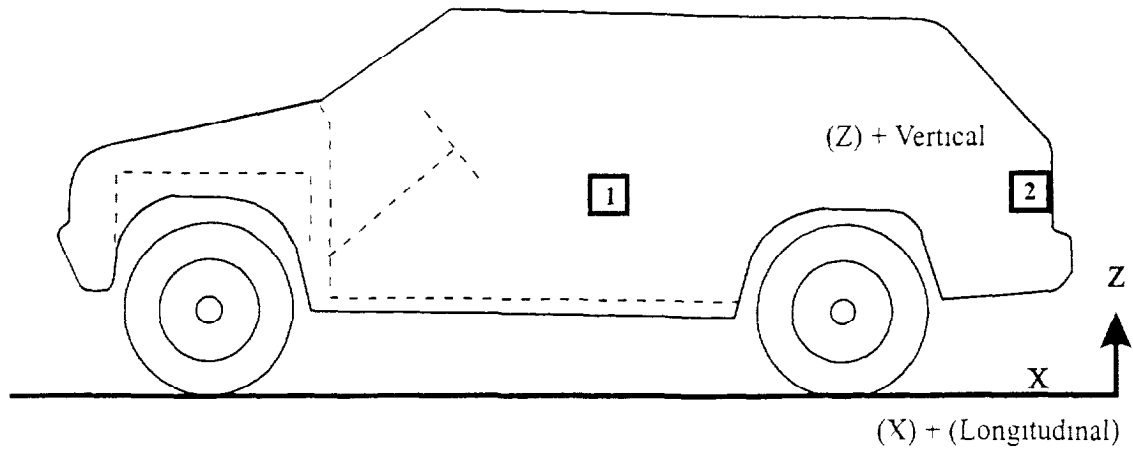
Figure 1 Impact Velocity Measurement System



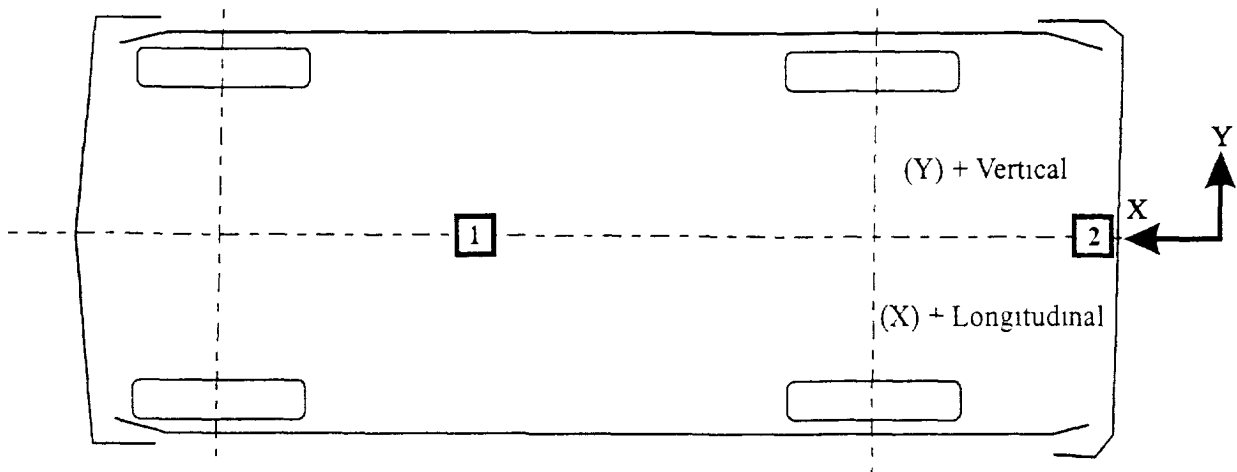
The final vane clears the final emitter/receiver pair 51 millimeters before impact.

The vanes have 305-millimeter spacing.

Figure 2 Vehicle Accelerometer Placement



Side View



Bottom View

Table 4 Vehicle Accelerometer Locations and Data Summary

TEST NUMBER: 010827		POSITIVE		NEGATIVE	
No	LOCATION		DIRECTION		DIRECTION
1	VEHICLE CENTER				
	OF GRAVITY				
	LONGITUDINAL				
	LATERAL	1.2 g	@ 103.1 ms	51.4 g	@ 71.4 ms
	VERTICAL	44.4 g	@ 91.5 ms	11.0 g	@ 43.8 ms
	RESULTANT	42.7 g	@ 50.3 ms	23.4 g	@ 125.1 ms
		64.1 g	@ 71.5 ms		
2	REAR DECK				
	LONGITUDINAL	3.3 g	@ 99.0 ms	40.5 g	@ 36.3 ms
	LATERAL	2.9 g	@ 55.9 ms	5.6 g	@ 39.4 ms
	VERTICAL	13.7 g	@ 38.5 ms	15.9 g	@ 56.3 ms
	RESULTANT	41.1 g	@ 37.2 ms		

Section 3.0

Summary of FMVSS 208 Data

Table 5 Dummy Injury Criteria Data

	<u>Maximum Acceleration¹</u>						
	Head				Chest		
	X	Y	Z	R	X	Y	Z
Driver	-35.5 g	15.6 g	28.3 g	44.4 g	-48.4 g	-8.9 g	16.9 g
Right Front Passenger	-41.3 g	18.5 g	15.2 g	41.7 g	-39.3 g	3.8 g	18.2 g
Right Rear Passenger	-45.6 g	-6.8 g	75.3 g	82.8 g	-71.8 g	9.3 g	-28.5 g

	<u>Maximum Femur Compressive Force</u>	
	Left Femur	Right Femur
Driver	2546 N	4163 N
Right Front Passenger	4038 N	3933 N
Right Rear Passenger	N/A	N/A

<u>Head Injury Criteria²</u>			
36 millisecond			
	HIC	Time t ₁	Time t ₂
Driver	177	83.3 ms	119.3 ms
Right Front Passenger	212	51.5 ms	87.5 ms
Right Rear Passenger	1210	61.3 ms	97.3 ms

15 millisecond			
	HIC	Time t ₁	Time t ₂
Driver	135	87.0 ms	102.0 ms
Right Front Passenger	121	64.2 ms	79.3 ms
Right Rear Passenger	765	71.1 ms	86.2 ms

Table 5 Dummy Injury Criteria Data, Cont'd

Chest Maximum Resultant Acceleration³

	Acceleration	Time t_1	Time t_2
Driver	50.3 g	73.1 ms	76.2 ms
Right Front Passenger	37.9 g	75.8 ms	78.8 ms
Right Rear Passenger	69.3 g	55.2 ms	58.2 ms

Maximum Chest Deflection

Driver	59 mm
Right Front Passenger	11 mm
Right Rear Passenger	40 mm

Neck Injury Calculations (N_{ij})²

	NTF	NTE	NCF	NCE
Driver	0.35	1.23	0.30	0.01
Right Front Passenger	0.26	0.27	0.68	0.23
Right Rear Passenger	0.14	0.27	0.13	0.10

¹ See Report Sign Convention in Appendix D

² As defined in FMVSS No. 208.

³ Defined as equal to or exceeding 0.003 sec. duration.

⁴ See Data Acquisition Explanation in Section 2.0

Table 6 Post-Impact Dummy/Vehicle Data

Visible Dummy Contact Points:

	<u>Driver</u>	<u>Right Front Passenger</u>	<u>Right Rear Passenger</u>
Head	Airbag	Airbag, head restraint	None
Chest	Steering wheel, airbag	Airbag	3-Pt belt
Abdomen	None	None	3-Pt belt
Left knee	Instrument panel	Instrument panel	None
Right knee	Instrument panel	Instrument panel	None

Door opening:

	<u>Left</u>	<u>Right</u>
Front	Easy	Easy
Rear	Easy	Easy

Seat movement:

	<u>Seat back failure</u>	<u>Seat shift</u>
Left Front	None	None
Right Front	None	None
Left Rear	N/A	N/A
Right Rear	None, fixed	None, fixed

Glazing damage: Windshield cracked primarily on left side.

Other notable impact effects: Steering column was found broken after test

Section 4 0

Occupant, Camera, and Vehicle Information

Dummy Kinematic Summary

Driver Dummy

Upon impact, the driver dummy translated forward on the seat impacting both knees into the instrument panel. The dummy's head rotated rearward as the head and chest were restrained by the airbag. The dummy's head rotated forward, then rearward, and then leftward as the dummy rebounded into the left portion of the seat back. The driver dummy came to rest in the left portion of the driver's seat leaning against the door panel, with its pelvis on the forward portion of the seat cushion and knees into the instrument panel.

Right Front Passenger Dummy

Upon impact, the passenger dummy translated forward impacting both knees into the instrument panel. The dummy's head rotated rearward as the head and chest were restrained by the airbag. The dummy's head rotated forward and then rearward into the head restraint as the dummy rebounded into the right portion of the seat back. The dummy came to rest on the passenger's seat.

Right Rear Passenger Dummy

Upon impact, the dummy's head and torso rotated forward as the dummy was restrained by the booster seat and 3-point belt system. The dummy's arms extended and rotated upward. The dummy's head rotated rearward as the dummy rebounded into the booster seat. The dummy came to rest on the booster seat.

Figure 3 Dummy Measurement Locations for Front Seat Occupants

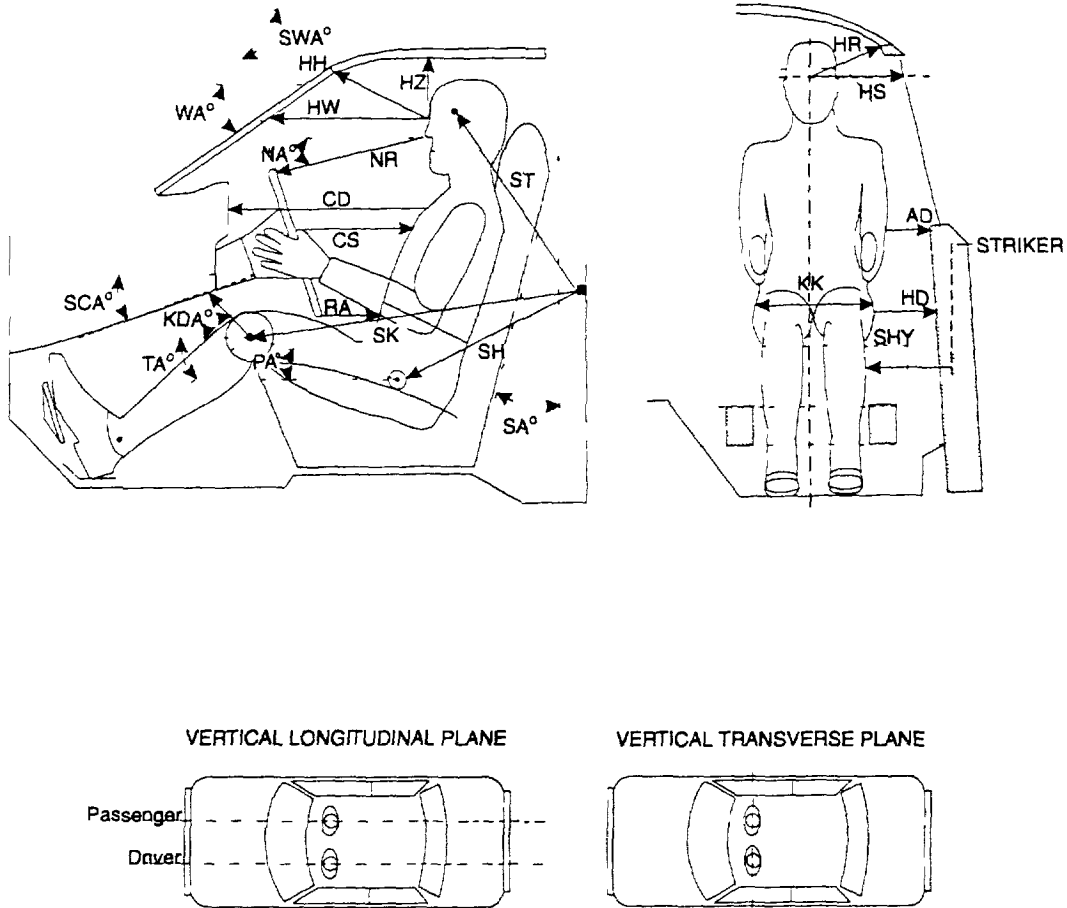


Table 7 Dummy Measurement Data For Occupants¹

Designation	Type of Measurement	Driver (Serial # 416)	Front Passenger (Serial # 421)
WA	Windshield angle	35 3°	35 3°
SWA	Steering wheel angle	62 5°	N/A
SCA	Steering column angle	27 5°	N/A
SA	Seat back angle	14 2°	16 7°
HZ	Head to roof	238 mm	238 mm
HH	Head to header	317 mm	328 mm
HW	Head to windshield	600 mm	572 mm
HR	Head to side header	303 mm	277 mm
NR	Nose to rim	288 mm	N/A
NA	Nose to rim angle	7 5°	N/A
CD	Chest to dash	460 mm	436 mm
CS	Steering wheel to chest	220 mm	N/A
RA	Rim to abdomen	106 mm	N/A
KDL	Left knee to dash	78 mm	60 mm
KDR	Right knee to dash	78 mm	64 mm
KDA	Outboard knee to dash angle	36 9°	20 4°
PA	Pelvic angle	20.1°	21 1°
TA	Tibia angle	70°	68 6°
KK	Knee to knee	275 mm	230 mm
ST ¹	Striker to head	505 mm	513 mm
	Striker to head angle	-62 4°	-66 3°
SK ¹	Striker to knee	653 mm	652 mm
	Striker to knee angle	1 2°	0.6°
SH ¹	Striker to H-point	333 mm	346 mm
	Striker to H-point angle	18 1°	12.6°
SHY	Striker to H-point (Y dir)	214 mm	233 mm
HS	Head to side window	292 mm	260 mm
HD	H-point to door	212 mm	193 mm
AD	Arm to door	131 mm	124 mm

The seat back angle (SA°) is measured relative to vertical, all other angles are measured relative to horizontal

¹ Rear seat occupant: Head to seat back=672 mm; Knee to seat back=404 mm.

² A negative angle indicates the measurement point was above the striker.

Figure 4 Pre-Test And Post-Test Measurement Points

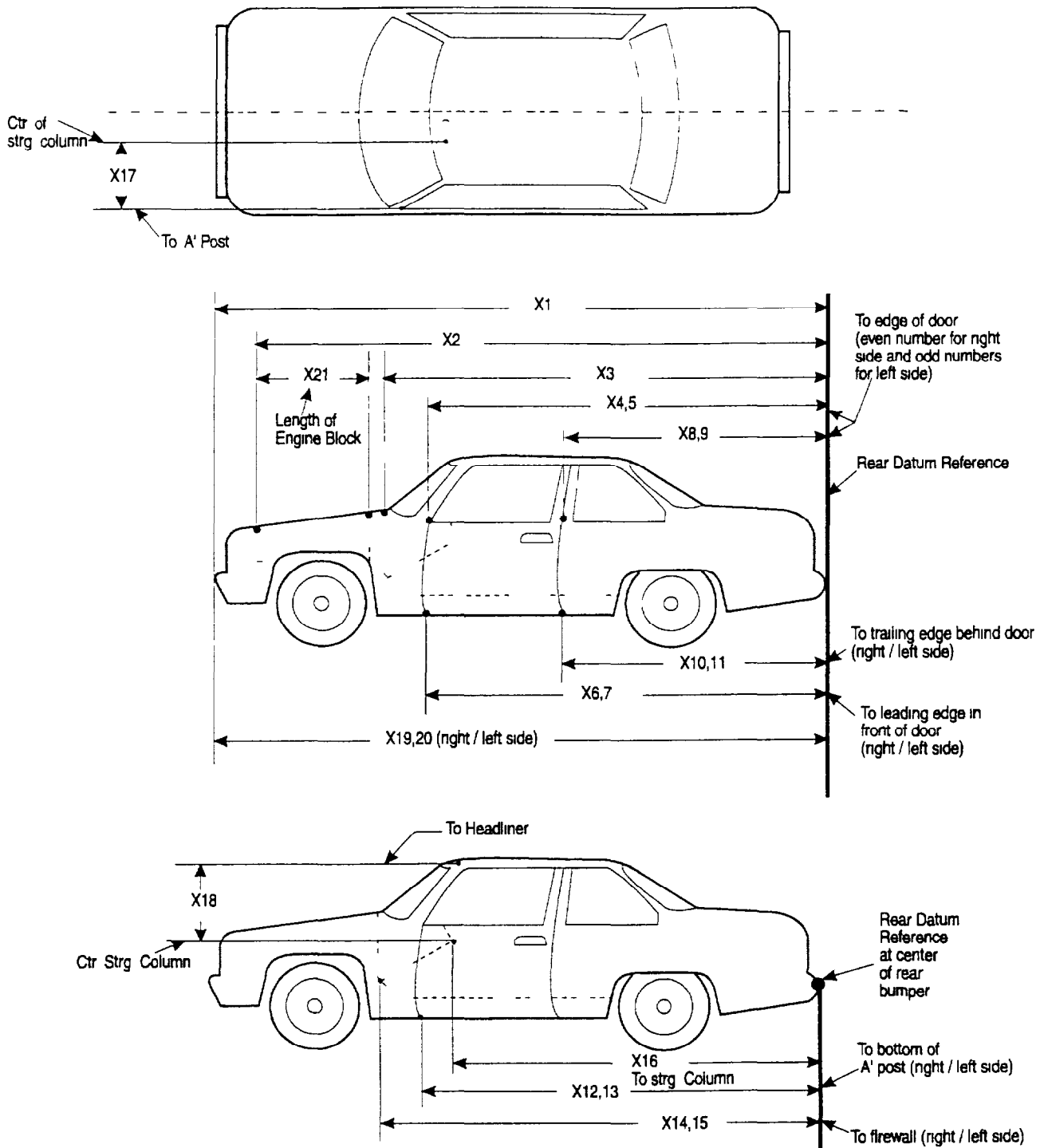


Table 8 Impacted Vehicle Measurements

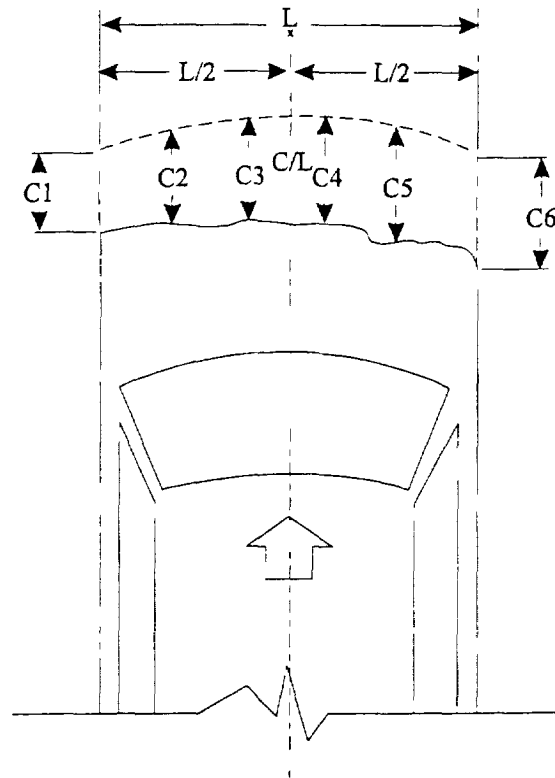
Test number 010827

Vehicle year/make/model/body style: 2001/Ford/Escape XLT/MPV

No	Type of measurement	Pre-Test	Post-Test	Difference
X1	Total Length of Vehicle at Centerline	4365	3995	370
X2	Rear Surface of Vehicle to Front of Engine Block	3665	3521	144
X3	Rear Surface of Vehicle to Firewall	3380	3331	49
X4	Rear Surface of Veh to Upper Leading Edge of Right Door	2984	2977	7
X5	Rear Surface of Veh to Upper Leading Edge of Left Door	2990	2984	6
X6	Rear Surface of Veh to Lower Leading Edge of Right Door	2950	2914	36
X7	Rear Surface of Veh to Lower Leading Edge of Left Door	2957	2918	39
X8	Rear Surface of Veh to Upper Trailing Edge of Right Door	1992	1983	9
X9	Rear Surface of Veh to Upper Trailing Edge of Left Door	1994	1982	12
X10	Rear Surface of Veh to Lower Trailing Edge of Right Door	2012	1982	30
X11	Rear Surface of Veh to Lower Trailing Edge of Left Door	2025	1989	36
X12	Rear Surface of Veh to Bottom of " A " Post on Right Side	2962	2960	2
X13	Rear Surface of Veh to Bottom of " A " Post on Left Side	2972	2975	-3
X14	Rear Surface of Vehicle to Firewall--Right Side	3410	3364	46
X15	Rear Surface of Vehicle to Firewall --Left Side	3425	3366	59
X16	Rear Surface of Vehicle to Steering Wheel Center	2584	2520	64
X17	Center of Steering Column to " A " Post	310	255	55
X18	Center of Steering Column to Headliner	471	755	-284
X19	Rear Surface of Vehicle to Right Side of Front Bumper	4225	3989	236
X20	Rear Surface of Vehicle to Left Side of Front Bumper	4225	3994	231
X21	Length of Engine Block	421	421	0
RD	Rear Surface of Vehicle to Right Side of Dash Panel	2845	2860	-15
CD	Rear Surface of Vehicle to Center of Dash Panel	2835	2827	8
LD	Rear Surface of Vehicle to Left Side of Dash Panel	2862	2845	17

All distance measurements are in millimeters

Figure 5 Vehicle Crush



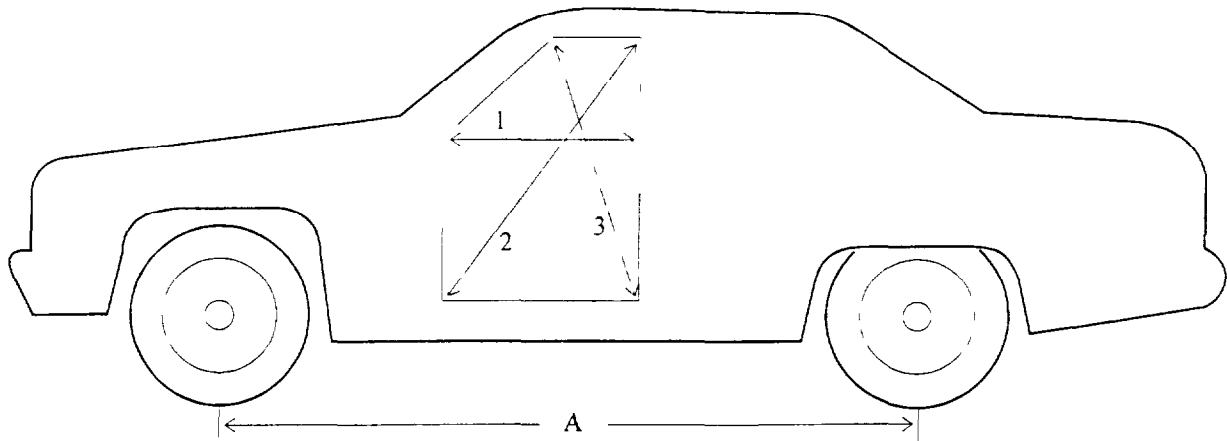
Notes: L is pre-test length of contact surface.
 $C1$ through $C6$ are spaced equally apart
 CL is vehicle centerline.

Vehicle: 2001 Ford Escape XLT

Location	Pre-test	Post-test	Difference
L	1525 mm		
C1	4225 mm	3994 mm	231 mm
C2	4352 mm	3989 mm	363 mm
C3	4365 mm	3980 mm	385 mm
C4	4365 mm	4010 mm	355 mm
C5	4360 mm	3944 mm	416 mm
C6	4225 mm	3989 mm	236 mm
CL	4365 mm	3995 mm	370 mm

Figure 6 Vehicle Intrusion Measurements

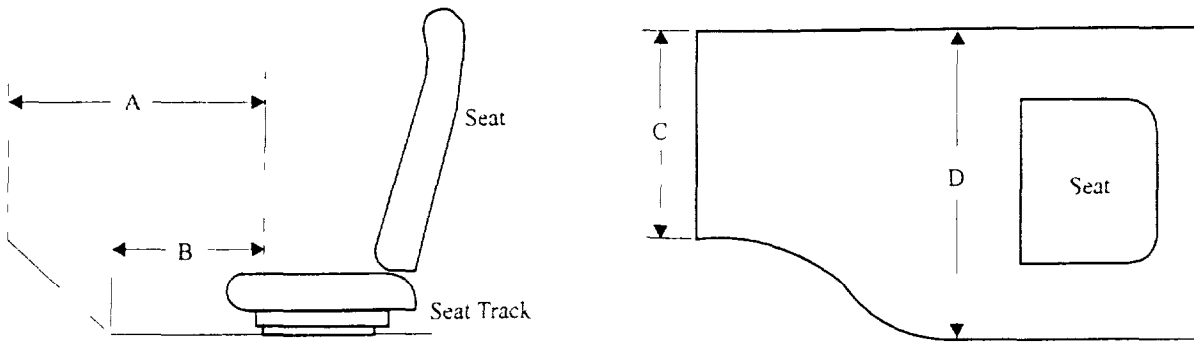
Door Opening Width



Units (mm)	Left			Right		
Measurement	1	2	3	1	2	3
Pre-Test	934 mm	1440 mm	1045 mm	938 mm	1433 mm	1060 mm
Post-Test	939 mm	1445 mm	1047 mm	935 mm	1434 mm	1070 mm
Difference	-5 mm	-5 mm	-2 mm	3 mm	-1 mm	-10 mm

Units (mm)	A = Wheelbase Left	A = Wheelbase Right
Pre-Test	2614 mm	2612 mm
Post-Test	2630 mm	2605 mm
Difference	-16 mm	7 mm

Figure 7 Vehicle Intrusion Measurements
Static Footwell Deformation



Driver's Side

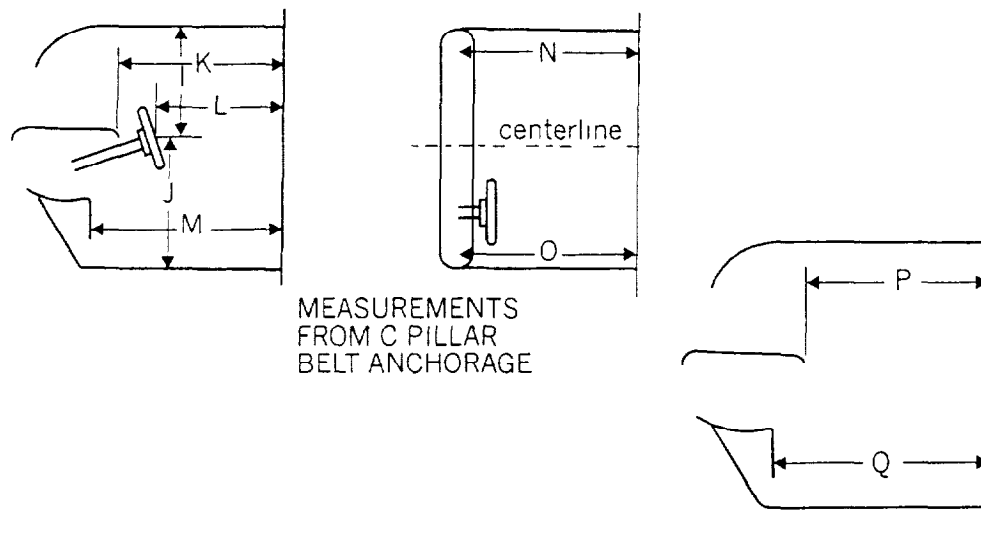
Measurement	Pre-Test	Post-Test	Difference
A	689 mm	645 mm	44 mm
B	543 mm	547 mm	-4 mm
C	369 mm	370 mm	-1 mm
D	370 mm	425 mm	-55 mm

Passenger's Side

Measurement	Pre-Test	Post-Test	Difference
A	692 mm	655 mm	37 mm
B	580 mm	574 mm	6 mm
C	371 mm	383 mm	-12 mm
D	375 mm	405 mm	-30 mm

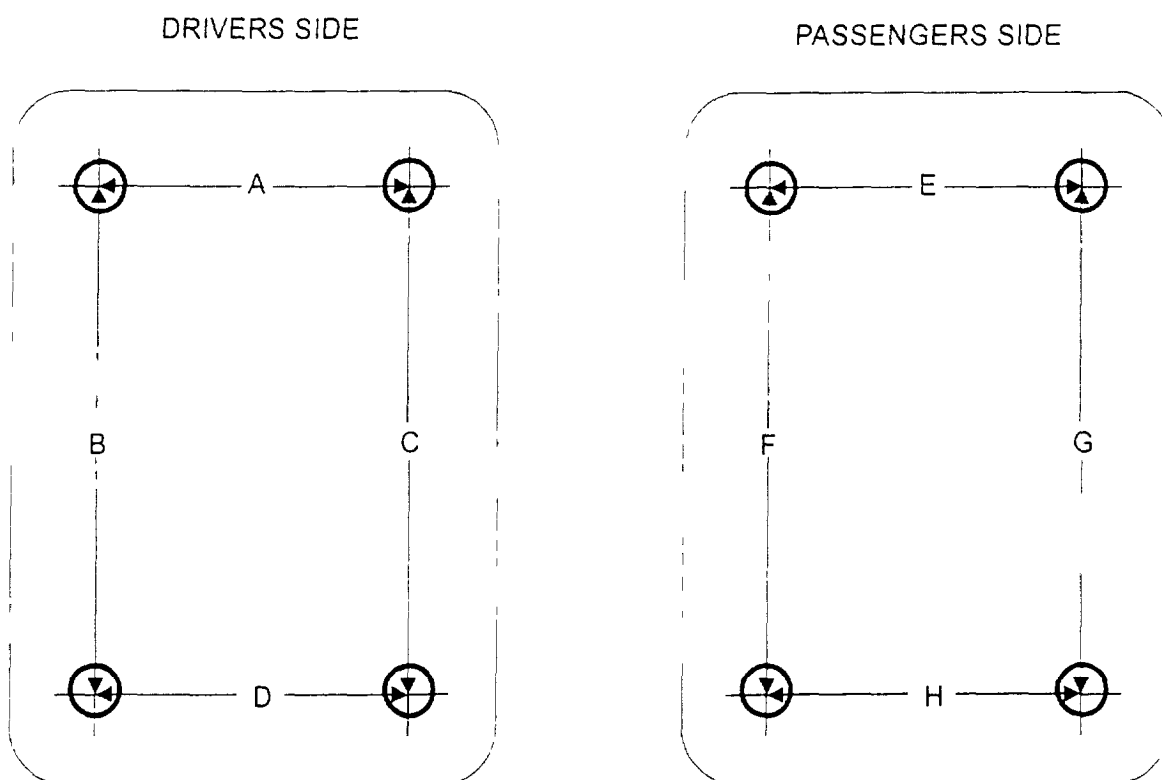
Figure 8 Vehicle Intrusion Measurements

Static Passenger Compartment Intrusion



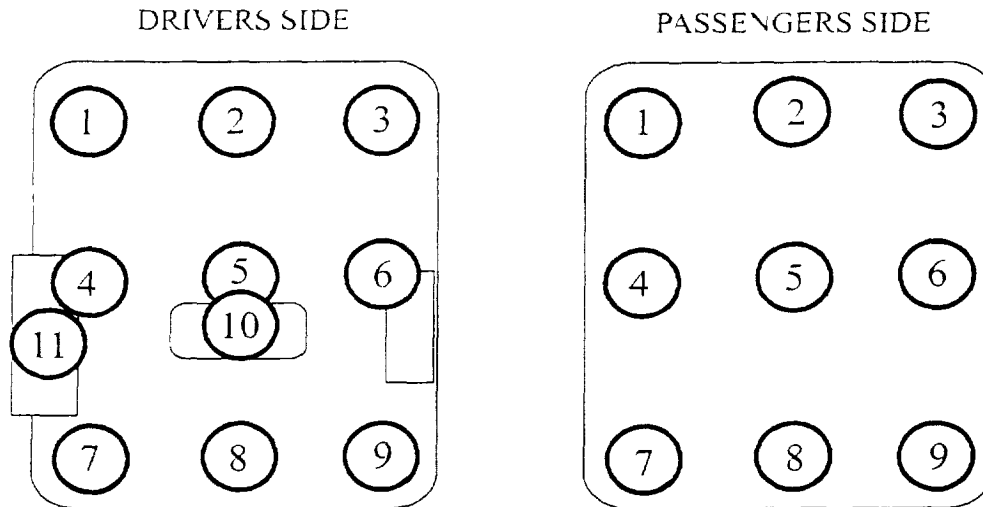
Measurement	Pre-Test	Post-Test	Difference
I	471 mm	755 mm	-284 mm
J	670 mm	375 mm	295 mm
K (driver's side)	1590 mm	1590 mm	0 mm
L	1300 mm	1280 mm	20 mm
M (driver's side)	1638 mm	1638 mm	0 mm
N	1492 mm	1492 mm	0 mm
O	1495 mm	1495 mm	0 mm
P (passenger's side)	1590 mm	1590 mm	0 mm
Q (passenger's side)	1632 mm	1632 mm	0 mm

Figure 9 Floorboard Deformation



Measurement	Pre-Test	Post-Test	Difference
A	425 mm	417 mm	8 mm
B	375 mm	379 mm	-4 mm
C	351 mm	350 mm	1 mm
D	424 mm	425 mm	-1 mm
E	381 mm	380 mm	1 mm
F	484 mm	485 mm	-1 mm
G	480 mm	475 mm	5 mm
H	404 mm	407 mm	-3 mm

Figure 10 Toeboard Measurements



Driver's Side Floorpan Measurements

Floorpan Location	X			Z		
	Pre-Test	Post-Test	Difference	Pre-Test	Post-Test	Difference
1	1510 mm	1458 mm	52 mm	542 mm	532 mm	10 mm
2	1545 mm	1435 mm	110 mm	505 mm	526 mm	-21 mm
3	1538 mm	1494 mm	44 mm	475 mm	515 mm	-40 mm
4	1460 mm	1443 mm	17 mm	409 mm	415 mm	-6 mm
5	1462 mm	1417 mm	45 mm	422 mm	408 mm	14 mm
6	1458 mm	1441 mm	17 mm	416 mm	430 mm	-14 mm
7	1370 mm	1373 mm	-3 mm	363 mm	343 mm	20 mm
8	1368 mm	1376 mm	-8 mm	382 mm	335 mm	47 mm
9	1376 mm	1377 mm	-1 mm	386 mm	352 mm	34 mm
10	1384 mm	1361 mm	23 mm	535 mm	533 mm	2 mm
11	1387 mm	1371 mm	16 mm	456 mm	440 mm	16 mm

Passenger's Side Floorpan Measurements

Floorpan Location	X			Z		
	Pre-Test	Post-Test	Difference	Pre-Test	Post-Test	Difference
1	1555 mm	1490 mm	65 mm	495 mm	513 mm	-18 mm
2	1445 mm	1436 mm	9 mm	520 mm	513 mm	7 mm
3	1500 mm	1447 mm	53 mm	570 mm	515 mm	55 mm
4	1487 mm	1455 mm	32 mm	440 mm	422 mm	18 mm
5	1500 mm	1421 mm	79 mm	463 mm	450 mm	13 mm
6	1460 mm	1436 mm	24 mm	490 mm	434 mm	56 mm
7	1404 mm	1400 mm	4 mm	401 mm	365 mm	36 mm
8	1396 mm	1386 mm	10 mm	397 mm	349 mm	48 mm
9	1400 mm	1396 mm	4 mm	401 mm	365 mm	36 mm

Reference +X forward from rear bumper, +Z upward from ground level

The diagram illustrates the experimental setup for the driving task. A vehicle is positioned on a 'Tow Road' which is supported by a 'Monorail' system. The vehicle is connected to a 'Tow Cable' and an 'Umbilical Cable'. A 'Cable Support' is shown where the cables meet. The vehicle is surrounded by several 'Overhead Steering Column Motion Targets' (labeled 1, 2, 3, 4, 6, 13) and a 'Barrier' on the left. A 'Concrete Pad' is indicated at the top. An arrow points to the vehicle with the label 'Real Time Panning'.

Figure 11 Camera Positions, Cont'd

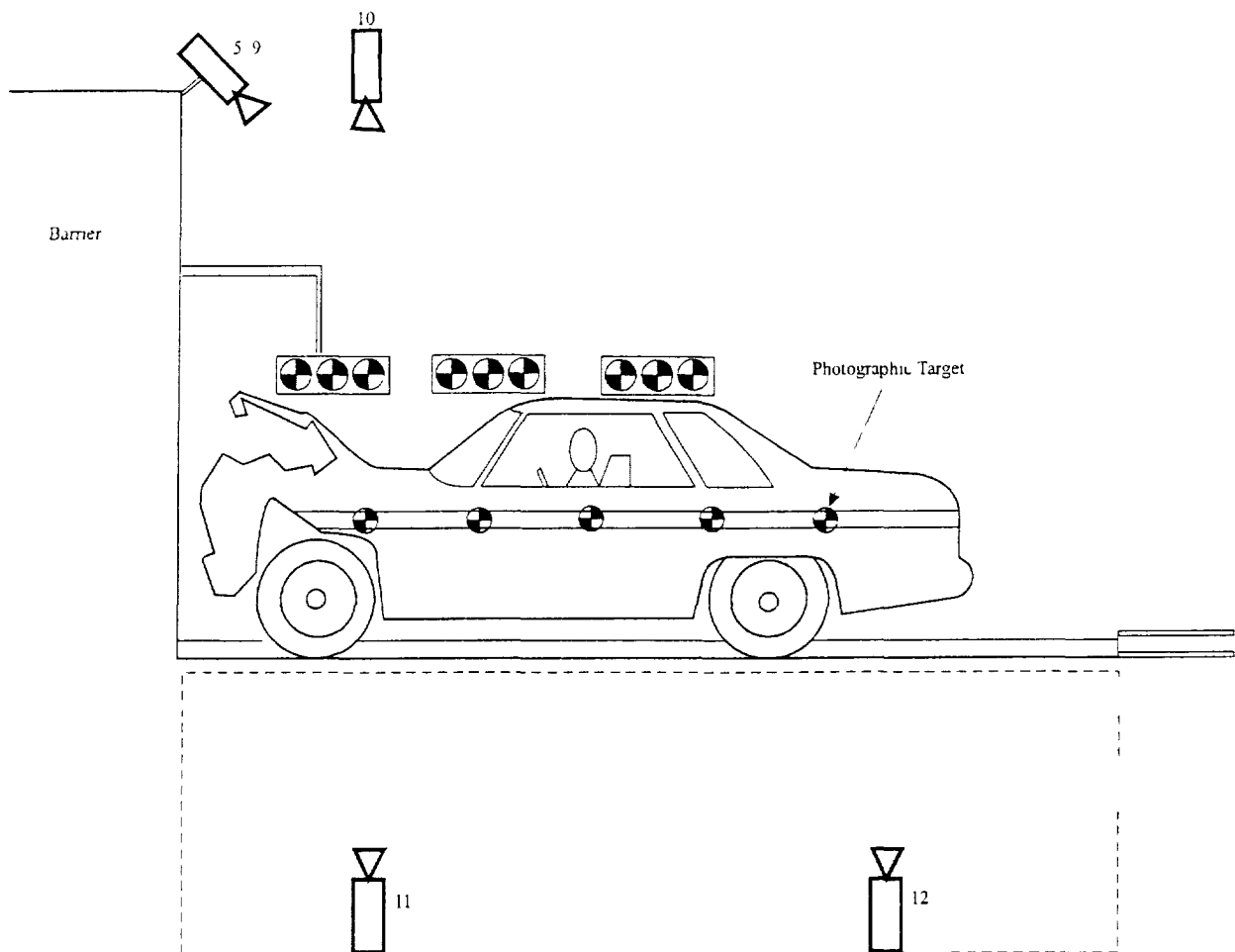


Table 9 Camera Information

Camera Number	Location	Type	Lens (mm)	Speed (fps)	Purpose of camera data
1	Panning	Bolex		24	Vehicle dynamics
2	Left perpendicular overall	Photosonic	13	910	Vehicle crush
3	Left tight dummy	Hycam	25	1042	Dummy kinematics
4	Left angled on dummy	Photosonic	25	997	Dummy kinematics
5	Barrier driver	Photosonic	25	1002	Dummy kinematics
6	Right perpendicular overall	Photosonic	13	995	Vehicle crush
7	Right tight dummy	Hycam	25	1035	Dummy kinematics
8	Right angled on dummy	Photosonic	25	1000	Dummy kinematics
9	Barrier passenger	Photosonic	25	992	Dummy kinematics
10	Overhead	Photosonic	13	997	Vehicle dynamics
11	Pit front	Photosonic	17	987	Vehicle crush
12	Pit rear	Photosonic	13	1002	Vehicle crush
13	Onboard child dummy	Photosonic	8	1000	Dummy kinematics

Description Of Timing Marks On TRC High-Speed Film

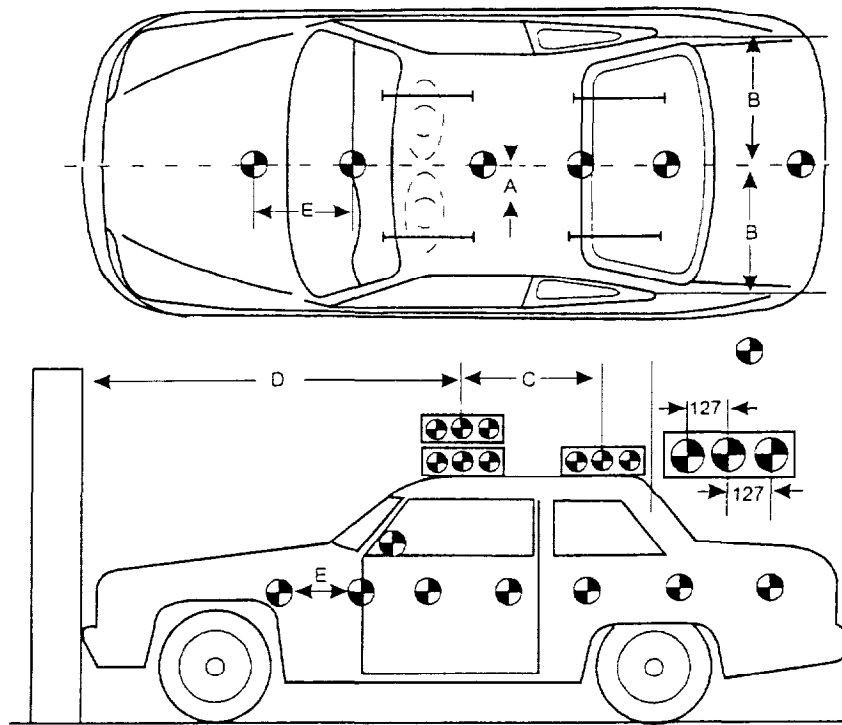
All TRC high-speed cameras are equipped with red LEDs which put timing marks on the right edge of the film. TRC uses a single timing generator to generate the timing for all cameras. This allows the timing marks to be common to all cameras. The timing marks can be used to measure camera speed (frames per second) or to locate a point in time before or after the time-zero event.

The timing marks appear on the film as small red marks on the right edge of the film. Round marks are left by the Photo-Sonics and Stalex cameras while horizontal bars are left by the Hycam, Locam, and Fastax II cameras.

The timing generator puts out a pulse for every millisecond plus it generates additional pulses for hundredths and tenths of seconds. To explain this further, we can use an example of a camera running at 1000 frames per second.

- 1 Every frame will have **one** LED appear in it. This indicates a *millisecond* pulse
- 2 Every ten frames will have **two** LEDs appear in it. These indicate a *millisecond* pulse plus a *hundredth of a second* pulse
- 3 Every one hundred frames will have **three** LEDs appear in it. These indicate a *millisecond* pulse, a *hundredth of a second* pulse, and a *tenth of a second* pulse

Figure 12 Vehicle Reference Photo Target Locations



Measurement	Pre-Test
A	L 382 mm R 382 mm
B	N/A mm
C	L 610 mm R 610 mm
D	1243 mm
E ¹	300 mm

¹ The first side target is placed 600 mm from front edge of bumper, and others are at 300 mm intervals

Section 5.0

Fuel System Test Procedure and Data

Table 10 Fuel System Data

Usable fuel system capacity	60.6 liters (from owner's manual)
Test volume range	55.7 - 56.9 liters (92-94% of usable)
Actual test volume	56.4 liters (93% of usable)
Test fluid type	Stoddard
Specific gravity	0.764
Kinematic viscosity	0.99 centistoke
Test fluid color	Purple
Type of fuel pump	Electric
Did electric fuel pump operate with ignition switch "on" and the engine not operating	Yes
Details of fuel system	The fuel tank is in front the of rear suspension. The filler neck runs out to the left rear above the wheel well with the cap at the end of the neck. The fuel lines run inside the left frame rail.

Table 11 FMVSS 301 Post-Impact Test Data

Test date 08/27/01

Vehicle year/make/
model/body style 2001/Ford/Escape XLT/MPV

Test requirements

Test vehicle fuel tank filled to 92 to 94% of manufacturer's usable capacity and with electric fuel pump operating (if it will operate without engine operation) Part 572 test dummies located at each front designated seating position

Test vehicle impact type:

- ☒ Frontal (48 km/h)
- ☐ Oblique (48 km/h) with ☐° barrier face first contacting ☐ (driver/pass) side
- ☐ Rear moving barrier (48 km/h)
- ☐ Lateral moving barrier (32 km/h)

Fuel system fluid spillage measurements

	<u>Test Results</u>	<u>Maximum Allowable</u>
1 From impact until vehicle motion ceases	0 0 g	28 g
2 5-minute period after vehicle motion ceases	0 0 g	142 g
3 Next 25 minutes after 5-minute period	0 0 g	28 g/min

Fuel system fluid spillage location(s): None

Table 12 Fuel Line Siphon Test Data

Test date 08/27/01
Test mode Frontal 48 km/h
Vehicle year/make/
model/body style 2001/Ford/Escape XLT/MPV

Test procedure:

Cut the fuel lines (return line as well as supply line if there is one) at their lowest point at - or forward of - the front seat mid-track position. Raise the vehicle so the top fuel level in the tank is 12 inches higher than the cut or until the vehicle has been raised 12 inches, whichever is greater. (If this cannot be achieved, record height lifted.) Catch any leakage for one-half hour and measure in the same manner as for an FMVSS test for the first half hour after a crash test.

Vehicle raised: N/A

Fuel system fluid spillage measurements:

	<u>Test Results</u>	<u>Maximum Allowable</u>
1 During vehicle height raising	0 g	N/A
2. 5-minute period after fuel lines severed	87 g	N/A
3 Next 25 minutes after 5-minute period	0 g	N/A

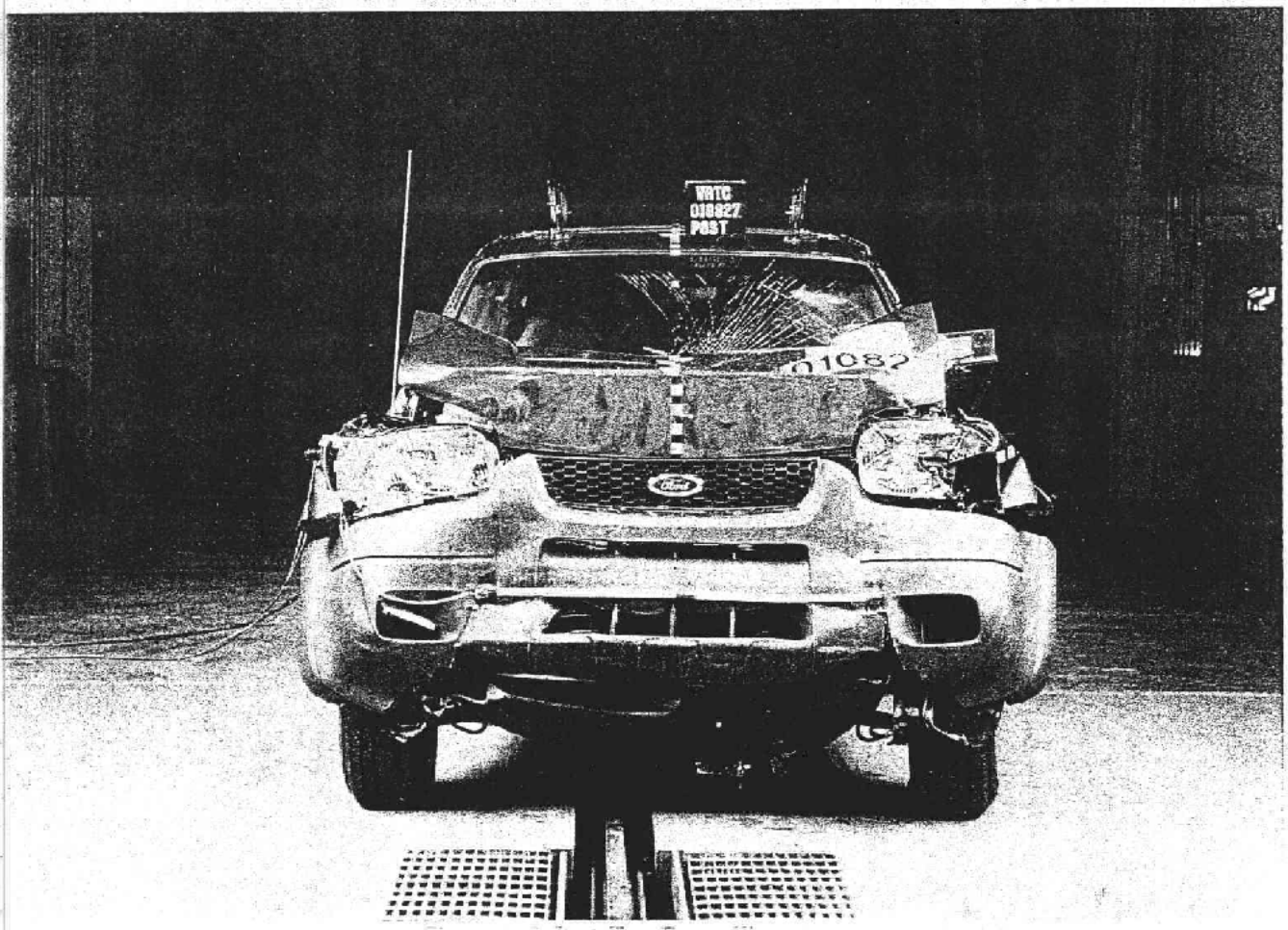
Fuel system fluid spillage location(s): Severed fuel lines

Appendix A

Photographs



Figure A-1 Pre-Test Front View



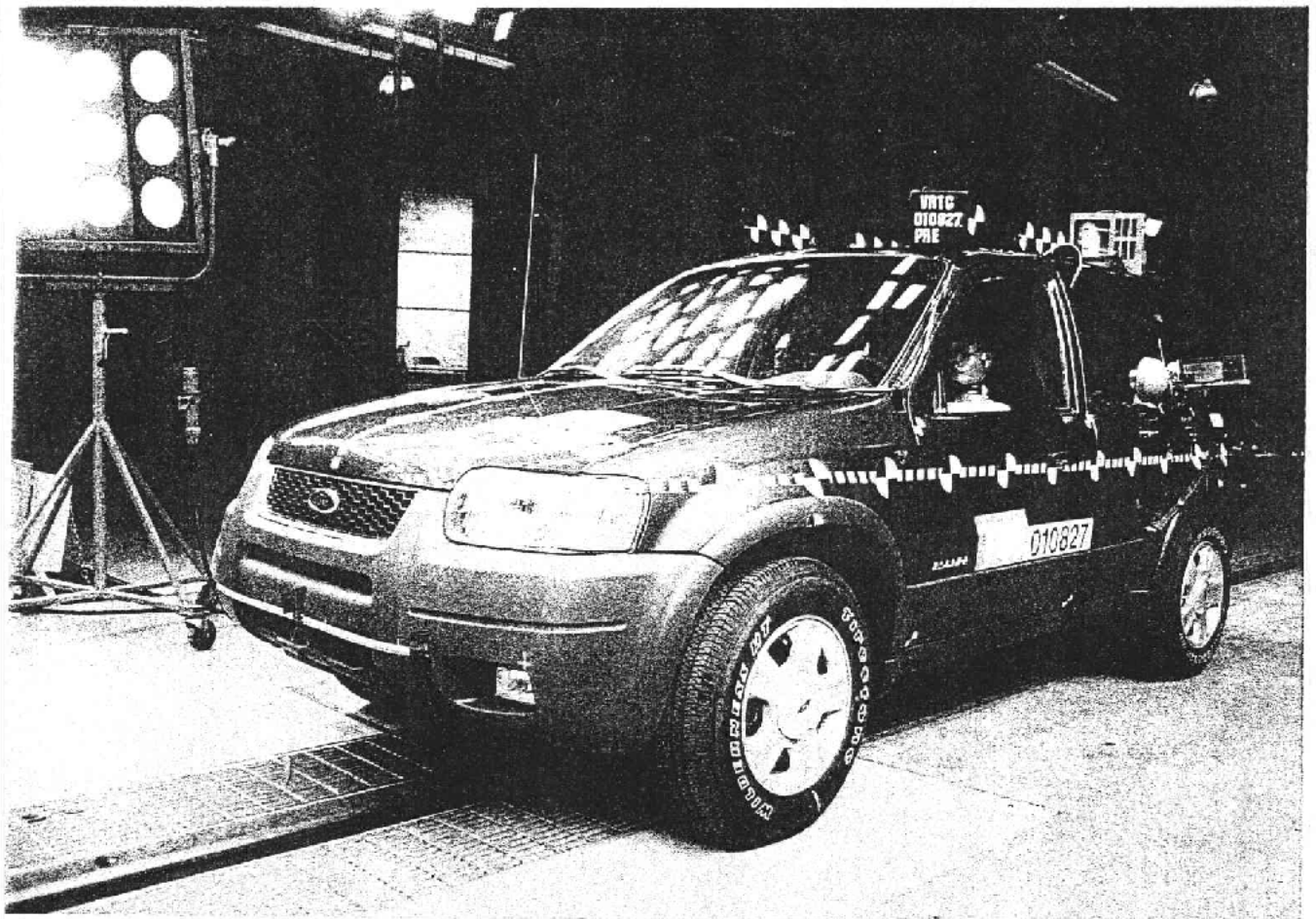


Figure A-3 Pre-Test Left Front View

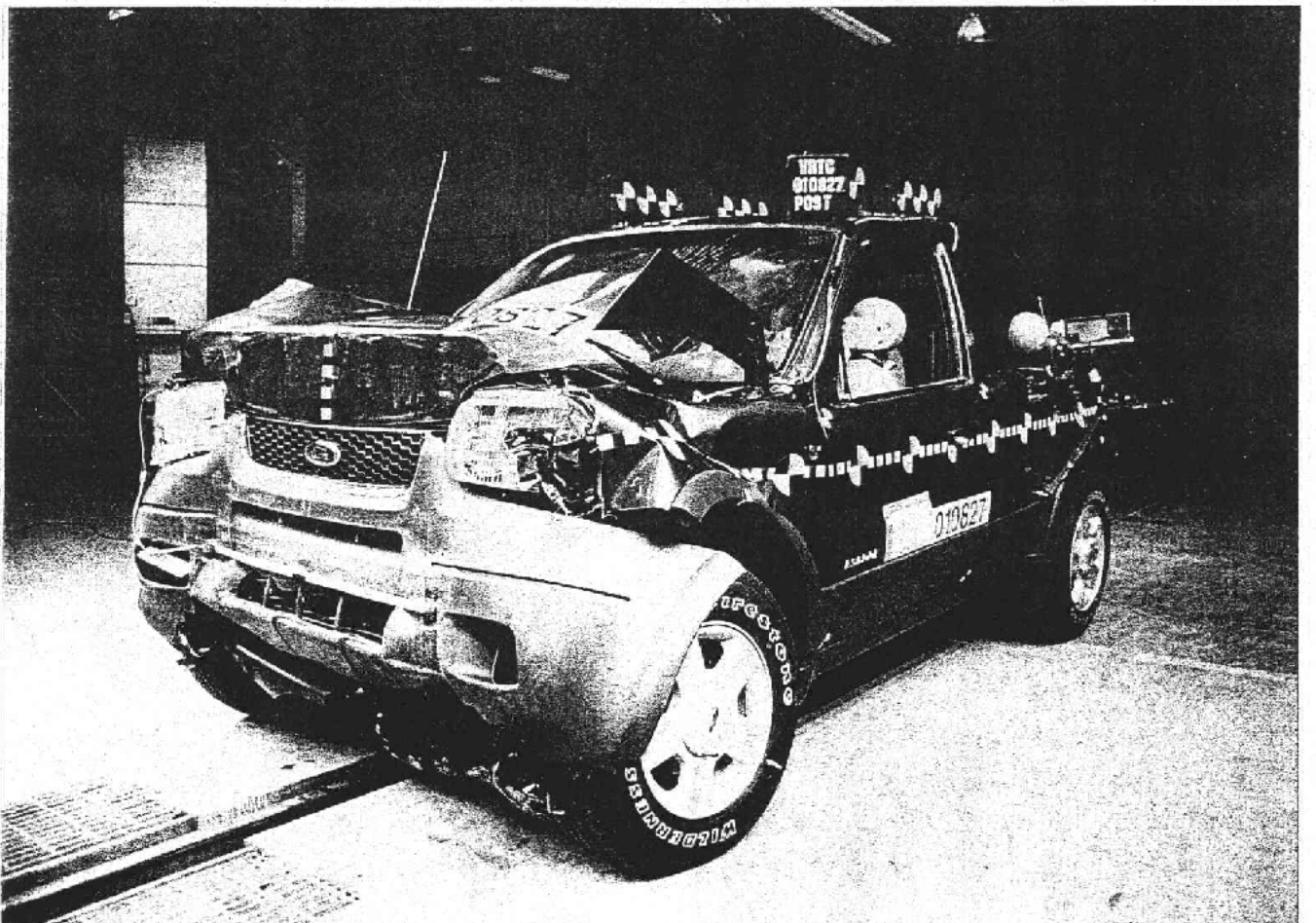


Figure A-4 Post-Test Left Front View



Figure A-5 Pre-Test Left Side View



Figure A-6 Post-Test Left Side View

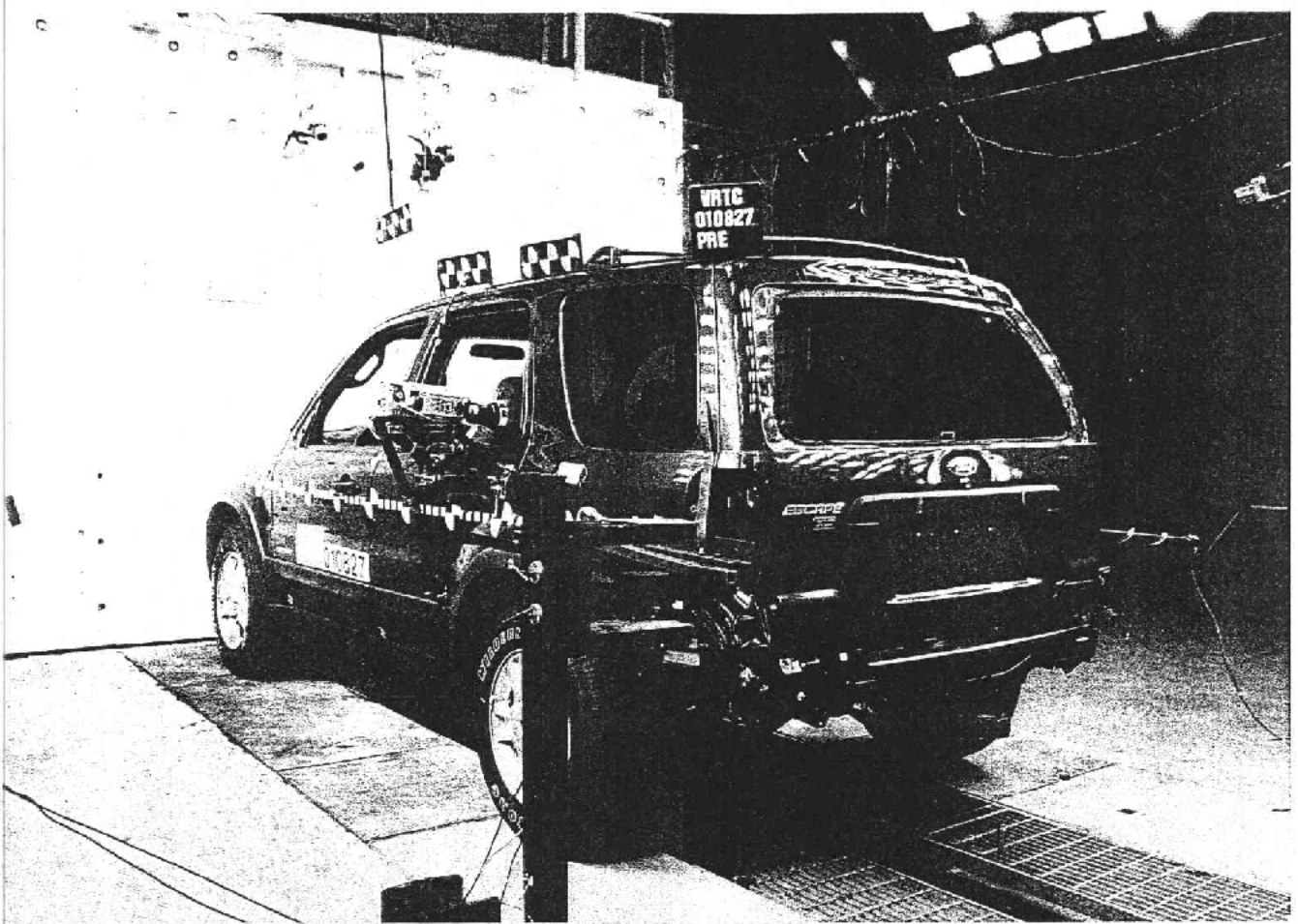


Figure A-7 Pre-Test Left Rear View



Figure A-8 Post-Test Left Rear View

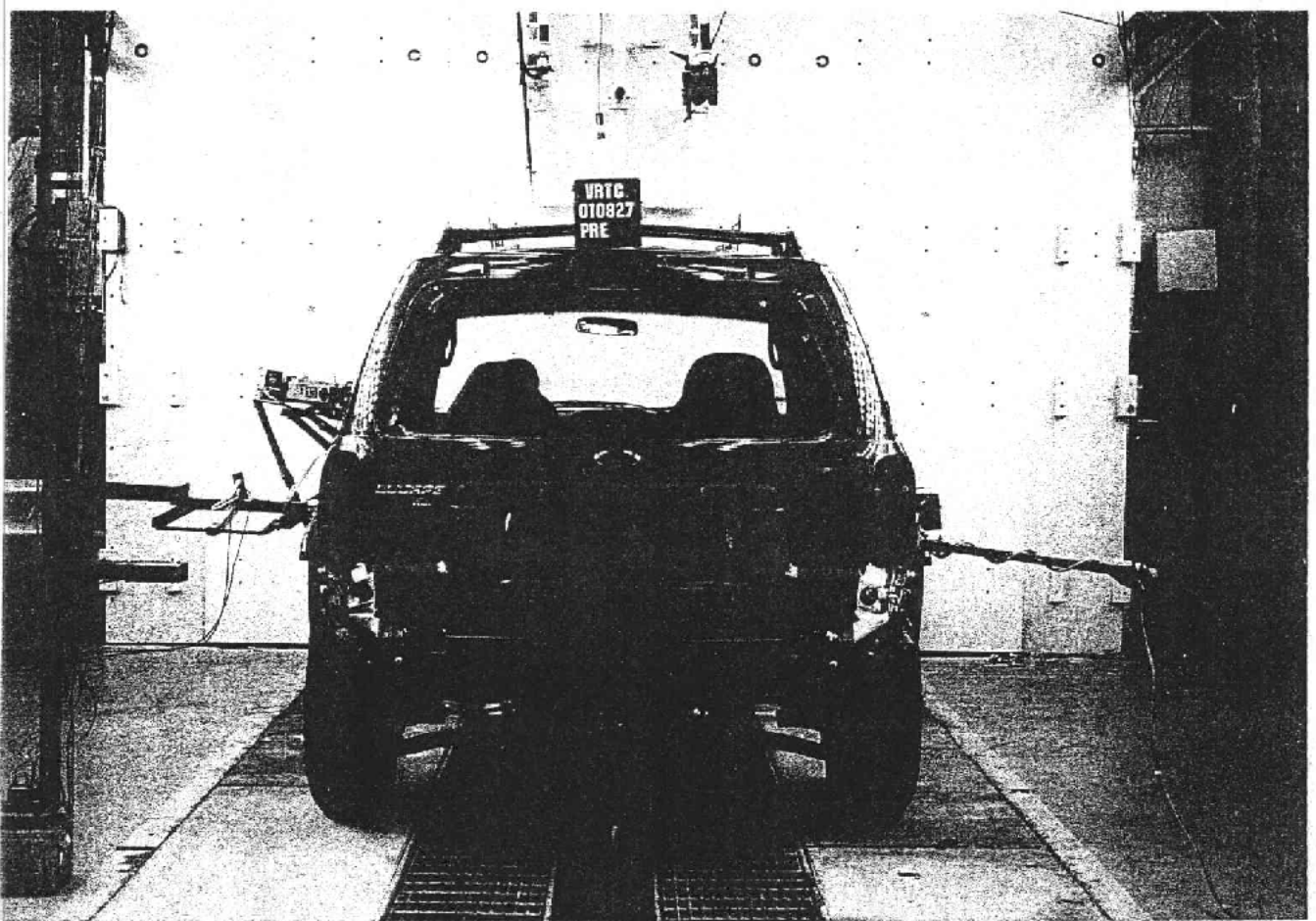
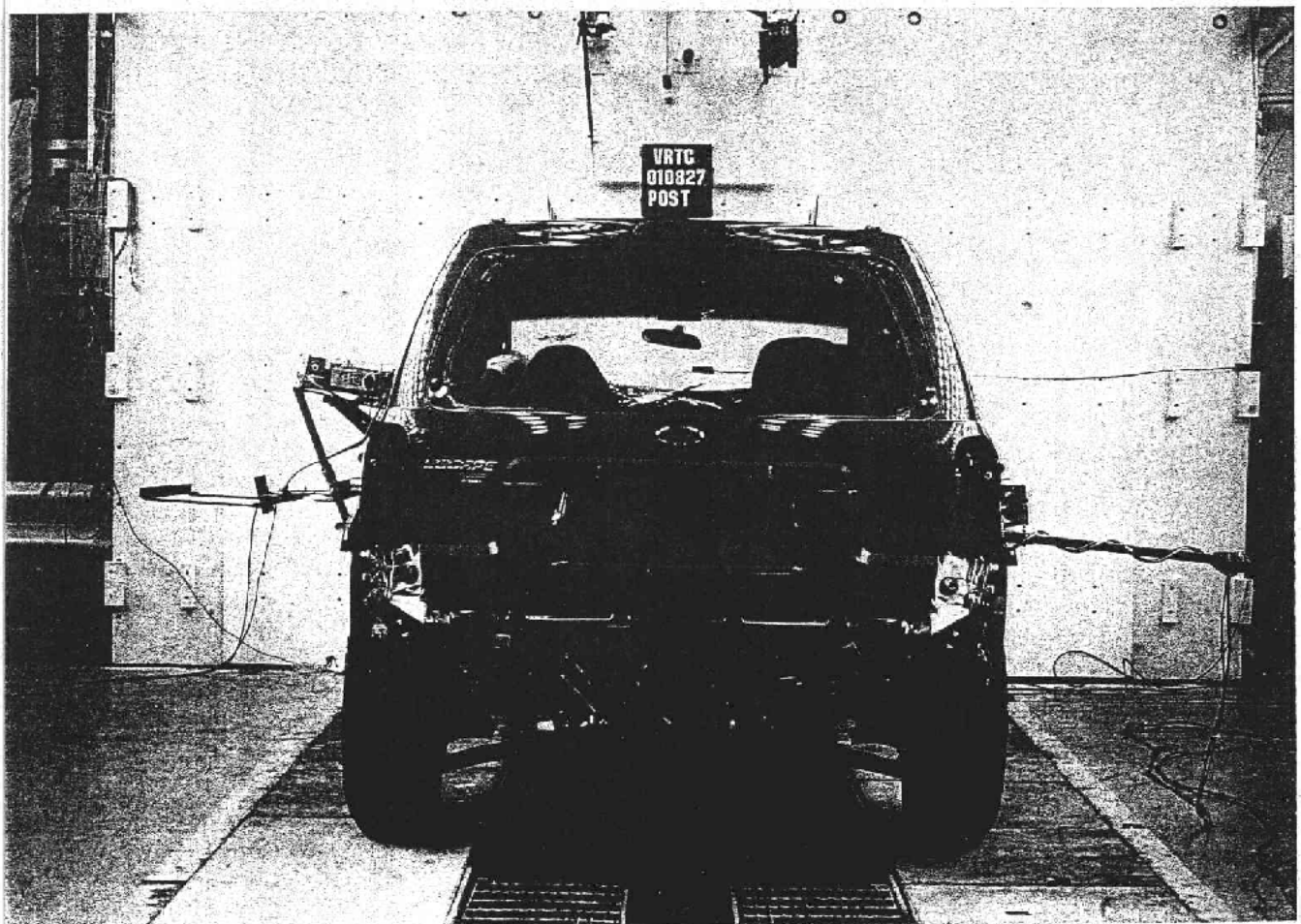


Figure A-9 Pre-Test Rear View



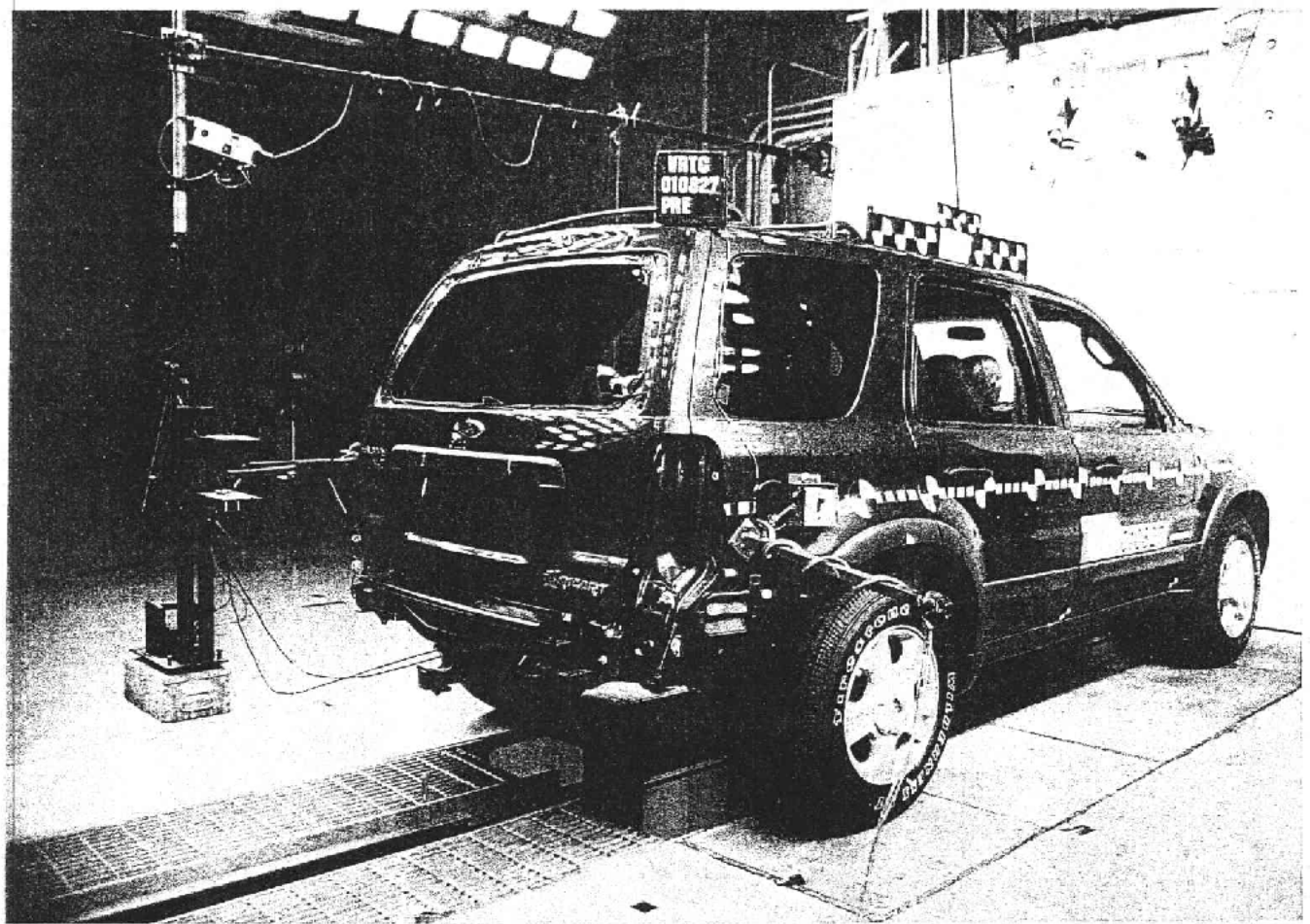


Figure A-11 Pre-Test Right Rear View

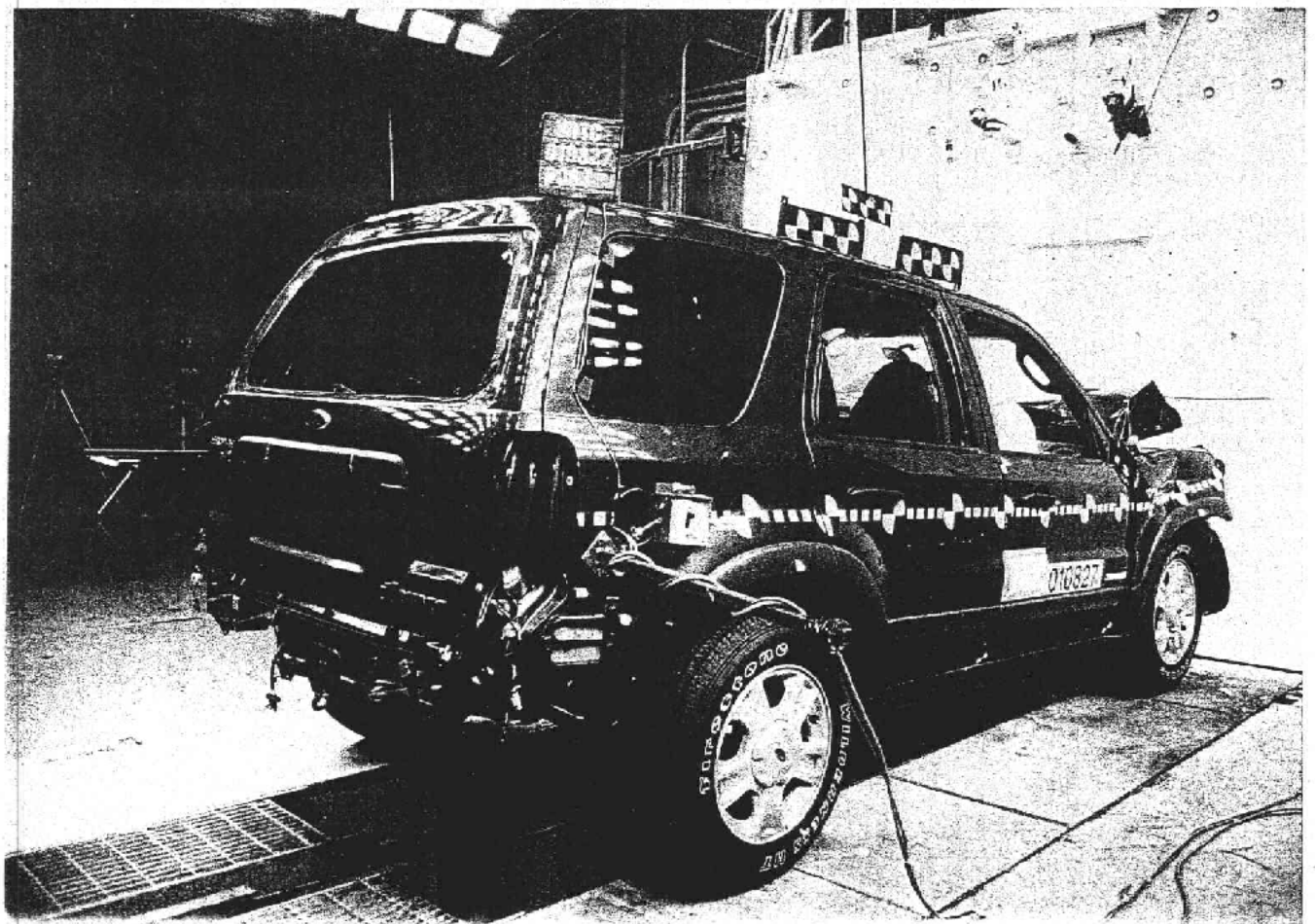


Figure A-12 Post-Test Right Rear View



Figure A-13 Pre-Test Right Side View



Figure A-14 Post-Test Right Side View

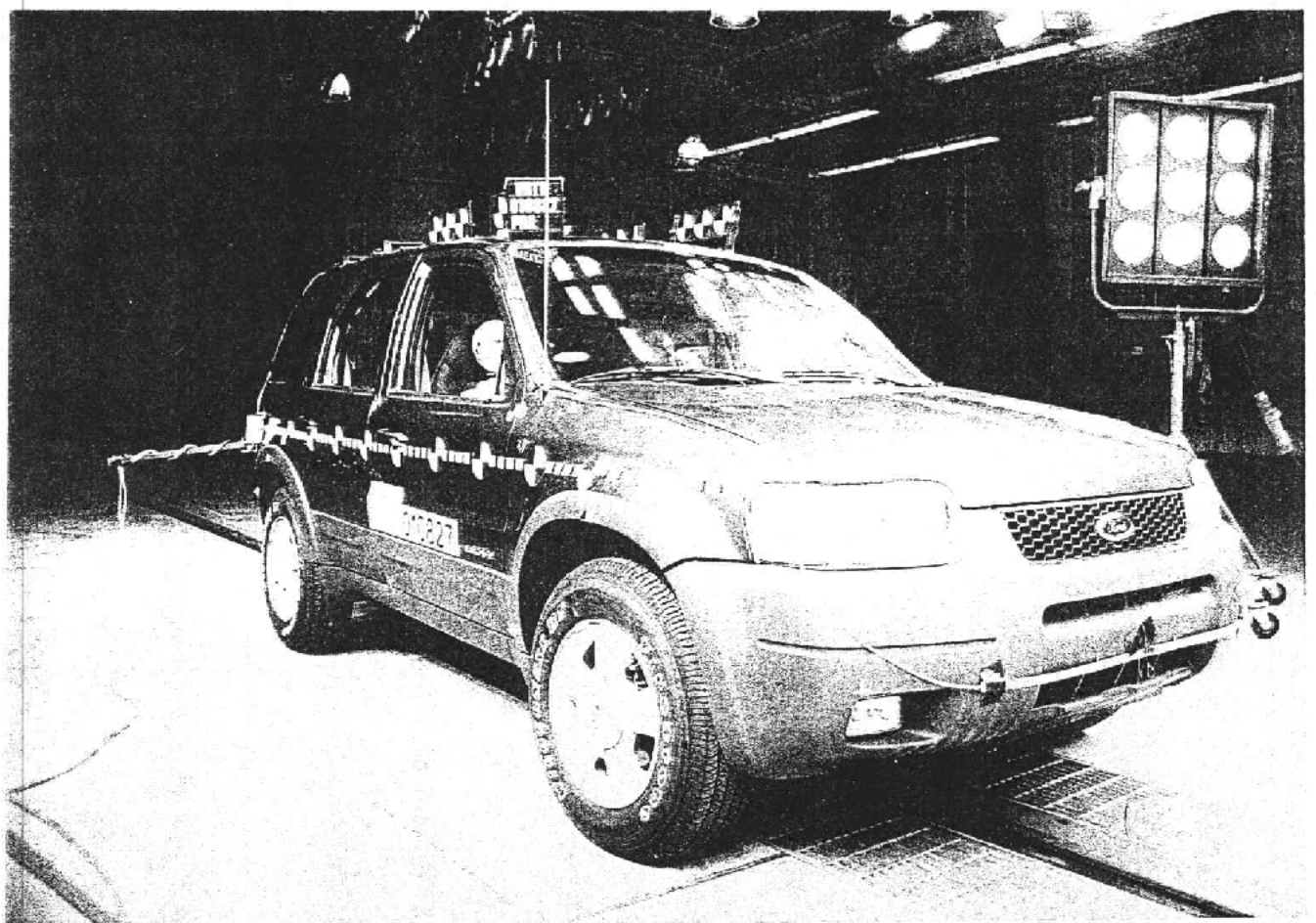
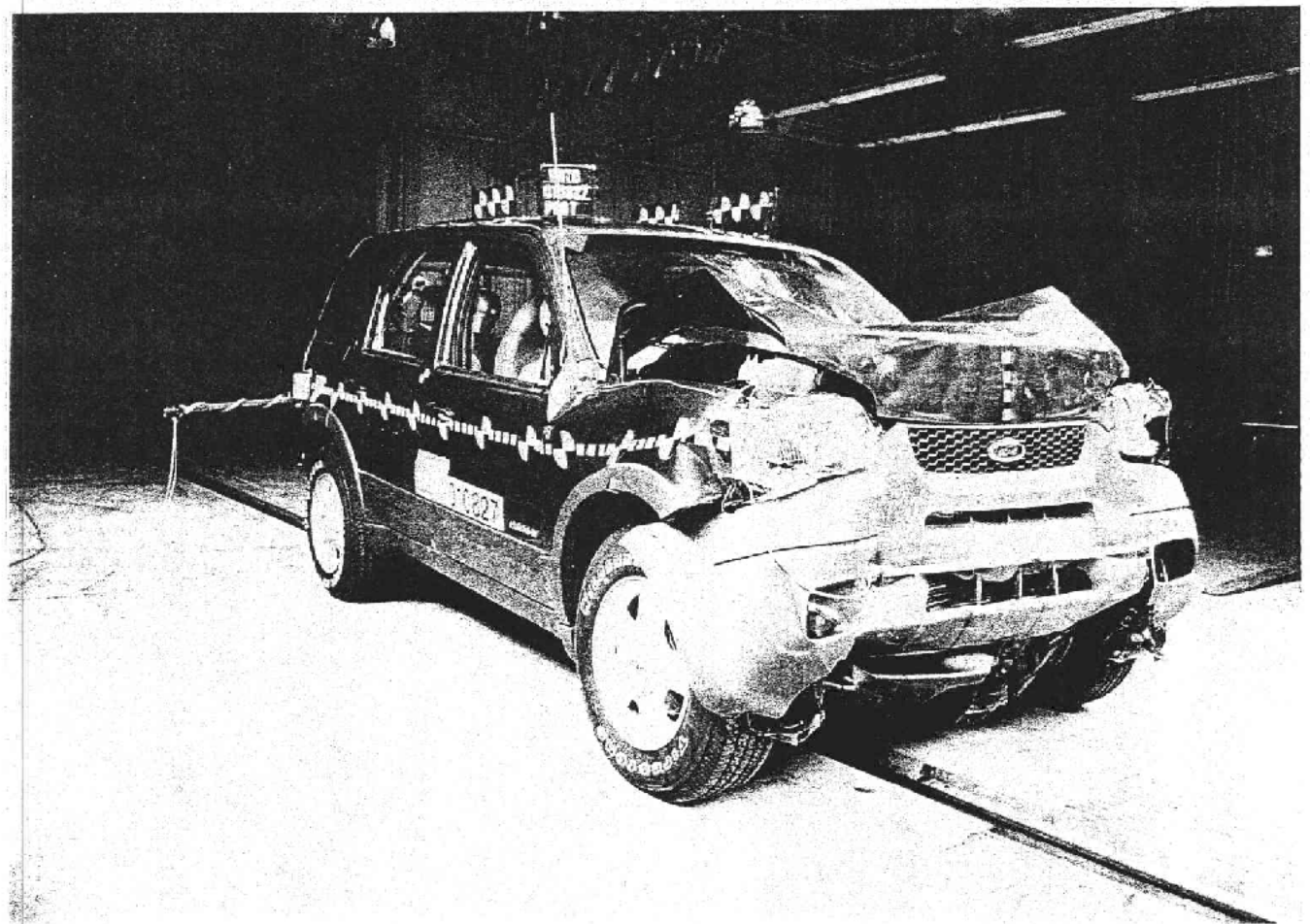


Figure A-15 Pre-Test Right Front View



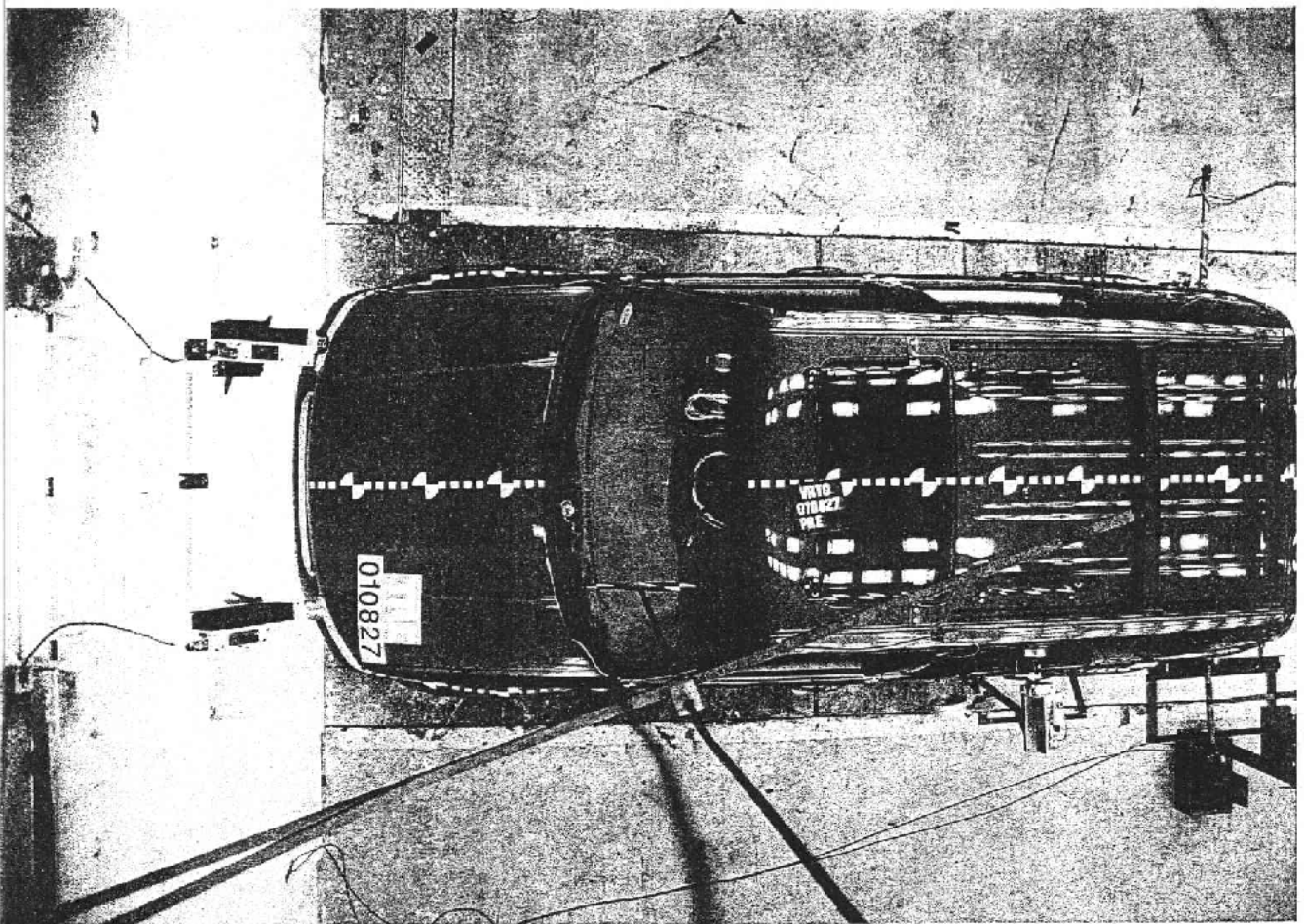


Figure A-17 Pre-Test Overhead View

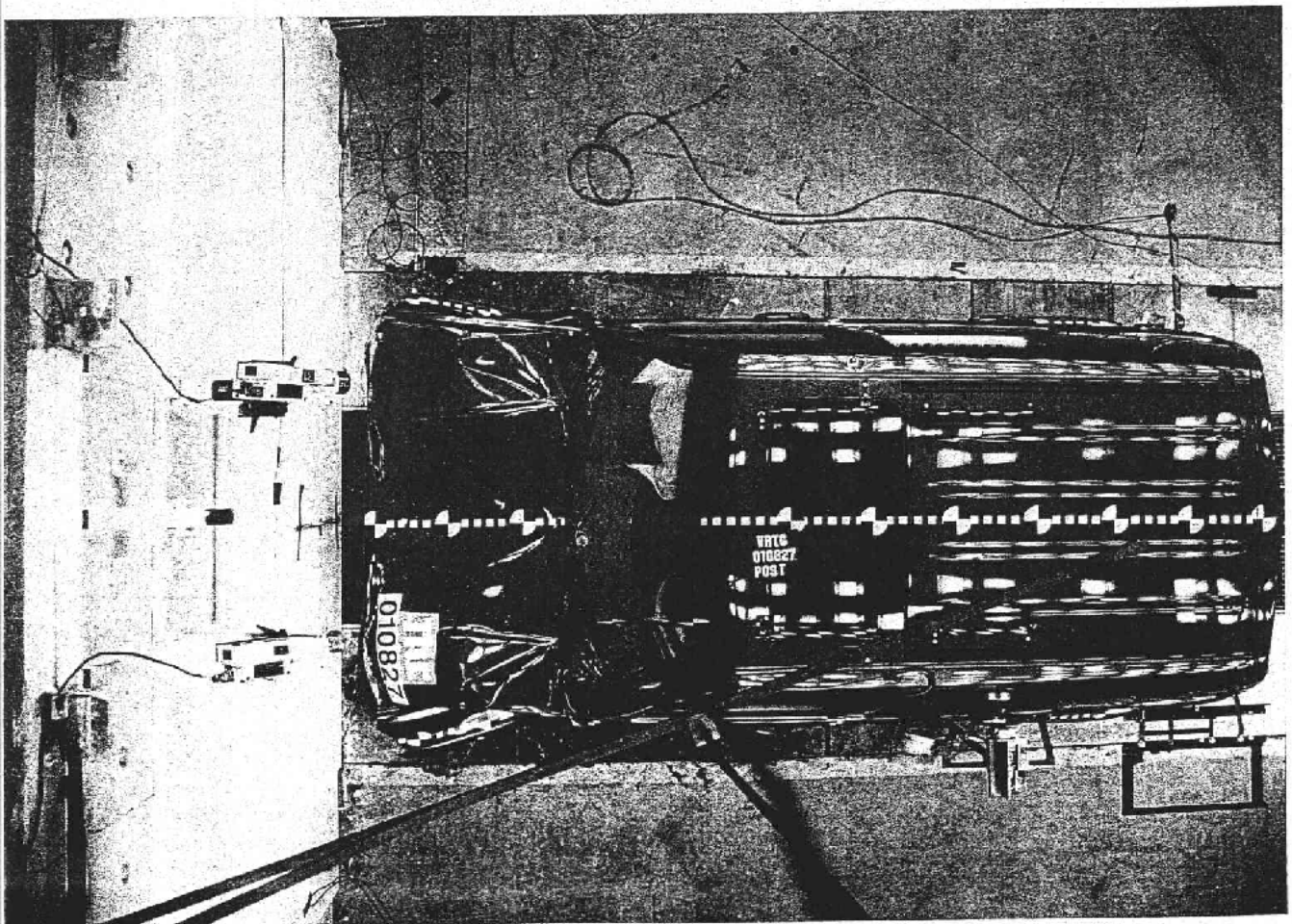


Figure A-18 Post-Test Overhead View

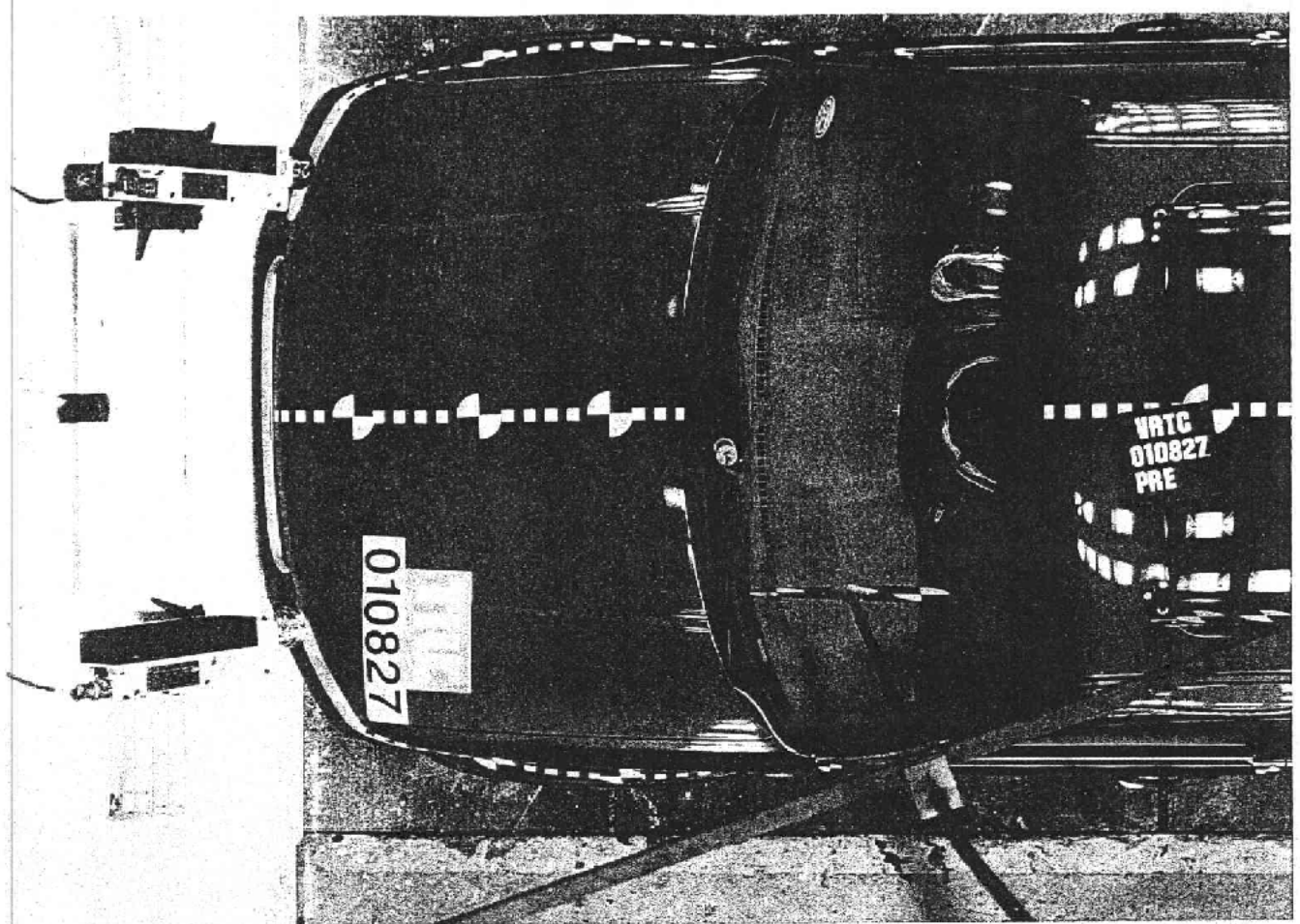


Figure A-19 Pre-Test Overhead Close-up View

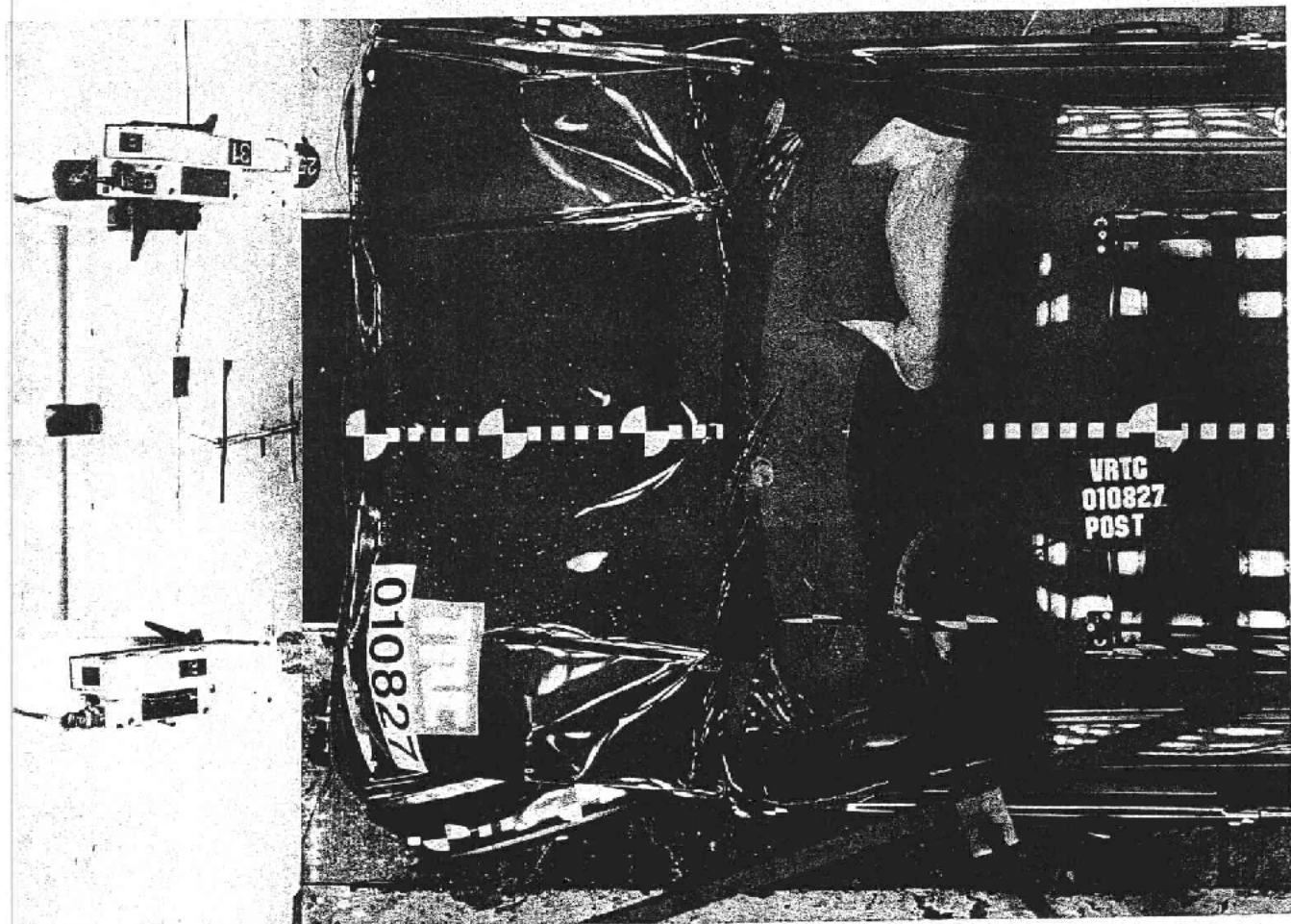


Figure A-20 Post-Test Overhead Close-up View

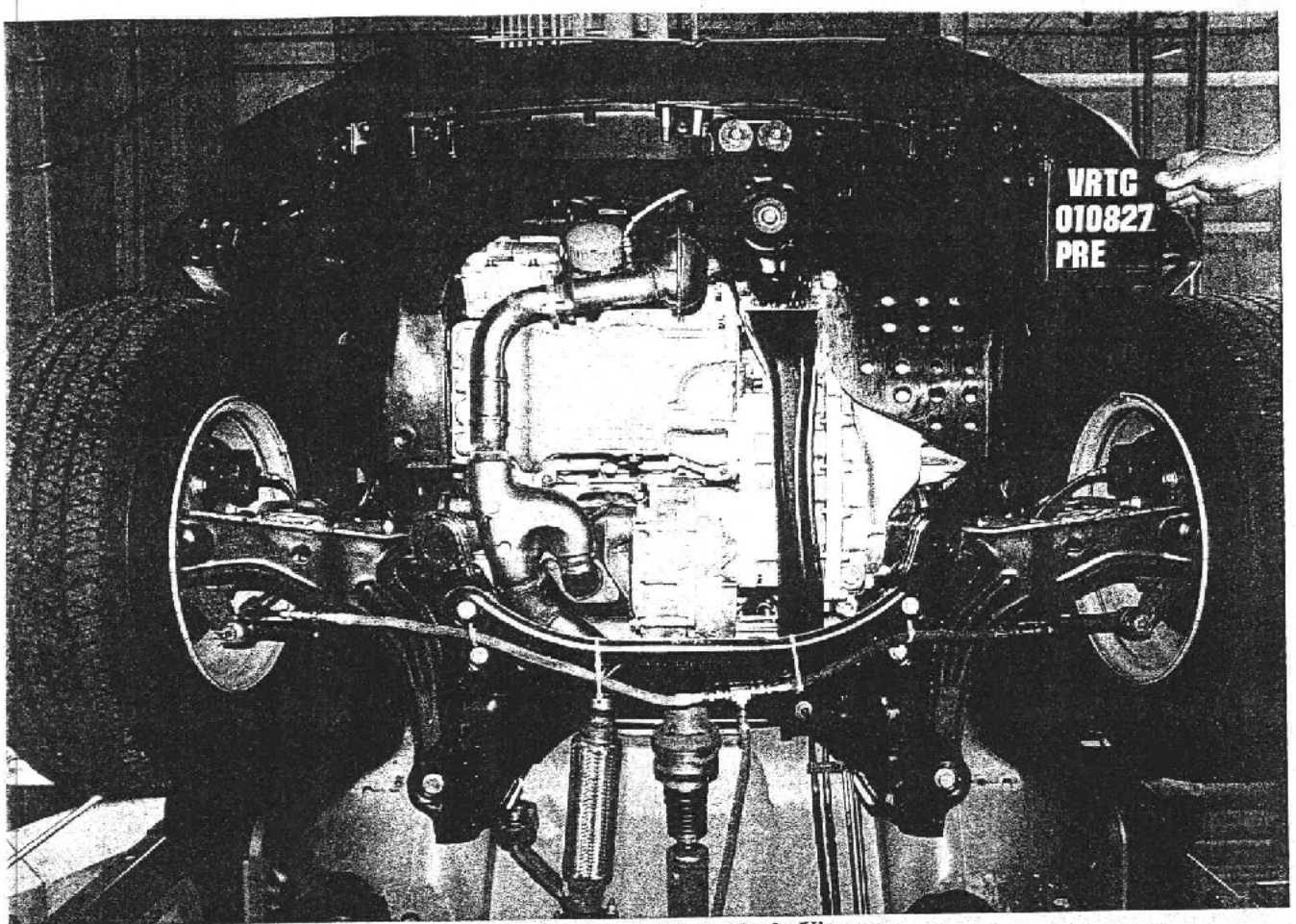
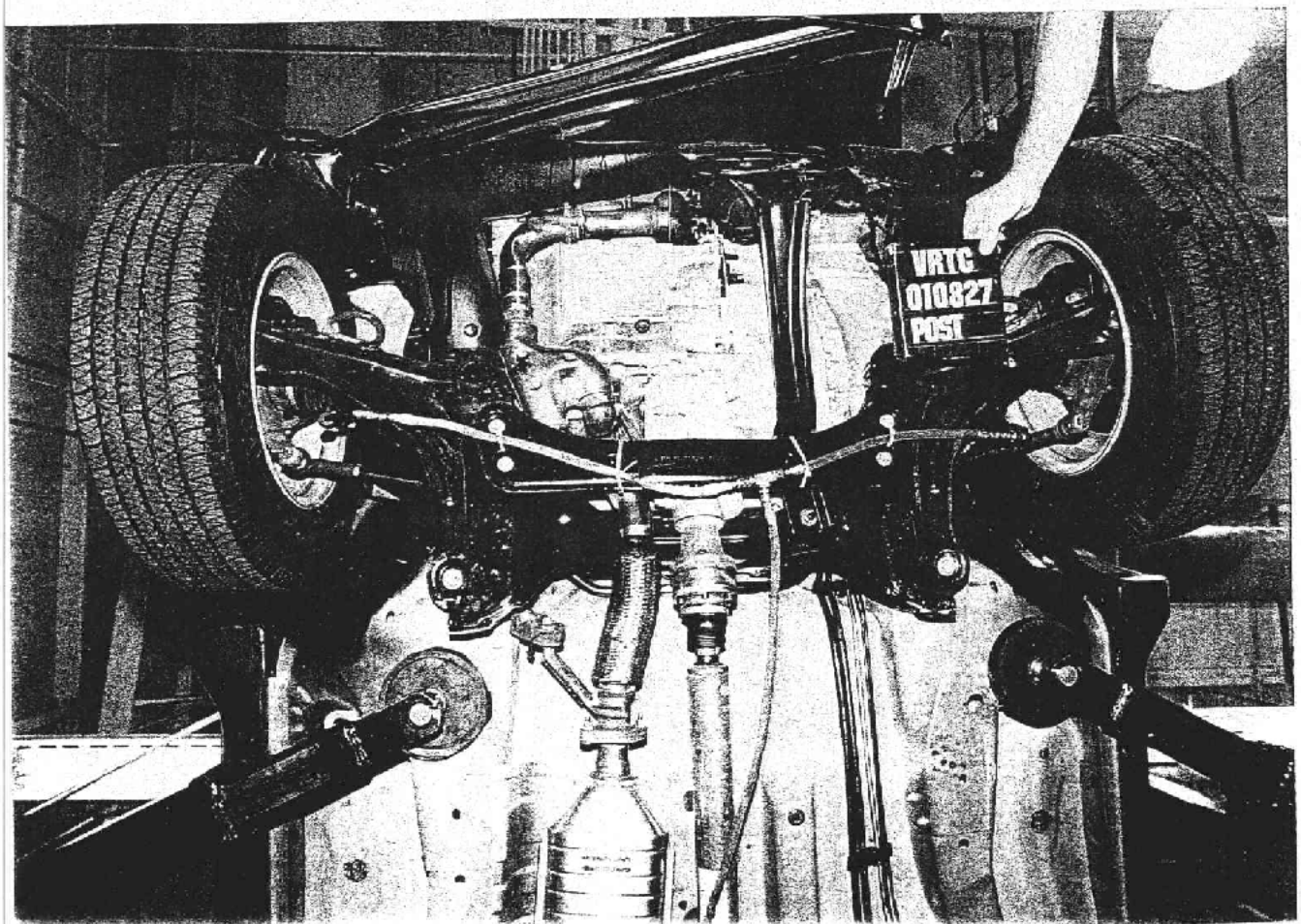


Figure A-21 Pre-Test Front Underbody View



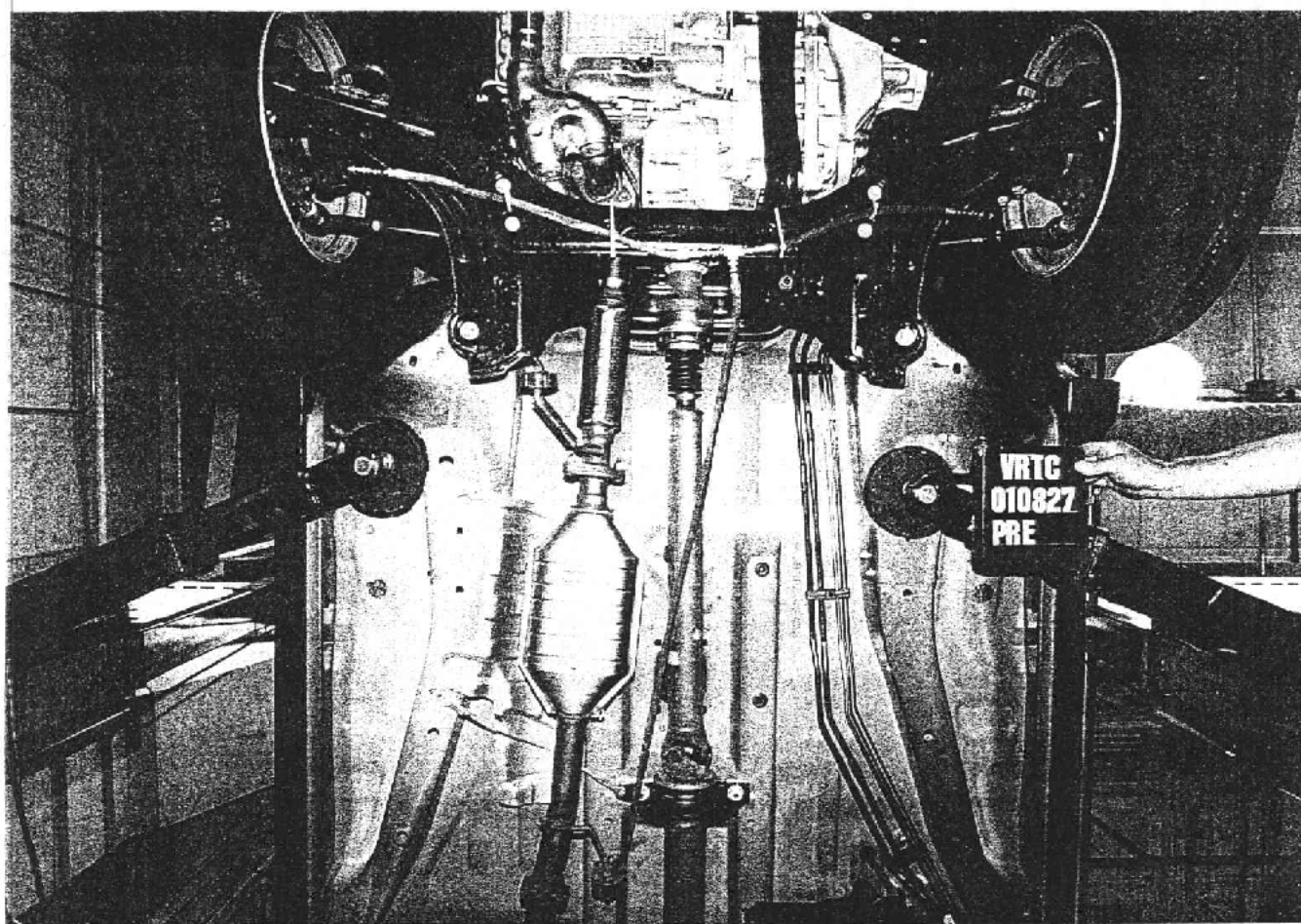


Figure A-23 Pre-Test Front Mid Underbody View

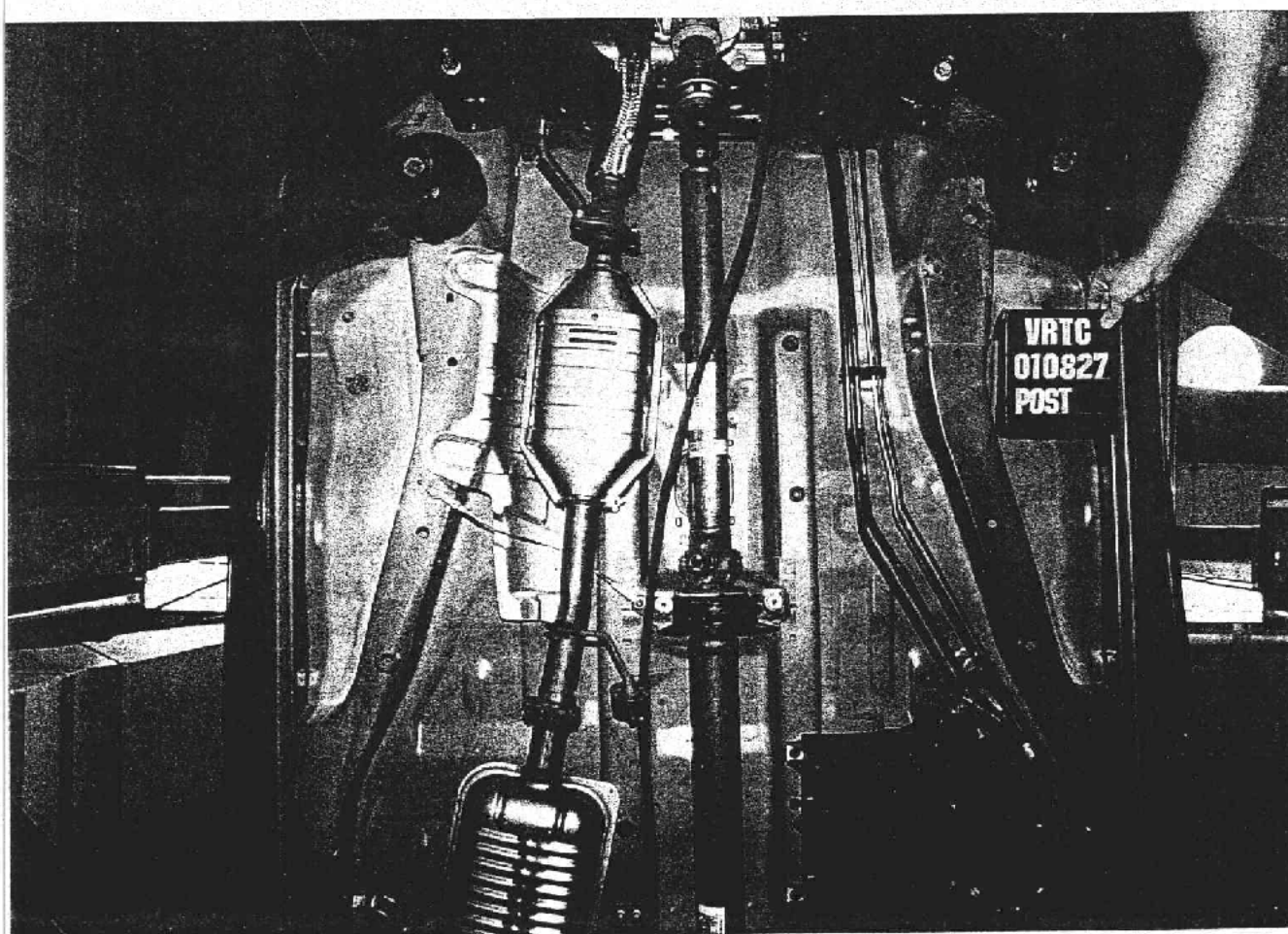


Figure A-24 Post-Test Front Mid Underbody View

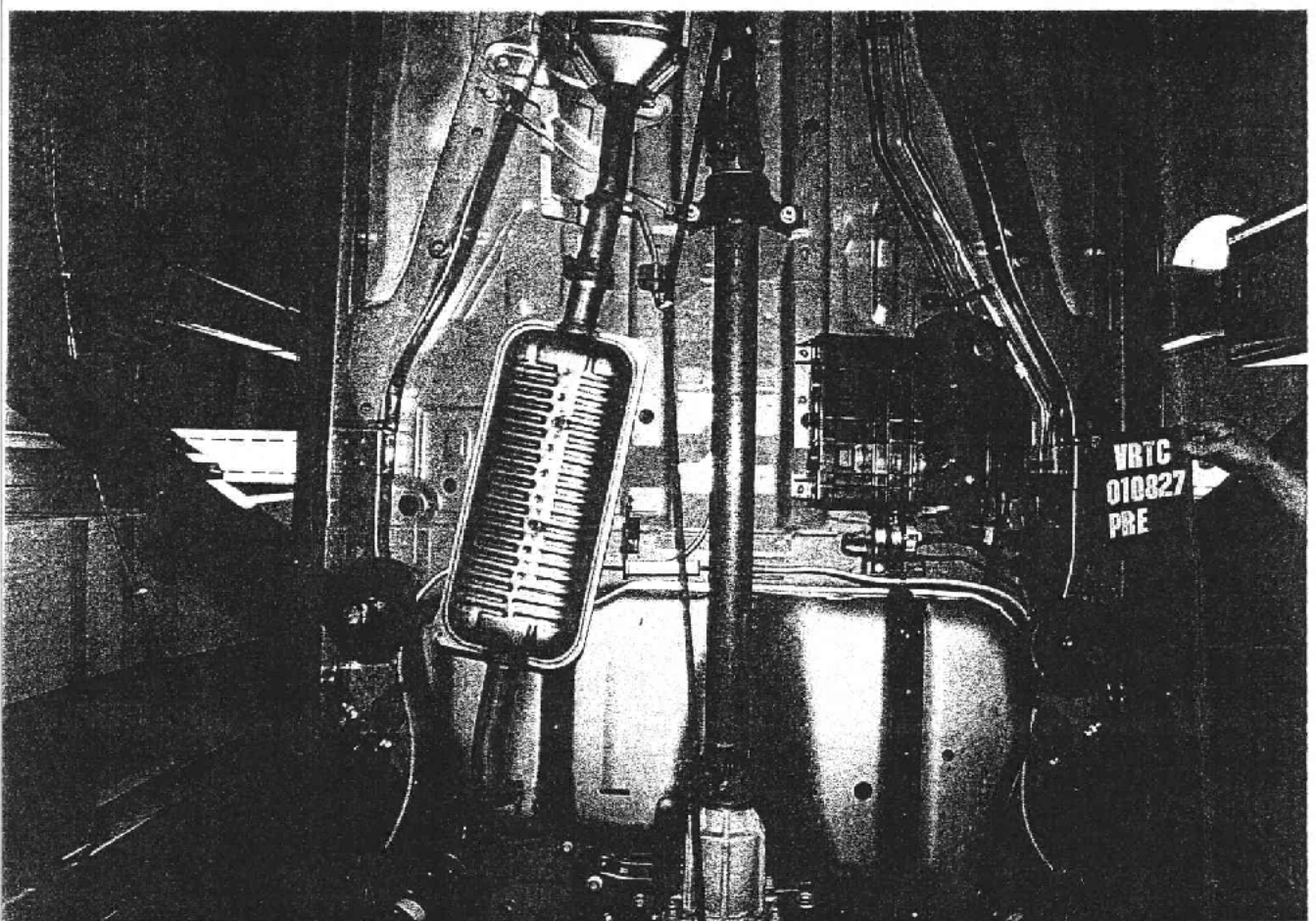


Figure A-25 Pre-Test Rear Mid Underbody View

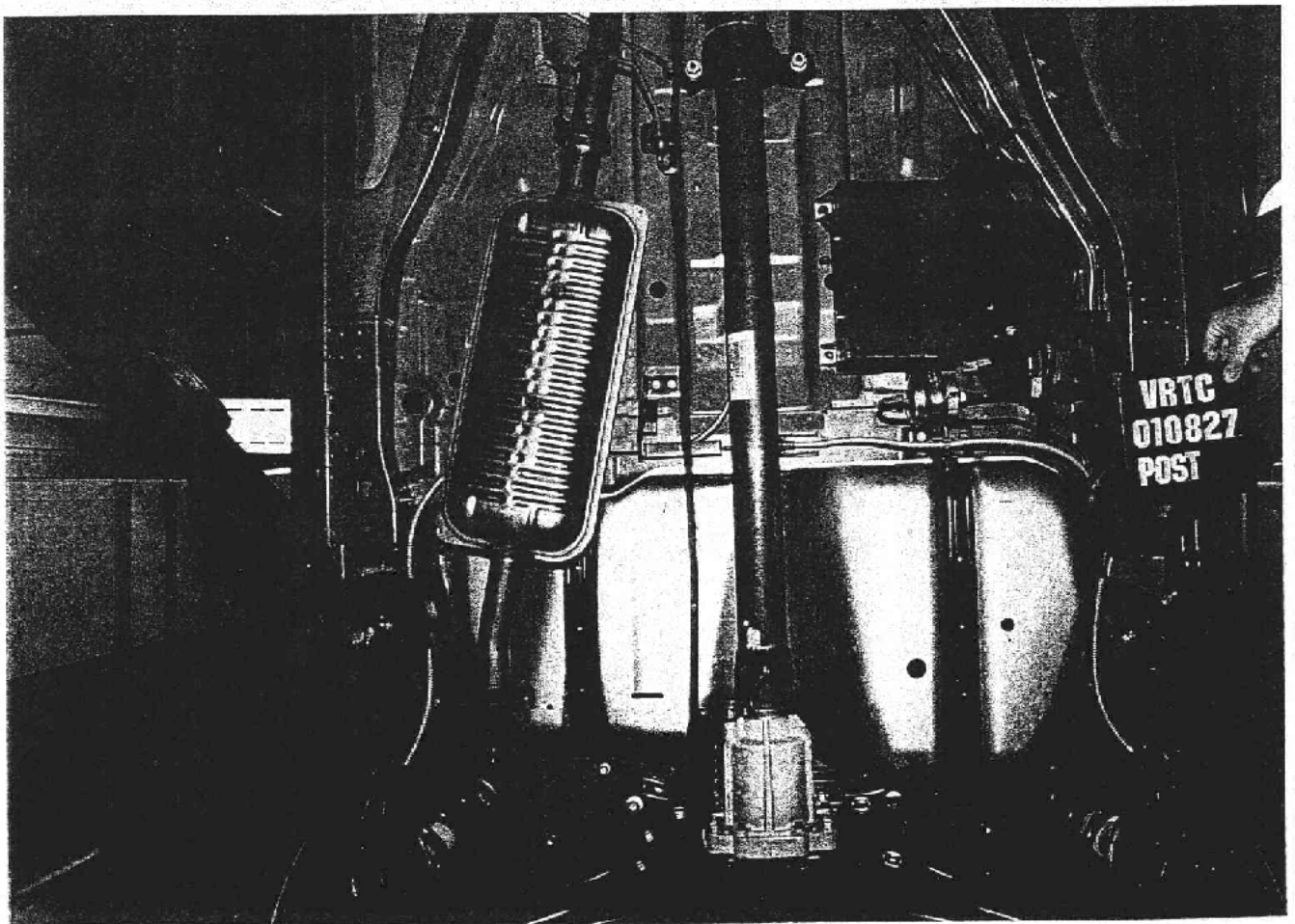


Figure A-26 Post-Test Rear Mid Underbody View

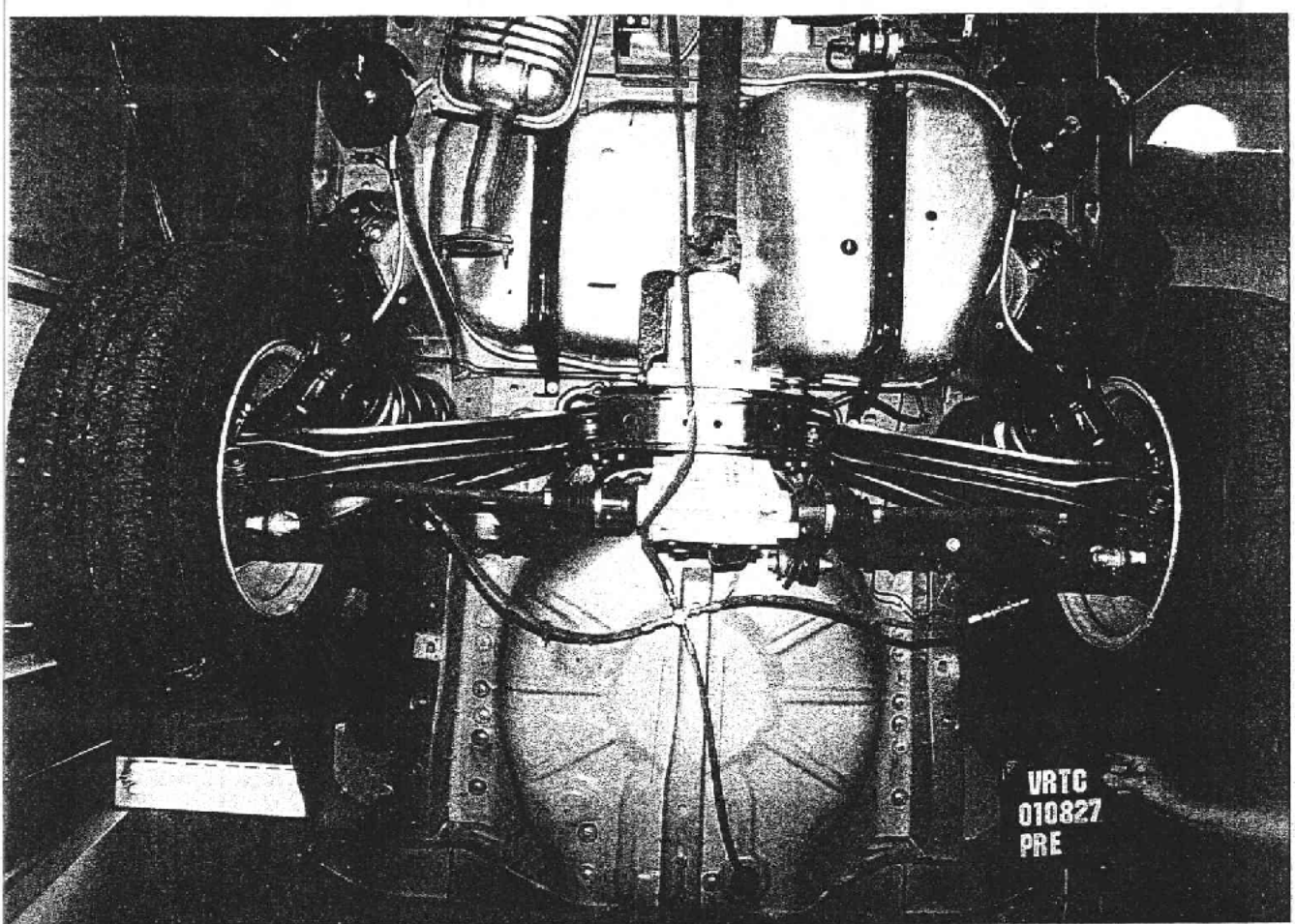


Figure A-27 Pre-Test Rear Underbody View

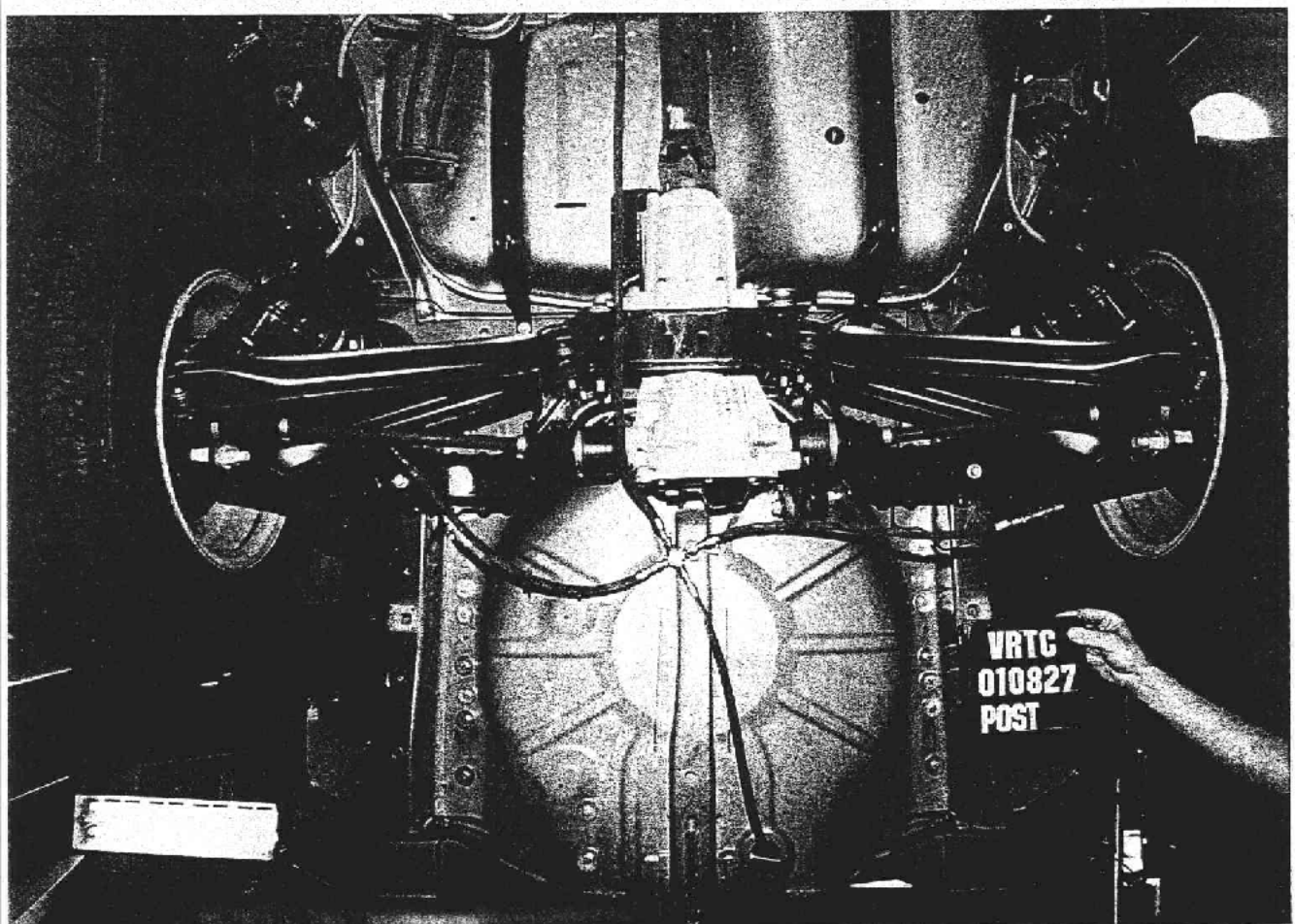


Figure A-28 Post-Test Rear Underbody View

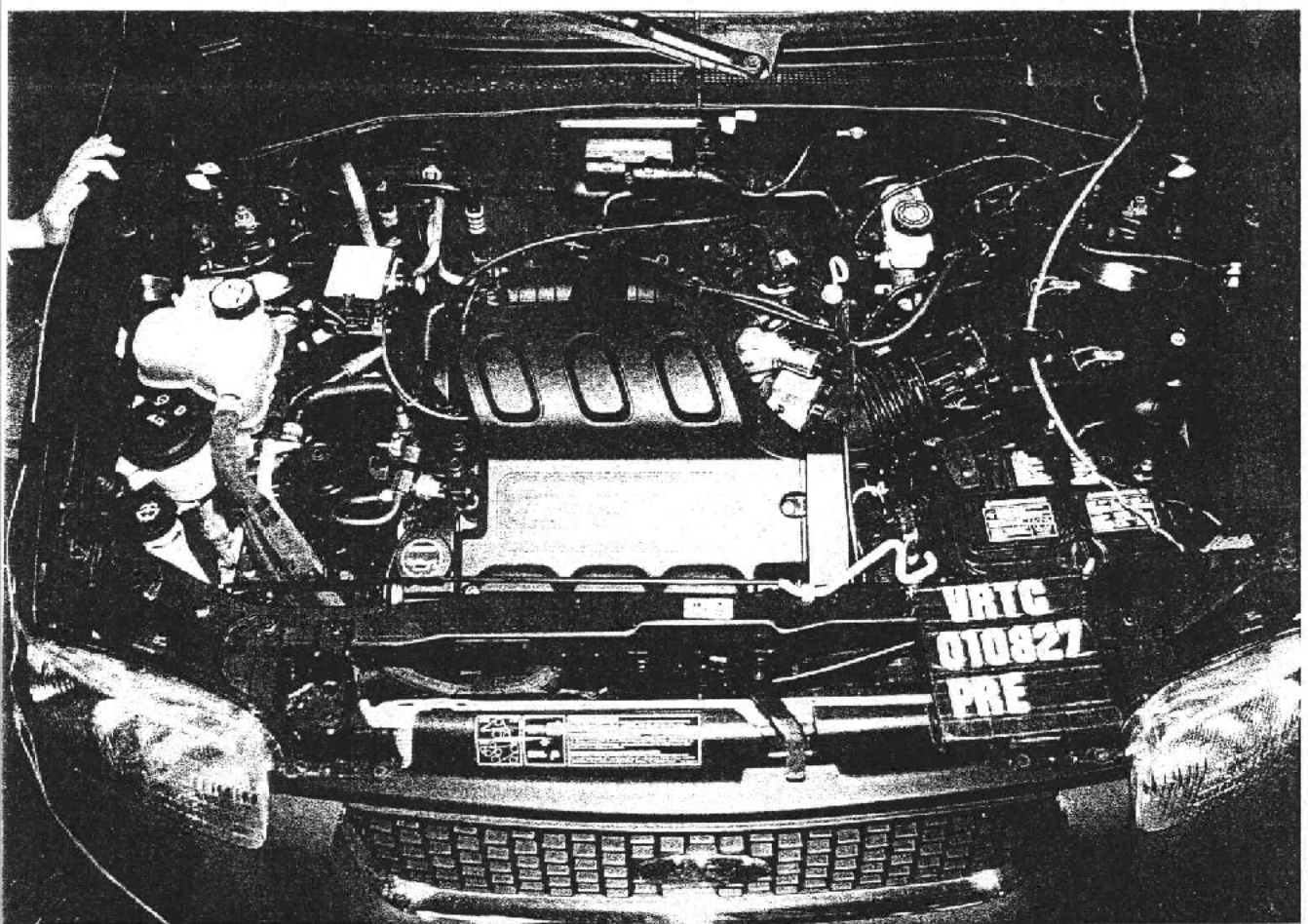


Figure A-29 Pre-Test Engine Compartment View

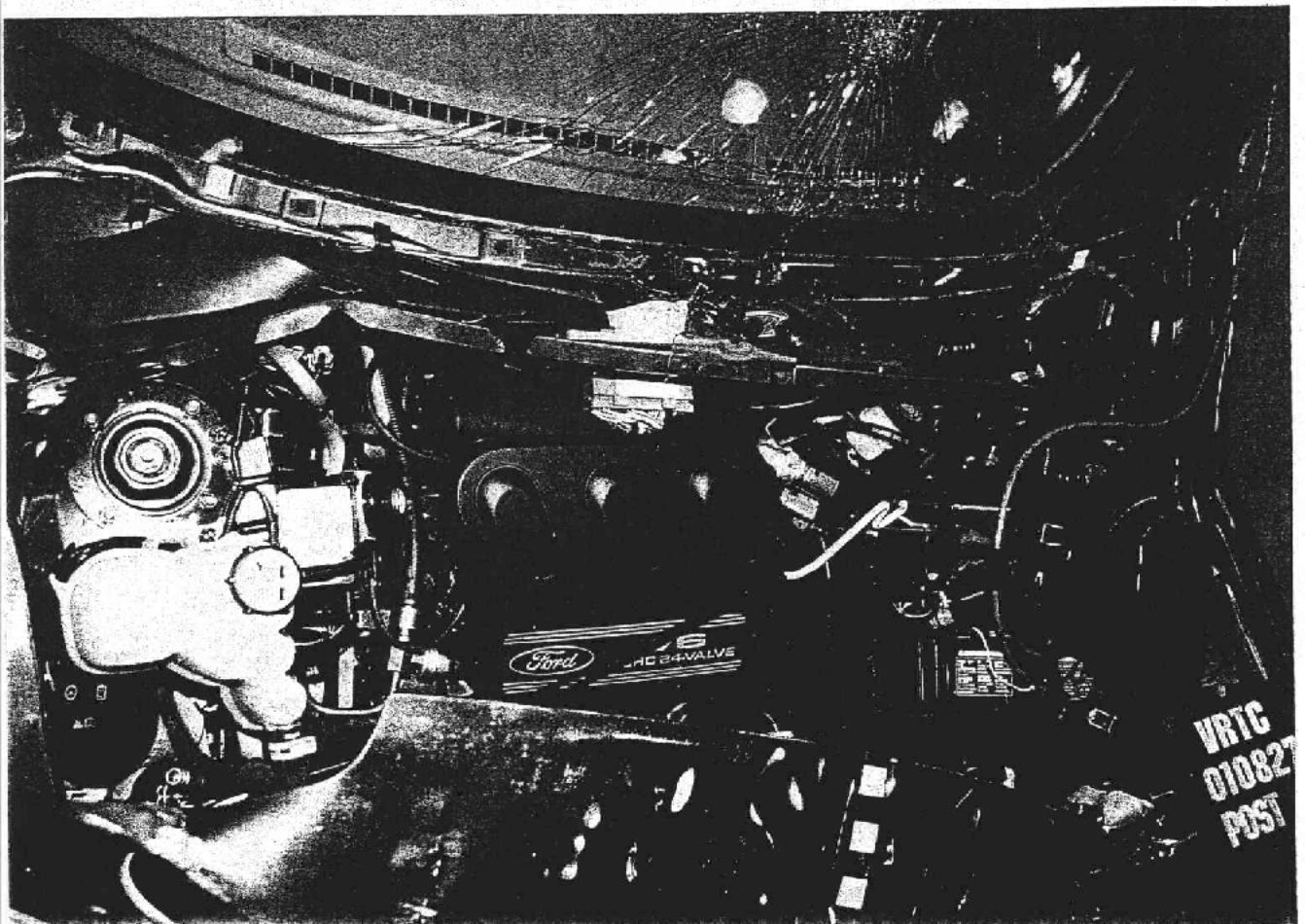


Figure A-30 Post-Test Engine Compartment View

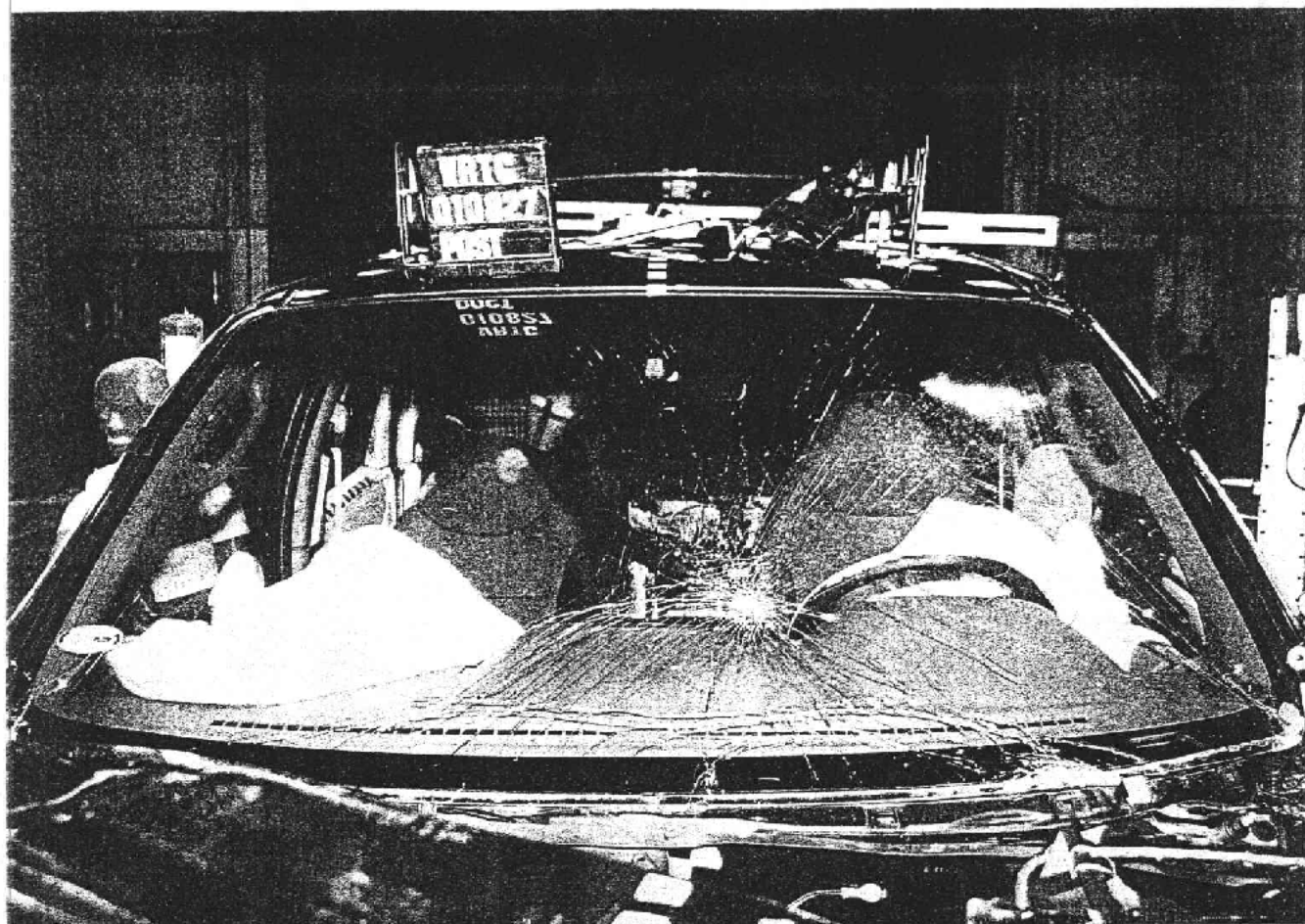


Figure A-31 Post-Test Windshield View

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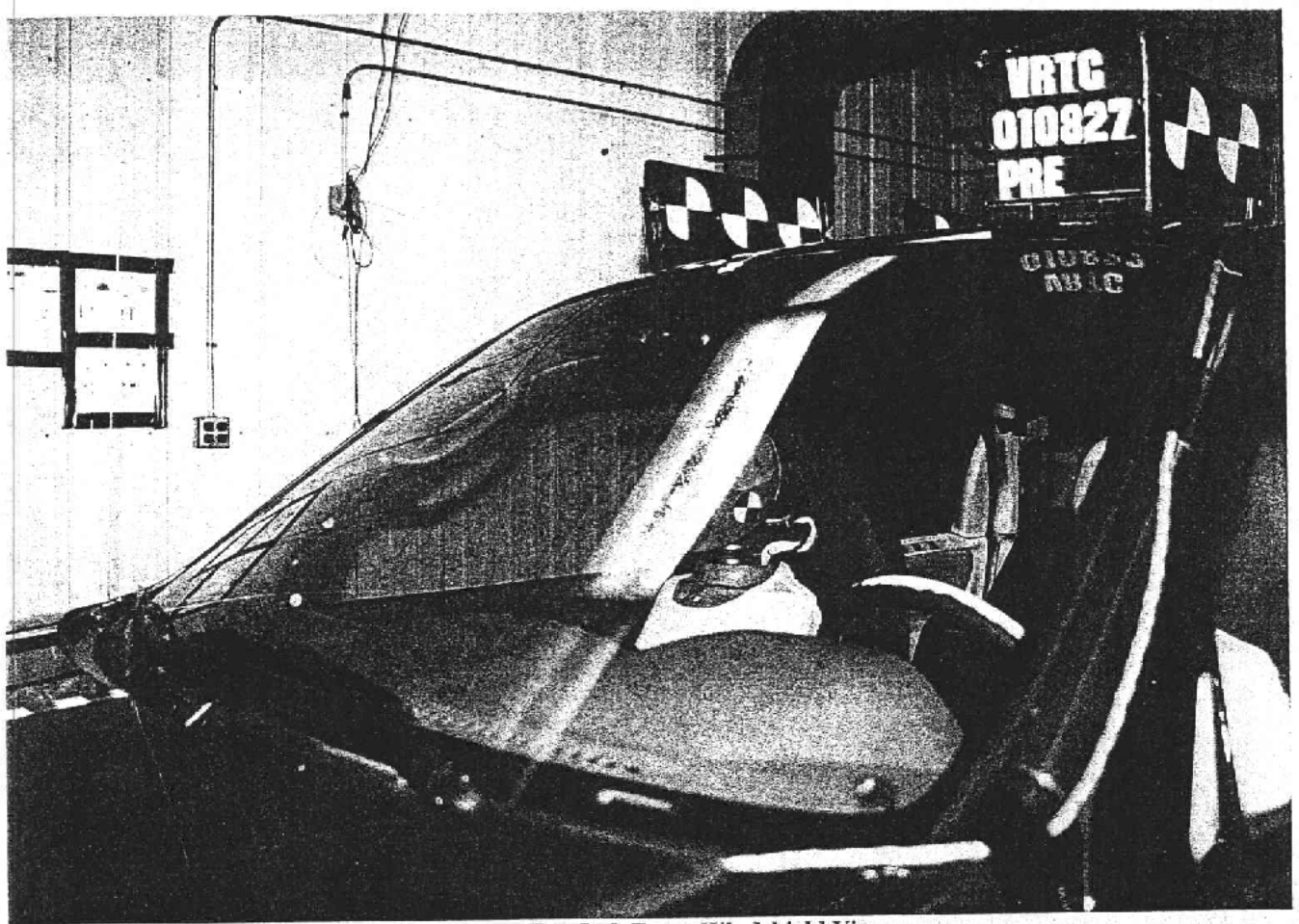
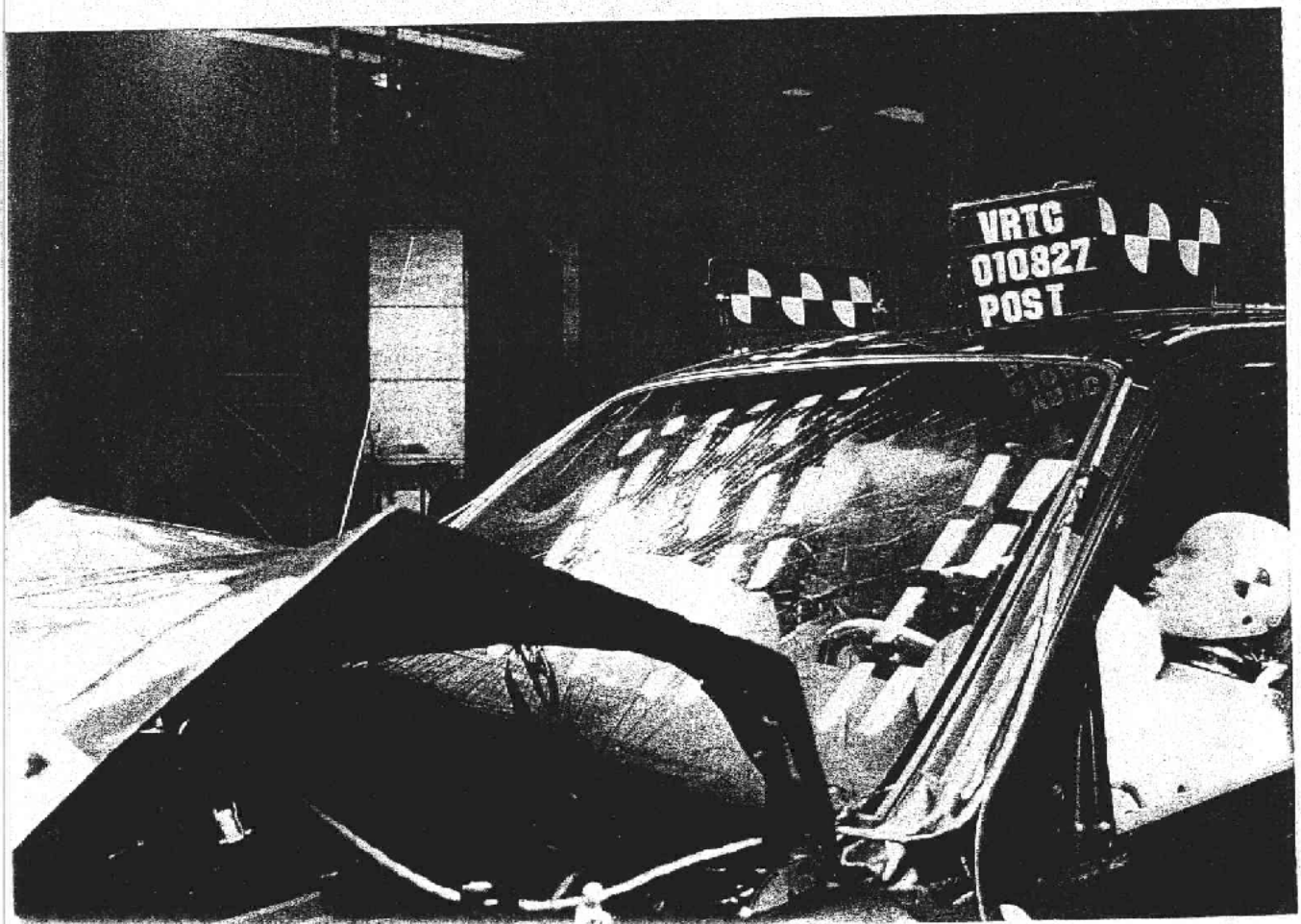


Figure A-32 Pre-Test Left Front Windshield View



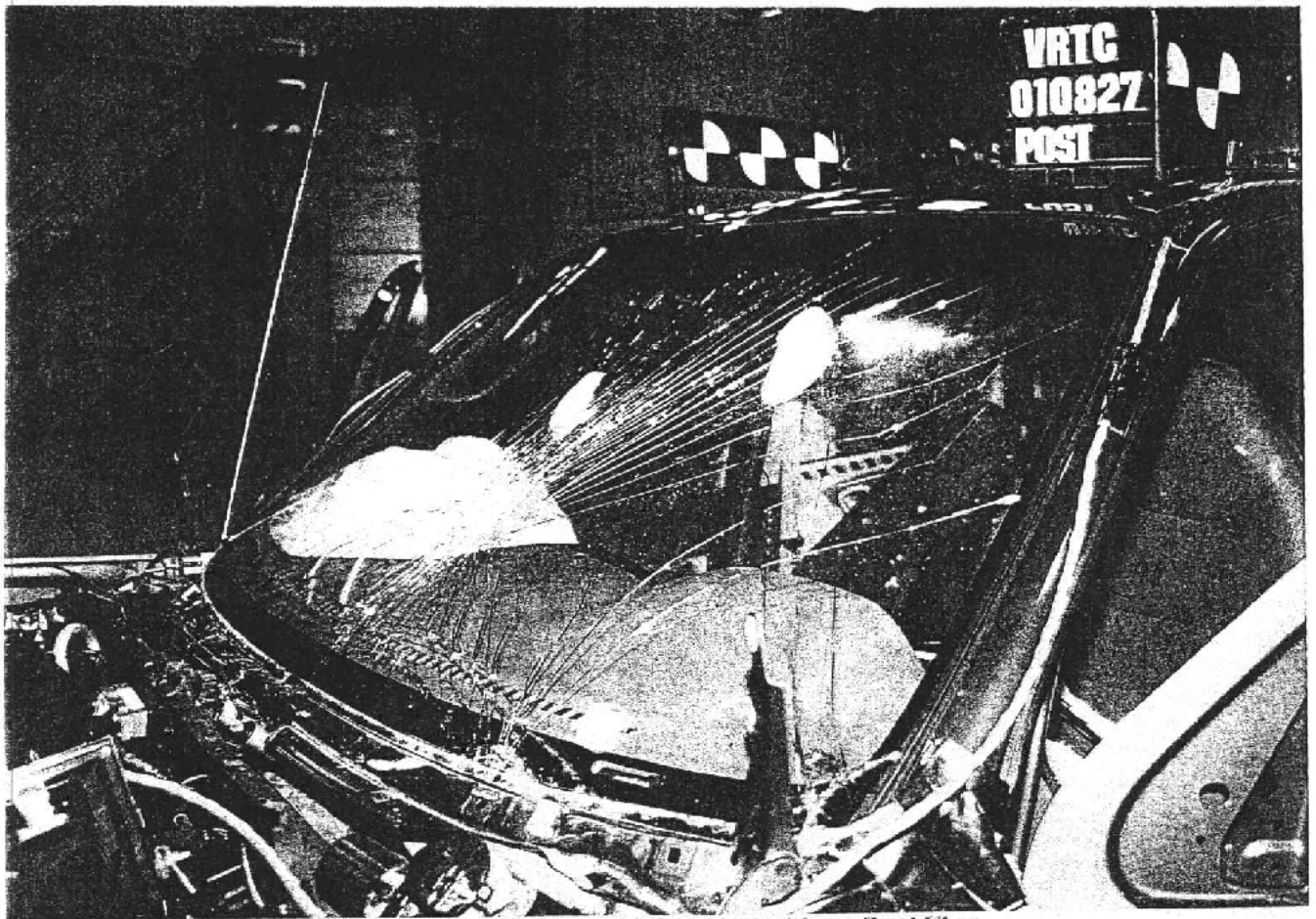


Figure A-34 Post-Test Left Front Windshield without Cowl View

Intentionally Left Blank

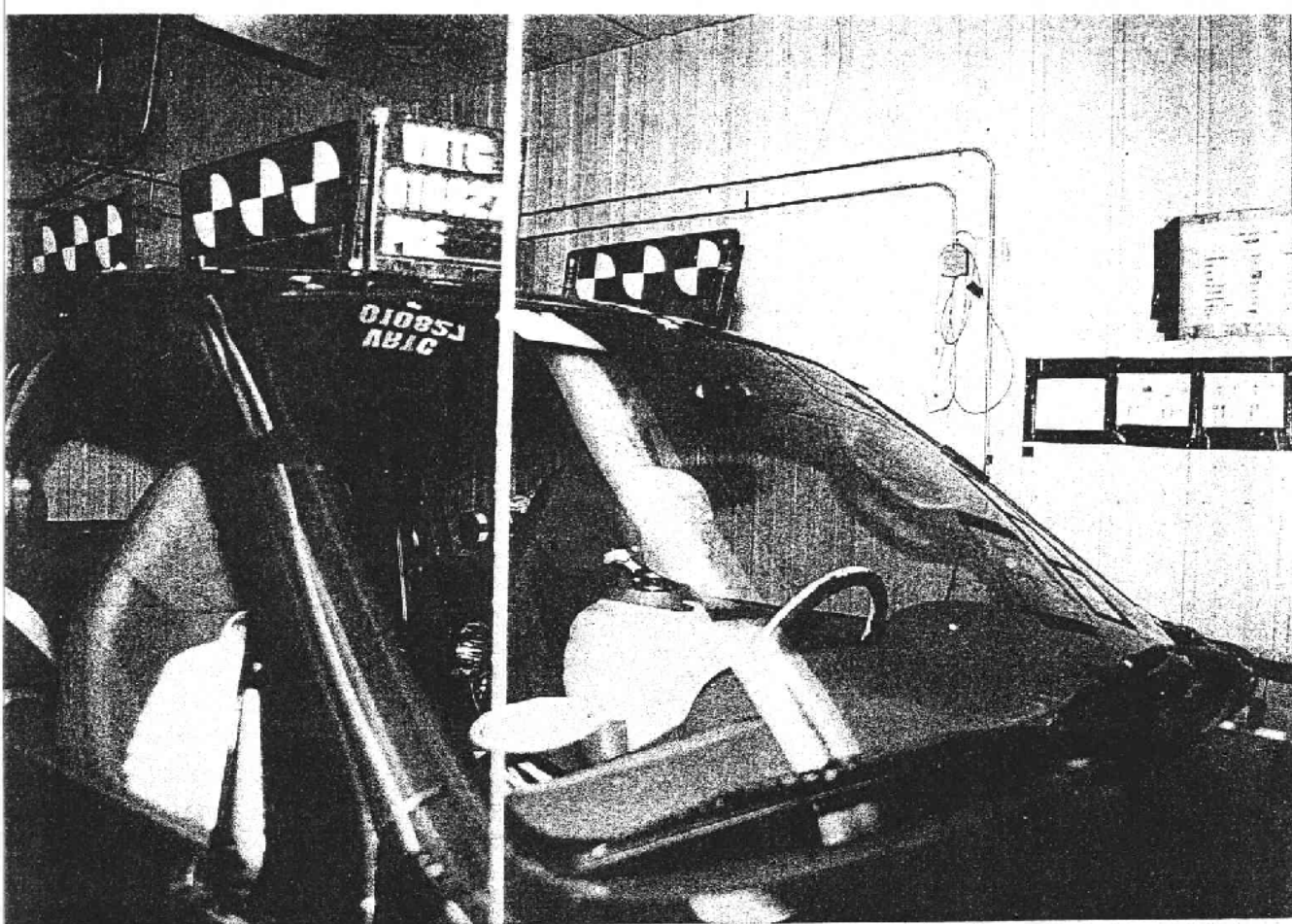


Figure A-35 Pre-Test Right Front Windshield View



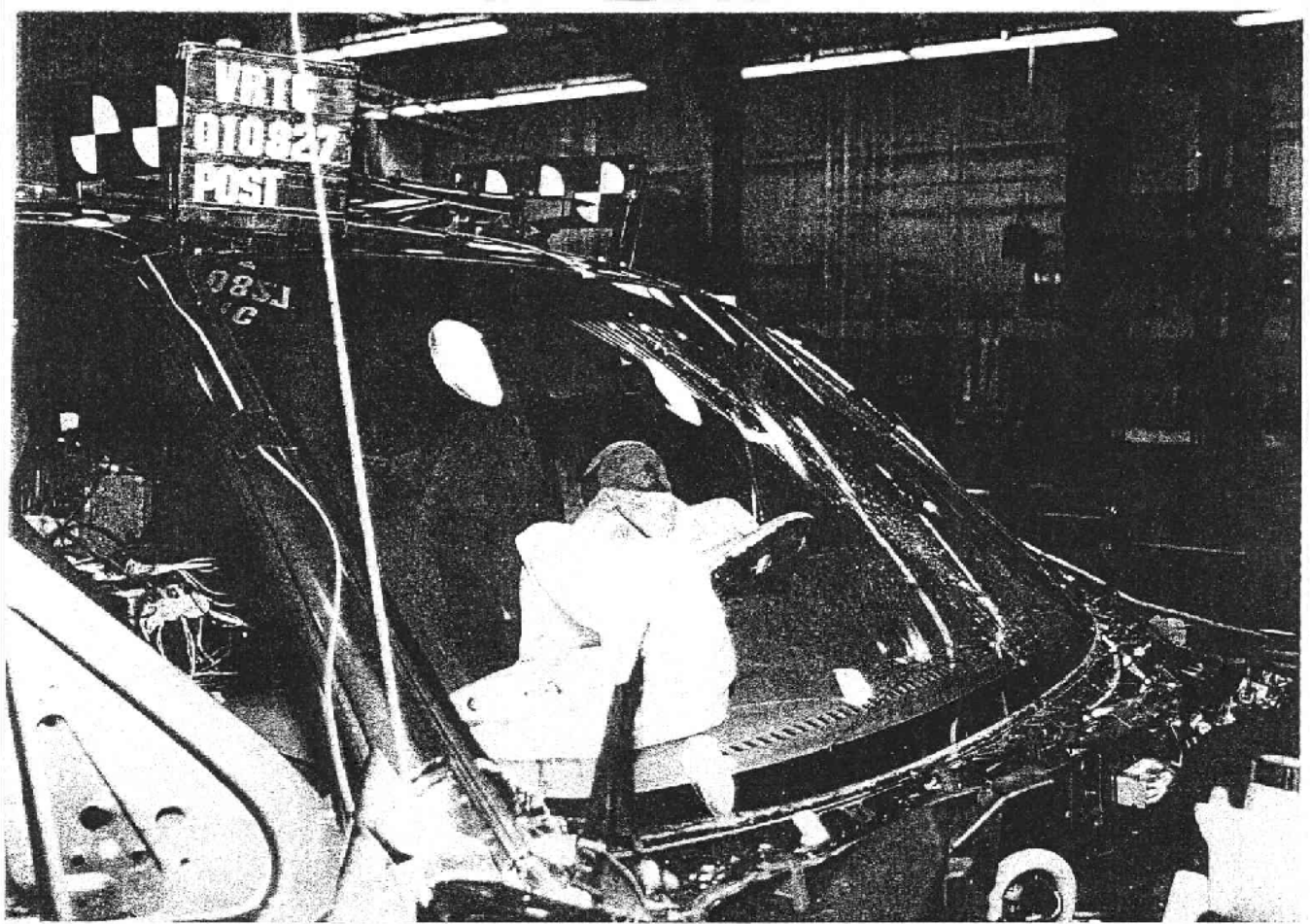


Figure A-37 Post-Test Right Front Windshield without Cowl View

Intentionally Left Blank

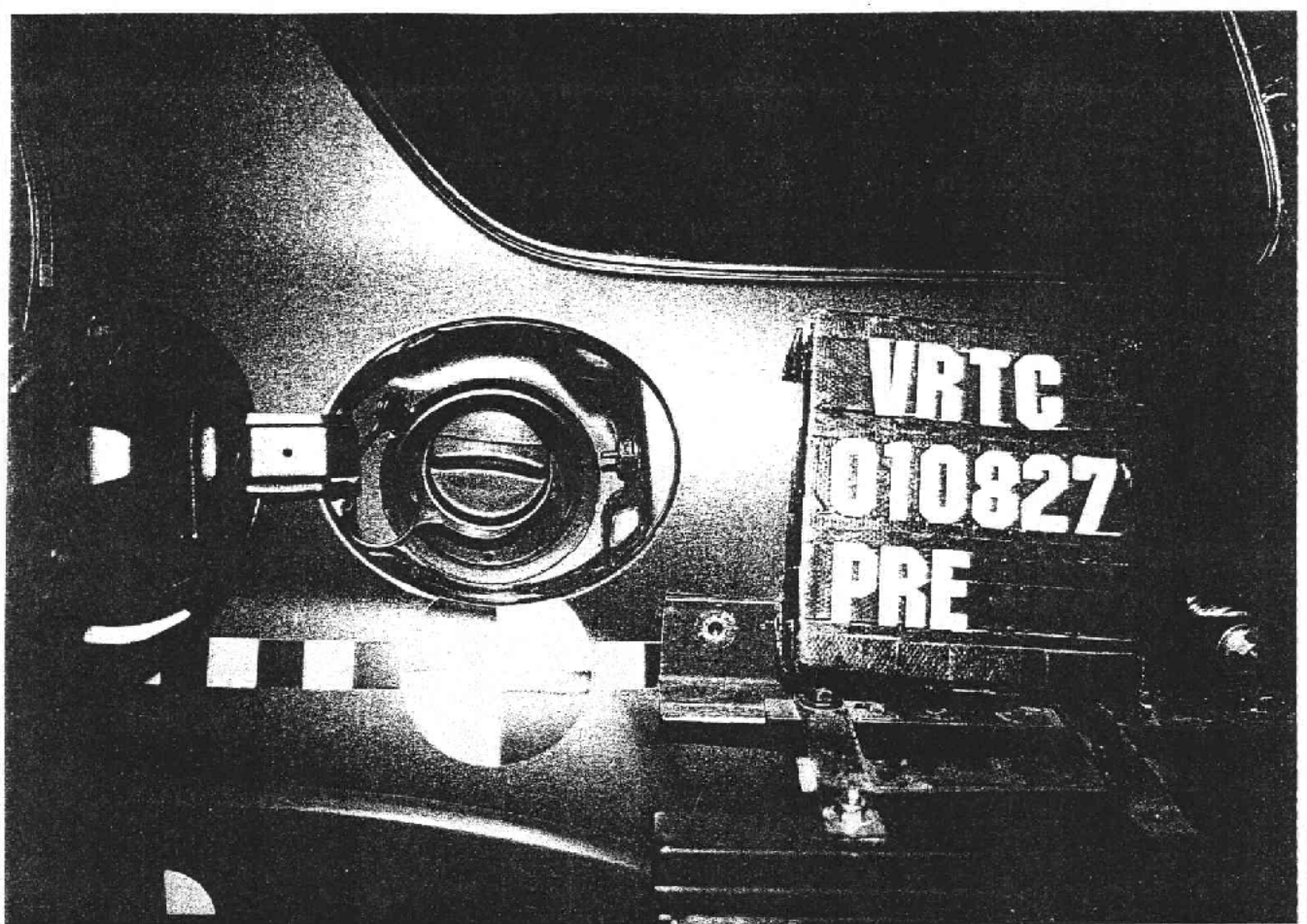
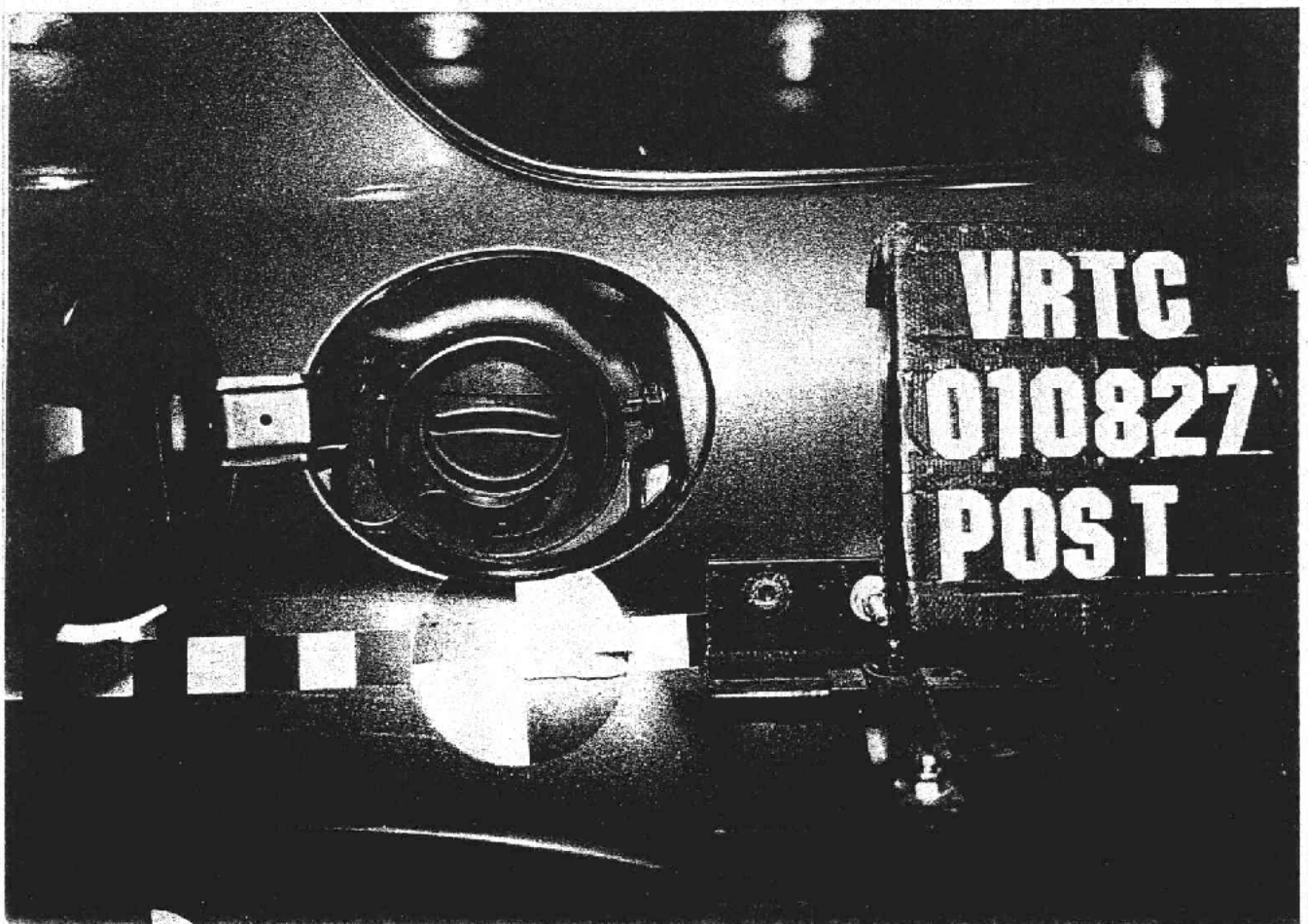


Figure A-38 Pre-Test Fuel Filler Cap View



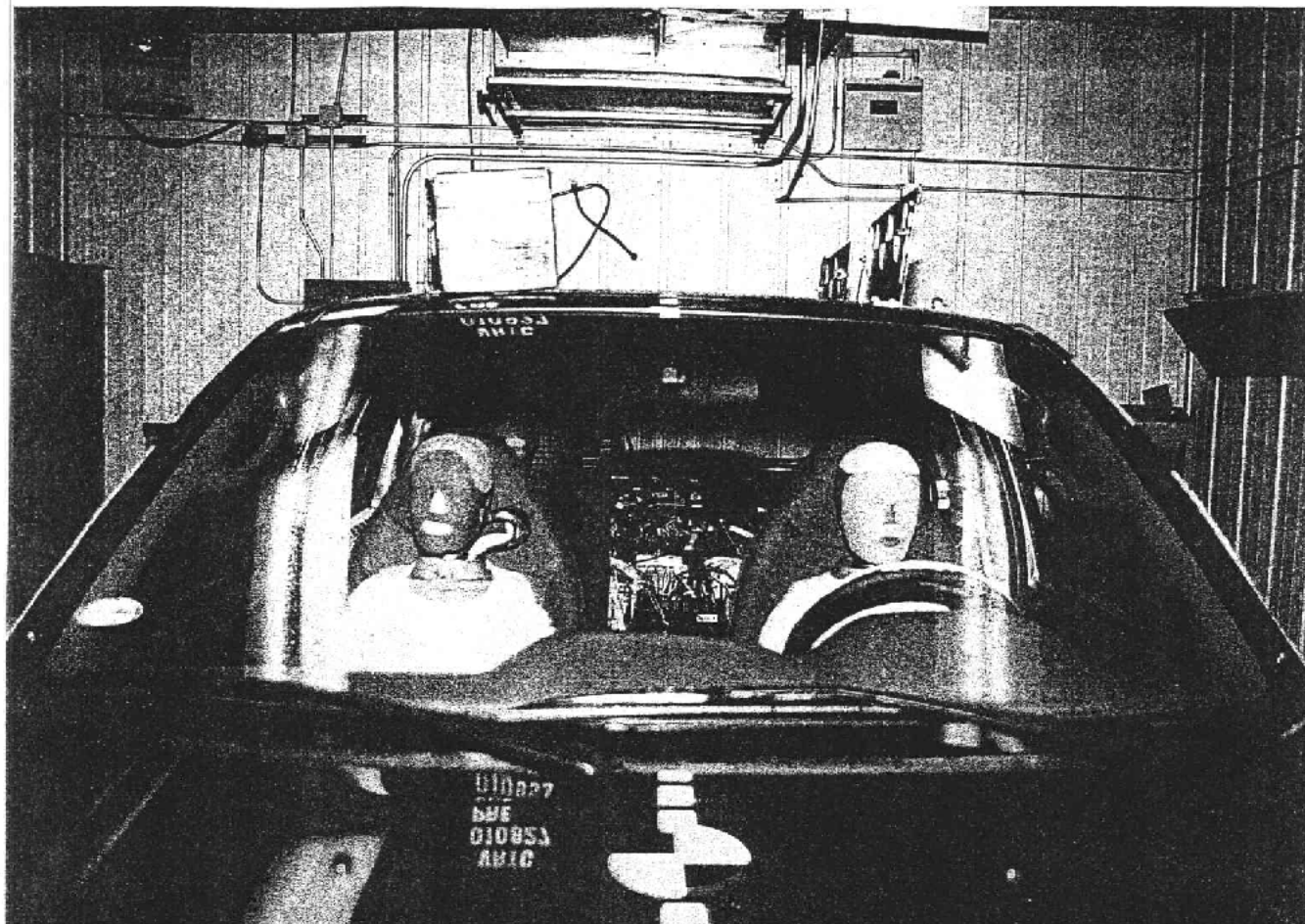


Figure A-40 Pre-Test Driver and Passenger Dummies Front View

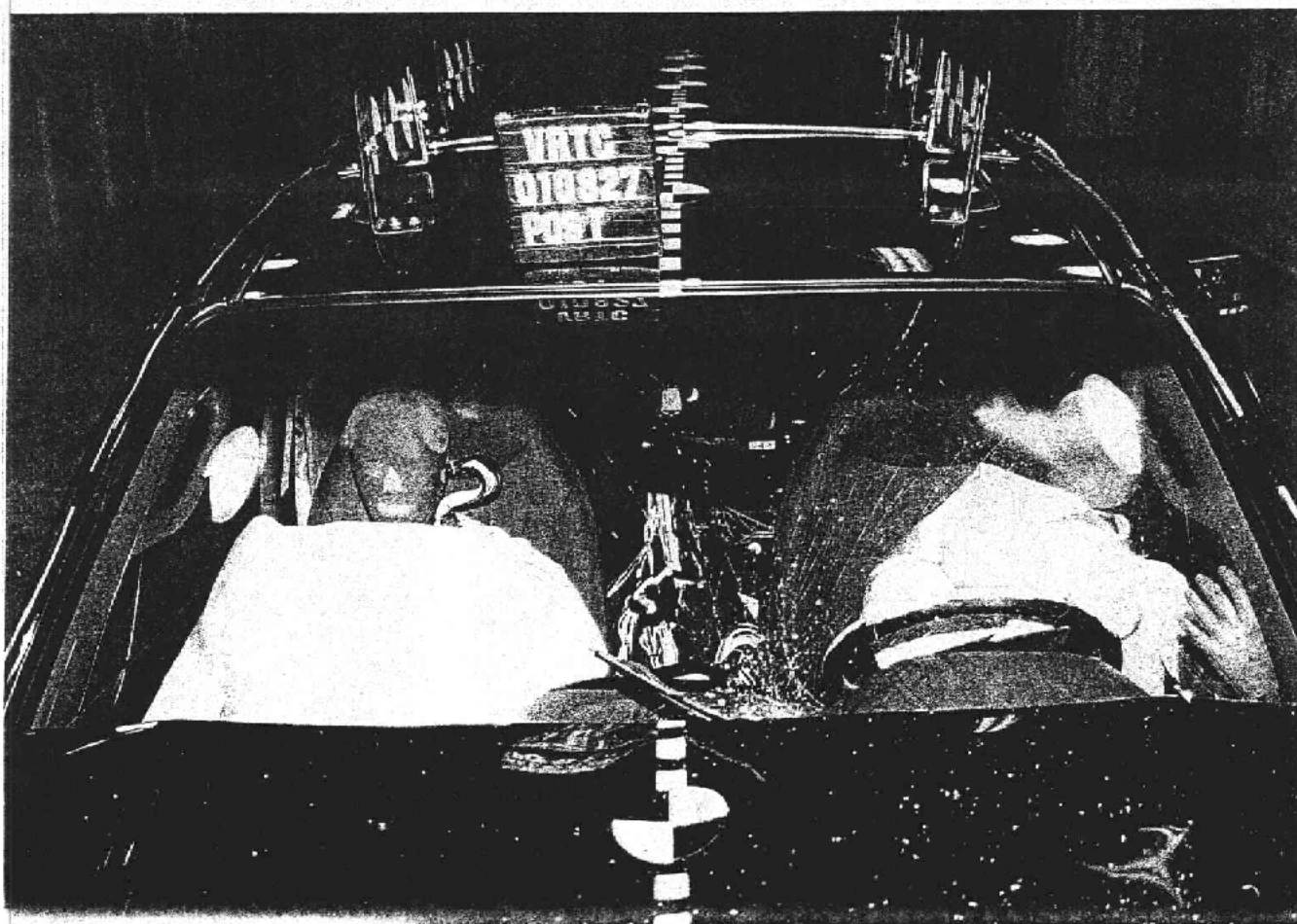


Figure A-41 Post-Test Driver and Passenger Dummies Front View

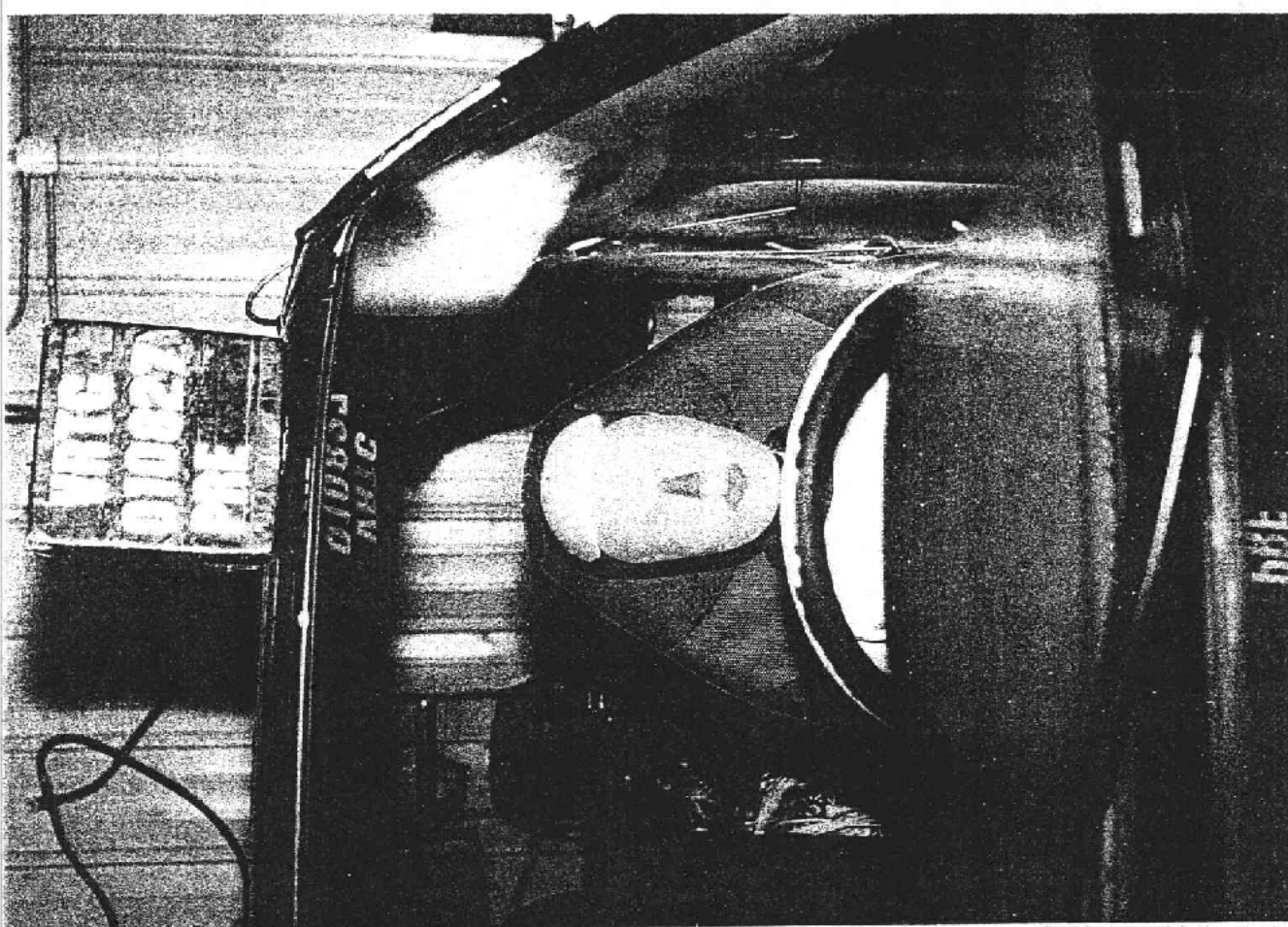


Figure A-42 Pre-Test Driver Dummy Position - View 1

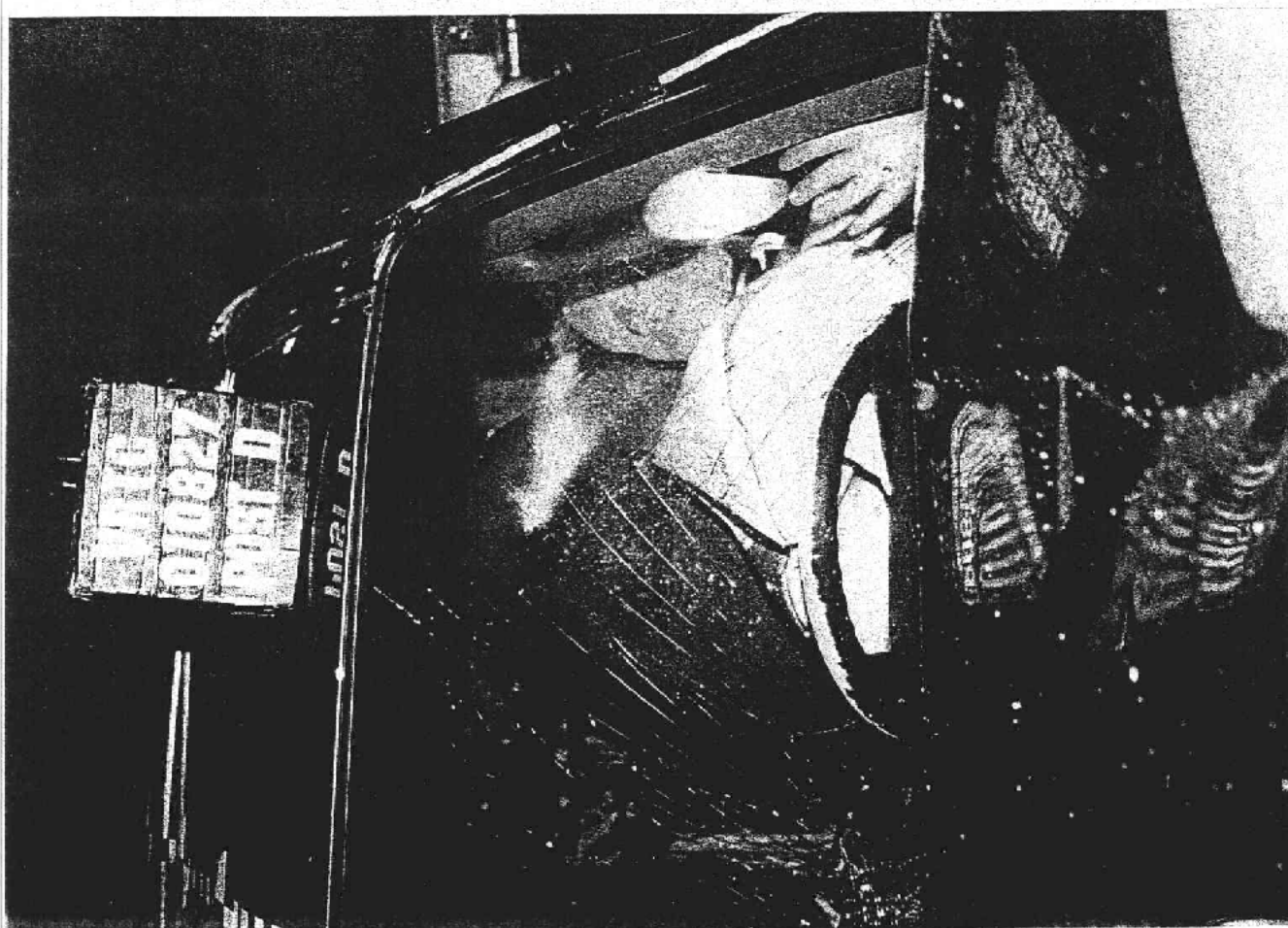


Figure A-43 Post-Test Driver Dummy Position - View 1

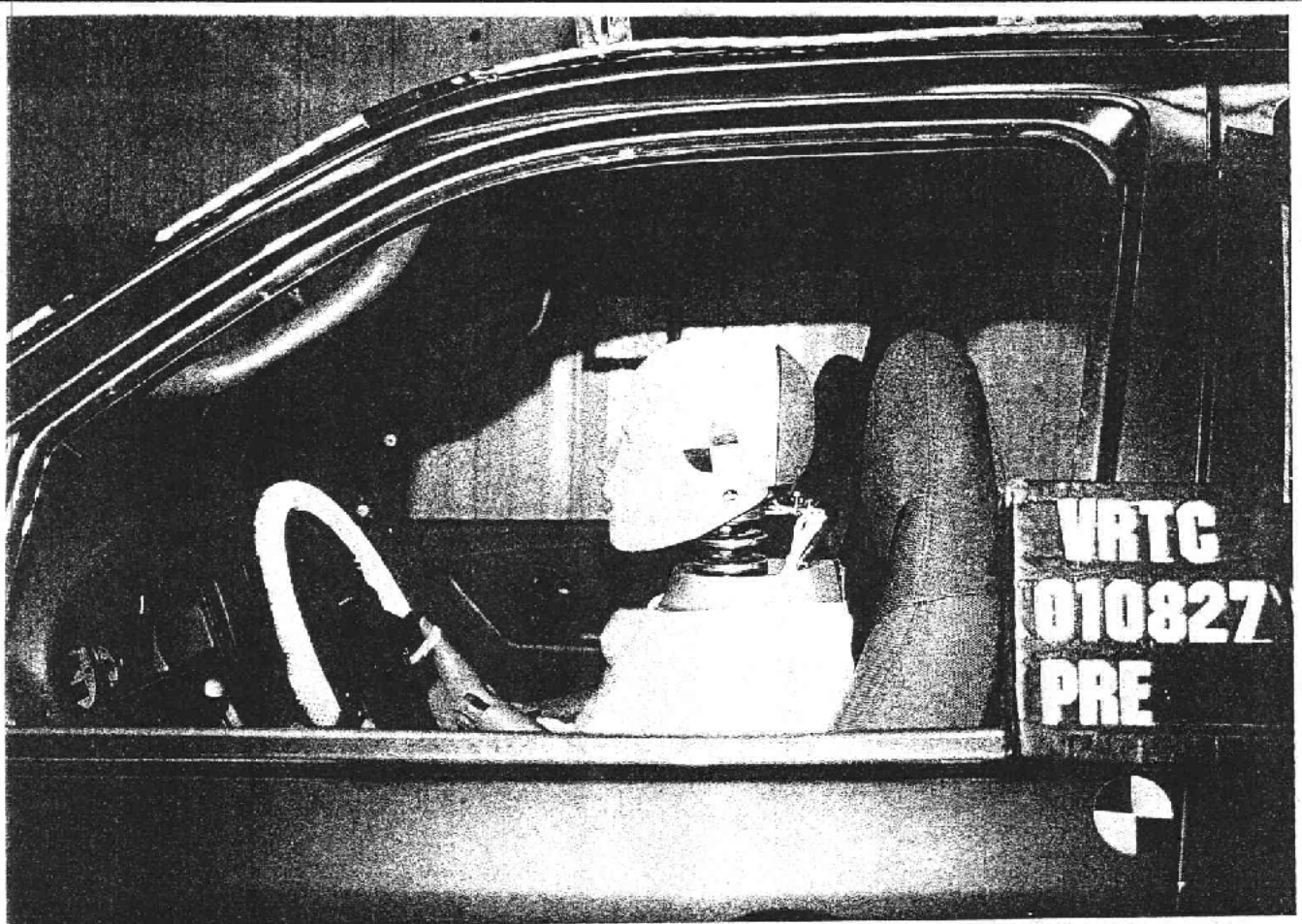


Figure A-44 Pre-Test Driver Dummy Position - View 2

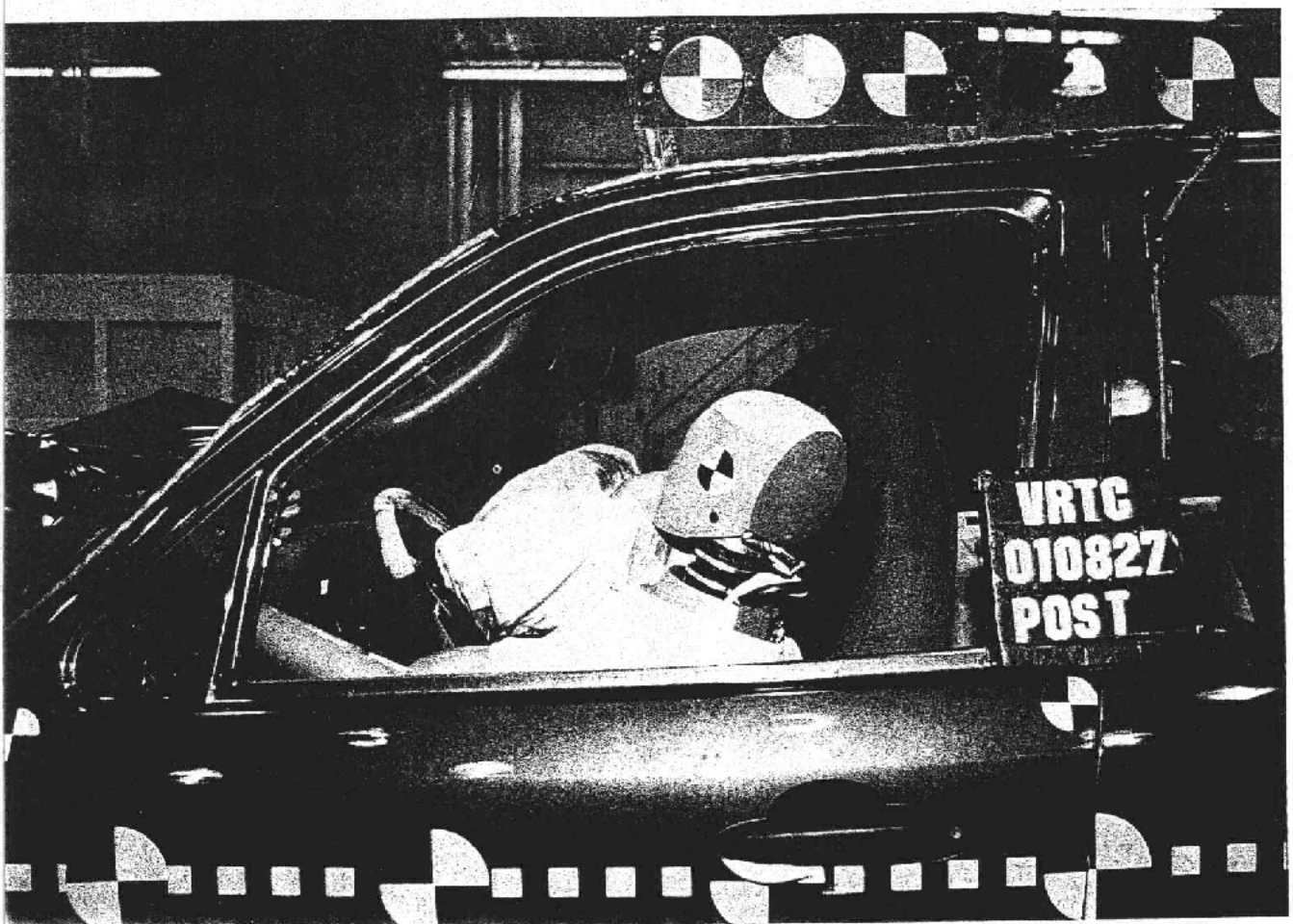




Figure A-46 Pre-Test Driver Dummy & Vehicle Interior - View 1



Figure A-47 Post-Test Driver Dummy & Vehicle Interior - View 1

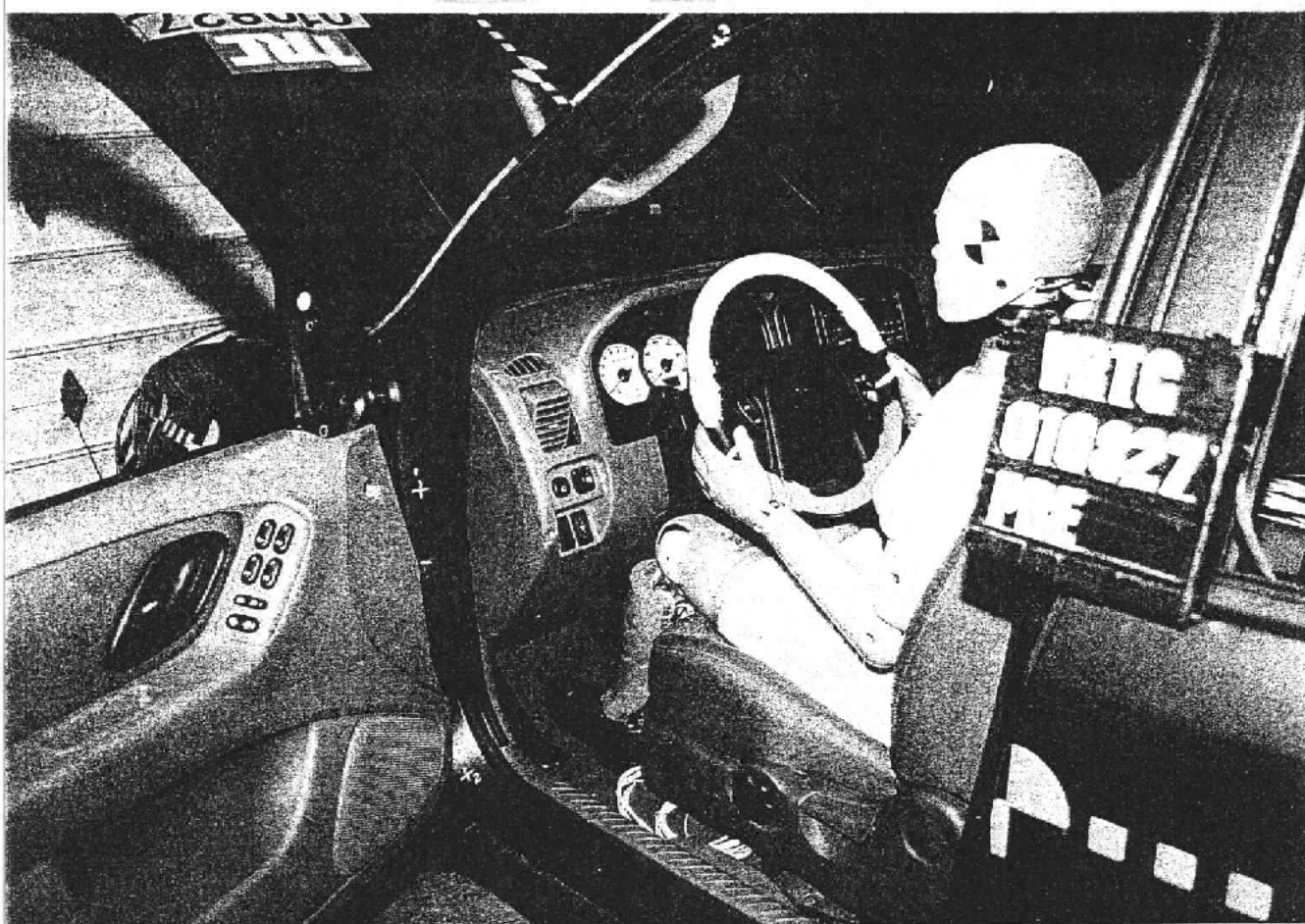


Figure A-48 Pre-Test Driver Dummy & Vehicle Interior - View 2

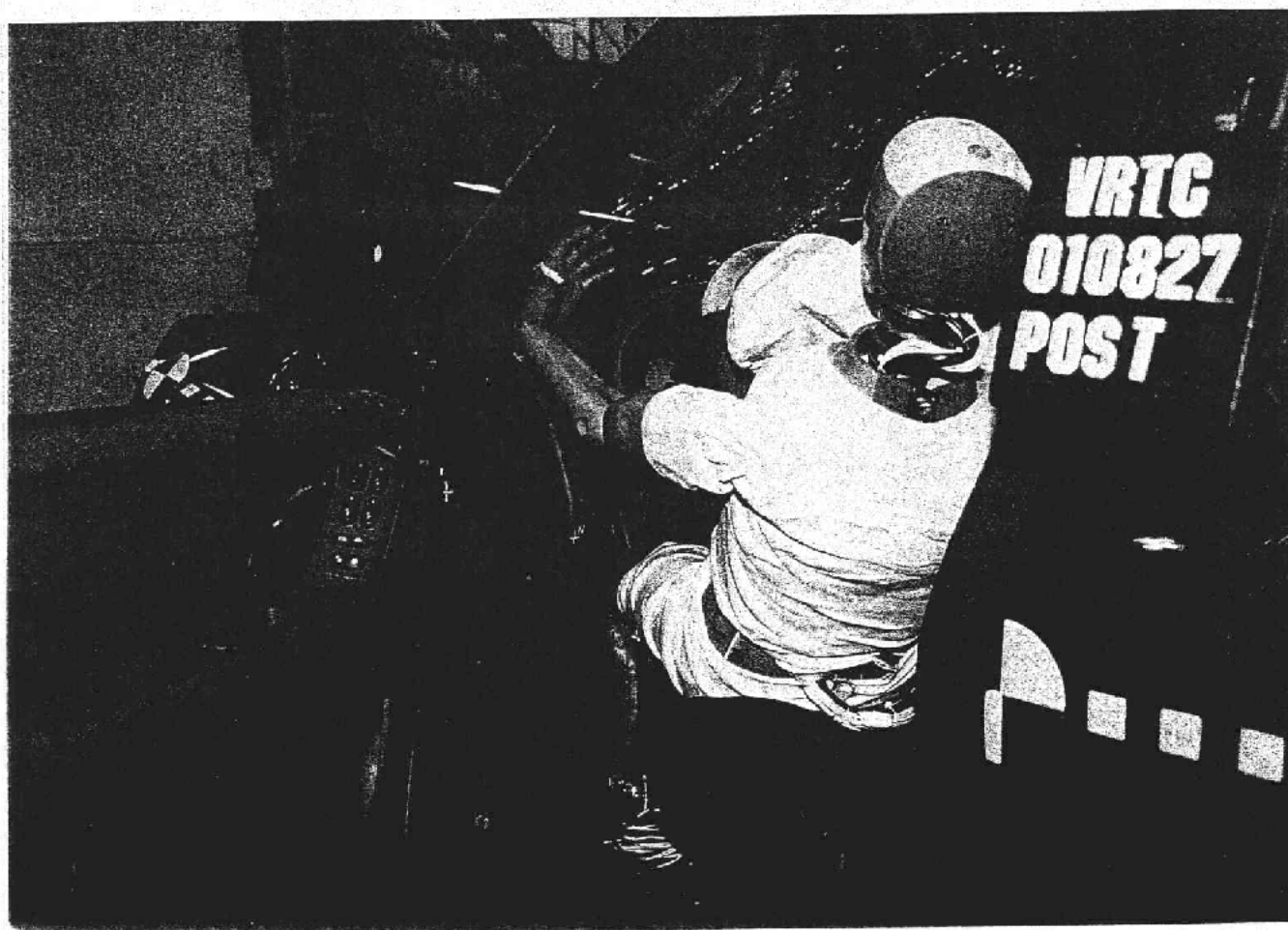


Figure A-49 Post-Test Driver Dummy & Vehicle Interior - View 2

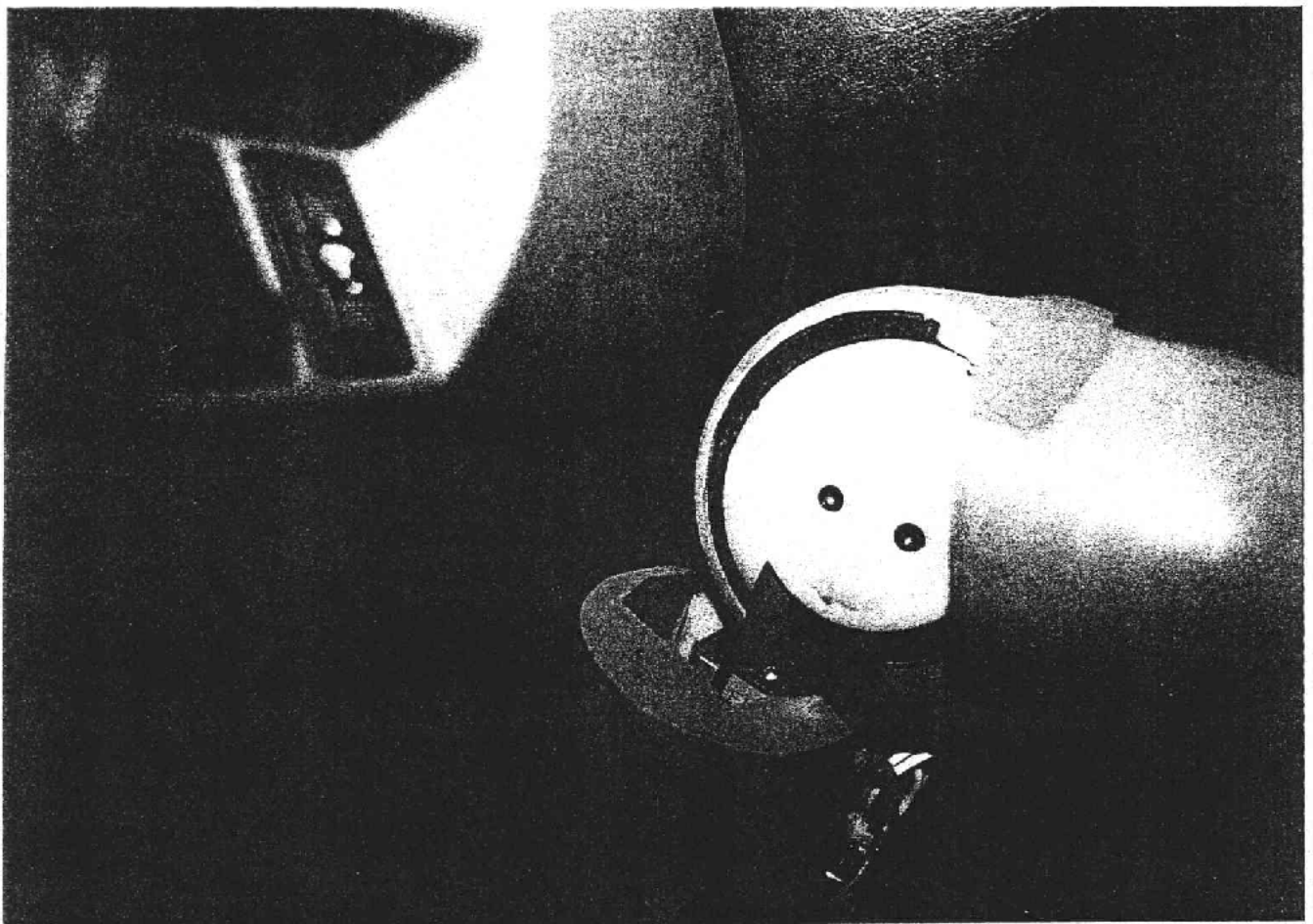


Figure A-50 Pre-Test Driver Dummy Knee and Bolster - View 1

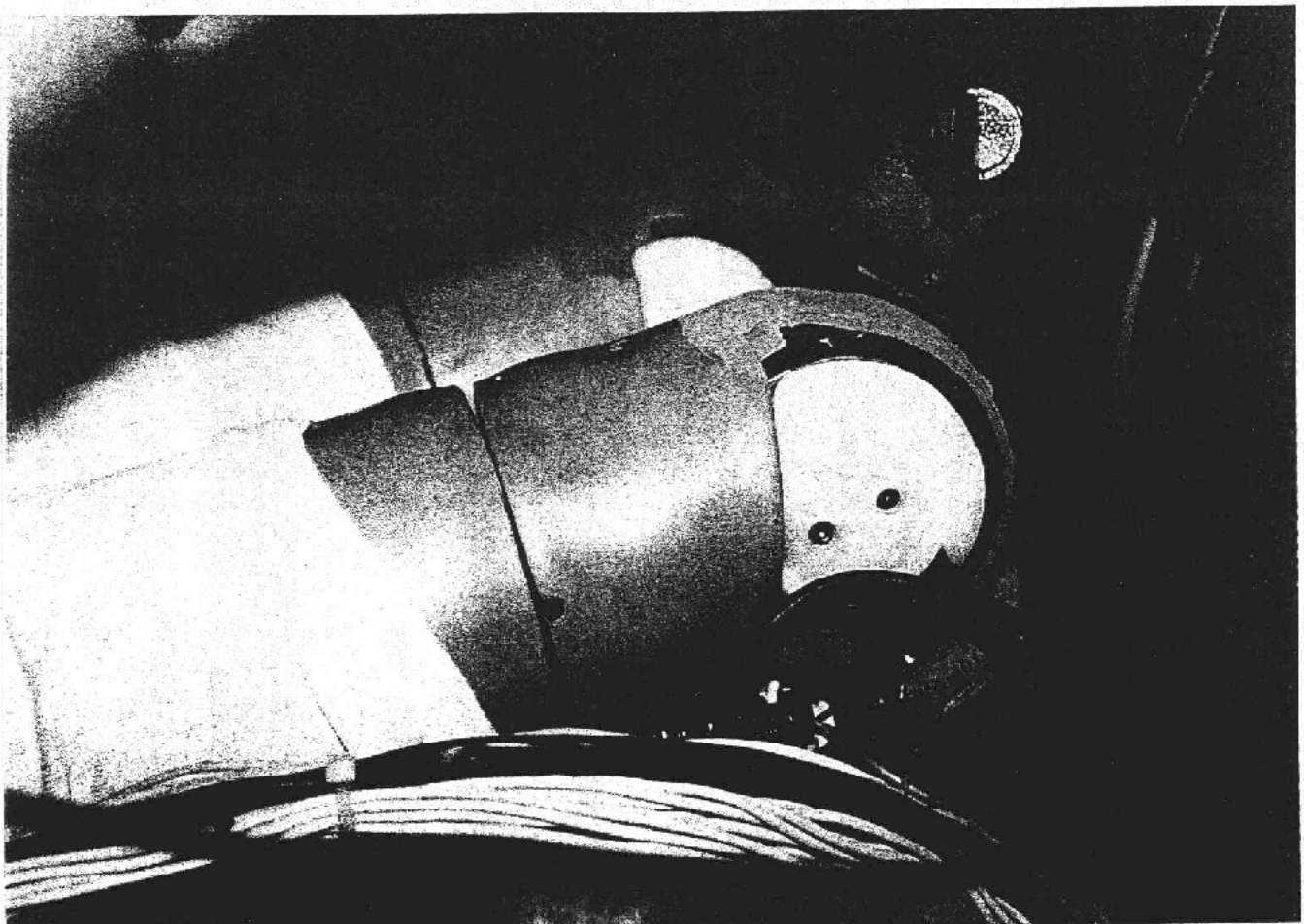


Figure A-51 Pre-Test Driver Dummy Knee and Bolster - View 2

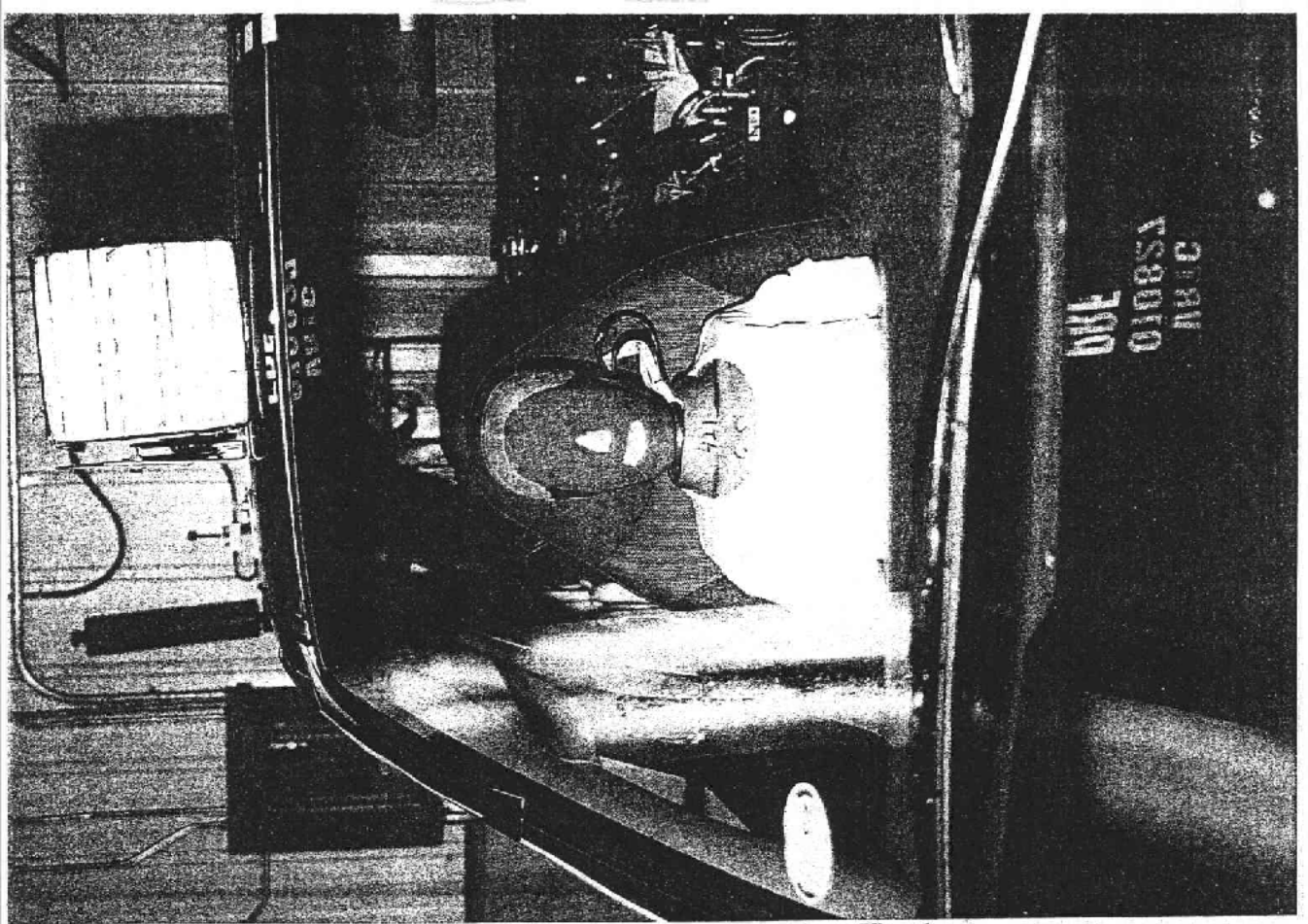


Figure A-52 Pre-Test Passenger Dummy Position - View 1



Figure A-53 Pre-Test Passenger Dummy Position - View 1



Figure A-54 Pre-Test Passenger Dummy Position - View 2

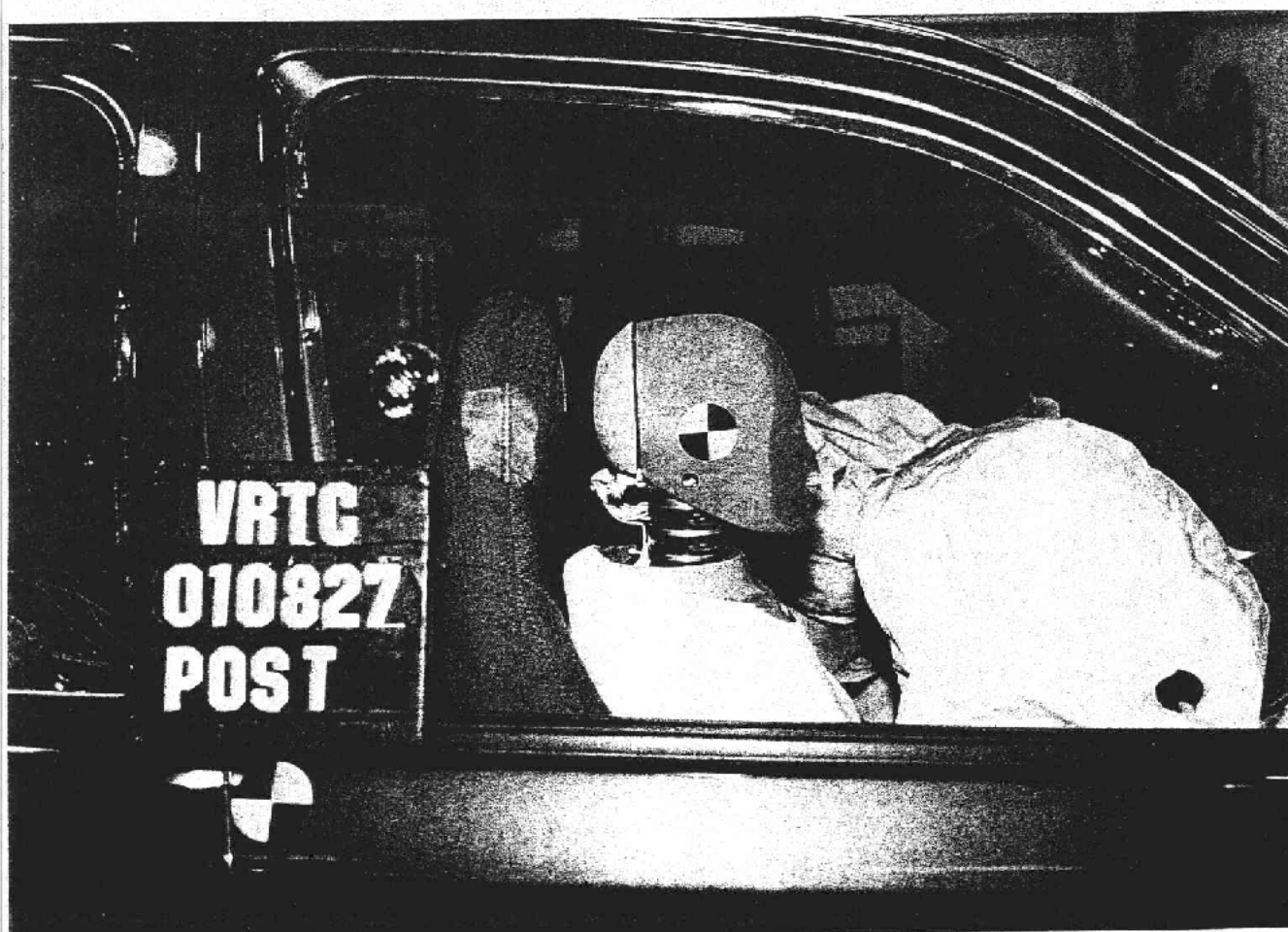


Figure A-55 Post-Test Passenger Dummy Position - View 2



Figure A-56 Pre-Test Passenger Dummy & Vehicle Interior - View 1

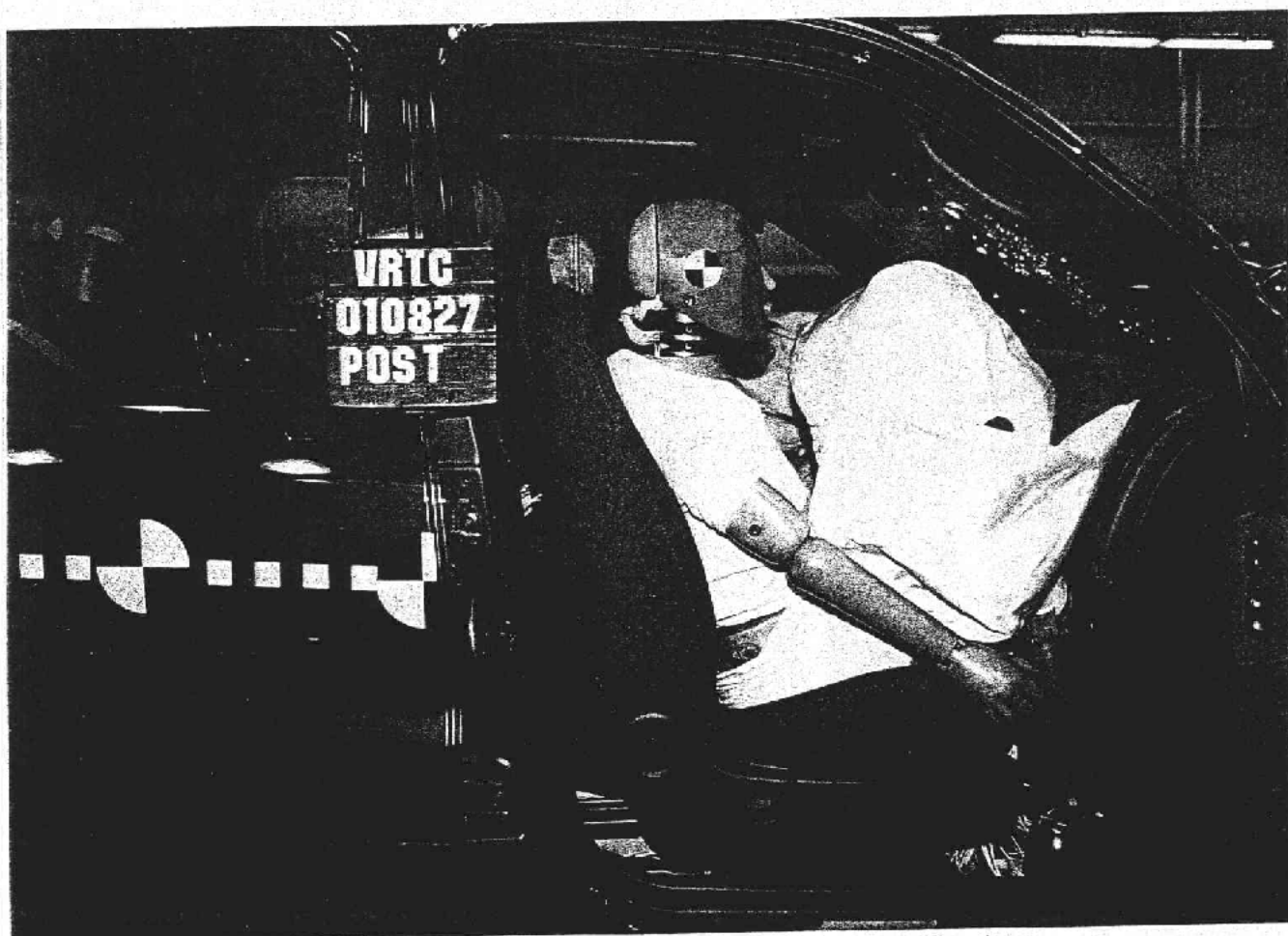


Figure A-57 Post-Test Passenger Dummy & Vehicle Interior - View 1

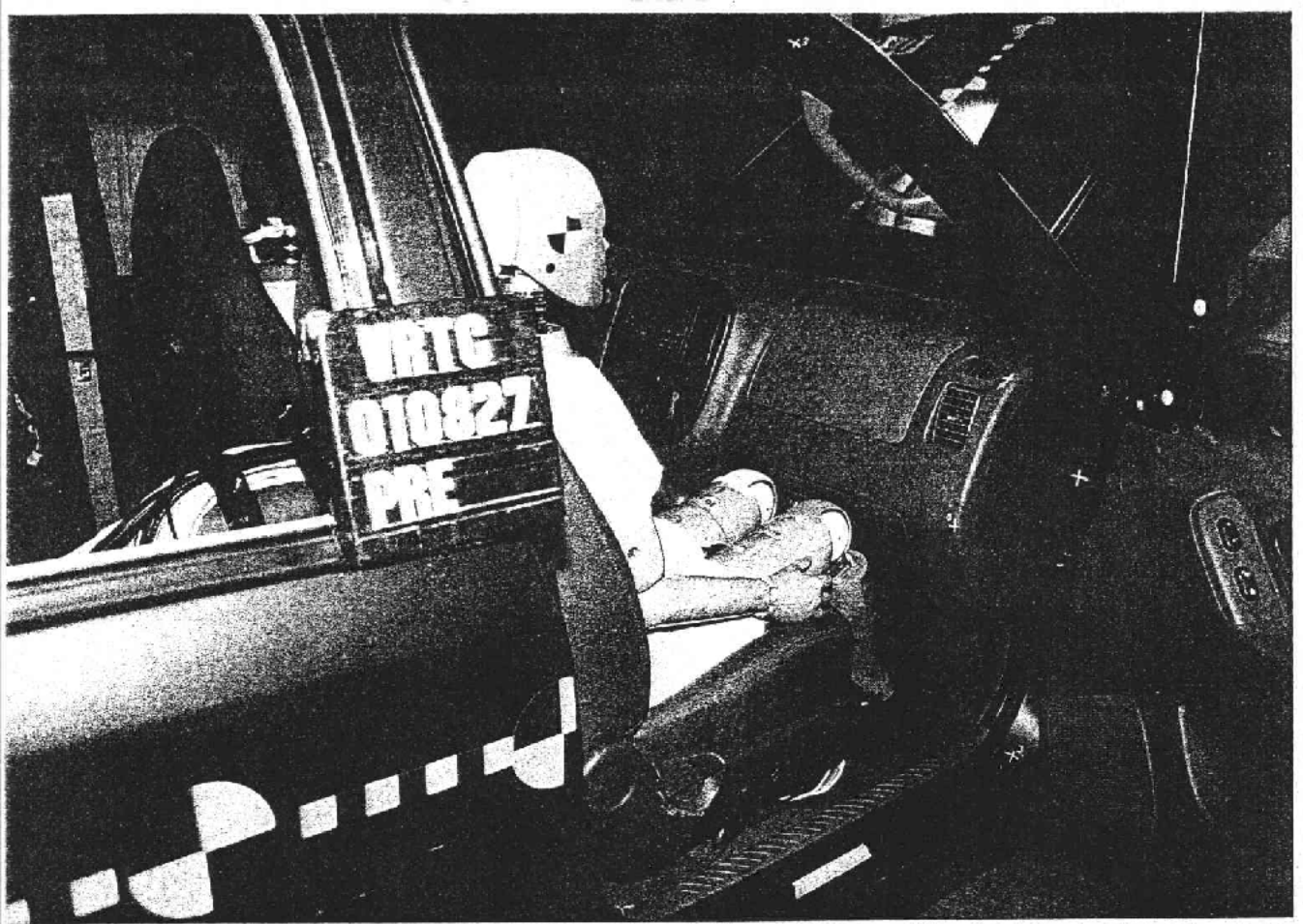


Figure A-58 Pre-Test Passenger Dummy & Vehicle Interior - View 2



Figure A-59 Post-Test Passenger Dummy & Vehicle Interior - View 2

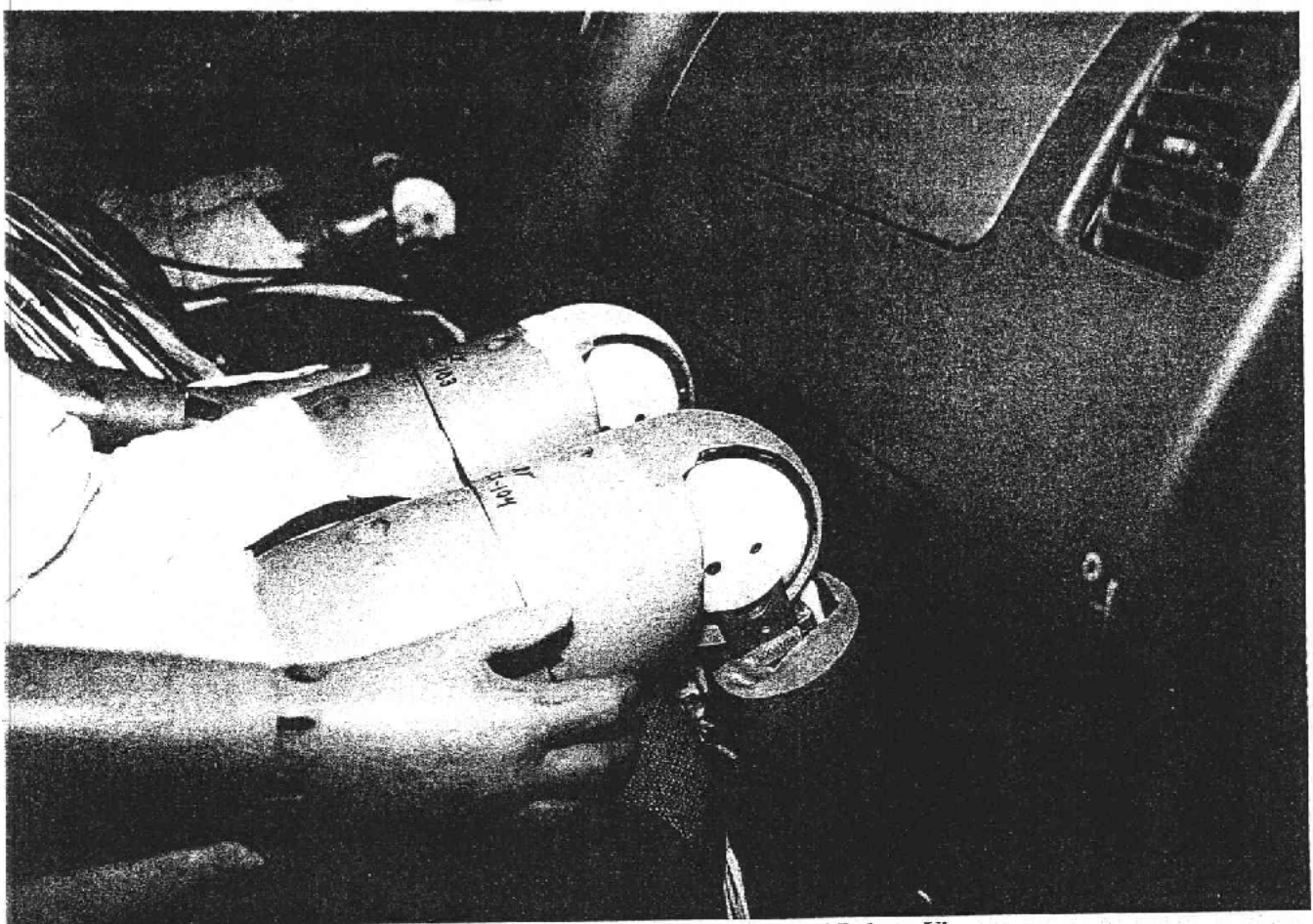


Figure A-60 Pre-Test Passenger Dummy Knee and Bolster View

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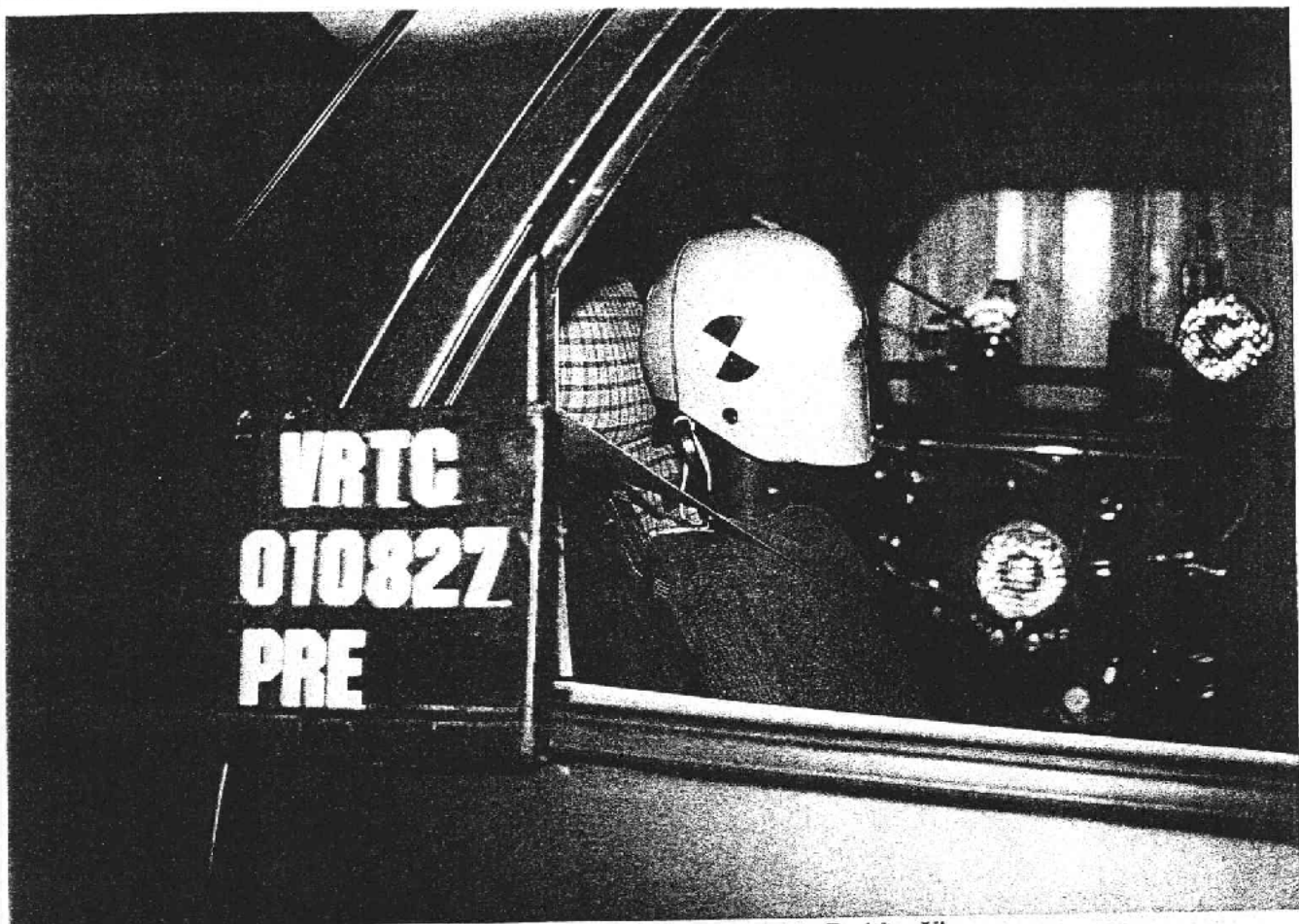


