

Load Cell Barrier Impact Test

**Ford Motor Company
2001 Ford Escape
NHTSA Number:
TRC Inc. Test Number: 011126-1**

**Prepared By:
Transportation Research Center Inc.
10820 State Route 347
East Liberty, OH 43319**



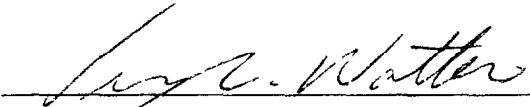
**Final Report
December 7, 2001**

**Prepared For:
U. S. Department of Transportation
Volpe National Transportation Systems Center
55 Broadway, Kendall Square
Cambridge, MA 02142**

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Test Performed By: Michael S Postle, Engineering Technician

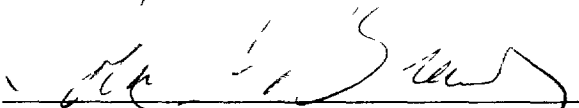
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Contracting Officer's Technical Representative (COTR),
USDOT, Volpe National Transportation Systems Center

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16	Abstract A 48 km/h flat frontal load cell barrier impact test was conducted on a 2001 Ford Escape at Transportation Research Center Inc. on November 26, 2001. This test was conducted in accordance with Volpe Task Order No. 1, for the evaluation of vehicle and occupant responses. The barrier impact velocity was 47.8 km/h. The vehicle's maximum static crush was 438 millimeters. The ambient temperature was 21° C. The driver's 36 millisecond Head Injury Criteria (HIC) was 628. The driver's chest maximum resultant acceleration with three (3) milliseconds minimum duration was 54.0 g. The driver's maximum chest deflection was 49 millimeters. The driver's left and right femur maximum axial compressive forces were 7536 N and 13461 N, respectively The passenger's 36 millisecond HIC was 395. The passenger's chest maximum resultant acceleration with three (3) milliseconds minimum duration was 57.8 g. The passenger's maximum chest deflection was 15 millimeters. The passenger's left and right femur maximum axial compressive forces were 7197 N and 13051 N, respectively.				
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Table of Contents

<u>Section</u>	<u>Description</u>	<u>Page</u>
1 0	Purpose and Test Procedure	1-1
2.0	Full Frontal Load Cell Barrier Test Summary	2-1
3 0	Summary of FMVSS 208 Data	3-1
4 0	Occupant, Camera, Barrier, and Vehicle Information	4-1
Appendix A	Photographs	A-1
Appendix B	Data Plots	B-1
Appendix C	Dummy Configuration and Performance Verification Data	C-1
Appendix D	Test Equipment and Instrumentation Calibration Information	D-1

List of Tables

<u>Number</u>	<u>Title</u>	<u>Page</u>
1	Crash Test Summary	2-4
2	General Test and Vehicle Parameter Data	2-5
3	Post-Impact Data	2-8
4	Vehicle Accelerometer Locations and Data Summary	2-11
5	Dummy Injury Criteria Data	3-2
6	Post-Impact Dummy/Vehicle Data	3-4
7	Dummy Measurement Data for Front Seat Occupants	4-4
8	Impacted Vehicle Measurements	4-9
9	Test Vehicle Frontal Profile Data	4-11
10	Intrusion of Upper Instrument Panel	4-13
11	Fuel System Data	4-14
12	Camera Information	4-17

List of Figures

<u>Number</u>	<u>Title</u>	<u>Page</u>
1	Impact Velocity Measurement System	2-9
2	Vehicle Accelerometer Placement	2-10
3	Dummy Measurement Locations for Front Seat Occupants	4-3
4	Pre-Test and Post-Test Measurement Points	4-8
5	Vehicle Crush	4-10
6	Toeboard Measurements	4-12
7	Camera Positions	4-15
8	Vehicle Reference Photo Target Locations	4-19
9	Load Cell Locations on Fixed Barrier	4-20

List of Photographs

<u>Description</u>	<u>Figure</u>
Pre-Test Front View	A-1
Post-Test Front View	A-2
Pre-Test Left Front View	A-3
Post-Test Left Front View	A-4
Pre-Test Left Side View	A-5
Post-Test Left Side View	A-6
Pre-Test Left Rear View	A-7
Post-Test Left Rear View	A-8
Pre-Test Rear View	A-9
Post-Test Rear View	A-10
Pre-Test Right Rear View	A-11
Post-Test Right Rear View	A-12
Pre-Test Right Side View	A-13
Post-Test Right Side View	A-14
Pre-Test Right Front View	A-15
Post-Test Right Front View	A-16
Pre-Test Overhead Overall View	A-17
Post-Test Overhead Overall View	A-18
Pre-Test Overhead Close-up View	A-19
Post-Test Overhead Close-up View	A-20
Pre-Test Front Underbody View	A-21
Post-Test Front Underbody View	A-22
Pre-Test Front Mid Underbody View	A-23
Post-Test Front Mid Underbody View	A-24
Pre-Test Rear Mid Underbody View	A-25
Post-Test Rear Mid Underbody View	A-26
Pre-Test Rear Underbody View	A-27
Post-Test Rear Underbody View	A-28

List of Photographs, Cont'd

<u>Description</u>	<u>Figure</u>
Pre-Test Fuel Filler Cap View	A-29
Post-Test Fuel Filler Cap View	A-30
Pre-Test Engine Compartment View	A-31
Post-Test Engine Compartment View	A-32
Pre-Test Windshield View	A-33
Post-Test Windshield View	A-34
Pre-Test Driver and Passenger Dummies Front View	A-35
Post-Test Driver and Passenger Dummies Front View	A-36
Pre-Test Driver Dummy Position - View 1	A-37
Post-Test Driver Dummy Position - View 1	A-38
Pre-Test Driver Dummy Position - View 2	A-39
Post-Test Driver Dummy Position - View 2	A-40
Pre-Test Driver Dummy & Vehicle Interior - View 1	A-41
Post-Test Driver Dummy & Vehicle Interior - View 1	A-42
Pre-Test Driver Dummy & Vehicle Interior - View 2	A-43
Post-Test Driver Dummy & Vehicle Interior - View 2	A-44
Pre-Test Driver Dummy Seat Track Position View	A-45
Post-Test Driver Dummy Seat Track Position View	A-46
Pre-Test Passenger Dummy Position - View 1	A-47
Post-Test Passenger Dummy Position - View 1	A-48
Pre-Test Passenger Dummy Position - View 2	A-49
Post-Test Passenger Dummy Position - View 2	A-50
Pre-Test Passenger Dummy & Vehicle Interior - View 1	A-51
Post-Test Passenger Dummy & Vehicle Interior - View 1	A-52
Pre-Test Passenger Dummy & Vehicle Interior - View 2	A-53
Post-Test Passenger Dummy & Vehicle Interior - View 2	A-54
Pre-Test Passenger Dummy Seat Track Position View	A-55
Post-Test Passenger Dummy Seat Track Position View	A-56

List of Photographs, Cont'd.

<u>Description</u>	<u>Figure</u>
Post-Test Driver Dummy Overall View	A-57
Post-Test Driver Dummy Head Contact - View 1	A-58
Post-Test Driver Dummy Head Contact - View 2	A-59
Post-Test Driver Dummy Head Contact - View 3	A-60
Post-Test Driver Dummy Head Contact - View 4	A-61
Post-Test Driver Dummy Head Contact - View 5	A-62
Pre-Test Driver Dummy Knee Contact - View 1	A-63
Post-Test Driver Dummy Knee Contact - View 1	A-64
Pre-Test Driver Dummy Knee Contact - View 2	A-65
Post-Test Driver Dummy Knee Contact - View 2	A-66
Post-Test Driver Dummy Knee Contact - View 3	A-67
Post-Test Passenger Dummy Overall View	A-68
Post-Test Passenger Dummy Head Contact - View 1	A-69
Post-Test Passenger Dummy Head Contact - View 2	A-70
Post-Test Passenger Dummy Head Contact - View 3	A-71
Post-Test Passenger Dummy Head Contact - View 4	A-72
Pre-Test Passenger Dummy Knee Contact - View 1	A-73
Post-Test Passenger Dummy Knee Contact - View 1	A-74
Post-Test Passenger Dummy Knee Contact - View 2	A-75
Pre-Test Vehicle Certification Label View	A-76
Pre-Test Tire Load Label View	A-77
Pre-Test Barrier Face View	A-78
Post-Test Barrier Face View	A-79
Pre-Test Ballast View	A-80
Post-Test Steering Column Damage View	A-81

Section 1.0

Purpose and Test Procedure

Purpose

This 48 km/h load cell barrier impact test was conducted for the Volpe National Transportation Systems Center (Volpe) by Transportation Research Center Inc. (TRC Inc.).

The purpose of this testing was to evaluate and compare vehicle and occupant responses in frontal rigid barrier crash tests conducted at various impact speeds using model year 2001 vehicles in support of the FMVSS 208 Implementation plan (May 12, 2000 interim rule). For this test, the subject vehicle was a 2001 Ford Escape, and the barrier wall was equipped with a load cell barrier.

Test Procedure

This test was conducted in accordance with Volpe's instructions for a full frontal car to load cell barrier test. Data was obtained relative to FMVSS 208, "Occupant Crash Protection" performance.

The test vehicle, a 2001 Ford Escape, was instrumented with ten (10) accelerometers to measure longitudinal axis accelerations and three (3) accelerometers to measure vertical axis accelerations. The driver's and passenger's airbag signals were monitored with inductive pickups. The vehicle impacted a load cell frontal barrier. The vehicle's specified impact velocity range was 47.3 to 48.9 km/h.

The test vehicle contained two (2) Part 572E adult male Hybrid III anthropomorphic test devices (dummies). The dummies were positioned in the front outboard designated seating positions according to NHTSA Laboratory Test Procedure TP-208-10. The driver dummy and the passenger dummy were both unbelted and were restrained with single stage airbags.

Both dummies were instrumented with an array of twelve (12) accelerometers in the head, and three (3) accelerometers in the chest, oriented to measure longitudinal, lateral, and vertical accelerations. The 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 dummies were also instrumented with upper and lower tibia load cells to measure forces and moments, and knee displacement potentiometers. The driver dummy was equipped with THOR-LX legs, which included longitudinal and lateral tibia accelerometers, three (3) foot accelerometers on each foot to measure accelerations in three (3) axes and three (3) rotary potentiometers at each ankle to measure foot rotations about three (3) axes. The passenger dummy was instrumented with three (3) foot accelerometers to measure accelerations at the heel and toe.

The 173 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 fourteen (14) high-speed motion picture cameras. The pre-test and post-test conditions were recorded by one (1) real-time motion picture camera.

The load cell barrier crash test summary data are presented in Section 2.0. The FMVSS 208 summary data are presented in Section 3.0. The occupant, camera, barrier, and vehicle measurements are presented in Section 4.0. Appendix A contains the still photographic prints. Appendix B contains the dummy, vehicle, and barrier data plots. Appendix C contains the dummy verification data. Appendix D contains miscellaneous test information.

Section 2.0

Full Frontal Load Cell Barrier Test Summary

Test Results Summary

This full frontal load cell rigid barrier crash test was conducted by TRC Inc. on November 26, 2001.

The test vehicle, a 2001 Ford Escape, was equipped with a 3.0-liter transverse engine, automatic transmission, power steering, power brakes and front airbags. The vehicle's test weight was 1796.4 kg. The vehicle's impact speed was 47.8 km/h. The vehicle sustained 438 mm of static crush during the impact.

The driver's 36 millisecond Head Injury Criteria (HIC) was 628. The driver's 15 millisecond HIC was 628. The driver's chest maximum resultant acceleration with three (3) milliseconds minimum duration was 54.0 g. The driver's maximum chest deflection was 49 mm. The driver's left and right femur maximum axial compressive forces were 7536 N and 13461 N, respectively. The driver dummy's neck injury calculations were as follows: NTF, 0.25; NTE, 0.06; NCF, 0.39; NCE, 0.15.

The right front passenger's 36 millisecond HIC was 395. The passenger's 15 millisecond HIC was 395. The passenger's chest maximum resultant acceleration with three (3) milliseconds minimum duration was 57.8 g. The passenger's maximum chest deflection was 15 mm. The passenger's left and right femur maximum axial compressive forces were 7197 N and 13051 N, respectively. The right front passenger's neck injury calculations were as follows: NTF, 0.24; NTE, 0.20; NCF, 0.39; NCE, 0.02.

Data Acquisition Explanations

The driver's right femur Z-axis force data channel, RFMZFI, exceeded its full-scale value at approximately 64 milliseconds.

The passenger's left knee X-axis displacement data channel, KNLXD2, recorded no valid data throughout the event due to a defective spike in the cable

The passenger's lower left tibia X-axis moment data channel, ANLXM2, exceeded its full-scale value from approximately 70 to 77 milliseconds.

Five barrier load cell channels did not fully return to the zero level following impact. This affected the Group 1, Group 4, Group 6, and full barrier totals. The load cells were as follows:

Row A, Cell 1, BA1F

Row A, Cell 2, BA2F

Row C, Cell 2, BC2F

Row C, Cell 9, BC9F

Row D, Cell 1, BD1F

Table 1 Crash Test Summary

Test mode:	Frontal load cell barrier		
Test date:	11/26/01		
Test time:	1043		
Ambient temperature:	21° C		
Vehicle year/make/ model/body style:	2001/Ford/Escape/MPV		
Vehicle test weight:	1796.4 kg		
Impact angle ¹ :	0°		
Impact velocity ² :	47.8 km/h		
Maximum static crush:	438 mm		
Average rebound:	114 mm		
Number of data channels:	173		
Number of cameras:	High-speed	14	Real-time 1
<u>Dummies:</u>	<u>Driver #206</u>		<u>Passenger #202</u>
Type:	Part 572E		Part 572E
Location:	Left front		Right front
Restraint:	Airbag, single stage		Airbag, single stage

Seat track position for test:

Driver:	Mid
Passenger:	Mid

Seat back position for test:

Driver:	17.2°
Passenger:	17.4°

Head restraint position for test:

Driver:	Fixed
Passenger:	Fixed
Steering column position:	Mid

¹ With respect to tow track centerline.

² Speed trap measurement (± .08 km/h accuracy)

Table 2 General Test and Vehicle Parameter Data

Vehicle year/make/ model/body style:	2001/Ford/Escape/MPV
VIN:	1FMYU04121KC57835
Model year:	2001
Body style	5-door MPV
Color:	Gray
Engine data:	
Cylinders:	6
Displacement	3.0 liters
Cylinder placement:	V
Engine placement:	Transverse
Transmission data:	<u>3</u> speed, <u> </u> manual, <u> X </u> automatic, <u> X </u> overdrive
Final drive:	<u> </u> FWD, <u> </u> RWD, <u> X </u> 4WD
Date vehicle received:	10/02/2001
Odometer reading:	327
Dealer's name and address:	Hal Gillam Ford 1775 South State Route 235 New Carlisle, OH 45344

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	None	Power door locks	Yes

Certification data from vehicle's label:

Vehicle manufactured by:	Ford Motor Company
Date of manufacture:	07/01
VIN:	1FMYU04121KC57835
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): Continental, Contitrac , 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: 1754 mm

Wheelbase: 2620 mm

Location of "Recommended Tire Pressure" label:

The label was located on the driver's door

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

Recommended tire size: P215/70R16 99T; P225/70R15 100S; P235/70R16

Recommended cold tire pressure:

Front: 207 kPa (30 psi)

Rear: 207 kPa (30 psi)

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 (by calculation; not on label)

Test vehicle attitude:

Delivered attitude: LF 821 mm; RF 829 mm; LR 861 mm; RR 854 mm

Fully loaded attitude: LF 810 mm; RF 815 mm; LR 825 mm; RR 829 mm

Pre-test attitude: LF 797 mm; RF 803 mm; LR 807 mm; RR 812 mm

Post-test attitude: LF 753 mm; RF 795 mm; LR 819 mm; RR 808 mm

Table 2 General Test and Vehicle Parameter Data Cont'd

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

Right front	459.0 kg	Right rear	308.0 kg
Left front	470.0 kg	Left rear	325.5 kg
Total front weight	929.0 kg	(59.5% of total vehicle weight)	
Total rear weight	633.5 kg	(40.5% of total vehicle weight)	
Total delivered weight	1562.5 kg		

Calculation of test vehicle's target test weight:

Total Delivered Weight (UDW) =	1562.5 kg
Rated Cargo/Luggage Weight (RCLW) ¹ =	68 kg
Weight of 2 Part 572E Dummies @ 76 kg each =	152 kg
Target test weight = UDW + RCLW + 152 =	1782.5 kg

Weight of test vehicle with required dummies and 81.9 kg of cargo weight:

Right front	498.0 kg	Right rear	398.2 kg
Left front	499.0 kg	Left rear	401.2 kg
Total front weight	997.0 kg	(55.5% of total vehicle weight)	
Total rear weight	799.4 kg	(44.5% of total vehicle weight)	
Total test weight ²	1796.4 kg	(0.8% over target test weight)	

Weight of ballast secured in vehicle: 13.6 kg steel plate on floor behind passenger seat

Components removed to meet target test weight: Right taillight

Location of Vehicle's CG: 1166 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.

² Derived from previous test. Note: Actual test is higher than calculated target test weight to match the test weight of previous Ford Escape in the test series (1796.6 kg).

Table 3 Post-Impact Data

Test number: 011126-1
Test date: 11/26/01
Test time: 1043
Test type: Frontal load cell barrier
Impact angle: 0°
Ambient temperature
at impact area: 21° C
Required impact velocity range: 47.3 to 48.9 km/h

Barrier impact velocity:

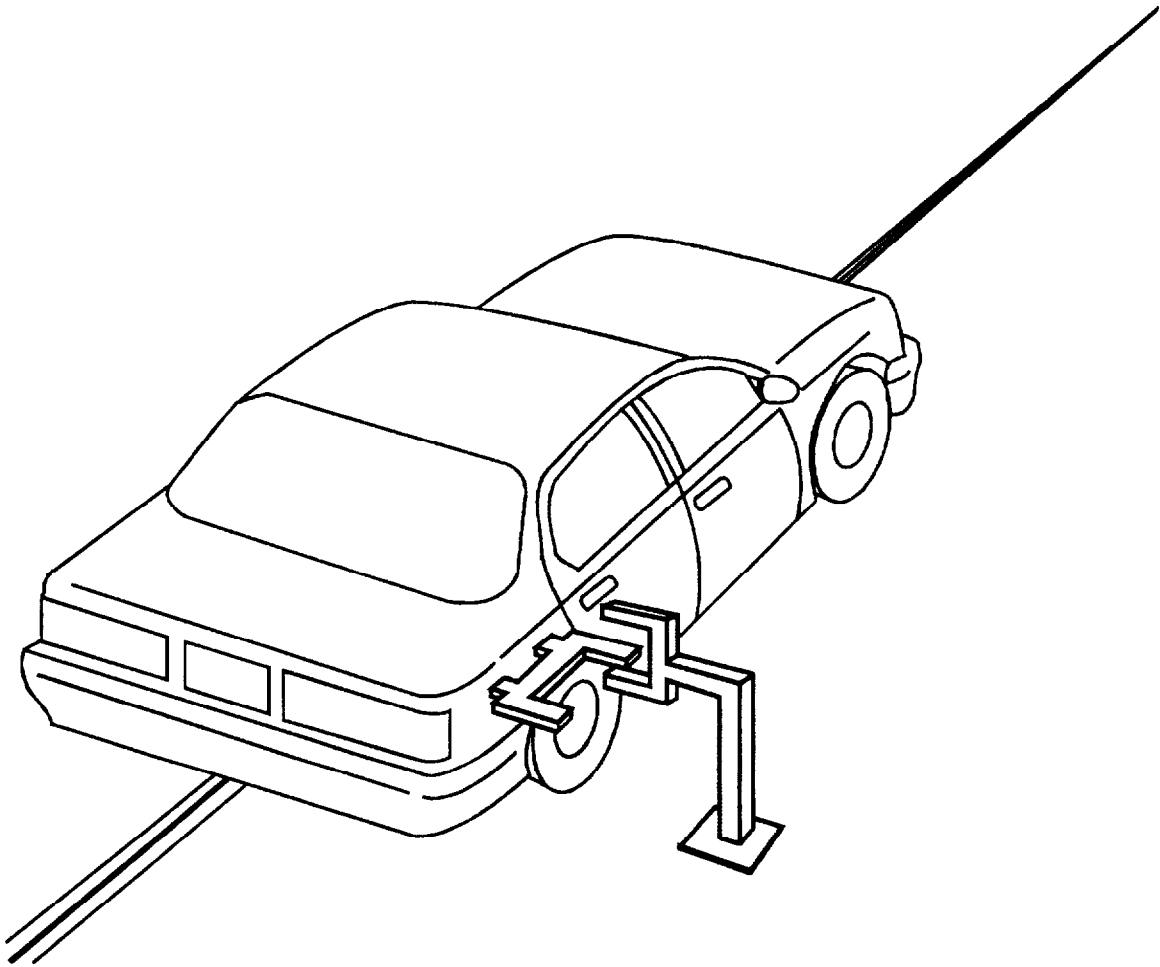
Primary: 47.8 km/h
Secondary: 47.8 km/h
Distance from vehicle to barrier:
Entering velocity trap: 356 mm
Exiting velocity trap: 51 mm

Vehicle rebound from flat rigid barrier:

Distance from test vehicle to barrier impact point:

Post-test: L 138 mm; C 95 mm; R 110 mm
Average rebound: 114 mm

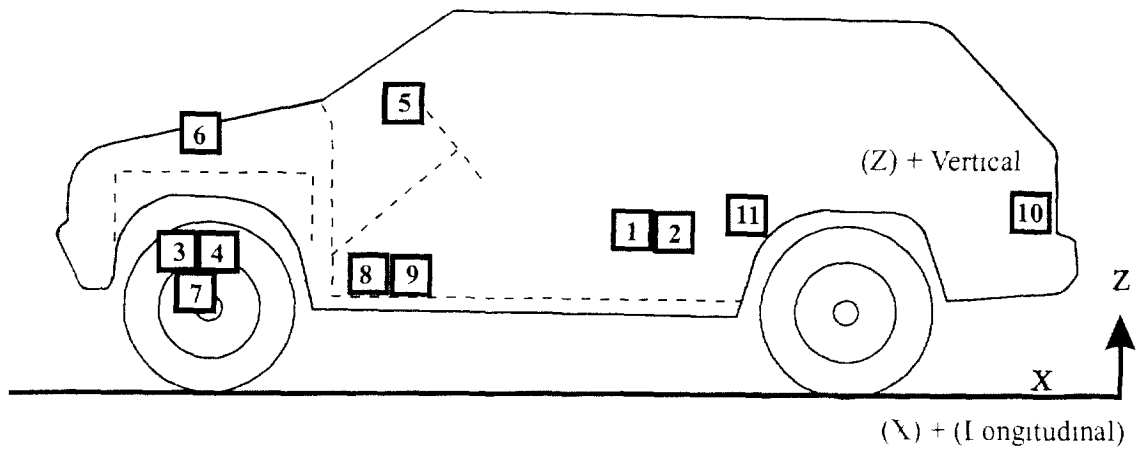
Figure 1 Impact Velocity Measurement System



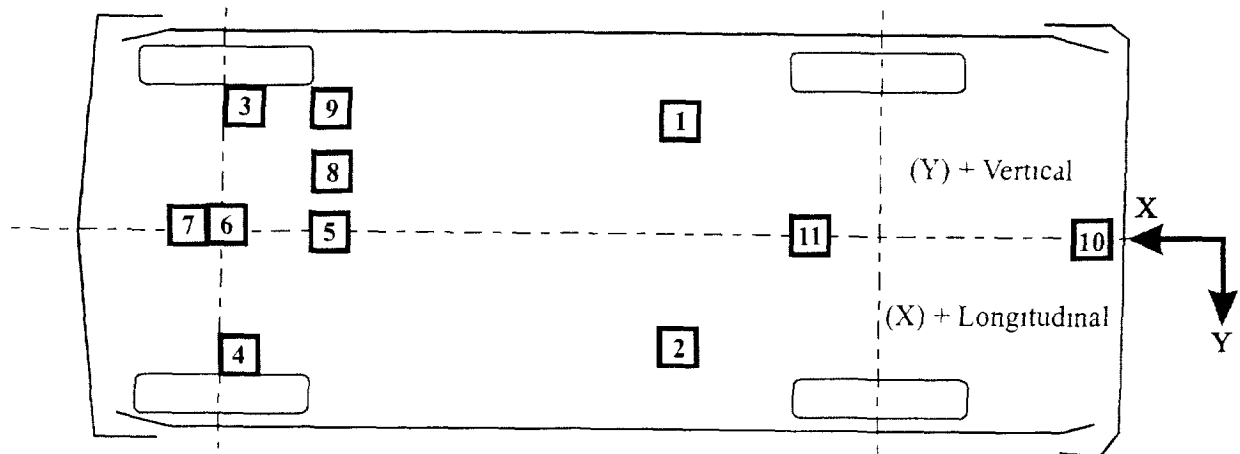
The final vane clears the final emitter/receiver pair 51 millimeters before impact

The vanes have 305-millimeter spacing.

Figure 2 Vehicle Accelerometer Placement

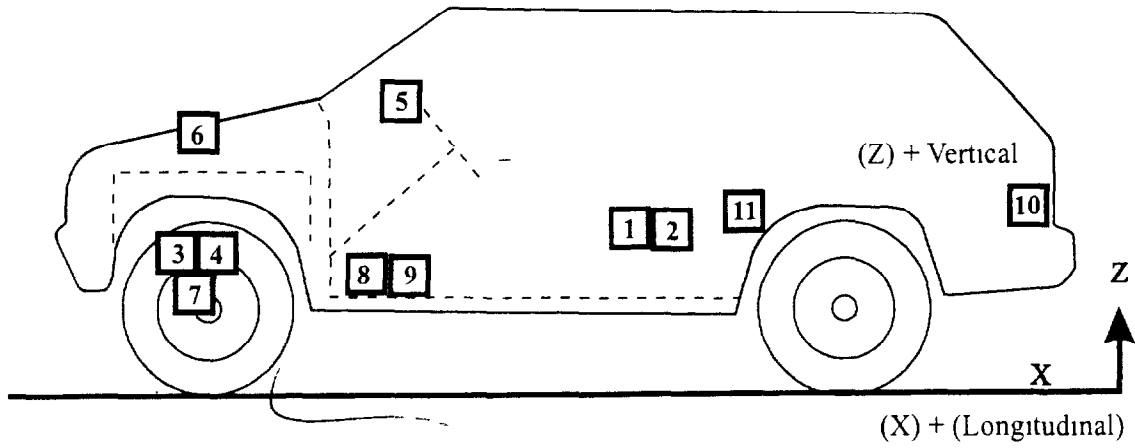


Side View

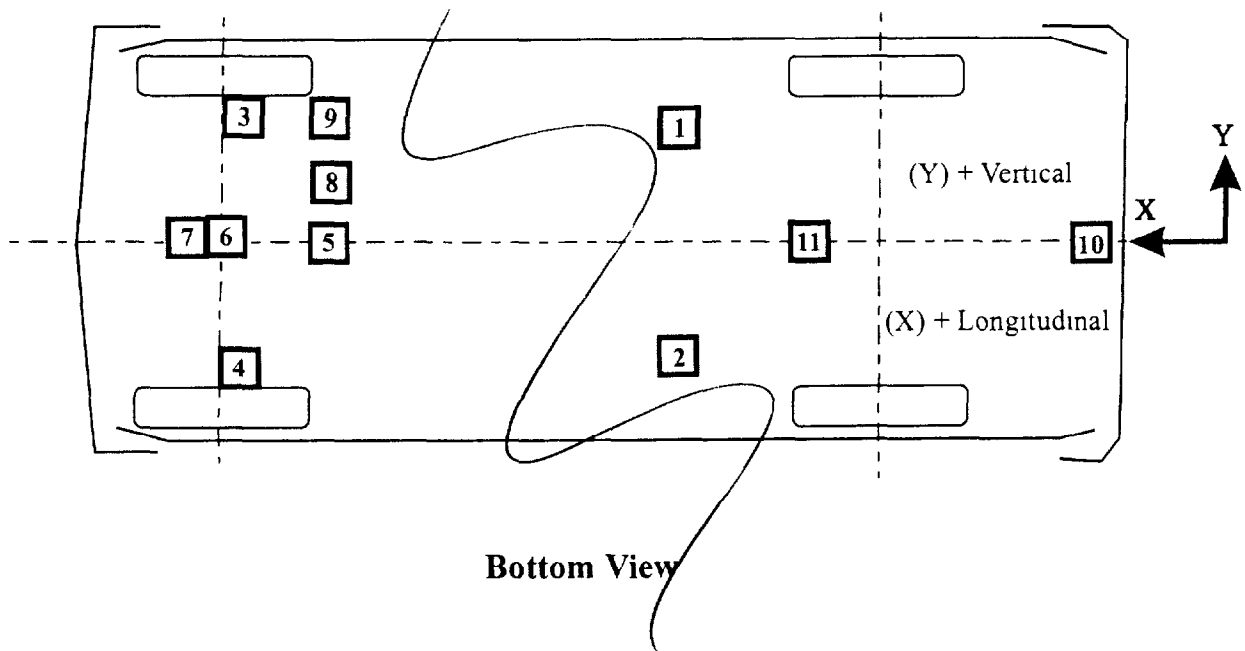


Bottom View

Figure 2 Vehicle Accelerometer Placement



Side View



Bottom View

Table 4 Vehicle Accelerometer Locations and Data Summary

TEST NUMBER: 011126 No. LOCATION	X	Y	Z	POSITIVE DIRECTION	NEGATIVE DIRECTION
1 LEFT REAR SEAT CROSSMEMBER LONGITUDINAL	1630 mm	-520 mm	581 mm	2.6 g @ 88.6 ms	41.4 g @ 36.2 ms
2 RIGHT REAR SEAT CROSSMEMBER LONGITUDINAL	1620 mm	564 mm	604 mm	2.5 g @ 111.4 ms	44.7 g @ 35.9 ms
3 FRONT BRAKE CALIPER LEFT LONGITUDINAL	3640 mm	-670 mm	363 mm	17.1 g @ 77.3 ms	88.8 g @ 39.2 ms
4 FRONT BRAKE CALIPER RIGHT LONGITUDINAL	3640 mm	670 mm	363 mm	18.4 g @ 75.1 ms	83.7 g @ 43.7 ms
5 DASH PANEL CENTER LONGITUDINAL	2995 mm	0 mm	1155 mm	21.9 g @ 67.5 ms	66.8 g @ 58.2 ms
6 ENGINE TOP LONGITUDINAL	3620 mm	80 mm	936 mm	30.0 g @ 35.1 ms	117.0 g @ 23.5 ms
7 ENGINE BOTTOM LONGITUDINAL	3823 mm	0 mm	228 mm	33.3 g @ 36.5 ms	124.3 g @ 29.9 ms

Table 4 Vehicle Accelerometer Locations and Data Summary. Cont'd.

TEST NUMBER: 011126 No. LOCATION	X	Y	Z	POSITIVE DIRECTION		NEGATIVE DIRECTION	
8 TOEPAN NEXT TO ACCEL LONGITUDINAL VERTICAL	3005 mm	-180 mm	397 mm	2.4 g 33.3 g	@ 112.6 ms @ 32.7 ms	44.9 g 21.3 g	@ 45.5 ms @ 65.0 ms
9 TOEPAN NEXT TO FOOTREST LONGITUDINAL VERTICAL	3020 mm	-510 mm	391 mm	2.4 g 40.8 g	@ 111.0 ms @ 35.0 ms	43.9 g 20.8 g	@ 34.1 ms @ 65.8 ms
10 REAR DECK VERTICAL	180 mm	0 mm	577 mm	14.2 g	@ 79.4 ms	27.9 g	@ 38.0 ms
11 REAR COMPARTMENT CENTER LONGITUDINAL	1040 mm	0 mm	636 mm	3.1 g	@ 89.0 ms	46.4 g	@ 35.6 ms

REFERENCE: X: + FORWARD FROM REAR BUMPER
Y: + RIGHTWARD FROM VEHICLE CENTERLINE
Z: + UPWARD FROM GROUND LEVEL

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	-94.3 g	-10.0 g	72.7 g	116.9 g	-51.2 g	5.1 g	30.5 g
Passenger	-86.7 g	-17.3 g	38.4 g	92.4 g	-57.0 g	-4.8 g	30.5 g

<u>Maximum Femur Compressive Force</u>		
	Left Femur	Right Femur
Driver	7536 N	N/A ⁴
Passenger	7197 N	13051 N

<u>Head Injury Criteria²</u>			
36 millisecond			
	HIC	Time t ₁	Time t ₂
Driver	628	63.4 ms	73.6 ms
Passenger	395	65.8 ms	75.4 ms

15 millisecond			
	HIC	Time t ₁	Time t ₂
Driver	628	63.4 ms	73.6 ms
Passenger	395	65.8 ms	75.4 ms

<u>Chest Maximum Resultant Acceleration³</u>			
	Acceleration	Time t ₁	Time t ₂
Driver	54.0 g	77.7 ms	82.1 ms
Passenger	57.8 g	79.1 ms	82.1 ms

Table 5 Dummy Injury Criteria Data, Cont'd

Maximum Chest Deflection

Driver	49 mm
Passenger	15 mm

Neck Injury Calculations (Nij)²

	NTF	NTE	NCF	NCE
Driver	0.25	0.06	0.39	0.15
Passenger	0.24	0.20	0.39	0.02

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>Passenger</u>
Head	Airbag, visor, windshield	Airbag, visor
Chest	Airbag	Airbag
Abdomen	Lower steering wheel	None
Left knee	Knee bolster	Knee bolster
Right knee	Knee bolster	Knee bolster

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	N/A	N/A

Glazing damage: Starburst cracking at head contact points

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

Section 4 0

Occupant, Camera, Barrier, and Vehicle Information

Dummy Kinematic Summary

Driver Dummy

Upon impact, the driver dummy translated forward in the seat impacting both knees into the instrument panel. The dummy's head contacted the airbag with the neck initially going into extension as it contacted the visor and then the head and neck flexed forward contacting the windshield. The chest contacted the airbag and the lower chest and abdomen contacted the lower steering wheel rim. As the dummy rebounded into the seat back, the dummy's head contacted the visor and extended rearward, contacting the headrest. The driver dummy came to rest seated in the driver's seat.

Right Front Passenger Dummy

Upon impact, the passenger dummy translated forward in the seat impacting both knees into the instrument panel. The dummy's neck extended rearward as the dummy's face and chest impacted the airbag. The dummy's head also contacted the forward edge of the sun visor. As the dummy rebounded into the seat back, the dummy's head rotated forward and then rearward, contacting the headrest. The dummy came to rest seated in the passenger's seat.

Figure 3 Dummy Measurement Locations for Front Seat Occupants

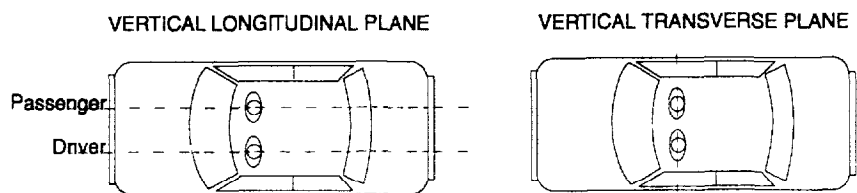
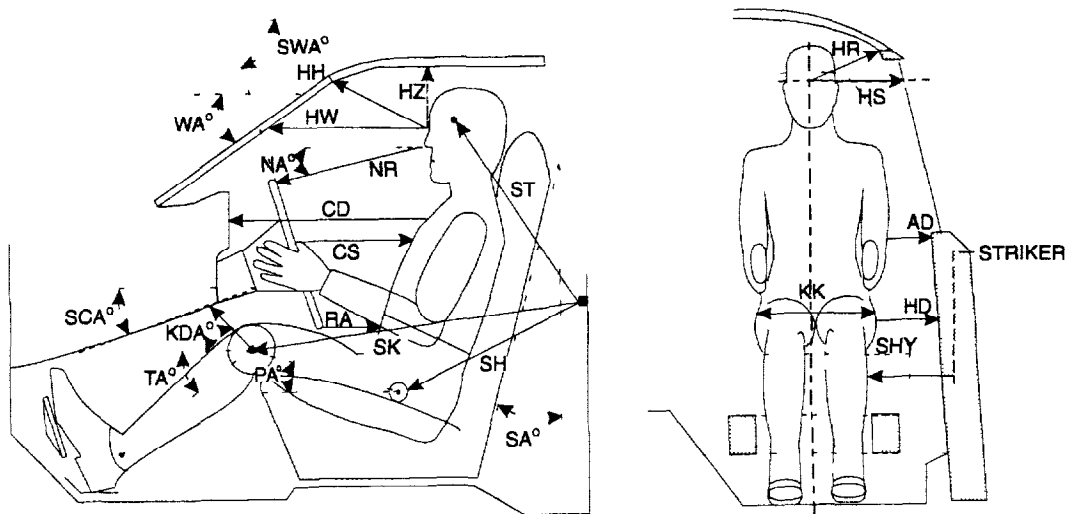


Table 7 Dummy Measurement Data For Front Seat Occupants

Designation	Type of Measurement	Driver (Serial # 206)	Passenger (Serial # 202)
WA	Windshield angle	35.4°	35.4°
SWA	Steering wheel angle	63.0°	N/A
SCA	Steering column angle	27.0°	N/A
SA	Seat back angle	17.2°	17.4°
HZ	Head to roof	210 mm	219 mm
HH	Head to header	373 mm	381 mm
HW	Head to windshield	585 mm	611 mm
HR	Head to side header	232 mm	245 mm
NR	Nose to rim	429 mm	N/A
NA	Nose to rim angle	19.2°	N/A
CD	Chest to dash	533 mm	549 mm
CS	Steering wheel to chest	316 mm	N/A
RA	Rim to abdomen	198 mm	N/A
KDL	Left knee to dash	128 mm	129 mm
KDR	Right knee to dash	128 mm	136 mm
KDA	Outboard knee to dash angle	59.2°	71.0°
PA	Pelvic angle	21.0°	23.6°
TA	Tibia angle	43.5°	51.5°
KK	Knee to knee	300 mm	270 mm
ST ¹	Striker to head	550 mm	555 mm
	Striker to head angle	-78.0°	-78.5°
SK ¹	Striker to knee	599 mm	590 mm
	Striker to knee angle	2.2°	3.3°
SH ¹	Striker to H-point	230 mm	215 mm
	Striker to H-point angle	31.9°	31.7°
SHY	Striker to H-point (Y dir.)	223 mm	196 mm
HS	Head to side window	248 mm	256 mm
HD	H-point to door	155 mm	137 mm
AD	Arm to door	103 mm	95 mm

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

¹ A negative angle indicates the measurement point was above the striker.

Descriptions of Dummy Measurements

When a level is to be used, it is to ensure that the line containing the two points described is either parallel or perpendicular to the ground. If a measurement to be made is less than 10 inches ignore the directions to use a level and approximate a level measurement. Also, when a measurement is to be taken to or from the center of a bolt on the dummy, take the measurement from the center of the bolt hole if the bolt is recessed.

The following measurements are to be made within a vertical longitudinal plane.

- ˆ HH Head to Header, taken from the point where the dummy's nose meets his forehead (between his eyes) to the furthest point forward on the header
- * HW Head to Windshield, taken from the point where the dummy's nose meets his forehead (between his eyes) to a point on the windshield. Use a level
- HZ Head to Roof, taken from the point where the dummy's nose meets his forehead (between his eyes) to the point on the roof directly above it. Use a level
- † CS Steering Wheel to Chest, taken from the center of the steering wheel hub to the dummy's chest. Use a level
- * CD Chest to Dash, place a tape measure on the tip of the dummy's chin and rotate five inches of it downward toward the dummy to the point of contact on the transverse center of the dummy's chest. Then measure from this point to the closest point on the dashboard either between the upper part of the steering wheel between the hub and the rim, or measure to the dashboard placing the tape measure above the rim, whichever is a shorter measurement. See diagram.
- RA Steering Wheel Rim to Abdomen, taken from the bottommost point of the steering wheel rim horizontally rearward to the dummy. Use a level.
- NR Nose to Rim, taken from the tip of the dummy's nose to the closest point on the top of the steering wheel rim. Also indicate the angle this line makes with respect to the horizontal (NA)
- *¹ KDL, Left and Right Knees to Dashboard, taken from the center of the knee pivot bolt's outer surface to the closest point forward acquired by swinging the tape measure in continually larger arcs until it contacts the dashboard. Also reference the angle of this measurement with respect to the horizontal for the outboard knee (KDA). See diagram

* Measurement used in Data Tape Reference Guide

¹ Only outboard measurement is referenced in Data Tape Reference Guide

Descriptions of Dummy Measurements, Cont'd.

SH, Striker to Hip, Knee, and Head, these measurements are to be taken in the X-
SK, Z plane measured from the forward most center point on the striker to the
ST center of the H-point, outer knee bolt, and head target. When taking this
measurement a firm device that can be rigidly connected to the striker should
be used. Use a level. The angles of these measurements with respect to the
horizontal should also be recorded. The measurement in the Y (transverse)
direction from the striker to the H-point should also be taken (SHY). See
diagram.

The following measurements are to be made within a vertical transverse plane.

- HS Head to Side Window, taken from the point where the dummy's nose meets
his forehead (between his eyes) to the outside of the side window. In order to
make this measurement, roll the window down to the exact height which
allows a level measurement. Use a level See diagram.
- * AD Arm to Door, taken from the outer surface of the elbow pivot bolt on a Hybrid
II dummy to the first point it hits on the door. In the case of a Hybrid III
dummy, measure from the bolt on the outer biceps. When a SID is used make
the measurement from the center of the bottom of the arm segment where it
meets the dummy's torso.
- * HD H-point to Door, taken from the H-point on the dummy to the closest point on
the door. Use a level.
- * HR Head to Side Header, measure the shortest distance from the point where the
dummy's nose meets his forehead (between his eyes) to the side edge of the
header just above the window frame, directly adjacent to the dummy.
- SHY Striker to H-point, taken from a rod rigidly connected to the forward most
center point on the striker to the H-point. Use a level. See diagram.
- KK Knee to Knee, for Hybrid II dummies measure the distance between knee
pivot bolt head outer surfaces. For Hybrid III dummies measure the distance
between the outboard knee clevis flange surfaces. (This measurement may
not be exactly transverse.)

Angles

- SA Seat Back Angle, find this angle using the instructions provided by the
manufacturer. If the manufacturer doesn't provide clear instructions contact
the COTR.

* Measurement used in Data Tape Reference Guide

Descriptions of Dummy Measurements, Cont'd.

- PA Pelvic or Femur Angle, taken by inserting the pelvic angle gauge into the H-point gauging hole on the SID or the Hybrid III dummies and taking this angle with respect to the horizontal. Measure the angle of the line connecting the H-point hole and the outer knee pivot bolt hole on a Hybrid II dummy with respect to the horizontal, to find the femur angle.
- SWA Steering Wheel Angle, find this by placing a straight edge against the steering wheel rim along the longitudinal plane. Then measure the acute angle of the straight edge with respect to the horizontal.
- SCA Steering Column Angle, measured with respect to the horizontal by placing an inclinometer on the center of the underside of the steering column.
- NA Measure the angle made when taking the measurement NR with respect to the horizontal.
- KDA Knee to Dash Angle, the angle that the measurement KD is taken at with respect to the horizontal. Only get this angle for the outboard knee. See diagram.
- WA Windshield Angle, place an inclinometer along the transverse center of the windshield exterior (measurement is made with respect to horizontal).
- TA Tibia Angle, use a straight edge to connect the dummy's knee and ankle bolts. Then place an inclinometer on the straight edge and measure the angle with respect to the horizontal.

Figure 4 Pre-Test And Post-Test Measurement Points

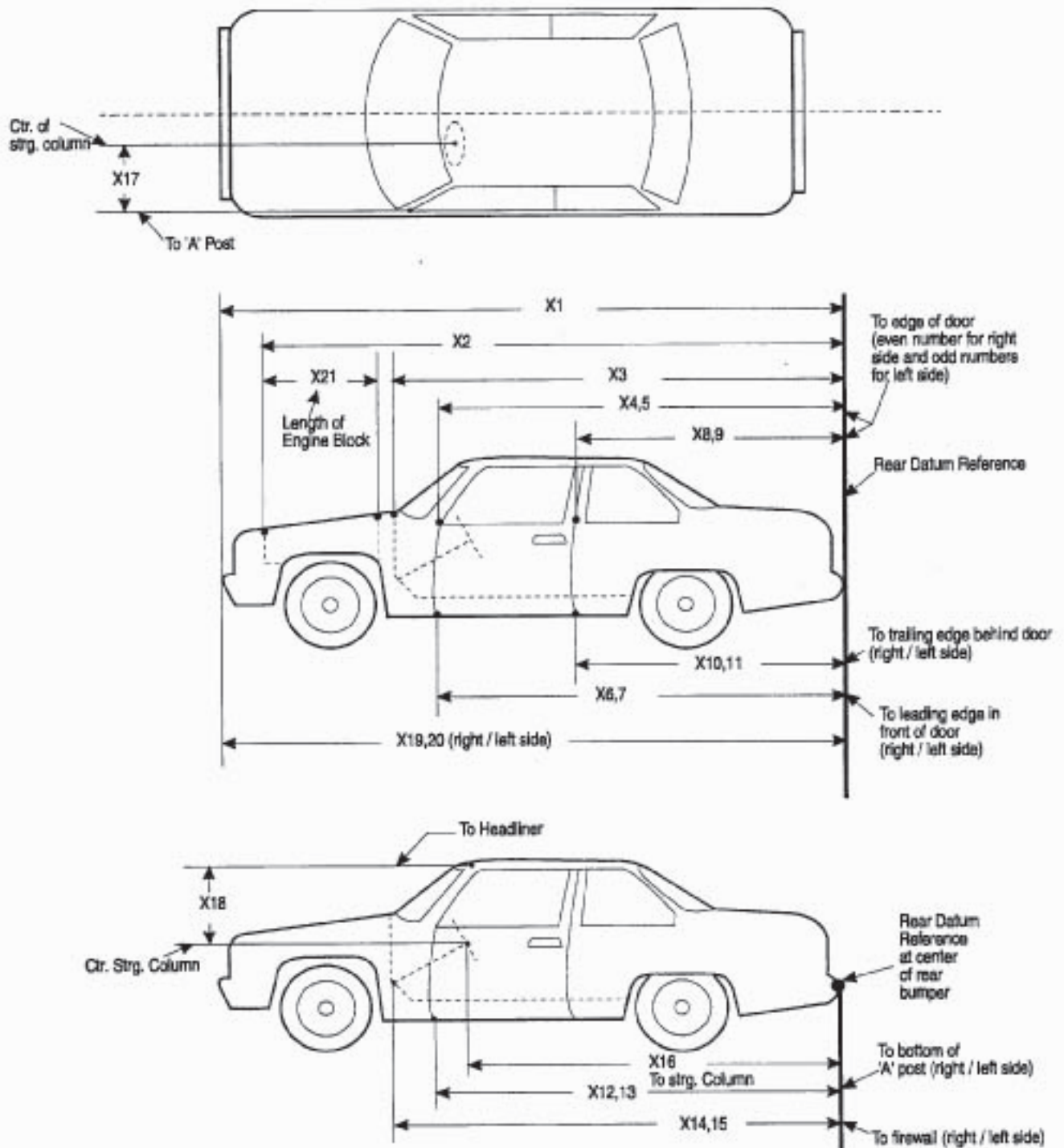


Table 8 Impacted Vehicle Measurements

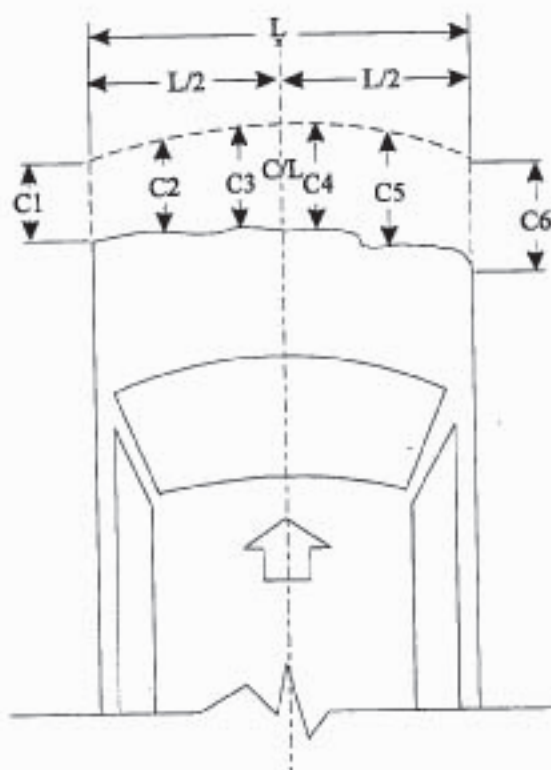
Test number: 011126-1

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

No.	Type of measurement	Pre-Test	Post-Test	Difference
X1	Total Length of Vehicle at Centerline	4375	3975	400
X2	Rear Surface of Vehicle to Front of Engine Block	3620	3375	245
X3	Rear Surface of Vehicle to Firewall	3399	3345	54
X4	Rear Surface of Veh. to Upper Leading Edge of Right Door	2999	2995	4
X5	Rear Surface of Veh. to Upper Leading Edge of Left Door	3009	2998	11
X6	Rear Surface of Veh. to Lower Leading Edge of Right Door	2941	2935	6
X7	Rear Surface of Veh. to Lower Leading Edge of Left Door	2960	2945	15
X8	Rear Surface of Veh. to Upper Trailing Edge of Right Door	2000	1995	5
X9	Rear Surface of Veh. to Upper Trailing Edge of Left Door	2014	2000	14
X10	Rear Surface of Veh. to Lower Trailing Edge of Right Door	2005	2007	-2
X11	Rear Surface of Veh. to Lower Trailing Edge of Left Door	2030	2020	10
X12	Rear Surface of Veh. to Bottom of " A " Post on Right Side	2990	2985	5
X13	Rear Surface of Veh. to Bottom of " A " Post on Left Side	3010	2990	20
X14	Rear Surface of Vehicle to Firewall--Right Side	3435	3385	50
X15	Rear Surface of Vehicle to Firewall --Left Side	3448	3420	28
X16	Rear Surface of Vehicle to Steering Wheel Center	2595	2560	35
X17	Center of Steering Column to " A " Post	378	308	70
X18	Center of Steering Column to Headliner	475	730	-255
X19	Rear Surface of Vehicle to Right Side of Front Bumper	4235	3965	270
X20	Rear Surface of Vehicle to Left Side of Front Bumper	4240	3900	340
X21	Length of Engine Block	500	500	0
RD	Rear Surface of Vehicle to Right Side of Dash Panel	2885	2875	10
CD	Rear Surface of Vehicle to Center of Dash Panel	2860	2853	7
LD	Rear Surface of Vehicle to Left Side of Dash Panel	2878	2875	3

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

Location	Pre-test	Post-test	Difference
L	1525 mm		
C1	4240 mm	3900 mm	340 mm
C2	4365 mm	3935 mm	430 mm
C3	4375 mm	3975 mm	400 mm
C4	4375 mm	3975 mm	400 mm
C5	4360 mm	3935 mm	425 mm
C6	4235 mm	3965 mm	270 mm
CL	4375 mm	3975 mm	400 mm

Table 9 Test Vehicle Frontal Profile Data

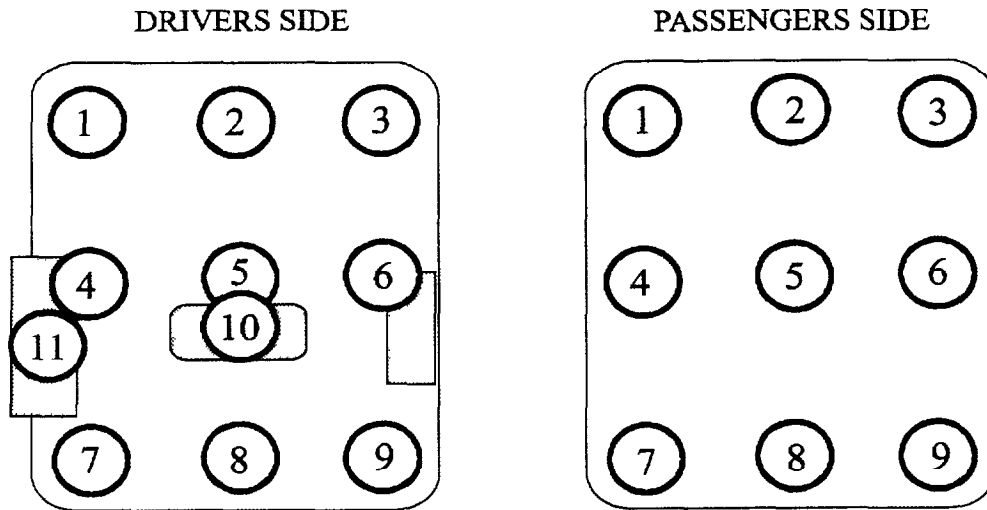
Pre-Test Profile							
		Vehicle Left			Vehicle Right		
		Point 1	Point 2	Point 3	Point 4	Point 5	Point 6
Bottom of Front Bumper	X	4234 mm	4370 mm	4374 mm	4371 mm	4360 mm	4231 mm
	Y	760 mm	455 mm	150 mm	150 mm	455 mm	760 mm
	Z	522 mm	526 mm	522 mm	523 mm	525 mm	533 mm
Top of Front Bumper	X	4220 mm	4342 mm	4359 mm	4360 mm	4334 mm	4211 mm
	Y	770 mm	455 mm	150 mm	150 mm	455 mm	760 mm
	Z	707 mm	714 mm	711 mm	714 mm	714 mm	708 mm
Center of Grille	X	4152 mm	4306 mm	4304 mm	4301 mm	4310 mm	4145 mm
	Y	760 mm	450 mm	145 mm	155 mm	445 mm	760 mm
	Z	803 mm	811 mm	789 mm	793 mm	804 mm	825 mm
Front of Hood	X	4096 mm	4250 mm	4282 mm	4279 mm	4249 mm	4090 mm
	Y	750 mm	445 mm	145 mm	150 mm	460 mm	755 mm
	Z	924 mm	870 mm	874 mm	879 mm	873 mm	922 mm

Post-Test Profile							
		Vehicle Left			Vehicle Right		
		Point 1	Point 2	Point 3	Point 4	Point 5	Point 6
Bottom of Front Bumper	X	3910 mm	3954 mm	3985 mm	3985 mm	3965 mm	3965 mm
	Y	760 mm	455 mm	150 mm	150 mm	455 mm	750 mm
	Z	578 mm	623 mm	633 mm	634 mm	629 mm	644 mm
Top of Front Bumper	X	3920 mm	3904 mm	3950 mm	3955 mm	3925 mm	3930 mm
	Y	760 mm	455 mm	150 mm	150 mm	457 mm	755 mm
	Z	760 mm	785 mm	803 mm	813 mm	816 mm	816 mm
Center of Grille	X	N/A mm	3908 mm	3915 mm	3915 mm	3925 mm	3935 mm
	Y	N/A mm	455 mm	145 mm	155 mm	460 mm	755 mm
	Z	866 mm	892 mm	900 mm	911 mm	907 mm	914 mm
Front of Hood	X	3960 mm	3896 mm	3910 mm	3910 mm	3915 mm	3875 mm
	Y	740 mm	450 mm	145 mm	150 mm	455 mm	745 mm
	Z	1100 mm	970 mm	953 mm	968 mm	1000 mm	1160 mm

Difference							
		Vehicle Left			Vehicle Right		
		Point 1	Point 2	Point 3	Point 4	Point 5	Point 6
Bottom of Front Bumper	X	324 mm	416 mm	389 mm	386 mm	395 mm	266 mm
	Y	0 mm	0 mm	0 mm	0 mm	0 mm	10 mm
	Z	-56 mm	-97 mm	-111 mm	-111 mm	-104 mm	-111 mm
Top of Front Bumper	X	300 mm	438 mm	409 mm	405 mm	409 mm	281 mm
	Y	10 mm	0 mm	0 mm	0 mm	-2 mm	5 mm
	Z	-53 mm	-71 mm	-92 mm	-99 mm	-102 mm	-108 mm
Center of Grille	X	N/A mm	398 mm	389 mm	386 mm	385 mm	210 mm
	Y	N/A mm	-5 mm	0 mm	0 mm	-15 mm	5 mm
	Z	-63 mm	-81 mm	-111 mm	-118 mm	-103 mm	-89 mm
Front of Hood	X	136 mm	354 mm	372 mm	369 mm	334 mm	215 mm
	Y	10 mm	-5 mm	0 mm	0 mm	5 mm	10 mm
	Z	-176 mm	-100 mm	-79 mm	-89 mm	-127 mm	-238 mm

Note X-axis measurements referenced forward of the rear bumper centerline Y-axis measurements are left and right of the original vehicle centerline Y-axis measurements (6 points) divide the width of the car Z-axis (height) measurements are from the ground

Figure 6 Toeboard Measurements



Driver's Side Floorpan Measurements

Floorpan Location	X			Z		
	Pre-Test	Post-Test	Difference	Pre-Test	Post-Test	Difference
1	3165 mm	3115 mm	50 mm	513 mm	555 mm	-42 mm
2	3175 mm	3090 mm	85 mm	496 mm	545 mm	-49 mm
3	3175 mm	3145 mm	30 mm	478 mm	535 mm	-57 mm
4	3130 mm	3105 mm	25 mm	420 mm	475 mm	-55 mm
5	3120 mm	3065 mm	55 mm	433 mm	465 mm	-32 mm
6	3110 mm	3110 mm	0 mm	428 mm	455 mm	-27 mm
7	3055 mm	3055 mm	0 mm	391 mm	395 mm	-4 mm
8	3050 mm	3050 mm	0 mm	398 mm	385 mm	13 mm
9	3050 mm	3050 mm	0 mm	397 mm	410 mm	-13 mm
10	3045 mm	3040 mm	5 mm	557 mm	530 mm	27 mm
11	3015 mm	3000 mm	15 mm	446 mm	395 mm	51 mm

Passenger's Side Floorpan Measurements

Floorpan Location	X			Z		
	Pre-Test	Post-Test	Difference	Pre-Test	Post-Test	Difference
1	3215 mm	3165 mm	50 mm	510 mm	510 mm	0 mm
2	3205 mm	3115 mm	90 mm	527 mm	552 mm	-25 mm
3	3160 mm	3130 mm	30 mm	567 mm	562 mm	5 mm
4	3150 mm	3115 mm	35 mm	467 mm	440 mm	27 mm
5	3150 mm	3080 mm	70 mm	468 mm	485 mm	-17 mm
6	3135 mm	3110 mm	25 mm	505 mm	485 mm	20 mm
7	3075 mm	3070 mm	5 mm	414 mm	390 mm	24 mm
8	3079 mm	3055 mm	24 mm	415 mm	395 mm	20 mm
9	3085 mm	3070 mm	15 mm	419 mm	345 mm	74 mm

Reference: +X forward from rear bumper; +Z upward from ground level

Table 10 Intrusion of Upper Instrument Panel

Pre-Test

	X	Y	Z
Driver Left Knee	2795 mm	545 mm	886 mm
Driver Right Knee	2795 mm	230 mm	898 mm
Passenger Left Knee	2765 mm	237 mm	861 mm
Passenger Right Knee	2765 mm	603 mm	858 mm

Post-Test

	X	Y	Z
Driver Left Knee	2810 mm	545 mm	835 mm
Driver Right Knee	2795 mm	245 mm	865 mm
Passenger Left Knee	2785 mm	230 mm	896 mm
Passenger Right Knee	2775 mm	600 mm	888 mm

Difference

	X	Y	Z
Driver Left Knee	-15 mm	0 mm	51 mm
Driver Right Knee	0 mm	-15 mm	33 mm
Passenger Left Knee	-20 mm	7 mm	-35 mm
Passenger Right Knee	-10 mm	3 mm	-30 mm

Instructions: Mark a point to be measured pre and post which is just above where the four (4) knees would be expected to contact the instrument panel.

+X: Forward from rear bumper

+Y: From centerline

+Z: Upward from ground level

Table 11 Fuel System Data

Usable fuel system capacity:	61 liters (from owner's manual)
Test volume range:	56.1 - 57.3 liters (92-94% of usable)
Actual test volume:	56.4 liters (92.5% 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 located in front of the rear suspension. The fuel filler neck runs out of the left rear of the tank with the fuel filler cap on the end of the neck opening above the wheel well. The fuel lines route along the inside of the left frame rail.

Figure 7 Camera Positions

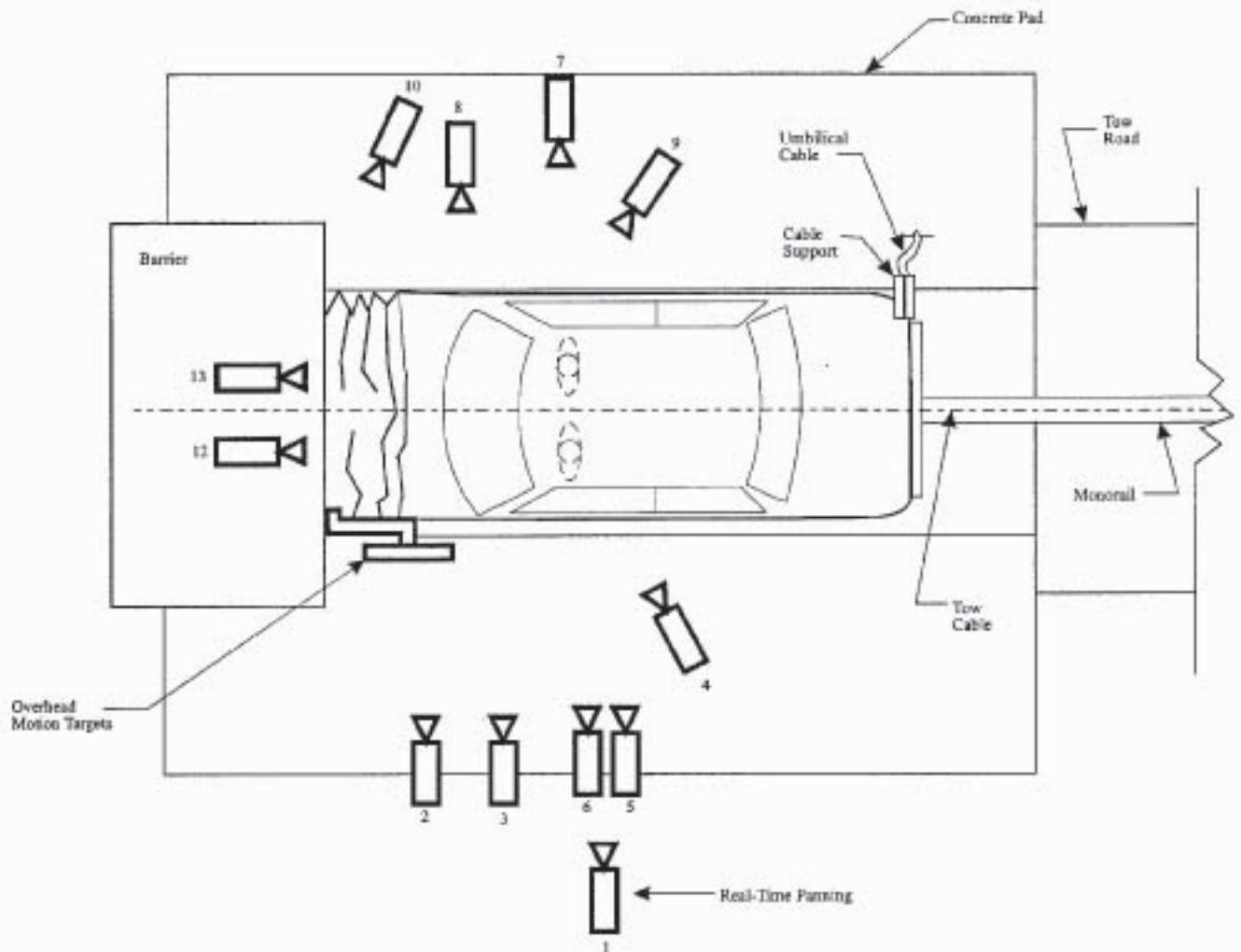


Figure 7 Camera Positions, Cont'd.

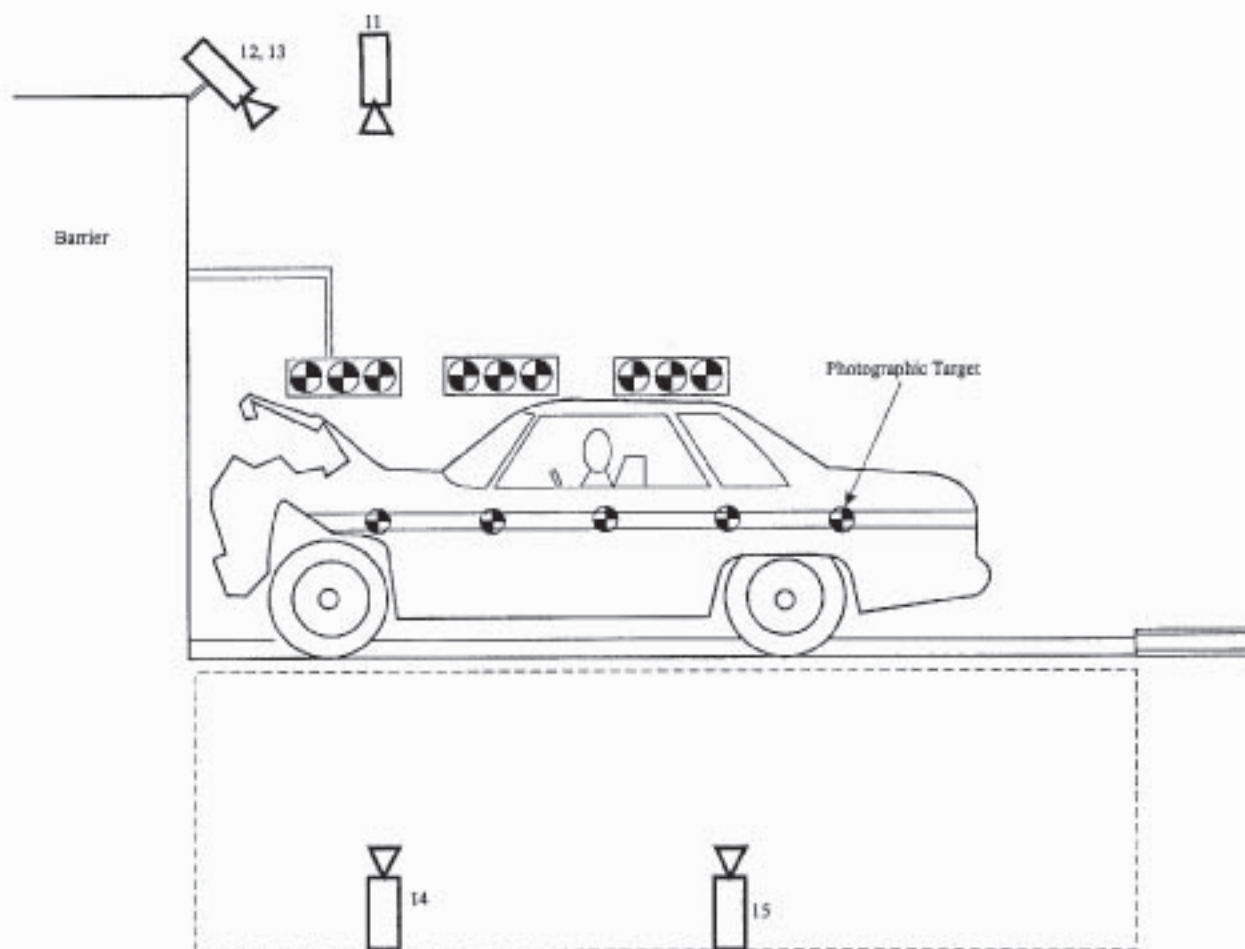


Table 12. Camera Information

No.	View	Type	Lens	Film Speed	Camera Positions ¹			Angle ²	Film Plane to Head Target
					X	Y	Z		
1	Real-time panning	Bolex		24 frames/s	N/A	N/A	N/A	N/A	N/A
2	Left side medium tight	Hycam	25 mm	1010 frames/s	565 mm	-9000 mm	1535 mm	-2.8	8650 mm
3	Left tight dummy	Photosonic	50 mm	1005 frames/s	1270 mm	-8220 mm	1430 mm	-0.7	7820 mm
4	Left angled on dummy	Photosonic	25 mm	1015 frames/s	2870 mm	-2720 mm	2230 mm	-18.1	2290 mm
5	Left steering column upper	Photosonic	25 mm	997 frames/s	2220 mm	-8000 mm	2100 mm	-11.8	7665 mm
6	Left steering column lower	Photosonic	25 mm	1000 frames/s	2220 mm	-7910 mm	1640 mm	-3.3	7600 mm
7	Right side overall	Photosonic	13 mm	1000 frames/s	2557 mm	7690 mm	1265 mm	-1.5	7350 mm
8	Right tight dummy	Photosonic	50 mm	997 frames/s	807 mm	6850 mm	1330 mm	-0.6	6660 mm
9	Right angled on dummy	Photosonic	25 mm	1000 frames/s	3100 mm	2300 mm	2160 mm	-18.2	1900 mm
10	Right side passenger	Hycam	25 mm	1000 frames/s	237 mm	7100 mm	1555 mm	-3.5	6820 mm
11	Overhead	Photosonic	8.5 mm	1005 frames/s	160 mm	0 mm	2540 mm	-53.2	2290 mm
12	Barrier driver	Photosonic	17 mm	1000 frames/s	140 mm	-350 mm	2560 mm	-48.3	2165 mm
13	Barrier passenger	Photosonic	17 mm	1005 frames/s	160 mm	350 mm	2540 mm	-53.2	2300 mm
14	Pit front	Photosonic	17 mm	1000 frames/s	1255 mm	0 mm	940 mm	90.0	N/A
15	Pit rear	Photosonic	13 mm	1000 frames/s	1785 mm	0 mm	940 mm	90.0	N/A

¹ +X = Film plane in front of (upstream from) barrier face

+Y = Film plane to right of monorail centerline

+Z = Film plane above ground level

² +Angle = Film plane angled upward from horizontal plane

Description Of Timing Marks On TRC Inc. High-Speed Film

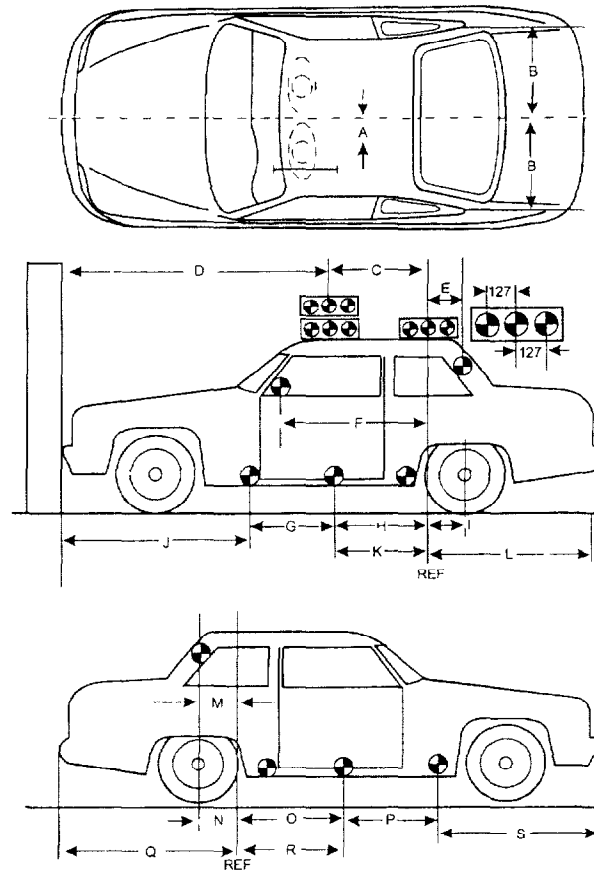
All TRC Inc high-speed cameras are equipped with red LEDs which put timing marks on the right edge of the film. TRC Inc uses a single timing generator to generate the timing for all cameras. This allows the timing marks to be common to all cameras. The timing marks can be used to measure camera speed (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 Photosonic 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.

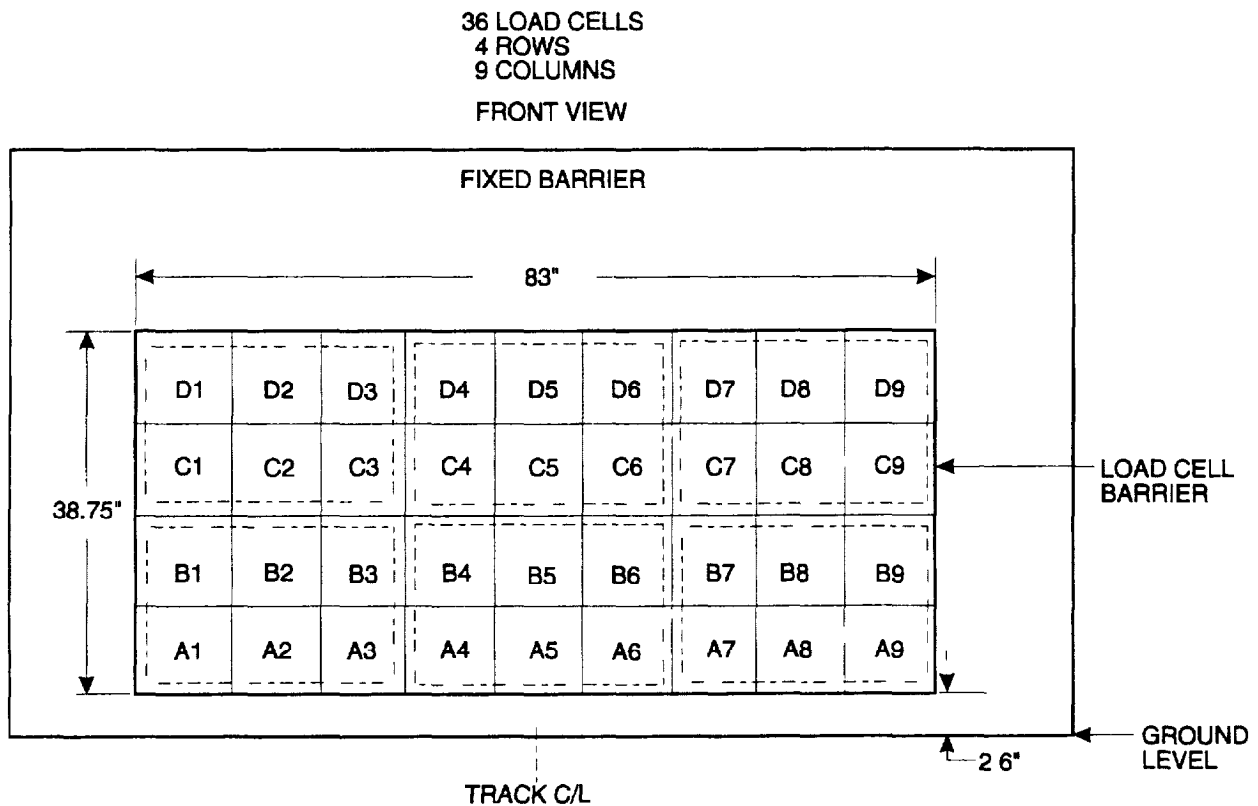
Figure 8 Vehicle Reference Photo Target Locations



Measurement	Pre-Test
A	370 mm
B	630 mm
C	610 mm
D	920 mm
E	470 mm
F	1600 mm
G	844 mm
H	820 mm
I	259 mm
J	1325 mm
K	558 mm
L	1655 mm
M	475 mm
N	275 mm
O	831 mm
P	840 mm
Q	1655 mm
R	558 mm
S	1330 mm

Additional targeting
Inch tape along the top
and sides of the vehicle
has targets placed at
300 mm intervals
except the first side
target is placed 600 mm
from front of front
bumper

Figure 9 Load Cell Locations on Fixed Barrier



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

The following data is presented as data plots at the end of Appendix B:

- 1) Data from 36 individual load cells
- 2) Total of 36 individual load cells
- 3) Data from 6 groupings shown above (6 cells/groups)

Appendix A

Photographs

V3848



Figure A-1 Pre-Test Front View



Figure A-2 Post-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

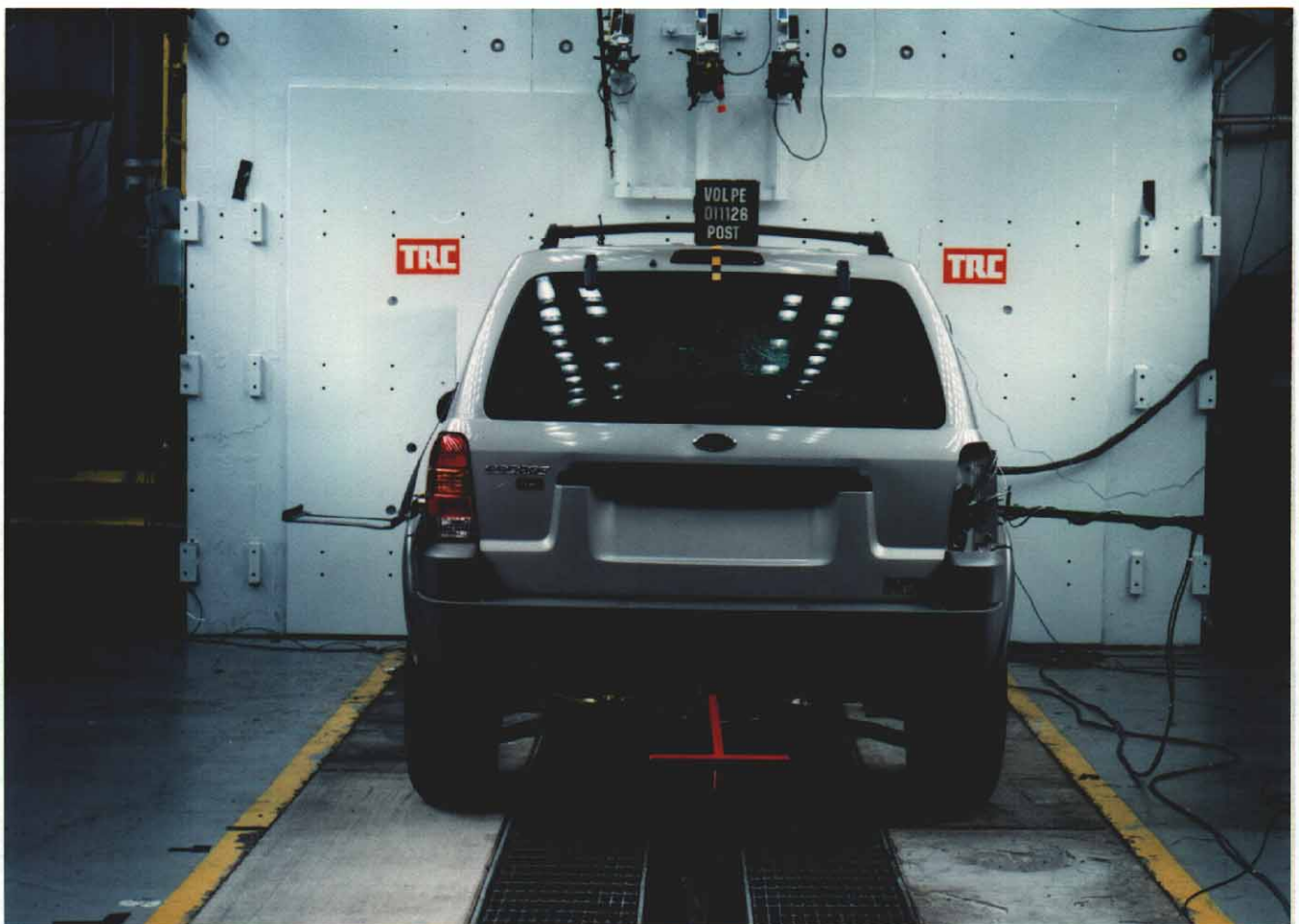


Figure A-10 Post-Test Rear View



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-16 Post-Test Right Front View

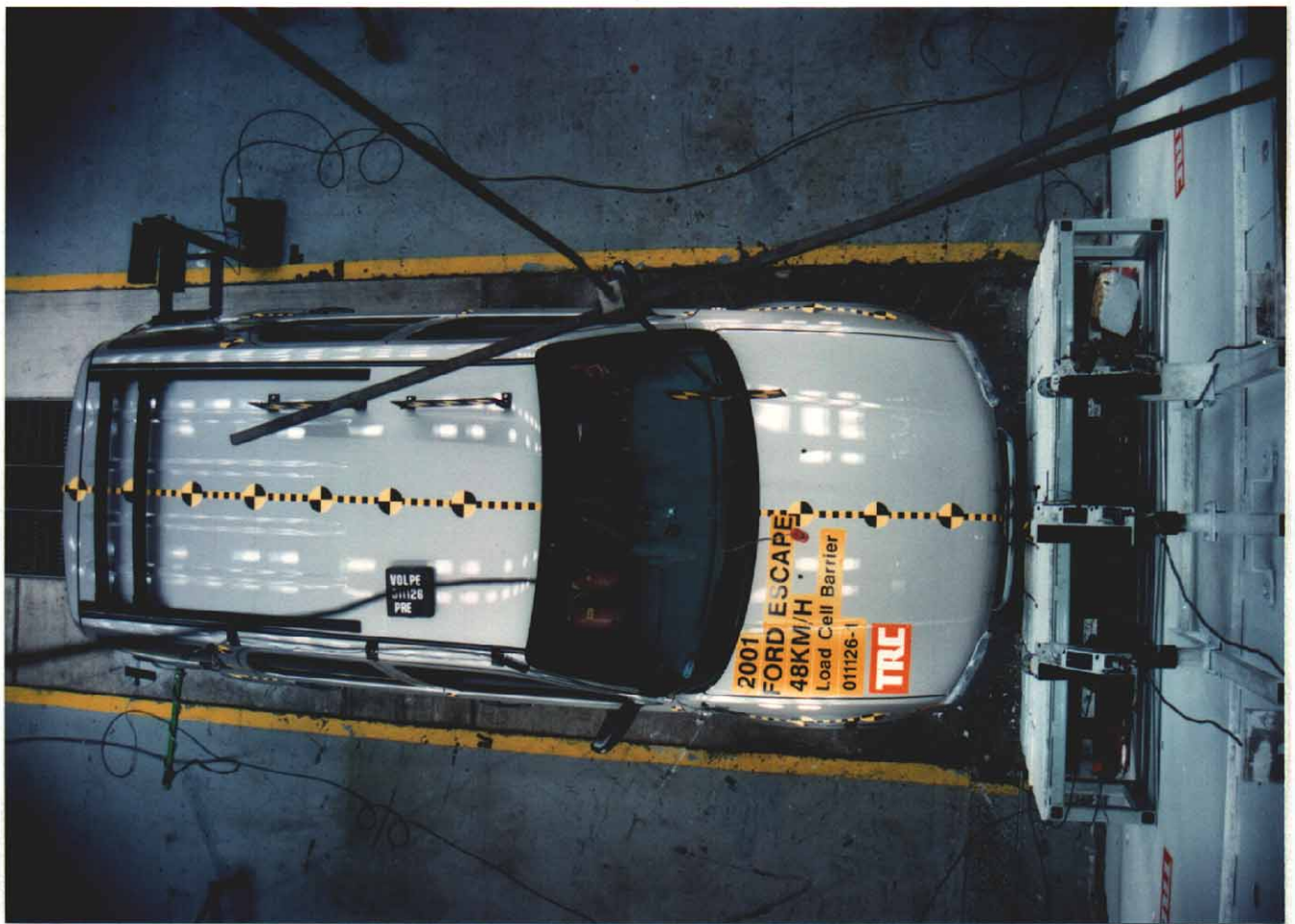


Figure A-17 Pre-Test Overhead Overall View

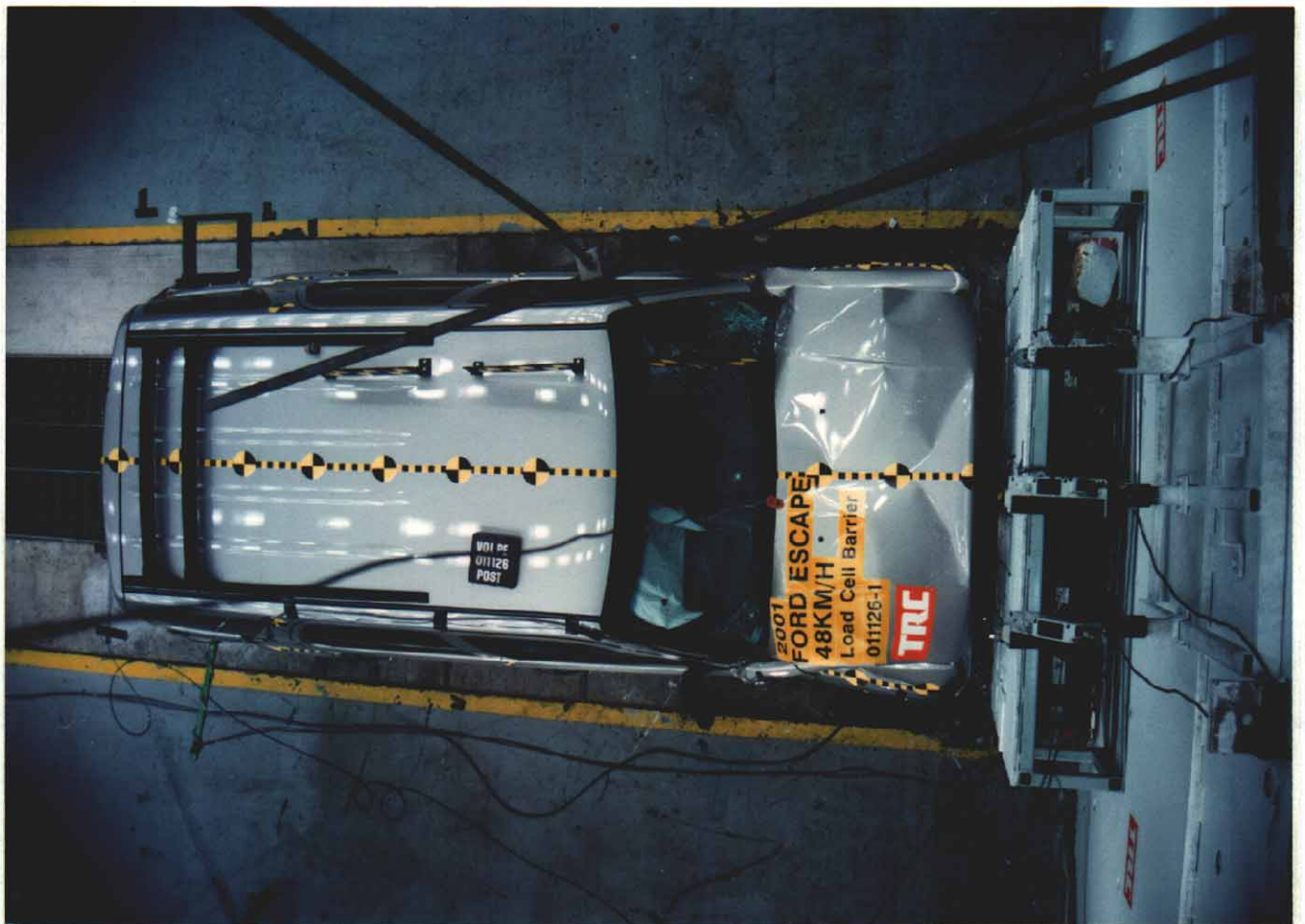


Figure A-18 Post-Test Overhead Overall View

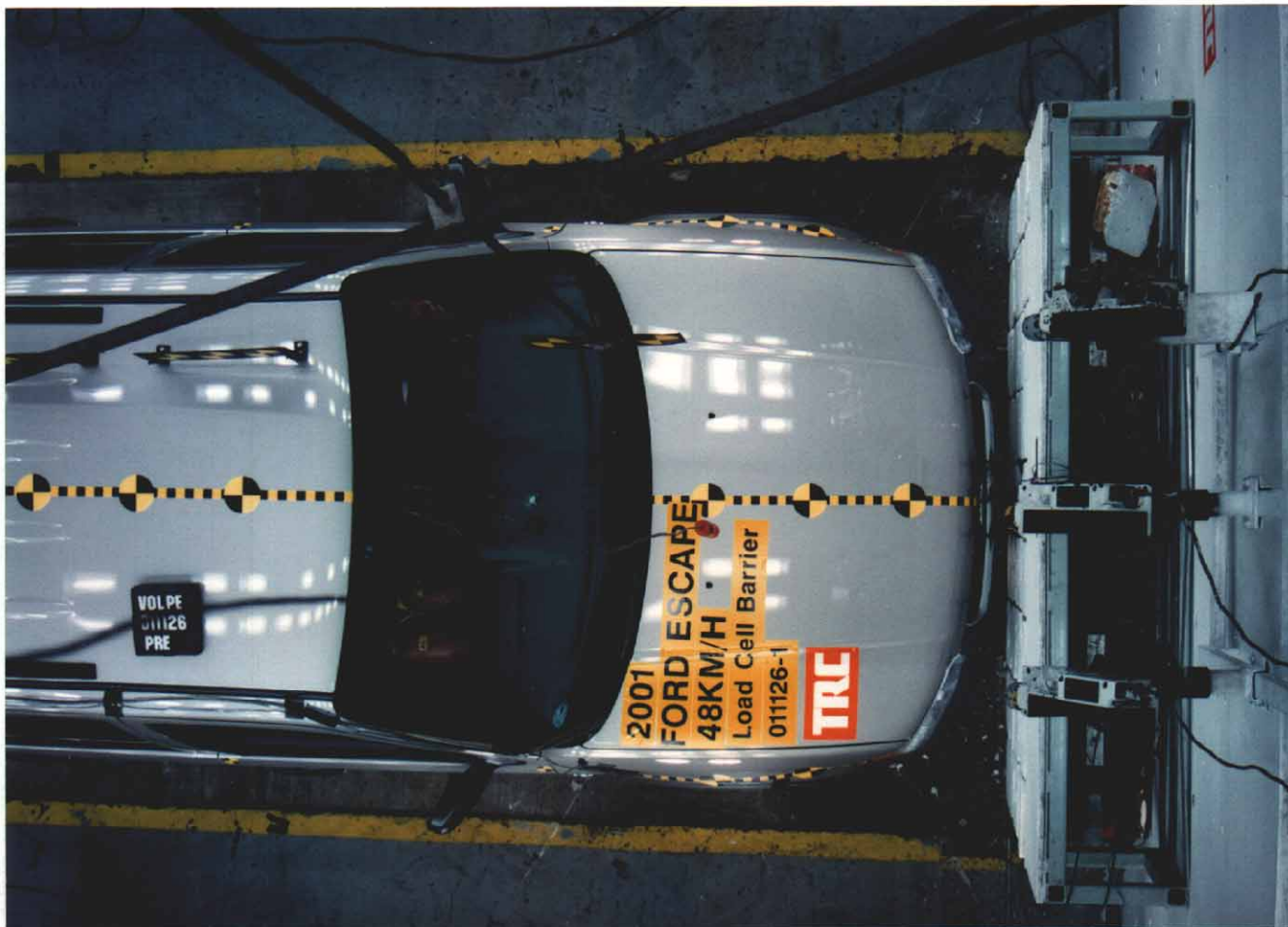


Figure A-19 Pre-Test Overhead Close-up View



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

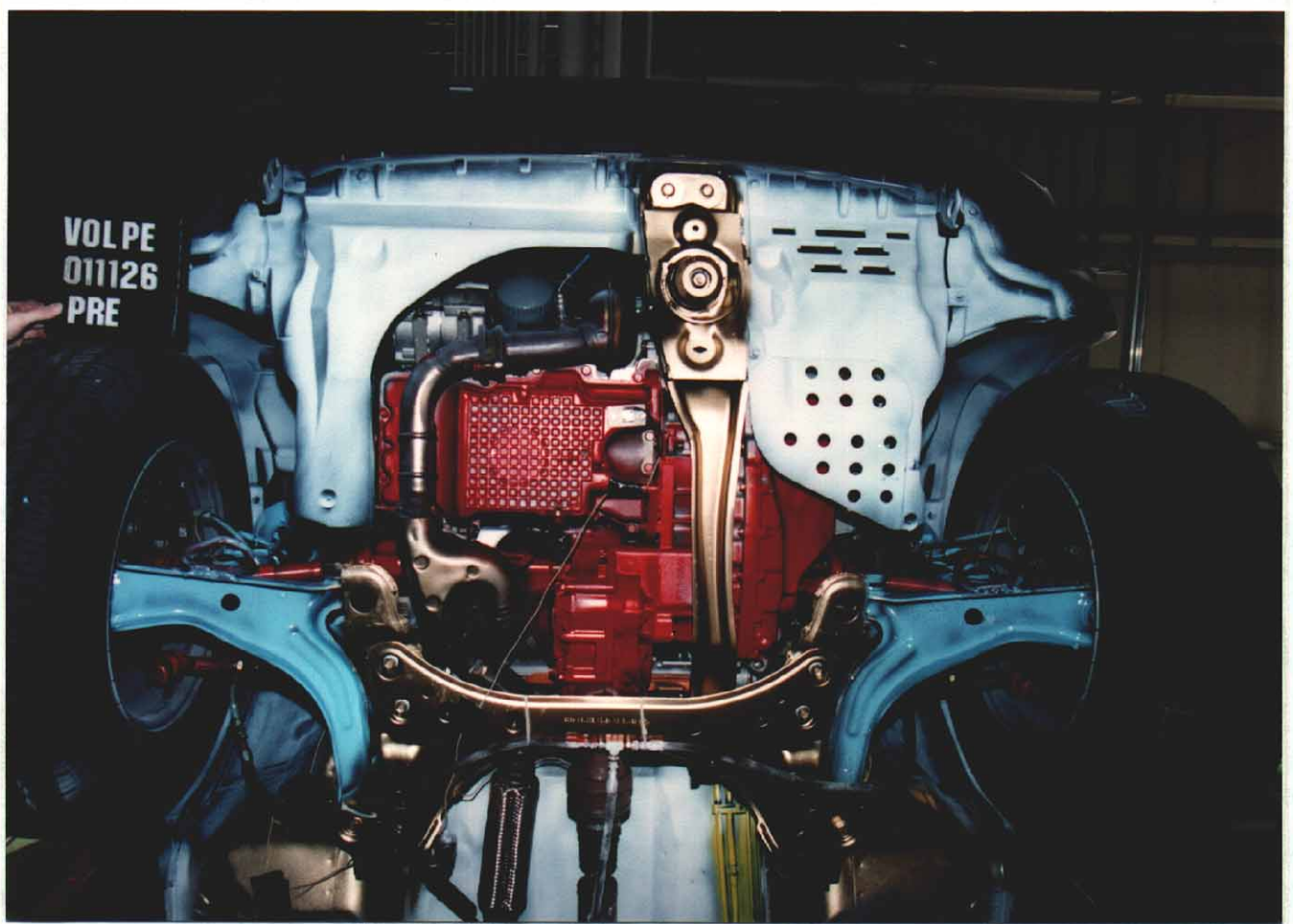


Figure A-21 Pre-Test Front Underbody View

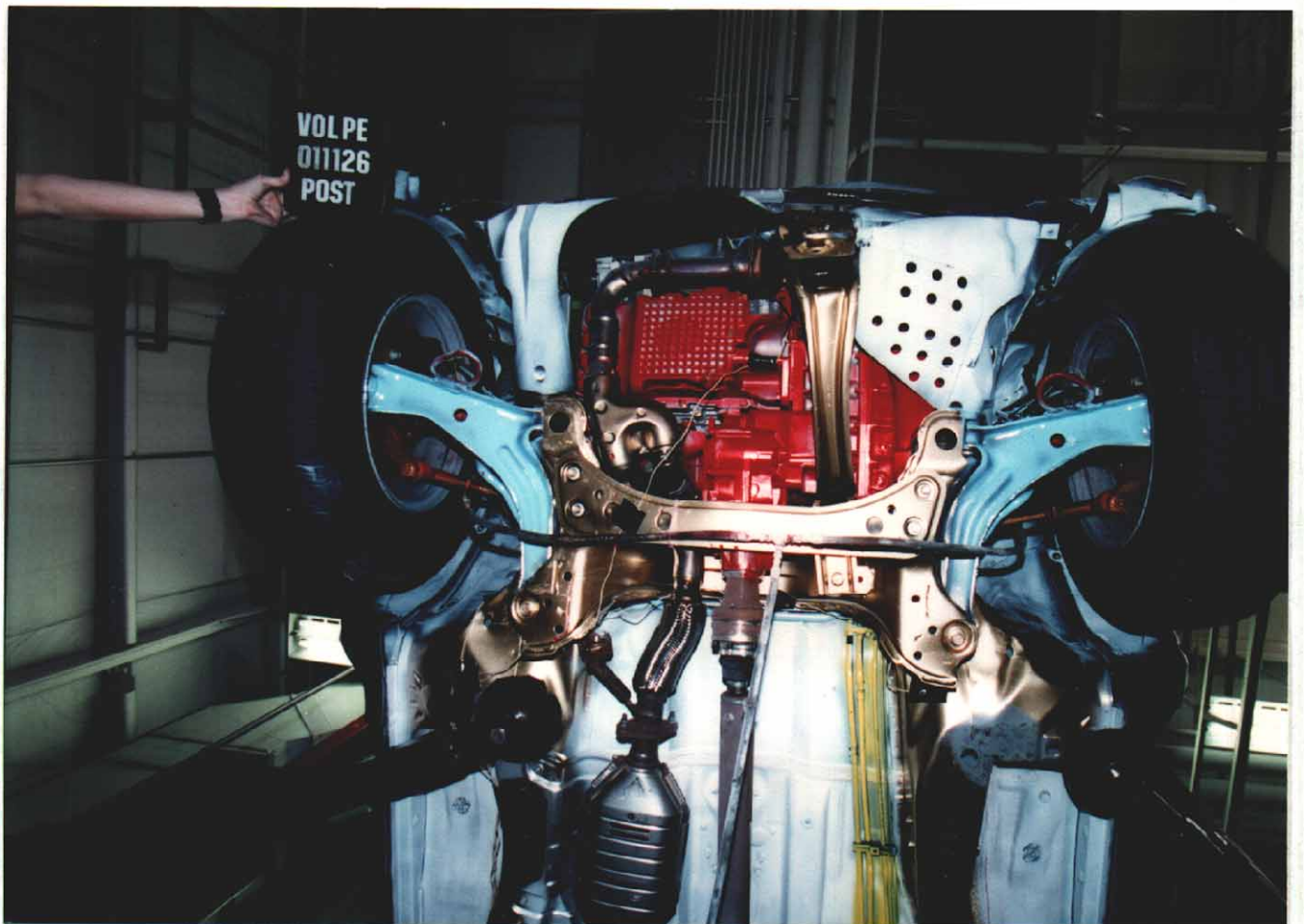


Figure A-22 Post-Test Front Underbody View

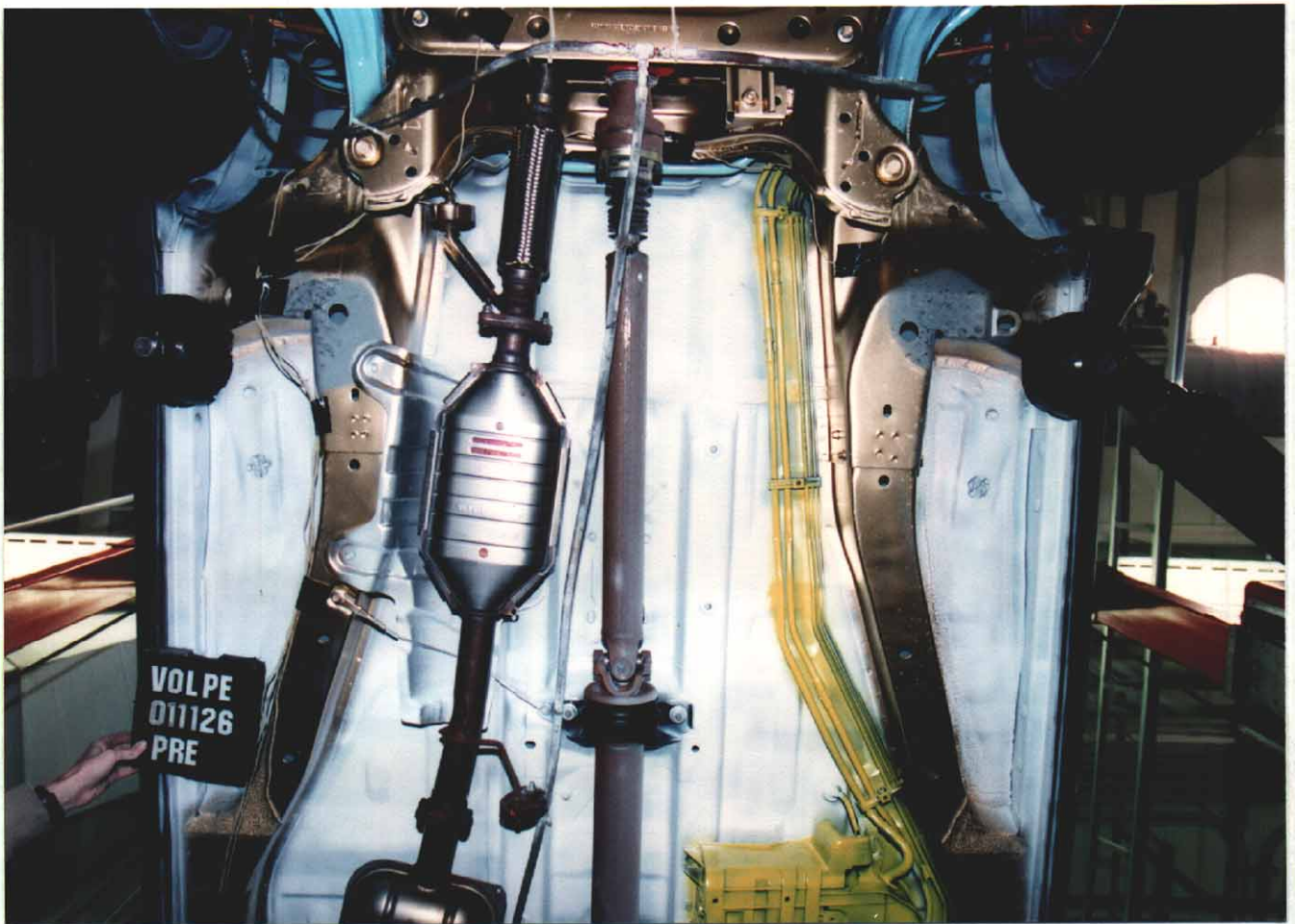


Figure A-23 Pre-Test Front Mid Underbody View

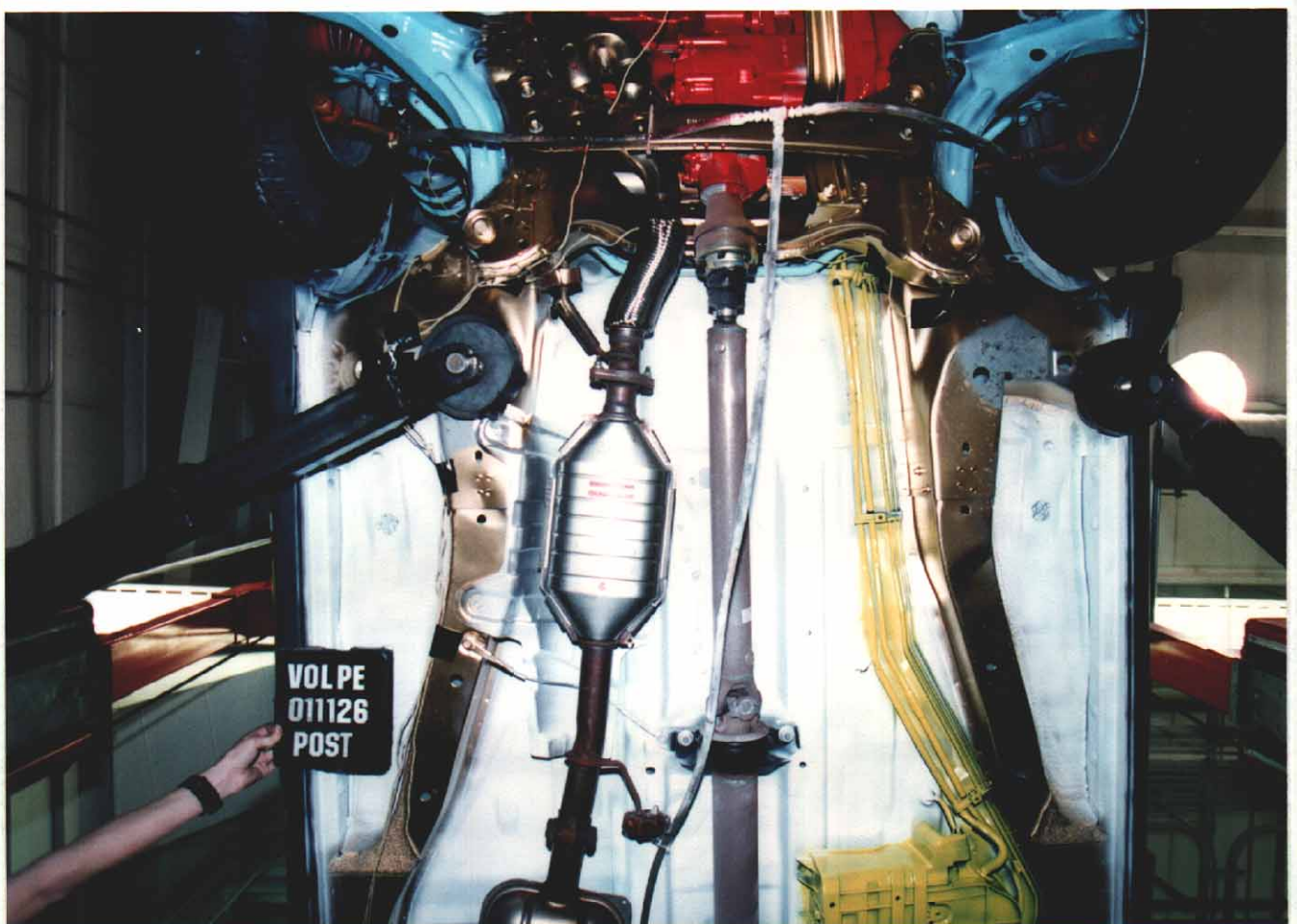


Figure A-24 Post-Test Front Mid Underbody View

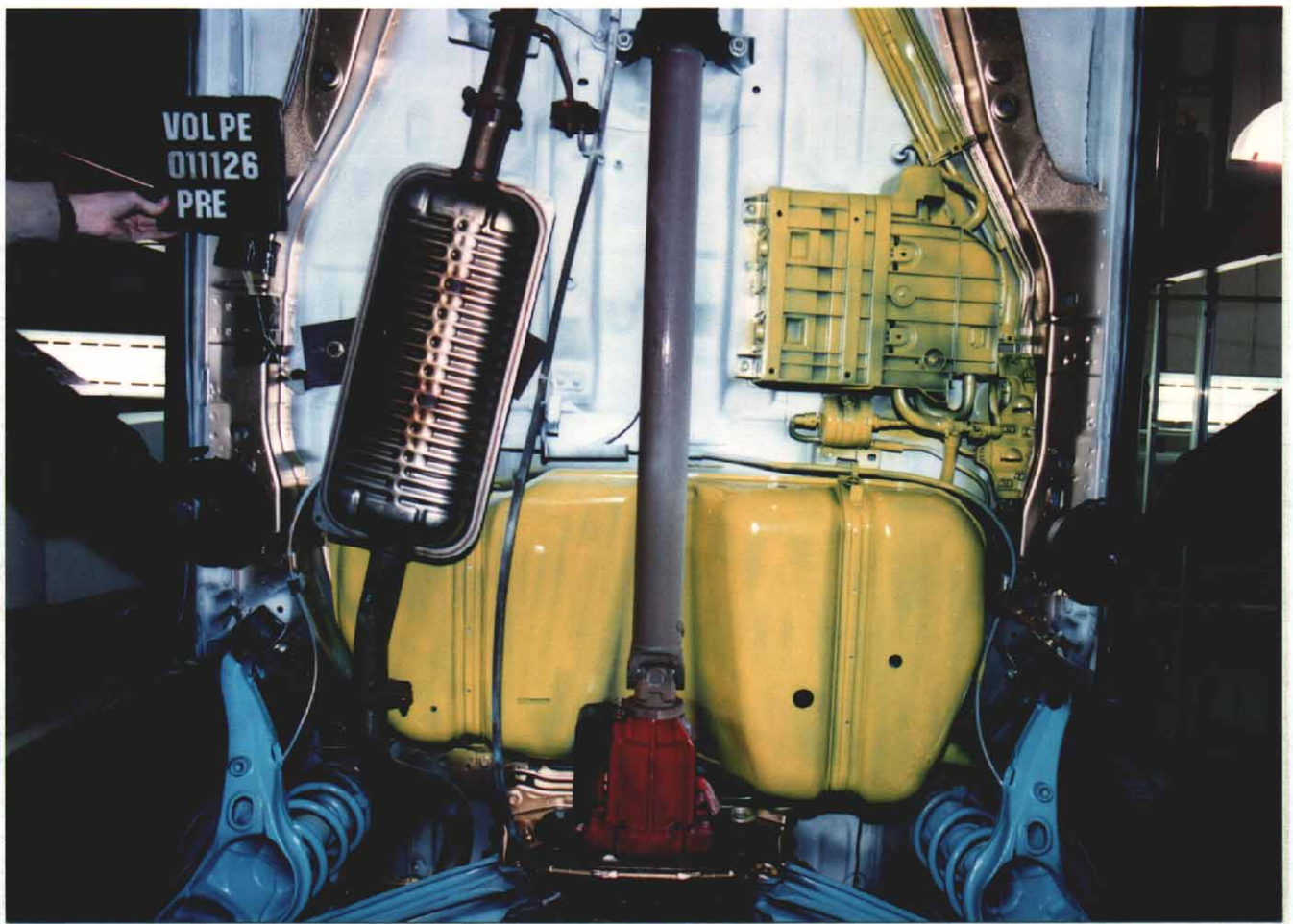


Figure A-25 Pre-Test Rear Mid Underbody View

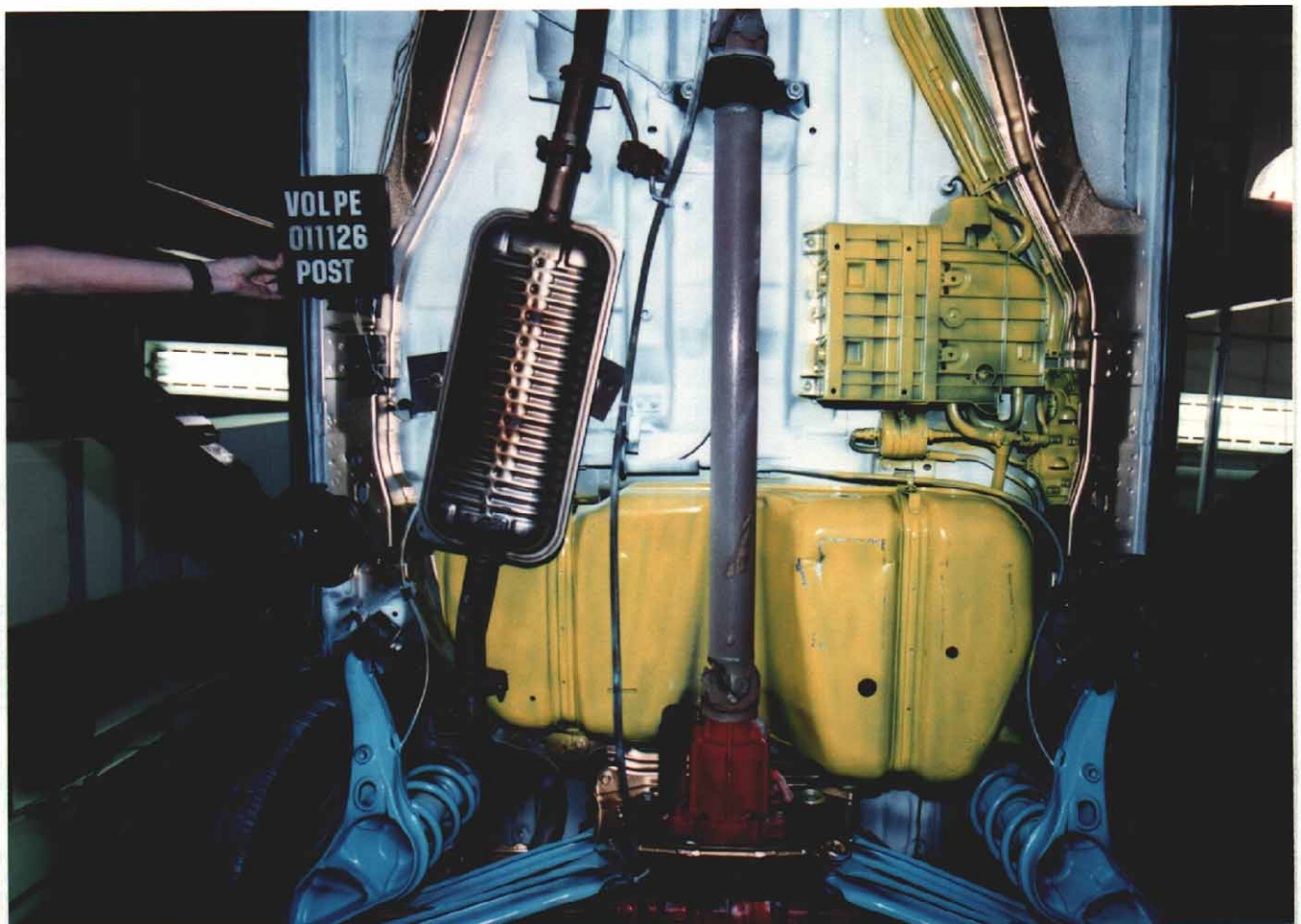


Figure A-26 Post-Test Rear Mid Underbody View

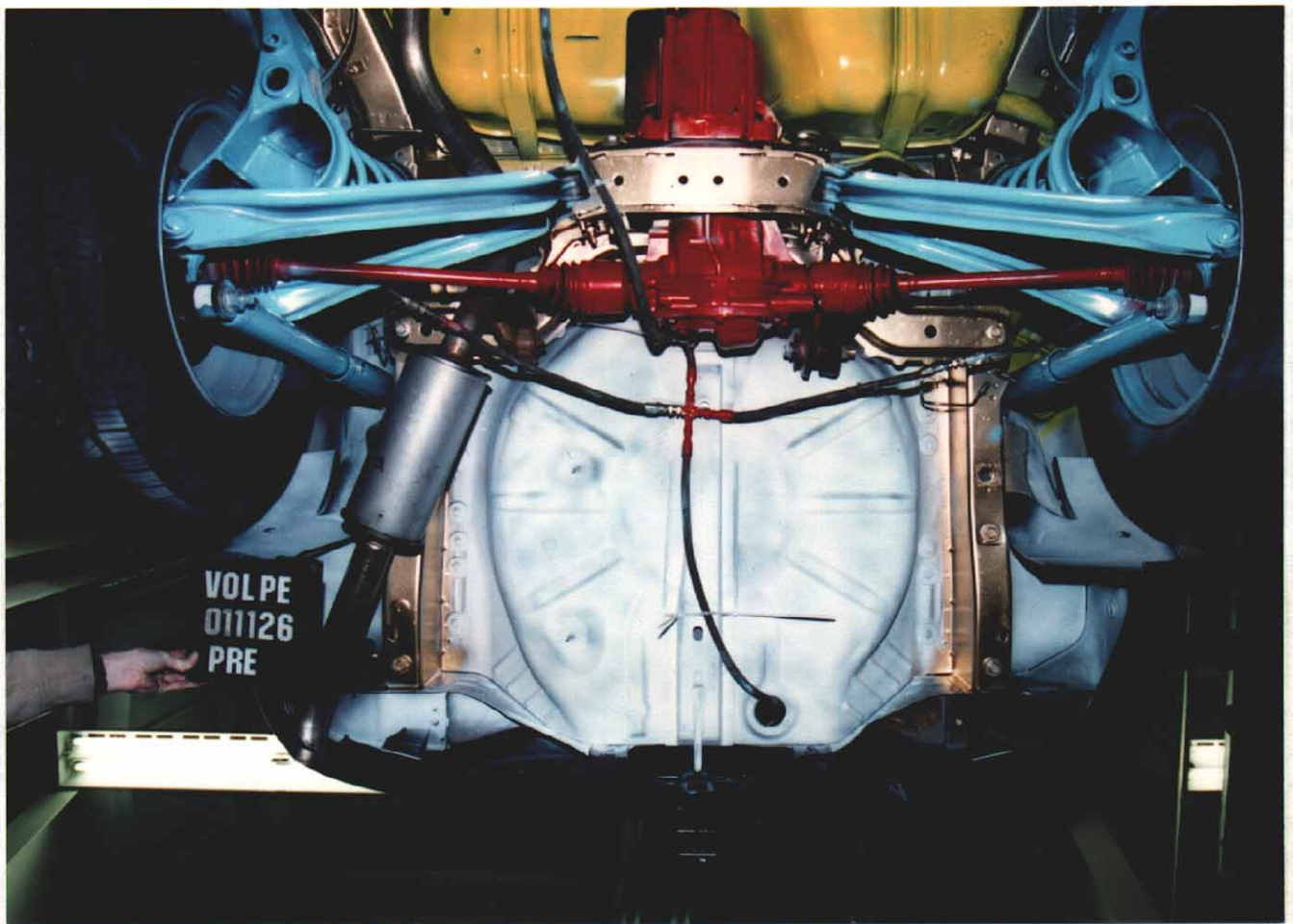


Figure A-27 Pre-Test Rear Underbody View

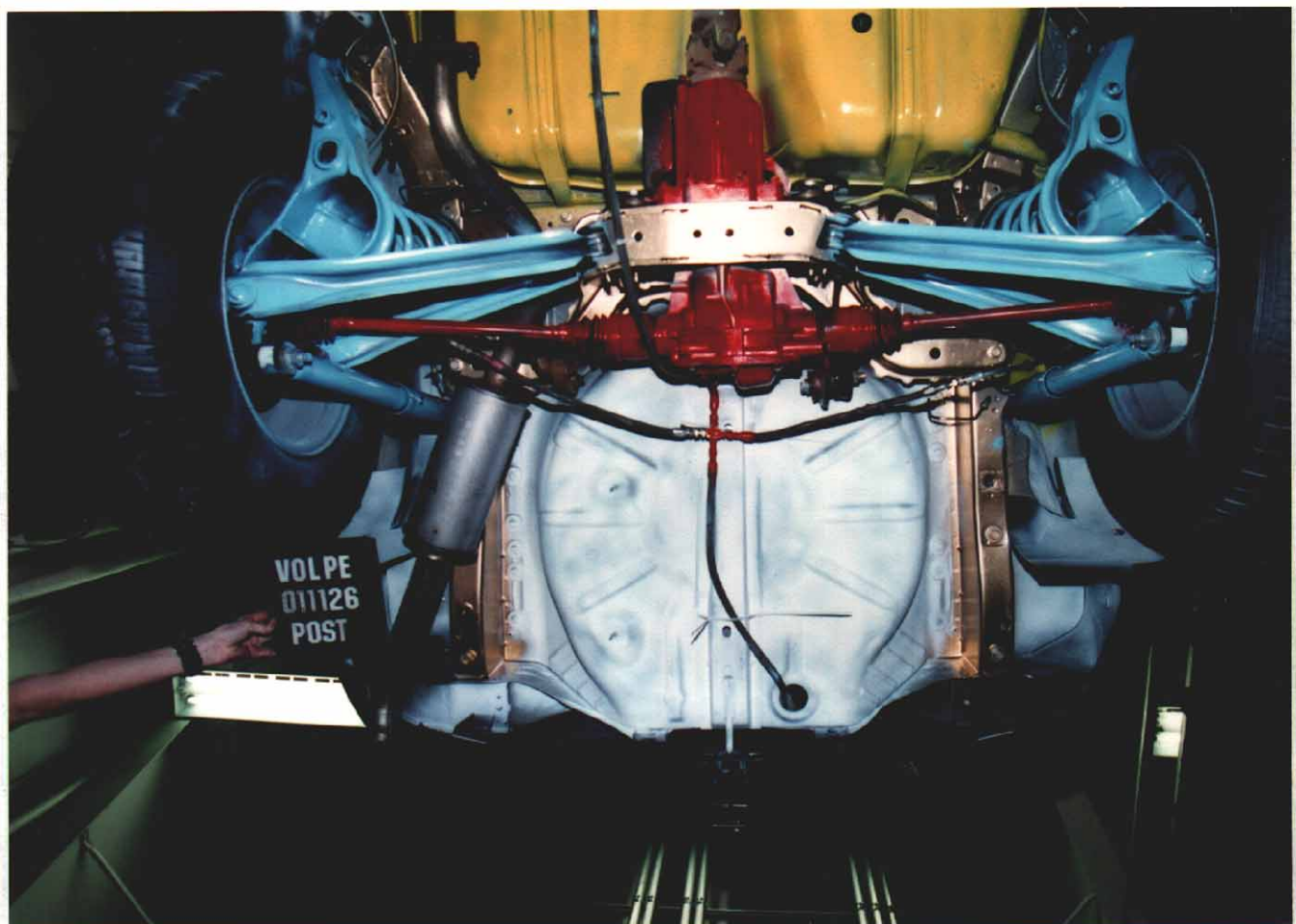


Figure A-28 Post-Test Rear Underbody View

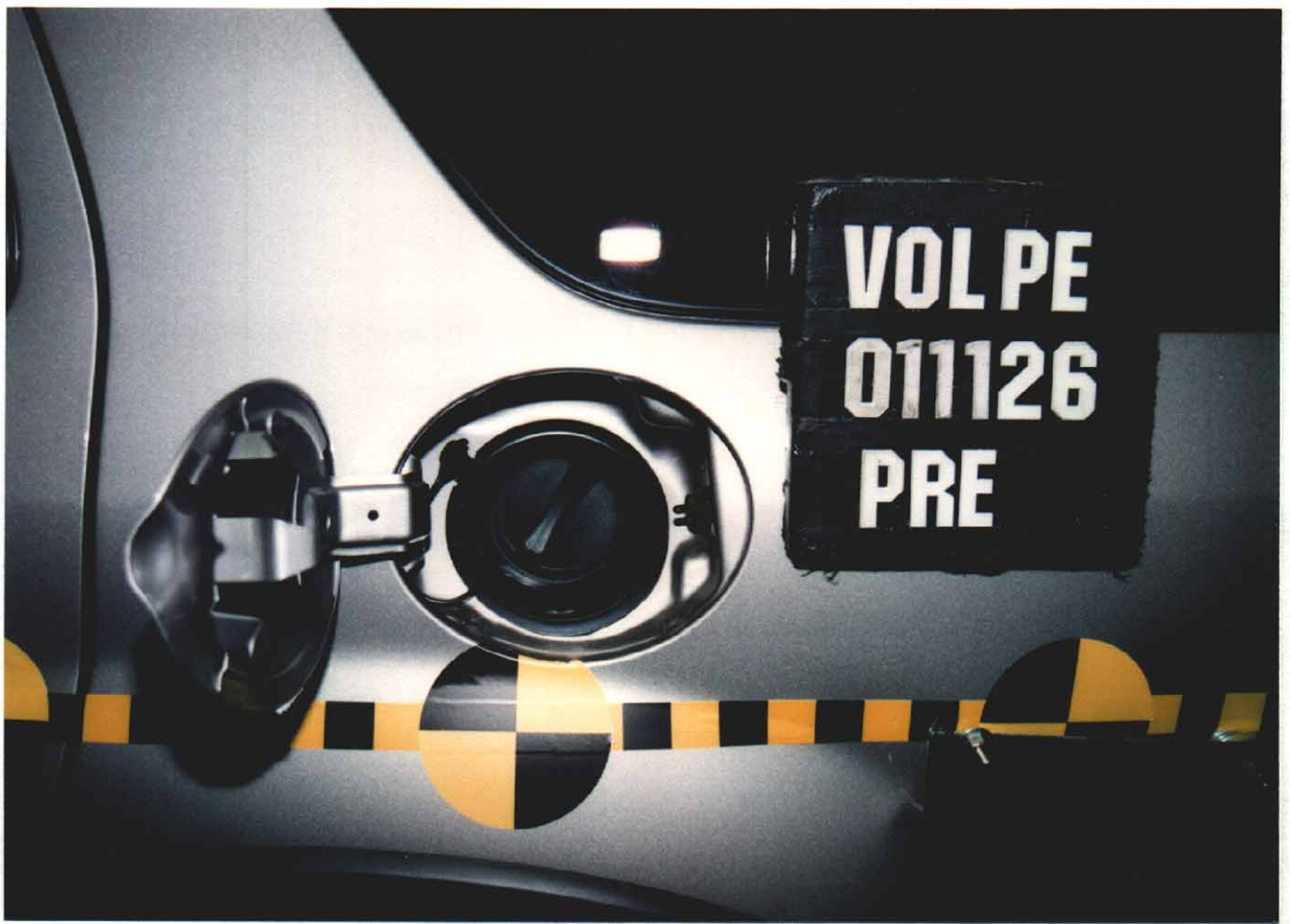


Figure A-29 Pre-Test Fuel Filler Cap View



Figure A-30 Post-Test Fuel Filler Cap View

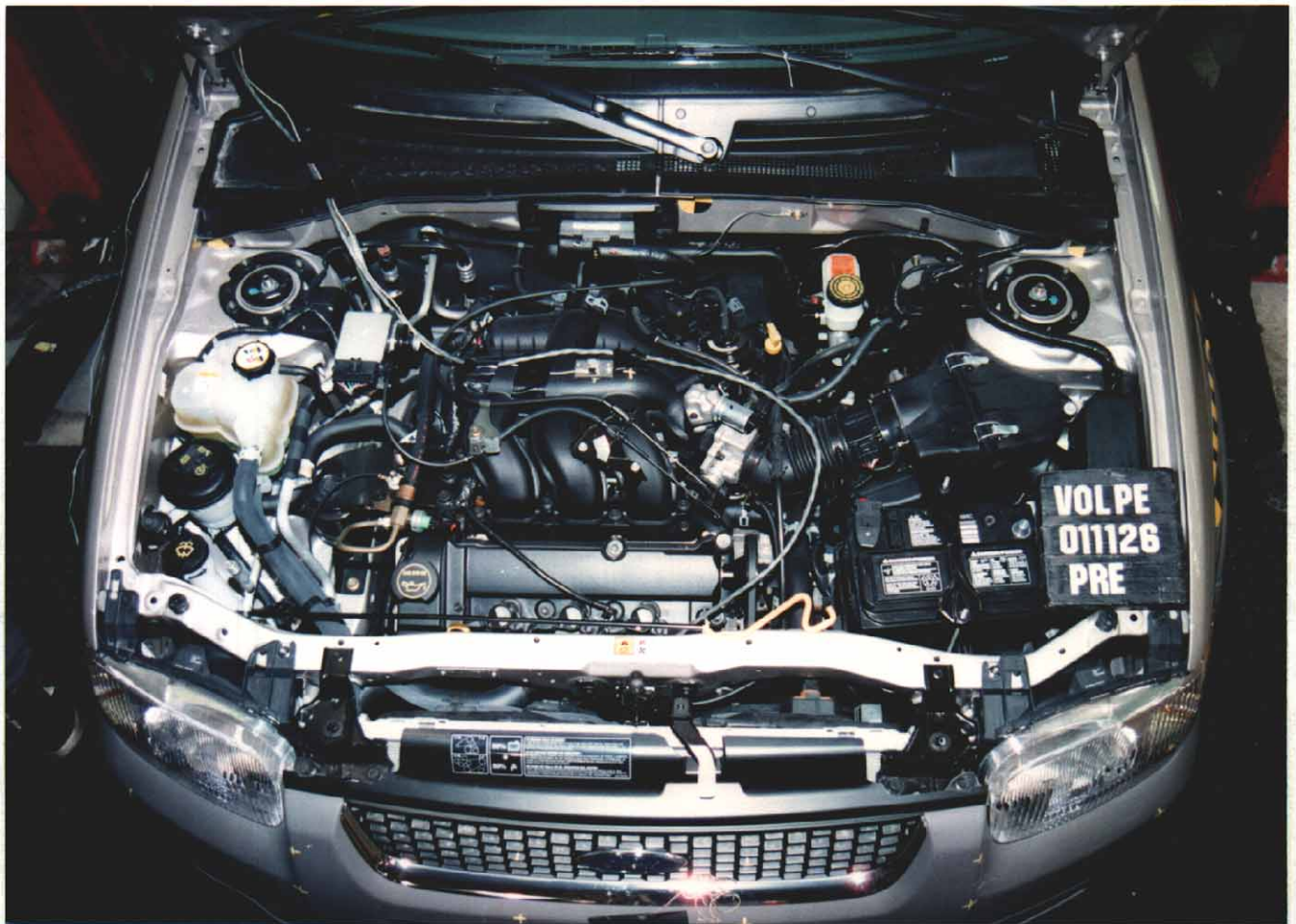


Figure A-31 Pre-Test Engine Compartment View

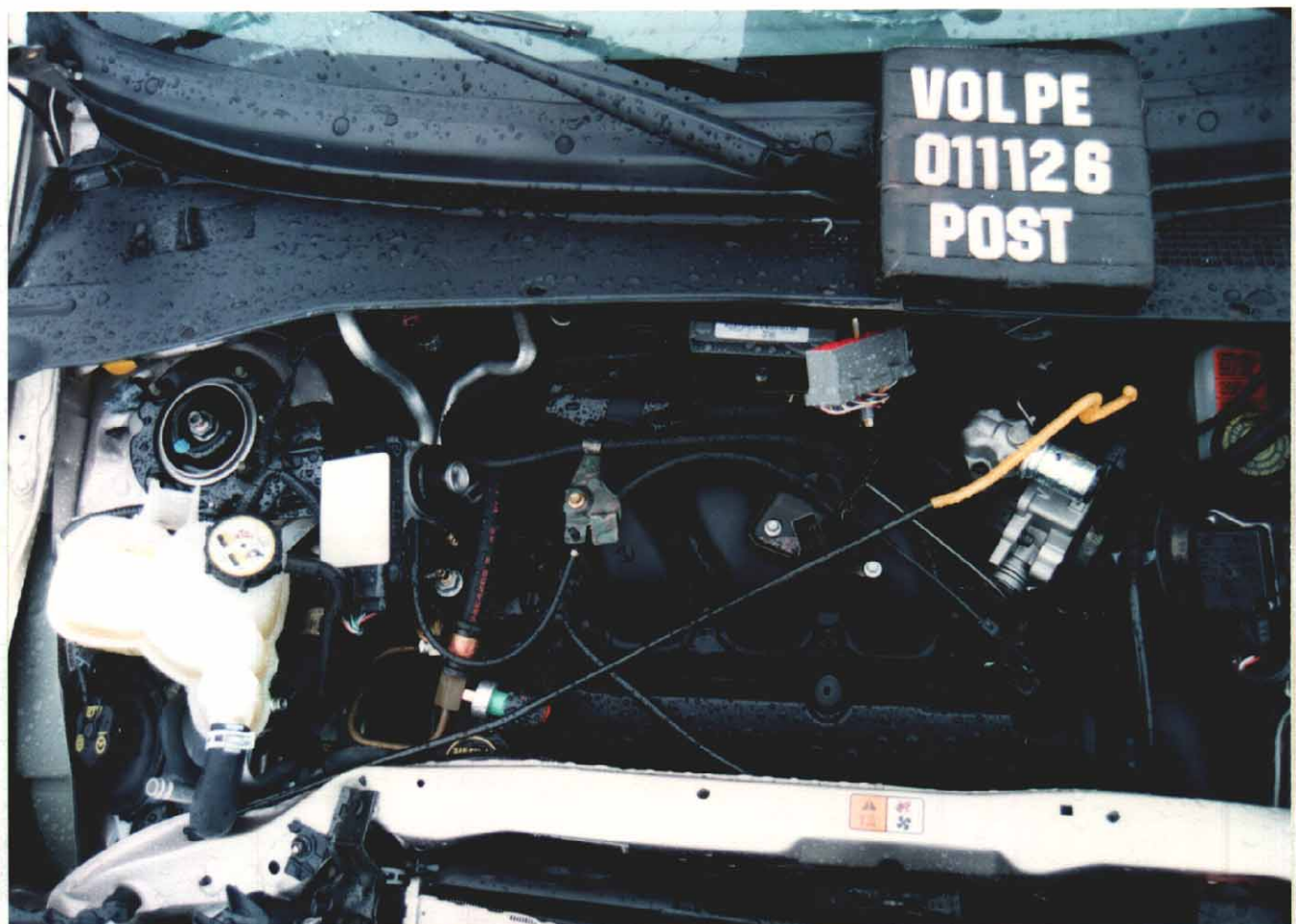


Figure A-32 Post-Test Engine Compartment View



Figure A-33 Pre-Test Windshield View



Figure A-34 Post-Test Windshield View

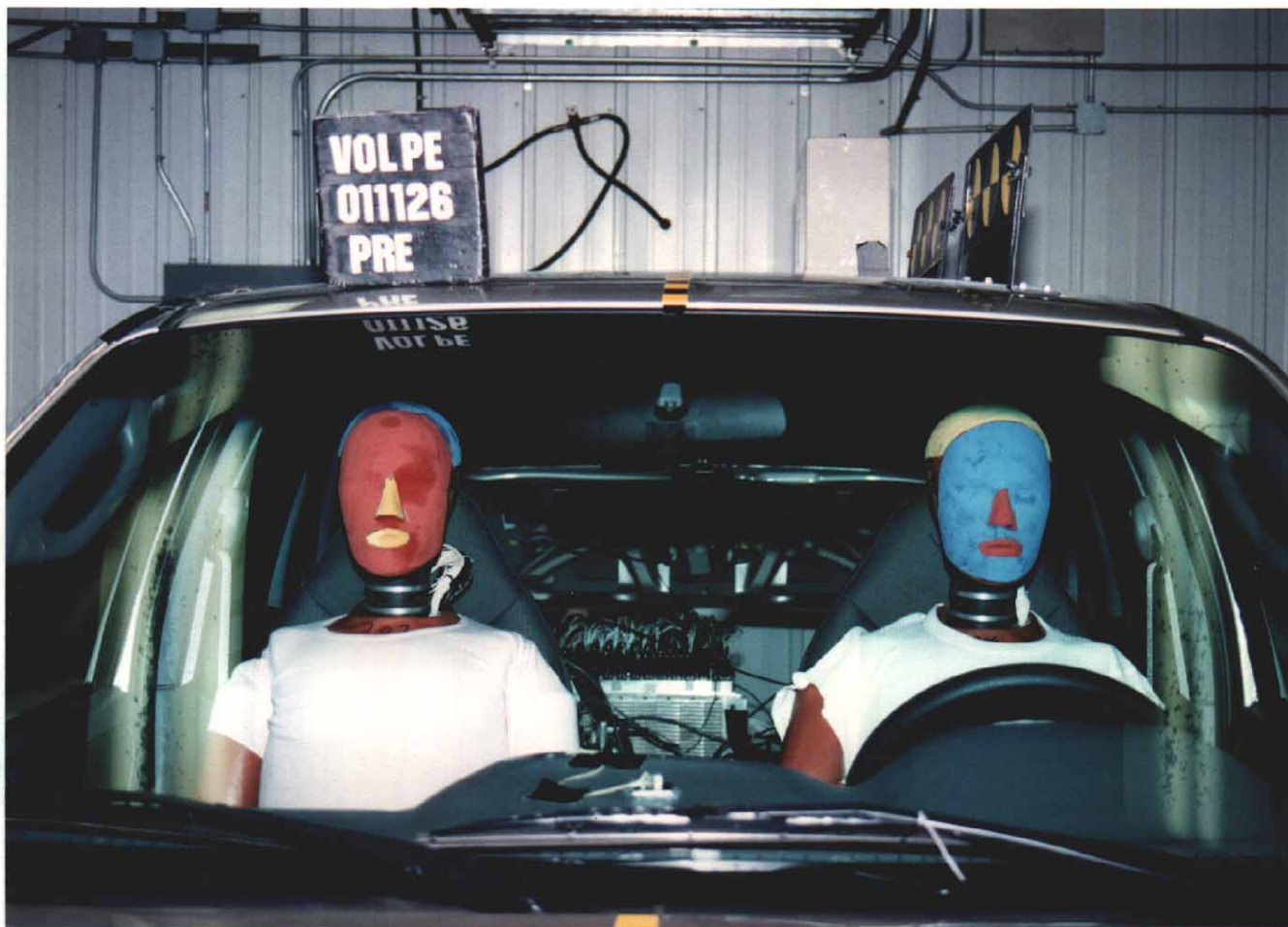


Figure A-35 Pre-Test Driver and Passenger Dummies Front View



Figure A-36 Post-Test Driver and Passenger Dummies Front View



Figure A-37 Pre-Test Driver Dummy Position - View 1



Figure A-38 Post-Test Driver Dummy Position - View 1



Figure A-39 Pre-Test Driver Dummy Position - View 2



Figure A-40 Post-Test Driver Dummy Position - View 2



Figure A-41 Pre-Test Driver Dummy & Vehicle Interior - View 1



Figure A-42 Post-Test Driver Dummy & Vehicle Interior - View 1



Figure A-43 Pre-Test Driver Dummy & Vehicle Interior - View 2



Figure A-44 Post-Test Driver Dummy & Vehicle Interior - View 2



Figure A-45 Pre-Test Driver Dummy Seat Track Position View

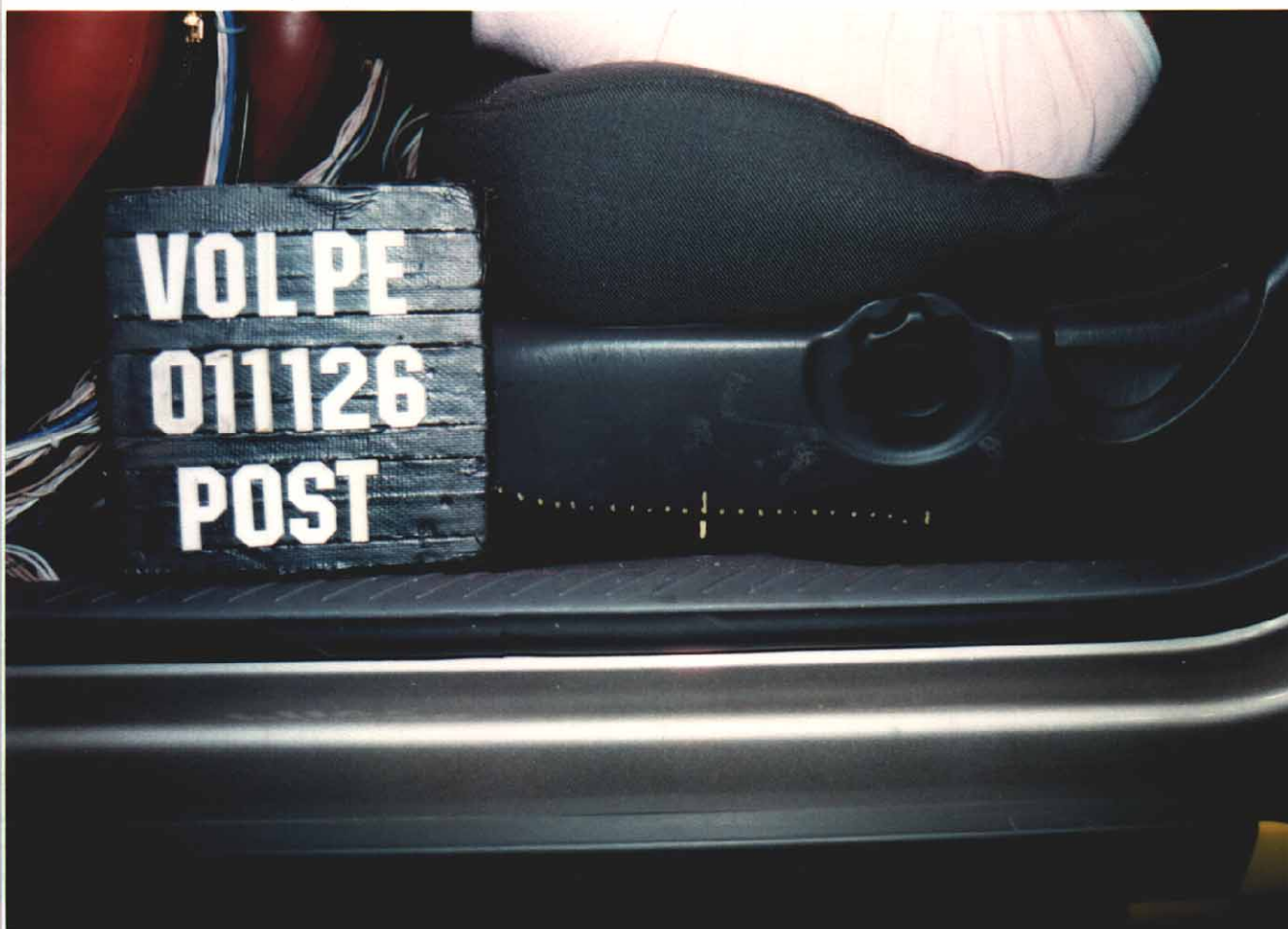


Figure A-46 Post-Test Driver Dummy Seat Track Position View

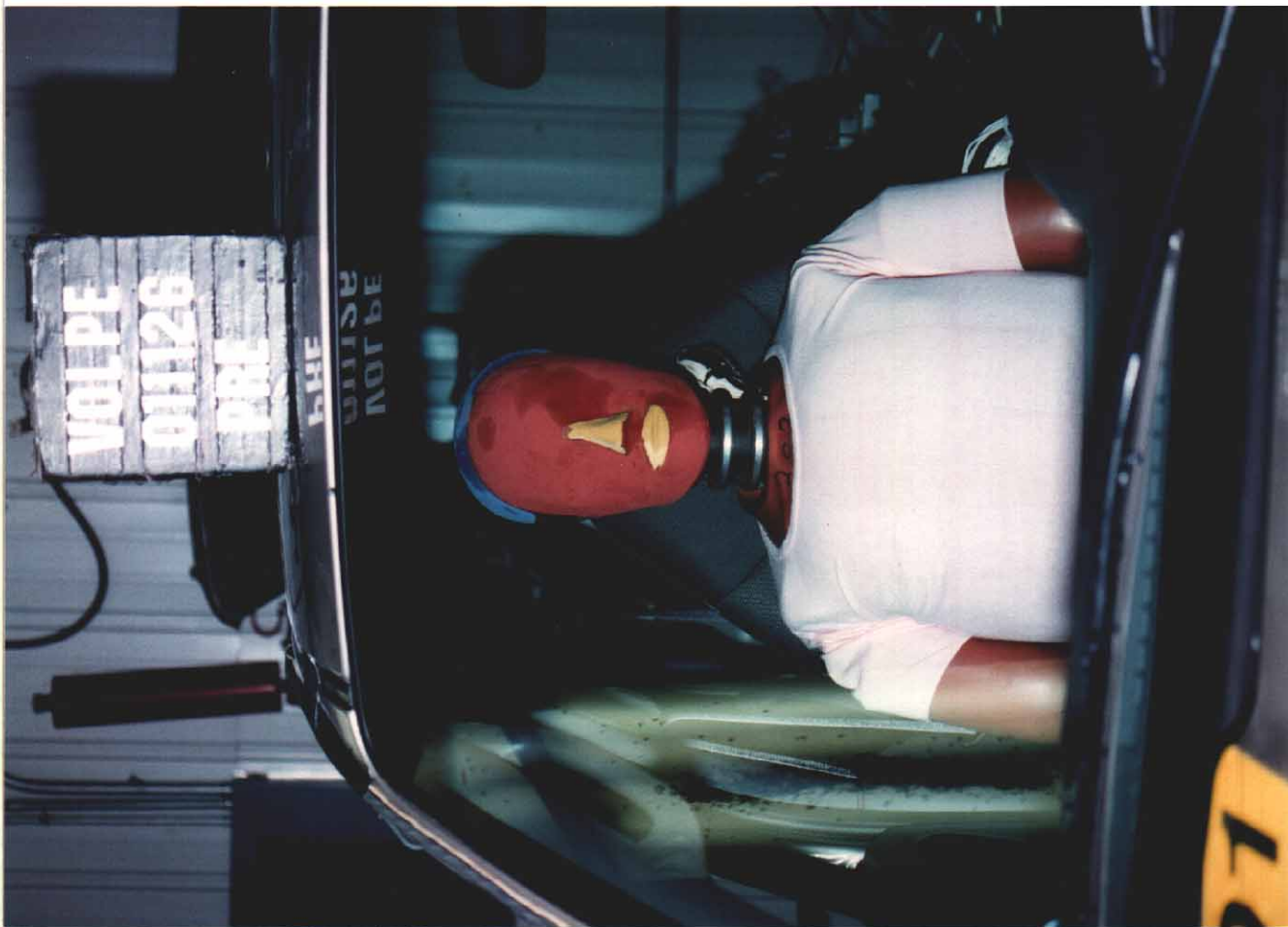


Figure A-47 Pre-Test Passenger Dummy Position - View 1



Figure A-48 Post-Test Passenger Dummy Position - View 1



Figure A-49 Pre-Test Passenger Dummy Position - View 2



Figure A-50 Post-Test Passenger Dummy Position - View 2



Figure A-51 Pre-Test Passenger Dummy & Vehicle Interior - View 1



Figure A-52 Post-Test Passenger Dummy & Vehicle Interior - View 1



Figure A-53 Pre-Test Passenger Dummy & Vehicle Interior - View 2



Figure A-54 Post-Test Passenger Dummy & Vehicle Interior - View 2



Figure A-55 Pre-Test Passenger Dummy Seat Track Position View



Figure A-56 Post-Test Passenger Dummy Seat Track Position View

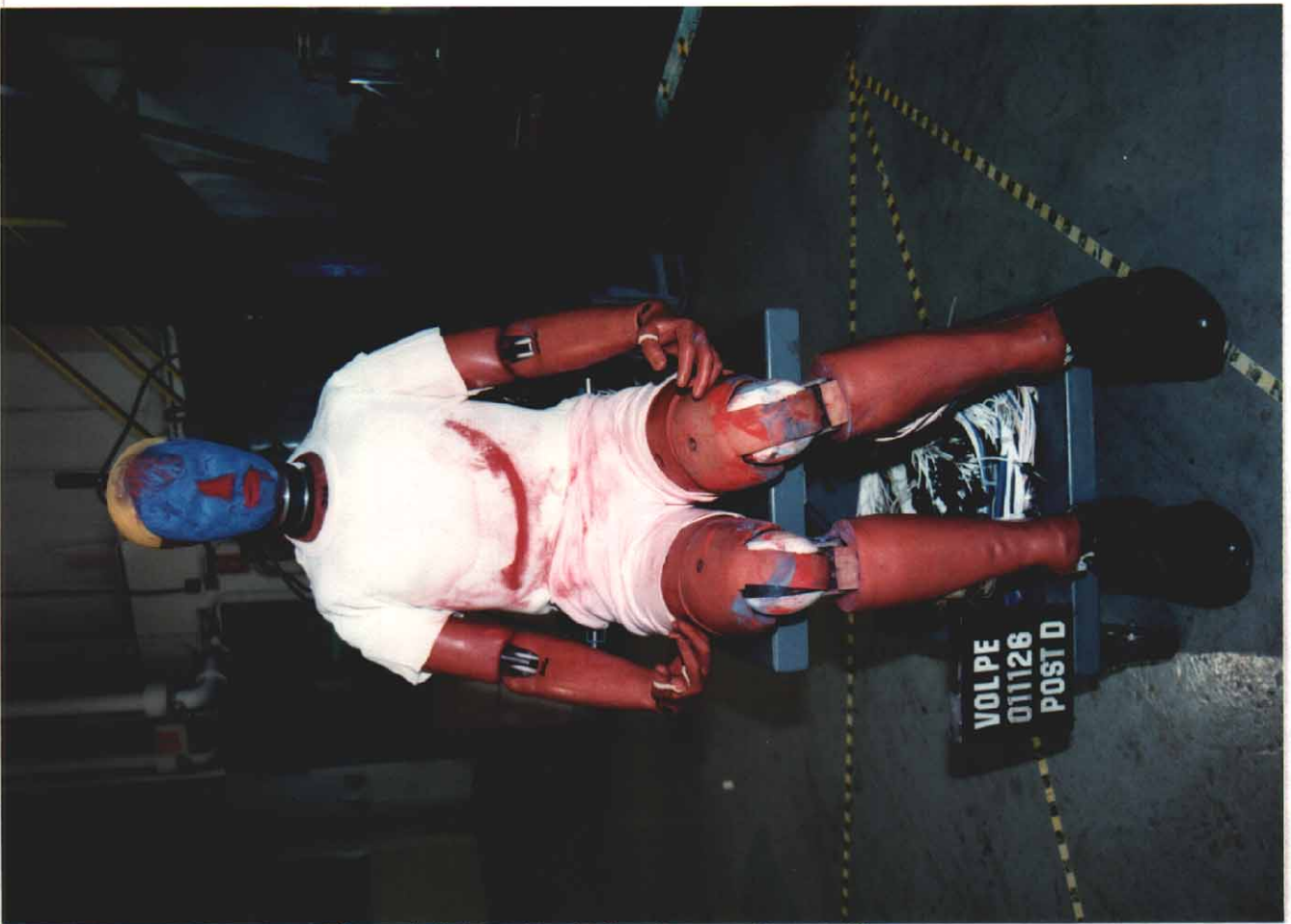


Figure A-57 Post-Test Driver Dummy Overall View

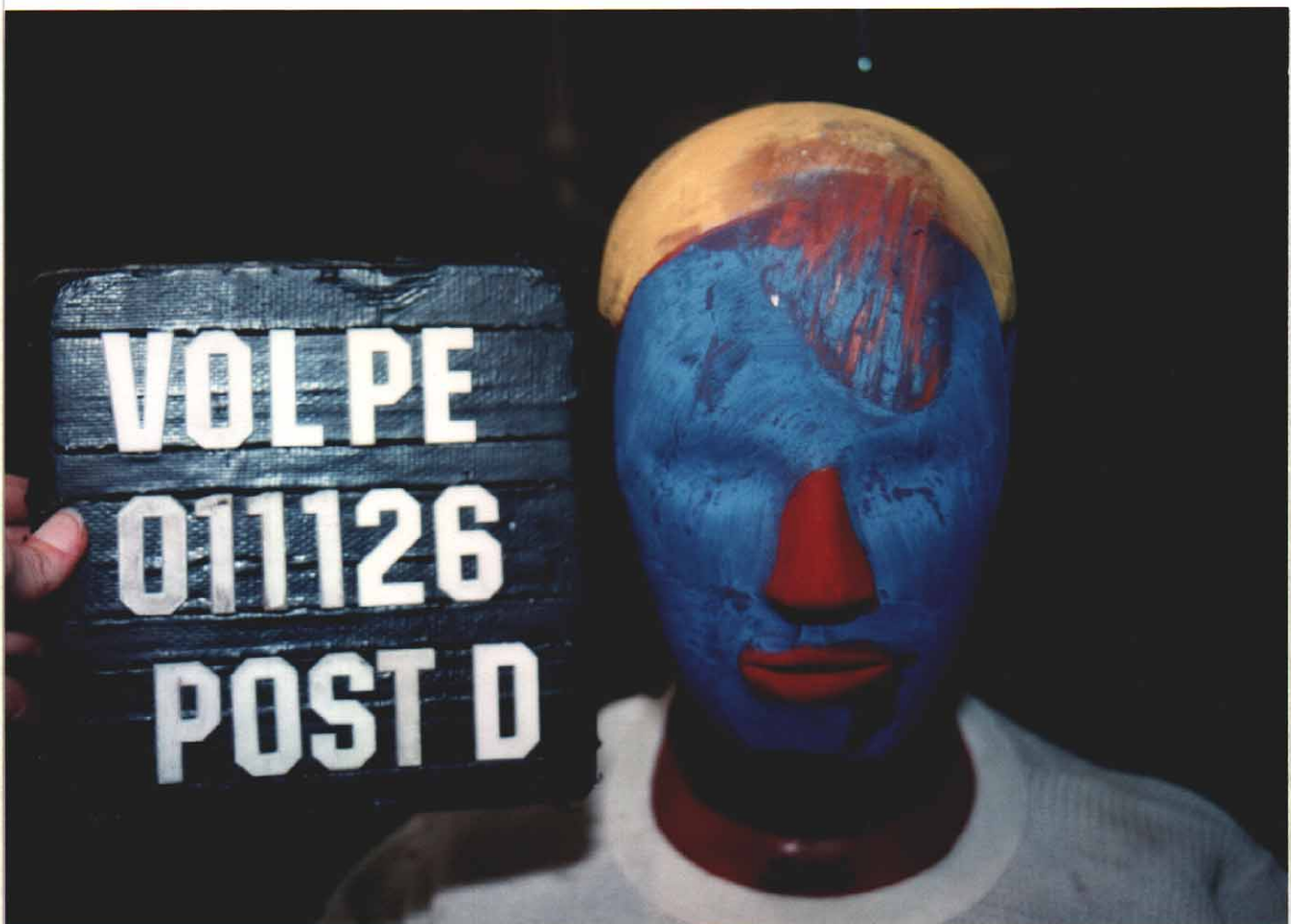


Figure A-58 Post-Test Driver Dummy Head Contact - View 1

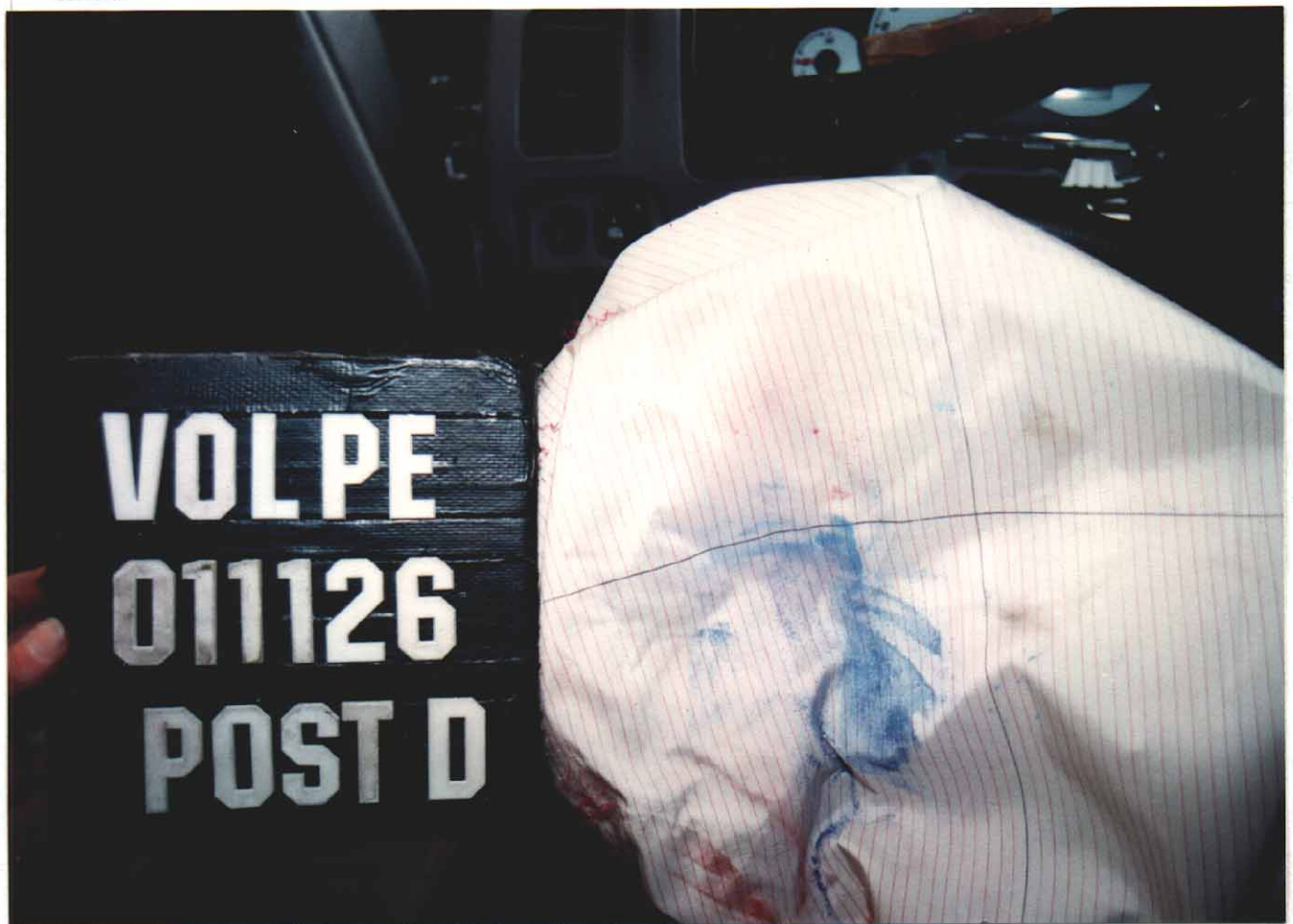


Figure A-59 Post-Test Driver Dummy Head Contact - View 2

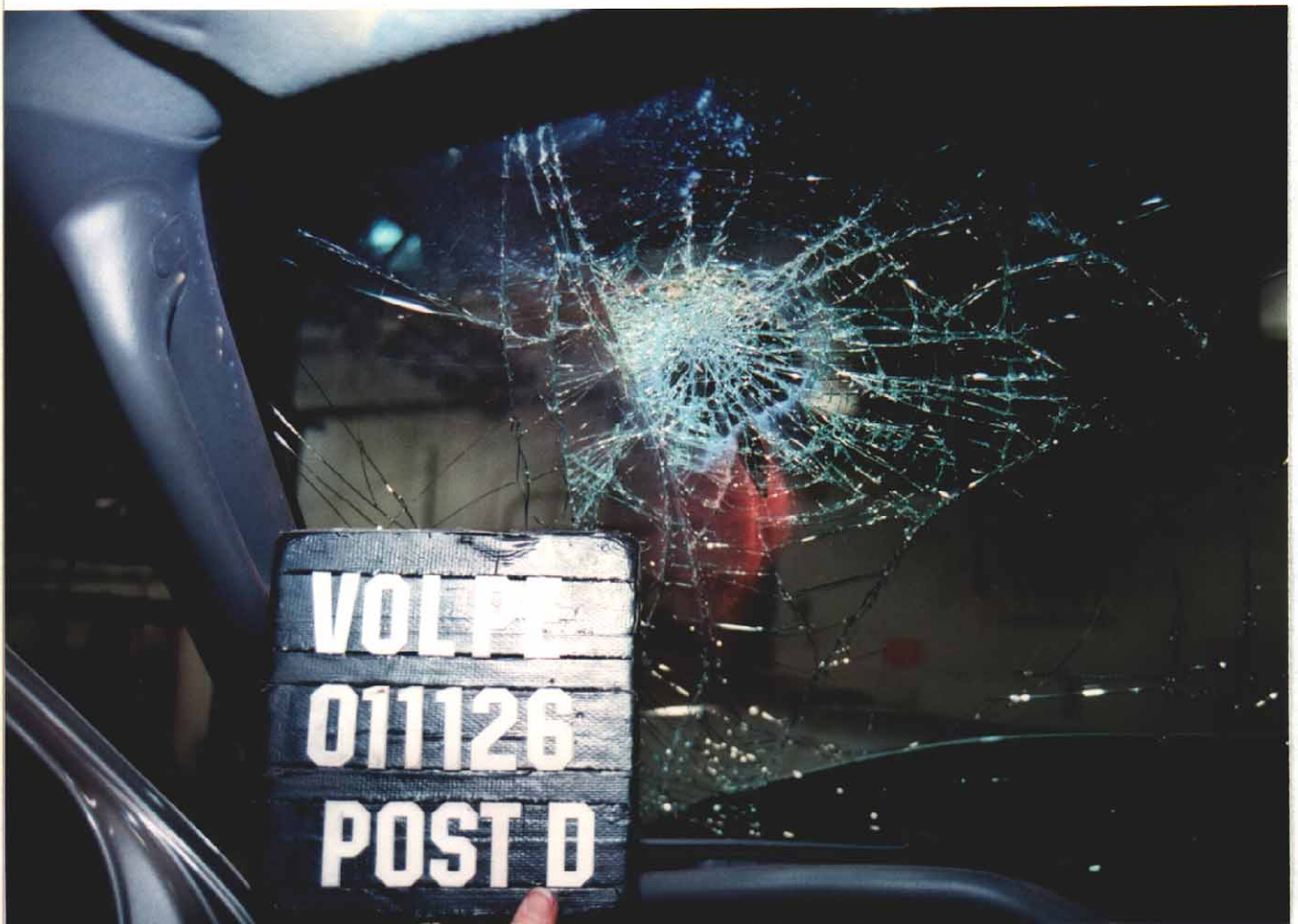


Figure A-60 Post-Test Driver Dummy Head Contact - View 3



Figure A-61 Post-Test Driver Dummy Head Contact - View 4

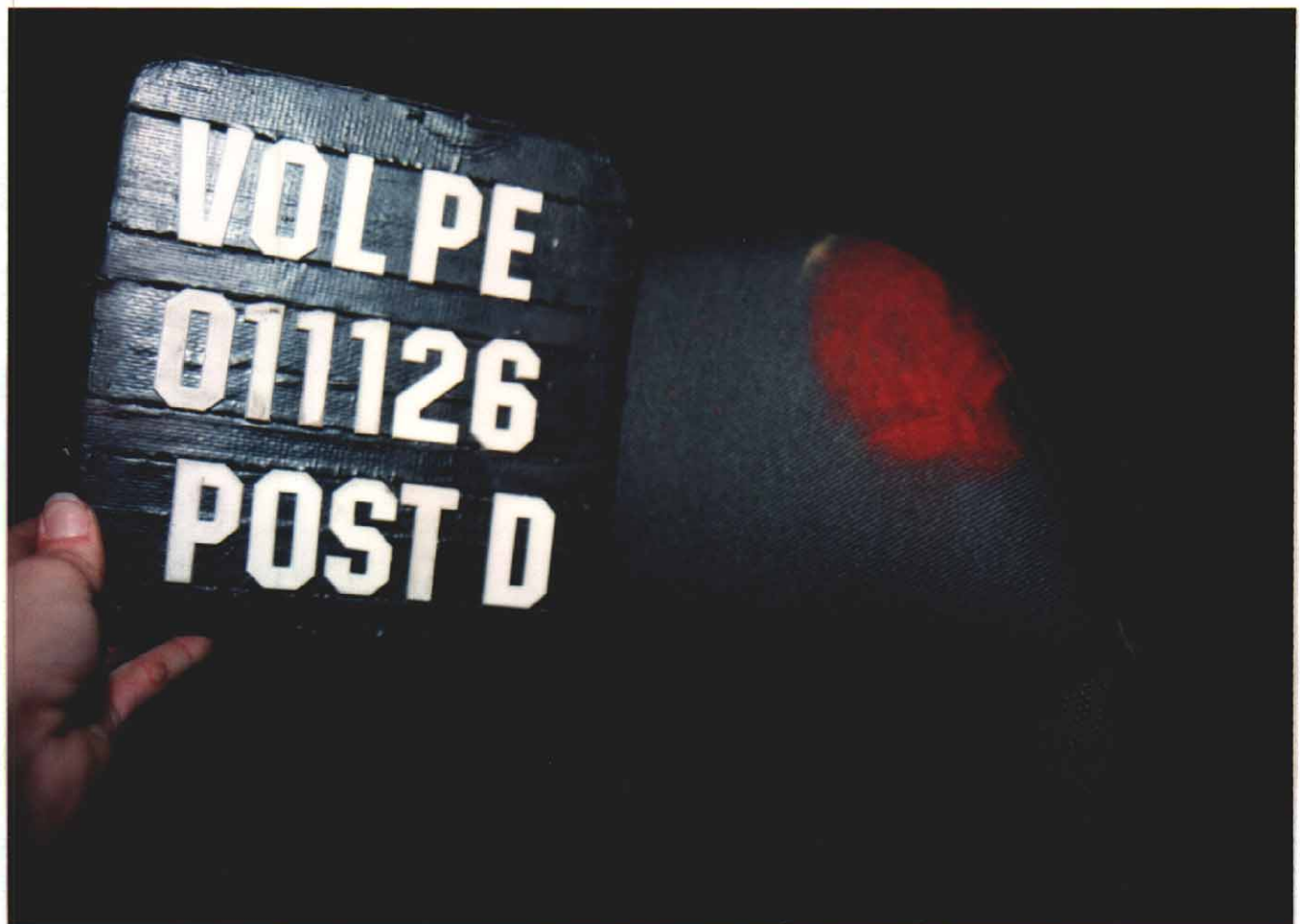


Figure A-62 Post-Test Driver Dummy Head Contact - View 5

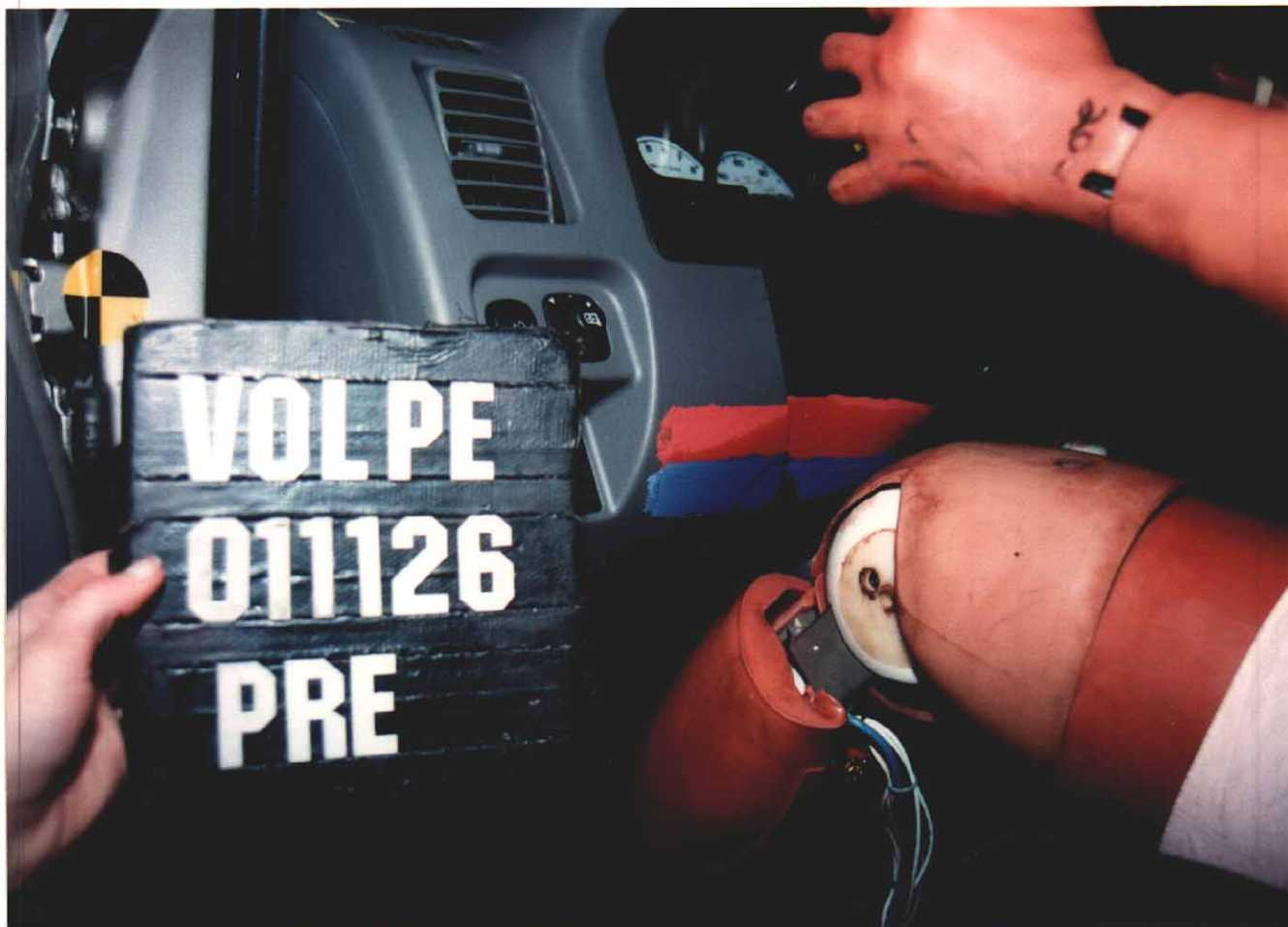


Figure A-63 Pre-Test Driver Dummy Knee Contact - View 1



Figure A-64 Post-Test Driver Dummy Knee Contact - View 1



Figure A-65 Pre-Test Driver Dummy Knee Contact - View 2



Figure A-66 Post-Test Driver Dummy Knee Contact - View 2

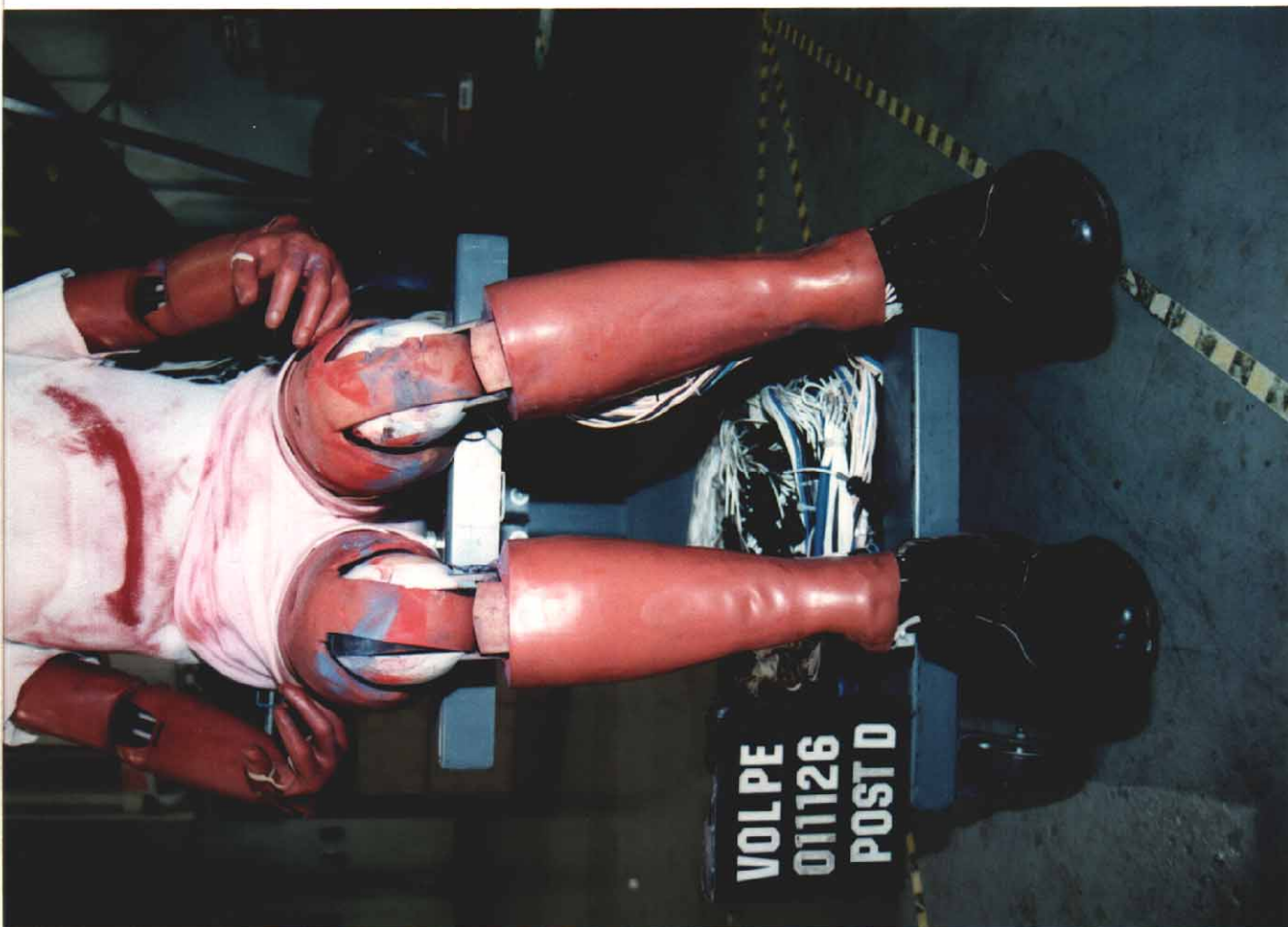


Figure A-67 Post-Test Driver Dummy Knee Contact - View 3



Figure A-68 Post-Test Passenger Dummy Overall View

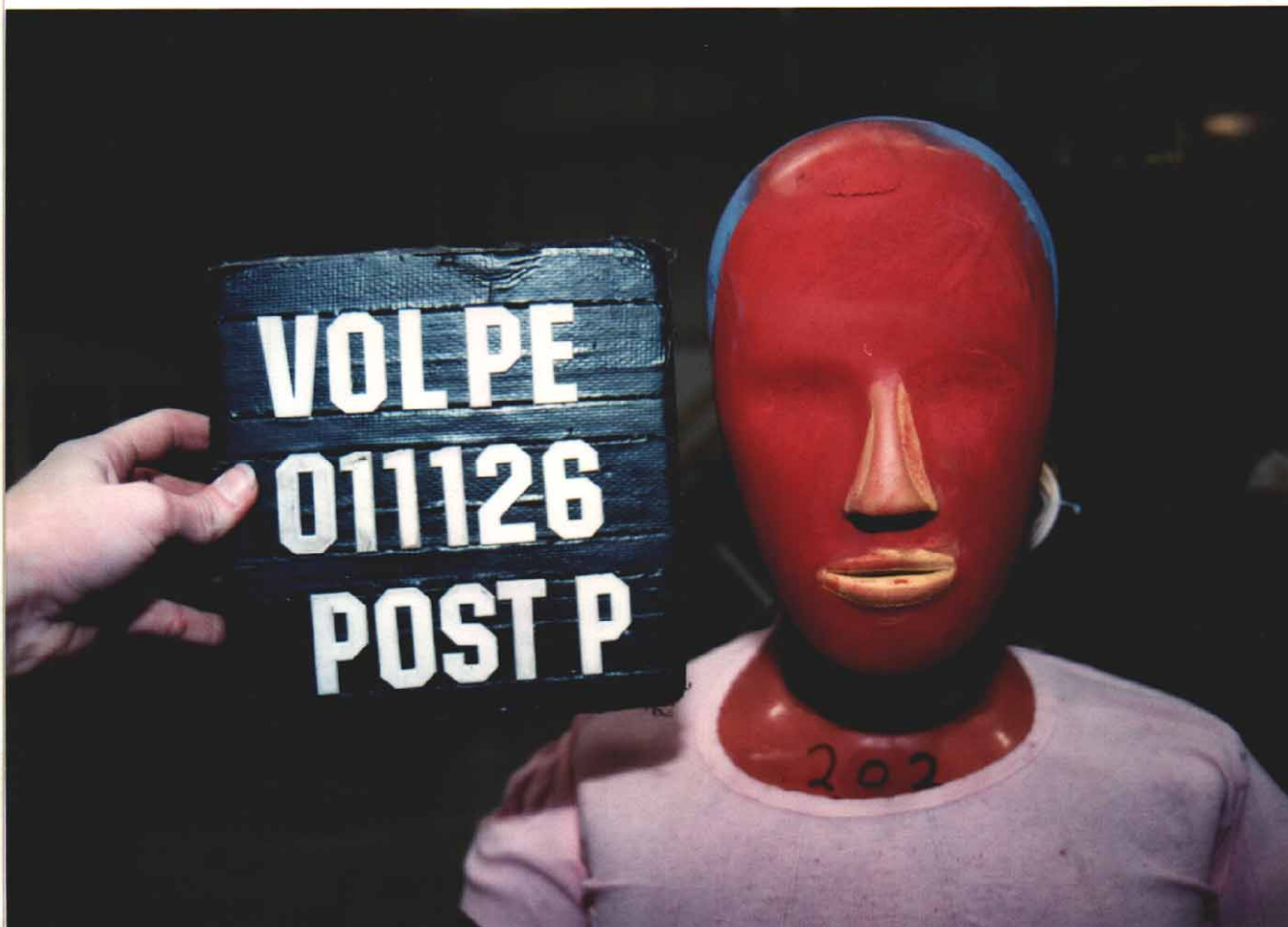


Figure A-69 Post-Test Passenger Dummy Head Contact - View 1



Figure A-70 Post-Test Passenger Dummy Head Contact - View 2

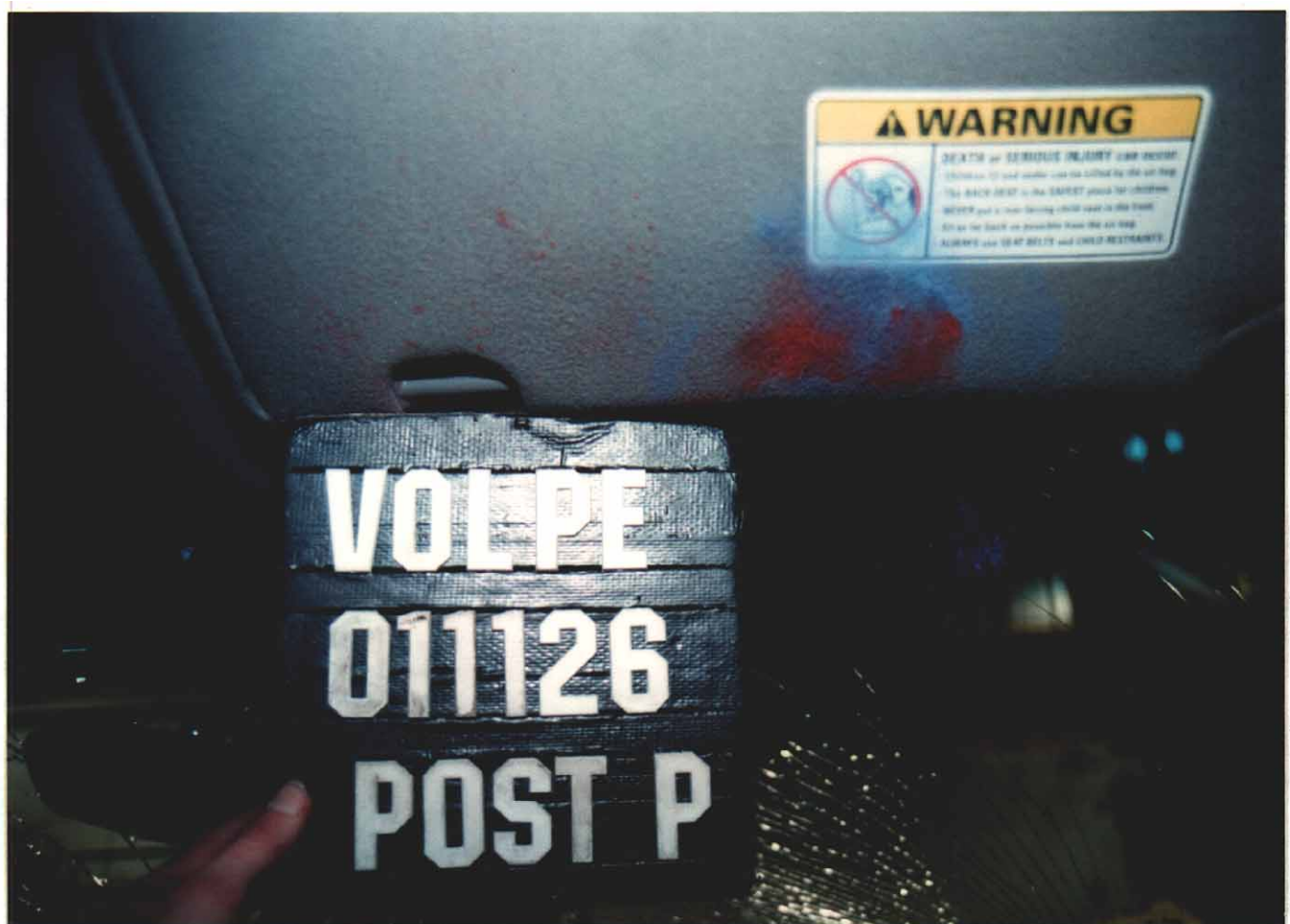


Figure A-71 Post-Test Passenger Dummy Head Contact - View 3



Figure A-72 Post-Test Passenger Dummy Head Contact - View 4



Figure A-73 Pre-Test Passenger Dummy Knee Contact - View 1

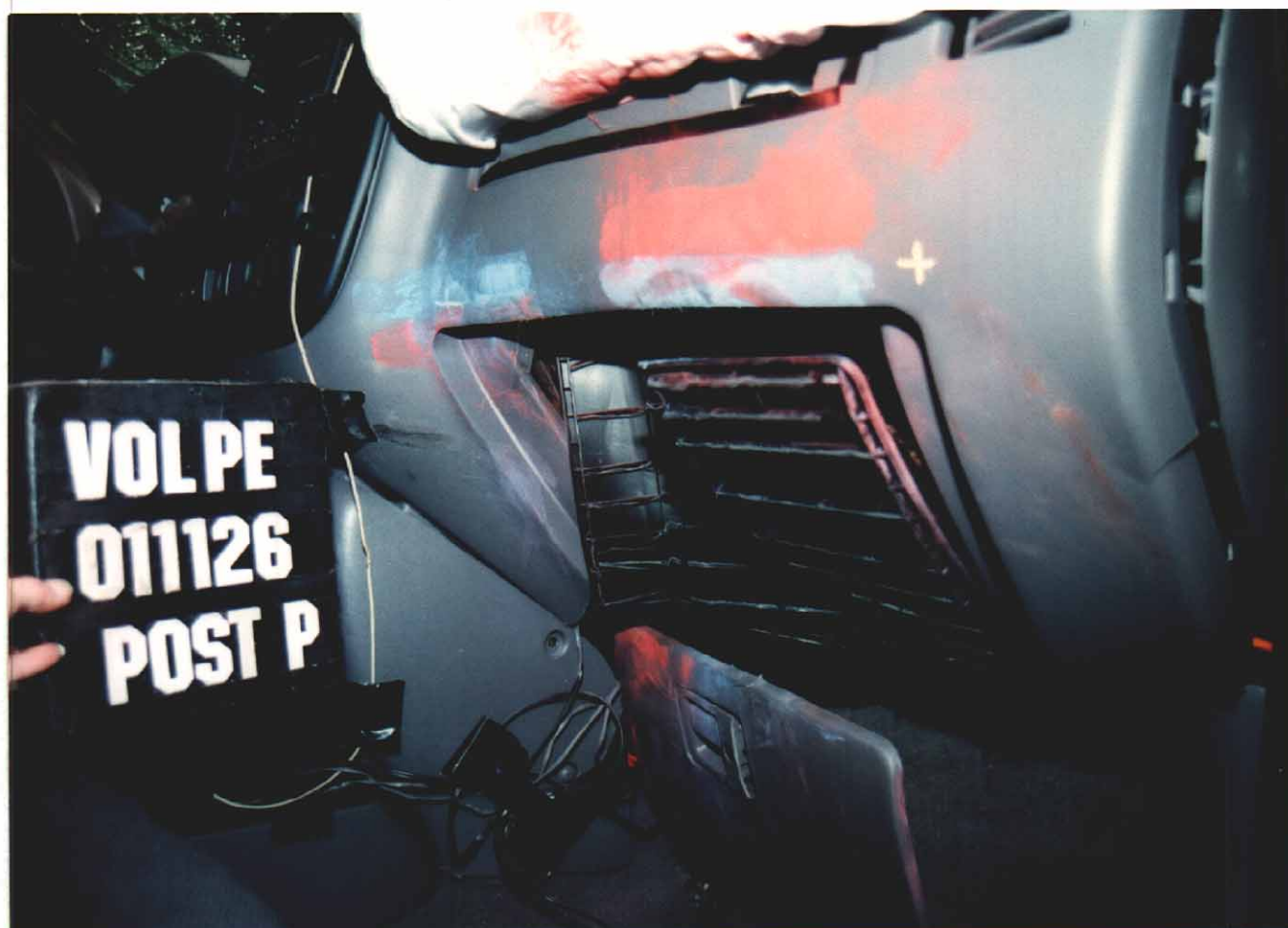


Figure A-74 Post-Test Passenger Dummy Knee Contact - View 1

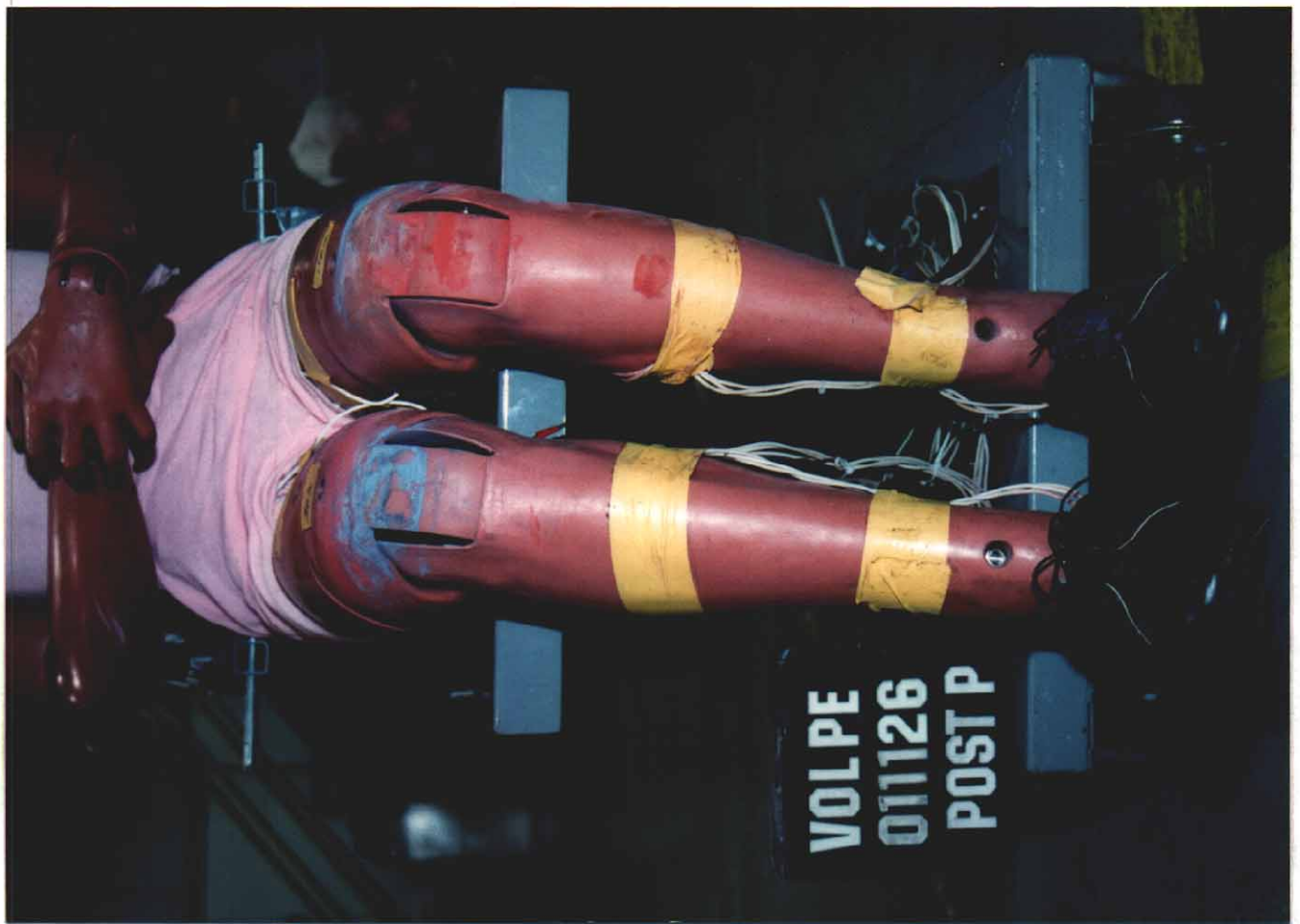


Figure A-75 Post-Test Passenger Dummy Knee Contact - View 2

Intentionally Left Blank



Figure A-76 Pre-Test Vehicle Certification Label View

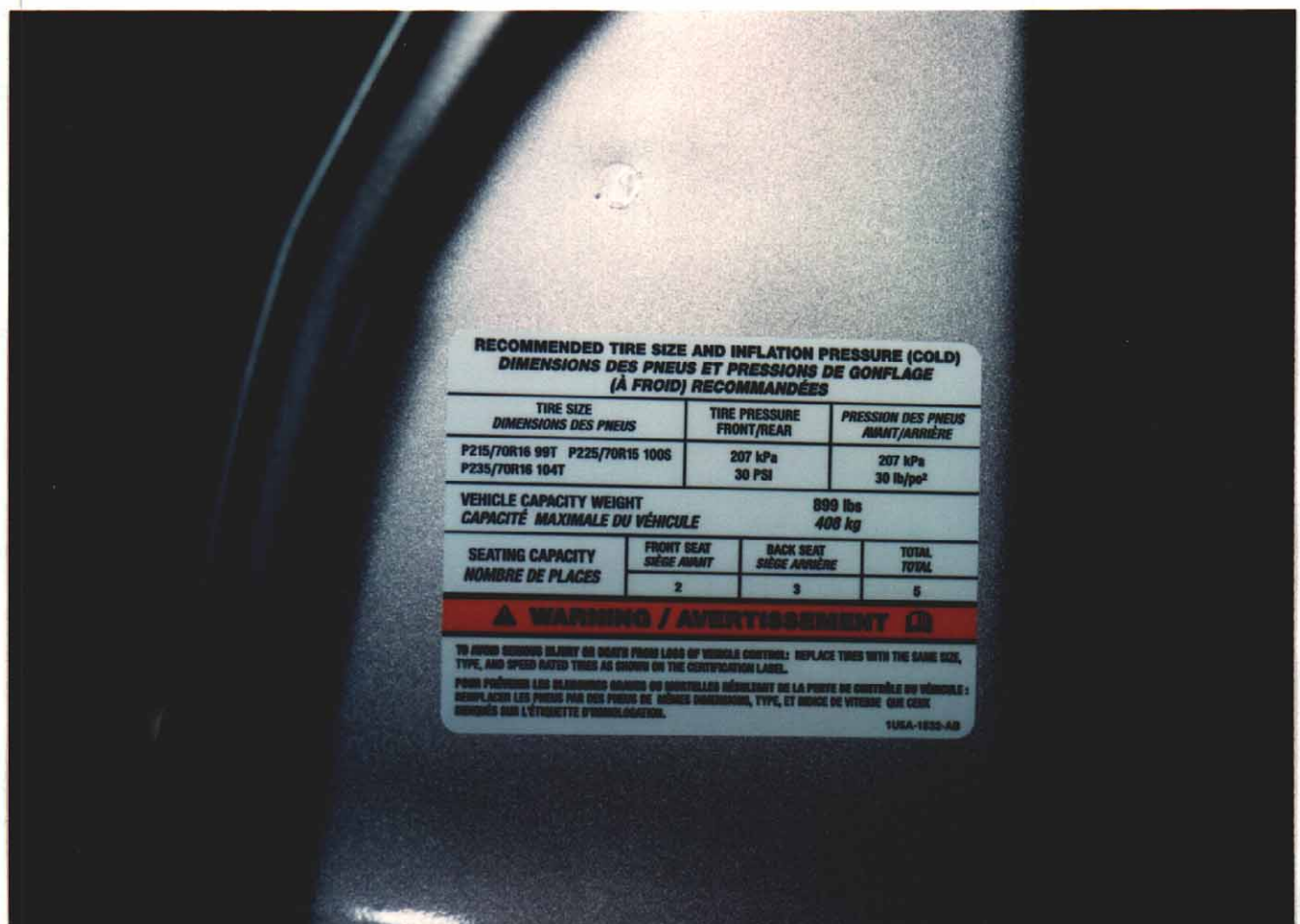


Figure A-77 Pre-Test Tire Load Label View

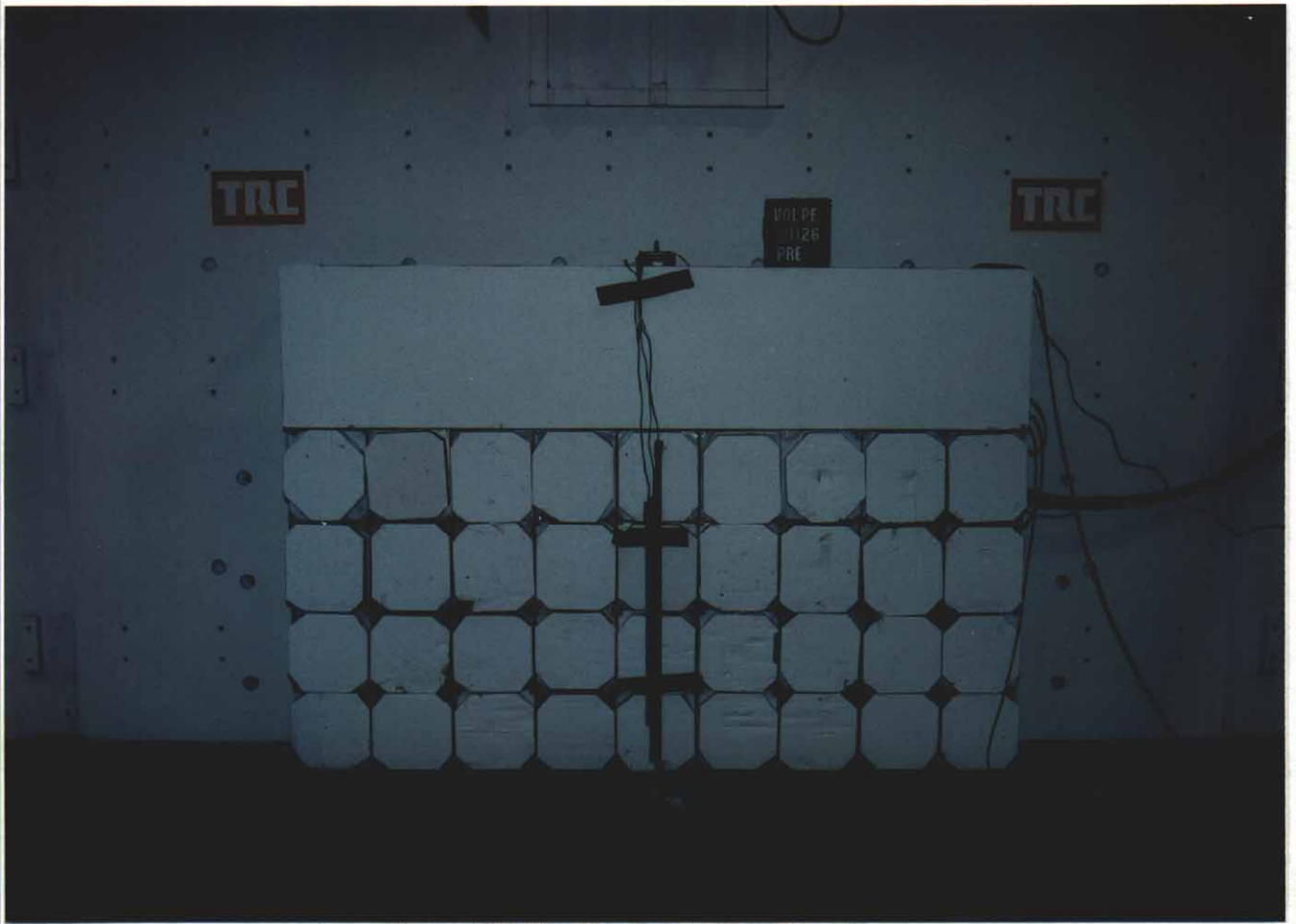


Figure A-78 Pre-Test Barrier Face View



Figure A-79 Post-Test Barrier Face View



Figure A-80 Pre-Test Ballast View



Figure A-81 Post-Test Steering Column Damage View

Appendix B

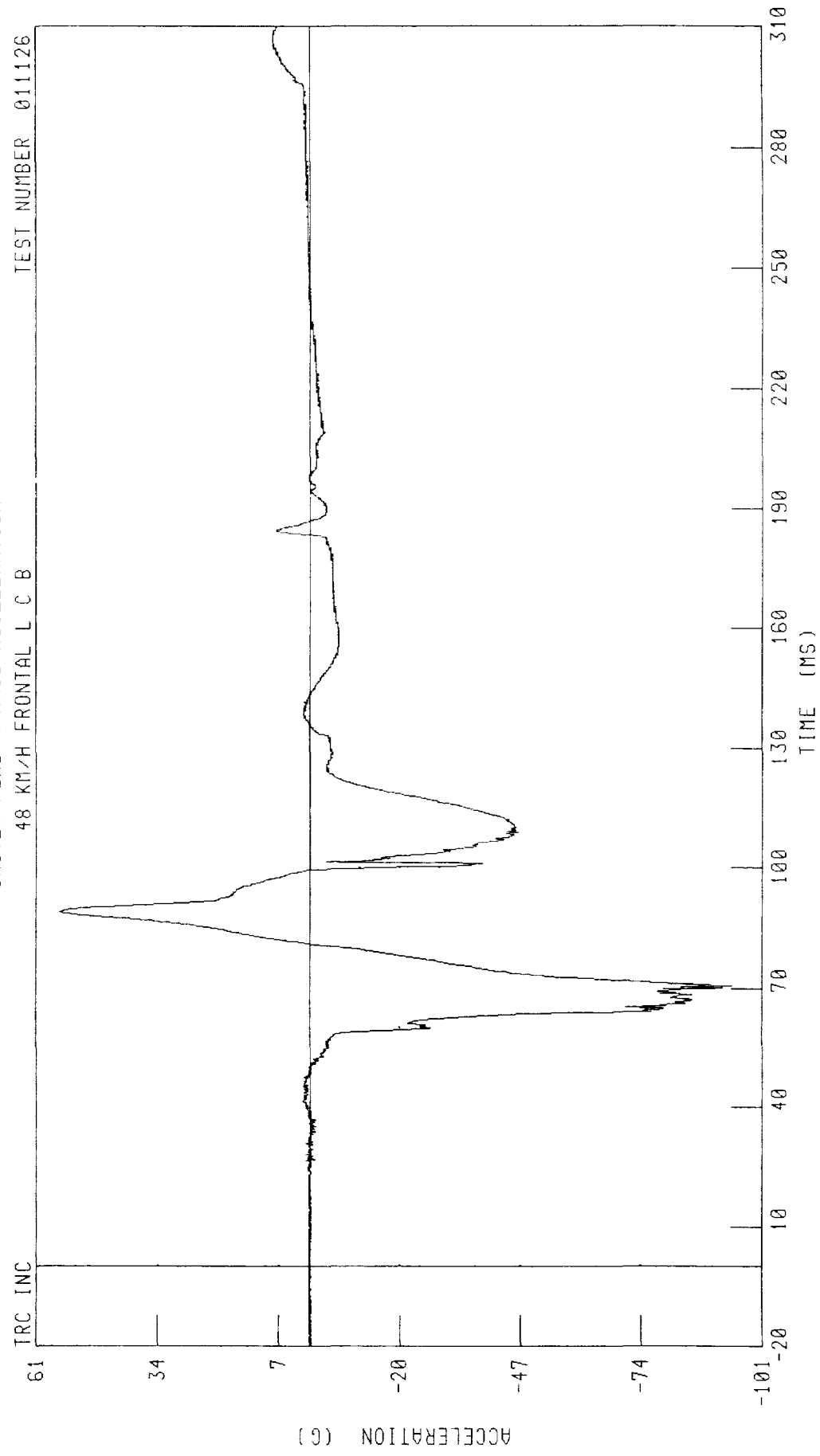
Data Plots

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

DRIVER HEAD X-AXIS ACCELERATION

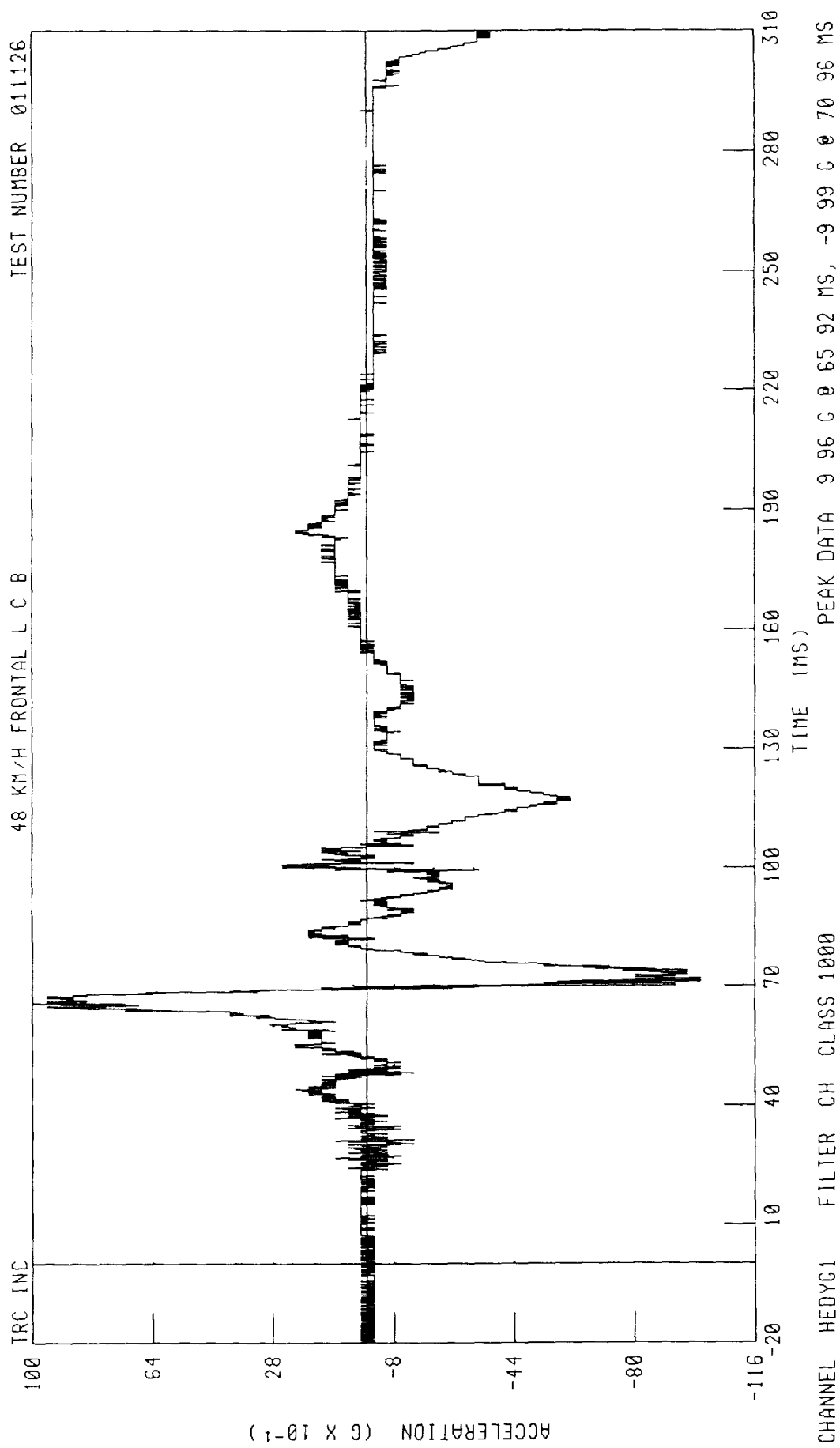
48 KM/H FRONTAL L C B

TEST NUMBER 011126



CHANNEL HEDXG1 FILTER CH CLASS 1000 PEAK DATA 55 74 G @ 88 96 MS, -94 32 G @ 70 64 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
DRIVER HEAD Y-AXIS ACCELERATION

