

Frontal Barrier Impact Test

**Honda Motor Company
2001 Honda Accord LX 4 door sedan
NHTSA Number:
TRC Inc. Test Number: 011001**

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



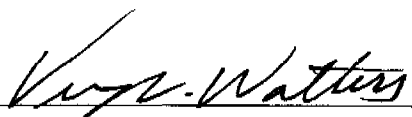
**Final Report
October 12, 2001**

**Prepared For:
U. S. Department of Transportation
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USDOT, Volpe National Transportation Systems Center

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16. Abstract A 40 km/h flat frontal rigid barrier impact test was conducted on a 2001 Honda Accord LX 4 door sedan, at Transportation Research Center Inc. on October 1, 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 40.2 km/h. The vehicle's maximum static crush was 325 millimeters. The ambient temperature was 21° C. The driver's 36 millisecond Head Injury Criteria (HIC) was 63. The driver's chest maximum resultant acceleration with three (3) milliseconds minimum duration was 37.1 g. The driver's maximum chest deflection was 47 millimeters. The driver's left and right femur maximum axial compressive forces were 3980 N and 7260 N, respectively. The passenger's 36 millisecond HIC was 263. The passenger's chest maximum resultant acceleration with three (3) milliseconds minimum duration was 47.5 g. The passenger's maximum chest deflection was 11 millimeters. The passenger's left and right femur maximum axial compressive forces were 3929 N and 4897 N, respectively.			
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Section 1.0

Purpose and Test Procedure

Purpose

This 40 km/h frontal 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 Honda Accord LX 4 door sedan.

Test Procedure

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

The test vehicle, a 2001 Honda Accord LX, 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 primary and secondary airbag signals were monitored with inductive pickups. The vehicle impacted a rigid flat frontal barrier. The vehicle's specified impact velocity range was 39.3 to 40.9 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 front dual 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 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 137 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 rigid 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, and vehicle measurements are presented in Section 4.0. Appendix A contains the still photographic prints. Appendix B contains the dummy and vehicle data plots. Appendix C contains the dummy verification data. Appendix D contains miscellaneous test information.

Section 2.0

Full Frontal Barrier Test Summary

Test Results Summary

This full frontal rigid barrier crash test was conducted by TRC Inc. on October 1, 2001.

The test vehicle, a 2001 Honda Accord LX 4 door sedan, was equipped with a 2.3-liter transverse engine, automatic transmission, power steering, power brakes and dual stage front airbags. The vehicle's test weight was 1555.6 kg. The vehicle's impact speed was 40.2 km/h. The vehicle sustained 325 mm of static crush during the impact.

The driver's 36 millisecond Head Injury Criteria (HIC) was 63. The driver's 15 millisecond HIC was 34. The driver's chest maximum resultant acceleration with three (3) milliseconds minimum duration was 37.1 g. The driver's maximum chest deflection was 47 mm. The driver's left and right femur maximum axial compressive forces were 3980 N and 7260 N, respectively. The driver dummy's neck injury calculations were as follows: NTF, 0.18; NTE, 0.22; NCF, 0.11; NCE, 0.07.

The right front passenger's 36 millisecond HIC was 263. The passenger's 15 millisecond HIC was 175. The passenger's chest maximum resultant acceleration with three (3) milliseconds minimum duration was 47.5 g. The passenger's maximum chest deflection was 11 mm. The passenger's left and right femur maximum axial compressive forces were 3929 N and 4897 N, respectively. The right front passenger's neck injury calculations were as follows: NTF, 0.27; NTE, 0.22; NCF, 0.38; NCE, 0.08.

Data Acquisition Explanations

The driver's right foot X-axis acceleration data channel, FTRXG1, recorded no valid data. The accelerometer was found to be damaged and was replaced.

Several, generally small, data spikes occurred concurrently on some of the passenger dummy's load cell channels at approximately 208, 230, and sometimes 222 milliseconds. The channels affected noticeably were:

- NEKYF2, passenger upper neck Y-axis force
- NEKZF2, passenger upper neck Z-axis force
- NKLZM2, passenger lower neck moment about the Z-axis
- ANLXF2, passenger left lower tibia X-axis force
- ANLYM2, passenger left lower tibia moment about the Z-axis

Table 1 Crash Test Summary

Test mode:	Flat frontal barrier		
Test date:	10/01/01		
Test time:	1046		
Ambient temperature:	21° C		
Vehicle year/make/ model/body style:	2001/Honda/Accord LX/4 door sedan		
Vehicle test weight:	1555.6 kg		
Impact angle ¹ :	0°		
Impact velocity ² :	40.2 km/h		
Maximum static crush:	325 mm		
Average rebound:	1258 mm		
Number of data channels:	137		
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, dual stage		Airbag, dual stage

Seat track position for test:

Driver:	Mid
Passenger:	Mid

Seat back position for test:

Driver:	21.3° (3 notches back from 1 st locking position per mfg.)
Passenger:	19.5° (3 notches back from 1 st locking position per mfg.)

Head restraint position for test:

Driver:	Full up
Passenger:	Full up
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/Honda/Accord LX/4 door sedan

VIN: 1HGCG55441A122794

Model year: 2001

Body style: 4-door sedan

Color: Pale gold

Engine data:

 Cylinders: 4

 Displacement 2.3 liters

 Cylinder placement: V

 Engine placement: Transverse

Transmission data: 5 speed, X manual, ___ automatic, ___ overdrive

 Final drive: X FWD, ___ RWD, ___ 4WD

Date vehicle received: 09/27/2001

Odometer reading: 88

Dealer's name and address: Hugh White Honda
621 East Broad Street
Columbus, OH 43215

Accessories:

Power steering	Yes	Automatic transmission	No
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: Honda of America Mfg., Inc.

Date of manufacture: 05/01

VIN: 1HGCG55441A122794

GVWR: 4035 lbs. (1830 kg)

GAWR: Front: 2180 lbs. (989 kg)

 Rear: 1920 lbs. (871 kg)

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

Tires on vehicle (mfr., line, size): Michelin, Energy, P195/65R15

Tire pressure with maximum capacity vehicle load:

Front:	44 psi	(300 kPa)
Rear:	44 psi	(300 kPa)

Spare tire (mfr., line, size): Goodyear, Temporary, T125/70D15

Type of seats:

Front	Bucket
Rear	Bench

Maximum width: 1790 mm

Wheelbase: 2707 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: P195/65R15

Recommended cold tire pressure:

Front:	210 kPa	(30 psi)
Rear:	210 kPa	(30 psi)

Vehicle Capacity Data:

Number of Occupants (Designated seating capacity):

Front	2
Mid	N/A
Rear	3
Total	5

Vehicle capacity weight: 850 lbs. (385.6 kg)

Rated cargo/luggage weight 100 lbs. (45.4 kg)

Test vehicle attitude:

Delivered attitude:	LF	699 mm;	RF	700 mm;	LR	704 mm;	RR	695 mm
Fully loaded attitude:	LF	682 mm;	RF	684 mm;	LR	674 mm;	RR	668 mm
Pre-test attitude:	LF	680 mm;	RF	680 mm;	LR	660 mm;	RR	660 mm
Post-test attitude:	LF	704 mm;	RF	693 mm;	LR	663 mm;	RR	660 mm

Table 2 General Test and Vehicle Parameter Data Cont'd

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

Right front	403.5 kg	Right rear	268.5 kg
Left front	415.0 kg	Left rear	276.5 kg
Total front weight	818.5 kg	(60.0 % of total vehicle weight)	
Total rear weight	545.0 kg	(40.0 % of total vehicle weight)	
Total delivered weight	1363.5 kg		

Calculation of test vehicle's target test weight:

Total Delivered Weight (UDW) =	1363.5 kg
Rated Cargo/Luggage Weight (RCLW) ¹ =	45.4 kg
Weight of 2 Part 572E Dummies @ 76 kg each =	152 kg
Target test weight =	1560.9 kg

Weight of test vehicle with required dummies and 40.1 kg of cargo weight:

Right front	442.4 kg	Right rear	329.4 kg
Left front	448.4 kg	Left rear	335.4 kg
Total front weight	890.8 kg	(57.3 % of total vehicle weight)	
Total rear weight	664.8 kg	(42.7 % of total vehicle weight)	
Total test weight	1555.6 kg	(0.3% under target test weight)	

Weight of ballast secured in vehicle: None

Components removed to meet target test weight: Trunk, 4 side windows and motors, both rear door panels, rear bumper fascia and partial beam, tail lights, speakers, trunk lid, 3rd brake light, exhaust, rear seats, seat belts, door and window trim, mirrors, rear power locks, child seat anchors, and front door regulator beams

Location of Vehicle's CG: 1157 mm rearward of front wheel centerline

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

Table 3. Post-Impact Data

Test number: 011001
Test date: 10/01/01
Test time: 1046
Test type: Flat frontal barrier
Impact angle: 0°
Ambient temperature
at impact area: 21° C
Required impact velocity range: 39.3 to 40.9 km/h

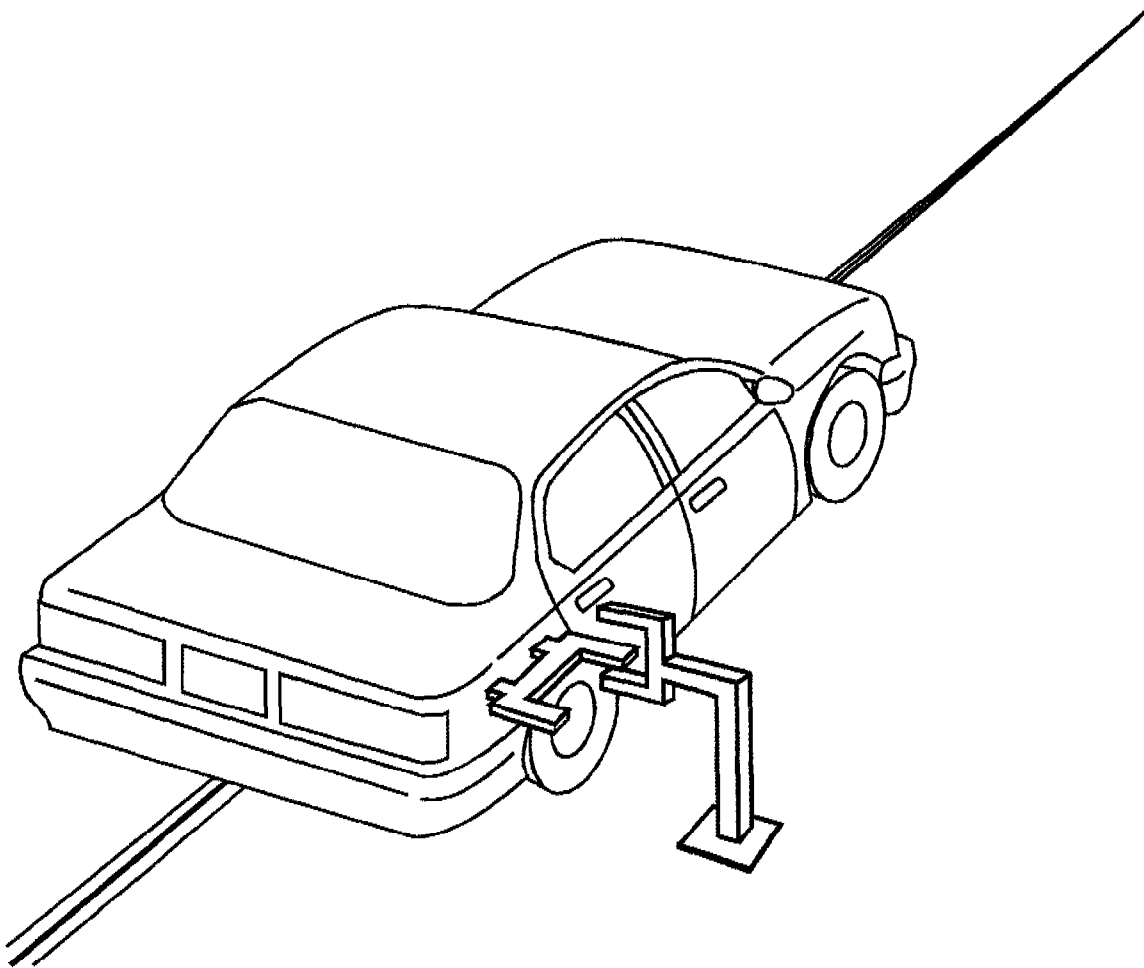
Barrier impact velocity:

Primary: 40.2 km/h
Secondary: 40.2 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 1290 mm; C 1213 mm; R 1271 mm
Average rebound: 1258 mm

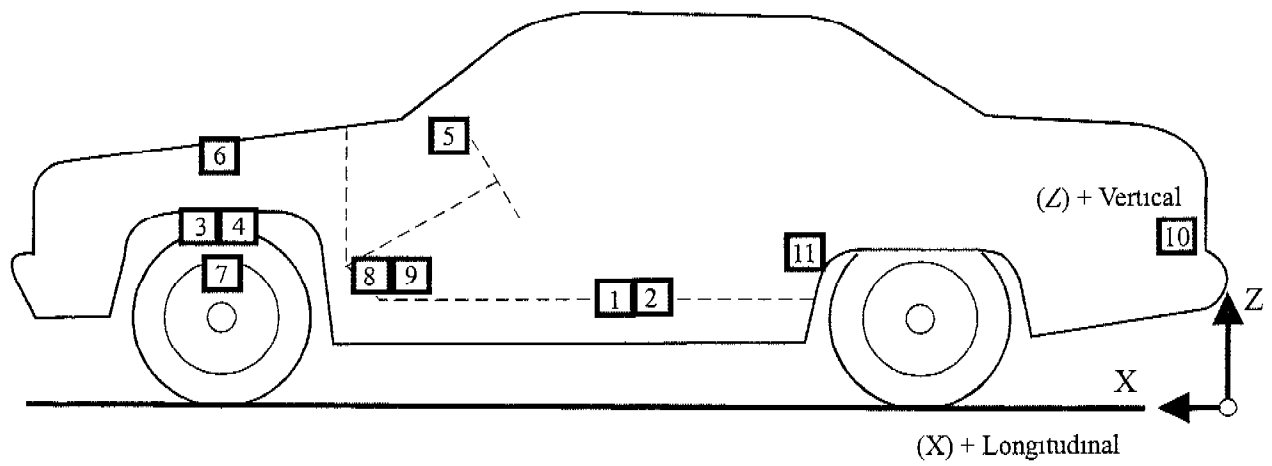
Figure 1 Impact Velocity Measurement System



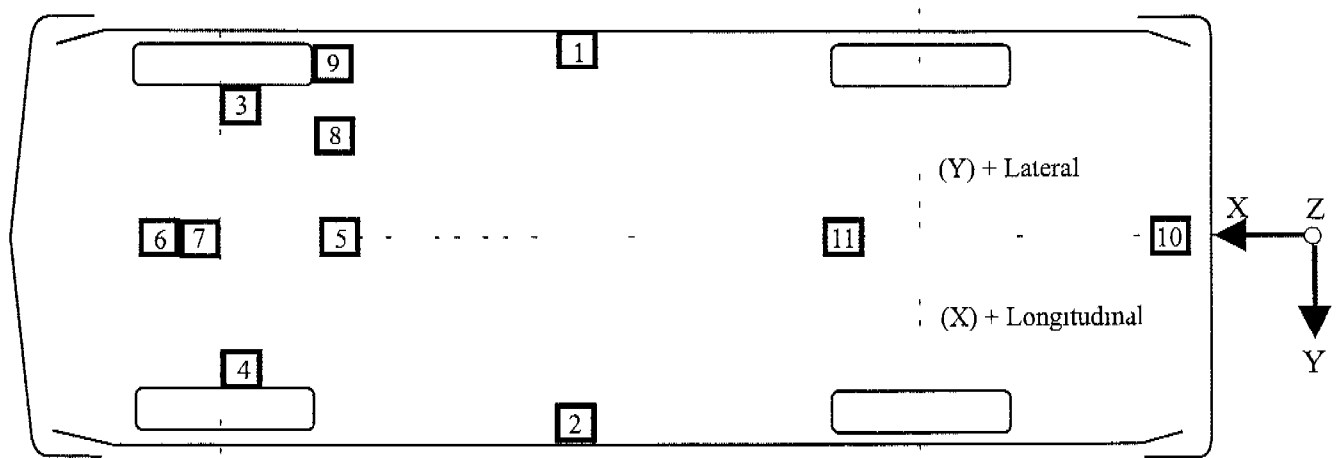
The final vane clears the final emitter/receiver pair 51 millimeters before impact.

The vanes have 305-millimeter spacing.

Figure 2 Vehicle Accelerometer Placement



Side View



Bottom View

Table 4 Vehicle Accelerometer Locations and Data Summary

TEST NUMBER: 011001 No. LOCATION	X	Y	Z	POSITIVE DIRECTION	NEGATIVE DIRECTION
1 LEFT REAR SEAT CROSSMEMBER LONGITUDINAL	1867 mm	-330 mm	420 mm	1.3 g @ 147.0 ms	24.7 g @ 71.0 ms
2 RIGHT REAR SEAT CROSSMEMBER LONGITUDINAL	1867 mm	330 mm	412 mm	1.8 g @ 90.6 ms	25.0 g @ 71.0 ms
3 FRONT BRAKE CALIPER LEFT LONGITUDINAL	3950 mm	-700 mm	300 mm	22.7 g @ 72.5 ms	57.4 g @ 50.2 ms
4 FRONT BRAKE CALIPER RIGHT LONGITUDINAL	3950 mm	700 mm	285 mm	27.6 g @ 74.7 ms	67.1 g @ 52.2 ms
5 DASH PANEL CENTER LONGITUDINAL	3217 mm	0 mm	931 mm	9.3 g @ 33.1 ms	38.3 g @ 47.9 ms
6 ENGINE TOP LONGITUDINAL	3977 mm	70 mm	760 mm	9.3 g @ 60.9 ms	50.1 g @ 45.8 ms
7 ENGINE BOTTOM LONGITUDINAL	4075 mm	-264 mm	151 mm	70.5 g @ 44.9 ms	29.7 g @ 67.9 ms

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

TEST NUMBER: 011001 No. LOCATION	X	Y	Z	POSITIVE DIRECTION	NEGATIVE DIRECTION
8 TOEPAN NEXT TO ACCEL LONGITUDINAL VERTICAL	3337 mm	-190 mm	223 mm	22.1 g @ 34.6 ms 31.6 g @ 43.4 ms	1.1 g @ 134.6 ms 23.2 g @ 24.9 ms
9 TOEPAN NEXT TO FOOTREST LONGITUDINAL VERTICAL	3337 mm	-490 mm	220 mm	1.0 g @ 134.6 ms 15.3 g @ 33.0 ms	24.3 g @ 34.2 ms 21.6 g @ 23.9 ms
10 REAR DECK VERTICAL	222 mm	0 mm	560 mm	9.0 g @ 64.7 ms	9.8 g @ 98.5 ms
11 REAR COMPARTMENT CENTER LONGITUDINAL	1282 mm	25 mm	567 mm	1.9 g @ 92.8 ms	26.2 g @ 71.3 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	30.5 g	3.7 g	17.6 g	31.7 g	-37.5 g	5.0 g	-5.6 g
Passenger	-45.0 g	-14.7 g	20.9 g	46.3 g	-45.3 g	4.9 g	17.2 g

<u>Maximum Femur Compressive Force</u>		
	Left Femur	Right Femur
Driver	3980 N	7260 N
Passenger	3929 N	4897 N

<u>Head Injury Criteria²</u>			
36 millisecond			
	HIC	Time t ₁	Time t ₂
Driver	63	84.2 ms	120.2 ms
Passenger	263	72.5 ms	103.8 ms

15 millisecond			
	HIC	Time t ₁	Time t ₂
Driver	34	96.2 ms	111.3 ms
Passenger	175	81.6 ms	96.6 ms

<u>Chest Maximum Resultant Acceleration³</u>			
	Acceleration	Time t ₁	Time t ₂
Driver	37.1 g	83.8 ms	86.7 ms
Passenger	47.5 g	84.2 ms	87.4 ms

Table 5 Dummy Injury Criteria Data, Cont'd.

Maximum Chest Deflection

Driver	47 mm
Passenger	11 mm

Neck Injury Calculations (Nij)²

	NTF	NTE	NCF	NCE
Driver	0.18	0.22	0.11	0.07
Passenger	0.27	0.22	0.38	0.08

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.

Table 6 Post-Impact Dummy/Vehicle Data

Visible Dummy Contact Points:

	<u>Driver</u>	<u>Passenger</u>
Head	Airbag, windshield, steering wheel	Airbag, visor
Chest	Airbag, lower steering wheel	Airbag
Abdomen	None	None
Left knee	Instrument panel	Instrument panel
Right knee	Instrument panel	Instrument panel

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	None	None
Right Rear	None	None

Glazing damage: None

Other notable impact effects: None

Section 4.0

Occupant, Camera, 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, and the head and neck flexed forward to contact the windshield. The chest contacted the airbag and the lower chest contacted the lower steering wheel rim. As the dummy rebounded, the dummy's pelvis and torso lifted upwards from the seat. The driver dummy came to rest with the pelvis above the seat cushion, against the seat back, with the torso leaning forward, and with the face against the deflated airbag and upper steering wheel rim.

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 sun visor. As the dummy torso rebounded into the seat back, the dummy's head rotated forward and then upright. The dummy came to rest seated in the passenger's seat, leaning forward.

Figure 3 Dummy Measurement Locations for Front Seat Occupants

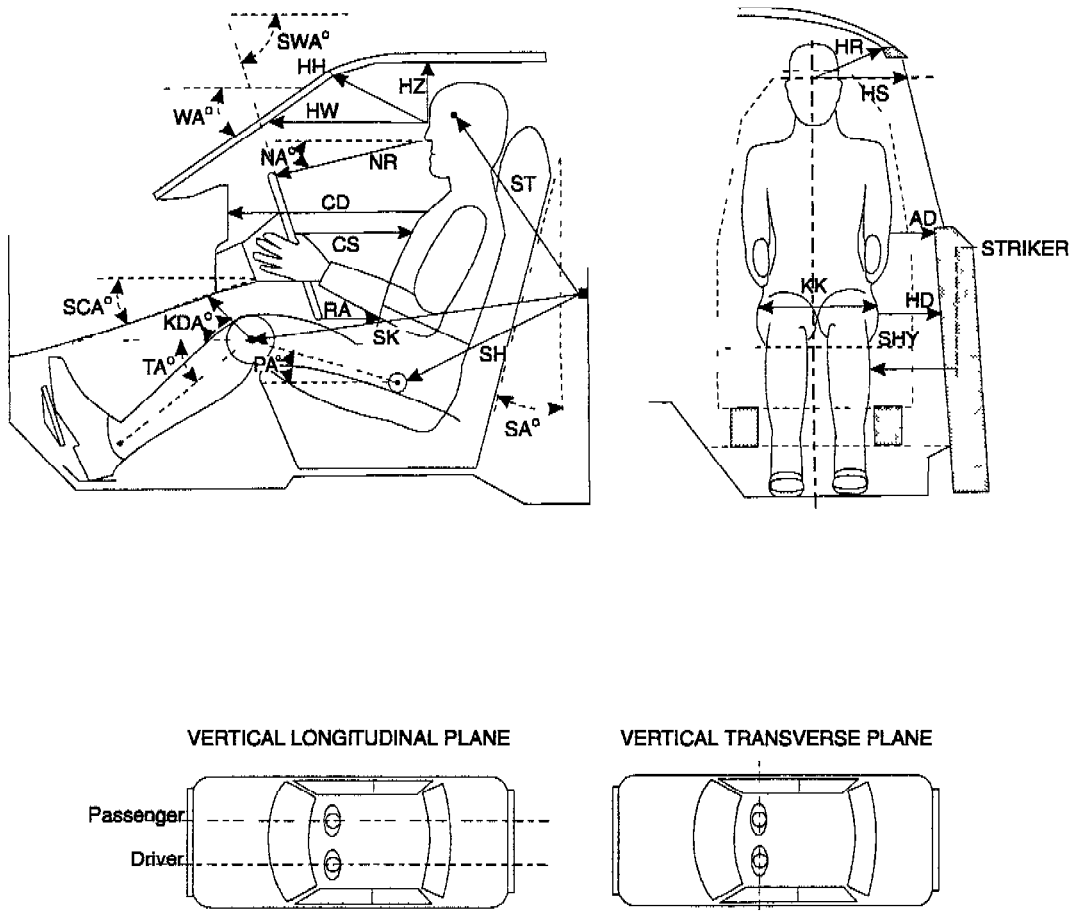


Table 7 Dummy Measurement Data For Front Seat Occupants

Designation	Type of Measurement	Driver (Serial # 206)	Passenger (Serial # 202)
WA	Windshield angle	26.4°	26.4°
SWA	Steering wheel angle	63.9°	N/A
SCA	Steering column angle	26.1°	N/A
SA	Seat back angle	21.3°	19.5°
HZ	Head to roof	190 mm	177 mm
HH	Head to header	340 mm	320 mm
HW	Head to windshield	603 mm	605 mm
HR	Head to side header	215 mm	215 mm
NR	Nose to rim	416 mm	N/A
NA	Nose to rim angle	13.3°	N/A
CD	Chest to dash	530 mm	505 mm
CS	Steering wheel to chest	330 mm	N/A
RA	Rim to abdomen	193 mm	N/A
KDL	Left knee to dash	150 mm	129 mm
KDR	Right knee to dash	148 mm	128 mm
KDA	Outboard knee to dash angle	59.9°	53.2°
PA	Pelvic angle	25.0°	24.5°
TA	Tibia angle	46.8°	46.6°
KK	Knee to knee	230 mm	270 mm
ST ¹	Striker to head	509 mm	523 mm
	Striker to head angle	-82.4°	-82.5°
SK ¹	Striker to knee	592 mm	591 mm
	Striker to knee angle	-0.7°	1.6°
SH ¹	Striker to H-point	239 mm	248 mm
	Striker to H-point angle	32.3°	28.4°
SHY	Striker to H-point (Y dir.)	242 mm	242 mm
HS	Head to side window	300 mm	300 mm
HD	H-point to door	126 mm	120 mm
AD	Arm to door	134 mm	116 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.