Figure A-61 Pre-Test Right Rear Passenger Dummy Position View



Figure A-62 Post-Test Right Rear Passenger Dummy Position View



Figure A-63 Pre-Test Right Rear Passenger Dummy & Vehicle Interior - View 1



Figure A-64 Post-Test Right Rear Passenger Dummy & Vehicle Interior - View 1

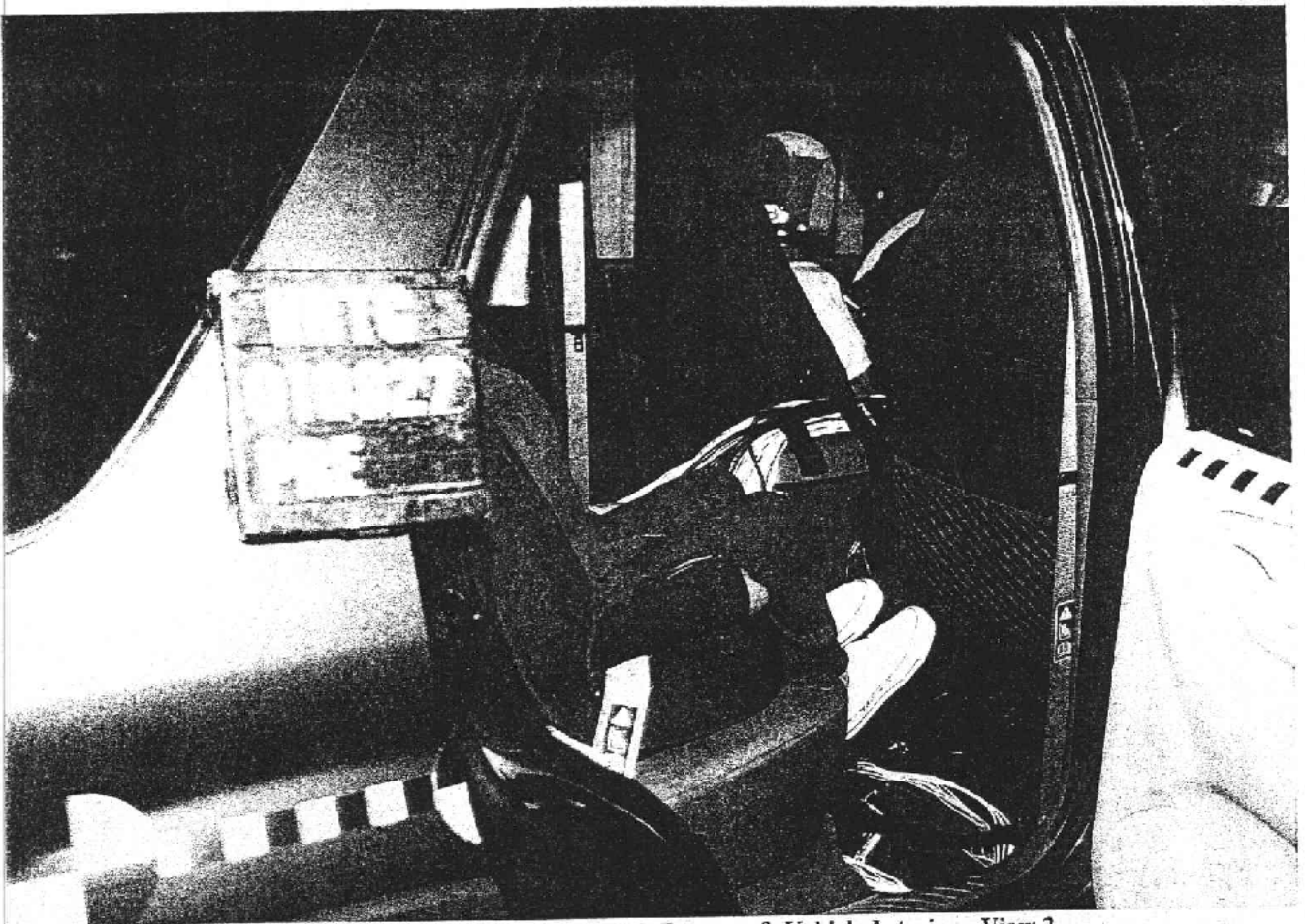


Figure A-65 Pre-Test Right Rear Passenger Dummy & Vehicle Interior - View 2



Figure A-66 Post-Test Right Rear Passenger Dummy & Vehicle Interior - View 2

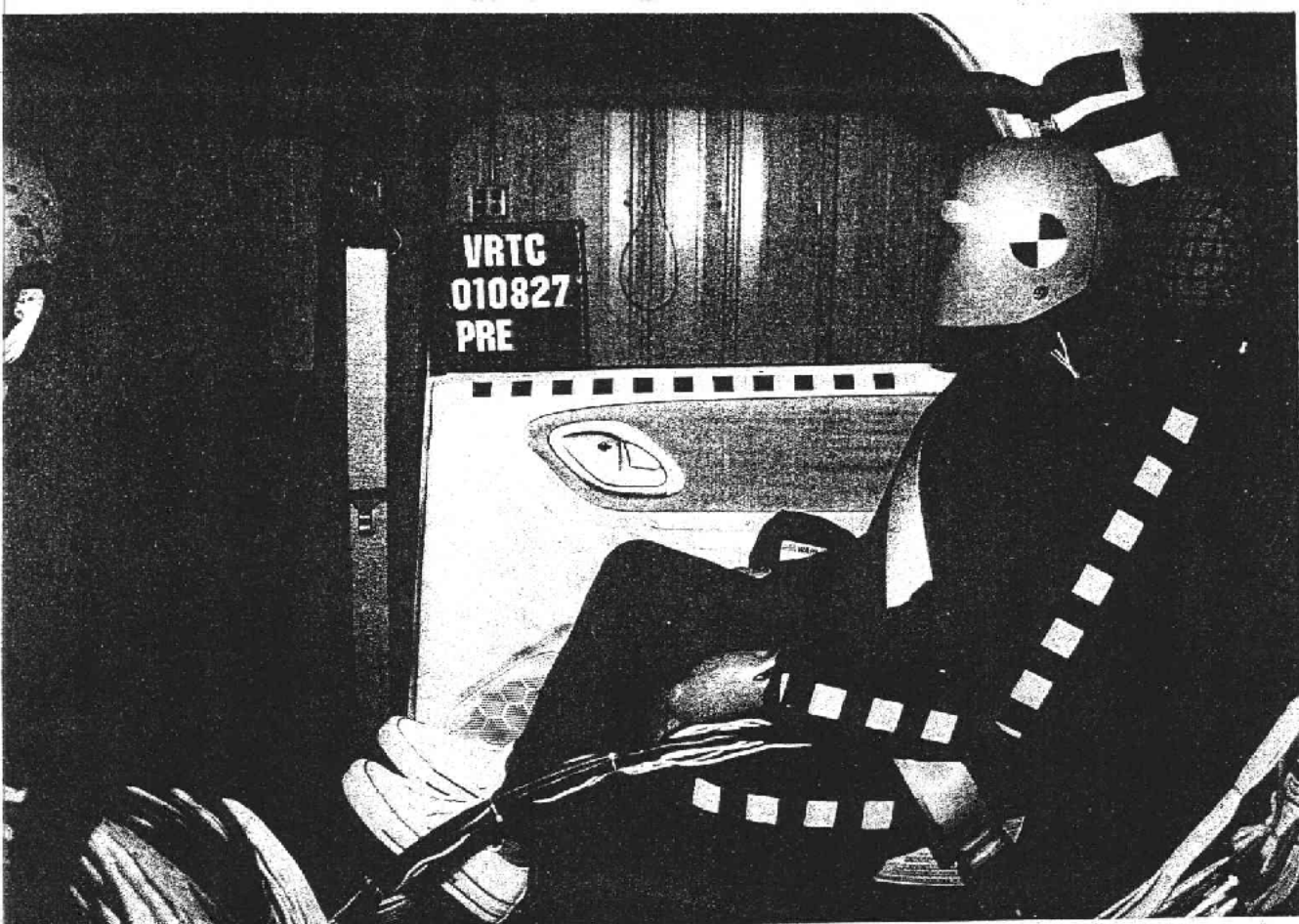


Figure A-67 Pre-Test Right Rear Passenger Dummy & Vehicle Interior - View 3

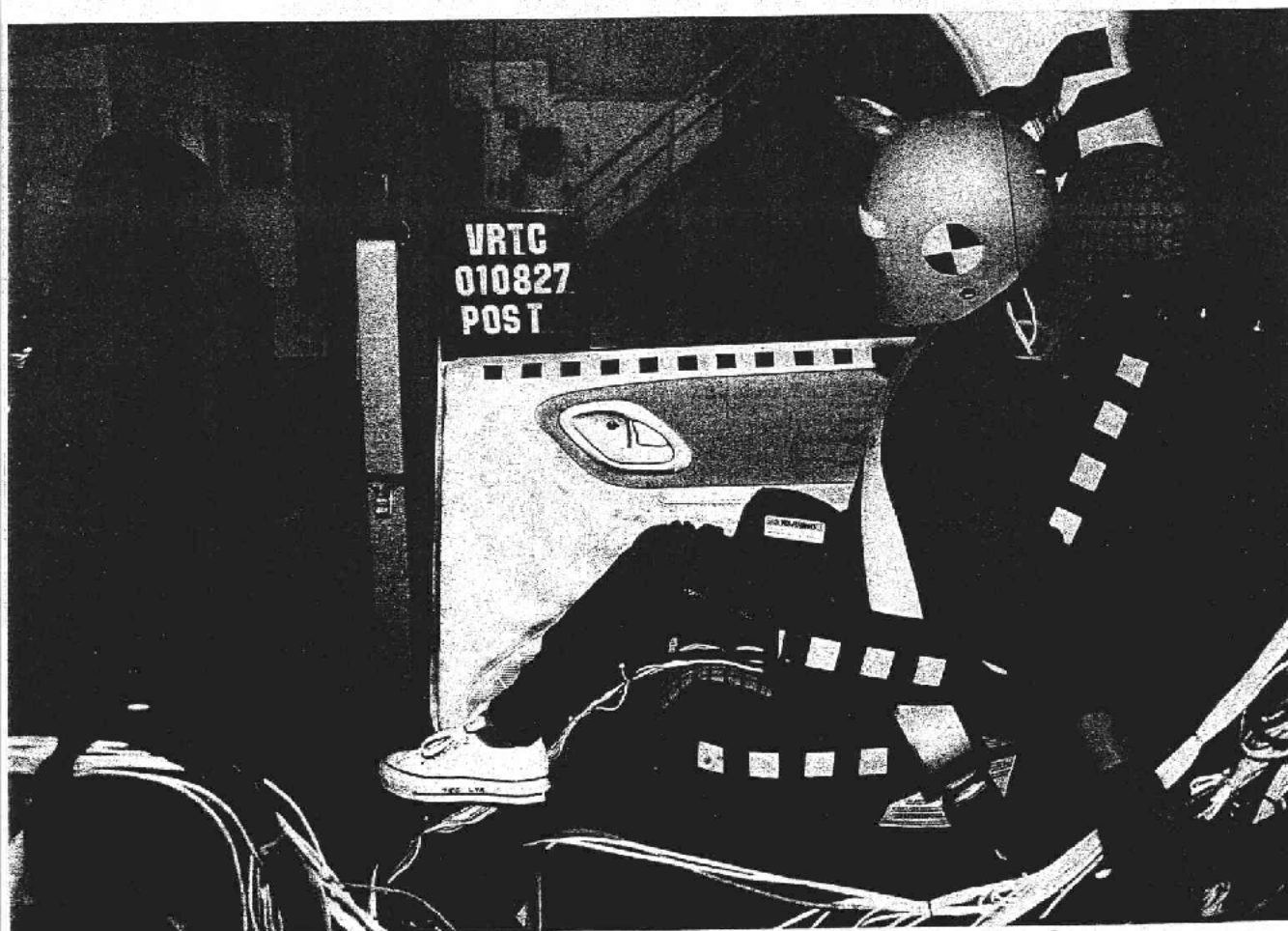


Figure A-68 Post-Test Right Rear Passenger Dummy & Vehicle Interior - View 3

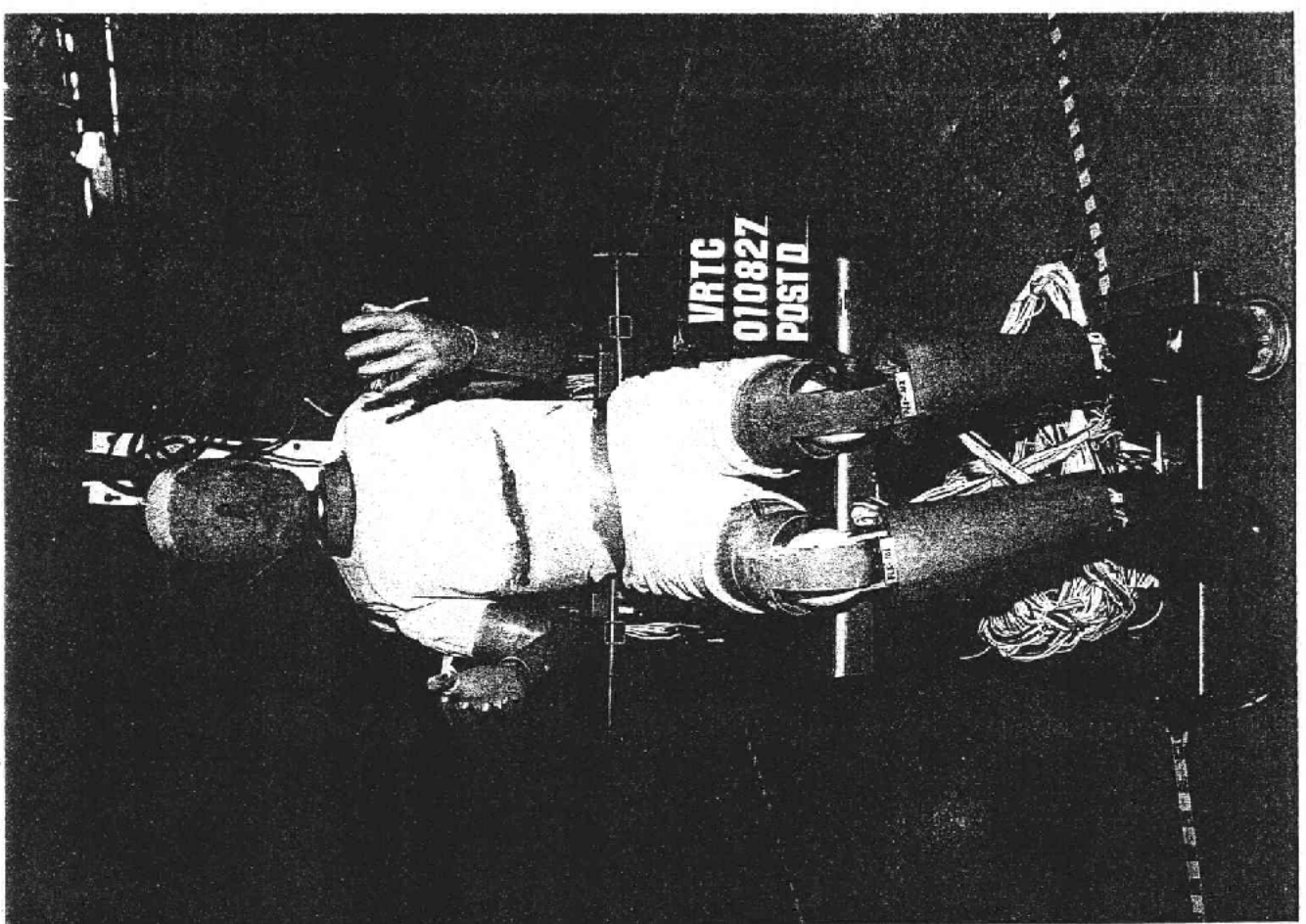


Figure A-69 Post-Test Driver Dummy Overall View

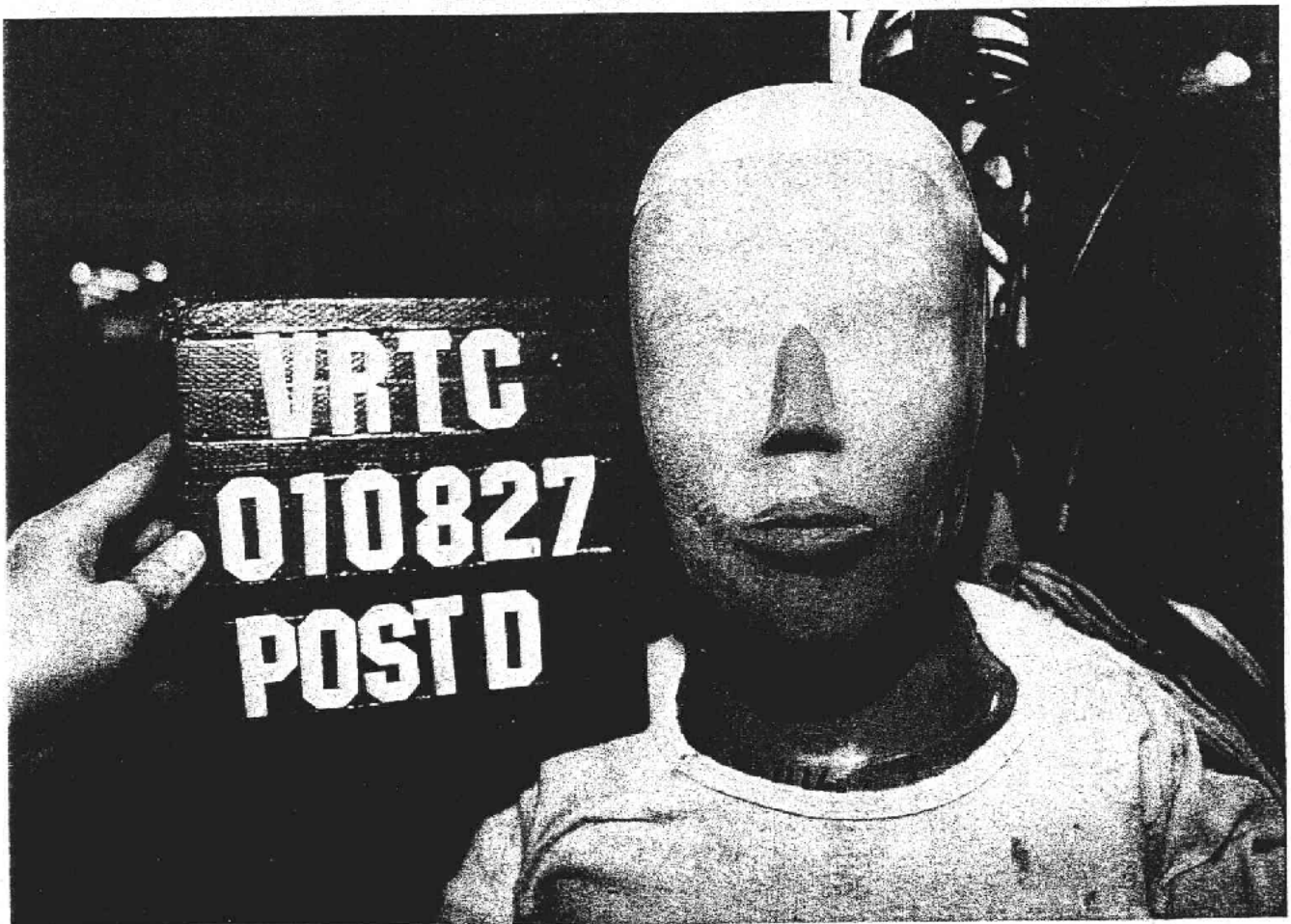


Figure A-70 Post-Test Driver Dummy Head Contact - View 1

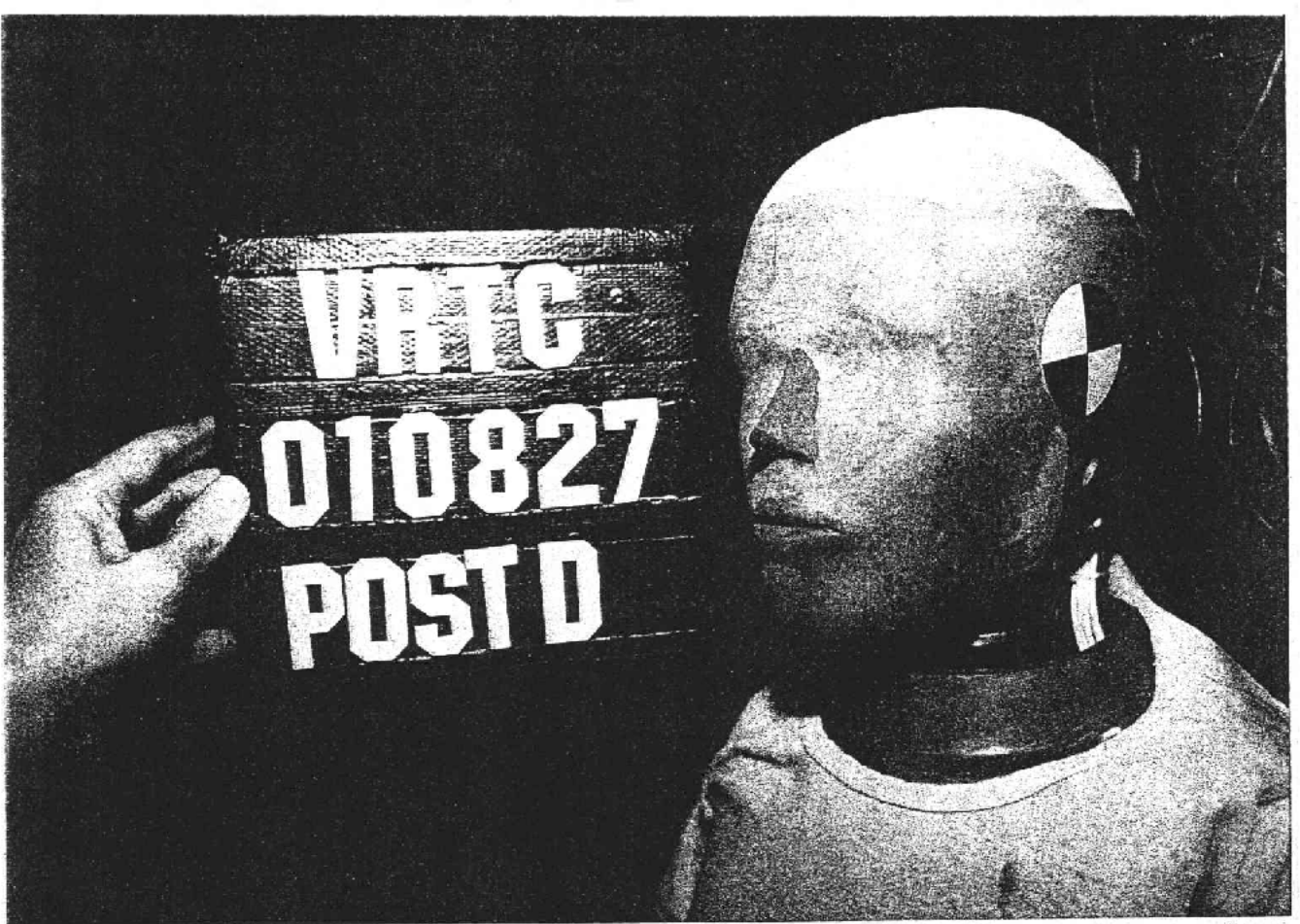


Figure A-71 Post-Test Driver Dummy Head Contact - View 2

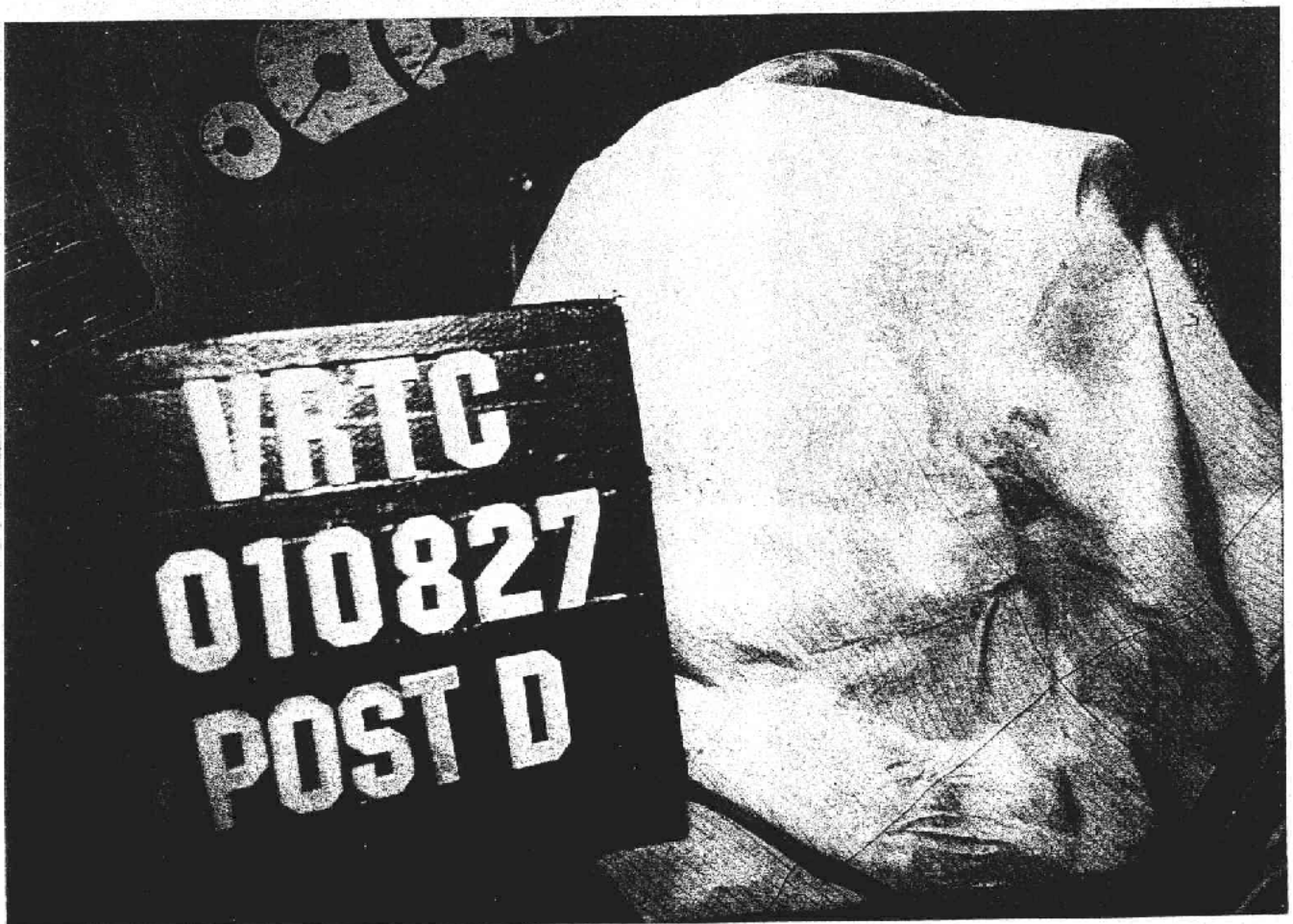


Figure A-72 Post-Test Driver Dummy Head Contact - View 3

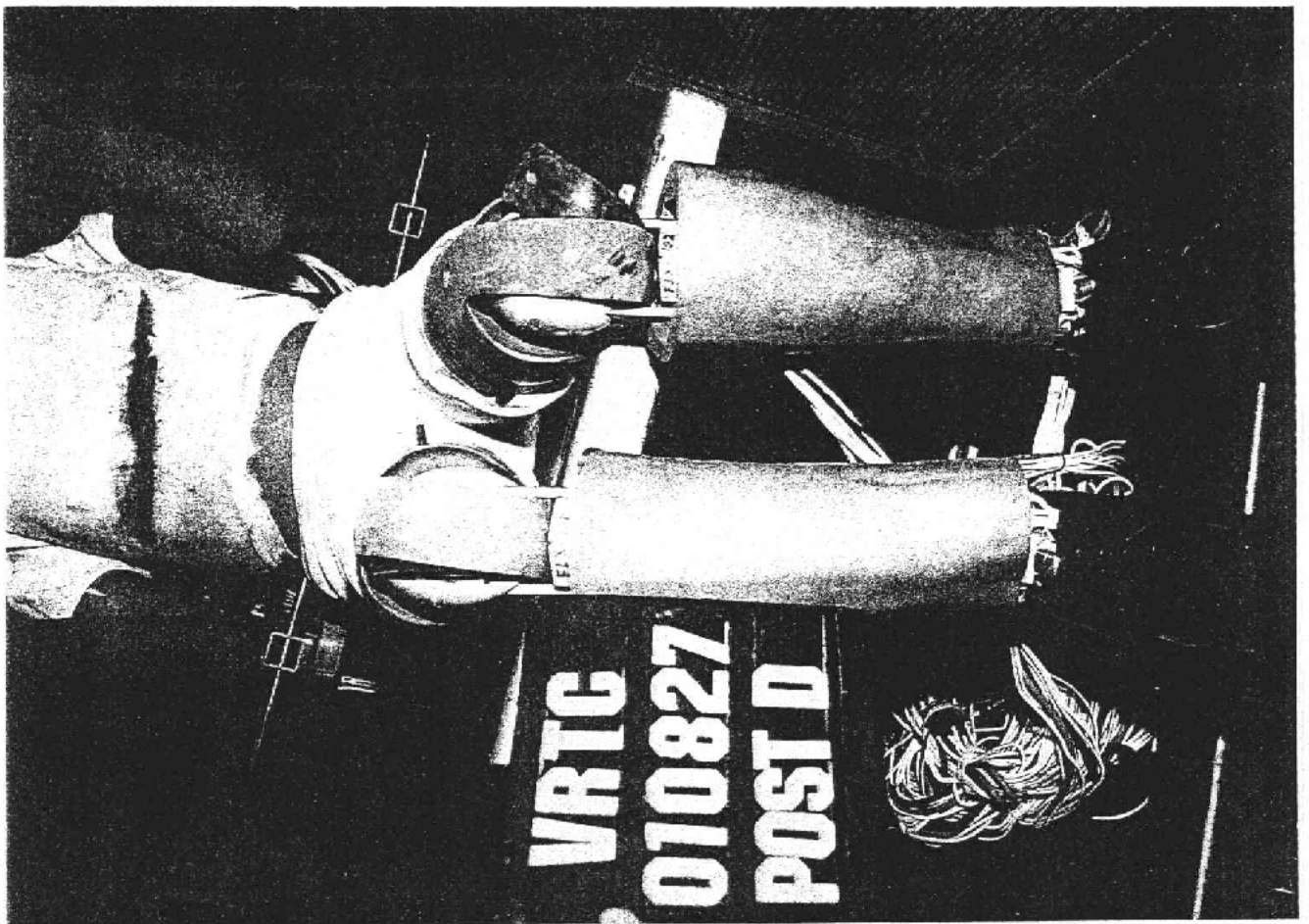


Figure A-73 Post-Test Driver Dummy Knee and Chest Contact - View 1



Figure A-74 Post-Test Driver Dummy Knee and Chest Contact - View 2



Figure A-75 Post-Test Driver Dummy Knee Contact - View 1

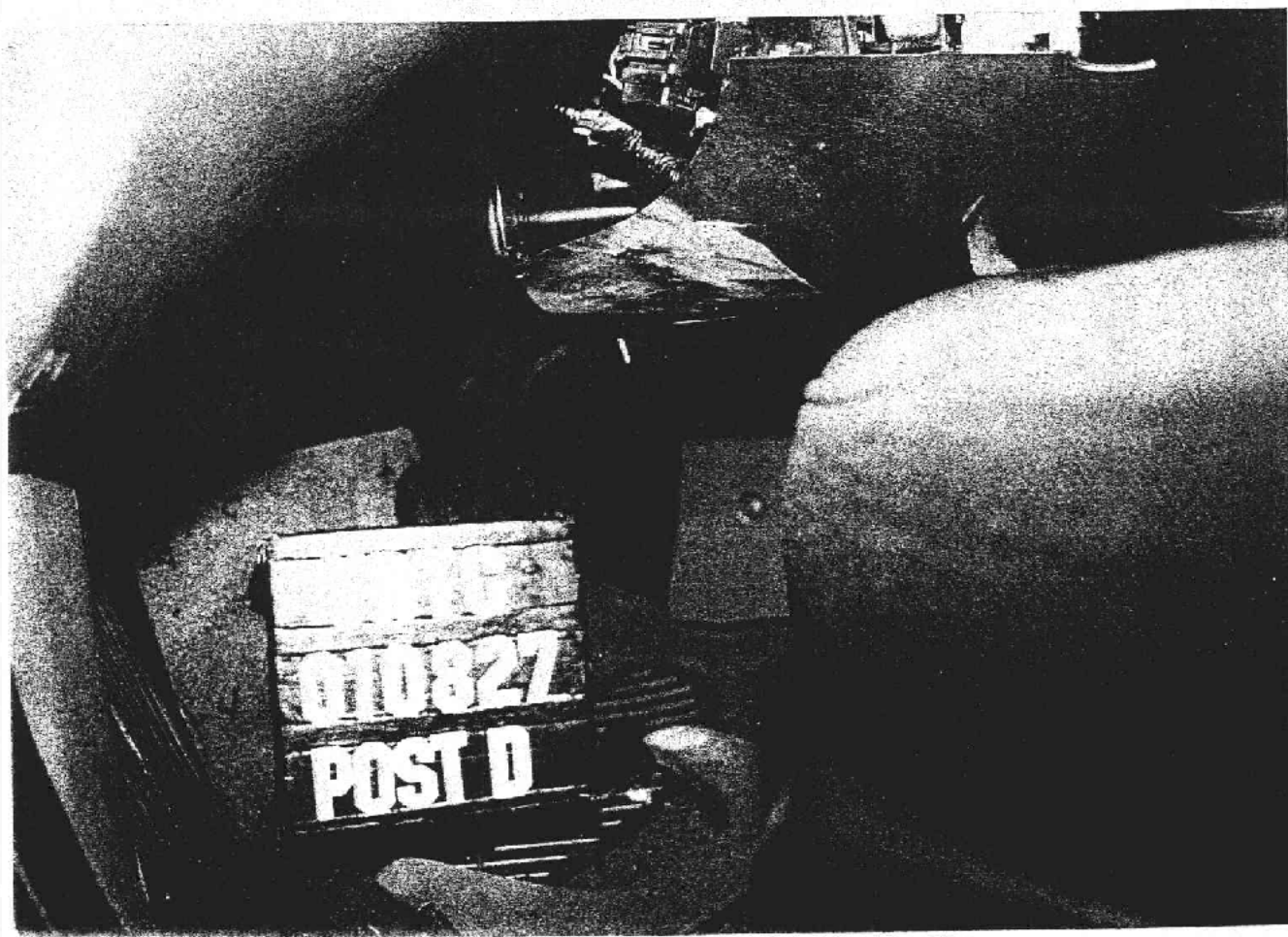


Figure A-76 Post-Test Driver Dummy Knee Contact - View 2

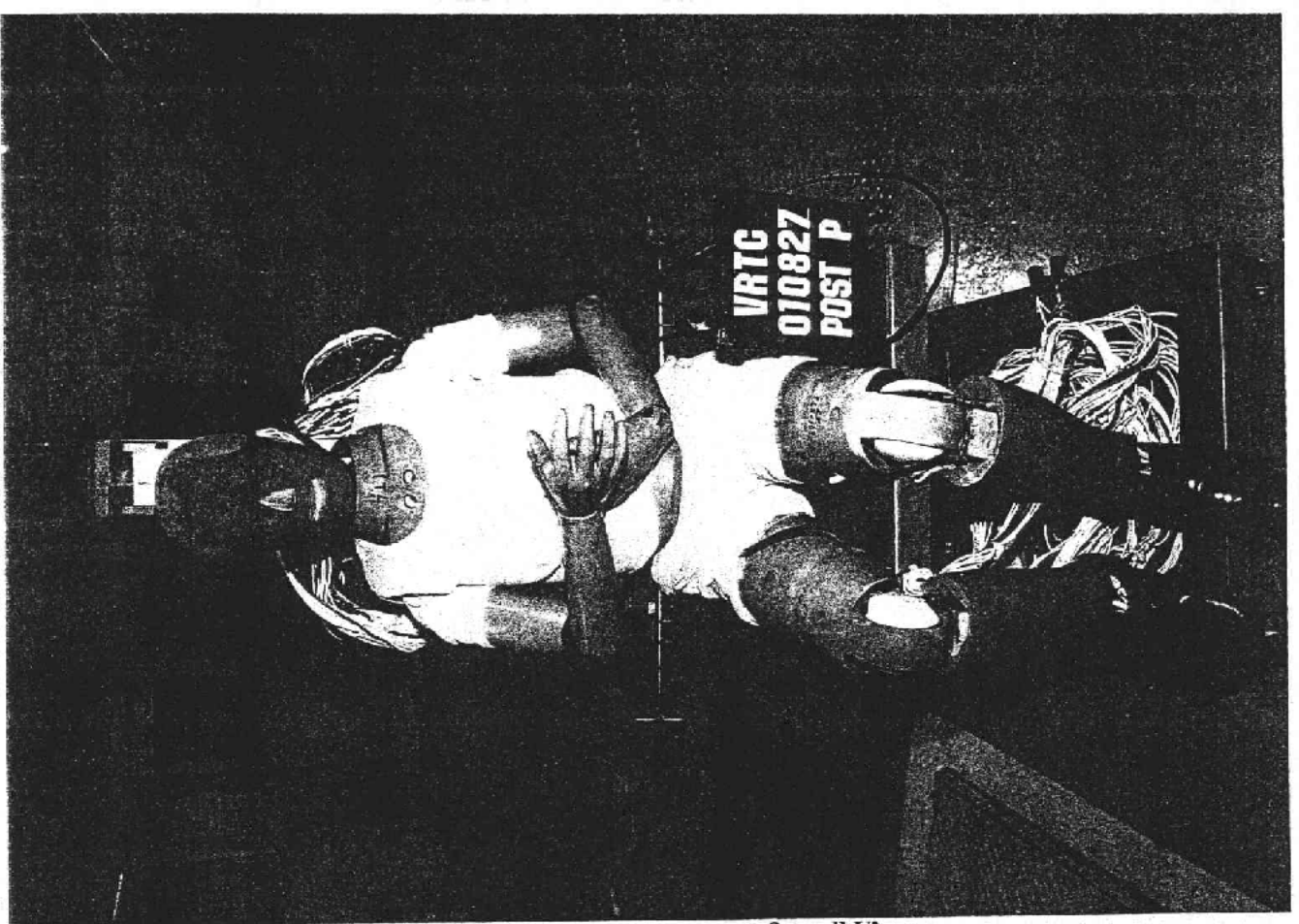
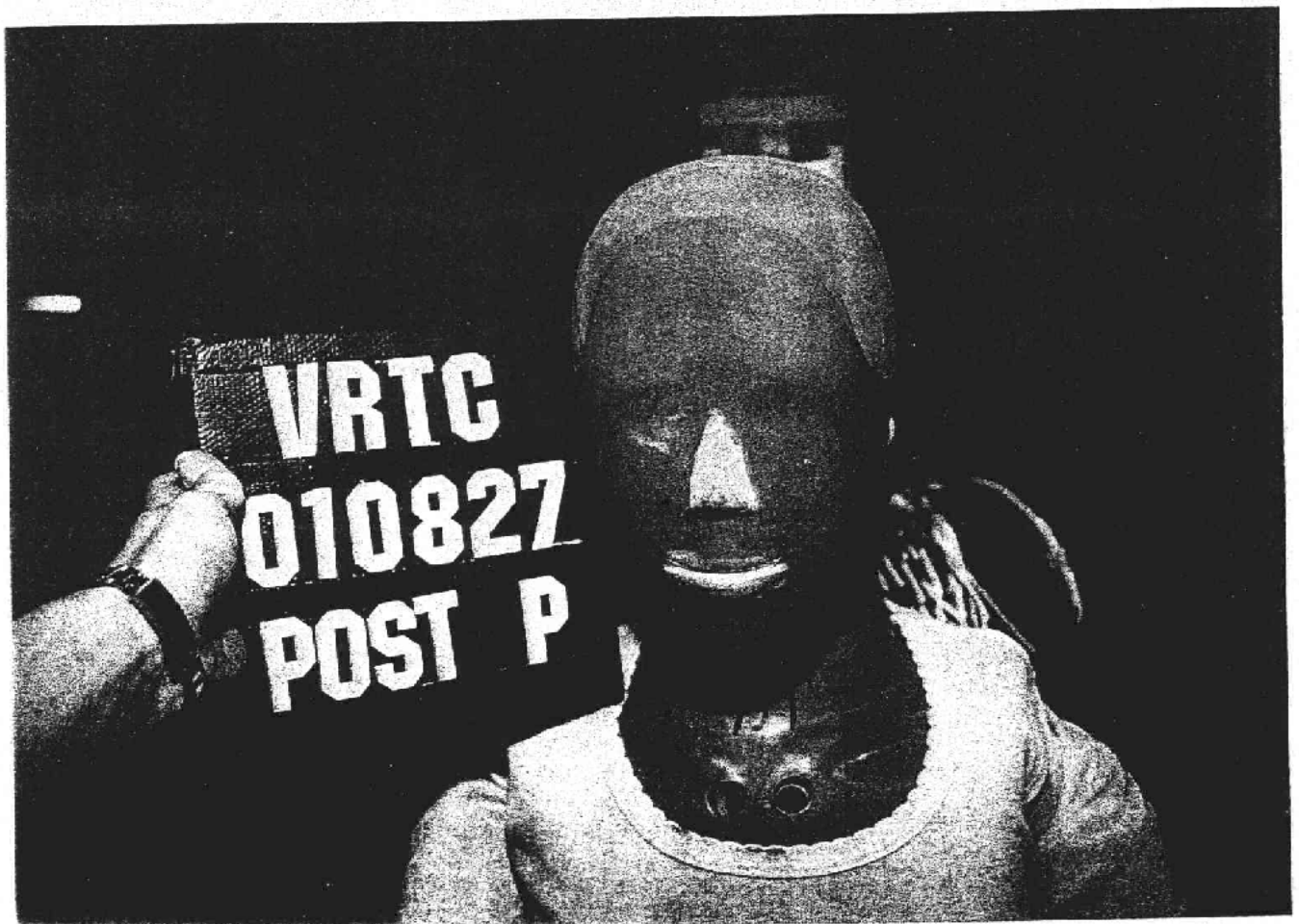


Figure A-77 Post-Test Passenger Dummy Overall View



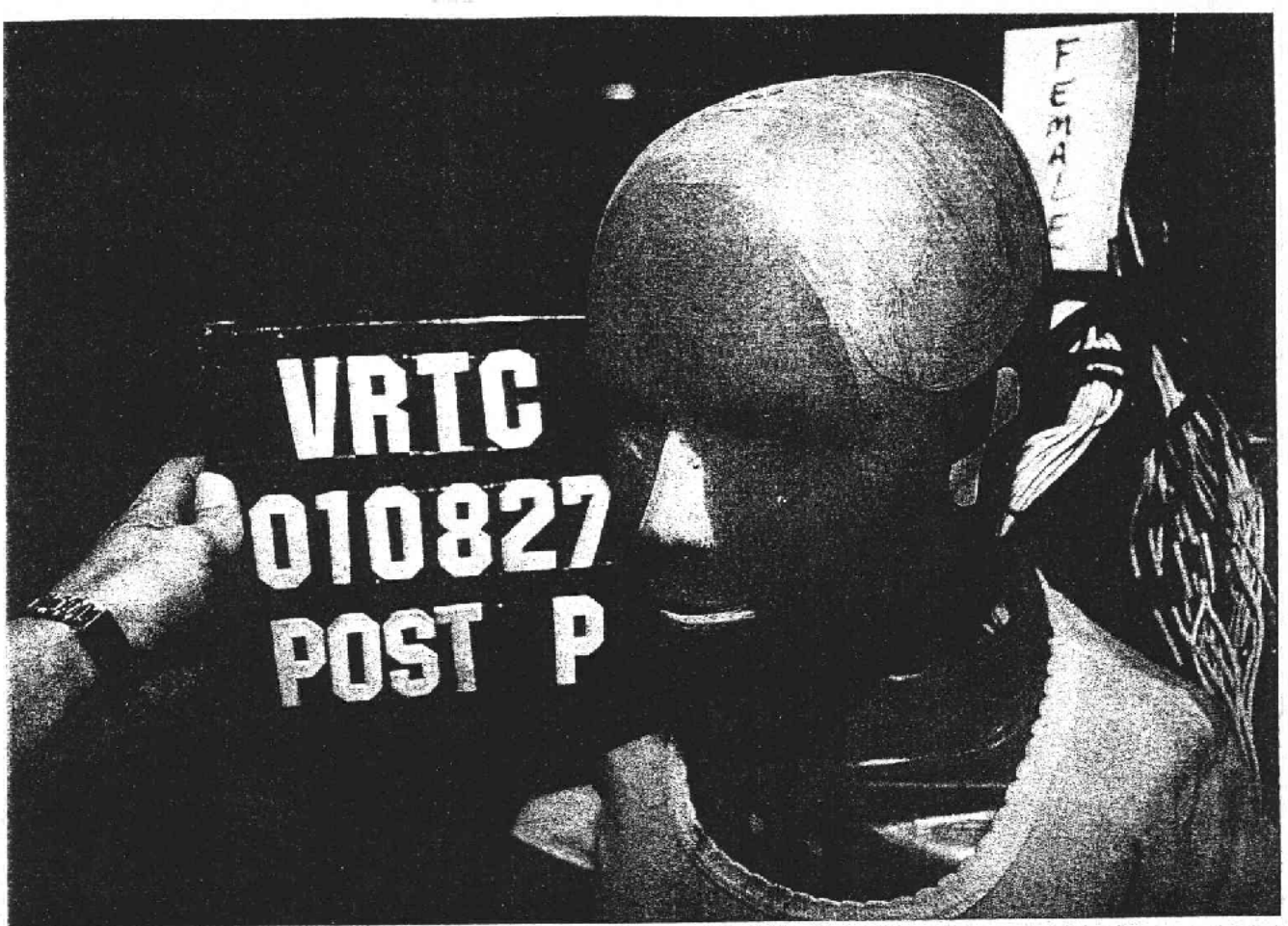


Figure A-79 Post-Test Passenger Dummy Head Contact - View 2

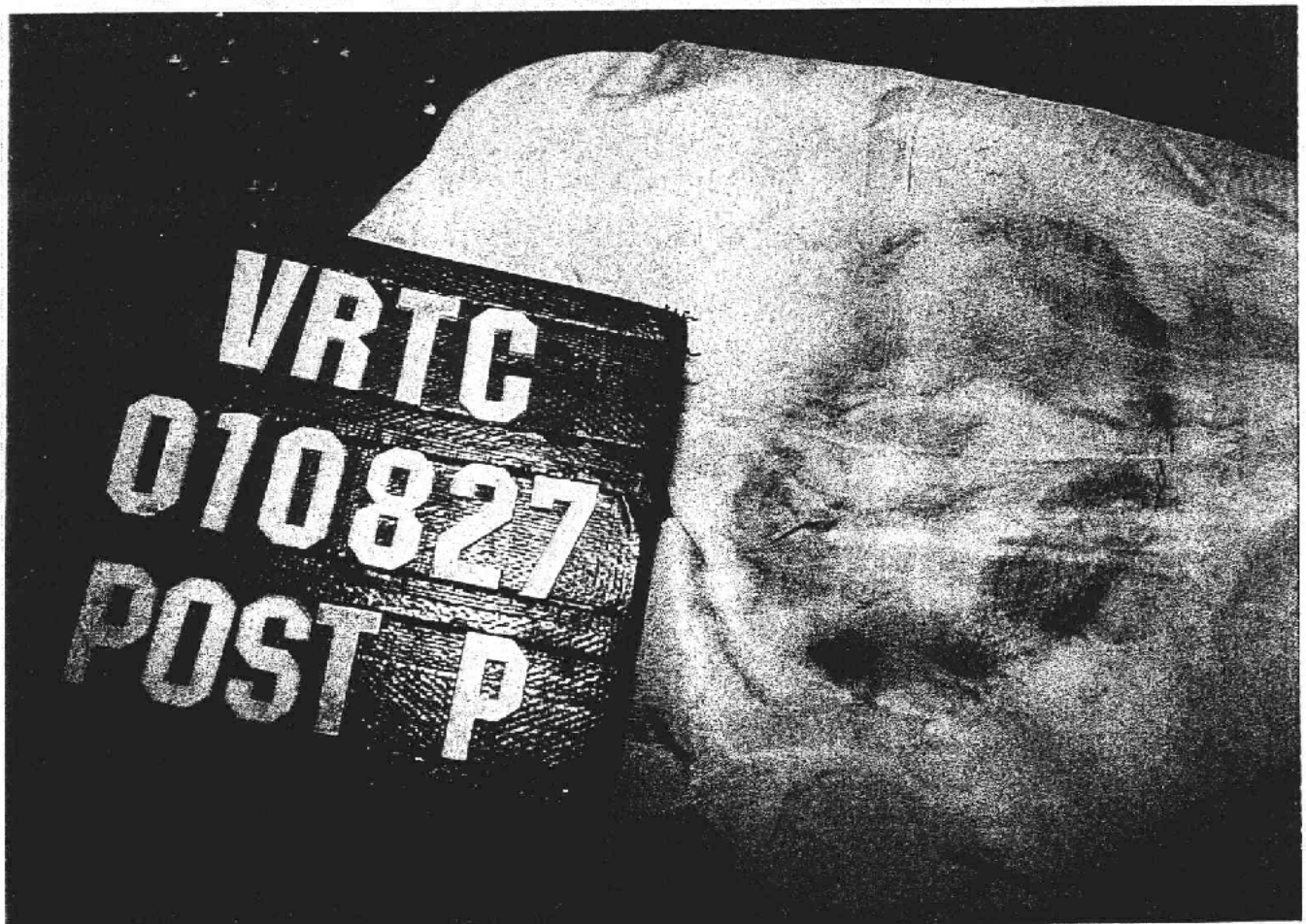


Figure A-80 Post-Test Passenger Dummy Head Contact - View 3

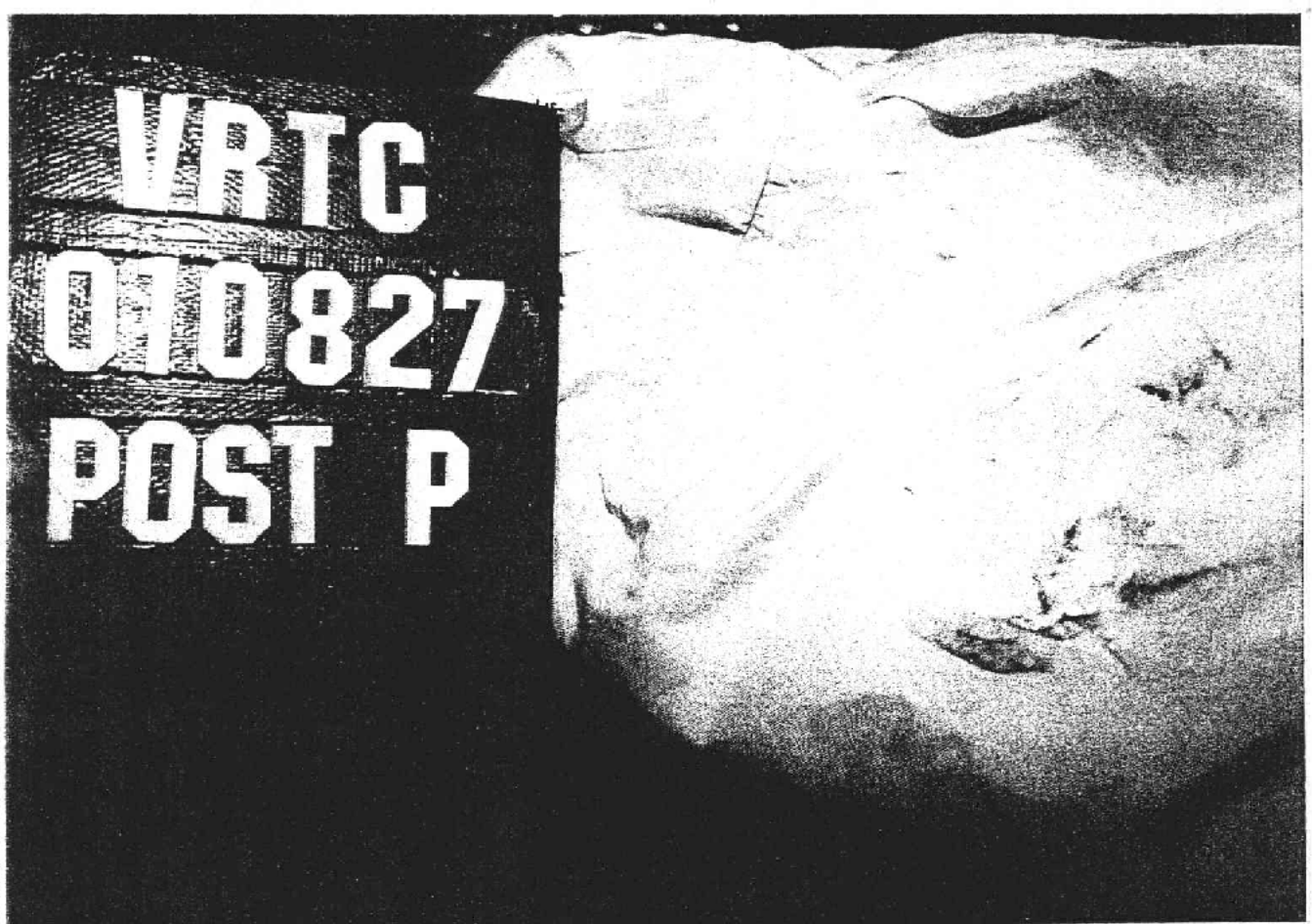


Figure A-81 Post-Test Passenger Dummy Head Contact - View 4

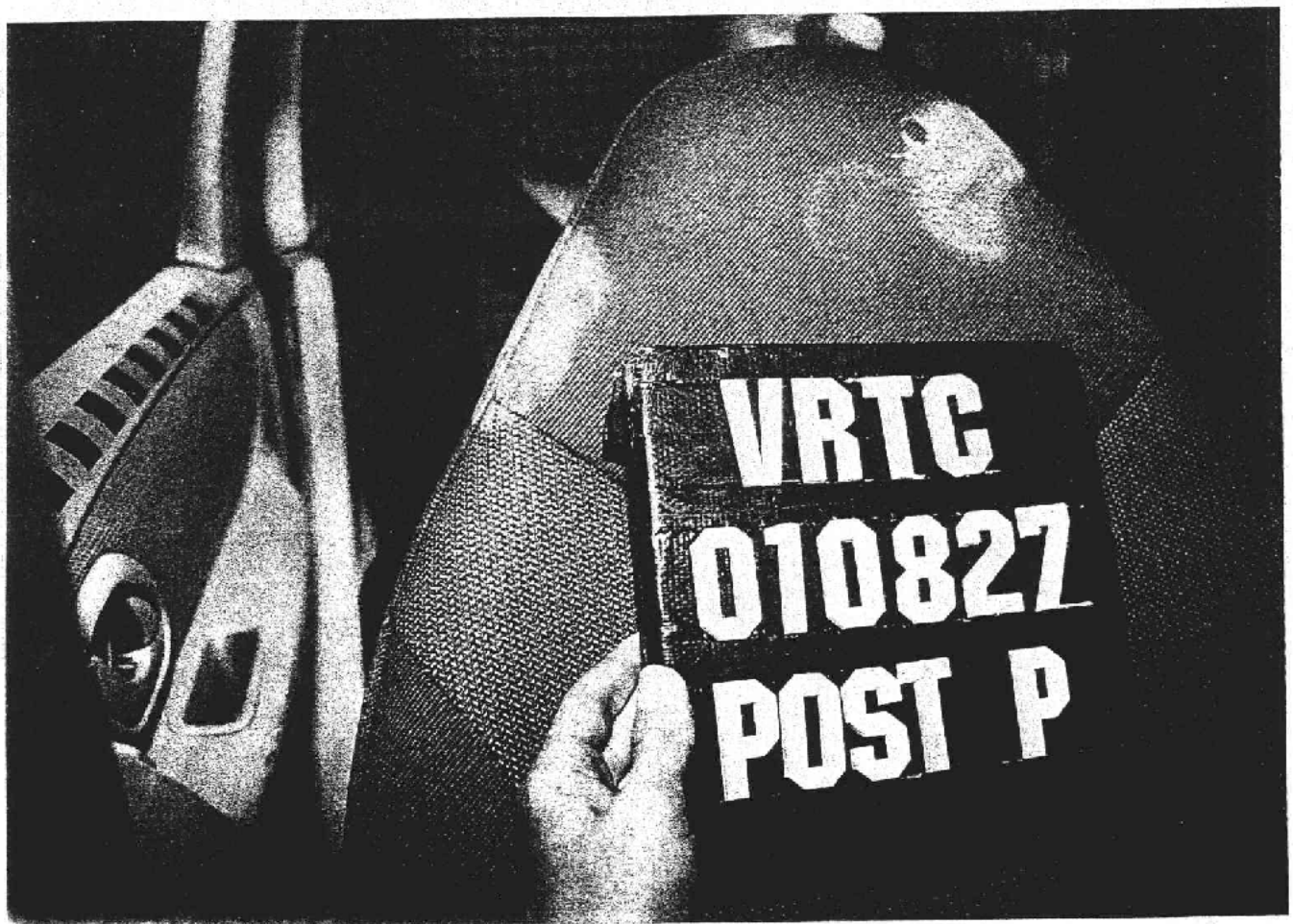


Figure A-82 Post-Test Passenger Dummy Head Contact - View 5



Figure A-83 Post-Test Passenger Dummy Knee Contact - View 1



Figure A-84 Post-Test Passenger Dummy Knee Contact - View 2

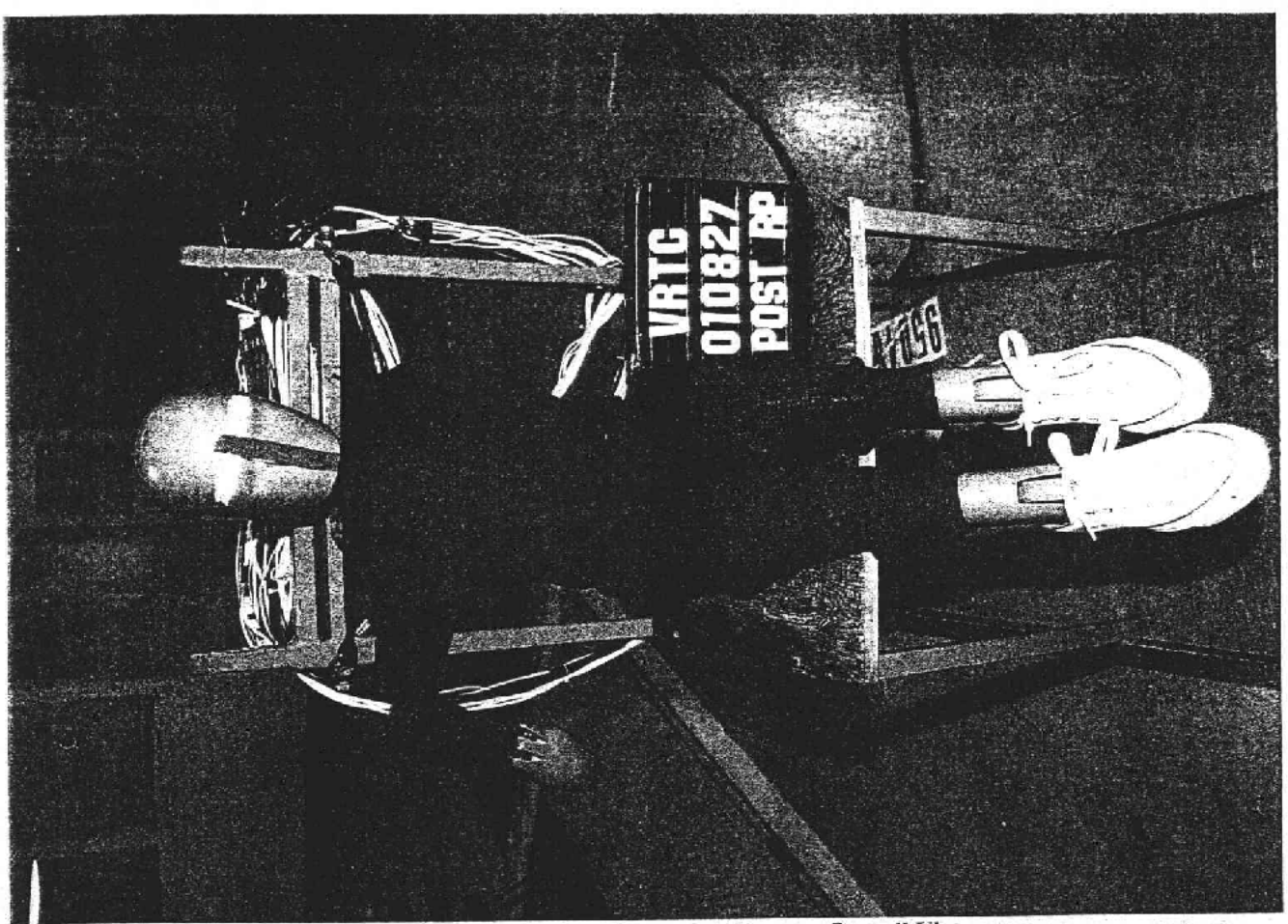


Figure A-85 Post-Test Right Rear Passenger Dummy Overall View



Figure A-86 Post-Test Right Rear Passenger Dummy Head Contact View



Figure A-87 Post-Test Steering Column Position - View 1



Figure A-88 Post-Test Steering Column Position - View 2

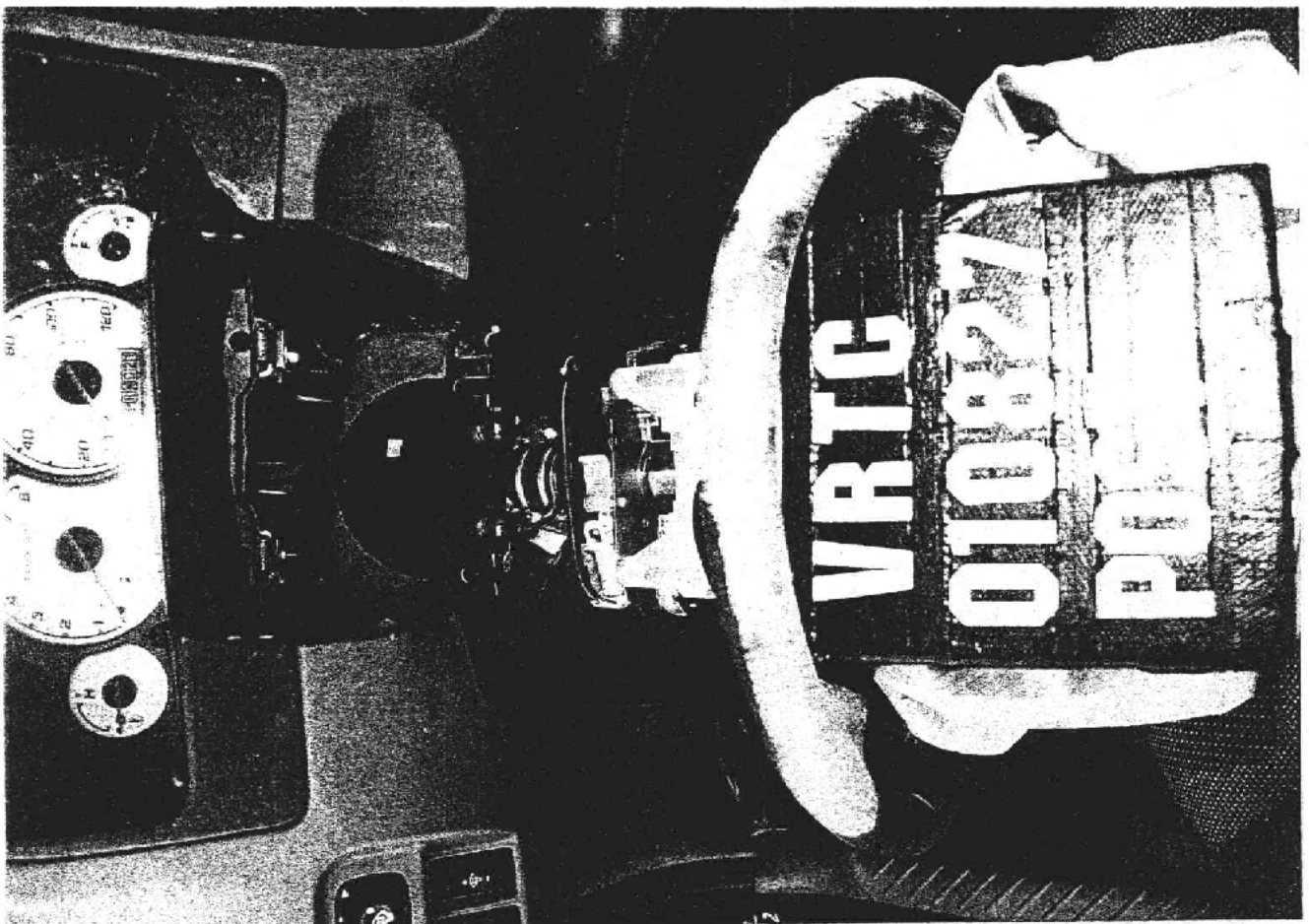


Figure A-89 Post-Test Steering Column Position - View 3



Figure A-90 Pre-Test Vehicle Certification Label View

RECOMMENDED TIRE SIZE AND INFLATION PRESSURE (COLD) DIMENSIONS DES PNEUS ET PRESSIONS DE GONFLAGE (À FROID) RECOMMANDÉES			
TIRE SIZE DIMENSIONS DES PNEUS	TIRE PRESSURE FRONT/REAR	PRESSION DES PNEUS AVANT/ARRIÈRE	
P215/70R16 99T P225/70R15 100S P235/70R16 104T	207 kPa 30 PSI	207 kPa 30 lb/po ²	
VEHICLE CAPACITY WEIGHT CAPACITÉ MAXIMALE DU VÉHICULE		899 lbs 408 kg	
SEATING CAPACITY NOMBRE DE PLACES	FRONT SEAT SIÈGE AVANT	BACK SEAT SIÈGE ARRIÈRE	TOTAL TOTAL
	2	3	5
A WARNING / ATTENTION DO NOT EXCEED WEIGHT OR SEATBELT LOADS OF VEHICLE. CONTROL: REPLACE TIRES WITH THE SAME SIZE, TYPE, AND INFLATION PRESSURE AS SHOWN ON THE CERTIFICATION LABEL. N'EXCÉPTEZ PAS LE PONDUS NI LE PONDUS DE LA CEINTURE DE SÉCURITÉ DE LA VÉHICULE. CONTRÔLE: REMPLACEZ LES PNEUS PAR LES MÊMES PNEUS, TYPE ET INFLATION DE GONFLAGE QUE CELLES INDICÉES SUR L'ÉTIQUETTE DE CERTIFICATION.			

Figure A-91 Pre-Test Tire Load Label View

Appendix B

Data Plots

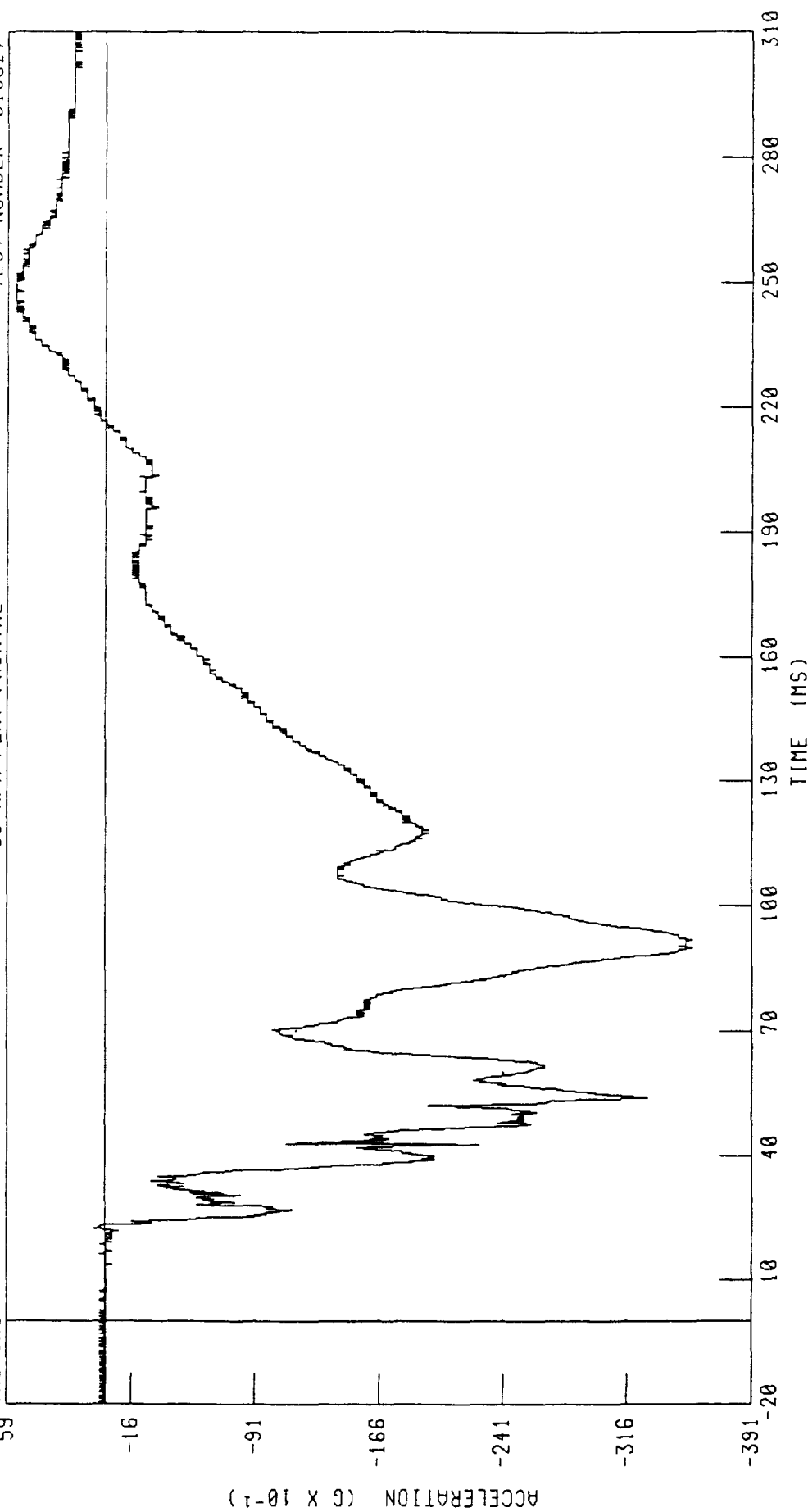
2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

DRIVER HEAD X-AXIS ACCELERATION

30 MPH FLAT FRONTAL

TRC INC

TEST NUMBER 010827



CHANNEL HEDXC1 FILTER CH CLASS 1000

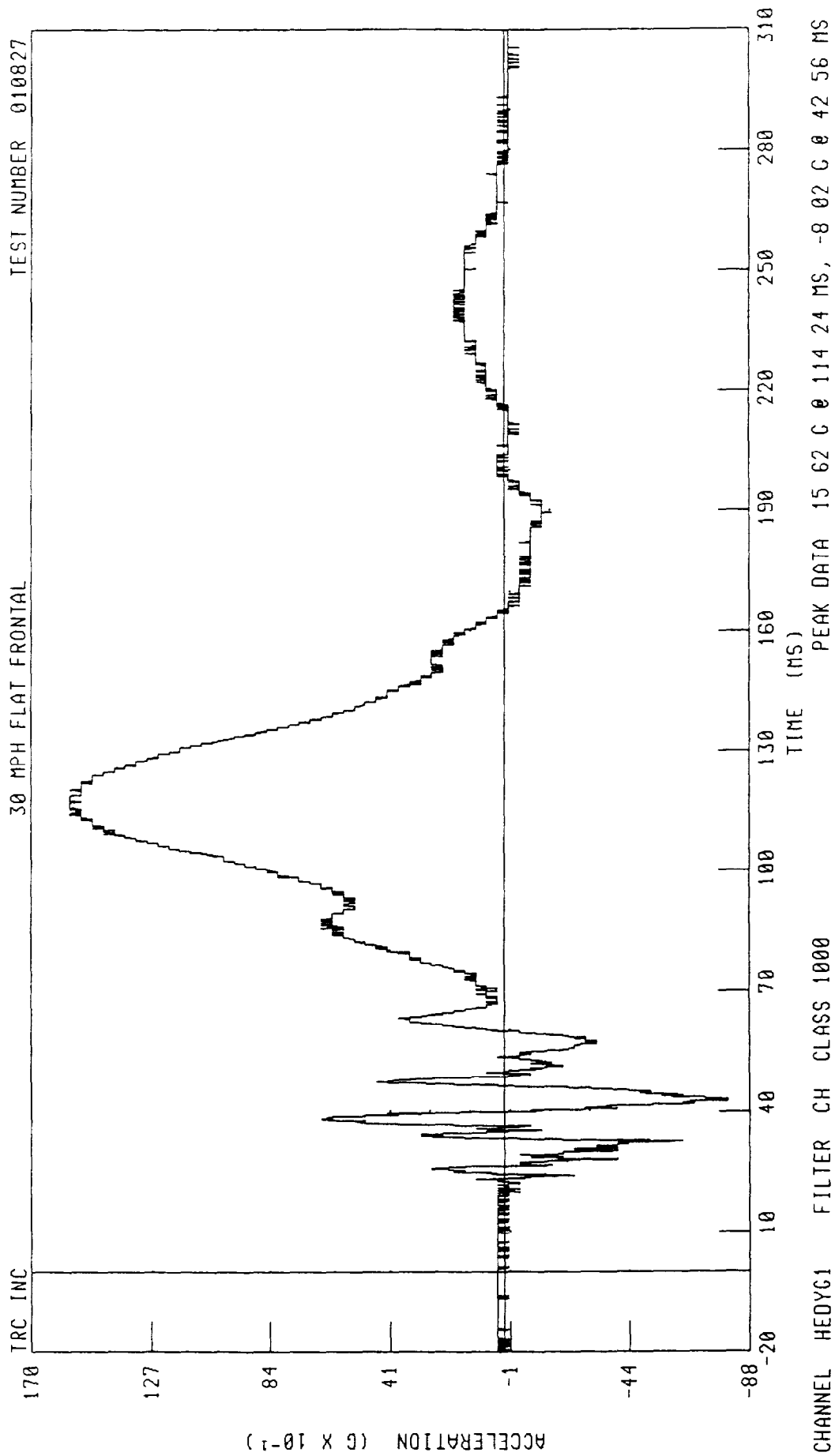
PEAK DATA 5 42 0 242 88 MS, -35 54 0 90 00 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

DRIVER HEAD Y-AXIS ACCELERATION

30 MPH FLAT FRONTAL

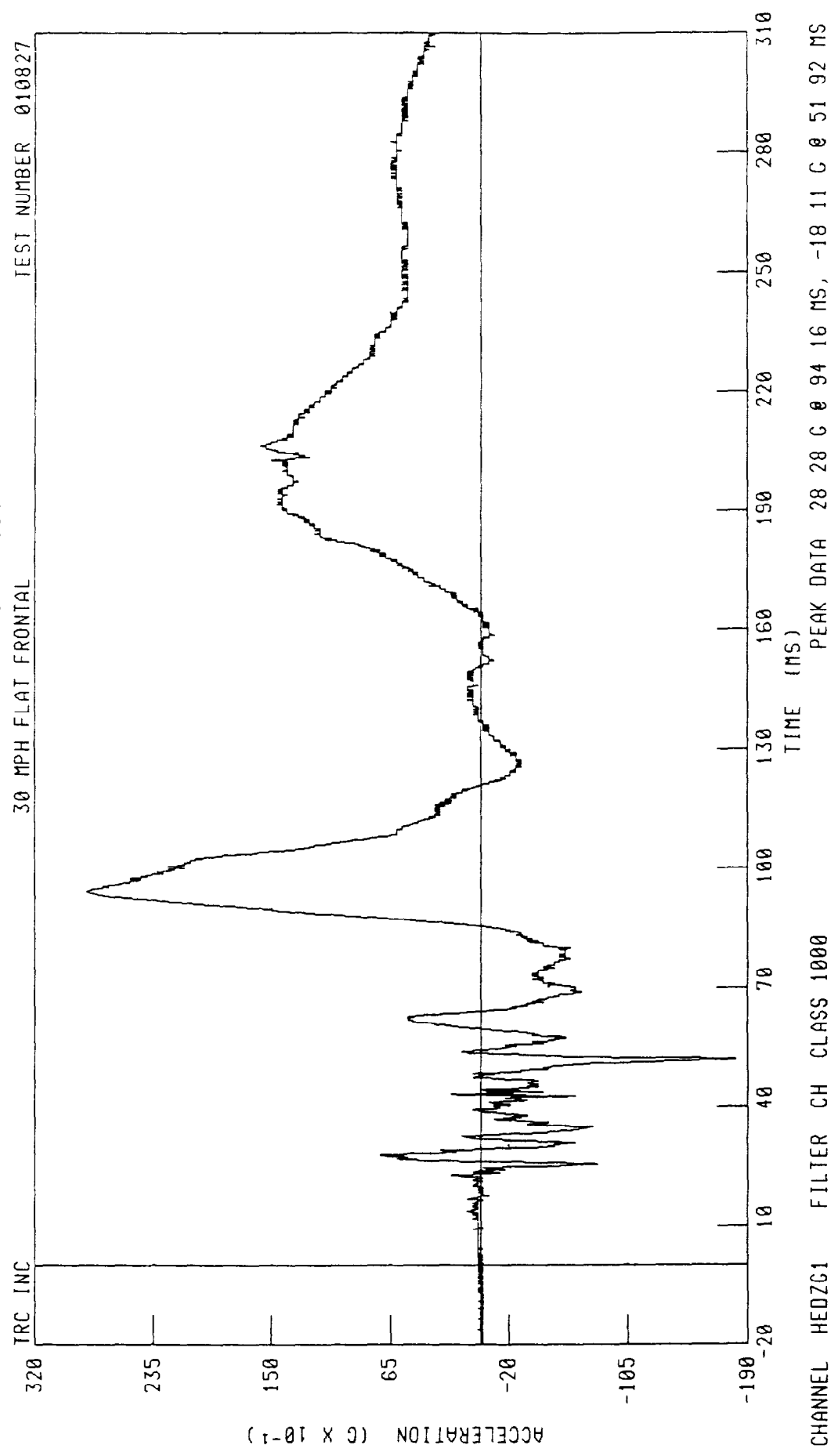
TEST NUMBER 010827



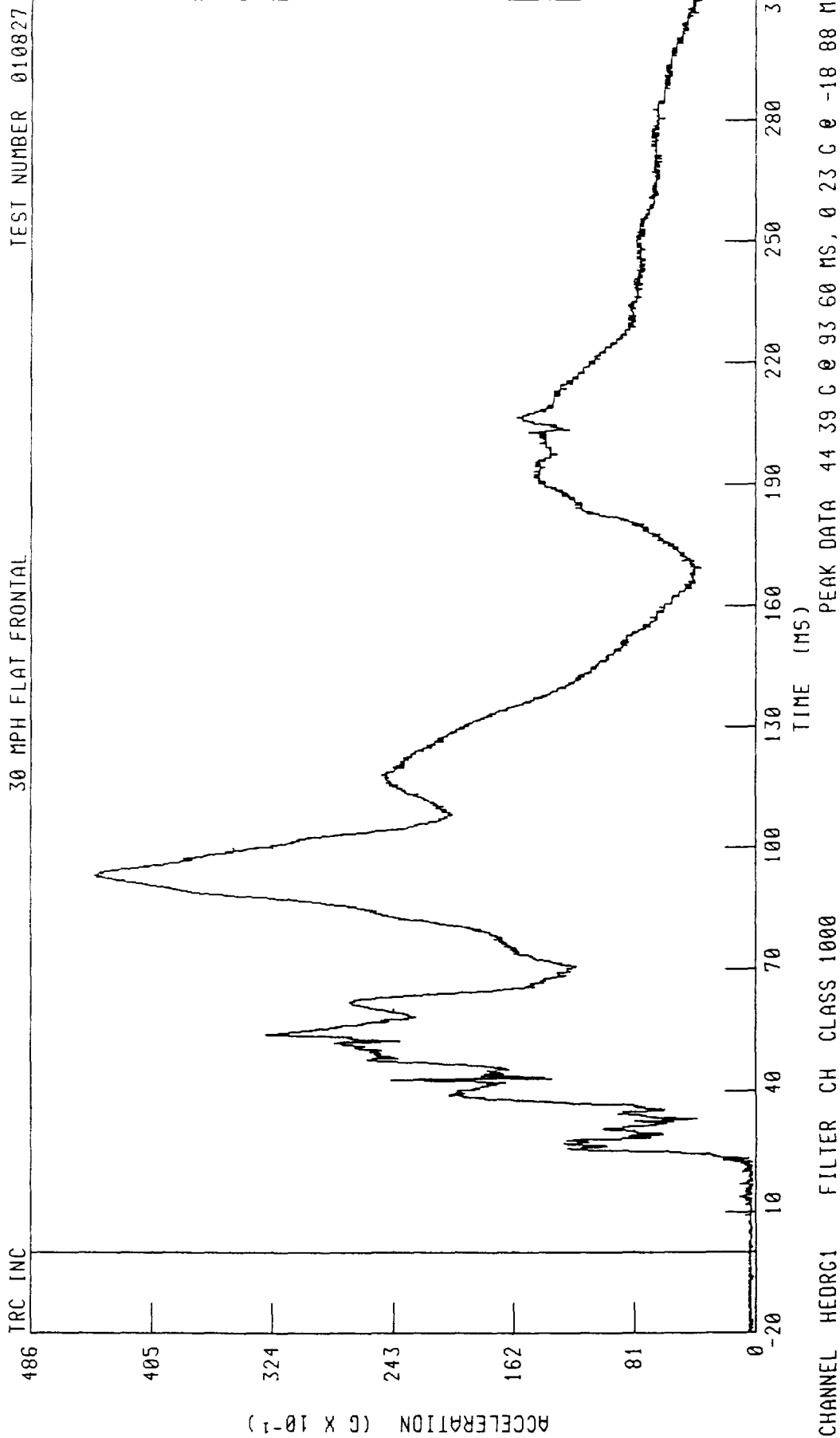
PEAK DATA 15 62 G @ 114 24 MS, -8 02 G @ 42 56 MS

CHANNEL HEDYG1 FILTER CH CLASS 1000

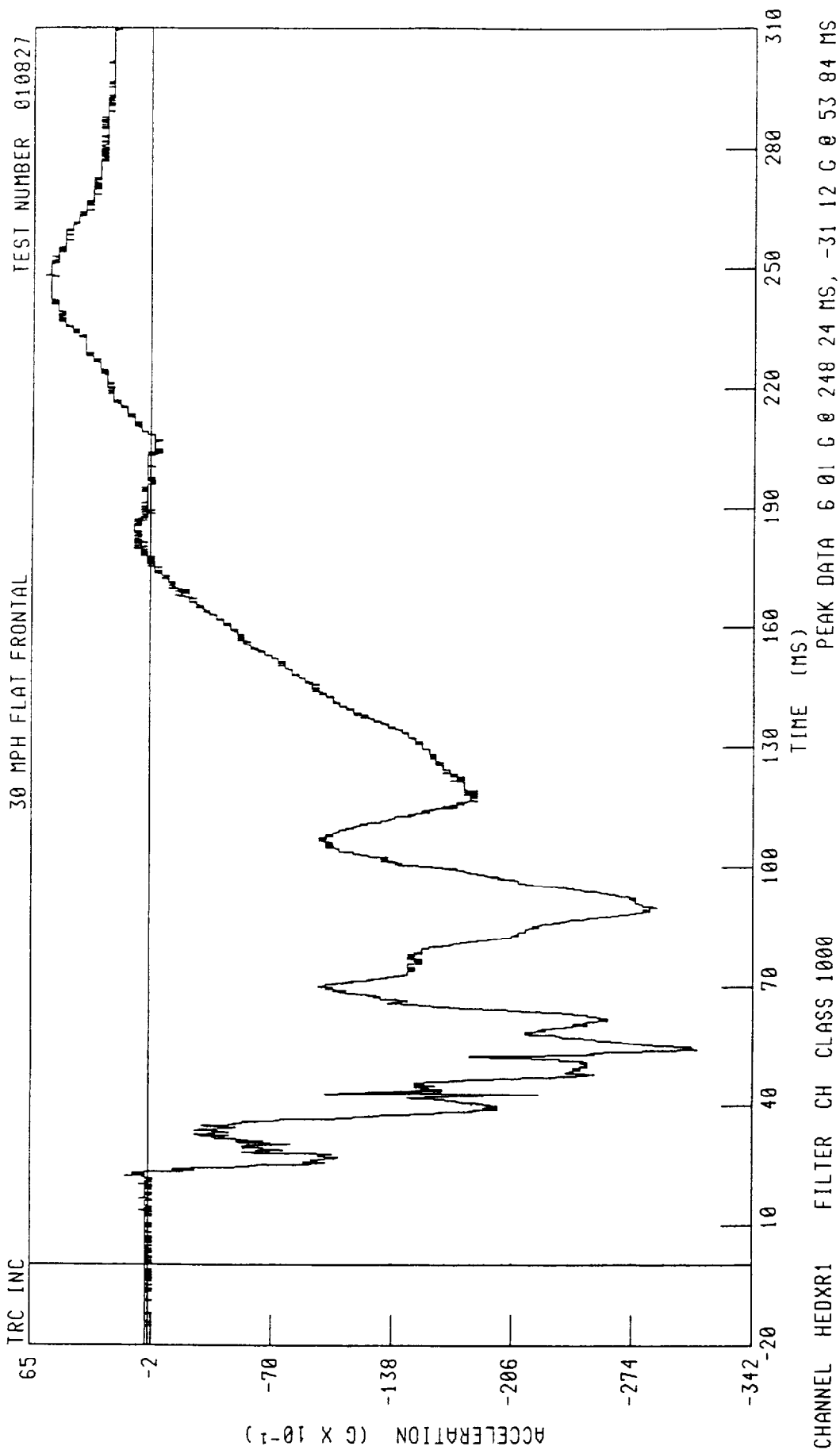
2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
DRIVER HEAD Z-AXIS ACCELERATION



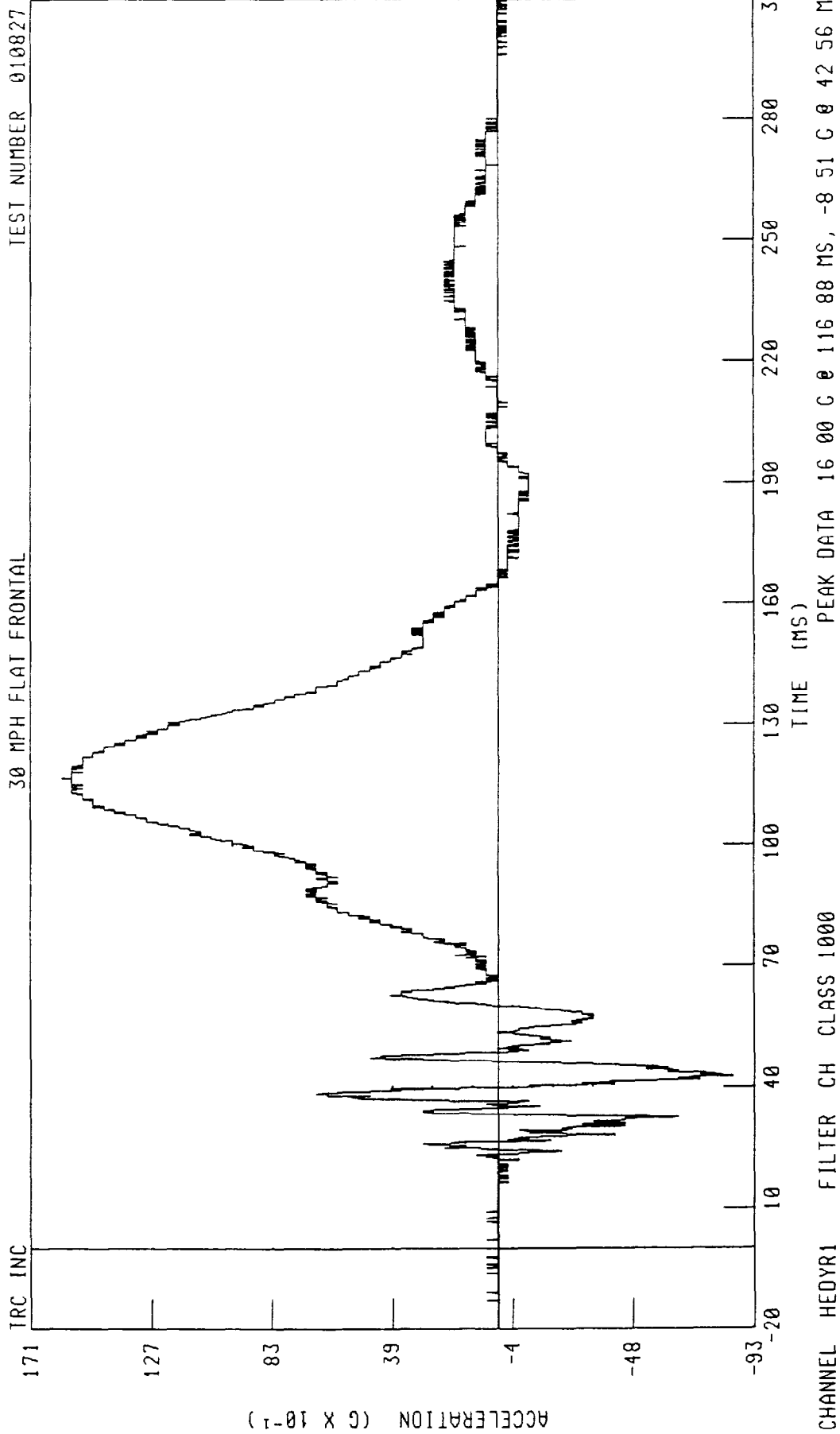
2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
DRIVER HEAD RESULTANT ACCELERATION
30 MPH FLAT FRONTAL



2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
 DRIVER HEAD X-AXIS ACCELERATION REDUNDANT



2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
DRIVER HEAD Y-AXIS ACCELERATION REDUNDANT

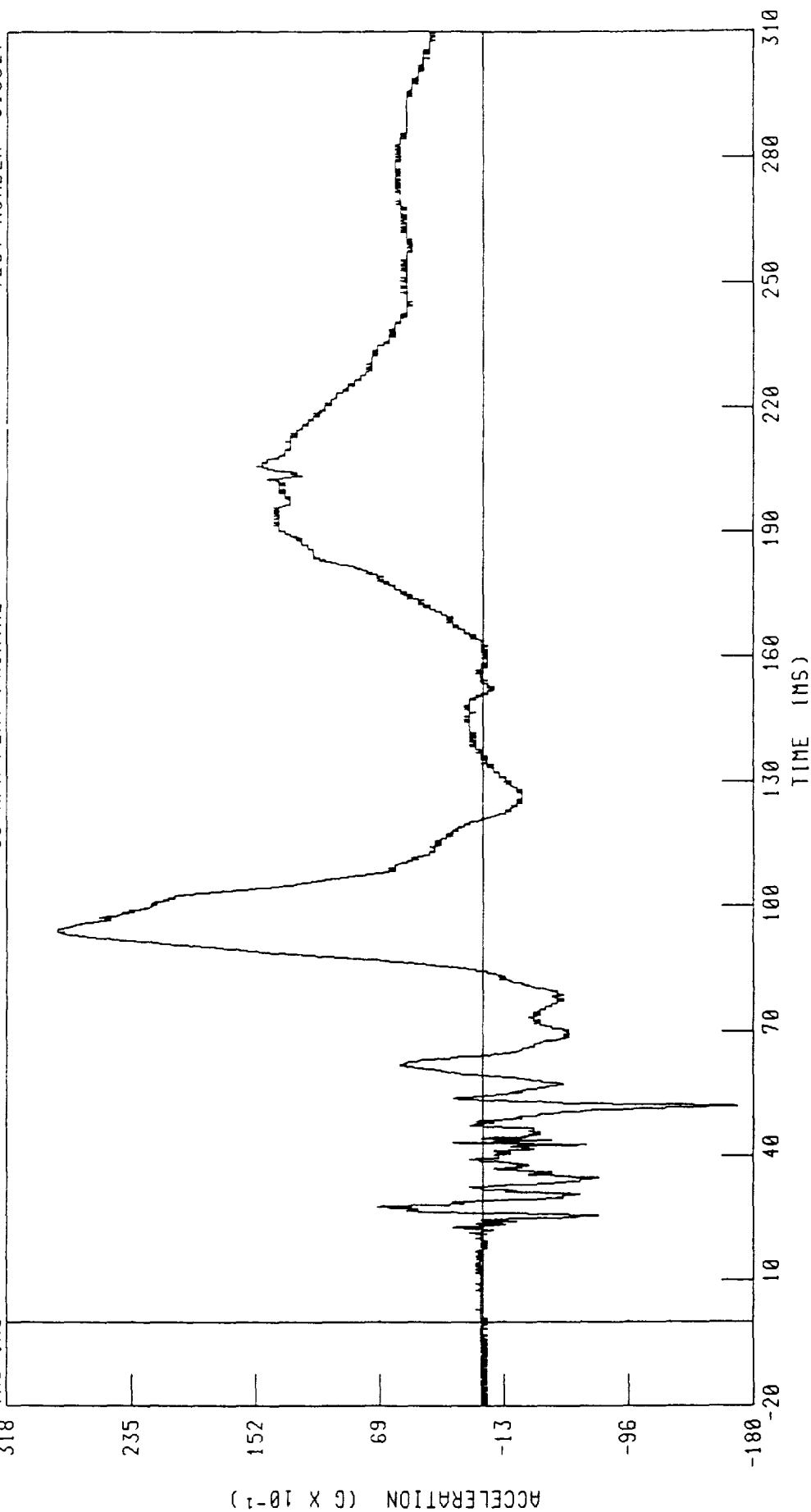


2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
DRIVER HEAD Z-AXIS ACCELERATION REDUNDANT

TRC INC

30 MPH FLAT FRONTAL

TEST NUMBER 010827



CHANNEL HEDZR1 FILTER CH CLASS 1000

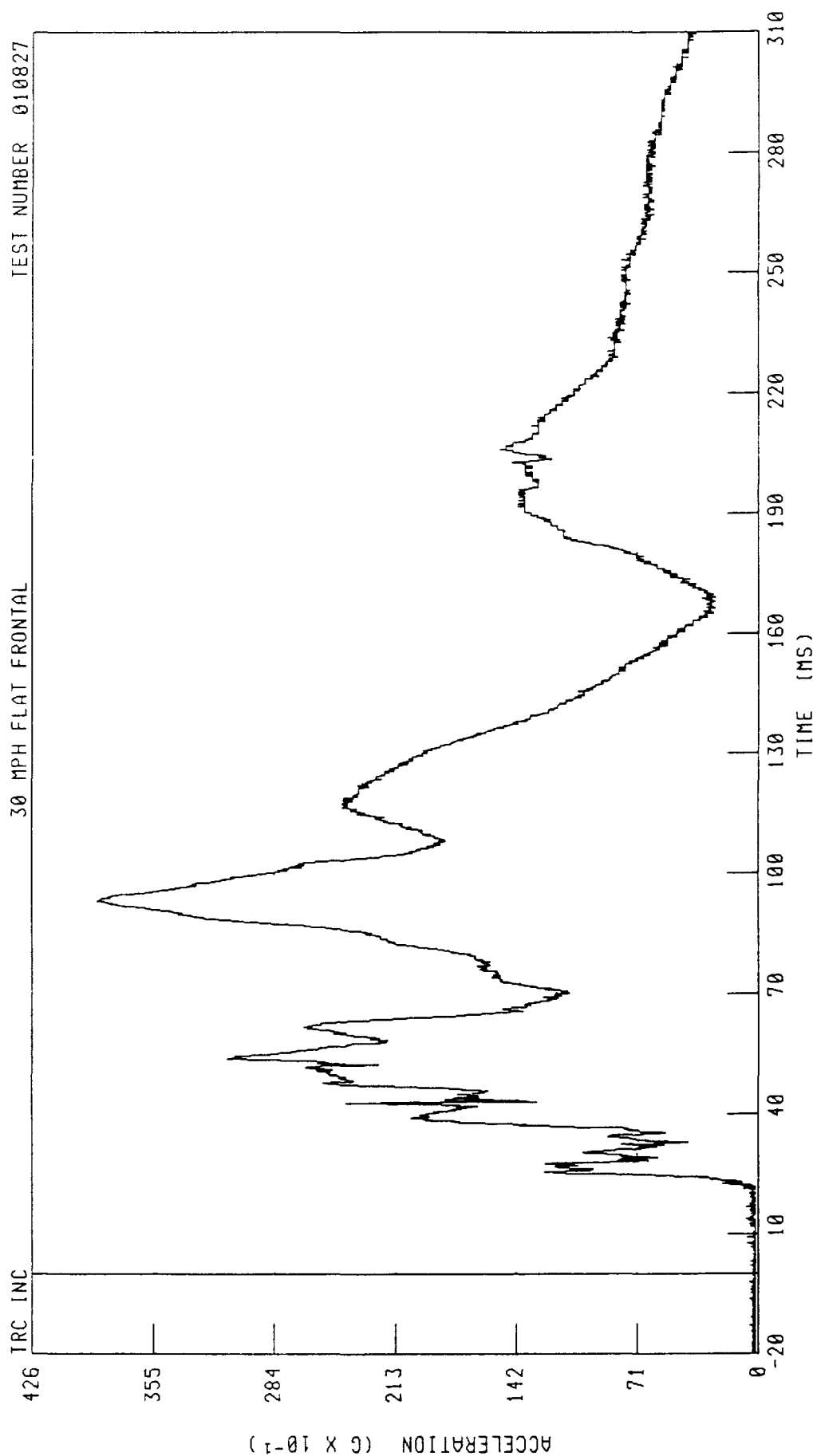
PEAK DATA 28 42 G @ 93 92 MS, -16 98 G @ 51 92 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

DRIVER HEAD RESULTANT ACCELERATION REDUNDANT

30 MPH FLAT FRONTAL

TEST NUMBER 010827



CHANNEL HEDRR1 FILTER CH CLASS 1000

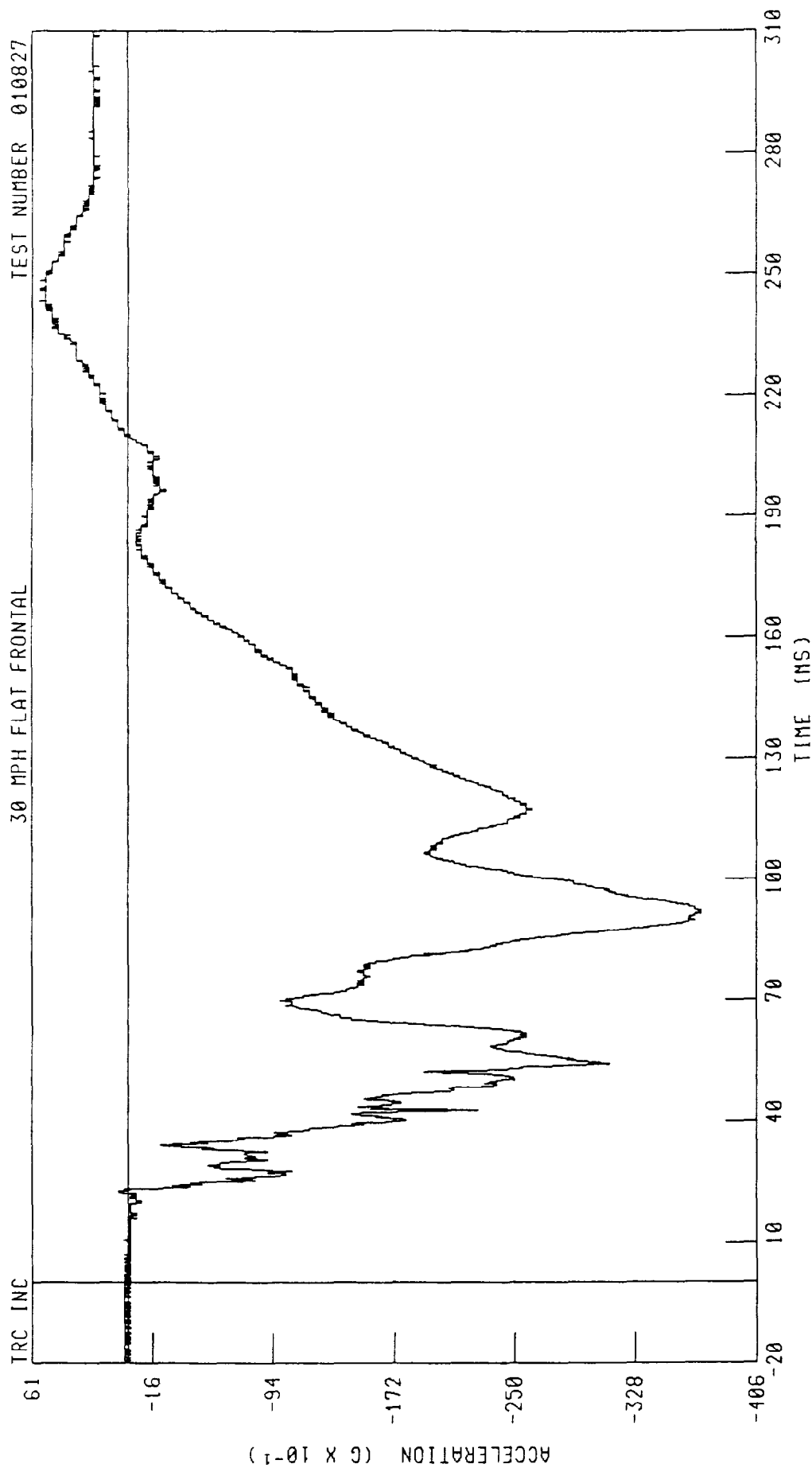
PEAK DATA 38 82 0 93 28 MS, 0 18 0 -20 00 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

DRIVER HEAD X-AXIS (LT) ACCELERATION

30 MPH FLAT FRONTAL

TEST NUMBER 010827



CHANNEL HD1XC1 FILTER CH CLASS 1000

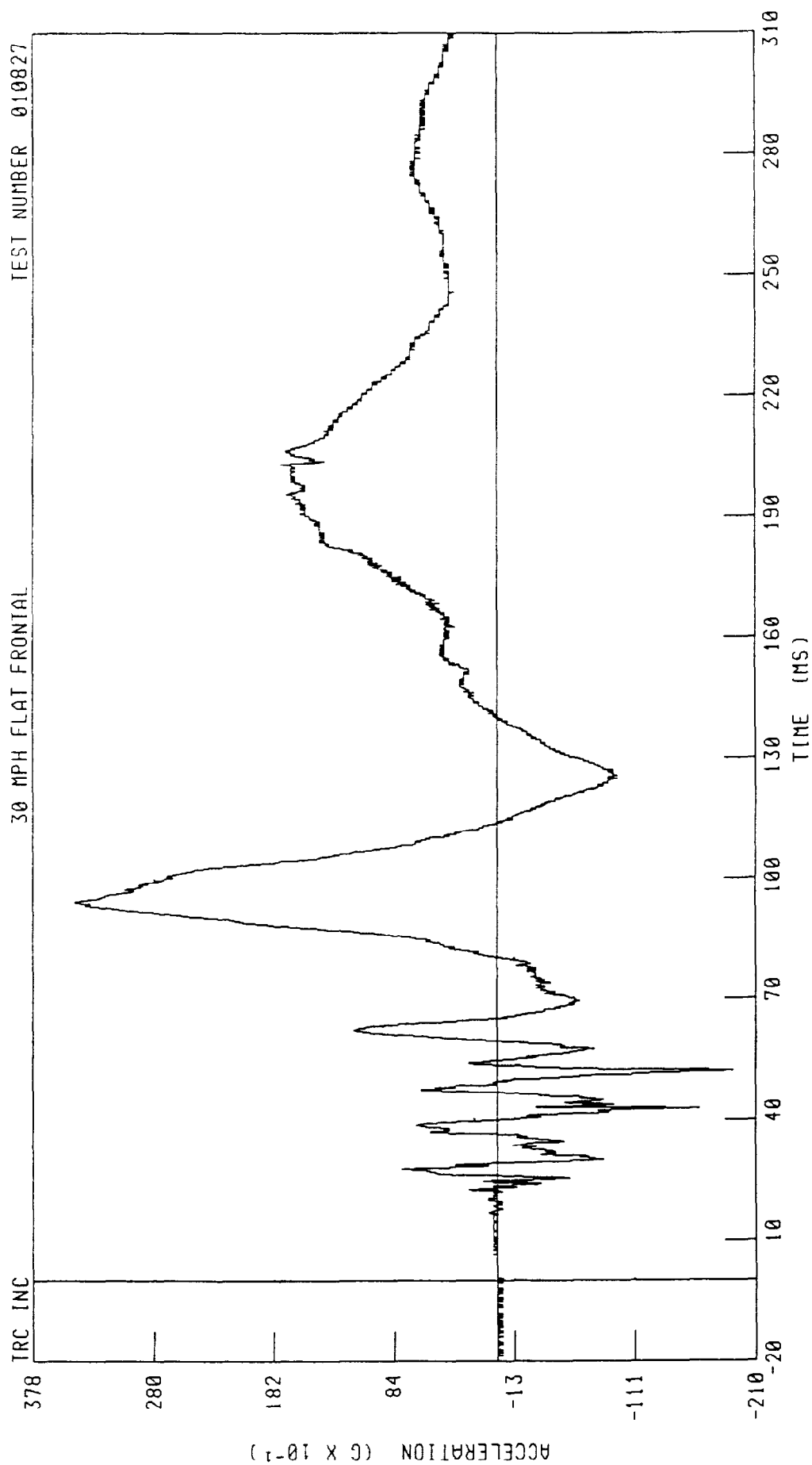
PEAK DATA 5 72 G 0 243 36 MS, -37 02 G 0 91 44 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

DRIVER HEAD Z-AXIS (LT) ACCELERATION

30 MPH FLAT FRONTAL

TEST NUMBER 010827



PEAK DATA 34 38 0 94 24 MS, -19 22 0 52 00 MS

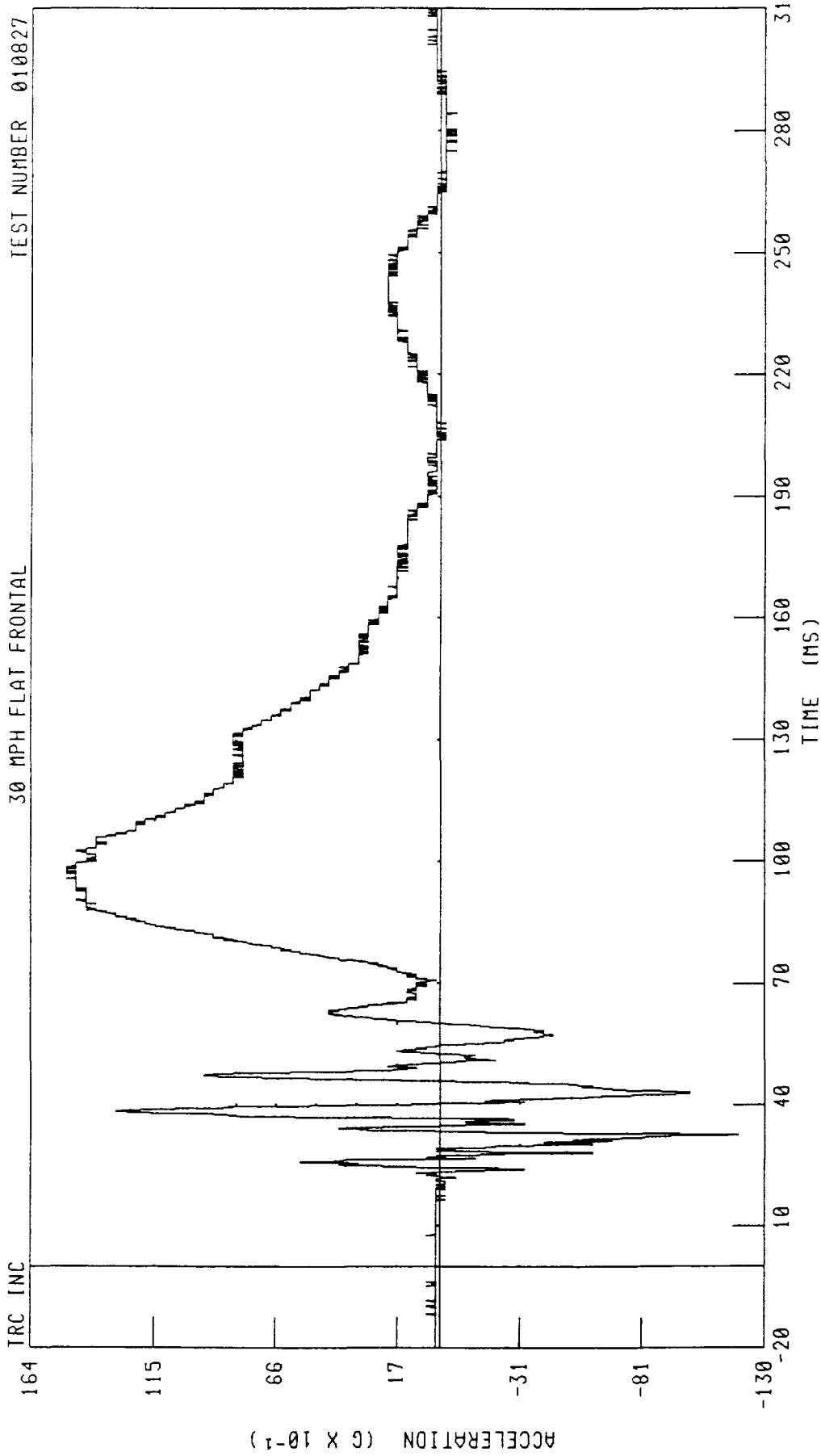
CHANNEL HD1ZG1 FILTER CH CLASS 1000

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

DRIVER HEAD Y-AXIS (FT) ACCELERATION

30 MPH FLAT FRONTAL

TEST NUMBER 010827



PEAK DATA 15 00 G @ 95 84 MS, -11 97 G @ 32 48 MS

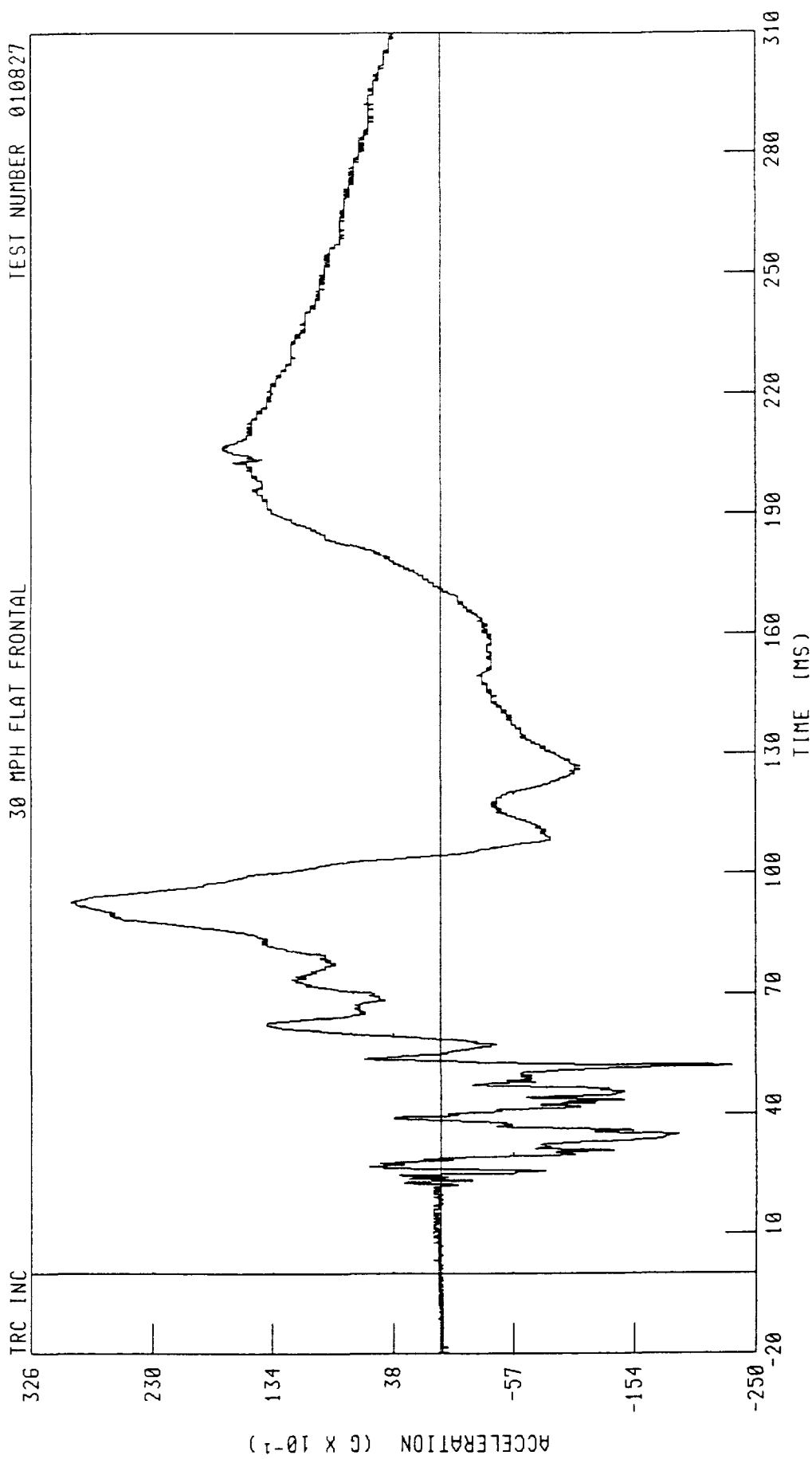
CHANNEL HD2YG1 FILTER CH CLASS 1000

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

DRIVER HEAD Z-AXIS (FT) ACCELERATION

30 MPH FLAT FRONTAL

TEST NUMBER 010827



CHANNEL HD2ZG1 FILTER CH CLASS 1000

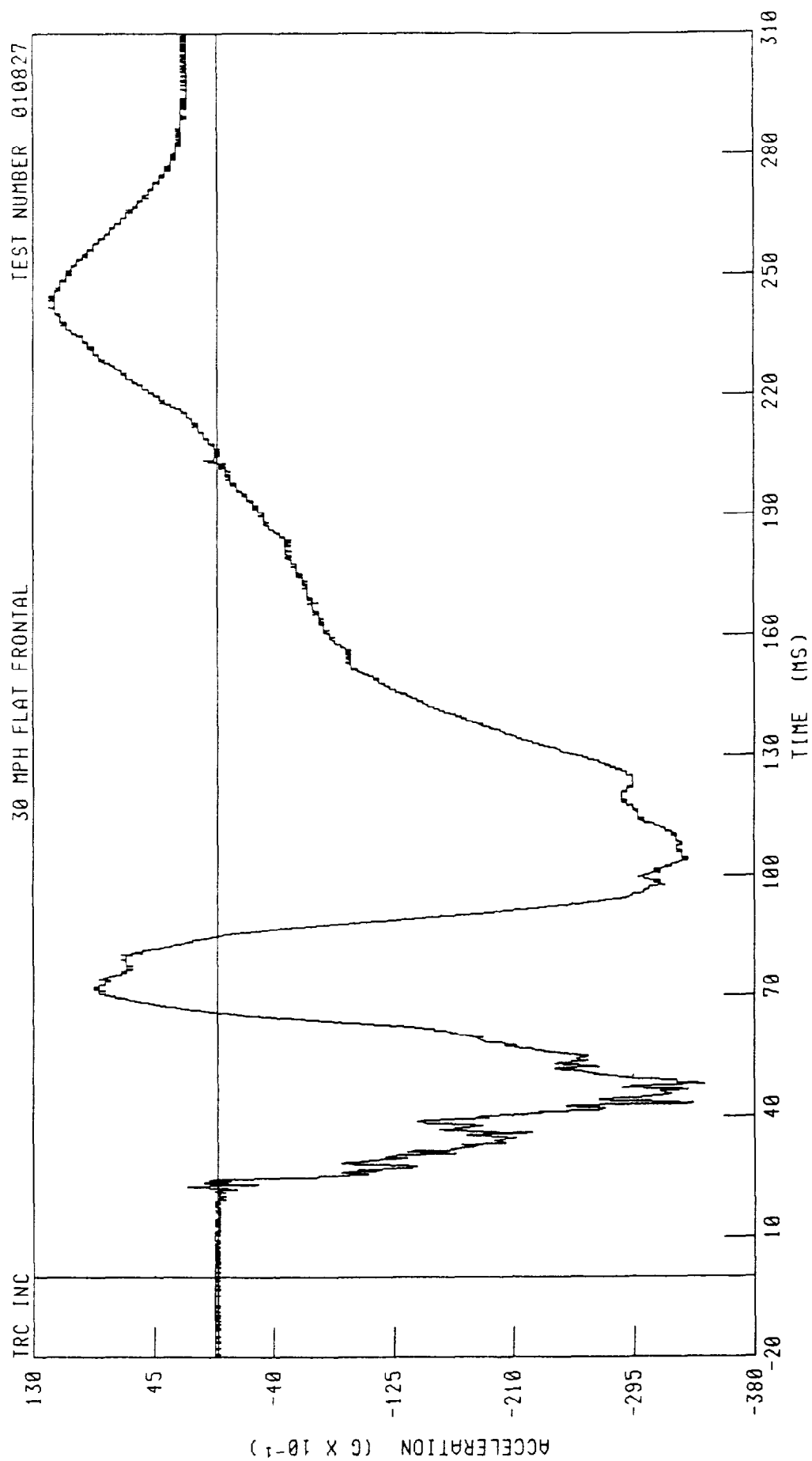
PEAK DATA 29 47 G 92 96 MS, -23 17 G 52 08 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

DRIVER HEAD X-AXIS (TP) ACCELERATION

30 MPH FLAT FRONTAL

TEST NUMBER 010827



PEAK DATA 11 91 C @ 241 76 MS, -34 49 C @ 48 00 MS

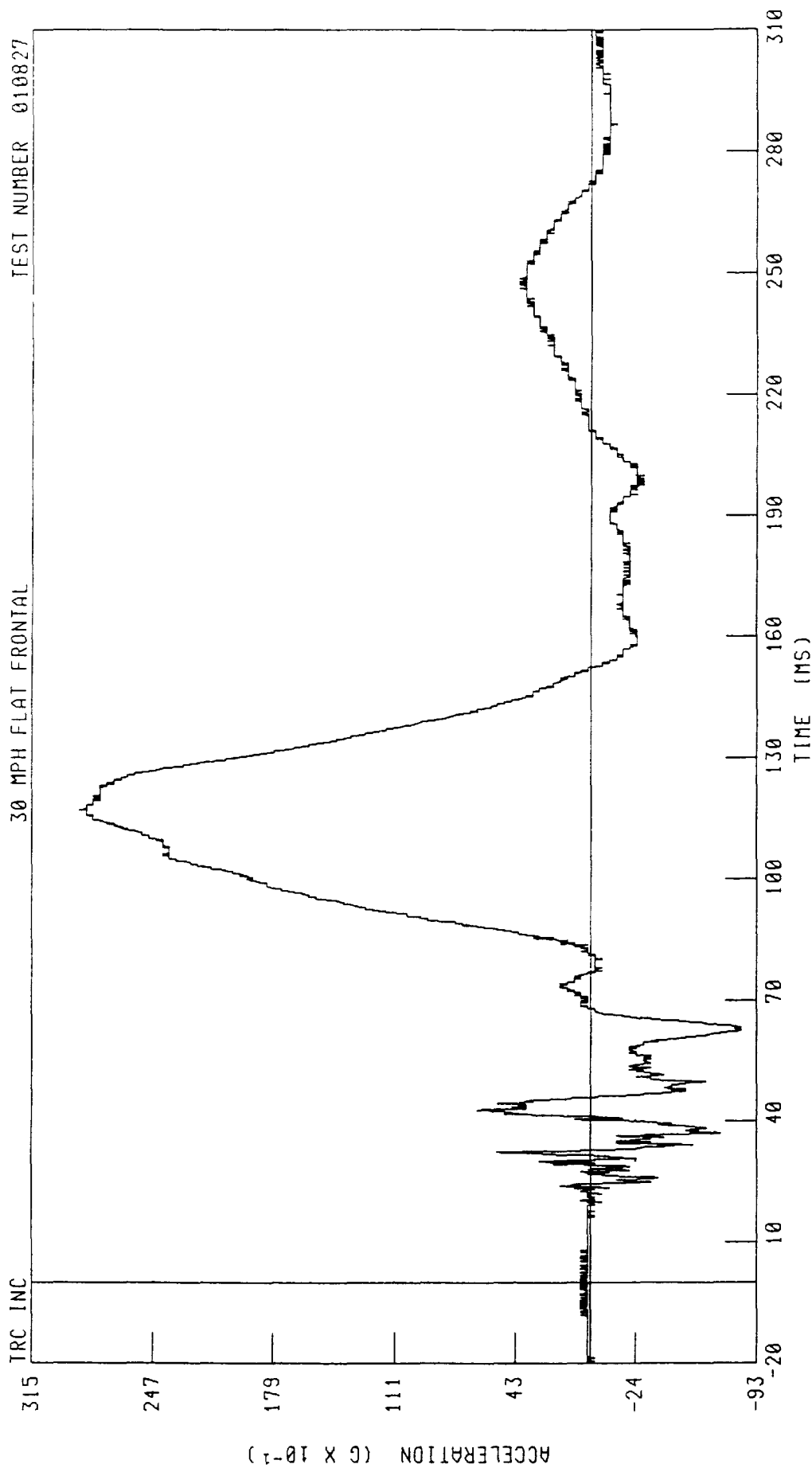
CHANNEL HD3XC1 FILTER CH CLASS 1000

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

DRIVER HEAD Y-AXIS (TP) ACCELERATION

30 MPH FLAT FRONTAL

TEST NUMBER 010827



CHANNEL HD3YG1 FILTER CH CLASS 1000

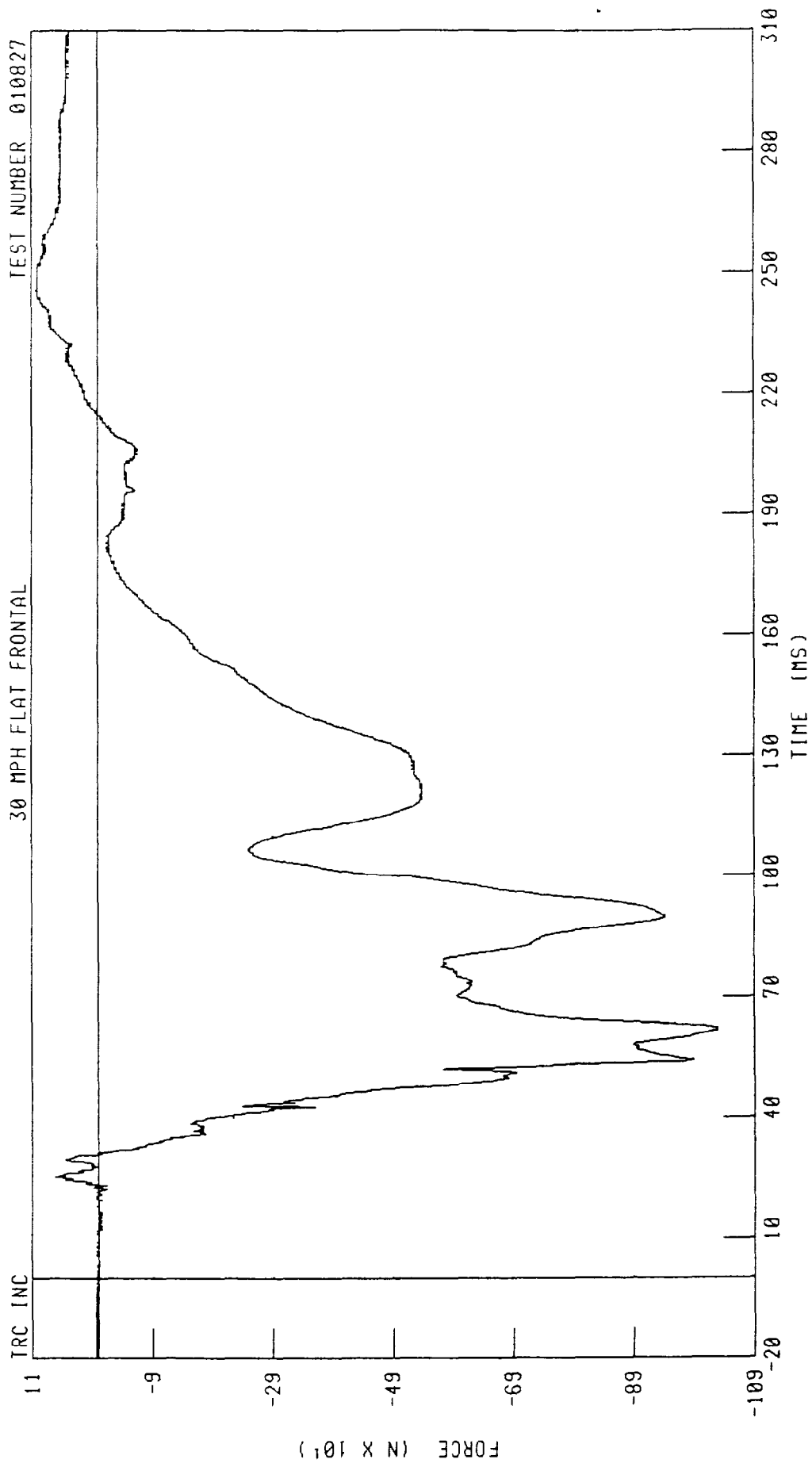
PEAK DATA 28 88 G @ 117 44 MS, -8 47 G @ 62 40 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

DRIVER NECK X-AXIS SHEAR FORCE

30 MPH FLAT FRONTAL

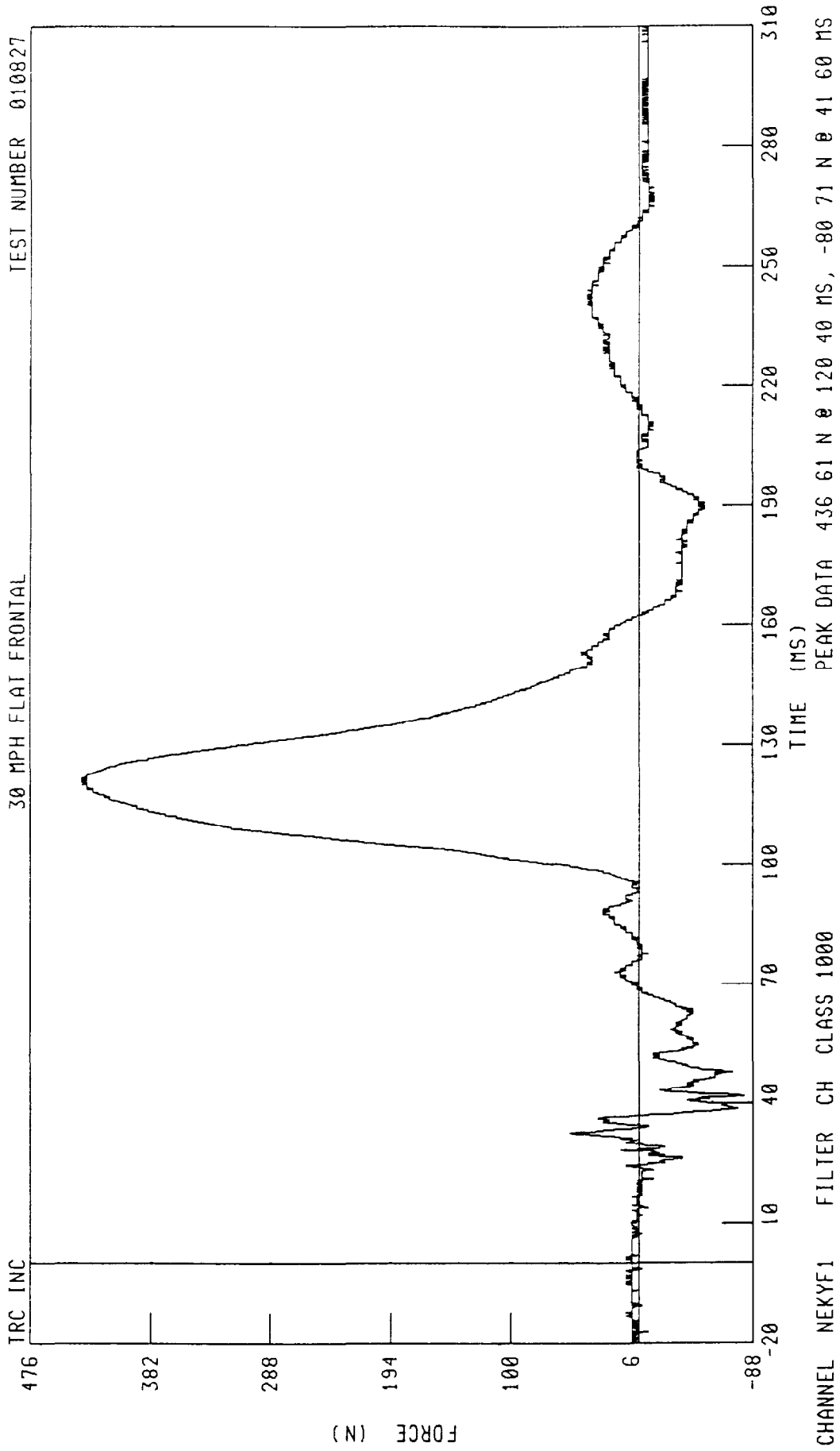
TEST NUMBER 010827



PEAK DATA 104 16 N @ 245 92 MS, -1029 91 N @ 61 60 MS

CHANNEL NEKXF1 FILTER CH CLASS 1000

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
DRIVER NECK Y-AXIS SHEAR FORCE

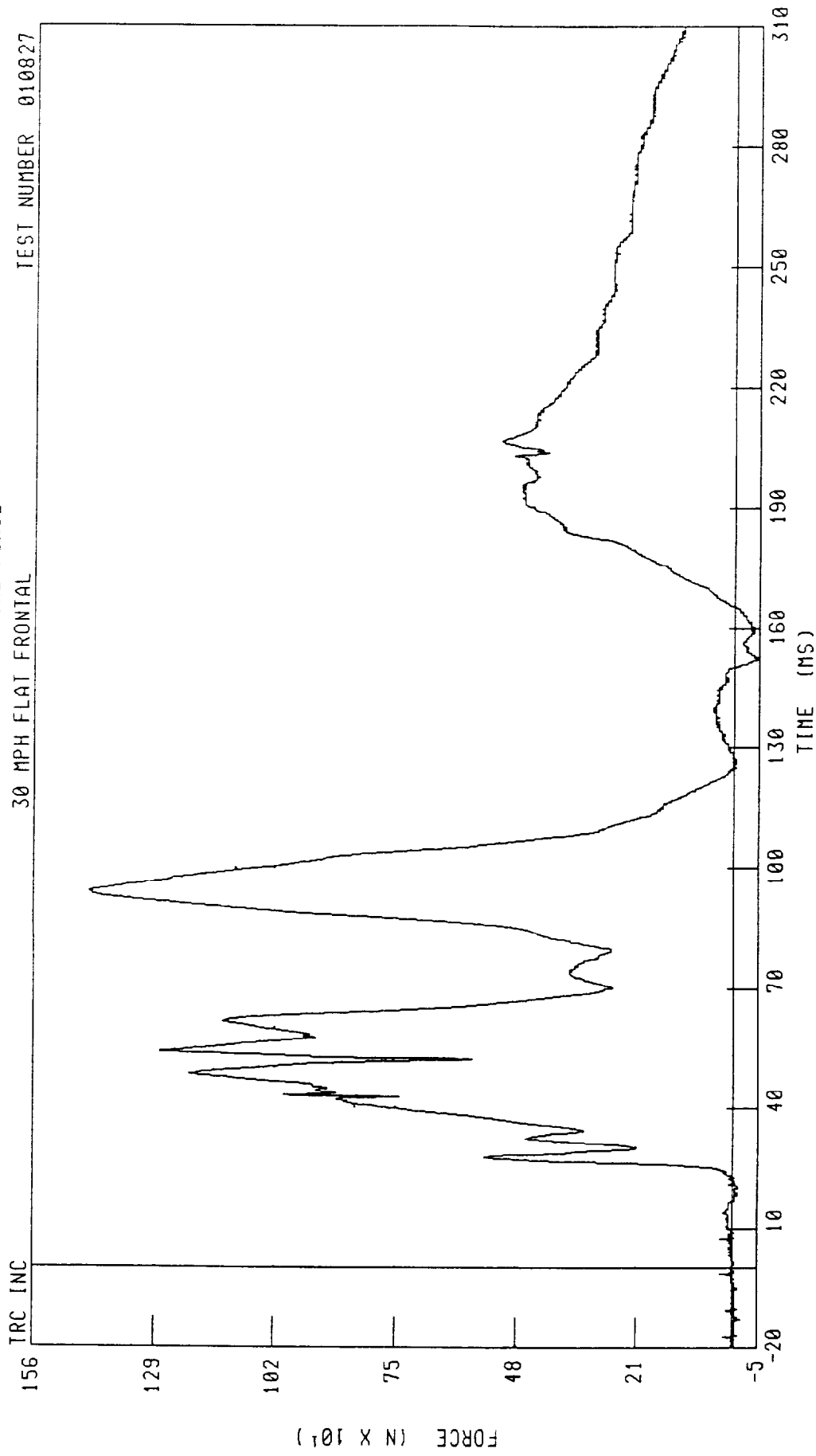


2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

DRIVER NECK Z-AXIS AXIAL FORCE

30 MPH FLAT FRONTAL

TEST NUMBER 010827



CHANNEL NEKZF1 FILTER CH CLASS 1000

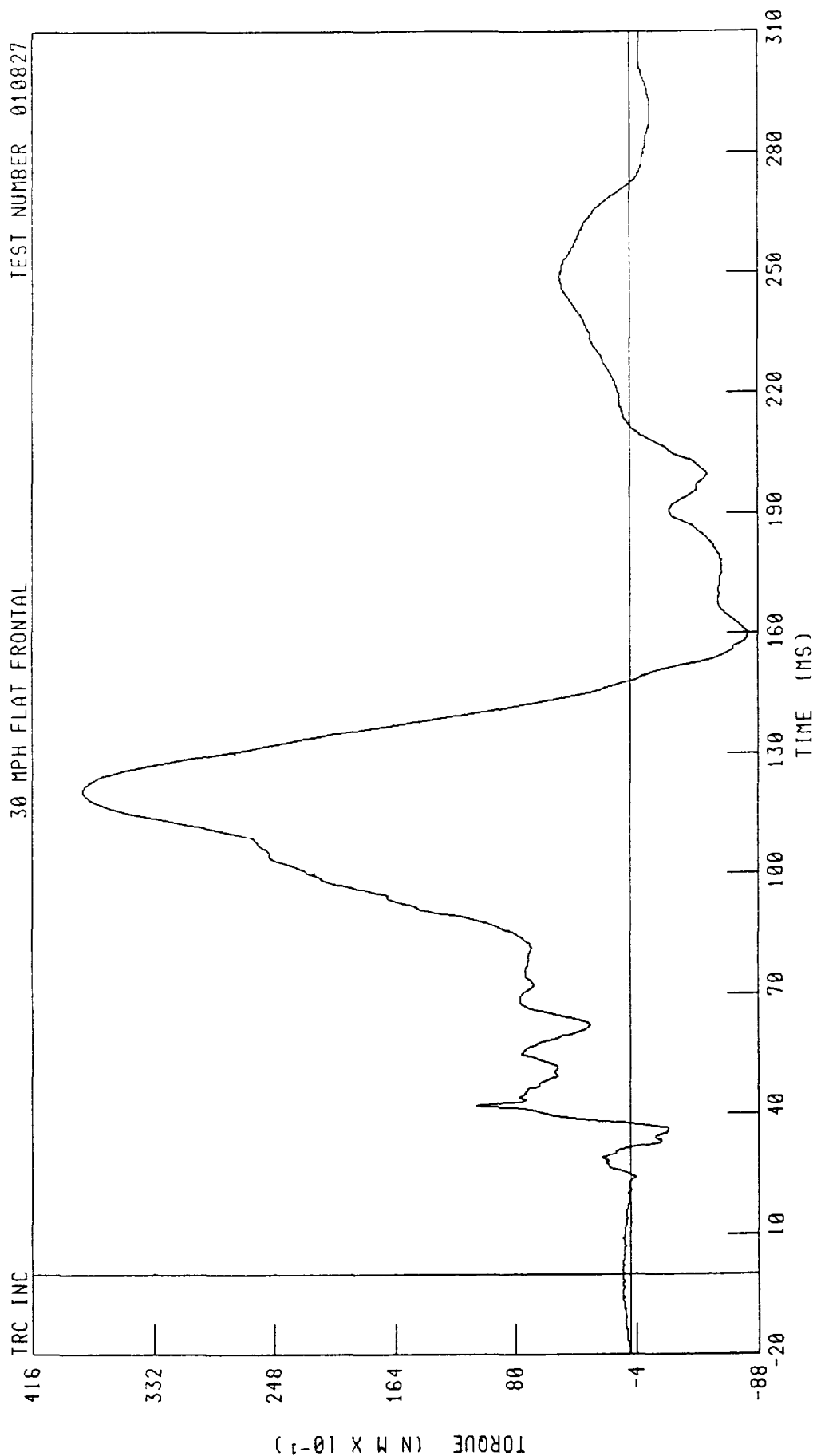
PEAK DATA 1441 70 N @ 94 00 MS, -50 76 N @ 152 24 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

DRIVER NECK MOMENT ABOUT X AXIS

30 MPH FLAT FRONTAL

TEST NUMBER 010827



PEAK DATA 38 14 N M @ 120 96 MS, -8 08 N M @ 159 04 MS

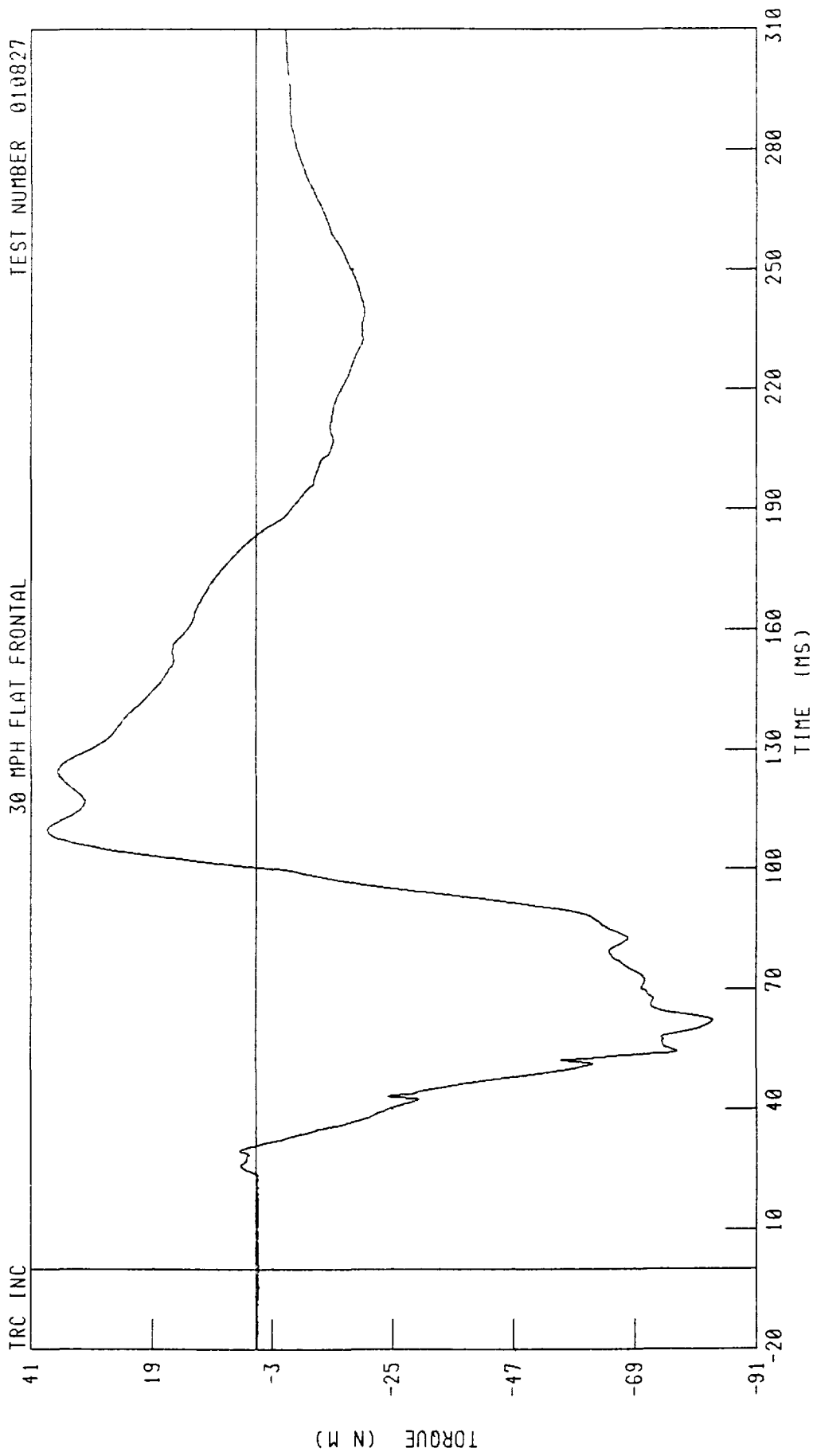
CHANNEL NEKXM1 FILTER CH CLASS 600

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

DRIVER NECK MOMENT ABOUT Y AXIS

30 MPH FLAT FRONTAL

TEST NUMBER 010827



PEAK DATA 37 99 N M @ 110 24 MS, -83 13 N M @ 62 08 MS

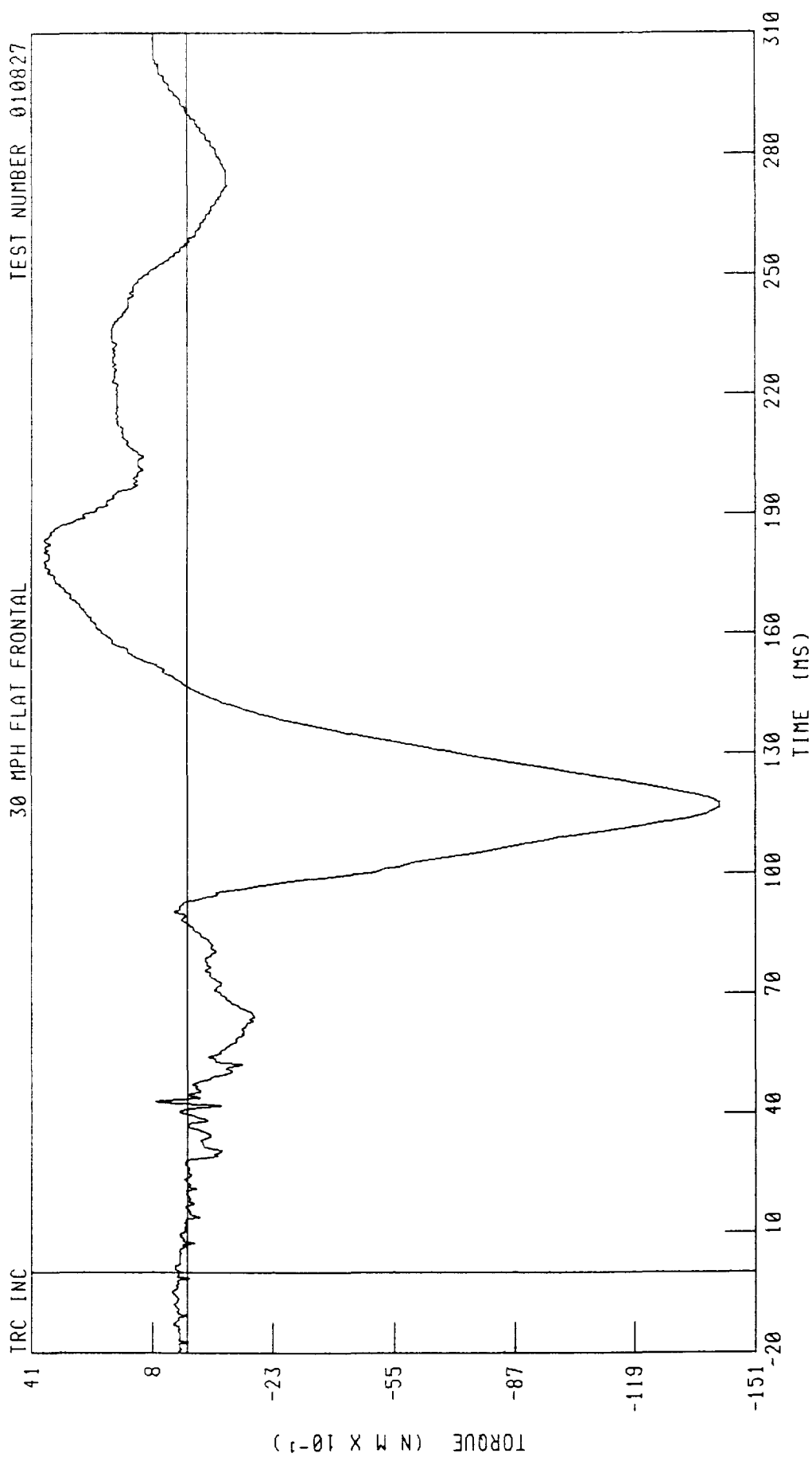
CHANNEL NEKYM1 FILTER CH CLASS 600

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

DRIVER NECK MOMENT ABOUT Z AXIS

30 MPH FLAT FRONTAL

TEST NUMBER 010827



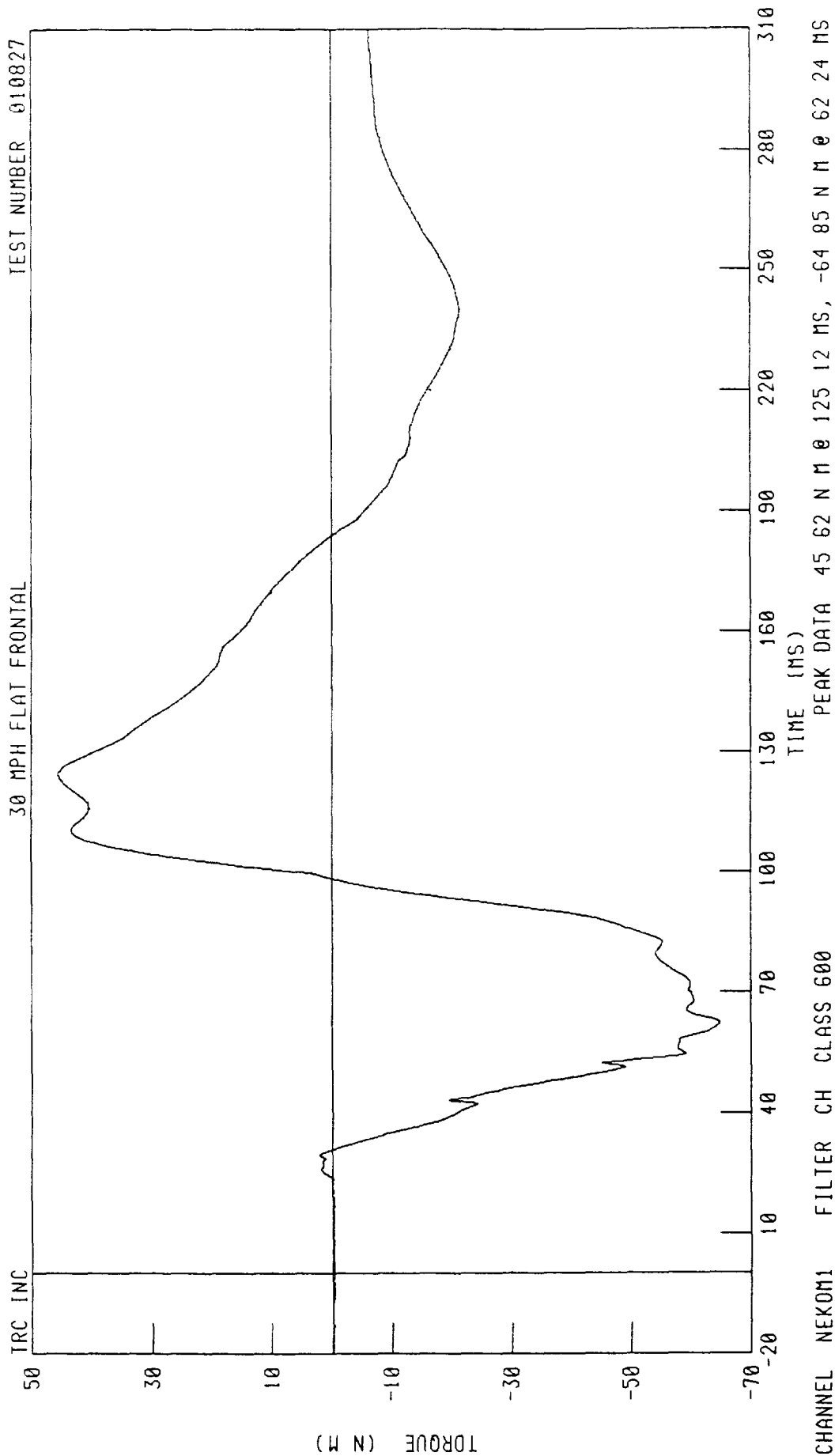
TIME (MS)

PEAK DATA 3 78 N M @ 183 52 MS, -14 16 N M @ 116 64 MS

CHANNEL NEKZM1 FILTER CH CLASS 600

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
DRIVER NECK OCCIPITAL CONDYLE MOMENT ABOUT Y AXIS

30 MPH FLAT FRONTAL TEST NUMBER 010827



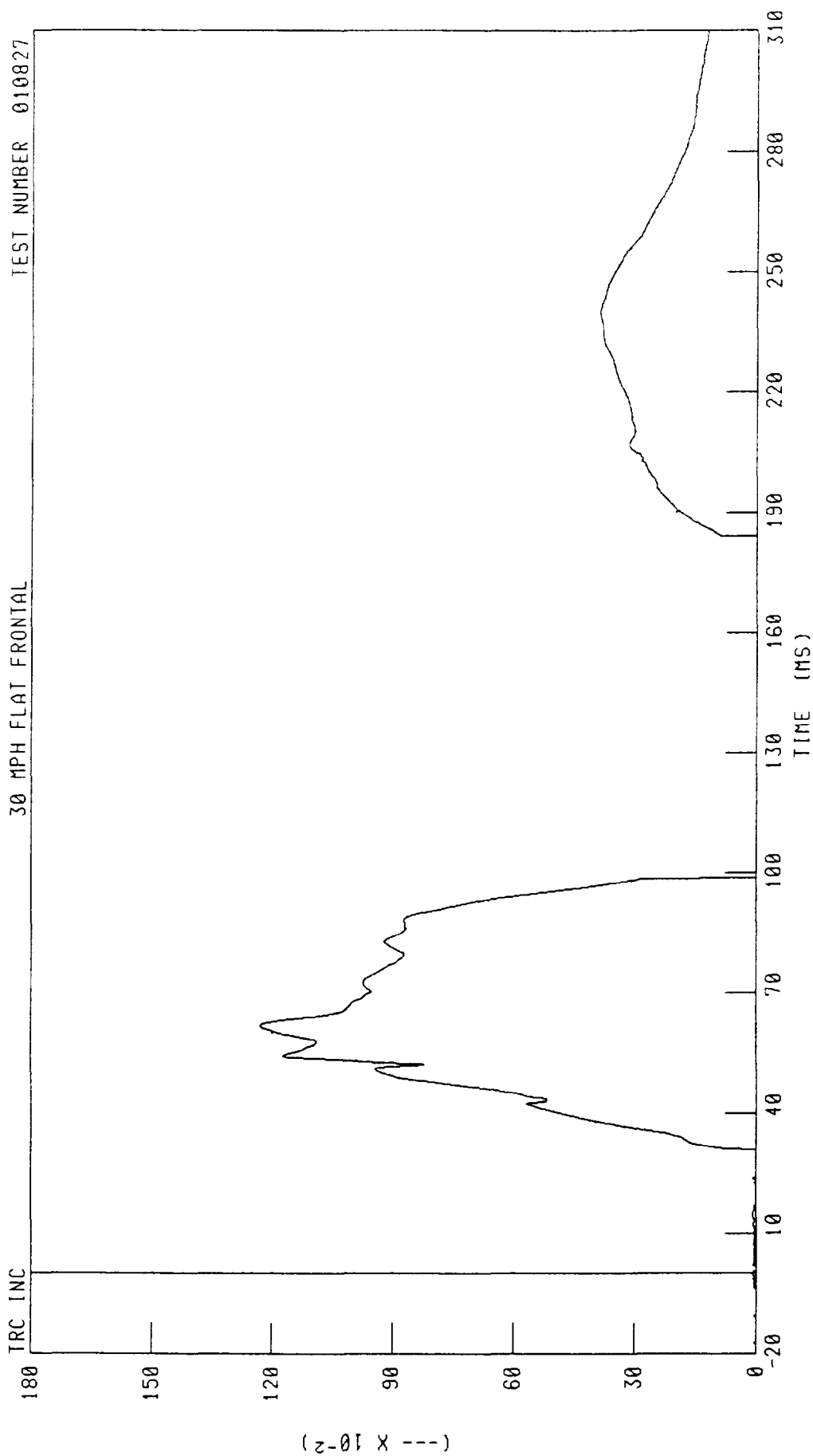
CHANNEL NEKOM1 FILTER CH CLASS 600

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

DRIVER NECK TENSION/EXTENSION

30 MPH FLAT FRONTAL

TEST NUMBER 010827



CHANNEL NTE1 FILTER CH CLASS 600

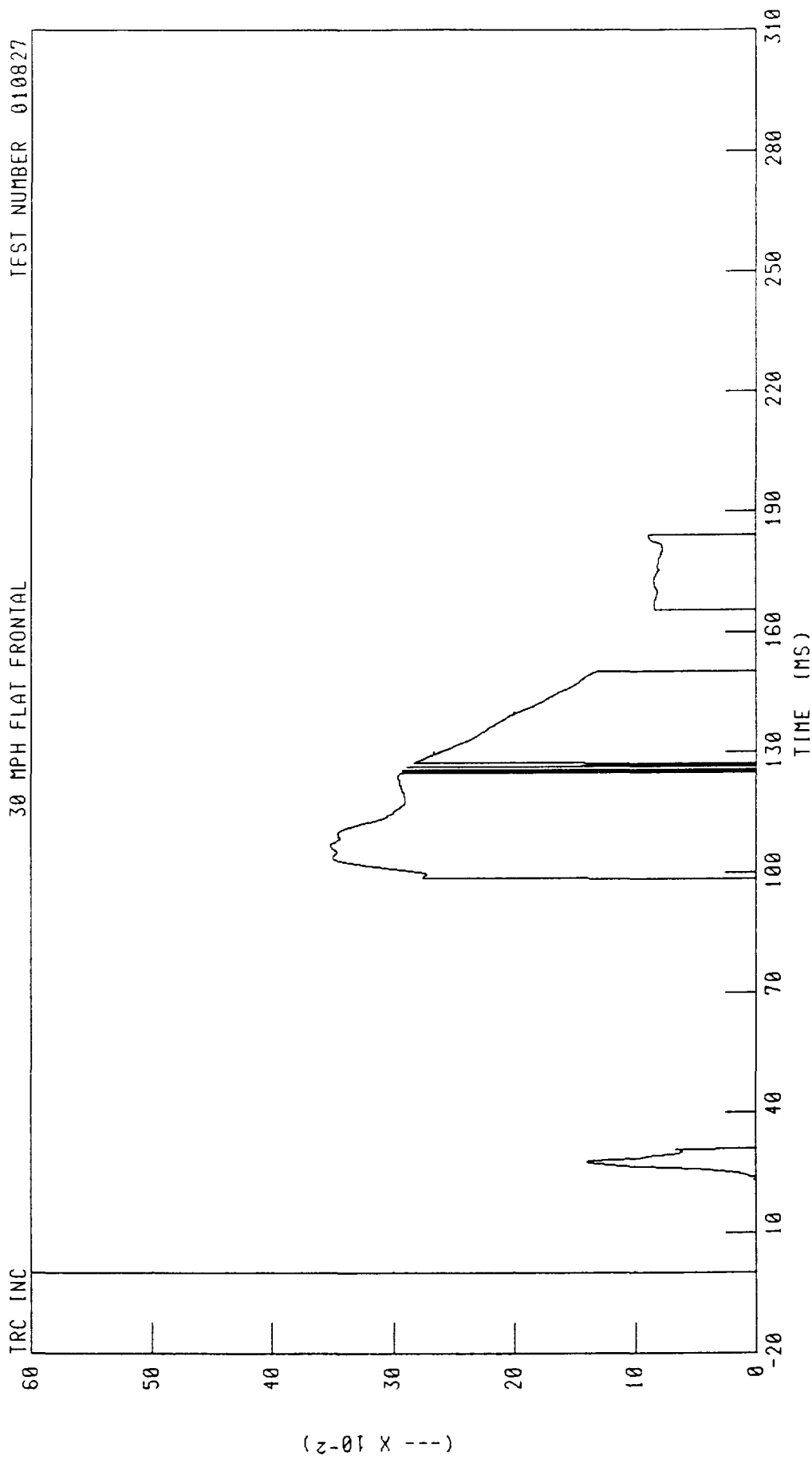
PEAK DATA 1 23 --- 0 61 92 MS, 0 00 --- 0 -20 00 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

DRIVER NECK TENSION/FLEXION

30 MPH FLAT FRONTAL

TEST NUMBER 010827



PEAK DATA 0 35 --- 0 107 20 MS, 0 00 --- 0 -20 00 MS

CHANNEL NTF1 FILTER CH CLASS 600

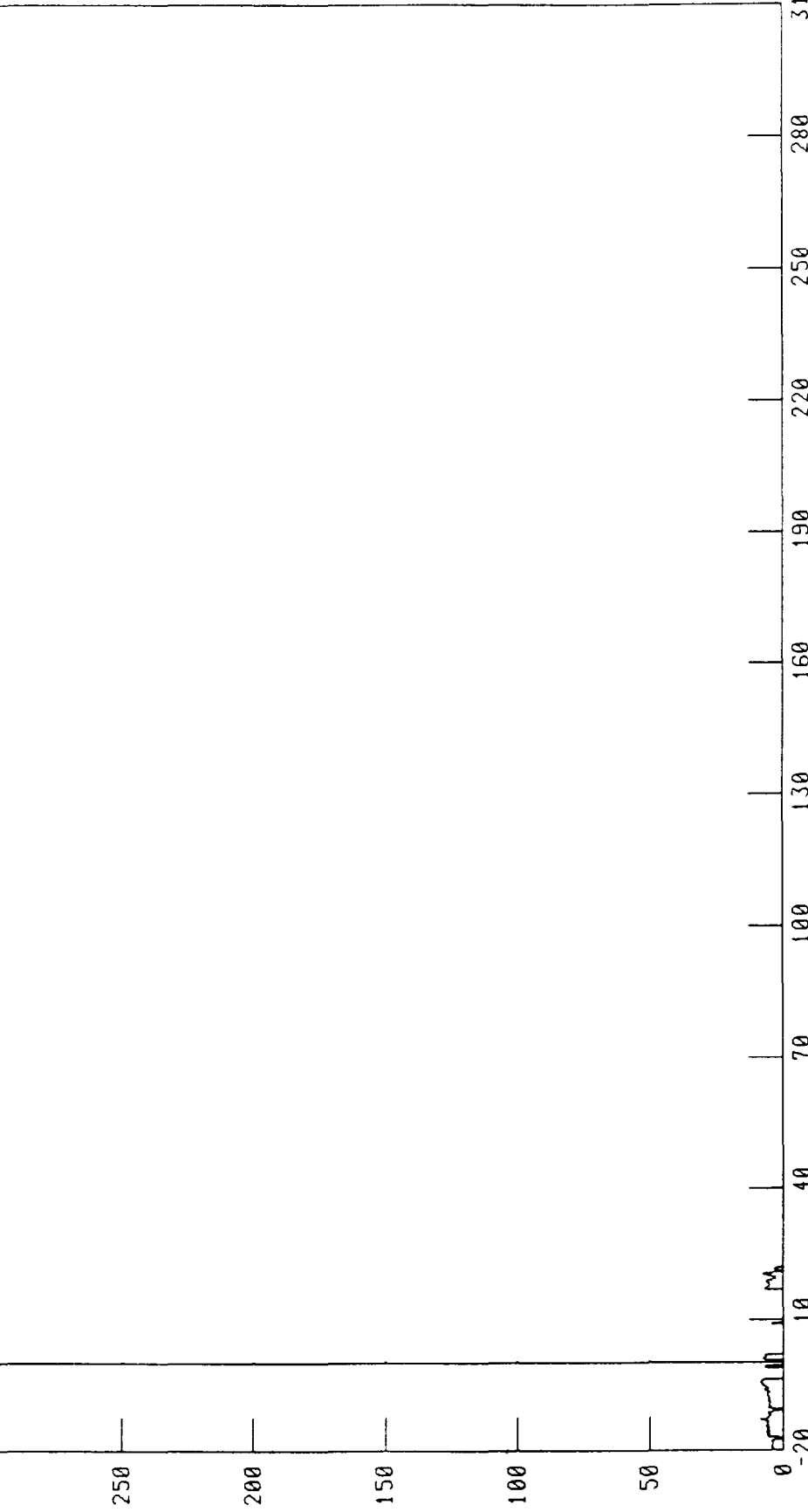
2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

DRIVER NECK COMPRESSION/EXTENSION

30 MPH FLAT FRONTAL

TEST NUMBER 010827

TRC INC



TIME (MS)

PEAK DATA 0 01 --- 0 -13 04 MS, 0 00 --- 0 -17 52 MS

CHANNEL NCE1 FILTER CH CLASS 600

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
 DRIVER NECK COMPRESSION/FLEXION

TEST NUMBER 010827

30 MPH FLAT FRONTAL

TRC INC

300

250

200

150

100

50

0

(--- X 10⁻³)

TIME (MS)

130

100

70

40

10

-20

310

280

250

220

190

160

130

100

70

40

10

-20

310

280

250

220

190

160

130

100

70

40

10

-20

310

280

250

220

190

160

130

100

70

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-20

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10

-20

310

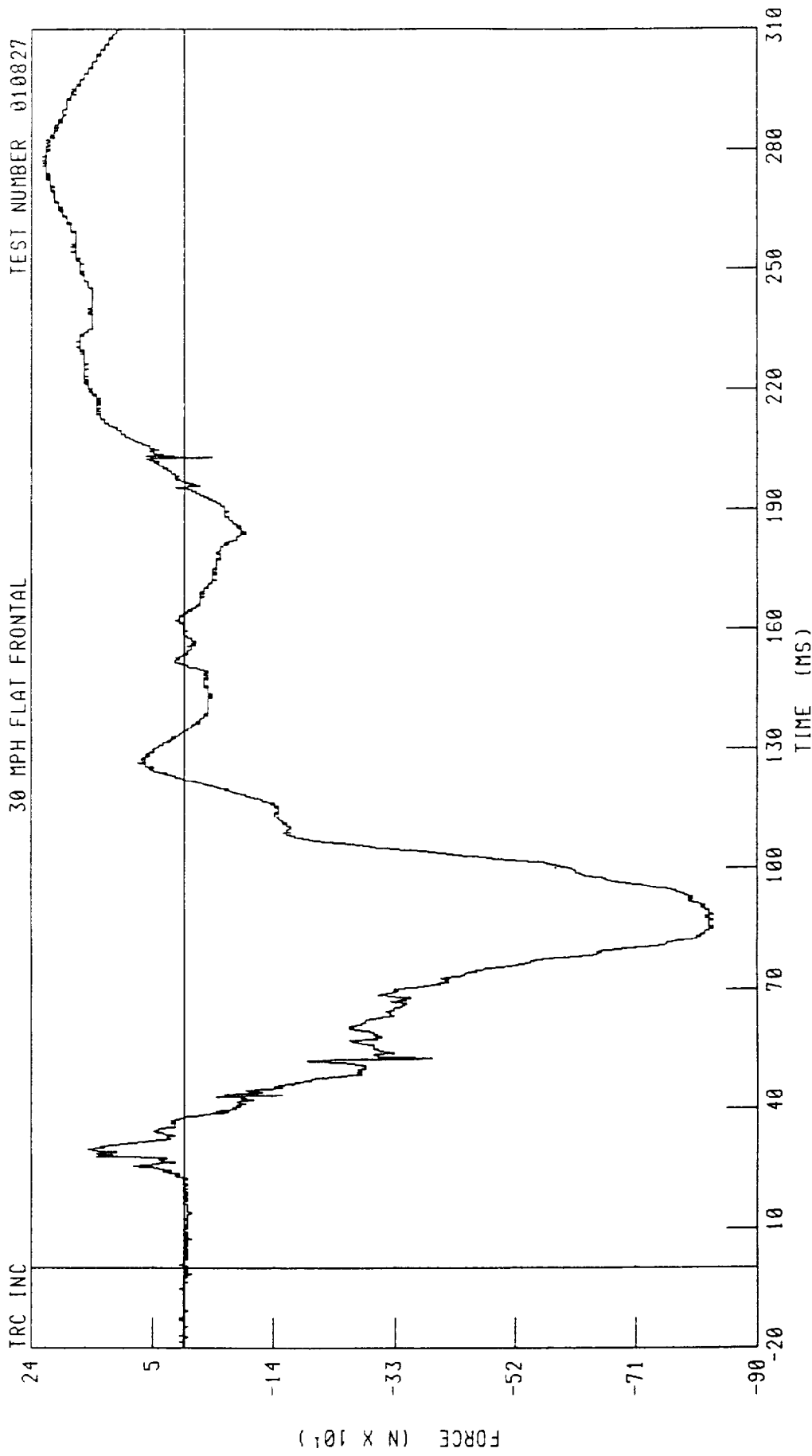
280

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

DRIVER NECK LOWER X-AXIS SHEAR FORCE

30 MPH FLAT FRONTAL

TEST NUMBER 010827



PEAK DATA 224 07 N @ 275 84 MS, -830 99 N @ 85 20 MS

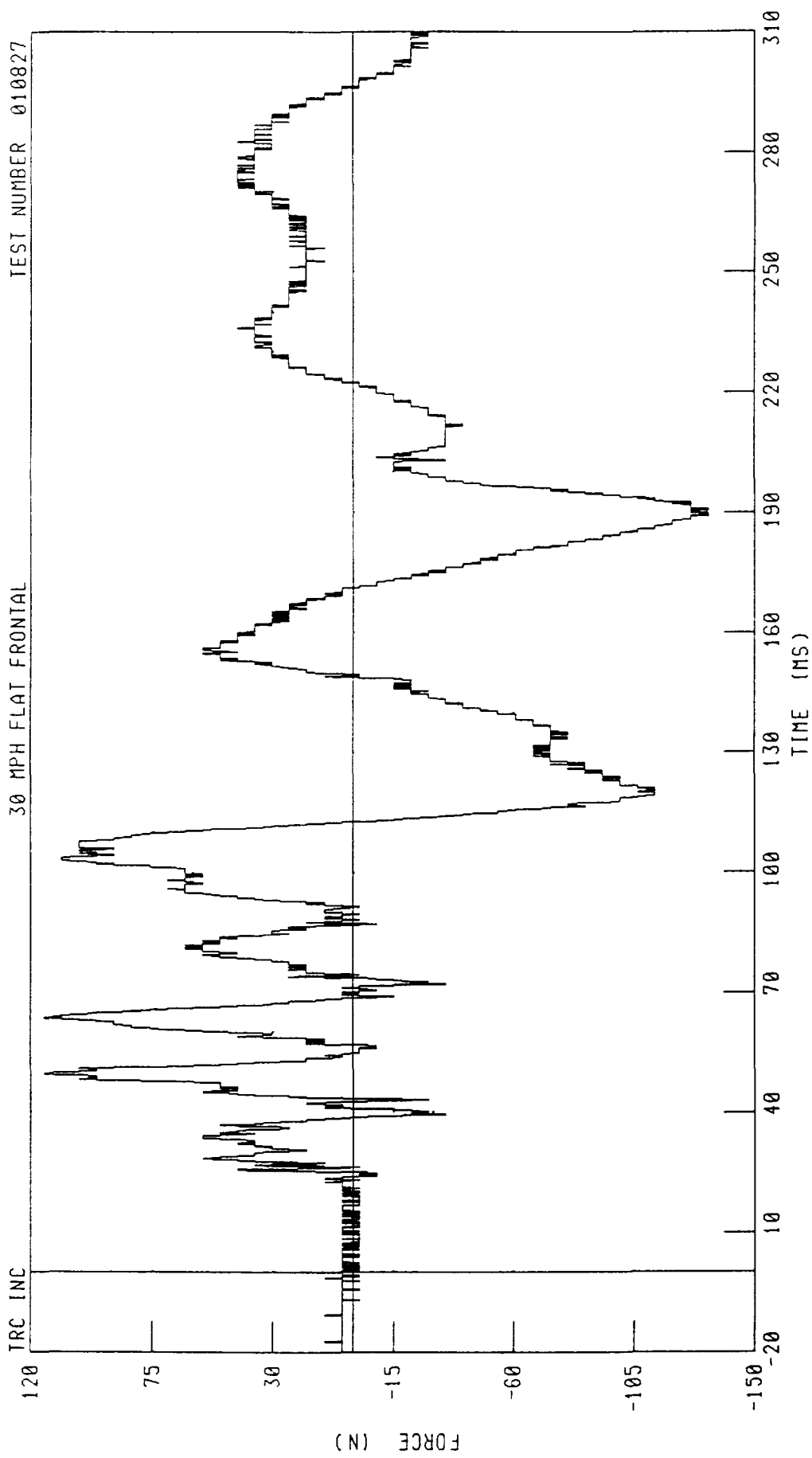
CHANNEL NKLXF1 FILTER CH CLASS 1000

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

DRIVER NECK LOWER Y-AXIS SHEAR FORCE

30 MPH FLAT FRONTAL

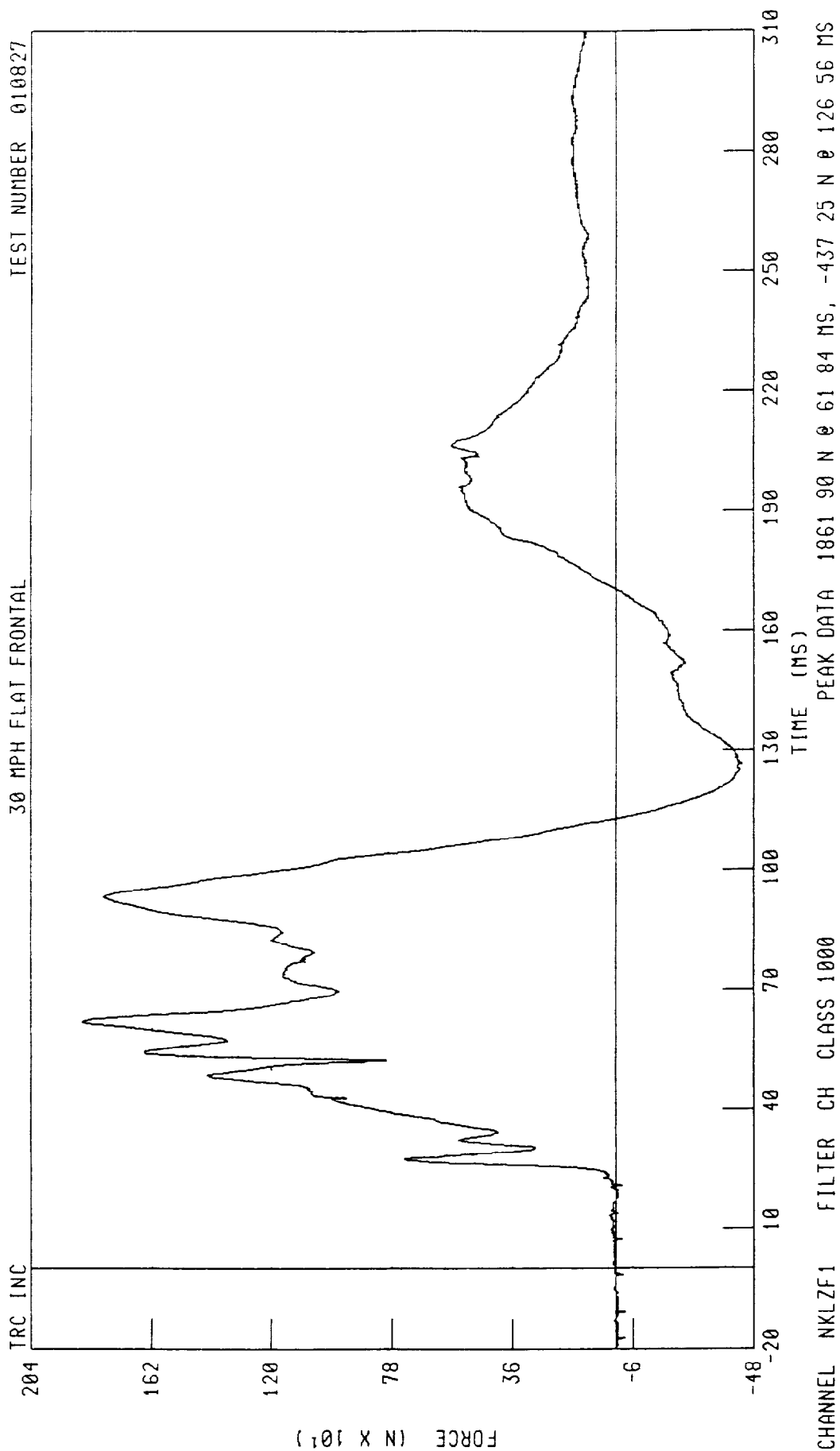
TEST NUMBER 010827



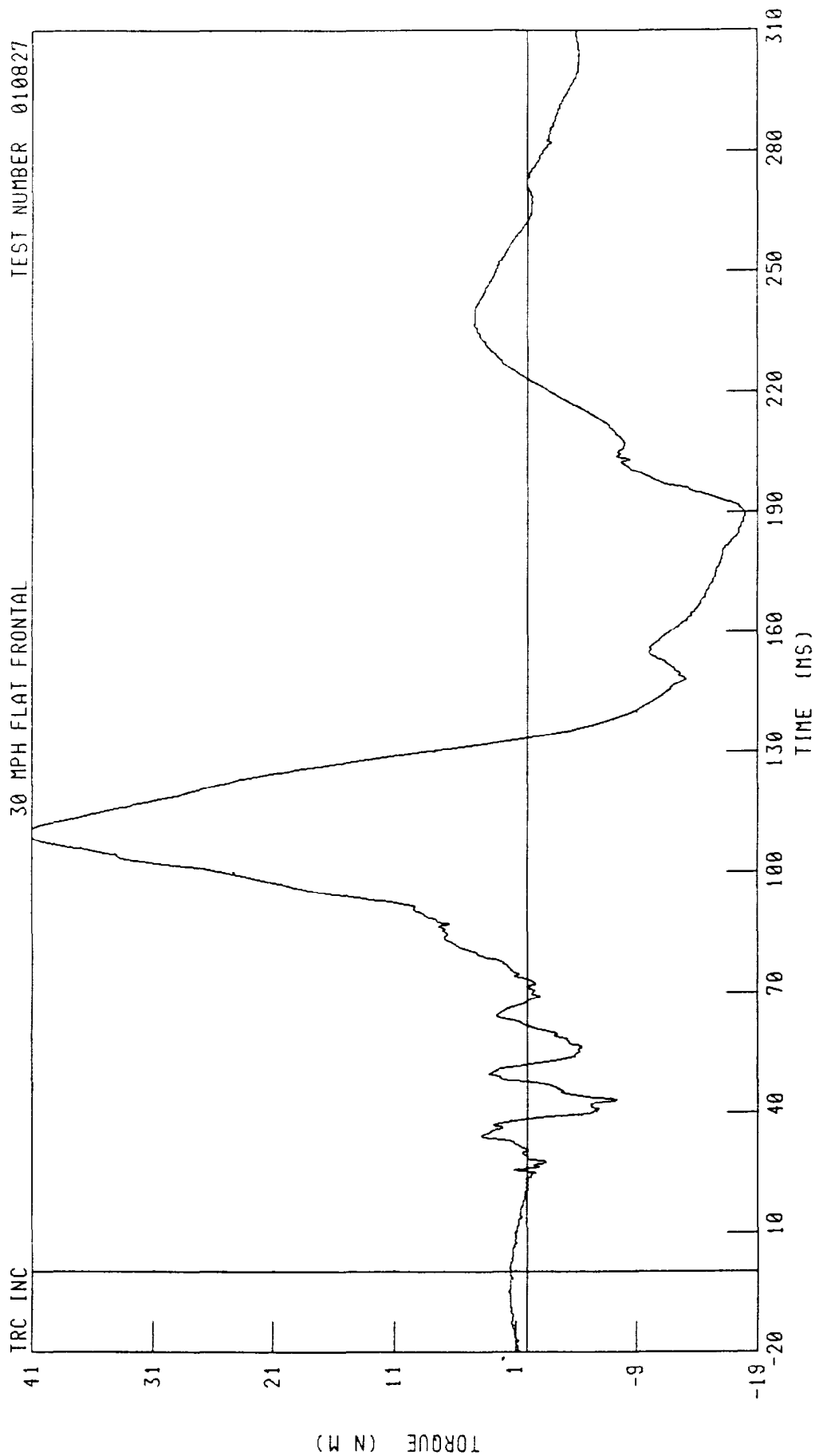
CHANNEL NKLYF1 FILTER CH CLASS 1000

PEAK DATA 115 15 N @ 49 44 MS, -132 38 N @ 189 04 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
 DRIVER NECK LOWER Z-AXIS AXIAL FORCE