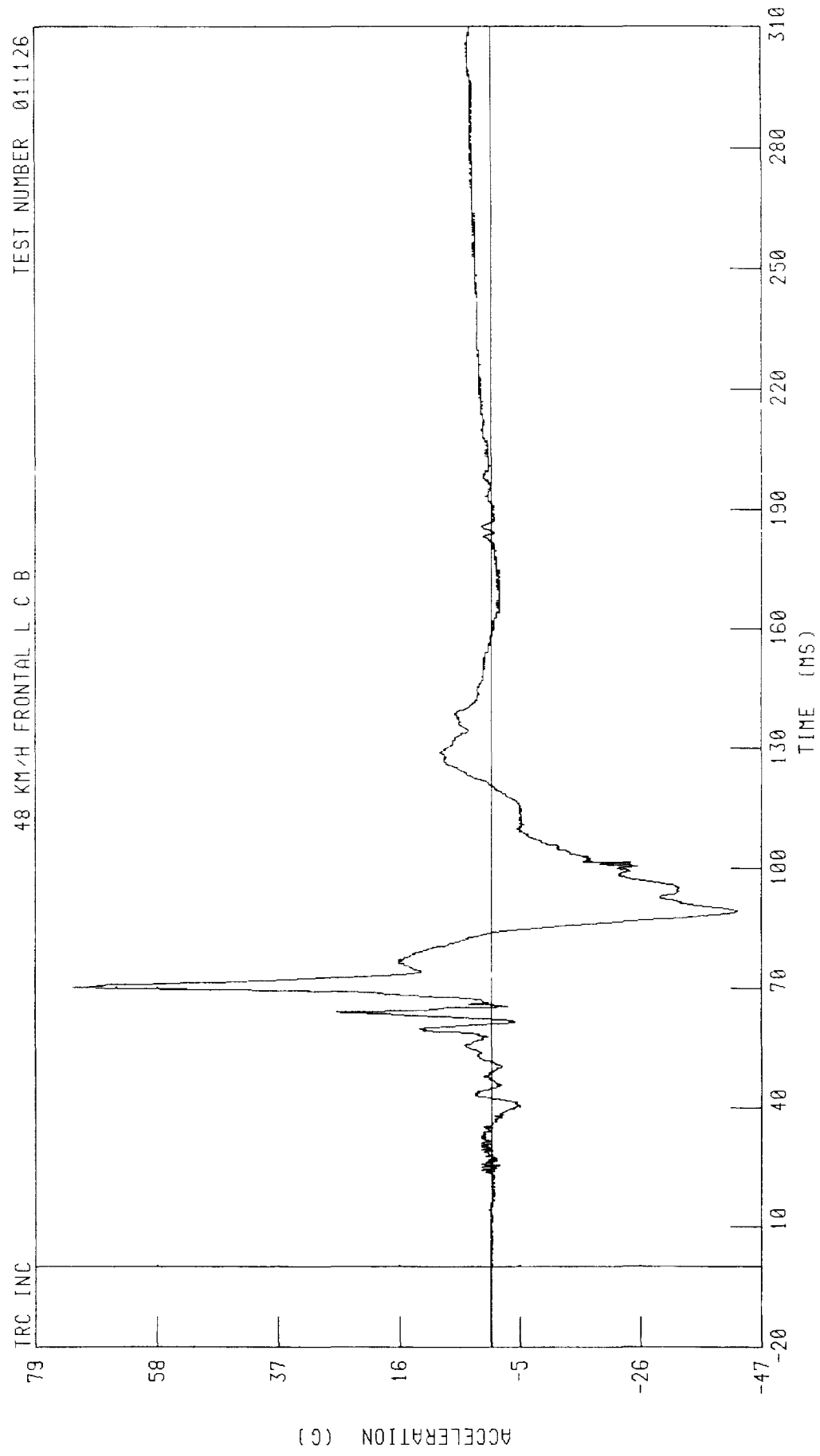


2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

DRIVER HEAD Z-AXIS ACCELERATION

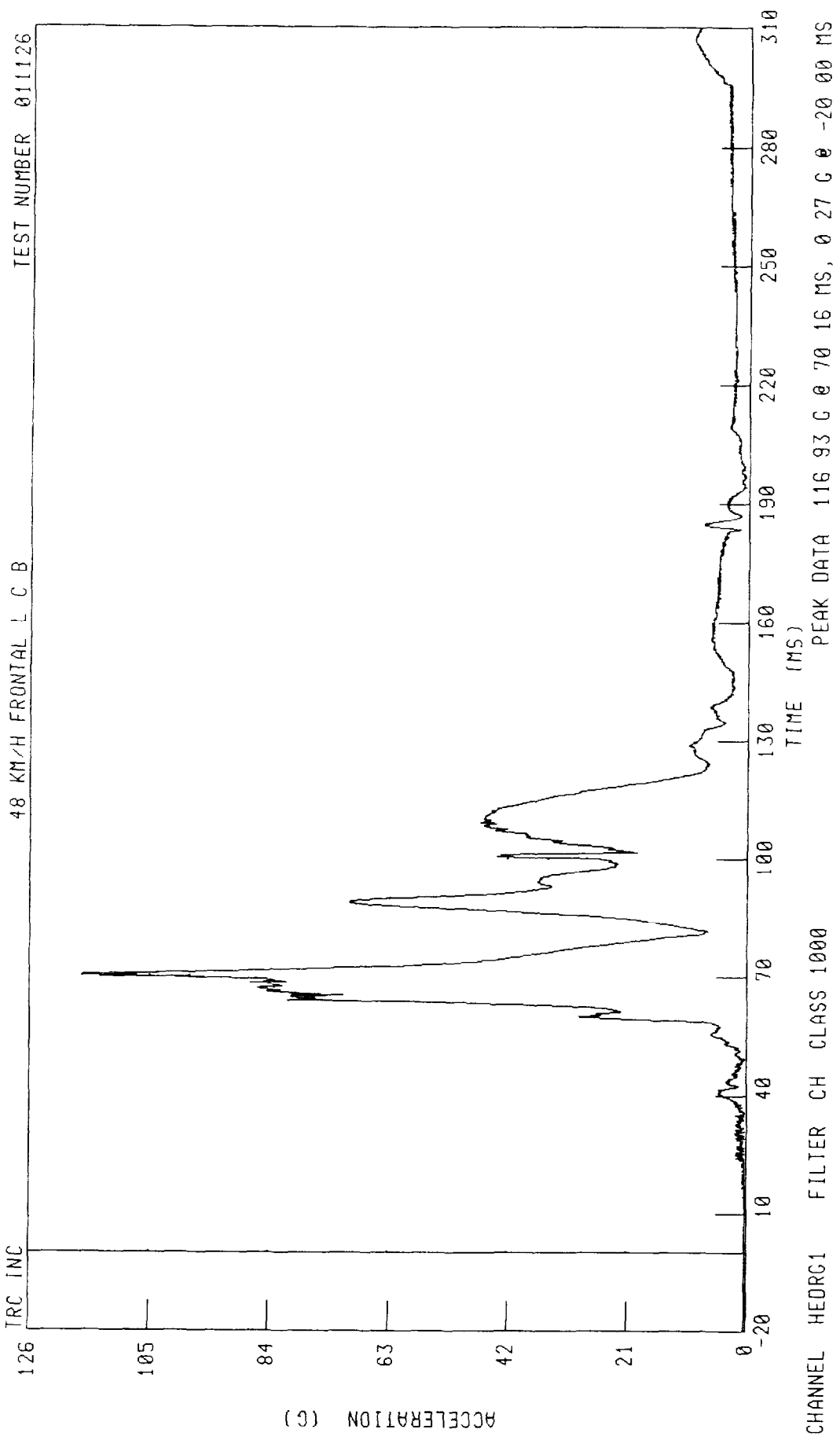
48 KM/H FRONTAL L C B

TEST NUMBER 011126



CHANNEL HEDZG1 FILTER CH CLASS 1000 PEAK DATA 72 66 G @ 70 16 MS, -42 91 G @ 89 36 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
DRIVER HEAD RESULTANT ACCELERATION

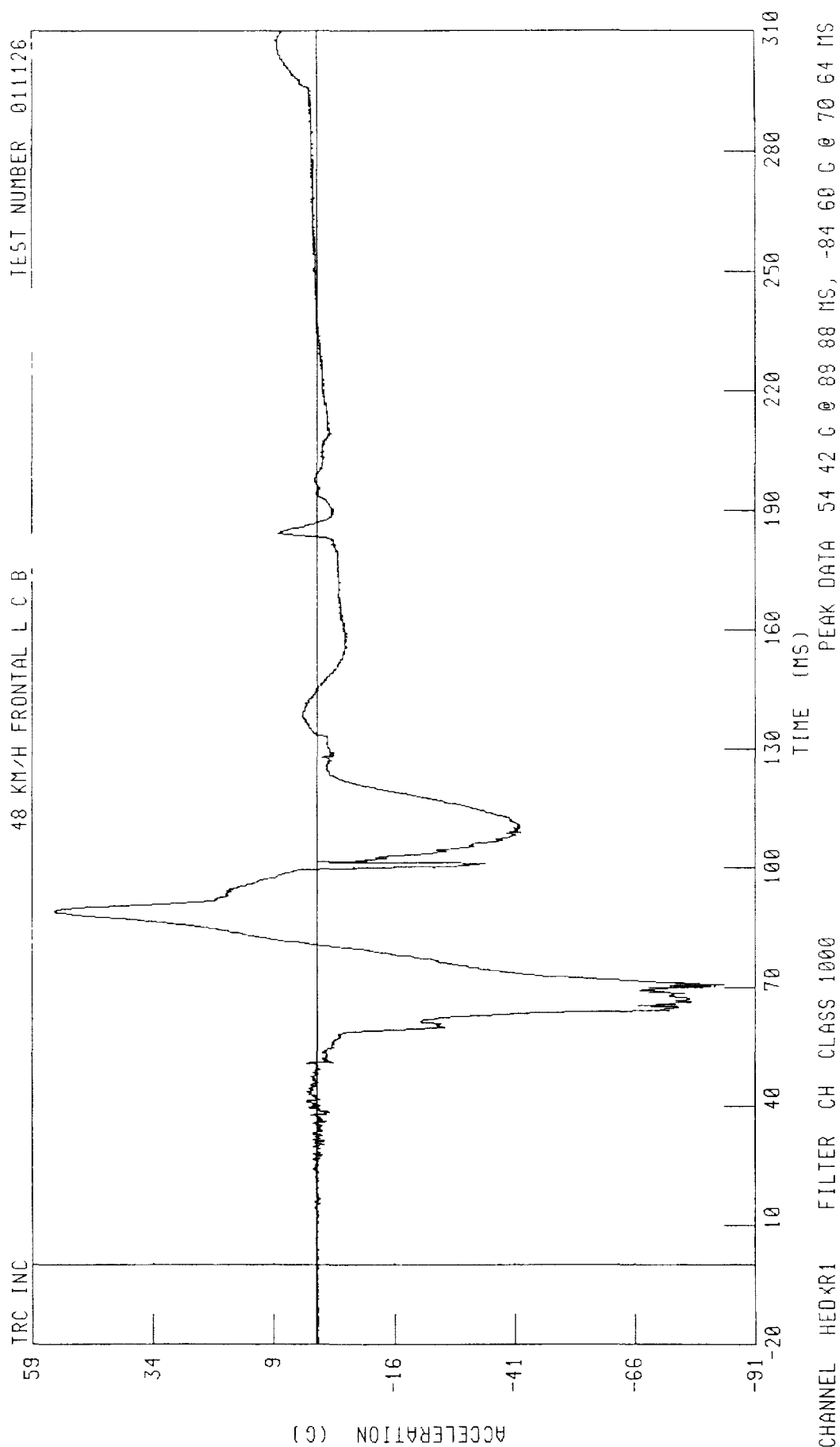


2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

DRIVER HEAD X-AXIS ACCELERATION REDUNDANT

48 KM/H FRONTAL L C B

TEST NUMBER 011126



PEAK DATA 54 42 0 89 88 MS, -84 60 0 70 64 MS

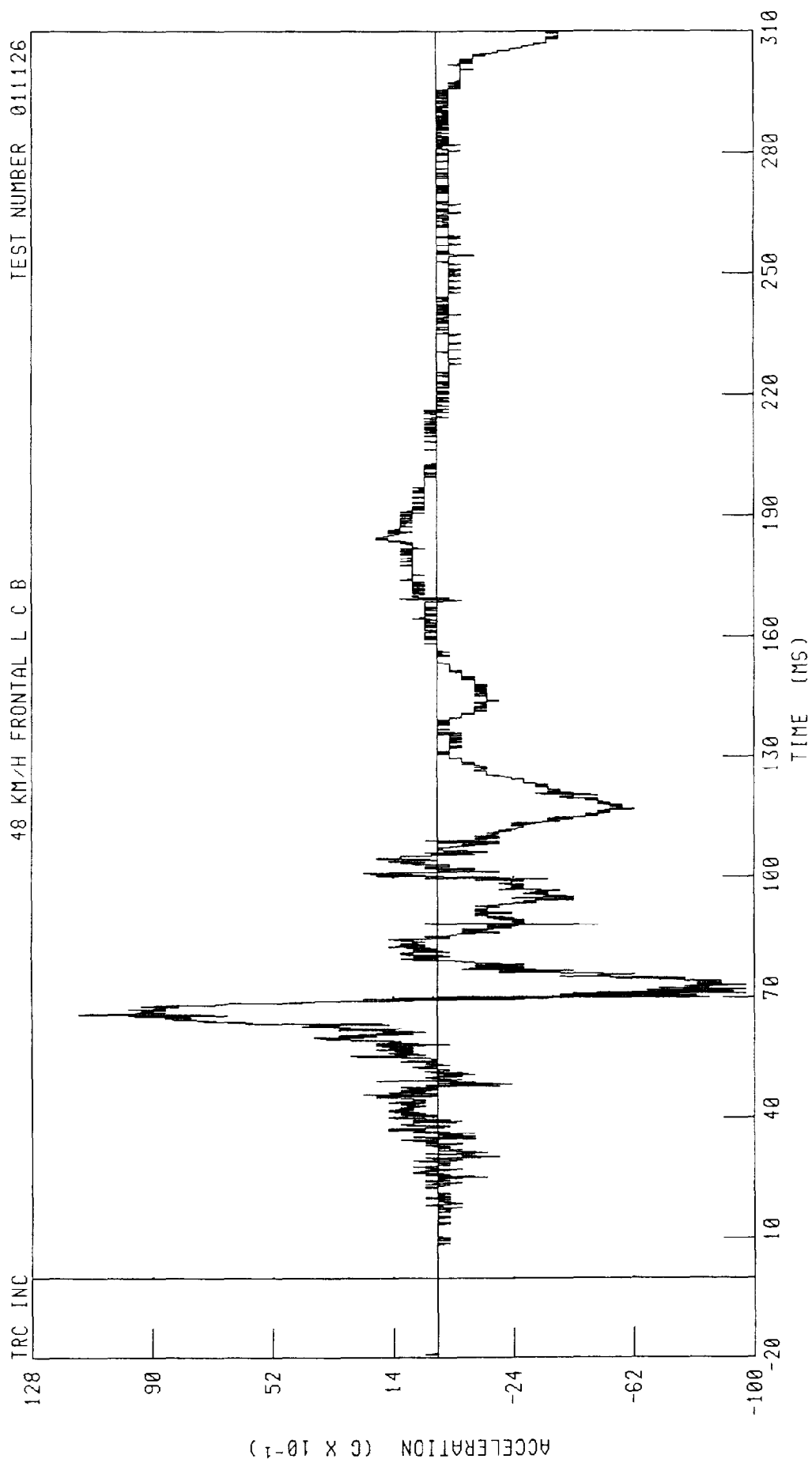
CHANNEL HEDXR1 FILTER CH CLASS 1000

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

DRIVER HEAD Y-AXIS ACCELERATION REDUNDANT

48 KM/H FRONTAL L C B

TEST NUMBER 011126

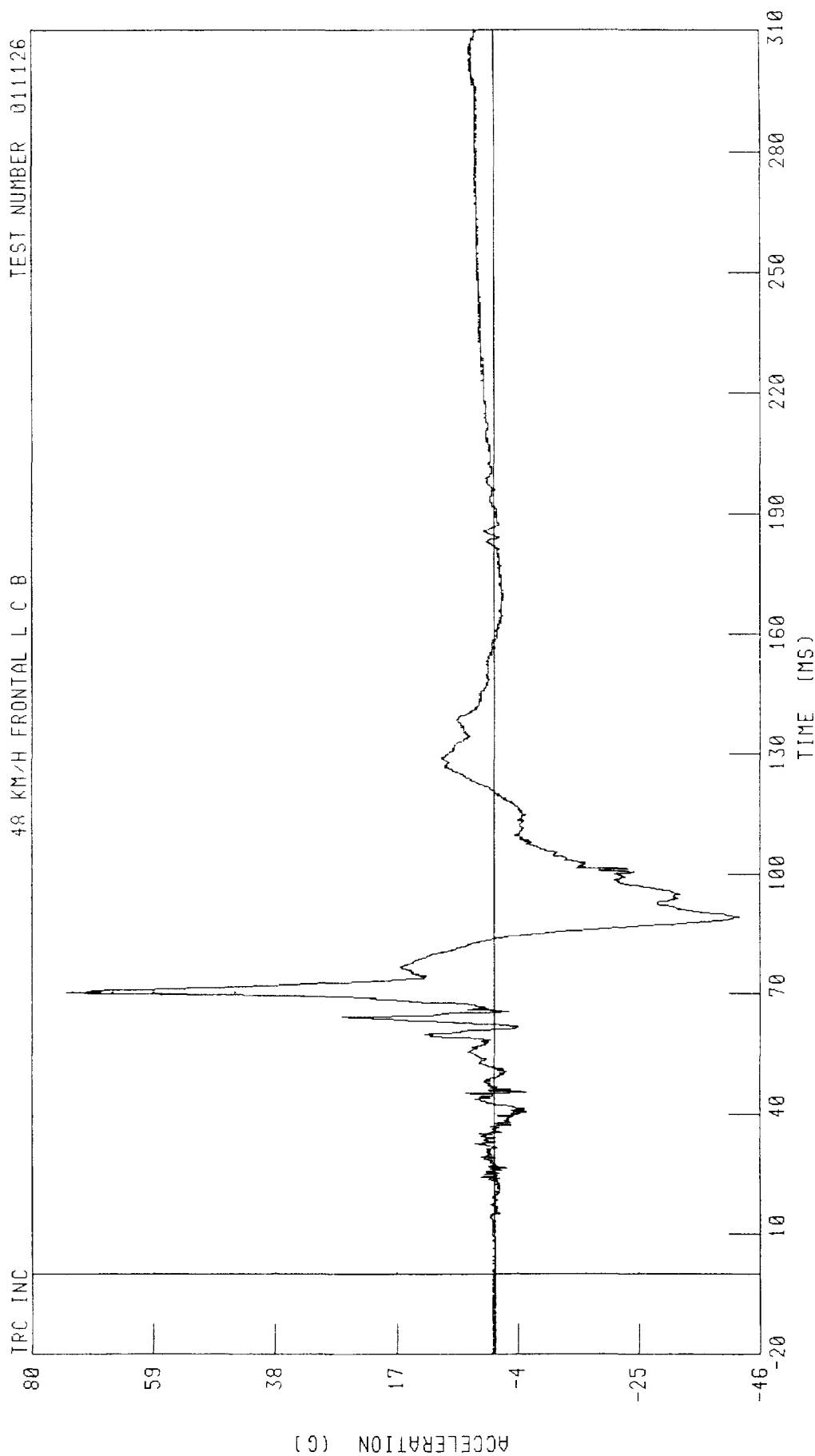


CHANNEL HEDYR1 FILTER CH CLASS 1000

PEAK DATA 11 31 G @ 65 92 MS, -9 76 G @ 70 96 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
DRIVER HEAD Z-AXIS ACCELERATION REDUNDANT
48 KM/H FRONTAL L C B

TEST NUMBER 011126



CHANNEL HEDZR1 FILTER CH CLASS 1000

PEAK DATA 74 05 G @ 70 16 MS, -42 42 G @ 89 28 MS

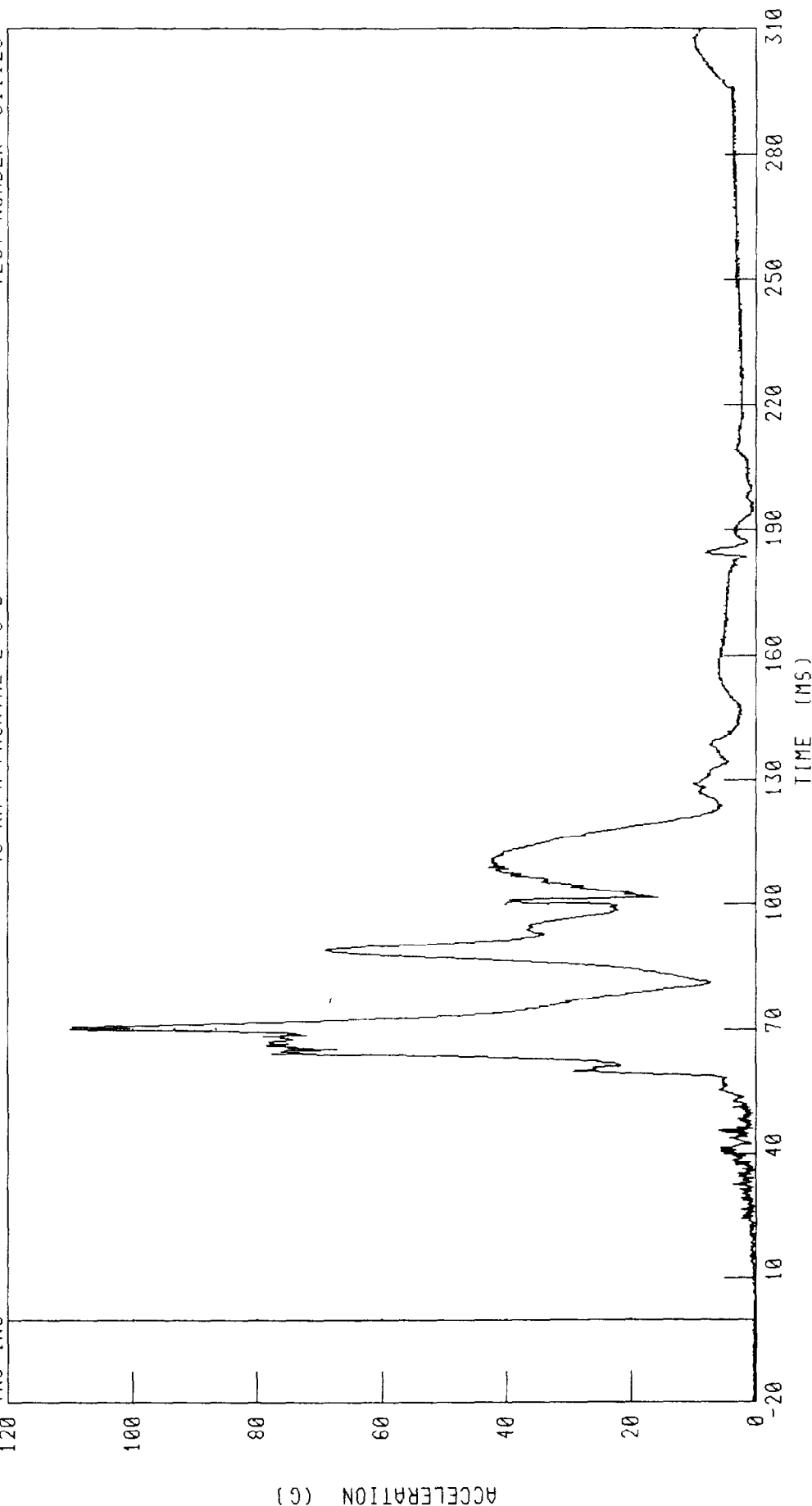
2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

DRIVER HEAD RESULTANT ACCELERATION REDUNDANT

TEST NUMBER 011126

48 KM/H FRONTAL L C B

TRC INC



CHANNEL HEDRR1 FILTER CH CLASS 1000

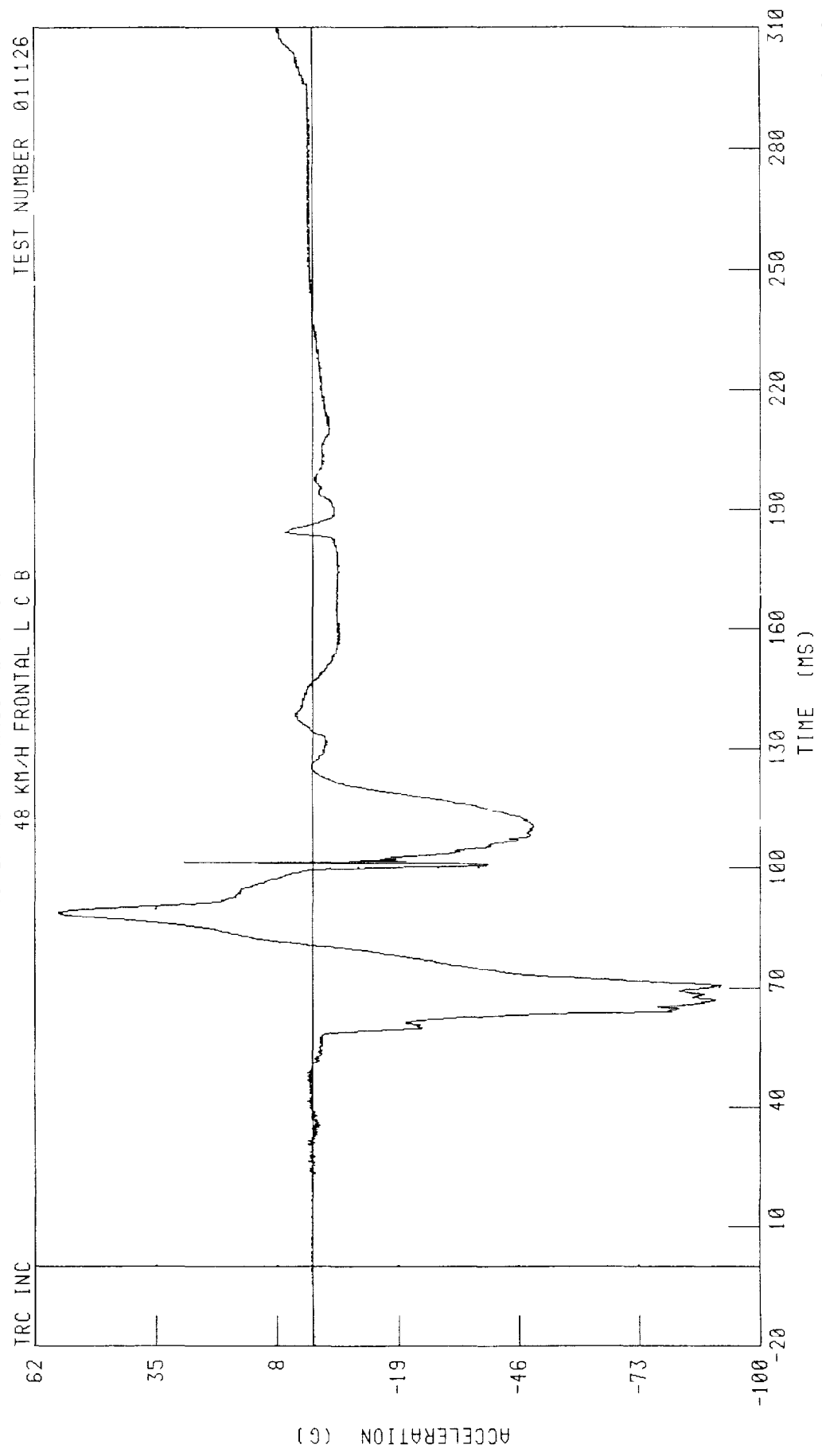
PEAK DATA 110 13 G 0 70 08 MS, 0 15 G 0 -19 68 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

DRIVER HEAD X-AXIS (LT) ACCELERATION

48 KM/H FRONTAL L C B

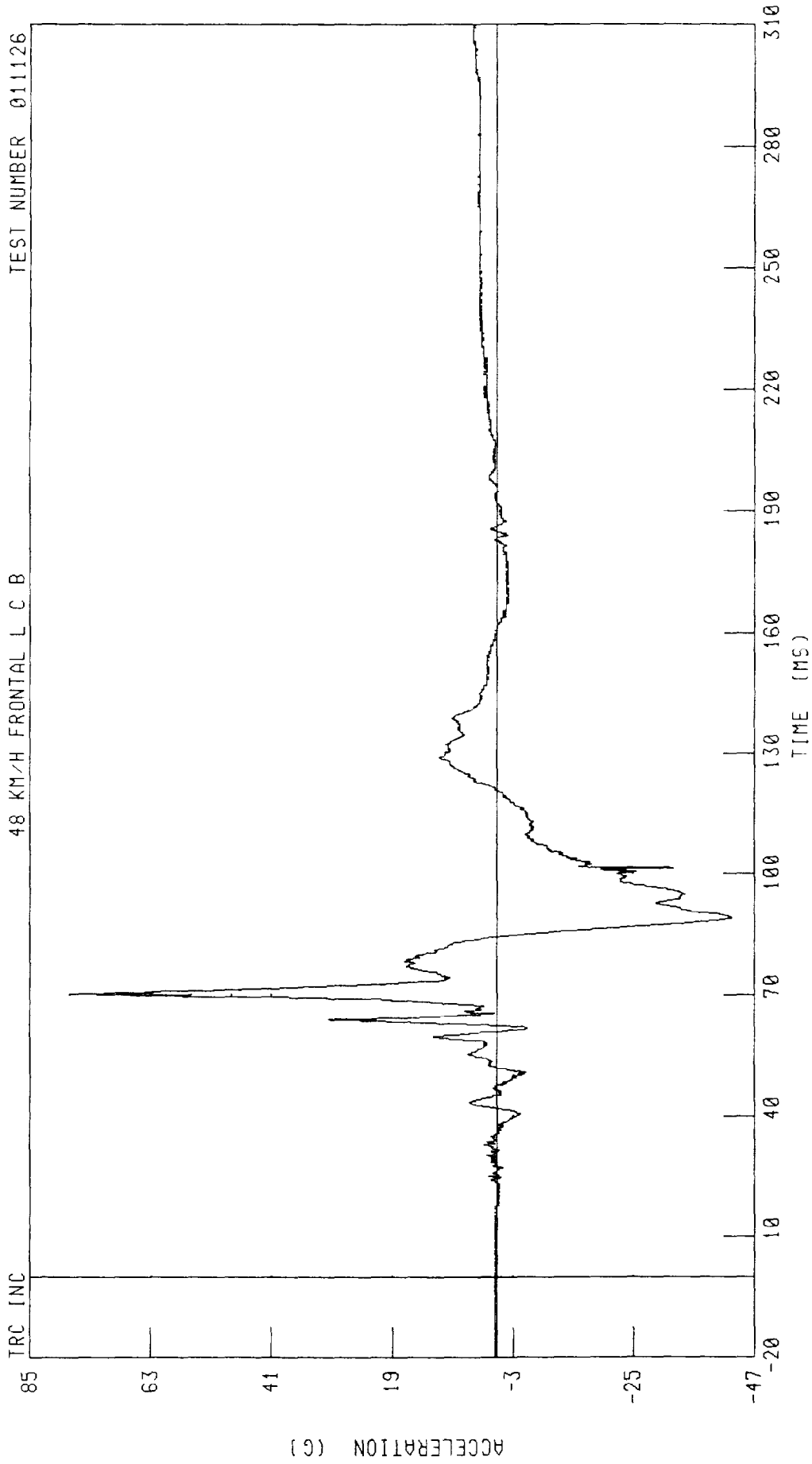
TEST NUMBER 011126



CHANNEL HD1XG1 FILTER CH CLASS 1000 PEAK DATA 56 78 G @ 88 96 MS, -91 27 G @ 70 64 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

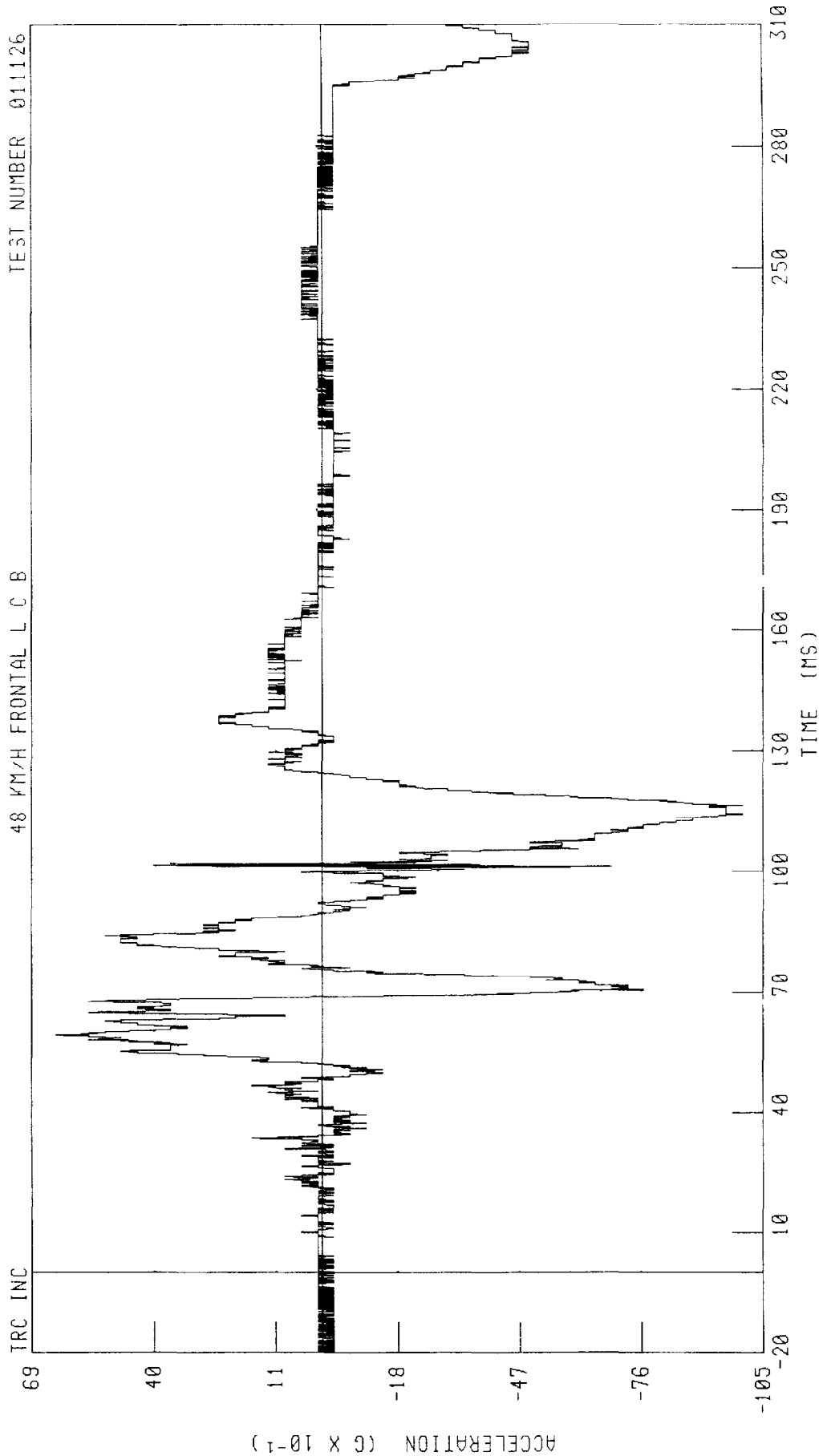
DRIVER HEAD Z-AXIS (LT) ACCELERATION



CHANNEL HD1ZG1 FILTER CH CLASS 1000

PEAK DATA 77 80 G 70 40 MS, -43 00 G 89 12 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
 DRIVER HEAD Y-AXIS (FT) ACCELERATION
 48 KM/H FRONTAL L C B



TEST NUMBER 011126

CHANNEL HD2YC1 FILTER CH CLASS 1000 PEAK DATA 6 34 0 59 12 MS, -10 00 G @ 114 32 MS

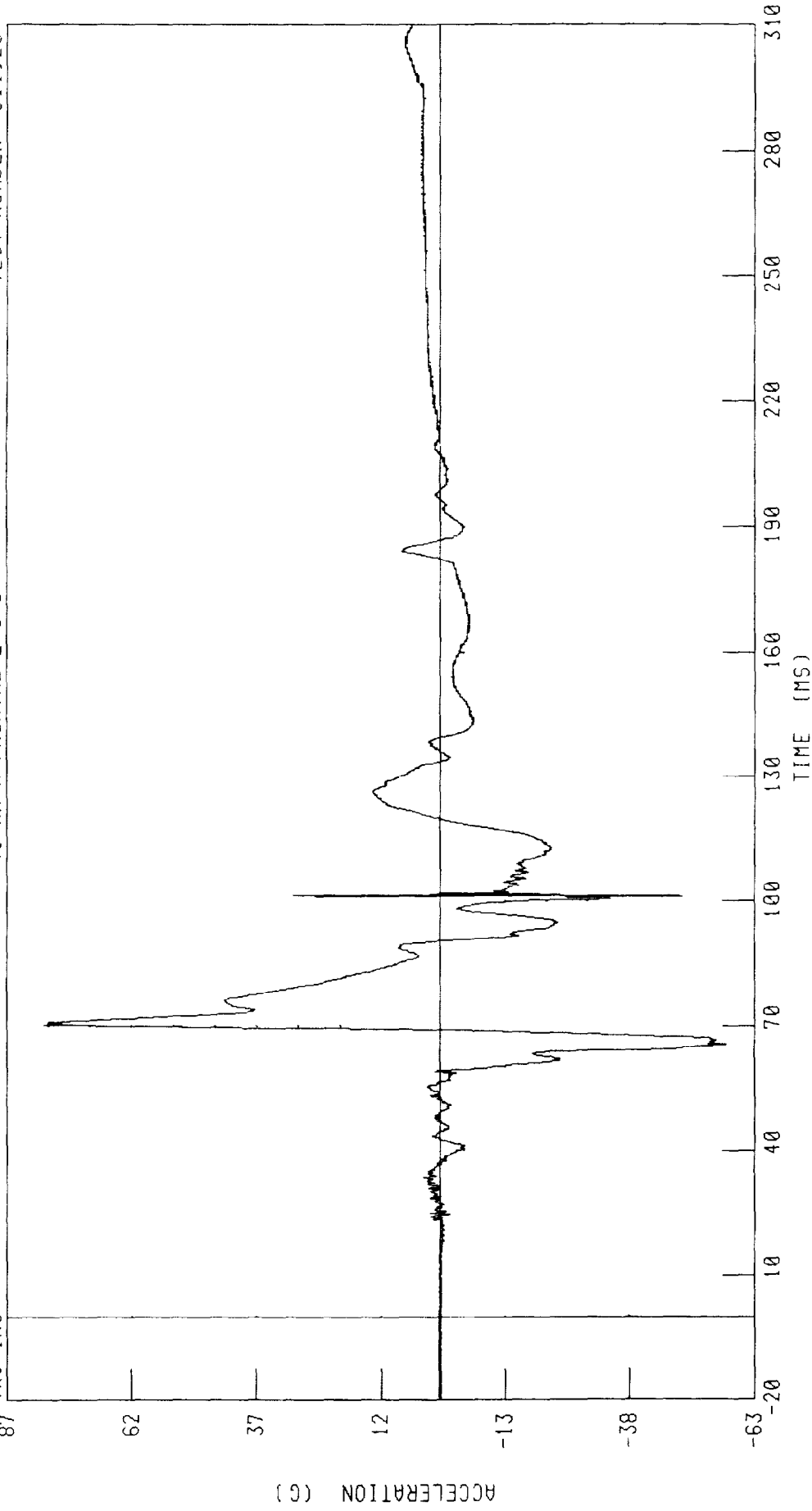
2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

DRIVER HEAD Z-AXIS (FT) ACCELERATION

48 KM/H FRONTAL L C B

TEST NUMBER 011126

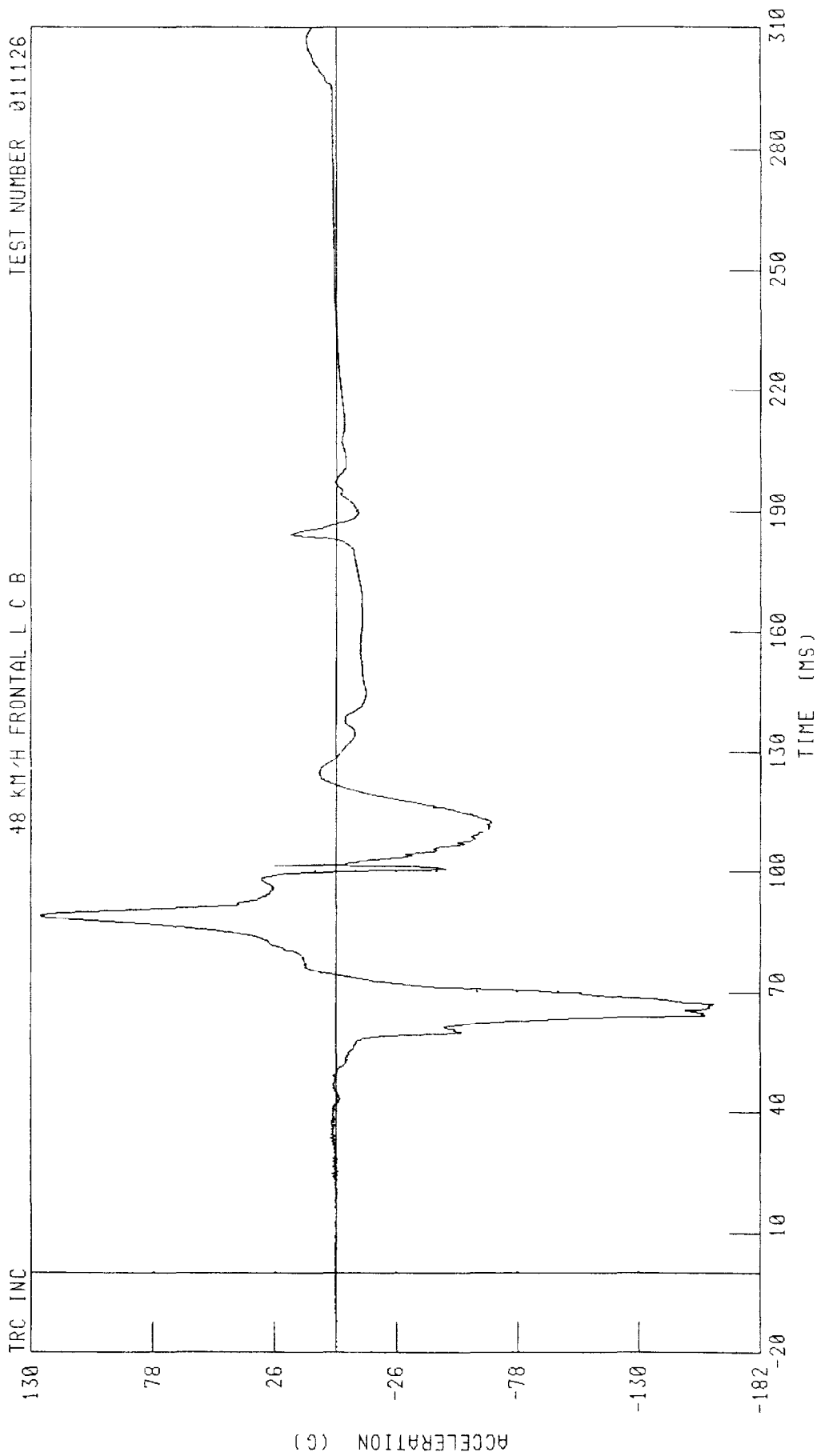
TRC INC



CHANNEL HD2ZG1 FILTER CH CLASS 1000

PEAK DATA 79 60 G @ 70 48 MS, -57 34 G @ 65 36 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
DRIVER HEAD X-AXIS (TP) ACCELERATION
48 KM/H FRONTAL L C B



CHANNEL HD3XG1 FILTER CH CLASS 1000

PEAK DATA 126 07 G @ 89 12 MS, -162 23 G @ 86 96 MS

TEST NUMBER 011126

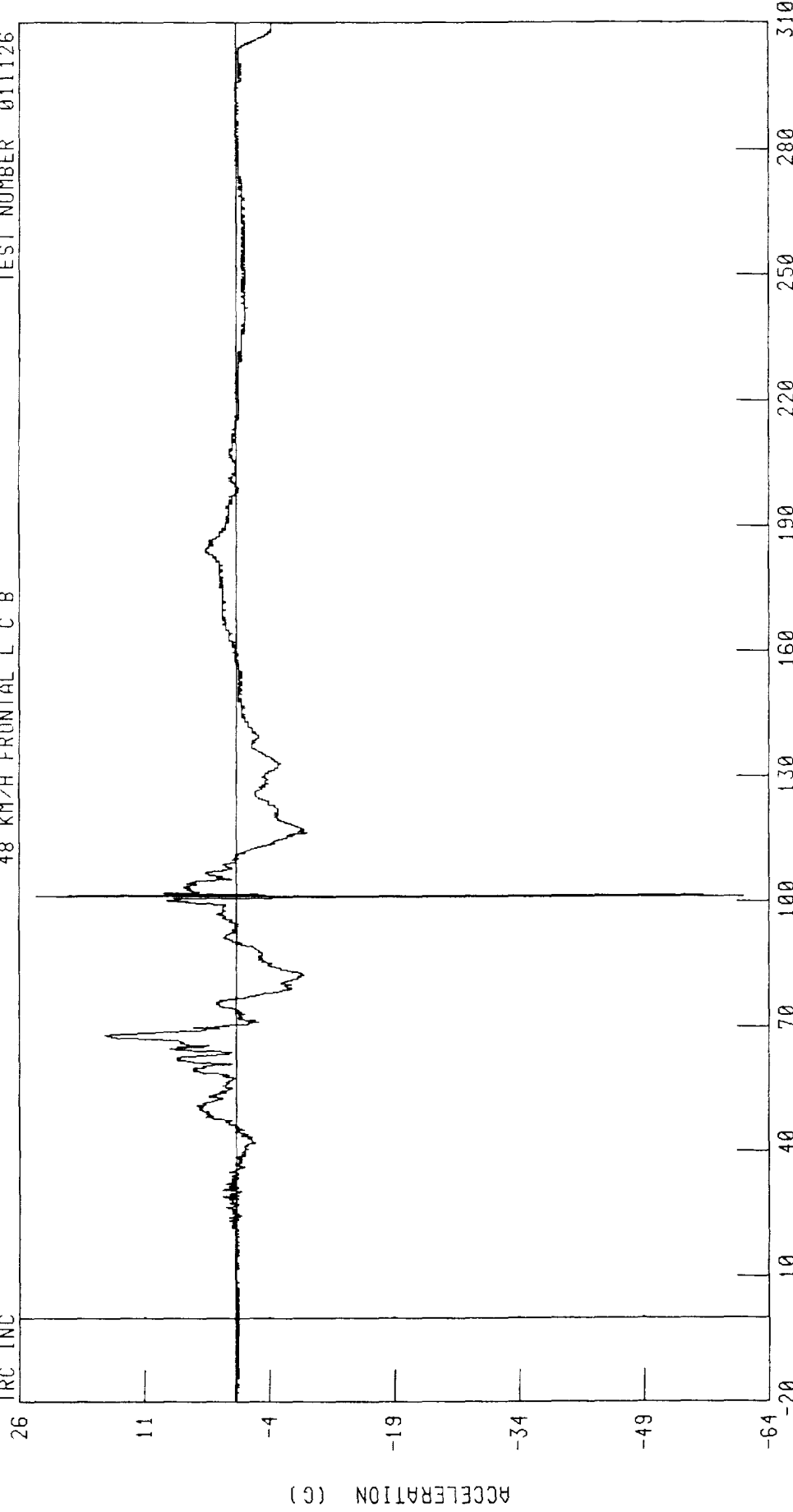
2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

DRIVER HEAD Y-AXIS (TP) ACCELERATION

48 KM/H FRONTAL L C B

TEST NUMBER 011126

TRC INC



TIME (MS)

PEAK DATA 24 00 G @ 101 76 MS, -61 00 G @ 101 44 MS

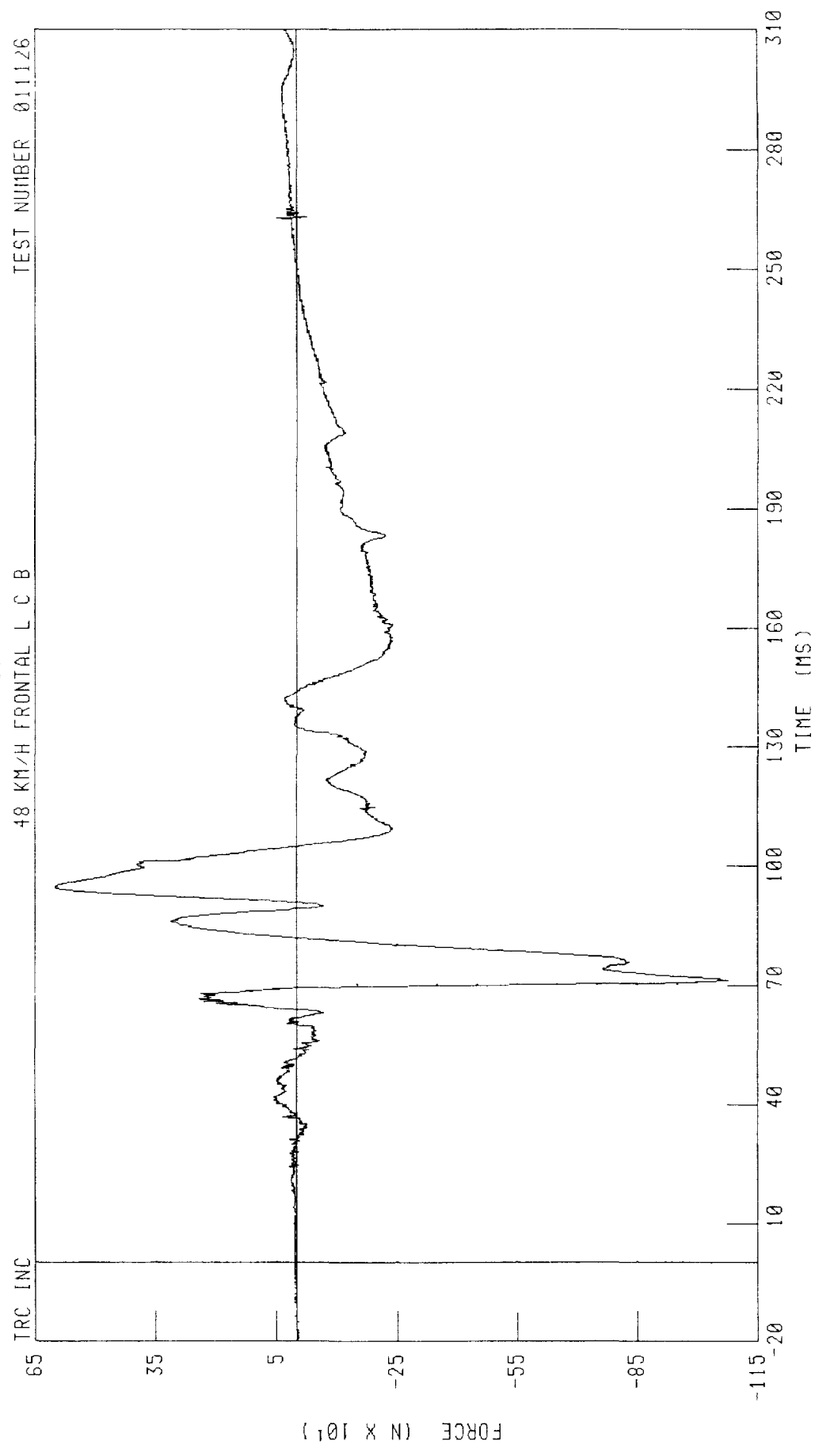
CHANNEL HD3YC1 FILTER CH CLASS 1000

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

DRIVER NECK X-AXIS SHEAR FORCE

48 KM/H FRONTAL L C B

TEST NUMBER 011126



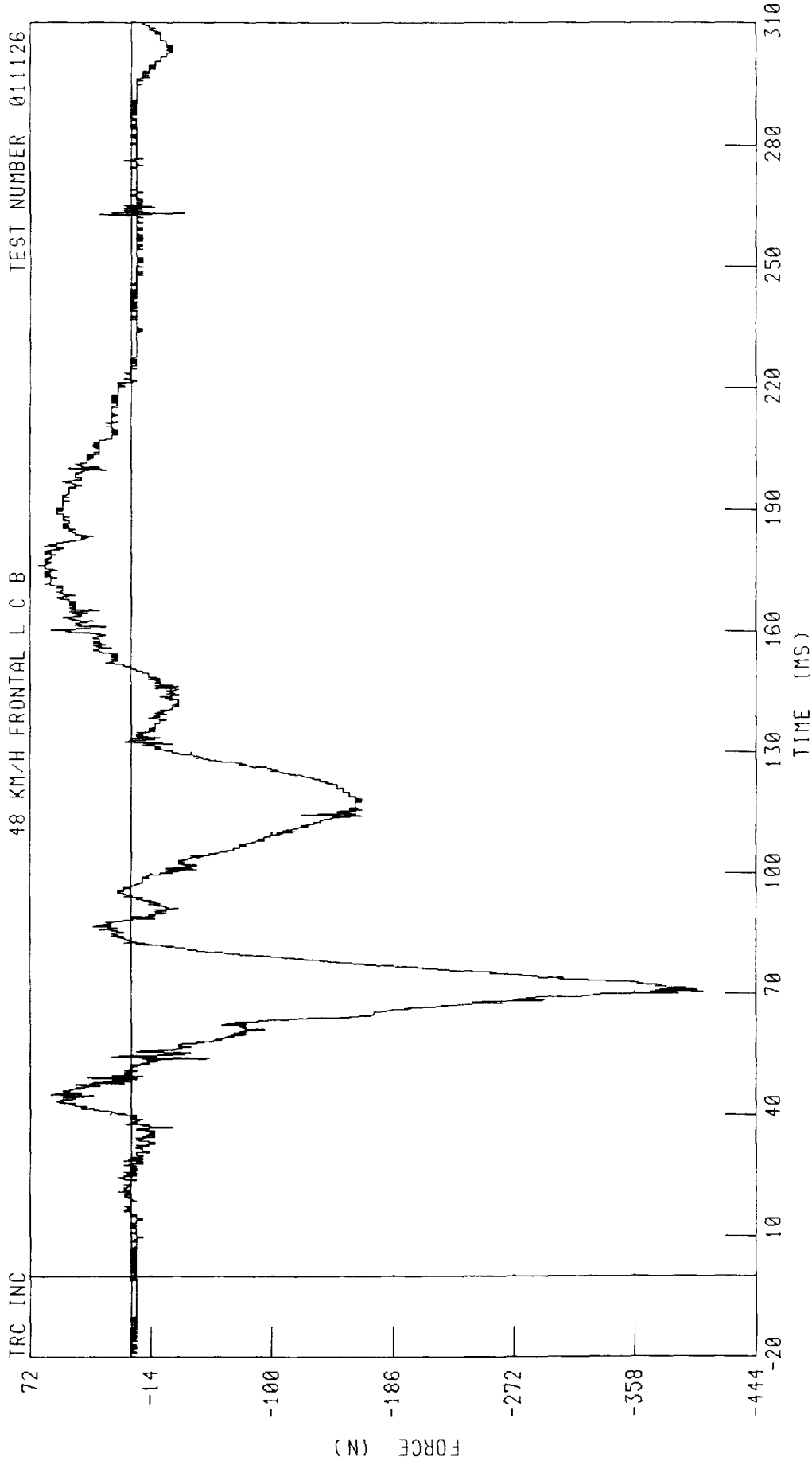
CHANNEL NEKXF1 FILTER CH CLASS 1000 PEAK DATA 599 84 N @ 94 48 MS, -1077 41 N @ 71 12 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

DRIVER NECK Y-AXIS SHEAR FORCE

48 KM/H FRONTAL L C B

TEST NUMBER 011126



CHANNEL NEKYF1 FILTER CH CLASS 1000

PEAK DATA 66 19 N @ 176 56 MS, -407 17 N @ 70 48 MS

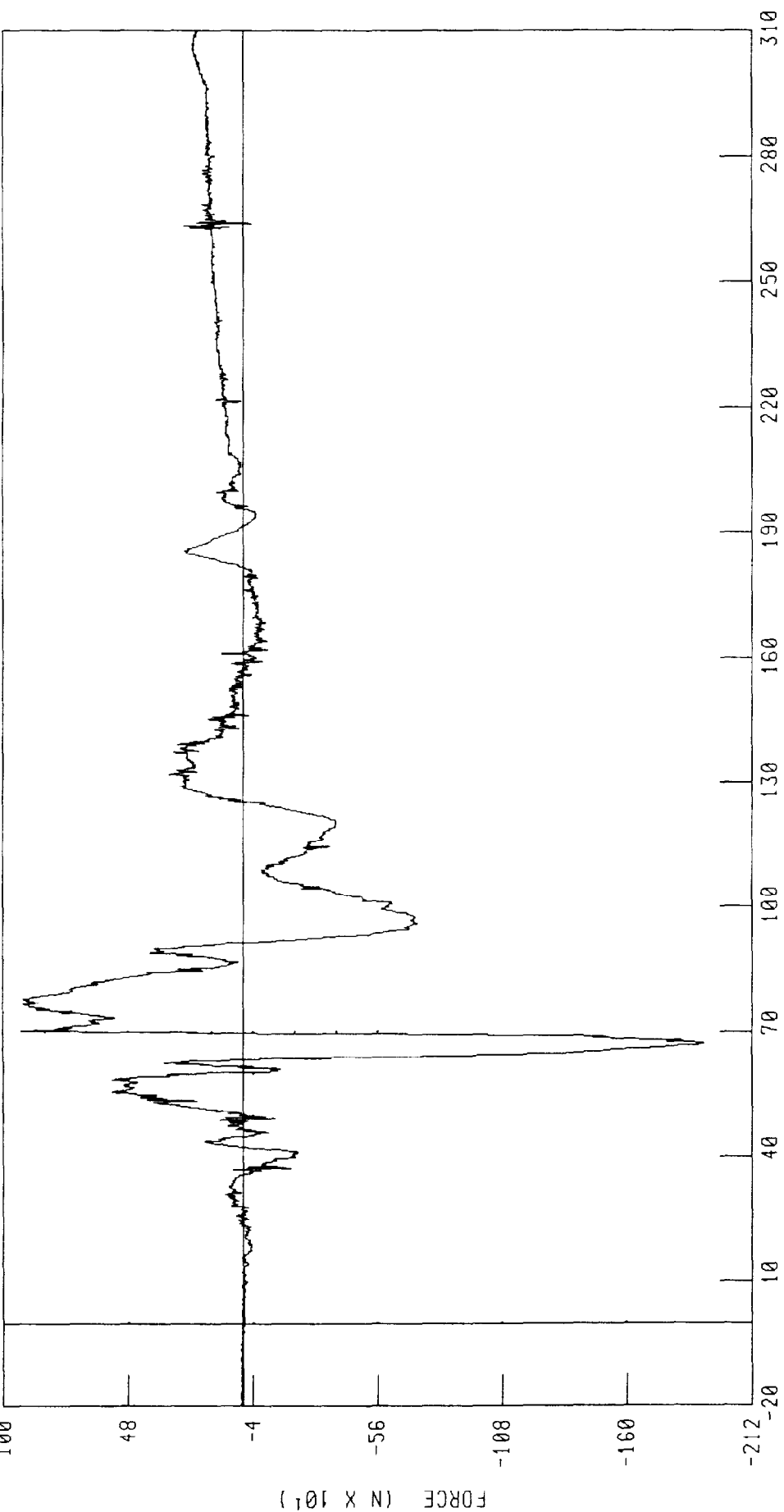
2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

DRIVER NECK Z-AXIS AXIAL FORCE

48 KM/H FRONTAL L C B

TEST NUMBER 011126

TRC INC



TIME (MS)

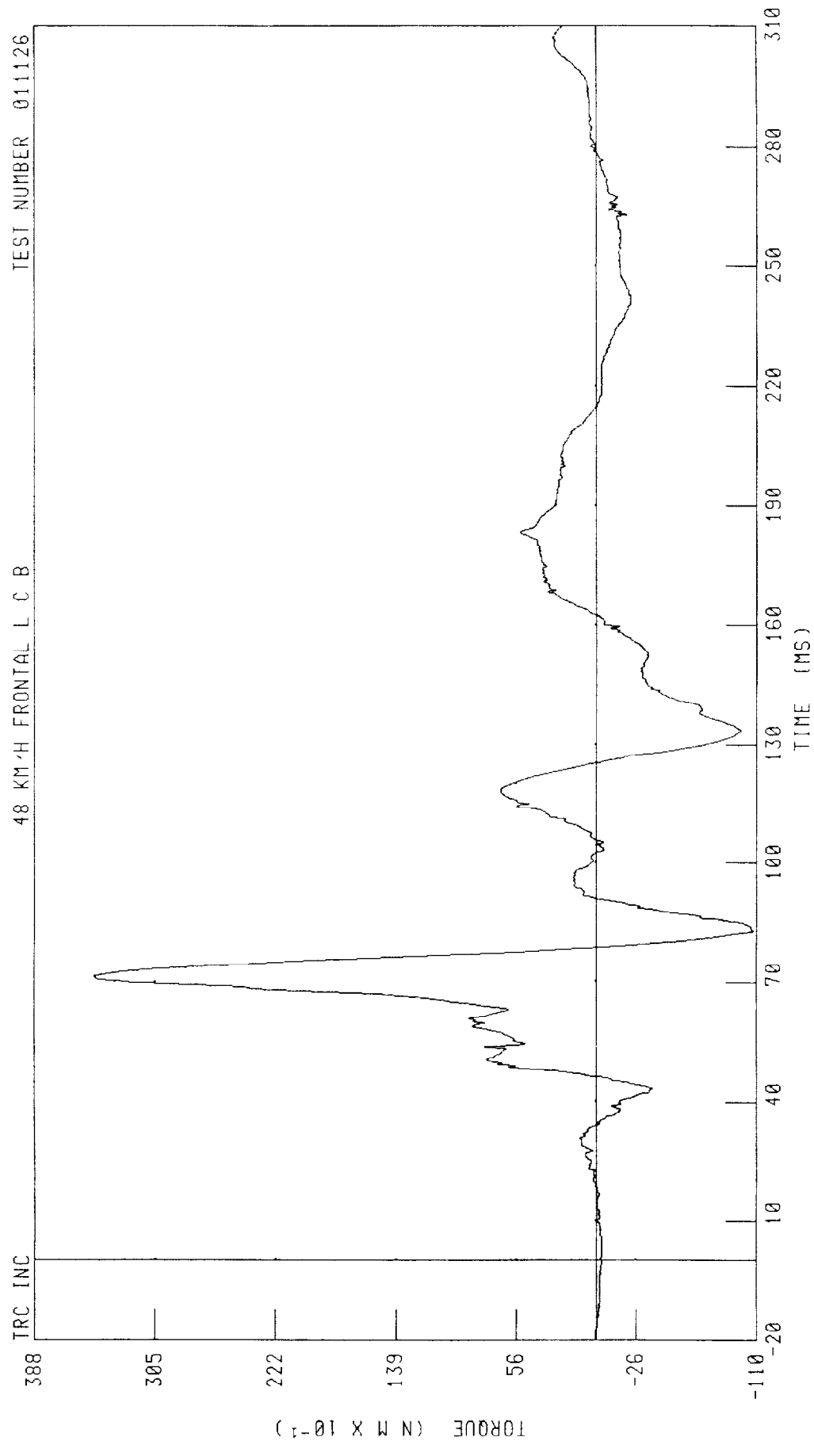
CHANNEL NEKZF1 FILTER CH CLASS 1000 PEAK DATA 924 14 N 0 70 40 MS, -1923 77 N 0 67 04 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

DRIVER NECK MOMENT ABOUT X AXIS

48 KM/H FRONTAL L C B

TEST NUMBER 011126



CHANNEL NEXXM1 FILTER CH CLASS 600 PEAK DATA 34 75 N H @ 71 44 MS, -10 80 N H @ 62 80 MS

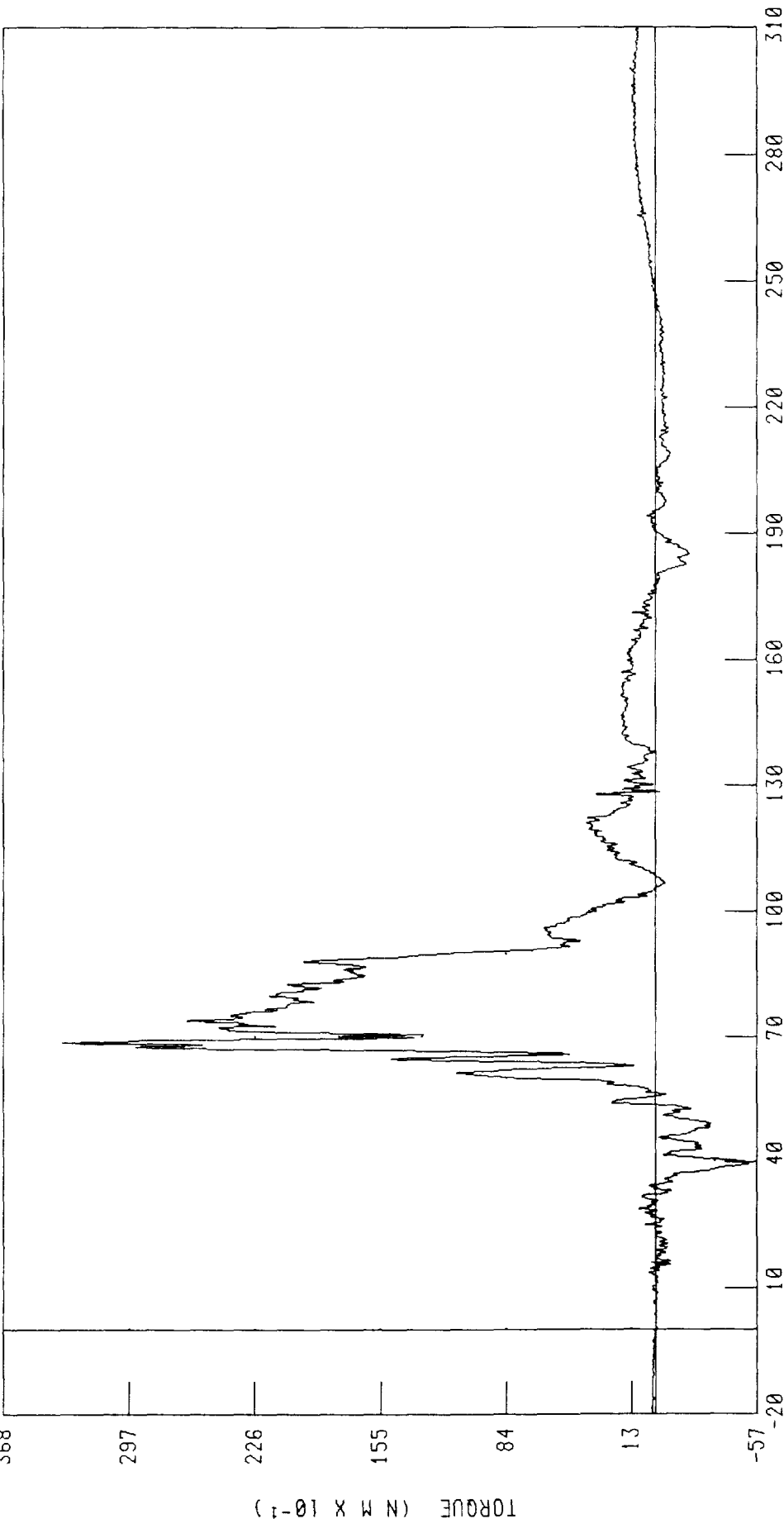
2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

DRIVER NECK MOMENT ABOUT Y AXIS

48 KM/H FRONTAL L C B

TEST NUMBER 011126

TRC INC



TIME (MS)

PEAK DATA 33 62 N M @ 68 64 MS, -5 25 N M @ 39 52 MS

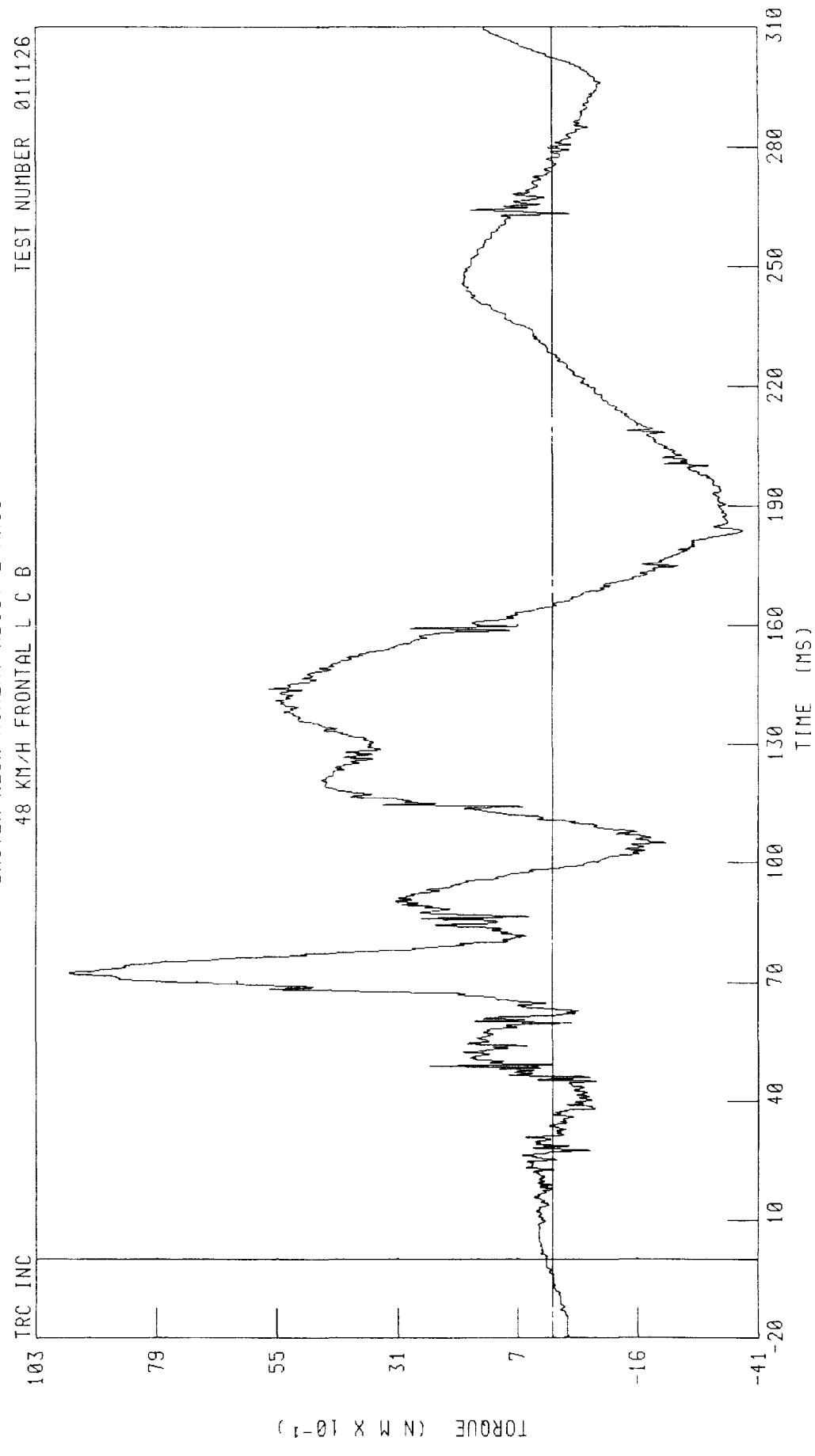
CHANNEL NEKYM1 FILTER CH CLASS 600

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

DRIVER NECK MOMENT ABOUT Z AXIS

48 KM/H FRONTAL L C B

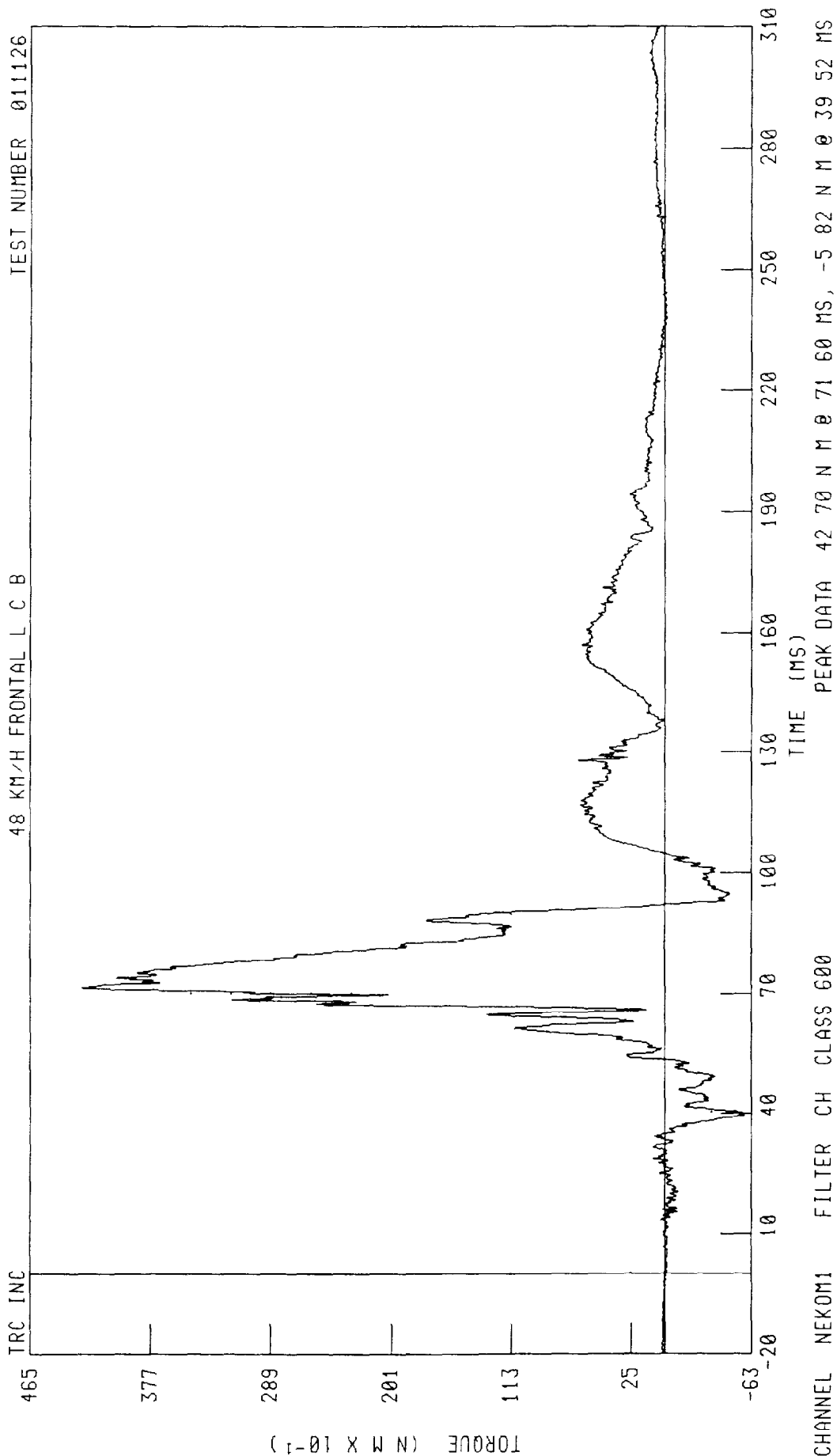
TEST NUMBER 011126



CHANNEL NEKZM1 FILTER CH CLASS 600 PEAK DATA 9 63 N M @ 72 32 MS, -3 77 N M @ 193 84 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

DRIVER NECK OCCIPITAL CONDYLE MOMENT ABOUT Y AXIS

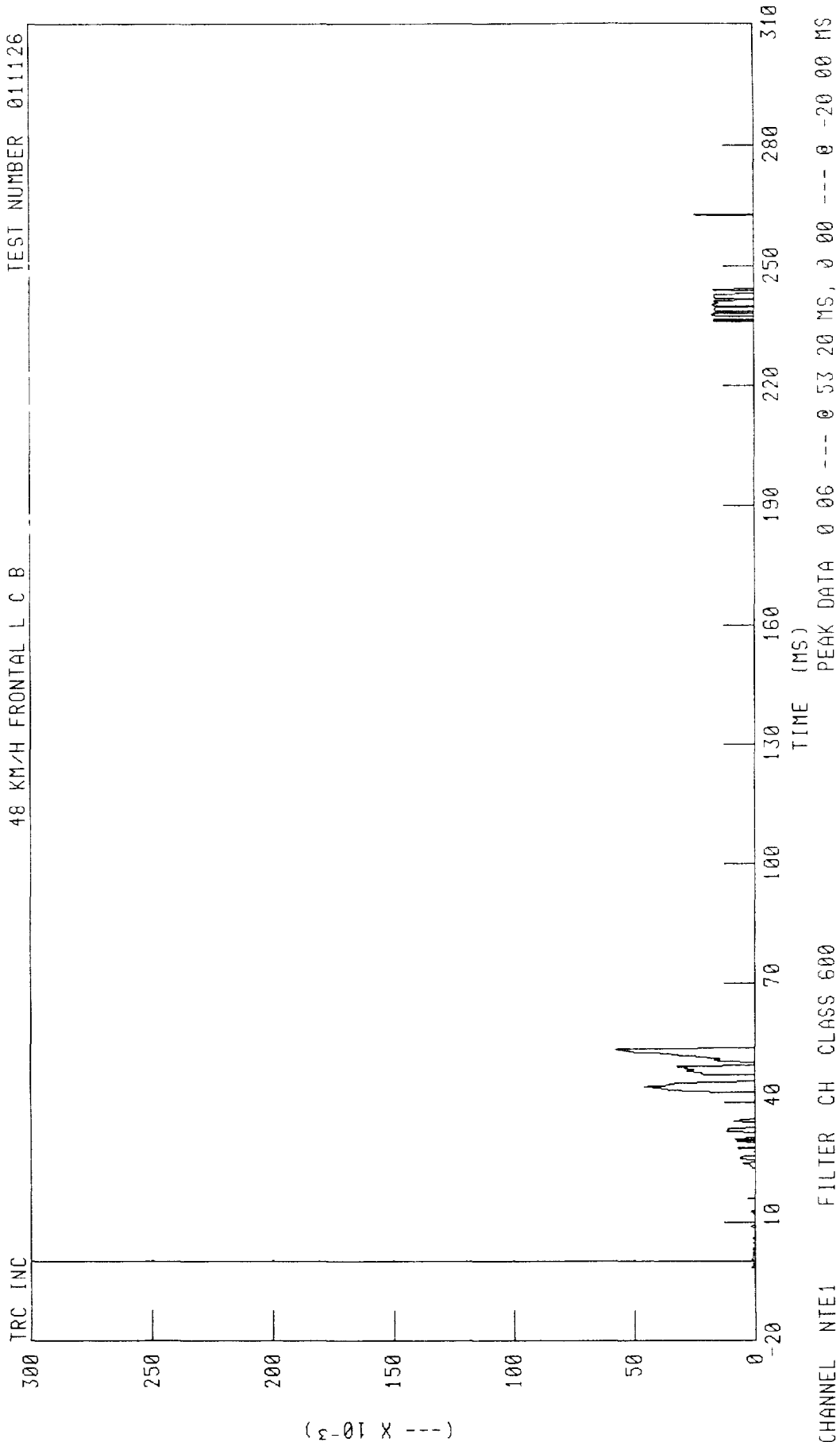


2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

DRIVER NECK TENSION/EXTENSION

48 KM/H FRONTAL L C B

TEST NUMBER 011126

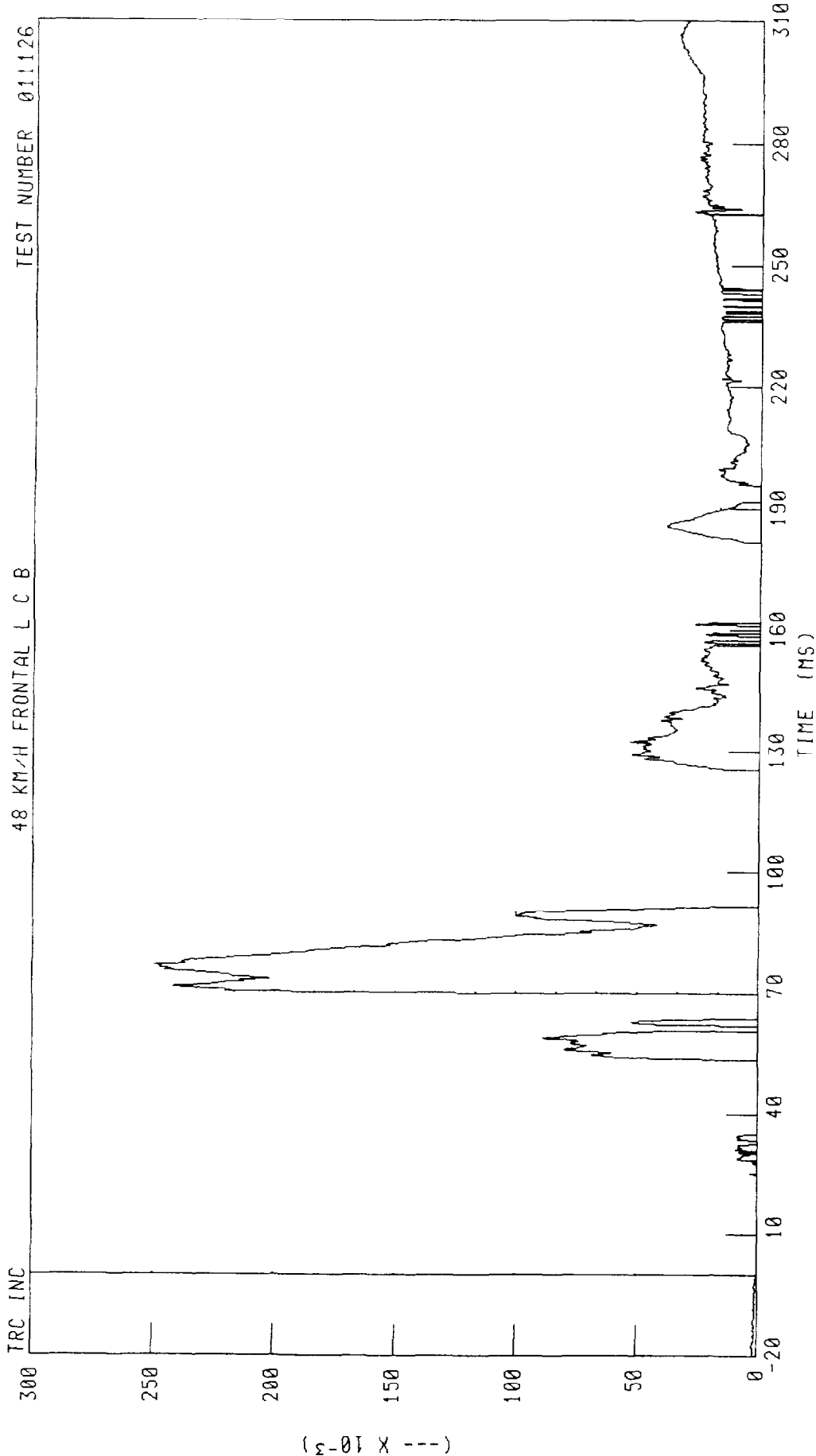


2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

DRIVER NECK TENSION/FLEXION

48 KM/H FRONTAL L C B

TEST NUMBER 011126

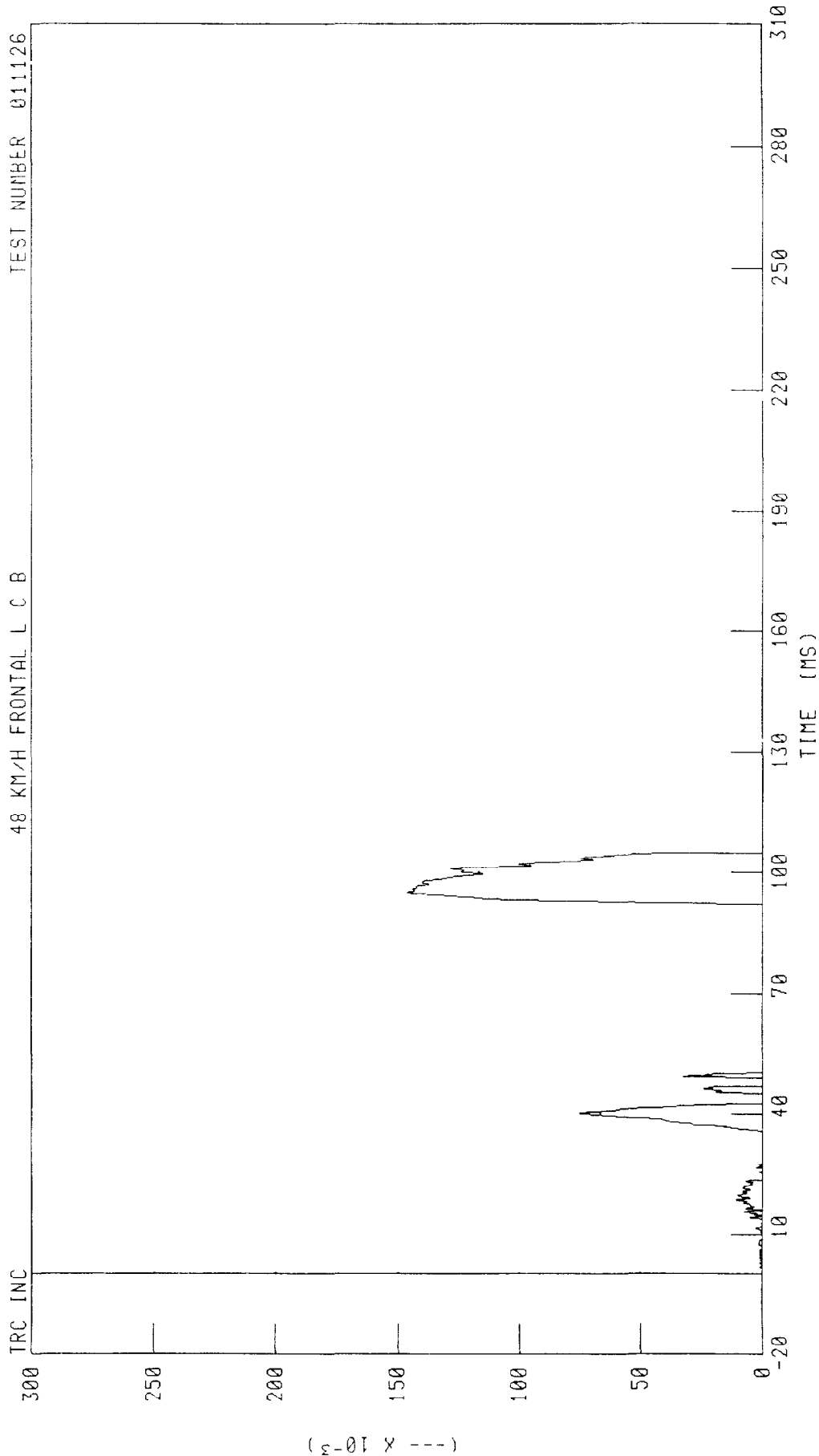


(--- X 10⁻³)

CHANNEL NTF1 FILTER CH CLASS 600

PEAK DATA 0 25 --- 0 76 80 MS, 0 00 --- 0 -1 76 MS

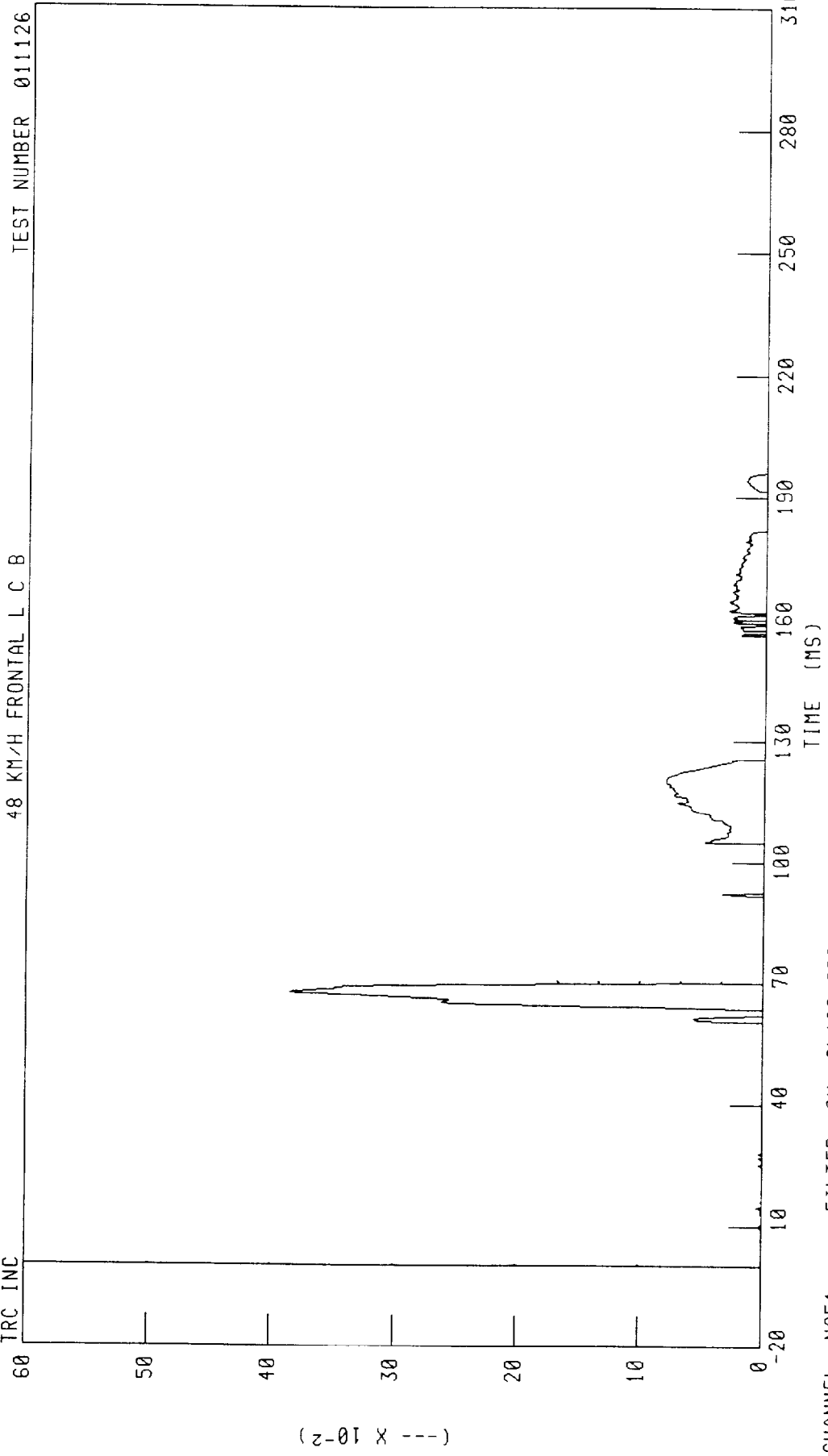
2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
 DRIVER NECK COMPRESSION/EXTENSION
 48 KM/H FRONTAL L C B



TEST NUMBER 011126

CHANNEL NCE1 FILTER CH CLASS 600 PEAK DATA 0 15 --- 0 95 04 MS, 0 00 --- 0 -20 00 MS

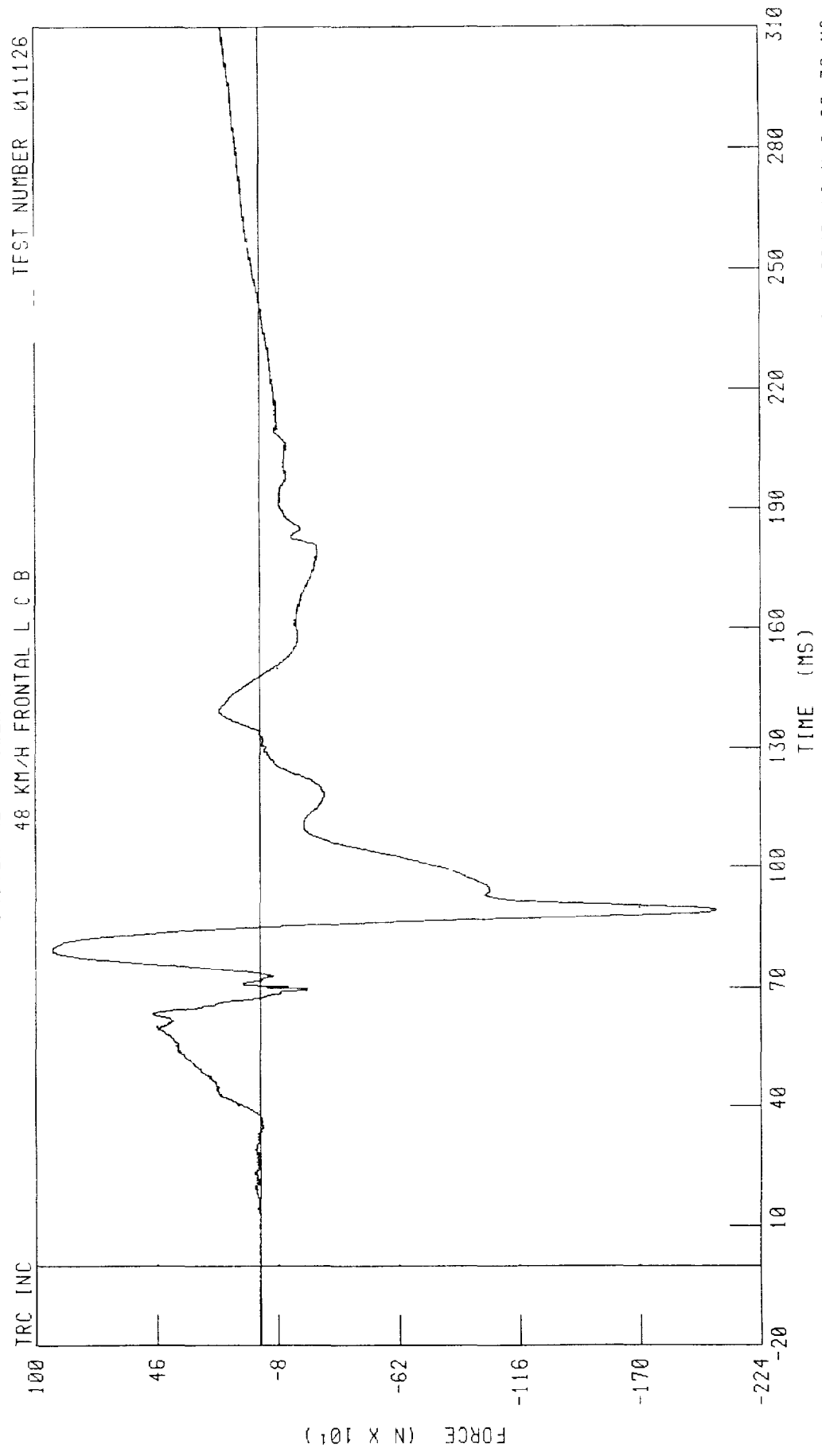
2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
DRIVER NECK COMPRESSION/FLEXION



CHANNEL NCF1 FILTER CH CLASS 600

PEAK DATA 0 39 --- 0 67 36 MS, 0 00 --- 0 -20 00 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
 DRIVER NECK LOWER X-AXIS SHEAR FORCE
 48 KM/H FRONTAL L C B



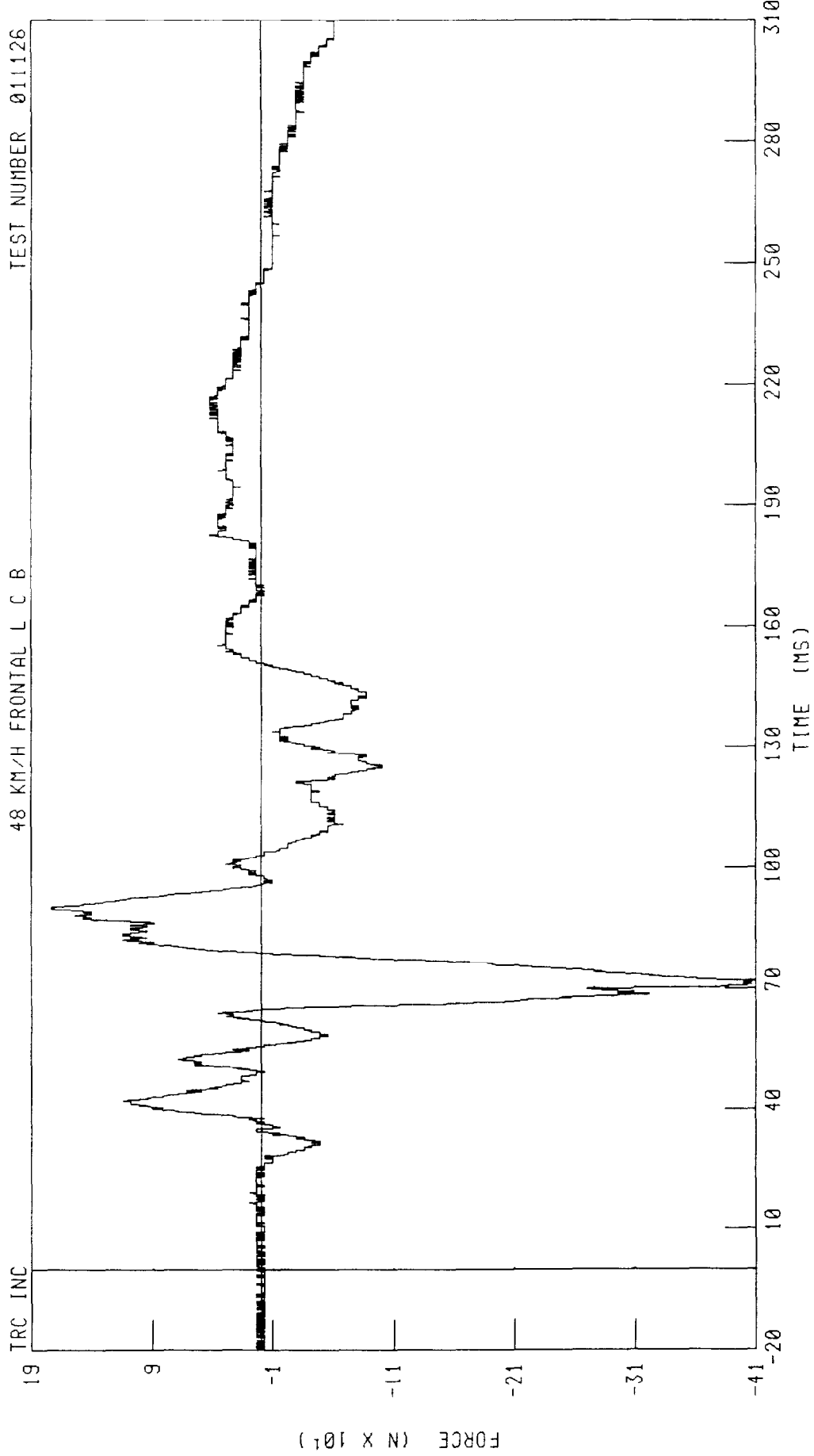
CHANNEL NKLXF1 FILTER CH CLASS 1000 PEAK DATA 924 53 N @ 79 12 MS -2046 12 N @ 89 36 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

DRIVER NECK LOWER Y-AXIS SHEAR FORCE

48 KM/H FRONTAL L C B

TEST NUMBER 011126



CHANNEL NKLYF1 FILTER CH CLASS 1000

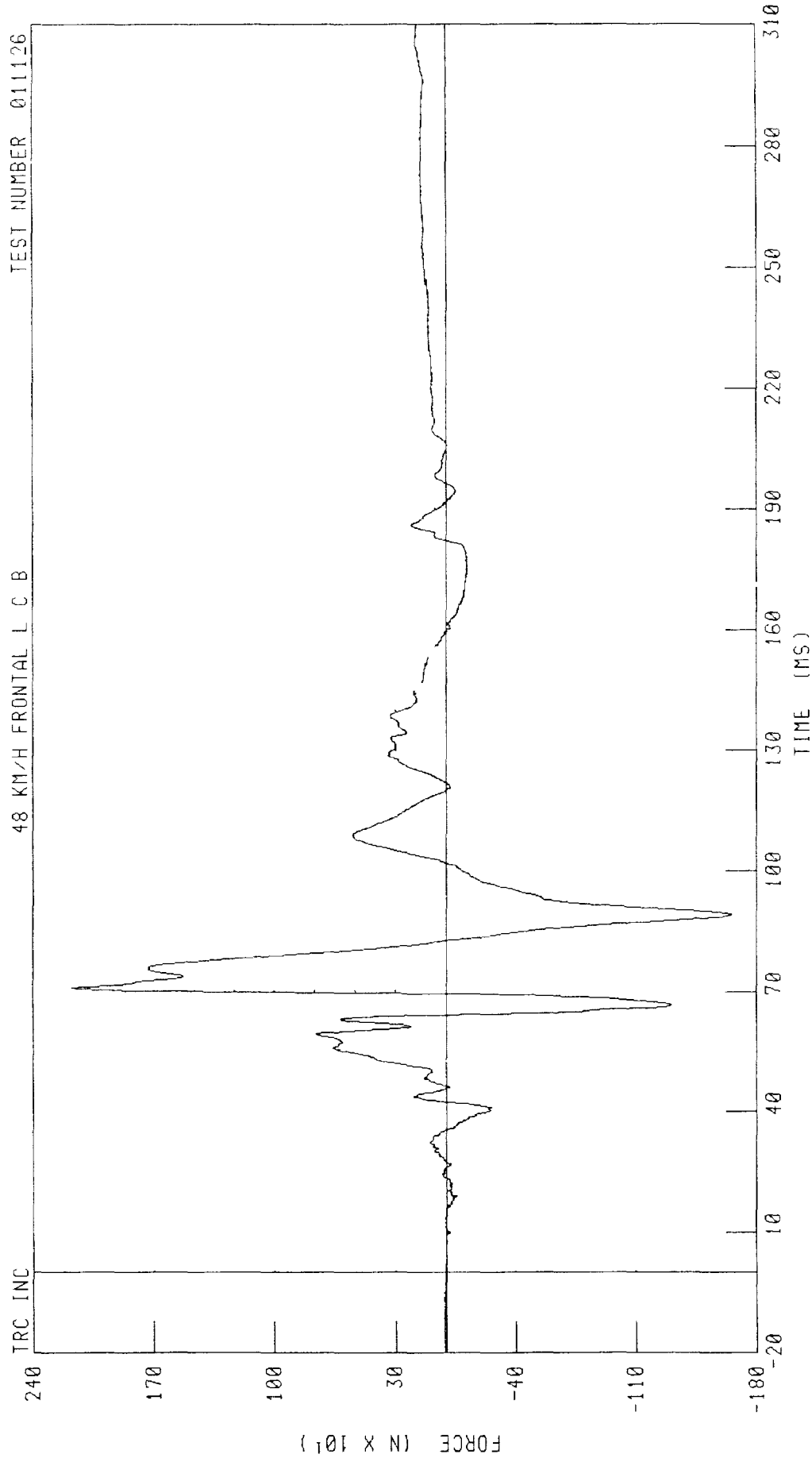
PEAK DATA 173 01 N 0 90 08 MS, -413 30 N 0 71 68 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

DRIVER NECK LOWER Z-AXIS AXIAL FORCE

48 KM/H FRONTAL L C B

TEST NUMBER 011126



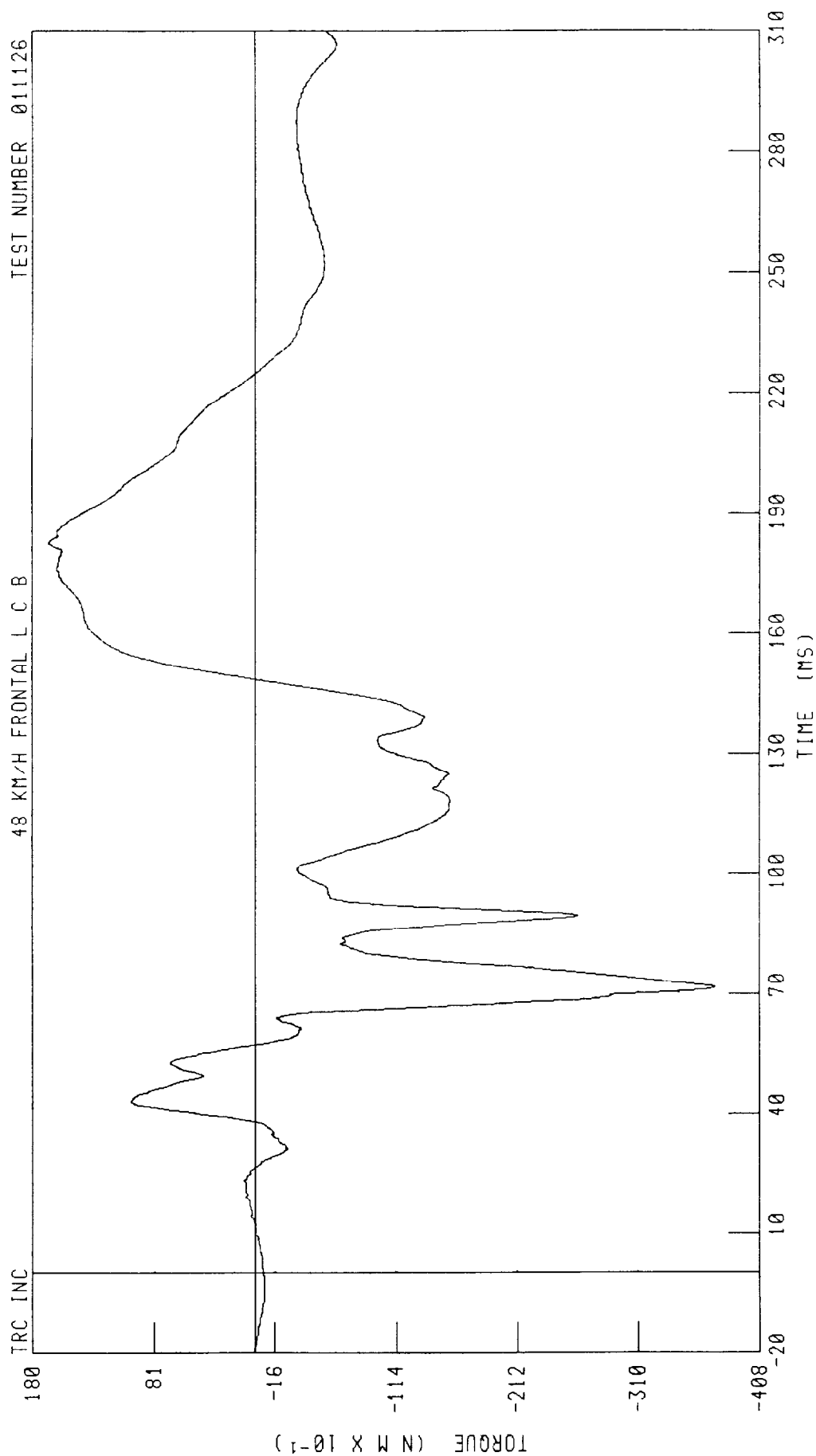
CHANNEL NKLZF1 FILTER CH CLASS 1000 PEAK DATA 2174 97 N @ 70 88 MS, -1655 64 N @ 89 36 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

DRIVER NECK LOWER MOMENT ABOUT X AXIS

48 KM/H FRONTAL L C B

TEST NUMBER 011126

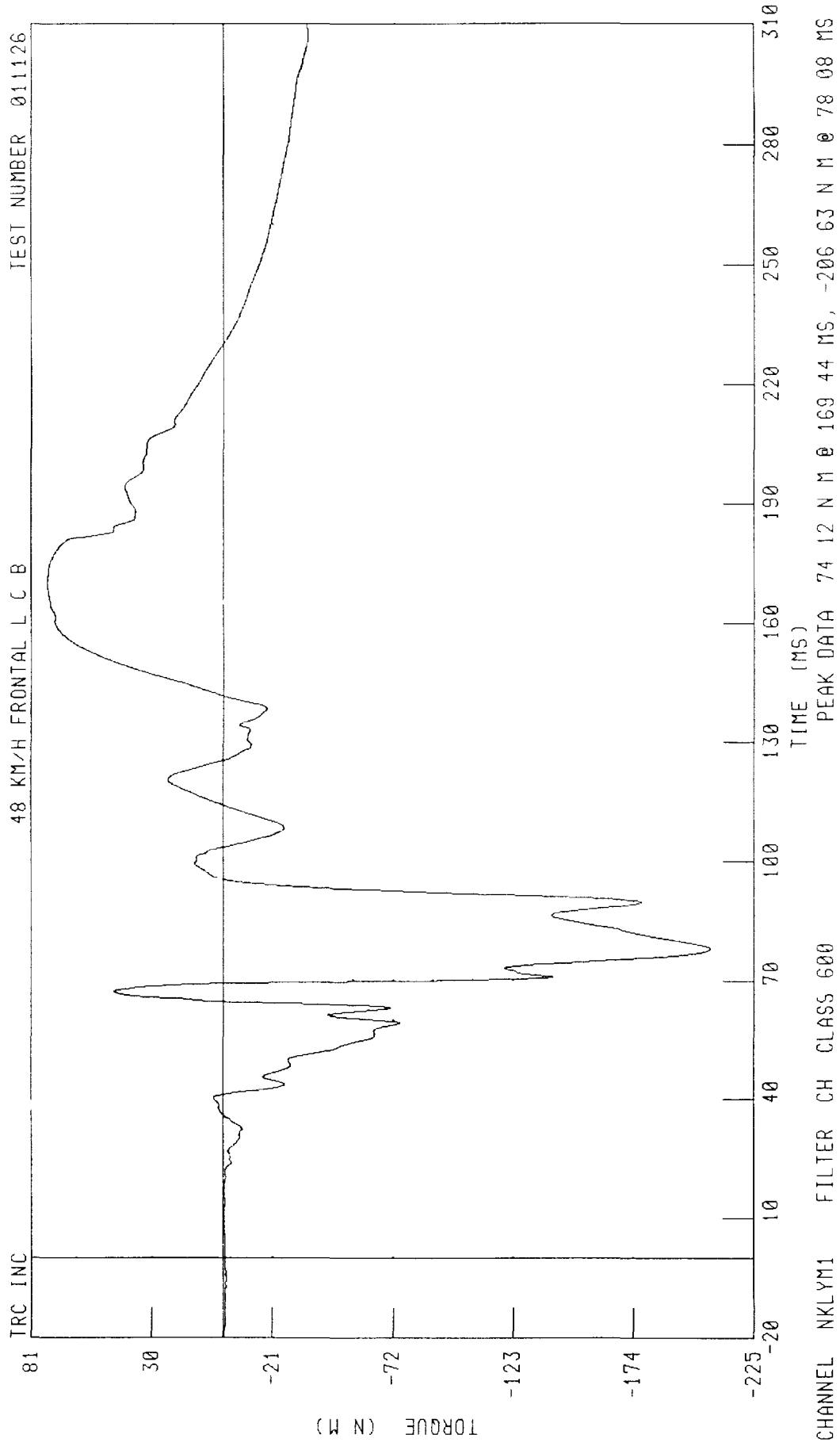


TIME (MS)

PEAK DATA 16 66 N M @ 183 20 MS, -37 23 N M @ 71 68 MS

CHANNEL NKLXM1 FILTER CH CLASS 600

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
DRIVER NECK LOWER MOMENT ABOUT Y AXIS

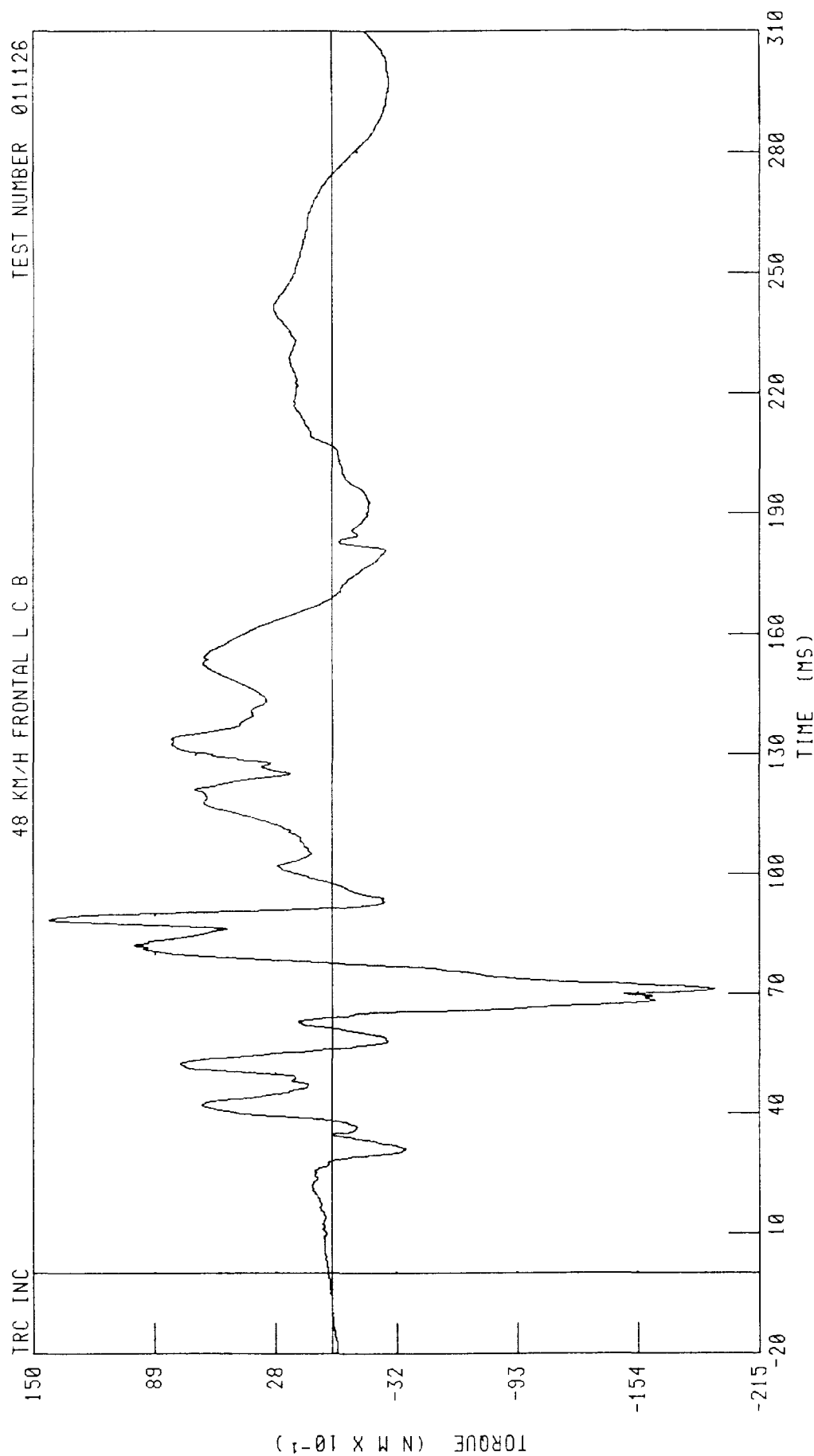


2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

DRIVER NECK LOWER MOMENT ABOUT Z AXIS

48 KM/H FRONTAL L C B

TEST NUMBER 011126



CHANNEL NKLZM1 FILTER CH CLASS 600

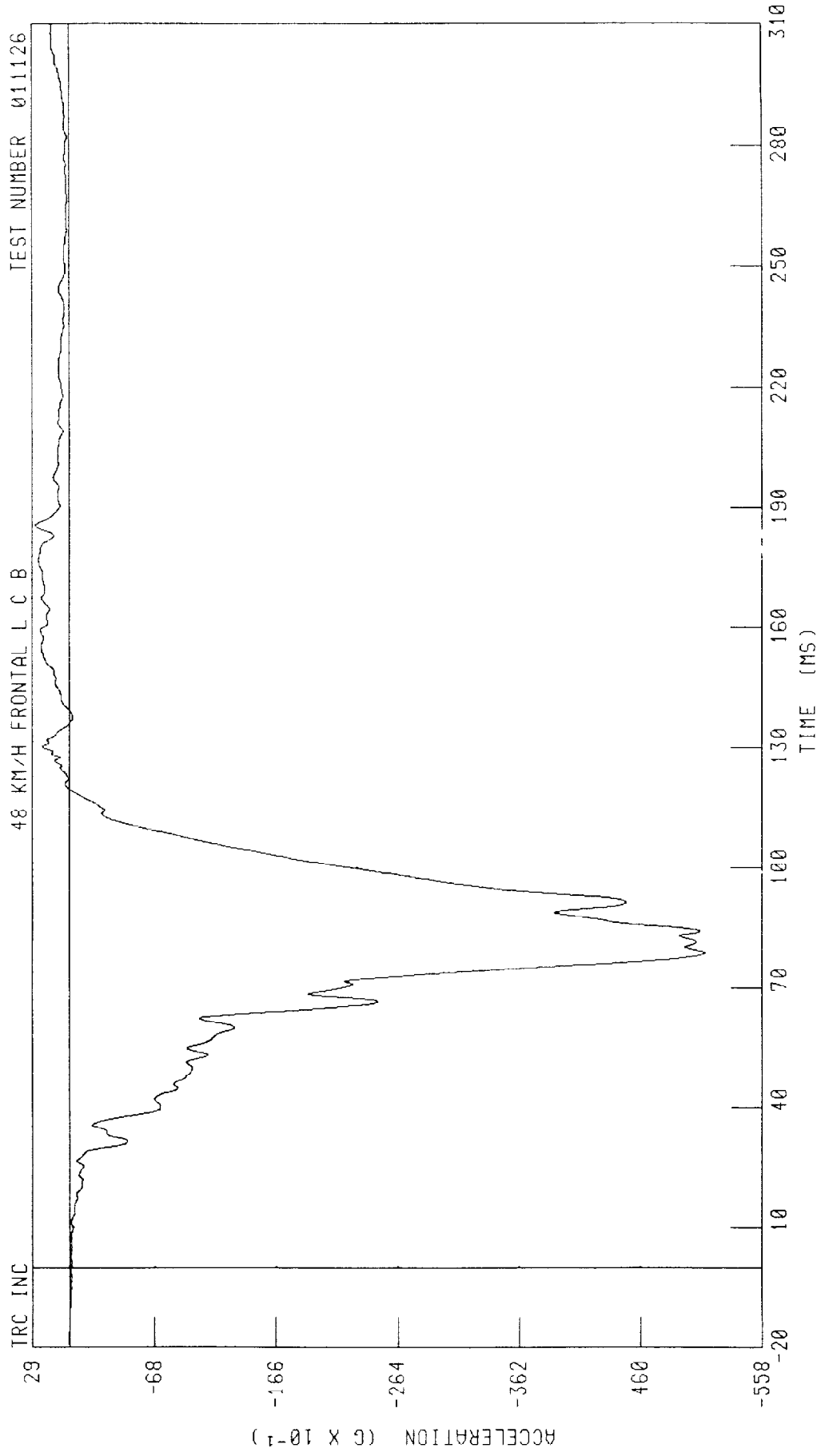
PEAK DATA 14 22 N M 0 88 88 MS, -19 40 N M 0 71 12 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

DRIVER CHEST X-AXIS ACCELERATION

48 KM/H FRONTAL L C B

TEST NUMBER 011126



CHANNEL CSTXG1 FILTER CH CLASS 180 PEAK DATA 2 75 G @ 185 76 MS, -51 20 G @ 78 80 MS

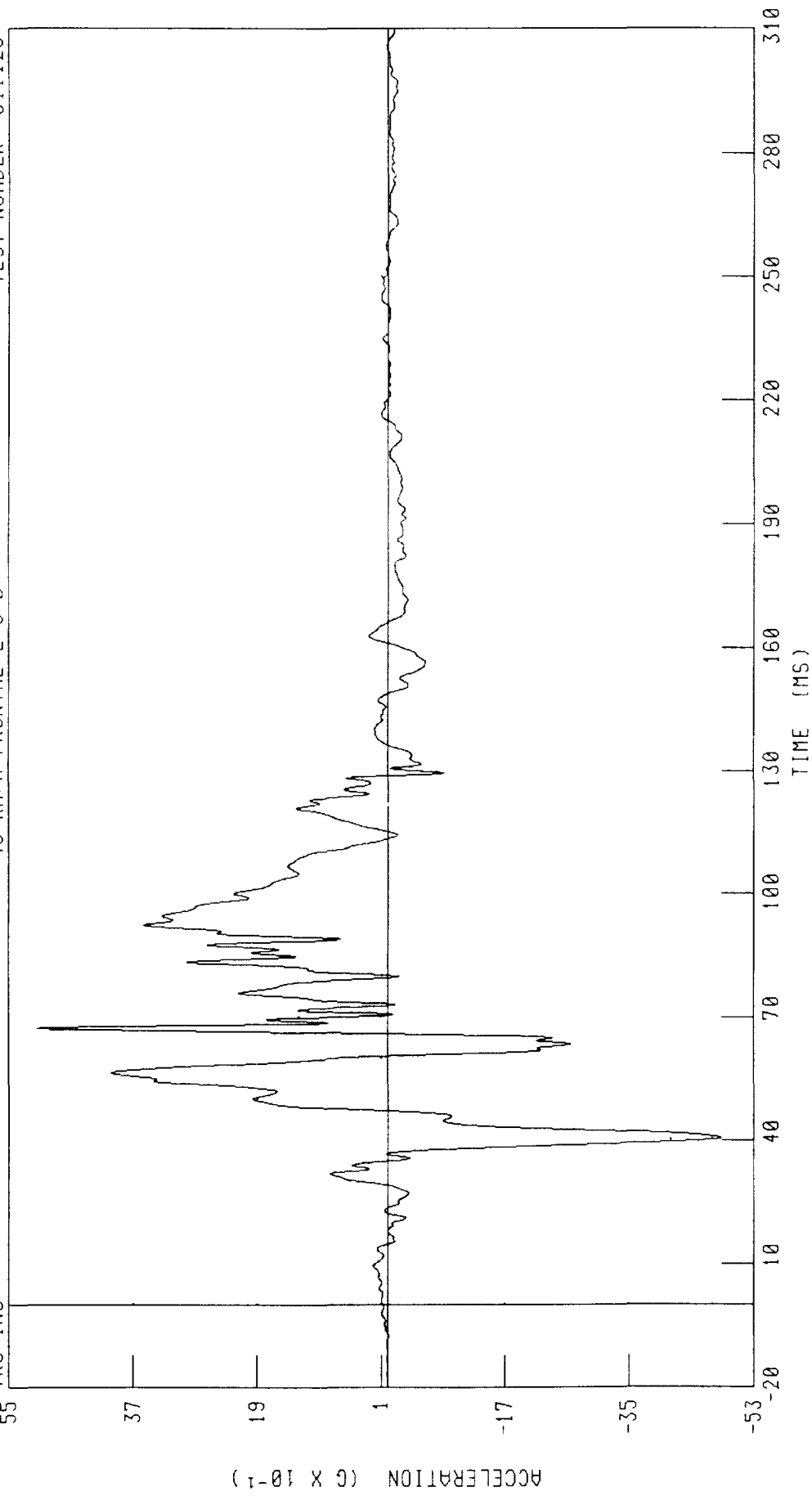
2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

DRIVER CHEST Y-AXIS ACCELERATION

48 KM/H FRONTAL L C B

TEST NUMBER 011126

TRC INC



CHANNEL CSTYG1 FILTER CH CLASS 180

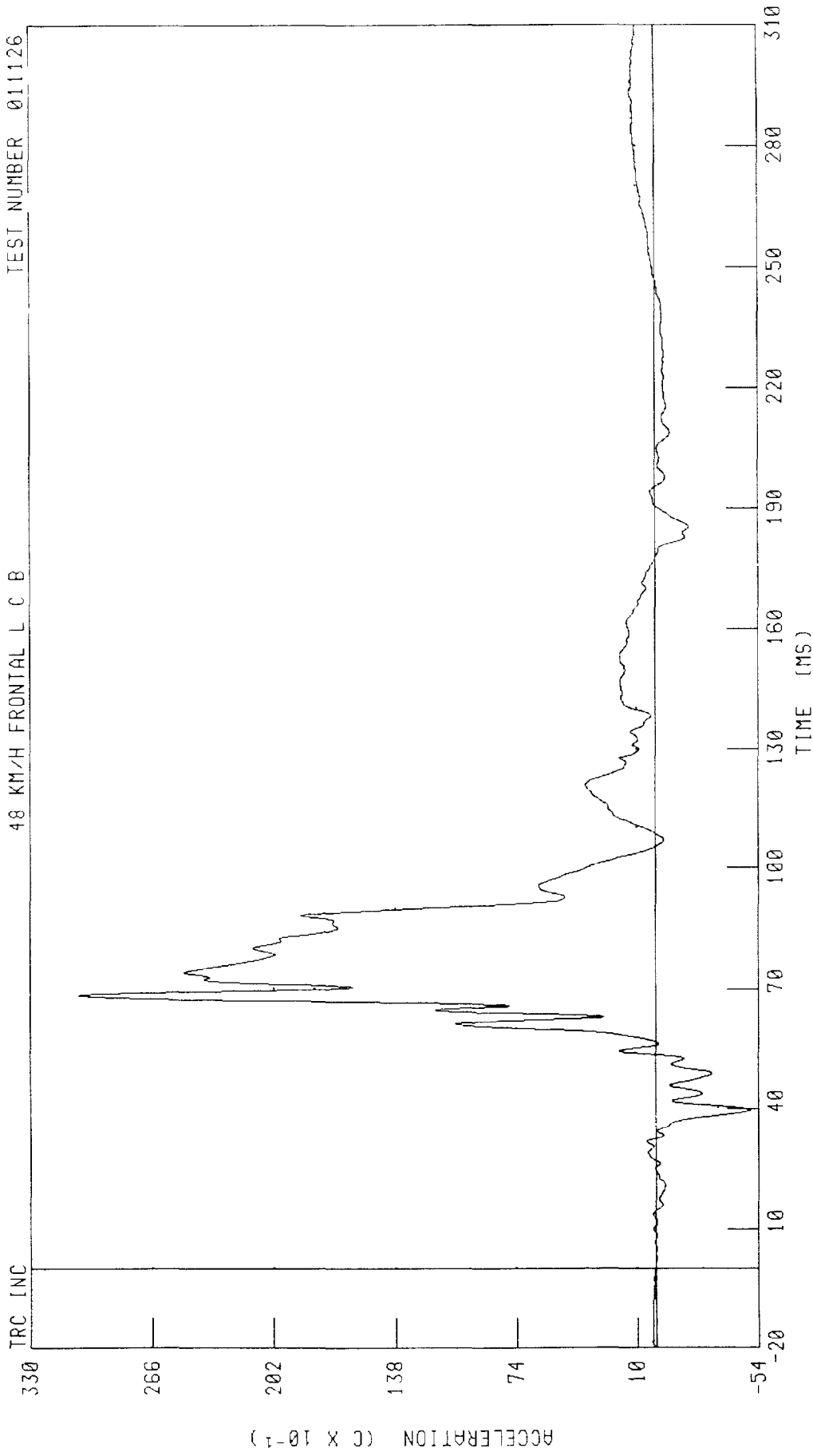
PEAK DATA 5 09 6 0 67 44 MS, -4 82 6 0 40 56 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

DRIVER CHEST Z-AXIS ACCELERATION

48 KM/H FRONTAL L C B

TEST NUMBER 011126



PEAK DATA 30 45 60 68 48 MS, -4 98 6 0 39 60 MS

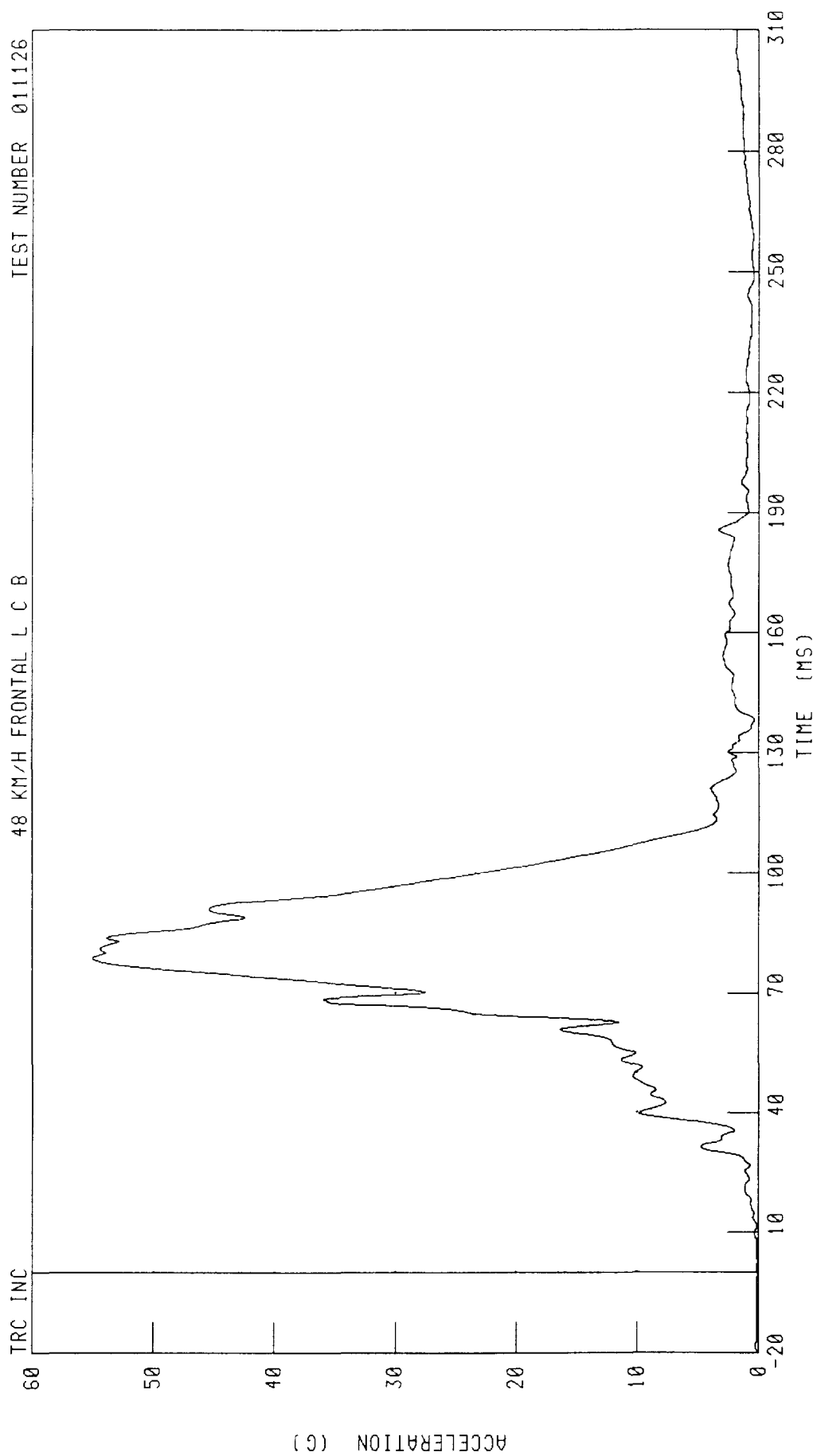
CHANNEL CSTZG1 FILTER CH CLASS 180

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

DRIVER CHEST RESULTANT ACCELERATION

48 KM/H FRONTAL L C B

TEST NUMBER 011126



CHANNEL CSTR01 FILTER CH CLASS 180

PEAK DATA 55 05 G @ 78 88 MS, 0 01 G @ -20 00 MS

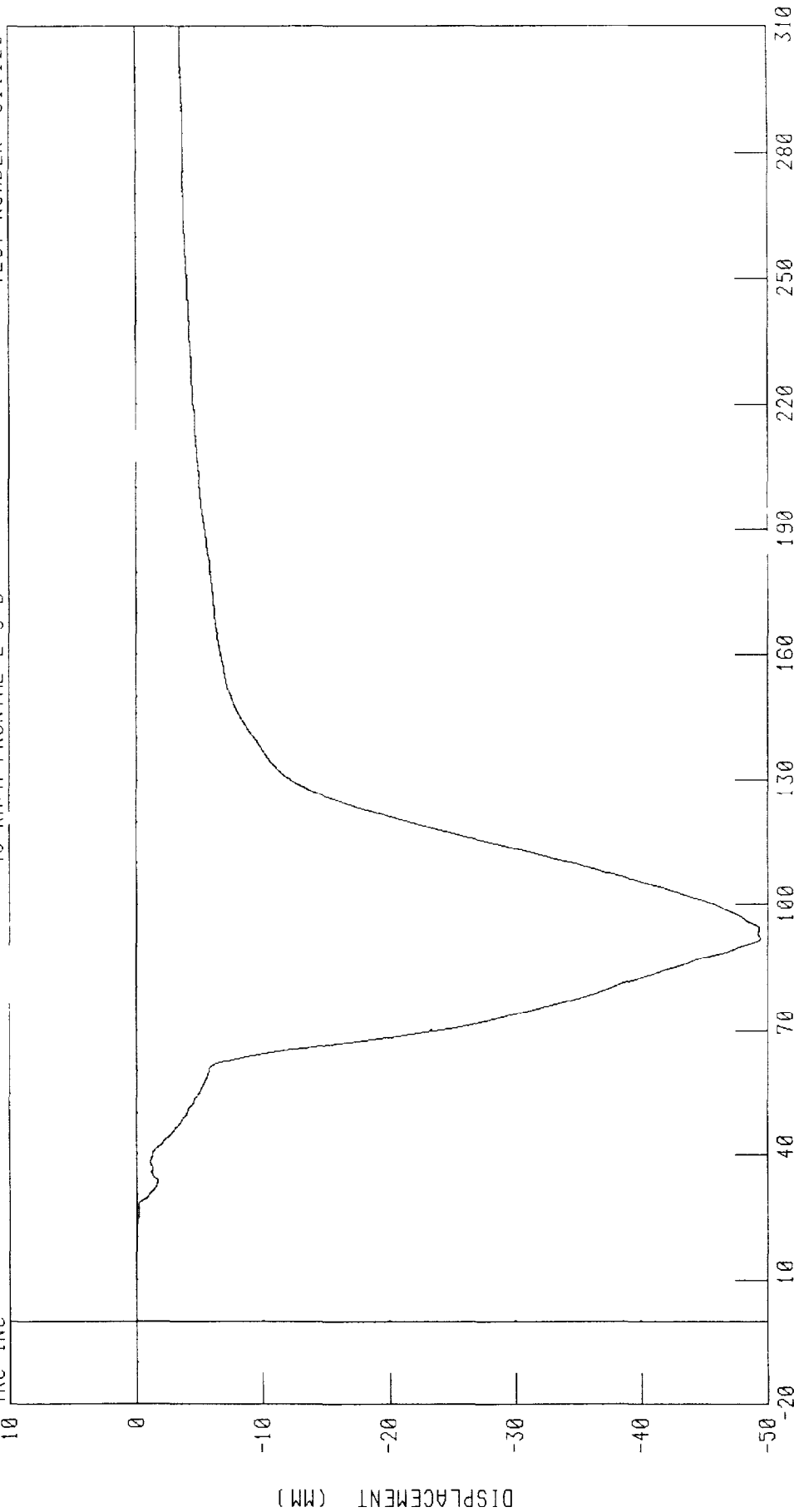
2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

DRIVER CHEST DEFLECTION

48 KM/H FRONTAL L C B

TEST NUMBER 011126

TRC INC



TIME (MS)

PEAK DATA 0 01 MM @ 12 40 MS, -49 41 MM @ 92 00 MS

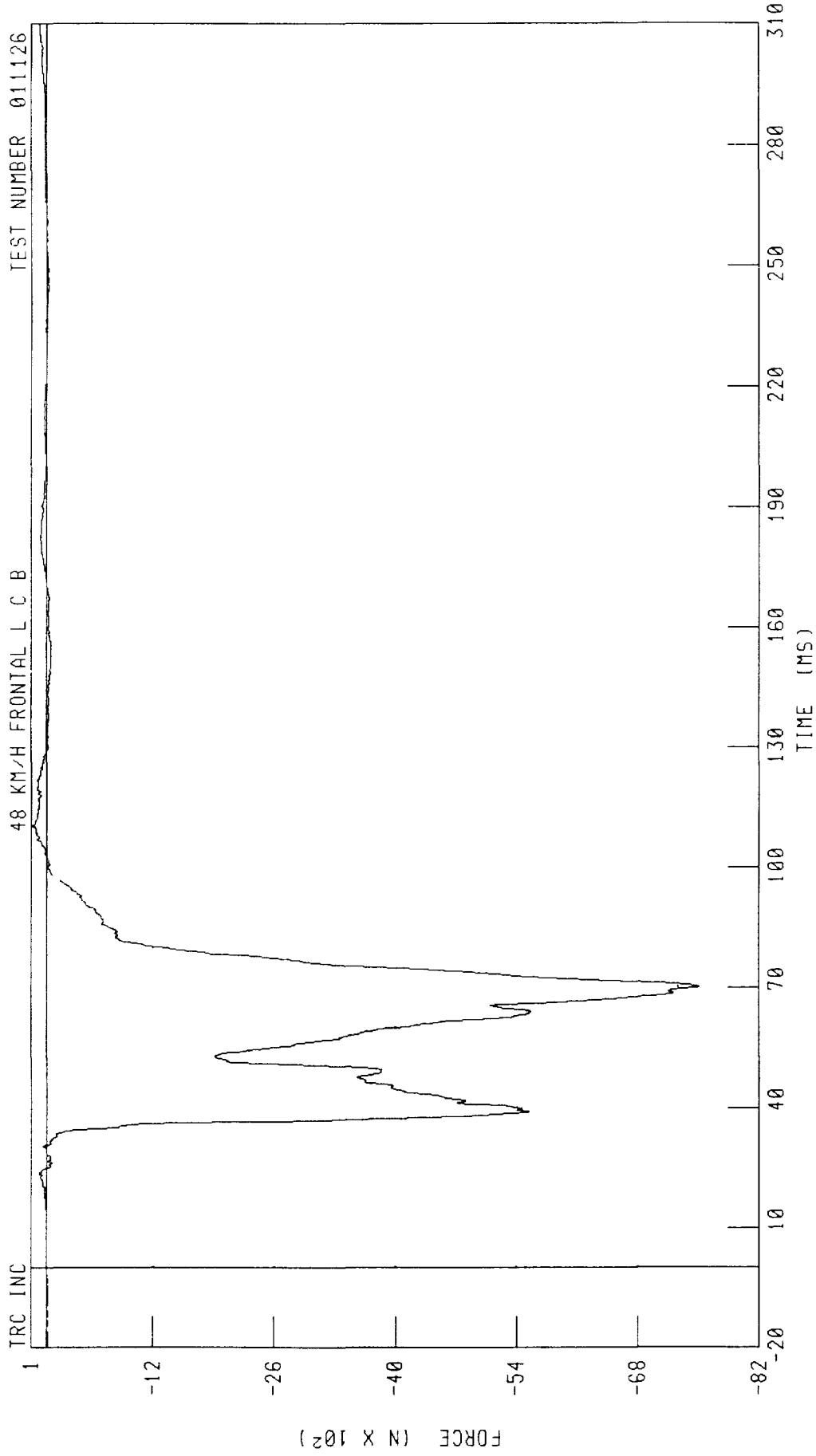
CHANNEL CSTXD1 FILTER CH CLASS 600

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

DRIVER LEFT FEMUR FORCE

48 KM/H FRONTAL L C B

TEST NUMBER 011126



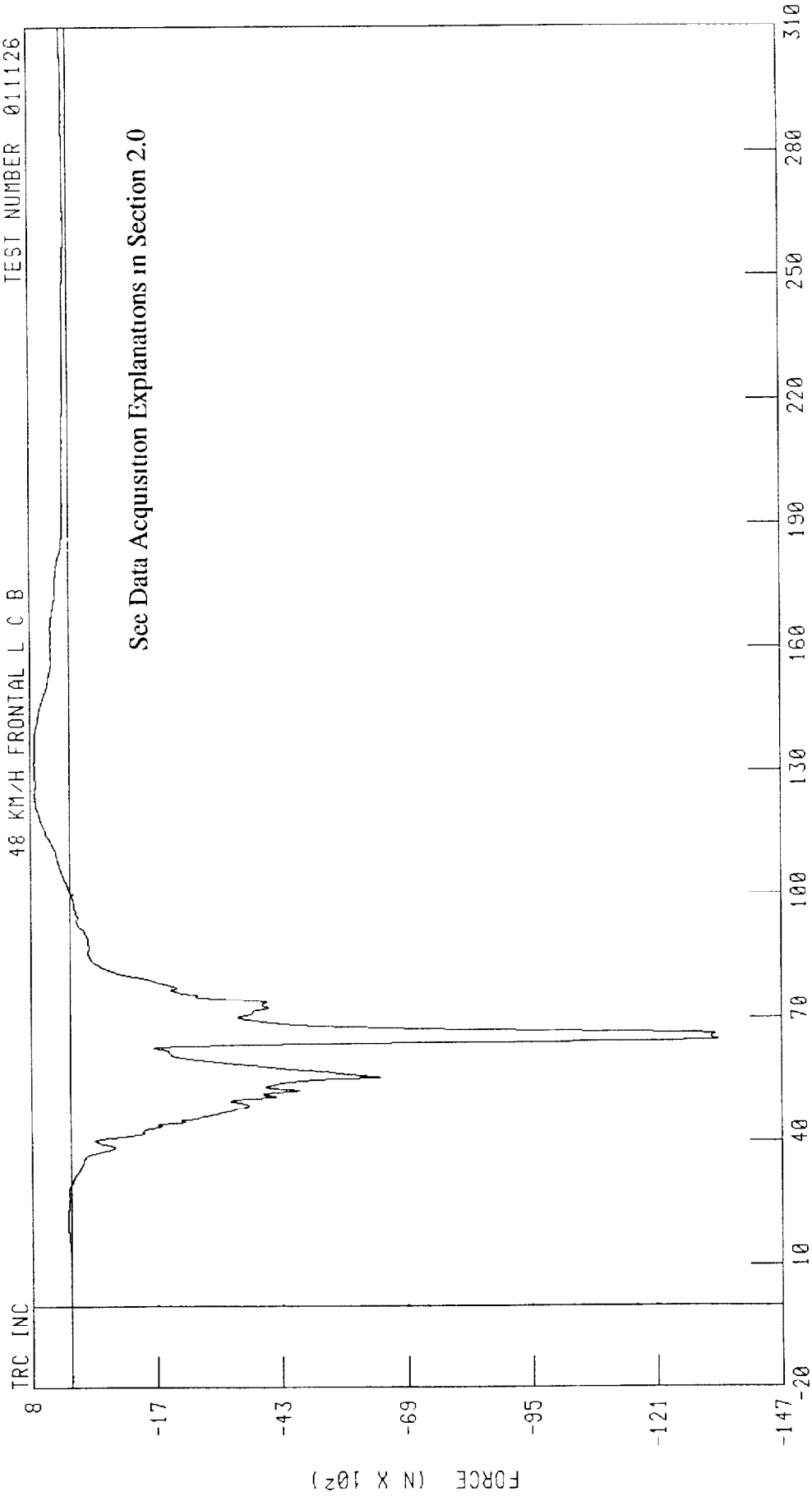
CHANNEL LFMZF1 FILTER CH CLASS 600 PEAK DATA 167 25 N @ 110 80 MS, -7535 71 N @ 70 08 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

DRIVER RIGHT FEMUR FORCE

48 KM/H FRONTAL L C B

TEST NUMBER 011126



CHANNEL RFMZFI FILTER CH CLASS 600

PEAK DATA 740 00 N @ 132 08 MS, -13461 17 N @ 64 72 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

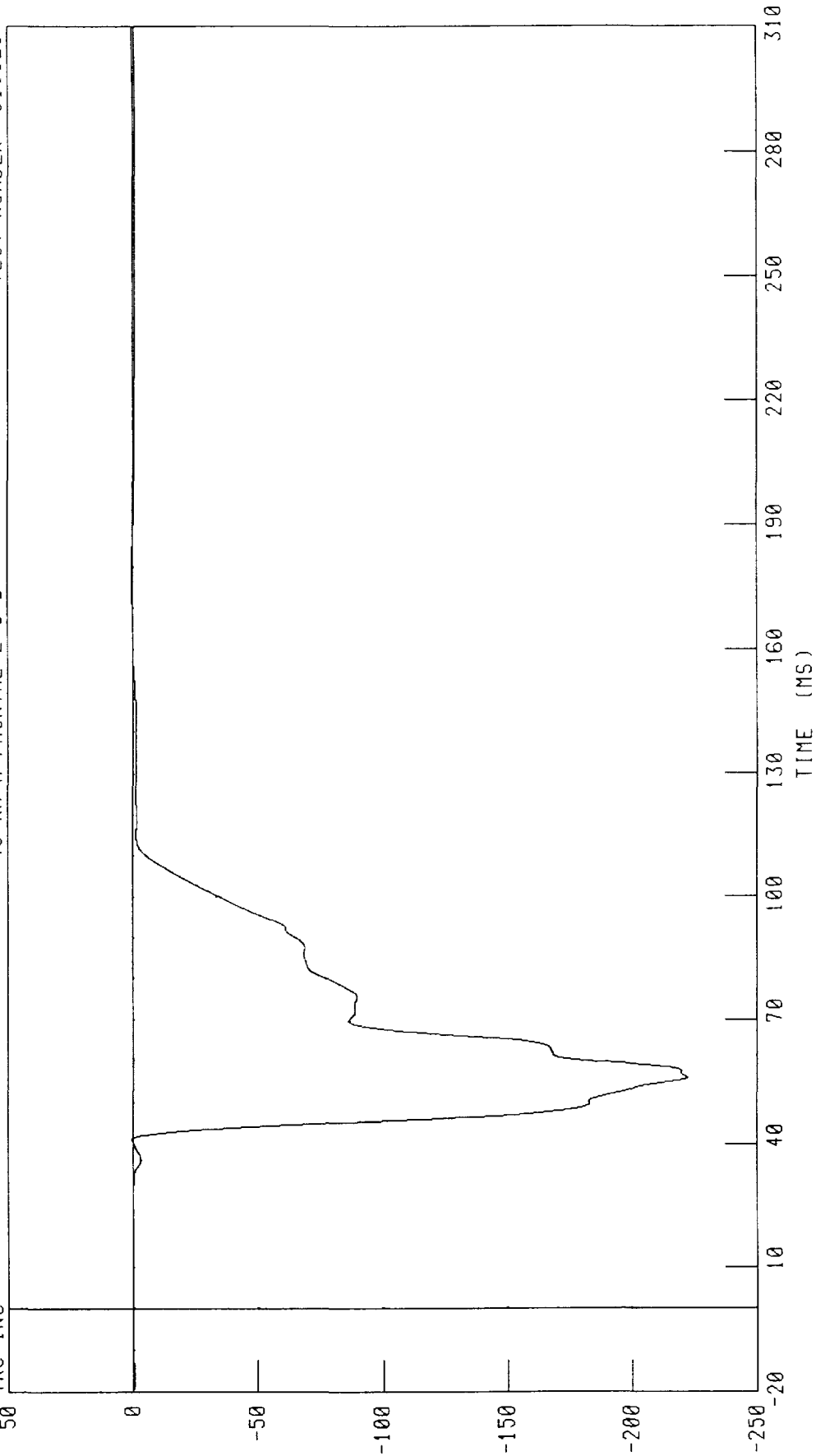
DRIVER LEFT KNEE DISPLACEMENT

48 KM/H FRONTAL L C B

TEST NUMBER 011126

TRC INC

DISPLACEMENT (MM X 10⁻¹)



CHANNEL KNLXD1 FILTER CH CLASS 180

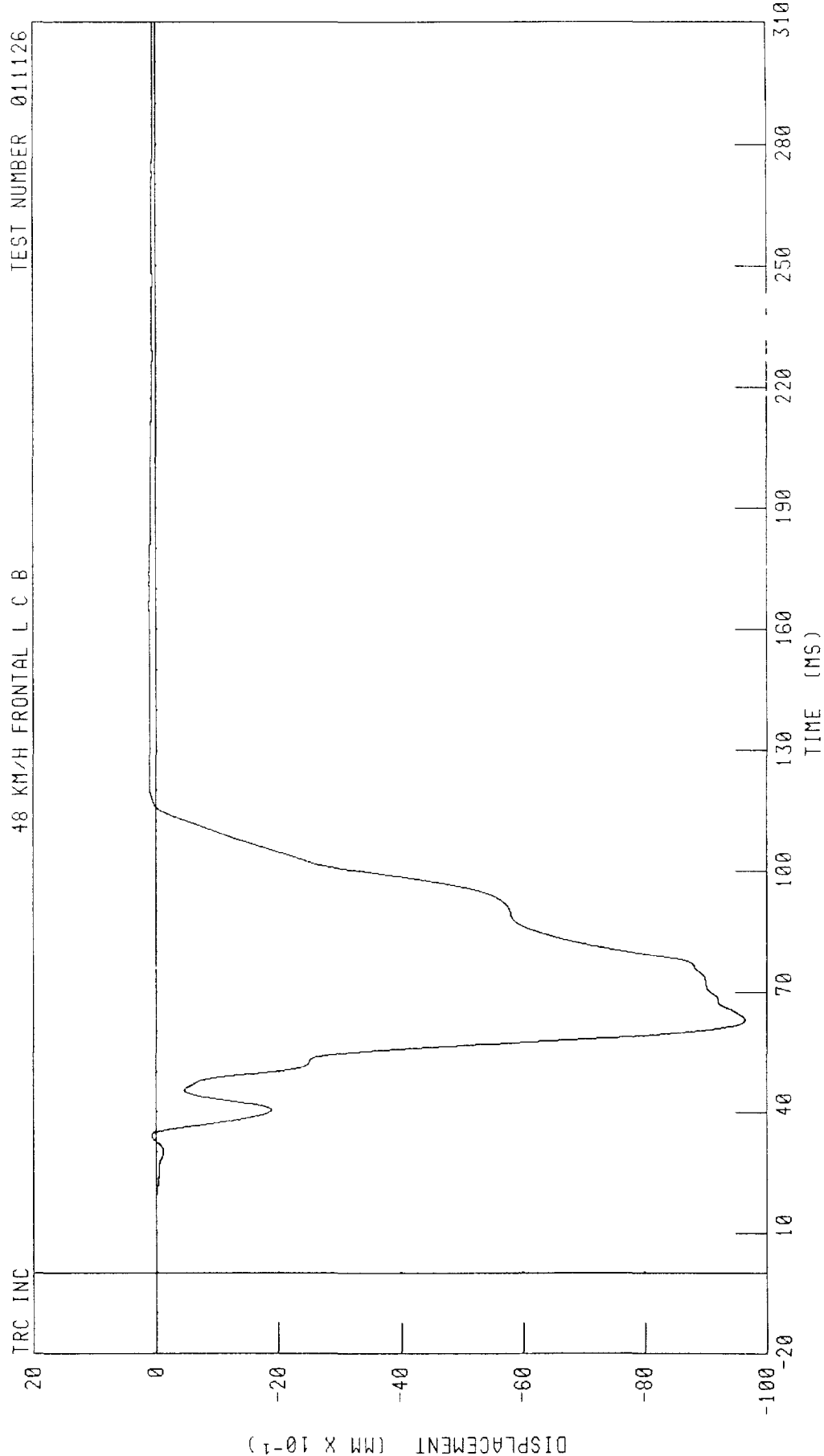
PEAK DATA 0 06 MM @ 182 88 MS, -22 20 MM @ 55 84 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

DRIVER RIGHT KNEE DISPLACEMENT

48 KM/H FRONTAL L C B

TEST NUMBER 011126



PEAK DATA 0 12 MM @ 165 36 MS, -9 64 MM @ 62 88 MS

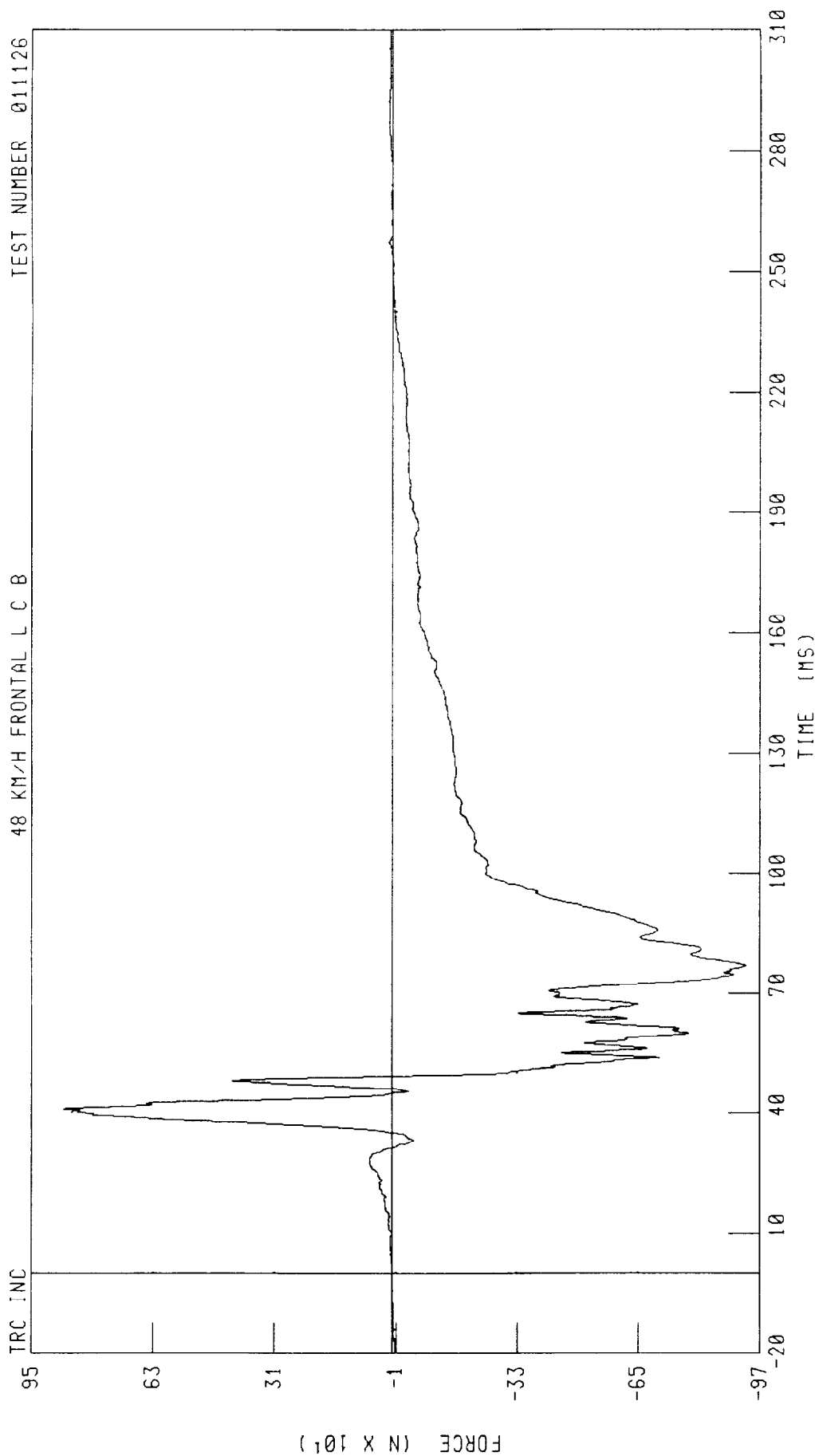
CHANNEL KNRX01 FILTER CH CLASS 180

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

DRIVER LEFT UPPER TIBIA X-AXIS FORCE

48 KM/H FRONTAL L C B

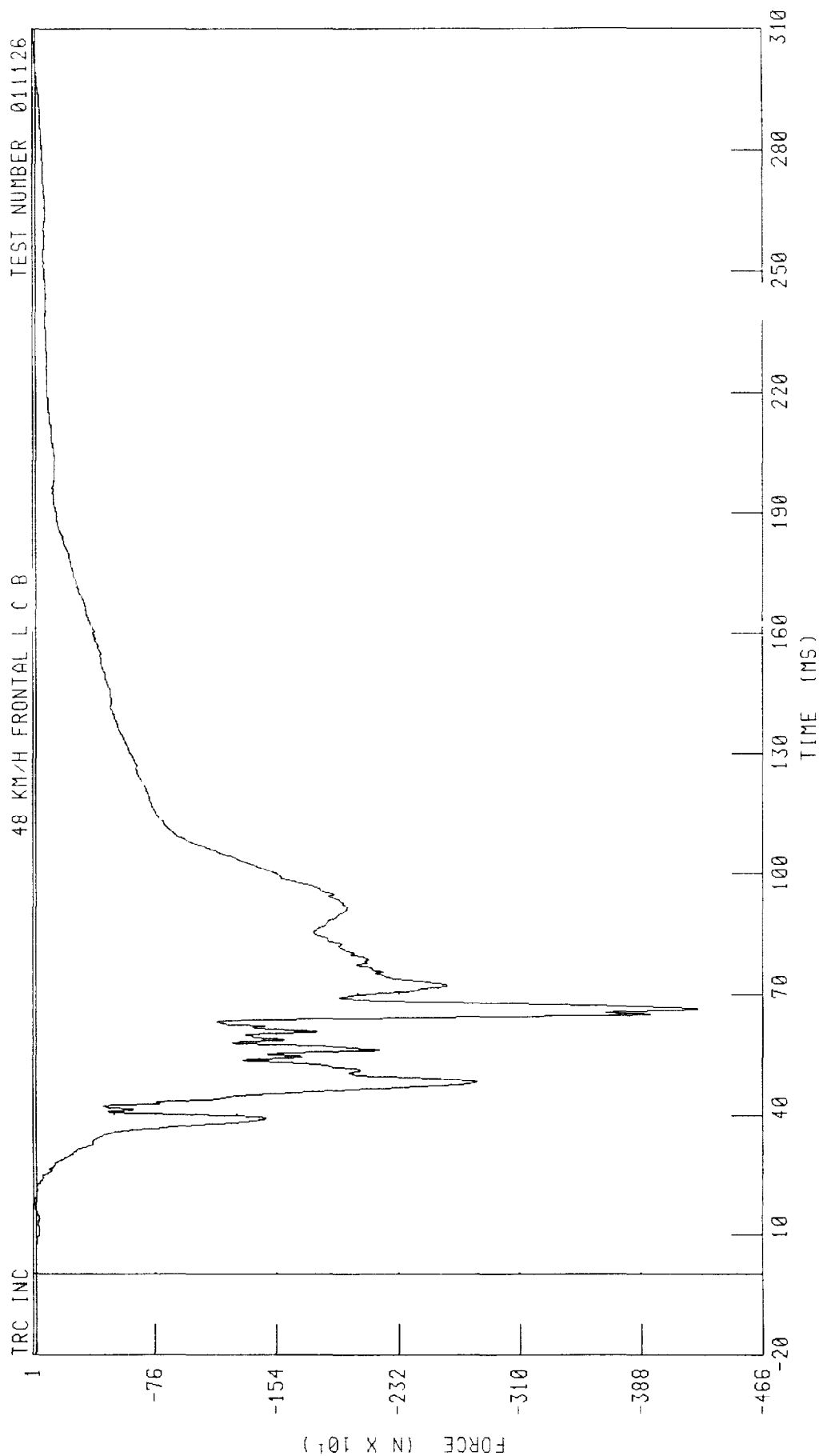
TEST NUMBER 011126



CHANNEL TBLXF1 FILTER CH CLASS 600

PEAK DATA 866 14 N @ 41 04 MS, -933 75 N @ 76 96 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
DRIVER LEFT UPPER TIBIA Z-AXIS FORCE
48 KM/H FRONTAL L C B

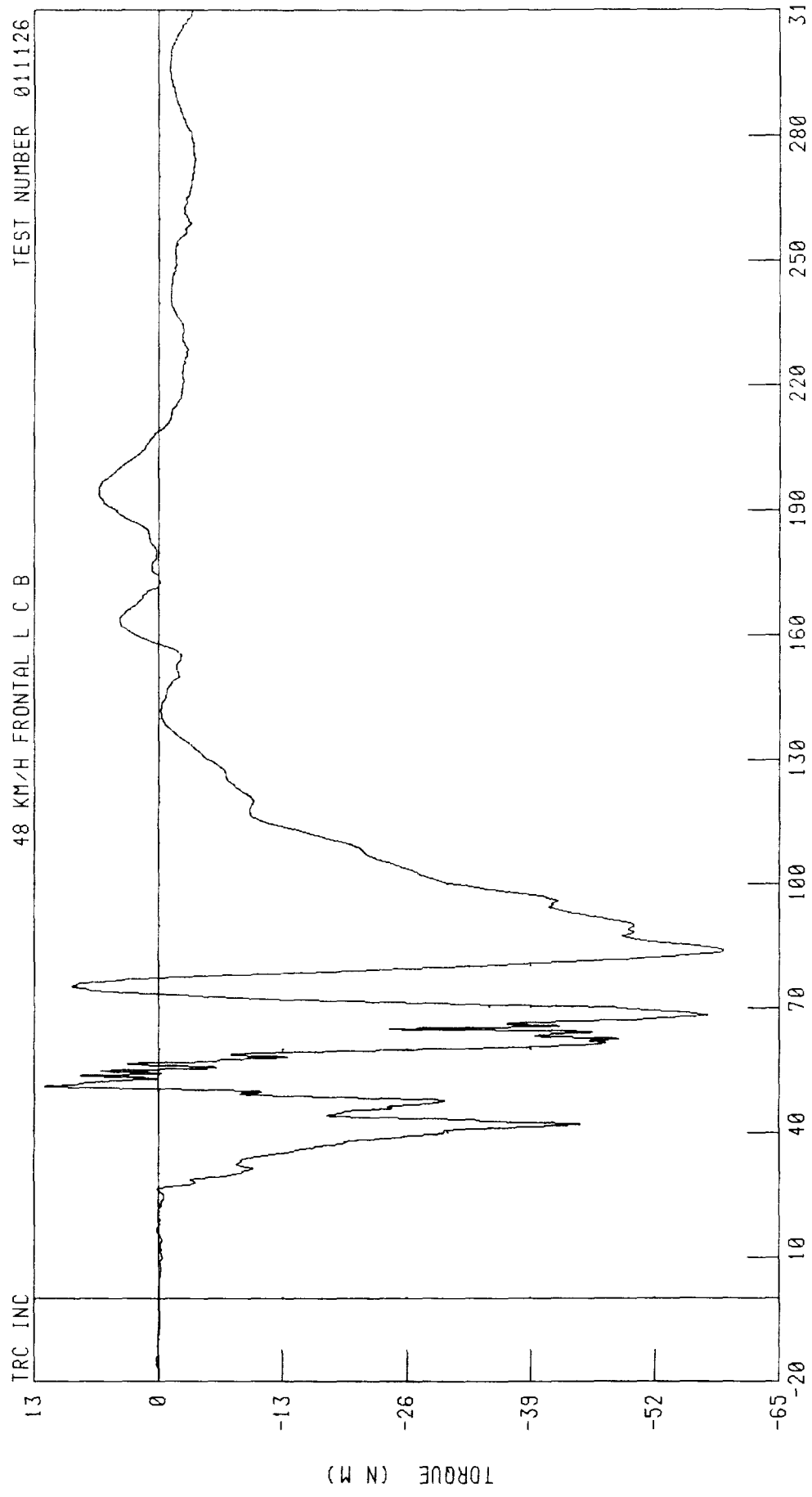


CHANNEL TBLZF1 FILTER CH CLASS 600 PEAK DATA 15 50 N @ 18 08 MS, -4247 55 N @ 66 40 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

DRIVER LEFT UPPER TIBIA MOMENT ABOUT X AXIS

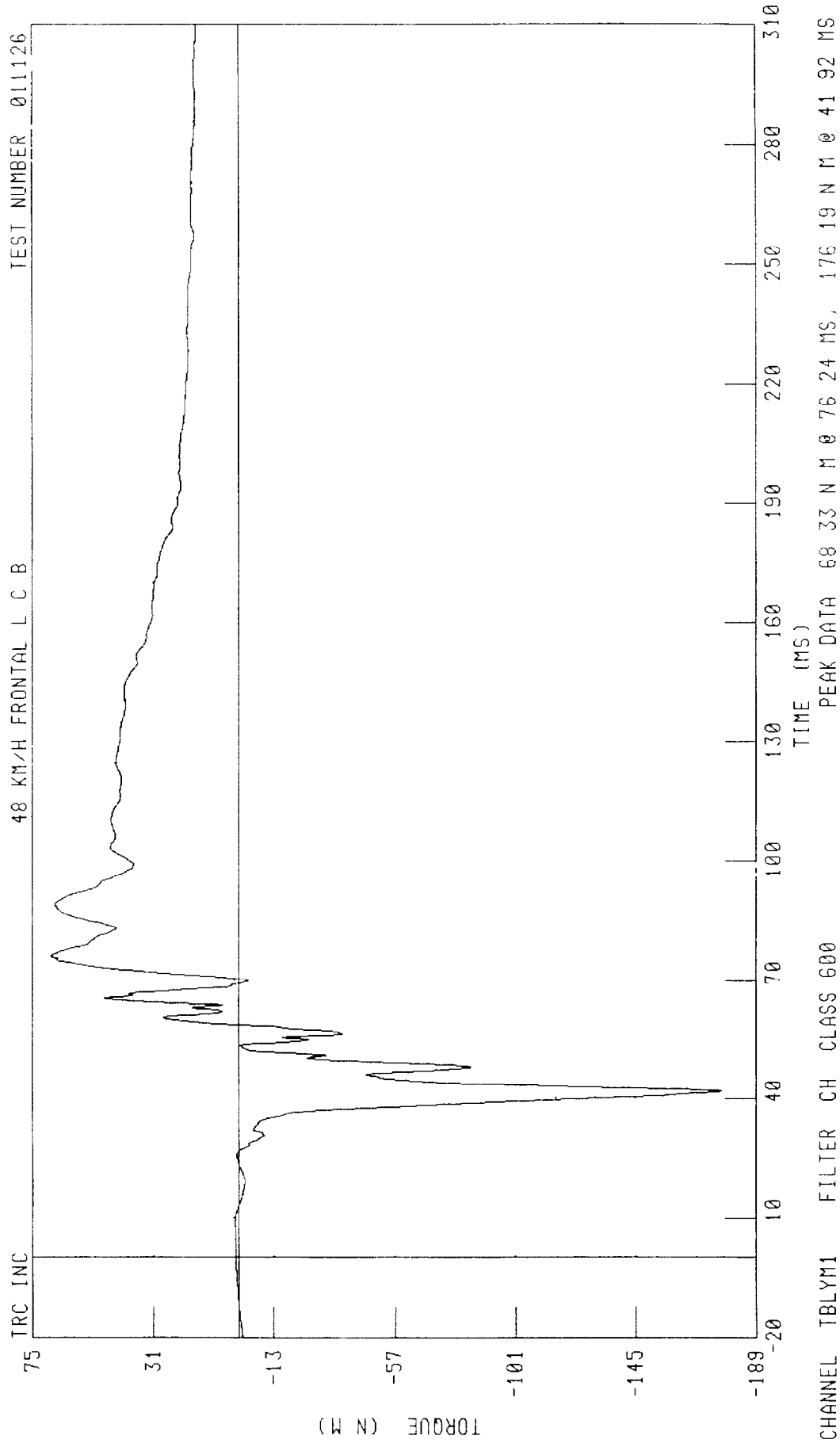
48 KM/H FRONTAL L C B TEST NUMBER 011126



TIME (MS)

CHANNEL TBLXM1 FILTER CH CLASS 600 PEAK DATA 11 93 N M 0 51 20 MS, -59 22 N M 0 83 92 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
DRIVER LEFT UPPER TIBIA MOMENT ABOUT Y AXIS



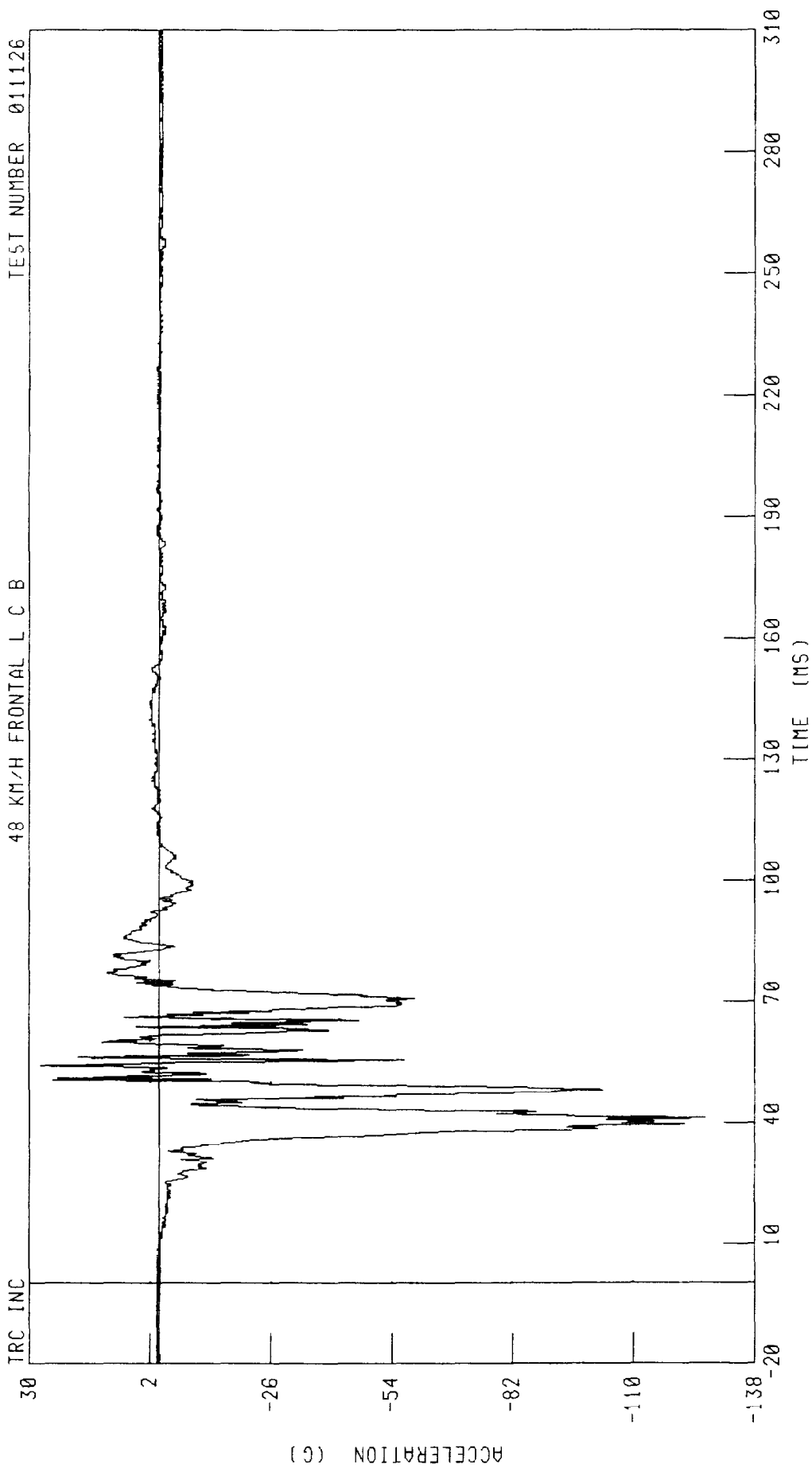
2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

DRIVER LEFT TIBIA X-AXIS ACCELERATION

48 KM/H FRONTAL L C B

TEST NUMBER 011126

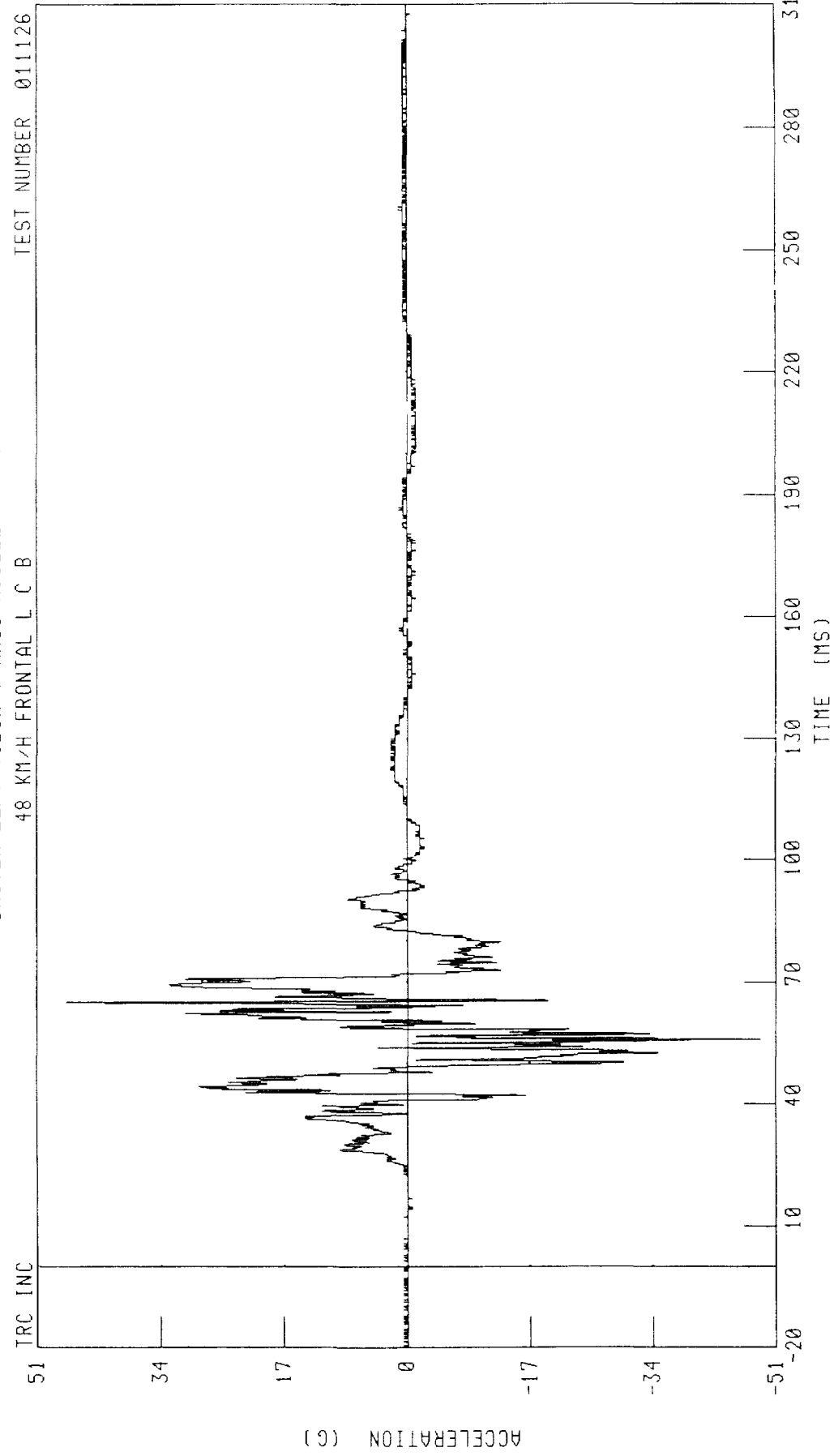
TRC INC



CHANNEL TBLXG1 FILTER CH CLASS 1000

PEAK DATA 27 49 G @ 54 08 MS, -126 58 G @ 41 20 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
DRIVER LEFT TIBIA Y-AXIS ACCELERATION
48 KM/H FRONTAL L C B



CHANNEL TBLYG1 FILTER CH CLASS 1000

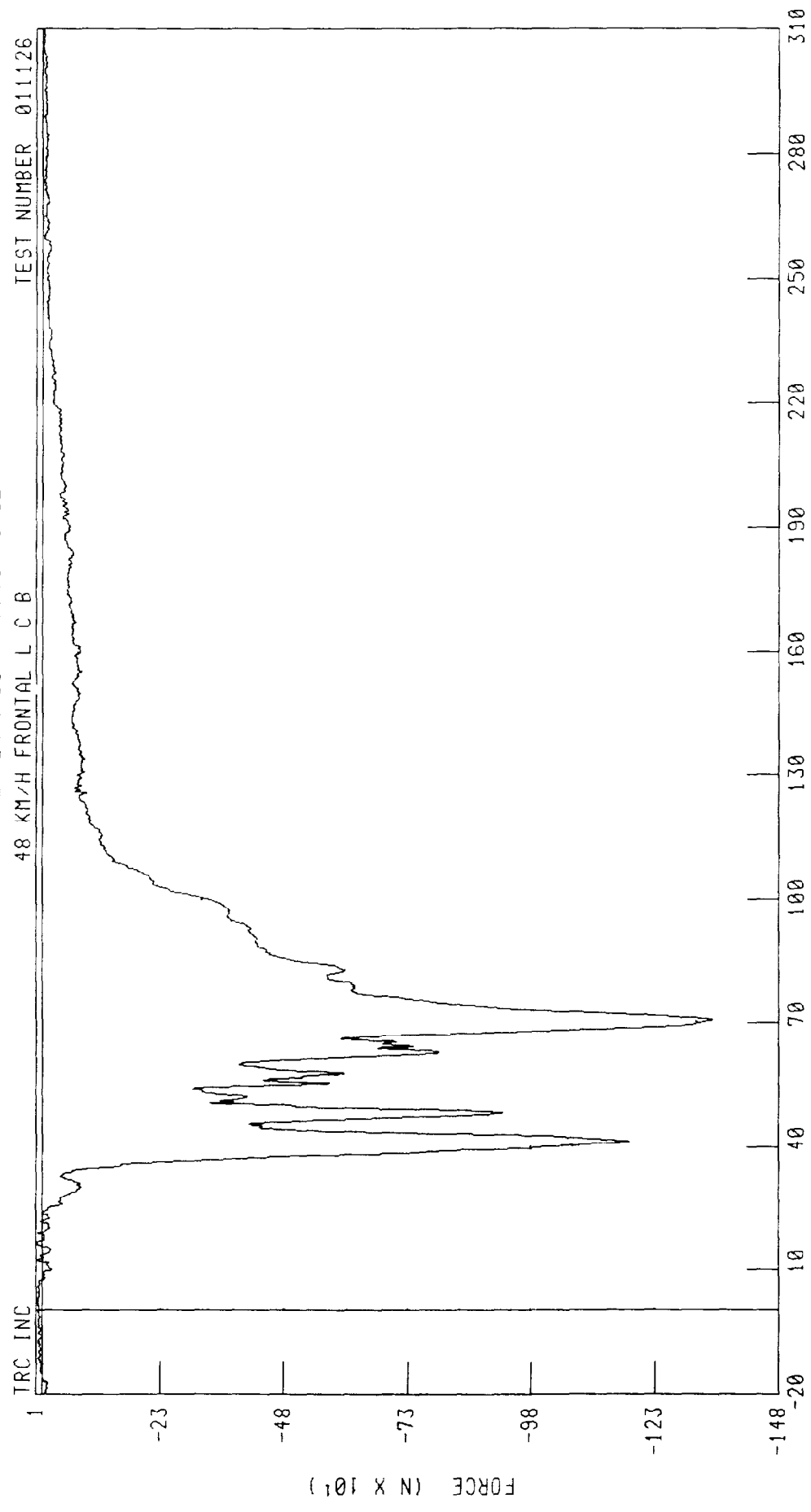
PEAK DATA 47 01 6 0 64 96 MS, -48 98 G @ 55 92 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

DRIVER LEFT LOWER TIBIA X-AXIS FORCE

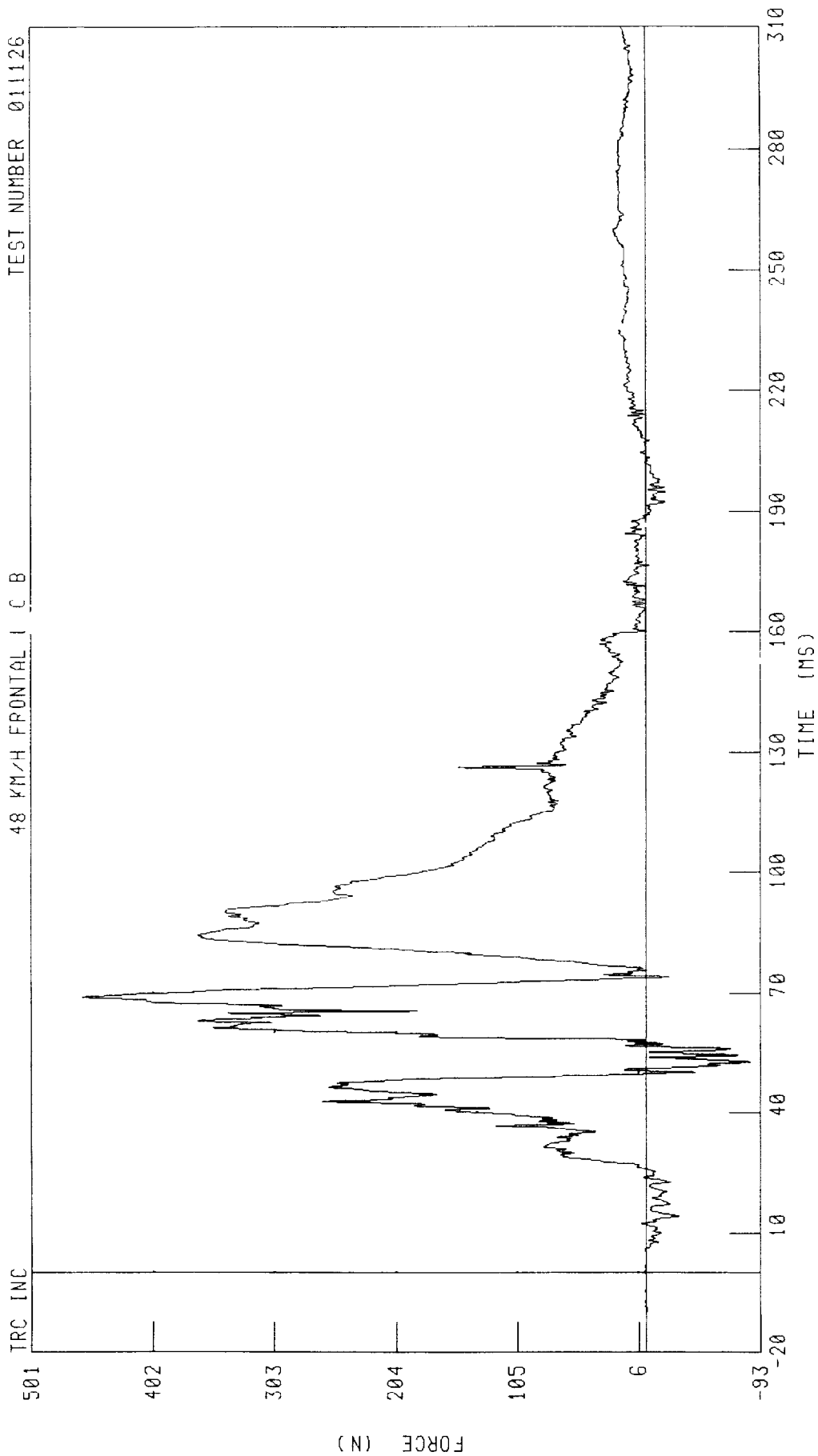
48 KM/H FRONTAL L C B

TEST NUMBER 011126



CHANNEL ANLXF1 FILTER CH CLASS 600 PEAK DATA 11 68 N 0 16 48 MS, -1354 38 N 0 70 64 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
 DRIVER LEFT LOWER TIBIA Y-AXIS FORCE
 48 KM/H FRONTAL I C B



CHANNEL ANLYF1 FILTER CH CLASS 600

PEAK DATA 459 64 N 68 88 MS, -84 98 N 52 72 MS

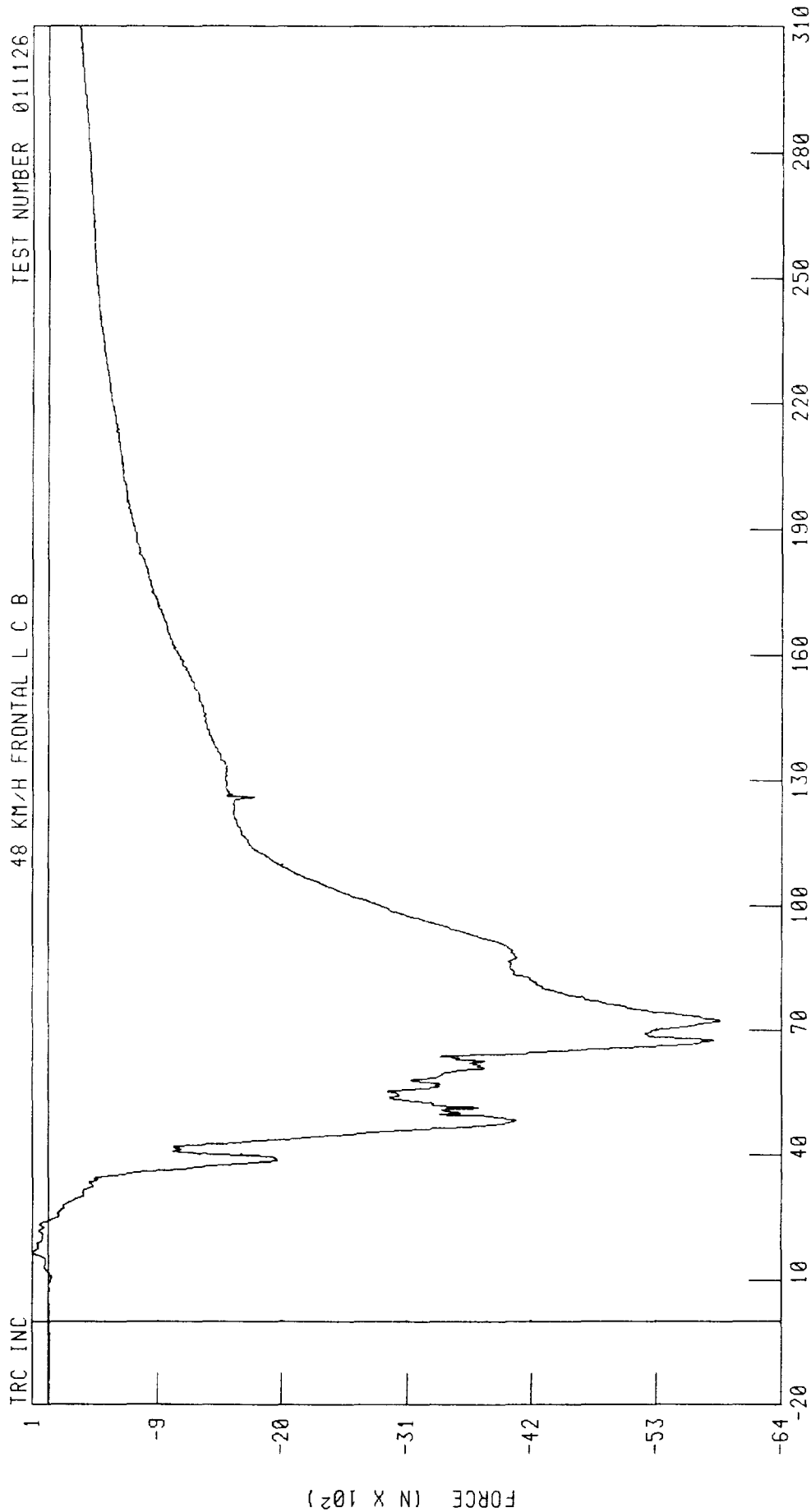
TEST NUMBER 011126

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

DRIVER LEFT LOWER TIBIA Z-AXIS FORCE

48 KM/H FRONTAL L C B

TEST NUMBER 011126



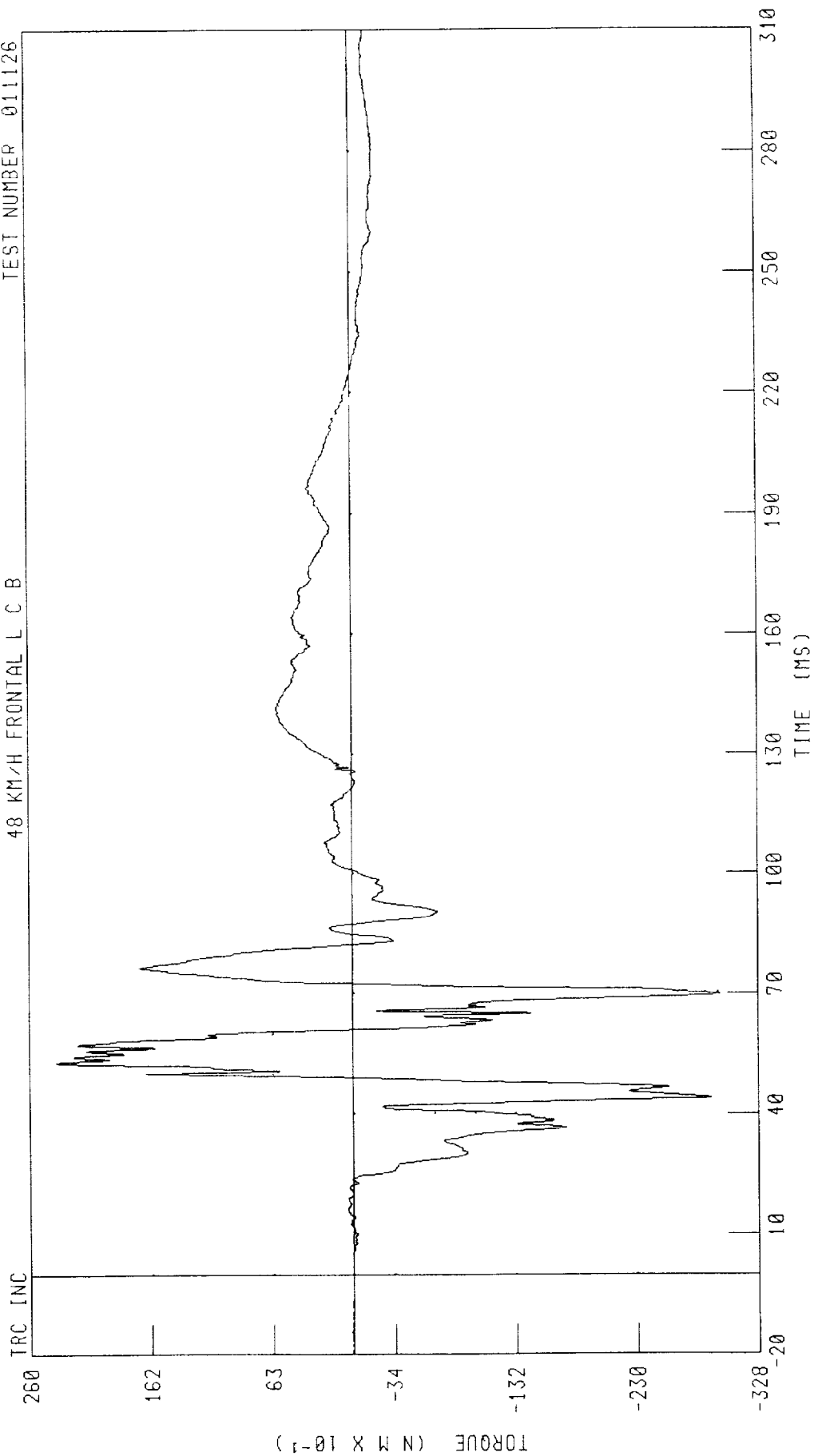
TIME (MS)

PEAK DATA 135 95 N 16 64 MS, -5919 12 N 0 72 16 MS

CHANNEL ANLZF1 FILTER CH CLASS 600

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
 DRIVER LEFT LOWER TIBIA MOMENT ABOUT X AXIS
 48 KM/H FRONTAL L C B

TEST NUMBER 011126



PEAK DATA 23 83 N M @ 53 12 MS, -29 72 N M @ 69 68 MS

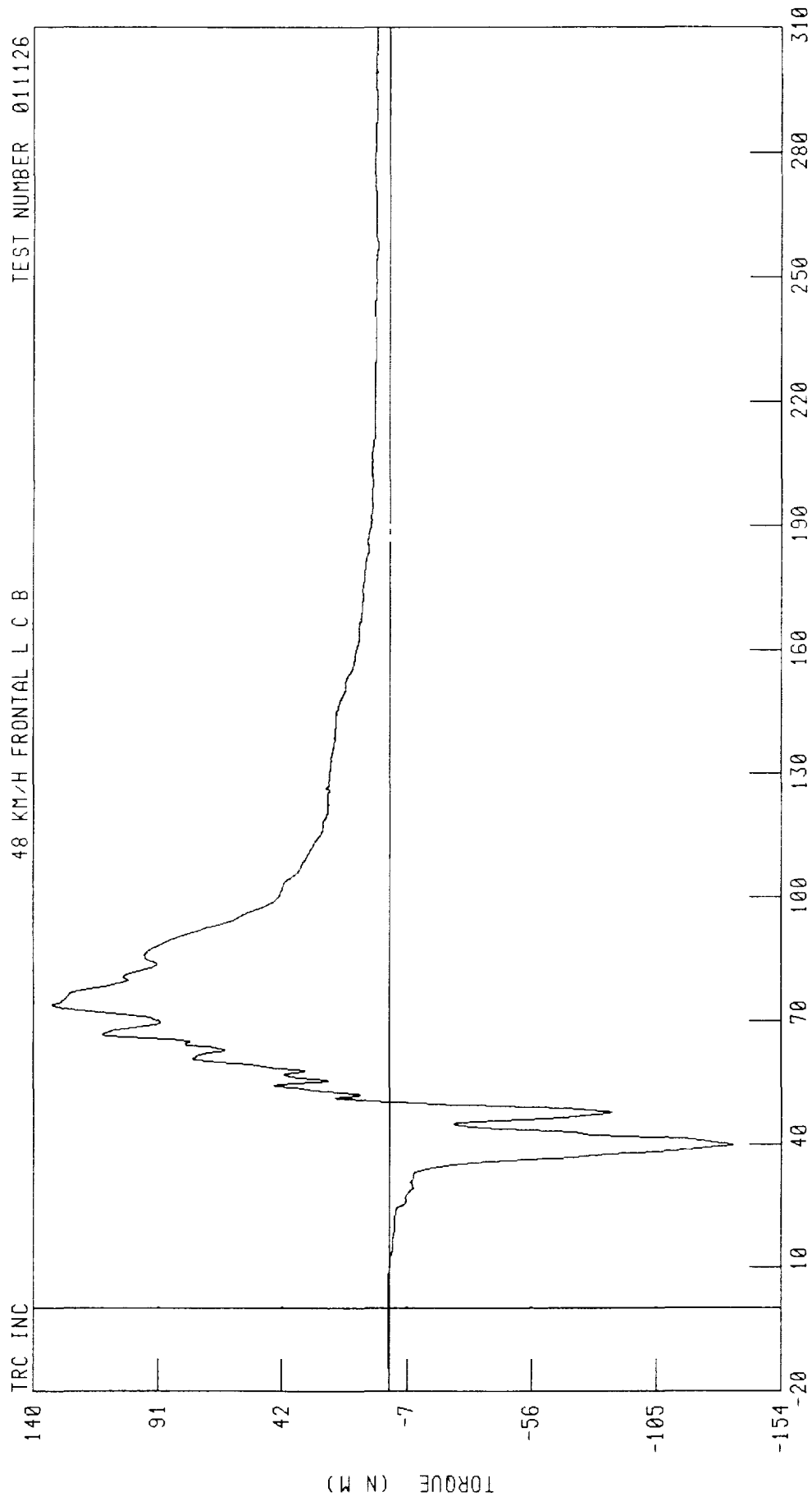
CHANNEL ANLXM1 FILTER CH CLASS 600

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

DRIVER LEFT LOWER TIBIA MOMENT ABOUT Y AXIS

48 KM/H FRONTAL L C B

TEST NUMBER 011126



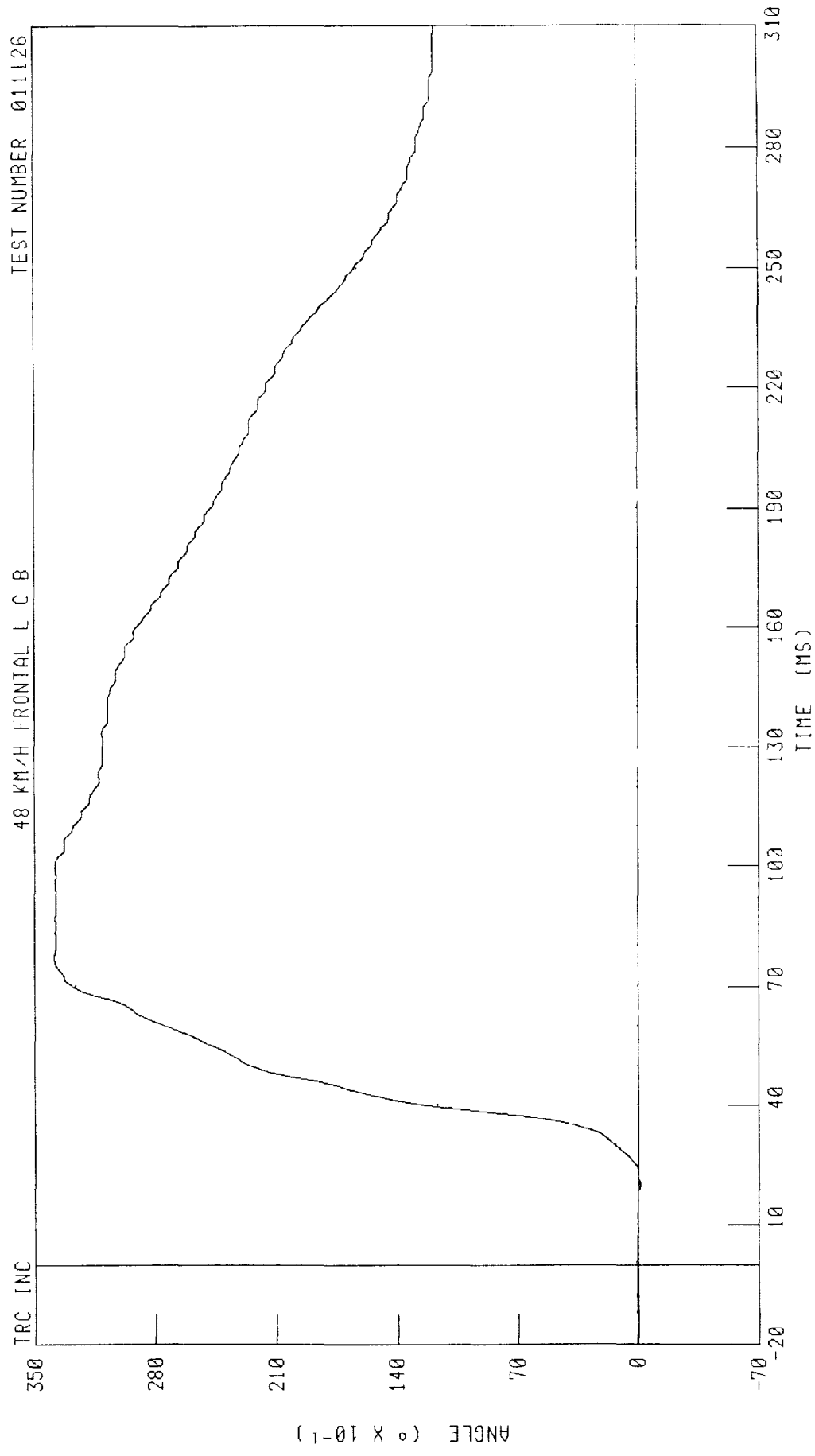
TIME (MS)

PEAK DATA 132 70 N M @ 73 92 MS, -135 09 N M @ 39 84 MS

CHANNEL ANLYM1 FILTER CH CLASS 600

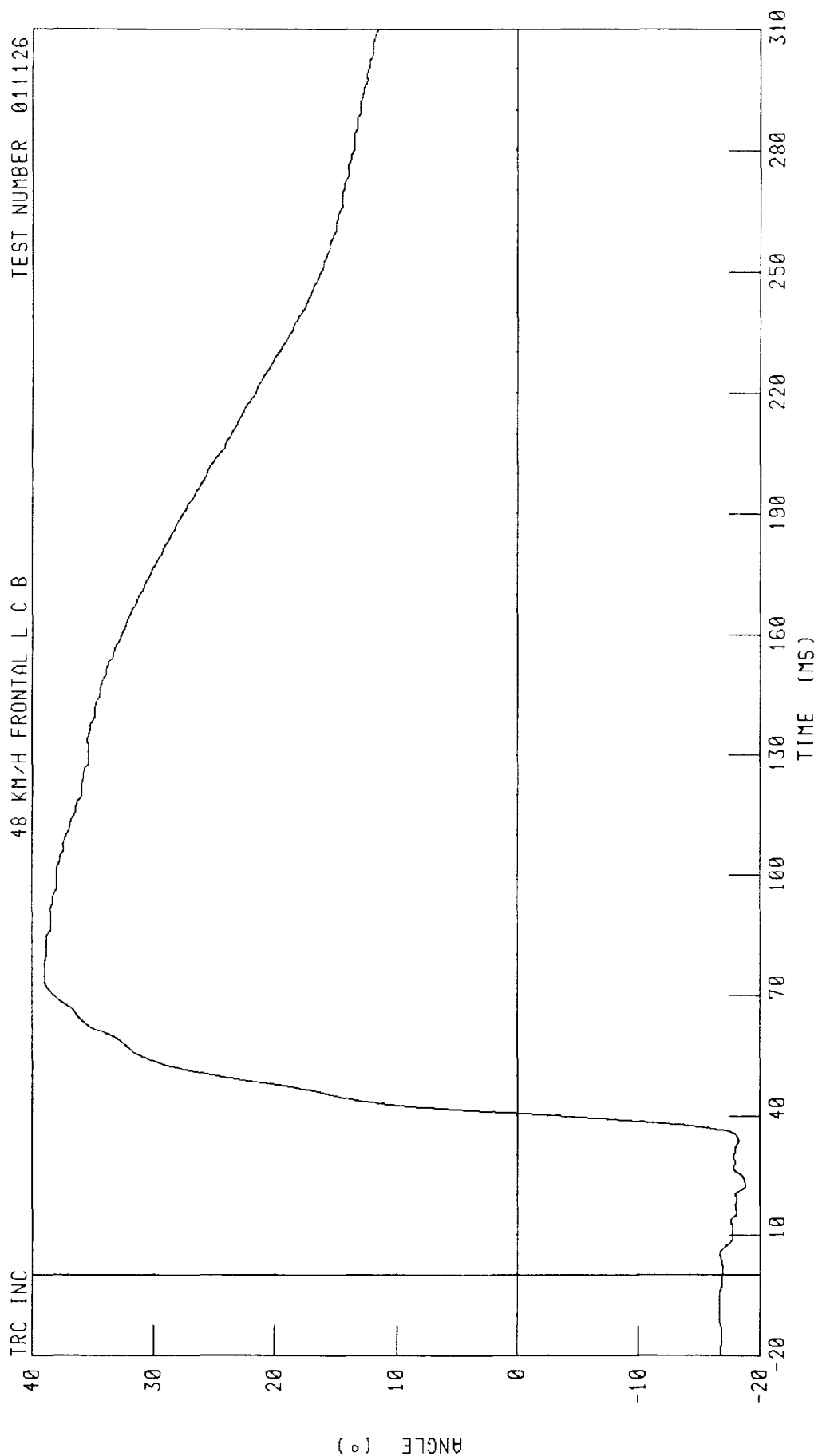
2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
 DRIVER LEFT FOOT TO ANKLE X-AXIS DISPLACEMENT
 48 KM/H FRONTAL L C B

TEST NUMBER 011126



CHANNEL FTLXD1 FILTER CH CLASS 180 PEAK DATA 33 87 ° @ 77 28 MS, -0 14 ° @ 19 84 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
DRIVER LEFT FOOT TO ANKLE Y-AXIS DISPLACEMENT

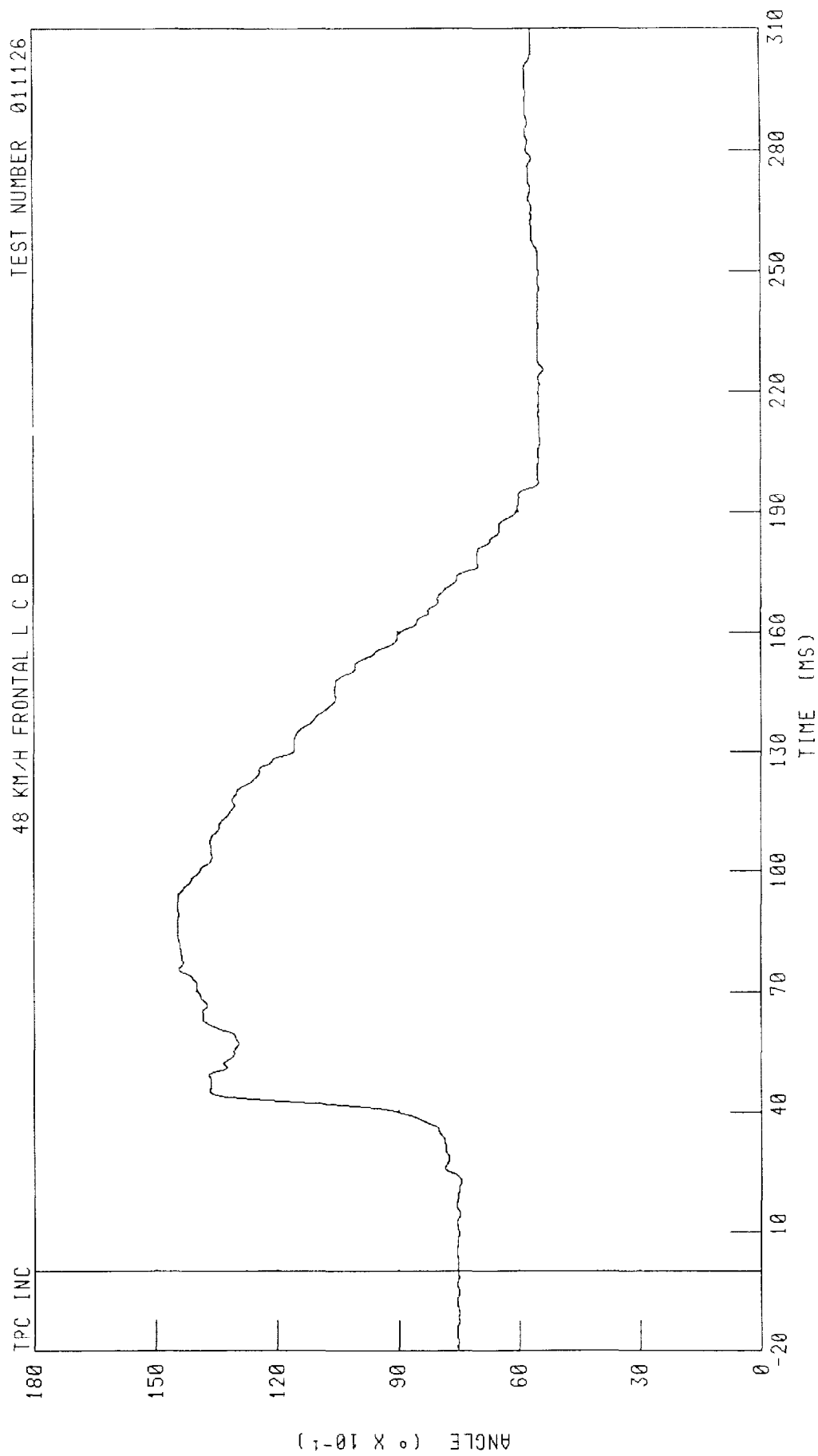


CHANNEL FTLYD1 FILTER CH CLASS 130

PEAK DATA 38 99 ° 0 73 68 MS, -18 81 ° 0 22 40 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
DRIVER LEFT FOOT TO ANKLE Z-AXIS DISPLACEMENT
48 KM/H FRONTAL L C B