- * 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

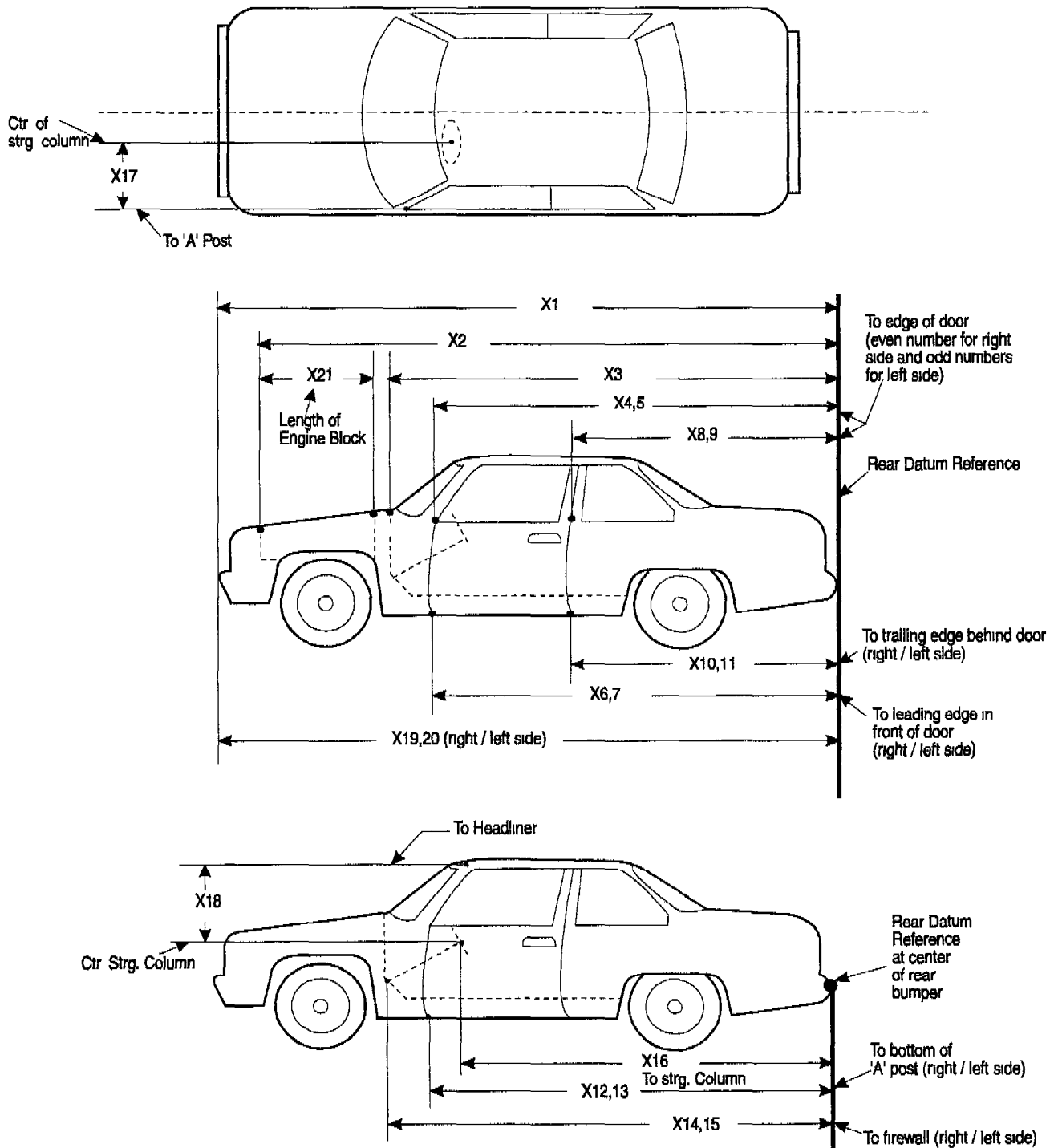


Table 8 Impacted Vehicle Measurements

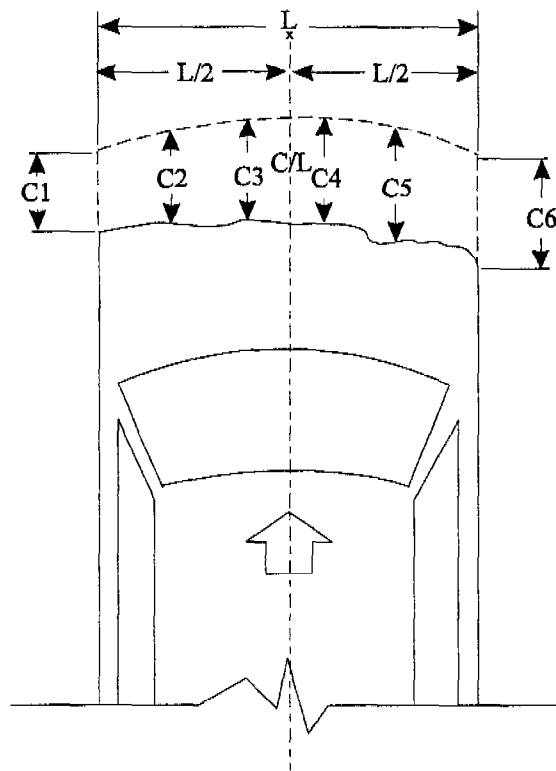
Test number: 011001

Vehicle year/make/model/body style: 2001/Honda/Accord LX/4 door sedan

No	Type of measurement	Pre-Test	Post-Test	Difference
X1	Total Length of Vehicle at Centerline	4782	4461	321
X2	Rear Surface of Vehicle to Front of Engine Block	4062	4016	46
X3	Rear Surface of Vehicle to Firewall	3687	3692	-5
X4	Rear Surface of Veh. to Upper Leading Edge of Right Door	3307	3304	3
X5	Rear Surface of Veh. to Upper Leading Edge of Left Door	3302	3302	0
X6	Rear Surface of Veh. to Lower Leading Edge of Right Door	3303	3297	6
X7	Rear Surface of Veh. to Lower Leading Edge of Left Door	3307	3300	7
X8	Rear Surface of Veh. to Upper Trailing Edge of Right Door	2238	2232	6
X9	Rear Surface of Veh. to Upper Trailing Edge of Left Door	2237	2234	3
X10	Rear Surface of Veh. to Lower Trailing Edge of Right Door	2256	2247	9
X11	Rear Surface of Veh. to Lower Trailing Edge of Left Door	2252	2243	9
X12	Rear Surface of Veh. to Bottom of " A " Post on Right Side	3317	3315	2
X13	Rear Surface of Veh. to Bottom of " A " Post on Left Side	3317	3319	-2
X14	Rear Surface of Vehicle to Firewall--Right Side	3642	3647	-5
X15	Rear Surface of Vehicle to Firewall --Left Side	3642	3636	6
X16	Rear Surface of Vehicle to Steering Wheel Center	2809	2807	2
X17	Center of Steering Column to " A " Post	318	295	23
X18	Center of Steering Column to Headliner	442	420	22
X19	Rear Surface of Vehicle to Right Side of Front Bumper	4597	4434	163
X20	Rear Surface of Vehicle to Left Side of Front Bumper	4592	4434	158
X21	Length of Engine Block	440	440	0
RD	Rear Surface of Vehicle to Right Side of Dash Panel	3097	3109	-12
CD	Rear Surface of Vehicle to Center of Dash Panel	3129	3132	-3
LD	Rear Surface of Vehicle to Left Side of Dash Panel	3097	3112	-15

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 Honda Accord LX

Location	Pre-test	Post-test	Difference
L	1525 mm		
C1	4592 mm	4434 mm	158 mm
C2	4712 mm	4414 mm	298 mm
C3	4787 mm	4462 mm	325 mm
C4	4782 mm	4473 mm	309 mm
C5	4732 mm	4454 mm	278 mm
C6	4597 mm	4434 mm	163 mm
CL	4782 mm	4461 mm	321 mm

Table 9 Test Vehicle Frontal Profile Data

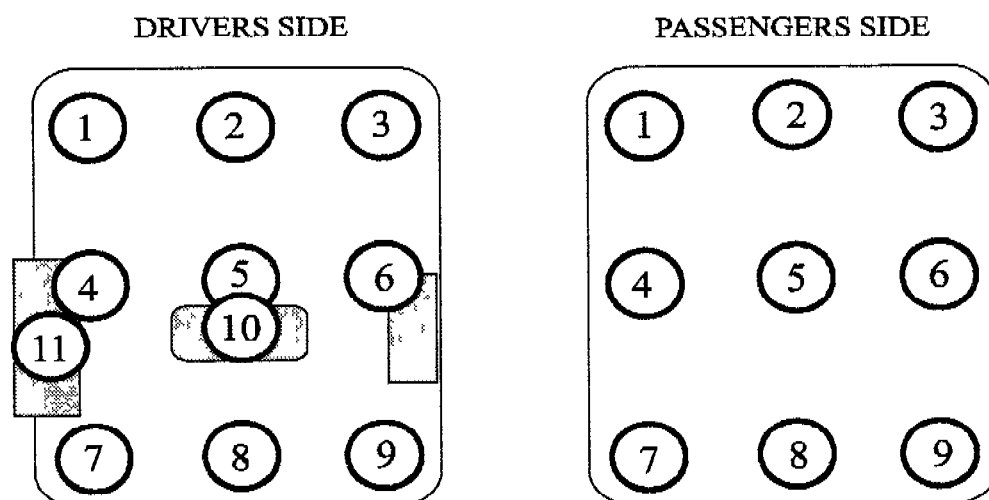
Pre-Test Profile							
		Vehicle Left			Vehicle Right		
		Point 1	Point 2	Point 3	Point 4	Point 5	Point 6
Bottom of Front Bumper	X	4582 mm	4707 mm	4767 mm	4777 mm	4722 mm	4597 mm
	Y	762 mm	455 mm	163 mm	162 mm	462 mm	762 mm
	Z	399 mm	410 mm	400 mm	401 mm	408 mm	412 mm
Top of Front Bumper	X	4567 mm	4697 mm	4767 mm	4767 mm	4702 mm	4572 mm
	Y	735 mm	452 mm	153 mm	153 mm	455 mm	725 mm
	Z	516 mm	518 mm	514 mm	518 mm	521 mm	520 mm
Center of Grille	X	4497 mm	4615 mm	4697 mm	4697 mm	4622 mm	4477 mm
	Y	714 mm	437 mm	143 mm	150 mm	460 mm	690 mm
	Z	630 mm	614 mm	612 mm	608 mm	611 mm	639 mm
Front of Hood	X	4437 mm	4582 mm	4687 mm	4682 mm	4592 mm	4447 mm
	Y	685 mm	440 mm	146 mm	145 mm	448 mm	680 mm
	Z	700 mm	670 mm	660 mm	655 mm	660 mm	700 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	4426 mm	4404 mm	4466 mm	4469 mm	4469 mm	4465 mm
	Y	762 mm	459 mm	154 mm	164 mm	453 mm	761 mm
	Z	382 mm	404 mm	405 mm	409 mm	415 mm	425 mm
Top of Front Bumper	X	4413 mm	4407 mm	4452 mm	4452 mm	4438 mm	4422 mm
	Y	762 mm	460 mm	152 mm	153 mm	457 mm	769 mm
	Z	495 mm	507 mm	517 mm	515 mm	4387 mm	530 mm
Center of Grille	X	4386 mm	4381 mm	4394 mm	4392 mm	4383 mm	4387 mm
	Y	695 mm	433 mm	154 mm	143 mm	410 mm	730 mm
	Z	605 mm	590 mm	602 mm	607 mm	590 mm	622 mm
Front of Hood	X	4344 mm	4372 mm	4382 mm	4383 mm	4375 mm	4348 mm
	Y	687 mm	455 mm	145 mm	145 mm	438 mm	683 mm
	Z	801 mm	663 mm	632 mm	635 mm	691 mm	832 mm

Difference							
		Vehicle Left			Vehicle Right		
		Point 1	Point 2	Point 3	Point 4	Point 5	Point 6
Bottom of Front Bumper	X	156 mm	303 mm	301 mm	308 mm	253 mm	132 mm
	Y	0 mm	-4 mm	9 mm	-2 mm	9 mm	1 mm
	Z	17 mm	6 mm	-5 mm	-8 mm	-7 mm	-13 mm
Top of Front Bumper	X	154 mm	290 mm	315 mm	315 mm	264 mm	150 mm
	Y	-27 mm	-8 mm	1 mm	0 mm	-2 mm	-44 mm
	Z	21 mm	11 mm	-3 mm	3 mm	-5 mm	-10 mm
Center of Grille	X	111 mm	234 mm	303 mm	305 mm	239 mm	90 mm
	Y	19 mm	4 mm	-11 mm	7 mm	50 mm	-40 mm
	Z	25 mm	24 mm	10 mm	1 mm	21 mm	17 mm
Front of Hood	X	93 mm	210 mm	305 mm	299 mm	217 mm	99 mm
	Y	-2 mm	-15 mm	1 mm	0 mm	10 mm	-3 mm
	Z	-101 mm	7 mm	28 mm	20 mm	-31 mm	-132 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	3471 mm	3381 mm	90 mm	377 mm	420 mm	-43 mm
2	3456 mm	3393 mm	63 mm	372 mm	425 mm	-53 mm
3	3446 mm	3422 mm	24 mm	377 mm	418 mm	-41 mm
4	3391 mm	3361 mm	30 mm	300 mm	396 mm	-96 mm
5	3381 mm	3341 mm	40 mm	293 mm	405 mm	-112 mm
6	3376 mm	3371 mm	5 mm	304 mm	420 mm	-116 mm
7	3316 mm	3321 mm	-5 mm	234 mm	296 mm	-62 mm
8	3326 mm	3322 mm	4 mm	227 mm	317 mm	-90 mm
9	3301 mm	3315 mm	-14 mm	243 mm	360 mm	-117 mm
10	3326 mm	3341 mm	-15 mm	401 mm	502 mm	-101 mm
11	3336 mm	3338 mm	-2 mm	313 mm	386 mm	-73 mm

Passenger's Side Floorpan Measurements

Floorpan Location	X			Z		
	Pre-Test	Post-Test	Difference	Pre-Test	Post-Test	Difference
1	3446 mm	3436 mm	10 mm	376 mm	425 mm	-49 mm
2	3456 mm	3431 mm	25 mm	365 mm	436 mm	-71 mm
3	3451 mm	3436 mm	15 mm	360 mm	430 mm	-70 mm
4	3391 mm	3386 mm	5 mm	321 mm	345 mm	-24 mm
5	3381 mm	3371 mm	10 mm	297 mm	338 mm	-41 mm
6	3371 mm	3378 mm	-7 mm	299 mm	328 mm	-29 mm
7	3306 mm	3316 mm	-10 mm	233 mm	225 mm	8 mm
8	3296 mm	3311 mm	-15 mm	226 mm	228 mm	-2 mm
9	3306 mm	3311 mm	-5 mm	228 mm	228 mm	0 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	3077 mm	575 mm	675 mm
Driver Right Knee	3077 mm	215 mm	682 mm
Passenger Left Knee	3006 mm	215 mm	725 mm
Passenger Right Knee	3000 mm	580 mm	715 mm

Post-Test			
Driver Left Knee	3097 mm	555 mm	677 mm
Driver Right Knee	3097 mm	195 mm	630 mm
Passenger Left Knee	3032 mm	200 mm	648 mm
Passenger Right Knee	3032 mm	575 mm	710 mm

Difference			
Driver Left Knee	-20 mm	20 mm	-2 mm
Driver Right Knee	-20 mm	20 mm	52 mm
Passenger Left Knee	-26 mm	15 mm	77 mm
Passenger Right Knee	-32 mm	5 mm	5 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:	64.8 liters (from owner's manual)
Test volume range:	59.6 - 60.9 liters (92-94% of usable)
Actual test volume:	60.2 liters (92.9% 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.	No
Details of fuel system:	The fuel tank is under the rear seat forward of the rear axle. The fuel filler neck comes from the left rear corner of the tank and runs to the fuel filler cap which is just above and to the rear of the left rear wheel well. The fuel lines follow the inside of the left rail forward to the engine.

Figure 7 Camera Positions

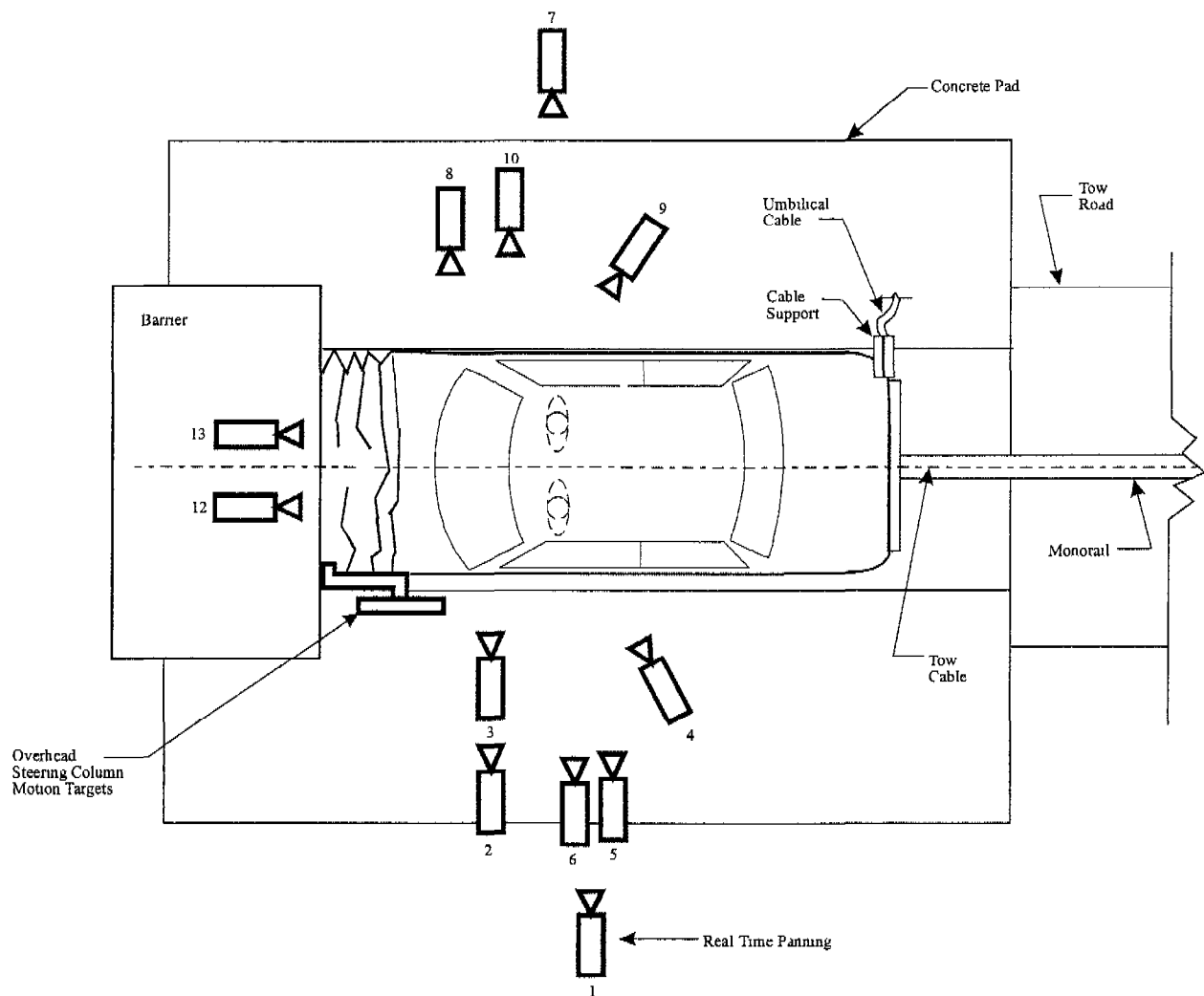


Figure 7 Camera Positions, Cont'd

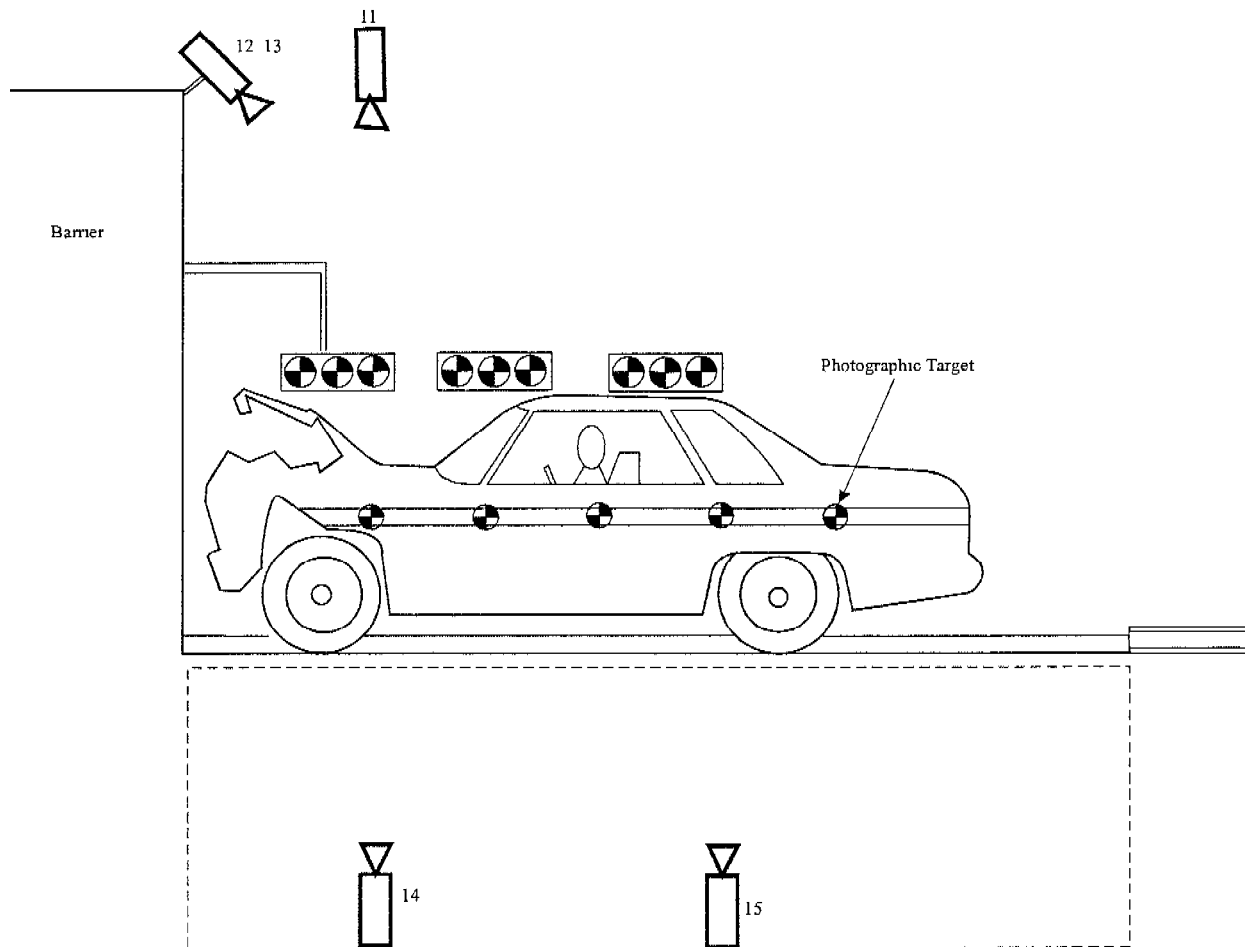


Table 12 Camera Information

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	1030 frames/s	1345 mm	-7210 mm	1505 mm	-3.9	6955 mm
3	Left tight dummy	Photosonic	50 mm	940 frames/s	820 mm	-6705 mm	1300 mm	-0.3	6450 mm
4	Left angled on dummy	Photosonic	25 mm	N/A ³	3120 mm	-2850 mm	2212 mm	-23.1	2400 mm
5	Left steering column upper	Photosonic	25 mm	950 frames/s	2150 mm	-8150 mm	2275 mm	-10.5	7765 mm
6	Left steering column lower	Photosonic	25 mm	492 frames/s	2150 mm	-8150 mm	1665 mm	-4.8	7765 mm
7	Right side overall	Photosonic	13 mm	990 frames/s	2760 mm	7750 mm	1290 mm	-3.3	7410 mm
8	Right tight dummy	Photosonic	50 mm	1000 frames/s	1235 mm	6850 mm	1240 mm	-1.4	6610 mm
9	Right angled on dummy	Photosonic	25 mm	990 frames/s	3260 mm	2400 mm	2060 mm	-26.4	2000 mm
10	Right side passenger	Hycam	25 mm	1025 frames/s	1610 mm	7300 mm	1535 mm	-3.7	7050 mm
11	Overhead	Photosonic	8.5 mm	997 frames/s	470 mm	0 mm	2550 mm	-61.3	2475 mm
12	Barrier driver	Photosonic	17 mm	1000 frames/s	470 mm	-360 mm	2550 mm	-51.8	2475 mm
13	Barrier passenger	Photosonic	17 mm	1000 frames/s	470 mm	360 mm	2550 mm	-57.6	2475 mm
14	Pit front	Photosonic	17 mm	450 frames/s	1040 mm	0 mm	-2700 mm	89.8	N/A
15	Pit rear	Photosonic	13 mm	990 frames/s	2805 mm	0 mm	-2700 mm	88.7	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

³ Camera started late; film speed was slow and variable

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

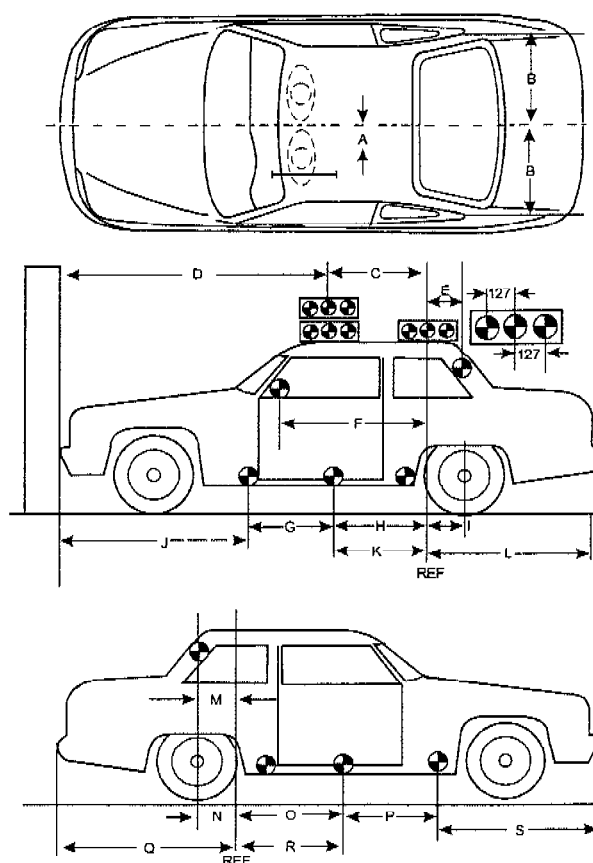
All TRC Inc. high-speed cameras are equipped with red LEDs which put timing marks on the right edge of the film. TRC Inc. uses a single timing generator to generate the timing for all cameras. This allows the timing marks to be common to all cameras. The timing marks can be used to measure camera speed (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	330 mm
B	610 mm
C	610 mm
D	1288 mm
E	384 mm
F	1600 mm
G	900 mm
H	925 mm
I	213 mm
J	1408 mm
K	712 mm
L	1762 mm
M	388 mm
N	220 mm
O	928 mm
P	895 mm
Q	1762 mm
R	710 mm
S	1413 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.