2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
DRIVER NECK LOWER MOMENT ABOUT X AXIS



CHANNEL NKLXM1 FILTER CH CLASS 600

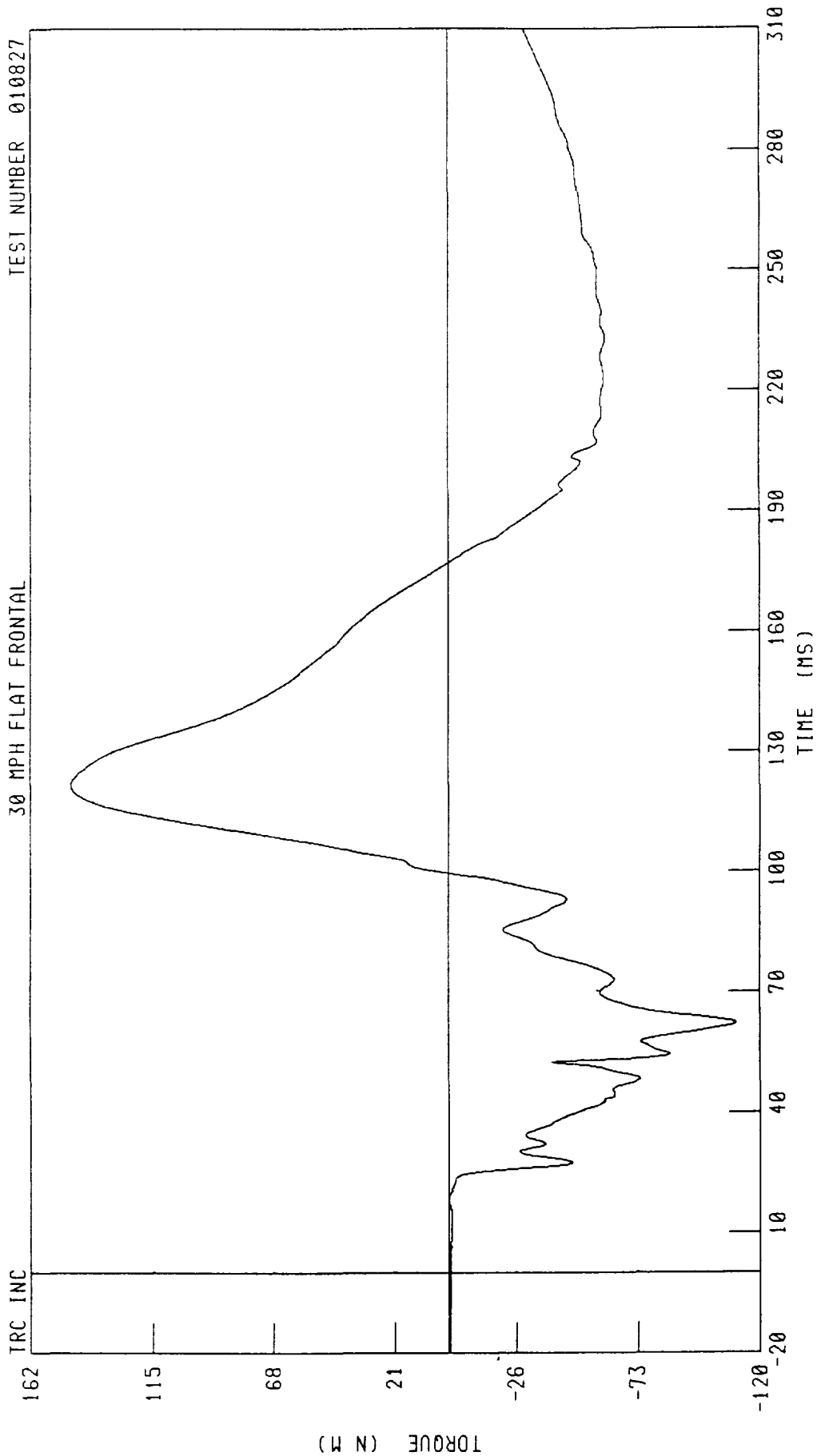
PEAK DATA 41 77 N M @ 109 84 MS, -17 98 N M @ 189 52 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

DRIVER NECK LOWER MOMENT ABOUT Y AXIS

30 MPH FLAT FRONTAL

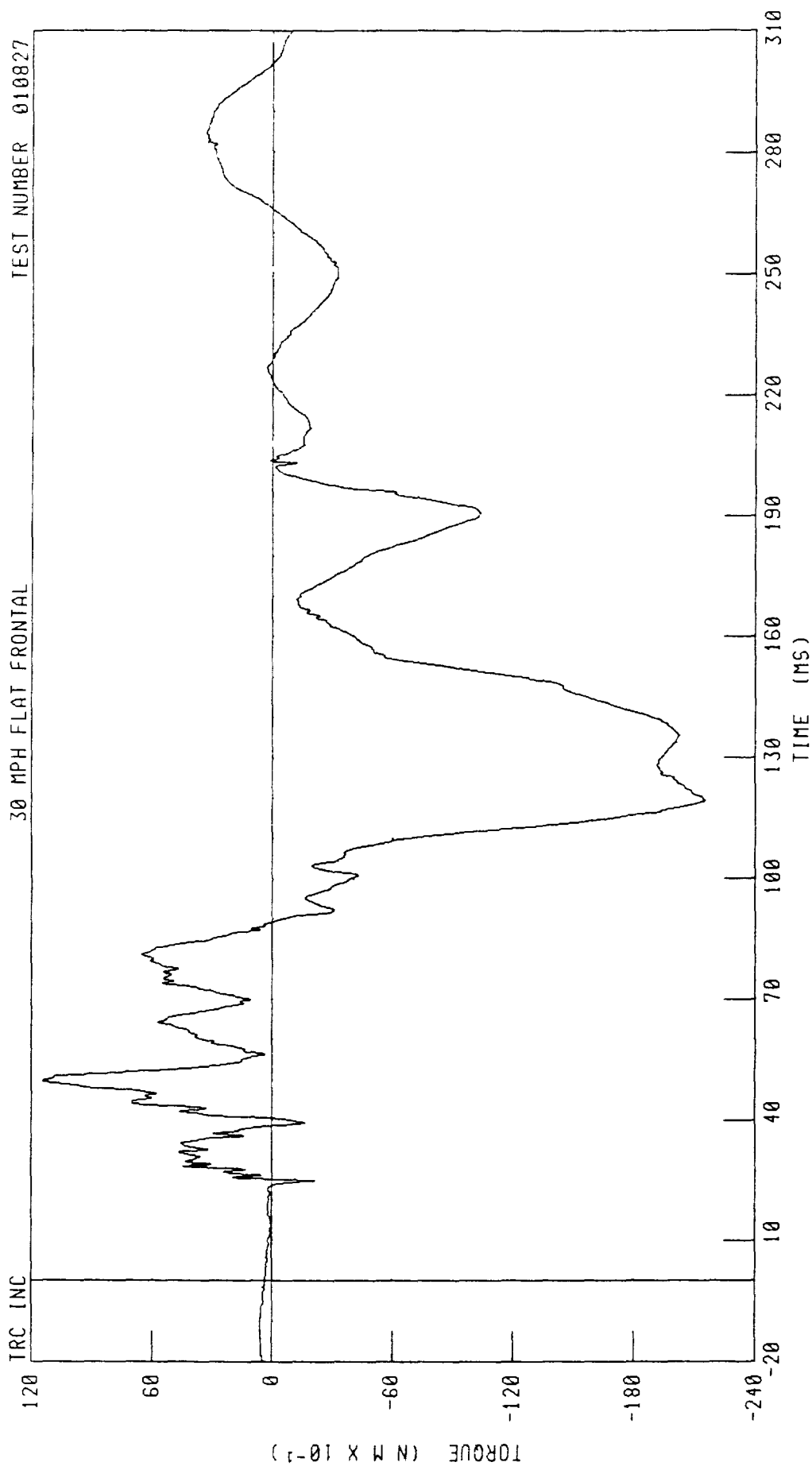
TEST NUMBER 010827



CHANNEL NKLYM1 FILTER CH CLASS 600

PEAK DATA 146 56 N M @ 121 52 MS, -110 96 N M @ 62 16 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
DRIVER NECK LOWER MOMENT ABOUT Z AXIS



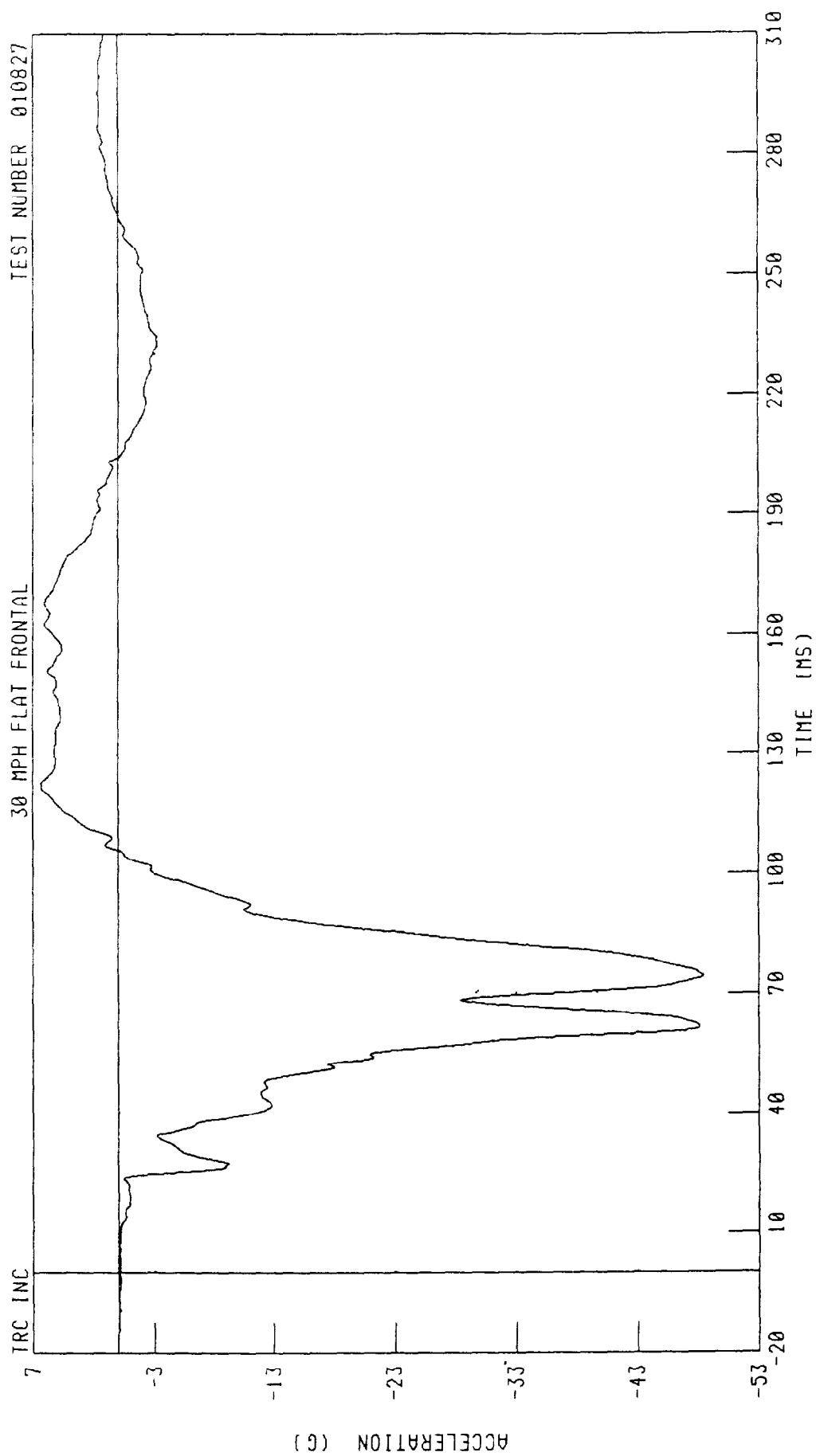
CHANNEL NKLZM1 FILTER CH CLASS 600 PEAK DATA 11 47 N M @ 49 84 MS, -21 54 N M @ 119 44 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

DRIVER CHEST X-AXIS ACCELERATION

30 MPH FLAT FRONTAL

TEST NUMBER 010827



CHANNEL CSTXG1 FILTER CH CLASS 180

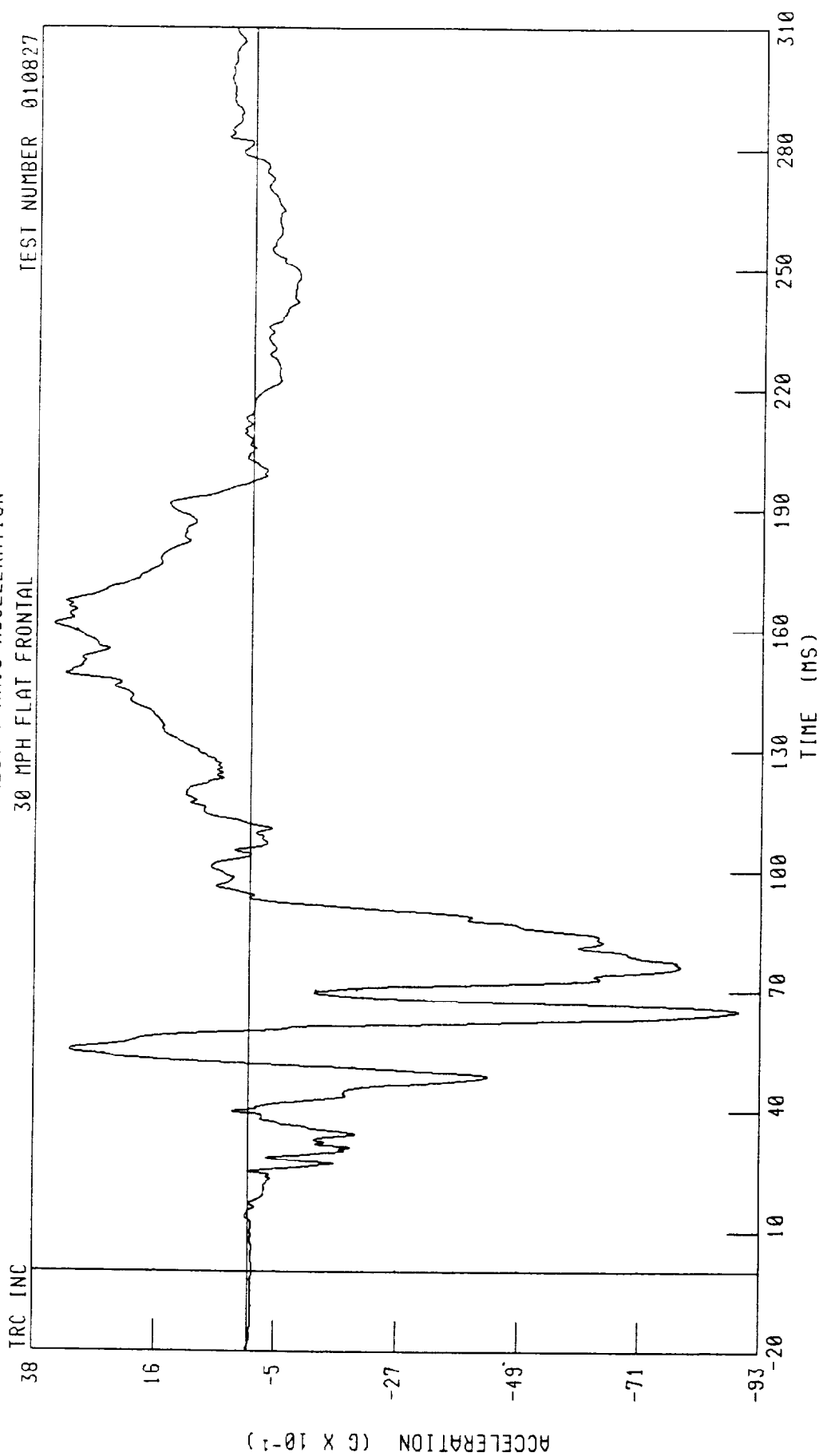
PEAK DATA 6 38 G @ 122 48 MS, -48 44 G @ 74 24 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

DRIVER CHEST Y-AXIS ACCELERATION

30 MPH FLAT FRONTAL

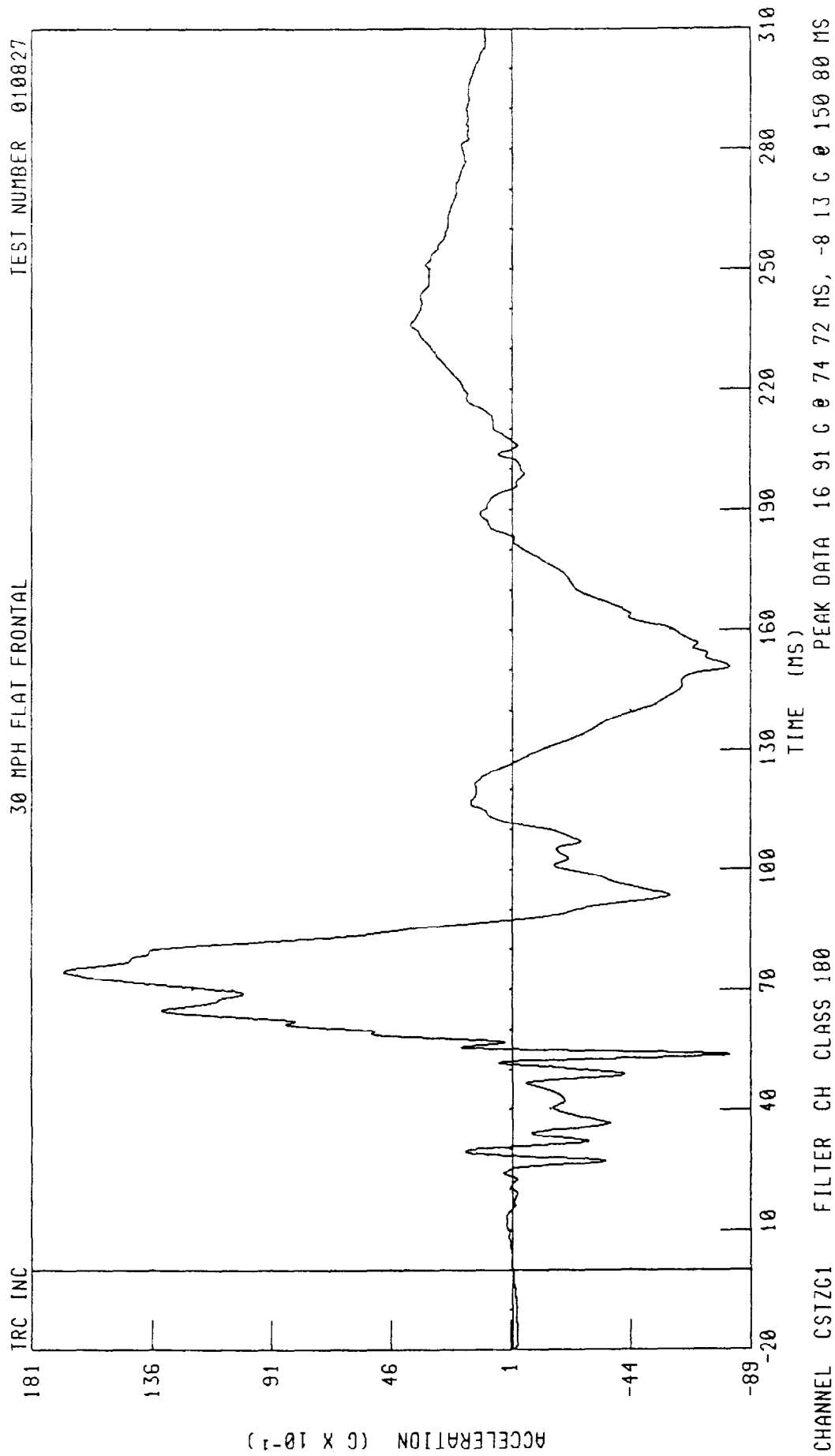
TEST NUMBER 010827



CHANNEL CSTYC1 FILTER CH CLASS 180

PEAK DATA 3 59 C 0 161 76 MS, -8 92 C 0 64 96 MS

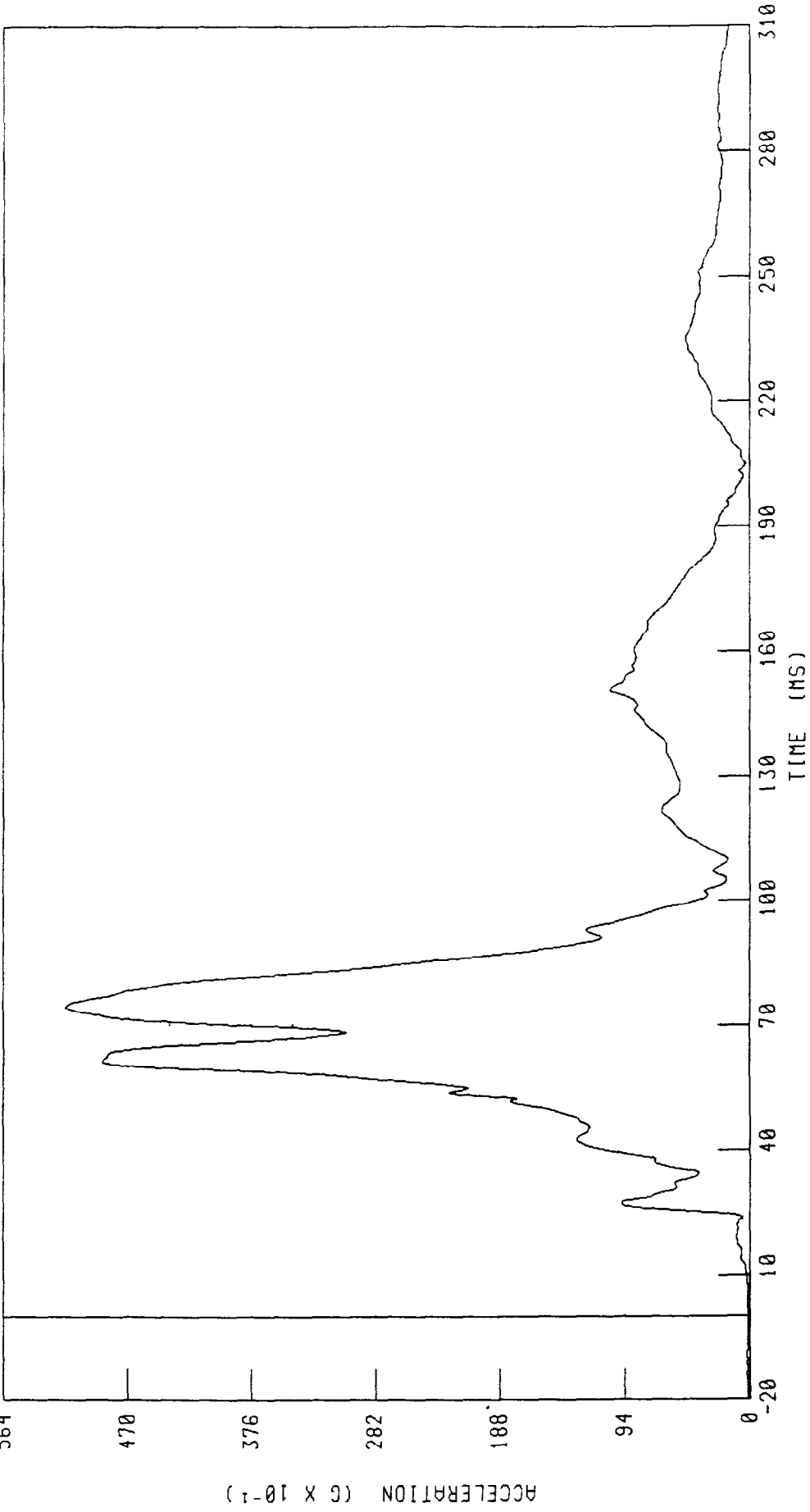
2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
 DRIVER CHEST Z-AXIS ACCELERATION



2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
DRIVER CHEST RESULTANT ACCELERATION
30 MPH FLAT FRONTAL

TEST NUMBER 010827

TRC INC



PEAK DATA 51 71 C 0 74 48 MS, 0 01 C 0 -20 00 MS

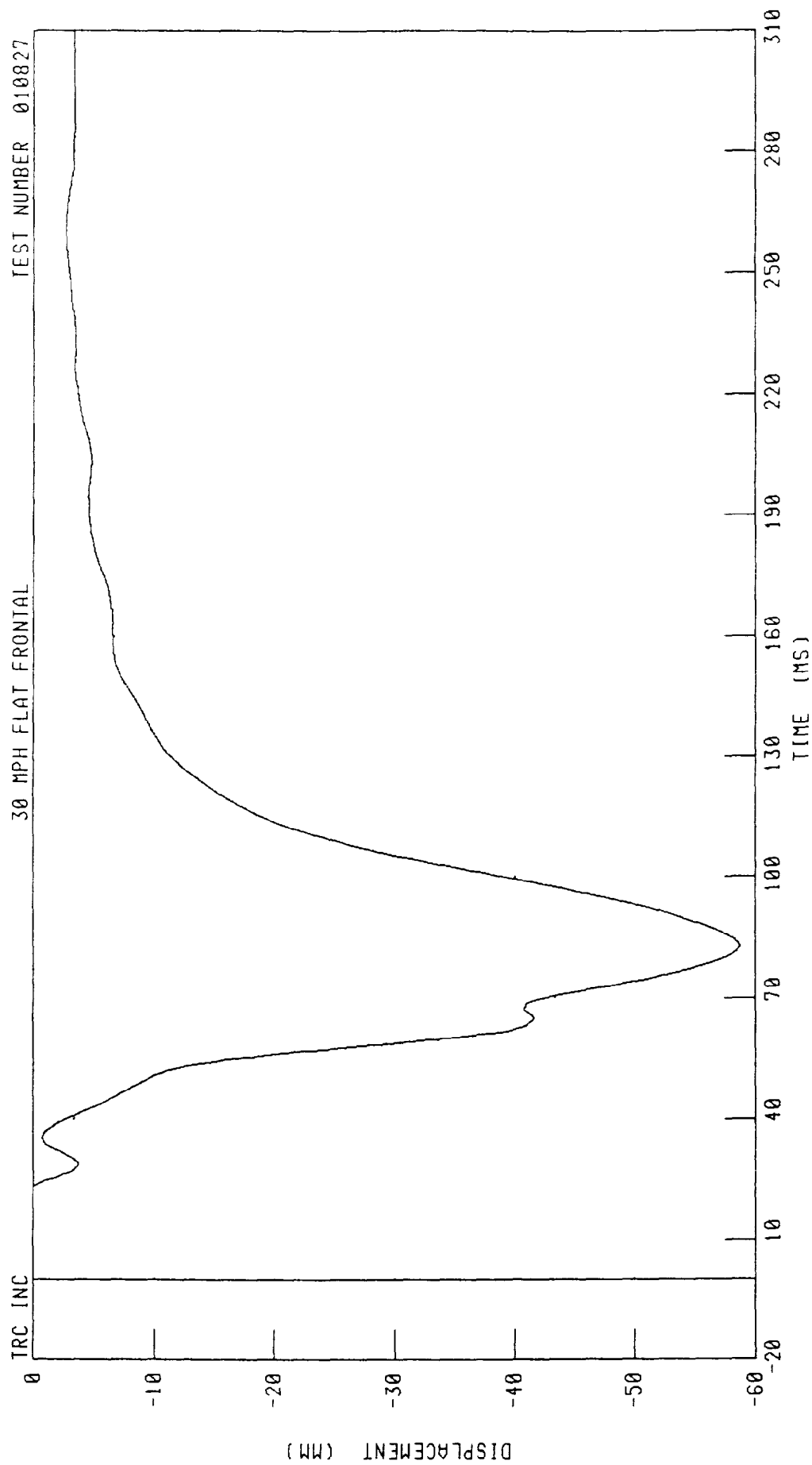
CHANNEL CSTRG1 FILTER CH CLASS 180

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

DRIVER CHEST DEFLECTION

30 MPH FLAT FRONTAL

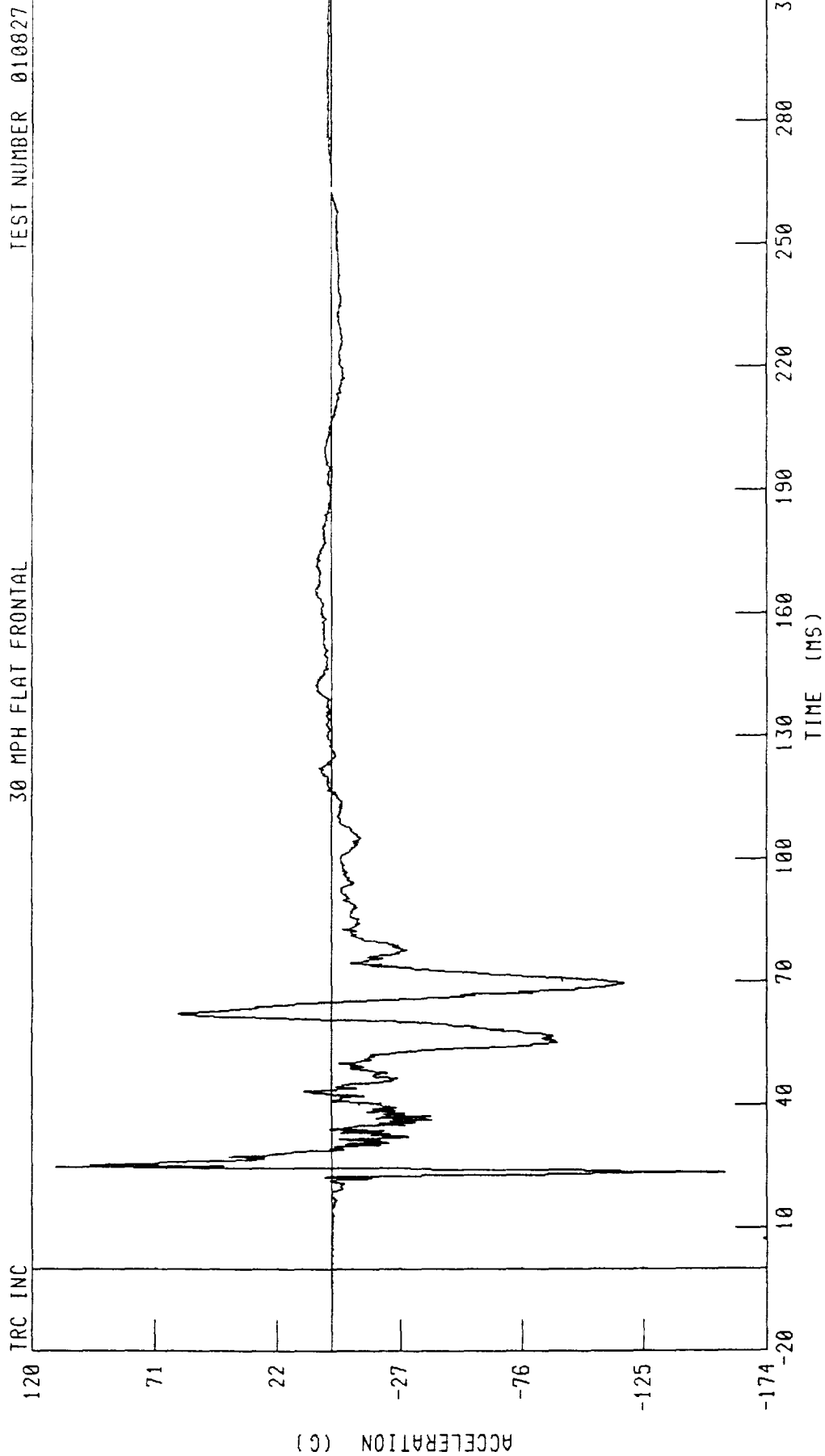
TEST NUMBER 010827



CHANNEL CSTXD1 FILTER CH CLASS 600

PEAK DATA 0 07 MM @ 19 68 MS, -58 72 MM @ 82 80 MS

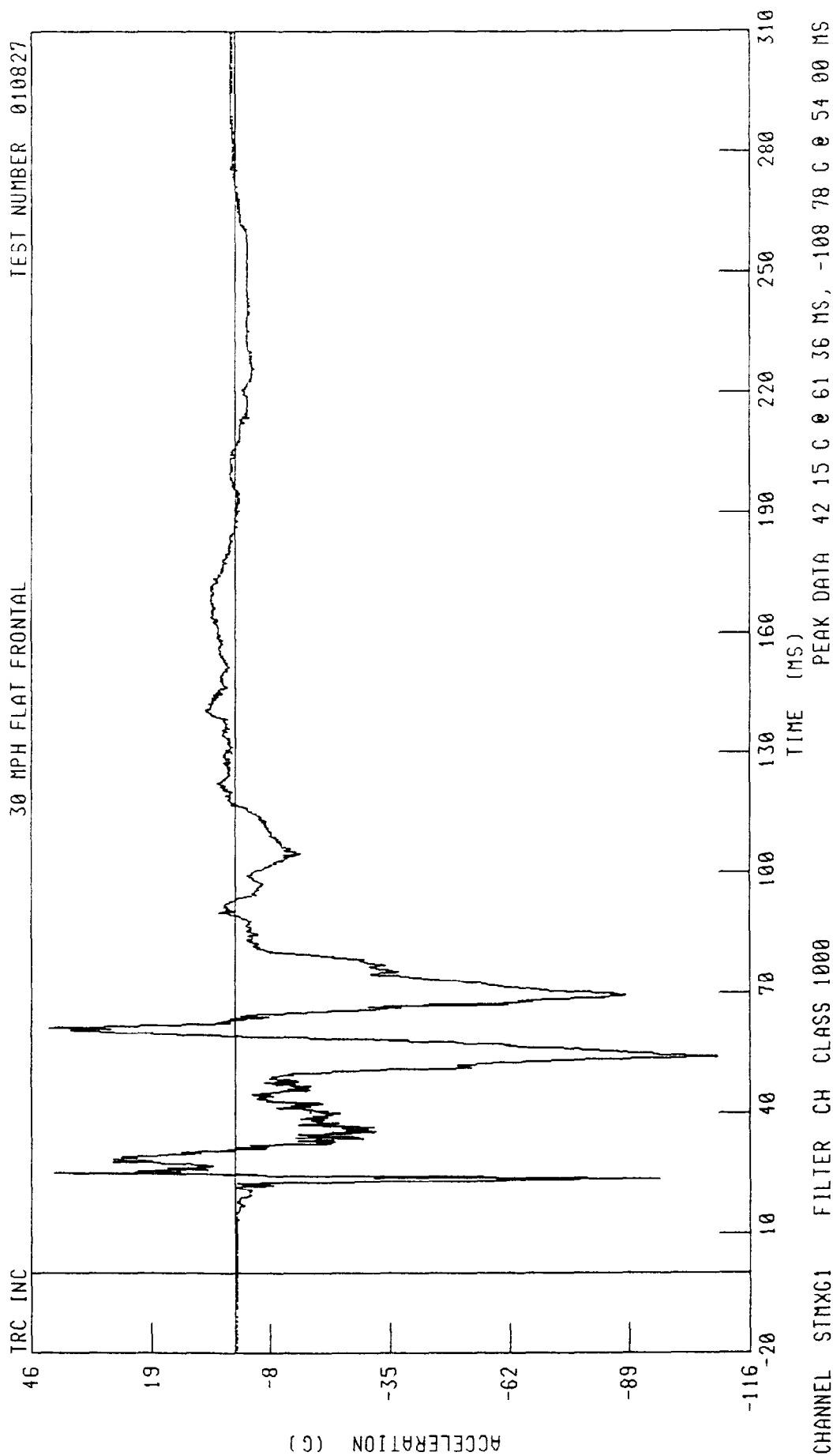
2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
DRIVER STERNUM UPPER X-AXIS ACCELERATION
30 MPH FLAT FRONTAL



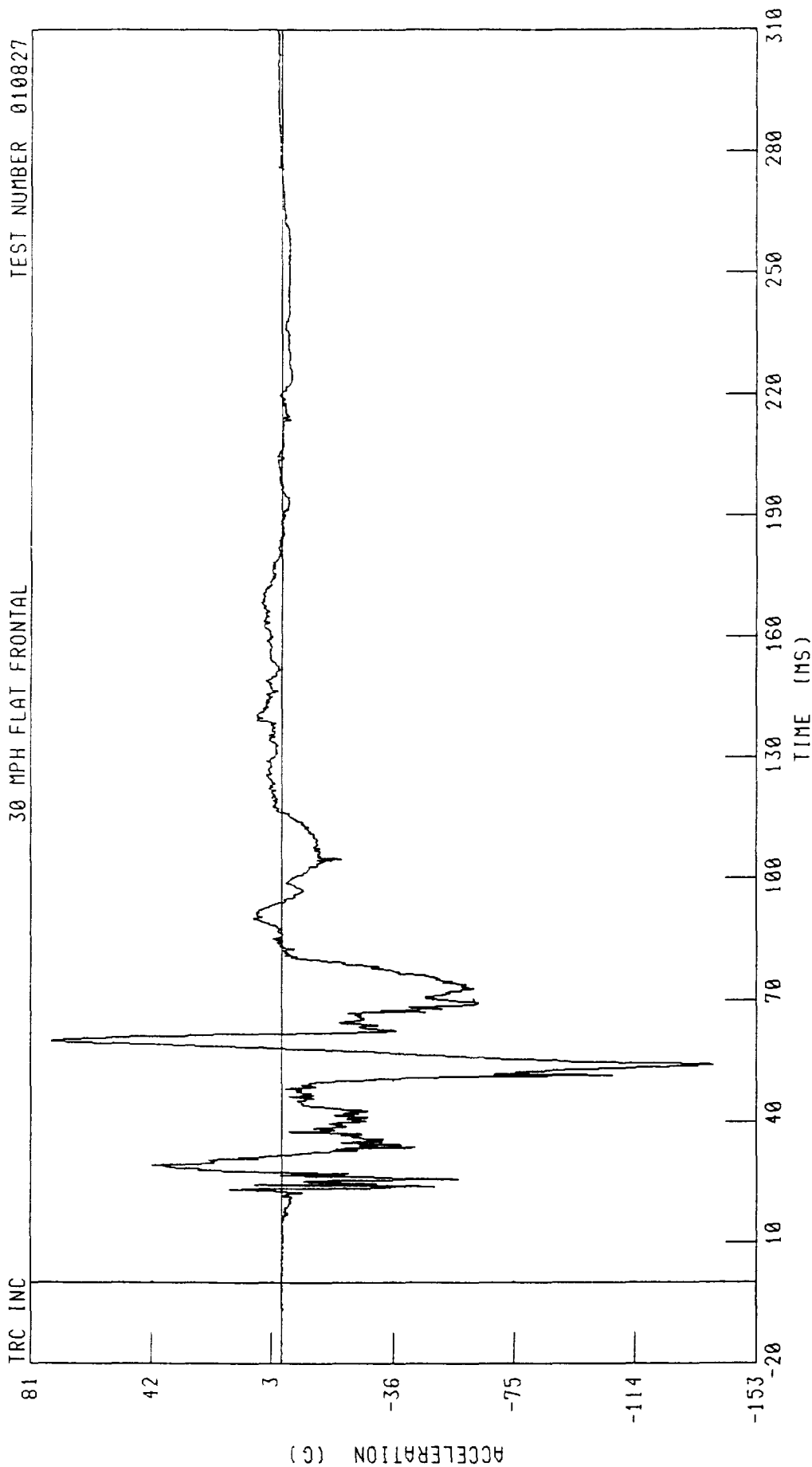
CHANNEL STUXG1 FILTER CH CLASS 1000 PEAK DATA 110 98 G @ 24 88 MS, -157 41 G @ 23 52 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
 DRIVER STERNUM MID X-AXIS ACCELERATION
 30 MPH FLAT FRONTAL

TEST NUMBER 010827



2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
 DRIVER STERNUM LOWER X-AXIS ACCELERATION
 30 MPH FLAT FRONTAL



TEST NUMBER 010827

PEAK DATA 74 44 C 0 60 08 MS, -139 14 C 0 54 00 MS

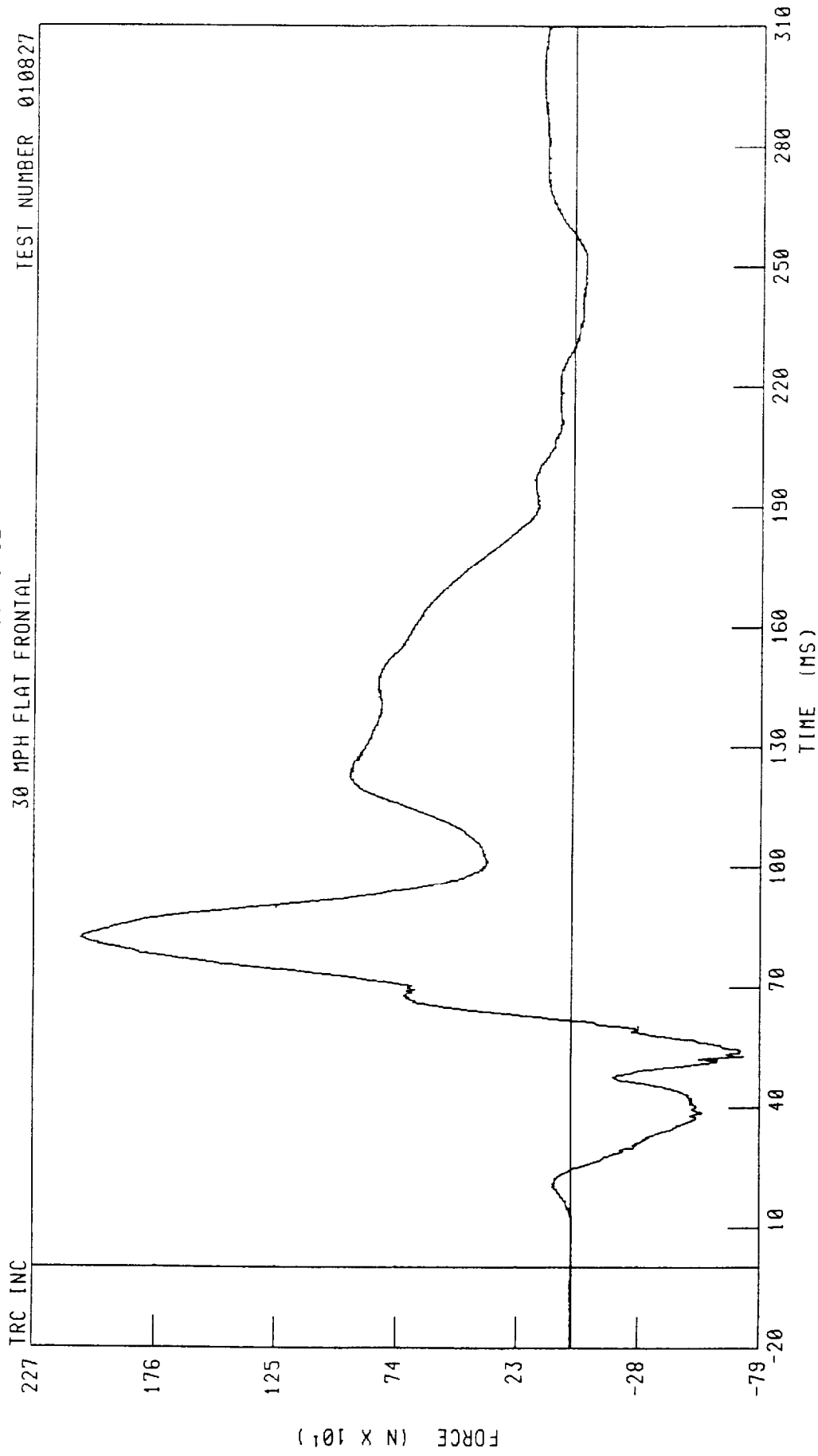
CHANNEL STLXC1 FILTER CH CLASS 1000

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

DRIVER LUMBAR X-AXIS FORCE

30 MPH FLAT FRONTAL

TEST NUMBER 010827



CHANNEL LMBXF1 FILTER CH CLASS 1000

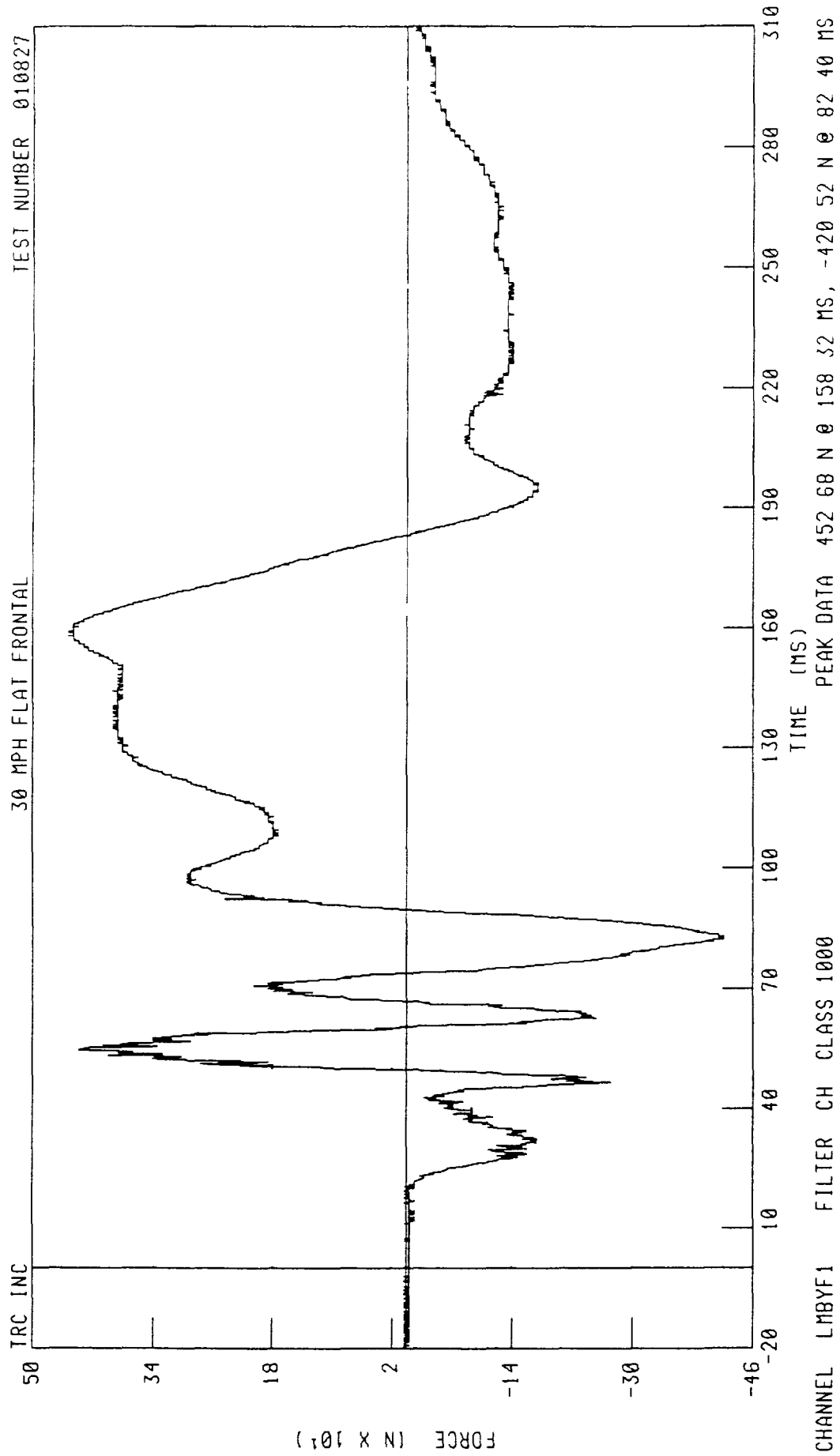
PEAK DATA 2076 27 N 0 82 24 MS, -719 71 N 0 52 56 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

DRIVER LUMBAR Y-AXIS FORCE

30 MPH FLAT FRONTAL

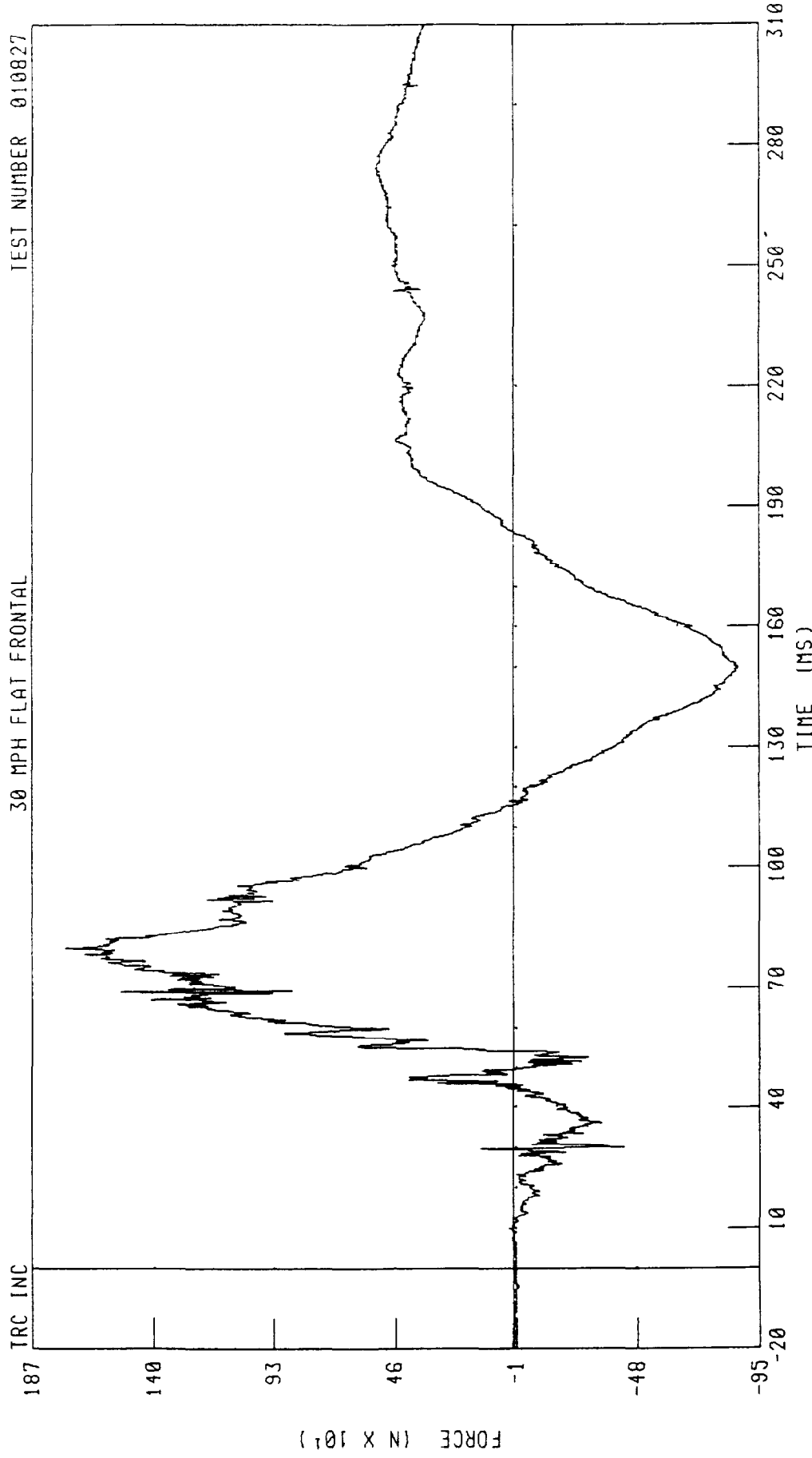
TEST NUMBER 010827



PEAK DATA 452 68 N @ 158 MS, -420 52 N @ 82 40 MS

CHANNEL LMBYF1 FILTER CH CLASS 1000

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
DRIVER LUMBAR Z-AXIS FORCE
30 MPH FLAT FRONTAL



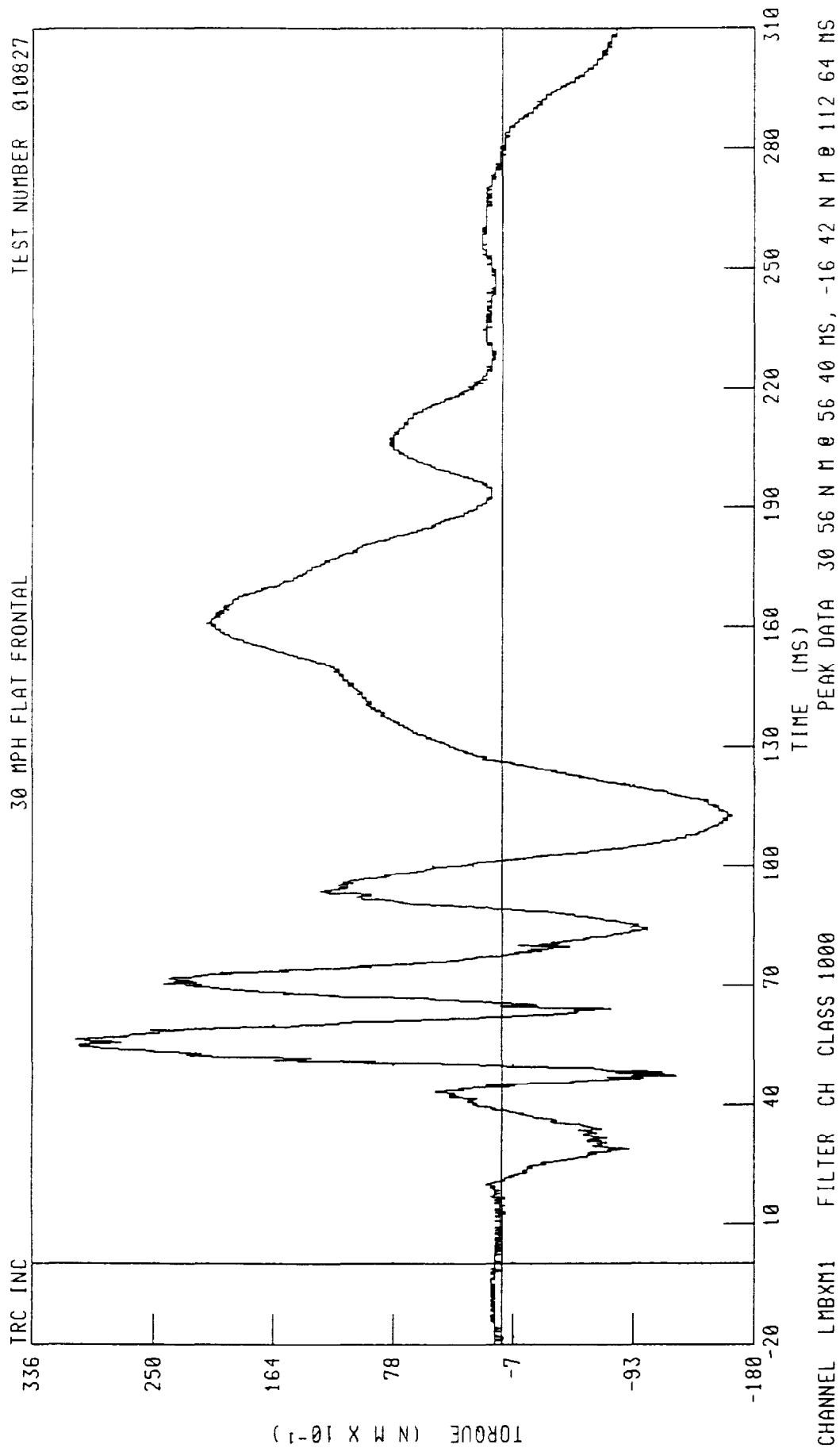
CHANNEL LMBZF1 FILTER CH CLASS 1000 PEAK DATA 1744 99 N @ 80 00 MS, -871 40 N @ 149 76 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

DRIVER LUMBAR X-AXIS MOMENT

30 MPH FLAT FRONTAL

TEST NUMBER 010827



CHANNEL LMBXM1 FILTER CH CLASS 1000

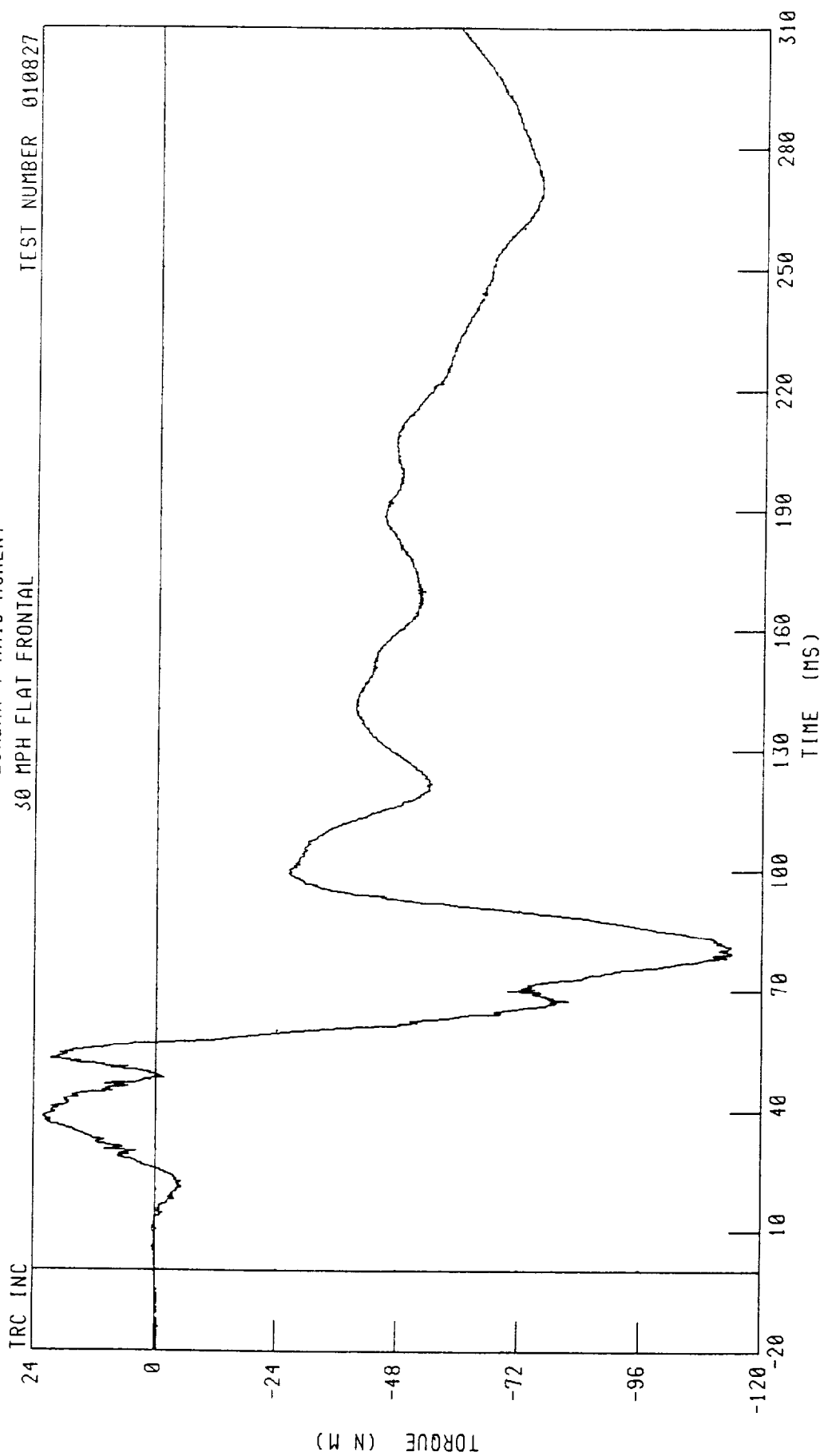
2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

DRIVER LUMBAR Y-AXIS MOMENT

30 MPH FLAT FRONTAL

TRC INC

TEST NUMBER 010827



CHANNEL LMBYM1 FILTER CH CLASS 1000

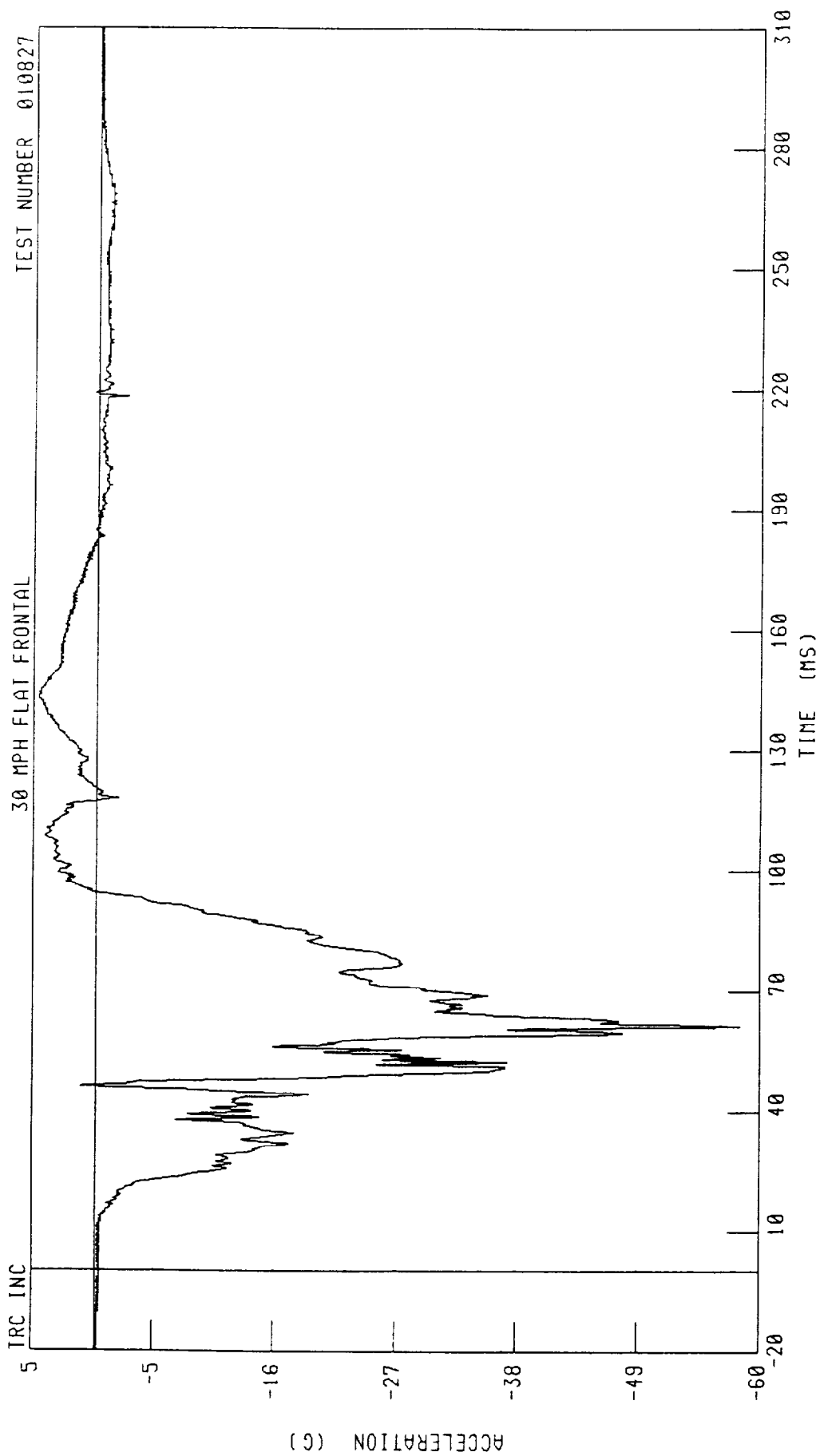
PEAK DATA 22 18 N M @ 38 48 MS, -114 16 N M @ 79 20 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

DRIVER PELVIS X-AXIS ACCELERATION

30 MPH FLAT FRONTAL

TEST NUMBER 010827



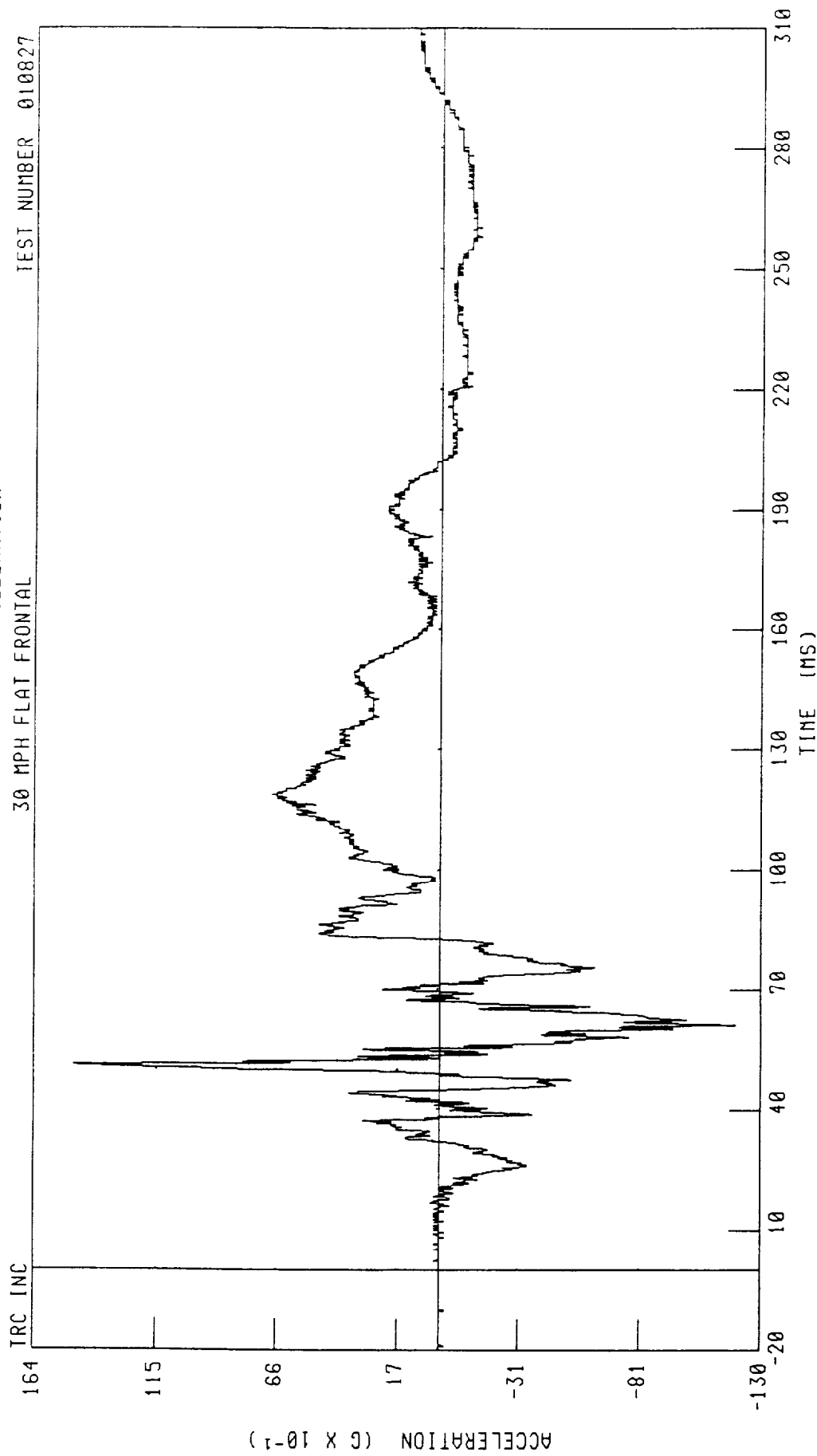
CHANNEL PEVXG1 FILTER CH CLASS 1000 PEAK DATA 5 36 G @ 143 04 MS, -58 40 G @ 61 28 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

DRIVER PELVIS Y-AXIS ACCELERATION

30 MPH FLAT FRONTAL

TEST NUMBER 010827



TIME (MS)

CHANNEL PEVG1 FILTER CH CLASS 1000 PEAK DATA 14 84 C 0 51 28 MS, -11 96 C 0 61 28 MS

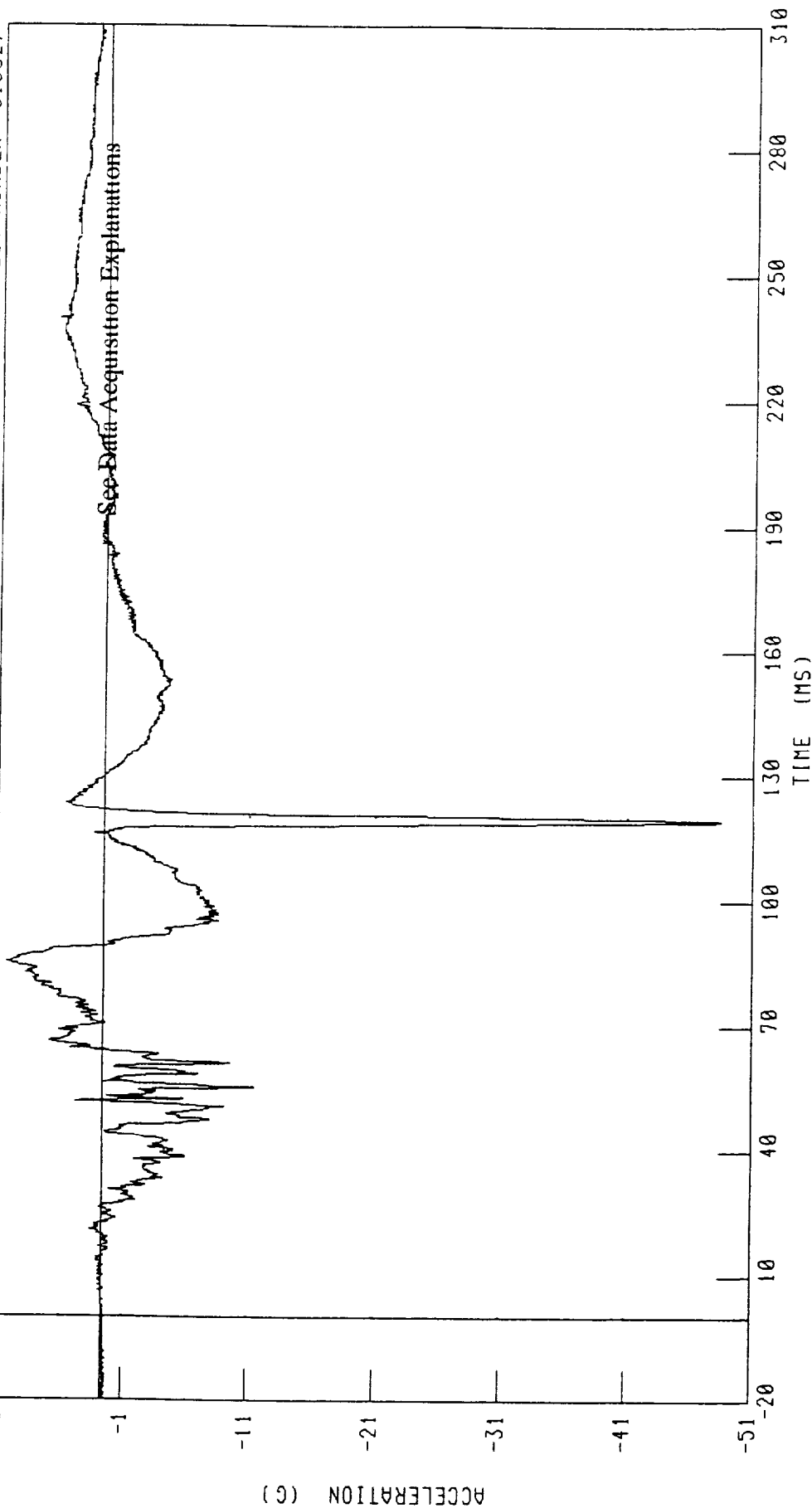
2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

DRIVER PELVIS Z-AXIS ACCELERATION

30 MPH FLAT FRONTAL

TRC INC

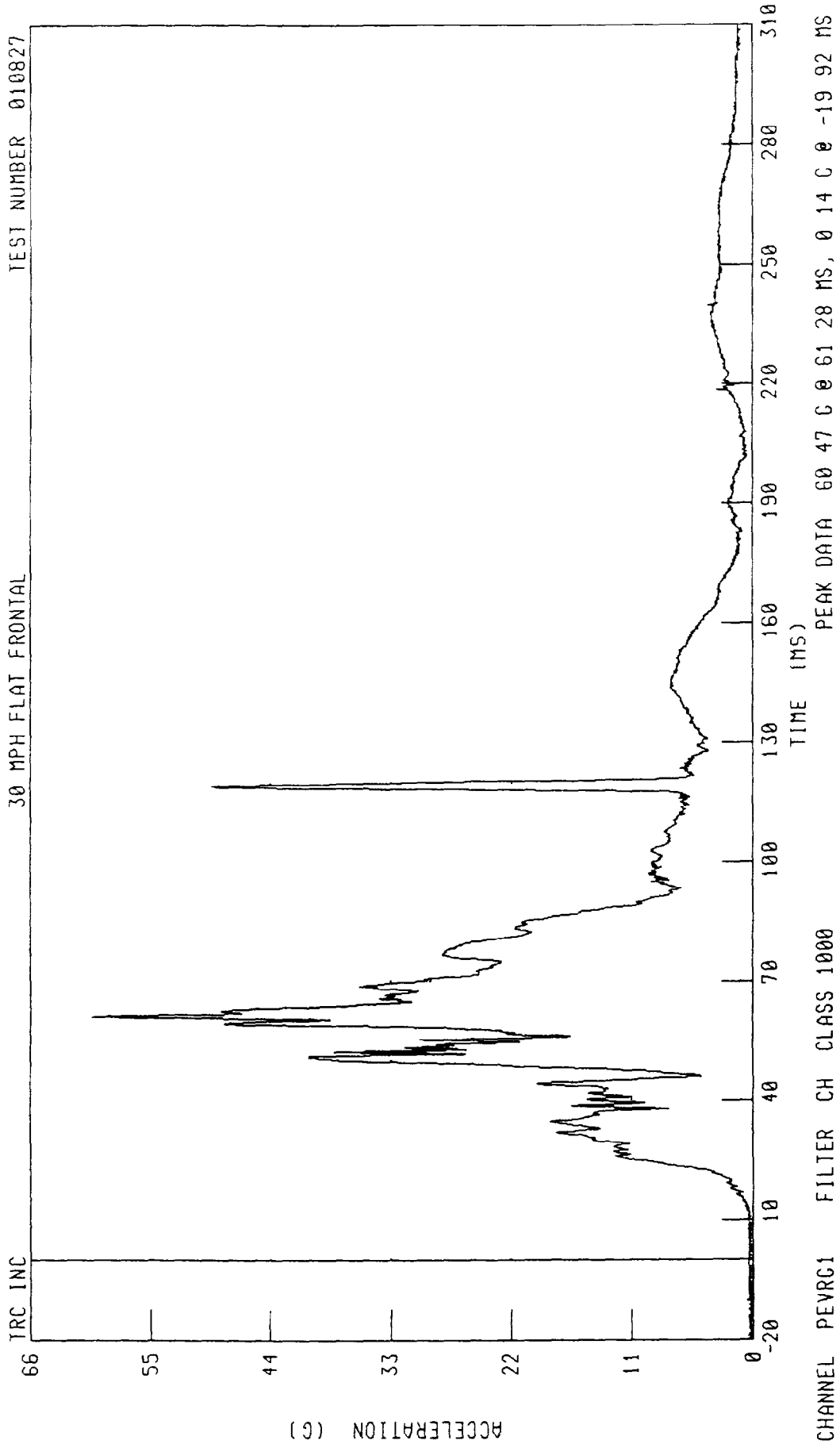
TEST NUMBER 010827



CHANNEL PEVZG1 FILTER CH CLASS 1000

PEAK DATA 7 71 G @ 85 60 MS, -49 04 G @ 119 52 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
DRIVER PELVIS RESULTANT ACCELERATION

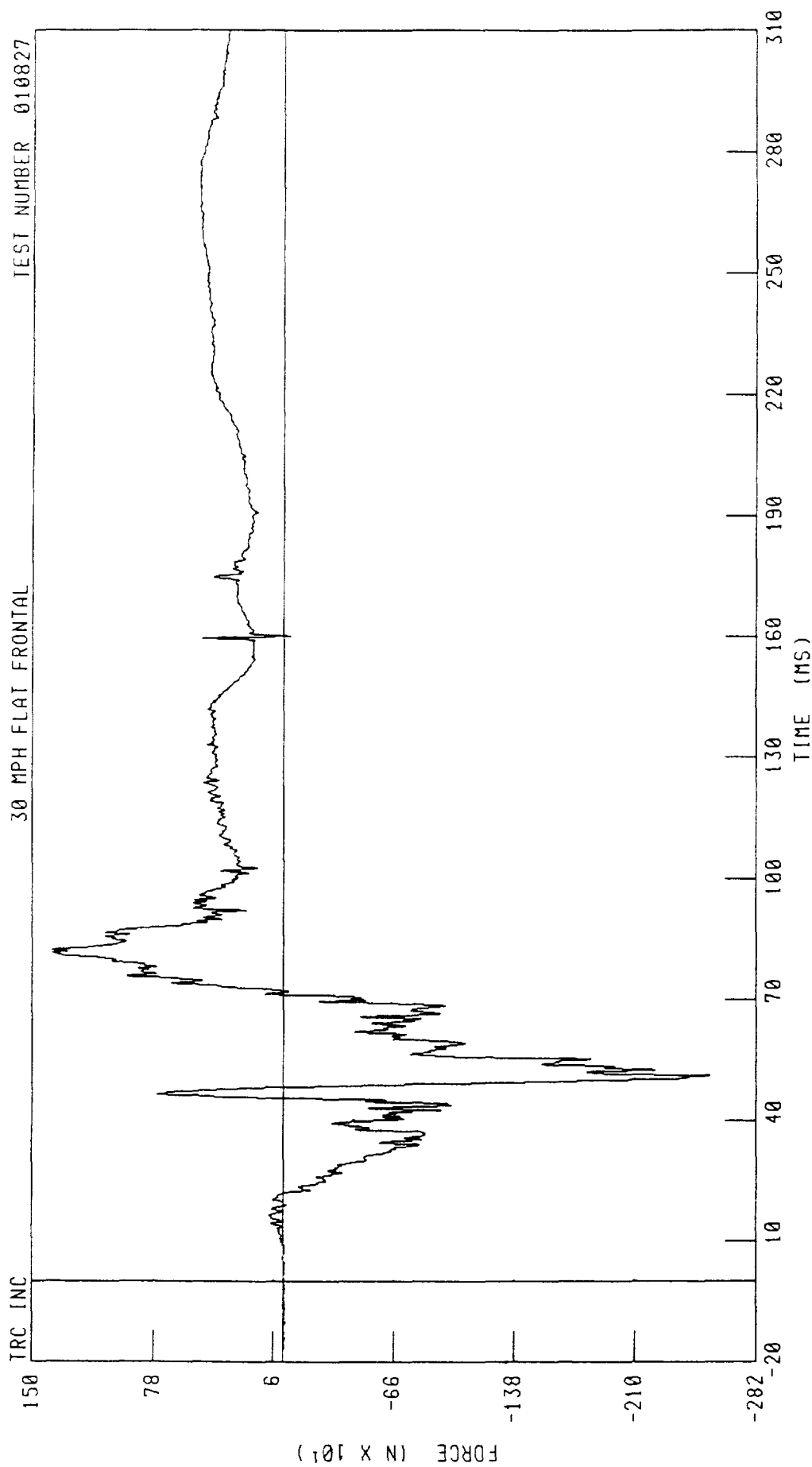


2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

DRIVER LEFT FEMUR FORCE

30 MPH FLAT FRONTAL

TEST NUMBER 010827



PEAK DATA 1392 28 N @ 82 56 MS, -2545 69 N @ 50 96 MS

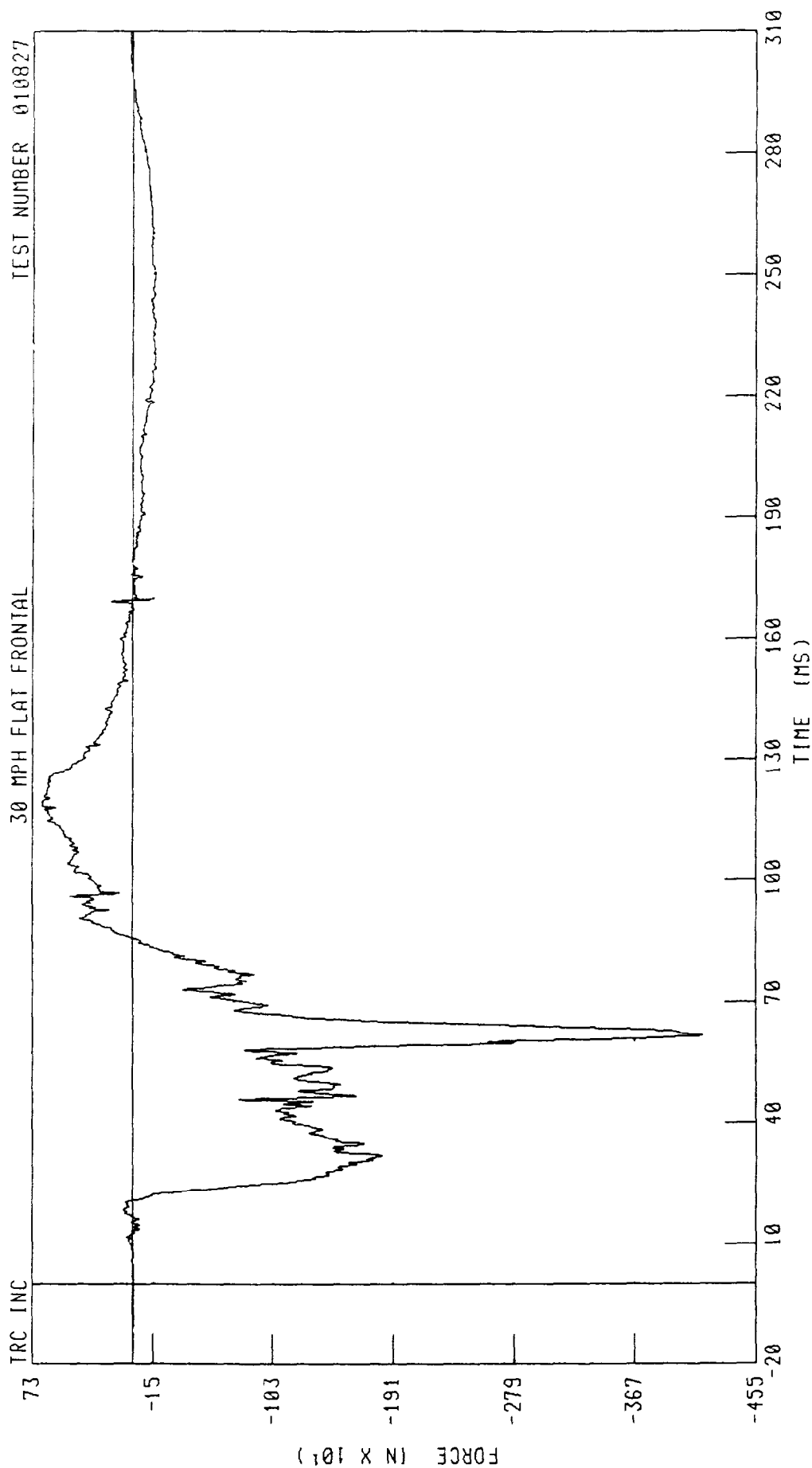
CHANNEL LFMZF1 FILTER CH CLASS 600

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

DRIVER RIGHT FEMUR FORCE

30 MPH FLAT FRONTAL

TEST NUMBER 010827



CHANNEL RFMZF1 FILTER CH CLASS 600

PEAK DATA 664 31 N 0 118 64 MS, -4162 61 N 0 61 52 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

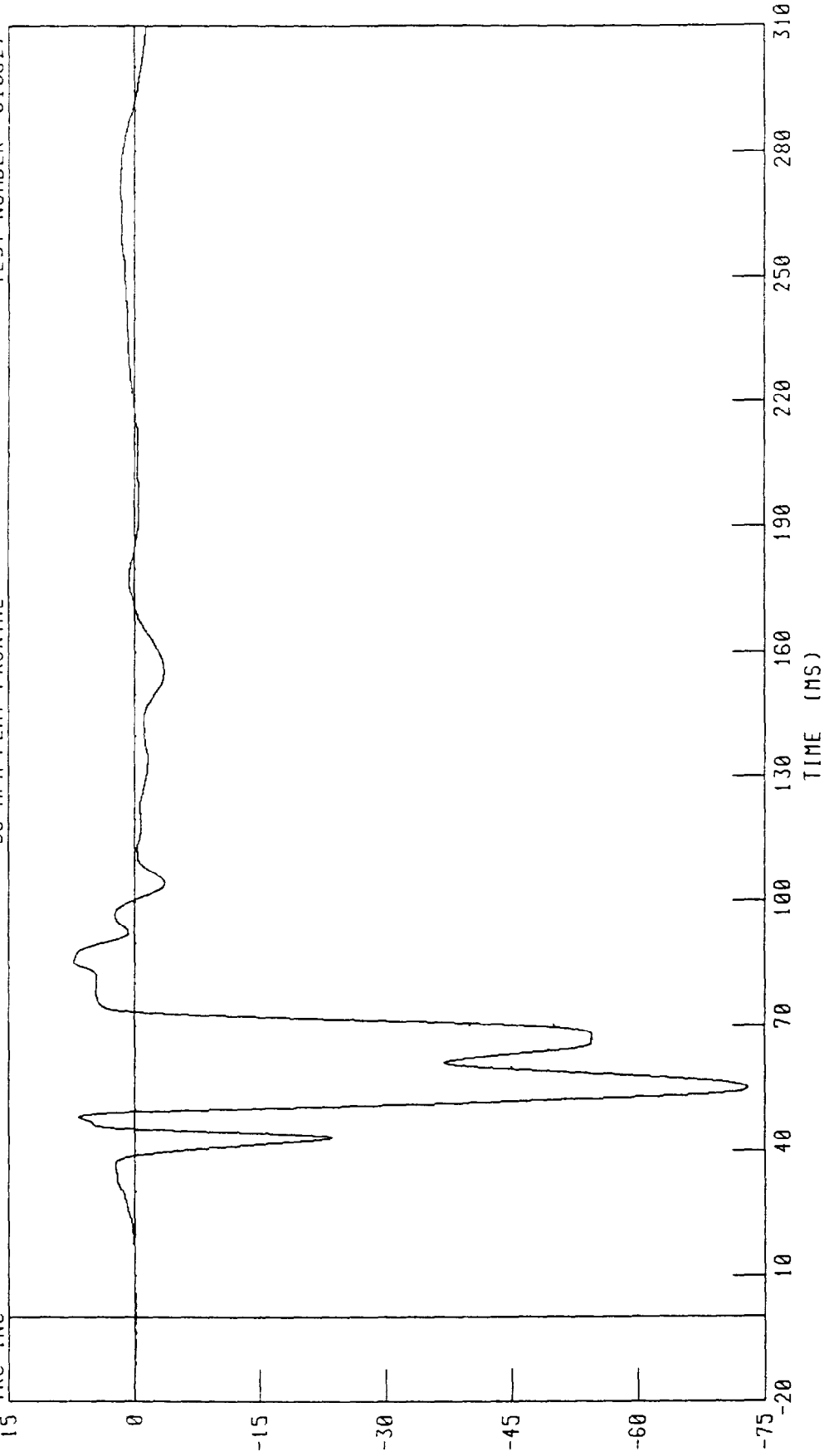
DRIVER LEFT KNEE DISPLACEMENT

30 MPH FLAT FRONTAL

TEST NUMBER 010827

TRC INC

DISPLACEMENT (MM X 10⁻¹)



PEAK DATA 0 73 MM @ 85 84 MS, -7 30 MM @ 54 96 MS

CHANNEL KNLXD1 FILTER CH CLASS 180

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

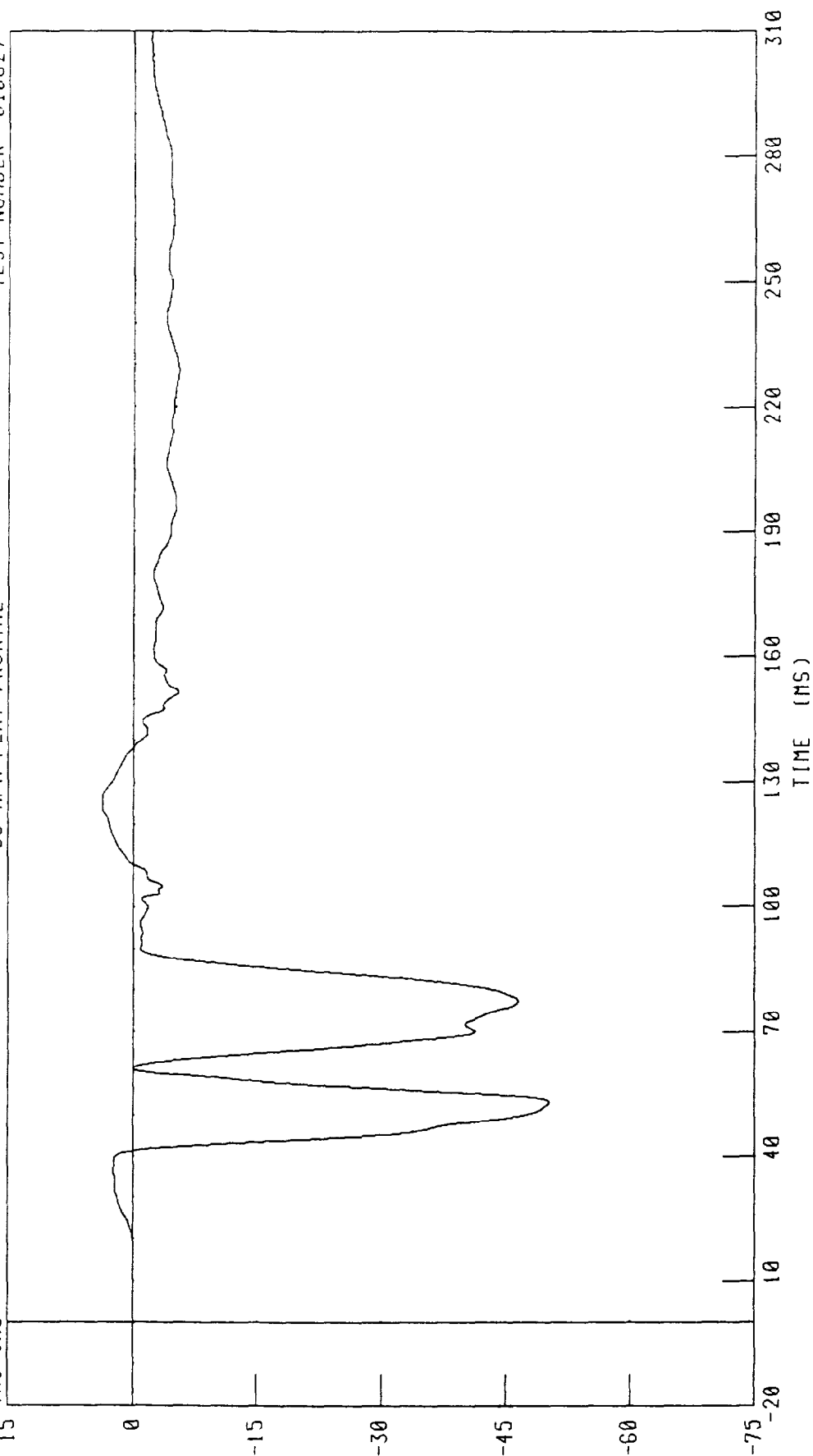
DRIVER LEFT KNEE DISPLACEMENT

30 MPH FLAT FRONTAL

TEST NUMBER 010827

TRC INC

DISPLACEMENT (MM X 10⁻¹)

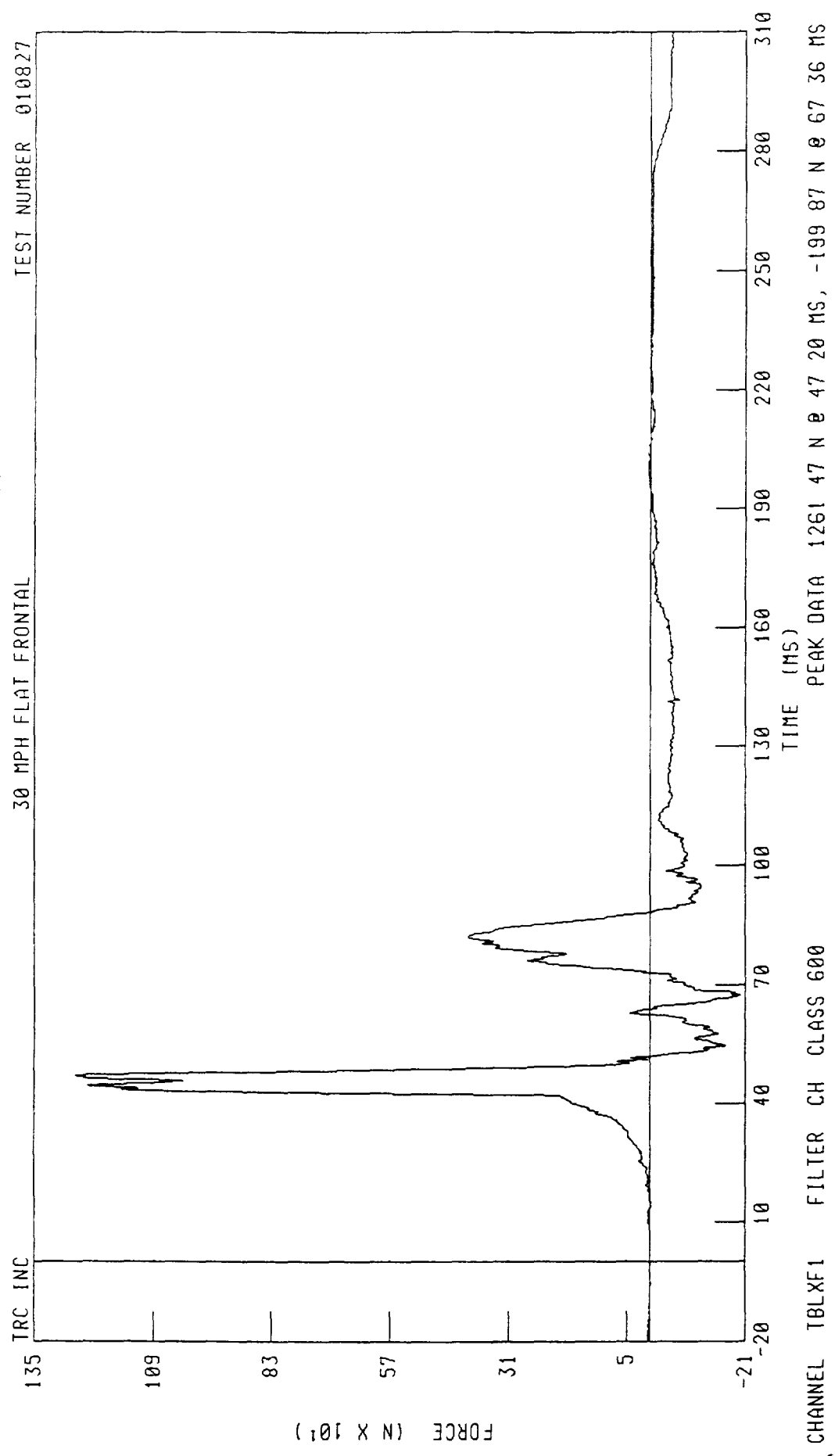


TIME (MS)

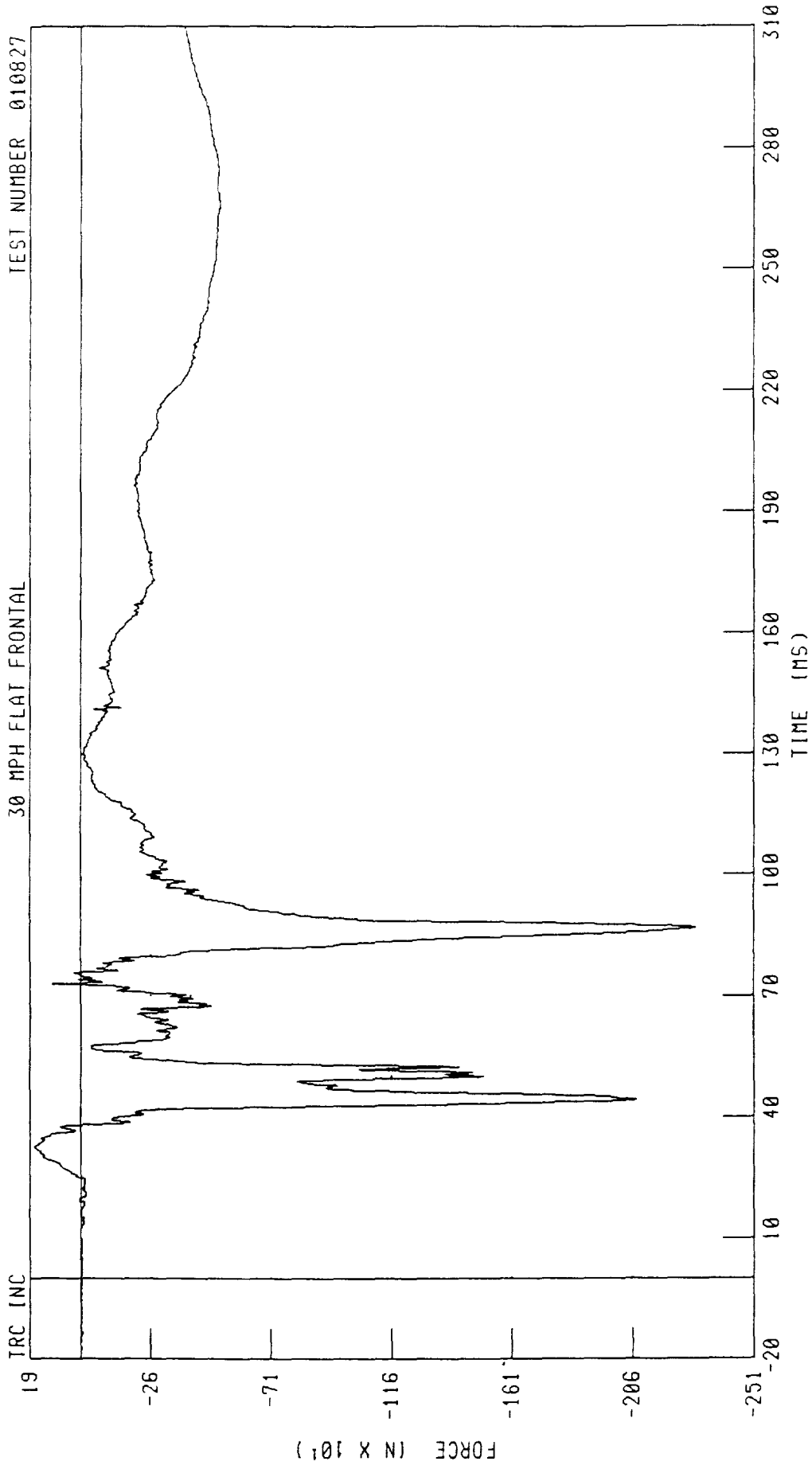
PEAK DATA 0 38 MM @ 124 16 MS, -5 02 MM @ 53 12 MS

CHANNEL KNRXD1 FILTER CH CLASS 180

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
DRIVER LEFT UPPER TIBIA X-AXIS FORCE

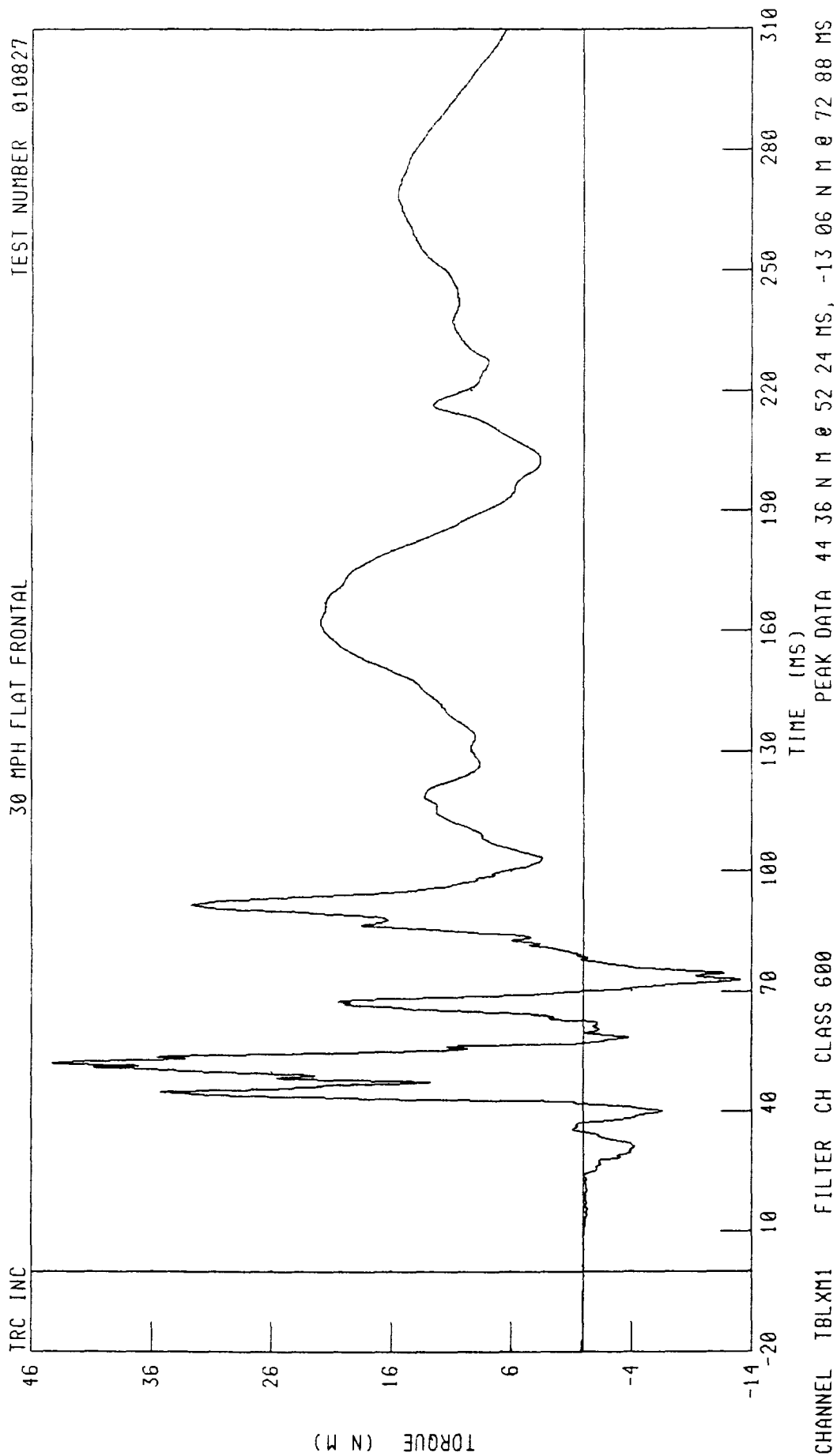


2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
 DRIVER LEFT UPPER TIBIA Z-AXIS FORCE



CHANNEL TBLZF1 FILTER CH CLASS 600 PEAK DATA 174 12 N @ 32 48 MS, -2292 14 N @ 86 88 MS

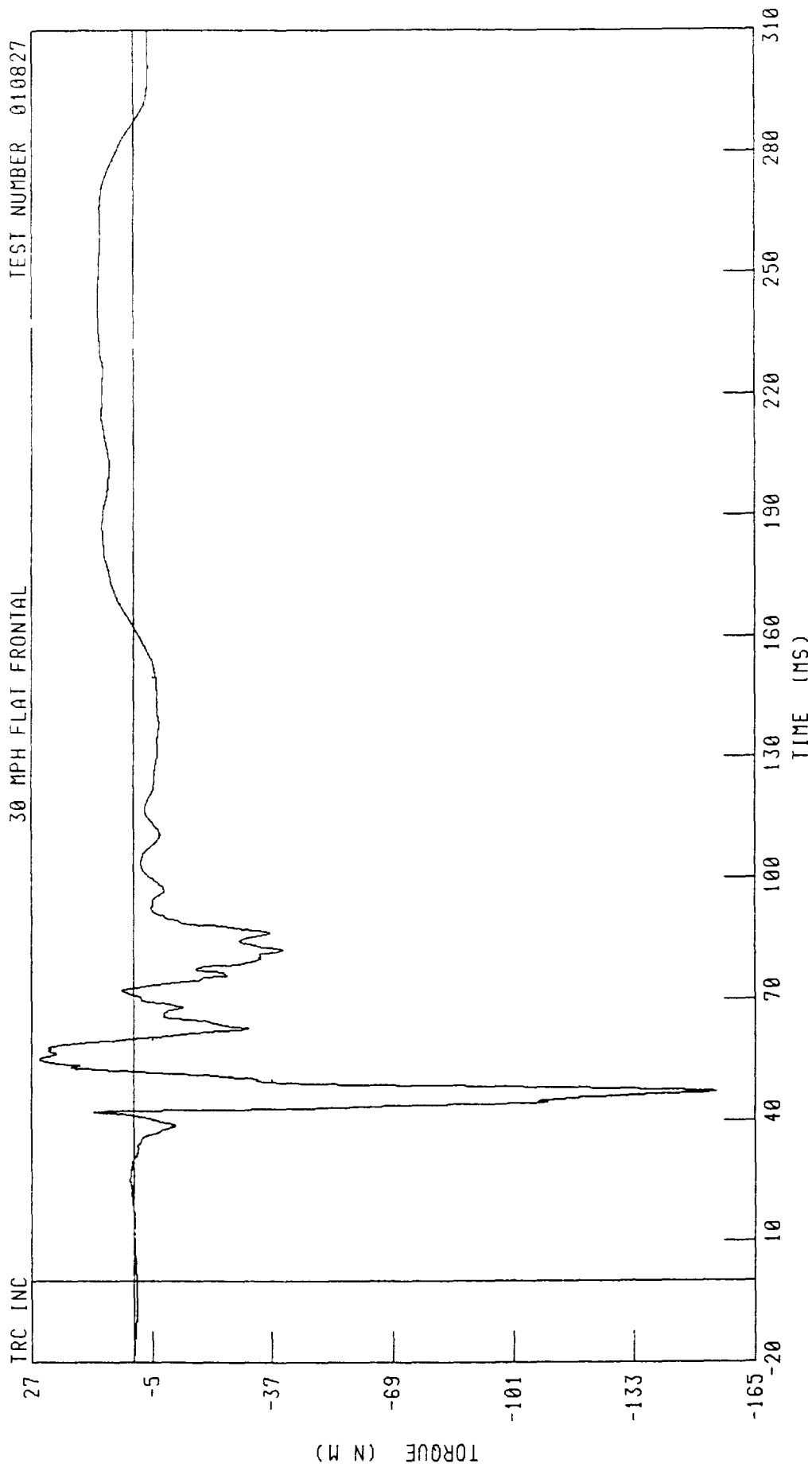
2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
DRIVER LEFT UPPER TIBIA MOMENT ABOUT X AXIS



2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
DRIVER LEFT UPPER TIBIA MOMENT ABOUT Y AXIS

30 MPH FLAT FRONTAL

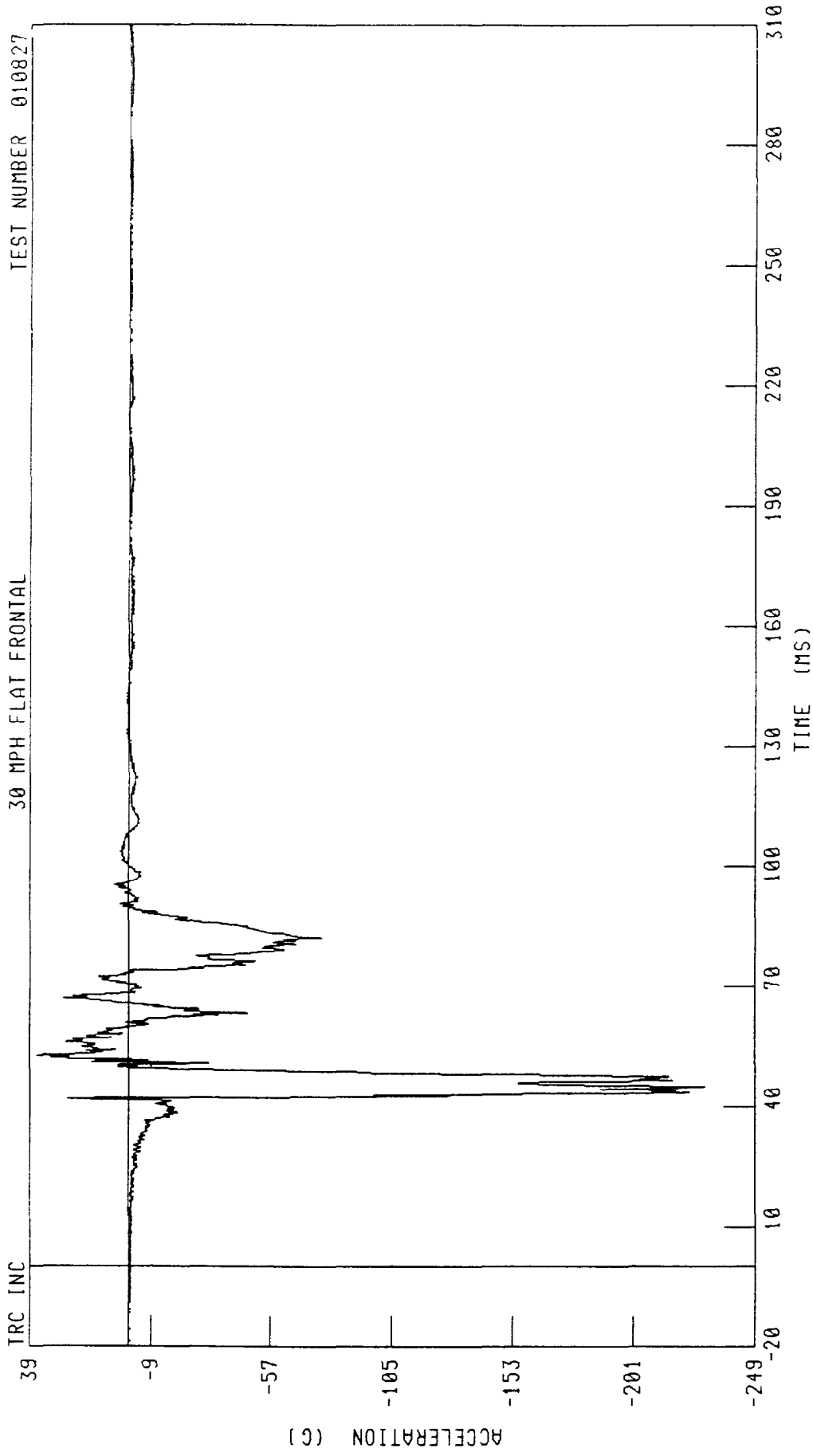
TEST NUMBER 010827



CHANNEL TBLYM1 FILTER CH CLASS 600

PEAK DATA 24 99 N M 0 55 12 MS, -154 78 N M 0 47 04 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
DRIVER LEFT TIBIA X-AXIS ACCELERATION



CHANNEL TBLXG1 FILTER CH CLASS 1000

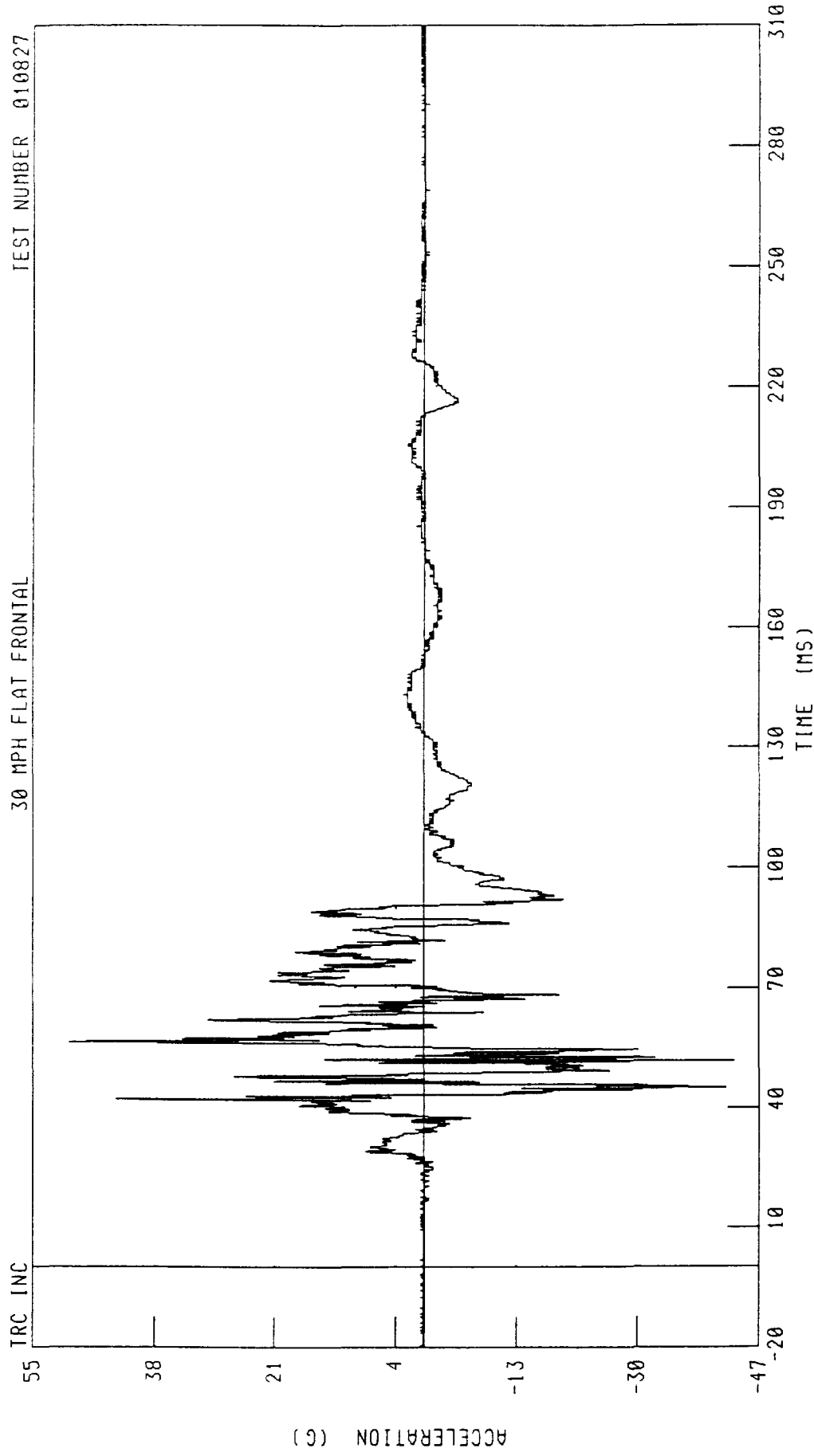
PEAK DATA 36 10 C 0 52 72 MS, -229 12 C 0 44 88 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

DRIVER LEFT TIBIA Y-AXIS ACCELERATION

30 MPH FLAT FRONTAL

TEST NUMBER 010827



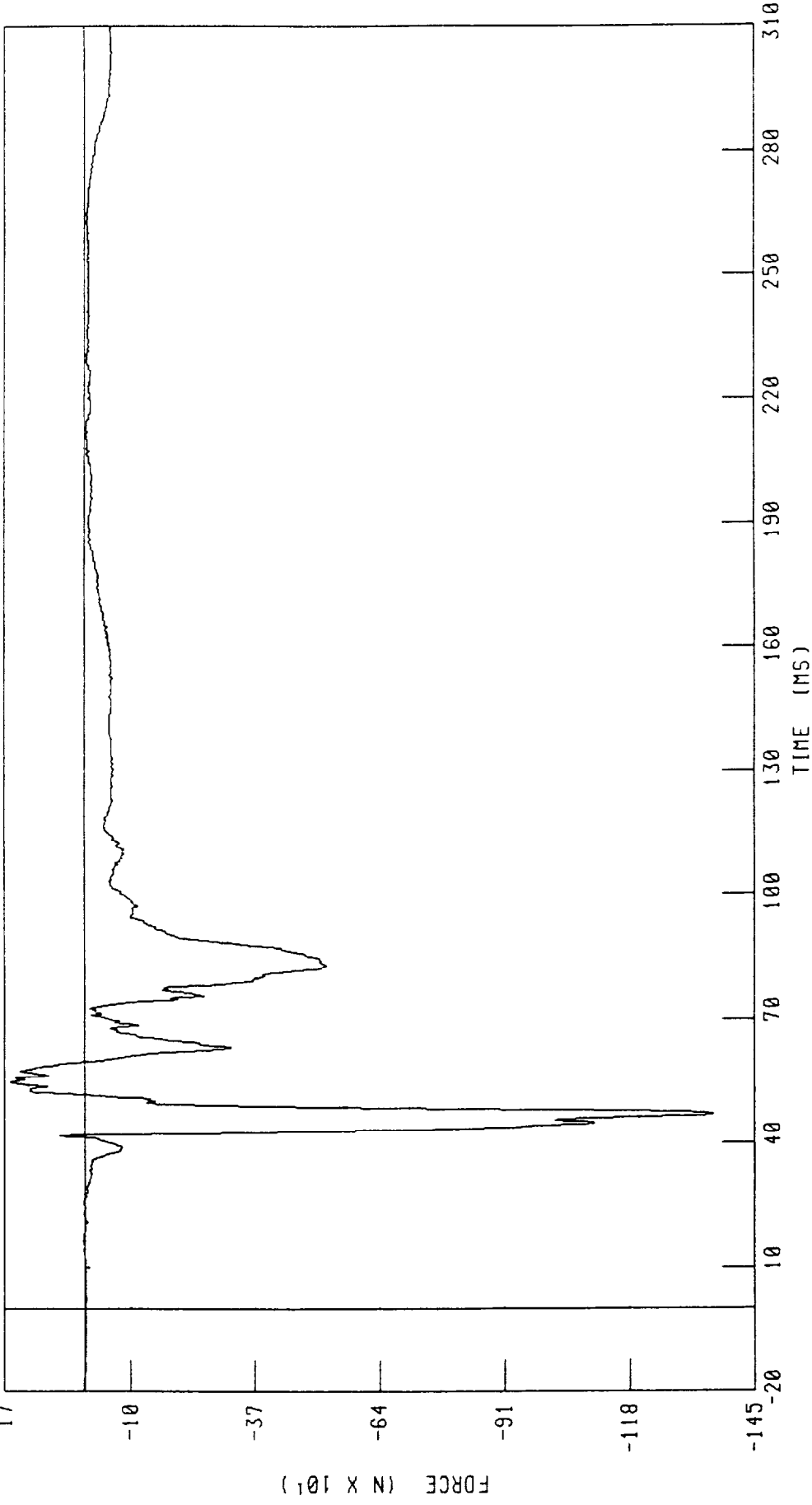
PEAK DATA 50 00 G @ 56 40 MS, -43 62 G @ 51 60 MS

CHANNEL TBLYC1 FILTER CH CLASS 1000

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
DRIVER LEFT LOWER TIBIA X-AXIS FORCE
30 MPH FLAT FRONTAL

TRC INC
17

TEST NUMBER 010827



PEAK DATA 158 74 N @ 54 88 MS, -1360 46 N @ 46 96 MS

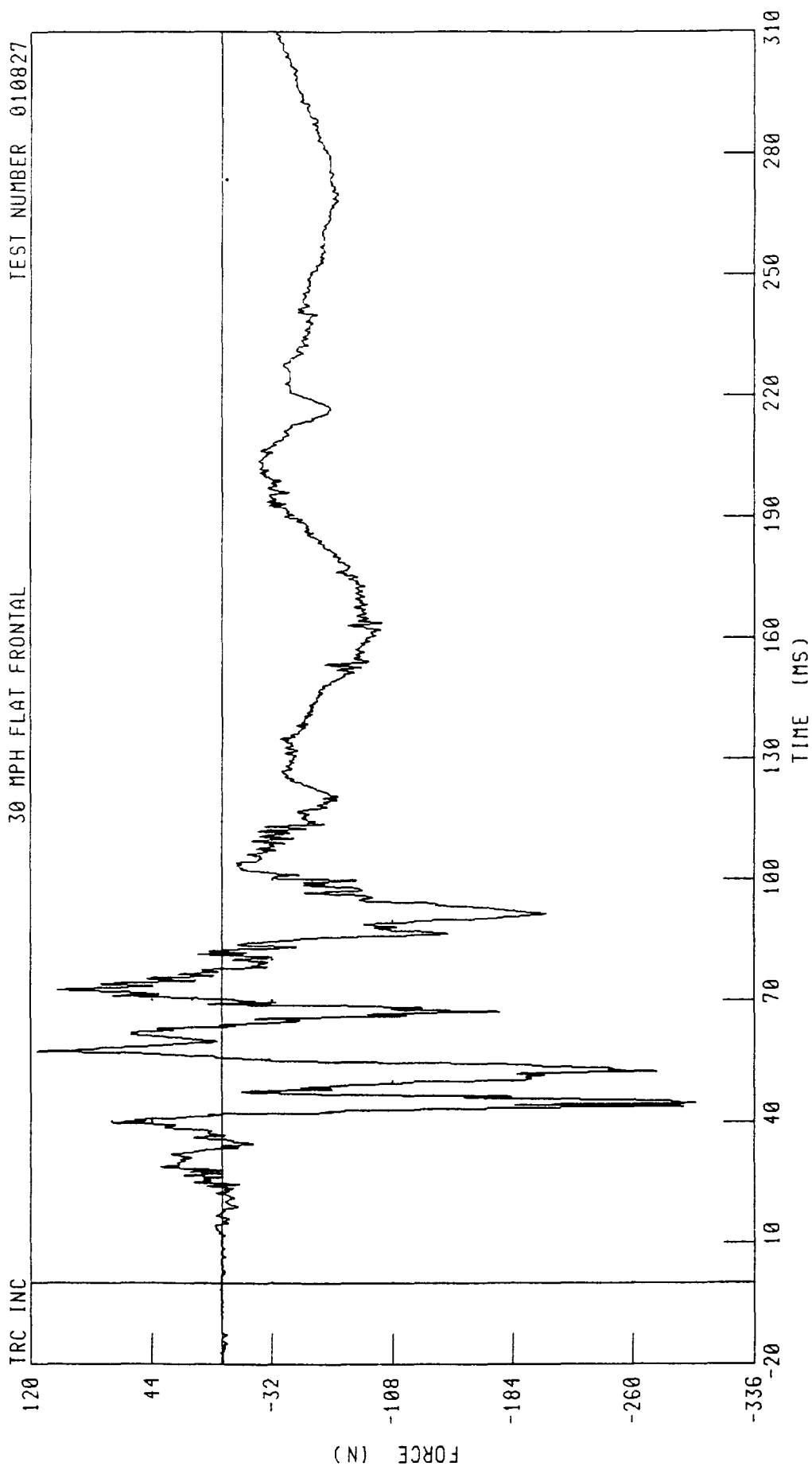
CHANNEL ANLXF1 FILTER CH CLASS 600

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

DRIVER LEFT LOWER TIBIA Y-AXIS FORCE

30 MPH FLAT FRONTAL

TEST NUMBER 010827



CHANNEL ANLYF1 FILTER CH CLASS 600

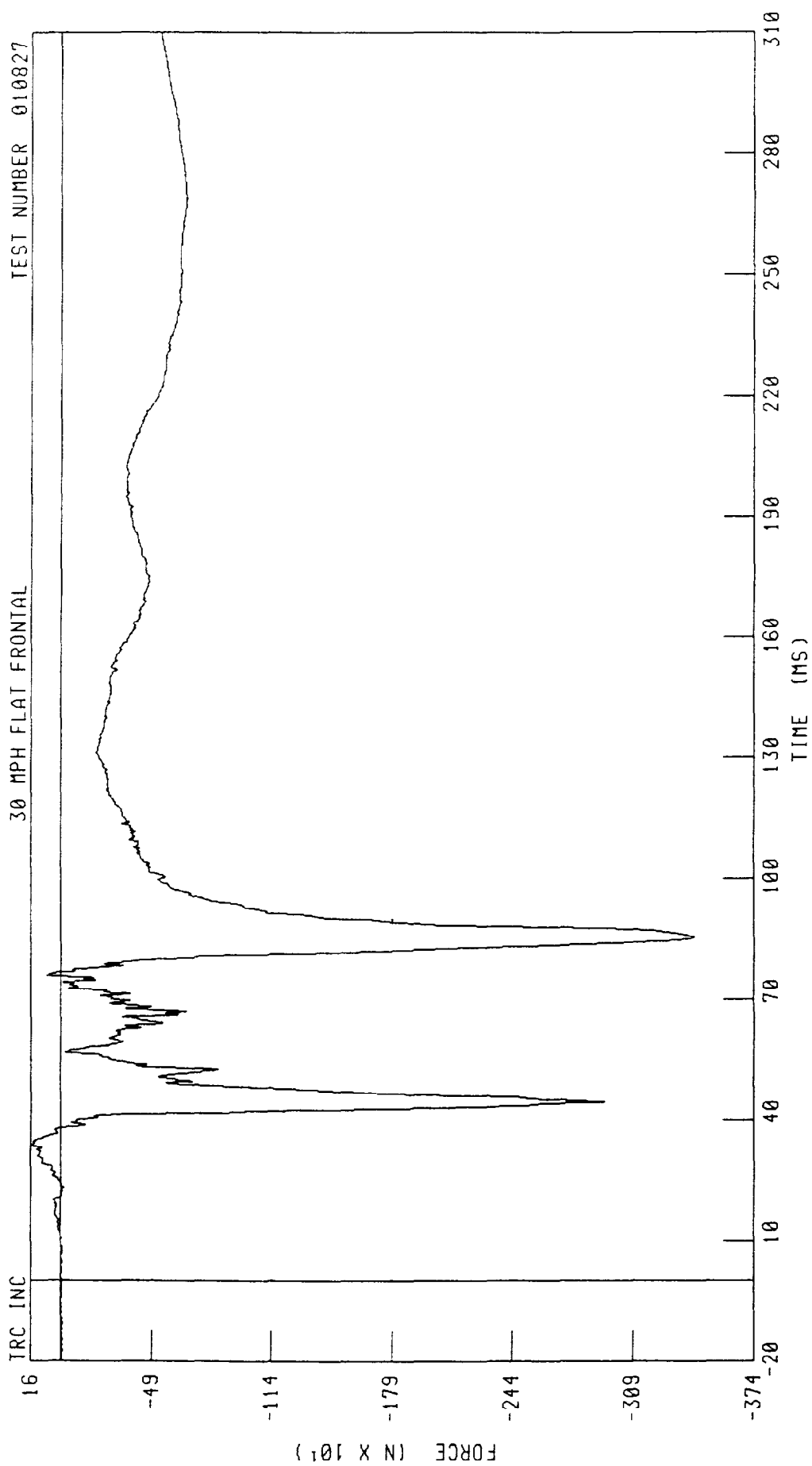
PEAK DATA 116 30 N @ 57 52 MS, -299 34 N @ 44 72 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

DRIVER LEFT LOWER TIBIA Z-AXIS FORCE

30 MPH FLAT FRONTAL

TEST NUMBER 010827



PEAK DATA 152 02 N 0 33 76 MS, -3421 16 N 0 85 76 MS

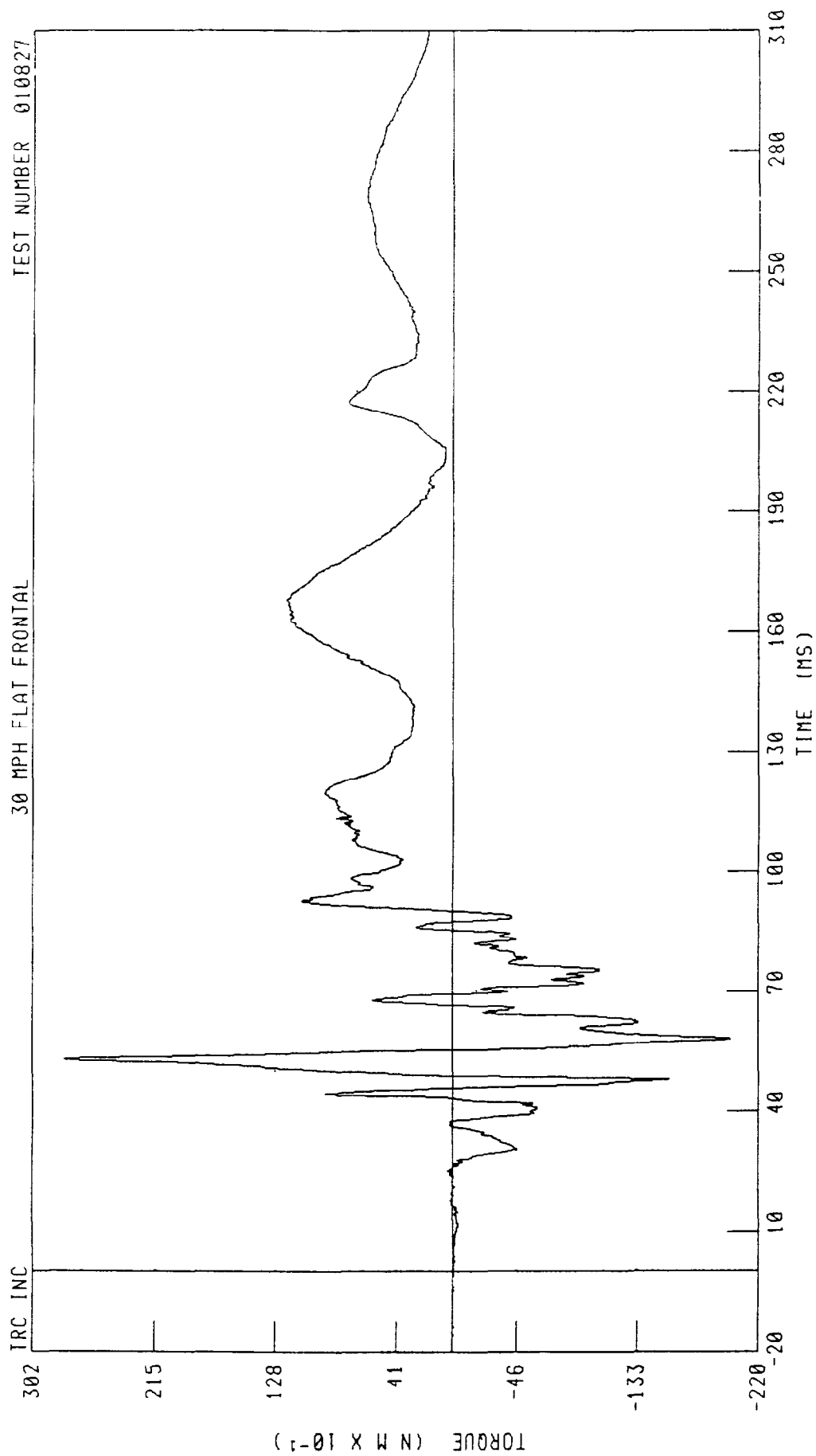
CHANNEL ANLZF1 FILTER CH CLASS 600

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

DRIVER LEFT LOWER TIBIA MOMENT ABOUT X AXIS

30 MPH FLAT FRONTAL

TEST NUMBER 010827



PEAK DATA 27 92 N M @ 53 04 MS, -20 06 N M @ 58 00 MS

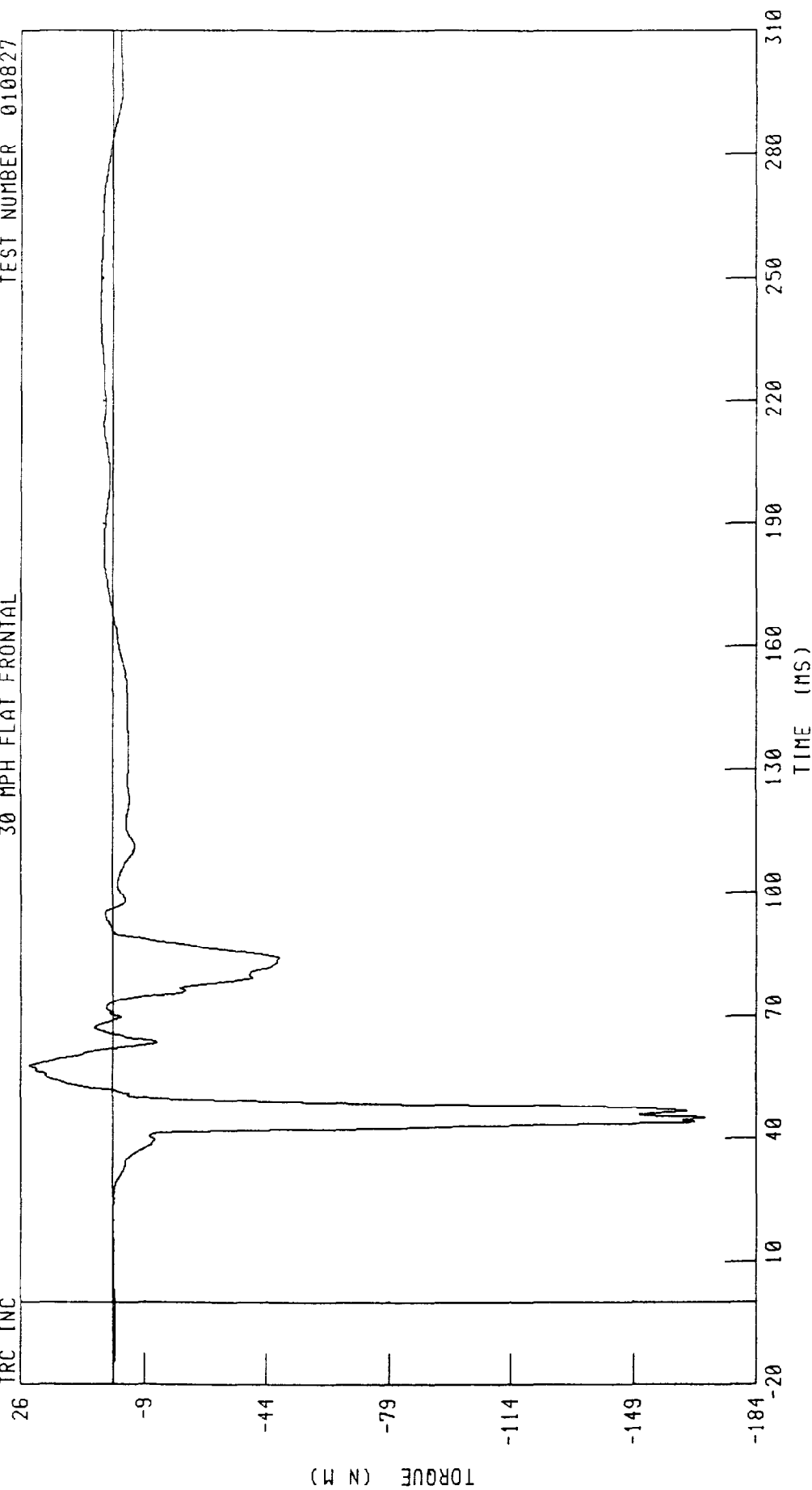
CHANNEL ANLXM1 FILTER CH CLASS 600

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
DRIVER LEFT LOWER TIBIA MOMENT ABOUT Y AXIS

TEST NUMBER 010827

30 MPH FLAT FRONTAL

TRC INC

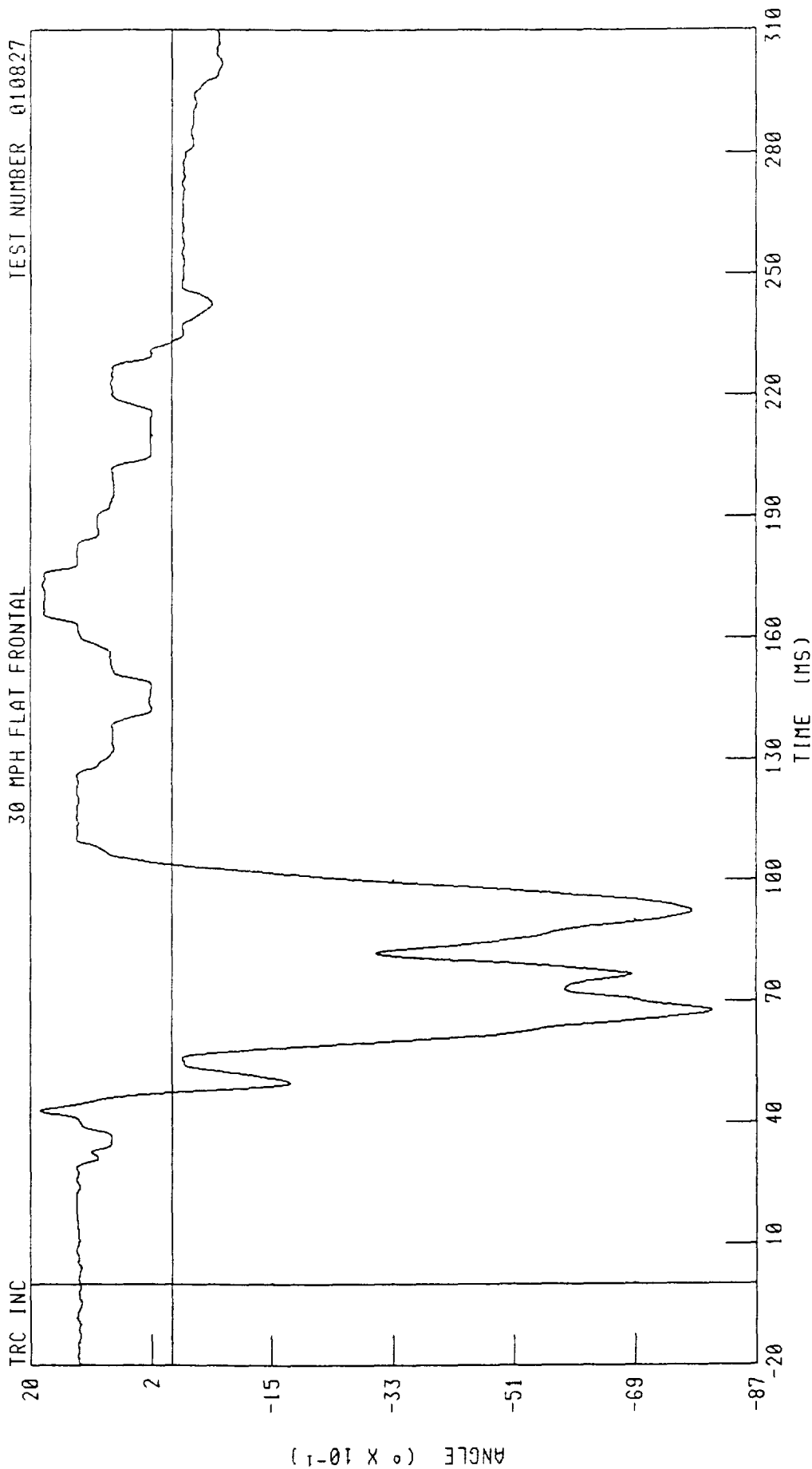


TIME (MS)

CHANNEL ANLYM1 FILTER CH CLASS 600

PEAK DATA 23 68 N M 57 84 MS, -169 29 N M 44 88 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
 DRIVER LEFT FOOT TO ANKLE X-AXIS DISPLACEMENT



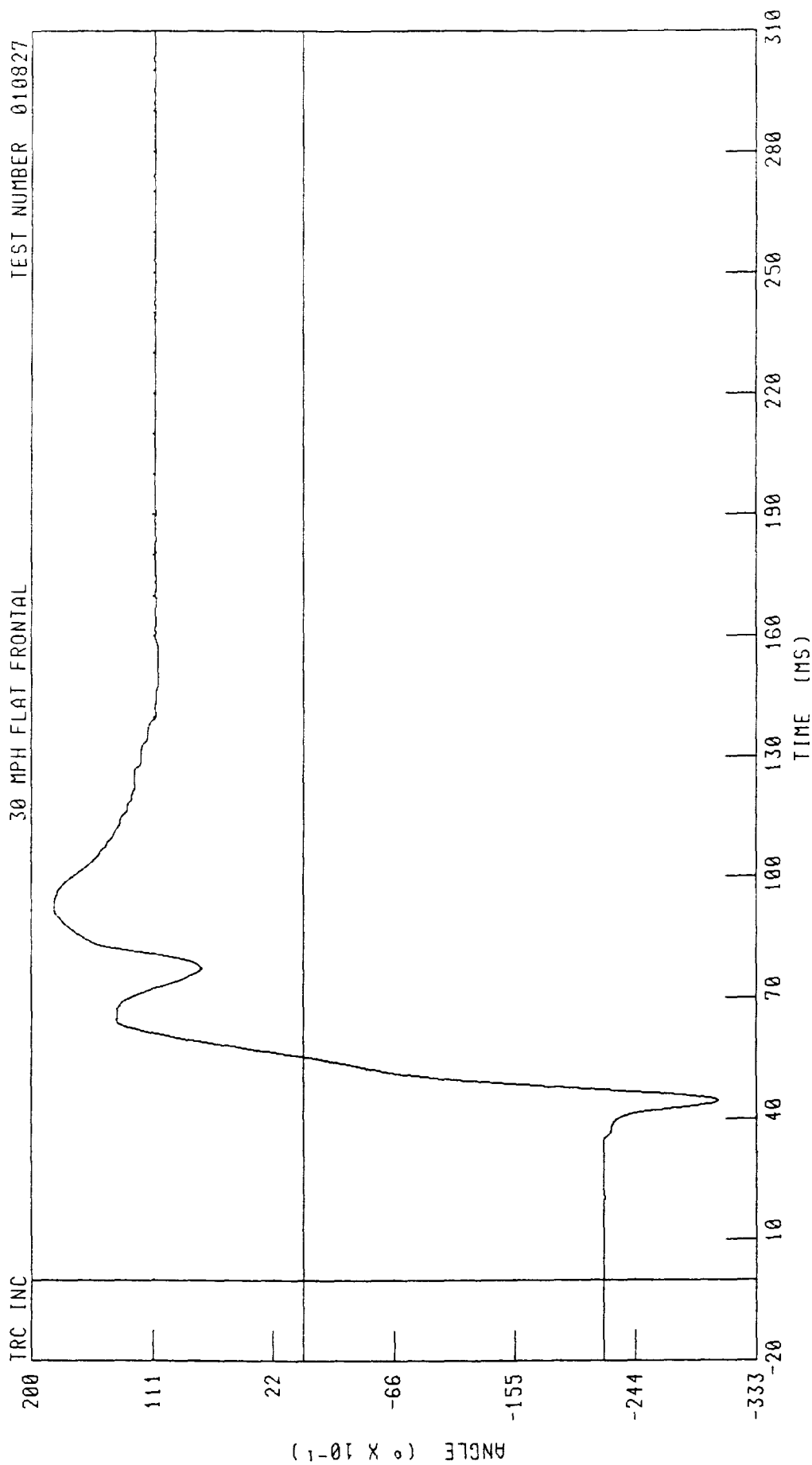
CHANNEL FTLXD1 FILTER CH CLASS 180

PEAK DATA 1 96 ° @ 42 96 MS, -8 04 ° @ 67 52 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
 DRIVER LEFT FOOT TO ANKLE Y-AXIS DISPLACEMENT

TEST NUMBER 010827

30 MPH FLAT FRONTAL

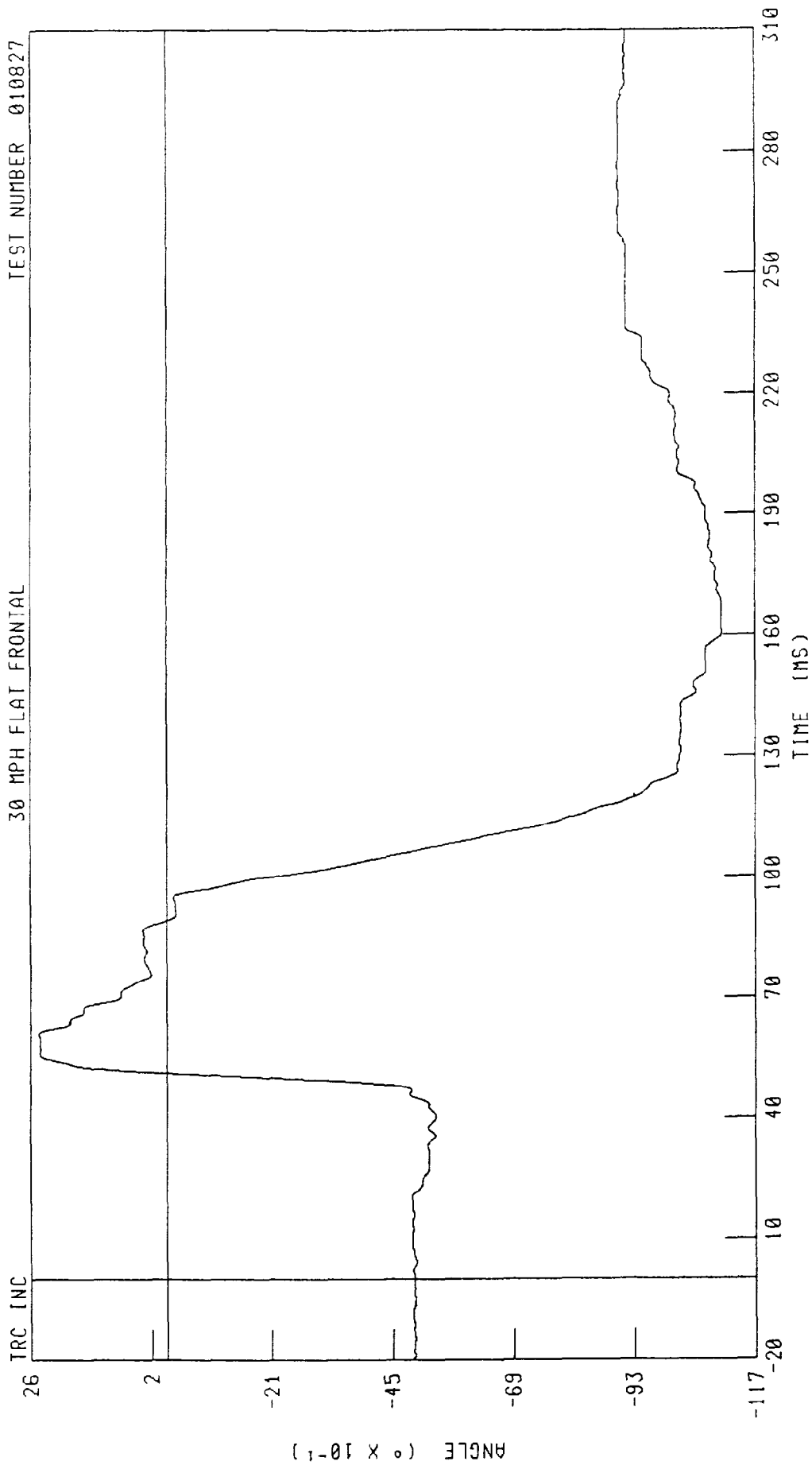


PEAK DATA 18 36 ° @ 92 40 MS, -30 58 ° @ 41 48 MS

CHANNEL FTLYD1 FILTER CH CLASS 180

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
 DRIVER LEFT FOOT TO ANKLE Z-AXIS DISPLACEMENT
 30 MPH FLAT FRONTAL

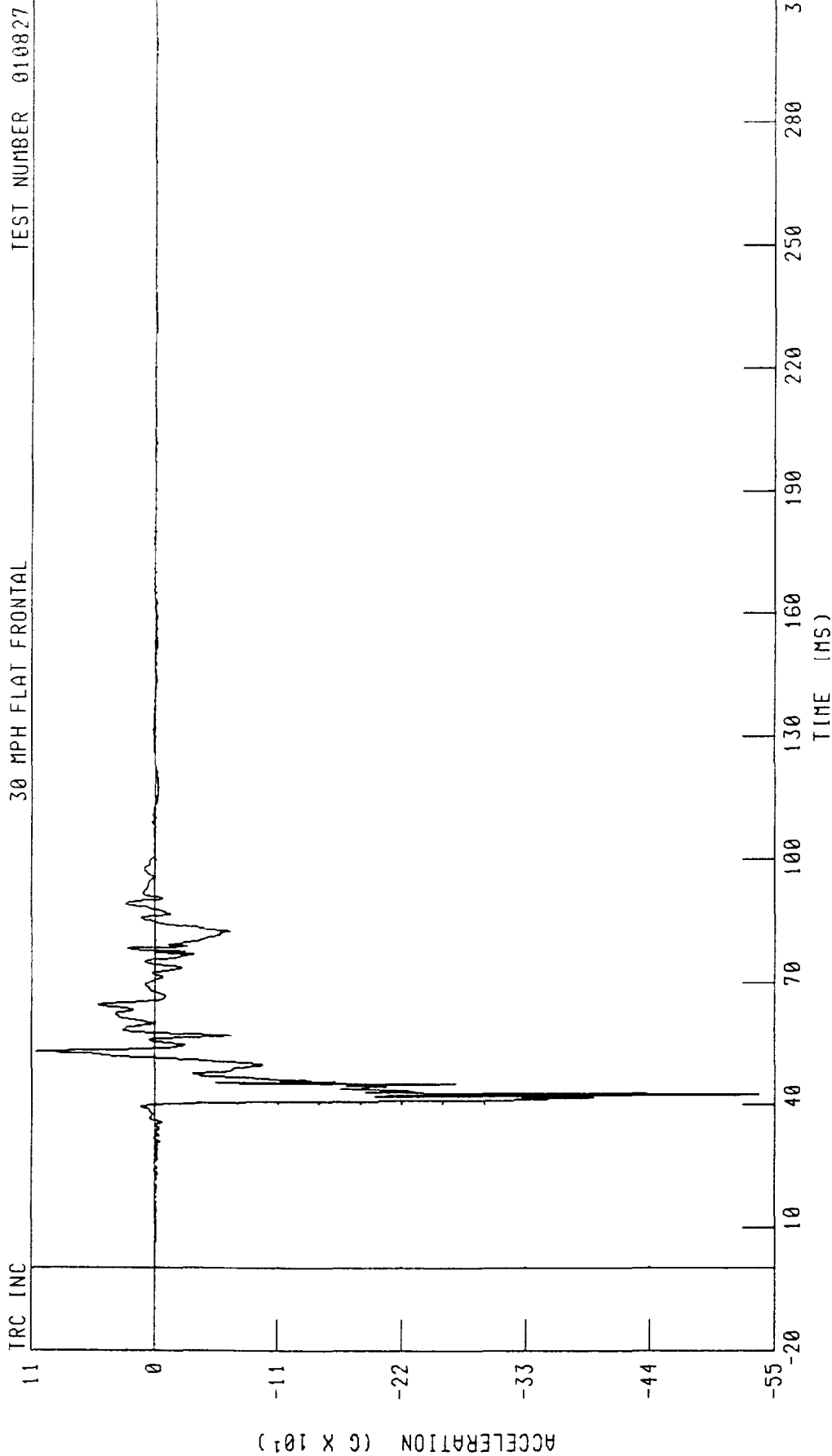
TEST NUMBER 010827



PEAK DATA 2 54 ° @ 60 88 MS, -11 05 ° @ 160 48 MS

CHANNEL FTLZD1 FILTER CH CLASS 180

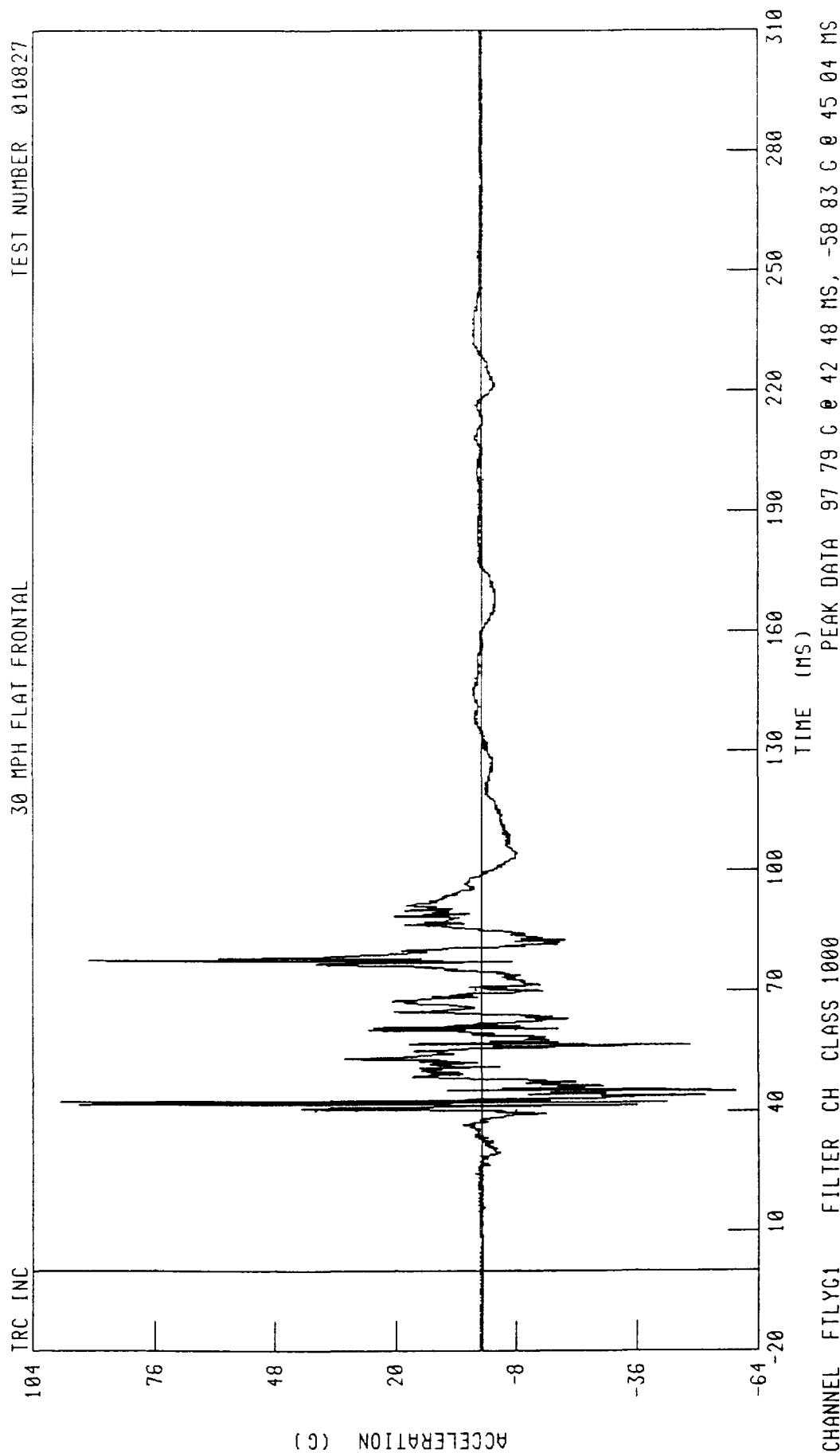
2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
 DRIVER LEFT FOOT X-AXIS ACCELERATION
 30 MPH FLAT FRONTAL



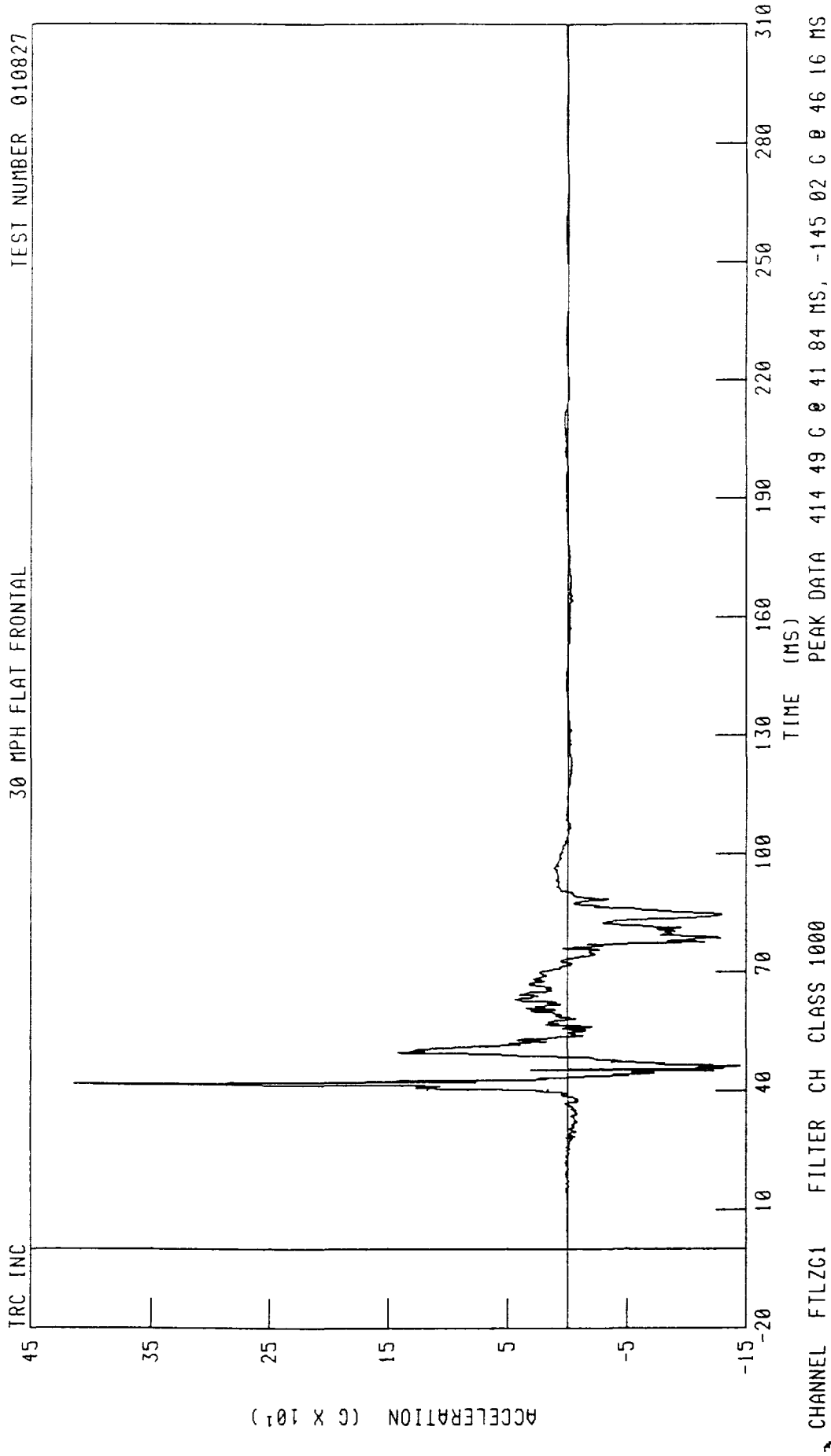
CHANNEL FTLXG1 FILTER CH CLASS 1000

PEAK DATA 106 22 G @ 52 96 MS, -536 12 G @ 42 40 MS

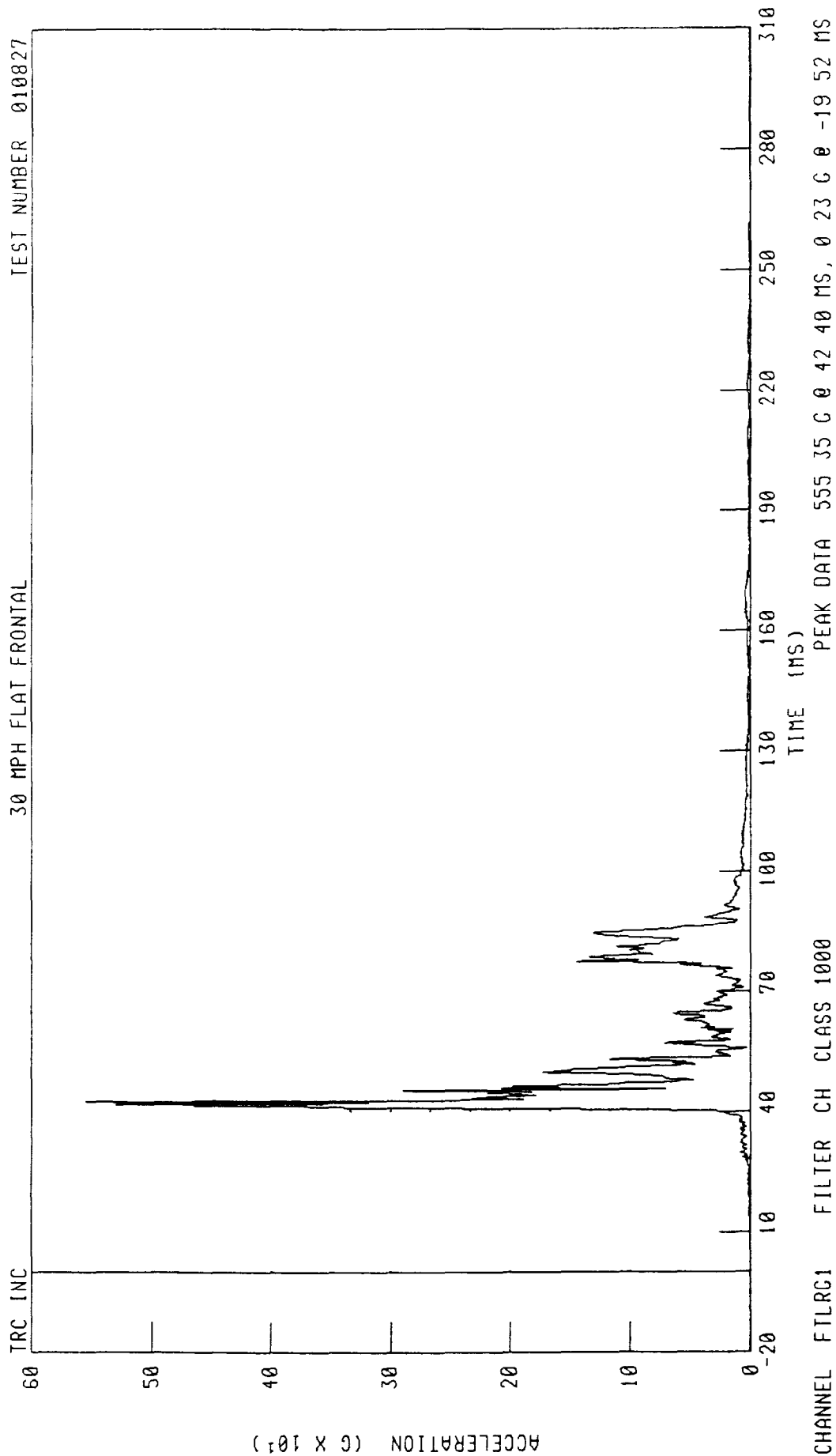
2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
 DRIVER LEFT FOOT Y-AXIS ACCELERATION
 30 MPH FLAT FRONTAL



2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
 DRIVER LEFT FOOT Z-AXIS ACCELERATION
 30 MPH FLAT FRONTAL



2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
DRIVER LEFT FOOT RESULTANT ACCELERATION

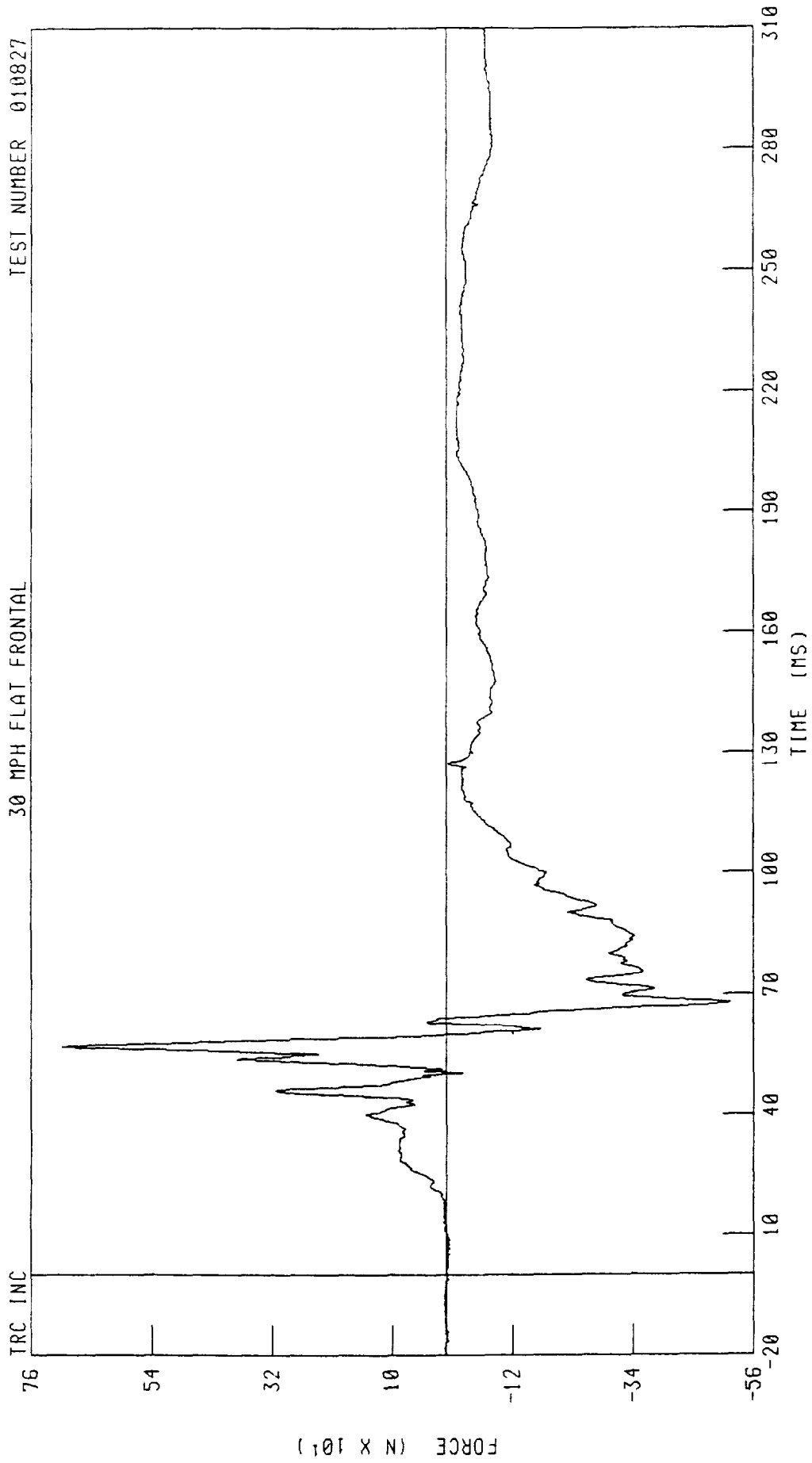


2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

DRIVER RIGHT UPPER TIBIA X-AXIS FORCE

30 MPH FLAT FRONTAL

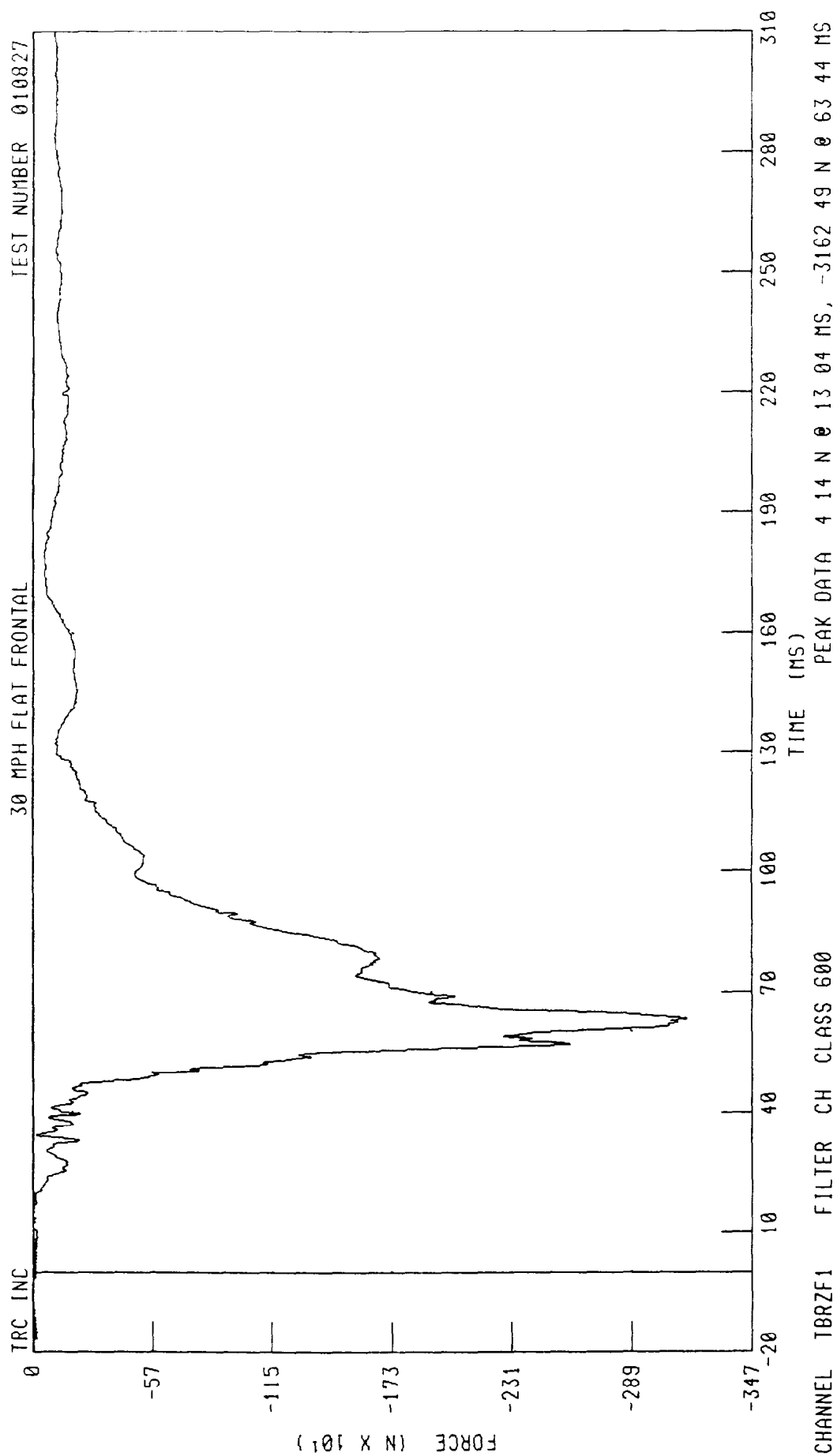
TEST NUMBER 010827



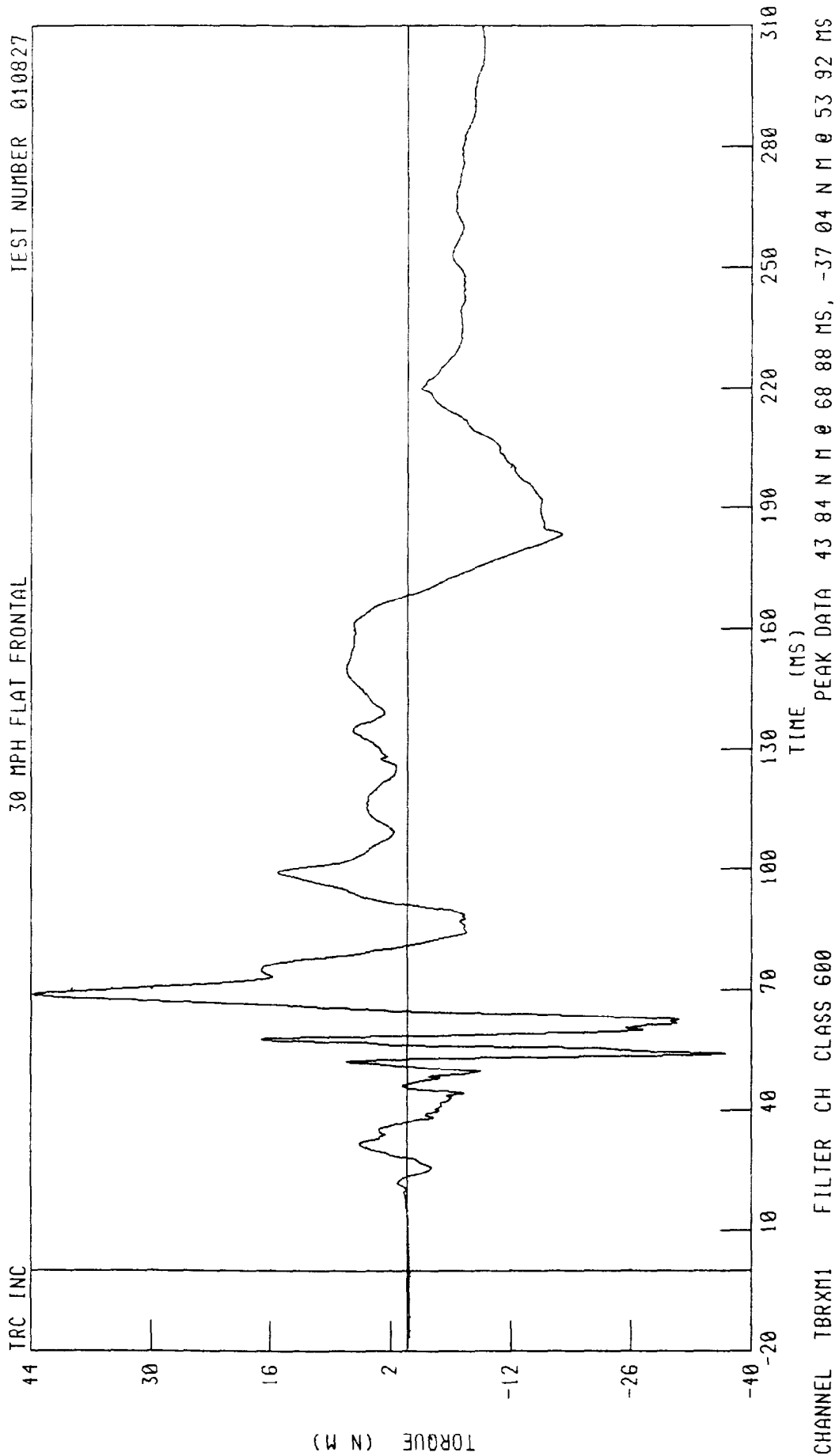
CHANNEL TBRXF1 FILTER CH CLASS 600

PEAK DATA 704 78 N @ 56 96 MS, -517 70 N @ 67 84 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
 DRIVER RIGHT UPPER TIBIA Z-AXIS FORCE



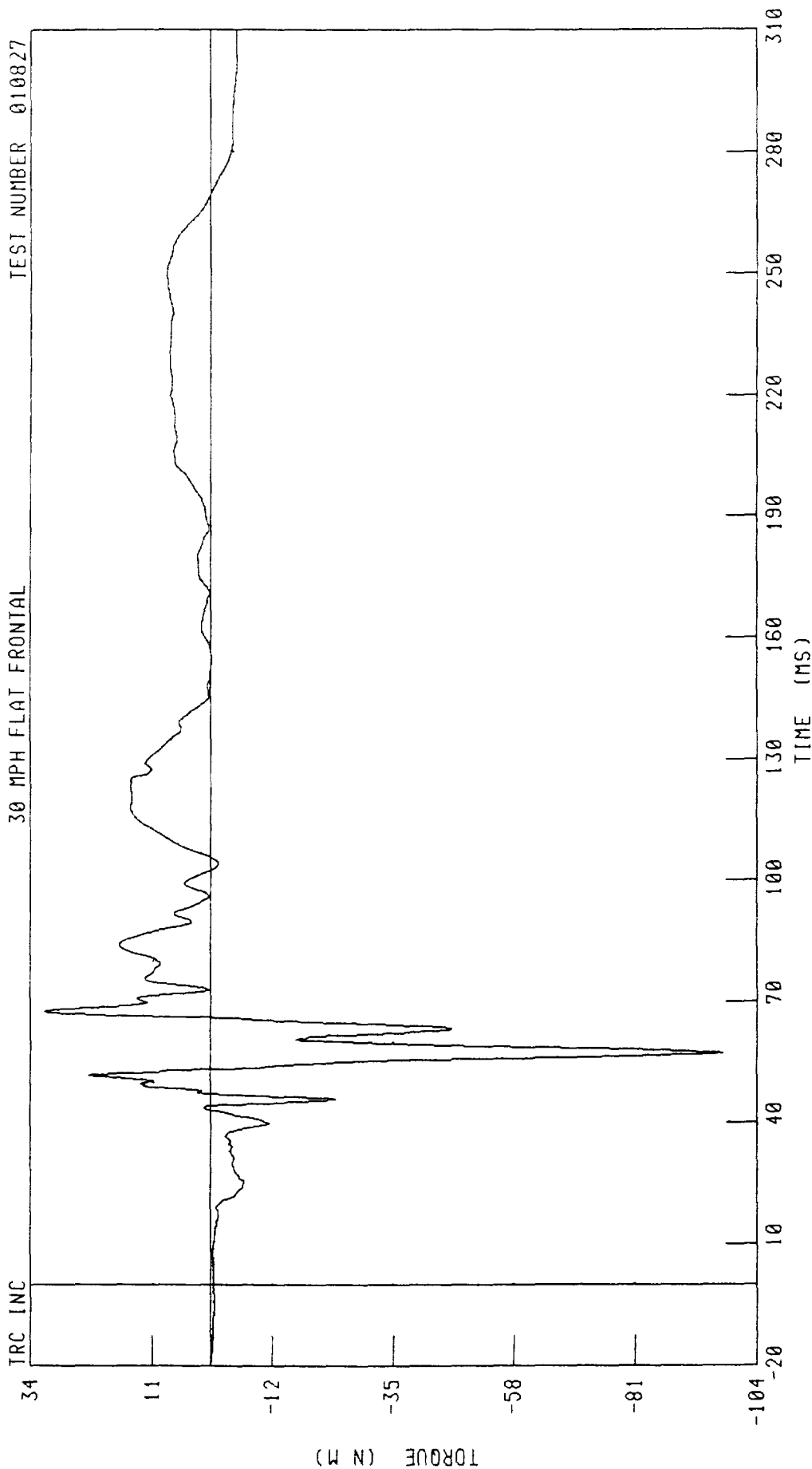
2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
DRIVER RIGHT UPPER TIBIA MOMENT ABOUT X AXIS



2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
DRIVER RIGHT UPPER TIBIA MOMENT ABOUT Y AXIS

30 MPH FLAT FRONTAL

TEST NUMBER 010827



CHANNEL TBRYM1 FILTER CH CLASS 600

PEAK DATA 31 60 N M 0 67 60 MS, -97 67 N M 0 57 20 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
DRIVER RIGHT TIBIA X-AXIS ACCELERATION
30 MPH FLAT FRONTAL

TEST NUMBER 010827

TRC INC

38

1

ACCELERATION (G)

-36

-73

-110

-147

-184

TIME (MS)

310

280

250

220

190

160

130

100

70

40

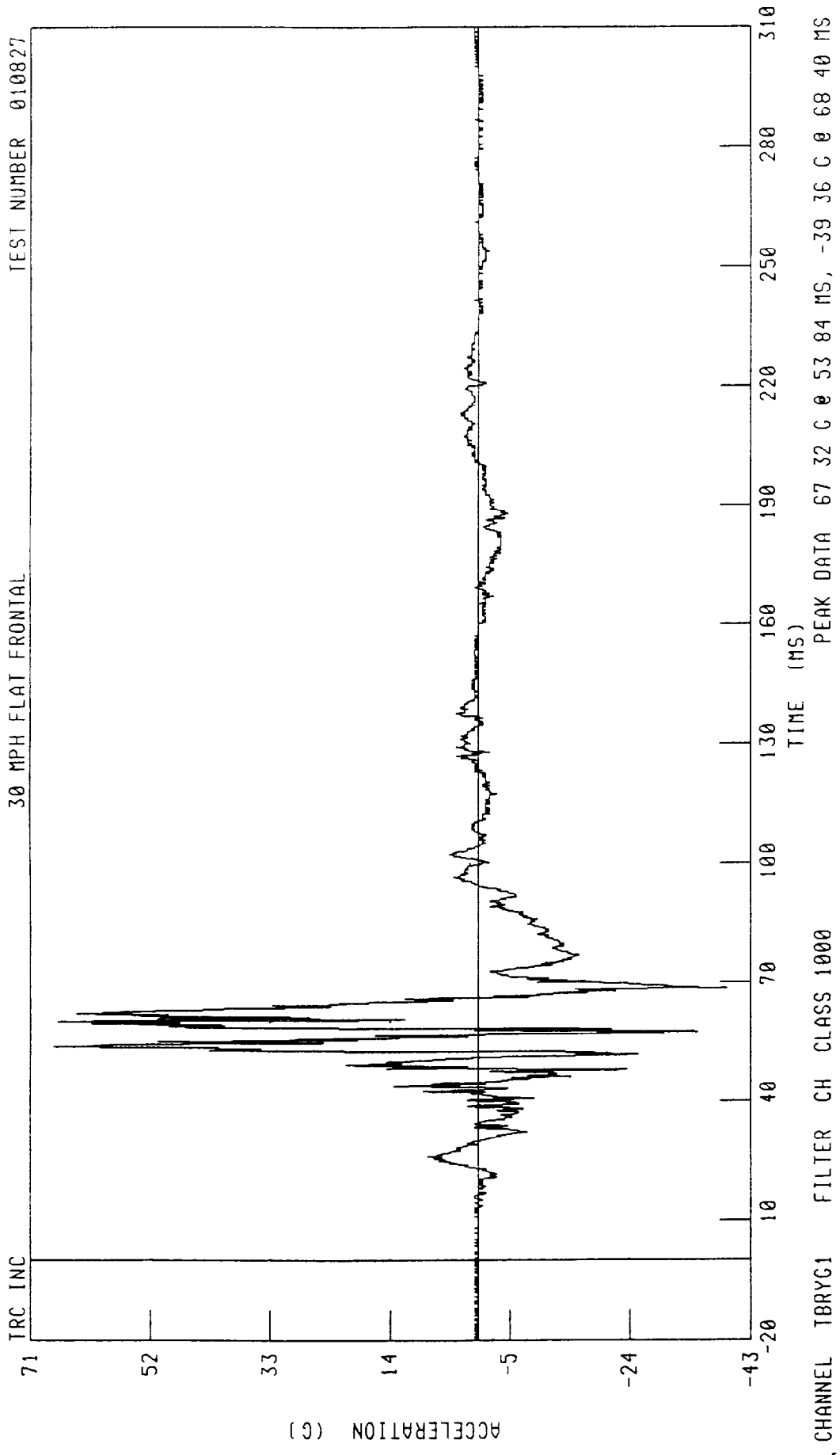
10

-20

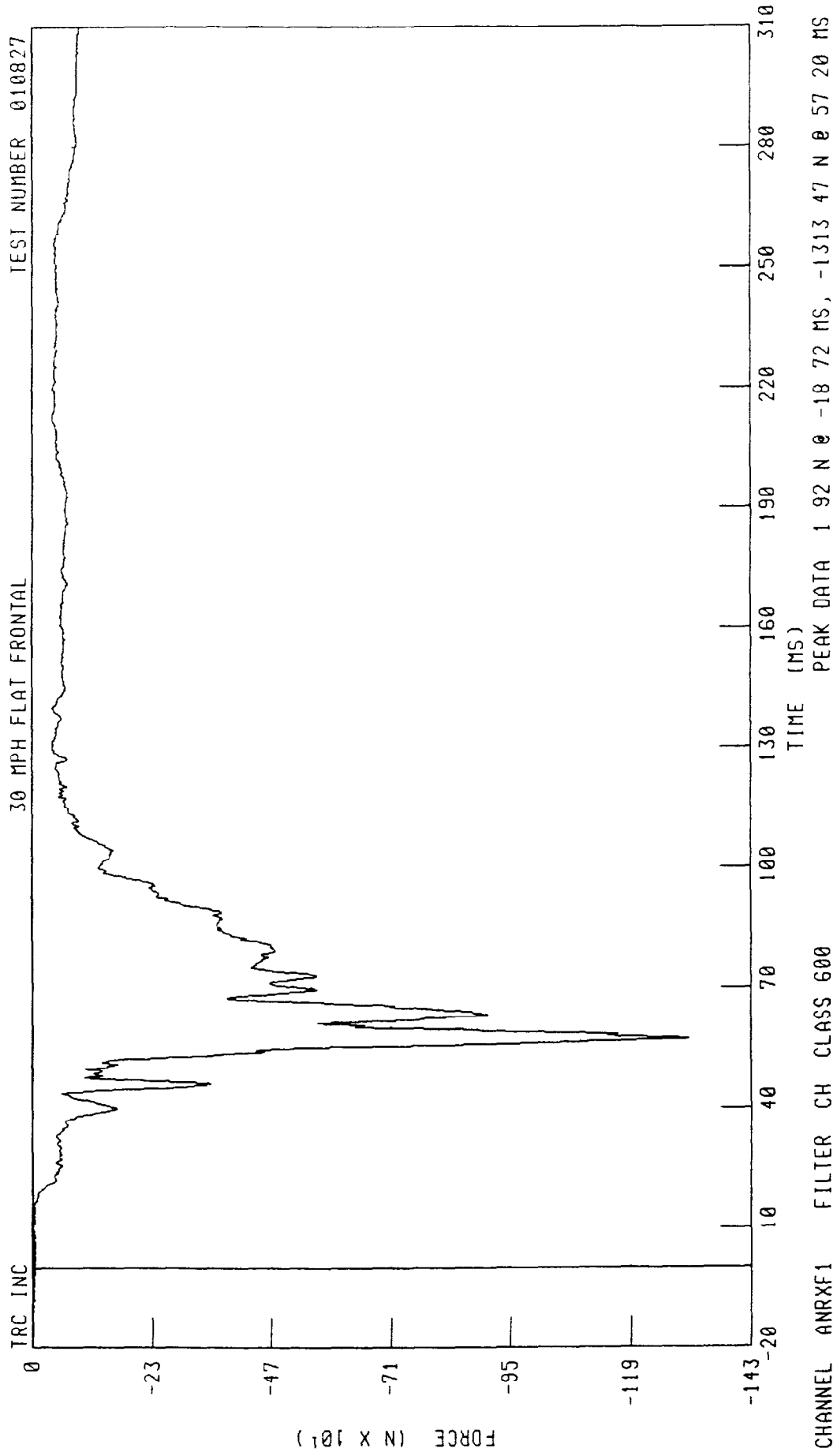
PEAK DATA 35 14 G @ 67 84 MS, -170 78 G @ 57 20 MS

CHANNEL TBRXC1 FILTER CH CLASS 1000

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
DRIVER RIGHT TIBIA Y-AXIS ACCELERATION



2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
DRIVER RIGHT LOWER TIBIA X-AXIS FORCE

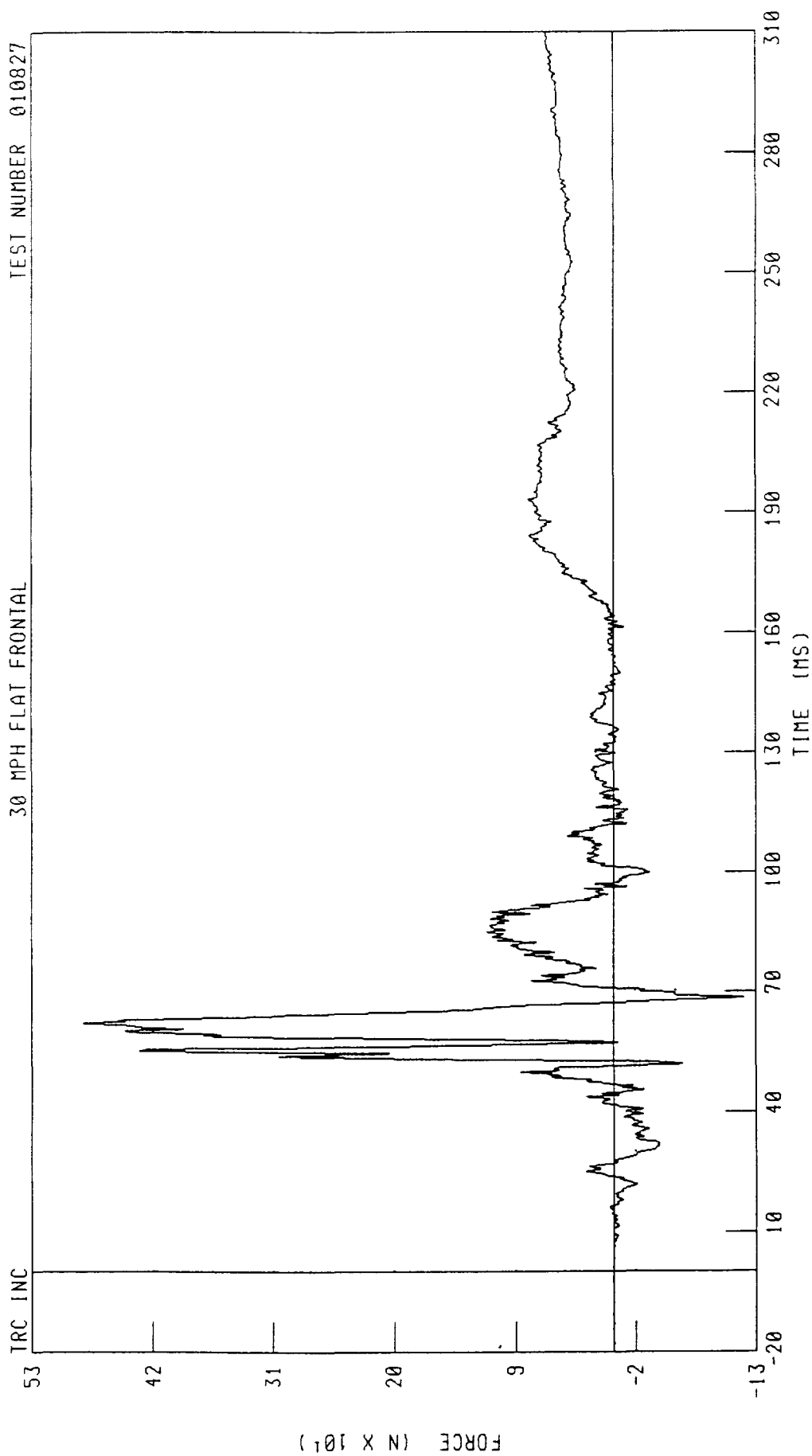


2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

DRIVER RIGHT LOWER TIBIA Y-AXIS FORCE

30 MPH FLAT FRONTAL

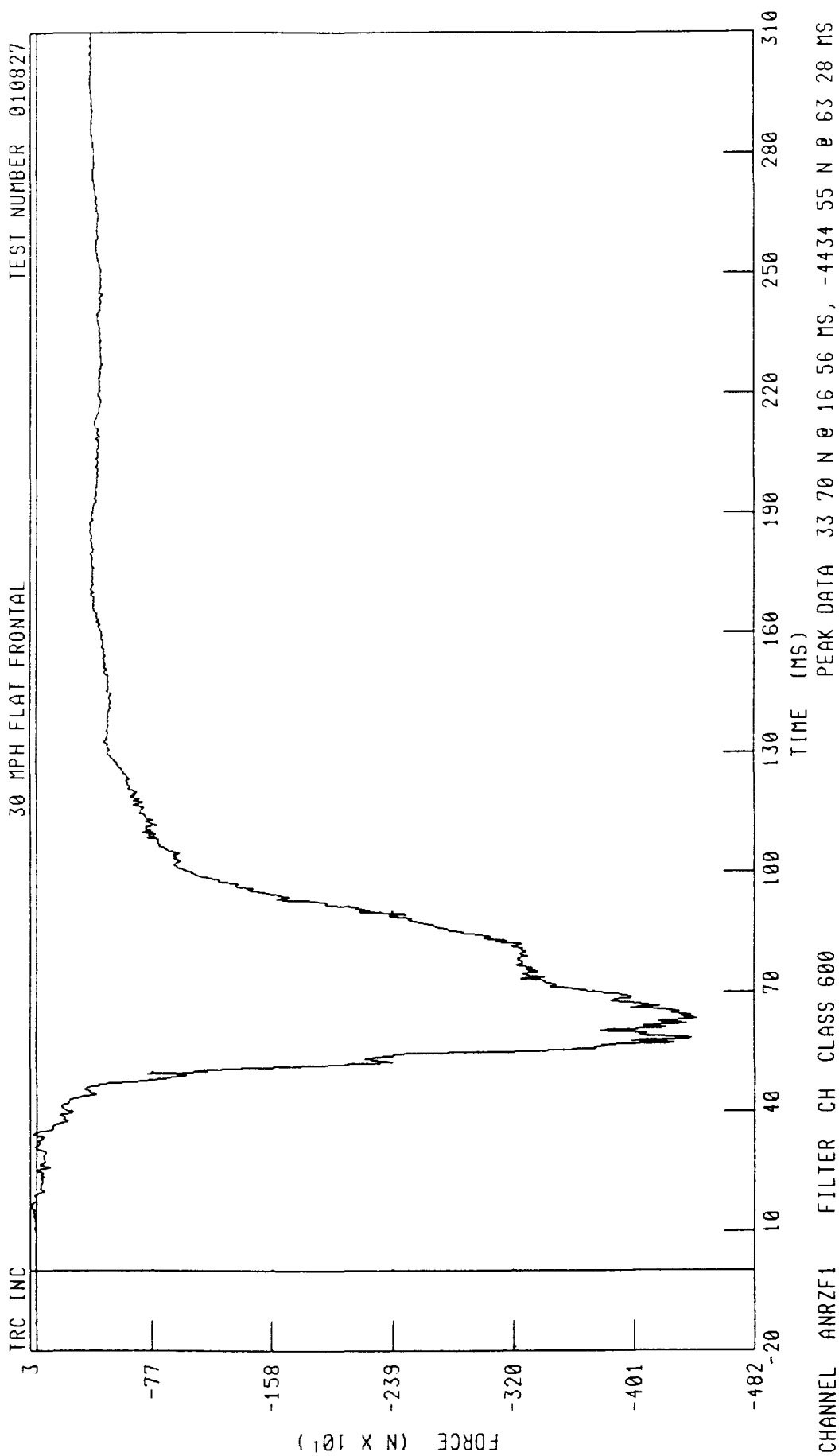
TEST NUMBER 010827



CHANNEL ANRYF1 FILTER CH CLASS 600

PEAK DATA 483 62 N @ 62 16 MS, -118 46 N @ 68 32 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
DRIVER RIGHT LOWER TIBIA Z-AXIS FORCE

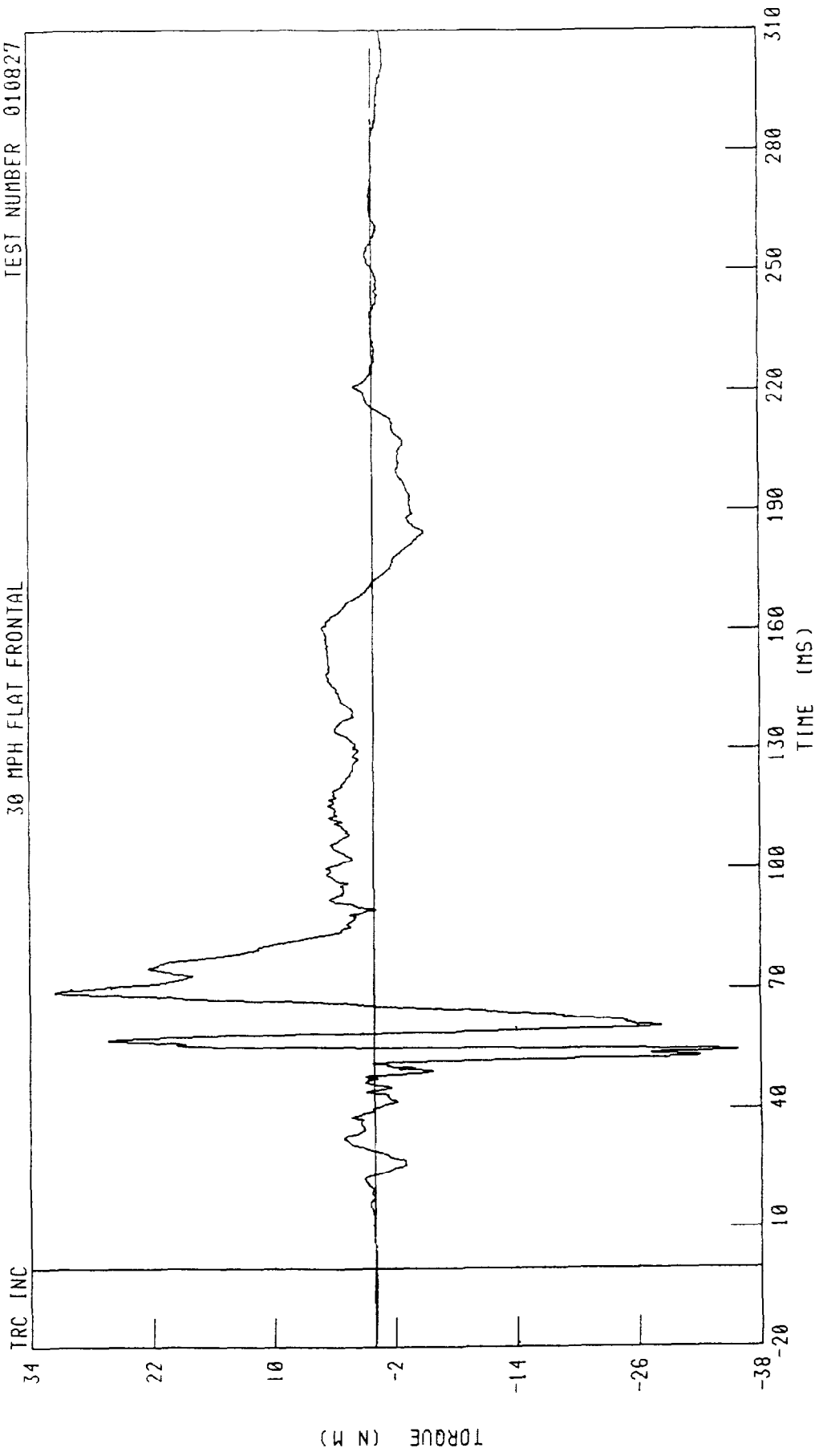


2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

DRIVER RIGHT LOWER TIBIA MOMENT ABOUT X AXIS

30 MPH FLAT FRONTAL

TEST NUMBER 010827

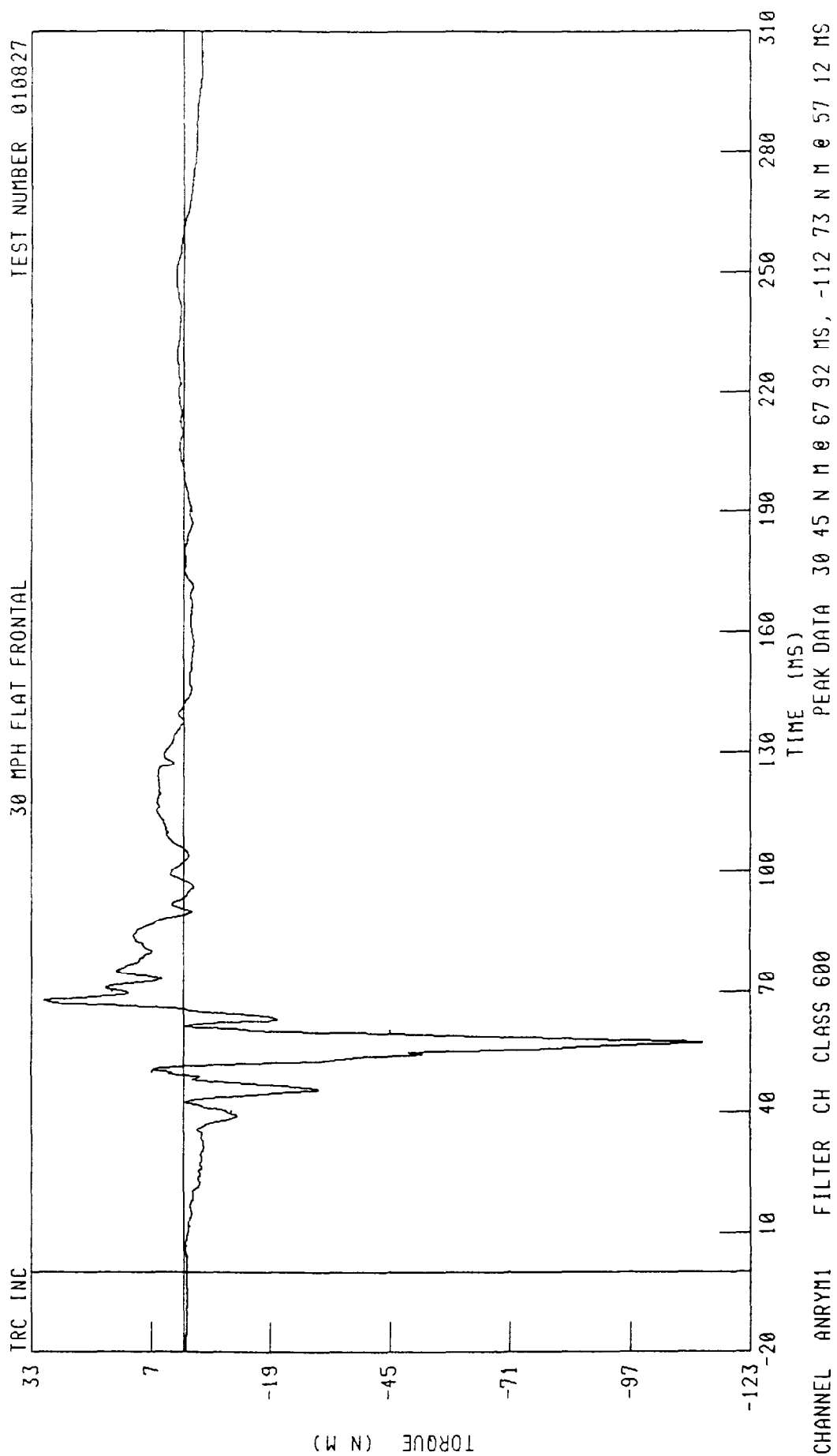


TIME (ms)