TEST NUMBER 011126



CHANNEL FTLZD1 FILTER CH CLASS 180

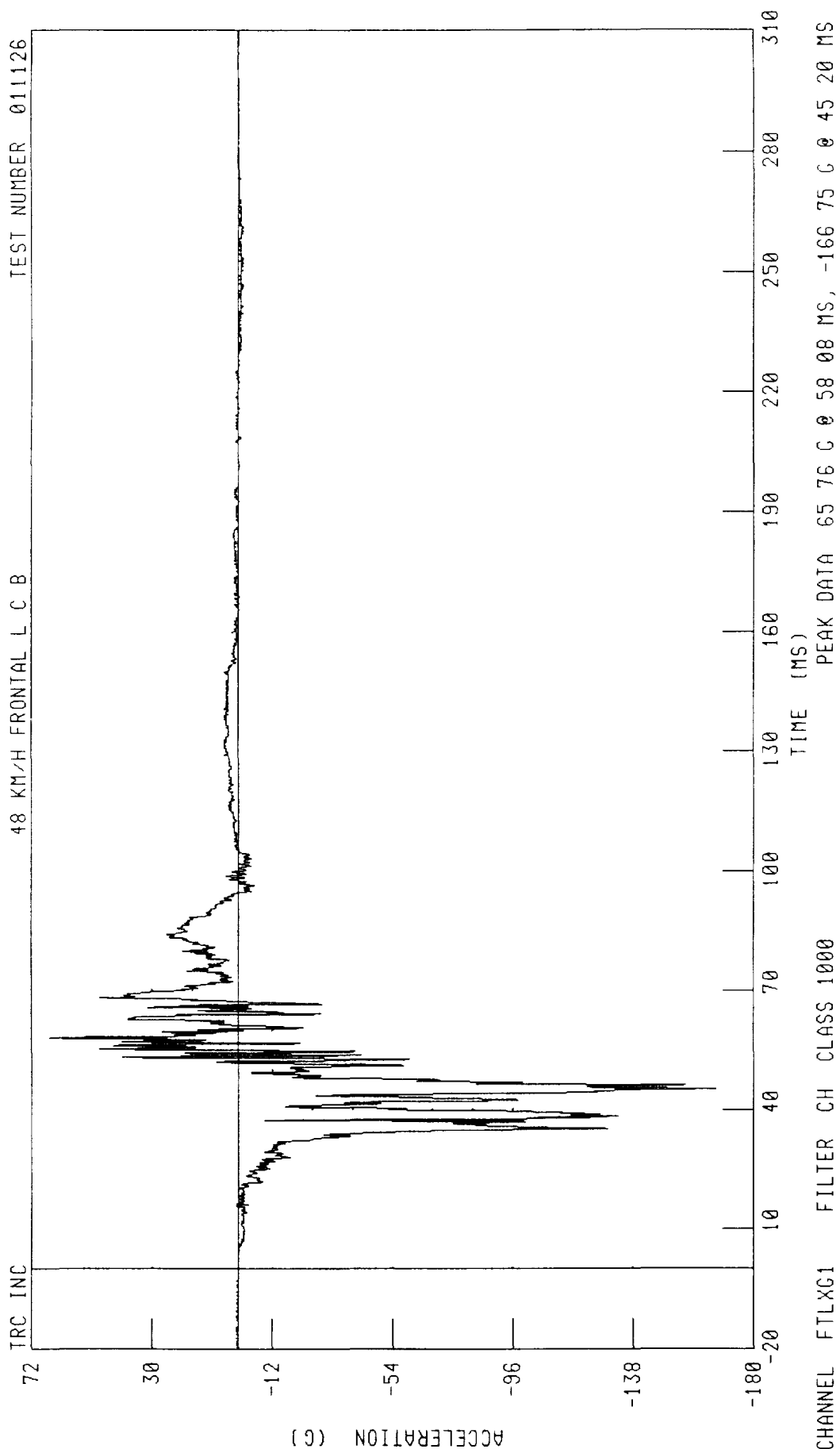
PEAK DATA 14 46 ° @ 93 44 MS, 5 37 ° @ 225 60 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

DRIVER LEFT FOOT X-AXIS ACCELERATION

48 KM/H FRONTAL L C B

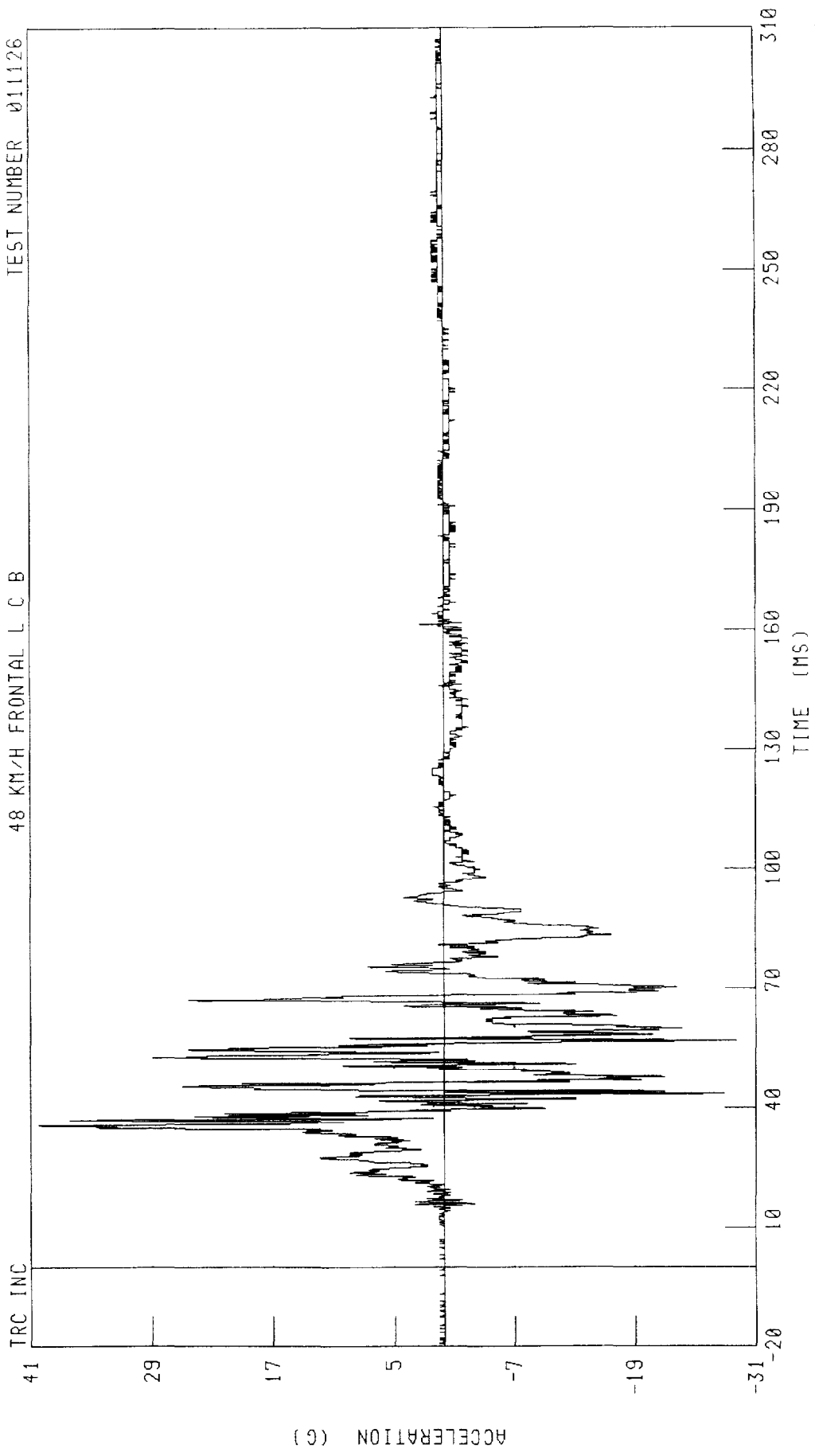
TEST NUMBER 011126



CHANNEL FTLXG1 FILTER CH CLASS 1000 PEAK DATA 65 76 C 0 58 08 MS, -166 75 C 0 45 20 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
DRIVER LEFT FOOT Y-AXIS ACCELERATION
48 KM/H FRONTAL L C B

TEST NUMBER 011126



CHANNEL FTLYC1 FILTER CH CLASS 1000

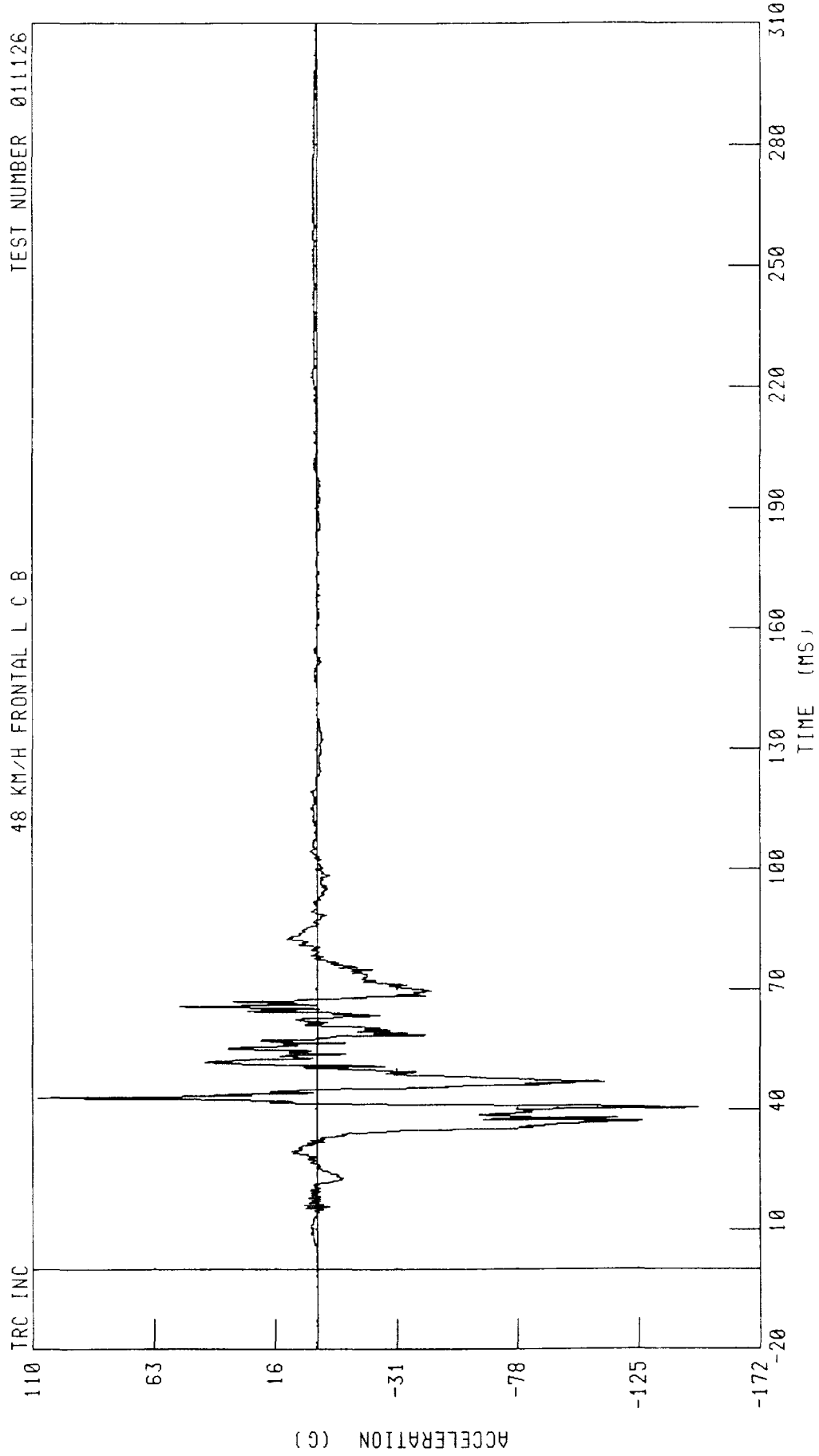
PEAK DATA 40 16 G @ 55 52 MS, -29 06 G @ 56 64 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

DRIVER LEFT FOOT Z-AXIS ACCELERATION

48 KM/H FRONTAL L C B

TEST NUMBER 011126



CHANNEL FTLZC1 FILTER CH CLASS 1000

PEAK DATA 108 27 G @ 43 04 MS, -148 26 G @ 40 32 MS

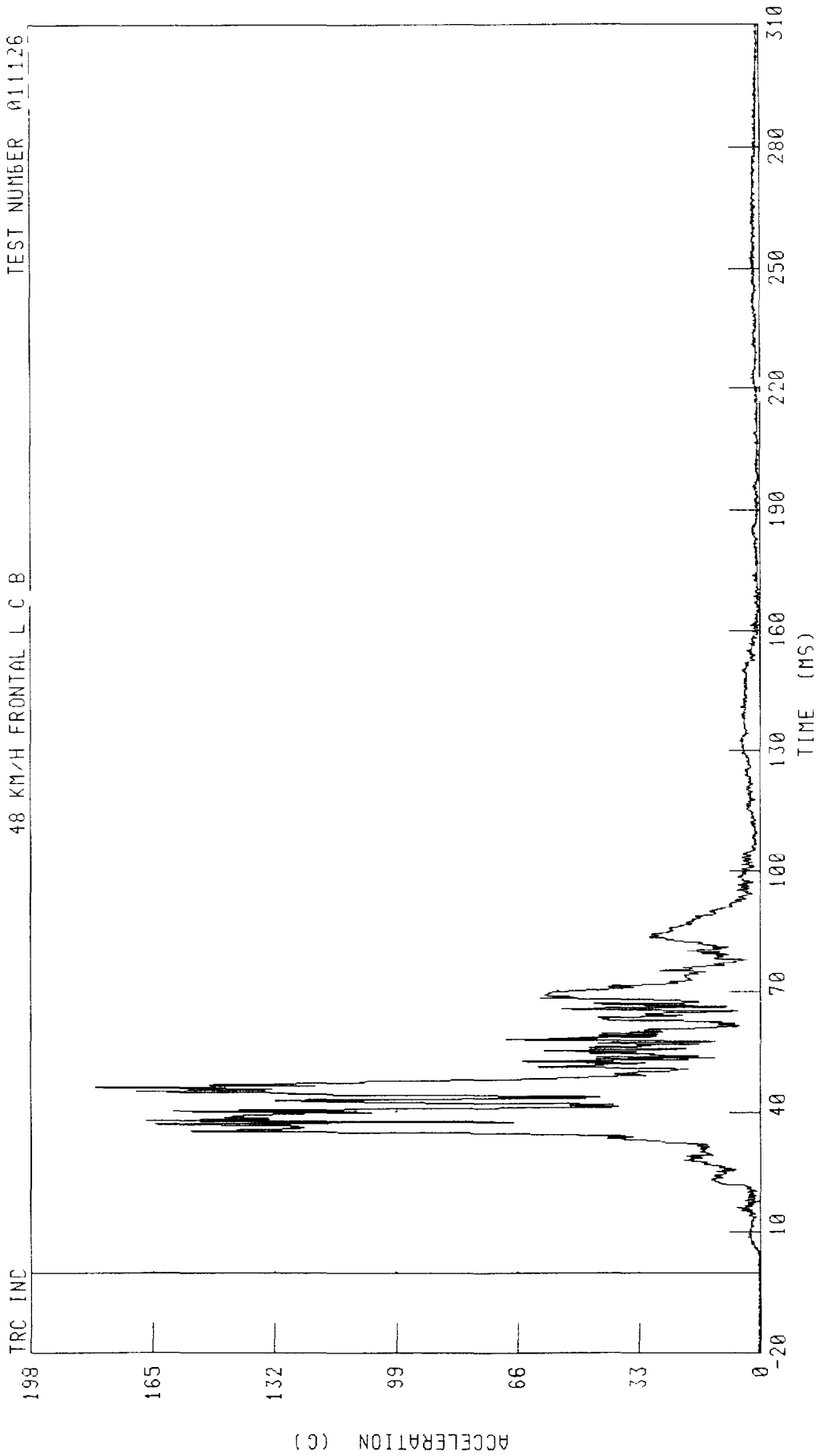
2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

DRIVER LEFT FOOT RESULTANT ACCELERATION

48 KM/H FRONTAL L C B

TEST NUMBER 011126

TRC INC



PEAK DATA 180 36 G @ 46 16 MS, 0 16 G @ -20 00 MS

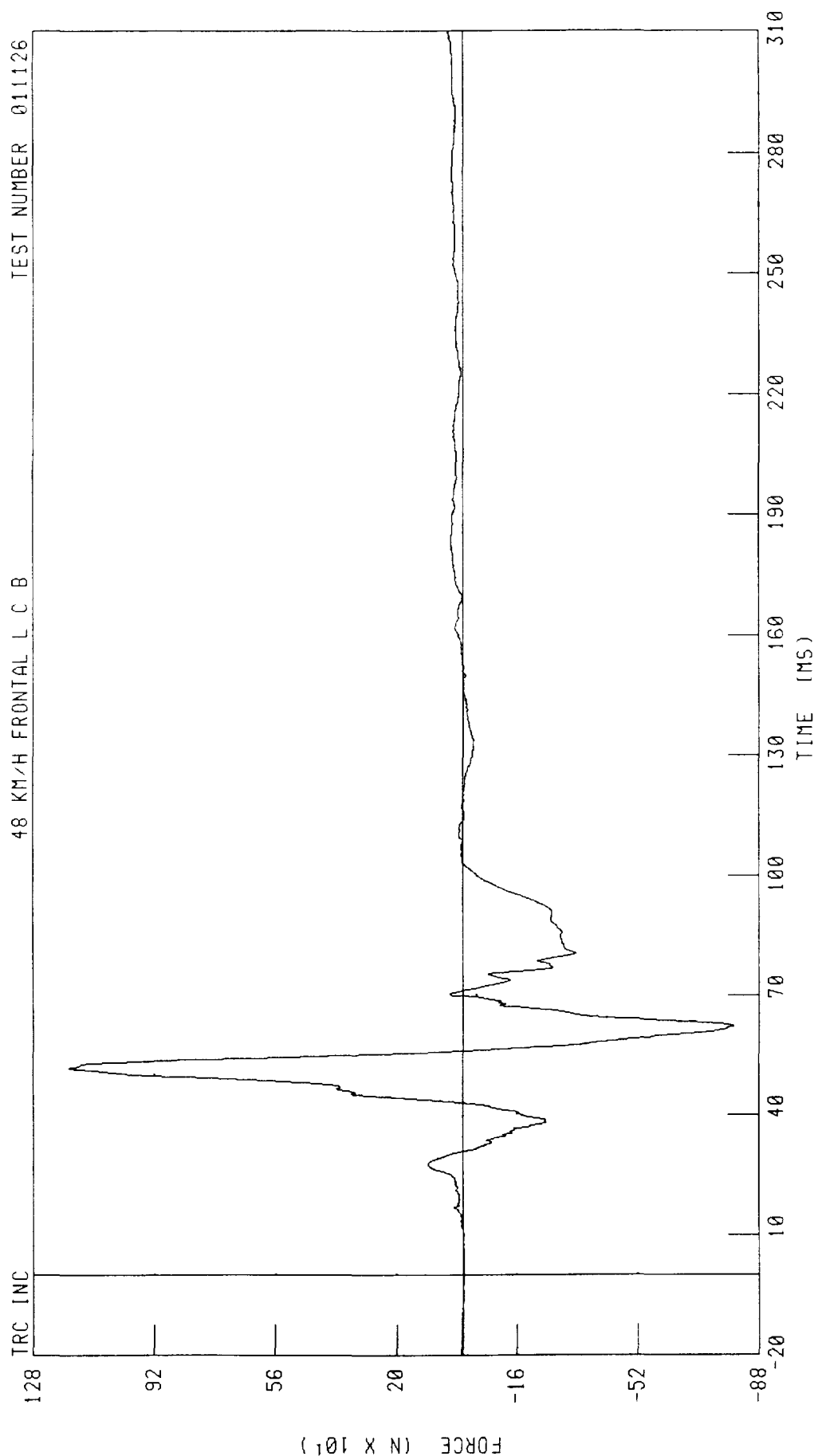
CHANNEL FTLR61 FILTER CH CLASS 1000

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

DRIVER RIGHT UPPER TIBIA X-AXIS FORCE

48 KM/H FRONTAL L C B

TEST NUMBER 011126



CHANNEL TBRXF1 FILTER CH CLASS 600

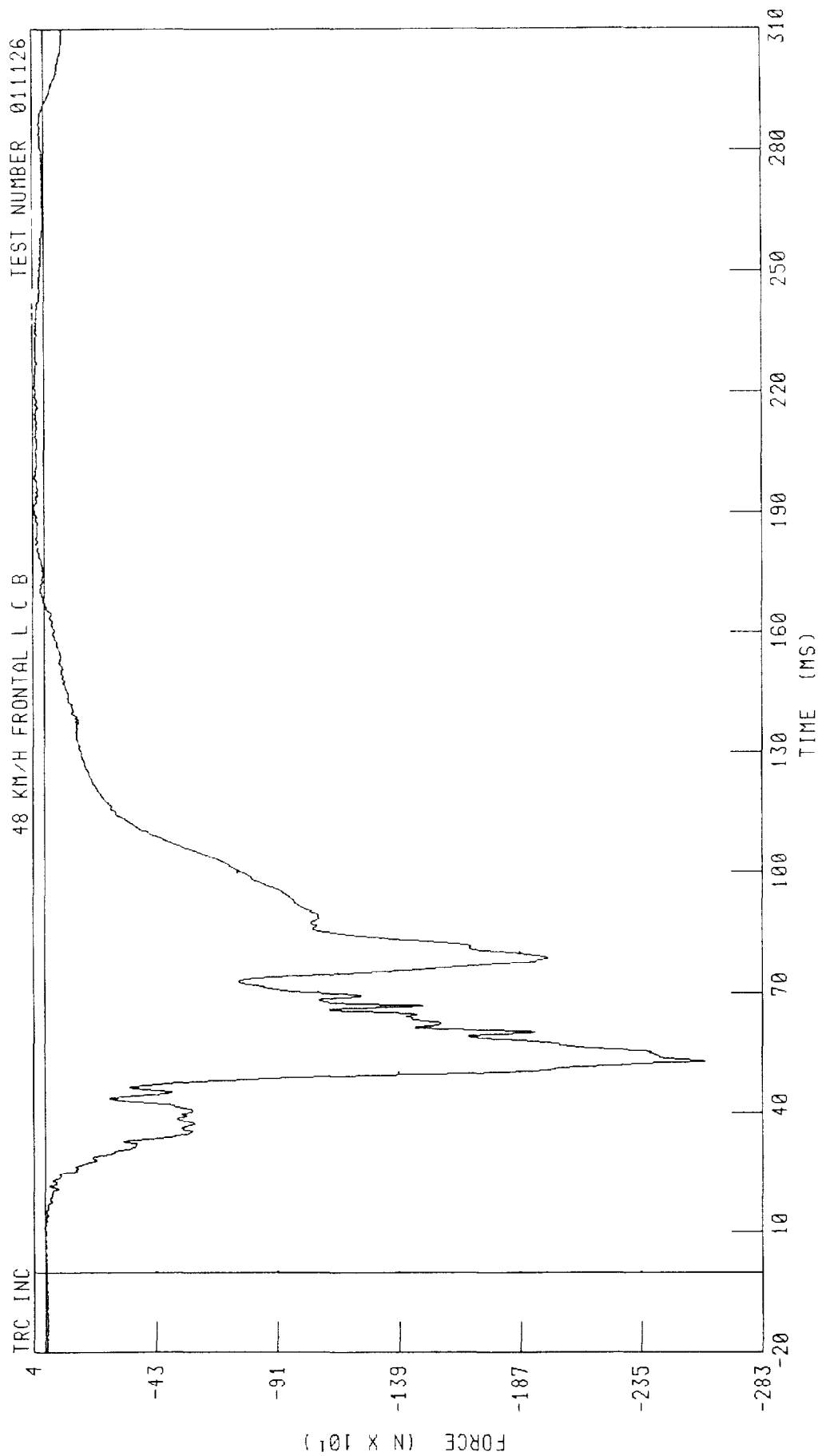
PEAK DATA 1173 04 N 0 51 68 MS, -805 49 N 0 62 16 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

DRIVER RIGHT UPPER TIBIA Z-AXIS FORCE

48 KM/H FRONTAL L C B

TEST NUMBER 011126



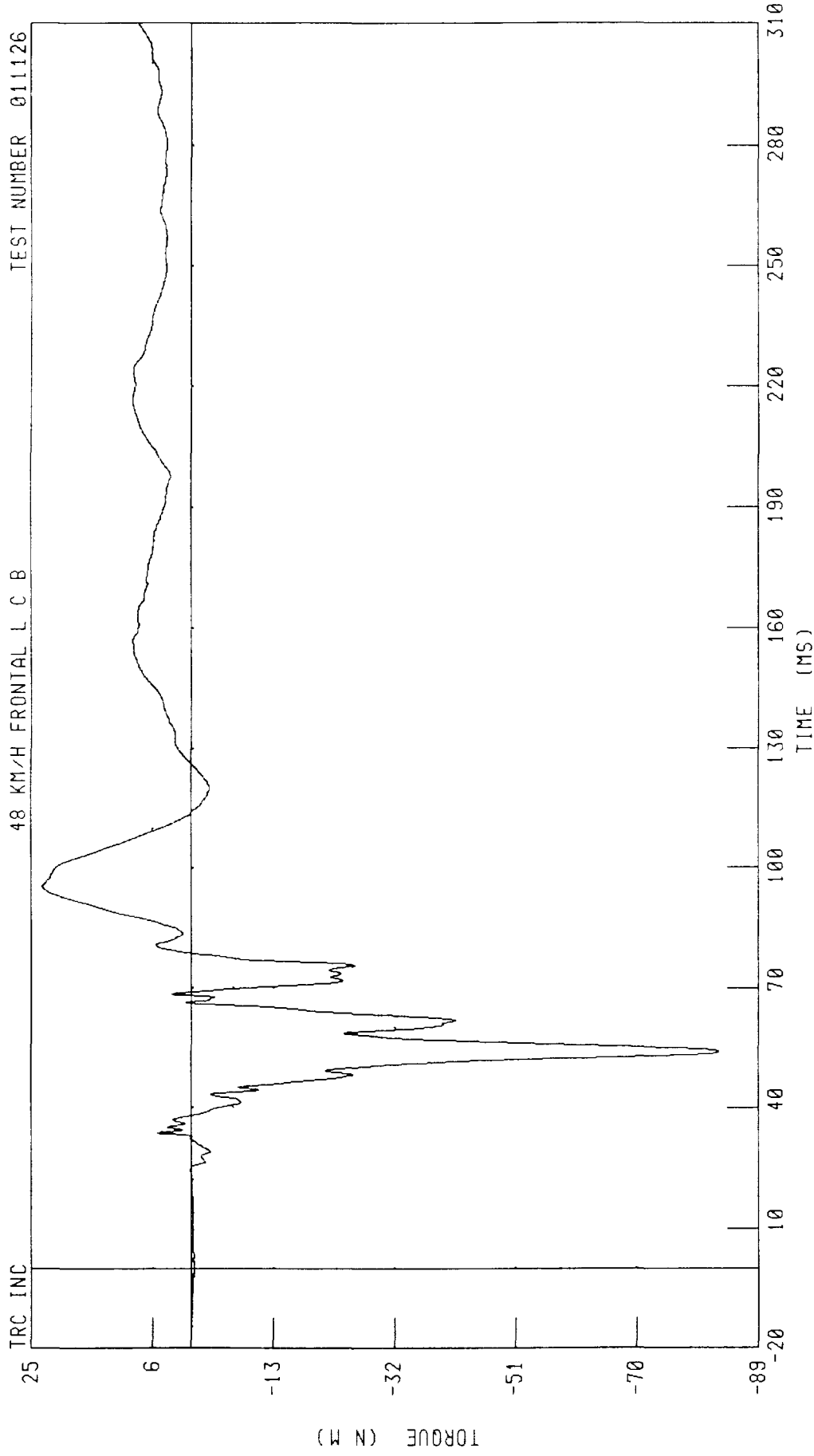
CHANNEL TBRZF1 FILTER CH CLASS 600 PEAK DATA 41 48 N @ 190 08 MS, -2606 C2 N @ 52 96 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

DRIVER RIGHT UPPER TIBIA MOMENT ABOUT X AXIS

48 KM/H FRONTAL L C B

TEST NUMBER 011126



TIME (MS)

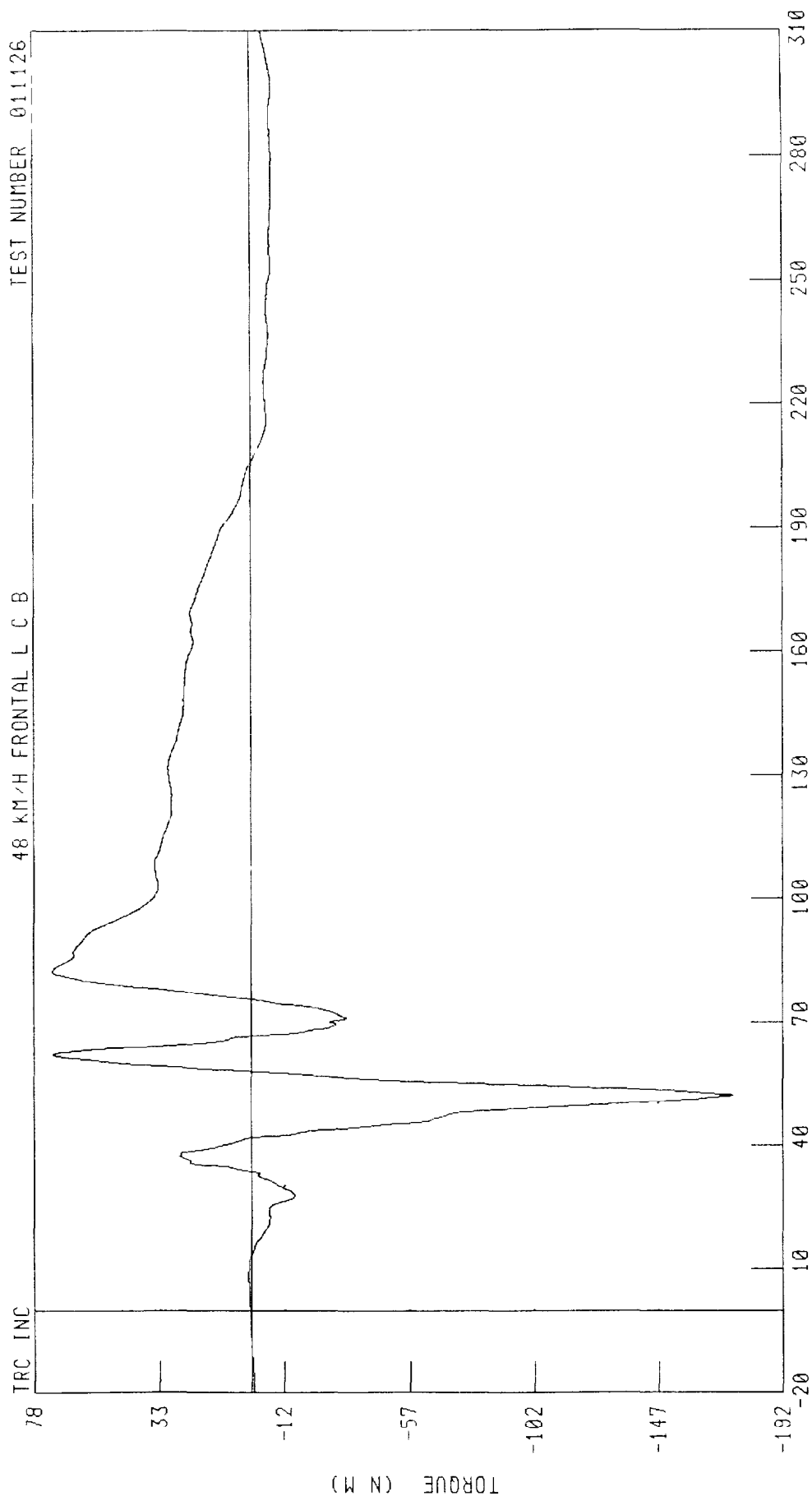
CHANNEL TBRX11 FILTER CH CLASS 600 PEAK DATA 23 22 N M @ 95 44 MS, -82 98 N M @ 54 00 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

DRIVER RIGHT UPPER TIBIA MOMENT ABOUT Y AXIS

48 KM/H FRONTAL L C B

TEST NUMBER 011126



CHANNEL TBRYM1 FILTER CH CLASS 600

TIME (MS)

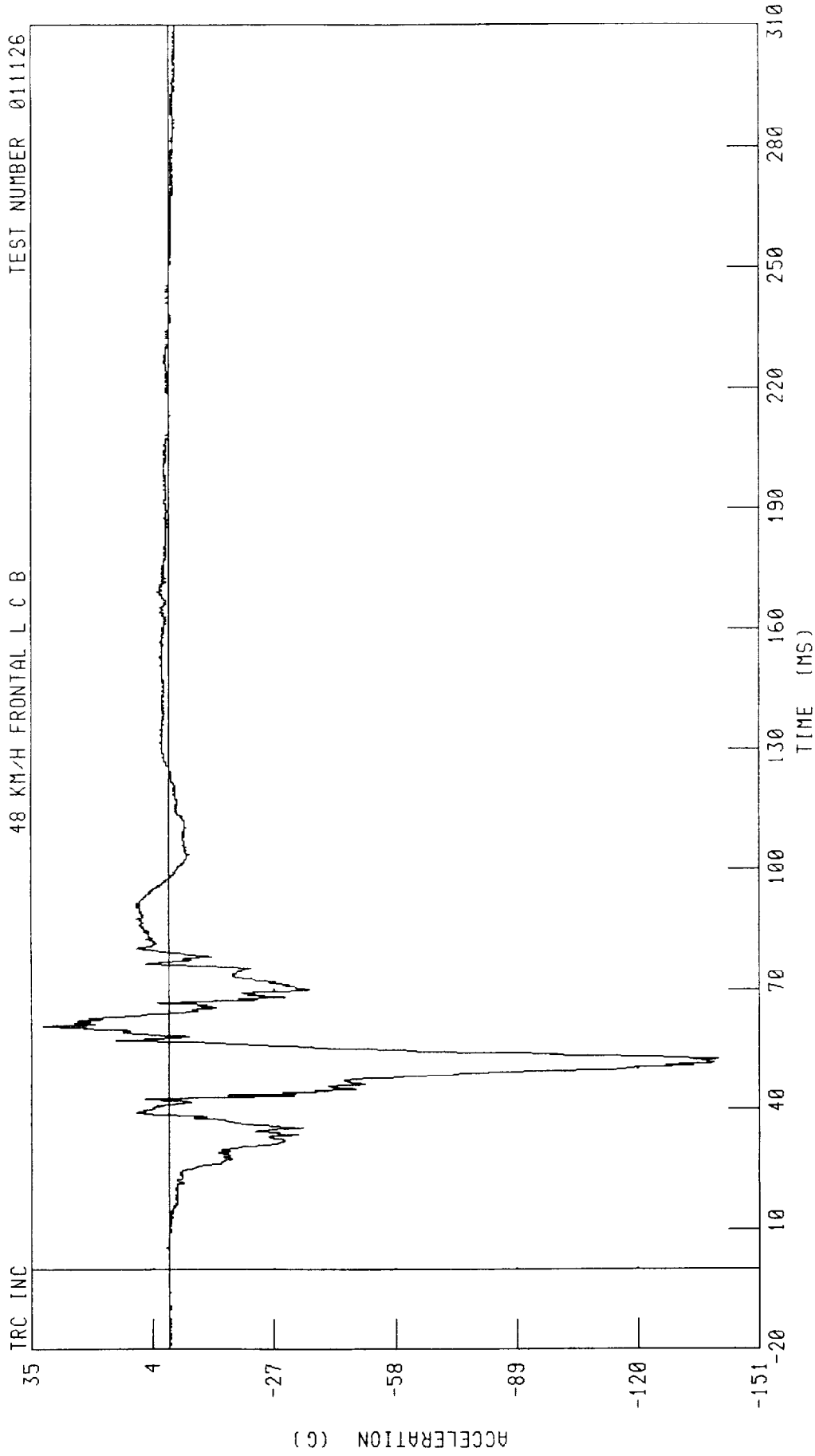
PEAK DATA 71 43 N M @ 82 32 MS, -174 10 N M @ 52 08 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

DRIVER RIGHT TIBIA X-AXIS ACCELERATION

48 KM/H FRONTAL L C B

TEST NUMBER 011126

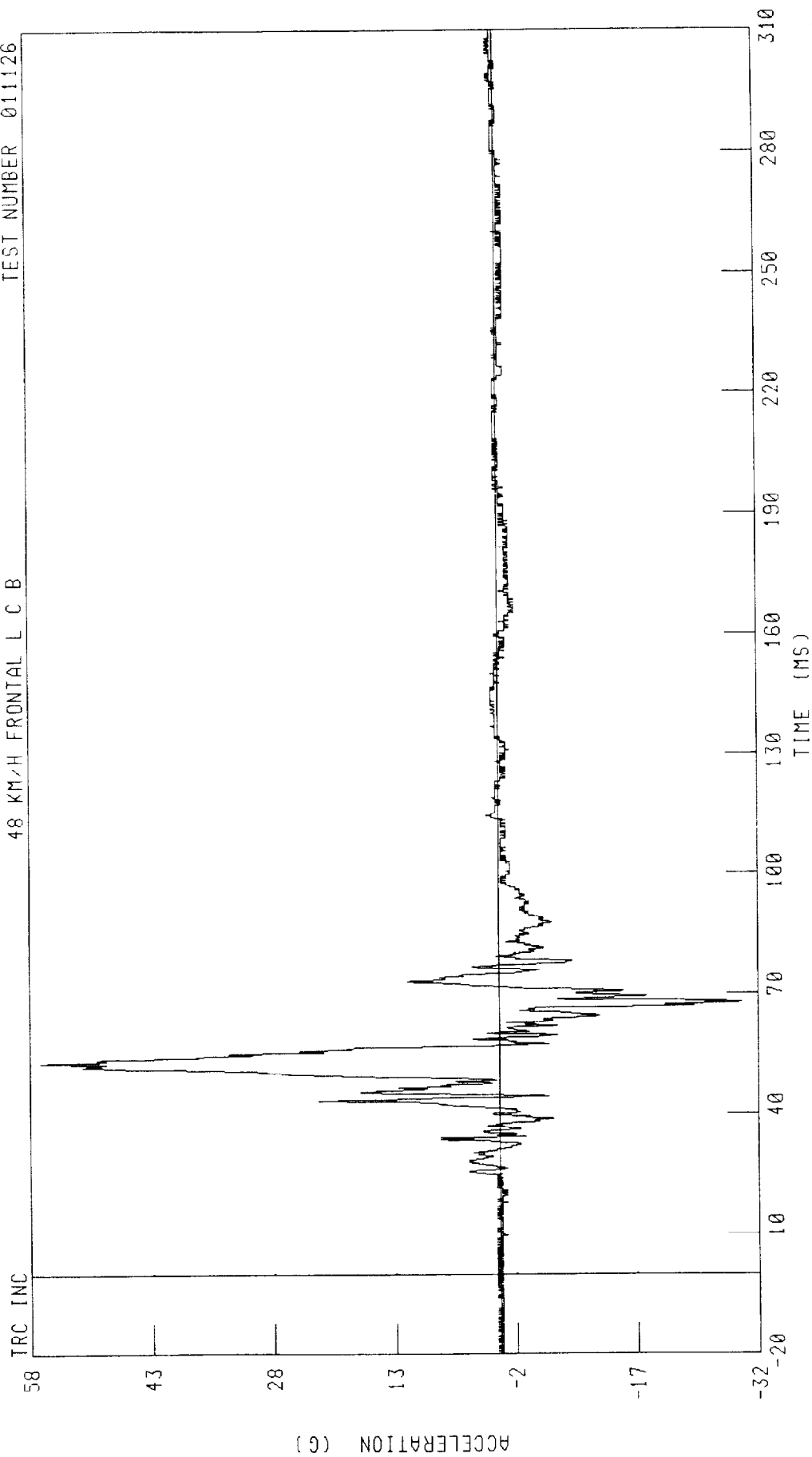


PEAK DATA 32 11 G @ 60 72 MS, -140 62 G @ 52 56 MS

CHANNEL TBRXG1 FILTER CH CLASS 1000

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
 DRIVER RIGHT TIBIA Y-AXIS ACCELERATION
 48 KM/H FRONTAL L C B

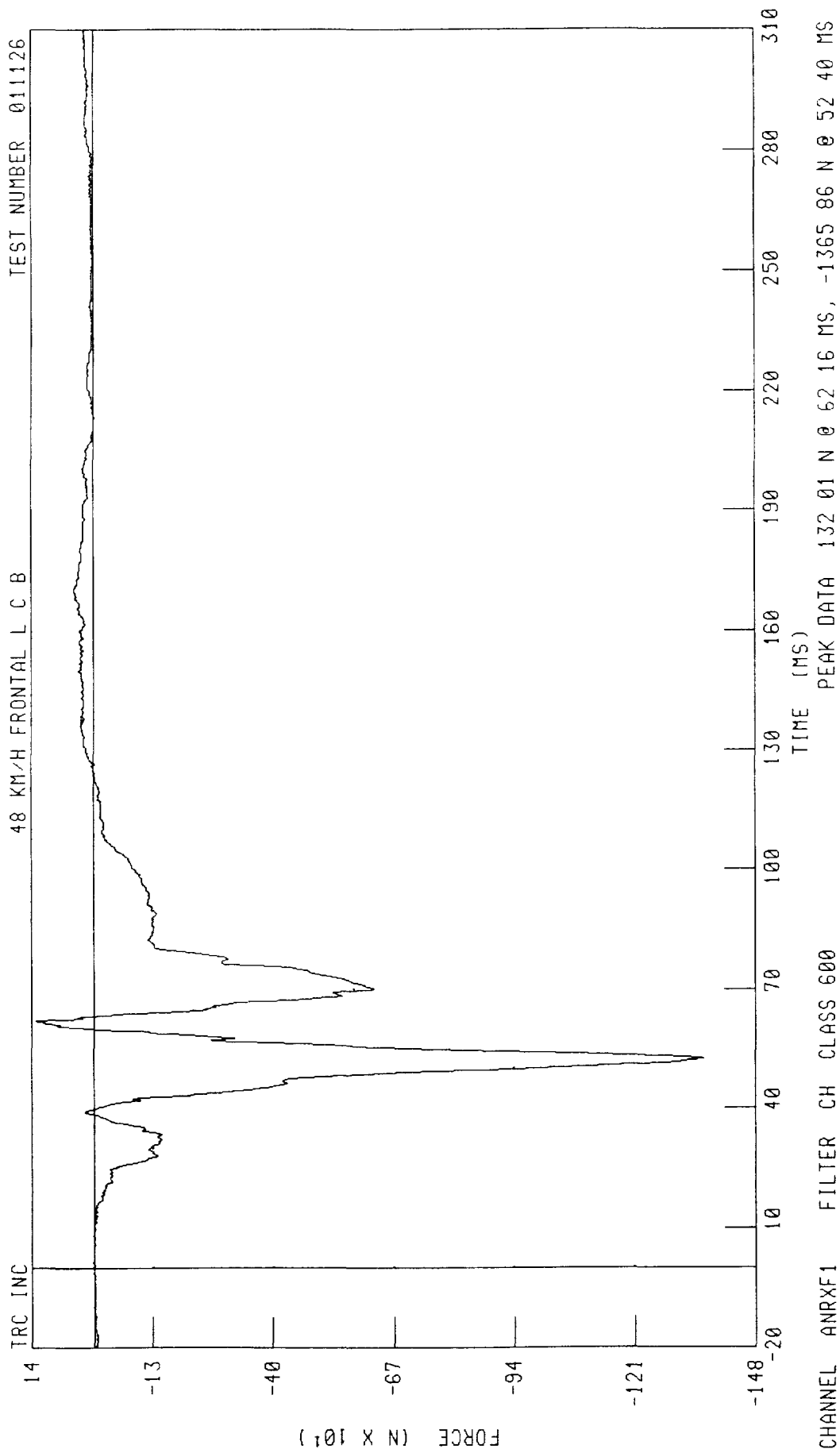
TEST NUMBER 011126



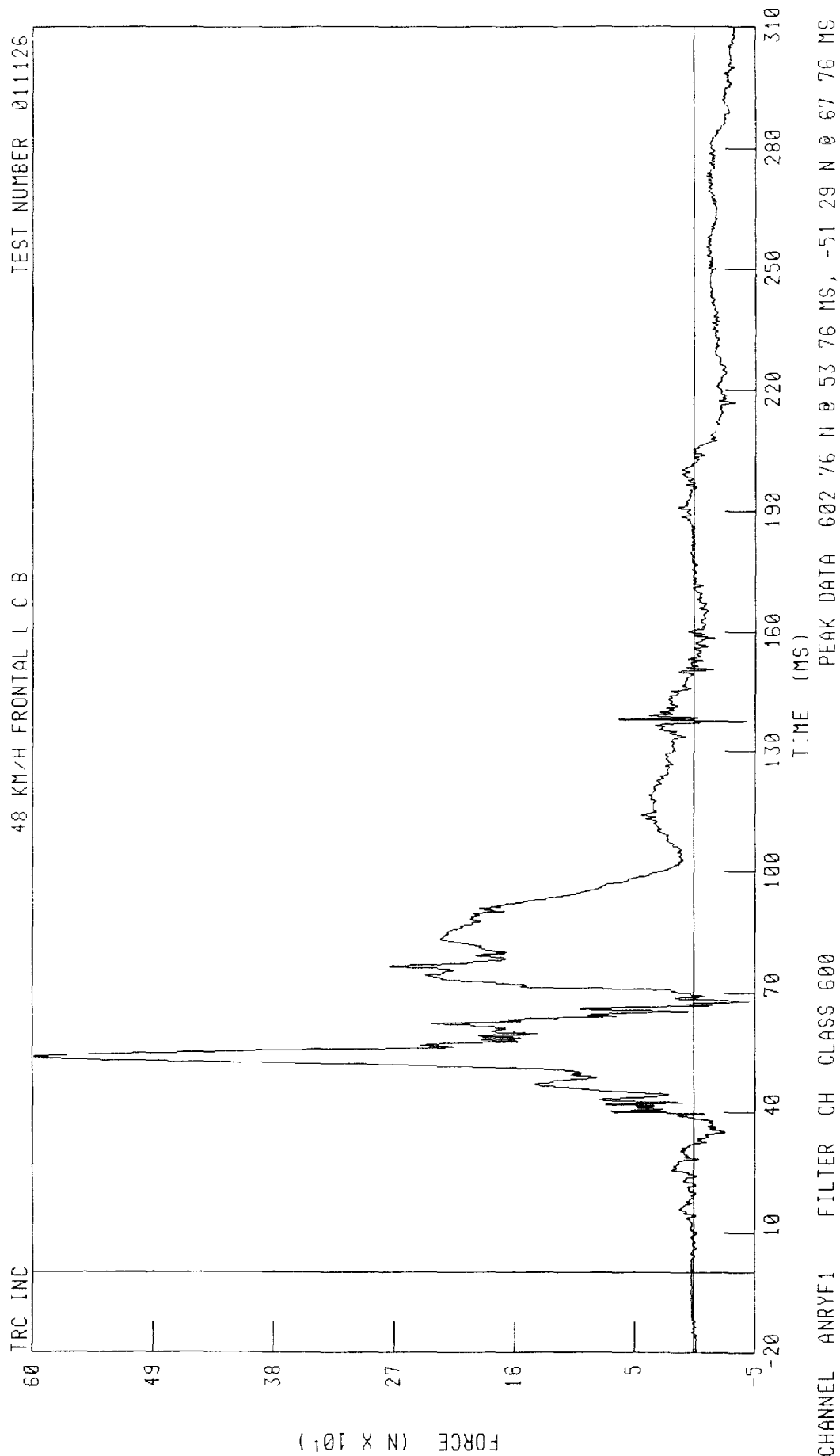
PEAK DATA 56 30 G @ 52 96 MS, -29 95 G @ 67 76 MS

CHANNEL TBRYG1 FILTER CH CLASS 1000

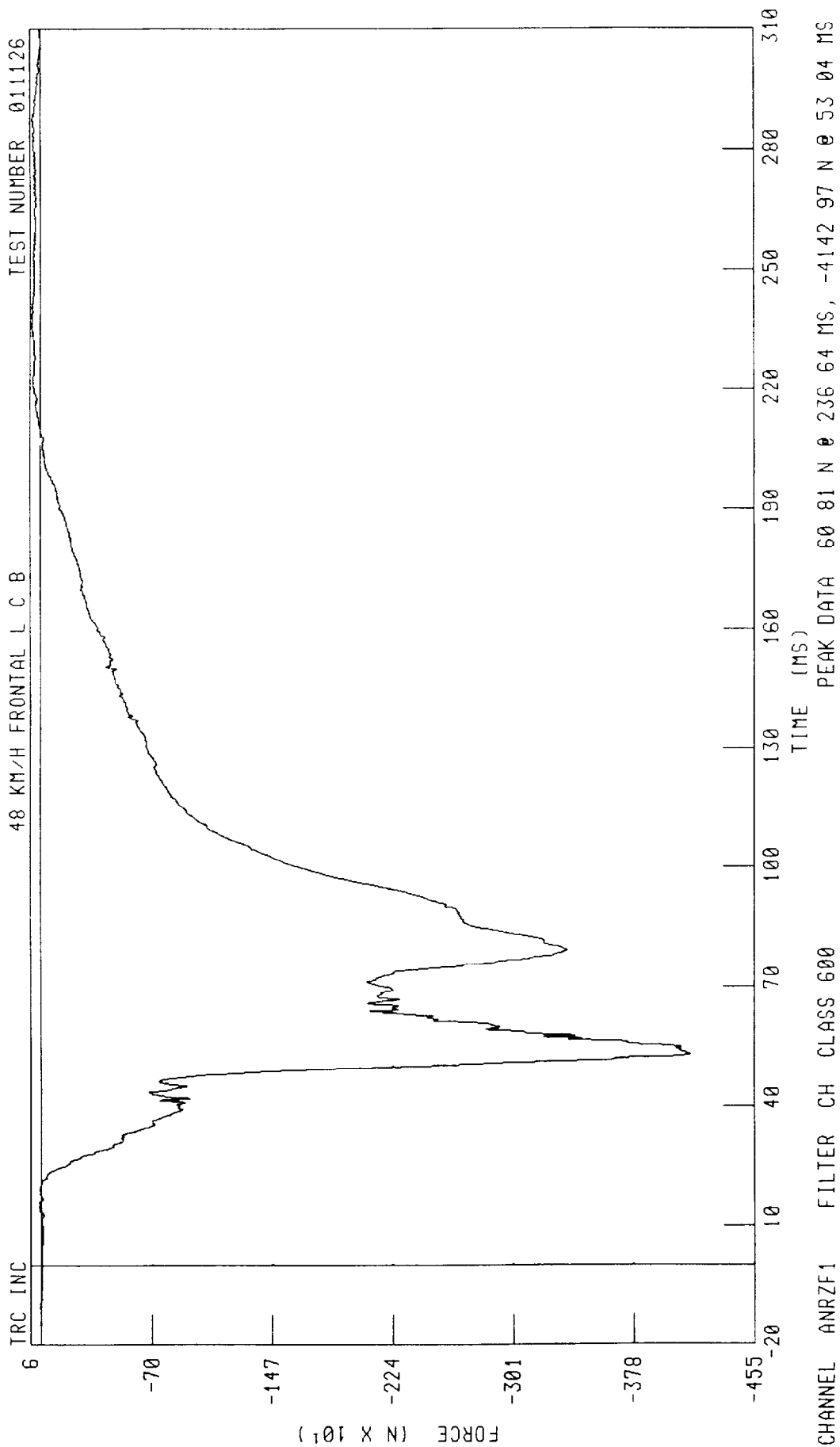
2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
DRIVER RIGHT LOWER TIBIA X-AXIS FORCE



2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
DRIVER RIGHT LOWER TIBIA Y-AXIS FORCE

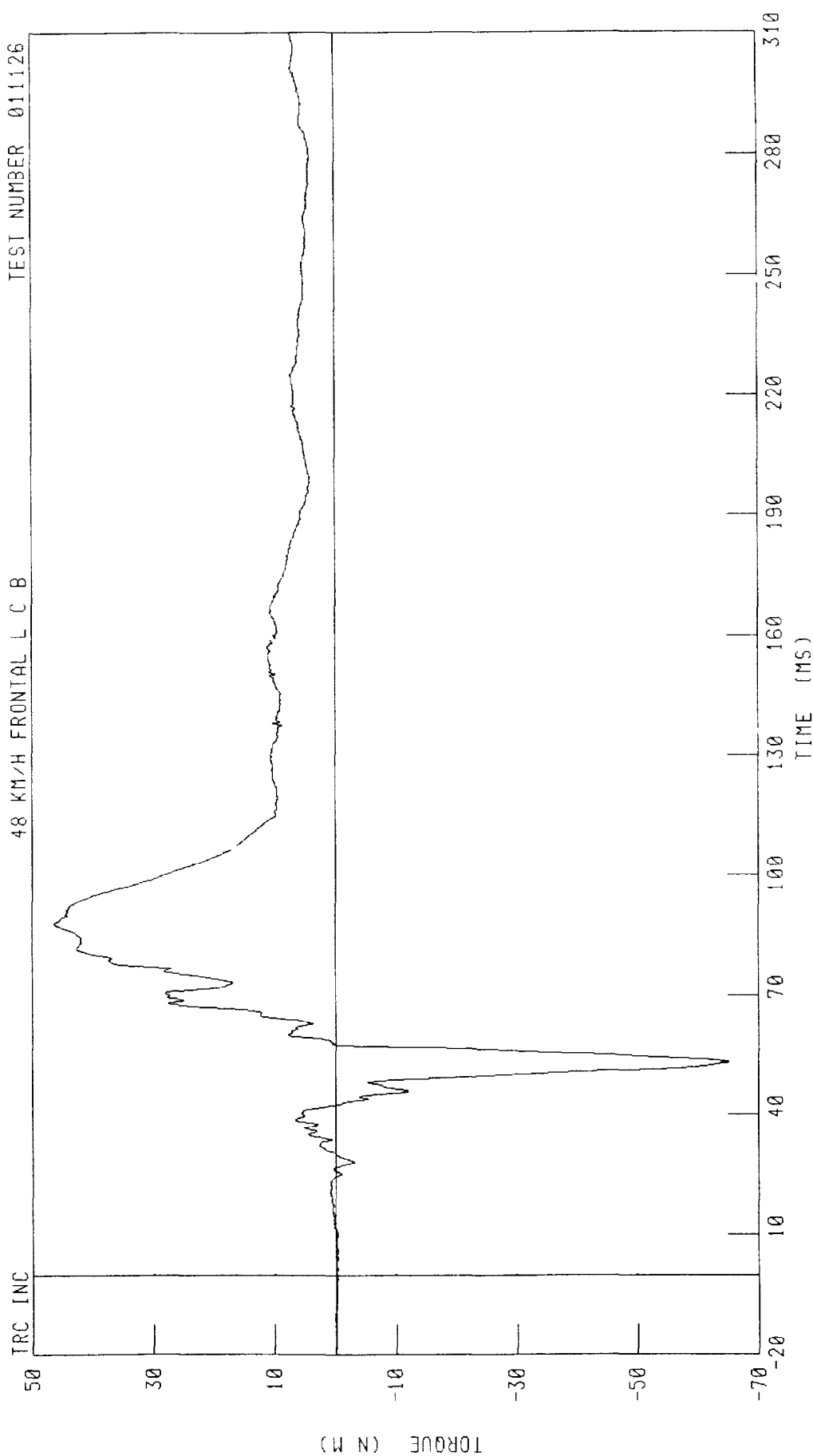


2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
DRIVER RIGHT LOWER TIBIA Z-AXIS FORCE



2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
DRIVER RIGHT LOWER TIBIA MOMENT ABOUT X AXIS
48 KM/H FRONTAL L C B

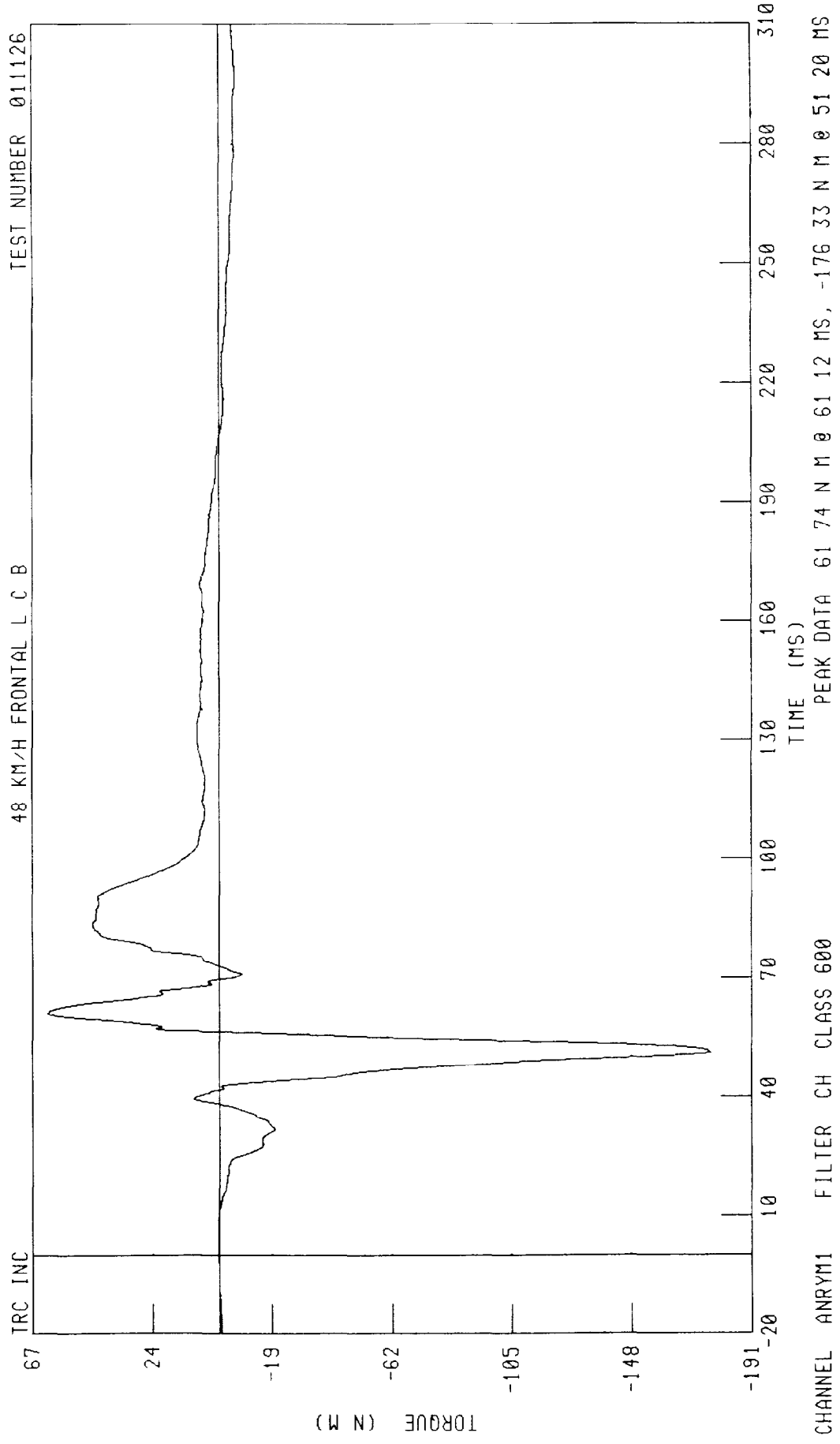
TEST NUMBER 011126



PEAK DATA 46 29 N M @ 88 08 MS, -65 18 N M @ 53 12 MS

CHANNEL ANRXM1 FILTER CH CLASS 600

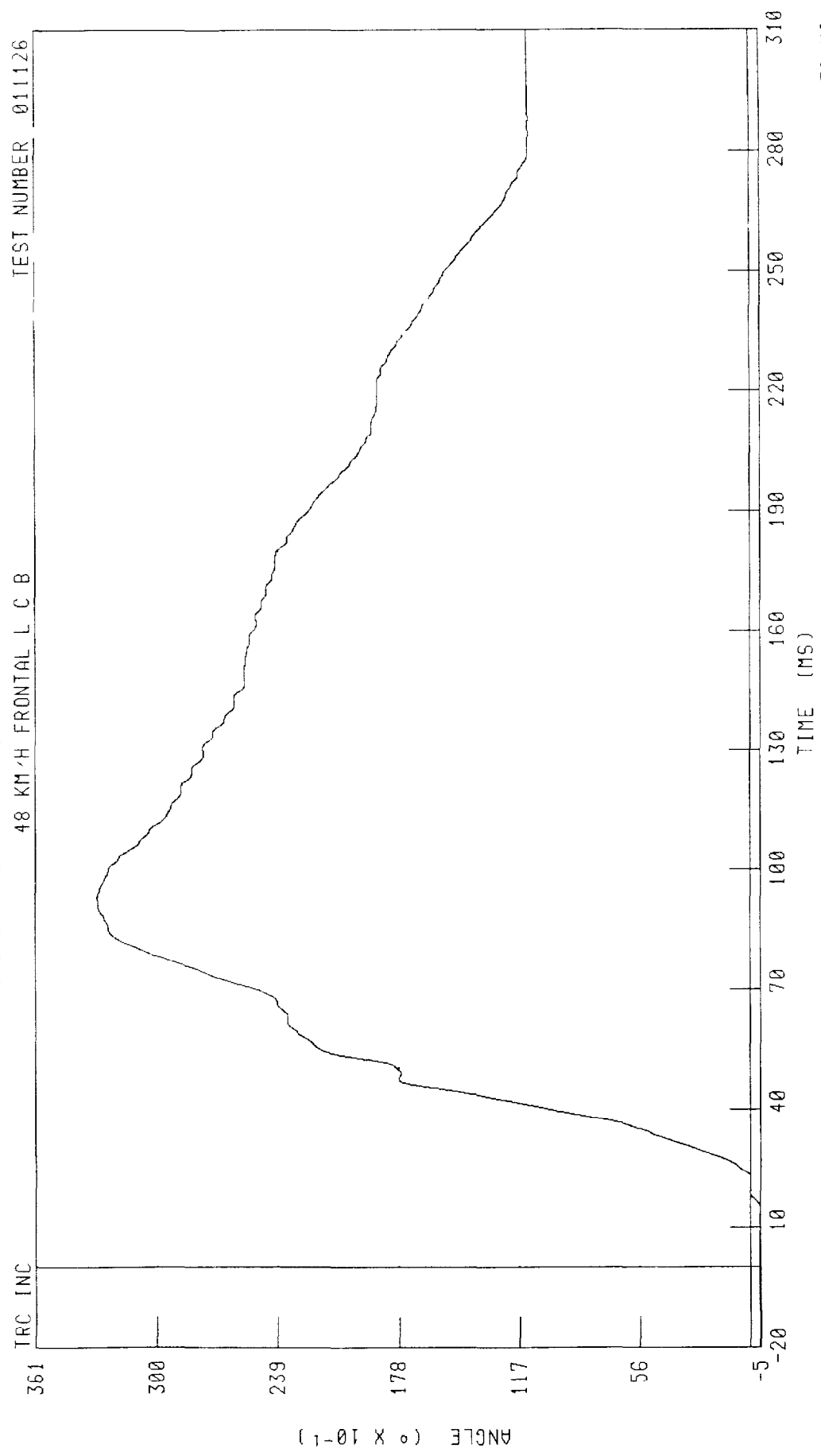
2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
DRIVER RIGHT LOWER TIBIA MOMENT ABOUT Y AXIS



2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
 DRIVER RIGHT FOOT TO ANKLE X-AXIS DISPLACEMENT

TEST NUMBER 011126

48 KM/H FRONTAL L C B



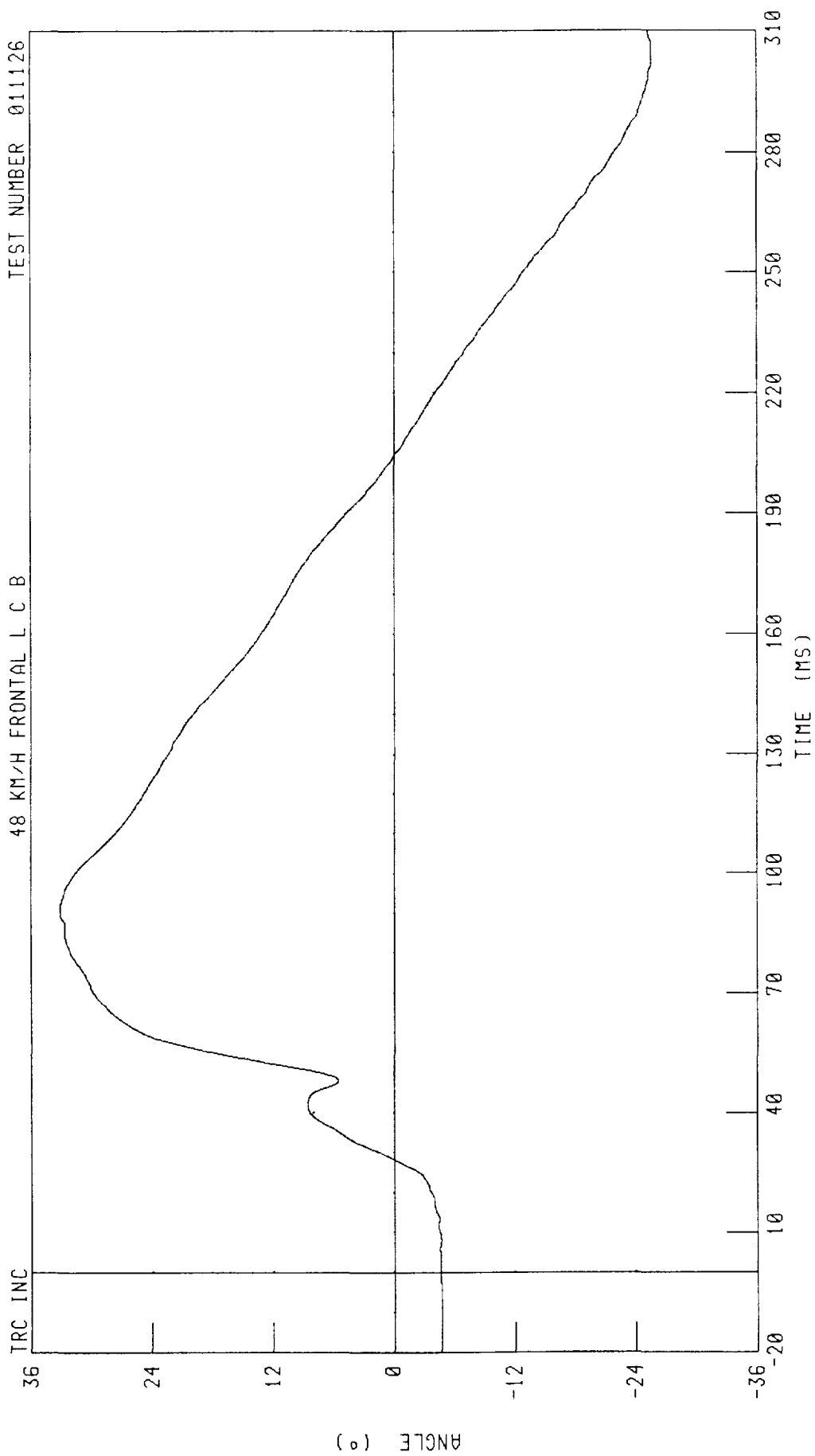
CHANNEL FTRXD1 FILTER CH CLASS 180 PEAK DATA 32 99 ° @ 93 12 MS, -0 51 ° @ 14 32 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

DRIVER RIGHT FOOT TO ANKLE Y-AXIS DISPLACEMENT

48 KM/H FRONTAL L C B

TEST NUMBER 011126



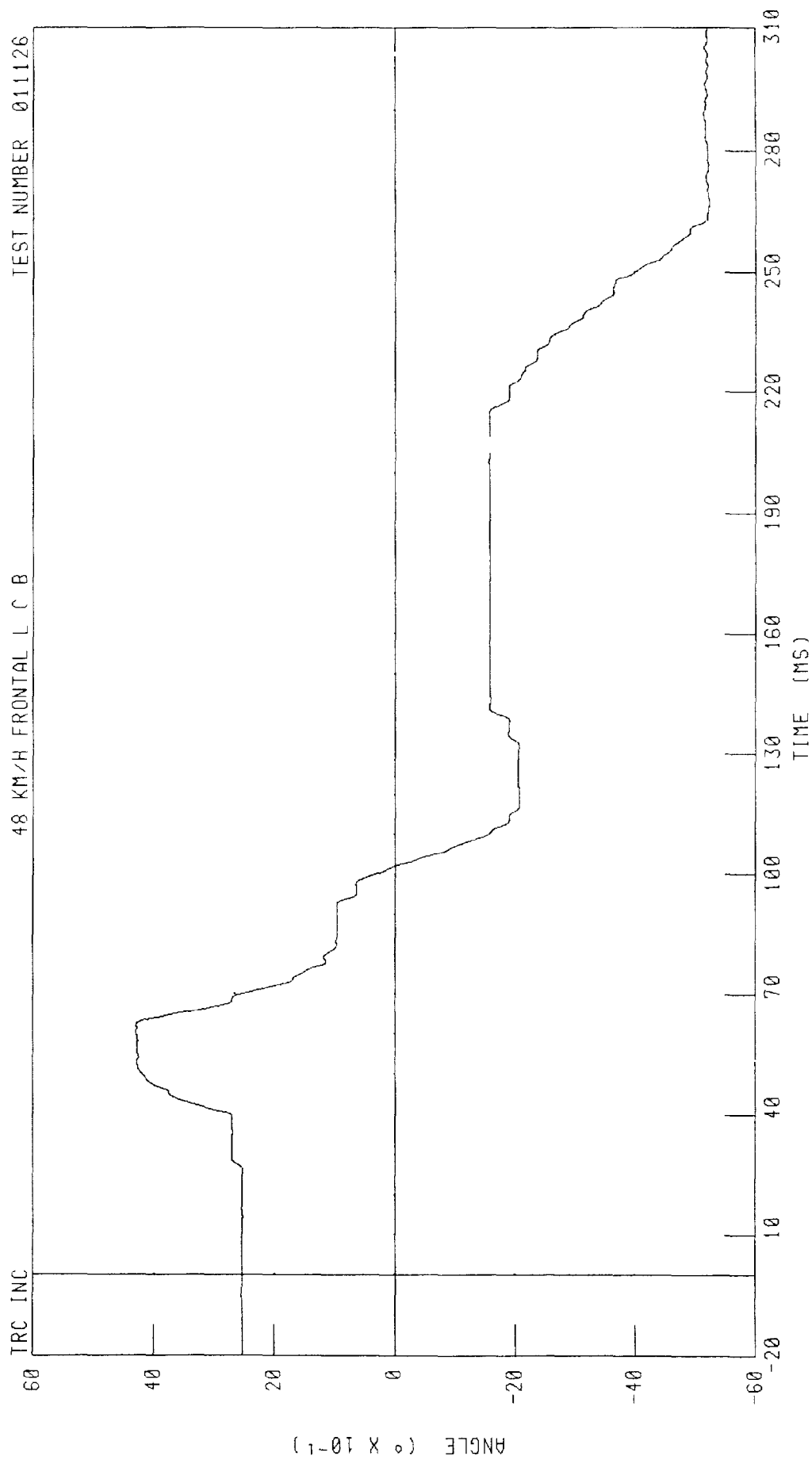
CHANNEL FTRYD1 FILTER CH CLASS 180

PEAK DATA 33 05 ° 0 89 76 MS, -25 65 ° 0 304 16 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
 DRIVER RIGHT FOOT TO ANKLE Z-AXIS DISPLACEMENT

48 KM/H FRONTAL L C B

TEST NUMBER 011126



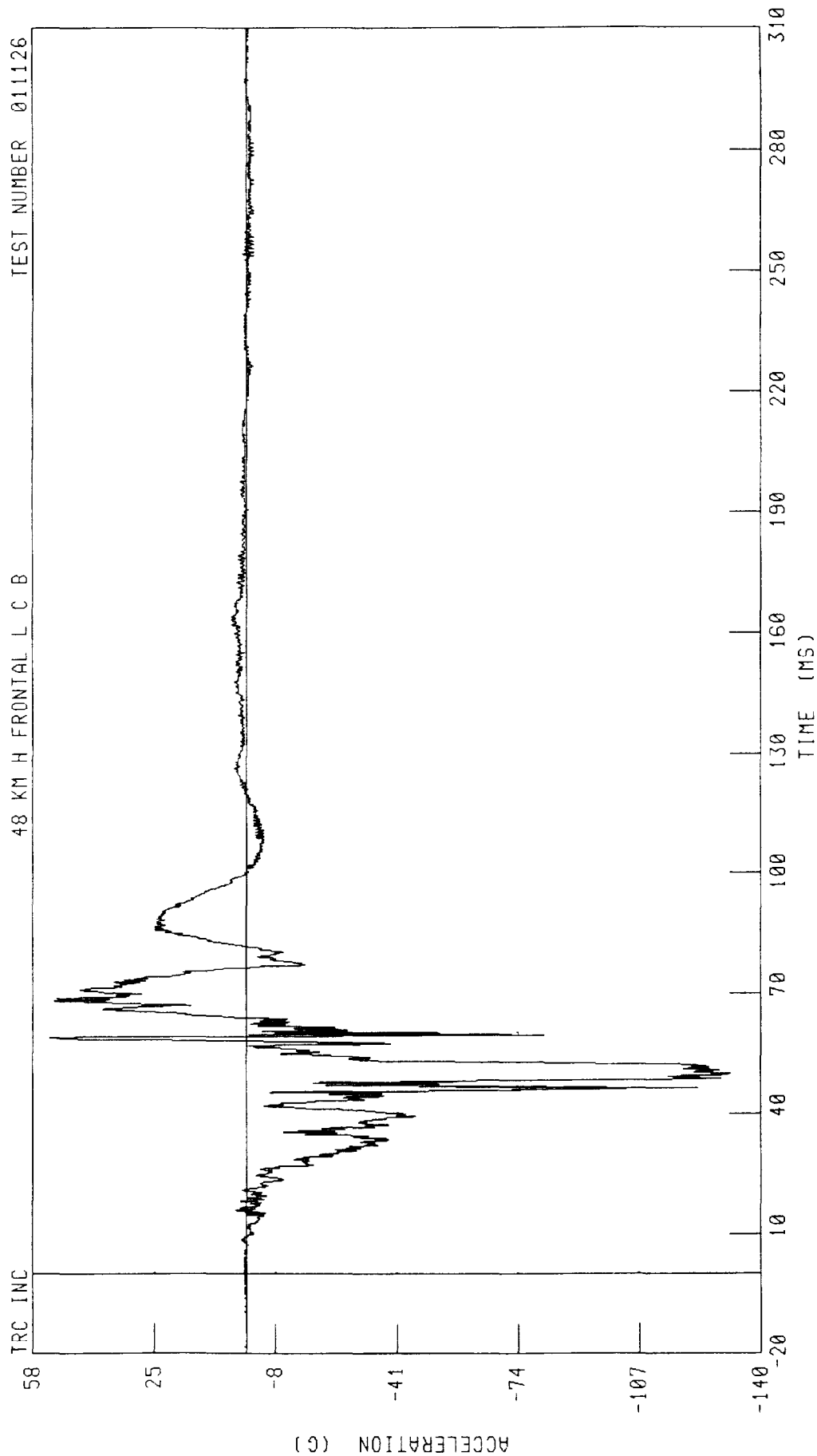
CHANNEL FTRZD1 FILTER CH CLASS 180 PEAK DATA 4 29 ° @ 62 32 MS, -5 24 ° @ 267 20 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

DRIVER RIGHT FOOT X-AXIS ACCELERATION

48 KM/H FRONTAL L C B

TEST NUMBER 011126



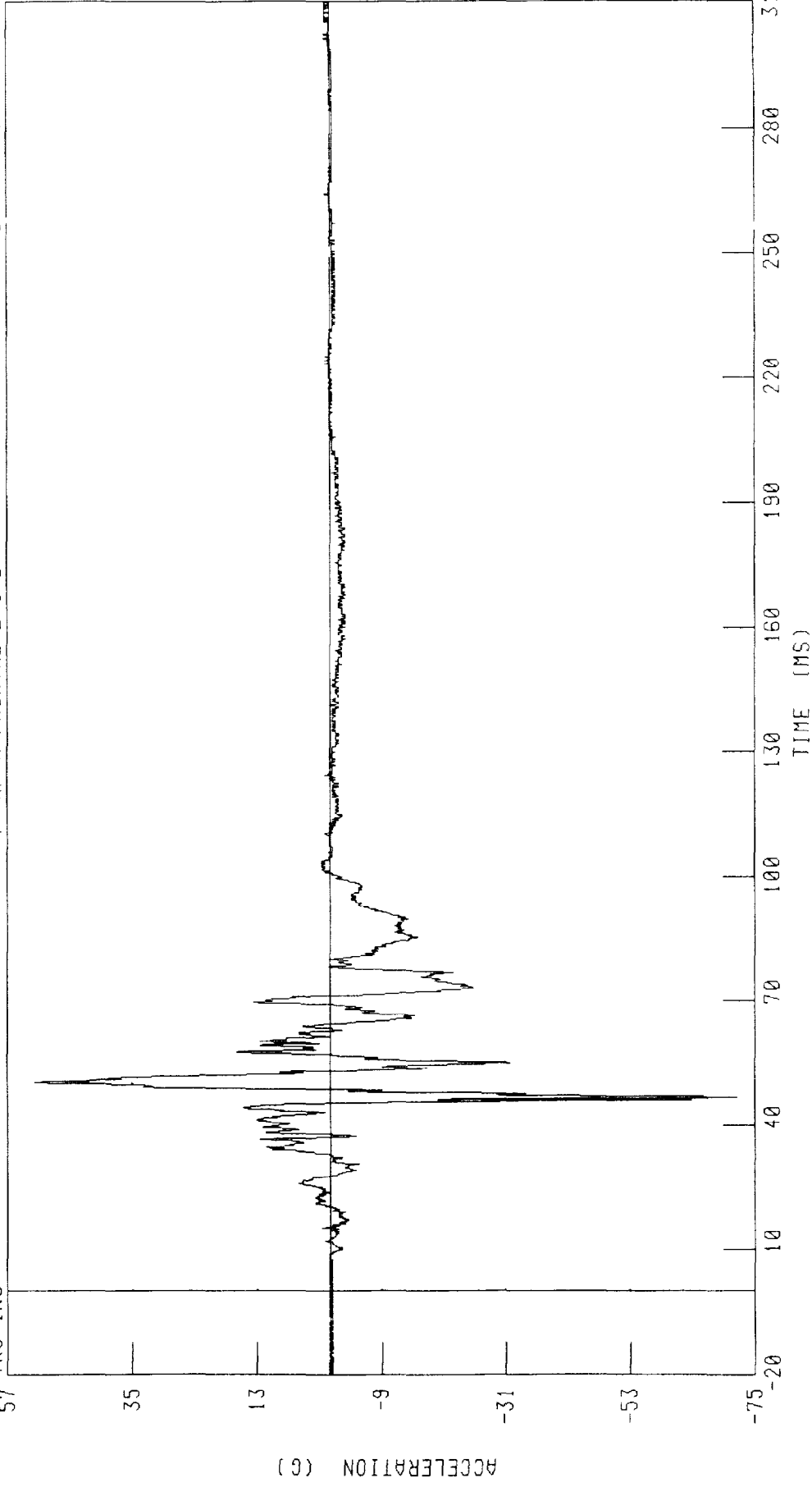
PEAK DATA 53 50 G @ 58 96 MS, -131 86 G @ 50 00 MS

CHANNEL FTRX01 FILTER CH CLASS 1000

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
DRIVER RIGHT FOOT Y-AXIS ACCELERATION
48 KM/H FRONTAL L C B

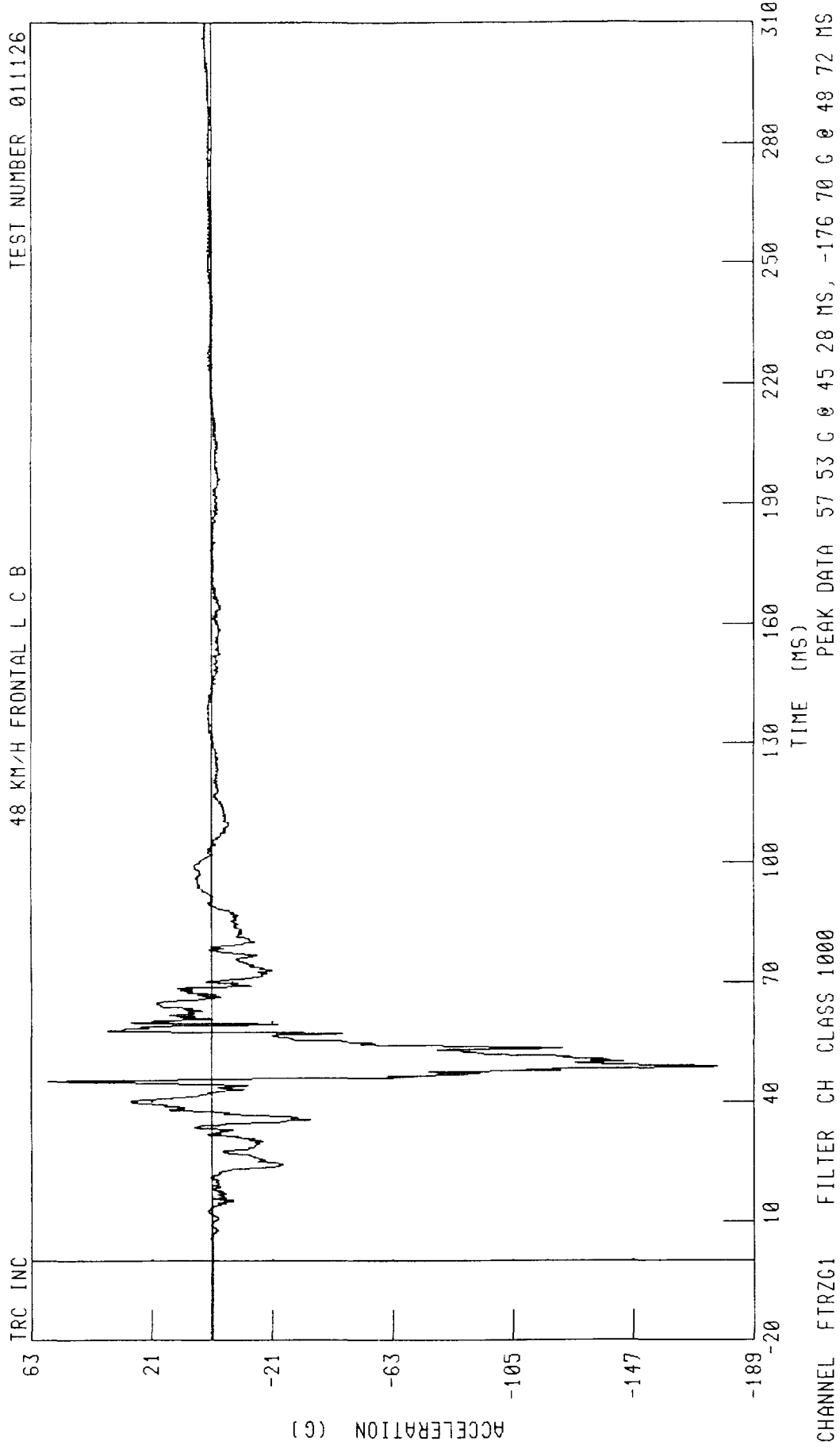
TEST NUMBER 011126

TRC INC



CHANNEL FTRYG1 FILTER CH CLASS 1000 PEAK DATA 52 16 0 50 32 MS -71 91 0 46 80 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
DRIVER RIGHT FOOT Z-AXIS ACCELERATION

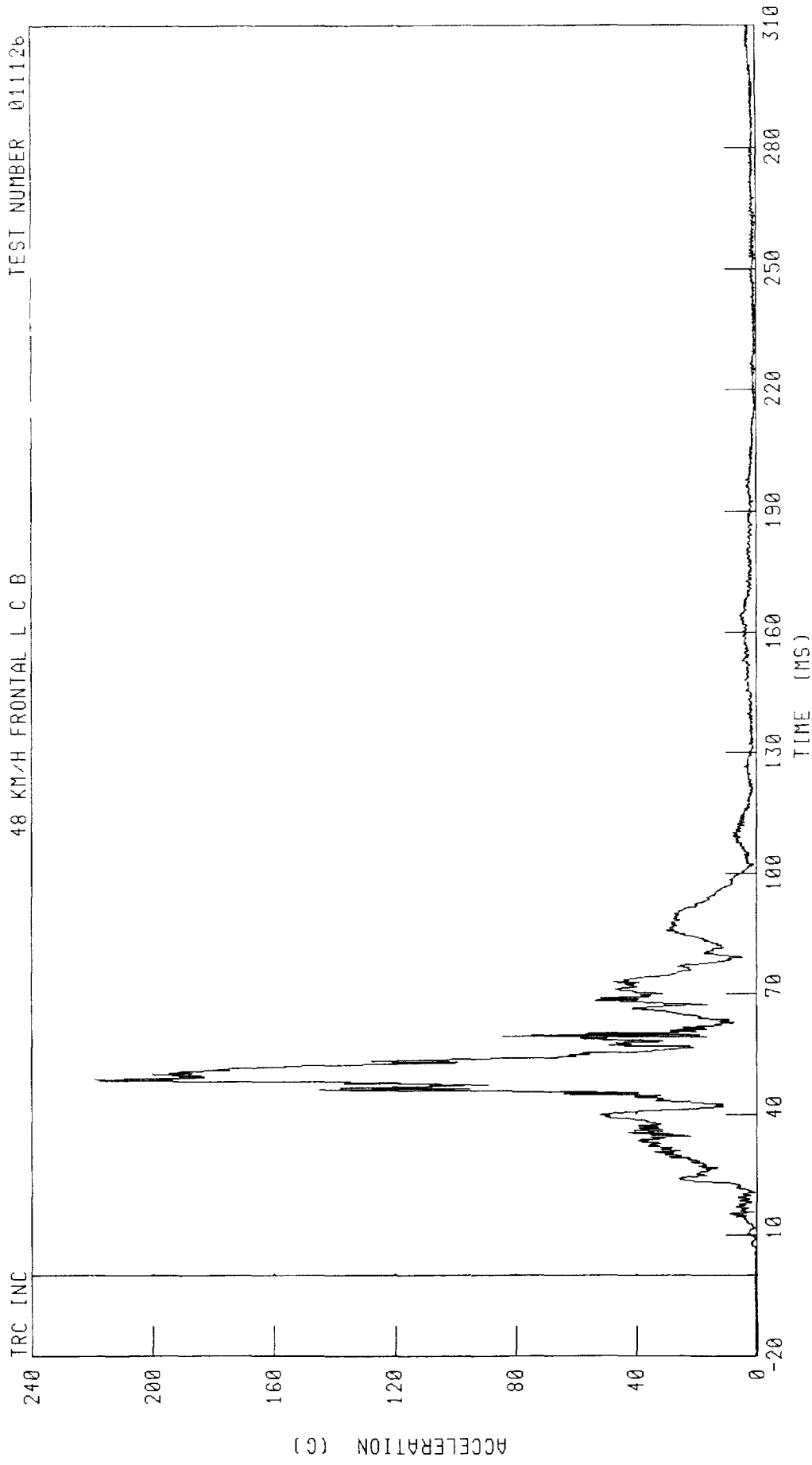


2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

DRIVER RIGHT FOOT RESULTANT ACCELERATION

48 KM/H FRONTAL L C B

TEST NUMBER 011126



PEAK DATA 219 12 G 48 72 MS, 0 33 G 0 -19 76 MS

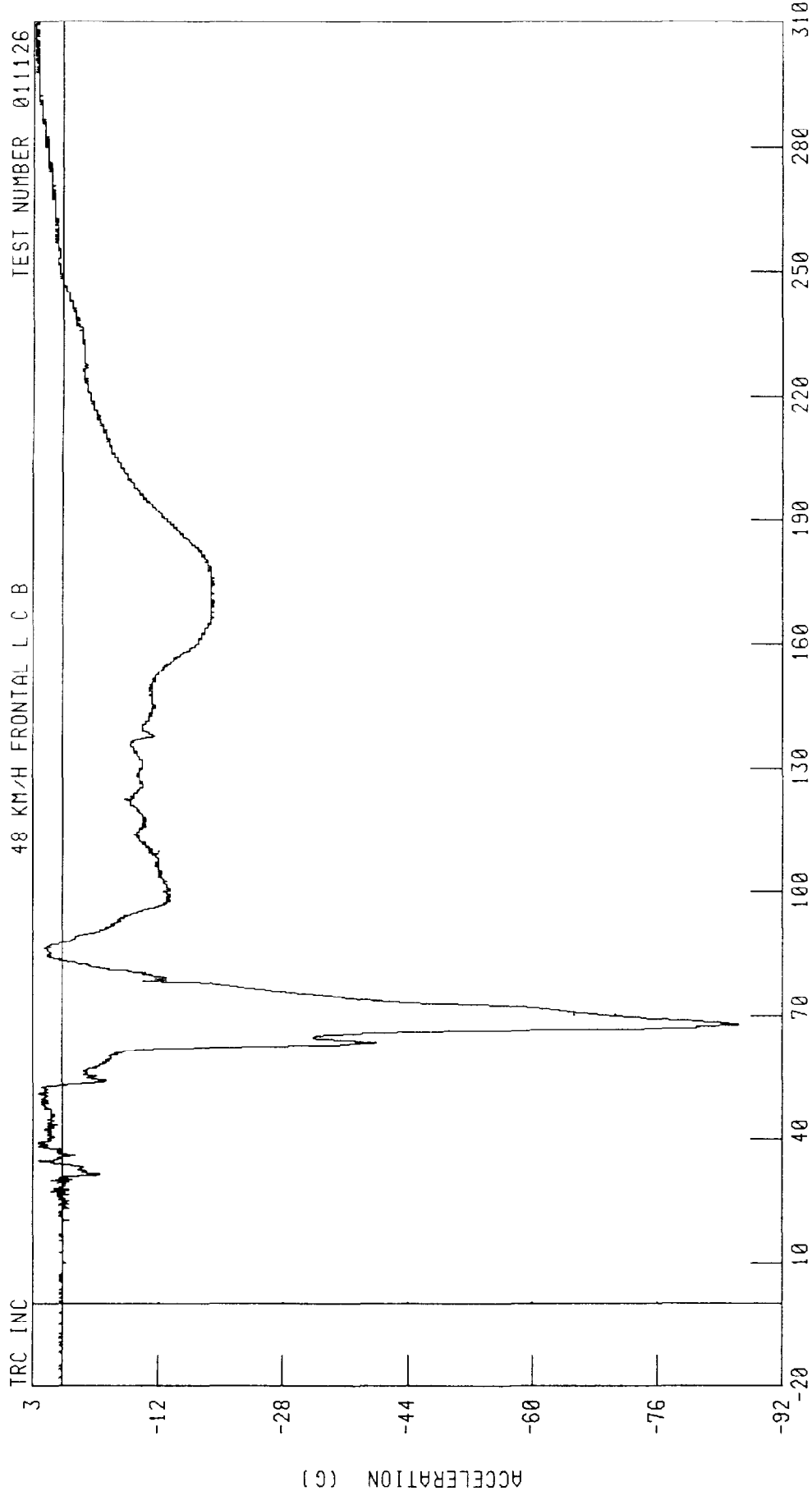
CHANNEL FTRRG1 FILTER CH CLASS 1000

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

PASSENGER HEAD X-AXIS ACCELERATION

48 KM/H FRONTAL L C B

TEST NUMBER 011126

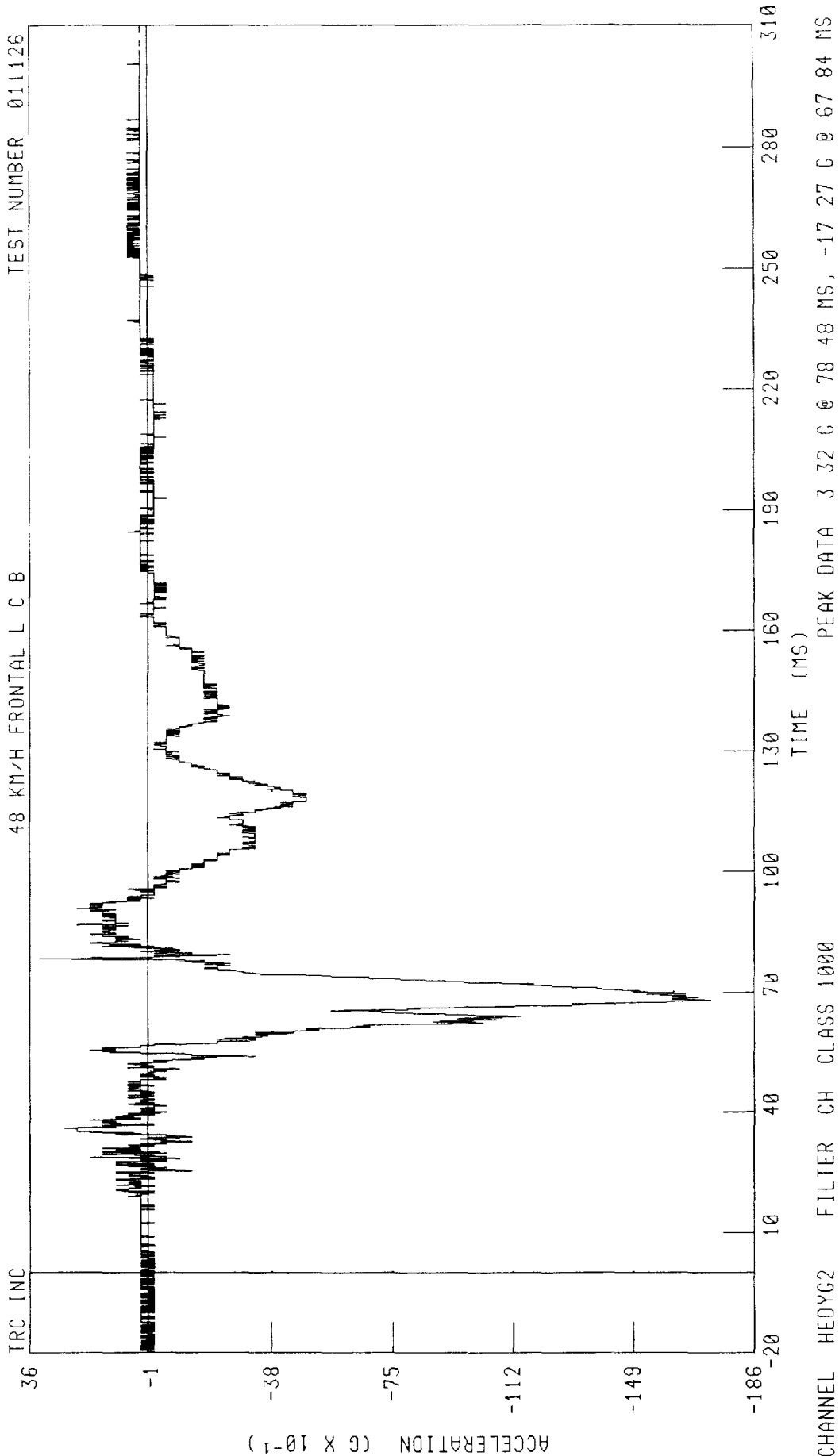


TIME (MS)

CHANNEL HEDXC2 FILTER CH CLASS 1000 PEAK DATA 3 51 C 0 310 00 MS, -86 68 G 0 67 68 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

PASSENGER HEAD Y-AXIS ACCELERATION

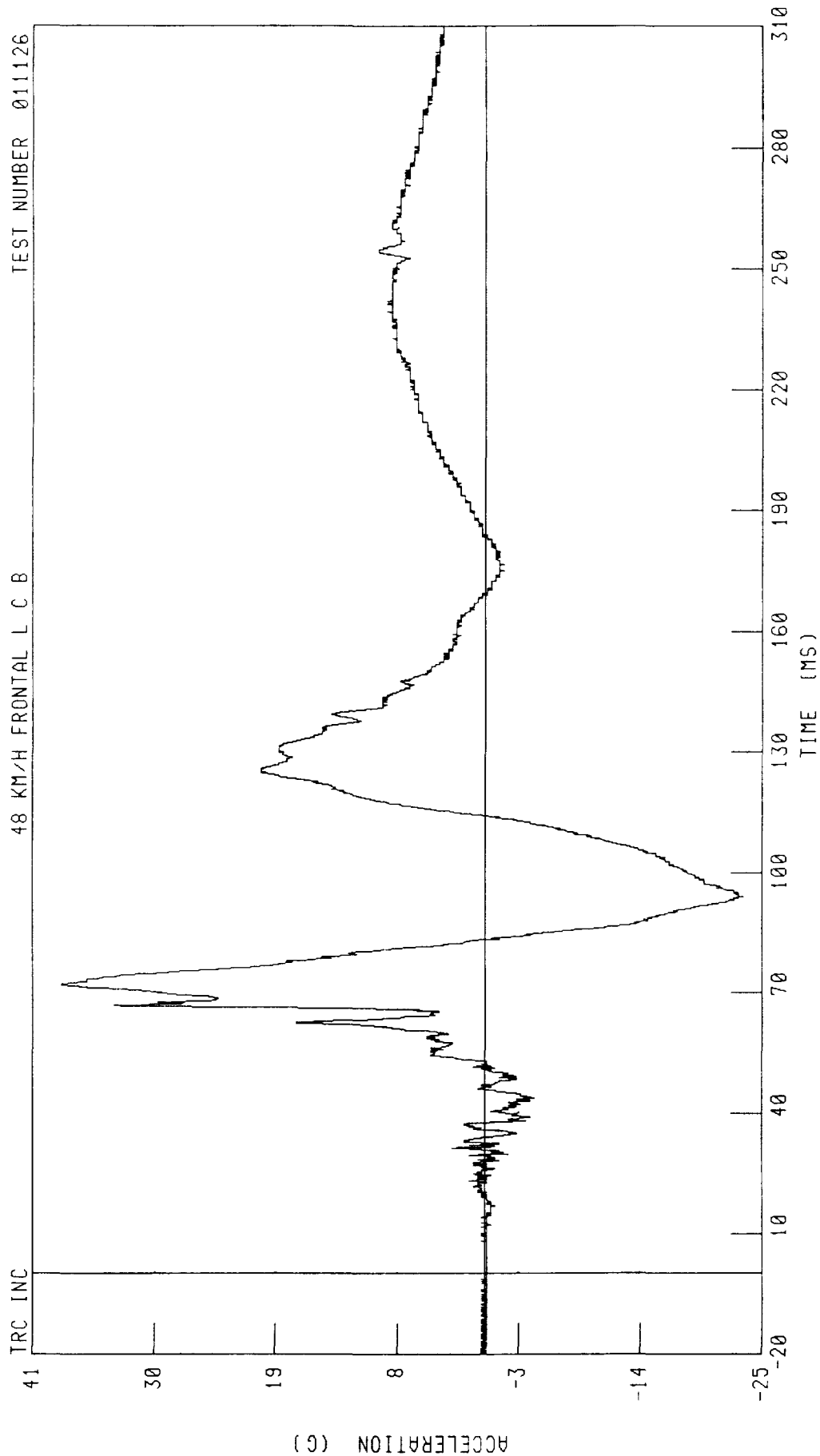


2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

PASSENGER HEAD Z-AXIS ACCELERATION

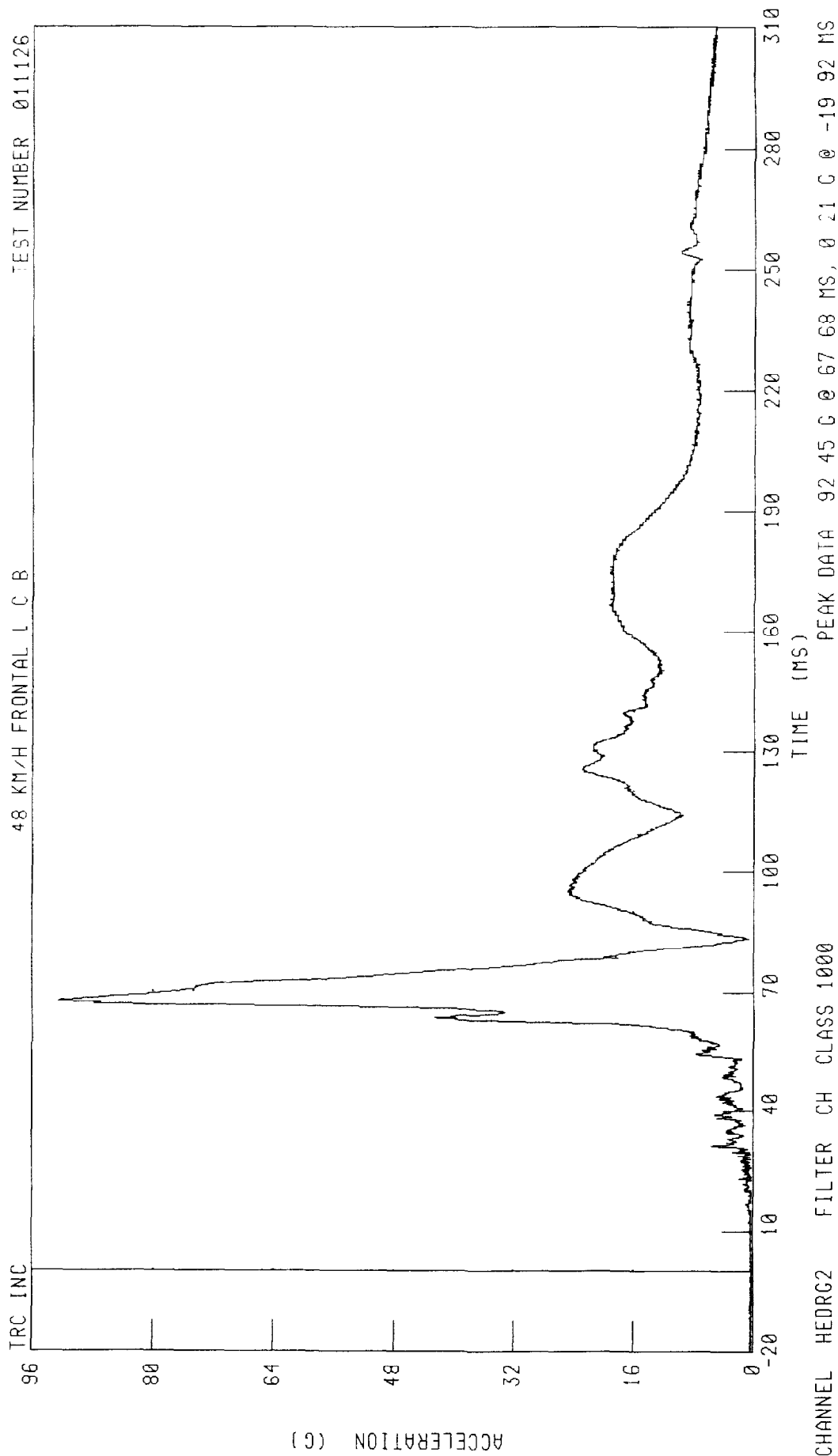
48 KM/H FRONTAL L C B

TEST NUMBER 011126

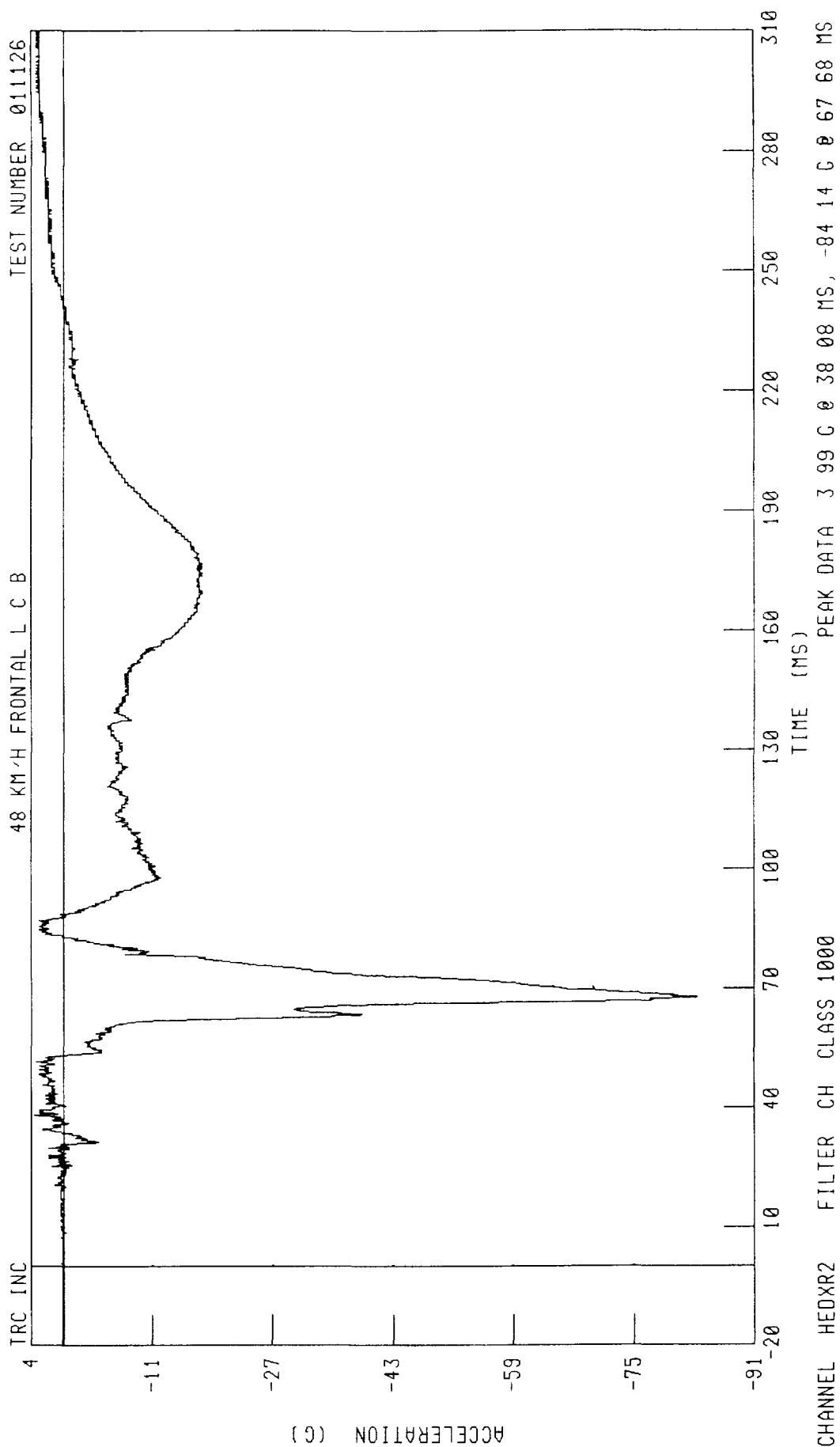


CHANNEL HEDZG2 FILTER CH CLASS 1000 PEAK DATA 38 42 G @ 71 92 MS, -23 30 G @ 94 24 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
PASSENGER HEAD RESULTANT ACCELERATION



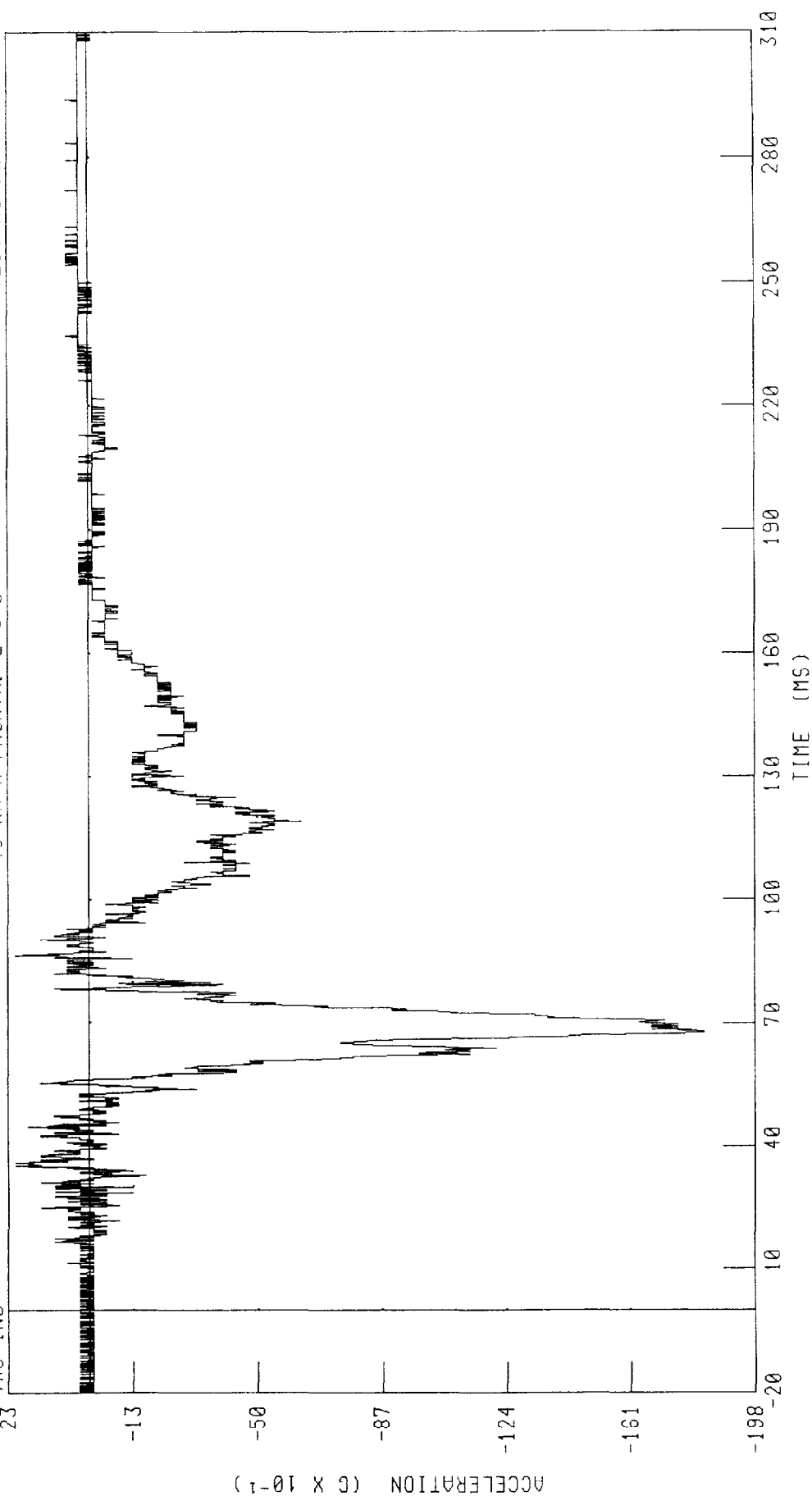
2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
PASSENGER HEAD X-AXIS ACCELERATION REDUNDANT



2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
PASSENGER HEAD Y-AXIS ACCELERATION REDUNDANT
48 KM/H FRONTAL L C B

TEST NUMBER 011126

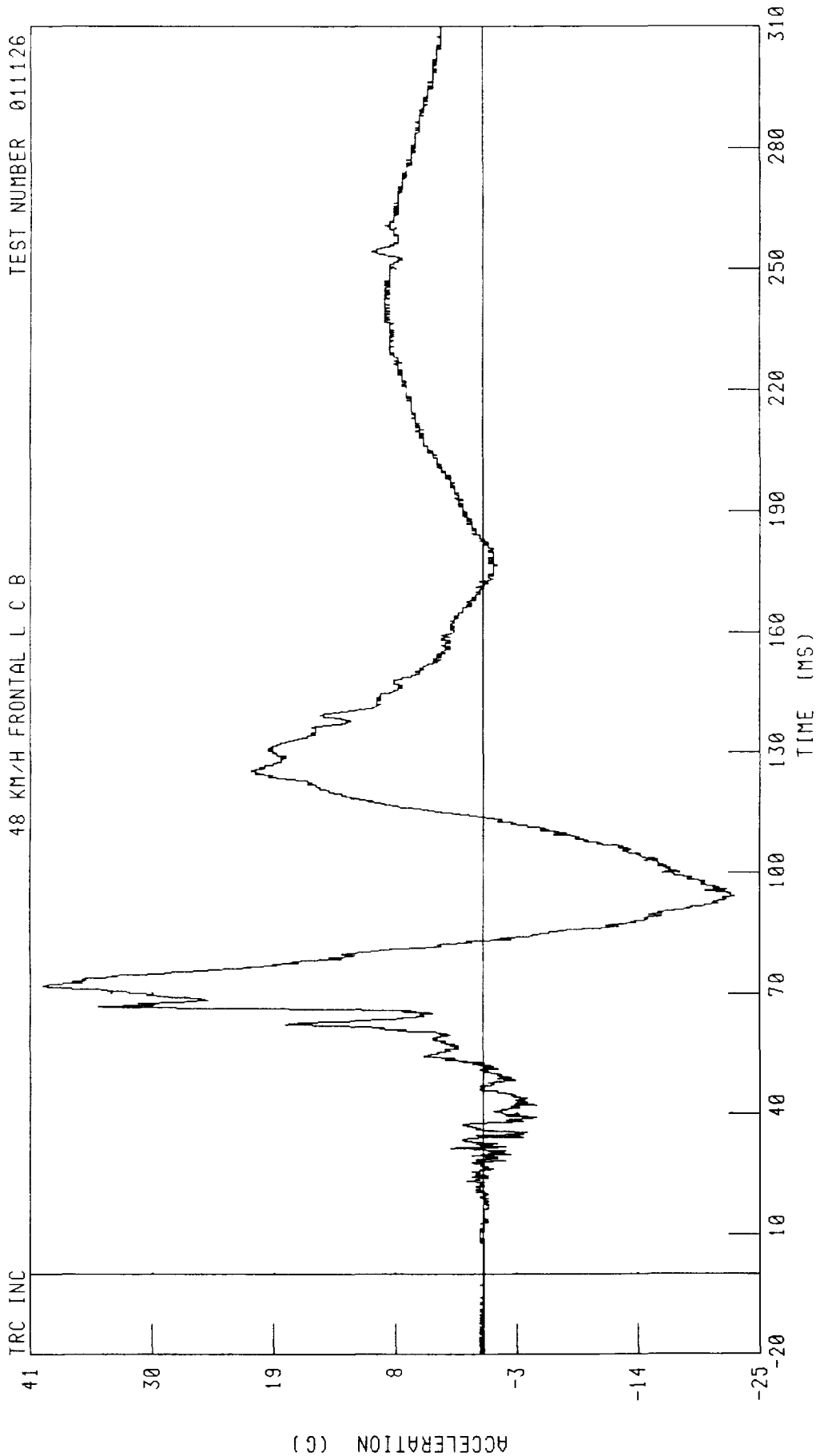
TRC INC



PEAK DATA 2 20 G @ 35 20 MS, -18 28 G @ 67 60 MS

CHANNEL HEDYR2 FILTER CH CLASS 1000

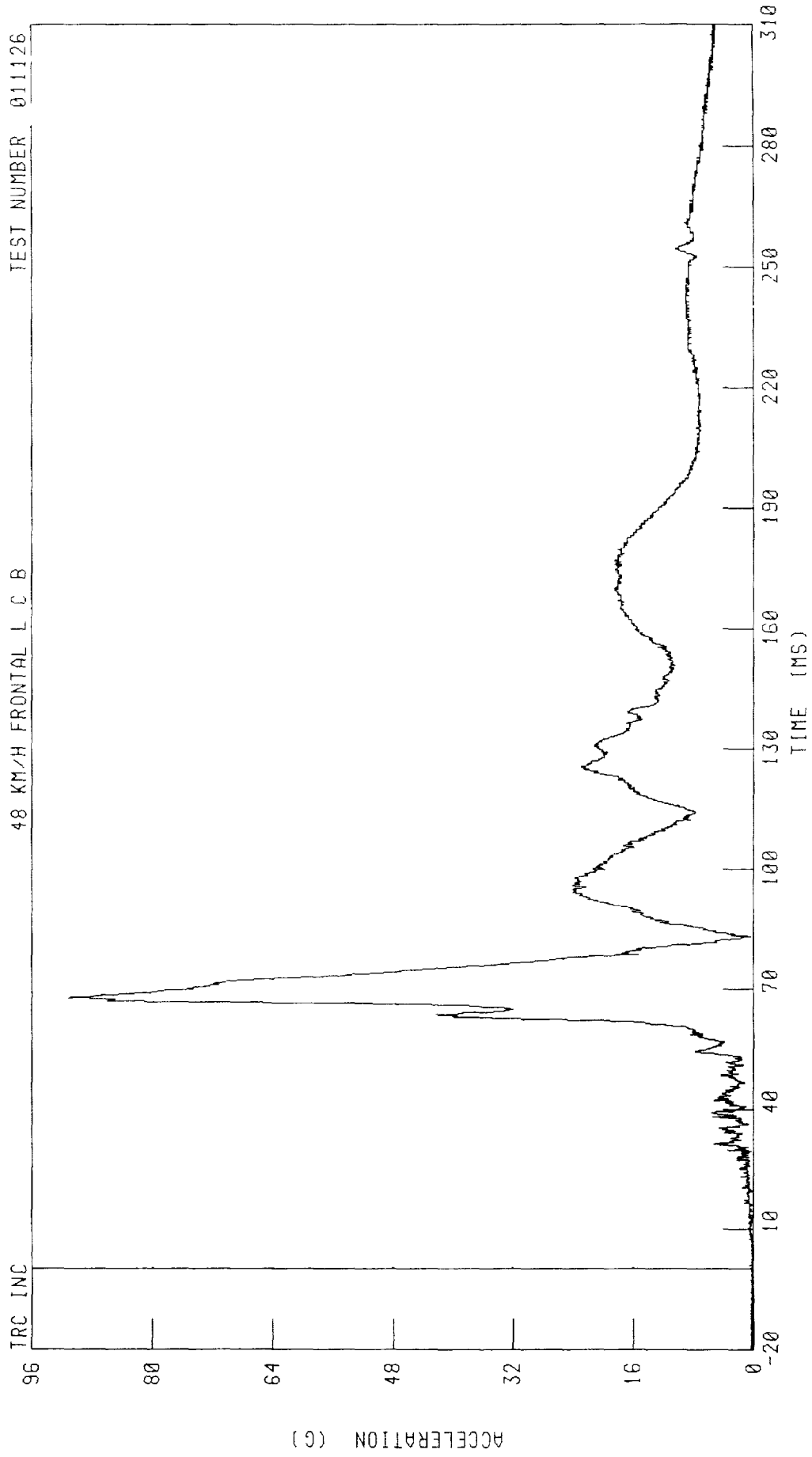
2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
PASSENGER HEAD Z-AXIS ACCELERATION REDUNDANT



PEAK DATA 39 93 G @ 71 92 MS, -22 82 G @ 94 24 MS

CHANNEL HEDZR2 FILTER CH CLASS 1000

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
PASSENGER HEAD RESULTANT ACCELERATION REDUNDANT

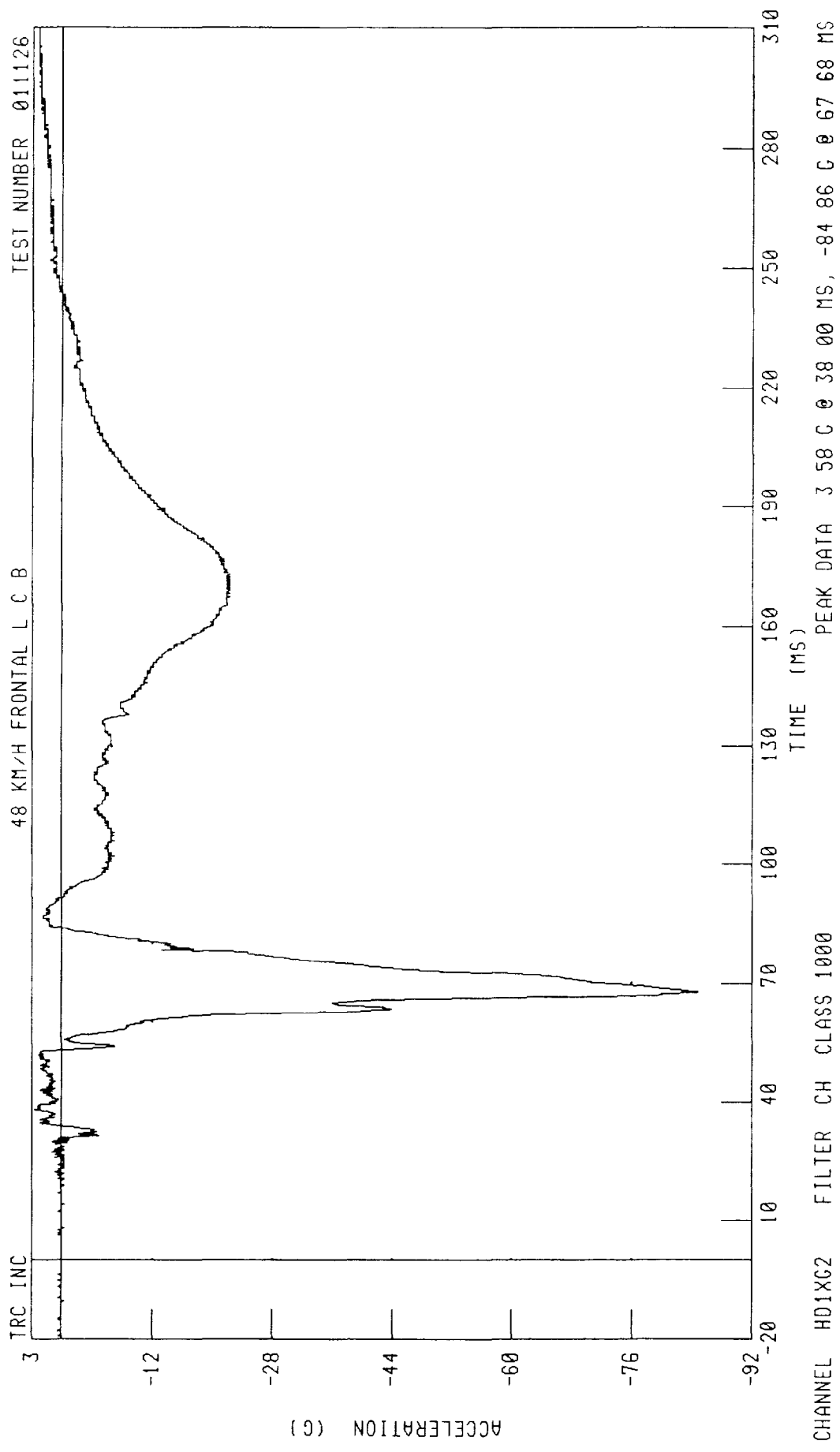


TEST NUMBER 011126

48 KM/H FRONTAL L C B

CHANNEL HEDRR2 FILTER CH CLASS 1000 PEAK DATA 91 09 6 @ 67 68 MS, 0 16 G @ -19 92 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
PASSENGER HEAD X-AXIS (LT) ACCELERATION



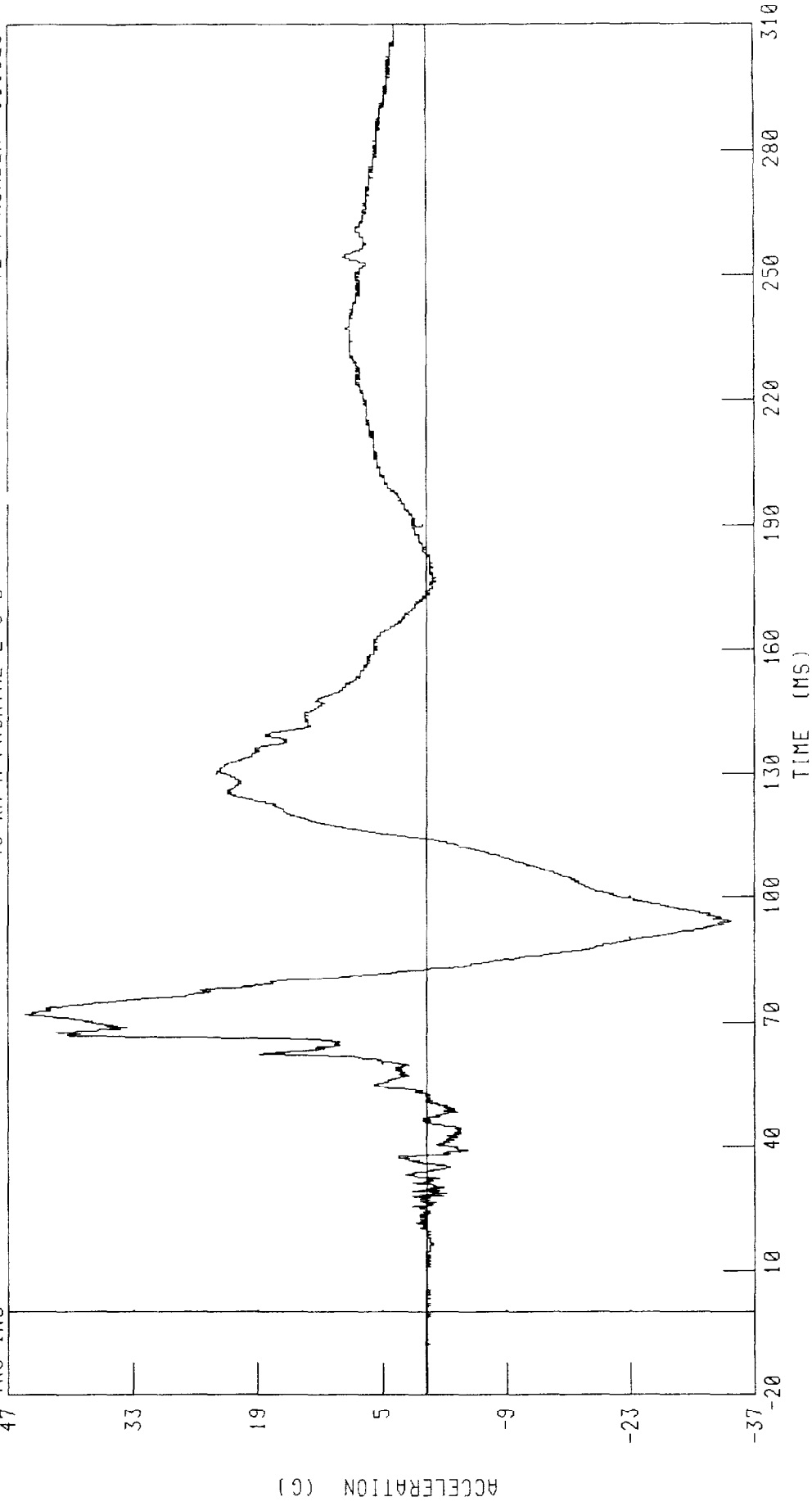
2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

PASSENGER HEAD Z-AXIS (LT) ACCELERATION

48 KM/H FRONTAL L C B

TEST NUMBER 011126

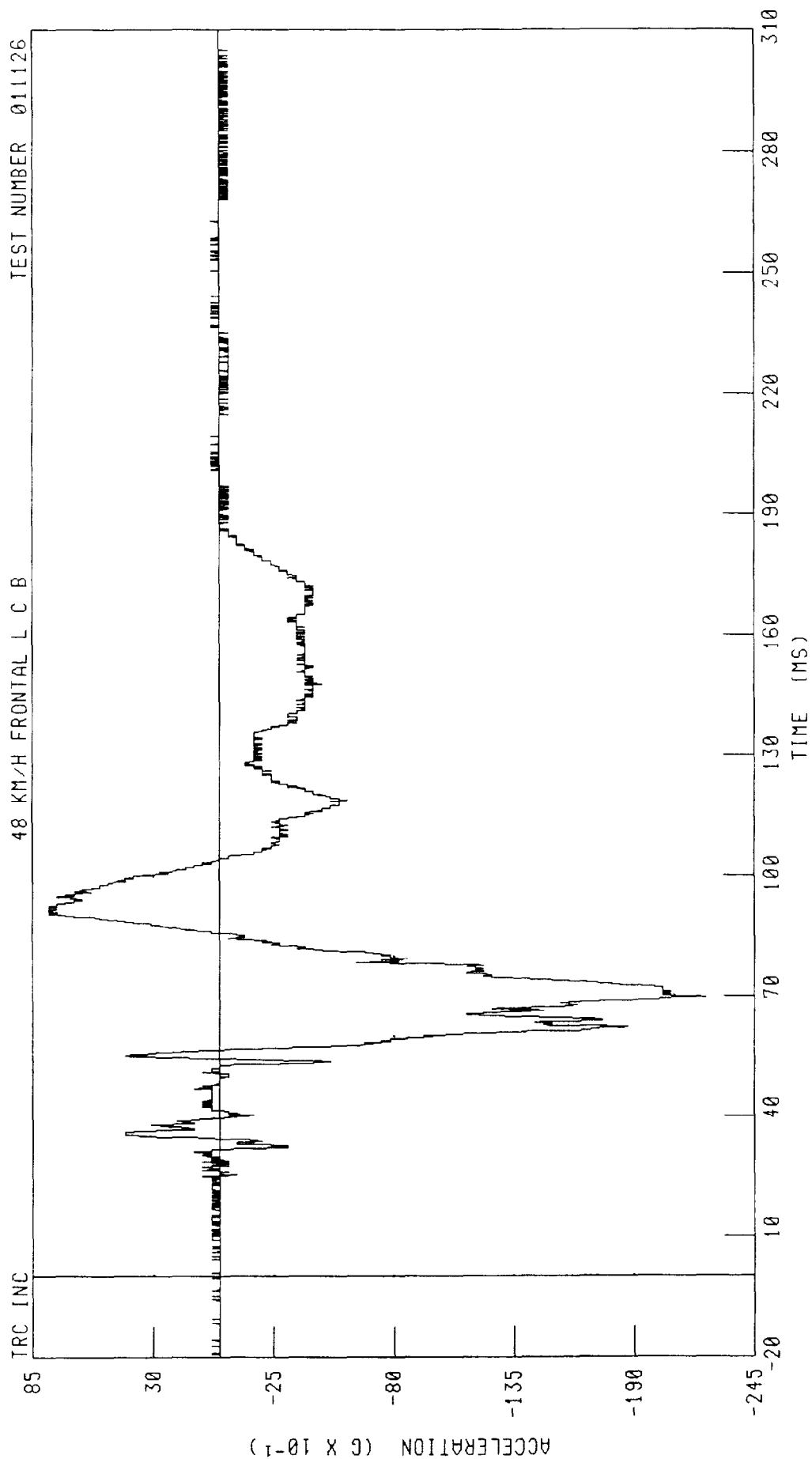
TRC INC



CHANNEL HD1ZC2 FILTER CH CLASS 1000

PEAK DATA 45 08 G @ 71 84 MS, -34 40 G @ 94 16 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
PASSENGER HEAD Y-AXIS (FT) ACCELERATION



CHANNEL HD2YC2 FILTER CH CLASS 1000

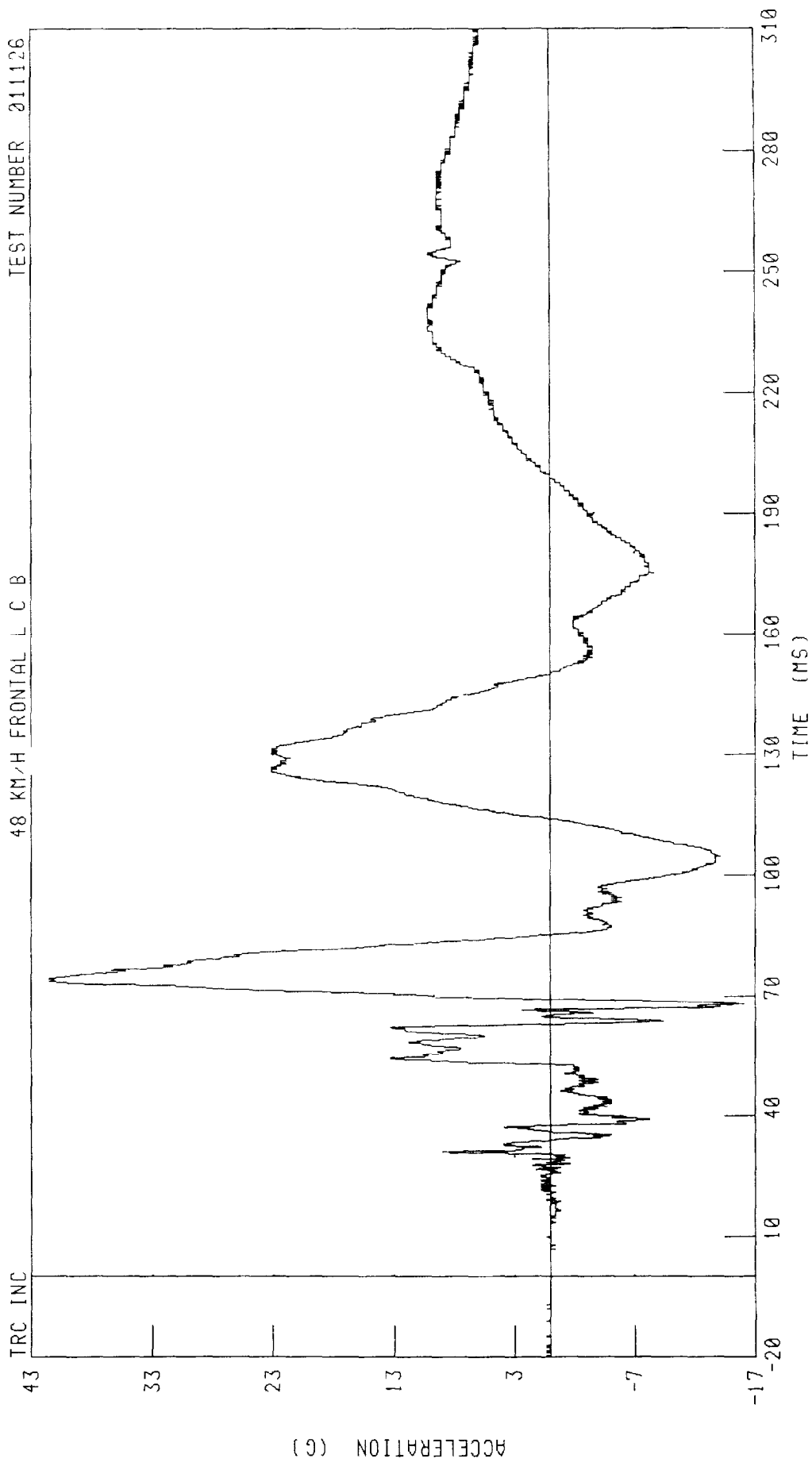
2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 46 KM/H

PASSENGER HEAD Z-AXIS (FT) ACCELERATION

TEST NUMBER 311126

48 KM/H FRONTAL L C B

TRC INC



CHANNEL HD2ZG2 FILTER CH CLASS 1000

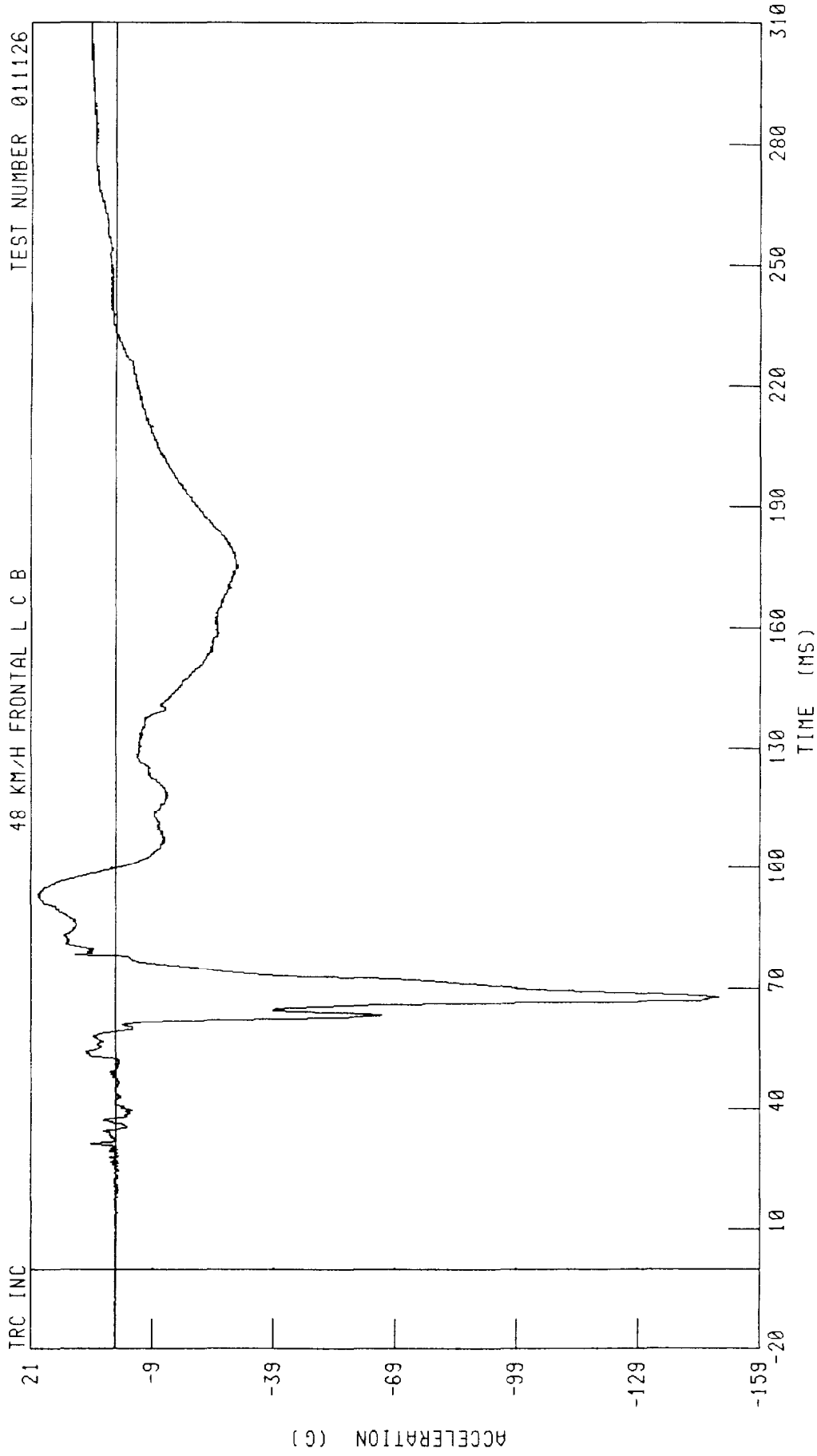
PEAK DATA 41 53 G @ 73 68 MS, -16 08 G @ 67 84 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

PASSENGER HEAD X-AXIS (TP) ACCELERATION

48 KM/H FRONTAL L C B

TEST NUMBER 011126



CHANNEL HD3XC2 FILTER CH CLASS 1000

PEAK DATA 19 22 G @ 92 88 MS, -149 02 G @ 67 68 MS

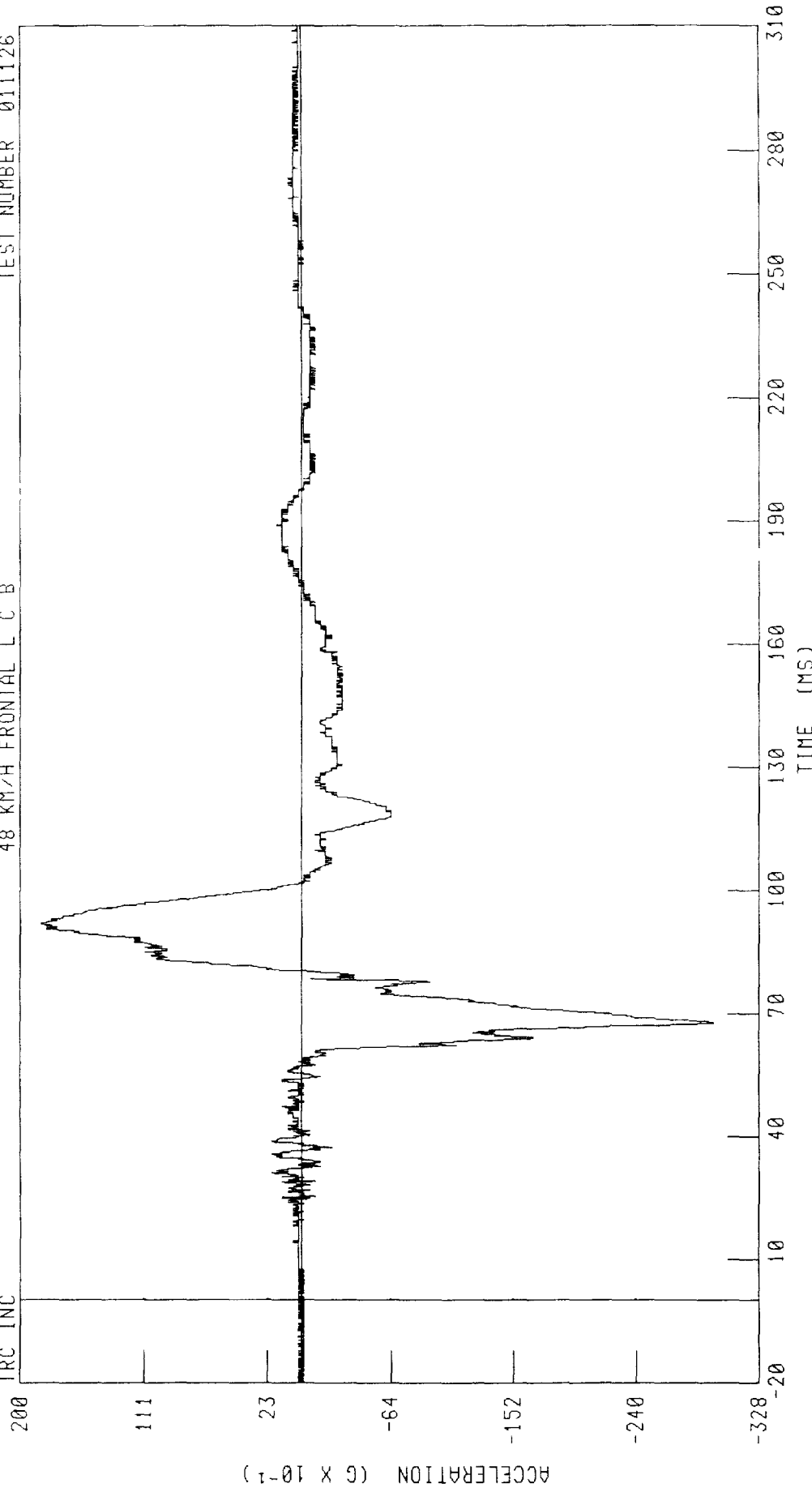
2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

PASSENGER HEAD Y-AXIS (TP) ACCELERATION

TEST NUMBER 011126

48 KM/H FRONTAL L C B

TRC INC



CHANNEL HD3YG2 FILTER CH CLASS 1000

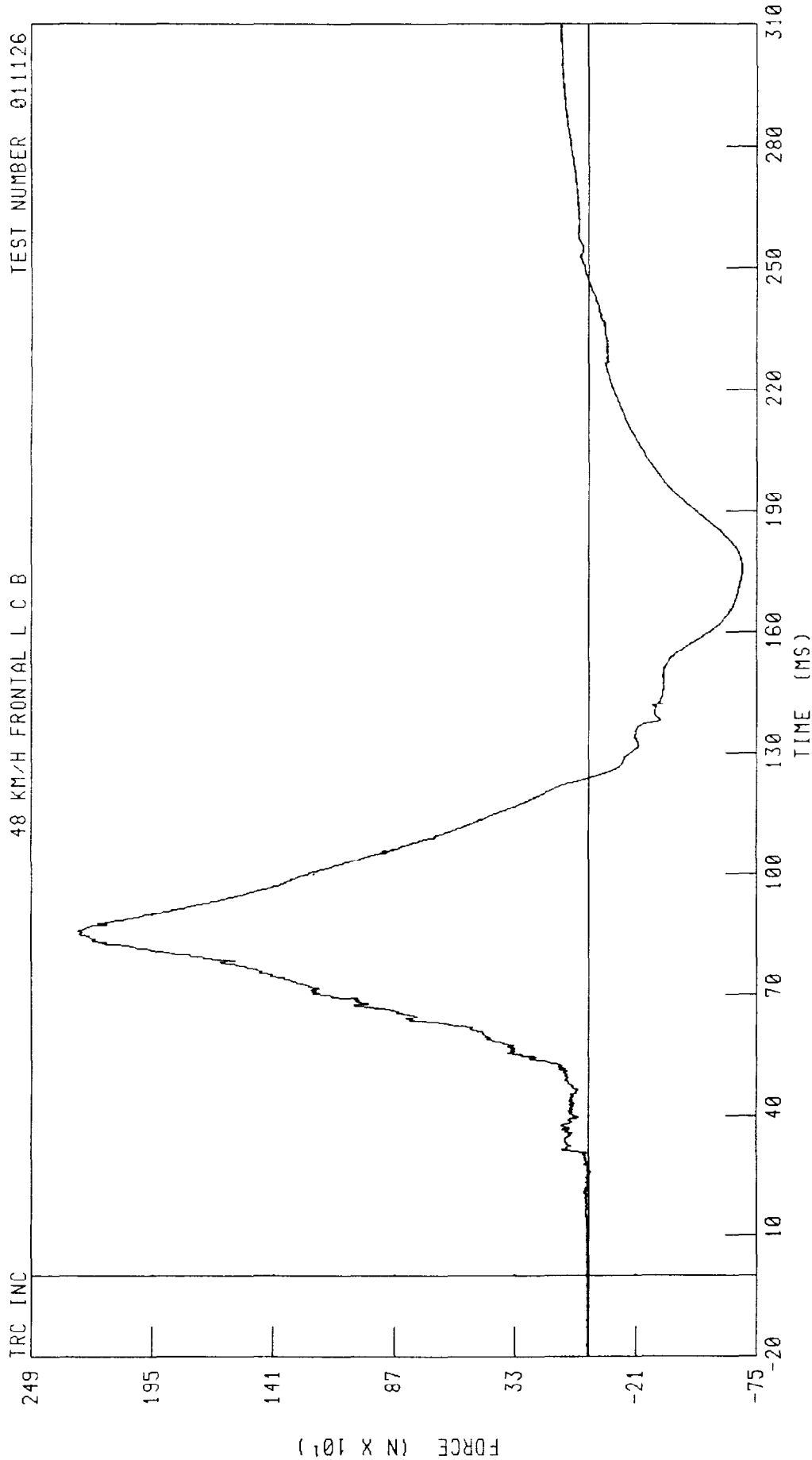
PEAK DATA 18 56 G @ 91 92 MS, -29 52 G @ 67 68 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

PASSENGER NECK X-AXIS SHEAR FORCE

48 KM/H FRONTAL L C B

TEST NUMBER 011126

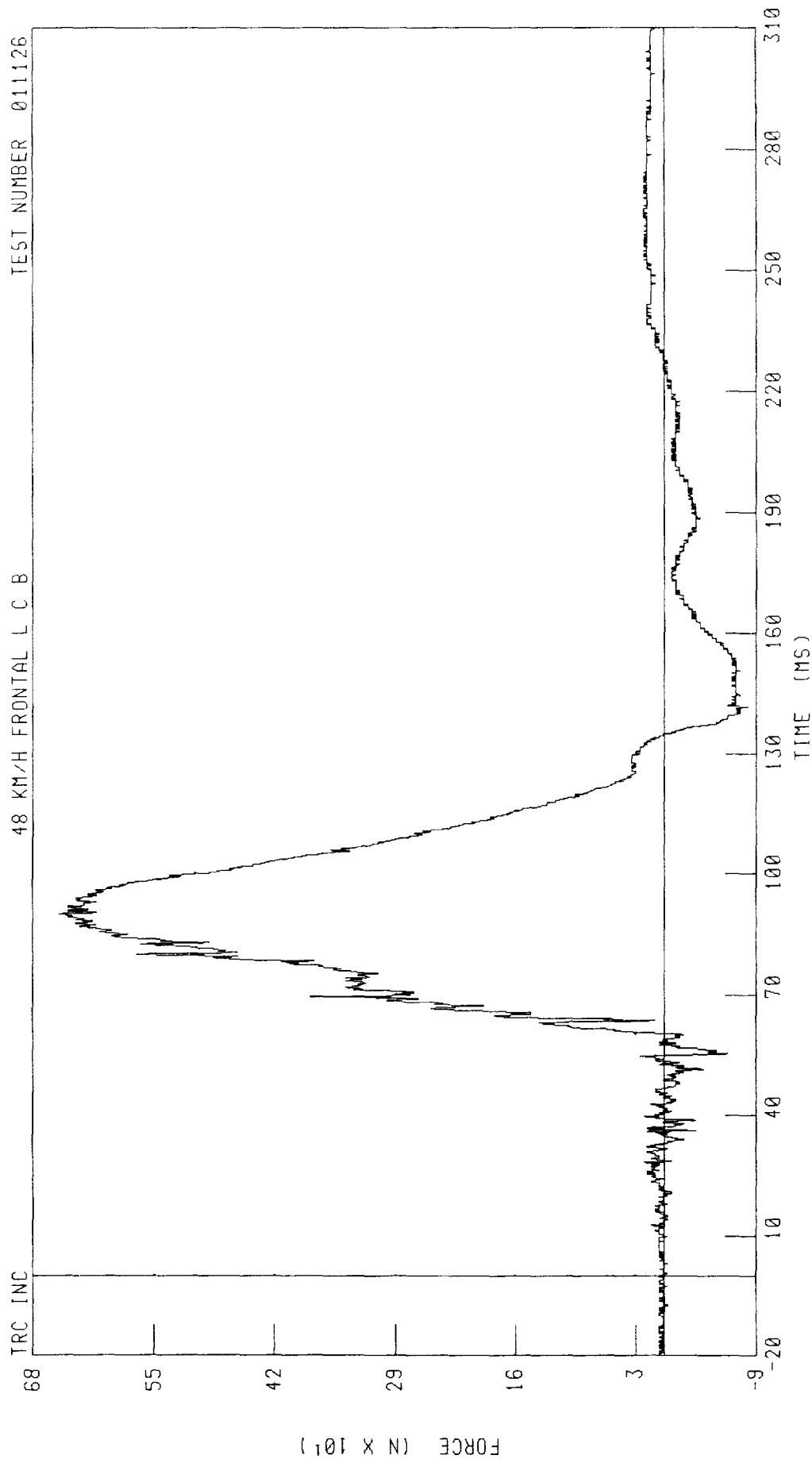


TIME (MS)

CHANNEL NEKXF2 FILTER CH CLASS 1000 PEAK DATA 2280 02 N @ 85 92 MS, -684 48 N @ 174 64 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

PASSENGER NECK Y-AXIS SHEAR FORCE



CHANNEL NEKYF2 FILTER CH CLASS 1000

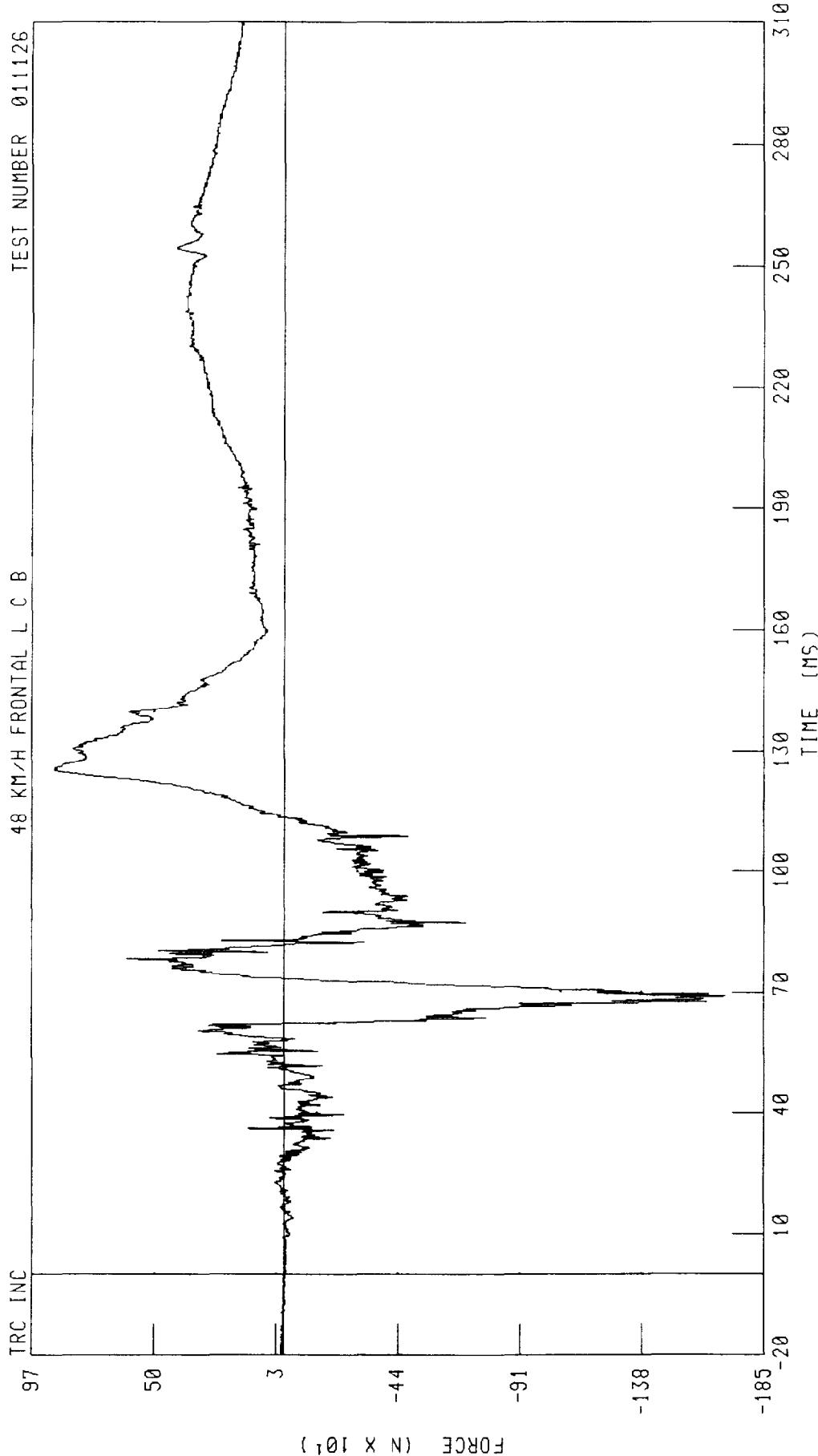
PEAK DATA 652 67 N @ 89.92 MS, -90 51 N @ 141.76 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

PASSENGER NECK Z-AXIS AXIAL FORCE

48 KM/H FRONTAL L C B

TEST NUMBER 011126

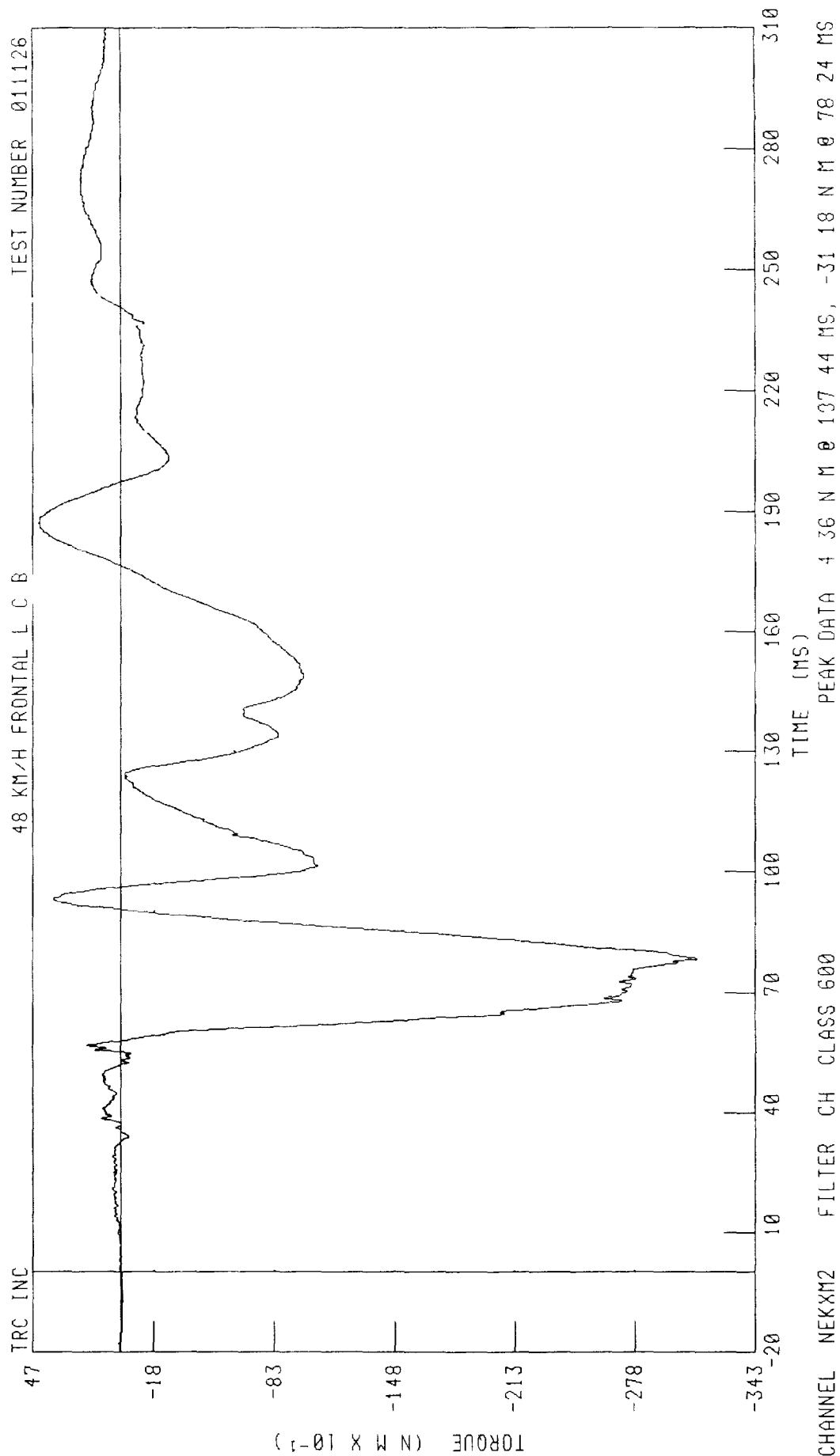


PEAK DATA 883 03 N 0 125 60 MS, -1703 07 N 0 69 04 MS

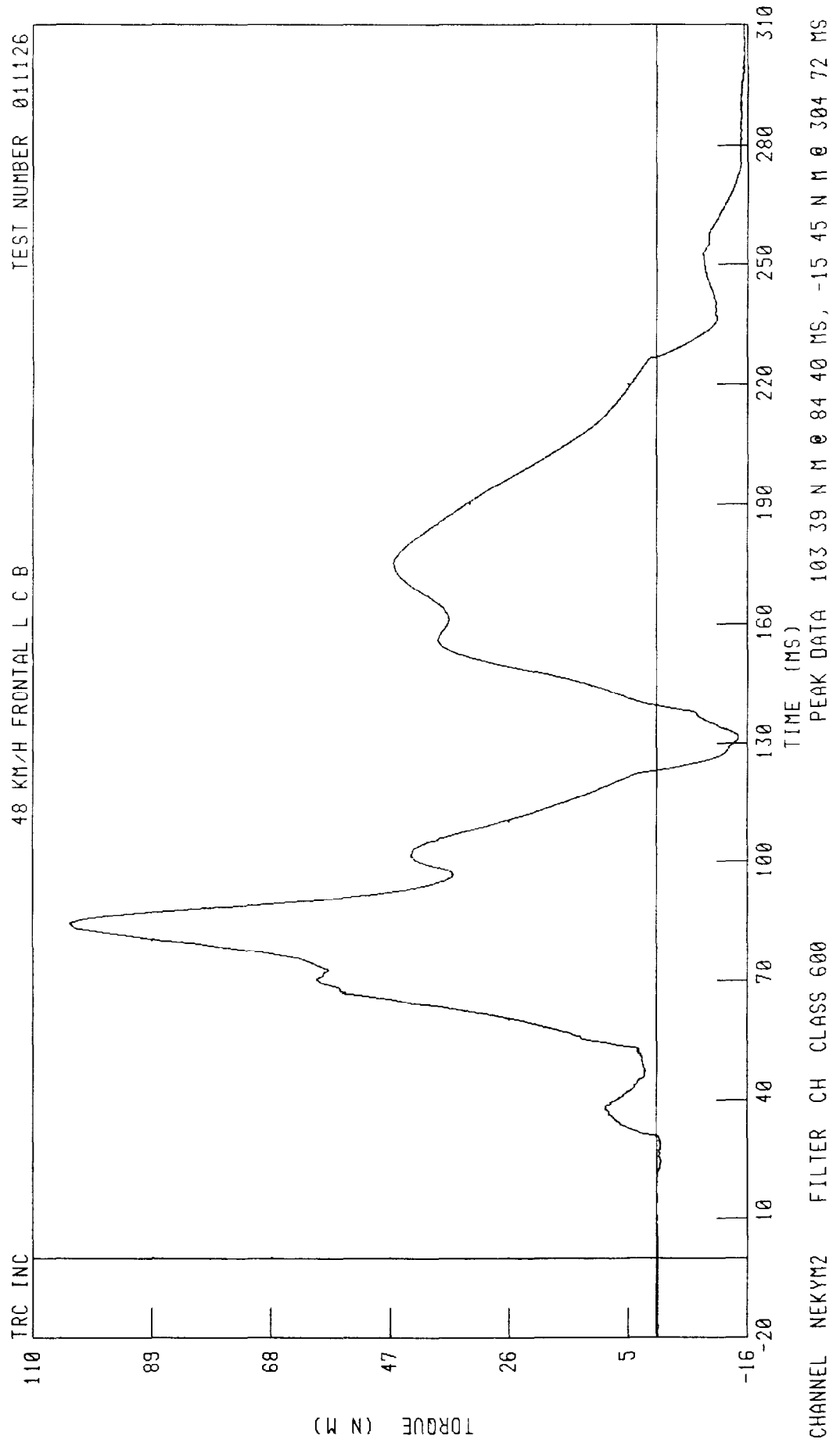
CHANNEL NEKZF2 FILTER CH CLASS 1000

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

PASSENGER NECK MOMENT ABOUT X AXIS

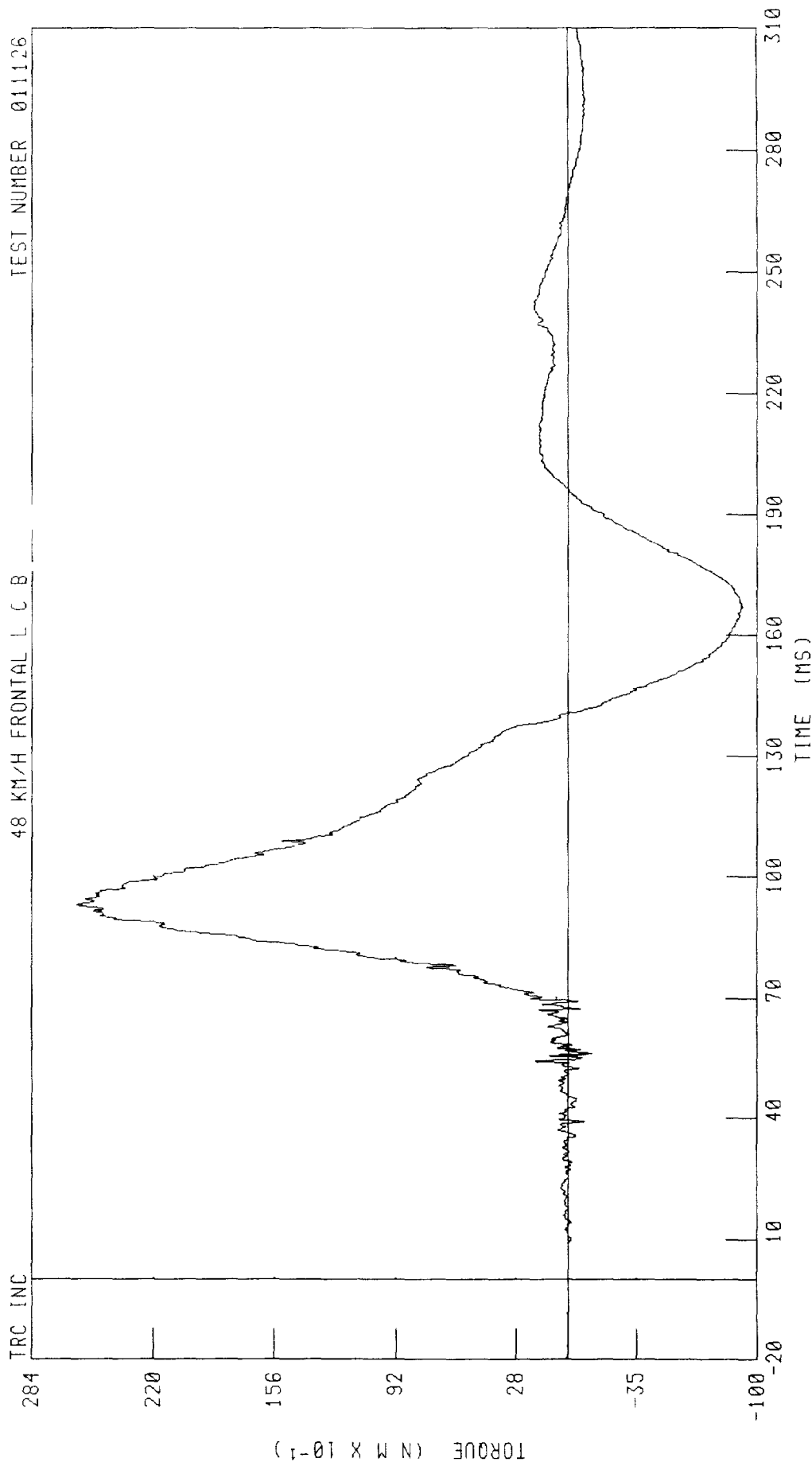


2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
PASSENGER NECK MOMENT ABOUT Y AXIS



2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

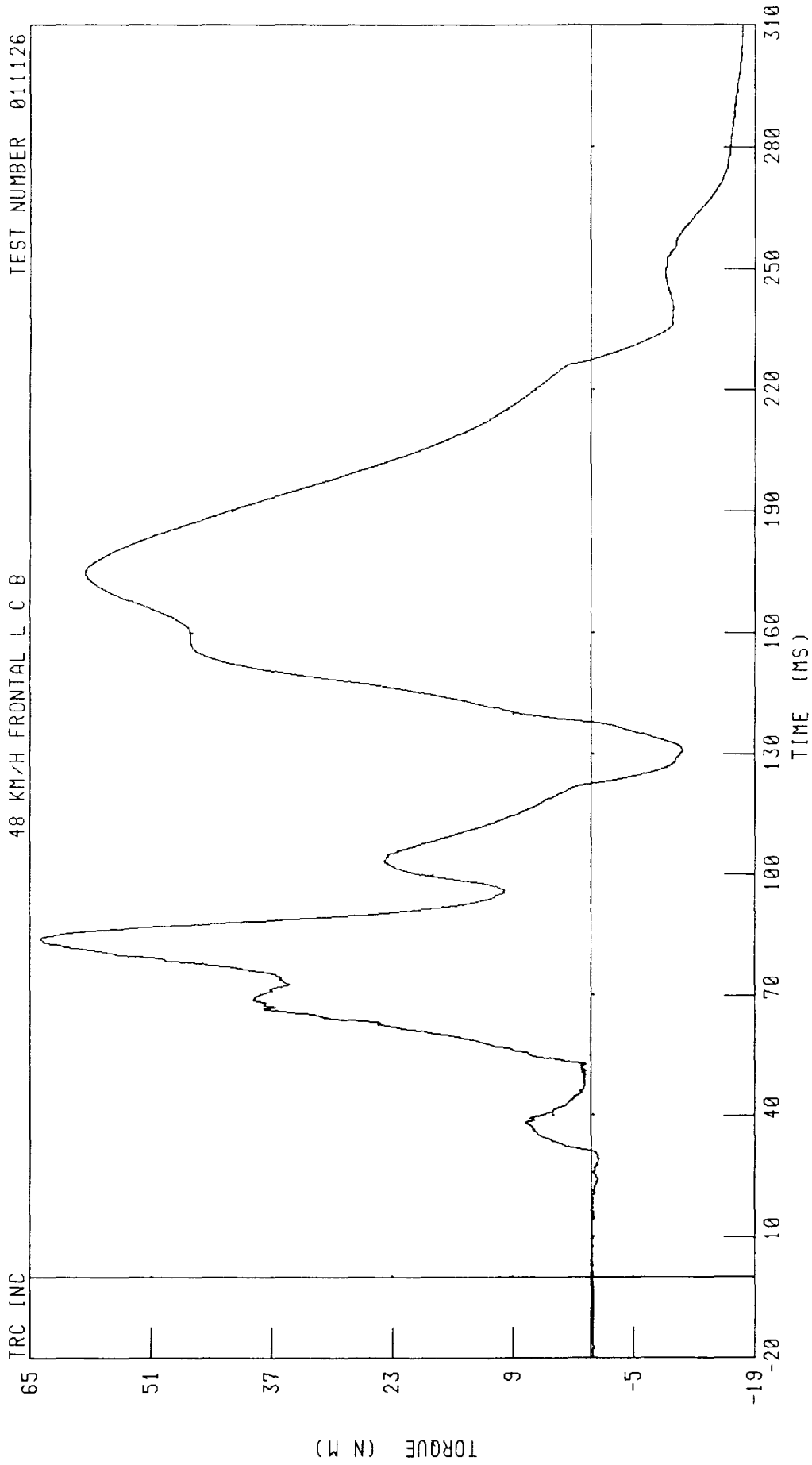
PASSENGER NECK MOMENT ABOUT Z AXIS



CHANNEL NEKZM2 FILTER CH CLASS 600

PEAK DATA 26 04 N M @ 93 04 MS, -9 23 N M @ 167 04 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
PASSENGER NECK OCCIPITAL CONDYLE MOMENT ABOUT Y AXIS



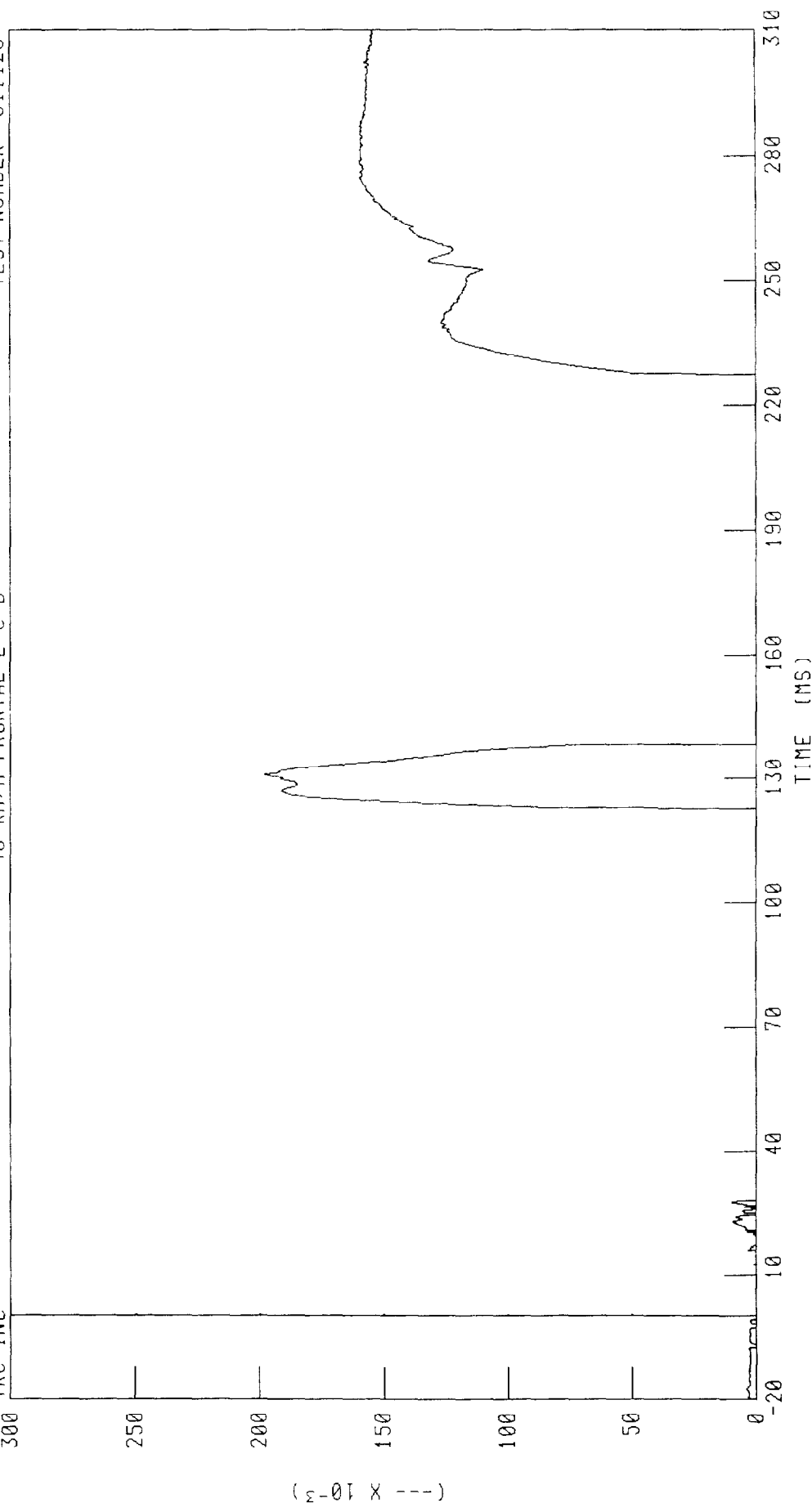
CHANNEL NEKOM2 FILTER CH CLASS 600

PEAK DATA 63 71 N M @ 84 32 MS, -17 60 N M @ 306 24 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
 PASSENGER NECK TENSION/EXTENSION
 48 KM/H FRONTAL L C B

TEST NUMBER 011126

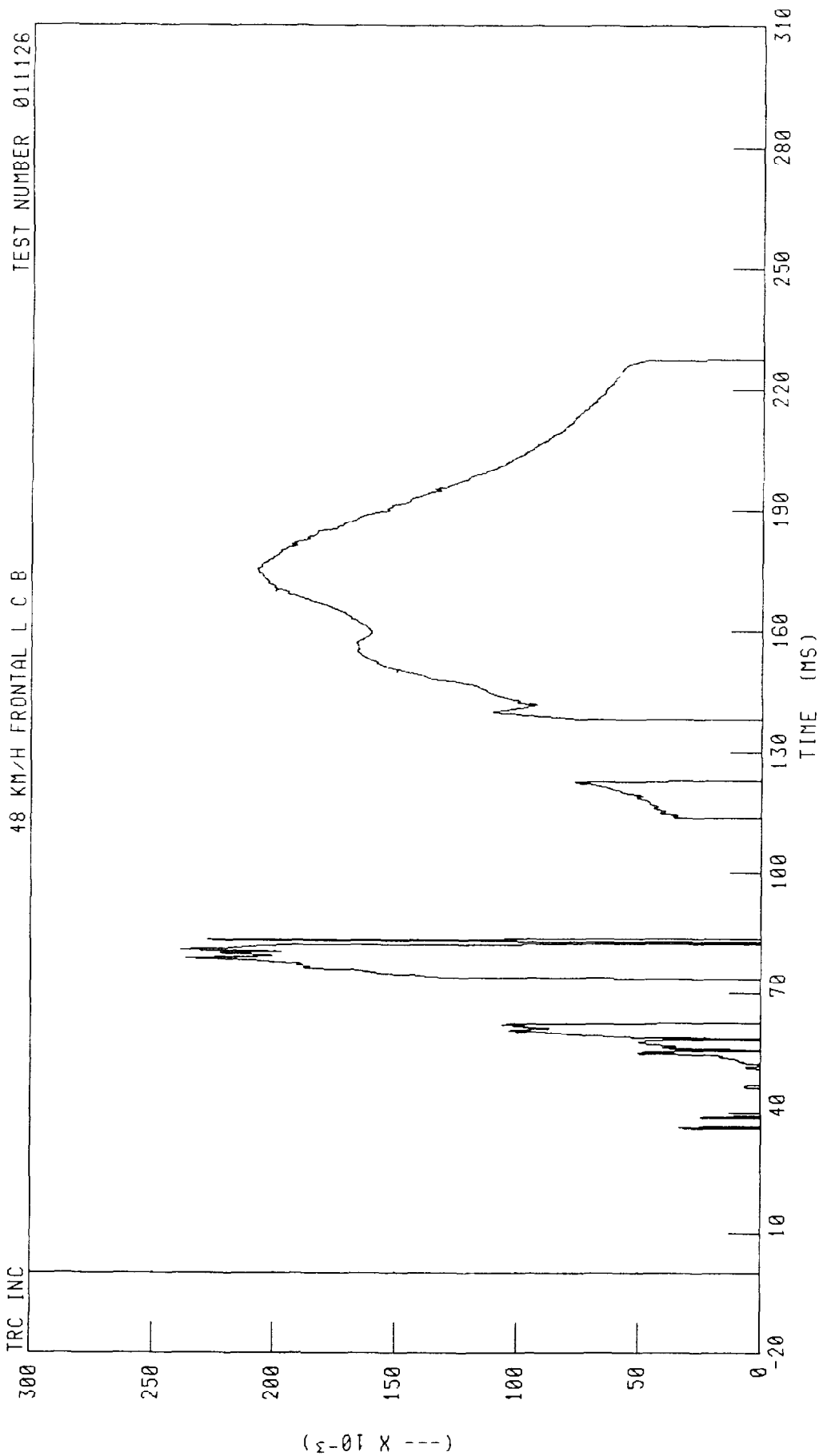
TRC INC



PEAK DATA 0 20 --- 0 130 96 MS, 0 00 --- 0 -7 52 MS

CHANNEL NTE2 FILTER CH CLASS 600

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
 PASSENGER NECK TENSION/FLEXION



2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

PASSENGER NECK COMPRESSION/EXTENSION

48 KM/H FRONTAL L C B

TEST NUMBER 011126

TRC INC

300

250

200

150

100

50

0

-20

(--- X 10⁻³)

TIME (MS)

310

280

250

220

190

160

130

100

70

40

10

PEAK DATA 0 02 --- 0 31 12 MS, 0 00 --- 0 -20 00 MS

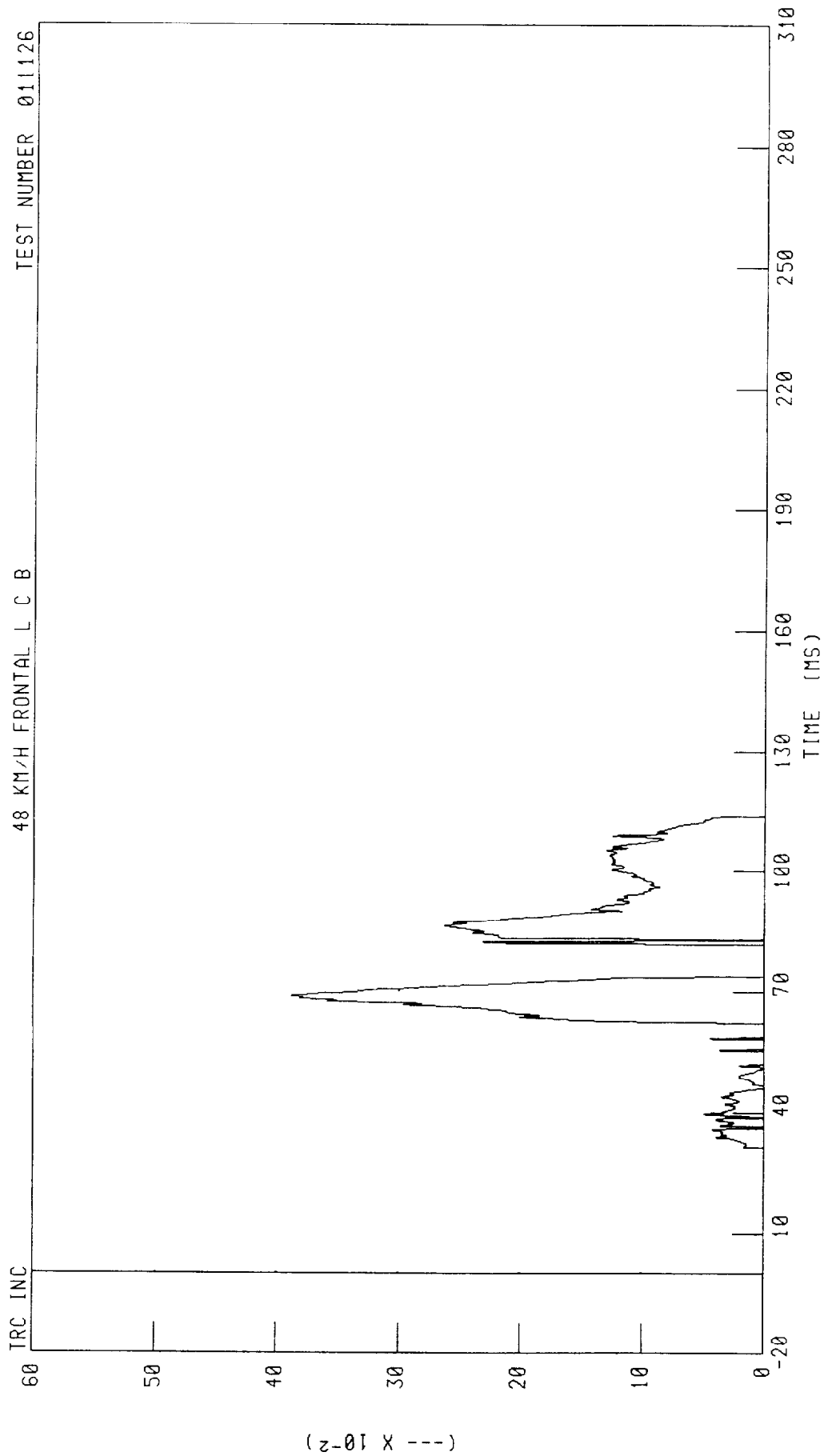
CHANNEL NCE2 FILTER CH CLASS 600

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

PASSENGER NECK COMPRESSION/FLEXION

48 KM/H FRONTAL L C B

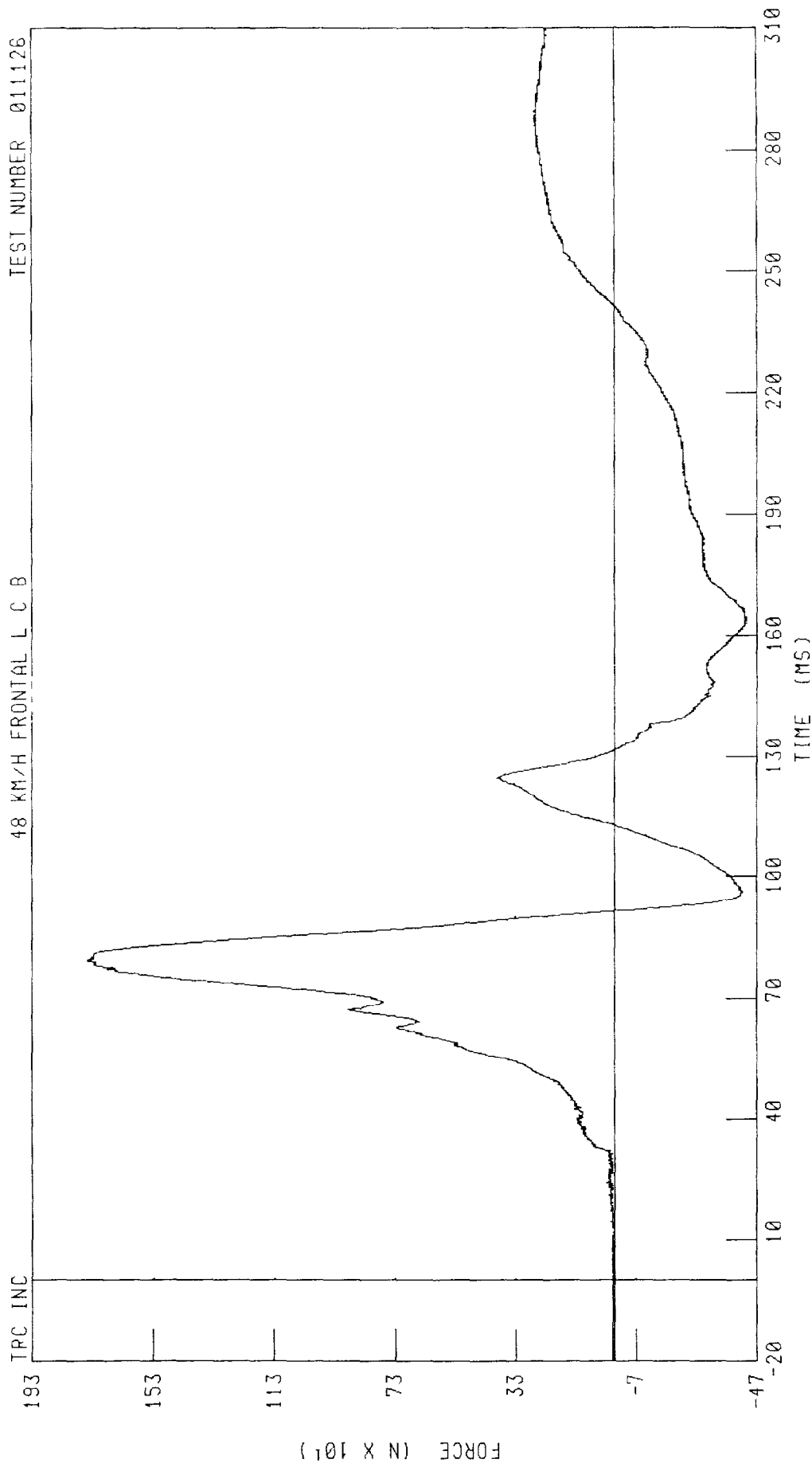
TEST NUMBER 011126



CHANNEL NCF2 FILTER CH CLASS 600

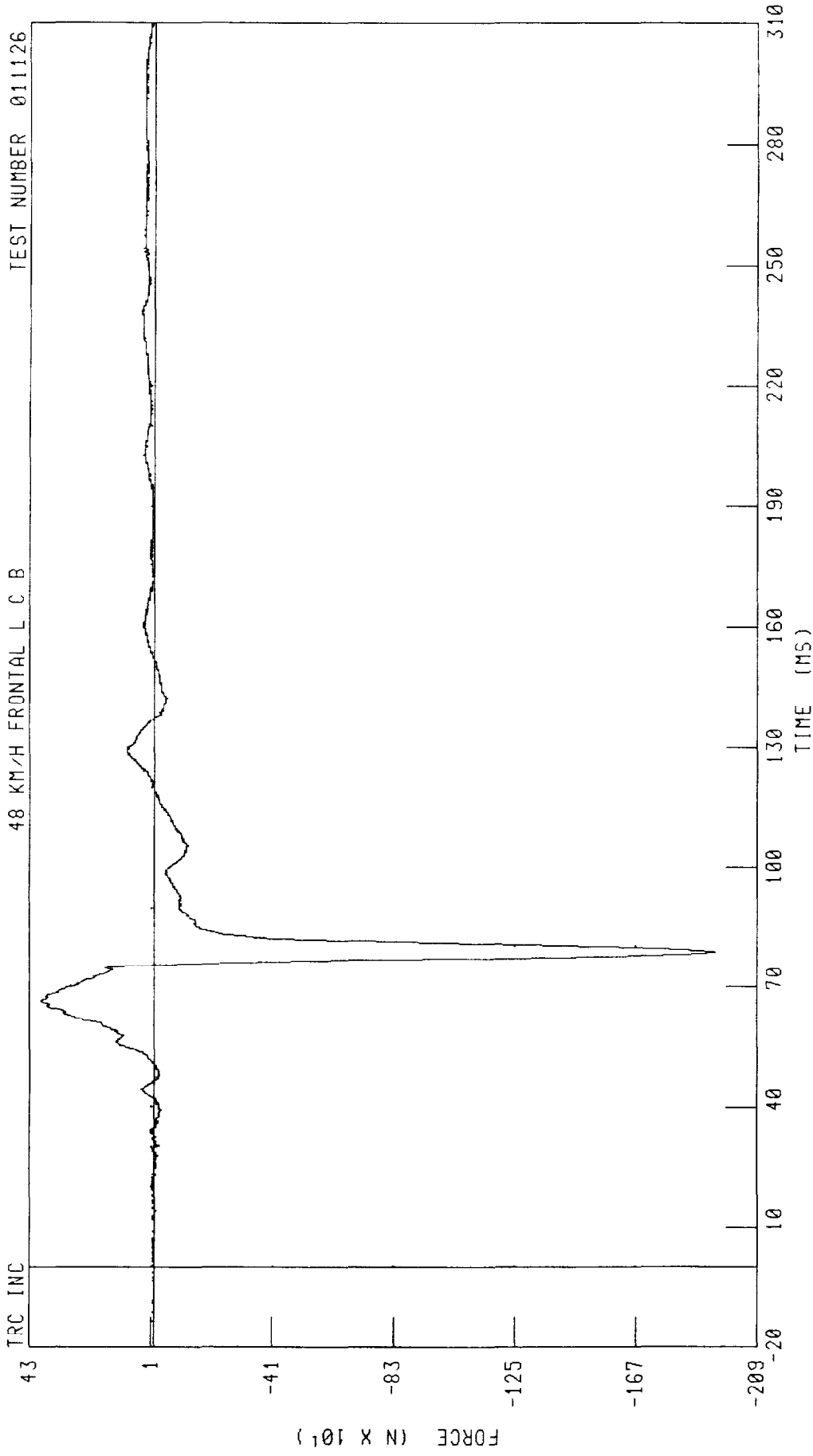
PEAK DATA 0 39 --- 0 68 96 MS, 0 00 --- 0 -20 00 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
PASSENGER NECK LOWER X-AXIS SHEAR FORCE



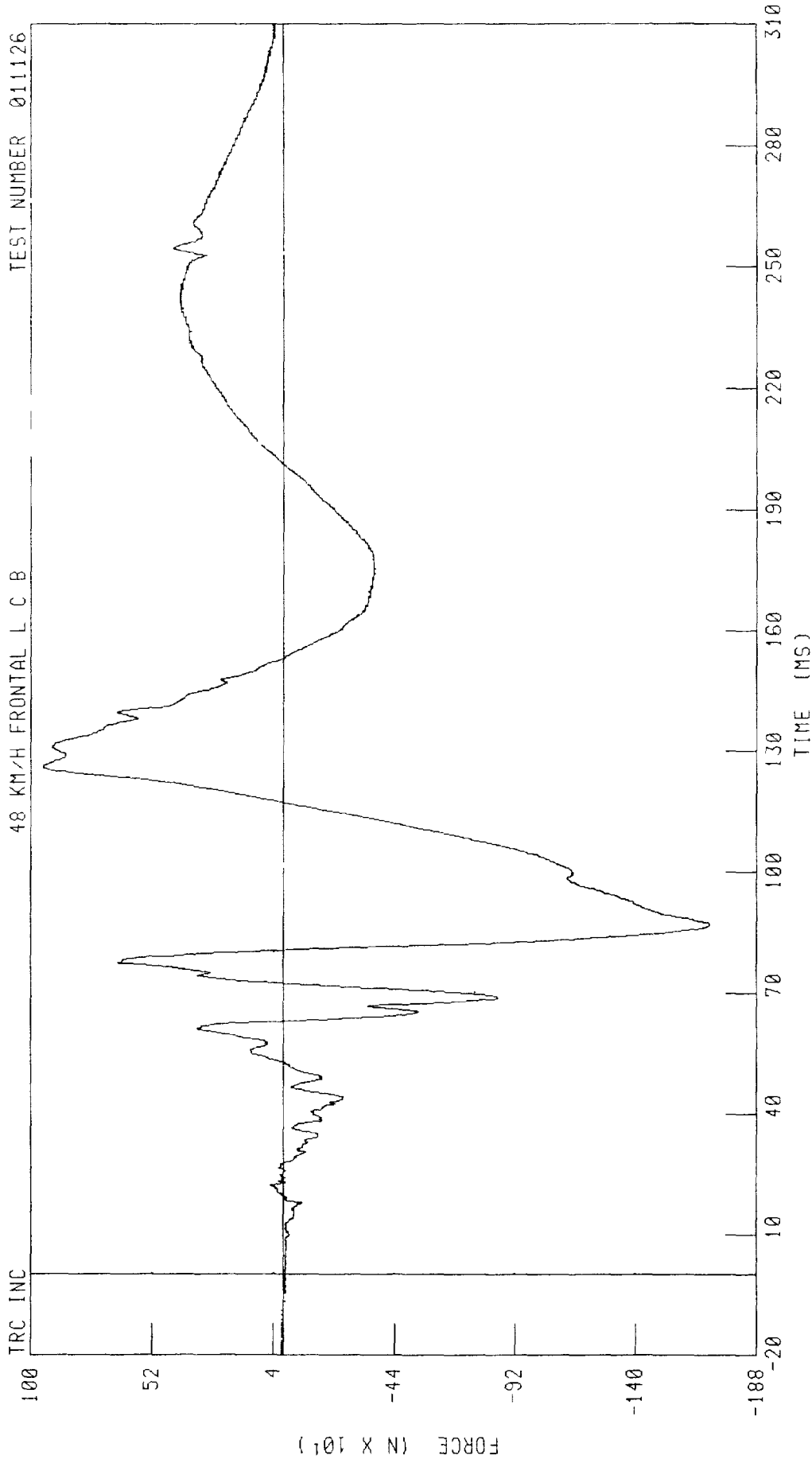
CHANNEL NKLXF2 FILTER CH CLASS 1000 PEAK DATA 1747 93 N @ 79 12 MS, -435 65 N @ 163 12 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
PASSENGER NECK LOWER Y-AXIS SHEAR FORCE



CHANNEL NKLYF2 FILTER CH CLASS 1000 PEAK DATA 391 46 N 0 66 24 MS, -1946 26 N 0 78 56 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
PASSENGER NECK LOWER Z-AXIS AXIAL FORCE



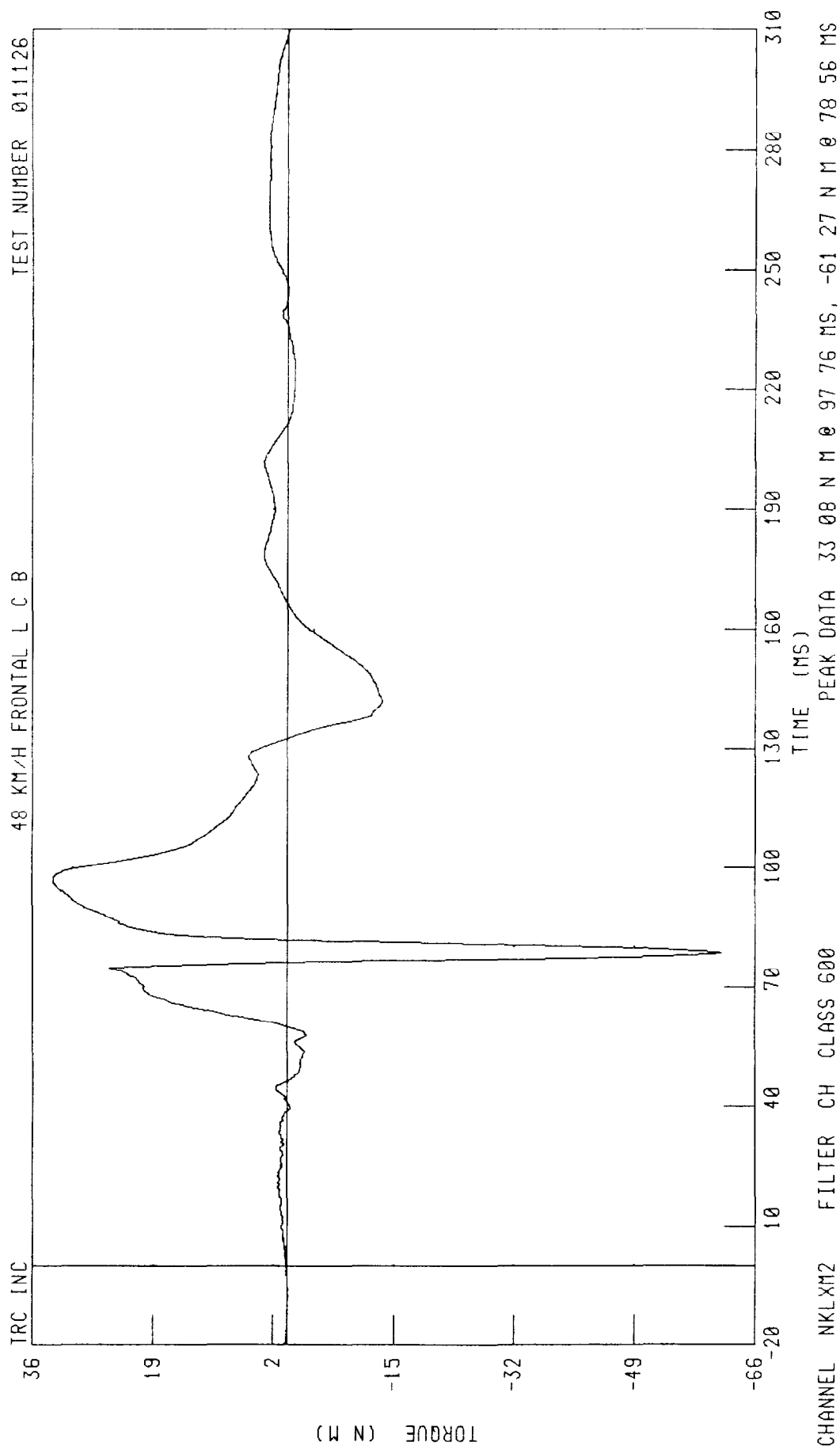
CHANNEL NKLZF2 FILTER CH CLASS 1000 PEAK DATA 953 50 N @ 125 84 MS, -1693 93 N @ 86 80 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

PASSENGER NECK LOWER MOMENT ABOUT X AXIS

48 KM/H FRONTAL L C B

TEST NUMBER 011126



CHANNEL NKLM2 FILTER CH CLASS 600 PEAK DATA 33 08 N M @ 97 76 MS, -61 27 N M @ 78 56 MS

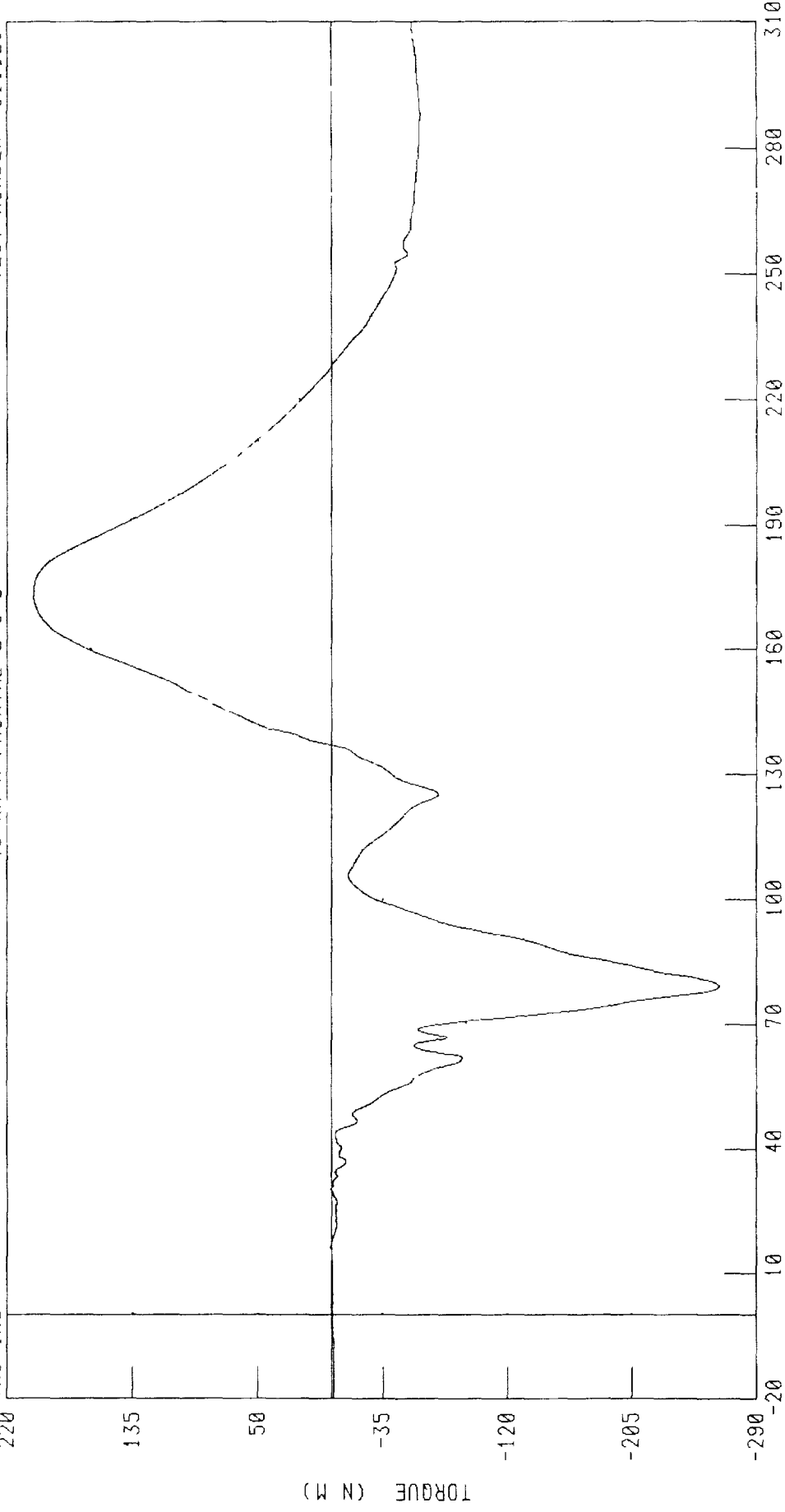
2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

PASSENGER NECK LOWER MOMENT ABOUT Y AXIS

TEST NUMBER 011126

48 KM/H FRONTAL L C B

TRC INC



TIME (MS)

CHANNEL NKLYM2 FILTER CH CLASS 600 PEAK DATA 202 23 N M @ 173 44 MS, -264 67 N M @ 79 12 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

PASSENGER NECK LOWER MOMENT ABOUT Z AXIS

TEST NUMBER 011126

48 KM/H FRONTAL L C B

TRC INC

33

11

-11

-33

-55

-77

-99

TORQUE (N M)

TIME (MS)