Appendix A

Photographs



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

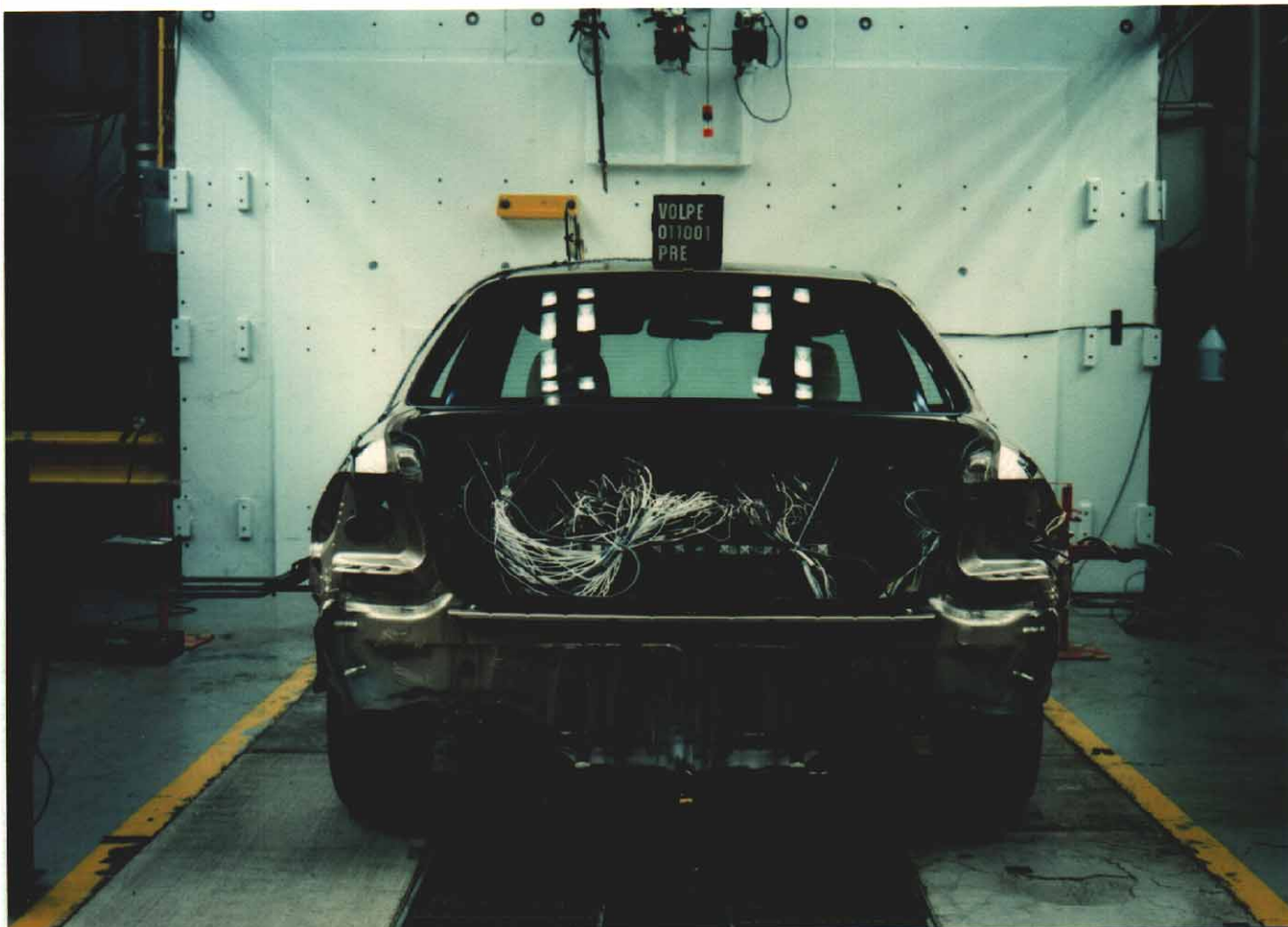


Figure A-9 Pre-Test Rear View

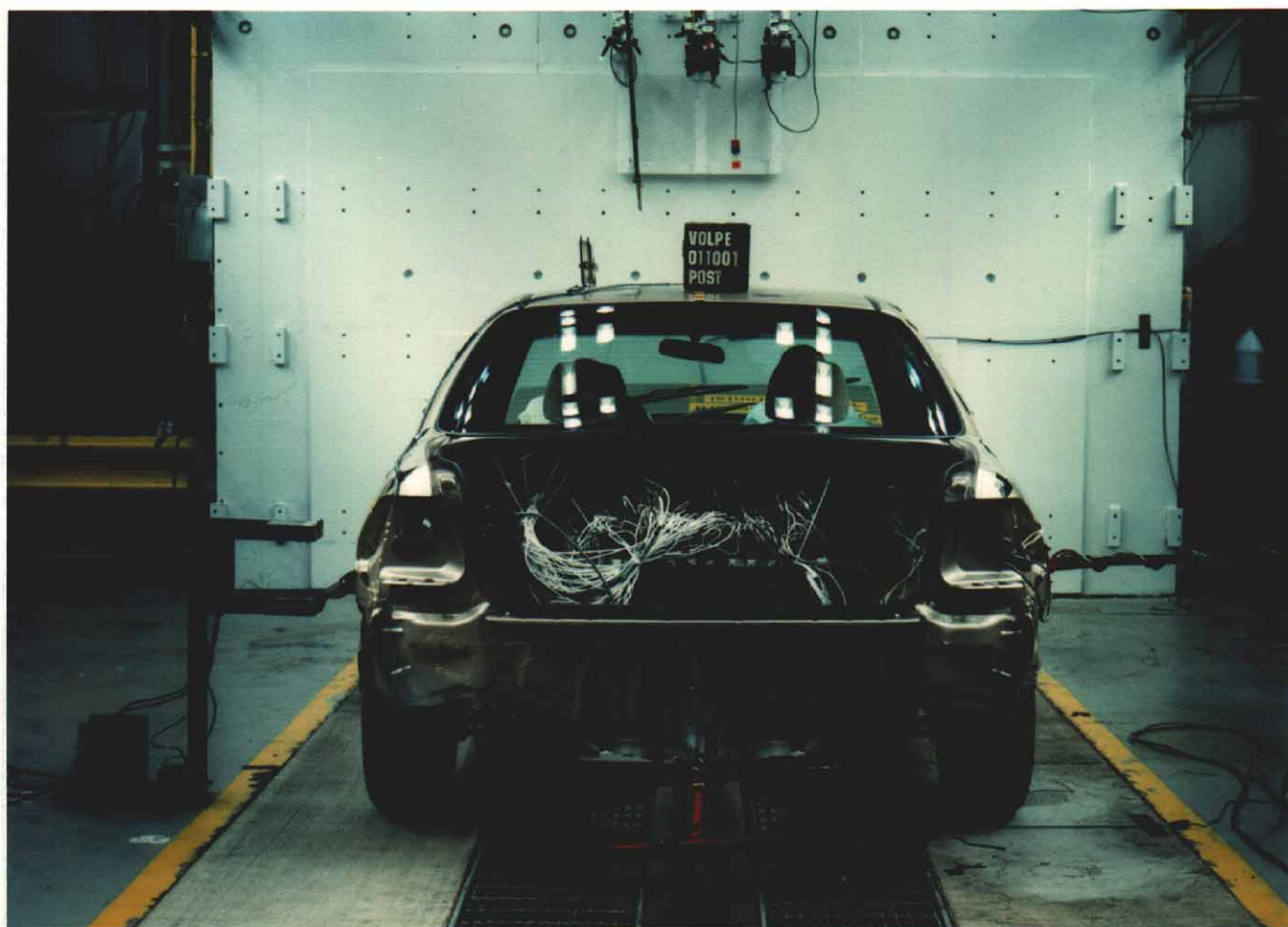


Figure A-10 Post-Test Rear View



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

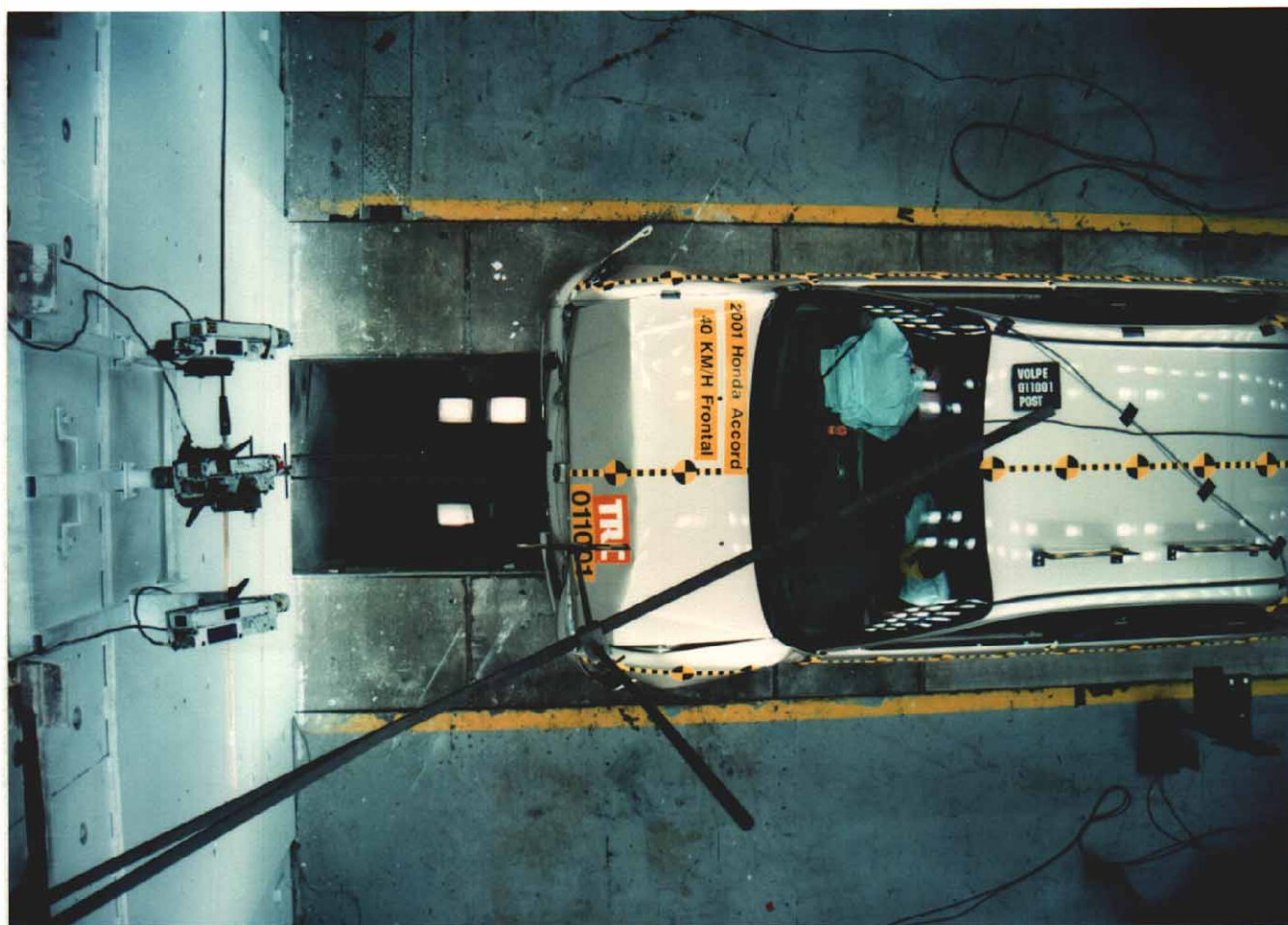


Figure A-18 Post-Test Overhead Overall View



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

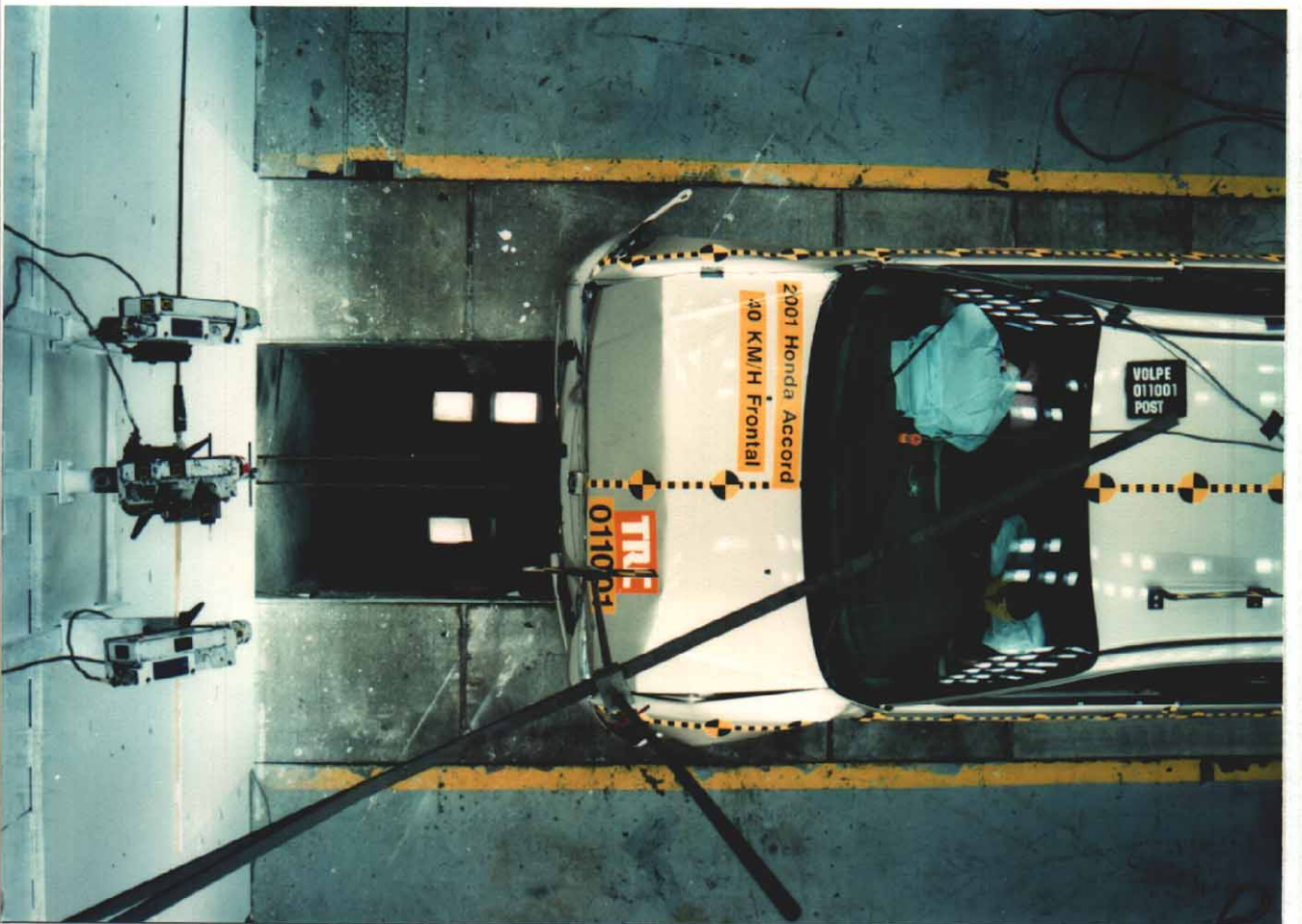


Figure A-20 Post-Test Overhead Close-up View

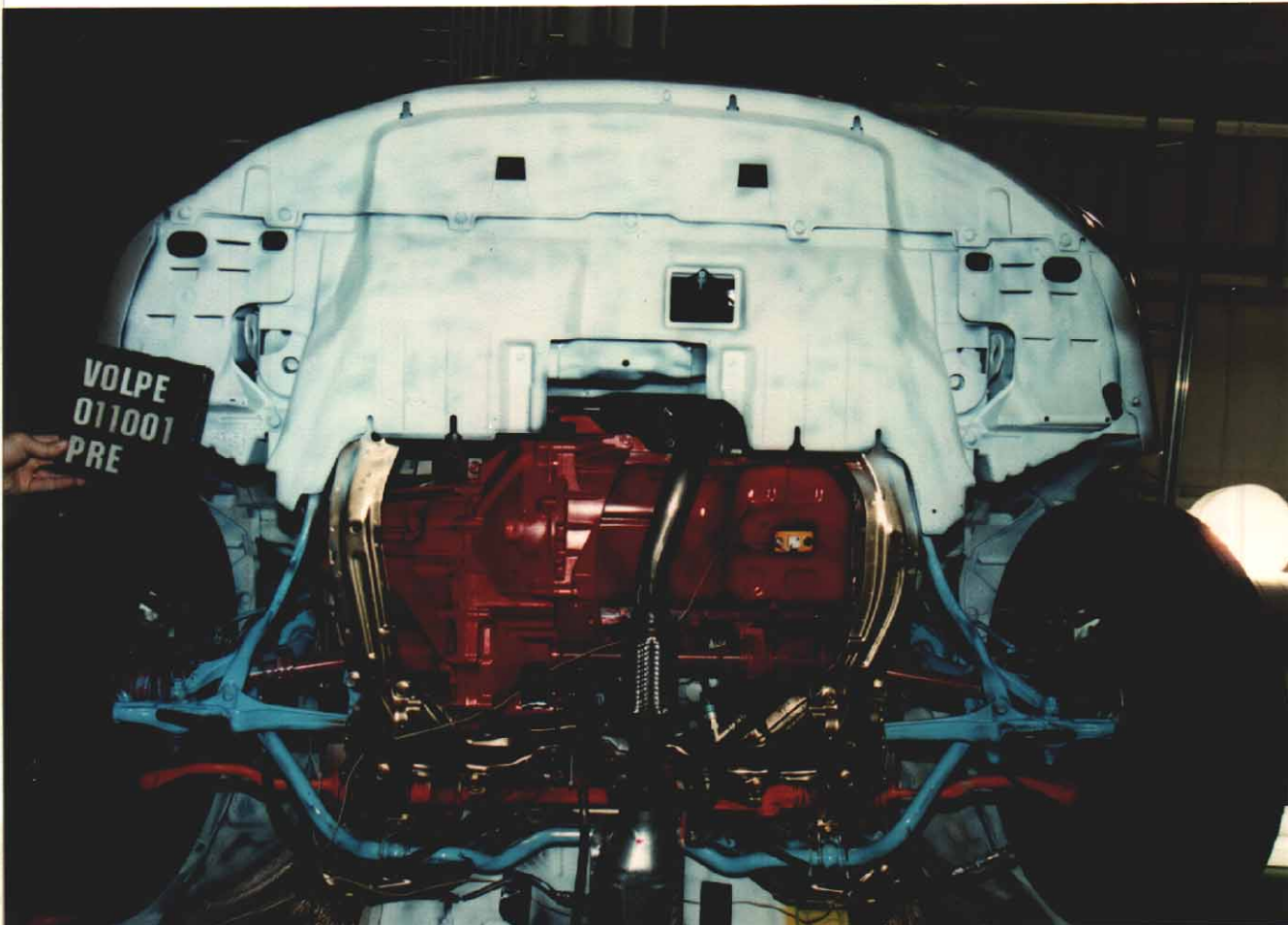


Figure A-21 Pre-Test Front Underbody View

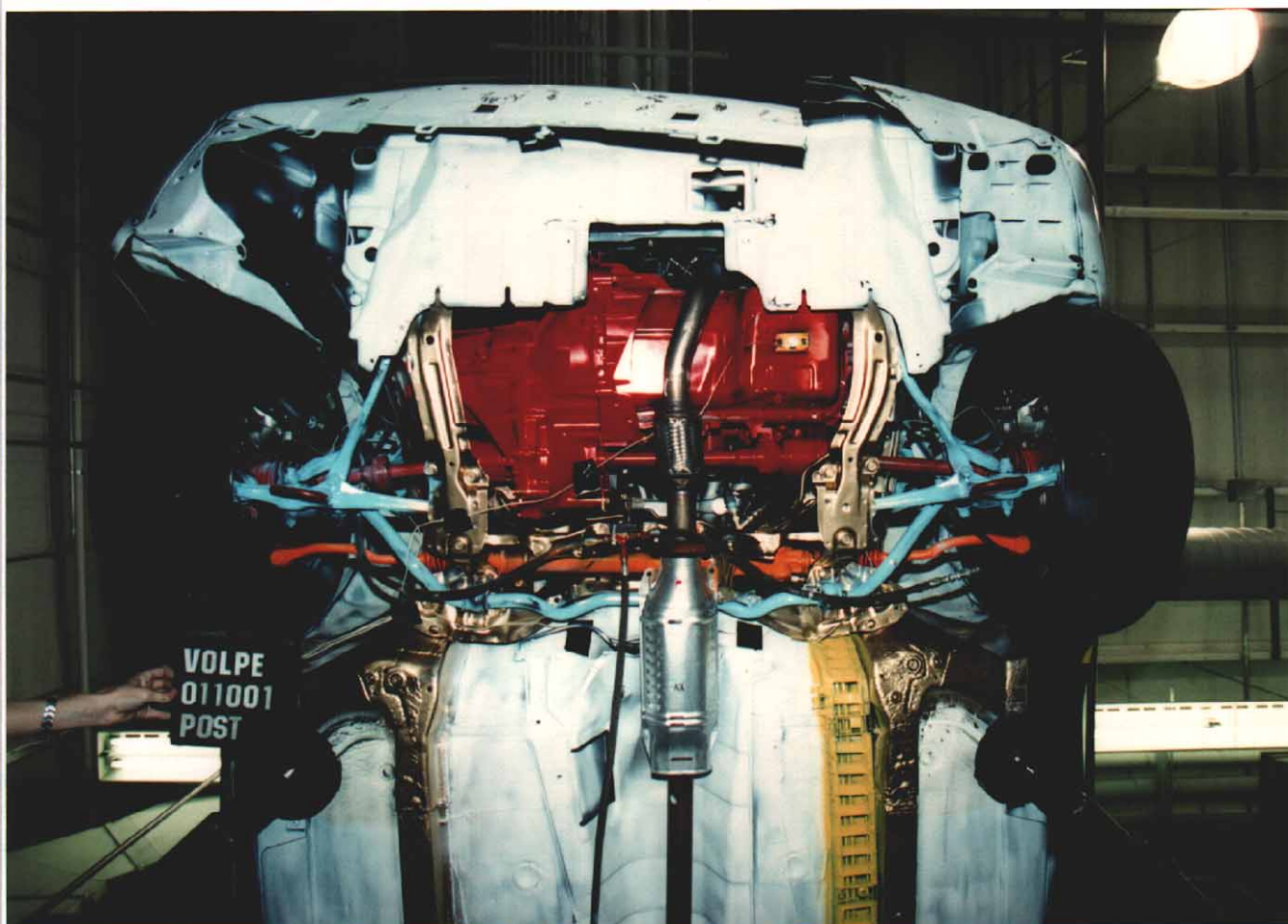


Figure A-22 Post-Test Front Underbody View



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

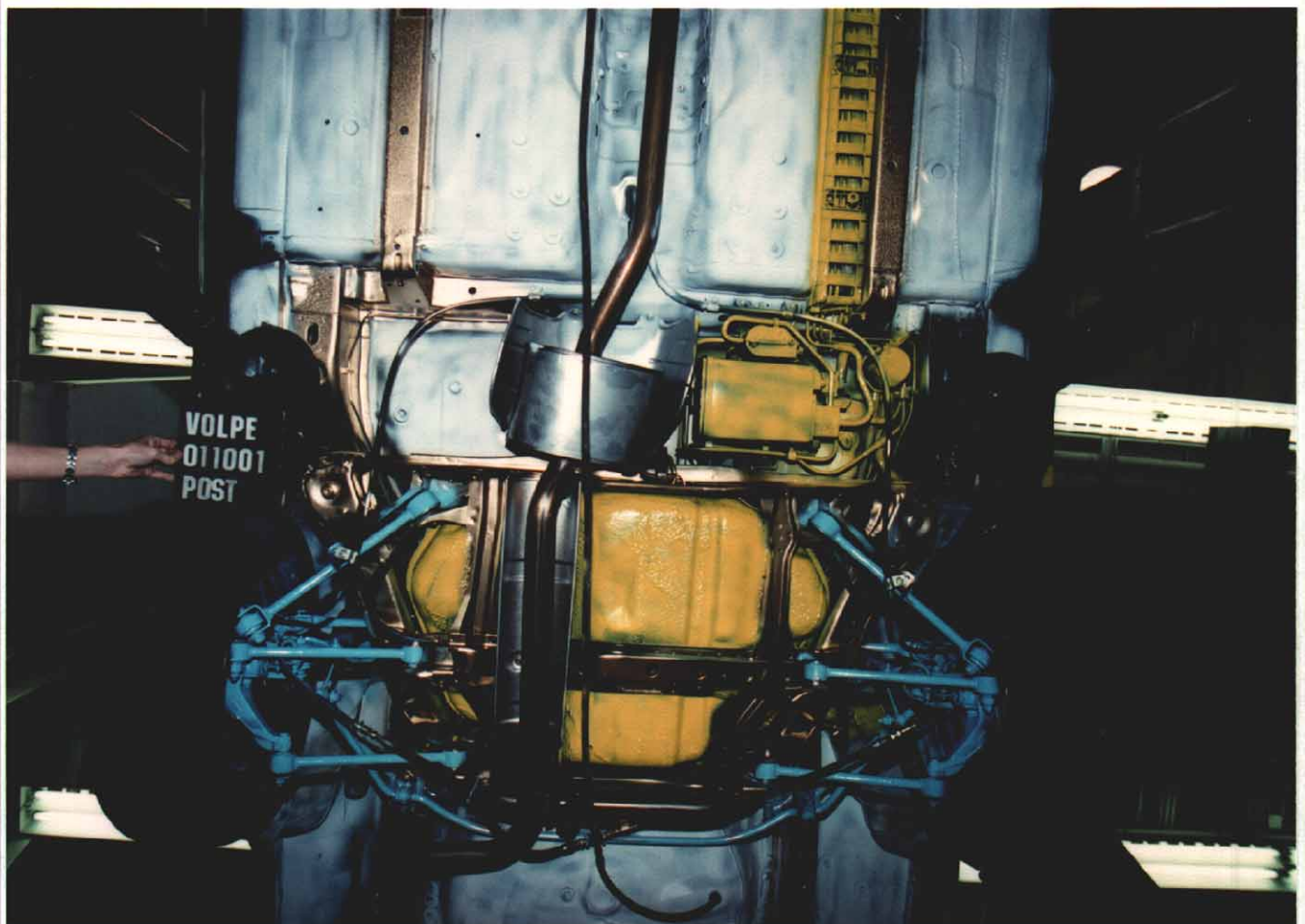


Figure A-26 Post-Test Rear Mid Underbody View

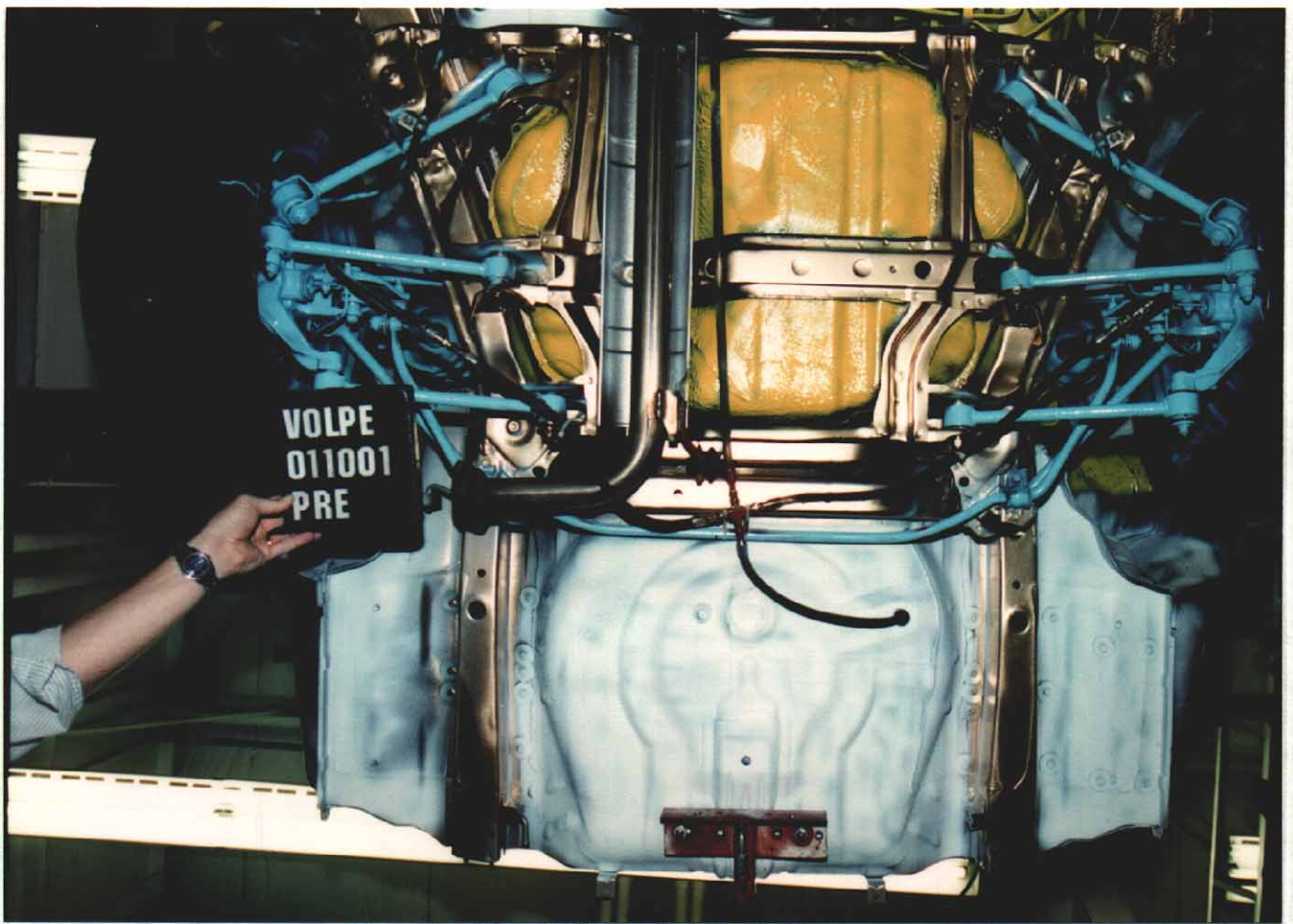


Figure A-27 Pre-Test Rear Underbody View

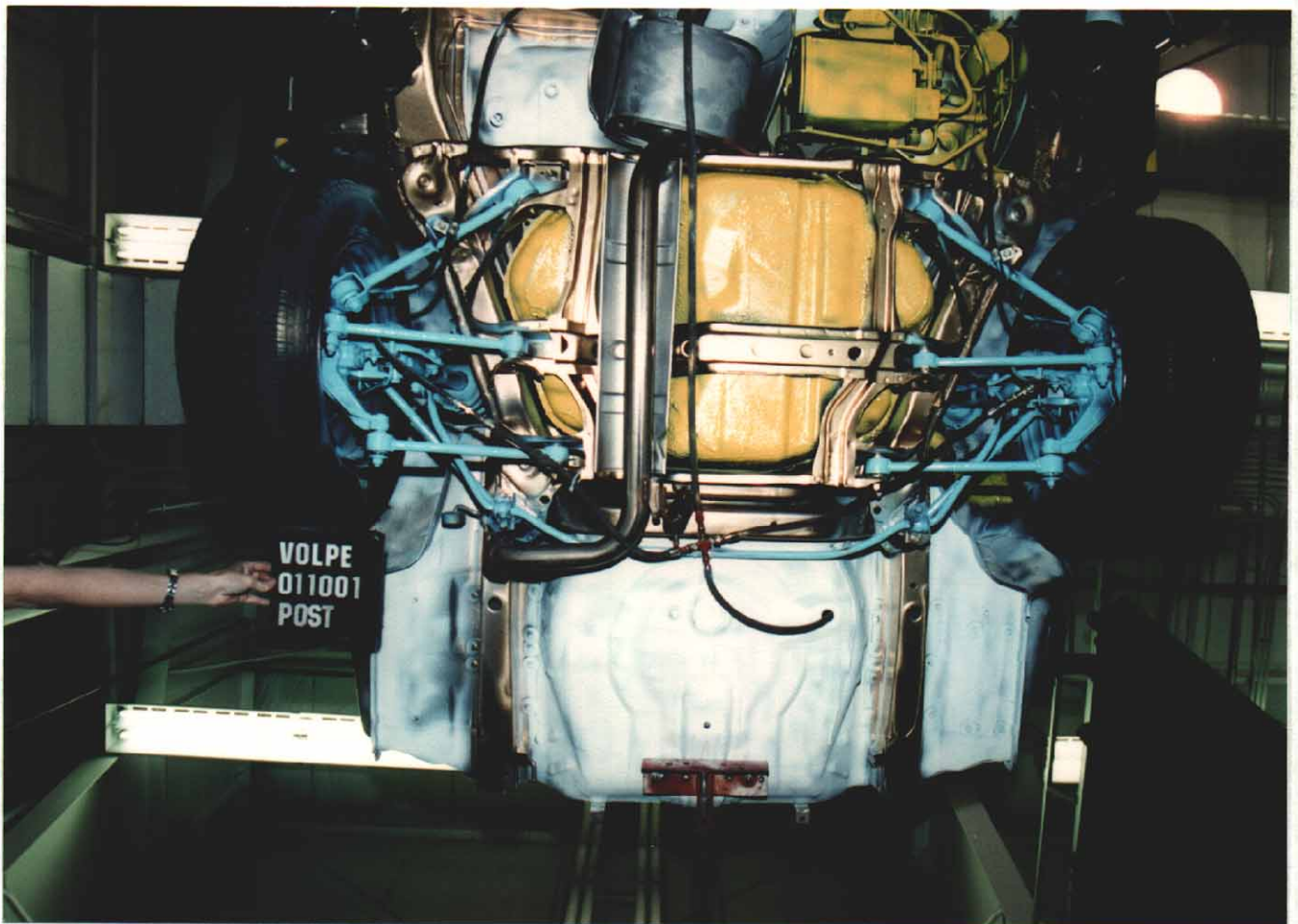


Figure A-28 Post-Test Rear Underbody View

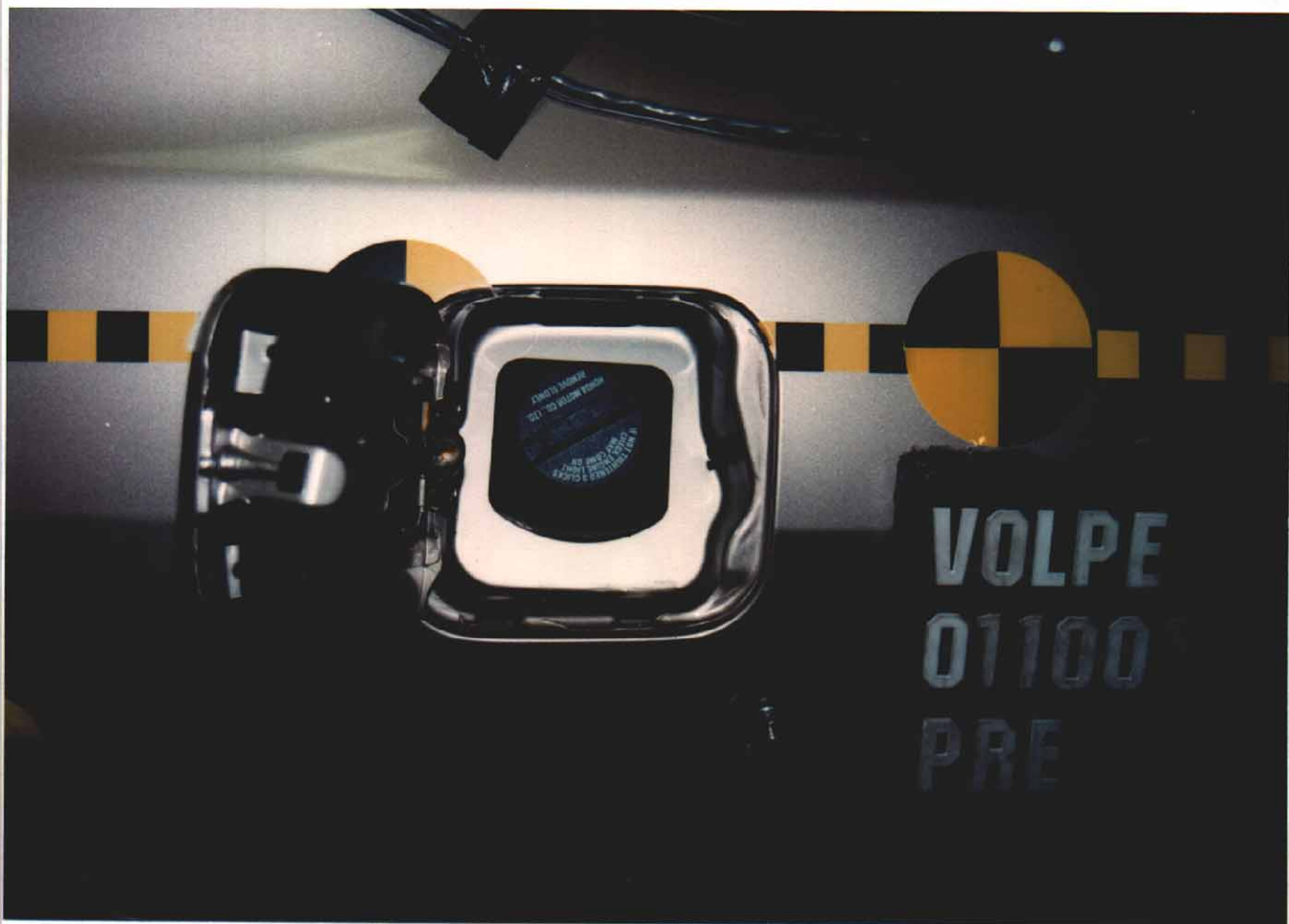