PEAK DATA 31 63 N M @ 69 20 MS, -35 82 N M @ 54 32 MS

CHANNEL ANRXM1 FILTER CH CLASS 600

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
DRIVER RIGHT LOWER TIBIA MOMENT ABOUT Y AXIS

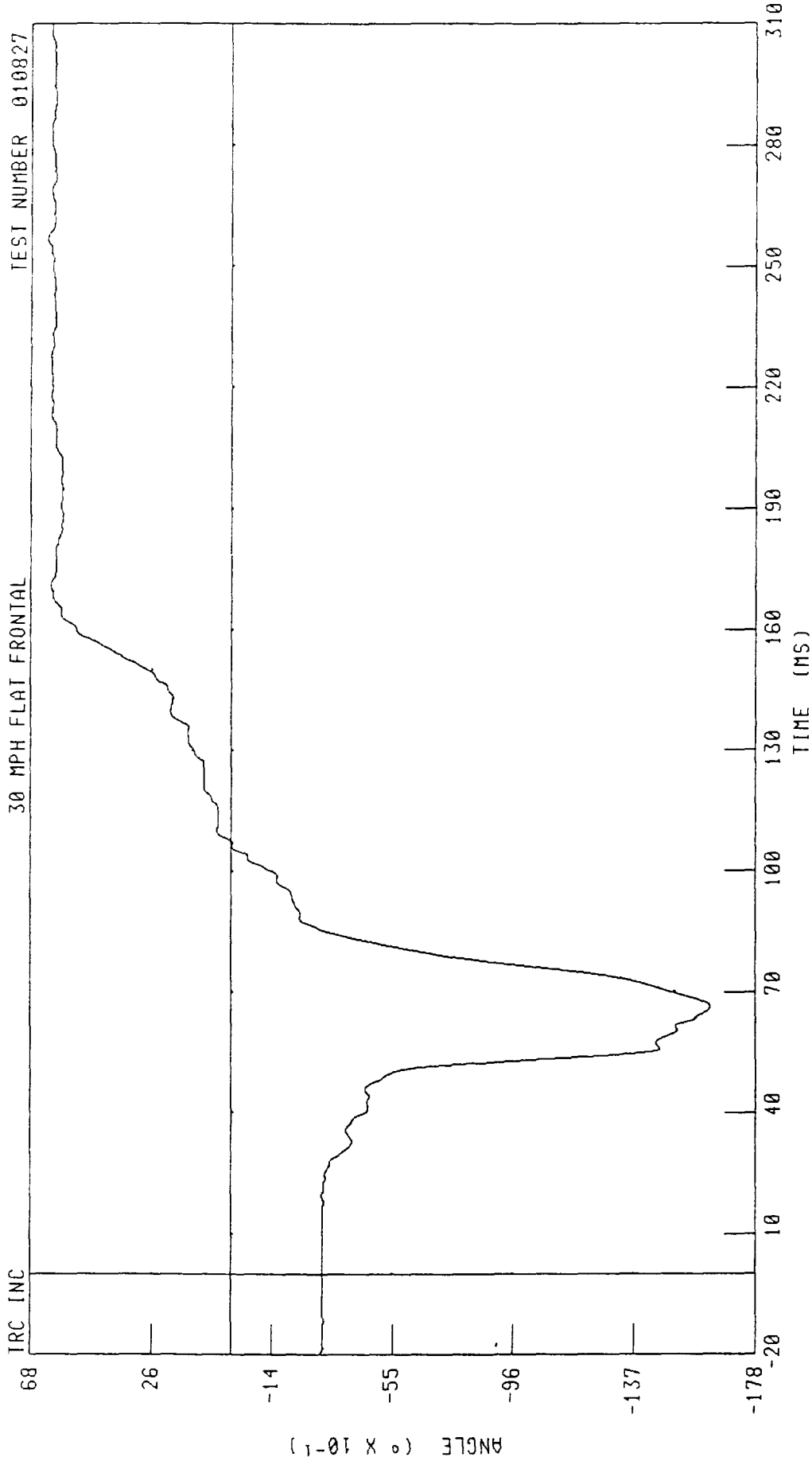


2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

DRIVER RIGHT FOOT TO ANKLE X-AXIS DISPLACEMENT

30 MPH FLAT FRONTAL

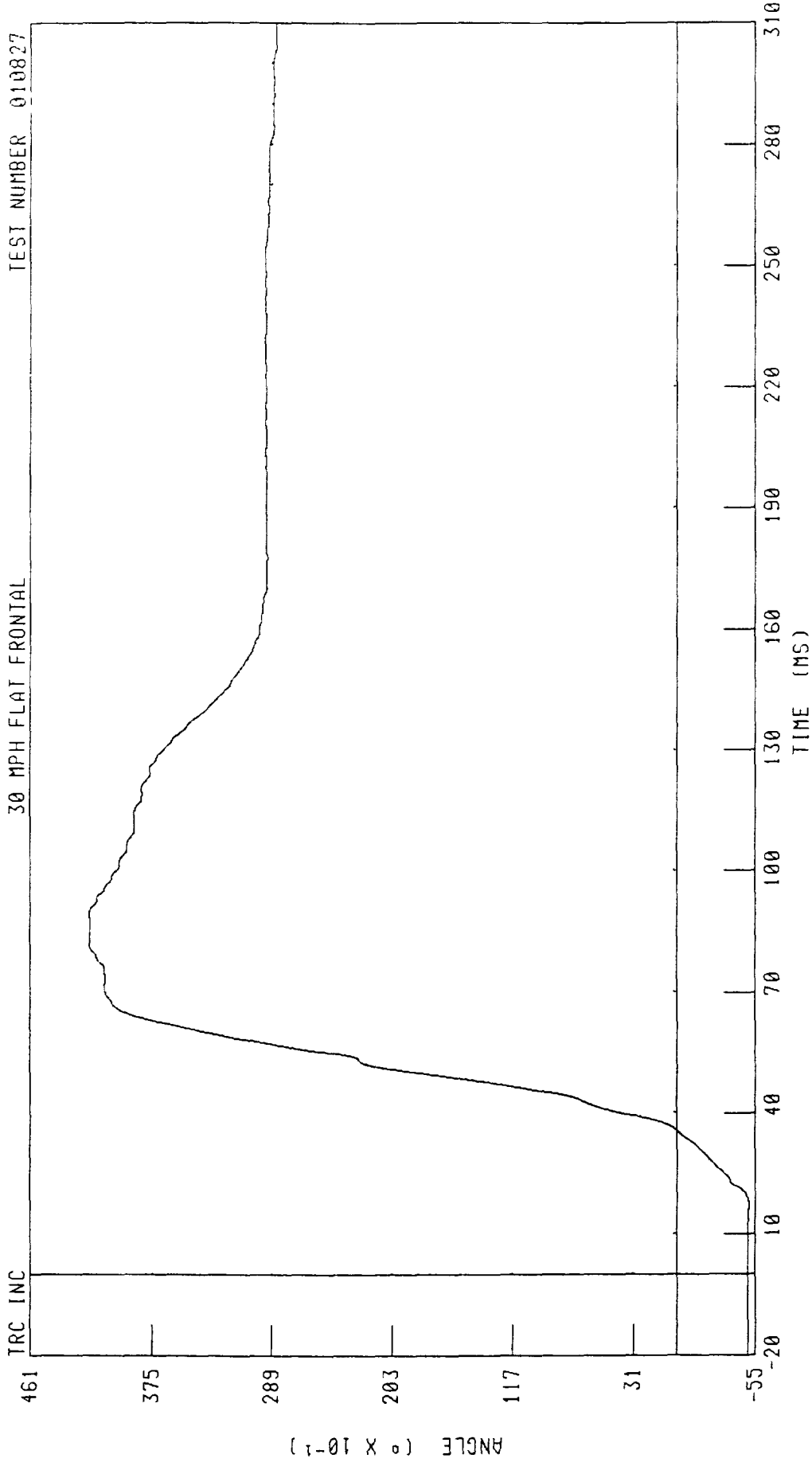
TEST NUMBER 010827



PEAK DATA 6 25 ° @ 256 48 MS, -16 28 ° @ 66 32 MS

CHANNEL FTRXD1 FILTER CH CLASS 180

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
 DRIVER RIGHT FOOT TO ANKLE Y-AXIS DISPLACEMENT



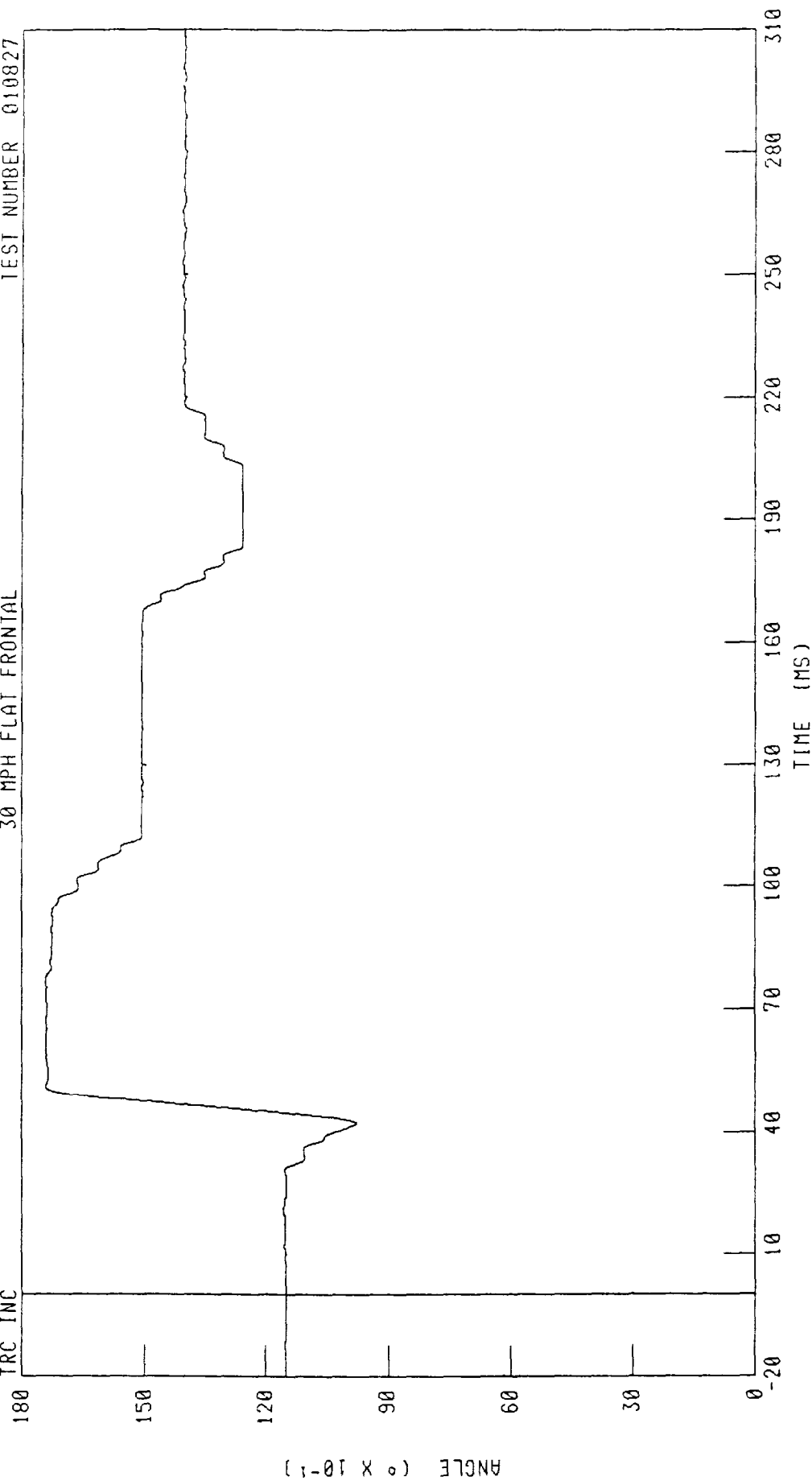
CHANNEL FTRYD1 FILTER CH CLASS 180 PEAK DATA 41 94 ° 0 81 60 MS, -5 07 ° 0 17 12 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
DRIVER RIGHT FOOT TO ANKLE Z-AXIS DISPLACEMENT

TEST NUMBER 010827

30 MPH FLAT FRONTAL

TRC INC

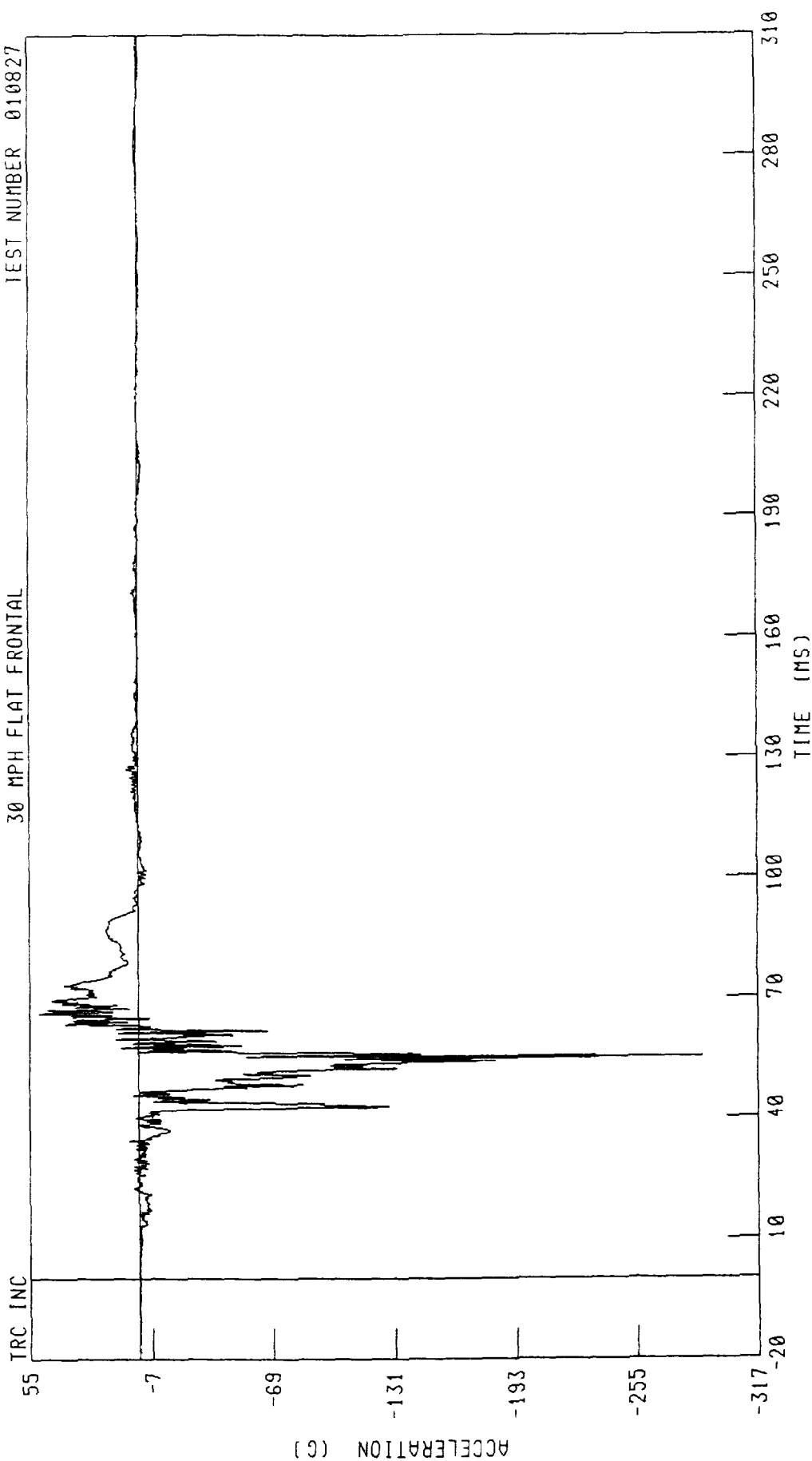


PEAK DATA 17 43 ° 0 66 88 MS, 9 77 ° 0 42 24 MS

CHANNEL FTRZ01 FILTER CH CLASS 180

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
DRIVER RIGHT FOOT X-AXIS ACCELERATION
30 MPH FLAT FRONTAL

TEST NUMBER 010827



PEAK DATA 50 54 G @ 66 16 MS, -288 88 G @ 55 12 MS

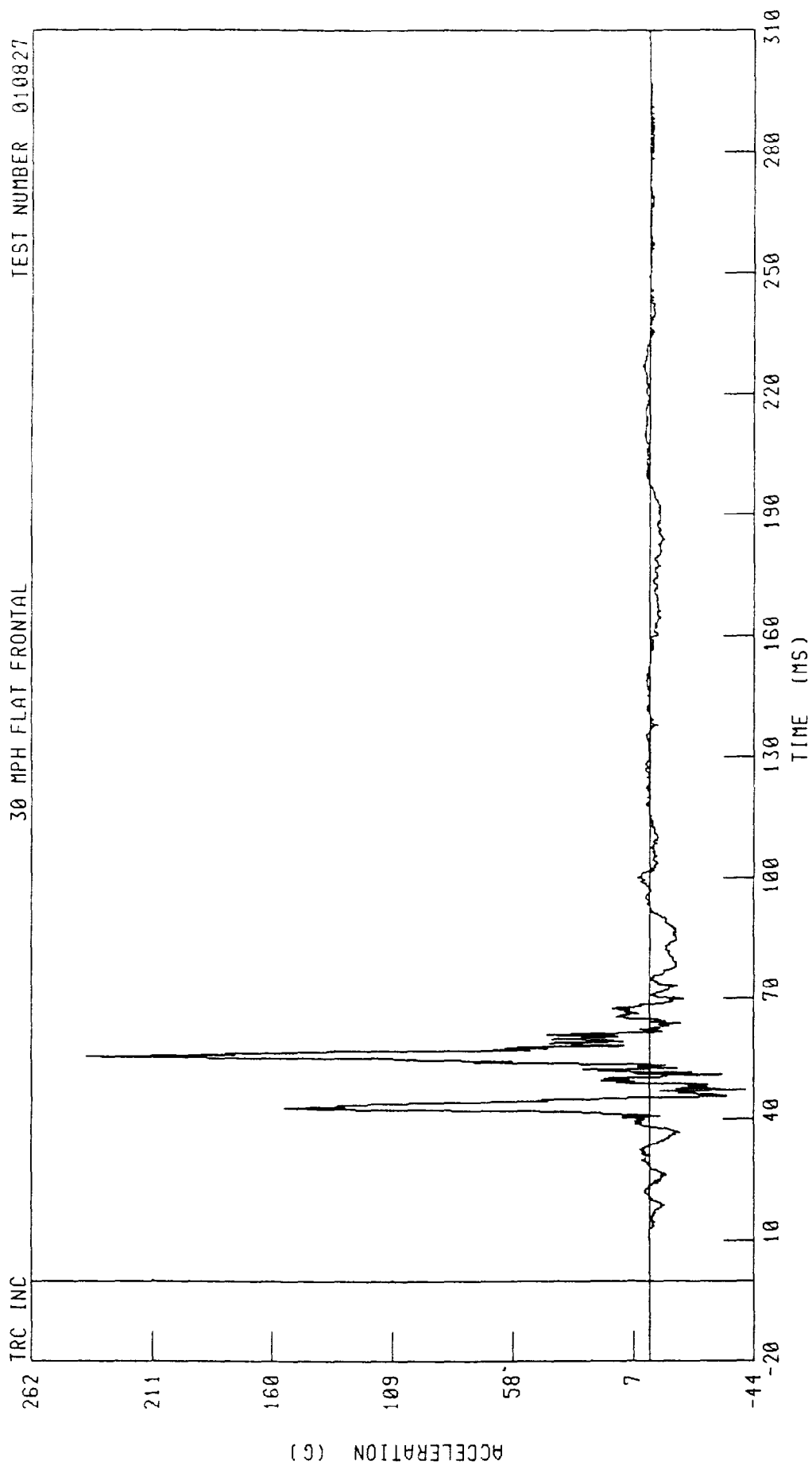
CHANNEL FTRXC1 FILTER CH CLASS 1000

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

DRIVER RIGHT FOOT Y-AXIS ACCELERATION

30 MPH FLAT FRONTAL

TEST NUMBER 010827

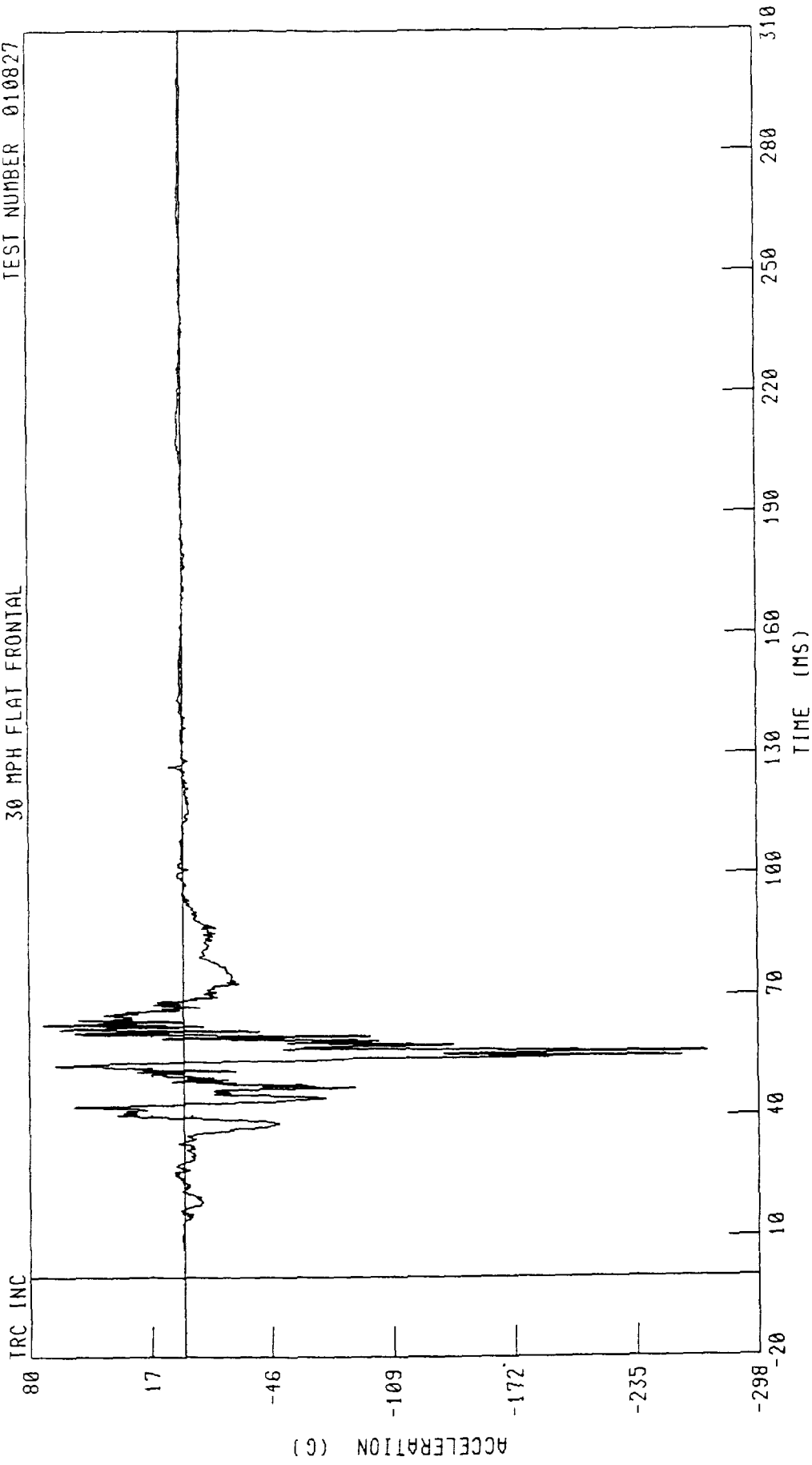


CHANNEL F1RYC1 FILTER CH CLASS 1000

PEAK DATA 239 28 G @ 55 60 MS, -40 67 G @ 47 28 MS

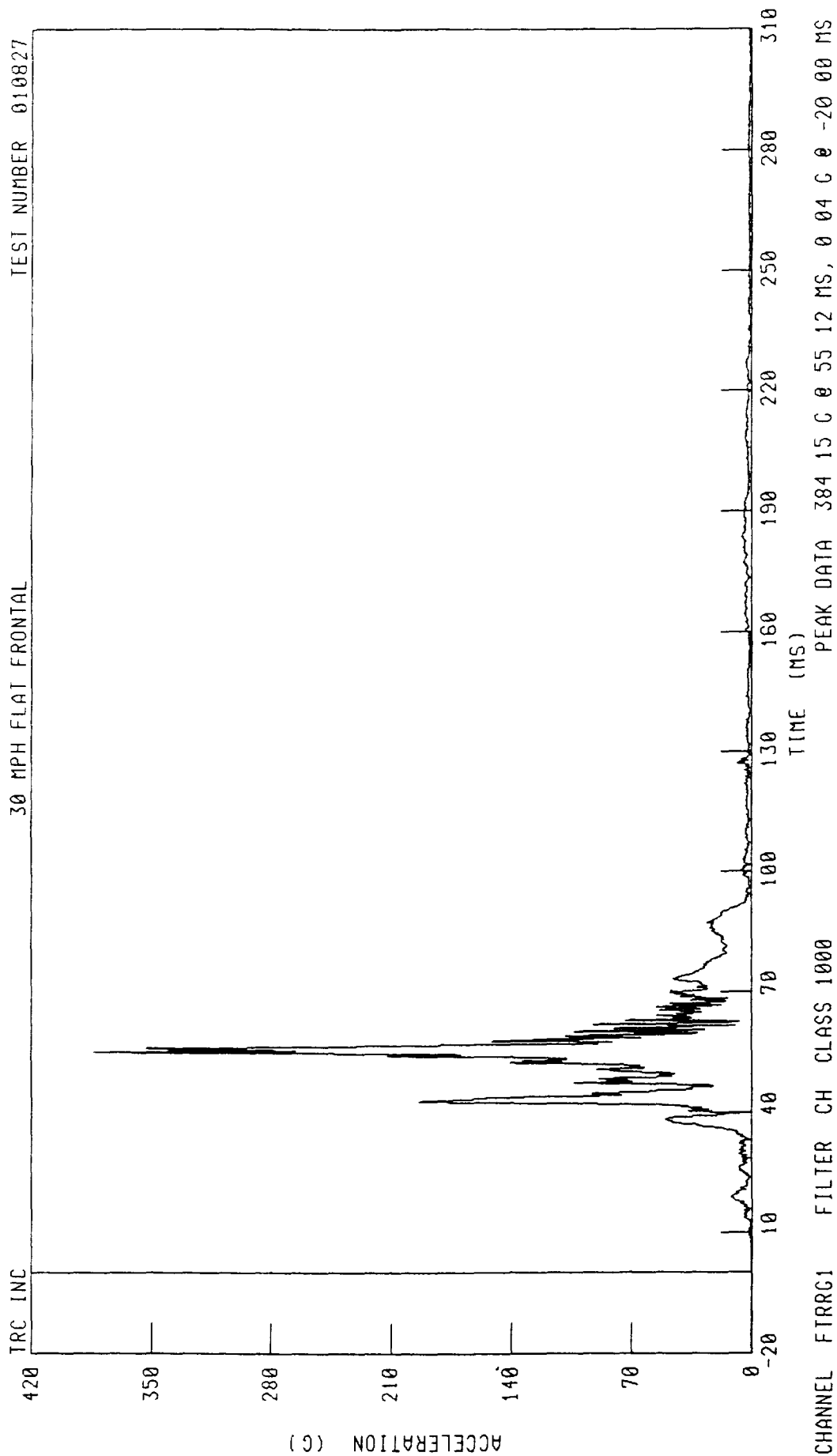
2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
 DRIVER RIGHT FOOT Z-AXIS ACCELERATION
 30 MPH FLAT FRONTAL

TEST NUMBER 010827



PEAK DATA 73 26 G 62 88 MS, -271 23 G 56 00 MS

2001 FORO ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
DRIVER RIGHT FOOT RESULTANT ACCELERATION

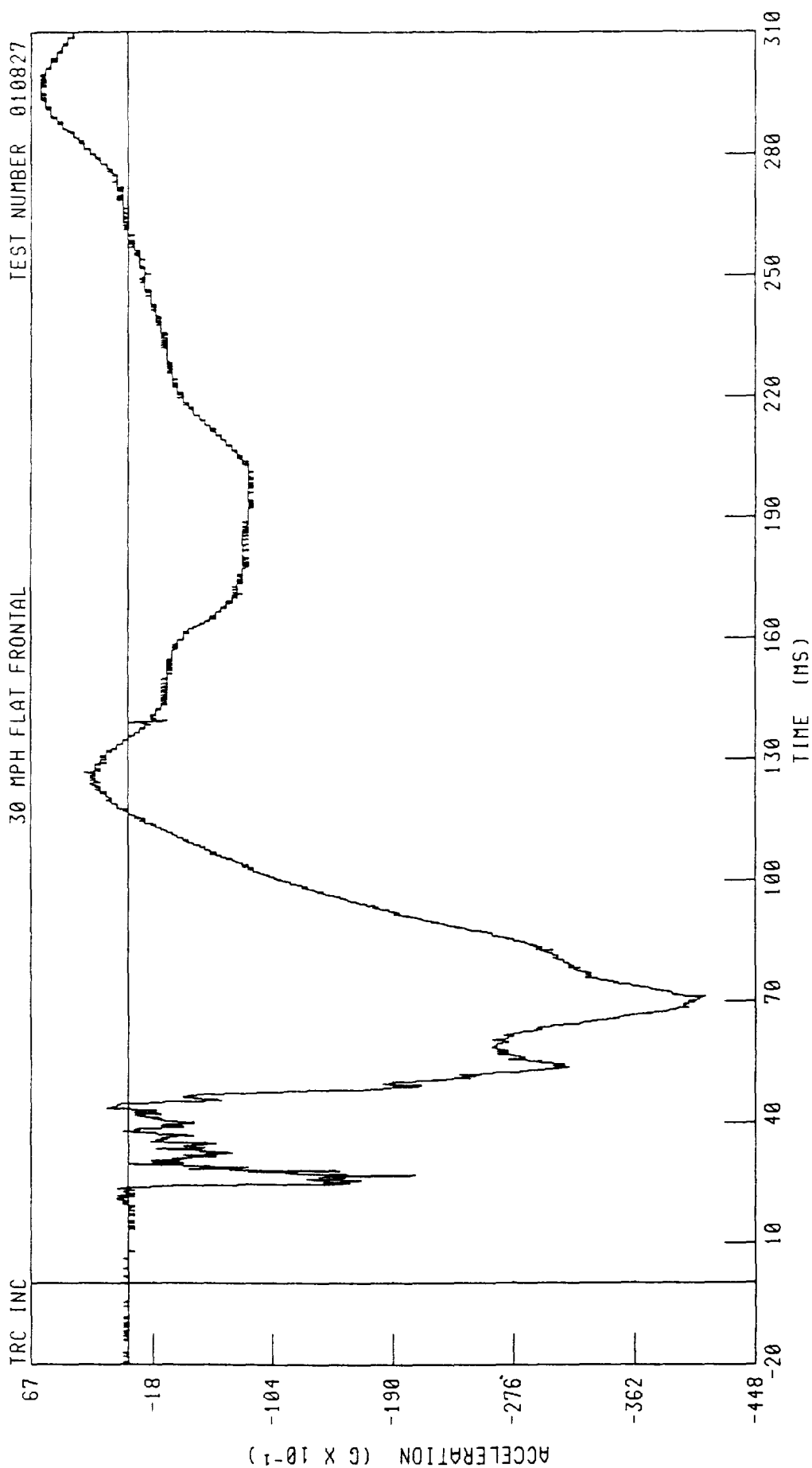


2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

PASSENGER HEAD X-AXIS ACCELERATION

30 MPH FLAT FRONTAL

TEST NUMBER 010827



CHANNEL HEDXC2 FILTER CH CLASS 1000

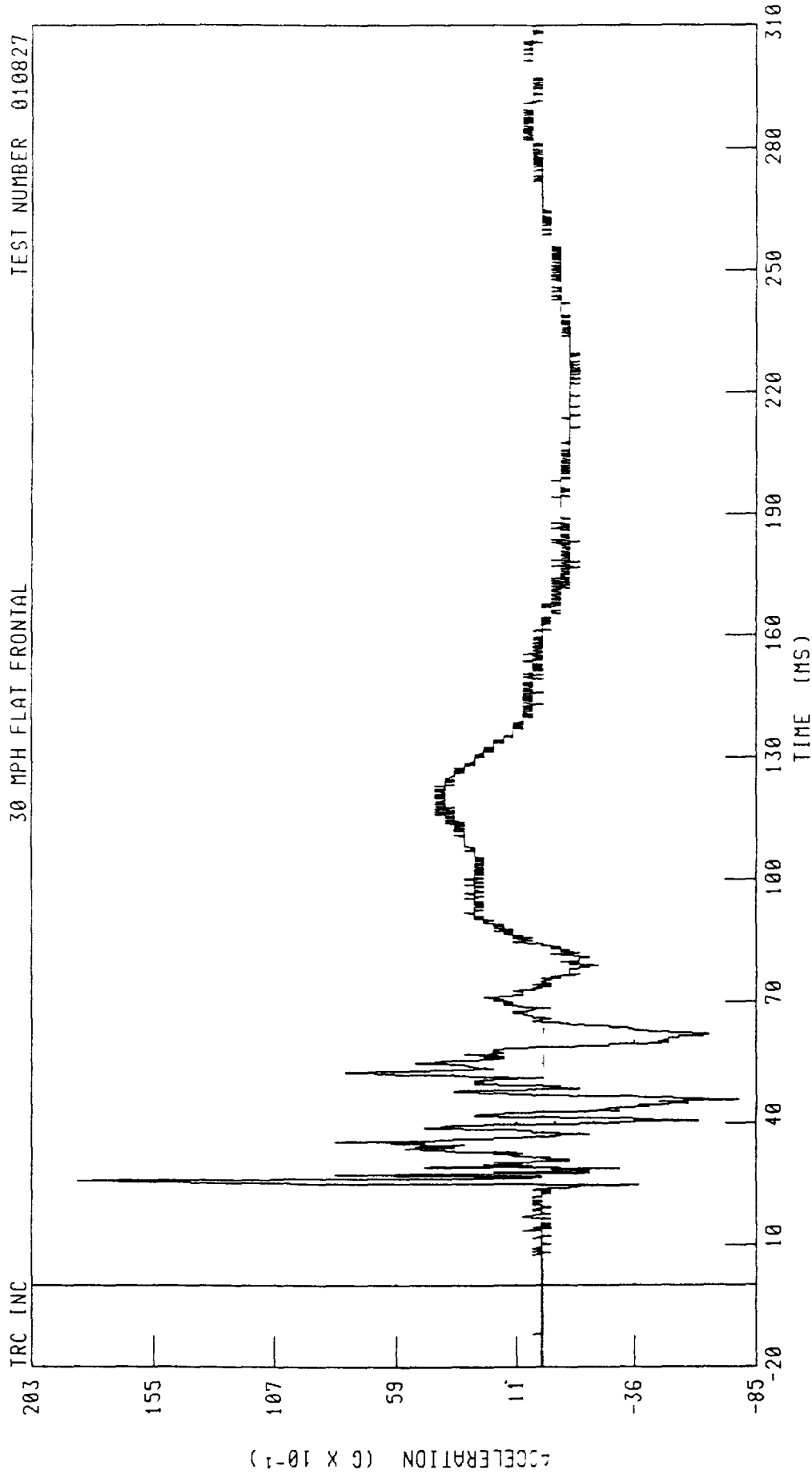
PEAK DATA 6 18 G @ 293 04 MS, -41 27 G @ 71 04 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

PASSENGER HEAD Y-AXIS ACCELERATION

30 MPH FLAT FRONTAL

TEST NUMBER 010827

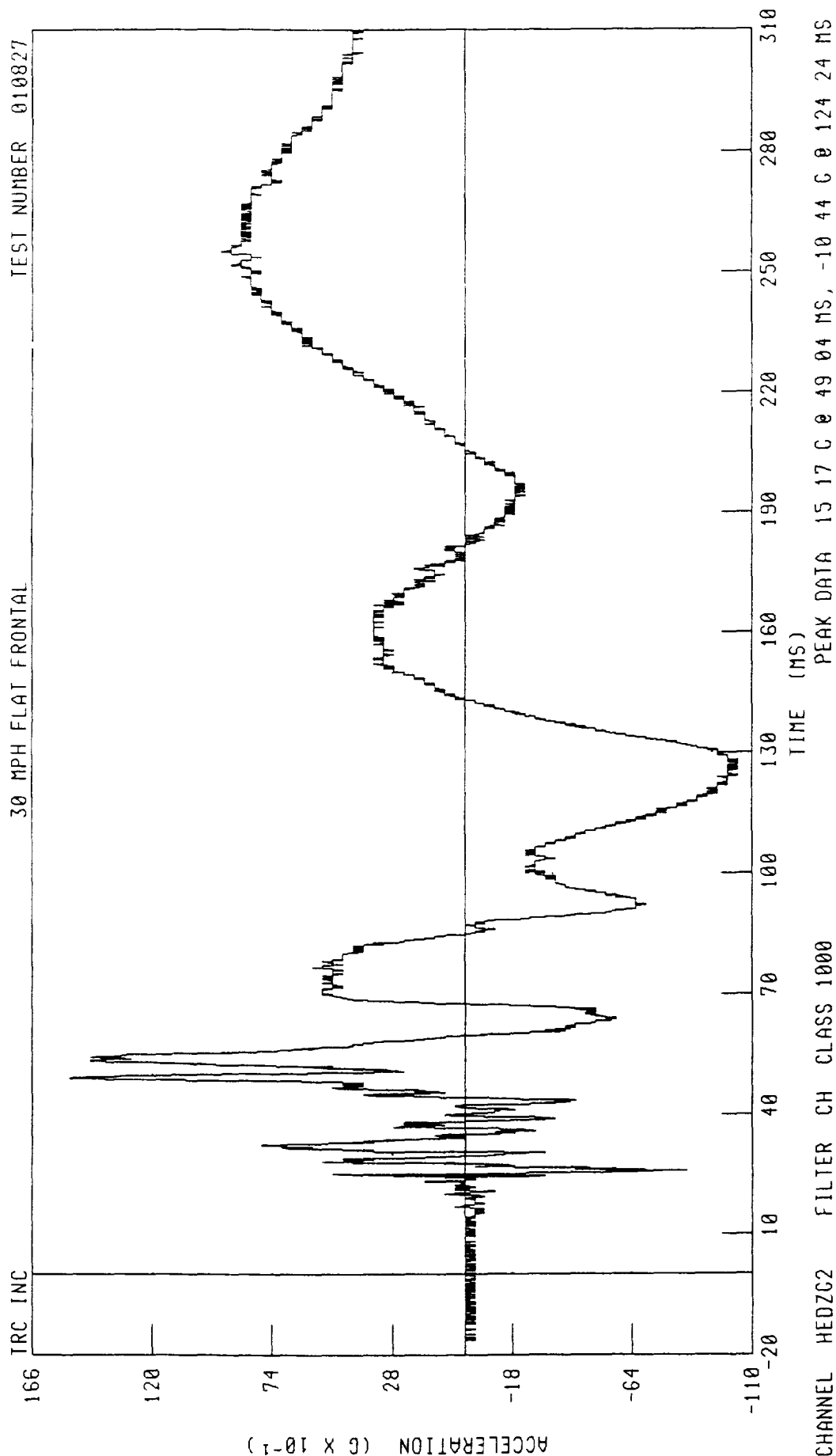


CHANNEL HEDYC2 FILTER CH CLASS 1000

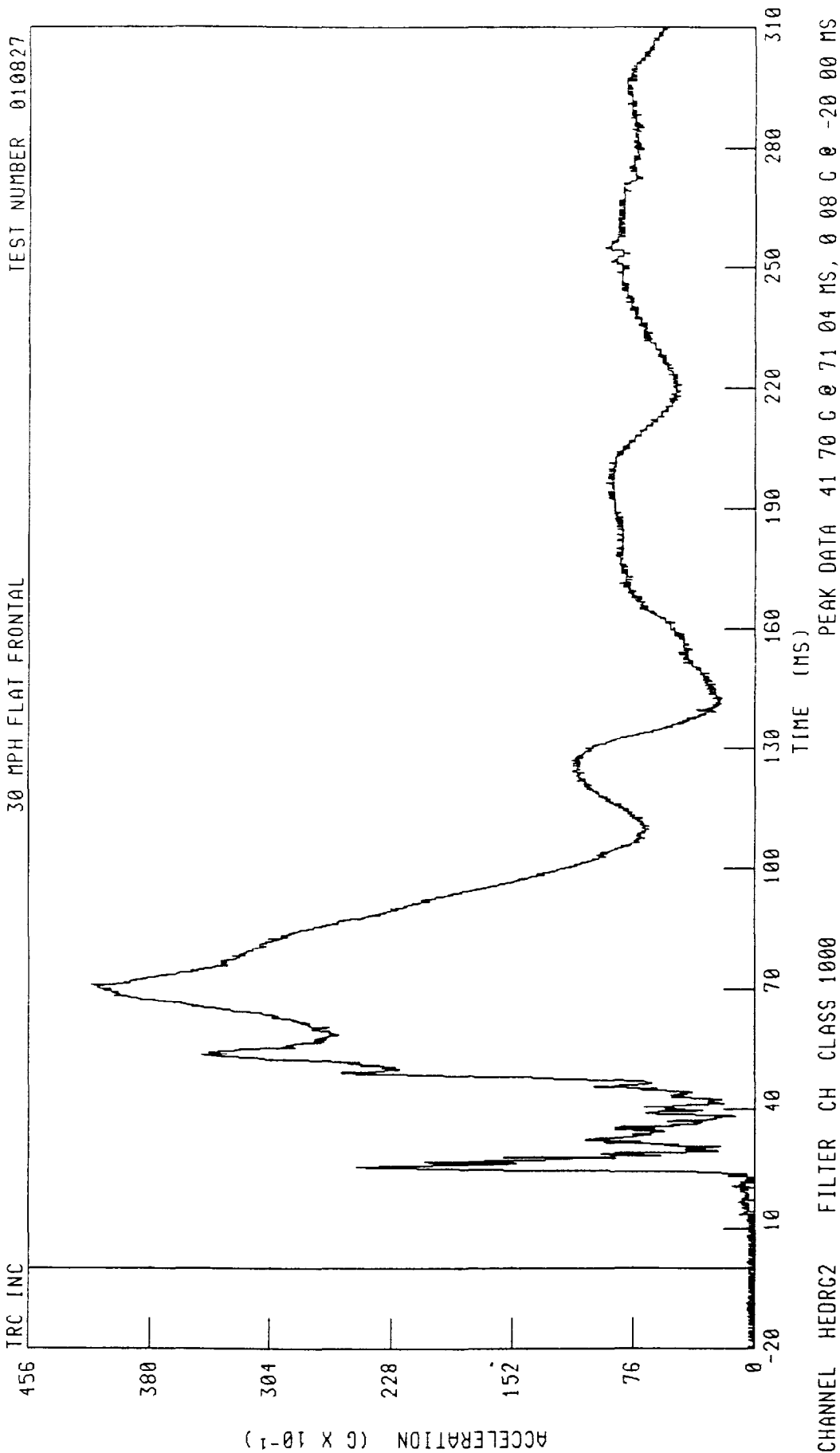
PEAK DATA 18 53 C @ 25 68 MS, -7 81 C @ 45 68 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

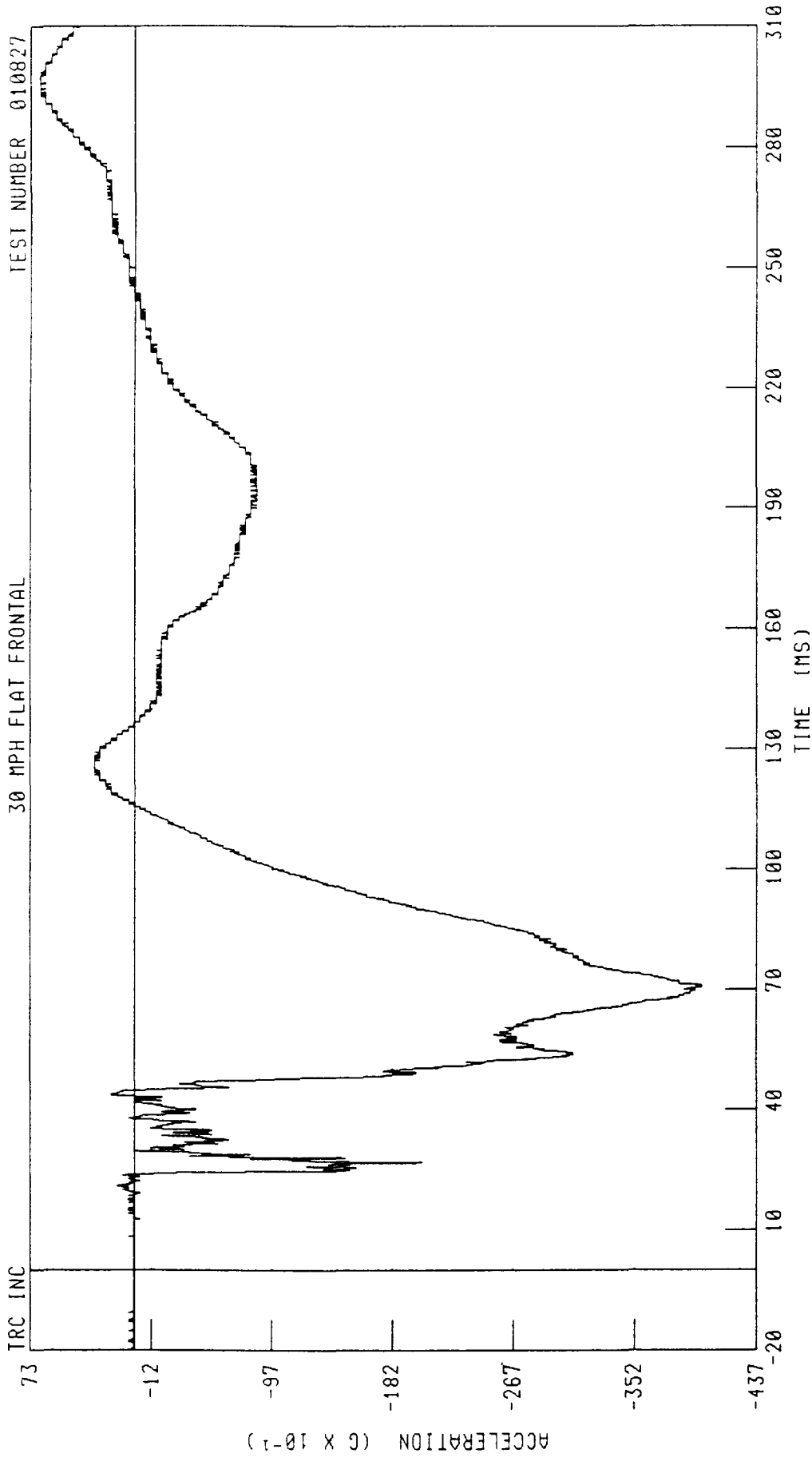
PASSENGER HEAD Z-AXIS ACCELERATION



2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
 PASSENGER HEAD RESULTANT ACCELERATION
 30 MPH FLAT FRONTAL



2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
PASSENGER HEAD X-AXIS ACCELERATION REDUNDANT

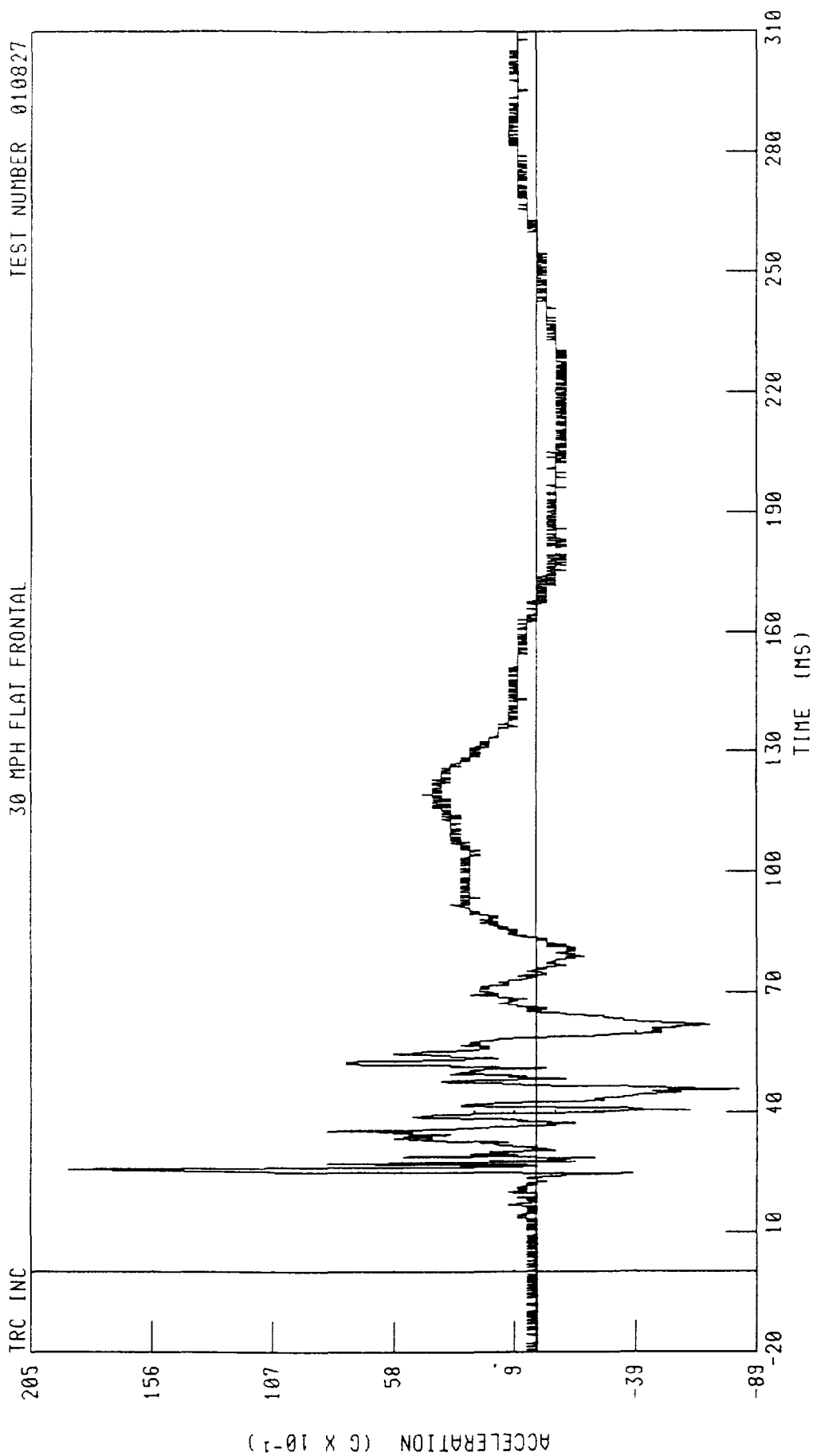


CHANNEL HEDXR2 FILTER CH CLASS 1000

PEAK DATA 6 69 C 0 292 56 MS, -39 86 C 0 70 48 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
 PASSENGER HEAD Y-AXIS ACCELERATION REDUNDANT
 30 MPH FLAT FRONTAL

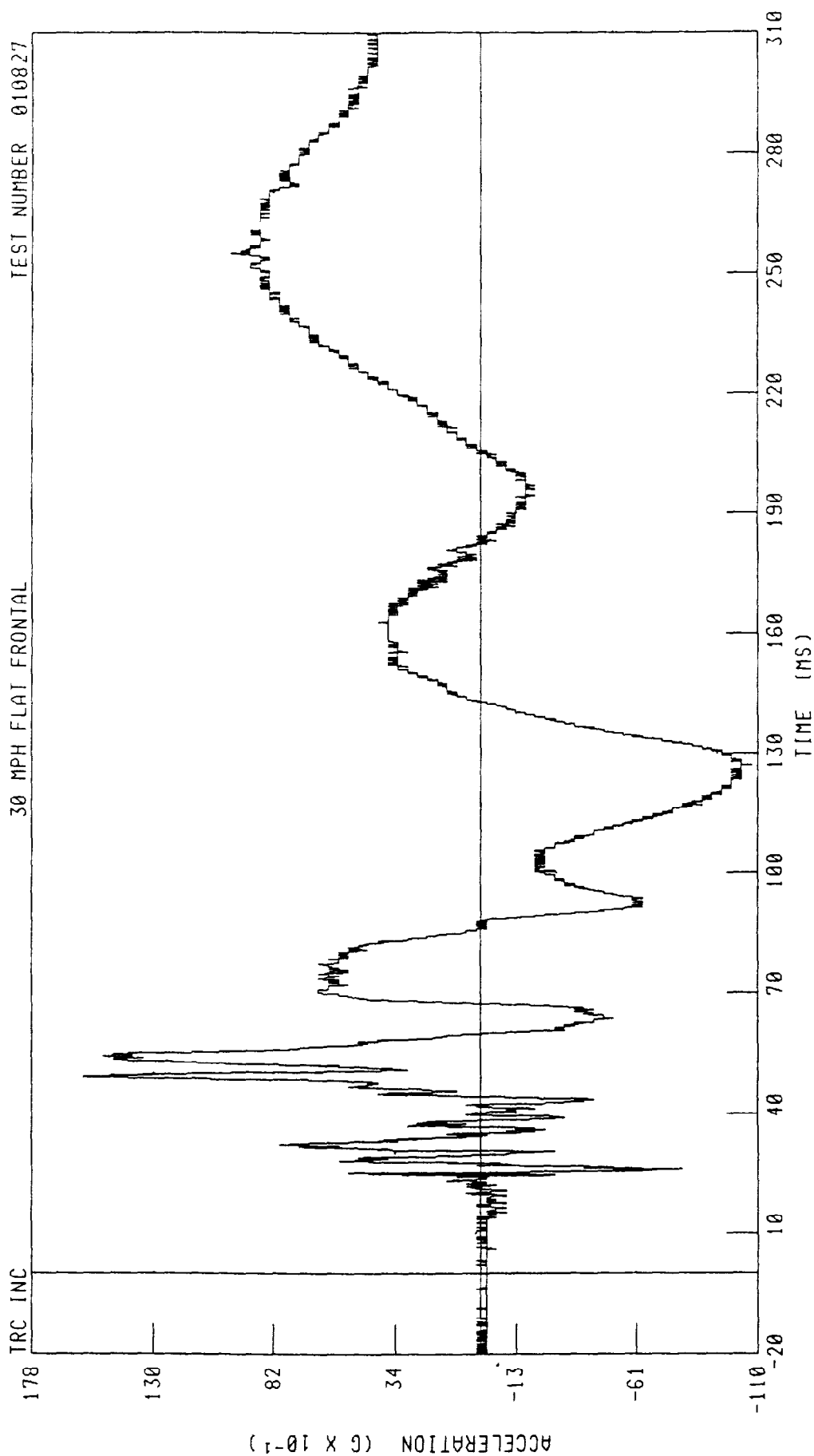
TEST NUMBER 010827



CHANNEL HEDYR2 FILTER CH CLASS 1000

PEAK DATA 19 00 C @ 25 68 MS, -8 16 C @ 45 68 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
 PASSENGER HEAD Z-AXIS ACCELERATION REDUNDANT
 30 MPH FLAT FRONTAL

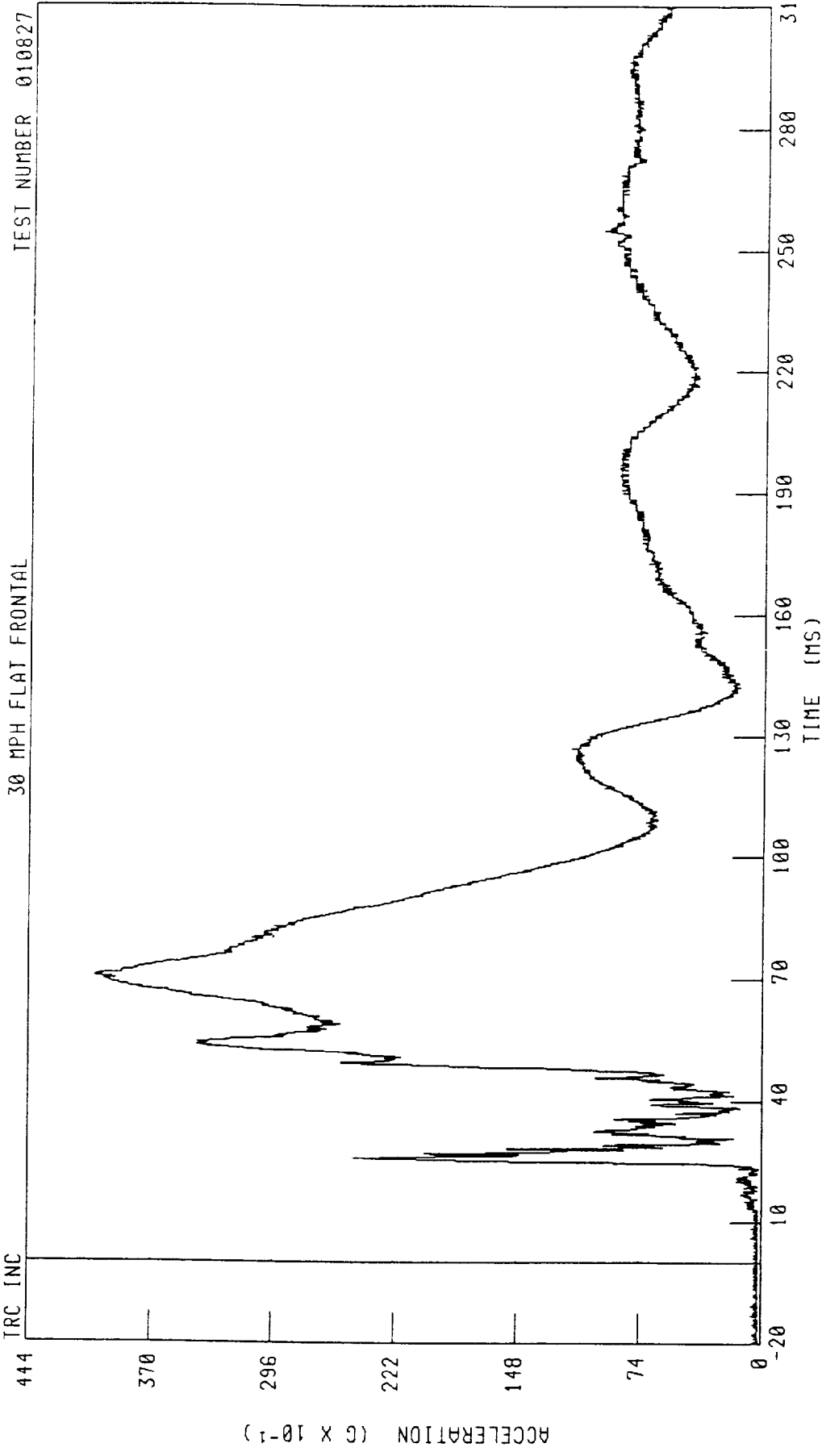


TEST NUMBER 010827

PEAK DATA 15 77 C @ 49 04 MS, -10 74 C @ 127 04 MS

CHANNEL HEDZR2 FILTER CH CLASS 1000

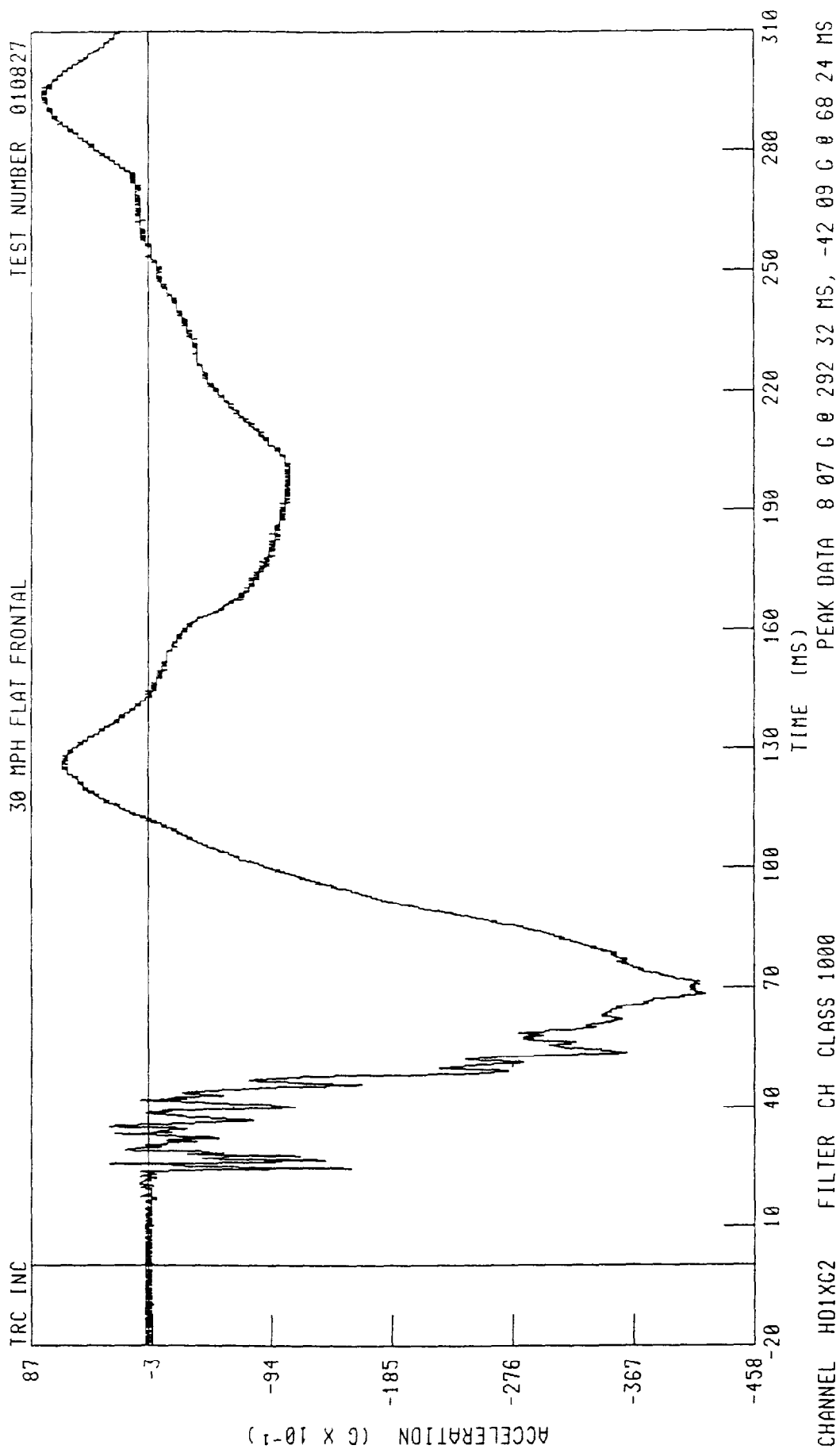
2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
PASSENGER HEAD RESULTANT ACCELERATION REDUNDANT
30 MPH FLAT FRONTAL



TEST NUMBER 010827

CHANNEL HEDRR2 FILTER CH CLASS 1000 PEAK DATA 40 44 G @ 70 48 MS, 0 18 G @ -19 76 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
PASSENGER HEAD X-AXIS (LT) ACCELERATION

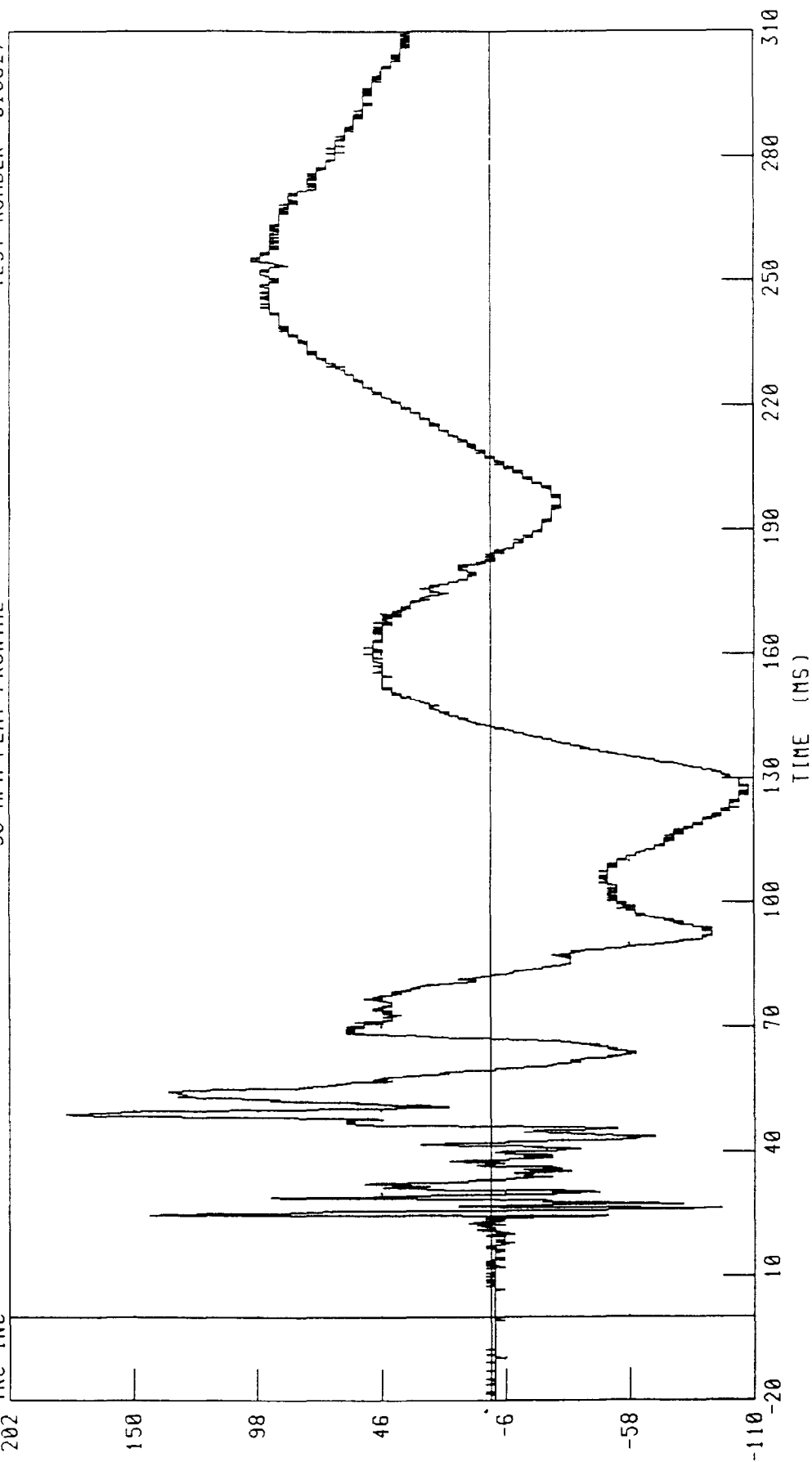


2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
 PASSENGER HEAD Z-AXIS (LT) ACCELERATION
 30 MPH FLAT FRONTAL

TRC INC

TEST NUMBER 010827

ACCELERATION (G X 10⁻¹)



TIME (MS)

CHANNEL HD1ZC2 FILTER CH CLASS 1000

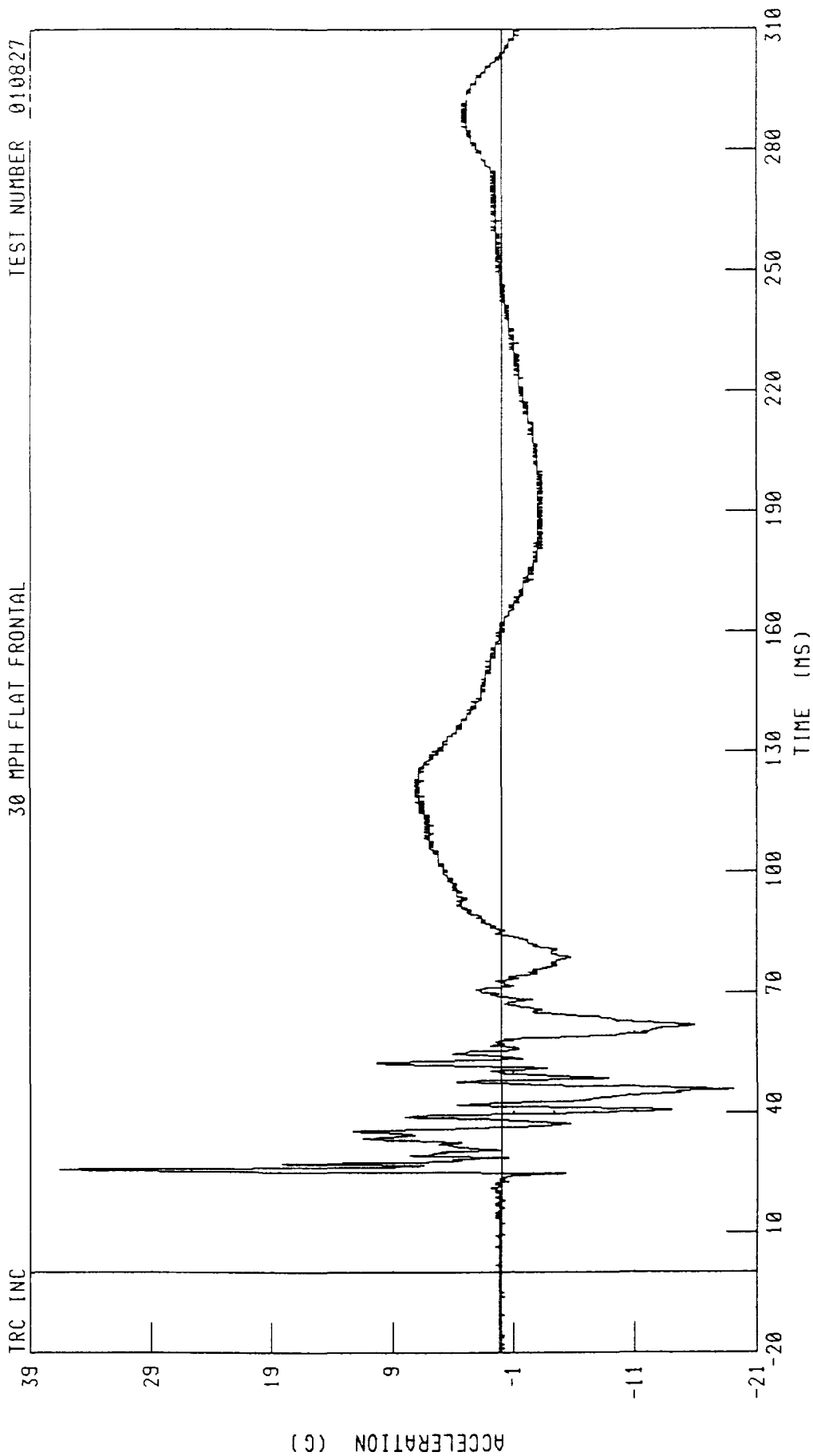
PEAK DATA 17 89 C 0 49 20 MS, -10 80 C 0 126 00 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

PASSENGER HEAD Y-AXIS (FT) ACCELERATION

30 MPH FLAT FRONTAL

TEST NUMBER 010827



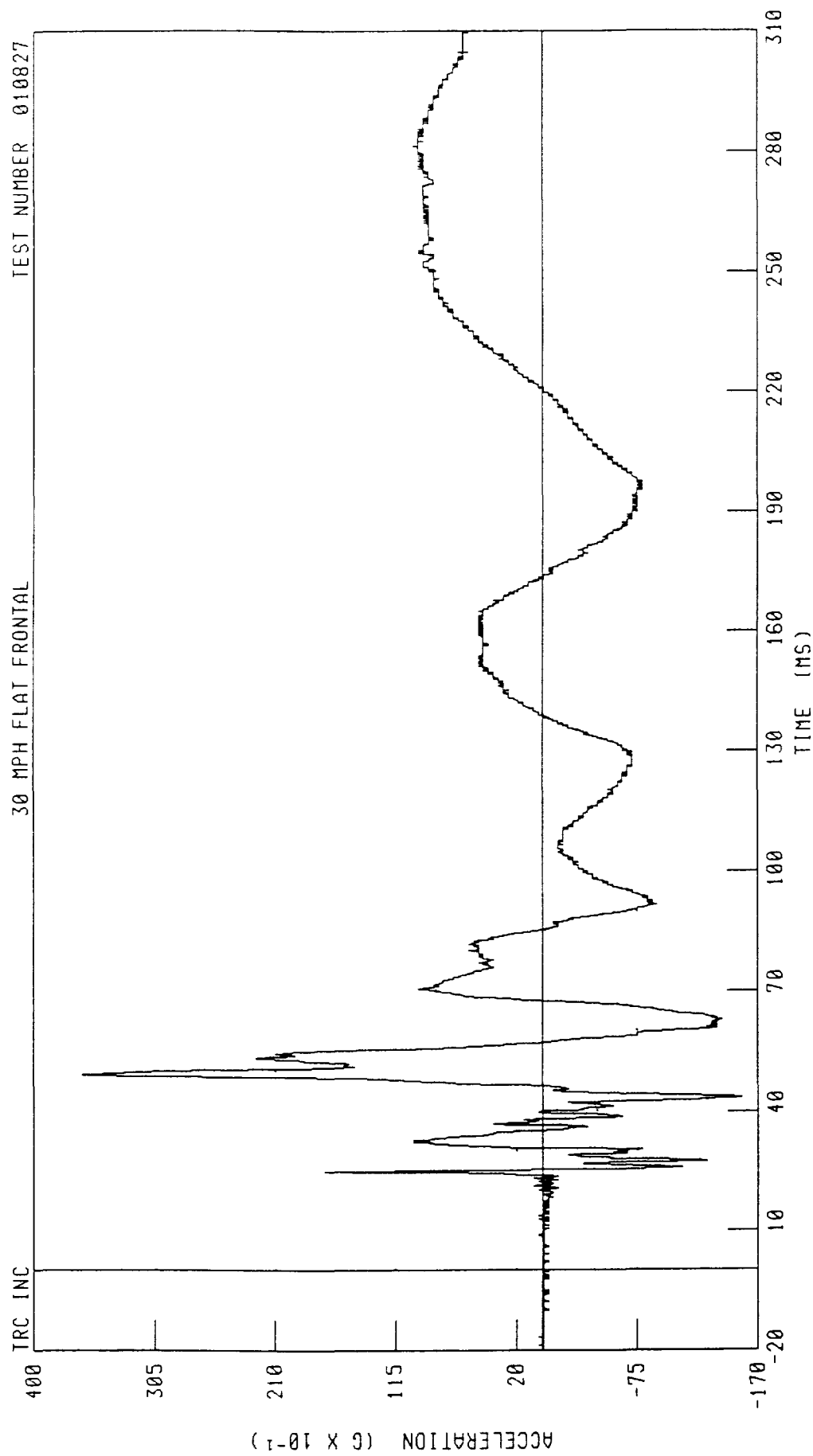
CHANNEL HD2YC2 FILTER CH CLASS 1000

PEAK DATA 36 65 C 0 25 68 MS, -19 10 C 0 45 68 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
PASSENGER HEAD Z-AXIS (FT) ACCELERATION

TEST NUMBER 010827

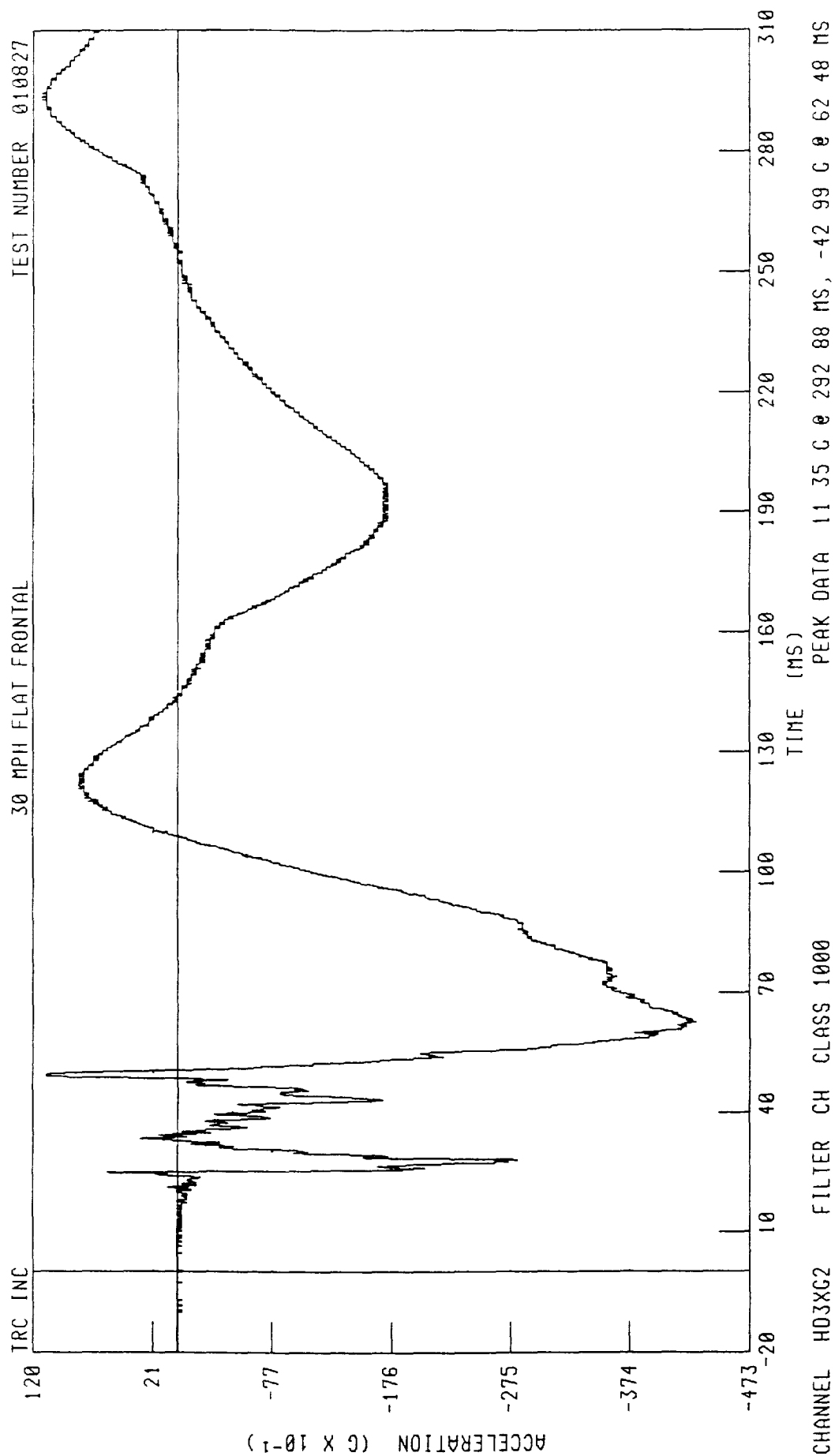
30 MPH FLAT FRONTAL



CHANNEL HD2ZC2 FILTER CH CLASS 1000

PEAK DATA 36 27 G @ 49 12 MS, -15 73 G @ 43 36 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
PASSENGER HEAD X-AXIS (IP) ACCELERATION

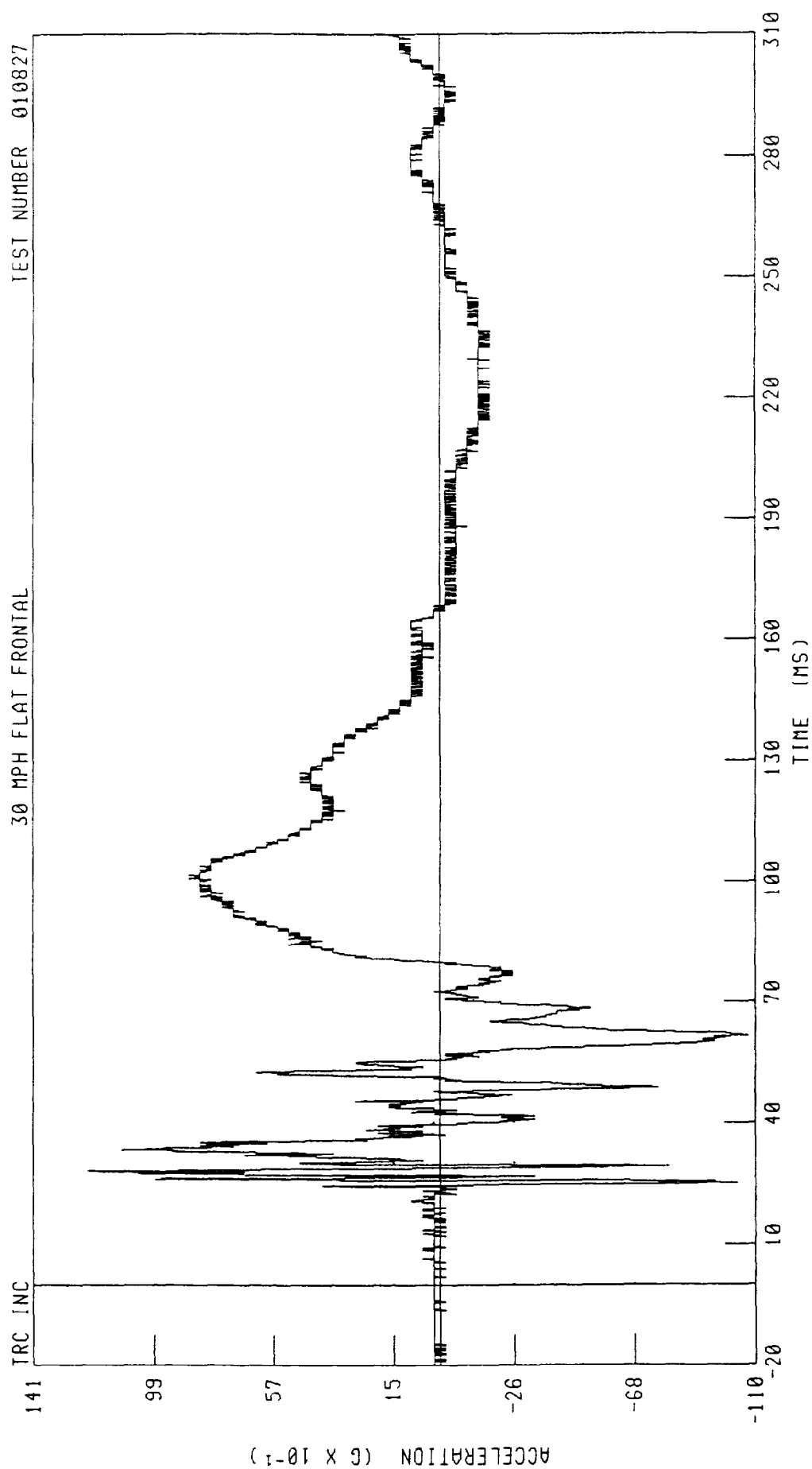


2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

PASSENGER HEAD Y-AXIS (TP) ACCELERATION

30 MPH FLAT FRONTAL

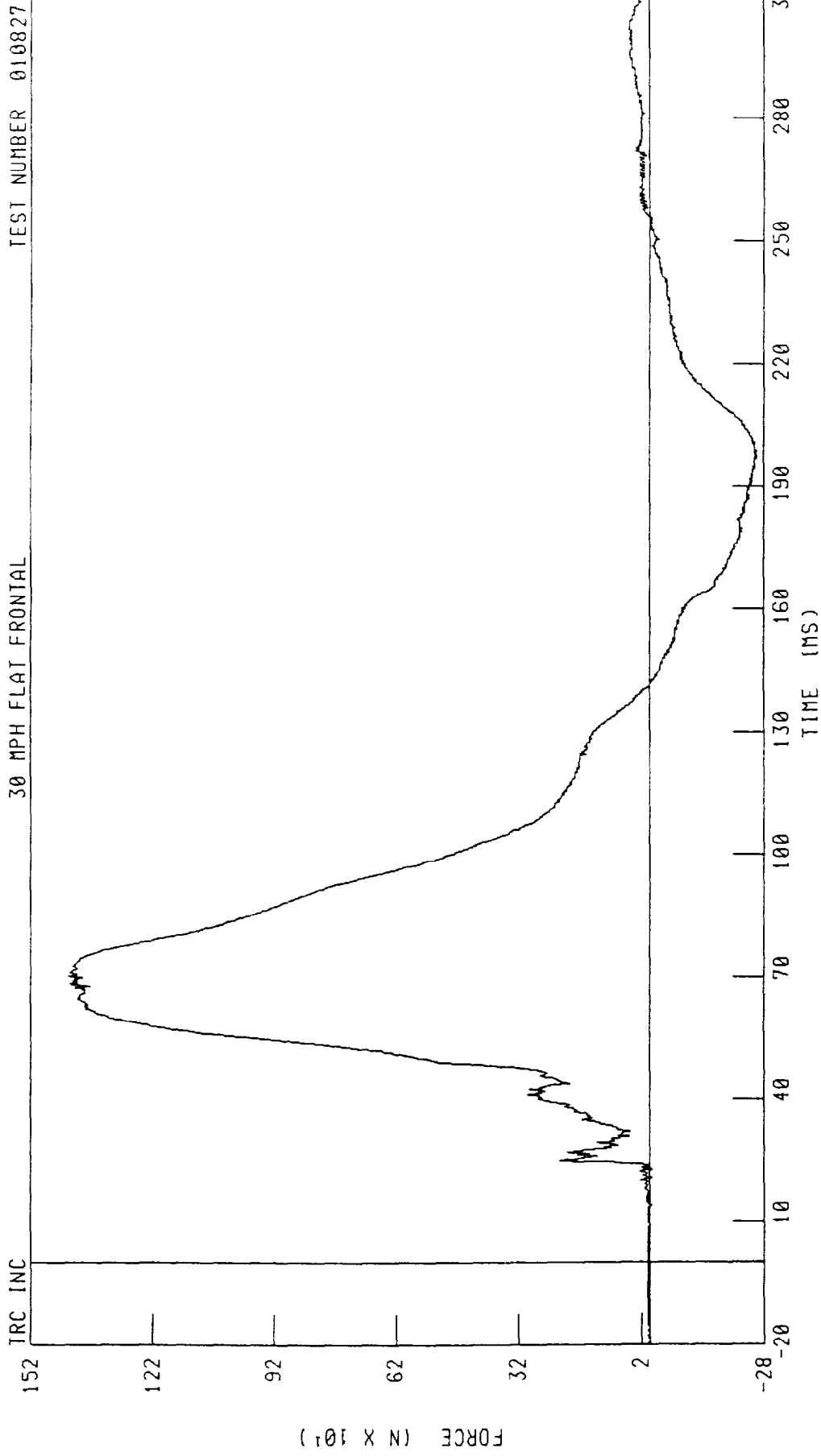
TEST NUMBER 010827



CHANNEL HDJYC2 FILTER CH CLASS 1000

PEAK DATA 12 32 G @ 28 16 MS, -10 77 G @ 61 52 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
 PASSENGER NECK X-AXIS SHEAR FORCE
 30 MPH FLAT FRONTAL



PEAK DATA 1428 82 N @ 70 32 MS, -262 06 N @ 196 72 MS

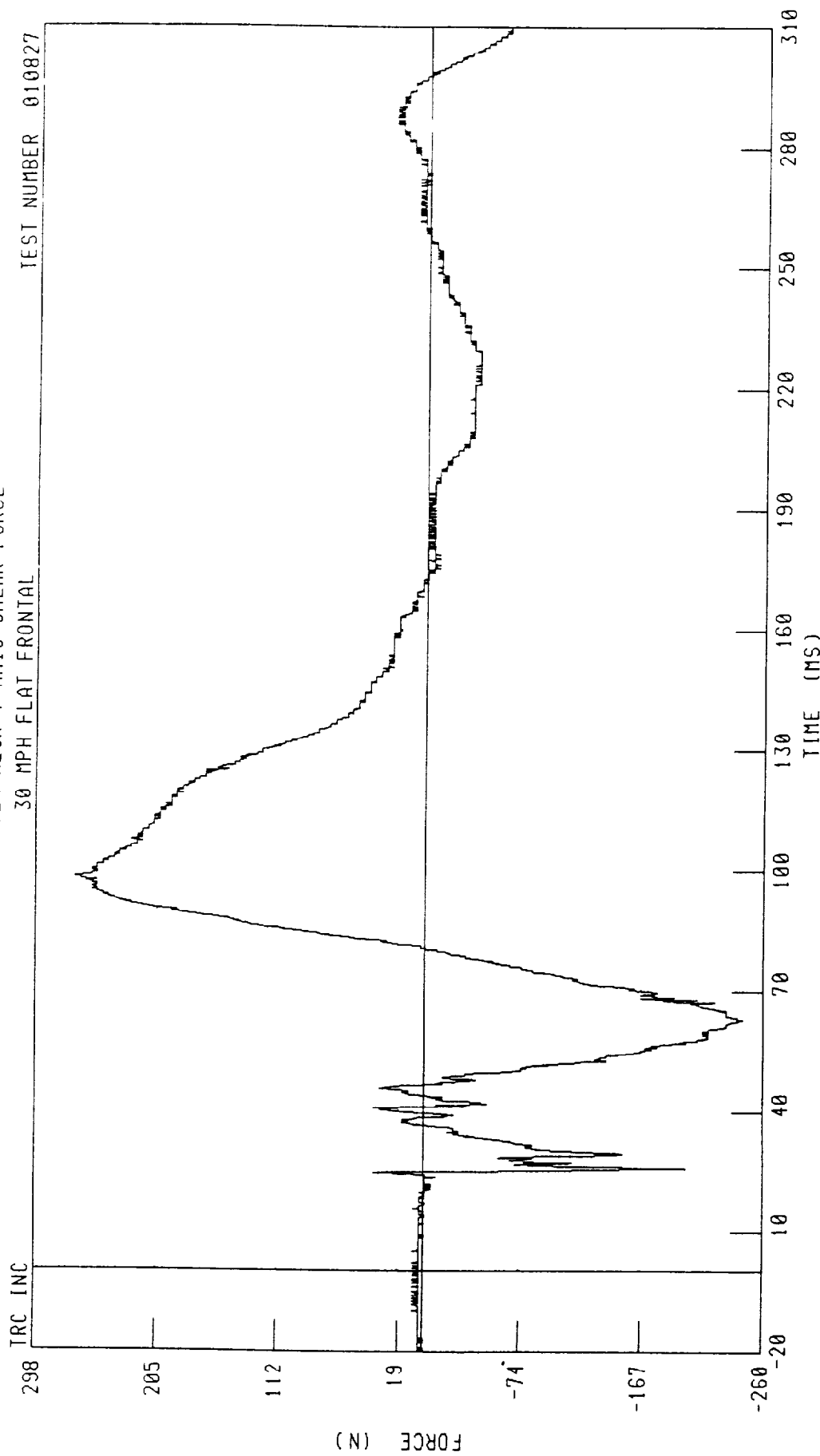
CHANNEL NEKXF2 FILTER CH CLASS 1000

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

PASSENGER NECK Y-AXIS SHEAR FORCE

30 MPH FLAT FRONTAL

TEST NUMBER 010827



CHANNEL NEKYF2 FILTER CH CLASS 1000

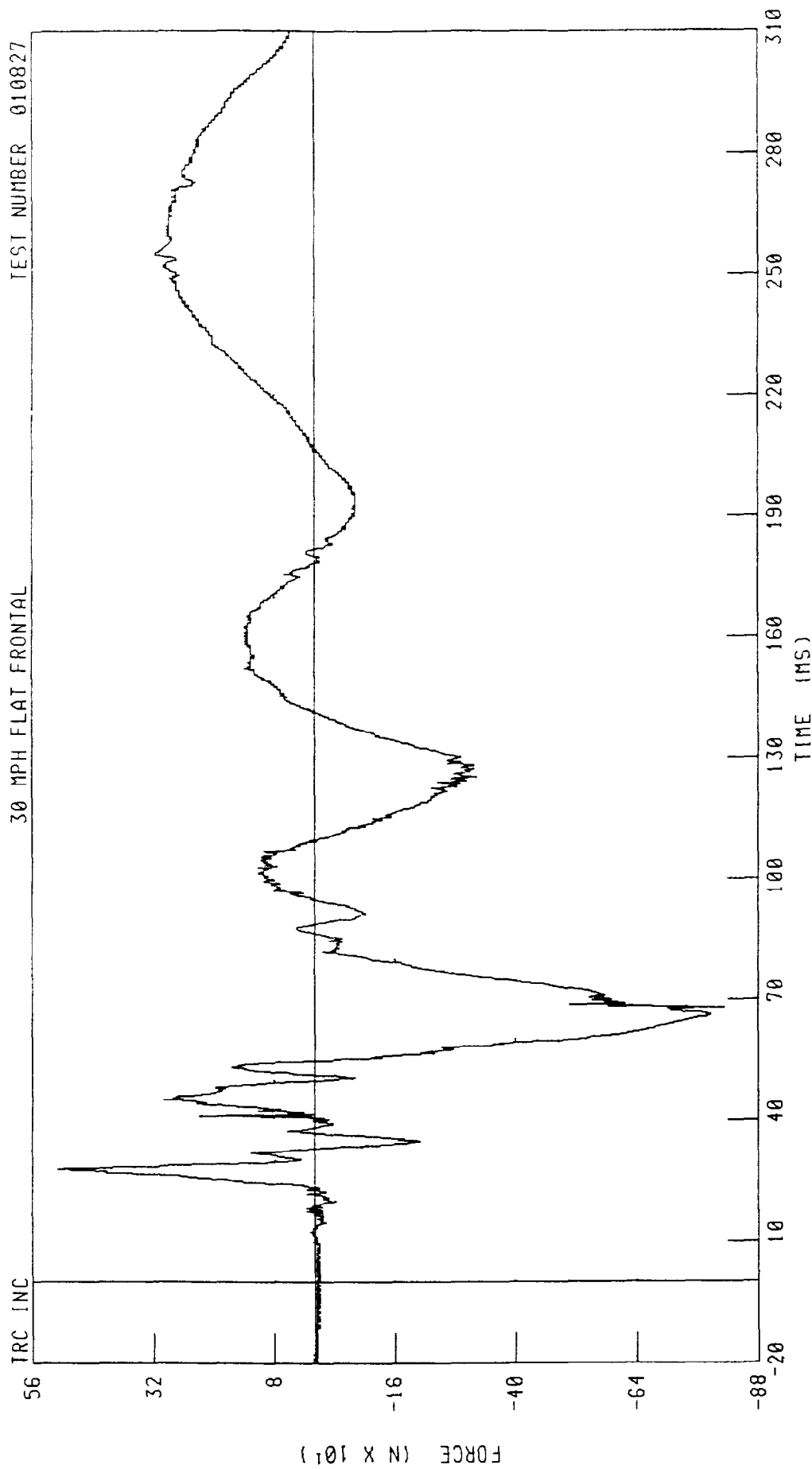
PEAK DATA 268 25 N 98 40 MS, -244 41 N 62 64 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

PASSENGER NECK Z-AXIS AXIAL FORCE

30 MPH FLAT FRONTAL

TEST NUMBER 010827



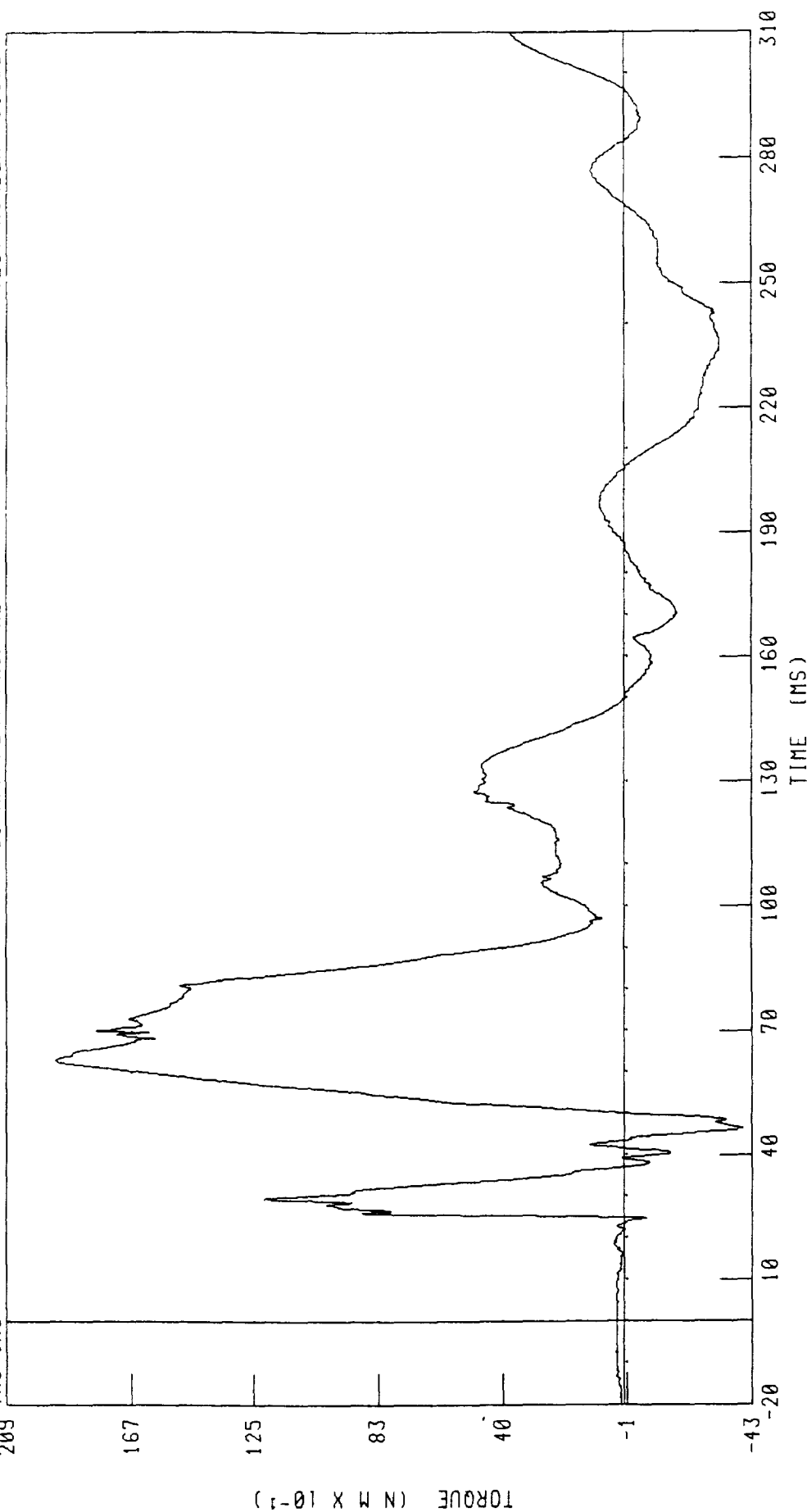
CHANNEL NEKZF2 FILTER CH CLASS 1000

PEAK DATA 511 34 N @ 28 00 MS, -812 18 N @ 67 84 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
 PASSENGER NECK MOMENT ABOUT X AXIS
 30 MPH FLAT FRONTAL

TRC INC

TEST NUMBER 010827



PEAK DATA 19 26 N M @ 63 20 MS, -3 99 N M @ 46 40 MS

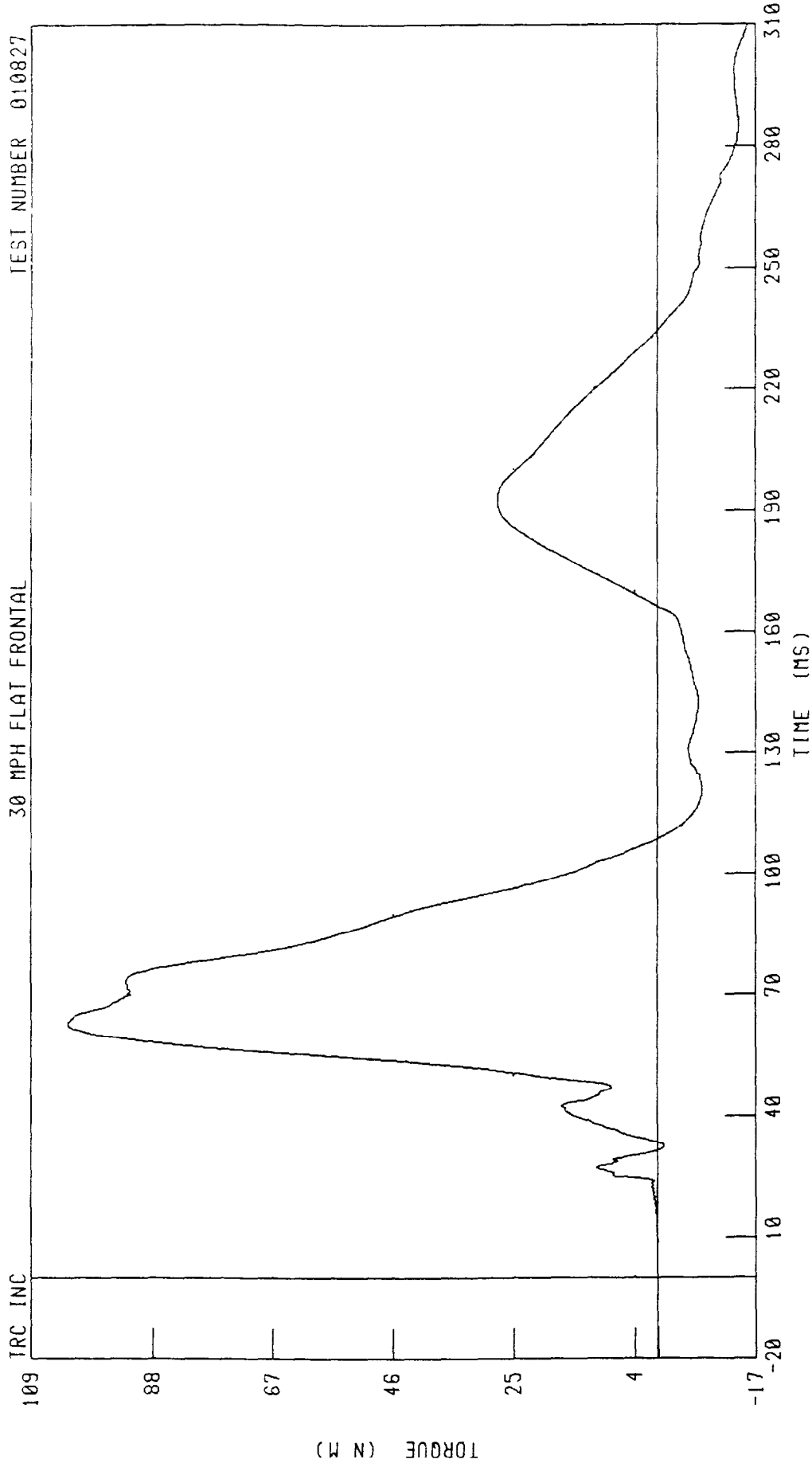
CHANNEL NEKX2 FILTER CH CLASS 600

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

PASSENGER NECK MOMENT ABOUT Y AXIS

30 MPH FLAT FRONTAL

TEST NUMBER 010827



PEAK DATA 102 72 N M @ 62 88 MS, -15 61 N M @ 309 60 MS

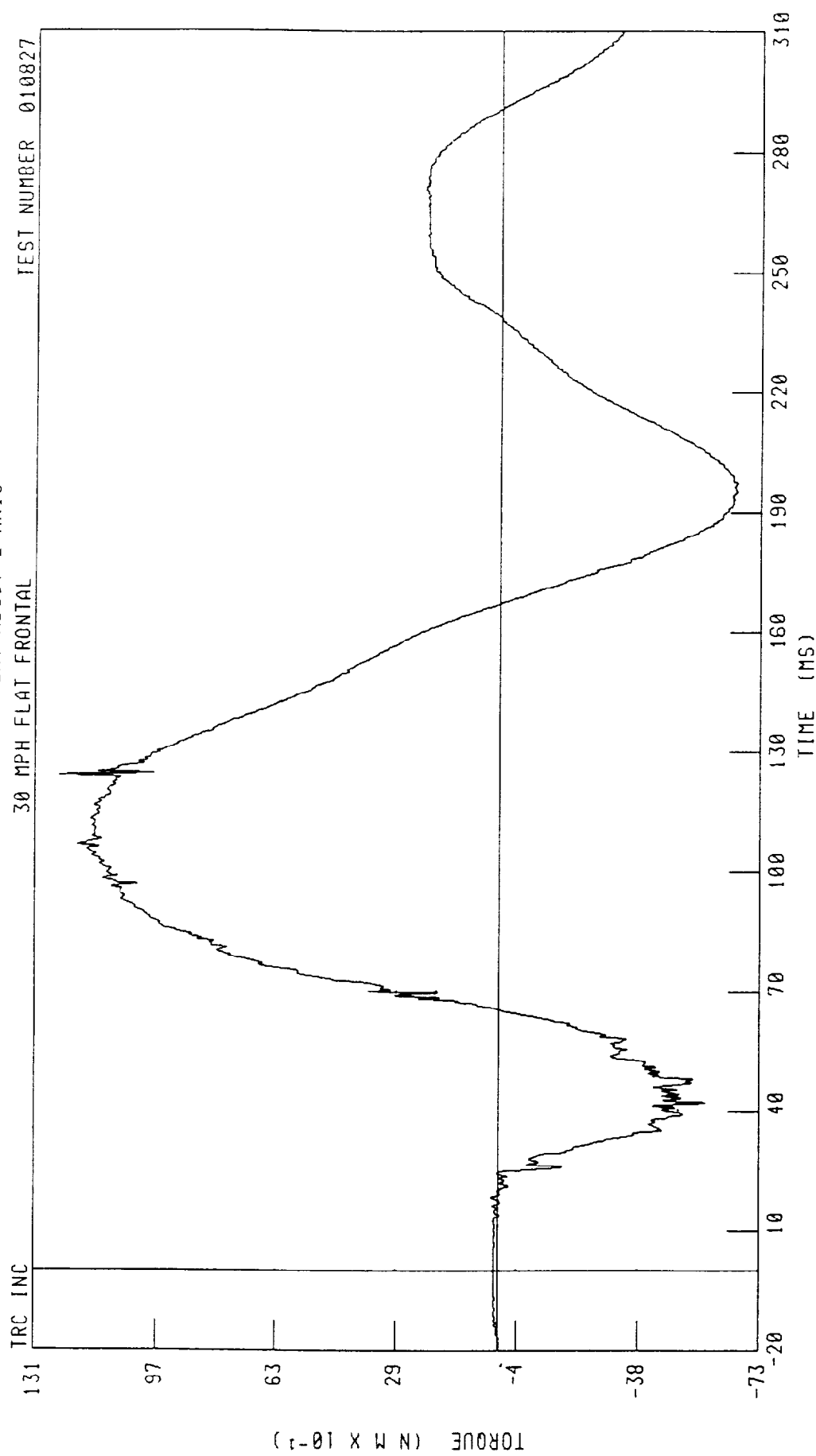
CHANNEL NEYM2 FILTER CH CLASS 600

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

PASSENGER NECK MOMENT ABOUT Z AXIS

30 MPH FLAT FRONTAL

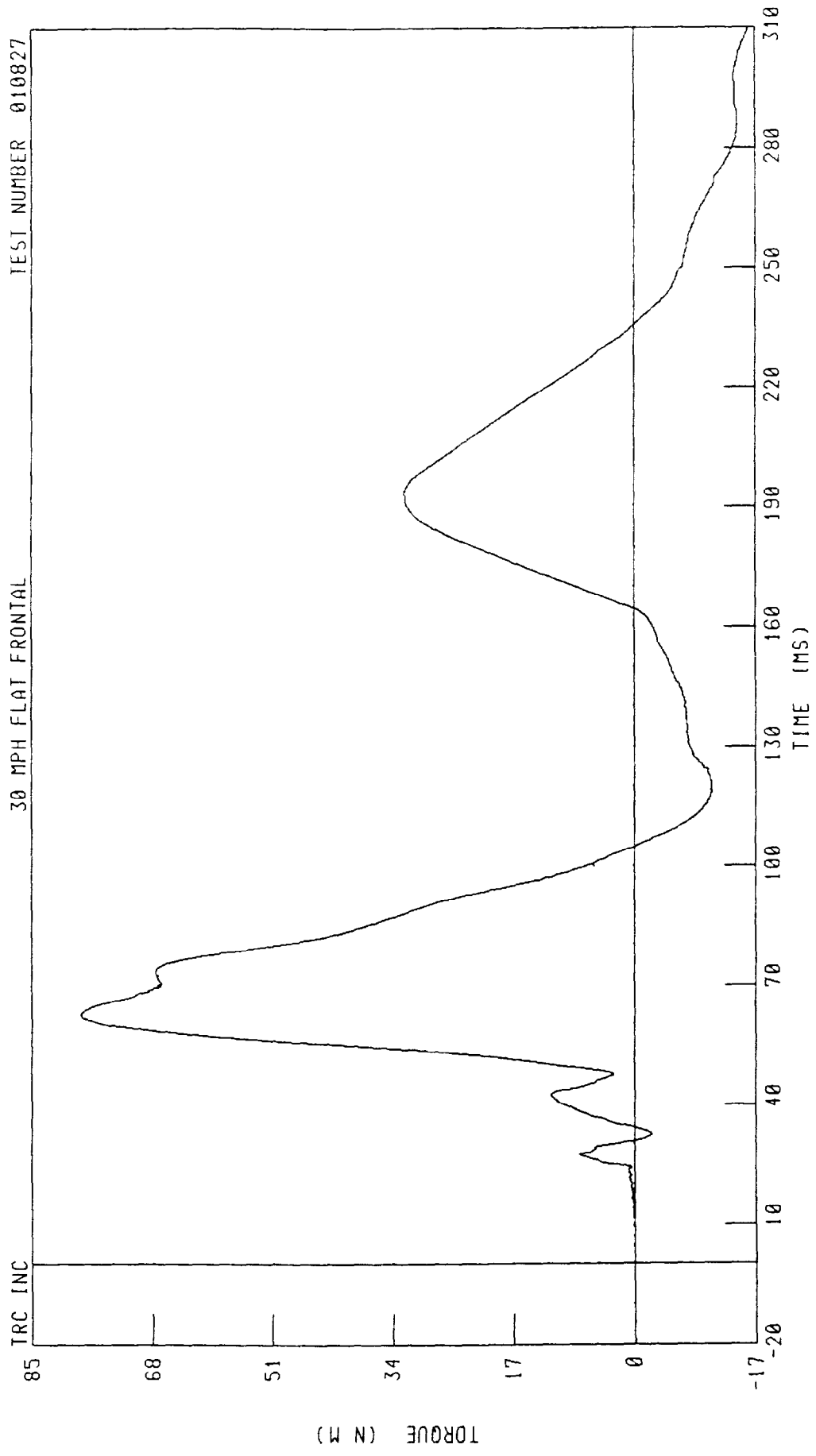
TEST NUMBER 010827



CHANNEL NEKZM2 FILTER CH CLASS 600

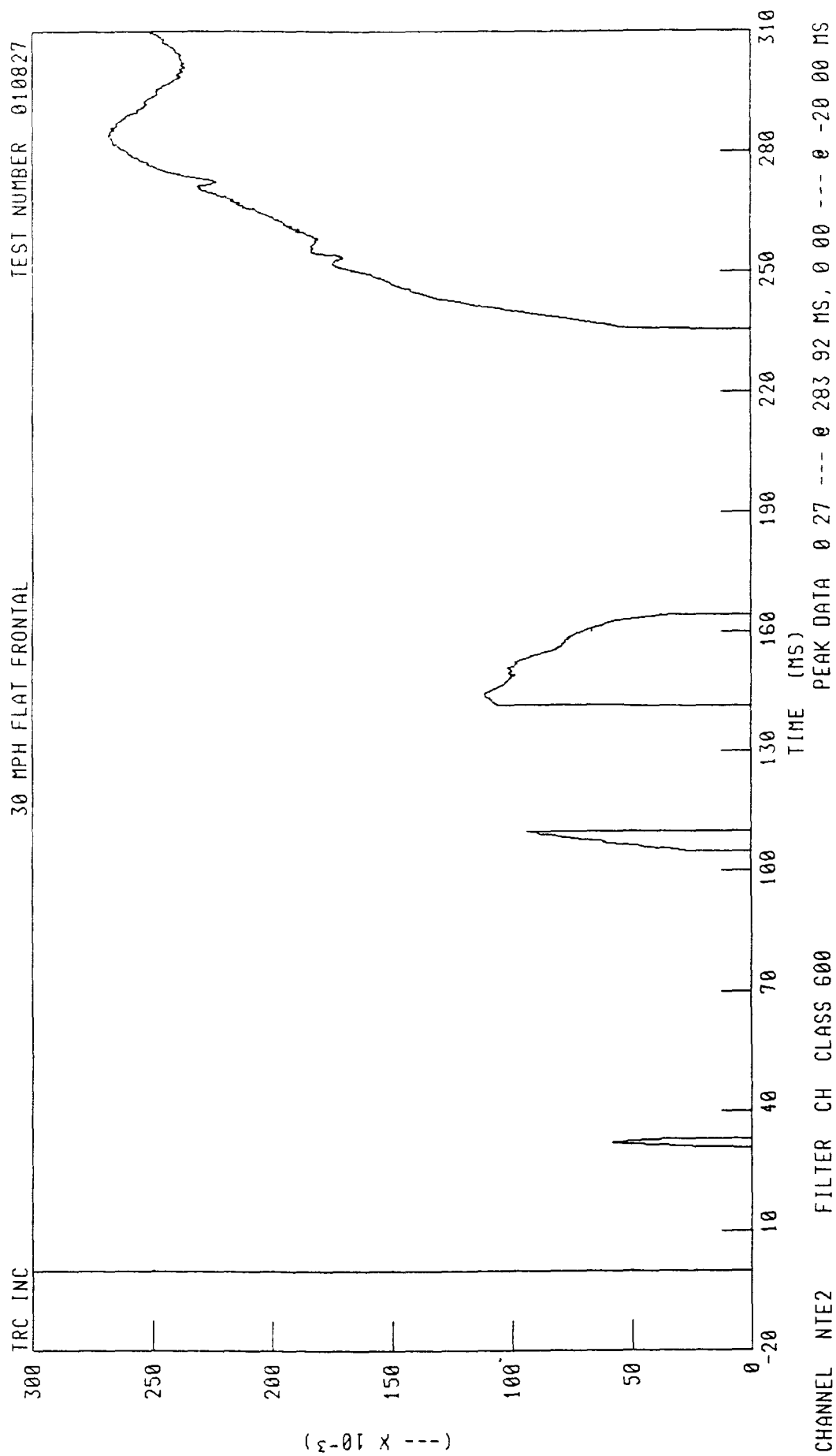
PEAK DATA 12 44 N M @ 124 24 MS, -6 64 N M @ 197 28 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
PASSENGER NECK OCCIPITAL CONDYLE MOMENT ABOUT Y AXIS
30 MPH FLAT FRONTAL



CHANNEL NEKOM2 FILTER CH CLASS 600 PEAK DATA 78 11 N M @ 62 72 MS, -16 05 N M @ 309 68 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
 PASSENGER NECK TENSION/EXTENSION

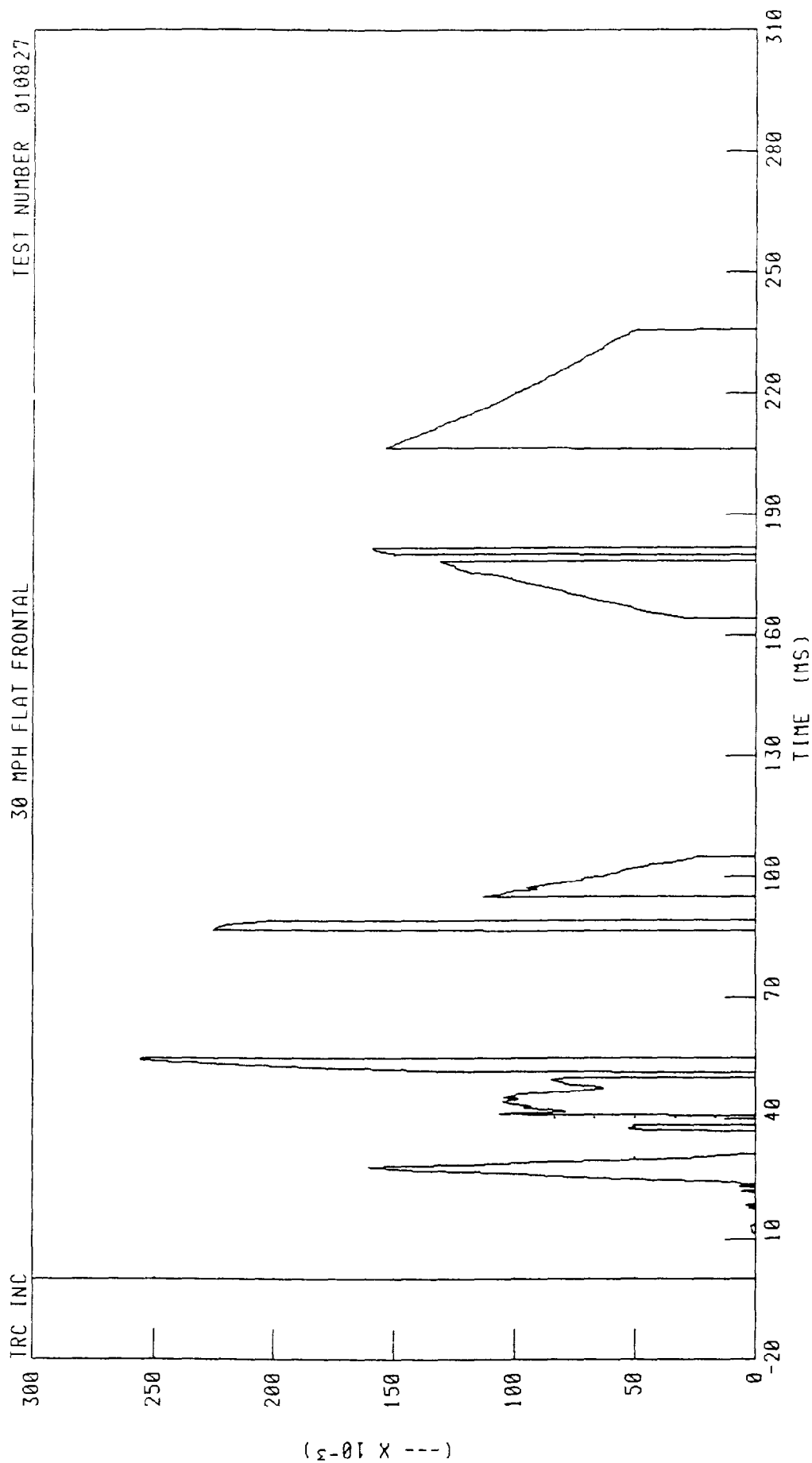


2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

PASSENGER NECK TENSION/FLEXION

30 MPH FLAT FRONTAL

TEST NUMBER 010827



TIME (MS)

PEAK DATA 0 26 --- 0 54 64 MS, 0 00 --- 0 -20 00 MS

CHANNEL NTF2 FILTER CH CLASS 600

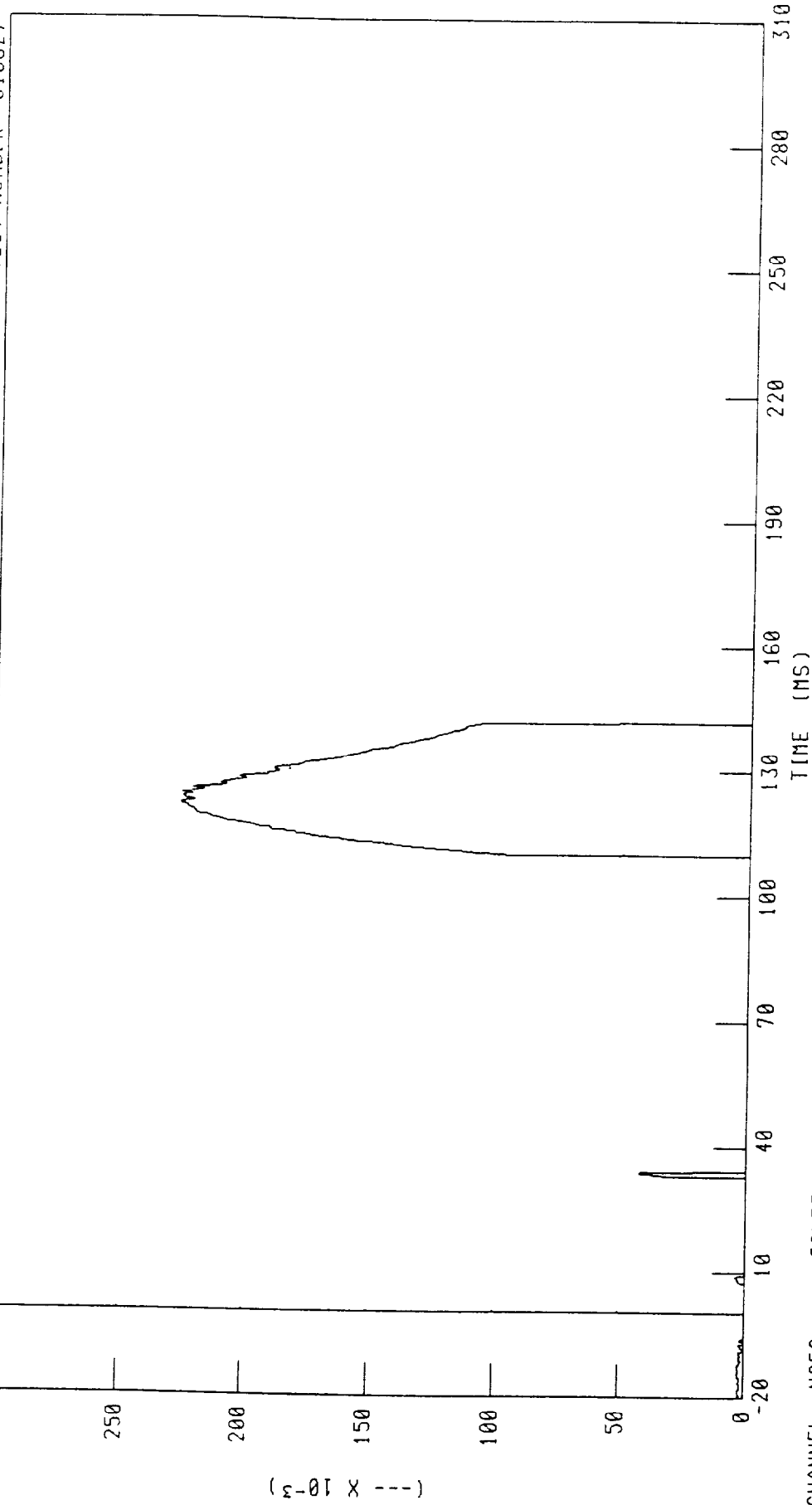
2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

PASSENGER NECK COMPRESSION/EXTENSION

TRC INC

30 MPH FLAT FRONTAL

TEST NUMBER 010827



CHANNEL NCE2

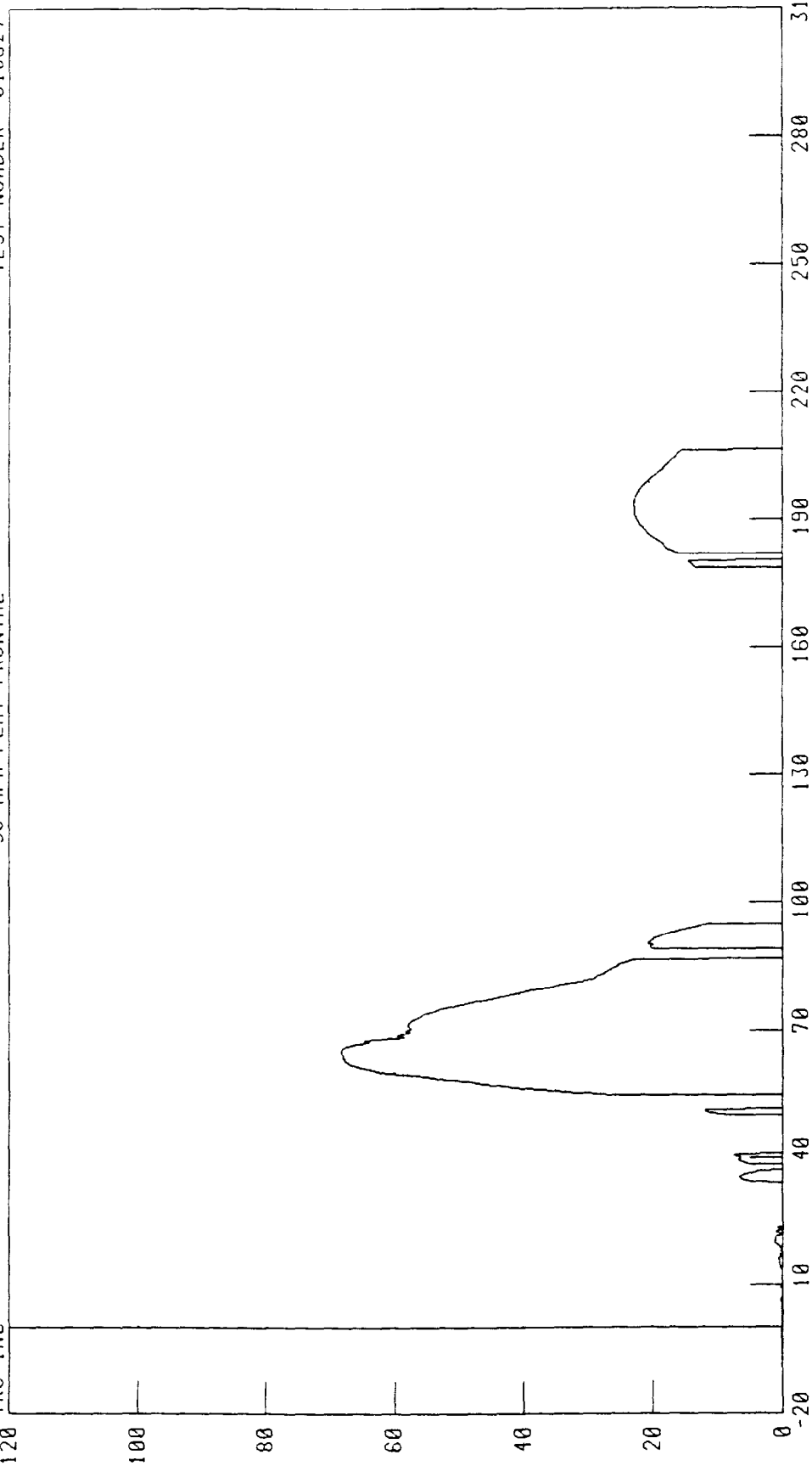
FILTER CH CLASS 600

PEAK DATA 0 23 --- 0 122 00 MS, 0 00 --- 0 -8 96 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
 PASSENGER NECK COMPRESSION/FLEXION
 30 MPH FLAT FRONTAL

TEST NUMBER 010827

TRC INC



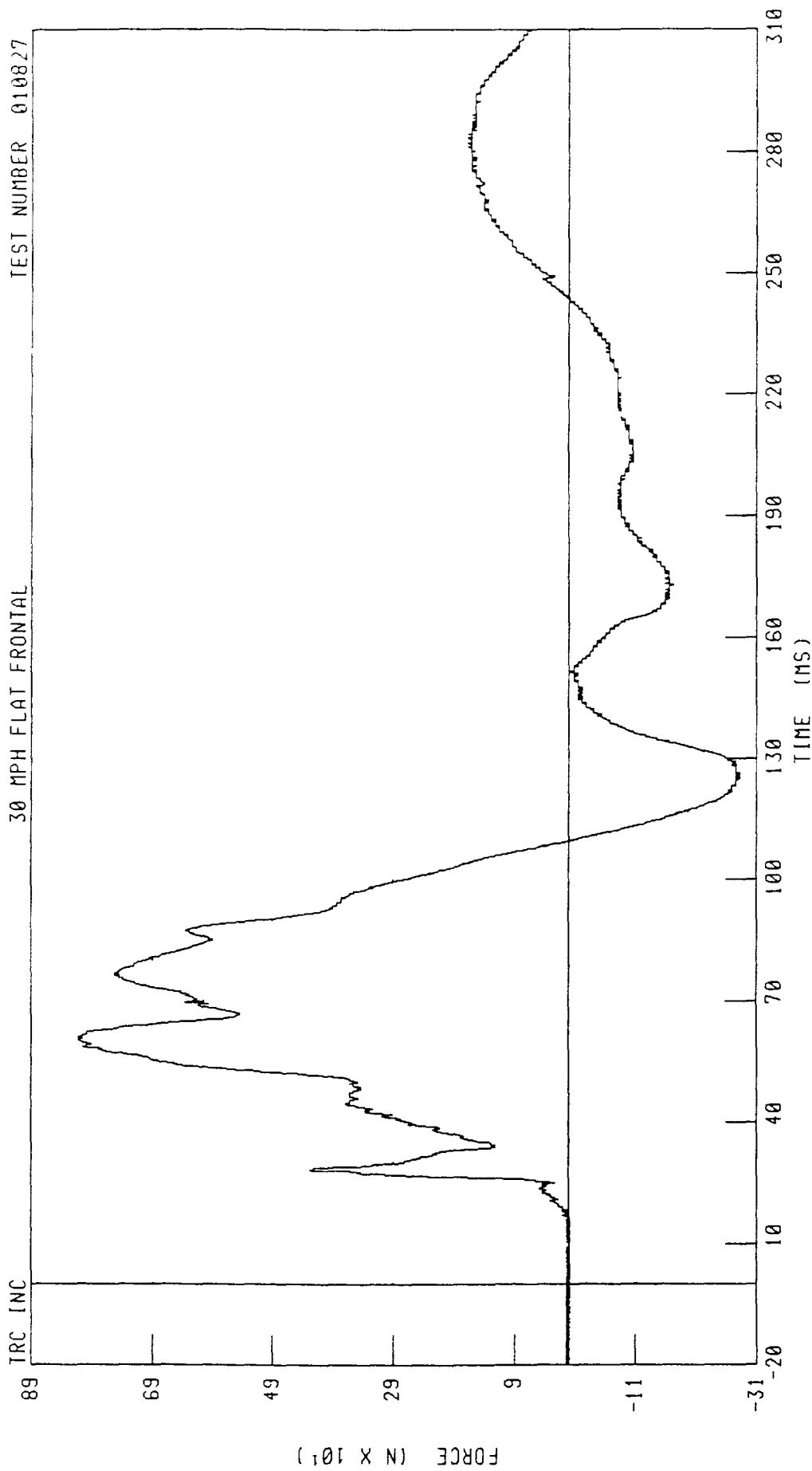
TIME (MS)

PEAK DATA 0 68 --- 0 64 96 MS, 0 00 --- 0 -20 00 MS

CHANNEL NCF2 FILTER CH CLASS 600

(--- X 10⁻²)

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
 PASSENGER NECK LOWER X-AXIS SHEAR FORCE
 30 MPH FLAT FRONTAL

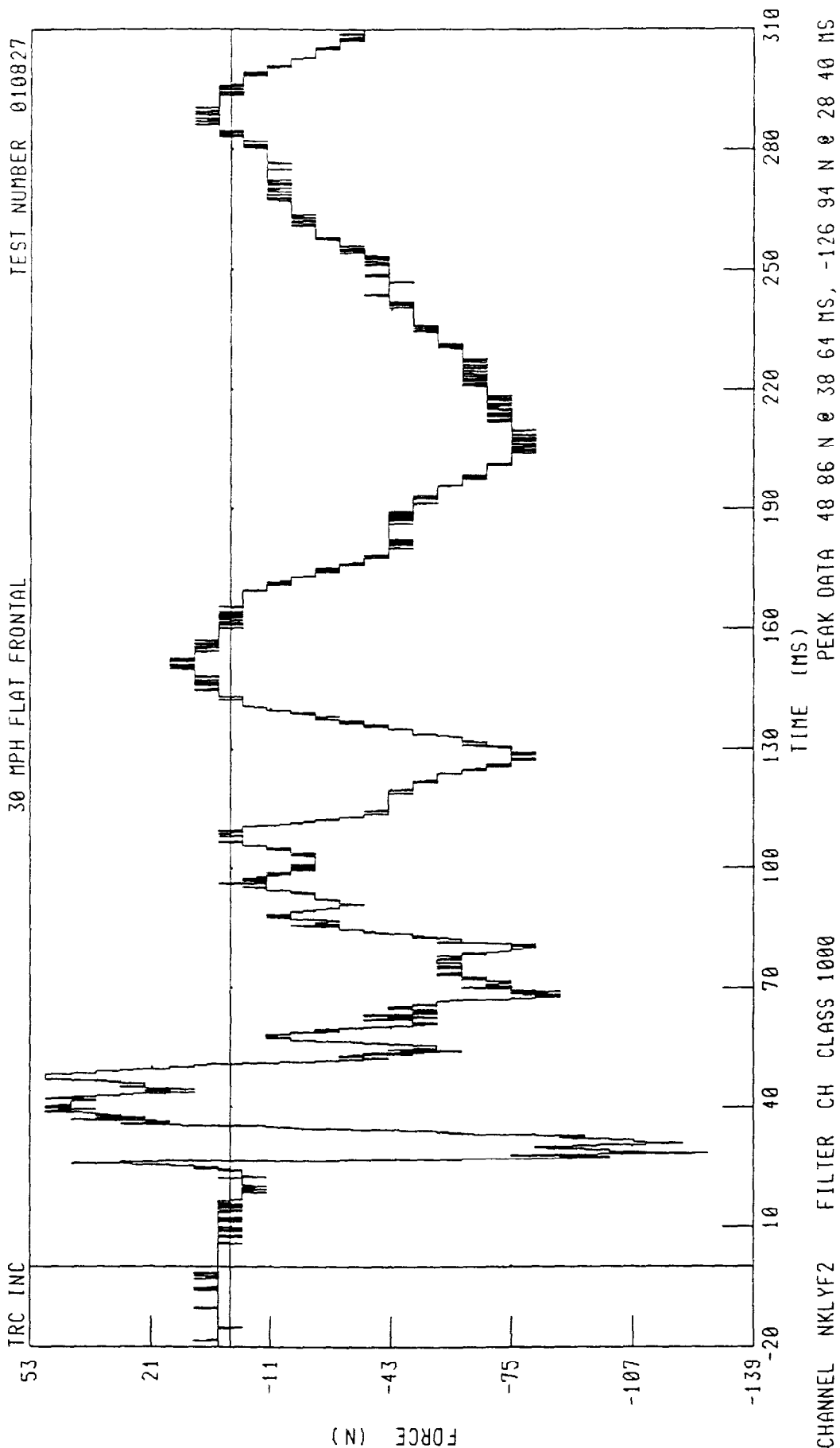


TEST NUMBER 010827

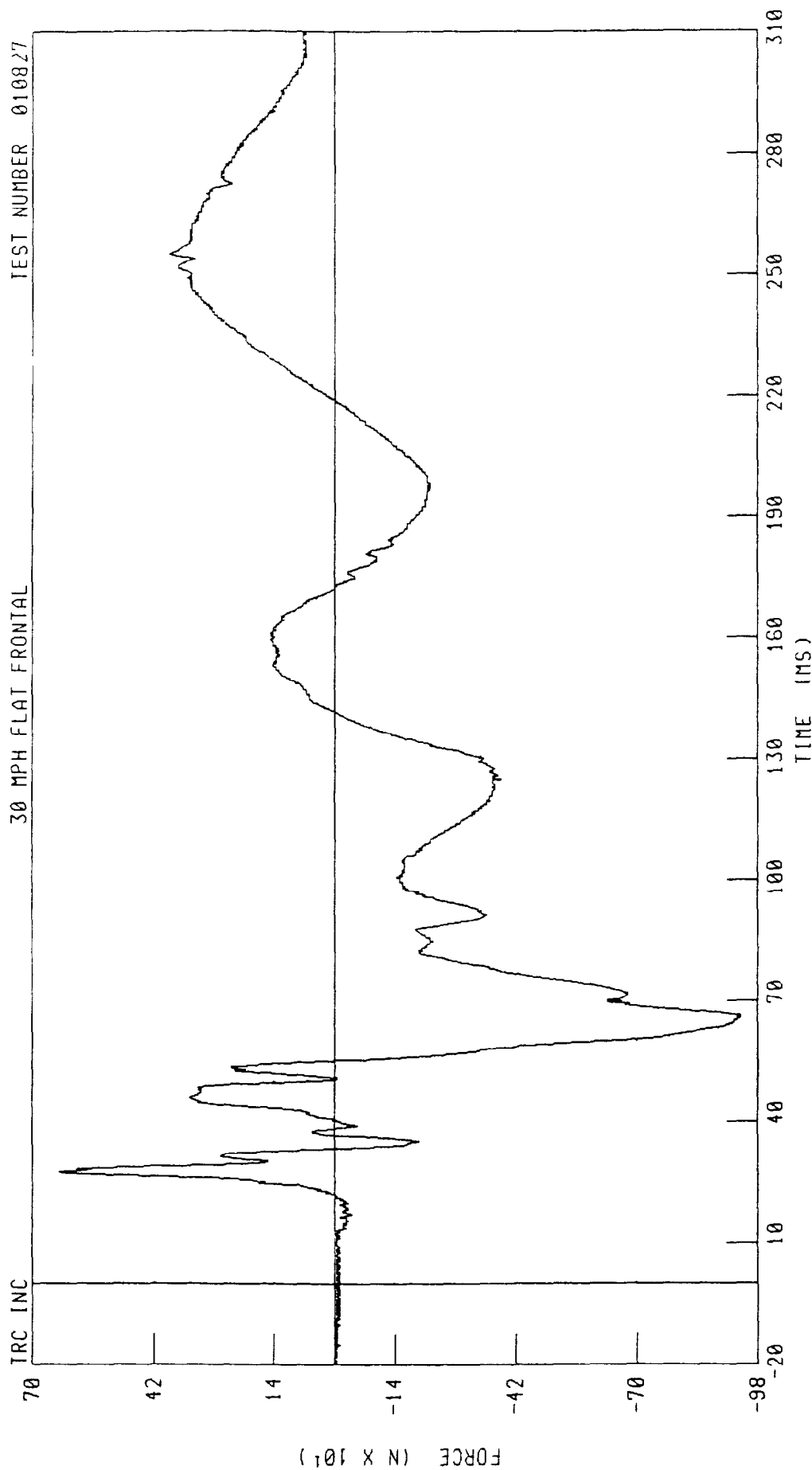
PEAK DATA 812 25 N 0 60 16 MS, -283 02 N 0 124 88 MS

CHANNEL NKLF2 FILTER CH CLASS 1000

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
 PASSENGER NECK LOWER Y-AXIS SHEAR FORCE
 30 MPH FLAT FRONTAL



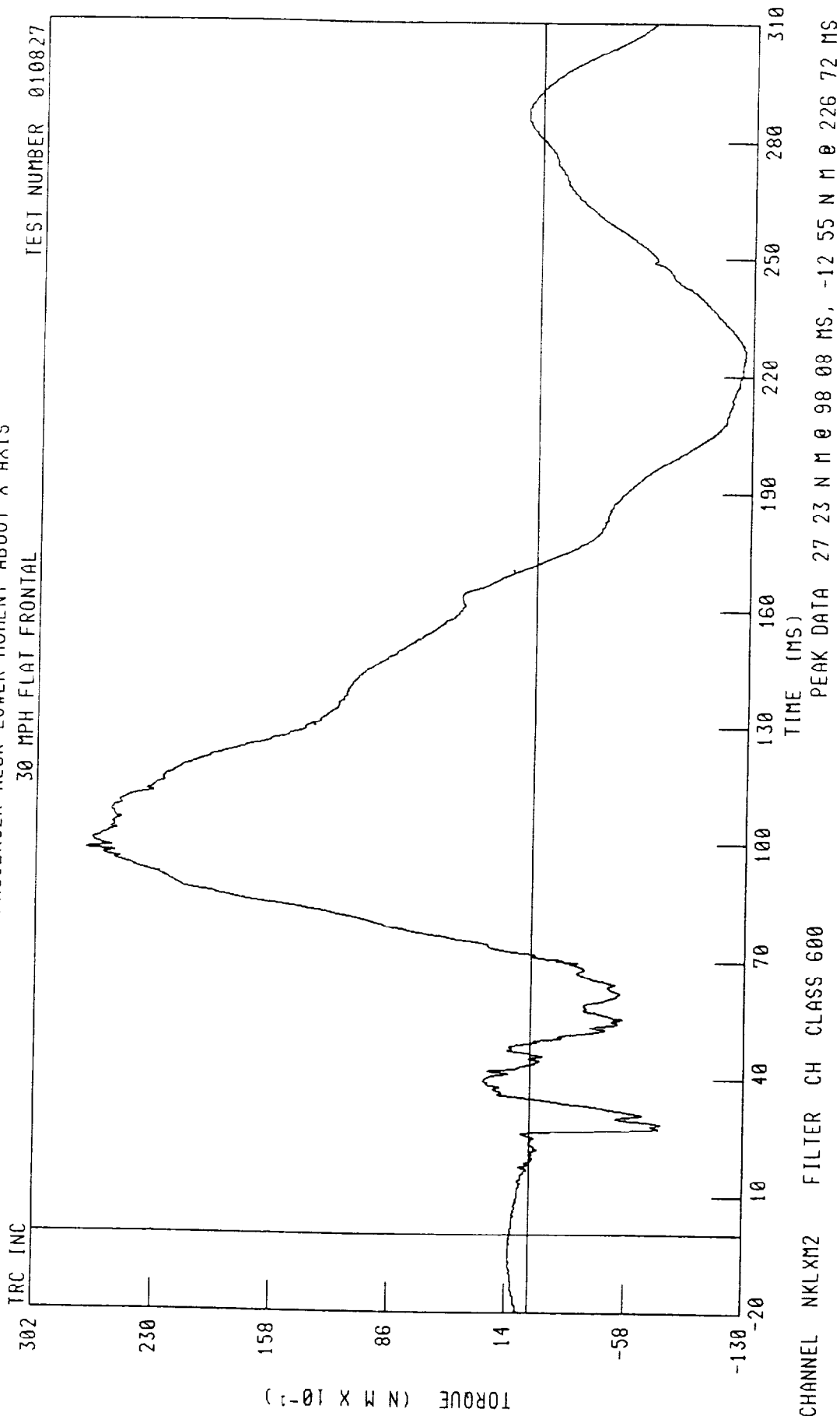
2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
 PASSENGER NECK LOWER Z-AXIS AXIAL FORCE
 30 MPH FLAT FRONTAL



CHANNEL NKLZF2 FILTER CH CLASS 1000

PEAK DATA 638 30 N 0 27 68 MS, -939 03 N 0 65 60 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
PASSENGER NECK LOWER MOMENT ABOUT X AXIS

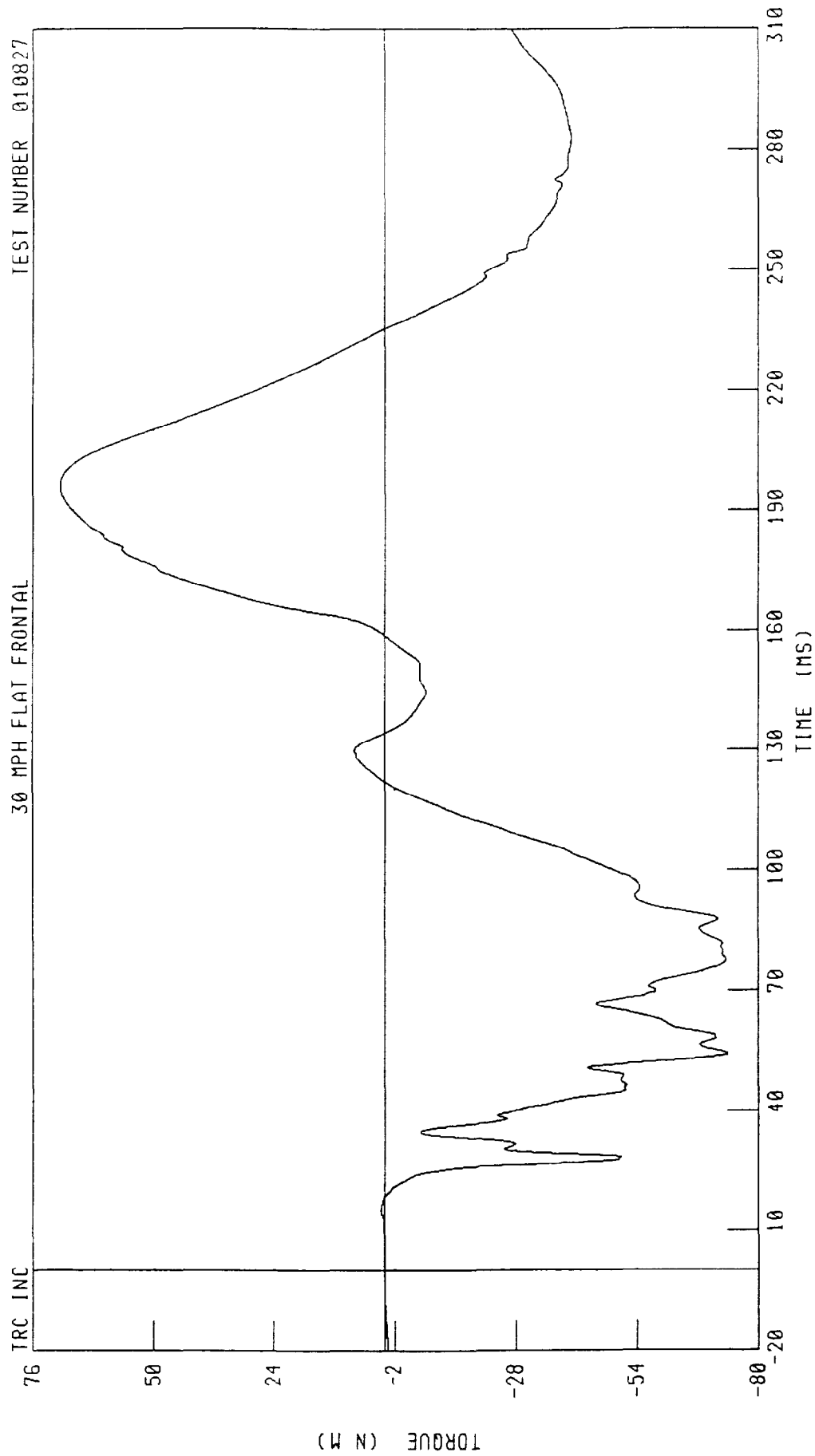


2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

PASSENGER NECK LOWER MOMENT ABOUT Y AXIS

30 MPH FLAT FRONTAL

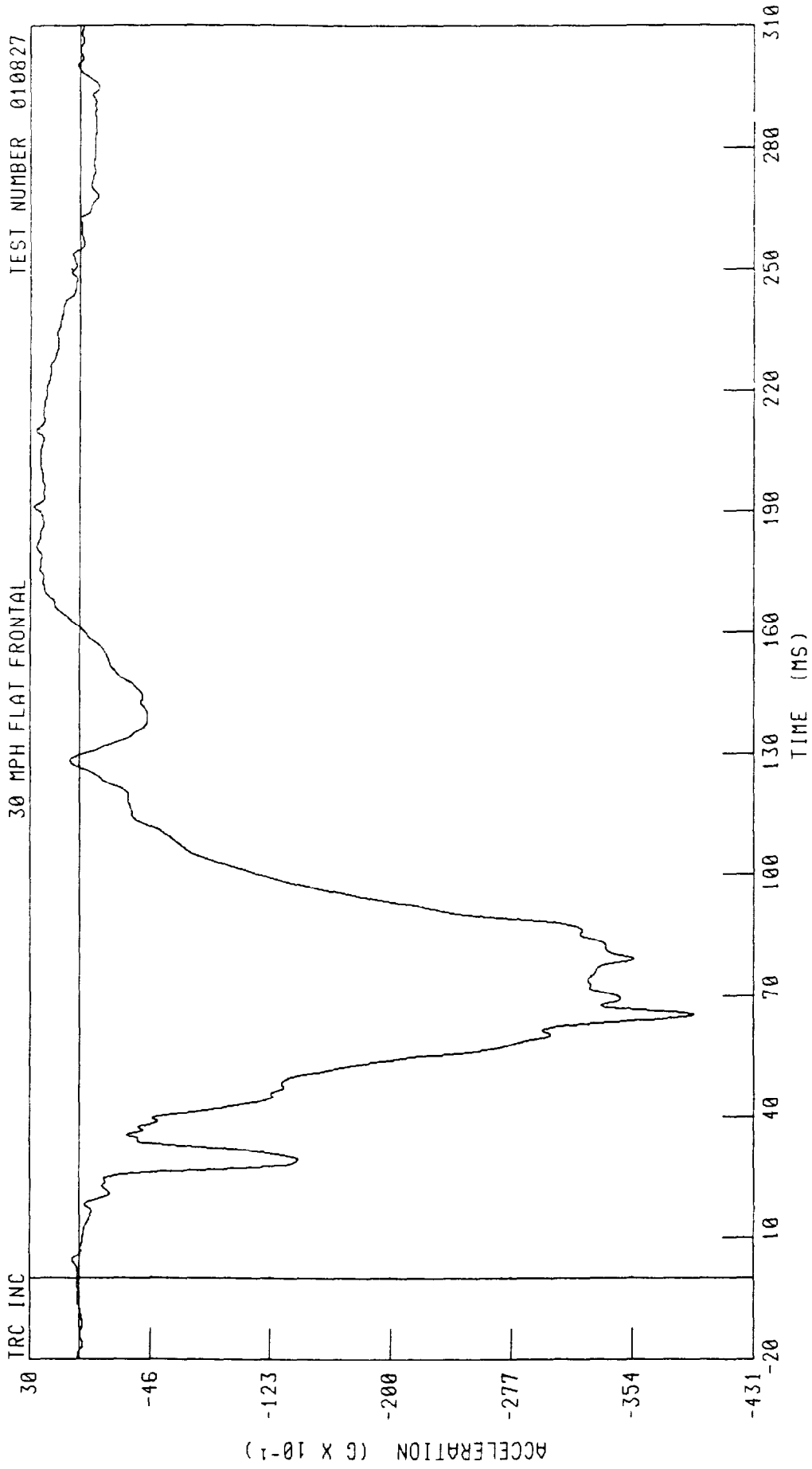
TEST NUMBER 010827



CHANNEL NKLYM2 FILTER CH CLASS 600

PEAK DATA 69 95 N M 0 196 88 MS, -73 50 N M 0 54 16 MS

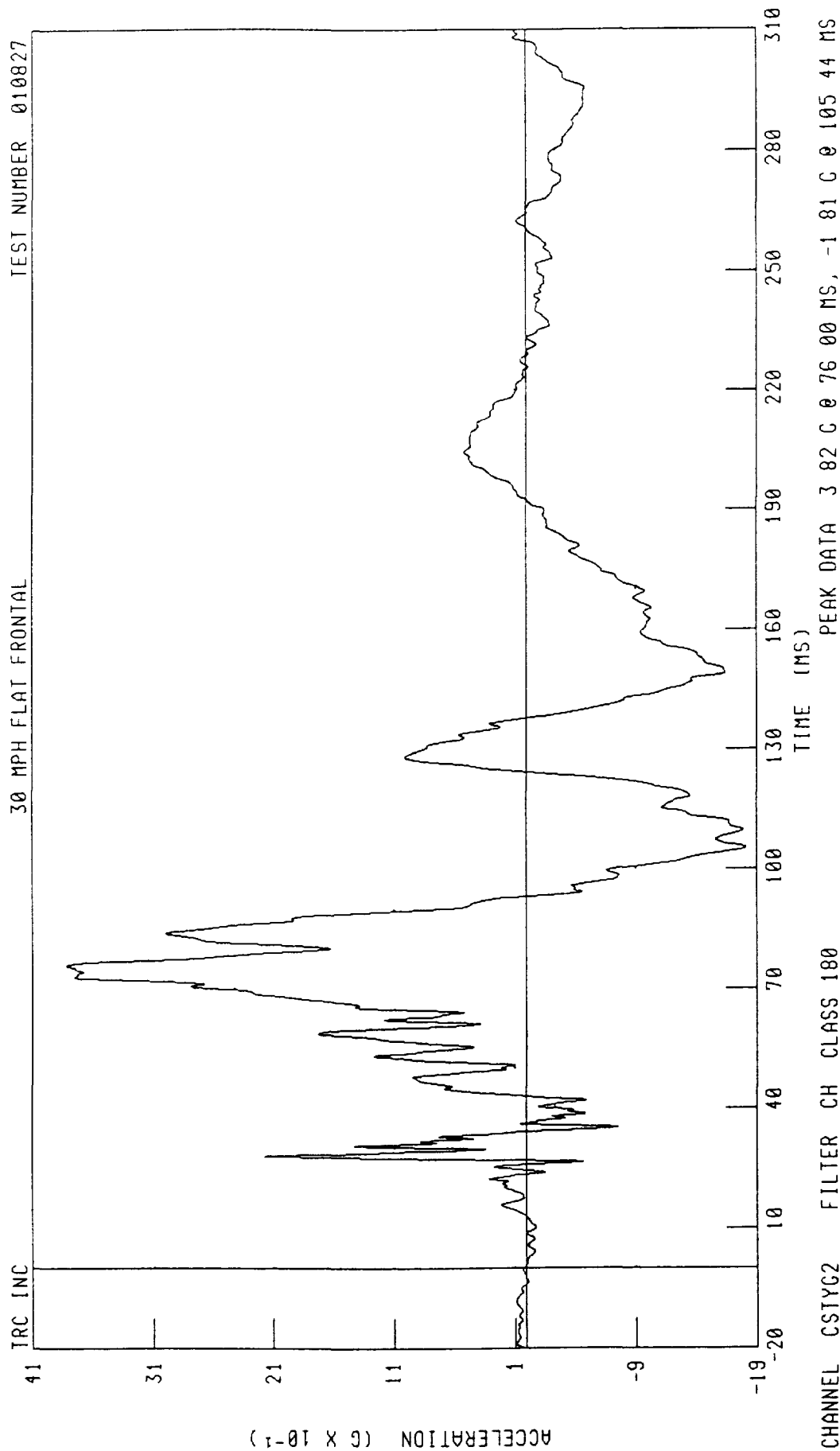
2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
PASSENGER CHEST X-AXIS ACCELERATION



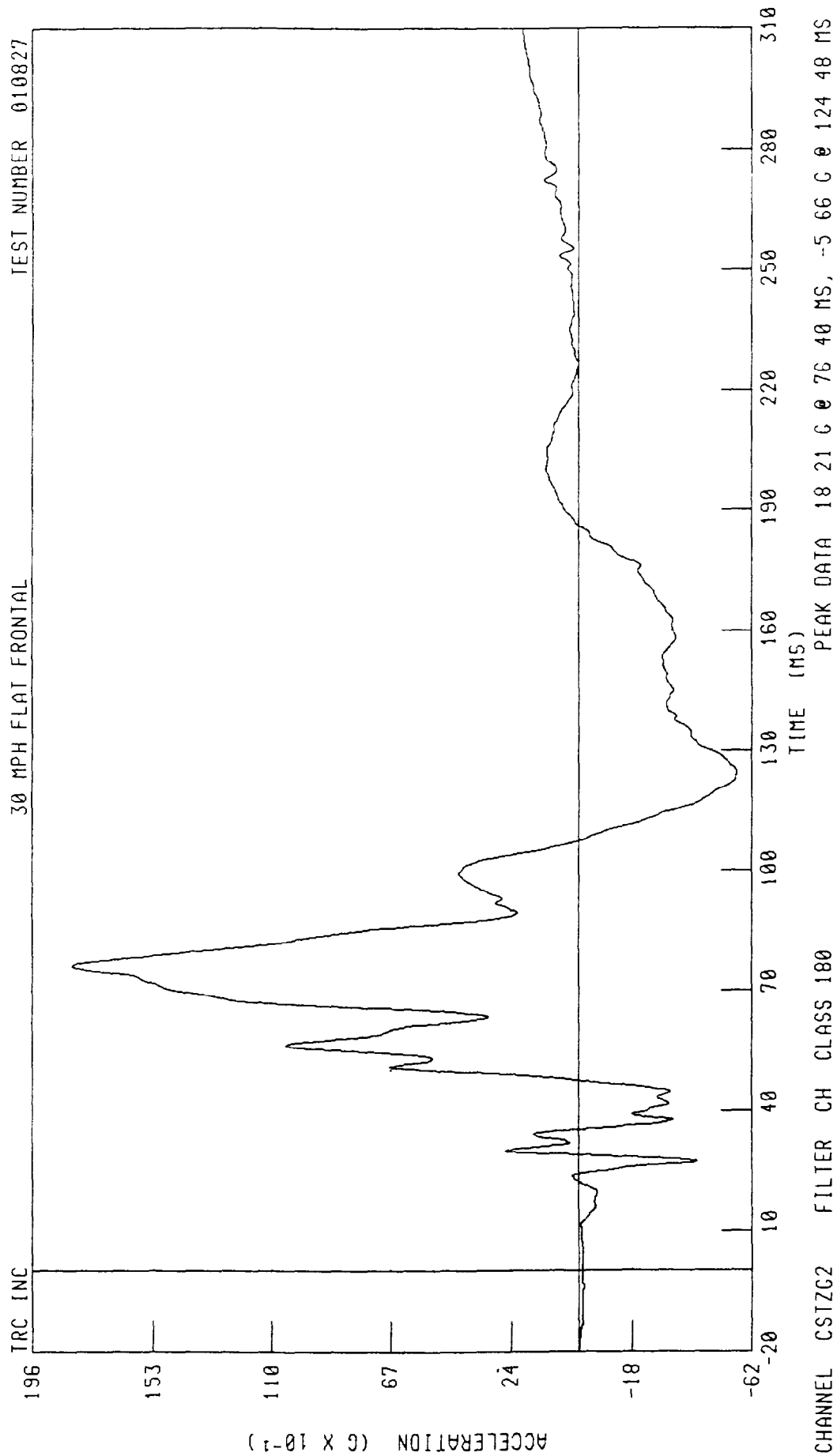
CHANNEL CSTXC2 FILTER CH CLASS 180

PEAK DATA 2 89 G 0 191 28 MS, -39 32 G 0 65 30 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
PASSENGER CHEST Y-AXIS ACCELERATION



2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
 PASSENGER CHEST Z-AXIS ACCELERATION
 30 MPH FLAT FRONTAL

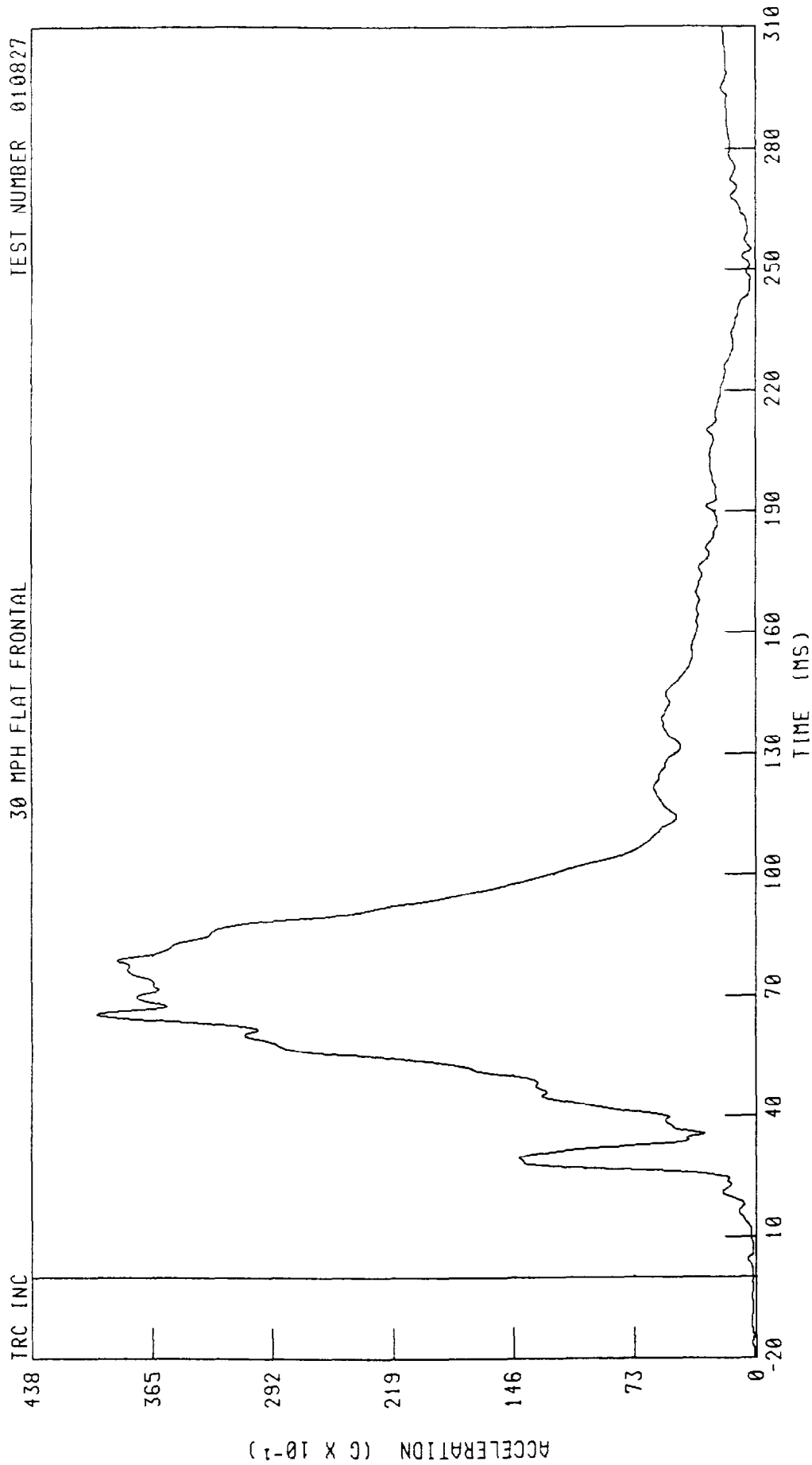


2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

PASSENGER CHEST RESULTANT ACCELERATION

30 MPH FLAT FRONTAL

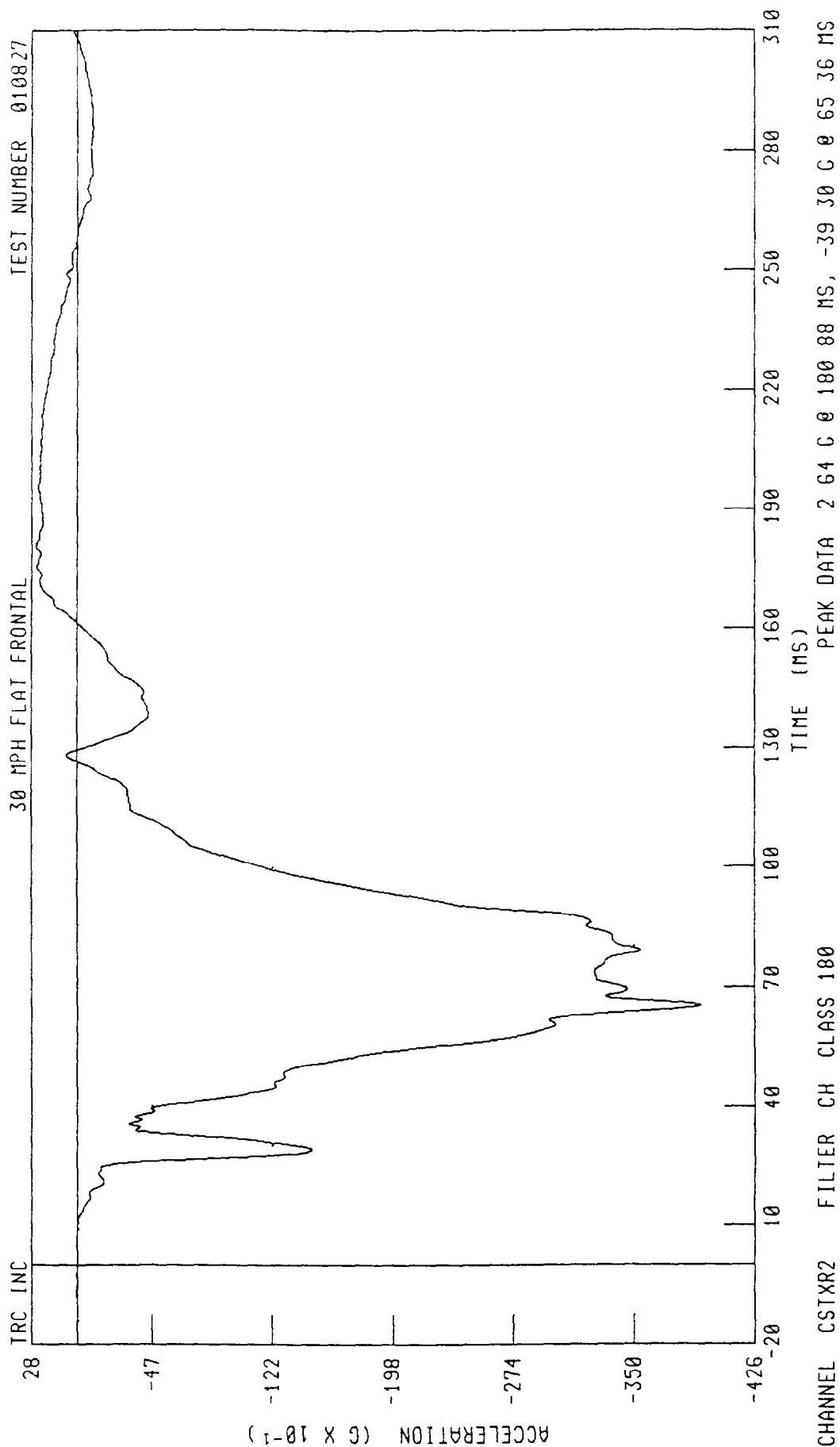
TEST NUMBER 010827



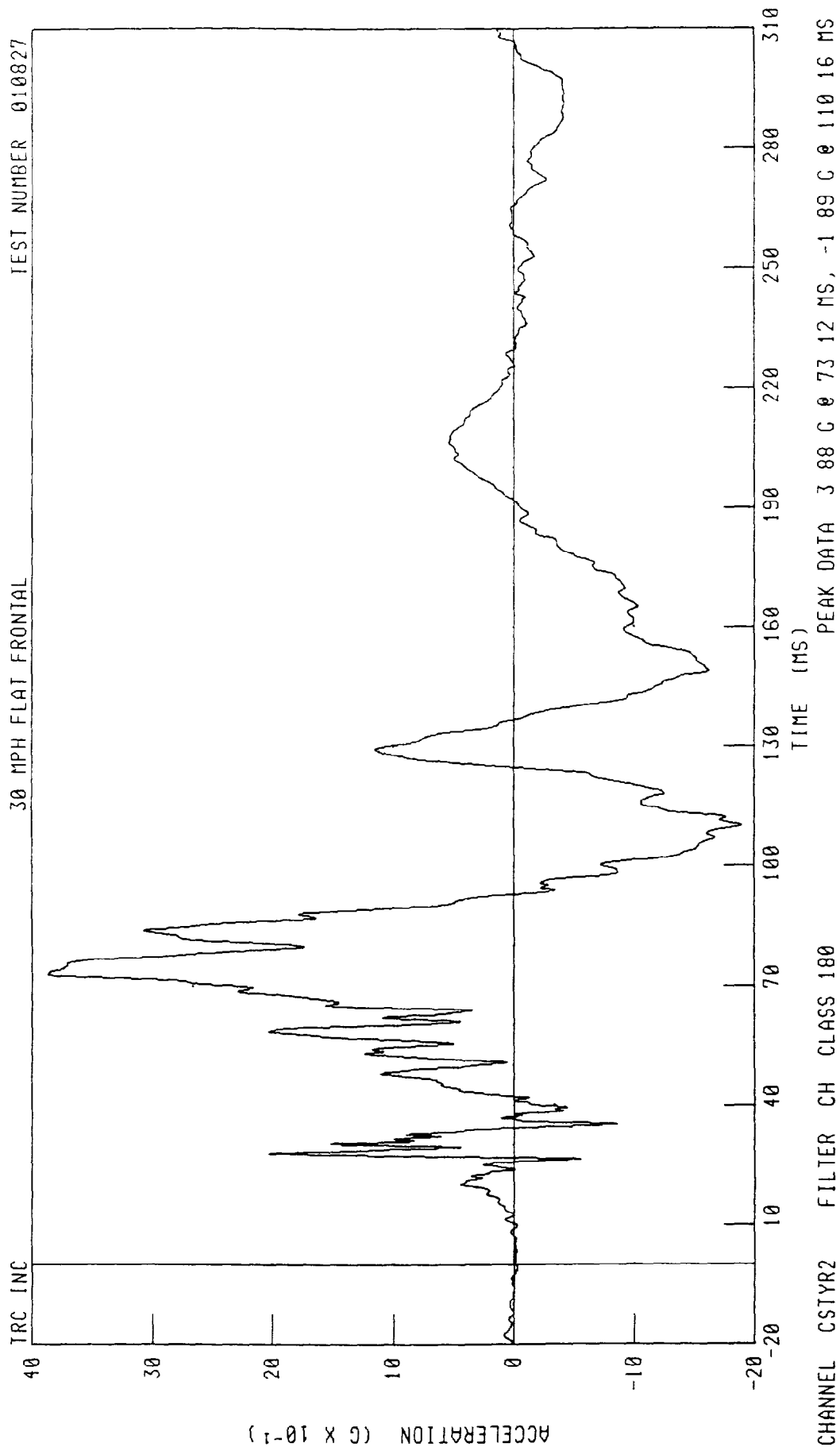
CHANNEL CSTRC2 FILTER CH CLASS 180

PEAK DATA 39 92 G @ 65 52 MS, 0 01 G @ -20 00 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
 PASSENGER CHEST X-AXIS ACCELERATION REDUNDANT

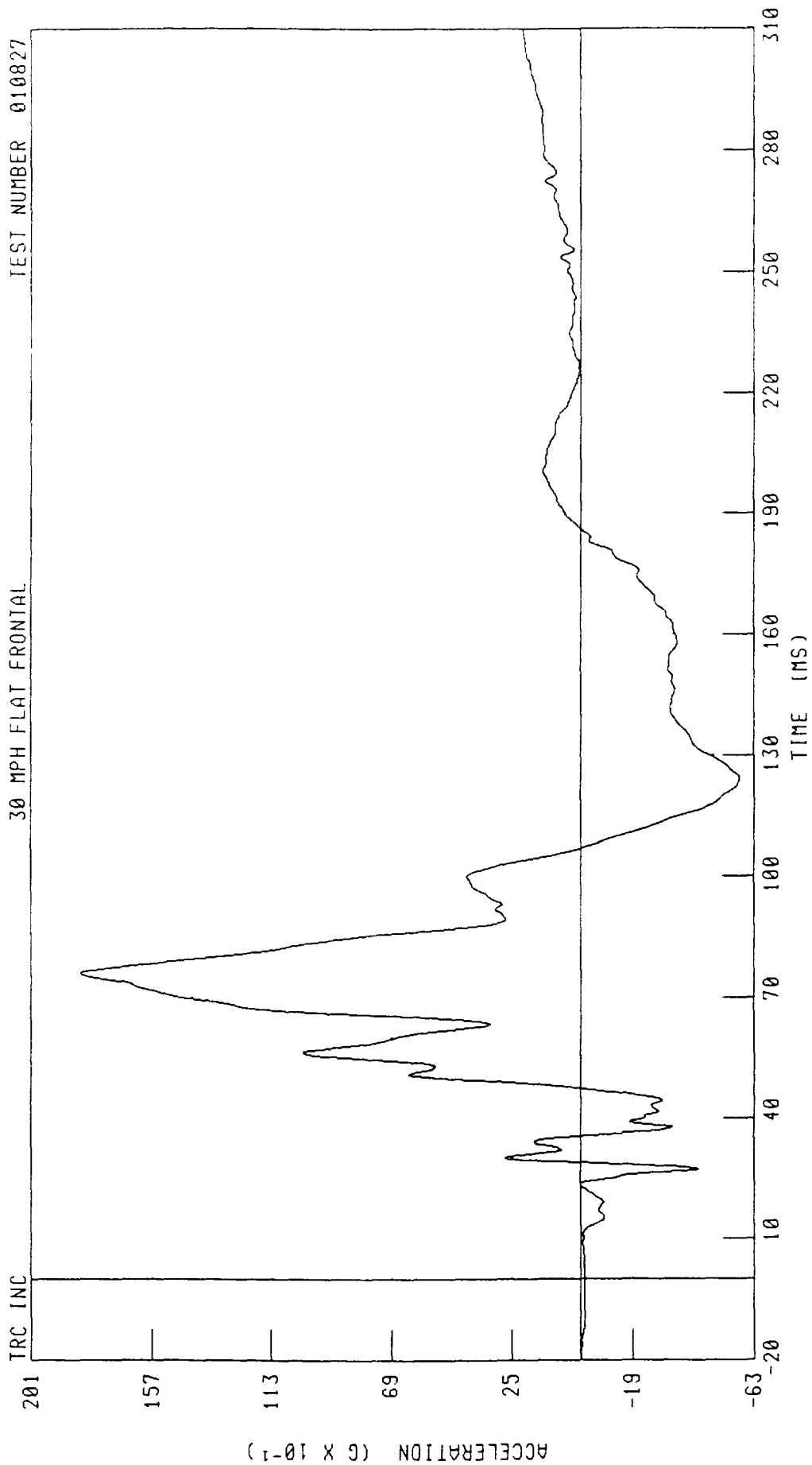


2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
PASSENGER CHEST Y-AXIS ACCELERATION REDUNDANT



2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
 PASSENGER CHEST Z-AXIS ACCELERATION REDUNDANT
 30 MPH FLAT FRONTAL

TEST NUMBER 010827

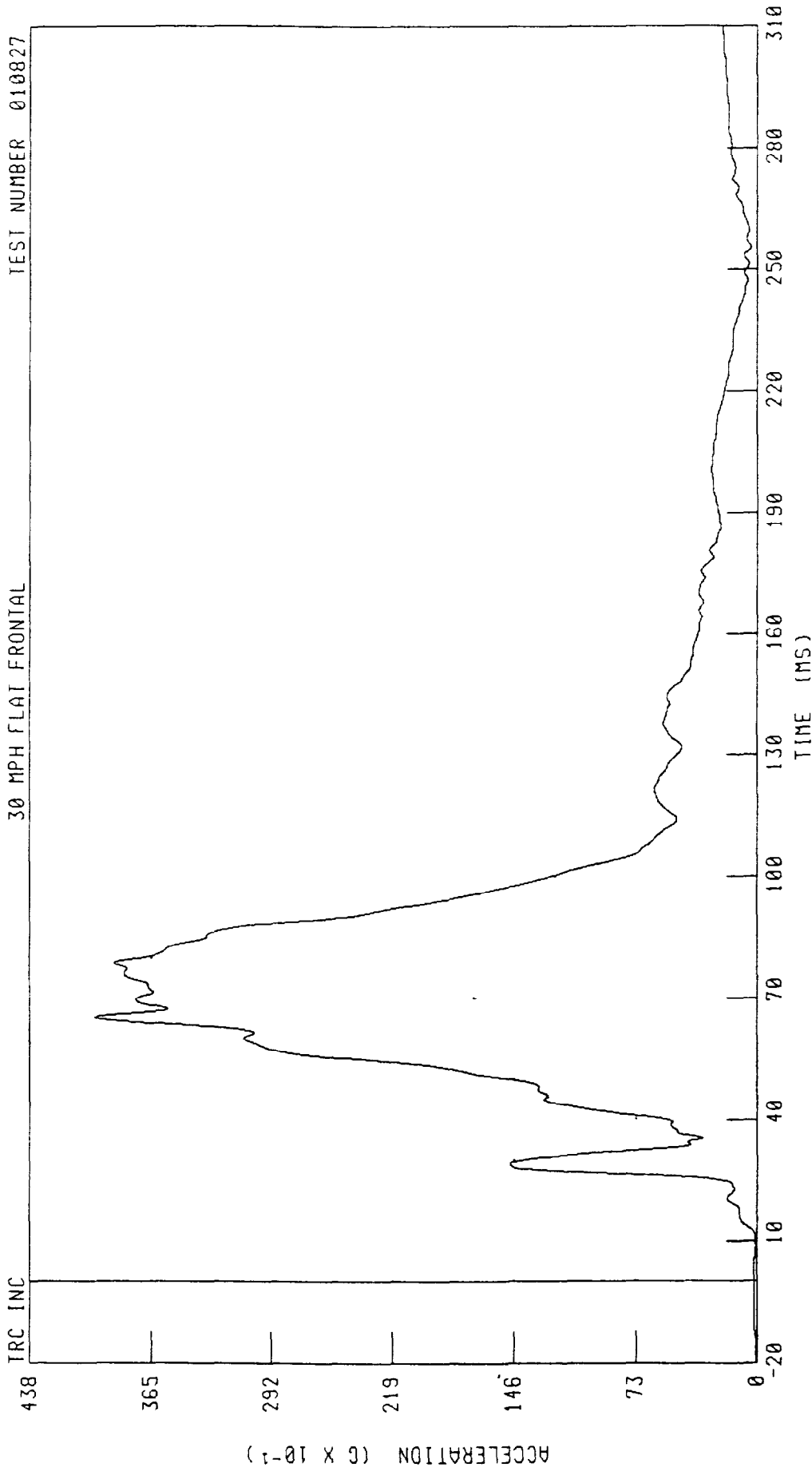


CHANNEL CSTZR2 FILTER CH CLASS 180

PEAK DATA 18 29 G @ 76 16 MS, -5 80 G @ 124 32 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
PASSENGER CHEST RESULTANT ACCELERATION REDUNDANT
30 MPH FLAT FRONTAL

TEST NUMBER 010827



CHANNEL CSTR2 FILTER CH CLASS 180

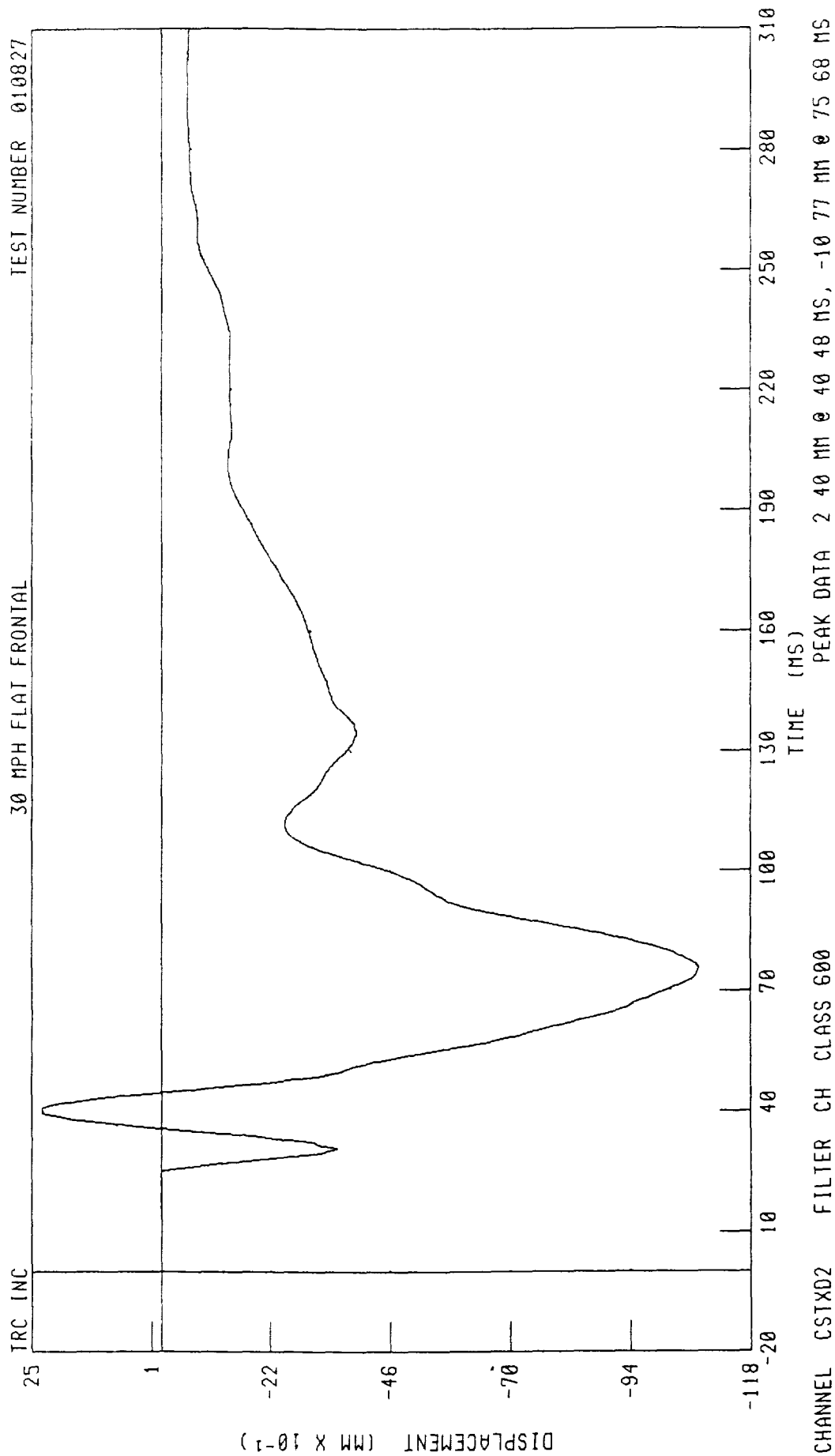
PEAK DATA 39 89 C 0 65 52 MS, 0 00 C 0 -20 00 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

PASSENGER CHEST DEFLECTION

30 MPH FLAT FRONTAL

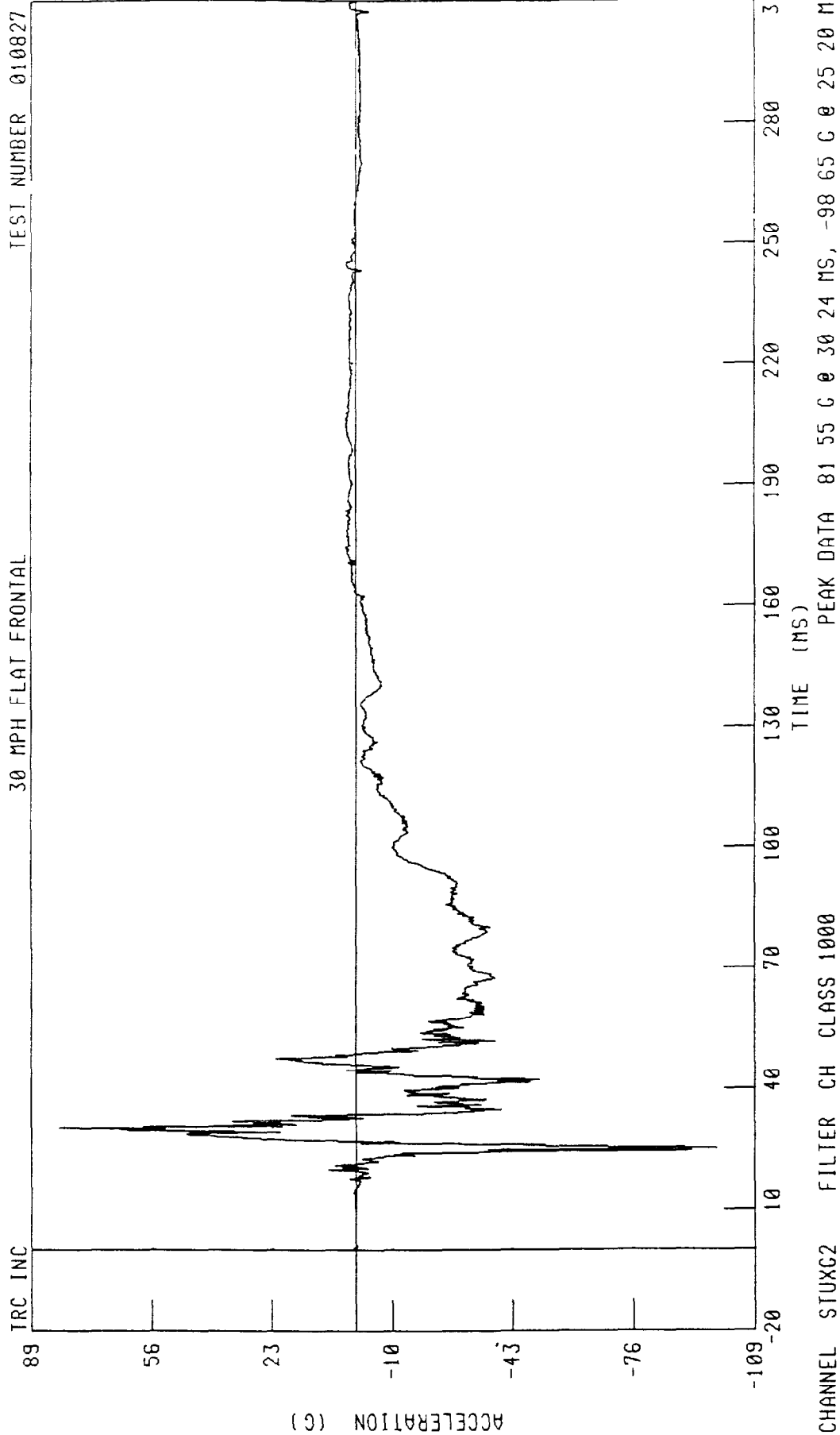
TEST NUMBER 010827



CHANNEL CSTXD2 FILTER CH CLASS 600

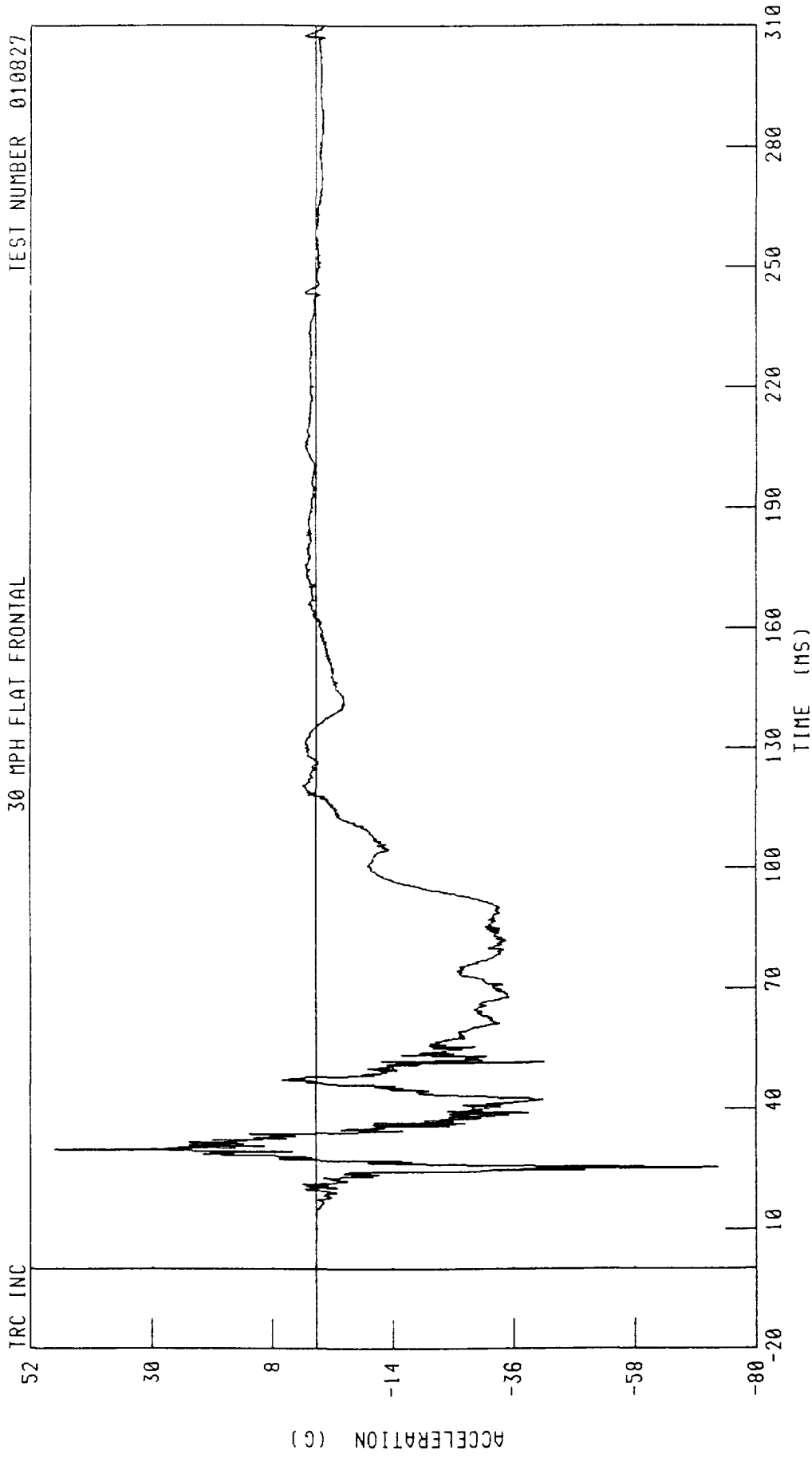
PEAK DATA 2 40 MM @ 40 48 MS, -10 77 MM @ 75 68 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
 PASSENGER STERNUM UPPER X-AXIS ACCELERATION
 30 MPH FLAT FRONTAL



2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
PASSENGER STERNUM MID X-AXIS ACCELERATION
30 MPH FLAT FRONTAL

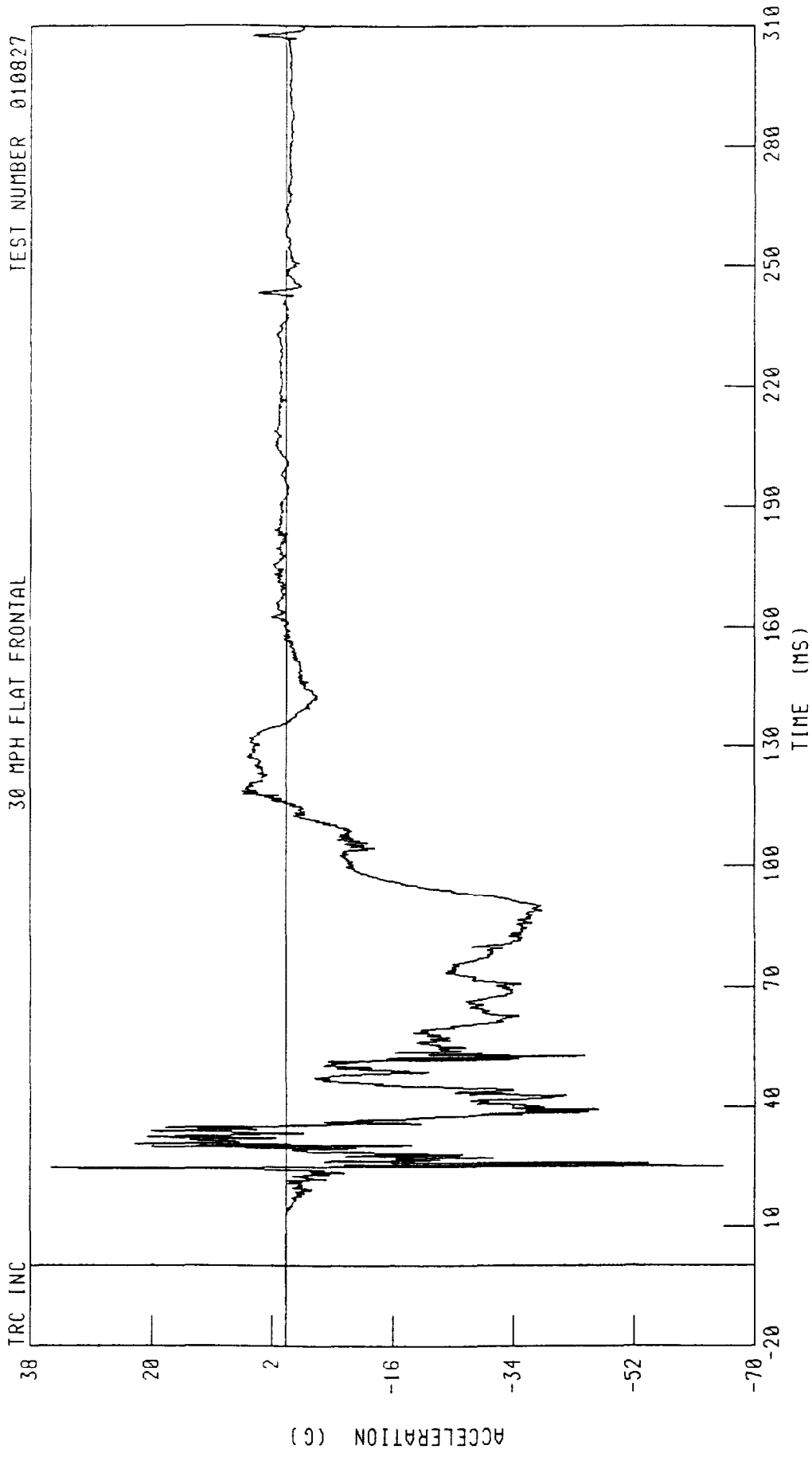
TEST NUMBER 010827



CHANNEL STMXC2 FILTER CH CLASS 1000

PEAK DATA 47 67 0 29 92 MS, -73 20 G @ 25 36 MS

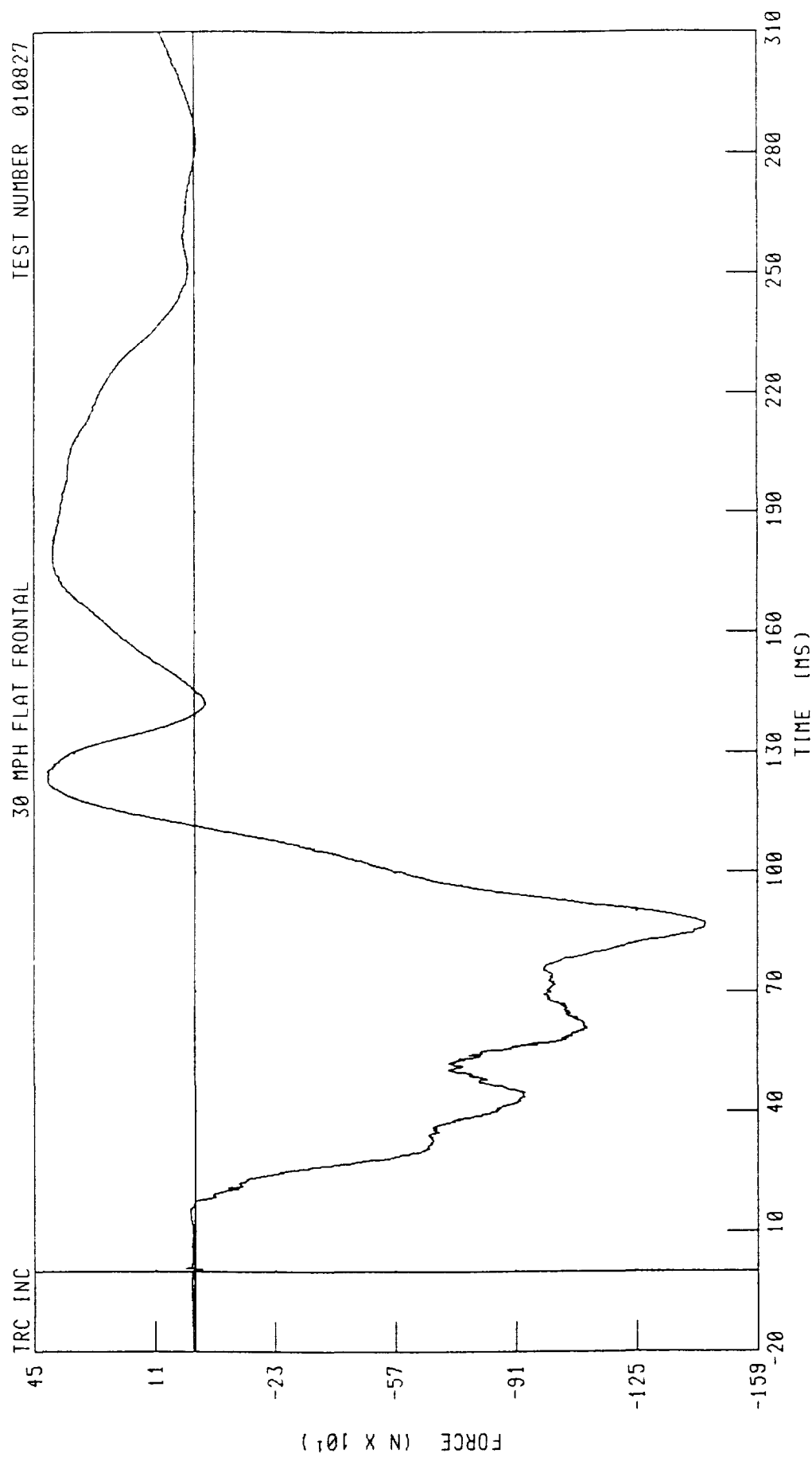
2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
PASSENGER STERNUM LOWER X-AXIS ACCELERATION



CHANNEL STLXC2 FILTER CH CLASS 1000

PEAK DATA 34 92 0 24 56 MS, -65 35 0 25 04 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
PASSENGER LUMBAR X-AXIS FORCE



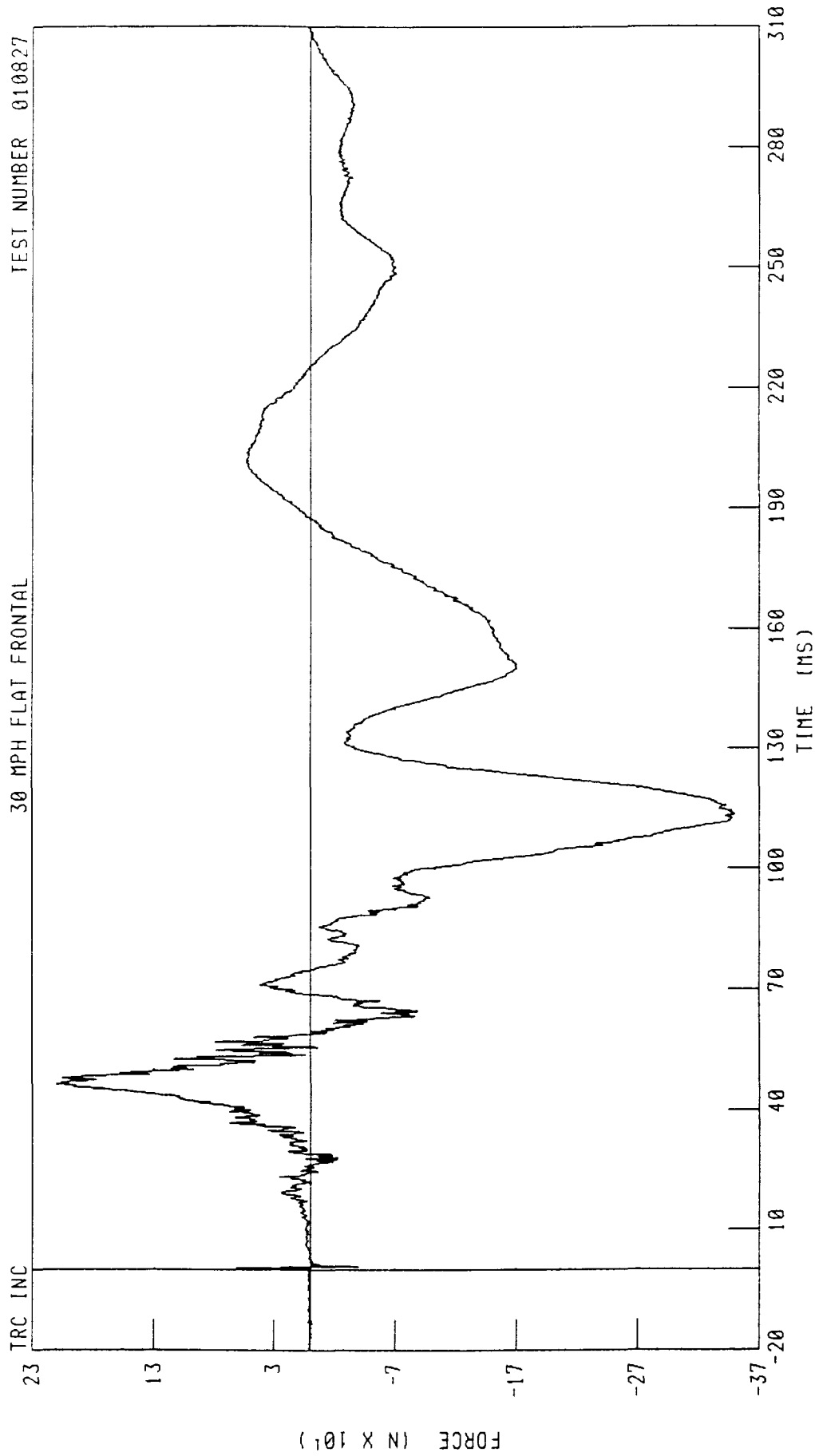
CHANNEL LMBXF2 FILTER CH CLASS 1000 PEAK DATA 412 39 N @ 125 52 MS, -1444 67 N @ 86 48 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