310

280

250

220

190

160

130

100

70

40

10

-20

PEAK DATA 30 14 N M 0 67 68 MS, -91 64 N M 0 78 56 MS

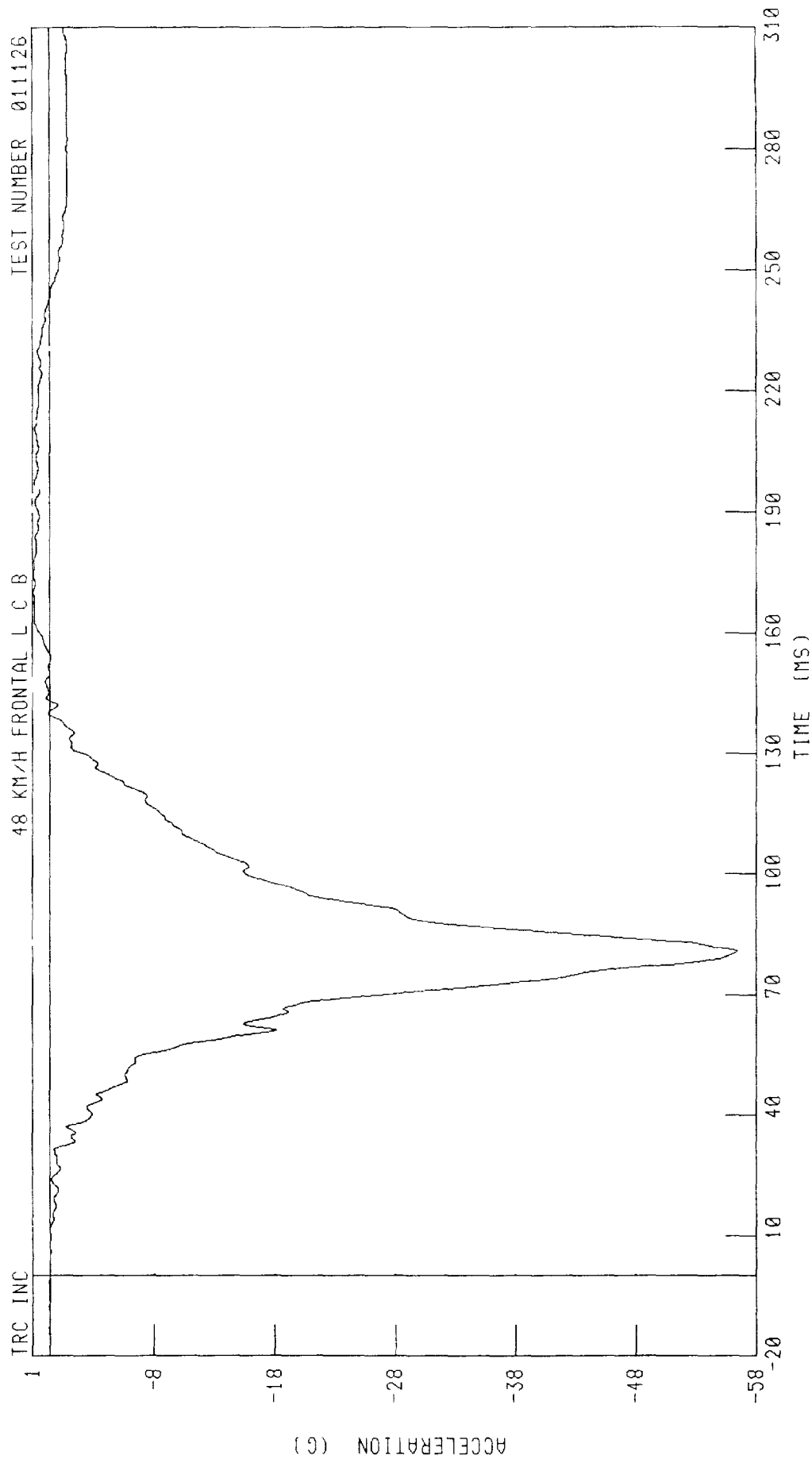
CHANNEL NKLZM2 FILTER CH CLASS 600

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

PASSENGER CHEST X-AXIS ACCELERATION

48 KM/H FRONTAL L C B

TEST NUMBER 011126



PEAK DATA 1 35 G @ 174 80 MS, -57 02 G @ 80 64 MS

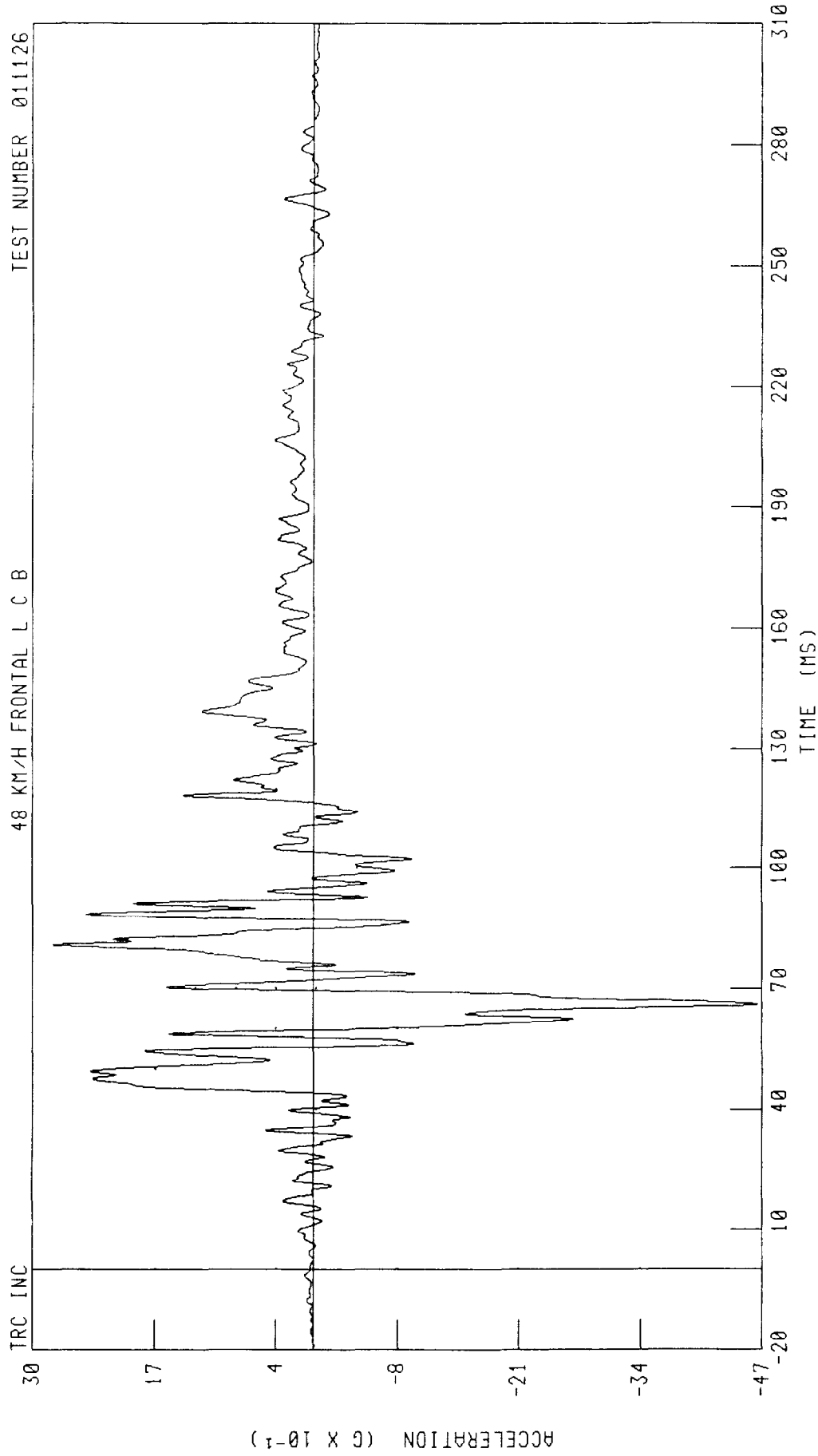
CHANNEL CSTXG2 FILTER CH CLASS 180

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

PASSENGER CHEST Y-AXIS ACCELERATION

48 KM/H FRONTAL L C B

TEST NUMBER 011126



PEAK DATA 2 79 G @ 80 96 MS, -4 76 G @ 66 00 MS

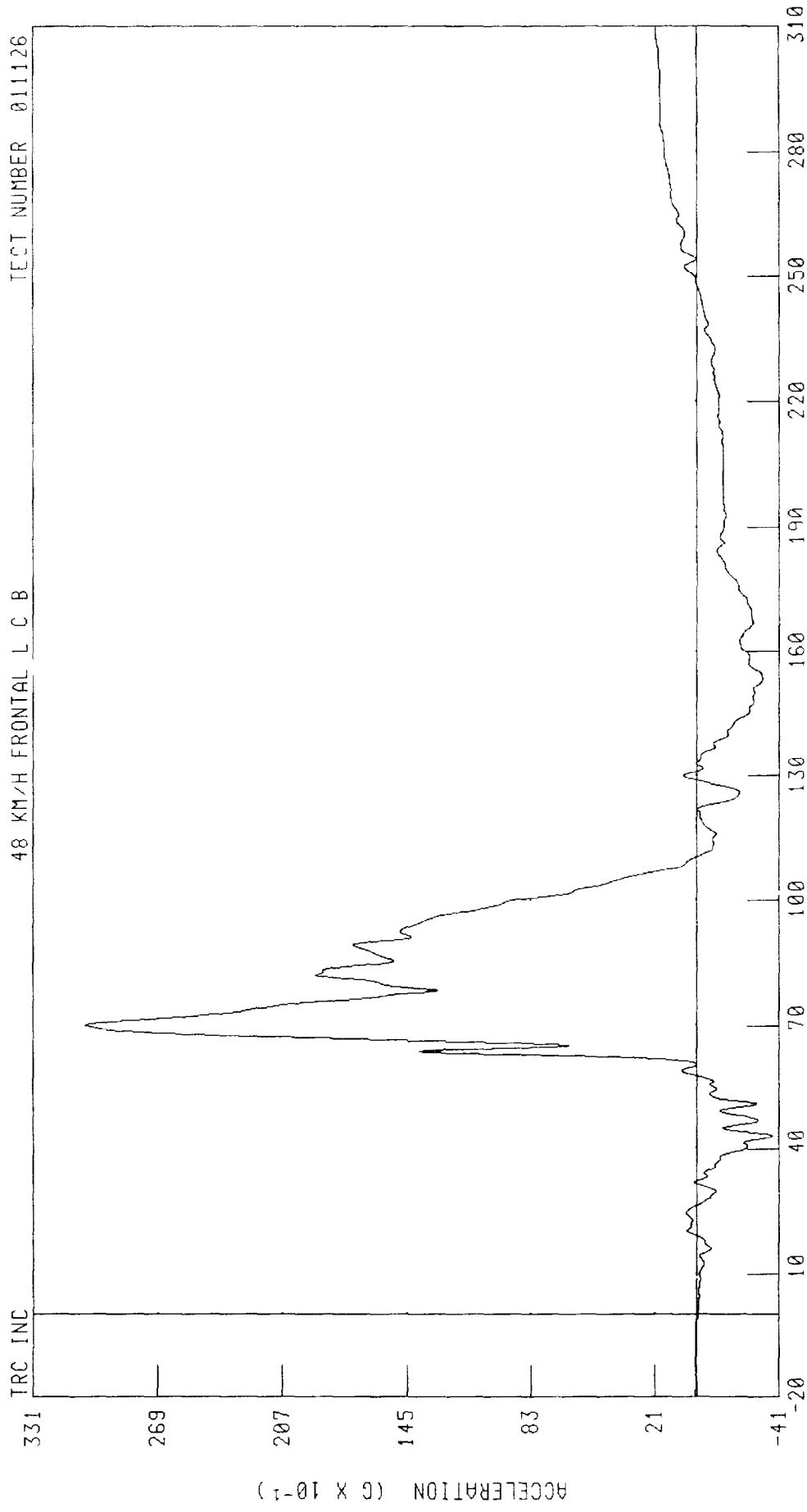
CHANNEL CSTY02 FILTER CH CLASS 180

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

PASSENGER CHEST Z-AXIS ACCELERATION

48 KM/H FRONTAL L C B

TEST NUMBER 011126

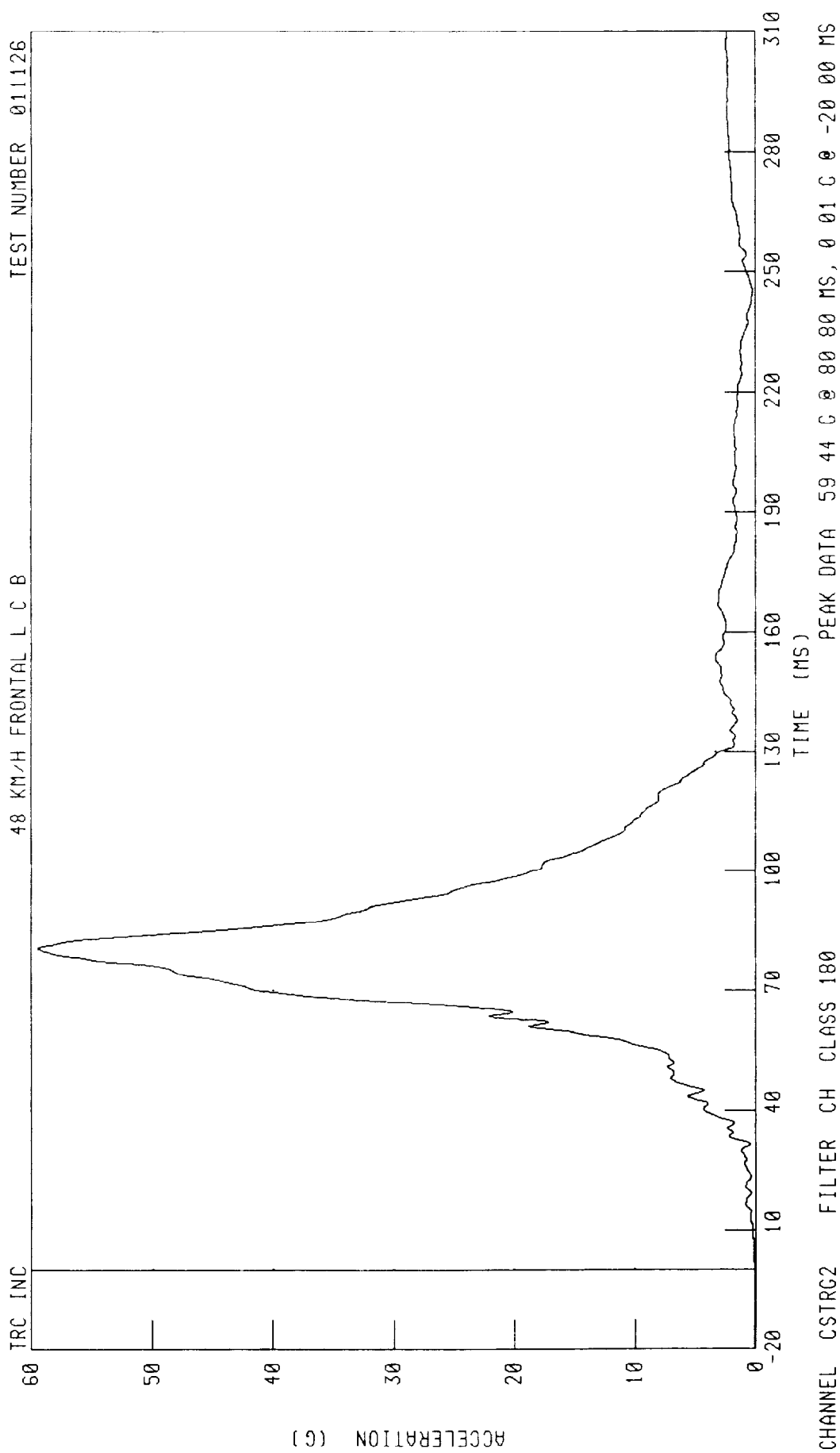


TIME (MS)

CHANNEL CSTZG2 FILTER CH CLASS 180

PEAK DATA 30 50 60 70 80 MS, -3 77 60 43 20 MS

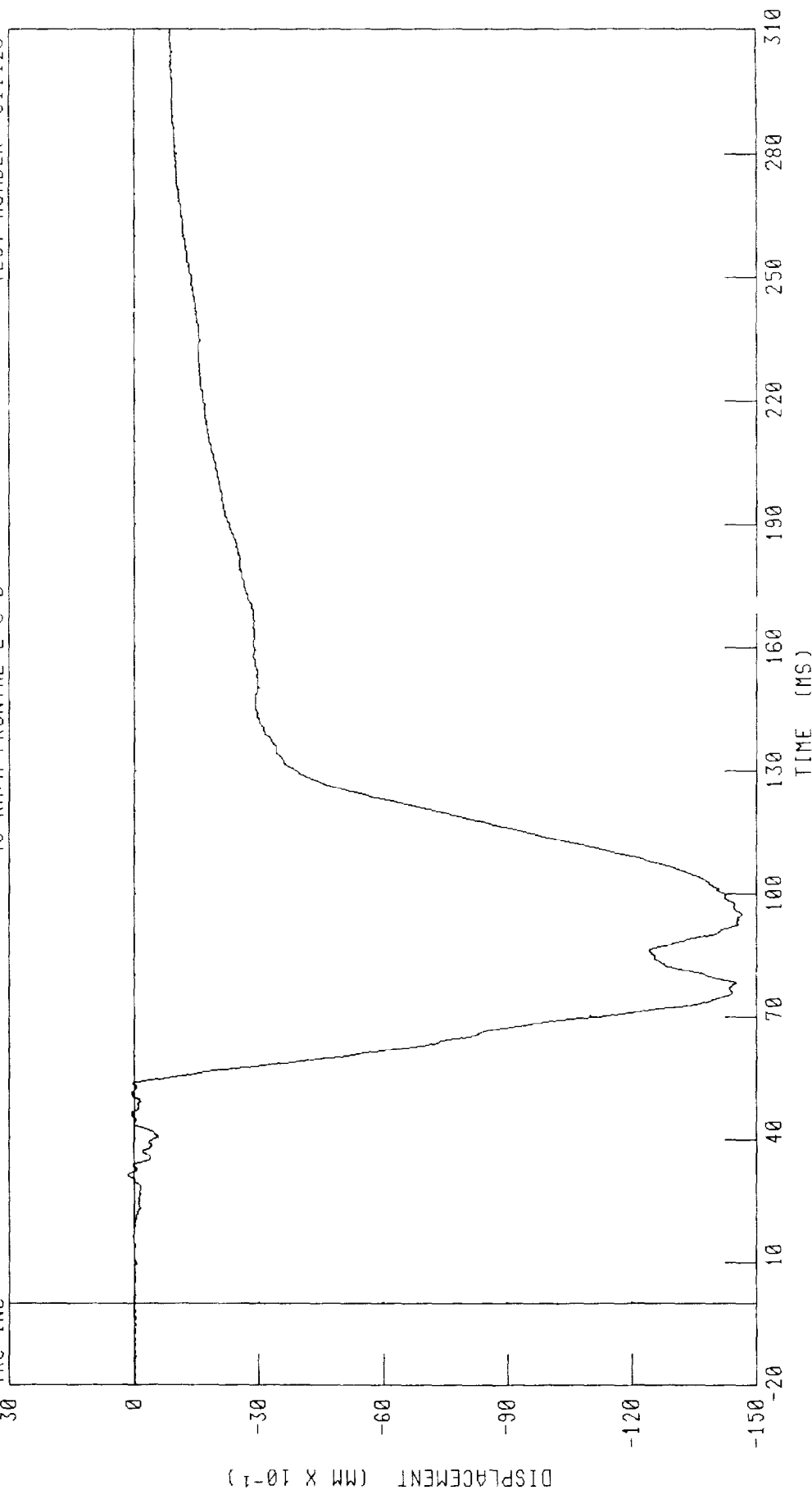
2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
PASSENGER CHEST RESULTANT ACCELERATION



2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
 PASSENGER CHEST DEFLECTION
 48 KM/H FRONTAL L C B

TEST NUMBER 011126

TRC INC



CHANNEL CSTXD2 FILTER CH CLASS 600

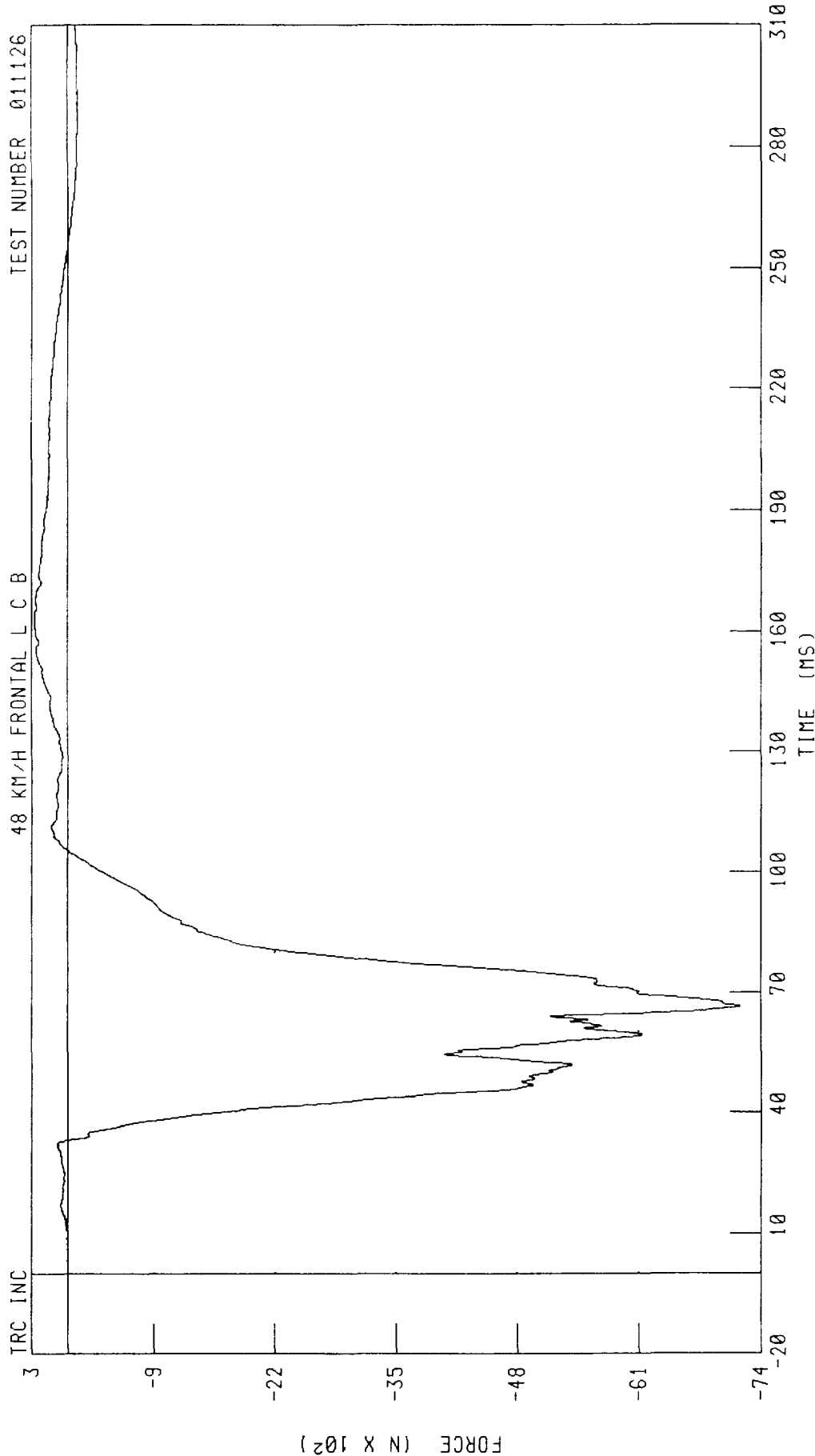
PEAK DATA 0 15 MM @ 31 28 MS, -14 65 MM @ 95 20 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

PASSENGER LEFT FEMUR FORCE

48 KM/H FRONTAL L C B

TEST NUMBER 011126



CHANNEL LFMZF2 FILTER CH CLASS 600 PEAK DATA 352 79 N @ 163 36 MS, -7197 28 N @ 66 40 MS

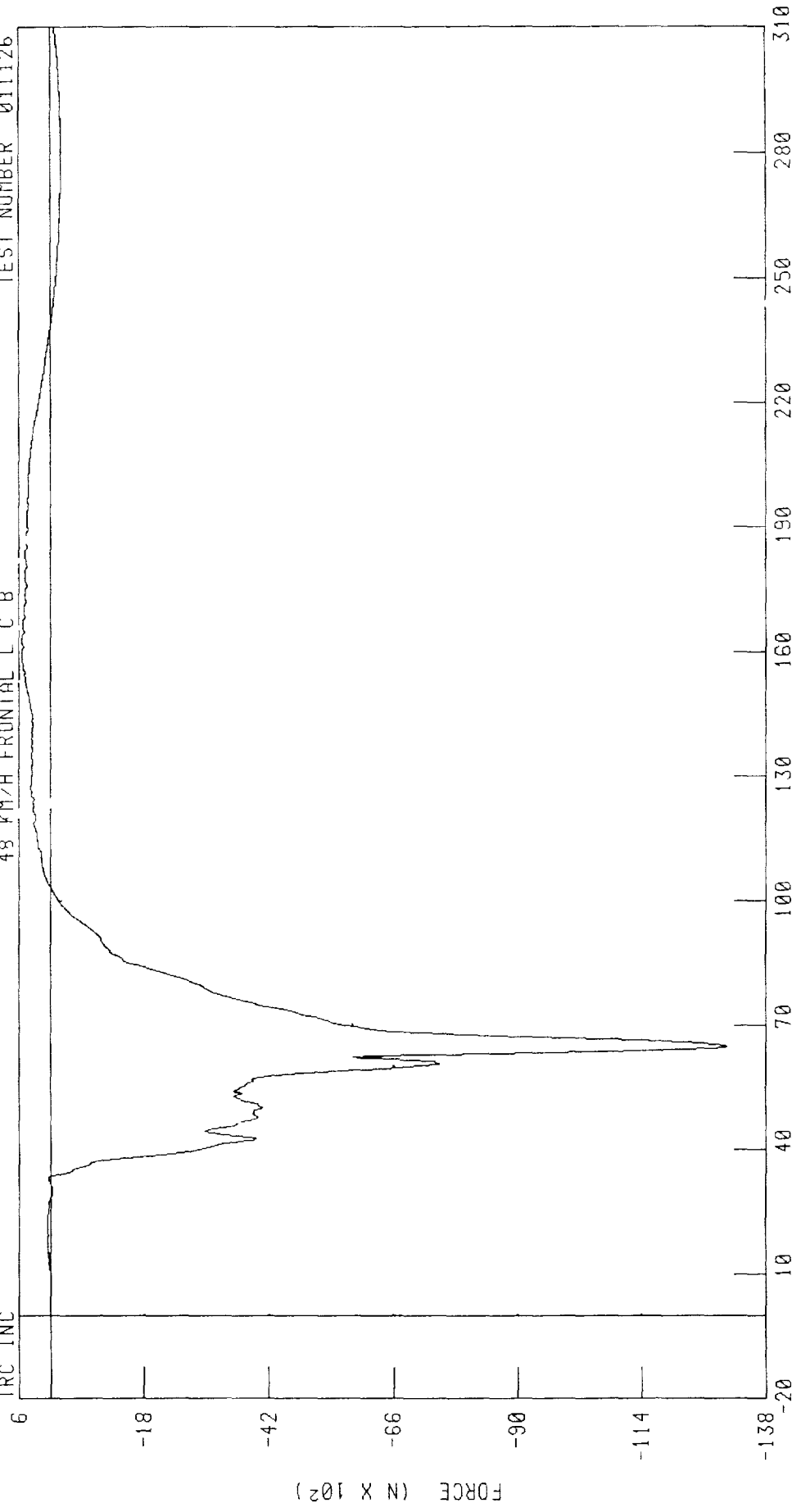
2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

PASSENGER RIGHT FEMUR FORCE

48 KM/H FRONTAL L C B

TEST NUMBER 011126

TRC INC



TIME (MS)

PEAK DATA 546 19 N @ 158 64 MS, -13051 45 N @ 64 72 MS

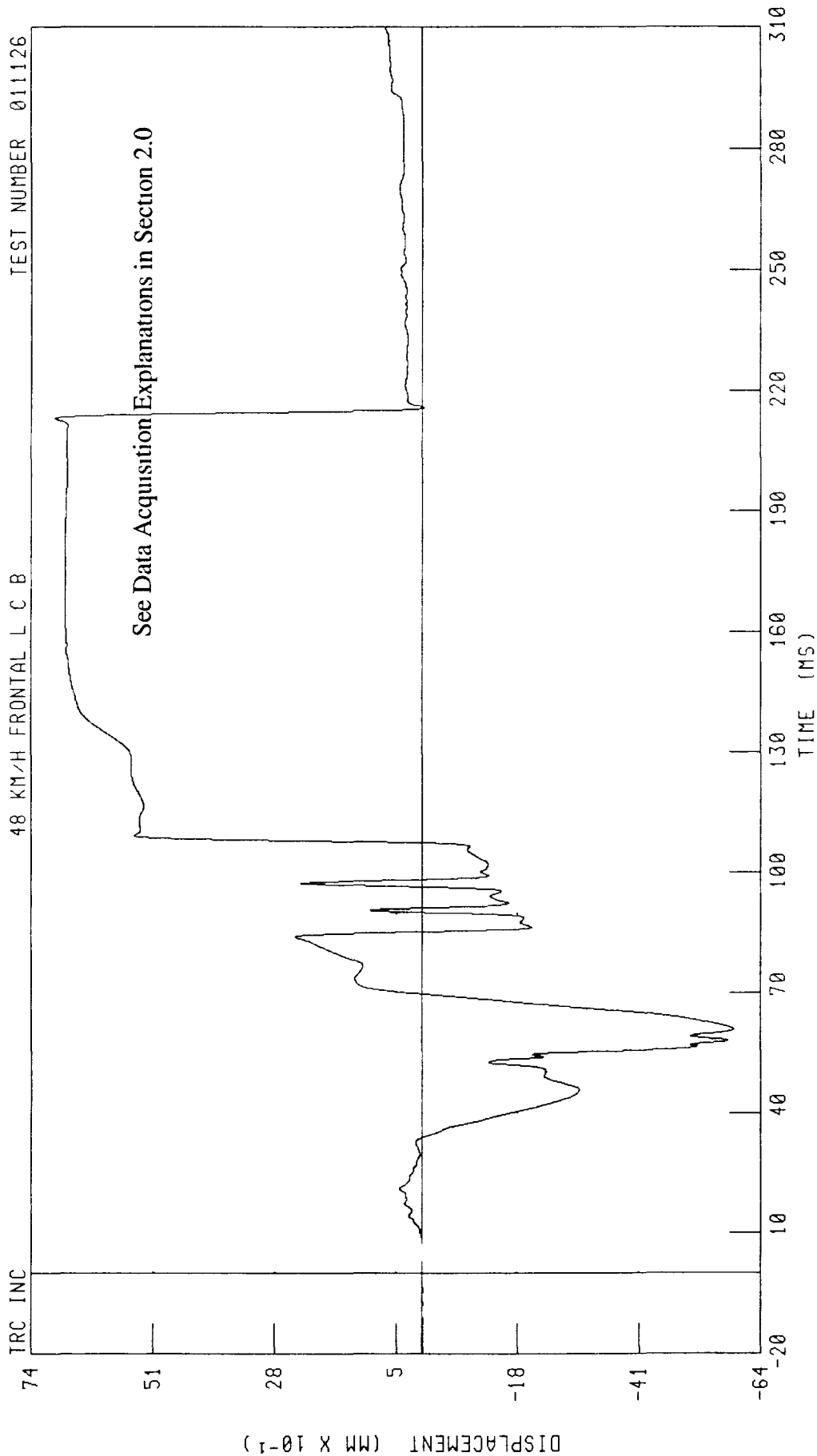
CHANNEL RFMZF2 FILTER CH CLASS 600

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

PASSENGER LEFT KNEE DISPLACEMENT

48 KM/H FRONTAL L C B

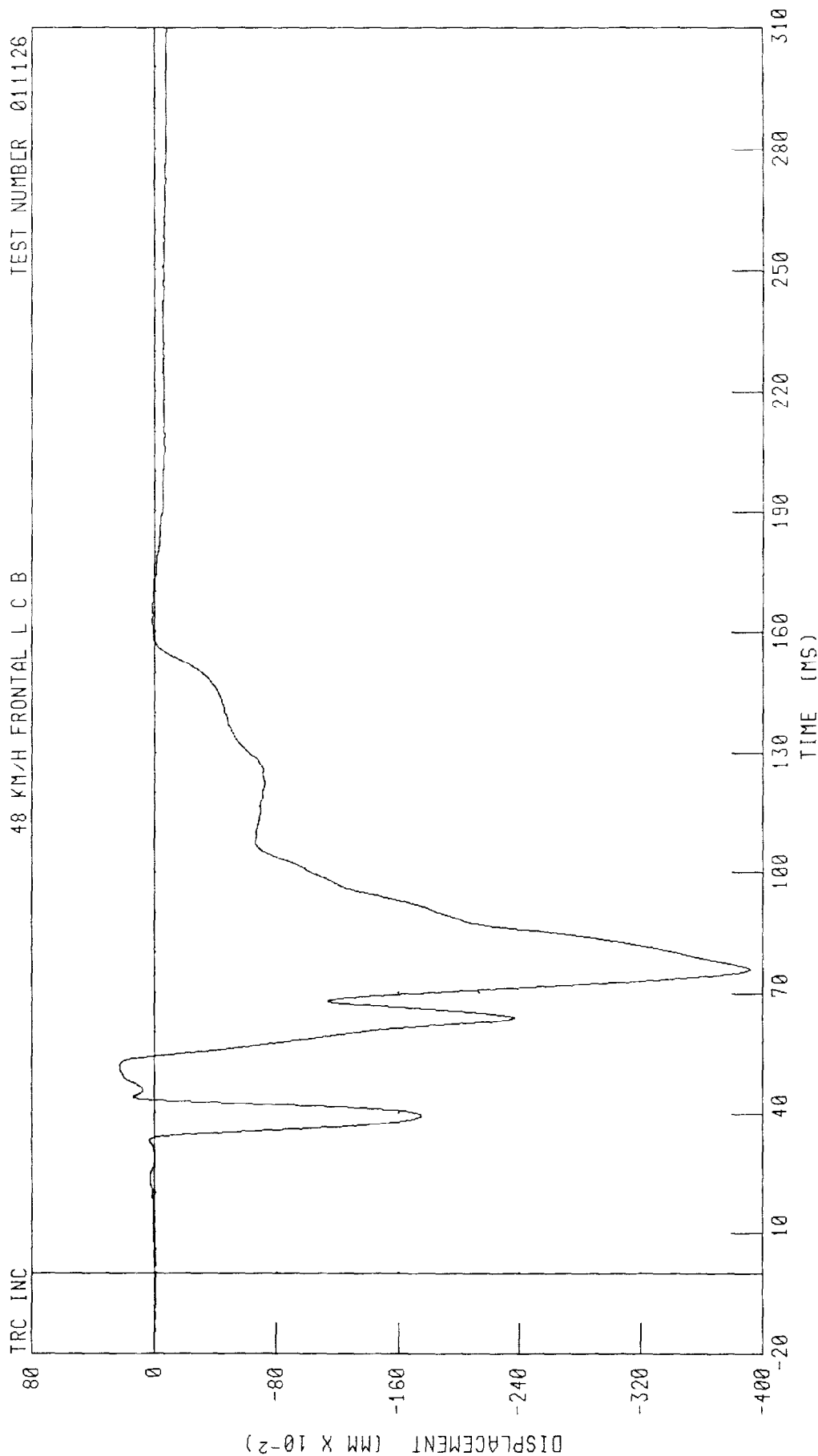
TEST NUMBER 011126



CHANNEL KNLXD2 FILTER CH CLASS 180 PEAK DATA 6 96 MM @ 213 20 MS, -5 89 MM @ 60 88 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
 PASSENGER RIGHT KNEE DISPLACEMENT
 48 KM/H FRONTAL L C B

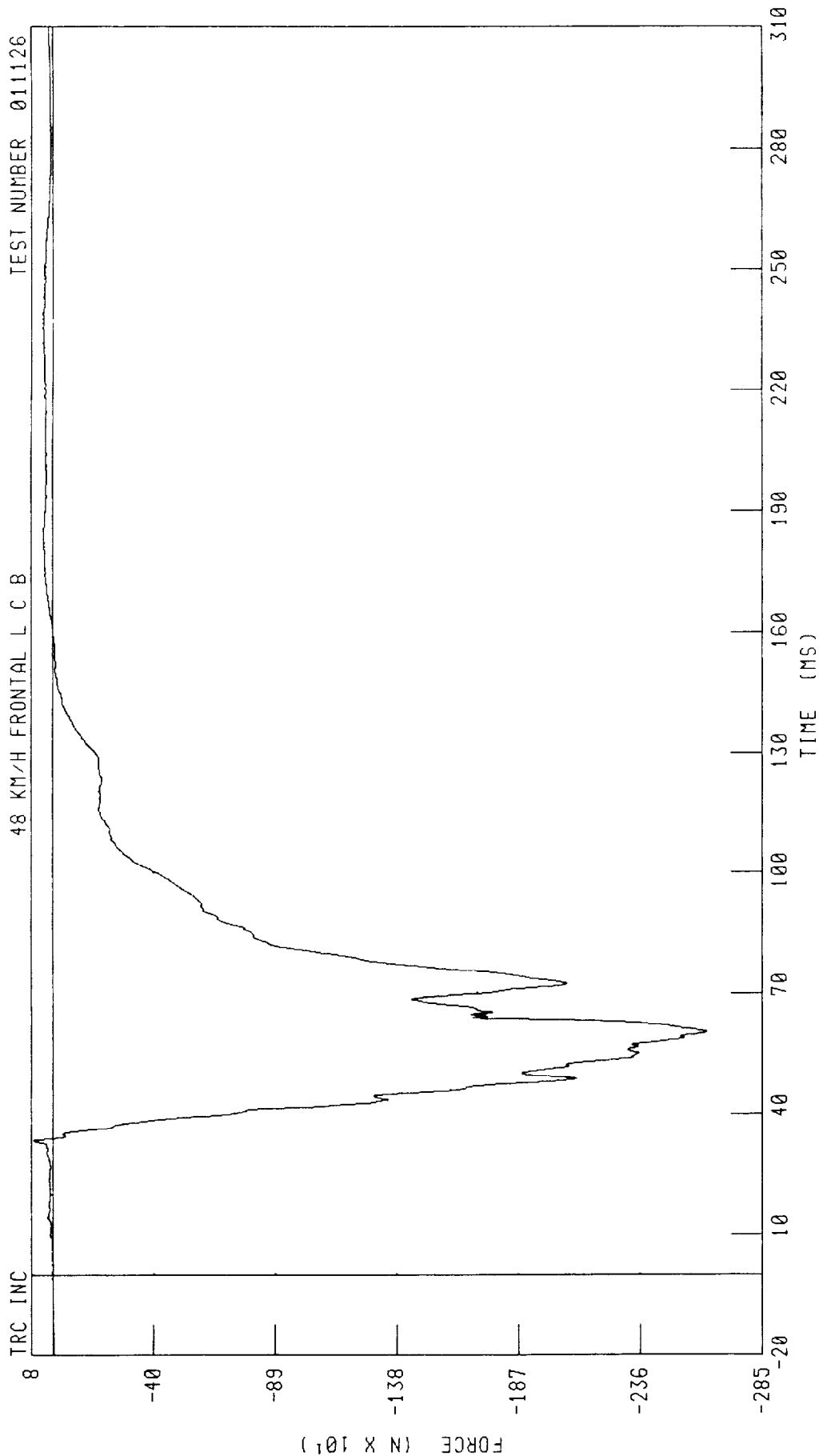
TEST NUMBER 011126



CHANNEL KNRXD2 FILTER CH CLASS 180

PEAK DATA 0 23 MM @ 51 12 MS, -3 92 MM @ 76 00 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
PASSENGER LEFT UPPER TIBIA X-AXIS FORCE



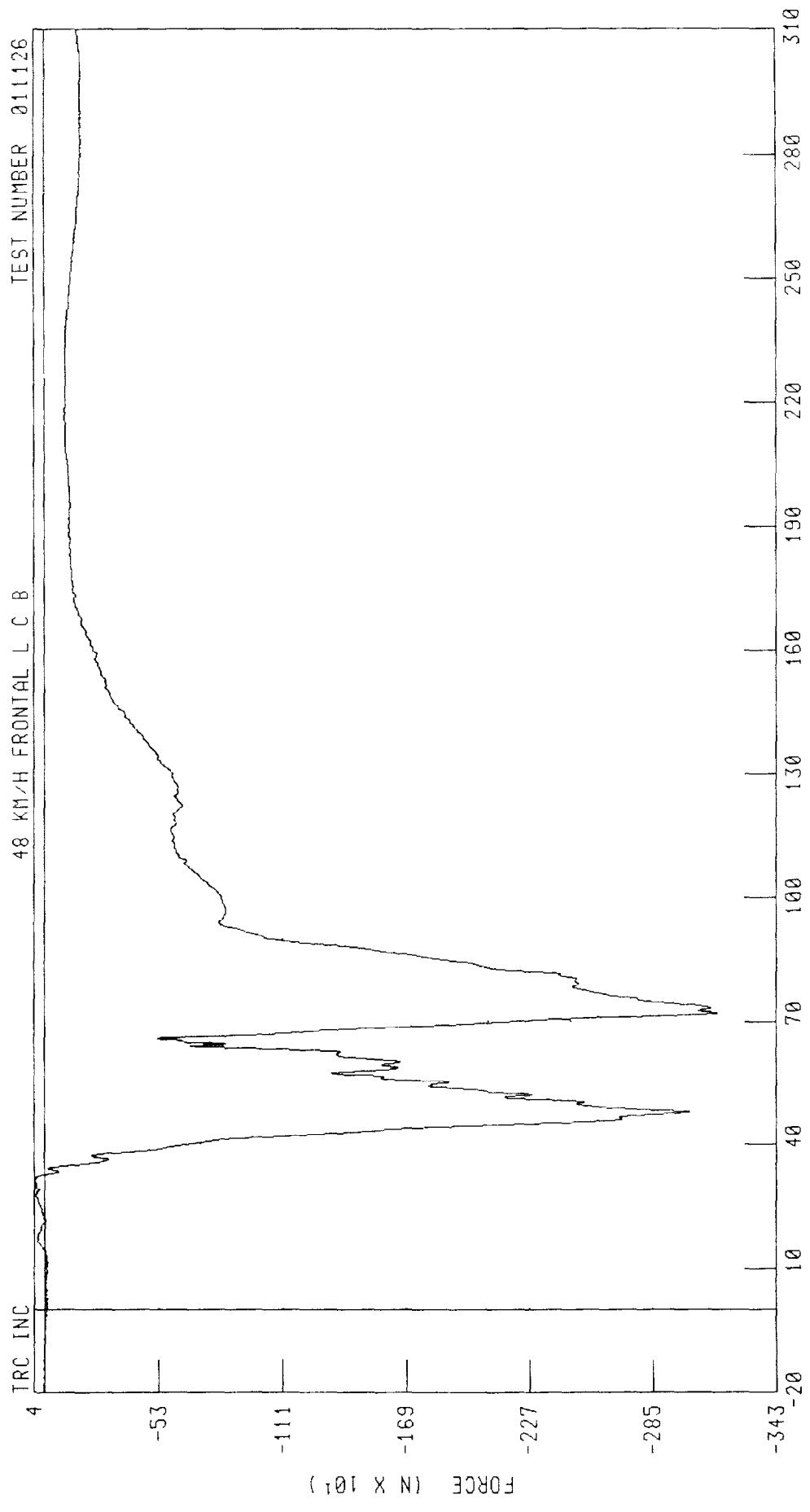
CHANNEL TBLXF2 FILTER CH CLASS 600 PEAK DATA 78 46 N 33 28 MS, -2630 28 N 60 32 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

PASSENGER LEFT UPPER TIBIA Z-AXIS FORCE

48 KM/H FRONTAL L C B

TEST NUMBER 011126

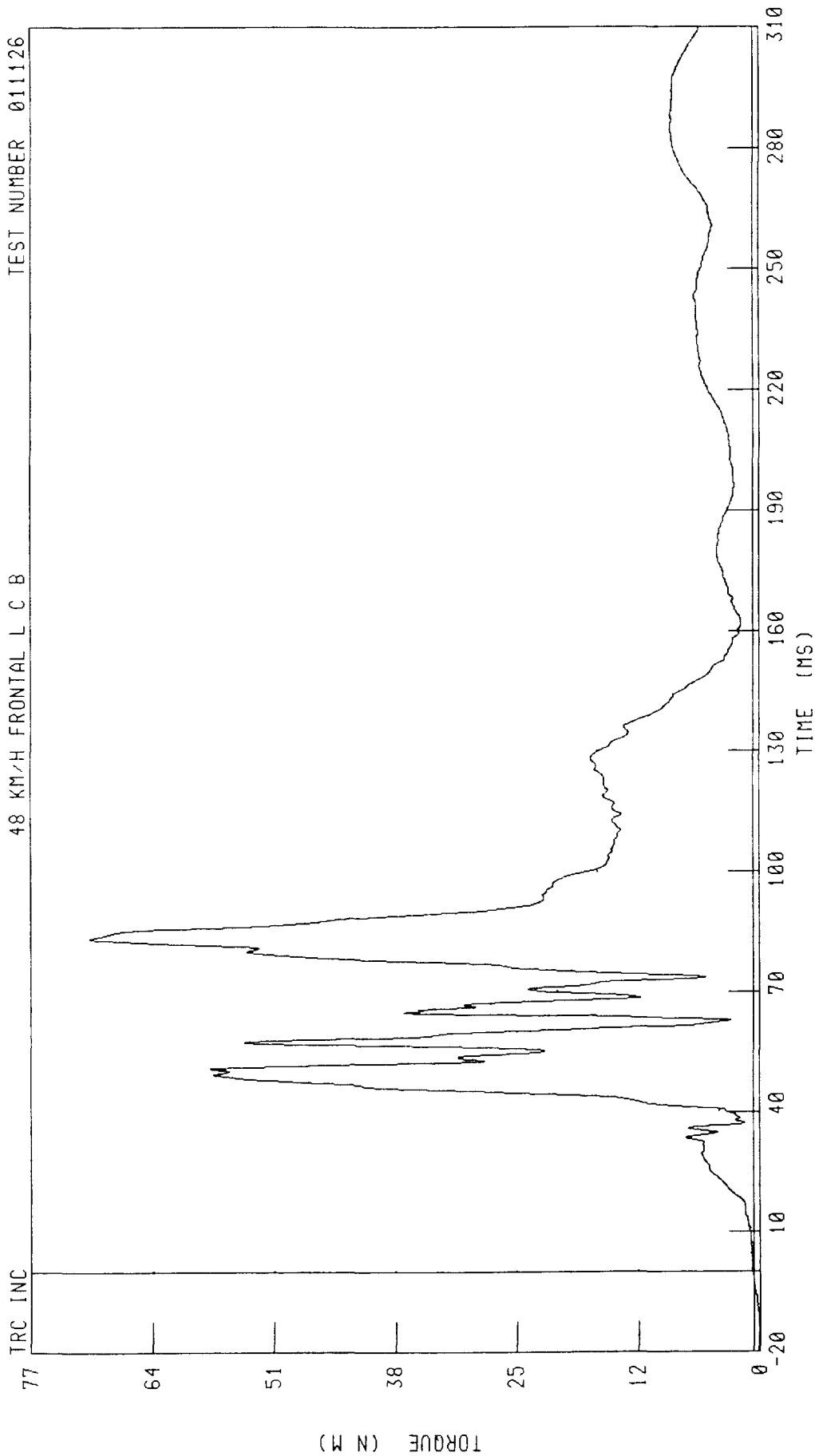


TIME (MS)

CHANNEL TBLZF2 FILTER CH CLASS 600

PEAK DATA 45 38 N @ 31 52 MS -3156 61 N @ 72 08 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
PASSENGER LEFT UPPER TIBIA MOMENT ABOUT X AXIS



PEAK DATA 71 19 N M @ 83 44 MS, -0 55 N M @ -19 68 MS

CHANNEL TBLX2 FILTER CH CLASS 600

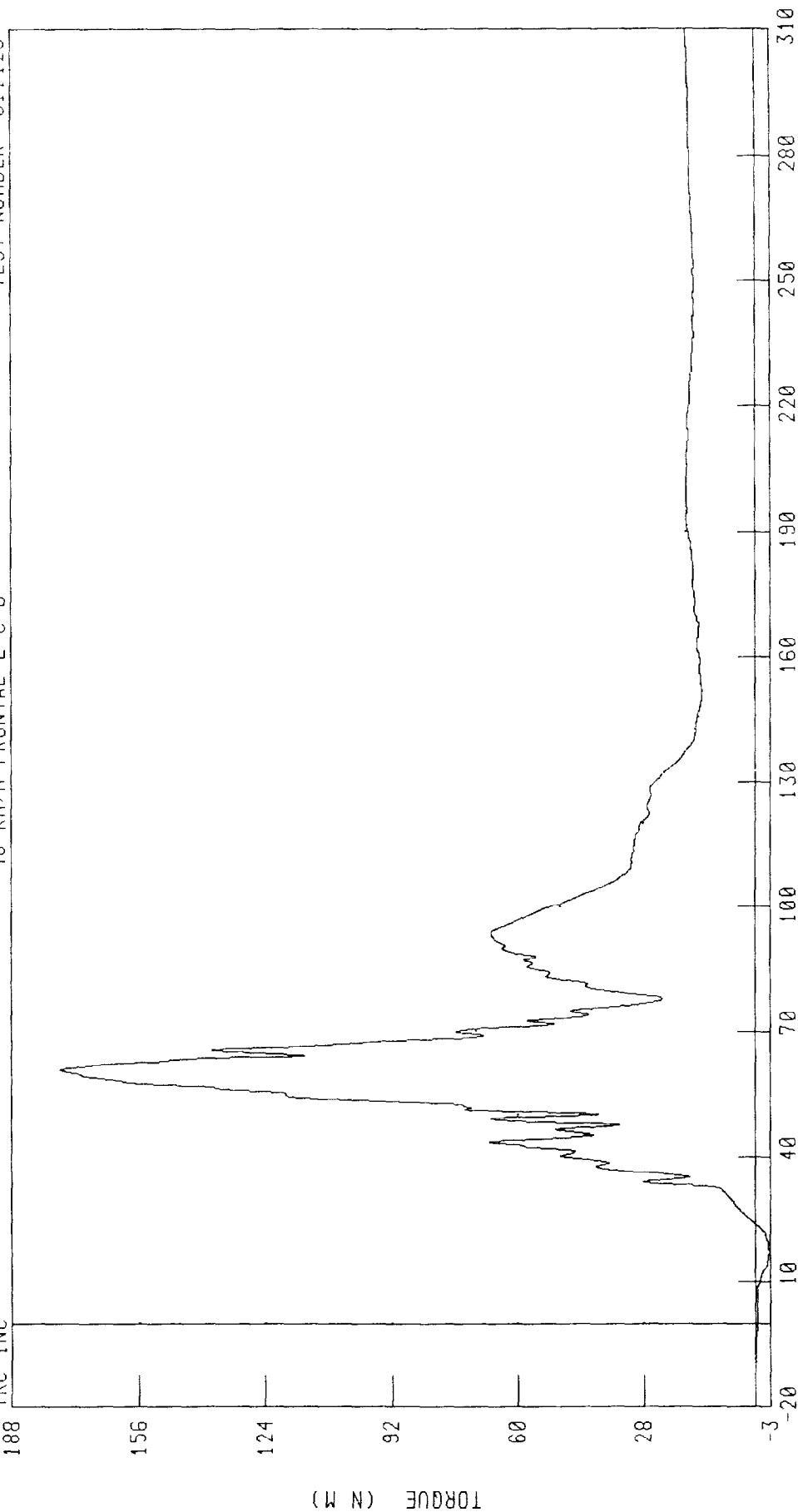
2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

PASSENGER LEFT UPPER TIBIA MOMENT ABOUT Y AXIS

48 KM/H FRONTAL L C B

TEST NUMBER 011126

TRC INC

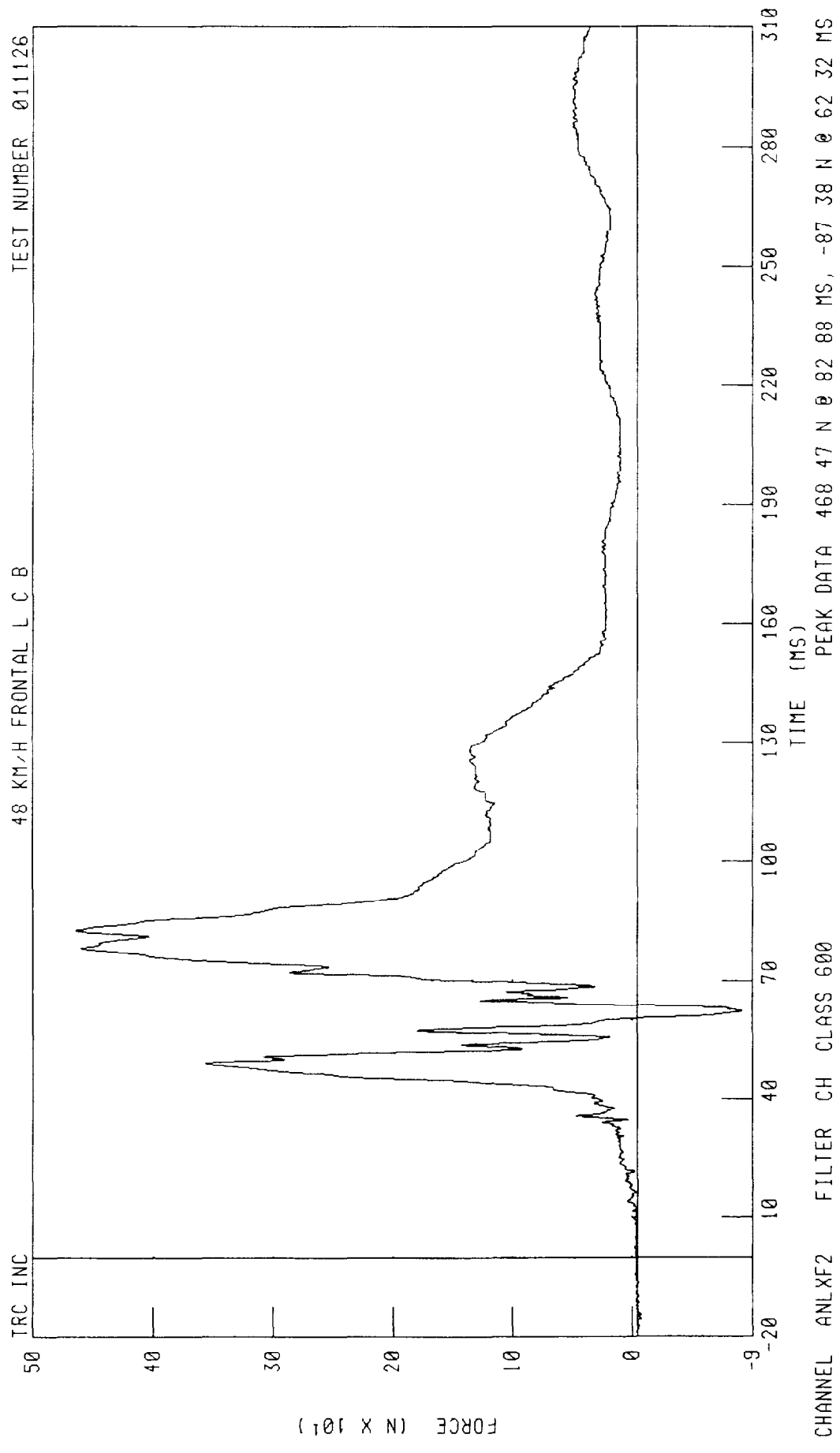


TIME (MS)

PEAK DATA 175 94 N M @ 60 80 MS, -3 54 N M @ 16 96 MS

CHANNEL TBLM2 FILTER CH CLASS 600

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
PASSENGER LEFT LOWER TIBIA X-AXIS FORCE



2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
PASSENGER LEFT LOWER TIBIA Z-AXIS FORCE
48 KM/H FRONTAL L C B

TEST NUMBER 011126

TRC INC

39

-14

-67

-120

-173

-226

-279

FORCE (N X 10¹¹)

TIME (MS)

310

280

250

220

190

160

130

100

70

40

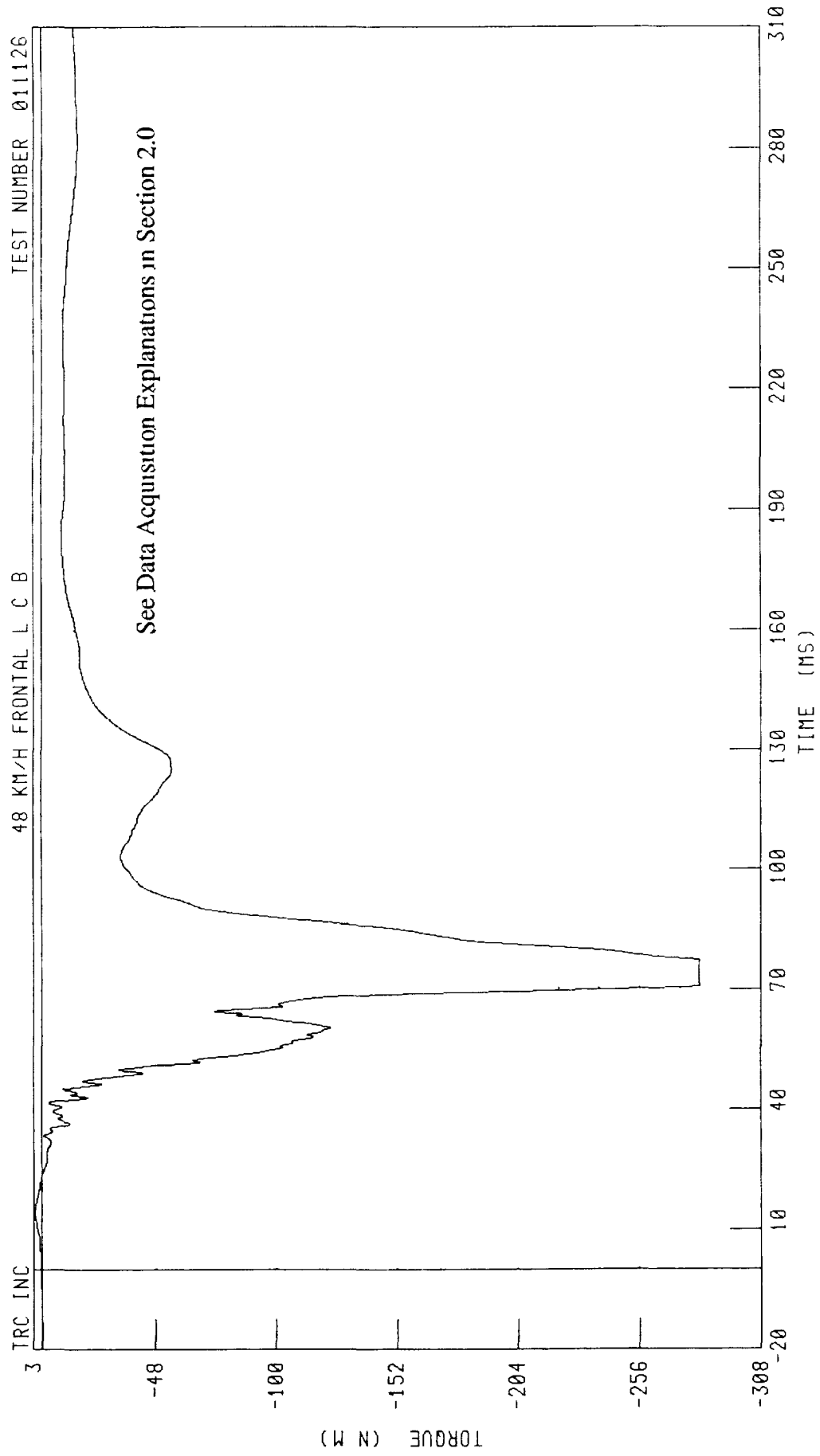
10

-20

PEAK DATA 363 07 N 0 64 96 MS, -2539 20 N 0 73 44 MS

CHANNEL ANLZF2 FILTER CH CLASS 600

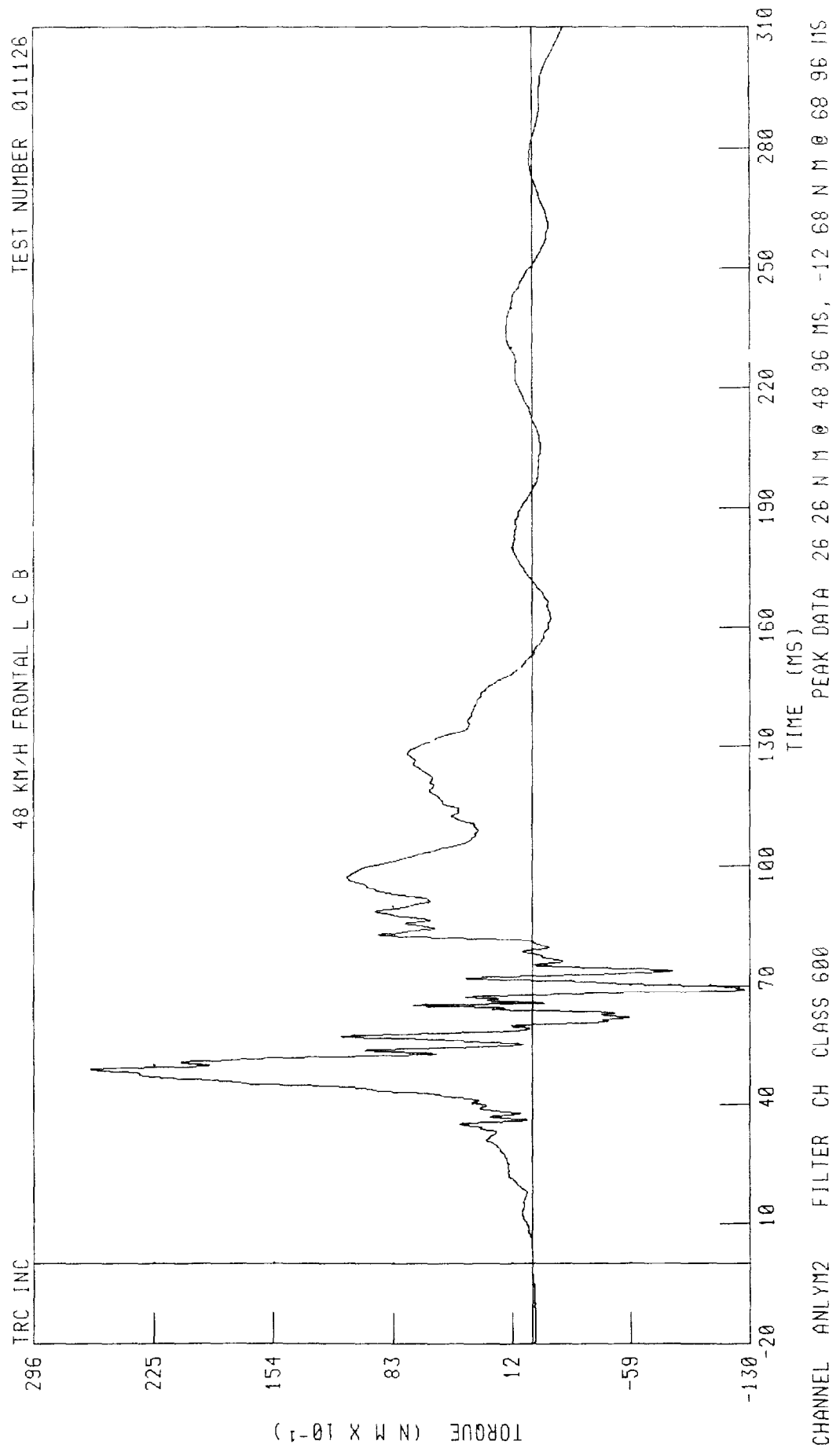
2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
PASSENGER LEFT LOWER TIBIA MOMENT ABOUT X AXIS



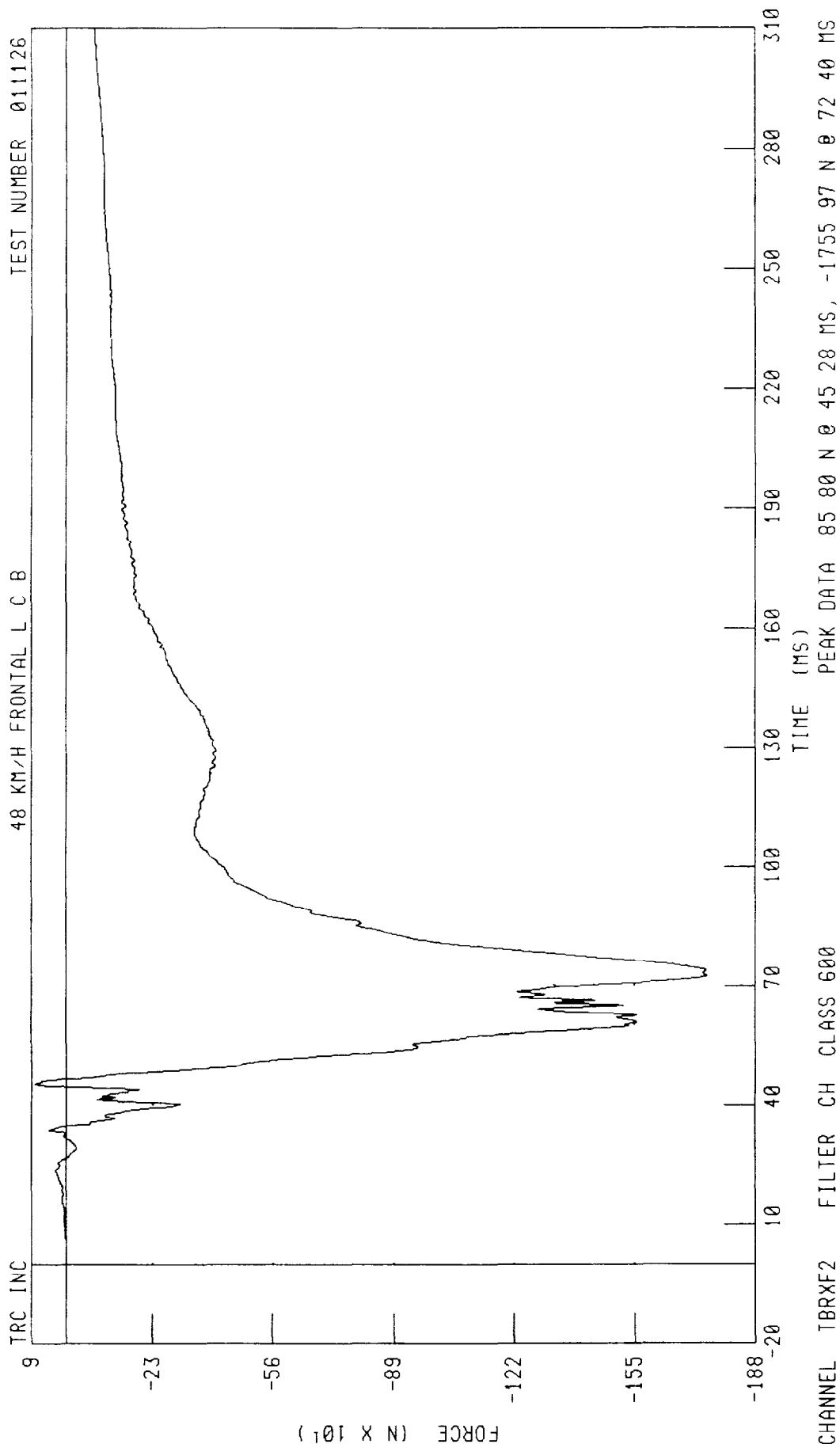
CHANNEL ANLXM2 FILTER CH CLASS 600

PEAK DATA 3 22 N M 14 24 MS, -282 75 N M 70 80 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
PASSENGER LEFT LOWER TIBIA MOMENT ABOUT Y AXIS

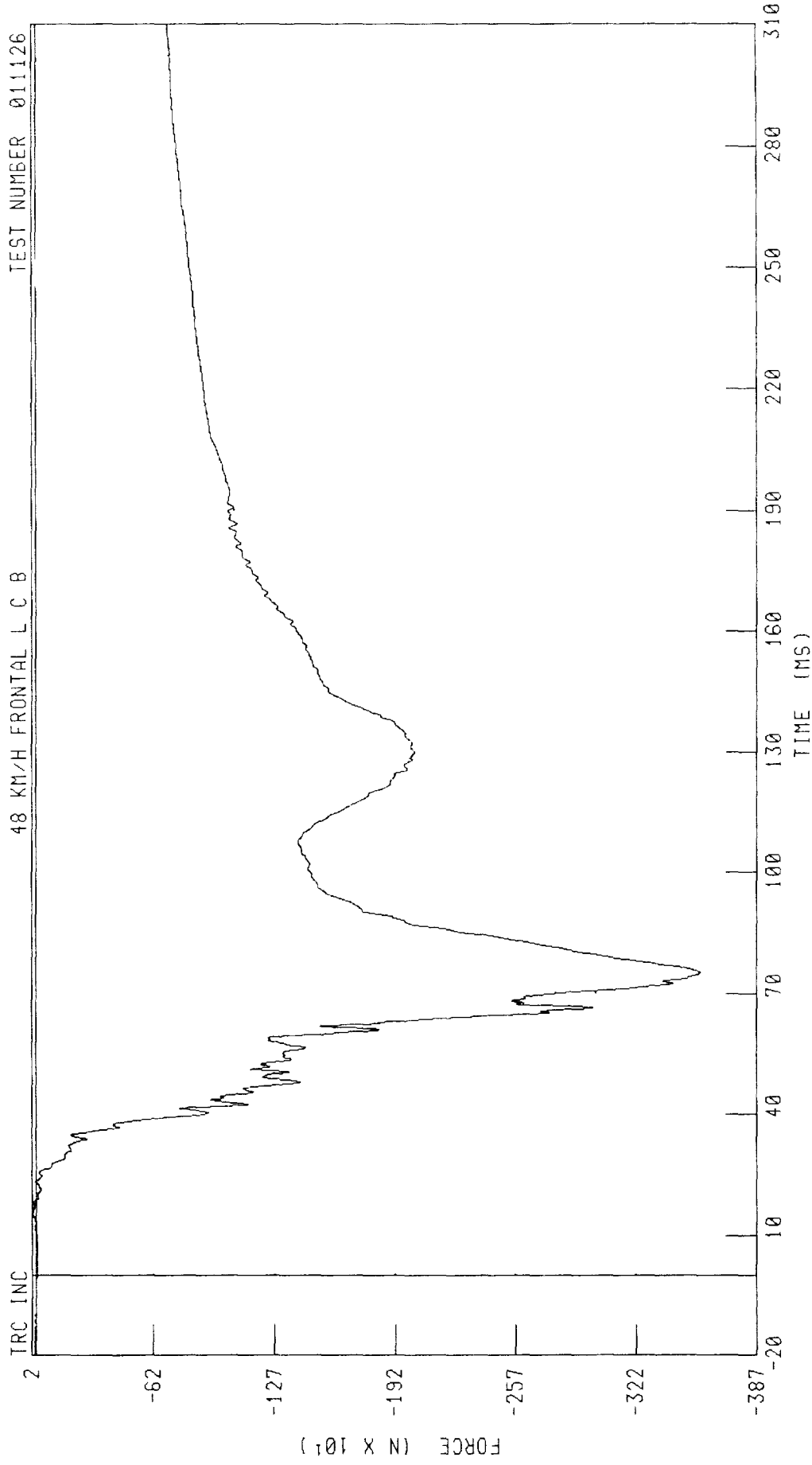


2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
PASSENGER RIGHT UPPER TIBIA X-AXIS FORCE



2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

PASSENGER RIGHT UPPER TIBIA Z-AXIS FORCE



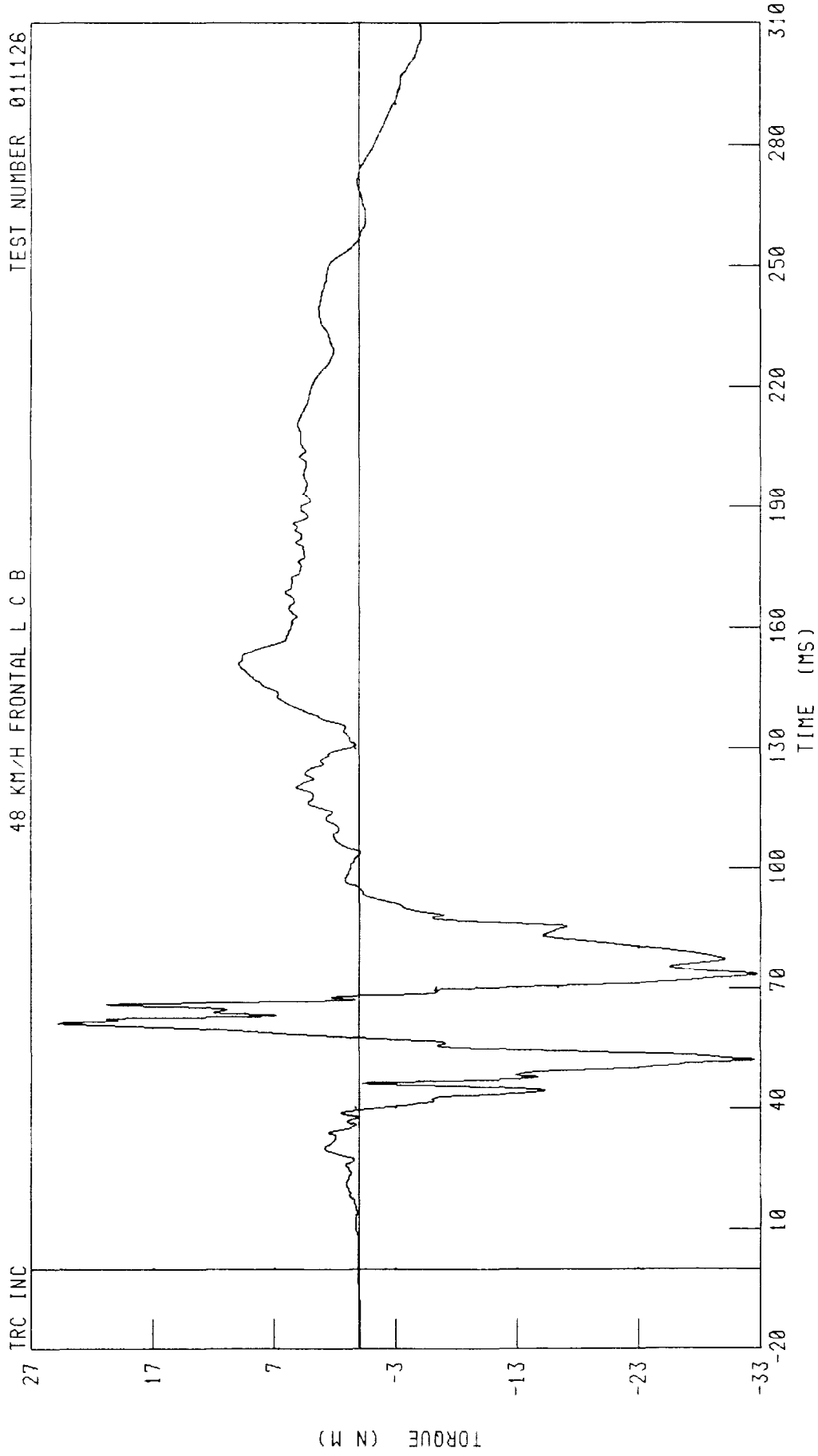
CHANNEL TBRZF2 FILTER CH CLASS 600 PEAK DATA 19 23 N @ 16 16 MS, -3575 87 N @ 75 28 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

PASSENGER RIGHT UPPER TIBIA MOMENT ABOUT X AXIS

48 KM/H FRONTAL L C B

TEST NUMBER 011126



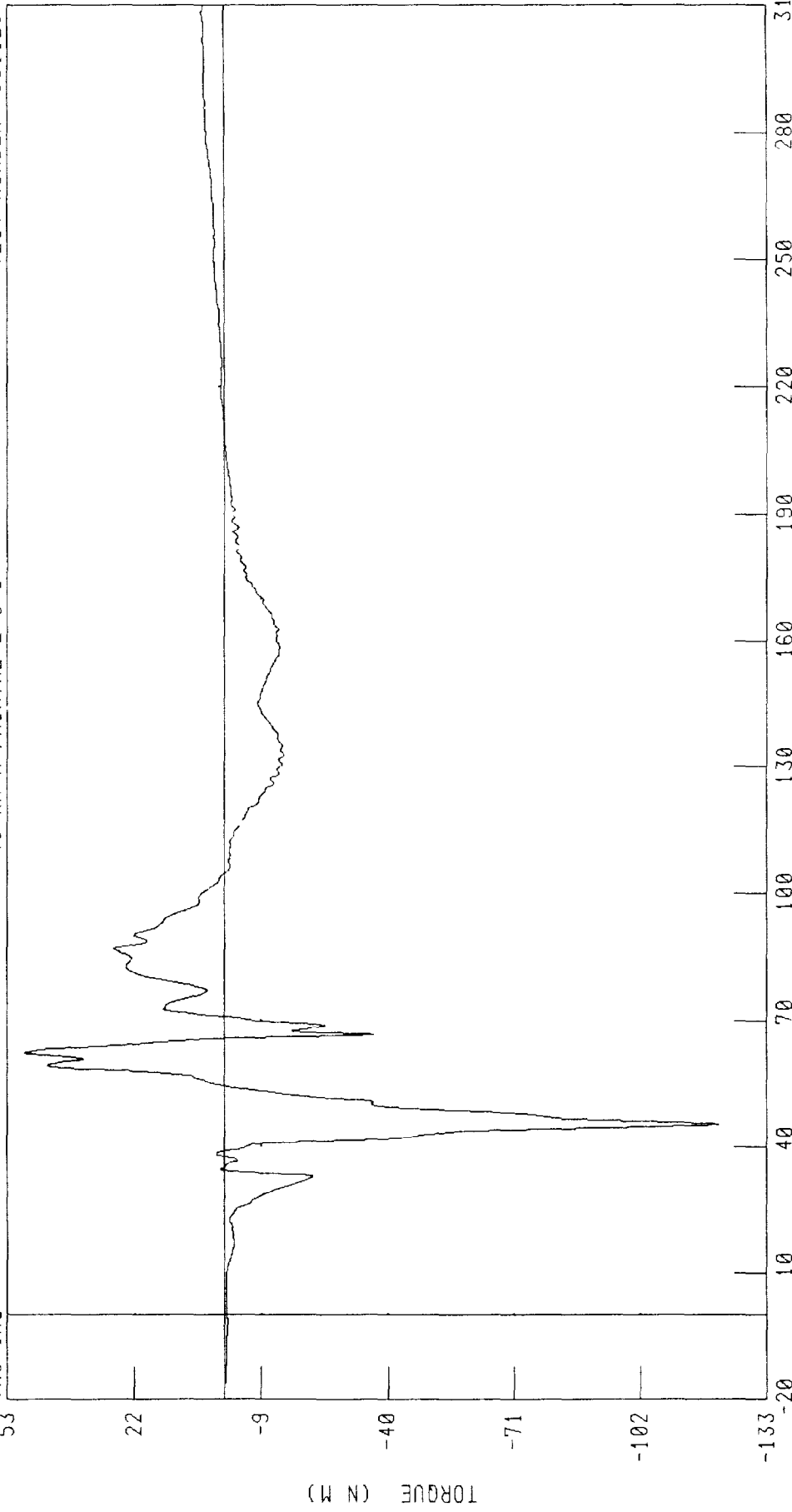
CHANNEL TBRX12 FILTER CH CLASS 600 PEAK DATA 24 84 N M @ 61 28 MS, -32 77 N M @ 73 44 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
PASSENGER RIGHT UPPER TIBIA MOMENT ABOUT Y AXIS

48 KM/H FRONTAL L C B

TRC INC

53



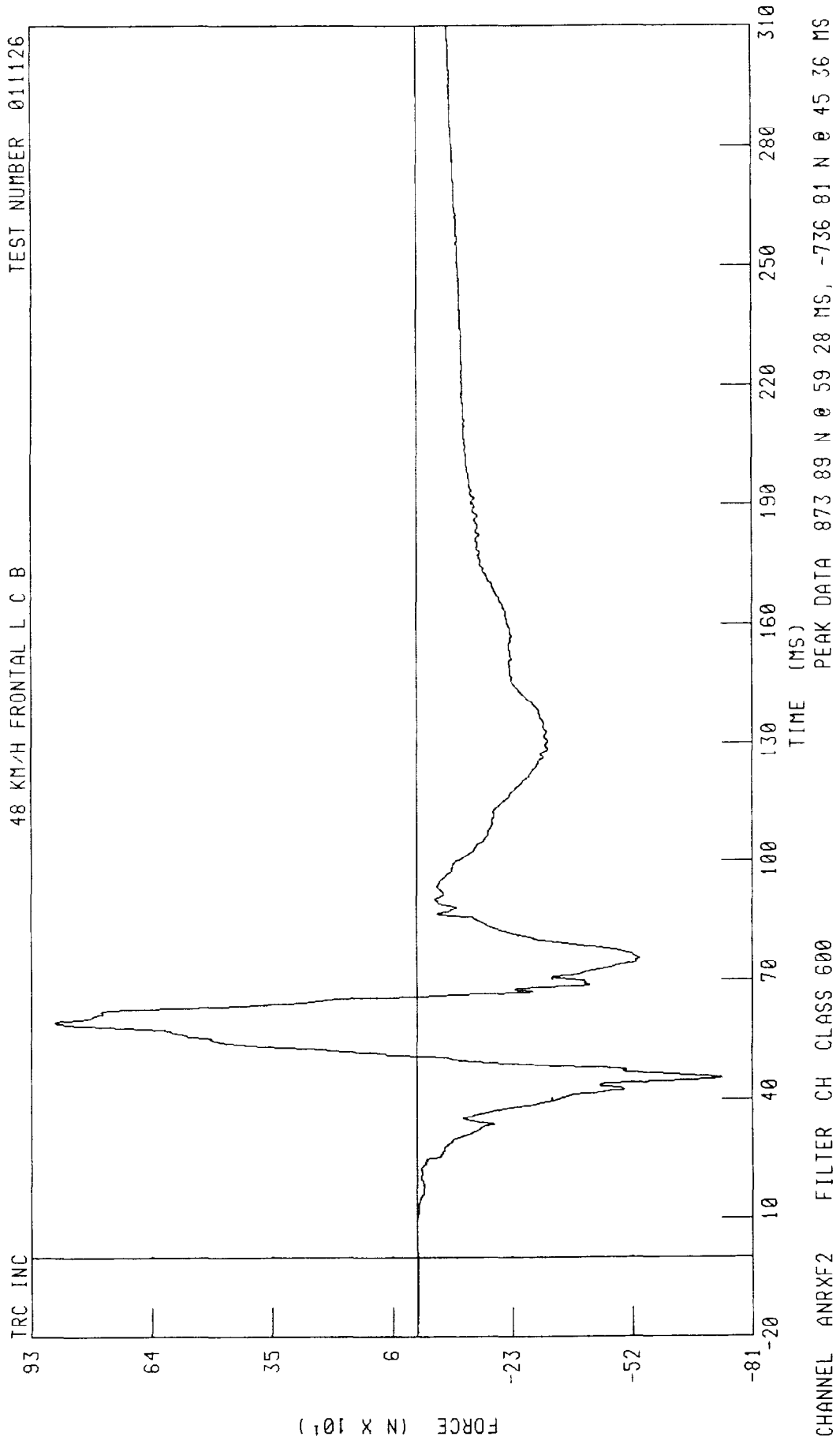
TIME (MS)

PEAK DATA 48 98 N M @ 62 24 MS, -121 27 N M @ 45 28 MS

CHANNEL TBRYM2 FILTER CH CLASS 600

TEST NUMBER 011126

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
PASSENGER RIGHT LOWER TIBIA X-AXIS FORCE

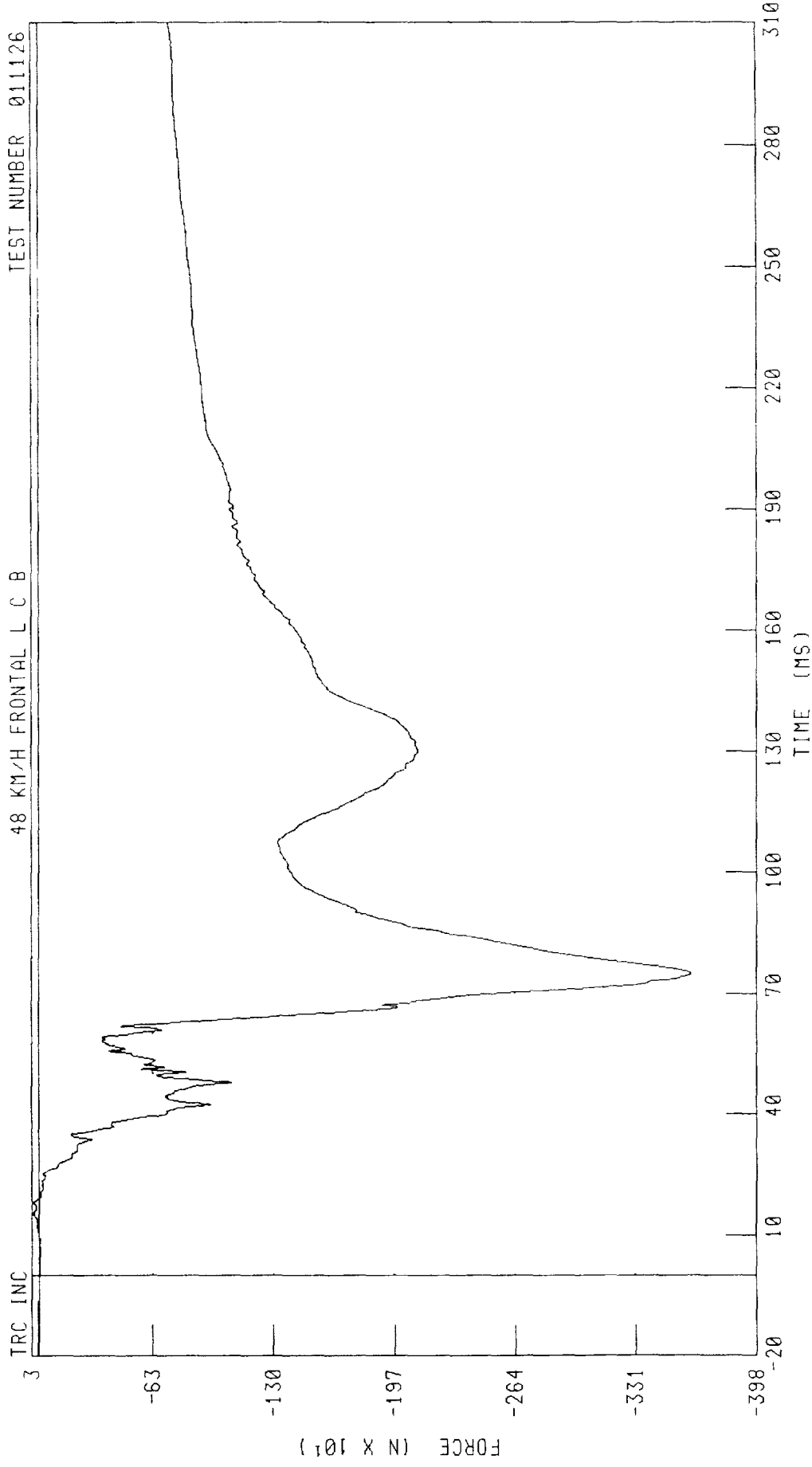


2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

PASSENGER RIGHT LOWER TIBIA Z-AXIS FORCE

48 KM/H FRONTAL L C B

TEST NUMBER 011126



CHANNEL ANRZF2 FILTER CH CLASS 600

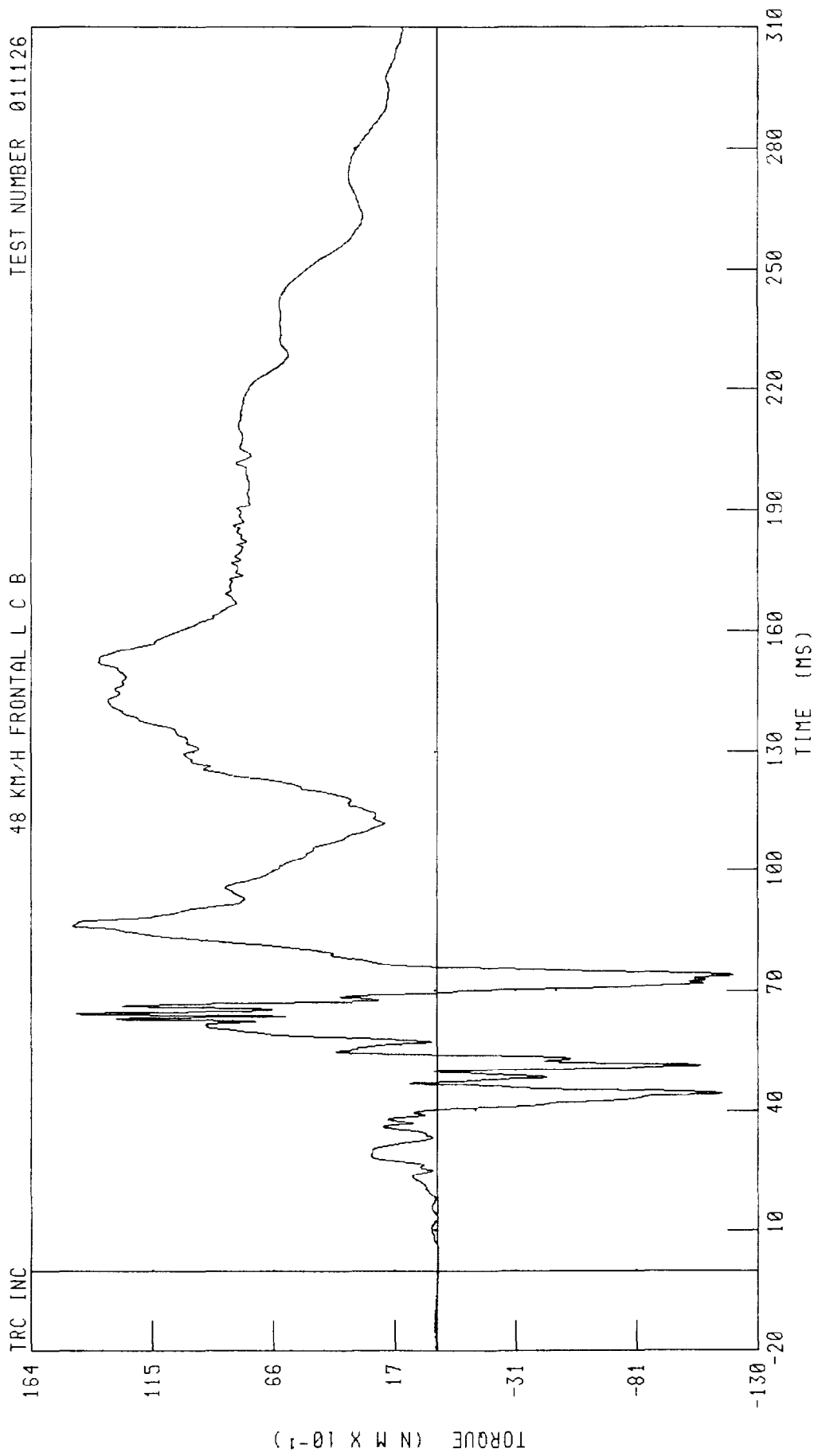
PEAK DATA 33 87 N @ 18 16 MS, -3621 01 N @ 74 88 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

PASSENGER RIGHT LOWER TIBIA MOMENT ABOUT X AXIS

48 KM/H FRONTAL L C B

TEST NUMBER 011126



TIME (MS)

PEAK DATA 14 73 N M @ 86 16 MS, -12 01 N M @ 73 68 MS

CHANNEL ANRXM2 FILTER CH CLASS 600

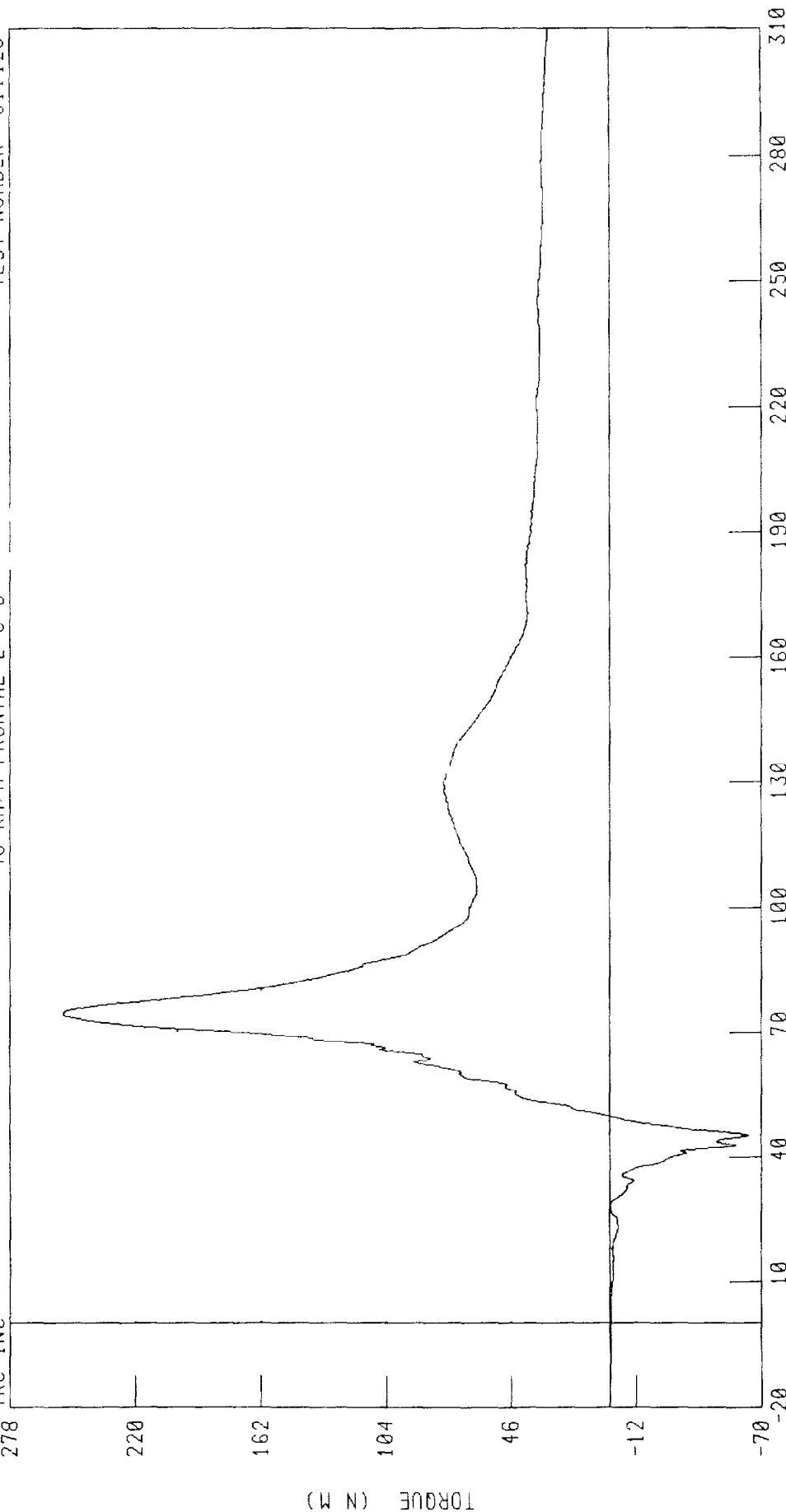
2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

PASSENGER RIGHT LOWER TIBIA MOMENT ABOUT Y AXIS

48 KM/H FRONTAL L C B

TEST NUMBER 011126

TRC INC



TIME (MS)

PEAK DATA 253 14 N M 0 74 16 MS, -64 05 N M 0 45 20 MS

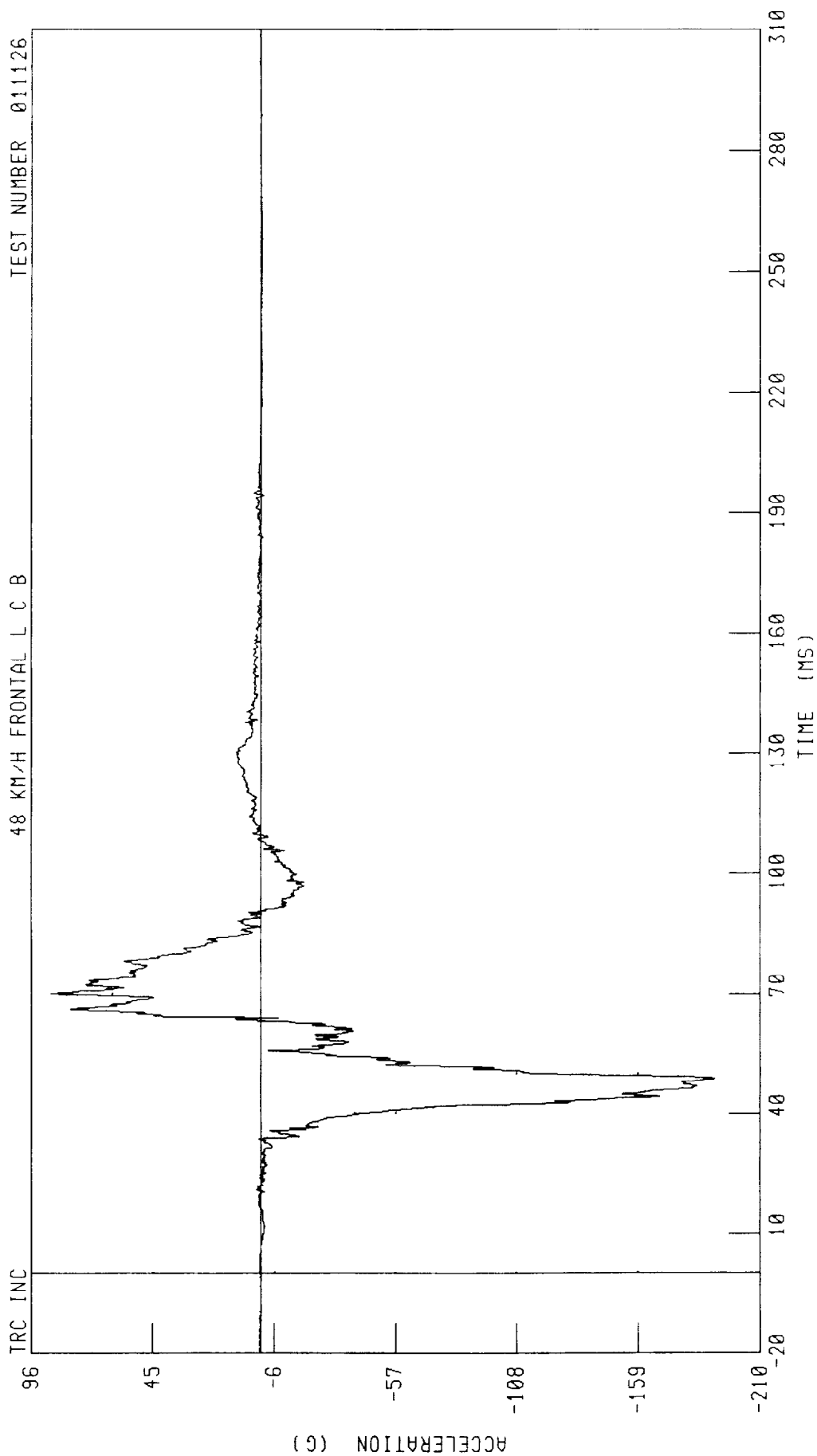
CHANNEL ANR1M2 FILTER CH CLASS 600

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

PASSENGER LEFT FOOT HEEL X-AXIS ACCELERATION

48 KM/H FRONTAL L C B

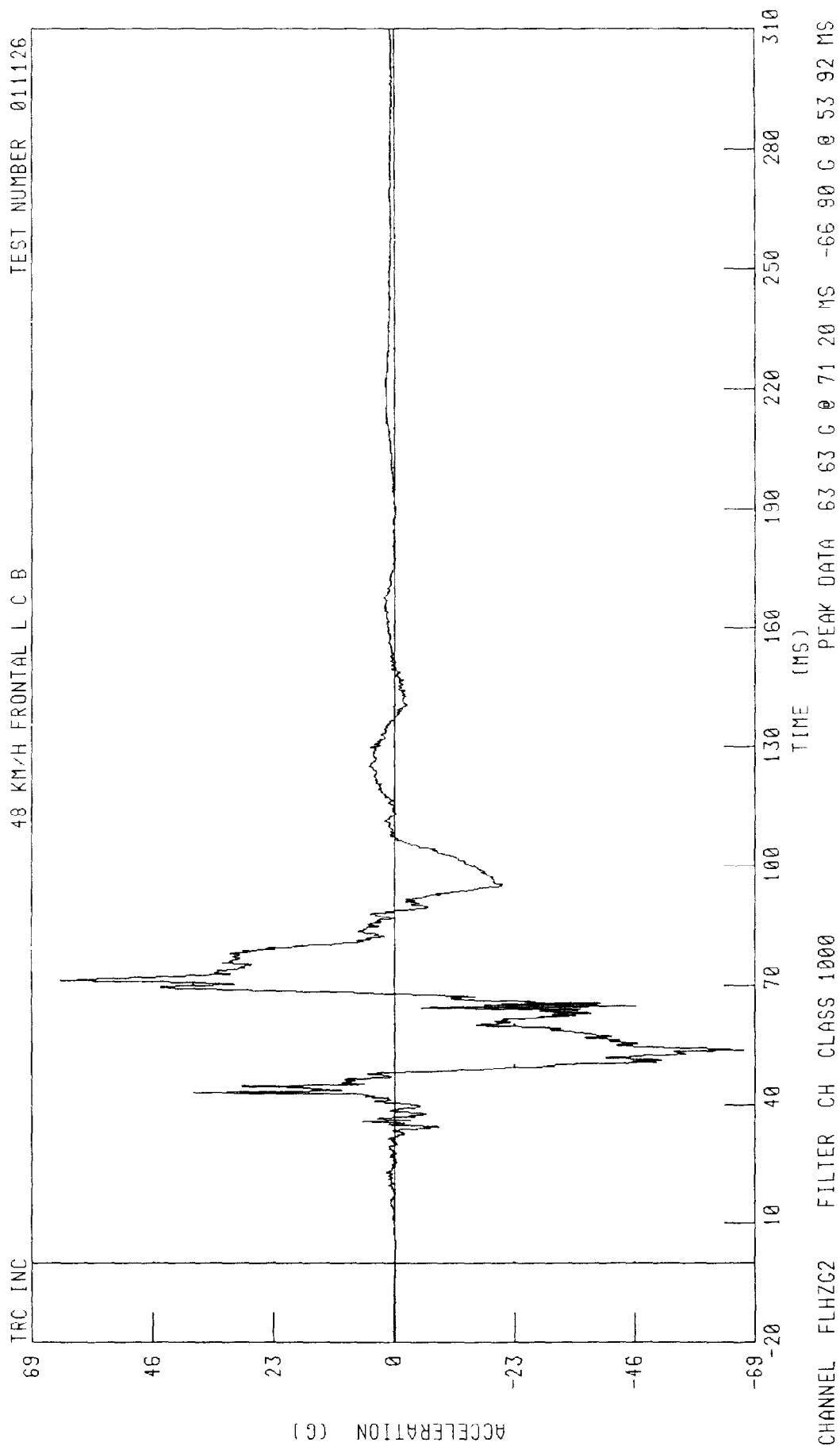
TEST NUMBER 011126



CHANNEL FLHXC2 FILTER CH CLASS 1000

PEAK DATA 88 06 C @ 70 16 MS, -191 16 G @ 48 72 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
PASSENGER LEFT FOOT HEEL Z-AXIS ACCELERATION

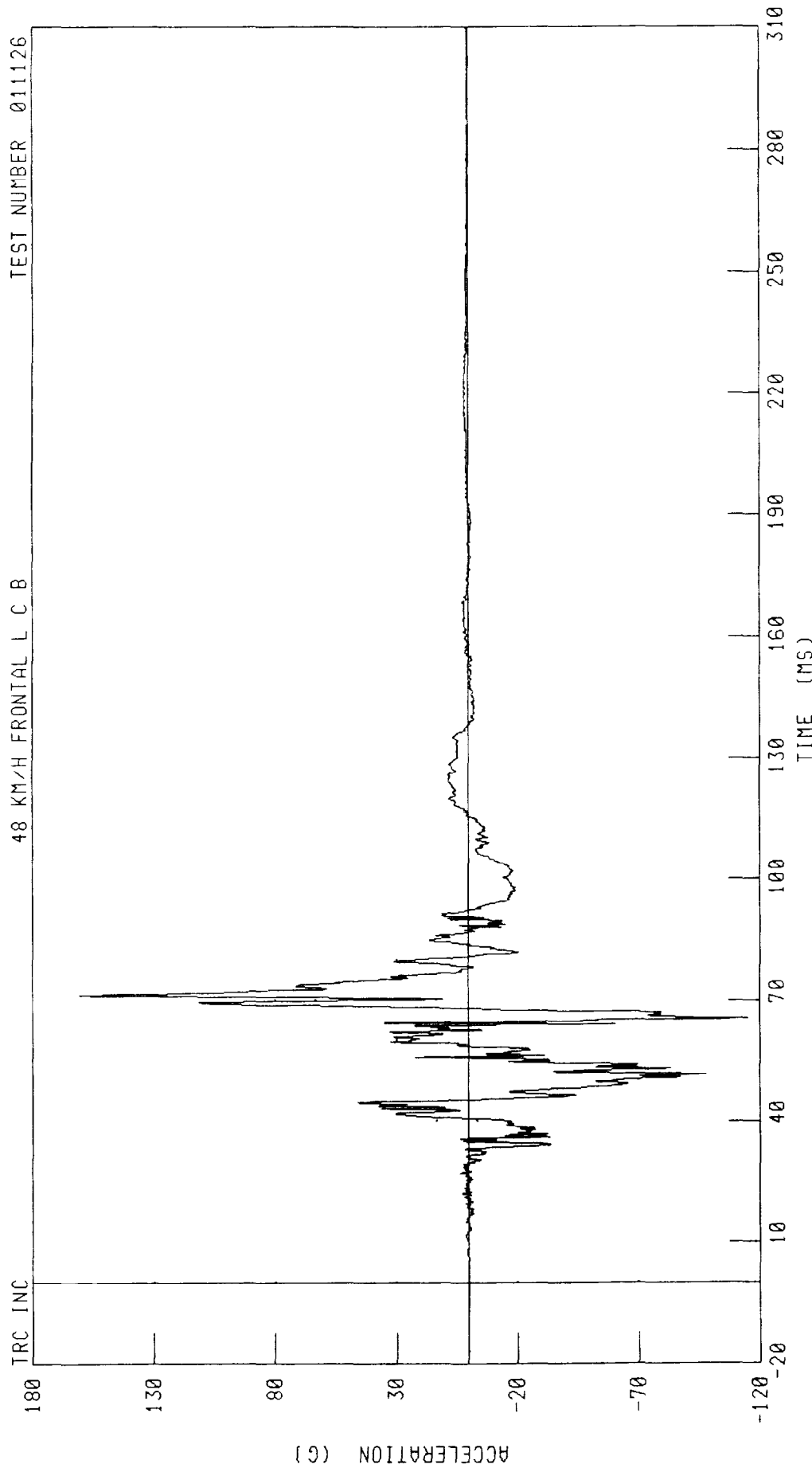


2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

PASSENGER LEFT FOOT TOE Z-AXIS ACCELERATION

48 KM/H FRONTAL L C B

TEST NUMBER 011126



CHANNEL FLIZG2 FILTER CH CLASS 1000

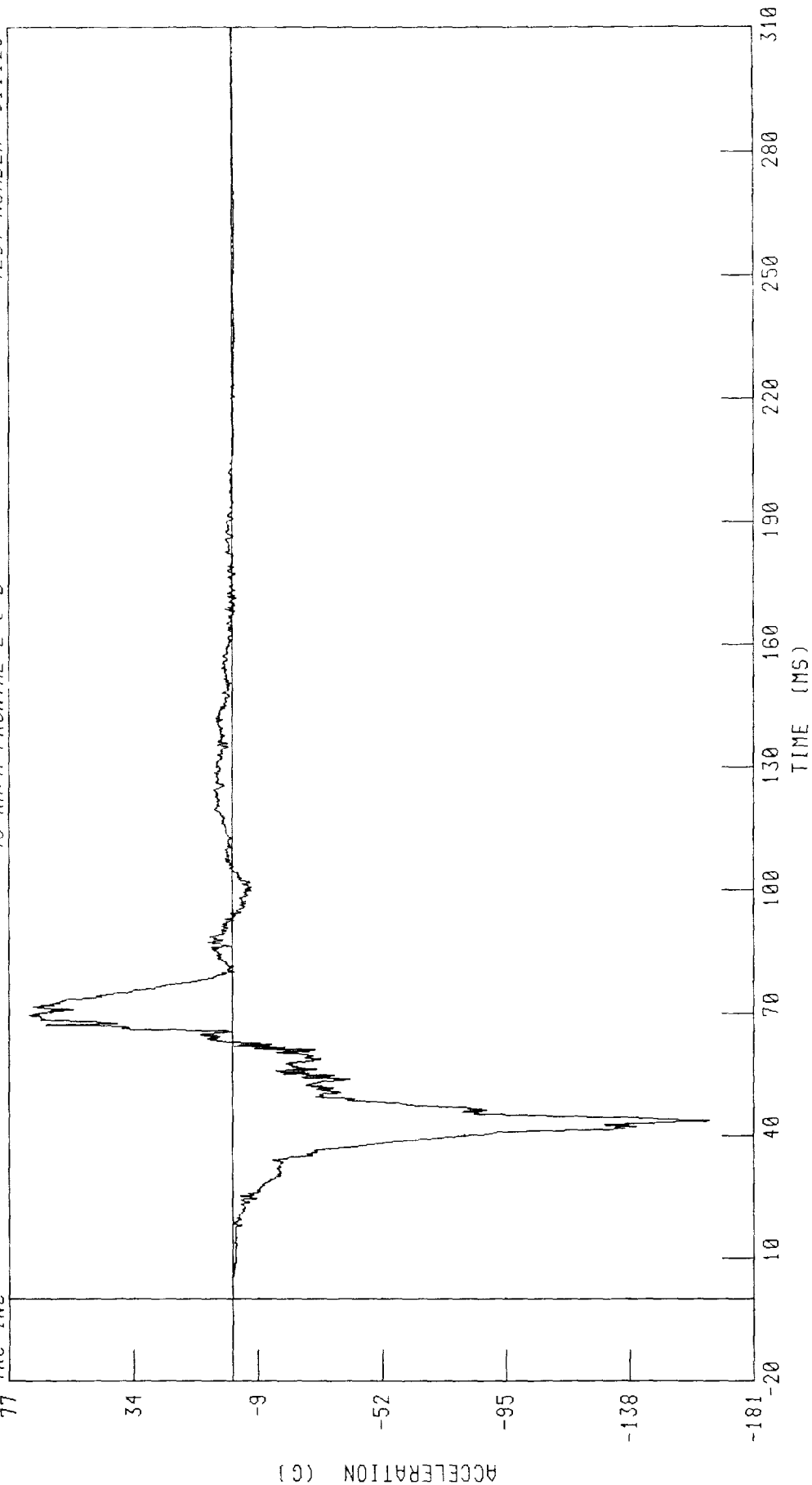
PEAK DATA 160 61 G @ 71 44 MS, -114 79 G @ 65 52 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
PASSENGER RIGHT FOOT HEEL X-AXIS ACCELERATION

TEST NUMBER 011126

48 KM/H FRONTAL L C B

IRC INC



CHANNEL FRHXG2 FILTER CH CLASS 1000

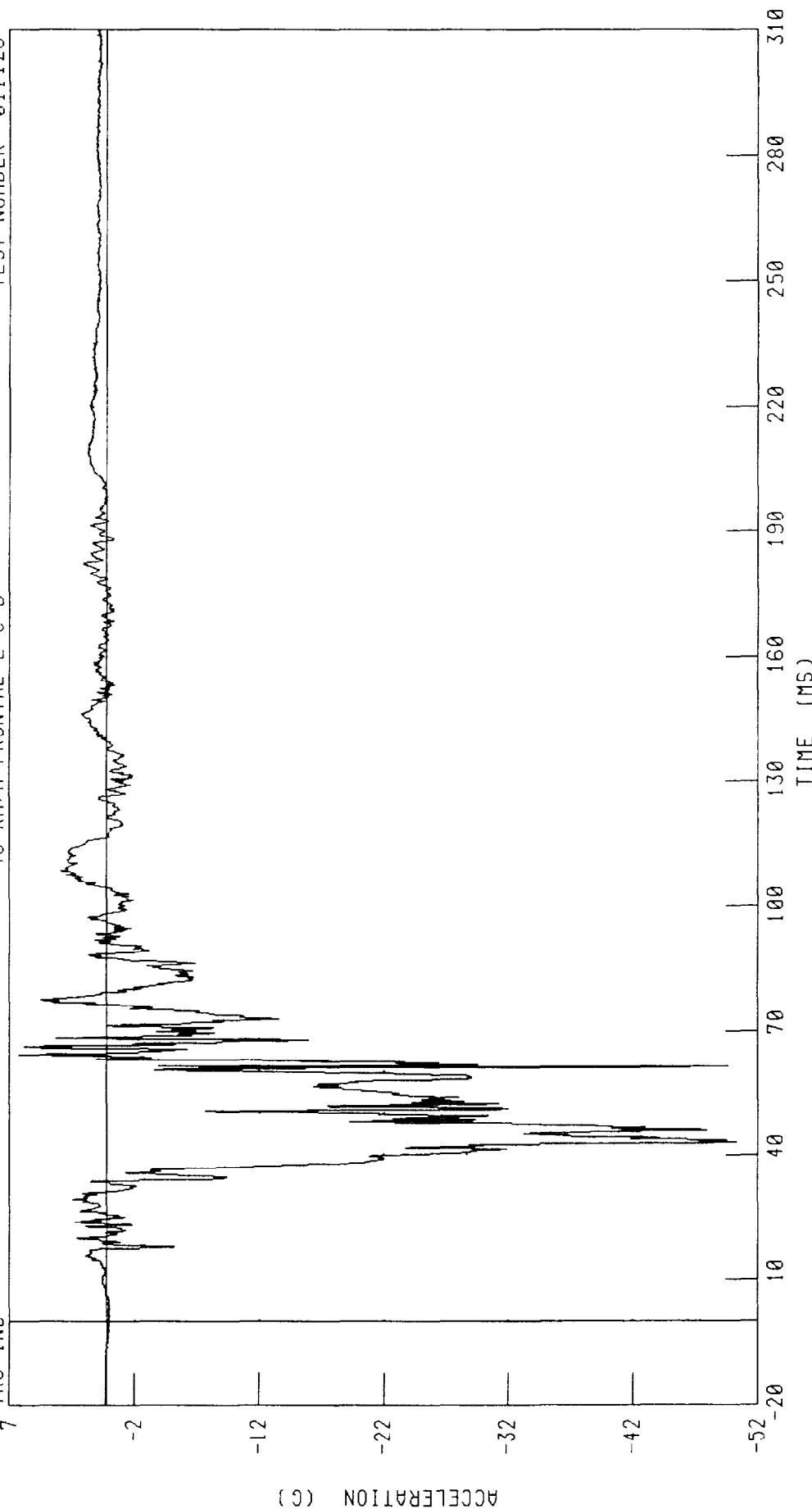
PEAK DATA 70 21 G @ 69 60 MS, -165 88 G @ 43 60 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

PASSENGER RIGHT FOOT HEEL Z-AXIS ACCELERATION

48 KM/H FRONTAL L C B

TEST NUMBER 011126

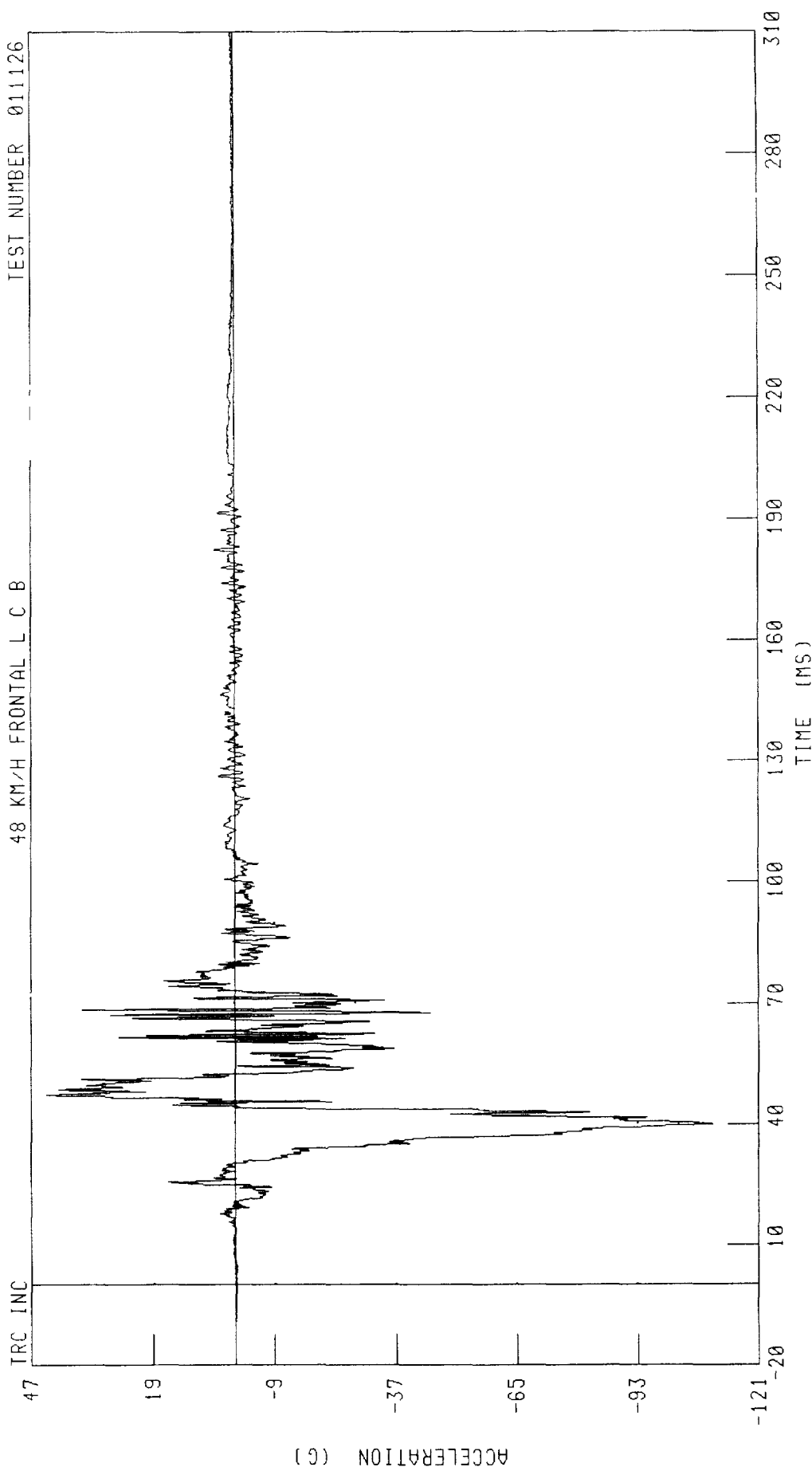


CHANNEL FRHZG2 FILTER CH CLASS 1000 PEAK DATA 7 09 G @ 64 32 MS, -50 55 G @ 42 96 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
PASSENGER RIGHT FOOT TOE Z-AXIS ACCELERATION

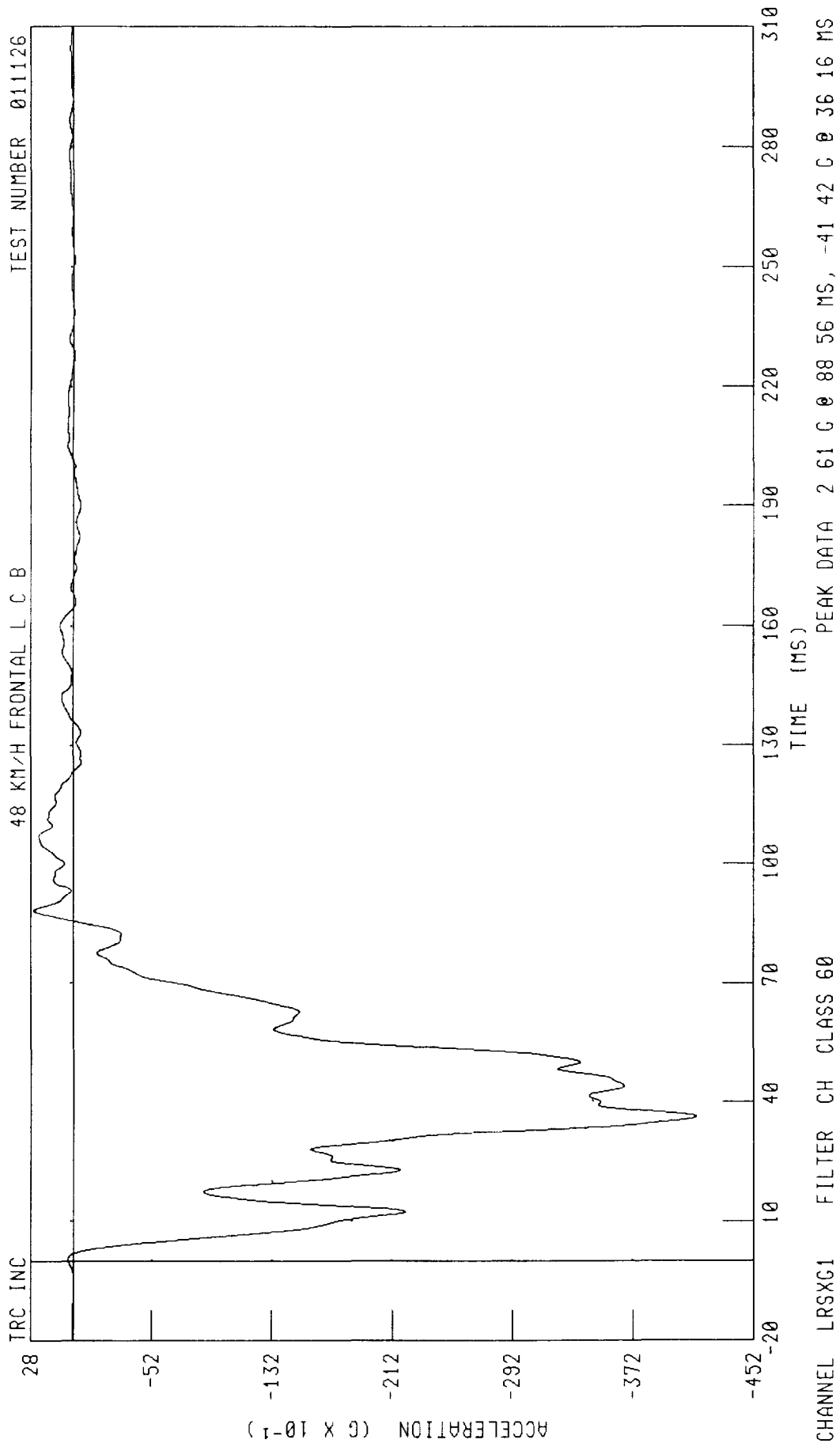
48 KM/H FRONTAL L C B

TEST NUMBER 011126



CHANNEL FRTZG2 FILTER CH CLASS 1000
PEAK DATA 43 60 C 47 28 MS, -110 43 C 40 00 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
LEFT REAR SEAT CROSSMEMBER X-AXIS ACCELERATION

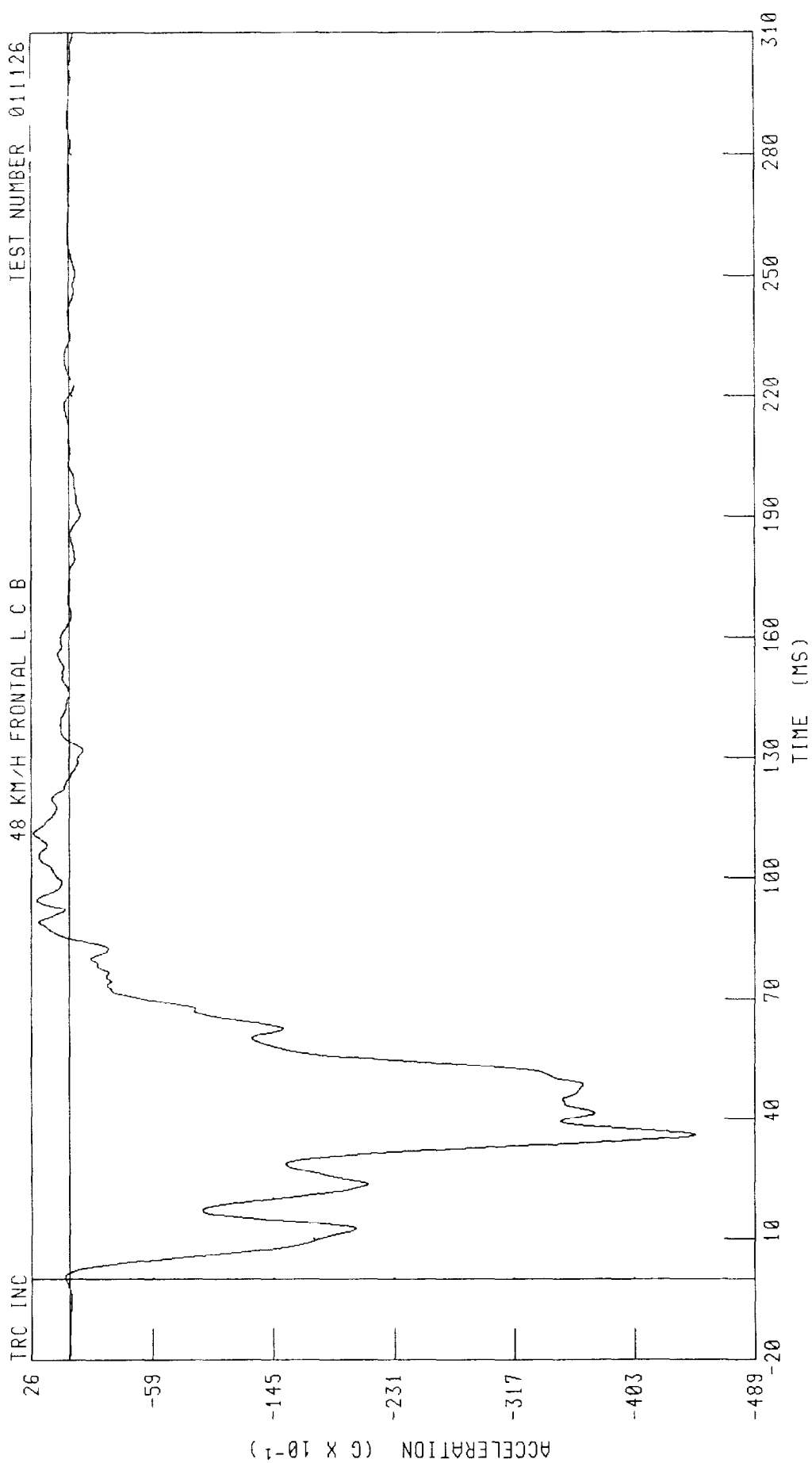


2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

RIGHT REAR SEAT CROSSMEMBER X-AXIS ACCELERATION

48 KM/H FRONTAL L C B

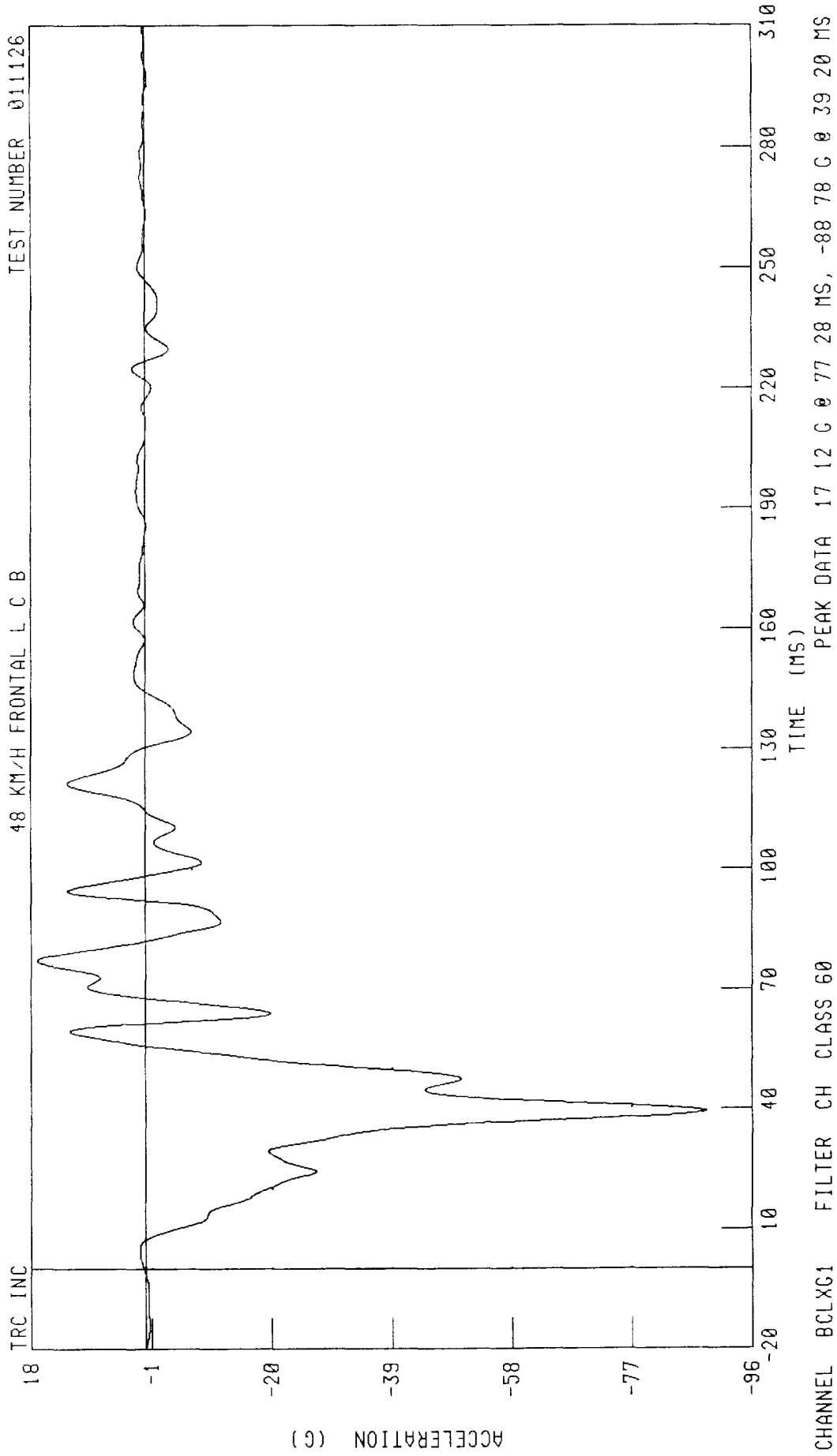
TEST NUMBER 011126



PEAK DATA 2 54 C 0 111 36 MS, -44 68 C 0 35 92 MS

CHANNEL RRSX01 FILTER CH CLASS 60

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
FRONT BRAKE CALIPER LEFT X-AXIS ACCELERATION



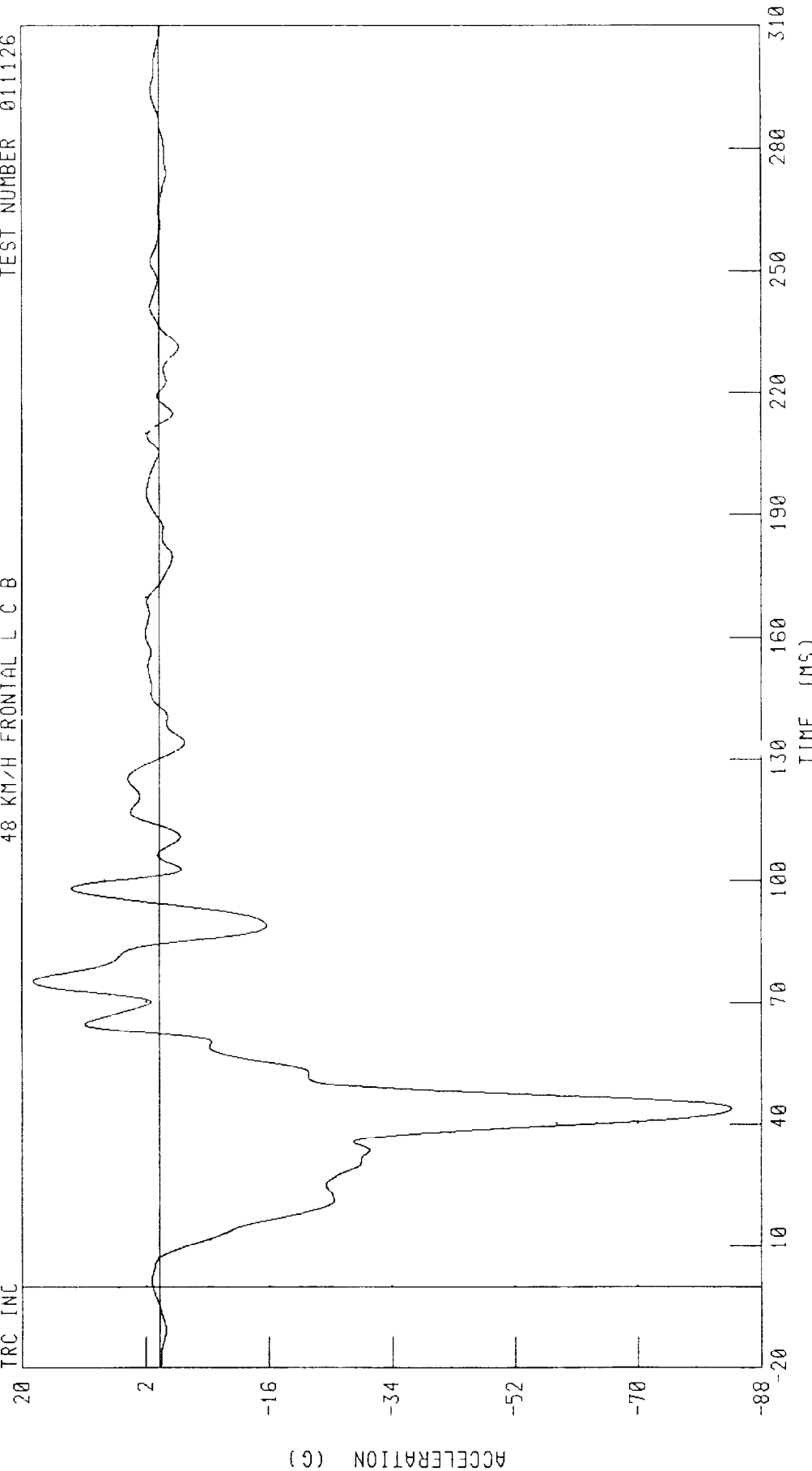
2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

FRONT BRAKE CALIPER RIGHT X-AXIS ACCELERATION

48 KM/H FRONTAL L C B

TEST NUMBER 011126

TRC INC



CHANNEL BCRXG1 FILTER CH CLASS 60

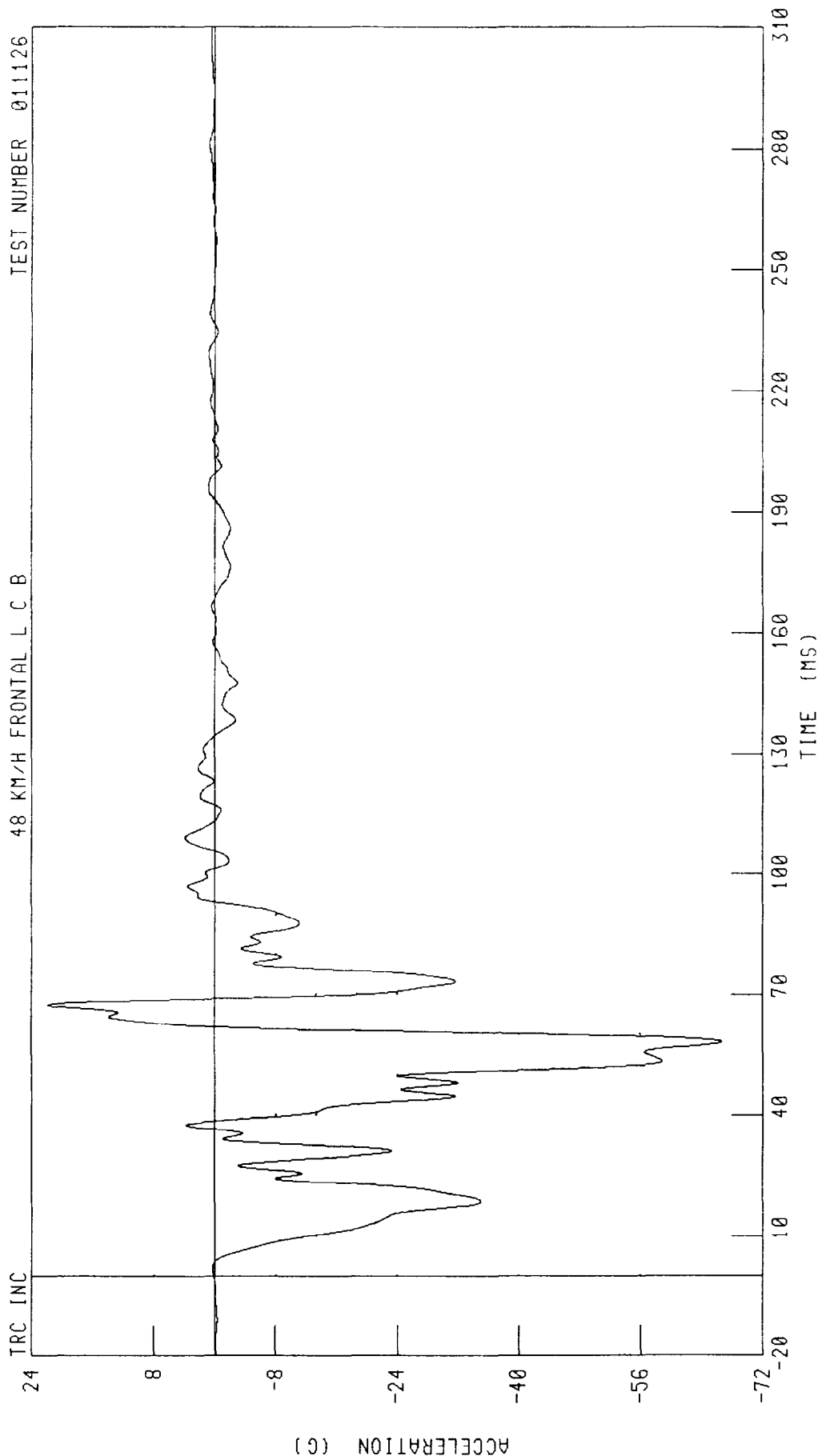
PEAK DATA 18 37 G @ 75 12 MS, -83 69 G @ 43 68 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

DASH PANEL CENTER X-AXIS ACCELERATION

48 KM/H FRONTAL L C B

TEST NUMBER 011126

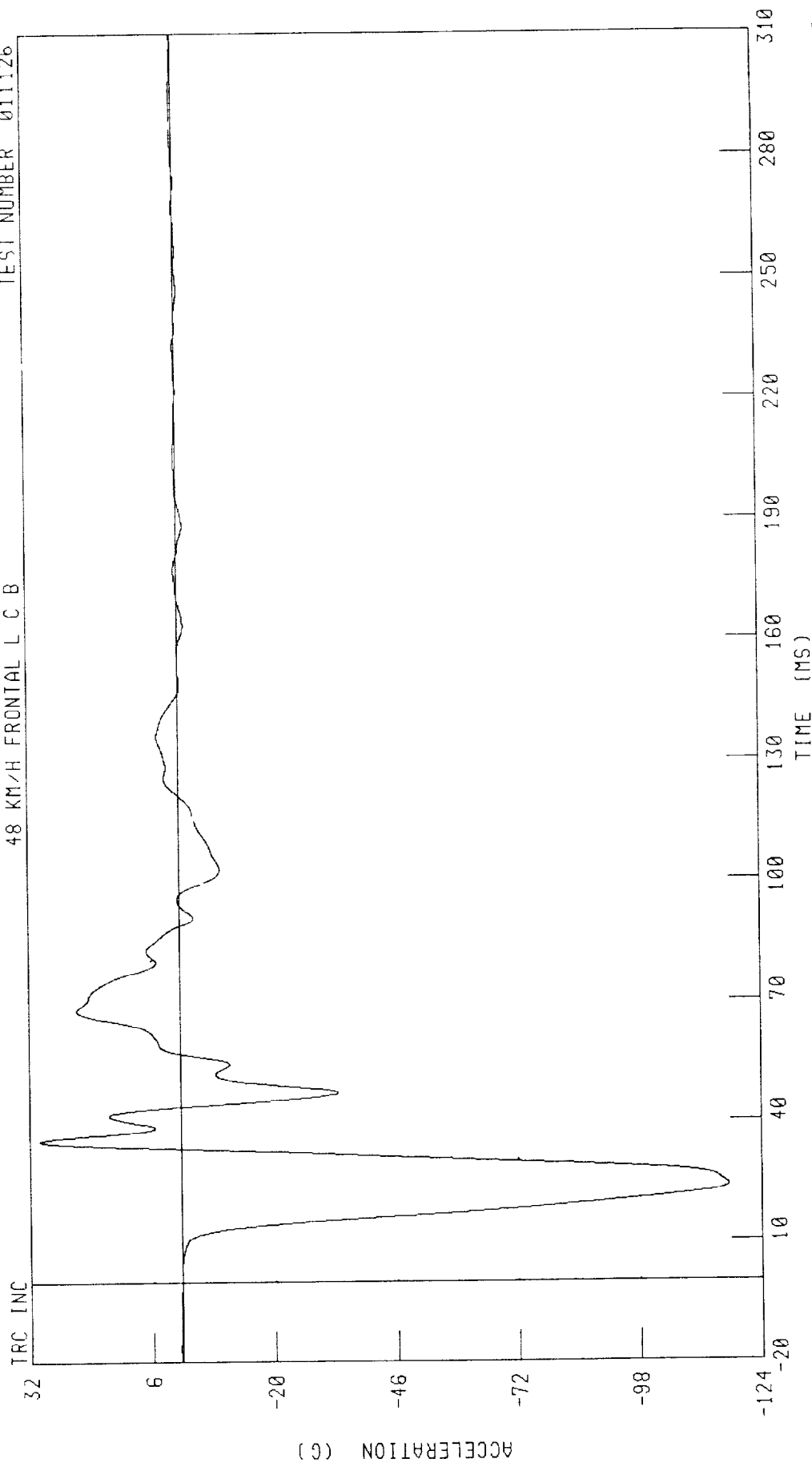


CHANNEL OPCXC1 FILTER CH CLASS 60

PEAK DATA 21 90 G @ 67 52 MS, -66 76 G @ 58 16 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
ENGINE TOP X-AXIS ACCELERATION
48 KM/H FRONTAL L C B

TEST NUMBER 011126



PEAK DATA 29 98 G @ 35 12 MS, -117 02 G @ 23 52 MS

CHANNEL ENG1 FILTER CH CLASS 60

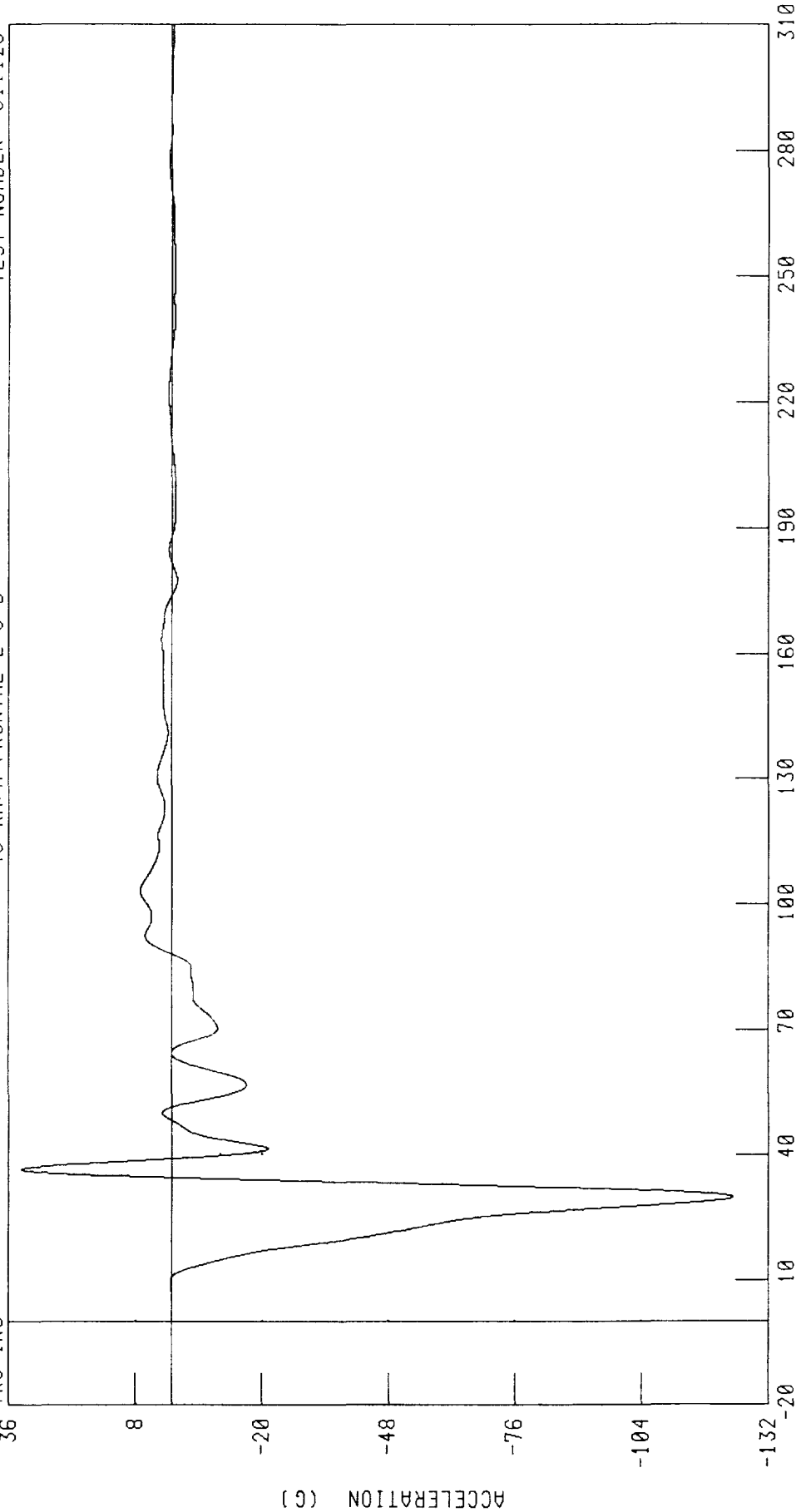
2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

ENGINE BOTTOM X-AXIS ACCELERATION

48 KM/H FRONTAL L C B

TEST NUMBER 011126

TRC INC



TIME (MS)

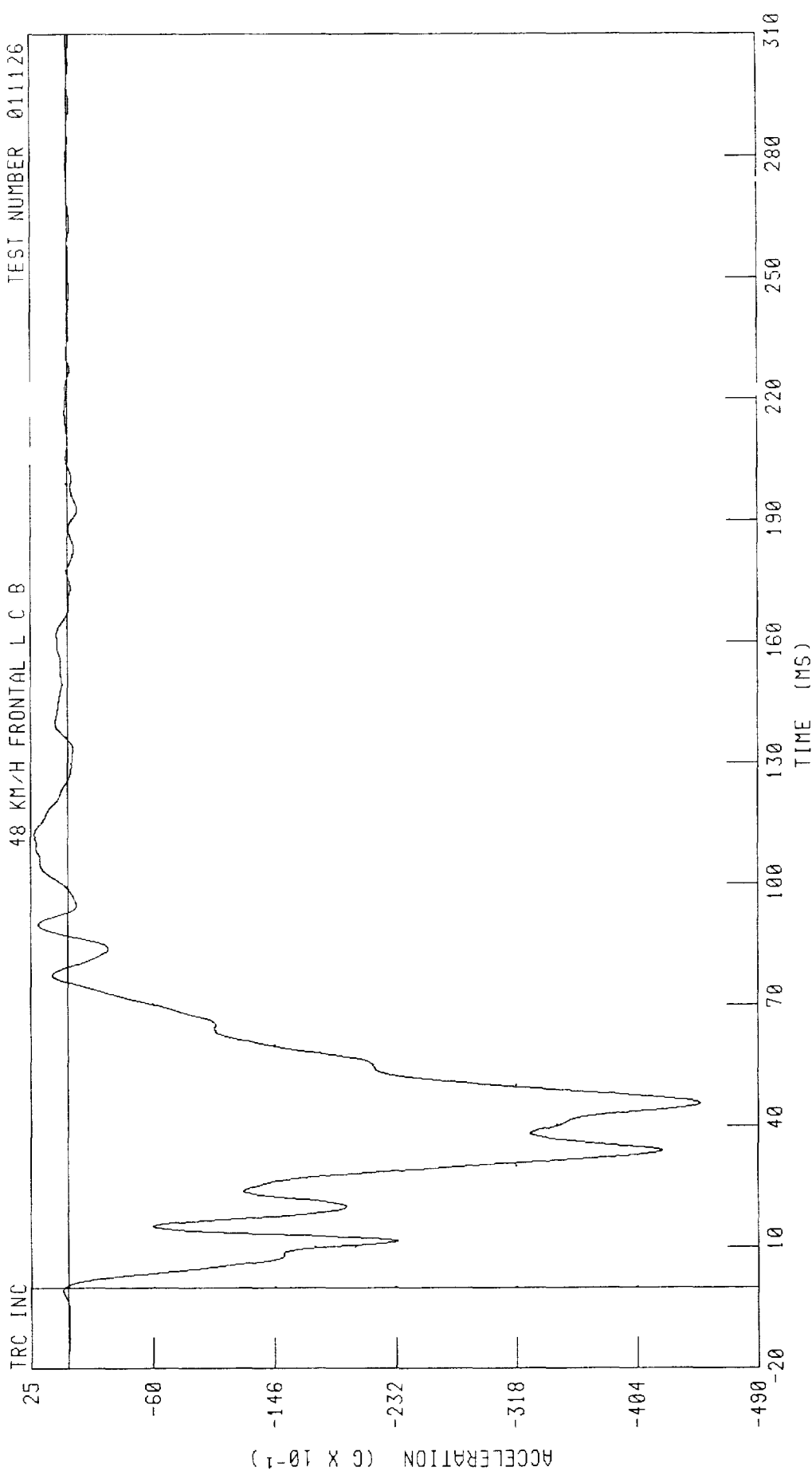
CHANNEL ENCXC2 FILTER CH CLASS 60 PEAK DATA 33 27 0 36 48 MS, -124 26 0 29 92 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

TOEPAN NEXT TO ACCELERATOR X-AXIS ACCELERATION

48 KM/H FRONTAL L C B

TEST NUMBER 011126



PEAK DATA 2 38 G @ 112 64 MS -44 90 G @ 45 52 MS

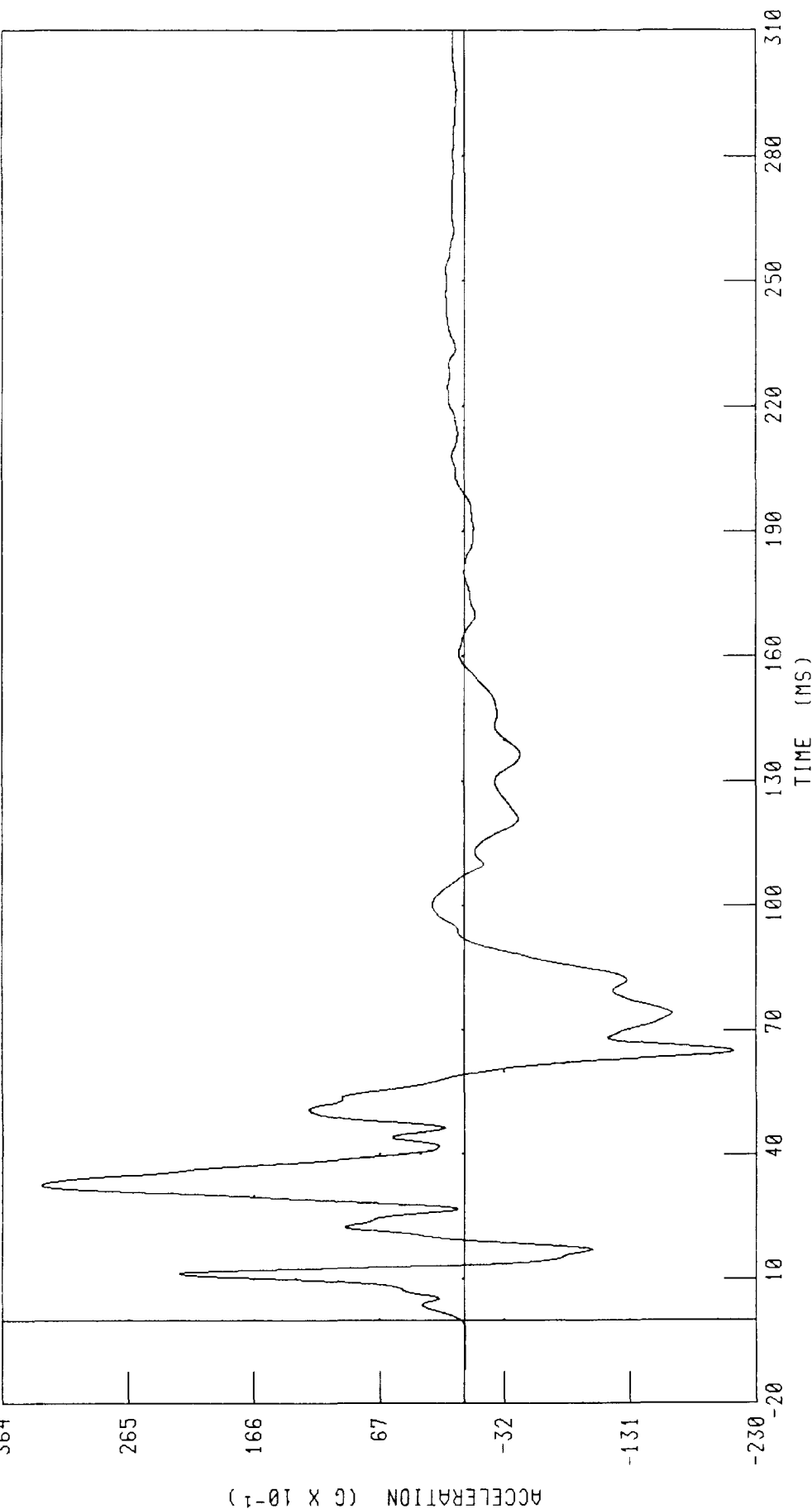
CHANNEL TPXG1 FILTER CH CLASS 60

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
 TOEPAN NEXT TO ACCELERATOR Z-AXIS ACCELERATION

TEST NUMBER 011126

48 KM/H FRONTAL L C B

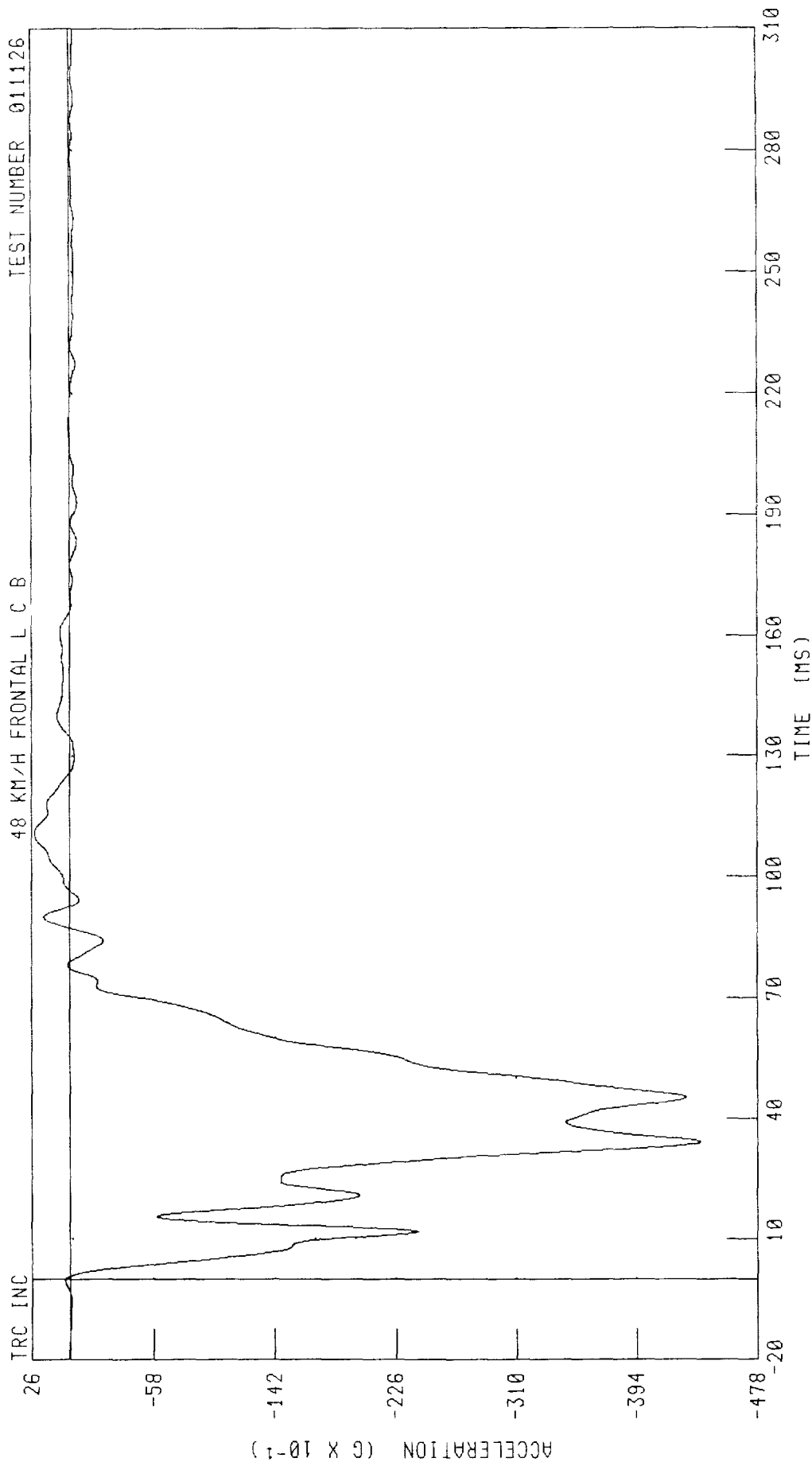
TRC INC



PEAK DATA 33 29 G 0 32 72 MS, -21 26 G 0 64 96 MS

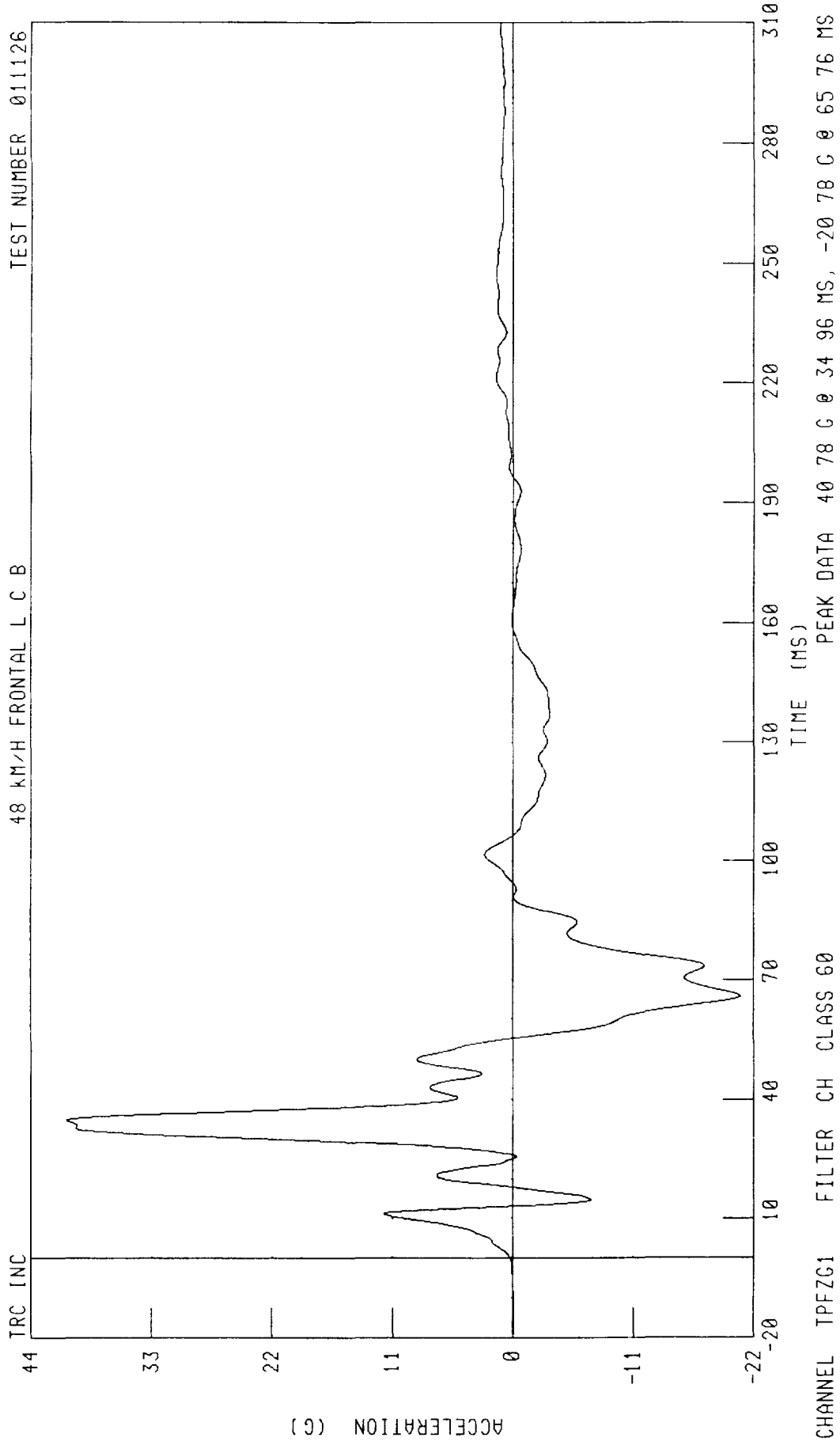
CHANNEL TPAZG1 FILTER CH CLASS 60

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
TOEPAN NEXT TO FOOTREST X-AXIS ACCELERATION



CHANNEL TPF01 FILTER CH CLASS 60 PEAK DATA 2 41 G @ 111 04 MS, -43 85 G @ 34 08 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
TOEPAN NEXT TO FOOTREST Z-AXIS ACCELERATION



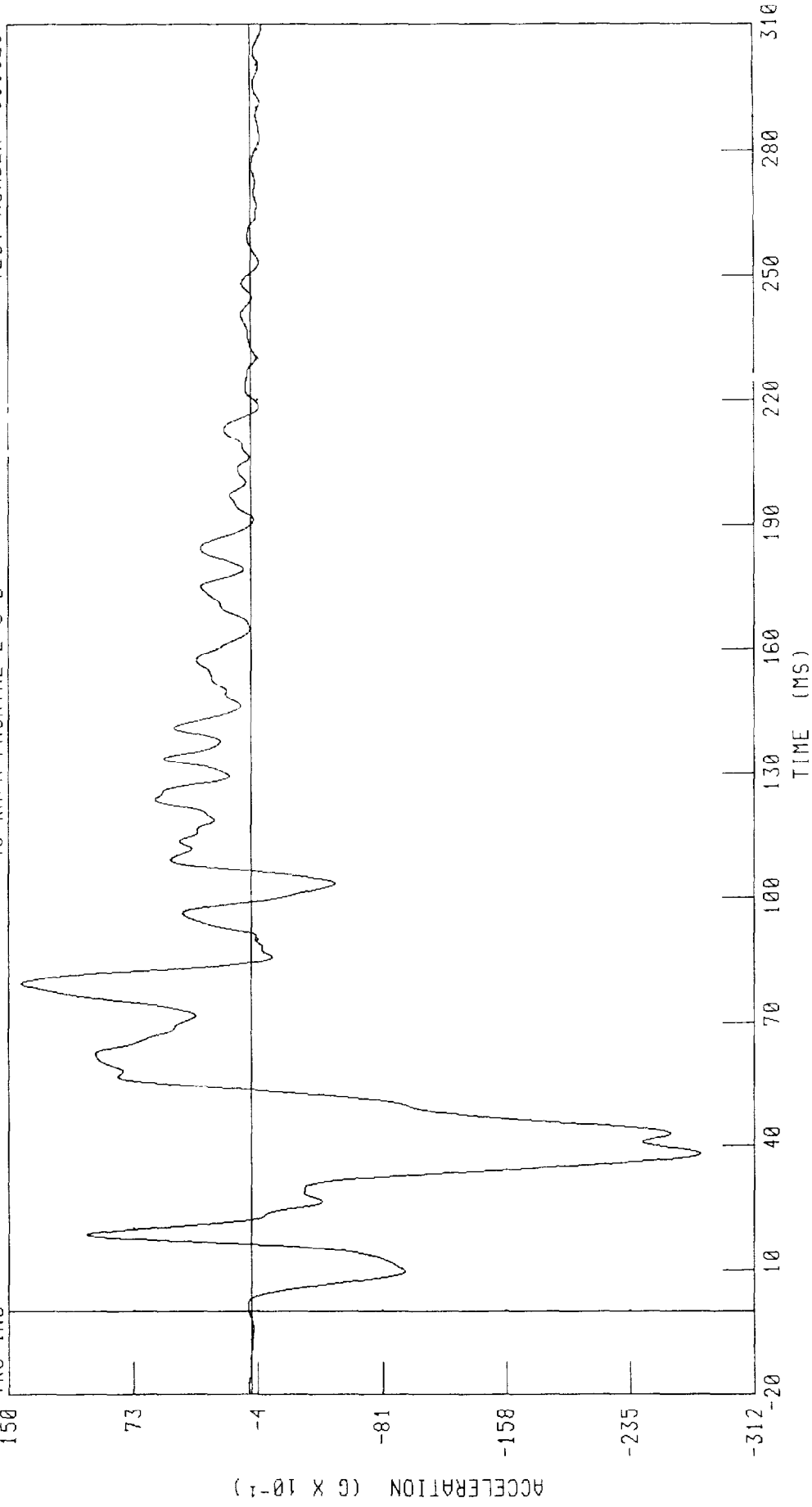
2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

REAR DECK Z-AXIS ACCELERATION

48 KM/H FRONTAL L C B

TEST NUMBER 011126

TRC INC



CHANNEL RDKZG1 FILTER CH CLASS 60 PEAK DATA 14 21 G @ 79 36 MS, -27 87 G @ 38 00 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

REAR COMPARTMENT CENTER X-AXIS ACCELERATION

48 KM/H FRONTAL L C B

TEST NUMBER 011126

TRC INC

34

-56

-146

-236

-326

-416

-506

ACCELERATION (G X 10⁻¹)

TIME (MS)

310

280

250

220

190

160

130

100

70

40

10

-20

CHANNEL RDCXC1 FILTER CH CLASS 60

PEAK DATA 3 14 G @ 89 04 MS, -46 43 G @ 35 60 MS

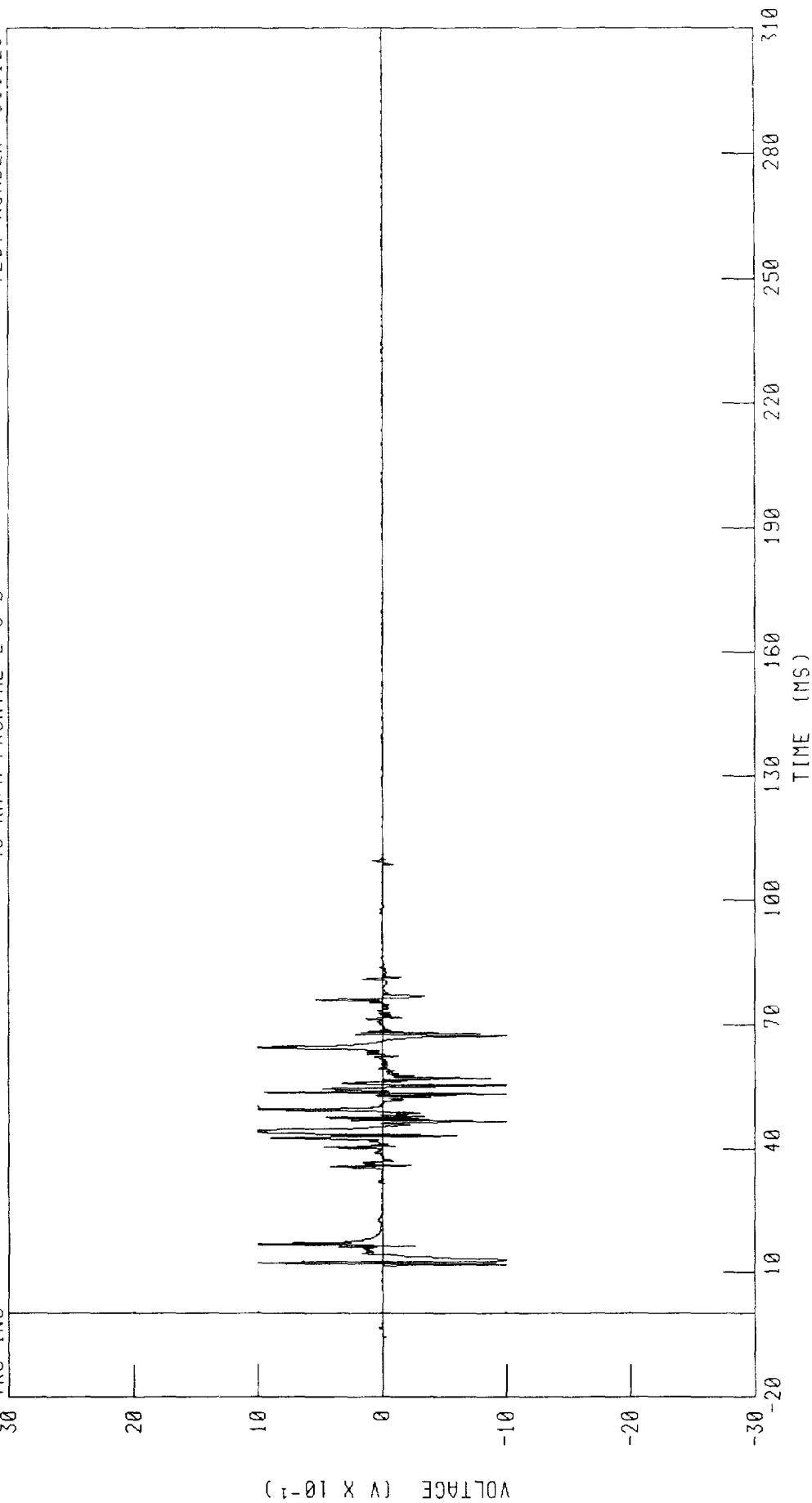
2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

DRIVER AIRBAG EVENT

48 KM/H FRONTAL L C B

TEST NUMBER 011126

TRC INC



CHANNEL DABET1 FILTER CH CLASS 1000

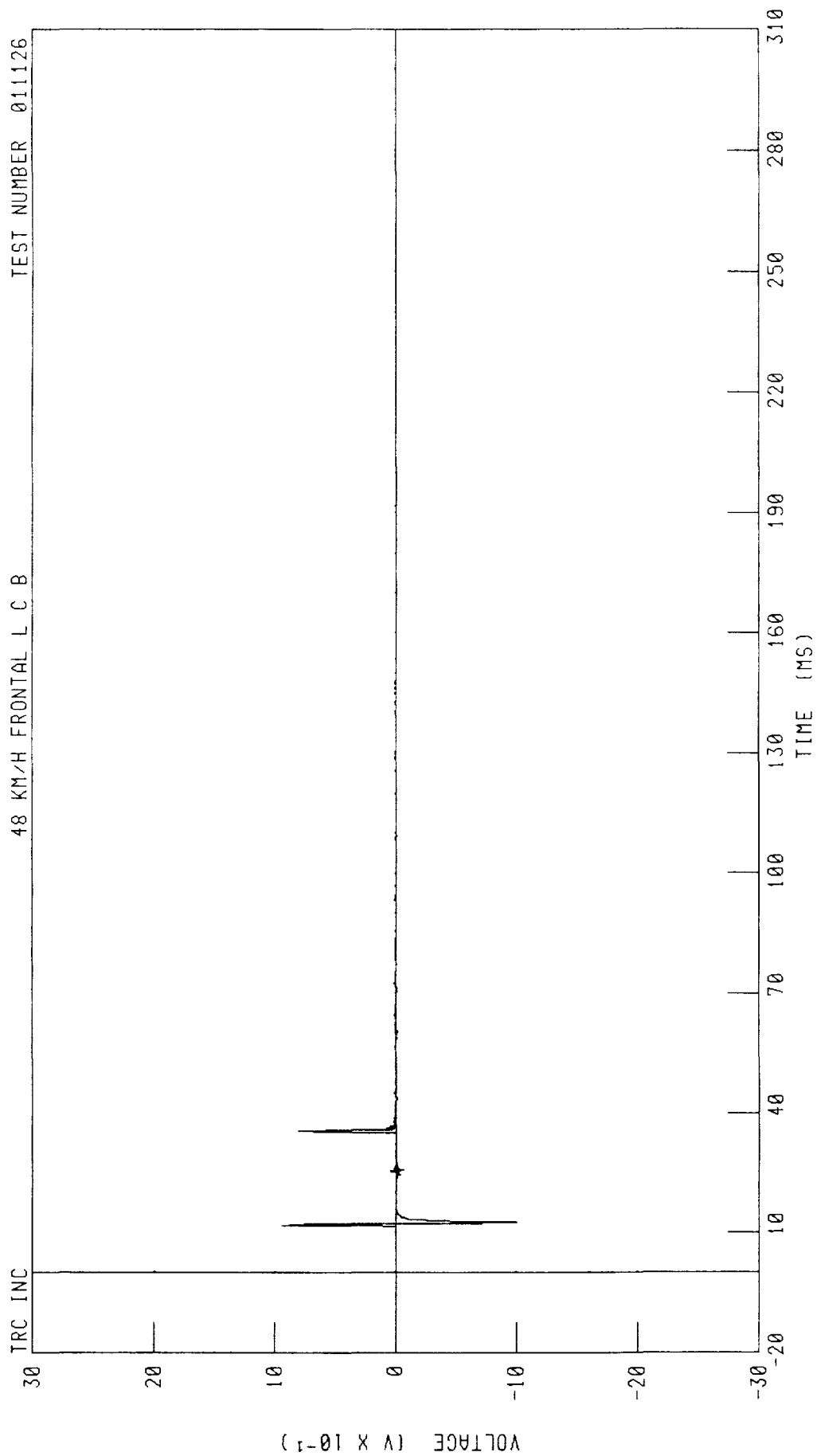
PEAK DATA 1 00 V @ 12 16 MS, -1 00 V @ 11 94 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

PASSENGER AIRBAG EVENT

48 KM/H FRONTAL L C B

TEST NUMBER 011126

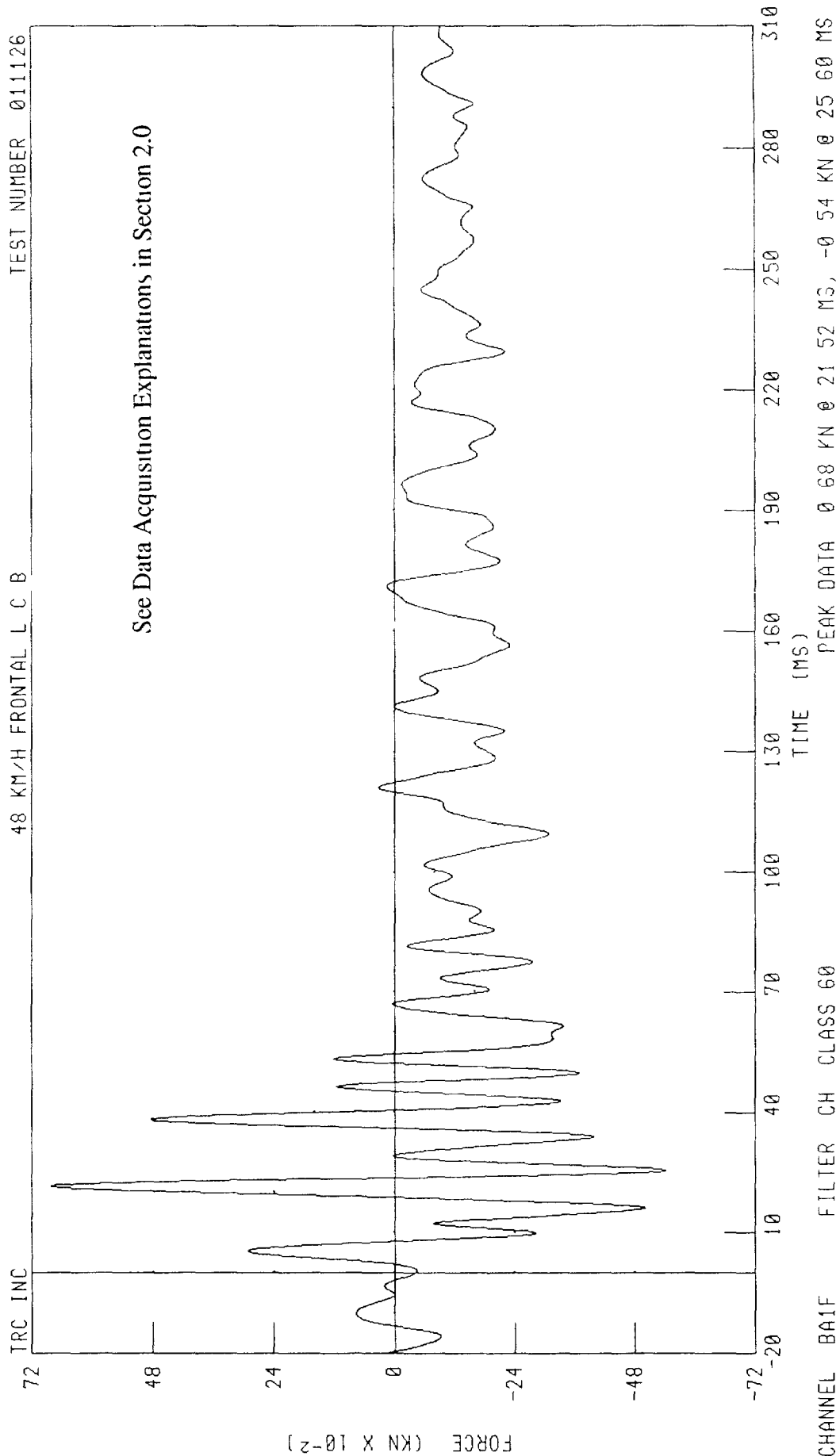


CHANNEL PABET1 FILTER CH CLASS 1000

PEAK DATA 0 94 V @ 11 84 MS, -1 00 V @ 12 40 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

LOAD CELL BARRIER POSITION A1 FORCE

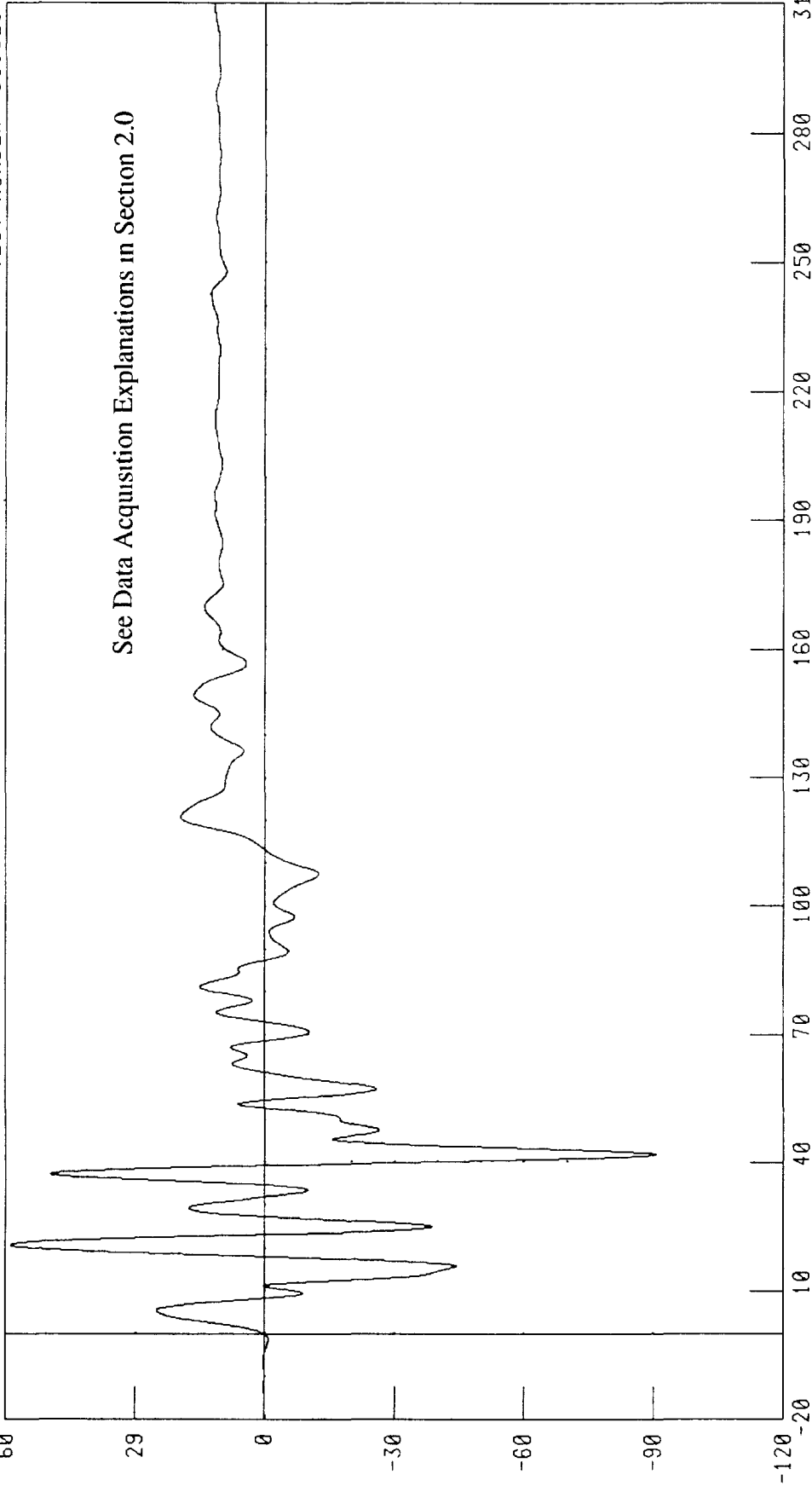


2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
LOAD CELL BARRIER POSITION A2 FORCE

48 KM/H FRONTAL L C B

TEST NUMBER 011126

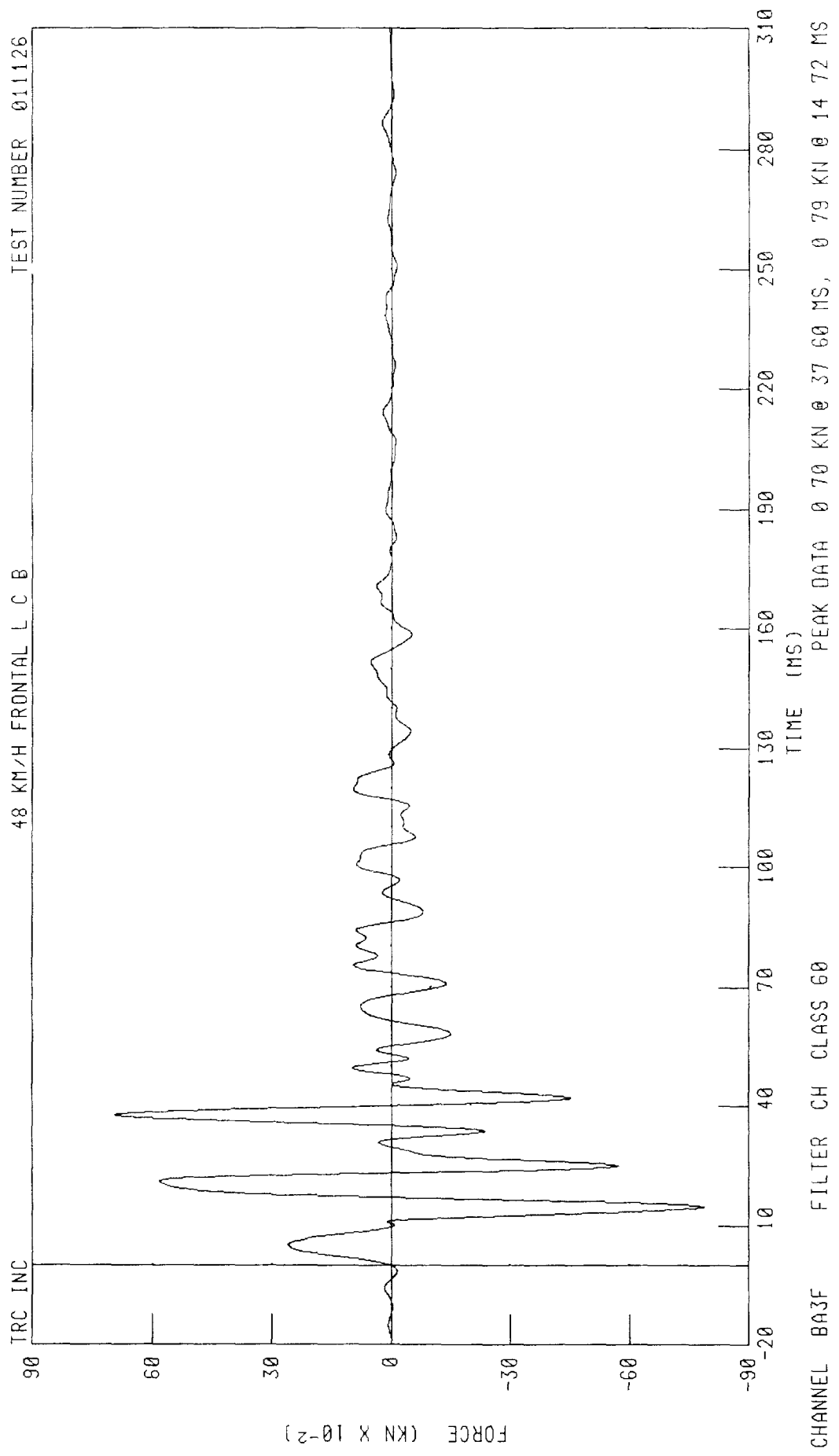
TRC INC



TIME (MS)

CHANNEL BA2F FILTER CH CLASS 60 PEAK DATA 0 59 KN @ 20 88 MS, -0 91 KN @ 41 84 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
LOAD CELL BARRIER POSITION A3 FORCE

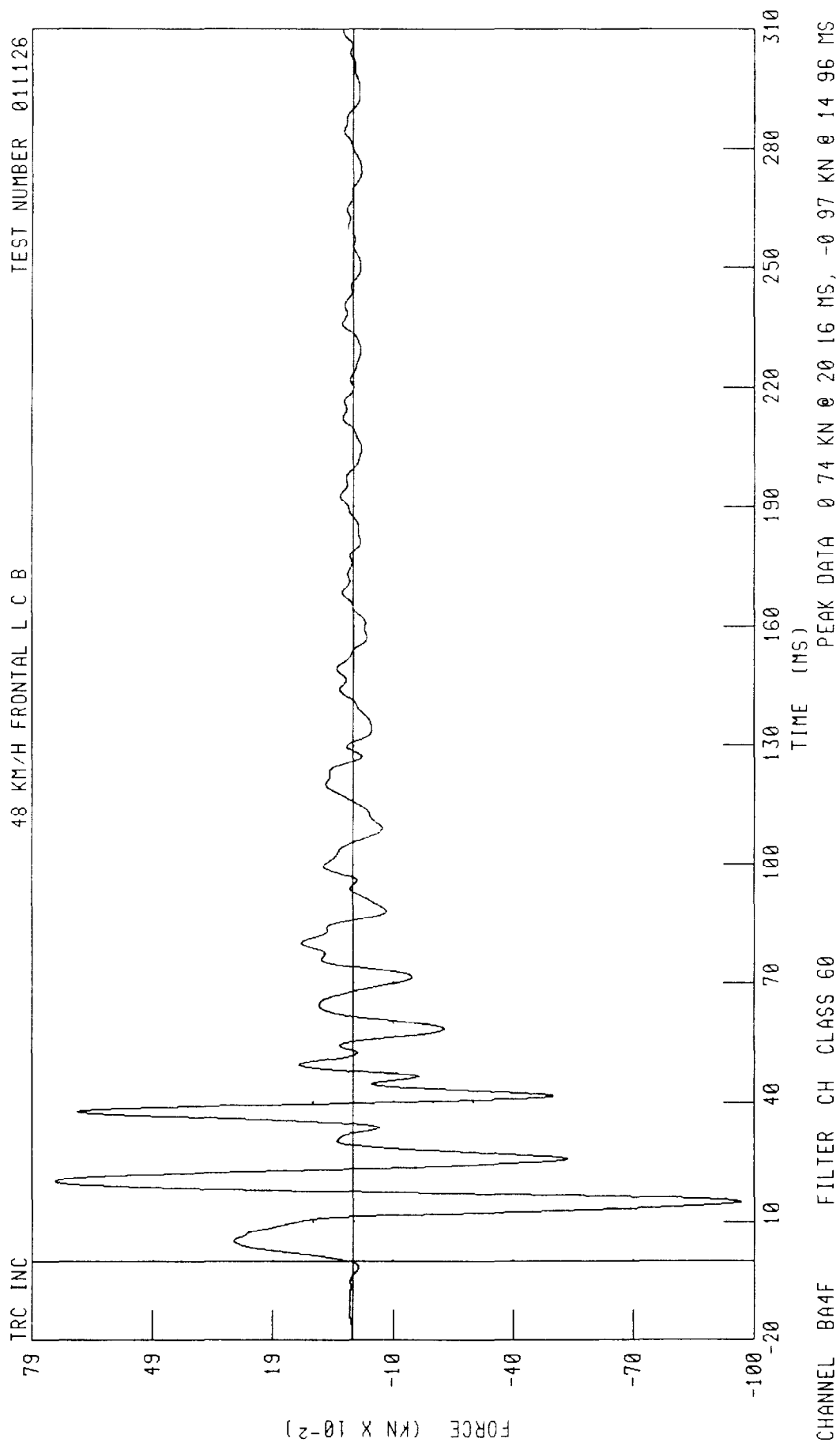


2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

LOAD CELL BARRIER POSITION A4 FORCE

48 KM/H FRONTAL L C B

TEST NUMBER 011126

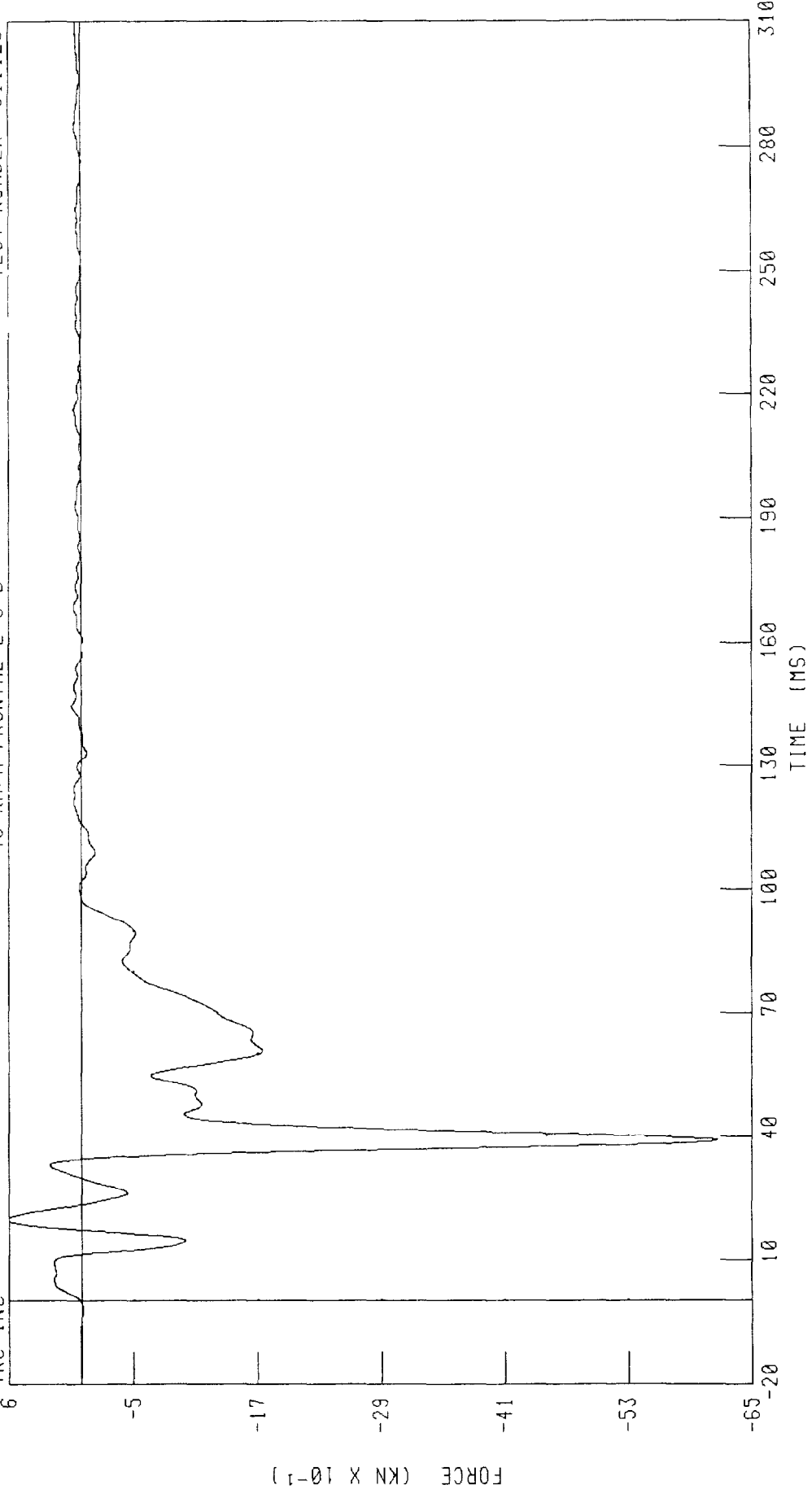


2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
LOAD CELL BARRIER POSITION A5 FORCE

TEST NUMBER 011126

48 KM/H FRONTAL L C B

TRC INC



PEAK DATA 0 72 KN @ 19 84 MS, -6 17 KN @ 39 04 MS

FILTER CH CLASS 60

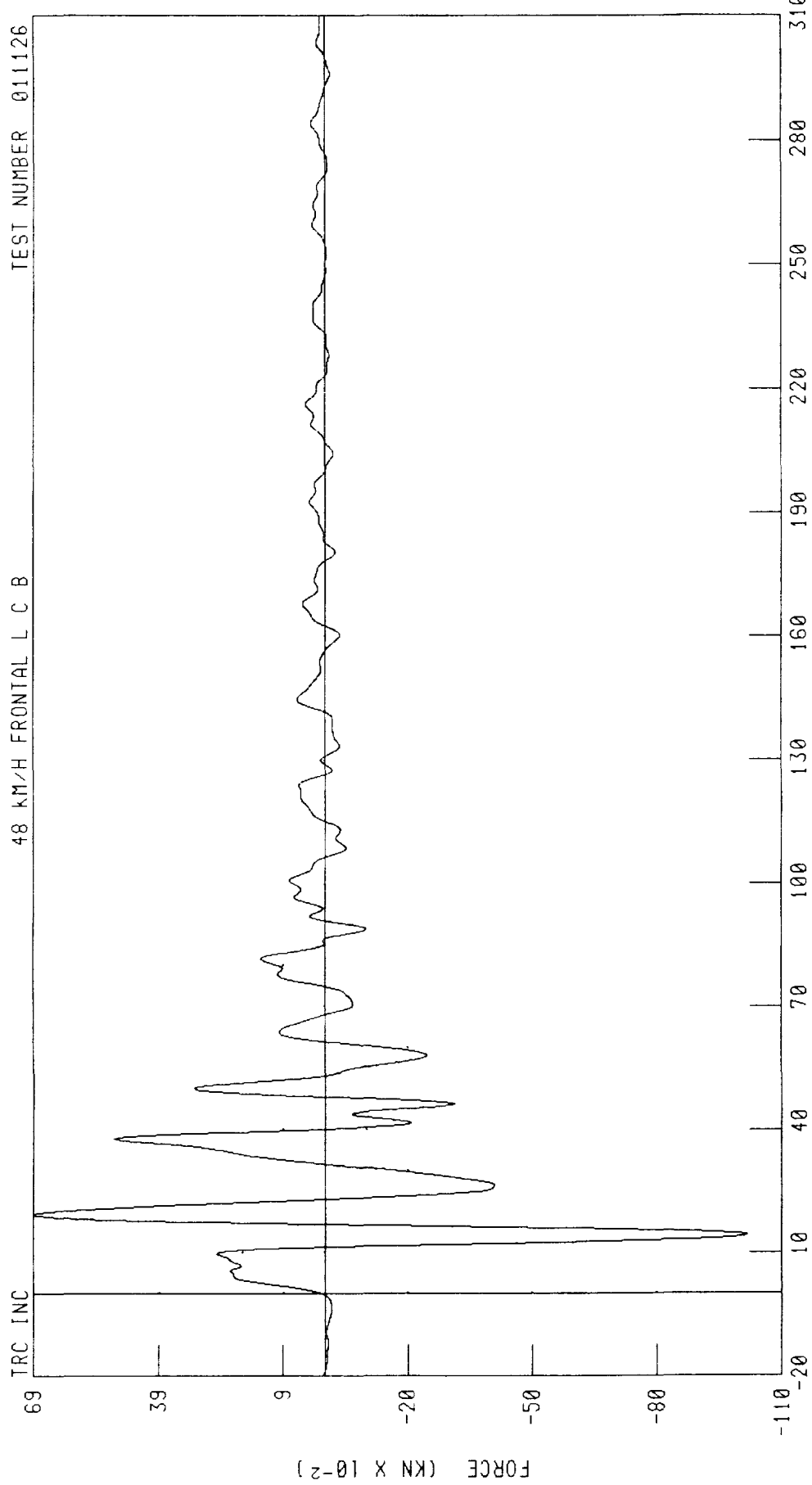
CHANNEL BA5F

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

LOAD CELL BARRIER POSITION A6 FORCE

48 KM/H FRONTAL L C B

TEST NUMBER 011126

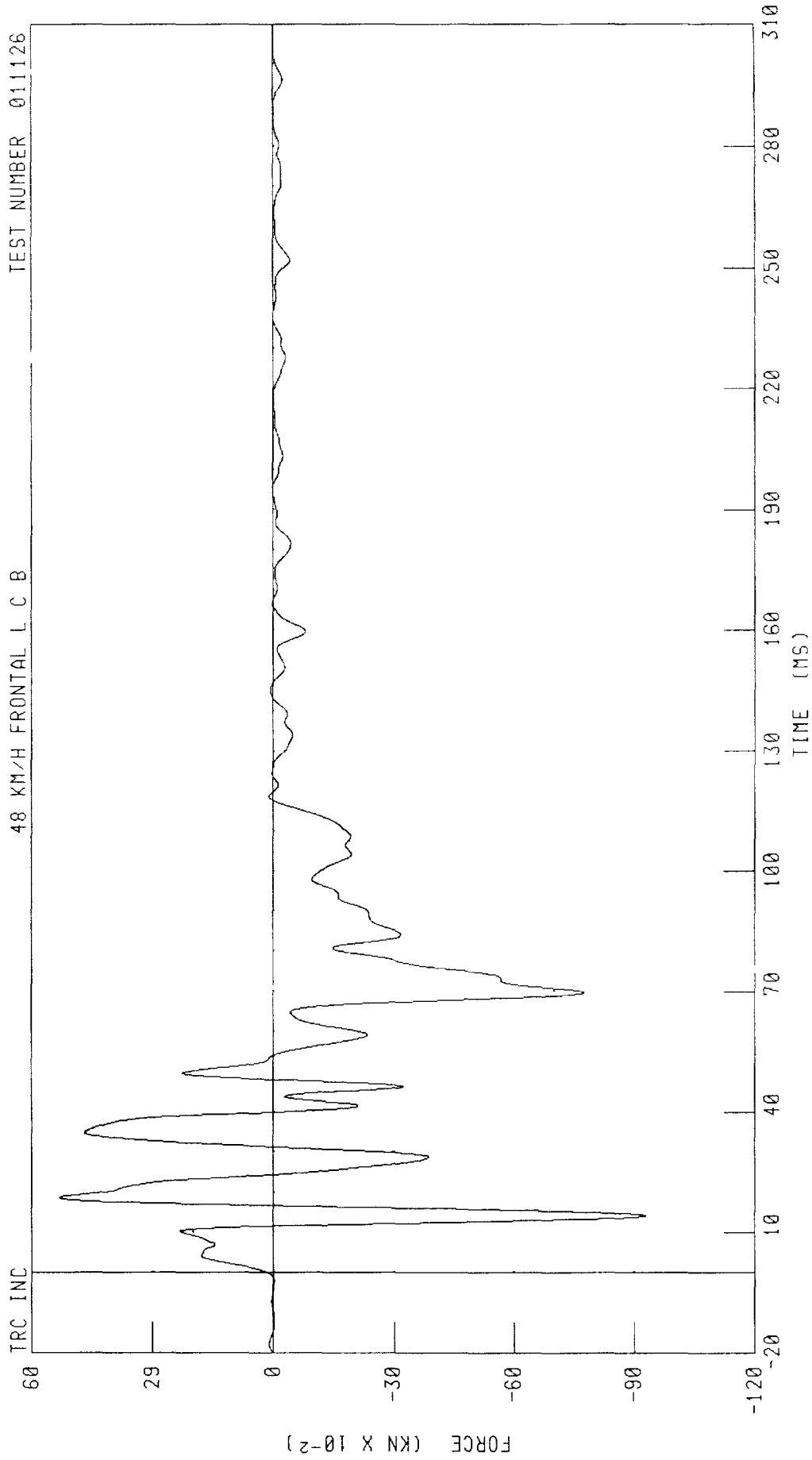


TIME (MS)

PEAK DATA 0 70 KN @ 19 44 MS, -1 02 KN @ 14 32 MS

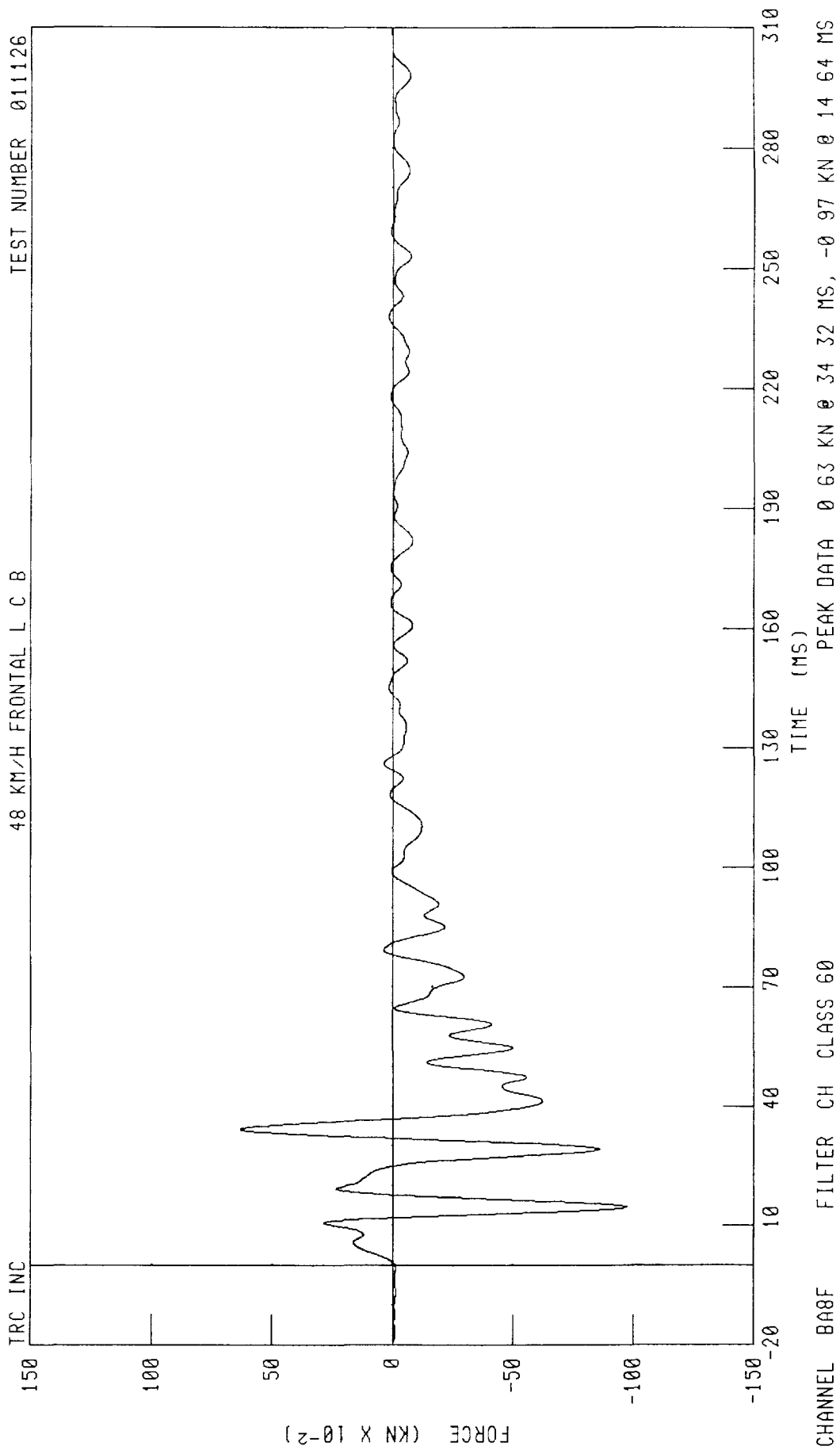
CHANNEL BAGF FILTER CH CLASS 60

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
LOAD CELL BARRIER POSITION A7 FORCE
48 KM/H FRONTAL L C B

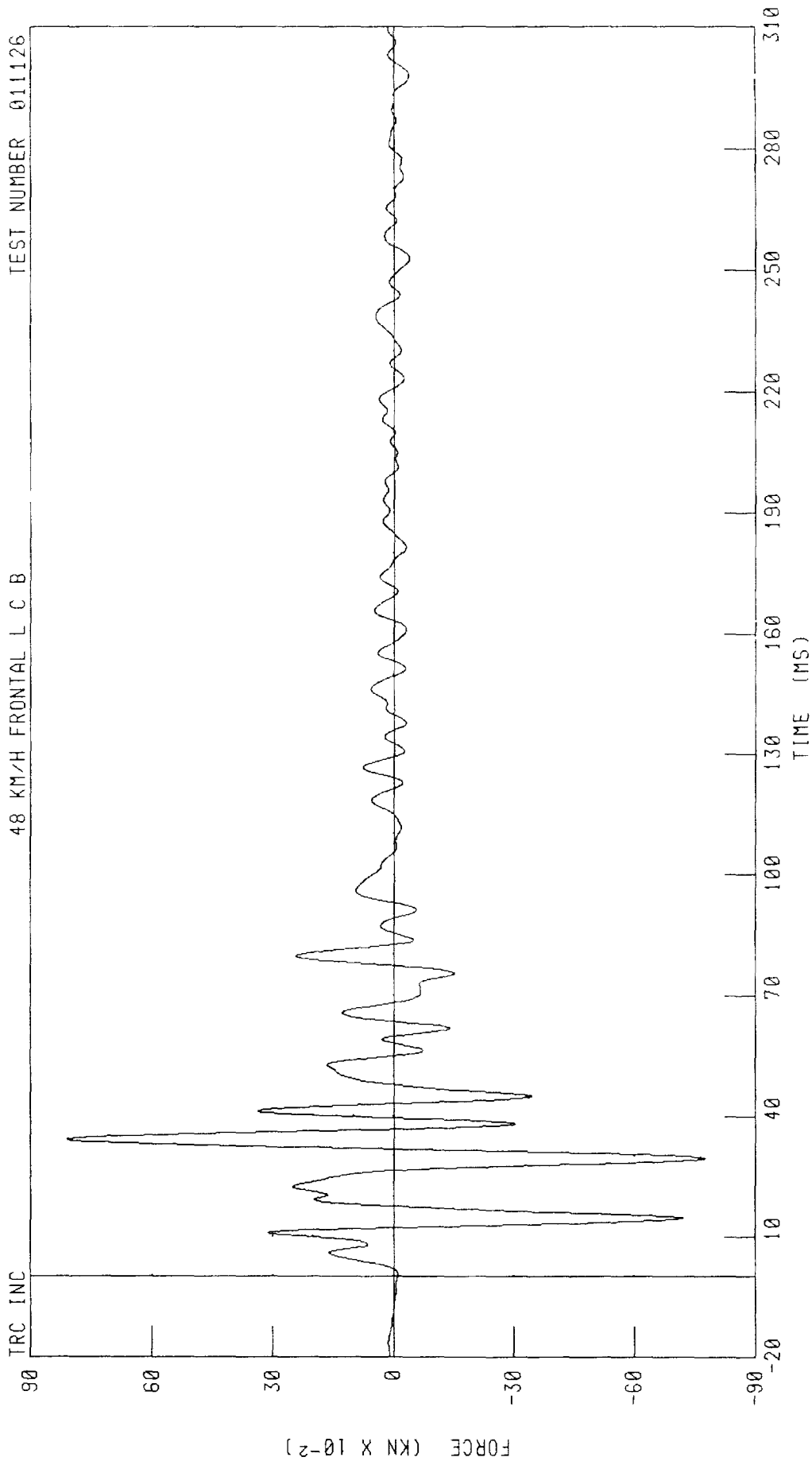


CHANNEL BA7F FILTER CH CLASS 60 PEAK DATA 0 53 KN @ 18 64 MS, -0 93 KN @ 14 16 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
LOAD CELL BARRIER POSITION A8 FORCE