Figure A-29 Pre-Test Fuel Filler Cap View

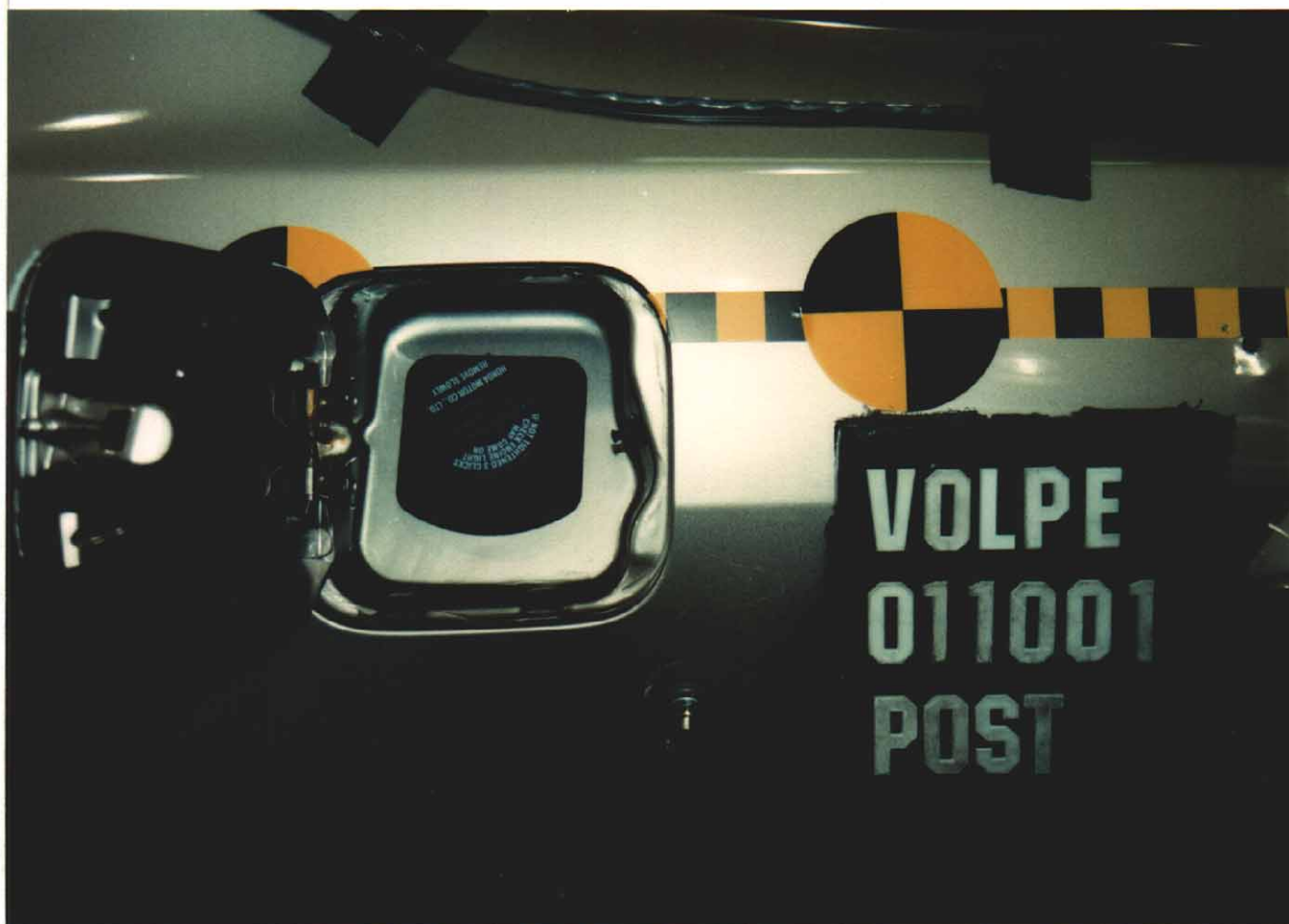


Figure A-30 Post-Test Fuel Filler Cap View

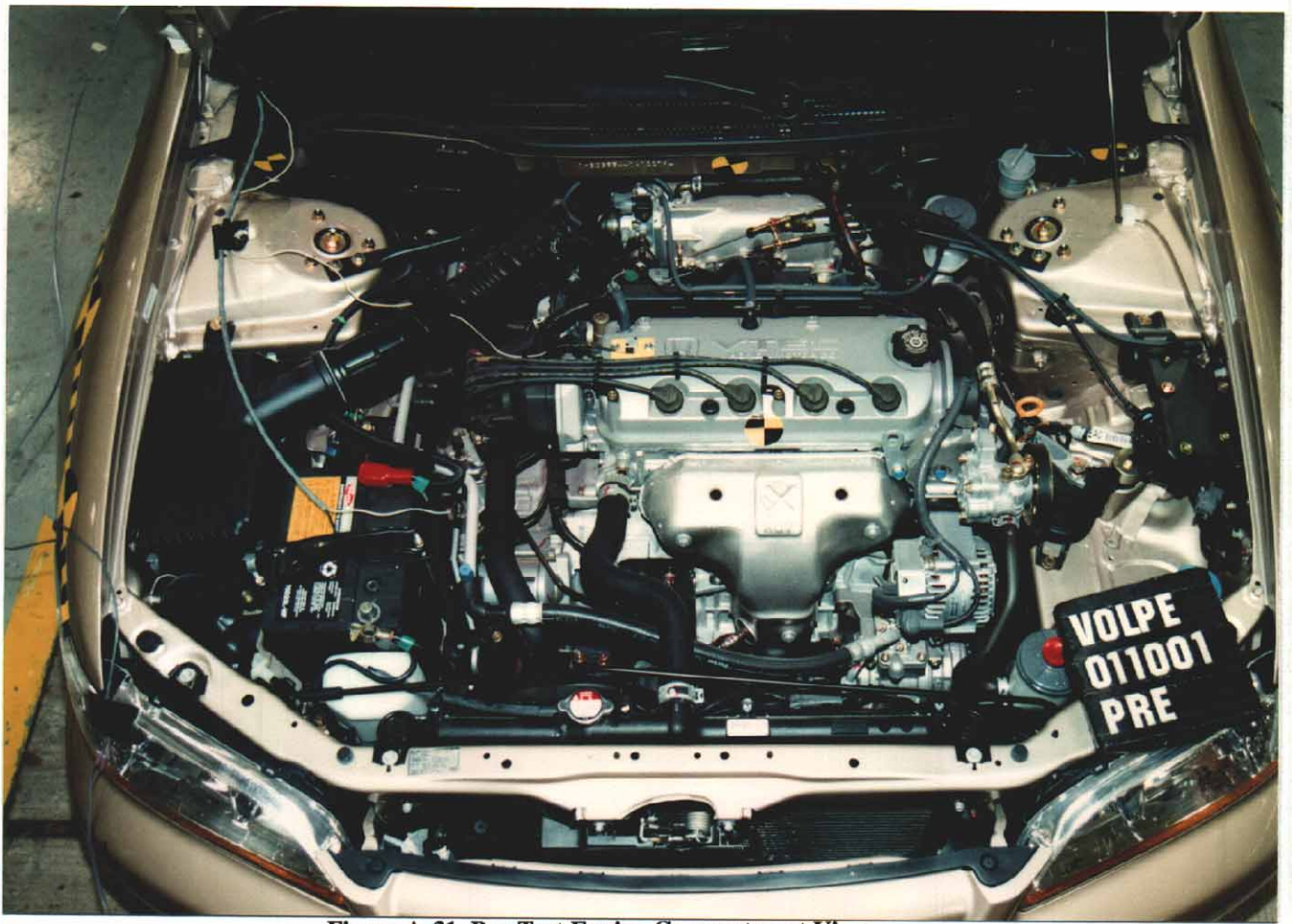


Figure A-31 Pre-Test Engine Compartment View

Intentionally Left Blank



Figure A-32 Pre-Test Windshield View



Figure A-33 Post-Test Windshield View



Figure A-34 Pre-Test Driver and Passenger Dummies Front View

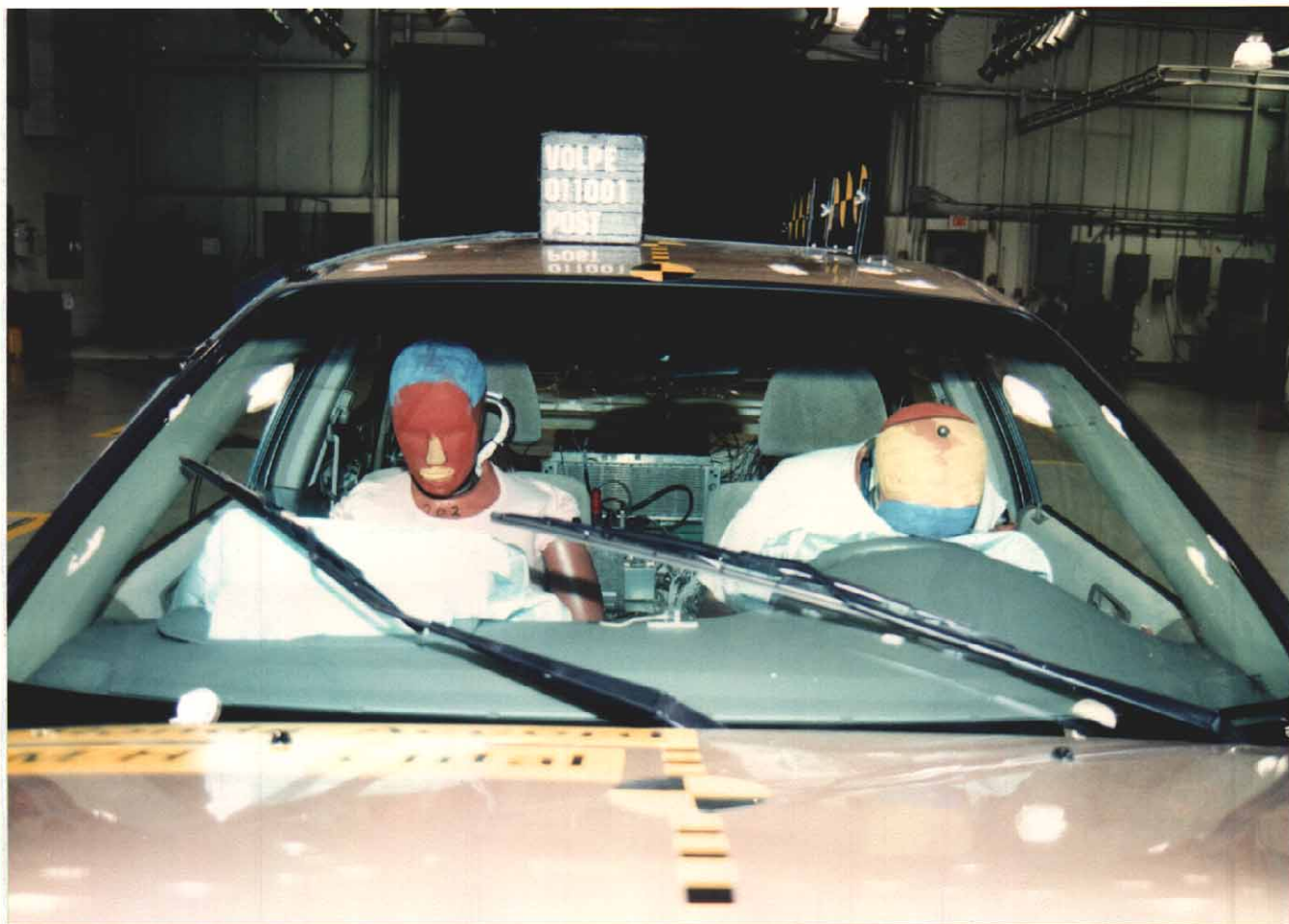


Figure A-35 Post-Test Driver and Passenger Dummies Front View

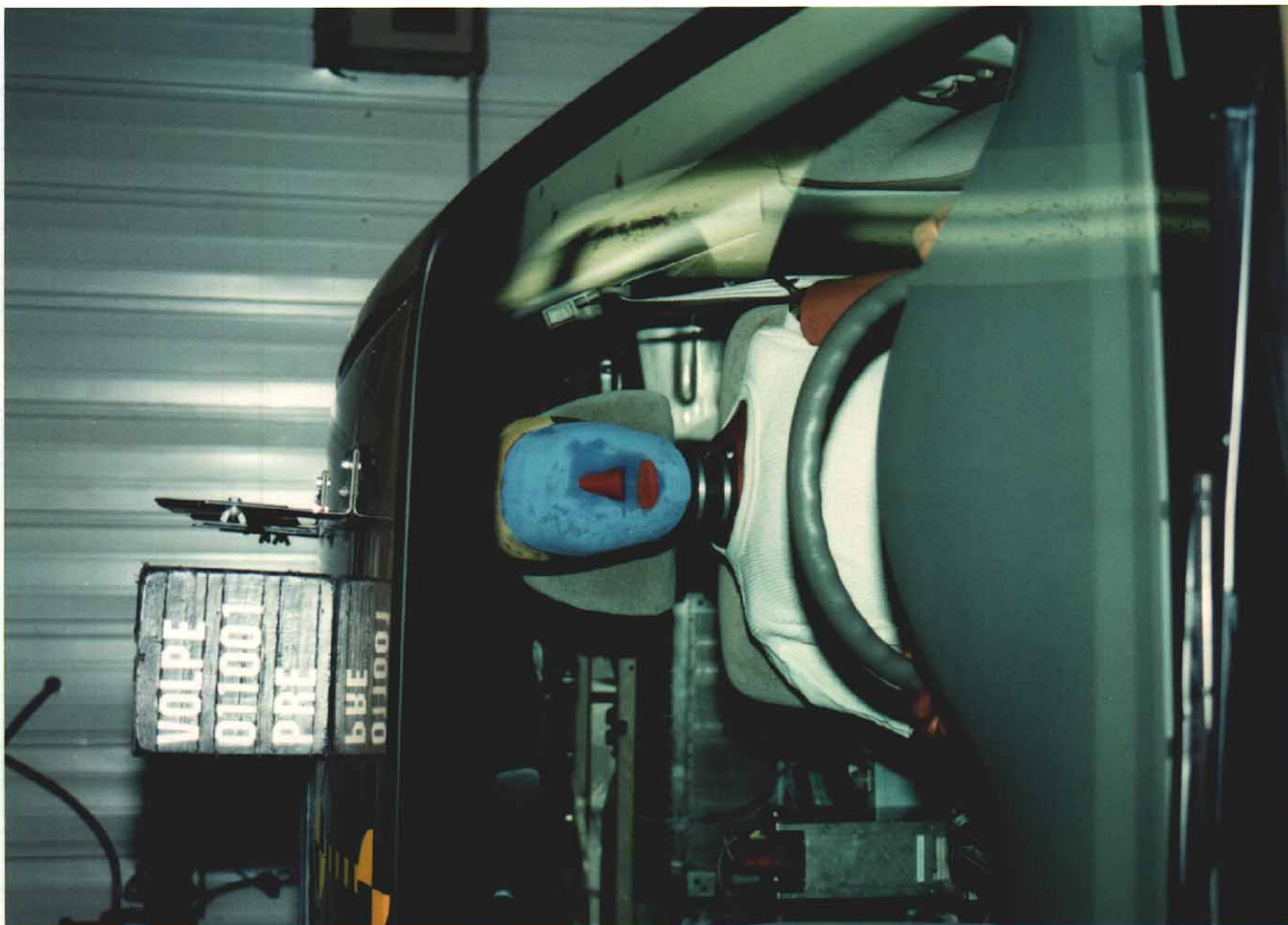


Figure A-36 Pre-Test Driver Dummy Position - View 1



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



Figure A-38 Pre-Test Driver Dummy Position - View 2



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

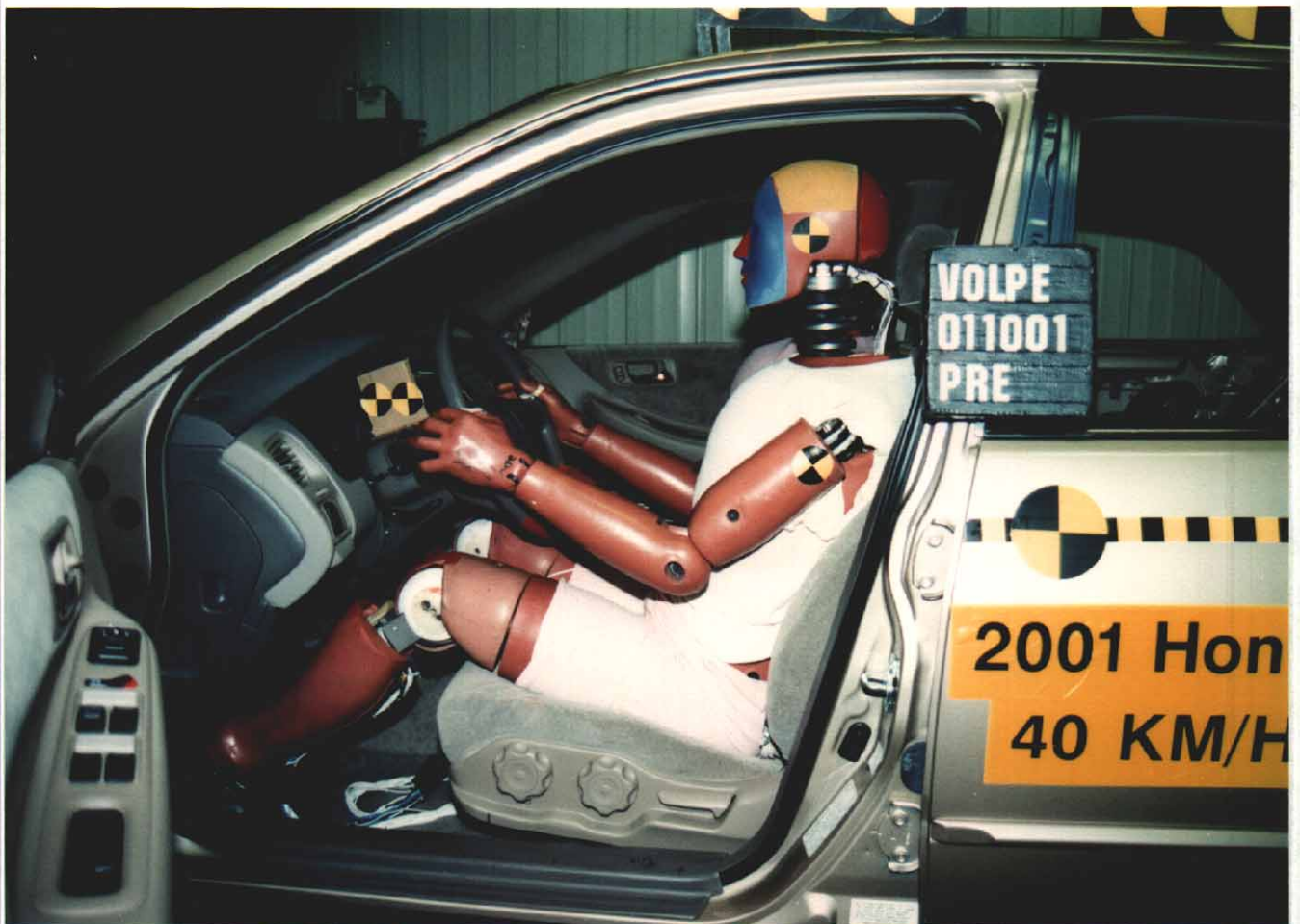


Figure A-40 Pre-Test Driver Dummy & Vehicle Interior - View 1



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



Figure A-42 Pre-Test Driver Dummy & Vehicle Interior - View 2