PASSENGER LUMBAR Y-AXIS FORCE

TEST NUMBER 010827

30 MPH FLAT FRONTAL



CHANNEL LM BYF2 FILTER CH CLASS 1000

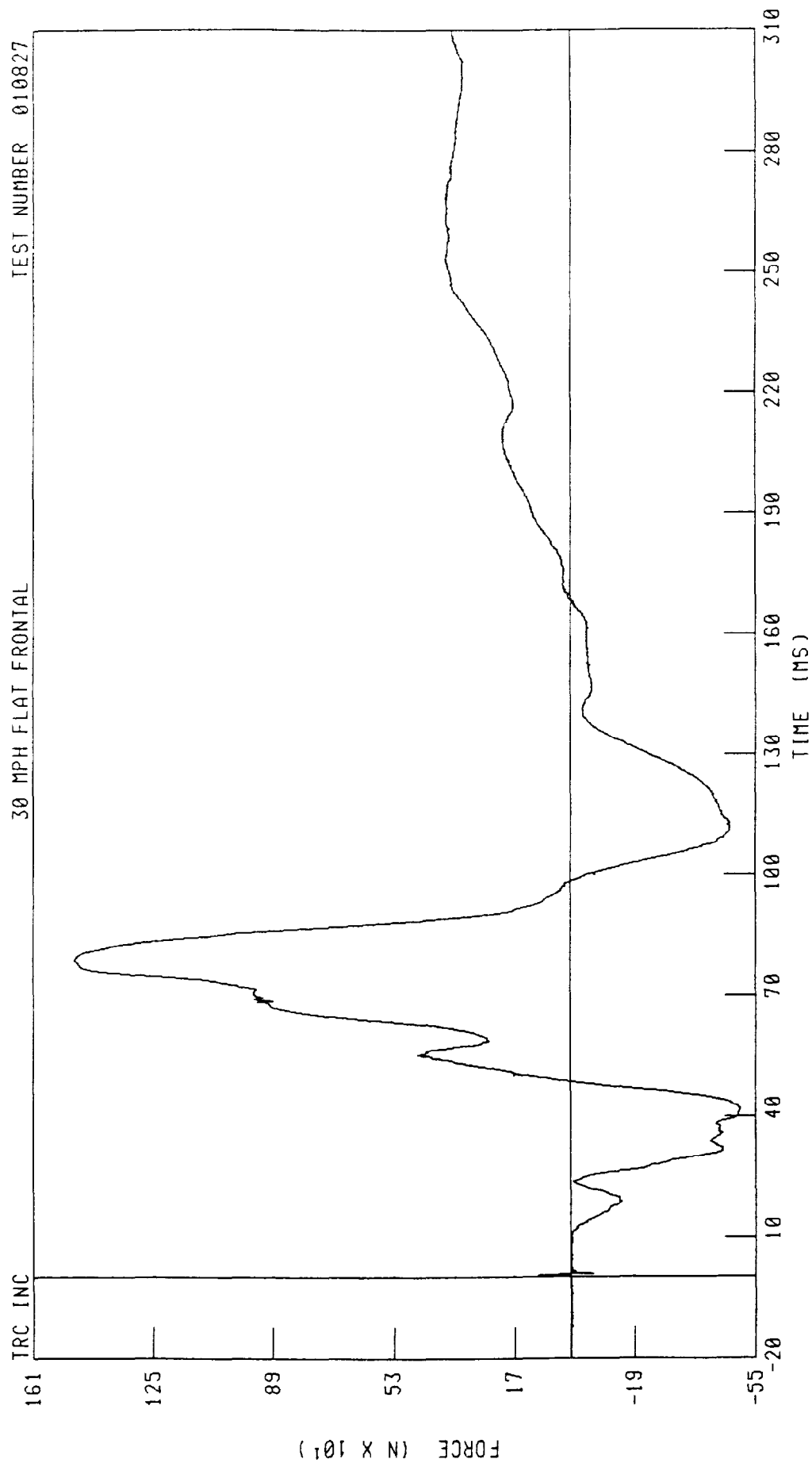
PEAK DATA 210 63 N @ 46 48 MS, -349 50 N @ 113 44 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

PASSENGER LUMBAR Z-AXIS FORCE

30 MPH FLAT FRONTAL

TEST NUMBER 010827

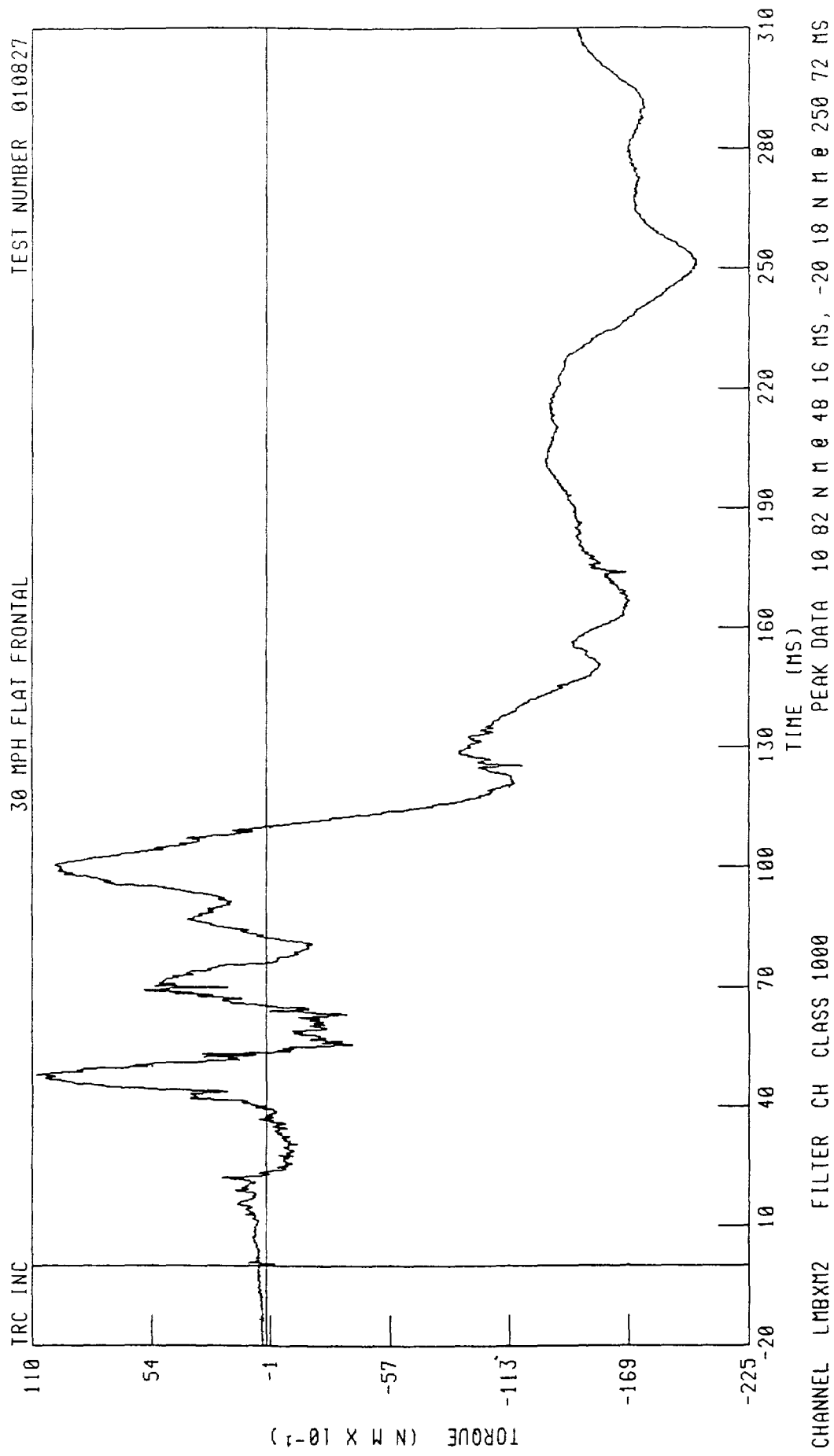


CHANNEL LMBZF2 FILTER CH CLASS 1000

PEAK DATA 1487 36 N @ 78 88 MS, -505 09 N @ 41 84 MS

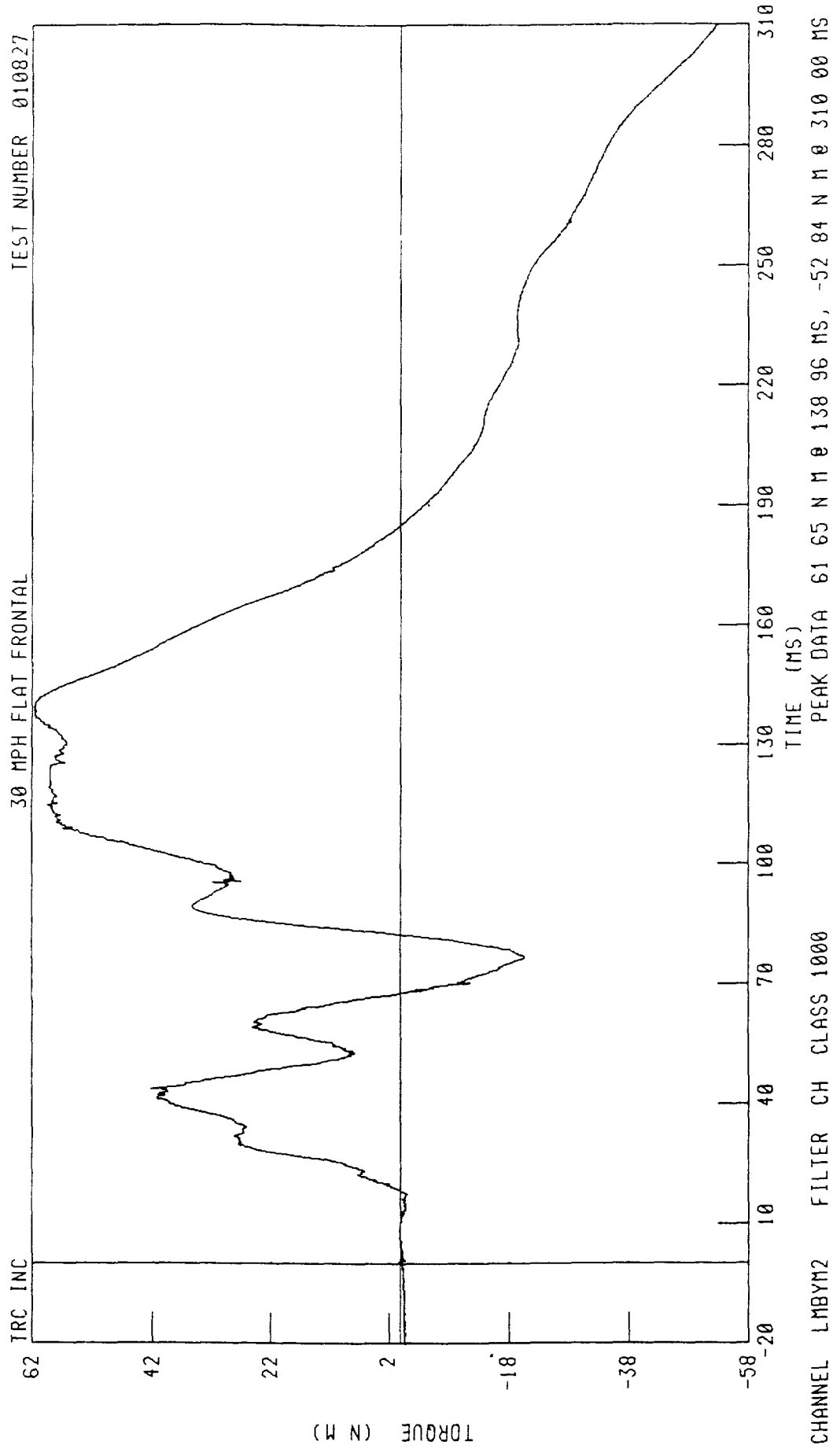
2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

PASSENGER LUMBAR X-AXIS MOMENT



2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

PASSENGER LUMBAR Y-AXIS MOMENT

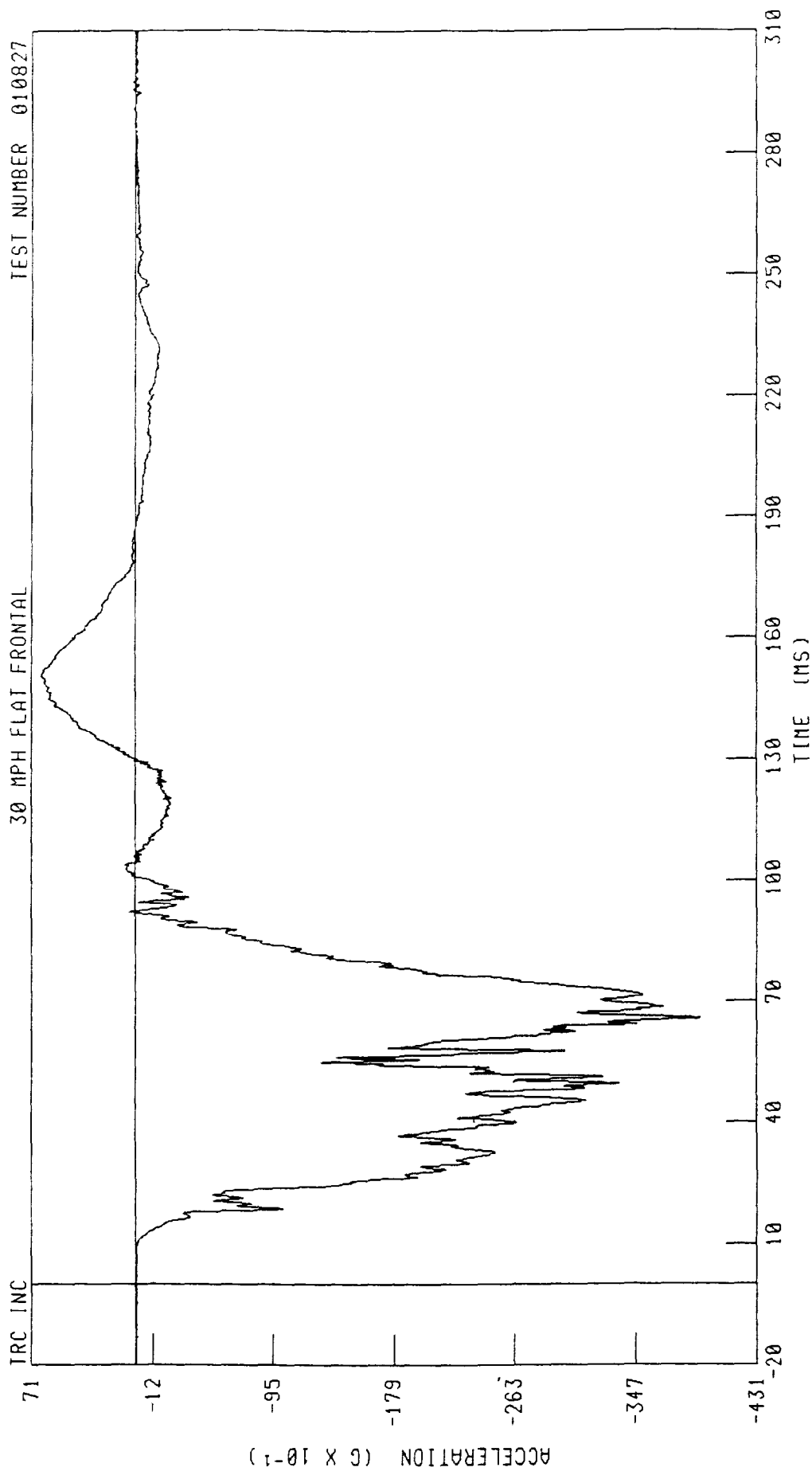


2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

PASSENGER PELVIS X-AXIS ACCELERATION

30 MPH FLAT FRONTAL

TEST NUMBER 010827



PEAK DATA 6 56 G @ 150 96 MS, -39 28 G @ 65 76 MS

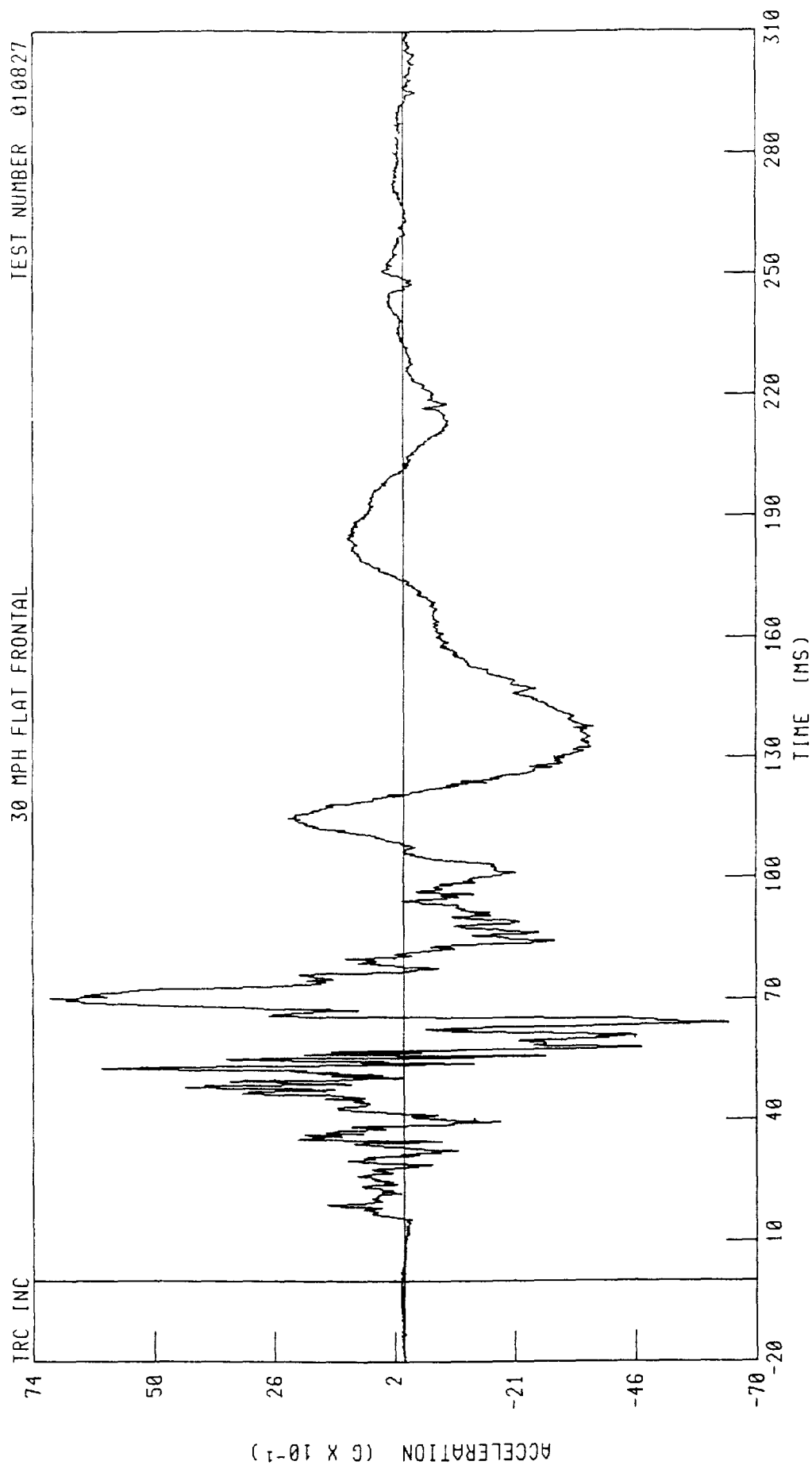
CHANNEL PEVXC2 FILTER CH CLASS 1000

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

PASSENGER PELVIS Y-AXIS ACCELERATION

30 MPH FLAT FRONTAL

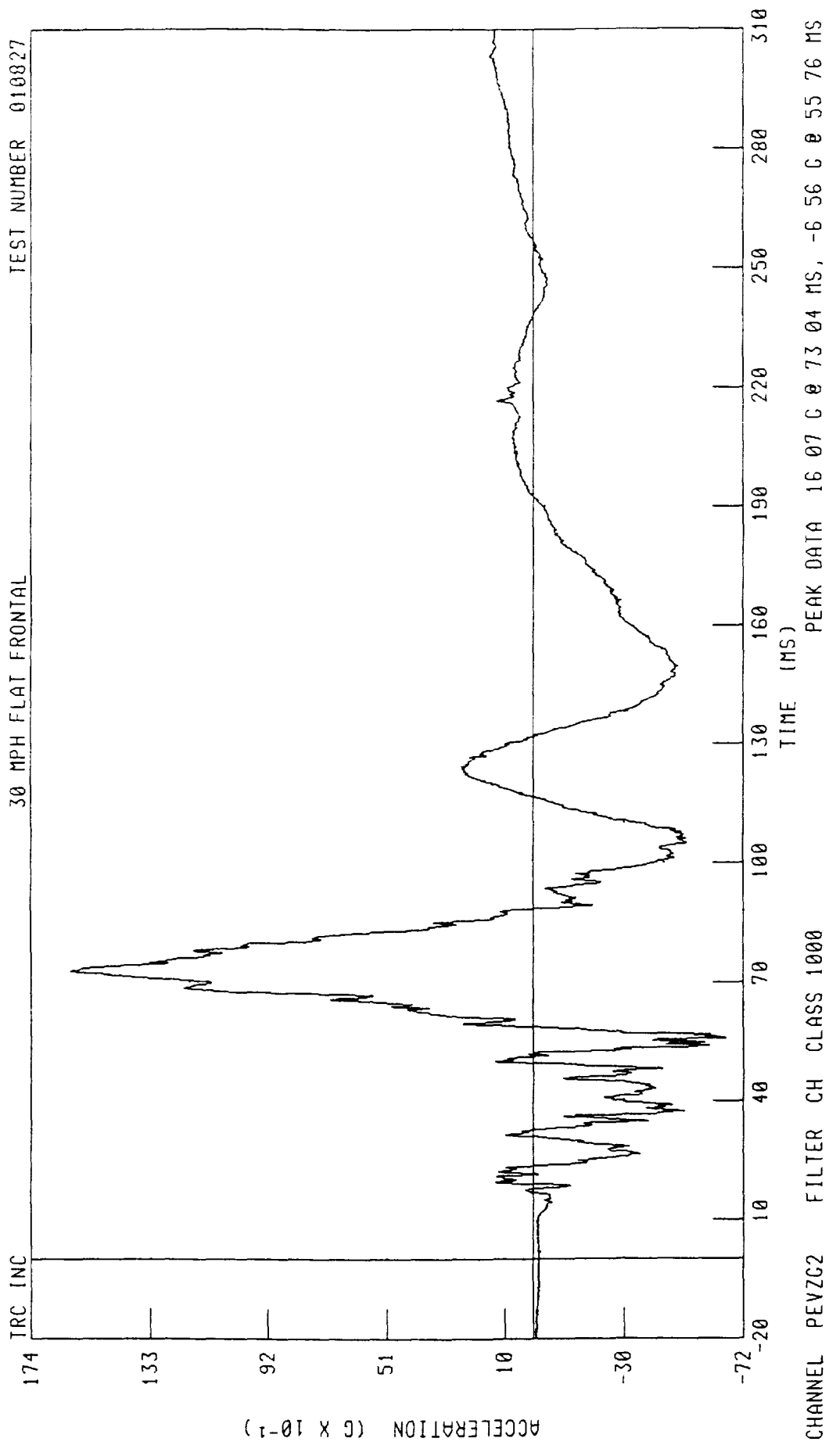
TEST NUMBER 010827



CHANNEL PEVYC2 FILTER CH CLASS 1000

PEAK DATA 7 07 G @ 70 32 MS, -6 45 G @ 63 84 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
 PASSENGER PELVIS Z-AXIS ACCELERATION



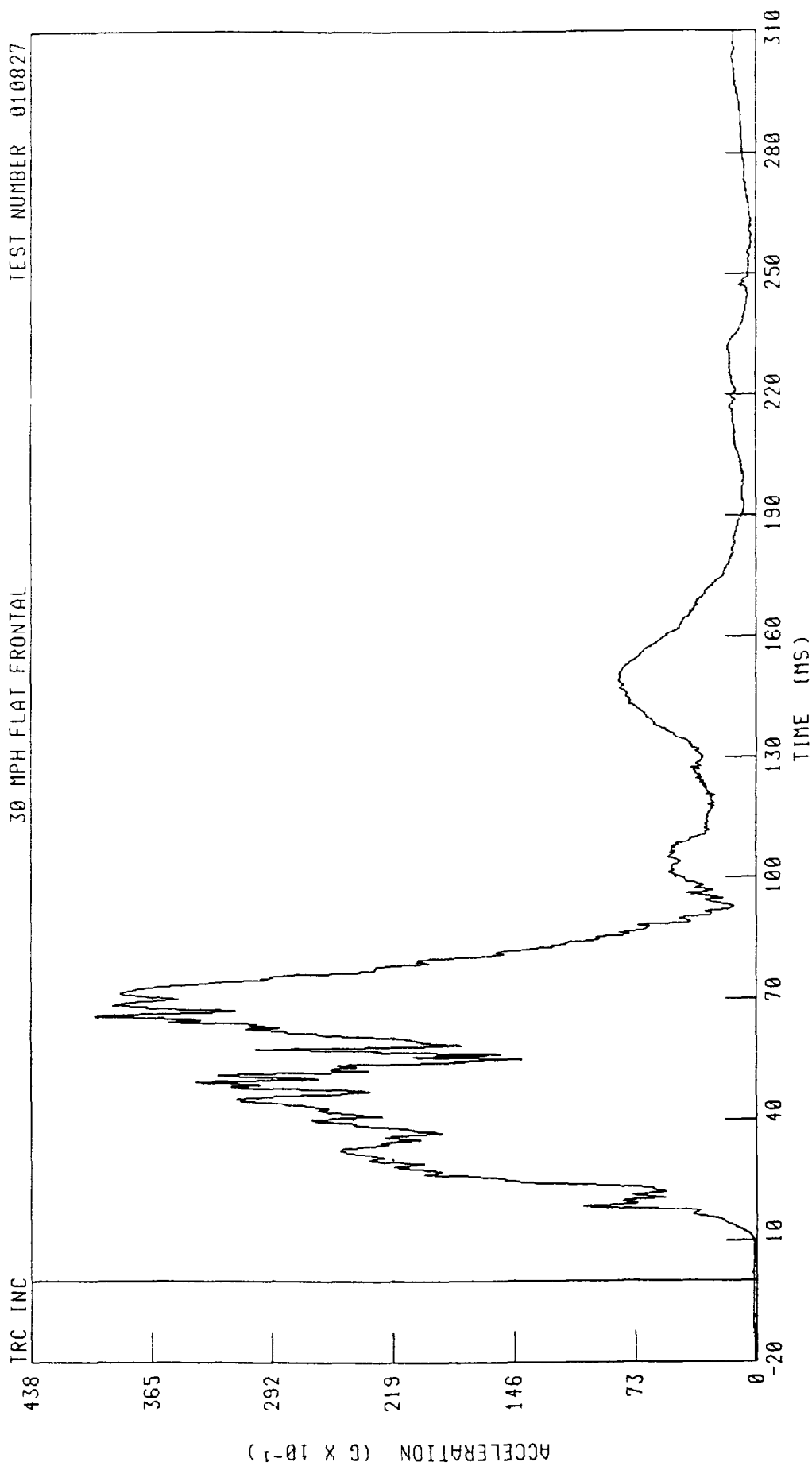
CHANNEL PEVZC2 FILTER CH CLASS 1000

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

PASSENGER PELVIS RESULTANT ACCELERATION

30 MPH FLAT FRONTAL

TEST NUMBER 010827



CHANNEL PEVRC2 FILTER CH CLASS 1000

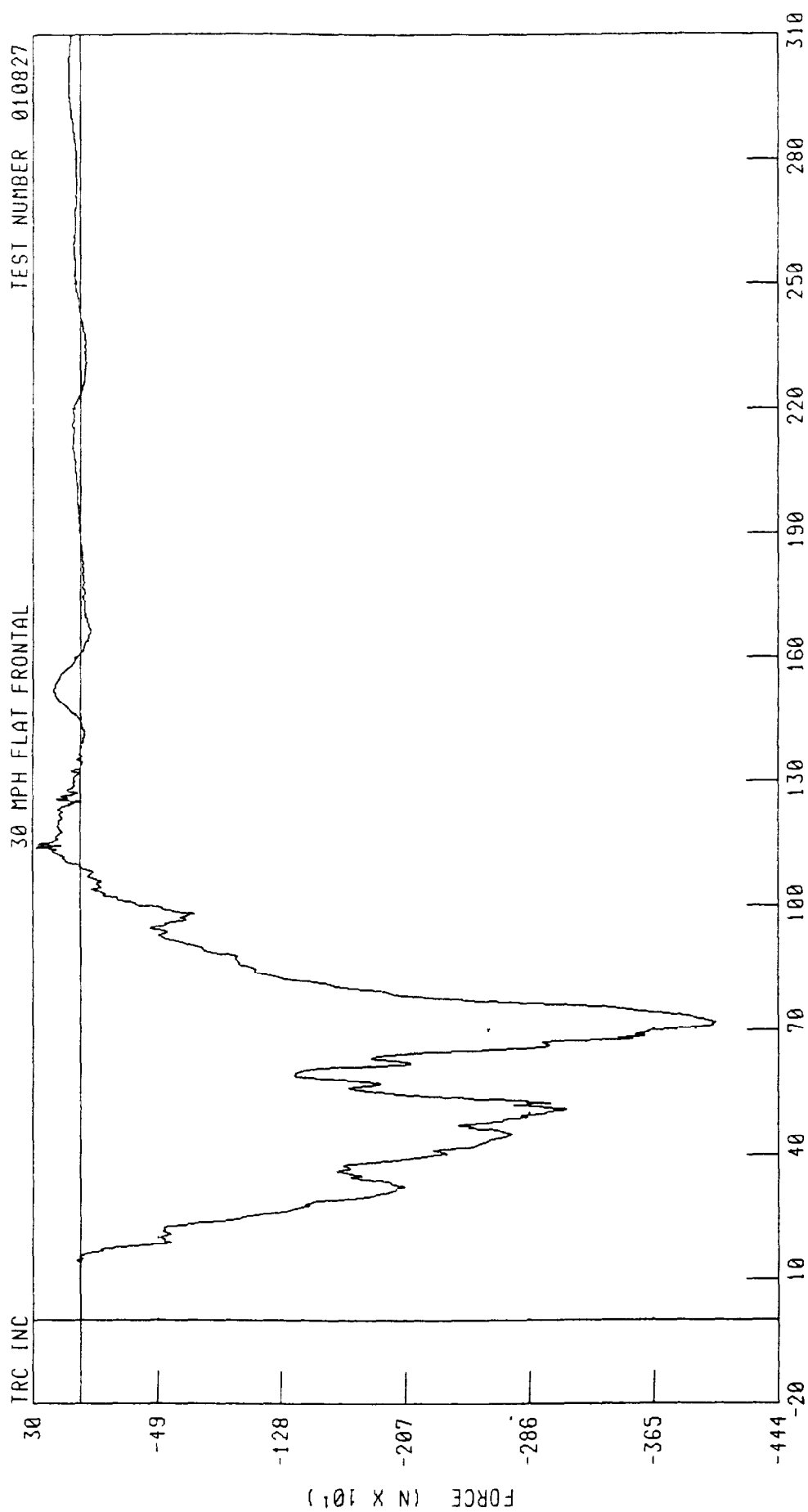
PEAK DATA 39 98 0 65 76 MS, 0 06 0 0 -18 16 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

PASSENGER LEFT FEMUR FORCE

30 MPH FLAT FRONTAL

TEST NUMBER 010827



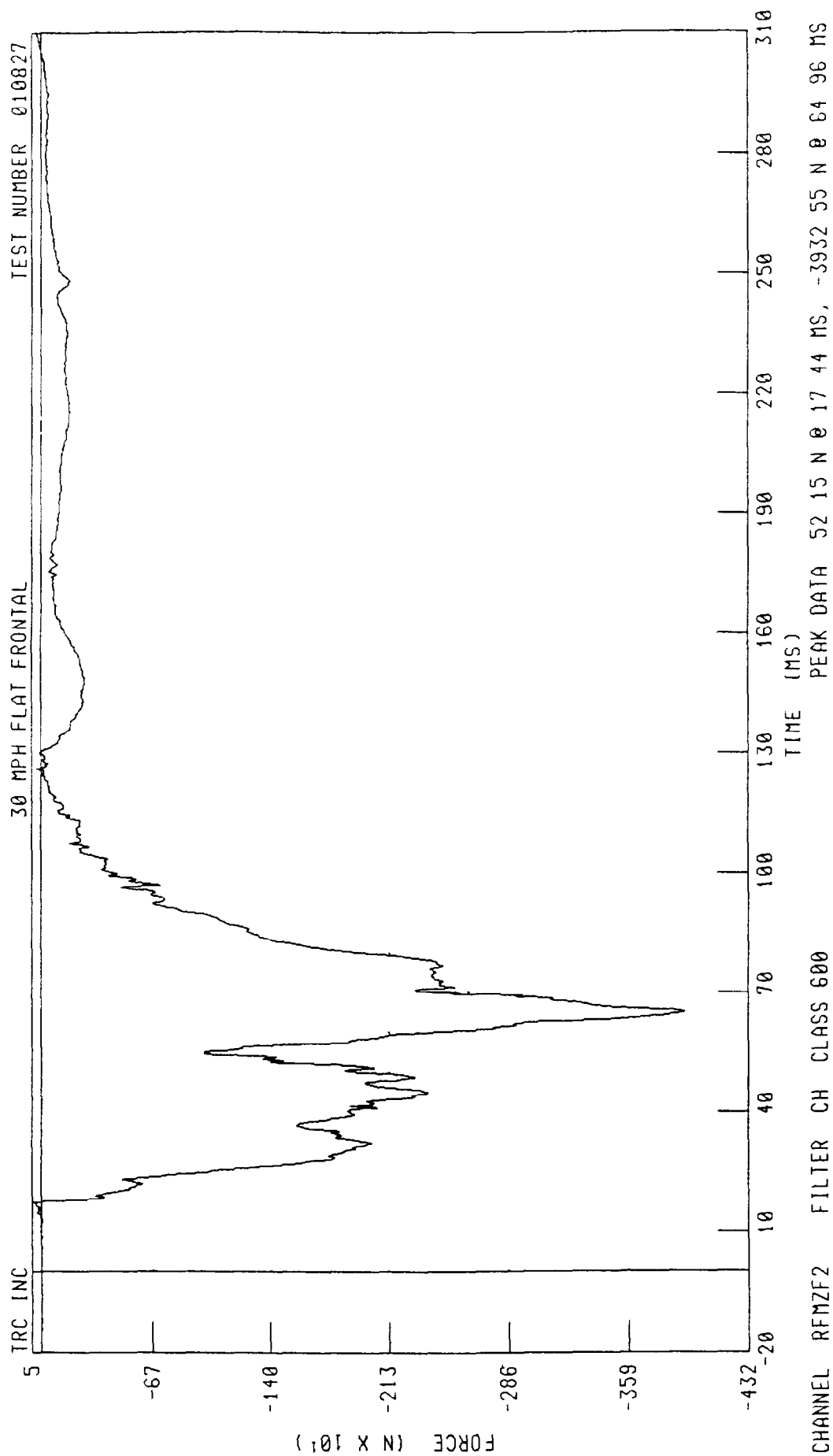
TIME (MS)

CHANNEL LFMZF2 FILTER CH CLASS 600

PEAK DATA 278 67 N @ 114 40 MS, -4038 46 N @ 71 76 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

PASSENGER RIGHT FEMUR FORCE



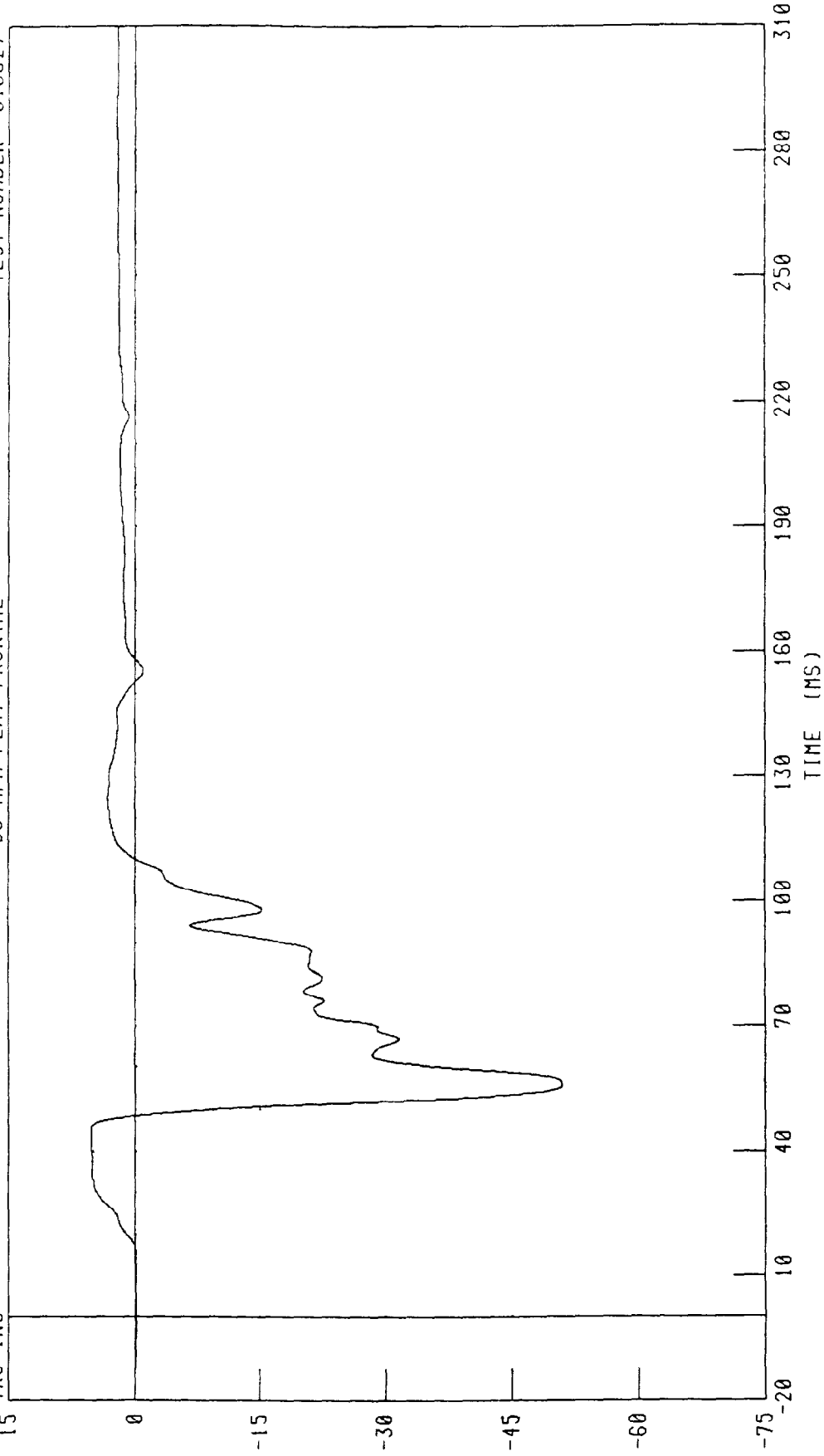
2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
PASSENGER LEFT KNEE DISPLACEMENT

TRC INC

30 MPH FLAT FRONTAL

TEST NUMBER 010827

DISPLACEMENT (MM X 10⁻¹)



CHANNEL KNLXD2 FILTER CH CLASS 180

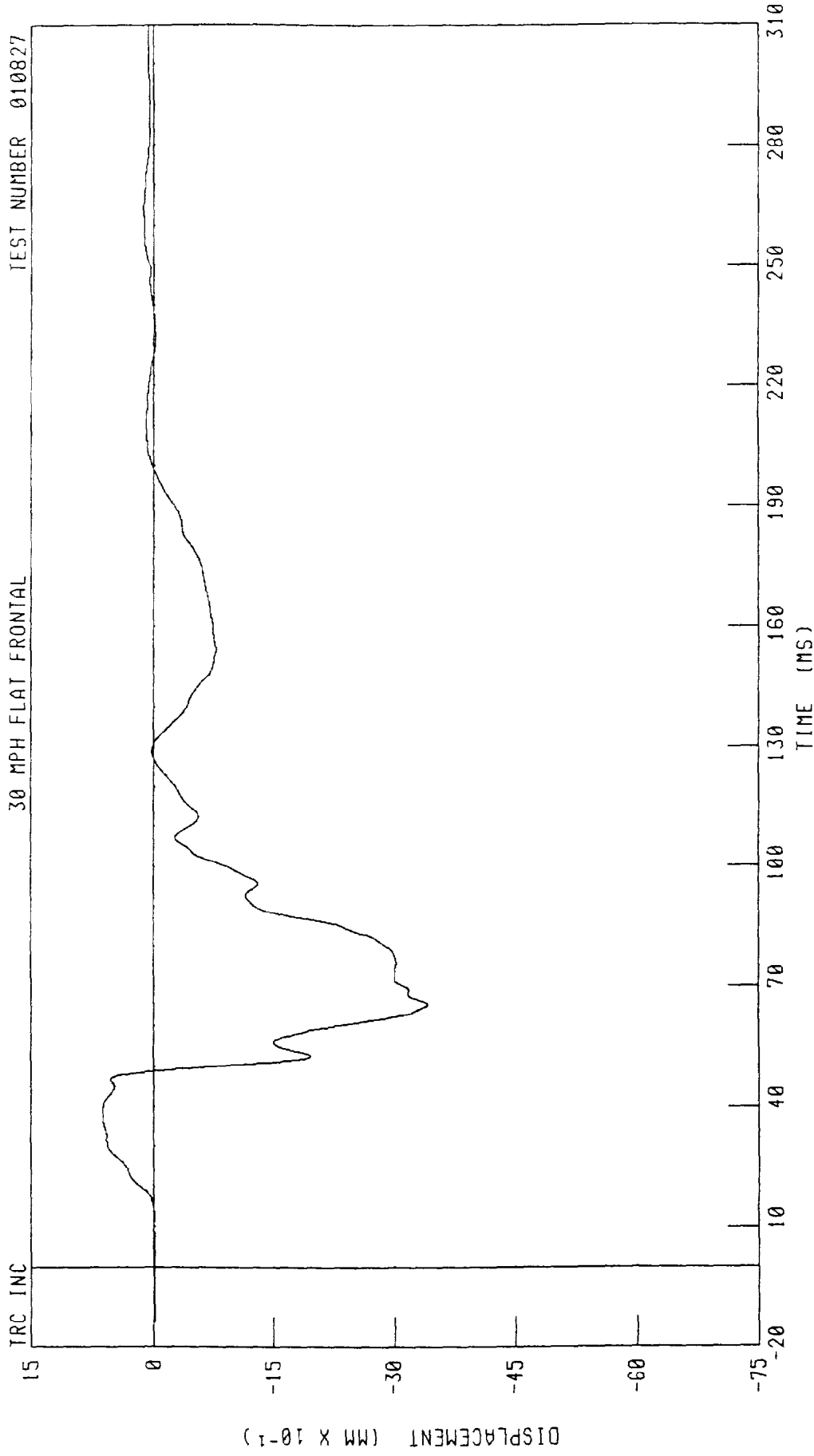
PEAK DATA 0 53 MM @ 44 80 MS, -5 09 MM @ 55 92 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

PASSENGER LEFT KNEE DISPLACEMENT

30 MPH FLAT FRONTAL

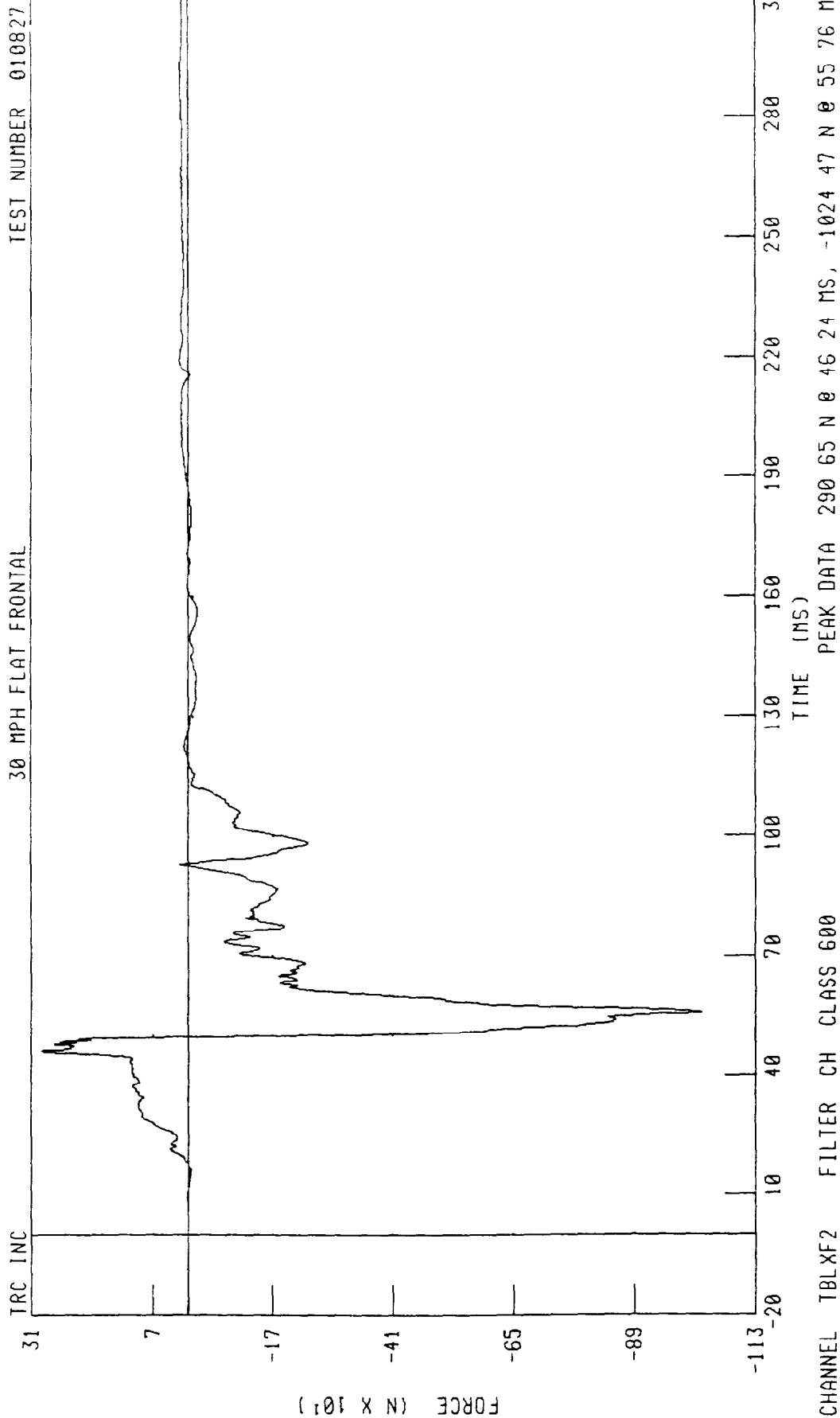
TEST NUMBER 010827



CHANNEL KNRXD2 FILTER CH CLASS 180

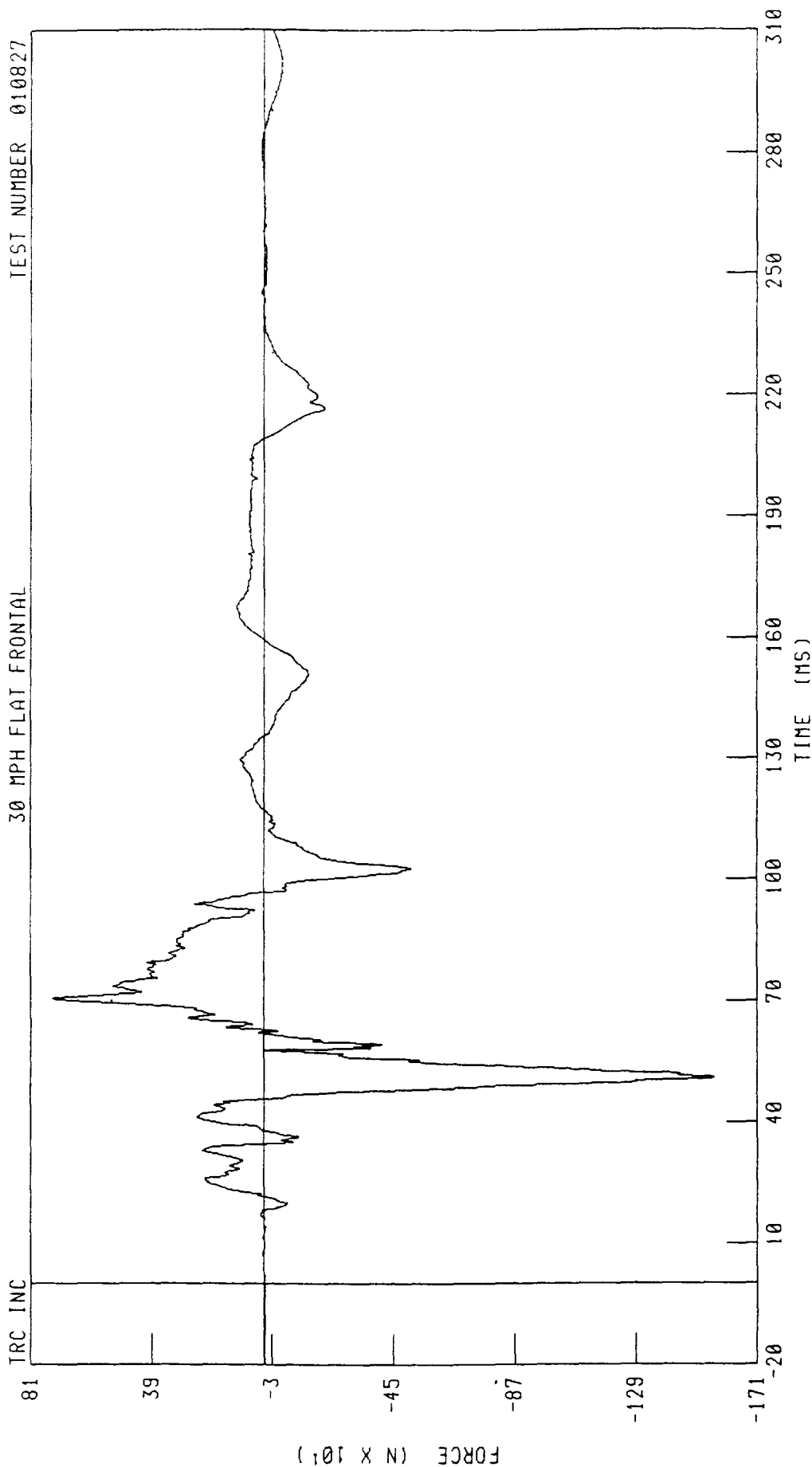
PEAK DATA 0 63 MM @ 37 68 MS, -3 42 MM @ 65 52 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
PASSENGER LEFT UPPER TIBIA X-AXIS FORCE
30 MPH FLAT FRONTAL



2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
PASSENGER LEFT UPPER TIBIA Z-AXIS FORCE
30 MPH FLAT FRONTAL

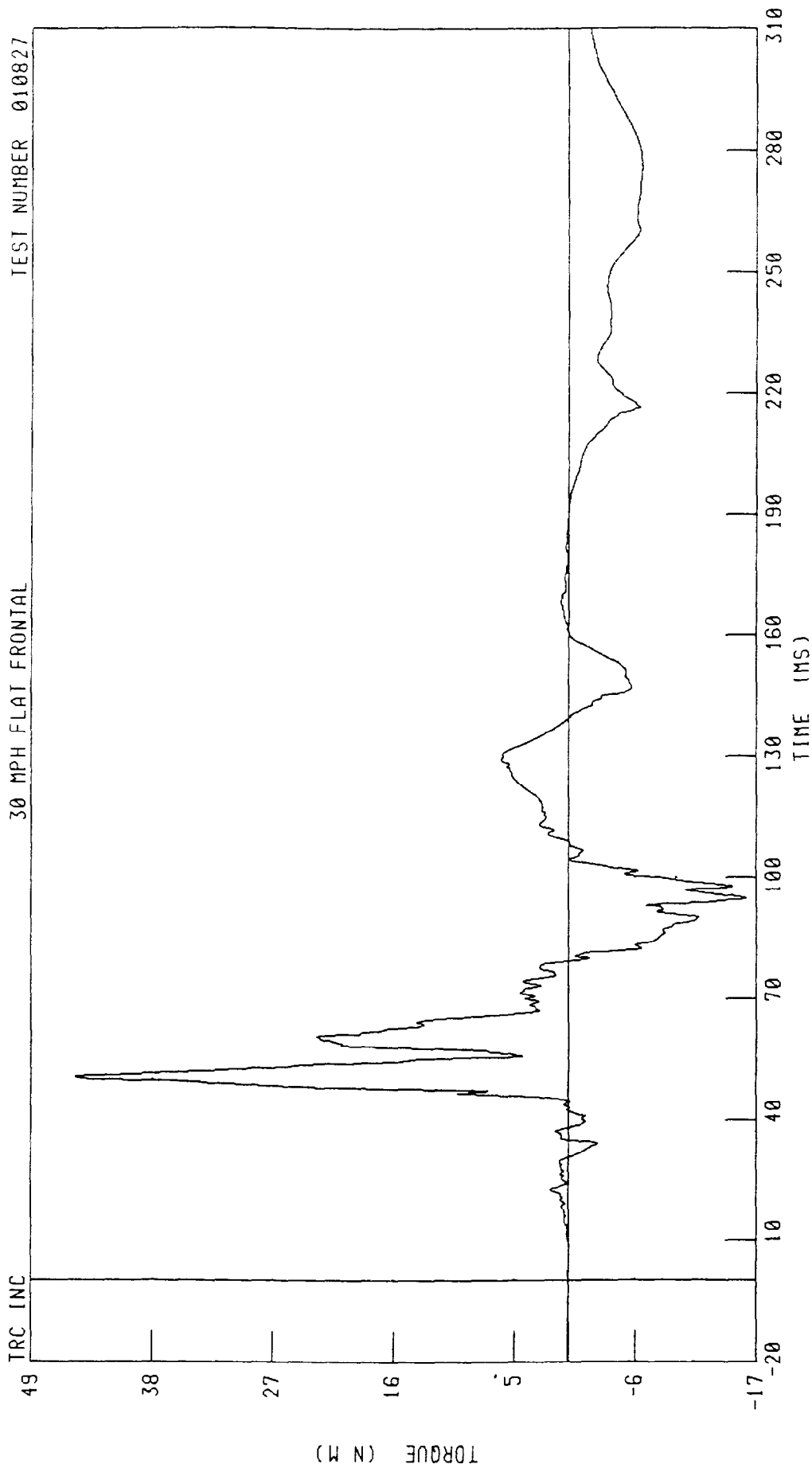
TEST NUMBER 010827



CHANNEL TBLZF2 FILTER CH CLASS 600

PEAK DATA 737 71 N @ 70 72 MS, -1561 68 N @ 50 80 MS

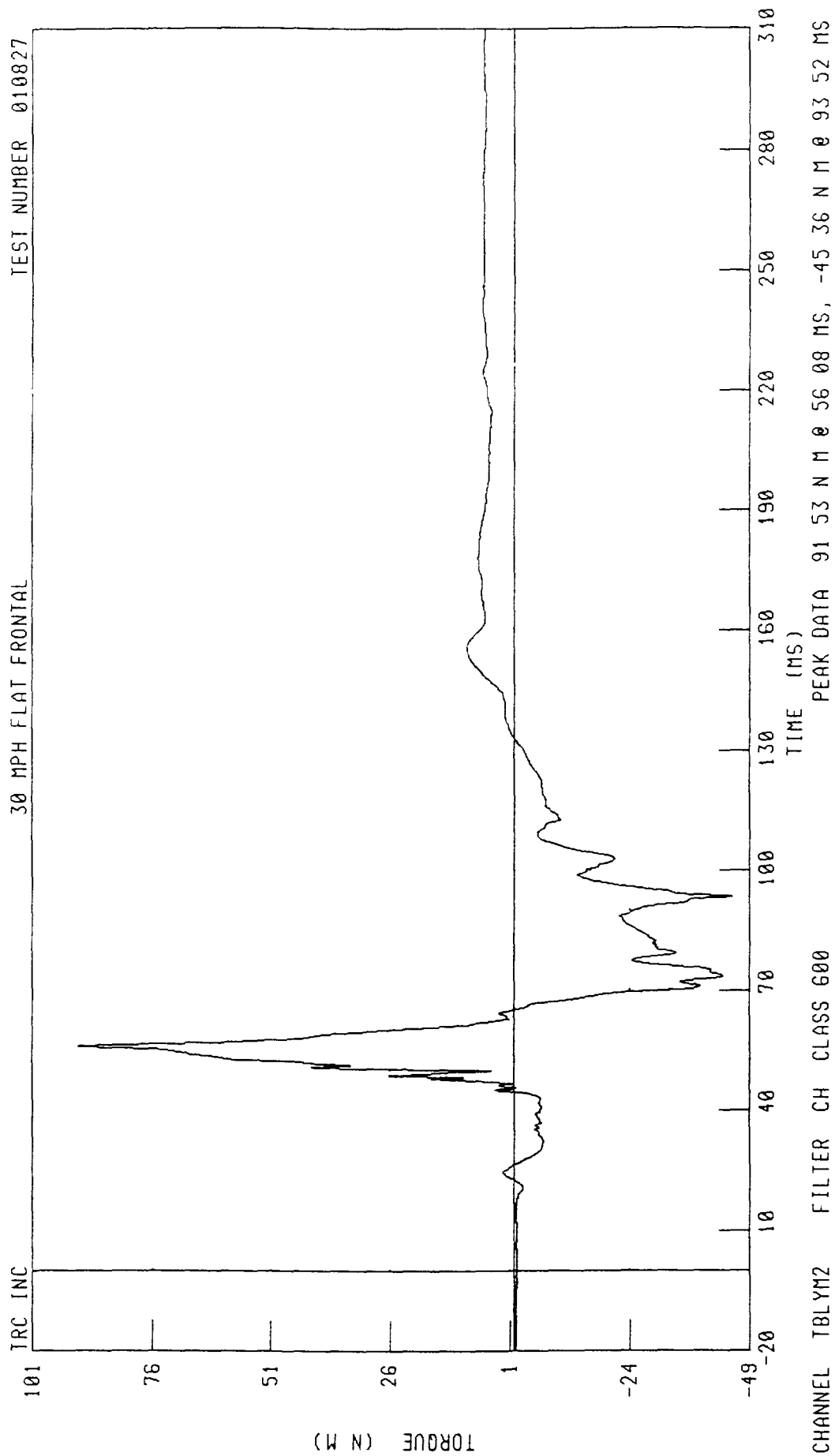
2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
 PASSENGER LEFT UPPER TIBIA MOMENT ABOUT X AXIS
 30 MPH FLAT FRONTAL



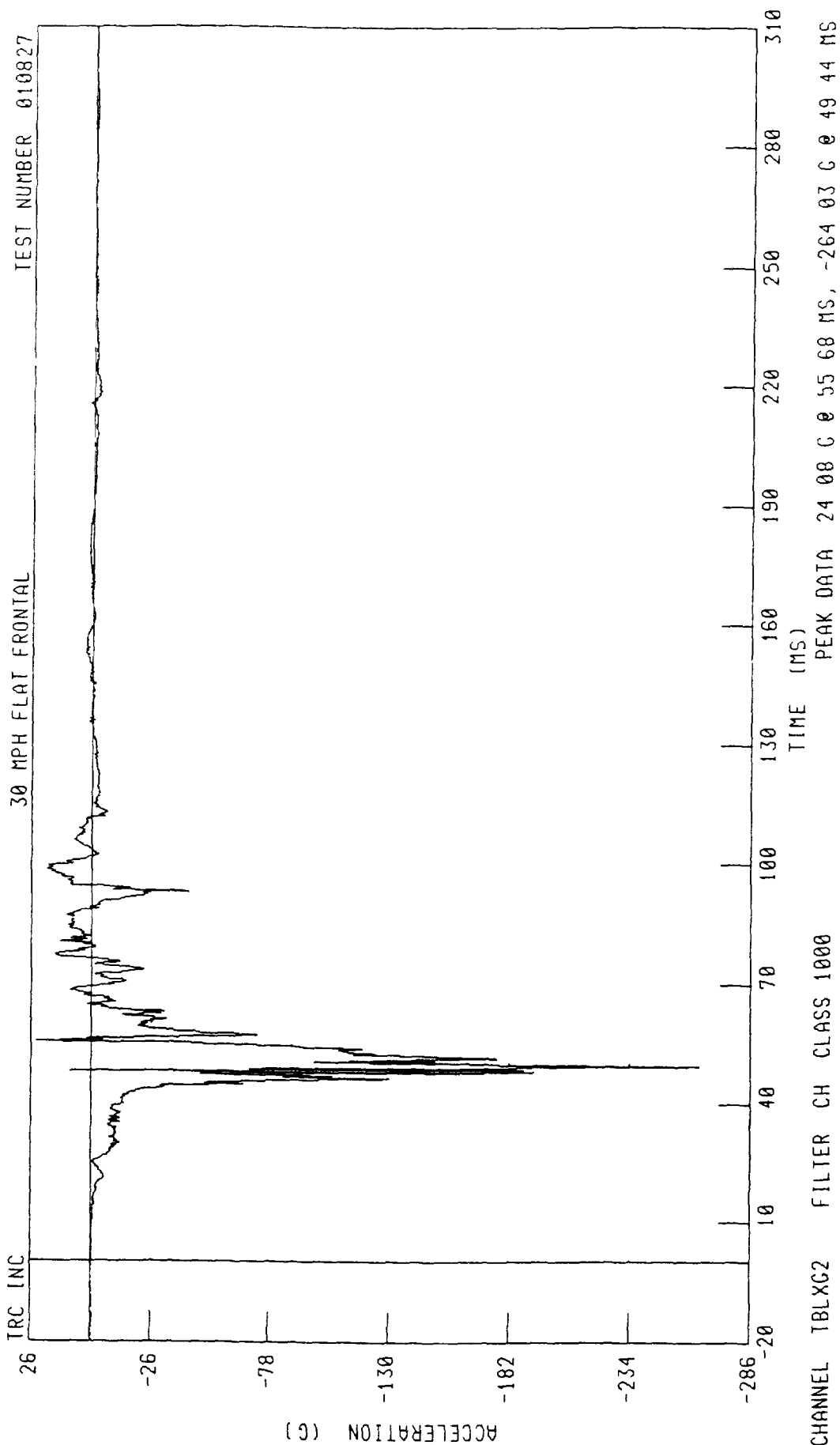
PEAK DATA 45 00 N M 0 50 64 MS, -16 12 N M 0 94 88 MS

CHANNEL TBLXM2 FILTER CH CLASS 600

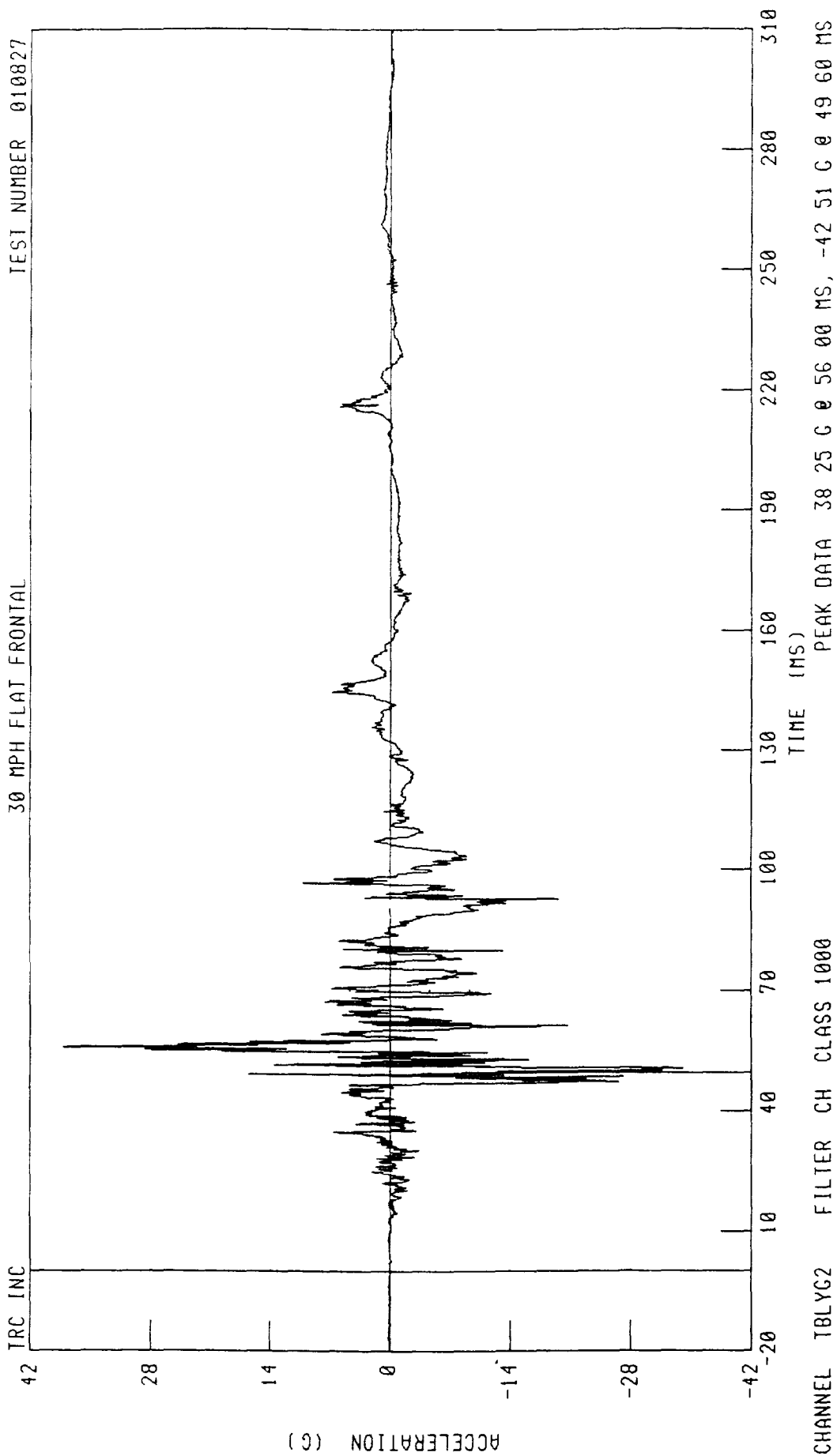
2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
PASSENGER LEFT UPPER TIBIA MOMENT ABOUT Y AXIS



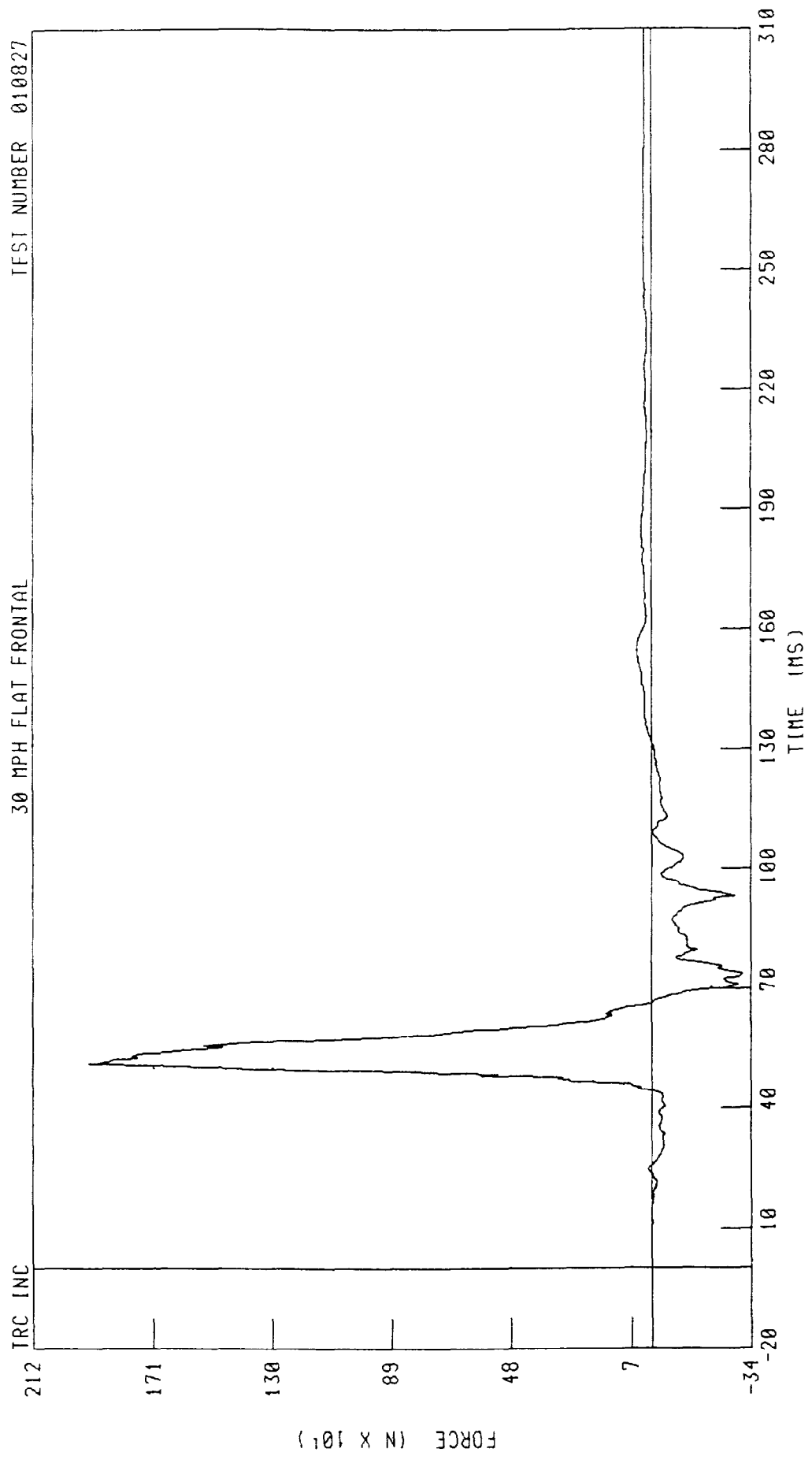
2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
PASSENGER LEFT TIBIA X-AXIS ACCELERATION



2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
PASSENGER LEFT TIBIA Y-AXIS ACCELERATION



2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
 PASSENGER LEFT LOWER TIBIA X-AXIS FORCE
 30 MPH FLAT FRONTAL



CHANNEL ANLXF2 FILTER CH CLASS 600

PEAK DATA 1928 38 N @ 51 28 MS, -310 78 N @ 73 52 MS

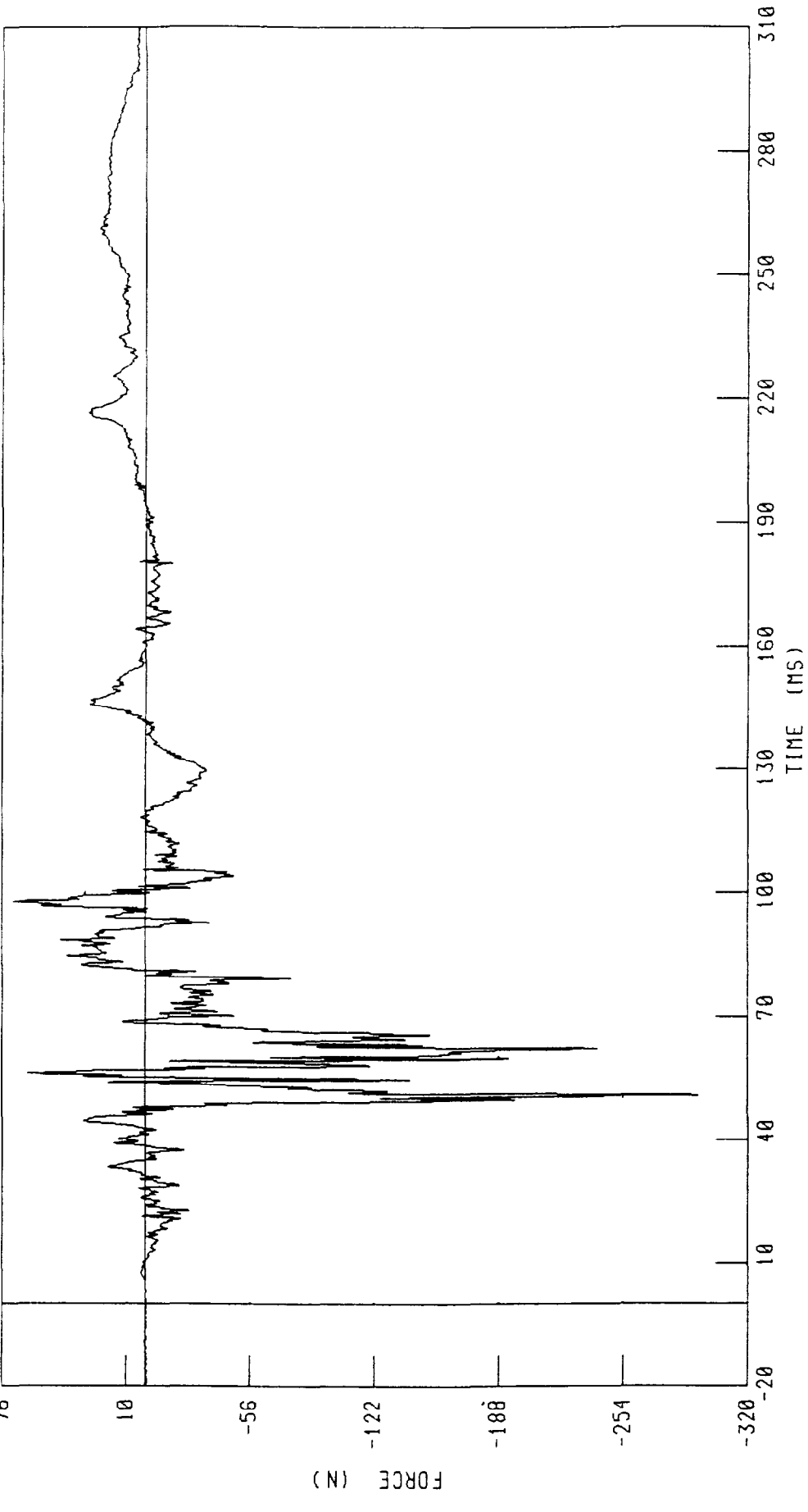
2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

PASSENGER LEFT LOWER TIBIA Y-AXIS FORCE

TRC INC 76 10 -56 -122 -188 -254 -320

TEST NUMBER 010827

30 MPH FLAT FRONTAL



CHANNEL ANLYF2 FILTER CH CLASS 600

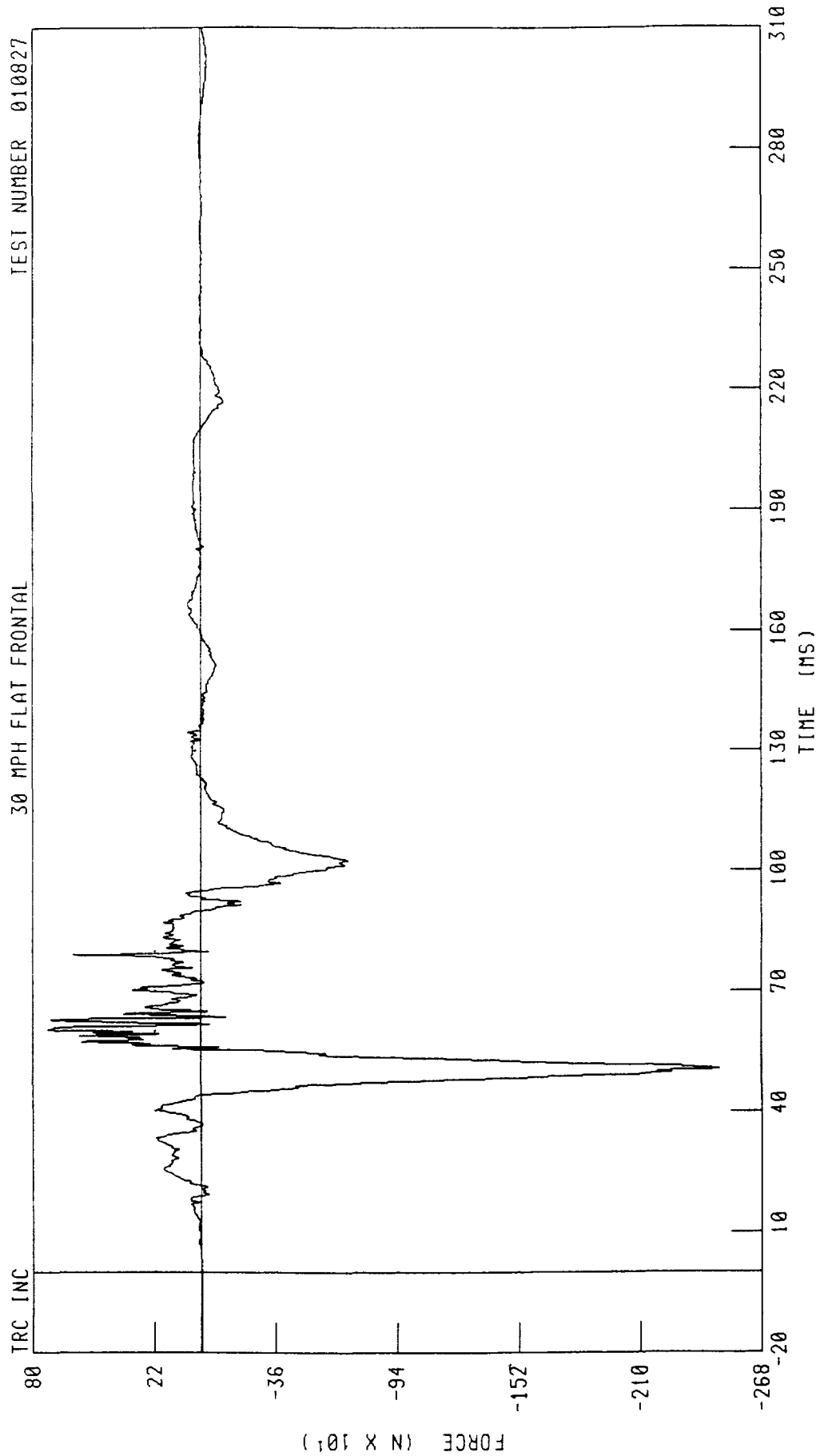
PEAK DATA 69 98 N 98 08 MS, -294 05 N 50 64 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

PASSENGER LEFT LOWER TIBIA Z-AXIS FORCE

30 MPH FLAT FRONTAL

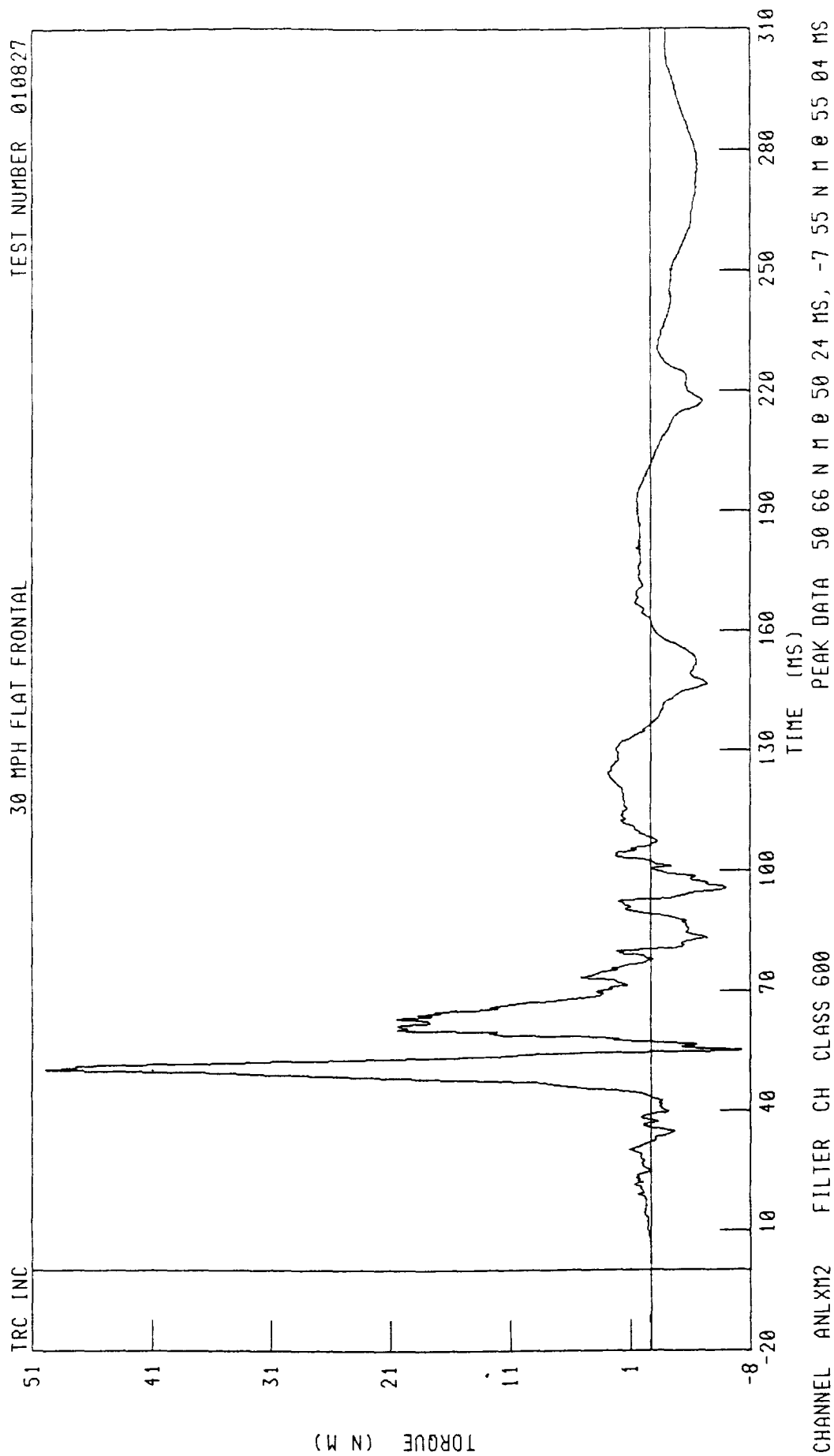
TEST NUMBER 010827



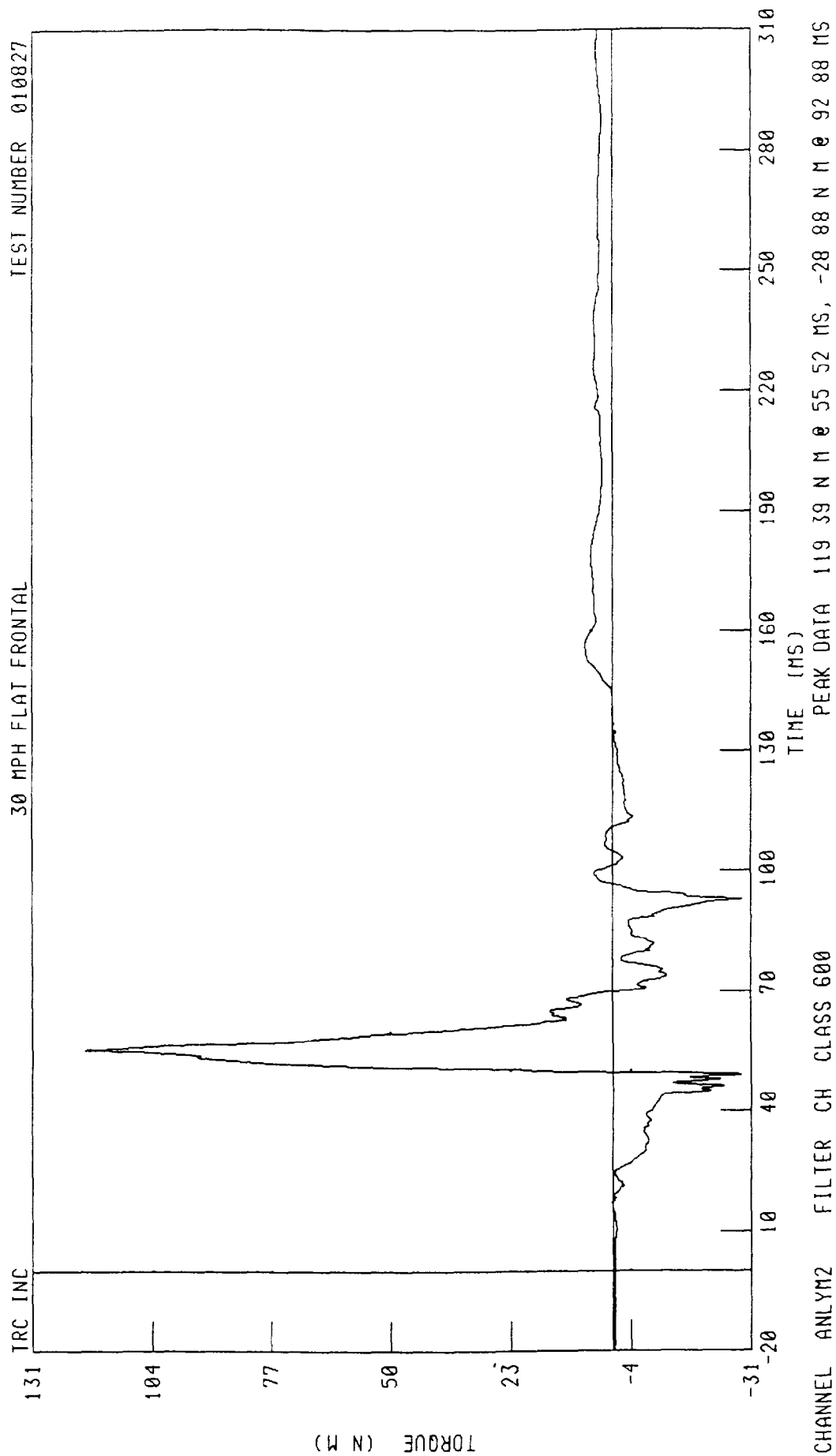
CHANNEL ANLZF2 FILTER CH CLASS 600

PEAK DATA 733 38 N @ 60 48 MS, -2480 01 N @ 50 56 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
PASSENGER LEFT LOWER TIBIA MOMENT ABOUT X AXIS



2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
PASSENGER LEFT LOWER TIBIA MOMENT ABOUT Y AXIS

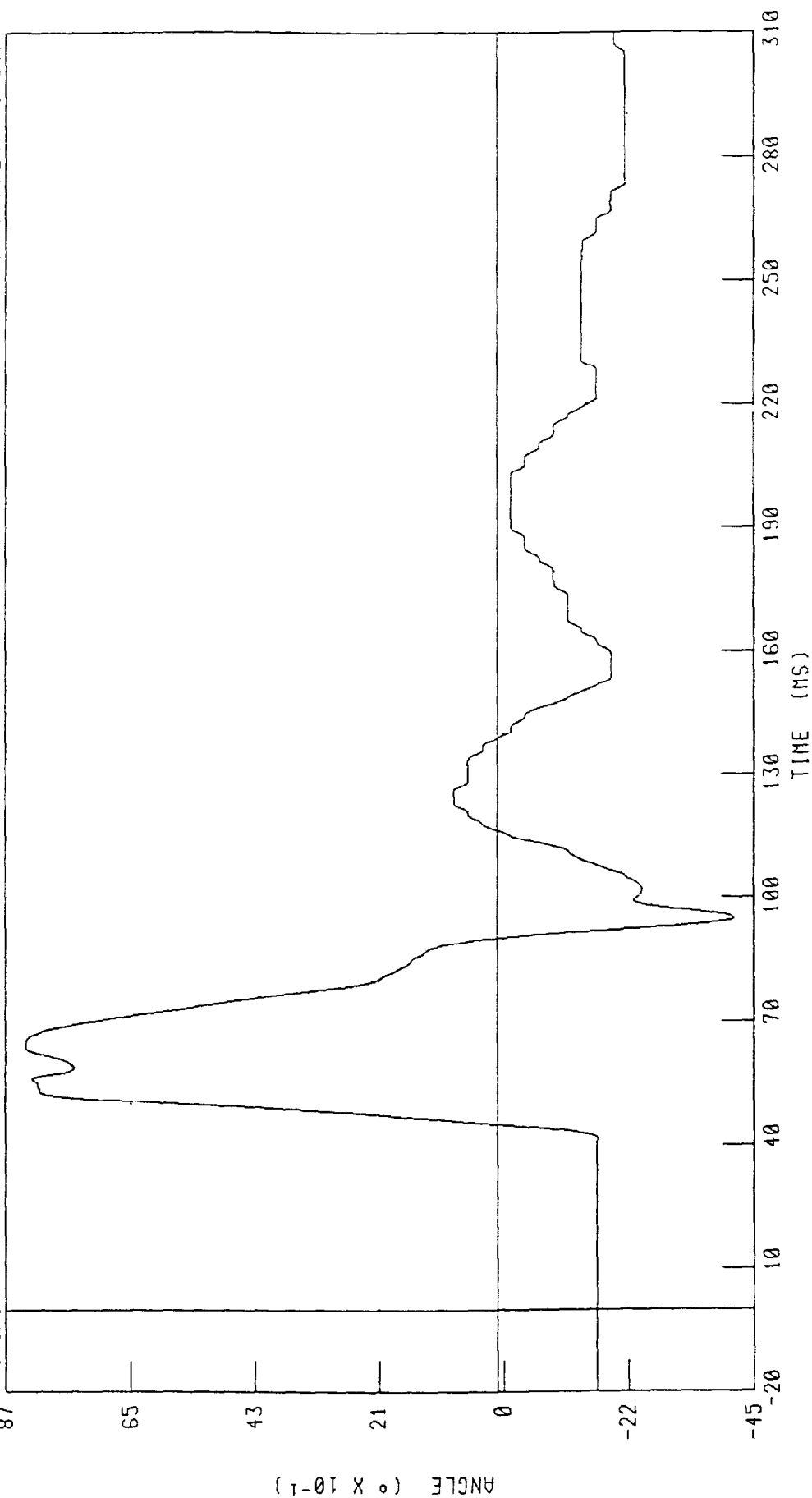


2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
PASSENGER LEFT FOOT TO ANKLE X-AXIS DISPLACEMENT

TRC INC

TEST NUMBER 010827

30 MPH FLAT FRONTAL



CHANNEL FTLD2 FILTER CH CLASS 100

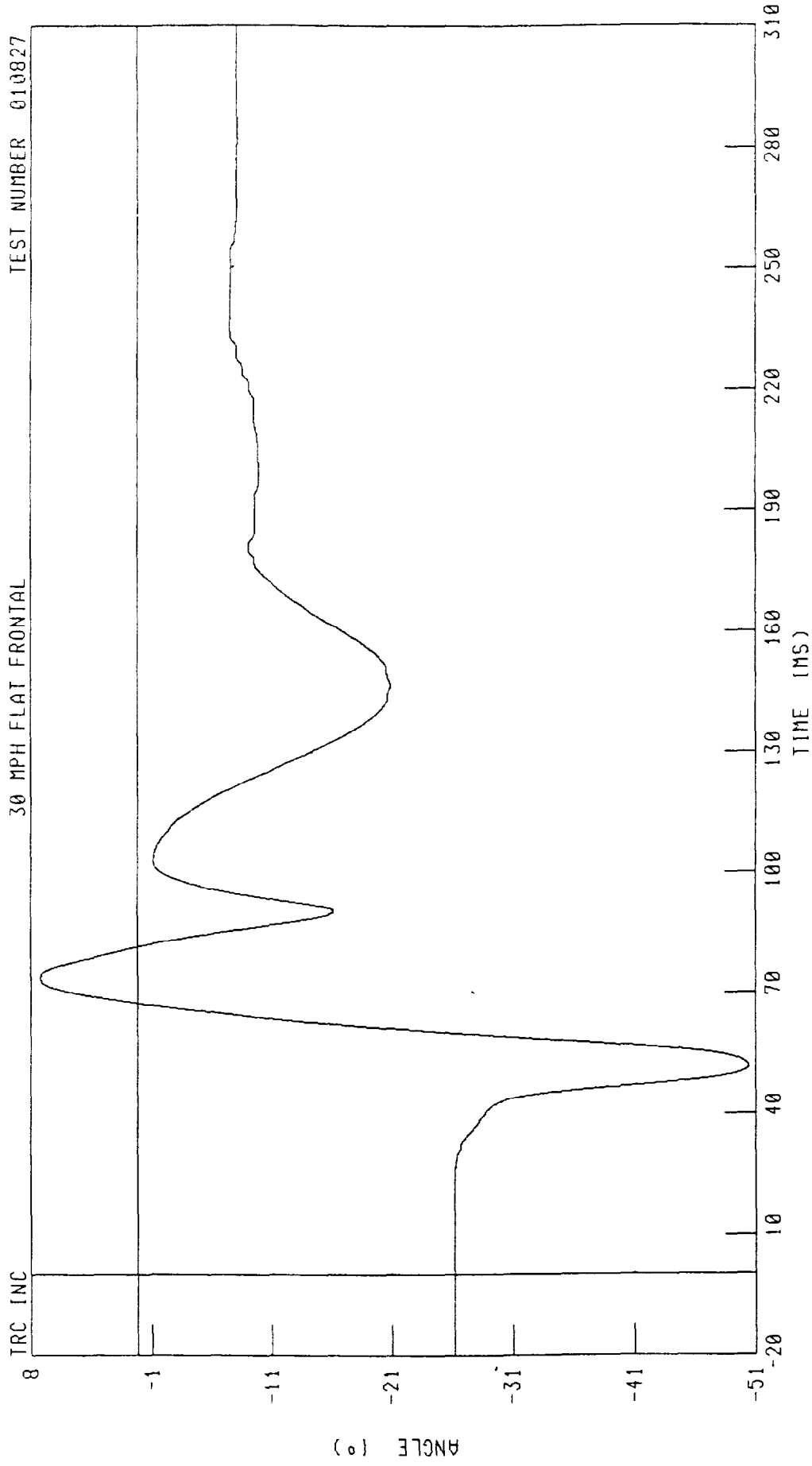
PEAK DATA 8 34 ° @ 63 68 MS, -4 16 ° @ 95 12 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

PASSENGER LEFT FOOT TO ANKLE Y-AXIS DISPLACEMENT

30 MPH FLAT FRONTAL

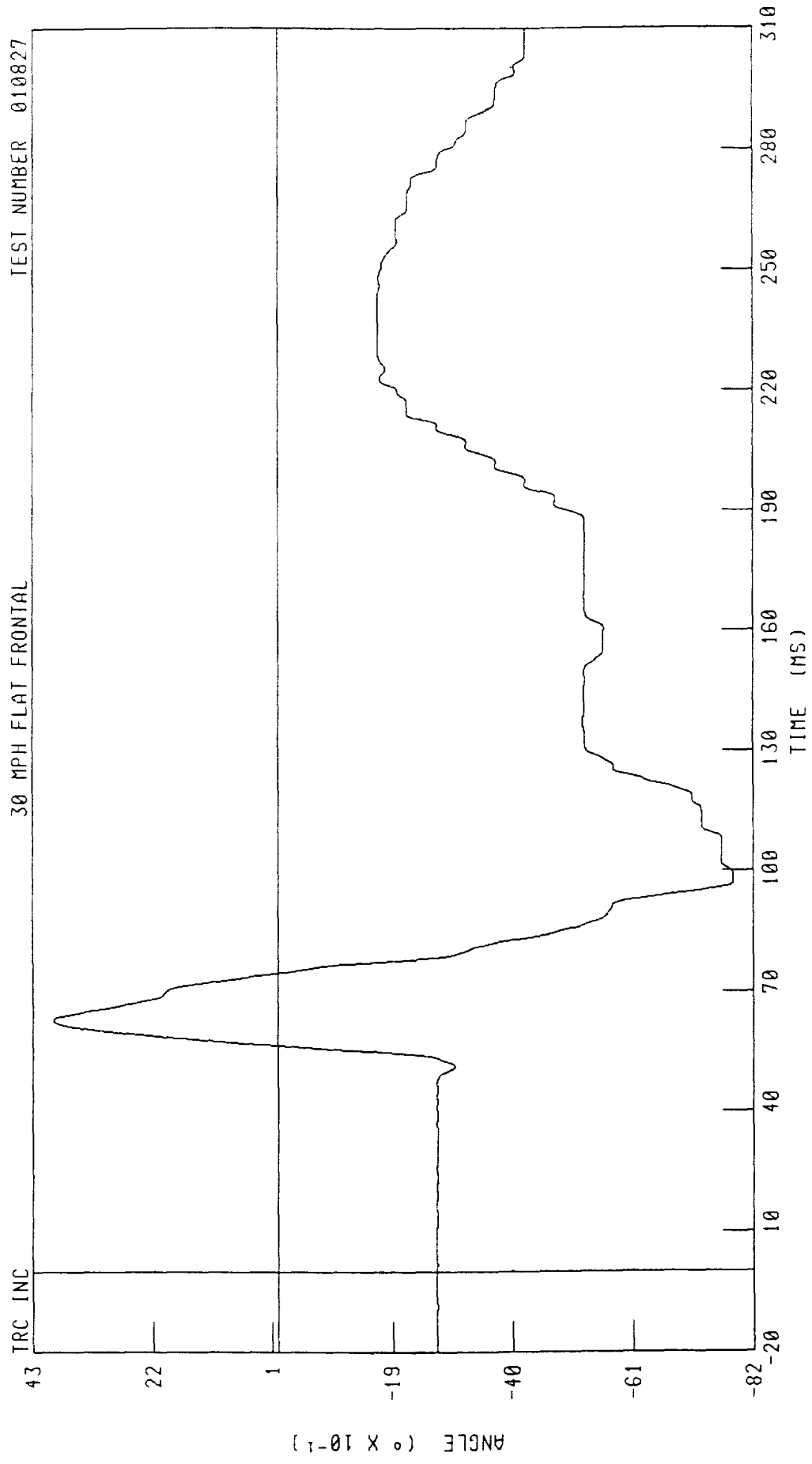
TEST NUMBER 010827



CHANNEL FTLYD2 FILTER CH CLASS 100

PEAK DATA 8 04 ° 73 76 MS, -50 64 ° 0 51 52 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
 PASSENGER LEFT FOOT TO ANKLE Z-AXIS DISPLACEMENT



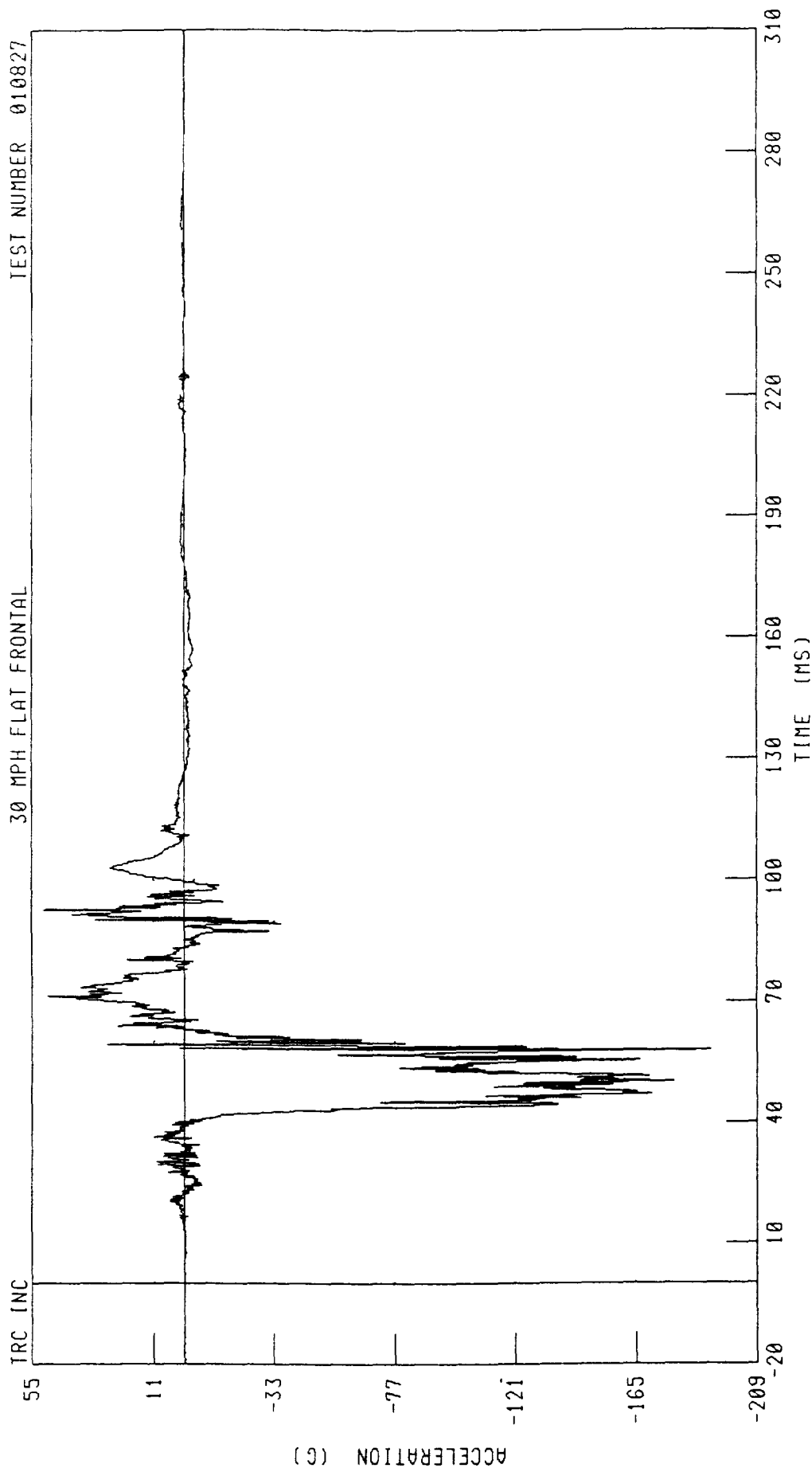
CHANNEL FTLZ02 FILTER CH CLASS 180

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

PASSENGER LEFT FOOT X-AXIS ACCELERATION

30 MPH FLAT FRONTAL

TEST NUMBER 010827

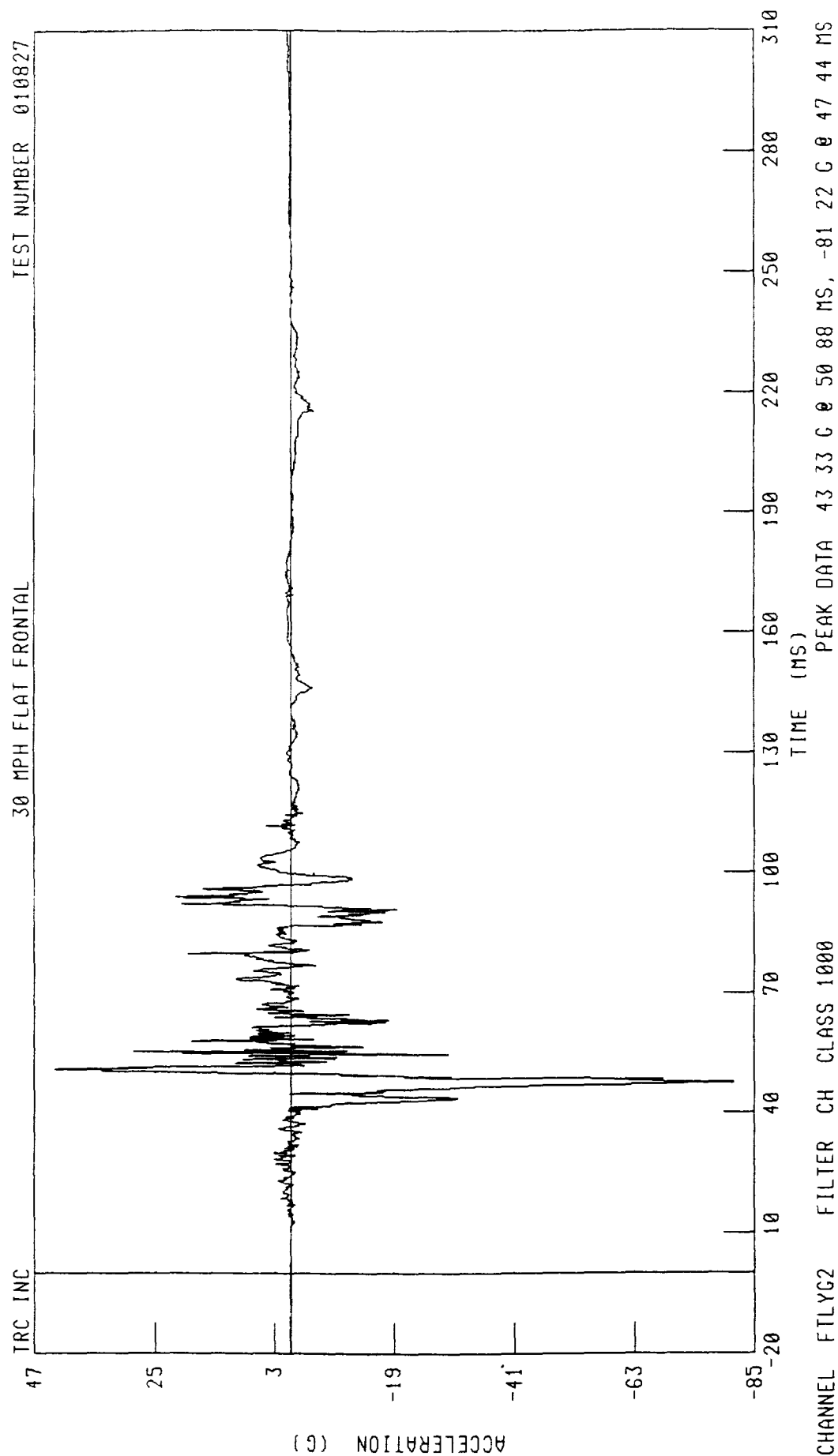


CHANNEL FTLXC2 FILTER CH CLASS 1000

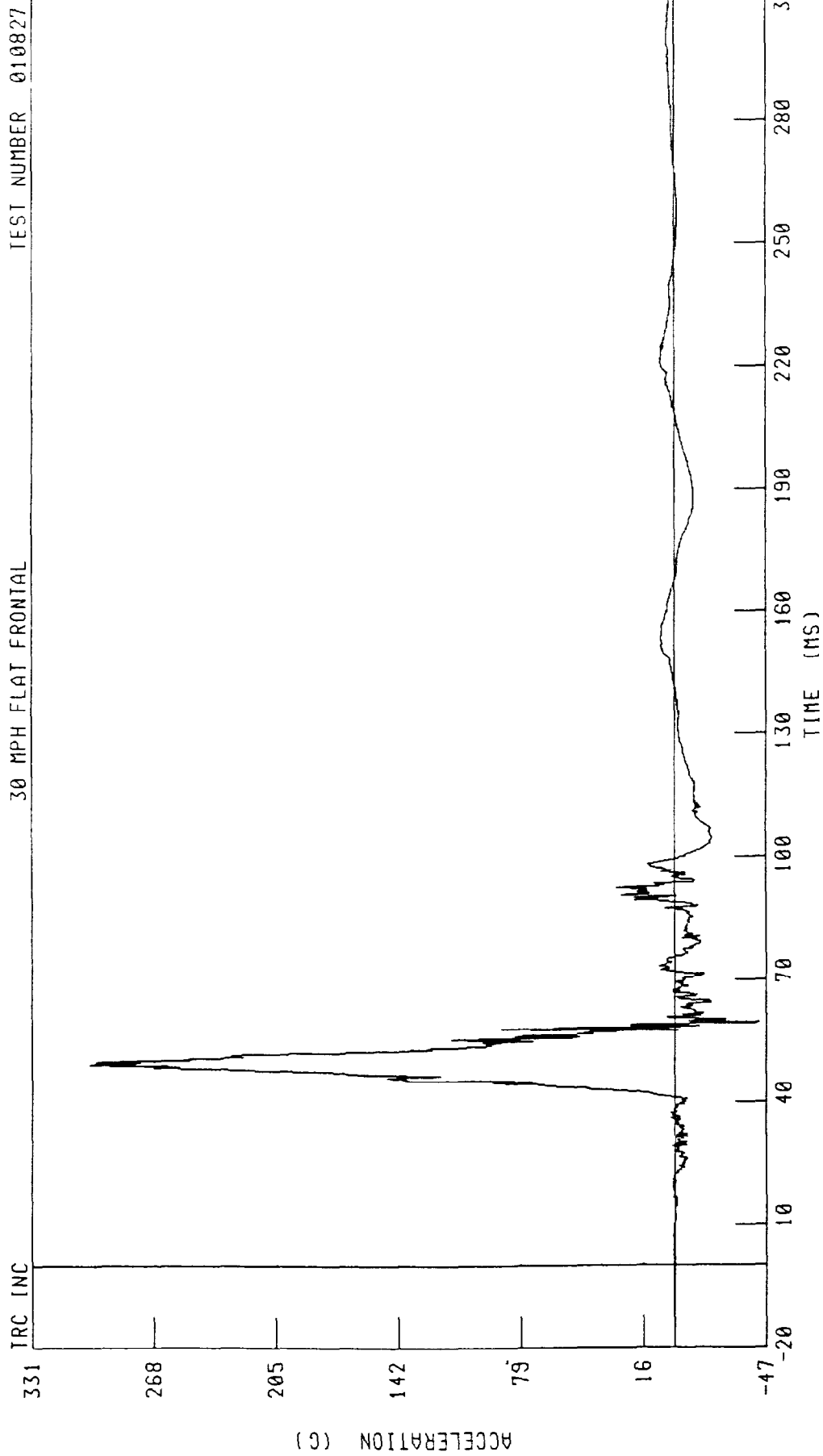
PEAK DATA 50 85 C 0 92 80 MS, -192 38 C 0 57 84 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

PASSENGER LEFT FOOT Y-AXIS ACCELERATION

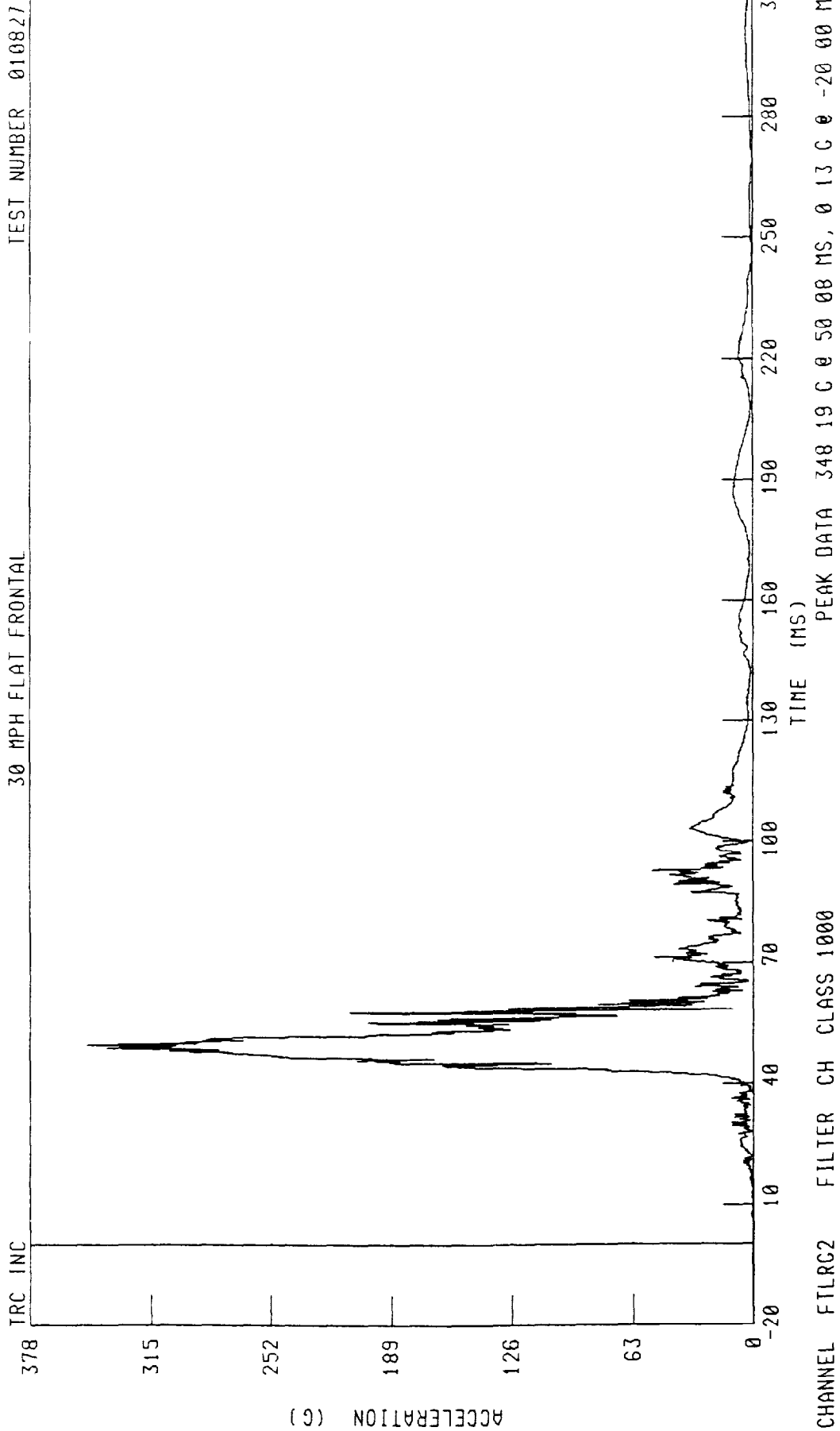


2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
 PASSENGER LEFT FOOT Z-AXIS ACCELERATION
 30 MPH FLAT FRONTAL

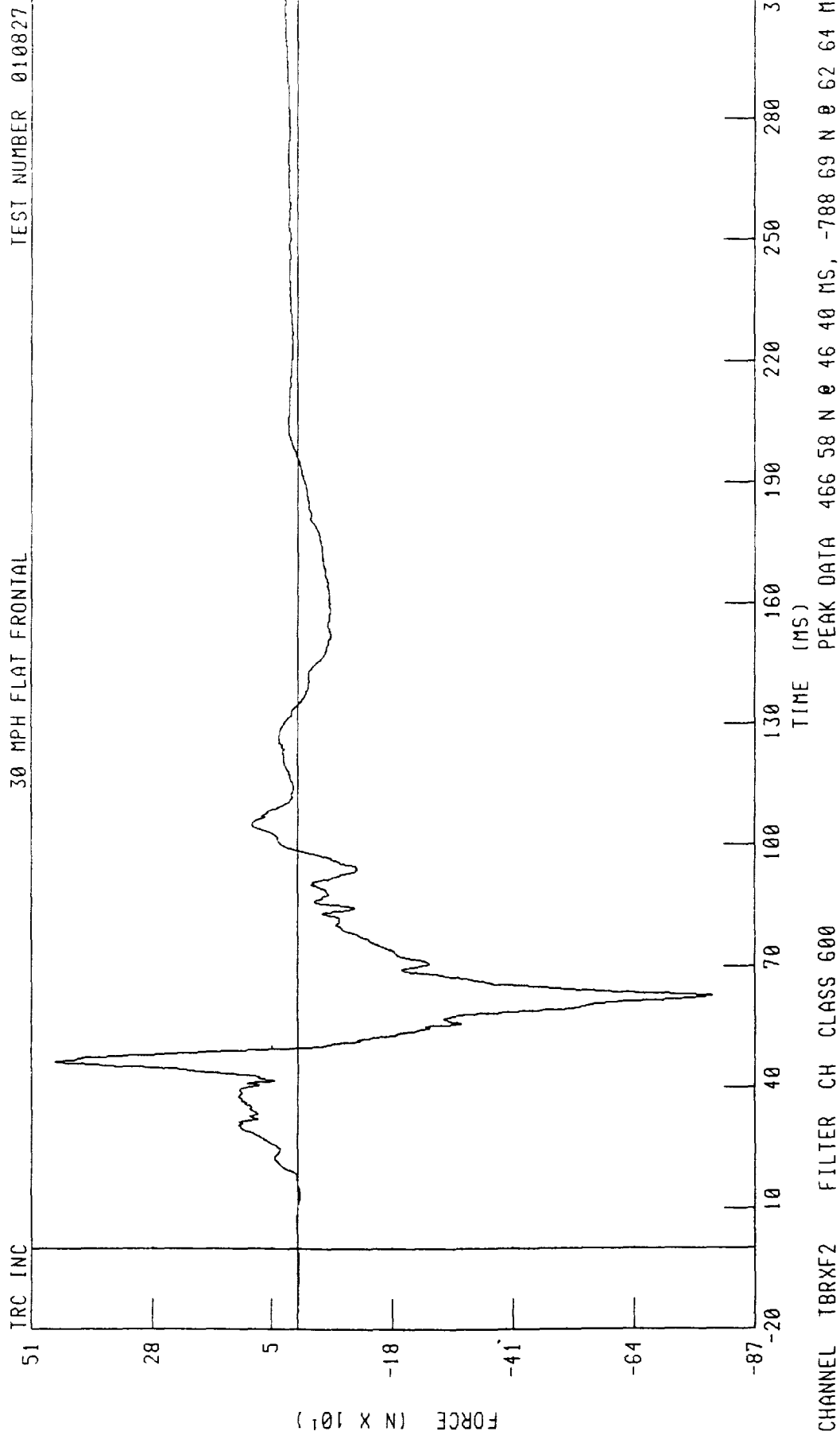


CHANNEL FTLZG2 FILTER CH CLASS 1000

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
PASSENGER LEFT FOOT RESULTANT ACCELERATION
30 MPH FLAT FRONTAL



2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
PASSENGER RIGHT UPPER TIBIA X-AXIS FORCE
30 MPH FLAT FRONTAL

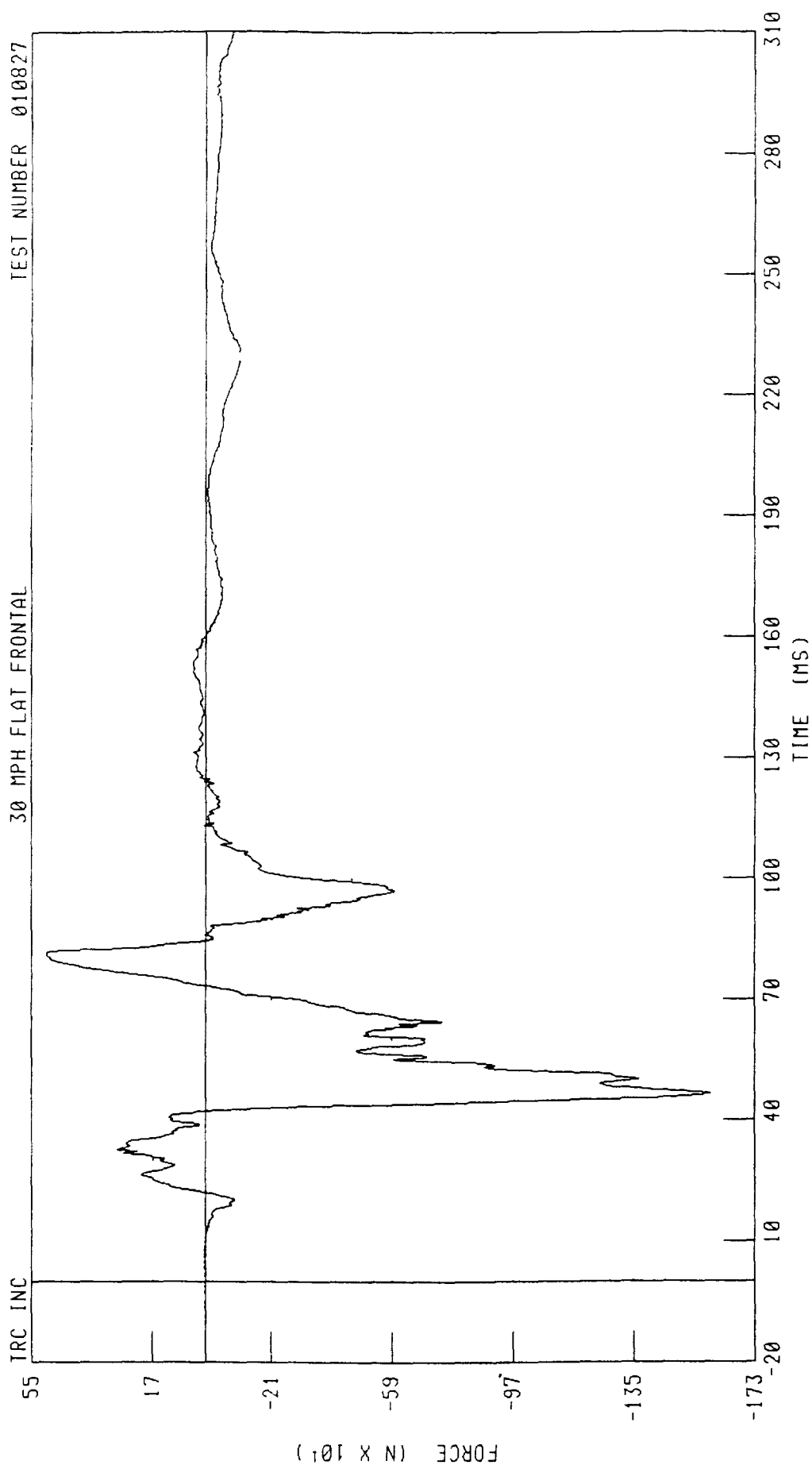


2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

PASSENGER RIGHT UPPER TIBIA Z-AXIS FORCE

30 MPH FLAT FRONTAL

TEST NUMBER 010827



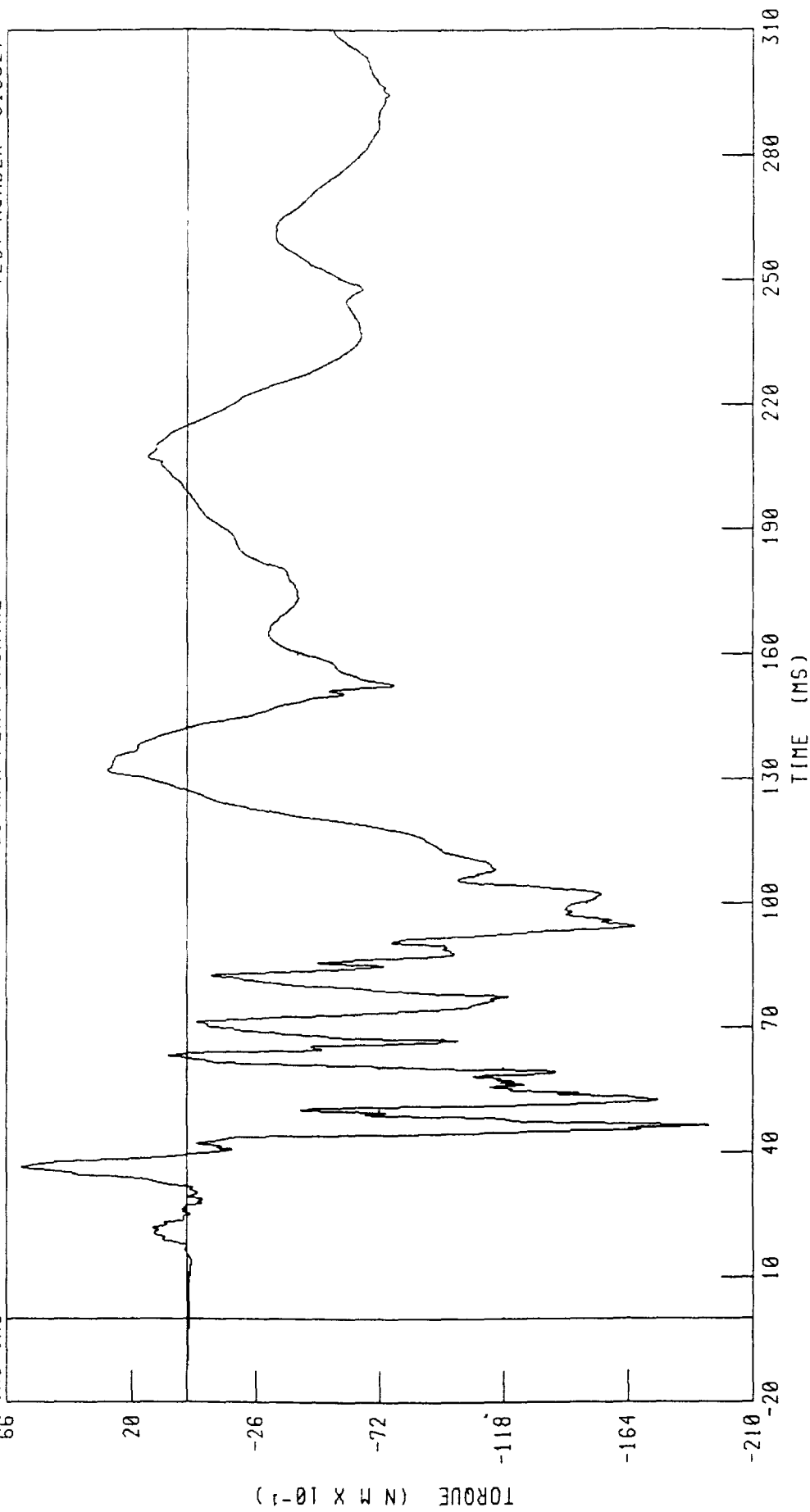
CHANNEL TBRZF2 FILTER CH CLASS 600

PEAK DATA 504 10 N @ 81 52 MS, -1588 23 N @ 46 40 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
PASSENGER RIGHT UPPER TIBIA MOMENT ABOUT X AXIS
30 MPH FLAT FRONTAL

TRC INC

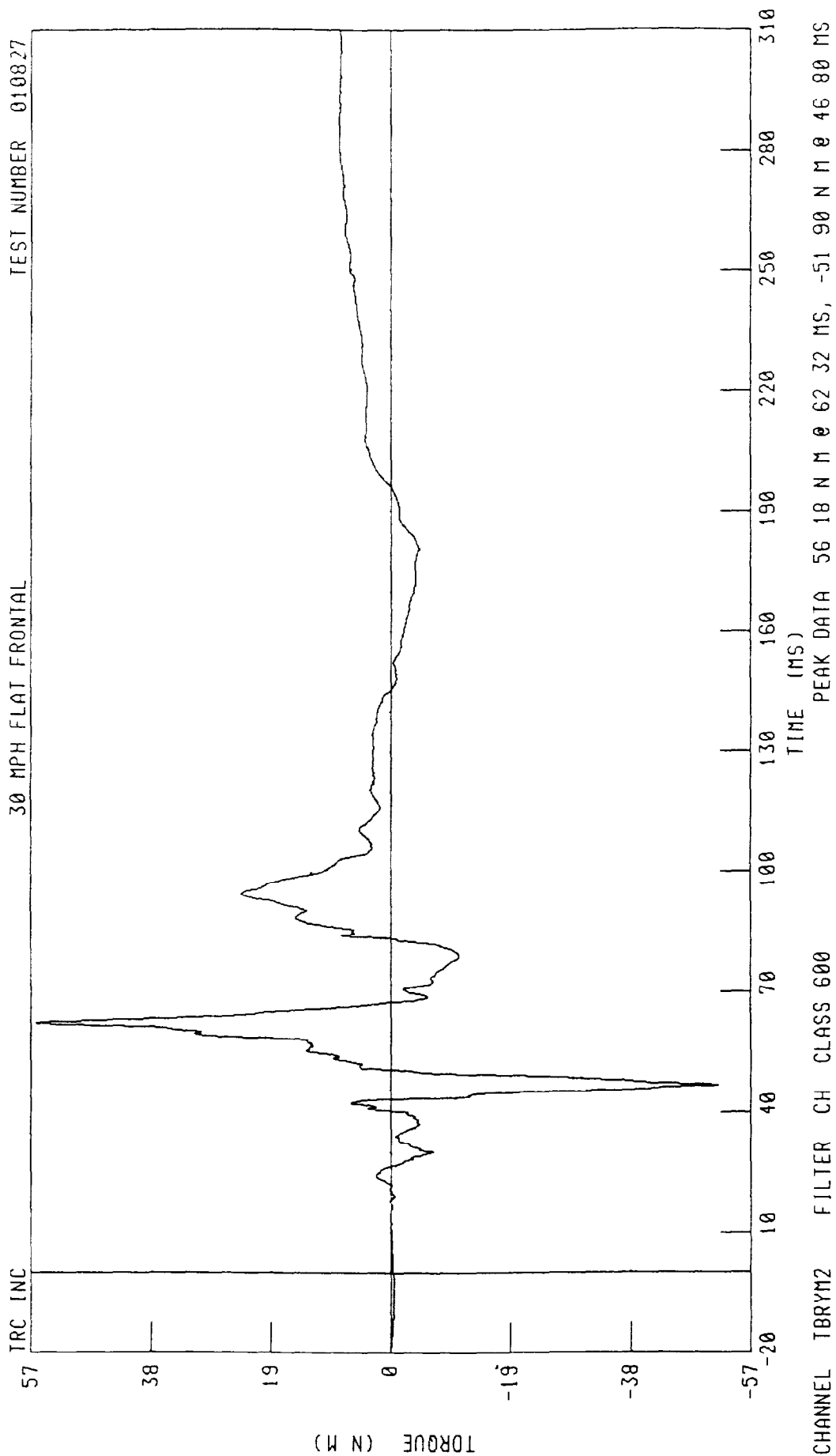
TEST NUMBER 010827



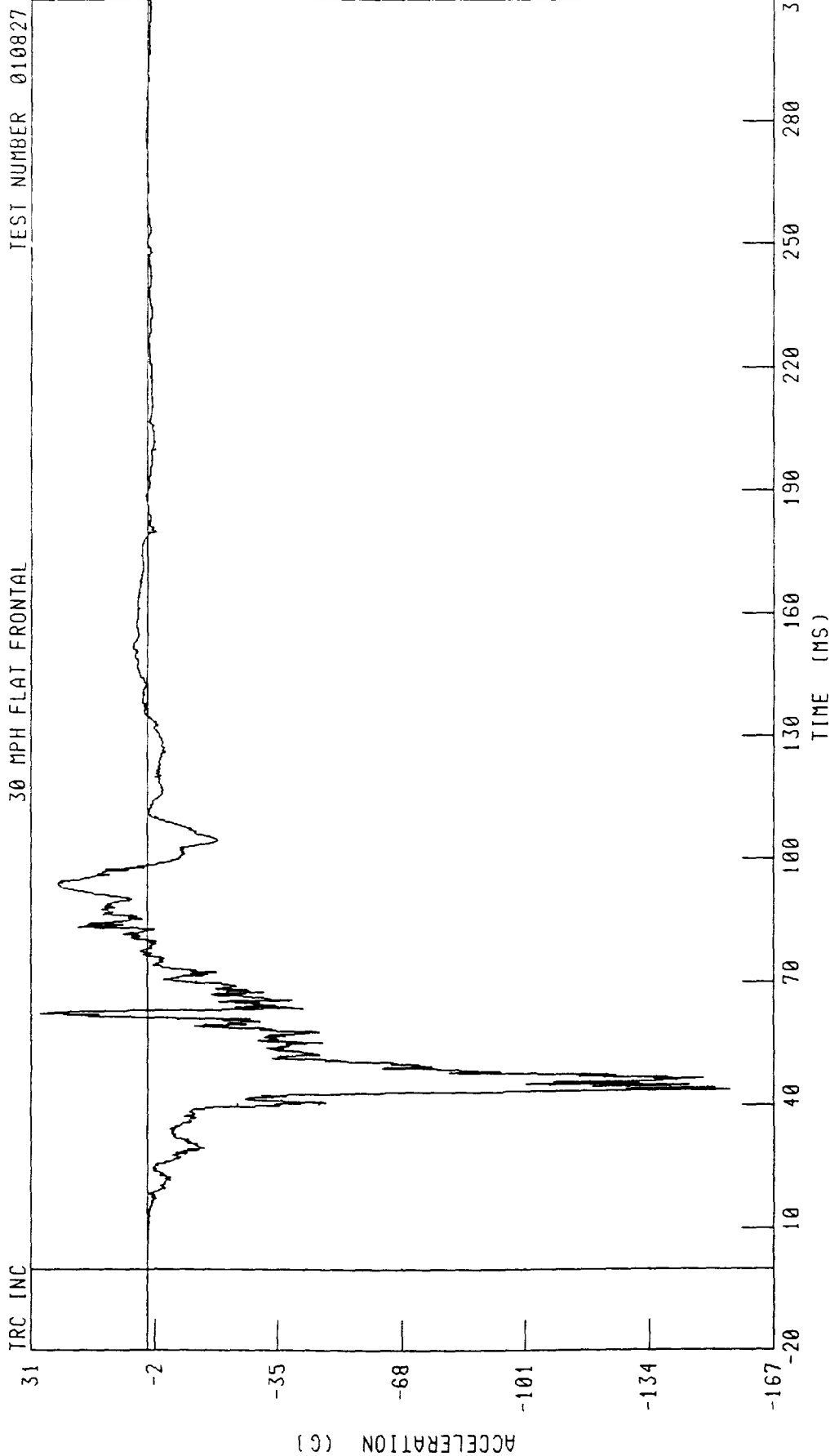
CHANNEL TBRXM2 FILTER CH CLASS 600

PEAK DATA 6 07 N M 0 36 48 MS, -19 38 N M 0 46 32 MS

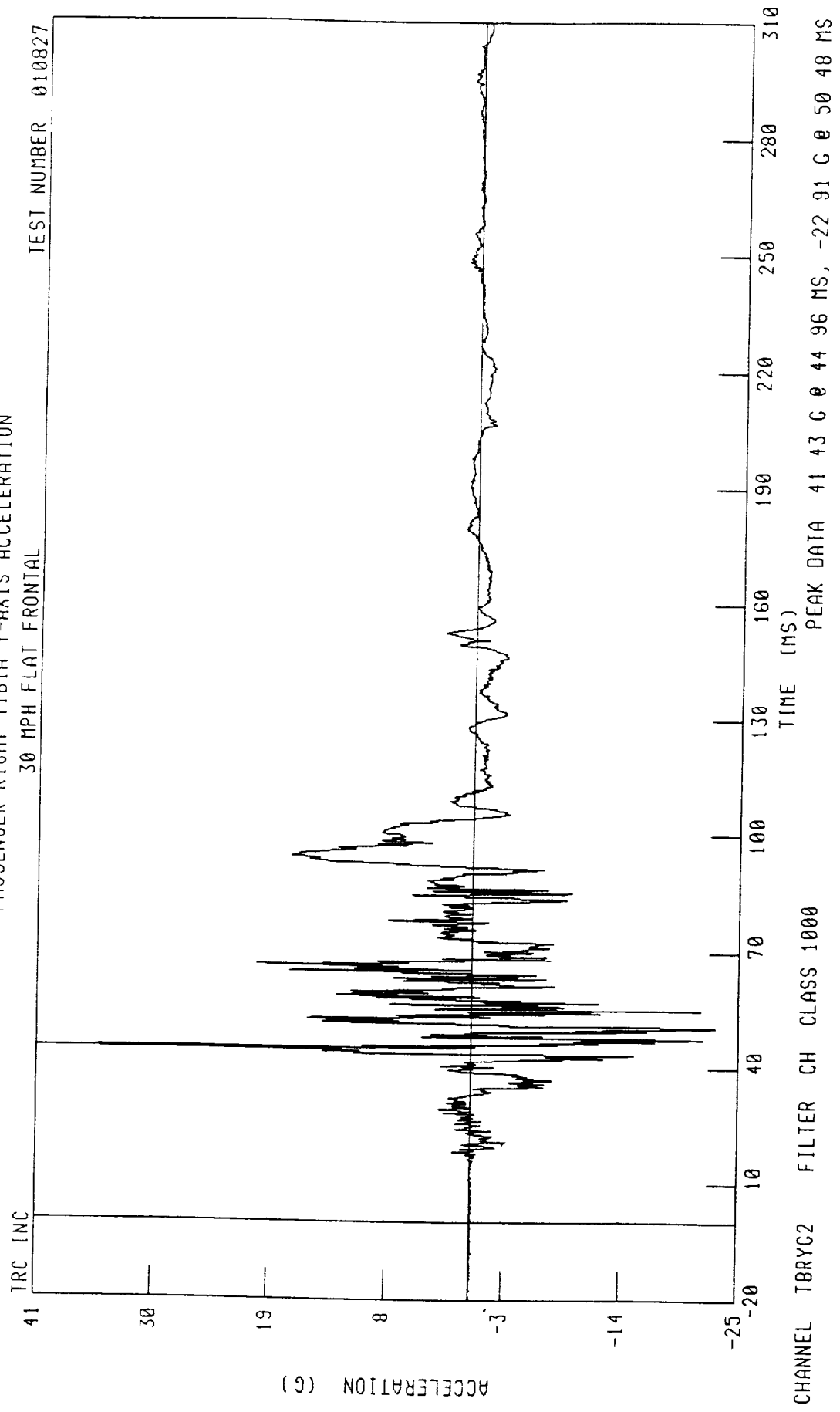
2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
PASSENGER RIGHT UPPER TIBIA MOMENT ABOUT Y AXIS



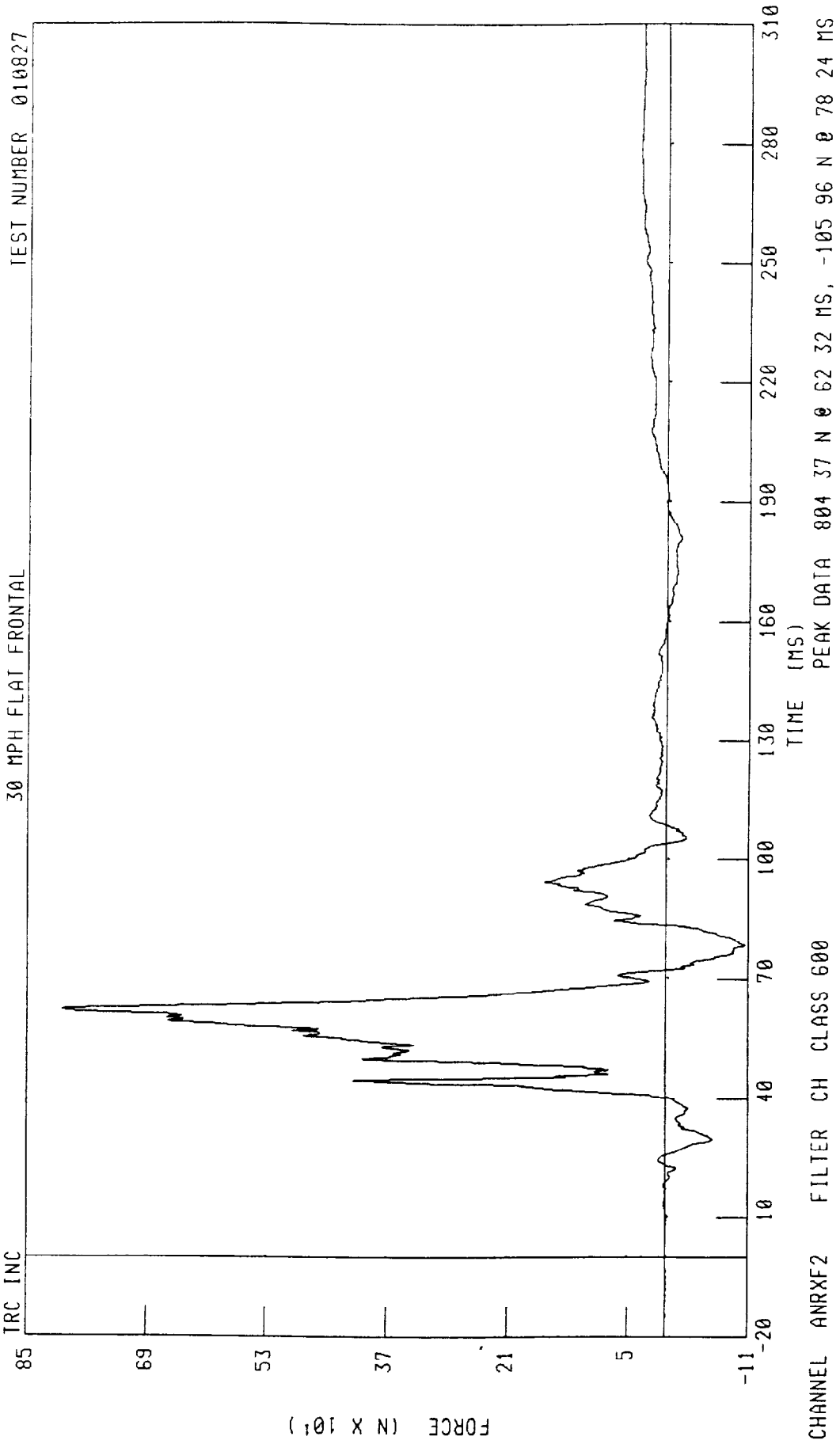
2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
PASSENGER RIGHT TIBIA X-AXIS ACCELERATION
30 MPH FLAT FRONTAL



2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
PASSENGER RIGHT TIBIA Y-AXIS ACCELERATION

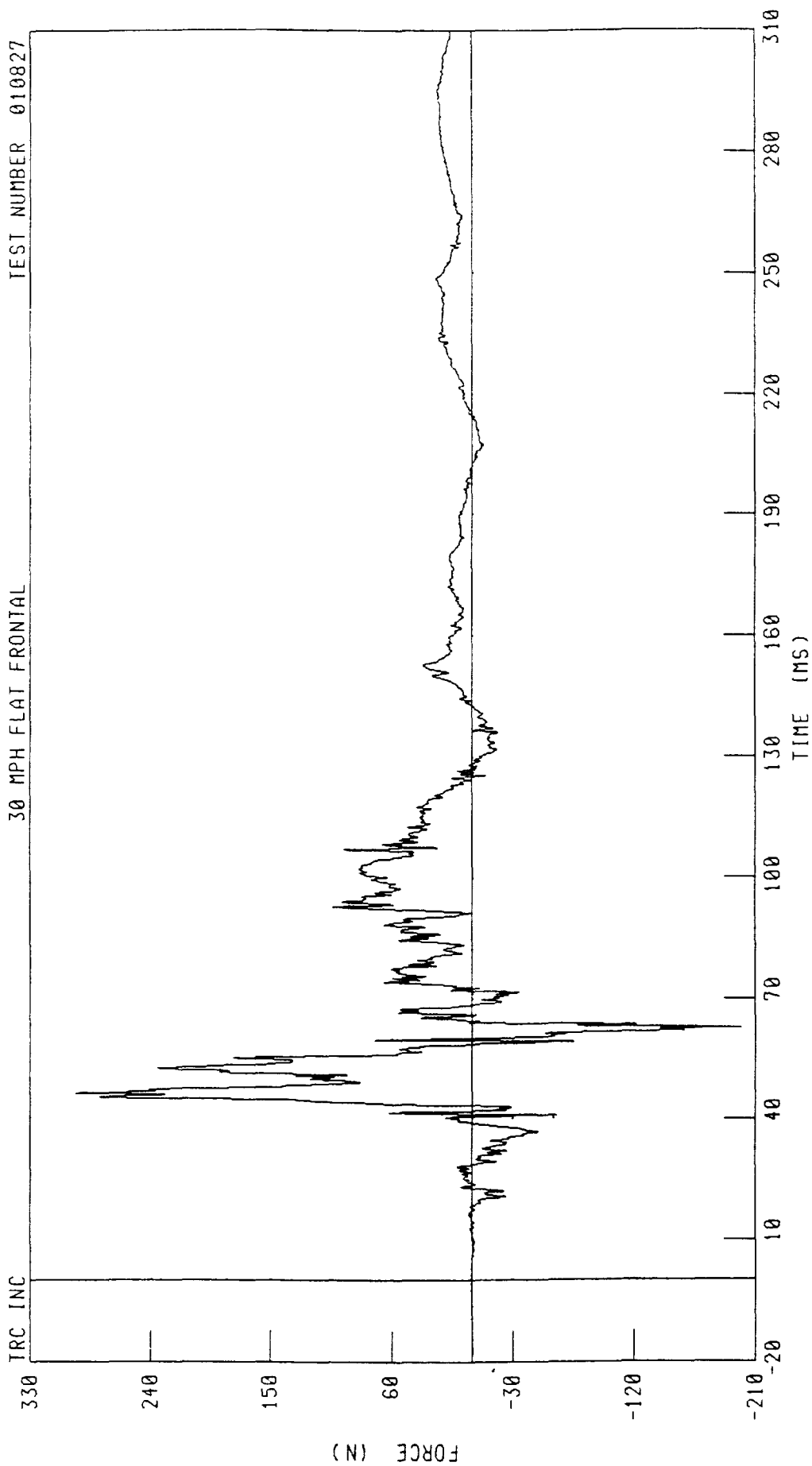


2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
PASSENGER RIGHT LOWER TIBIA X-AXIS FORCE



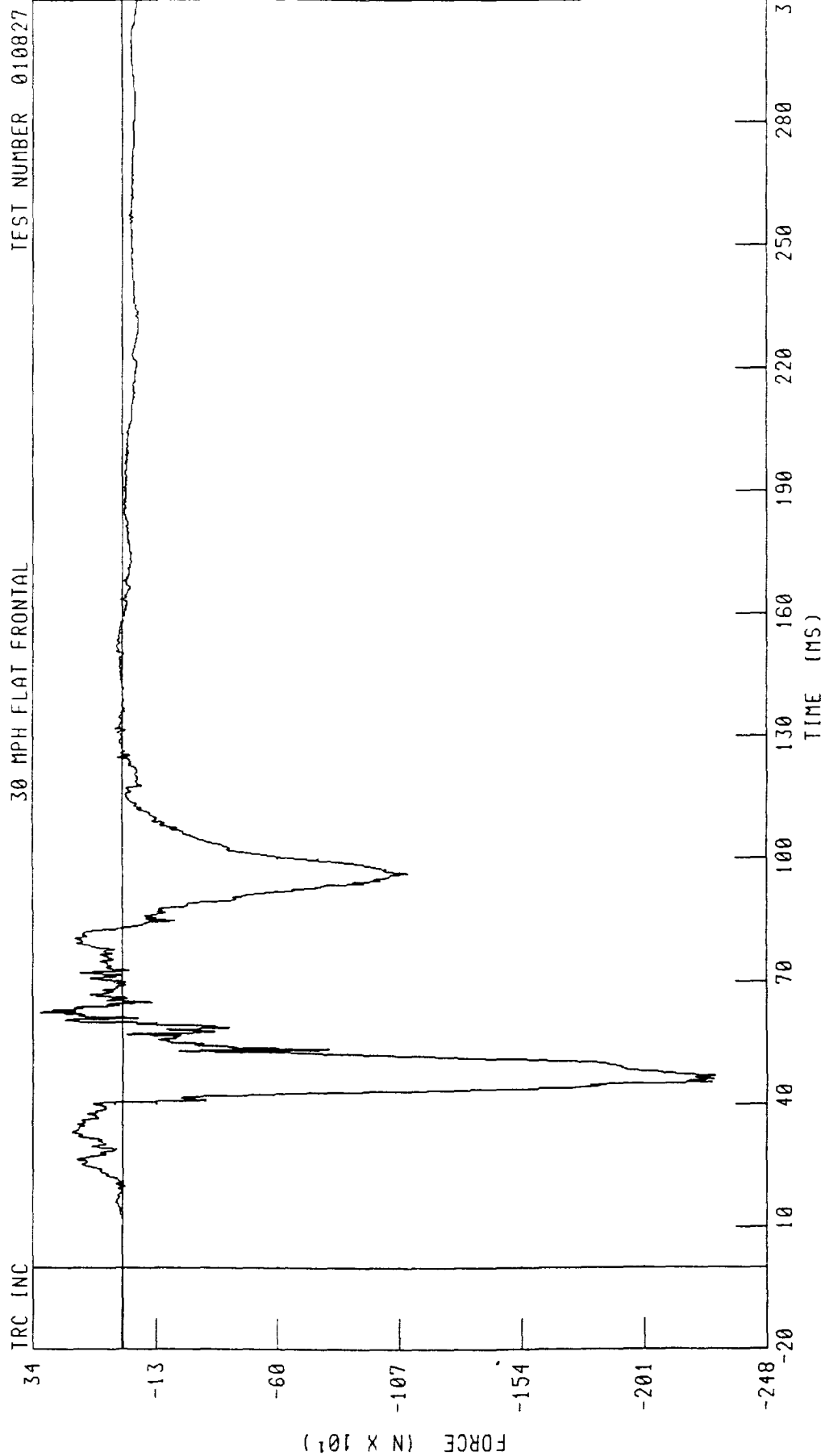
2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
PASSENGER RIGHT LOWER TIBIA Y-AXIS FORCE
30 MPH FLAT FRONTAL

TEST NUMBER 010827



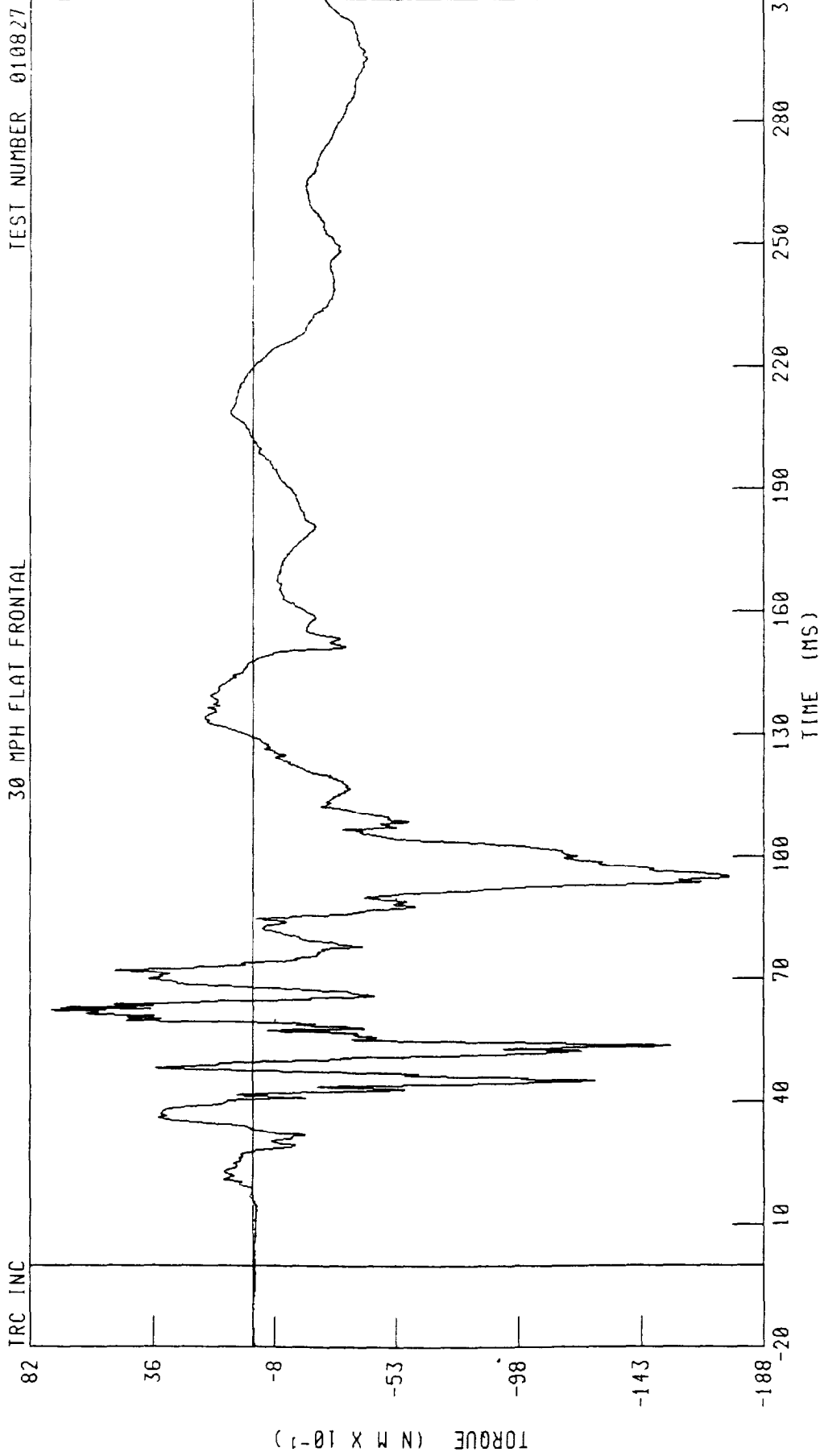
CHANNEL ANRYF2 FILTER CH CLASS 600 PEAK DATA 295 77 N @ 46 64 MS, -199 67 N @ 62 80 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
 PASSENGER RIGHT LOWER TIBIA Z-AXIS FORCE
 30 MPH FLAT FRONTAL



CHANNEL ANRZF2 FILTER CH CLASS 600

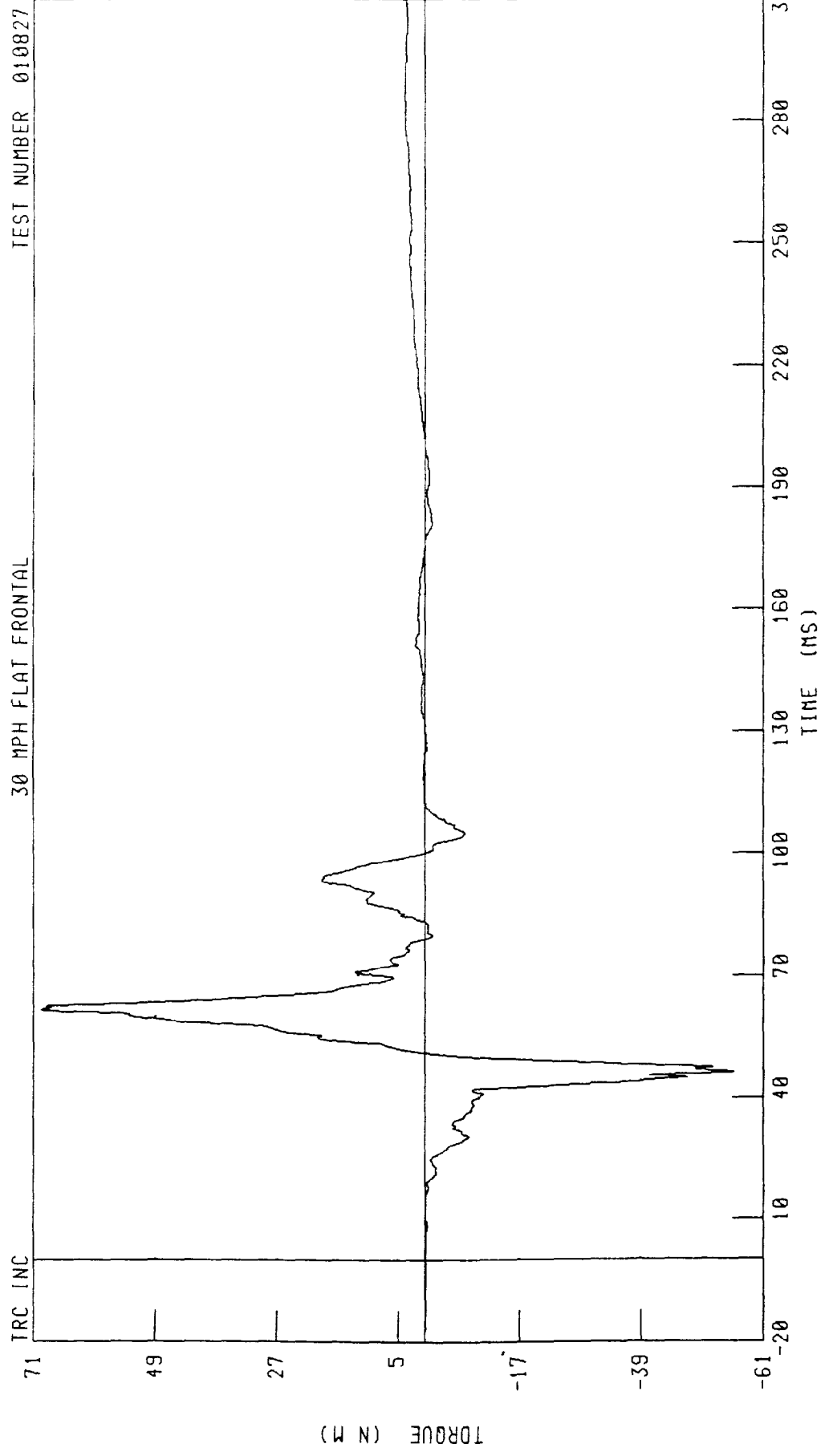
2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
 PASSENGER RIGHT LOWER TIBIA MOMENT ABOUT X AXIS
 30 MPH FLAT FRONTAL



CHANNEL ANRXM2 FILTER CH CLASS 600

PEAK DATA 7 46 N M @ 62 40 MS, -17 55 N M @ 95 04 MS

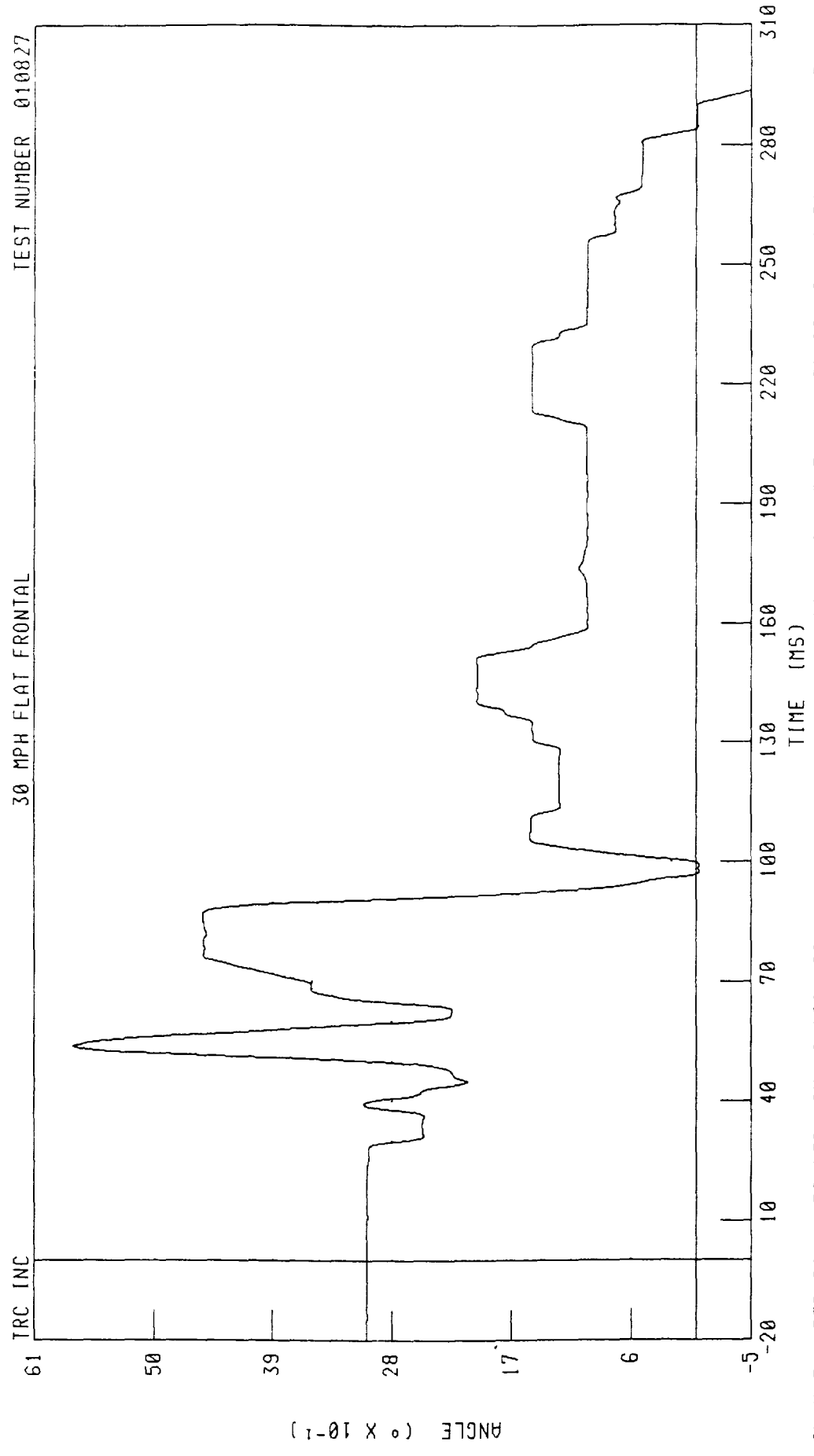
2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
PASSENGER RIGHT LOWER TIBIA MOMENT ABOUT Y AXIS
30 MPH FLAT FRONTAL



PEAK DATA 69 67 N M @ 61 76 MS, -55 58 N M @ 46 16 MS

CHANNEL ANR2M2 FILTER CH CLASS 600

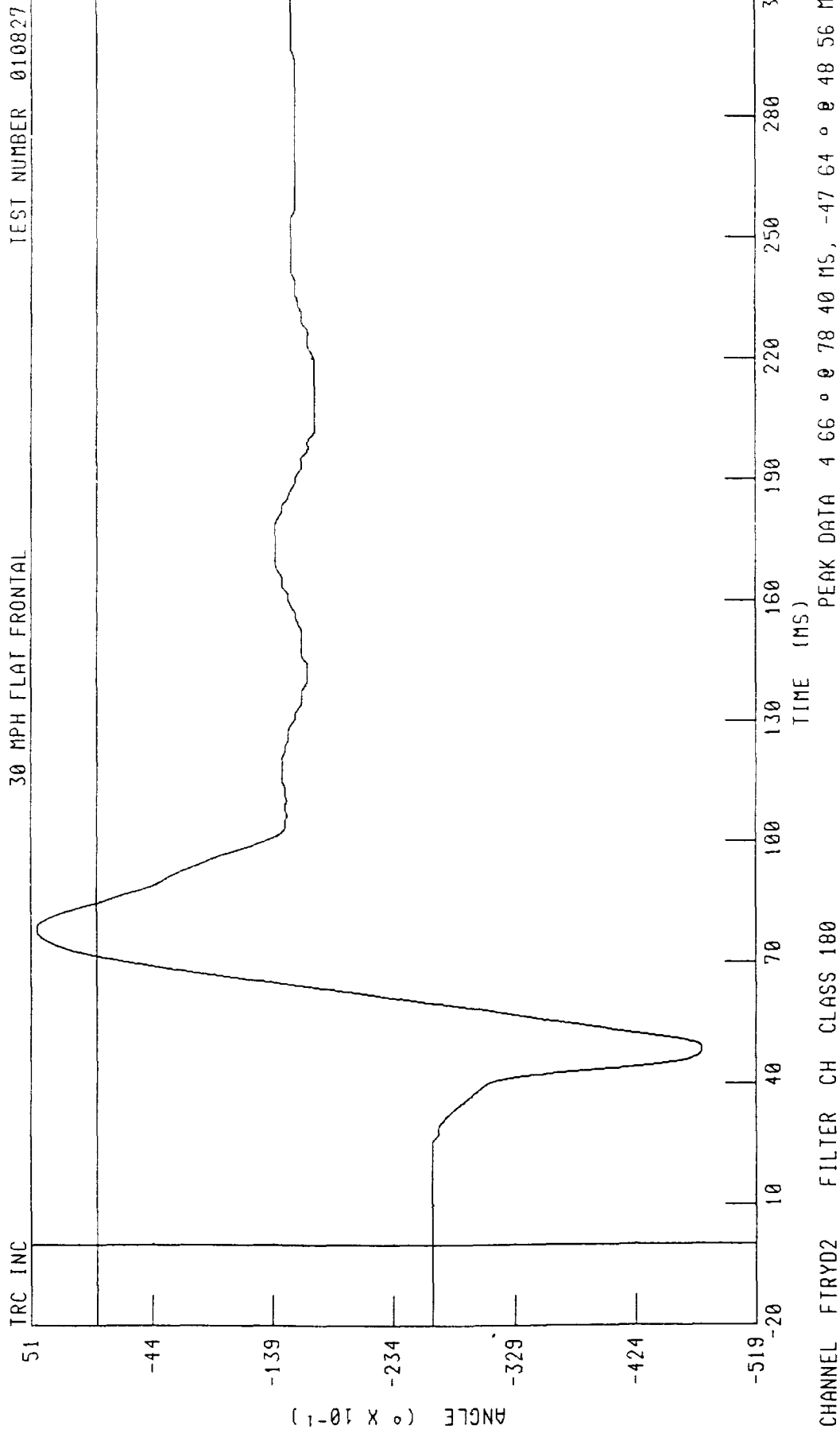
2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
 PASSENGER RIGHT FOOT TO ANKLE X-AXIS DISPLACEMENT
 30 MPH FLAT FRONTAL



TEST NUMBER 010827

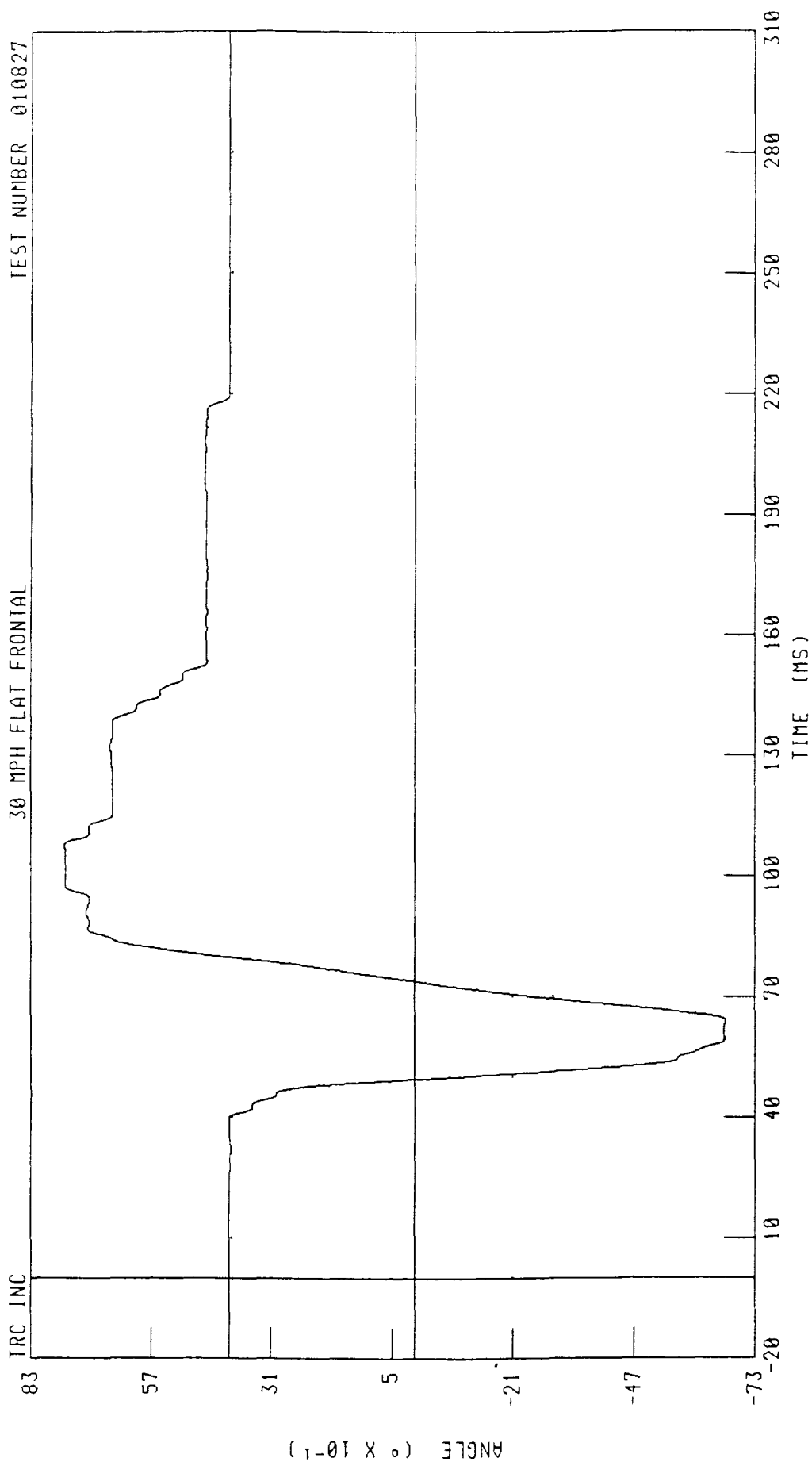
CHANNEL FTRXD2 FILTER CH CLASS 180 PEAK DATA 5 74 ° @ 53 92 MS, -0 52 ° @ 294 32 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
 PASSENGER RIGHT FOOT TO ANKLE Y-AXIS DISPLACEMENT
 30 MPH FLAT FRONTAL



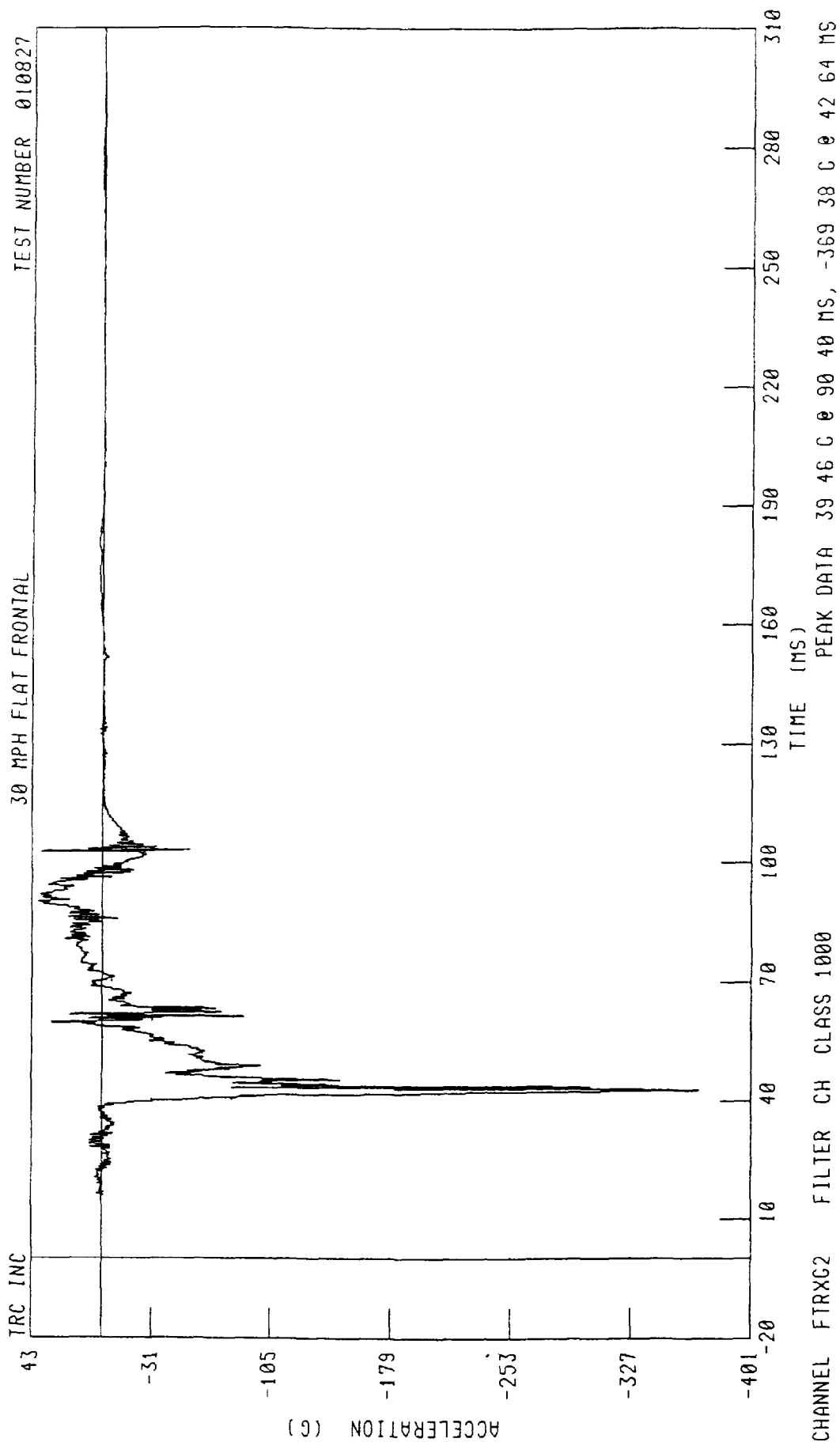
2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
PASSENGER RIGHT FOOT TO ANKLE Z-AXIS DISPLACEMENT

30 MPH FLAT FRONTAL TEST NUMBER 010827

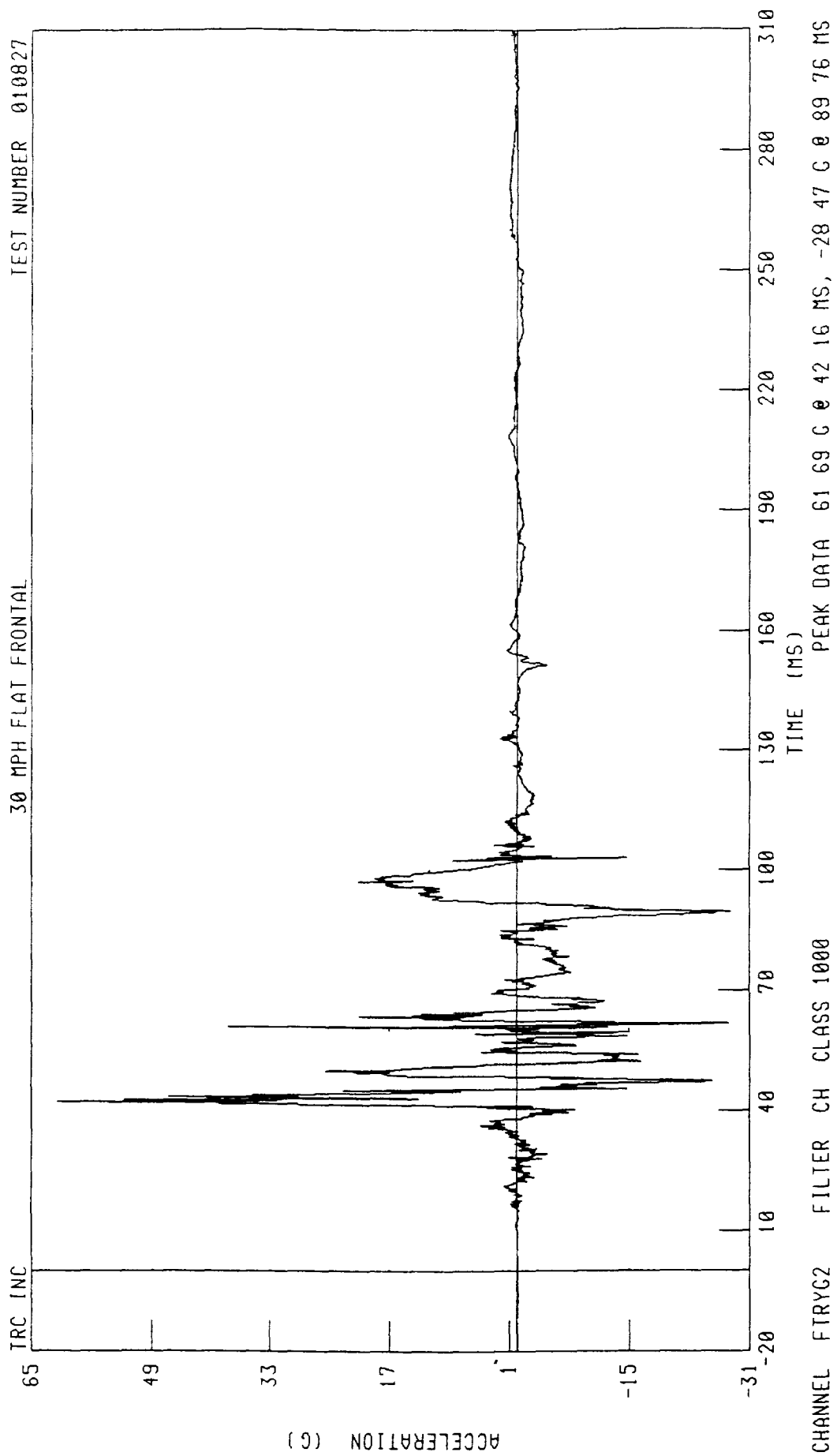


CHANNEL FTRZD2 FILTER CH CLASS 180 PEAK DATA 7 58 ° @ 107 92 MS, -6 67 ° @ 63 92 MS

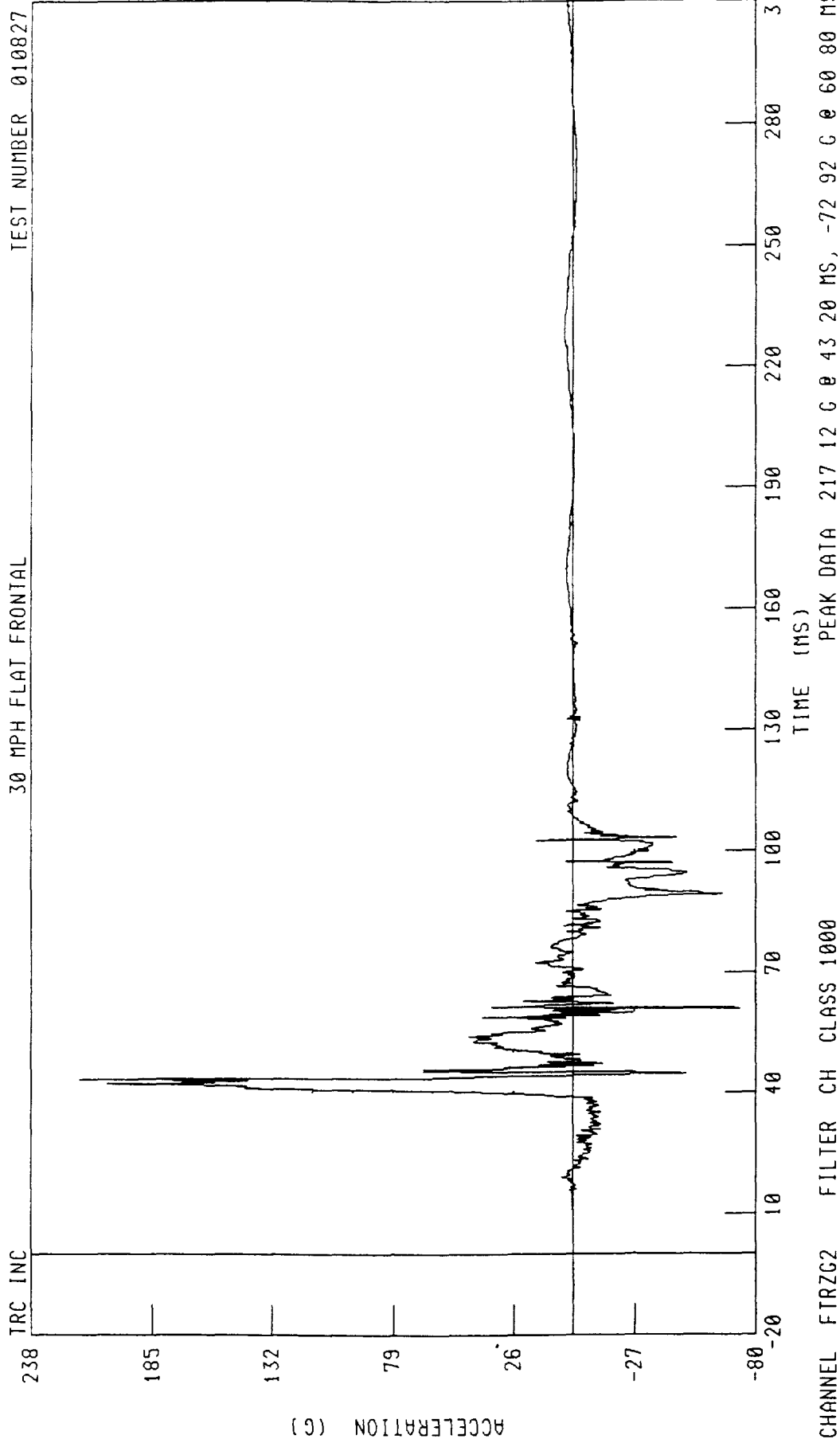
2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
PASSENGER RIGHT FOOT X-AXIS ACCELERATION



2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
PASSENGER RIGHT FOOT Y-AXIS ACCELERATION

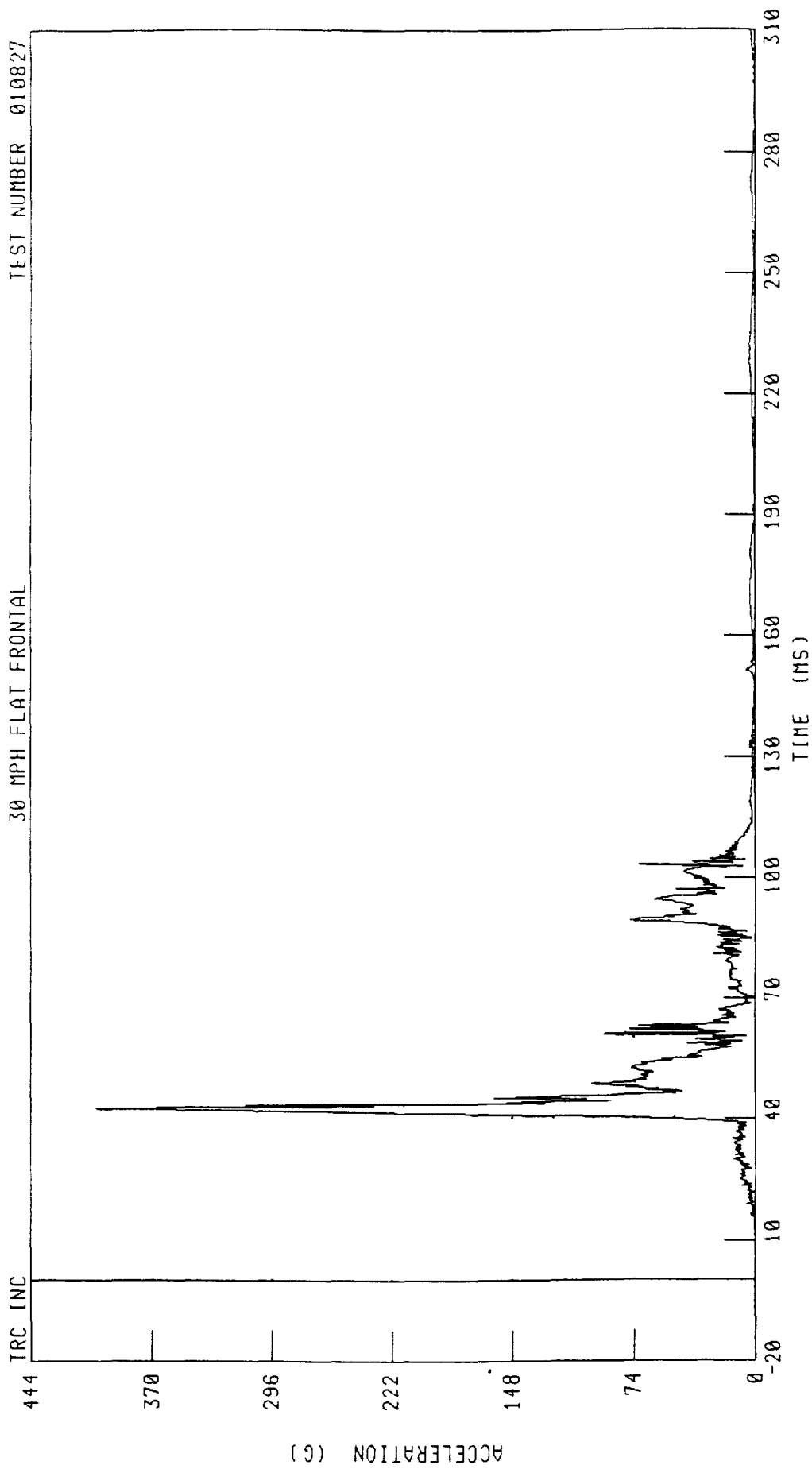


2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
PASSENGER RIGHT FOOT Z-AXIS ACCELERATION
30 MPH FLAT FRONTAL



2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
PASSENGER RIGHT FOOT RESULTANT ACCELERATION
30 MPH FLAT FRONTAL

TEST NUMBER 010827



PEAK DATA 404 93 G @ 42 64 MS, 0 03 G @ 10 80 MS

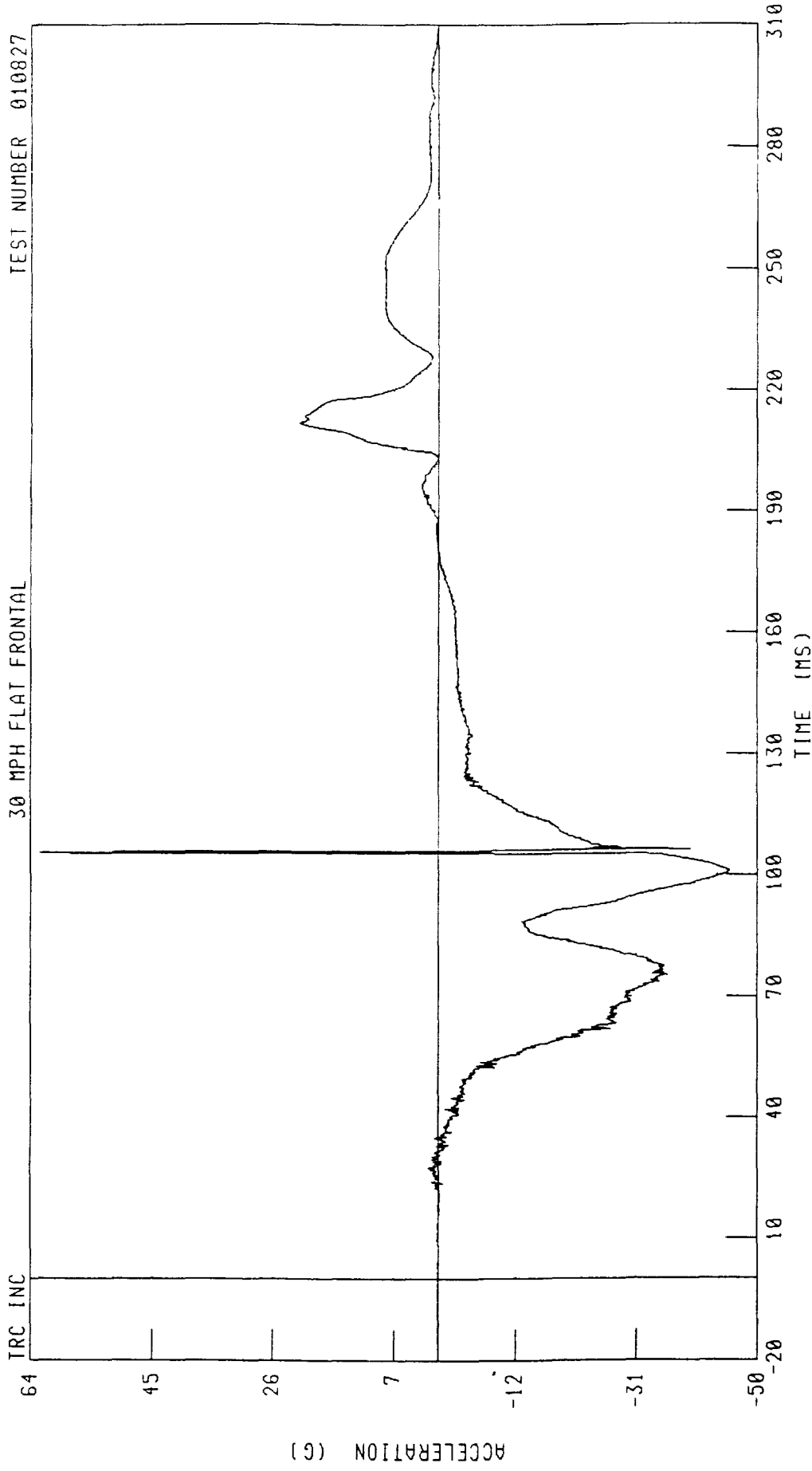
CHANNEL FTRRC2 FILTER CH CLASS 1000

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

RIGHT REAR PASSENGER HEAD X-AXIS ACCELERATION

30 MPH FLAT FRONTAL

TEST NUMBER 010827



CHANNEL HEDXC3 FILTER CH CLASS 1000

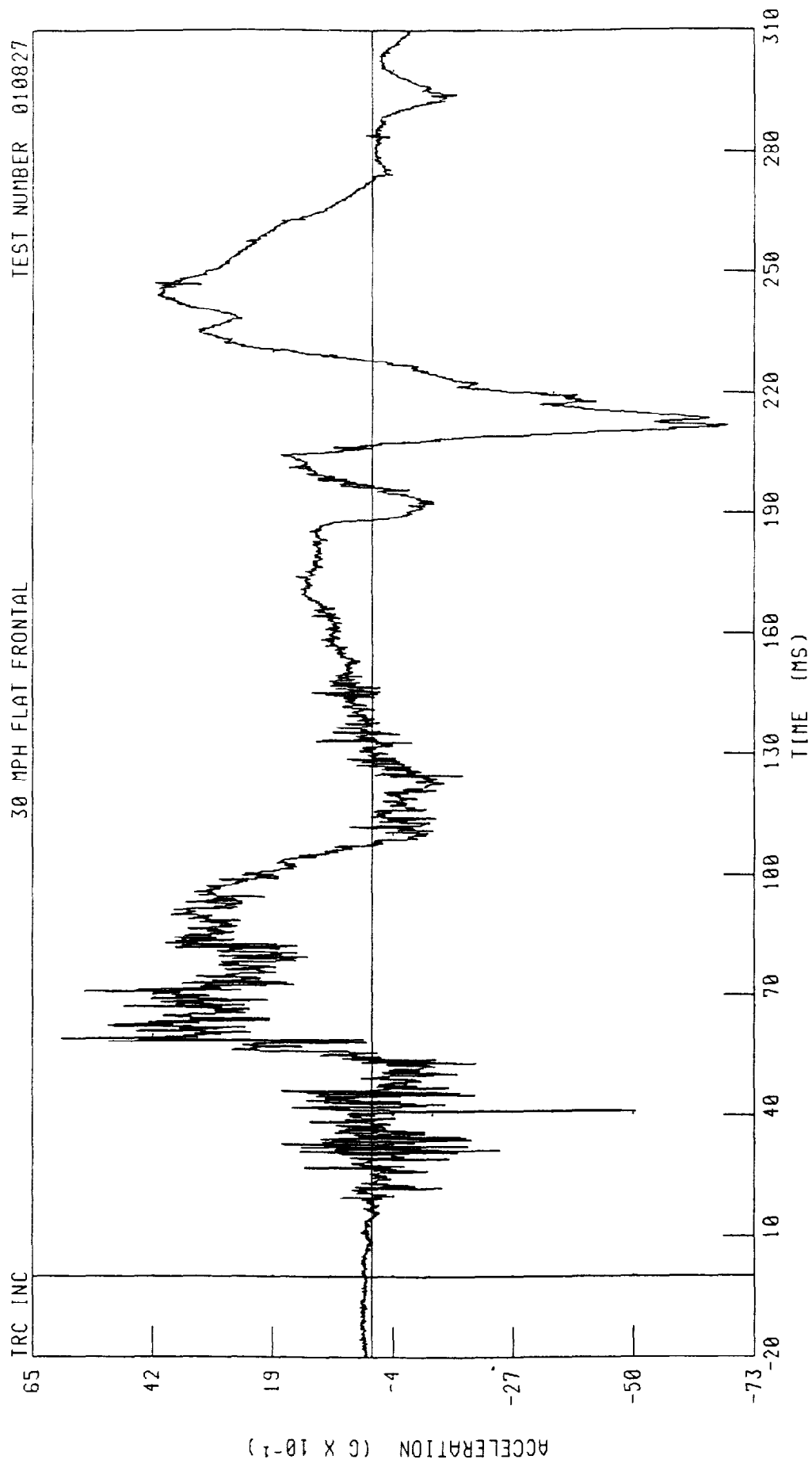
PEAK DATA 62 55 G @ 105 84 MS, -45 64 G @ 101 04 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

RIGHT REAR PASSENGER HEAD Y-AXIS ACCELERATION

TEST NUMBER 010827

30 MPH FLAT FRONTAL

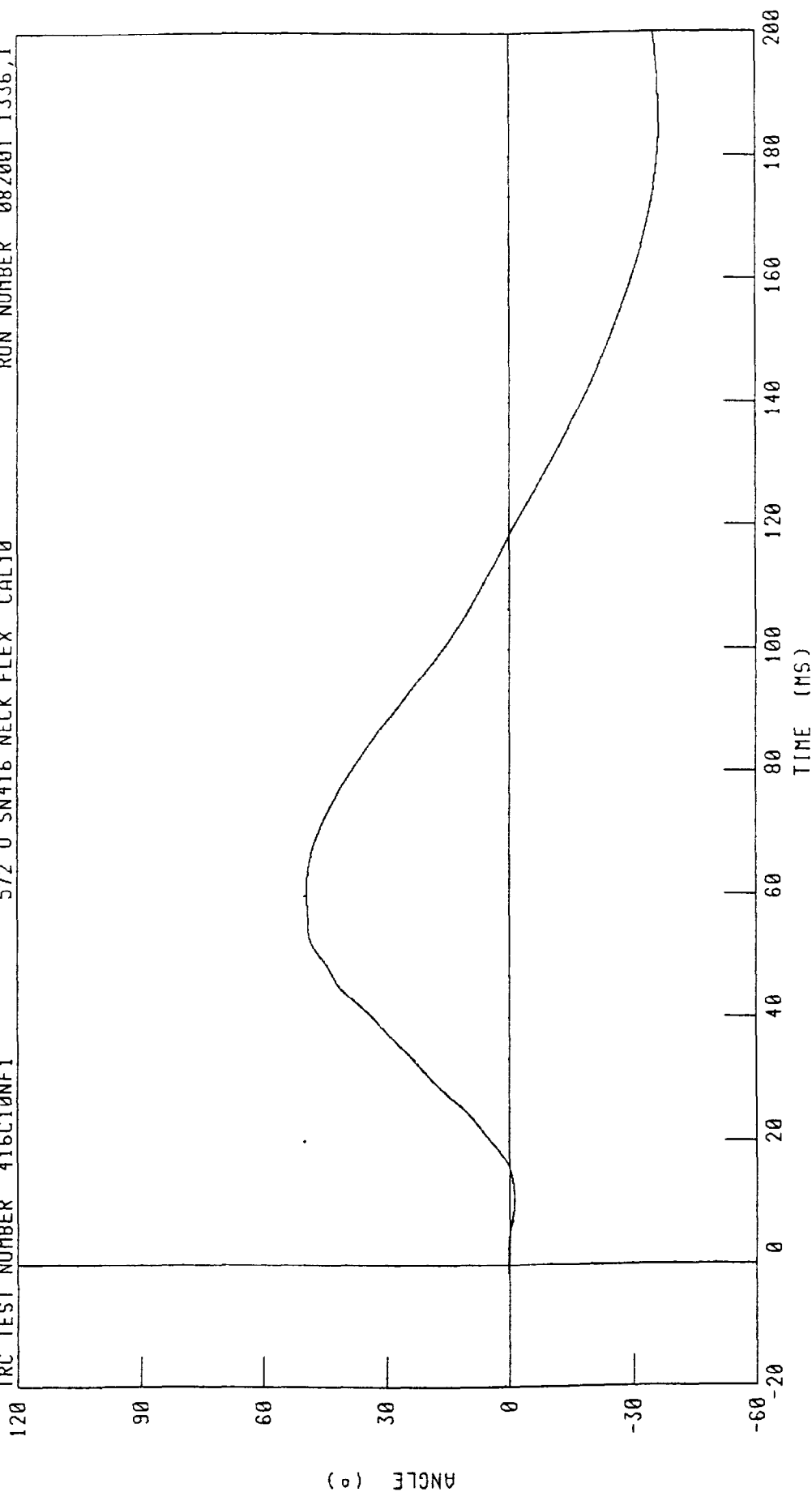


CHANNEL HEDYC3 FILTER CH CLASS 1000

PART 572-0 HYBRID III SMALL FEMALE - NECK FLEXION CALIBRATION

ROTATION ABOUT OCCIPITAL CONDYLE

TRC TEST NUMBER 416C10NF1 572 0 SN416 NECK FLEX CAL10 RUN NUMBER 082001 1336,1

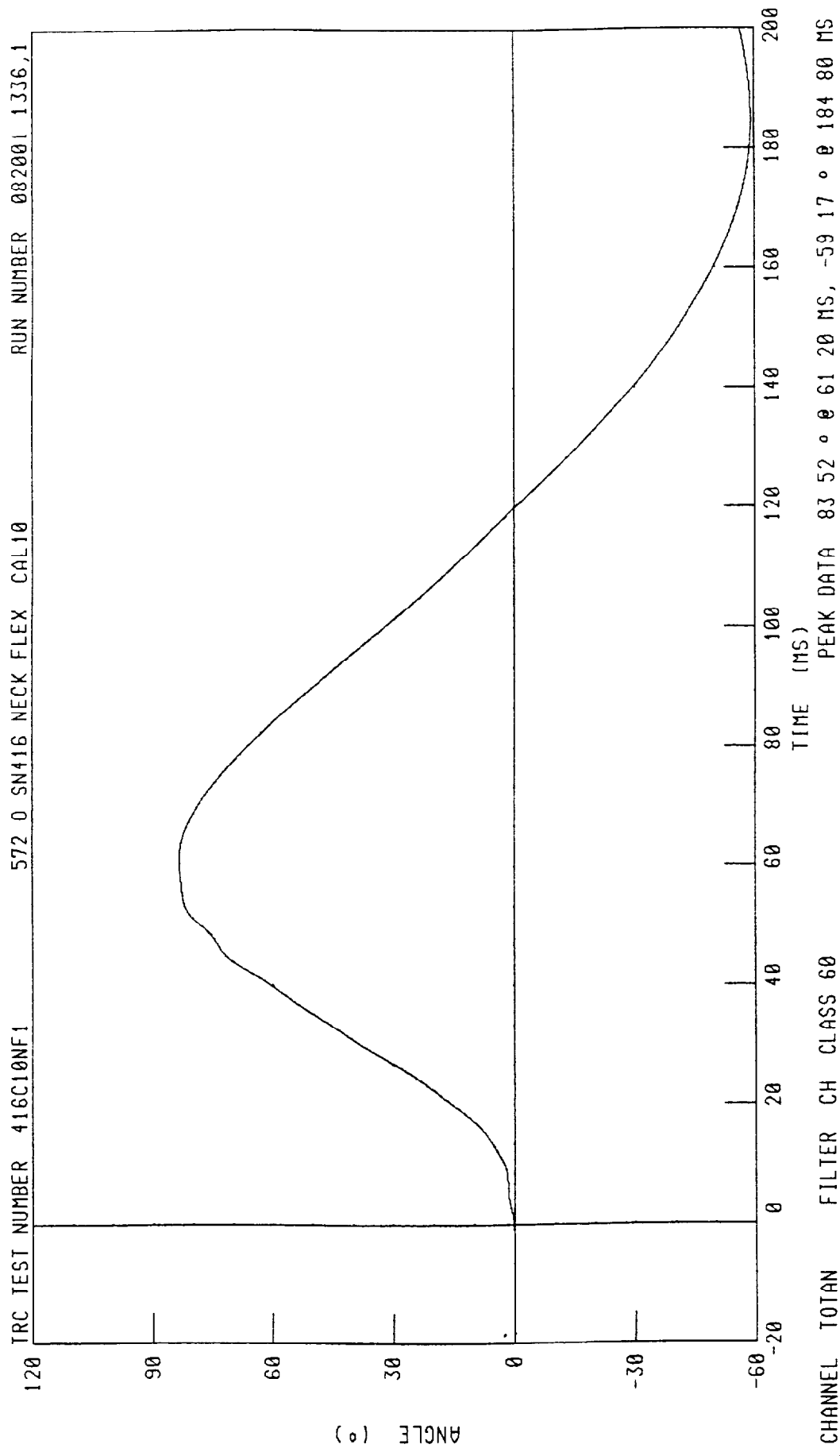


PEAK DATA 49 42 ° @ 61 36 MS, -36 62 ° @ 185 92 MS

CHANNEL THETA FILTER CH CLASS 60

PART 572-0 HYBRID III SMALL FEMALE - NECK FLEXION CALIBRATION

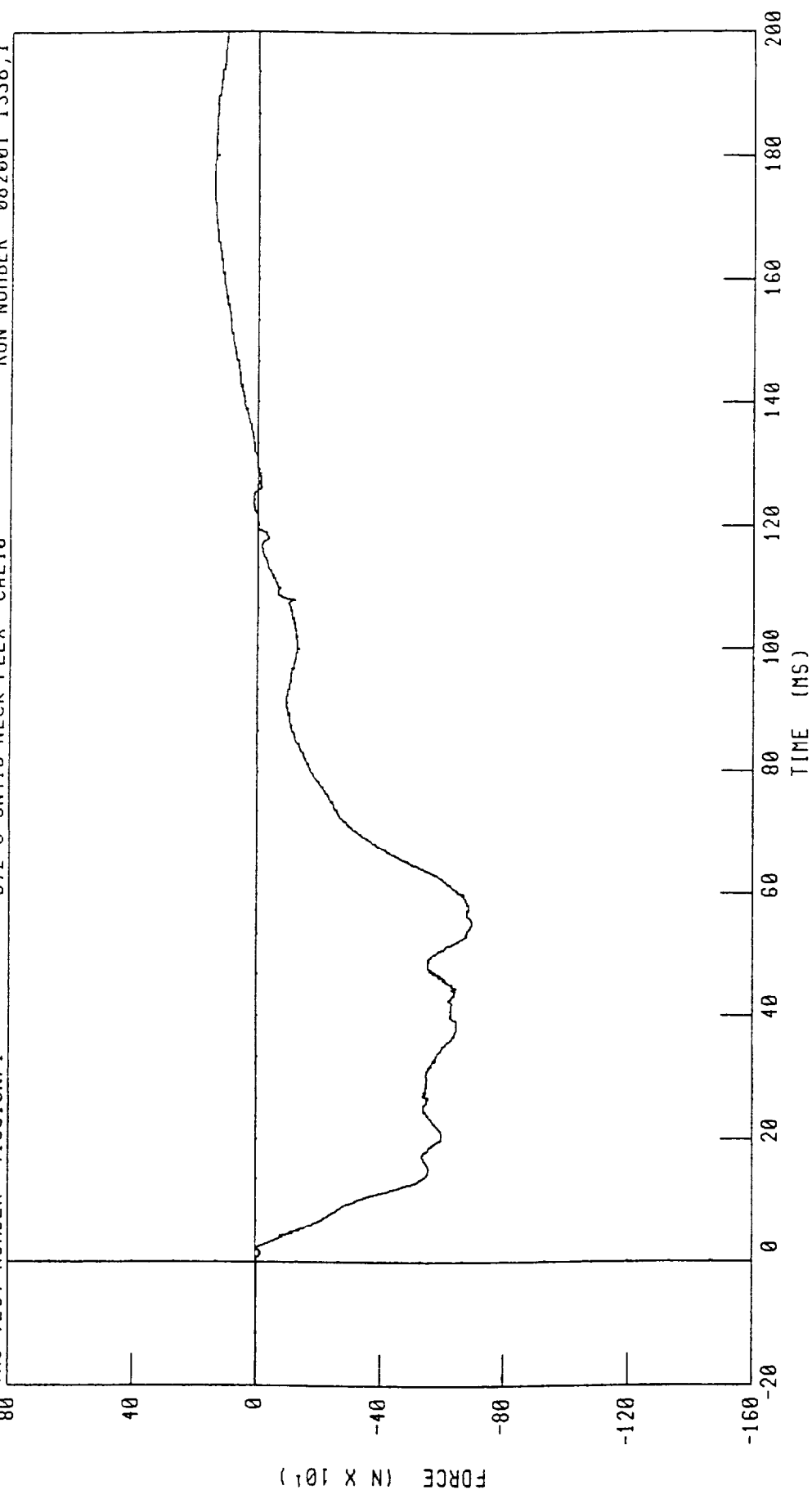
TOTAL ROTATION



PART 572-0 HYBRID III SMALL FEMALE - NECK FLEXION CALIBRATION

NECK FORCE X AXIS

TRC TEST NUMBER 416C10NF1 572 0 SN416 NECK FLEX CAL10 RUN NUMBER 082001 1336,1



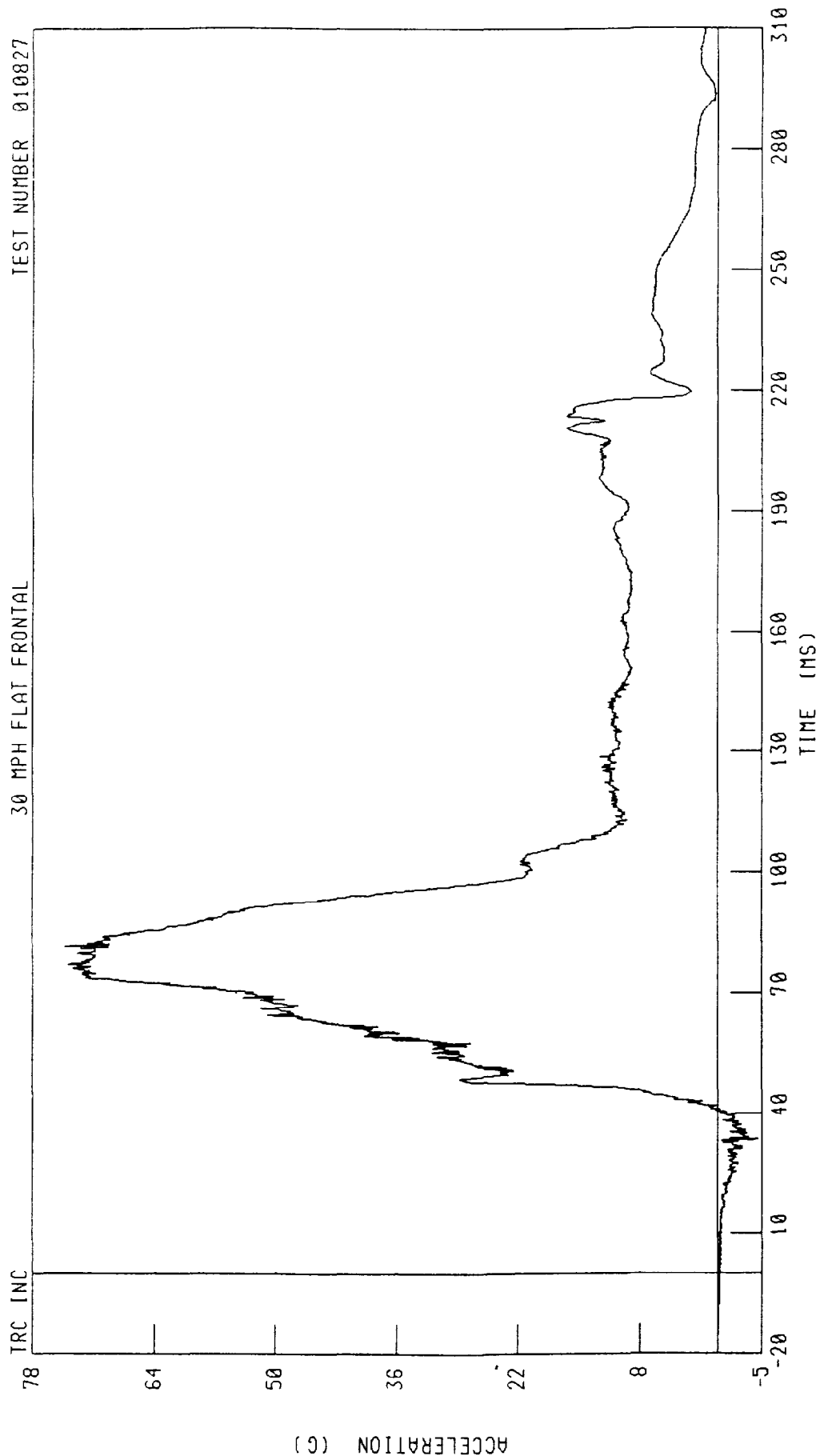
CHANNEL NEKXF FILTER CH CLASS 1000

PEAK DATA 145 16 N @ 172 16 MS, -697 79 N @ 54 96 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
 RIGHT REAR PASSENGER HEAD Z-AXIS ACCELERATION