2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
LOAD CELL BARRIER POSITION A9 FORCE



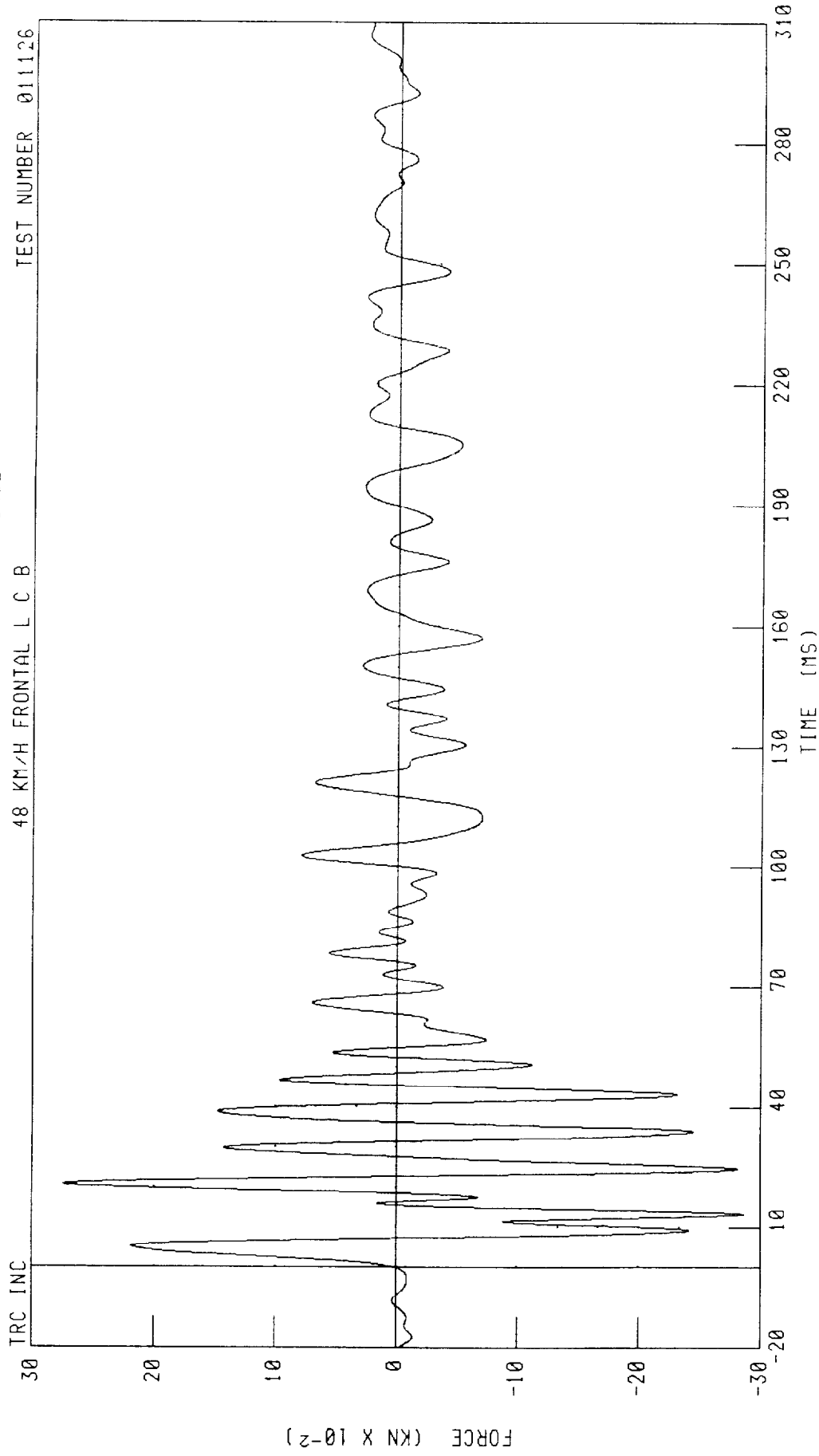
CHANNEL B9F FILTER CH CLASS 60 PEAK DATA 0 81 KN @ 34 16 MS, -0 77 KN @ 29 44 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

LOAD CELL BARRIER POSITION B1 FORCE

48 KM/H FRONTAL L C B

TEST NUMBER 011126

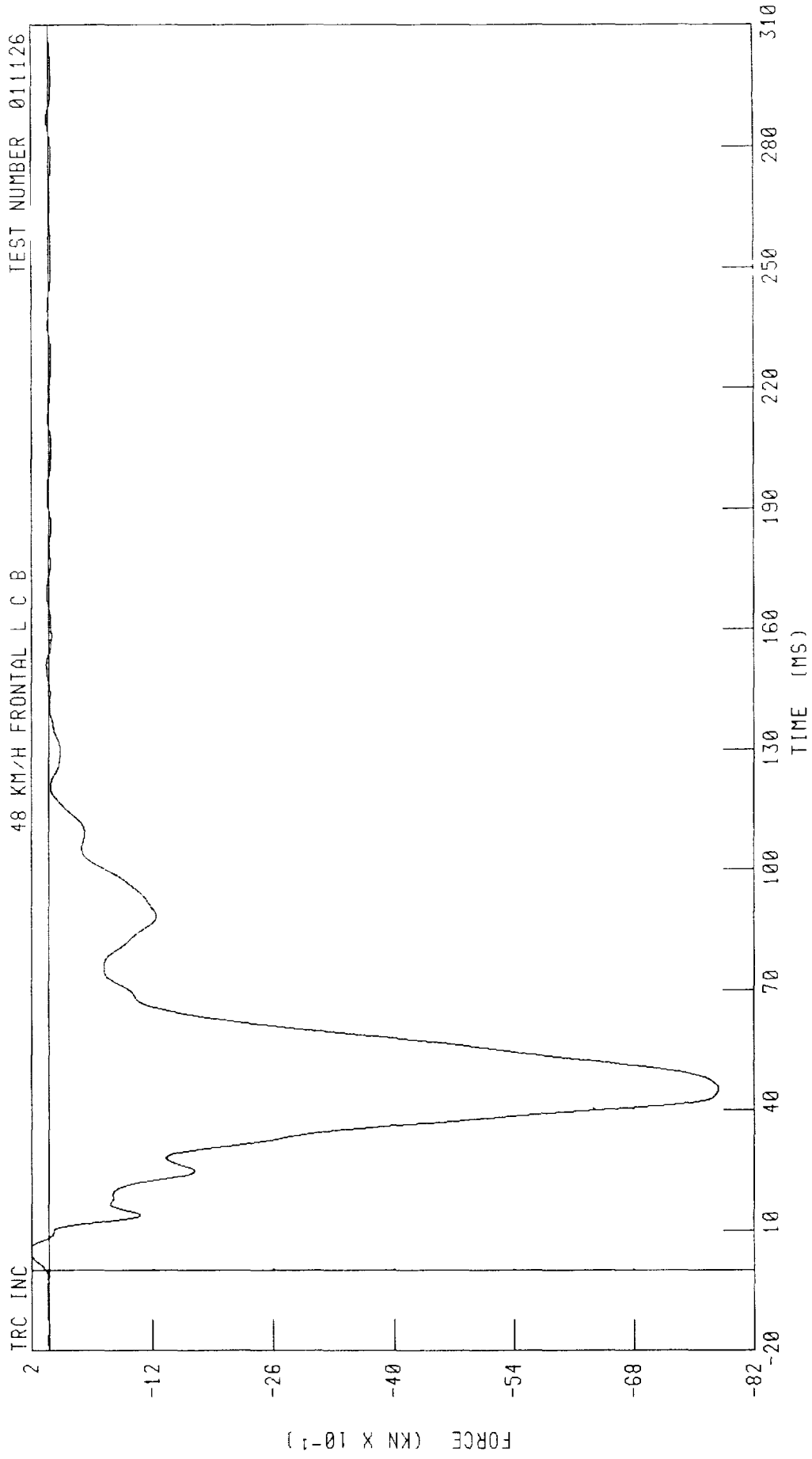


CHANNEL BB1F

FILTER CH CLASS 60

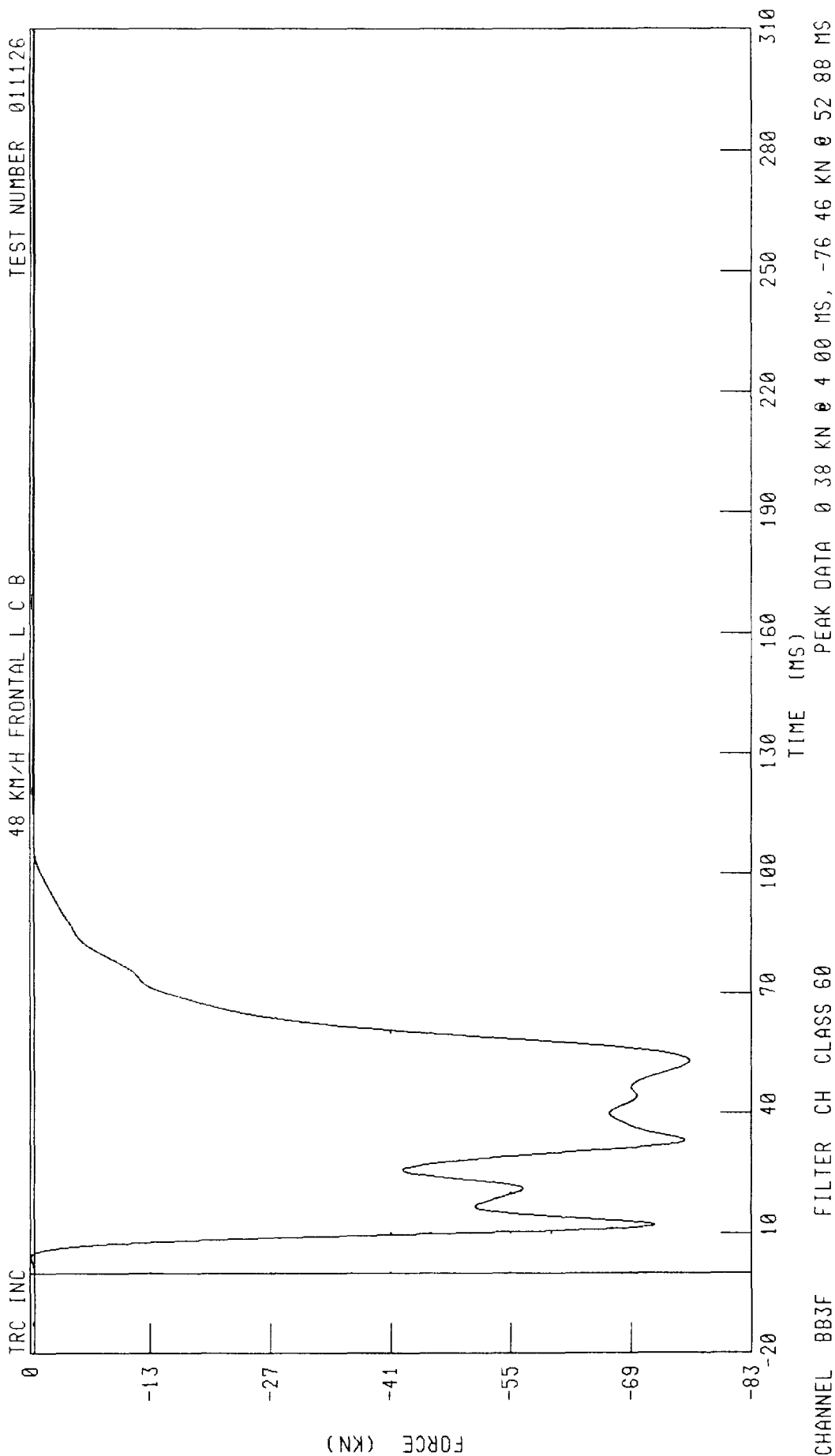
PEAK DATA 0 27 KN @ 20 88 MS, -0 29 KN @ 13 28 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
LOAD CELL BARRIER POSITION B2 FORCE
48 KM/H FRONTAL L C B



CHANNEL BB2F FILTER CH CLASS 60 PEAK DATA 0 24 KN @ 5 04 MS, -7 79 KN @ 45 20 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
LOAD CELL BARRIER POSITION B3 FORCE

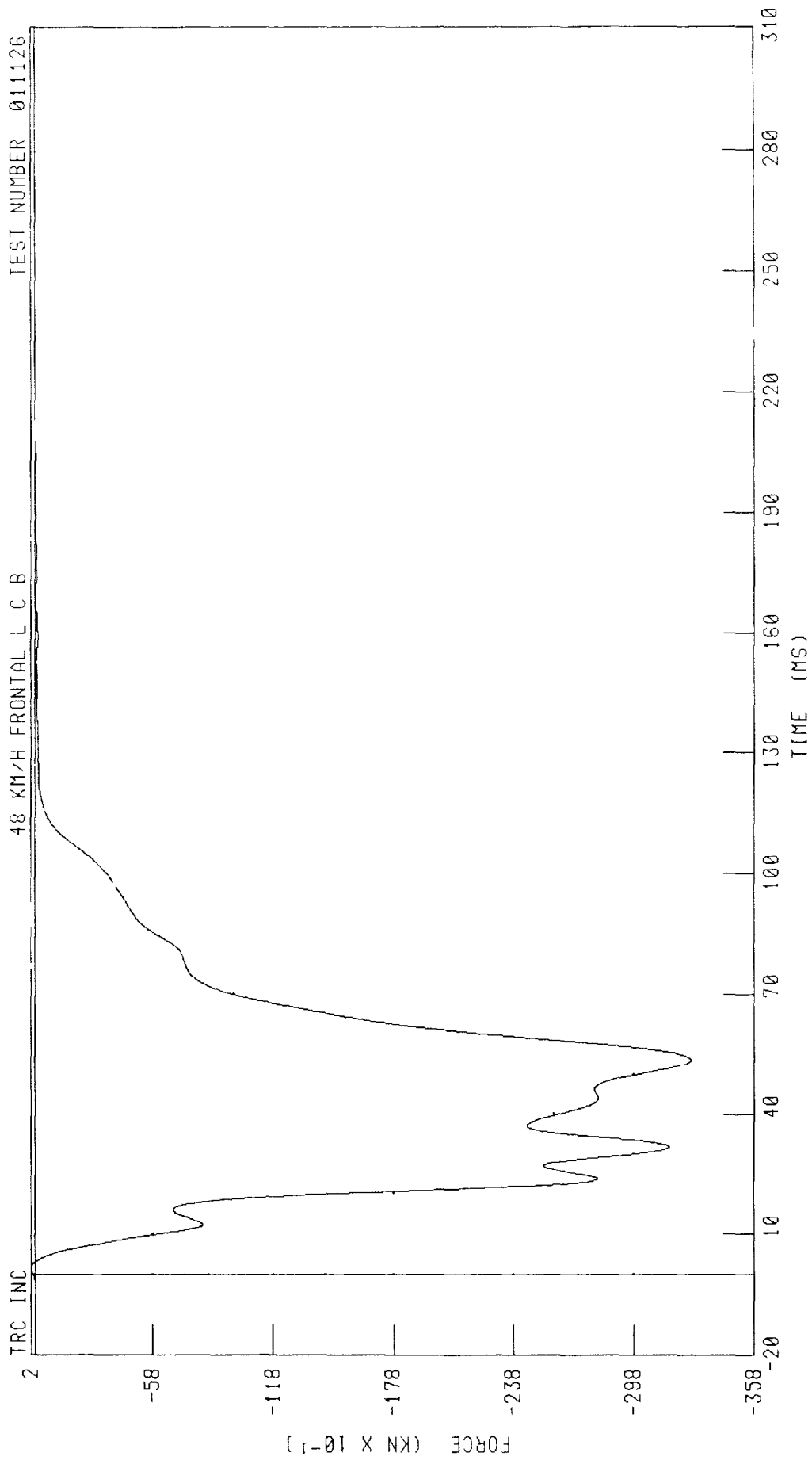


2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

LOAD CELL BARRIER POSITION B4 FORCE

48 KM/H FRONTAL L C B

TEST NUMBER 011126



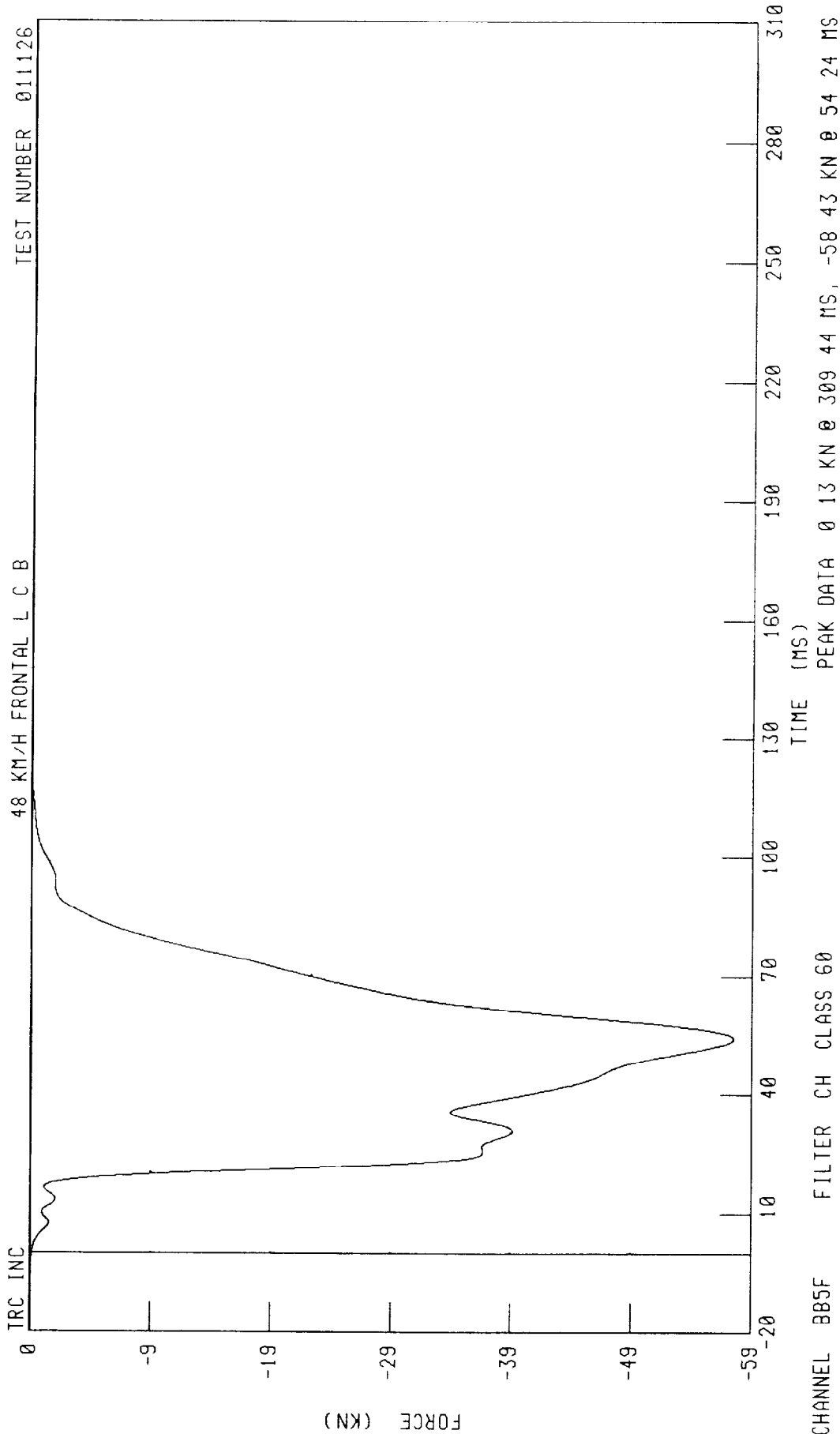
TIME (MS)

PEAK DATA 0 21 KN @ 1 52 MS, 32 67 KN @ 53 60 MS

CHANNEL BB4F FILTER CH CLASS 60

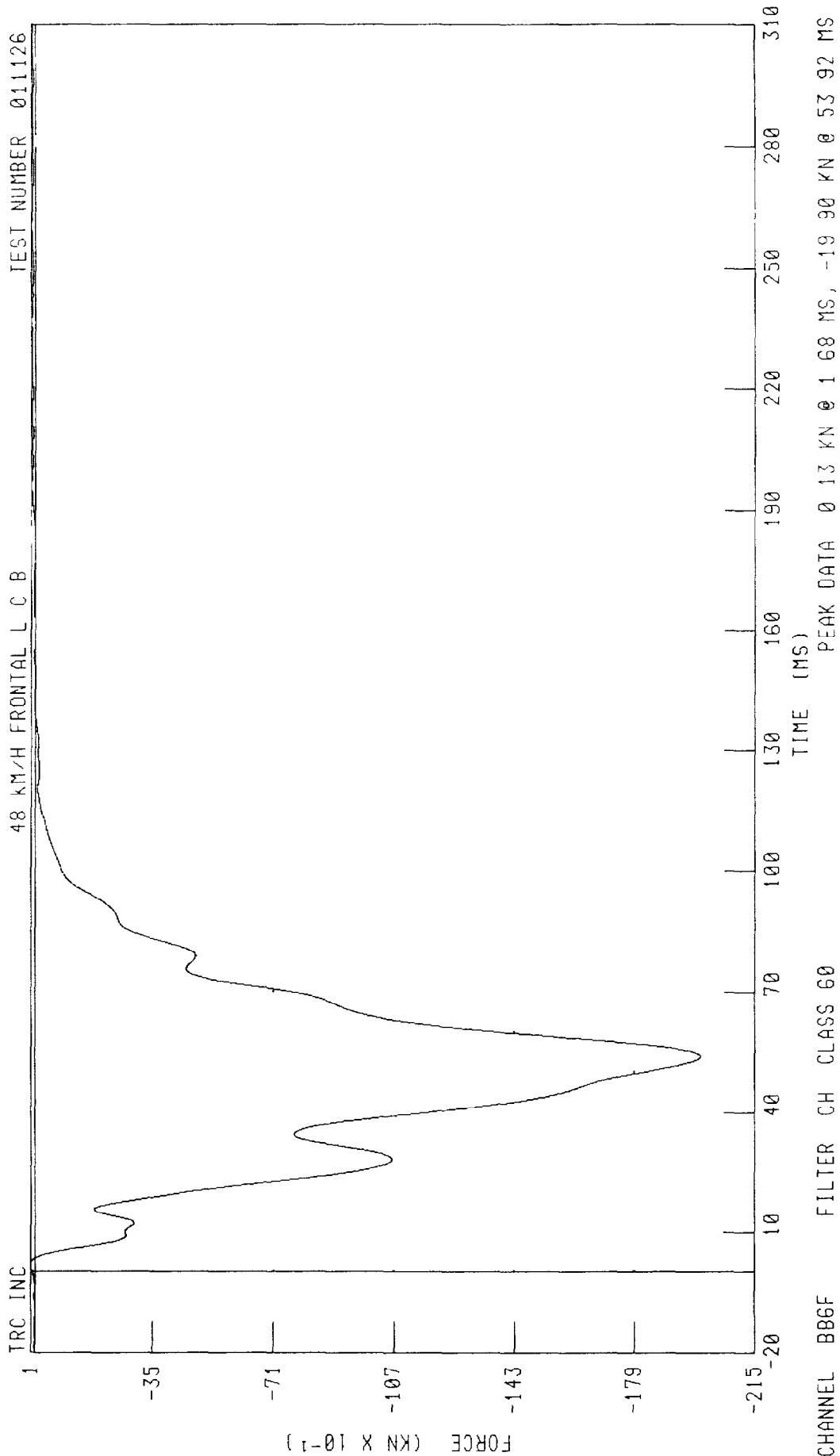
2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

LOAD CELL BARRIER POSITION B5 FORCE



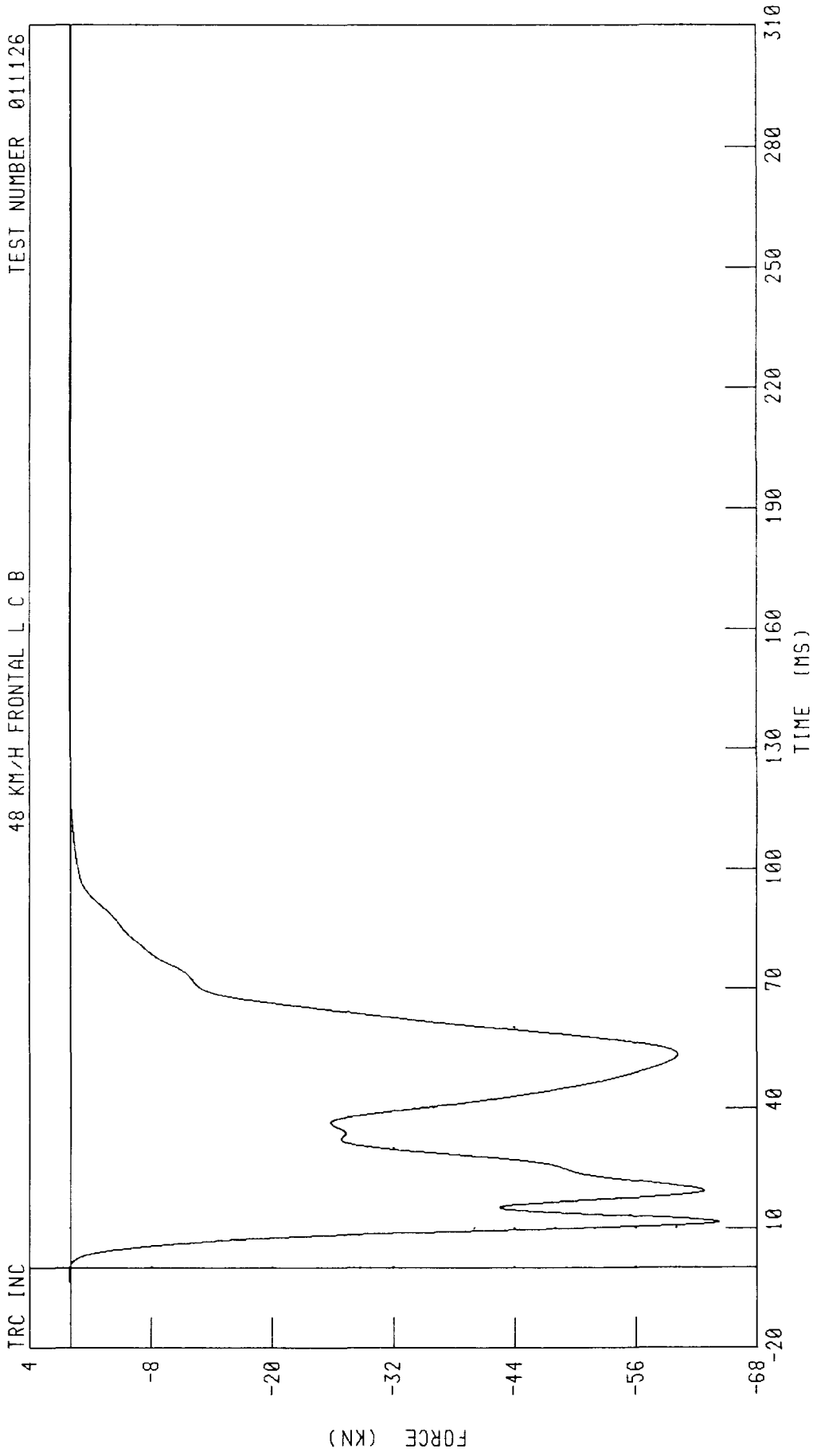
2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

LOAD CELL BARRIER POSITION B6 FORCE



2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
LOAD CELL BARRIER POSITION B7 FORCE

48 KM/H FRONTAL L C B TEST NUMBER 011126



CHANNEL BB7F FILTER CH CLASS 60

PEAK DATA 0 09 KN 0 -0 88 MS, -64 24 KN 0 11 60 MS

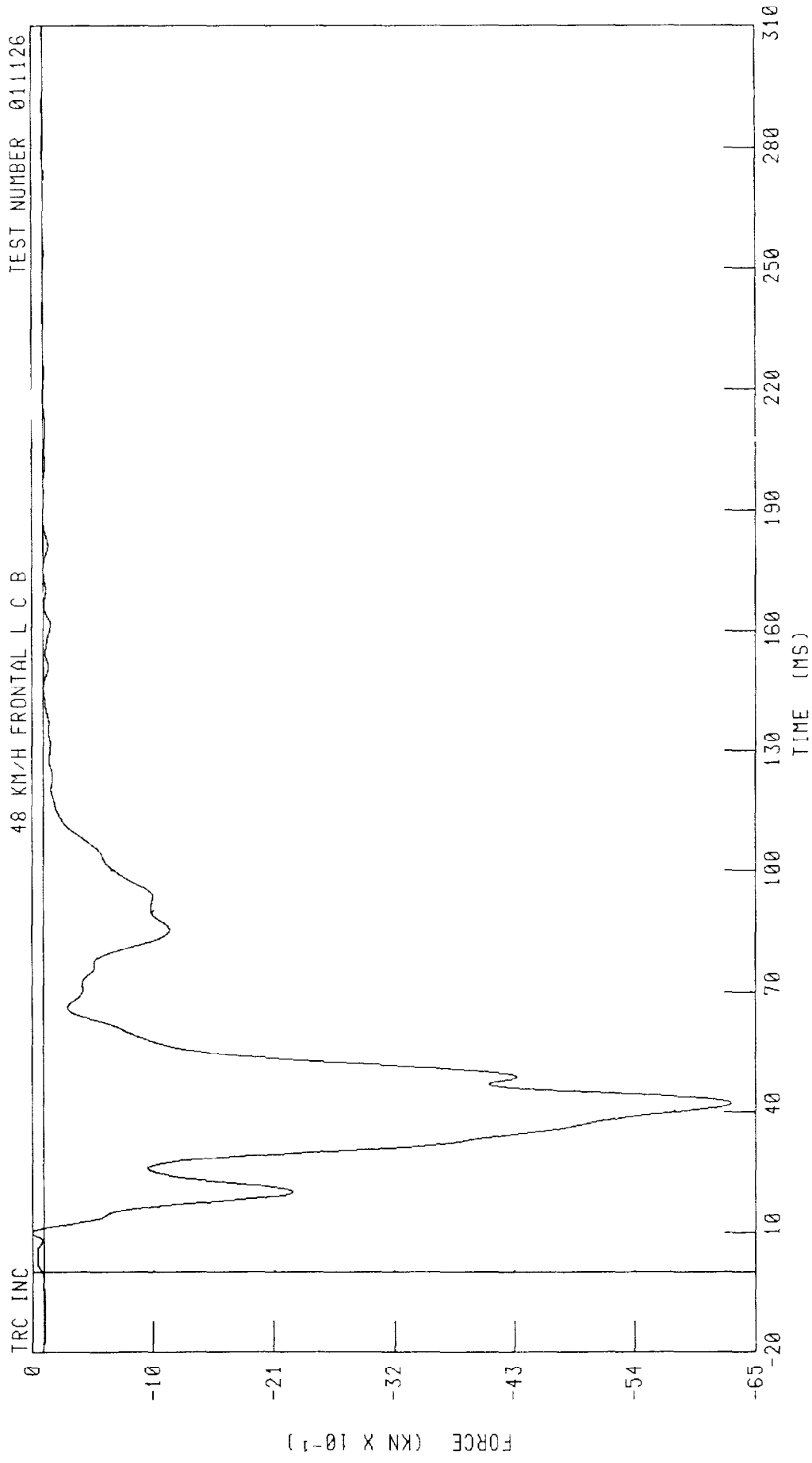
2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

LOAD CELL BARRIER POSITION B8 FORCE

TEST NUMBER 011126

48 KM/H FRONTAL L C B

TRC INC



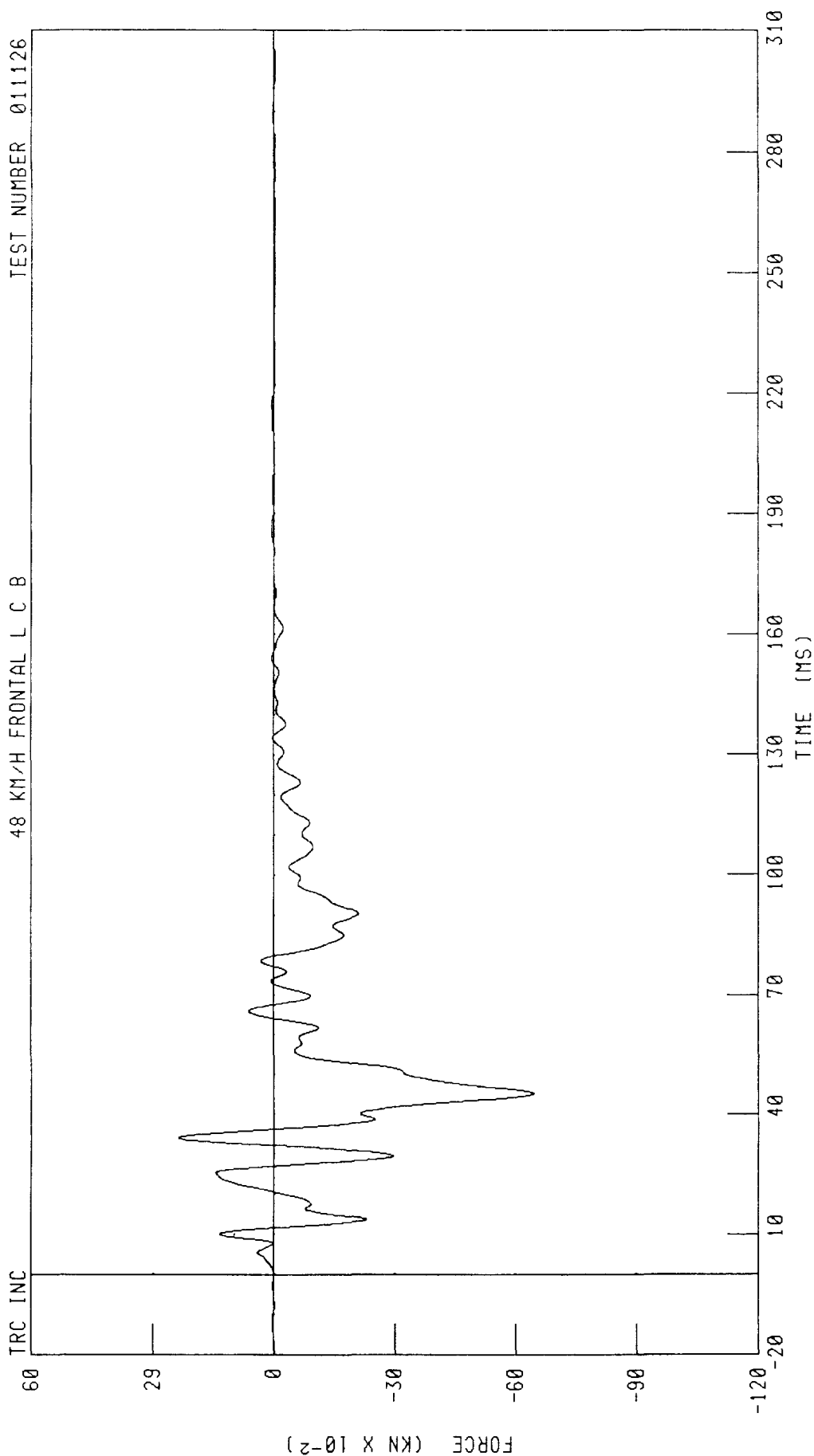
PEAK DATA 0 11 KN @ 9 84 MS, -6 28 KN @ 42 16 MS

FILTER CH CLASS 60

CHANNEL B8F

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
LOAD CELL BARRIER POSITION B9 FORCE

48 KM/H FRONTAL L C B TEST NUMBER 011126



CHANNEL BB9F FILTER CH CLASS 60 PEAK DATA 0 24 KN @ 34 24 MS, -0 65 KN @ 45 20 MS

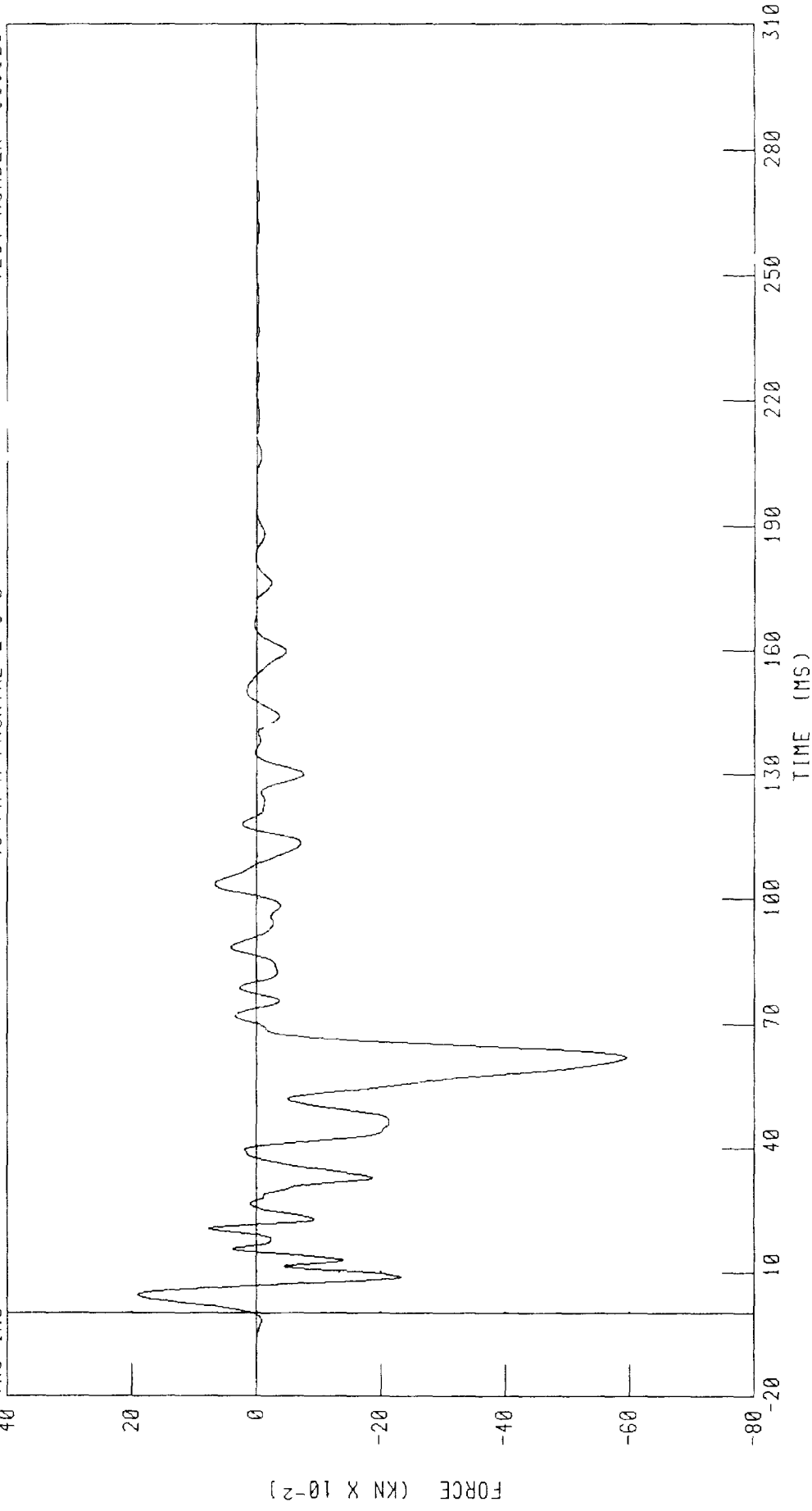
2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

LOAD CELL BARRIER POSITION C1 FORCE

48 KM/H FRONTAL L C B

TEST NUMBER 011126

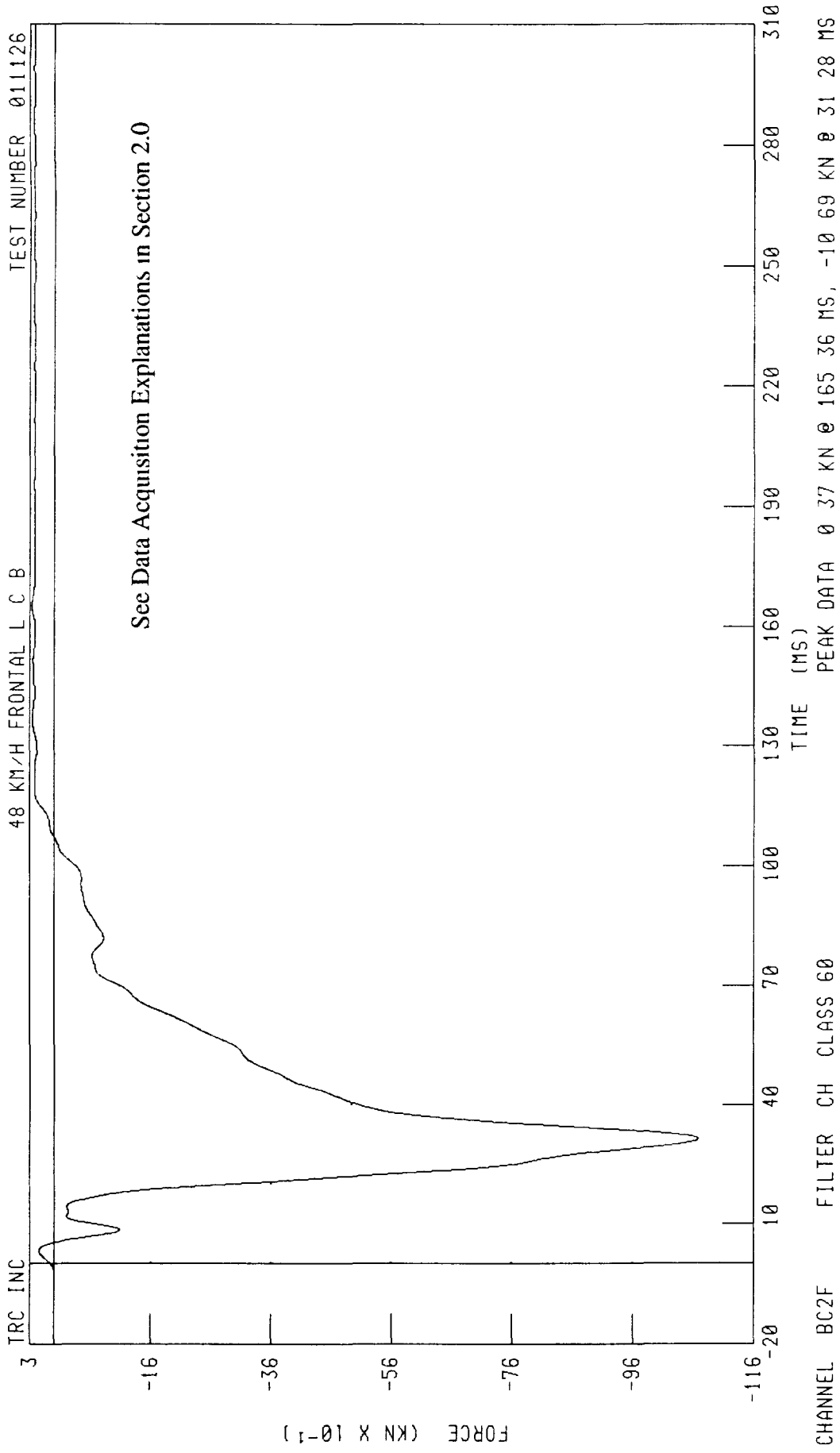
TRC INC



PEAK DATA 0 19 KN @ 4 56 MS, -0 59 KN @ 61 92 MS

CHANNEL BC1F FILTER CH CLASS 60

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
LOAD CELL BARRIER POSITION C2 FORCE

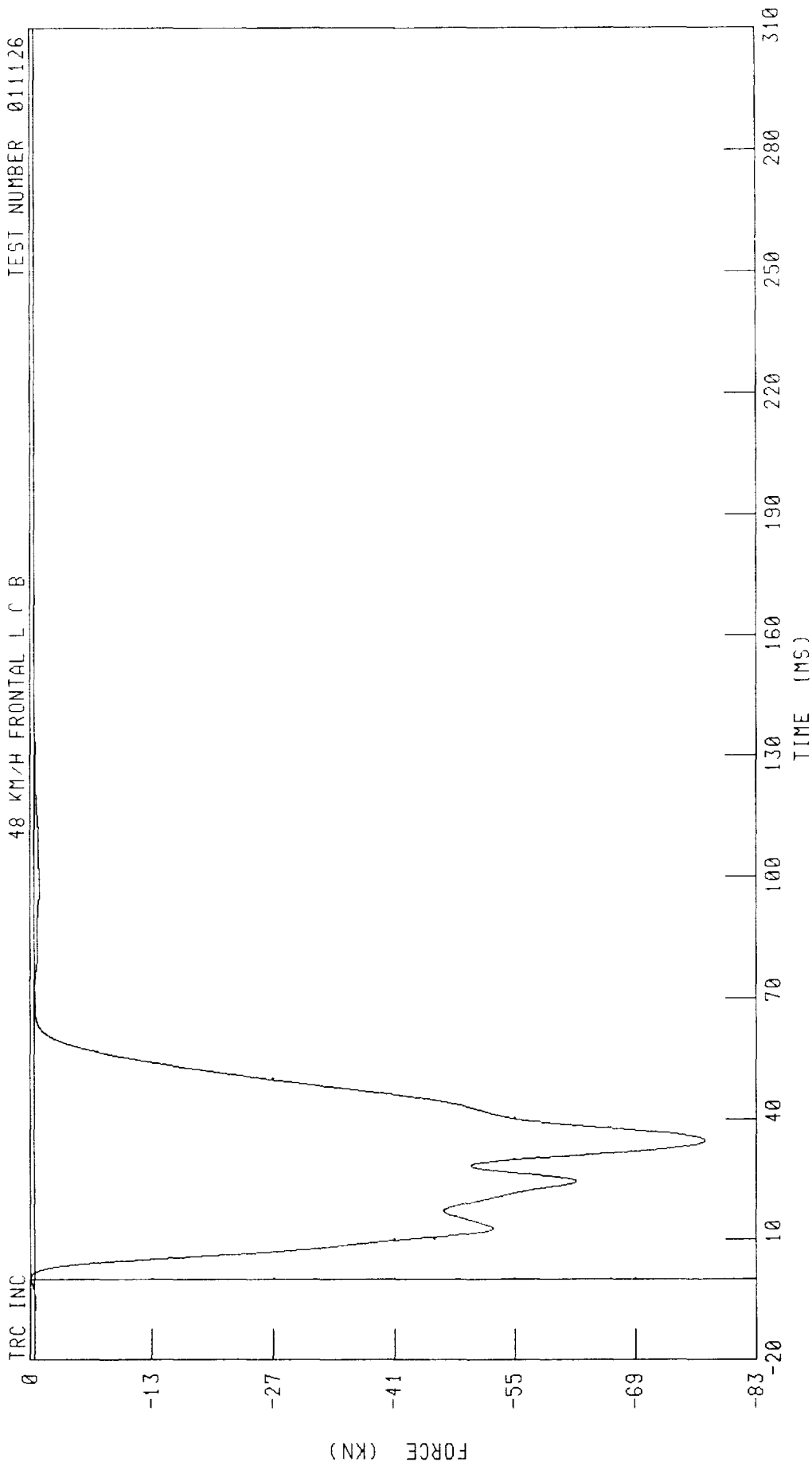


2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

LOAD CELL BARRIER POSITION U3 FORCE

48 KM/H FRONTAL L C B

TEST NUMBER 011126

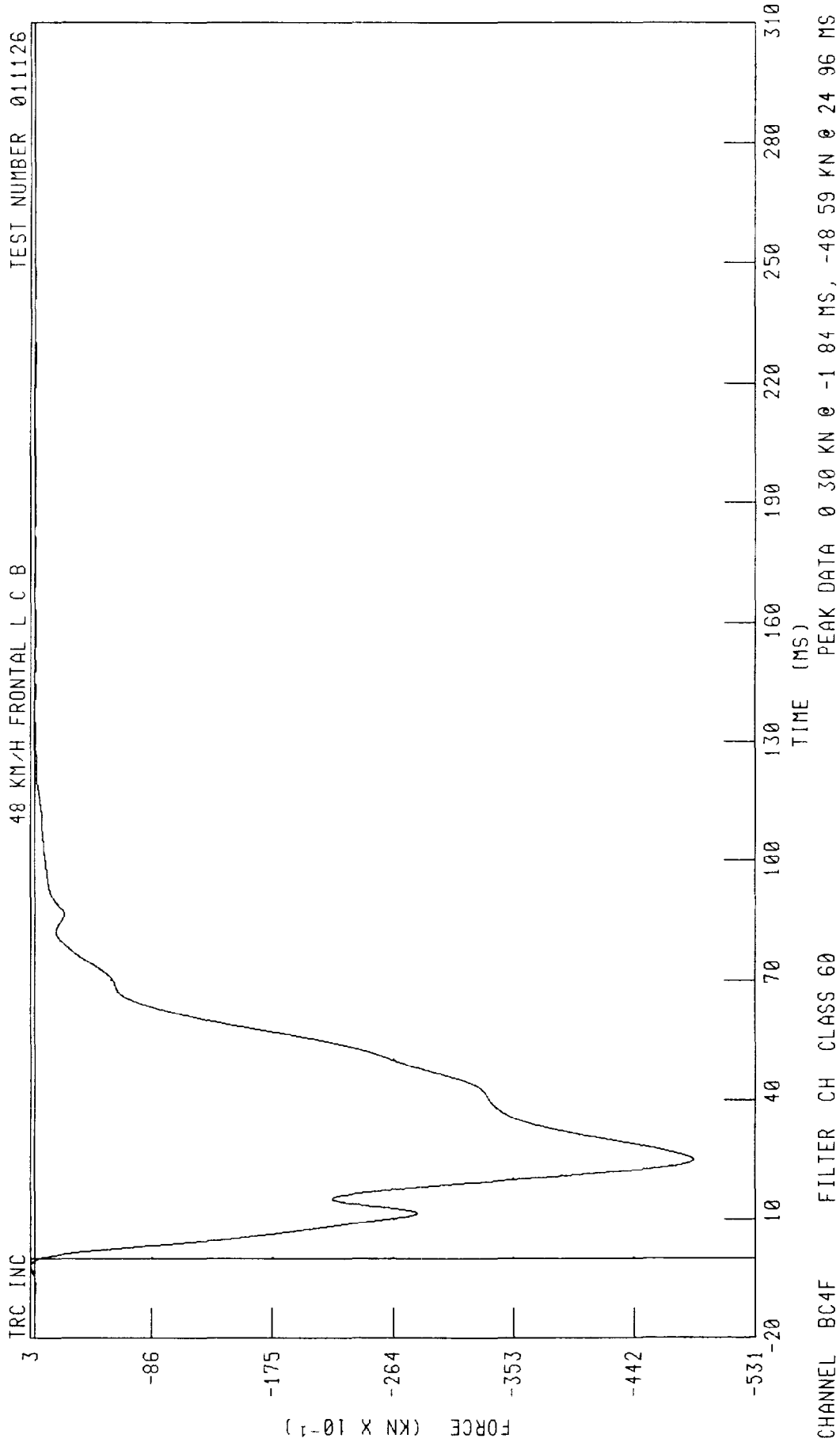


TIME (MS)

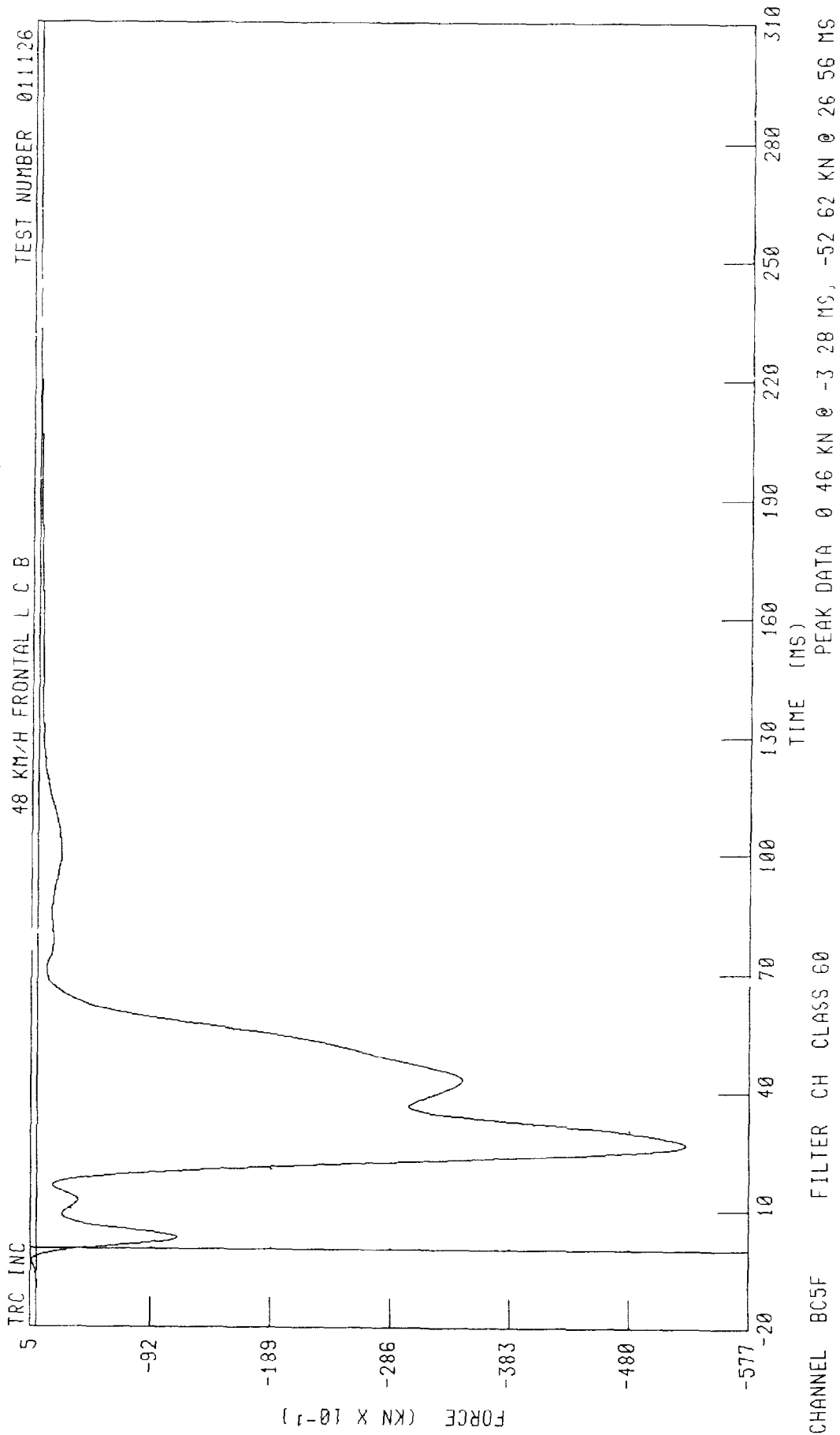
PEAK DATA 0 49 KN @ 0 32 MS, -77 64 KN @ 34 64 MS

CHANNEL BC3F FILTER CH CLASS 60

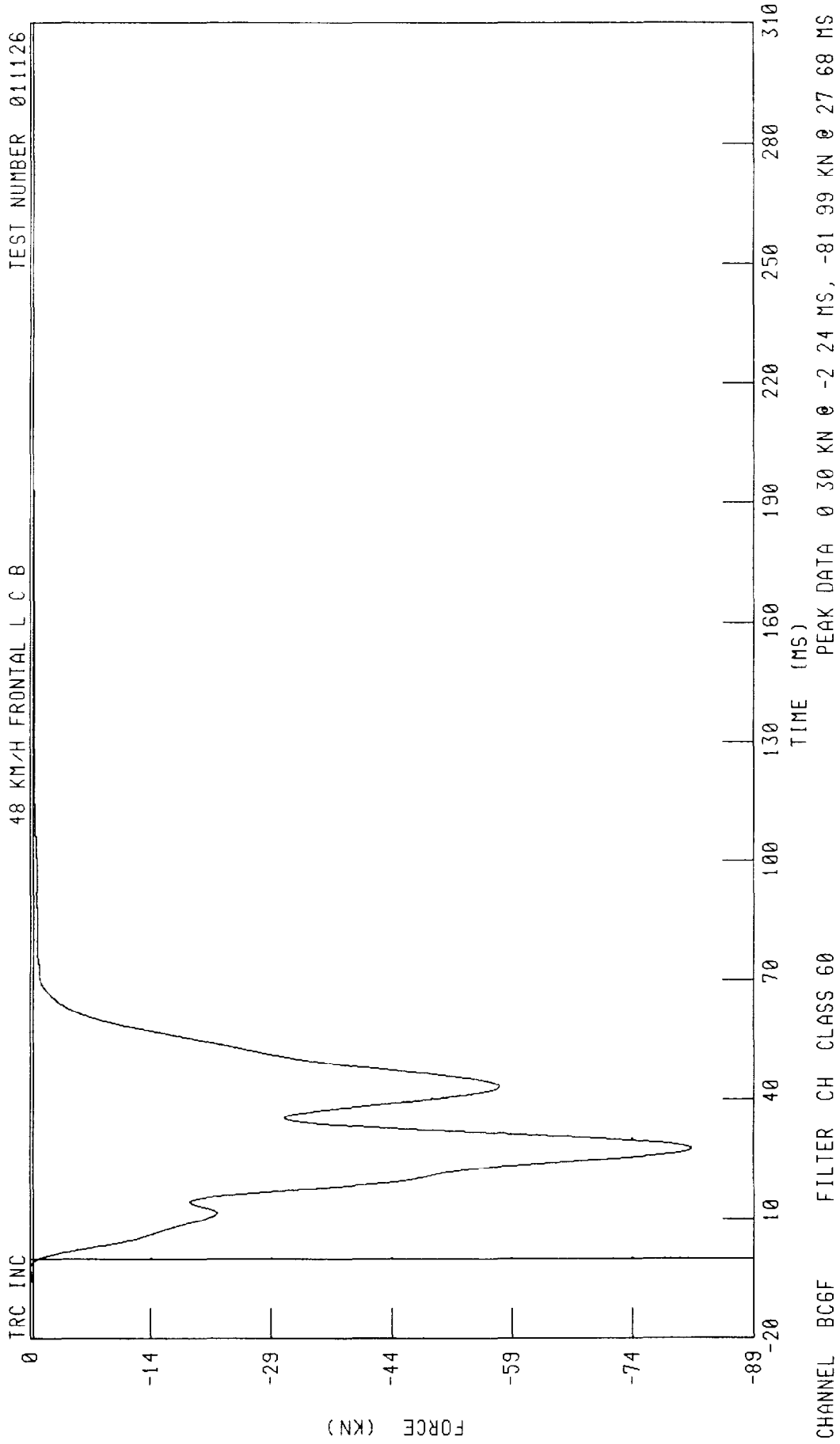
2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
LOAD CELL BARRIER POSITION C4 FORCE



2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
LOAD CELL BARRIER POSITION C5 FORCE



2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
LOAD CELL BARRIER POSITION C6 FORCE

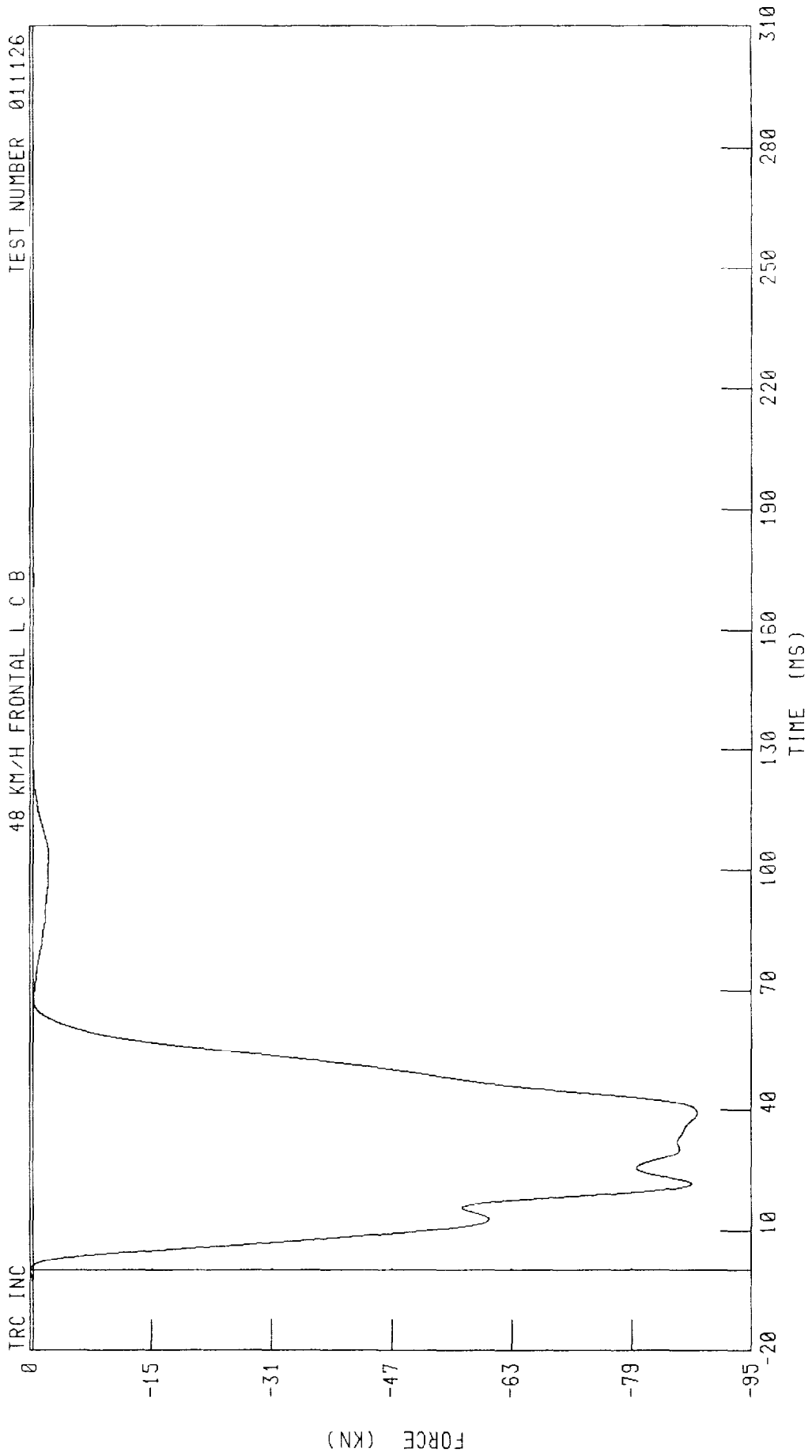


2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

LOAD CELL BARRIER POSITION C7 FORCE

48 KM/H FRONTAL L C B

TEST NUMBER 011126



TIME (MS)

PEAK DATA 0 43 KN @ -0 08 MS, -88 45 KN @ 39 20 MS

FILTER CH CLASS 60

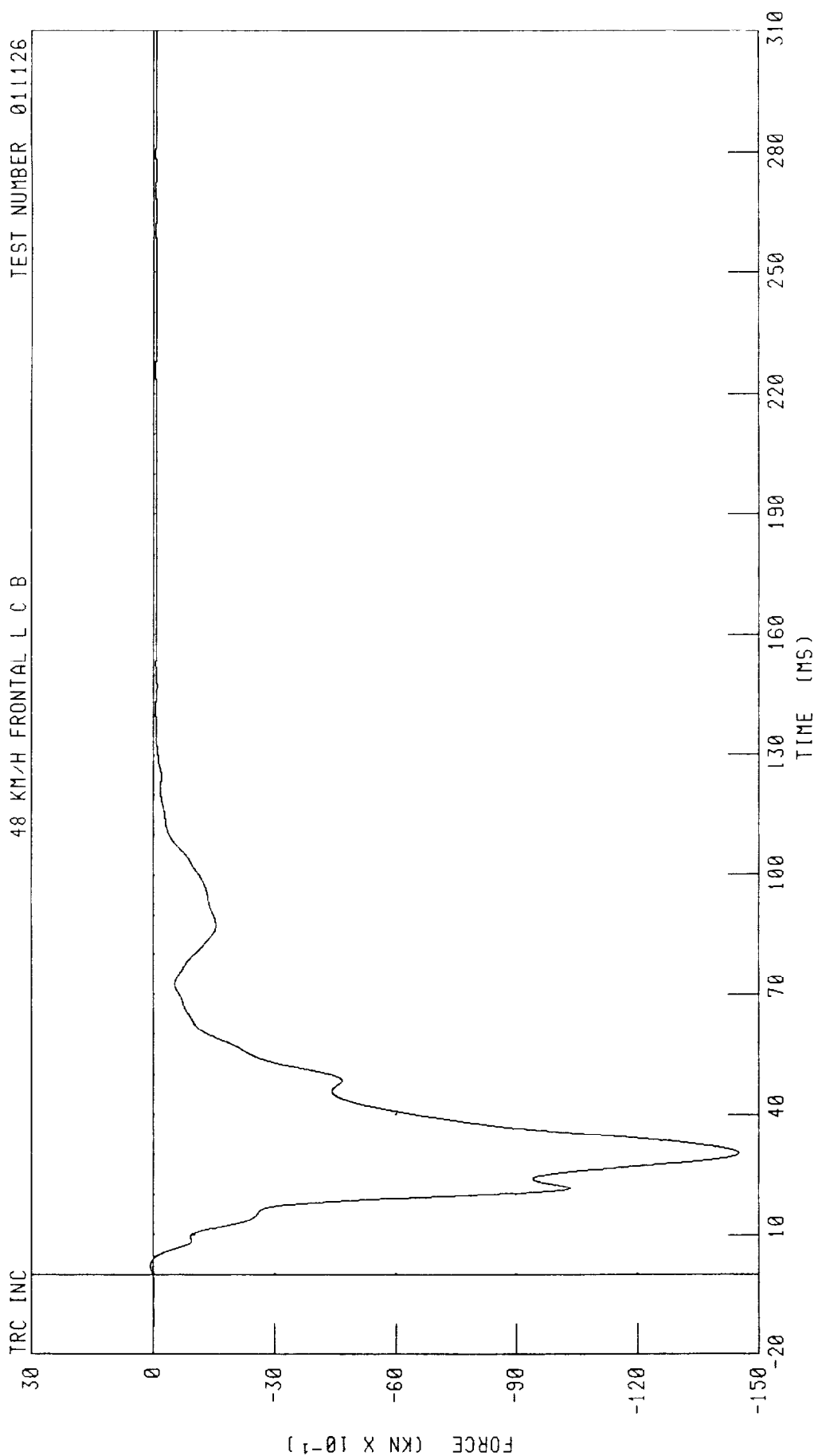
CHANNEL BC7F

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

LOAD CELL BARRIER POSITION C8 FORCE

48 KM/H FRONTAL L C B

TEST NUMBER 011126



CHANNEL BC8F FILTER CH CLASS 60 PEAK DATA 0 07 KN 0 2 32 MS, -14 51 KN 0 30 48 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

LOAD CELL BARRIER POSITION C9 FORCE

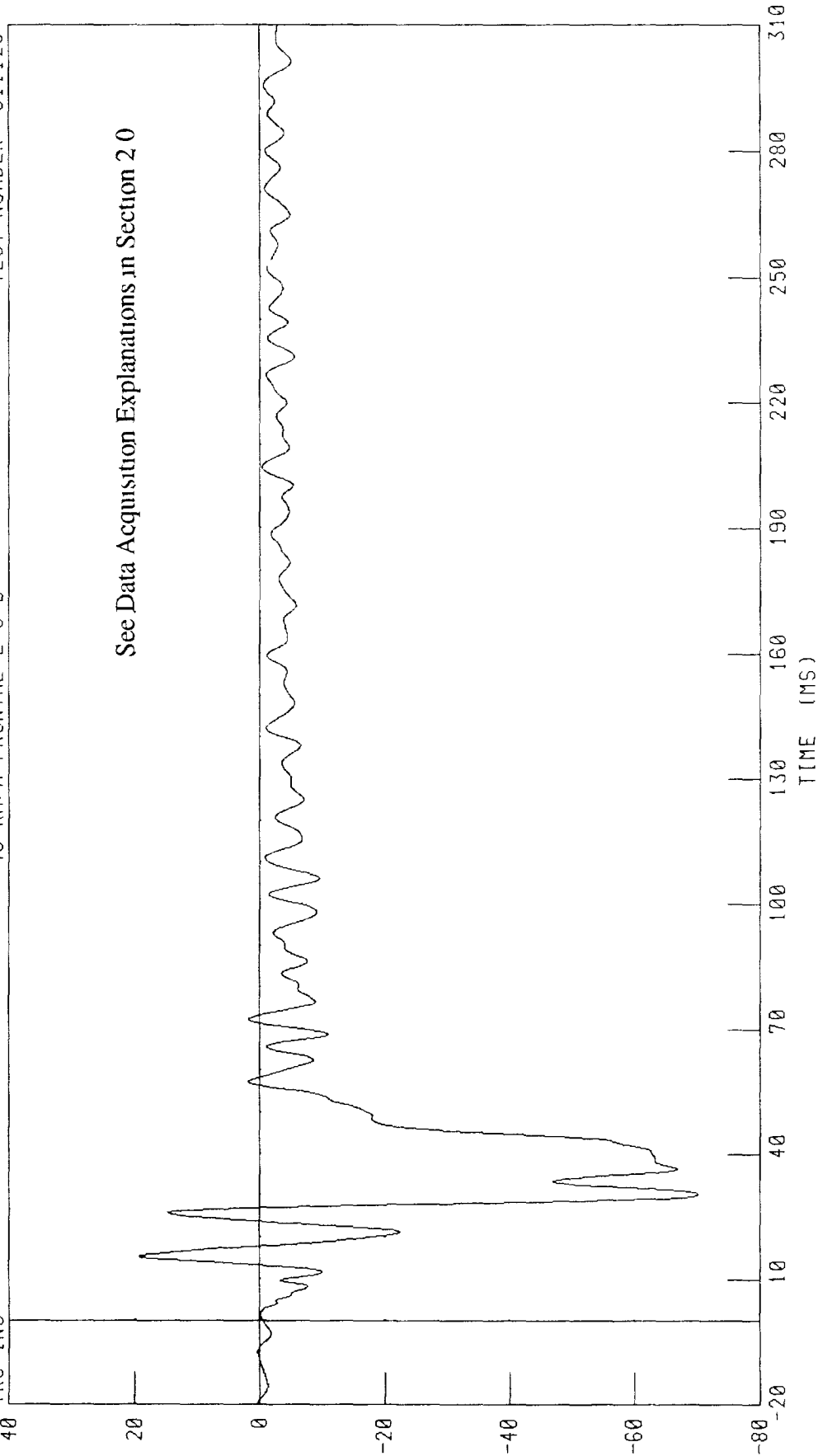
TEST NUMBER 011126

48 KM/H FRONTAL L C B

TRC INC

See Data Acquisition Explanations in Section 20

FORCE (KN X 10⁻²)



TIME (MS)

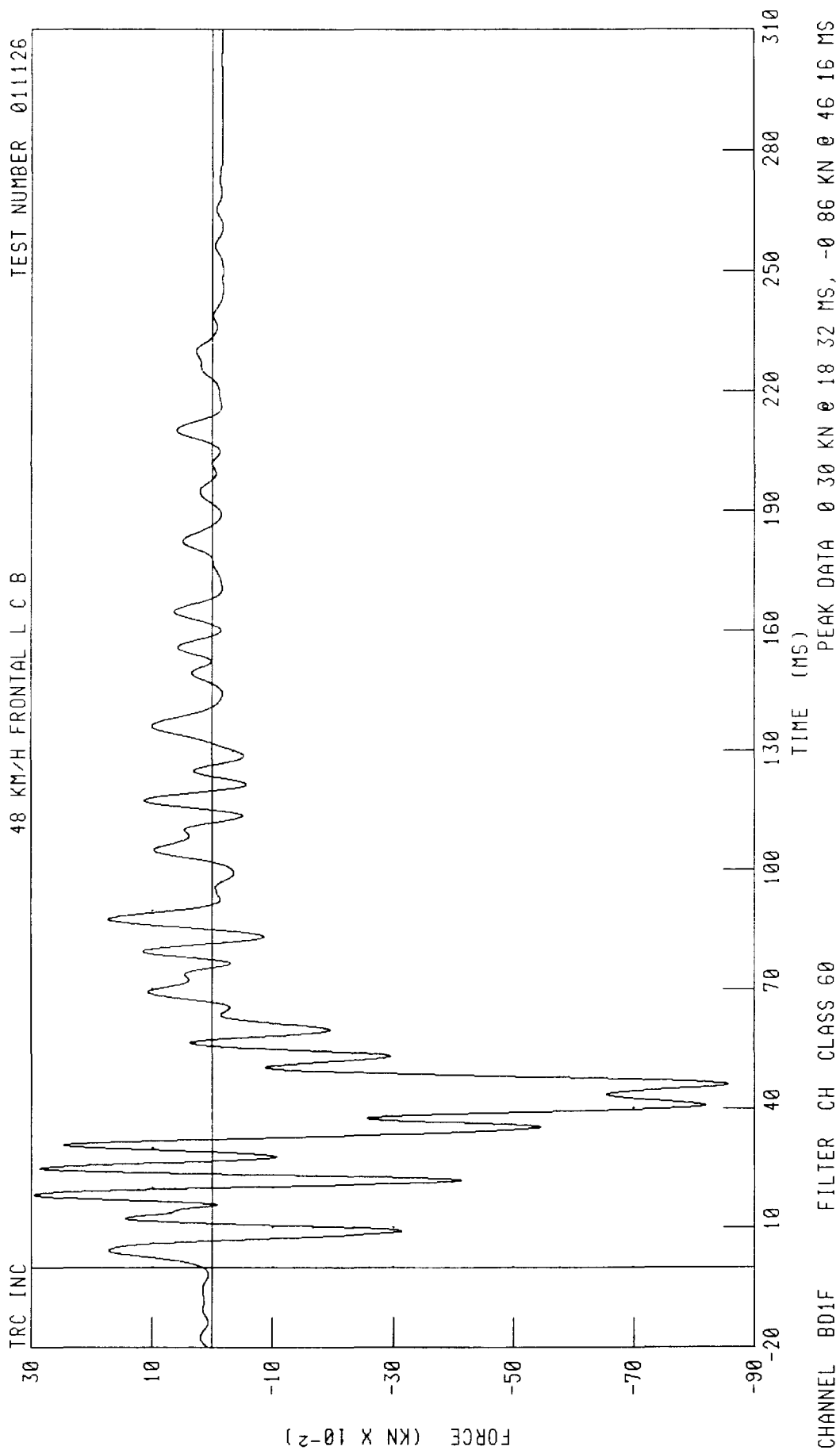
CHANNEL BC9F FILTER CH CLASS 60 PEAK DATA 0 19 KN @ 15 52 MS, -0 70 KN @ 30 24 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

LOAD CELL BARRIER POSITION D1 FORCE

48 KM/H FRONTAL L C B

TEST NUMBER 011126



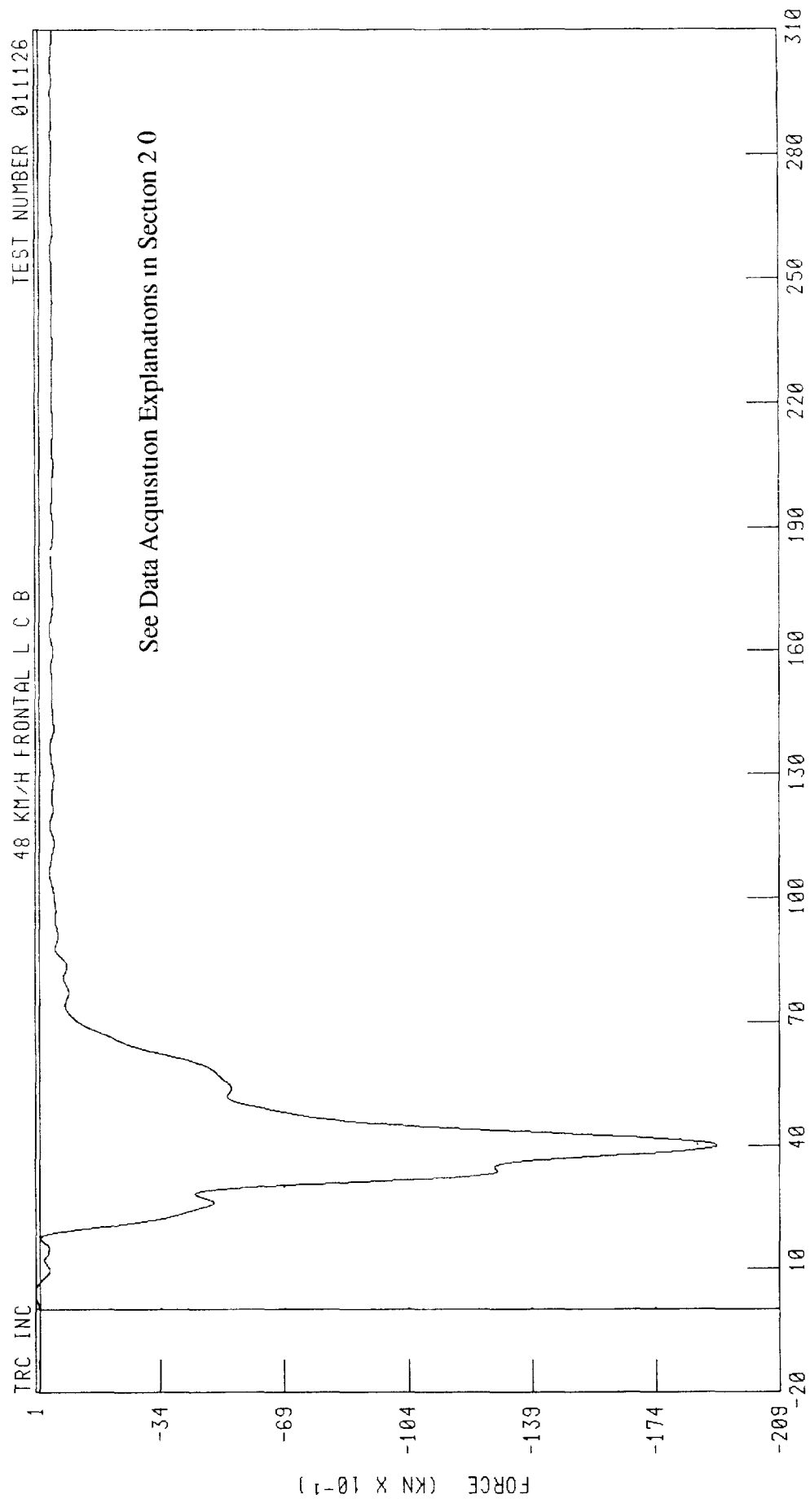
CHANNEL BD1F FILTER CH CLASS 60 PEAK DATA 0 30 KN @ 18 32 MS, -0 86 KN @ 46 16 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

LOAD CELL BARRIER POSITION D2 FORCE

48 KM/H FRONTAL L C B

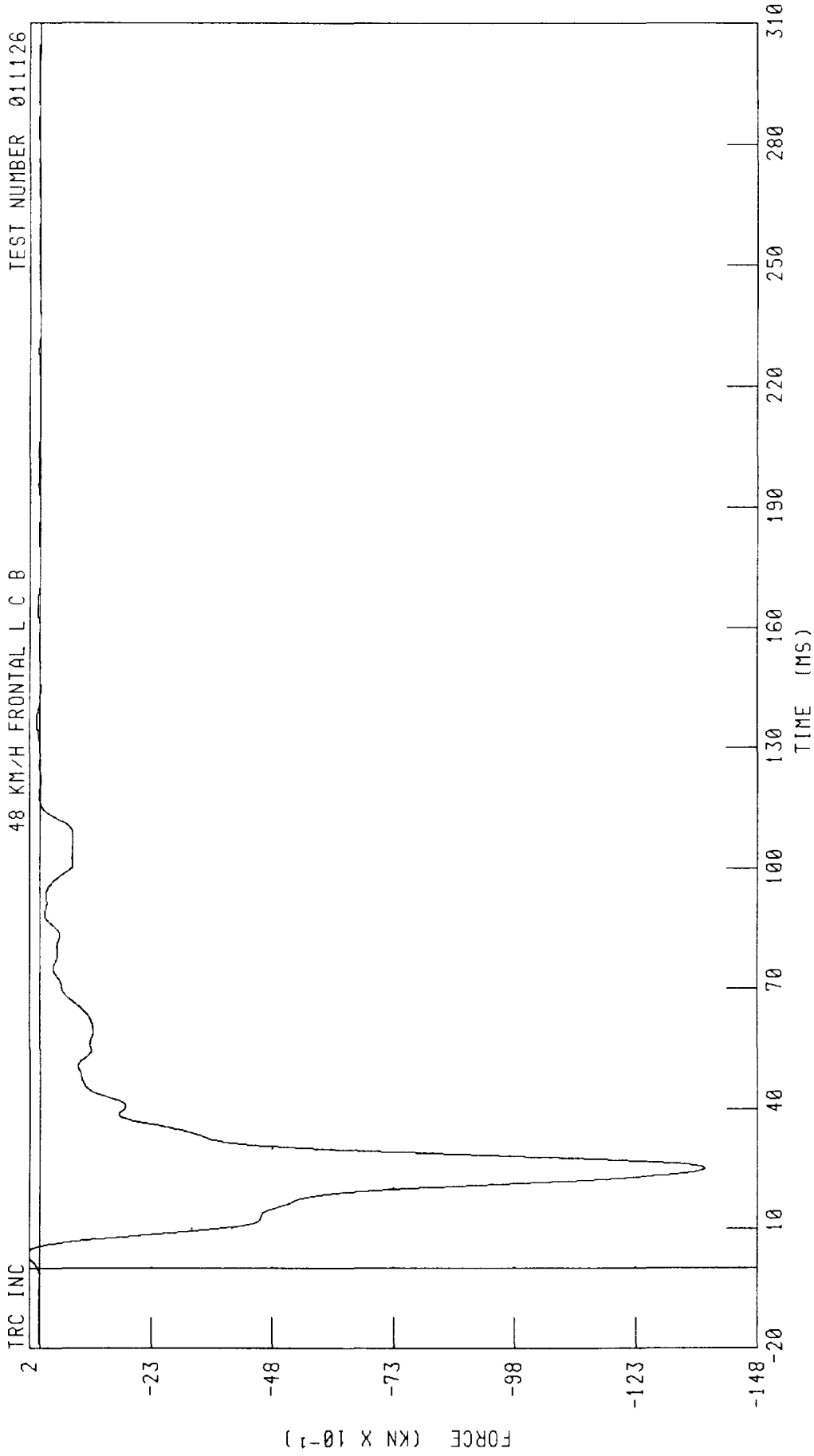
TEST NUMBER 011126



See Data Acquisition Explanations in Section 2.0

CHANNEL BD2F FILTER CH CLASS 60 PEAK DATA 0 14 KN @ 3 84 MS, -19 13 KN @ 40 00 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
LOAD CELL BARRIER POSITION D3 FORCE



TEST NUMBER 011126

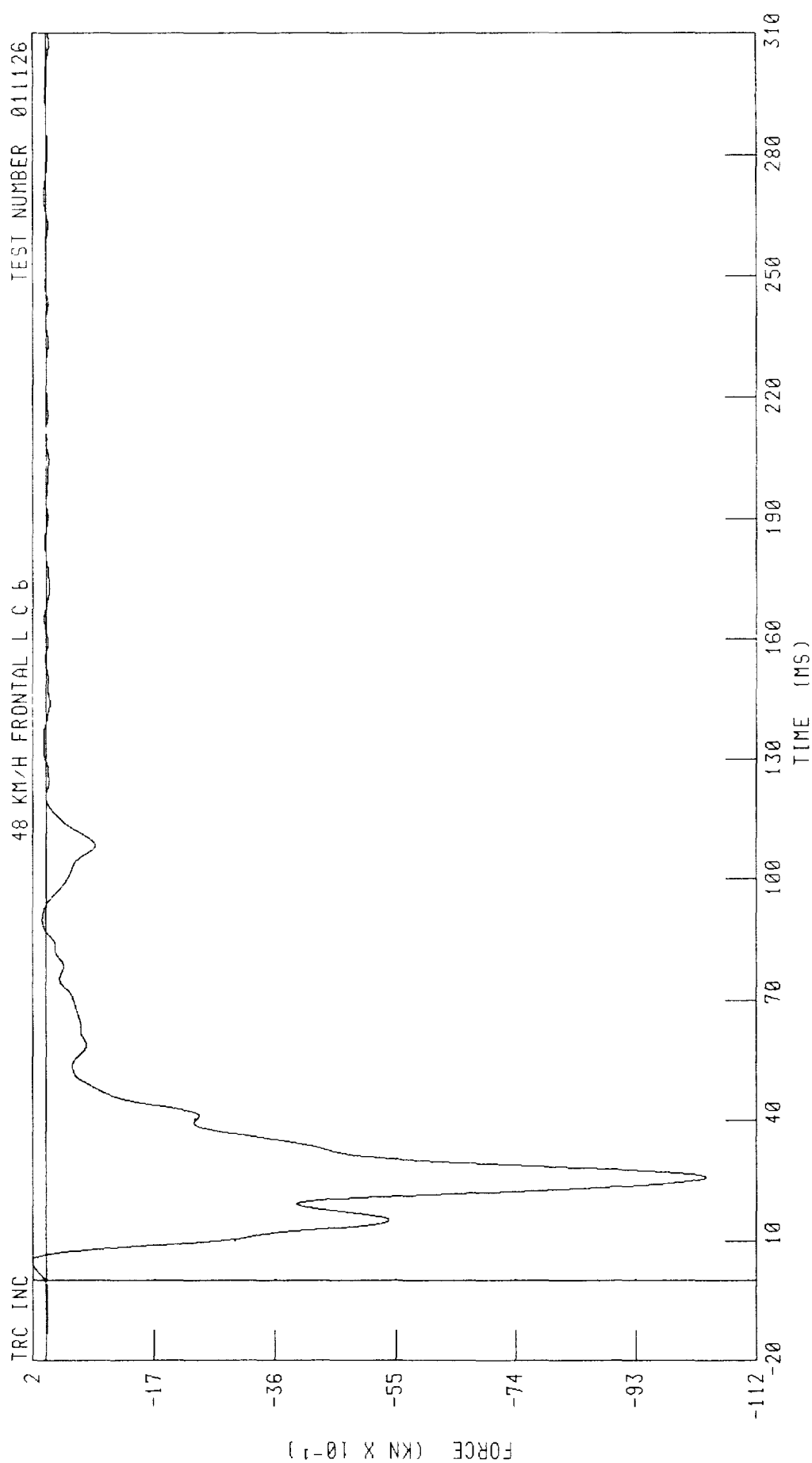
CHANNEL B03F FILTER CH CLASS 60 PEAK DATA 0 23 KN @ 3 84 MS, -13 73 KN @ 25 12 MS

2001 FORD FScape INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

LOAD CELL BARRIER POSITION D4 FORCE

48 KM/H FRONTAL L C 6

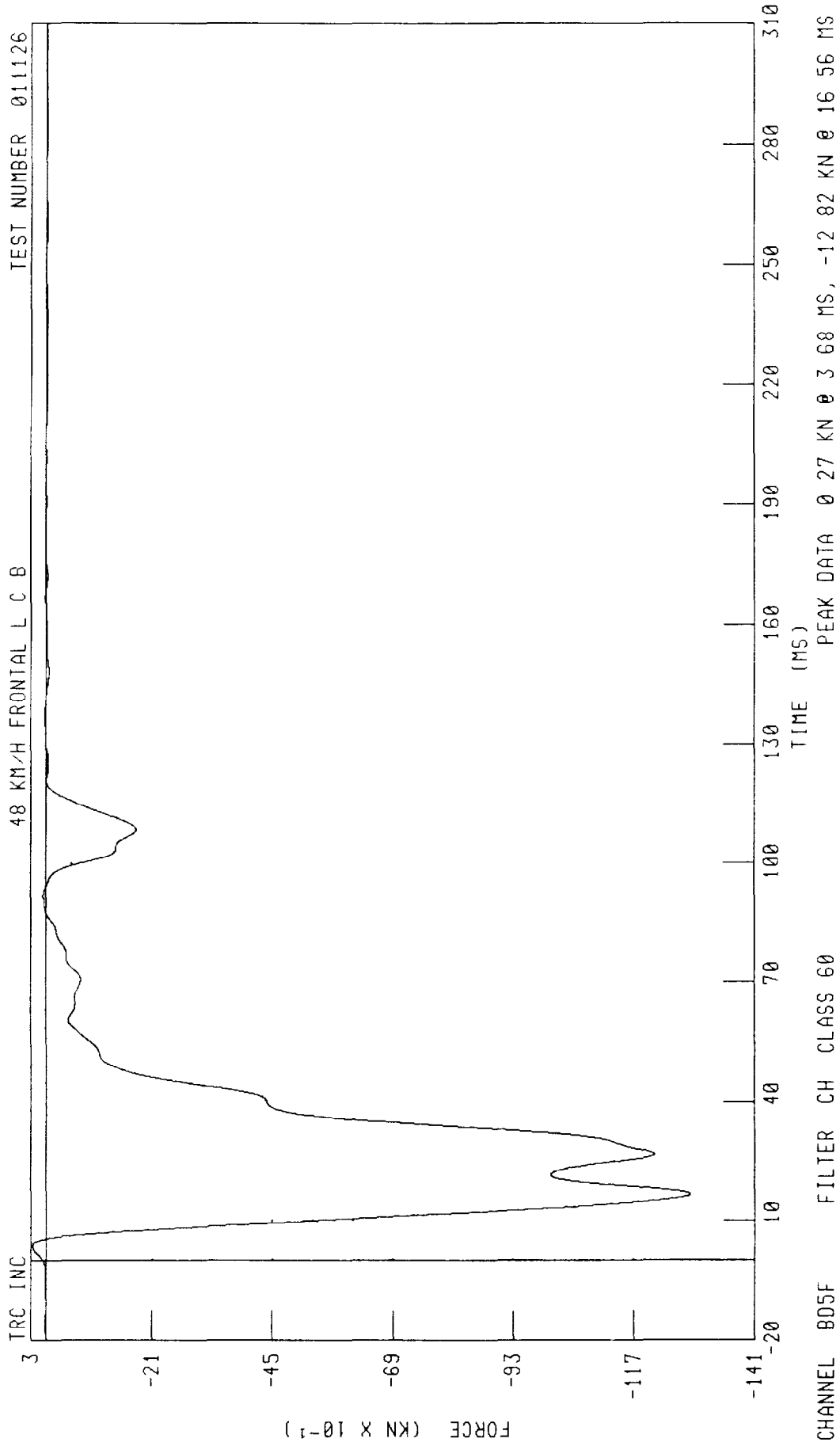
TEST NUMBER 011126



PEAK DATA 0 24 KN @ 4 72 MS, -10 41 KN @ 25 60 MS

CHANNEL BD4F FILTER CH CLASS 60

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
LOAD CELL BARRIER POSITION D5 FORCE



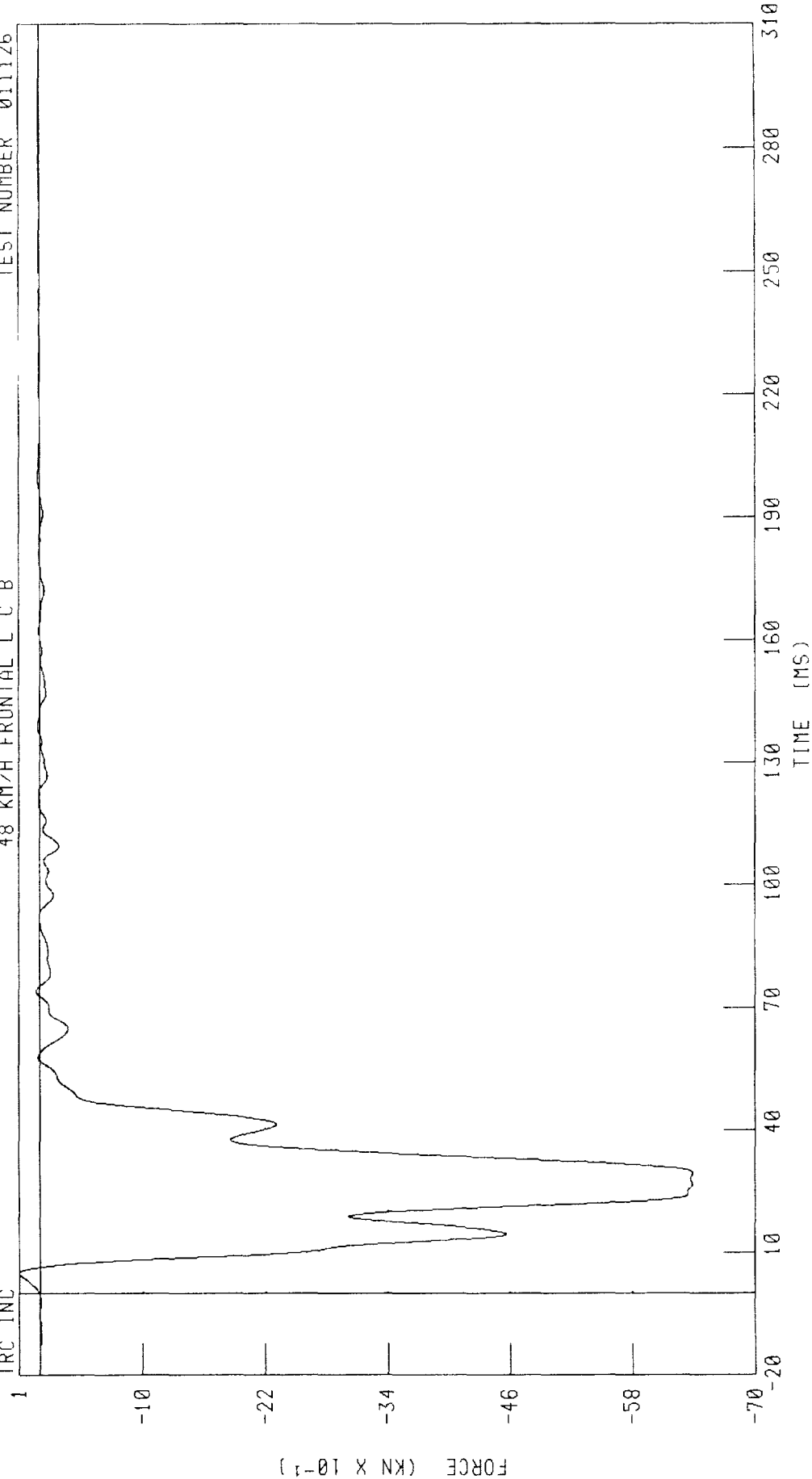
2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

LOAD CELL BARRIER POSITION D6 FORCE

TEST NUMBER 011126

48 KM/H FRONTAL L C B

TRC INC

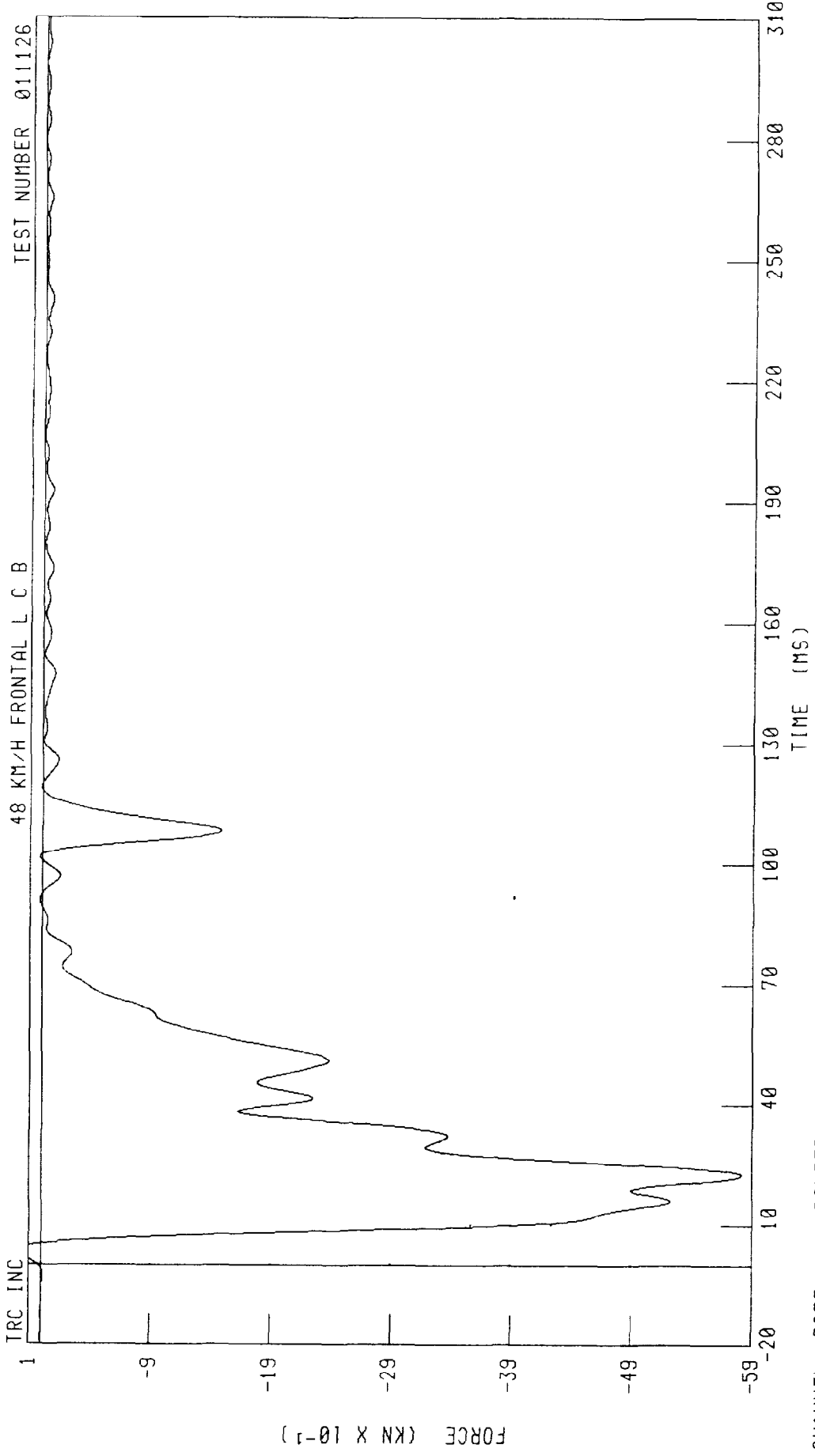


PEAK DATA 0 21 KN @ 4 88 MS, 6 39 KN @ 29 36 MS

FILTER CH CLASS 60

CHANNEL B06F

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
LOAD CELL BARRIER POSITION D7 FORCE



TEST NUMBER 011126

48 KM/H FRONTAL L C B

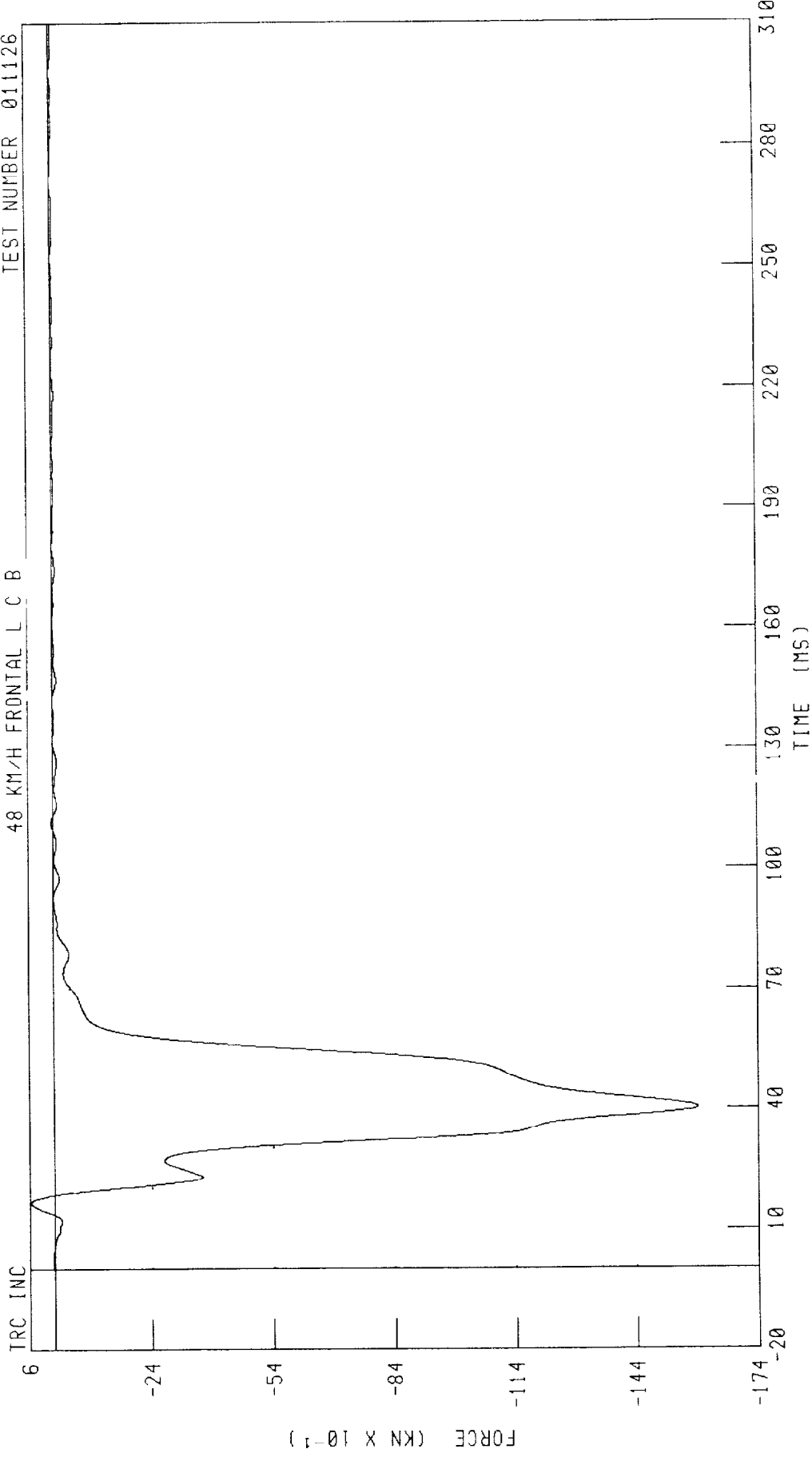
CHANNEL B07F FILTER CH CLASS 60 PEAK DATA 0 17 KN @ 3 36 MS, -5 82 KN @ 22 48 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

LOAD CELL BARRIER POSITION D8 FORCE

48 KM/H FRONTAL L C B

TEST NUMBER 011126



PEAK DATA 0 58 KN @ 16 64 MS, -15 92 KN @ 40 08 MS

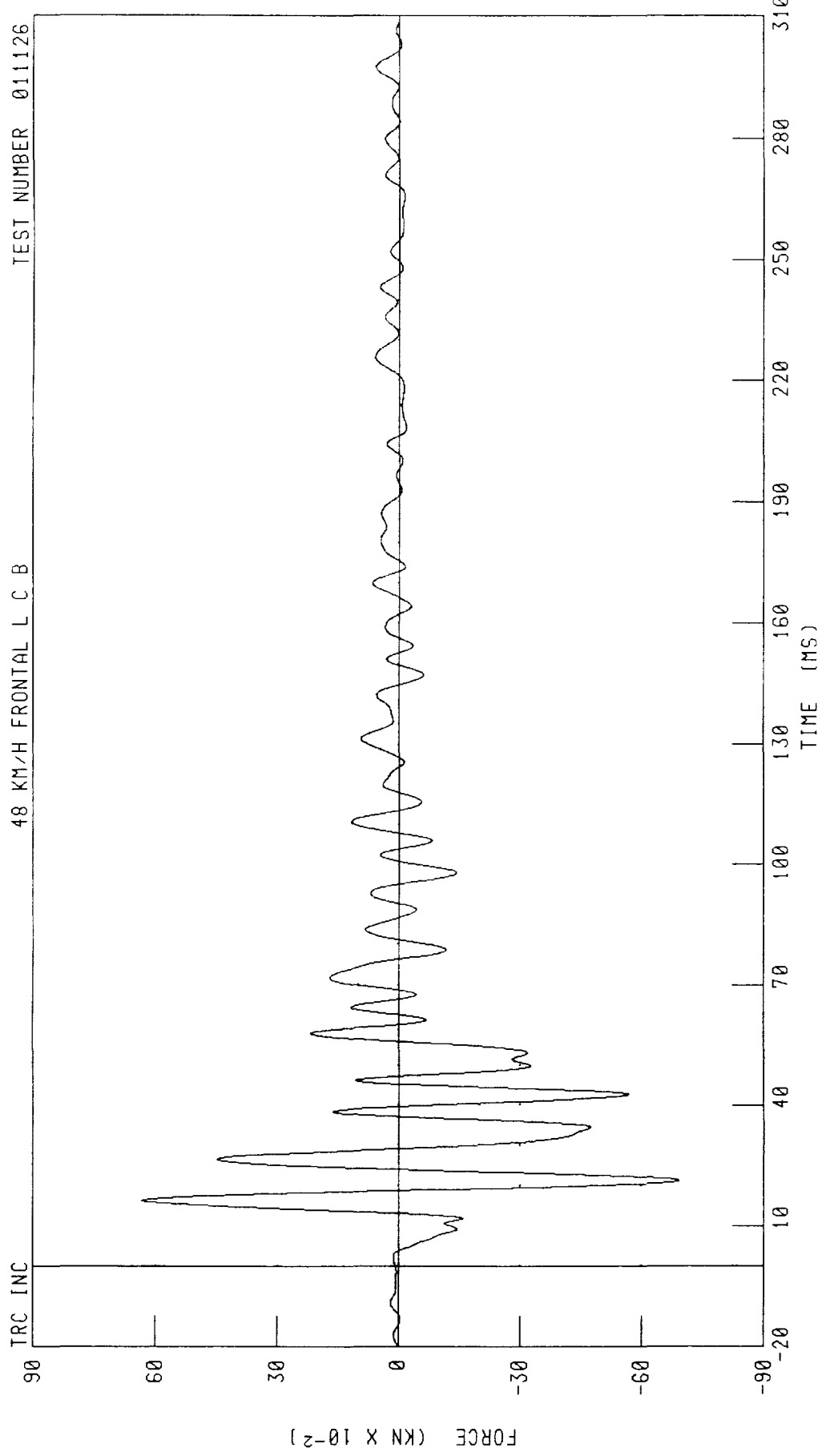
CHANNEL BD8F FILTER CH CLASS 60

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

LOAD CELL BARRIER POSITION D9 FORCE

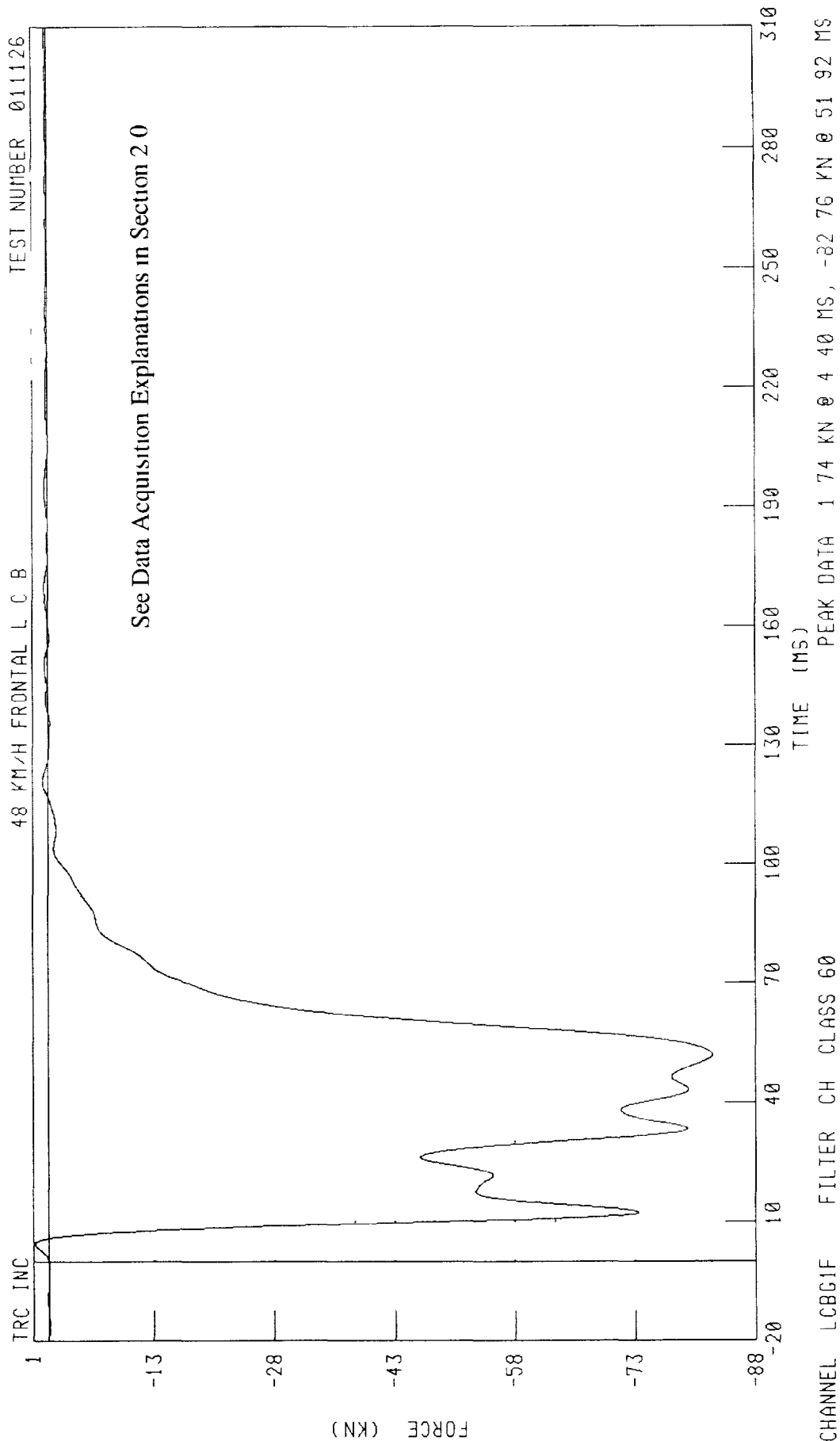
48 KM/H FRONTAL L C B

TEST NUMBER 011126

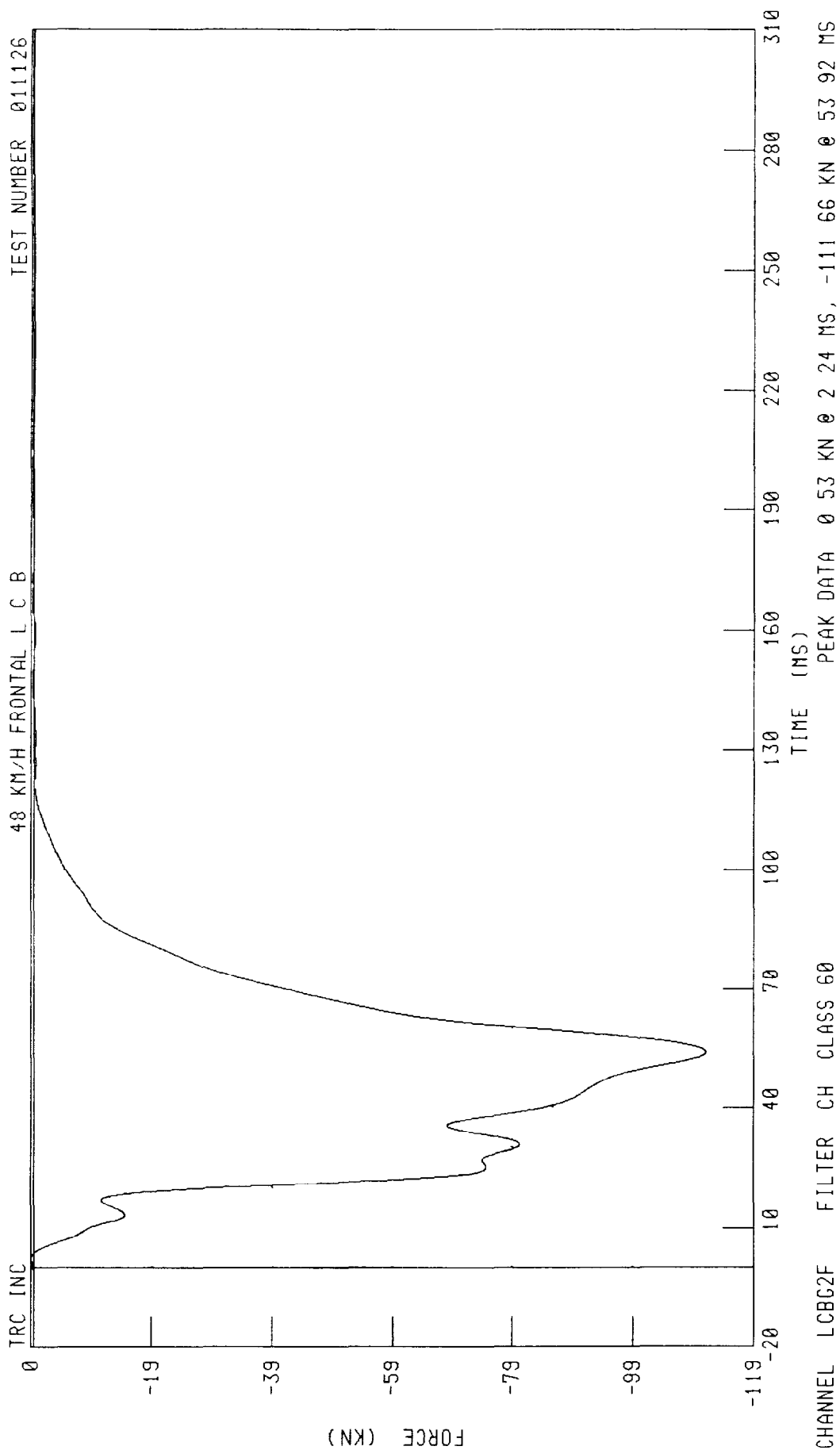


CHANNEL BD9F FILTER CH CLASS 60 PEAK DATA 0 63 KN 0 16 40 MS, -0 69 KN 0 21 36 MS

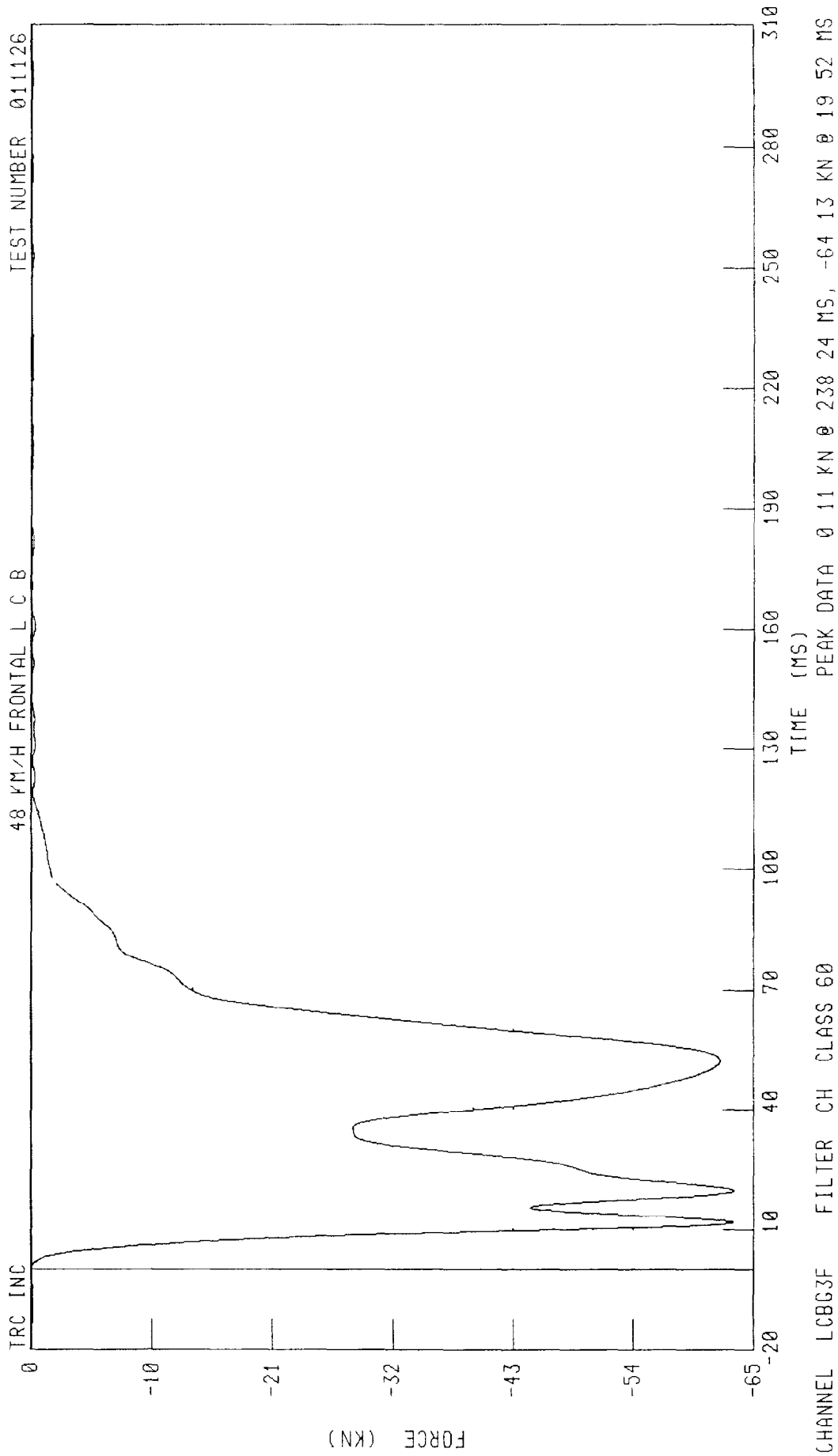
2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
LOAD CELL BARRIER GROUP # 1 FORCE TOTAL



2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
LOAD CELL BARRIER GROUP # 2 FORCE TOTAL



2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H
LOAD CELL BARRIER GROUP # 3 FORCE TOTAL

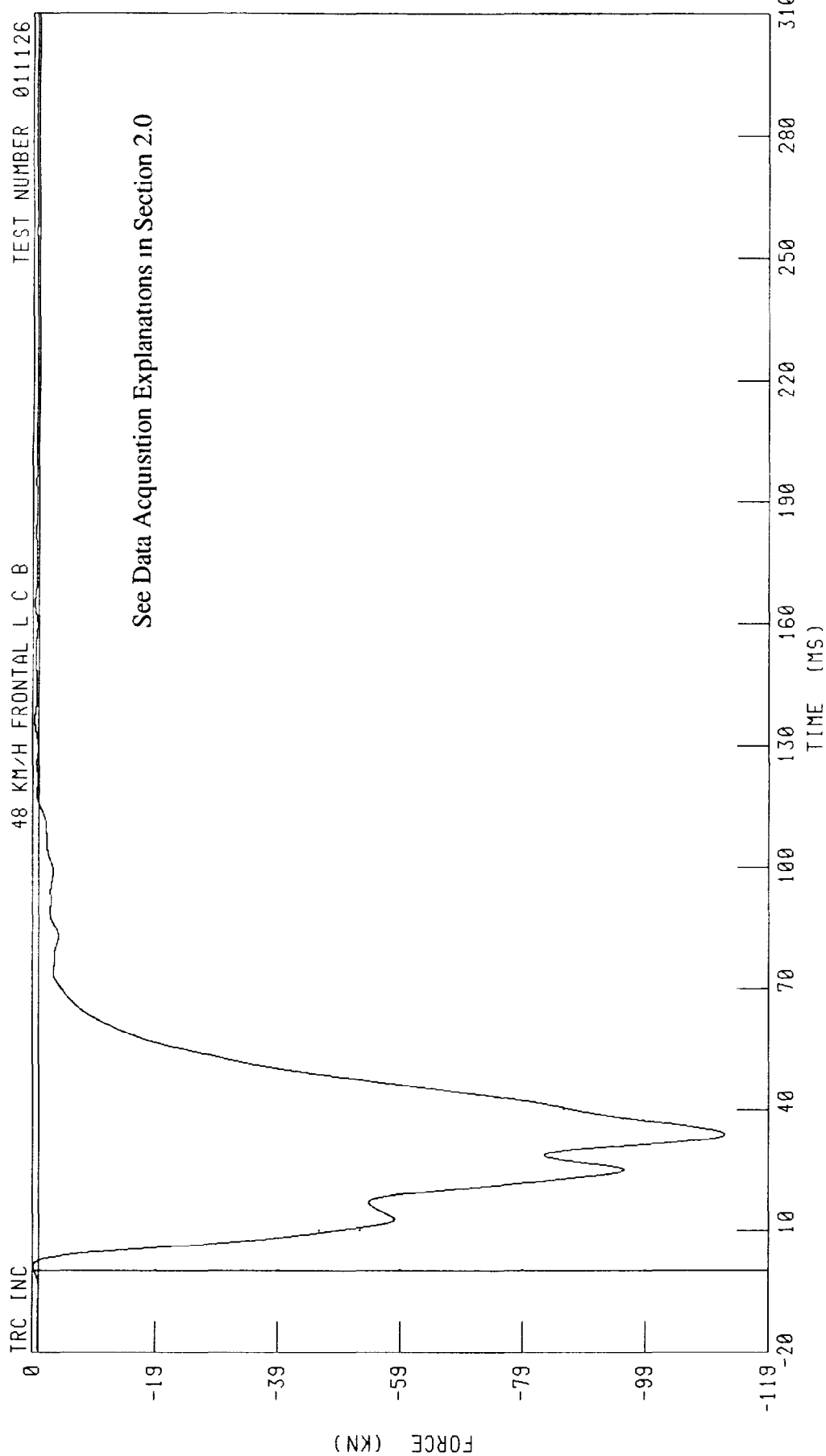


2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

LOAD CELL BARRIER GROUP # 4 FORCE TOTAL

48 KM/H FRONTAL L C B

TEST NUMBER 011126



CHANNEL LCBC4F FILTER CH CLASS 60

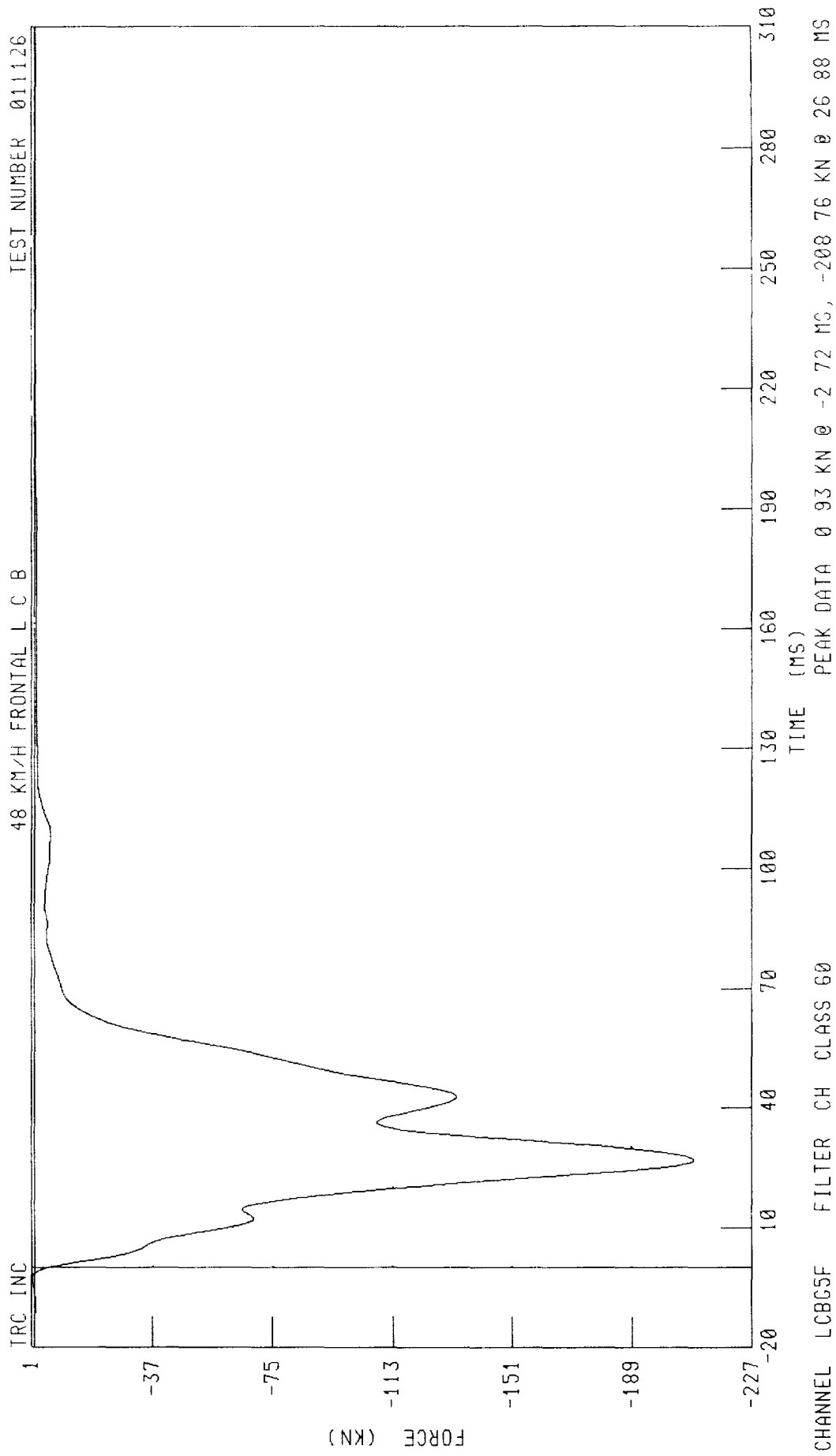
PEAK DATA 0 87 KN @ 1 12 MS, -112 06 KN @ 33 76 MS

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

LOAD CELL BARRIER GROUP # 5 FORCE TOTAL

48 KM/H FRONTAL L C B

TEST NUMBER 011126



PEAK DATA 0 93 KN @ -2 72 MS, -208 76 KN @ 26 88 MS

CHANNEL LCBC5F FILTER CH CLASS 60

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

LOAD CELL BARRIER GROUP # 6 FORCE TOTAL

48 KM/H FRONTAL L C B

TEST NUMBER 011126

TRC INC

See Data Acquisition Explanations in Section 2.0

FORCE (KN)

TIME (MS)

PEAK DATA 0 49 KN 0 0 16 MS, -114 00 KN 0 33 84 MS

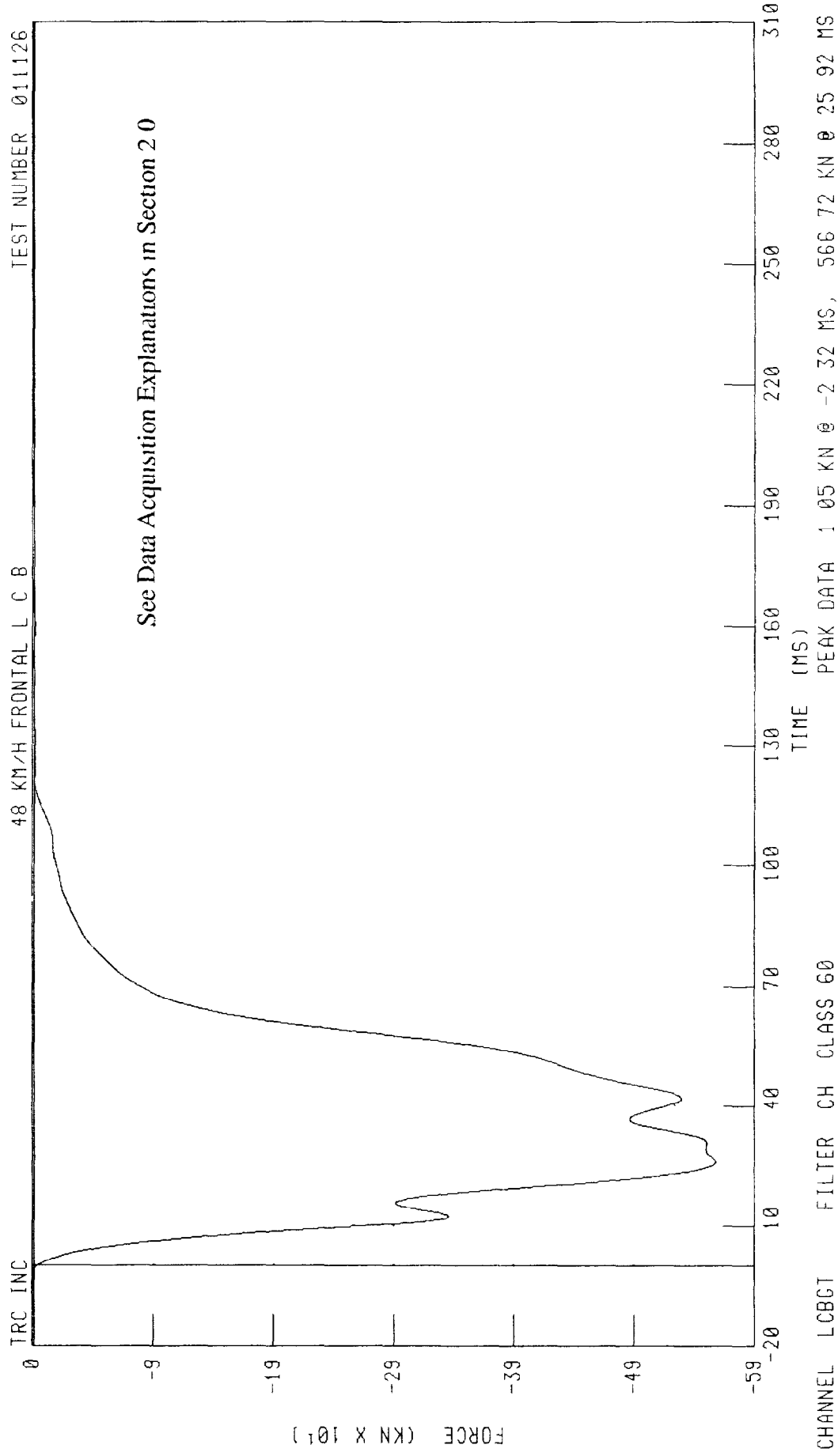
CHANNEL LCBGCF FILTER CH CLASS 60

2001 FORD ESCAPE INTO FRONTAL LOAD CELL BARRIER AT 48 KM/H

TOTAL LOAD CELL BARRIER FORCE

48 KM/H FRONTAL L C B

TEST NUMBER 011126



Appendix C

Dummy Configuration and Performance Verification Data

Pre-Test Dummy Configuration and Performance Verification Data

Driver Dummy S/N: 206

TRANSPORTATION RESEARCH CENTER INC.
HYBRID III EXTERNAL DIMENSIONS

206

21-NOV-01

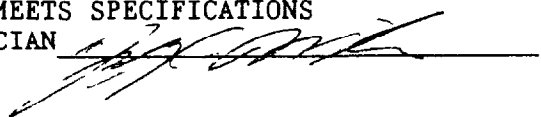
TRC INC. TEST NO: 206C12ED1 572E SN206 EXT.DIMENSION CAL12

TEST PARAMETER (DIMEN.)	SPECIFICATION	TEST RESULTS
LOCATION FOR CHEST CIRCUMFERENCE (AA)	429 - 434 MM	432. MM
LOCATION FOR WAIST CIRCUMFERENCE (BB)	226 - 231 MM	229. MM
CHEST CIRCUMFERENCE (Y)	970 - 1001 MM	983. MM
WAIST CIRCUMFERENCE (Z)	836 - 866 MM	856. MM
CHEST DEPTH (O)	213 - 229 MM	224. MM
H-POINT HEIGHT (C)	84 - 89 MM	86. MM
H-POINT FROM SEATBACK (D)	135 - 140 MM	137. MM
SKULL CAP TO BACKLINE (H)	41 - 46 MM	43. MM
TOTAL SITTING HEIGHT (A)	879 - 889 MM	886. MM
THIGH CLEARANCE (F)	140 - 155 MM	147. MM
BUTTOCK KNEE LENGTH (K)	579 - 605 MM	594. MM
BUTTOCK POPLITEAL LENGTH (N)	452 - 478 MM	472. MM
POPLITEAL HEIGHT (L)	429 - 455 MM	439. MM
KNEE PIVOT HEIGHT (M)	485 - 500 MM	490. MM
FOOT LENGTH (P)	252 - 267 MM	254. MM
FOOT BREADTH (W)	91 - 107 MM	102. MM
SHOULDER PIVOT FROM BACKLINE (E)	84 - 94 MM	89. MM
SHOULDER BREADTH (V)	422 - 437 MM	432. MM
SHOULDER PIVOT HEIGHT (B)	506 - 521 MM	516. MM
ELBOW REST HEIGHT (J)	191 - 211 MM	206. MM
SHOULDER-ELBOW LENGTH (I)	330 - 345 MM	335. MM
BACK OF ELBOW TO WRIST PIVOT (G)	290 - 305 MM	297. MM

572E SN206 EXT.DIMENSION CAL12

DUMMY MEETS SPECIFICATIONS

TECHNICIAN



RUN NUMBER: 112101.1555

TRANSPORTATION RESEARCH CENTER INC.

HEAD DROP TEST

HYBRID III 50th

21-NOV-01

TRC INC.

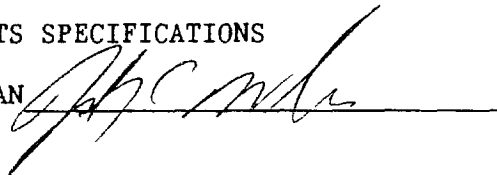
TEST NO: 206C12HD1

572E SN206 HEAD DROP CAL 12

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	20.6 DEG. C
RELATIVE HUMIDITY	10 - 70 %	24.0 %
PEAK RESULTANT ACCELERATION	225 - 275 G	265.82 G
PEAK LATERAL ACCELERATION	15 G MAX	-5.44 G
IS ACCELERATION CURVE UNIMODAL?	YES	YES

TEST MEETS SPECIFICATIONS

TECHNICIAN



RUN NUMBER: 112101.0737;1

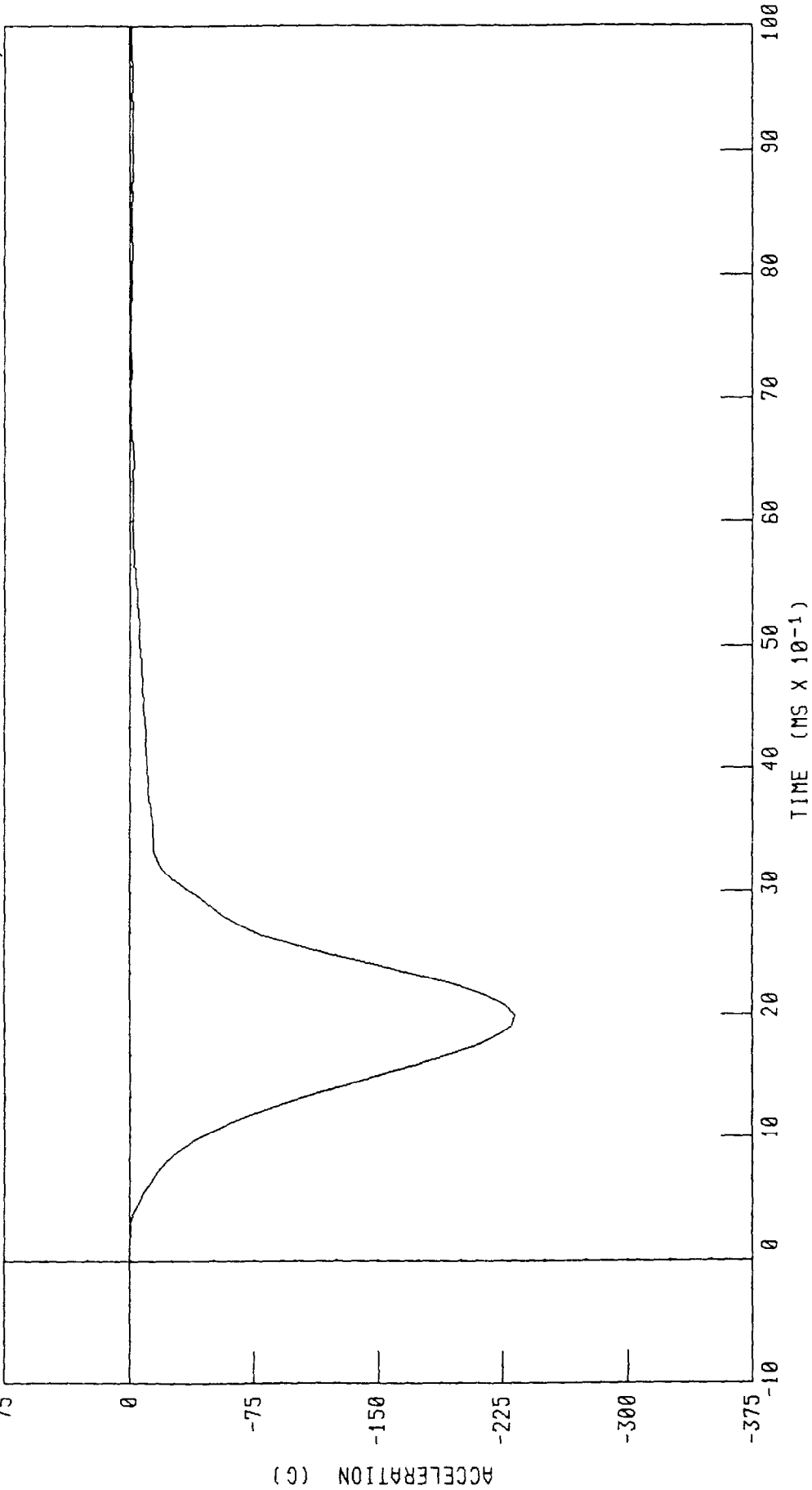
PART 572-E HYBRID III HEAD CALIBRATION

HEAD ACCELERATION X AXIS

TRC TEST NUMBER 206C12HD1

572E SN206 HEAD DROP CAL 12

RUN NUMBER 112101 0737,1



CHANNEL HEDXC FILTER CH CLASS 1000

PEAK DATA 0 08 G @ 16 MS, -232 23 G @ 2 00 MS

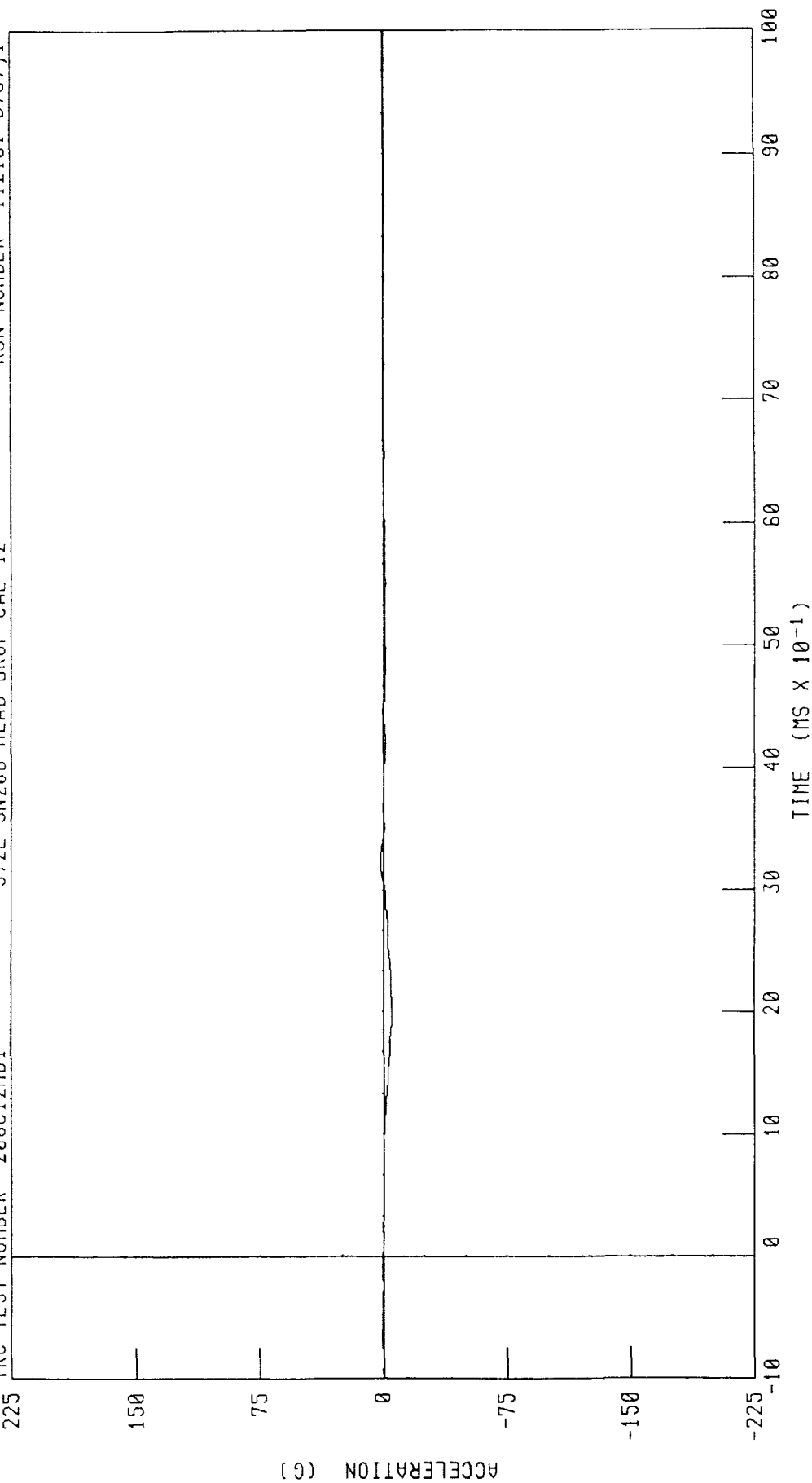
PART 572-E HYBRID III HEAD CALIBRATION

HEAD ACCELERATION Y AXIS

TRC TEST NUMBER 206C12HD1

572E SN206 HEAD DROP CAL 12

RUN NUMBER 112101 0737,1



PEAK DATA 1 74 G @ 3 28 MS, -5 45 G @ 2 00 MS

CHANNEL HEDYG FILTER CH CLASS 1000

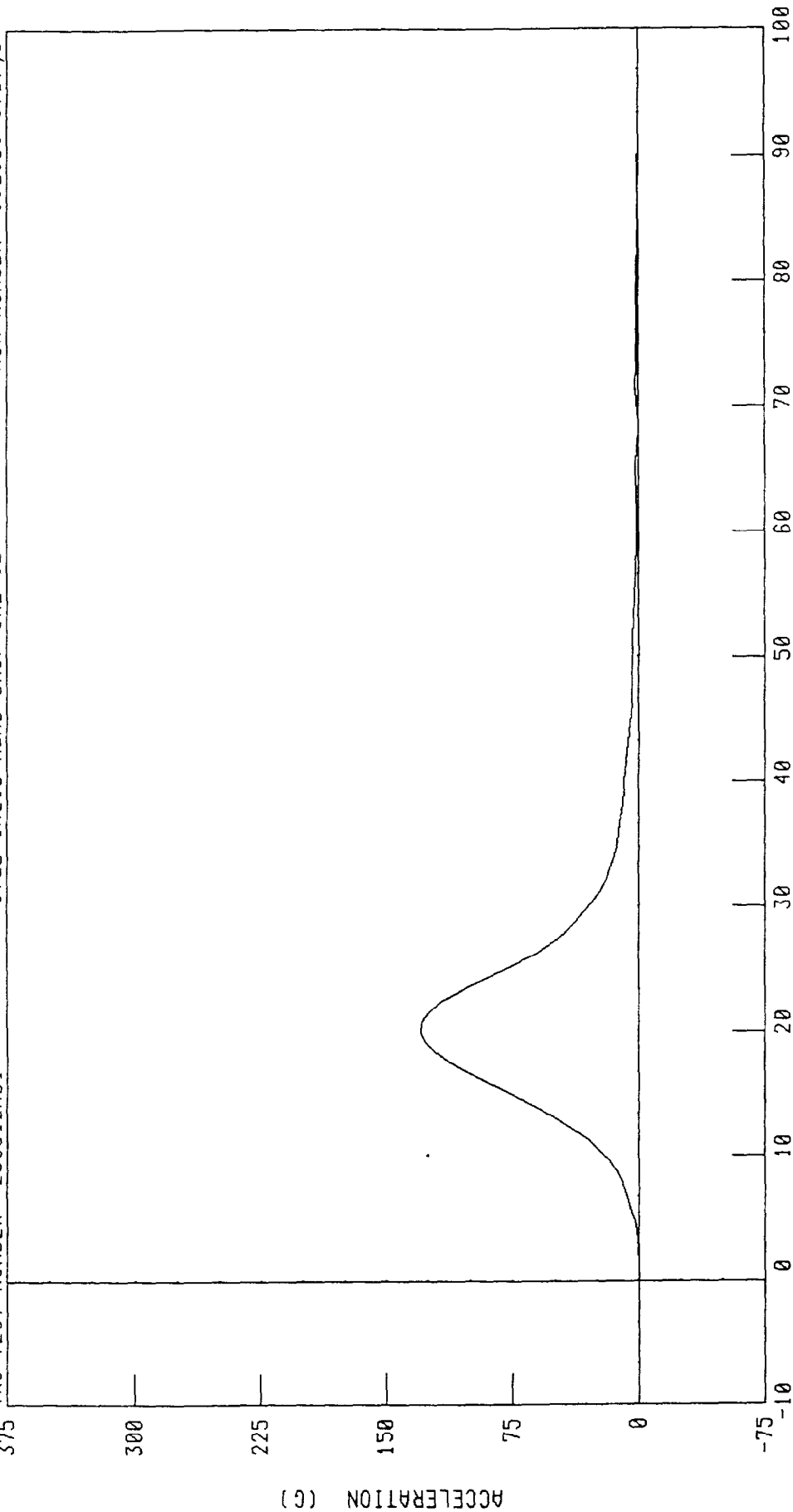
PART 572-E HYBRID III HEAD CALIBRATION

HEAD ACCELERATION Z AXIS

572E SN206 HEAD DROP CAL 12

RUN NUMBER 112101 0737,1

TRC TEST NUMBER 206C12HD1



PEAK DATA 129 22 6 2 00 MS, -0 34 6 6 80 MS

CHANNEL HEDZC FILTER CH CLASS 1000

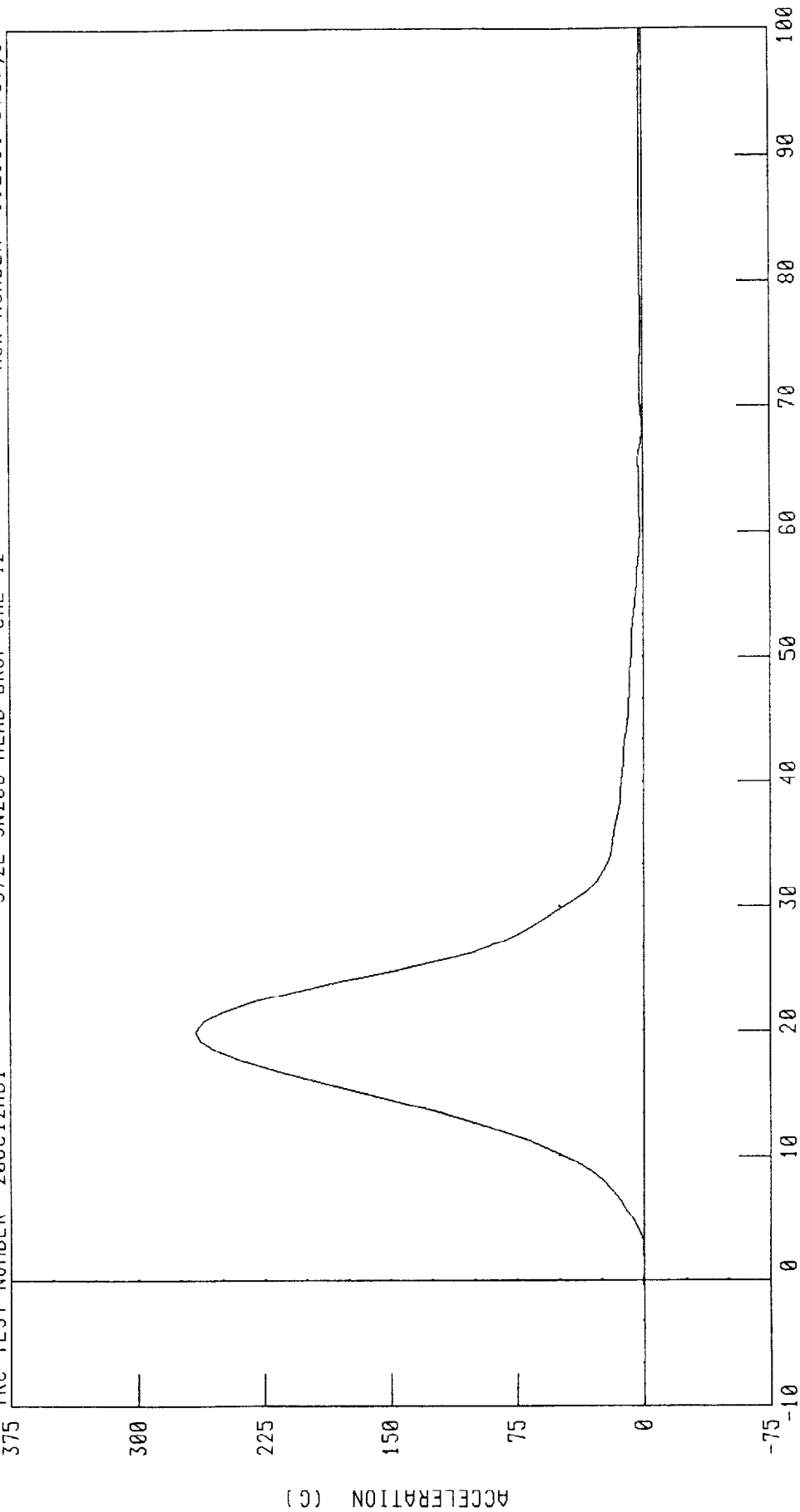
PART 572-E HYBRID III HEAD CALIBRATION

HEAD RESULTANT ACCELERATION

TRC TEST NUMBER 206C12HD1

572E SN206 HEAD DROP CAL 12

RUN NUMBER 112101 0737,1



TIME (MS X 10⁻¹)

PEAK DATA 265 82 G @ 2 00 MS, 0 08 G @ -0 64 MS

CHANNEL HEDRG FILTER CH CLASS 1000

TRANSPORTATION RESEARCH CENTER INC.

HYBRID III 50th

21-NOV-01

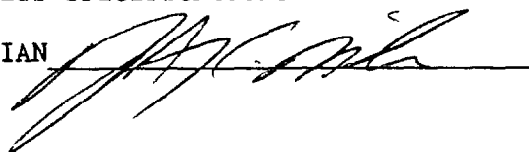
NECK FLEXION TEST - 6 CHANNEL TRANSDUCER

TRC INC. TEST NO: 206C12NF1 572E SN206 NECK FLEXION CAL12

TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE		20.6-22.2 DEG. C	21.1 DEG. C
RELATIVE HUMIDITY		10 - 70 %	24.0 %
IMPACT VELOCITY		6.89 - 7.13 M/S	6.99 M/S
PENDULUM DECELERATION	10 MS	22.50 - 27.50 G	25.68 G
	20 MS	17.60 - 22.60 G	21.83 G
	30 MS	12.50 - 18.50 G	17.06 G
MAX PENDULUM G		29 G MAX	26.37 G
MAX PENDULUM G ABOVE 30 MS		29 G MAX	16.99 G
DECELERATION-TIME CURVE DECAY TIME TO 5 G		34 - 42 MS	38.56 MS
D PLANE	MAX	64 - 78 DEG.	77.36 DEG.
ROTATION	TIME	57 - 64 MS	61.44 MS
MOMENT ABOUT OCCIPITAL CONDYLE	MAX	88.2 - 108.5 NM	98.31 NM
	TIME	47 - 58 MS	51.84 MS
ROTATION ANGLE-TIME CURVE DECAY TIME TO ZERO		113 - 128 MS	121.84 MS
POSITIVE MOMENT-TIME CURVE DECAY TIME TO ZERO		97 - 107 MS	103.84 MS

TEST MEETS SPECIFICATIONS

TECHNICIAN



RUN NUMBER: 112101.1050;1

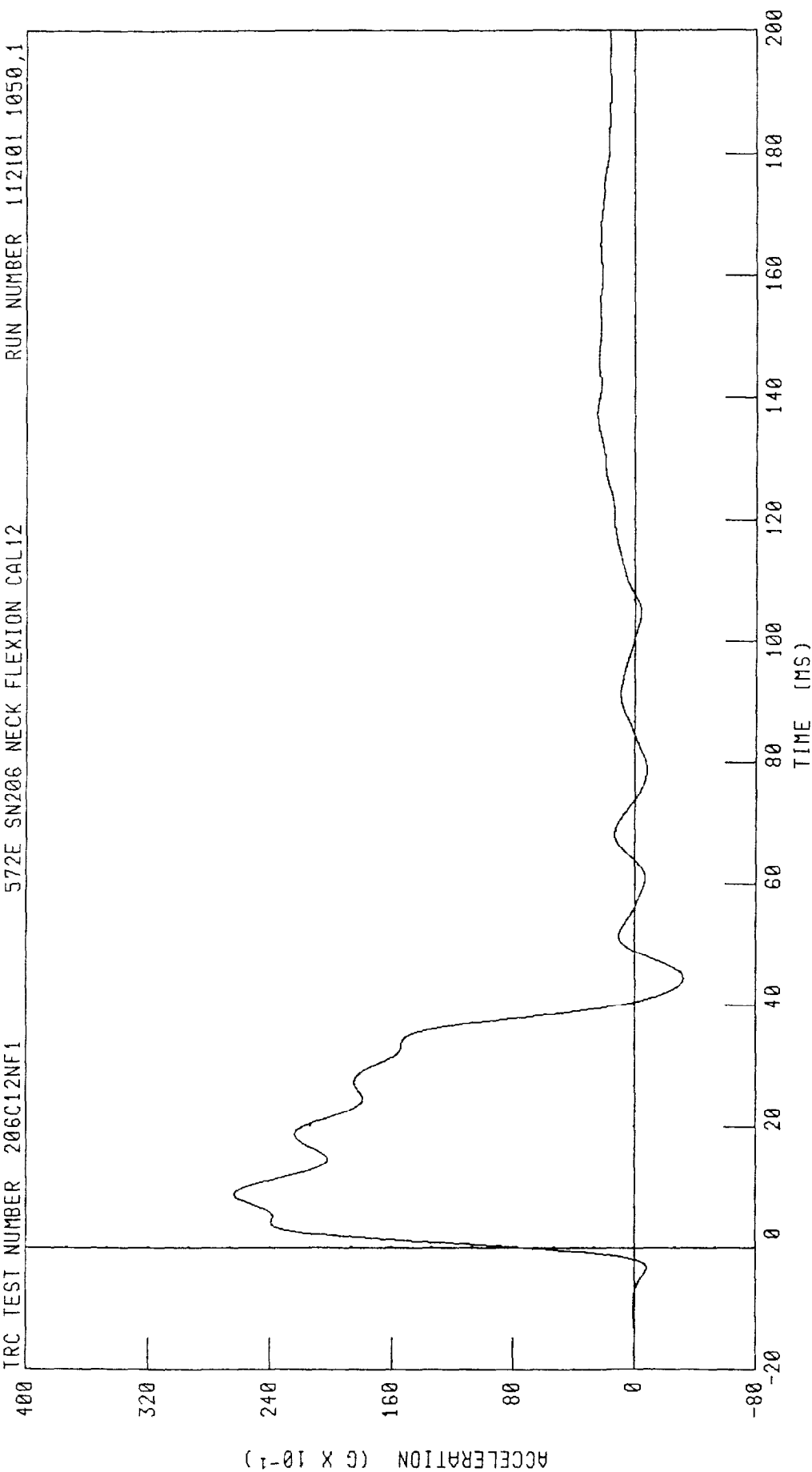
PART 572-E HYBRID III NECK FLEXION CALIBRATION

PENDULUM DECELERATION

TRC TEST NUMBER 206C12NF1

572E SN206 NECK FLEXION CAL12

RUN NUMBER 112101 1050,1



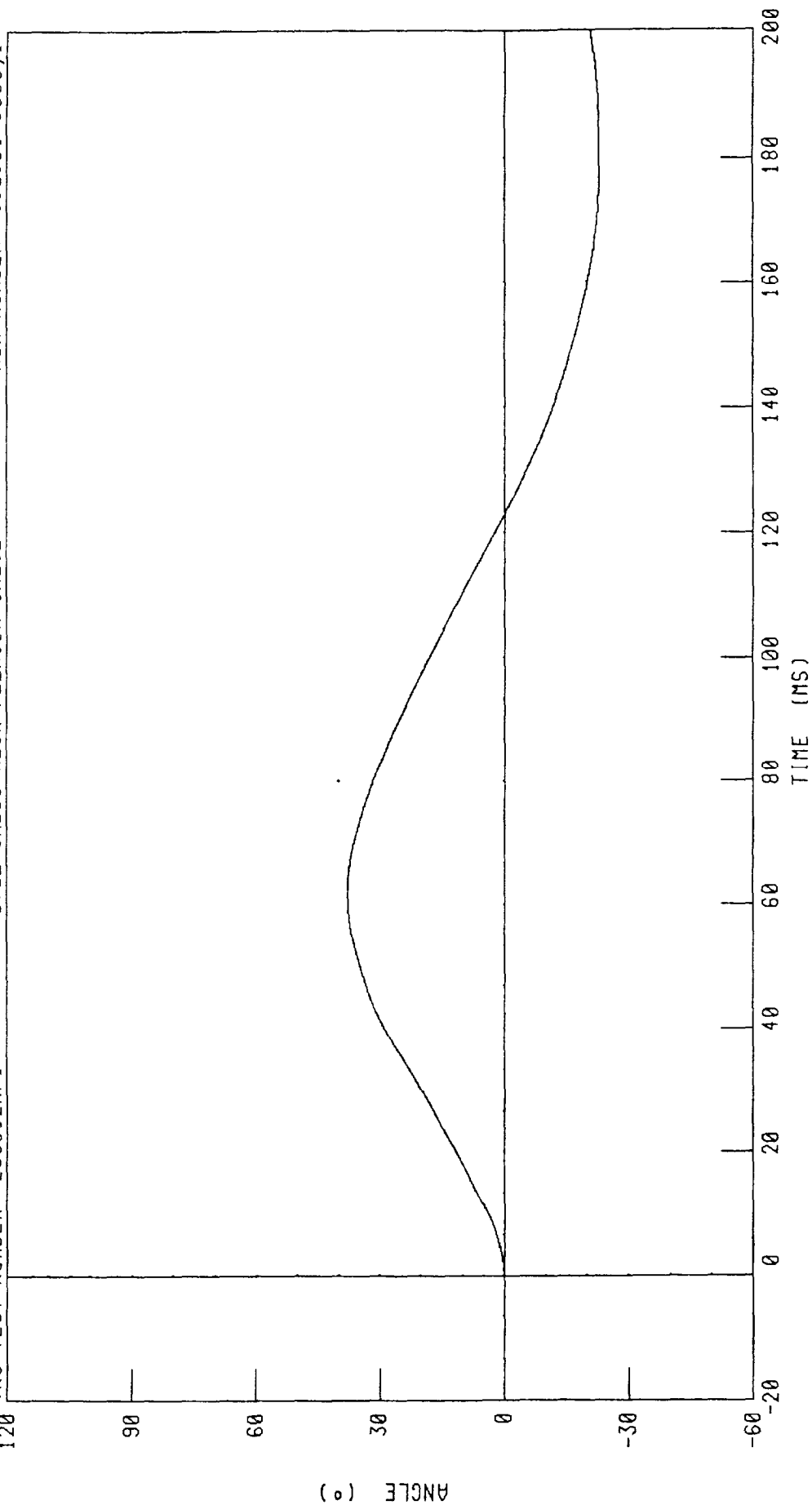
PEAK DATA 26 37 0 0 8 88 MS, -3 23 0 0 44 40 MS

CHANNEL PENXC FILTER CH CLASS 60

ROTATION ABOUT BASE OF NECK

RUN NUMBER 112101 1050,1

TRC TEST NUMBER 206C12NF1



PEAK DATA 37 82 ° @ 61 68 MS, -23 03 ° @ 180 72 MS

CHANNEL	BETA	FILTER	CH	CLASS	60
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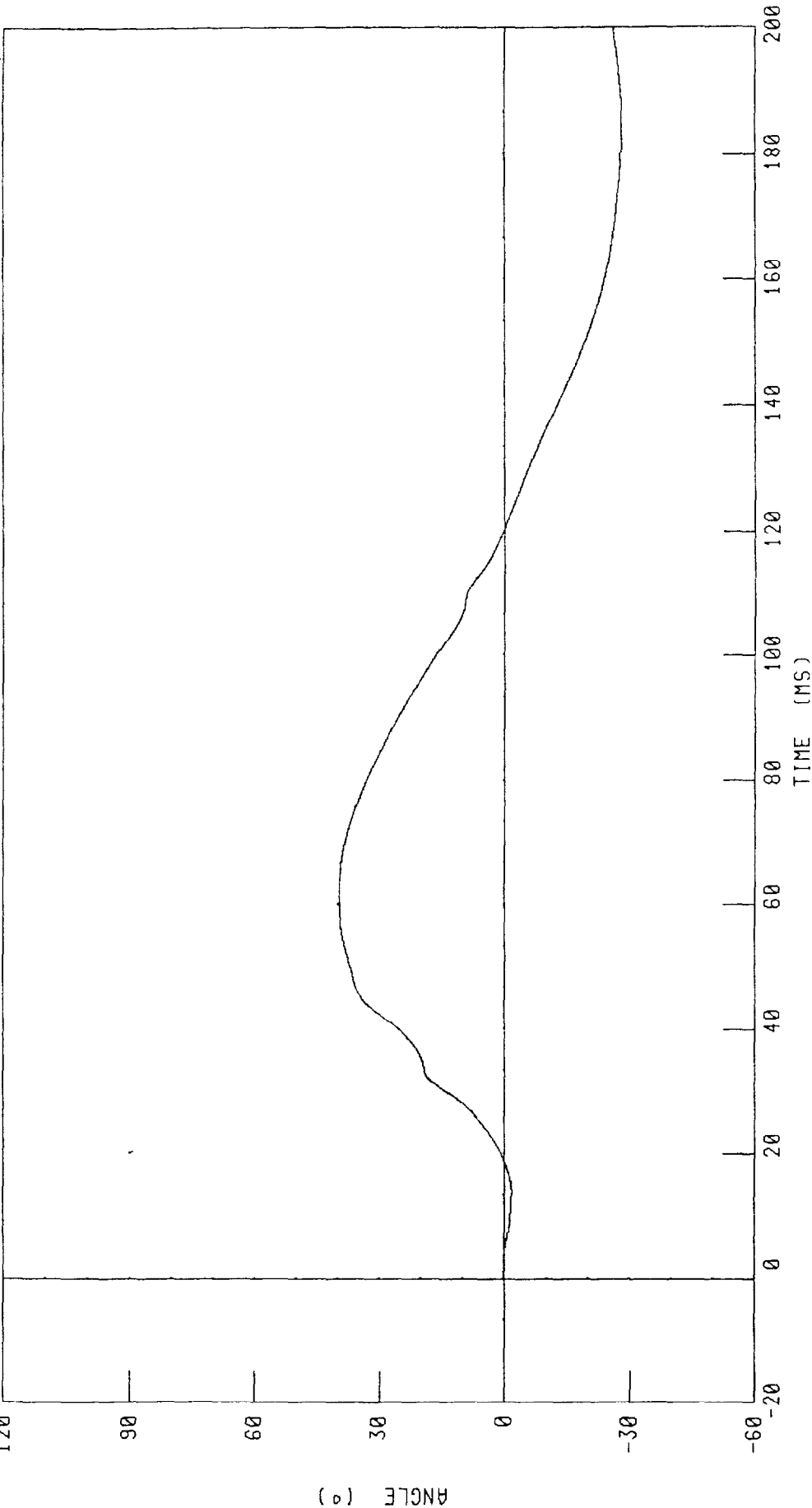
PART 572-E HYBRID III NECK FLEXION CALIBRATION

ROTATION ABOUT OCCIPITAL CONDYLE

572E SN206 NECK FLEXION CAL12

TRC TEST NUMBER 206C12NF1

RUN NUMBER 112101 1050,1



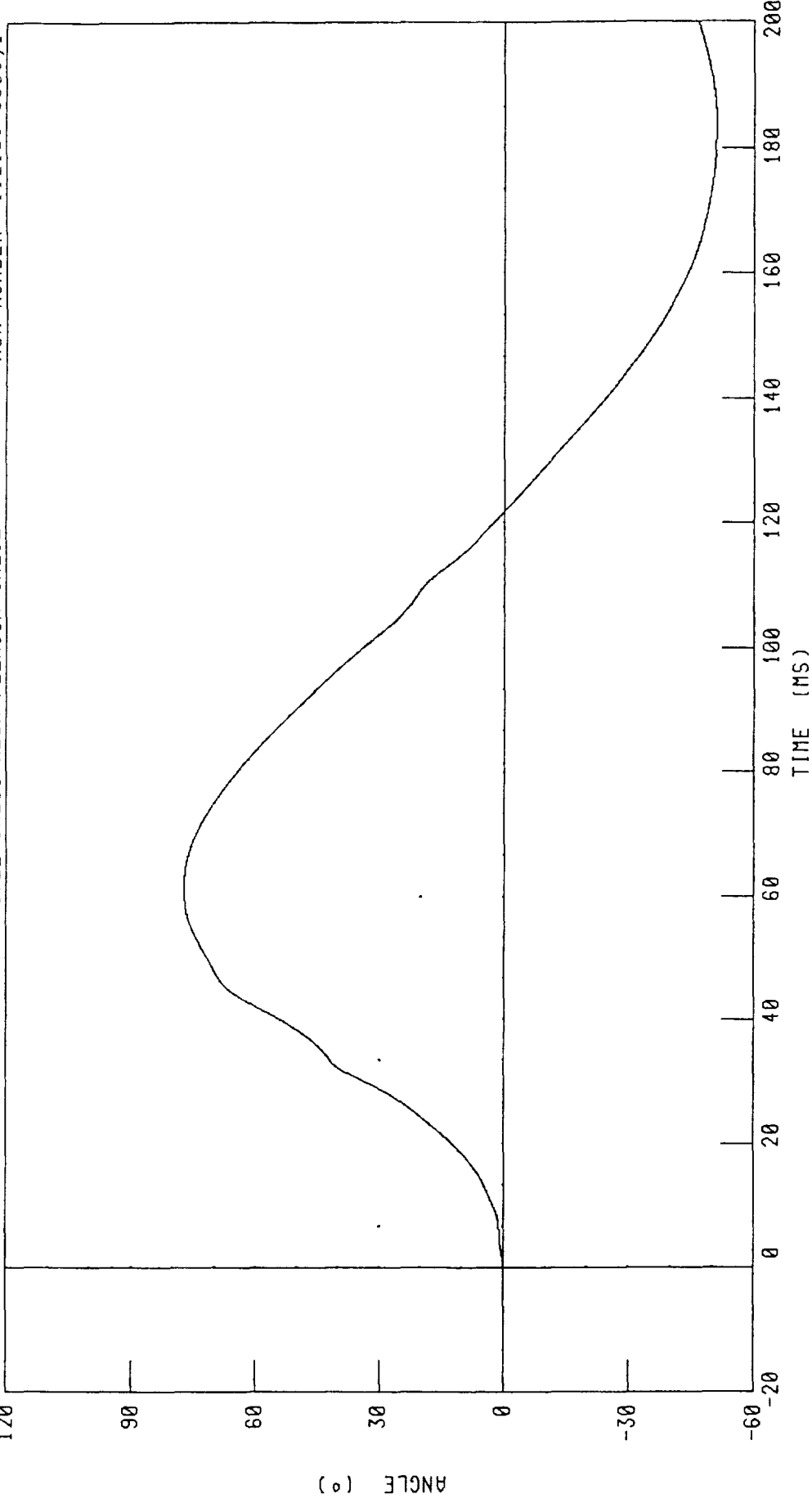
PEAK DATA 39 55 ° 0 60 88 MS, -28 11 ° 0 184 96 MS

CHANNEL THETA FILTER CH CLASS 60

PART 572-E HYBRID III NECK FLEXION CALIBRATION

TOTAL ROTATION

TRC TEST NUMBER 206C12NF1 572E SN206 NECK FLEXION CAL12 RUN NUMBER 112101 1050,1



CHANNEL TOTAL FILTER CH CLASS 60 PEAK DATA 77 37 ° 0 61 44 MS, -51 11 ° 0 183 84 MS

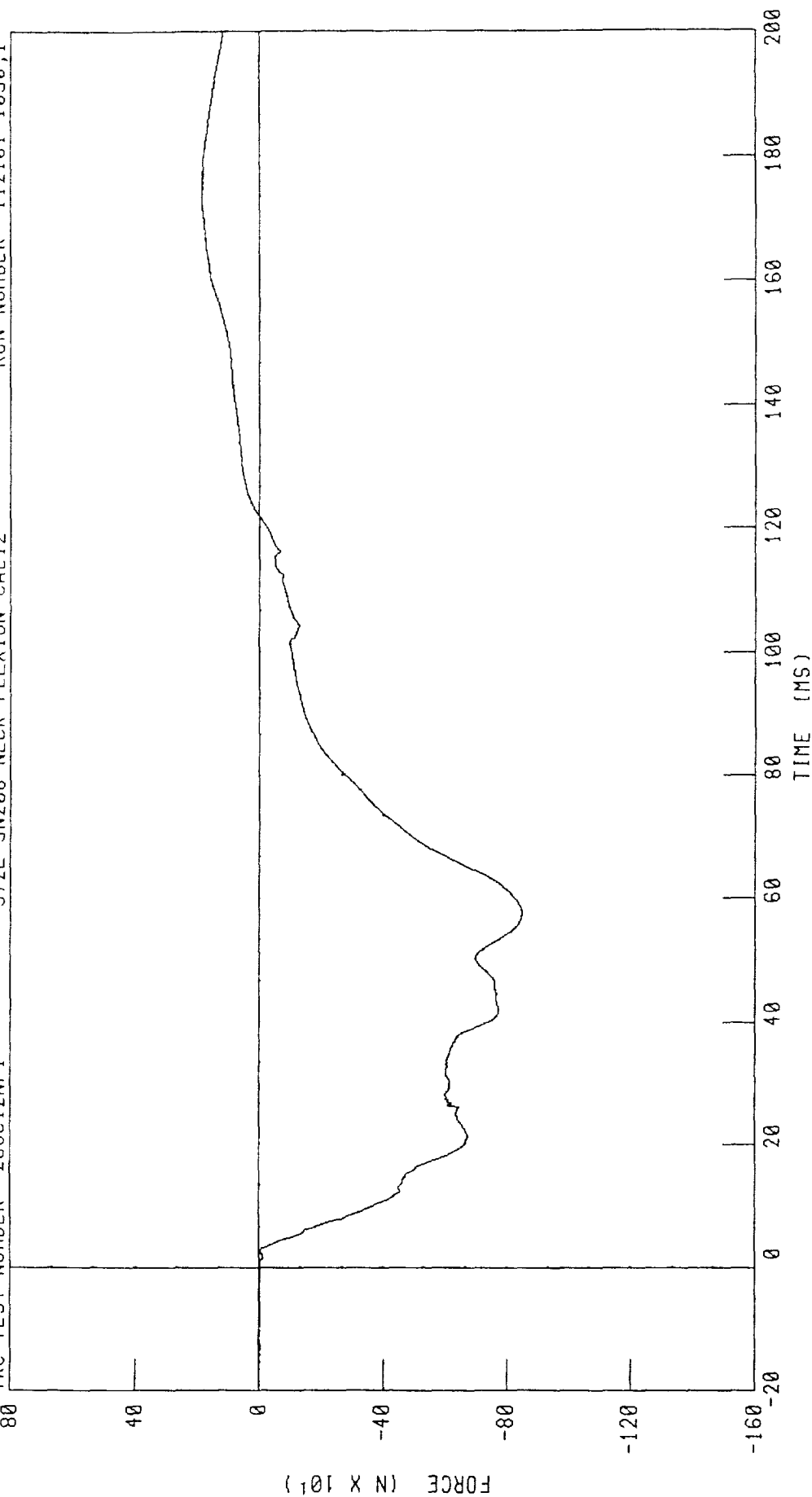
PART 572-E HYBRID III NECK FLEXION CALIBRATION

NECK FORCE X AXIS

TRC TEST NUMBER 206C12NF1

572E SN206 NECK FLEXION CAL12

RUN NUMBER 112101 1050,1



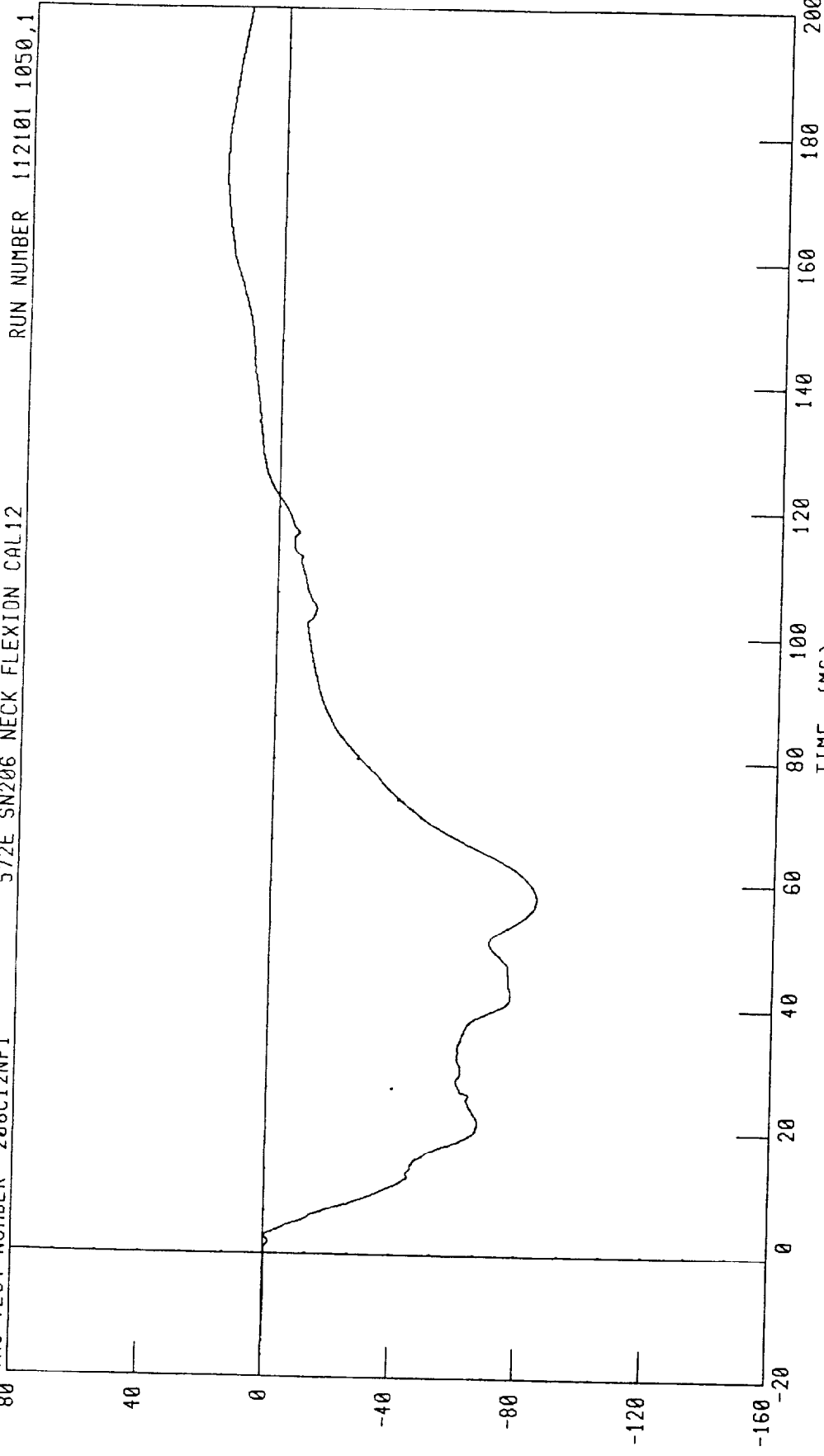
CHANNEL NEKF FILTER CH CLASS 1000 PEAK DATA 188 17 N 0 173 76 MS, -848 44 N 0 57 68 MS

PART 572-E HYBRID III NECK FLEXION CALIBRATION

NECK FORCE X AXIS FILTERED FOR USE IN OCCIPITAL MOMENT CALCULATION

TRC TEST NUMBER 206C12NF1 572E SN206 NECK FLEXION CAL12 RUN NUMBER 112101 1050,1

FORCE (N X 10¹)



CHANNEL NEKXFC FILTER CH CLASS 600

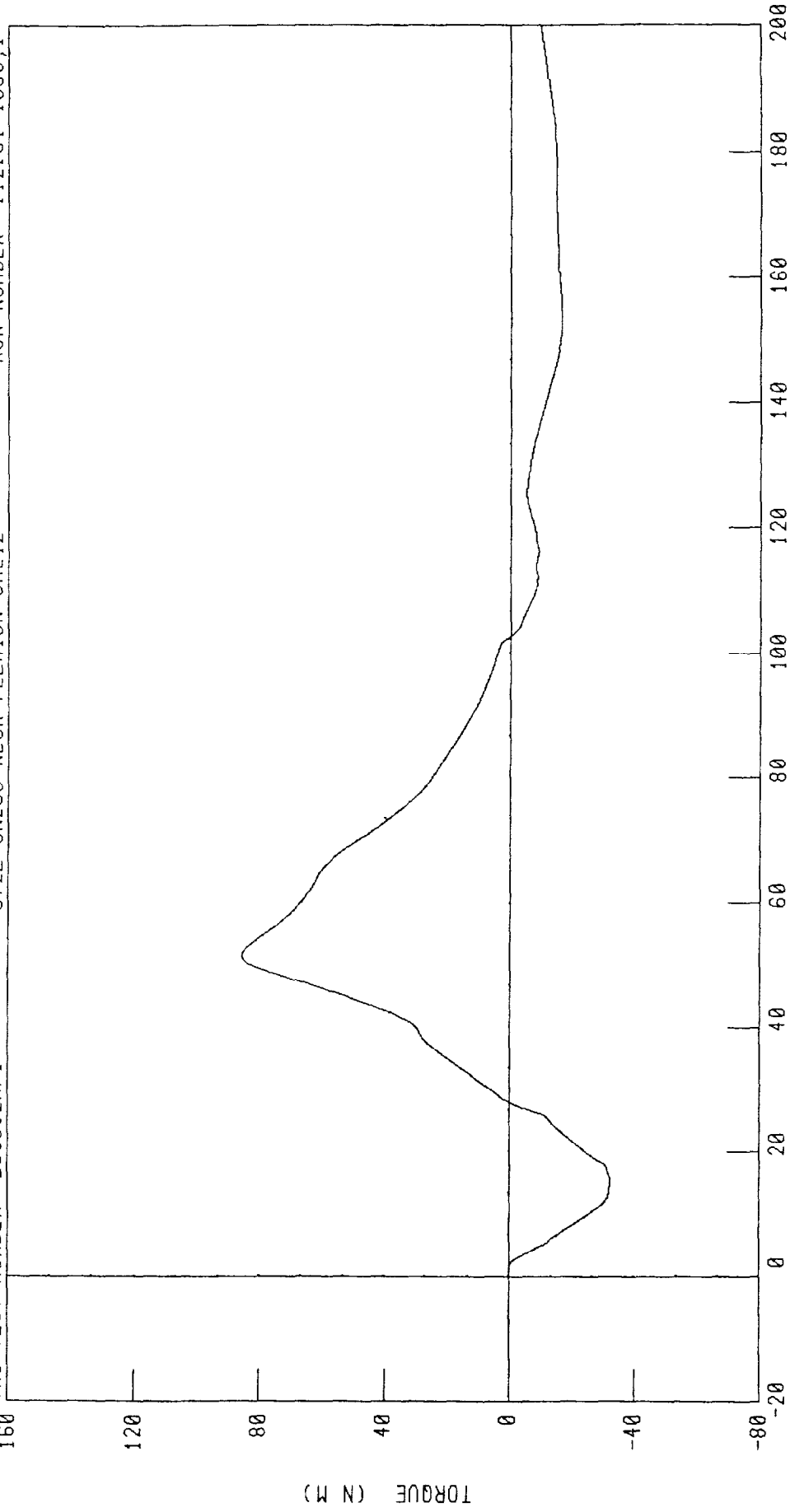
TIME (MS)

PEAK DATA 187 75 N @ 173 76 MS, -848 21 N @ 57 60 MS

PART 572-E HYBRID III NECK FLEXION CALIBRATION

NECK MOMENT Y AXIS

TRC TEST NUMBER 206C12NF1 572E SN206 NECK FLEXION CAL12 RUN NUMBER 112101 1050,1

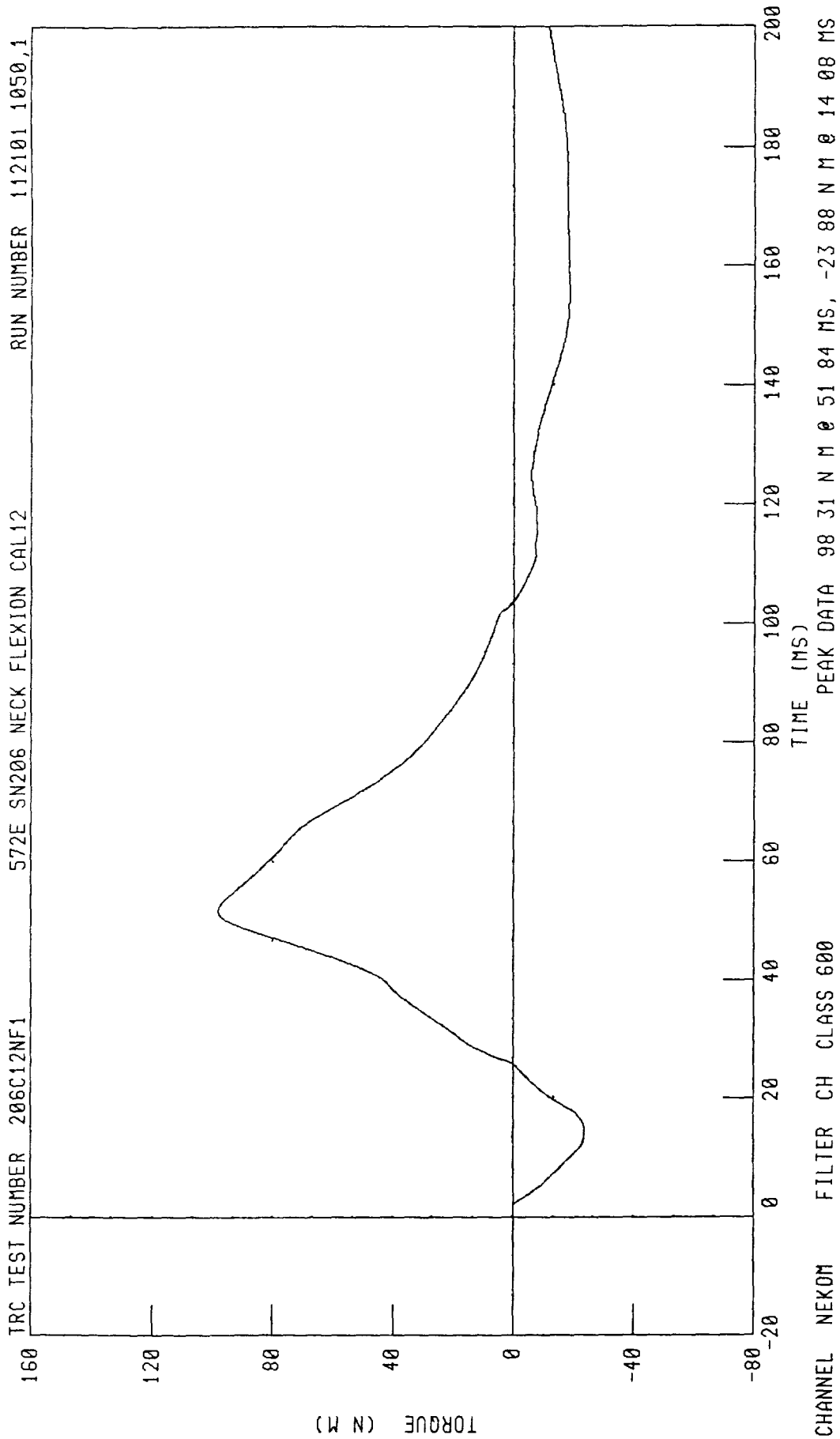


TIME (MS)

CHANNEL NEKYM FILTER CH CLASS 600

PEAK DATA 85 57 N M @ 51 44 MS, -32 21 N M @ 15 68 MS

PART 572-E HYBRID III NECK FLEXION CALIBRATION
TOTAL MOMENT ABOUT OCCIPITAL CONDYLE



TRANSPORTATION RESEARCH CENTER INC.