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



Figure A-44 Pre-Test Driver Dummy Seat Track Position View

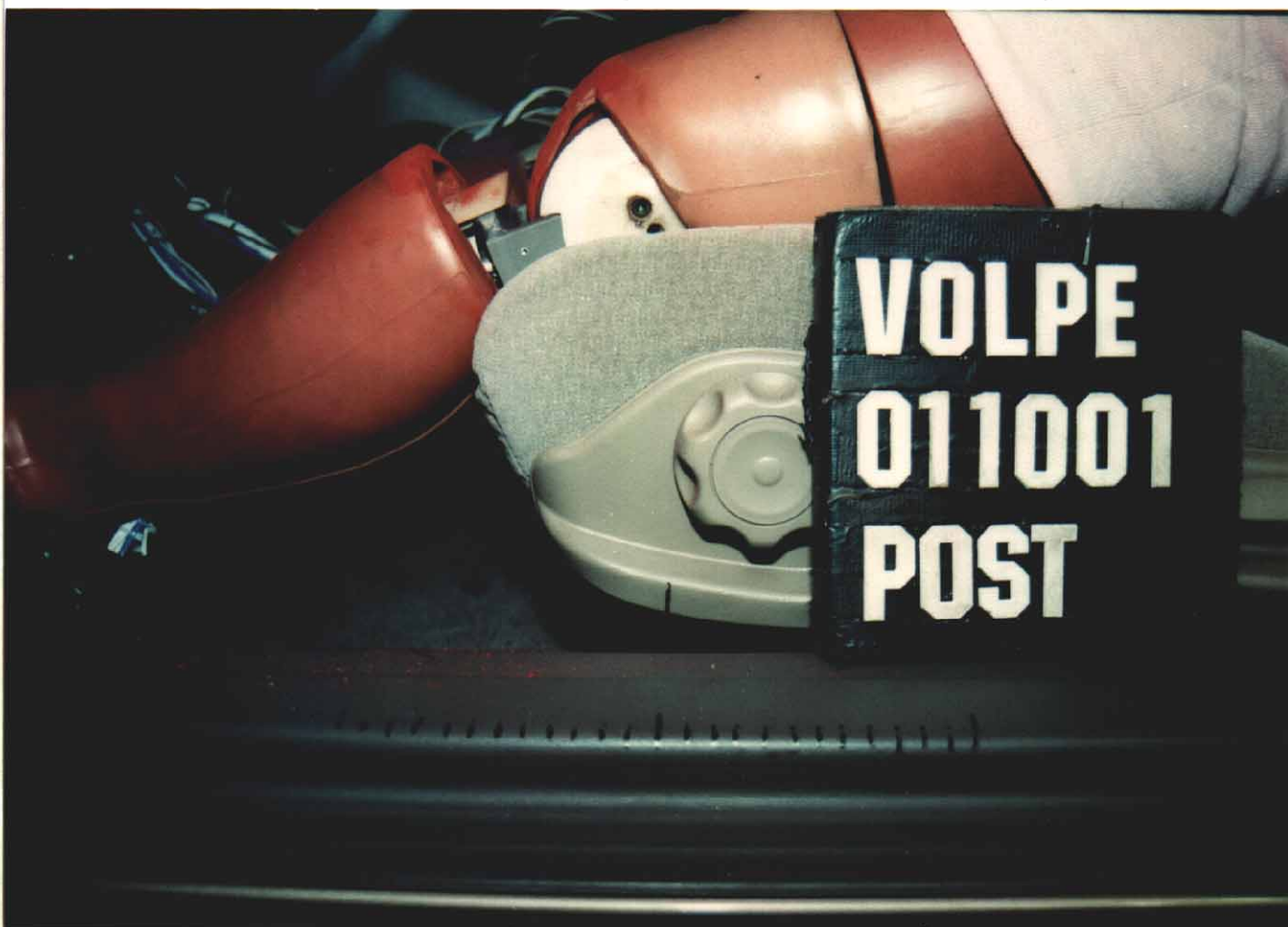


Figure A-45 Post-Test Driver Dummy Seat Track Position View

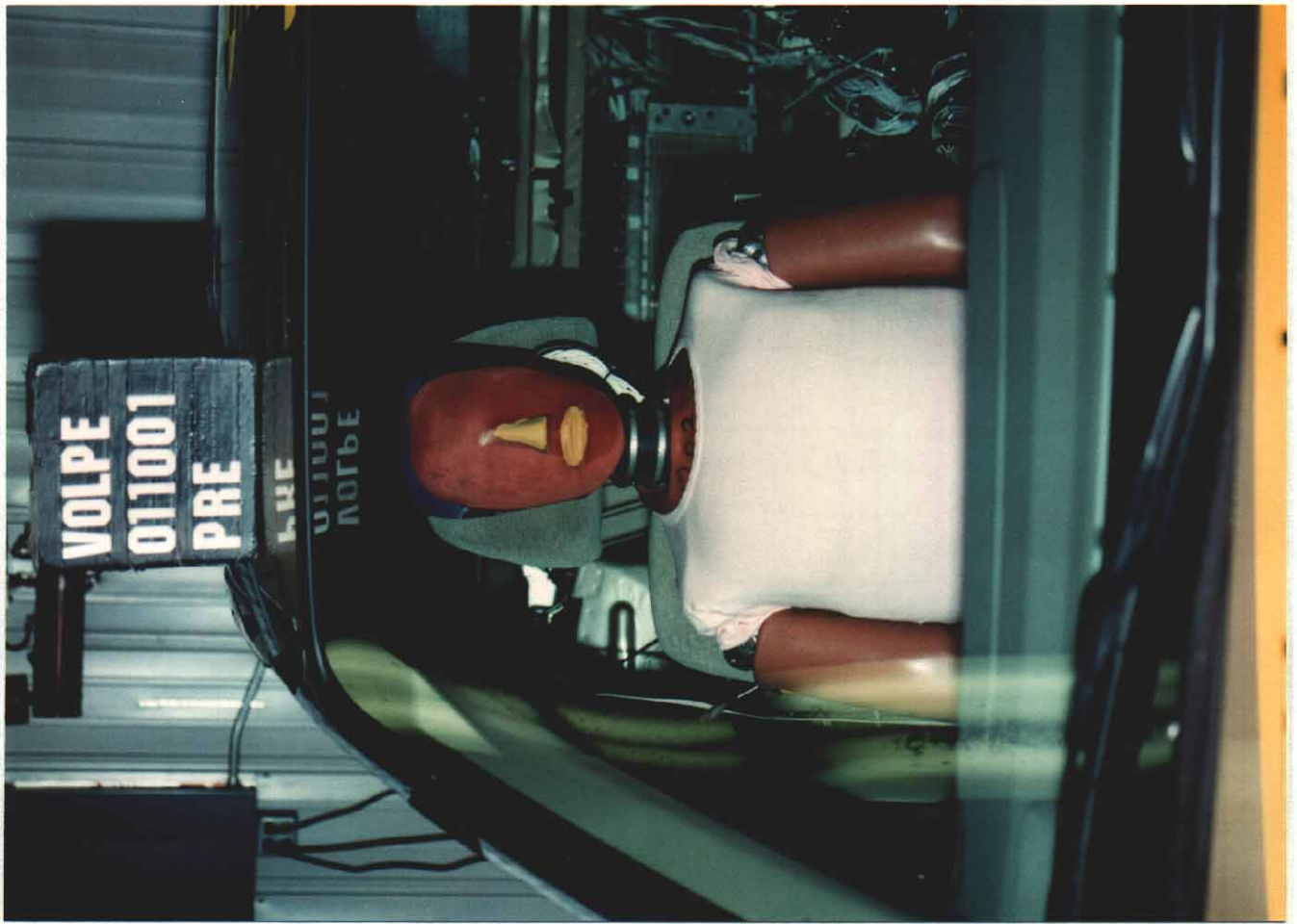


Figure A-46 Pre-Test Passenger Dummy Position - View 1



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



Figure A-48 Pre-Test Passenger Dummy Position - View 2



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



Figure A-50 Pre-Test Passenger Dummy & Vehicle Interior - View 1



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



Figure A-52 Pre-Test Passenger Dummy & Vehicle Interior - View 2



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



Figure A-54 Pre-Test Passenger Dummy Seat Track Position View



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



Figure A-56 Post-Test Driver Dummy Overall View

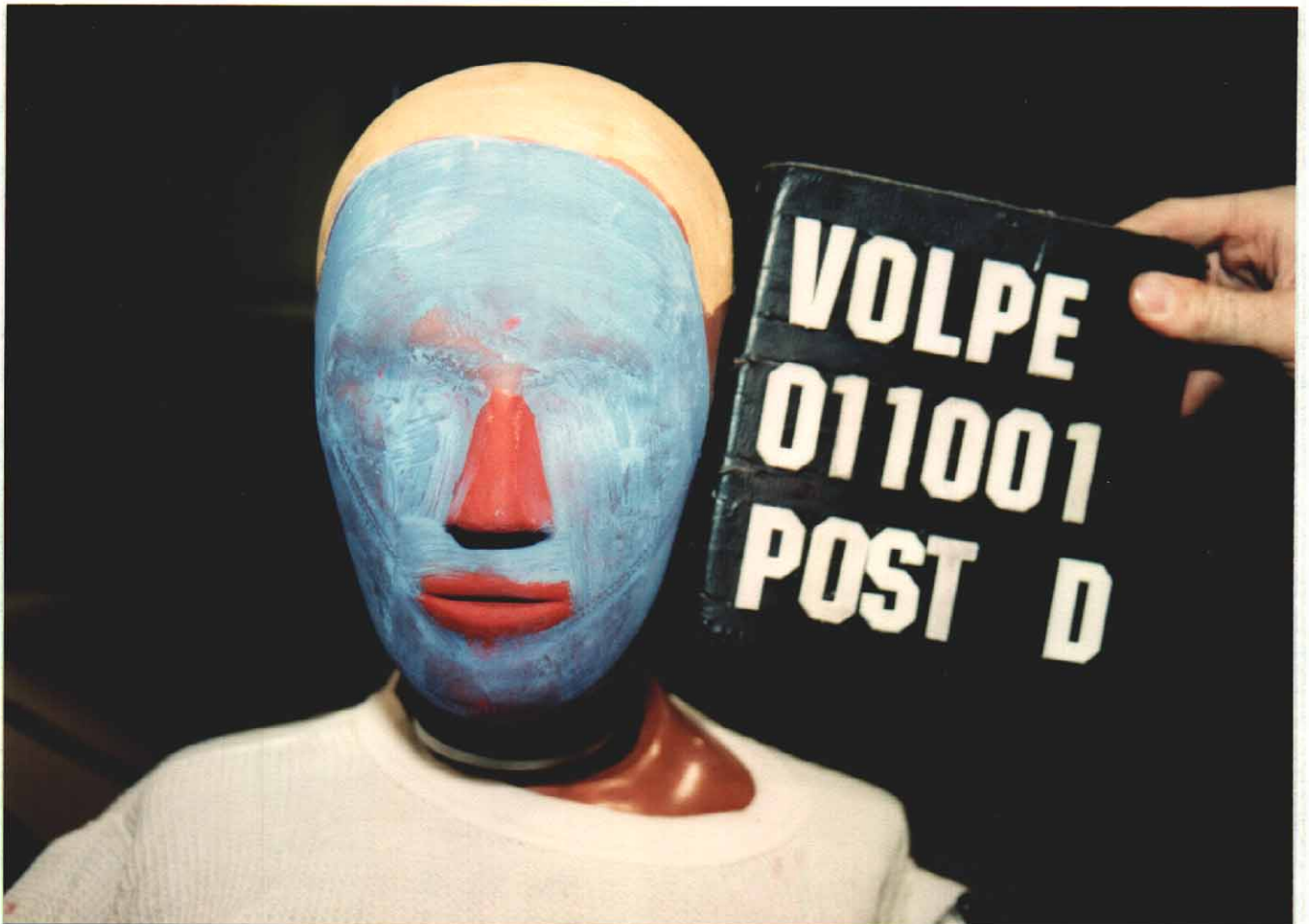


Figure A-57 Post-Test Driver Dummy Head Contact - View 1



Figure A-58 Post-Test Driver Dummy Head Contact - View 2