TEST NUMBER 010827

30 MPH FLAT FRONTAL



CHANNEL HEDZG3 FILTER CH CLASS 1000

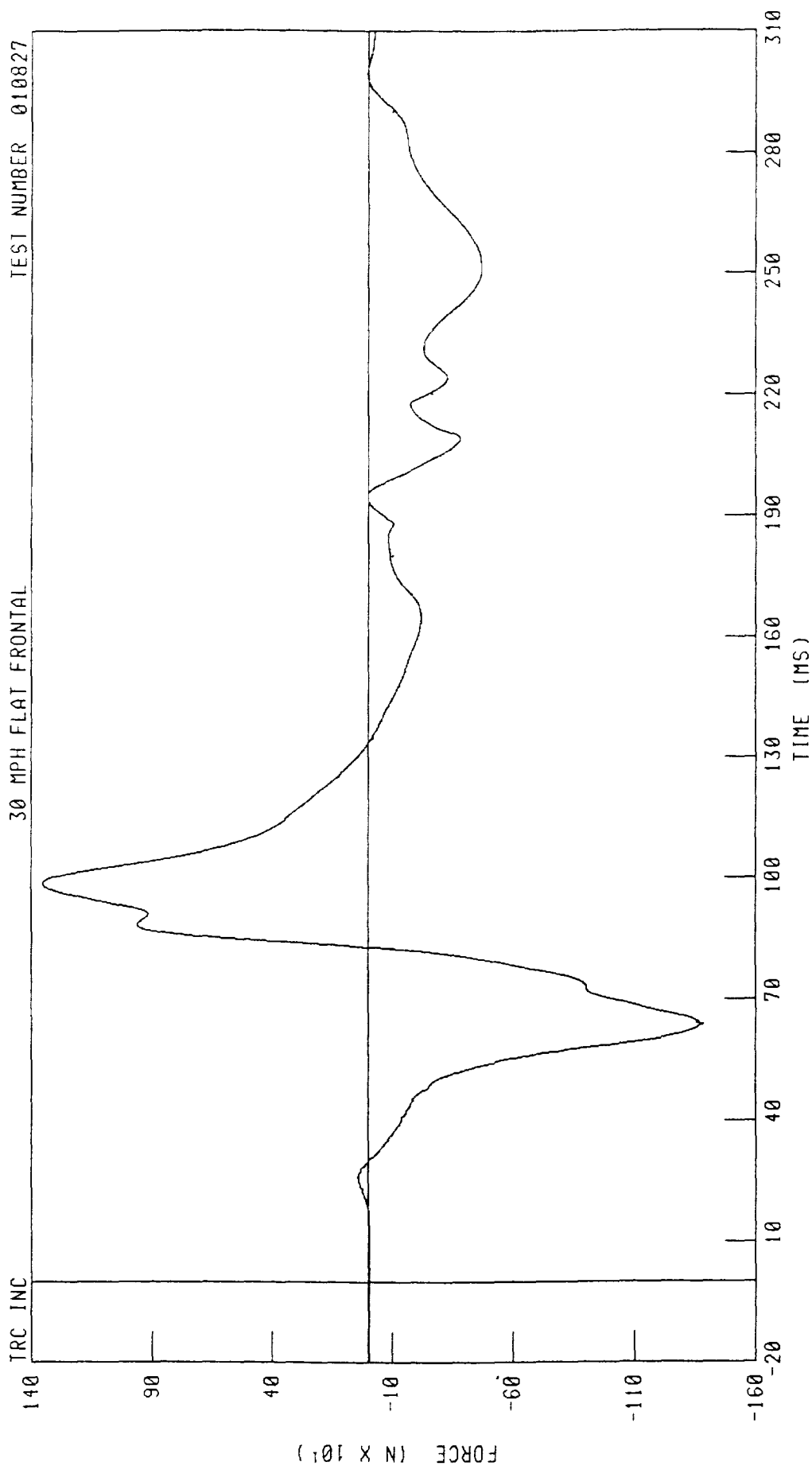
PEAK DATA 75 29 0 82 16 MS, -4 65 0 33 44 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

RIGHT REAR PASSENGER NECK Y-AXIS SHEAR FORCE

30 MPH FLAT FRONTAL

TEST NUMBER 010827



CHANNEL NEKYF3 FILTER CH CLASS 1000

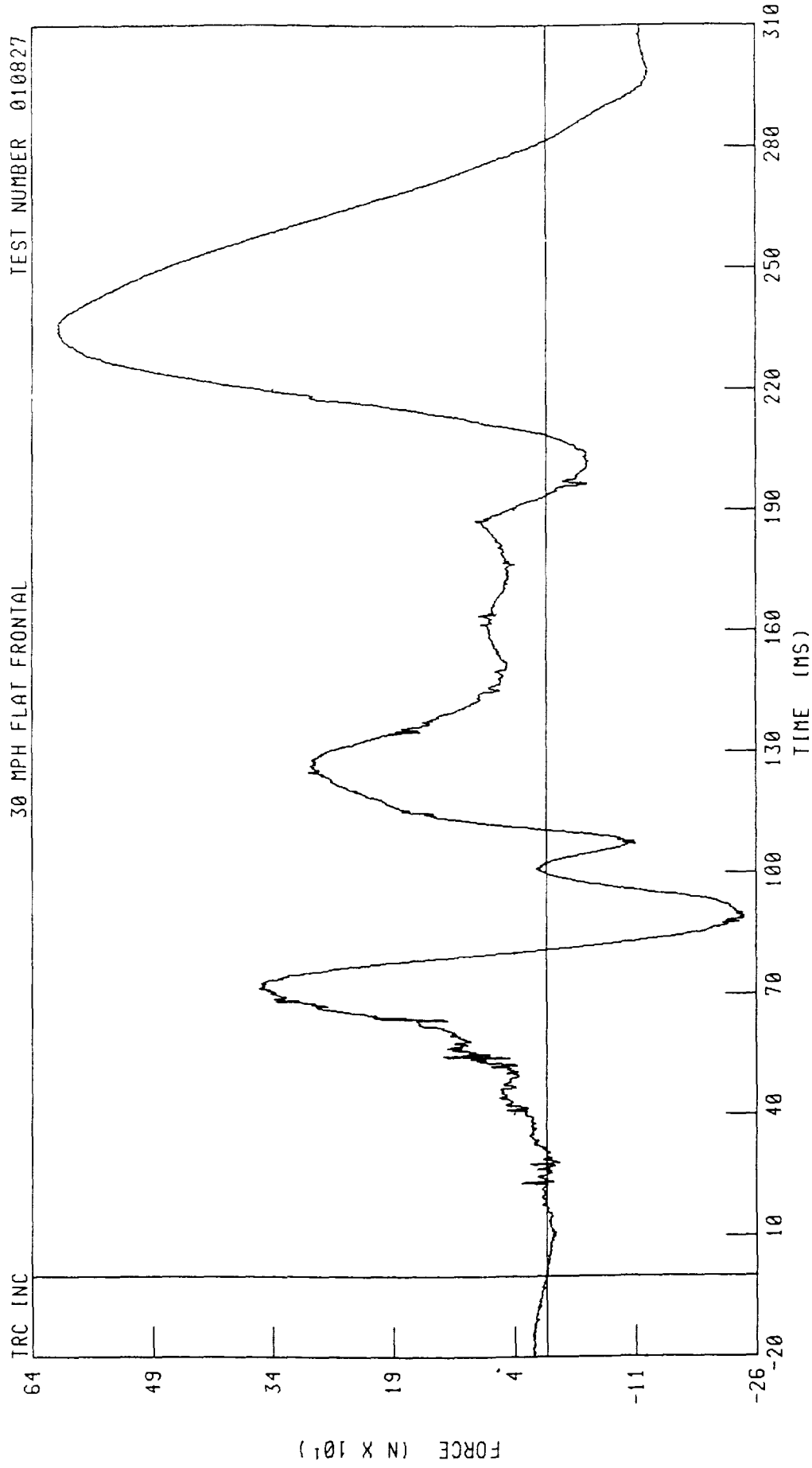
PEAK DATA 1353 39 N @ 98 72 MS, -1383 51 N @ 63 68 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

RIGHT REAR PASSENGER NECK Z-AXIS AXIAL FORCE

30 MPH FLAT FRONTAL

TEST NUMBER 010827



PEAK DATA 608 37 N @ 234 32 MS, -244 72 N @ 89 44 MS

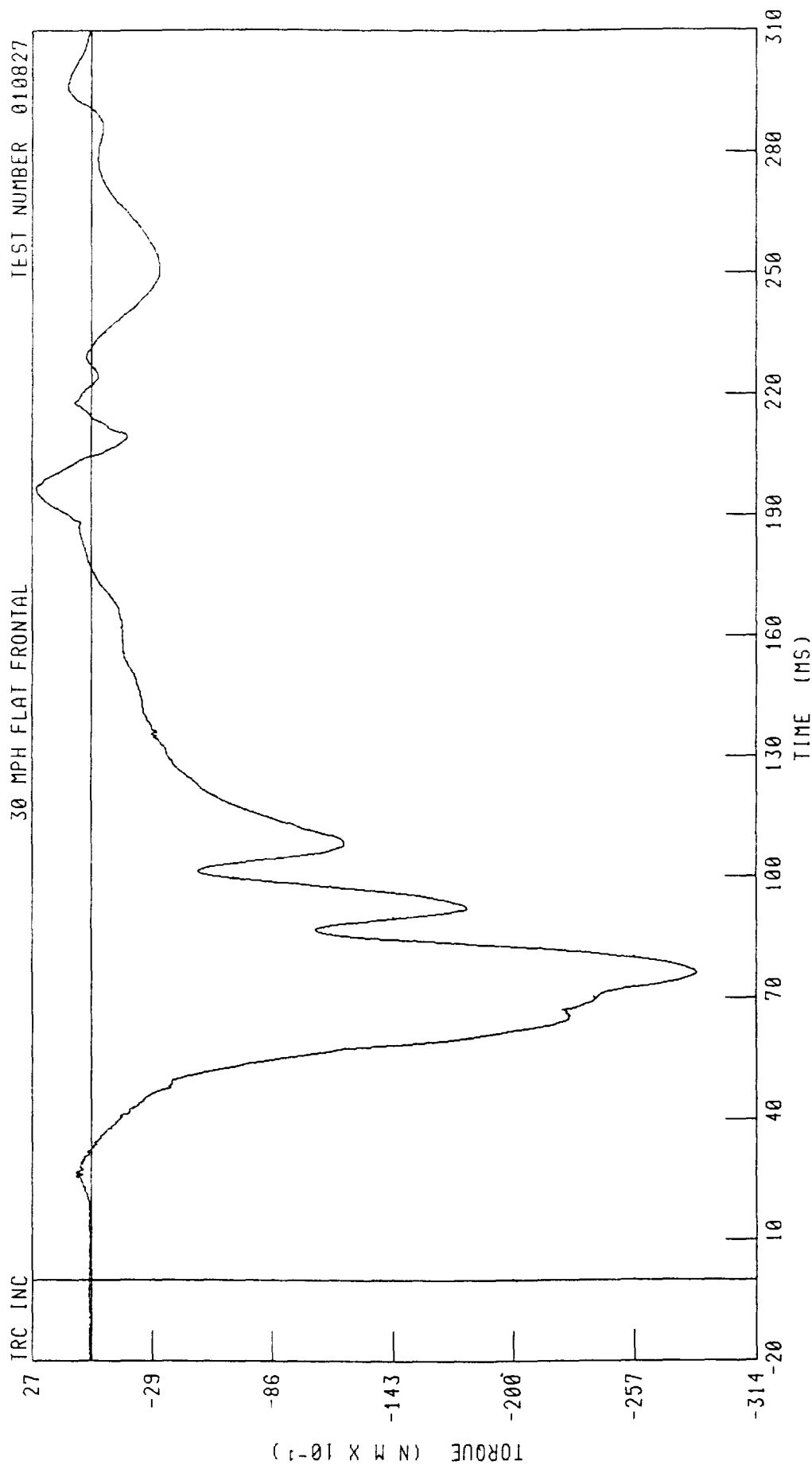
CHANNEL NEKZF3 FILTER CH CLASS 1000

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

RIGHT REAR PASSENGER NECK MOMENT ABOUT X AXIS

30 MPH FLAT FRONTAL

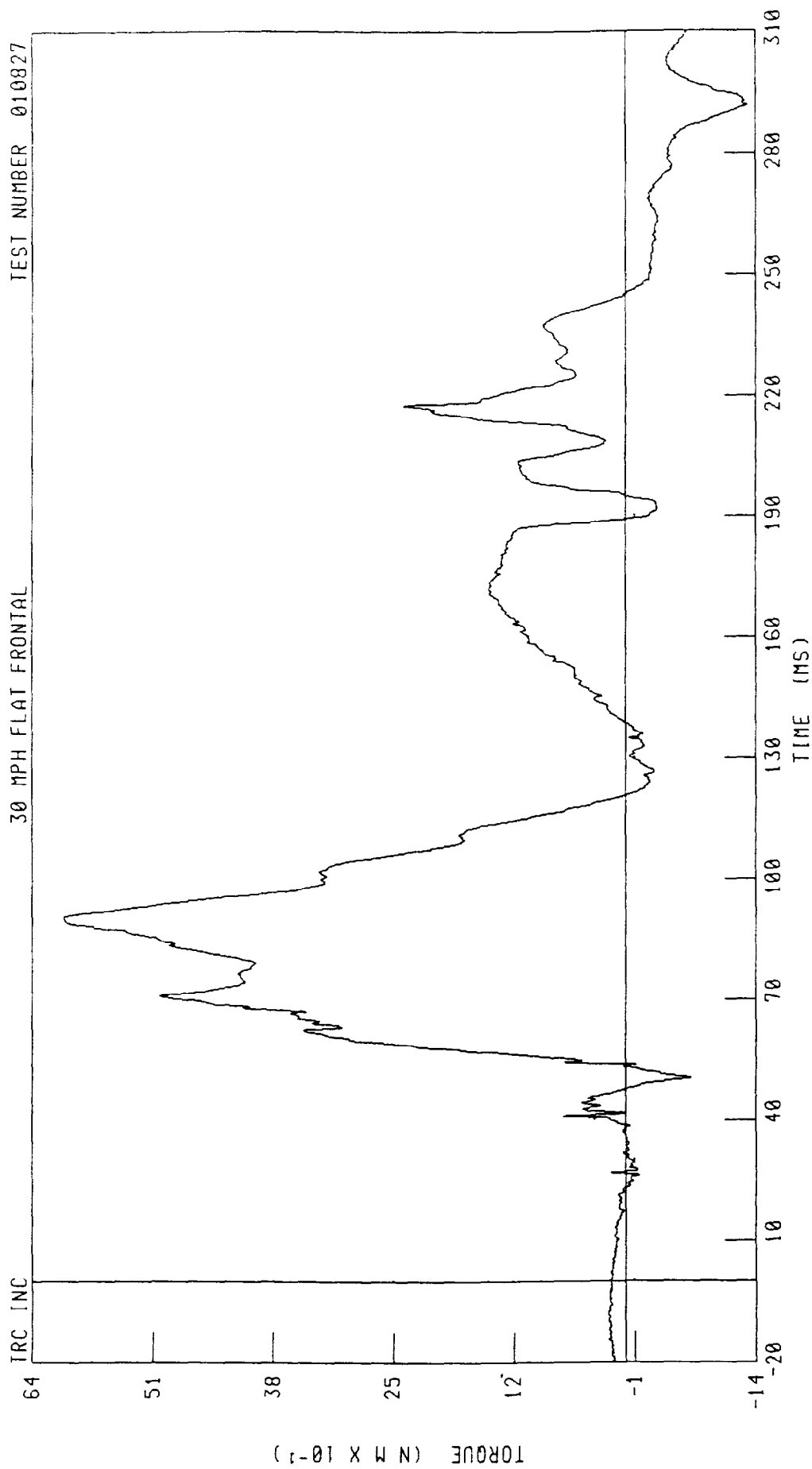
TEST NUMBER 010827



CHANNEL NEKXN3 FILTER CH CLASS 600

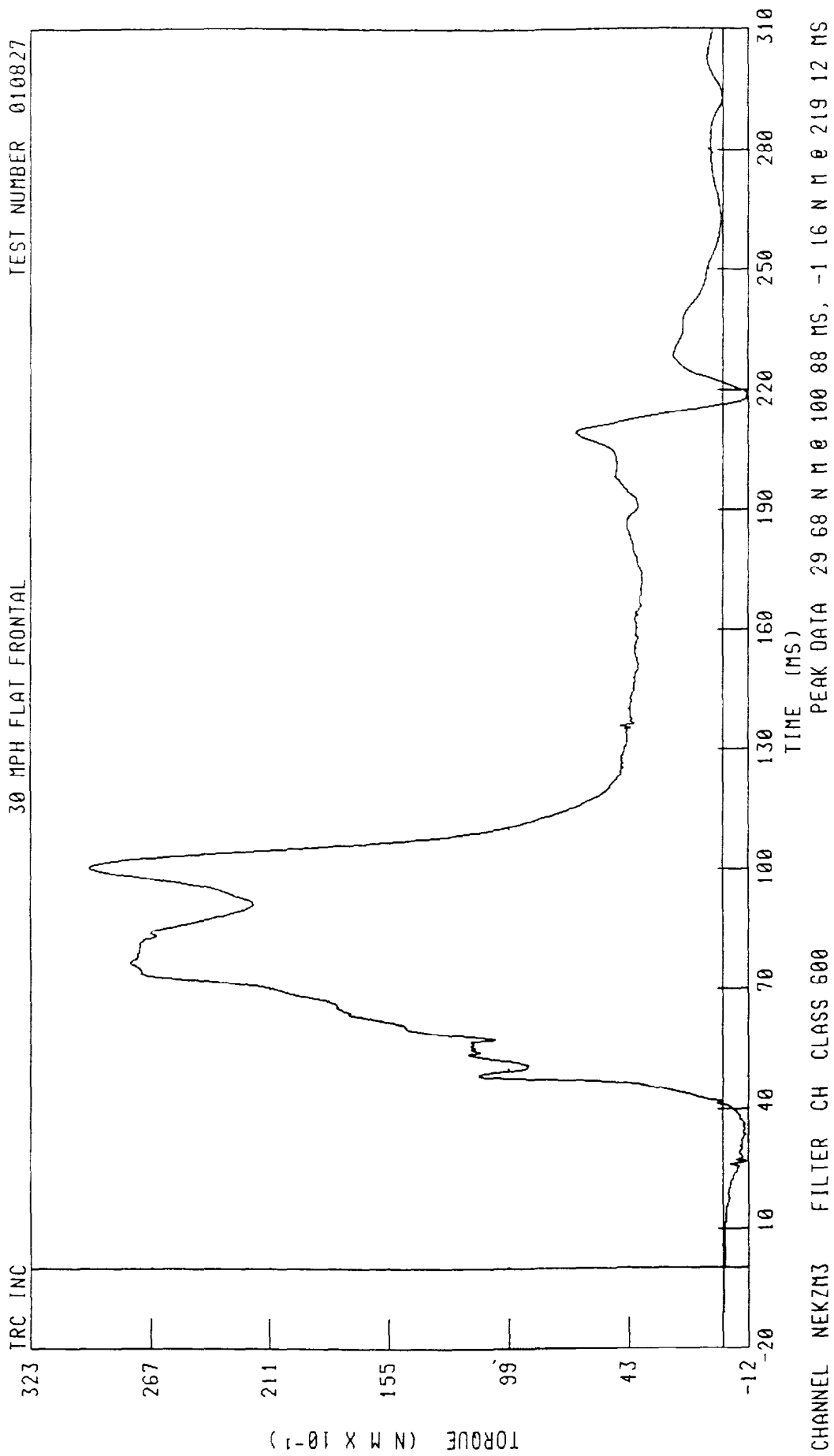
PEAK DATA 2 62 N M @ 196 88 MS, -28 61 N M @ 76 08 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
 RIGHT REAR PASSENGER NECK MOMENT ABOUT Y AXIS

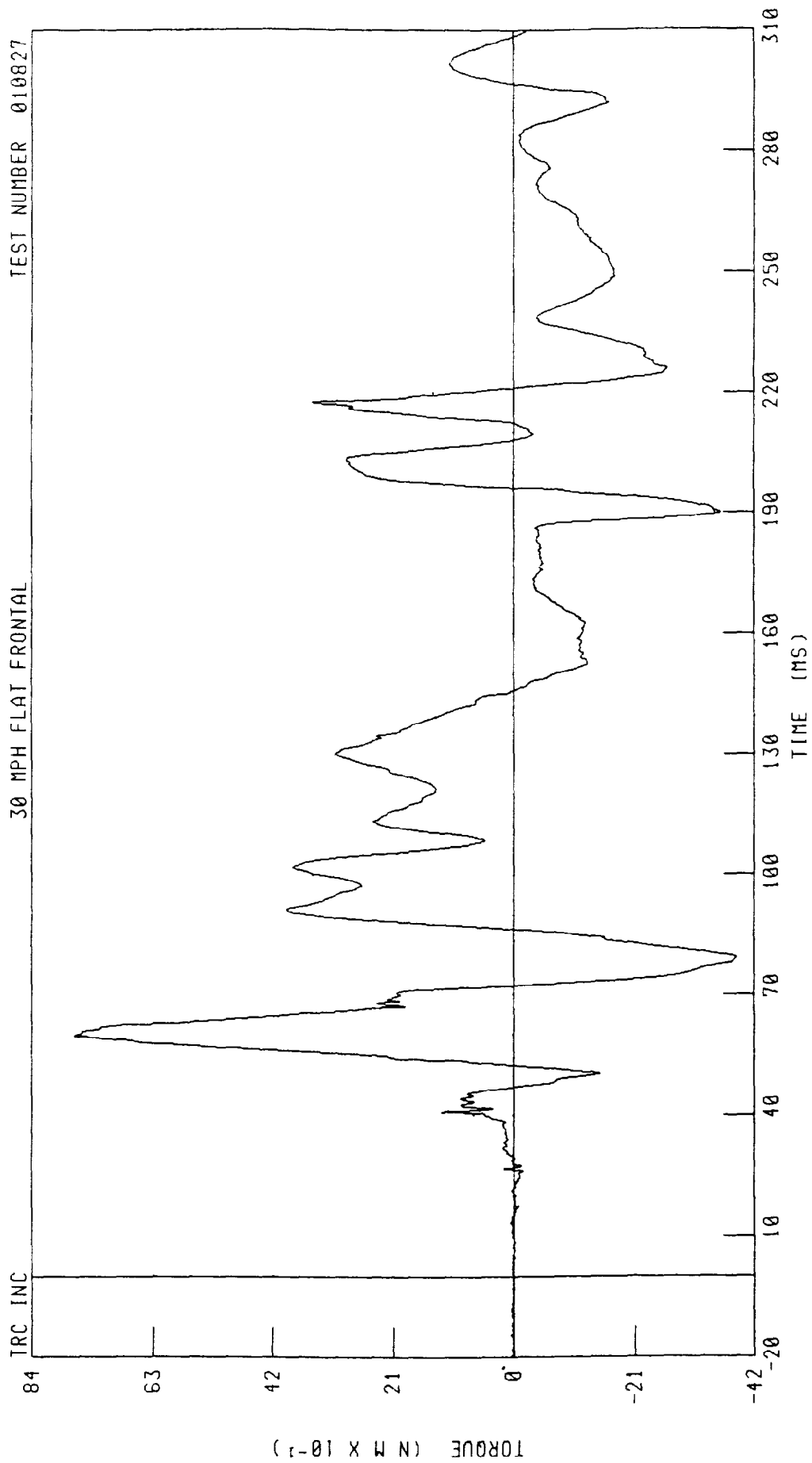


CHANNEL NEKYM3 FILTER CH CLASS 600

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
RIGHT REAR PASSENGER NECK MOMENT ABOUT Z AXIS



2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
RIGHT REAR PASSENGER NECK OCCIPITAL CONDYLE MOMENT ABOUT Y AXIS

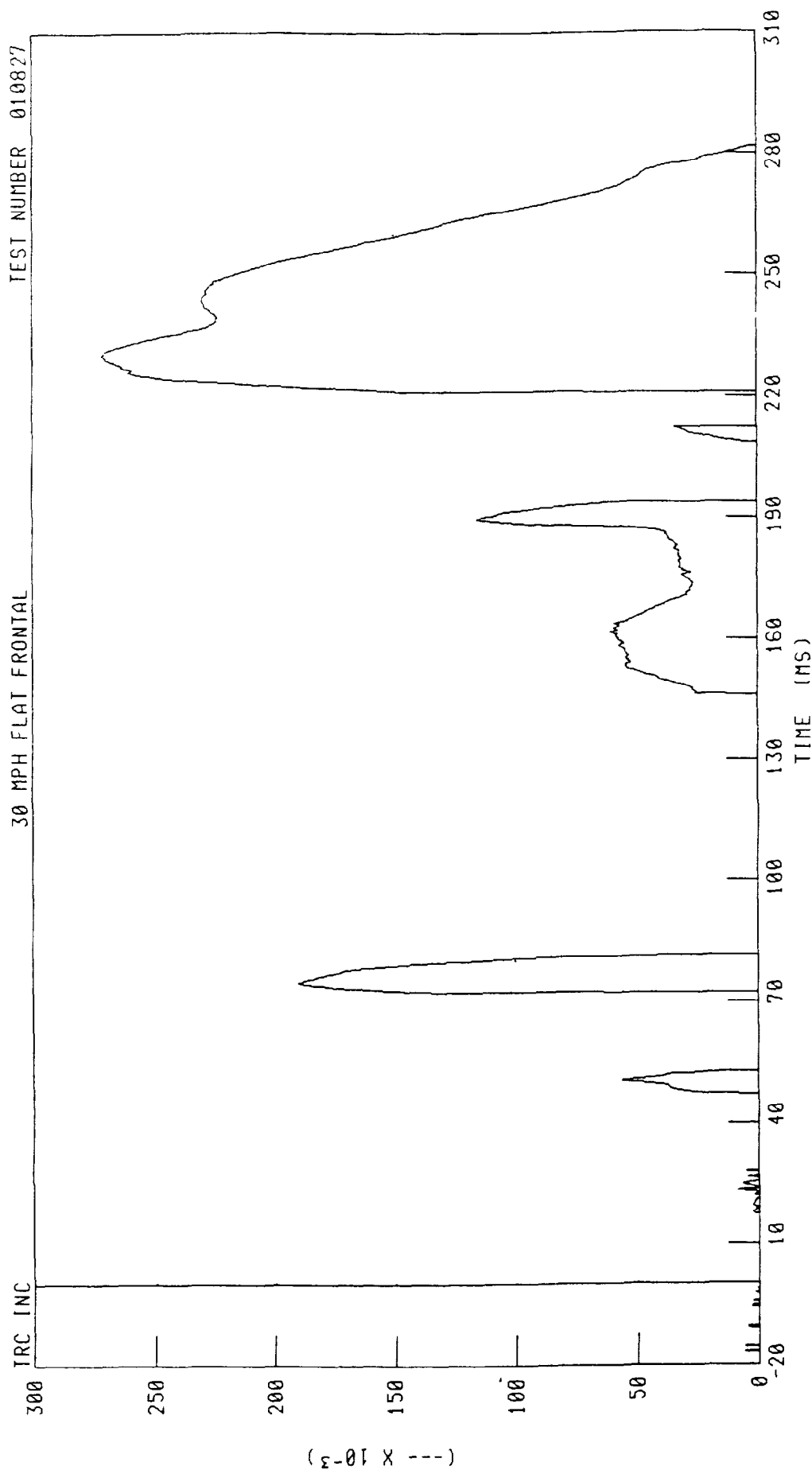


CHANNEL NEKOM3 FILTER CH CLASS 600

PEAK DATA 7 68 N M @ 60 00 MS, -3 89 N M @ 79 28 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
 RIGHT REAR PASSENGER NECK TENSION/EXTENSION
 30 MPH FLAT FRONTAL

TEST NUMBER 010827



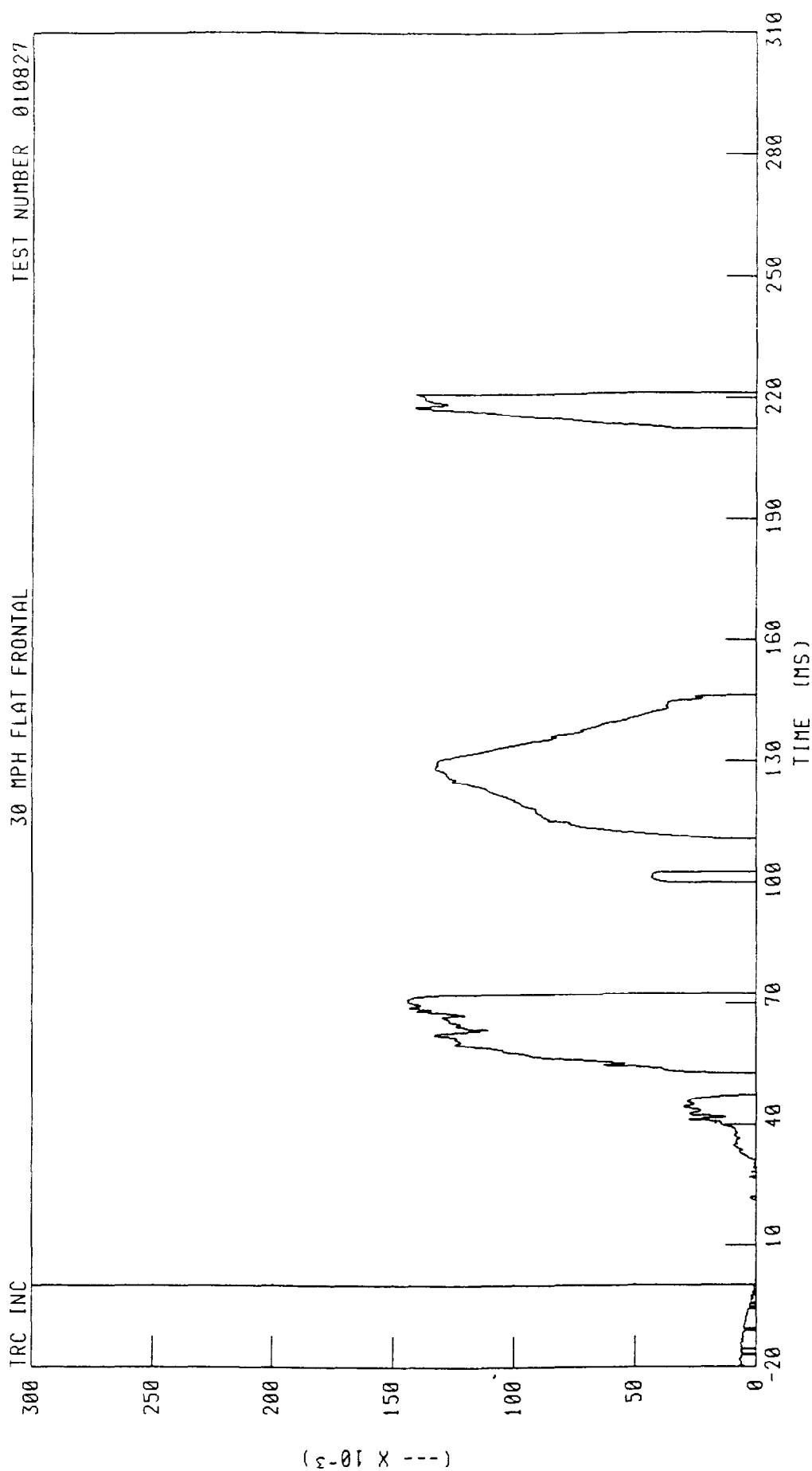
(--- X 10⁻³)

CHANNEL NTE3 FILTER CH CLASS 600

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
 RIGHT REAR PASSENGER NECK TENSION/FLEXION

TEST NUMBER 010827

30 MPH FLAT FRONTAL



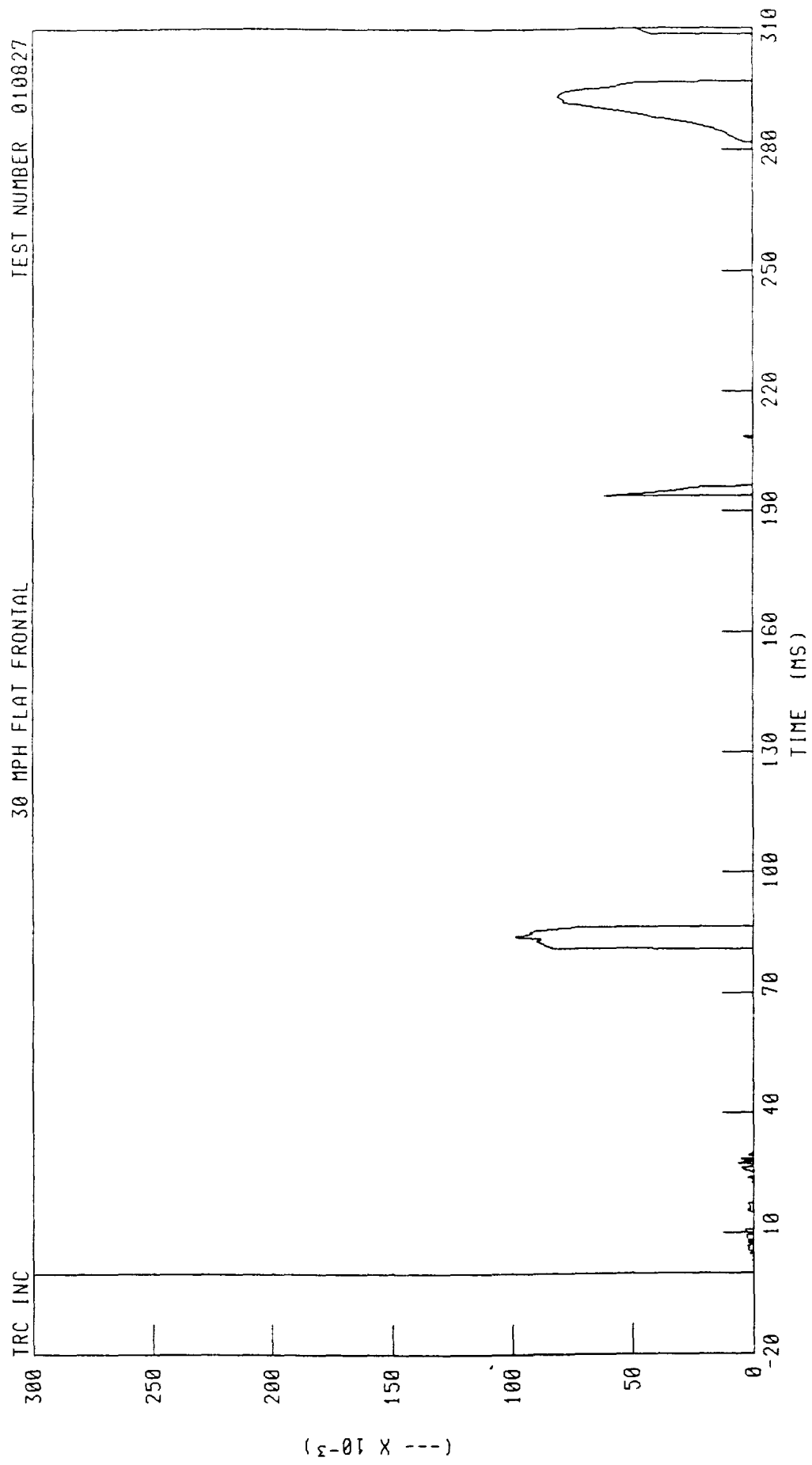
(--- X 10⁻³)

PEAK DATA 0 14 --- 0 71 04 MS, 0 00 --- 0 -16 88 MS

CHANNEL NTF3 FILTER CH CLASS 600

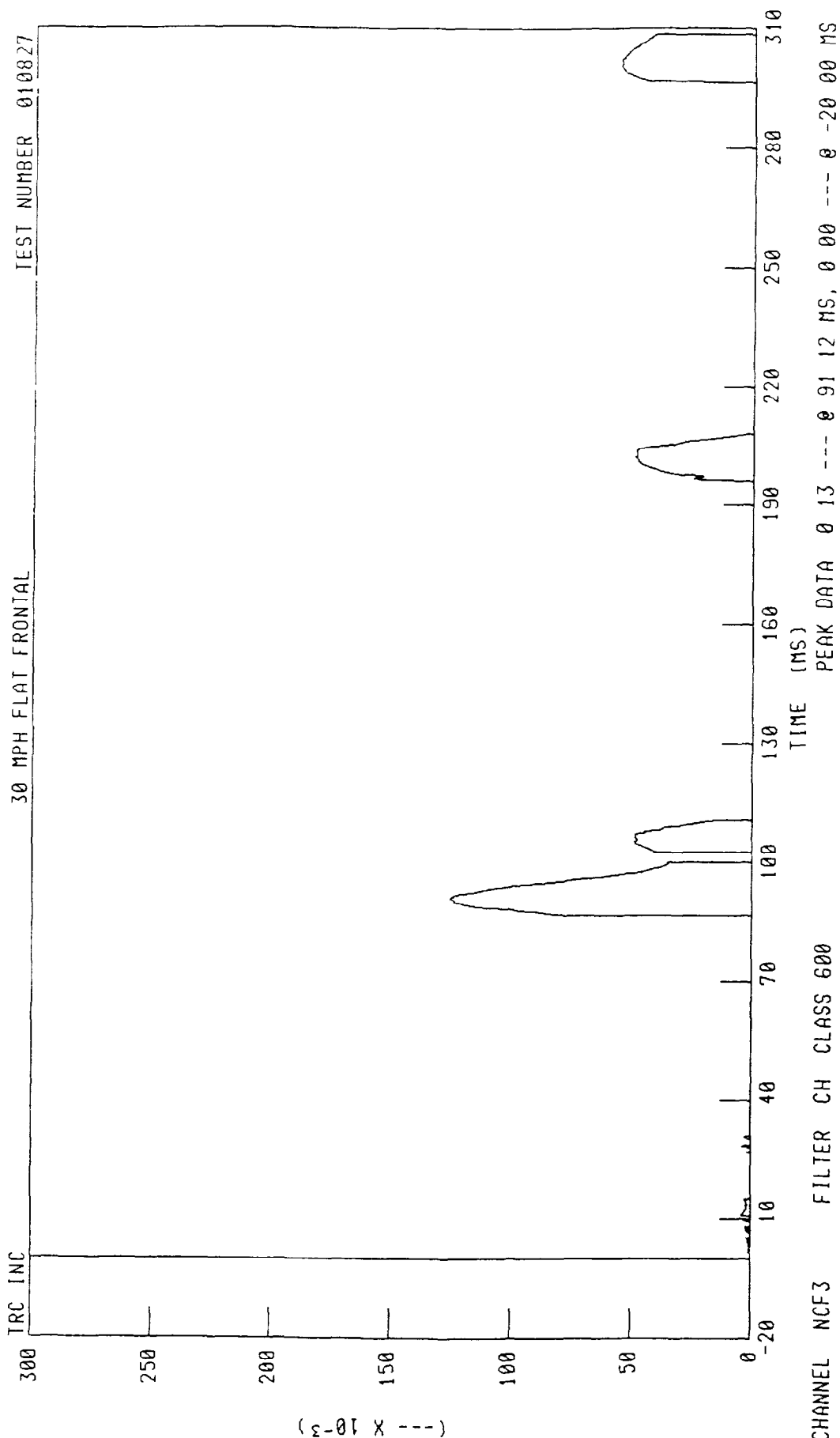
2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
 RIGHT REAR PASSENGER NECK COMPRESSION/EXTENSION
 30 MPH FLAT FRONTAL

TEST NUMBER 010827



CHANNEL NCE3 FILTER CH CLASS 600 PEAK DATA 0 10 --- 0 84 40 MS, 0 00 --- 0 -20 00 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
 RIGHT REAR PASSENGER NECK COMPRESSION/FLEXION

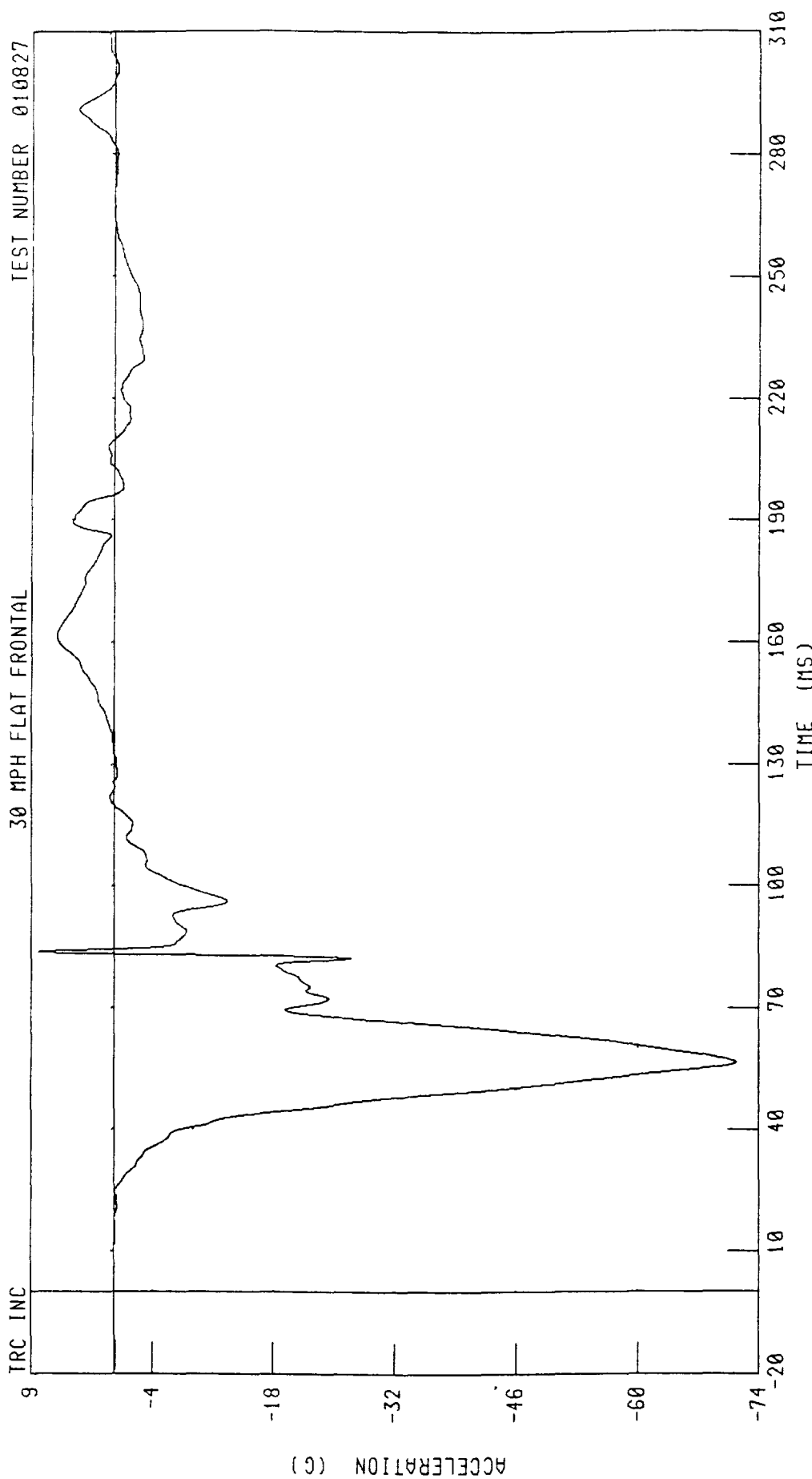


2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

RIGHT REAR PASSENGER CHEST X-AXIS ACCELERATION

30 MPH FLAT FRONTAL

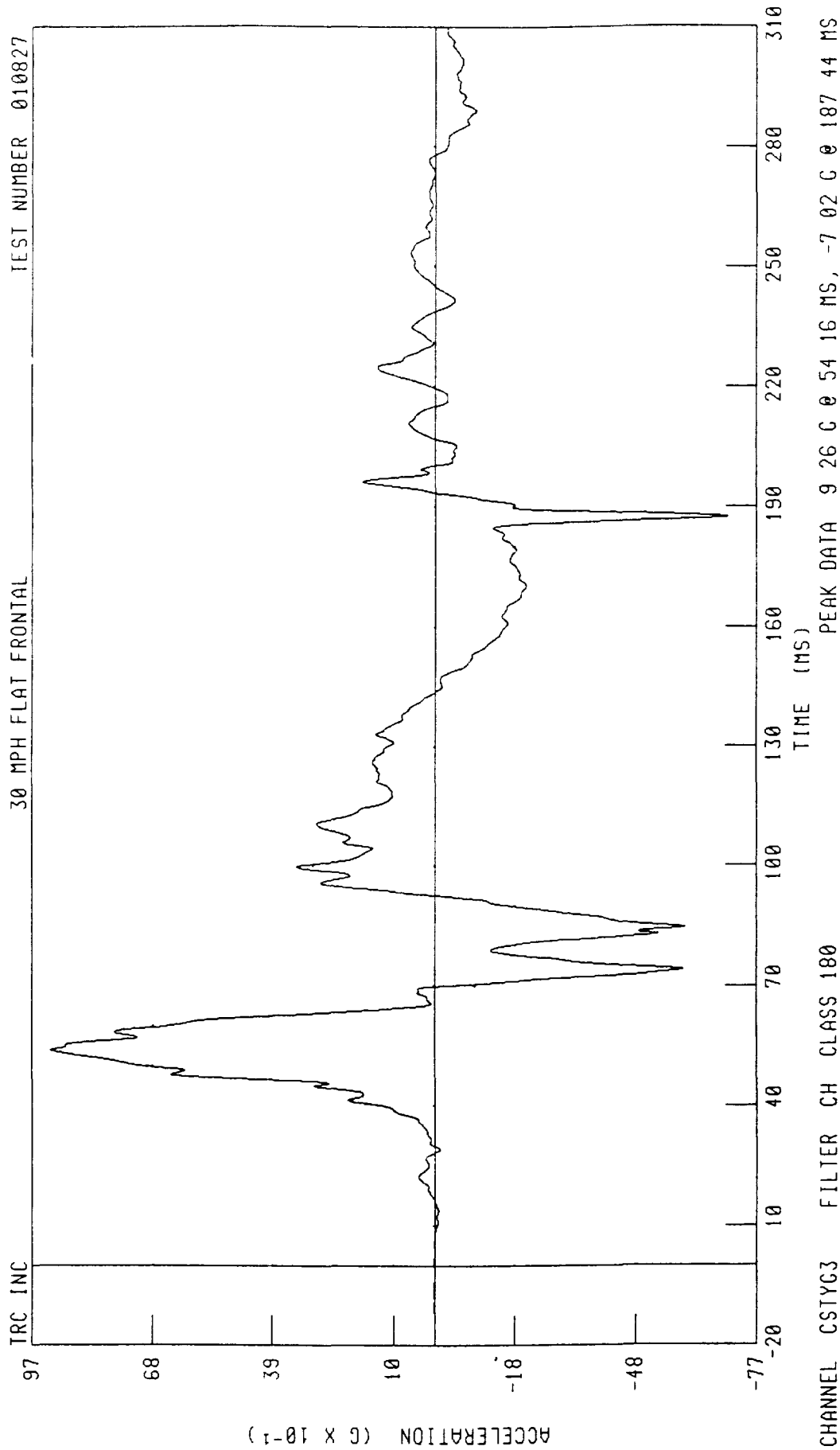
TEST NUMBER 010827



CHANNEL CSTXC3 FILTER CH CLASS 180

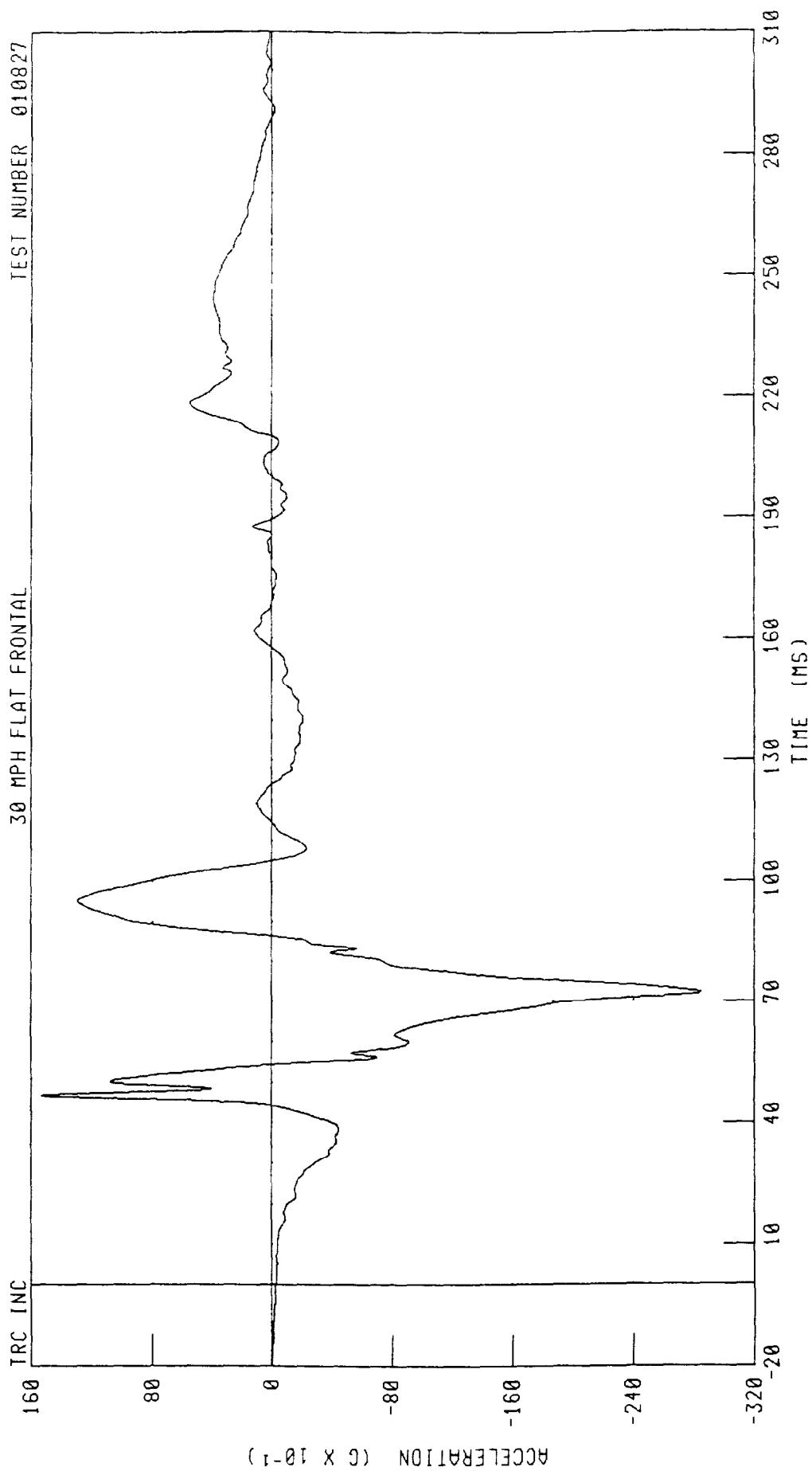
PEAK DATA 8 78 G @ 83 92 MS, -71 78 G @ 56 48 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
 RIGHT REAR PASSENGER CHEST Y-AXIS ACCELERATION



2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
RIGHT REAR PASSENGER CHEST Z-AXIS ACCELERATION
30 MPH FLAT FRONTAL

TEST NUMBER 010827



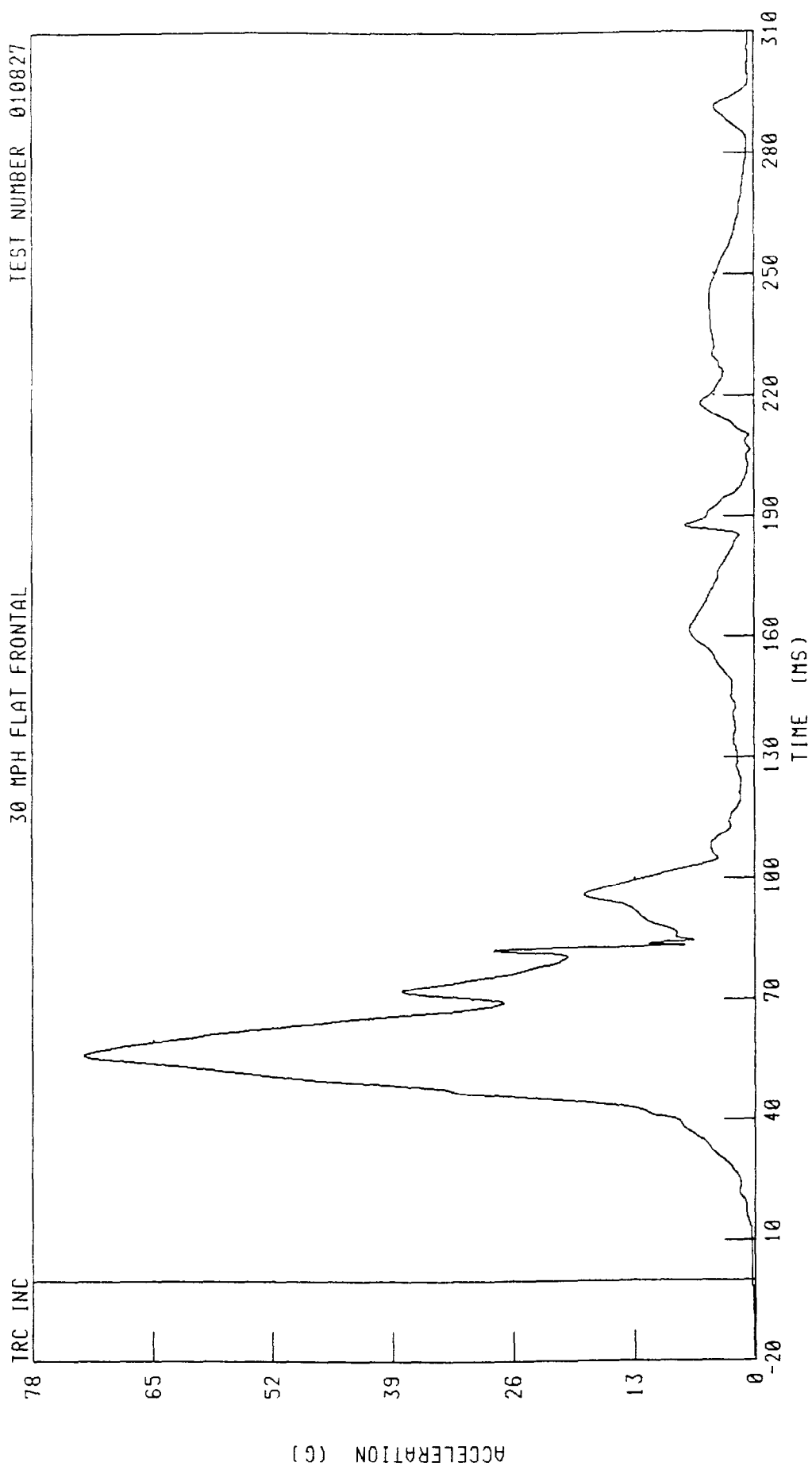
CHANNEL CSTZC3 FILTER CH CLASS 180

PEAK DATA 15 36 G @ 46 88 MS, -28 47 G @ 72 24 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
RIGHT REAR PASSENGER CHEST RESULTANT ACCELERATION

TEST NUMBER 010827

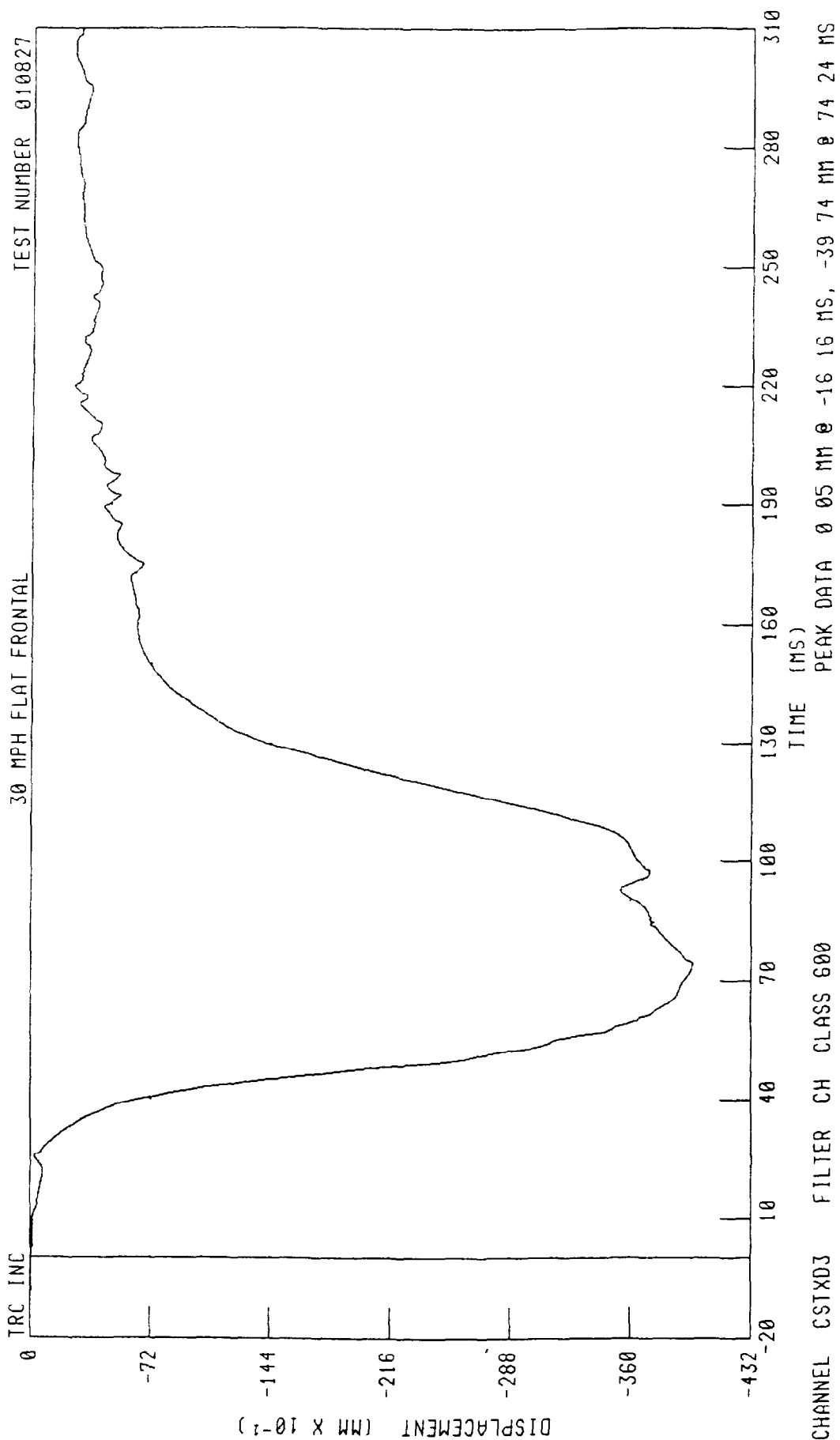
30 MPH FLAT FRONTAL



PEAK DATA 72 55 C @ 56 40 MS, 0 00 C @ -20 00 MS

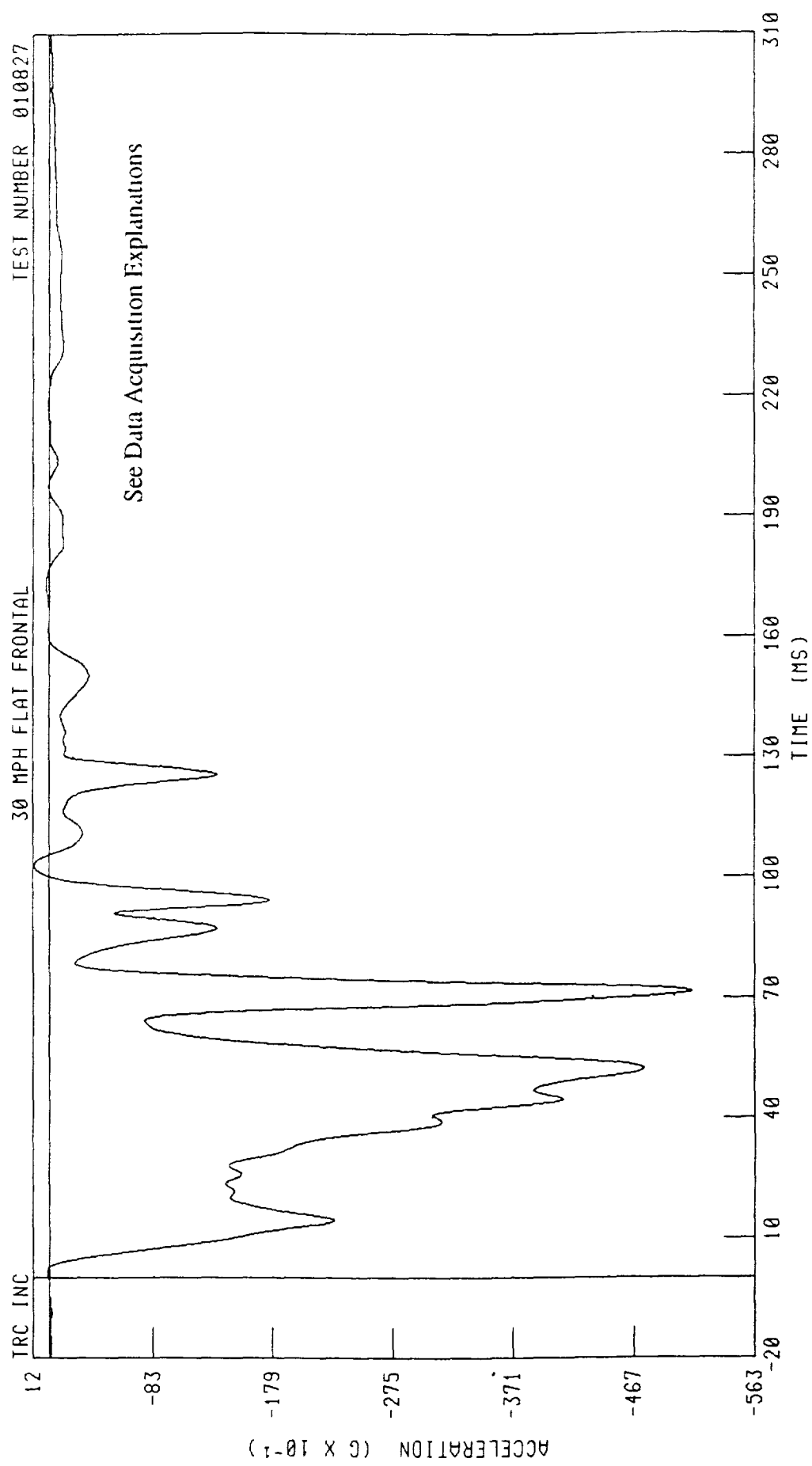
CHANNEL CSTRG3 FILTER CH CLASS 180

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
 RIGHT REAR PASSENGER CHEST DEFLECTION



2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
 VEHICLE CENTER OF GRAVITY X-AXIS ACCELERATION
 30 MPH FLAT FRONTAL

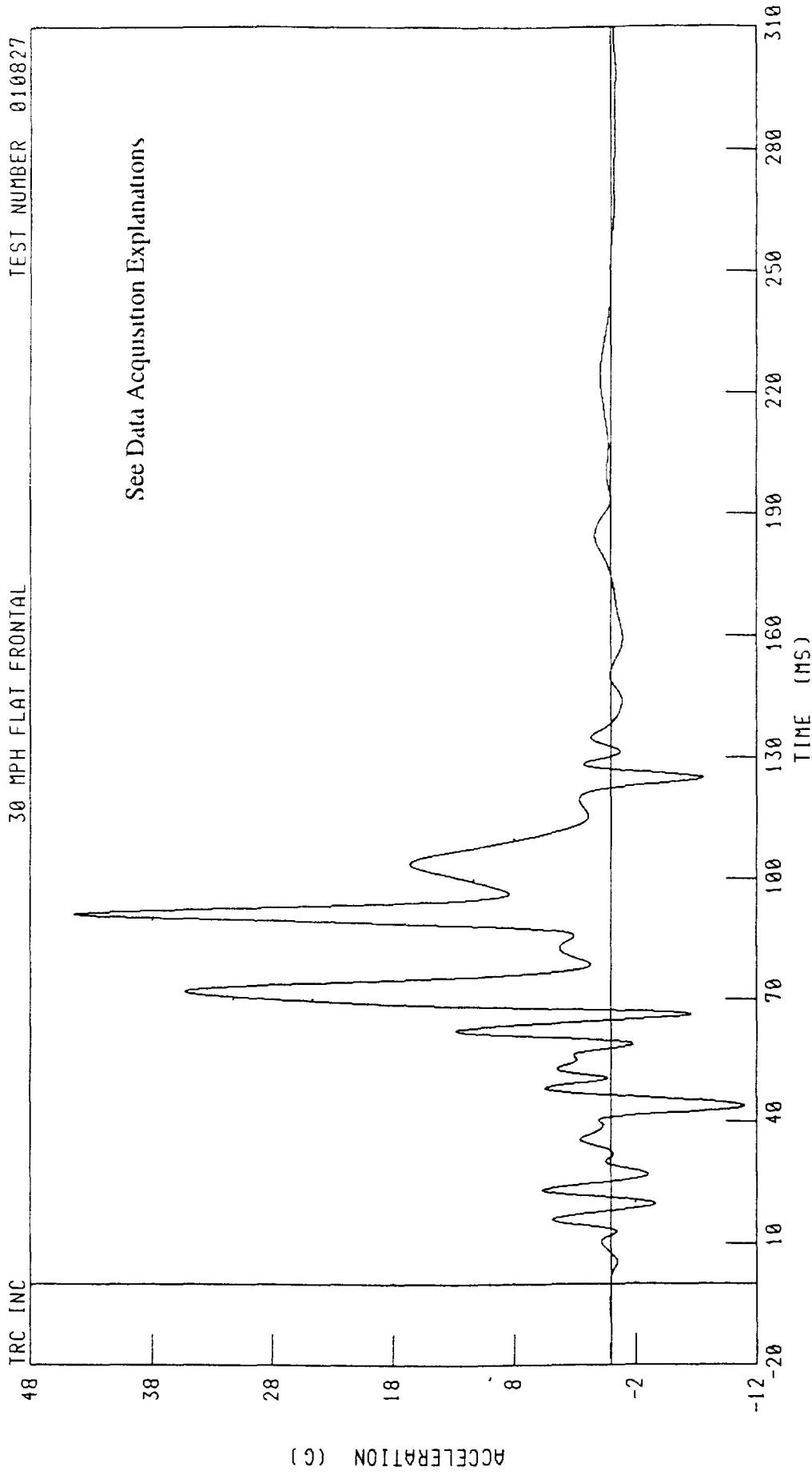
TEST NUMBER 010827



CHANNEL VCCXG1 FILTER CH CLASS 60 PEAK DATA 1 22 C 0 103 12 MS, -51 37 C 0 71 44 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
 VEHICLE CENTER OF GRAVITY Y-AXIS ACCELERATION
 30 MPH FLAT FRONTAL

TEST NUMBER 010827



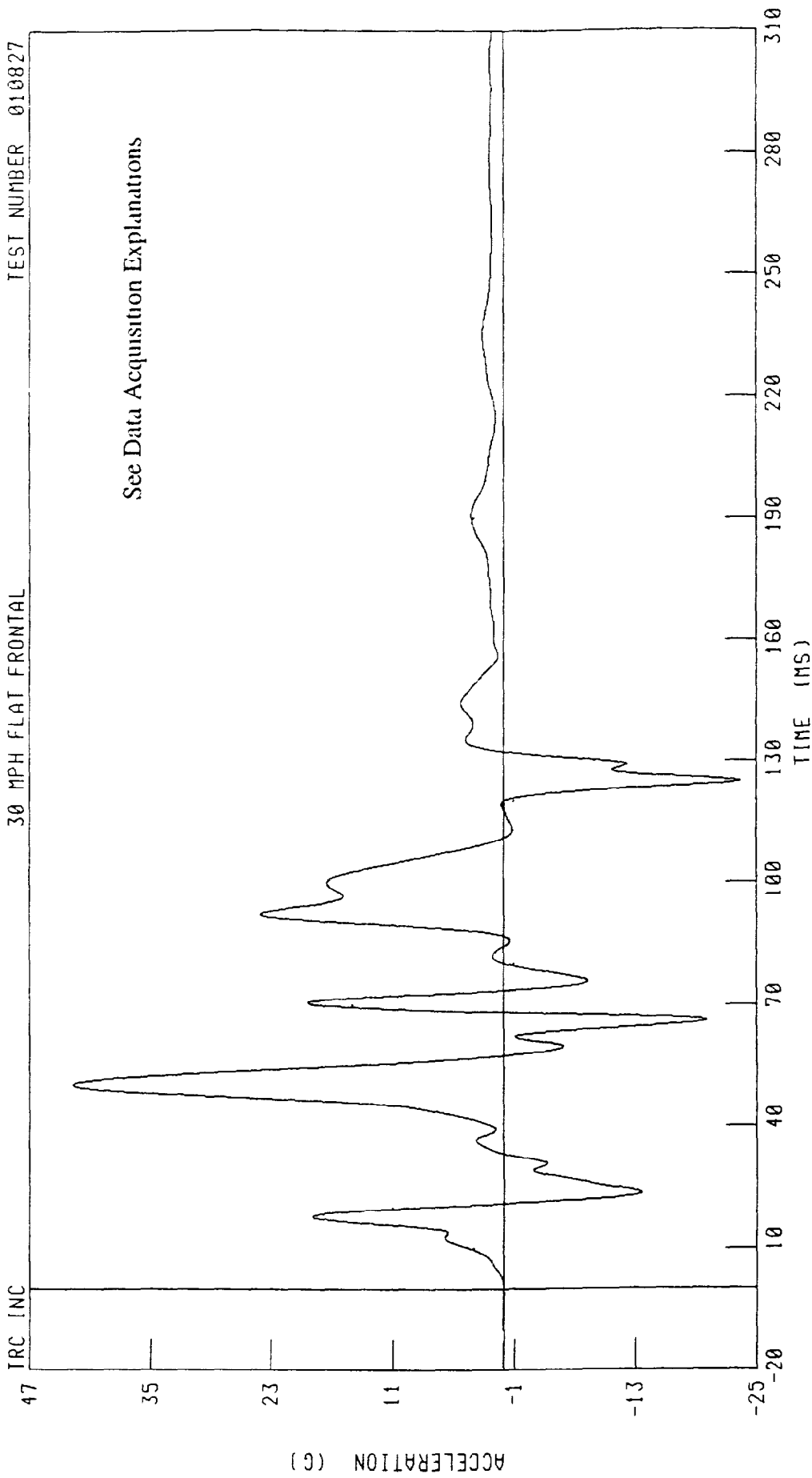
PEAK DATA 44 43 G 0 91 52 MS, -11 03 G 0 43 76 MS

CHANNEL VCCYG1 FILTER CH CLASS 60

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
 VEHICLE CENTER OF GRAVITY Z-AXIS ACCELERATION
 30 MPH FLAT FRONTAL

IRC INC

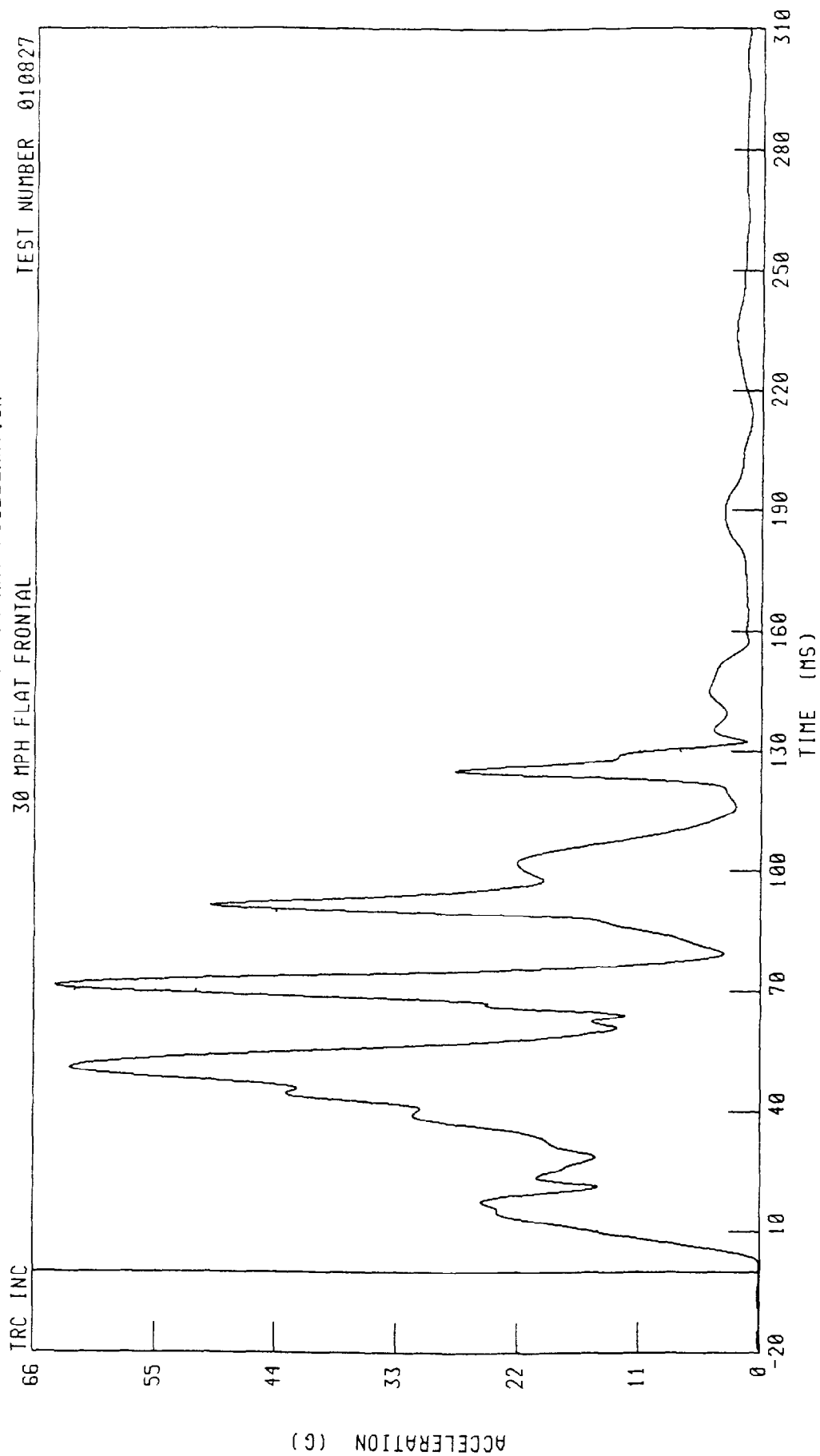
TEST NUMBER 010827



CHANNEL VCC7C1 FILTER CH CLASS 60

PEAK DATA 42 74 G 50 32 MS, -23 42 G 125 12 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
VEHICLE CENTER OF GRAVITY RESULTANT ACCELERATION



CHANNEL VCCRG1 FILTER CH CLASS 60

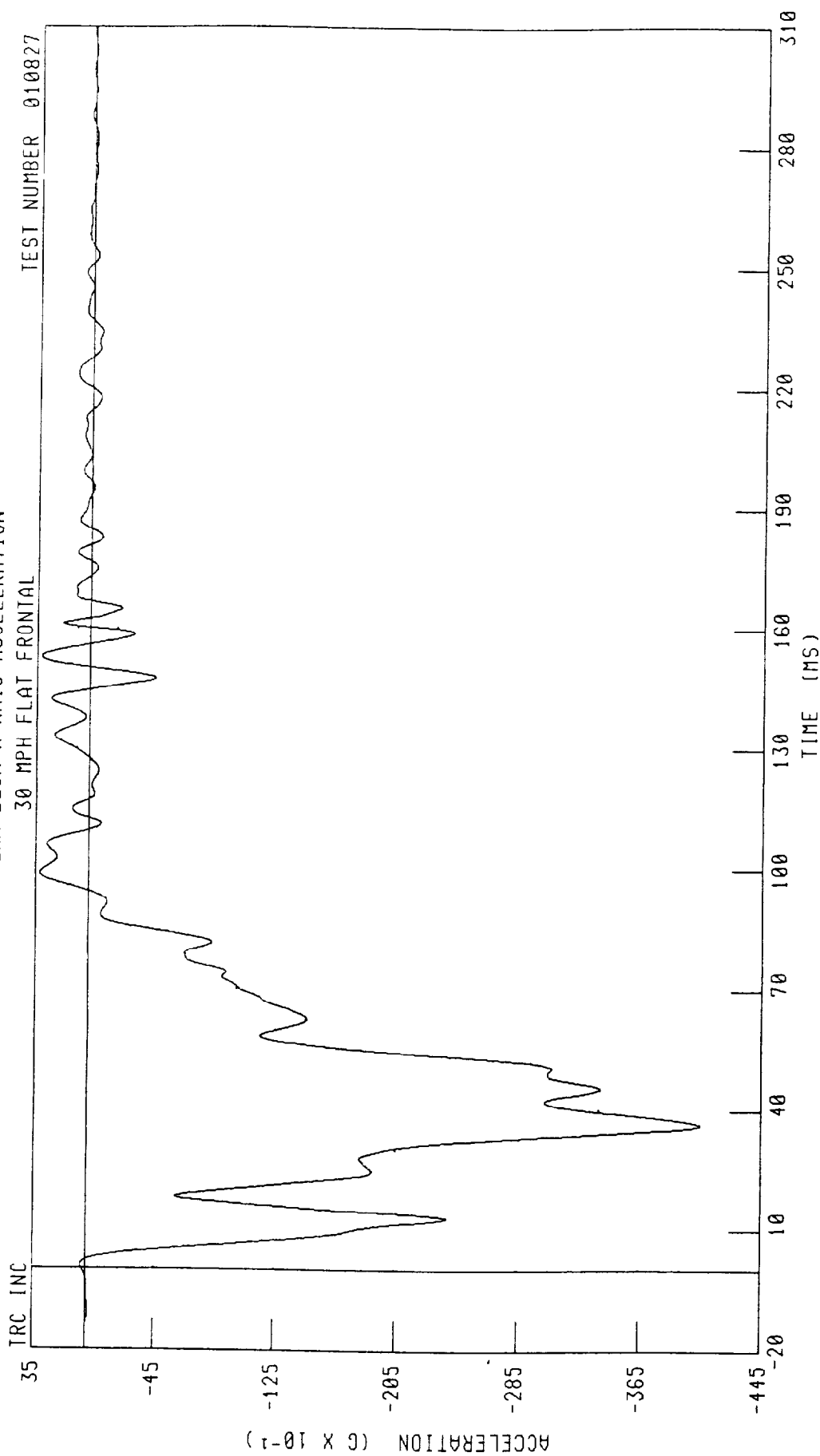
PEAK DATA 64 13 G @ 71 52 MS, 0 03 G @ -20 00 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

REAR DECK X-AXIS ACCELERATION

30 MPH FLAT FRONTAL

TEST NUMBER 010827



CHANNEL RDXG1 FILTER CH CLASS 60

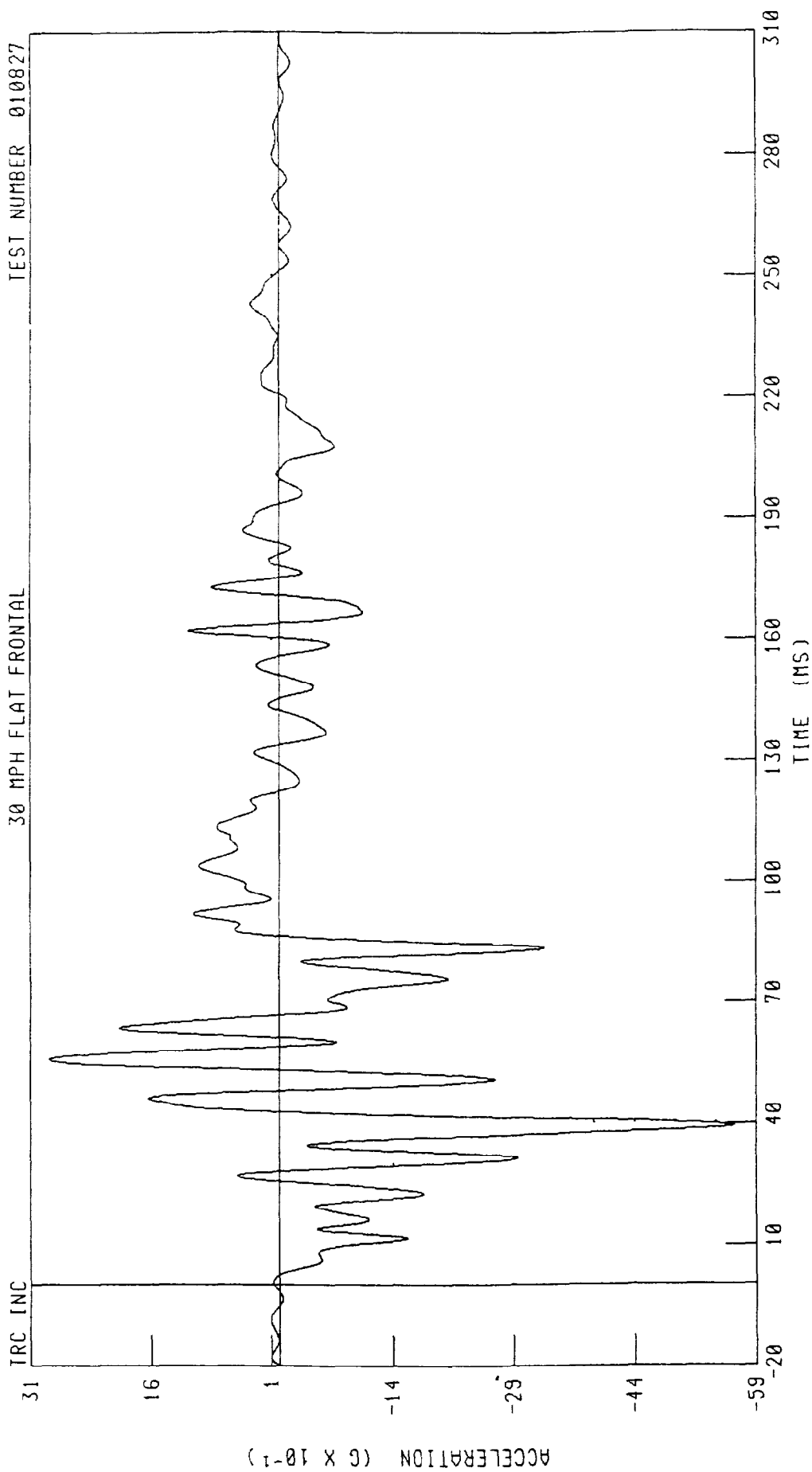
PEAK DATA 3 25 G 0 99 04 MS, -40 54 G 0 36 32 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

REAR DECK Y-AXIS ACCELERATION

30 MPH FLAT FRONTAL

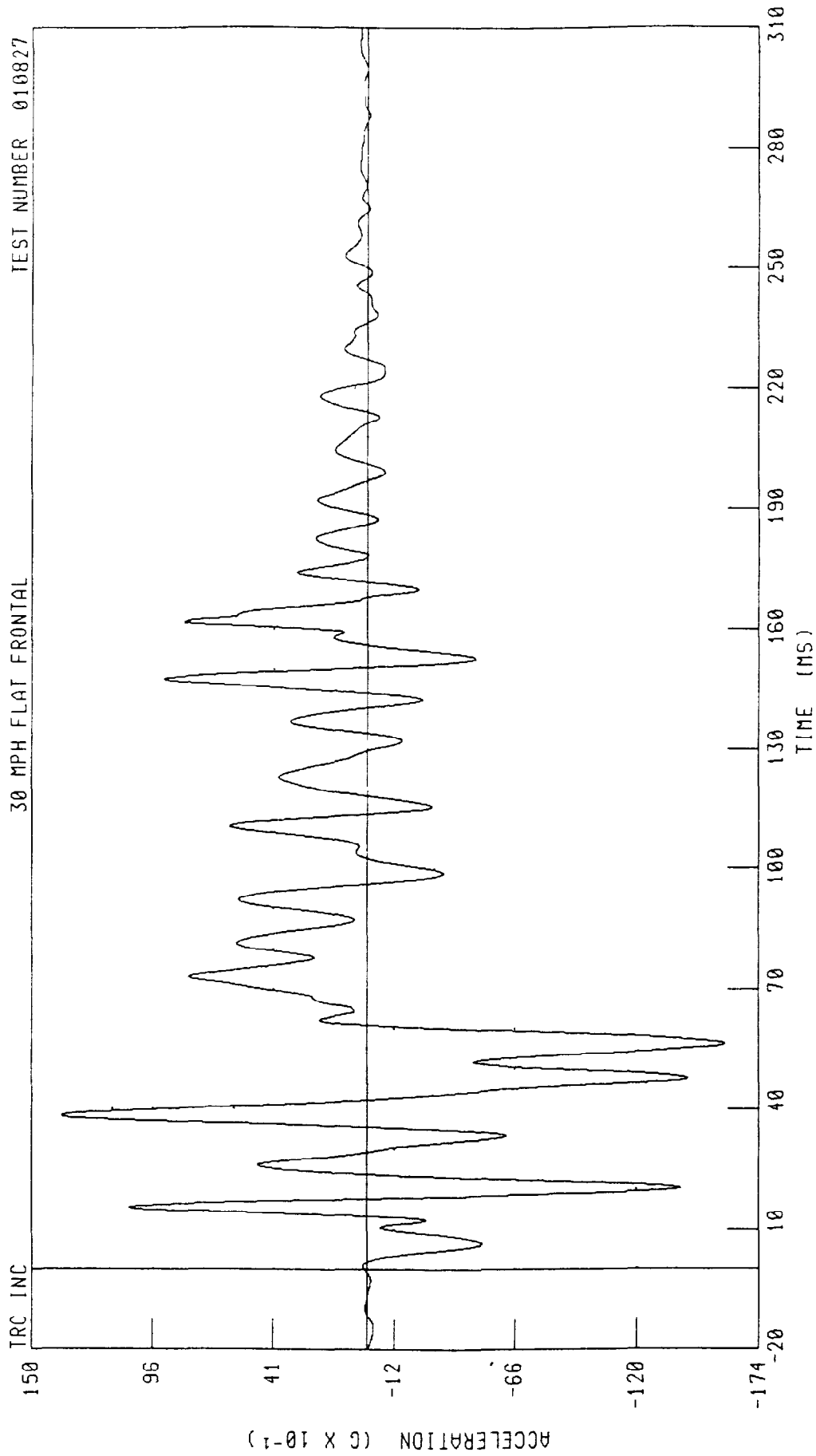
TEST NUMBER 010827



CHANNEL RDKYC1 FILTER CH CLASS 60

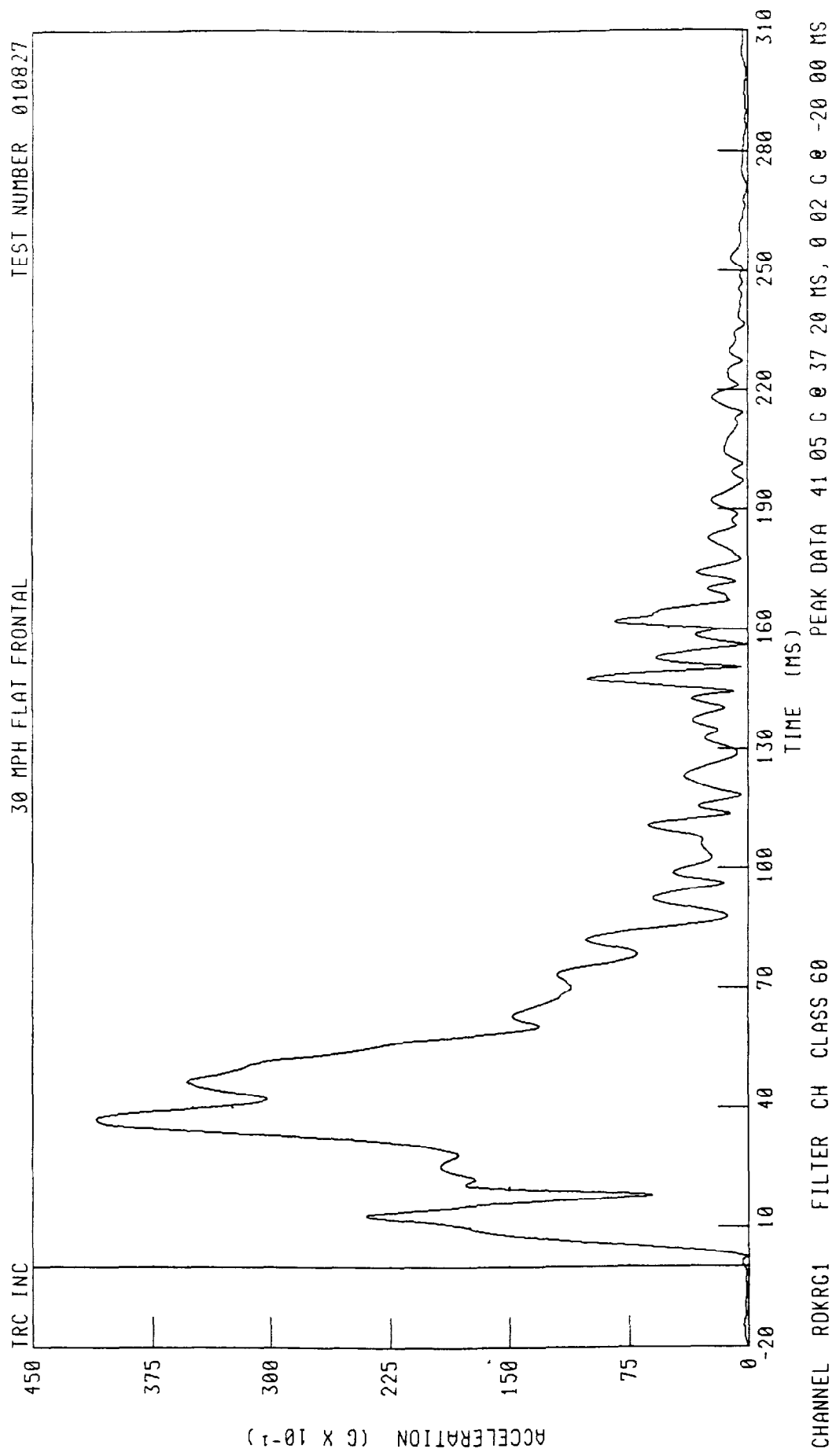
PEAK DATA 2 87 G @ 55 92 MS, -5 63 G @ 39 36 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
 REAR DECK Z-AXIS ACCELERATION



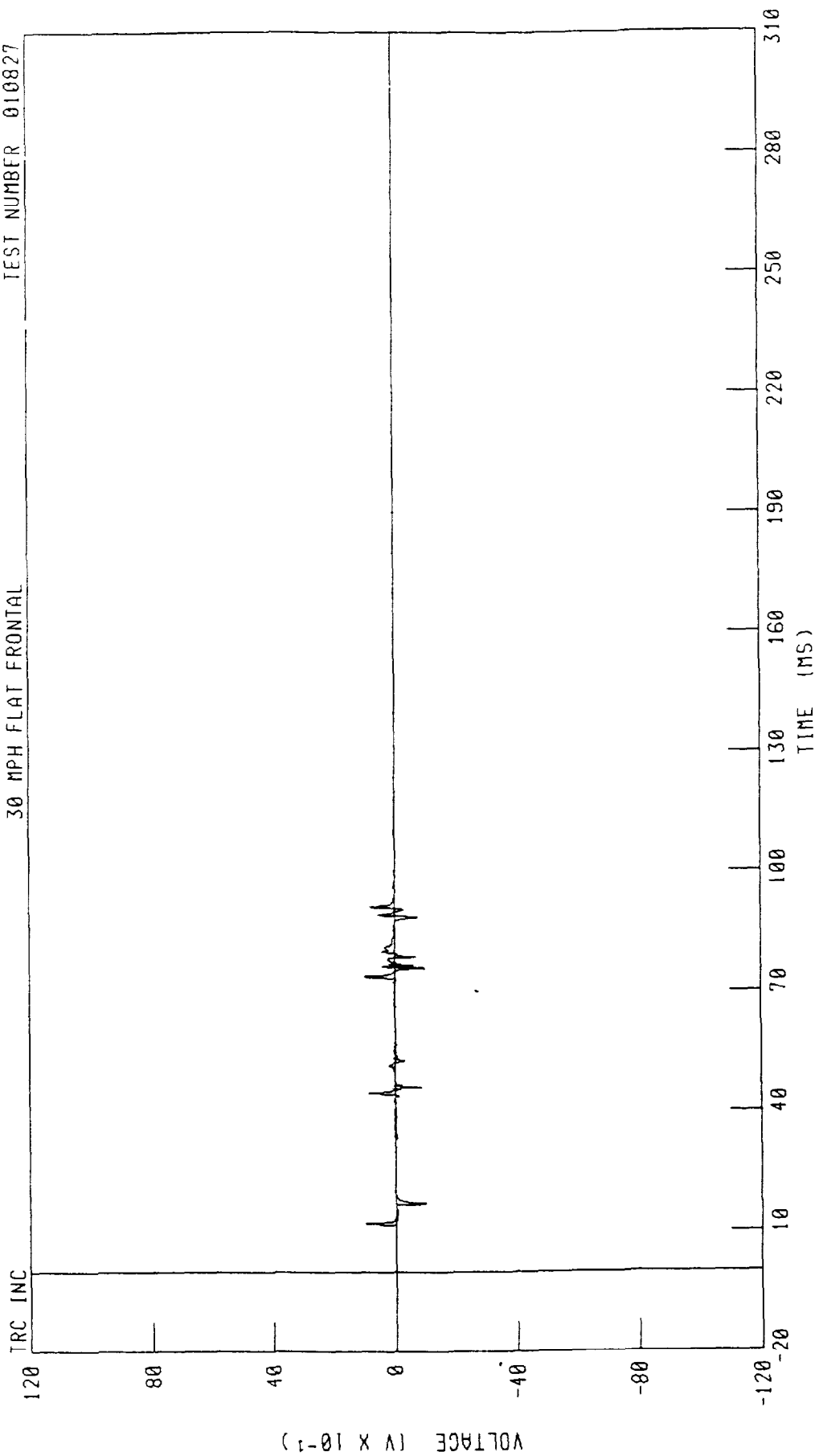
CHANNEL ROKZC1 FILTER CH CLASS 60 PEAK DATA 13 70 C 0 38 48 MS, -15 91 C 0 56 32 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
REAR DECK RESULTANT ACCELERATION



2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
DRIVER AIRBAG EVENT PRIMARY
30 MPH FLAT FRONTAL

TEST NUMBER 010827

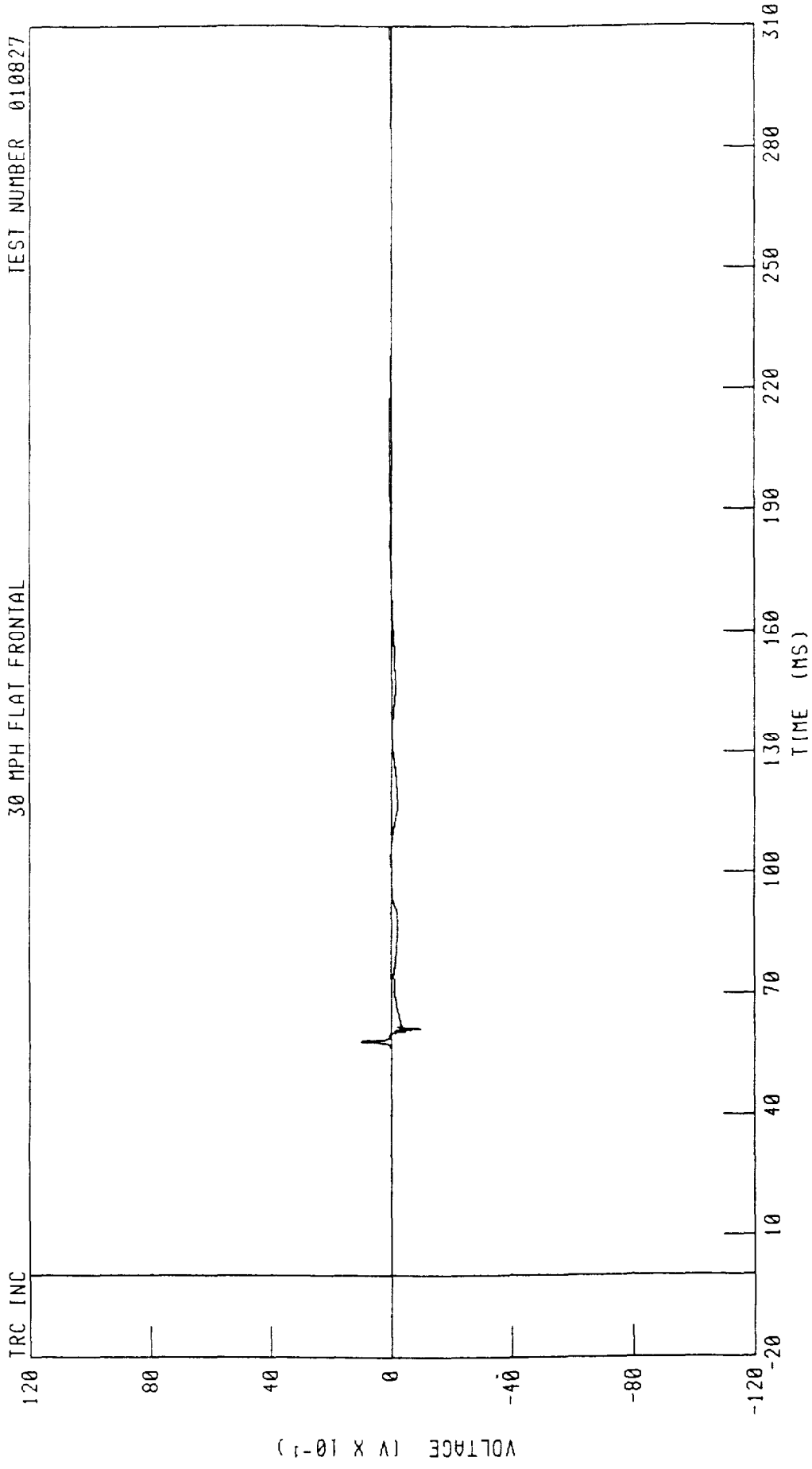


PEAK DATA 1 00 V @ 12 00 MS, -1 00 V @ 16 96 MS

CHANNEL DABET1 FILTER CH CLASS 1000

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
DRIVER AIRBAG EVENT SECONDARY
30 MPH FLAT FRONTAL

TEST NUMBER 010827



CHANNEL DABET2 FILTER CH CLASS 1000

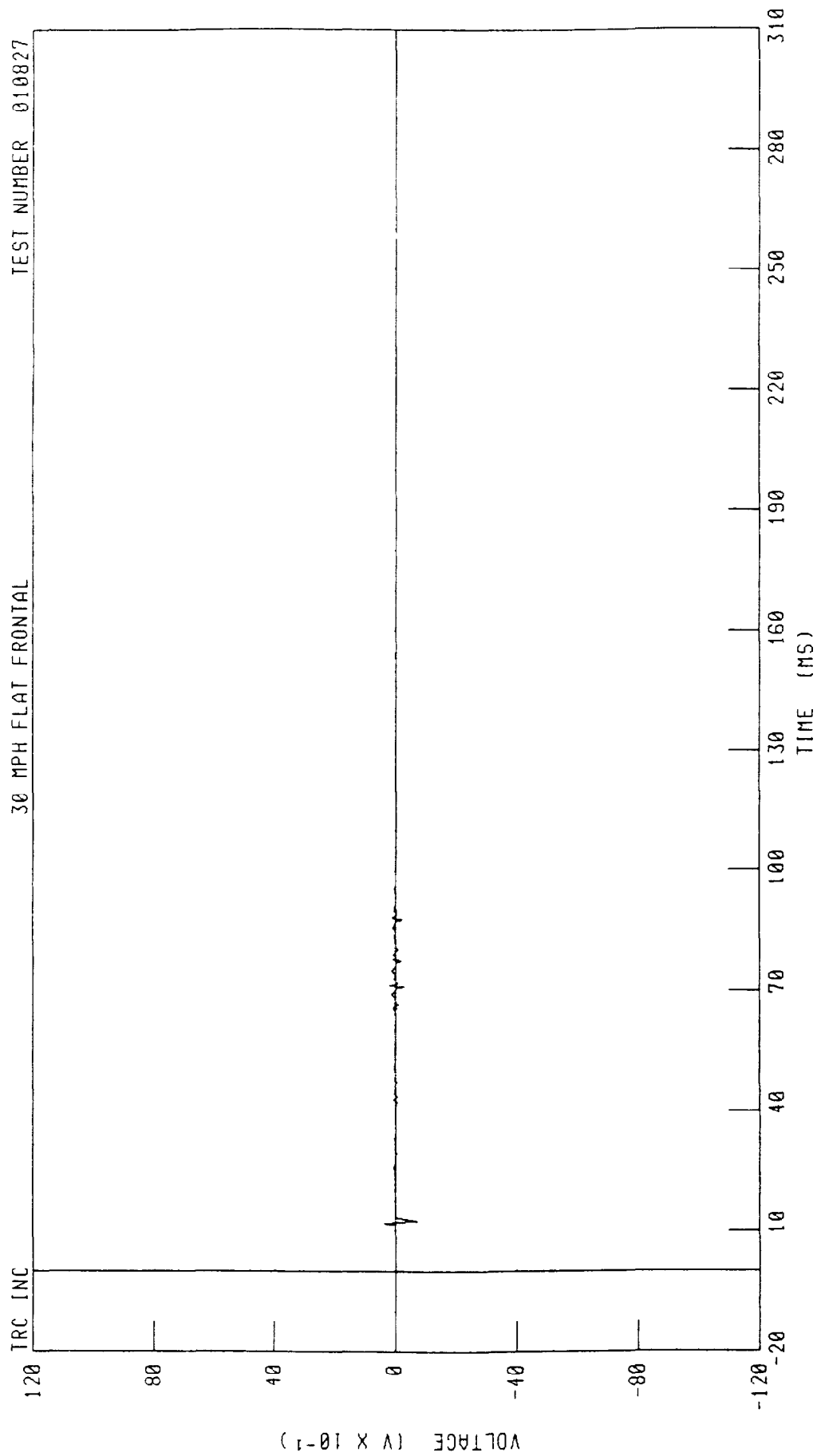
PEAK DATA 1 00 V @ 58 00 MS, -1 00 V @ 61 28 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH

PASSENGER AIRBAG EVENT PRIMARY

30 MPH FLAT FRONTAL

TEST NUMBER 010827

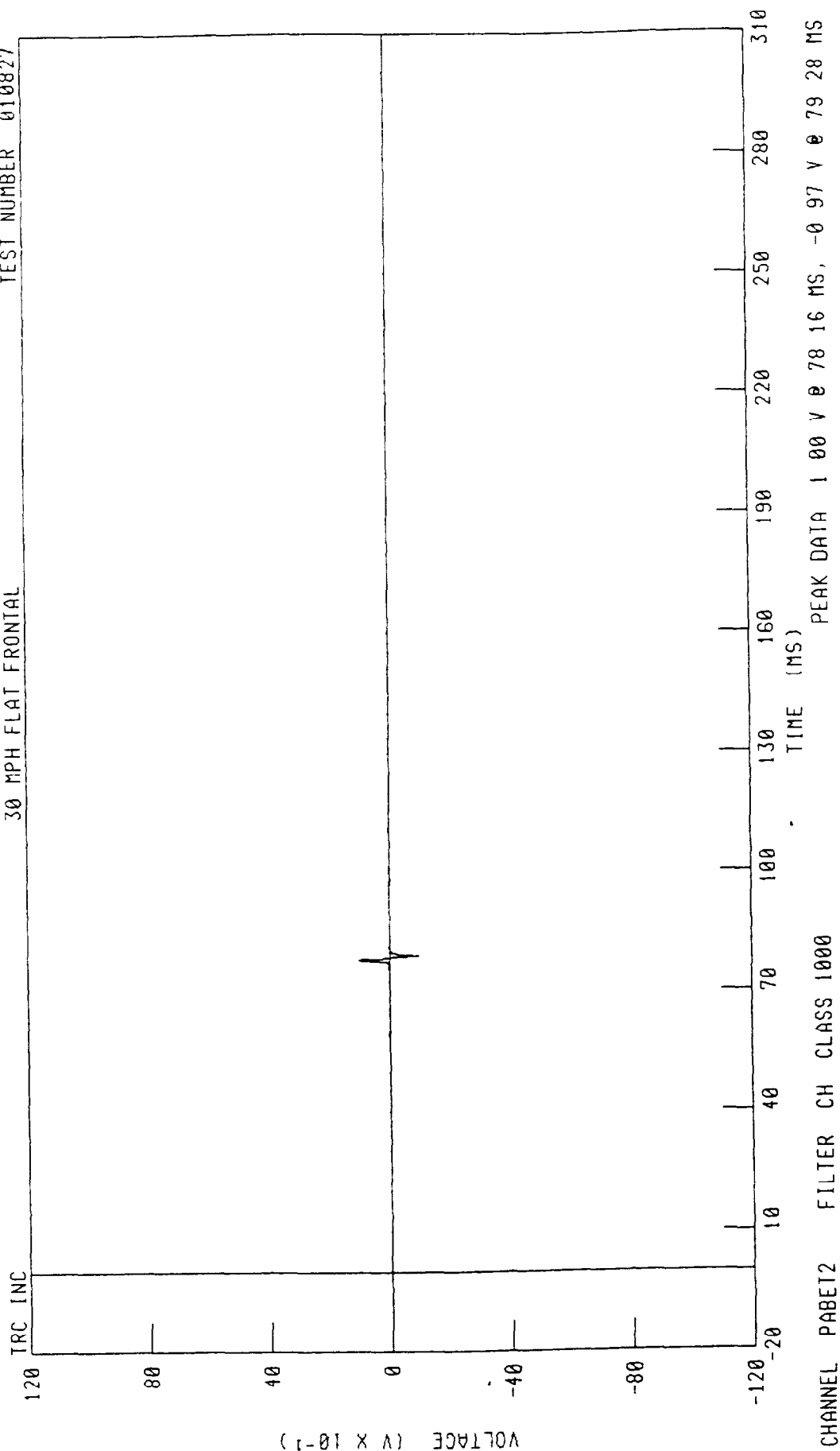


CHANNEL PABET1 FILTER CH CLASS 1000

PEAK DATA 0 37 V @ 11 92 MS, -0 72 V @ 12 56 MS

2001 FORD ESCAPE INTO FLAT FRONTAL BARRIER AT 30 MPH
PASSENGER AIRBAG EVENT SECONDARY
30 MPH FLAT FRONTAL

TEST NUMBER 010827



Appendix C

Dummy Configuration and Performance Verification Data

Pre-Test Dummy Configuration and Performance Verification Data

Driver Dummy S/N 416

TRANSPORTATION RESEARCH CENTER INC
HYBRID III SMALL FEMALE EXTERNAL DIMENSIONS
SN: 416 MFG:FTSS

DATE: 21-Aug-01

TRC INC. TEST NO: 416C10ED1 5720 SN416EXT. DIMENSION CAL10

TEST PARAMETER	DIMEN.	SPECIFICATION	TEST RESULTS
Total Sitting Height	A	774 7 - 800 1 MM	784 86 MM
Shoulder Pivot Height	B	431 8 - 457 2 MM	444 5 MM
Hip Pivot Height	C	81 3 - 86 3 MM	86 36 MM
Hip Pivot from Backline	D	144 8 - 149 8 MM	147 32 MM
Shoulder Pivot from Backline	E	68 6 - 83 8 MM	78 74 MM
Thigh Clearance	F	119 4 - 134 6 MM	124 46 MM
Back of Elbow to Wrist Pivot	G	243 9 - 259 1 MM	254 MM
Head Back from Backline	H	40 7 - 45 7 MM	45 72 MM
Shoulder to Elbow Length	I	276 8 - 297 2 MM	284 48 MM
Elbow Rest Height	J	182 8 - 203 2 MM	187 96 MM
Buttock to Knee Length	K	520 7 - 546 1 MM	541 02 MM
Popliteal Height	L	355 6 - 376 MM	370 84 MM
Knee to Floor Height	M	393 7 - 419 1 MM	408 94 MM
Buttock Popliteal Length	N	414 - 439 4 MM	431 8 MM
Chest Depth	O	175 3 - 190 5 MM	180 34 MM
Foot Length	P	218 5 - 233 7 MM	228 6 MM
Buttock to Knee Pivot Length	R	457 2 - 482 6 MM	472 44 MM
Head Breadth	S	137 1 - 147 3 MM	142 24 MM
Head Depth	T	177 8 - 188 MM	185 42 MM
Hip Breadth	U	299 7 - 314 9 MM	307 34 MM
Shoulder Breadth	V	350 5 - 365 7 MM	353 06 MM
Foot Breadth	W	78 8 - 94 MM	88 9 MM
Head Circumference	X	528 3 - 548 7 MM	541 02 MM
Chest Circumference with Jacket	Y	850 9 - 881 3 MM	876 3 MM
Waist Circumference	Z	759 5 - 789 9 MM	777 24 MM
Ref Location for Chest Circumference	AA	299 7 - 309 9 MM	304 8 MM
Ref Location for Waist Circumference	BB	160 - 170 2 MM	165 1 MM

DUMMY MEETS SPECIFICATION

TECHNICIAN: J.P.M.

TRANSPORTATION RESEARCH CENTER INC.

HEAD DROP TEST

HYBRID III SMALL FEMALE

20-AUG-01

TRC INC.

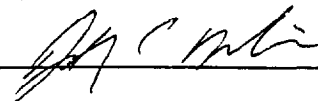
TEST NO: 416C10HD9

572 0 SN416 HEAD DROP CAL 10

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.1 DEG. C
RELATIVE HUMIDITY	10 - 70 %	65.0 %
PEAK RESULTANT ACCELERATION	250 - 300 G	254.51 G
PEAK LATERAL ACCELERATION	15 G MAX	7.73 G
IS ACCELERATION CURVE UNIMODAL?	YES	YES

TEST MEETS SPECIFICATIONS

TECHNICIAN



RUN NUMBER: 082001.1258;1

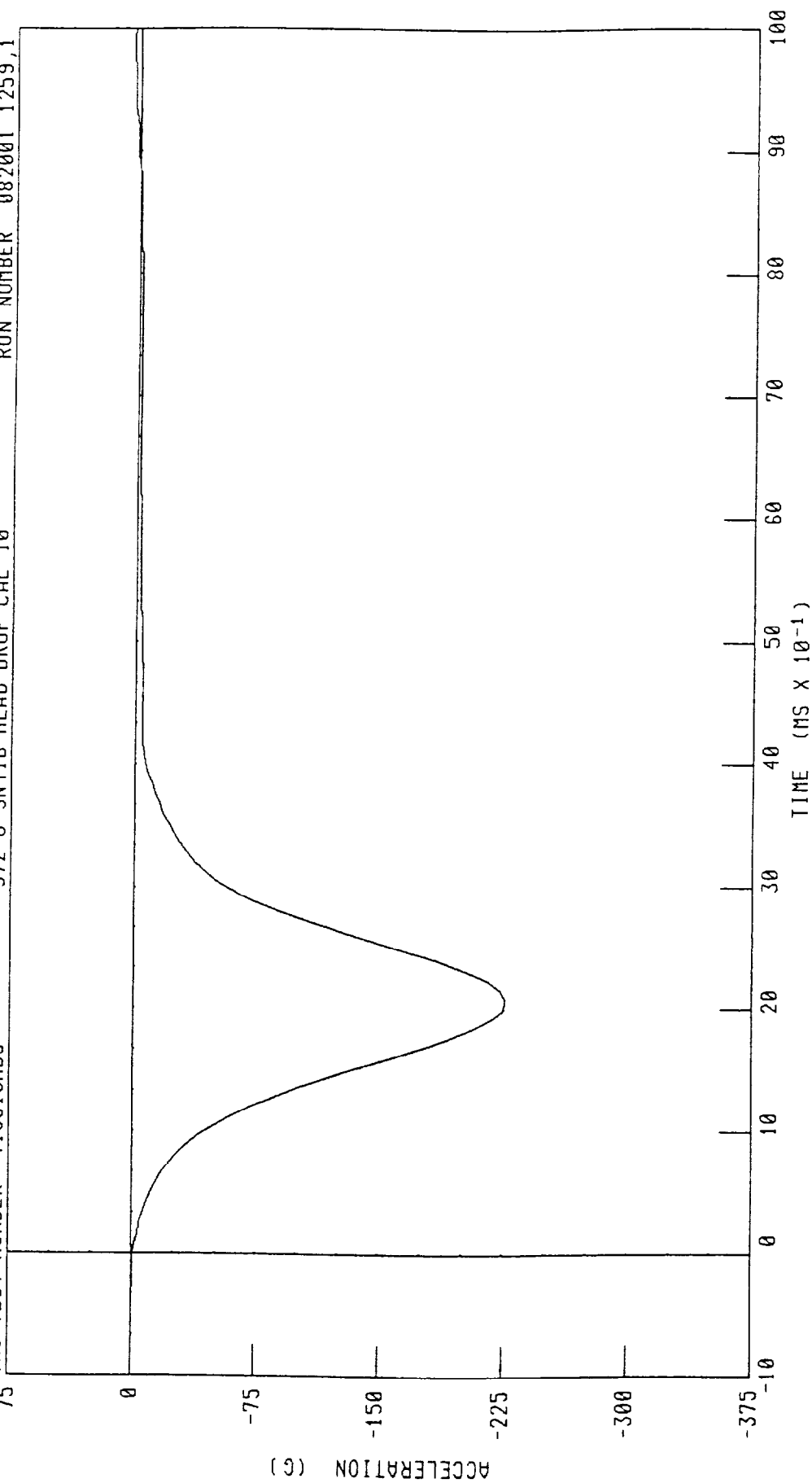
PART 572-0 HYBRID III SMALL FEMALE - HEAD CALIBRATION

HEAD ACCELERATION X AXIS

TRC TEST NUMBER 416C10HD9

572 0 SN416 HEAD DROP CAL 10

RUN NUMBER 082001 1259,1



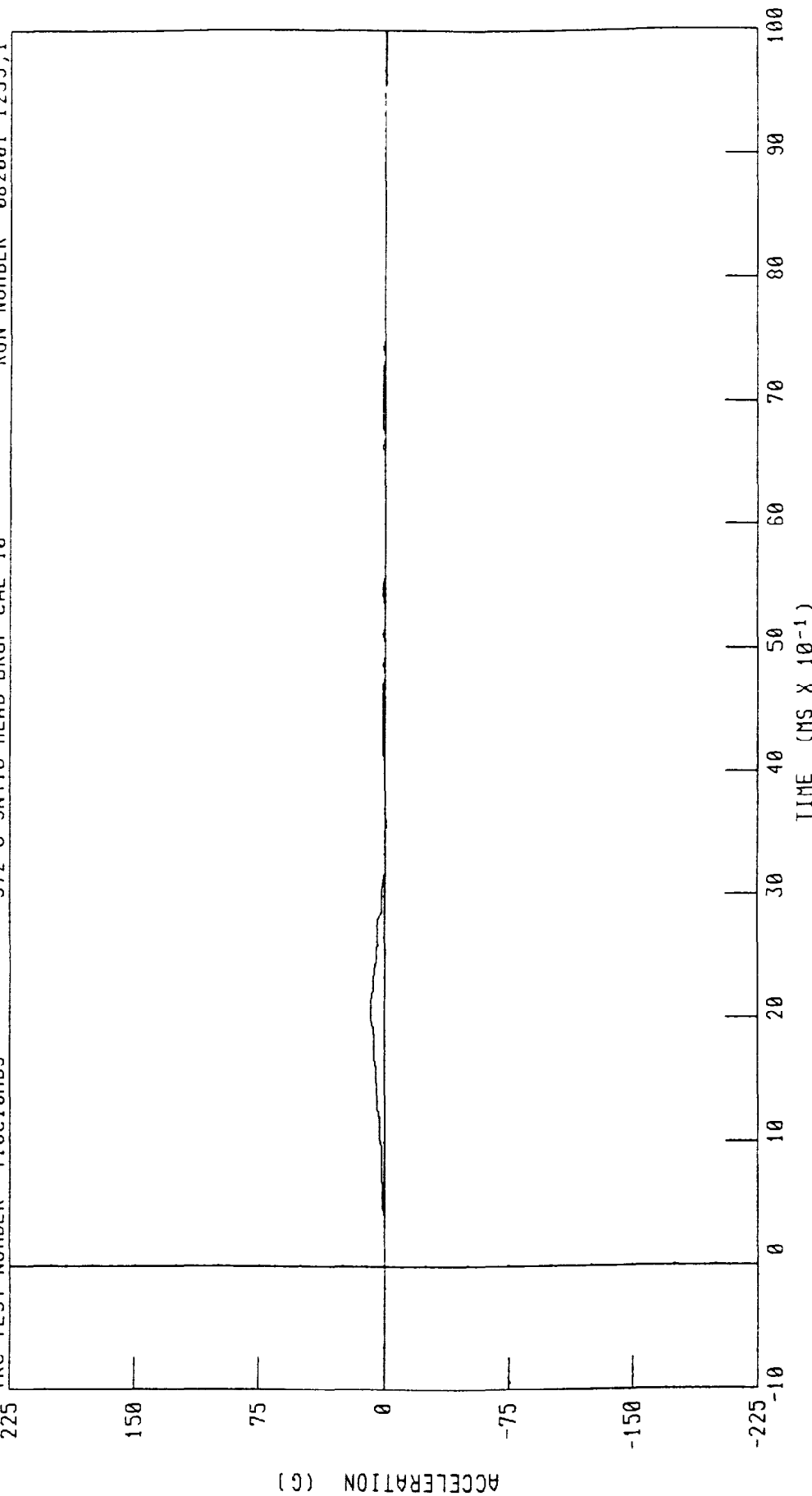
CHANNEL HEDXC FILTER CH CLASS 1000

PEAK DATA 4 18 C 0 9 76 MS, -226 02 C 0 2 08 MS

PART 572-0 HYBRID III SMALL FEMALE - HEAD CALIBRATION

HEAD ACCELERATION Y AXIS

TRC TEST NUMBER 416C10HD9 572 0 SN416 HEAD DROP CAL 10 RUN NUMBER 082001 1259,1



CHANNEL HEDYC FILTER CH CLASS 1000 PEAK DATA 7 74 C 0 2 00 MS, -0 97 C 0 3 60 MS

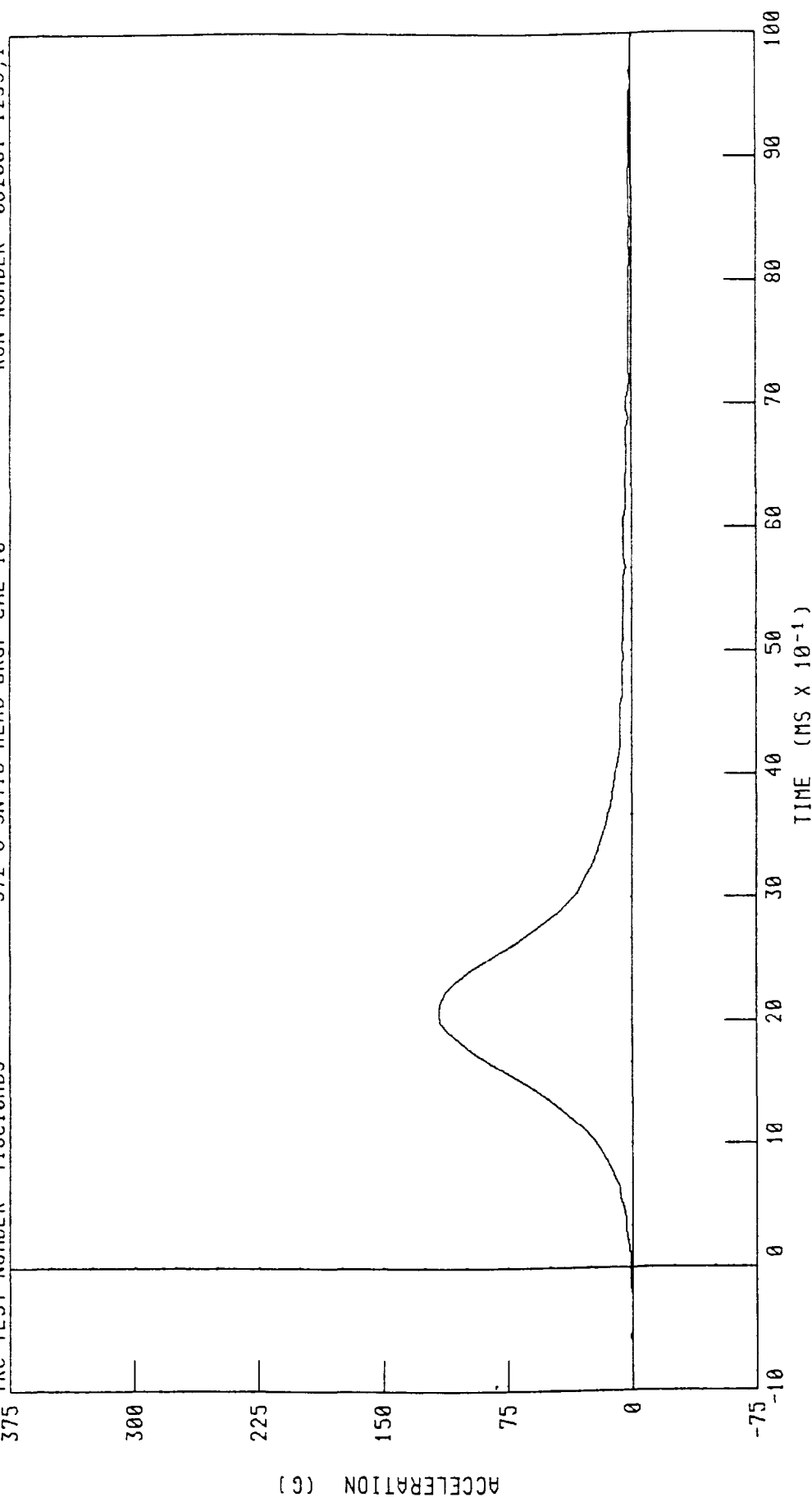
PART 572-0 HYBRID III SMALL FEMALE - HEAD CALIBRATION

HEAD ACCELERATION Z AXIS

TRC TEST NUMBER 416C10HD9

572 0 SN416 HEAD DROP CAL 10

RUN NUMBER 082001 1259,1



PEAK DATA 116 76 C 0 2 08 MS, -1 06 C 0 10 00 MS

CHANNEL HEDZG FILTER CH CLASS 1000

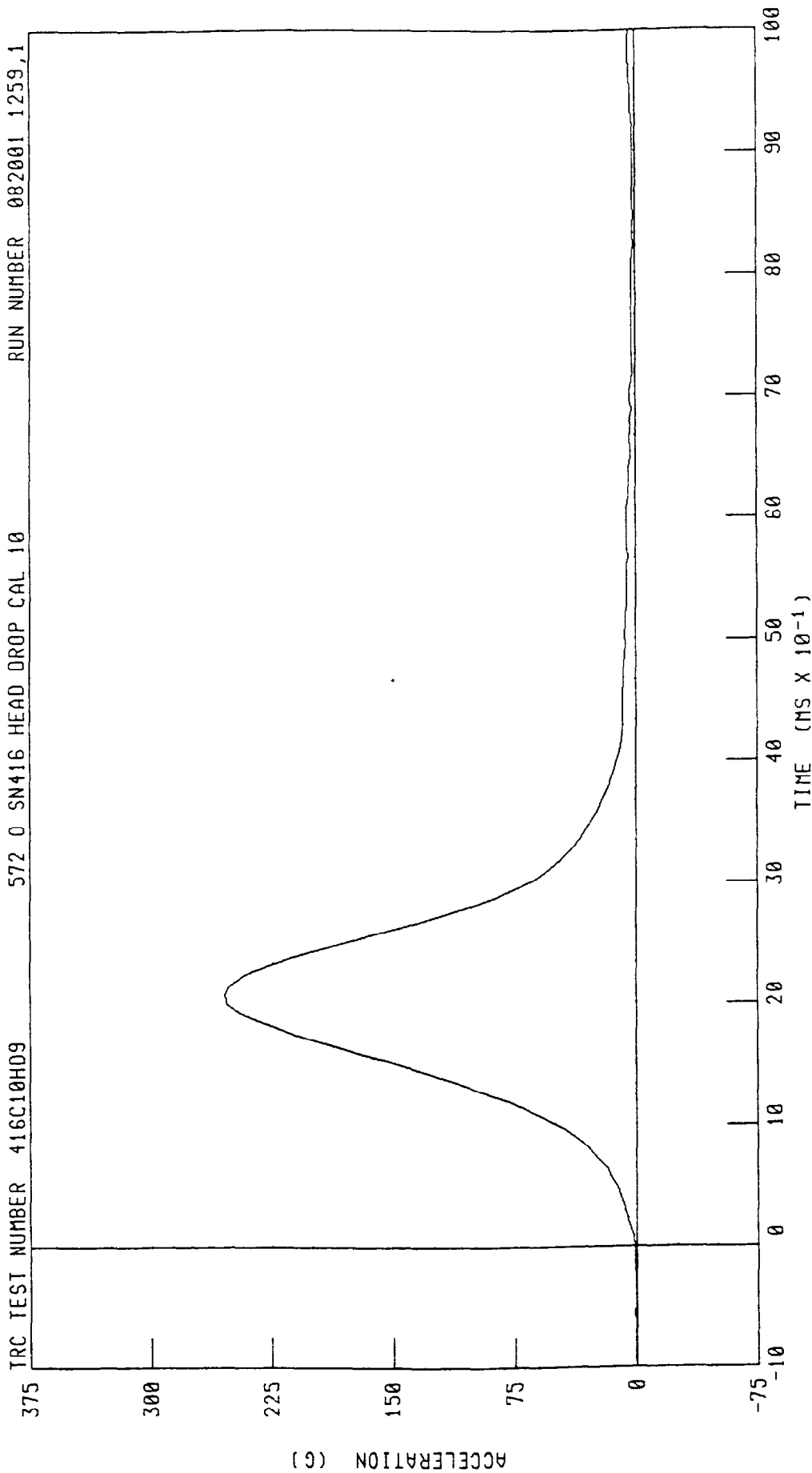
PART 572-0 HYBRID III SMALL FEMALE - HEAD CALIBRATION

HEAD RESULTANT ACCELERATION

TRC TEST NUMBER 416C10HD9

572 0 SN416 HEAD DROP CAL 10

RUN NUMBER 082001 1259,1



PEAK DATA 254 51 G @ 2 08 MS, 0 34 G @ -0 96 MS

CHANNEL HEDRC FILTER CH CLASS 1000

TRANSPORTATION RESEARCH CENTER INC.

HYBRID III SMALL FEMALE

20-AUG-01

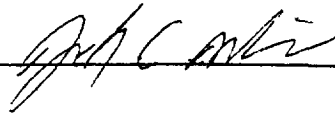
NECK FLEXION TEST - 6 CHANNEL TRANSDUCER

TRC INC. TEST NO: 416C10NF1 572 O SN416 NECK FLEX. CAL10

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	20.6-22.2 DEG. C	21.1 DEG. C
RELATIVE HUMIDITY	10 - 70 %	65.0 %
IMPACT VELOCITY	6.89 - 7.13 M/S	7.06 M/S
INTEGRATED PENDULUM VELOCITY	10 MS 2.0 - 2.5 M/S	2.37 M/S
	20 MS 4.0 - 5.0 M/S	4.66 M/S
	30 MS 5.8 - 7.0 M/S	6.74 M/S
PEAK D-PLANE ROTATION	77 - 91 DEG.	83.51 DEG.
PEAK MOMENT DURING ROTATION INTERVAL	69 - 83 NM	79.09 NM
POSITIVE MOMENT DECAY TIME TO 10 NM	80 - 100 MS	88.32 MS

TEST MEETS SPECIFICATIONS

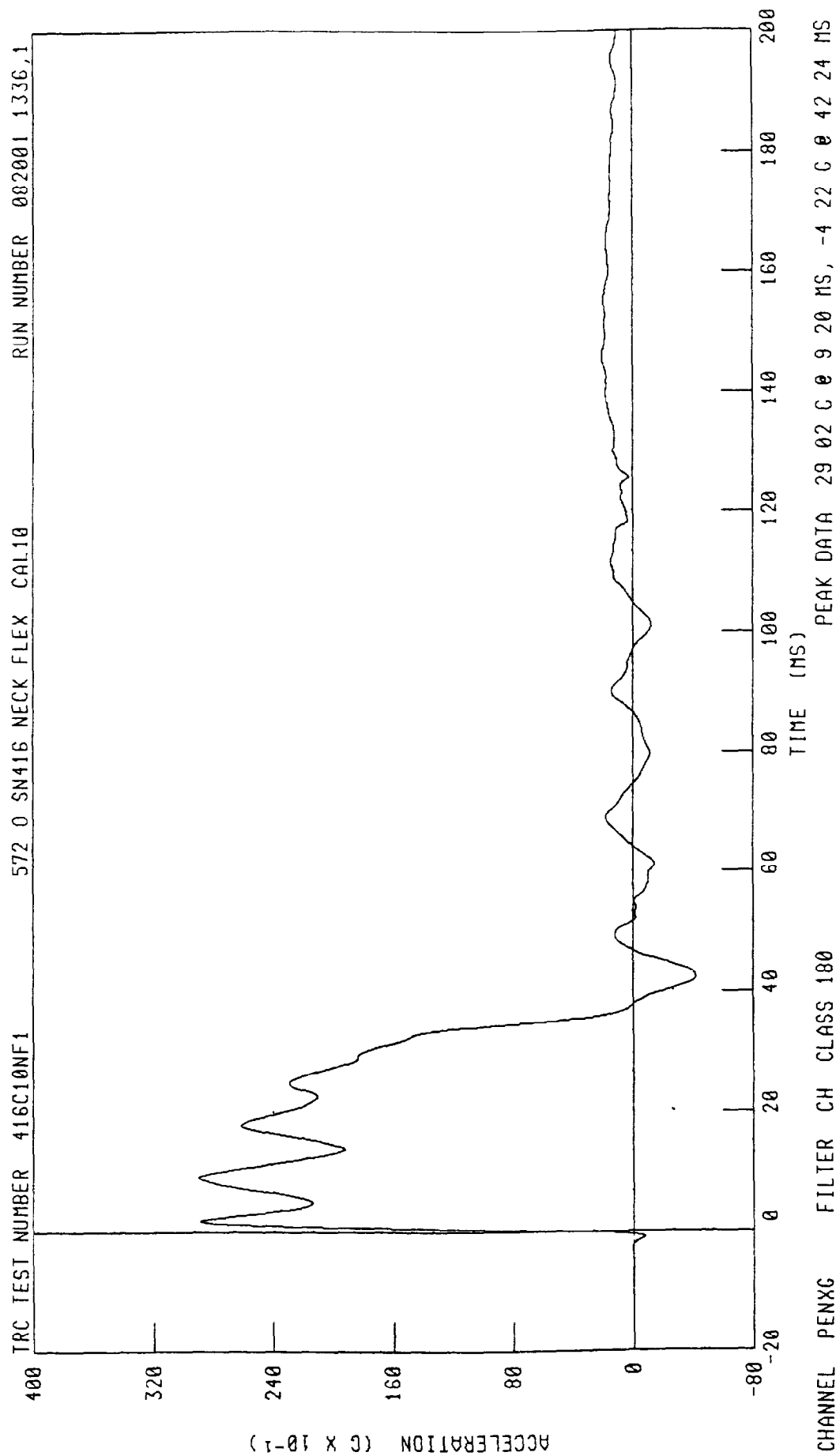
TECHNICIAN



RUN NUMBER: 082001.1334;1

PART 572-0 HYBRID III SMALL FEMALE - NECK FLEXION CALIBRATION

PENDULUM DECELERATION



PART 572-0 HYBRID III SMALL FEMALE - NECK FLEXION CALIBRATION

ROTATION ABOUT BASE OF NECK

TRC TEST NUMBER 416C10NF1

572 0 SN416 NECK FLEX CAL10

RUN NUMBER 082001 1336,1

120

90

60

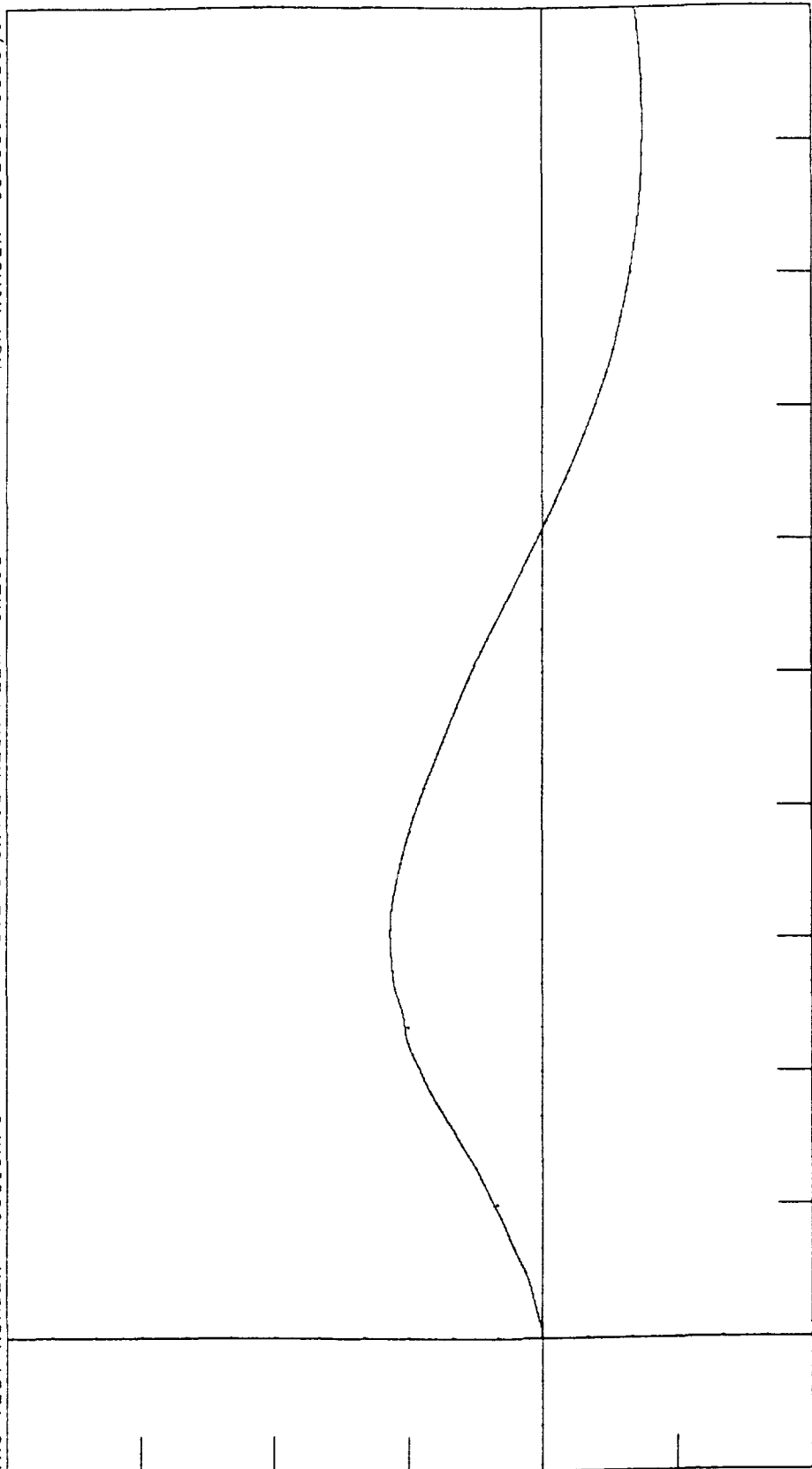
30

0

-30

-60

ANGLE (°)

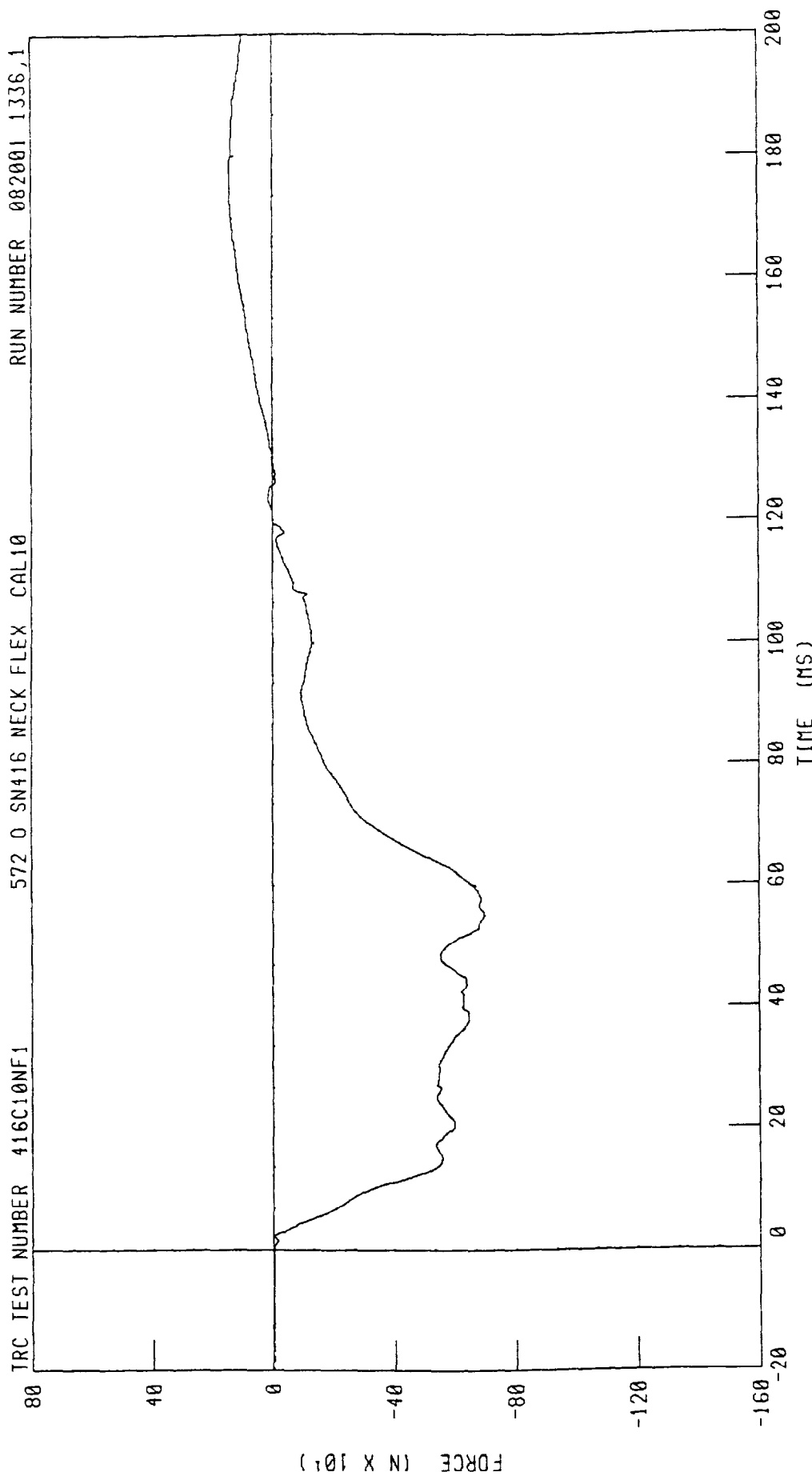


TIME (MS)

PEAK DATA 34 09 ° @ 61 12 MS, -22 59 ° @ 182 64 MS

CHANNEL BETA FILTER CH CLASS 60

PART 572-0 HYBRID III SMALL FEMALE - NECK FLEXION CALIBRATION
NECK FORCE X AXIS FILTERED FOR USE IN OCCIPITAL MOMENT CALCULATION



CHANNEL NEKXFC FILTER CH CLASS 600

PEAK DATA 145 26 N @ 172 96 MS, -697 94 N @ 55 20 MS

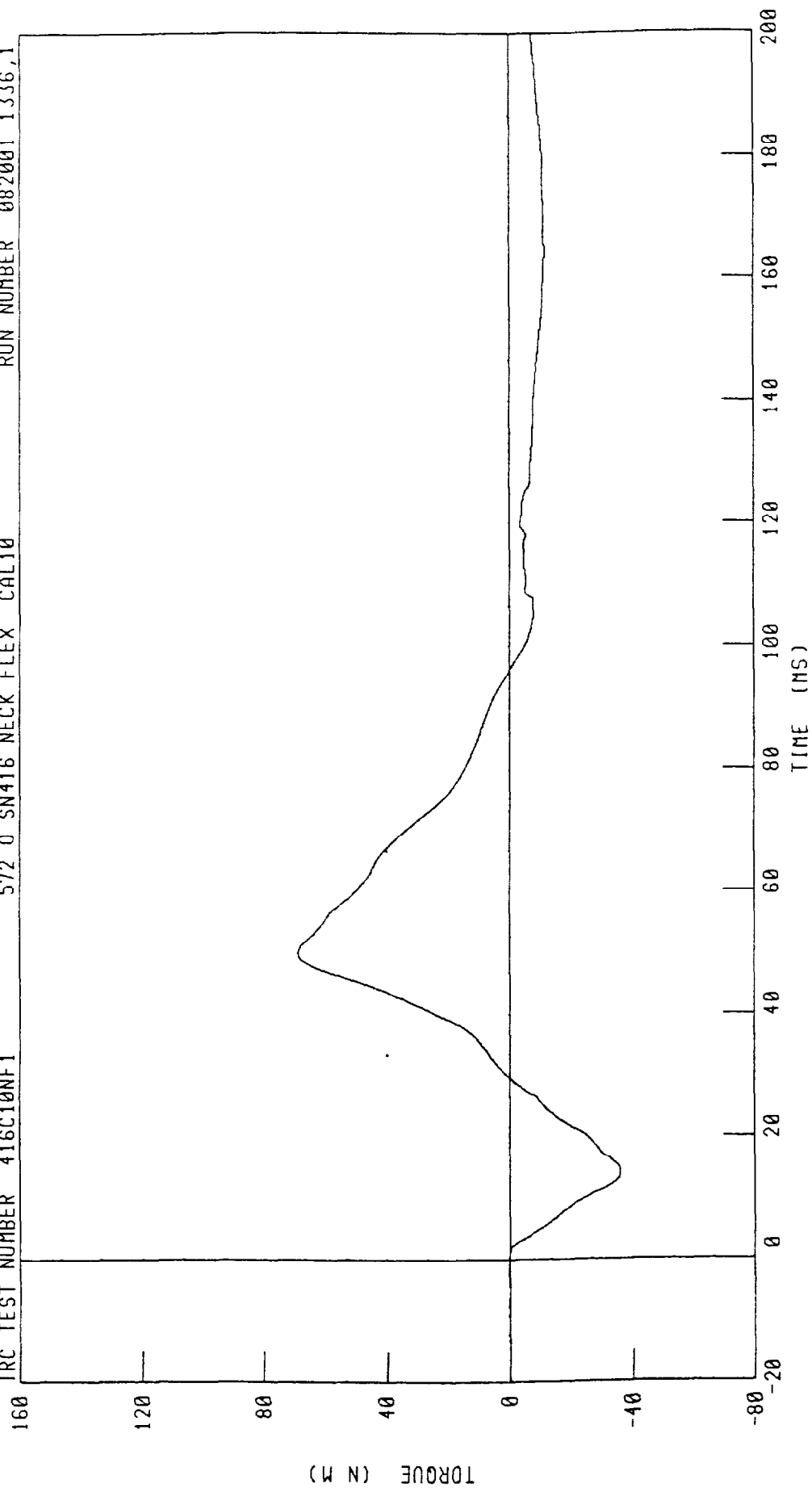
PART 572-0 HYBRID III SMALL FEMALE - NECK FLEXION CALIBRATION

NECK MOMENT Y AXIS

TRC TEST NUMBER 416C10NF1

572 0 SN416 NECK FLEX CAL10

RUN NUMBER 082001 1336,1



PEAK DATA 68 82 N M @ 50 16 MS, -36 00 N M @ 14 00 MS

CHANNEL NEKYM FILTER CH CLASS 600

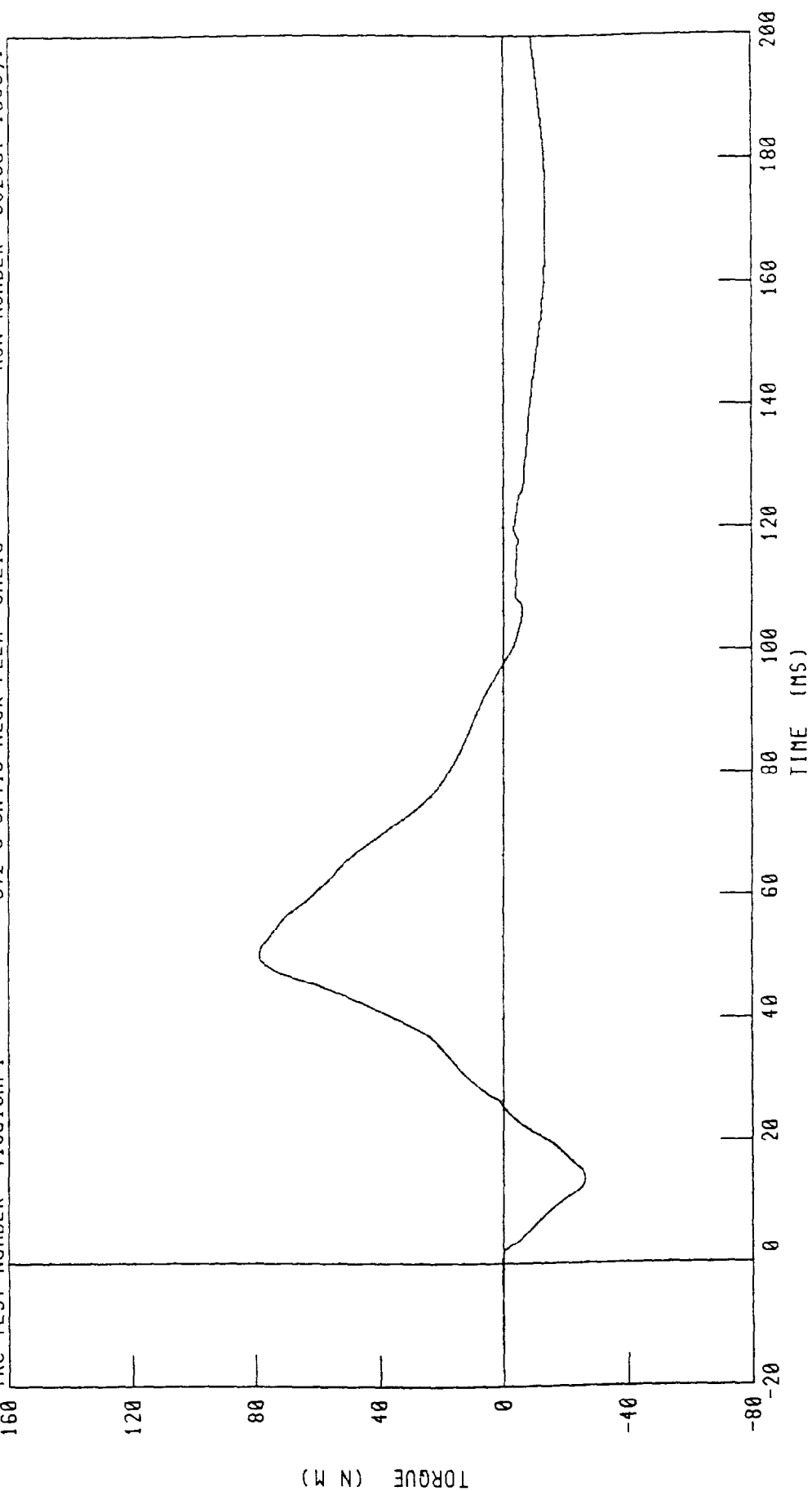
PART 572-0 HYBRID III SMALL FEMALE - NECK FLEXION CALIBRATION

TOTAL MOMENT ABOUT OCCIPITAL CONDYLE

TRC TEST NUMBER 416C10NF1

572 0 SN416 NECK FLEX CAL10

RUN NUMBER 082001 1336,1



CHANNEL NEKOM FILTER CH CLASS 600

PEAK DATA 79 09 N M @ 50 40 MS, -26 27 N M @ 13 76 MS

TRANSPORTATION RESEARCH CENTER INC.

HYBRID III SMALL FEMALE

20-AUG-01

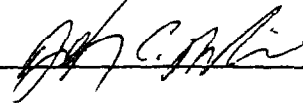
NECK EXTENSION TEST - 6 CHANNEL TRANSDUCER

TRC INC. TEST NO: 416C10NE1 572 O SN416 NECK EXT. CAL 10

TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE		20.6 - 22.2 DEG. C	21.1 DEG. C
RELATIVE HUMIDITY		10 - 70 %	65.0 %
IMPACT VELOCITY		5.95 - 6.19 M/S	6.19 M/S
INTEGRATED PENDULUM VELOCITY	10 MS	1.5 - 1.9 M/S	1.70 M/S
	20 MS	3.1 - 3.9 M/S	3.46 M/S
	30 MS	4.6 - 5.6 M/S	5.13 M/S
PEAK D-PLANE ROTATION		99 - 114 DEG.	106.29 DEG.
PEAK MOMENT DURING ROTATION INTERVAL		-53/-65 NM	-60.95 NM
NEGATIVE MOMENT DECAY TIME TO -10 NM LEVEL		94 -114 MS	101.76 MS

TEST MEETS SPECIFICATIONS

TECHNICIAN

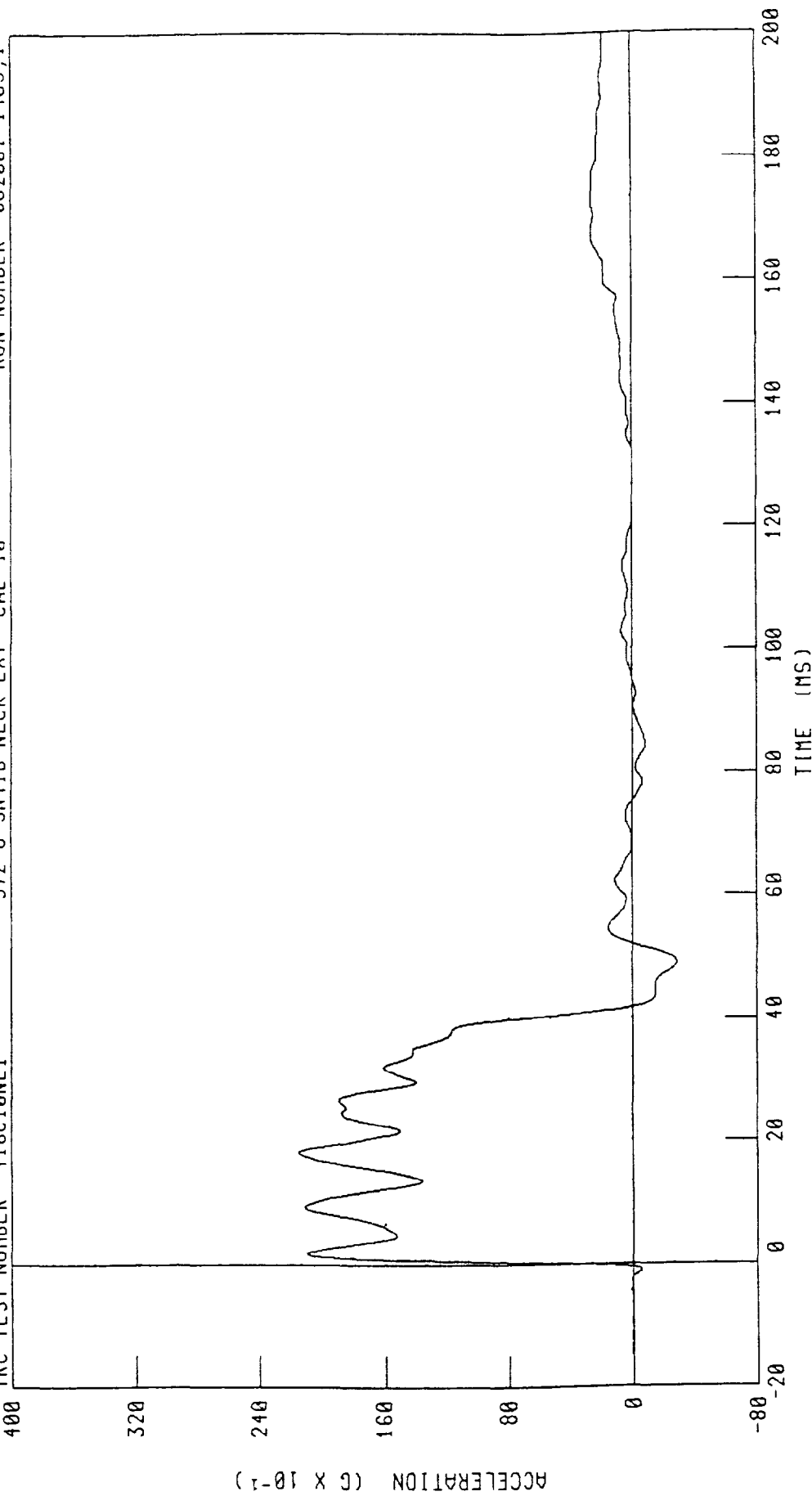


RUN NUMBER: 082001.1402;1

PART 572-0 HYBRID III SMALL FEMALE - NECK EXTENSION CALIBRATION

PENDULUM DECELERATION

TRC TEST NUMBER 416C10NE1 572 0 SN416 NECK EXT CAL 10 RUN NUMBER 082001 1405,1

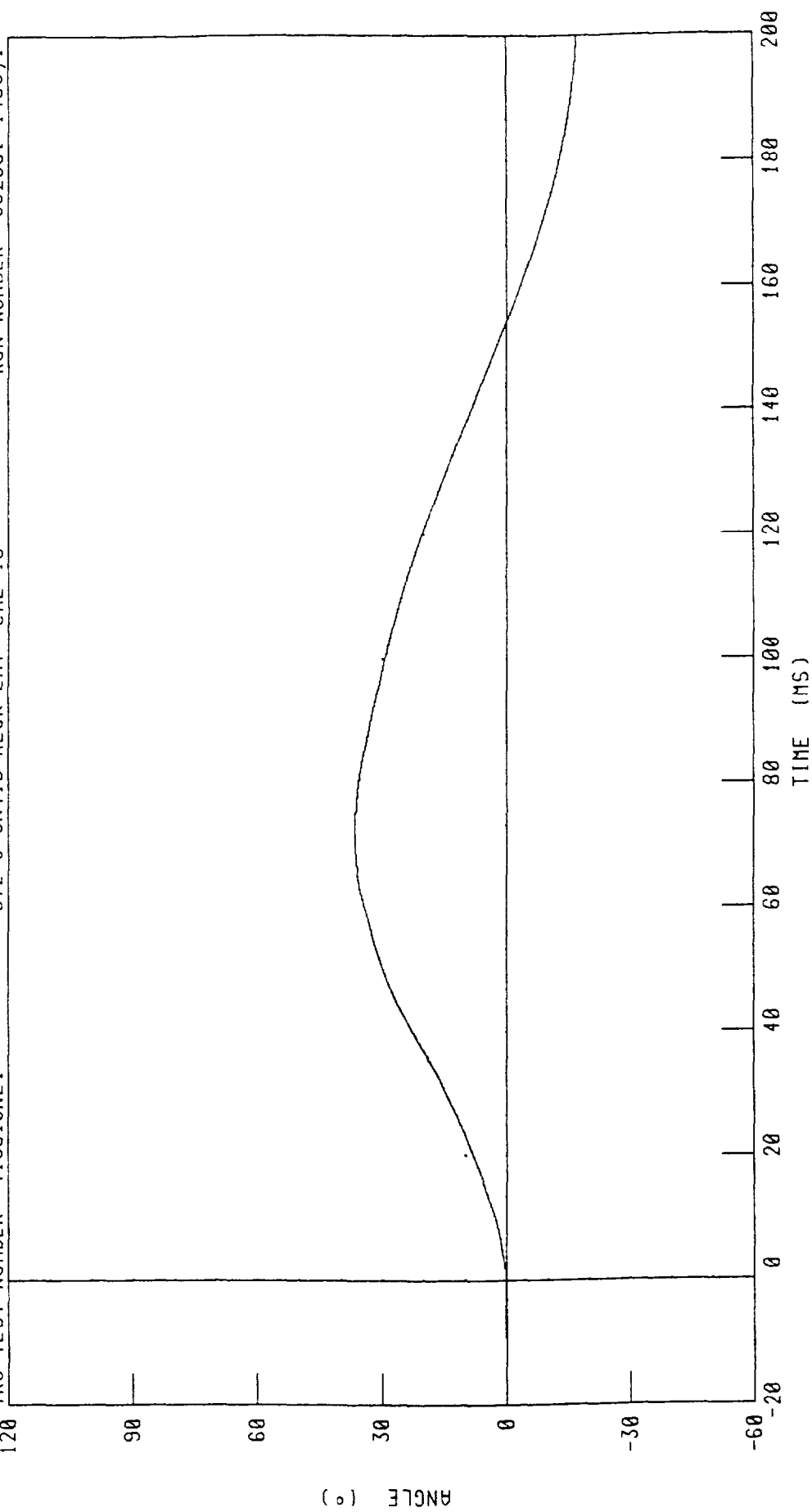


CHANNEL PENXC FILTER CH CLASS 180 PEAK DATA 21 55 G 0 18 24 MS, -2 91 G 0 49 12 MS

PART 572-0 HYBRID III SMALL FEMALE - NECK EXTENSION CALIBRATION

ROTATION ABOUT BASE OF NECK

TRC TEST NUMBER 416C10NE1 572 0 SN416 NECK EXT CAL 10 RUN NUMBER 082001 1405,1



CHANNEL BETA FILTER CH CLASS 60 PEAK DATA 36 51 ° @ 71 92 MS, -17 15 ° @ 200 00 MS

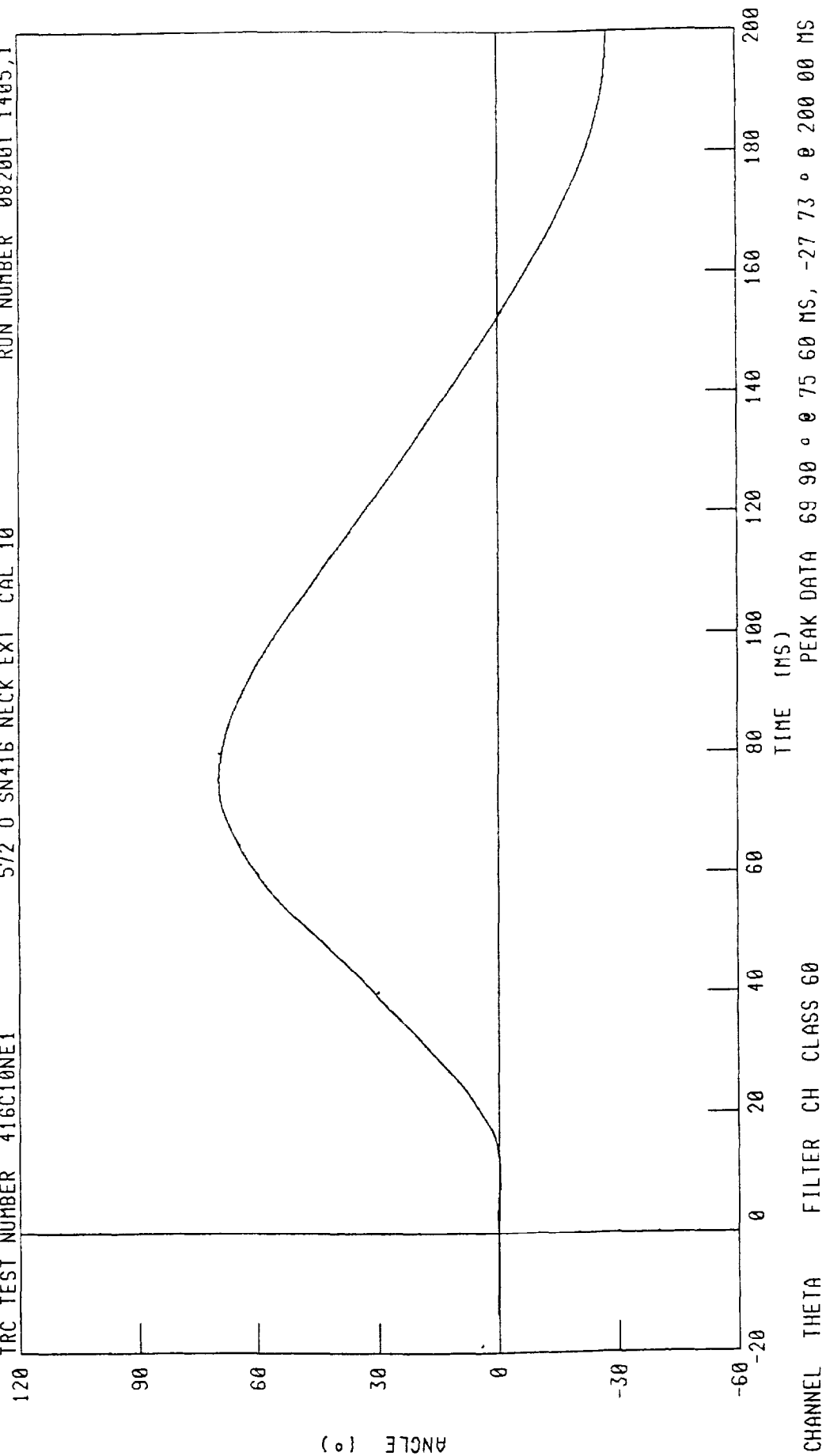
PART 572-0 HYBRID III SMALL FEMALE - NECK EXTENSION CALIBRATION

ROTATION ABOUT OCCIPITAL CONDYLE

TRC TEST NUMBER 416C10NE1

572 0 SN416 NECK EXT CAL 10

RUN NUMBER 082001 1405,1

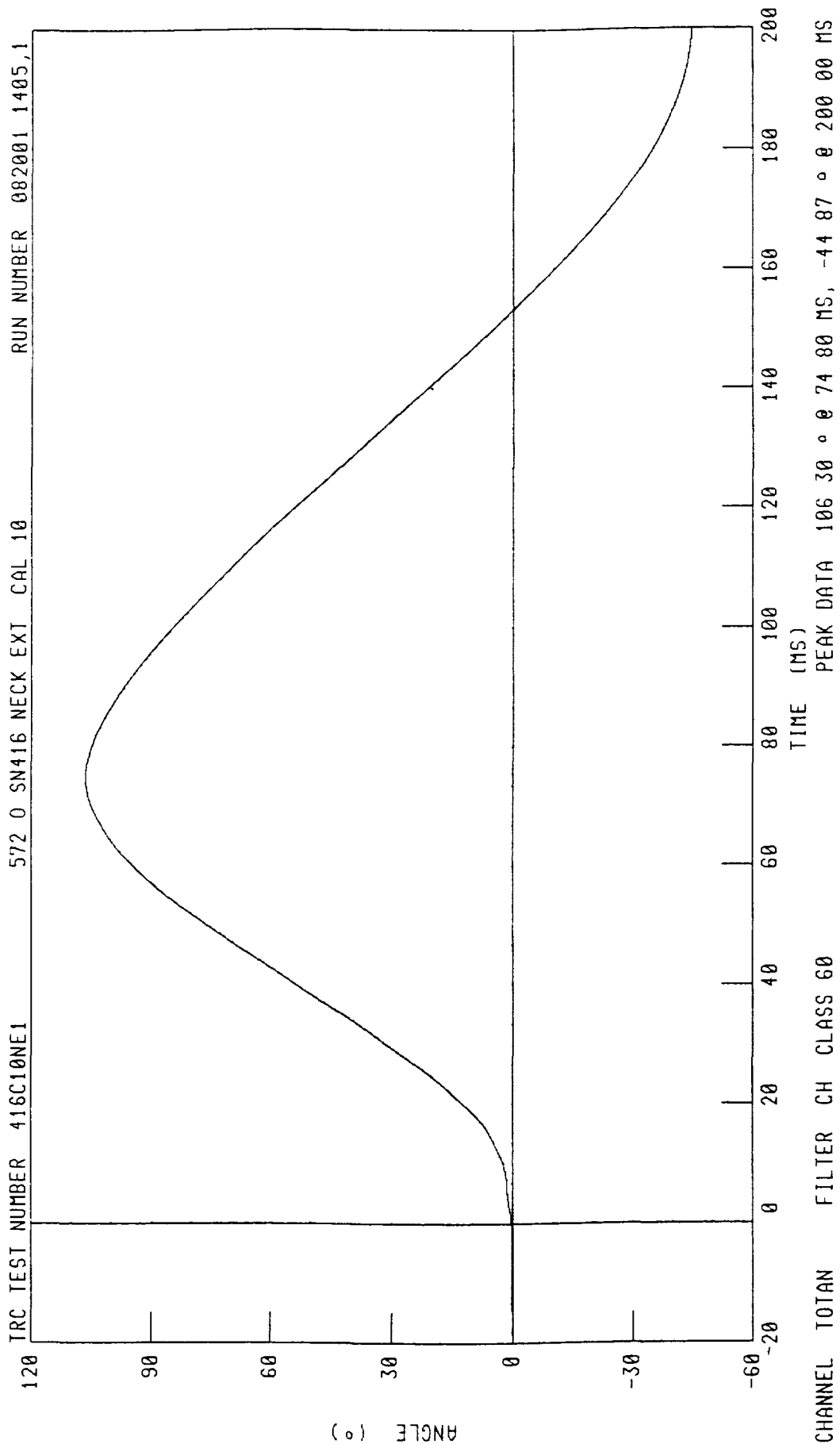


PEAK DATA 69 90 ° @ 75 60 MS, -27 73 ° @ 200 00 MS

CHANNEL THETA FILTER CH CLASS 60

PART 572-0 HYBRID III SMALL FEMALE - NECK EXTENSION CALIBRATION

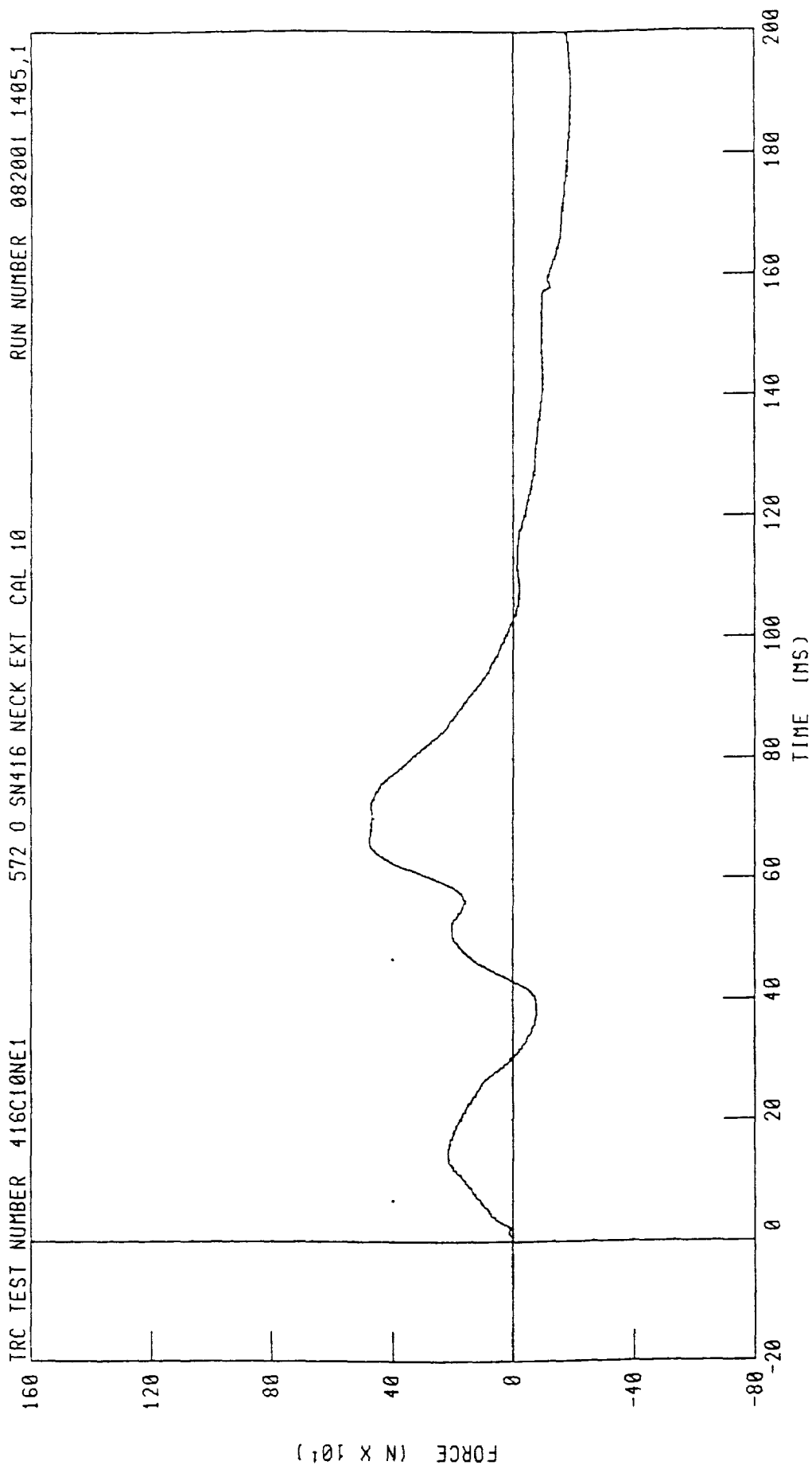
TOTAL ROTATION



CHANNEL TOTAL FILTER CH CLASS 60

PART 572-0 HYBRID III SMALL FEMALE - NECK EXTENSION CALIBRATION

NECK FORCE X AXIS



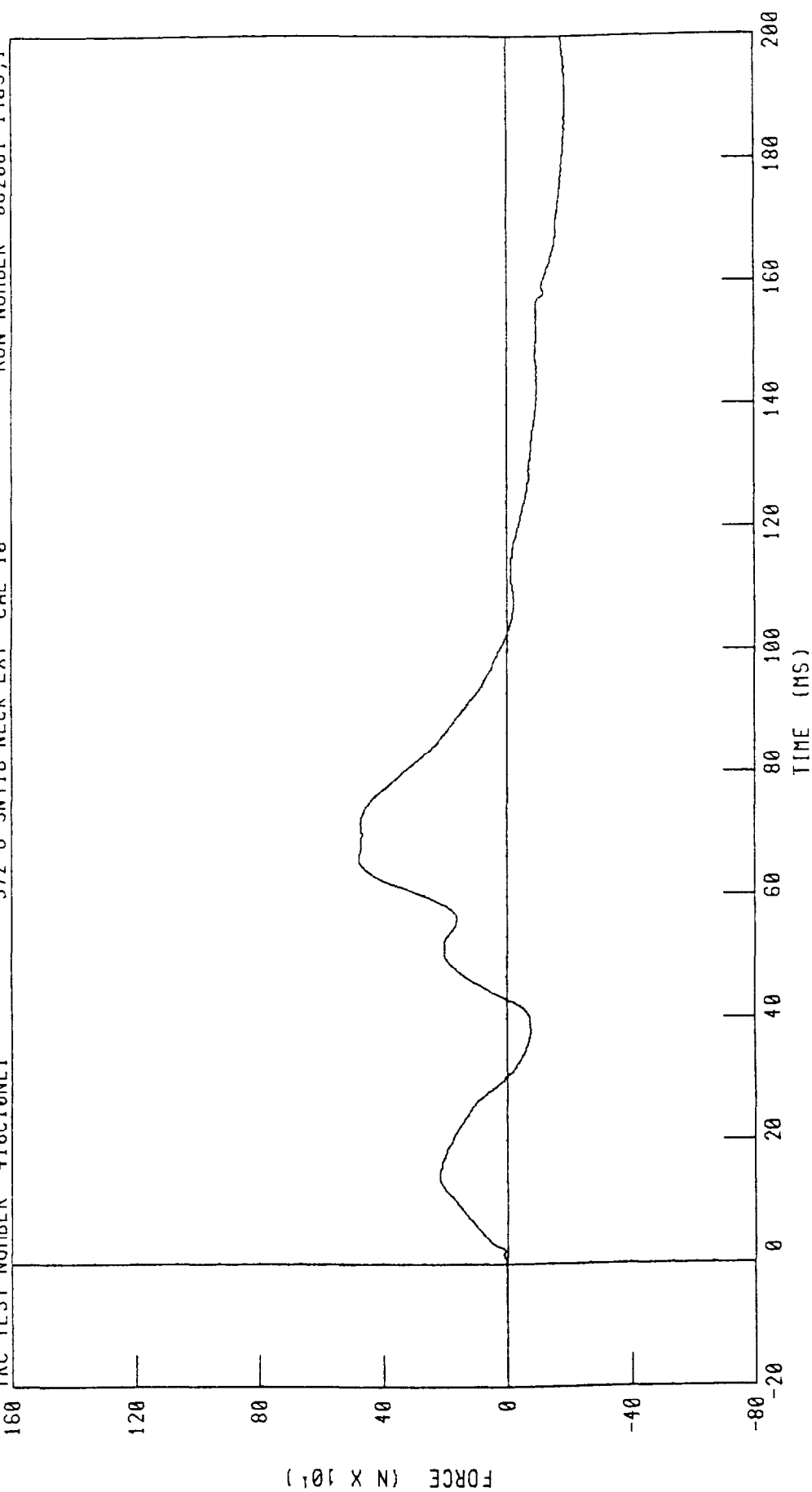
PEAK DATA 476 97 N @ 65 52 MS, -192 18 N @ 184 88 MS

CHANNEL NEKXF FILTER CH CLASS 1000

PART 572-0 HYBRID III SMALL FEMALE - NECK EXTENSION CALIBRATION

NECK FORCE X AXIS FILTERED FOR USE IN OCCIPITAL MOMENT CALCULATION

TRC TEST NUMBER 416C10NE1 572 0 SN416 NECK EXT CAL 10 RUN NUMBER 082001 1405,1



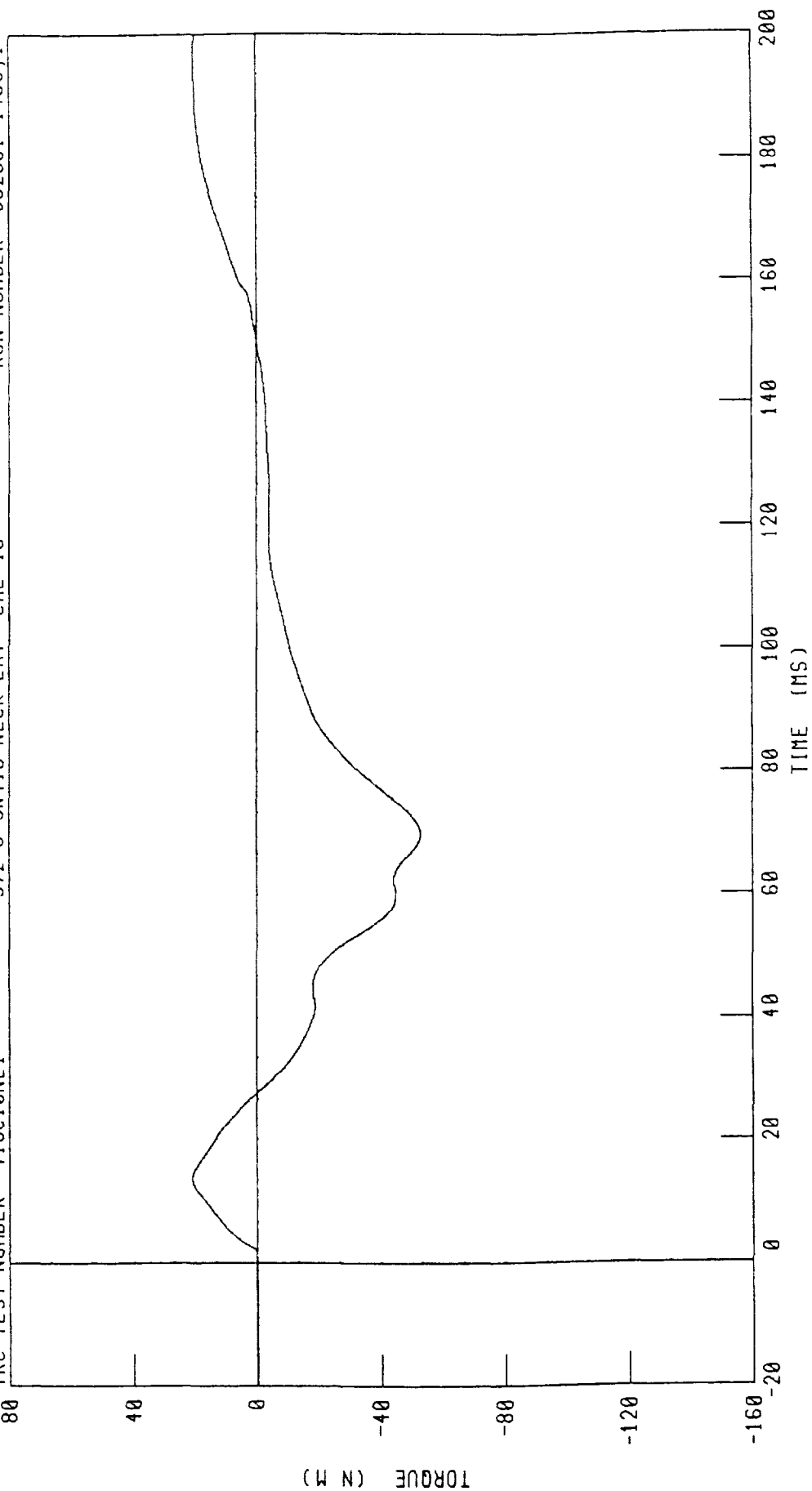
CHANNEL NEKXFC FILTER CH CLASS 600

PEAK DATA 477 13 N 0 65 84 MS, -192 27 N 0 188 88 MS

PART 572-0 HYBRID III SMALL FEMALE - NECK EXTENSION CALIBRATION

NECK MOMENT Y AXIS

TRC TEST NUMBER 416C10NE1 572 0 SN416 NECK EXT CAL 10 RUN NUMBER 082001 1405,1



PEAK DATA 21 11 N M 0 13 76 MS, -52 64 N M 0 70 16 MS

CHANNEL NEKYH FILTER CH CLASS 600

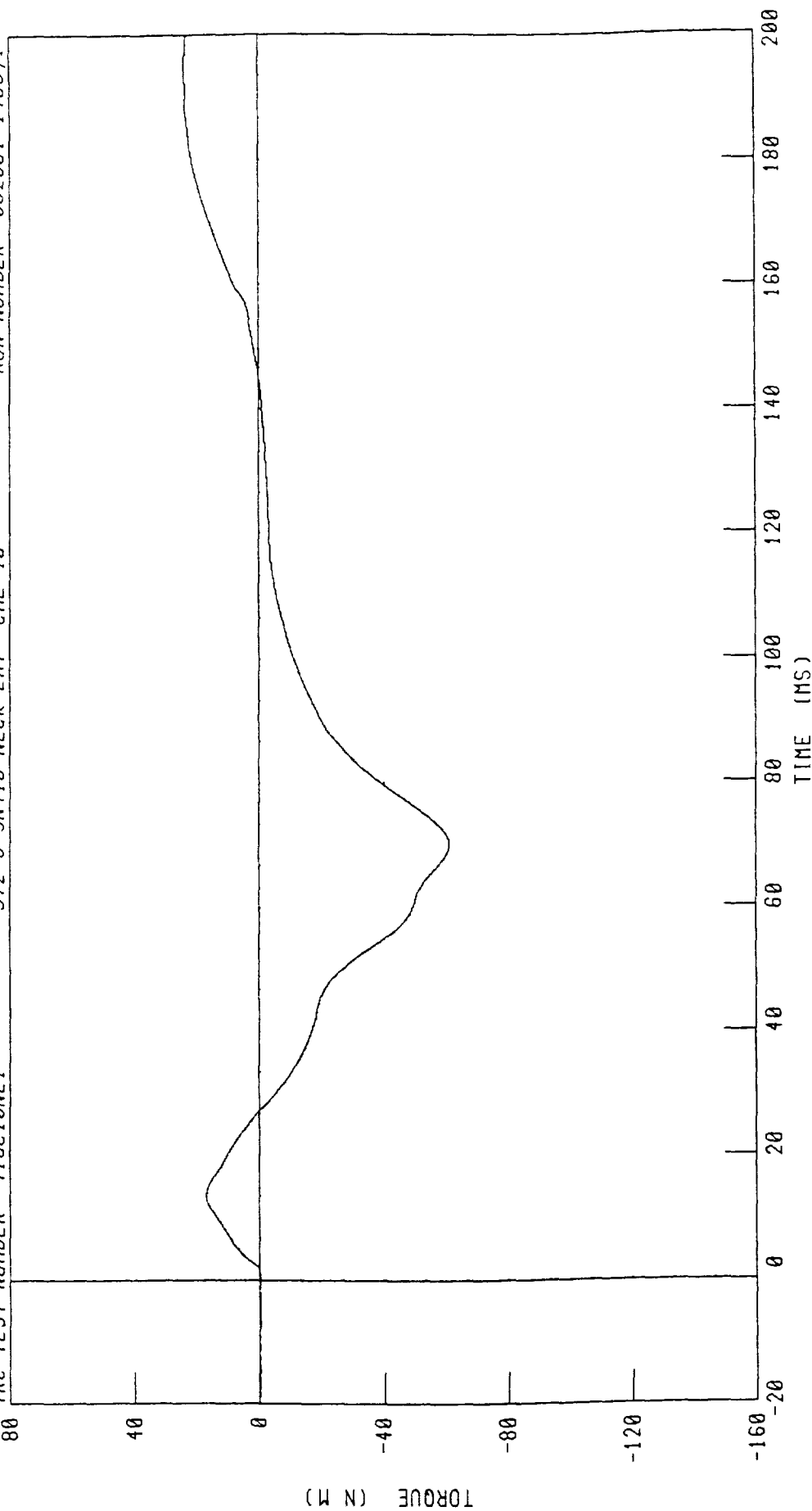
PART 572-0 HYBRID III SMALL FEMALE - NECK EXTENSION CALIBRATION

TOTAL MOMENT ABOUT OCCIPITAL CONDYLE

TRC TEST NUMBER 416C10NE1

572 0 SN416 NECK EXT CAL 10

RUN NUMBER 082001 1405,1



PEAK DATA 23 83 N M @ 192 88 MS, -60 95 N M @ 70 24 MS

CHANNEL NEKOM FILTER CH CLASS 600

TRANSPORTATION RESEARCH CENTER INC.

THORAX IMPACT TEST

HYBRID III SMALL FEMALE

21-AUG-01

TRC INC.

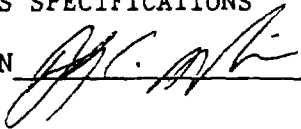
TEST NO: 416C10TH1

572 O SN416 THORAX CAL10

TEST PARAMETER	HIGH SPEED TEST	TEST RESULTS
	SPECIFICATION	
TEMPERATURE	20.6-22.2 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	59.0 %
PENDULUM VELOCITY	6.59 - 6.83 M/S	6.62 M/S
MAXIMUM DEFLECTION	50 - 58 MM	55.0 MM
PEAK RESISTIVE FORCE DURING DEFLECTION INTERVAL	3900 - 4400 N	4214. N
INTERNAL HYSTERESIS	69% - 85%	73.0%
PEAK FORCE % DURING 18 MM & 50 MM DEFLECTION	<= 105%	94.5 %

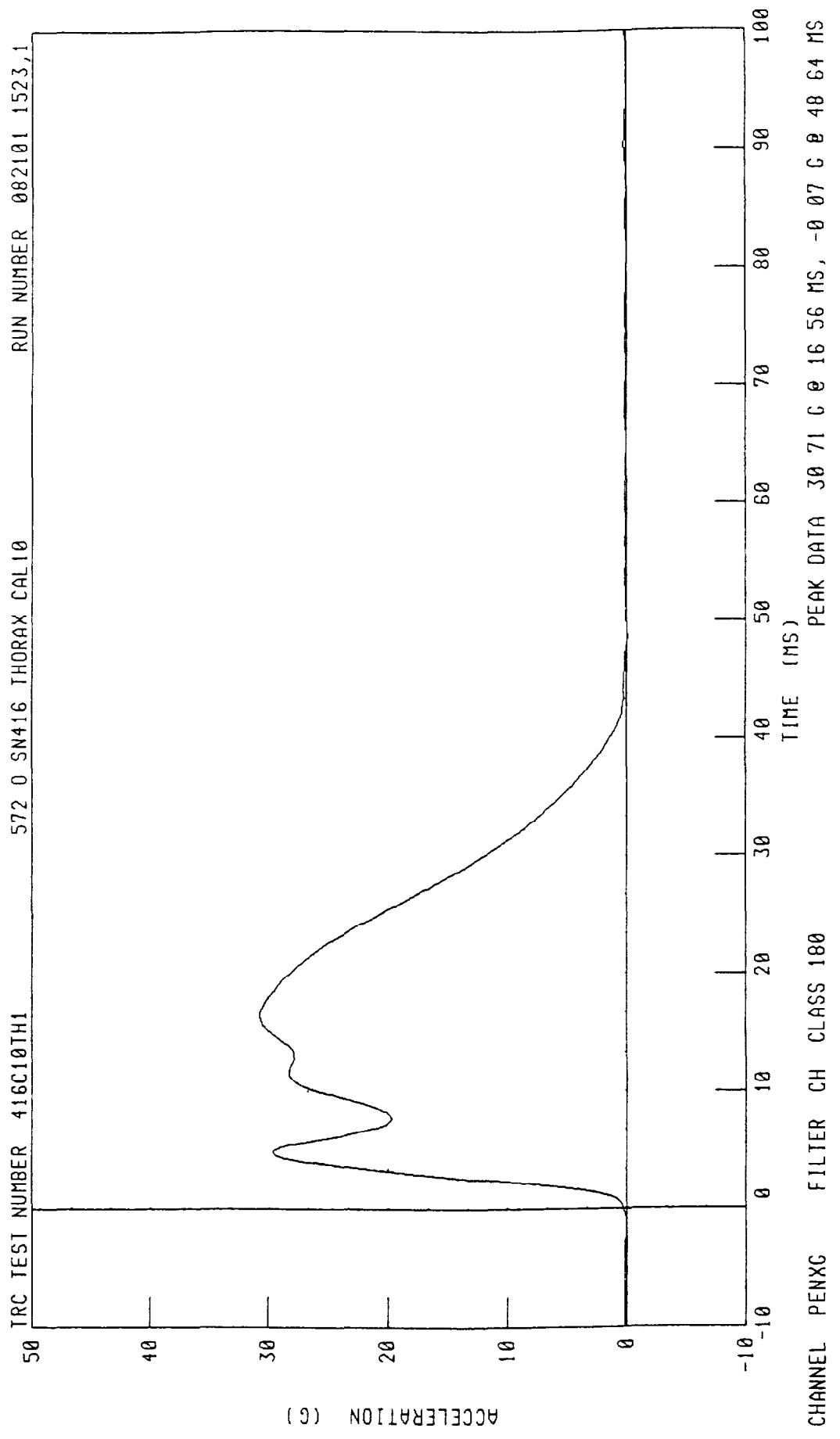
TEST MEETS SPECIFICATIONS

TECHNICIAN



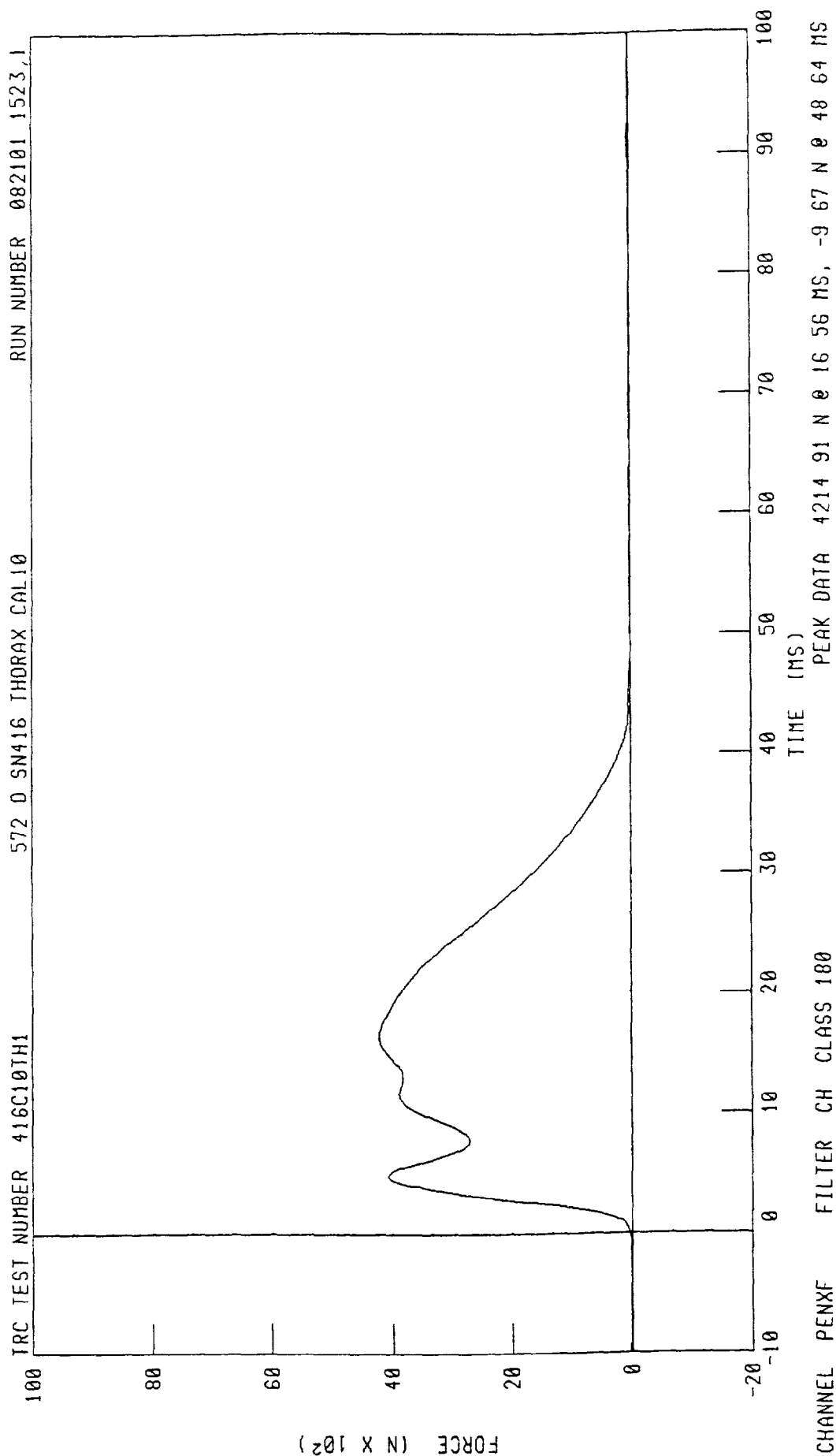
RUN NUMBER: 082101.1514;1

PART 572-0 HYBRID III SMALL FEMALE - THORAX CALIBRATION
PENDULUM DECELERATION



PART 572-0 HYBRID III SMALL FEMALE - THORAX CALIBRATION

PENDULUM FORCE

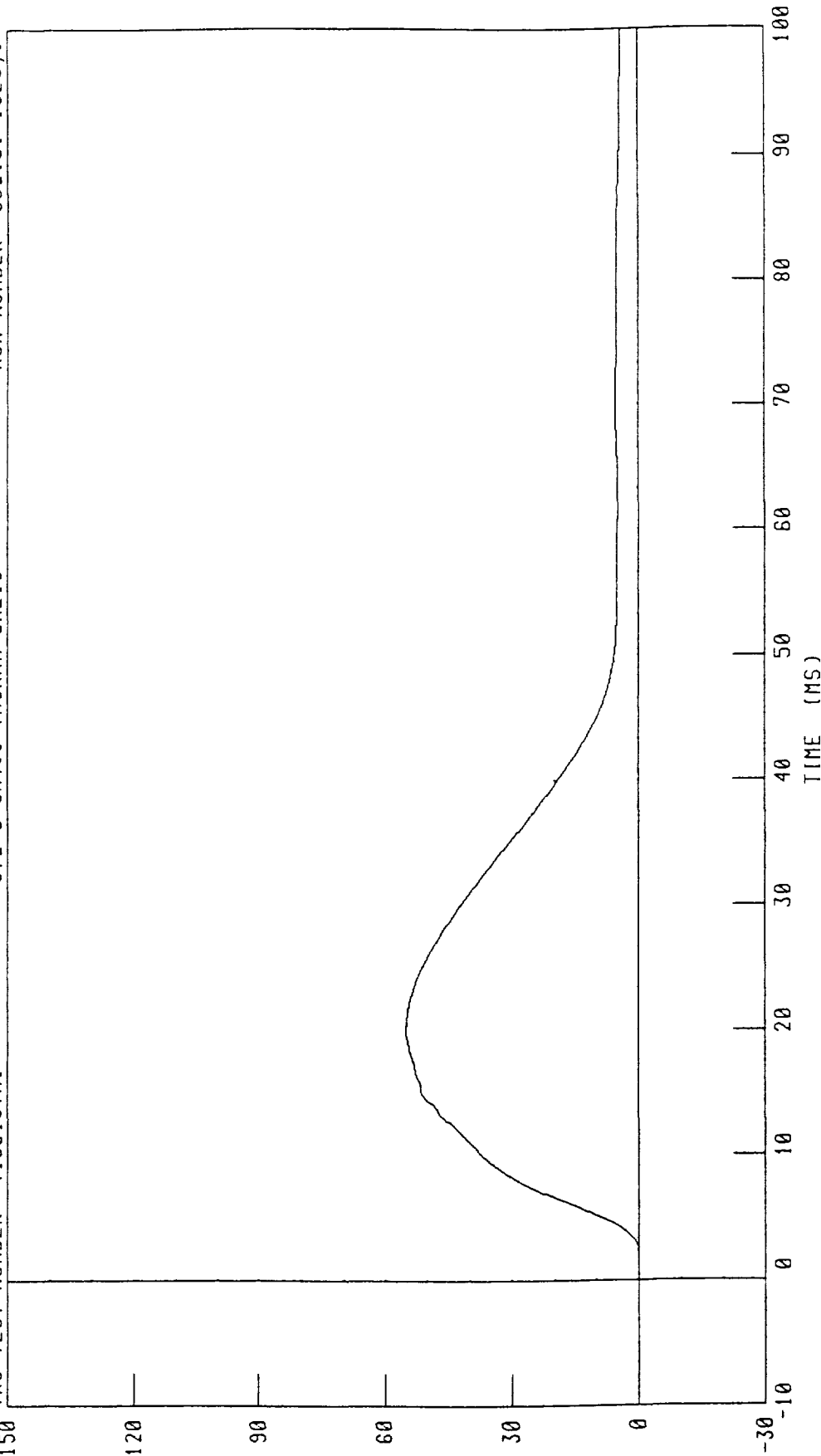


PART 572-0 HYBRID III SMALL FEMALE - THORAX CALIBRATION

STERNUM DISPLACEMENT

TRC TEST NUMBER 416C10TH1 572 0 SN416 THORAX CAL10 RUN NUMBER 082101 1523,1

DISPLACEMENT (MM)



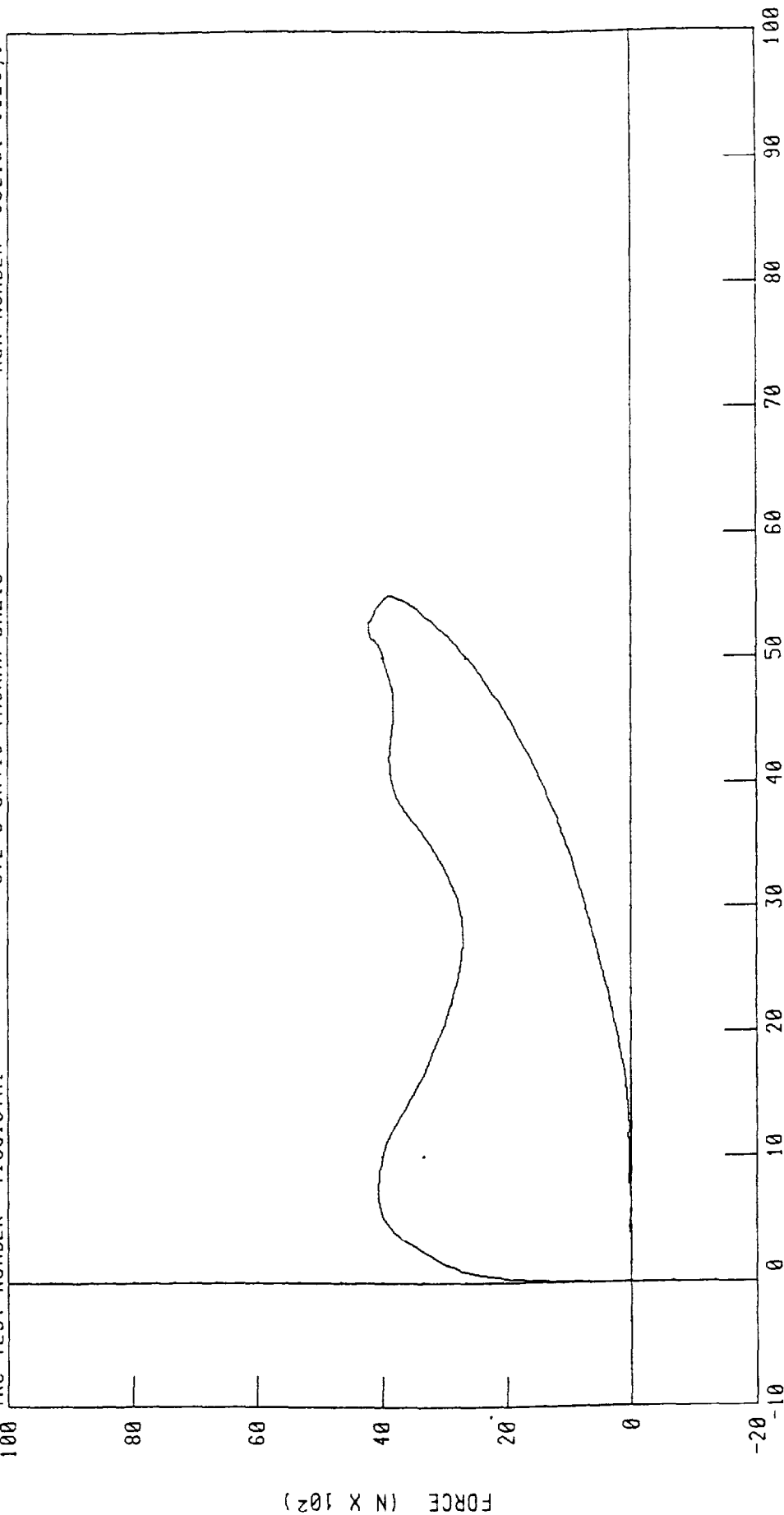
CHANNEL CSTXD FILTER CH CLASS 600

PEAK DATA 55 03 MM @ 20 08 MS, -0 02 MM @ -1 28 MS

PART 572-0 HYBRID III SMALL FEMALE - THORAX CALIBRATION

CHEST DISPLACEMENT VS PENDULUM FORCE

TRC TEST NUMBER 416C10TH1 572 0 SN416 THORAX CAL10 RUN NUMBER 082101 1523,1



DISPLACEMENT (MM)

PEAK DATA

CHANNEL CSTXD FILTER CH CLASS 600
PENXF CH CLASS 180

55 03 MM @ 20 08 MS, -0 02 MM @ -1 28 MS
4214 91 N @ 16 56 MS, -9 67 N @ 48 64 MS

TRANSPORTATION RESEARCH CENTER INC.