HYBRID III 50th

21-NOV-01

NECK EXTENSION TEST - 6 CHANNEL TRANSDUCER

TRC INC. TEST NO: 206C13NE1 572E SN206 NECK EXT CAL13

TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE		20.6 - 22.2 DEG. C	21.1 DEG. C
RELATIVE HUMIDITY		10 - 70 %	25.0 %
IMPACT VELOCITY		5.95 - 6.19 M/S	6.05 M/S
PENDULUM DECELERATION	10 MS	17.20 - 21.20 G	18.93 G
	20 MS	14.00 - 19.00 G	17.88 G
	30 MS	11.00 - 16.00 G	14.98 G
MAX PENDULUM G		22 G MAX	19.08 G
MAX PENDULUM G ABOVE 30 MS		22 G MAX	14.92 G
DECELERATION-TIME CURVE DECAY TIME TO 5 G		38 - 46 MS	41.36 MS
D PLANE	MAX	81 - 106 DEG.	96.62 DEG.
ROTATION	TIME	72 - 82 MS	78.16 MS
MOMENT ABOUT OCCIPITAL CONDYLE	MIN	-80.0/-52.9 NM	-69.89 NM
	TIME	65 - 79 MS	72.64 MS
ROTATION ANGLE-TIME CURVE DECAY TIME TO ZERO		147 - 174 MS	156.64 MS
NEGATIVE MOMENT-TIME CURVE DECAY TIME TO ZERO		120 - 148 MS	145.44 MS

TEST MEETS SPECIFICATIONS

TECHNICIAN



RUN NUMBER: 112101.1119;1

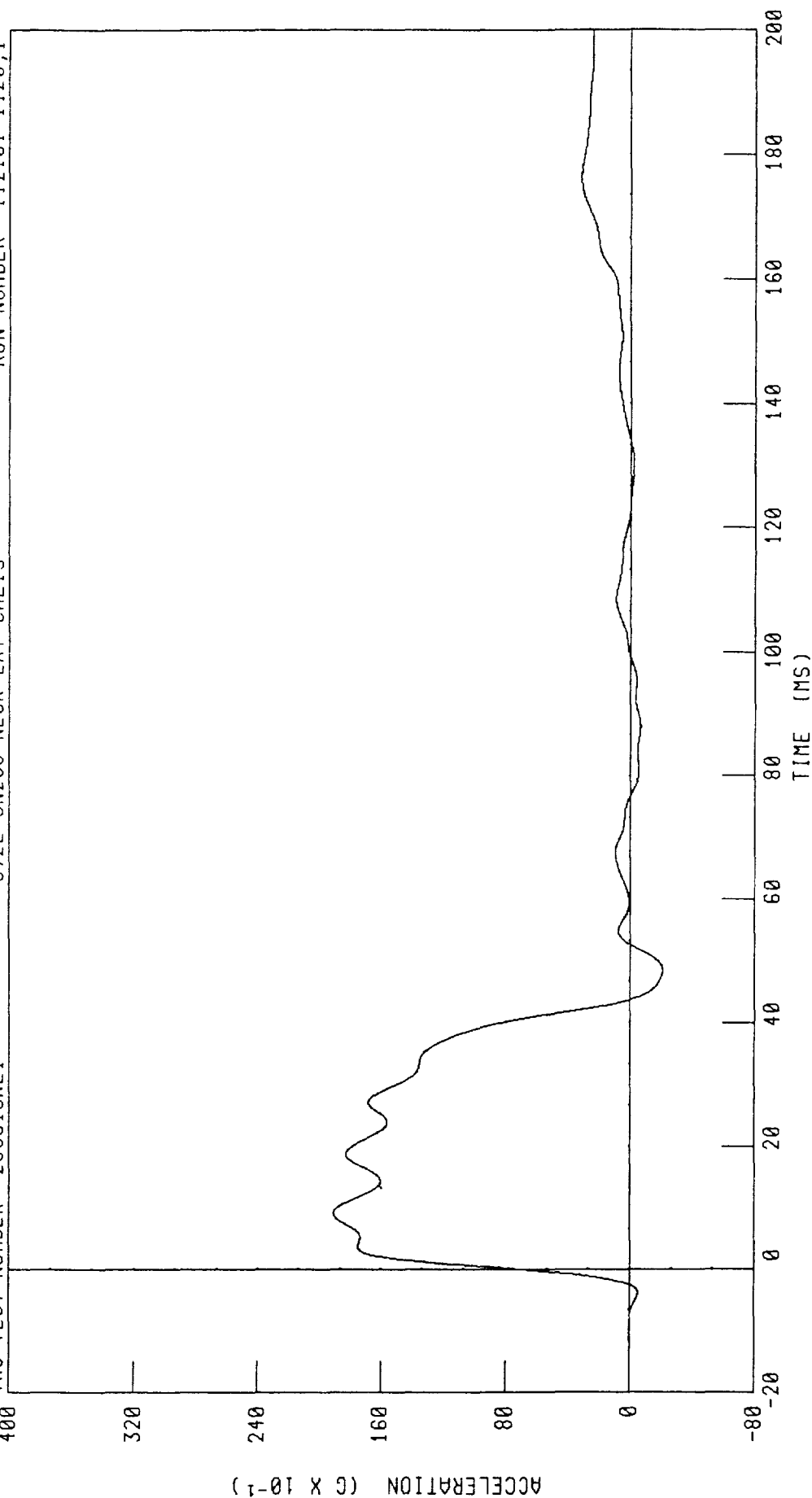
PART 572-E HYBRID III NECK EXTENSION CALIBRATION

PENDULUM DECELERATION

TRC TEST NUMBER 206C13NE1

572E SN206 NECK EXT CAL13

RUN NUMBER 112101 1120,1



CHANNEL PENXC FILTER CH CLASS 60 PEAK DATA 19 09 C 0 9 28 MS, -2 10 C 0 48 48 MS

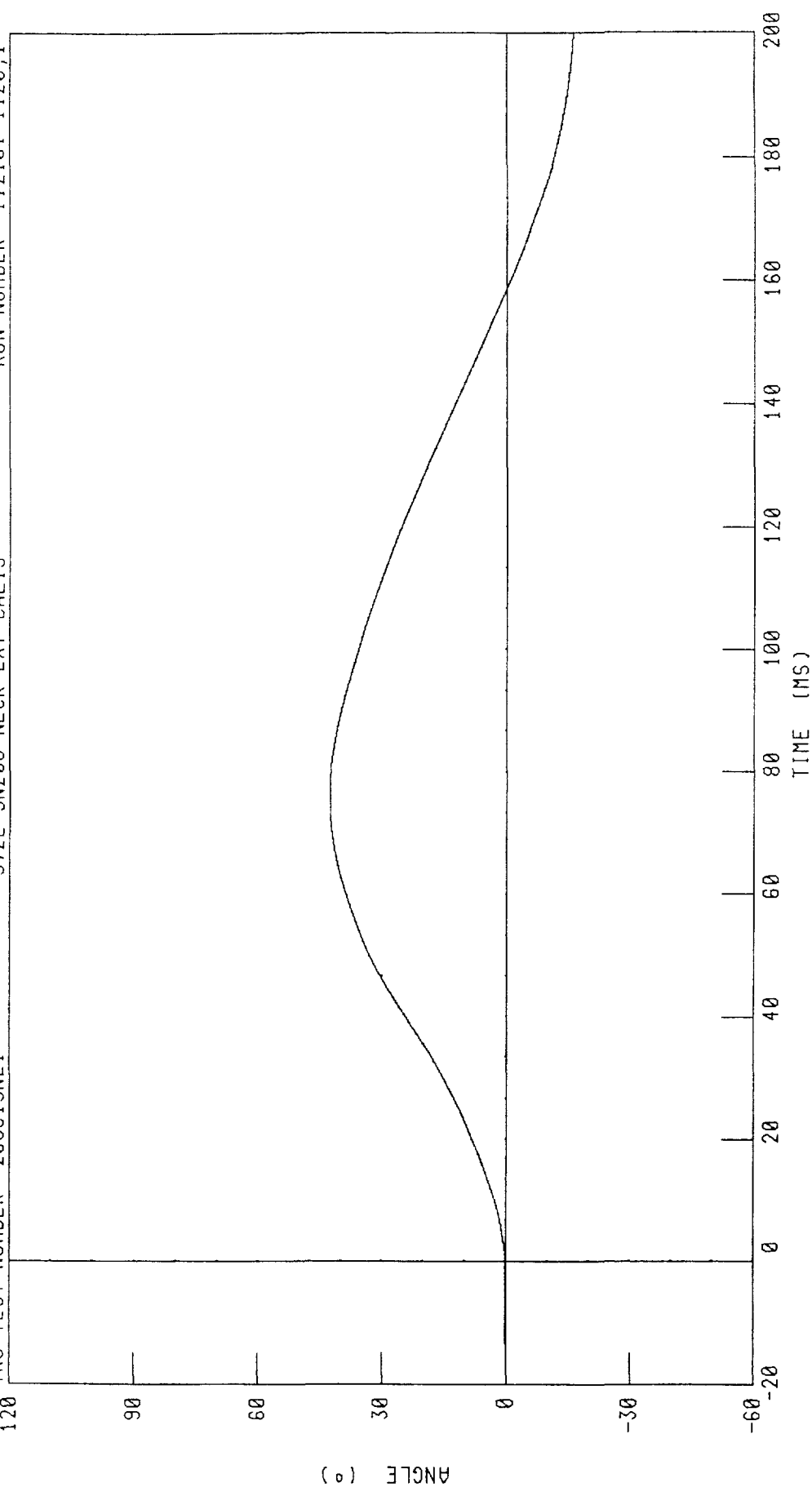
PART 572-E HYBRID III NECK EXTENSION CALIBRATION

ROTATION ABOUT BASE OF NECK

TRC TEST NUMBER 206C13NE1

572E SN206 NECK EXT CAL13

RUN NUMBER 112101 1120,1



CHANNEL BETA FILTER CH CLASS 60 PEAK DATA 42 68 ° 0 75 92 MS, -16 30 ° 0 200 00 MS

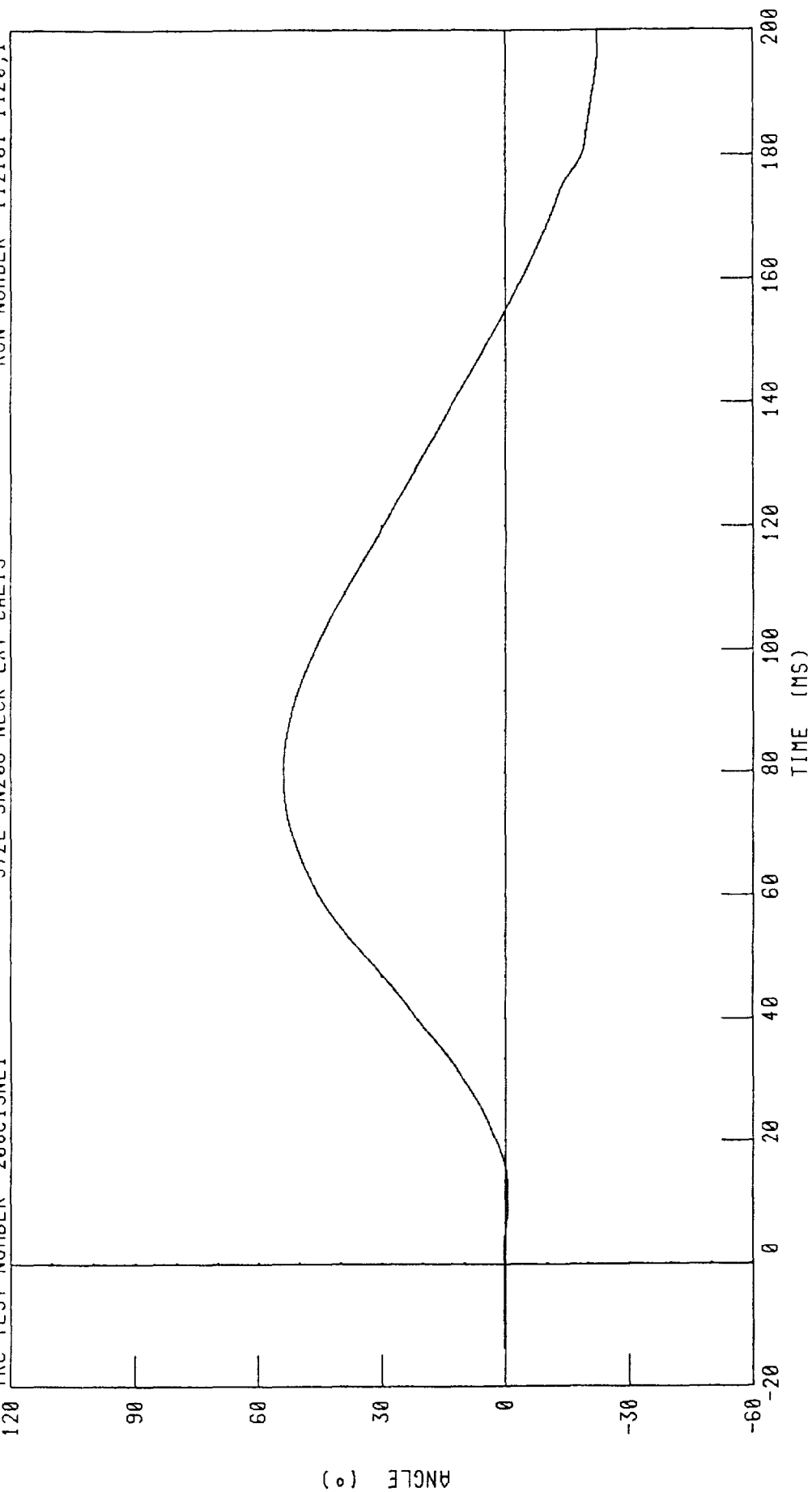
PART 572-E HYBRID III NECK EXTENSION CALIBRATION

ROTATION ABOUT OCCIPITAL CONDYLE

TRC TEST NUMBER 206C13NE1

572E SN206 NECK EXT CAL13

RUN NUMBER 112101 1120,1



PEAK DATA 54 06 ° @ 79 92 MS, -22 54 ° @ 200 00 MS

CHANNEL THETA FILTER CH CLASS 60

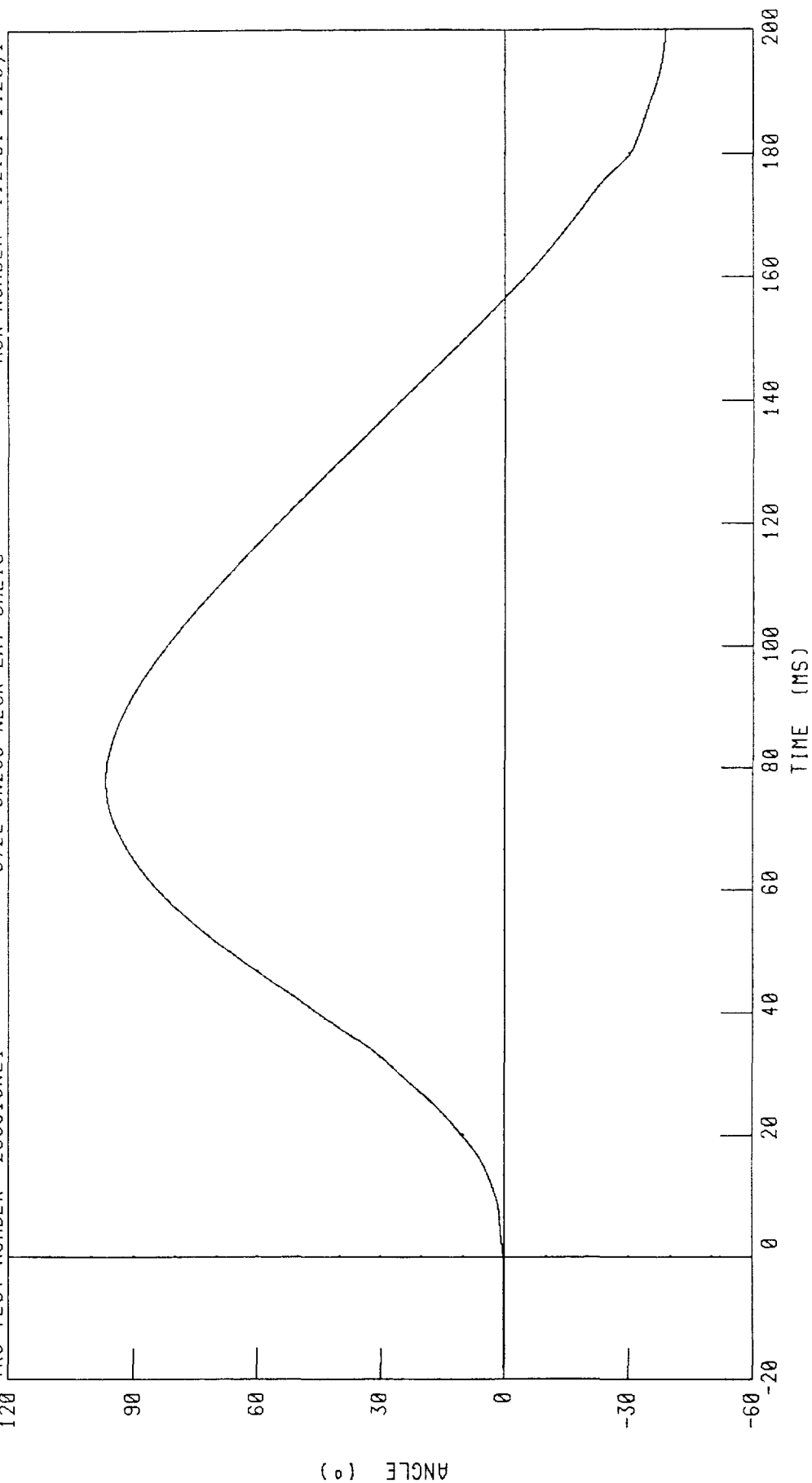
PART 572-E HYBRID III NECK EXTENSION CALIBRATION

TOTAL ROTATION

TRC TEST NUMBER 206C13NE1

572E SN206 NECK EXT CAL13

RUN NUMBER 112101 1120,1



PEAK DATA 96 62 ° @ 78 16 MS, -38 84 ° @ 200 00 MS

CHANNEL TOTAL FILTER CH CLASS 60

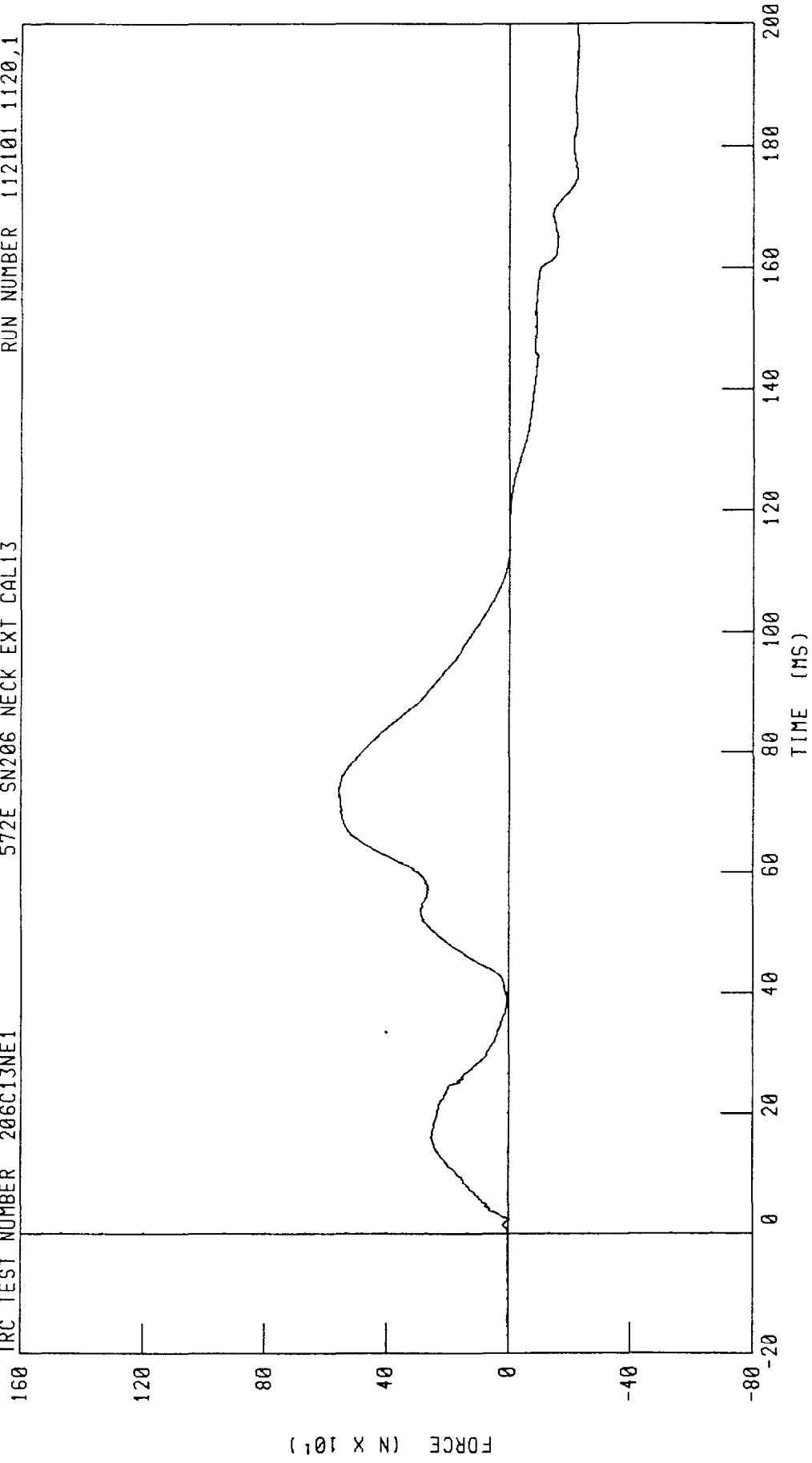
PART 572-E HYBRID III NECK EXTENSION CALIBRATION

NECK FORCE X AXIS

TRC TEST NUMBER 206C13NE1

572E SN206 NECK EXT CAL13

RUN NUMBER 112101 1120,1

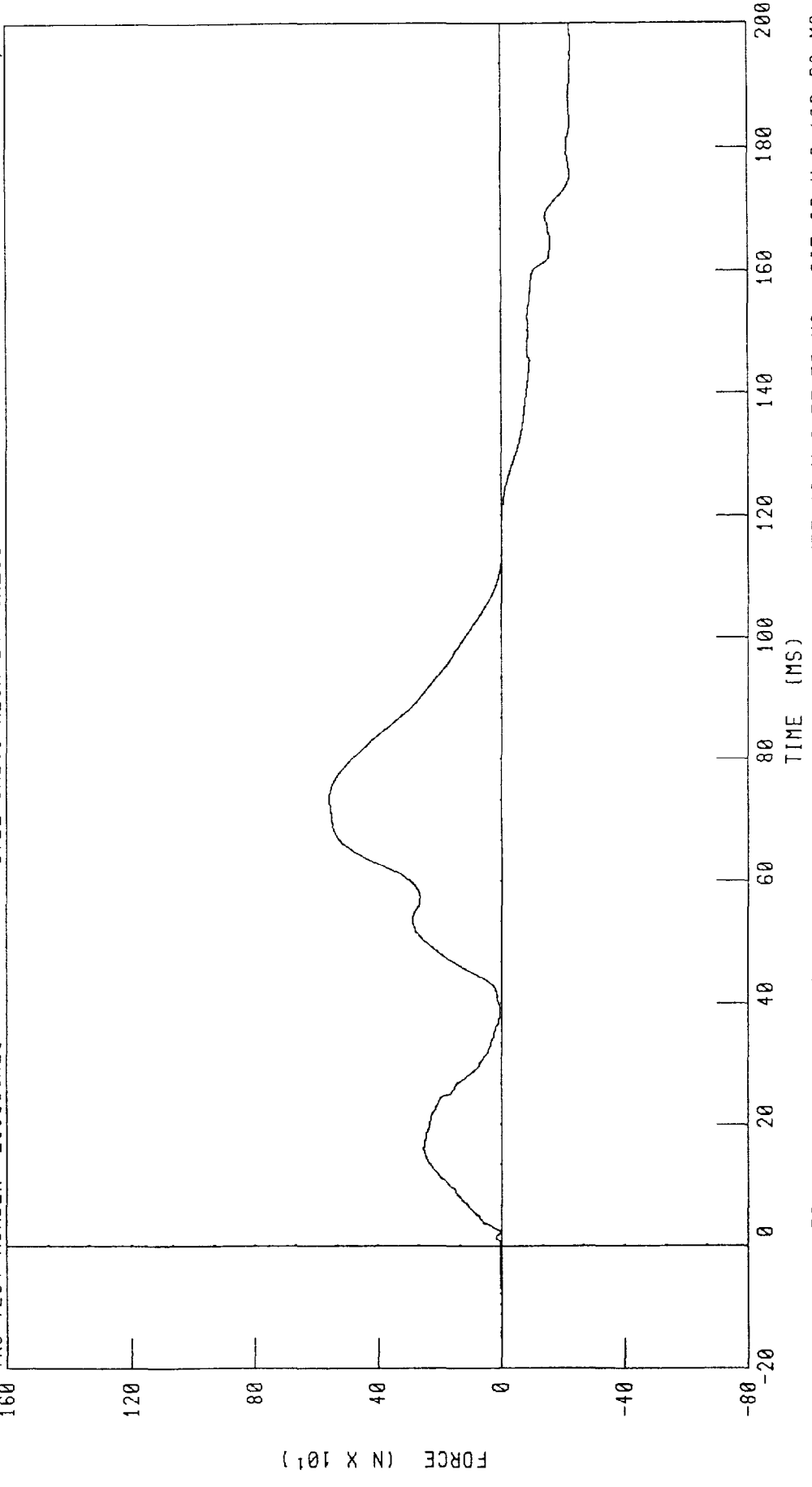


CHANNEL NEKXF FILTER CH CLASS 1000

PEAK DATA 557 49 N 0 73 44 MS, -227 91 N 0 196 88 MS

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

TRC TEST NUMBER 206C13NE1 572E SN206 NECK EXT CAL13 RUN NUMBER 112101 1120,1



CHANNEL NEKXFC FILTER CH CLASS 600 PEAK DATA 557 16 N @ 73 52 MS, -227 62 N @ 196 96 MS

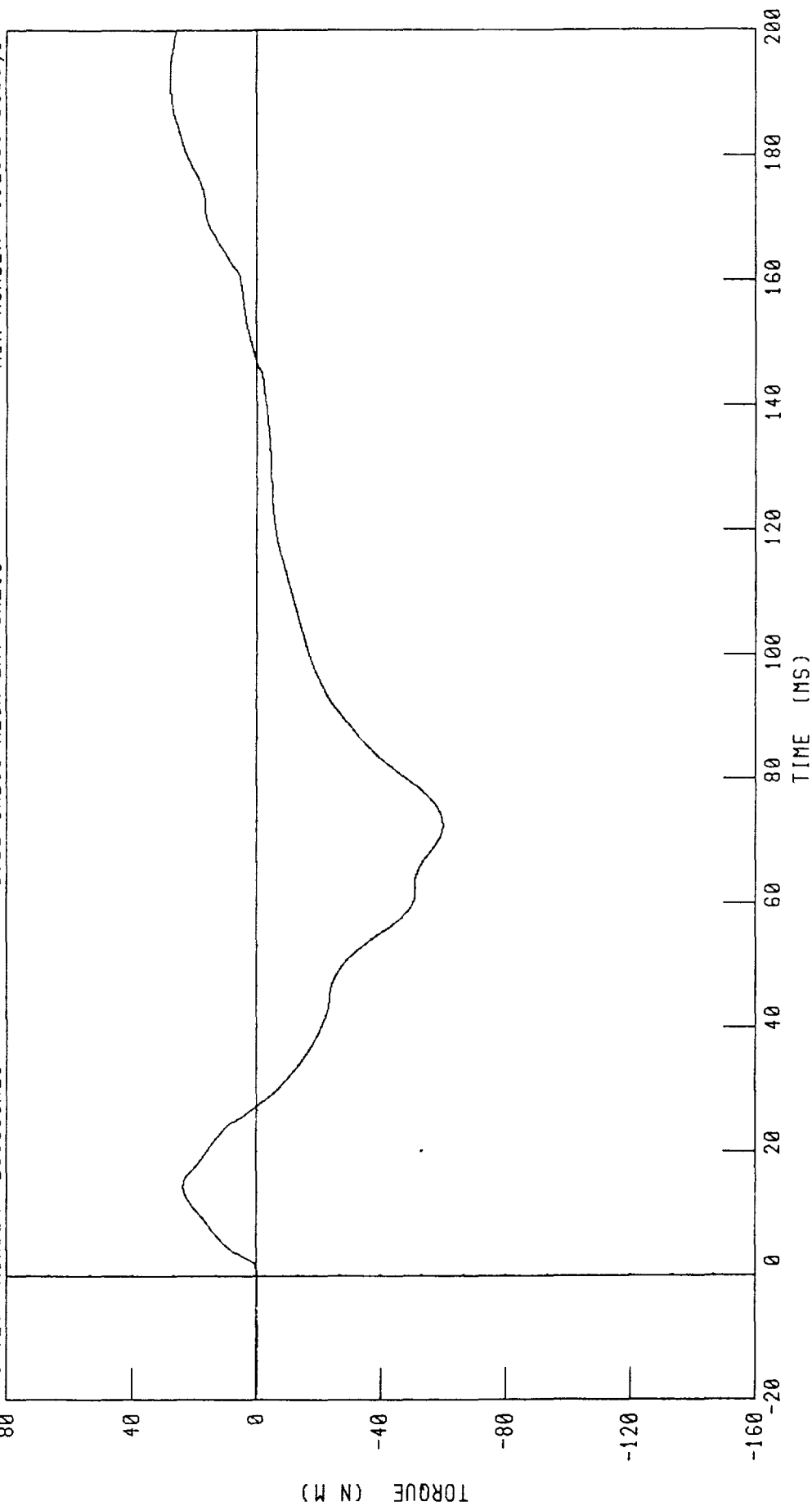
PART 572-E HYBRID III NECK EXTENSION CALIBRATION

NECK MOMENT Y AXIS

TRC TEST NUMBER 206C13NE1

572E SN206 NECK EXT CAL13

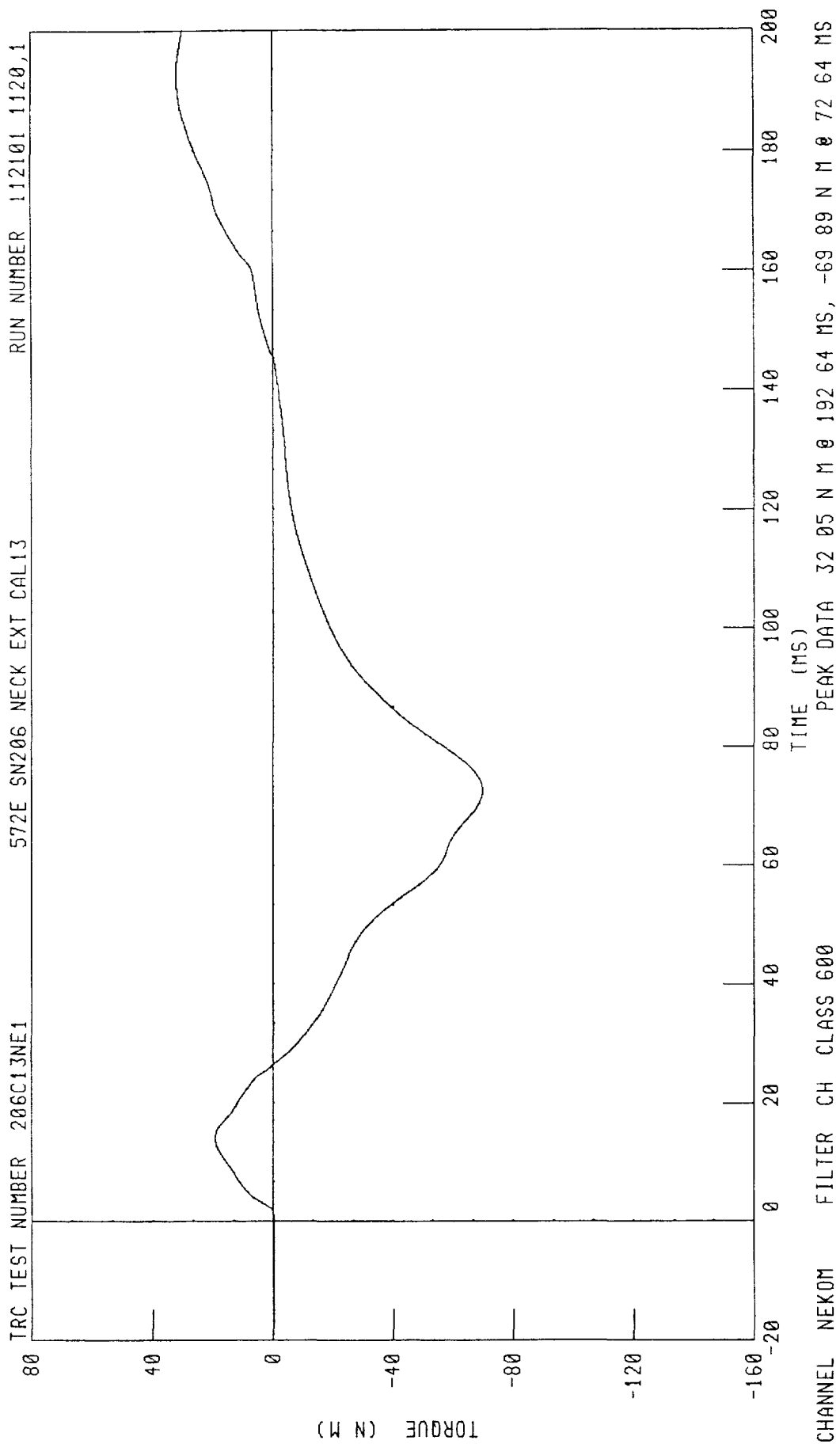
RUN NUMBER 112101 1120,1



CHANNEL NEKYM FILTER CH CLASS 600

PEAK DATA 28 05 N M 0 192 64 MS, -60 00 N M 0 72 56 MS

PART 572-E HYBRID III NECK EXTENSION CALIBRATION
TOTAL MOMENT ABOUT OCCIPITAL CONDYLE



TRANSPORTATION RESEARCH CENTER INC.

THORAX IMPACT TEST

HYBRID III 50th

21-NOV-01

TRC INC.

TEST NO: 206C12TH1

572E SN206 H.S.THORAX CAL12

TEST PARAMETER	HIGH SPEED TEST	TEST RESULTS
	SPECIFICATION	
TEMPERATURE	20.6-22.2 DEG. C	21.1 DEG. C
RELATIVE HUMIDITY	10 - 70 %	24.0 %
PENDULUM VELOCITY	6.59 - 6.83 M/S	6.62 M/S
MAXIMUM DEFLECTION	63.5 - 72.6 MM	65.9 MM
MAXIMUM RESISTIVE FORCE	5159 - 5894 N	5847. N
INTERNAL HYSTERESIS	69% - 85%	72.0%

TEST MEETS SPECIFICATIONS

TECHNICIAN



RUN NUMBER: 112101.1321;1

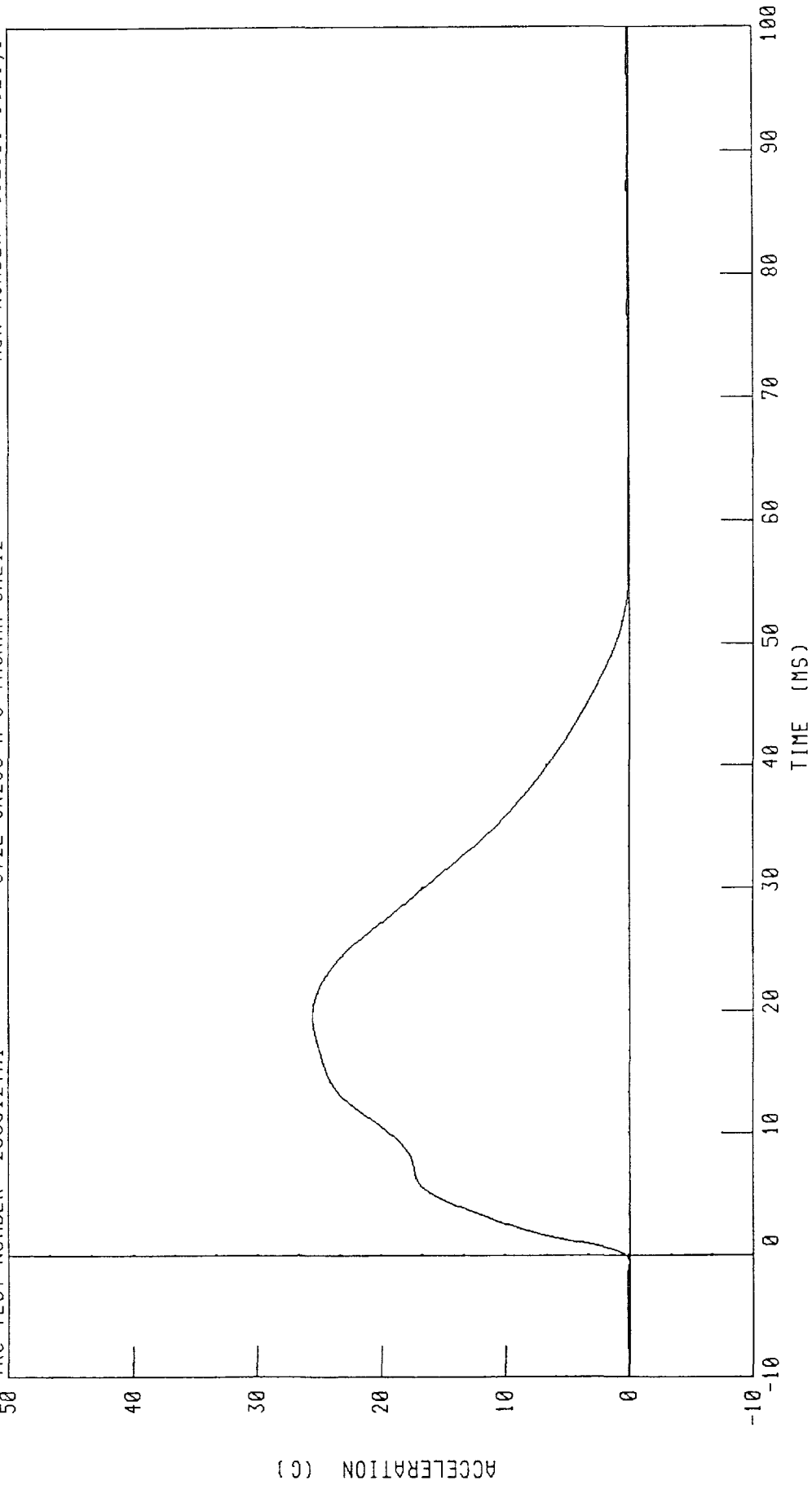
PART 572-E HYBRID III THORAX CALIBRATION

PENDULUM DECELERATION

TRC TEST NUMBER 206C12TH1

572E SN206 H S THORAX CAL12

RUN NUMBER 112101 1321,1



CHANNEL PENXC FILTER CH CLASS 180

PEAK DATA 25 53 G 19 44 MS, 0 01 G 0 56 MS

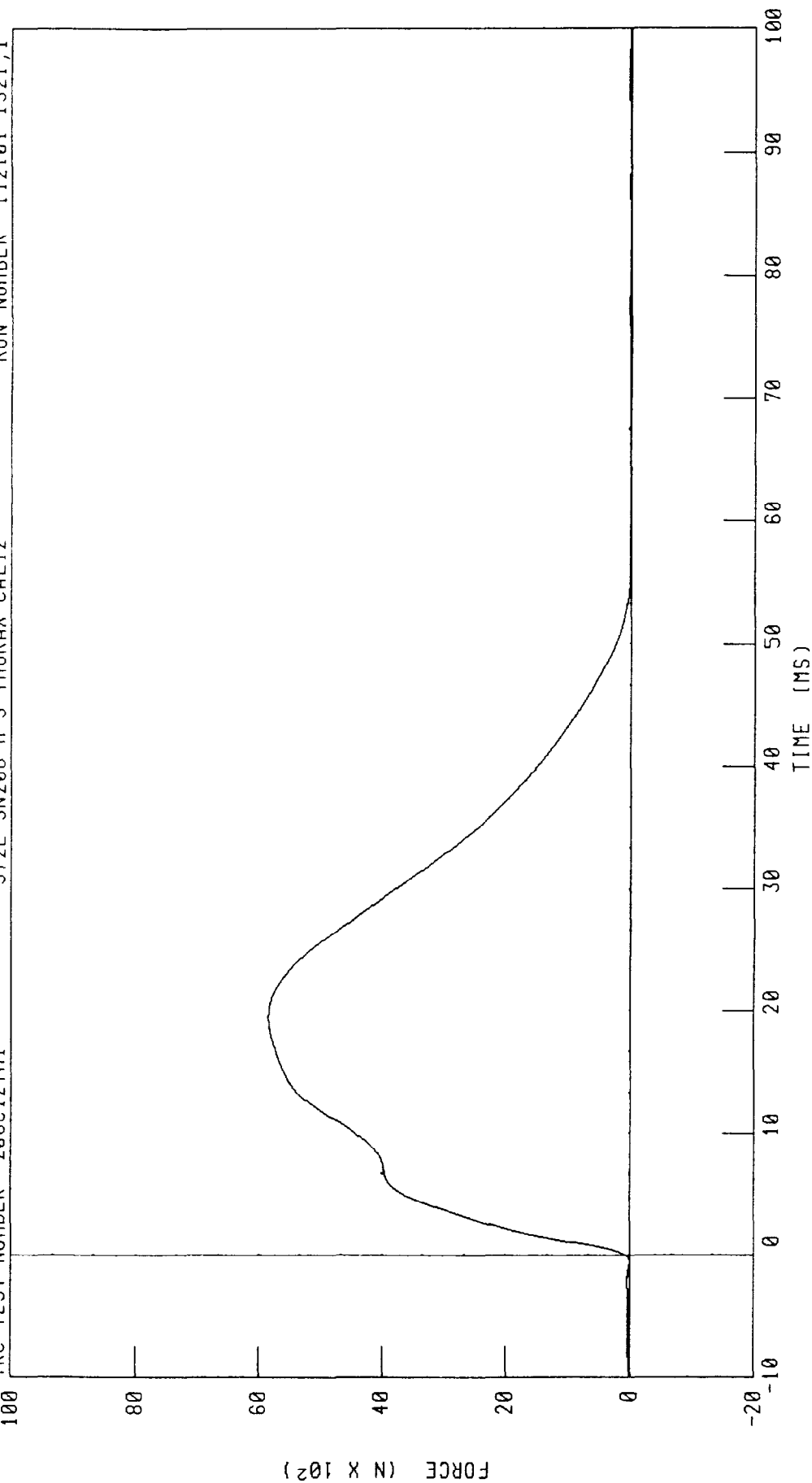
PART 572-E HYBRID III THORAX CALIBRATION

PENDULUM FORCE

TRC TEST NUMBER 206C12TH1

572E SN206 H S THORAX CAL12

RUN NUMBER 112101 1321,1



CHANNEL PENXF

FILTER CH CLASS 180

PEAK DATA 5847 44 N 0 19 44 MS, 1 77 N 0 -0 56 MS

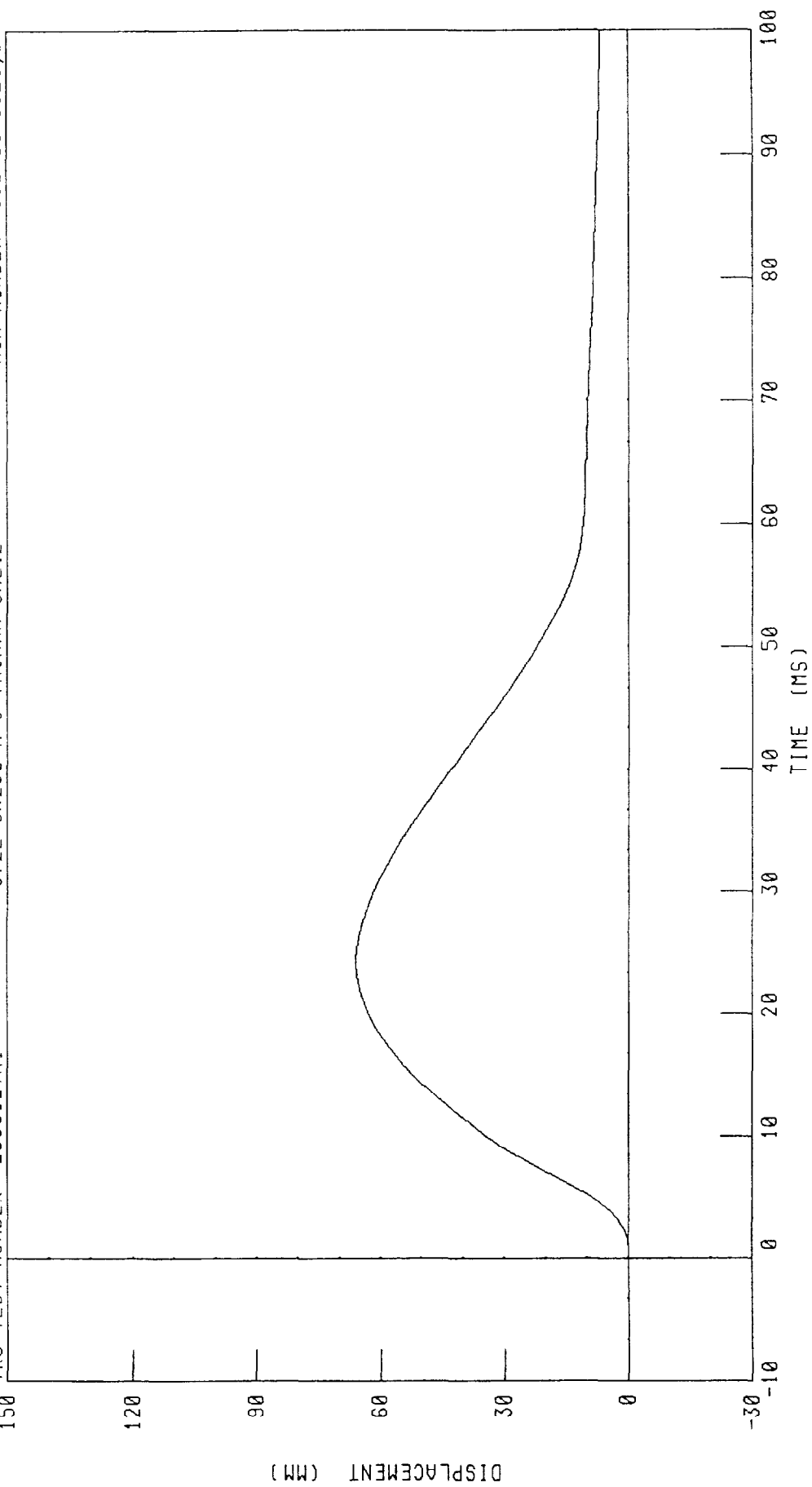
PART 572-E HYBRID III THORAX CALIBRATION

STERNUM DISPLACEMENT

TRC TEST NUMBER 206C12TH1

572E SN206 H S THORAX CAL12

RUN NUMBER 112101 1321,1



PEAK DATA 65 93 MM @ 24 32 MS, -0 02 MM @ 0 40 MS

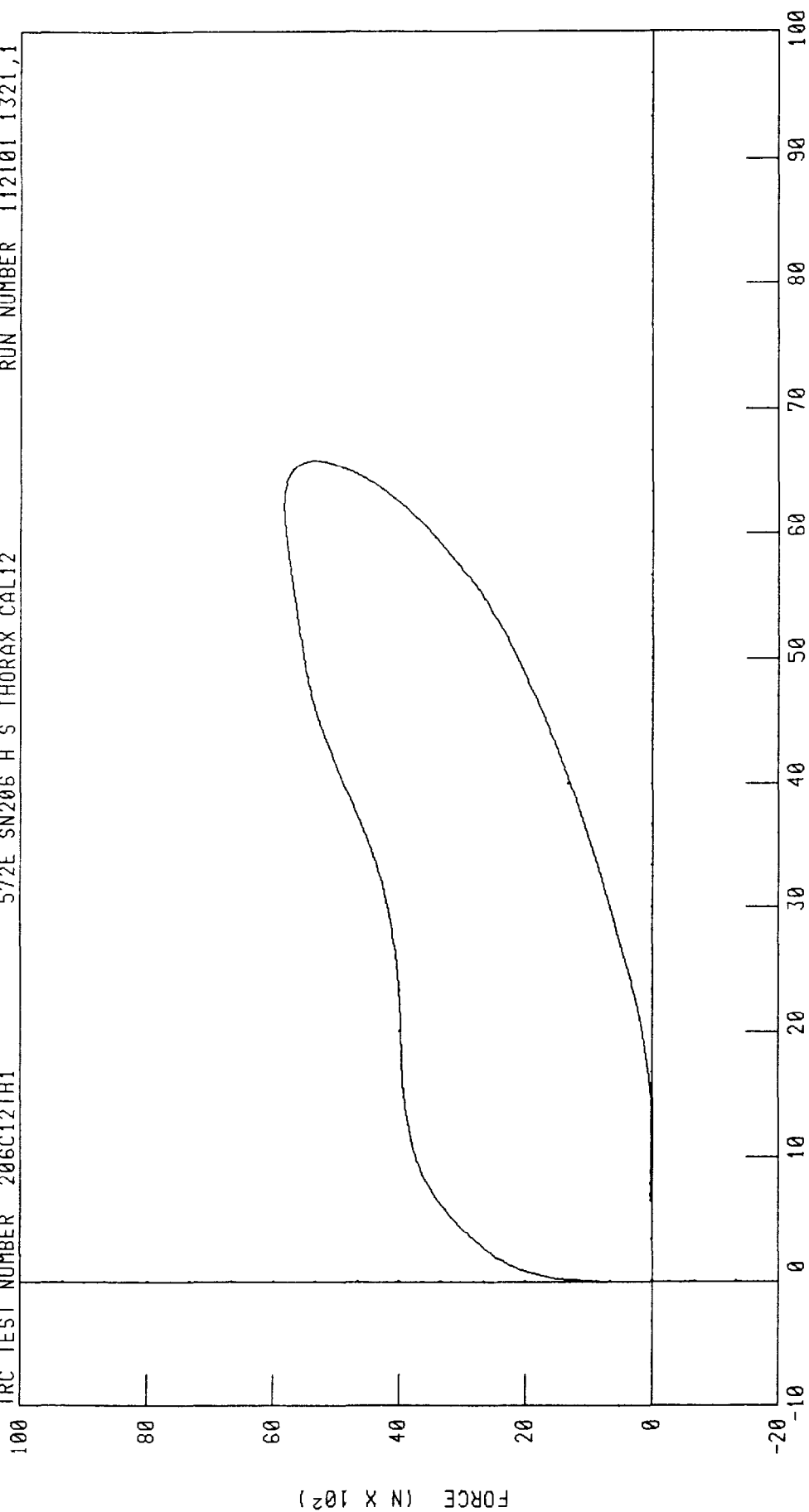
CHANNEL CSTXD FILTER CH CLASS 180

PART 572-E HYBRID III THORAX CALIBRATION
CHEST DISPLACEMENT VS PENDULUM FORCE

TRC TEST NUMBER 206C12TH1

572E SN206 H S THORAX CAL12

RUN NUMBER 112101 1321,1



CHANNEL CSTXD
PENXF

FILTER CH CLASS 180
CH CLASS 180

DISPLACEMENT (MM)

PEAK DATA

65 93 MM @ 24 32 MS, -0 02 MM @ 0 40 MS
5847 44 N @ 19 44 MS, 1 77 N @ -0 56 MS

Transportation Research Center Inc

Hybrid III Hip Range of Motion

Serial Number 206L

Date 11/21/2001

Test Number 206C12

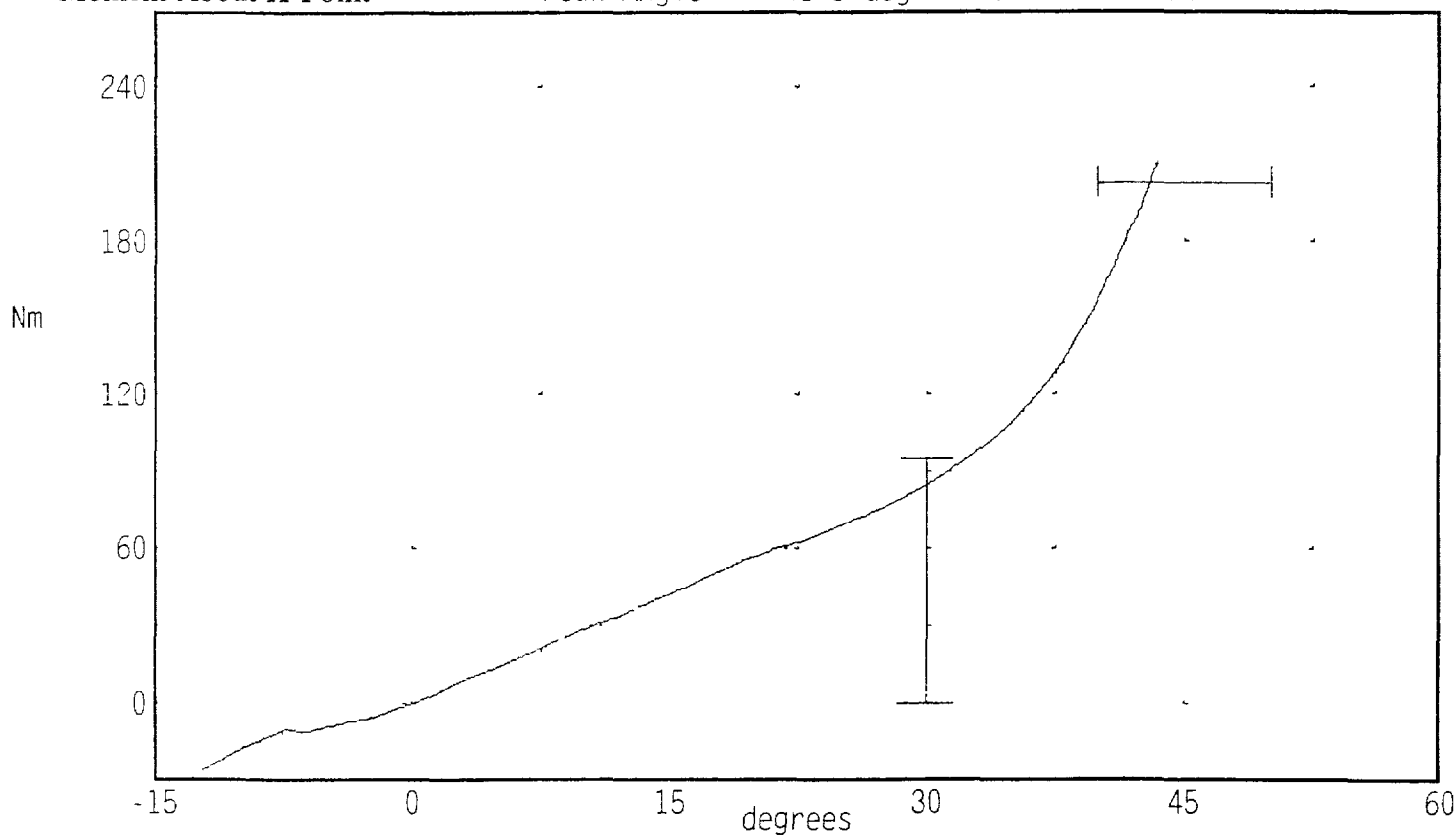
Time 08 40

Comments

TEST PARAMETER	SPECIFICATION	TEST RESULTS	
Temperature	18.9 - 25.6	20.6 °C	Pass
Humidity	10 - 70	24 %	Pass
Moment at 30 deg	<= 94.9	85.0 Nm	Pass
Angle at 203 Nm	40.0 - 50.0	43.0 deg	Pass
Average Velocity	5.0 - 10.0	7.5 deg/sec	Pass

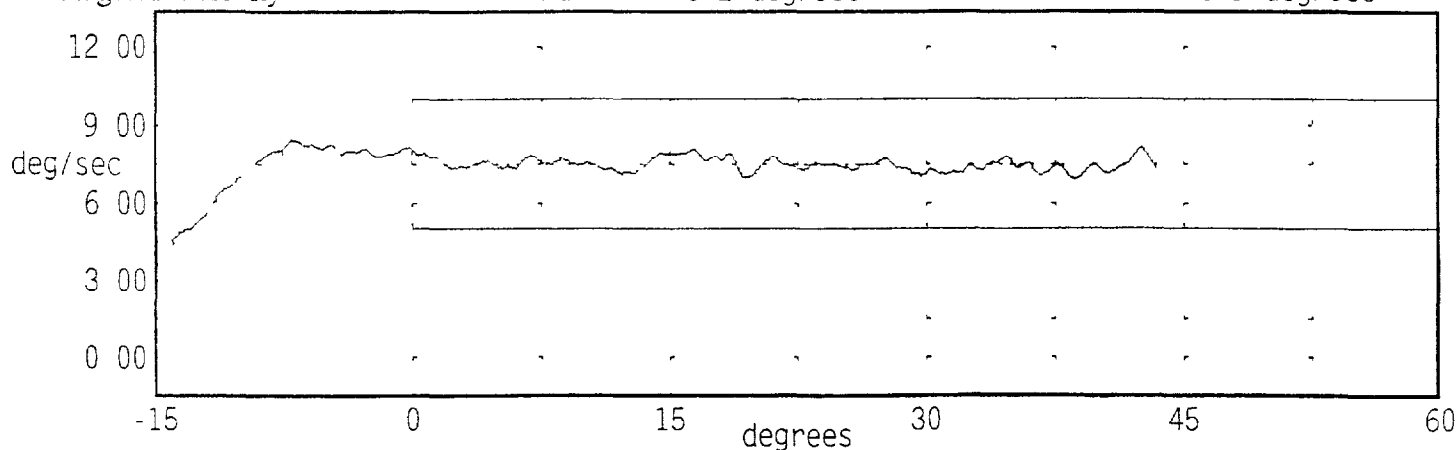
Moment About H-Point

Peak Moment	210.8 Nm	at	43.5 deg
Peak Angle	43.5 deg	at	210.8 Nm



Angular Velocity

Max	8.2 deg/sec	Min	6.9 deg/sec
-----	-------------	-----	-------------



Transportation Research Center Inc

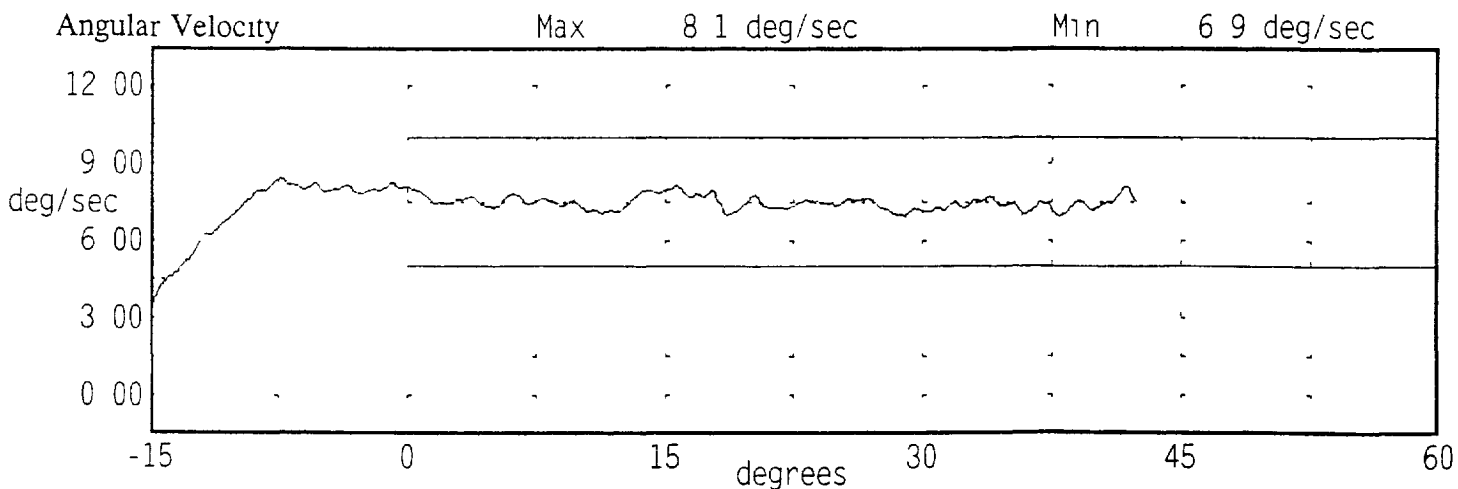
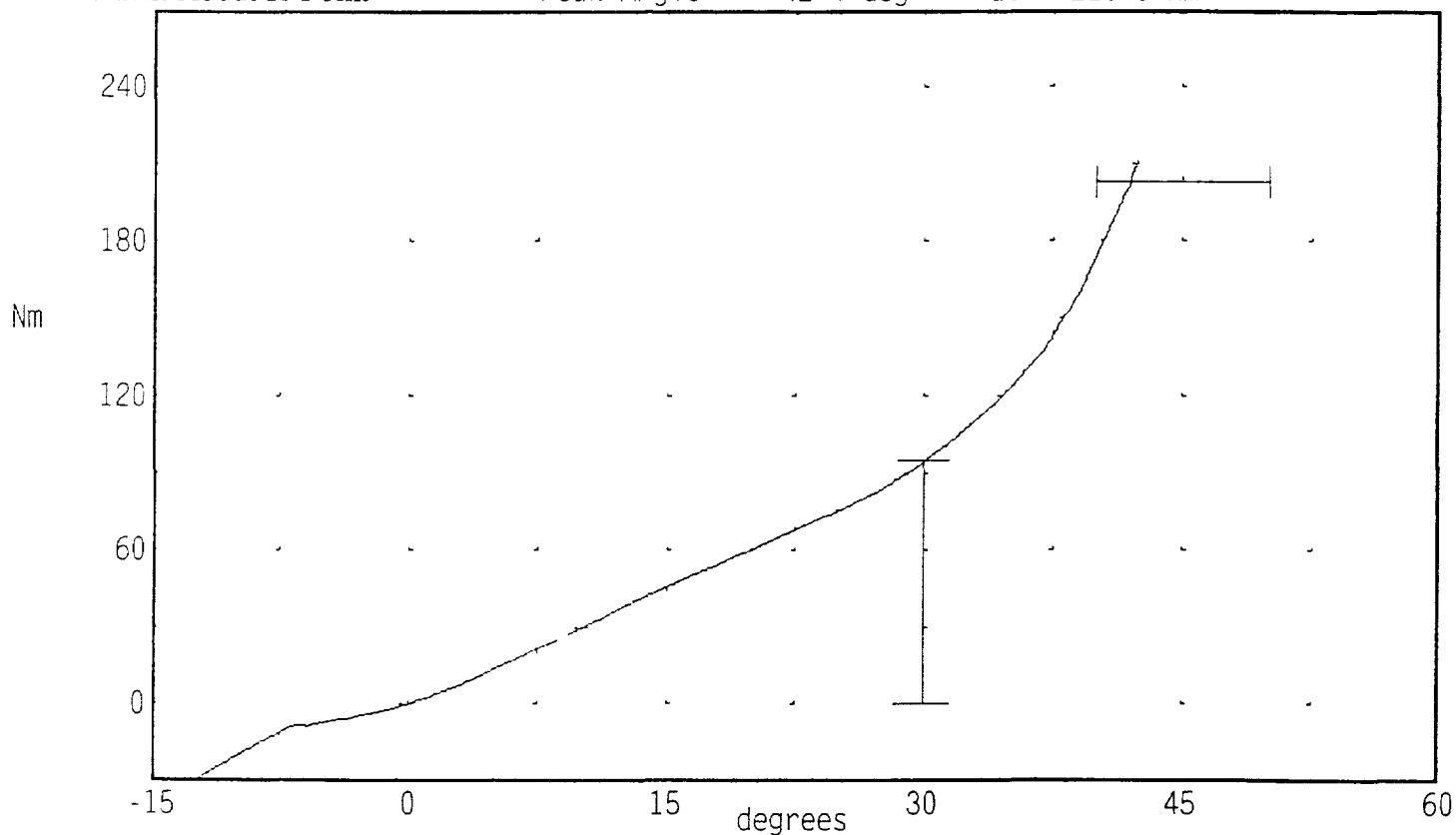
Hybrid III Hip Range of Motion

Serial Number 206R
Test Number 206C12
Comments

Date 11/21/2001
Time 08 32

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	18.9 - 25.6	20.6 °C Pass
Humidity	10 - 70	24 % Pass
Moment at 30 deg	<= 94.9	94.1 Nm Pass
Angle at 203 Nm	40.0 - 50.0	42.0 deg Pass
Average Velocity	5.0 - 10.0	7.5 deg/sec Pass

Moment About H-Point
Peak Moment 210.8 Nm at 42.4 deg
Peak Angle 42.4 deg at 210.8 Nm



TRANSPORTATION RESEARCH CENTER INC.

LEFT KNEE IMPACT TEST

HYBRID III 50th

21-NOV-01

TRC INC.

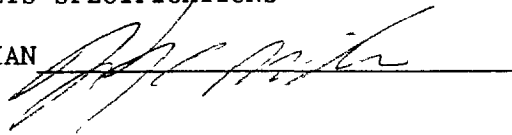
TEST NO: 206C12LK1

572E SN206 LEFT KNEE CAL 12

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	24.0 %
PROBE VELOCITY	2.07 - 2.13 M/S	2.09 M/S
PEAK KNEE IMPACT FORCE 5.0 KG PENDULUM	4715 - 5782 N	5633.1 N

TEST MEETS SPECIFICATIONS

TECHNICIAN

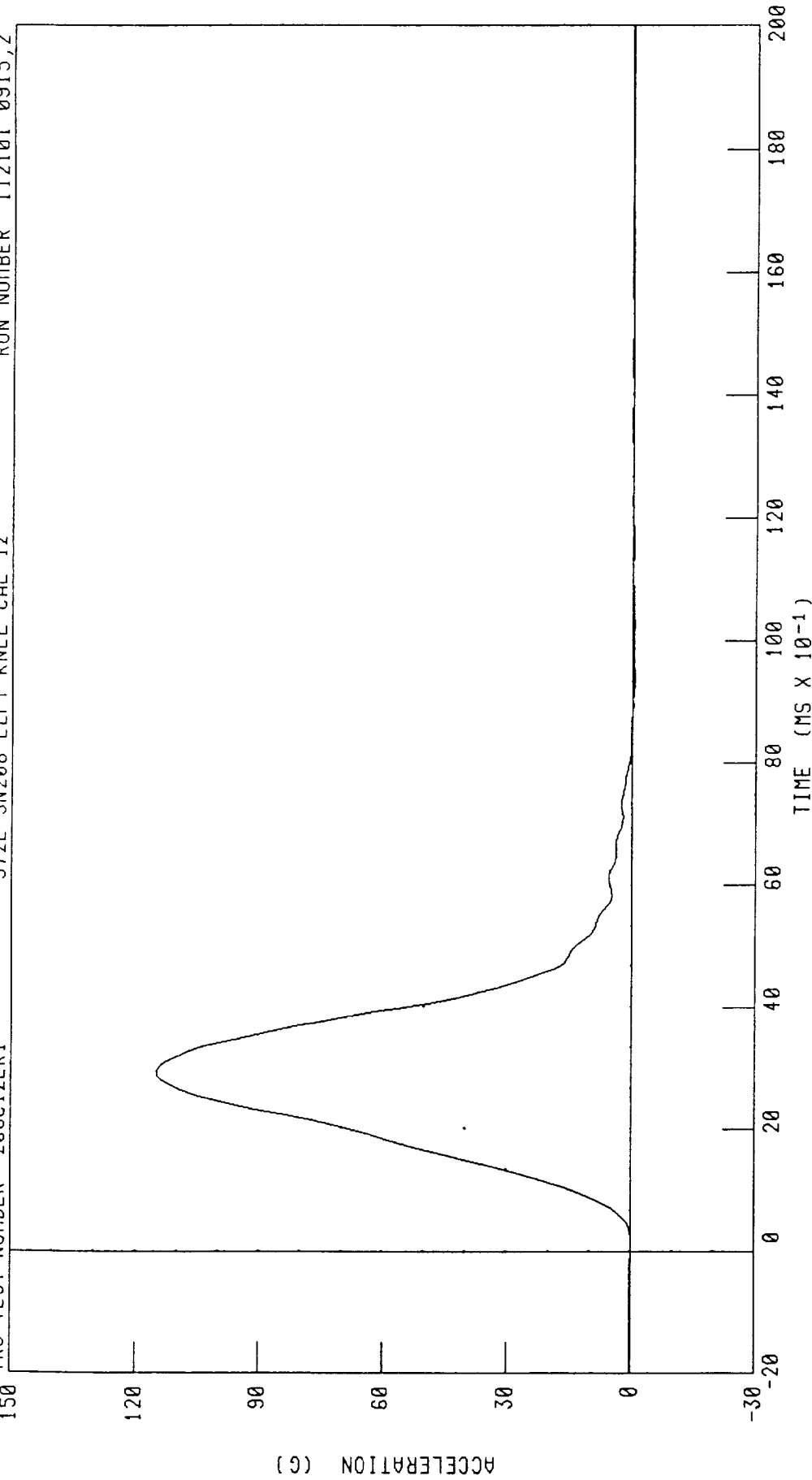


RUN NUMBER: 112101.0915;2

PART 572-E HYBRID III LEFT KNEE CALIBRATION

PENDULUM DECELERATION (5 KG PEND)

TRC TEST NUMBER 206C12LK1 572E SN206 LEFT KNEE CAL 12 RUN NUMBER 112101 0915,2



CHANNEL PENXC FILTER CH CLASS 600 PEAK DATA 115 13 G 0 2 88 MS, -0 64 G 0 9 36 MS

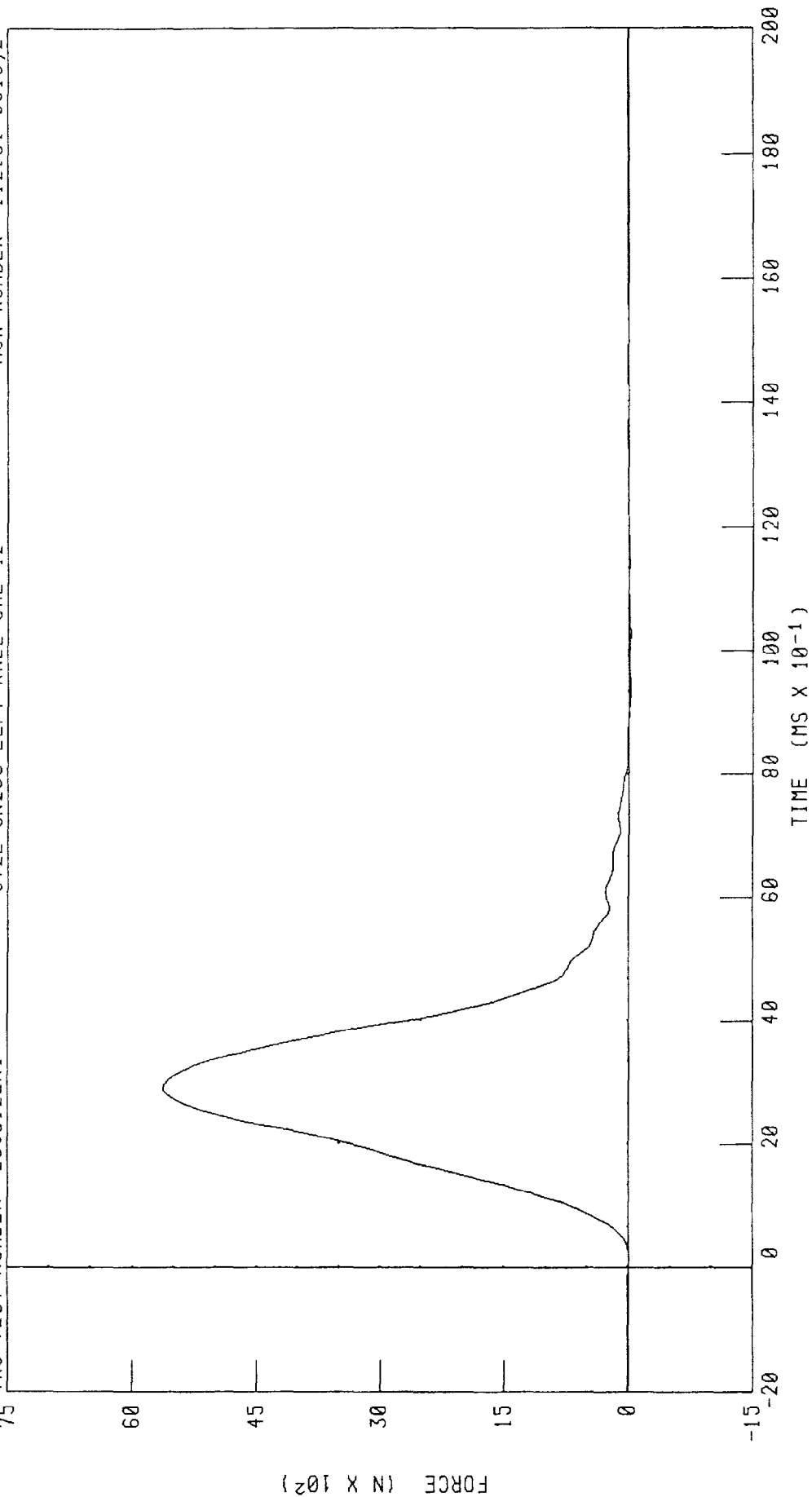
PART 572-E HYBRID III LEFT KNEE CALIBRATION

PENDULUM FORCE (5 KG PEND)

TRC TEST NUMBER 206C12LK1

572E SN206 LEFT KNEE CAL 12

RUN NUMBER 112101 0915,2



PEAK DATA 5633 19 N @ 2 80 MS, -31 18 N @ 9 36 MS

CHANNEL PENXF FILTER CH CLASS 600

TRANSPORTATION RESEARCH CENTER INC.

RIGHT KNEE IMPACT TEST

HYBRID III 50th

21-NOV-01

TRC INC.

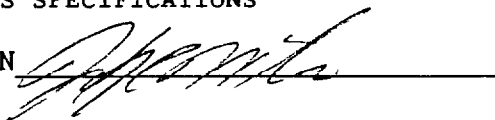
TEST NO: 206C12RK1

572E SN206 RIGHT KNEE CAL 12

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	24.0 %
PROBE VELOCITY	2.07 - 2.13 M/S	2.09 M/S
PEAK KNEE IMPACT FORCE 5.0 KG PENDULUM	4715 - 5782 N	5178.1 N

TEST MEETS SPECIFICATIONS

TECHNICIAN



RUN NUMBER: 112101.0908;1

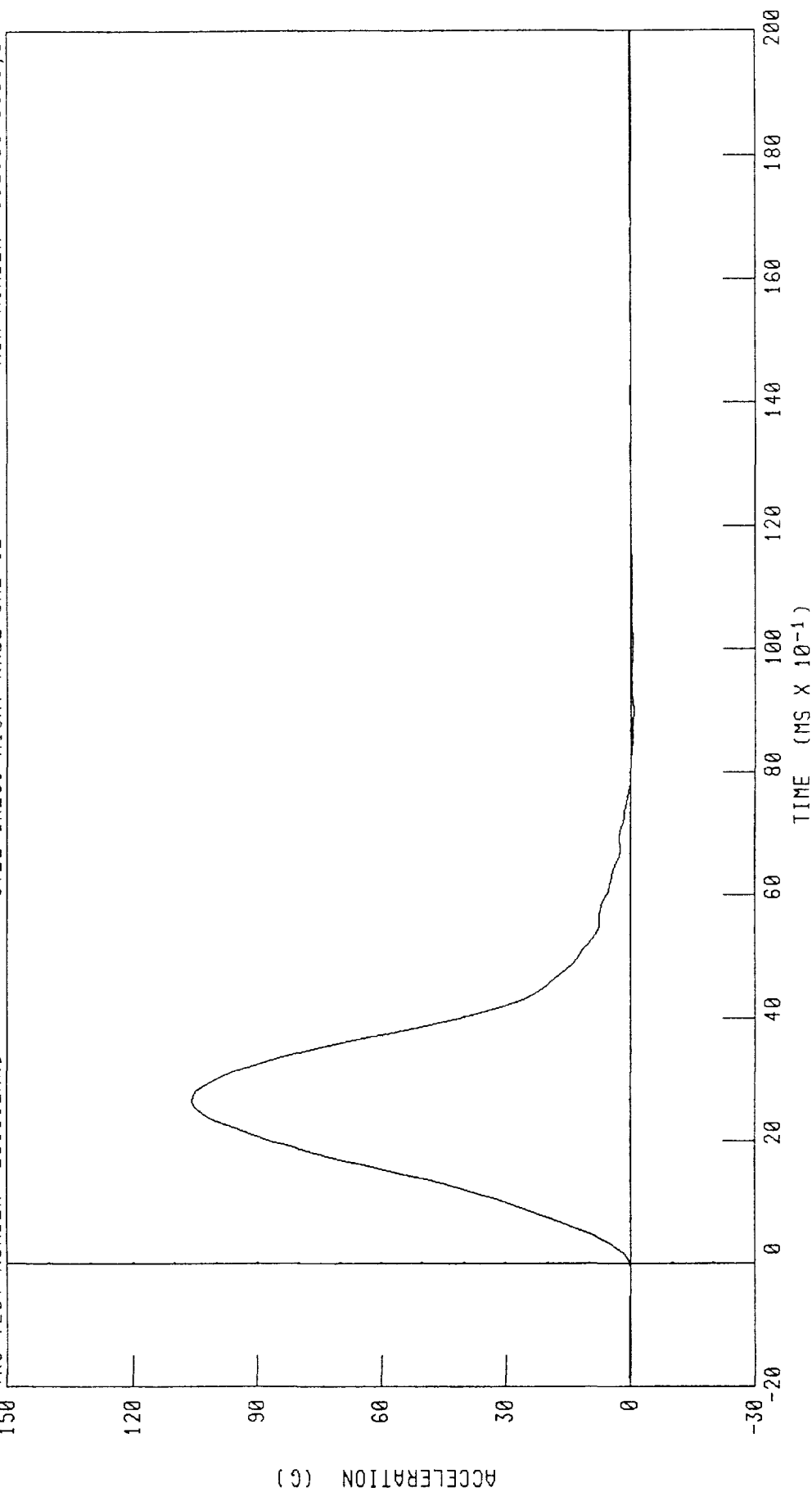
PART 572-E HYBRID III RIGHT KNEE CALIBRATION

PENDULUM DECELERATION (5 KG PEND)

TRC TEST NUMBER 206C12RK1

572E SN206 RIGHT KNEE CAL 12

RUN NUMBER 112101 1036,1



CHANNEL PENXC FILTER CH CLASS 600

PEAK DATA 105 83 G @ 2 64 MS, -0 73 G @ 9 04 MS

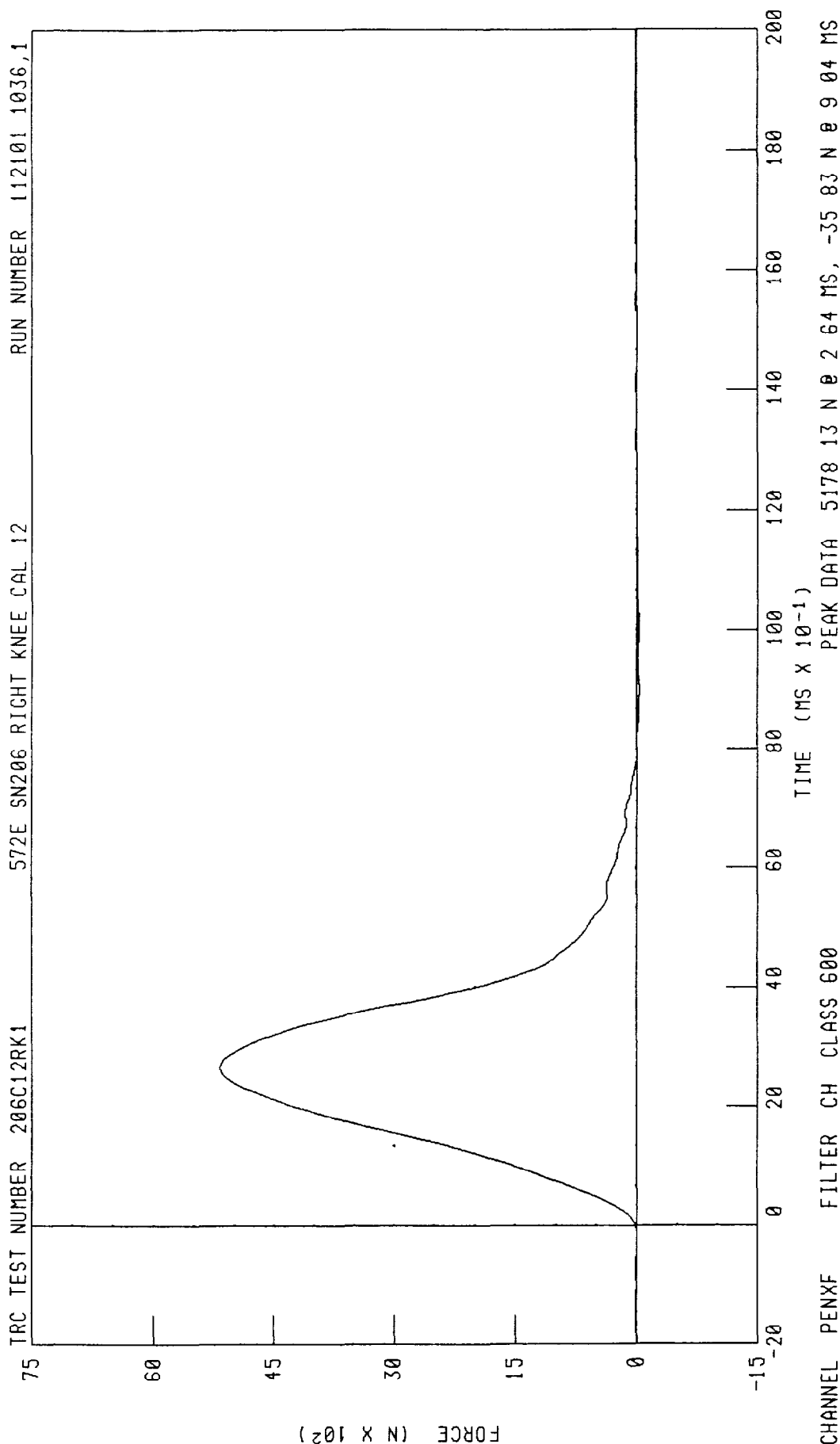
PART 572-E HYBRID III RIGHT KNEE CALIBRATION

PENDULUM FORCE (5 KG PEND)

TRC TEST NUMBER 206C12RK1

572E SN206 RIGHT KNEE CAL 12

RUN NUMBER 112101 1036,1



CHANNEL PENXF FILTER CH CLASS 600

PEAK DATA 5178 13 N 0 2 64 MS, -35 83 N 0 9 04 MS

TRANSPORTATION RESEARCH CENTER INC.

KNEE SLIDER TEST

HYBRID III 50th

20-NOV-01

LEFT KNEE

TRC INC.

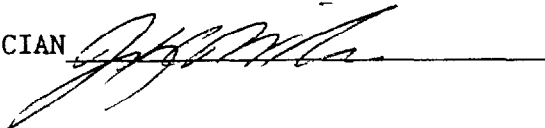
TEST NO: 206C12LS1

572E SN206 LEFT SLIDER CAL 12

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.1 DEG. C
RELATIVE HUMIDITY	10 - 70 %	25.0 %
PENDULUM VELOCITY	2.70-2.80 M/S	2.73 M/S
FORCE AT 10.0 MM DISPLACEMENT	1259 - 1721 N	1353. N
FORCE AT 18.0 MM DISPLACEMENT	2268 - 3096 N	2870. N

TEST MEETS SPECIFICATIONS

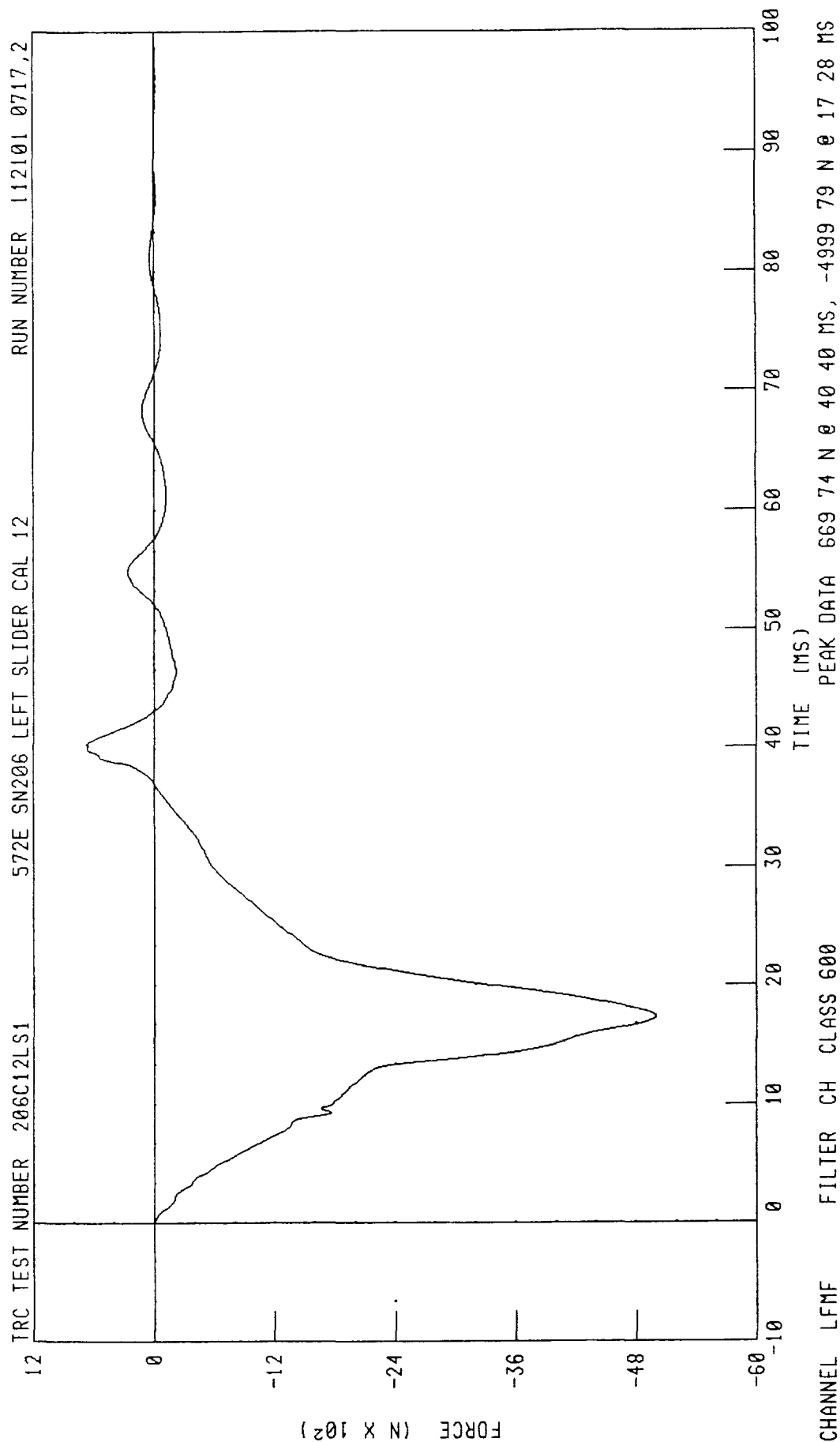
TECHNICIAN



RUN NUMBER: 112101.0711;1

PART 572-E HYBRID III LEFT KNEE SLIDER CALIBRATION

LEFT FEMUR FORCE



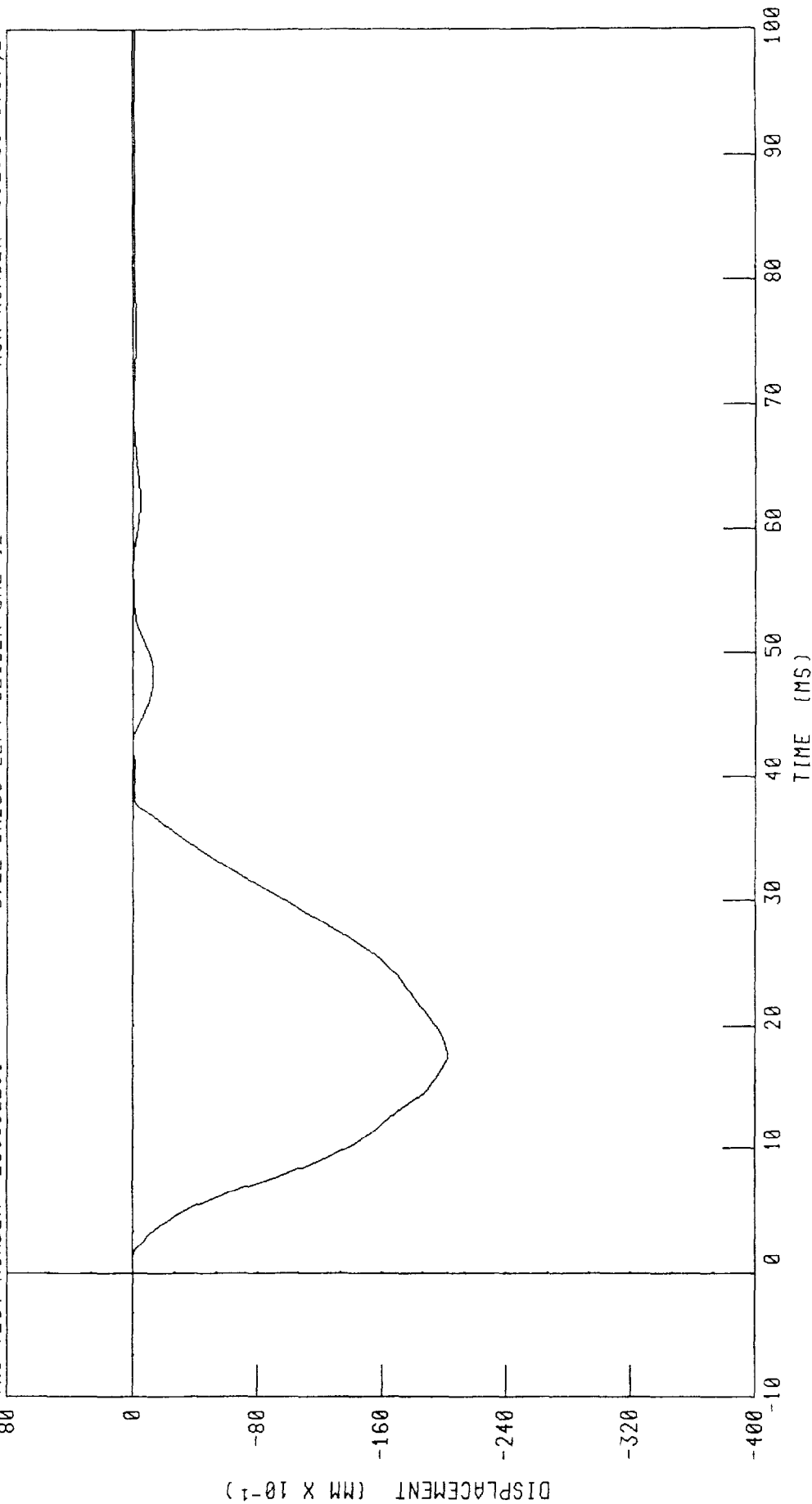
PART 572-E HYBRID III LEFT KNEE SLIDER CALIBRATION

LEFT KNEE DISPLACEMENT

TRC TEST NUMBER 206C12LS1

572E SN206 LEFT SLIDER CAL 12

RUN NUMBER 112101 0717,2

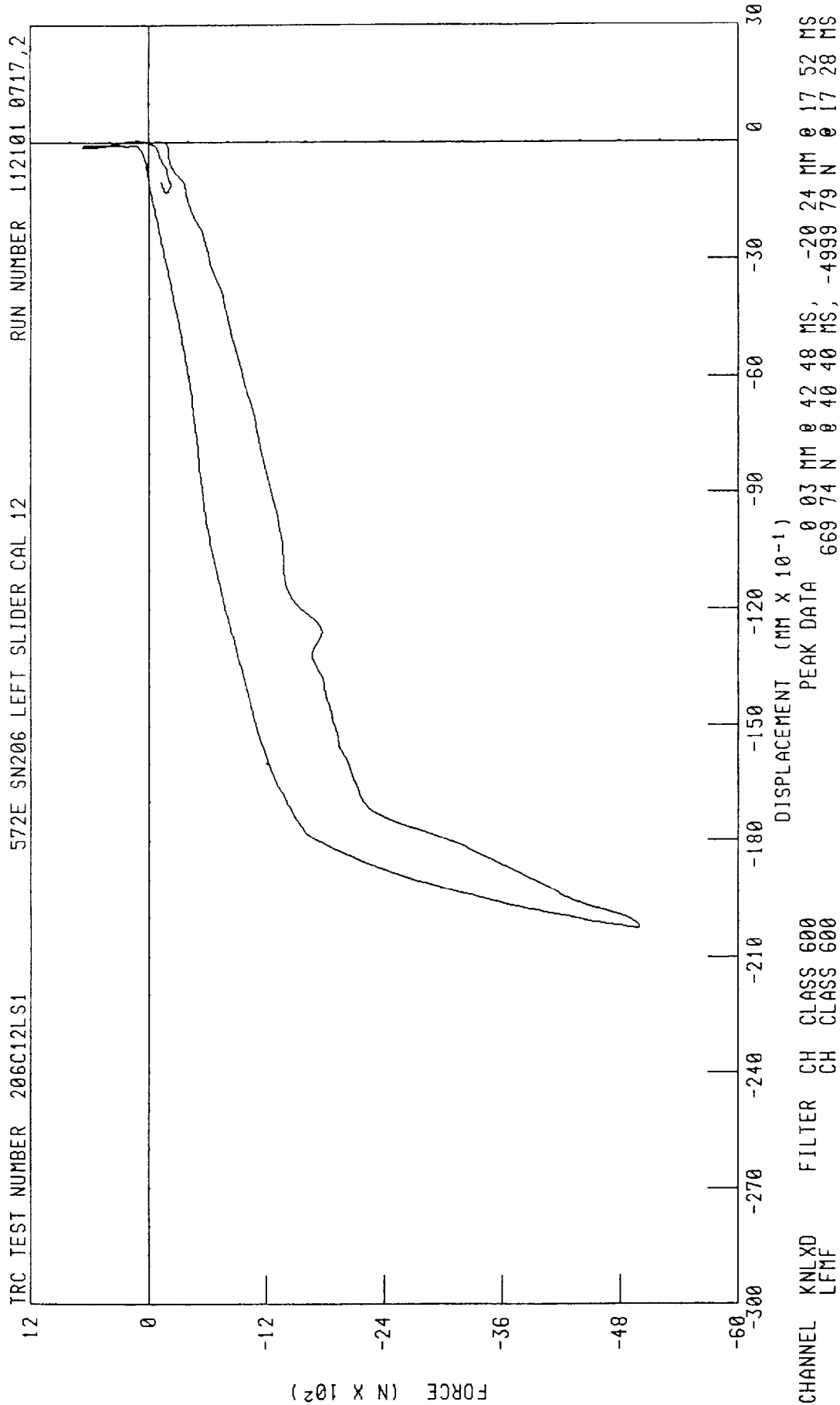


CHANNEL KNLXD FILTER CH CLASS 600

PEAK DATA 0 03 MM 0 42 48 MS, -20 24 MM 0 17 52 MS

PART 572-E HYBRID III LEFT KNEE SLIDER CALIBRATION

LEFT KNEE DISPLACEMENT VS FEMUR FORCE



TRANSPORTATION RESEARCH CENTER INC.

KNEE SLIDER TEST

HYBRID III 50th

20-NOV-01

RIGHT KNEE
INC.

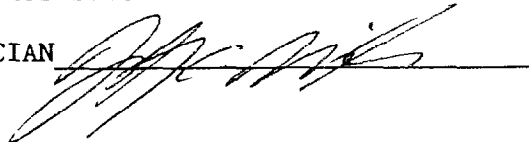
TEST NO: 206C12RS1

SN206 RIGHT SLIDER CAL 12

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	20.6 DEG. C
RELATIVE HUMIDITY	10 - 70 %	24.0 %
PENDULUM VELOCITY	2.70-2.80 M/S	2.72 M/S
FORCE AT 10.0 MM DISPLACEMENT	1259 - 1721 N	1442. N
FORCE AT 18.0 MM DISPLACEMENT	2268 - 3096 N	2669. N

TEST MEETS SPECIFICATIONS

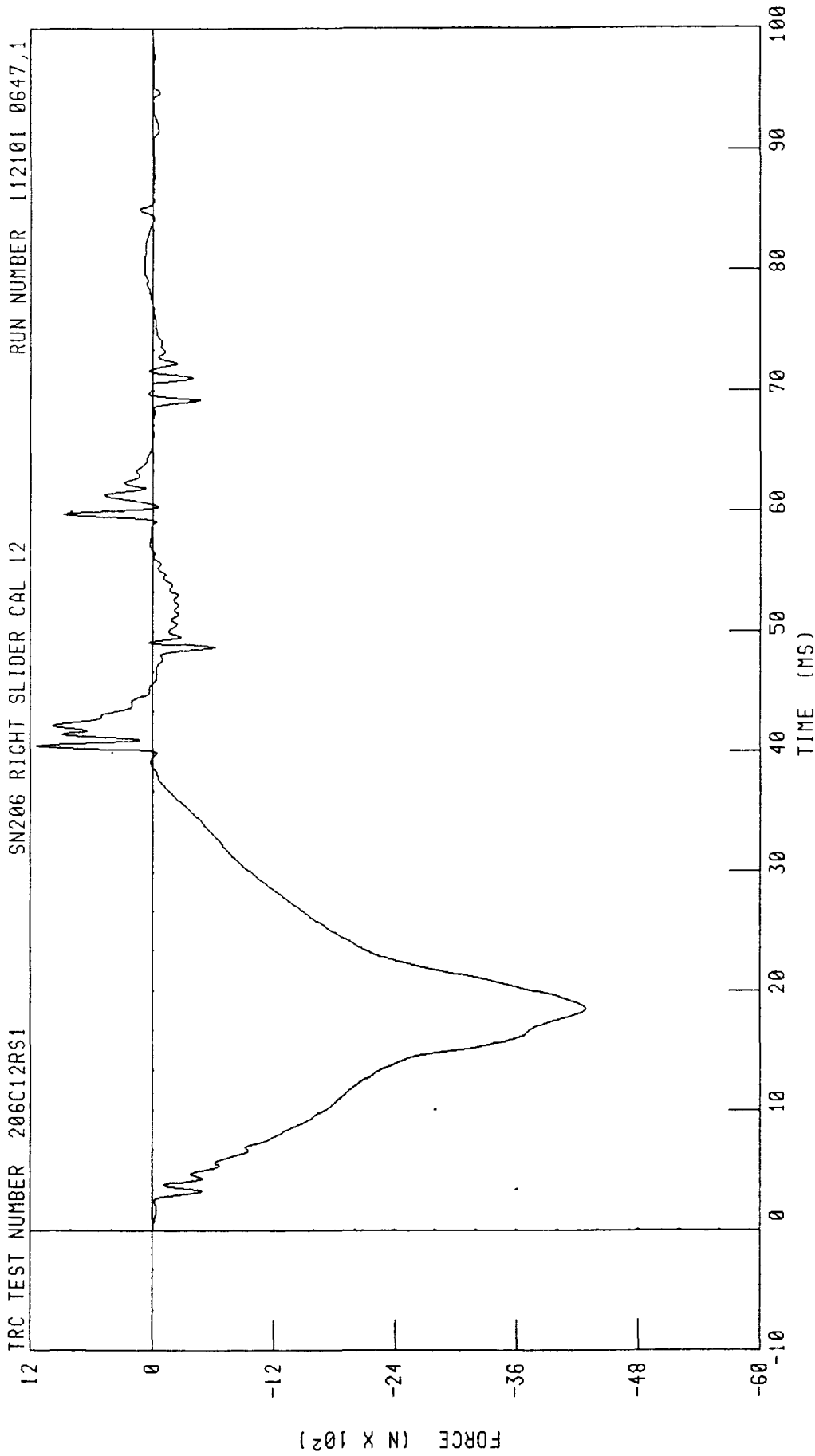
TECHNICIAN



RUN NUMBER: 112001.1531;1

PART 572-E HYBRID III RIGHT KNEE SLIDER CALIBRATION

RIGHT FEMUR FORCE



CHANNEL RFMF FILTER CH CLASS 600 PEAK DATA 1139 24 N @ 40 64 MS, -4284 46 N @ 18 48 MS

PART 572-E HYBRID III RIGHT KNEE SLIDER CALIBRATION

RIGHT KNEE DISPLACEMENT

SN206 RIGHT SLIDER CAL 12

TRC TEST NUMBER 206C12RS1

80

0

-80

-160

-240

-320

-400

DISPLACEMENT (MM X 10⁻¹)

0

10

20

30

40

50

60

70

80

90

100

TIME (MS)

PEAK DATA 0 44 MM @ 43 84 MS, -19 99 MM @ 18 96 MS

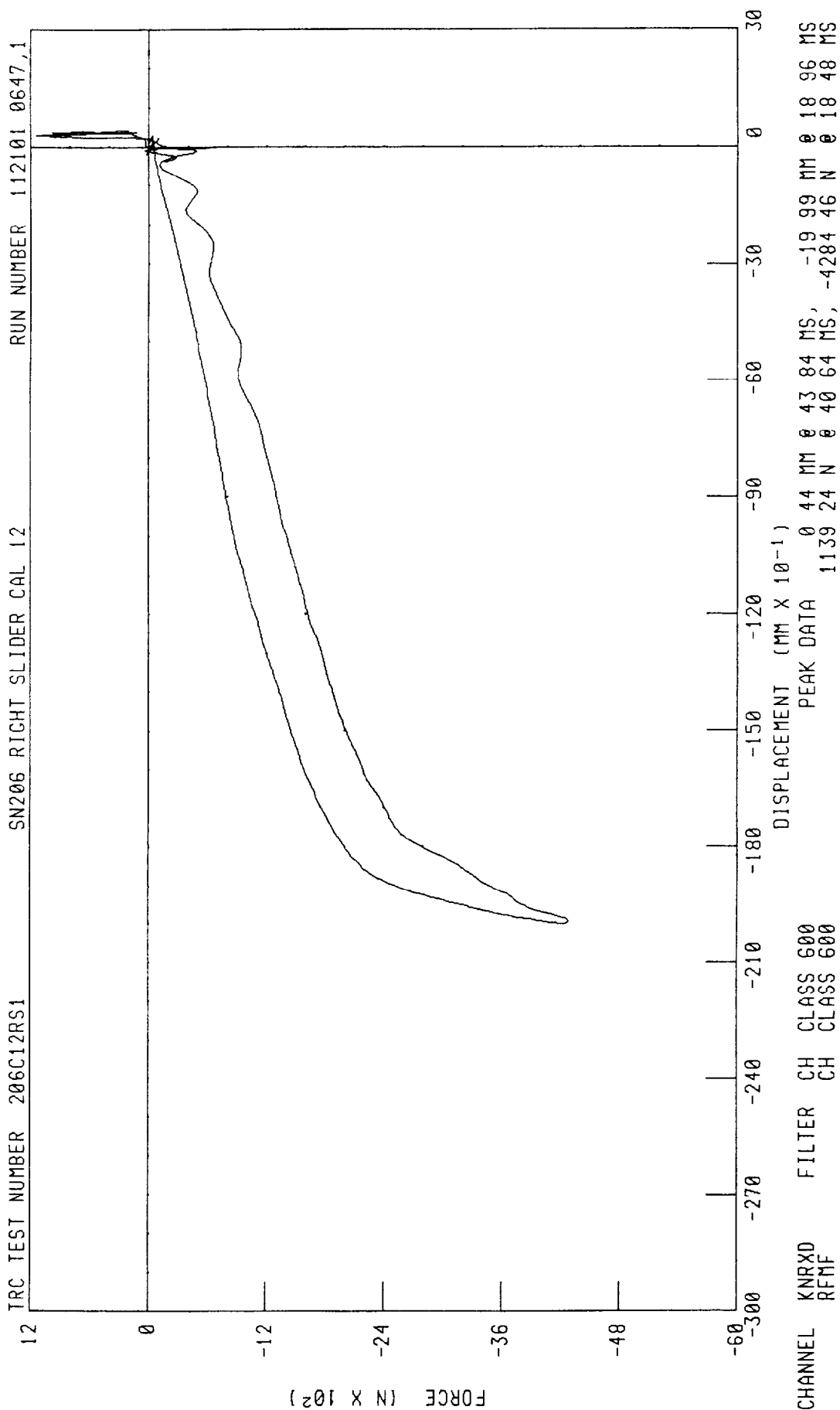
CHANNEL KNRXD

FILTER CH

CLASS 600

RUN NUMBER 112101 0647,1

PART 572-E HYBRID III RIGHT KNEE SLIDER CALIBRATION
 RIGHT KNEE DISPLACEMENT VS FEMUR FORCE



Pre-Test Dummy Configuration and Performance Verification Data

Passenger Dummy S/N: 202

TRANSPORTATION RESEARCH CENTER INC.
HYBRID III EXTERNAL DIMENSIONS

202

21-NOV-01

TRC INC. TEST NO: 202C13ED1 572E SN202 EXT.DIMENSION CAL13

TEST PARAMETER	(DIMEN.)	SPECIFICATION	TEST RESULTS
LOCATION FOR CHEST CIRCUMFERENCE (AA)		429 - 434 MM	432. MM
LOCATION FOR WAIST CIRCUMFERENCE (BB)		226 - 231 MM	229. MM
CHEST CIRCUMFERENCE	(Y)	970 -1001 MM	996. MM
WAIST CIRCUMFERENCE	(Z)	836 - 866 MM	859. MM
CHEST DEPTH	(O)	213 - 229 MM	218. MM
H-POINT HEIGHT	(C)	84 - 89 MM	86. MM
H-POINT FROM SEATBACK	(D)	135 - 140 MM	135. MM
SKULL CAP TO BACKLINE	(H)	41 - 46 MM	43. MM
TOTAL SITTING HEIGHT	(A)	879 - 889 MM	886. MM
THIGH CLEARANCE	(F)	140 - 155 MM	147. MM
BUTTOCK KNEE LENGTH	(K)	579 - 605 MM	599. MM
BUTTOCK POPLITEAL LENGTH	(N)	452 - 478 MM	467. MM
POPLITEAL HEIGHT	(L)	429 - 455 MM	447. MM
KNEE PIVOT HEIGHT	(M)	485 - 500 MM	493. MM
FOOT LENGTH	(P)	252 - 267 MM	254. MM
FOOT BREADTH	(W)	91 - 107 MM	102. MM
SHOULDER PIVOT FROM BACKLINE	(E)	84 - 94 MM	91. MM
SHOULDER BREADTH	(V)	422 - 437 MM	434. MM
SHOULDER PIVOT HEIGHT	(B)	506 - 521 MM	516. MM
ELBOW REST HEIGHT	(J)	191 - 211 MM	206. MM
SHOULDER-ELBOW LENGTH	(I)	330 - 345 MM	330. MM
BACK OF ELBOW TO WRIST PIVOT	(G)	290 - 305 MM	297. MM

572E SN202 EXT.DIMENSION CAL13

DUMMY MEETS SPECIFICATIONS

TECHNICIAN

RUN NUMBER: 112101.1539

TRANSPORTATION RESEARCH CENTER INC.

HEAD DROP TEST

HYBRID III 50th

21-NOV-01

TRC INC.

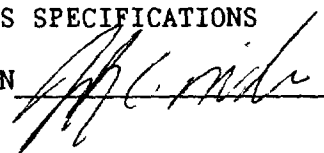
TEST NO: 202C13HD1

572E SN202 HEAD DROP CAL 13

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.1 DEG. C
RELATIVE HUMIDITY	10 - 70 %	25.0 %
PEAK RESULTANT ACCELERATION	225 - 275 G	249.18 G
PEAK LATERAL ACCELERATION	15 G MAX	2.87 G
IS ACCELERATION CURVE UNIMODAL?	YES	YES

TEST MEETS SPECIFICATIONS

TECHNICIAN



RUN NUMBER: 112101.0902;1

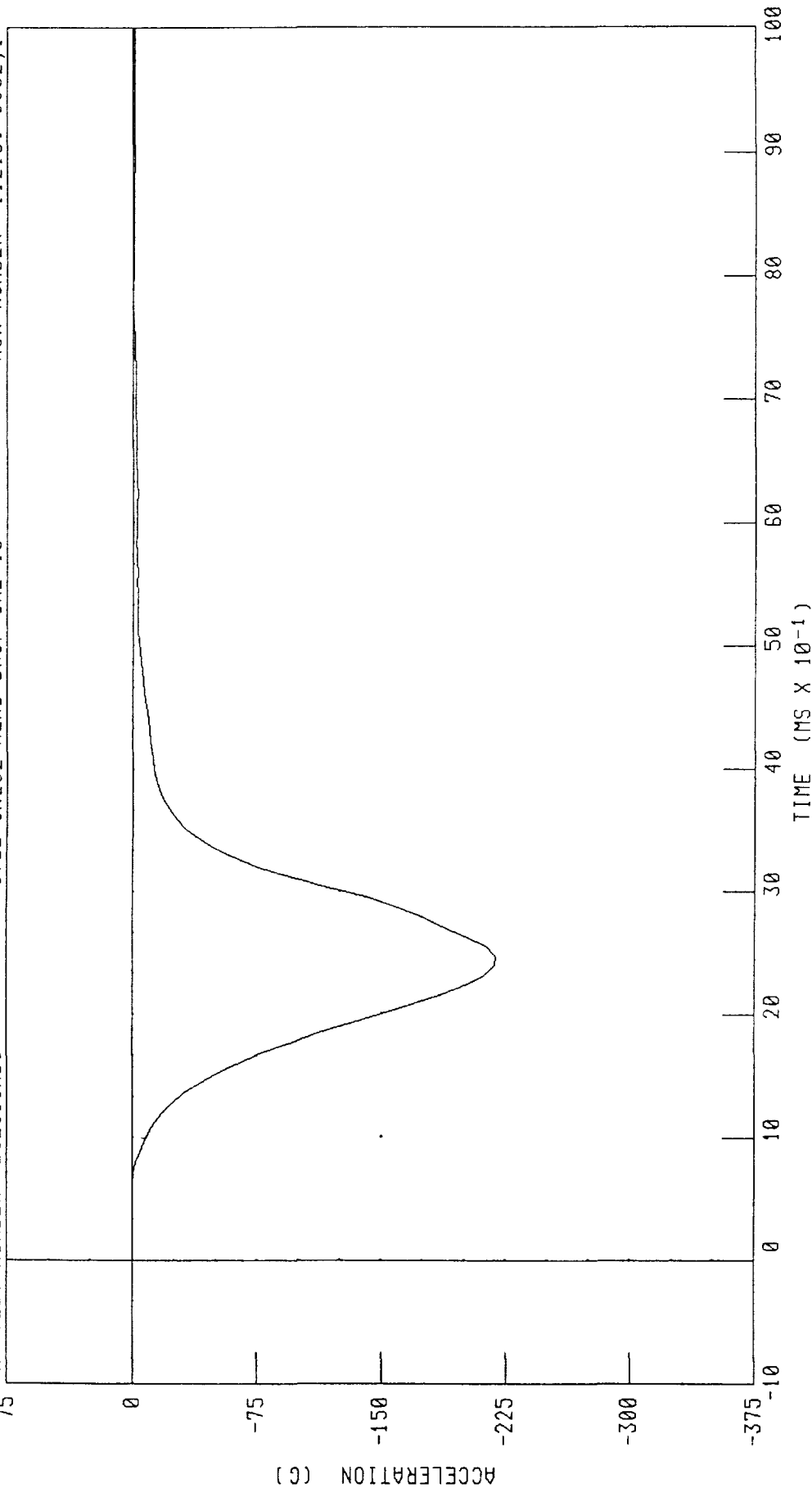
PART 572-E HYBRID III HEAD CALIBRATION

HEAD ACCELERATION X AXIS

TRC TEST NUMBER 202C13HD1

572E SN202 HEAD DROP CAL 13

RUN NUMBER 112101 0902,1



CHANNEL HEDXC FILTER CH CLASS 1000

PEAK DATA 0 06 C 0 -0 88 MS, -219 07 C 0 2 48 MS

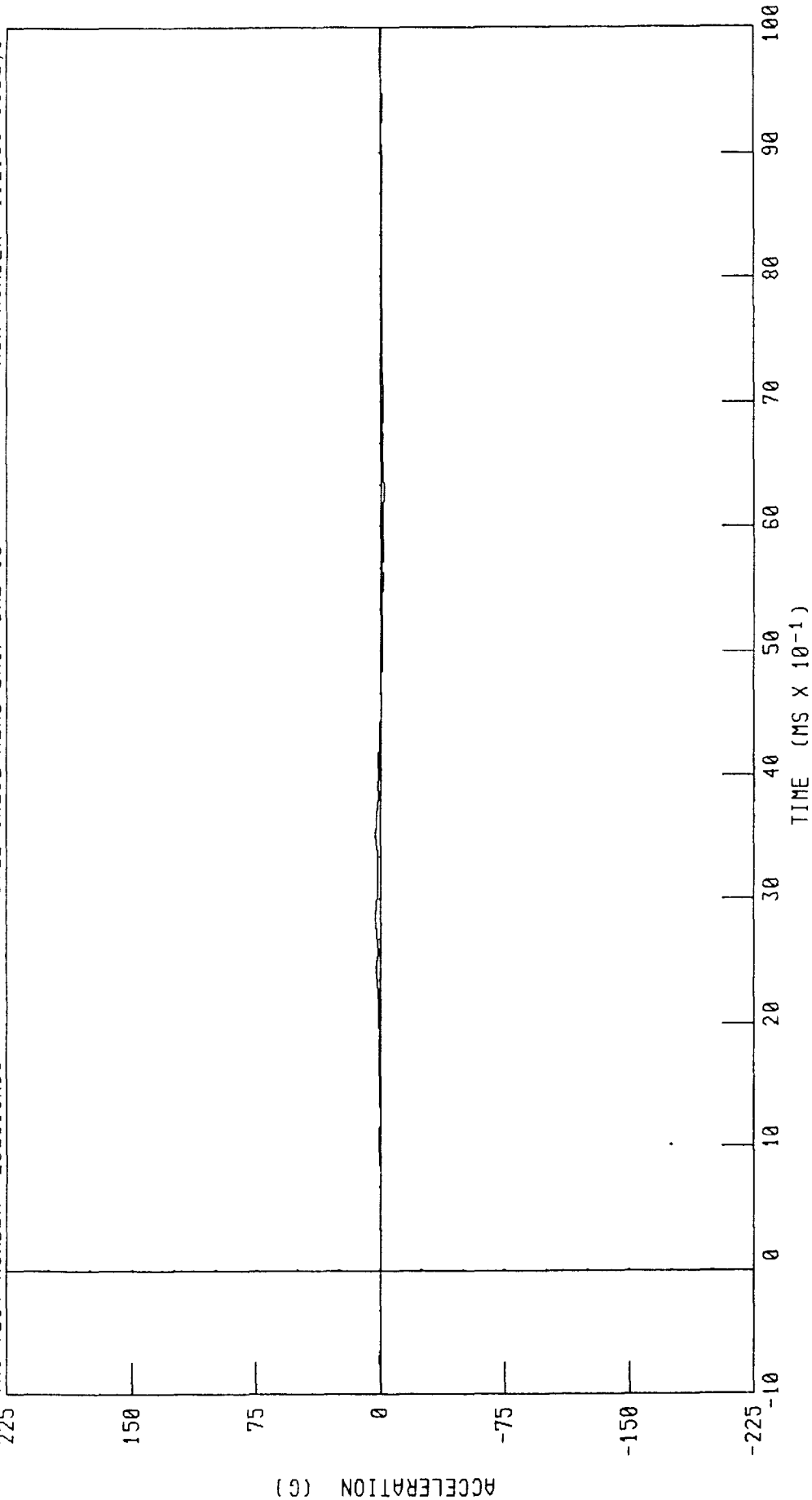
PART 572-E HYBRID III HEAD CALIBRATION

HEAD ACCELERATION Y AXIS

TRC TEST NUMBER 202C13HD1

572E SN202 HEAD DROP CAL 13

RUN NUMBER 112101 0902,1



CHANNEL HEDYC FILTER CH CLASS 1000

PEAK DATA 2 88 G 0 2 80 MS, -2 02 G 0 6 32 MS

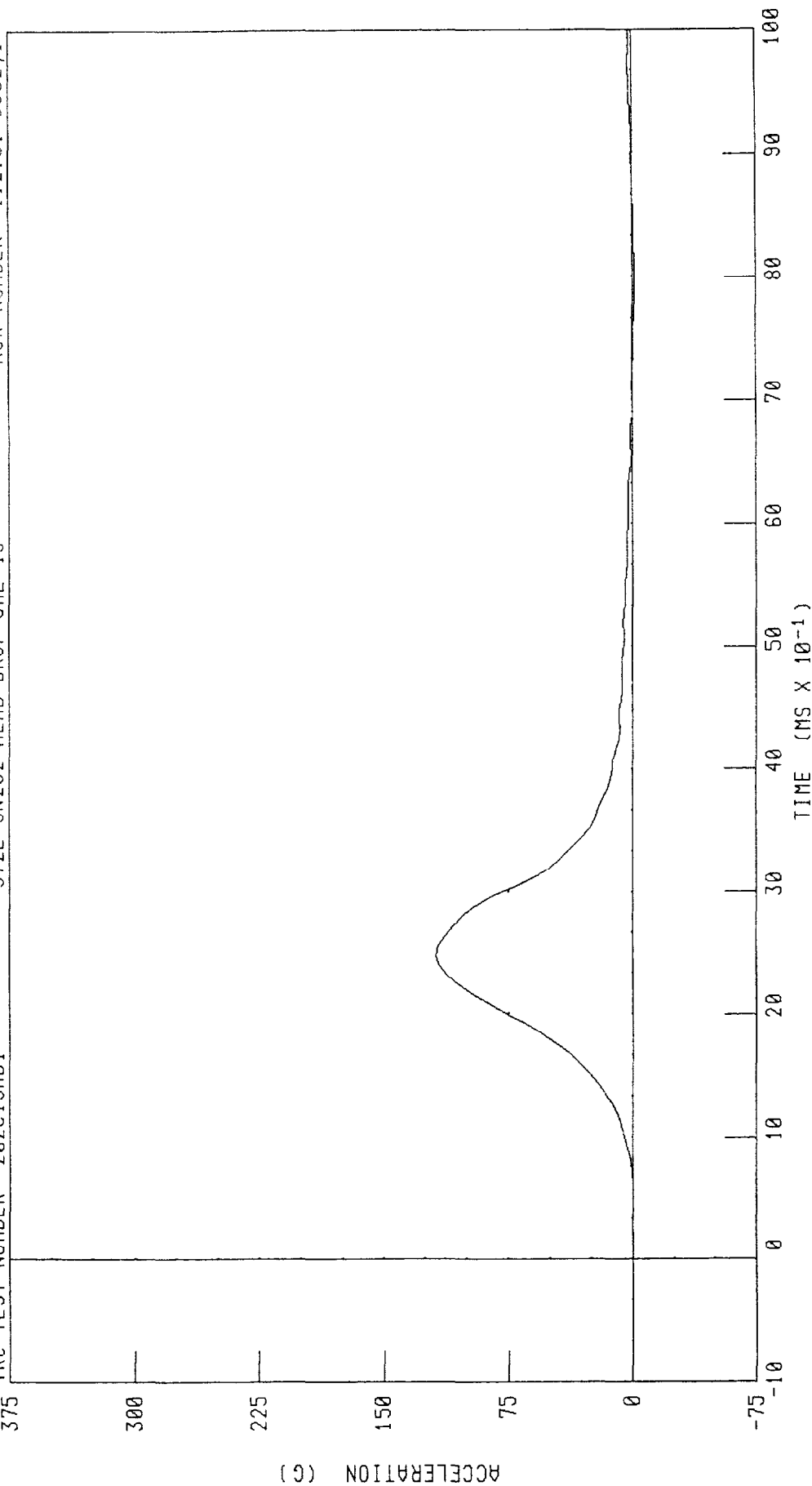
PART 572-E HYBRID III HEAD CALIBRATION

HEAD ACCELERATION Z AXIS

TRC TEST NUMBER 202C13HD1

572E SN202 HEAD DROP CAL 13

RUN NUMBER 112101 0902,1



CHANNEL HEDZG FILTER CH CLASS 1000

PEAK DATA 118 72 G 2 48 MS, -1 47 G 0 7 76 MS

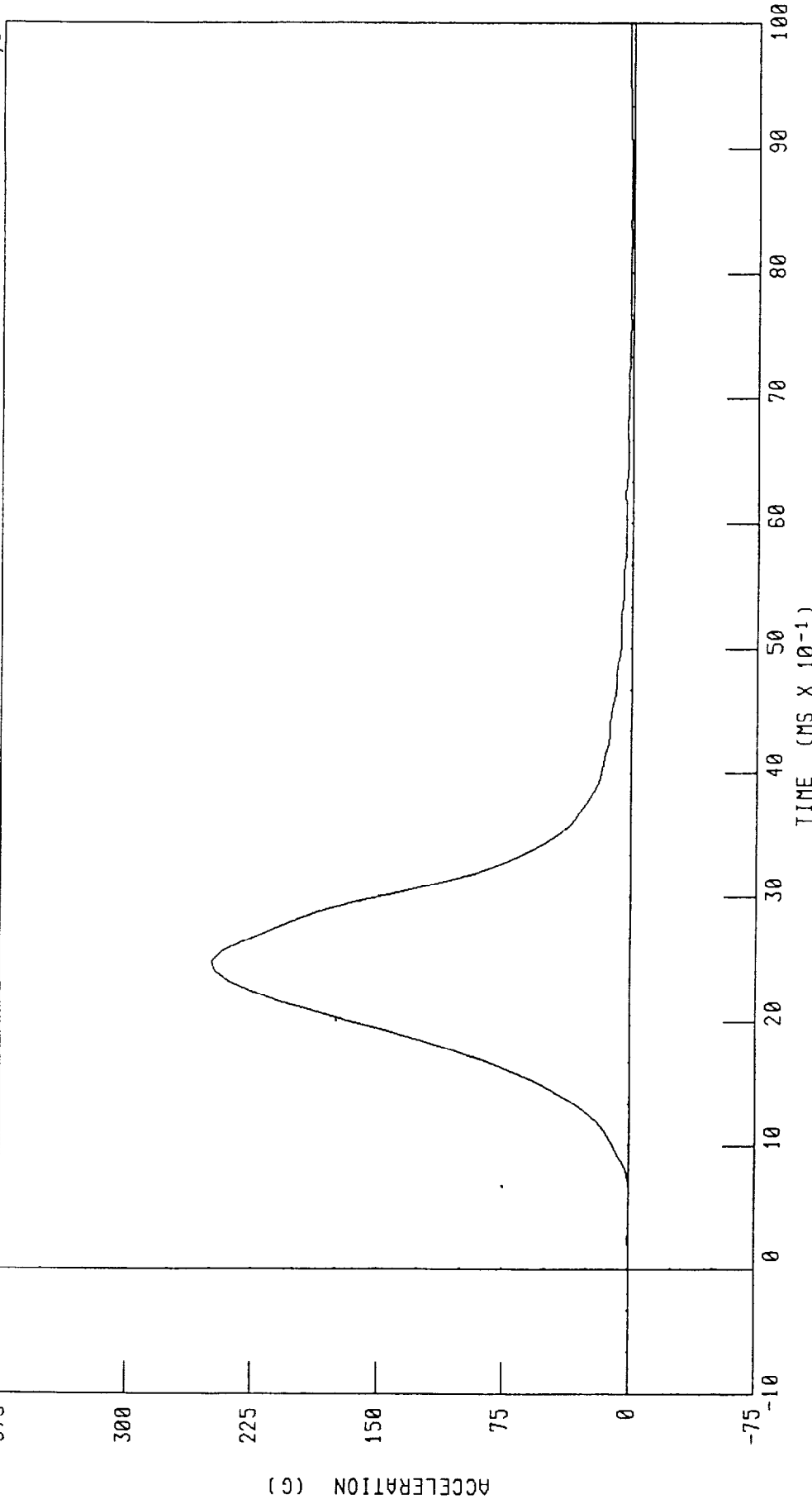
PART 572-E HYBRID III HEAD CALIBRATION

HEAD RESULTANT ACCELERATION

TRC TEST NUMBER 202C13HD1

572E SN202 HEAD DROP CAL 13

RUN NUMBER 112101 0902,1



CHANNEL HEDRG FILTER CH CLASS 1000

PEAK DATA 249 18 C 0 2 48 MS, 0 01 C 0 0 00 MS

TRANSPORTATION RESEARCH CENTER INC.

HYBRID III 50th

21-NOV-01

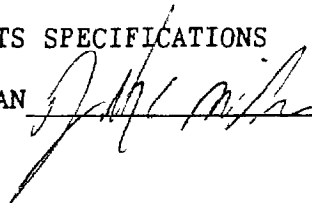
NECK FLEXION TEST - 6 CHANNEL TRANSDUCER

TRC INC. TEST NO: 202C13NF1 572E SN202 NECK FLEXION CAL13

TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE		20.6-22.2 DEG. C	21.1 DEG. C
RELATIVE HUMIDITY		10 - 70 %	24.0 %
IMPACT VELOCITY		6.89 - 7.13 M/S	6.99 M/S
PENDULUM DECELERATION	10 MS	22.50 - 27.50 G	26.48 G
	20 MS	17.60 - 22.60 G	21.18 G
	30 MS	12.50 - 18.50 G	17.89 G
MAX PENDULUM G		29 G MAX	26.94 G
MAX PENDULUM G ABOVE 30 MS		29 G MAX	17.86 G
DECELERATION-TIME CURVE DECAY TIME TO 5 G		34 - 42 MS	36.16 MS
D PLANE	MAX	64 - 78 DEG.	75.15 DEG.
ROTATION	TIME	57 - 64 MS	58.64 MS
MOMENT ABOUT OCCIPITAL CONDYLE	MAX	88.2 - 108.5 NM	101.73 NM
	TIME	47 - 58 MS	50.08 MS
ROTATION ANGLE-TIME CURVE DECAY TIME TO ZERO		113 - 128 MS	119.60 MS
POSITIVE MOMENT-TIME CURVE DECAY TIME TO ZERO		97 - 107 MS	99.92 MS

TEST MEETS SPECIFICATIONS

TECHNICIAN

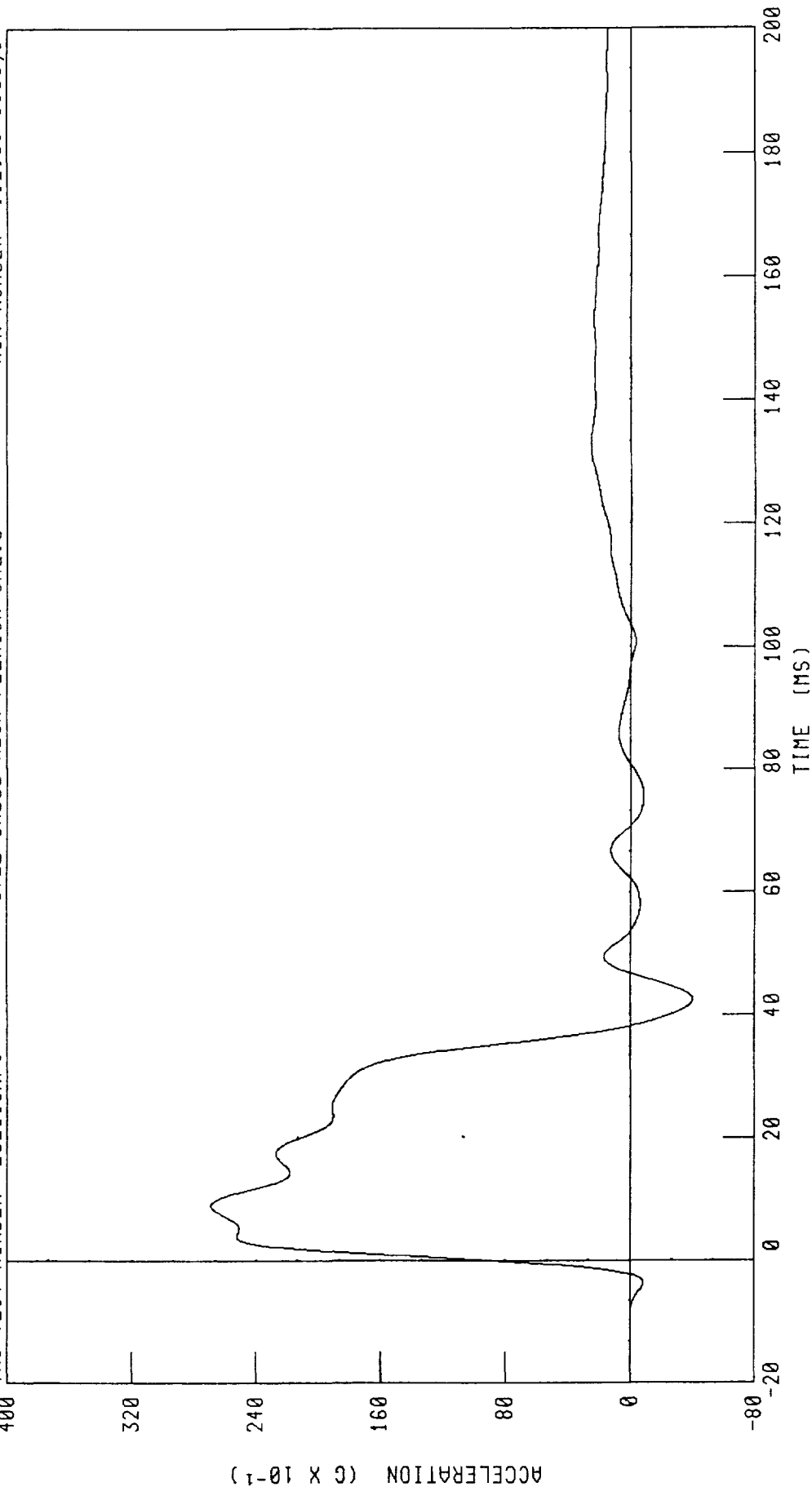


RUN NUMBER: 112101.1053;1

PART 572-E HYBRID III NECK FLEXION CALIBRATION

PENDULUM DECELERATION

TRC TEST NUMBER 202C13NF1 572E SN202 NECK FLEXION CAL13 RUN NUMBER 112101 1053,1



CHANNEL PENXC FILTER CH CLASS 60 PEAK DATA 26 95 C 0 8 96 MS, -4 01 C 0 42 40 MS

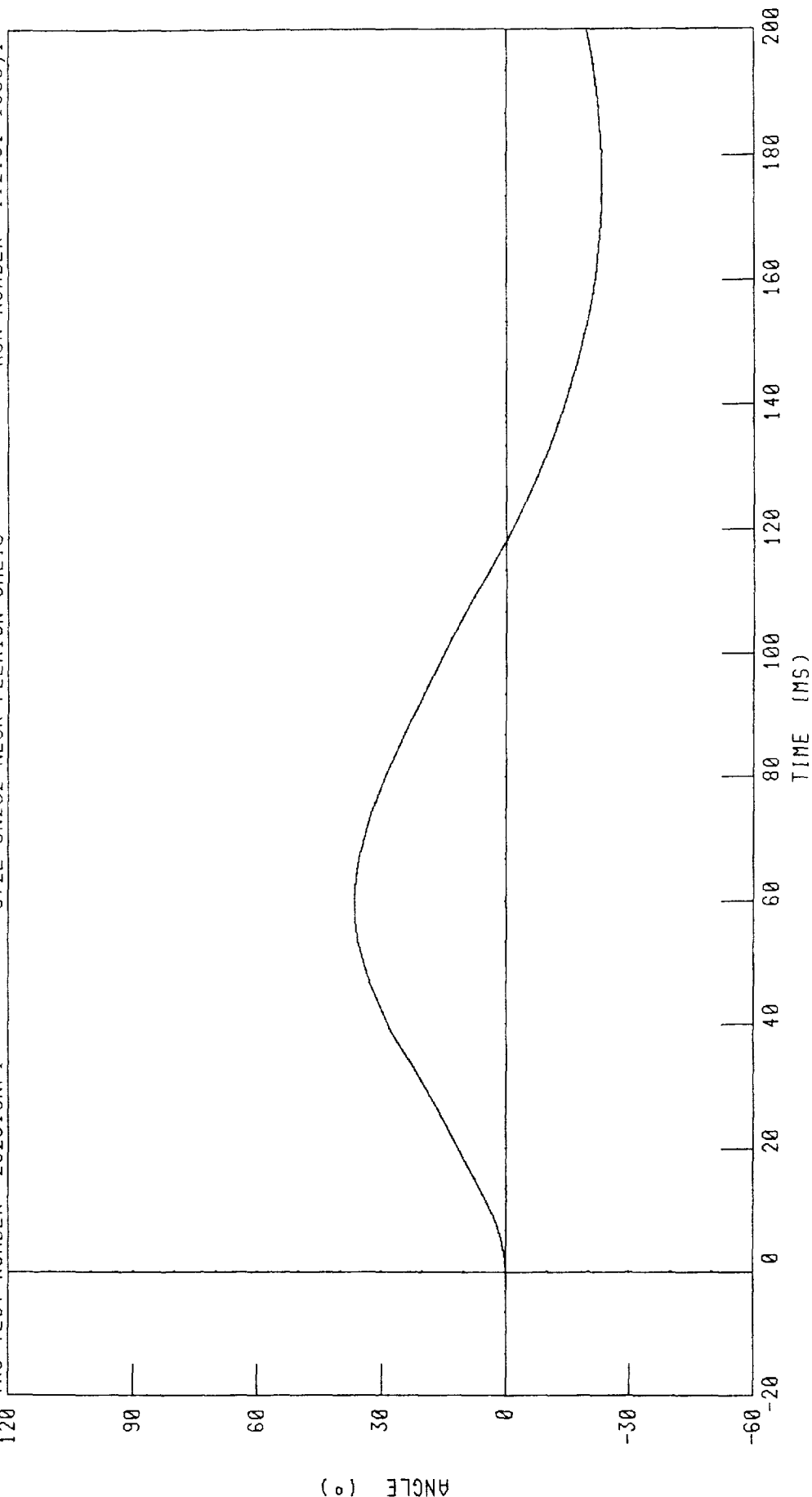
PART 572-E HYBRID III NECK FLEXION CALIBRATION

ROTATION ABOUT BASE OF NECK

572E SN202 NECK FLEXION CAL13

TRC TEST NUMBER 202C13NF1

RUN NUMBER 112101 1053.1



PEAK DATA 36 57 ° 0 59 68 MS, -23 21 ° 0 175 28 MS

FILTER CH CLASS 60

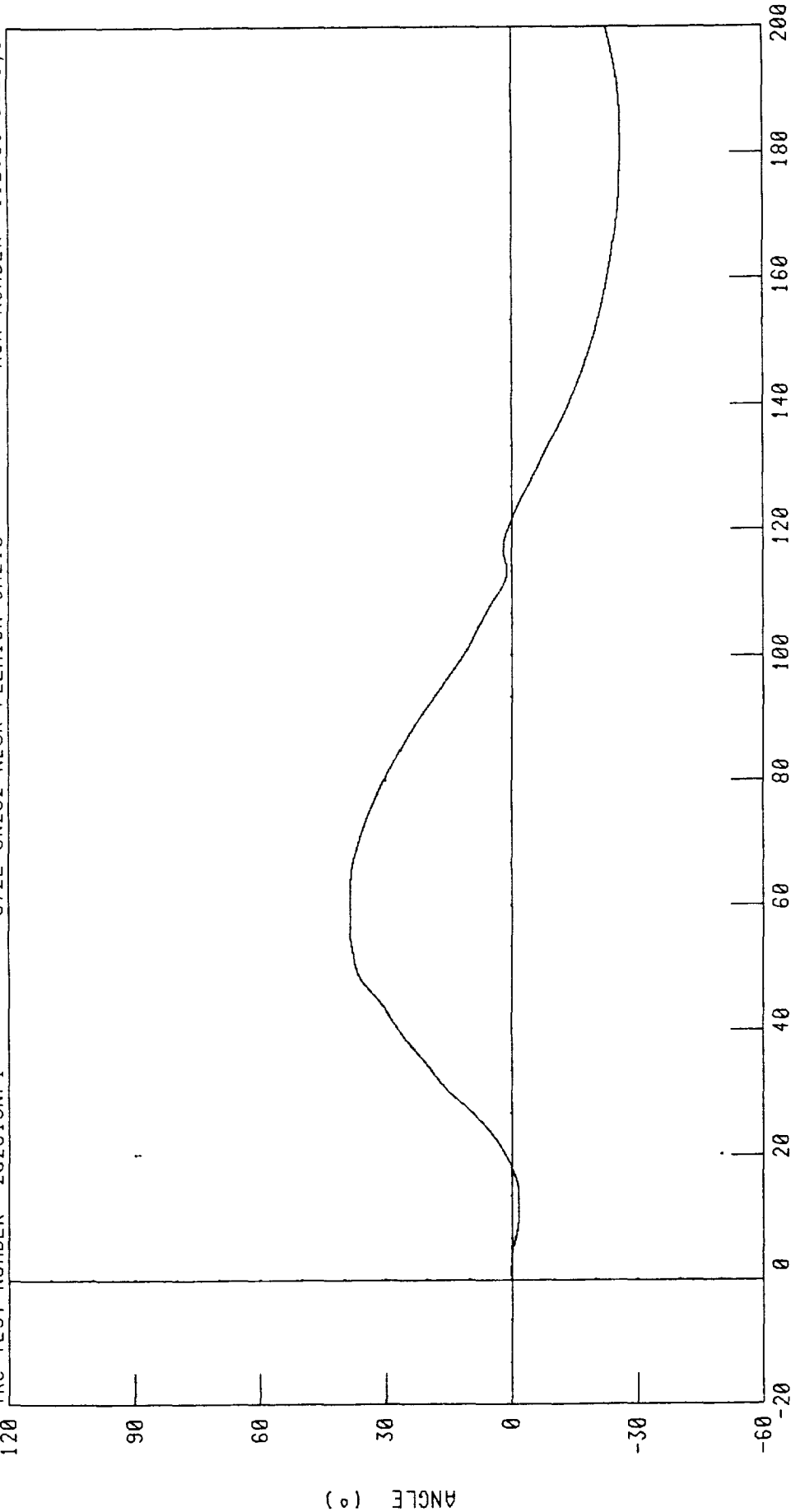
CHANNEL BETA

PART 572-E HYBRID III NECK FLEXION CALIBRATION
 ROTATION ABOUT OCCIPITAL CONDYLE

TRC TEST NUMBER 202C13NF1

572E SN202 NECK FLEXION CAL13

RUN NUMBER 112101 1053,1

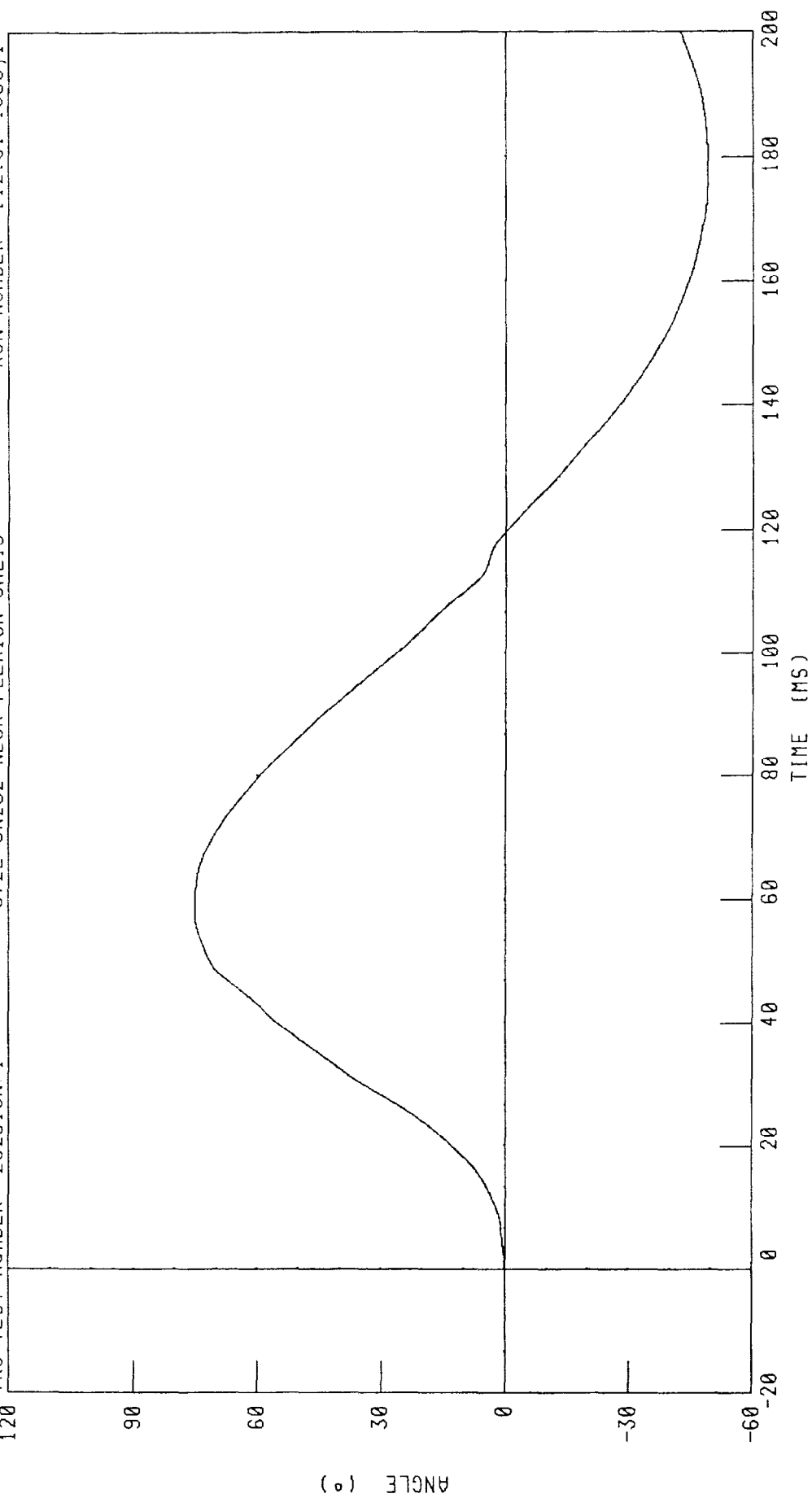


CHANNEL THETA FILTER CH CLASS 60 PEAK DATA 38 63 ° @ 57 28 MS, -26 00 ° @ 182 40 MS

PART 572-E HYBRID III NECK FLEXION CALIBRATION

TOTAL ROTATION

IRC TEST NUMBER 202C13NF1 572E SN202 NECK FLEXION CAL13 RUN NUMBER 112101 1053,1



CHANNEL TOTAL FILTER CH CLASS 60 PEAK DATA 75 15 ° 0 58 64 MS, -49 11 ° 0 178 80 MS

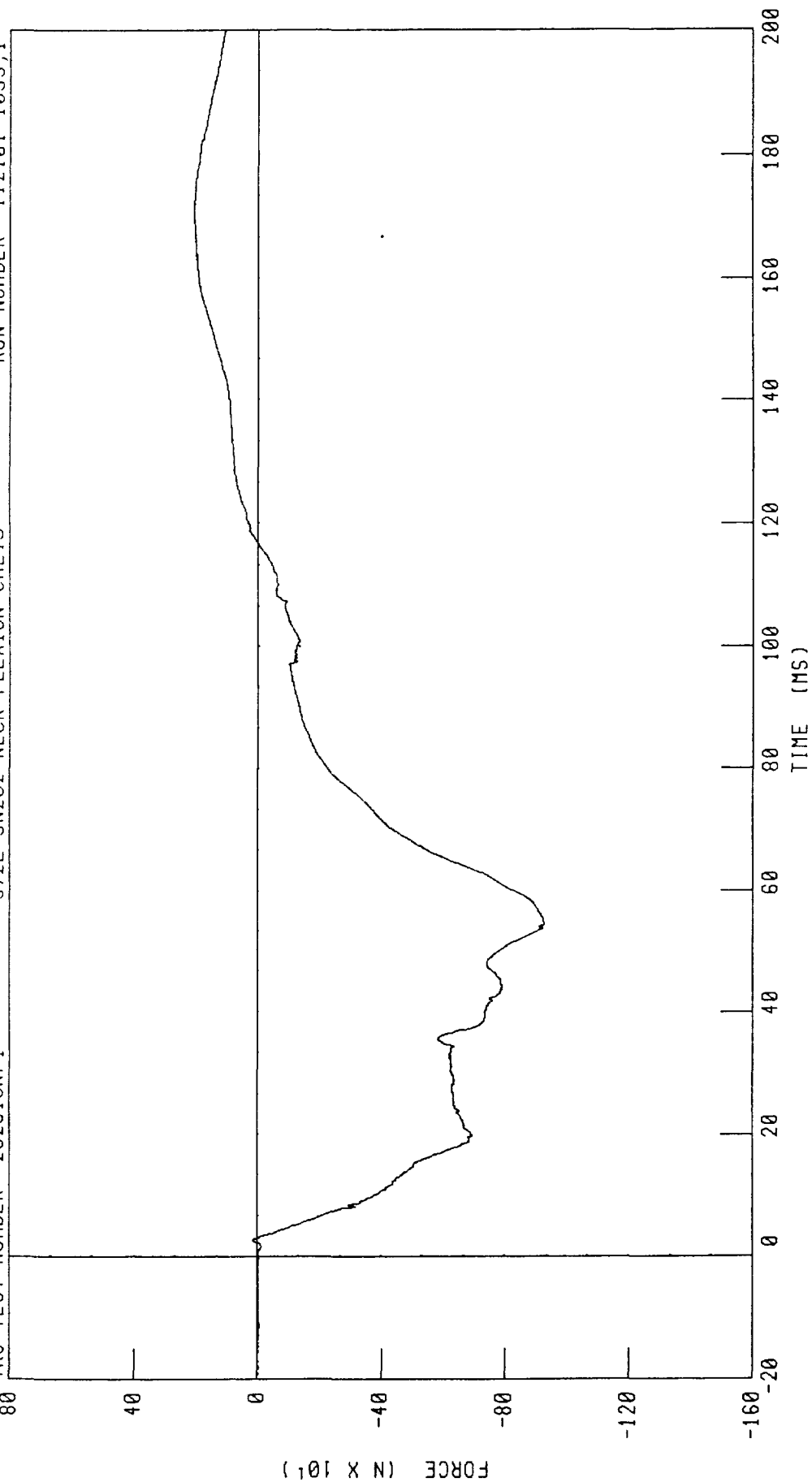
PART 572-E HYBRID III NECK FLEXION CALIBRATION

NECK FORCE X AXIS

TRC TEST NUMBER 202C13NF1

572E SN202 NECK FLEXION CAL13

RUN NUMBER 112101 1053,1



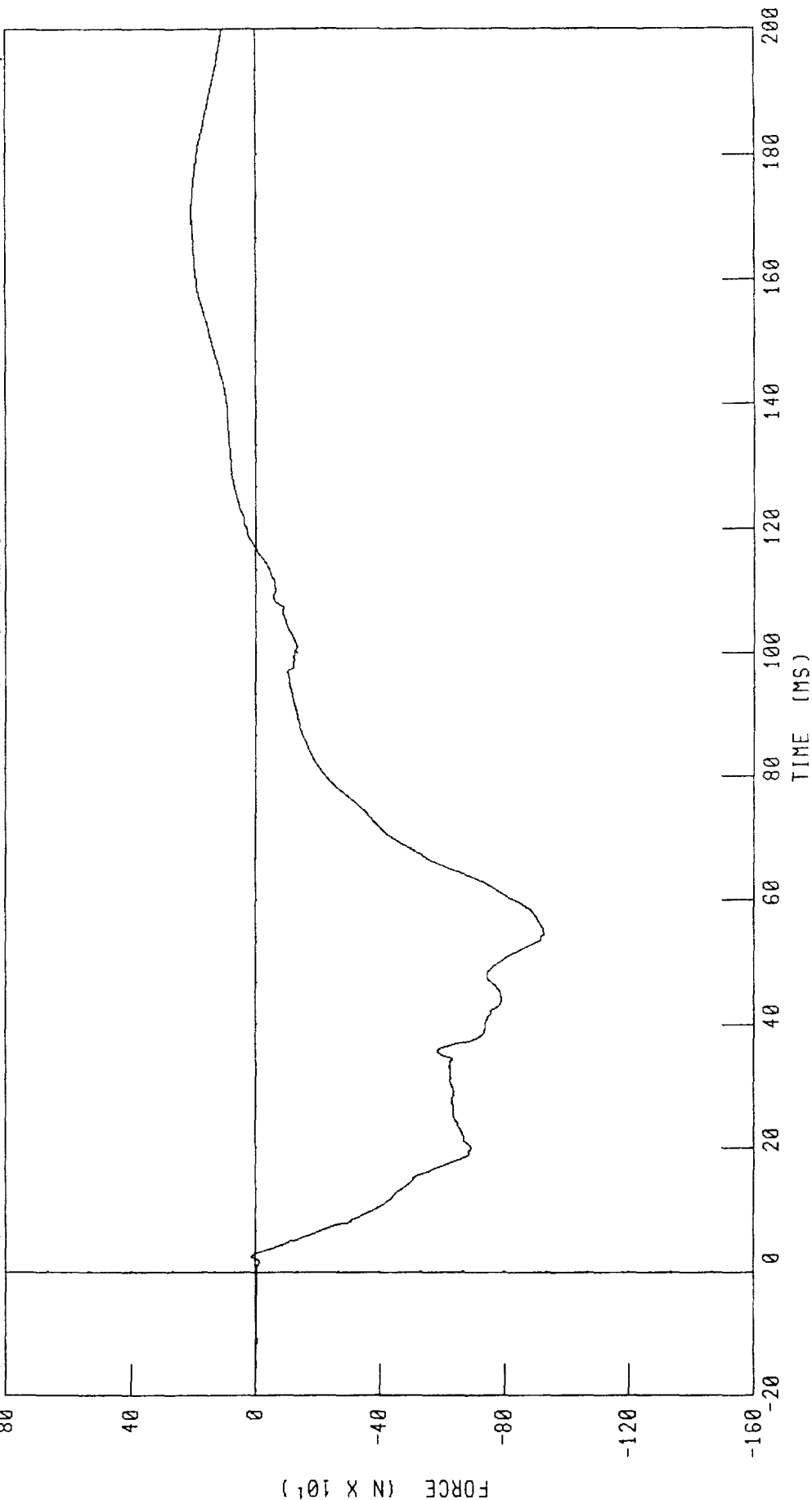
CHANNEL NEKXF FILTER CH CLASS 1000

PEAK DATA 207 54 N @ 170 96 MS, -927 25 N @ 54 48 MS

PART 572-E HYBRID III NECK FLEXION CALIBRATION

NECK FORCE X AXIS FILTERED FOR USE IN OCCIPITAL MOMENT CALCULATION

TRC TEST NUMBER 202C13NF1 572E SN202 NECK FLEXION CAL13 RUN NUMBER 112101 1053,1

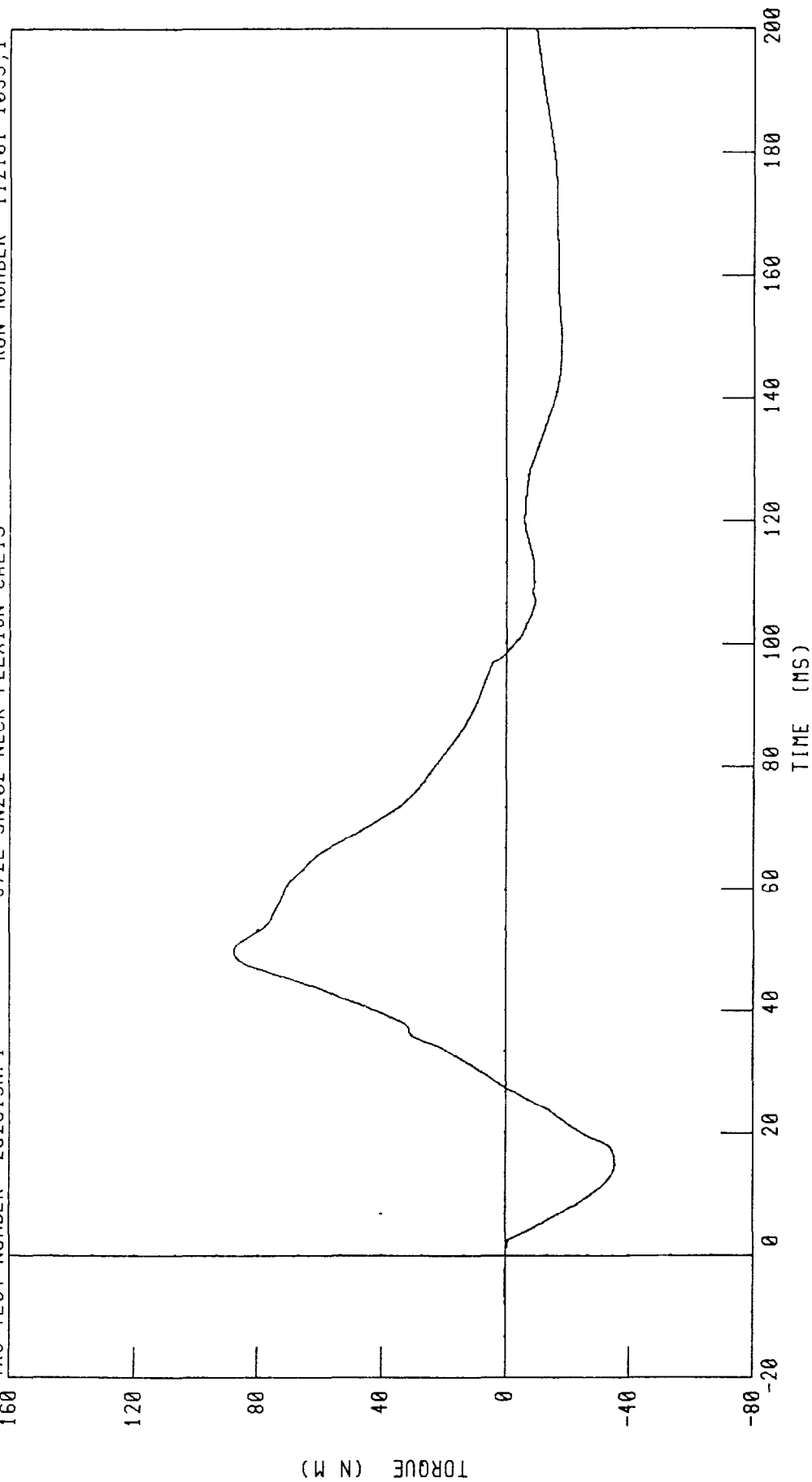


CHANNEL NEKXFC FILTER CH CLASS 600 PEAK DATA 207 37 N 0 171 20 MS, -926 94 N 0 54 64 MS

PART 572-E HYBRID III NECK FLEXION CALIBRATION

NECK MOMENT Y AXIS

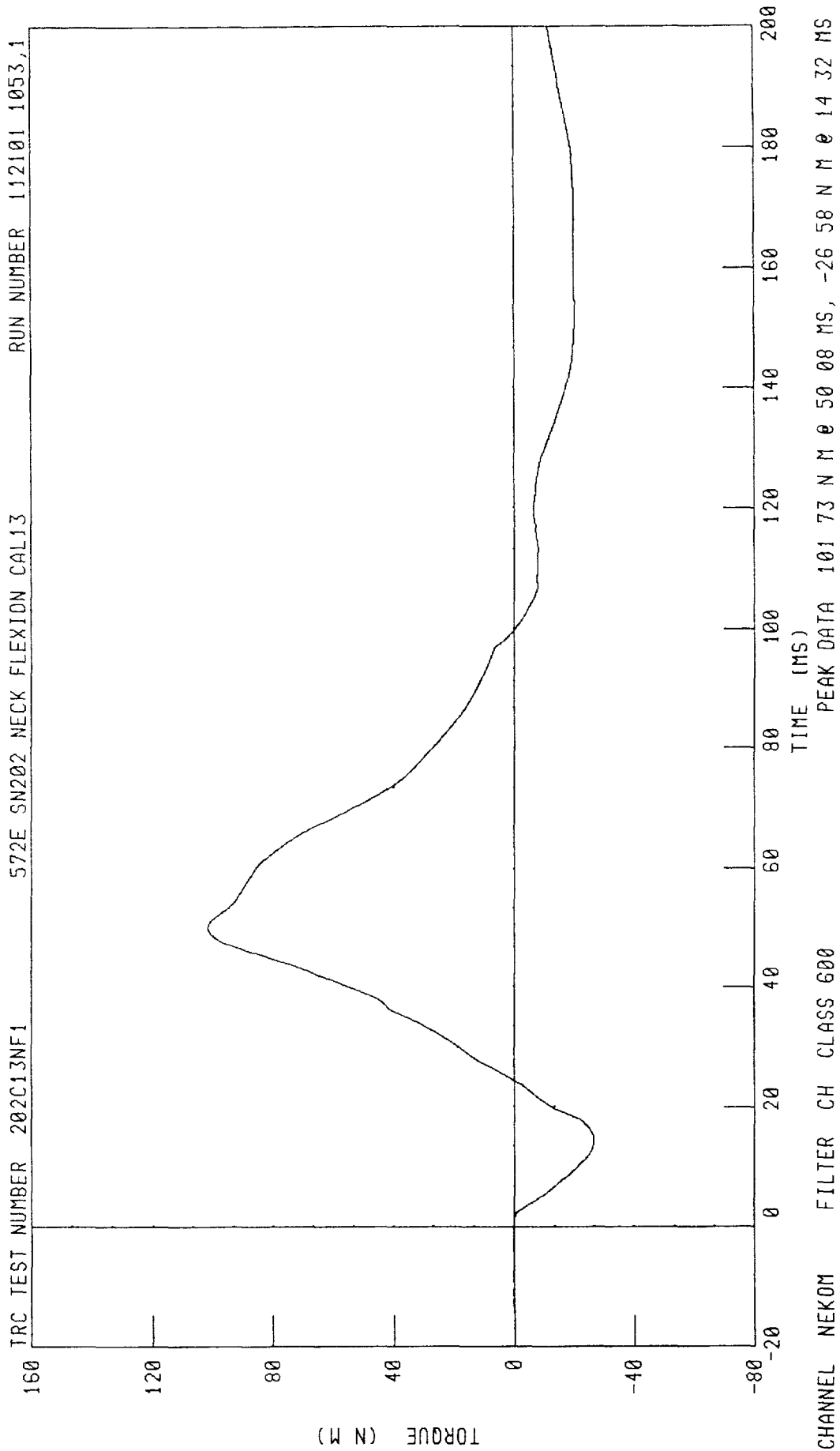
TRC TEST NUMBER 202C13NF1 572E SN202 NECK FLEXION CAL13 RUN NUMBER 112101 1053,1



CHANNEL NEKYM FILTER CH CLASS 600

PEAK DATA 87 88 N M @ 49 68 MS, -35 52 N M @ 14 80 MS

PART 572-E HYBRID III NECK FLEXION CALIBRATION
 TOTAL MOMENT ABOUT OCCIPITAL CONDYLE



CHANNEL NEKOM FILTER CH CLASS 600

TRANSPORTATION RESEARCH CENTER INC.

HYBRID III 50th

21-NOV-01

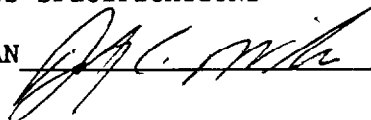
NECK EXTENSION TEST - 6 CHANNEL TRANSDUCER

TRC INC. TEST NO: 202C13NE1 572E SN202 NECK EXT CAL13

TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE		20.6 - 22.2 DEG. C	21.1 DEG. C
RELATIVE HUMIDITY		10 - 70 %	24.0 %
IMPACT VELOCITY		5.95 - 6.19 M/S	6.05 M/S
PENDULUM DECELERATION	10 MS	17.20 - 21.20 G	19.26 G
	20 MS	14.00 - 19.00 G	17.44 G
	30 MS	11.00 - 16.00 G	15.53 G
MAX PENDULUM G		22 G MAX	19.59 G
MAX PENDULUM G ABOVE 30 MS		22 G MAX	15.47 G
DECELERATION-TIME CURVE DECAY TIME TO 5 G		38 - 46 MS	40.72 MS
D PLANE	MAX	81 - 106 DEG.	96.17 DEG.
ROTATION	TIME	72 - 82 MS	76.96 MS
MOMENT ABOUT OCCIPITAL CONDYLE	MIN	-80.0/-52.9 NM	-71.87 NM
	TIME	65 - 79 MS	72.24 MS
ROTATION ANGLE-TIME CURVE DECAY TIME TO ZERO		147 - 174 MS	156.72 MS
NEGATIVE MOMENT-TIME CURVE DECAY TIME TO ZERO		120 - 148 MS	141.84 MS

TEST MEETS SPECIFICATIONS

TECHNICIAN



RUN NUMBER: 112101.1053;1

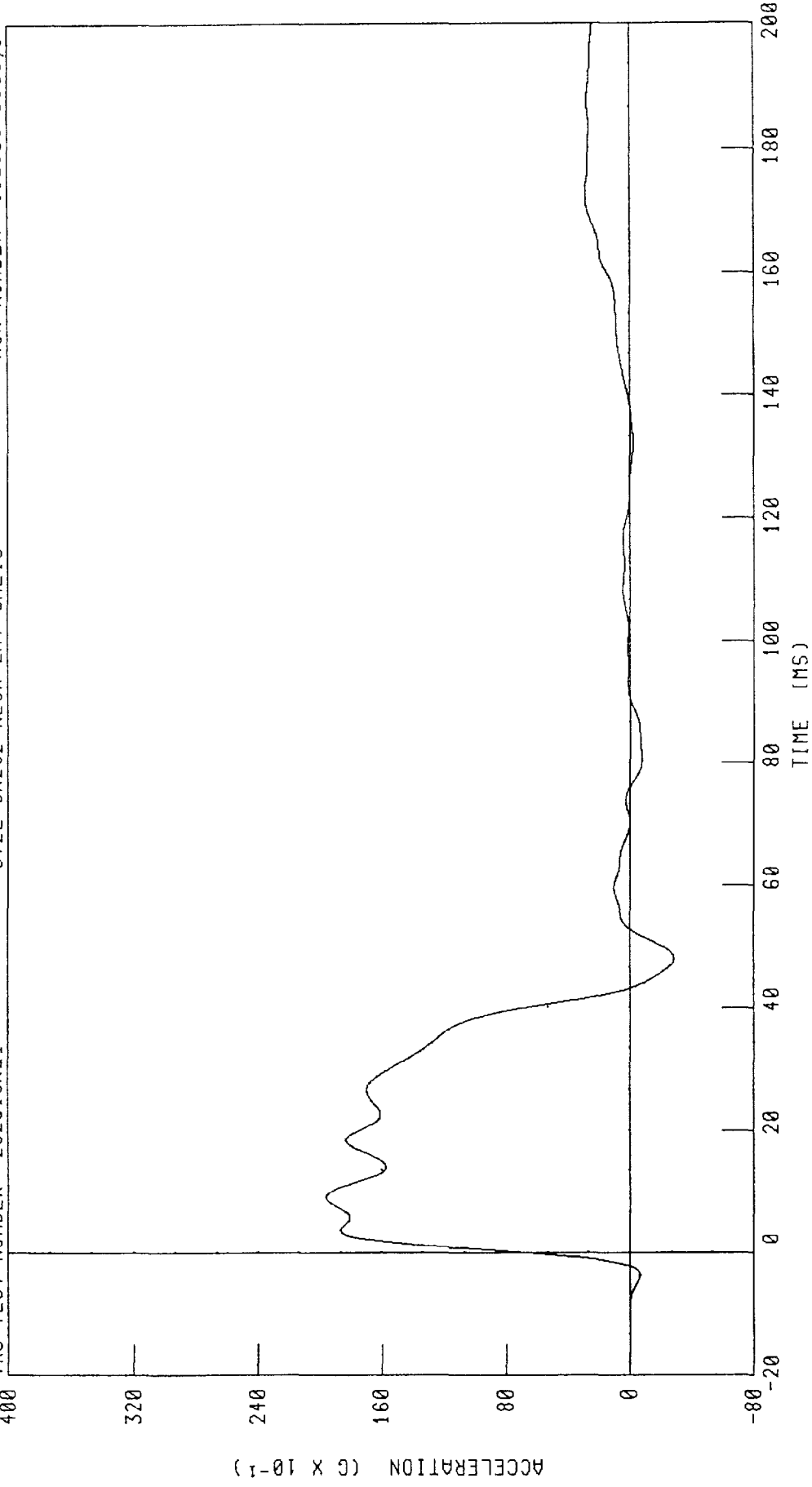
PART 572-E HYBRID III NECK EXTENSION CALIBRATION

PENDULUM DECELERATION

IRC TEST NUMBER 202C13NE1

572E SN202 NECK EXT CAL13

RUN NUMBER 112101 1053,1



PEAK DATA 19 60 G 0 9 04 MS, -2 83 G 0 48 16 MS

CHANNEL PENXC FILTER CH CLASS 60

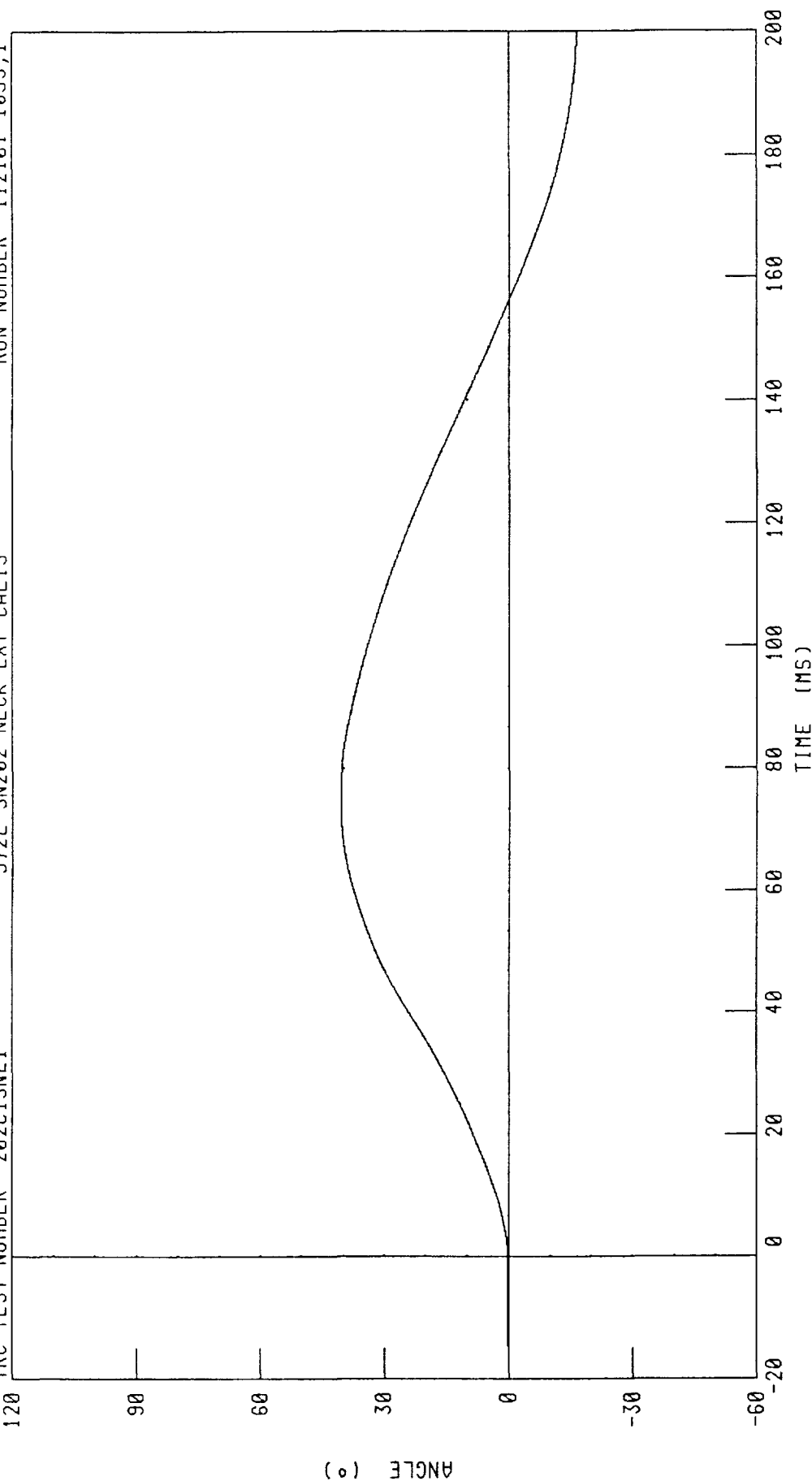
PART 572-E HYBRID III NECK EXTENSION CALIBRATION

ROTATION ABOUT BASE OF NECK

TRC TEST NUMBER 202C13NE1

572E SN202 NECK EXT CAL13

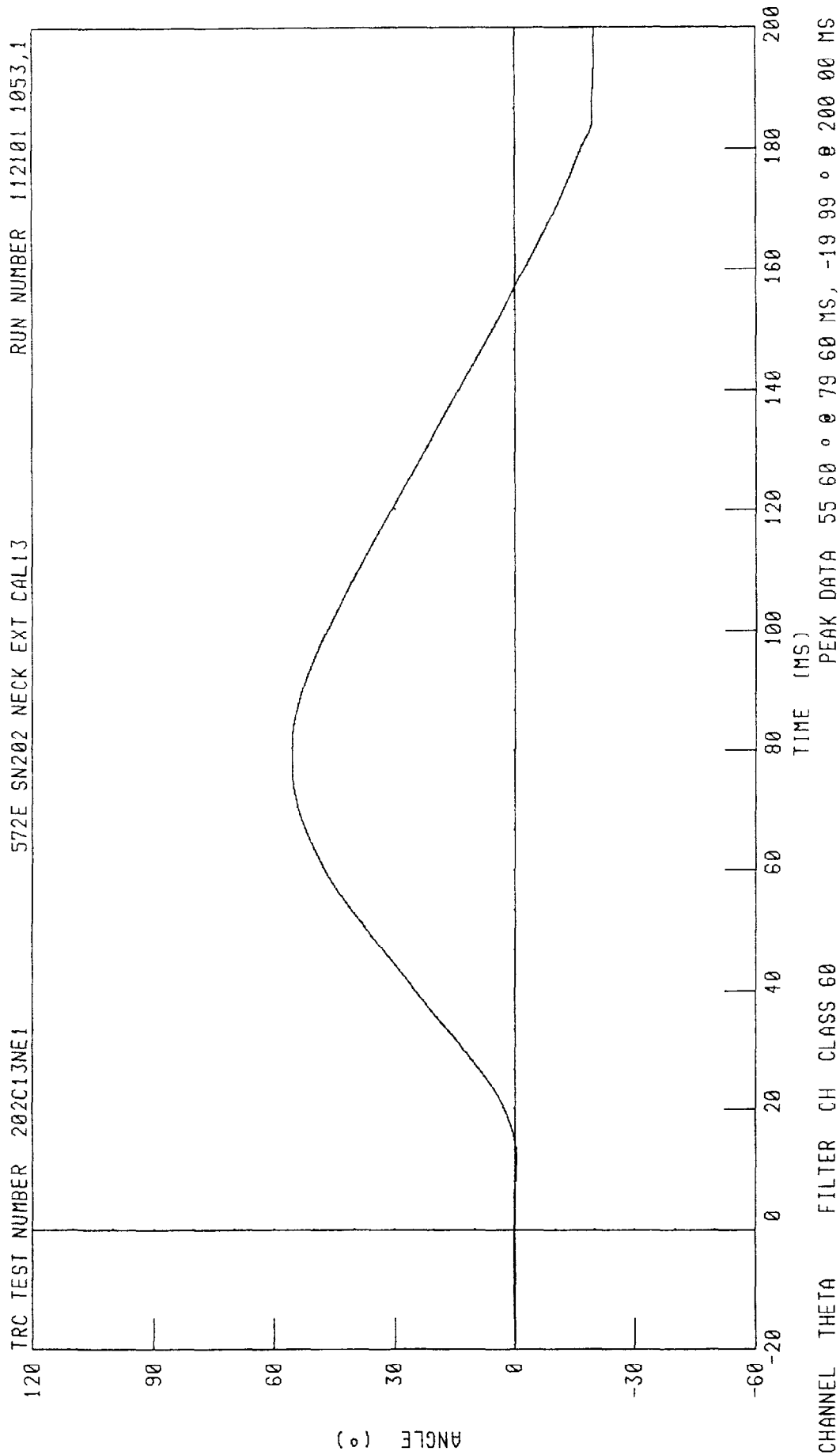
RUN NUMBER 112101 1053,1



PEAK DATA 40 65 ° @ 75 04 MS, -16 56 ° @ 200 00 MS

CHANNEL BETA FILTER CH CLASS 60

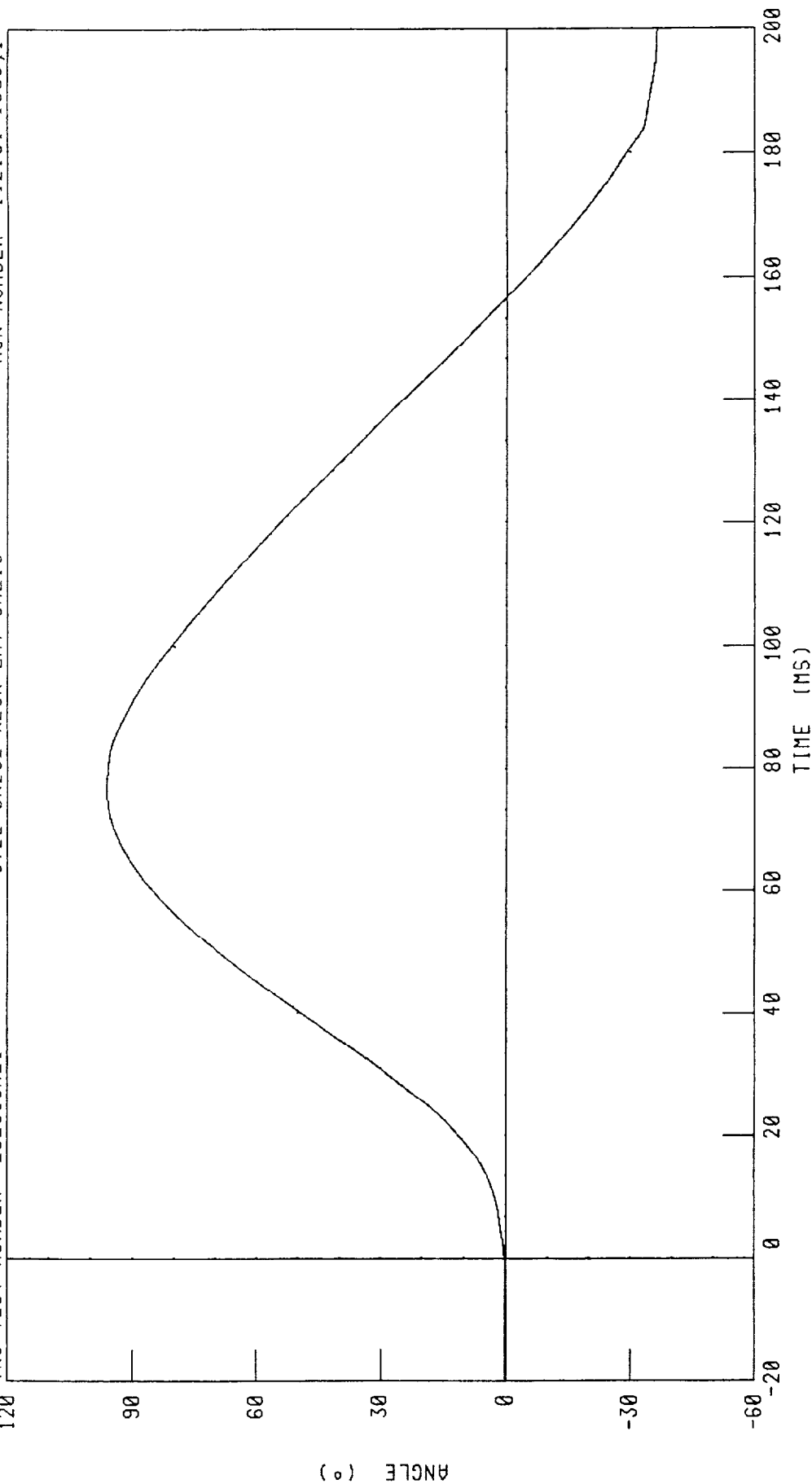
PART 572-E HYBRID III NECK EXTENSION CALIBRATION
 ROTATION ABOUT OCCIPITAL CONDYLE



PART 572-E HYBRID III NECK EXTENSION CALIBRATION

TOTAL ROTATION

TRC TEST NUMBER 202C13NE1 572E SN202 NECK EXT CAL13 RUN NUMBER 112101 1053,1



CHANNEL TOTAL FILTER CH CLASS 60 PEAK DATA 96 17 ° @ 76 96 MS, -36 55 ° @ 200 00 MS

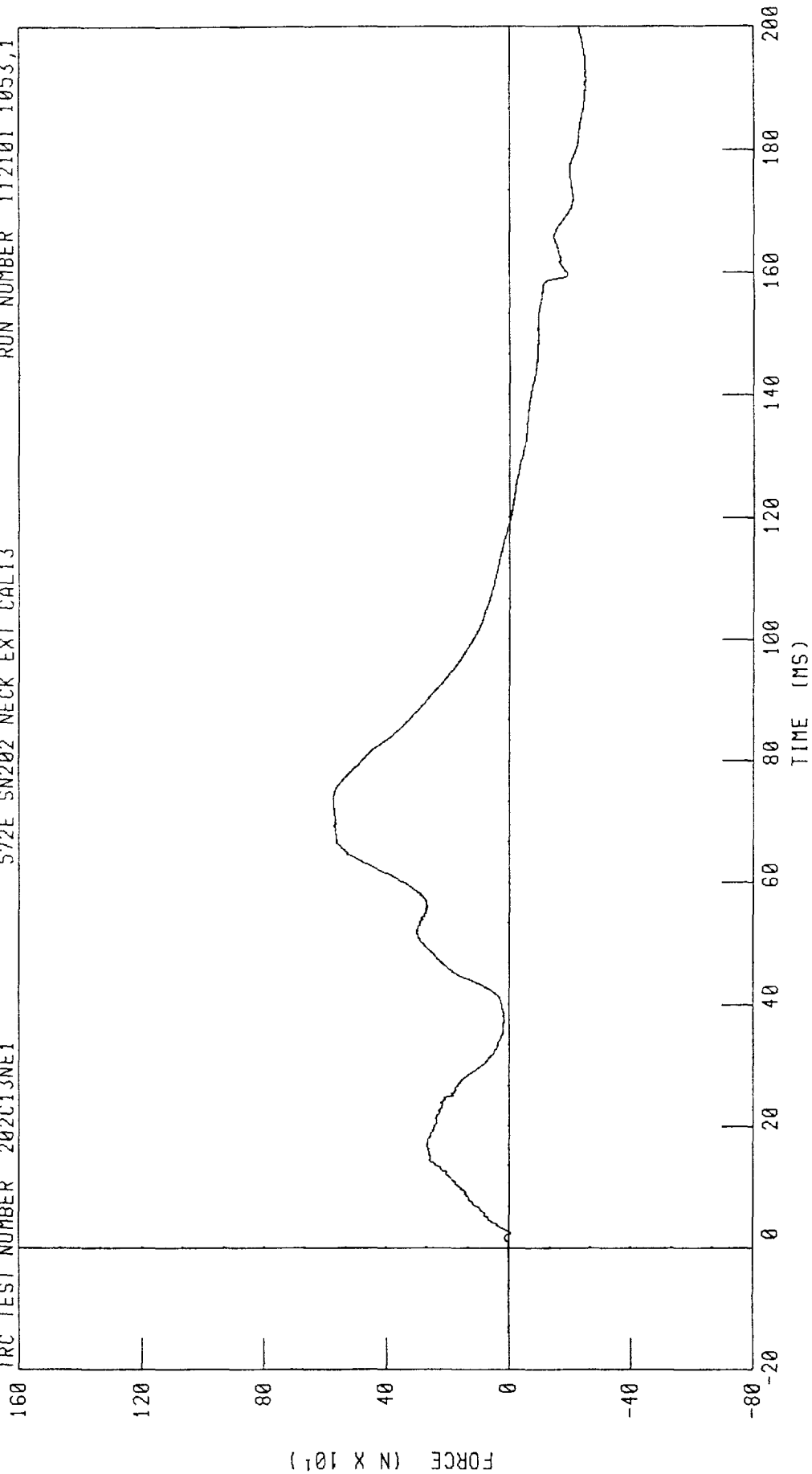
PART 572-E HYBRID III NECK EXTENSION CALIBRATION

NECK FORCE X AXIS

TRC TEST NUMBER 202C13NE1

572E SN202 NECK EXT CAL13

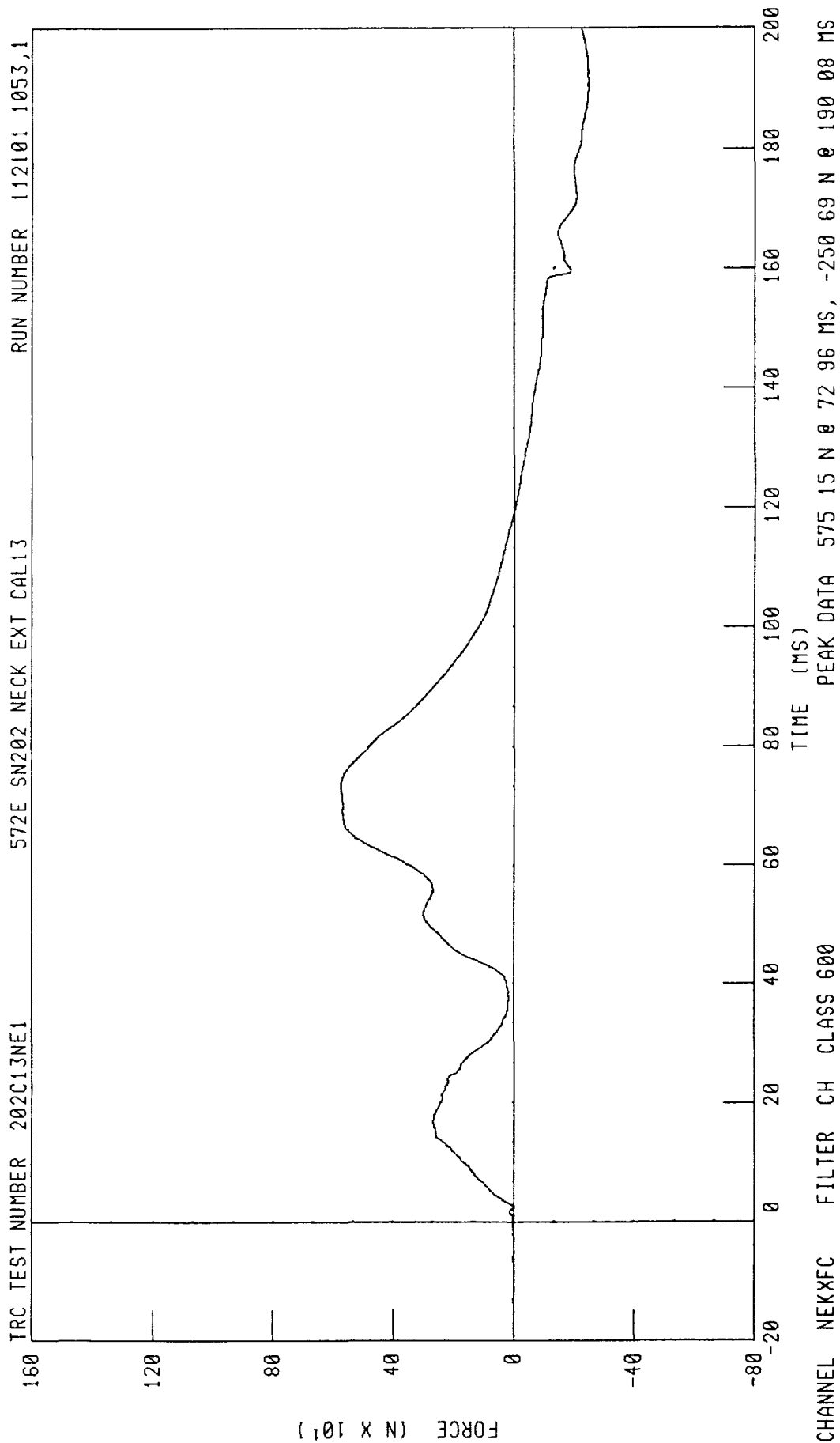
RUN NUMBER 112101 1053,1



CHANNEL NEKXF FILTER CH CLASS 1000

PEAK DATA 575 48 N @ 72 88 MS, -251 20 N @ 190 16 MS

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



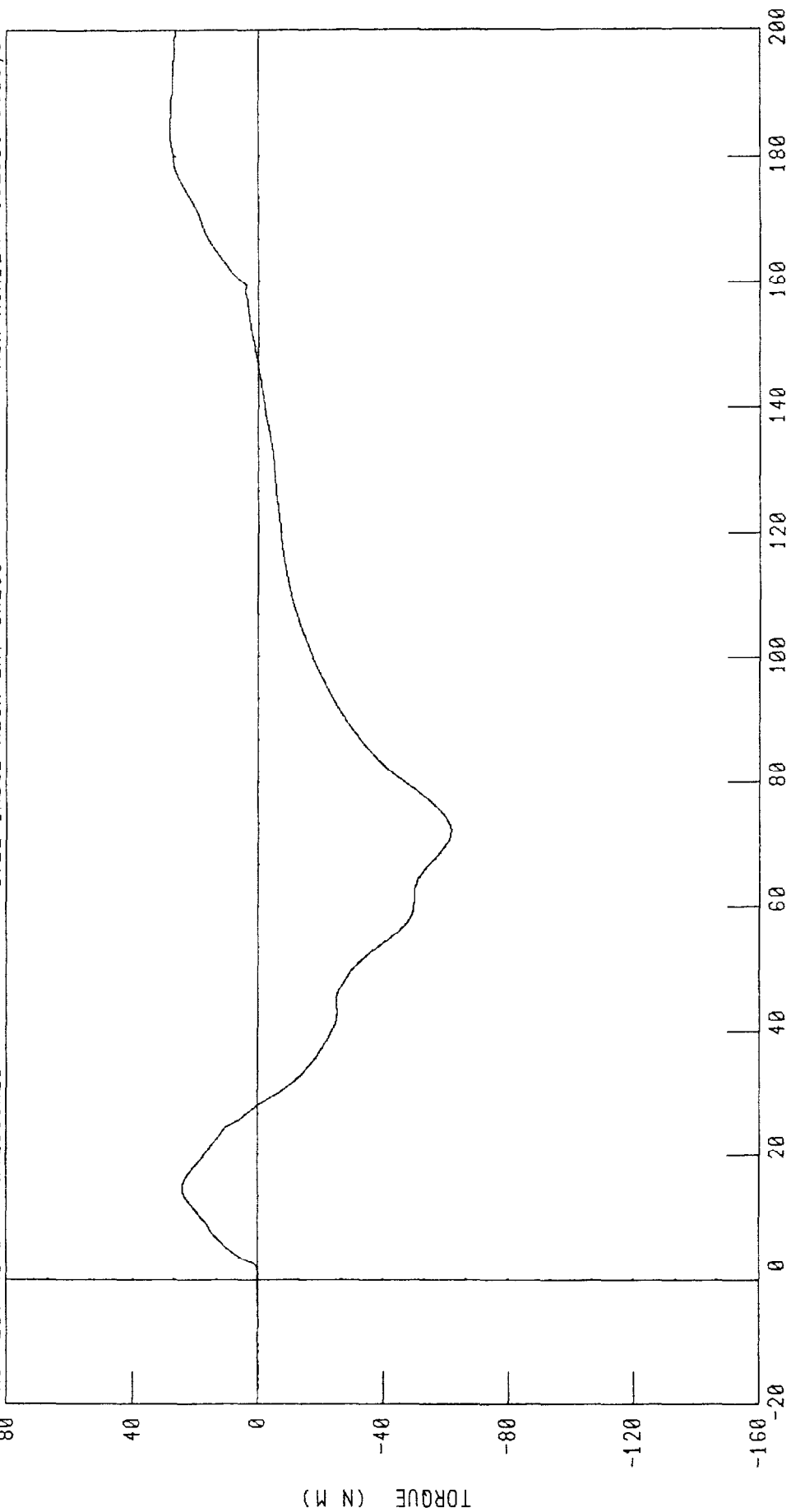
PART 572-E HYBRID III NECK EXTENSION CALIBRATION

NECK MOMENT Y AXIS

TRC TEST NUMBER 202C13NE1

572E SN202 NECK EXT CAL13

RUN NUMBER 112101 1053.1



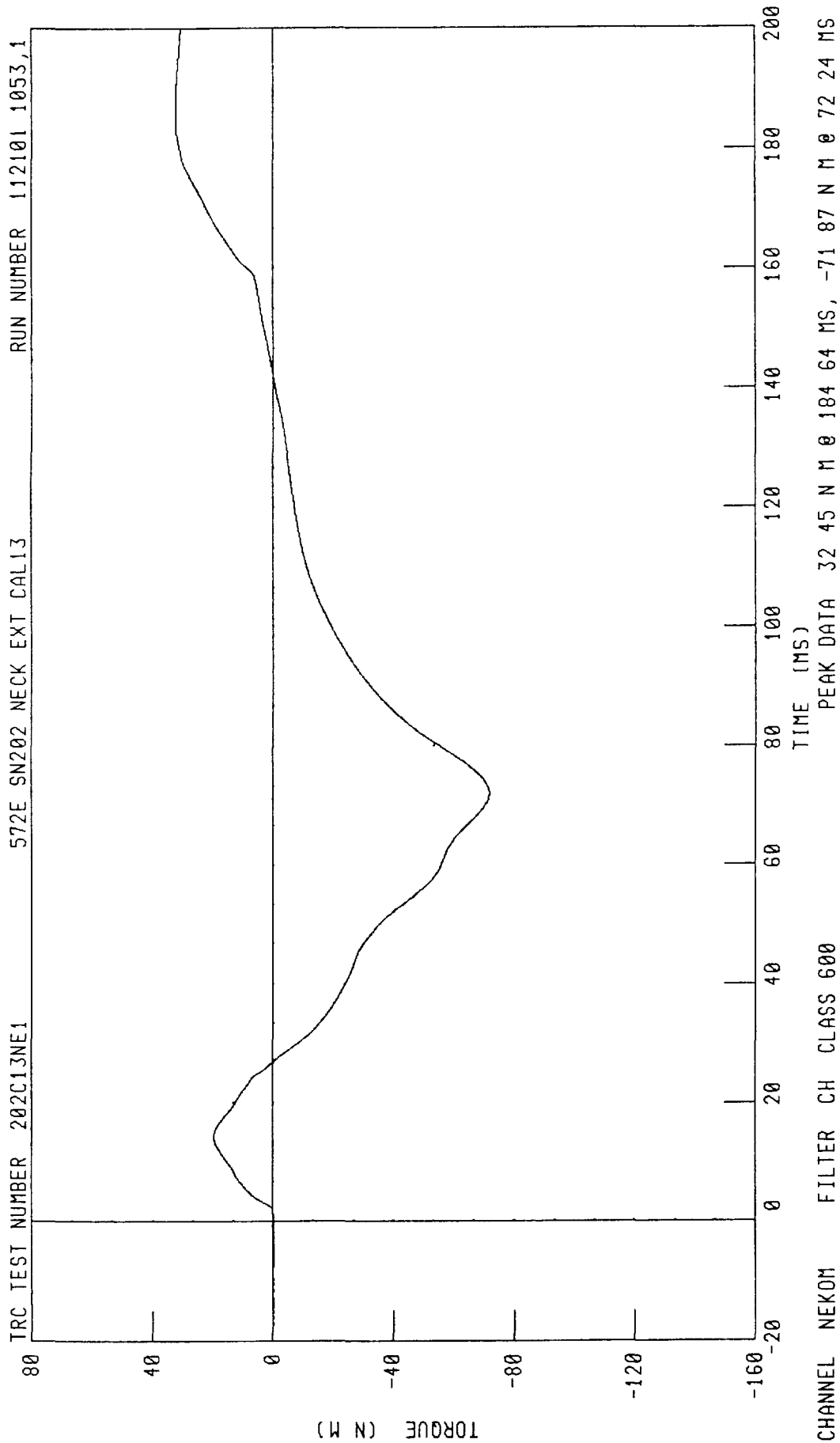
TIME (MS)

PEAK DATA 28 32 N M @ 184 00 MS, -61 69 N M @ 72 16 MS

CHANNEL NEKYM FILTER CH CLASS 600

PART 572-E HYBRID III NECK EXTENSION CALIBRATION

TOTAL MOMENT ABOUT OCCIPITAL CONDYLE



TRANSPORTATION RESEARCH CENTER INC.

THORAX IMPACT TEST

HYBRID III 50th

21-NOV-01

TRC INC.

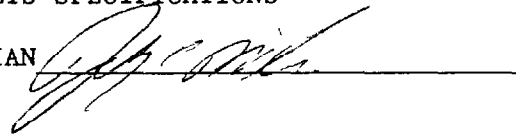
TEST NO: 202C13TH1

572E SN202 H.S.THORAX CAL13

TEST PARAMETER	HIGH SPEED TEST	TEST RESULTS
	SPECIFICATION	
TEMPERATURE	20.6-22.2 DEG. C	21.1 DEG. C
RELATIVE HUMIDITY	10 - 70 %	25.0 %
PENDULUM VELOCITY	6.59 - 6.83 M/S	6.59 M/S
MAXIMUM DEFLECTION	63.5 - 72.6 MM	65.2 MM
MAXIMUM RESISTIVE FORCE	5159 - 5894 N	5826. N
INTERNAL HYSTERESIS	69% - 85%	72.4%

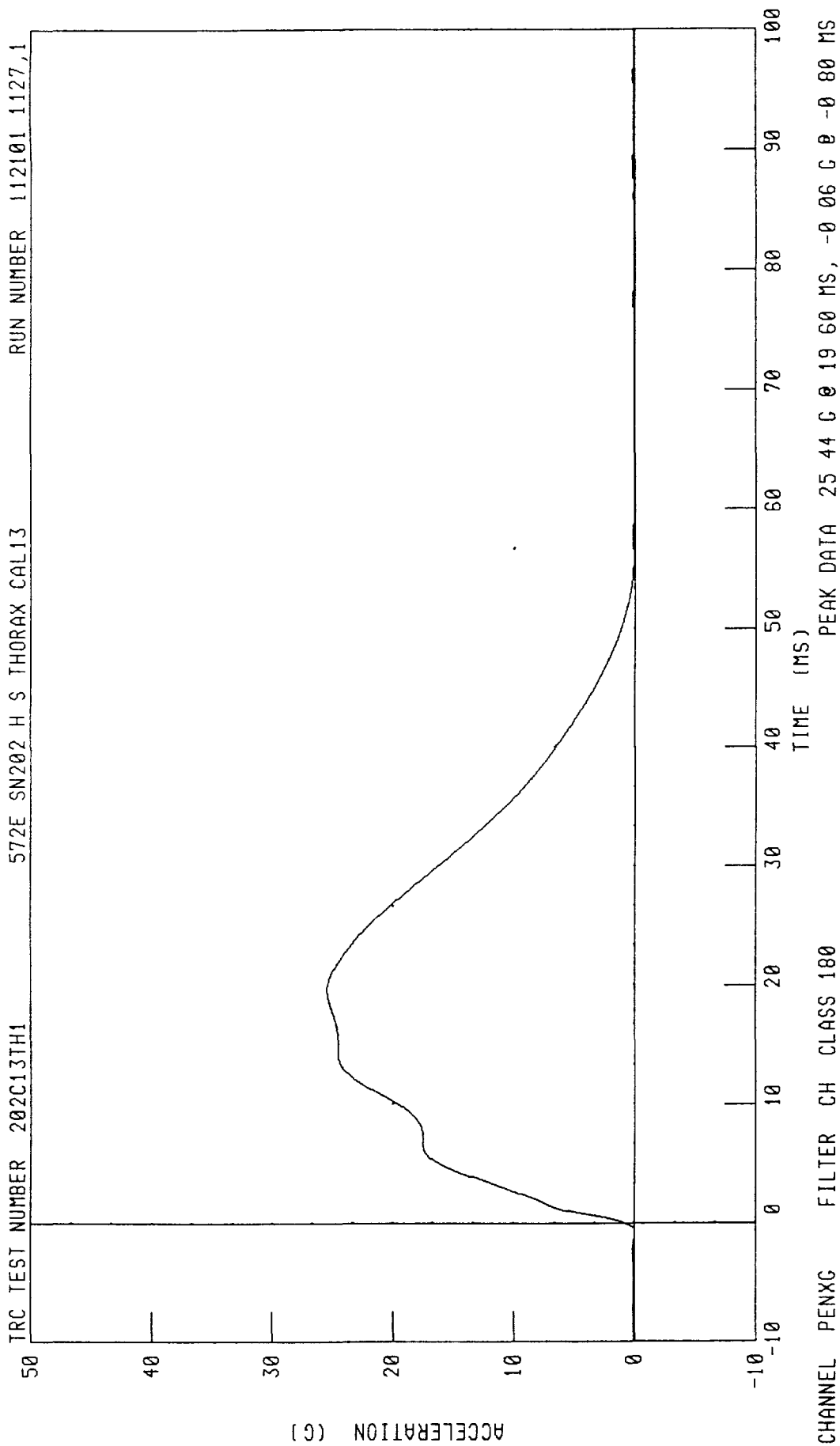
TEST MEETS SPECIFICATIONS

TECHNICIAN



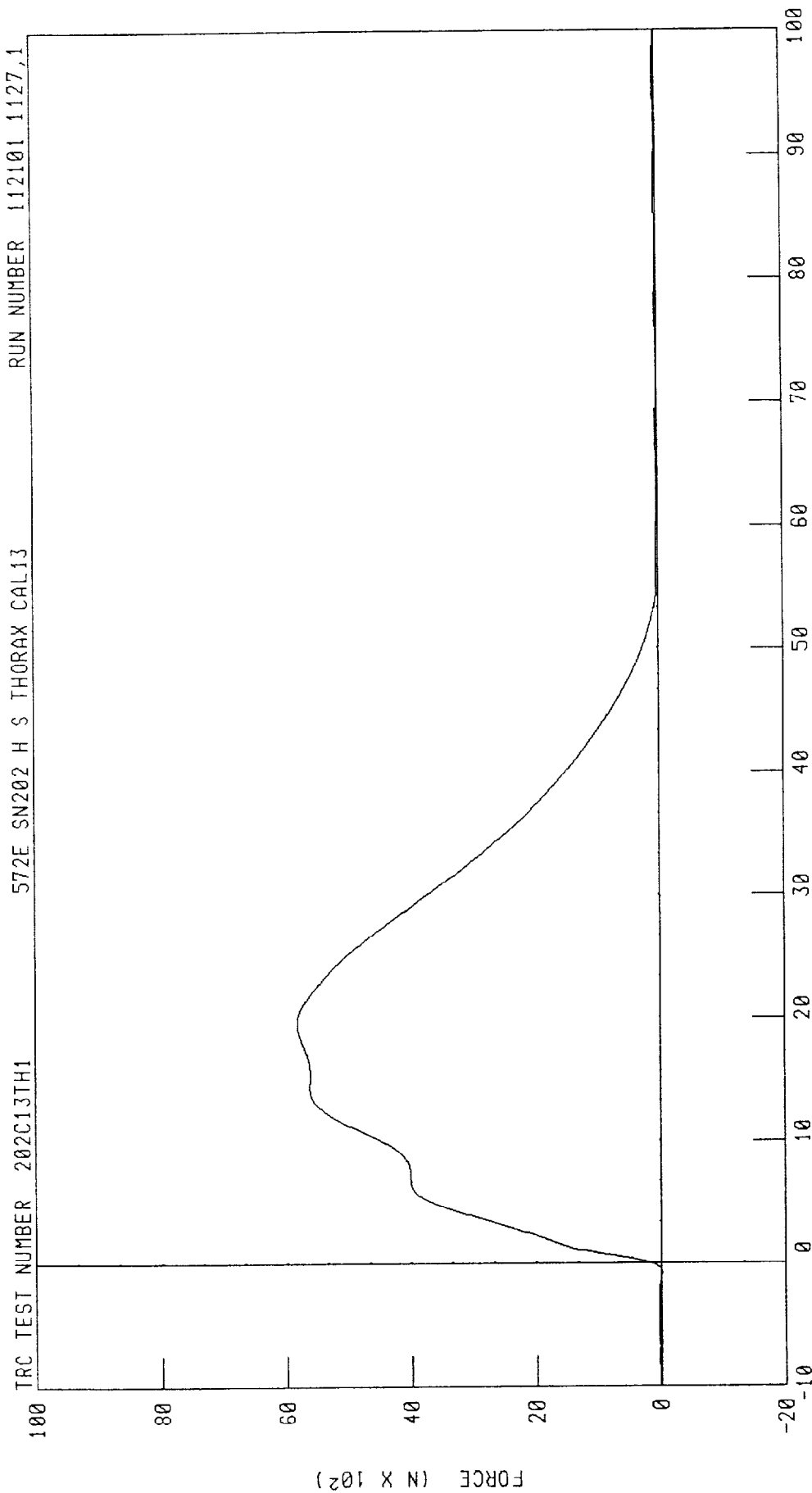
RUN NUMBER: 112101.1126;1

PART 572-E HYBRID III THORAX CALIBRATION
PENDULUM DECELERATION



PART 572-E HYBRID III THORAX CALIBRATION

PENDULUM FORCE

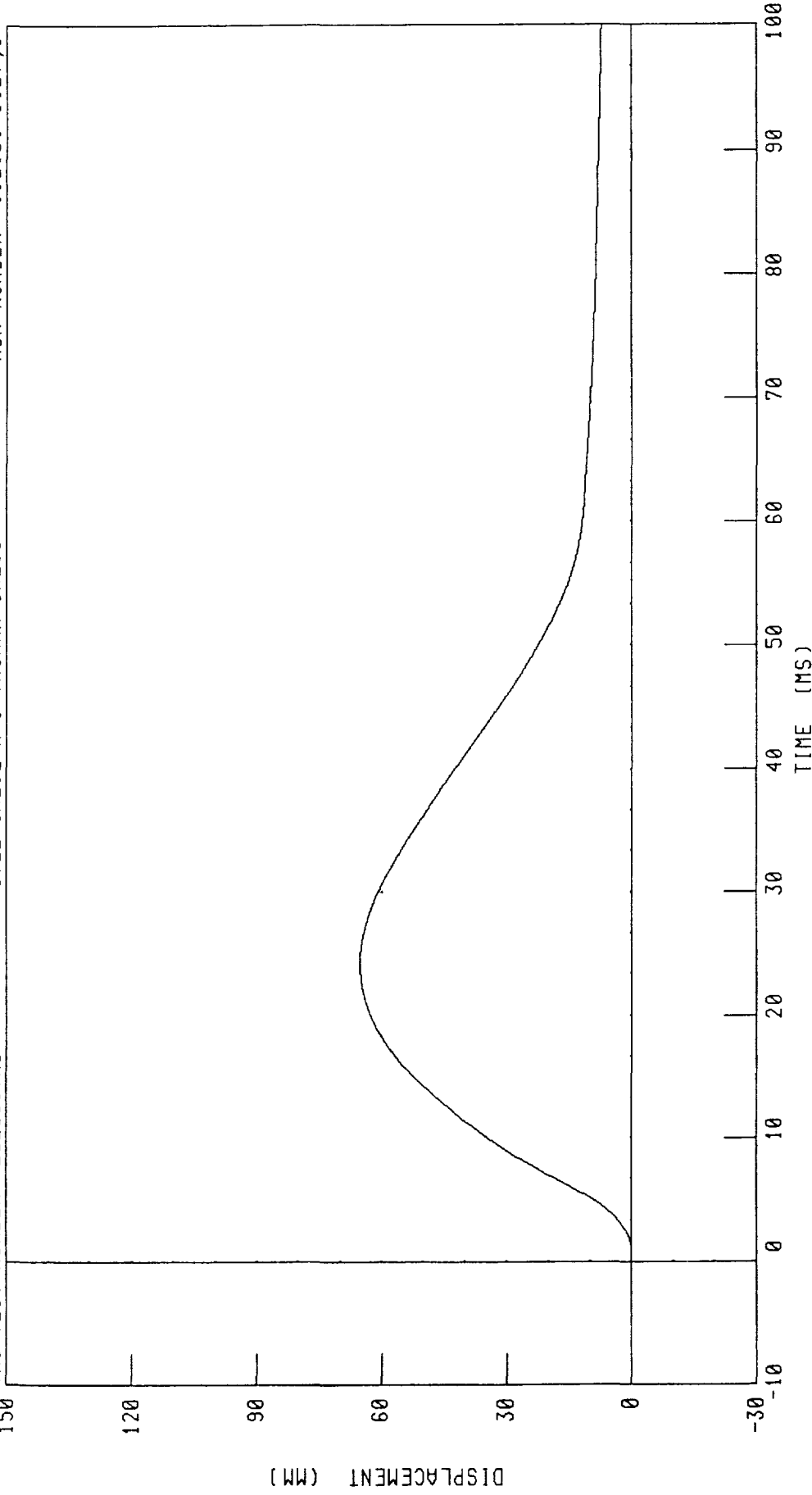


CHANNEL PENXF FILTER CH CLASS 180 PEAK DATA 5826 90 N @ 19 60 MS, -13 09 N @ -0 80 MS

PART 572-E HYBRID III THORAX CALIBRATION

STERNUM DISPLACEMENT

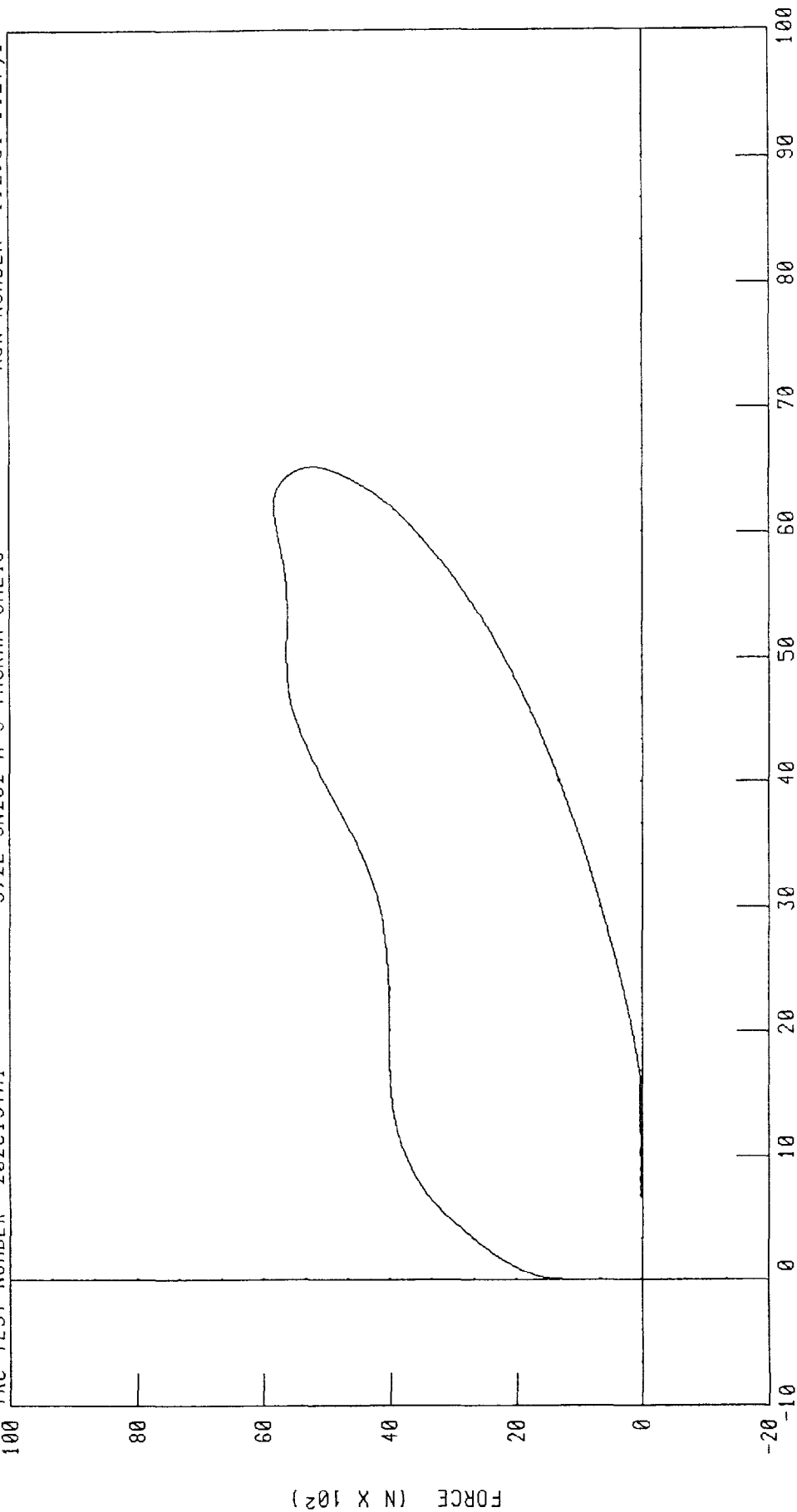
TRC TEST NUMBER 202C13TH1 572E SN202 H S THORAX CAL13 RUN NUMBER 112101 1127,1



CHANNEL CSTXD FILTER CH CLASS 180 PEAK DATA 65 23 MM @ 24 32 MS, -0 03 MM @ 0 48 MS

PART 572-E HYBRID III THORAX CALIBRATION
CHEST DISPLACEMENT VS PENDULUM FORCE

TRC TEST NUMBER 202C13TH1 572E SN202 H S THORAX CAL13 RUN NUMBER 112101 1127,1



CHANNEL CSTXD
PENXF

FILTER CH CLASS 180
CH CLASS 180

DISPLACEMENT (MM)

PEAK DATA 65 23 MM @ 24 32 MS, -0 03 MM @ 0 48 MS
5826 90 N @ 19 60 MS, -13 09 N @ -0 80 MS

Transportation Research Center Inc

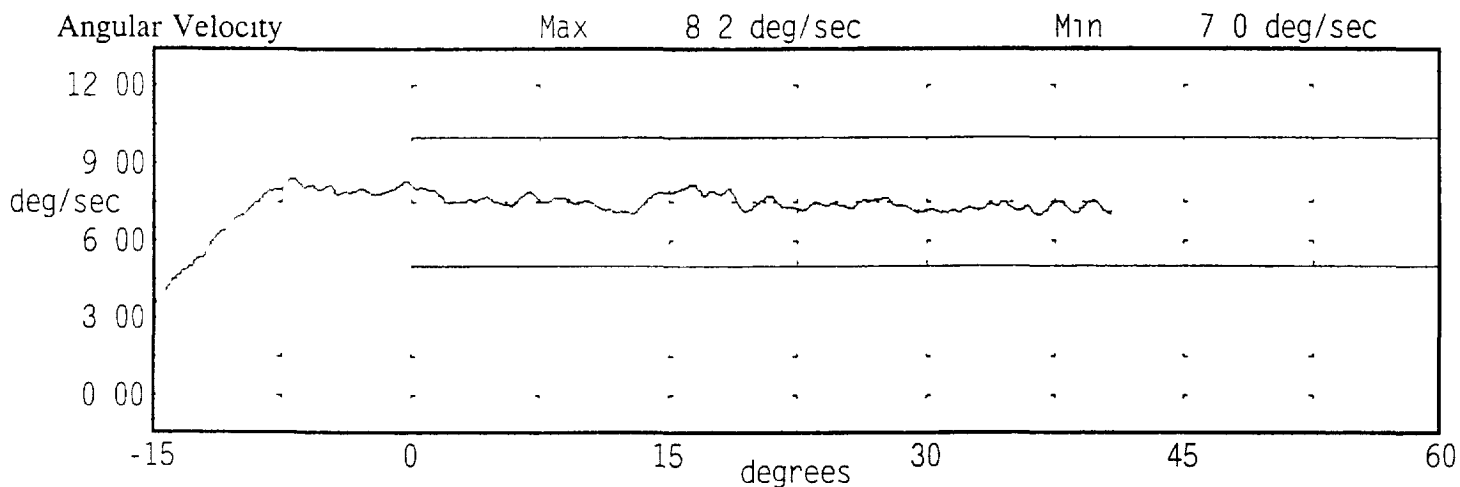
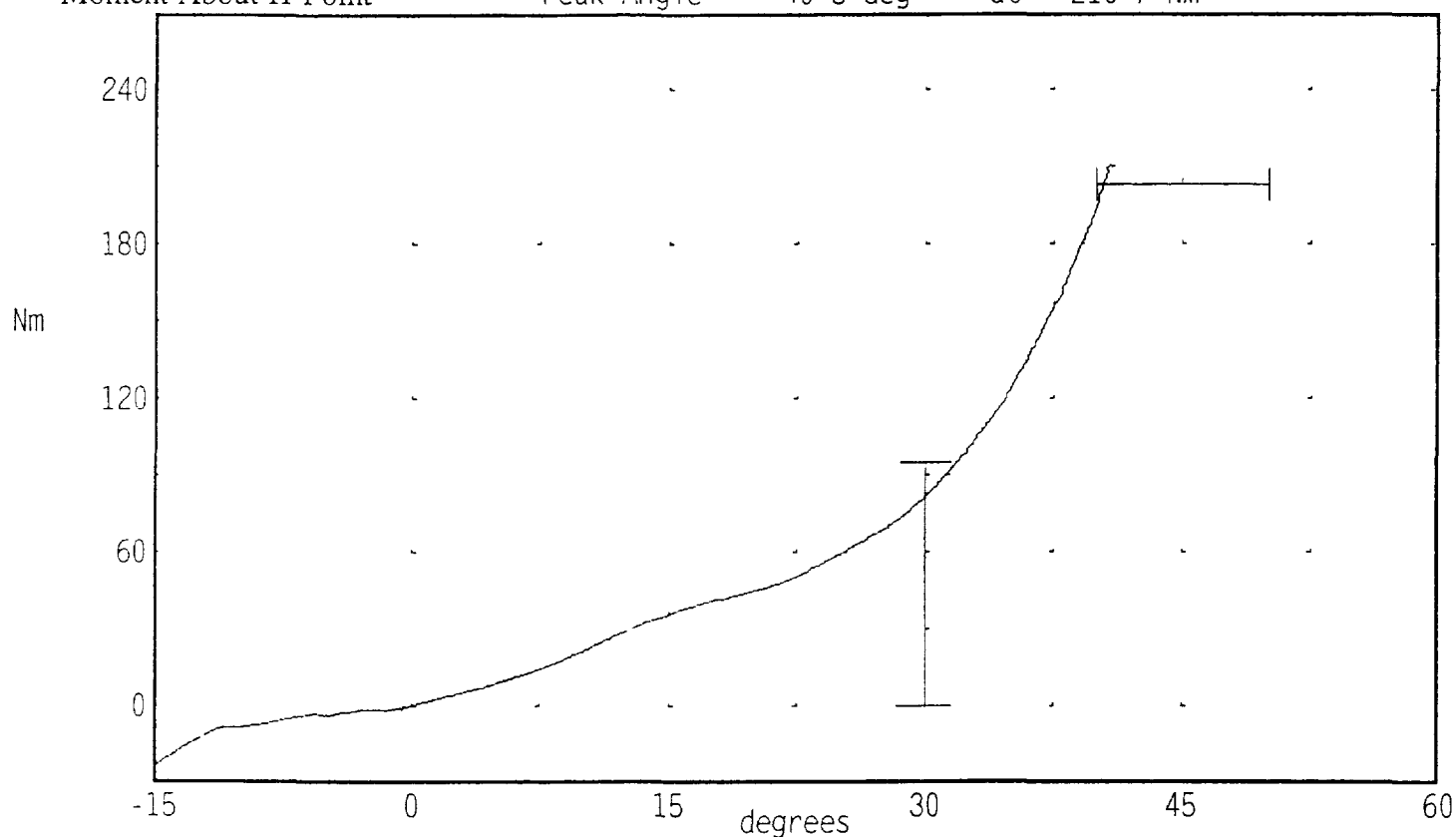
Hybrid III Hip Range of Motion

Serial Number 202L
Test Number 202C13
Comments

Date 11/21/2001
Time 07 47

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	18.9 - 25.6	20.6 °C Pass
Humidity	10 - 70	24 % Pass
Moment at 30 deg	<= 94.9	81.4 Nm Pass
Angle at 203 Nm	40.0 - 50.0	40.3 deg Pass
Average Velocity	5.0 - 10.0	7.5 deg/sec Pass

Moment About H-Point
Peak Moment 210.7 Nm at 40.8 deg
Peak Angle 40.8 deg at 210.7 Nm



Transportation Research Center Inc

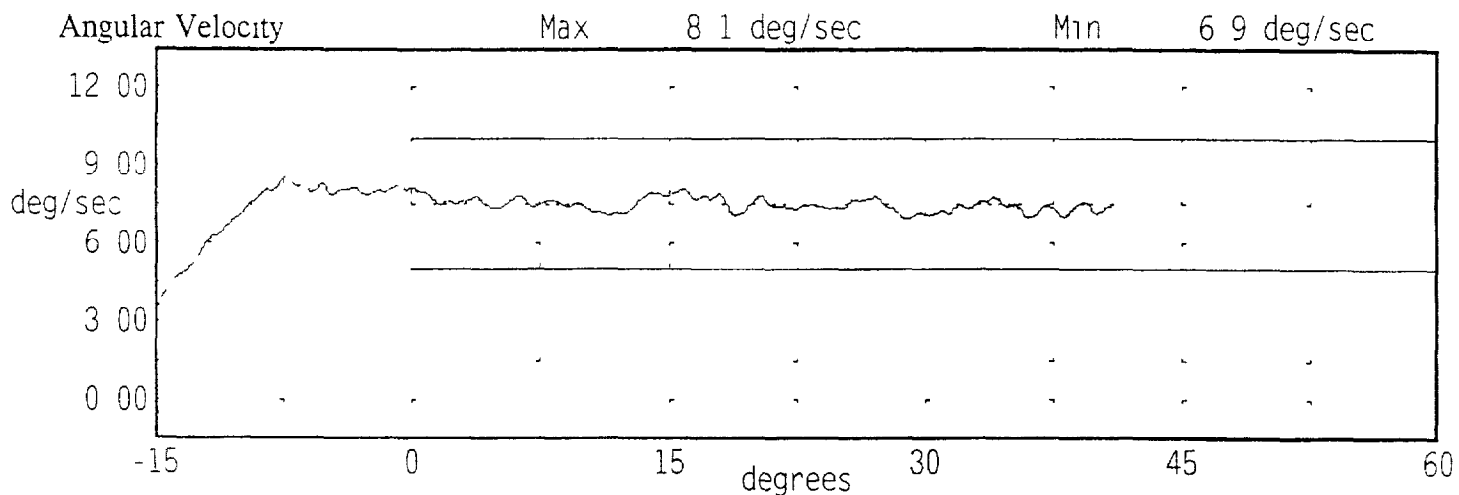
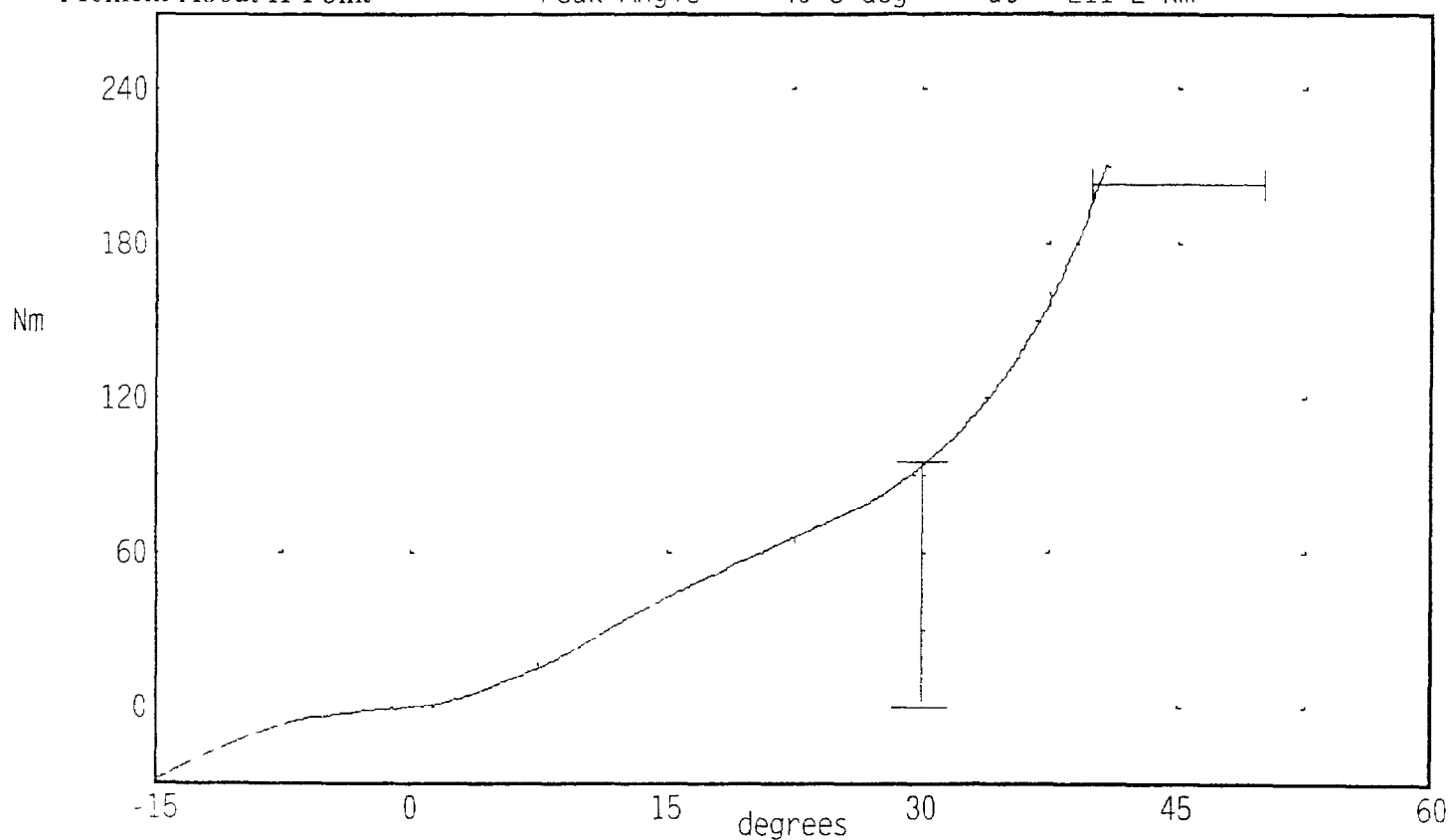
Hybrid III Hip Range of Motion

Serial Number 202R
Test Number 202C13
Comments

Date 11/21/2001
Time 08 02

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	18.9 - 25.6	20.6 °C Pass
Humidity	10 - 70	24 % Pass
Moment at 30 deg	<= 94.9	93.5 Nm Pass
Angle at 203 Nm	40.0 - 50.0	40.5 deg Pass
Average Velocity	5.0 - 10.0	7.5 deg/sec Pass

Moment About H-Point
Peak Moment 211.2 Nm at 40.8 deg
Peak Angle 40.8 deg at 211.2 Nm



TRANSPORTATION RESEARCH CENTER INC.