Figure A-59 Post-Test Driver Dummy Head Contact - View 3



Figure A-60 Post-Test Driver Dummy Head Contact - View 4

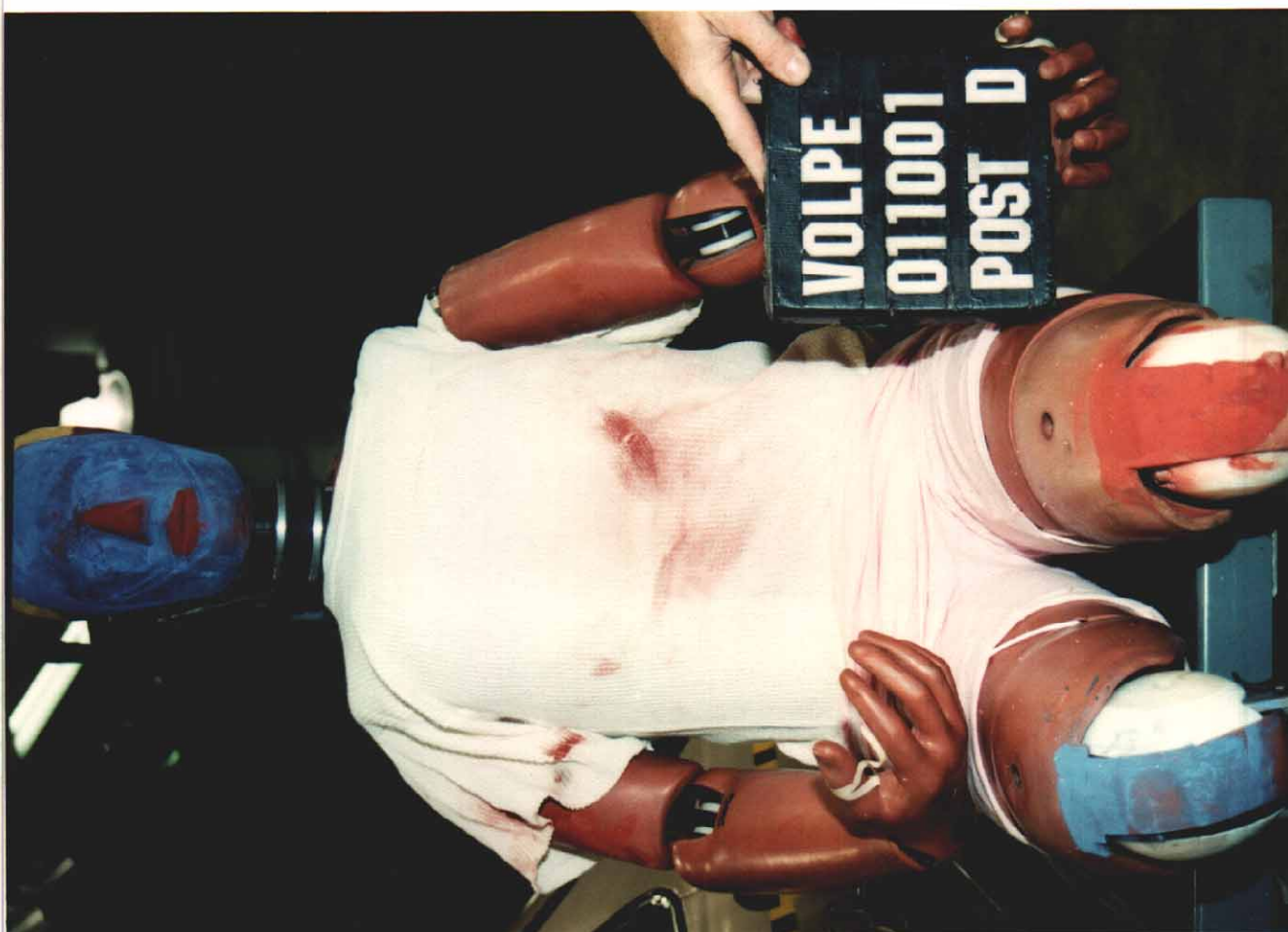


Figure A-61 Post-Test Driver Dummy Chest Contact View

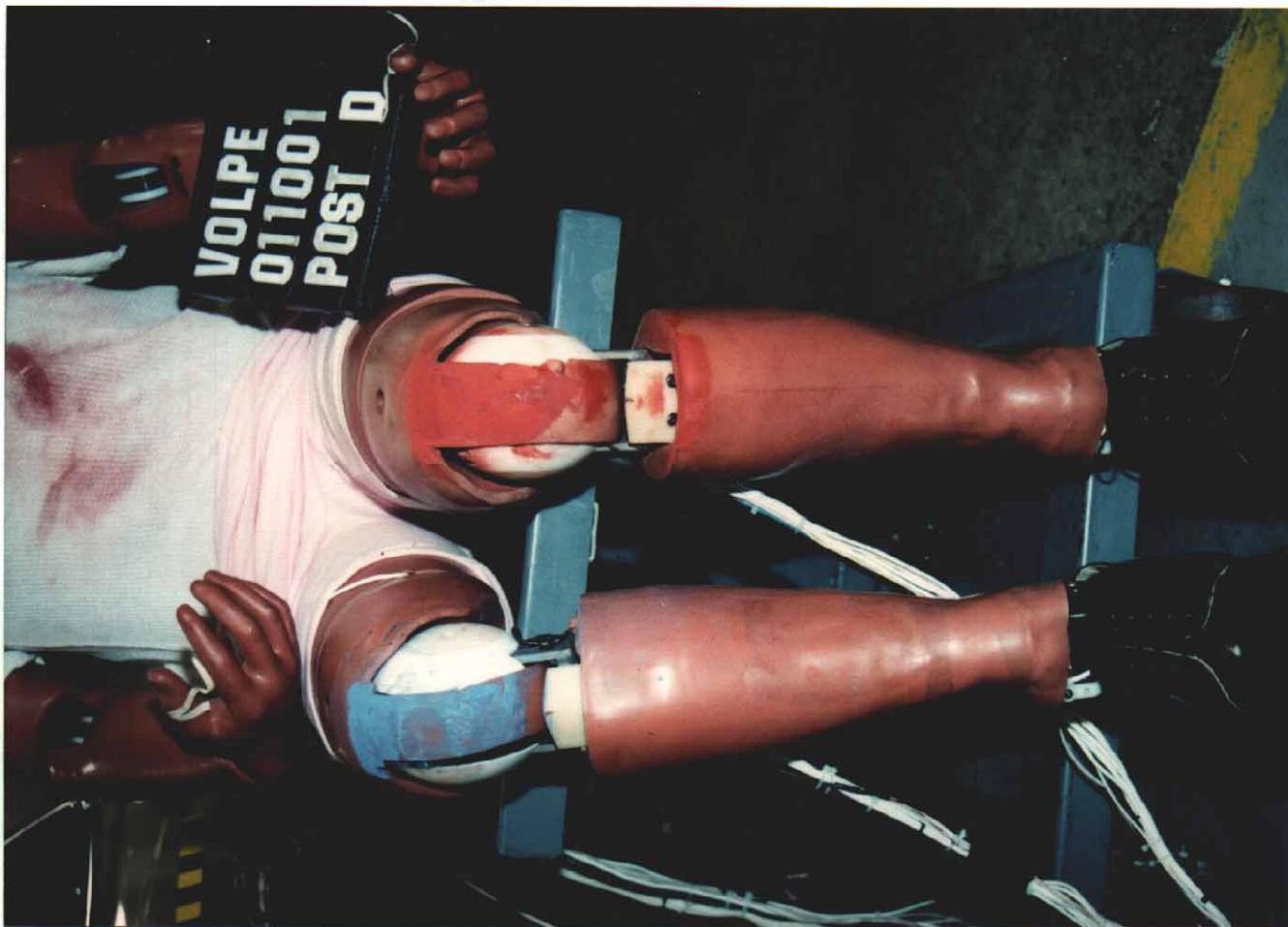


Figure A-62 Post-Test Driver Dummy Knee Contact - View 1

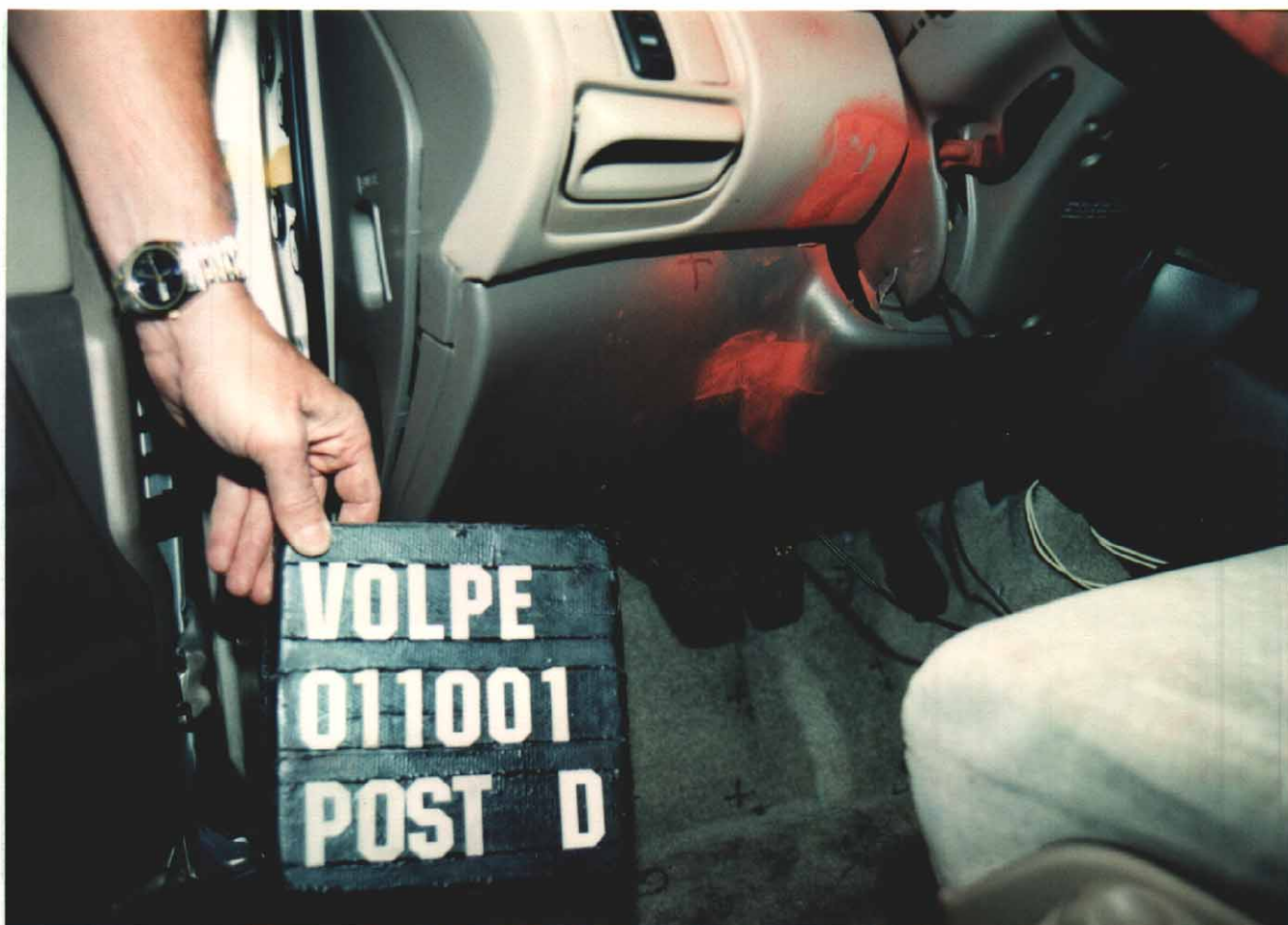


Figure A-63 Post-Test Driver Dummy Knee Contact - View 2



Figure A-64 Post-Test Driver Dummy Knee Contact - View 3

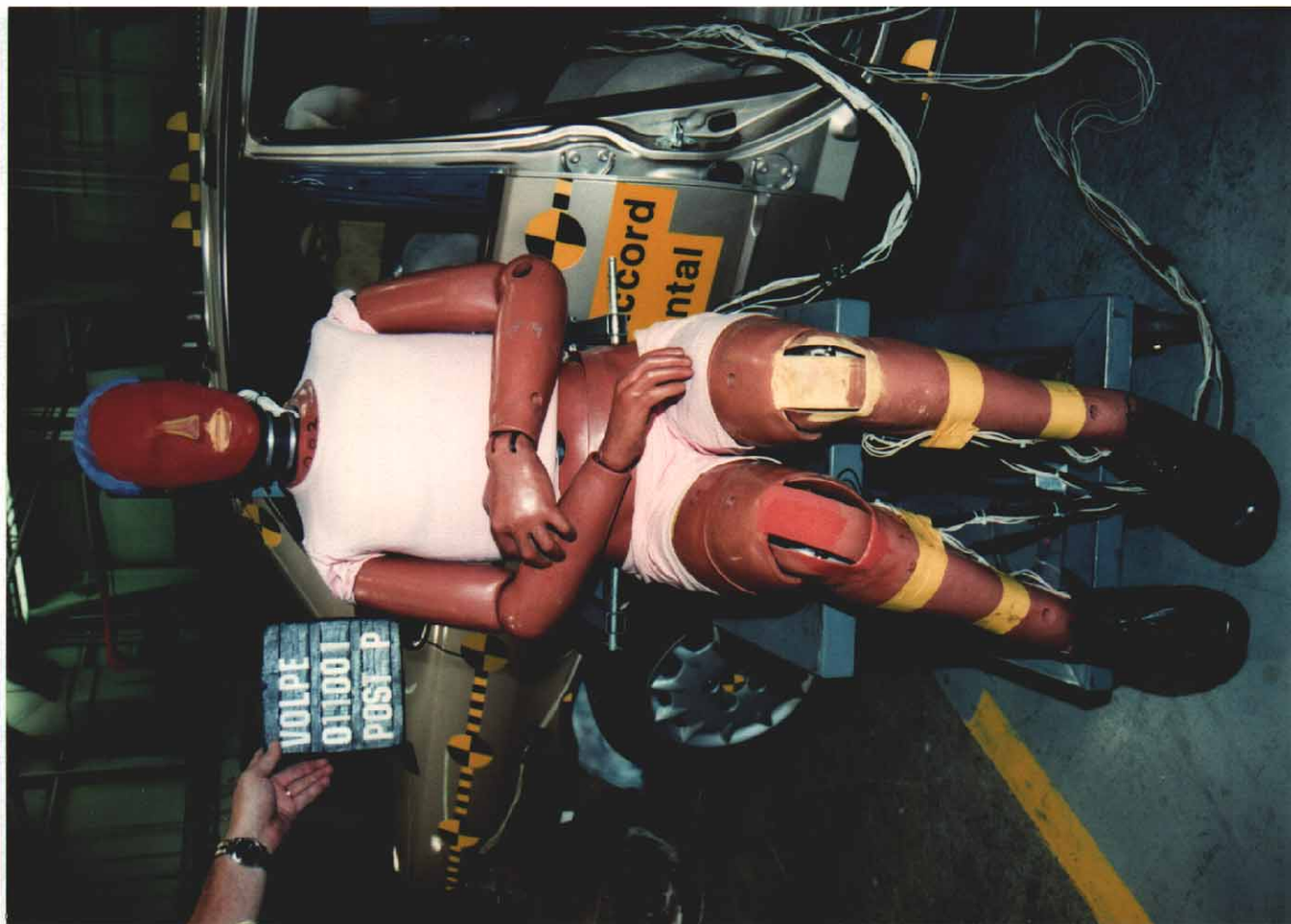


Figure A-65 Post-Test Passenger Dummy Overall View

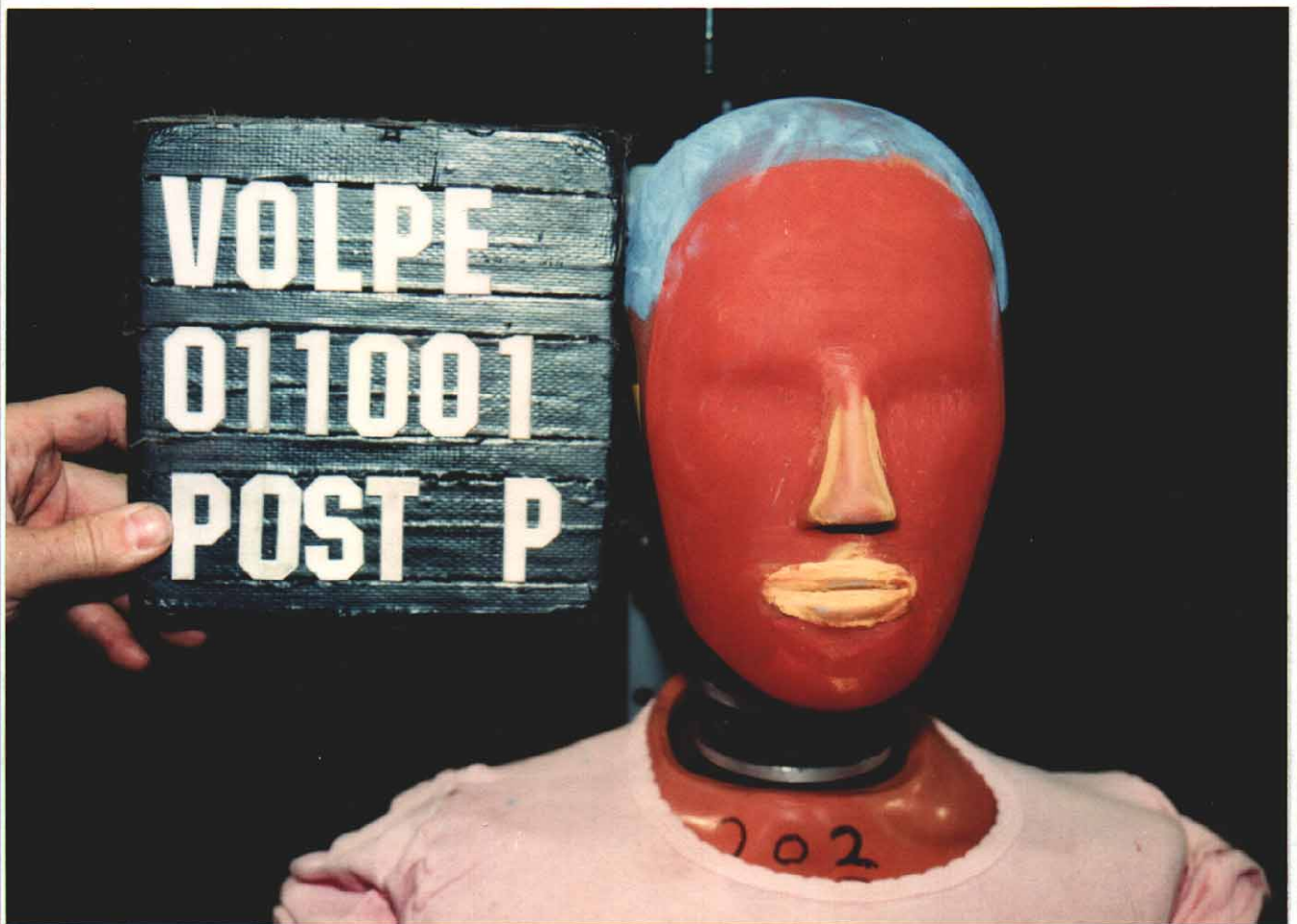


Figure A-66 Post-Test Passenger Dummy Head Contact - View 1

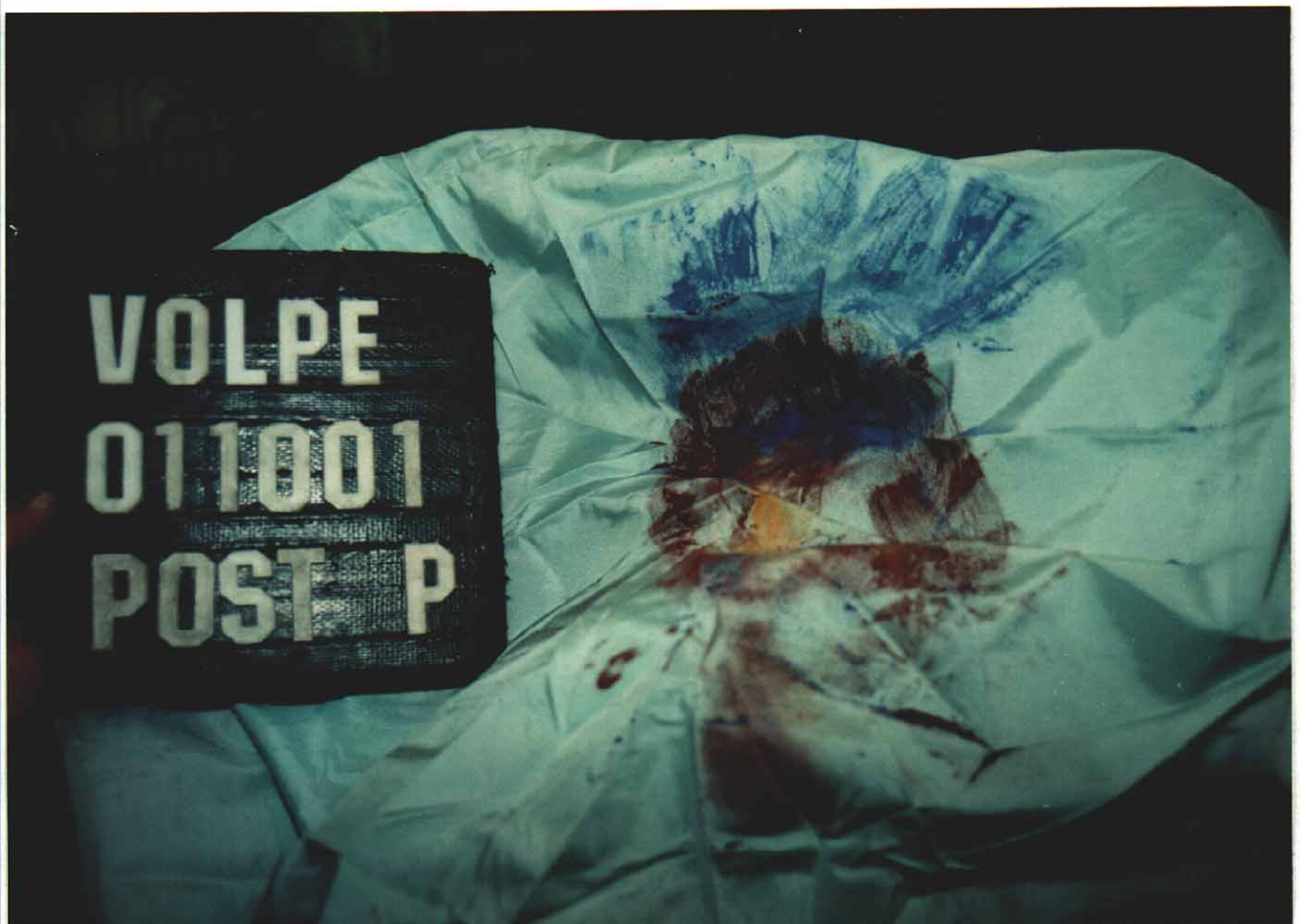


Figure A-67 Post-Test Passenger Dummy Head Contact - View 2

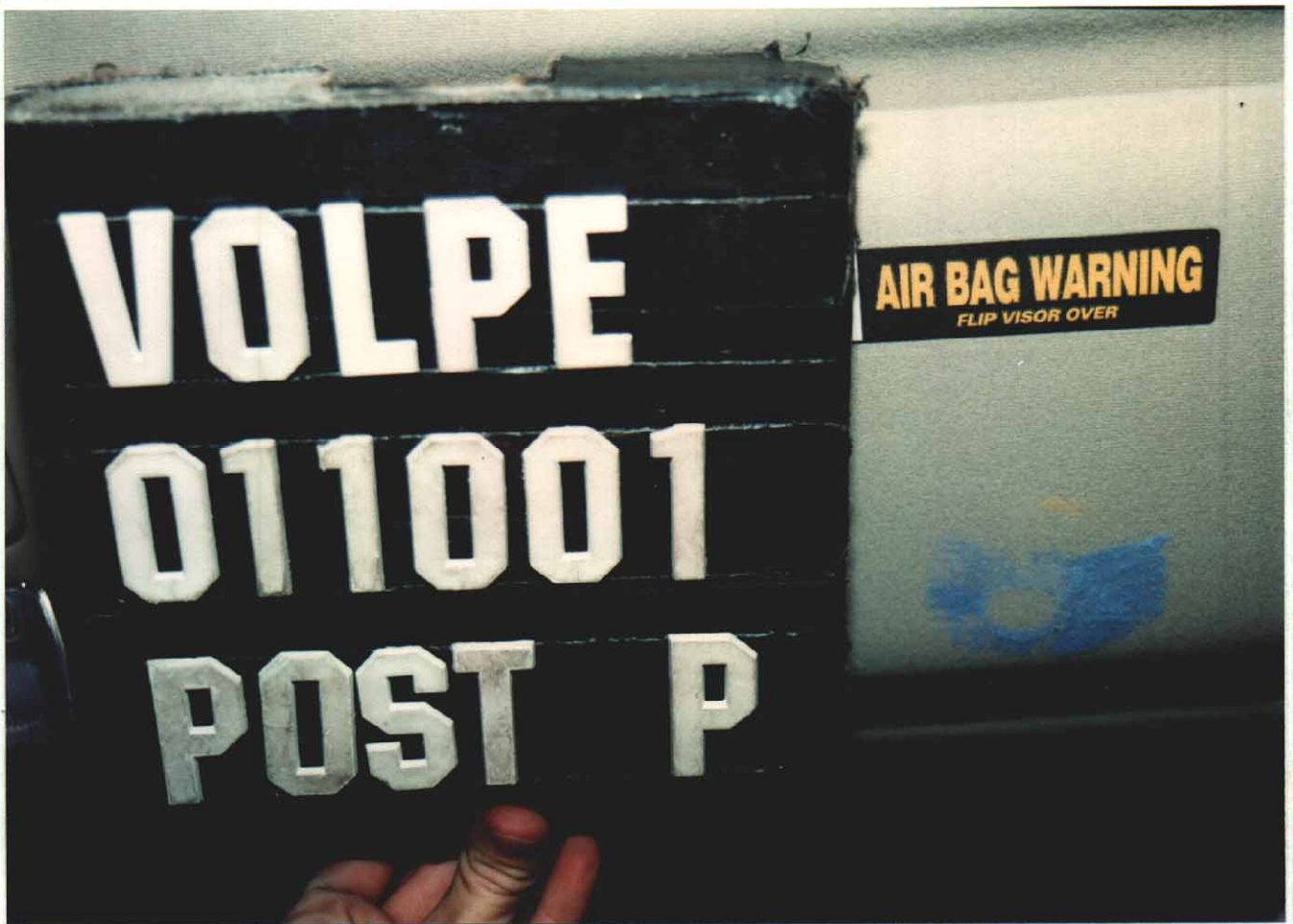


Figure A-68 Post-Test Passenger Dummy Head Contact - View 3

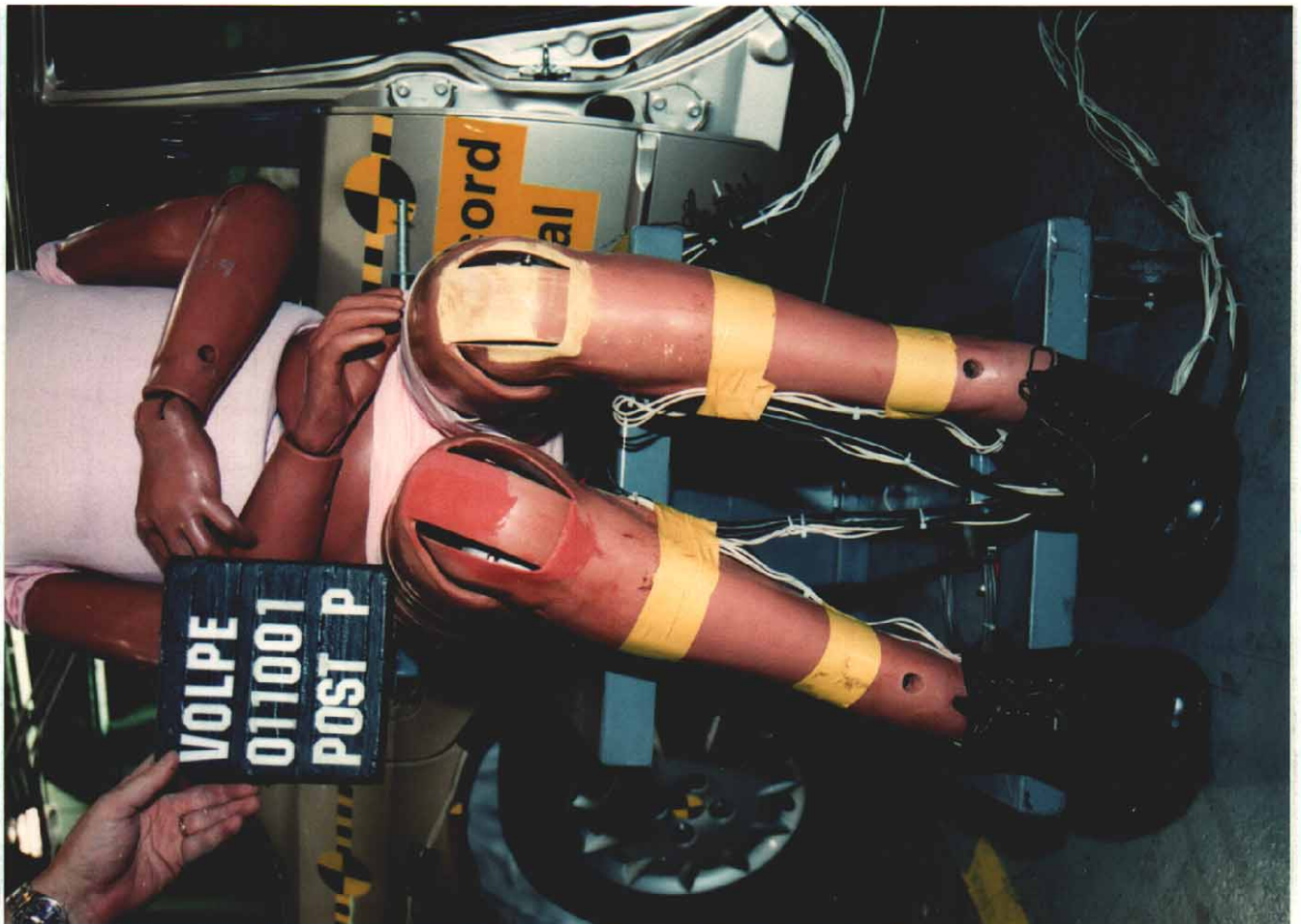


Figure A-69 Post-Test Passenger Dummy Knee Contact - View 1

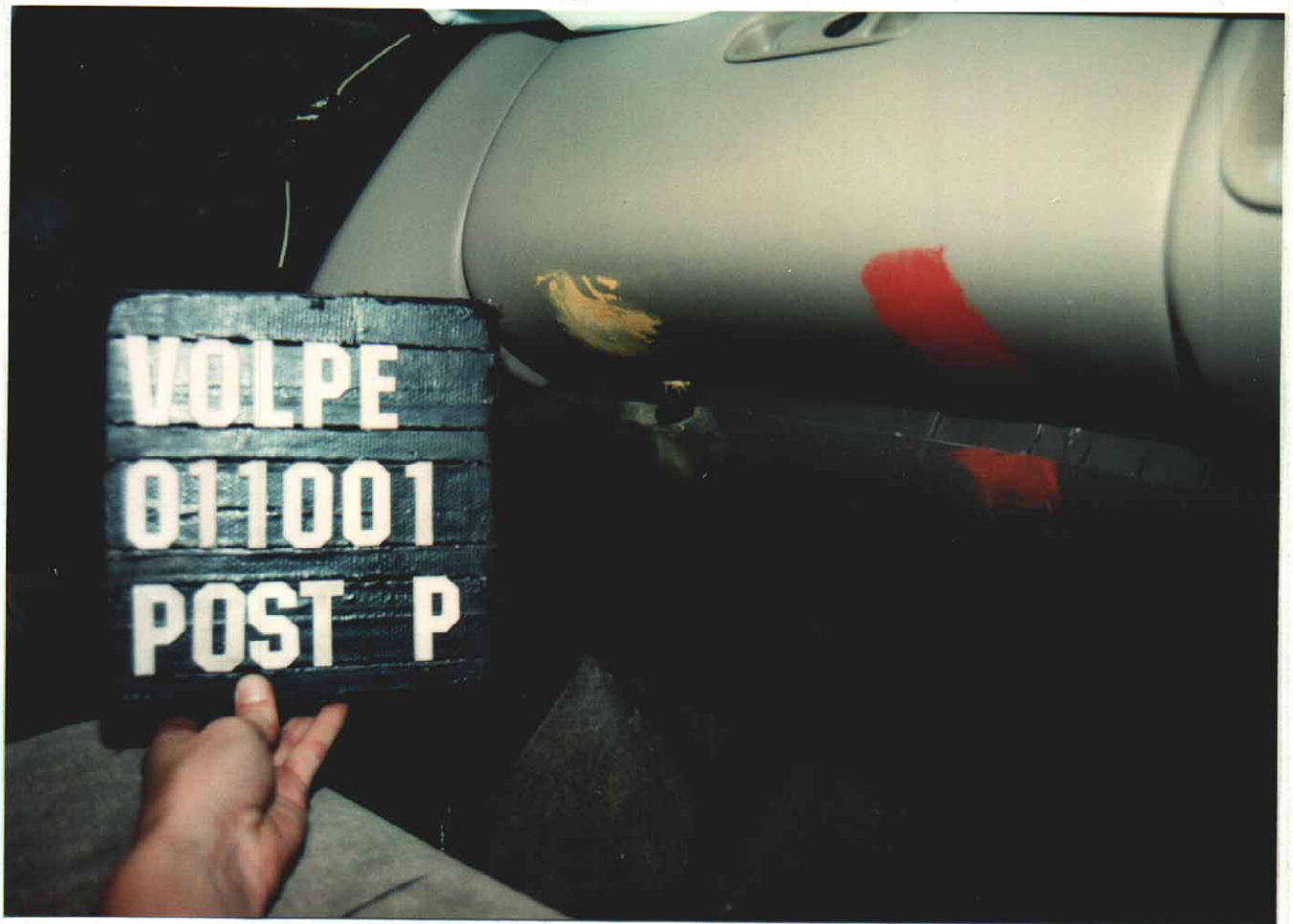