TORSO FLEXION TEST

HYBRID III SMALL FEMALE

CAL DATE: 20-Aug-01

TRC, INC. TEST NO: 416C10TF1 572 O SN 416 TORSO FLEX CAL 10

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9 - 25.6 DEG C	21.1 DEG C
RELATIVE HUMIDITY	10 - 70 %	65 %
INITIAL ANGLE OF UNSUPPORTED DUMMY	<= 20 DEG REFERENCED TO VERTICAL	9 DEG
MAXIMUM FORCE AT 45 DEG DURING 10 SECOND PERIOD	320 - 390 N	335 N
RETURN ANGLE @ 3MINUTES	+/- 8 DEG OF INITIAL ANGLE	12 DEG

TEST MEETS SPECIFICATIONS

TECHNICIAN 

TRANSPORTATION RESEARCH CENTER INC.

LEFT KNEE IMPACT TEST

HYBRID III SMALL FEMALE

15-AUG-01

TRC INC.

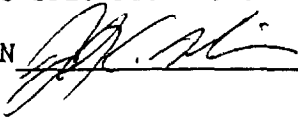
TEST NO: 416C10LK1

572 0 SN416 LEFT KNEE CAL10

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.1 DEG. C
RELATIVE HUMIDITY	10 - 70 %	54.0 %
PROBE VELOCITY	2.07 - 2.13 M/S	2.09 M/S
PEAK KNEE IMPACT FORCE 3.0 KG PENDULUM	3400 - 4200 N	3749.8 N

TEST MEETS SPECIFICATIONS

TECHNICIAN



RUN NUMBER: 081501.1105;1

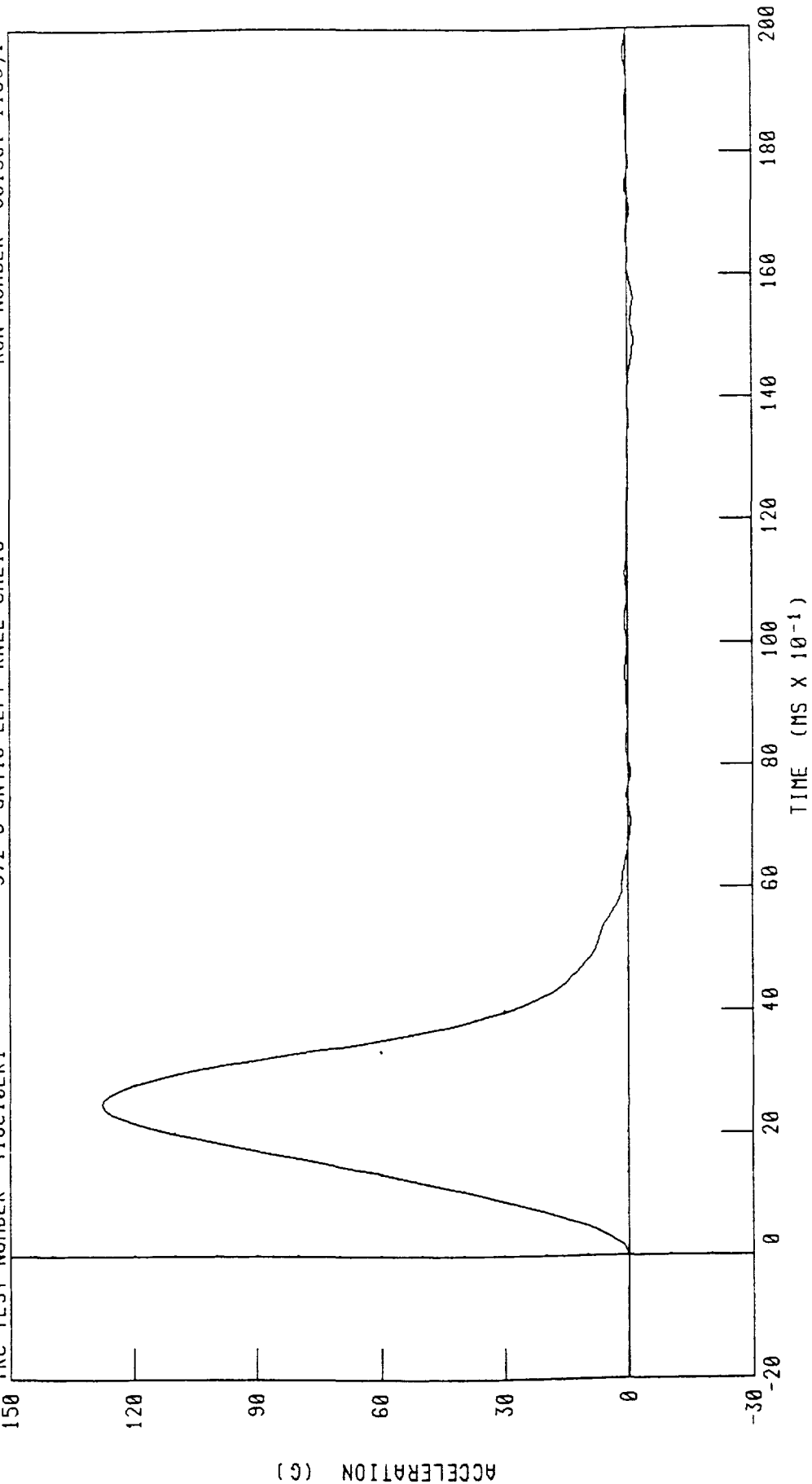
PART 572-0 HYBRID III SMALL FEMALE - LEFT KNEE CALIBRATION

PENDULUM DECELERATION (5 KG PEND)

TRC TEST NUMBER 416C10LK1

572 0 SN416 LEFT KNEE CAL10

RUN NUMBER 081501 1105,1



CHANNEL PENXG FILTER CH CLASS 600

PEAK DATA 127 73 G @ 2 48 MS, -1 51 C @ 14 88 MS

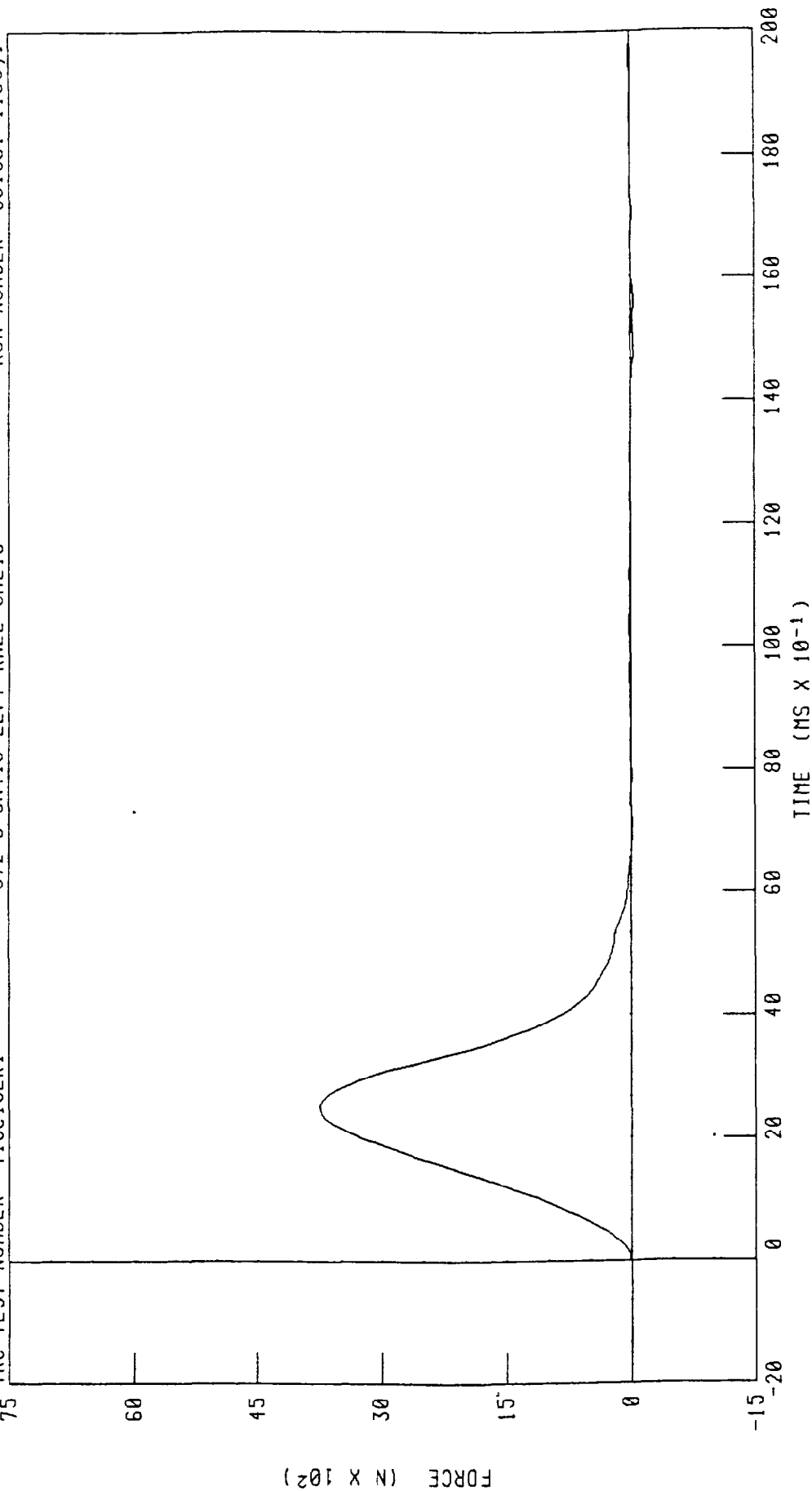
PART 572-0 HYBRID III SMALL FEMALE - LEFT KNEE CALIBRATION

PENDULUM FORCE (5 KG PEND)

TRC TEST NUMBER 416C10LK1

572 0 SN416 LEFT KNEE CAL10

RUN NUMBER 081501 1105,1



CHANNEL PENXF FILTER CH CLASS 600

PEAK DATA 3749 81 N @ 2 48 MS, -44 42 N @ 14 88 MS

TRANSPORTATION RESEARCH CENTER INC.

RIGHT KNEE IMPACT TEST

HYBRID III SMALL FEMALE

15-AUG-01

TRC INC.

TEST NO: 416C10RK1

572 0 SN416 R.KNEE CAL10

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.1 DEG. C
RELATIVE HUMIDITY	10 - 70 %	54.0 %
PROBE VELOCITY	2.07 - 2.13 M/S	2.09 M/S
PEAK KNEE IMPACT FORCE 3.0 KG PENDULUM	3400 - 4200 N	3796.3 N

TEST MEETS SPECIFICATIONS

TECHNICIAN



RUN NUMBER: 081501.1116;1

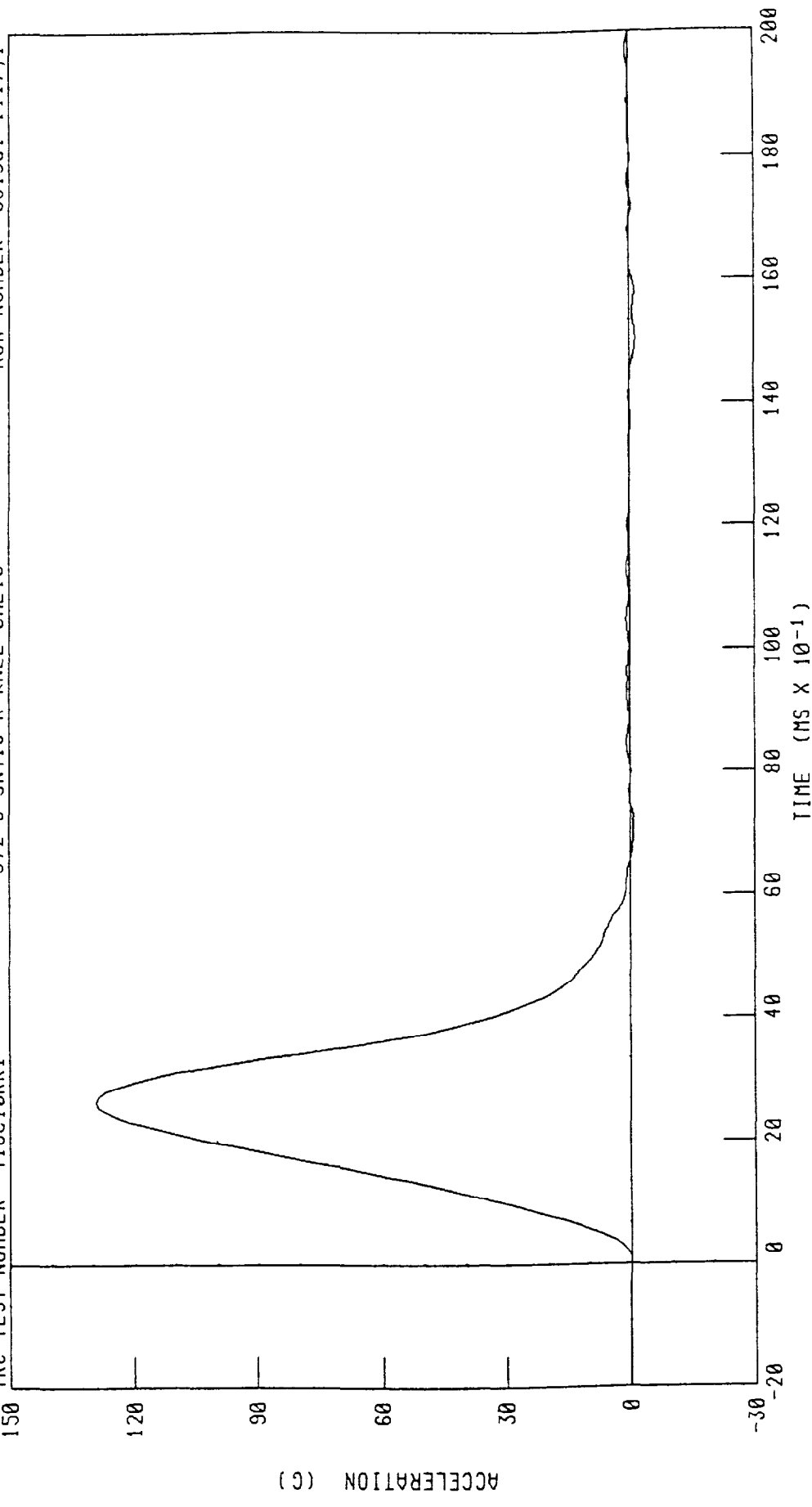
PART 572-0 HYBRID III SMALL FEMALE - RIGHT KNEE CALIBRATION

PENDULUM DECELERATION (5 KG PEND)

TRC TEST NUMBER 416C10RK1

572 0 SN416 R KNEE CAL10

RUN NUMBER 081501 1117.1



CHANNEL PENXC FILTER CH CLASS 600

PEAK DATA 129 32 G 2 64 MS, -1 46 G 15 04 MS

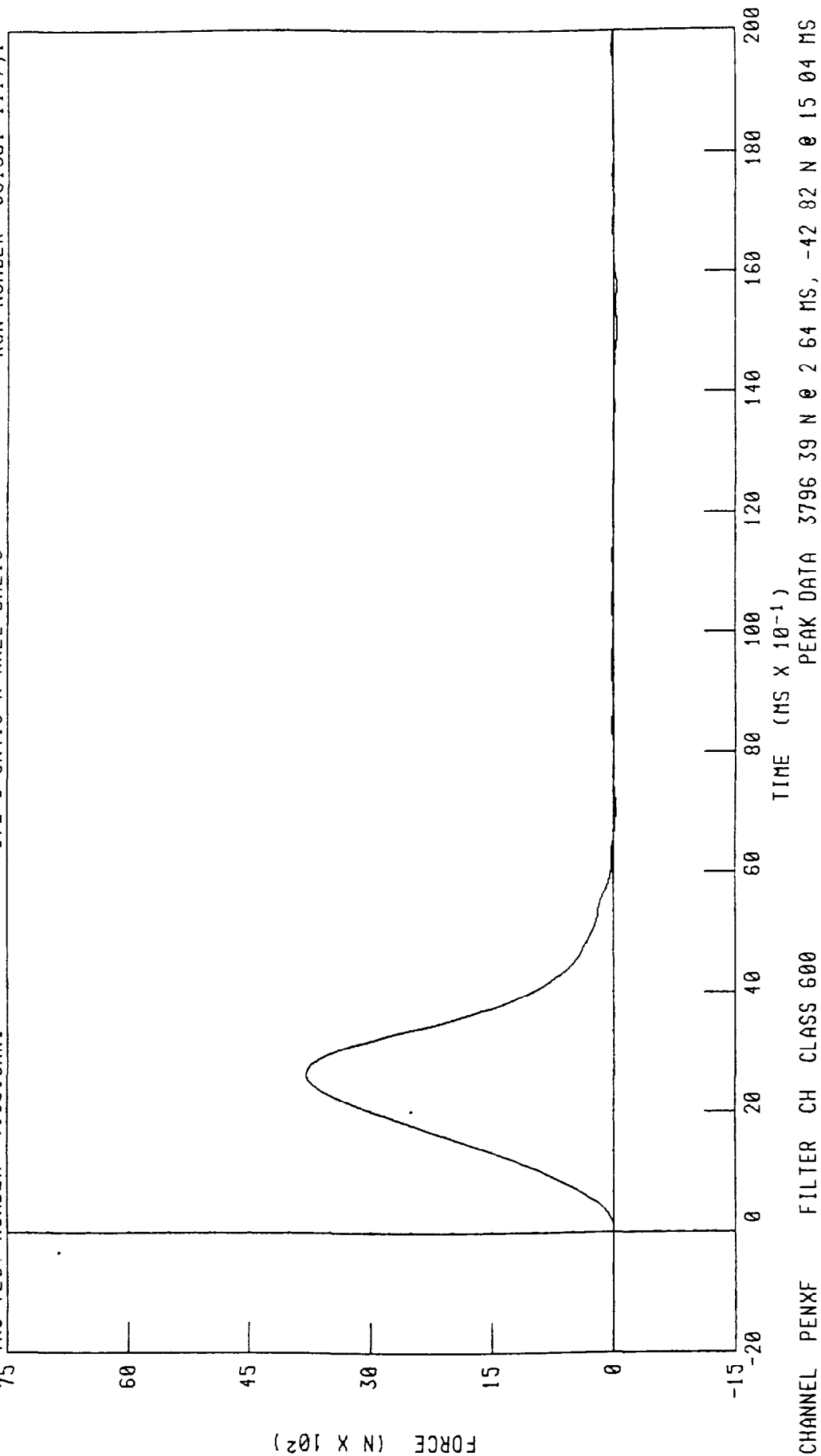
PART 572-0 HYBRID III SMALL FEMALE - RIGHT KNEE CALIBRATION

PENDULUM FORCE (5 KG PEND)

TRC TEST NUMBER 416C10RK1

572 0 SN416 R KNEE CAL10

RUN NUMBER 081501 1117,1



TRANSPORTATION RESEARCH CENTER INC.

KNEE SLIDER TEST

HYBRID III SMALL FEMALE

16-AUG-01

LEFT KNEE

TRC INC.

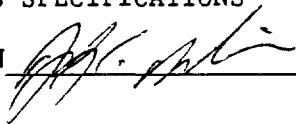
TEST NO: 416C10LS1

572 O SN416 LEFT SLIDER CAL10

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	22.2 DEG. C
RELATIVE HUMIDITY	10 - 70 %	62.0 %
PENDULUM VELOCITY	2.70-2.80 M/S	2.78 M/S
PEAK DISPLACEMENT	12.7 - 15.5 MM	14.3 MM

TEST MEETS SPECIFICATIONS

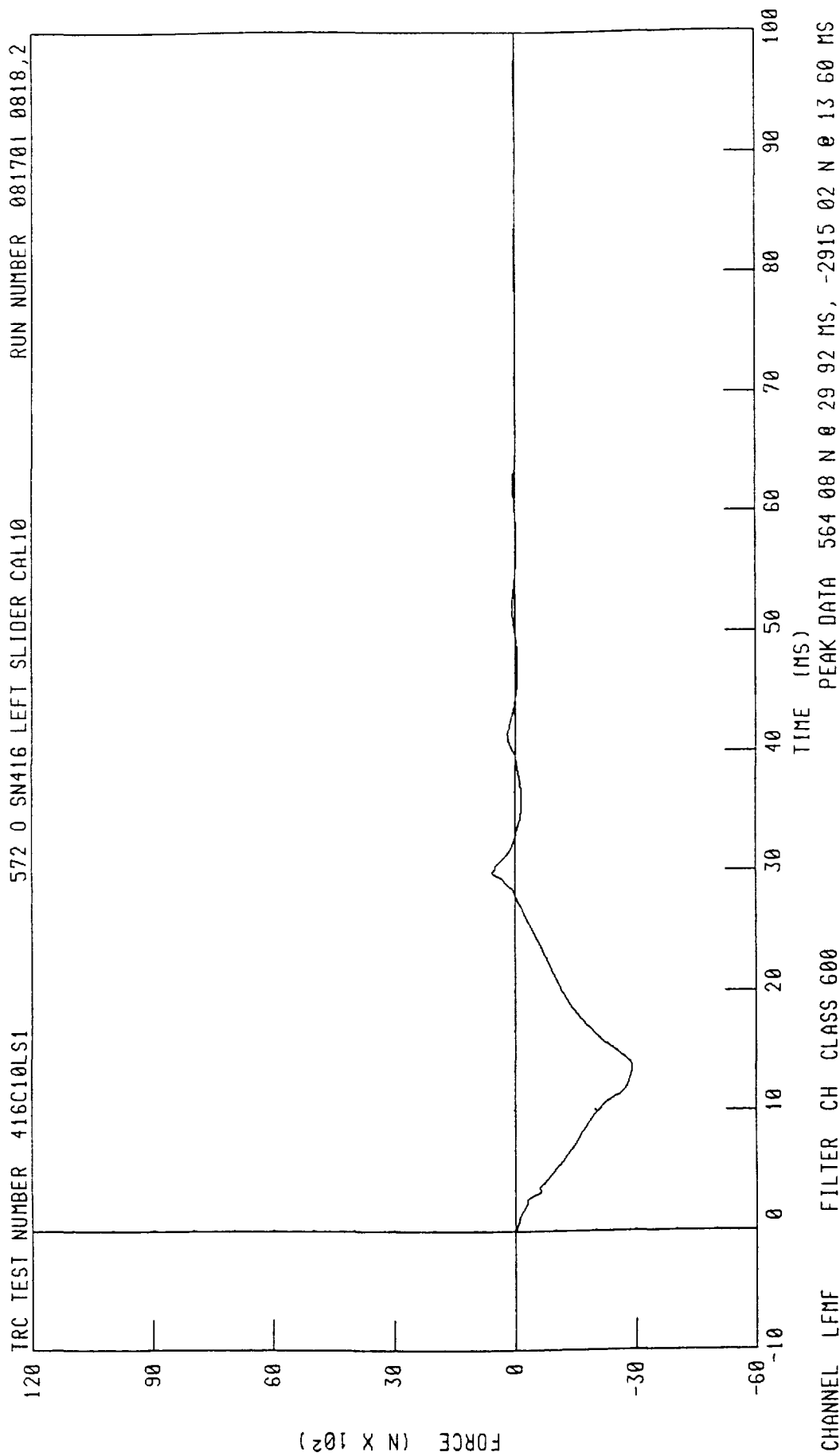
TECHNICIAN



RUN NUMBER: 081601.1306;1

PART 572-0 HYBRID III SMALL FEMALE - LEFT KNEE SLIDER CALIBRATION

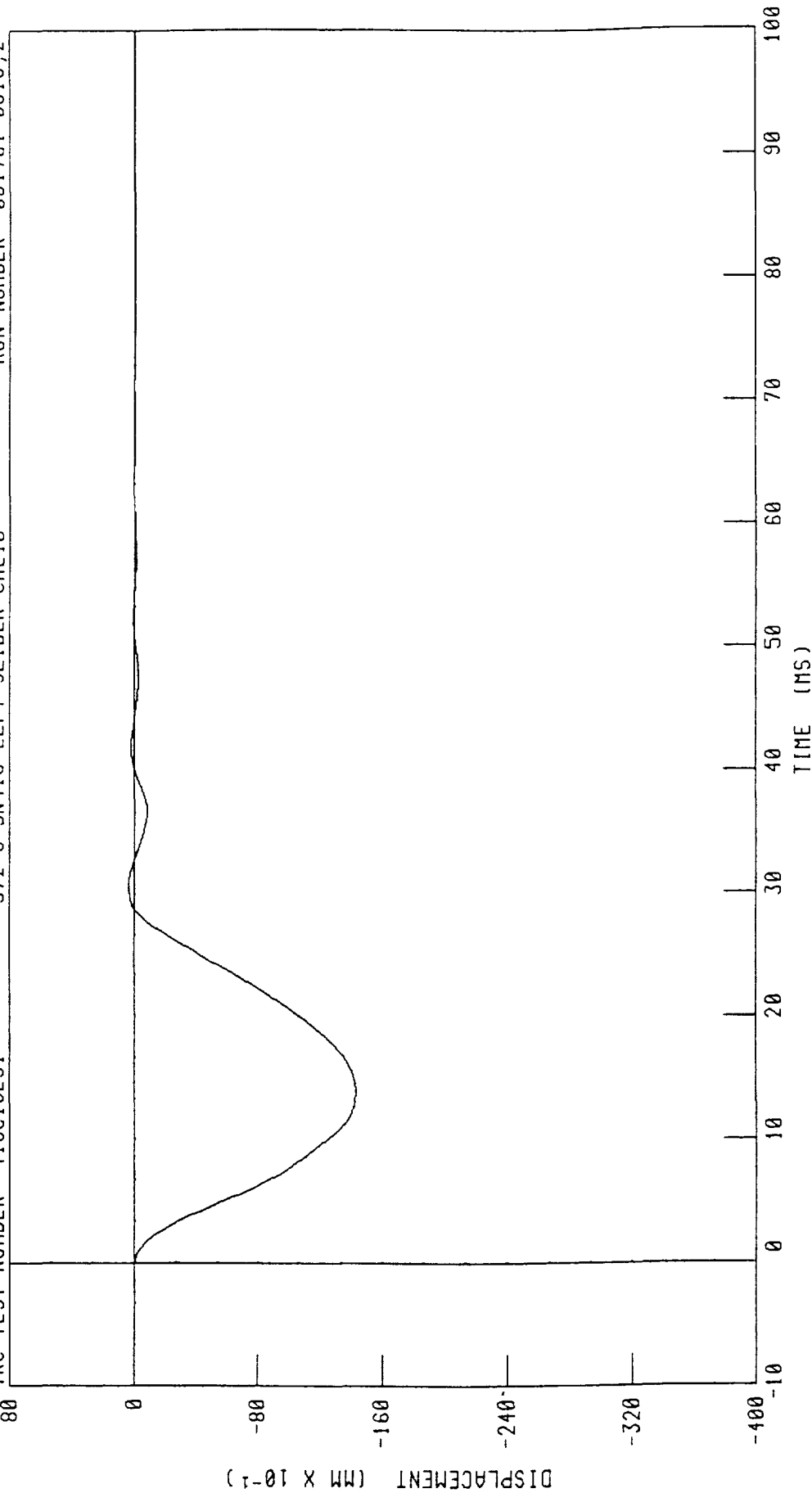
LEFT FEMUR FORCE



PART 572-0 HYBRID III SMALL FEMALE - LEFT KNEE SLIDER CALIBRATION

LEFT KNEE DISPLACEMENT

TRC TEST NUMBER 416C10LS1 572 0 SN416 LEFT SLIDER CAL10 RUN NUMBER 081701 0818,2



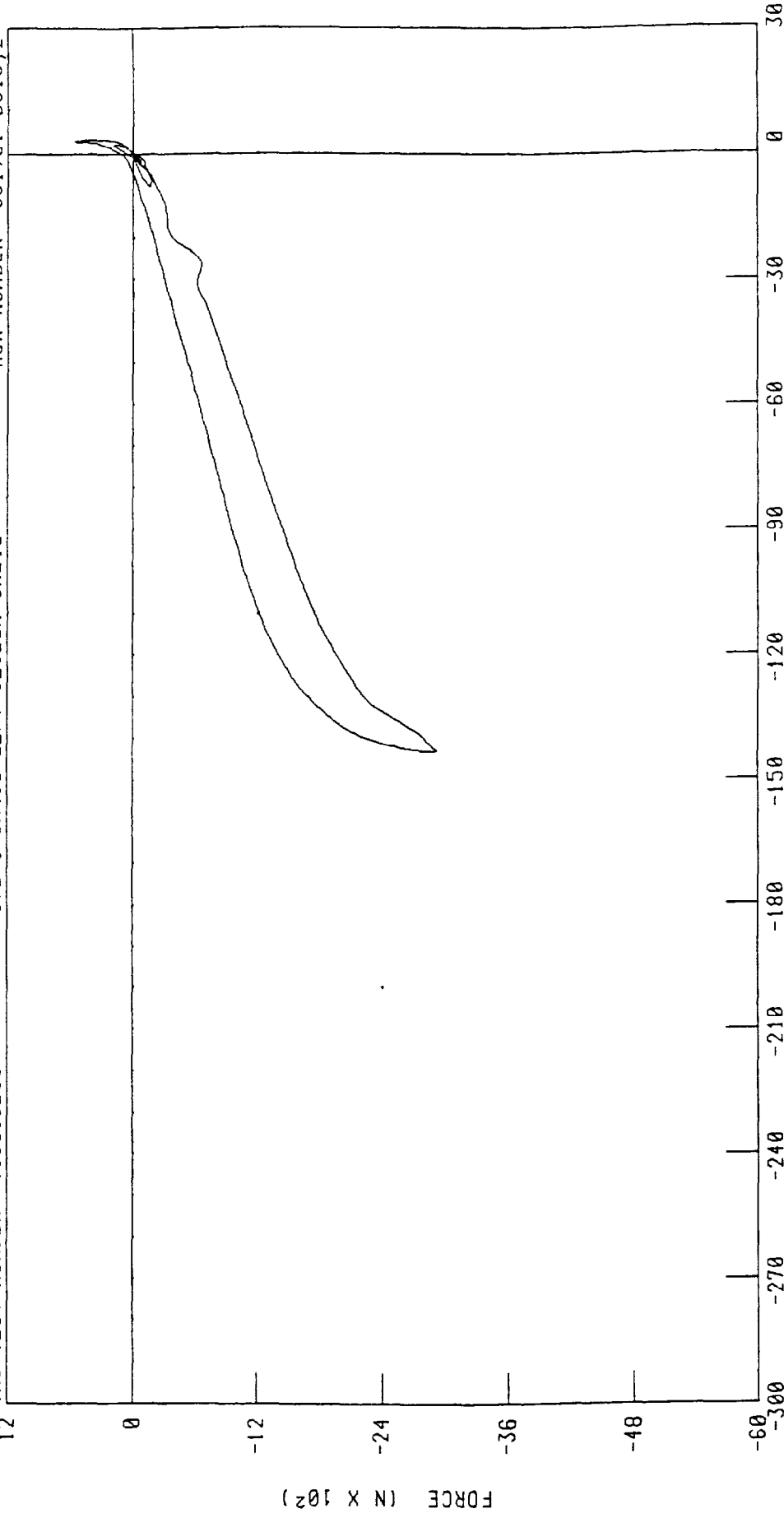
CHANNEL KNLXD FILTER CH CLASS 180

PEAK DATA 0 36 MM @ 30 80 MS, -14 32 MM @ 14 00 MS

PART 572-0 HYBRID III SMALL FEMALE - LEFT KNEE SLIDER CALIBRATION

LEFT KNEE DISPLACEMENT VS FEMUR FORCE

TRC TEST NUMBER 416C10LS1 572 0 SN416 LEFT SLIDER CAL10 RUN NUMBER 081701 0818,2



DISPLACEMENT (MM X 10⁻¹)

CHANNEL KNLXD FILTER CH CLASS 180 PEAK DATA 0 36 MM @ 30 80 MS, -14 32 MM @ 14 00 MS
LRFH LFHF CH CLASS 600 564 08 N @ 29 92 MS, -2915 02 N @ 13 60 MS

TRANSPORTATION RESEARCH CENTER INC.

KNEE SLIDER TEST

HYBRID III SMALL FEMALE

16-AUG-01

RIGHT KNEE

TRC INC.

TEST NO: 416C10RS1

572 0 SN416 RIGHT SLIDER 10

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	64.0 %
PENDULUM VELOCITY	2.70-2.80 M/S	2.77 M/S
PEAK DISPLACEMENT	12.7 - 15.5 MM	14.8 MM

TEST MEETS SPECIFICATIONS

TECHNICIAN

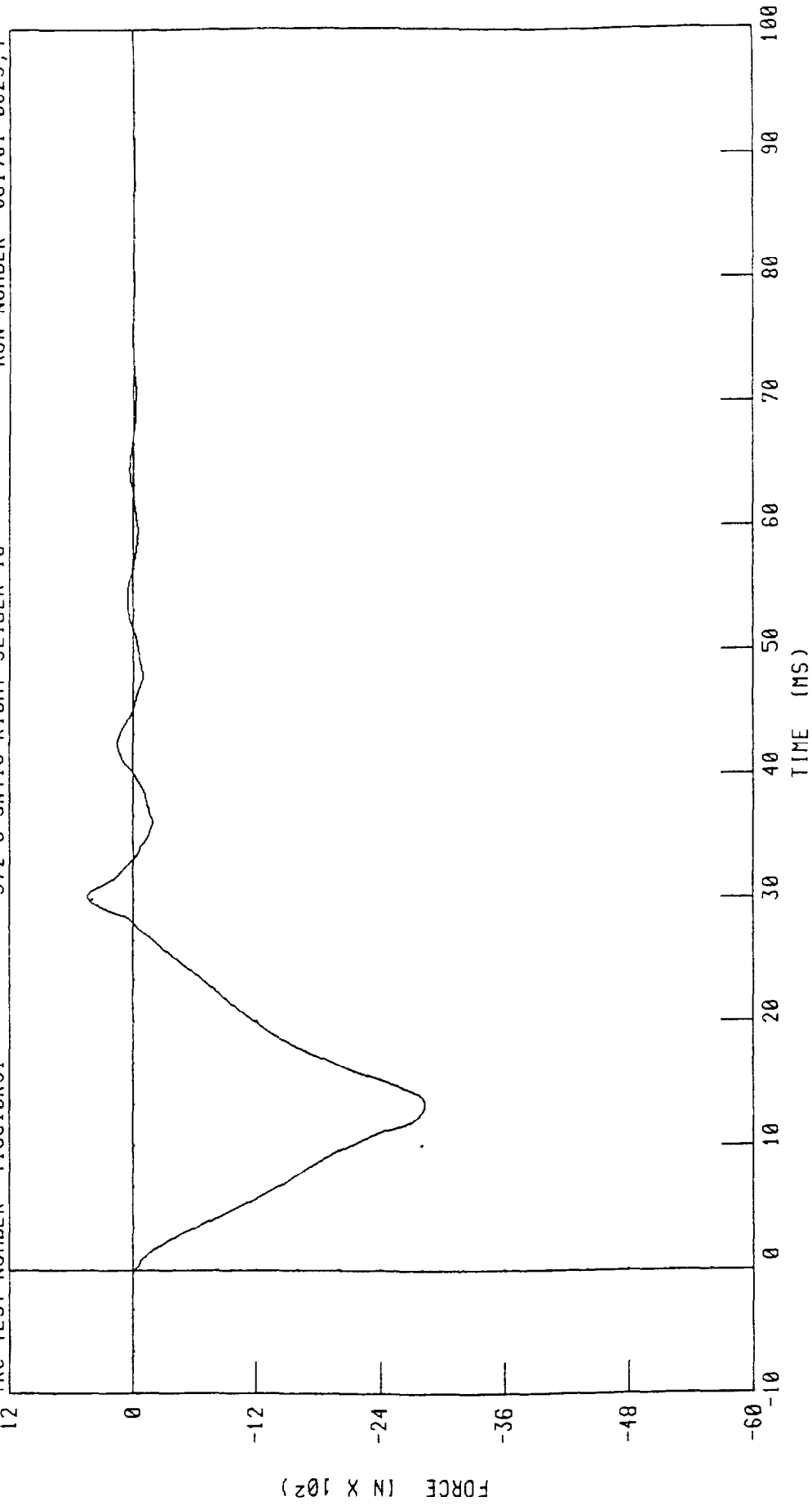
[Signature]

RUN NUMBER: 081601.1120;3

PART 572-0 HYBRID III SMALL FEMALE - RIGHT KNEE SLIDER CALIBRATION

RIGHT FEMUR FORCE

TRC TEST NUMBER 416C10RS1 572 0 SN416 RIGHT SLIDER 10 RUN NUMBER 081701 0829,4



CHANNEL RFMF FILTER CH CLASS 600 PEAK DATA 449 81 N 0 30 32 MS, -2821 33 N 0 13 36 MS

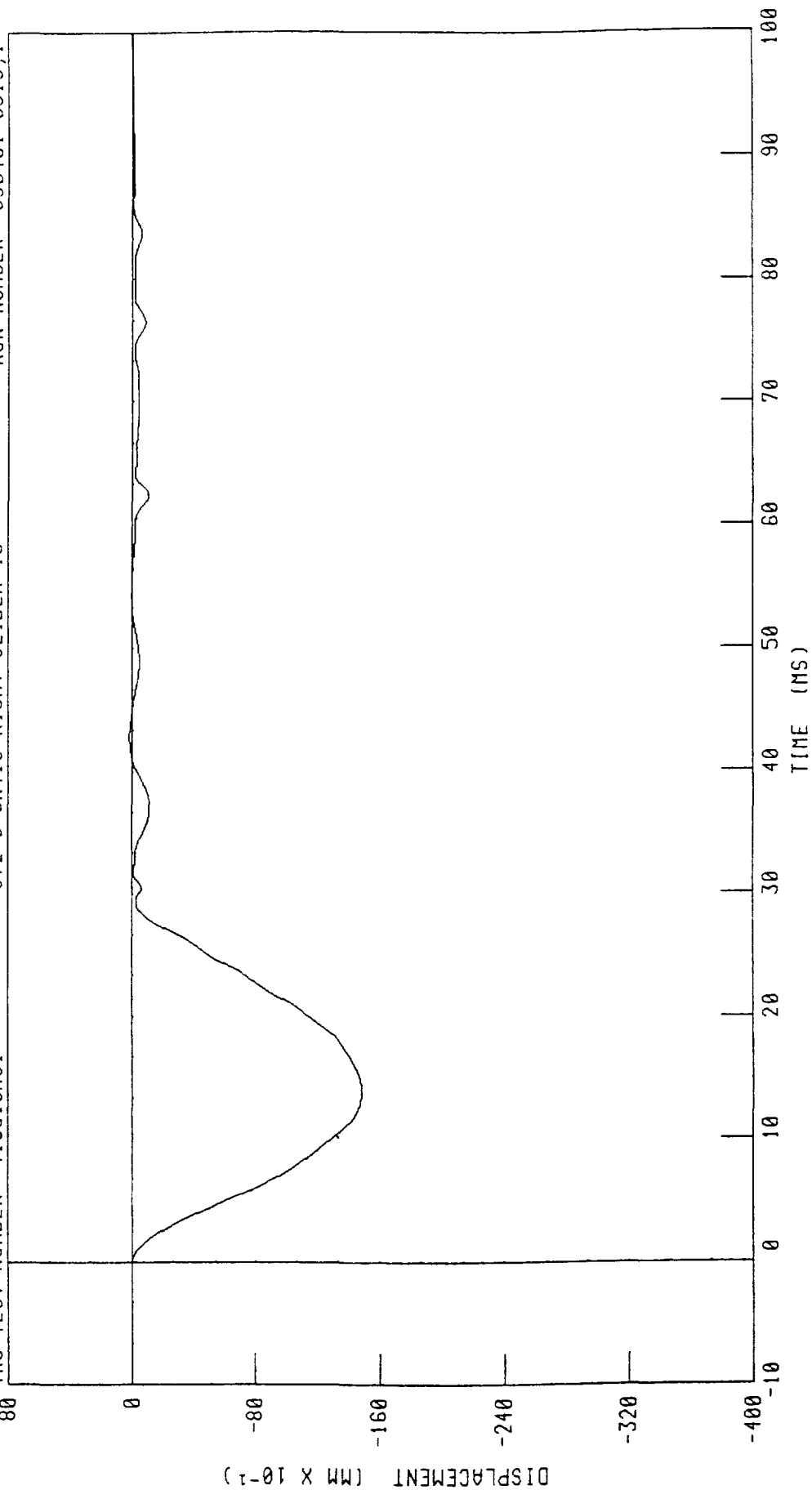
PART 572-0 HYBRID III SMALL FEMALE - RIGHT KNEE SLIDER CALIBRATION

RIGHT KNEE DISPLACEMENT

TRC TEST NUMBER 416C10RS1

572 0 SN416 RIGHT SLIDER 10

RUN NUMBER 090401 0913,1

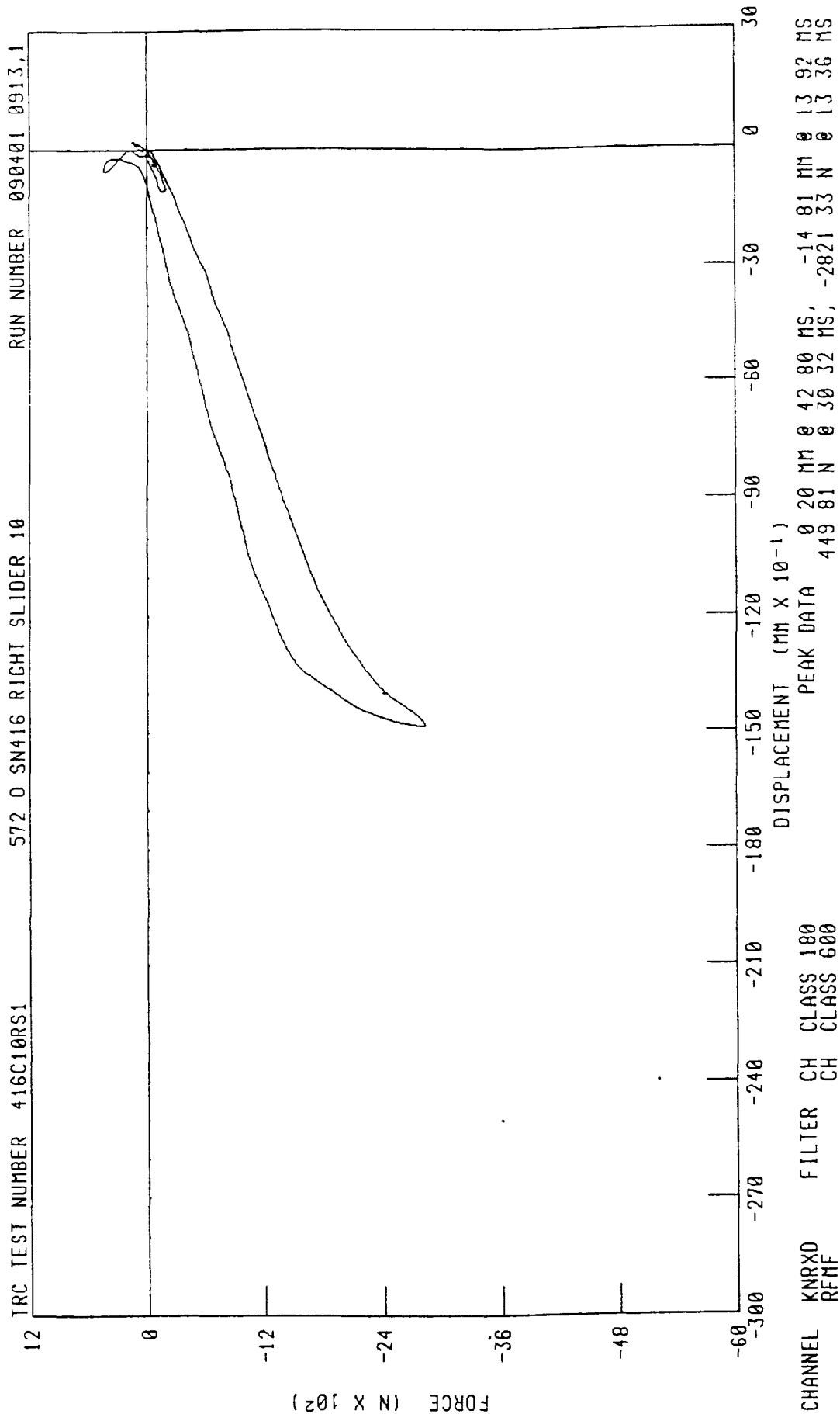


CHANNEL KNRXD FILTER CH CLASS 180

PEAK DATA 0 20 MM @ 42 80 MS, -14 81 MM @ 13 92 MS

PART 572-0 HYBRID III SMALL FEMALE - RIGHT KNEE SLIDER CALIBRATION

RIGHT KNEE DISPLACEMENT VS FEMUR FORCE



Pre-Test Dummy Configuration and Performance Verification Data

Right Front Passenger Dummy S/N: 421

TRANSPORTATION RESEARCH CENTER INC.
HYBRID III SMALL FEMALE EXTERNAL DIMENSIONS
SN: 421 MFG:03

DATE: 21-Aug-01

TRC INC. TEST NO: 421C03ED1

5720 SN421EXT. DIMENSION CAL03

TEST PARAMETER	DIMEN.	SPECIFICATION	TEST RESULTS
Total Sitting Height	A	774 7 - 800 1 MM	795 02 MM
Shoulder Pivot Height	B	431 8 - 457 2 MM	447 04 MM
Hip Pivot Height	C	81 3 - 86 3 MM	81 28 MM
Hip Pivot from Backline	D	144 8 - 149 8 MM	147 32 MM
Shoulder Pivot from Backline	E	68 6 - 83 8 MM	78 74 MM
Thigh Clearance	F	119 4 - 134 6 MM	127 MM
Back of Elbow to Wrist Pivot	G	243 9 - 259 1 MM	256 54 MM
Head Back from Backline	H	40 7 - 45 7 MM	45 72 MM
Shoulder to Elbow Length	I	276 8 - 297 2 MM	284 48 MM
Elbow Rest Height	J	182 8 - 203 2 MM	187 96 MM
Buttock to Knee Length	K	520 7 - 546 1 MM	530 86 MM
Popliteal Height	L	355 6 - 376 MM	373 38 MM
Knee to Floor Height	M	393 7 - 419 1 MM	408 94 MM
Buttock Popliteal Length	N	414 - 439 4 MM	431 8 MM
Chest Depth	O	175 3 - 190 5 MM	185 42 MM
Foot Length	P	218 5 - 233 7 MM	228 6 MM
Buttock to Knee Pivot Length	R	457 2 - 482 6 MM	469 9 MM
Head Breadth	S	137 1 - 147 3 MM	144 78 MM
Head Depth	T	177 8 - 188 MM	185 42 MM
Hip Breadth	U	299 7 - 314 9 MM	307 34 MM
Shoulder Breadth	V	350 5 - 365 7 MM	358 14 MM
Foot Breadth	W	78 8 - 94 MM	88 9 MM
Head Circumference	X	528 3 - 548 7 MM	541 02 MM
Chest Circumference with Jacket	Y	850 9 - 881 3 MM	869 442 MM
Waist Circumference	Z	759 5 - 789 9 MM	782 32 MM
Ref Location for Chest Circumference	AA	299 7 - 309 9 MM	304 8 MM
Ref Location for Waist Circumference	BB	160 - 170 2 MM	165 1 MM

DUMMY MEETS SPECIFICATION

TECHNICIAN: *[Signature]*

TRANSPORTATION RESEARCH CENTER INC.

HEAD DROP TEST

HYBRID III SMALL FEMALE

16-AUG-01

TRC INC.

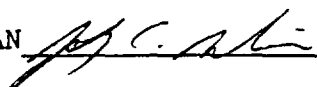
TEST NO: 421C03HD4

572 0 SN421 HEAD DROP CAL 3

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	22.2 DEG. C
RELATIVE HUMIDITY	10 - 70 %	64.0 %
PEAK RESULTANT ACCELERATION	250 - 300 G	251.91 G
PEAK LATERAL ACCELERATION	15 G MAX	6.74 G
IS ACCELERATION CURVE UNIMODAL?	YES	YES

TEST MEETS SPECIFICATIONS

TECHNICIAN



RUN NUMBER: 082201.0932;1

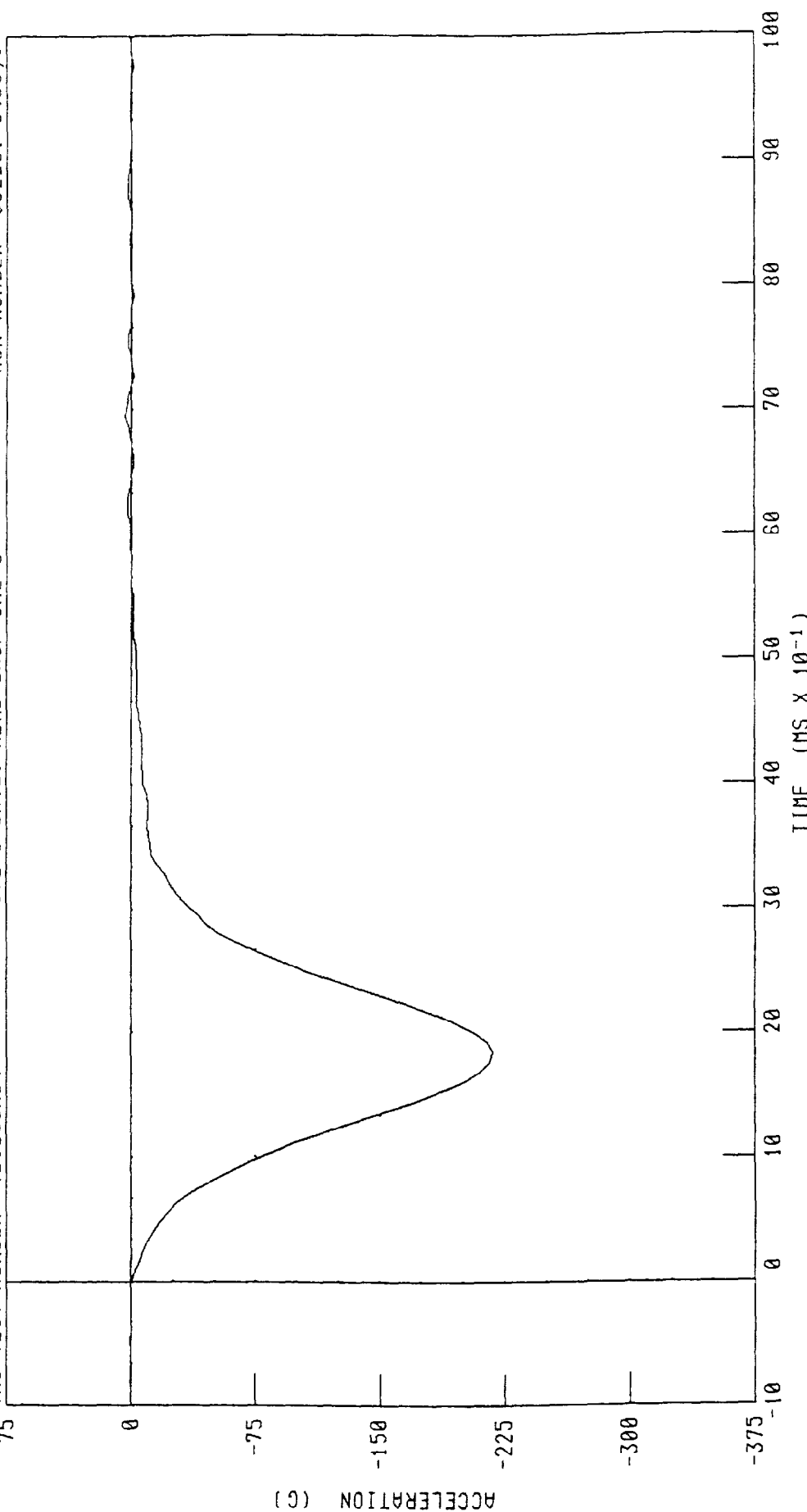
PART 572-0 HYBRID III SMALL FEMALE - HEAD CALIBRATION

HEAD ACCELERATION X AXIS

TRC TEST NUMBER 421C03HD4

572 0 SN421 HEAD DROP CAL 3

RUN NUMBER 082201 0933,1



TIME (MS $\times 10^{-1}$)

CHANNEL HEDXC FILTER CH CLASS 1000

PEAK DATA 3 86 G 0 6 96 MS, -217 80 G 0 1 84 MS

PART 572-0 HYBRID III SMALL FEMALE - HEAD CALIBRATION

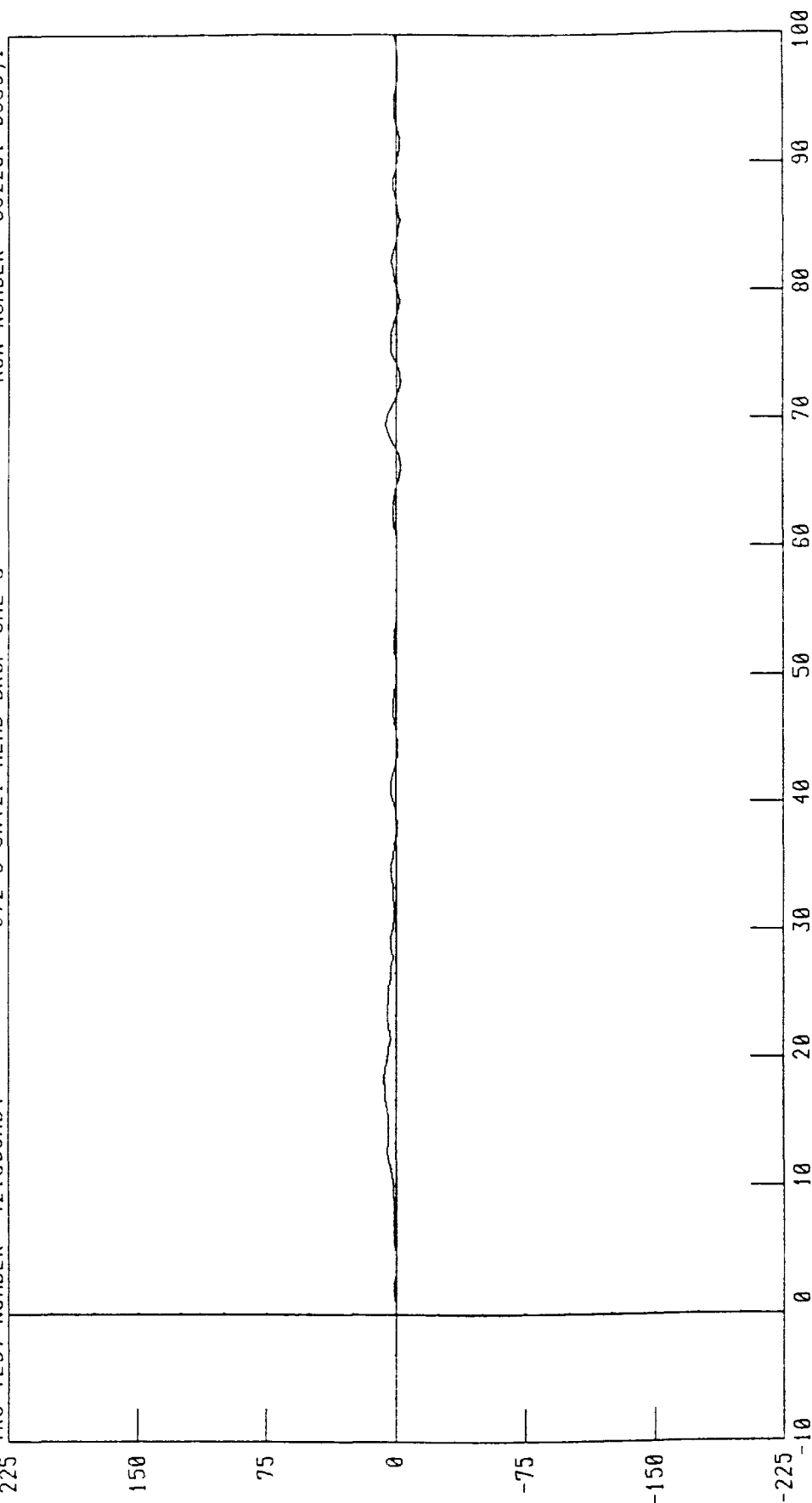
HEAD ACCELERATION Y AXIS

TRC TEST NUMBER 421C03HD4

572 0 SN421 HEAD DROP CAL 3

RUN NUMBER 082201 0933,1

ACCELERATION (G)



TIME (MS X 10⁻¹)

CHANNEL HEDYC FILTER CH CLASS 1000

PEAK DATA 6 74 C 0 1 84 MS, -2 87 C 0 6 64 MS

PART 572-0 HYBRID III SMALL FEMALE - HEAD CALIBRATION

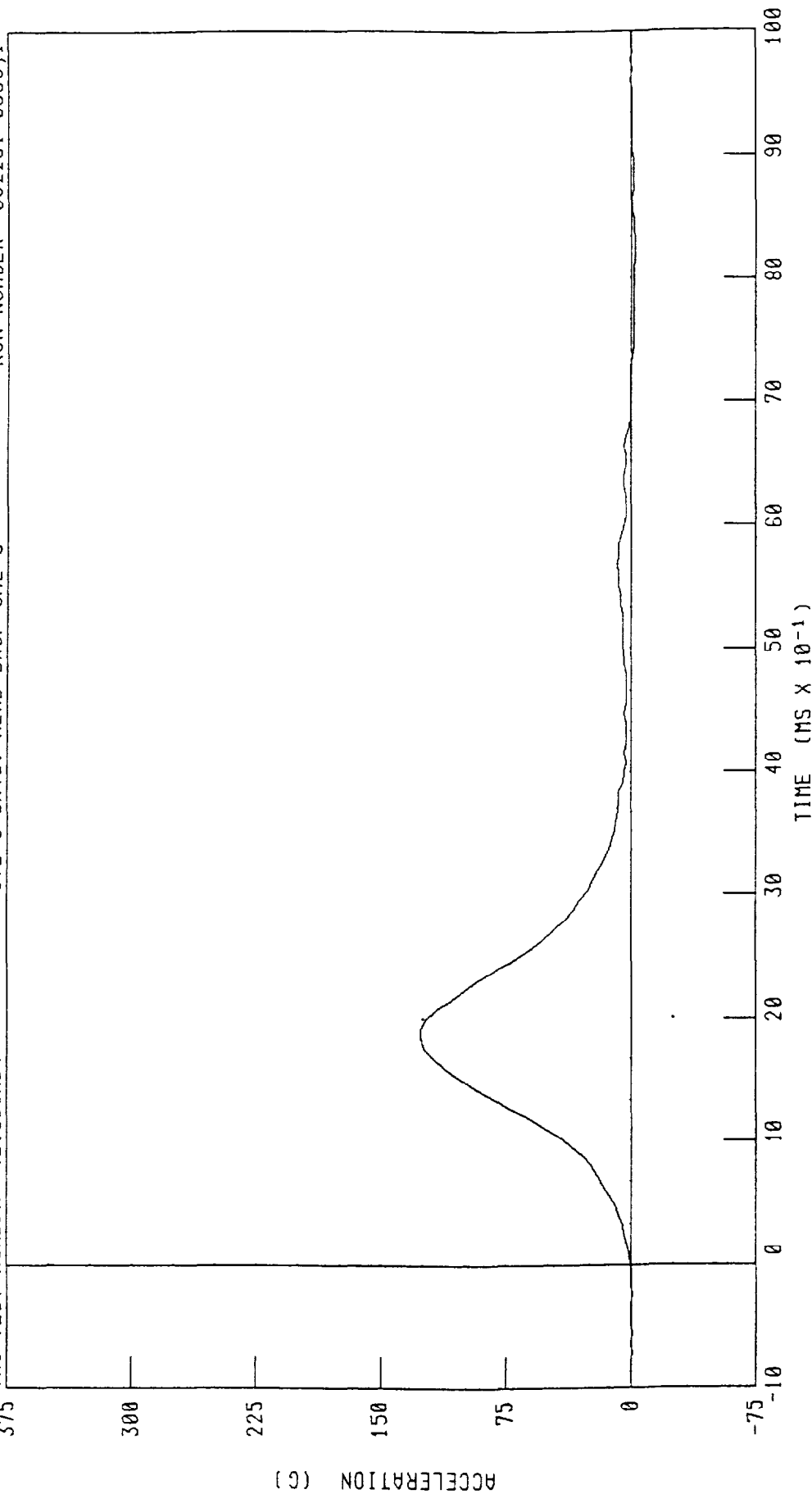
HEAD ACCELERATION Z AXIS

572 0 SN421 HEAD DROP CAL 3

572 0 SN421 HEAD DROP CAL 3

IRC TEST NUMBER 421C03HD4

RUN NUMBER 082201 0933,1



CHANNEL HEDZC FILTER CH CLASS 1000

PEAK DATA 126 41 C 0 1 84 MS, -2 75 C 0 8 16 MS

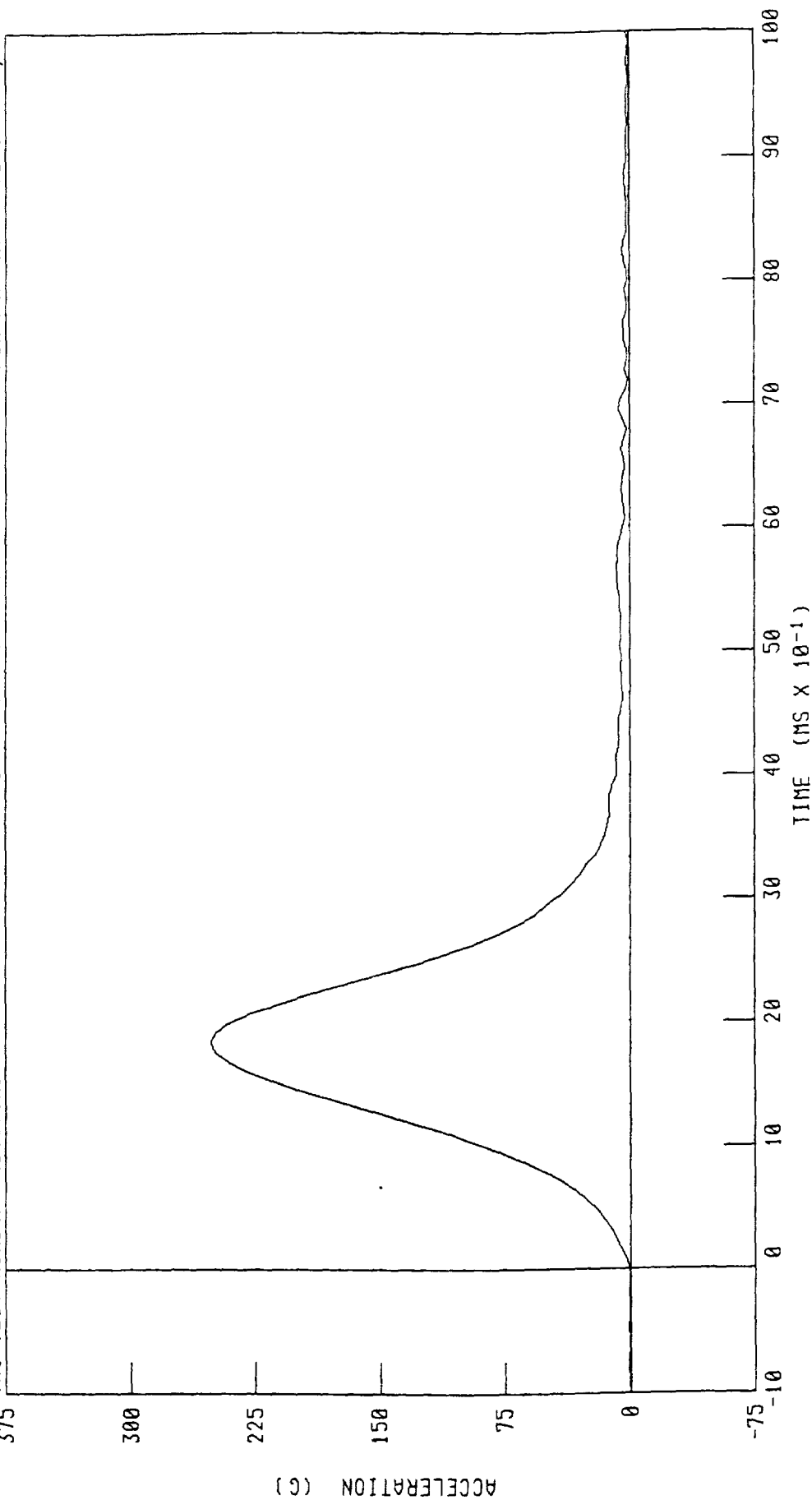
PART 572-0 HYBRID III SMALL FEMALE - HEAD CALIBRATION

HEAD RESULTANT ACCELERATION

TRC TEST NUMBER 421C03HD4

572 0 SN421 HEAD DROP CAL 3

RUN NUMBER 082201 0933,1



CHANNEL HEDRC FILTER CH CLASS 1000

PEAK DATA 251 92 G @ 1 84 MS, 0 26 G @ -0 96 MS

TRANSPORTATION RESEARCH CENTER INC.

HYBRID III SMALL FEMALE

20-AUG-01

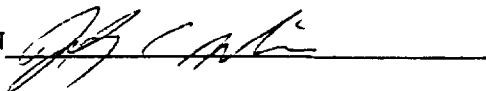
NECK FLEXION TEST - 6 CHANNEL TRANSDUCER

TRC INC. TEST NO: 421C03NF10 572 0 SN421 NECK FLEX. CAL03

TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE		20.6-22.2 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY		10 - 70 %	640.0 %
IMPACT VELOCITY		6.89 - 7.13 M/S	7.06 M/S
INTEGRATED PENDULUM VELOCITY	10 MS	2.0 - 2.5 M/S	2.35 M/S
	20 MS	4.0 - 5.0 M/S	4.65 M/S
	30 MS	5.8 - 7.0 M/S	6.78 M/S
PEAK D-PLANE ROTATION		77 - 91 DEG.	82.95 DEG.
PEAK MOMENT DURING ROTATION ITNERVAL		69 - 83 NM	72.53 NM
POSITIVE MOMENT DECAY TIME TO 10 NM LEVEL		80 - 100 MS	89.04 MS

TEST MEETS SPECIFICATIONS

TECHNICIAN

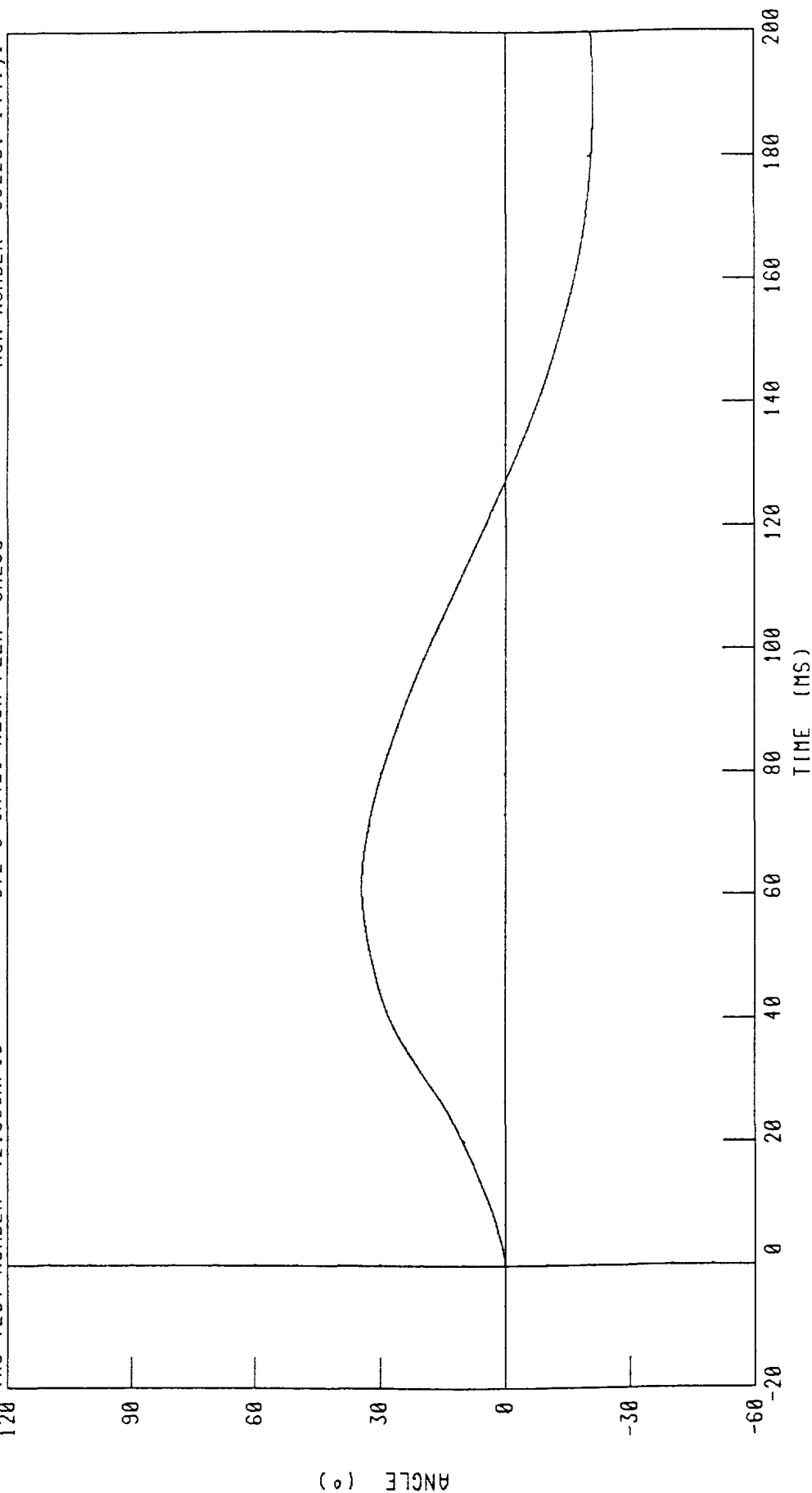


RUN NUMBER: 082201.1439;1

PART 572-0 HYBRID III SMALL FEMALE - NECK FLEXION CALIBRATION

ROTATION ABOUT BASE OF NECK

TRC TEST NUMBER 421C03NF10 572 0 SN421 NECK FLEX CAL03 RUN NUMBER 082201 1441,1



CHANNEL BETA FILTER CH CLASS 60 PEAK DATA 34 40 ° @ 61 76 MS, -21 21 ° @ 189 92 MS

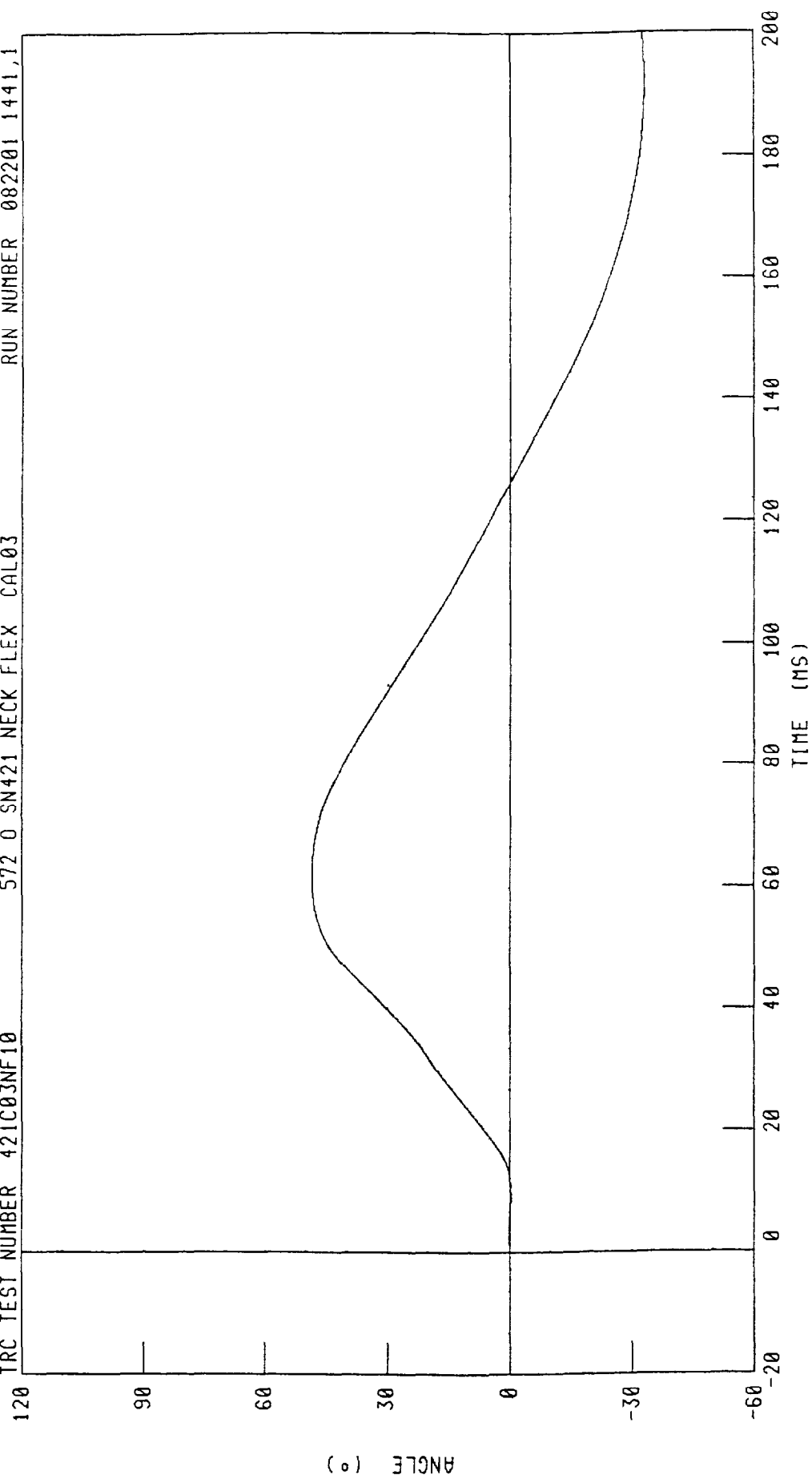
PART 572-0 HYBRID III SMALL FEMALE - NECK FLEXION CALIBRATION

ROTATION ABOUT OCCIPITAL CONDYLE

TRC TEST NUMBER 421C03NF10

572 0 SN421 NECK FLEX CAL03

RUN NUMBER 082201 1441,1



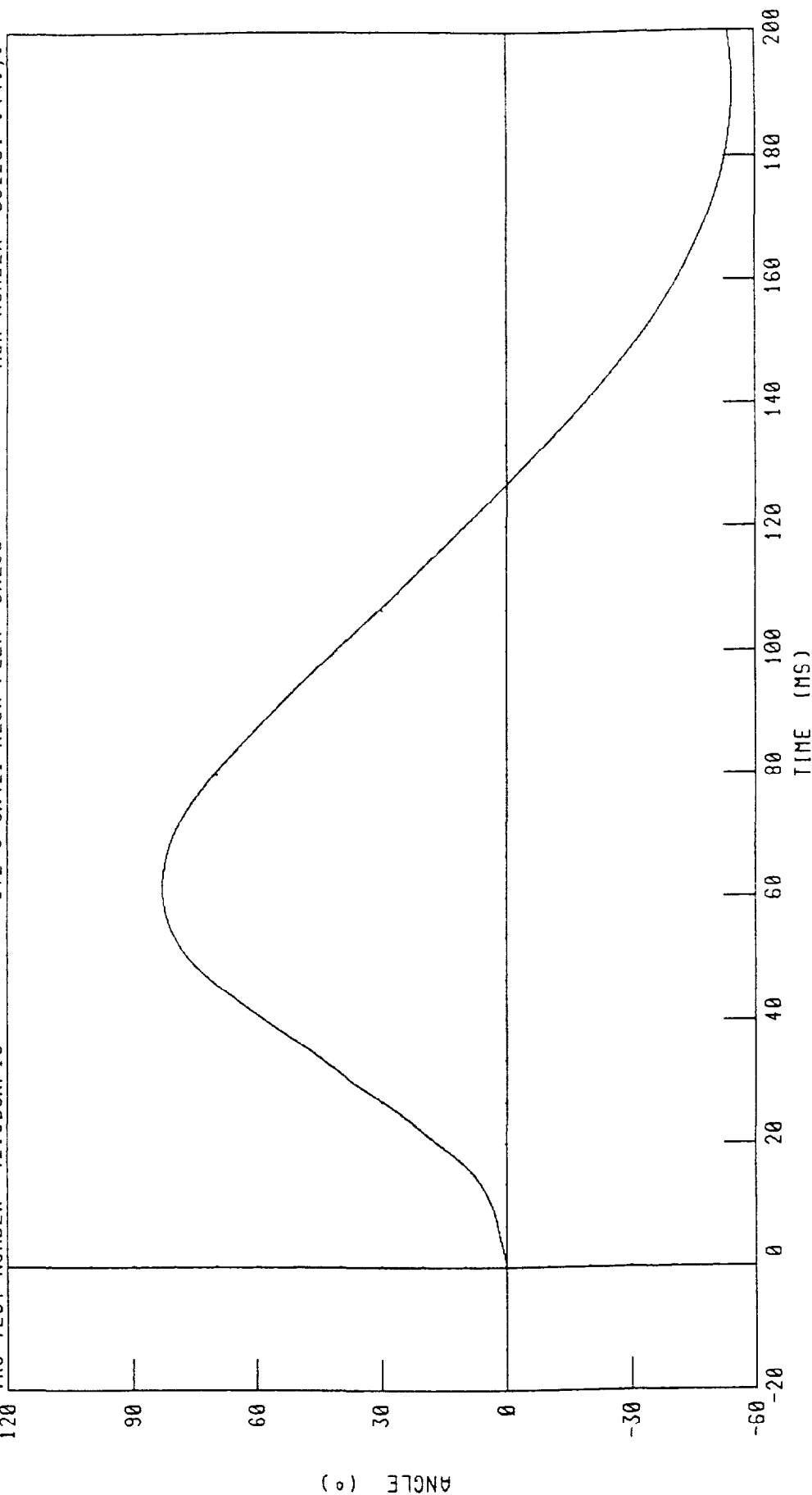
CHANNEL THETA FILTER CH CLASS 60

PEAK DATA 48 56 ° @ 61 60 MS, -33 29 ° @ 192 56 MS

PART 572-0 HYBRID III SMALL FEMALE - NECK FLEXION CALIBRATION

TOTAL ROTATION

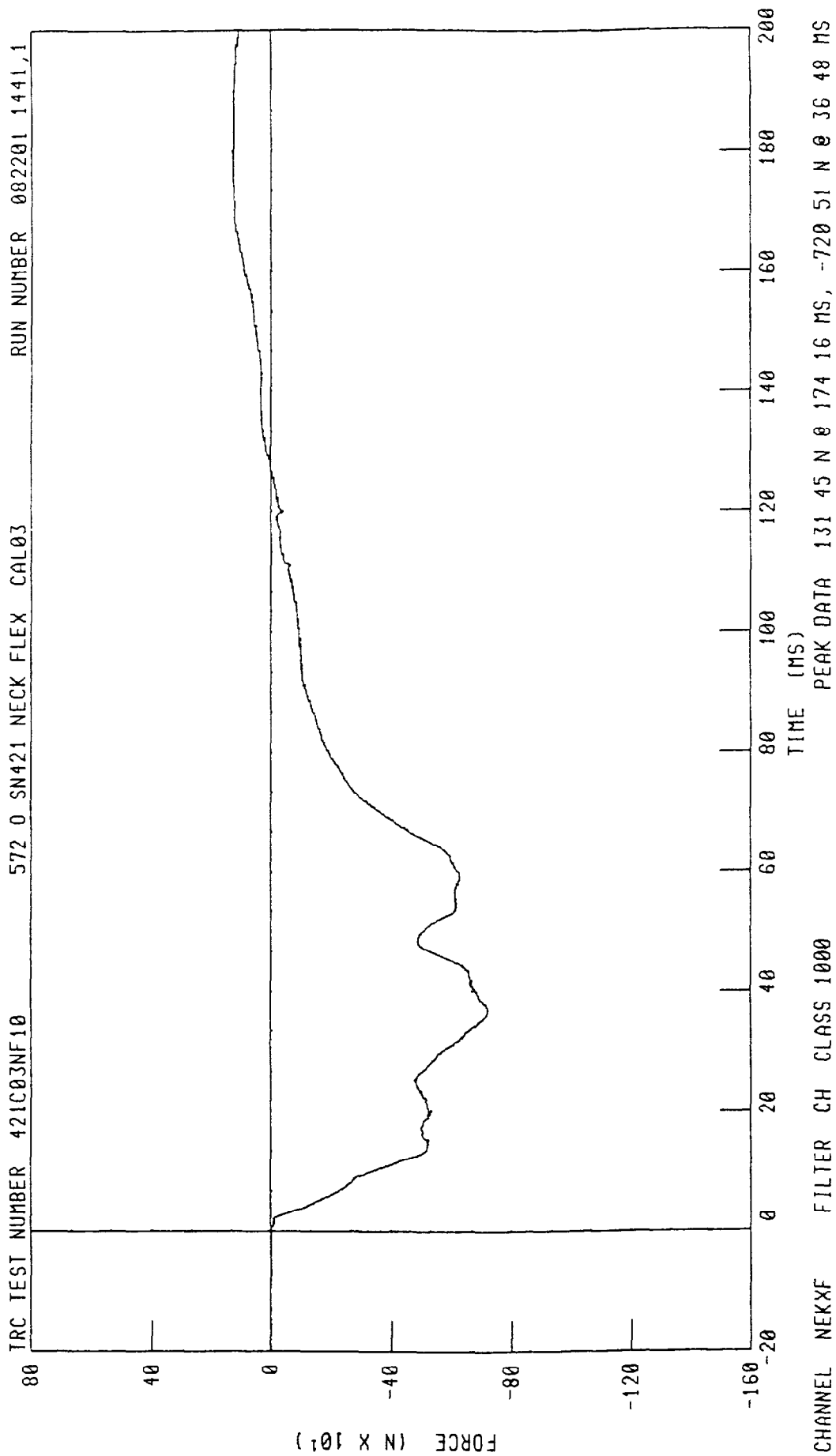
TRC TEST NUMBER 421C03NF10 572 0 SN421 NECK FLEX CAL03 RUN NUMBER 0822201 1441,1



CHANNEL TOTAL FILTER CH CLASS 60

PEAK DATA 82 96 ° @ 61 68 MS, -54 49 ° @ 191 20 MS

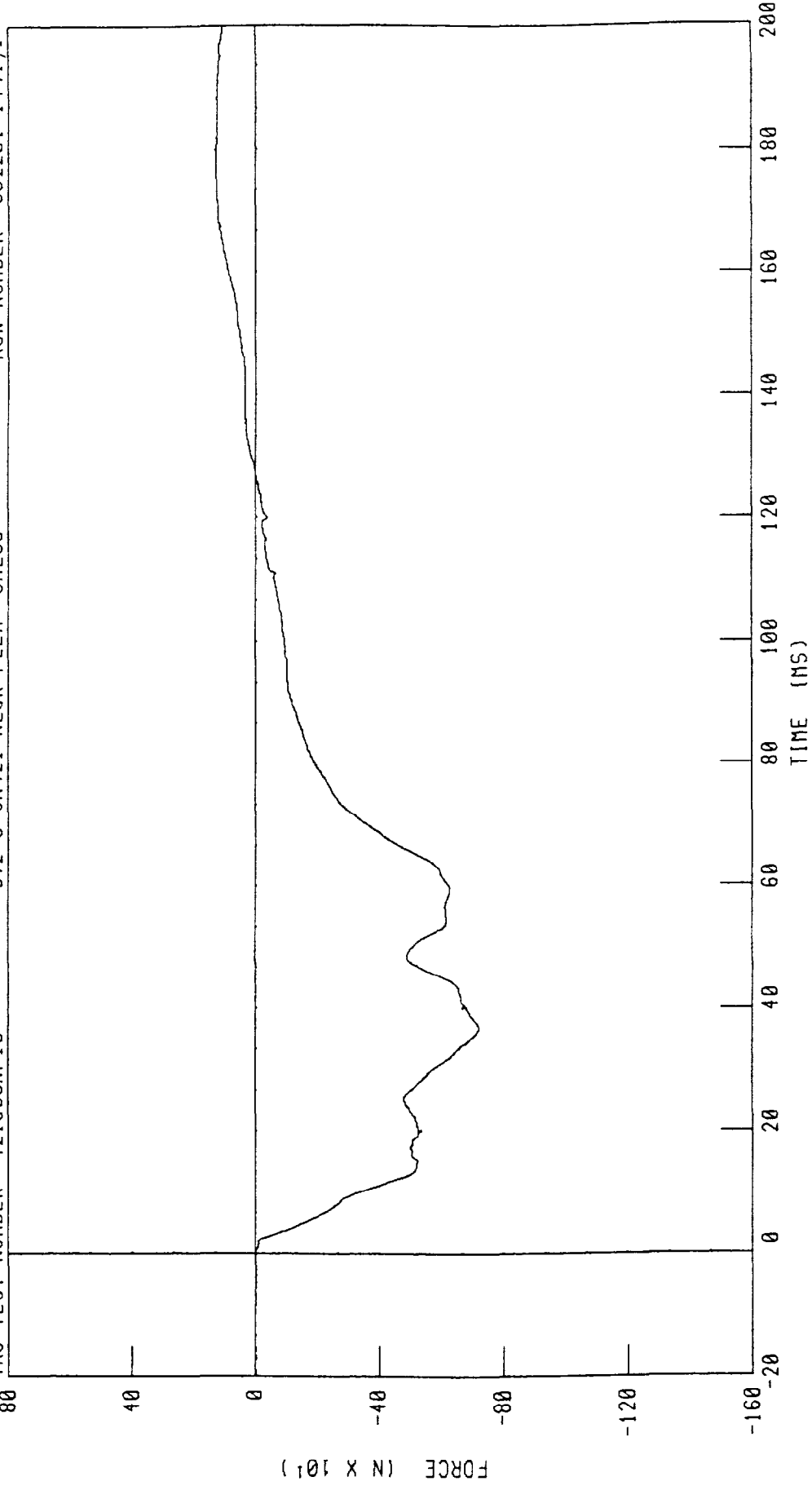
PART 572-0 HYBRID III SMALL FEMALE - NECK FLEXION CALIBRATION
NECK FORCE X AXIS



PART 572-0 HYBRID III SMALL FEMALE - NECK FLEXION CALIBRATION

NECK FORCE X AXIS FILTERED FOR USE IN OCCIPITAL MOMENT CALCULATION

TRC TEST NUMBER 421C03NF10 572 0 SN421 NECK FLEX CAL03 RUN NUMBER 082201 1441,1



CHANNEL NEKXFC FILTER CH CLASS 600

PEAK DATA 131 08 N @ 176 80 MS, -720 82 N @ 36 88 MS

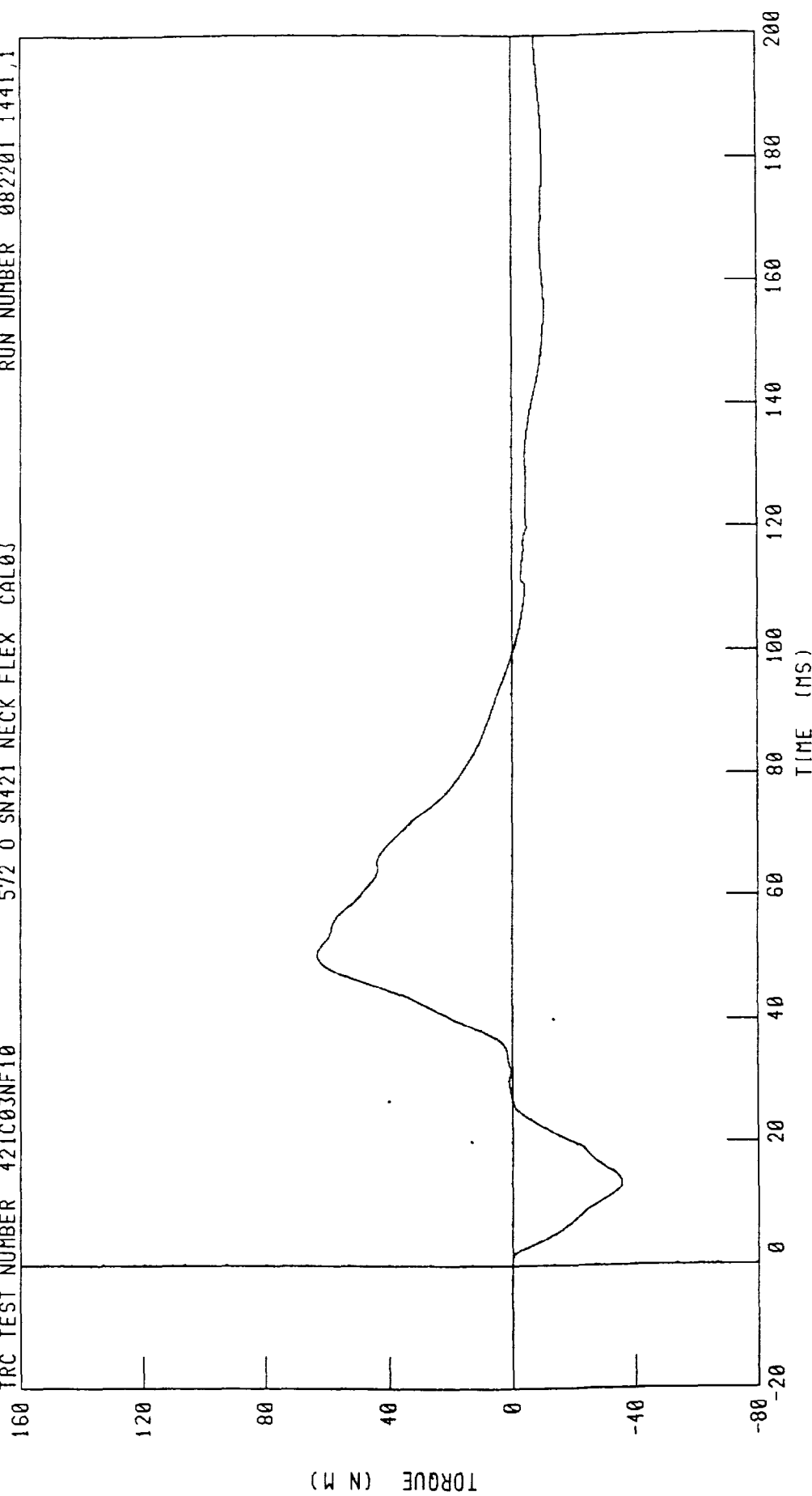
PART 572-0 HYBRID III SMALL FEMALE - NECK FLEXION CALIBRATION

NECK MOMENT Y AXIS

TRC TEST NUMBER 421C03NF10

572 0 SN421 NECK FLEX CAL03

RUN NUMBER 082201 1441,1

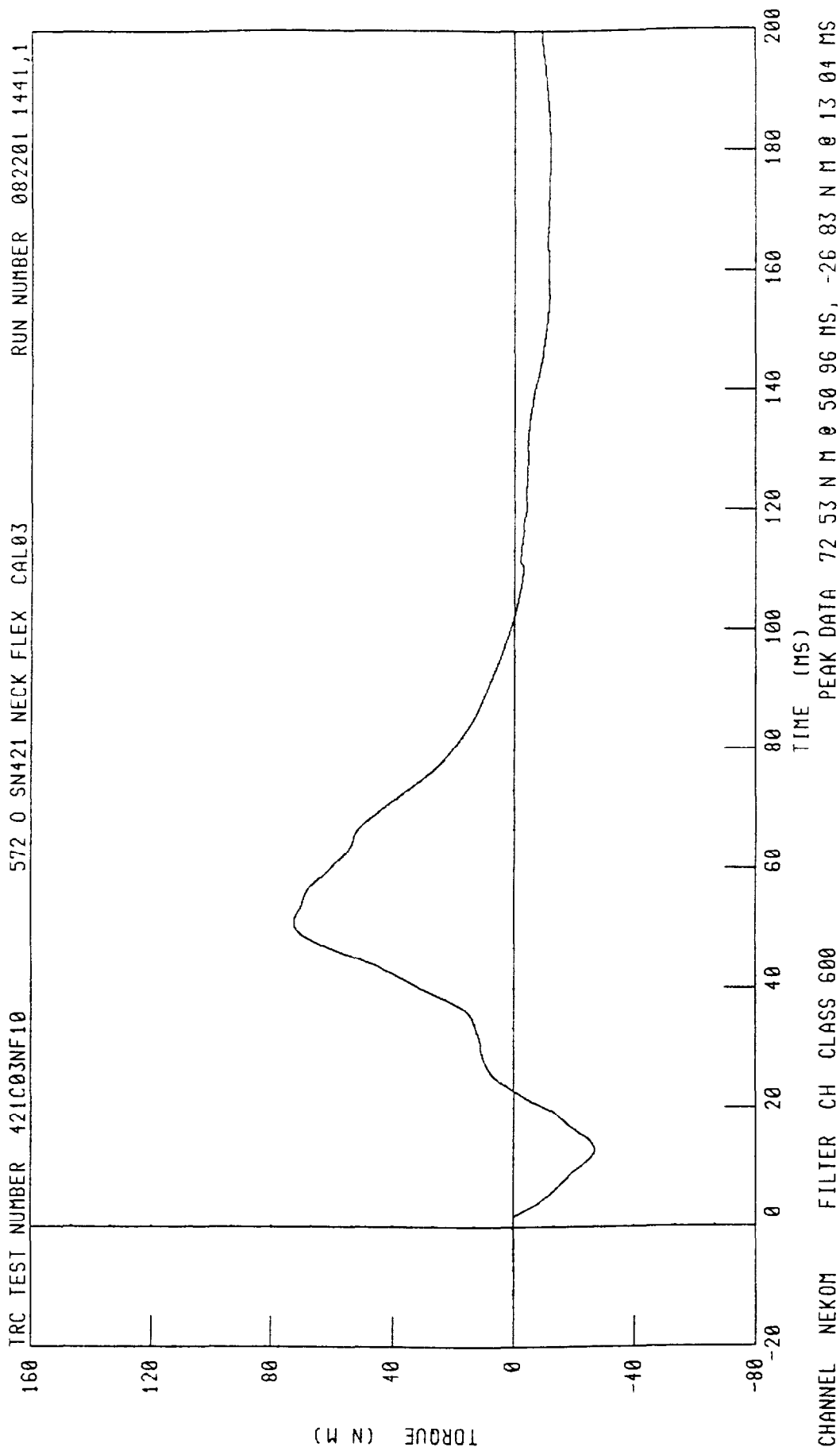


CHANNEL NEKYM FILTER CH CLASS 600

PEAK DATA 63 32 N M 0 50 72 MS, -35 76 N M 0 13 28 MS

PART 572-0 HYBRID III SMALL FEMALE - NECK FLEXION CALIBRATION

TOTAL MOMENT ABOUT OCCIPITAL CONDYLE



TRANSPORTATION RESEARCH CENTER INC.

HYBRID III SMALL FEMALE

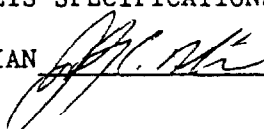
20-AUG-01

NECK EXTENSION TEST - 6 CHANNEL TRANSDUCER

TRC INC. TEST NO: 421C03NE1 572 0 SN421 NECK EXT. CAL 3

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	20.6 - 22.2 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	67.0 %
IMPACT VELOCITY	5.95 - 6.19 M/S	6.14 M/S
INTEGRATED PENDULUM VELOCITY	10 MS 1.5 - 1.9 M/S	1.78 M/S
	20 MS 3.1 - 3.9 M/S	3.70 M/S
	30 MS 4.6 - 5.6 M/S	5.47 M/S
PEAK D-PLANE ROTATION	99 - 114 DEG.	106.13 DEG.
PEAK MOMENT DURING ROTATION INTERVAL	-53 / -65 NM	-57.22 NM
NEGATIVE MOMENT DECAY TIME TO -10 NM LEVEL	94 - 114 MS	101.12 MS

TEST MEETS SPECIFICATIONS

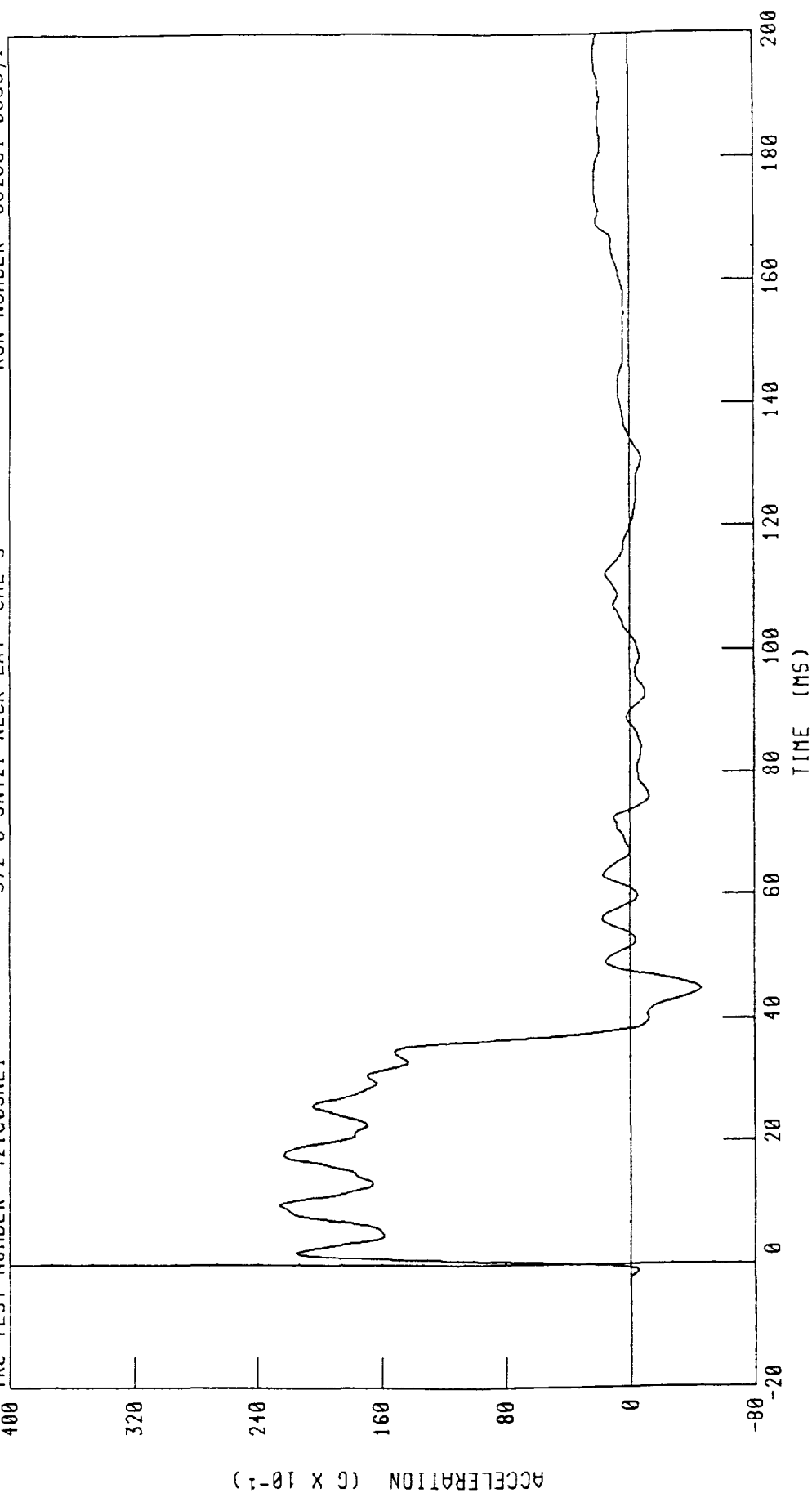
TECHNICIAN 

RUN NUMBER: 082001.0852;1

PART 572-0 HYBRID III SMALL FEMALE - NECK EXTENSION CALIBRATION

PENDULUM DECELERATION

TRC TEST NUMBER 421C03NE1 572 0 SN421 NECK EXT CAL 3 RUN NUMBER 082001 0855,1



CHANNEL PENXC FILTER CH CLASS 180

PEAK DATA 22 61 C 0 9 76 MS, -4 54 C 0 44 80 MS

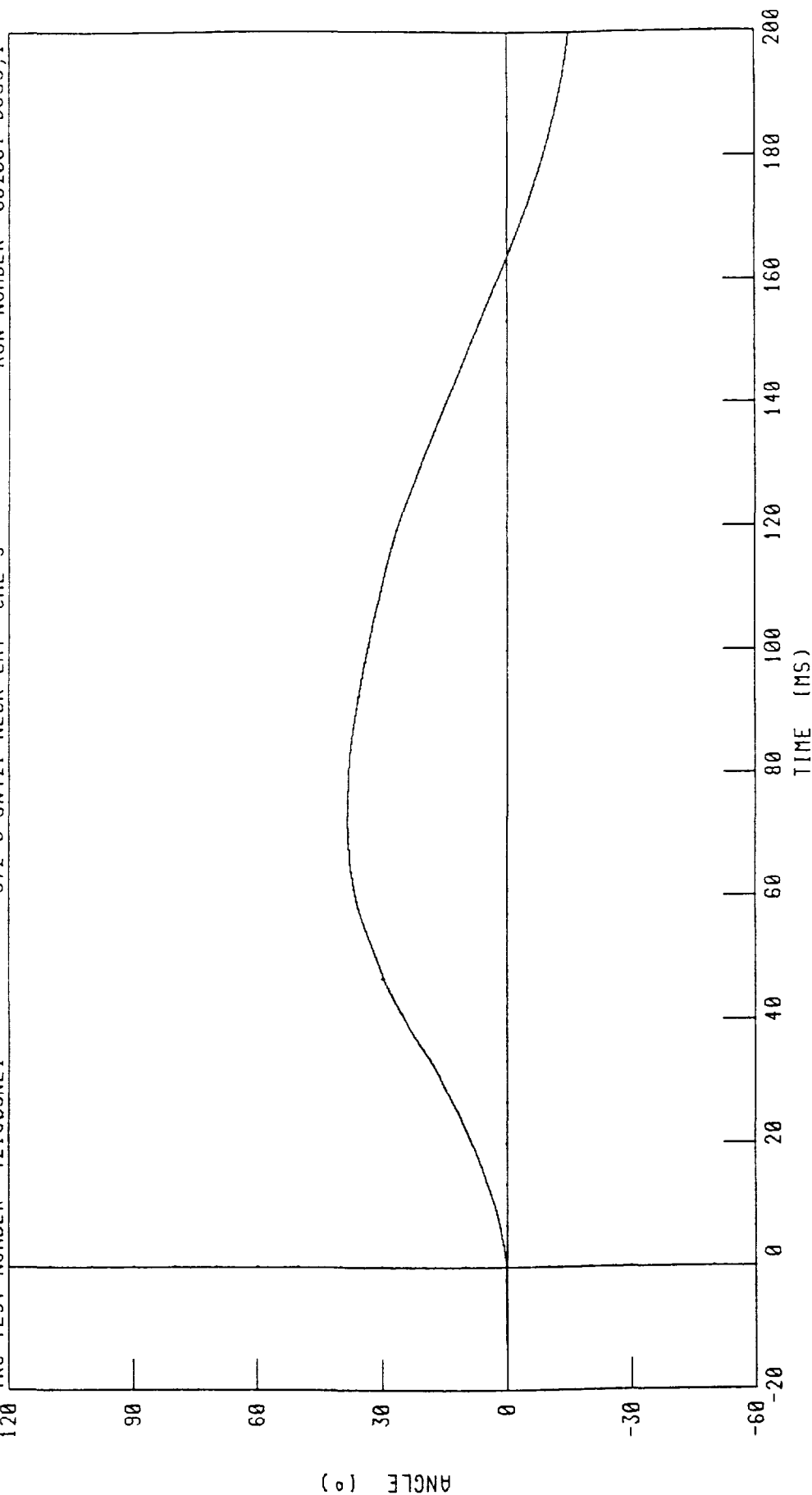
PART 572-0 HYBRID III SMALL FEMALE - NECK EXTENSION CALIBRATION

ROTATION ABOUT BASE OF NECK

TRC TEST NUMBER 421C03NE1

572 0 SN421 NECK EXT CAL 3

RUN NUMBER 002001 0855,1



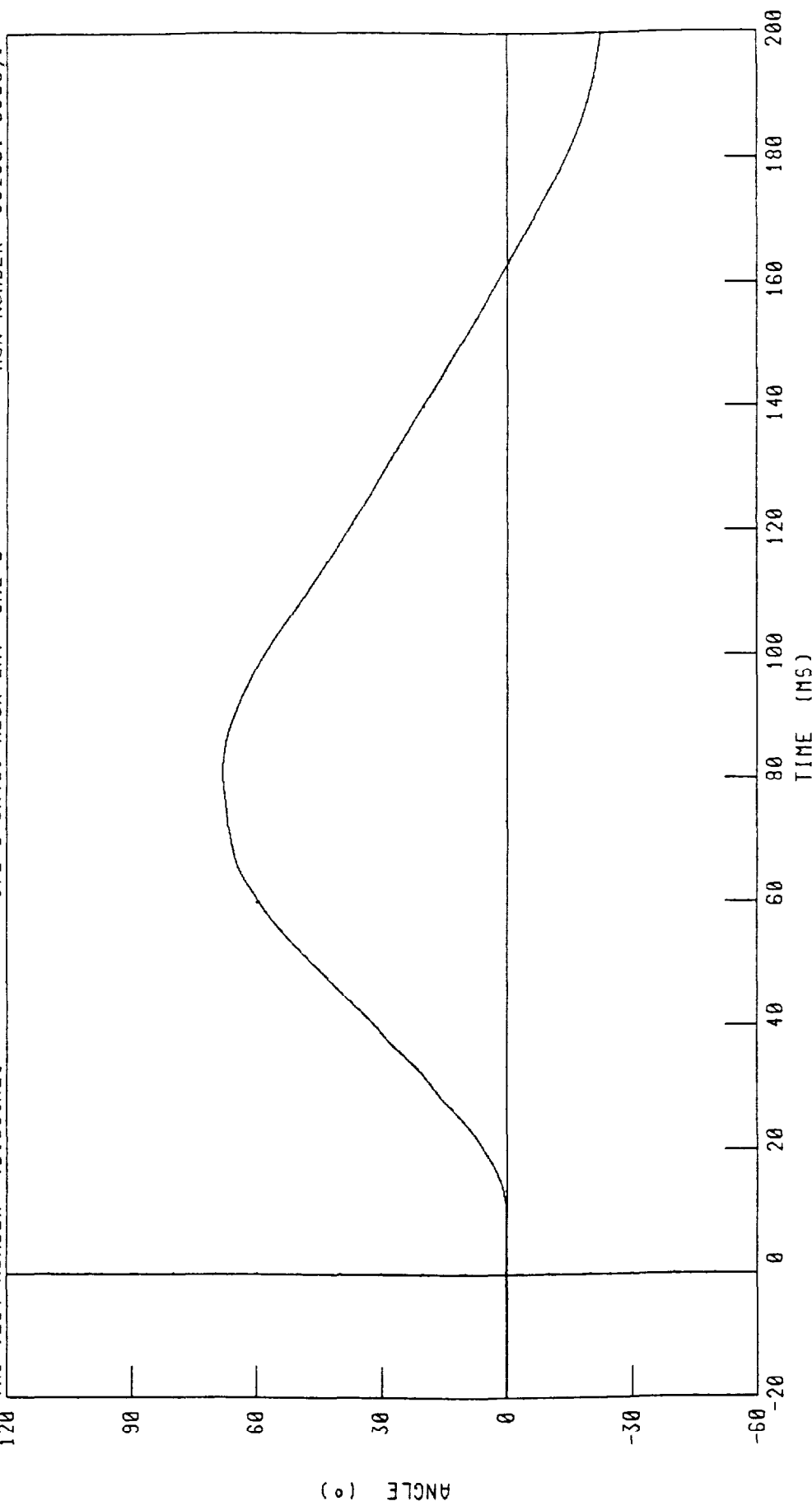
CHANNEL BETA FILTER CH CLASS 60

PEAK DATA 38 25 ° @ 74 40 MS, -15 08 ° @ 200 00 MS

PART 572-0 HYBRID III SMALL FEMALE - NECK EXTENSION CALIBRATION

ROTATION ABOUT OCCIPITAL CONDYLE

IRC TEST NUMBER 421C03NE1 572 0 SN421 NECK EXT CAL 3 RUN NUMBER 082001 0855,1

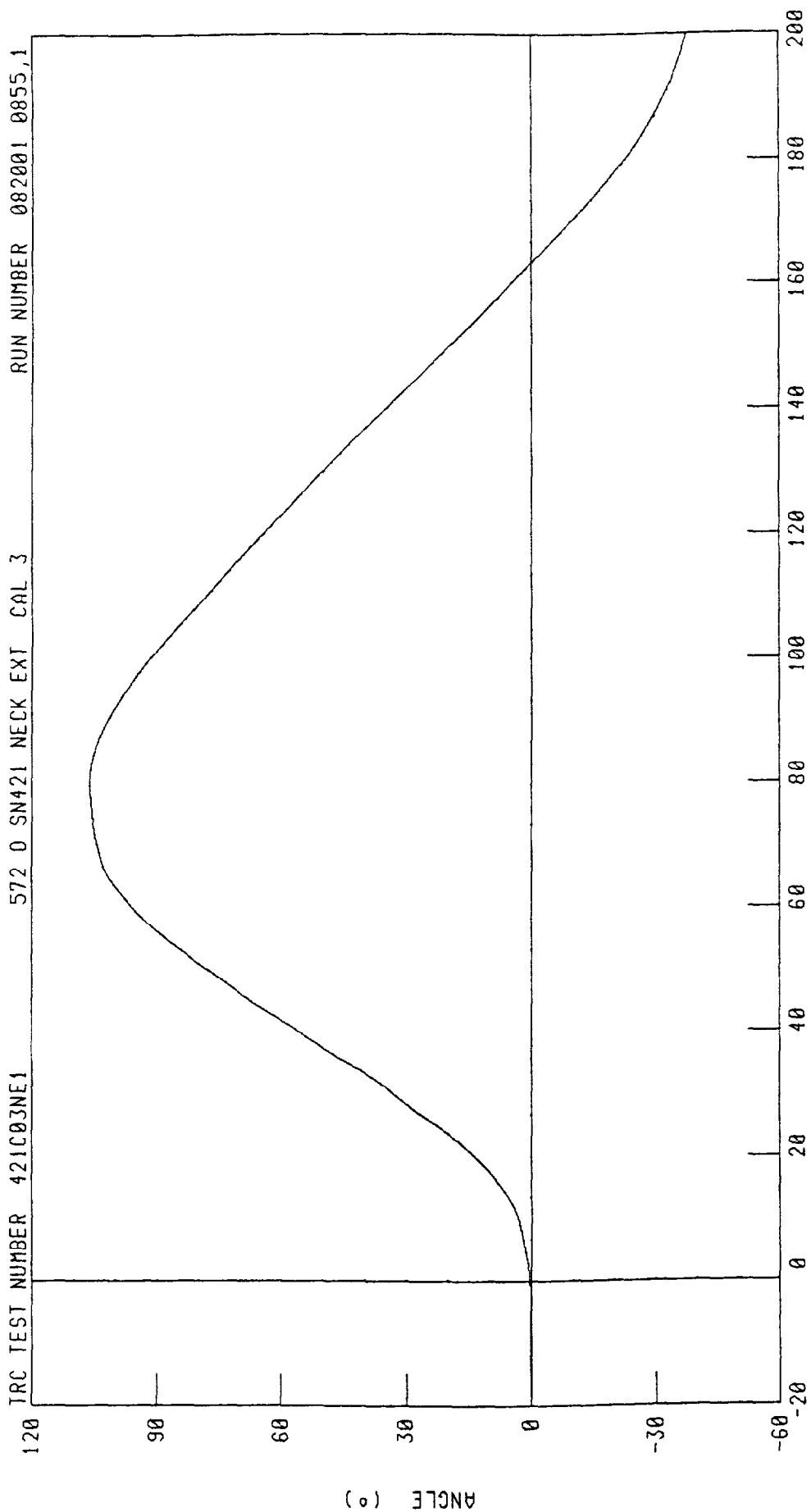


PEAK DATA 68 22 ° @ 81 28 MS, -22 81 ° @ 200 00 MS

CHANNEL THETA FILTER CH CLASS 60

PART 572-0 HYBRID III SMALL FEMALE - NECK EXTENSION CALIBRATION

TOTAL ROTATION



CHANNEL TOTAL FILTER CH CLASS 60

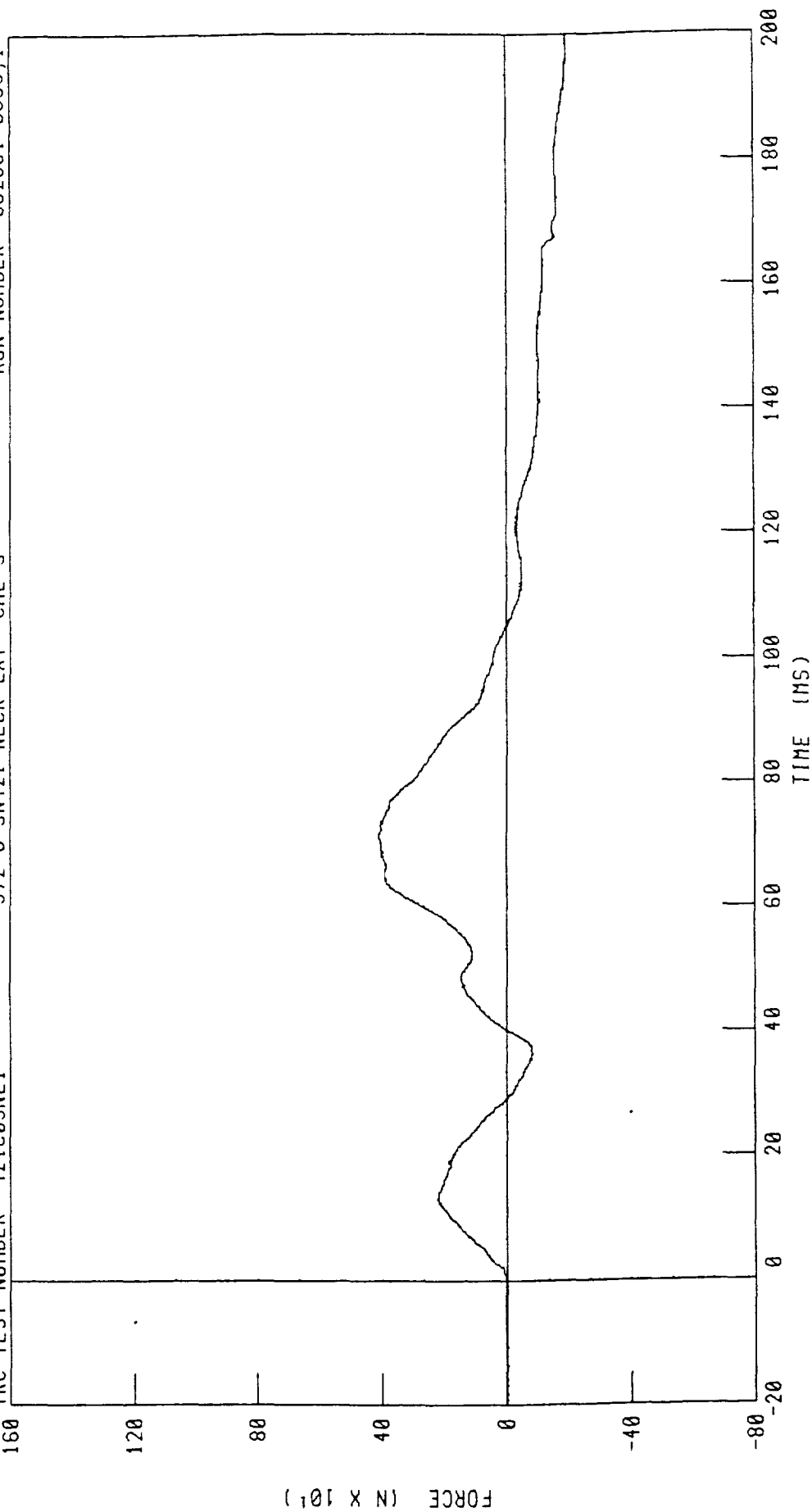
PEAK DATA 106 14 ° @ 80 48 MS, -37 89 ° @ 200 00 MS

IRC TEST NUMBER 421003NE1 572 0 SN421 NECK EXT CAL 3 RUN NUMBER 082001 0855,1

PART 572-0 HYBRID III SMALL FEMALE - NECK EXTENSION CALIBRATION

NECK FORCE X AXIS

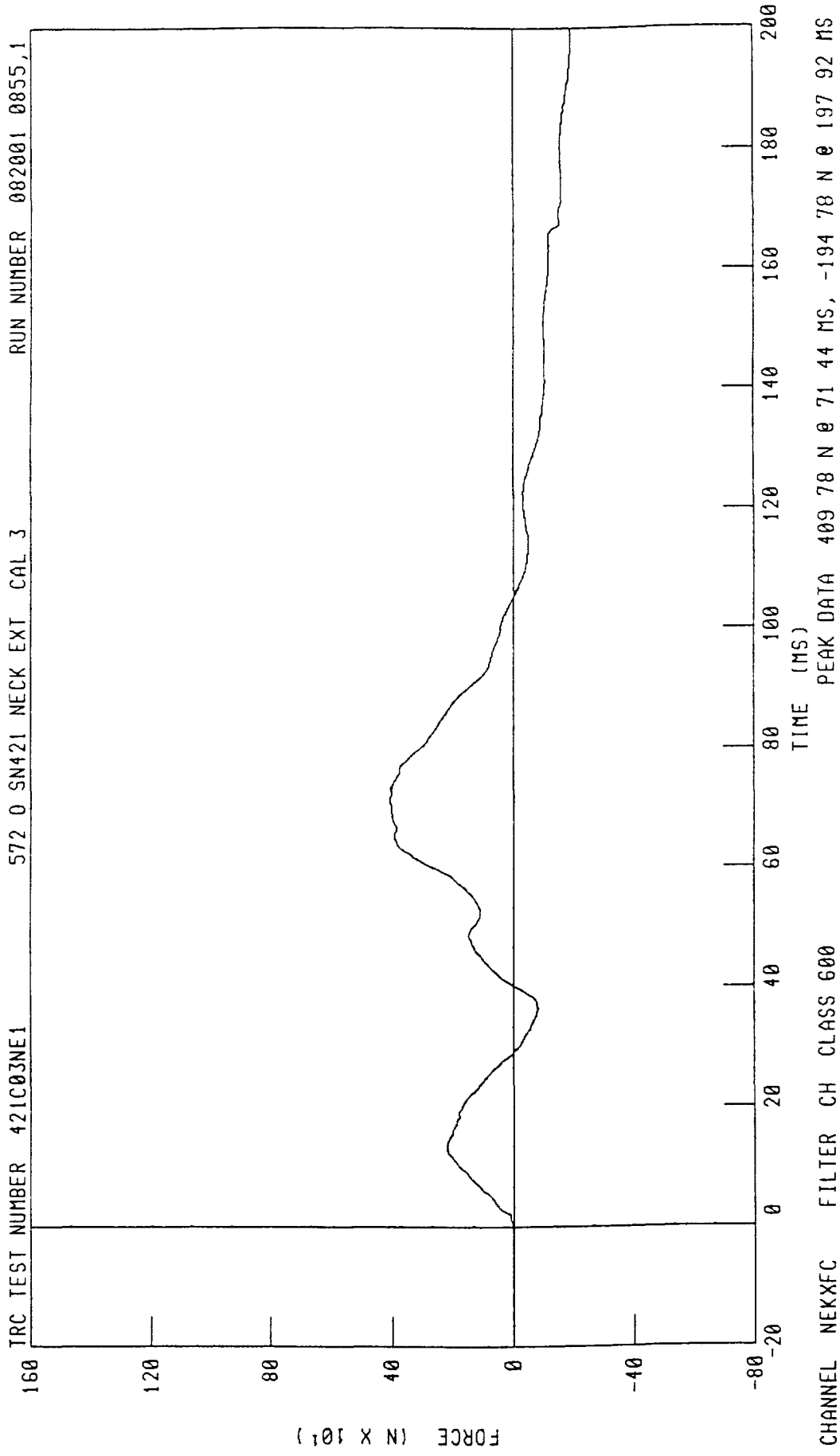
TRC TEST NUMBER 421C03NE1 572 0 SN421 NECK EXT CAL 3 RUN NUMBER 082001 0855,1



CHANNEL NEKXF FILTER CH CLASS 1000

PEAK DATA 409 48 N @ 71 12 MS, -194 72 N @ 195 12 MS

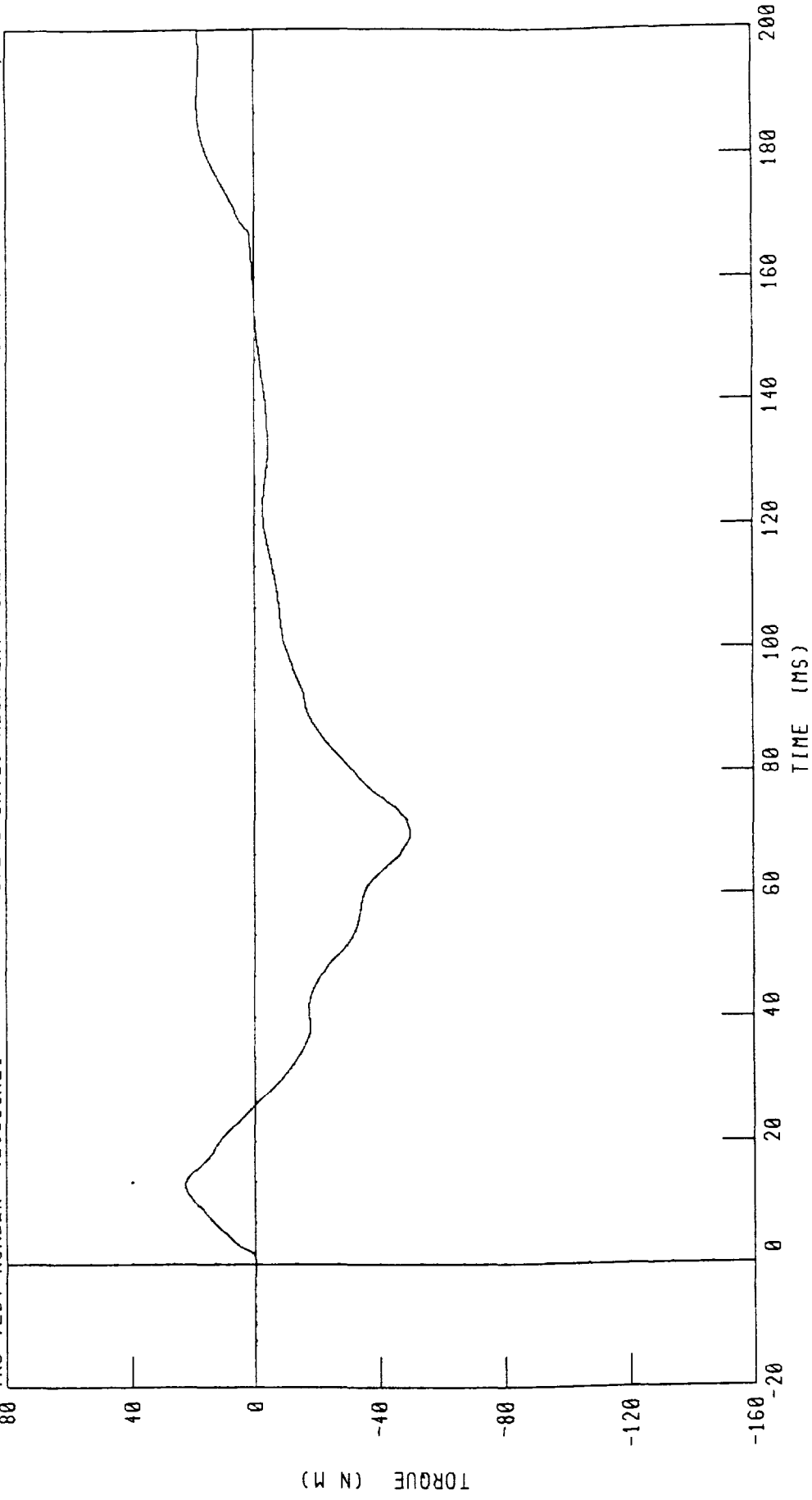
PART 572-0 HYBRID III SMALL FEMALE - NECK EXTENSION CALIBRATION
NECK FORCE X AXIS FILTERED FOR USE IN OCCIPITAL MOMENT CALCULATION



PART 572-0 HYBRID III SMALL FEMALE - NECK EXTENSION CALIBRATION

NECK MOMENT Y AXIS

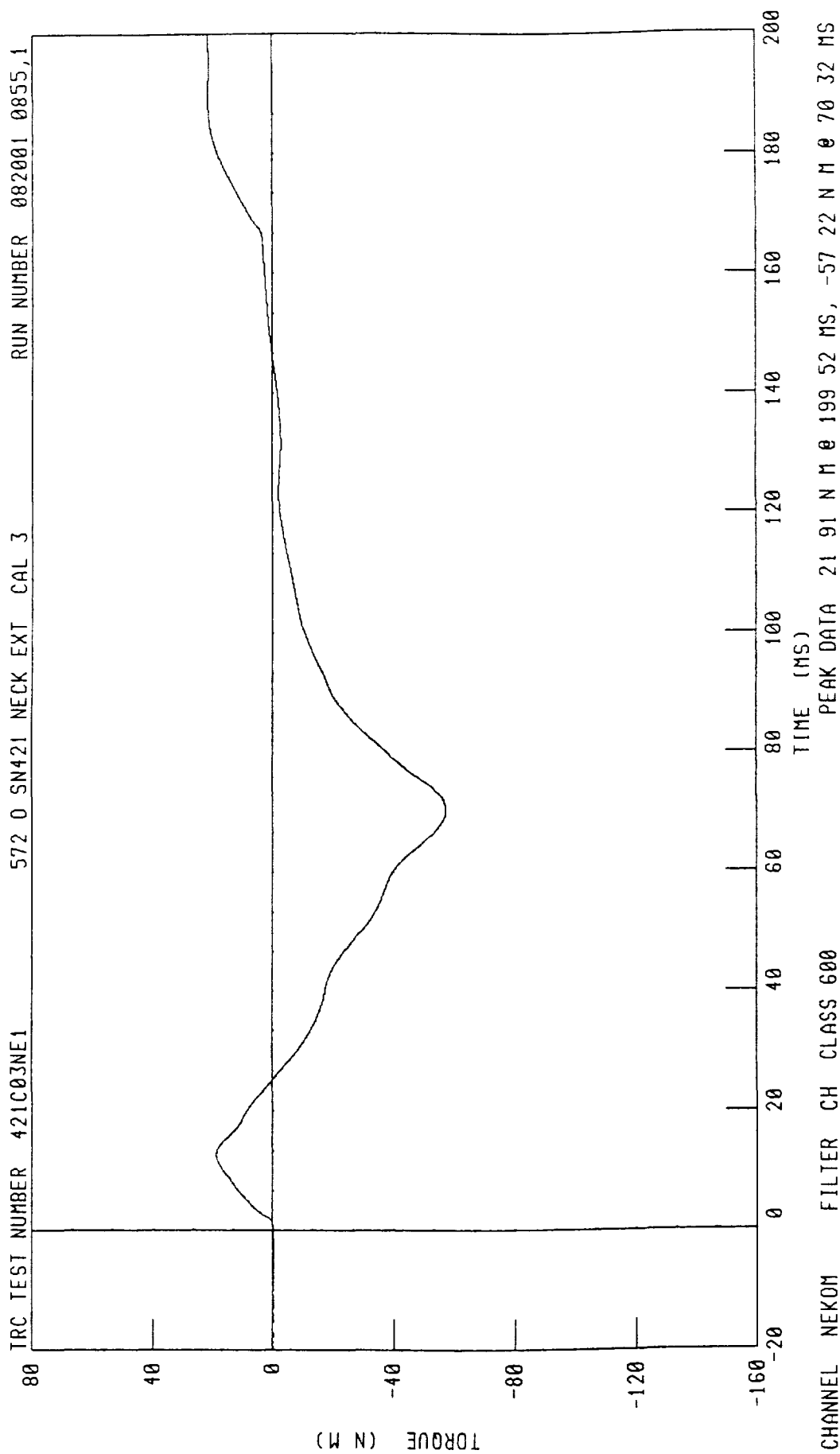
TRC TEST NUMBER 421C03NE1 572 0 SN421 NECK EXT CAL 3 RUN NUMBER 082001 0855,1



CHANNEL NEKYM FILTER CH CLASS 600

PEAK DATA 22 90 N M @ 12 96 MS, -50 09 N M @ 70 24 MS

PART 572-0 HYBRID III SMALL FEMALE - NECK EXTENSION CALIBRATION
TOTAL MOMENT ABOUT OCCIPITAL CONDYLE



TRANSPORTATION RESEARCH CENTER INC.

THORAX IMPACT TEST

HYBRID III SMALL FEMALE

21-AUG-01

TRC INC.

TEST NO: 421C03TH1

572 0 SN421 THORAX CAL3

TEST PARAMETER	HIGH SPEED TEST	TEST RESULTS
	SPECIFICATION	
TEMPERATURE	20.6-22.2 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	62.0 %
PENDULUM VELOCITY	6.59 - 6.83 M/S	6.71 M/S
MAXIMUM DEFLECTION	50 - 58 MM	50.8 MM
PEAK RESISTIVE FORCE DURING DEFLECTION INTERVAL	3900 - 4400 N	4188. N
INTERNAL HYSTERESIS	69% - 85%	73.3%
PEAK FORCE DURING 18 TO 50 MM DEFLECTION	<= 105%	102%

TEST MEETS SPECIFICATIONS

TECHNICIAN



RUN NUMBER: 082101.1353;1

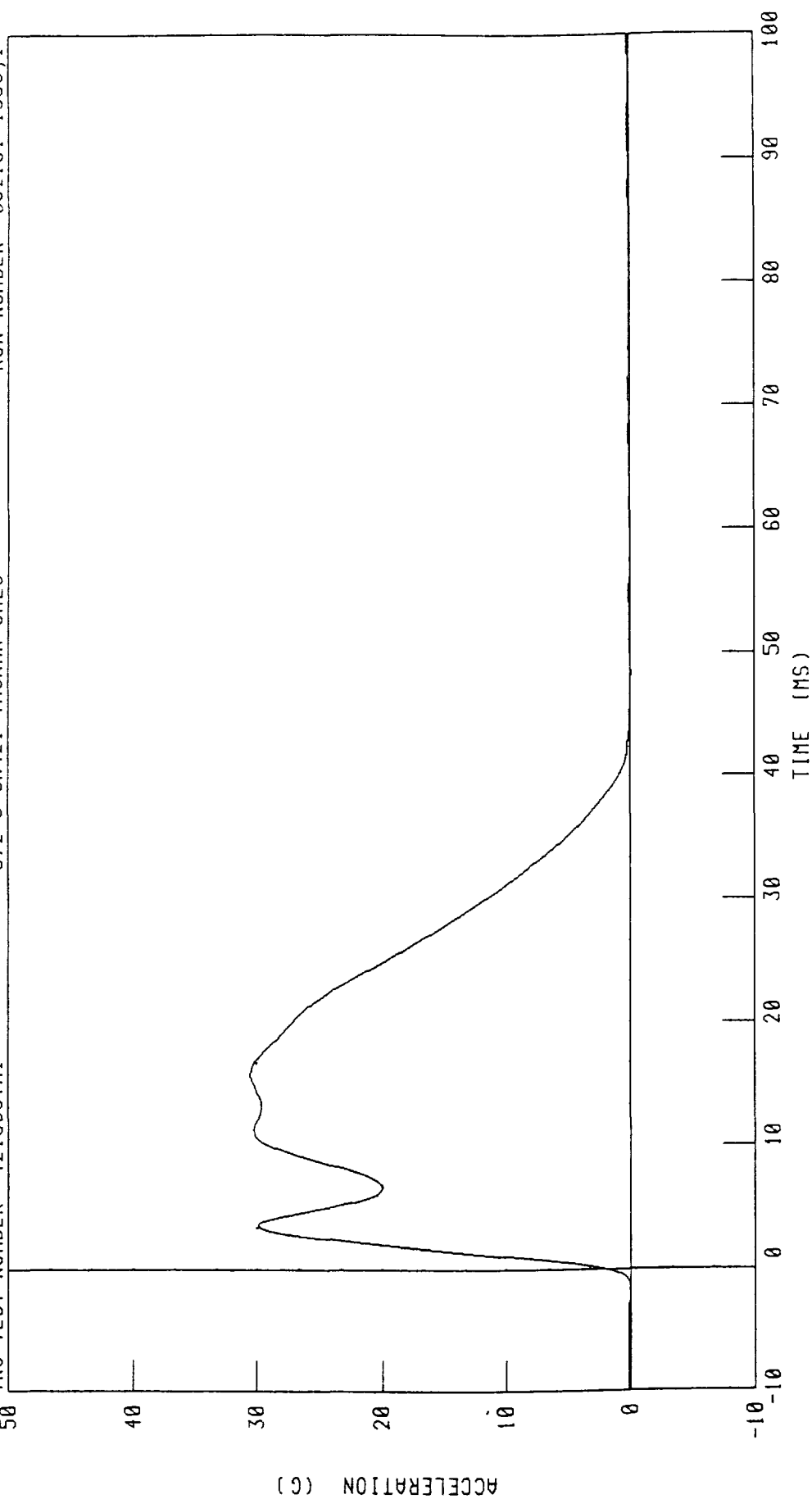
PART 572-0 HYBRID III SMALL FEMALE - THORAX CALIBRATION

PENDULUM DECELERATION

TRC TEST NUMBER 421C03TH1

572 0 SN421 THORAX CAL3

RUN NUMBER 082101 1356,1

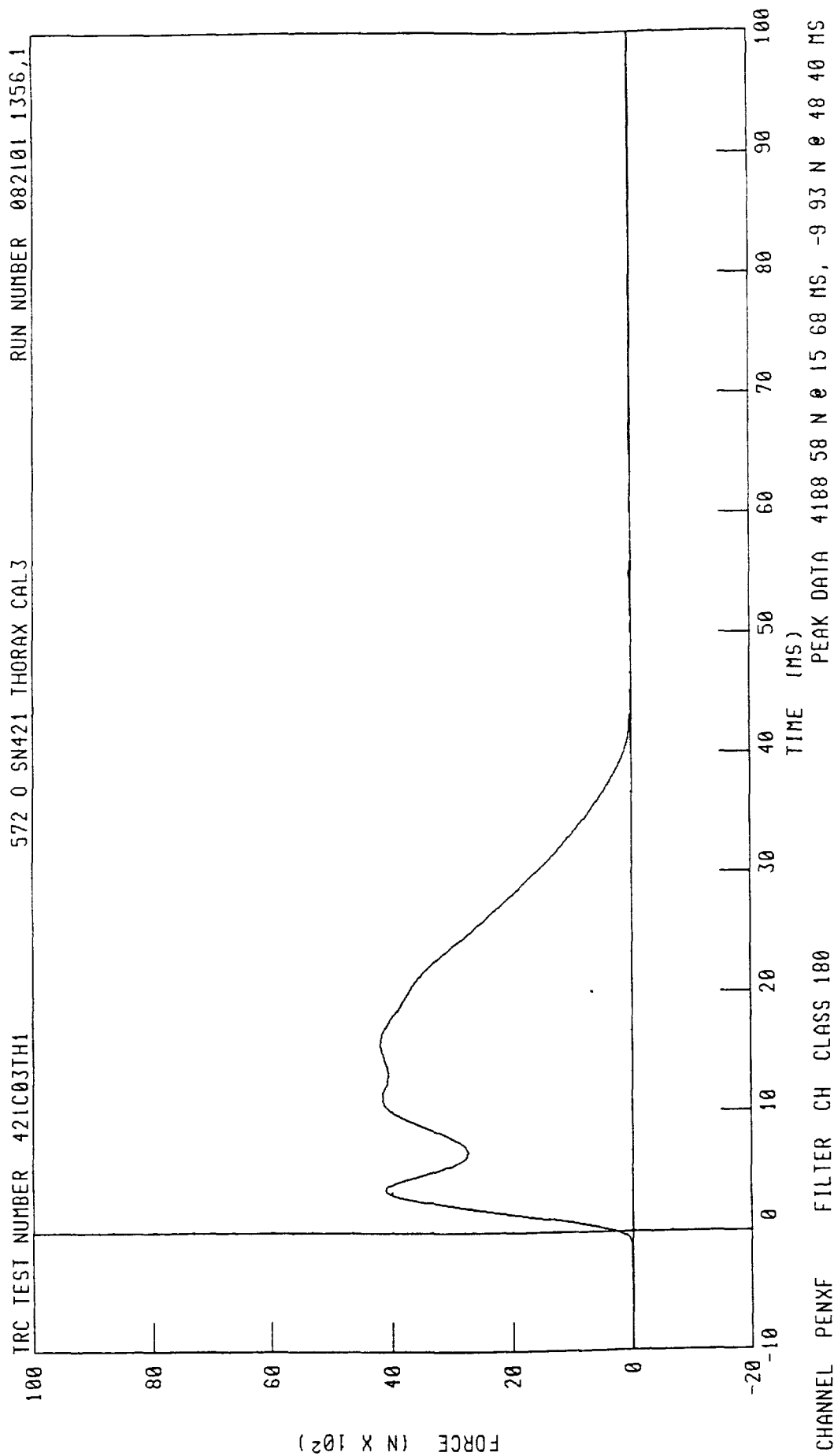


CHANNEL PENXC FILTER CH CLASS 180

PEAK DATA 30 52 G @ 15 68 MS, -0 07 G @ 48 40 MS

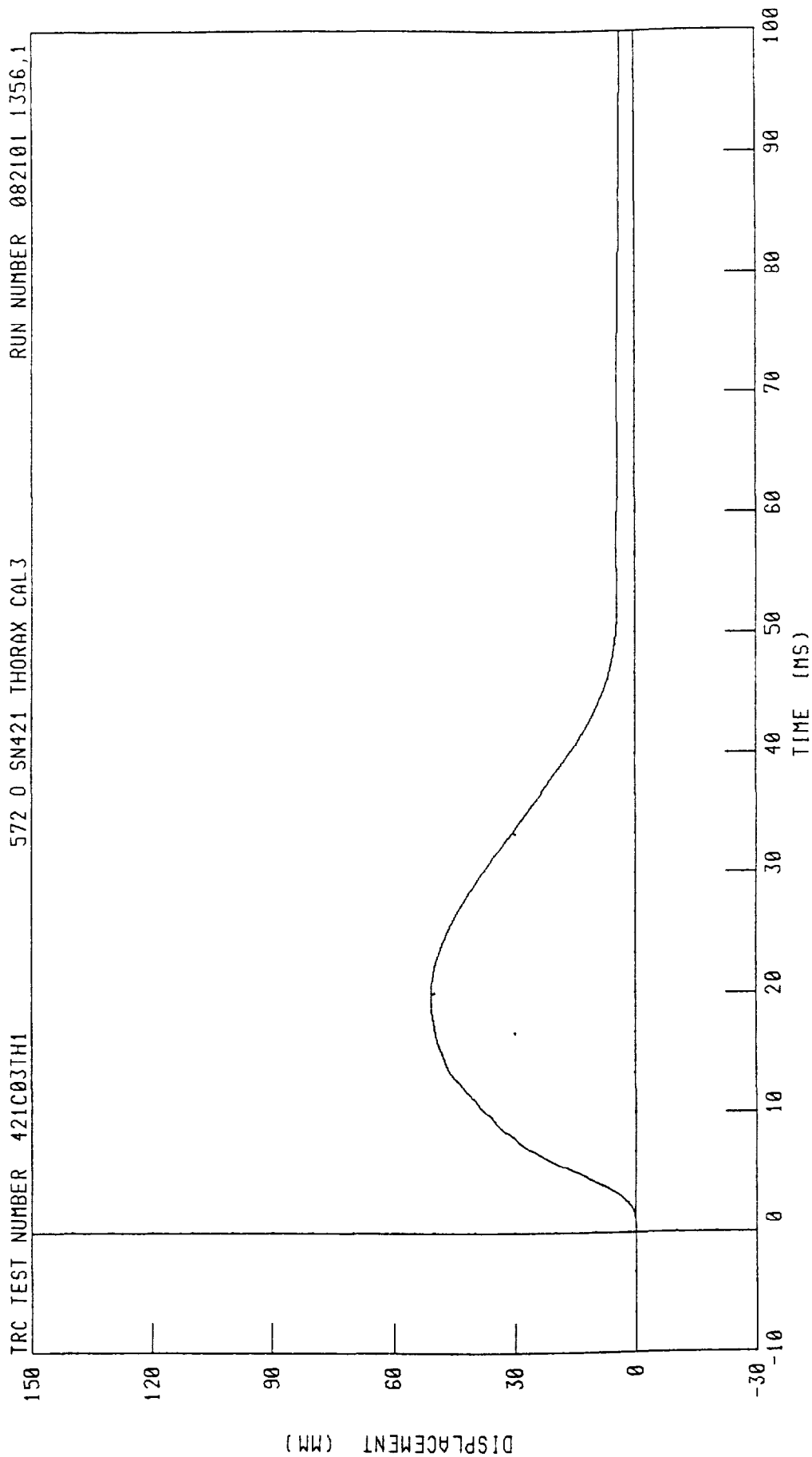
PART 572-0 HYBRID III SMALL FEMALE - THORAX CALIBRATION

PENDULUM FORCE



PART 572-0 HYBRID III SMALL FEMALE - THORAX CALIBRATION

STERNUM DISPLACEMENT



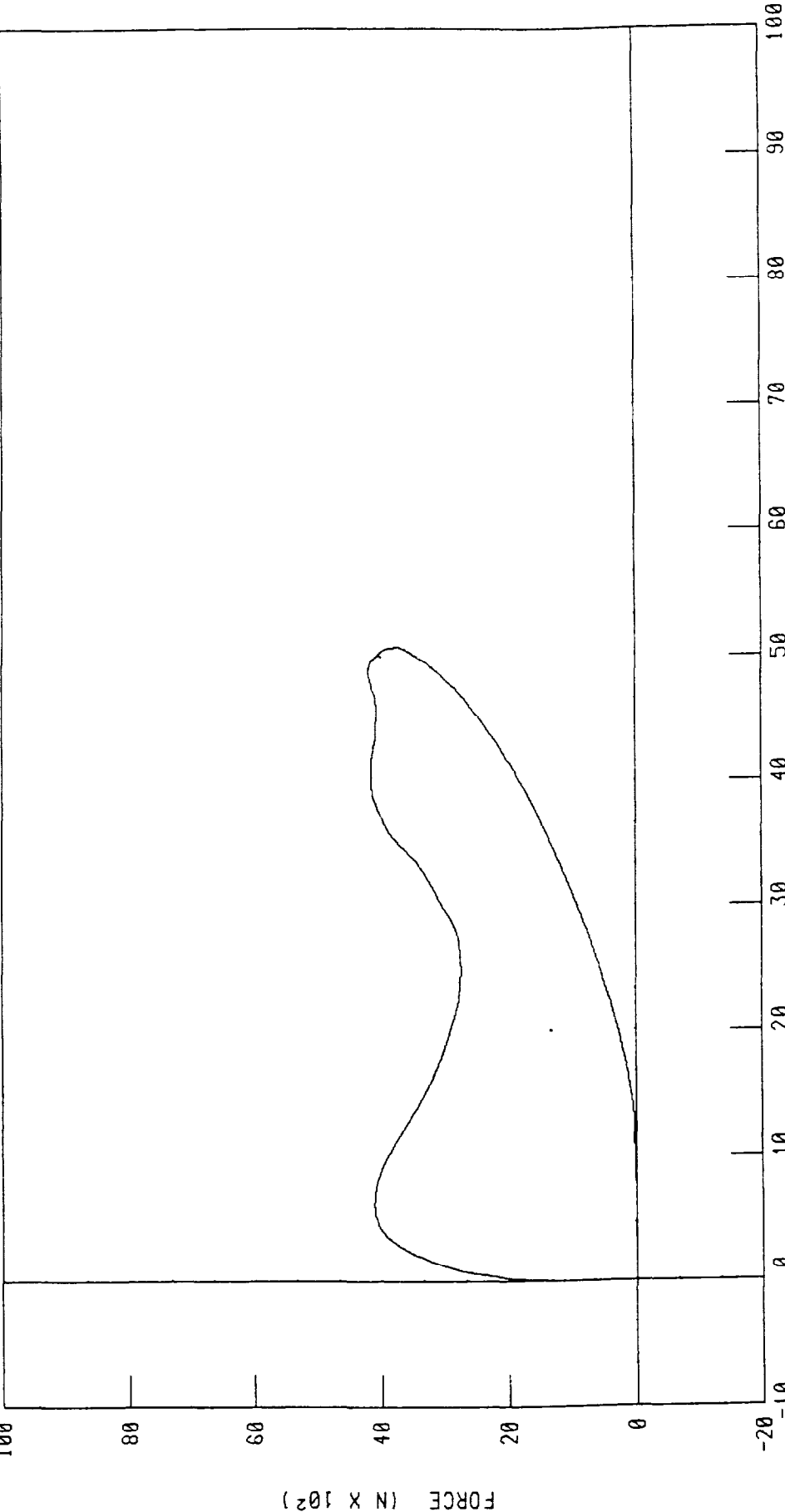
CHANNEL CSTXD FILTER CH CLASS 600

PEAK DATA 50 84 MM @ 20 00 MS, -0 01 MM @ -5 28 MS

PART 572-0 HYBRID III SMALL FEMALE - THORAX CALIBRATION

CHEST DISPLACEMENT VS PENDULUM FORCE

TRC TEST NUMBER 421C03TH1 572 0 SN421 THORAX CAL3 RUN NUMBER 082101 1356,1



CHANNEL CSTXD FILTER CH CLASS 600
PENXF CH CLASS 180
DISPLACEMENT (MM)
PEAK DATA 50 84 MM @ 20 00 MS, -0 01 MM @ -5 28 MS
4188 58 N @ 15 68 MS, -9 93 N @ 48 40 MS

TRANSPORTATION RESEARCH CENTER INC.

TORSO FLEXION TEST

HYBRID III SMALL FEMALE

CAL DATE: 20-Aug-01

TRC, INC. TEST NO: 421C03TF1 572 O SN 421 TORSO FLEX CAL 03

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9 - 25.6 DEG C	21.1 DEG C
RELATIVE HUMIDITY	10 - 70 %	65 %
INITIAL ANGLE OF UNSUPPORTED DUMMY	<= 20 DEG REFERENCED TO VERTICAL	4 DEG
MAXIMUM FORCE AT 45 DEG DURING 10 SECOND PERIOD	320 - 390 N	342 N
RETURN ANGLE @ 3MINUTES	+/- 8 DEG OF INITIAL ANGLE	2 DEG

TEST MEETS SPECIFICATIONS

TECHNICIAN 

TRANSPORTATION RESEARCH CENTER INC.

LEFT KNEE IMPACT TEST

HYBRID III SMALL FEMALE

15-AUG-01

TRC INC.

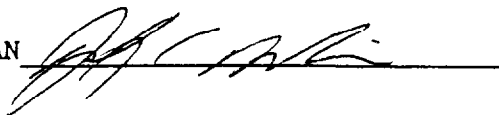
TEST NO: 421C03LK1

572 0 SN421 LEFT KNEE CAL3

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	56.0 %
PROBE VELOCITY	2.07 - 2.13 M/S	2.09 M/S
PEAK KNEE IMPACT FORCE 3.0 KG PENDULUM	3400 - 4200 N	3819.0 N

TEST MEETS SPECIFICATIONS

TECHNICIAN



RUN NUMBER: 081501.1012;1

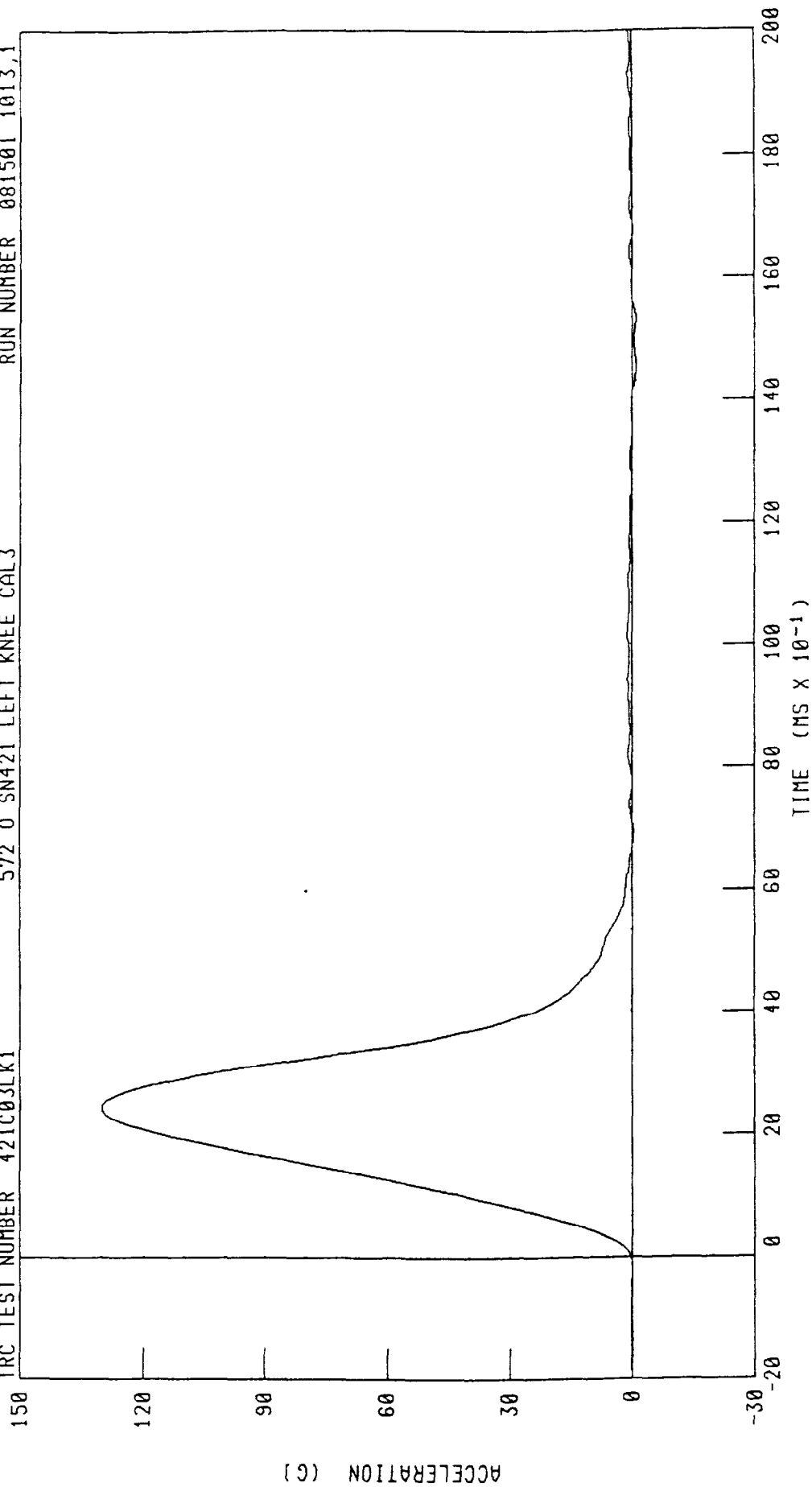
PART 572-0 HYBRID III SMALL FEMALE - LEFT KNEE CALIBRATION

PENDULUM DECELERATION (5 KG PEND)

TRC TEST NUMBER 421C03LK1

572 0 SN421 LEFT KNEE CAL3

RUN NUMBER 081501 1013,1



CHANNEL PENXC FILTER CH CLASS 600

PEAK DATA 130 09 C 0 2 40 MS, -1 04 C 0 15 28 MS

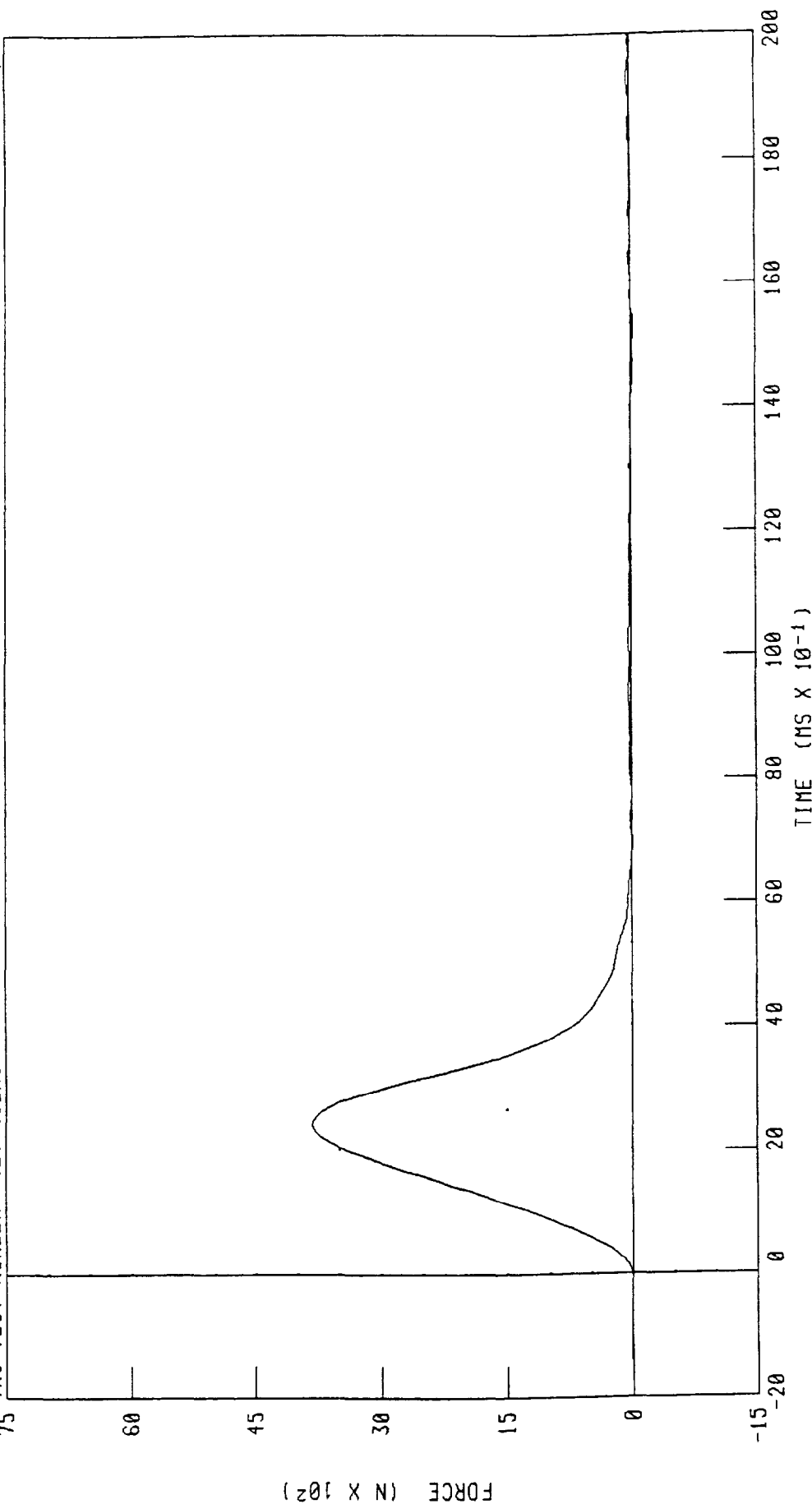
PART 572-0 HYBRID III SMALL FEMALE - LEFT KNEE CALIBRATION

PENDULUM FORCE (5 KG PEND)

TRC TEST NUMBER 421C03LK1

572 0 SN421 LEFT KNEE CAL3

RUN NUMBER 081501 1013,1



CHANNEL PENXF FILTER CH CLASS 600

PEAK DATA 3819 04 N @ 2 40 MS, -30 45 N @ 15 28 MS

TRANSPORTATION RESEARCH CENTER INC.

RIGHT KNEE IMPACT TEST

HYBRID III SMALL FEMALE

15-AUG-01

TRC INC.

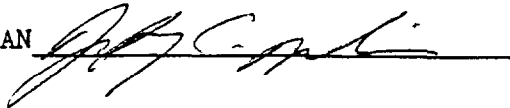
TEST NO: 421C03RK1

572 0 SN421 R.KNEE CAL3

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	56.0 %
PROBE VELOCITY	2.07 - 2.13 M/S	2.09 M/S
PEAK KNEE IMPACT FORCE 3.0 KG PENDULUM	3400 - 4200 N	3925.7 N

TEST MEETS SPECIFICATIONS

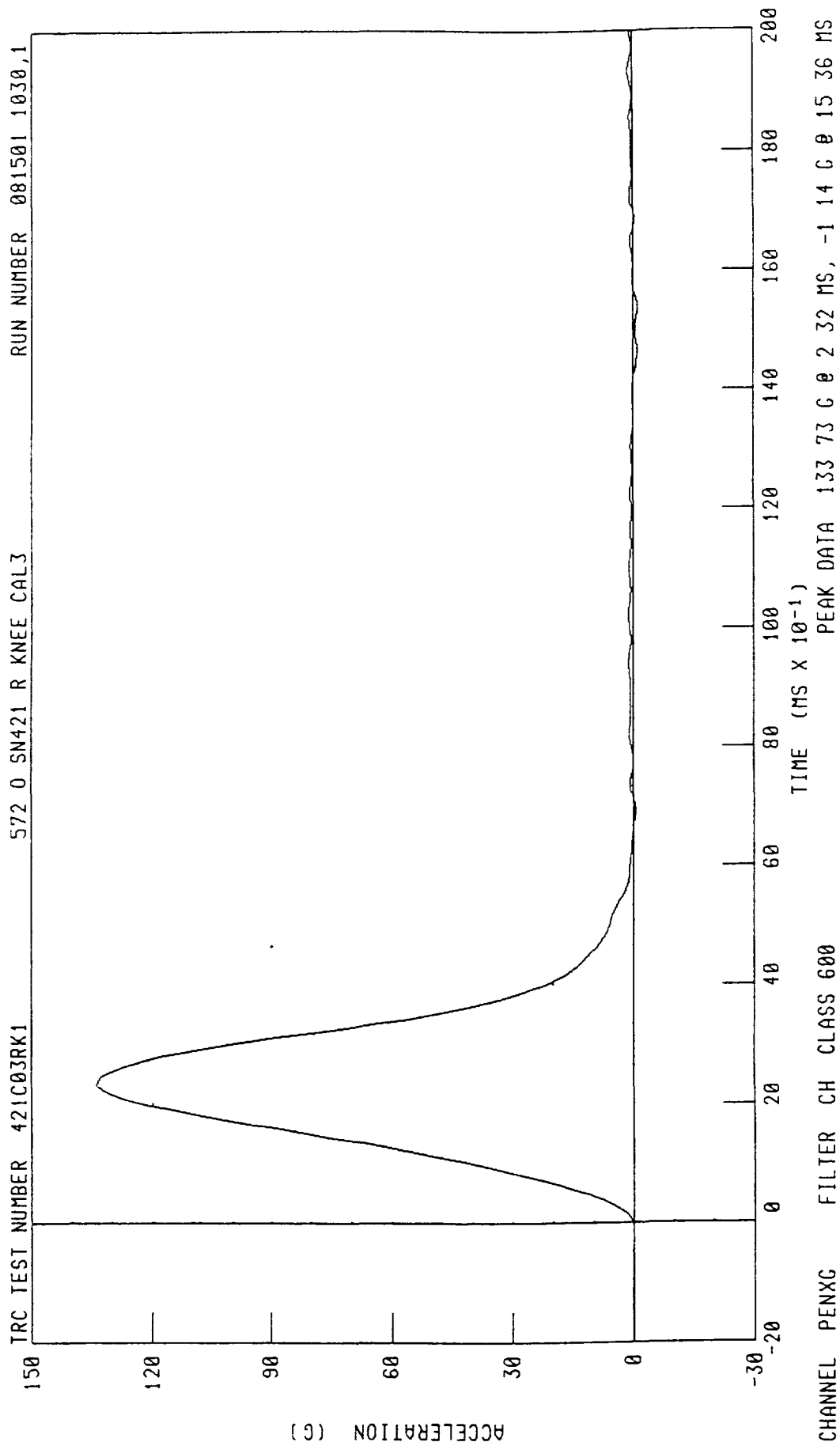
TECHNICIAN



RUN NUMBER: 081501.1030;1

PART 572-0 HYBRID III SMALL FEMALE - RIGHT KNEE CALIBRATION

PENDULUM DECELERATION (5 KG PEND)



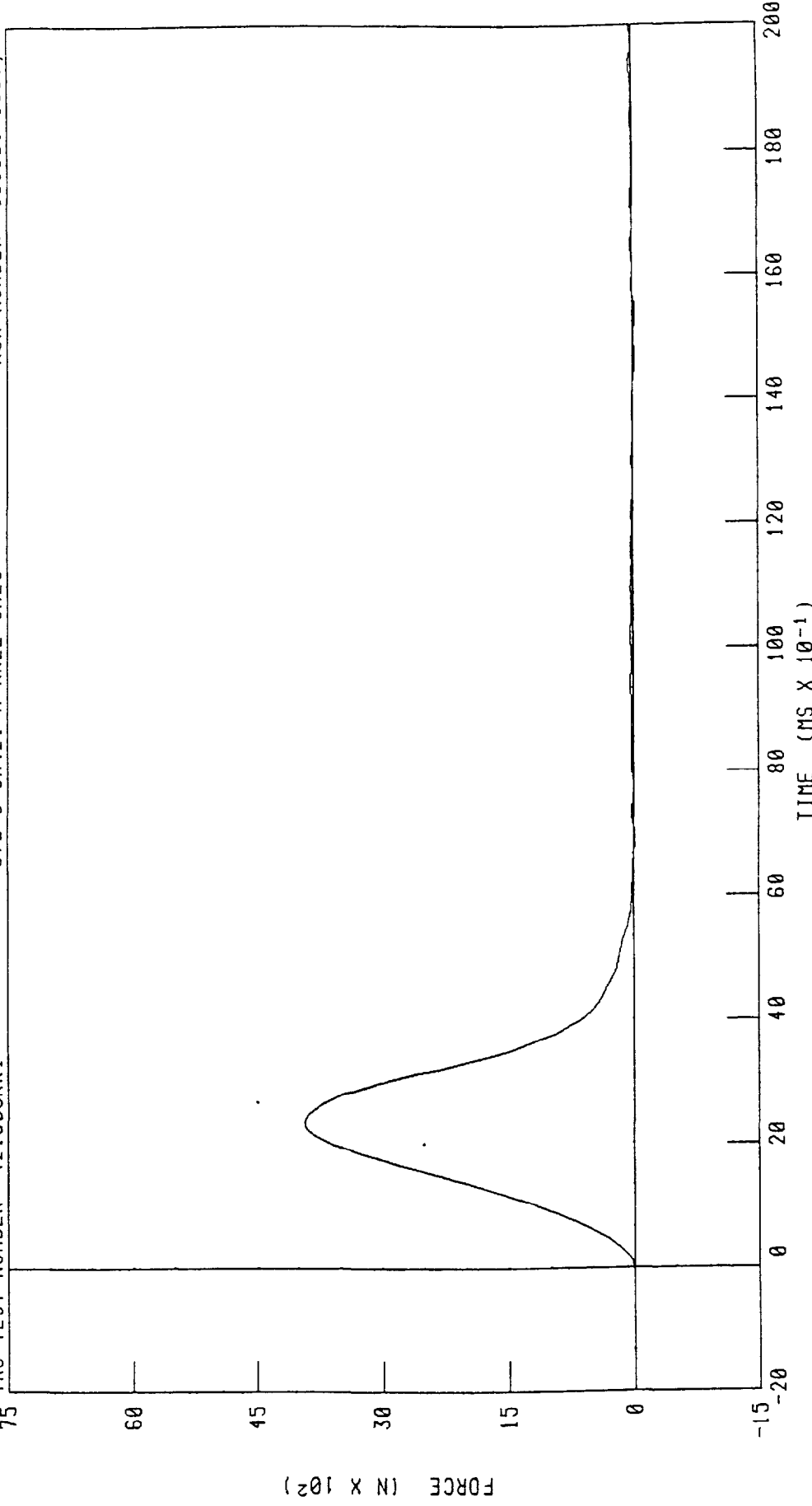
PART 572-0 HYBRID III SMALL FEMALE - RIGHT KNEE CALIBRATION

PENDULUM FORCE (5 KC PEND)

TRC TEST NUMBER 421C03RK1

572 0 SN421 R KNEE CAL3

RUN NUMBER 081501 1030,1



CHANNEL PENXF FILTER CH CLASS 600

PEAK DATA 3925 76 N 0 2 32 MS, -33 57 N 0 15 36 MS

TRANSPORTATION RESEARCH CENTER INC.

KNEE SLIDER TEST

HYBRID III SMALL FEMALE

16-AUG-01

LEFT KNEE

TRC INC.

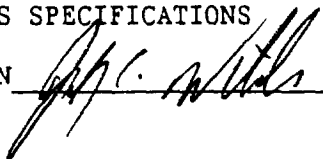
TEST NO: 421C03LS1

572 0 SN421 LEFT SLIDER CAL3

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	65.0 %
PENDULUM VELOCITY	2.70-2.80 M/S	2.79 M/S
PEAK DISPLACEMENT	12.7 - 15.5 MM	14.5 MM

TEST MEETS SPECIFICATIONS

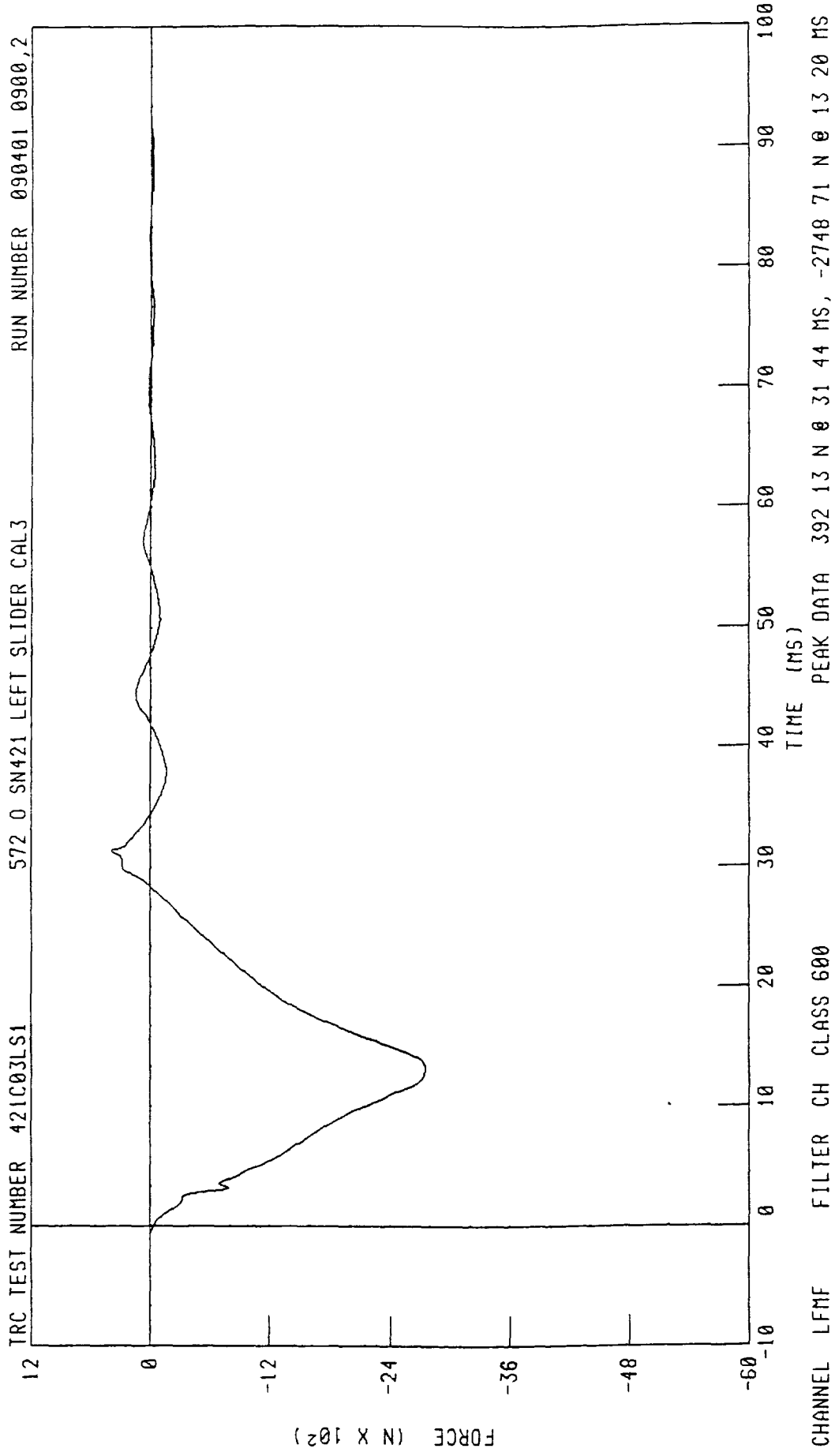
TECHNICIAN



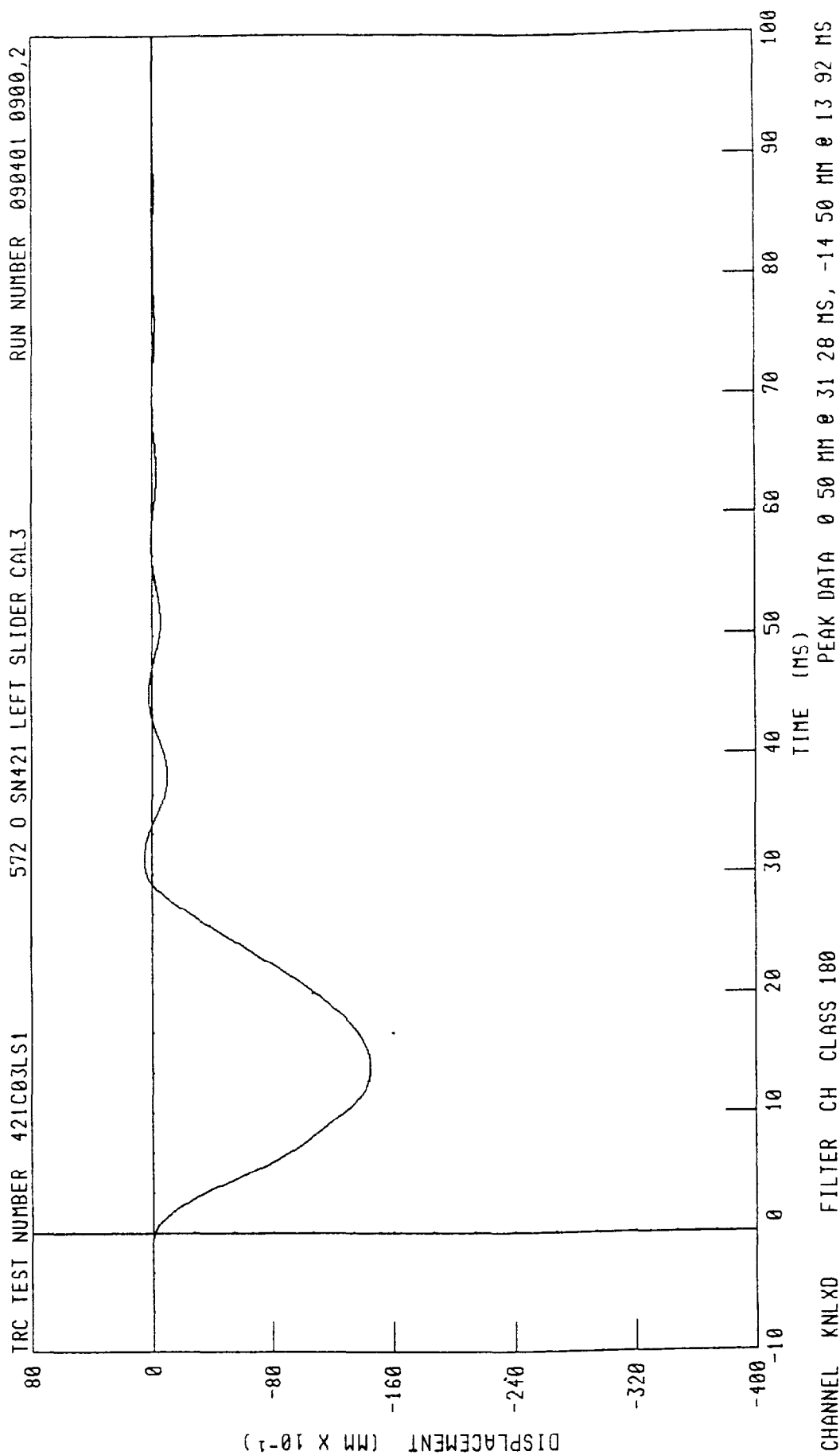
RUN NUMBER: 090401.0859;2

PART 572-0 HYBRID III SMALL FEMALE - LEFT KNEE SLIDER CALIBRATION

LEFT FEMUR FORCE

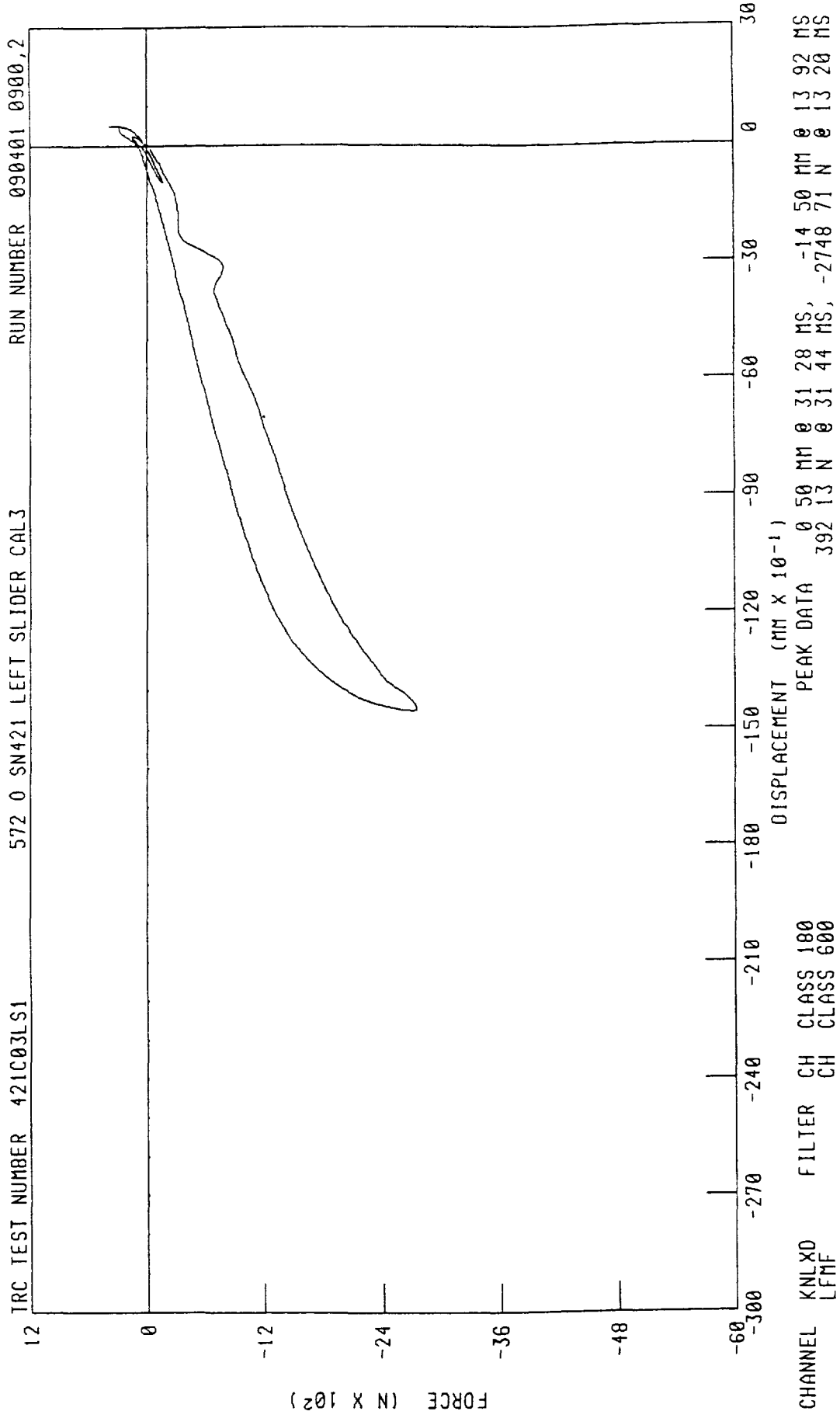


PART 572-0 HYBRID III SMALL FEMALE - LEFT KNEE SLIDER CALIBRATION
LEFT KNEE DISPLACEMENT



PART 572-0 HYBRID III SMALL FEMALE - LEFT KNEE SLIDER CALIBRATION

LEFT KNEE DISPLACEMENT VS FEMUR FORCE



TRANSPORTATION RESEARCH CENTER INC.

KNEE SLIDER TEST

HYBRID III SMALL FEMALE

16-AUG-01

RIGHT KNEE

TRC INC.

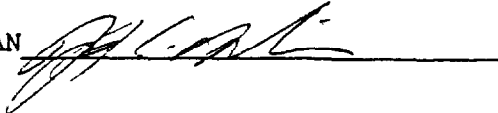
TEST NO: 421C03RS1

572 0 SN421 RIGHT SLIDER CAL3

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	60.0 %
PENDULUM VELOCITY	2.70-2.80 M/S	2.75 M/S
PEAK DISPLACEMENT	12.7 - 15.5 MM	14.9 MM

TEST MEETS SPECIFICATIONS

TECHNICIAN

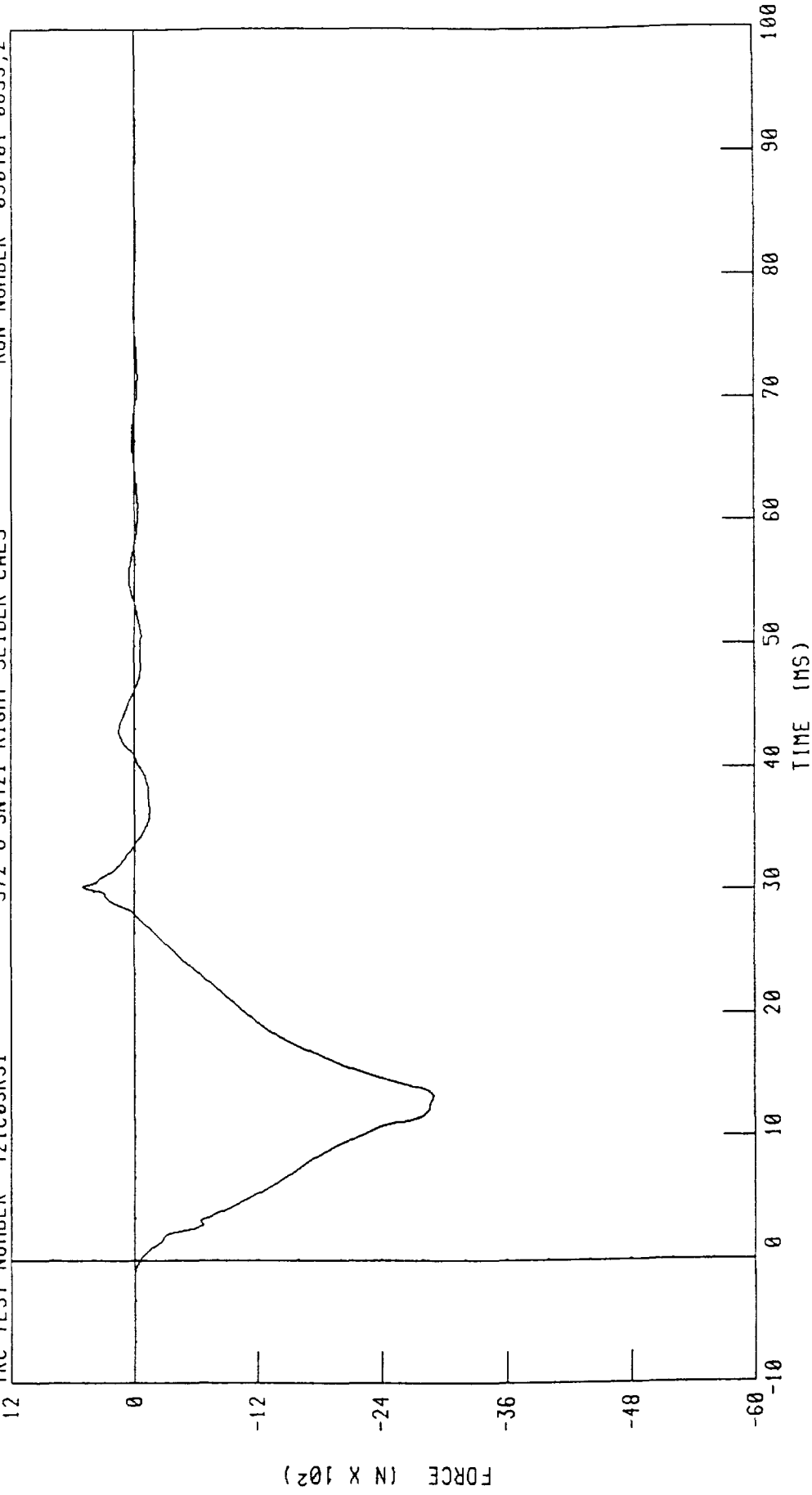


RUN NUMBER: 081601.1557;1

PART 572-0 HYBRID III SMALL FEMALE - RIGHT KNEE SLIDER CALIBRATION

RIGHT FEMUR FORCE

TRC TEST NUMBER 421C03RS1 572 0 SN421 RIGHT SLIDER CAL3 RUN NUMBER 090401 0839,2

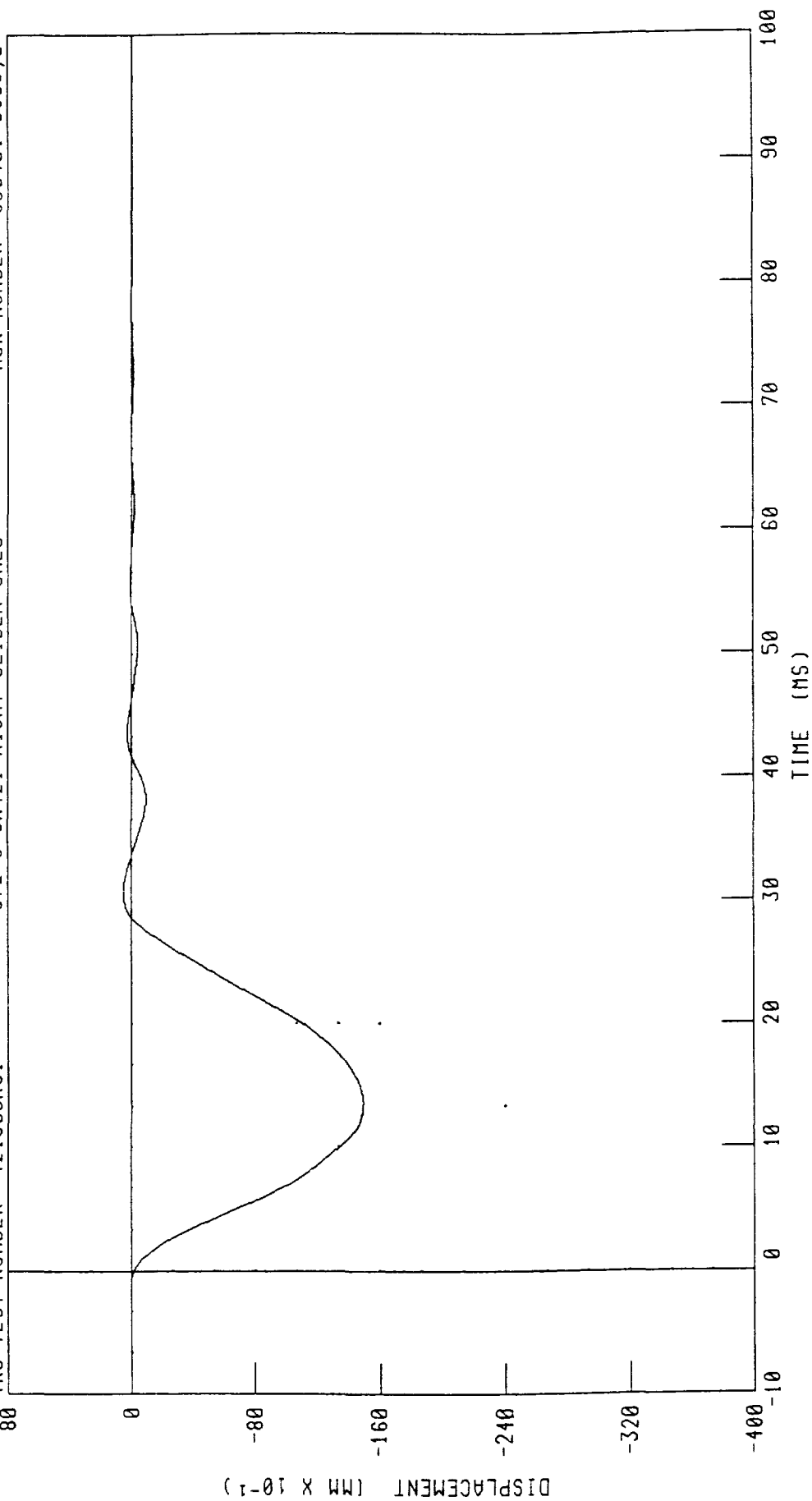


CHANNEL RFMF FILTER CH CLASS 600

PEAK DATA 512 55 N 0 30 48 MS, -2898 24 N 0 13 36 MS

PART 572-0 HYBRID III SMALL FEMALE - RIGHT KNEE SLIDER CALIBRATION
RIGHT KNEE DISPLACEMENT

TRC TEST NUMBER 421C03RS1 572 0 SN421 RIGHT SLIDER CAL3 RUN NUMBER 090401 0839,2



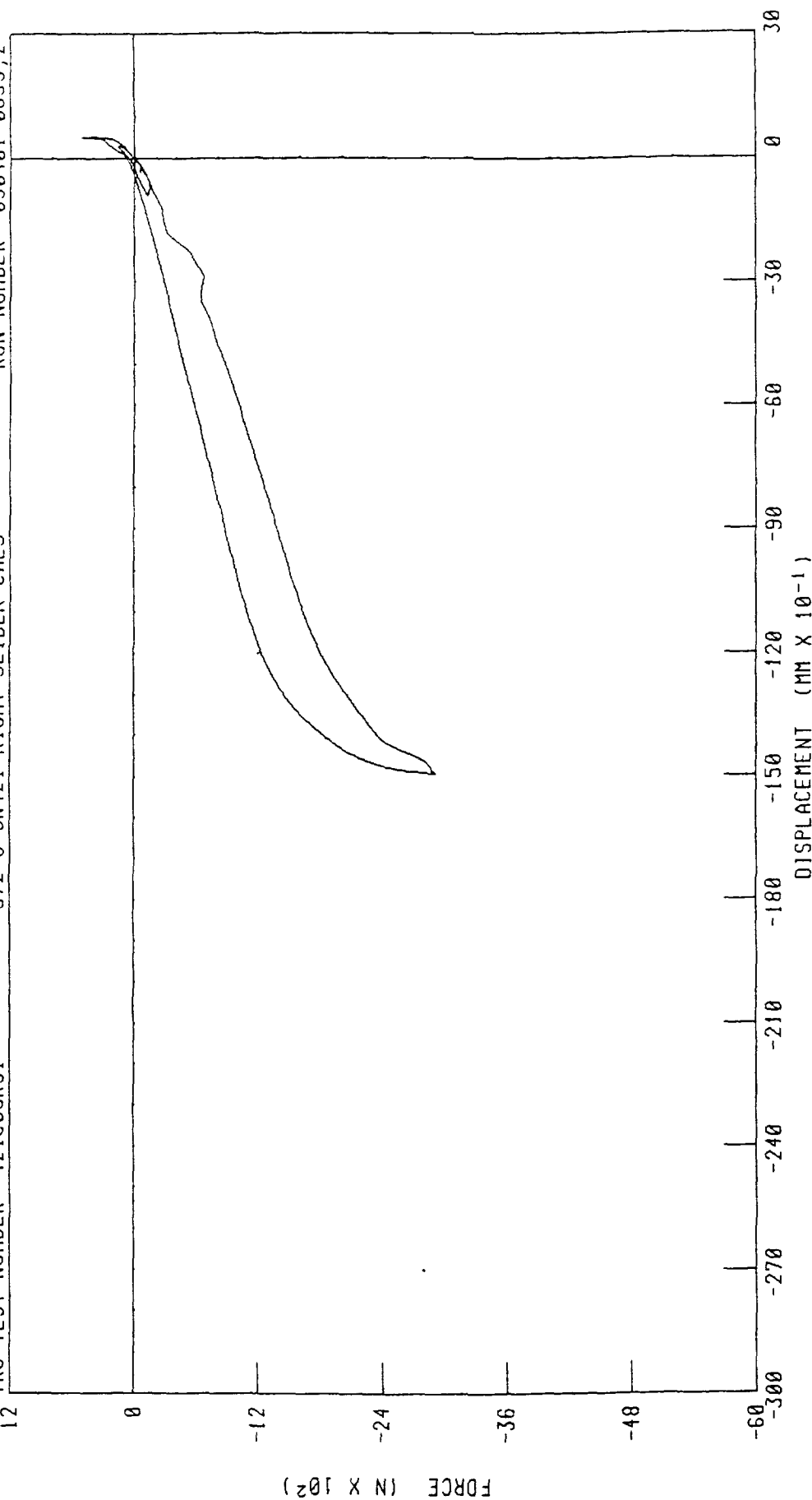
CHANNEL KNRXD FILTER CH CLASS 180

PEAK DATA 0 51 MM @ 30 80 MS, -14 91 MM @ 13 60 MS

PART 572-0 HYBRID III SMALL FEMALE - RIGHT KNEE SLIDER CALIBRATION

RIGHT KNEE DISPLACEMENT VS FEMUR FORCE

TRC TEST NUMBER 421C03RS1 572 0 SN421 RIGHT SLIDER CAL3 RUN NUMBER 090401 0839,2



CHANNEL KNRXD FILTER CH CLASS 180
REFR CH CLASS 600

PEAK DATA 512 55 N 0 51 MM 0 30 80 MS, -14 91 MM 0 13 60 MS

512 55 N 0 30 48 MS, -2898 24 N 0 13 36 MS

Pre-Test Dummy Configuration and Performance Verification Data

Right Rear Passenger Dummy S/N 088

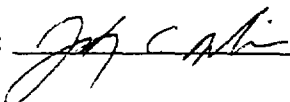
TRANSPORTATION RESEARCH CENTER INC.
HYBRID III SIX-YEAR-OLD EXTERNAL DIMENSIONS
SN: 088 MFG: FTSS

DATE:13-Aug-01

TRC INC. TEST NO: 088C06ED1 572N SN 088 EXT. DIMENSION CAL 06

TEST PARAMETER	DIMEN.	SPECIFICATION	TEST RESULTS
Total Sitting Height	A	622 3 - 647 7 MM	637 54 MM
Shoulder Pivot Height	B	348 0 - 363 2 MM	353 06 MM
Hip Pivot Height	C	63 5 - 73 7 MM	71 12 MM
Hip Pivot from Backline	D	88 9 - 99 1 MM	91 44 MM
Shoulder Pivot from Backline	E	53 3 - 63 5 MM	63 5 MM
Thigh Clearance	F	88 9 - 104 1 MM	91 44 MM
Back of Elbow to Wrist Pivot	G	182 9 - 198 1 MM	193 04 MM
Head Back from Backline	H	17 8 - 22 8 MM	20 32 MM
Shoulder to Elbow Length	I	215 9 - 231 1 MM	223 52 MM
Elbow Rest Height	J	157 4 - 177 8 MM	167 64 MM
Buttock to Knee Length	K	370 8 - 391 2 MM	383 54 MM
Popliteal Height	L	269 2 - 289 6 MM	279 4 MM
Knee to Floor Height	M	307 4 - 322 6 MM	320 04 MM
Buttock Popliteal Length	N	320 0 - 340 4 MM	327 66 MM
Chest Depth	O	129 6 - 144 8 MM	134 62 MM
Foot Length	P	170 2 - 185 4 MM	177 8 MM
Buttock to Knee Pivot Length	R	342 9 - 363 3 MM	358 14 MM
Head Breadth	S	137 1 - 147 3 MM	139 7 MM
Head Depth	T	167 6 - 177 8 MM	175 26 MM
Hip Breadth	U	208 3 - 223 5 MM	220 98 MM
Shoulder Breadth	V	259 1 - 274 3 MM	269 24 MM
Foot Breadth	W	62 3 - 77 5 MM	76 2 MM
Head Circumference	X	510 5 - 530 9 MM	520 7 MM
Chest Circumference with Jacket	Y	596 9 - 622 3 MM	612 14 MM
Waist Circumference	Z	558 8 - 584 2 MM	574 04 MM
Reference Location for Chest Circumference	AA	325 1 - 335 3 MM	330 2 MM
Reference Location for Waist Circumference	BB	153 7 - 163 9 MM	160 02 MM

DUMMY MEETS SPECIFICATION

TECHNICIAN: 

TRANSPORTATION RESEARCH CENTER INC.

HEAD DROP TEST

HYBRID III SIX YEAR OLD

07-AUG-01

TRC INC.