LEFT KNEE IMPACT TEST

HYBRID III 50th

21-NOV-01

TRC INC.

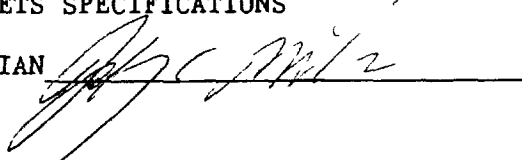
TEST NO: 202C13LK1

572E SN202 LEFT KNEE CAL 13

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.1 DEG. C
RELATIVE HUMIDITY	10 - 70 %	25.0 %
PROBE VELOCITY	2.07 - 2.13 M/S	2.09 M/S
PEAK KNEE IMPACT FORCE 5.0 KG PENDULUM	4715 - 5782 N	5042.6 N

TEST MEETS SPECIFICATIONS

TECHNICIAN



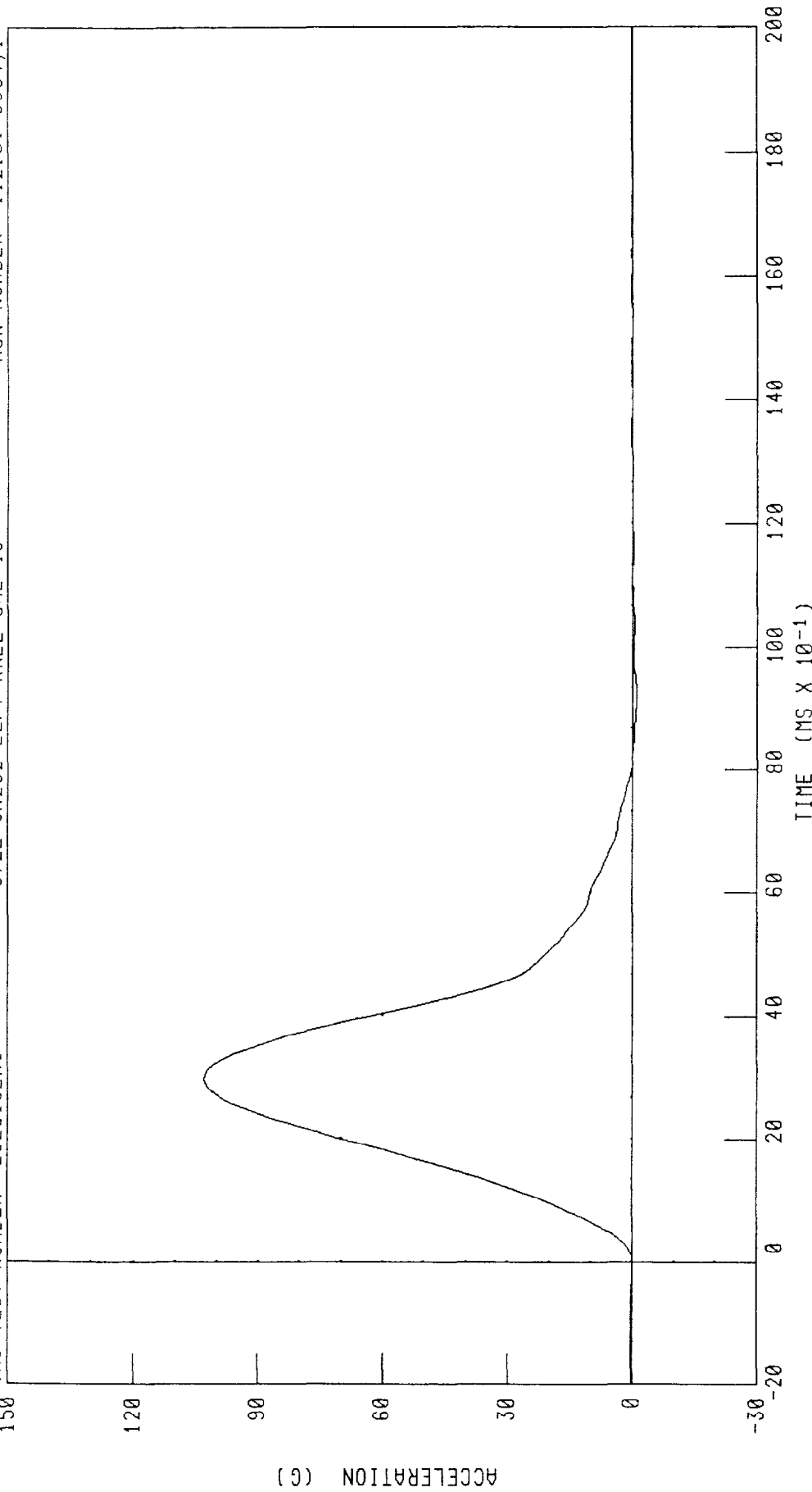
RUN NUMBER: 112101.0854;1

PART 572-E HYBRID III LEFT KNEE CALIBRATION
PENDULUM DECELERATION (5 KG PEND)

TRC TEST NUMBER 202C13LK1

572E SN202 LEFT KNEE CAL 13

RUN NUMBER 112101 0854,1



CHANNEL PENXG FILTER CH CLASS 600 PEAK DATA 103 06 G 0 2 96 MS, -1 04 G 0 9 20 MS

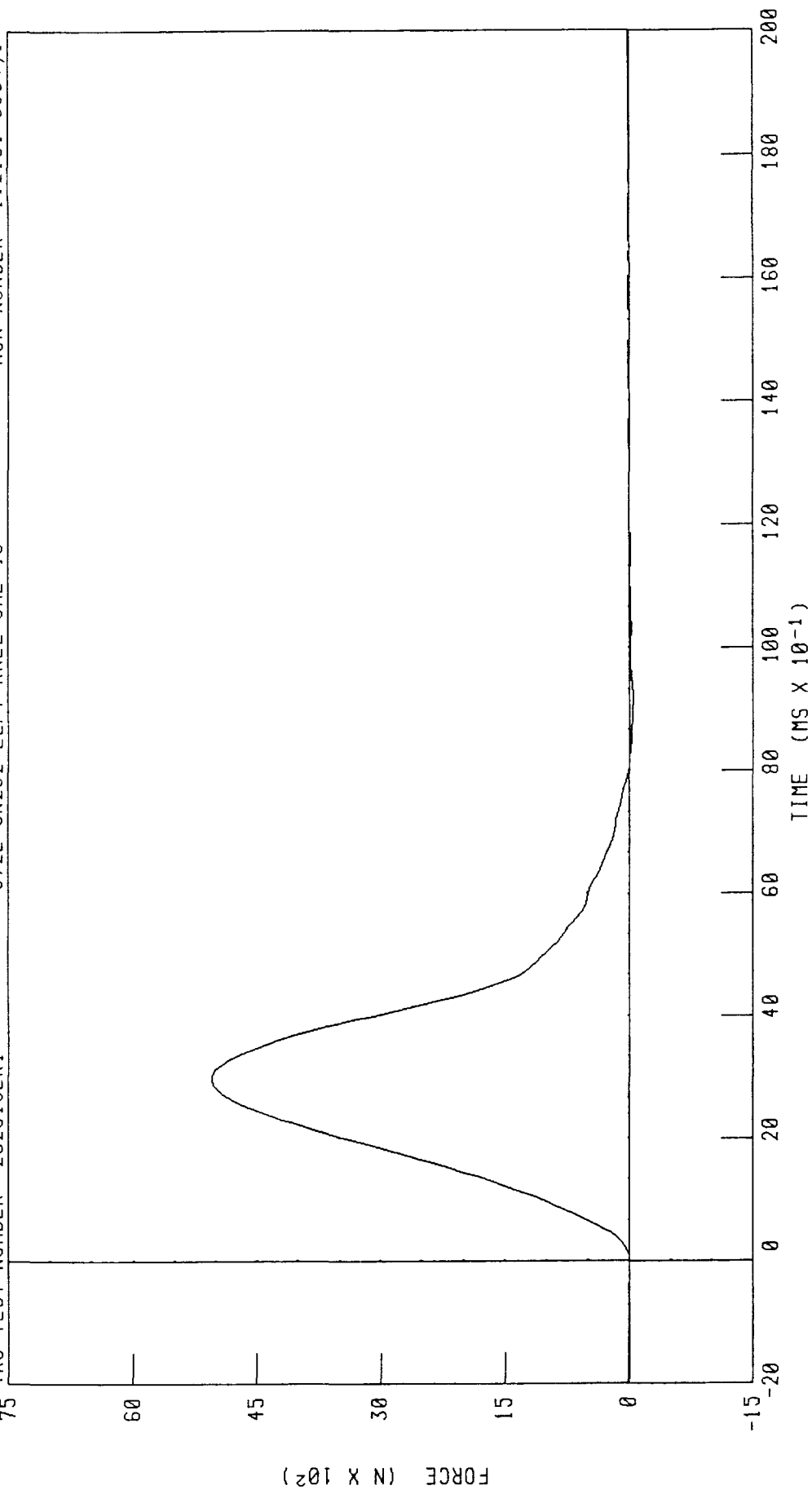
PART 572-E HYBRID III LEFT KNEE CALIBRATION

PENDULUM FORCE (5 KG PEND)

TRC TEST NUMBER 202C13LK1

572E SN202 LEFT KNEE CAL 13

RUN NUMBER 112101 0854,1



CHANNEL PENXF FILTER CH CLASS 600

PEAK DATA 5042 63 N 0 2 96 MS, -50 98 N 0 9 20 MS

TRANSPORTATION RESEARCH CENTER INC.

RIGHT KNEE IMPACT TEST

HYBRID III 50th

21-NOV-01

TRC INC.

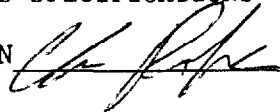
TEST NO: 202C13RK2

572E SN202 RIGHT KNEE CAL 13

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.1 DEG. C
RELATIVE HUMIDITY	10 - 70 %	24.0 %
PROBE VELOCITY	2.07 - 2.13 M/S	2.09 M/S
PEAK KNEE IMPACT FORCE 5.0 KG PENDULUM	4715 - 5782 N	5176.6 N

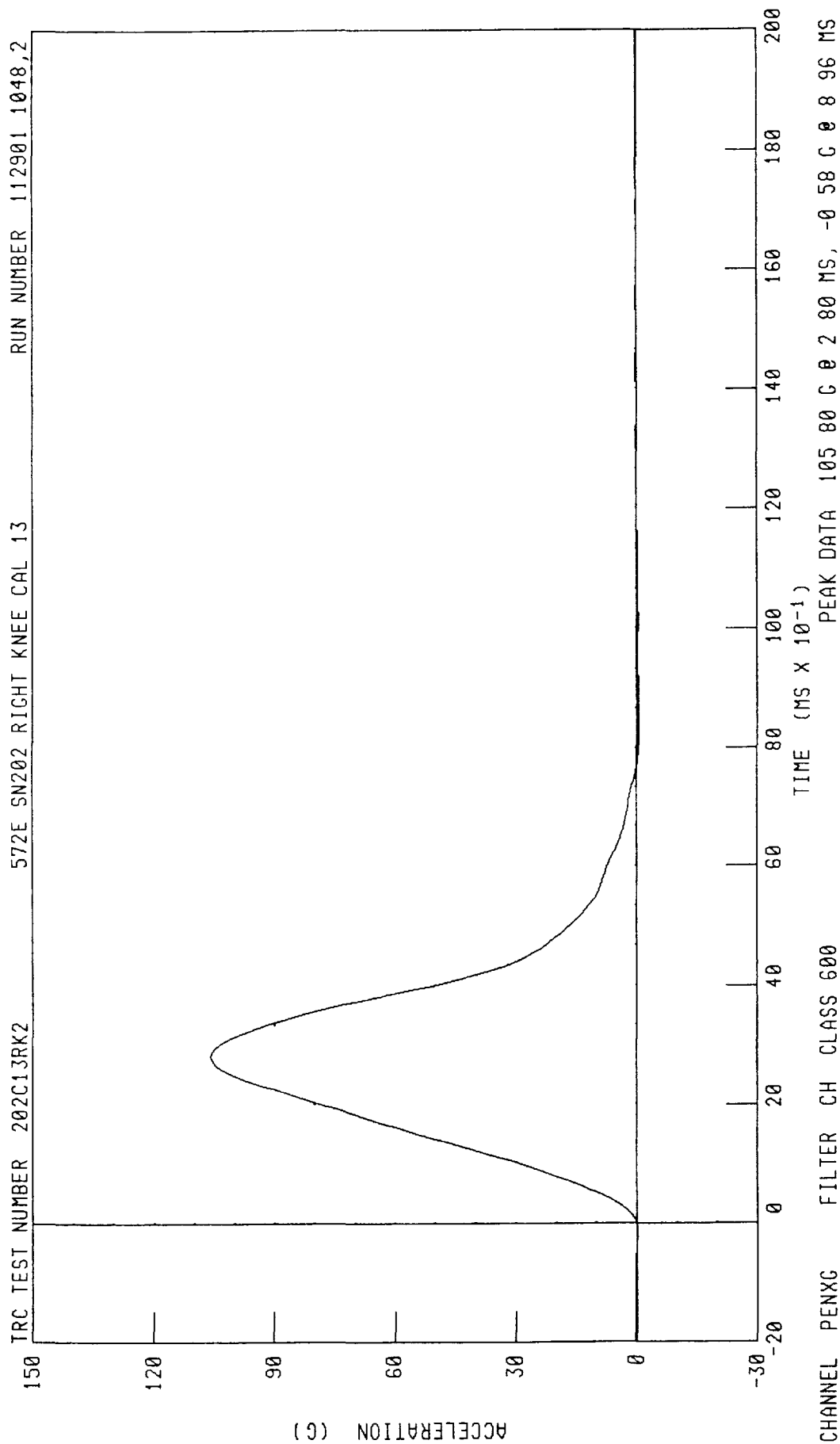
TEST MEETS SPECIFICATIONS

TECHNICIAN



RUN NUMBER: 112901.1048;2

PART 572-E HYBRID III RIGHT KNEE CALIBRATION
PENDULUM DECELERATION (5 KG PEND)



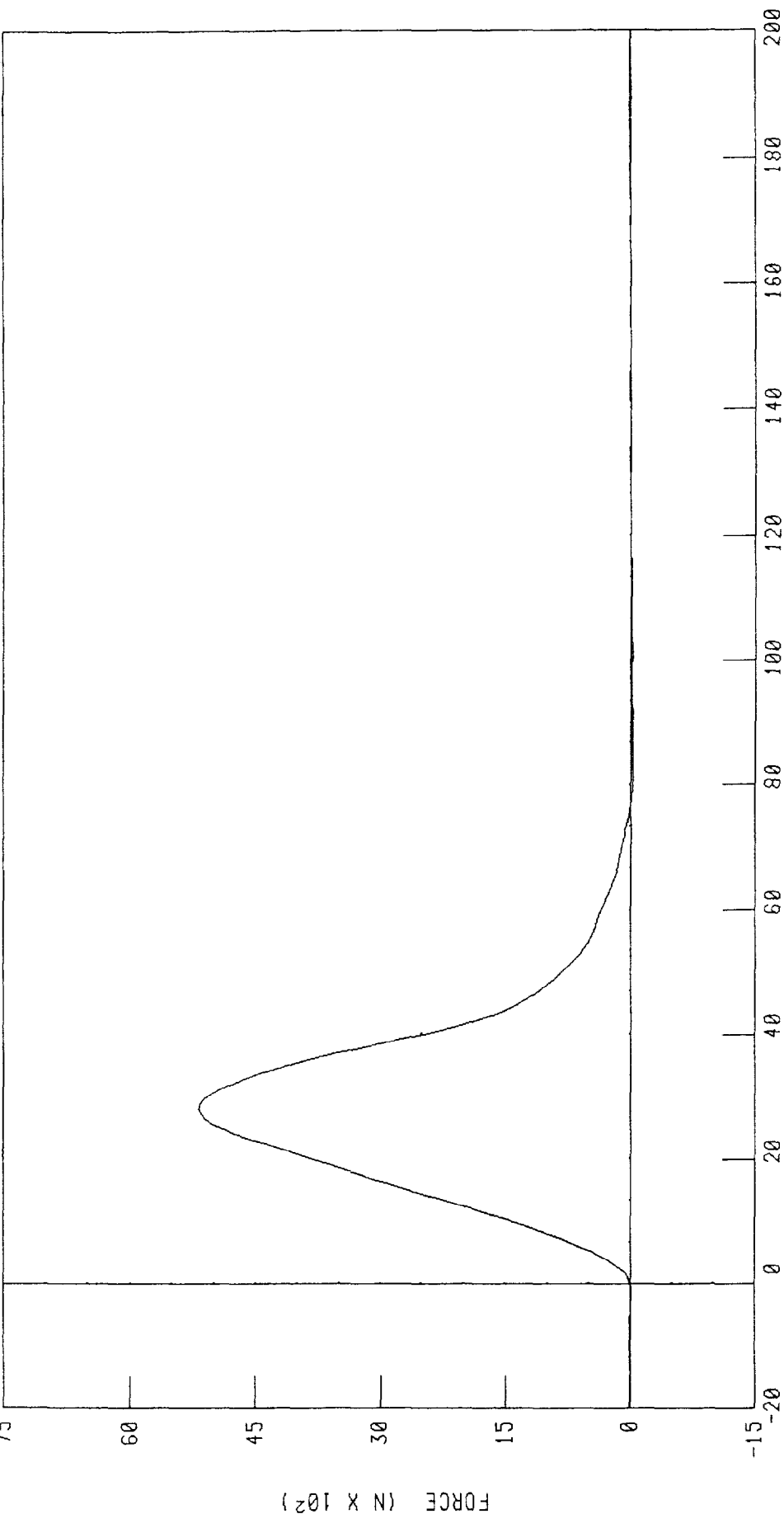
PART 572-E HYBRID III RIGHT KNEE CALIBRATION

PENDULUM FORCE (5 KG PEND)

572E SN202 RIGHT KNEE CAL 13

TRC TEST NUMBER 202C13RK2

RUN NUMBER 112901 1048,2



PEAK DATA 5176 63 N @ 2 80 MS, -28 20 N @ 8 96 MS

CHANNEL PENXF FILTER CH CLASS 600

TRANSPORTATION RESEARCH CENTER INC.

KNEE SLIDER TEST

HYBRID III 50th

21-NOV-01

LEFT KNEE

TRC INC.

TEST NO: 202C13LS1

572E SN202 LEFT SLIDER CAL 13

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	24.0 %
PENDULUM VELOCITY	2.70-2.80 M/S	2.70 M/S
FORCE AT 10.0 MM DISPLACEMENT	1259 - 1721 N	1453. N
FORCE AT 18.0 MM DISPLACEMENT	2268 - 3096 N	2794. N

TEST MEETS SPECIFICATIONS

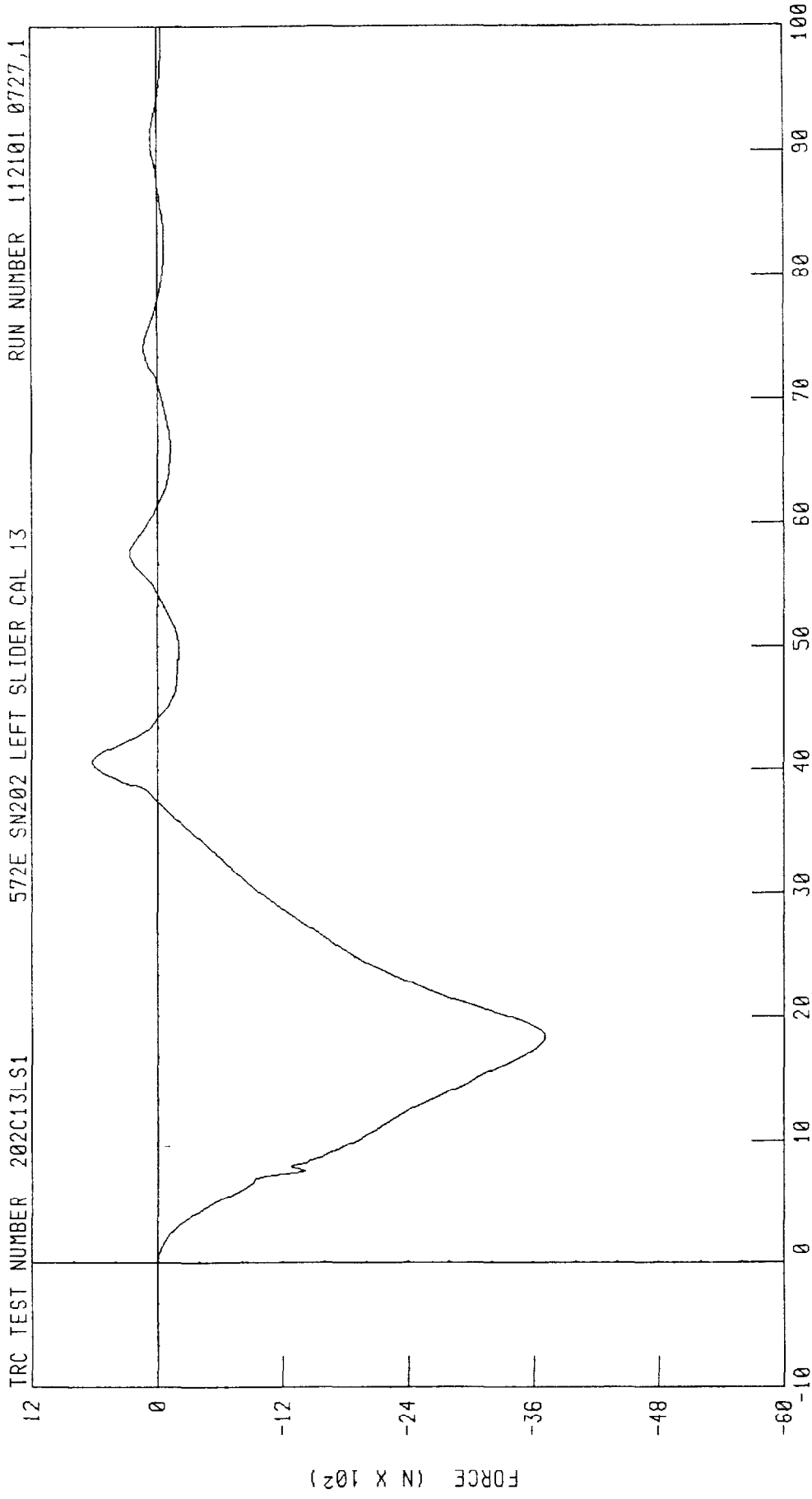
TECHNICIAN



RUN NUMBER: 112101.0727;1

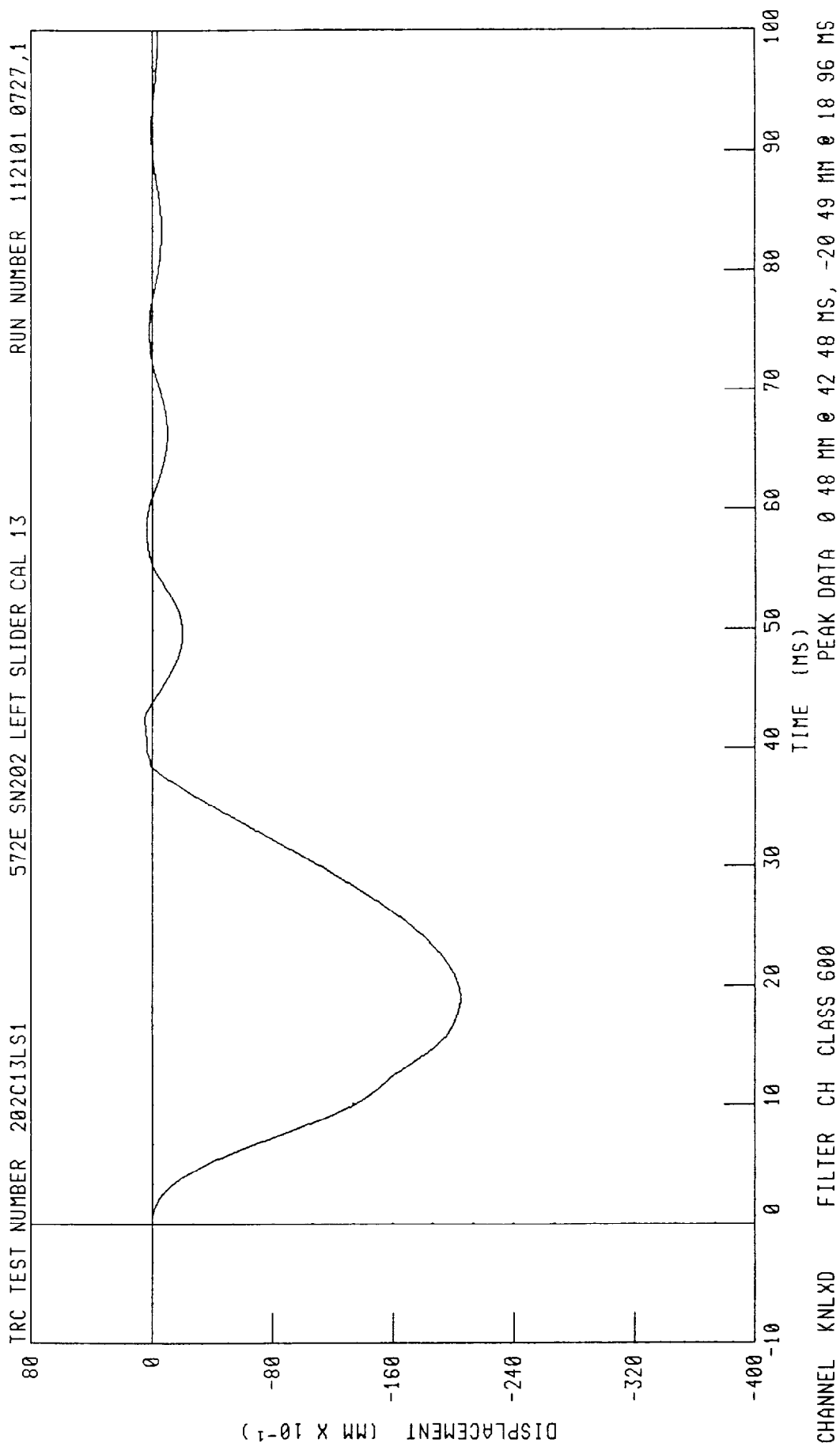
PART 572-E HYBRID III LEFT KNEE SLIDER CALIBRATION

LEFT FEMUR FORCE

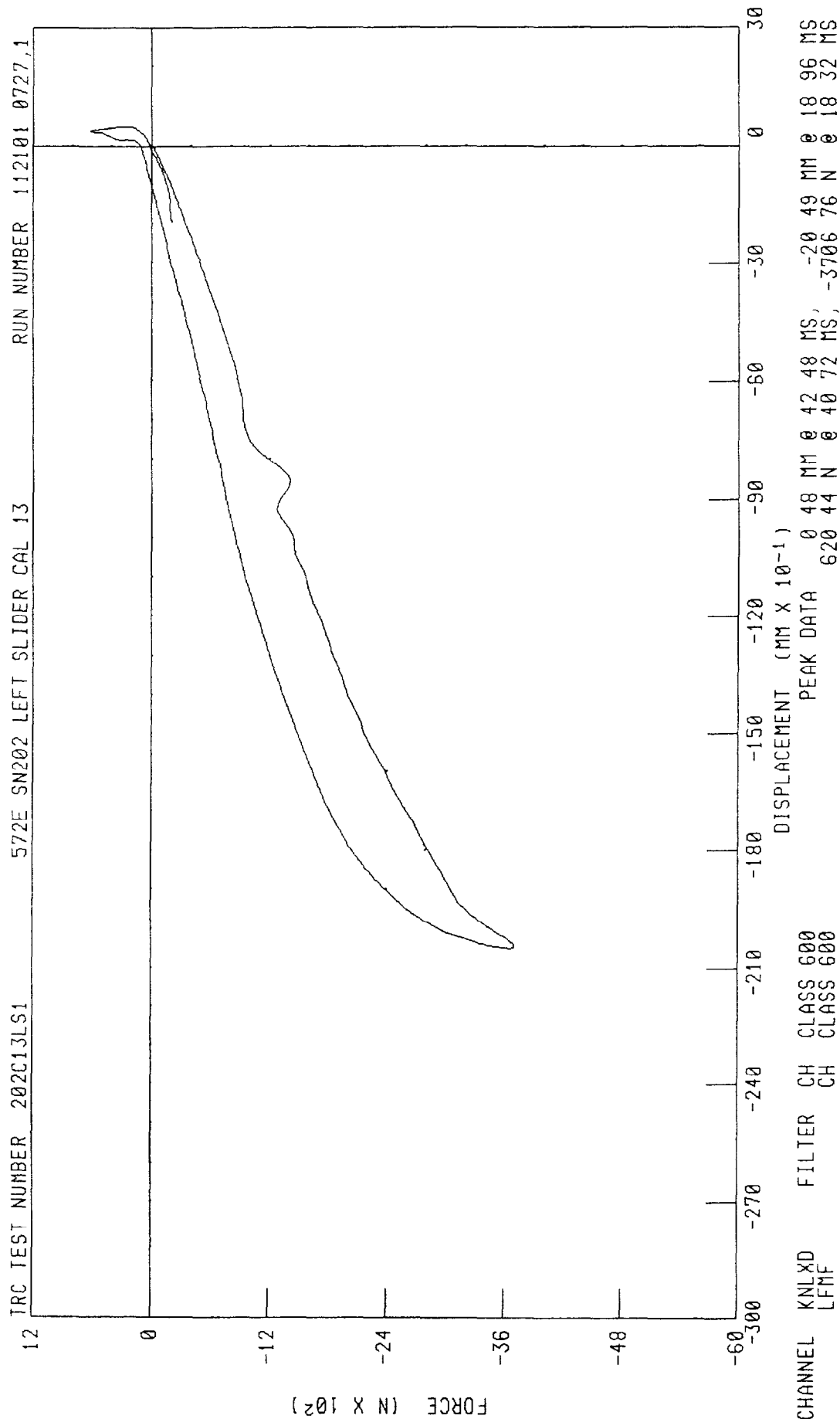


CHANNEL LFMF FILTER CH CLASS 600 PEAK DATA 620 44 N 0 40 72 MS, -3706 76 N 0 18 32 MS

PART 572-E HYBRID III LEFT KNEE SLIDER CALIBRATION
LEFT KNEE DISPLACEMENT



PART 572-E HYBRID III LEFT KNEE SLIDER CALIBRATION
LEFT KNEE DISPLACEMENT VS FEMUR FORCE



TRANSPORTATION RESEARCH CENTER INC.

KNEE SLIDER TEST

HYBRID III 50th

21-NOV-01

RIGHT KNEE

TRC INC.

TEST NO: 202C13RS1

572E SN202 RIGHT SLIDER CAL 13

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.1 DEG. C
RELATIVE HUMIDITY	10 - 70 %	24.0 %
PENDULUM VELOCITY	2.70-2.80 M/S	2.70 M/S
FORCE AT 10.0 MM DISPLACEMENT	1259 - 1721 N	1581. N
FORCE AT 18.0 MM DISPLACEMENT	2268 - 3096 N	2927. N

TEST MEETS SPECIFICATIONS

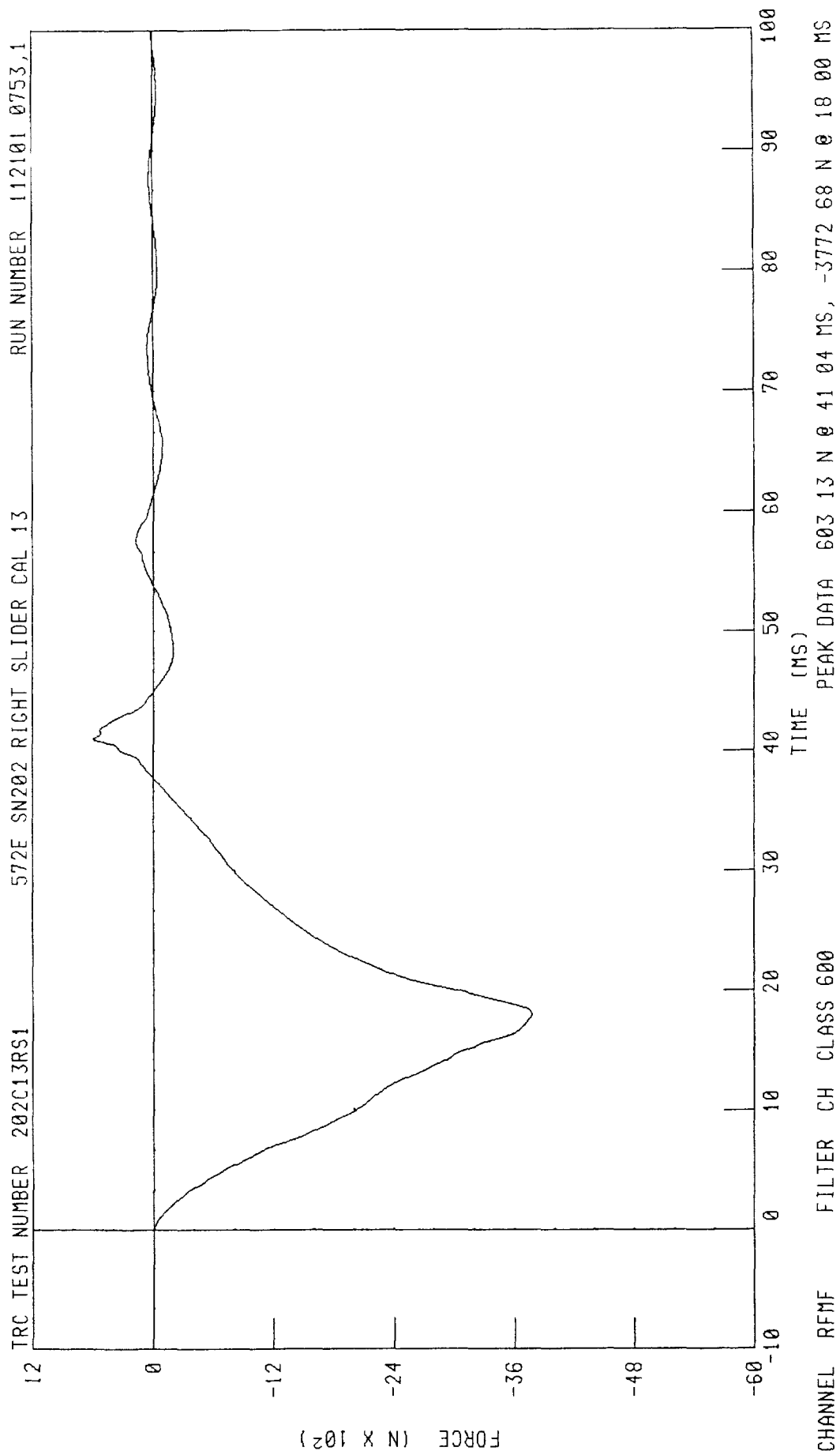
TECHNICIAN



RUN NUMBER: 112101.0753;1

PART 572-E HYBRID III RIGHT KNEE SLIDER CALIBRATION

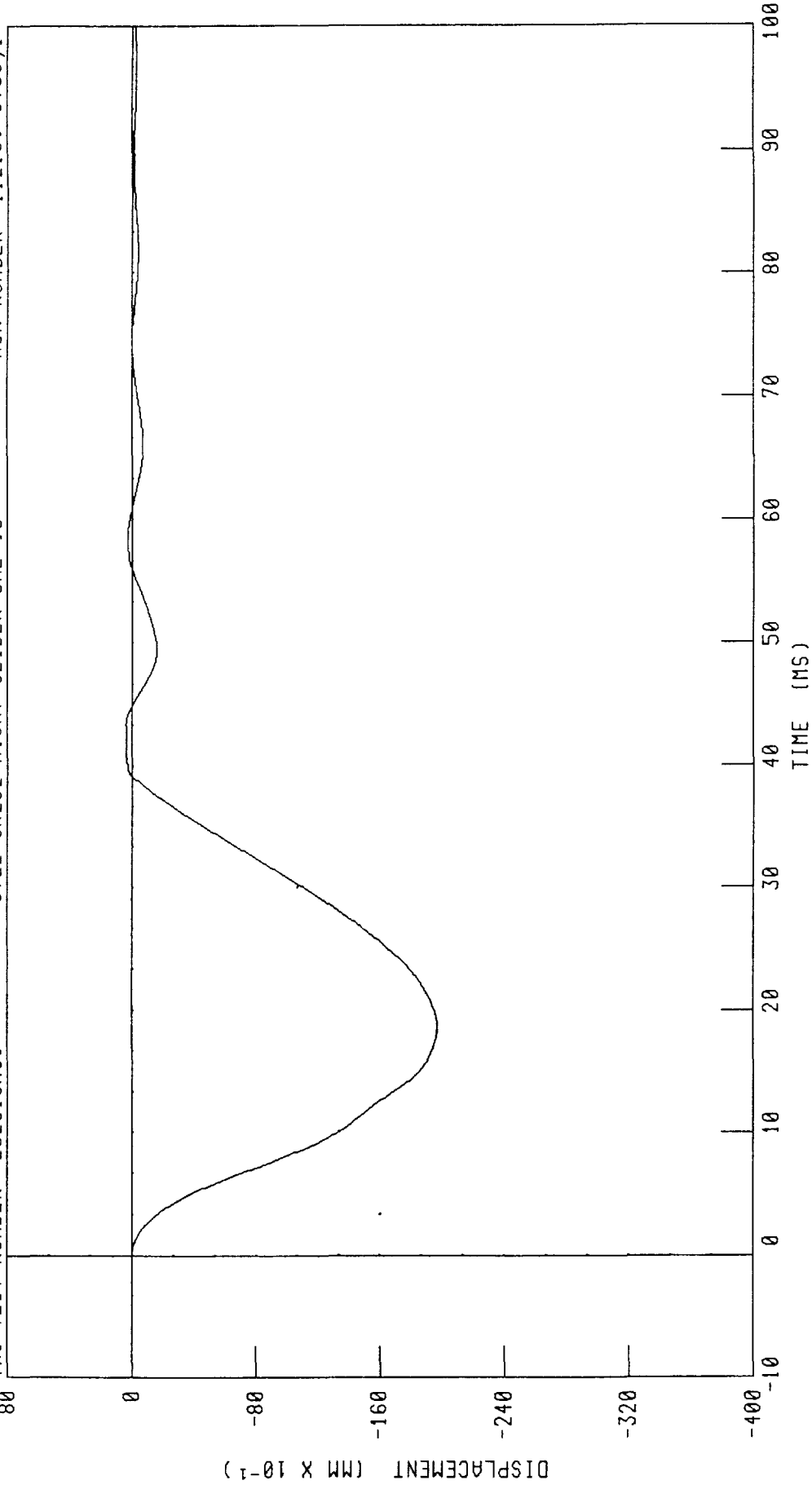
RIGHT FEMUR FORCE



PART 572-E HYBRID III RIGHT KNEE SLIDER CALIBRATION

RIGHT KNEE DISPLACEMENT

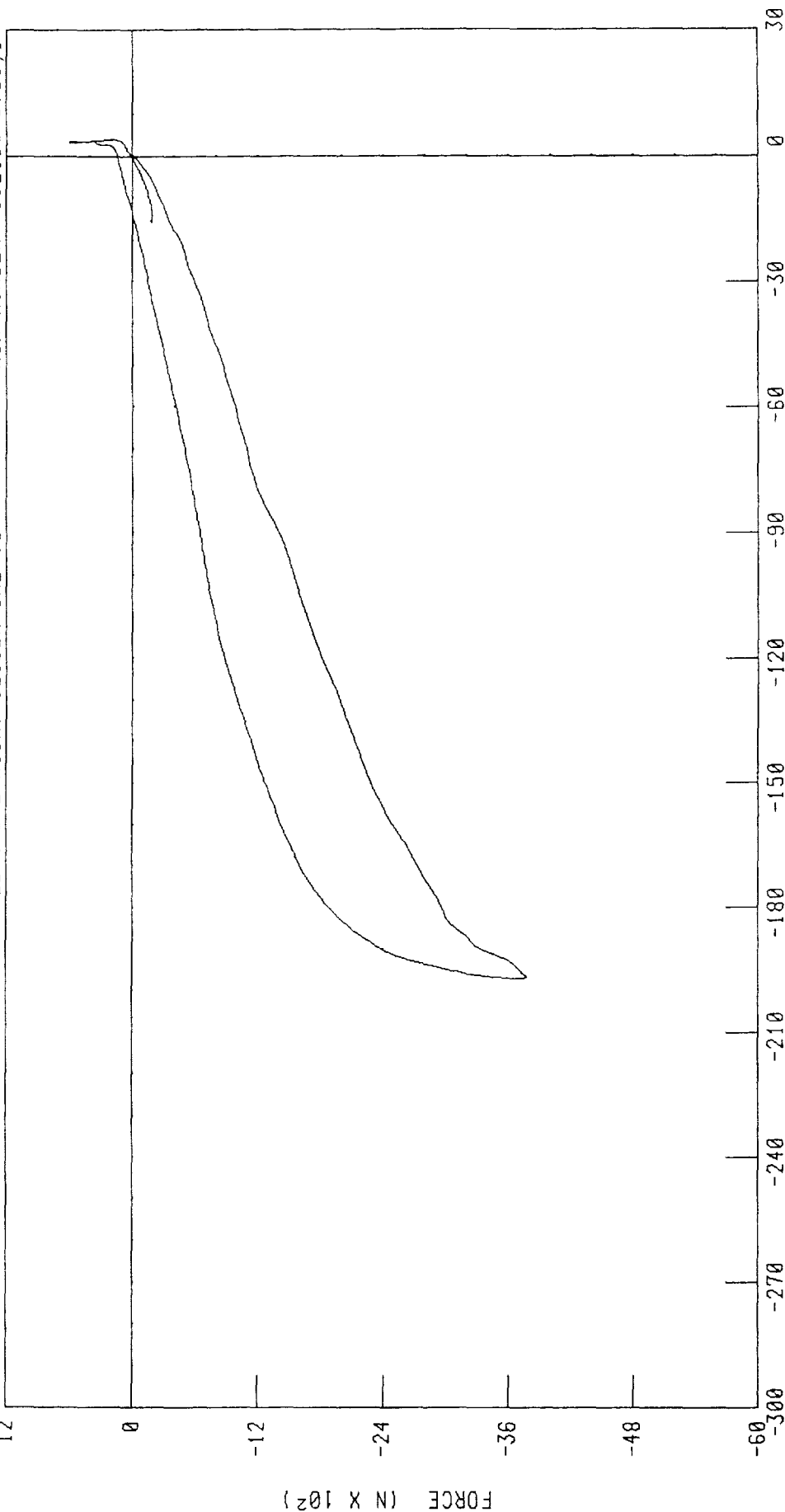
TRC TEST NUMBER 202C13RS1 572E SN202 RIGHT SLIDER CAL 13 RUN NUMBER 112101 0753,1



CHANNEL KNRXD FILTER CH CLASS 600 PEAK DATA 0 40 MM 0 43 44 MS, -19 70 MM 0 18 56 MS

PART 572-E HYBRID III RIGHT KNEE SLIDER CALIBRATION
 RIGHT KNEE DISPLACEMENT VS FEMUR FORCE

TRC TEST NUMBER 202C13RS1 572E SN202 RIGHT SLIDER CAL 13 RUN NUMBER 112101 0753.1



DISPLACEMENT (MM X 10⁻¹)

CHANNEL KNRXD FILTER CH CLASS 600
 RFMF CH CLASS 600
 PEAK DATA 0 40 MM @ 43 44 MS, -19 70 MM @ 18 56 MS
 603 13 N @ 41 04 MS, -3772 68 N @ 18 00 MS

Post-Test Dummy Configuration and Performance Verification Data

Driver Dummy S/N· 206

TRANSPORTATION RESEARCH CENTER INC.
HYBRID III EXTERNAL DIMENSIONS

206

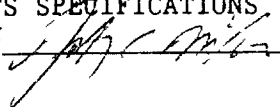
05-DEC-01

TRC INC. TEST NO: 206C13ED1 572E SN206 EXT.DIMENSION CAL13

TEST PARAMETER	(DIMEN.)	SPECIFICATION	TEST RESULTS
LOCATION FOR CHEST CIRCUMFERENCE (AA)		429 - 434 MM	432. MM
LOCATION FOR WAIST CIRCUMFERENCE (BB)		226 - 231 MM	229. MM
CHEST CIRCUMFERENCE (Y)		970 -1001 MM	988. MM
WAIST CIRCUMFERENCE (Z)		836 - 866 MM	856. MM
CHEST DEPTH (O)		213 - 229 MM	224. MM
H-POINT HEIGHT (C)		84 - 89 MM	86. MM
H-POINT FROM SEATBACK (D)		135 - 140 MM	137. MM
SKULL CAP TO BACKLINE (H)		41 - 46 MM	43. MM
TOTAL SITTING HEIGHT (A)		879 - 889 MM	886. MM
THIGH CLEARANCE (F)		140 - 155 MM	147. MM
BUTTOCK KNEE LENGTH (K)		579 - 605 MM	597. MM
BUTTOCK POPLITEAL LENGTH (N)		452 - 478 MM	467. MM
POPLITEAL HEIGHT (L)		429 - 455 MM	447. MM
KNEE PIVOT HEIGHT (M)		485 - 500 MM	490. MM
FOOT LENGTH (P)		252 - 267 MM	254. MM
FOOT BREADTH (W)		91 - 107 MM	102. MM
SHOULDER PIVOT FROM BACKLINE (E)		84 - 94 MM	91. MM
SHOULDER BREADTH (V)		422 - 437 MM	432. MM
SHOULDER PIVOT HEIGHT (B)		506 - 521 MM	516. MM
ELBOW REST HEIGHT (J)		191 - 211 MM	206. MM
SHOULDER-ELBOW LENGTH (I)		330 - 345 MM	335. MM
BACK OF ELBOW TO WRIST PIVOT (G)		290 - 305 MM	297. MM

572E SN206 EXT.DIMENSION CAL13

DUMMY MEETS SPECIFICATIONS

TECHNICIAN 

RUN NUMBER: 120501.0927

TRANSPORTATION RESEARCH CENTER INC.

HEAD DROP TEST

HYBRID III 50th

29-NOV-01

TRC INC.

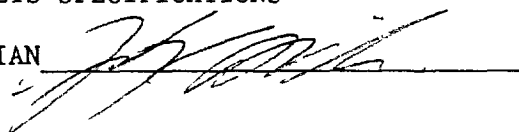
TEST NO: 206C13HD1

572E SN206 HEAD DROP CAL 13

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.1 DEG. C
RELATIVE HUMIDITY	10 - 70 %	60.0 %
PEAK RESULTANT ACCELERATION	225 - 275 G	265.80 G
PEAK LATERAL ACCELERATION	15 G MAX	-4.07 G
IS ACCELERATION CURVE UNIMODAL?	YES	YES

TEST MEETS SPECIFICATIONS

TECHNICIAN



RUN NUMBER: 112901.1717;1

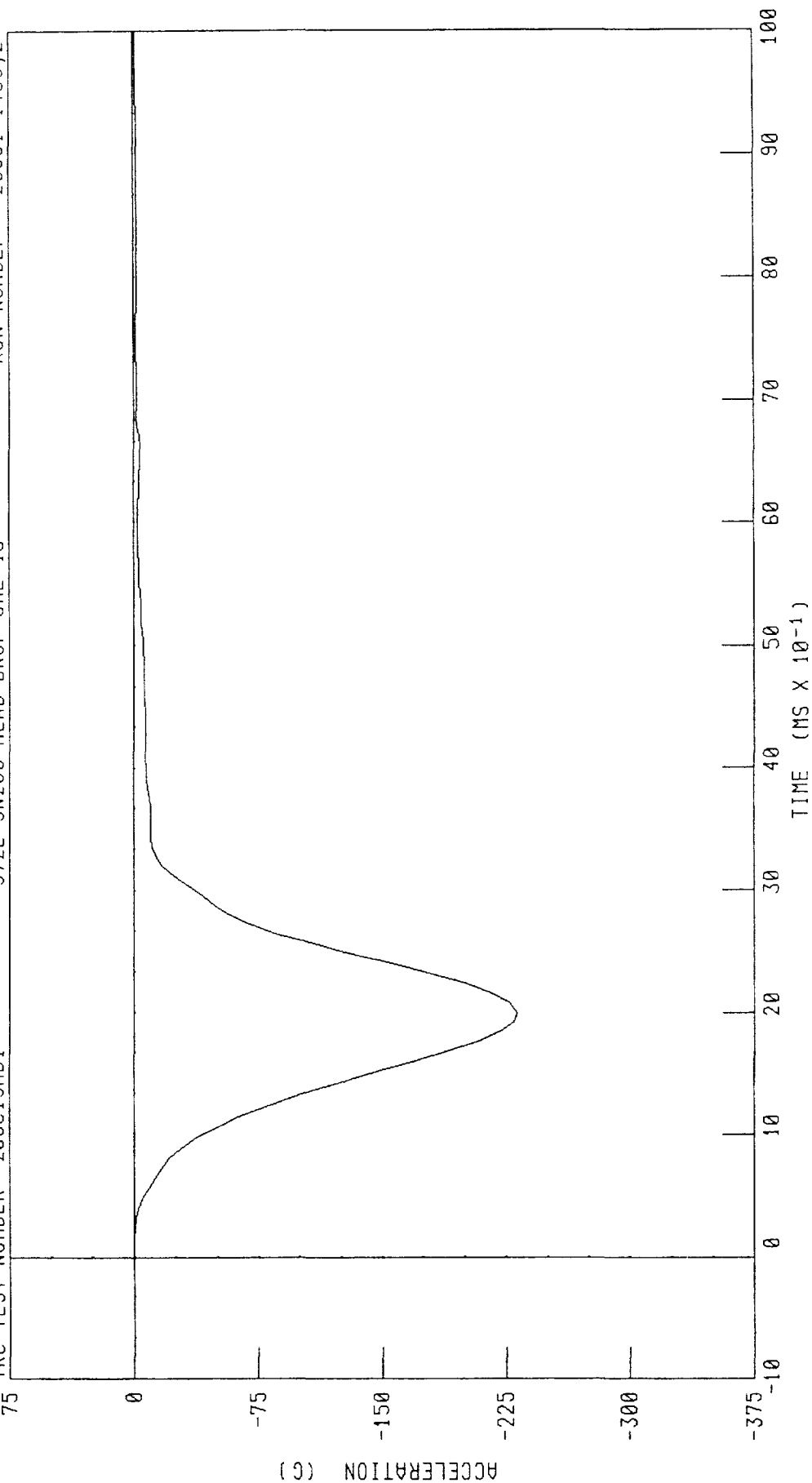
PART 572-E HYBRID III HEAD CALIBRATION

HEAD ACCELERATION X AXIS

TRC TEST NUMBER 206C13HD1

572E SN206 HEAD DROP CAL 13

RUN NUMBER 120301 1459,2



CHANNEL HEDXC FILTER CH CLASS 1000

PEAK DATA 0 12 G 0 -0 16 MS, -231 77 G 0 2 00 MS

PART 572-E HYBRID III HEAD CALIBRATION

HEAD ACCELERATION Y AXIS

TRC TEST NUMBER 206C13HD1

572E SN206 HEAD DROP CAL 13

RUN NUMBER 120301 1459,2

225

150

75

0

-75

-150

-225

ACCELERATION (G)

TIME (MS X 10⁻¹)

100

90

80

70

60

50

40

30

20

10

0

FILTER CH CLASS 1000

CHANNEL HEDYC

PEAK DATA 1 63 C 0 3 28 MS, -4 07 C 0 2 08 MS

PART 572-E HYBRID III HEAD CALIBRATION

HEAD ACCELERATION Z AXIS

572E SN206 HEAD DROP CAL 13

TRC TEST NUMBER 206C13HD1

375

300

225

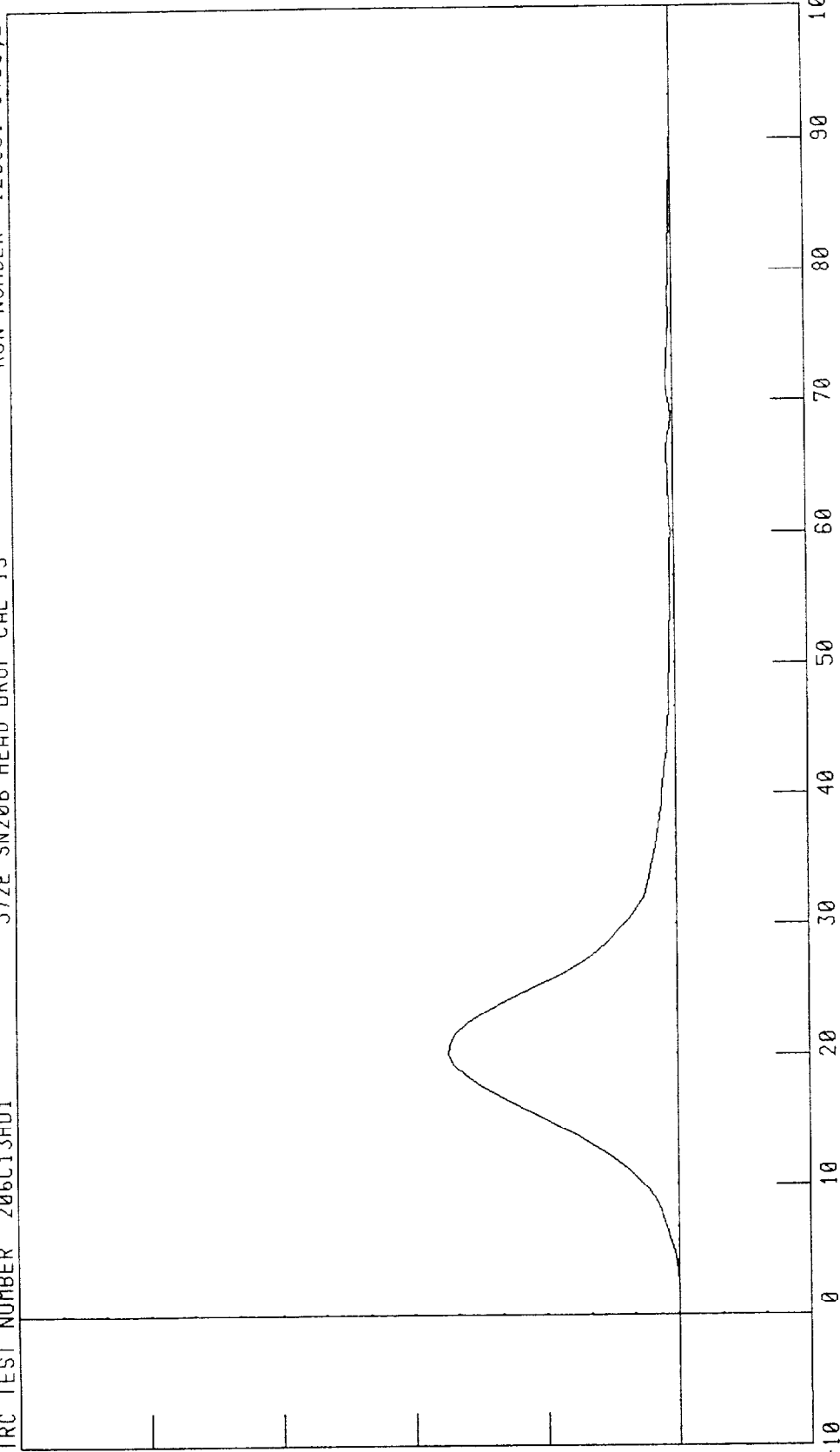
150

75

0

-75

ACCELERATION (G)



TIME (MS X 10⁻¹)

PEAK DATA 130 07 G @ 2 00 MS, -0 28 G @ 9 44 MS

CHANNEL HEDZG FILTER CH CLASS 1000

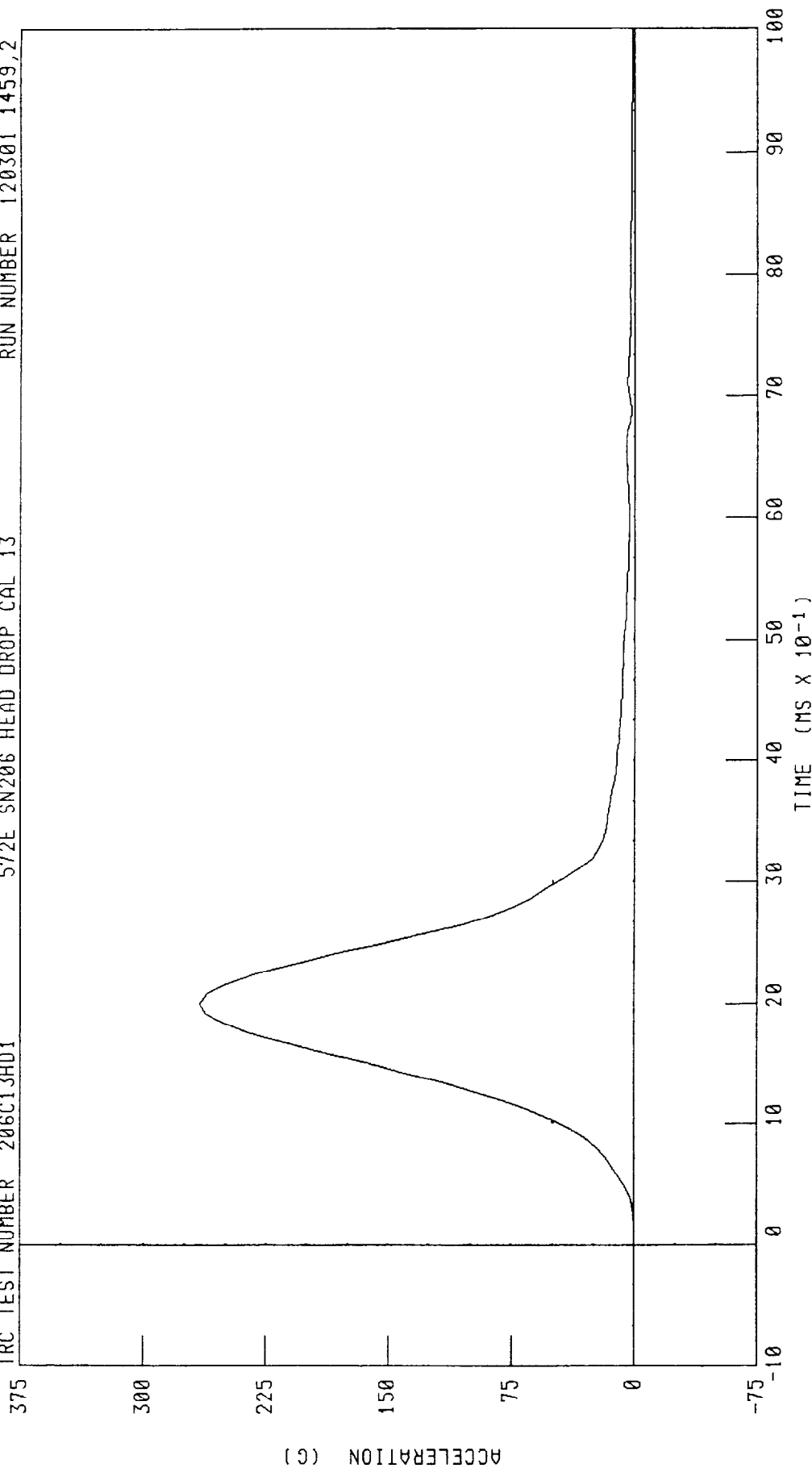
PART 572-E HYBRID III HEAD CALIBRATION

HEAD RESULTANT ACCELERATION

TRC TEST NUMBER 206C13HD1

572E SN206 HEAD DROP CAL 13

RUN NUMBER 120301 1459,2



CHANNEL HEDRG FILTER CH CLASS 1000

PEAK DATA 265 80 G 2 00 MS, 0 05 G 0 -0 40 MS

TRANSPORTATION RESEARCH CENTER INC.

HYBRID III 50th

03-DEC-01

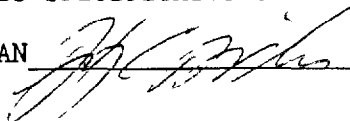
NECK FLEXION TEST - 6 CHANNEL TRANSDUCER

TRC INC. TEST NO: 206C13NF1 572E SN206 NECK FLEXION CAL13

TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE		20.6-22.2 DEG. C	21.1 DEG. C
RELATIVE HUMIDITY		10 - 70 %	28.0 %
IMPACT VELOCITY		6.89 - 7.13 M/S	6.93 M/S
PENDULUM DECELERATION	10 MS	22.50 - 27.50 G	25.49 G
	20 MS	17.60 - 22.60 G	21.23 G
	30 MS	12.50 - 18.50 G	16.39 G
MAX PENDULUM G		29 G MAX	26.56 G
MAX PENDULUM G ABOVE 30 MS		29 G MAX	16.35 G
DECELERATION-TIME CURVE DECAY TIME TO 5 G		34 - 42 MS	37.52 MS
D PLANE	MAX	64 - 78 DEG.	74.94 DEG.
ROTATION	TIME	57 - 64 MS	60.72 MS
MOMENT ABOUT OCCIPITAL CONDYLE	MAX	88.2 - 108.5 NM	98.37 NM
	TIME	47 - 58 MS	50.88 MS
ROTATION ANGLE-TIME CURVE DECAY TIME TO ZERO		113 - 128 MS	120.56 MS
POSITIVE MOMENT-TIME CURVE DECAY TIME TO ZERO		97 - 107 MS	103.04 MS

TEST MEETS SPECIFICATIONS

TECHNICIAN



RUN NUMBER: 120301.1321;1

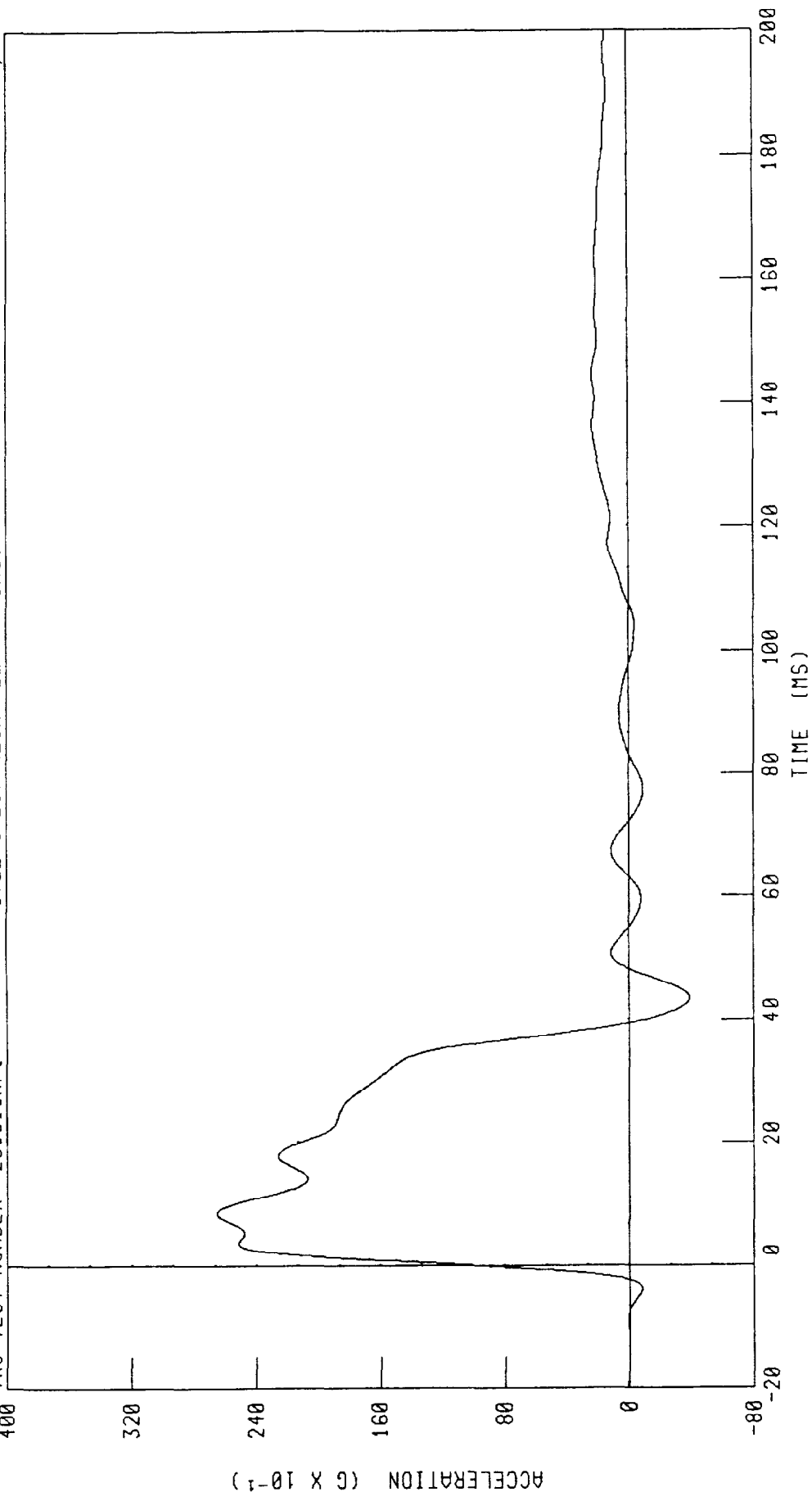
PART 572-E HYBRID III NECK FLEXION CALIBRATION

PENDULUM DECELERATION

TRC TEST NUMBER 206C13NF1

572E SN206 NECK FLEXION CAL13

RUN NUMBER 120301 1321,1



PEAK DATA 26 57 6 8 56 MS, -3 94 6 0 43 36 MS

CHANNEL PENXC FILTER CH CLASS 60

PART 572-E HYBRID III NECK FLEXION CALIBRATION

ROTATION ABOUT BASE OF NECK

572E SN206 NECK FLEXION CAL13

TRC TEST NUMBER 206C13NF1

120

90

60

30

0

-30

-60

-20

0

20

40

60

80

100

120

140

160

180

200

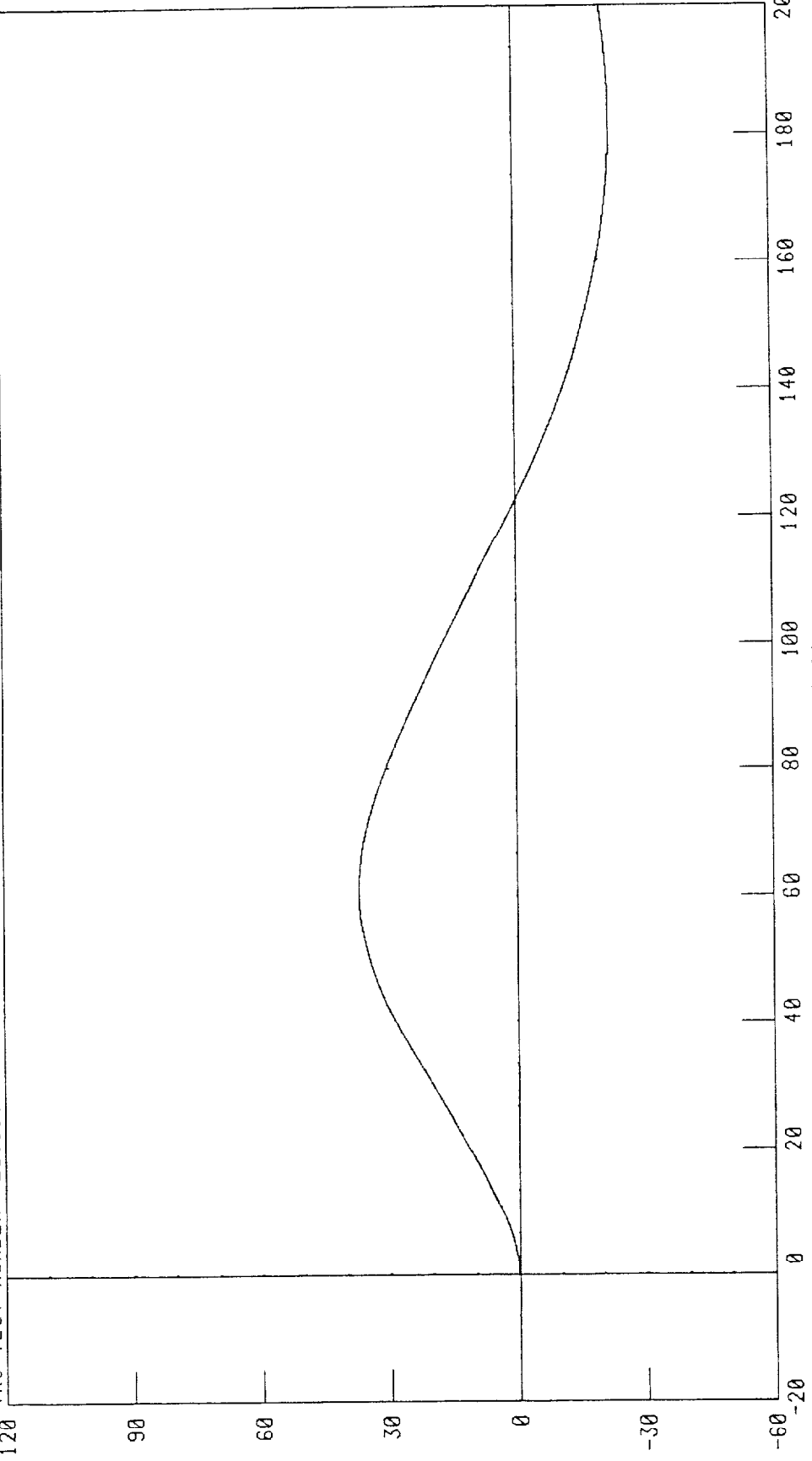
TIME (MS)

PEAK DATA 36 99 ° @ 60 72 MS, -22 71 ° @ 182 08 MS

CHANNEL BETA

FILTER CH CLASS 60

RUN NUMBER 120301 1321,1



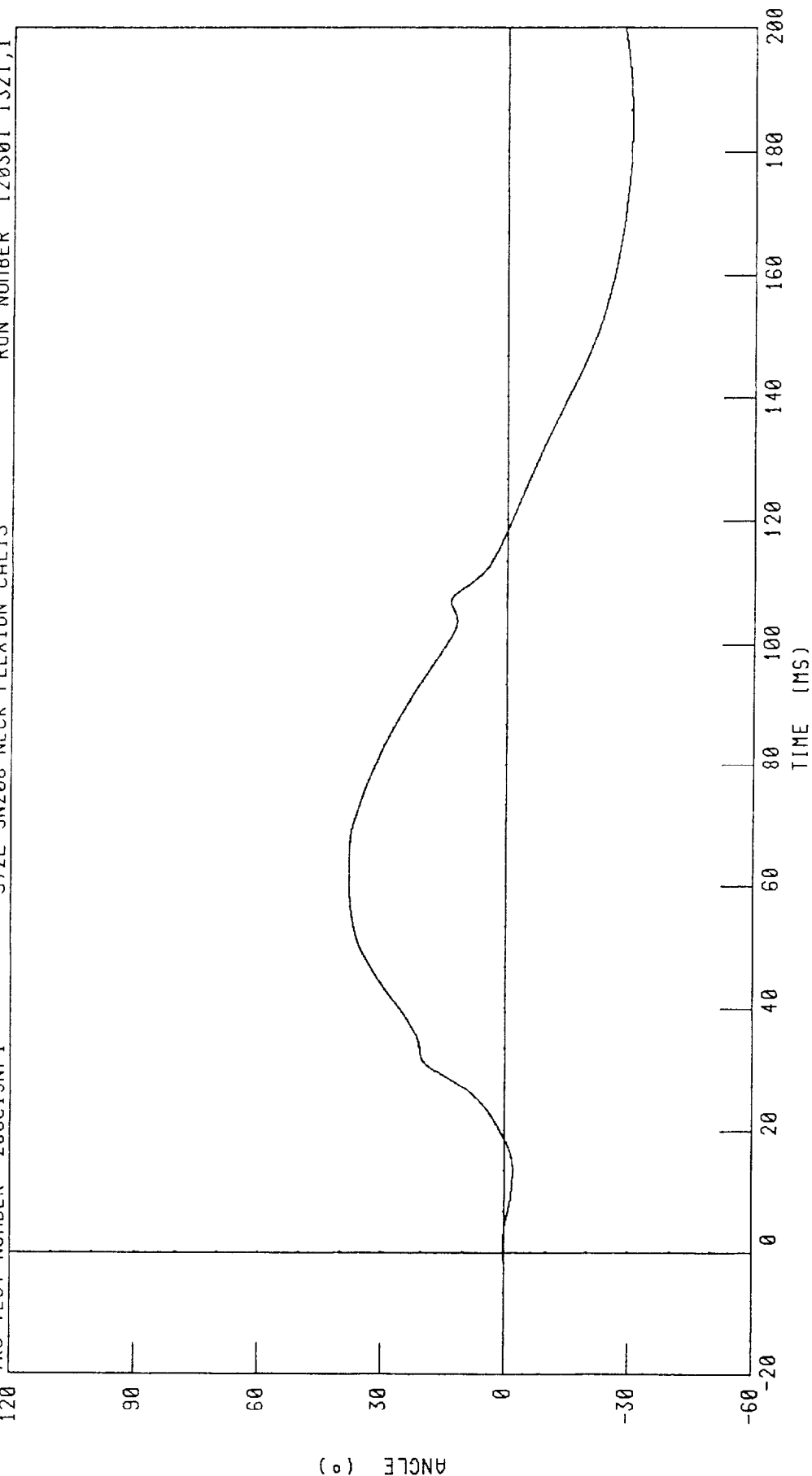
PART 572-E HYBRID III NECK FLEXION CALIBRATION

ROTATION ABOUT OCCIPITAL CONDYLE

TRC TEST NUMBER 206C13NF1

572E SN206 NECK FLEXION CAL13

RUN NUMBER 120301 1321,1

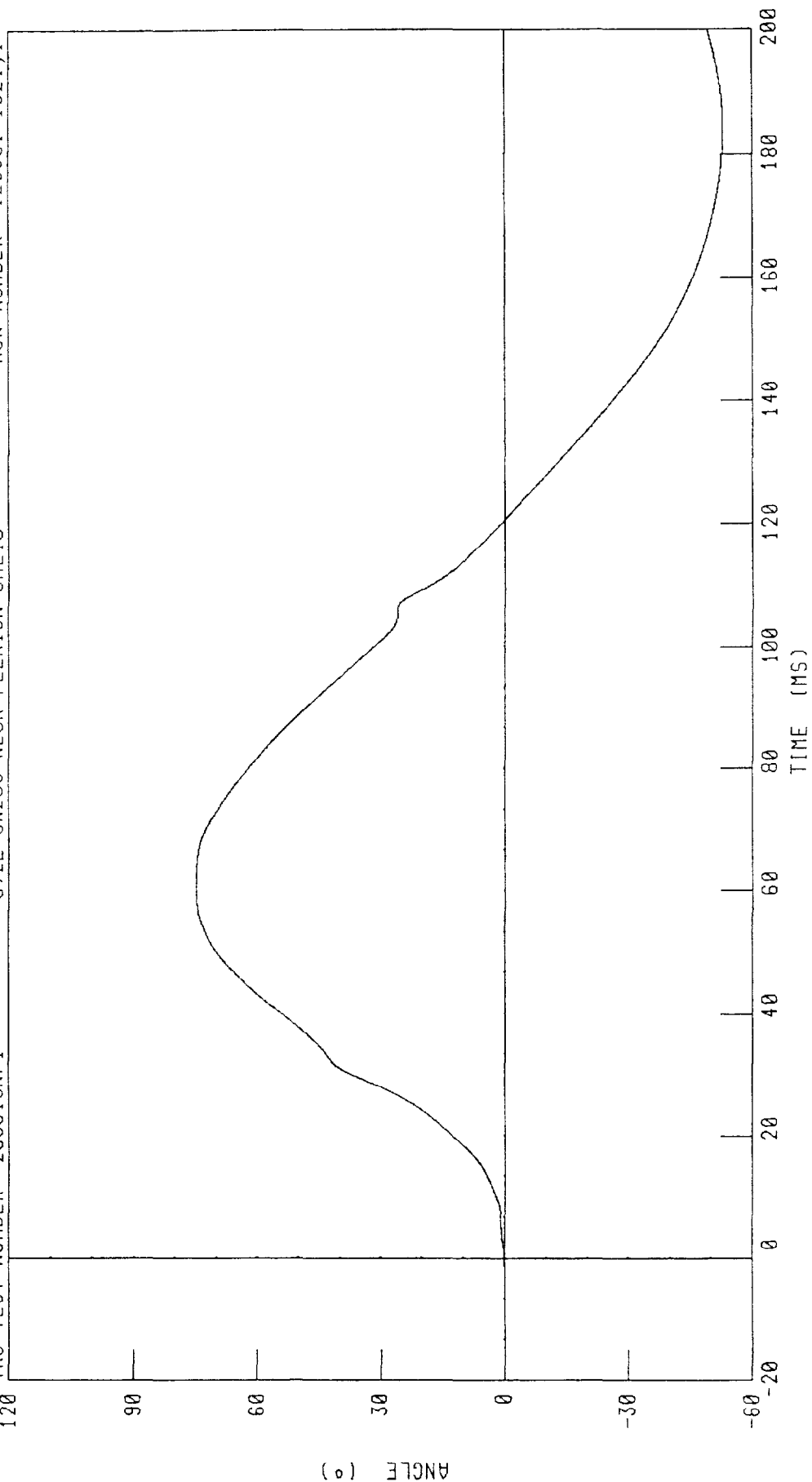


CHANNEL THETA FILTER CH CLASS 60 PEAK DATA 37 97 ° @ 65 04 MS, -30 30 ° @ 185 28 MS

PART 572-E HYBRID III NECK FLEXION CALIBRATION

TOTAL ROTATION

TRC TEST NUMBER 206C13NF1 572E SN206 NECK FLEXION CAL13 RUN NUMBER 120301 1321,1

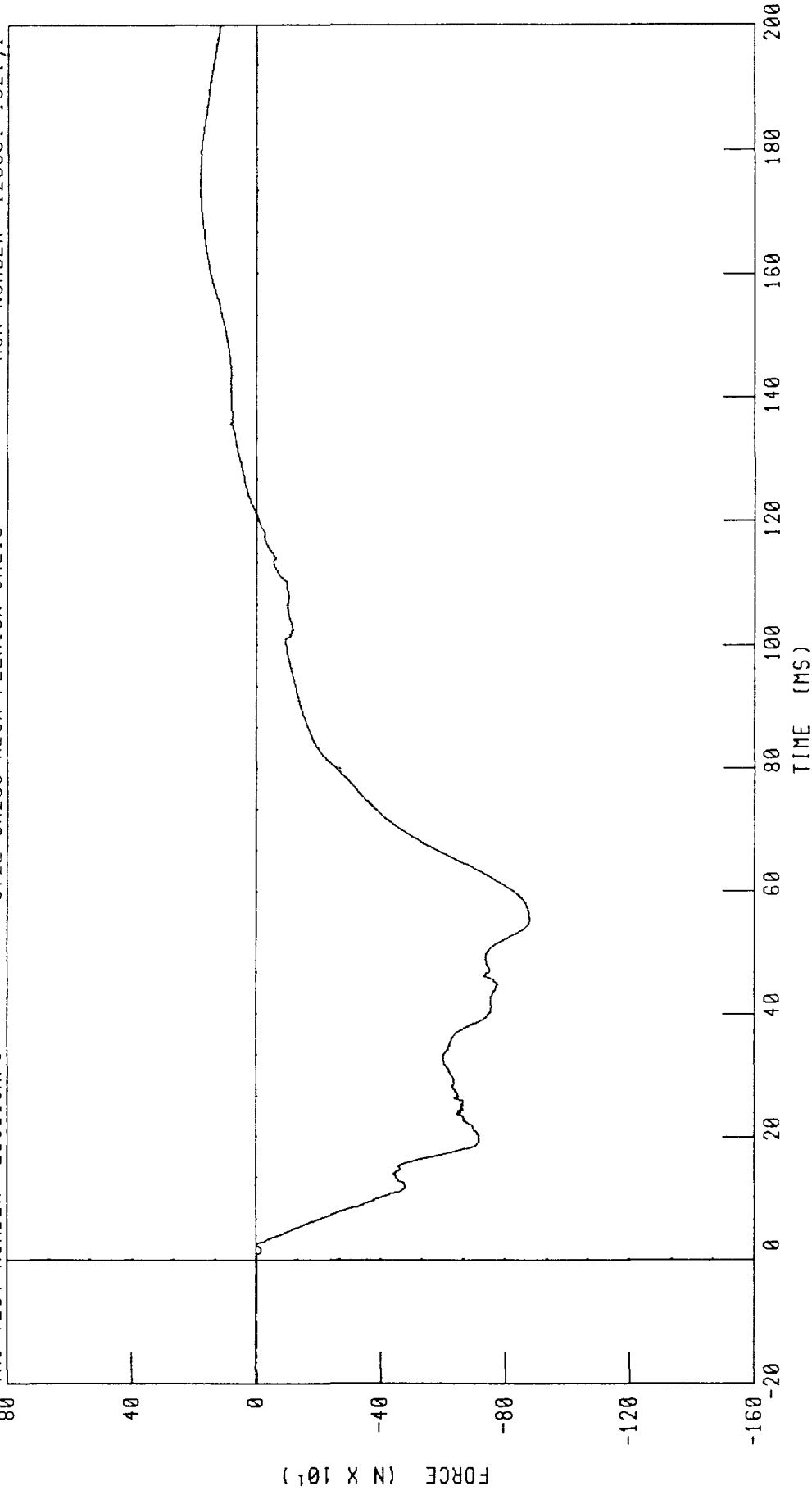


CHANNEL TOTAL FILTER CH CLASS 60 PEAK DATA 74 95 ° @ 60 72 MS, -52 98 ° @ 184 40 MS

PART 572-E HYBRID III NECK FLEXION CALIBRATION

NECK FORCE X AXIS

TRC TEST NUMBER 206C13NF1 572E SN206 NECK FLEXION CAL13 RUN NUMBER 120301 1321,1

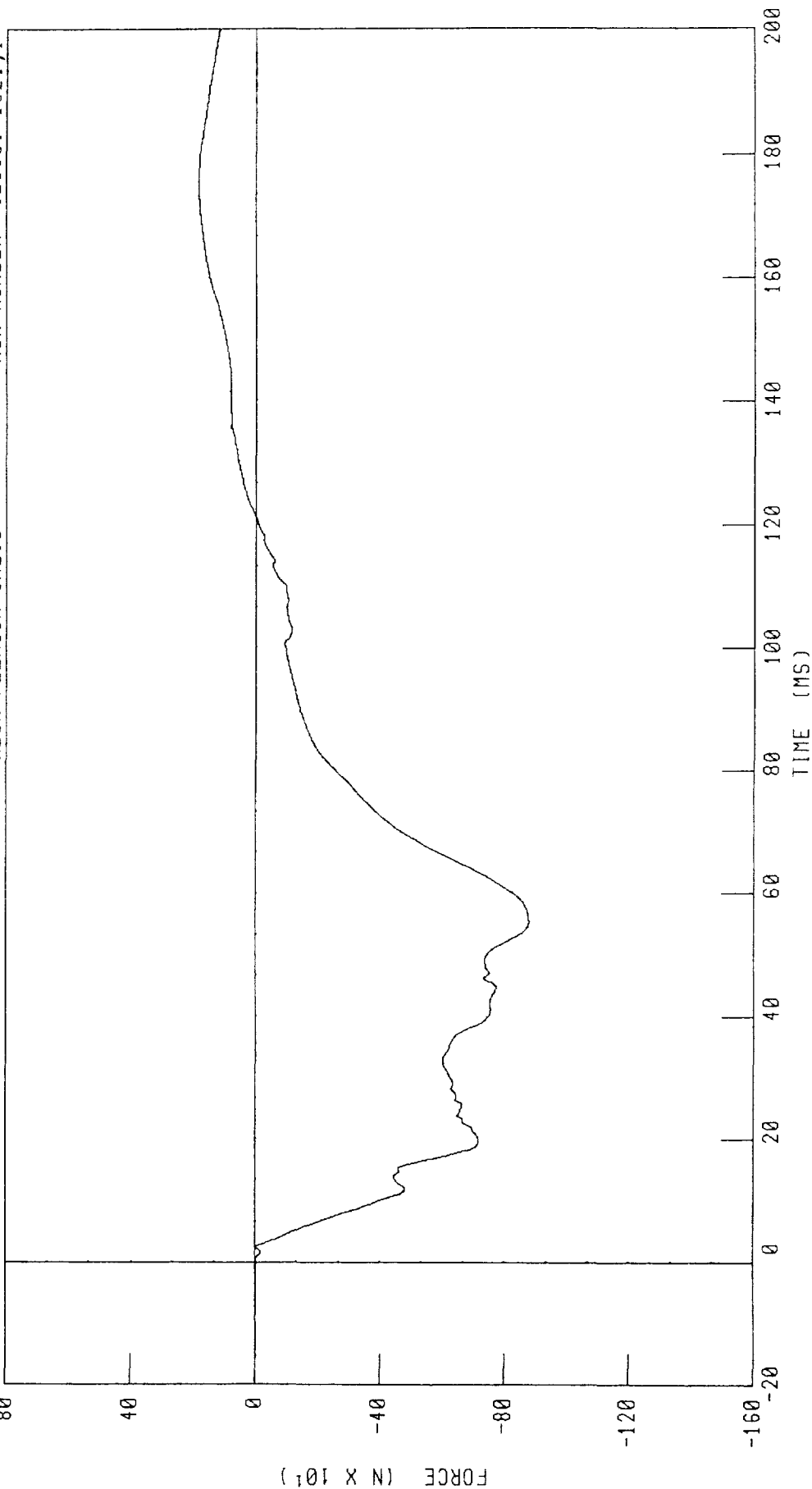


CHANNEL NEKXF FILTER CH CLASS 1000 PEAK DATA 184 31 N 0 175 68 MS, -878 09 N 0 55 20 MS

PART 572-E HYBRID III NECK FLEXION CALIBRATION

NECK FORCE X AXIS FILTERED FOR USE IN OCCIPITAL MOMENT CALCULATION

TRC TEST NUMBER 206C13NF1 572E SN206 NECK FLEXION CAL13 RUN NUMBER 120301 1321,1



CHANNEL NEKXFC FILTER CH CLASS 600 PEAK DATA 183 78 N @ 175 84 MS, -877 60 N @ 55 28 MS

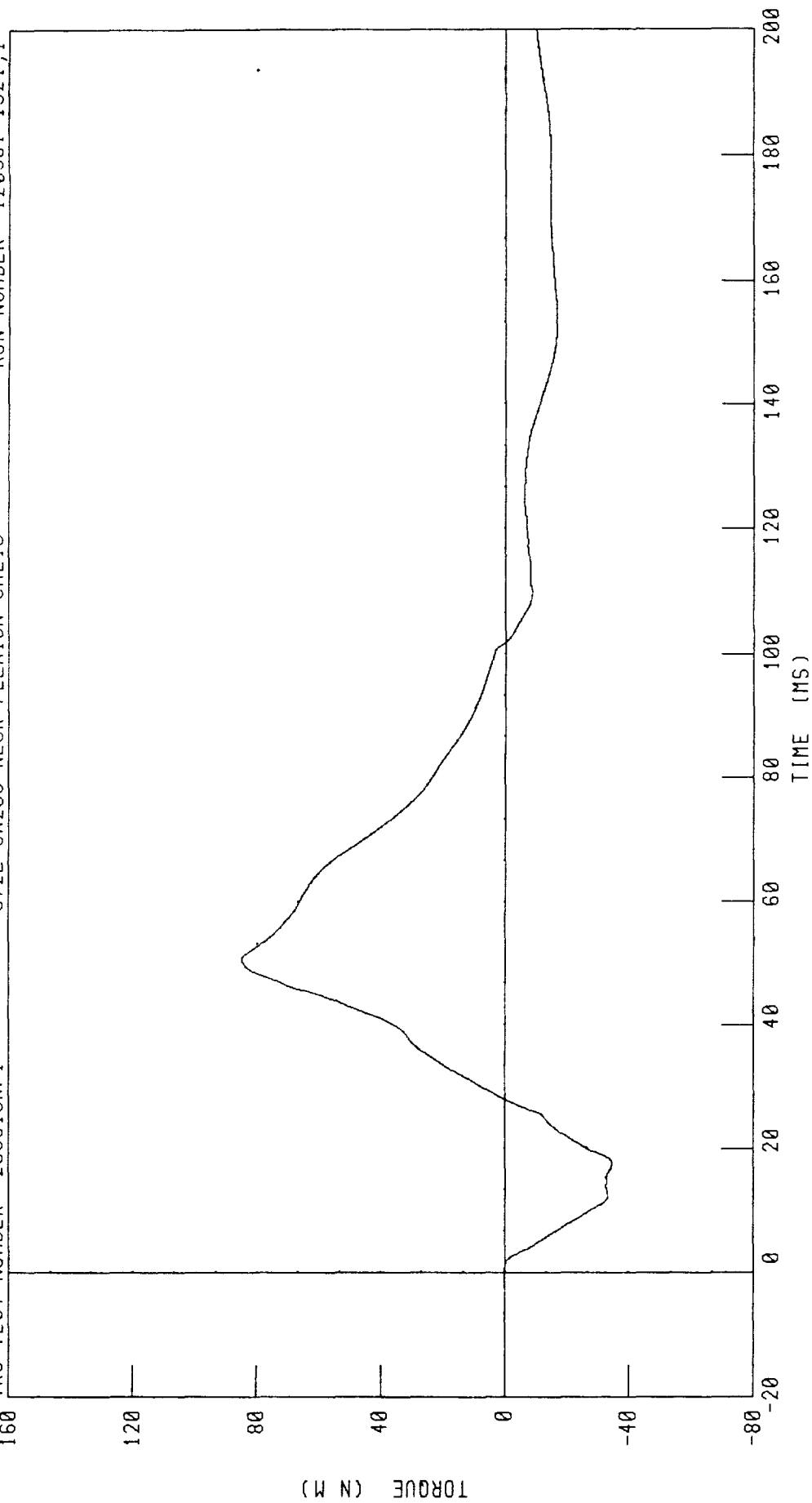
PART 572-E HYBRID III NECK FLEXION CALIBRATION

NECK MOMENT Y AXIS

TRC TEST NUMBER 206C13NF1

572E SN206 NECK FLEXION CAL13

RUN NUMBER 120301 1321,1

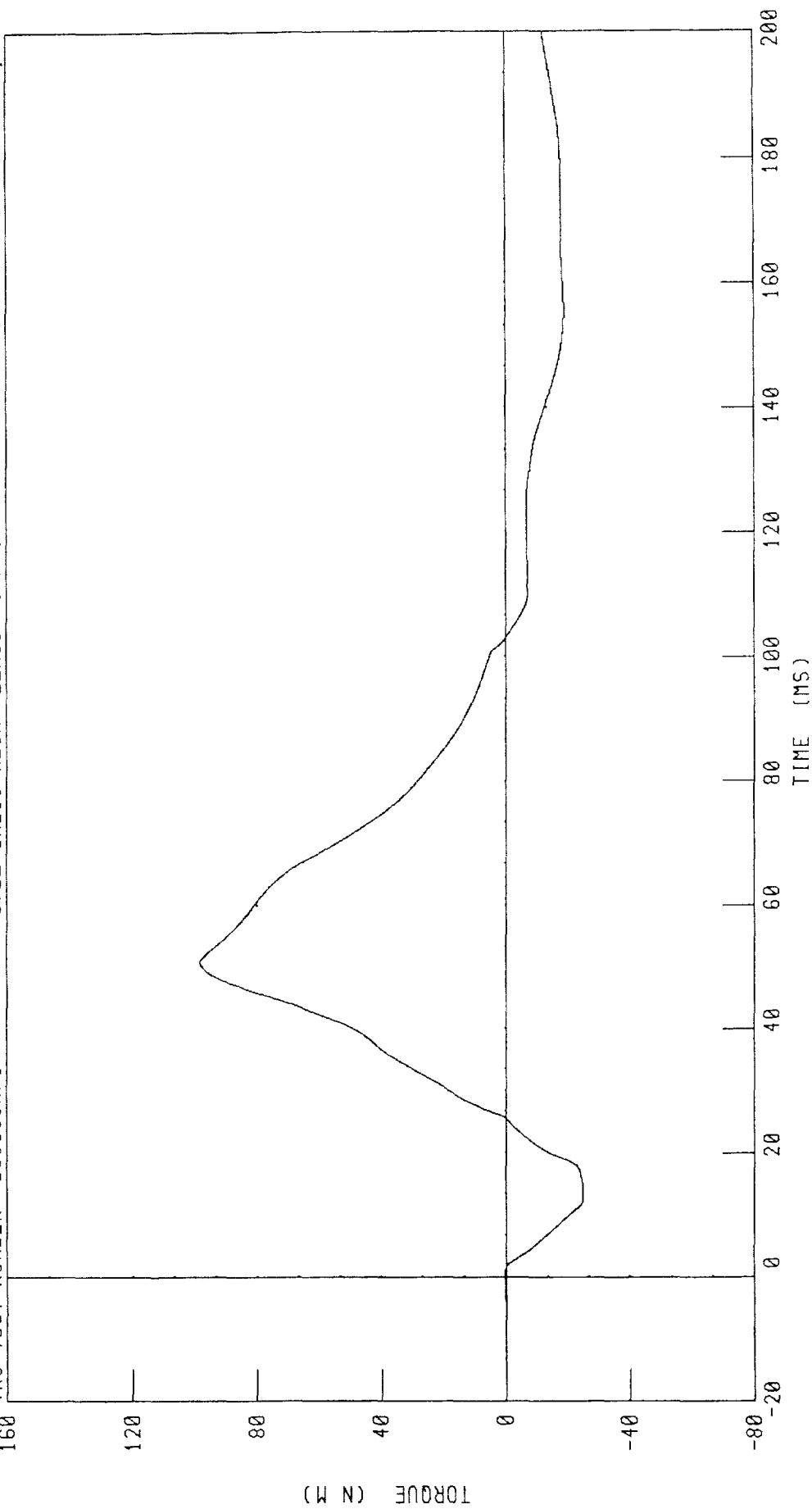


CHANNEL NEKYM FILTER CH CLASS 600 PEAK DATA 84 95 N M 0 50 72 MS, -34 69 N M 0 17 60 MS

PART 572-E HYBRID III NECK FLEXION CALIBRATION

TOTAL MOMENT ABOUT OCCIPITAL CONDYLE

IRC TEST NUMBER 206C13NF1 572E SN206 NECK FLEXION CAL13 RUN NUMBER 120301 1321,1



CHANNEL NEKOM FILTER CH CLASS 600 PEAK DATA 98 37 N M 0 50 88 MS, -24 95 N M 0 12 72 MS

TRANSPORTATION RESEARCH CENTER INC.

HYBRID III 50th

03-DEC-01

NECK EXTENSION TEST - 6 CHANNEL TRANSDUCER

TRC INC.

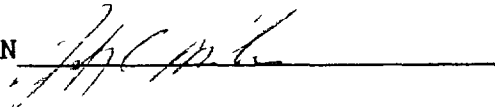
TEST NO: 206C13NE1

572E SN206 NECK EXT CAL13

TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE		20.6 - 22.2 DEG. C	21.1 DEG. C
RELATIVE HUMIDITY		10 - 70 %	33.0 %
IMPACT VELOCITY		5.95 - 6.19 M/S	6.05 M/S
PENDULUM DECELERATION	10 MS	17.20 - 21.20 G	19.15 G
	20 MS	14.00 - 19.00 G	17.96 G
	30 MS	11.00 - 16.00 G	14.17 G
MAX PENDULUM G		22 G MAX	19.45 G
MAX PENDULUM G ABOVE 30 MS		22 G MAX	14.10 G
DECELERATION-TIME CURVE DECAY TIME TO 5 G		38 - 46 MS	41.60 MS
D PLANE	MAX	81 - 106 DEG.	97.76 DEG.
ROTATION	TIME	72 - 82 MS	78.08 MS
MOMENT ABOUT OCCIPITAL CONDYLE	MIN	-80.0/-52.9 NM	-69.92 NM
	TIME	65 - 79 MS	73.44 MS
ROTATION ANGLE-TIME CURVE DECAY TIME TO ZERO		147 - 174 MS	159.84 MS
NEGATIVE MOMENT-TIME CURVE DECAY TIME TO ZERO		120 - 148 MS	146.88 MS

TEST MEETS SPECIFICATIONS

TECHNICIAN



RUN NUMBER: 120301.1330;1

PART 572-E HYBRID III NECK EXTENSION CALIBRATION

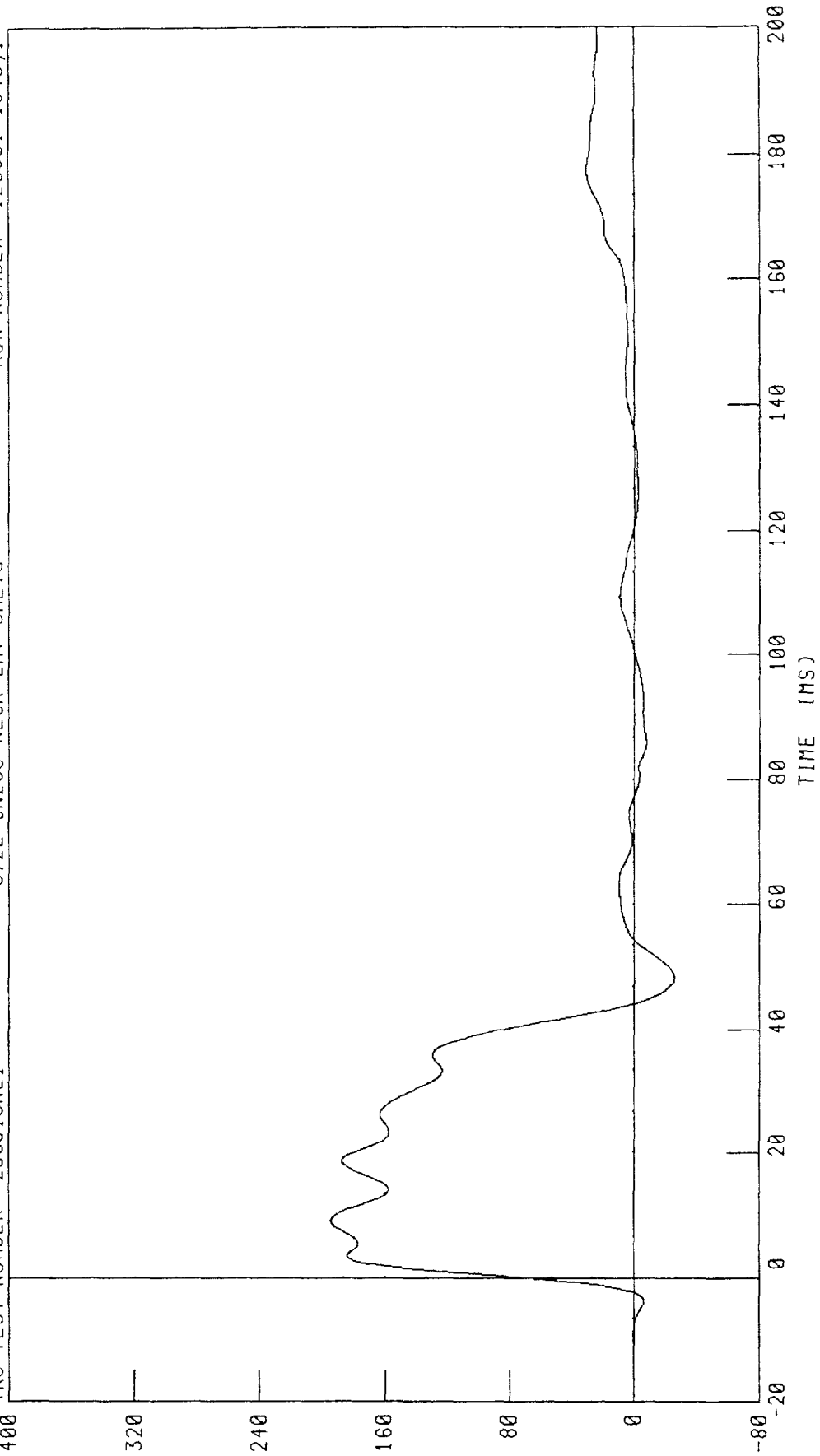
PENDULUM DECELERATION

TRC TEST NUMBER 206C13NE1

572E SN206 NECK EXT CAL13

RUN NUMBER 120301 1343,1

ACCELERATION ($G \times 10^{-1}$)



PEAK DATA 19 46 C 0 9 04 MS, -2 56 C 0 48 32 MS

CHANNEL PENXC FILTER CH CLASS 60

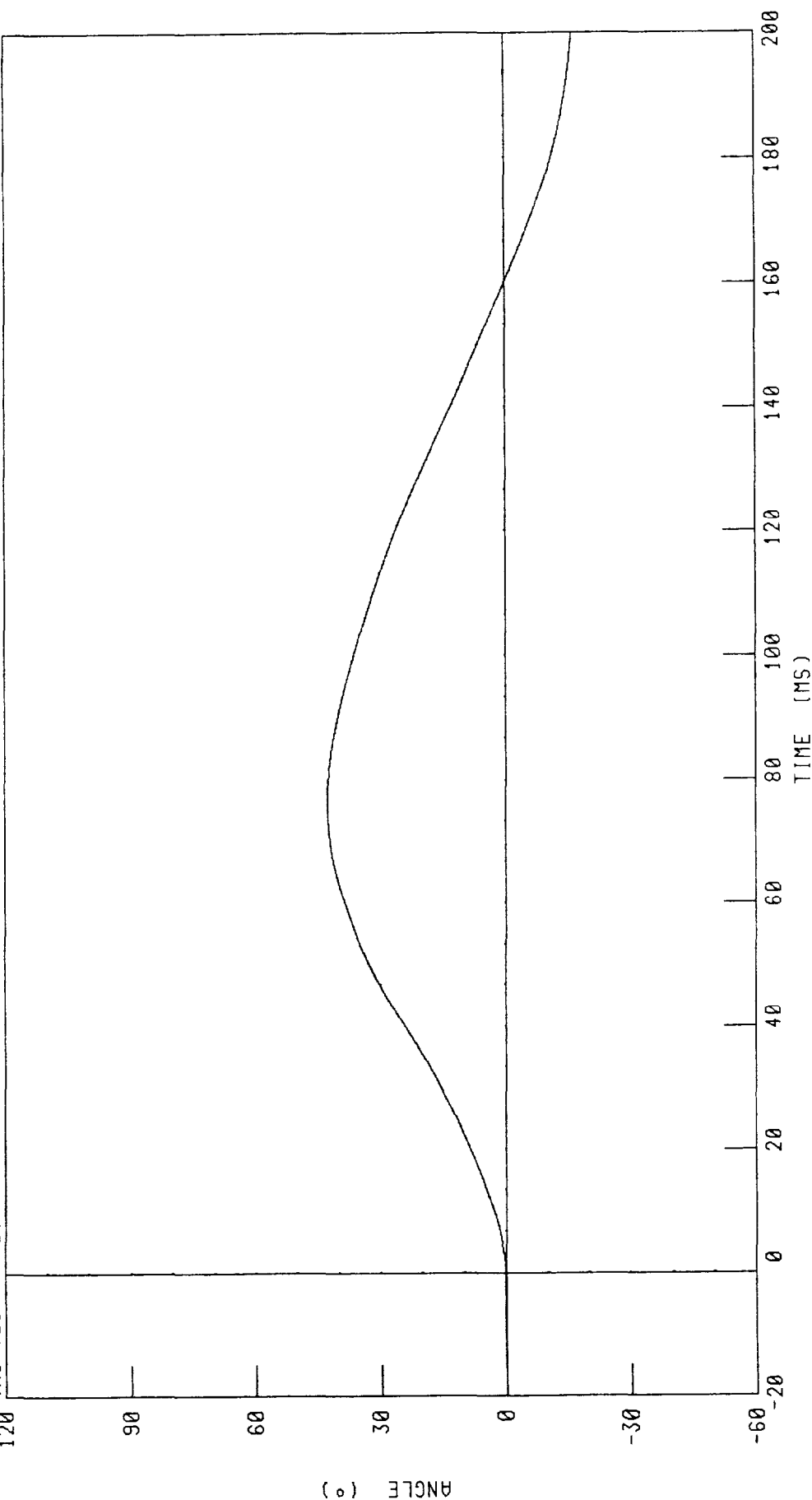
PART 572-E HYBRID III NECK EXTENSION CALIBRATION

ROTATION ABOUT BASE OF NECK

TRC TEST NUMBER 206C13NE1

572E SN206 NECK EXT CAL13

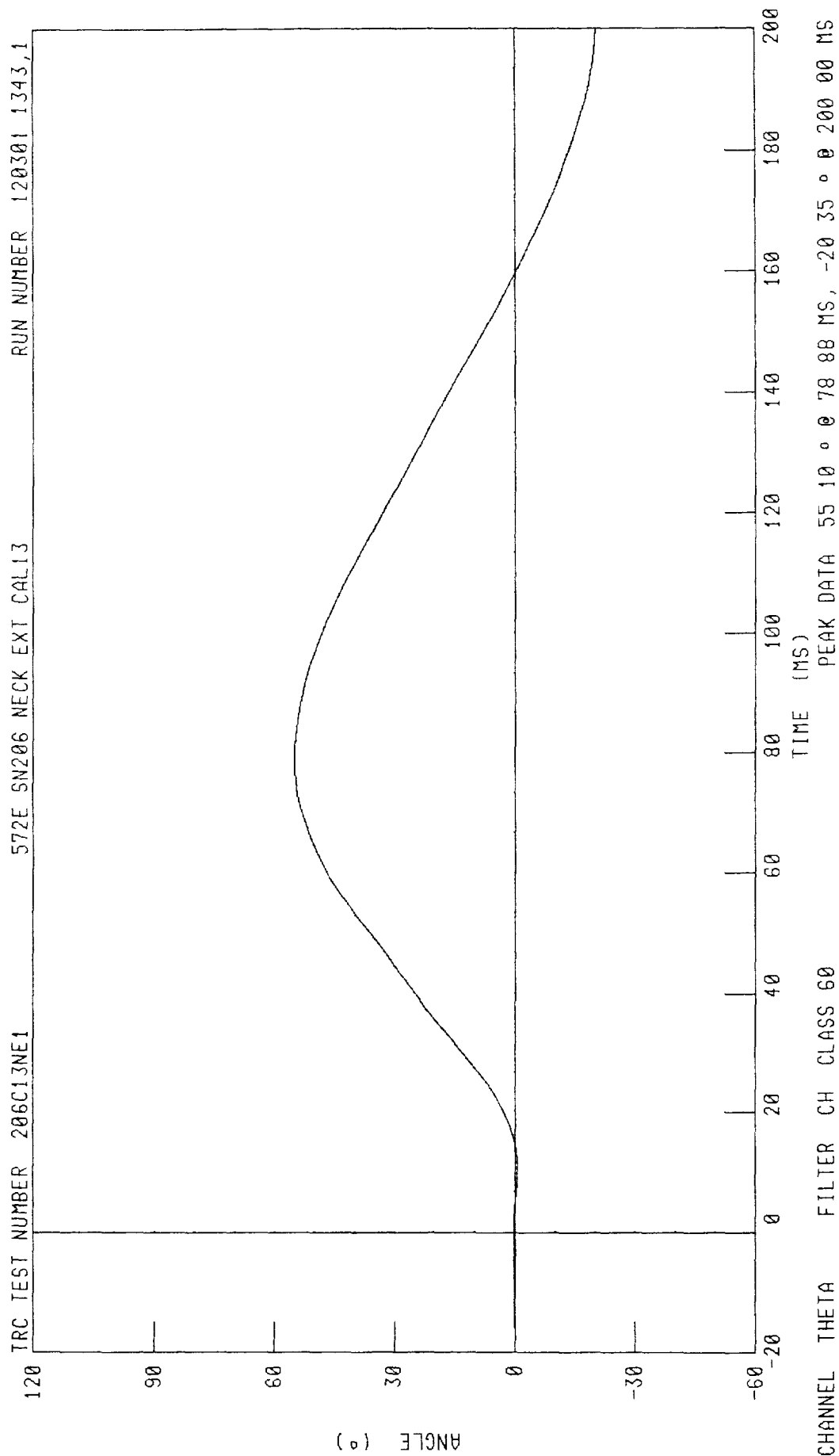
RUN NUMBER 120301 1343.1



PEAK DATA 42 71 ° @ 76 88 MS, -16 40 ° @ 200 00 MS

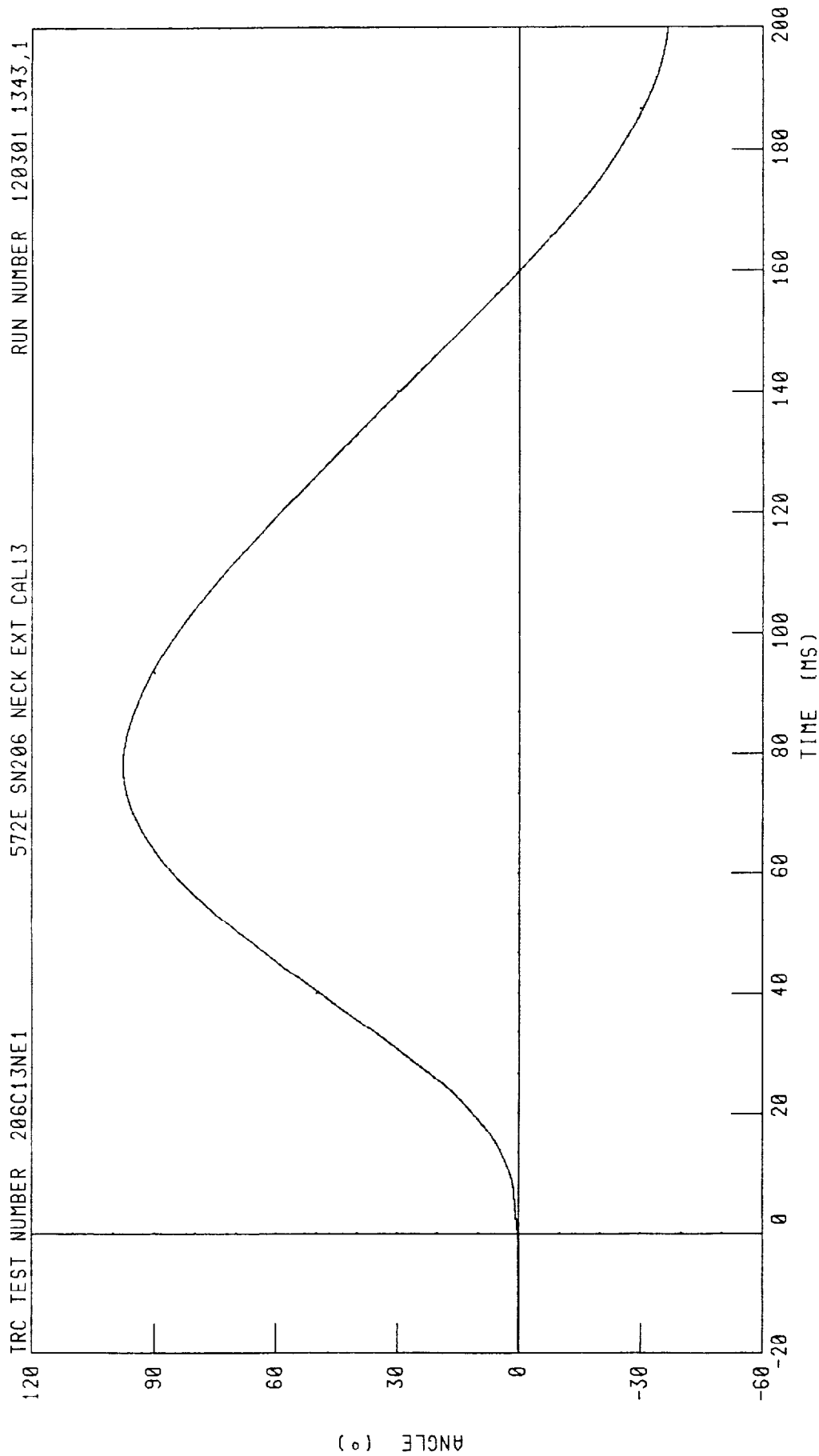
CHANNEL BETA FILTER CH CLASS 60

PART 572-E HYBRID III NECK EXTENSION CALIBRATION
ROTATION ABOUT OCCIPITAL CONDYLE



PART 572-E HYBRID III NECK EXTENSION CALIBRATION

TOTAL ROTATION



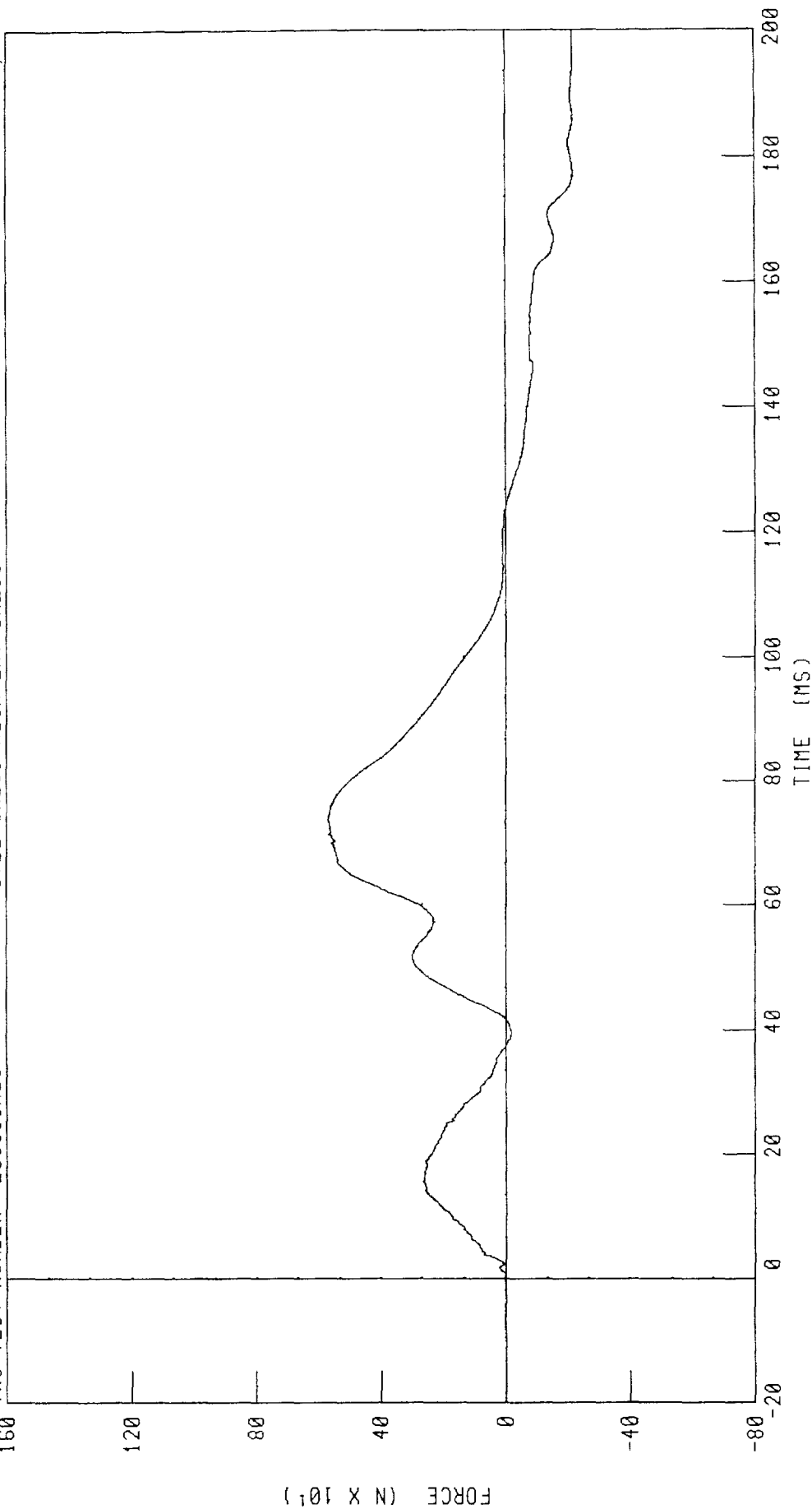
TRC TEST NUMBER 206C13NE1 572E SN206 NECK EXT CAL13 RUN NUMBER 120301 1343,1

CHANNEL TOTAL FILTER CH CLASS 60 PEAK DATA 97 77 ° @ 78 08 MS, -36 75 ° @ 200 00 MS

PART 572-E HYBRID III NECK EXTENSION CALIBRATION

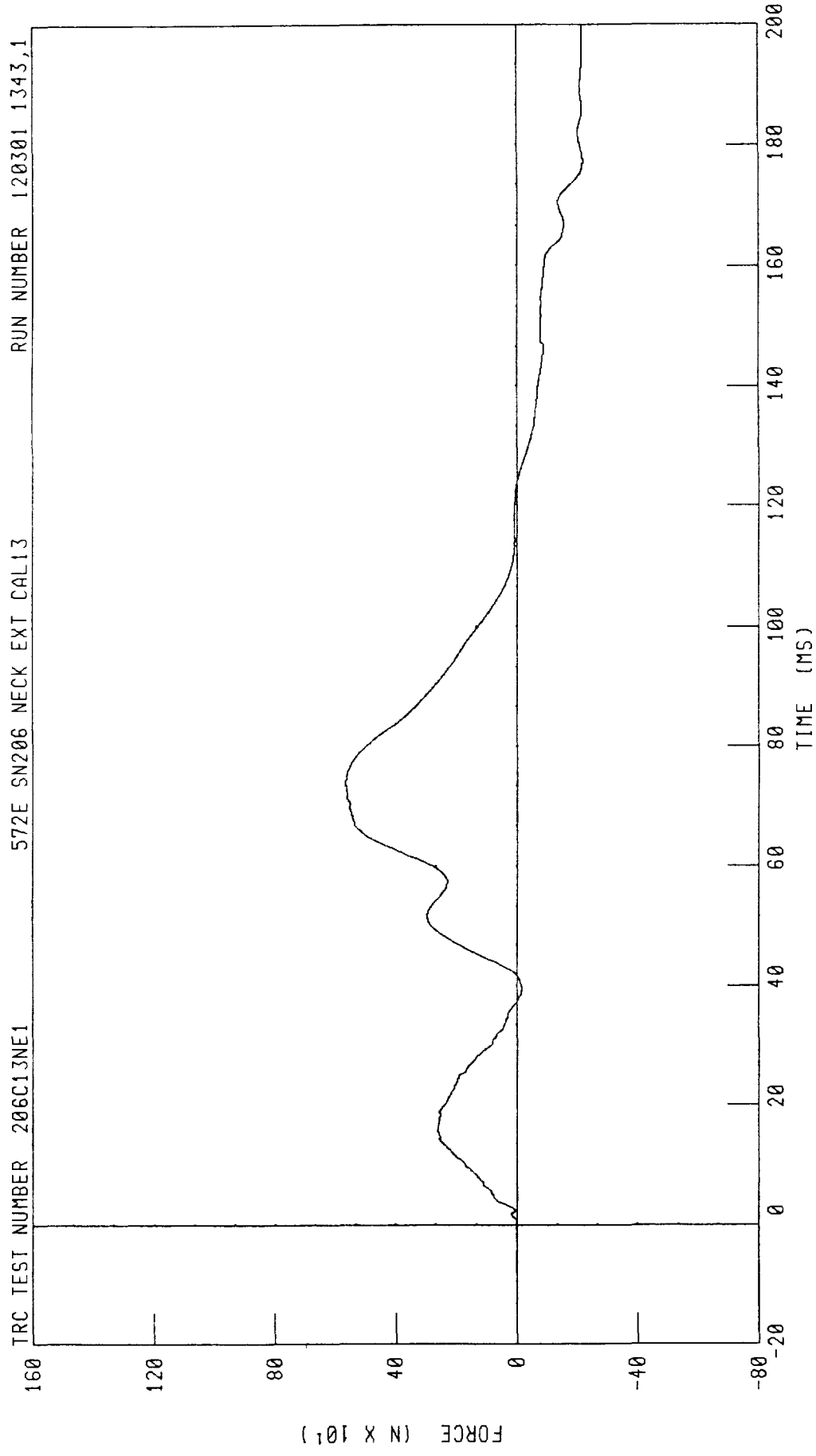
NECK FORCE X AXIS

TRC TEST NUMBER 206C13NE1 572E SN206 NECK EXT CAL13 RUN NUMBER 120301 1343,1



CHANNEL NEKXF FILTER CH CLASS 1000 PEAK DATA 567 62 N @ 73 68 MS, -220 22 N @ 177 52 MS

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



CHANNEL NEKXFC FILTER CH CLASS 600 PEAK DATA 567 15 N @ 73 76 MS, -219 91 N @ 177 44 MS

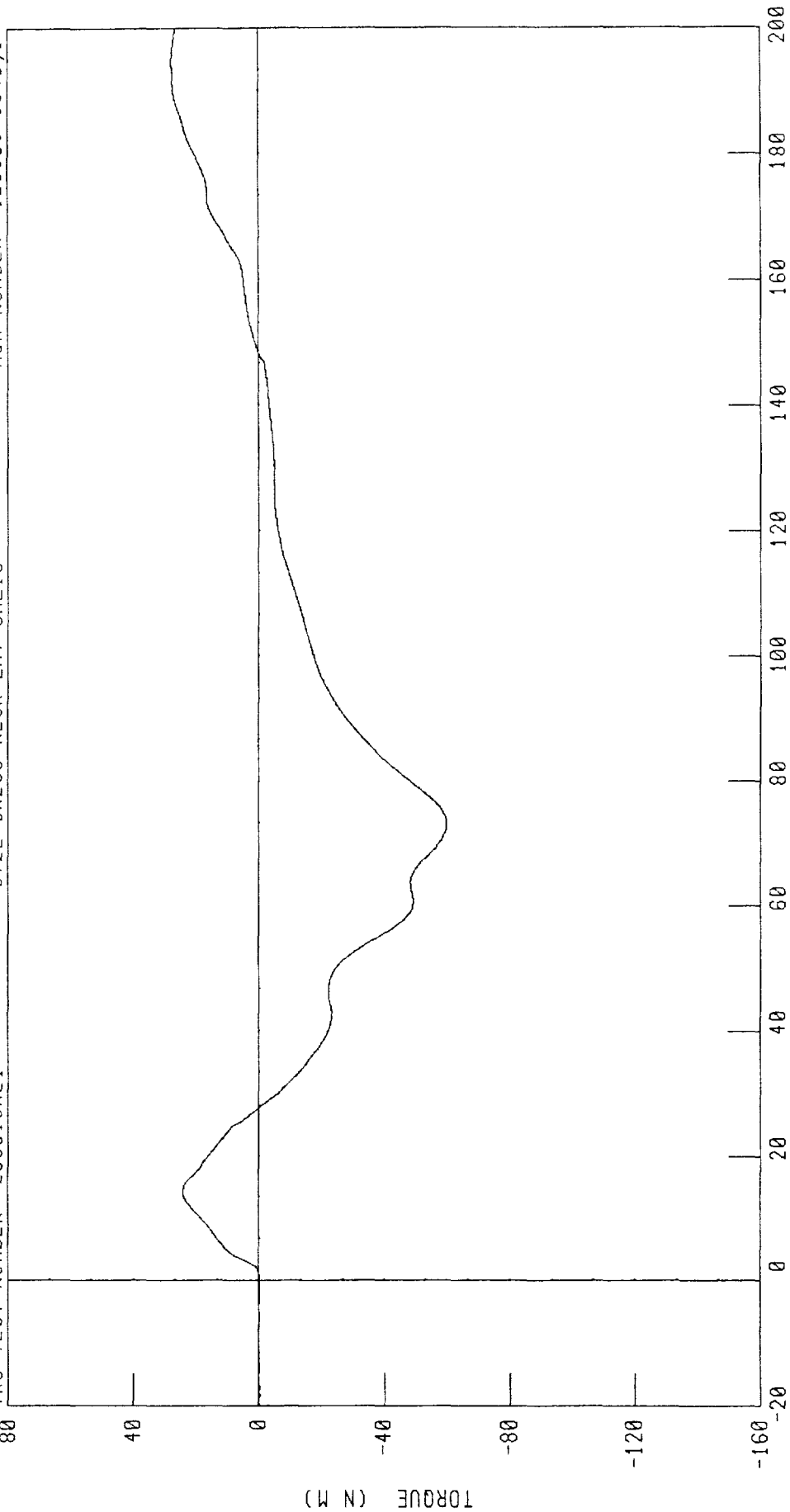
PART 572-E HYBRID III NECK EXTENSION CALIBRATION

NECK MOMENT Y AXIS

TRC TEST NUMBER 206C13NE1

572E SN206 NECK EXT CAL13

RUN NUMBER 120301 1343,1



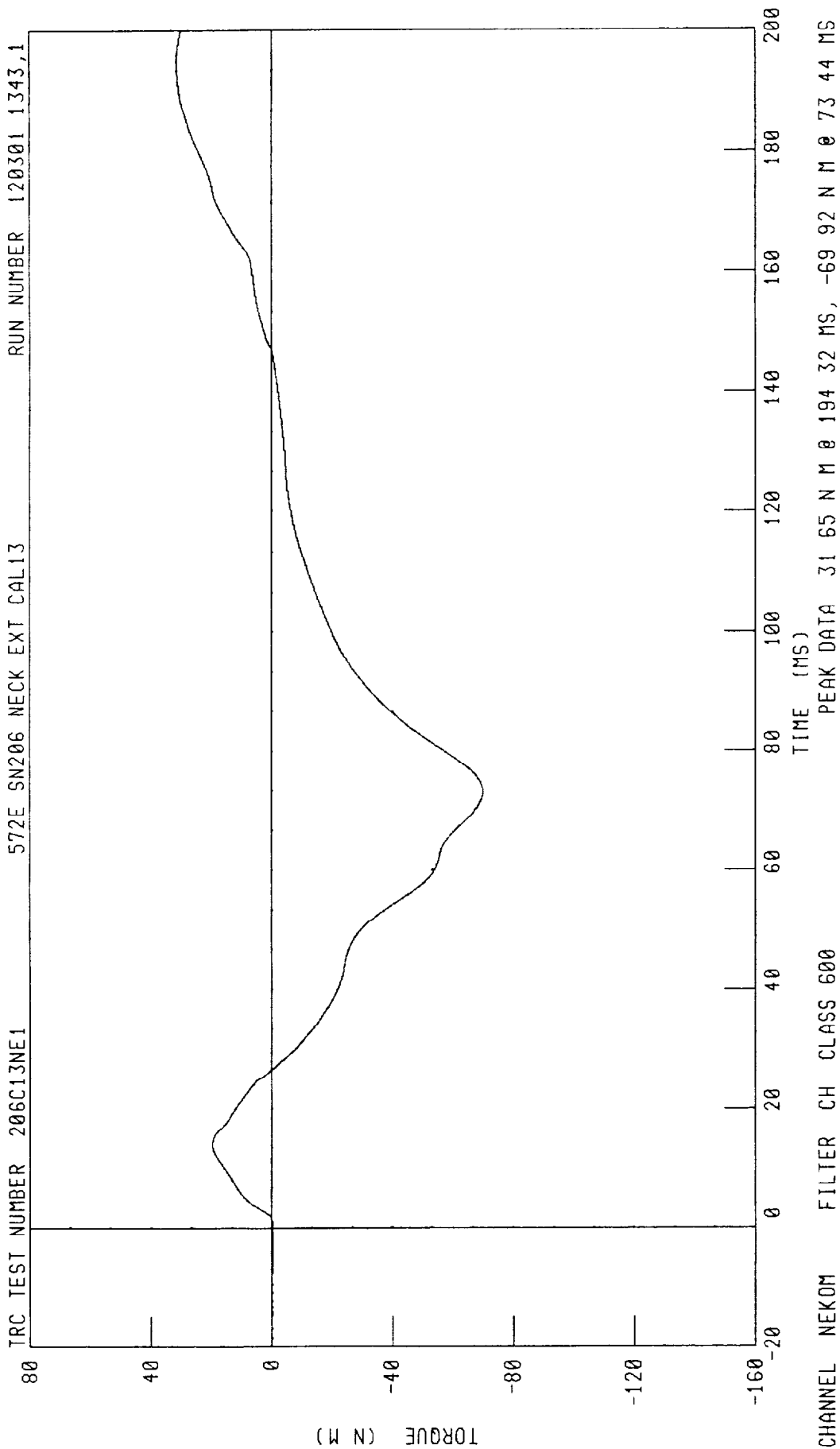
TIME (MS)

PEAK DATA 27 79 N M @ 194 32 MS, -59 88 N M @ 73 04 MS

CHANNEL NEKYM FILTER CH CLASS 600

PART 572-E HYBRID III NECK EXTENSION CALIBRATION

TOTAL MOMENT ABOUT OCCIPITAL CONDYLE



TRANSPORTATION RESEARCH CENTER INC.

THORAX IMPACT TEST

HYBRID III 50th

04-DEC-01

TRC INC.

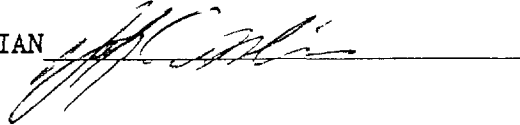
TEST NO: 206C13TH1

572E SN206 H.S.THORAX CAL13

TEST PARAMETER	HIGH SPEED TEST	TEST RESULTS
	SPECIFICATION	
TEMPERATURE	20.6-22.2 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	42.0 %
PENDULUM VELOCITY	6.59 - 6.83 M/S	6.65 M/S
MAXIMUM DEFLECTION	63.5 - 72.6 MM	66.1 MM
MAXIMUM RESISTIVE FORCE	5159 - 5894 N	5740. N
INTERNAL HYSTERESIS	69% - 85%	70.9%

TEST MEETS SPECIFICATIONS

TECHNICIAN



RUN NUMBER: 120401.1512;1

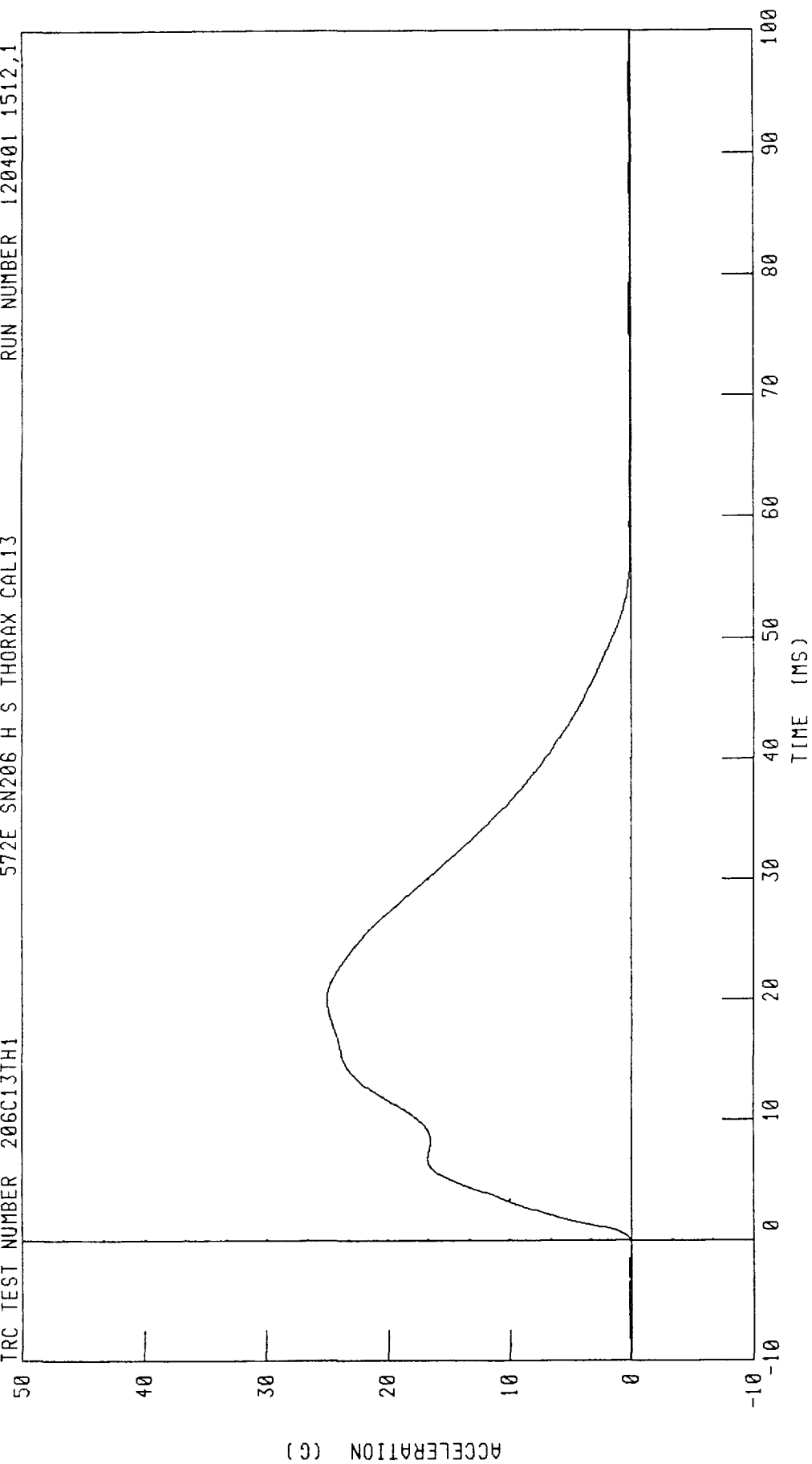
PART 572-E HYBRID III THORAX CALIBRATION

PENDULUM DECELERATION

TRC TEST NUMBER 206C13TH1

572E SN206 H S THORAX CAL13

RUN NUMBER 120401 1512,1

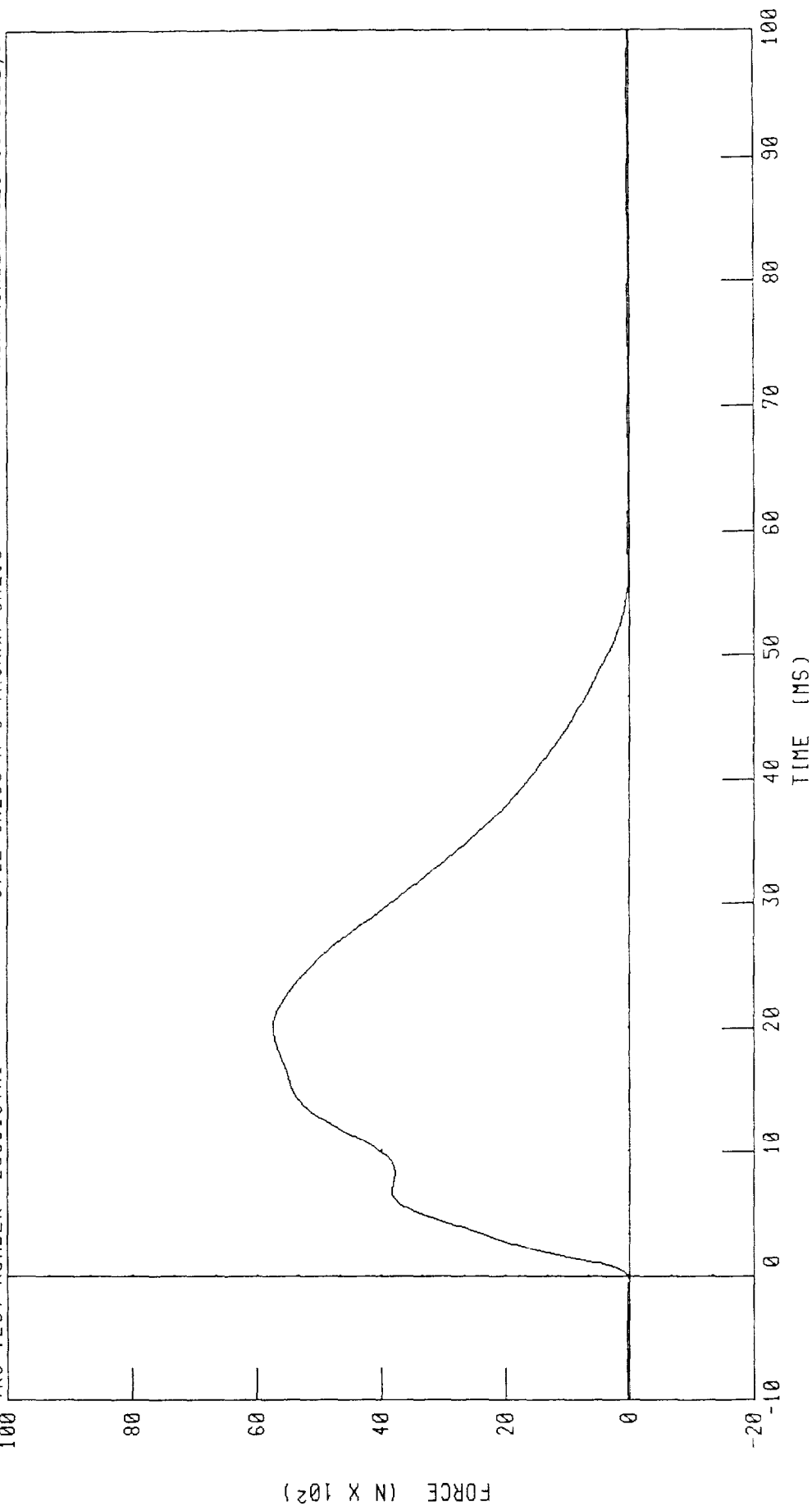


CHANNEL PENXC FILTER CH CLASS 180 PEAK DATA 25 06 G @ 20 00 MS, 0 02 G @ -0 40 MS

PART 572-E HYBRID III THORAX CALIBRATION

PENDULUM FORCE

TRC TEST NUMBER 206C13TH1 572E SN206 H S THORAX CAL13 RUN NUMBER 120401 1512,1



CHANNEL PENXF FILTER CH CLASS 180 PEAK DATA 5740 65 N @ 20 00 MS, 3 80 N @ -0 40 MS

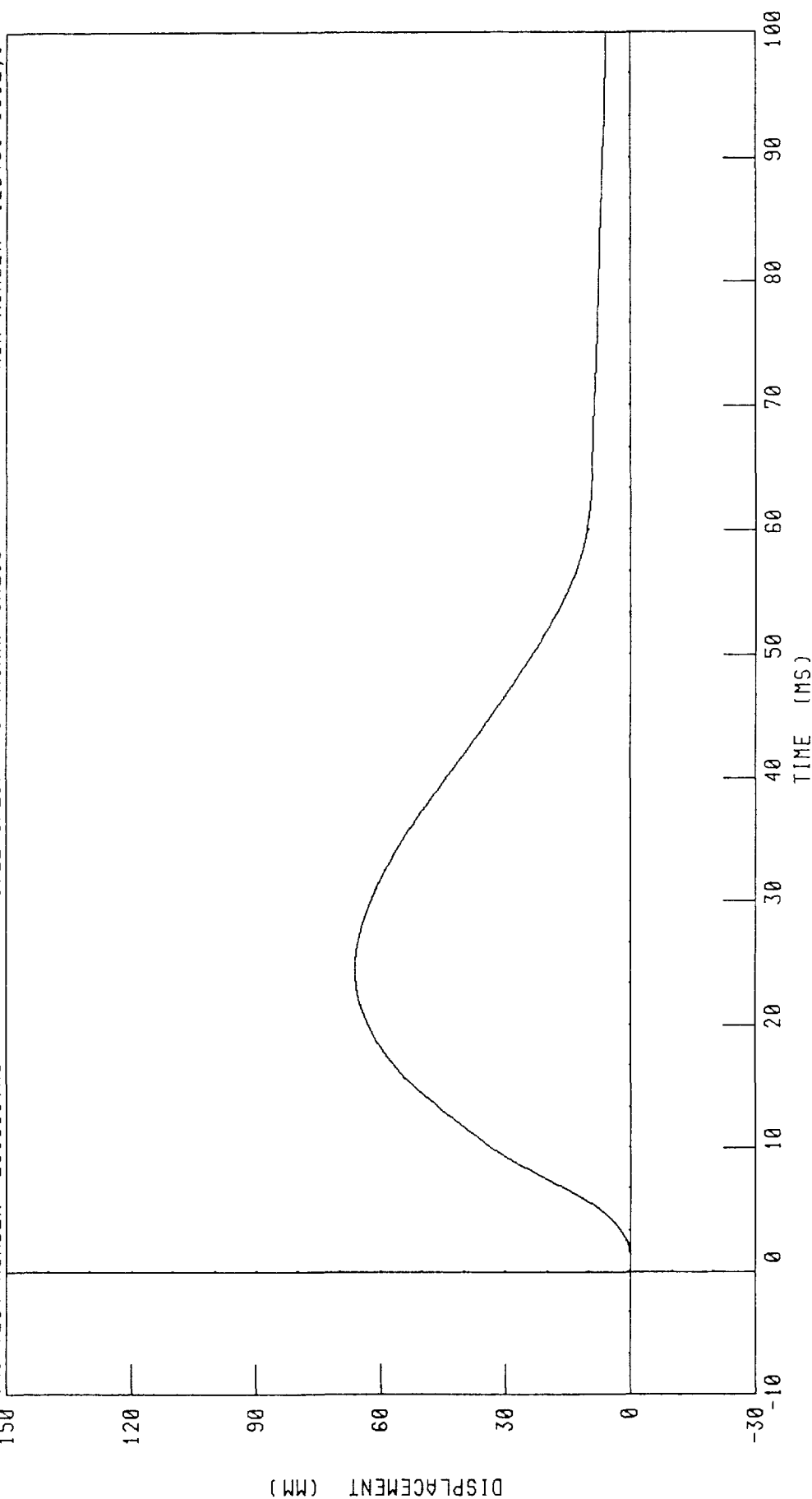
PART 572-E HYBRID [II] THORAX CALIBRATION

STERNUM DISPLACEMENT

TRC TEST NUMBER 206C13TH1

572E SN206 H S THORAX CAL13

RUN NUMBER 120401 1512,1



PEAK DATA 66 19 MM @ 24 64 MS, -0 02 MM @ 0 80 MS

CHANNEL CSTXD FILTER CH CLASS 180

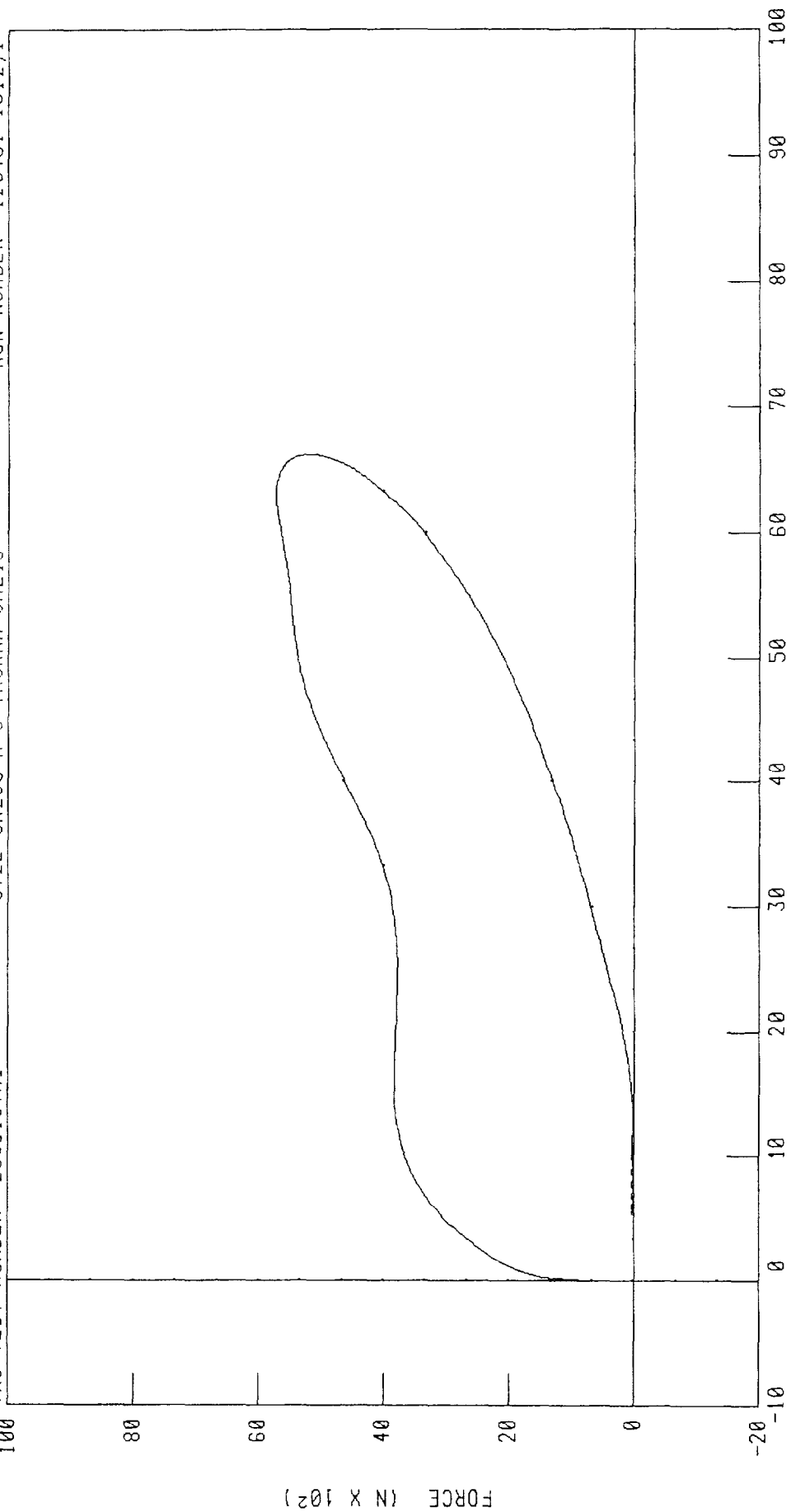
PART 572-E HYBRID III THORAX CALIBRATION

CHEST DISPLACEMENT VS PENDULUM FORCE

TRC TEST NUMBER 206C13TH1

572E SN206 H S THORAX CAL13

RUN NUMBER 120401 1512.1



CHANNEL CSTXD FILTER CH CLASS 180 DISPLACEMENT (MM) PEAK DATA 66 19 MM @ 24 64 MS, -0 02 MM @ 0 80 MS
 PENXF CH CLASS 180 5740 65 N @ 20 00 MS, 3 80 N @ -0 40 MS

Transportation Research Center Inc

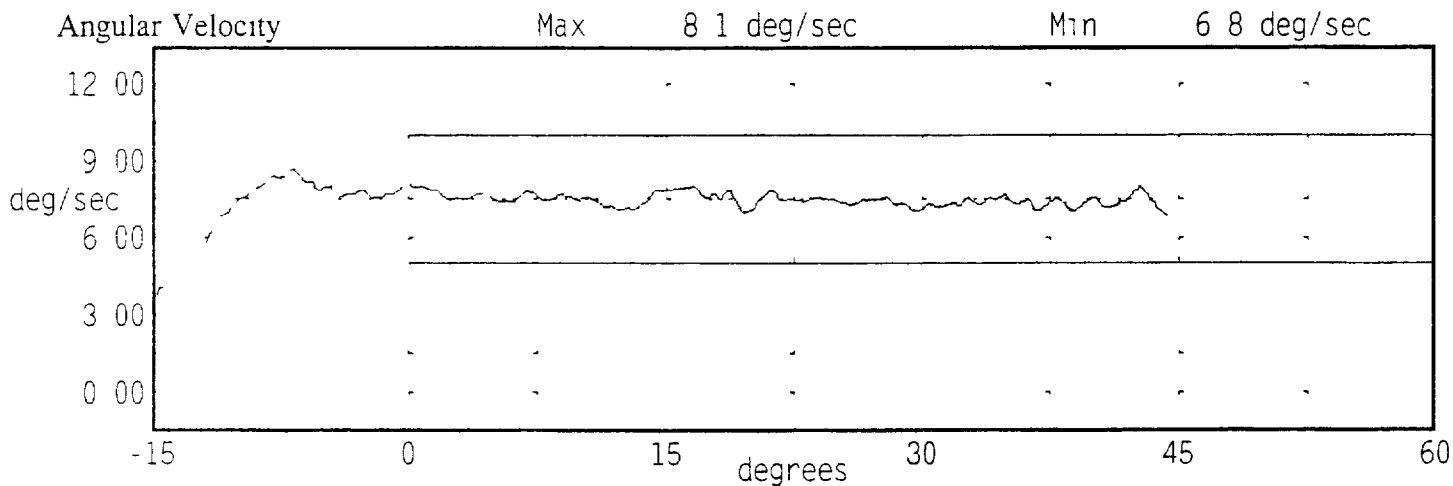
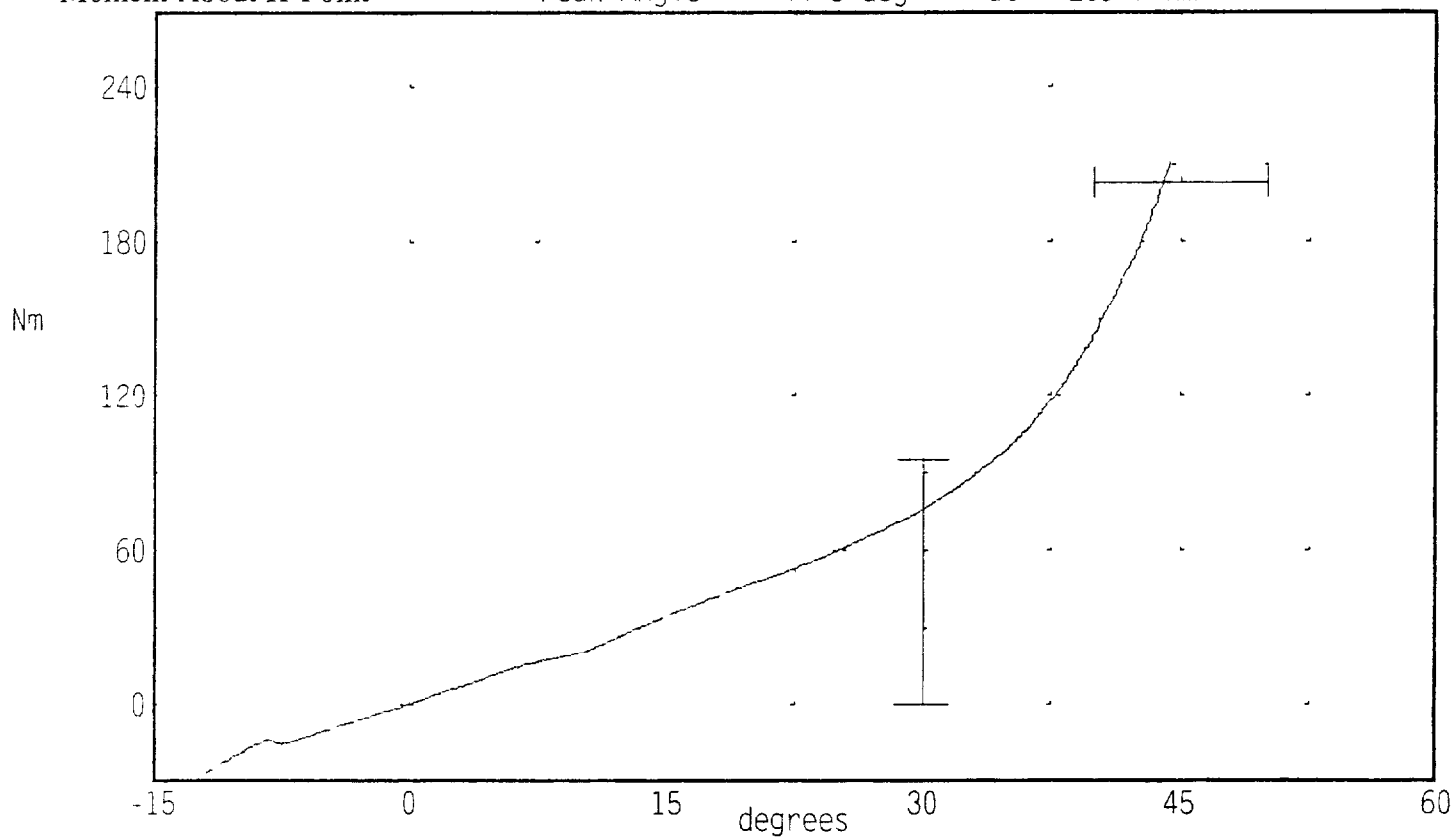
Hybrid III Hip Range of Motion

Serial Number 206L
Test Number 206C13
Comments

Date 11/30/2001
Time 08 59

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	18.9 - 25.6	21.7 °C Pass
Humidity	10 - 70	50 % Pass
Moment at 30 deg	<= 94.9	75.9 Nm Pass
Angle at 203 Nm	40.0 - 50.0	43.9 deg Pass
Average Velocity	5.0 - 10.0	7.5 deg/sec Pass

Moment About H-Point
Peak Moment 210.8 Nm at 44.3 deg
Peak Angle 44.3 deg at 209.7 Nm



Transportation Research Center Inc

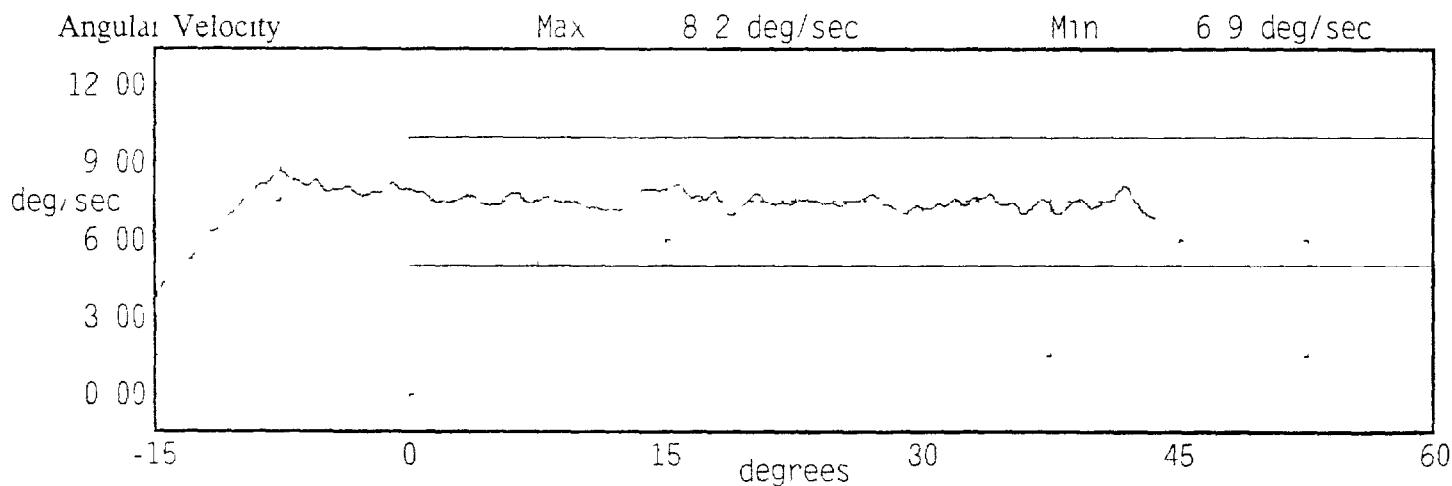
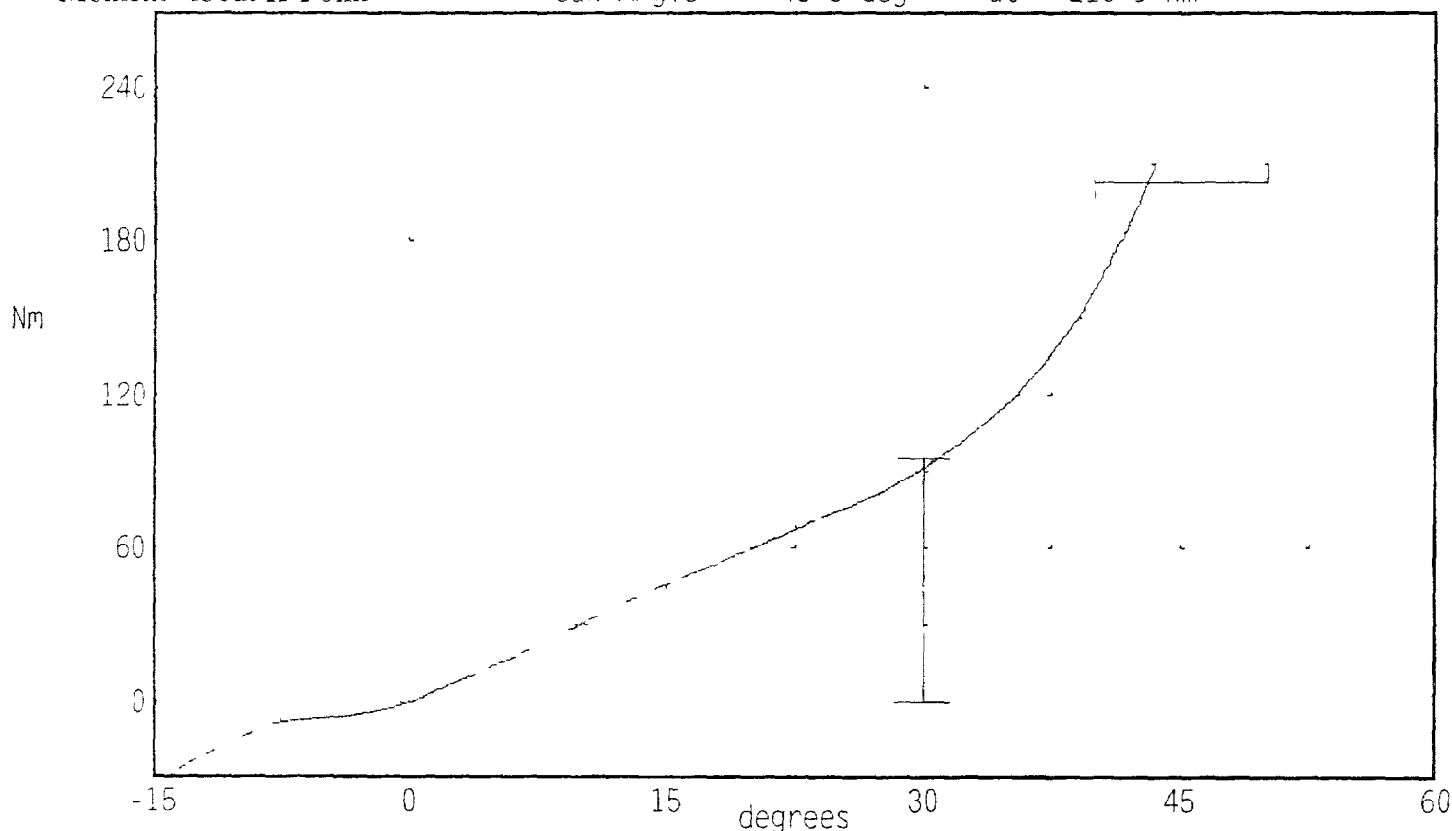
Hybrid III Hip Range of Motion

Serial Number 206R
Test Number 206C13
Comments

Date 11/30/2001
Time 09 10

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	18.9 - 25.6	21.7 °C Pass
Humidity	10 - 70	50 % Pass
Moment at 30 deg	<= 94.9	91.6 Nm Pass
Angle at 203 Nm	40.0 - 50.0	43.1 deg Pass
Average velocity	5.0 - 10.0	7.5 deg/sec Pass

Moment About H-Point
Peak Moment 210.9 Nm at 43.5 deg
Peak Angle 43.5 deg at 210.9 Nm



TRANSPORTATION RESEARCH CENTER INC.

LEFT KNEE IMPACT TEST

HYBRID III 50th

03-DEC-01

TRC INC.

TEST NO: 206C13LK1

572E SN206 LEFT KNEE CAL 13

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.1 DEG. C
RELATIVE HUMIDITY	10 - 70 %	28.0 %
PROBE VELOCITY	2.07 - 2.13 M/S	2.10 M/S
PEAK KNEE IMPACT FORCE 5.0 KG PENDULUM	4715 - 5782 N	5473.1 N

TEST MEETS SPECIFICATIONS

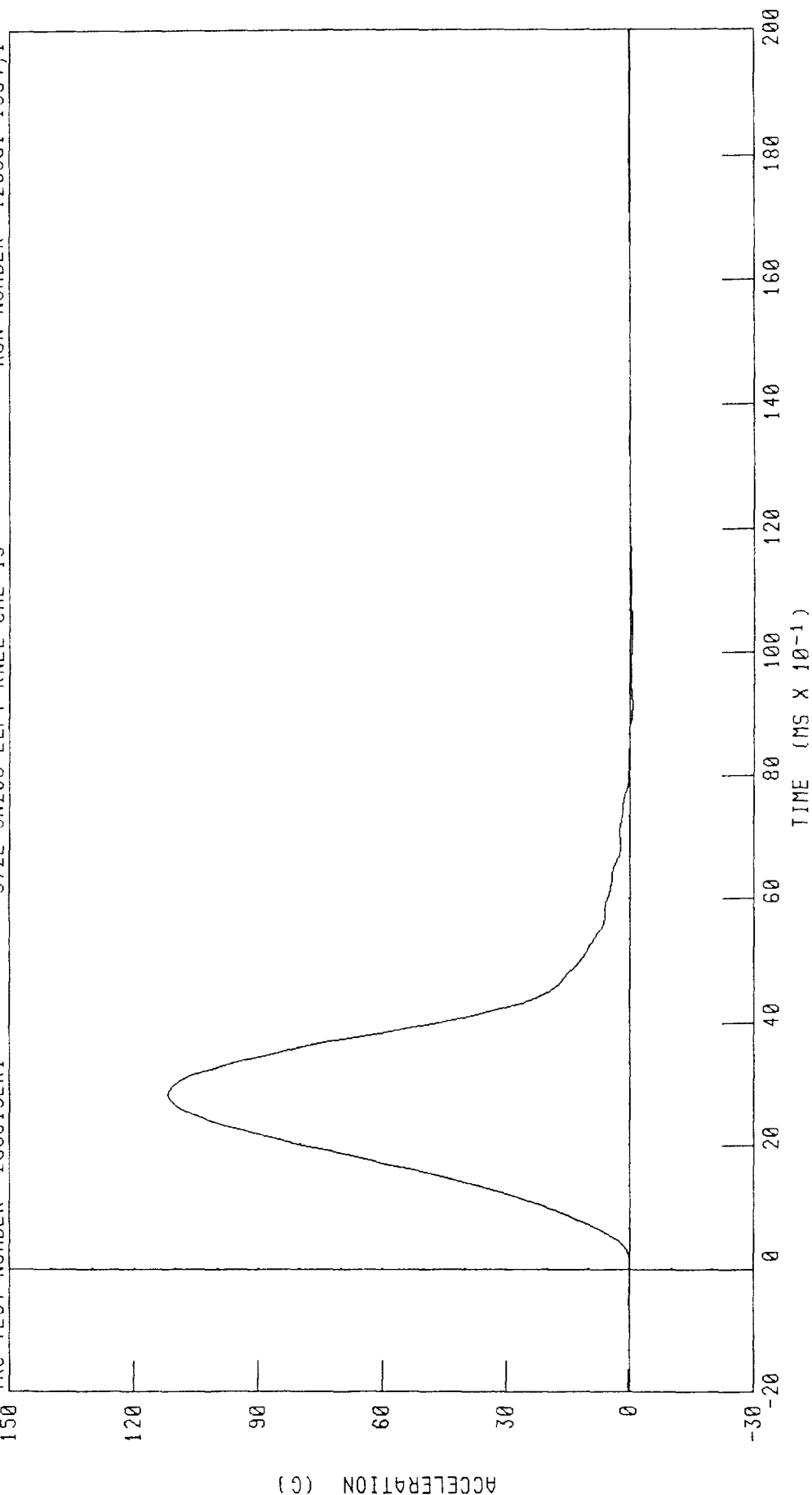
TECHNICIAN



RUN NUMBER: 120301.1353;1

PART 572-E HYBRID III LEFT KNEE CALIBRATION
PENDULUM DECELERATION (5 KG PEND)

TRC TEST NUMBER 206C13LK1 572E SN206 LEFT KNEE CAL 13 RUN NUMBER 120301 1354,1



CHANNEL PENXC FILTER CH CLASS 600 PEAK DATA 111 86 G 2 80 MS, -0 81 G 9 12 MS

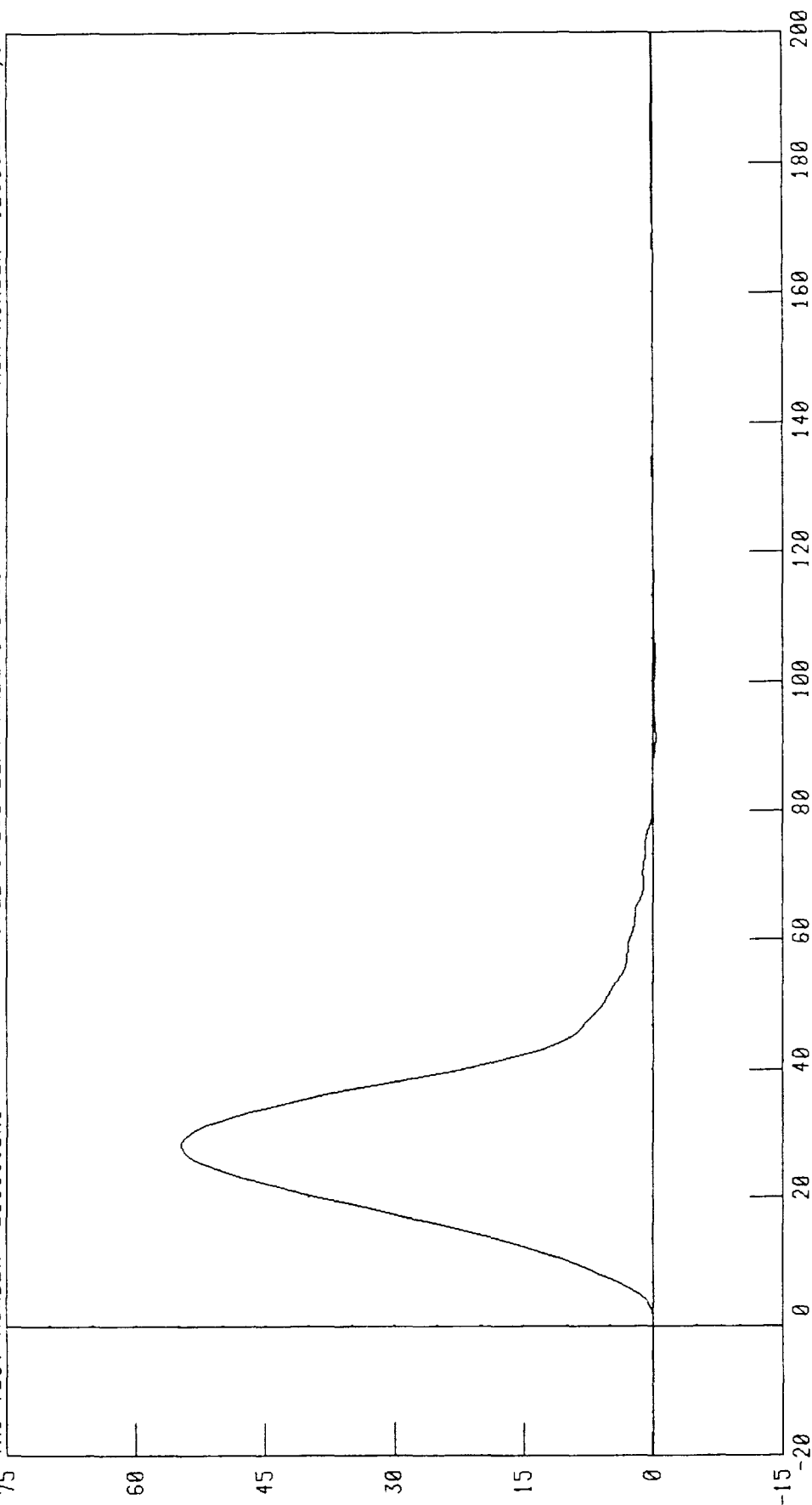
PART 572-E HYBRID III LEFT KNEE CALIBRATION

PENDULUM FORCE (5 KG PEND)

TRC TEST NUMBER 206C13LK1

572E SN206 LEFT KNEE CAL 13

RUN NUMBER 120301 1354,1



TIME (MS X 10⁻¹)

CHANNEL PENXF

FILTER CH CLASS 600

PEAK DATA 5473 19 N 0 2 80 MS, -39 74 N 0 9 12 MS

TRANSPORTATION RESEARCH CENTER INC.

RIGHT KNEE IMPACT TEST

HYBRID III 50th

03-DEC-01

TRC INC.

TEST NO: 206C13RK1

572E SN206 RIGHT KNEE CAL 13

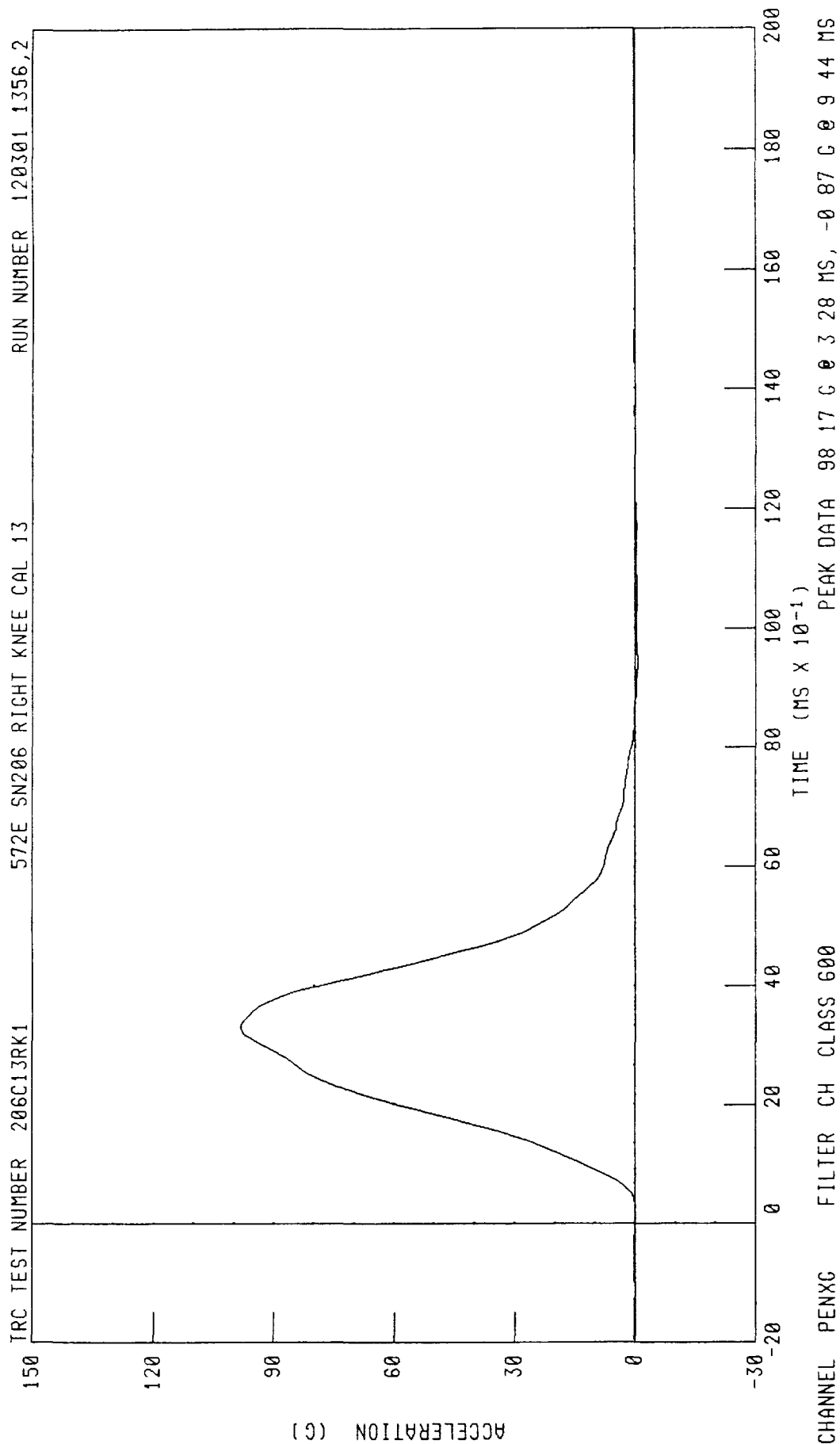
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.1 DEG. C
RELATIVE HUMIDITY	10 - 70 %	33.0 %
PROBE VELOCITY	2.07 - 2.13 M/S	2.11 M/S
PEAK KNEE IMPACT FORCE 5.0 KG PENDULUM	4715 - 5782 N	4803.1 N

TEST MEETS SPECIFICATIONS

TECHNICIAN *[Signature]*

RUN NUMBER: 120301.1356;2

PART 572-E HYBRID III RIGHT KNEE CALIBRATION
PENDULUM DECELERATION (5 KG PEND)



PART 572-E HYBRID III RIGHT KNEE CALIBRATION

PENDULUM FORCE (5 KG PEND)

572E SN206 RIGHT KNEE CAL 13

TRC TEST NUMBER 206C13RK1

75

60

45

30

15

0

-15

-20

0

20

40

60

80

100

120

140

160

180

200

200

1356,2

120301

RUN NUMBER

FORCE (N X 10²)

TIME (MS X 10⁻¹)

PEAK DATA 4803 13 N 0 3 28 MS, -42 48 N 0 9 44 MS

CHANNEL PENXF FILTER CH CLASS 600

TRANSPORTATION RESEARCH CENTER INC.

KNEE SLIDER TEST

HYBRID III 50th

04-DEC-01

LEFT KNEE

TRC INC.

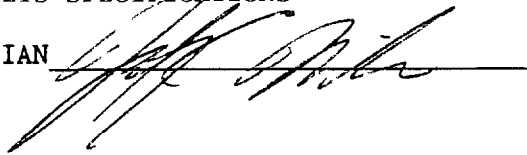
TEST NO: 206C13LS1

572E SN206 LEFT SLIDER CAL 13

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	43.0 %
PENDULUM VELOCITY	2.70-2.80 M/S	2.75 M/S
FORCE AT 10.0 MM DISPLACEMENT	1259 - 1721 N	1341. N
FORCE AT 18.0 MM DISPLACEMENT	2268 - 3096 N	2448. N

TEST MEETS SPECIFICATIONS

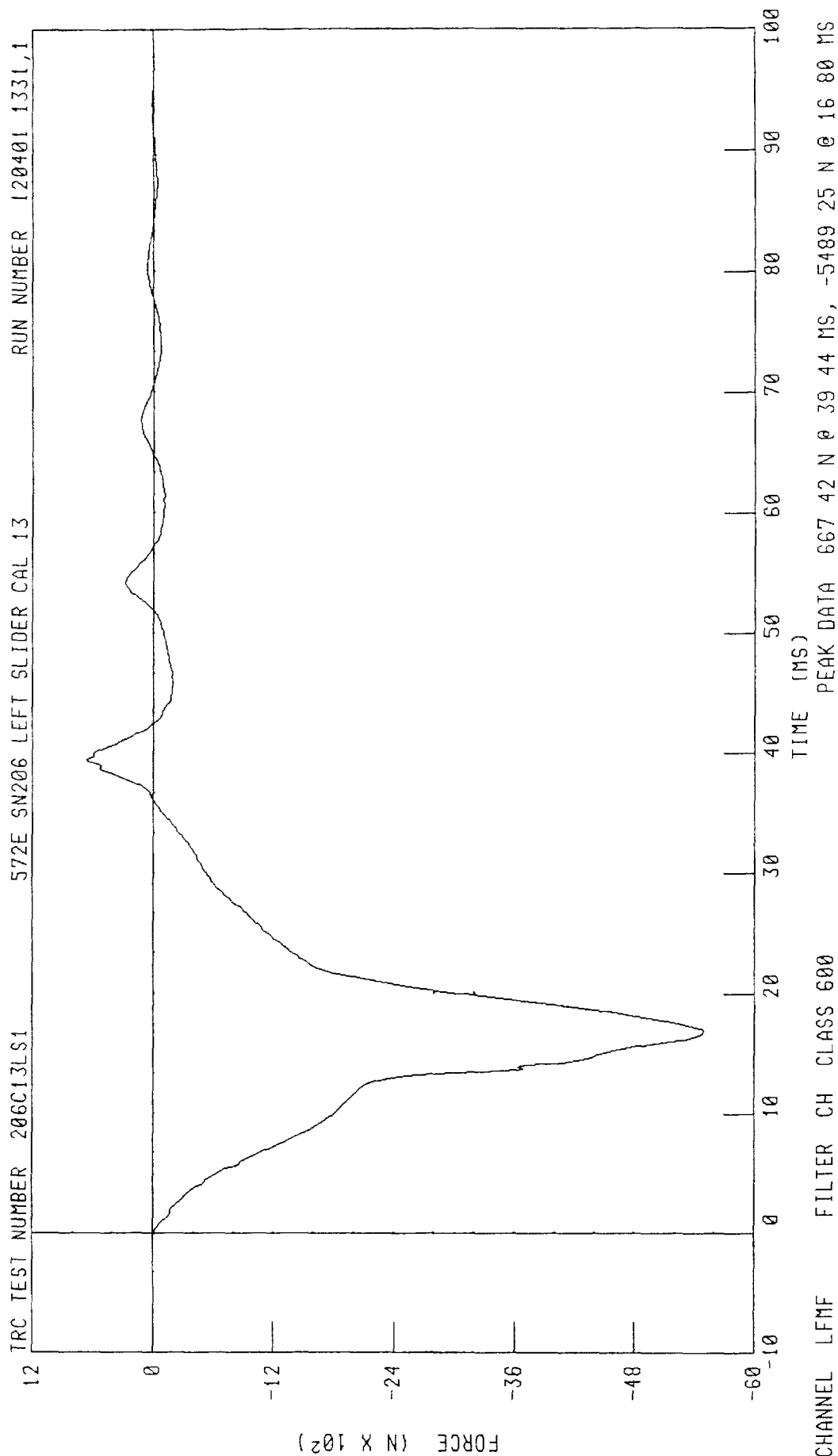
TECHNICIAN



RUN NUMBER: 120401.1330;1

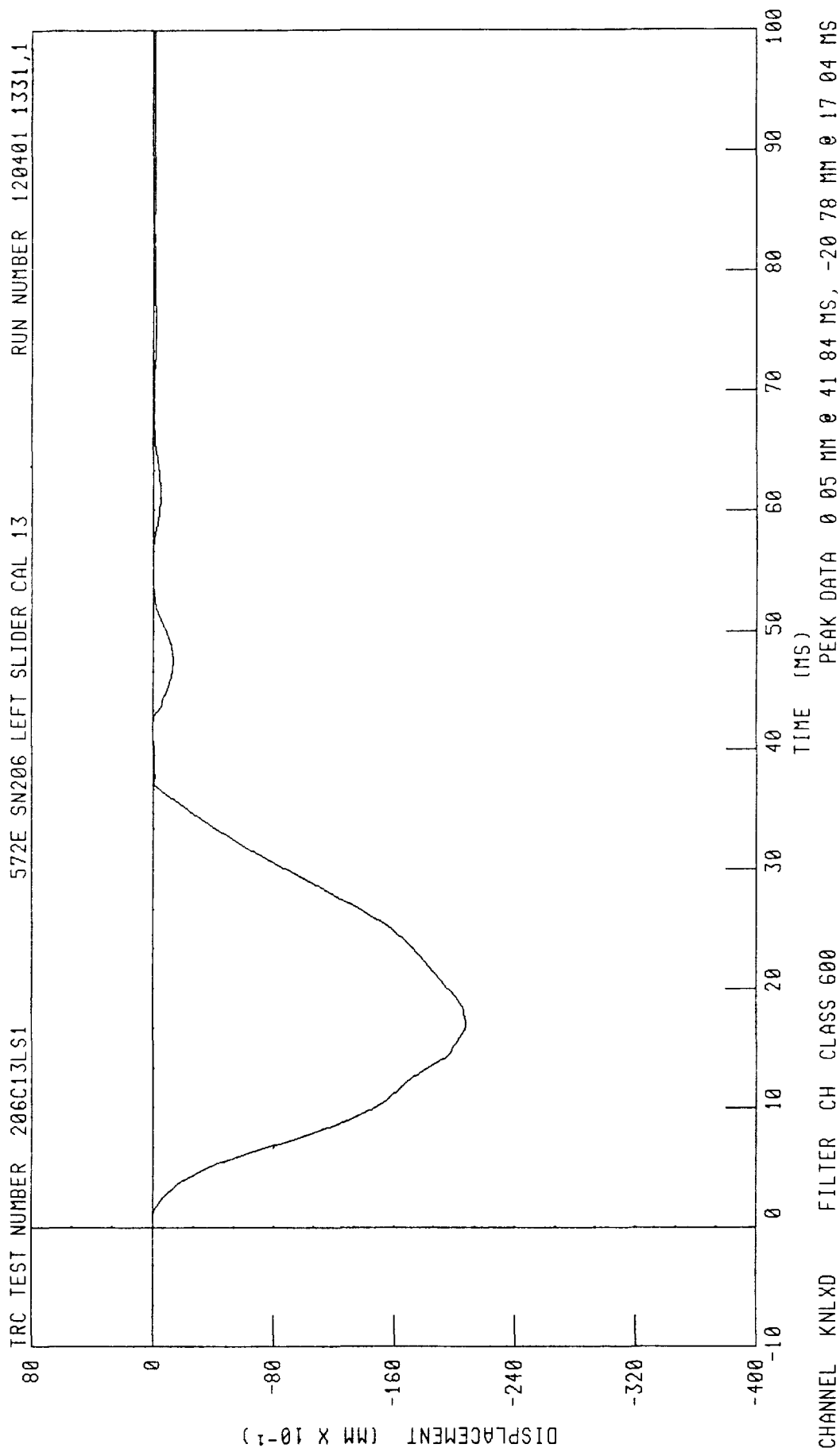
PART 572-E HYBRID III LEFT KNEE SLIDER CALIBRATION

LEFT FEMUR FORCE



PART 572-E HYBRID III LEFT KNEE SLIDER CALIBRATION

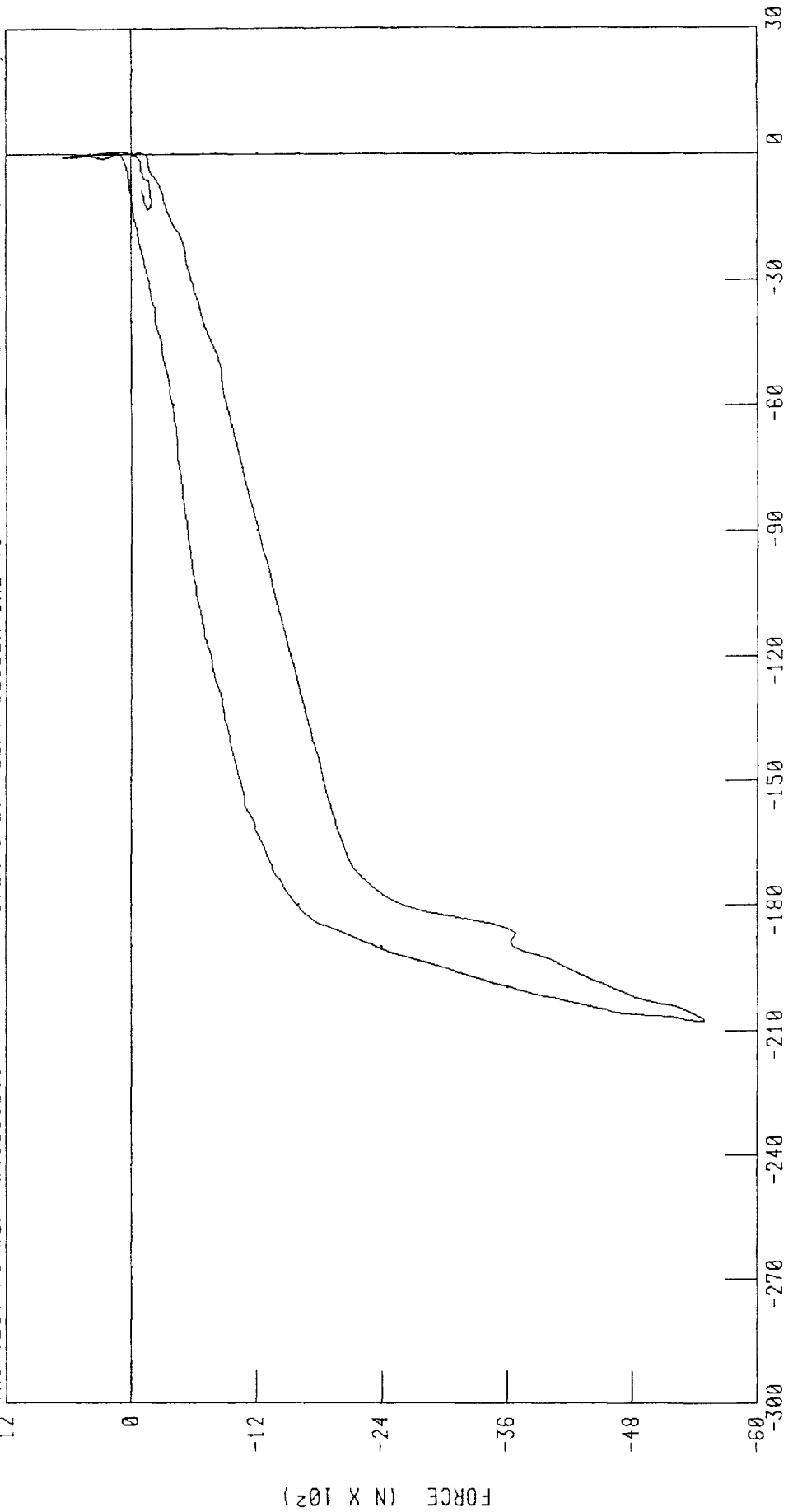
LEFT KNEE DISPLACEMENT



PART 572-E HYBRID III LEFT KNEE SLIDER CALIBRATION

LEFT KNEE DISPLACEMENT VS FEMUR FORCE

TRC TEST NUMBER 206C13LS1 572E SN206 LEFT SLIDER CAL 13 RUN NUMBER 120401 1331,1



DISPLACEMENT (MM X 10⁻¹)

CHANNEL KNLXD LFMF FILTER CH CLASS 600 CH CLASS 600 PEAK DATA 0 05 MM 0 41 84 MS, -20 78 MM 0 17 04 MS 667 42 N 0 39 44 MS, -5489 25 N 0 16 80 MS

TRANSPORTATION RESEARCH CENTER INC.

KNEE SLIDER TEST

HYBRID III 50th

04-DEC-01

RIGHT KNEE

TRC INC.

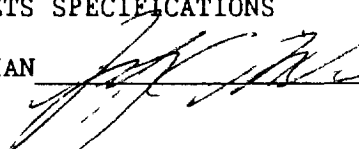
TEST NO: 206C13RS1

572E SN206 RIGHT SLIDER CAL 13

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	43.0 %
PENDULUM VELOCITY	2.70-2.80 M/S	2.75 M/S
FORCE AT 10.0 MM DISPLACEMENT	1259 - 1721 N	1488. N
FORCE AT 18.0 MM DISPLACEMENT	2268 - 3096 N	2599. N

TEST MEETS SPECIFICATIONS

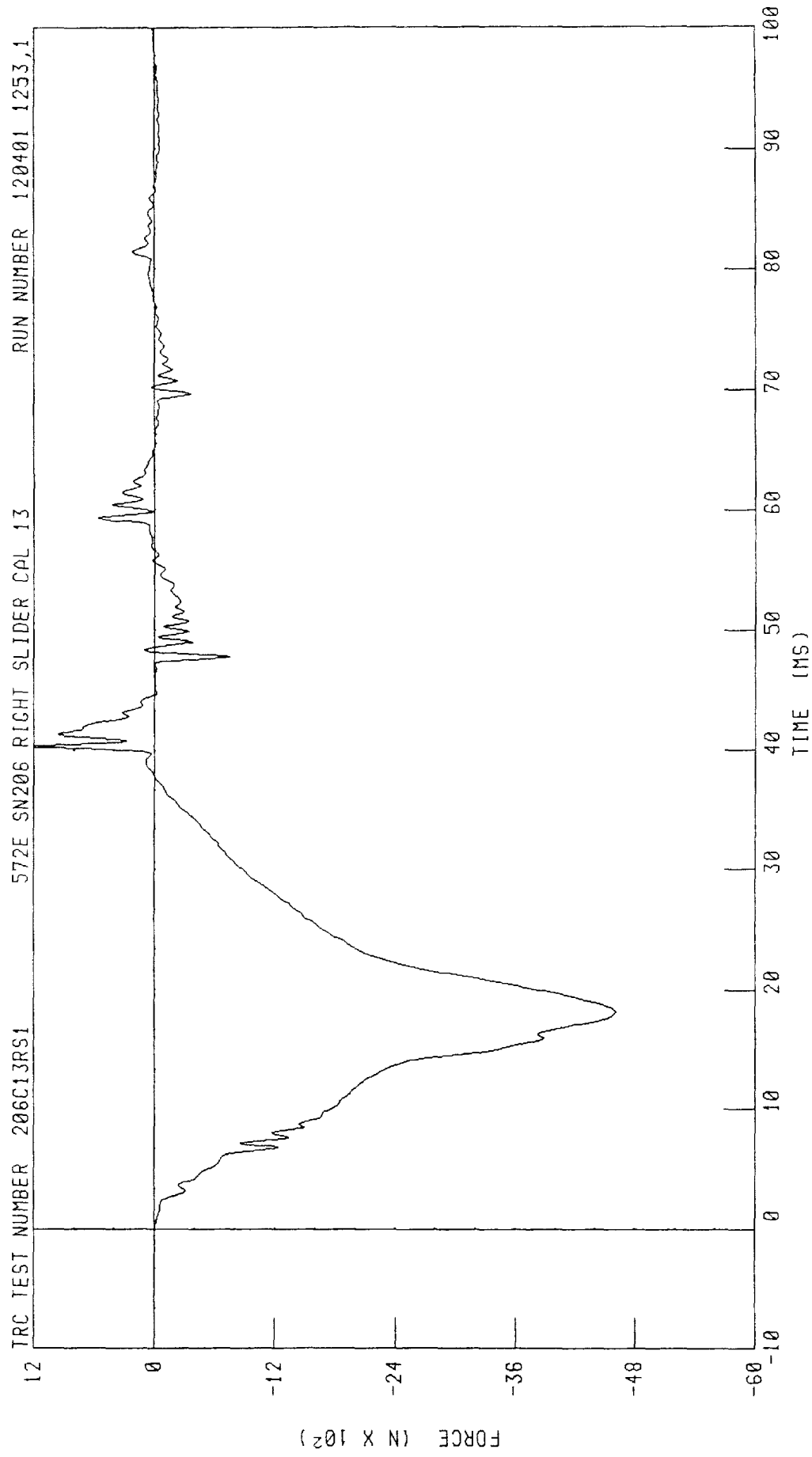
TECHNICIAN



RUN NUMBER: 120401.1252;1

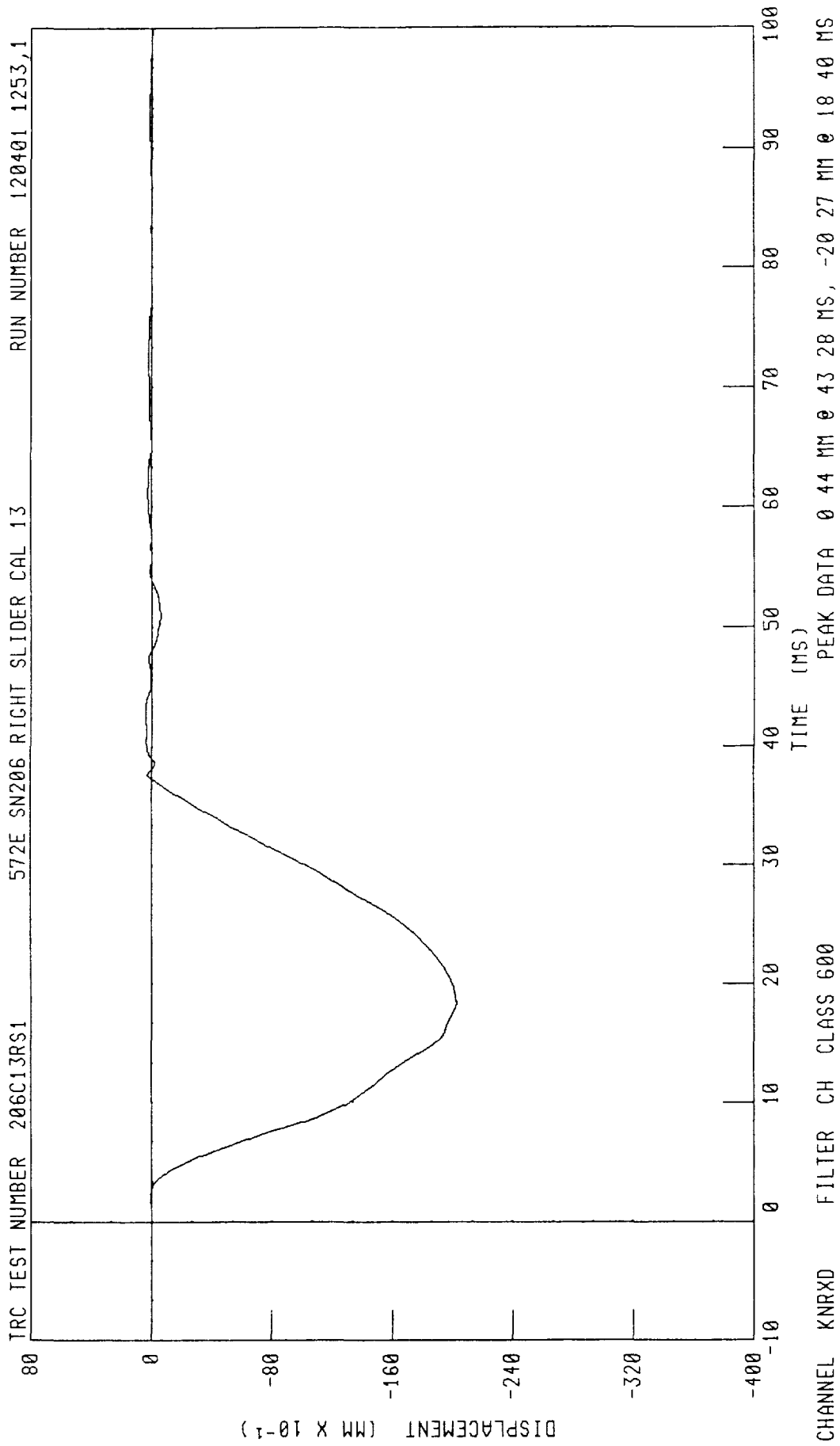
PART 572-E HYBRID III RIGHT KNEE SLIDER CALIBRATION

RIGHT FEMUR FORCE

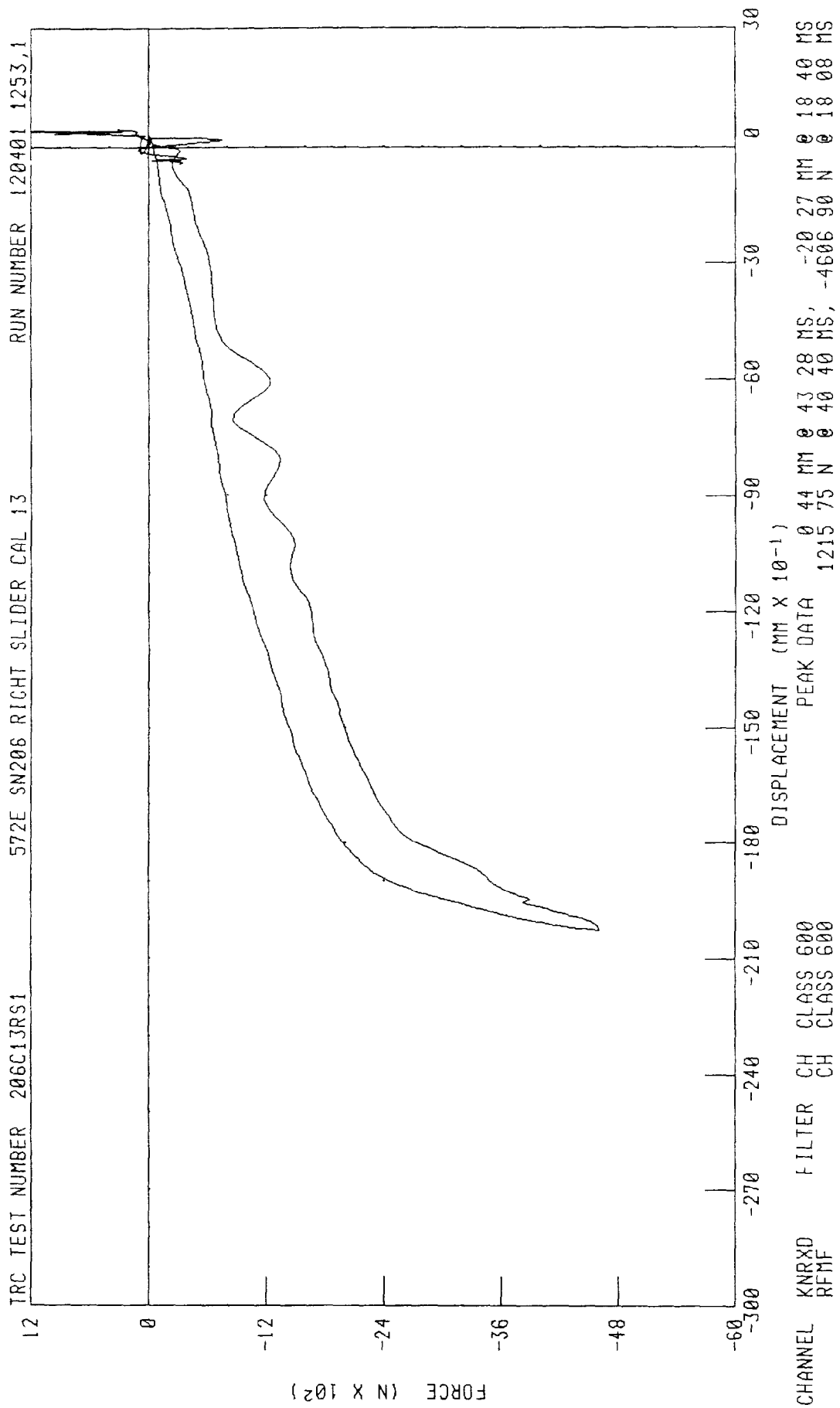


CHANNEL RFMF FILTER CH CLASS 600 PEAK DATA 1215 75 N @ 40 40 MS, -4606 90 N @ 18 08 MS

PART 572-E HYBRID III RIGHT KNEE SLIDER CALIBRATION
RIGHT KNEE DISPLACEMENT



PART 572-E HYBRID III RIGHT KNEE SLIDER CALIBRATION
 RIGHT KNEE DISPLACEMENT VS FEMUR FORCE



Post-Test Dummy Configuration and Performance Verification Data

Passenger Dummy S/N: 202

TRANSPORTATION RESEARCH CENTER INC.
HYBRID III EXTERNAL DIMENSIONS

202

05-DEC-01

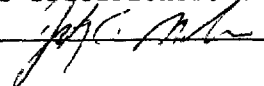
TRC INC. TEST NO: 202C14ED1 572E SN202 EXT.DIMENSION CAL14

TEST PARAMETER	(DIMEN.)	SPECIFICATION	TEST RESULTS
LOCATION FOR CHEST CIRCUMFERENCE (AA)		429 - 434 MM	432. MM
LOCATION FOR WAIST CIRCUMFERENCE (BB)		226 - 231 MM	229. MM
CHEST CIRCUMFERENCE (Y)		970 -1001 MM	993. MM
WAIST CIRCUMFERENCE (Z)		836 - 866 MM	856. MM
CHEST DEPTH (O)		213 - 229 MM	224. MM
H-POINT HEIGHT (C)		84 - 89 MM	86. MM
H-POINT FROM SEATBACK (D)		135 - 140 MM	137. MM
SKULL CAP TO BACKLINE (H)		41 - 46 MM	43. MM
TOTAL SITTING HEIGHT (A)		879 - 889 MM	886. MM
THIGH CLEARANCE (F)		140 - 155 MM	147. MM
BUTTOCK KNEE LENGTH (K)		579 - 605 MM	597. MM
BUTTOCK POPLITEAL LENGTH (N)		452 - 478 MM	470. MM
POPLITEAL HEIGHT (L)		429 - 455 MM	447. MM
KNEE PIVOT HEIGHT (M)		485 - 500 MM	495. MM
FOOT LENGTH (P)		252 - 267 MM	254. MM
FOOT BREADTH (W)		91 - 107 MM	102. MM
SHOULDER PIVOT FROM BACKLINE (E)		84 - 94 MM	91. MM
SHOULDER BREADTH (V)		422 - 437 MM	434. MM
SHOULDER PIVOT HEIGHT (B)		506 - 521 MM	516. MM
ELBOW REST HEIGHT (J)		191 - 211 MM	206. MM
SHOULDER-ELBOW LENGTH (I)		330 - 345 MM	330. MM
BACK OF ELBOW TO WRIST PIVOT (G)		290 - 305 MM	297. MM

572E SN202 EXT.DIMENSION CAL14

DUMMY MEETS SPECIFICATIONS

TECHNICIAN



RUN NUMBER: 120501.0922

TRANSPORTATION RESEARCH CENTER INC.

HEAD DROP TEST

HYBRID III 50th

29-NOV-01

TRC INC.