Figure A-70 Post-Test Passenger Dummy Knee Contact - View 2

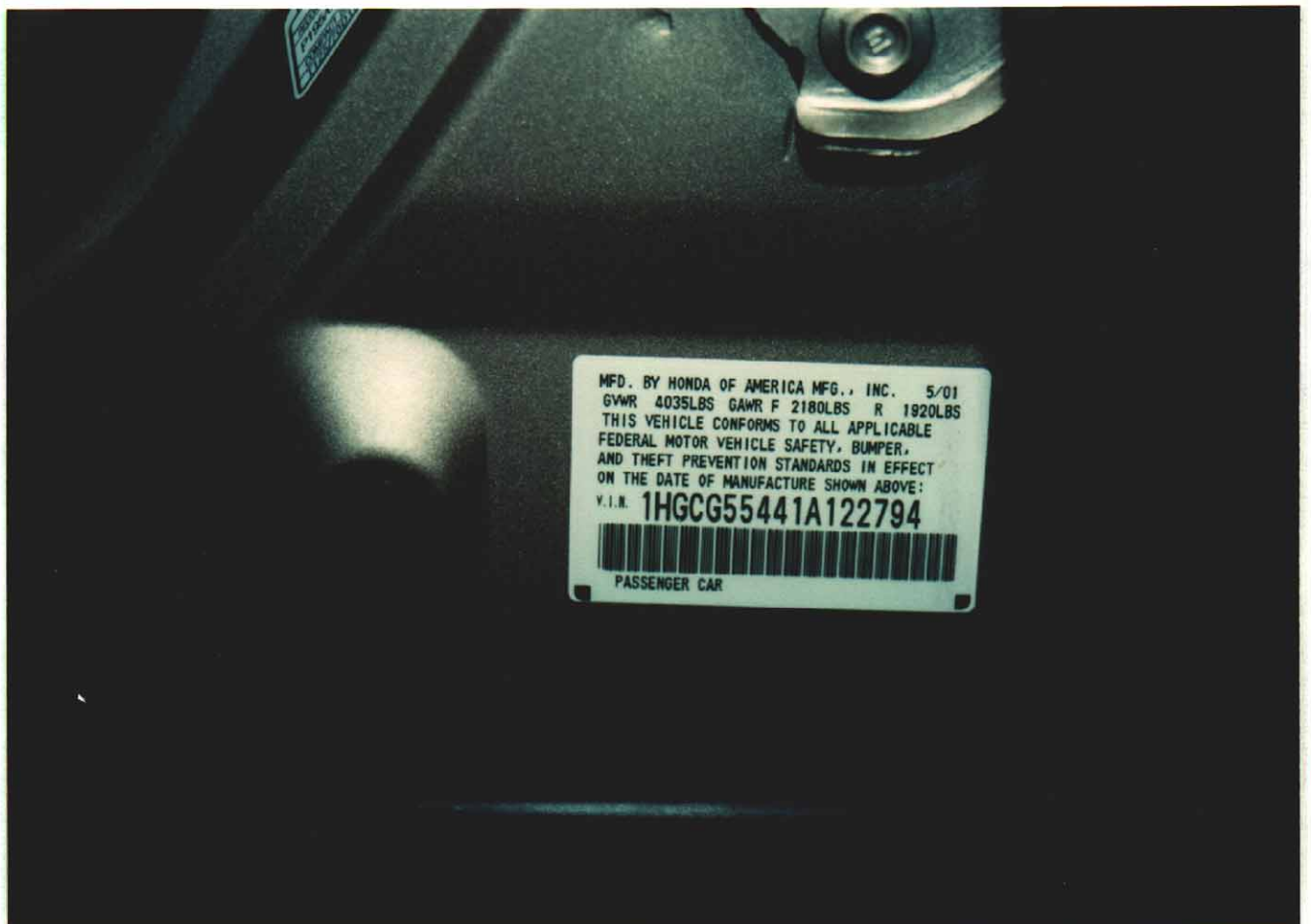


Figure A-71 Pre-Test Vehicle Certification Label View

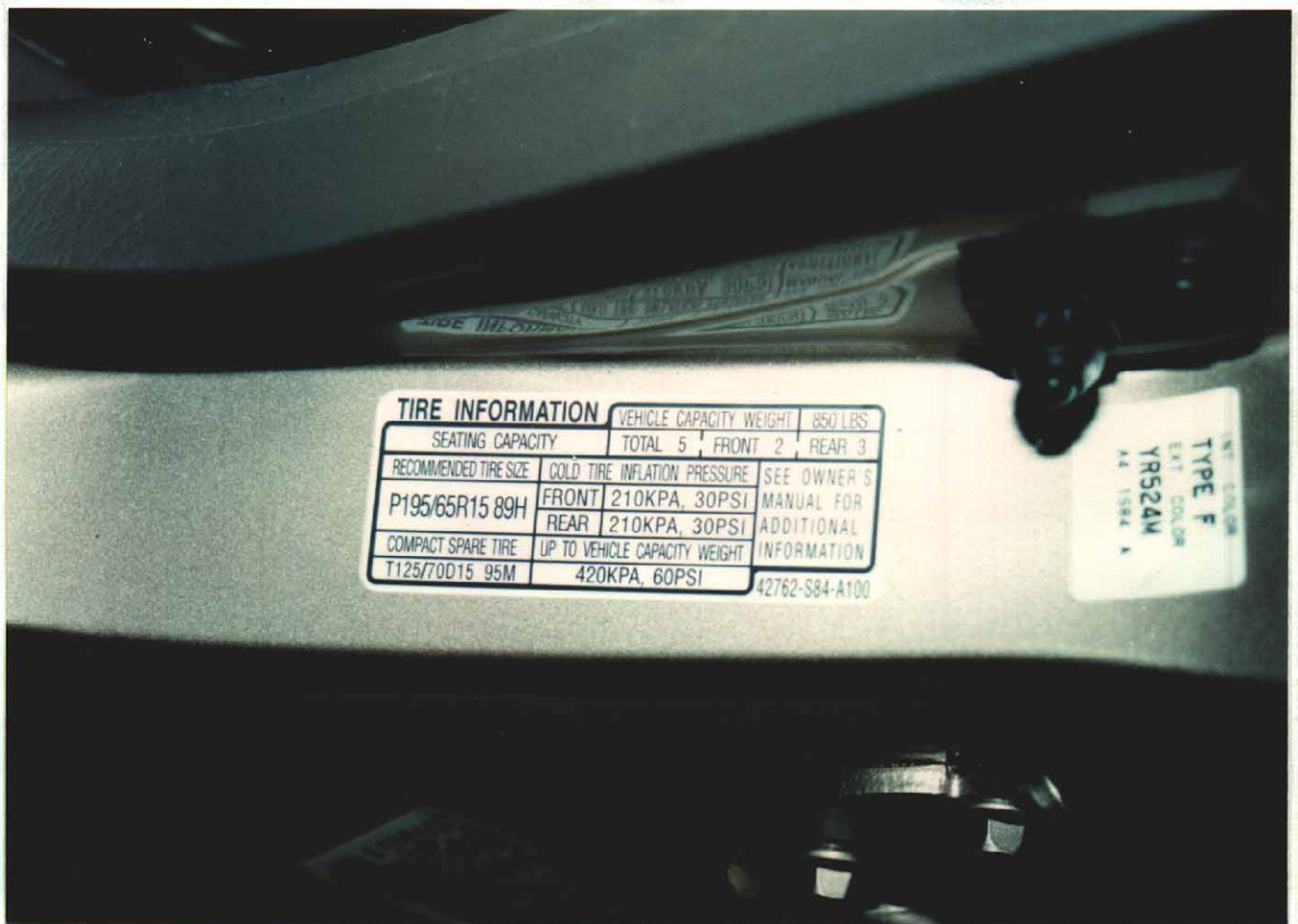


Figure A-72 Pre-Test Tire Load Label View

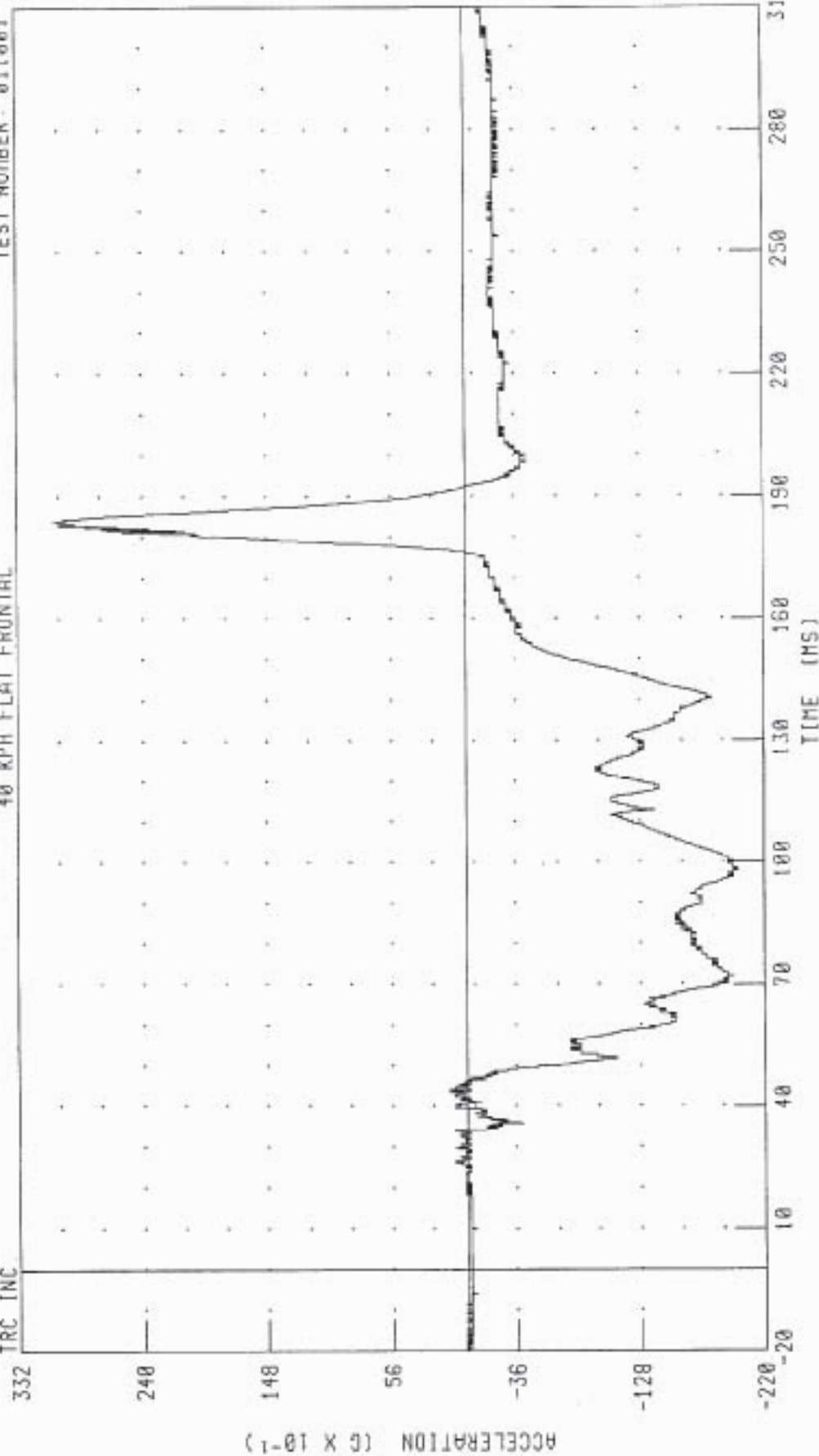
Appendix B

Data Plots

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
DRIVER HEAD X-AXIS ACCELERATION
40 KPH FLAT FRONTAL

TEST NUMBER: 011001

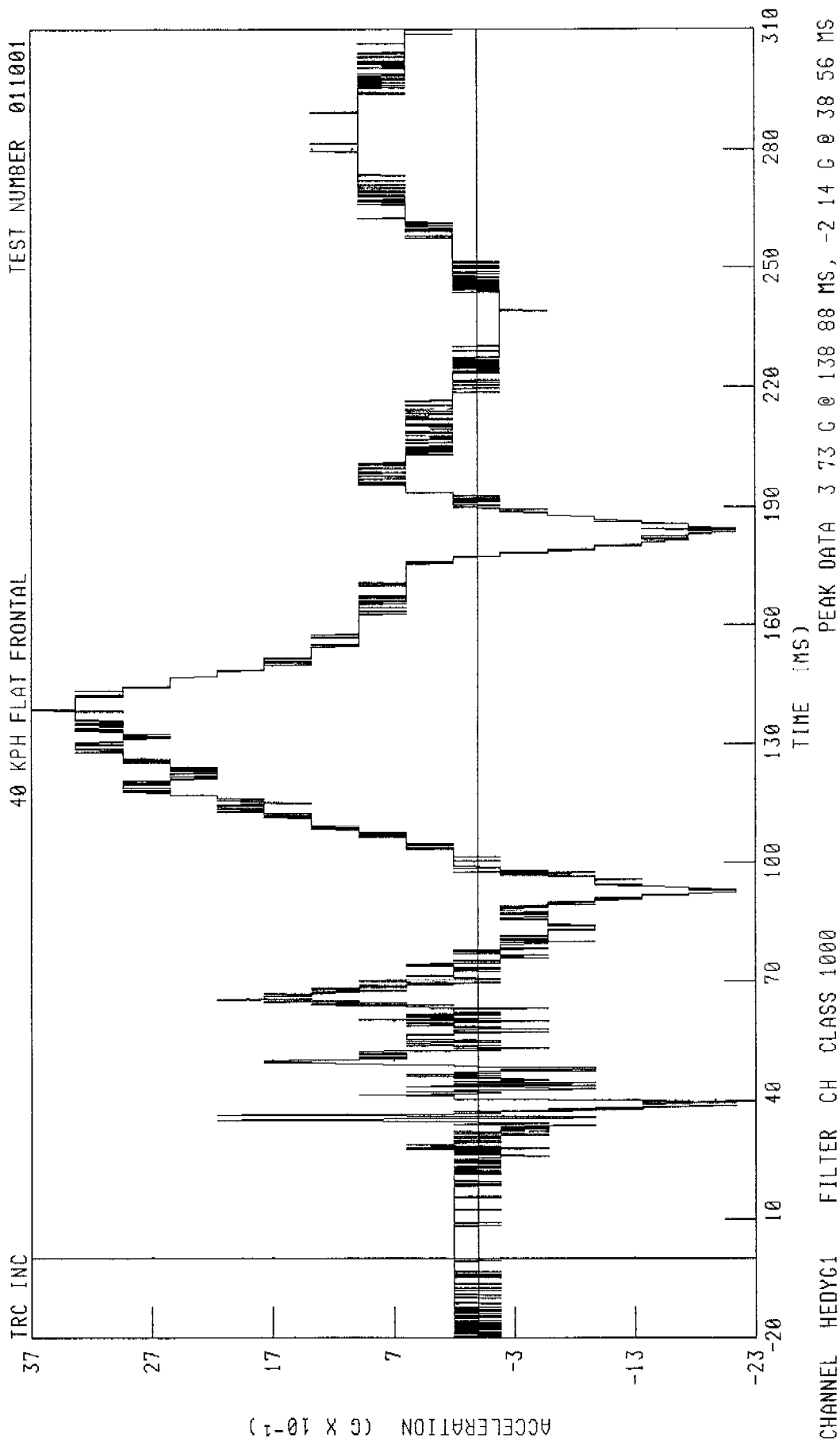
TRC INC.



CHANNEL: HEDXC1 FILTER: CH. CLASS 1000

PEAK DATA 30.51 C @ 184.08 MS, -20 03 C @ 97.84 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
DRIVER HEAD Y-AXIS ACCELERATION

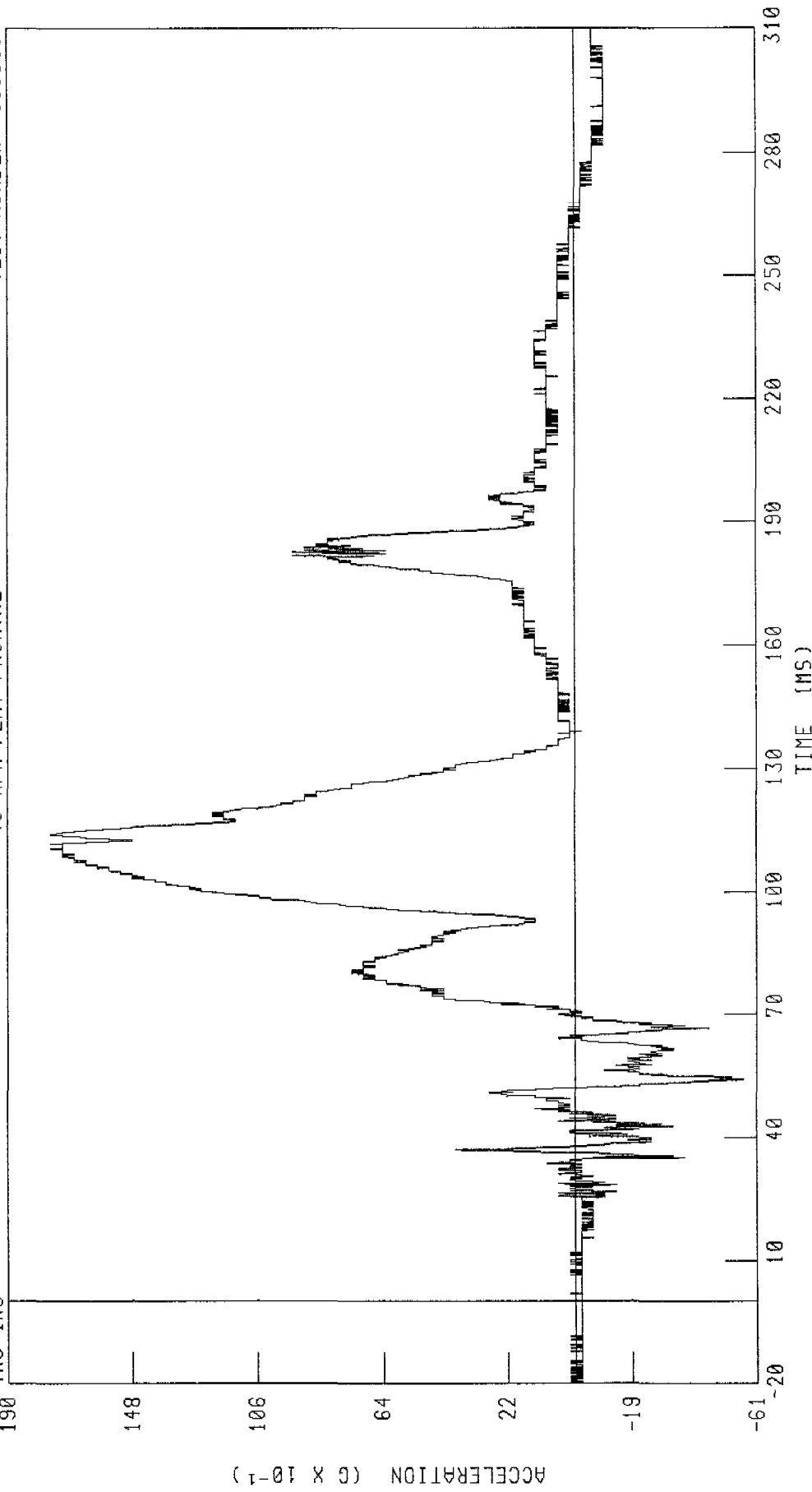


2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
 DRIVER HEAD Z-AXIS ACCELERATION

TRC INC

40 KPH FLAT FRONTAL

TEST NUMBER 011001

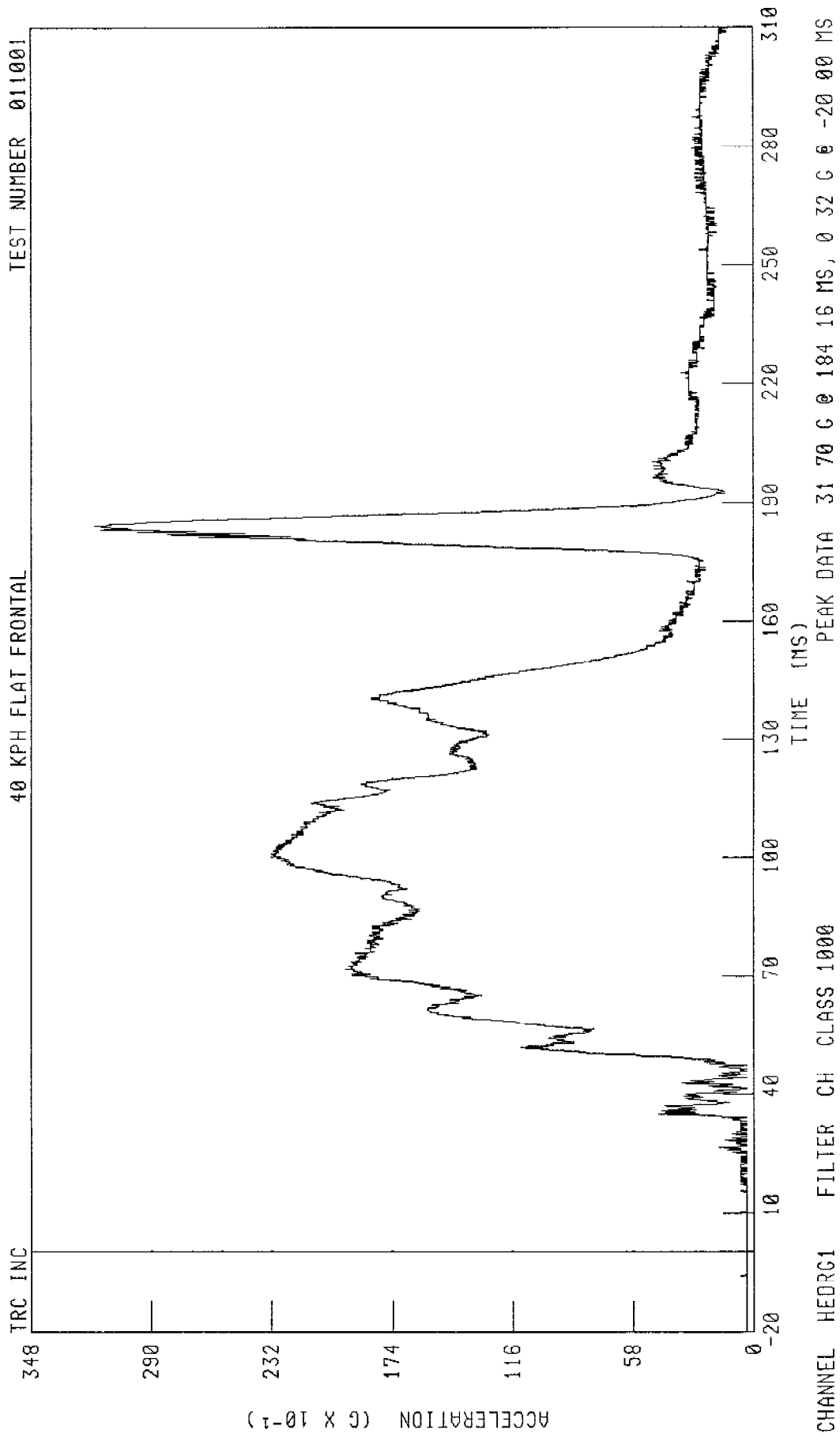


CHANNEL HEDZG1 FILTER CH CLASS 1000

PEAK DATA 17 64 G @ 110 64 MS, -5 63 G @ 54 08 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