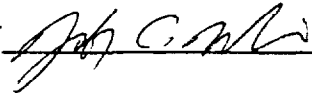
TEST NO: 088C6HD2

572 N SN088 HEAD DROP CAL6

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	59.0 %
PEAK RESULTANT ACCELERATION	245 - 300 G	263.15 G
PEAK LATERAL ACCELERATION	15 G MAX	4.42 G
IS ACCELERATION CURVE UNIMODAL?	YES	YES

TEST MEETS SPECIFICATIONS

TECHNICIAN



RUN NUMBER: 080701.1038;1

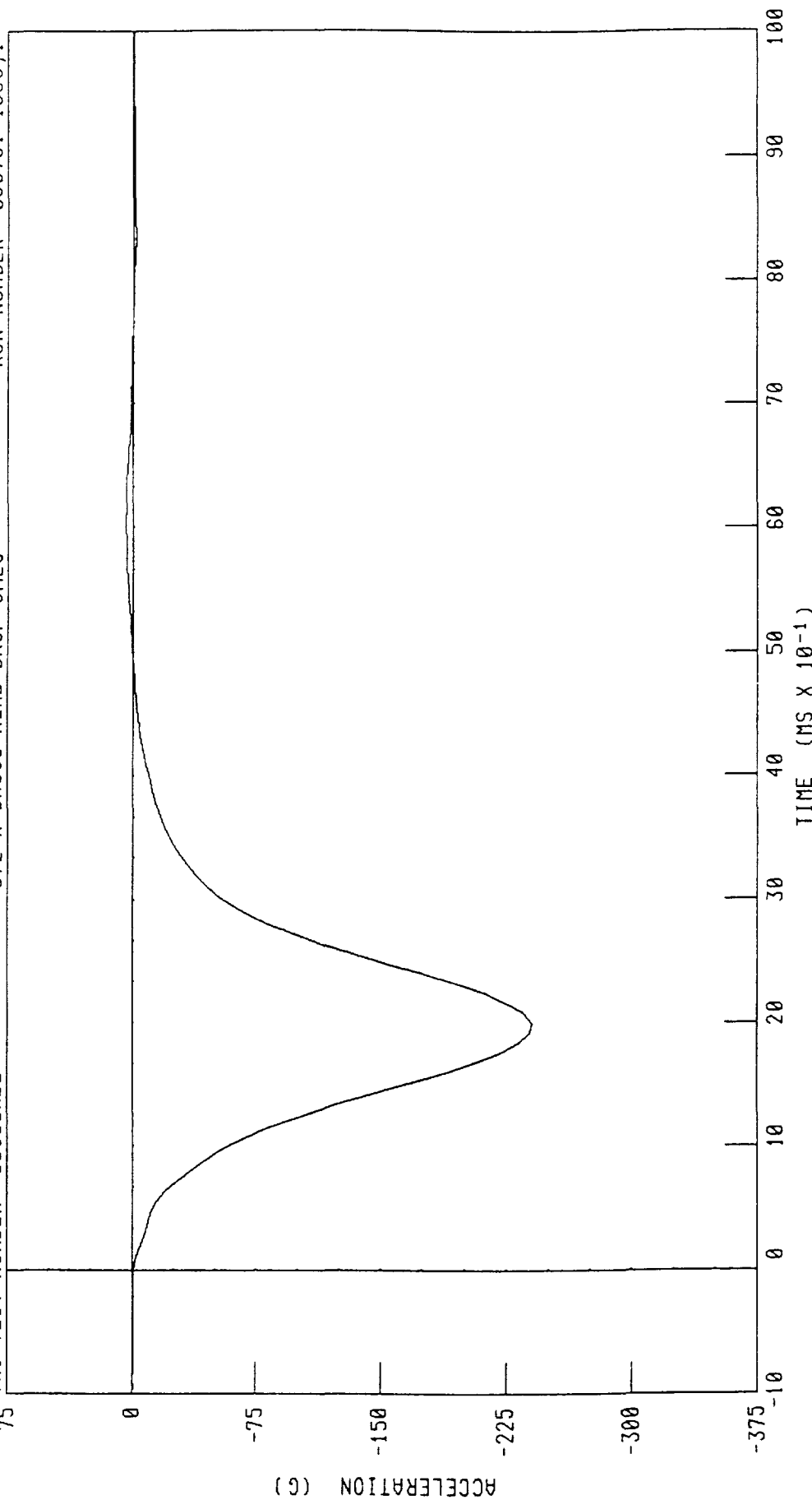
PART 572-N HYBRID III SIX-YEAR-OLD CHILD - HEAD CALIBRATION

HEAD ACCELERATION X AXIS

TRC TEST NUMBER 088C6HD2

572 N SN088 HEAD DROP CAL6

RUN NUMBER 080701 1039,1



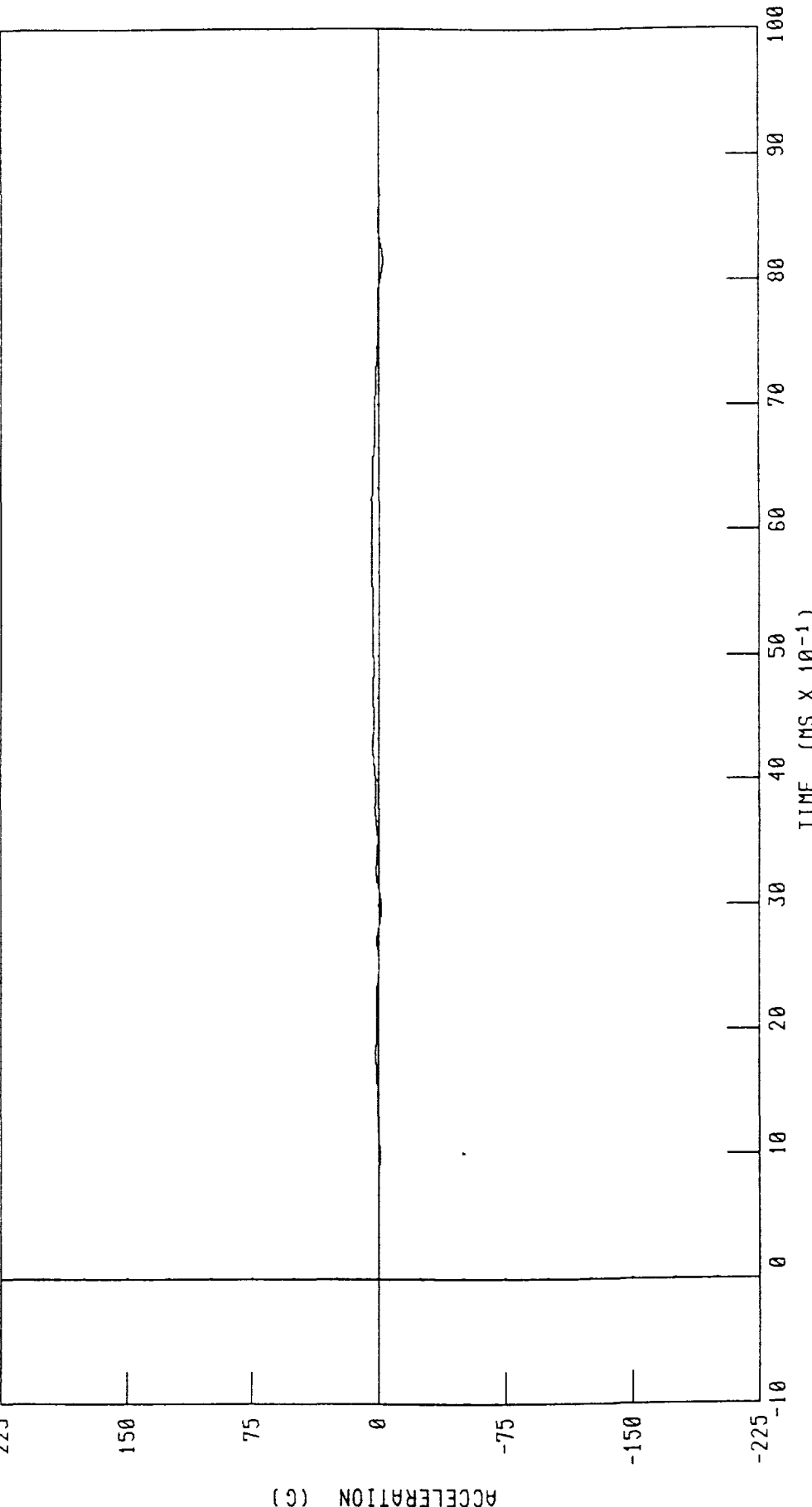
CHANNEL HEDXC FILTER CH CLASS 1000

PEAK DATA 4 52 C 0 6 00 MS, -240 34 C 0 2 00 MS

PART 572-N HYBRID III SIX-YEAR-OLD CHILD - HEAD CALIBRATION

HEAD ACCELERATION Y AXIS

TRC TEST NUMBER 088C6HD2 572 N SN088 HEAD DROP CAL6 RUN NUMBER 080701 1039,1



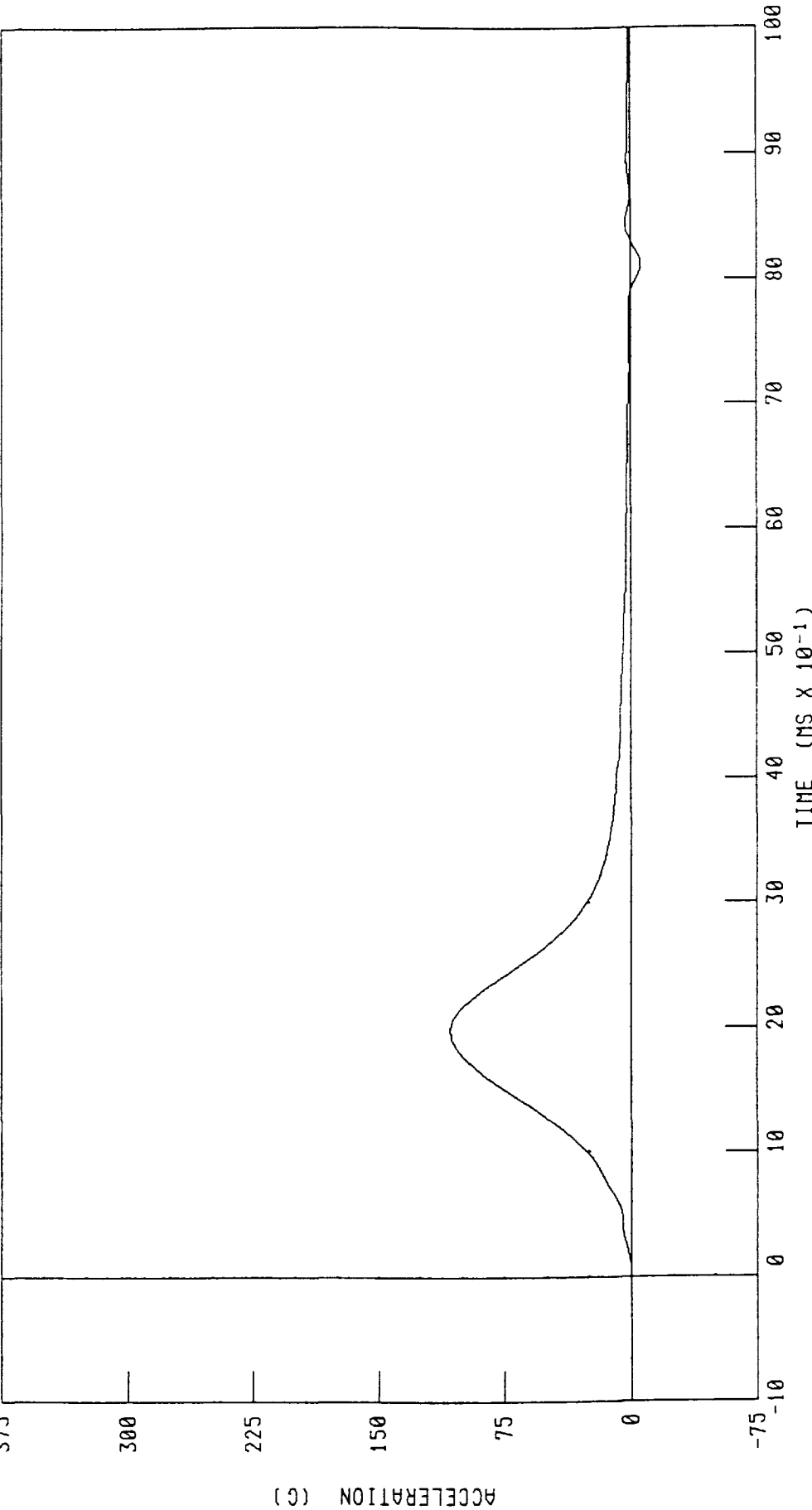
CHANNEL HEDYC FILTER CH CLASS 1000 PEAK DATA 4 42 C 0 6 00 MS, -2 80 C 0 8 16 MS

PART 572-N HYBRID III SIX-YEAR-OLD CHILD - HEAD CALIBRATION

HEAD ACCELERATION Z AXIS

572 N SN088 HEAD DROP CAL6 RUN NUMBER 080701 1039,1

TRC TEST NUMBER 088C6HD2



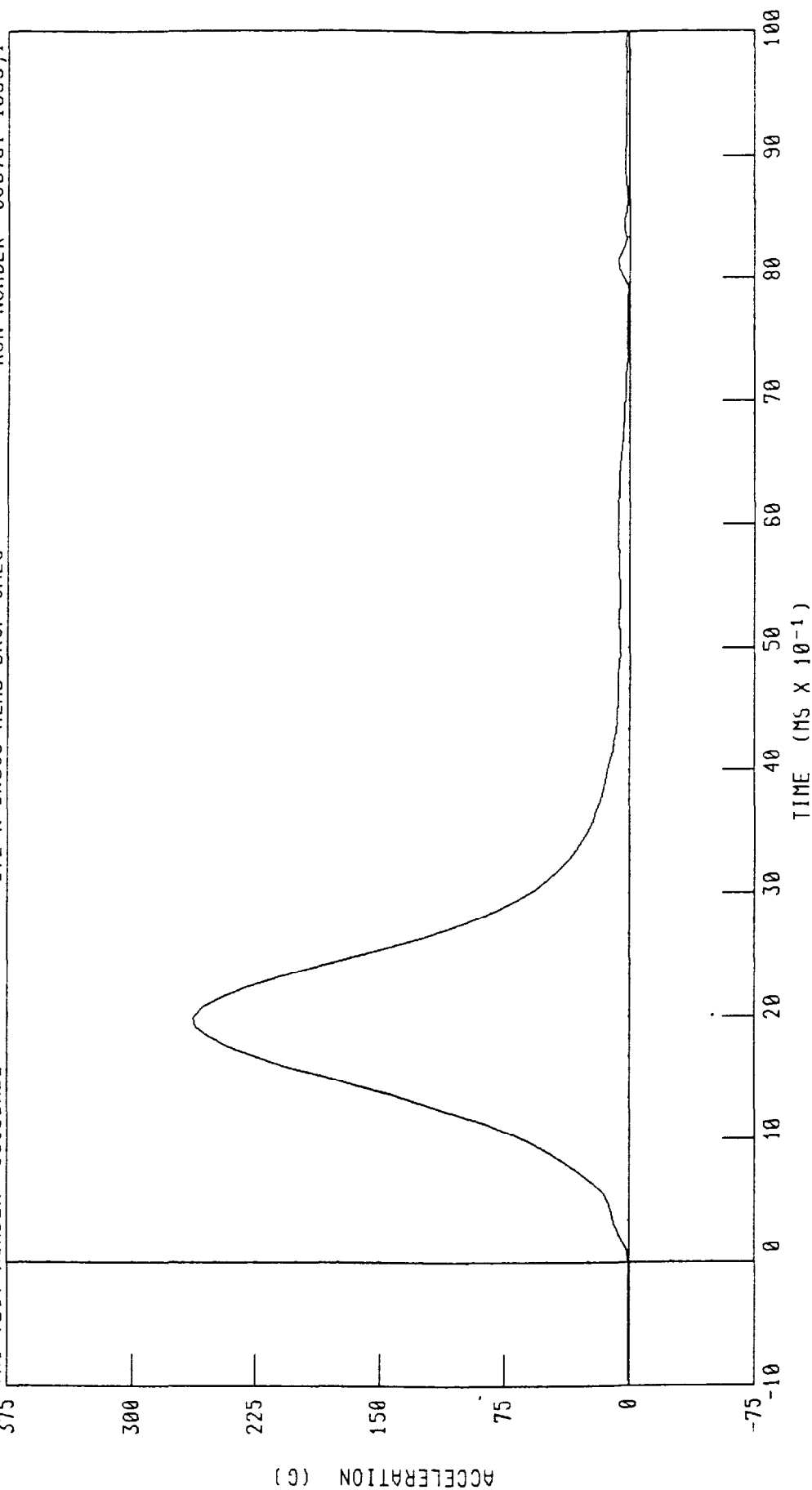
CHANNEL HEDZG FILTER CH CLASS 1000

PEAK DATA 107 17 C 0 2 00 MS, -6 02 C 0 8 16 MS

PART 572-N HYBRID III SIX-YEAR-OLD CHILD - HEAD CALIBRATION

HEAD RESULTANT ACCELERATION

IRC TEST NUMBER 088C6HD2 572 N SN088 HEAD DROP CAL6 RUN NUMBER 080701 1039,1



CHANNEL HEDRC FILTER CH CLASS 1000

PEAK DATA 263 16 G 2 00 MS, 0 22 G 0 -0 88 MS

TRANSPORTATION RESEARCH CENTER INC.

HYBRID III SIX YEAR OLD

13-AUG-01

NECK FLEXION TEST

TRC INC. TEST NO: 088C6NF7 572 N SN088 NECK FLEX.CAL6

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	20.6-22.2 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	60.0 %
IMPACT VELOCITY	4.83 - 5.07 M/S	5.07 M/S
INTEGRATED PENDULUM VELOCITY	10 MS 1.2 - 1.6 M/S	1.54 M/S
	20 MS 2.4 - 3.4 M/S	3.10 M/S
	30 MS 3.8 - 5.0 M/S	4.50 M/S
PEAK D-PLANE ROTATION	74 - 92 DEG.	74.98 DEG.
PEAK MOMENT DURING ROTATION INTERVAL	27 -33 NM	31.89 NM
POSITIVE MOMENT DECAY TIME TO 5 NM LEVEL	103 - 123 MS	104.80 MS
TIME OF PEAK ROTATION AFTER PEAK MOMENT	10 - 22 MS	19.76 MS

TEST MEETS SPECIFICATIONS

TECHNICIAN

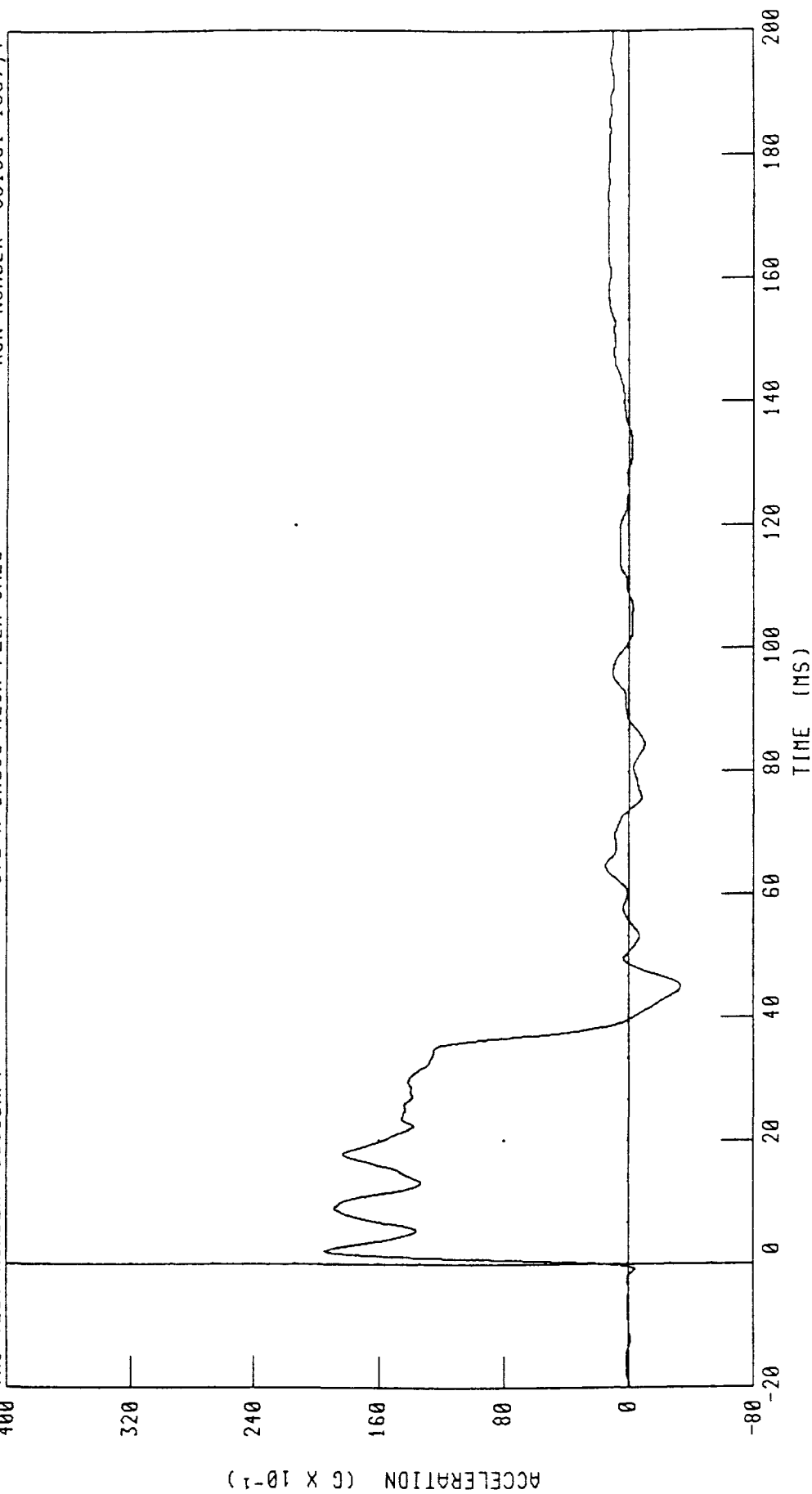


RUN NUMBER: 081301.1935;4

PART 572 N HYBRID III SIX-YEAR-OLD CHILD - NECK FLEXION CALIBRATION

PENDULUM DECELERATION

TRC TEST NUMBER 088C6NF7 572 N SN088 NECK FLEX CAL6 RUN NUMBER 081301 1937,4



CHANNEL PENXC FILTER CH CLASS 180

PEAK DATA 19 45 G @ 2 08 MS, -3 36 G @ 44 96 MS

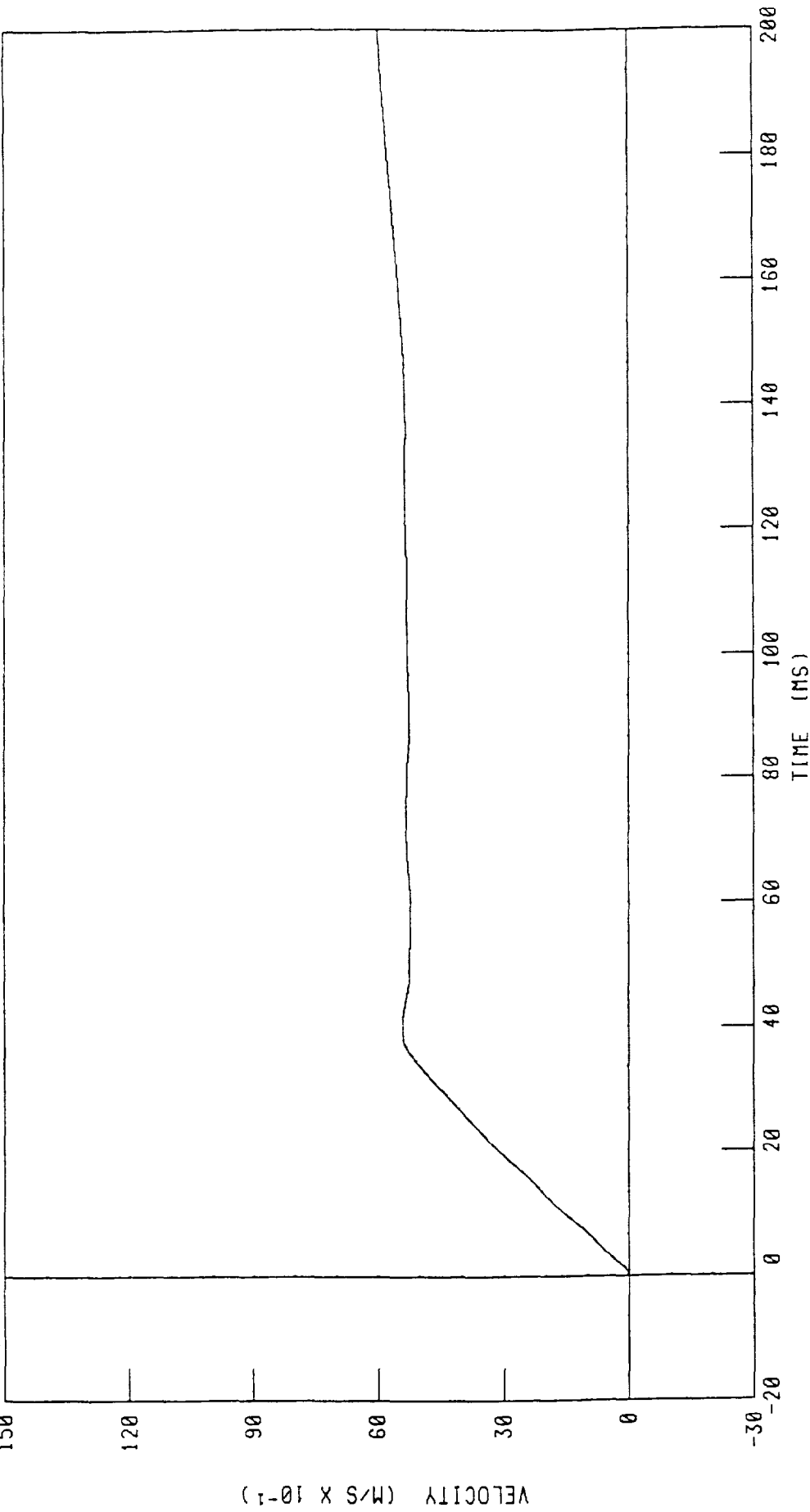
PART 572 N HYBRID III SIX-YEAR-OLD CHILD - NECK FLEXION CALIBRATION

INTEGRATED PENDULUM VELOCITY

TRC TEST NUMBER 088C6NF7

572 N SN088 NECK FLEX CAL6

RUN NUMBER 081301 1937,4



CHANNEL PENXVI FILTER CH CLASS 180

TIME (MS)

PEAK DATA 5 97 M/S @ 200 00 MS, -0 01 M/S @ -18 64 MS

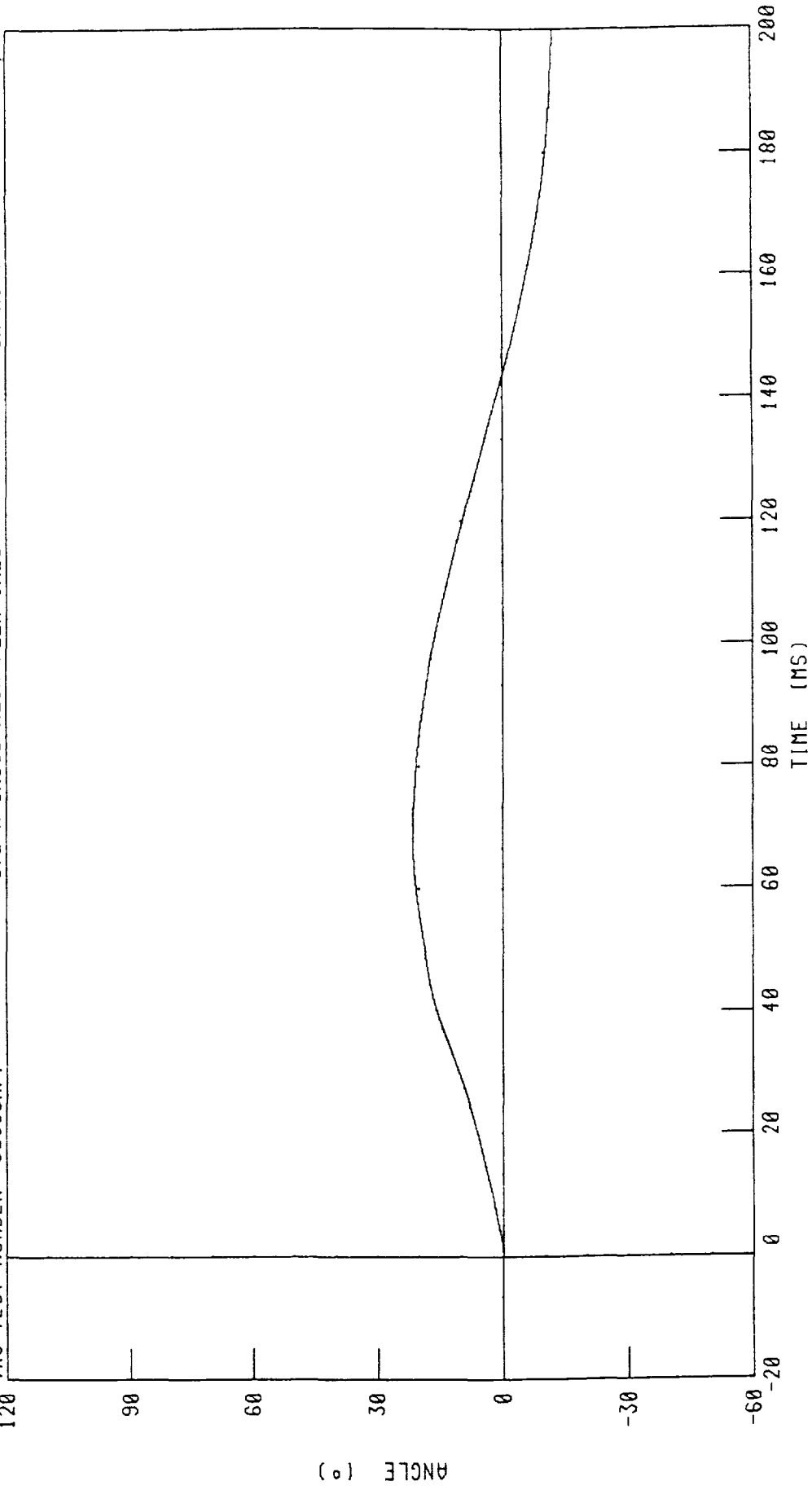
PART 572 N HYBRID III SIX-YEAR-OLD CHILD - NECK FLEXION CALIBRATION

ROTATION ABOUT BASE OF NECK

TRC TEST NUMBER 088C6NF7

572 N SN088 NECK FLEX CAL6

RUN NUMBER 081301 1937,4



CHANNEL BETA FILTER CH CLASS 60

PEAK DATA 21 51 ° @ 69 04 MS, -12 25 ° @ 200 00 MS

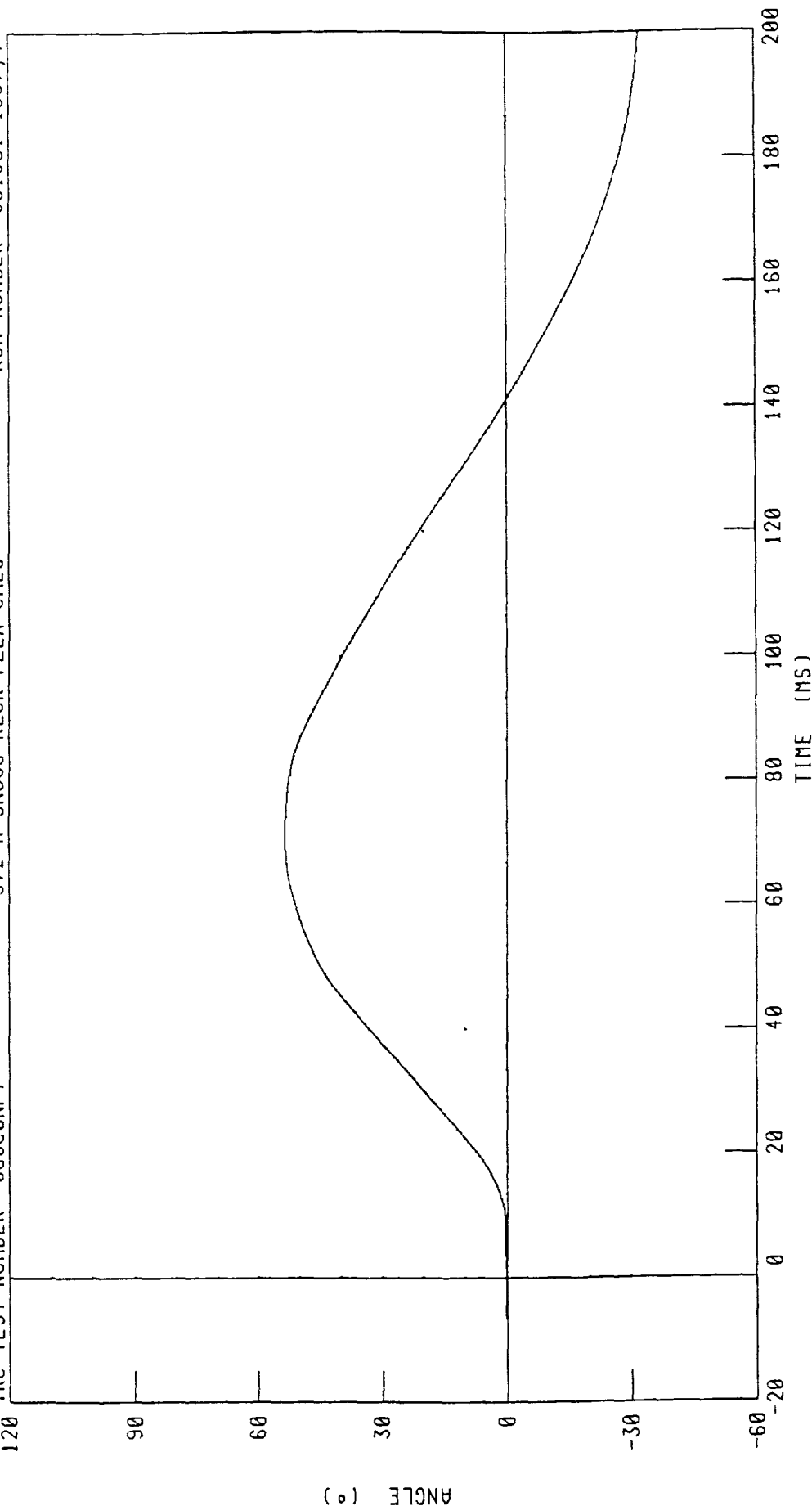
PART 572 N HYBRID III SIX-YEAR-OLD CHILD - NECK FLEXION CALIBRATION

ROTATION ABOUT OCCIPITAL CONDYLE

IRC TEST NUMBER 088C6NF7

572 N SN088 NECK FLEX CAL6

RUN NUMBER 081301 1937,4



CHANNEL THETA FILTER CH CLASS 60

PEAK DATA 53 51 ° @ 71 36 MS, -32 33 ° @ 200 00 MS

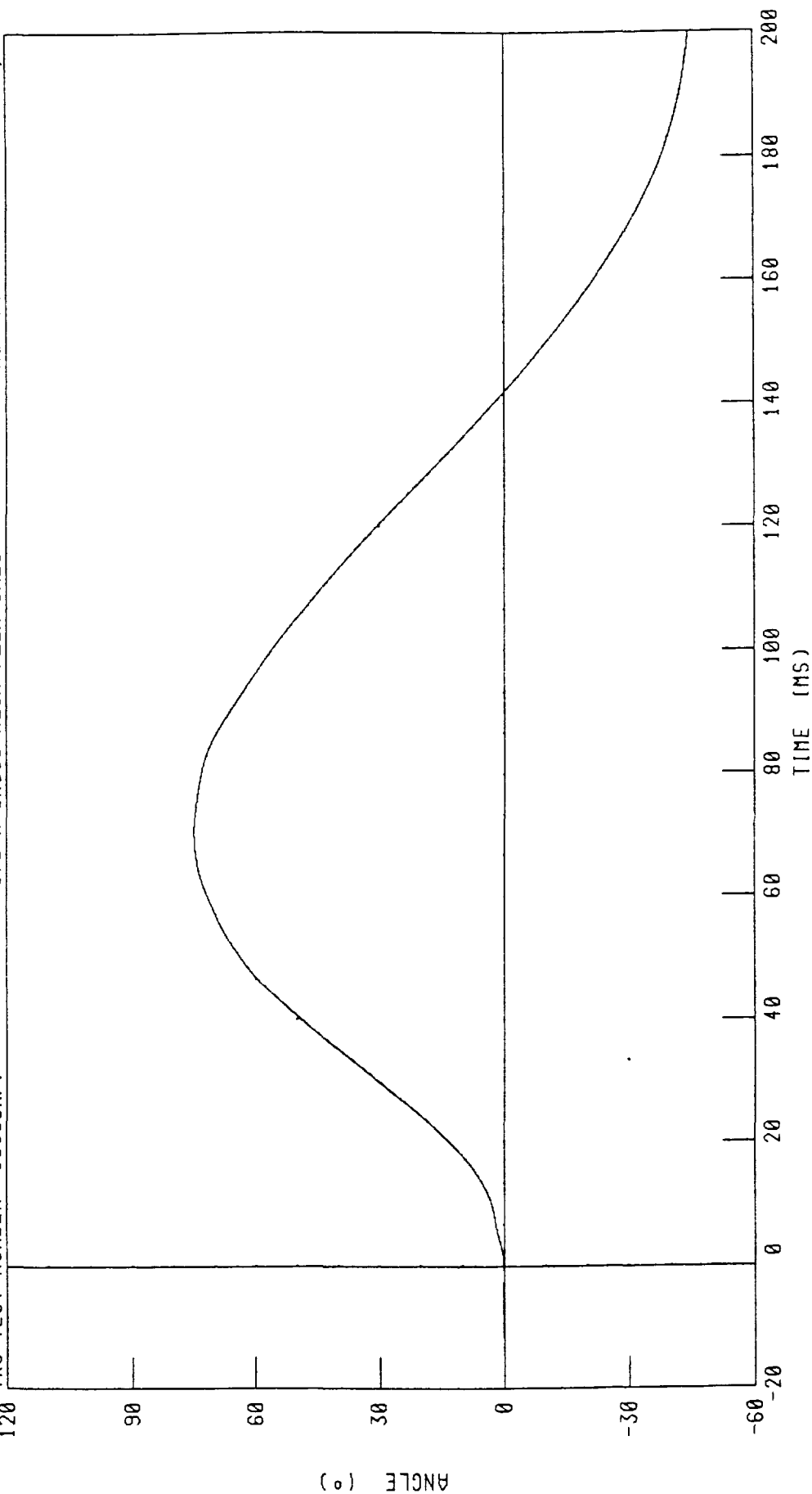
PART 572 N HYBRID III SIX-YEAR-OLD CHILD - NECK FLEXION CALIBRATION

TOTAL ROTATION

TRC TEST NUMBER 088C6NF7

572 N SN088 NECK FLEX CAL6

RUN NUMBER 081301 1937,4



PEAK DATA 74 98 ° @ 70 72 MS, -44 57 ° @ 200 00 MS

CHANNEL TOTAL FILTER CH CLASS 60

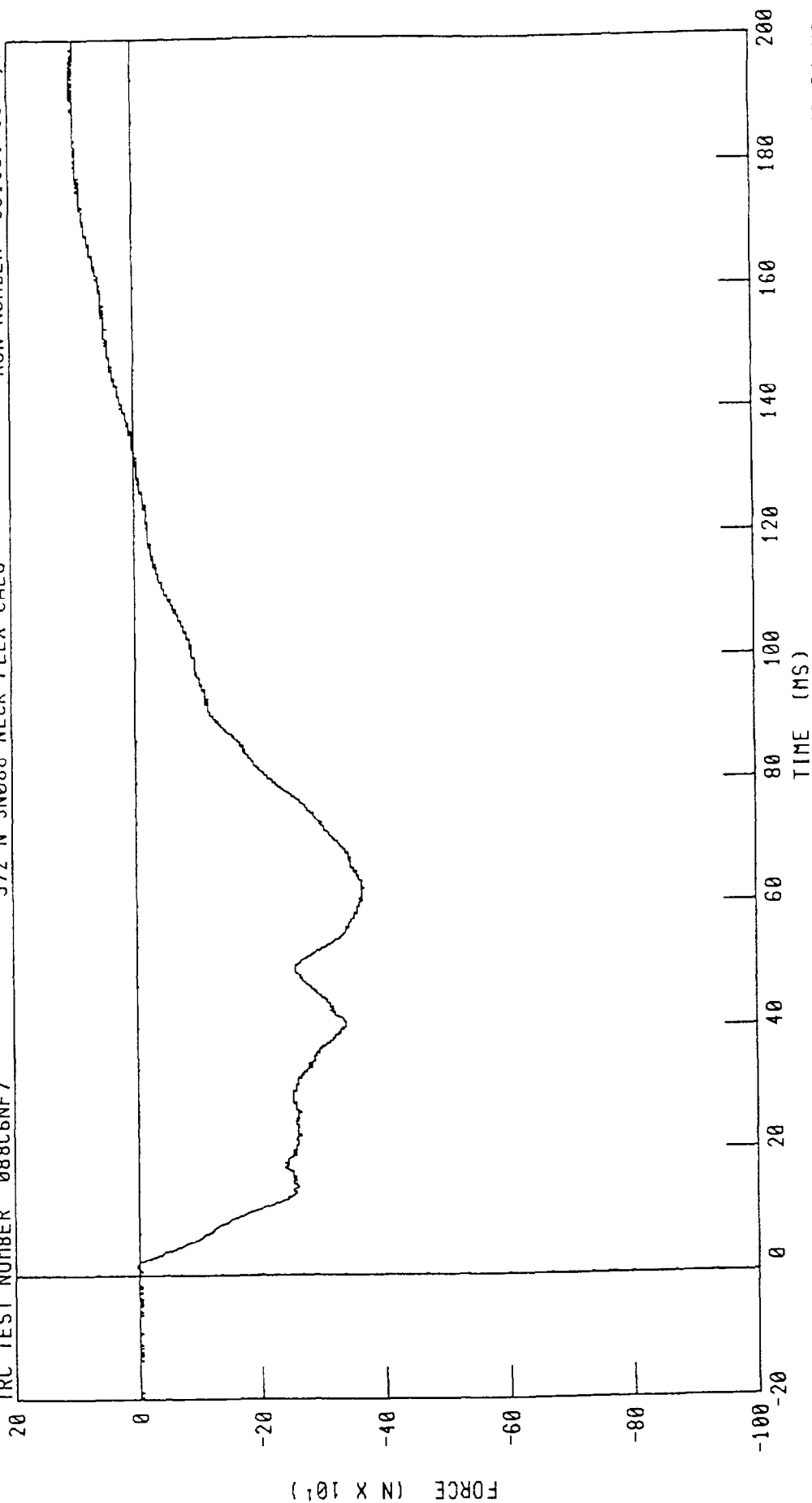
PART 572 N HYBRID III SIX-YEAR-OLD CHILDO - NECK FLEXION CALIBRATION

NECK FORCE X AXIS

TRC TEST NUMBER 088C6NF7

572 N SN088 NECK FLEX CAL6

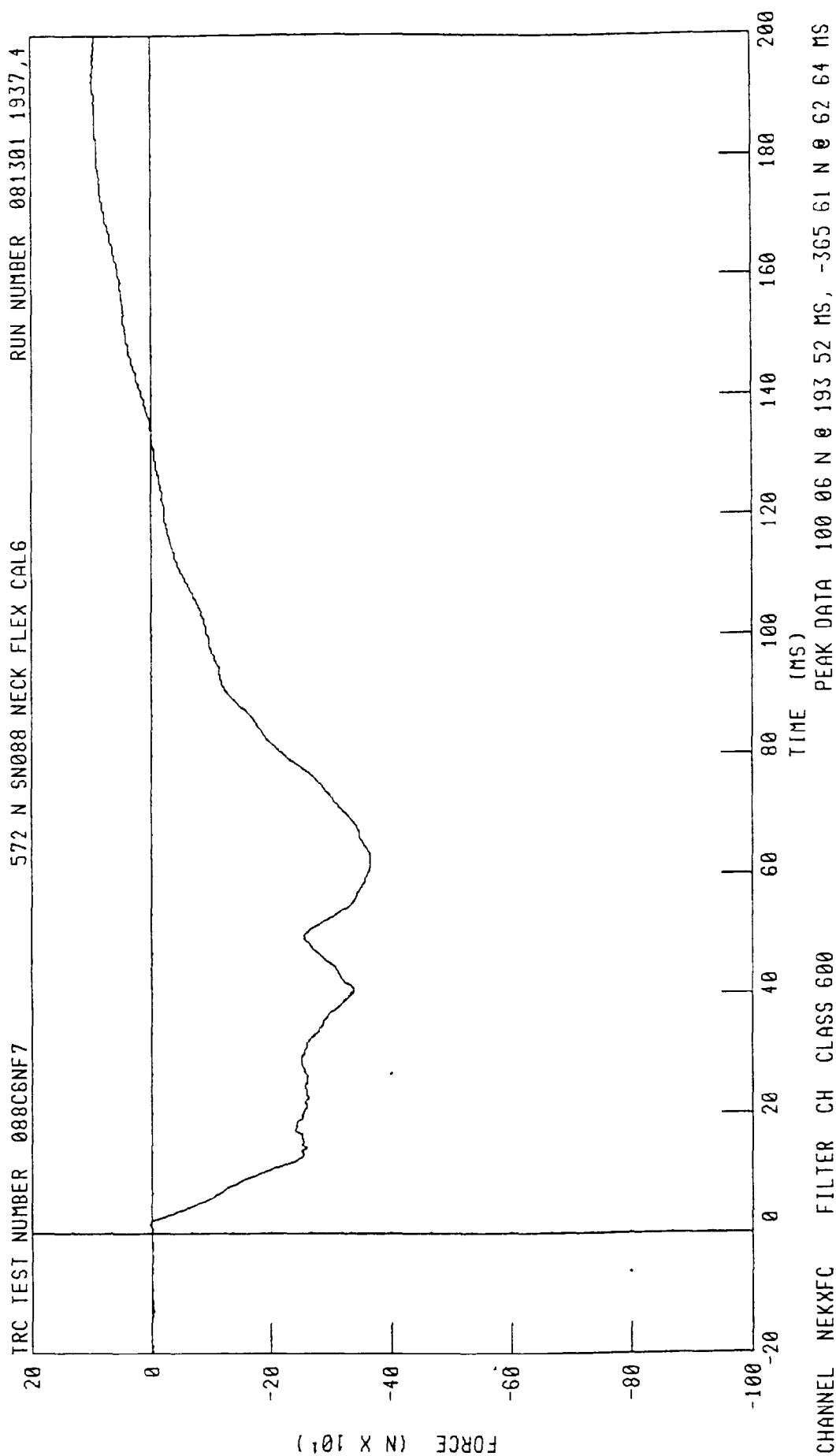
RUN NUMBER 081301 1937,4



CHANNEL NEKXF FILTER CH CLASS 1000

PEAK DATA 100 03 N @ 188 72 MS, -369 03 N @ 62 64 MS

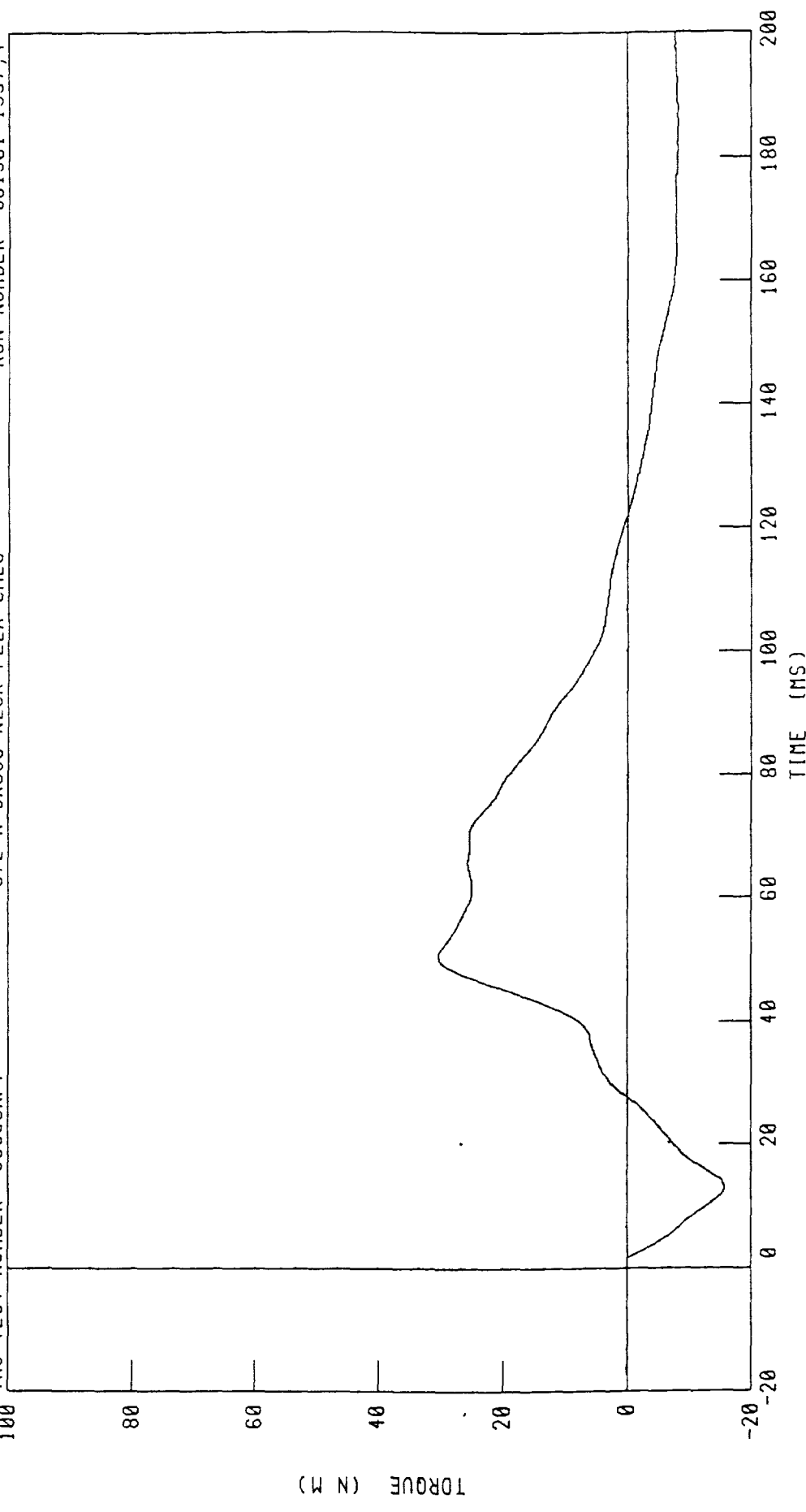
PART 572 N HYBRID III SIX-YEAR-OLD CHILD - NECK FLEXION CALIBRATION
 NECK FORCE X AXIS FILTERED FOR USE IN OCCIPITAL MOMENT CALCULATION



PART 572 N HYBRID III SIX-YEAR-OLD CHILD - NECK FLEXION CALIBRATION

NECK MOMENT Y AXIS

TRC TEST NUMBER 088C6NF7 572 N SN088 NECK FLEX CAL6 RUN NUMBER 081301 1937,4



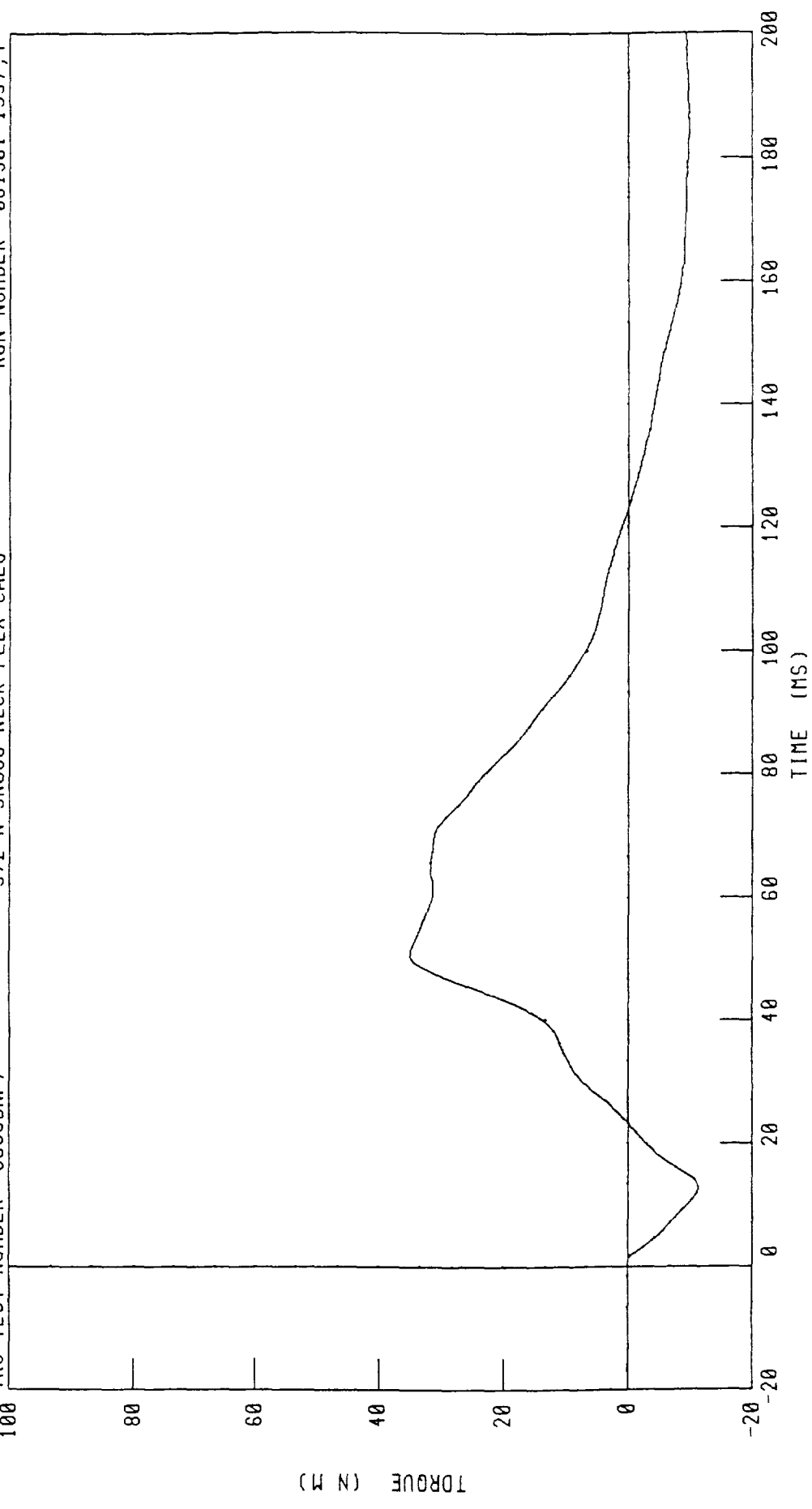
CHANNEL NEKYM FILTER CH CLASS 600

PEAK DATA 30 35 N M 0 50 64 MS, -15 84 N M 0 12 96 MS

PART 572 N HYBRID III SIX-YEAR-OLD CHILD - NECK FLEXION CALIBRATION

TOTAL MOMENT ABOUT OCCIPITAL CONDYLE

TRC TEST NUMBER 088C6NF7 572 N SN088 NECK FLEX CAL6 RUN NUMBER 081301 1937,4

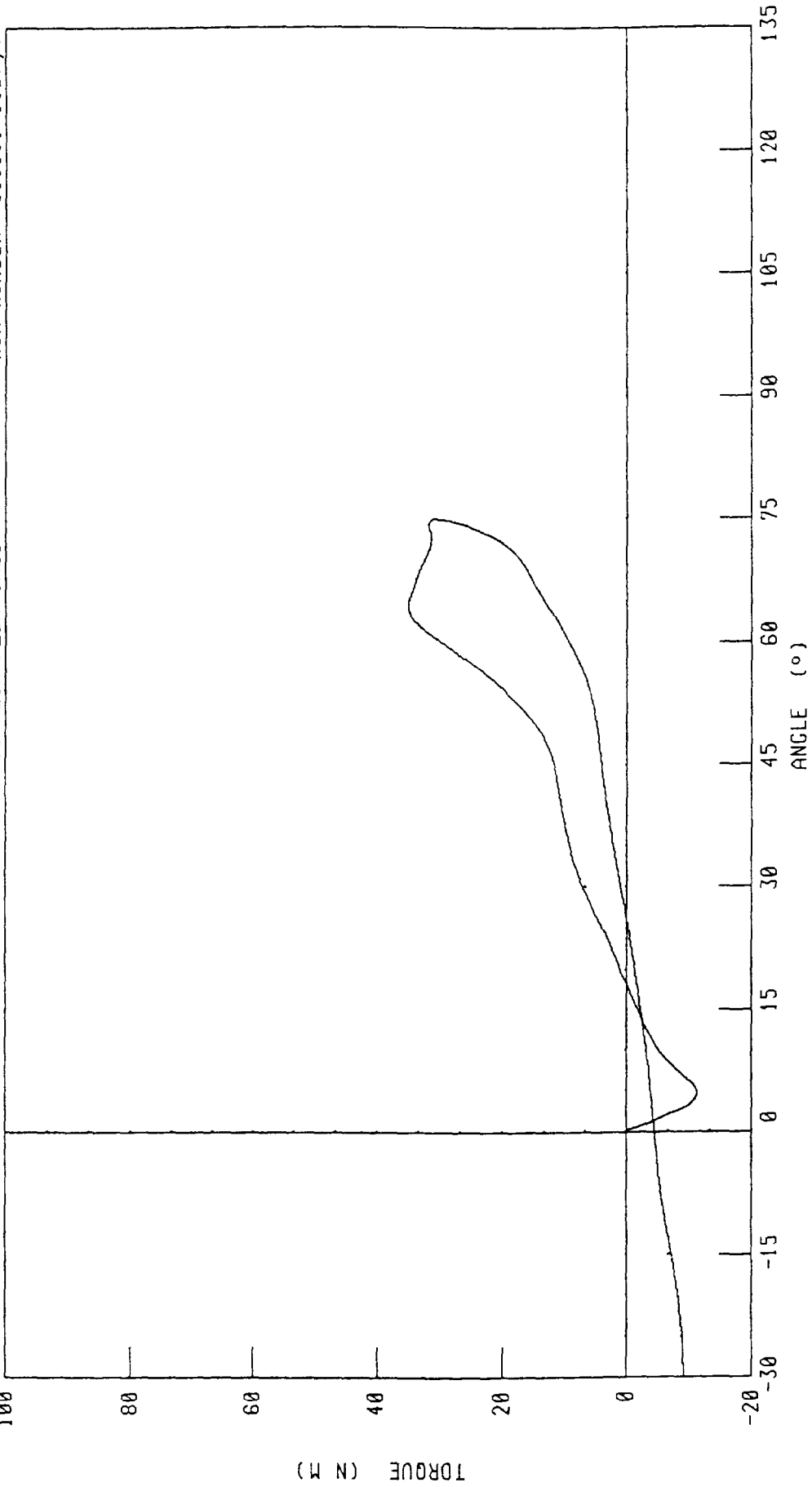


CHANNEL NEKOM FILTER CH CLASS 600 PEAK DATA 35 07 N M @ 50 96 MS, -11 32 N M @ 12 80 MS

PART 572 N HYBRID III SIX-YEAR-OLD CHILD - NECK FLEXION CALIBRATION

TOTAL ROTATION VS OCCIPITAL CONDYLAR MOMENT

TRC TEST NUMBER 088CSNF7 572 N SN088 NECK FLEX CAL6 RUN NUMBER 081301 1937,4



CHANNEL TOTAL NEKOM FILTER CH CLASS 60 CH CLASS 600
 PEAK DATA 74 98 ° 0 70 72 MS, -44 57 ° 0 200 00 MS
 35 07 N M 0 50 96 MS, -11 32 N M 0 12 80 MS

TRANSPORTATION RESEARCH CENTER INC.

HYBRID III SIX YEAR OLD

13-AUG-01

NECK EXTENSION TEST

TRC INC. TEST NO: 088C6NE4 572 N SN088 NECK EXT.CAL6

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	20.6 - 22.2 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	60.0 %
IMPACT VELOCITY	4.18 - 4.42 M/S	4.38 M/S
INTEGRATED PENDULUM VELOCITY	10 MS 1.0 - 1.4 M/S	1.22 M/S
	20 MS 2.2 - 3.0 M/S	2.55 M/S
	30 MS 3.2 - 4.2 M/S	3.79 M/S
PEAK D-PLANE ROTATION	85 - 103 DEG.	85.53 DEG.
PEAK MOMENT IN ROTATION INTERVAL	-19 / -24 NM	-24.22 NM *
NEGATIVE MOMENT DECAY TIME FROM PEAK TO 5 NM	123 - 147 MS	127.04 MS

* TEST DOES NOT MEET SPECIFICATIONS

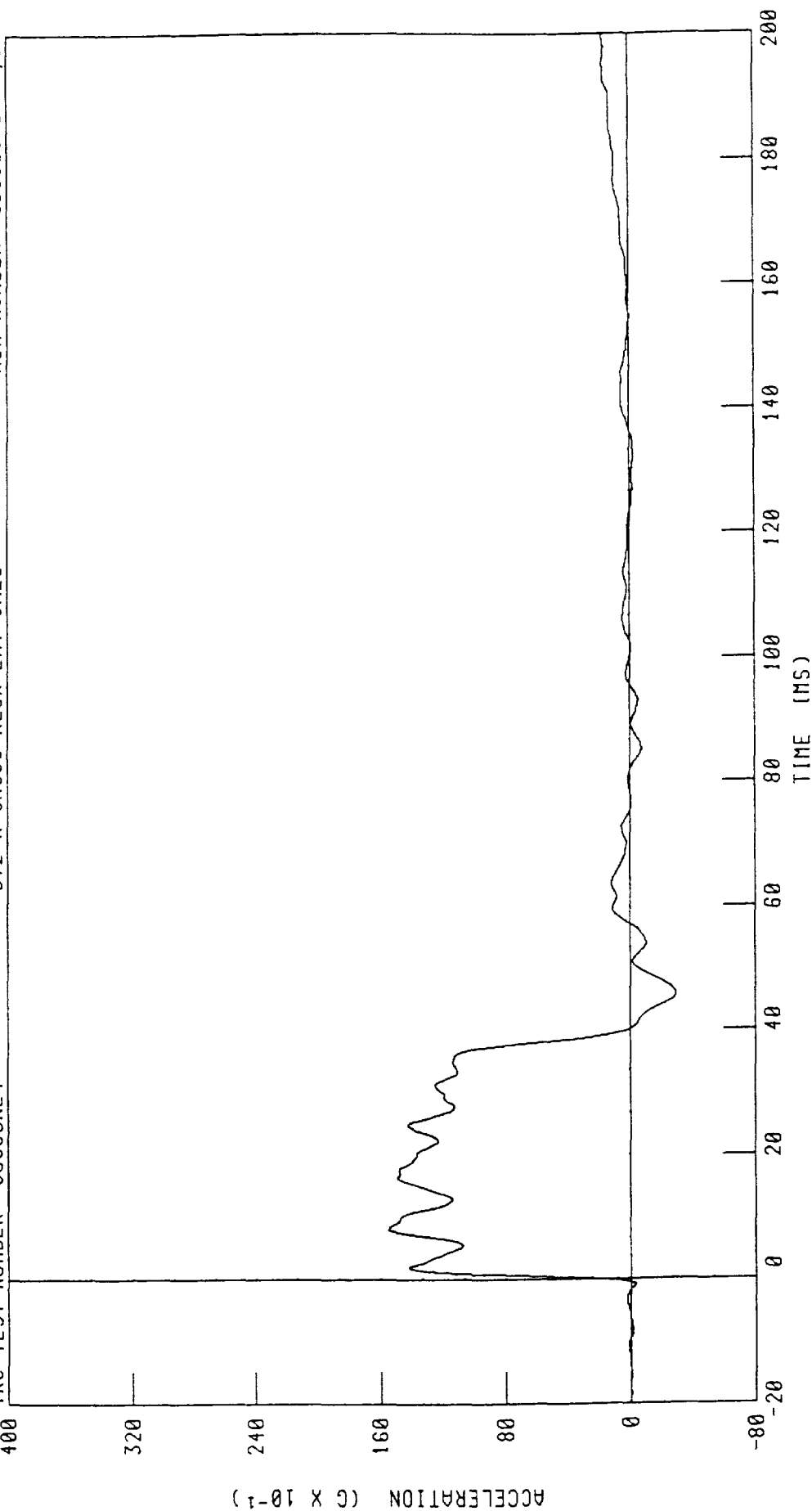
TECHNICIAN 

RUN NUMBER: 081301.1856;1

PART 572-N HYBRID III SIX-YEAR-OLD CHILD - NECK EXTENSION CALIBRATION

PENDULUM DECELERATION

TRC TEST NUMBER 088C6NE4 572 N SN088 NECK EXT CAL6 RUN NUMBER 081501 0900,1

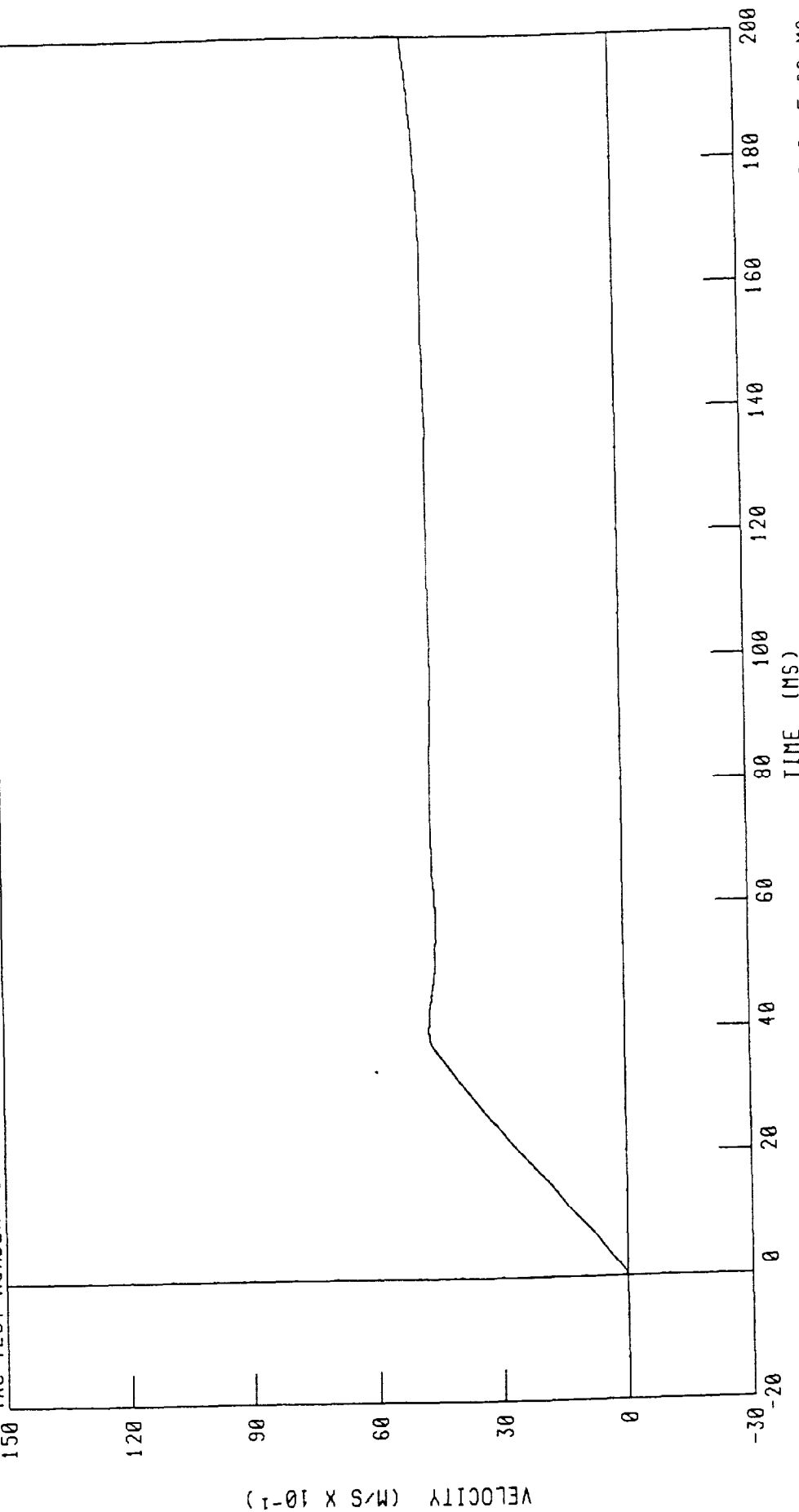


CHANNEL PENXC FILTER CH CLASS 180 PEAK DATA 15 48 C 8 08 MS, -2 94 C 0 45 76 MS

PART 572-N HYBRID III SIX-YEAR-OLD CHILD - NECK EXTENSION CALIBRATION

INTEGRATED PENDULUM VELOCITY

TRC TEST NUMBER 088C6NE4 572 N SN088 NECK EXT CAL6 RUN NUMBER 081501 0900,1

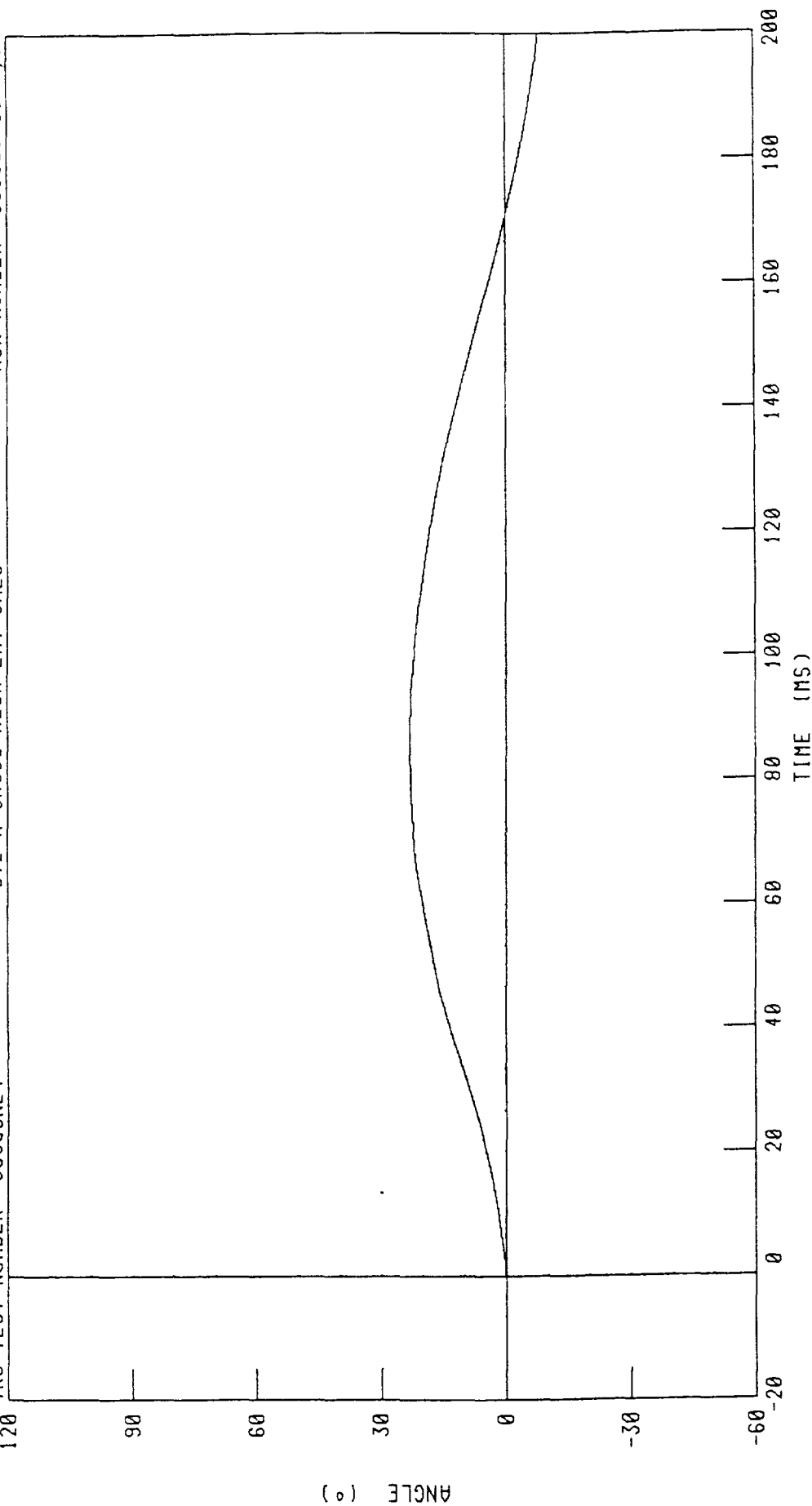


CHANNEL PENXVI FILTER CH CLASS 180 PEAK DATA 5 04 M/S @ 200 00 MS, -0 01 M/S @ -5 92 MS

PART 572-N HYBRID III SIX-YEAR-OLD CHILD - NECK EXTENSION CALIBRATION

ROTATION ABOUT BASE OF NECK

TRC TEST NUMBER 088CSNE4 572 N SN088 NECK EXT CAL6 RUN NUMBER 081501 0900,1



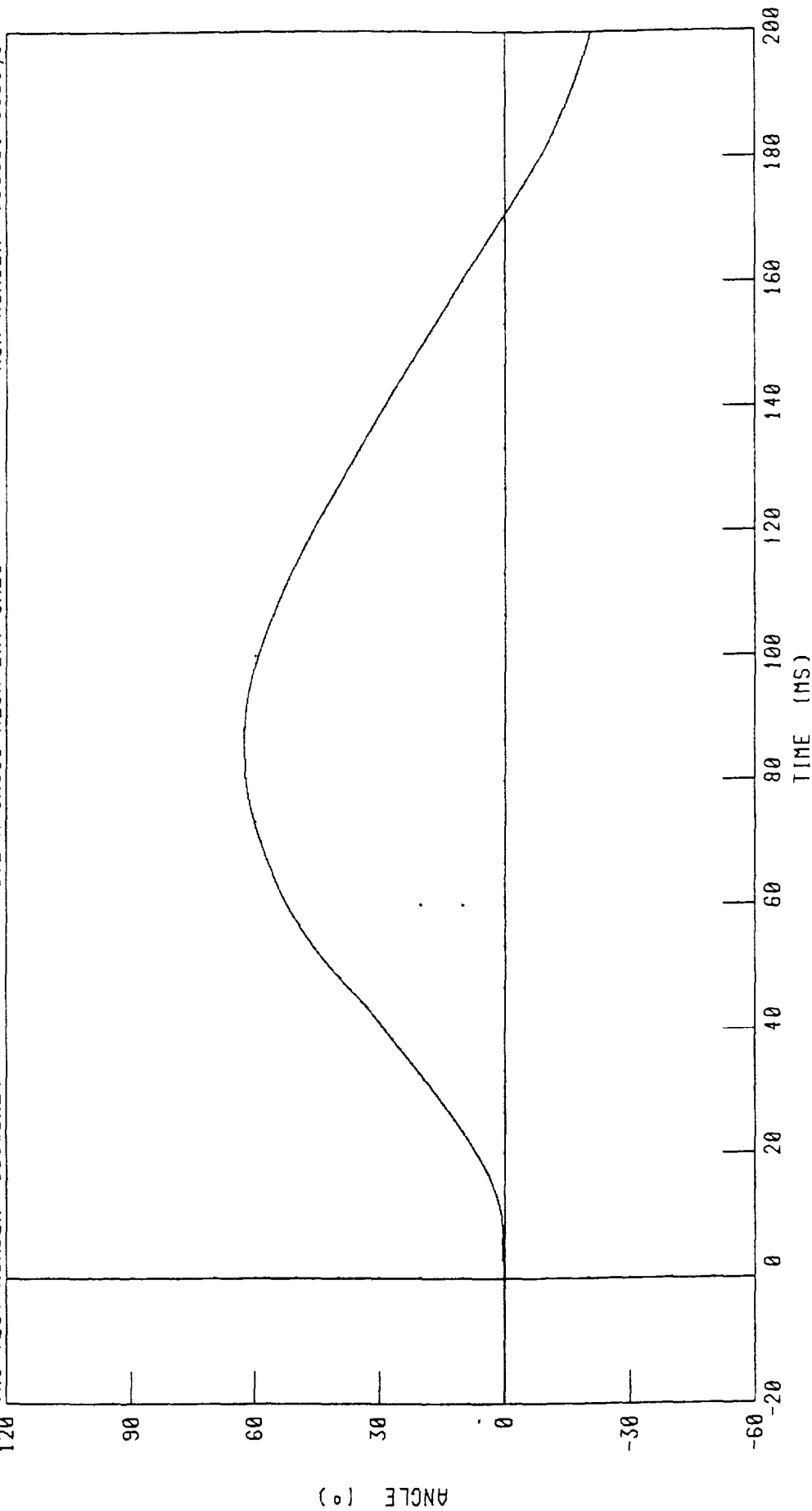
CHANNEL BETA FILTER CH CLASS 60

PEAK DATA 22 94 ° @ 86 16 MS, -8 11 ° @ 200 00 MS

PART 572-N HYBRID III SIX-YEAR-OLD CHILD - NECK EXTENSION CALIBRATION

ROTATION ABOUT OCCIPITAL CONDYLE

TRC TEST NUMBER 088C6NE4 572 N SN088 NECK EXT CAL6 RUN NUMBER 081501 0900,1



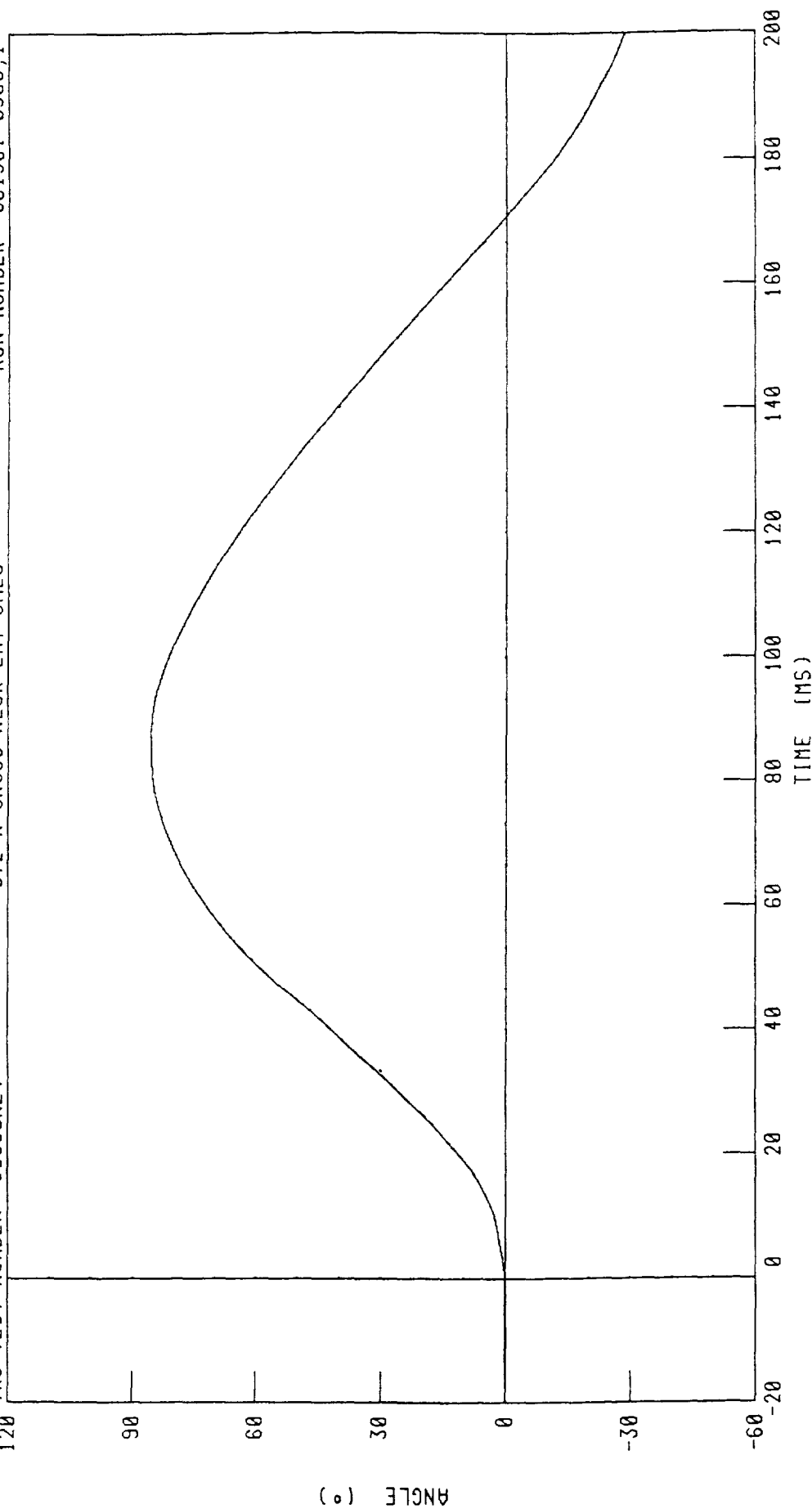
PEAK DATA 62 60 ° 0 86 08 MS, -20 80 ° 0 200 00 MS

CHANNEL THETA FILTER CH CLASS 60

PART 572-N HYBRID III SIX-YEAR-OLD CHILD - NECK EXTENSION CALIBRATION

TOTAL ROTATION

IRC TEST NUMBER 088C6NE4 572 N SN088 NECK EXT CAL6 RUN NUMBER 081501 0900,1



CHANNEL TOTAL FILTER CH CLASS 60

PEAK DATA 85 53 ° @ 86 00 MS, -28 91 ° @ 200 00 MS

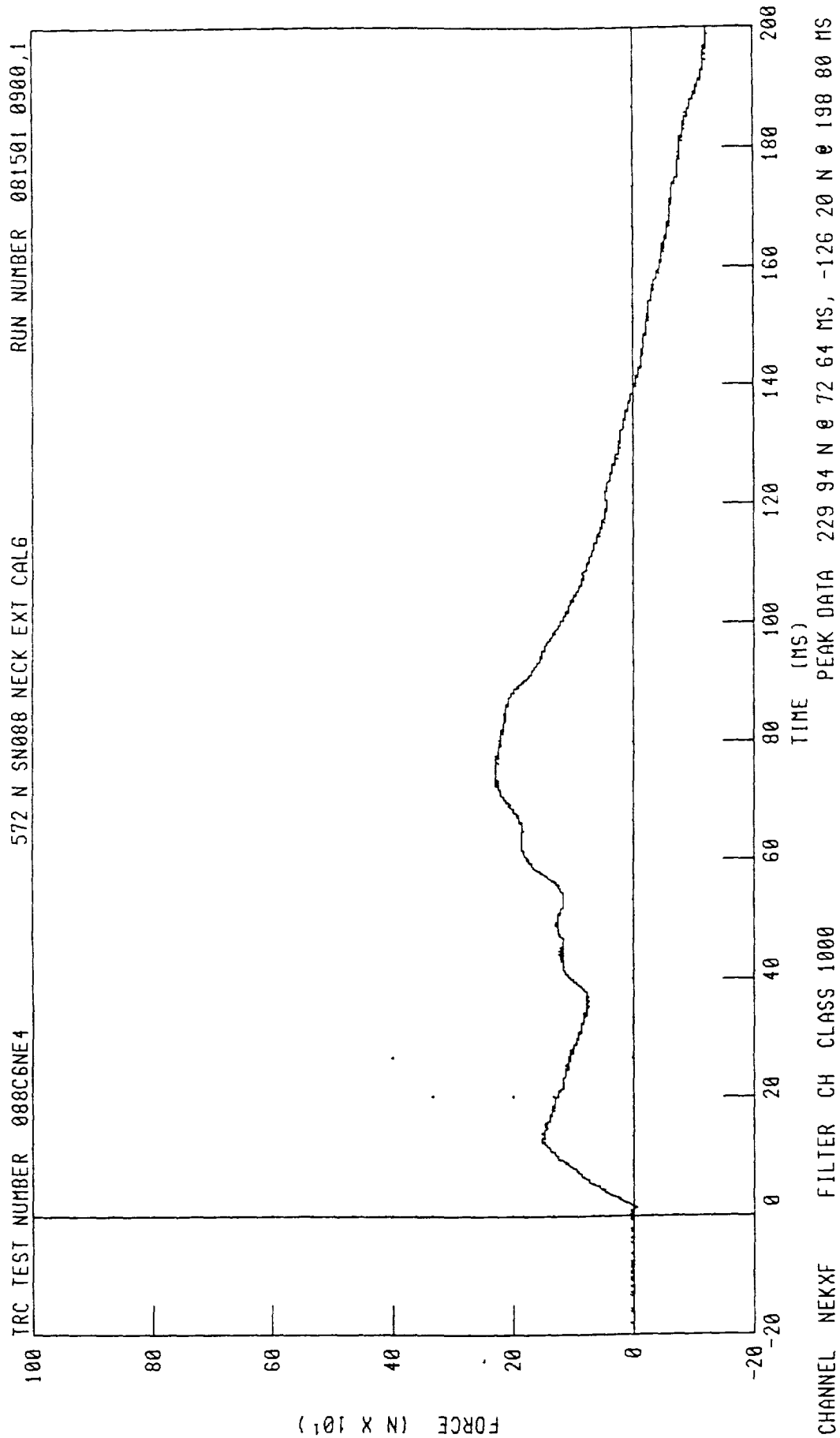
PART 572-N HYBRID III SIX-YEAR-OLD CHILD - NECK EXTENSION CALIBRATION

NECK FORCE X AXIS

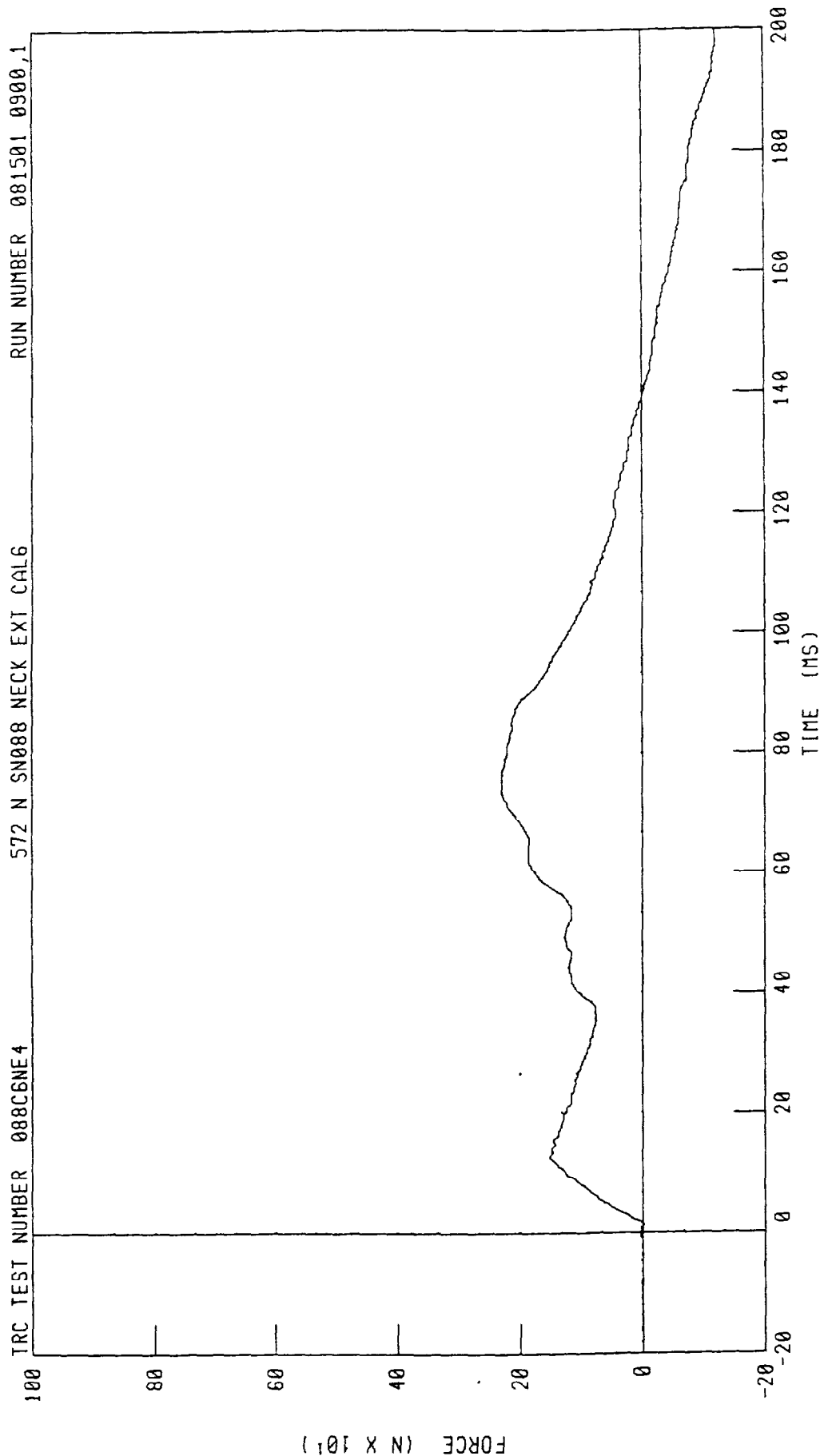
TRC TEST NUMBER 088C6NE4

572 N SN088 NECK EXT CAL6

RUN NUMBER 081501 0900,1



PART 572-N HYBRID III SIX-YEAR-OLD CHILD - NECK EXTENSION CALIBRATION
 NECK FORCE X AXIS FILTERED FOR USE IN OCCIPITAL MOMENT CALCULATION

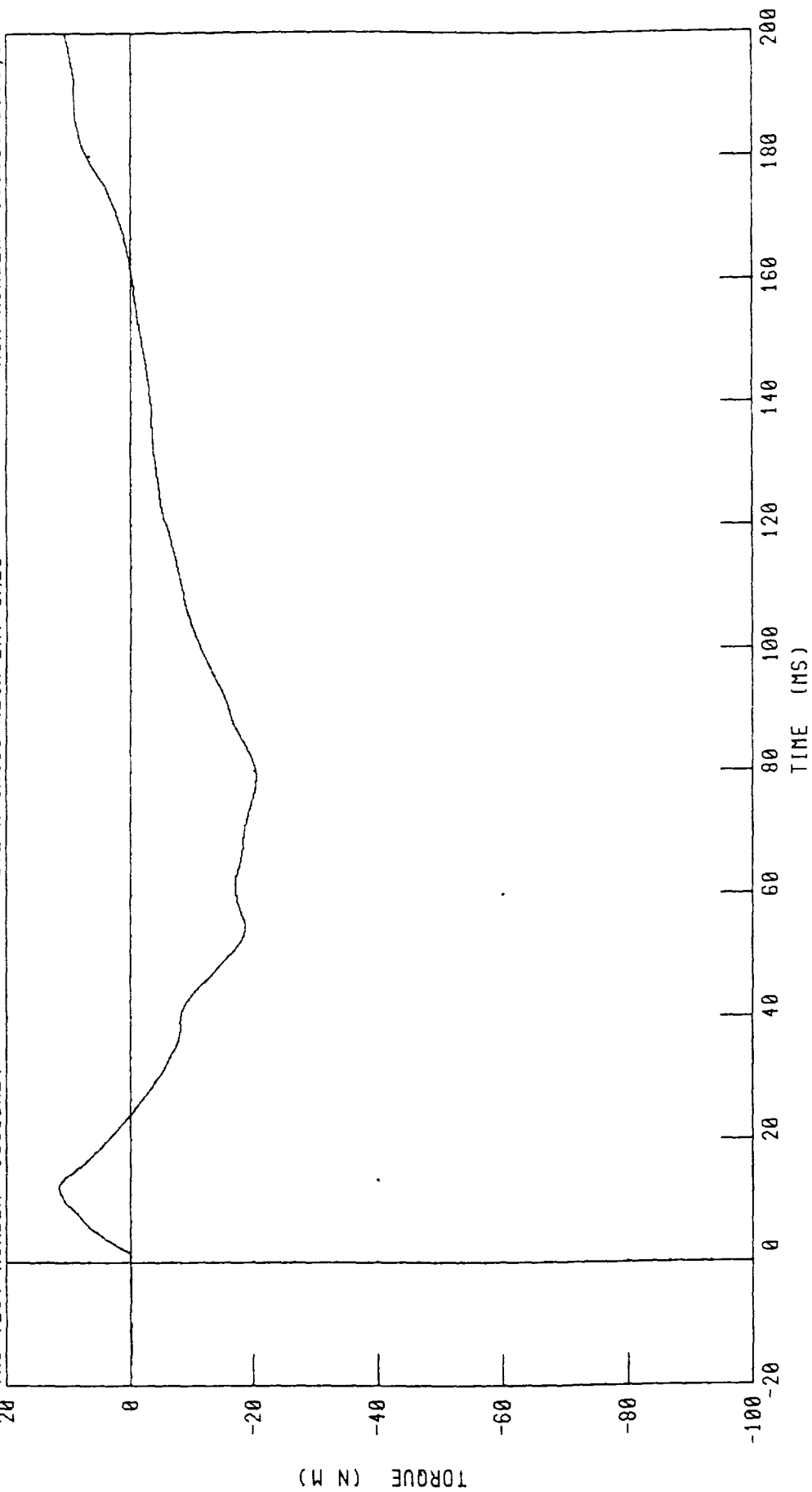


CHANNEL NEKXFC FILTER CH CLASS 600 PEAK DATA 229 98 N 0 76 00 MS, -122 78 N 0 198 80 MS

PART 572-N HYBRID III SIX-YEAR-OLD CHILD - NECK EXTENSION CALIBRATION

NECK MOMENT Y AXIS

TRC TEST NUMBER 088C6NE4 572 N SN088 NECK EXT CAL6 RUN NUMBER 081501 0900,1

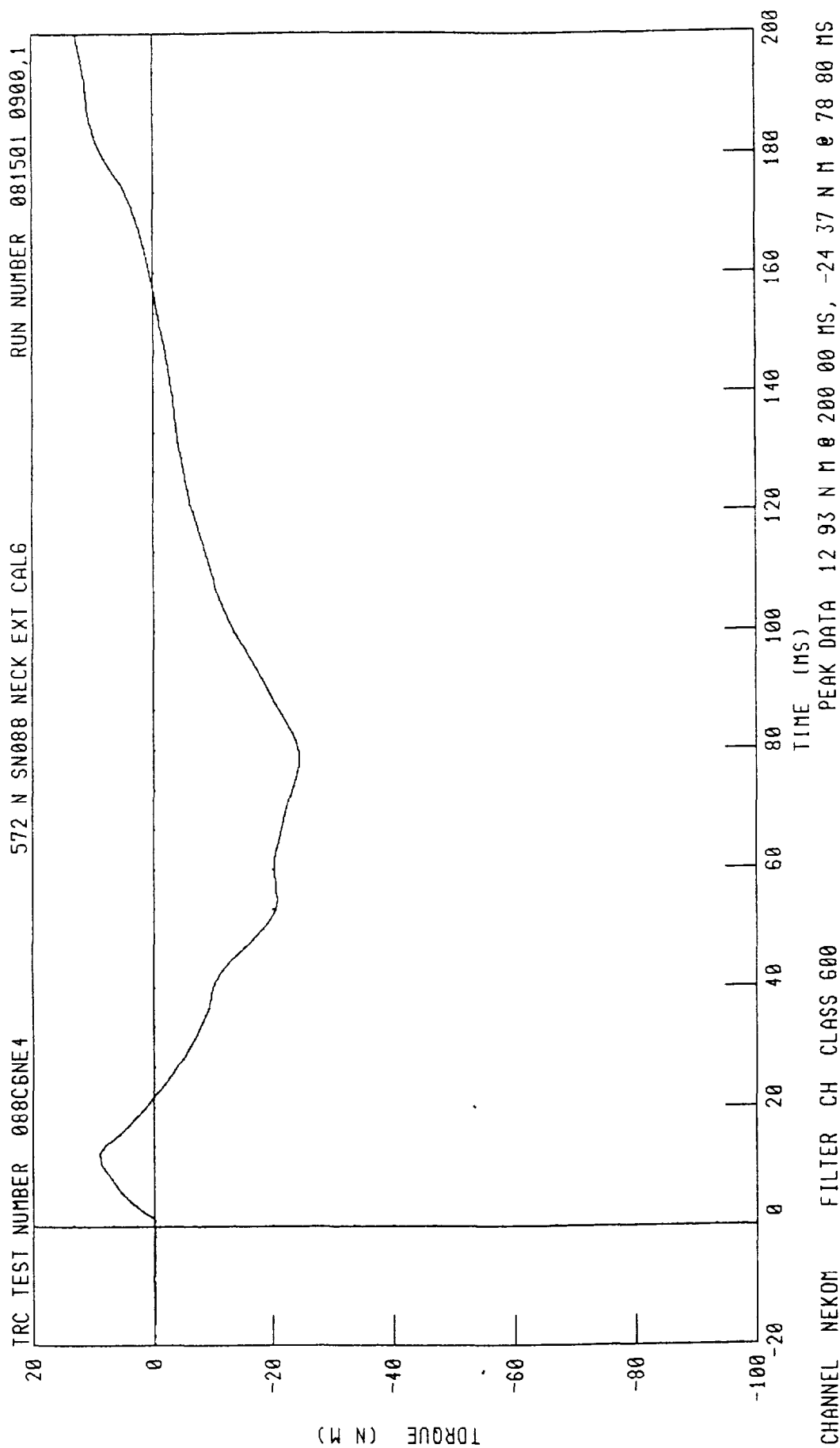


CHANNEL NEKYM FILTER CH CLASS 600

PEAK DATA 11 63 N M @ 12 32 MS, -20 36 N M @ 79 44 MS

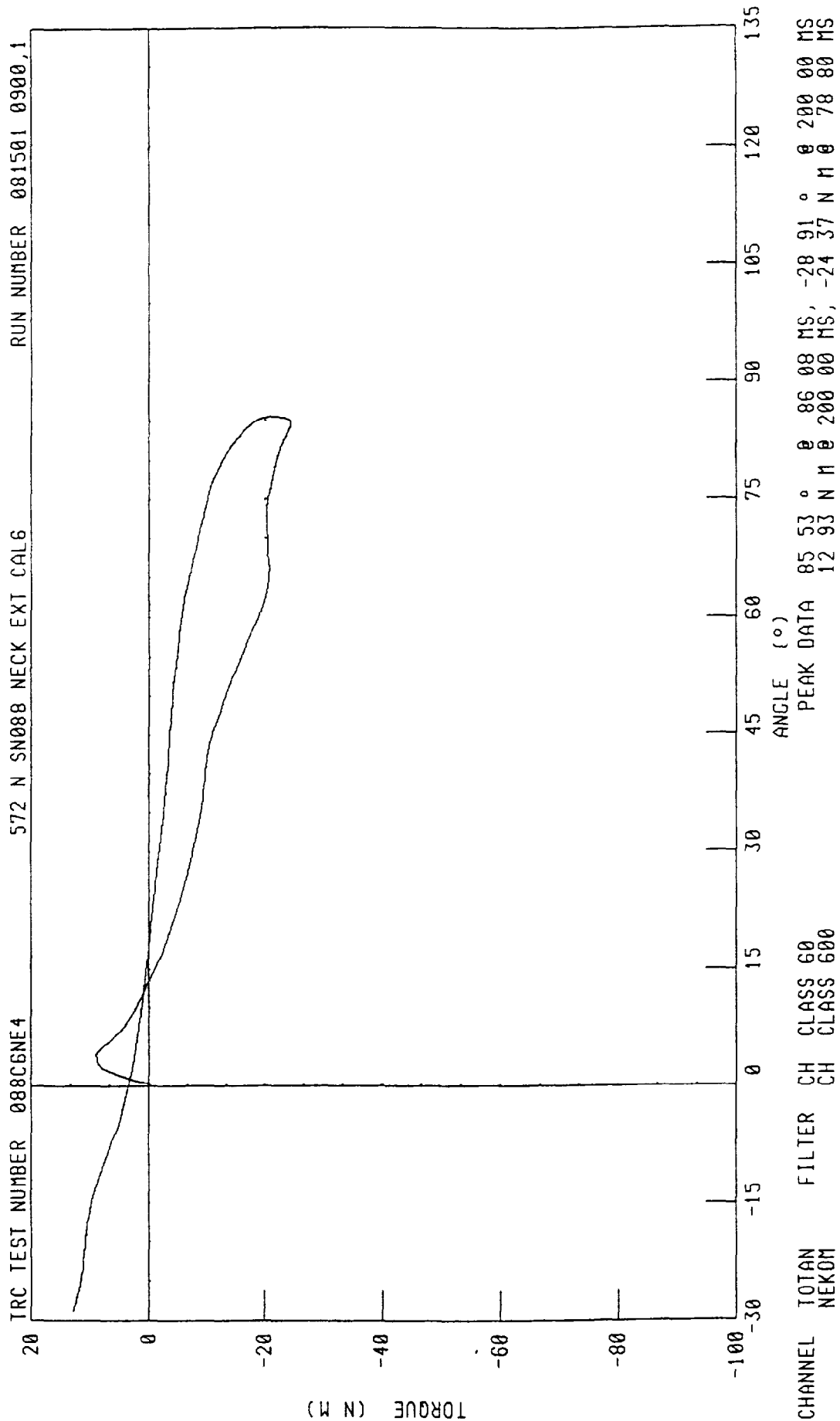
PART 572-N HYBRID III SIX-YEAR-OLD CHILD - NECK EXTENSION CALIBRATION

TOTAL MOMENT ABOUT OCCIPITAL CONDYLE



PART 572-N HYBRID III SIX-YEAR-OLD CHILD - NECK EXTENSION CALIBRATION

TOTAL ROTATION VS OCCIPITAL CONDYLAR MOMENT



CHANNEL TOTAL NEKOM FILTER CH CLASS 60 CH CLASS 600

PEAK DATA 85 53 ° 86 08 MS, -28 91 ° 200 00 MS
 12 93 N M 200 00 MS, -24 37 N M 78 80 MS

TRANSPORTATION RESEARCH CENTER INC.

THORAX IMPACT TEST

HYBRID III SIX YEAR OLD

13-AUG-01

TRC INC.

TEST NO: 088C6TH1

572N SN088 H.S.THORAX CAL6

TEST PARAMETER	HIGH SPEED TEST	TEST RESULTS
	SPECIFICATION	
TEMPERATURE	20.6-22.2 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	56.0 %
PENDULUM VELOCITY	6.59 - 6.83 M/S	6.59 M/S
MAXIMUM DEFLECTION	38.1 - 45.7 MM	41.0 MM
MAXIMUM FORCE IN DEFLECTION INTERVAL	1150 - 1380 N	1290. N
INTERNAL HYSTERESIS	76% - 92%	78.7%
MAXIMUM FORCE % BETWEEN 12.5 & 38 MM DEFLECTION	<= 105 %	102 %

TEST MEETS SPECIFICATIONS

TECHNICIAN



RUN NUMBER: 081601.1037;1

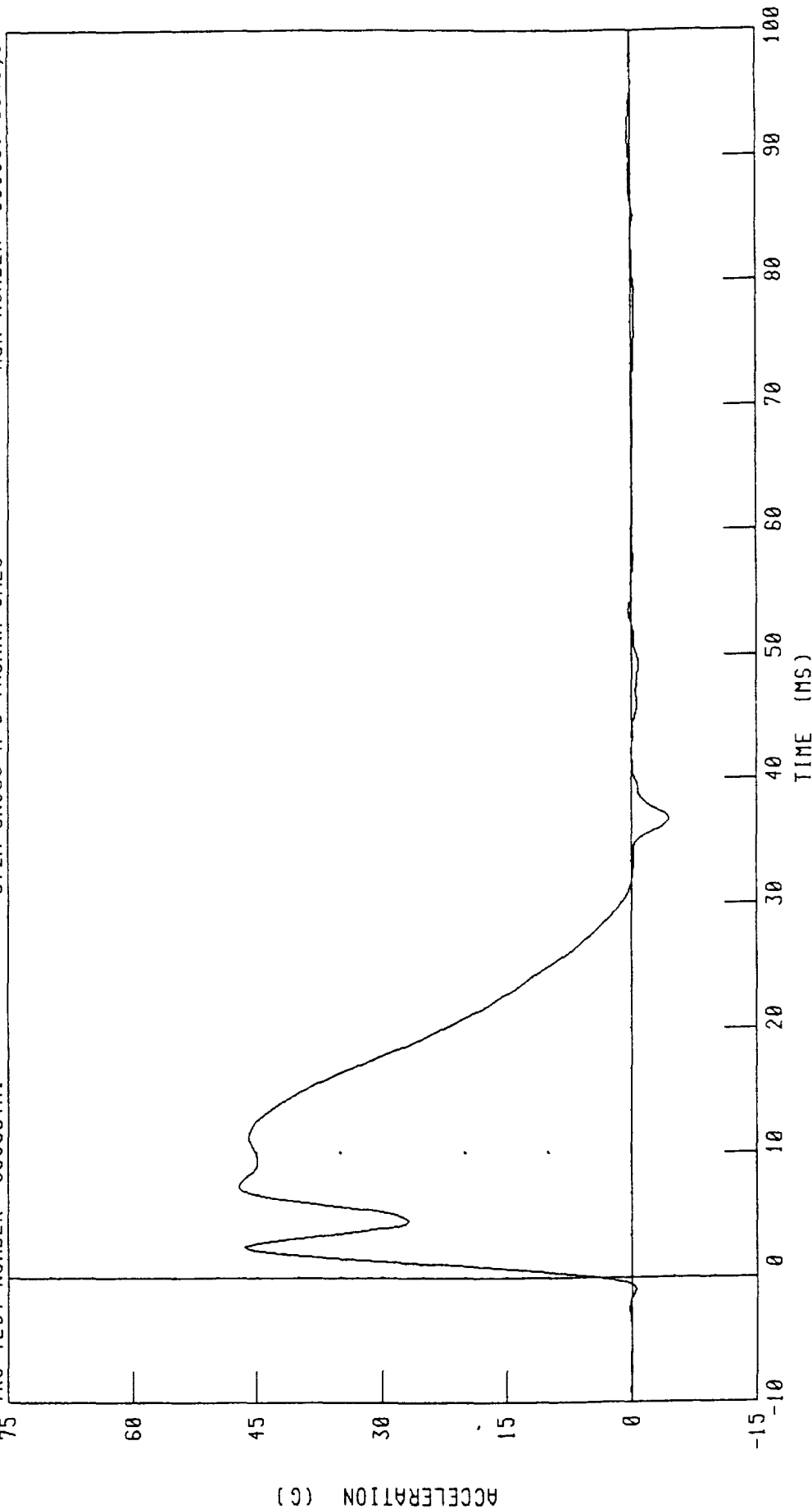
PART 572 N HYBRID III SIX-YEAR-OLD CHILD - THORAX CALIBRATION

PENDULUM DECELERATION

TRC TEST NUMBER 088C6TH1

572N SN088 H S THORAX CAL6

RUN NUMBER 081601 1046,1



CHANNEL PENXC FILTER CH CLASS 180

PEAK DATA 47 19 C 0 7 36 MS, -4 44 C 0 36 80 MS

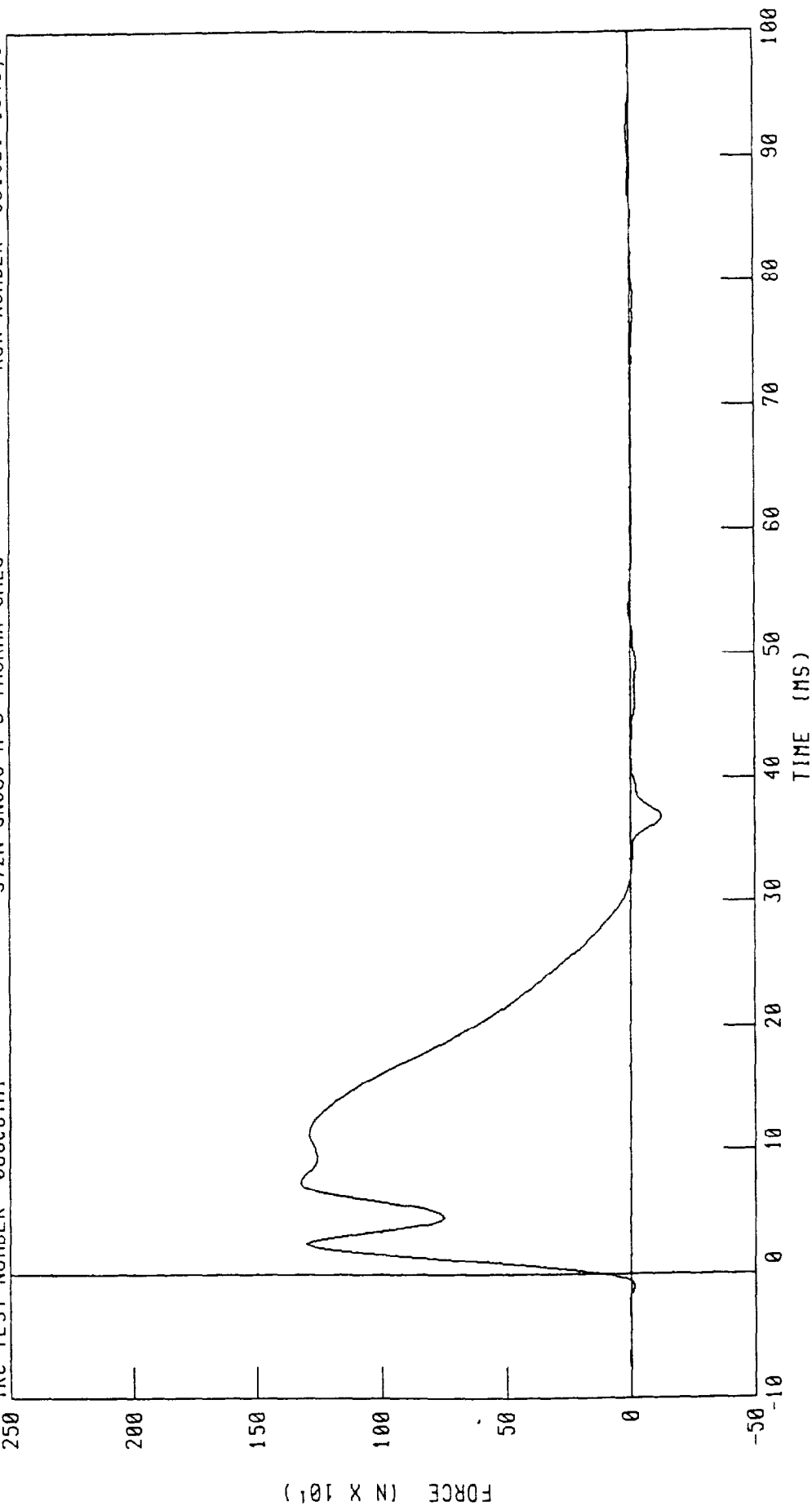
PART 572 N HYBRID III SIX-YEAR-OLD CHILD - THORAX CALIBRATION

PENDULUM FORCE

TRC TEST NUMBER 088C6TH1

572N SN088 H S THORAX CAL6

RUN NUMBER 081601 1046,1



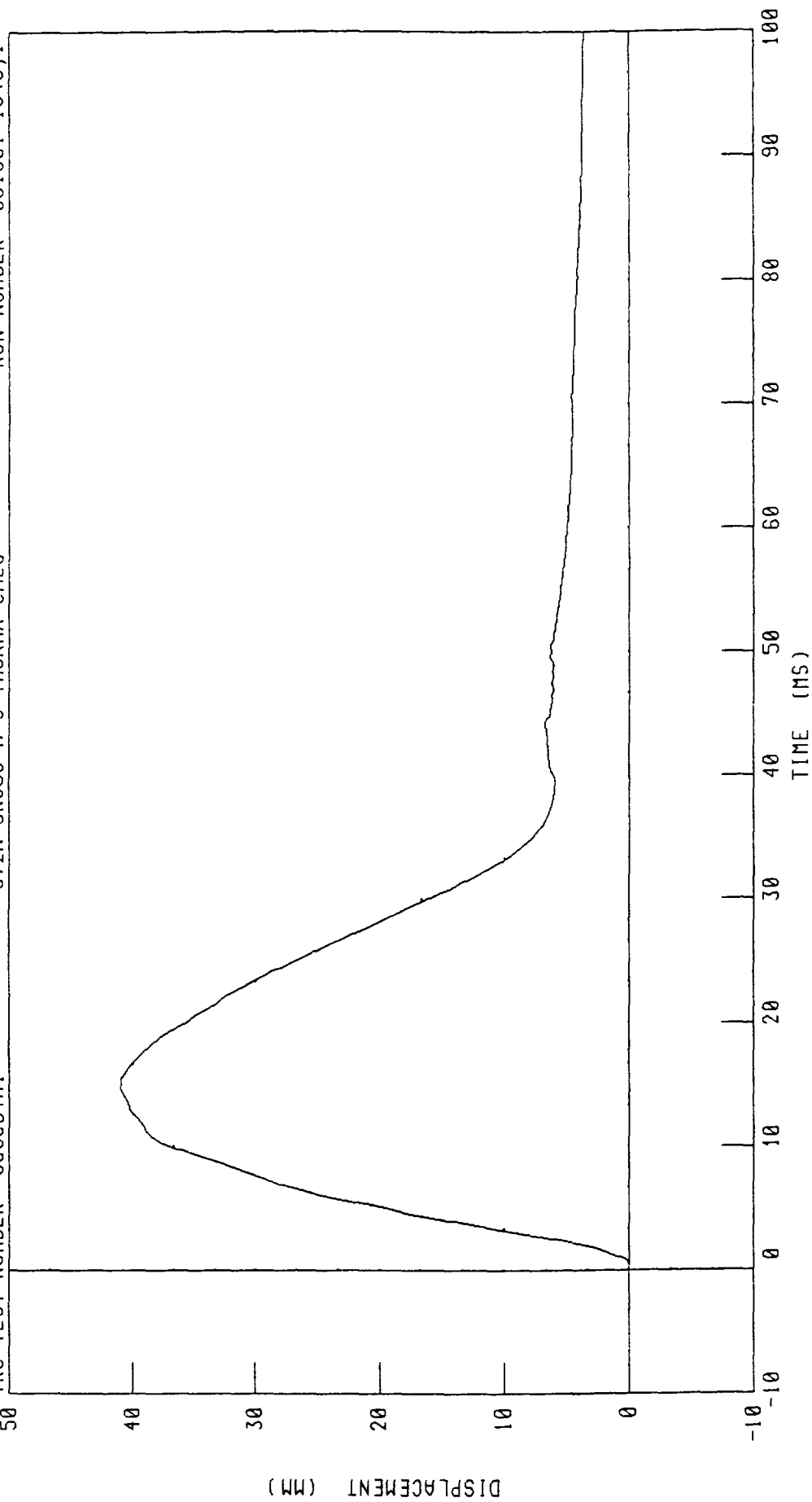
CHANNEL PENXF FILTER CH CLASS 180

PEAK DATA 1322 45 N 0 7 36 MS, -124 55 N 0 36 80 MS

PART 572 N HYBRID 111 SIX-YEAR-OLD CHILD - THORAX CALIBRATION

STERNUM DISPLACEMENT

TRC TEST NUMBER 088C6TH1 572N SN088 H S THORAX CALS RUN NUMBER 081601 1046,1



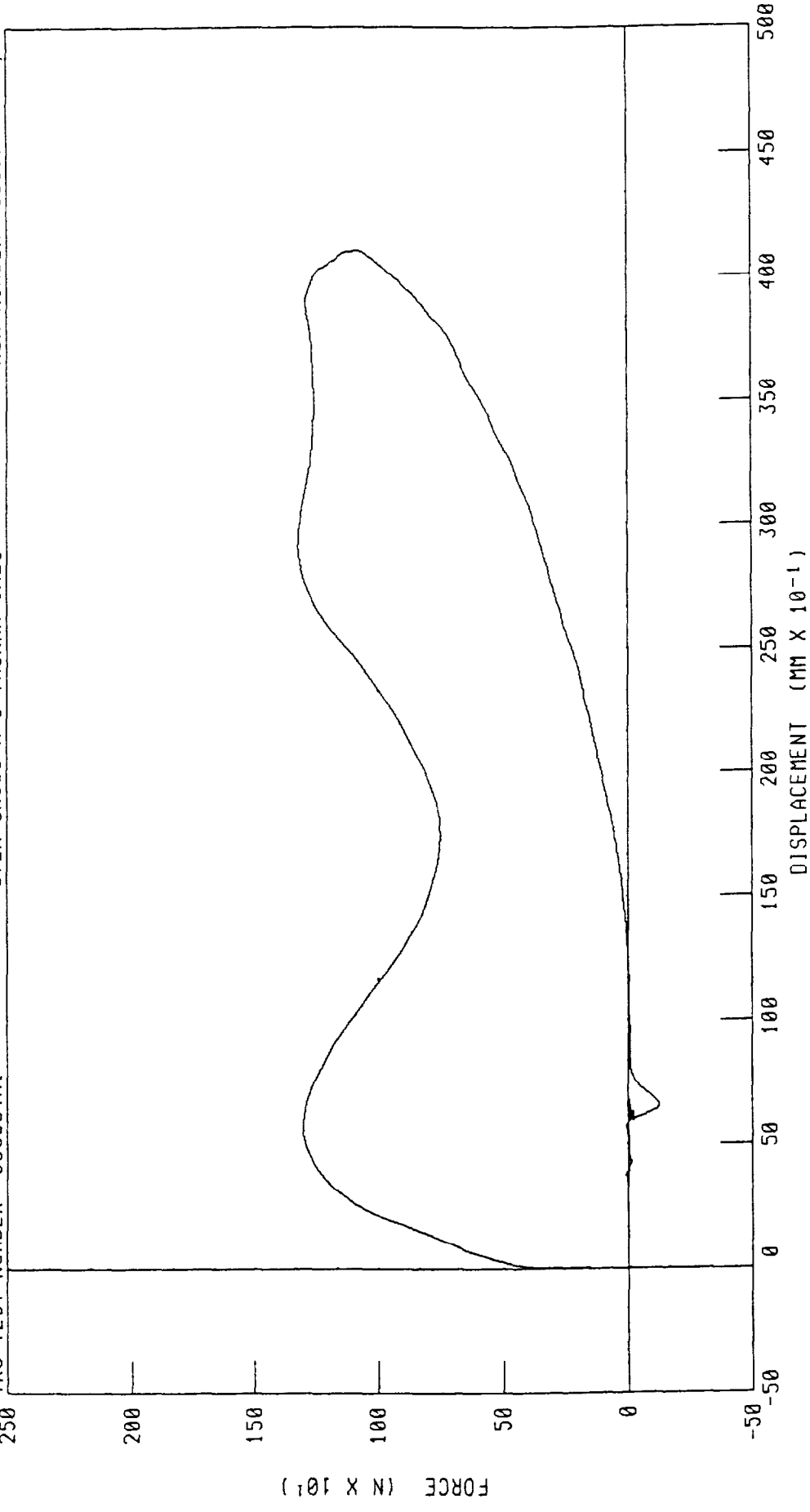
CHANNEL CSTXD FILTER CH CLASS 600

PEAK DATA 41 00 MM @ 15 28 MS, 0 00 MM @ -0 32 MS

PART 572 N HYBRID III SIX-YEAR-OLD CHILD - THORAX CALIBRATION

CHEST DISPLACEMENT VS PENDULUM FORCE

TRC TEST NUMBER 088C6TH1 572N SN088 H S THORAX CAL6 RUN NUMBER 081601 1046,1



CHANNEL CSTXD FILTER CH CLASS 600
 PENXF CH CLASS 180
 DISPLACEMENT (MM X 10⁻¹)
 PEAK DATA 41 00 MM @ 15 28 MS, 0 00 MM @ -0 32 MS
 1322 45 N @ 7 36 MS, -124 55 N @ 36 80 MS

TRANSPORTATION RESEARCH CENTER INC.

TORSO FLEXION TEST

HYBRID III SIX-YEAR-OLD

CAL DATE: 07-Aug-01

TRC, INC. TEST NO: 088C06TF1 572 N SN088 TORSO FLEX CAL 06

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	20.6 – 22.2 DEG C	21.7 DEG C
RELATIVE HUMIDITY	10 – 70 %	56 %
INITIAL ANGLE OF UNSUPPORTED DUMMY	<= 22 DEG REFERENCED TO VERTICAL	6 DEG
MAXIMUM FORCE AT 45 DEG DURING 10 SECOND PERIOD	147 – 200 N	191.3 N
RETURN ANGLE	+/- 8 DEG OF INITIAL ANGLE	9 DEG

TEST MEETS SPECIFICATIONS

TECHNICIAN



Appendix D

Test Equipment and Instrumentation Calibration Information

Report Sign Convention
SAE J211 MAR95

Accelerometers:

- +X Forward
- +Y Rightward
- +Z Downward

Potentiometers:

- +Chest longitudinal deflection: Outward
- +Chest lateral deflection Leftward
- +Seat belt displacement: Outward
- +Seat belt extension: Elongation
- +Knee slider displacement: Distance between femur and tibia increased (in relation to a seated dummy)

Rotation potentiometers

- +About the X-axis: Left foot-eversion
Right foot-inversion
- +About the Y-axis: Left/right foot-dorsiflexion
- +About the Z-axis: Left foot-internal
Right foot-external

Load cells:

- +Femur force: Tension
- +Seat belt force: Tension
- +Barrier force: Tension

Neck load cells:

- +X force: Head pushed rearward
- +Y force: Head pushed leftward
- +Z force: Head pulled upward (tension on neck)
- +X moment: Left ear rotating toward left shoulder
- +Y moment: Chin rotating toward chest
- +Z moment: Chin rotating toward left shoulder

Tibia load cells:

- +X force: Ankle forward, knee rearward
- +Y force: Ankle rightward, knee leftward
- +Z force: Tension
- +X moment: Bottom of tibia moving leftward
- +Y moment: Bottom of tibia moving rearward

Frequency Response Classes
SAE J211 MAR95

<u>Typical Test Measurements</u>	<u>Channel Class</u>
Vehicle Structural Accelerations for use in:	
Total vehicle comparison	60
Collision simulation input	60
Component analysis	600
Integration for velocity or displacement	180
Barrier Face Forces	60
Belt Restraint System Loads	60
Anthropomorphic Test Device	
Head accelerations (linear and angular)	1000
Neck	
Forces	1000
Moments	600
Thorax	
Spine accelerations	180
Rib accelerations	1000
Sternum accelerations	1000
Deflections	180
Lumbar	
Forces	1000
Moments	1000
Pelvis	
Accelerations	1000
Forces	1000
Moments	1000
Femur/Knee/Tibia/Ankle	
Forces	600
Moments	600
Displacements	180
Sled Accelerations	60
Steering Column Loads	600
Head form Accelerations	1000

The direction column on the following sheets describes the transducer output as mounted and wired in the test location. See Report Sign Convention sheet for description of data output as presented in the report: channels were adjusted in post-acquisition processing to conform to J211 MAR95

Dummy 416v Type HYBRID III 5th Description VRTC - 416v HYBRID III 5th Female CAL'd 5-24-01 (DKS 7-31-01)

Chsnam	Location	Model	Name	Manufacturer	Sens./mV/V/U	Fullscale	Caldate	TRC Dir
HEDXG	Head Accel X	EGE-73B6Q 20	01G19 F01	Entran	0 02003 G	2000	08/10/2001	I wd
HEDYG	Head Accel Y	EGE 73BQ 200	98H10 F12	Entran	0 0235 G	2000	05/24/2001	Lt
HEDZG	Head Accel Z	EGE 73BQE0 2	99H12 F30	Entran	0 01886 G	2000	05/23/2001	Up
HEDXR	Head Accel Red X	EGE 73BQE0 2	99H12-F06	Entran	0 01854 G	2000	05/23/2001	Rwd
HEDYR	Head Accel Red Y	EGE-73BQ-200	98H13 F04	Entran	0 01627 G	2000	05/24/2001	Lt
HEDZR	Head Accel Red Z	7264 2KM5T	DJ64J	Endevco	0 03304 G	2000	05/22/2001	Up
HD1XG	Head (LT) Accel X	EGE-73BQ 200	98H10 F10	Entran	0 01838 G	2000	05/24/2001	Iwd
HD1ZG	Head (LT) Accel Z	EGE-73BQE0 2	99H12 F07	Entran	0 01727 G	2000	05/23/2001	Up
HD2YG	Head (FT) Accel Y	EGE 73BQ 200	98H14 K20	Entran	0 03046 G	2000	05/24/2001	Lt
HD2ZG	Head (FT) Accel Z	EGE-73BQ 200	98H13 F05	Entran	0 01623 G	2000	05/24/2001	Up
HD3XG	Head (TP) Accel X	EGE 73BQ-200	98H10 F19	Entran	0 02068 G	2000	05/24/2001	Fwd
HD3YG	Head (TP) Accel Y	EGE 73BQ-200	98H13 F07	Entran	0 01742 G	2000	05/24/2001	I ft
NEKXF	Neck Force X	1716A	1716A-1039 I-X	Denton	0 000200125 N	8896 4	05/24/2001	Hd Fd,Cst Rr
NEKYF	Neck Force Y	1716A	1716A 1039 F-Y	Denton	0 000193302 N	8896 4	05/24/2001	Hd Lt,Cst Rt
NEKZF	Neck Force Z	1716A	1716A 1039 FZ	Denton	0 000100025 N	13344 6	05/24/2001	Hd Up,Cst Dn
NEKXM	Neck Moment X	1716A	1716A 1039-MX	Denton	0 006030442 NM	282 5	05/24/2001	Rt Ear to Rt Shld
NEKYM	Neck Moment Y	1716A	1716A 1039 MY	Denton	0 006117876 NM	282 5	05/24/2001	Chn to Strmm
NEKZM	Neck Moment Z	1716A	1716A 1039 MZ	Denton	0 008430442 NM	282 5	05/24/2001	Chn to Lt Shld
NKLXF	Neck Lower Force X	IF 228	IF 228 101-FX	FTSS	0 000149947 N	13344 7	01/26/2001	Hd Rr,Cst Fd
NKLYF	Neck Lower Force Y	IF-228	IF 228 101 FY	FTSS	0 000149624 N	13344 7	01/26/2001	Hd Lt,Cst Rt
NKLZF	Neck Lower Force Z	IF-228	IF 228 101 FZ	FTSS	0 000093505 N	13344 7	01/26/2001	Hd Up,Cst Dn
NKLXM	Neck Lower Moment X	IF-228	IF 228 101-MX	FTSS	0 006805252 NM	338 95	01/26/2001	Lt Ear to Lt Shld
NKLYM	Neck Lower Moment Y	IF 228	IF 228 101 MY	FTSS	0 006924461 NM	338 95	01/26/2001	Chn to Strmm
NKLZM	Neck Lower Moment Z	IF 228	IF 228 101-MZ	FTSS	0 013821902 NM	180 78	01/26/2001	Chn to Lt Shld
CSTXG	Chest Accel X	EGE-73BQF0 2	99H12 F15	Entran	0 01832 G	2000	05/23/2001	Iwd
CSTYG	Chest Accel Y	7264-2000LC	AAMD5	Endevco	0 02675 G	2000	05/24/2001	I ft

Chsnam	Location	Model	Name	Manufacturer	Sens./m/V/V/U	Fullscale	Caldate	TRC Dir
CSTZG	Chest Accel Z	EGE-73BQE0 2 99H12 F08		Entran	0 01787 G	2000	05/23/2001	Up
STUXG	Sternum Upper Accel X	7264-2KM51	AJ7R1	Endevco	0 02229 G	2000	05/22/2001	Fwd
TMXG	Sternum Mid Accel X	7264 2000T	J19868	Endevco	0 02419 G	2000	05/21/2001	Fwd
STLXG	Sternum Lower Accel X	7264-2000T	DC33J	Endevco	0 02488 G	2000	05/21/2001	Fwd
CSFXD	Chest Deflection X	14CB1-2897	14CB1 2897 416	Servo	1 5983 MM	100	06/18/2001	Strmm Away Firm Spn
LMBXF	Lumbar Force X	2152A	2152A 086 FX	Denton	0 000139995 N	13344 6	06/02/2001	Cst Fd,Pel Rr
LMBYF	Lumbar Force Y	2152A	2152A-086 FY	Denton	0 000138002 N	13344 6	06/02/2001	Cst Lt,Pel Rt
LMBZF	Lumbar Force Z	2152A	2152A 086 FZ	Denton	0 000050458 N	17793	06/02/2001	Cst Up,Pel Dn
LMBXM	Lumbar Moment X	2152A	2152A 086 MX	Denton	0 002293111 NM	677 9	06/02/2001	Rt Shld to Rt Hip
LMBYM	Lumbar Moment Y	2152A	2152A 086 MY	Denton	0 002268623 NM	677 9	06/02/2001	Strmm to Fit of Legs
PEVXG	Pelvis Accel X	7264-2000T	J18037	Endevco	0 01748 G	2000	05/21/2001	Rwd
PEVYG	Pelvis Accel Y	7264 2000T	J19547	Endevco	0 02635 G	2000	05/21/2001	1 ft
PEVZG	Pelvis Accel Z	7264-2000T	J19639	Endevco	0 02323 G	2000	05/21/2001	Up
LFMZP	Left Femur Force Z 516	2430	2430 717	GSE	0 000067221 N	13344	05/23/2001	Knee Fd,Pel Rr
RMZP	Right Femur Force Z 507	2430	2430 729	GSE	0 000067895 N	13344	05/23/2001	Knee Fd,Pel Rr
KNLXD	Left Knee Displacement	150 0121VR	150 0121VR 15021	SpaceAge	23 438 MM	40	04/04/2001	Tib Rr,Hld Fem
TBLXF	Left Upper Tibia Force X LC8	4825	4825 75 FX	Denton	0 000257576 N	8896	11/08/2000	1 lb Fd,Knee Rr
TBLZF	Left Upper Tibia Force Z LC15	4825	4825 75 FZ	Denton	0 000106013 N	8896	11/08/2000	Tib Dn,Knee Up
TBLXM	Left Upper Tibia Moment X LC17	4825	4825 75 MX	Denton	0 010263456 NM	282 4	11/08/2000	Ank Lt,Hld Knee
TBLYM	Left Upper Tibia Moment Y LC01	4825	4825 75 MY	Denton	0 01017422 NM	282 4	11/08/2000	Ank Fd,Hld Knee
TBLXG	Left Tibia Accel X	EGE 73BQE0 2 99H12 F14		Entran	0 01797 G	2000	07/12/2001	Fwd
TBLYG	Left Tibia Accel Y	EGE 73BQF0 2 99108 F27		Entran	0 02295 G	2000	07/12/2001	Rt
ANLXF	Left Lower Tibia Force X LC23	4826	4826 79 FX	Denton	0 000261758 N	8896	11/15/2000	Ank Fd,Knee Rr
ANLYF	Left Lower Tibia Force Y LC16	4826	4826 79 FY	Denton	0 000260577 N	8896	11/15/2000	Ank Rt,Knee Lt
ANLZF	Left Lower Tibia Force Z LC19	4826	4826-79 FZ	Denton	0 000107351 N	8896	11/15/2000	Ank Dn,Knee Up
ANLXM	Left Lower Tibia Moment X LC26	4826	4826-79 MX	Denton	0 010225566 NM	282 4	11/15/2000	Ank Lt,Hld Knee
ANLYM	Left Lower Tibia Moment Y LC18	4826	4826 79 MY	Denton	0 010491147 NM	282 4	11/15/2000	Ank Fd,Hld Knee
FTLXD	Left Foot Disp X POT4	PD210 4B	PD210 4B-AK 044	CONTELEC	3 18 DE	318	07/31/2001	Inversion

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Chsnam	Location	Model	Name	Manufacturer	Sens./mV/V/U	Fullscale	Caldate	TRC Dir
FTLYD	Left Foot Disp Y POT5	PD210 4B	PD210 4B AK 043	CONTELEC	3 159 DE	318	07/31/2001	Dorsiflexion
FTLZD	Left Foot Disp Z POT6	PD210 4B	PD210 4B AK 048	CONTELEC	3 17 DE	318	07/31/2001	External Rotation
FTLXG	Left Foot Accel X	EGE-73B6Q 20	00L20 A08	Entran	0 01946 G	2000	07/11/2001	Fwd
FTLYG	Left Foot Accel Y	EGE-73B6Q-20	00L13-F72	Entran	0 02079 G	2000	07/11/2001	Rt
FTLZG	Left Foot Accel Z	FGE 73BQ 200	98H10 F18	Entran	0 02075 G	2000	07/12/2001	Dn
KNRXd	Right Knee Displacement	150 0121VL	150 0121V1 -14949	SpaceAge	22 77 MM	40	04/04/2001	1 lb Rr,Hld Fem
TBRXF	Right Upper Tibia Force X LC10	4825	4825 77 FX	Denton	0 000258869 N	8896	11/08/2000	1 lb Fd,Knee Rr
TBRZF	Right Upper Tibia Force Z LC14	4825	4825 77 FZ	Denton	0 000106272 N	8896	11/08/2000	Tib Dn,Knee Up
TBRXM	Right Upper Tibia Moment X LC13	4825	4825 77 MX	Denton	0 01026558 NM	282 4	11/08/2000	Ank Lr,Hld Knee
TBRYM	Right Upper Tibia Moment Y LC22	4825	4825 77 MY	Denton	0 01018449 NM	282 4	11/08/2000	Ank Fd,Hld Knee
TBRXG	Right Tibia Accel X	EGE 73BQE0 2	99H12-F18	Entran	0 01803 G	2000	07/12/2001	Fwd
TBRYG	Right Tibia Accel Y	EGE-73BQE0 2	99H12 F23	Entran	0 01706 G	2000	07/12/2001	Rt
ANRXF	Right Lower Tibia Force X LC28	4826	4826 75 FX	Denton	0 000259959 N	8896	11/08/2000	Ank Fd,Knee Rr
ANRYF	Right Lower Tibia Force Y LC20	4826	4826-75-FY	Denton	0 000260982 N	8896	11/08/2000	Ank Rt,Knee Lft
ANRZF	Right Lower Tibia Force Z LC9	4826	4826-75 FZ	Denton	0 000107093 N	8896	11/08/2000	Ank Dn,Knee Up
ANRXM	Right Lower Tibia Moment X LC11	4826	4826 75 MX	Denton	0 010228753 NM	282 4	11/08/2000	Ank Lr,Hld Knee
ANRYM	Right Lower Tibia Moment Y LC02	4826	4826 75 MY	Denton	0 010225212 NM	282 4	11/08/2000	Ank Fd,Hld Knee
FTRXD	Right Foot Disp X POT1	PD210 4B	PD210 4B AK 029	CONTELEC	3 192 DE	318	07/31/2001	Extension
FTRYD	Right Foot Disp Y POT2	PD210 4B	PD210 4B-AK 030	CONTELEC	3 184 DE	318	07/31/2001	Dorsiflexion
FTRZD	Right Foot Disp Z POT3	PD210 4B	PD210 4B AK 031	CONTELEC	3 213 DE	318	07/31/2001	Internal Rotation
FTRXG	Right Foot Accel X	EGE 73BQE0 2	99H12 F29	Entran	0 01851 G	2000	07/12/2001	Fwd
FTRYG	Right Foot Accel Y	EGE 73BQE0 2	99102 F13	Entran	0 01973 G	2000	07/12/2001	Rt
FTRZG	Right Foot Accel Z	EGE 73BQE0 2	99102 F08	Entran	0 02032 G	2000	07/12/2001	Dn

Dummy 421v Type I1YBRID III 5th Description VRTC - 421v HYBRID III 5th Female CAL'd 5-24-01 (DKS 7-31-01)

Chsnam	Location	Model	Name	Manufacturer	Sens./mV/V/U	Fullscale	Caldate	TRC Dir
HEDXG	Head Accel X 514	EGE-73BQ-200	98G18 F18	Entran	0 01863 G	2000	04/12/2001	Fwd
HEDYG	Head Accel Y	EGE 73BQE0 2	99H30 Z05	Entran	0 01927 G	2000	04/12/2001	1 ft
HEDZG	Head Accel Z	EGE 73BQE0-2	99102 F09	Entran	0 02013 G	2000	04/12/2001	Up
HFDXR	Head Accel Red X	EGE 73B6Q 20	00L13 F03	Entran	0 02506 G	2000	04/12/2001	Rwd
HEDYR	Head Accel Red Y	EGE-73BQE0-2	99H30 Z08	Entran	0 01895 G	2000	04/12/2001	1 ft
HEDZR	Head Accel Red Z	EGE-73BQE0-2	99H30 Z04	Entran	0 02068 G	2000	04/12/2001	Up
HD1XG	Head (LT) Accel X	EGE 73BQE0 2	99102 F12	Entran	0 01849 G	2000	04/12/2001	Fwd
HD1ZG	Head (LT) Accel Z	EGE-73BQE0 2	99102 F06	Entran	0 01871 G	2000	04/12/2001	Up
HD2YG	Head (FT) Accel Y	EGE-73BQE0-2	99102 F15	Entran	0 01873 G	2000	04/12/2001	Lft
HD2ZG	Head (FT) Accel Z	EGE-73BQE0-2	99108 F29	Entran	0 01998 G	2000	04/11/2001	Up
HD3XG	Head (TP) Accel X	EGE-73BQE0-2	99H30 Z03	Entran	0 01982 G	2000	04/11/2001	Fwd
HD3YG	Head (TP) Accel Y	EGE-73BQE0-2	99108 F28	Entran	0 02241 G	2000	04/12/2001	Lft
NEKXF	Neck Force X	1716A	1716A 852 F-X	Denton	0 000195627 N	8896 4	09/01/2000	Hd Lt,Cst Rr
NEKYF	Neck Force Y	1716A	1716A-852 FY	Denton	0 00018805 N	8896 4	09/01/2000	Hd Lt,Cst Rt
NEKZF	Neck Force Z	1716A	1716A 852 FZ	Denton	0 000097446 N	13344 6	09/01/2000	Hd Up,Cst Dn
NEKXM	Neck Moment X	1716A	1716A 852 MX	Denton	0 006055575 NM	282 5	09/01/2000	1 t Ear to Lt Shld
NEKYM	Neck Moment Y	1716A	1716A-852 MY	Denton	0 005970973 NM	282 5	09/01/2000	Chn to Strmm
NEKZM	Neck Moment Z	1716A	1716A 852 MZ	Denton	0 008707256 NM	282 5	09/01/2000	Chn to Lt Shld
NKLXF	Neck Lower Force X	2150	2150 86 FX	Denton	0 000171191 N	13344 2	06/18/2001	Hd Fd,Cst Rr
NKLYF	Neck Lower Force Y	2150	2150 86 FY	Denton	0 000169895 N	13344 2	06/18/2001	Hd Lt,Cst Rt
NKLZF	Neck Lower Force Z	2150	2150 86 FZ	Denton	0 000081957 N	13344 2	06/18/2001	Hd Up,Cst Dn
NKLXM	Neck Lower Moment X	2150	2150 86-MX	Denton	0 004240265 NM	451 9	06/18/2001	1 t Ear to Lt Shld
NKLYM	Neck Lower Moment Y	2150	2150 86-MY	Denton	0 004374336 NM	451 9	06/18/2001	Chn to Strmm
CSTXG	Chest Accel X	EGE-73BQ 200	98H14 K02	Entran	0 01948 G	2000	04/12/2001	Fwd
CSTYG	Chest Accel Y	7264C-2KLC-2-	P15321	Endevco	0 01428 G	2000	04/11/2001	Lft
CSTZG	Chest Accel Z	7264C 2KLC-2	P17743	Endevco	0 01467 G	2000	04/11/2001	Up

Chsnam	Location	Model	Name	Manufacturer	Sens./mV/V/U	Fullscale	Caldate	TRC Dir
CSTXR	Chest Accel Red X	EGE-73BQE0 2 99H30 Z07		Entran	0 01974 G	2000	04/12/2001	Fwd
CSTYR	Chest Accel Red Y	7264C 2KLC 2 P15334		Endevco	0 01336 G	2000	04/11/2001	Lit
CSTZR	Chest Accel Red Z	EGE 73BQE0 2 99G29 Q13		Entran	0 02286 G	2000	04/12/2001	Up
STUXG	Sternum Upper Accel X 4	7264 2KM5T AL40		Endevco	0 03206 G	2000	05/21/2001	Fwd
STMXG	Sternum Mid Accel X	7264 2KM5T BF99J		Endevco	0 03707 G	2000	05/21/2001	Lwd
STLXG	Sternum Lower Accel X	7264 2000T J20294		Endevco	0 02826 G	2000	05/21/2001	Fwd
CSTXD	Chest Deflection X VRTC1	14CB1-2897 14CB1 2897-1355		Servo	1 808364 MM	100	08/14/2001	Strum Away Frm Spn
LMBXF	Lumbar Force X	2152 2152 076 FX		Denton	0 000144364 N	13344 6	06/01/2001	Cst Ld,Pel Rr
LMBYF	Lumbar Force Y	2152 2152-076 FY		Denton	0 000143967 N	13344 6	06/01/2001	Cst Lt,Pel Rt
LMBZF	Lumbar Force Z	2152 2152-076 FZ		Denton	0 000058433 N	17793	06/01/2001	Cst Up,Pel Dn
LMBXM	Lumbar Moment X	2152 2152 076 MX		Denton	0 002374243 NM	677 9	06/01/2001	Rt Shld to Rt Hip
LMBYM	Lumbar Moment Y	2152 2152 076 MY		Denton	0 002370998 NM	677 9	06/01/2001	Strum to Ftr of Legs
PEVXG	Pelvis Accel X	EGE 73BQE0-2 99108 F26		Entran	0 02368 G	2000	04/12/2001	Rwd
PEVYG	Pelvis Accel Y	EGE-73BQE0 2 99H30 Z02		Entran	0 0191 G	2000	04/12/2001	Lft
PEVZG	Pelvis Accel Z	EGE 73BQE0 2 99108 F30		Entran	0 0237 G	2000	04/12/2001	Up
LFMXF	Left Femur Force X	1914A 1914A 383 FX		Denton	0 000147751 N	13344	05/24/2001	Knee Dn,Fem Up
LFMYF	Left Femur Force Y	1914A 1914A-383 FY		Denton	0 000148246 N	13344	05/24/2001	Knee Rt,Fem Lt
LFMZF	Left Femur Force Z	1914A 1914A 383 FZ		Denton	0 000060202 N	22240	05/24/2001	Knee Fd,Pel Rr
LFMXM	Left Femur Moment X	1914A 1914A 383 MX		Denton	0 004511209 NM	339	05/24/2001	Knee Rt,Hld Fem
LFMYM	Left Femur Moment Y	1914A 1914A 383 MY		Denton	0 004614159 NM	339	05/24/2001	Knee Up,Hld Fem
LFMZM	Left Femur Moment Z	1914A 1914A 383-MZ		Denton	0 008078761 NM	339	05/24/2001	Tib Lt,Hld Pel
RFMXF	Right Femur Force X	1914A 1914A 376 FX		Denton	0 000146934 N	13344	05/24/2001	Knee Dn,Fem Up
RFMYF	Right Femur Force Y	1914A 1914A 376 FY		Denton	0 000146882 N	13344	05/24/2001	Knee Rt,Fem Lt
RFMZF	Right Femur Force Z	1914A 1914A-376 FZ		Denton	0 000060008 N	22240	05/24/2001	Knee Fd,Pel Rr
RFMXM	Right Femur Moment X	1914A 1914A 376 MX		Denton	0 004509439 NM	339	05/24/2001	Knee Rt,Hld Fem
RFMYM	Right Femur Moment Y	1914A 1914A 376 MY		Denton	0 004633038 NM	339	05/24/2001	Knee Up,Hld Fem
RFMZM	Right Femur Moment Z	1914A 1914A 376-MZ		Denton	0 008148082 NM	339	05/24/2001	Tib Lt,Hld Pel
KNLXD	Left Knee Displacement	150 0121VR 150 0121VR-13742		SpaceAge	23 206 MM	40	04/25/2001	Tib Rr,Hld Fem

Part Name	Location	Model	Name	Manufacturer	Sens./mV/V/U	Fullscale	Caldate	TRC Dir
TBLXF	Left Upper Tibia Force X LC12	4825	4825-79 FX	Denton	0 000264129 N	8896	11/29/2000	Tib Fd,Knee Rr
TBLZF	Left Upper Tibia Force Z LC7	4825	4825 79 FZ	Denton	0 000108172 N	8896	11/29/2000	Tib Dn,Knee Up
TBLXM	Left Upper Tibia Moment X LC3	4825	4825-79 MX	Denton	0 010405453 NM	282 4	11/29/2000	Ank Lt,Hld Knee
TBLYM	Left Upper Tibia Moment Y LC4	4825	4825 79 MY	Denton	0 010242917 NM	282 4	11/29/2000	Ank Fd,Hld Knee
TBLXG	Left Tibia Accel X	EGE-73B6Q 20 00L13 F16		Entran	0 01927 G	2000	07/11/2001	Fwd
TBLYG	Left Tibia Accel Y	EGE-73BQ-200 98H10-F01		Entran	0 01939 G	2000	07/11/2001	Rt
ANLXF	Left Lower Tibia Force X LC21	4826	4826-77 FX	Denton	0 000261432 N	8896	11/08/2000	Ank Fd,Knee Rr
ANLYF	Left Lower Tibia Force Y LC06	4826	4826 77 FY	Denton	0 000262646 N	8896	11/08/2000	Ank Rt,Knee Lt
ANLZF	Left Lower Tibia Force Z LC24	4826	4826 77 FZ	Denton	0 000107284 N	8896	11/08/2000	Ank Dn,Knee Up
ANLXM	Left Lower Tibia Moment X LC30	4826	4826-77 MX	Denton	0 010269121 NM	282 4	11/08/2000	Ank Lt,Hld Knee
ANLYM	Left Lower Tibia Moment Y LC05	4826	4826 77 MY	Denton	0 010377124 NM	282 4	11/08/2000	Ank Fd,Hld Knee
FTLXD	Left Foot Disp X POT7	PD210 4B	PD210-4B AK 047	CONTELEC	3 2 DE	318	07/31/2001	Inversion
FTLYD	Left Foot Disp Y POT8	PD210-4B	PD210 4B AK 049	CONTELEC	3 192 DE	318	07/31/2001	Dorsiflexion
FTLZD	Left Foot Disp Z POT9	PD210-4B	PD210 4B-AK 087	CONTELEC	3 145 DE	318	07/31/2001	External Rotation
FTLXG	Left Foot Accel X	EGE-73BQE0 2 99108 F25		Entran	0 02092 G	2000	07/12/2001	Fwd
FTLYG	Left Foot Accel Y	EGE 73B6Q 20 00L20 A14		Entran	0 01924 G	2000	07/11/2001	Rt
FTLZG	Left Foot Accel Z	EGE-73B6Q 20 00L13 F13		Entran	0 0271 G	2000	07/11/2001	Dn
KNRXd	Right Knee Displacement	150 0121VL	150-0121VL-18123	SpaceAge	23 66 MM	40	04/26/2001	Tib Rr,Hld Fem
TBRXF	Right Upper Tibia Force X UTRFX	4825	4825 76 FX	Denton	0 000260442 N	8896	11/08/2000	Tib Fd,Knee Rr
TBRZF	Right Upper Tibia Force Z UTRFY	4825	4825 76 FZ	Denton	0 000107093 N	8896	11/08/2000	Tib Dn,Knee Up
TBRXM	Right Upper Tibia Moment X UTRM	4825	4825 76-MX	Denton	0 010338172 NM	282 4	11/08/2000	Ank Lt,Hld Knee
TBRYM	Right Upper Tibia Moment Y UTRM	4825	4825 76 MY	Denton	0 010246813 NM	282 4	11/08/2000	Ank Fd,Hld Knee
TBRXG	Right Tibia Accel X	EGE 73B6Q 20 00L20 A15		Entran	0 0191 G	2000	07/11/2001	Fwd
TBRYG	Right Tibia Accel Y	EGE-73BQ 200 98H13 F15		Entran	0 01868 G	2000	07/11/2001	Rt
ANRXF	Right Lower Tibia Force X LTRFX	4826	4826 78-FX	Denton	0 000263871 N	8896	11/08/2000	Ank Fd,Knee Rr
ANRYF	Right Lower Tibia Force Y LC25	4826	4826 78 FY	Denton	0 00026504 N	8896	11/08/2000	Ank Rt,Knee Lt
ANRZF	Right Lower Tibia Force Z LTRFZ	4826	4826-78 FZ	Denton	0 000108498 N	8896	11/08/2000	Ank Dn,Knee Up
ANRXM	Right Lower Tibia Moment X LC27	4826	4826 78 MX	Denton	0 010286473 NM	282 4	11/08/2000	Ank Lt,Hld Knee

Chsnam	Location	Model	Name	Manufacturer	Sens./mV/V/U	Fullscale	Caldate	TRC Dir
ANRYM	Right Lower Tibia Moment Y	LTRM 4826	4826 78 MY	Denton	0 01048796 NM	282.4	11/08/2000	Ank Fld Knee
FTRXD	Right Foot Disp X	RO1 X	PD210 4B AK 084	CONTELEC	3 155 DE	318	07/31/2001	Eversion
FTRYD	Right Foot Disp Y	ROTY	PD210 4B-AK 085	CONTELEC	3 164 DE	318	07/31/2001	Dorsiflexion
FTRZD	Right Foot Disp Z	RO1Z	PD210 4B AK-086	CONTELEC	3 171 DE	318	07/31/2001	Internal Rotation
FTRXG	Right Foot Accel X	EGE-73BQE0 2 99D15 N08		Entran	0 02244 G	2000	07/12/2001	Fwd
FTRYG	Right Foot Accel Y	EGE-73BQE0 2 99102-F10		Entran	0 01868 G	2000	07/12/2001	Rt
FTRZG	Right Foot Accel Z	EGE 73B6Q 20 00L20 A12		Entran	0 01982 G	2000	07/11/2001	Dn

Dummy	088v	Type	HIII-6 Y O	Description	VRTC - 088v HIII 6 YR OLD CAL'd 9-7-00 (DKS 8-8-01)			
Chsnam	Location	Model	Name	Manufacturer	Sens./mV/V/U	Fullscale	Caldate	TRC Dir
HEDXG	Head Accel X	7264 2000T	J23803	Endevco	0 02584 G	2000	06/26/2001	Fwd
HEDYG	Head Accel Y	7264-2000T	J23947	Endevco	0 02461 G	2000	06/26/2001	Rgt
HEDZG	Head Accel Z	7264 2000T	J23998	Endevco	0 02126 G	2000	06/27/2001	Up
NEKXF	Neck Force X	1716A	1716A-798 FX	Denton	0 000191875 N	8896 4	06/26/2001	Hd Fd,Cst Rr
NEKYF	Neck Force Y	1716A	1716A 798 FY	Denton	0 000185277 N	8896 4	06/26/2001	Hd Lt,Cst Rt
NEKZF	Neck Force Z	1716A	1716A 798 FZ	Denton	0 000096503 N	13344 6	06/26/2001	Hd Up,Cst Dn
NEKXM	Neck Moment X	1716A	1716A 798 MX	Denton	0 0005769203 NM	282 5	06/26/2001	Rt Ear to Rt Shld
NEKYM	Neck Moment Y	1716A	1716A 798 MY	Denton	0 0005850973 NM	282 5	06/26/2001	Chn to Strmm
NEKZM	Neck Moment Z	1716A	1716A-798-MZ	Denton	0 0008164247 NM	282 5	06/26/2001	Chn to Lt Shld
CSTXG	Chest Accel X S33	7264 2000T	ACC65	Endevco	0 02152 G	2000	06/26/2001	Fwd
CSTYG	Chest Accel Y	7264 2000T	DW83J	Endevco	0 03307 G	2000	06/26/2001	Lft
CSTZG	Chest Accel Z	7264-2000T	AJ4L3	Endevco	0 02481 G	2000	06/26/2001	Dwn
CSTXD	Chest Deflection X	08C1-3179	08C1-3179 088	Servo	2 154617037 MM	100	08/16/2001	Strmm Away Frm Spn
LMBXF	Lumbar Force X	2431	2431-128 FX	Denton	0 000472054 N	4448 2	07/02/2001	Cst Fwd, Pel Rwd
LMBYF	Lumbar Force Y	2431	2431 128-FY	Denton	0 000470683 N	4448 2	07/02/2001	Cst Lft, Pel Rgt
LMBZF	Lumbar Force Z	2431	2431-128-FZ	Denton	0 000138906 N	7117 16	07/02/2001	Cst Up, Pel Dwn
LMBXM	Lumbar Moment X	2431	2431 128-MX	Denton	0 0006257079 NM	225 969	07/02/2001	Rgt Shld twd Rgt Hip
LMBYM	Lumbar Moment Y	2431	2431-128-MY	Denton	0 000609115 NM	225 969	07/02/2001	Strm twd Frt of Leg
LMBZM	Lumbar Moment Z	2431	2431 128 MZ	Denton	0 015342776 NM	141 23	07/02/2001	Rt Shld Fwd Lt Shld RR
PEVXG	Pelvis Accel X	7264-2000LC	AALW8	Fndevco	0 02281 G	2000	06/26/2001	Fwd
PEVYG	Pelvis Accel Y	EGE-73BQE0 2 99H12 F25		Entran	0 01696 G	2000	06/26/2001	Lft
PEVZG	Pelvis Accel Z	7264-2000T	AJ4I6	Endevco	0 02719 G	2000	06/26/2001	Up
LFMZP	Left Femur Force Z	2090	2090 126	Denton	0 000213084 N	6672	07/11/2001	Knee Fd,Pel Rr
RFMZP	Right Femur Force Z	2090	2090 125	Denton	0 000210836 N	6672	07/11/2001	Knee Fd,Pel Rr

Channel Report

08/27/2001 11 12 32 4M

Name of Test 010827

System K3600

Name of DAU DAU1

Chan.#	Sensor #	Mnemonic	Description	Dir.	Range	Pol.	Cal. Date/Status	Group	Mfg.	Model
1000	EVENT1	EVENT	EVENT		10 24	+	11/20/2000	OK	TRC	Event
1001	01G19-F01	HFDXG1	Head Accel X	Fwd	798 8017973G	+	08/10/2001	OK	Entran	FGE-73B6Q 2000BF
1002	98H10-F12	HEDYG1	Head Accel Y	Lft	806 9345941G	+	05/24/2001	OK	Entran	FGE-73BQ-2000BF
1003	99H12-F30	HEDZG1	Head Accel Z	Up	798 4529973G	+	05/23/2001	OK	Entran	FGE 73BQE0 2000BF
1004	99H12-F06	HEDXR1	Head Accel Red X	Rwd	800 4627675G	+	05/23/2001	OK	Intran	EGE-73BQE0-2000BF
1005	98H13-F04	HEDYR1	Head Accel Red Y	Lft	796 6825640G	+	05/24/2001	OK	Entran	EGE-73BQ-2000BF
1006	DJ64J	HEDZR1	Head Accel Red Z	Up	794 6855404G	+	05/22/2001	OK	Endevco	7264-2KM5T
1007	98H10-F10	HID1XG1	Head (LT) Accel X	Fwd	795 8961604G	+	05/24/2001	OK	Entran	EGE-73BQ-2000BF
1008	99H12-F07	HD1ZG1	Head (LT) Accel Z	Up	801 2644955G	+	05/23/2001	OK	Entran	FGE 73BQ10 2000BF
1009	98H14-K20	HID2YG1	Head (FT) Accel Y	Lft	800 4252259G	+	05/24/2001	OK	Entran	EGE-73BQ 2000BF
1010	98H13-F05	HID2ZG1	Head (FT) Accel Z	Up	798 6460453G	+	05/24/2001	OK	Entran	FGE-73BQ-2000BF
1011	98H10-F19	HD3XG1	Head (TP) Accel X	1 wd	798 6522742G	+	05/24/2001	OK	Entran	EGE-73BQ 2000BF
1012	98H13-F07	HD3YG1	Head (TP) Accel Y	Lft	798 6522742G	+	05/24/2001	OK	Entran	EGE-73BQ-2000BF
1013	1716A-1039-FX	NEKXF1	Neck Force X	Hd	805 2466854G	+	05/24/2001	OK	Denton	1716A
1014	1716A-1039-FY	NEKYT1	Neck Force Y	Hd	8898 786084N	+	05/24/2001	OK	Denton	1716A
1015	1716A-1039-FZ	NEKZF1	Neck Force Z	Hd	8903 210537N	+	05/24/2001	OK	Denton	1716A
1016	1716A-1039-MX	NEKXM1	Neck Moment X	Rt Far	13347 38023N	+	05/24/2001	OK	Denton	1716A
1017	1716A-1039-MY	NEKYM1	Neck Moment Y	Chn	282 5376572NM	+	05/24/2001	OK	Denton	1716A
1018	1716A-1039-MZ	NEKZM1	Neck Moment Z	Chn	282 7337019NM	+	05/24/2001	OK	Denton	1716A
1019	IF-228-101-FX	NKLF1	Neck Lower Force X	Hd	282 4757407NM	+	01/26/2001	OK	F1SS	IF-228
1020	IF-228-101-FY	NKLYF1	Neck Lower Force Y	Hd	13338 04610N	+	01/26/2001	OK	F1SS	IF-228
1021	IF-228-101-FZ	NKLZF1	Neck Lower Force Z	Hd	13340 78332N	+	01/26/2001	OK	F1SS	IF-228
1022	IF-228-101-MX	NKLXM1	Neck Lower Moment X	Lt Ear	13338 95983N	+	01/26/2001	OK	F1SS	IF-228
1023	IF-228-101-MY	NKLYM1	Neck Lower Moment Y	Chn	338 9009409NM	+	01/26/2001	OK	F1SS	IF-228
1024	IF-228-101-MZ	NKLZM1	Neck Lower Moment Z	Chn	339 1778584NM	+	01/26/2001	OK	F1SS	IF-228
1025	99H12-F15	CS1XG1	Chest Accel X	Chn	180 6958966NM	+	01/26/2001	OK	F1SS	IF-228
1026	AAMD5	CSTYG1	Chest Accel Y	Fwd	399 2514036G	+	05/23/2001	OK	Lntran	EGE-73BQE0-2000BF
1027	99H12-F08	CSTZG1	Chest Accel Z	Lft	398 7538940G	+	05/24/2001	OK	Lntran	7264-2000LC
1028	AJ7R1	STUXG1	Sternum Upper Accel X	Up	400 7184757G	+	05/23/2001	OK	Lntran	EGE-73BQE0 2000BF
1029	J19868	STMXG1	Sternum Mid Accel X	Fwd	805 9628658G	+	05/22/2001	OK	Endevco	7264-2KM5T
				Fwd	798 7083388G	+	05/21/2001	OK	Endevco	7264-20001

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103	DC33J	SILXG1	Sternum Lower Accel X	Fwd	807 0109072G	+	05/21/2001	OK	416v	Endevco	7264-20001
103	14CB1-2897-416	CSTXD1	Chest Deflection X	Strum	106 7801205MM	+	06/18/2001	OK	416v	Servo	14CB1-2897
103	2152A-086-FX	LMBXF1	Lumbar Force X	Cst	13347 71340N	+	06/02/2001	OK	416v	Denton	2152A
103	2152A-086-FY	LMBYF1	Lumbar Force Y	Cst	13345 65164N	+	06/02/2001	OK	416v	Denton	2152A
103	2152A-086-FZ	LMBZF1	Lumbar Force Z	Cst	17801 84735N	+	06/02/2001	OK	416v	Denton	2152A
103	2152A-086-MX	LMBXM1	Lumbar Moment X	Rt	677 6250688NM	+	06/02/2001	OK	416v	Denton	2152A
103	2152A 086-MY	LMBYM1	Lumbar Moment Y	Strum	677 7404344NM	+	06/02/2001	OK	416v	Denton	2152A
103	J18037	PEVXG1	Pelvis Accel X	Rwd	401 7829116G	+	05/21/2001	OK	416v	Endevco	7264 2000T
103	J19547	PEVYG1	Pelvis Accel Y	Lft	400 6338152G	+	05/21/2001	OK	416v	Endevco	7264 2000T
103	J19639	PEVZG1	Pelvis Accel Z	Up	400 7357252G	+	05/21/2001	OK	416v	Endevco	7264 2000T
103	2430-717	LFMZG1	Left Femur Force Z 516	Knee	13339 17234N	+	05/23/2001	OK	416v	GSE	2430
103	2430-729	RFMZG1	Right Femur Force Z 507	Knee	13347 00184N	+	05/23/2001	OK	416v	GSE	2430
103	150-0121VR-15021KNLXD1	KNLXD1	Left Knee Displacement	Tib	43 68973461MM	+	04/04/2001	OK	416v	SpaceAge	150 0121VR
103	150-0121VL-14949KNRXXD1	KNRXXD1	Right Knee Displacement	Tib	44 97145366MM	+	04/04/2001	OK	416v	SpaceAge	150 0121VR
103	4825-75-FX	TBLXF1	Left Upper Tibia Force X LC8	Tib	8893 793445N	+	11/08/2000	OK	416v	Denton	4825
103	4825-75-FZ	TBLZF1	Left Upper Tibia Force Z LC15	Tib	8894 284291N	+	11/08/2000	OK	416v	Denton	4825
103	4825-75-MX	TBLXM1	Left Upper Tibia Moment X	Ank	282 6386997NM	+	11/08/2000	OK	416v	Denton	4825
103	4825-75-MY	TBLYM1	Left Upper Tibia Moment Y LC01	Ank	282 7149889NM	+	11/08/2000	OK	416v	Denton	4825
103	99H12-F14	TBLXG1	Left Tibia Accel X	Fwd	1212 422595G	+	07/12/2001	OK	416v	Entran	FGI-73BQ1 0-2000BF
103	99108-F27	TBLYG1	Left Tibia Accel Y	Rt	1205 911794G	+	07/12/2001	OK	416v	Entran	LGI 73BQE0-2000BF
103	4826-79-FX	ANLXF1	Left Lower Tibia Force X LC23	Ank	8890 932568N	+	11/15/2000	OK	416v	Denton	4826
103	4826-79-FY	ANLYF1	Left Lower Tibia Force Y LC16	Ank	8890 815695N	+	11/15/2000	OK	416v	Denton	4826
103	4826-79-FZ	ANLZF1	Left Lower Tibia Force Z LC19	Ank	8898 136771N	+	11/15/2000	OK	416v	Denton	4826
103	4826-79-MX	ANLXM1	Left Lower Tibia Moment X	Ank	282 0877633NM	+	11/15/2000	OK	416v	Denton	4826
103	4826-79-MY	ANLYM1	Left Lower Tibia Moment Y LC18	Ank	282 0985705NM	+	11/15/2000	OK	416v	Denton	4826
103	PD210-4B-AK-044FTLXD1	FTLXD1	Left Foot Disp X POT4	Invers	322 0125786DEG	+	07/31/2001	OK	416v	CONIFTC	PD210-4B
103	PD210-4B-AK-043FTLYD1	FTLYD1	Left Foot Disp Y POT5	Dorsif	324 1532130DEG	+	07/31/2001	OK	416v	CONIELLC	PD210-4B
103	PD210-4B-AK-048FT1ZD1	FT1ZD1	Left Foot Disp Z POT6	Extern	323 0283911DFG	+	07/31/2001	OK	416v	CONIELEC	PD210 4B
103	00L20-A08	FTLXG1	Left Foot Accel X	Fwd	1195 926375G	+	07/11/2001	OK	416v	Entran	FGF-73B6Q 2000JF
103	00L13-F72	FTLYG1	Left Foot Accel Y	Rt	1201 328030G	+	07/11/2001	OK	416v	Entran	LGE-73B6Q-2000JF
103	98H10-F18	FTLZG1	Left Foot Accel Z	Dn	1203 643843G	+	07/12/2001	OK	416v	Entran	EGE-73BQ-2000BF
103	4825-77-FX	TBRXF1	Right Upper Tibia Force X LC10	Tib	8889 143139N	+	11/08/2000	OK	416v	Denton	4825
103	4825-77-FZ	TBRZF1	Right Upper Tibia Force Z LC14	Tib	8905 408421N	+	11/08/2000	OK	416v	Denton	4825
103	4825-77-MX	TBRXM1	Right Upper Tibia Moment X	Ank	282 5802203NM	+	11/08/2000	OK	416v	Denton	4825
103	4825-77-MY	TBRYM1	Right Upper Tibia Moment Y	Ank	282 4299002NM	+	11/08/2000	OK	416v	Denton	4825

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1	99H12-F18	TBRXG1	Right Tibia Accel X	Fwd	1208 387911G	+	07/12/2001	OK	416v	Entran	EGL-73BQE0-2000BF
1	99H12-F23	TBRYG1	Right Tibia Accel Y	Rt	1200 468933G	+	07/12/2001	OK	416v	Entran	EGL-73BQE0-2000BF
1	4826-75-FX	ANRXF1	Right Lower Tibia Force X	LC28 Ank	8891 834540N	+	11/08/2000	OK	416v	Denton	4826
1	4826-75-FY	ANRYF1	Right Lower Tibia Force Y	LC20 Ank	8897 147944N	+	11/08/2000	OK	416v	Denton	4826
1	4826-75-FZ	ANRZF1	Right Lower Tibia Force Z	LC9 Ank	8902 963453N	+	11/08/2000	OK	416v	Denton	4826
1	4826-75-MX	ANRXM1	Right Lower Tibia Moment X	Ank	282 7964823NM	+	11/08/2000	OK	416v	Denton	4826
1	4826-75-MY	ANRYM1	Right Lower Tibia Moment Y	Ank	282 0975293NM	+	11/08/2000	OK	416v	Denton	4826
2	PD210-4B-AK-029	FTRXD1	Right Foot Disp X	POT1 Eversif	320 8020050DEG	+	07/31/2001	OK	416v	CONTELEC	PD210-4B
3	PD210-4B-AK-030	F1RYD1	Right Foot Disp Y	POT2 Dorsif	321 6080402DEG	+	07/31/2001	OK	416v	CONTELEC	PD210-4B
4	PD210-4B-AK-031	FTRZD1	Right Foot Disp Z	POT3 Intern	318 7052598DEG	+	07/31/2001	OK	416v	CONTELEC	PD210-4B
5	99H12-F29	FTRXG1	Right Foot Accel X	Fwd	1202 640171G	+	07/12/2001	OK	416v	Entran	EGL-73BQE0-2000BF
6	99102-F13	FTRYG1	Right Foot Accel Y	Rt	1206 992067G	+	07/12/2001	OK	416v	Entran	EGL-73BQE0-2000BF
7	99102-F08	FTRZG1	Right Foot Accel Z	Dn	1199 850018G	+	07/12/2001	OK	416v	Entran	EGL-73BQE0-2000BF
8	98G18-F18	HEDXG2	Head Accel X	514 Fwd	796 5957976G	+	04/12/2001	OK	421v	Entran	EGL-73BQE0-2000BF
9	99H30-Z05	HEDYG2	Head Accel Y	Lft	805 1453822G	+	04/12/2001	OK	421v	Entran	EGL-73BQE0-2000BF
10	99102-F09	HEDZG2	Head Accel Z	Up	794 8335817G	+	04/12/2001	OK	421v	Entran	EGL-73BQE0-2000BF
11	00L13-F03	HEDXR2	Head Accel Red X	Rwd	801 2143404G	+	04/12/2001	OK	421v	Entran	EGL-73B6Q 2000JF
12	99H30-Z08	HEDYR2	Head Accel Red Y	Lft	794 6608722G	+	04/12/2001	OK	421v	Entran	EGL-73BQE0-2000BF
13	99H30-Z04	HEDZR2	Head Accel Red Z	Up	798 6522742G	+	04/12/2001	OK	421v	Entran	EGL-73BQE0-2000BF
14	99102-F12	HD1XG2	Head (LT) Accel X	Fwd	802 6273504G	+	04/12/2001	OK	421v	Entran	EGL-73BQE0-2000BF
15	99102-F06	HD1ZG2	Head (LT) Accel Z	Up	804 8542773G	+	04/12/2001	OK	421v	Entran	EGL-73BQE0-2000BF
16	99102-F15	HD2YG2	Head (F1) Accel Y	Lft	803 9948494G	+	04/12/2001	OK	421v	Entran	EGL-73BQE0-2000BF
17	99108-F29	HD2ZG2	Head (FT) Accel Z	Up	800 8008008G	+	04/11/2001	OK	421v	Entran	EGL-73BQF0-2000BF
18	99H30-Z03	HD3XG2	Head (TP) Accel X	Fwd	794 8459209G	+	04/11/2001	OK	421v	Entran	EGL-73BQE0-2000BF
19	99108-F28	HD3YG2	Head (TP) Accel Y	Lft	801 6471343G	+	04/12/2001	OK	421v	Entran	EGL-73BQE0-2000BF
20	1716A-852-FX	NEKXF2	Neck Force X	Hd	8902 128022N	+	09/01/2000	OK	421v	Denton	1716A
21	1716A-852-FY	NEKYF2	Neck Force Y	Hd	8897 647510N	+	09/01/2000	OK	421v	Denton	1716A
22	1716A-852-FZ	NEKZF2	Neck Force Z	Hd	13352 45759N	+	09/01/2000	OK	421v	Denton	1716A
23	1716A-852-MX	NEKXM2	Neck Moment X	Lt Ear	282 3044648NM	+	09/01/2000	OK	421v	Denton	1716A
24	1716A-852-MY	NEKYM2	Neck Moment Y	Chn	282 5310335NM	+	09/01/2000	OK	421v	Denton	1716A
25	1716A-852-MZ	NEKZM2	Neck Moment Z	Chn	282 6996773NM	+	09/01/2000	OK	421v	Denton	1716A
26	2150-86-FX	NK1XF2	Neck Lower Force X	Hd	13351 83675N	+	06/18/2001	OK	421v	Denton	2150
27	2150-86-FY	NK1YF2	Neck Lower Force Y	Hd	13334 62859N	+	06/18/2001	OK	421v	Denton	2150
28	2150-86-FZ	NK1ZF2	Neck Lower Force Z	Hd	13348 67179N	+	06/18/2001	OK	421v	Denton	2150
29	2150-86-MX	NK1XM2	Neck Lower Moment X	Lt Ear	339 1774446NM	+	06/18/2001	OK	421v	Denton	2150

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1100	2150-86-MY	NKLYM2	Neck Lower Moment Y	Chn	338 7737647NM	+	06/18/2001	OK	421v	Denton	2150
1101	98H14-K02	CSTXG2	Chest Accel X	Fwd	401 2727871G	+	04/12/2001	OK	421v	Entran	FGE-73BQ-2000BI
1102	P15321	CSTYG2	Chest Accel Y	Lft	400 6071702G	+	04/11/2001	OK	421v	Endevco	7264C-2KLC-2-240
1103	P17743	CSTZG2	Chest Accel Z	Up	398 8703866G	+	04/11/2001	OK	421v	Endevco	7264C-2K1 C-2-240
1104	99H30-Z07	CSTXR2	Chest Accel Red X	Fwd	399 0335905G	+	04/12/2001	OK	421v	Entran	FGE-73BQE0-2000BF
1105	P15334	CSTYR2	Chest Accel Red Y	Lft	399 2015968G	+	04/11/2001	OK	421v	Endevco	7264C-2KLC-2-240
1106	99G29 Q13	CSTZR2	Chest Accel Red Z	Up	399 9500062G	+	04/12/2001	OK	421v	Entran	LGF 73BQE0-2000BF
1107	J40073	VCGXG	VEHICLE CG X-AXIS	FWD	991 9308748G	+	04/20/2001	OK	-1	Endevco	7264-2000I7

Inel Report

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Name of Test			010827		System		MINIDAU		Name of DAU		DAU6	
#	Sensor #	Mnemonic	Description	Dir.	Range	Pol.	Cal. Date/Status	Group	Mfg.	Model		
	BF99J	STMXG2	Sternum Mid Accel X	Fwd	812 4533870G	+	05/21/2001	OK	421v	Endevco	7264 2KM5T	
	J20294	STLXG2	Sternum Lower Accel X	Fwd	787 7165451G	+	05/21/2001	OK	421v	Endevco	7264-2000T	
	14CB1-2897-1355	CSTXD2	Chest Deflection X VRTC1	Strm	101 1174425MM	+	08/14/2001	OK	421v	Servo	14CB1-2897	
	2152-076-FX	LMBXF2	Lumbar Force X	Cst	13333 04722N	+	06/01/2001	OK	421v	Denton	2152	
	2152-076-FY	LMBYF2	Lumbar Force Y	Cst	13319 73991N	+	06/01/2001	OK	421v	Denton	2152	
	2152-076-FZ	LMBZF2	Lumbar Force Z	Cst	17809 29280N	+	06/01/2001	OK	421v	Denton	2152	
	2152-076-MX	LMBXM2	Lumbar Moment X	Rt	678 1373655NM	+	06/01/2001	OK	421v	Denton	2152	
	2152-076-MY	LMBYM2	Lumbar Moment Y	Strm	676 9367473NM	+	06/01/2001	OK	421v	Denton	2152	
	99108-F26	PEVXG2	Pelvis Accel X	Rwd	400 4004004 G	+	04/12/2001	OK	421v	Entran	FGE-73BQE0-2000BF	
	99H30-Z02	PEVYG2	Pelvis Accel Y	Lft	400 0937719G	+	04/12/2001	OK	421v	Entran	1GF-73BQ1 0-2000BH	
	99108-F30	PEVZG2	Pelvis Accel Z	Up	400 0625097G	+	04/12/2001	OK	421v	Entran	1GF-73BQF0 2000BH	
	1914A-383-FZ	11MZ12	Left Femur Force Z	Knee	13351 17871 N	+	05/24/2001	OK	421v	Denton	1914A	
	1914A-376-FZ	RFMZ12	Right Femur Force Z	Knee	13352 41894 N	+	05/24/2001	OK	421v	Denton	1914A	
	150-0121VR-13742	KNLXD2	Left Knee Displacement	Tib	22 06325950MM	+	04/25/2001	OK	421v	SpaceAge	150-0121VR	
	150-0121VL-18123	KNRXd2	Right Knee Displacement	Tib	21 63989856MM	+	04/26/2001	OK	421v	SpaceAge	150 0121VL	
	4825-79-FX	TBLXT2	Left Upper Tibia Force X	Tib	8891 957540N	+	11/29/2000	OK	421v	Denton	4825	
	4825-79-FZ	TBLZF2	Left Upper Tibia Force Z	Tib	8896 997513N	+	11/29/2000	OK	421v	Denton	4825	
	4825-79-MX	TBLXM2	Left Upper Tibia Moment X	Ank	282 7871824NM	+	11/29/2000	OK	421v	Denton	4825	
	4825-79 MY	TBLYM2	Left Upper Tibia Moment Y	Ank	282 4054287NM	+	11/29/2000	OK	421v	Denton	4825	
	00L13-F16	TBLXG2	Left Tibia Accel X	Fwd	1207 718073G	+	07/11/2001	OK	421v	Entran	EGE-73B6Q 2000JF	
	98H10-FQ1	TBLYG2	Left Tibia Accel Y	Rt	1200 243799G	+	07/11/2001	OK	421v	Entran	EGF-73BQ 2000BF	
	4826-77-FX	ANLXF2	Left Lower Tibia Force X	Ank	8902 019367N	+	11/08/2000	OK	421v	Denton	4826	
	4826-77-FY	ANLYF2	Left Lower Tibia Force Y	Ank	8901 333138N	+	11/08/2000	OK	421v	Denton	4826	
	4826 77-FZ	ANLZF2	Left Lower Tibia Force Z	Ank	8903 693753N	+	11/08/2000	OK	421v	Denton	4826	
	4826-77-MX	ANLXM2	Left Lower Tibia Moment X	Ank	281 6848070NM	+	11/08/2000	OK	421v	Denton	4826	
	4826-77-MY	ANLYM2	Left Lower Tibia Moment Y	LC05Ank	281 9388383NM	+	11/08/2000	OK	421v	Denton	4826	
	PD210-4B-AK-047	FTLXD2	Left Foot Disp X POT7	Invers	160 DEG	+	07/31/2001	OK	421v	CONTELEC	PD210-4B	
	PD210-4B-AK-049	F7LYD2	Left Foot Disp Y POT8	Dorsif	160 4010025DEG	+	07/31/2001	OK	421v	CONTELEC	PD210-4B	
	PD210-4B-AK-087	FTLZD2	Left Foot Disp Z POT9	Extern	162 7980922DEG	+	07/31/2001	OK	421v	CONTELEC	PD210-4B	
	99108-F25	F7LXG2	Left Foot Accel X	Fwd	1223 709369G	+	07/12/2001	OK	421v	Entran	FGF-73BQF0-2000BF	

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00L20-A14	FTI YG2	Left Foot Accel Y	Rt	1209 601209 G	+	07/11/2001	OK	421v	Entran	EGE-73B6Q-2000JF
00L13-F13	FTLZG2	Left Foot Accel Z	Dn	1180 811808 G	+	07/11/2001	OK	421v	Fntran	EGE-73B6Q-2000JI

Innel Report

Name of Test 010827

Name of DAU DAU7

System MINIDAU

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I.#	Sensor #	Mnemonic	Description	Dir.	Range	Pol	Cal. Date/Status	Group	Mfg.	Model
1	4825-76-FX	IBRX12	Right Upper Tibia Force X	Tib	8895 424245 N	+	11/08/2000	421v	Denton	4825
2	4825-76-FZ	TBRZF2	Right Upper Tibia Force Z	Tib	8902 963453 N	+	11/08/2000	421v	Denton	4825
3	4825-76-MX	TBRXM2	Right Upper Tibia Moment X	Ank	283 0011229 NM	+	11/08/2000	421v	Denton	4825
4	4825 76-MY	TBRYM2	Right Upper Tibia Moment Y	Ank	282 2980537 NM	+	11/08/2000	421v	Denton	4825
5	00L20-A15	IBRXG2	Right Tibia Accel X	Fwd	1218 467396 G	+	07/11/2001	421v	Entran	EGL-73B6Q-2000JF
6	98H13-F15	TBRYG2	Right Tibia Accel Y	Rt	1191 695372 G	+	07/11/2001	421v	Entran	EGL-73B6Q-2000JF
7	4826-78 FX	ANRXF2	Right Lower Tibia Force X	Ank	8900 651656 N	+	11/08/2000	421v	Denton	4826
8	4826-78 FY	ANRYF2	Right Lower Tibia Force Y	LC25 Ank	8902 229869 N	+	11/08/2000	421v	Denton	4826
9	4826-78-FZ	ANRZF2	Right Lower Tibia Force Z	Ank	8903 737726 N	+	11/08/2000	421v	Denton	4826
10	4826-78 MX	ANRXM2	Right Lower Tibia Moment X	Ank	282 8074218 NM	+	11/08/2000	421v	Denton	4826
11	4826-78 MY	ANRYM2	Right Lower Tibia Moment Y	Ank	282 1842924 NM	+	11/08/2000	421v	Denton	4826
12	PD210-4B-AK-084	F1RXD2	Right Foot Disp X ROT X	Eversl	162 2820919 DEG	+	07/31/2001	421v	CONTELEC	PD210-4B
13	PD210-4B-AK-085	F1RYD2	Right Foot Disp Y ROTY	Dorsif	161 8204804 DEG	+	07/31/2001	421v	CONTELEC	PD210 4B
14	PD210-4B-AK-086	F1RZD2	Right Foot Disp Z ROTZ	Intern	161 4632608 DEG	+	07/31/2001	421v	CONTELEC	PD210-4B
15	99D15-N08	F1RXG2	Right Foot Accel X	Fwd	1200 863120 G	+	07/12/2001	421v	Entran	EGL-73BQ10 2000BF
16	99102-F10	F1RYG2	Right Foot Accel Y	Rt	1191 695372 G	+	07/12/2001	421v	Entran	LGE-73BQL0-2000BF
17	00L20-A12	F1RZG2	Right Foot Accel Z	Dn	1174 204201 G	+	07/11/2001	421v	Entran	EGL-73B6Q 2000JF
18	J23803	HEDXG3	Head Accel X	Fwd	792 5696594 G	+	06/26/2001	088v	Endevco	7264 2000I
19	J23947	HEDYG3	Head Accel Y	Rgt	800 1750382 G	+	06/26/2001	088v	Endevco	7264-2000I
20	J23998	HEDZG3	Head Accel Z	Up	802 7594857 G	+	06/27/2001	088v	Endevco	7264-2000I
21	1716A-798-FX	NEKXF3	Neck Force X	Illd	8894 679695 N	+	06/26/2001	088v	Denton	1716A
22	1716A-798-FY	NEKYF3	Neck Force Y	Illd	8885 626660 N	+	06/26/2001	088v	Denton	1716A
23	1716A-798-FZ	NEKZF3	Neck Force Z	Illd	13330 48880 N	+	06/26/2001	088v	Denton	1716A
24	1716A-798-MX	NEKXM3	Neck Moment X	Rt Ear	282 6340568 NM	+	06/26/2001	088v	Denton	1716A
25	1716A-798-MY	NEKYM3	Neck Moment Y	Chn	282 2800418 NM	+	06/26/2001	088v	Denton	1716A
26	1716A-798-MZ	NEKZM3	Neck Moment Z	Chn	282 4885511 NM	+	06/26/2001	088v	Denton	1716A
27	ACC65	CSTXG3	Chest Accel X S33	Fwd	403 2512129 G	+	06/26/2001	088v	Endevco	7264-2000I
28	DW83J	CSTYG3	Chest Accel Y	Lft	396 9823141 G	+	06/26/2001	088v	Endevco	7264-2000I
29	AJ4L3	CSIZG3	Chest Accel Z	Dwn	396 8623073 G	+	06/26/2001	088v	Endevco	7264-2000T
30	08C1-3179-088	CSIXD3	Chest Deflection X	Strm	99 01218159 MM	+	08/16/2001	088v	Servo	08C1-3179

inel Report

J30421
J35748

VCGYG
VCGZG

VECHICLE C G Y-AXIS
VECHICLE C G Z-AXIS

LT
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+ 06/19/2001
+ 06/20/2001

OK
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Endevco
Endevco

7264-2000TZ
7264-2000TZ

08/27/2001 11 12 45 AM

Channel Report

08/27/2001 11 12 45 AM

Name of Test 010827

System MINIDAU

Name of DAU DAU8

Chan #	Sensor #	Mnemonic	Description	Dir.	Range	Pol.	Cal. Date/Status	Group	Mfg.	Model
8001	J38413	RDKXG	REAR DECK X-AXIS	FWD	1007 279165G	+	03/19/2001 OK	-1	Endevco	7264-2000TZ
8002	J38779	RDKYG	REAR DECK Y-AXIS	LT	1019 108280G	+	05/24/2001 OK	-1	Endevco	7264-2000TZ
8003	J39618	RDKZG	REAR DECK Z-AXIS	UP	1007 477371G	+	04/20/2001 OK	-1	Endevco	7264-2000TZ
8004	IP1	DABET1	DRIVER AIRBAG EVENT -	69	1 003921568 V	+	06/15/2000 ---	-1	FLUKE	Y8101A
8005	IP2	DABET2	DRIVER AIRBAG EVENT -	9	1 003921568 V	+	06/15/2000 ---	-1	FLUKE	Y8101A
8006	IP3	PABET1	PASSENGER AIRBAG EVENT -	5	1 003921568 V	+	06/15/2000 ---	-1	FLUKE	Y8101A
8007	IP4	PABET2	PASSENGER AIRBAG EVENT -	4	1 003921568 V	+	06/15/2000 ---	-1	FLUKE	Y8101A
8008	AL40	STUXG2	Sternum Upper Accel X	Fwd	798 5028072 G	+	05/21/2001 OK	421v	Endevco	7264-2KM5T

S16. Test procedures for rigid barrier test requirements using 5th percentile adult female dummies

S16.1 General provisions. Crash testing to determine compliance with the requirements of S15 of this standard is conducted as specified in the following paragraphs (a) and (b)

(a) Belted test. Place a 49 CFR Part 572 Subpart O 5th percentile adult female test dummy at each front outboard seating position of a vehicle, in accordance with the procedures specified in S16.3 of this standard. Impact the vehicle traveling longitudinally forward at any speed, up to and including 48 km/h (30 mph), into a fixed rigid barrier that is perpendicular within a tolerance of ± 5 degrees to the line of travel of the vehicle under the applicable conditions of S16.2 of this standard

(b) Unbelted test. Place a 49 CFR Part 572 Subpart O 5th percentile adult female test dummy at each front outboard seating position of a vehicle, in accordance with the procedures specified in S16.3 of this standard, except S16.3.5. Impact the vehicle traveling longitudinally forward at any speed, from 32 km/h (20 mph) to 40 km/h (25 mph), inclusive, into a fixed rigid barrier that is perpendicular within a tolerance of ± 5 degrees to the line of travel of the vehicle under the applicable conditions of S16.3 of this standard.

S16.2 Test conditions.

S16.2.1 The vehicle, including test devices and instrumentation, is loaded as in S8.1.1

S16.2.2 Movable vehicle windows and vents are placed in the fully closed position, unless the vehicle manufacturer chooses to specify a different adjustment position prior to the time the vehicle is certified.

S16.2.3 Convertibles and open-body type vehicles have the top, if any, in place in the closed passenger compartment configuration.

S16.2.4 Doors are fully closed and latched but not locked.

S16.2.5 The dummy is clothed in form fitting cotton stretch garments with short sleeves and above the knee length pants. A size 7½W shoe which meets the configuration and size specifications of MIL-S-21711E (see S4.7) or its equivalent is placed on each foot of the test dummy.

S16.2.6 Limb joints are set at one g, barely restraining the weight of the limb when extended horizontally. Leg joints are adjusted with the torso in the supine position.

S16.2.7 Instrumentation shall not affect the motion of dummies during impact.

S16.2.8 The stabilized temperature of the dummy is at any level between 20.6° C and 22.2° C (69° F to 72° F).

S16.2.9 Steering wheel adjustment

S16.2.9.1 Adjust a tiltable steering wheel, if possible, so that the steering wheel hub is at the geometric center of its full range of driving positions.

S16.2.9.2 If there is no setting detent at the mid-position, lower the steering wheel to the detent just below the mid-position.

S16.2.9.3 If the steering column is telescoping, place the steering column in the mid-position. If there is no mid-position, move the steering wheel rearward one position from the mid-position

S16.2.10 Driver and passenger seat set-up

S16.2.10.1 Lumbar support adjustment. Position adjustable lumbar supports so that the lumbar support is in its lowest, retracted or deflated adjustment position.

S16.2.10.2 Other seat adjustments. Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position.

S16.2.10.3 Seat position adjustment If the passenger seat does not adjust independently of the driver seat, the driver seat position shall control the final position of the passenger seat

S16.2.10.3.1 If the seat is adjustable in the fore and aft and/or vertical directions, move the seat to the rearmost position at the full down height adjustment. If the seat cushion adjusts fore and aft, independent of the seat back, set this adjustment to the full rearward position. If the seat cushion contains a height adjustment, independent of the seat back, set this adjustment to the full down position. Record a seat cushion reference angle.

S16.2.10.3.2 Using only controls which move the seat fore and aft, move the seat to the full forward position. If seat adjustments other than fore-aft are present and the seat cushion reference angle changes from that measured in S16.2.10.3.1, use those adjustments to maintain as closely as possible the angle recorded in S16.2.10.3.1.

S16.2.10.3.3 If the seat height is adjustable, determine the maximum and minimum heights at this position, while maintaining, as closely as possible, the angle recorded in S16.2.10.3.1. Set the seat at the midpoint height with the seat cushion reference angle set as closely as possible to the angle recorded in S16.2.10.3.1. Mark the location of the seat for future reference.

S16.3 Dummy seating positioning procedures The 49 CFR Part 572 Subpart O 5th percentile adult female test dummy is positioned as follows:

S16.3.1 General provisions and definitions

S16.3.1.1 All angles are measured with respect to the horizontal plane unless otherwise stated.

S16.3.1.2 The dummy's neck bracket is adjusted to align the zero degree index marks.

S16.3.1.3 The term "midsagittal plane" refers to the vertical plane that separates the dummy into equal left and right halves.

S16.3.1.4 The term "vertical longitudinal plane" refers to a vertical plane parallel to the vehicle's longitudinal centerline.

S16.3.1.5 The term "vertical plane" refers to a vertical plane, not necessarily parallel to the vehicle's longitudinal centerline.

S16.3.1.6 The term "transverse instrumentation platform" refers to the transverse instrumentation surface inside the dummy's skull casting to which the neck load cell mounts. This surface is perpendicular to the skull cap's machined inferior-superior mounting surface.

S16.3.1.7 The term "thigh" refers to the femur between, but not including the knee and the pelvis.

S16.3.1.8 The term "leg" refers to the lower part of the entire leg including the knee.

S16.3.1.9 The term "foot" refers to the foot including the ankle.

S16.3.1.10 The longitudinal centerline of a bucket seat cushion is determined at the widest part of the seat cushion. Measure perpendicular to the longitudinal centerline of the vehicle.

S16.3.1.11 For leg and thigh angles use the following references:

S16.3.1.11.1 Thigh - a straight line on the thigh skin between the center of the ½ - 13 UNC-2B tapped hole in the upper leg femur clamp (see drawings 880105-504 (left thigh) and 880105-505 (right thigh), upper leg femur clamp) and the knee pivot shoulder bolt (part 880105-527 in drawing 880105-528R & 528L, sliding knee assy. w/o pot).

S16 3 1 1 1 2 Leg - a straight line on the leg skin between the center of the ankle shell (parts 880105-609 & 633 in drawing 880105-660, ankle assembly) and the knee pivot shoulder bolt (part 880105-27 in drawing 880105-528R & 528L, sliding knee assy w/o pot)

S16.3.2 Driver dummy positioning

S16 3 2.1 Driver torso/head/seat back angle positioning

S16 3 2 1 1 With the seat in the position determined in S16 2.10, use only the controls which move the seat fore and aft to place the seat in the rearmost position, without adjusting independent height controls. If the seat cushion reference angle automatically changes as the seat is moved from the full forward position, maintain as closely as possible the seat cushion reference angle in S16 2 10.3 1, for the final forward position when measuring the pelvic angle as specified in S16 3.2.1.11

S16 3 2 1 2 Fully recline the seat back, if adjustable. Install the dummy into the driver's seat, such that when the legs are positioned 120 degrees to the thighs, the calves of the legs are not touching the seat cushion.

S16 3 2.1 3 Bucket seats. Center the dummy on the seat cushion so that its midsagittal plane is vertical and coincides with the vertical longitudinal plane through the center of the seat cushion.

S16 3 2 1 4 Bench seats. Position the midsagittal plane of the dummy vertical and parallel to the vehicle's longitudinal centerline and aligned with the center of the steering wheel rim.

S16 3.2.1.5 Hold the dummy's thighs down and push rearward on the upper torso to maximize the dummy's pelvic angle.

S16 3.2 1.6 Place the legs at 120 degrees to the thighs. Set the initial transverse distance between the longitudinal centerlines at the front of the dummy's knees at 160 to 170 mm (6 3 to 6 7 in.), with the thighs and legs of the dummy in vertical planes. Push rearward on the dummy's knees to force the pelvis into the seat so there is no gap between the pelvis and the seat back or until contact occurs between the back of the dummy's calves and the front of the seat cushion.

S16.3 2.1 7 Gently rock the upper torso relative to the lower torso laterally in a side to side motion three times through a ± 5 degree arc (approximately 51 mm (2 in) side to side) to reduce friction between the dummy and the seat.

S16.3 2 1.8 Extend the legs slightly so that the feet are not in contact with the floor pan. Let the thighs rest on the seat cushion to the extent permitted by the foot movement. Keeping the leg and the thigh in a vertical plane, place the foot in the vertical longitudinal plane that passes through the centerline of the accelerator pedal. Rotate the left thigh outboard about the hip until the center of the knee is the same distance from the midsagittal plane of the dummy as the right knee ± 5 mm (± 0.2 in). Using only controls which move the seat fore and aft, attempt to return the seat to the full forward position. If either of the dummy's legs first contacts the steering wheel, then adjust the steering wheel, if adjustable, upward until contact with the steering wheel is avoided. If the steering wheel is not adjustable, separate the knees enough to avoid steering wheel contact. Proceed with moving the seat forward until either the leg contacts the vehicle interior or the seat reaches the full forward position. (The right foot may contact and depress the accelerator and/or change the angle of the foot with respect to the leg during seat movement.) If necessary to avoid contact with the vehicle's brake or clutch pedal, rotate the test dummy's left foot about the leg. If there is still interference, rotate the left thigh outboard about the hip the minimum distance necessary to avoid pedal interference. If a dummy leg contacts the vehicle interior before the

full forward position is attained, position the seat at the next detent where there is no contact. If the seat is a power seat, position the seat to avoid contact while assuring that there is a maximum of 5 mm (0.2 in.) distance between the vehicle interior and the point on the dummy that would first contact the vehicle interior. If the steering wheel was moved, return it to the position described in S16.2.9. If the steering wheel contacts the dummy's leg(s) prior to attaining this position, adjust it to the next higher detent or if infinitely adjustable, until there is 5 mm (0.2 in.) clearance between the wheel and the dummy's leg(s).

S16.3.2.1.9 For vehicles without adjustable seat backs, adjust the lower neck bracket to level the head as much as possible. For vehicles with adjustable seat backs, while holding the thighs in place, rotate the seat back forward until the transverse instrumentation platform of the head is level to within ± 5 degrees, making sure that the pelvis does not interfere with the seat bight. Inspect the abdomen to ensure that it is properly installed. If the torso contacts the steering wheel, adjust the steering wheel in the following order until there is no contact: telescoping adjustment, lowering adjustment, raising adjustment. If the vehicle has no adjustments or contact with the steering wheel cannot be eliminated by adjustment, position the seat at the next detent where there is no contact with the steering wheel as adjusted in S16.2.9. If the seat is a power seat, position the seat to avoid contact while assuring that there is a maximum of 5 mm (0.2 in.) distance between the steering wheel as adjusted in S16.2.9 and the point of contact on the dummy.

S16.3.2.1.10 If it is not possible to achieve the head level within ± 5 degrees, minimize the angle.

S16.3.2.1.11 Measure and set the dummy's pelvic angle using the pelvic angle gage (drawing TE-2504, incorporated by reference in 49 CFR Part 572, Subpart O, of the chapter). The angle shall be set to 20.0 degrees ± 2.5 degrees. If this is not possible, adjust the pelvic angle as close to 20.0 degrees as possible while keeping the transverse instrumentation platform of the head as level as possible by adjustments specified in S16.3.2.1.9 and S16.3.2.1.10.

S16.3.2.1.12 If the dummy is contacting the vehicle interior after these adjustments, move the seat rearward until there is a maximum of 5 mm (0.2 in.) between the contact points of the dummy and the interior of the vehicle or if it has a manual seat adjustment, to the next rearward detent position. If after these adjustments, the dummy contact point is more than 5 mm (0.2 in.) from the vehicle interior and the seat is still not in its forward most position, move the seat forward until the contact point is 5 mm (0.2 in.) or less from the vehicle interior, or if it has a manual seat adjustment, move the seat to the closest detent position without making contact, or until the seat reaches its forward most position, whichever occurs first.

S16.3.2.2 Driver foot positioning.

S16.3.2.2.1 If the vehicle has an adjustable accelerator pedal, adjust it to the full forward position. Rest the right foot of the test dummy on the undepressed accelerator pedal with the rearmost point of the heel on the floor pan in the plane of the pedal. If the foot cannot be placed on the accelerator pedal, set it initially perpendicular to the leg and then place it as far forward as possible in the direction of the pedal centerline with the rearmost point of the heel resting on the floor pan. If the vehicle has an adjustable accelerator pedal and the right foot is not touching the accelerator pedal when positioned as above, move the pedal rearward until it touches the right foot. If the accelerator pedal in the full rearward position still does not touch the foot, leave the pedal in that position.

S16.3.2 2.2 If the ball of the foot does not contact the pedal, change the angle of the foot relative to the leg such that the toe of the foot contacts the undepressed accelerator pedal

S16 3 2.2.3 Place the left foot on the toe board with the rearmost point of the heel resting on the floor pan as close as possible to the point of intersection of the planes described by the toe board and floor pan, and not on the wheel-well projection or foot rest

S16 3 2.2.4 If the left foot cannot be positioned on the toe board, place the foot perpendicular to the lower leg centerline as far forward as possible with the heel resting on the floor pan.

S16.3.2 2.5 If necessary to avoid contact with the vehicle's brake or clutch pedal, rotate the test dummy's left foot about the lower leg. If there is still pedal interference, rotate the left leg outboard about the hip the minimum distance necessary to avoid the pedal interference. If the left foot does not contact the floor pan, place the foot parallel to the floor and place the leg as perpendicular to the thigh as possible

S16 3 2 3 Driver arm/hand positioning

S16.3 2.3.1 Place the dummy's upper arms adjacent to the torso with the arm centerlines as close to a vertical longitudinal plane as possible

S16.3 2 3 2 Place the palms of the dummy in contact with the outer part of the steering wheel rim at its horizontal centerline with the thumbs inside the steering wheel rim.

S16.3 2.3.3 If it is not possible to position the thumbs inside the steering wheel rim at its horizontal centerline, then position them above and as close to the horizontal centerline of the steering wheel rim as possible.

S16.3.2.3 4 Lightly tape the hands to the steering wheel rim so that if the hand of the test dummy is pushed upward by a force of not less than 9 N (2 lb.) and not more than 22 N (5 lb.), the tape releases the hand from the steering wheel rim.

S16 3 3 Passenger dummy positioning

S16 3 3 1 Passenger torso/head/seat back angle positioning

S16.3.3.1.1 With the seat in the position determined in S16 2 10, use only the controls which move the seat fore and aft to place the seat in the rearmost position, without adjusting independent height controls. If the seat cushion reference angle automatically changes as the seat is moved from the full forward position, maintain as closely as possible the seat cushion reference angle recorded in S16.2.10 3.1, for the final forward position when measuring the pelvic angle as specified in S16.3.3.1.11.

S16.3.3 1.2 Fully recline the seat back, if adjustable. Install the dummy into the passenger's seat, such that when the legs are 120 degrees to the thighs, the calves of the legs are not touching the seat cushion.

S16.3.3.1.3 Bucket seats. Center the dummy on the seat cushion so that its midsagittal plane is vertical and coincides with the vertical longitudinal plane through the center of the seat cushion.

S16 3.3.1.4 Bench seats. Position the midsagittal plane of the dummy vertical and parallel to the vehicle's longitudinal centerline and the same distance from the vehicle's longitudinal centerline as the midsagittal plane of the driver dummy

S16.3.3 1 5 Hold the dummy's thighs down and push rearward on the upper torso to maximize the dummy's pelvic angle.

S16 3.3.1.6 Place the legs at 120 degrees to the thighs. Set the initial transverse distance between the longitudinal centerlines at the front of the dummy's knees at 160 to 170 mm (6.3 to 6.7 in.), with the thighs and legs of the dummy in vertical planes. Push rearward on the dummy's knees to force the pelvis into the seat so there is no gap between the pelvis and

the seat back or until contact occurs between the back of the dummy's calves and the front of the seat cushion

S16.3.3.1.7 Gently rock the upper torso relative to the lower torso laterally side to side three times through at ± 5 degree arc (approximately 51 mm (2 in.) side to side)

S16.3.3.1.8 Extend the legs slightly so that the feet are not in contact with the floor pan. Let the thighs rest on the seat cushion to the extent permitted by the foot movement. With the feet perpendicular to the legs, place the heels on the floor pan. If a heel will not contact the floor pan, place it as close to the floor pan as possible. Using only controls which move the seat fore and aft, attempt to return the seat to the full forward position. If a dummy leg contacts the vehicle interior before the full forward position is attained, position the seat at the next detent where there is no contact. If the seats are power seats, position the seat to avoid contact while assuring that there is a maximum of 5 mm (0.2 in.) distance between the vehicle interior and the point on the dummy that would first contact the vehicle interior.

S16.3.3.1.9 For vehicles without adjustable seat backs, adjust the lower neck bracket to level the head as much as possible. For vehicles with adjustable seat backs, while holding the thighs in place, rotate the seat back forward until the transverse instrumentation platform of the head is level to within ± 5 degrees, making sure that the pelvis does not interfere with the seat bight. Inspect the abdomen to insure that it is properly installed

S16.3.3.1.10 If it is not possible to orient the head level within ± 5 degrees, minimize the angle

S16.3.3.1.11 Measure and set the dummy's pelvic angle using the pelvic angle gage (drawing TE-2504, incorporated by reference in 49 CFR Part 572, Subpart O, of this chapter). The angle shall be set to 20.0 degrees ± 2.5 degrees. If this is not possible, adjust the pelvic angle as close to 20.0 degrees as possible while keeping the transverse instrumentation platform of the head as level as possible as specified in S16.3.3.1.9 and S16.3.3.1.10.

S16.3.3.1.12 If the dummy is contacting the vehicle interior after these adjustments, move the seat rearward until there is a maximum of 5 mm (0.2 in.) between the contact point of the dummy and the interior of the vehicle or if it has a manual seat adjustment, to the next rearward detent position. If after these adjustments the dummy contact point is more than 5 mm (0.2 in.) from the vehicle interior and the seat is still not in its forward most position, move the seat forward until the contact point is 5 mm (0.2 in.) or less from the vehicle interior, or if it has a manual seat adjustment, move the seat to the closest detent position without making contact, or until the seat reaches its forward most position, whichever occurs first.

S16.3.3.2 Passenger foot positioning

S16.3.3.2.1 Place the passenger's feet flat on the toe board.

S16.3.3.2.2 If the feet cannot be placed flat on the toe board, set them perpendicular to the leg centerlines and place them as far forward as possible with the heels resting on the floor pan.

S16.3.3.3 Passenger arm/hand positioning.

S16.3.3.3.1 Place the dummy's upper arms in contact with the seat back and the torso

S16.3.3.3.2 Place the palms of the dummy in contact with the outside of the thighs

S16.3.3.3.3 Place the little fingers in contact with the seat cushion.

S16.3.4 Driver and passenger adjustable head restraints.

S16.3.4.1 If the head restraint has an automatic adjustment, leave it where the system positions the restraint after the dummy is placed in the seat.

S16.3 4 2 Adjust each head restraint to its lowest and most forward position.

S16 3 4 3 Measure the vertical distance from the top most point of the head restraint to the bottom most point. Locate a horizontal plane through the midpoint of this distance. Adjust each head restraint vertically so that this horizontal plane is aligned with the center of gravity (CG) of the dummy head.

S16 3 4 3 If the above position is not attainable, move the vertical center of the head restraint to the closest detent below the center of the head CG.

S16.3 4 4 If the head restraint has a fore and aft adjustment, place the restraint in the forward most position or until contact with the head is made, whichever occurs first.

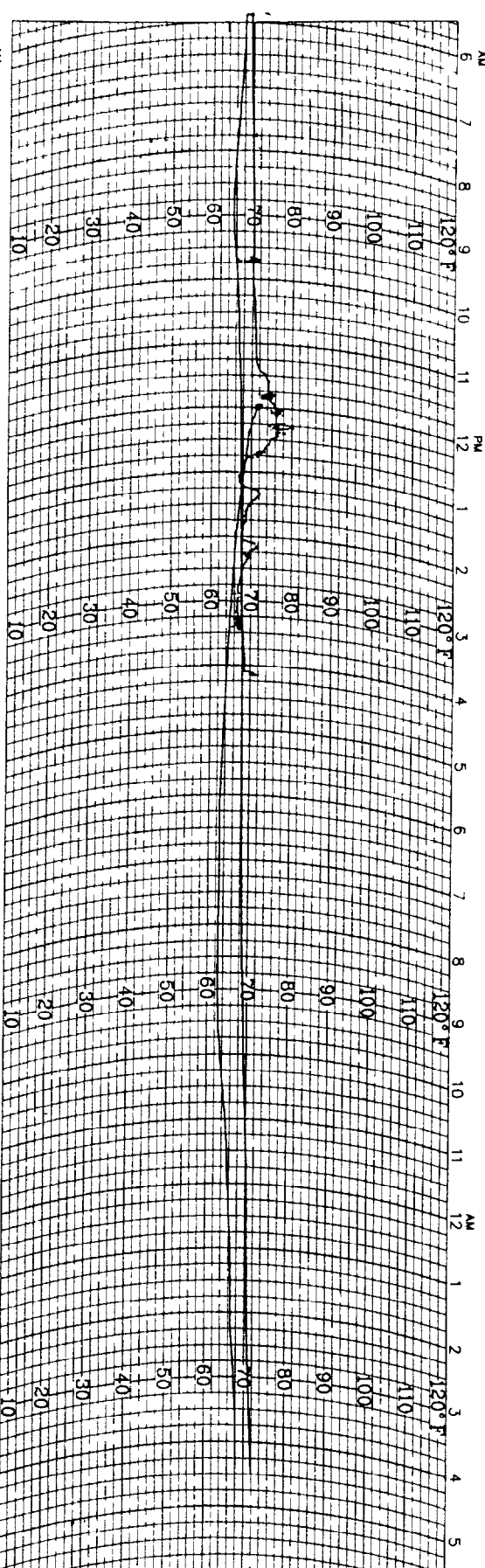
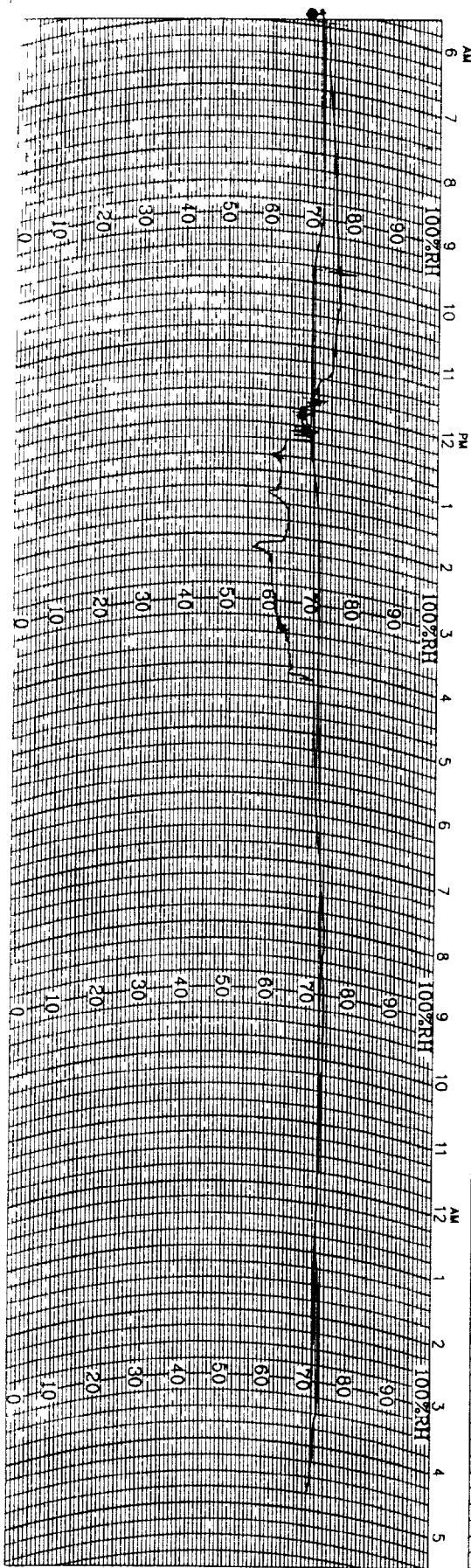
S16 3 5 Driver and passenger manual belt adjustment (for tests conducted with a belted dummy)

S16 3 5 1 If an adjustable seat belt D-ring anchorage exists, place it in the manufacturer's design position for a 5th percentile adult female with the seat in the position specified in S16 2.10 3

S16 3.5.2 Place the Type 2 manual belt around the test dummy and fasten the latch.

S16 3 5 3 Ensure that the dummy's head remains as level as possible, as specified in S16.3 2 1 9 and S16.3 2.1.10, and S16.3.3 1.9 and S16.3.3.1.10.

S16.3.5.4 Remove all slack from the lap belt. Pull the upper torso webbing out of the retractor and allow it to retract; repeat this operation four times. Apply a 9 N (2 lbf) to 18 N (4 lbf) tension load to the lap belt. If the belt system is equipped with a tension-relieving device, introduce the maximum amount of slack into the upper torso belt that is recommended by the manufacturer. If the belt system is not equipped with a tension-relieving device, allow the excess webbing in the shoulder belt to be retracted by the retractive force of the retractor.



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