TEST NO: 202C14HD1

572E SN202 HEAD DROP CAL 14

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.1 DEG. C
RELATIVE HUMIDITY	10 - 70 %	60.0 %
PEAK RESULTANT ACCELERATION	225 - 275 G	245.26 G
PEAK LATERAL ACCELERATION	15 G MAX	2.85 G
IS ACCELERATION CURVE UNIMODAL?	YES	YES

TEST MEETS SPECIFICATIONS

TECHNICIAN



RUN NUMBER: 112901.1645;1

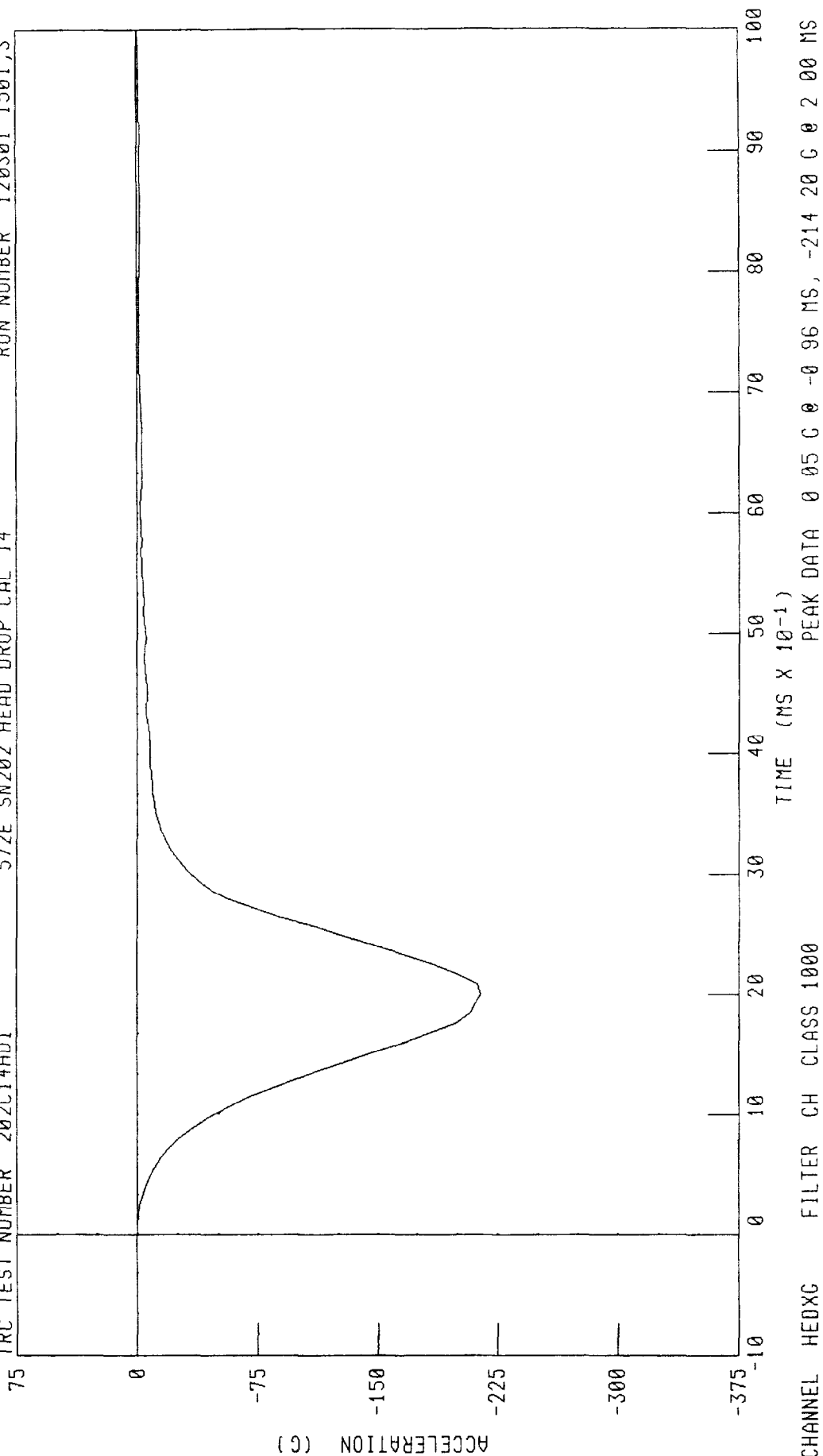
PART 572-E HYBRID III HEAD CALIBRATION

HEAD ACCELERATION X AXIS

572E SN202 HEAD DROP CAL 14

TRC TEST NUMBER 202C14HD1

RUN NUMBER 120301 1501,3



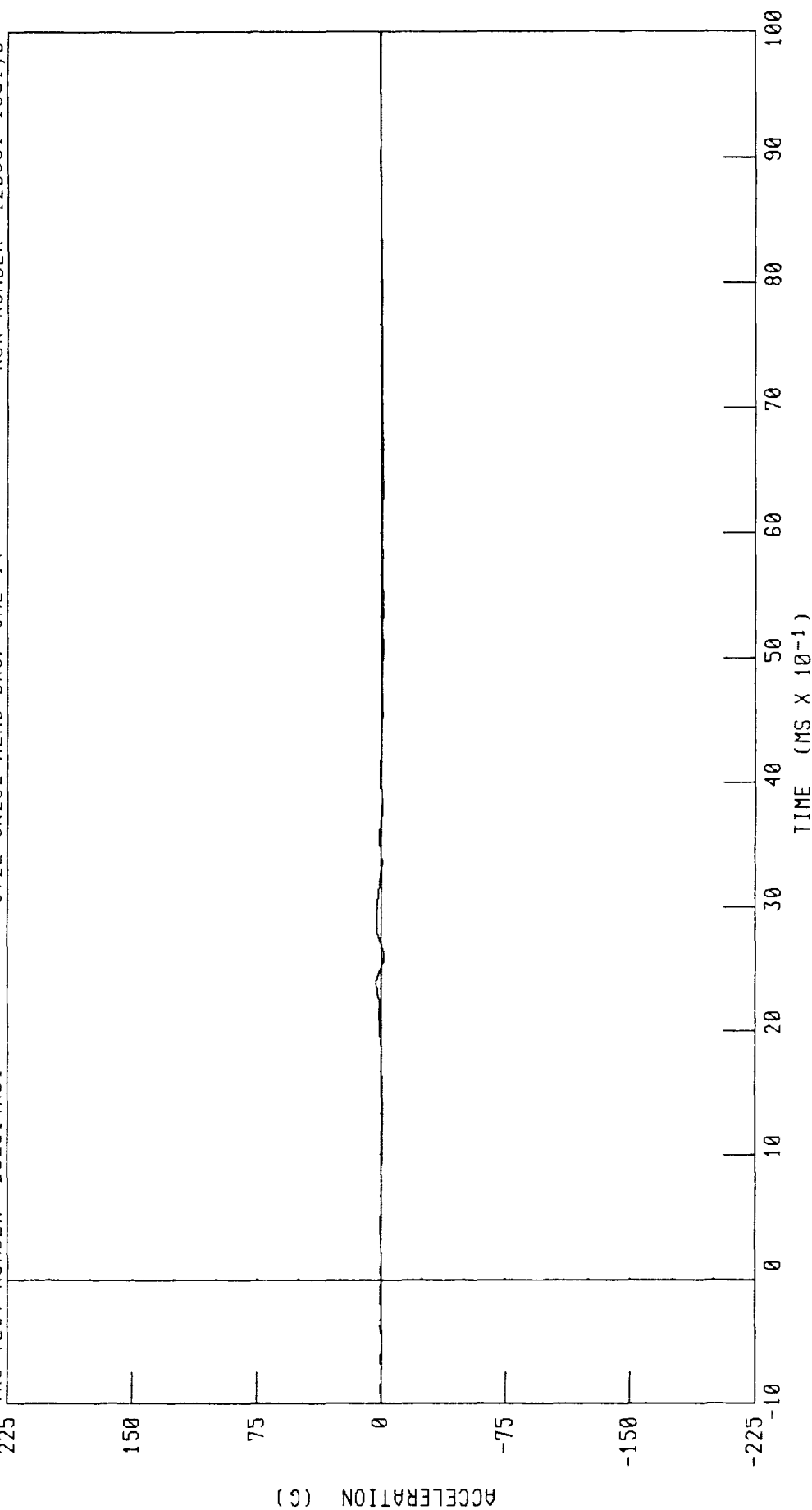
PART 572-E HYBRID III HEAD CALIBRATION

HEAD ACCELERATION Y AXIS

TRC TEST NUMBER 202C14HD1

572E SN202 HEAD DROP CAL 14

RUN NUMBER 120301 1501,3



CHANNEL HEDYC FILTER CH CLASS 1000 PEAK DATA 2 86 C 0 2 40 MS, -1 62 C 0 6 48 MS

PART 572-E HYBRID III HEAD CALIBRATION

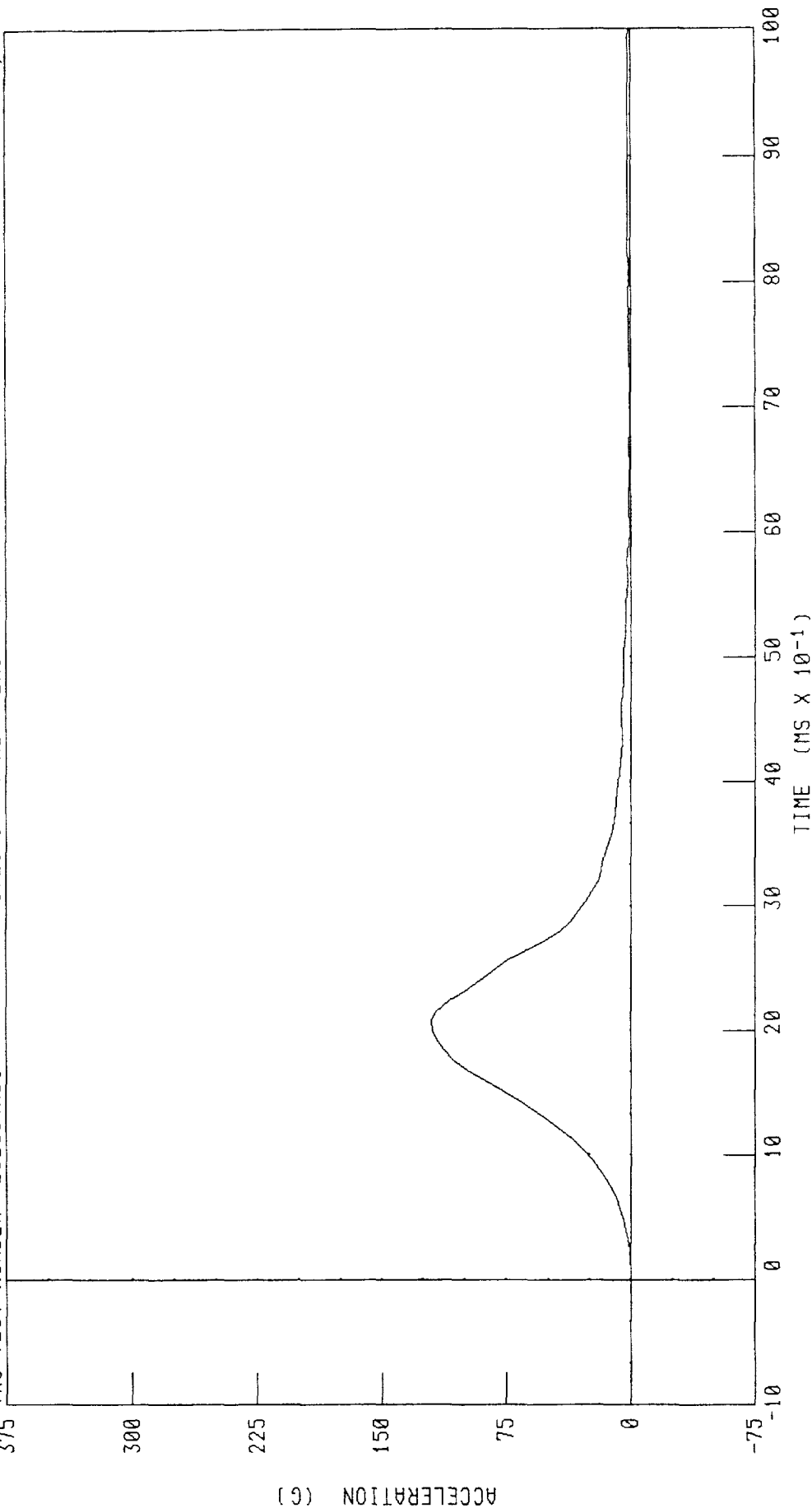
HEAD ACCELERATION Z AXIS

572E SN202 HEAD DROP CAL 14

TRC TEST NUMBER 202C14HD1

375

RUN NUMBER 120301 1501,3



PEAK DATA 119 65 G 2 08 MS, -0 05 C 0 -0 88 MS

CHANNEL HEDZG FILTER CH CLASS 1000

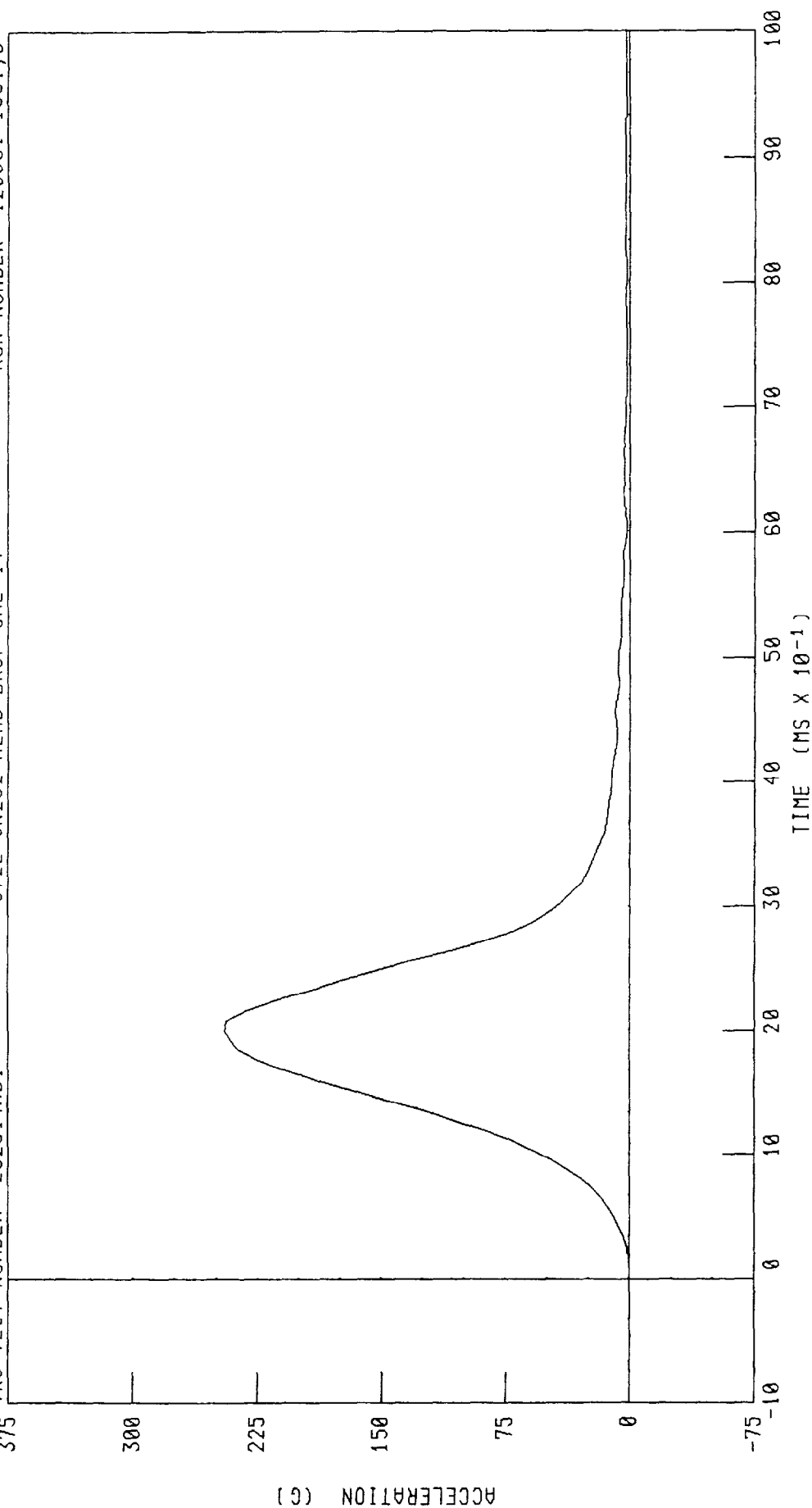
PART 572-E HYBRID III HEAD CALIBRATION

HEAD RESULTANT ACCELERATION

TRC TEST NUMBER 202C14HD1

572E SN202 HEAD DROP CAL 14

RUN NUMBER 120301 1501,3



CHANNEL HEDRG FILTER CH CLASS 1000

PEAK DATA 245 26 G 2 00 MS, 0 02 G 0 -0 80 MS

TRANSPORTATION RESEARCH CENTER INC.

HYBRID III 50th

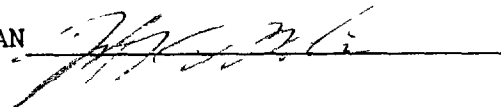
03-DEC-01

NECK FLEXION TEST - 6 CHANNEL TRANSDUCER

TRC INC. TEST NO: 202C14NF2 572E SN202 NECK FLEXION CAL14

TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE		20.6-22.2 DEG. C	21.1 DEG. C
RELATIVE HUMIDITY		10 - 70 %	35.0 %
IMPACT VELOCITY		6.89 - 7.13 M/S	6.99 M/S
PENDULUM DECELERATION	10 MS	22.50 - 27.50 G	26.95 G
	20 MS	17.60 - 22.60 G	21.10 G
	30 MS	12.50 - 18.50 G	16.50 G
MAX PENDULUM G		29 G MAX	27.54 G
MAX PENDULUM G ABOVE 30 MS		29 G MAX	16.44 G
DECELERATION-TIME CURVE DECAY TIME TO 5 G		34 - 42 MS	36.56 MS
D PLANE	MAX	64 - 78 DEG.	76.06 DEG.
ROTATION	TIME	57 - 64 MS	59.36 MS
MOMENT ABOUT OCCIPITAL CONDYLE	MAX	88.2 - 108.5 NM	103.70 NM
	TIME	47 - 58 MS	49.84 MS
ROTATION ANGLE-TIME CURVE DECAY TIME TO ZERO		113 - 128 MS	116.72 MS
POSITIVE MOMENT-TIME CURVE DECAY TIME TO ZERO		97 - 107 MS	99.60 MS

TEST MEETS SPECIFICATIONS

TECHNICIAN 

RUN NUMBER: 120301.1505;1

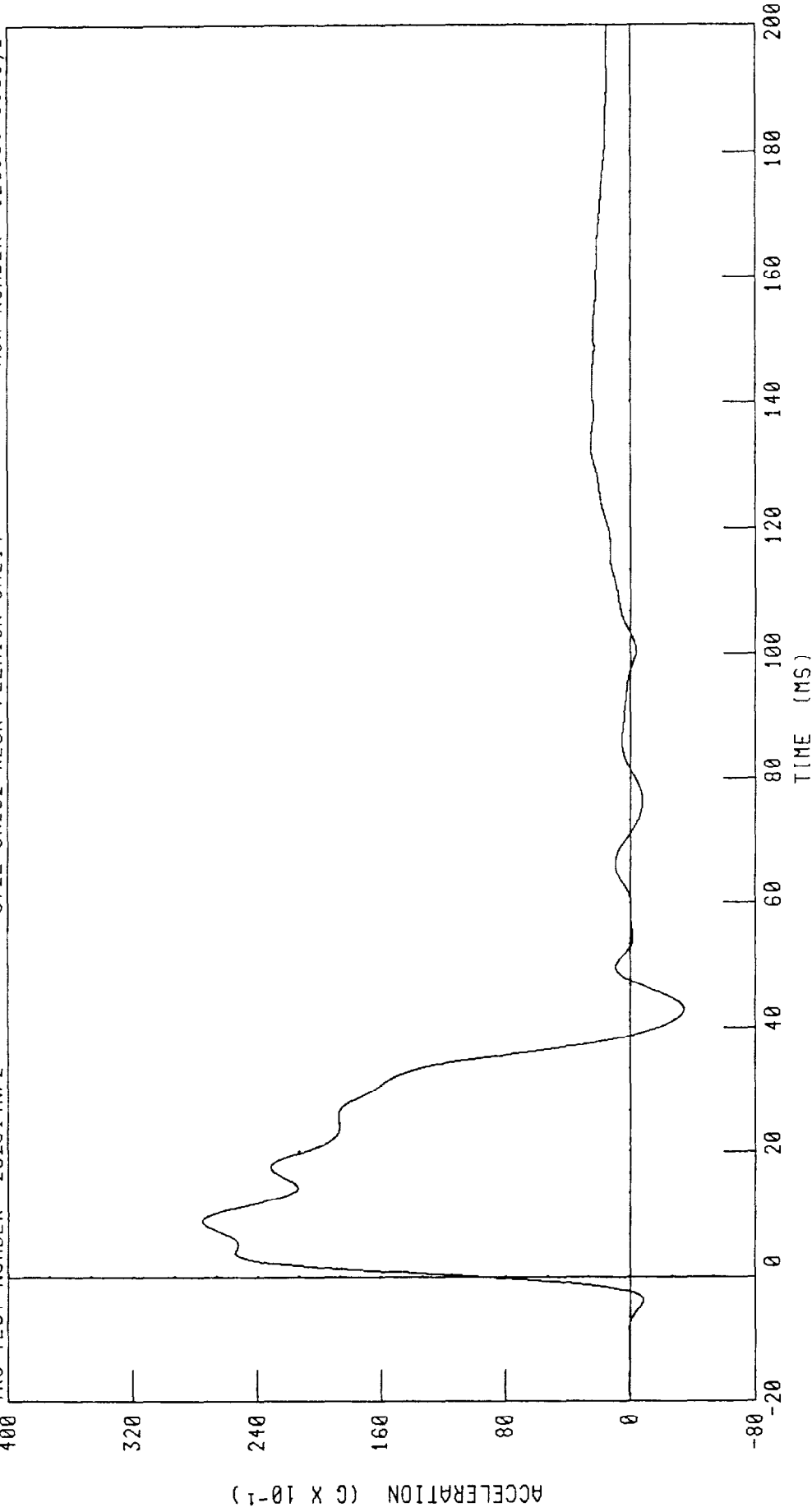
PART 572-E HYBRID III NECK FLEXION CALIBRATION

PENDULUM DECELERATION

TRC TEST NUMBER 202C14NF2

572E SN202 NECK FLEXION CAL14

RUN NUMBER 120301 1505.1



CHANNEL PENXC FILTER CH CLASS 60 PEAK DATA 27 54 G 0 8 88 MS, -3 46 G 0 42 80 MS

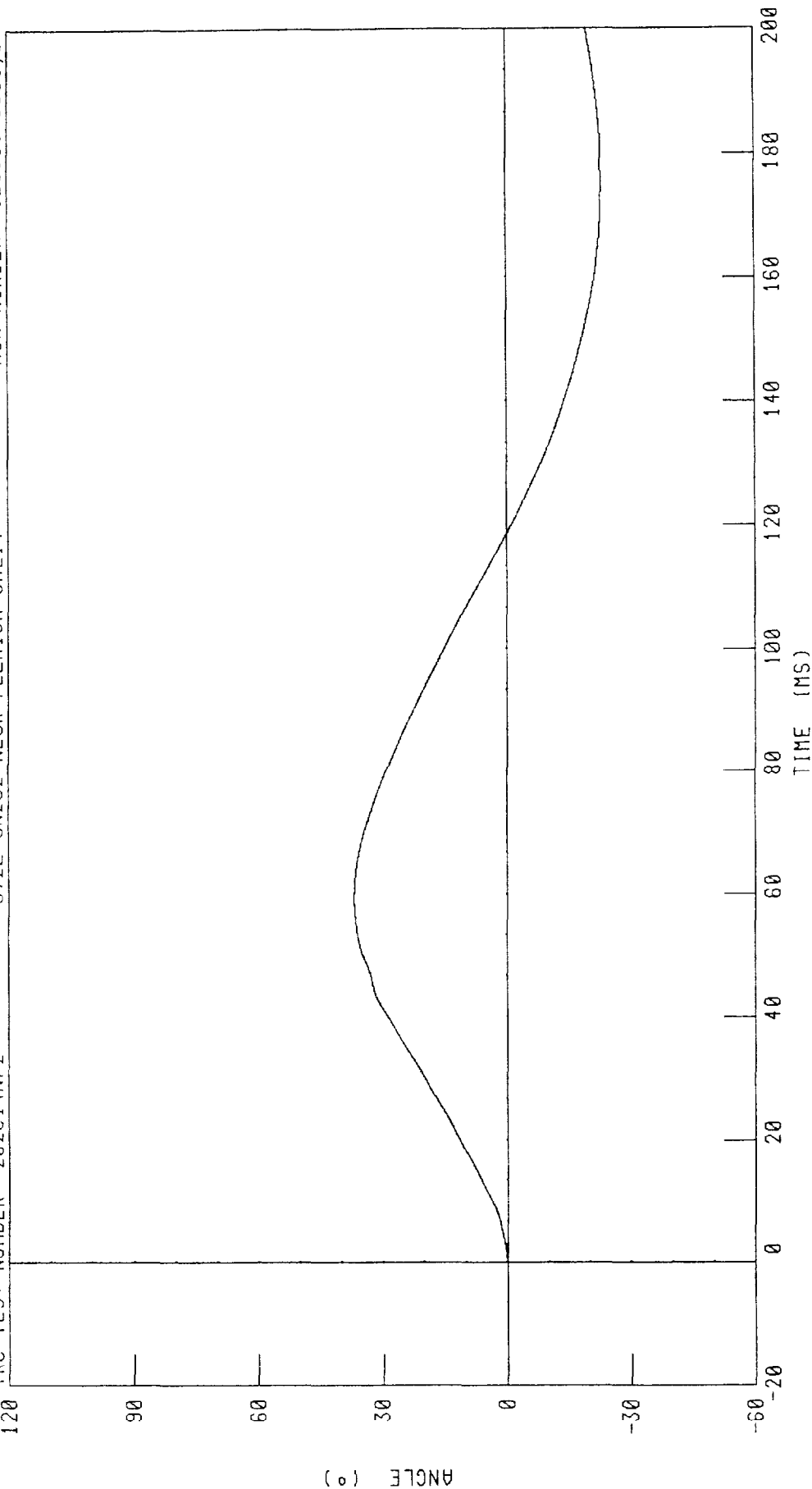
PART 572-E HYBRID III NECK FLEXION CALIBRATION

ROTATION ABOUT BASE OF NECK

572E SN202 NECK FLEXION CAL14

TRC TEST NUMBER 202C14NF2

RUN NUMBER 120301 1505,1



PEAK DATA 36 90 ° @ 59 20 MS, -23 09 ° @ 175 28 MS

CHANNEL BETA FILTER CH CLASS 60

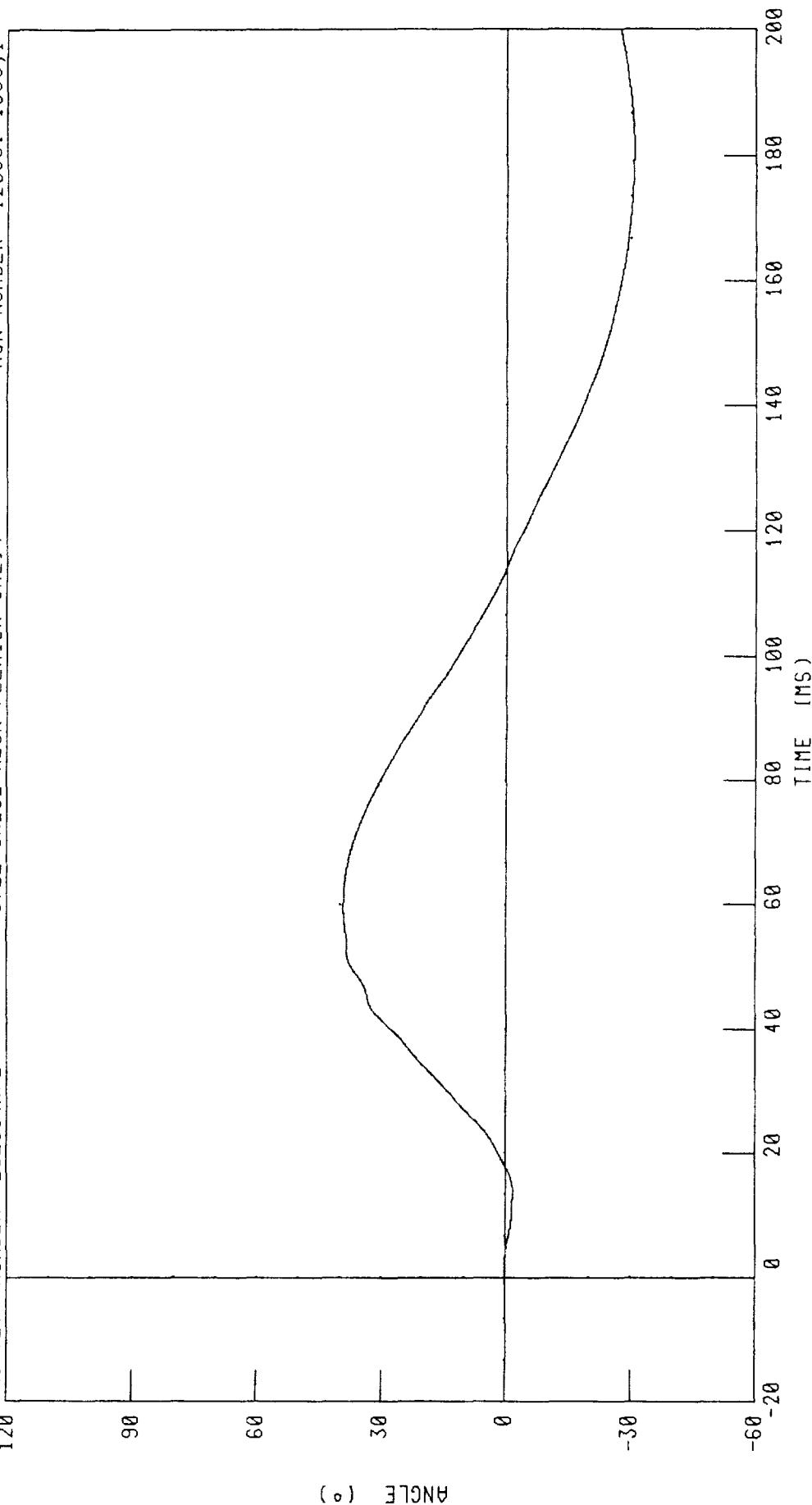
PART 572-E HYBRID III NECK FLEXION CALIBRATION

ROTATION ABOUT OCCIPITAL CONDYLE

TRC TEST NUMBER 202C14NF2

572E SN202 NECK FLEXION CAL14

RUN NUMBER 120301 1505,1



CHANNEL THETA FILTER CH CLASS 60 PEAK DATA 39 17 ° @ 59 44 MS, -30 76 ° @ 181 36 MS

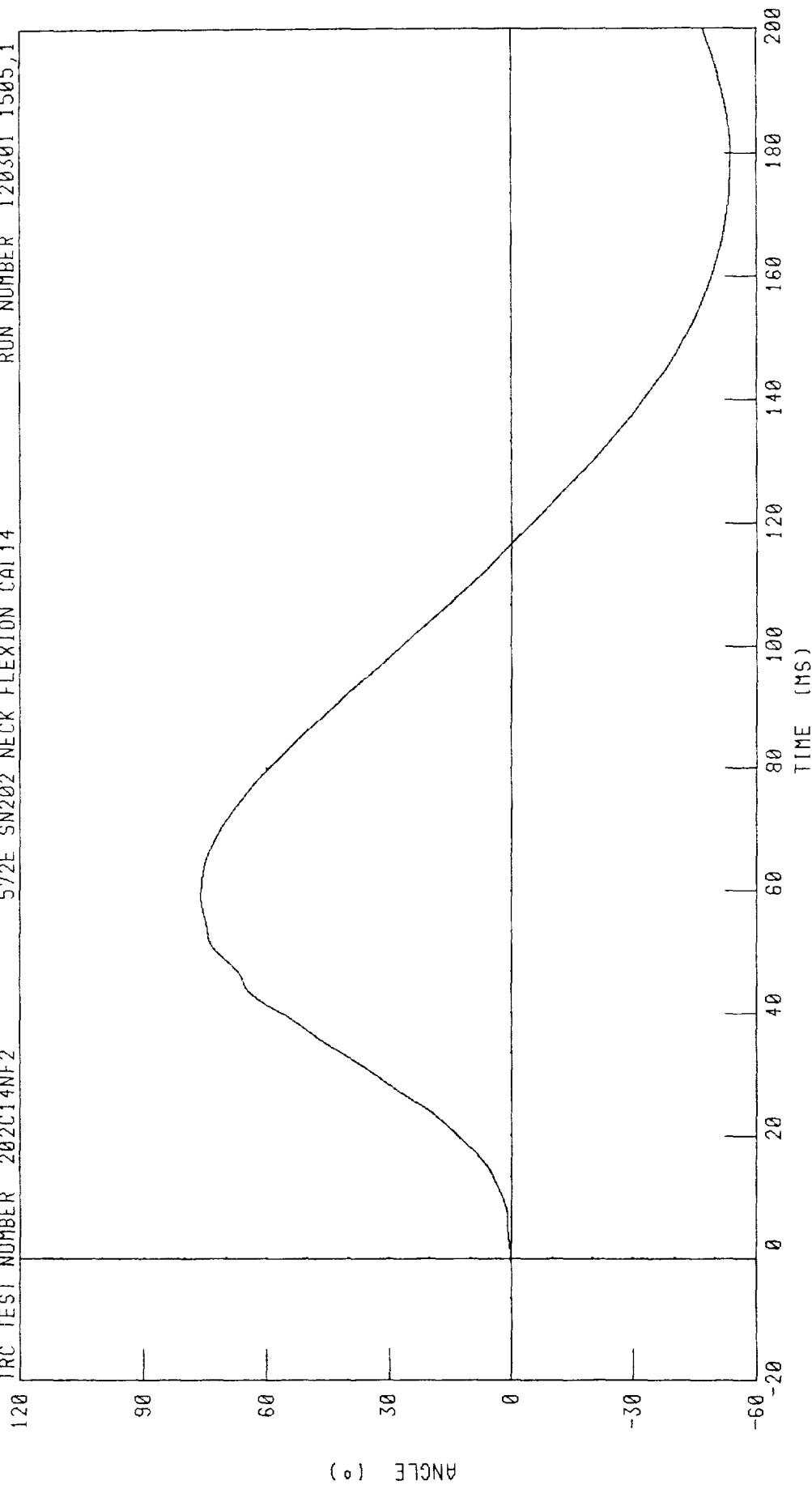
PART 572-E HYBRID III NECK FLEXION CALIBRATION

TOTAL ROTATION

IRC TEST NUMBER 202C14NF2

572E SN202 NECK FLEXION CAL14

RUN NUMBER 120301 1505,1



CHANNEL TOTAL FILTER CH CLASS 60 PEAK DATA 76 07 ° 0 59 36 MS, -53 71 ° 0 180 24 MS

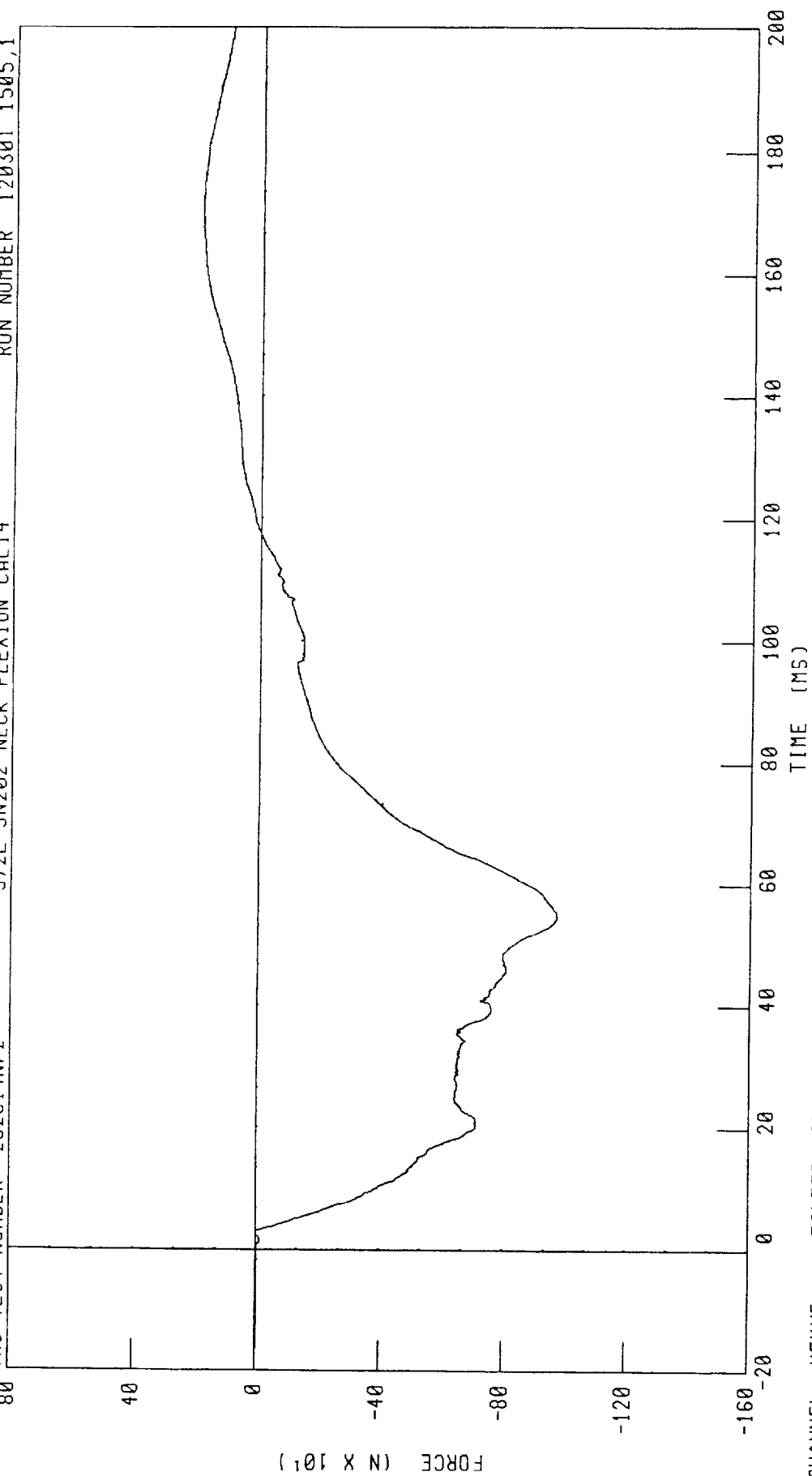
PART 572-E HYBRID III NECK FLEXION CALIBRATION

NECK FORCE X AXIS

TRC TEST NUMBER 202C14NF2

572E SN202 NECK FLEXION CAL14

RUN NUMBER 120301 1505,1

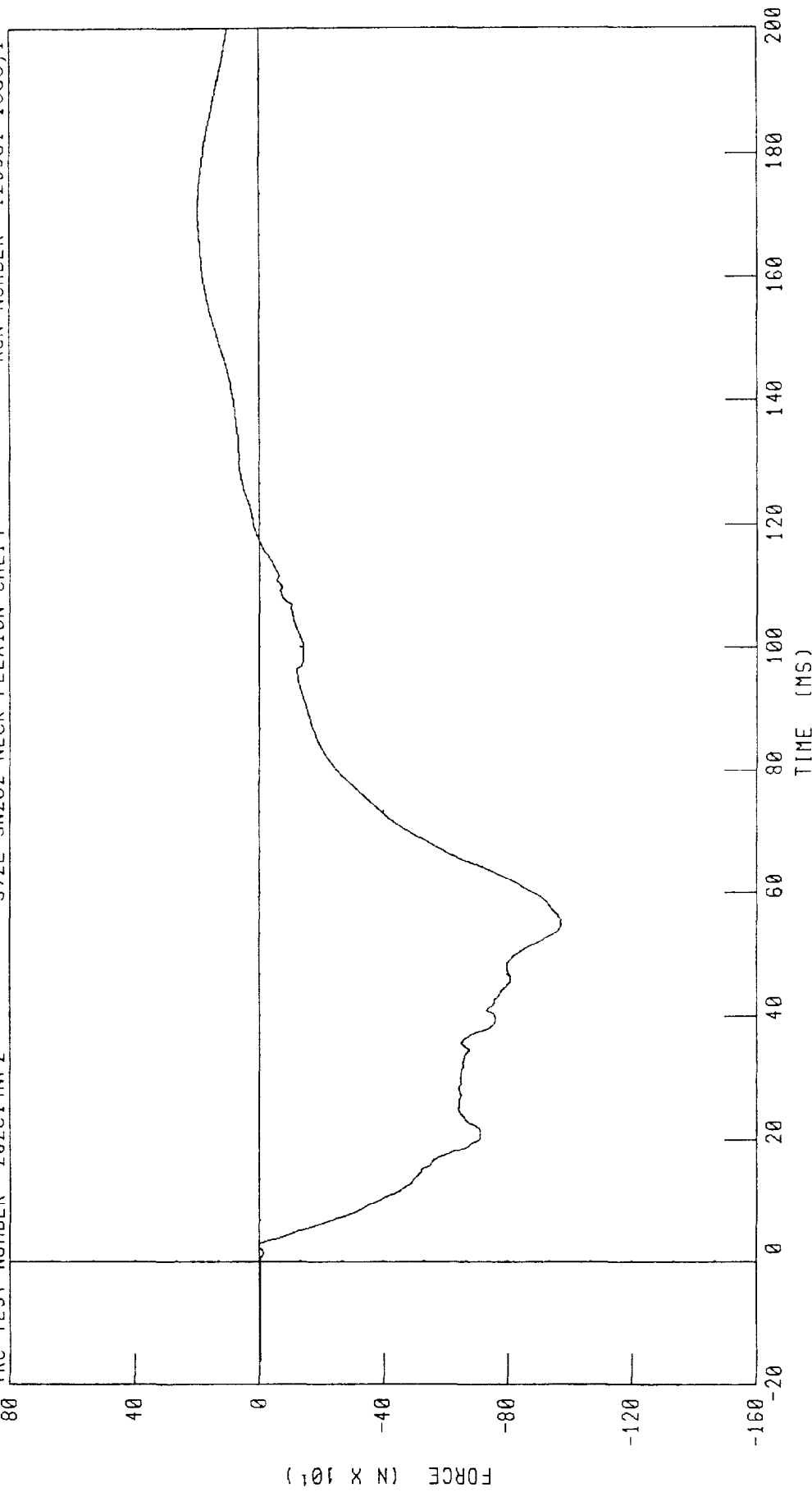


CHANNEL NEKXF FILTER CH CLASS 1000

PEAK DATA 198 03 N @ 171 28 MS, -972 29 N @ 54 80 MS

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

TRC TEST NUMBER 202C14NF2 572E SN202 NECK FLEXION CAL14 RUN NUMBER 120301 1505,1

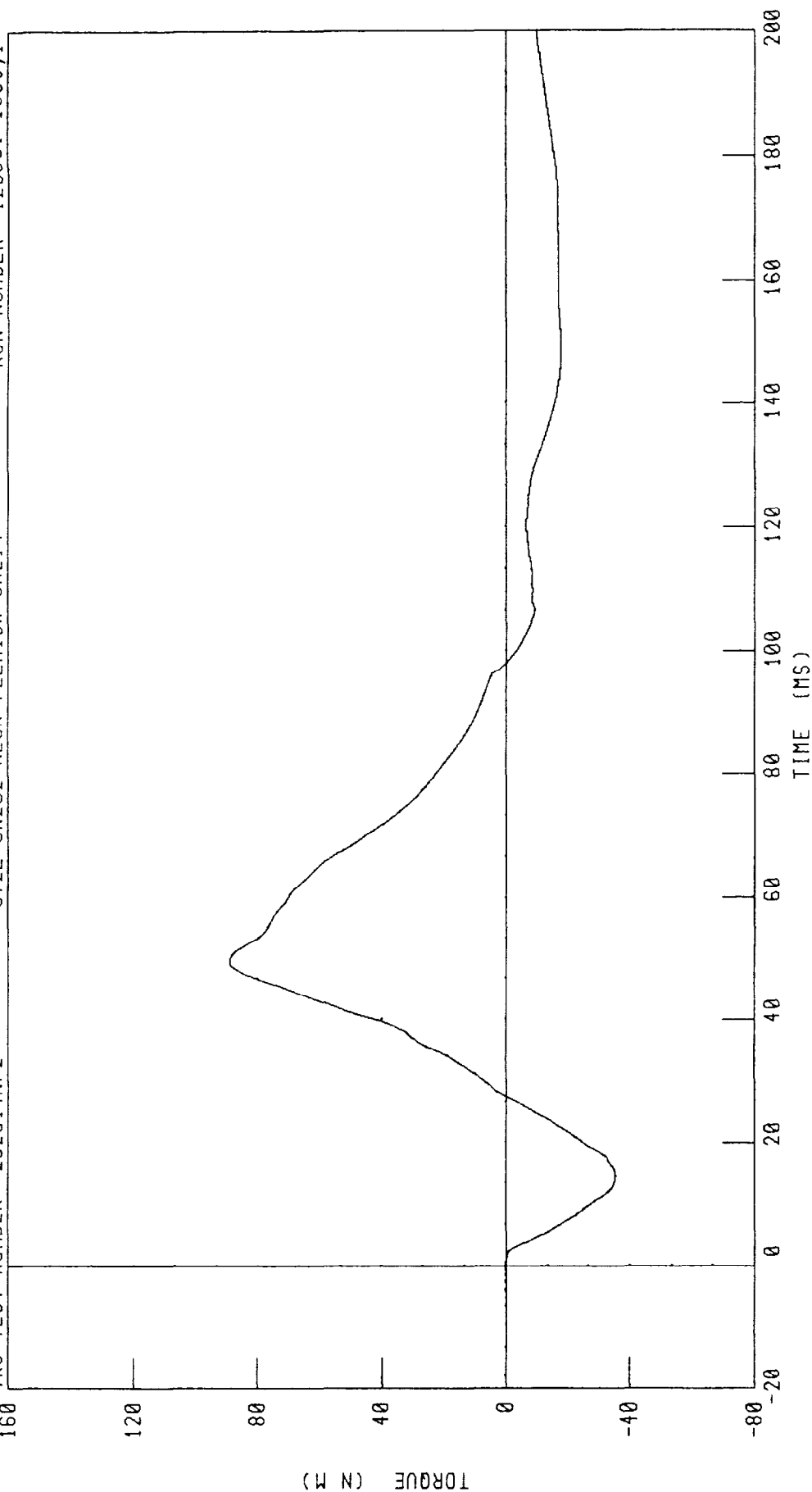


CHANNEL NEKXFC FILTER CH CLASS 600 PEAK DATA 197 45 N @ 169 92 MS, -972 18 N @ 54 88 MS

PART 572-E HYBRID III NECK FLEXION CALIBRATION

NECK MOMENT Y AXIS

TRC TEST NUMBER 202C14NF2 572E SN202 NECK FLEXION CAL14 RUN NUMBER 120301 1505,1



CHANNEL NEKYM FILTER CH CLASS 600 PEAK DATA 89 12 N M @ 49 60 MS, -35 50 N M @ 14 48 MS

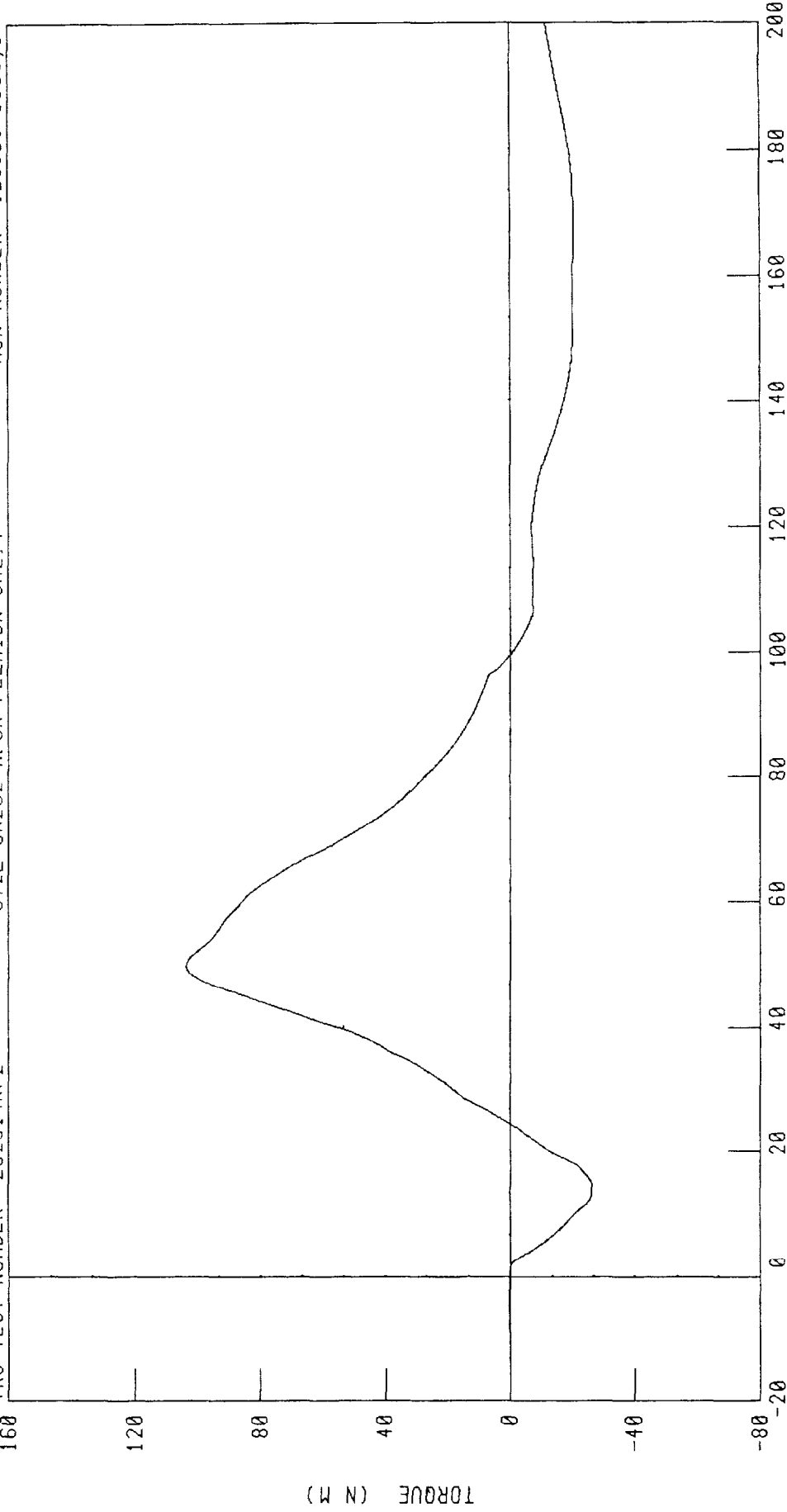
PART 572-E HYBRID III NECK FLEXION CALIBRATION

TOTAL MOMENT ABOUT OCCIPITAL CONDYLE

TRC TEST NUMBER 202C14NF2

572E SN202 NECK FLEXION CAL14

RUN NUMBER 120301 1505,1



TIME (MS)

PEAK DATA 103 70 N M @ 49 84 MS, -26 30 N M @ 13 92 MS

CHANNEL NEKOM FILTER CH CLASS 600

TRANSPORTATION RESEARCH CENTER INC.

HYBRID III 50th

04-DEC-01

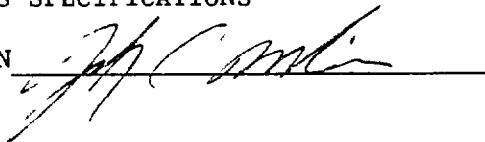
NECK EXTENSION TEST - 6 CHANNEL TRANSDUCER

TRC INC. TEST NO: 202C14NE1 572E SN202 NECK EXT CAL14

TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE		20.6 - 22.2 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY		10 - 70 %	33.0 %
IMPACT VELOCITY		5.95 - 6.19 M/S	6.05 M/S
PENDULUM DECELERATION	10 MS	17.20 - 21.20 G	19.52 G
	20 MS	14.00 - 19.00 G	17.85 G
	30 MS	11.00 - 16.00 G	15.14 G
MAX PENDULUM G		22 G MAX	19.83 G
MAX PENDULUM G ABOVE 30 MS		22 G MAX	15.09 G
DECELERATION-TIME CURVE DECAY TIME TO 5 G		38 - 46 MS	40.24 MS
D PLANE	MAX	81 - 106 DEG.	98.57 DEG.
ROTATION	TIME	72 - 82 MS	78.32 MS
MOMENT ABOUT OCCIPITAL CONDYLE	MIN	-80.0/-52.9 NM	-70.64 NM
	TIME	65 - 79 MS	72.48 MS
ROTATION ANGLE-TIME CURVE DECAY TIME TO ZERO		147 - 174 MS	157.60 MS
NEGATIVE MOMENT-TIME CURVE DECAY TIME TO ZERO		120 - 148 MS	141.44 MS

TEST MEETS SPECIFICATIONS

TECHNICIAN



RUN NUMBER: 120401.0656;1

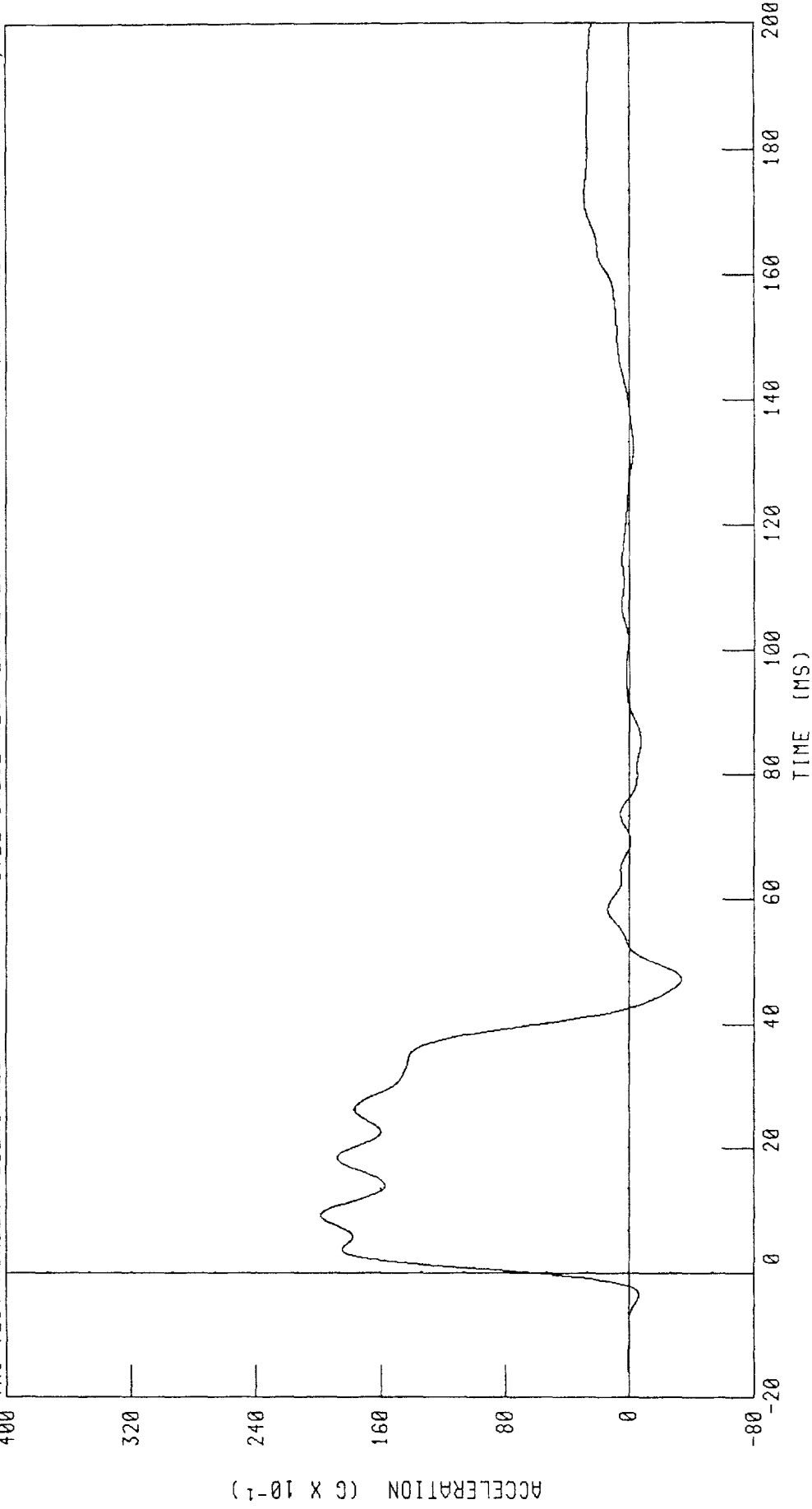
PART 572-E HYBRID III NECK EXTENSION CALIBRATION

PENDULUM DECELERATION

TRC TEST NUMBER 202C14NE1

572E SN202 NECK EXT CAL14

RUN NUMBER 120401 0656,1



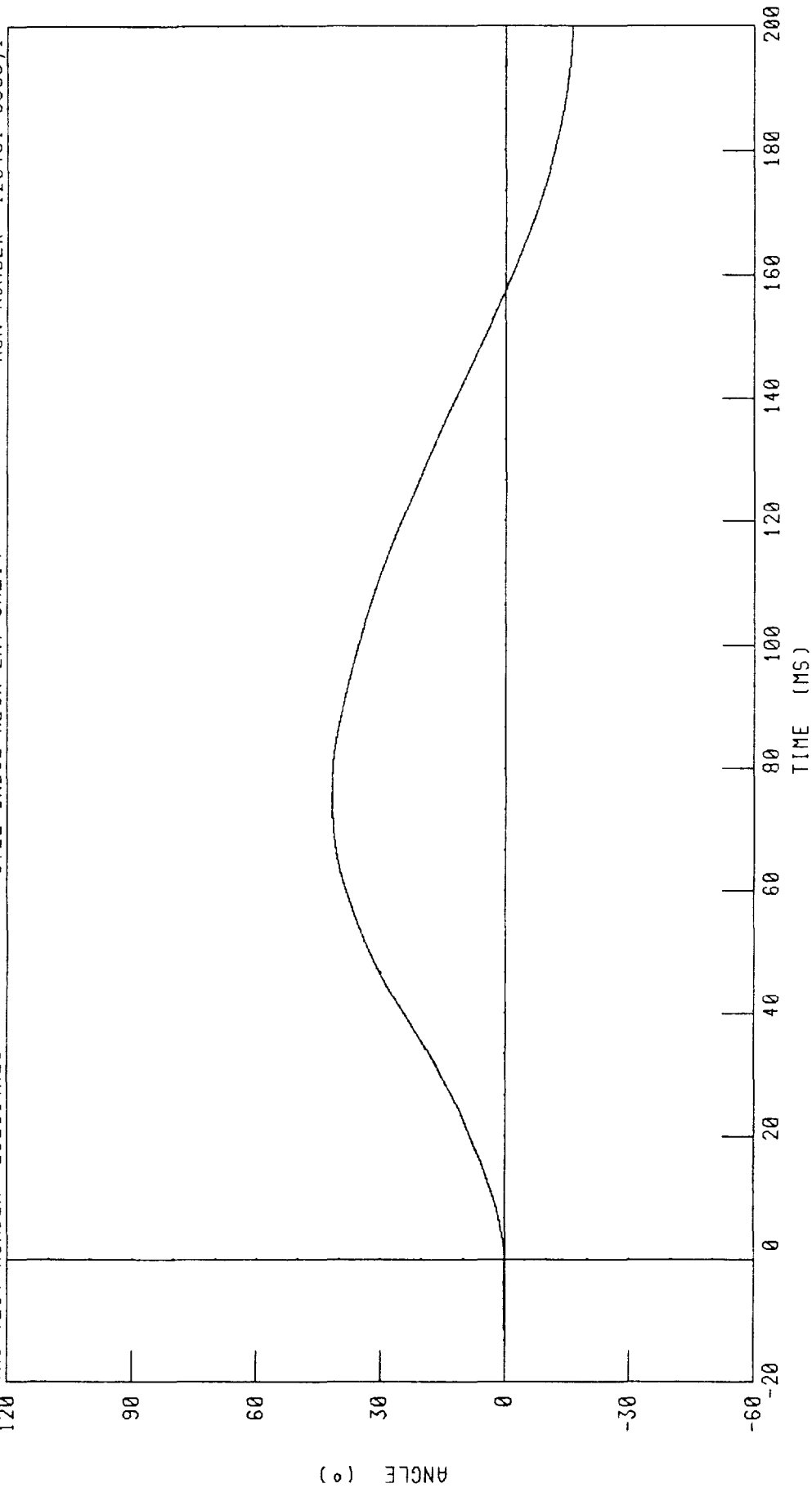
CHANNEL PENXC FILTER CH CLASS 60

PEAK DATA 19 84 G @ 9 20 MS, -3 34 G @ 47 20 MS

PART 572-E HYBRID III NECK EXTENSION CALIBRATION

ROTATION ABOUT BASE OF NECK

TRC TEST NUMBER 202C14NE1 572E SN202 NECK EXT CAL14 RUN NUMBER 120401 0656,1



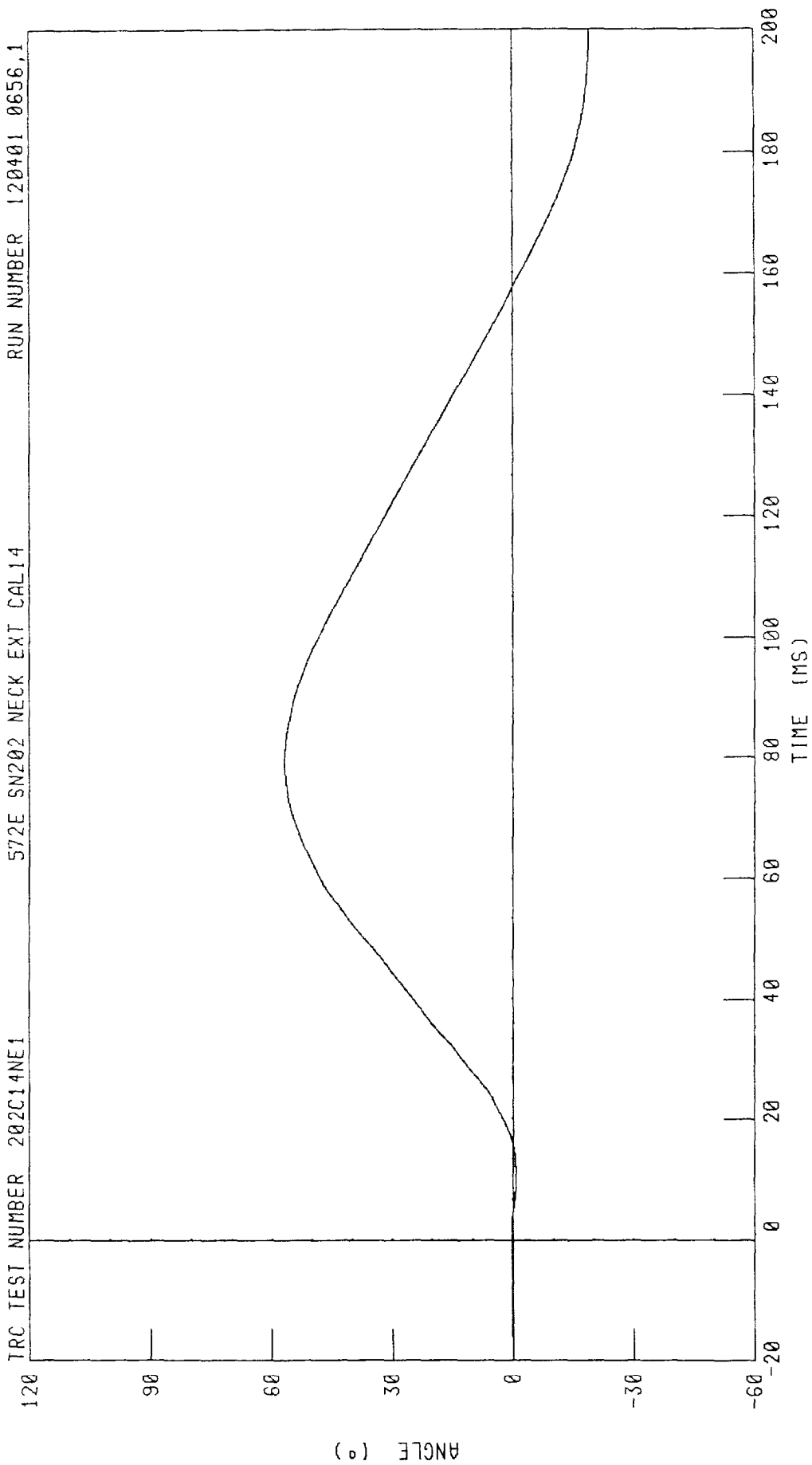
CHANNEL BETA FILTER CH CLASS 60 PEAK DATA 41 84 ° @ 76 32 MS, -16 31 ° @ 200 00 MS

PART 572-E HYBRID III NECK EXTENSION CALIBRATION
 ROTATION ABOUT OCCIPITAL CONDYLE

TRC TEST NUMBER 202C14NE1

572E SN202 NECK EXT CAL14

RUN NUMBER 120401 0656,1

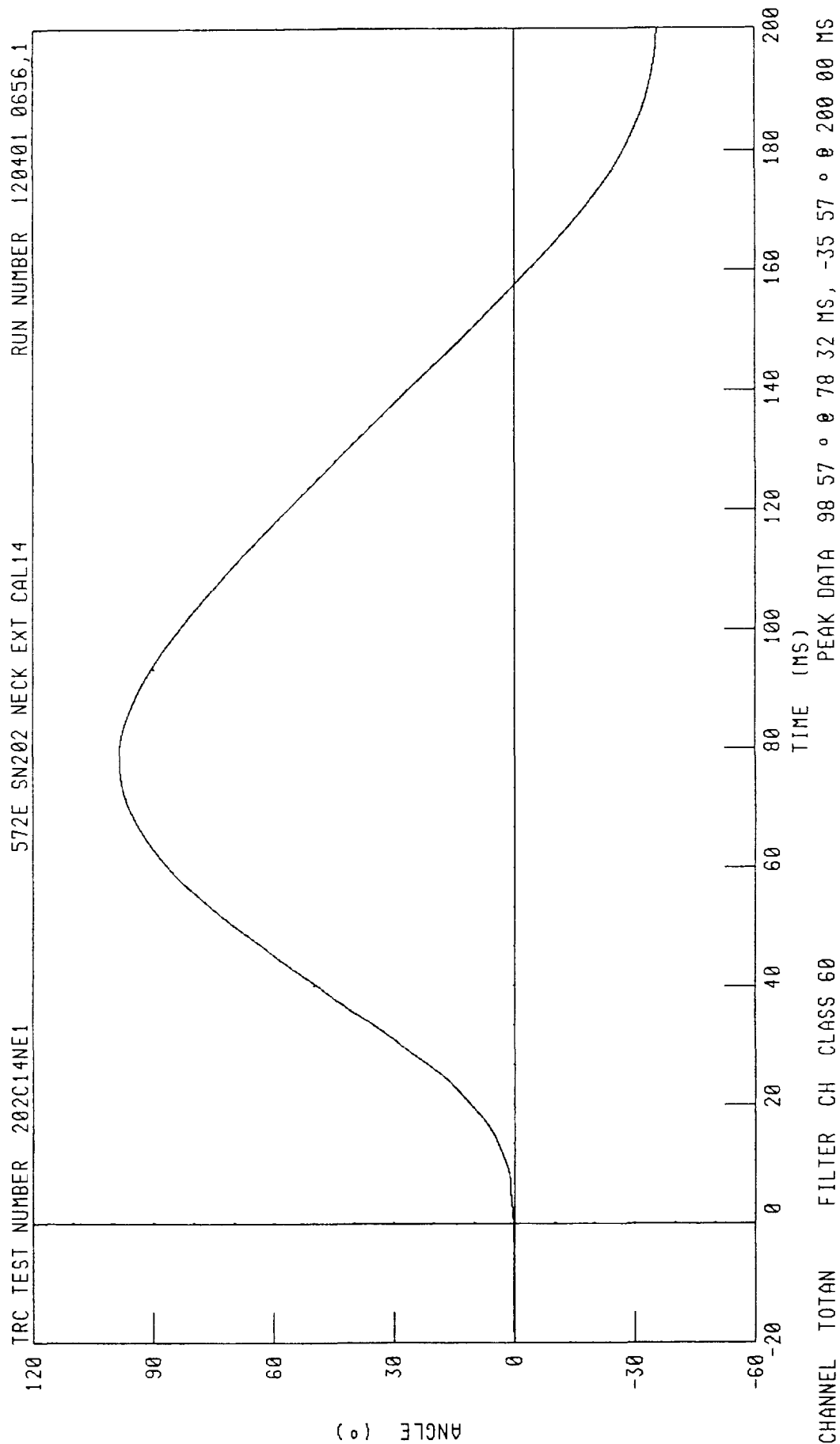


CHANNEL THETA FILTER CH CLASS 60

PEAK DATA 56 82 ° @ 79 28 MS, -19 26 ° @ 200 00 MS

PART 572-E HYBRID III NECK EXTENSION CALIBRATION

TOTAL ROTATION



TRC TEST NUMBER 202C14NE1

572E SN202 NECK EXT CAL14

RUN NUMBER 120401 0656,1

CHANNEL TOTAL FILTER CH CLASS 60 PEAK DATA 98 57 ° 0 78 32 MS, -35 57 ° 0 200 00 MS

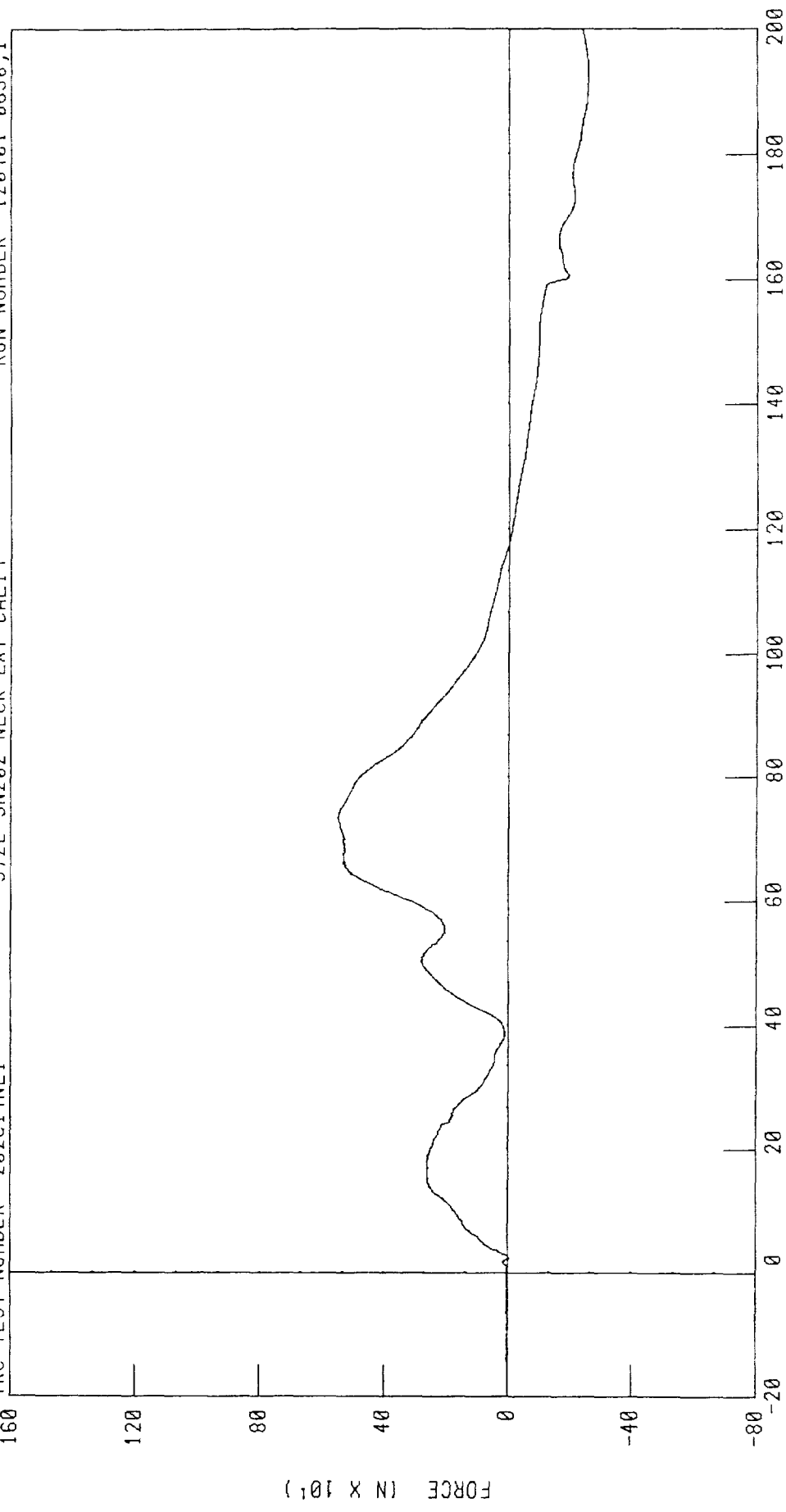
PART 572-E HYBRID III NECK EXTENSION CALIBRATION

NECK FORCE X AXIS

TRC TEST NUMBER 202C14NE1

572E SN202 NECK EXT CAL14

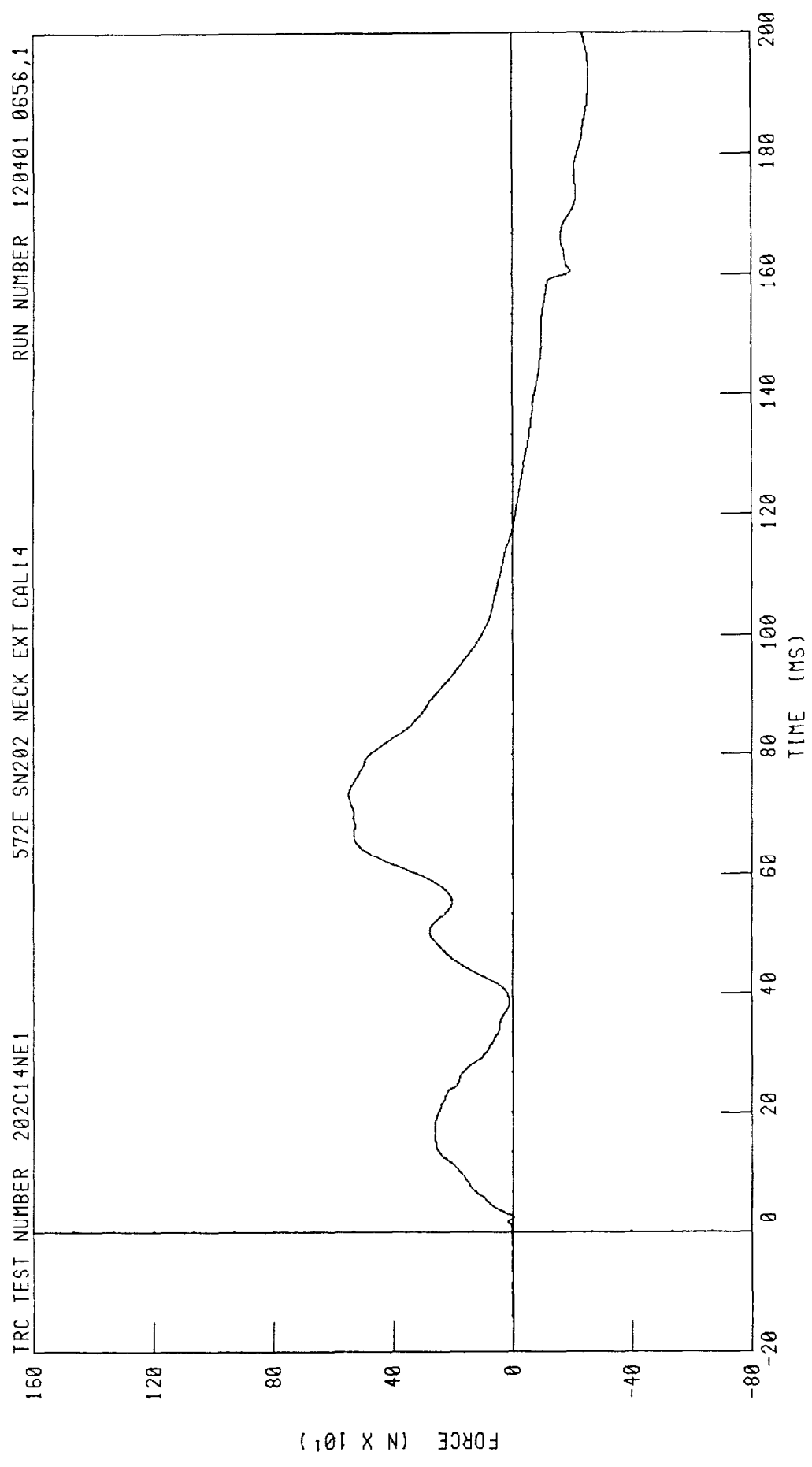
RUN NUMBER 120401 0656,1



CHANNEL NEKXF FILTER CH CLASS 1000

PEAK DATA 549 94 N @ 73 28 MS, -259 39 N @ 191 76 MS

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

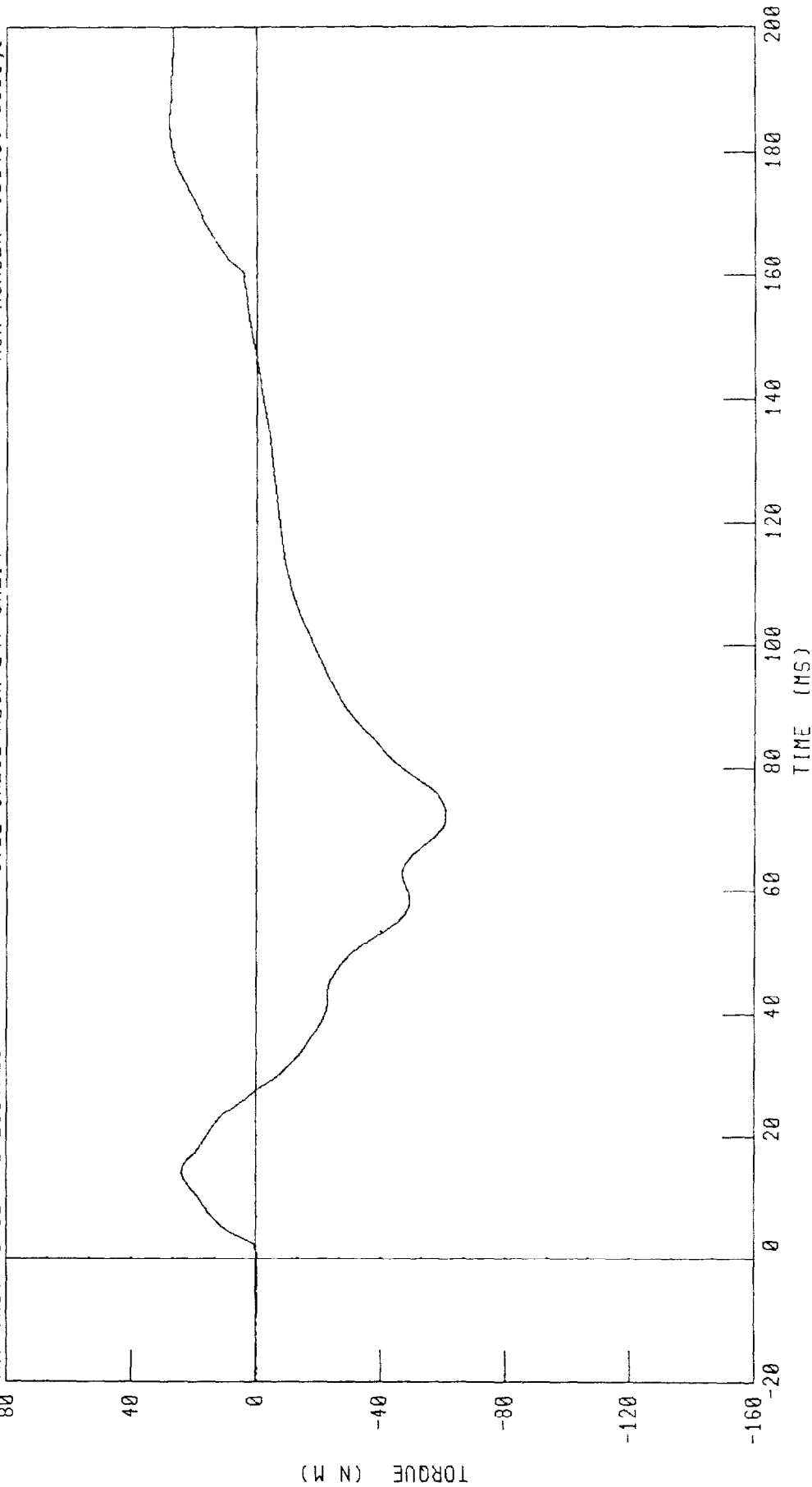


CHANNEL NEKXFC FILTER CH CLASS 600 PEAK DATA 549 69 N @ 73 44 MS, -258 96 N @ 191 36 MS

PART 572-E HYBRID III NECK EXTENSION CALIBRATION

NECK MOMENT Y AXIS

TRC TEST NUMBER 202014NE1 572E SN202 NECK EXT CAL14 RUN NUMBER 120401 0656,1



CHANNEL NEKYM FILTER CH CLASS 600 PEAK DATA 28 20 N M @ 185 28 MS, -60 96 N M @ 72 24 MS

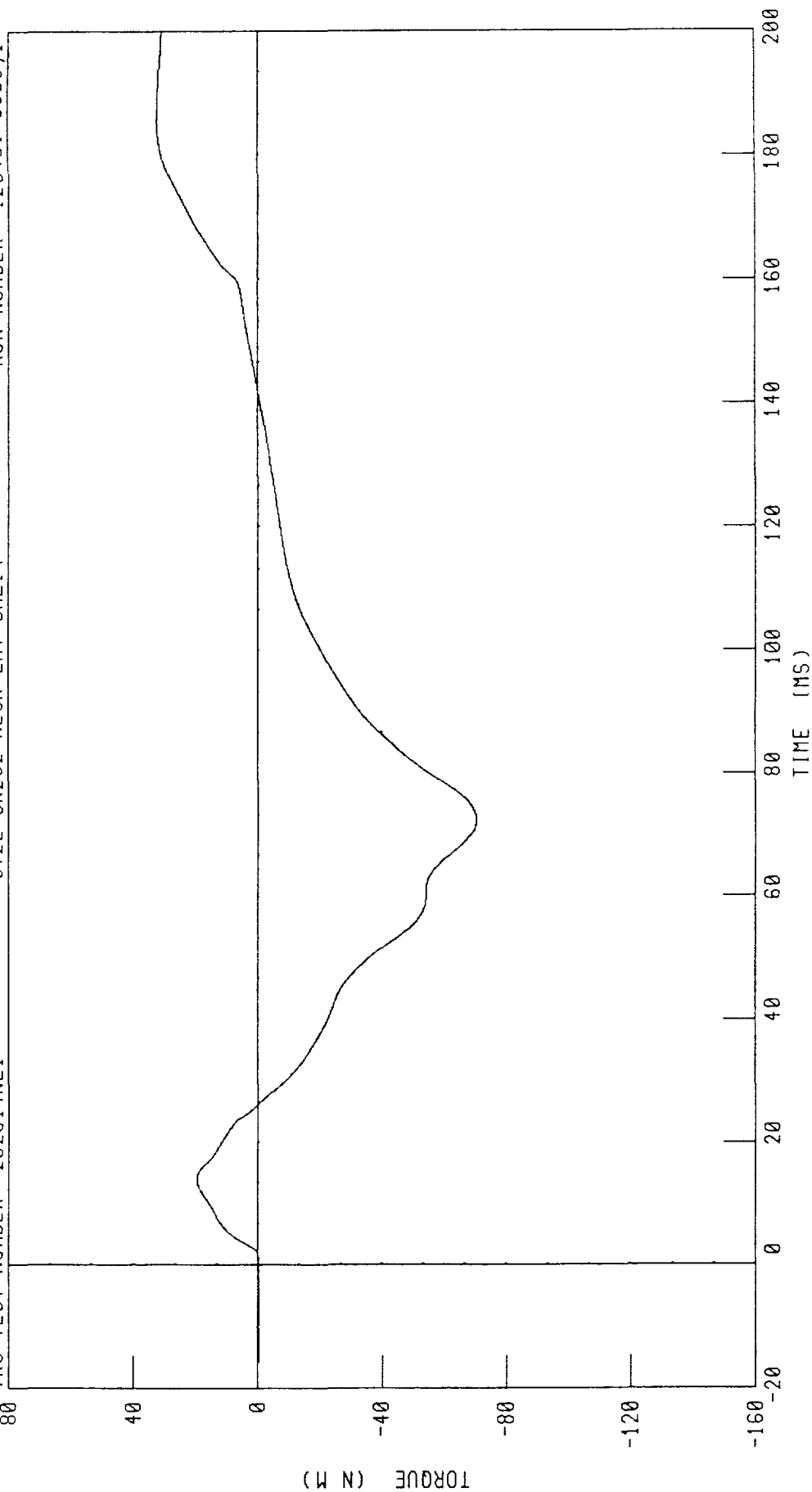
PART 572-E HYBRID III NECK EXTENSION CALIBRATION

TOTAL MOMENT ABOUT OCCIPITAL CONDYLE

TRC TEST NUMBER 202C14NE1

572E SN202 NECK EXT CAL14

RUN NUMBER 120401 0656,1



CHANNEL NEKOM FILTER CH CLASS 600

PEAK DATA 32 50 N M 0 185 52 MS, -70 64 N M 0 72 48 MS

TRANSPORTATION RESEARCH CENTER INC.

THORAX IMPACT TEST

HYBRID III 50th

04-DEC-01

TRC INC.

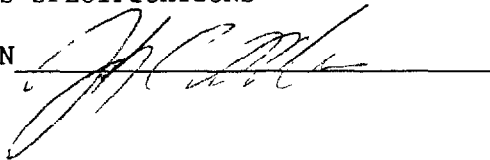
TEST NO: 202C14TH1

572E SN202 H.S.THORAX CAL14

TEST PARAMETER	HIGH SPEED TEST	TEST RESULTS
	SPECIFICATION	
TEMPERATURE	20.6-22.2 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	42.0 %
PENDULUM VELOCITY	6.59 - 6.83 M/S	6.62 M/S
MAXIMUM DEFLECTION	63.5 - 72.6 MM	66.5 MM
MAXIMUM RESISTIVE FORCE	5159 - 5894 N	5636. N
INTERNAL HYSTERESIS	69% - 85%	71.7%

TEST MEETS SPECIFICATIONS

TECHNICIAN



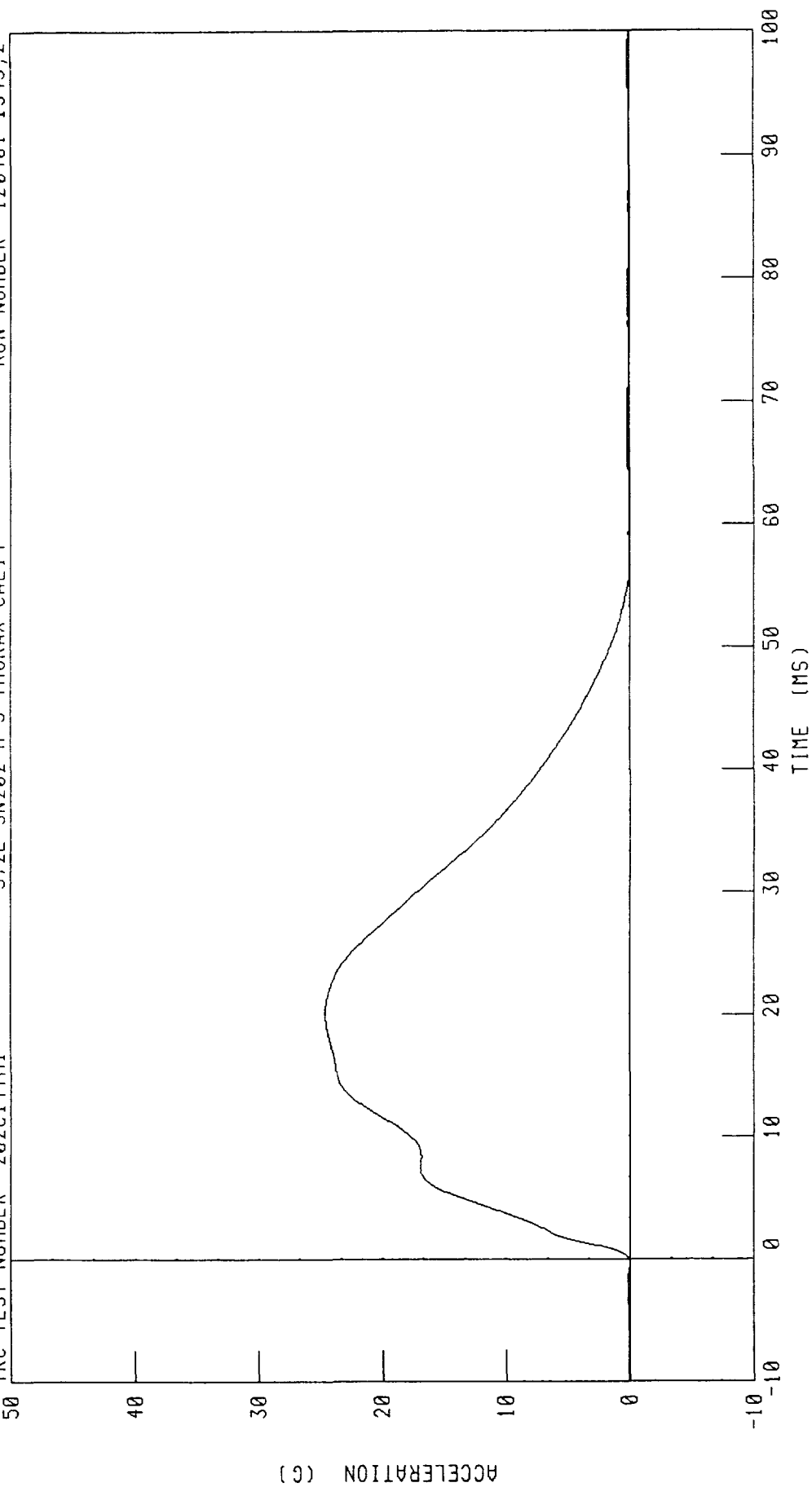
RUN NUMBER: 120401.1549;2

PART 572-E HYBRID III THORAX CALIBRATION
PENDULUM DECELERATION

TRC TEST NUMBER 202C14TH1

572E SN202 H S THORAX CAL14

RUN NUMBER 120401 1549,2



CHANNEL PENXC FILTER CH CLASS 180 PEAK DATA 24 61 G 20 24 MS, -0 01 G 0 -0 24 MS

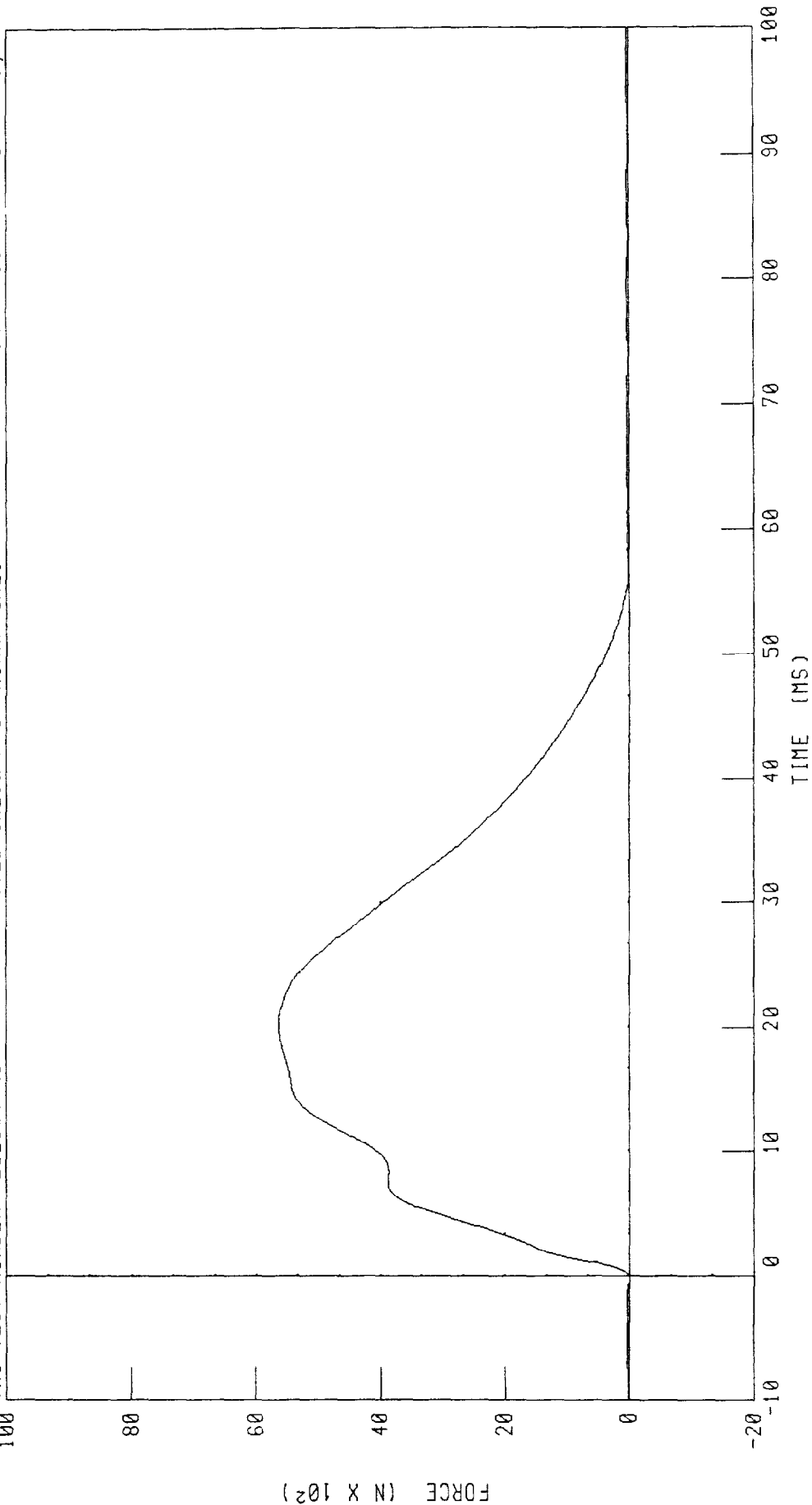
PART 572-E HYBRID III THORAX CALIBRATION

PENDULUM FORCE

TRC TEST NUMBER 202C14TH1

572E SN202 H S THORAX CAL14

RUN NUMBER 120401 1549,2



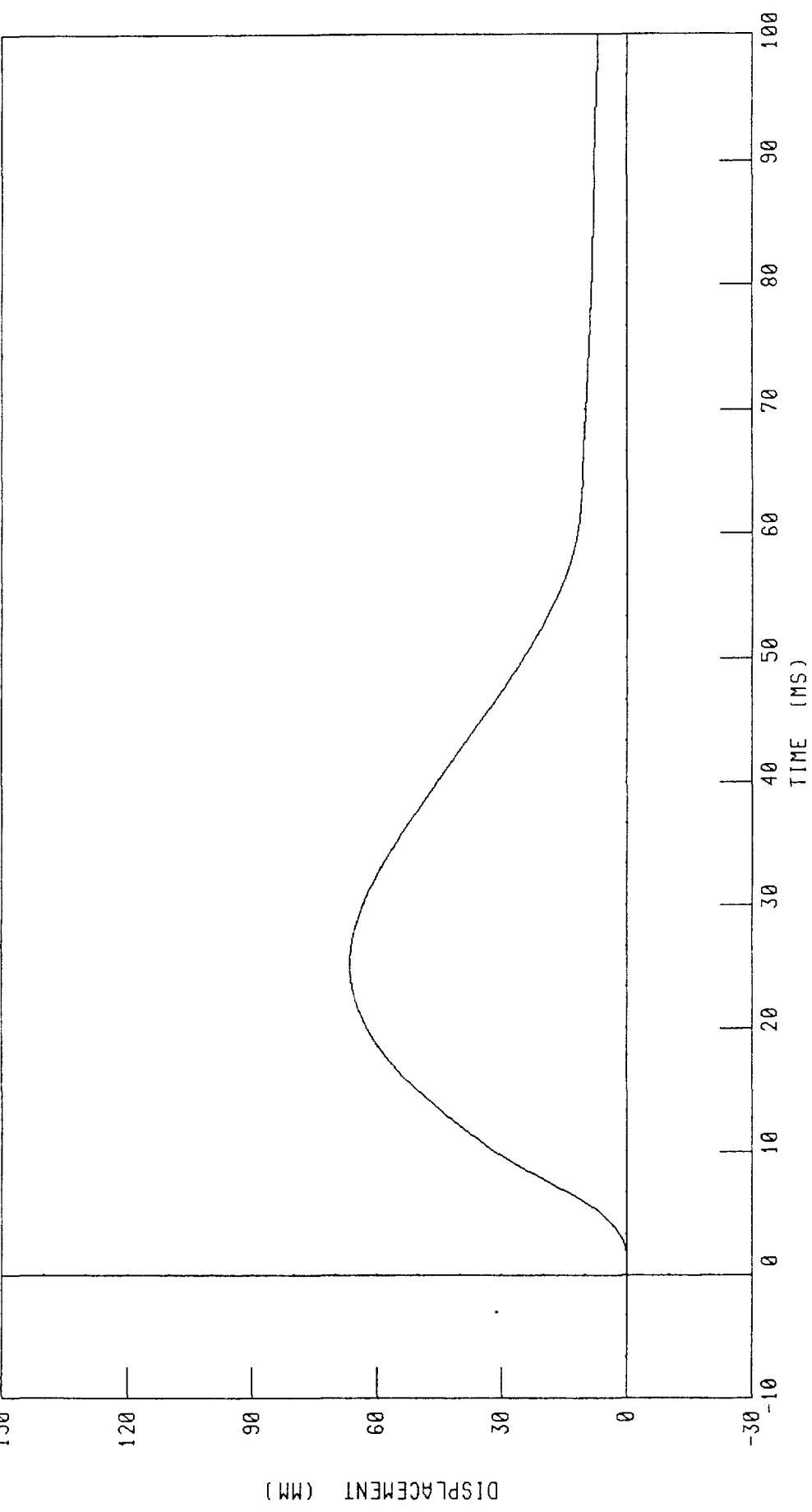
PEAK DATA 5636 74 N @ 20 24 MS, -3 44 N @ -0 24 MS

CHANNEL PENXF FILTER CH CLASS 180

PART 572-E HYBRID III THORAX CALIBRATION

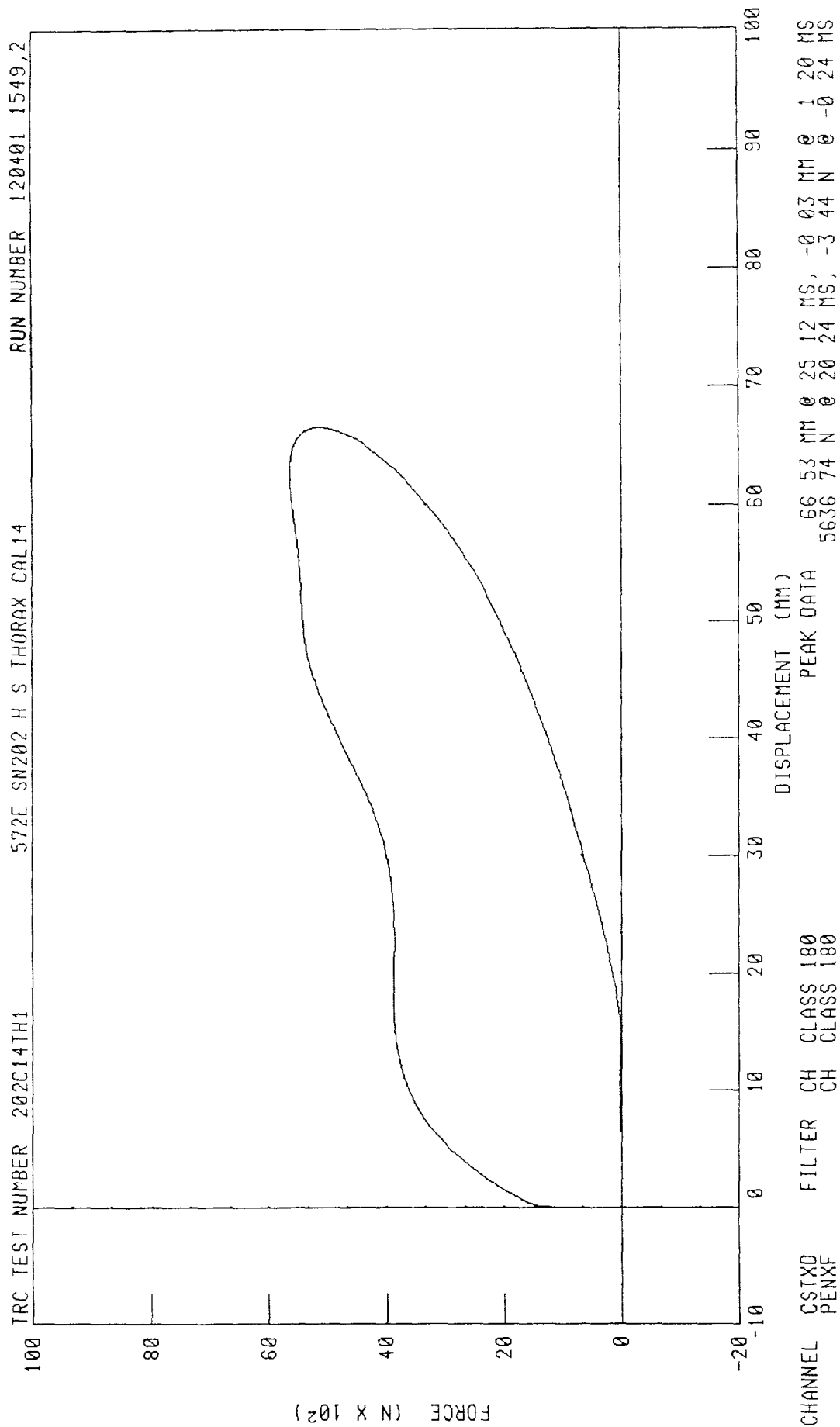
STERNUM DISPLACEMENT

TRC TEST NUMBER 202C14TH1 572E SN202 H S THORAX CAL14 RUN NUMBER 120401 1549,2



CHANNEL CSTXD FILTER CH CLASS 180 PEAK DATA 66 53 MM @ 25 12 MS, -0 03 MM @ 1 20 MS

PART 572-E HYBRID III THORAX CALIBRATION
CHEST DISPLACEMENT VS PENDULUM FORCE



Transportation Research Center Inc

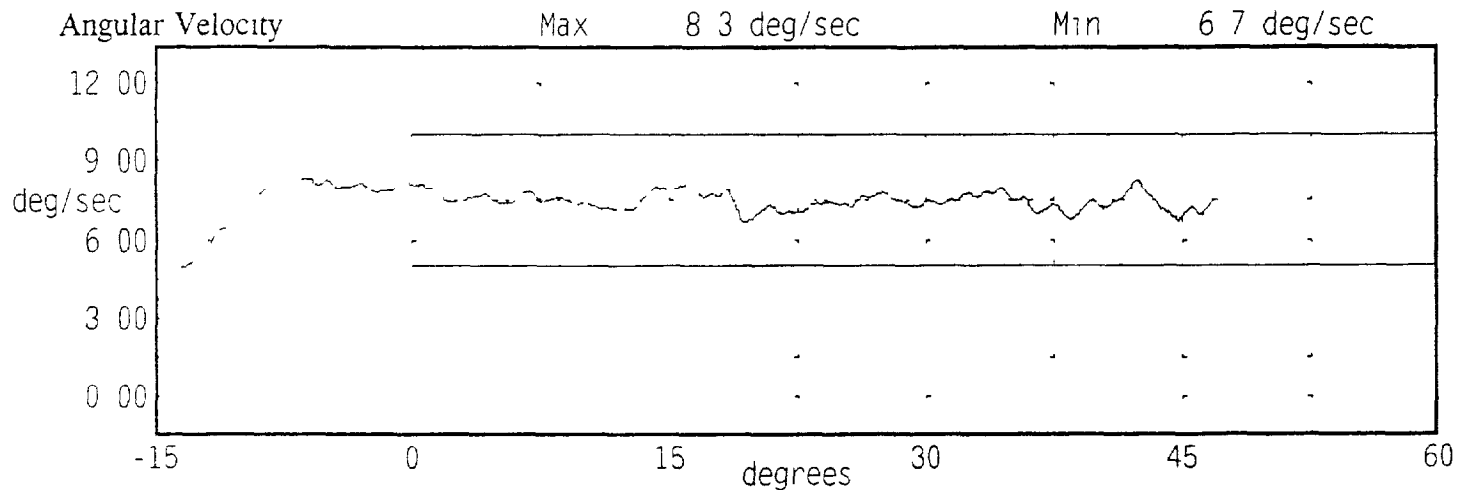
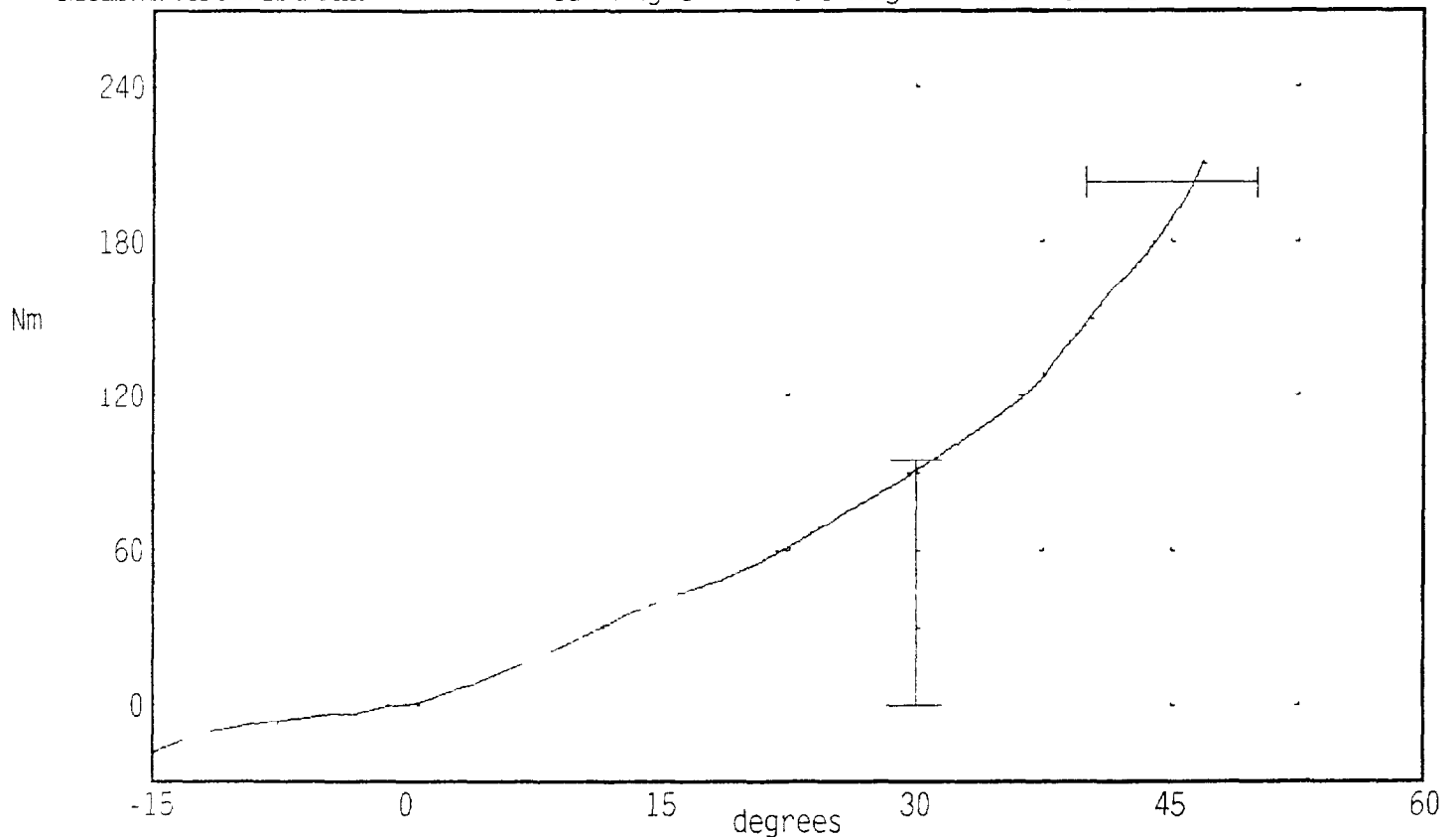
Hybrid III Hip Range of Motion

Serial Number 202L
Test Number 202C14
Comments

Date 11/30/2001
Time 09 31

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	18.9 - 25.6	21.7 °C Pass
Humidity	10 - 70	50 % Pass
Moment at 30 deg	<= 94.9	91.2 Nm Pass
Angle at 203 Nm	40.0 - 50.0	46.3 deg Pass
Average Velocity	5.0 - 10.0	7.5 deg/sec Pass

Moment About H-Point
Peak Moment 211.1 Nm at 46.9 deg
Peak Angle 46.9 deg at 211.1 Nm



Transportation Research Center Inc

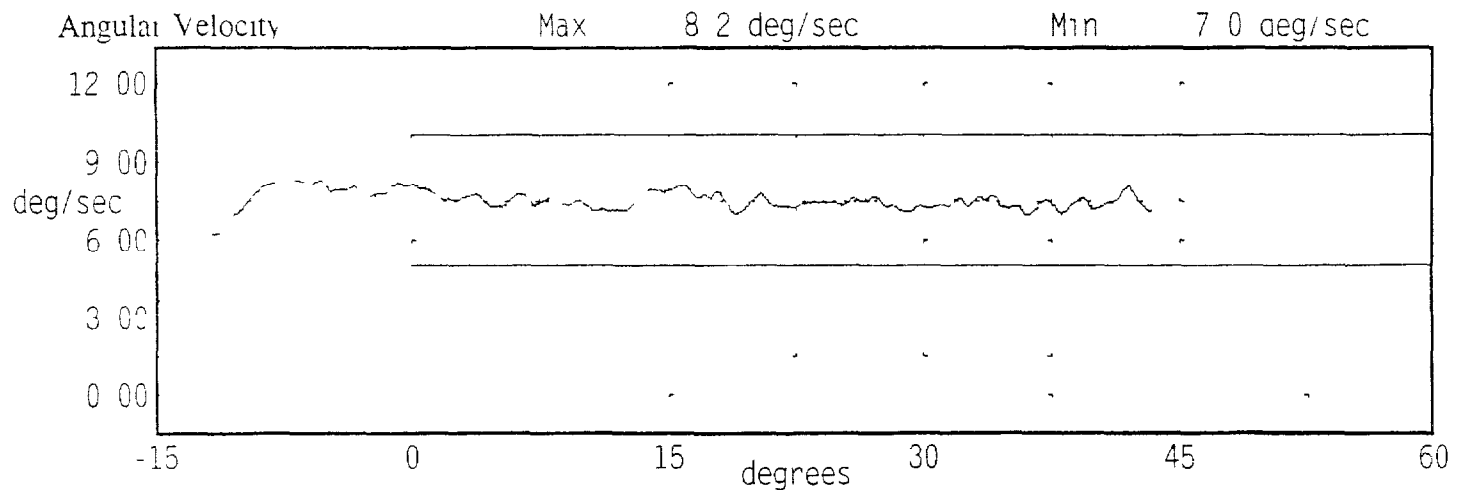
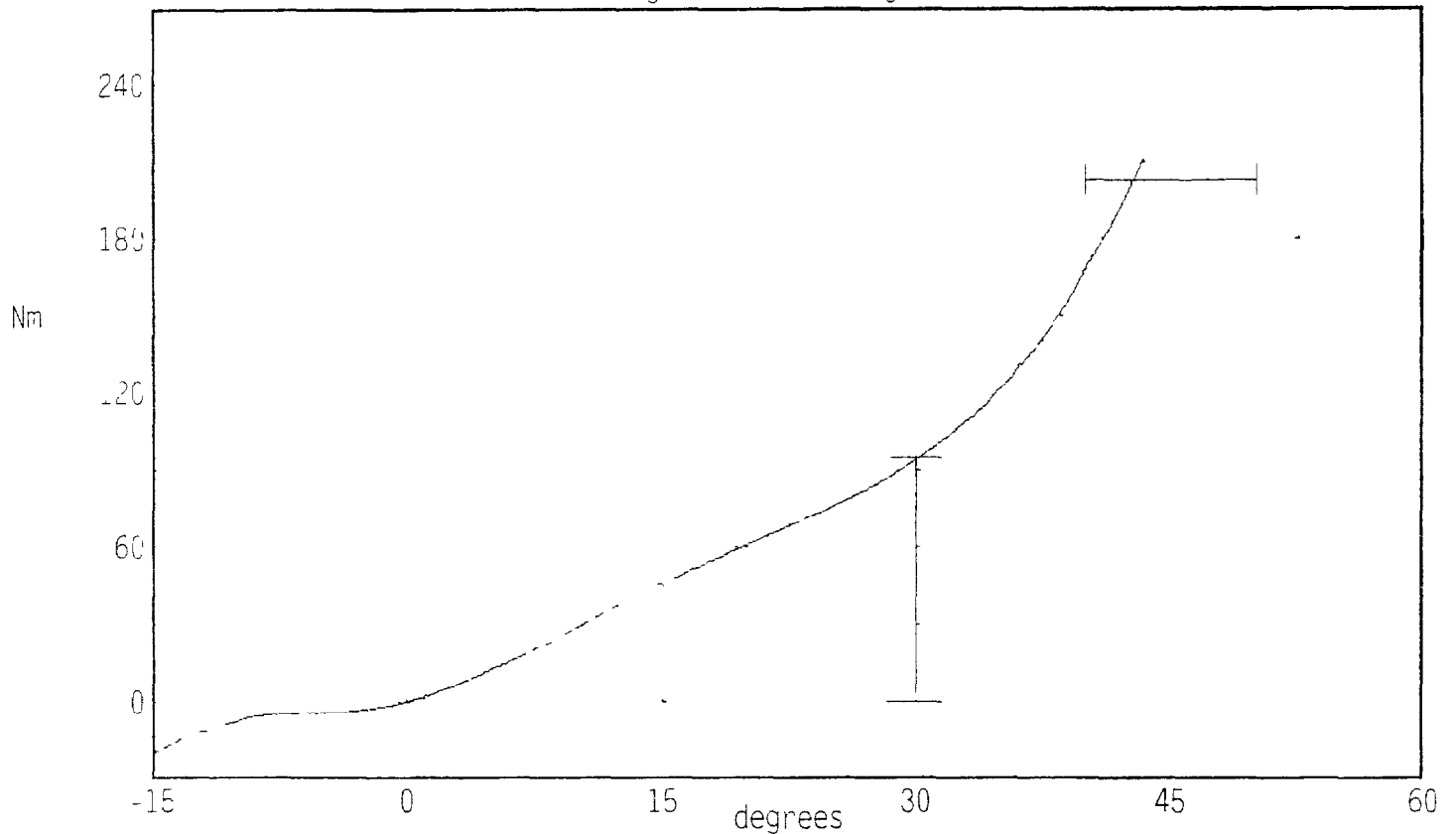
Hybrid III Hip Range of Motion

Serial Number 202R
Test Number 202C14
Comments

Date 11/30/2001
Time 09 28

TEST PARAMETER	SPECIFICATION	TEST RESULTS	
Temperature	18.9 - 25.6	21.7 °C	Pass
Humidity	10 - 70	50 %	Pass
Moment at 30 deg	<= 94.9	94.4 Nm	Pass
Angle at 203 Nm	40.0 - 50.0	42.8 deg	Pass
Average Velocity	5.0 - 10.0	7.5 deg/sec	Pass

Moment About H-Point
Peak Moment 210.8 Nm at 43.3 deg
Peak Angle 43.3 deg at 210.8 Nm



TRANSPORTATION RESEARCH CENTER INC.

LEFT KNEE IMPACT TEST

HYBRID III 50th

03-DEC-01

TRC INC.

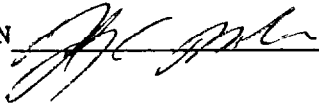
TEST NO: 202C14LK1

572E SN202 LEFT KNEE CAL 14

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.1 DEG. C
RELATIVE HUMIDITY	10 - 70 %	34.0 %
PROBE VELOCITY	2.07 - 2.13 M/S	2.09 M/S
PEAK KNEE IMPACT FORCE 5.0 KG PENDULUM	4715 - 5782 N	5021.5 N

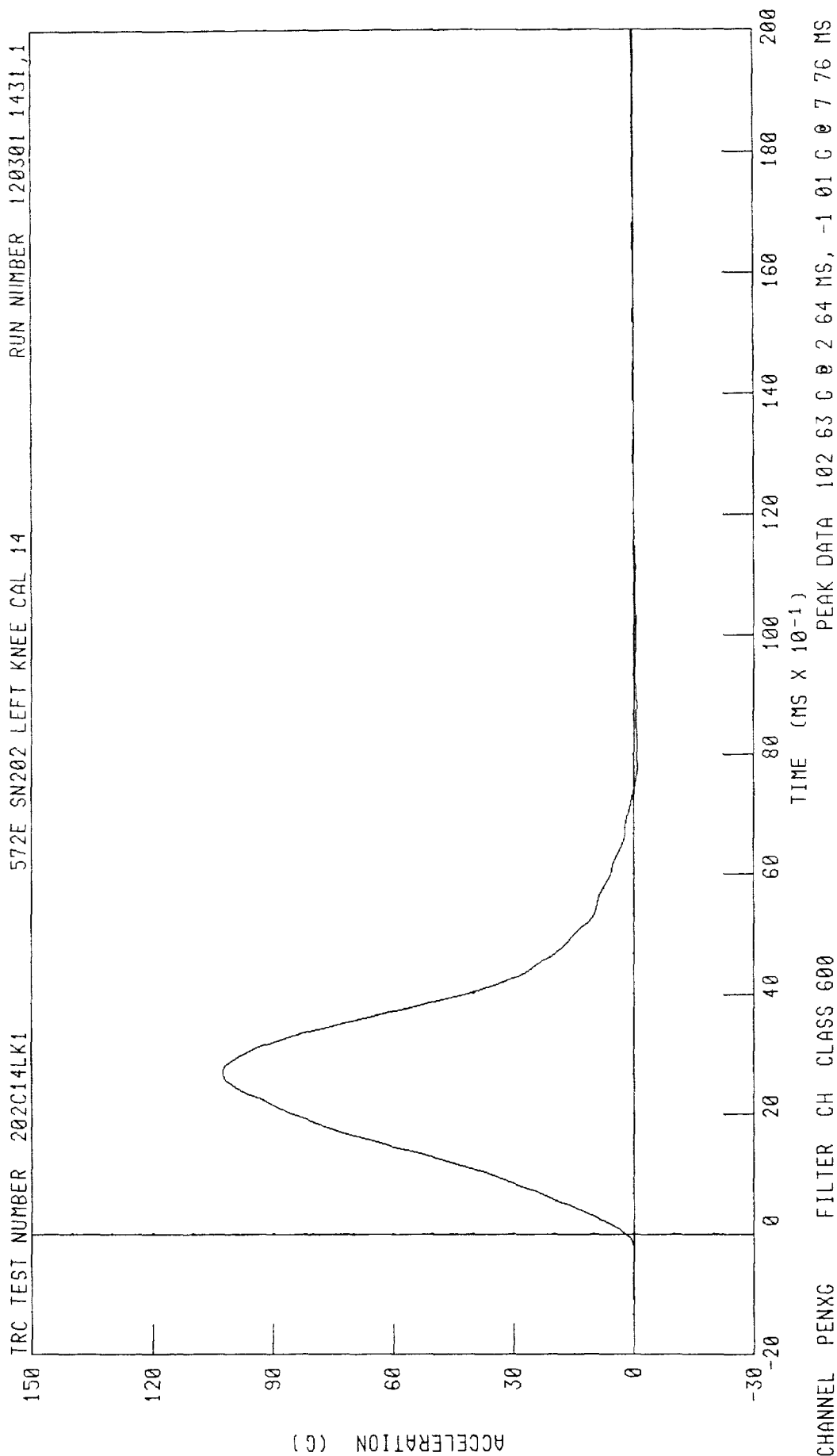
TEST MEETS SPECIFICATIONS

TECHNICIAN



RUN NUMBER: 120301.1431;1

PART 572-E HYBRID III LEFT KNEE CALIBRATION
PENDULUM DECELERATION (5 KG PEND)



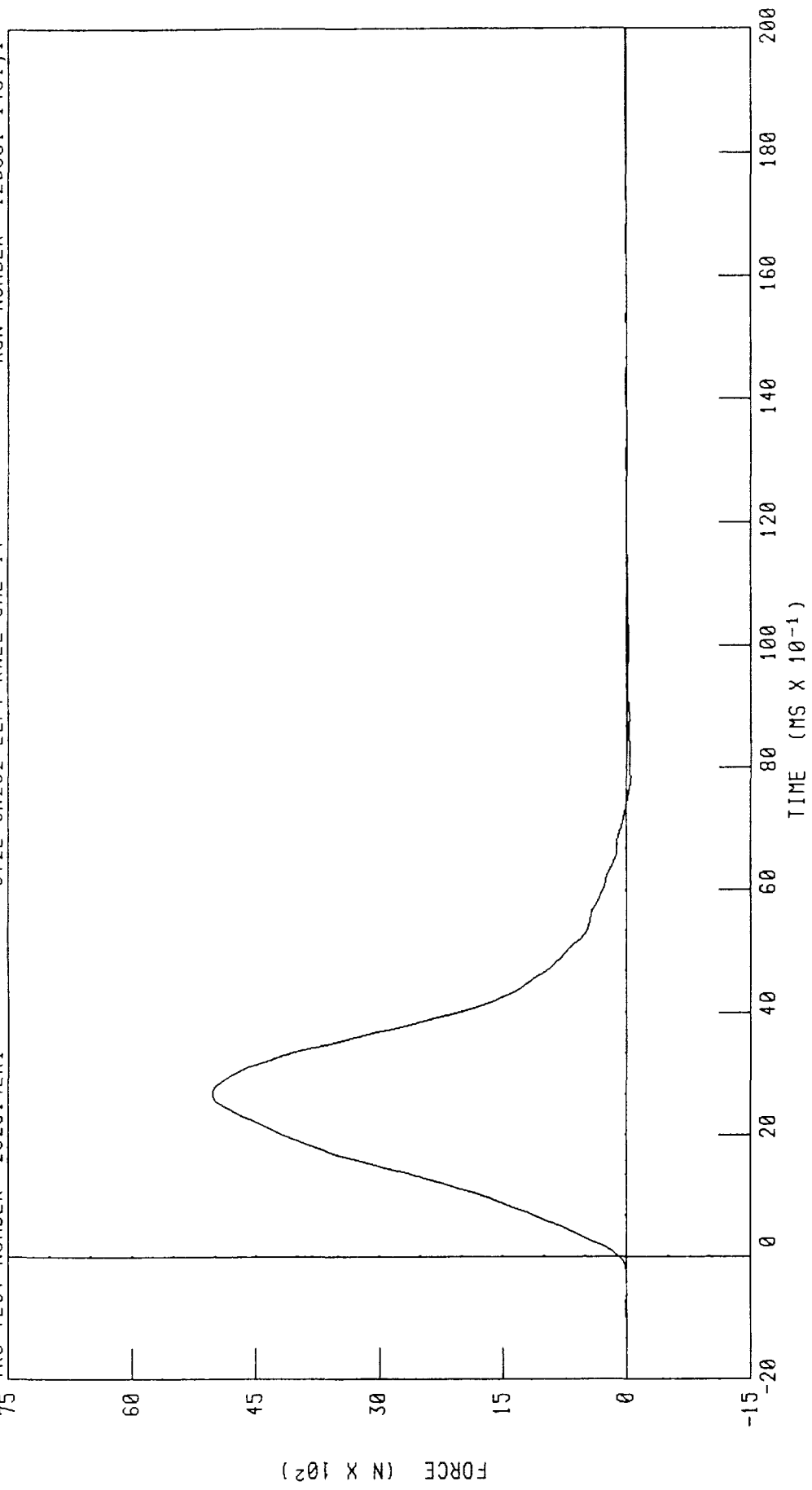
PART 572-E HYBRID III LEFT KNEE CALIBRATION

PENDULUM FORCE (5 KG PEND)

TRC TEST NUMBER 202C14LK1

572E SN202 LEFT KNEE CAL 14

RUN NUMBER 120301 1431,1



CHANNEL PENXF FILTER CH CLASS 600 PEAK DATA 5021 53 N 0 2 64 MS, -49 58 N 0 7 76 MS

TRANSPORTATION RESEARCH CENTER INC.

RIGHT KNEE IMPACT TEST

HYBRID III 50th

03-DEC-01

TRC INC.

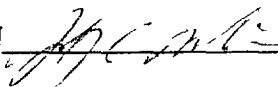
TEST NO: 202C14RK1

572E SN202 RIGHT KNEE CAL 14

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.1 DEG. C
RELATIVE HUMIDITY	10 - 70 %	34.0 %
PROBE VELOCITY	2.07 - 2.13 M/S	2.09 M/S
PEAK KNEE IMPACT FORCE 5.0 KG PENDULUM	4715 - 5782 N	5021.5 N

TEST MEETS SPECIFICATIONS

TECHNICIAN



RUN NUMBER: 120301.1435;1

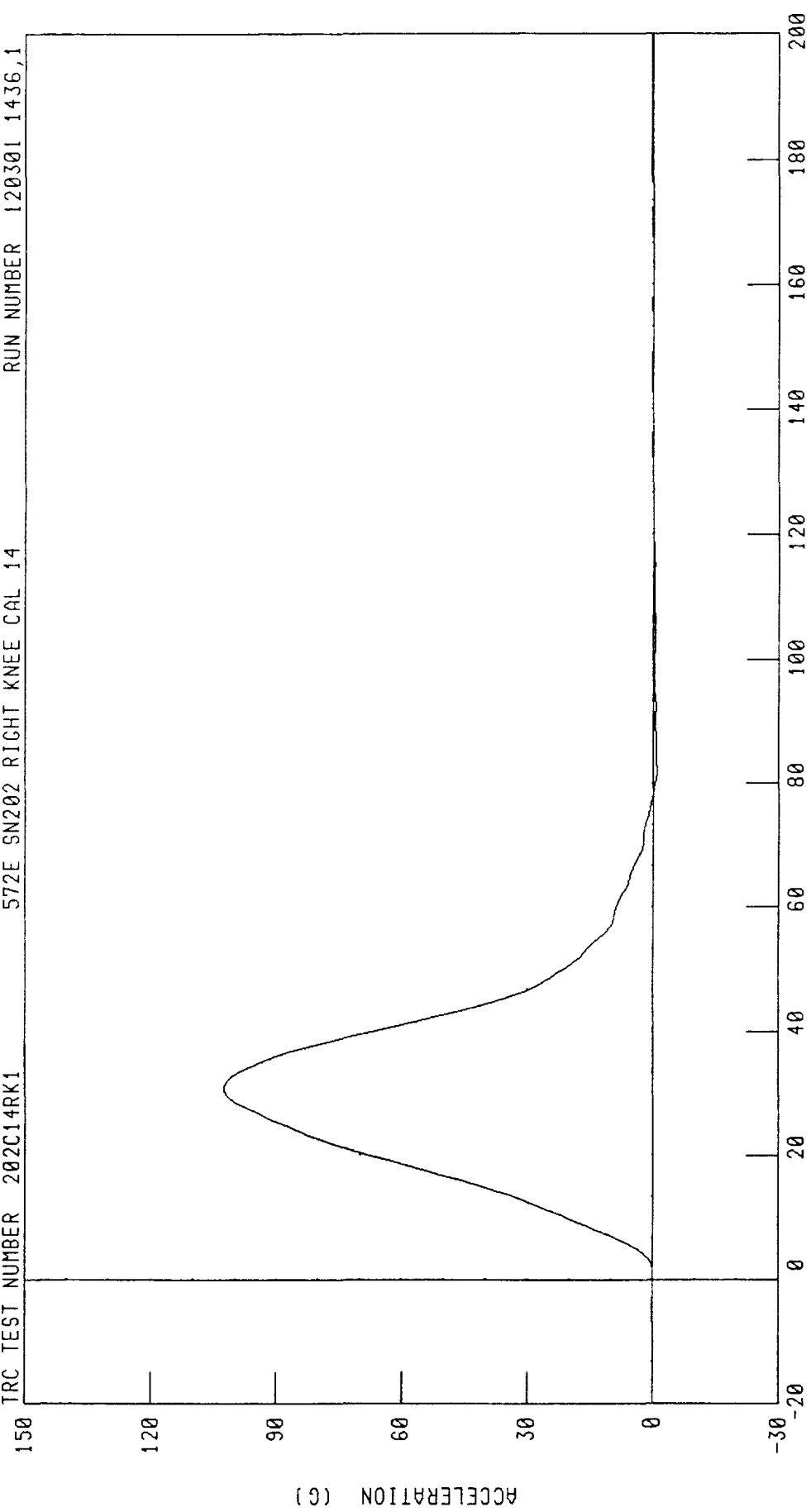
PART 572-E HYBRID III RIGHT KNEE CALIBRATION

PENDULUM DECELERATION (5 KG PEND)

TRC TEST NUMBER 202C14RK1

572E SN202 RIGHT KNEE CAL 14

RUN NUMBER 120301 1436,1



TIME (MS X 10⁻¹)

CHANNEL PENXC FILTER CH CLASS 600

PEAK DATA 102 63 G 0 3 04 MS, -1 01 G 0 8 16 MS

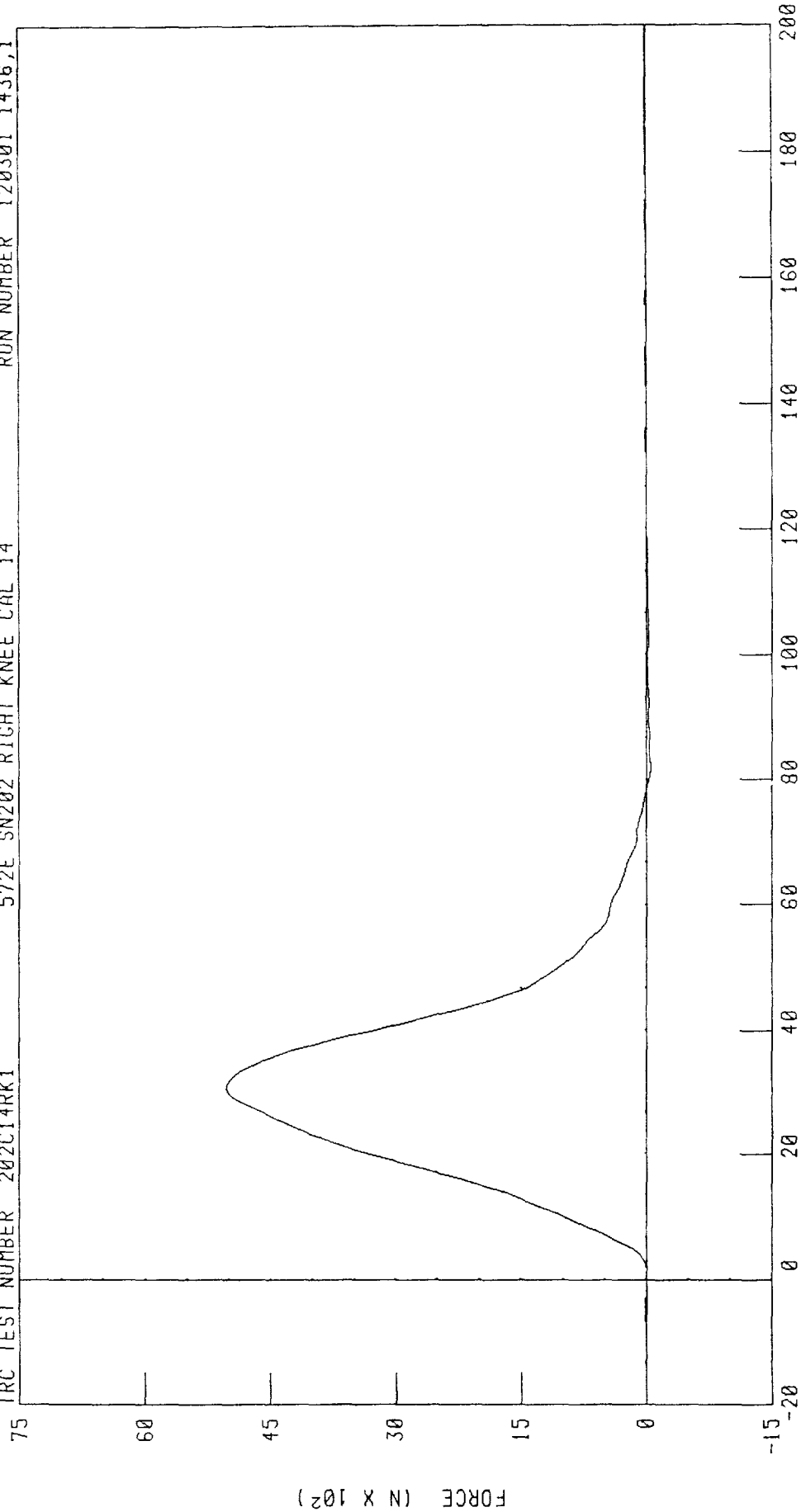
PART 572-E HYBRID III RIGHT KNEE CALIBRATION

PENDULUM FORCE (5 KG PEND)

TRC TEST NUMBER 202C14RK1

572E SN202 RIGHT KNEE CAL 14

RUN NUMBER 120301 1436,1



PEAK DATA 5021 58 N 0 3 04 MS, -49 54 N 0 8 16 MS

CHANNEL PENXF FILTER CH CLASS 600

TRANSPORTATION RESEARCH CENTER INC.

KNEE SLIDER TEST

HYBRID III 50th

04-DEC-01

LEFT KNEE

TRC INC.

TEST NO: 202C14LS1

572E SN202 LEFT SLIDER CAL 14

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	42.0 %
PENDULUM VELOCITY	2.70-2.80 M/S	2.73 M/S
FORCE AT 10.0 MM DISPLACEMENT	1259 - 1721 N	1442. N
FORCE AT 18.0 MM DISPLACEMENT	2268 - 3096 N	2836. N

TEST MEETS SPECIFICATIONS

TECHNICIAN

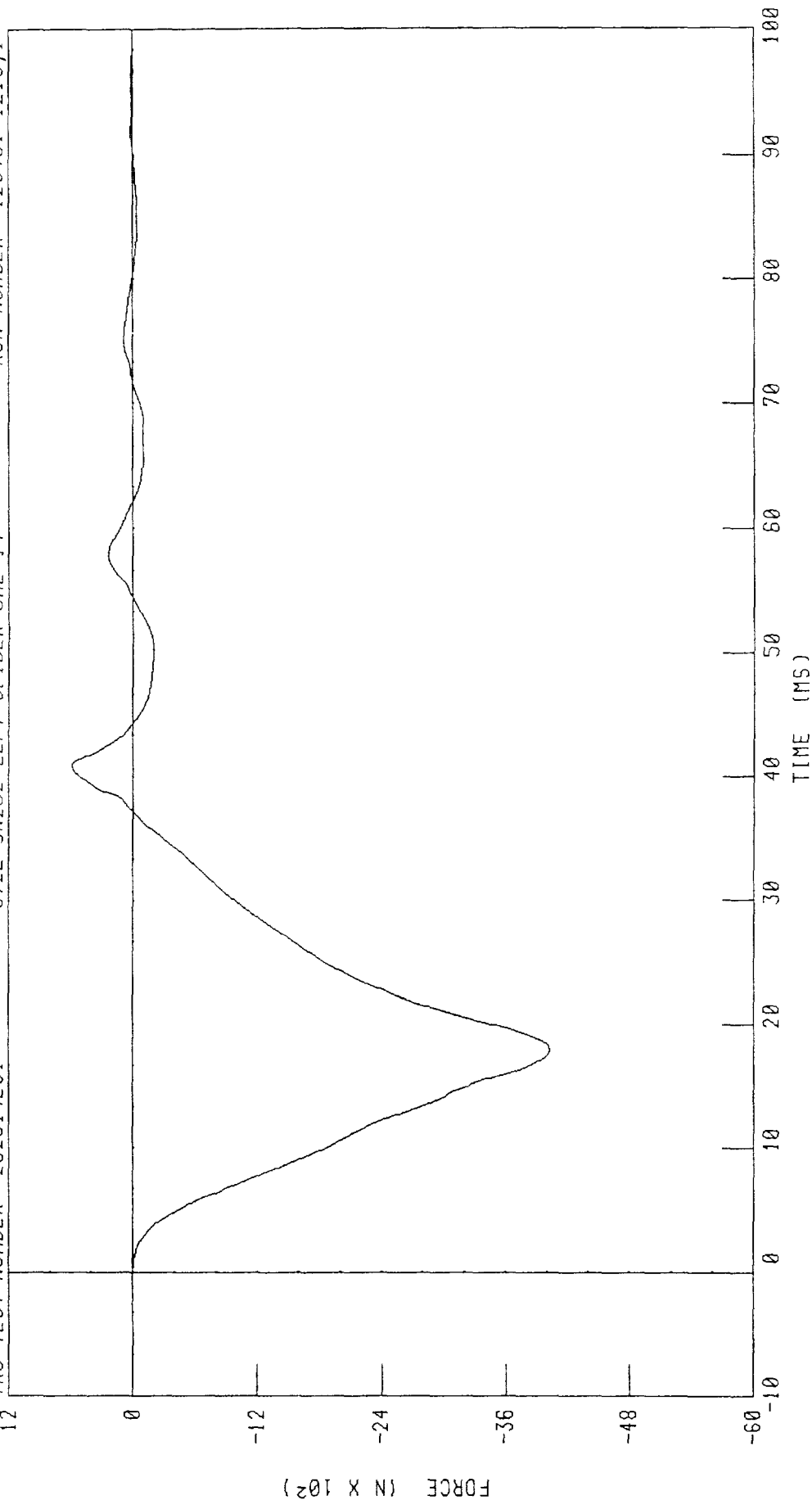


RUN NUMBER: 120401.1214;1

PART 572-E HYBRID III LEFT KNEE SLIDER CALIBRATION

LEFT FEMUR FORCE

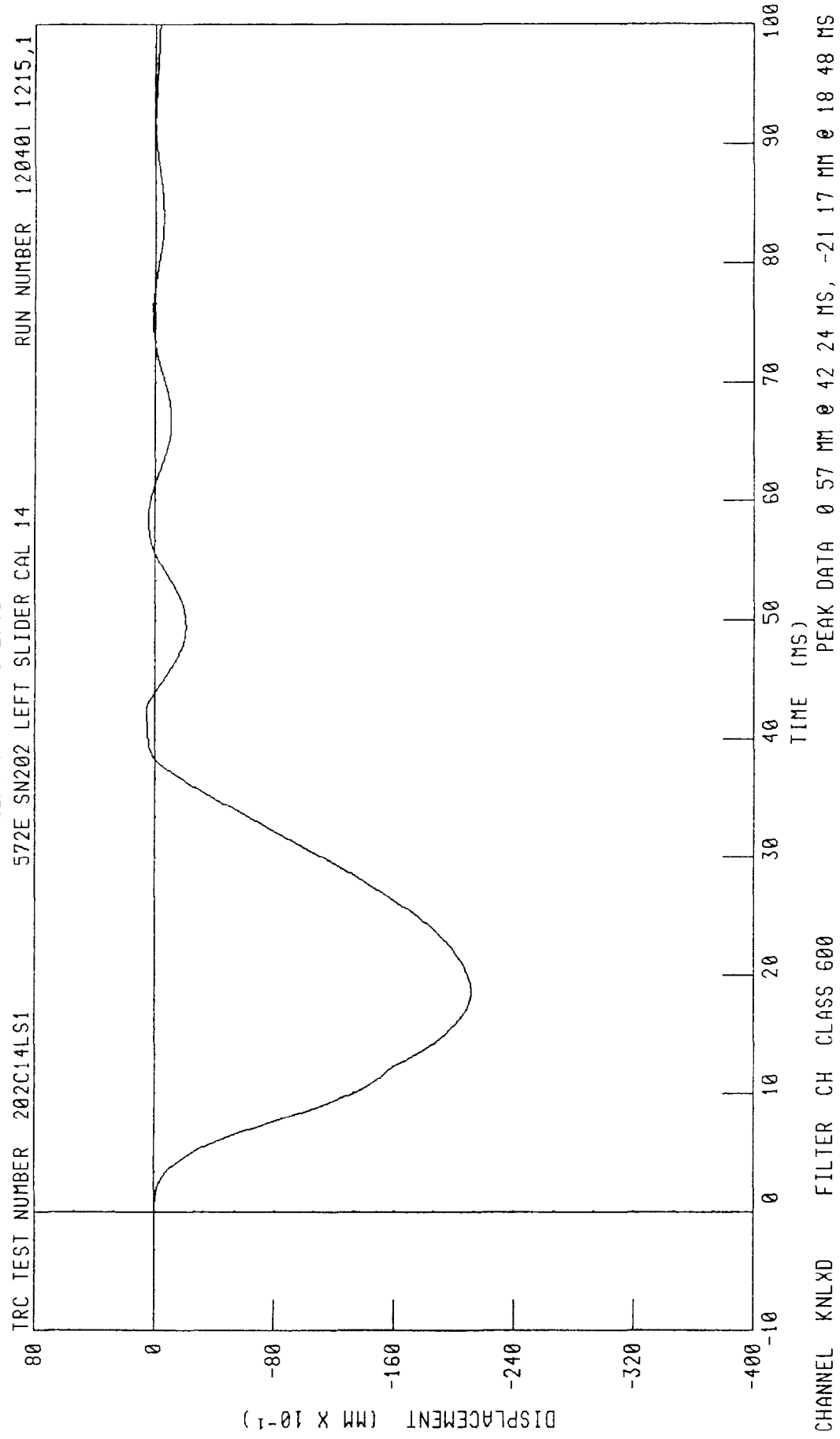
TRC TEST NUMBER 202C14LS1 572E SN202 LEFT SLIDER CAL J4 RUN NUMBER 120401 1215,1



CHANNEL LFMF FILTER CH CLASS 600 PEAK DATA 590 70 N @ 40 96 MS, -4026 76 N @ 17 92 MS

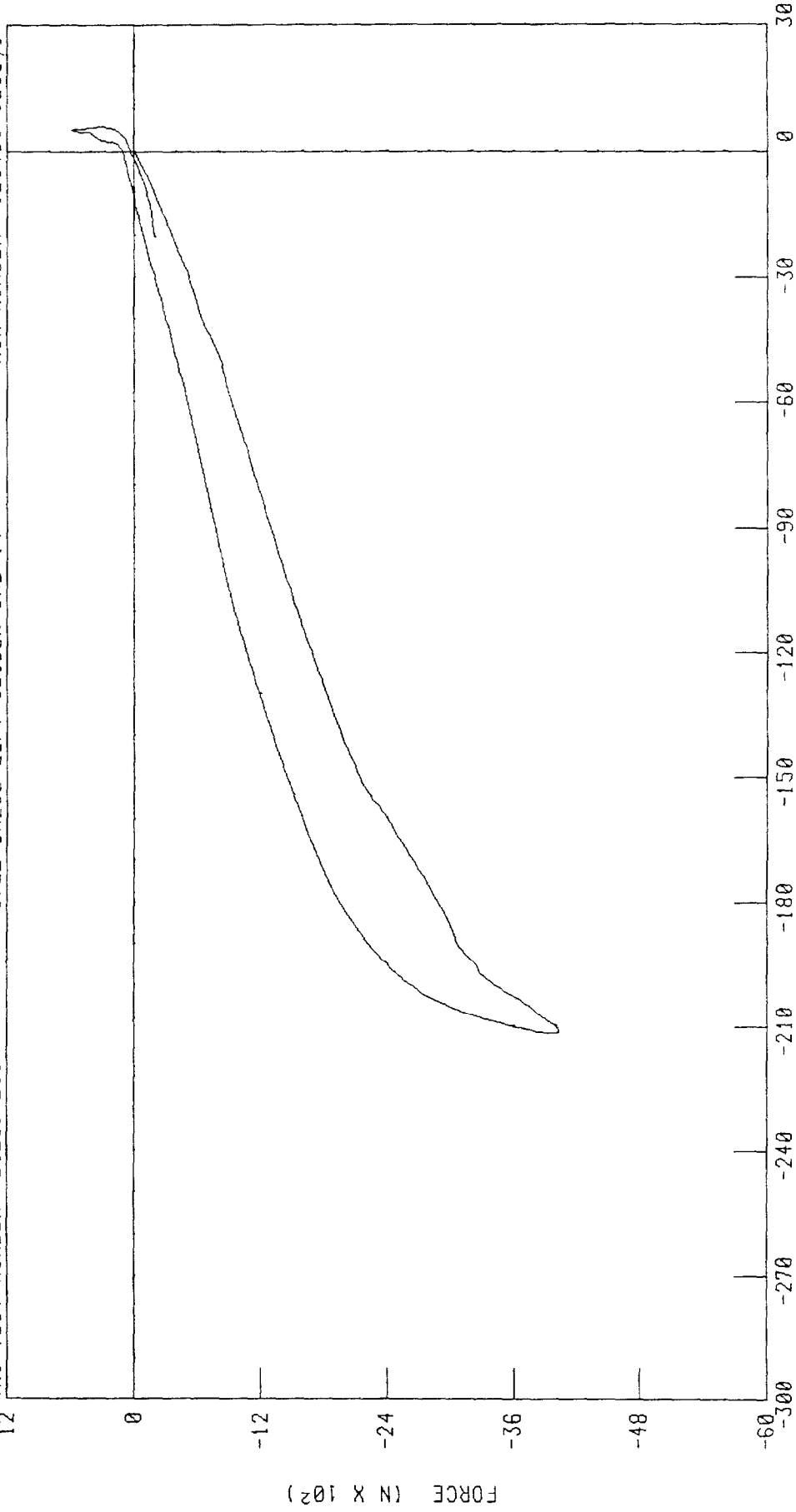
PART 572-E HYBRID III LEFT KNEE SLIDER CALIBRATION

LEFT KNEE DISPLACEMENT



PART 572-E HYBRID III LEFT KNEE SLIDER CALIBRATION
LEFT KNEE DISPLACEMENT VS FEMUR FORCE

TRC TEST NUMBER 202C14LS1 572E SN202 LEFT SLIDER CAL 14 RUN NUMBER 120401 1215,1



CHANNEL KNLXD FILTER CH CLASS 600
LFMF CH CLASS 600
DISPLACEMENT (MM X 10⁻¹)
PEAK DATA 0 57 MM 0 42 24 MS, -21 17 MM 0 18 48 MS
590 70 N 0 40 96 MS, -4026 76 N 0 17 92 MS

TRANSPORTATION RESEARCH CENTER INC.

KNEE SLIDER TEST

HYBRID III 50th

04-DEC-01

RIGHT KNEE

ETRC INC.

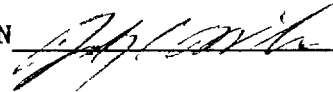
TEST NO: 202C14RS1

572E SN202 RIGHT SLIDER CAL 14

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	33.0 %
PENDULUM VELOCITY	2.70-2.80 M/S	2.75 M/S
FORCE AT 10.0 MM DISPLACEMENT	1259 - 1721 N	1511. N
FORCE AT 18.0 MM DISPLACEMENT	2268 - 3096 N	2840. N

TEST MEETS SPECIFICATIONS

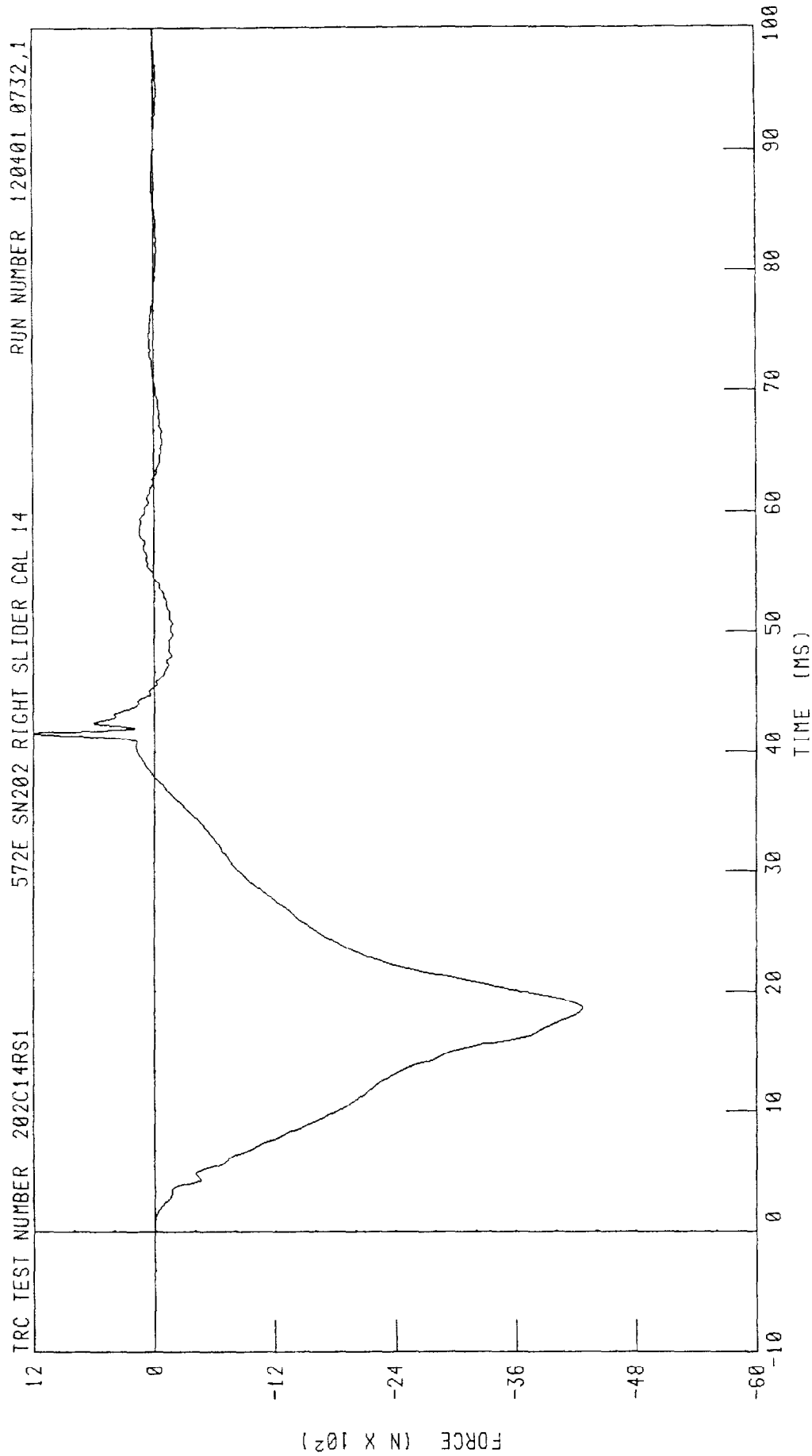
TECHNICIAN



RUN NUMBER: 120401.0713;1

PART 572-E HYBRID III RIGHT KNEE SLIDER CALIBRATION

RIGHT FEMUR FORCE



TRC TEST NUMBER 202C14RS1 572E SN202 RIGHT SLIDER CAL 14 RUN NUMBER 120401 0732,1

TIME (MS)

PEAK DATA 1233 84 N 0 41 60 MS, -4265 04 N 0 18 64 MS

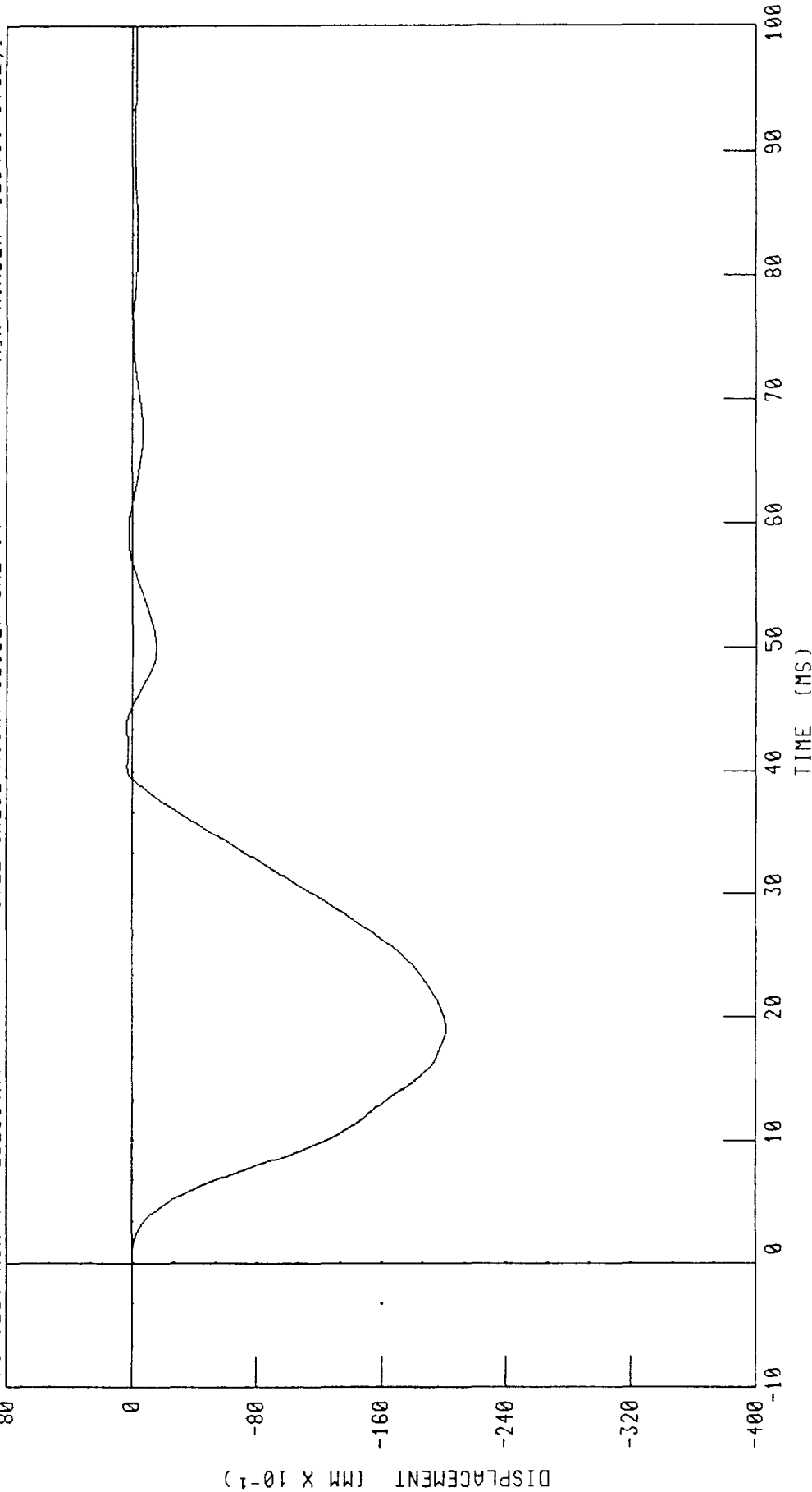
FILTER CH CLASS 600

CHANNEL RFMF

PART 572-E HYBRID III RIGHT KNEE SLIDER CALIBRATION

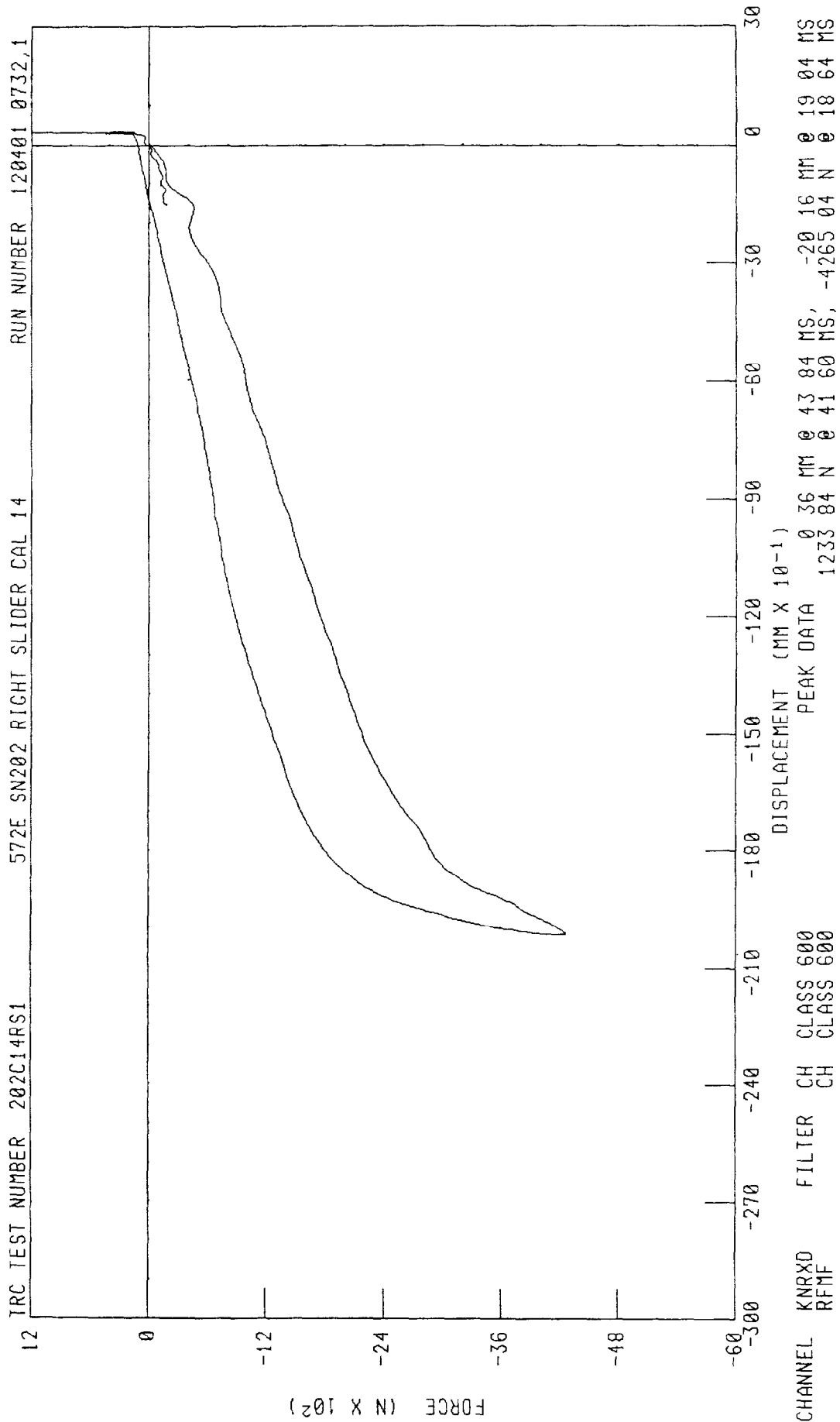
RIGHT KNEE DISPLACEMENT

TRC TEST NUMBER 202C14RS1 572E SN202 RIGHT SLIDER CAL 14 RUN NUMBER 120401 0732,1



CHANNEL KNRXD FILTER CH CLASS 600 PEAK DATA 0 36 MM 0 43 84 MS, -20 16 MM 0 19 04 MS

PART 572-E HYBRID III RIGHT KNEE SLIDER CALIBRATION
 RIGHT KNEE DISPLACEMENT VS FEMUR FORCE



Appendix D

Test Equipment and Instrumentation Calibration Information

Report Sign Convention
SAE J211 MAR95¹

<u>Accelerometers:</u>	+X: Forward	
	+Y: Rightward	
	+Z: Downward	
<u>Potentiometers:</u>	+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)
<u>Rotation potentiometers:</u>	+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
<u>Load cells:</u>	+Femur force:	Tension
	+Seat belt force:	Tension
	+Barrier force:	Tension
<u>Neck load cells:</u>	+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
<u>Tibia load cells:</u>	+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

¹ The chest deflection and knee slider displacement presented in the dummy certification in Appendix C are opposite of J211 polarity

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

Channel Report

11/26/2001 5 47 25 AM

Name of Test 011126-1 System K3600 Name of DAU DAU1

Chan.#	Sensor #	Mnemonic	Description	Dir.	Range	Pol. Cal.	Group	Mfg.	Model
1000	EVENT	SYNCI	SYNCI		10 24	+ 11/21/2001	-1	TRC	Event
1001	TEMP0	EXPG	EXPG		750 66709	+ 11/5/1998	OK -1	TRC	TEMP
1002	TEMP1	EXPU	EXPU		750 66709	+ 11/5/1998	OK -1	TRC	TEMP
1003	01G25-N01	HEDXG1	Head Accel X	Fwd	796 16843	+ 8/10/2001	OK 206v	Entran	EGE-73B6Q-200
1004	01G25-N14	HEDYG1	Head Accel Y	Lft	801 42754	- 8/10/2001	OK 206v	Entran	EGE-73B6Q-200
1005	01G25-N08	HEDZG1	Head Accel Z	Up	794 29103	- 8/10/2001	OK 206v	Entran	EGE-73B6Q-200
1006	P12566	HEDXR1	Head Accel Red X 1014	Rwd	799 75007	- 8/28/2001	OK 206v	Endevco	7264C-2K-2-180
1007	J38075	HEDYR1	Head Accel Red Y M1	Rgt	799 00124	+ 11/16/2001	OK 206v	Endevco	7264-2000TZ
1008	P17858	HEDZR1	Head Accel Red Z 1018	Up	803 14985	- 8/28/2001	OK 206v	Endevco	7264C-2KLC-2-
1009	01G25-N06	HD1XG1	Head (LT) Accel X	Fwd	802 15579	+ 8/10/2001	OK 206v	Entran	EGE-73B6Q-200
1010	01G25-N05	HD1ZG1	Head (LT) Accel Z	Up	805 82333	- 8/10/2001	OK 206v	Entran	EGE-73B6Q-200
1011	01G25-N04	HD2YG1	Head (FT) Accel Y	Lft	796 85615	- 8/10/2001	OK 206v	Entran	EGE-73B6Q-200
1012	01G25-N13	HD2ZG1	Head (FT) Accel Z	Up	803 61627	- 8/10/2001	OK 206v	Entran	EGE-73B6Q-200
1013	01G25-N09	HD3XG1	Head (TP) Accel X	Fwd	802 23120	+ 8/10/2001	OK 206v	Entran	EGE-73B6Q-200
1014	01G25-N16	HD3YG1	Head (TP) Accel Y	Lft	802 28148	- 8/10/2001	OK 206v	Entran	EGE-73B6Q-200
1015	1716A-858-FX	NEKXF1	Neck Force X	Hd	8899 0017	- 8/16/2001	OK 206v	Entran	EGE-73B6Q-200
1016	1716A-858-FY	NEKYF1	Neck Force Y	Hd	8893 9293	+ 8/16/2001	OK 206v	Denton	1716A
1017	1716A-858-FZ	NEKZF1	Neck Force Z	Hd	13346 730	+ 8/16/2001	OK 206v	Denton	1716A
1018	1716A-858-MX	NEKXM1	Neck Moment X	Rt Ear	282 48320	- 8/16/2001	OK 206v	Denton	1716A
1019	1716A-858-MY	NEKYM1	Neck Moment Y	Chn	282 73213	+ 8/16/2001	OK 206v	Denton	1716A
1020	1716A-858-MZ	NEKZM1	Neck Moment Z	Chn	282 21777	+ 8/16/2001	OK 206v	Denton	1716A
1021	1794A-216-FX	NKLXF1	Lwr Neck Force X	Hd	13341 899	- 7/5/2001	OK 206v	Denton	1716A
1022	1794A-216-FY	NKLYF1	Lwr Neck Force Y	Hd	13341 903	+ 7/5/2001	OK 206v	Denton	1794A
1023	1794A-216-FZ	NKLZF1	Lwr Neck Force Z	Hd	13341 967	+ 7/5/2001	OK 206v	Denton	1794A
1024	1794A-216-MX	NKLXM1	Lwr Neck Moment X	Rt Ear	339 12535	- 7/5/2001	OK 206v	Denton	1794A
1025	1794A-216-MY	NKLYM1	Lwr Neck Moment Y	Chn	339 07284	+ 7/5/2001	OK 206v	Denton	1794A
1026	1794A-216-MZ	NKLZM1	Lwr Neck Moment Z	Chn	181 06613	+ 7/5/2001	OK 206v	Denton	1794A
1027	ACCM9	CSTXG1	Chest Accel X	Fwd	398 18638	+ 8/24/2001	OK 206v	Endevco	7264-2000TZ
1028	J15368	CSTYG1	Chest Accel Y	Lft	397 26415	- 8/24/2001	OK 206v	Endevco	7264-2000TZ
1029	J20184	CSTZG1	Chest Accel Z	Up	398 22354	- 8/24/2001	OK 206v	Endevco	7264-2000TZ

Channel Report

11/26/2001 5 47 26 AM

1030	14CB1-2847-206	CSTXDI	Chest Deflection X	Simm	99 776518	MM	+	9/7/2001	OK	206v	Servo	14CB1-2847
1031	2121-0160	LFMZFI	Left Femur Force Z	Knee	13351 984	N	+	8/24/2001	OK	206v	Denton	2121
1032	2121-0161	RFMZF1	Right Femur Force Z	Knee	13336 309	N	+	8/24/2001	OK	206v	Denton	2121
1033	150-0121VR-180	KNLXDI	Left Knee Displacement	Tib	43 838806	MM	-	11/9/2001	OK	206v	SpaceAge	150-0121VR
1034	150-0121VL-181	KNRXDI	Right Knee Displacement	Tib	43 279797	MM	-	4/26/2001	OK	206v	SpaceAge	150-0121VL
1035	4353J-82-FX	TBLXF1	Left Upper Tibia Force X LC8	Tib	8894 2849	N	+	8/3/2001	OK	206v	Denton	4353J
1036	4353J-82-FZ	TBLZF1	Left Upper Tibia Force Z LC15	Tib	8893 5422	N	+	8/3/2001	OK	206v	Denton	4353J
1037	4353J-82-MX	TBLXM1	Left Upper Tibia Moment X	Ank	281 72034	NM	+	8/3/2001	OK	206v	Denton	4353J
1038	4353J-82-MY	TBLYM1	Left Upper Tibia Moment Y	Ank	281 72034	NM	+	8/3/2001	OK	206v	Denton	4353J
1039	01G19-F02	TBLXG1	Left Tibia Accel X	Fwd	1208 9728	G	+	8/21/2001	OK	206v	Entran	FGE-73B6Q-200
1040	01H02-N02	TBLYG1	Left Tibia Accel Y	Rt	1204 7058	G	+	8/21/2001	OK	206v	Entran	EGE-73B6Q-200
1041	4929J-87-FX	ANLXF1	Left Lower Tibia Force X LC23	Ank	8892 6806	N	+	12/22/2000	OK	206v	Denton	4929J
1042	4929J-87-FY	ANLYF1	Left Lower Tibia Force Y LC16	Ank	8892 2605	N	+	12/22/2000	OK	206v	Denton	4929J
1043	4929J-87-FZ	ANLZF1	Left Lower Tibia Force Z LC19	Ank	8902 2422	N	+	12/22/2000	OK	206v	Denton	4929J
1044	4929J-87-MX	ANLXM1	Left Lower Tibia Moment X	Ank	282 23274	NM	+	12/22/2000	OK	206v	Denton	4929J
1045	4929J-87-MY	ANLYM1	Left Lower Tibia Moment Y	Ank	281 73632	NM	+	12/22/2000	OK	206v	Denton	4929J
1046	PD210-4B-AK-06	FTLXDI	Left Foot Disp X POT4	Eversif	324 65679	DEG	+	7/31/2001	OK	206v	CONTELE	PD210-4B
1047	PD210-4B-AK-06	FTLYDI	Left Foot Disp Y POT5	Dorsif	323 24252	DEG	+	7/31/2001	OK	206v	CONTELE	PD210-4B
1048	PD210-4B-AK-06	FTLZDI	Left Foot Disp Z POT6	Intern	321 82029	DEG	+	7/31/2001	OK	206v	CONTELE	PD210-4B
1049	01H02-N05	FTLXG1	Left Foot Accel X	Fwd	1202 4848	G	+	8/21/2001	OK	206v	Entran	EGE-73B6Q-200
1050	J38064	FTLYG1	Left Foot Accel Y	Rt	1211 6909	G	+	10/23/2001	OK	206v	Endevco	7264-2000TZ
1051	01H02-N01	FTLZG1	Left Foot Accel Z	Dn	1213 3276	G	+	8/21/2001	OK	206v	Entran	EGE-73B6Q-200
1052	4353J-81-FX	TBRXF1	Right Upper Tibia Force X	Tib	8895 2823	N	+	8/3/2001	OK	206v	Denton	4353J
1053	4353J-81-FZ	TBRZF1	Right Upper Tibia Force Z	Tib	8904 7399	N	+	8/3/2001	OK	206v	Denton	4353J
1054	4353J-81-MX	TBRXM1	Right Upper Tibia Moment X	Ank	281 77048	NM	+	8/3/2001	OK	206v	Denton	4353J
1055	4353J-81-MY	TBRYM1	Right Upper Tibia Moment Y	Ank	281 74774	NM	+	8/3/2001	OK	206v	Denton	4353J
1056	01H02-N07	TBRXG1	Right Tibia Accel X	Fwd	1195 1447	G	+	8/21/2001	OK	206v	Entran	FGE-73B6Q-200
1057	01H02-N03	TBRYG1	Right Tibia Accel Y	Rt	1192 3614	G	+	8/21/2001	OK	206v	Entran	EGE-73B6Q-200
1058	4929J-86-FX	ANRXF1	Right Lower Tibia Force X	Ank	8893 2428	N	+	12/22/2000	OK	206v	Denton	4929J
1059	4929J-86-FY	ANRYF1	Right Lower Tibia Force Y	Ank	8899 5962	N	+	12/22/2000	OK	206v	Denton	4929J
1060	4929J-86-FZ	ANRZF1	Right Lower Tibia Force Z LC9	Ank	8894 6050	N	+	12/22/2000	OK	206v	Denton	4929J
1061	4929J-86-MX	ANRXM1	Right Lower Tibia Moment X	Ank	282 12517	NM	+	12/22/2000	OK	206v	Denton	4929J
1062	4929J-86-MY	ANRYM1	Right Lower Tibia Moment Y	Ank	281 85485	NM	+	12/22/2000	OK	206v	Denton	4929J
1063	PD210-4B-AK-05	FTRXDI	Right Foot Disp X POT1	Inersif	323 73304	DEG	+	7/31/2001	OK	206v	CONTELE	PD210-4B
1064	PD210-4B-AK-05	FTRYDI	Right Foot Disp Y POT2	Dorsif	324 19426	DEG	+	7/31/2001	OK	206v	CONTELE	PD210-4B

Channel Report

11/26/2001 5 47 26 AM

1065	PD210-4B-AK-05	FTRZD1	Right Foot Disp Z	POT3	Ext	325 11032	DEG	+	7/31/2001	OK	206v	CONTELF	PD210-4B
1066	J38857	FTRXG1	Right Foot Accel X		Fwd	1193 7236	G	+	11/15/2001	OK	206v	Fndevco	7264-2000TZ
1067	J38787	FTRYG1	Right Foot Accel Y		Rt	1192 9170	G	+	11/15/2001	OK	206v	Endevco	7264-2000TZ
1068	01G19-F05	FTRZG1	Right Foot Accel Z		Dn	1205 2730	G	+	8/21/2001	OK	206v	Entran	EGE-73B6Q-200
1069	01G25-N07	HEDXG2	Head Accel X		Fwd	799 60019	G	+	8/10/2001	OK	202v	Entran	EGE-73B6Q-200
1070	01G25-N20	HEDYG2	Head Accel Y		Lft	795 62406	G	-	8/10/2001	OK	202v	Entran	EGE-73B6Q-200
1071	01G25-N17	HEDZG2	Head Accel Z		Up	804 99980	G	-	8/10/2001	OK	202v	Entran	EGE-73B6Q-200
1072	PI15951	HEDXR2	Head Accel Red X	VRTC10	Rwd	802 18092	G	-	8/28/2001	OK	202v	Endevco	7264C-2KLC-2-
1073	J36709	HEDYR2	Head Accel Red Y	VRTC3	Rgt	791 44252	G	+	10/22/2001	OK	202v	Endevco	7264-2000TZ
1074	PI16899	HEDZR2	Head Accel Red Z	VRTC9	Up	803 13725	G	-	8/28/2001	OK	202v	Endevco	7264C-2KLC-2-
1075	01G19-F03	HD1XG2	Head (LT) Accel X		Fwd	805 00613	G	+	8/10/2001	OK	202v	Entran	EGE-73B6Q-200
1076	01G25-N18	HD1ZG2	Head (LT) Accel Z		Up	801 86684	G	-	8/10/2001	OK	202v	Entran	EGE-73B6Q-200
1077	01G25-N10	HD2YG2	Head (FT) Accel Y		Lft	799 15090	G	-	8/10/2001	OK	202v	Entran	EGE-73B6Q-200
1078	01G25-N03	HD2ZG2	Head (FT) Accel Z		Up	802 64622	G	-	8/10/2001	OK	202v	Entran	EGE-73B6Q-200
1079	01G25-N15	HD3XG2	Head (TP) Accel X		Fwd	805 05043	G	+	8/10/2001	OK	202v	Entran	EGE-73B6Q-200
1080	01G25-N02	HD3YG2	Head (TP) Accel Y		Lft	800 50031	G	-	8/10/2001	OK	202v	Entran	EGE-73B6Q-200
1081	1716-0628-FX	NEKXF2	Neck Force X		Hd	8902 1983	N	-	8/16/2001	OK	202v	Denton	1716
1082	1716-0628-FY	NEKYF2	Neck Force Y		Hd	8900 7198	N	+	8/16/2001	OK	202v	Denton	1716
1083	1716-0628-FZ	NEKZF2	Neck Force Z		Hd	13340 872	N	+	8/16/2001	OK	202v	Denton	1716
1084	1716-0628-MX	NEKXM2	Neck Moment X		Rt Ear	282 54737	NM	-	8/16/2001	OK	202v	Denton	1716
1085	1716-0628-MY	NEKYM2	Neck Moment Y		Chn	282 33653	NM	+	8/16/2001	OK	202v	Denton	1716
1086	1716-0628-MZ	NEKZM2	Neck Moment Z		Chn	282 33050	NM	+	8/16/2001	OK	202v	Denton	1716
1087	1794A-215-FX	NKLXF2	Lwr Neck Force X		Hd	13349 134	N	-	7/5/2001	OK	202v	Denton	1794A
1088	1794A-215-FY	NKLYF2	Lwr Neck Force Y		Hd	13336 090	N	+	7/5/2001	OK	202v	Denton	1794A
1089	1794A-215-FZ	NKLZF2	Lwr Neck Force Z		Hd	13354 542	N	+	7/5/2001	OK	202v	Denton	1794A
1090	1794A-215-MX	NKLXM2	Lwr Neck Moment X		Rt Ear	338 83521	NM	-	7/5/2001	OK	202v	Denton	1794A
1091	1794A-215-MY	NKLYM2	Lwr Neck Moment Y		Chn	338 90972	NM	+	7/5/2001	OK	202v	Denton	1794A
1092	1794A-215-MZ	NKLZM2	Lwr Neck Moment Z		Chn	181 09799	NM	+	7/5/2001	OK	202v	Denton	1794A
1093	AJ460	CSTXG2	Chest Accel X		Fwd	401 87278	G	+	8/24/2001	OK	202v	Endevco	7264-2000TZ
1094	J14404	CSTYG2	Chest Accel Y		Lft	401 88383	G	-	8/24/2001	OK	202v	Endevco	7264-2000TZ
1095	J14144	CSTZG2	Chest Accel Z		Up	402 72943	G	-	8/24/2001	OK	202v	Endevco	7264-2000TZ
1096	14CB1-2847-013	CSTXD2	Chest Deflection X		Stimm	100 27107	MM	+	9/7/2001	OK	202v	Servo	14CB1-2847
1097	2121-0226	LFMZP2	Left Femur Force Z		Knee	13348 553	N	+	8/24/2001	OK	202v	Denton	2121
1098	2121-0227	RFMZP2	Right Femur Force Z		Knee	13344 498	N	+	8/24/2001	OK	202v	Denton	2121
1099	150-0121VR-137	KNLXD2	Left Knee Displacement		Flb	44 31668	MM	-	11/30/2000	OK	202v	SpaceAge	150-0121VR

Channel Report

11/26/2001 5 47 27 AM

1100	150-0121VL-137	KNR XD2	Right Knee Displacement	Tib	43 442476	MM	-	11/30/2000	OK	202v	SpaceAge	150-0121VL
1101	3115-199-FX	TBLXF2	Left Upper Tibia Force X	Tib	8896 2362	N	-	3/2/2001	OK	202v	Denton	3115
1102	3115-199-FZ	TBLZF2	Left Upper Tibia Force Z	Tib	8894 2961	N	+	3/2/2001	OK	202v	Denton	3115
1103	3115-199-MX	TBLXM2	Left Upper Tibia Moment X	Tib	281 78037	NM	-	3/2/2001	OK	202v	Denton	3115
1104	3115-199-MY	TBLYM2	Left Upper Tibia Moment Y	Tib	281 82613	NM	+	3/2/2001	OK	202v	Denton	3115
1105	3287-128-FX	ANLXF2	Left Lower Tibia Force X	Ank	8898 2923	N	-	3/5/2001	OK	202v	Denton	3287
1106	3287-128-FZ	ANLZF2	Left Lower Tibia Force Z	Ank	8897 2105	N	+	3/5/2001	OK	202v	Denton	3287
1107	J36595	ENGXG1	Top Engine X-Axis	Fwd	988 94200	G	+	9/7/2001	OK	-1	Endevco	7264-2000FZ

Channel Report

11/26/2001 5 47 27 AM

Name of Test 011126-1 System K3600 Name of DAU DAU2

Chan.#	Sensor #	Mnemonic	Description	Dir.	Range	Pol. Cal.	Group	Mfg.	Model
2000	EVENT	SYNC2	SYNC2		10 24				
2001	62467	BA1F	ROW A CELL 1	V	222457 47	+ 11/21/2001	OK -1	TRC	Event
2002	68056	BA2F	ROW A CELL 2	N	222196 95	+ 8/15/2001	OK TRC	Interface	1220TX-50K
2003	68054	BA3F	ROW A CELL 3	N	222370 56	+ 8/15/2001	OK TRC	Interface	1220TX-50K
2004	68061	BA4F	ROW A CELL 4	N	222569 31	+ 8/15/2001	OK TRC	Interface	1220TX-50K
2005	68058	BA5F	ROW A CELL 5	N	222420 21	+ 8/15/2001	OK TRC	Interface	1220TX-50K
2007	68042	BA6F	ROW A CELL 6	N	222048 36	+ 8/15/2001	OK TRC	Interface	1220TX-50K
2008	68032	BA7F	ROW A CELL 7	N	222519 59	+ 8/15/2001	OK TRC	Interface	1220TX-50K
2009	68026	BA8F	ROW A CELL 8	N	222532 01	+ 8/15/2001	OK TRC	Interface	1220TX-50K
2010	68045	BA9F	ROW A CELL 9	N	222706 15	+ 8/15/2001	OK TRC	Interface	1220TX-50K
2011	68027	BB1F	ROW B CELL 1	N	222793 32	+ 8/15/2001	OK TRC	Interface	1220TX-50K
2012	68055	BB2F	ROW B CELL 2	N	222556 87	+ 8/15/2001	OK TRC	Interface	1220TX-50K
2013	68046	BB3F	ROW B CELL 3	N	222544 44	+ 8/15/2001	OK TRC	Interface	1220TX-50K
2014	68068	BB4F	ROW B CELL 4	N	222296 12	+ 8/15/2001	OK TRC	Interface	1220TX-50K
2015	68024	BB5F	ROW B CELL 5	N	222382 97	+ 8/15/2001	OK TRC	Interface	1220TX-50K
2016	68044	BB6F	ROW B CELL 6	N	222271 32	+ 8/15/2001	OK TRC	Interface	1220TX-50K
2017	68069	BB7F	ROW B CELL 7	N	222358 10	+ 8/15/2001	OK TRC	Interface	1220TX-50K
2018	68034	BB8F	ROW B CELL 8	N	222395 38	+ 8/15/2001	OK TRC	Interface	1220TX-50K
2019	68047	BB9F	ROW B CELL 9	N	222432 63	+ 8/15/2001	OK TRC	Interface	1220TX-50K
2020	62466	BC1F	ROW C CELL 1	N	222432 63	+ 8/15/2001	OK TRC	Interface	1220TX-50K
2021	62510	BC2F	ROW C CELL 2	N	222544 44	+ 8/15/2001	OK TRC	Interface	1220TX-50K
2022	68052	BC3F	ROW C CELL 3	N	222679 95	+ 8/15/2001	OK TRC	Interface	1220TX-50K
2023	68028	BC4F	ROW C CELL 4	N	222507 16	+ 8/15/2001	OK TRC	Interface	1220TX-50K
2025	68064	BC5F	ROW C CELL 5	N	222283 72	+ 8/15/2001	OK TRC	Interface	1220TX-50K
2026	68012	BC6F	ROW C CELL 6	N	222755 95	+ 8/15/2001	OK TRC	Interface	1220TX-50K
2027	68063	BC7F	ROW C CELL 7	N	222544 44	+ 8/15/2001	OK TRC	Interface	1220TX-50K
2028	68015	BC8F	ROW C CELL 8	N	222780 86	+ 8/15/2001	OK TRC	Interface	1220TX-50K
2029	62453	BC9F	ROW C CELL 9	N	222755 95	+ 8/15/2001	OK TRC	Interface	1220TX-50K
2030	68050	BD1F	ROW D CELL 1	N	222053 94	+ 8/15/2001	OK TRC	Interface	1220TX-50K
2031	68021	BD2F	ROW D CELL 2	N	222041 52	+ 8/15/2001	OK TRC	Interface	1220TX-50K

Channel Report

1/26/2001 5:47:27 AM

2032	68039	BD3F	ROW D CELL 3	222631 49	N	+	8/15/2001	OK	IRC	Interface	1220TX-50K
2033	68018	BD4F	ROW D CELL 4	222743 50	N	+	8/15/2001	OK	TRC	Interface	1220TX-50K
2034	68067	BD5F	ROW D CELL 5	222283 72	N	+	8/15/2001	OK	TRC	Interface	1220TX-50K
2036	62456	BD6F	ROW D CELL 6	222407 80	N	+	8/15/2001	OK	TRC	Interface	1220TX-50K
2037	68014	BD7F	ROW D CELL 7	222457 47	N	+	8/15/2001	OK	IRC	Interface	1220TX-50K
2038	68051	BD8F	ROW D CELL 8	221998 87	N	+	8/15/2001	OK	IRC	Interface	1220TX-50K
2039	68033	BD9F	ROW D CELL 9	222718 60	N	+	8/15/2001	OK	TRC	Interface	1220TX-50K

Channel Report

11/26/2001 5 47 27 AM

Name of Test 011126-1 System MINIDAU Name of DAU DAU8

Chan.#	Sensor #	Mnemonic	Description	Dir.	Range	Pol. Cal.	Group	Mfg.	Model
8001	3287-128-MX	ANLXM2	Left Lower Tibia Moment X	Ank	281 99114	- 3/5/2001	OK	Denton	3287
8002	3287-128-MY	ANLYM2	Left Lower Tibia Moment Y	Ank	281 91981	+ 3/5/2001	OK	Denton	3287
8003	J27387	FLHXG2	Left Foot-Heel Accel X	Fwd	1180 2674	+ 8/24/2001	OK	Endevco	7264-2KM5T
8004	J27553	FLHZG2	Left Foot-Heel Accel Z	Dwn	1239 4093	+ 8/24/2001	OK	Endevco	7264-2KM5T
8005	J27474	FLTZG2	Left Foot-Toe Accel Z	Up	1179 9410	- 8/24/2001	OK	Endevco	7264-2KM5T
8006	3115-200-FX	TBRXF2	Right Upper Tibia Force X	Tib	8901 1740	- 3/5/2001	OK	Denton	3115
8007	3115-200-FZ	TBRZF2	Right Upper Tibia Force Z	Tib	8902 8464	+ 3/5/2001	OK	Denton	3115
8008	3115-200-MX	TBRXM2	Right Upper Tibia Moment X	Tib	282 42093	- 3/5/2001	OK	Denton	3115
8009	3115-200-MY	TBRYM2	Right Upper Tibia Moment Y	Tib	282 34311	+ 3/5/2001	OK	Denton	3115
8010	3287-129-FX	ANRXF2	Right Lower Tibia Force X	Ank	8891 9115	- 3/7/2001	OK	Denton	3287
8011	3287-129-FZ	ANRZF2	Right Lower Tibia Force Z	Ank	8895 4511	+ 3/7/2001	OK	Denton	3287
8012	3287-129-MX	ANRXM2	Right Lower Tibia Moment X	Ank	282 43453	- 3/7/2001	OK	Denton	3287
8013	3287-129-MY	ANRYM2	Right Lower Tibia Moment Y	Ank	281 46269	+ 3/7/2001	OK	Denton	3287
8014	J17976	FRHXG2	Right Foot-Heel Accel X	Fwd	1229 1441	+ 8/24/2001	OK	Endevco	7264-2000T
8015	J38801	FRHZG2	Right Foot-Heel Accel Z	Dwn	1179 0714	+ 11/21/2001	OK	Endevco	7264-2000TZ
8016	J28727	FRTZG2	Right Foot-Toe Accel Z	Up	1188 6520	- 8/24/2001	OK	Endevco	7264-2KM5T
8017	J38316	LRSXG	Left Rear Seat Crossmember	Fwd	1013 0589	+ 10/29/2001	OK	Endevco	7264-2000TZ
8018	J38644	RRSXG	Right Rear Seat Crossmember	Fwd	977 58429	+ 9/7/2001	OK	Endevco	7264-2000TZ
8019	J22013	BCLXG	Front Brake Caliper Left X-Axis	Fwd	1015 4700	+ 9/7/2001	OK	Endevco	7264-2000TZ
8020	J36241	BCRXG	Front Brake Caliper Right	Fwd	989 48670	+ 11/1/2001	OK	Endevco	7264-2000TZ
8021	J38149	DPCXG	Dashpanel Center X-Axis	Fwd	986 36048	+ 8/30/2001	OK	Endevco	7264-2000TZ
8022	J35860	ENGXG2	Bottom Engine X-Axis	Fwd	1021 5075	+ 10/30/2001	OK	Endevco	7264-2000TZ
8023	J37655	TPAXG	Toeplan (next to accelerator)	Fwd	984 12332	+ 9/7/2001	OK	Endevco	7264-2000TZ
8024	J38076	TPAZG	Toeplan (next to accelerator)	Up	1011 6777	- 9/7/2001	OK	Endevco	7264-2000TZ
8025	J35748	TPFXG	Toeplan (next to foot rest)	Fwd	1024 4097	+ 6/20/2001	OK	Endevco	7264-2000TZ
8026	J30421	1PFZG	Toeplan (next to foot rest)	Up	1006 8235	- 6/19/2001	OK	Endevco	7264-2000TZ
8027	J30211	RDKZG	Rear Deck Z-Axis Acceleration	Up	1012 3178	- 11/1/2001	OK	Endevco	7264-2000TZ
8028	J40150	RDCXG	Rear Compartment Center	Fwd	1019 2705	+ 10/29/2001	OK	Endevco	7264-2000TZ
8029	IP1	DABET1	Driver Airbag Event - Primary	4	1 0039215	+ 6/15/2000	---	FLUKE	Y8101A
8030	IP2	PABET1	Passenger Airbag Event -	6	1 0039215	+ 6/15/2000	---	FLUKE	Y8101A

Dummy	206v	Type	HIII 50TH	Description	VOLPE (NHISA) - 206 HYBRID III 50TH (DKS 11-16-01) J211									
Chsname	Location	Model	Name	Manufacturer	Sens./mV/V/U	Fullscale	Caldate	Pos Output	Flip					
HEDXG	Head Accel X	EGE-73B6Q-20	01G25-N01	Entran	0 01864 G	2000	08/10/2001	Fwd	0					
HEDYG	Head Accel Y	EGE-73B6Q-20	01G25-N14	Entran	0 01879 G	2000	08/10/2001	Lft	1					
HEDZG	Head Accel Z	EGE-73B6Q-20	01G25-N08	Entran	0 02344 G	2000	08/10/2001	Up	1					
HEDXR	Head Accel Red X 1014	7264C-2K-2-18	P12566	Endevco	0 0194 G	2000	08/28/2001	Rwd	1					
HEDYR	Head Accel Red Y M1	7264-2000TZ	J38075	Endevco	0 0267 G	2000	11/16/2001	Rgt	0					
HEDZR	Head Accel Red Z 1018	7264C-2KLC-2-	P17858	Endevco	0 01301 G	2000	08/28/2001	Up	1					
HD1XG	Head (LT) Accel X	EGE-73B6Q-20	01G25-N06	Entran	0 02364 G	2000	08/10/2001	Fwd	0					
HD1ZG	Head (LT) Accel Z	EGE-73B6Q-20	01G25-N05	Entran	0 01955 G	2000	08/10/2001	Up	1					
HD2YG	Head (FT) Accel Y	EGE-73B6Q-20	01G25-N04	Entran	0 01977 G	2000	08/10/2001	Lft	1					
HD2ZG	Head (FT) Accel Z	EGE-73B6Q-20	01G25-N13	Entran	0 01991 G	2000	08/10/2001	Up	1					
HD3XG	Head (TP) Accel X	EGE-73B6Q-20	01G25-N09	Entran	0 01934 G	2000	08/10/2001	Fwd	0					
HD3YG	Head (TP) Accel Y	EGE-73B6Q-20	01G25-N16	Entran	0 01877 G	2000	08/10/2001	Lft	1					
NEKXF	Neck Force X	1716A	1716A-858-FX	Denton	0 000193719 N	8896 4	08/16/2001	Hd Fd,Cst Rr	1					
NEKYF	Neck Force Y	1716A	1716A-858-FY	Denton	0 000186907 N	8896 4	08/16/2001	Hd Lt,Cst Rt	0					
NEKZF	Neck Force Z	1716A	1716A-858-FZ	Denton	0 000096144 N	13344 6	08/16/2001	Hd Up,Cst Dn	0					
NEKXM	Neck Moment X	1716A	1716A-858-MX	Denton	0 005827965 NM	282 5	08/16/2001	Rt Ear to Rt Shld	1					
NEKYM	Neck Moment Y	1716A	1716A-858-MY	Denton	0 005966726 NM	282 5	08/16/2001	Chn to Strmm	0					
NEKZM	Neck Moment Z	1716A	1716A-858-MZ	Denton	0 008246372 NM	282 5	08/16/2001	Chn to Lt Shld	0					
NKLXF	Lwr Neck Force X	1794A	1794A-216-FX	Denton	0 000140056 N	13344 6	07/05/2001	Hd Fd,Cst Rr	1					
NKLYF	Lwr Neck Force Y	1794A	1794A-216-FY	Denton	0 000117546 N	13344 6	07/05/2001	Hd Lt,Cst Rt	0					
NKLZF	Lwr Neck Force Z	1794A	1794A-216-FZ	Denton	0 000069773 N	13344 6	07/05/2001	Hd Up,Cst Dn	0					
NKLXM	Lwr Neck Moment X	1794A	1794A-216-MX	Denton	0 00389115 NM	452	07/05/2001	Rt Ear to Rt Shld	1					
NK1 YM	Lwr Neck Moment Y	1794A	1794A-216-MY	Denton	0 003775 NM	452	07/05/2001	Chn to Strmm	0					
NKLZM	Lwr Neck Moment Z	1794A	1794A-216-MZ	Denton	0 006764823 NM	452	07/05/2001	Chn to Lt Shld	0					
CSTXG	Chest Accel X	7264-2000TZ	ACCM9	Endevco	0 02826 G	2000	08/24/2001	Fwd	0					
CSTYG	Chest Accel Y	7264-2000TZ	J15368	Endevco	0 03531 G	2000	08/24/2001	Lft	1					

Chsname	Location	Model	Name	Manufacturer	Sens./mV/V/U	Fullscale	Caldate	Pos Output	Flip
CSTZG	Chest Accel Z	7264-2000TZ	J20184	Endevco	0 02521 G	2000	08/24/2001	Up	1
CSTXD	Chest Deflection X	14CB1-2847	14CB1-2847-206	Servo	1 1403262 MM	100	09/07/2001	Strm Away Frm Spn	0
LFMZf	Left Femur Force Z	2121	2121-0160	Denton	0 000098324 N	13344 6	08/24/2001	Knee Fd,Pel Rr	0
RFMZf	Right Femur Force Z	2121	2121-0161	Denton	0 000099718 N	13344 6	08/24/2001	Knee Fd,Pel Rrxt	0
KNLXD	Left Knee Displacement	150-0121VR	150-0121VR-18026	SpaceAge	23 3583 MM	40	11/09/2001	Tib Rr,Hld Fem	1
TBLXF	Left Upper Tibia Force X LC8	4353J	4353J-82-FX	Denton	0 00017107 N	11120	08/03/2001	Tib Fd,Knee Rr	0
TBLZF	Left Upper Tibia Force Z LC15	4353J	4353J-82-FZ	Denton	0 000095631 N	11120	08/03/2001	Tib Dn,Knee Up	0
TBLXM	Left Upper Tibia Moment X LC17	4353J	4353J-82-MX	Denton	0 0075411 NM	395 4	08/03/2001	Ank Lt,Hld Knee	0
TBLYM	Left Upper Tibia Moment Y LC01	4353J	4353J-82-MY	Denton	0 0075411 NM	395 4	08/03/2001	Ank Fd,Hld Knee	0
TBLXG	Left Tibia Accel X	EGE-73B6Q-20	01G19-F02	Entran	0 01925 G	2000	08/21/2001	Fwd	0
TBLYG	Left Tibia Accel Y	EGE-73B6Q-20	01H02-N02	Entran	0 02125 G	2000	08/21/2001	Rt	0
ANLXF	Left Lower Tibia Force X LC23	4929J	4929J-87-FX	Denton	0 00017264 N	11120	12/22/2000	Ank Fd,Knee Rr	0
ANLYF	Left Lower Tibia Force Y LC16	4929J	4929J-87-FY	Denton	0 00017608 N	11120	12/22/2000	Ank Rt,Knee Lft	0
ANLZF	Left Lower Tibia Force Z LC19	4929J	4929J-87-FZ	Denton	0 000095856 N	11120	12/22/2000	Ank Dn,Knee Up	0
ANLXM	Left Lower Tibia Moment X LC26	4929J	4929J-87-MX	Denton	0 0075904 NM	395 4	12/22/2000	Ank Lt,Hld Knee	0
ANLYM	Left Lower Tibia Moment Y LC18	4929J	4929J-87-MY	Denton	0 0075879 NM	395 4	12/22/2000	Ank Fd,Hld Knee	0
FTLXD	Left Foot Disp X POT4	PD210-4B	PD210-4B-AK-060	CONTELEC	3 1541 DF	318	07/31/2001	Everson	0
FTLYD	Left Foot Disp Y POT5	PD210-4B	PD210-4B-AK-061	CONTELEC	3 1679 DE	318	07/31/2001	Dorsiflexion	0
FTLZD	Left Foot Disp Z POT6	PD210-4B	PD210-4B-AK-062	CONTELEC	3 1819 DE	318	07/31/2001	Internal Rotation	0
FTLXG	Left Foot Accel X	EGE-73B6Q-20	01H02-N05	Entran	0 02077 G	2000	08/21/2001	Fwd	0
FTLYG	Left Foot Accel Y	7264-20001Z	J38064	Endevco	0 0313 G	2000	10/23/2001	Rt	0
FTLZG	Left Foot Accel Z	EGE-73B6Q-20	01H02-N01	Entran	0 02164 G	2000	08/21/2001	Dn	0
KNRXd	Right Knee Displacement	150-0121VL	150 0121VL-18123	SpaceAge	23 66 MM	40	04/26/2001	Tib Rr,Hld Fem	1
TBRXF	Right Upper Tibia Force X LC10	4353J	4353J-81-FX	Denton	0 00016929 N	11120	08/03/2001	Tib Fd,Knee Rr	0
TBRZF	Right Upper Tibia Force Z LC14	4353J	4353J-81-FZ	Denton	0 000094724 N	11120	08/03/2001	Tib Dn,Knee Up	0
TBRXM	Right Upper Tibia Moment X LC13	4353J	4353J-81-MX	Denton	0 0073122 NM	395 4	08/03/2001	Ank Lt,Hld Knee	0
TBRYM	Right Upper Tibia Moment Y LC22	4353J	4353J-81-MY	Denton	0 0073572 NM	395 4	08/03/2001	Ank Fd,Hld Knee	0
TBRXG	Right Tibia Accel X	EGE-73B6Q-20	01H02-N07	Entran	0 02142 G	2000	08/21/2001	Fwd	0

Chsname	Location	Model	Name	Manufacturer	Sens./mV/V/U	Fullscale	Caldate	Pos Output	Flip
TBRYG	Right Tibia Accel Y	EGE-73B6Q-20	01H02-N03	Entran	0 02147 G	2000	08/21/2001	Rt	0
ANRXF	Right Lower Tibia Force X	LC28	4929J-86-FX	Denton	0 0001716 N	11120	12/22/2000	Ank Fd,Knee Rr	0
ANRYF	Right Lower Tibia Force Y	I C20	4929J-86-FY	Denton	0 0001746 N	11120	12/22/2000	Ank Rt,Knee I ft	0
ANRZF	Right Lower Tibia Force Z	LC9	4929J-86-FZ	Denton	0 000095461 N	11120	12/22/2000	Ank Dn,Knee Up	0
ANRXM	Right Lower Tibia Moment X	LC11	4929J-86-MX	Denton	0 0074837 NM	395 4	12/22/2000	Ank Lt,Hld Knee	0
ANRYM	Right Lower Tibia Moment Y	LC02	4929J-86-MY	Denton	0 0073843 NM	395 4	12/22/2000	Ank Fd,Hld Knee	0
FTRXD	Right Foot Disp X	POT1	PD210-4B	CONTELEC	3 1631 DE	318	07/31/2001	Inersion	0
FTRYD	Right Foot Disp Y	POT2	PD210-4B	CONTELEC	3 1586 DE	318	07/31/2001	Dorsiflexion	0
FTRZD	Right Foot Disp Z	POT3	PD210-4B	CONTELEC	3 1497 DE	318	07/31/2001	External Rotation	0
FTRXG	Right Foot Accel X	7264-2000TZ	J38857	Fndevco	0 02958 G	2000	11/15/2001	Fwd	0
FTRYG	Right Foot Accel Y	7264-2000TZ	J38787	Endevco	0 0232 G	2000	11/15/2001	Rt	0
FTRZG	Right Foot Accel Z	EGE-73B6Q-20	01G19-F05	Entran	0 0177 G	2000	08/21/2001	Dn	0

Dummy 202v Type HIII 50TH VOLPE (NHTSA) - 202 HYBRID III 50TH (DKS 11-19-01) J211

Chsname	Location	Model	Name	Manufacturer	Sens./mV/V/U	Fullscale	Caldate	TRC Dir
HEDXG	Head Accel X	EGE-73B6Q-20	01G25-N07	Entran	0 02208 G	2000	08/10/2001	Fwd
HEDYG	Head Accel Y	EGE-73B6Q-20	01G25-N20	Entran	0 02011 G	2000	08/10/2001	Lft
HEDZG	Head Accel Z	EGF-73B6Q-20	01G25-N17	Entran	0 01957 G	2000	08/10/2001	Up
HEDXR	Head Accel Red X VRTC10	7264C-2KLC-2-	P15951	Endevco	0 01358 G	2000	08/28/2001	Rwd
HEDYR	Head Accel Red Y VRTC3	7264-2000TZ	J36709	Endevco	0 03594 G	2000	10/22/2001	Rgt
HEDZR	Head Accel Red Z VRTC9	7264C-2KLC-2-	P16899	Endevco	0 015 G	2000	08/28/2001	Up
HD1XG	Head (LT) Accel X	EGE-73B6Q-20	01G19-F03	Entran	0 02156 G	2000	08/10/2001	Fwd
HD1ZG	Head (LT) Accel Z	EGE-73B6Q-20	01G25-N18	Entran	0 01906 G	2000	08/10/2001	Up
HD2YG	Head (FT) Accel Y	EGE-73B6Q-20	01G25-N10	Entran	0 02248 G	2000	08/10/2001	Lft
HD2ZG	Head (FT) Accel Z	FGE-73B6Q-20	01G25-N03	Entran	0 01933 G	2000	08/10/2001	Up
HD3XG	Head (TP) Accel X	EGE-73B6Q-20	01G25-N15	Entran	0 02019 G	2000	08/10/2001	Fwd
HD3YG	Head (TP) Accel Y	FGE-73B6Q-20	01G25-N02	Entran	0 01968 G	2000	08/10/2001	Lft
NEKXF	Neck Force X	1716	1716-0628-FX	Denton	0 000192033 N	8896 4	08/16/2001	Hd Fd,Cst Rr
NEKYF	Neck Force Y	1716	1716-0628-FY	Denton	0 000184075 N	8896 4	08/16/2001	Hd Lt,Cst Rt
NEKZF	Neck Force Z	1716	1716-0628-FZ	Denton	0 00008605 N	13344 6	08/16/2001	Hd Up,Cst Dn
NEKXM	Neck Moment X	1716	1716-0628-MX	Denton	0 005770973 NM	282 5	08/16/2001	Rt Ear to Rt Shld
NEKYM	Neck Moment Y	1716	1716-0628-MY	Denton	0 005887788 NM	282 5	08/16/2001	Chn to Strmm
NEKZM	Neck Moment Z	1716	1716-0628-MZ	Denton	0 008187257 NM	282 5	08/16/2001	Chn to Lt Shld
NKLYF	Lwr Neck Force X	1794A	1794A-215-FX	Denton	0 000140236 N	13344 6	07/05/2001	Hd Fd,Cst Rr
NKLYF	Lwr Neck Force Y	1794A	1794A-215-FY	Denton	0 000137853 N	13344 6	07/05/2001	Hd Lt,Cst Rt
NKLYF	Lwr Neck Force Z	1794A	1794A-215-FZ	Denton	0 000069204 N	13344 6	07/05/2001	Hd Up,Cst Dn
NK1 XM	Lwr Neck Moment X	1794A	1794A-215-MX	Denton	0 003864601 NM	452	07/05/2001	Rt Ear to Rt Shld
NKLYM	Lwr Neck Moment Y	1794A	1794A-215-MY	Denton	0 003795796 NM	452	07/05/2001	Chn to Strmm
NKLZM	Lwr Neck Moment Z	1794A	1794A-215-MZ	Denton	0 006828982 NM	452	07/05/2001	Chn to Lt Shld
CSTXG	Chest Accel X	7264-2000TZ	AJ460	Endevco	0 02863 G	2000	08/24/2001	Fwd
CSTYG	Chest Accel Y	7264-2000TZ	J14404	Endevco	0 028 G	2000	08/24/2001	Lft

Chsname	Location	Model	Name	Manufacturer	Sens./mV/V/U	Fullscale	Caldate	TRC Dir
CSTZG	Chest Accel Z	7264-2000TZ	J14144	Endevco	0.03795 G	2000	08/24/2001	Up
CSTXD	Chest Deflection X	14CB1-2847	14CB1-2847-0137	Servo	1 1347019 MM	100	09/07/2001	Strm Away Frm Spn
LFMZ	Left Femur Force Z	2121	2121-0226	Denton	0.000098729 N	1334 6	08/24/2001	Knee Fd,Pel Rr
RFMZF	Right Femur Force Z	2121	2121-0227	Denton	0.000098759 N	13344 6	08/24/2001	Knee Fd,Pel Rrxt
KNLXD	Left Knee Displacement	150-0121VR	150-0121VR-13739	SpaceAge	23 10643 MM	40	11/30/2000	Tib Rt,Hld Fem
TBLXF	Left Upper Tibia Force X	3115	3115-199-FX	Denton	0.000172571 N	11120	03/02/2001	Tib Rr,Knee Fd
TBLZF	Left Upper Tibia Force Z	3115	3115-199-FZ	Denton	0.000095782 N	11120 5	03/02/2001	Tib Dn,Knee Up
TBLXM	Left Upper Tibia Moment X	3115	3115-199-MX	Denton	0.007356348 NM	395 5	03/02/2001	Tib Rt,Hld Knee
TBLYM	Left Upper Tibia Moment Y	3115	3115-199-MY	Denton	0.007476226 NM	395 5	03/02/2001	Tib Fd,Hld Knee
ANLXF	Left Lower Tibia Force X	3287	3287-128-FX	Denton	0.000174361 N	11120 5	03/05/2001	Ank Rr,Knee Fd
ANLZF	Left Lower Tibia Force Z	3287	3287-128-FZ	Denton	0.000096879 N	11120 5	03/05/2001	Ank Dn,Knee Up
ANLXM	Left Lower Tibia Moment X	3287	3287-128-MX	Denton	0.007693474 NM	395 4	03/05/2001	Ank Rt,Hld Knee
ANLYM	Left Lower Tibia Moment Y	3287	3287-128-MY	Denton	0.007630753 NM	395 4	03/05/2001	Ank Fd,Hld Knee
FLHXG	Left Foot-Heel Accel X	7264-2KM5T	J27387	Endevco	0.0241 G	2000	08/24/2001	Fwd
FLHZG	Left Foot-Heel Accel Z	7264-2KM5T	J27553	Endevco	0.02754 G	2000	08/24/2001	Dwn
FLTZG	Left Foot-Toe Accel Z	7264-2KM5T	J27474	Endevco	0.02712 G	2000	08/24/2001	Up
KNRXD	Right Knee Displacement	150-0121VI	150-0121VL-13723	SpaceAge	23 5714 MM	40	11/30/2000	Tib Rr,Hld Fem
TBRXF	Right Upper Tibia Force X	3115	3115-200-FX	Denton	0.000170179 N	11120	03/05/2001	Tib Rr,Knee Fd
TBRZF	Right Upper Tibia Force Z	3115	3115-200-FZ	Denton	0.000094433 N	11120	03/05/2001	Tib Dn,Knee Up
TBRXM	Right Upper Tibia Moment X	3115	3115-200-MX	Denton	0.007369499 NM	395 5	03/05/2001	Tib Rt,Hld Knee
TBRYM	Right Upper Tibia Moment Y	3115	3115-200-MY	Denton	0.007401618 NM	395 5	03/05/2001	Tib Fd,Hld Knee
ANRXF	Right Lower Tibia Force X	3287	3287-129-FX	Denton	0.000173435 N	11120 5	03/07/2001	Ank Rr,Knee Fd
ANRZF	Right Lower Tibia Force Z	3287	3287-129-FZ	Denton	0.000096573 N	11120 5	03/07/2001	Ank Dn,Knee Up
ANRXM	Right Lower Tibia Moment X	3287	3287-129-MX	Denton	0.007584977 NM	395 4	03/07/2001	Ank Rt,Hld Knee
ANRYM	Right Lower Tibia Moment Y	3287	3287-129-MY	Denton	0.007643146 NM	395 4	03/07/2001	Ank Fd,Hld Knee
FRHXG	Right Foot-Heel Accel X	7264-2000T	J17976	Endevco	0.02777 G	2000	08/24/2001	Fwd
FRHZG	Right Foot-Heel Accel Z	7264-2000TZ	J38801	Endevco	0.02714 G	2000	11/21/2001	Dwn
FRTZG	Right Foot-Toe Accel Z	7264-2KM5T	J28727	Endevco	0.02393 G	2000	08/24/2001	Up