DRIVER HEAD RESULTANT ACCELERATION

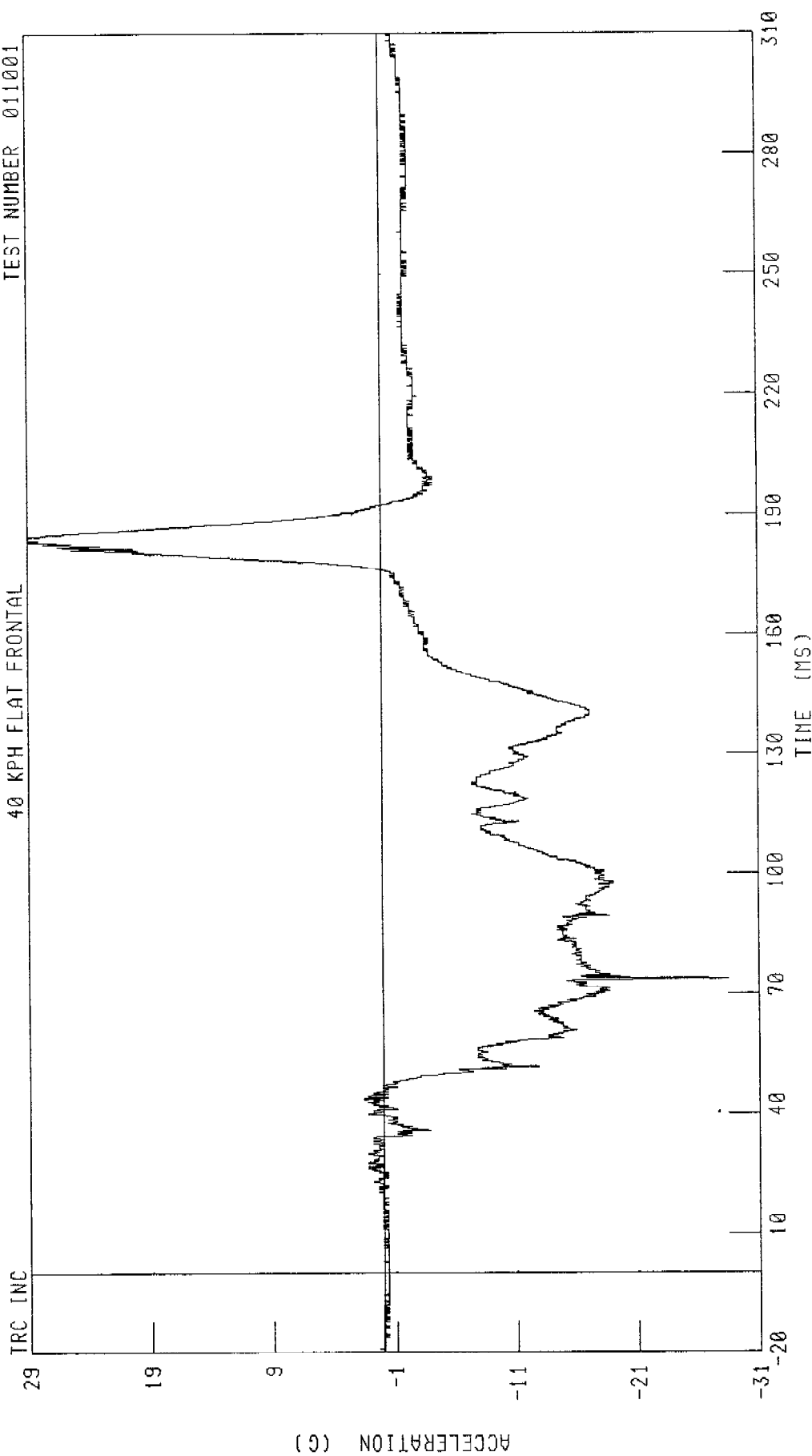


2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

DRIVER HEAD X-AXIS ACCELERATION REDUNDANT

40 KPH FLAT FRONTAL

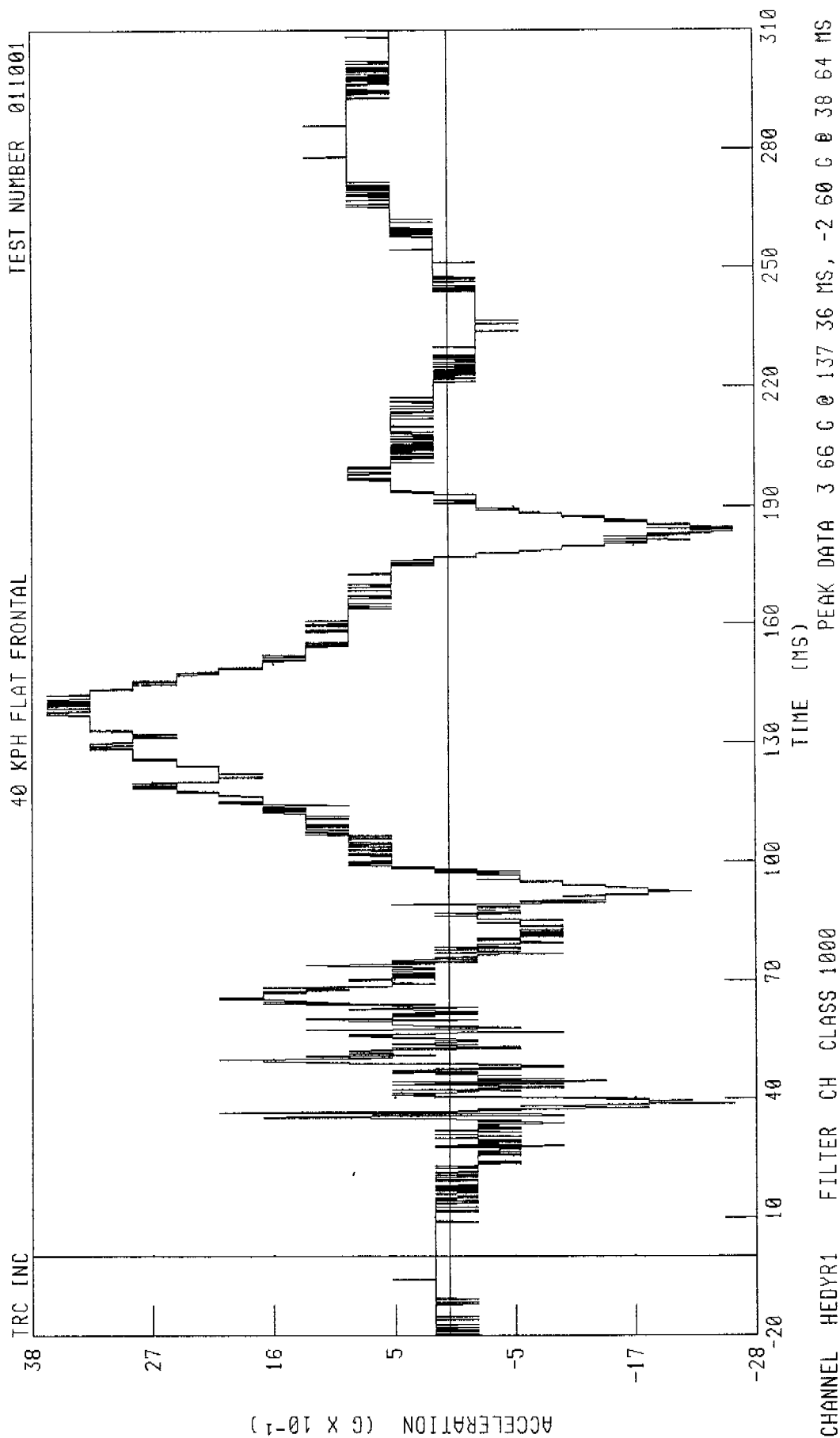
TEST NUMBER 011001



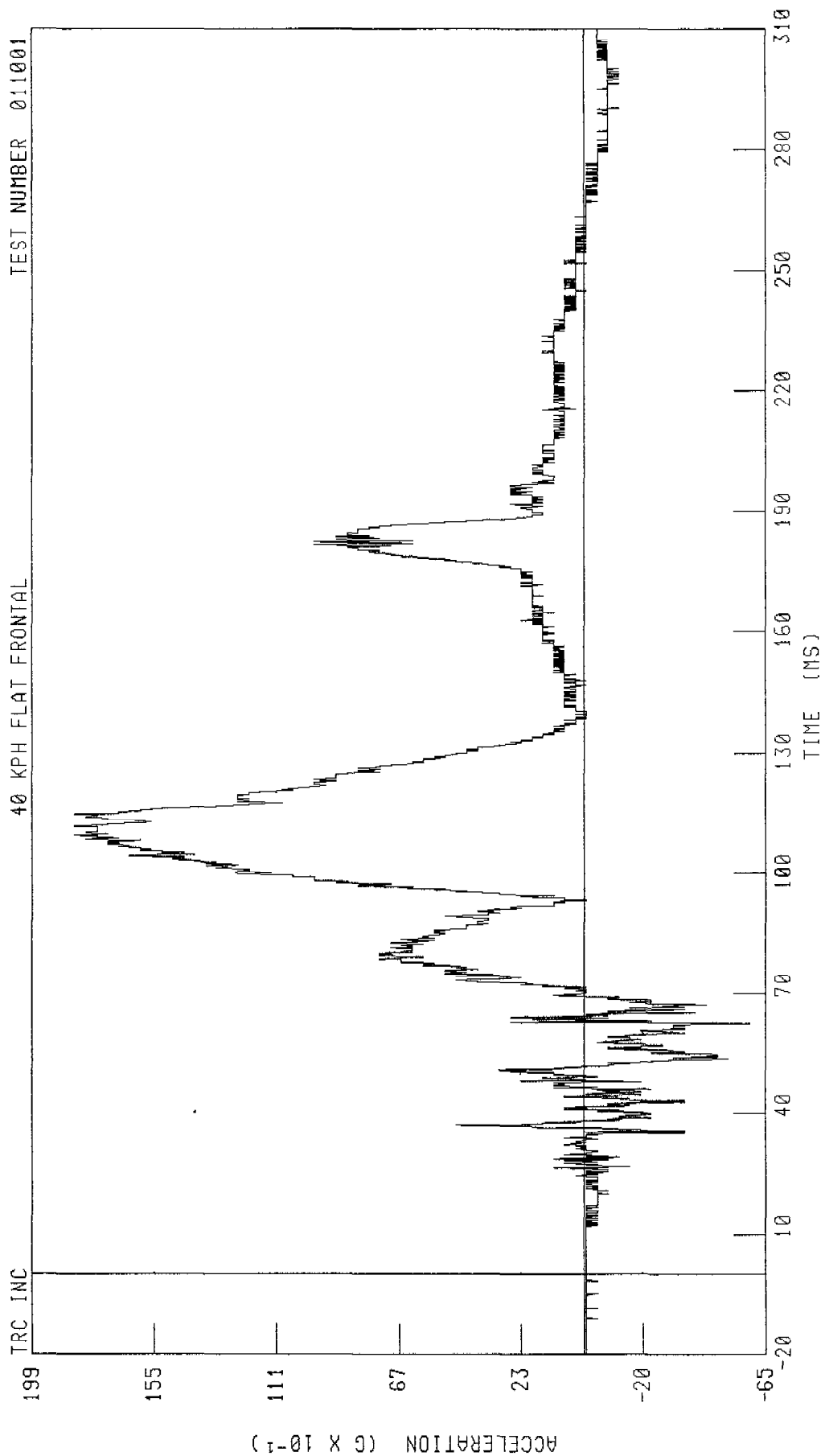
PEAK DATA 29 72 G @ 183 92 MS, -28 47 G @ 73 76 MS

CHANNEL HEDXR1 FILTER CH CLASS 1000

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
DRIVER HEAD Y-AXIS ACCELERATION REDUNDANT



2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
DRIVER HEAD Z-AXIS ACCELERATION REDUNDANT



CHANNEL HEDZR1 FILTER CH CLASS 1000

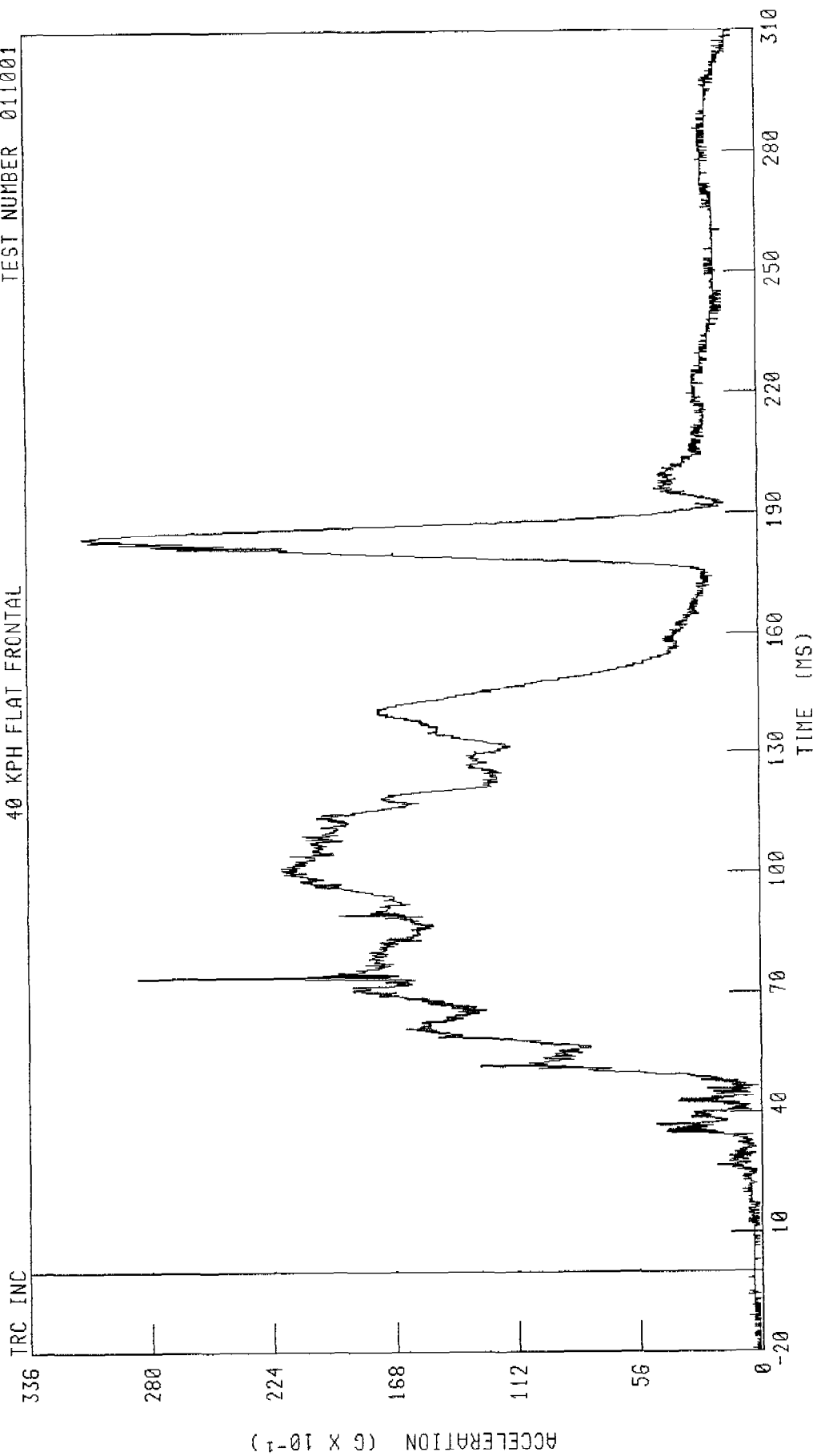
PEAK DATA 18 36 G @ 109 44 MS, -5 95 G @ 62 56 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

DRIVER HEAD RESULTANT ACCELERATION REDUNDANT

40 KPH FLAT FRONTAL

TEST NUMBER 011001



PEAK DATA 31 03 G @ 184 16 MS, 0 16 G @ -20 00 MS

CHANNEL HEDR1 FILTER CH CLASS 1000

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

DRIVER HEAD X-AXIS (LT) ACCELERATION

40 KPH FLAT FRONTAL

TEST NUMBER 011001

TRC INC

356

260

164

68

-27

-123

-220

ACCELERATION (G X 10⁻¹)

TIME (MS)

310

280

250

220

190

160

130

100

70

40

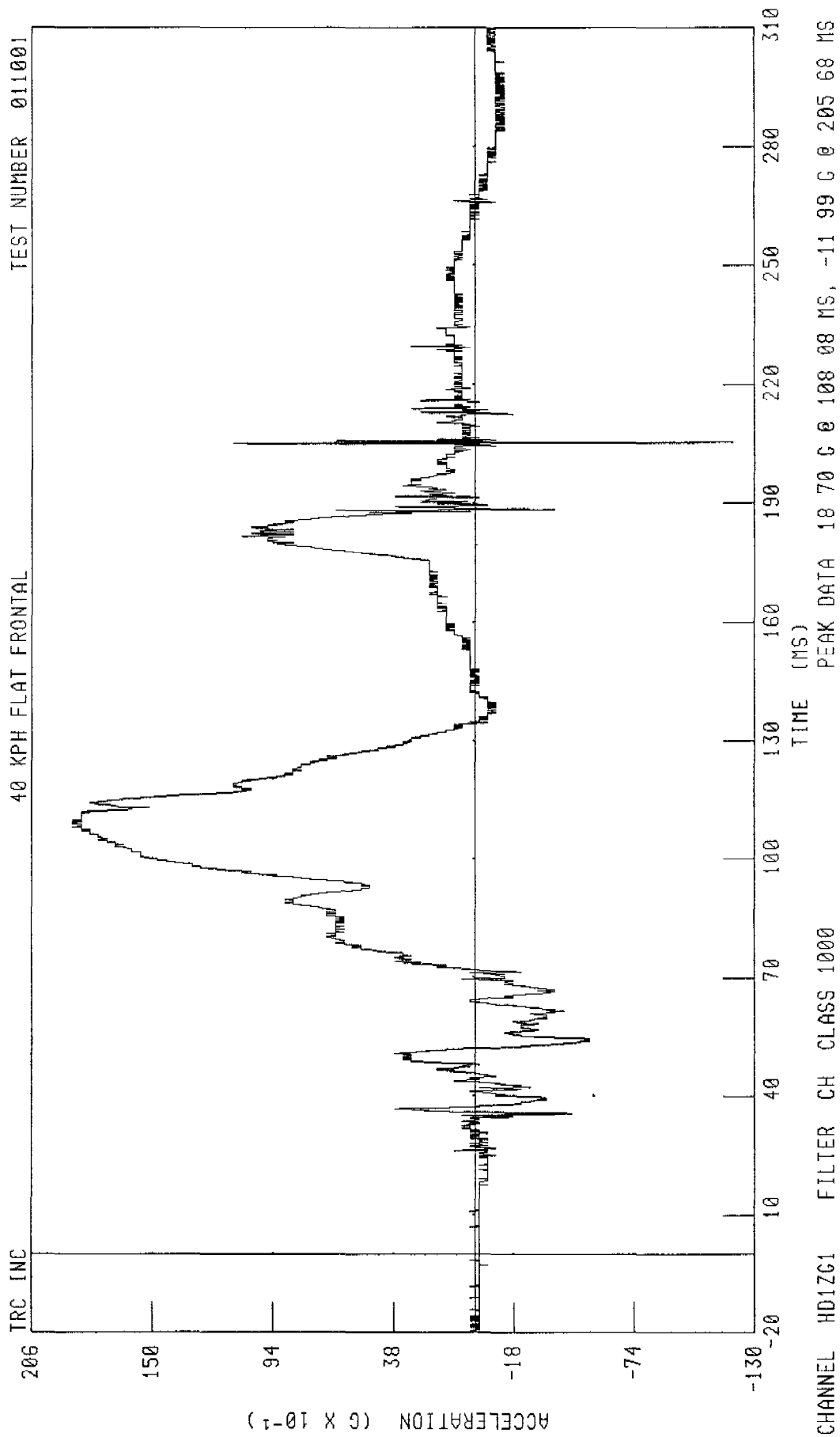
10

-20

CHANNEL HD1XG1 FILTER CH CLASS 1000

PEAK DATA 31 99 G @ 183 84 MS, -20 89 G @ 97 92 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
DRIVER HEAD Z-AXIS (LT) ACCELERATION



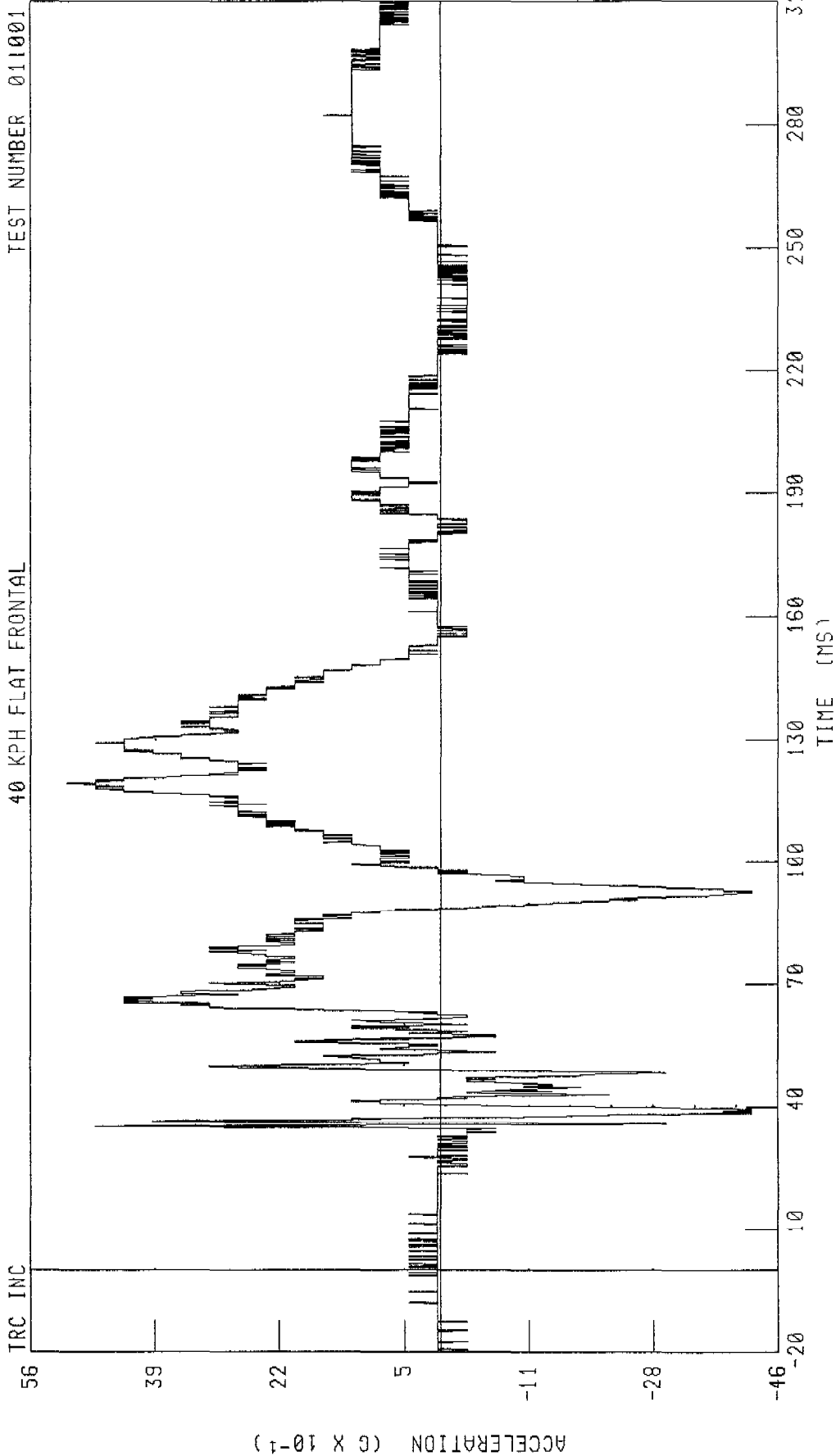
2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

DRIVER HEAD Y-AXIS (FT) ACCELERATION

40 KPH FLAT FRONTAL

TEST NUMBER 011001

TRC INC

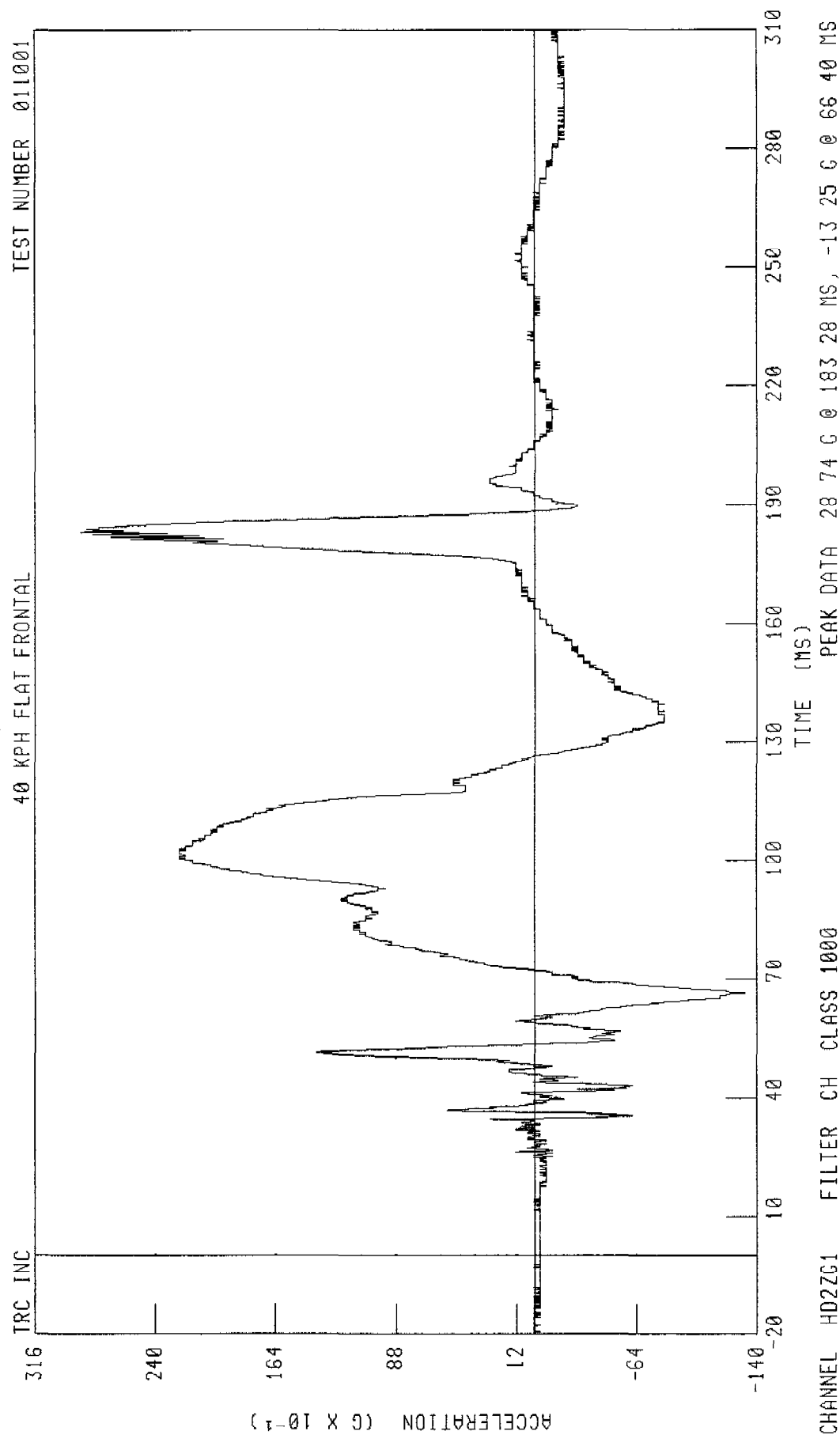


CHANNEL HD2YG1 FILTER CH CLASS 1000

PEAK DATA 5 10 0 119 36 MS, -4 24 0 38 48 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

DRIVER HEAD Z-AXIS (FT) ACCELERATION



2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

DRIVER HEAD X-AXIS (TP) ACCELERATION

40 KPH FLAT FRONTAL

TEST NUMBER 011001

TRC INC

59

44

29

14

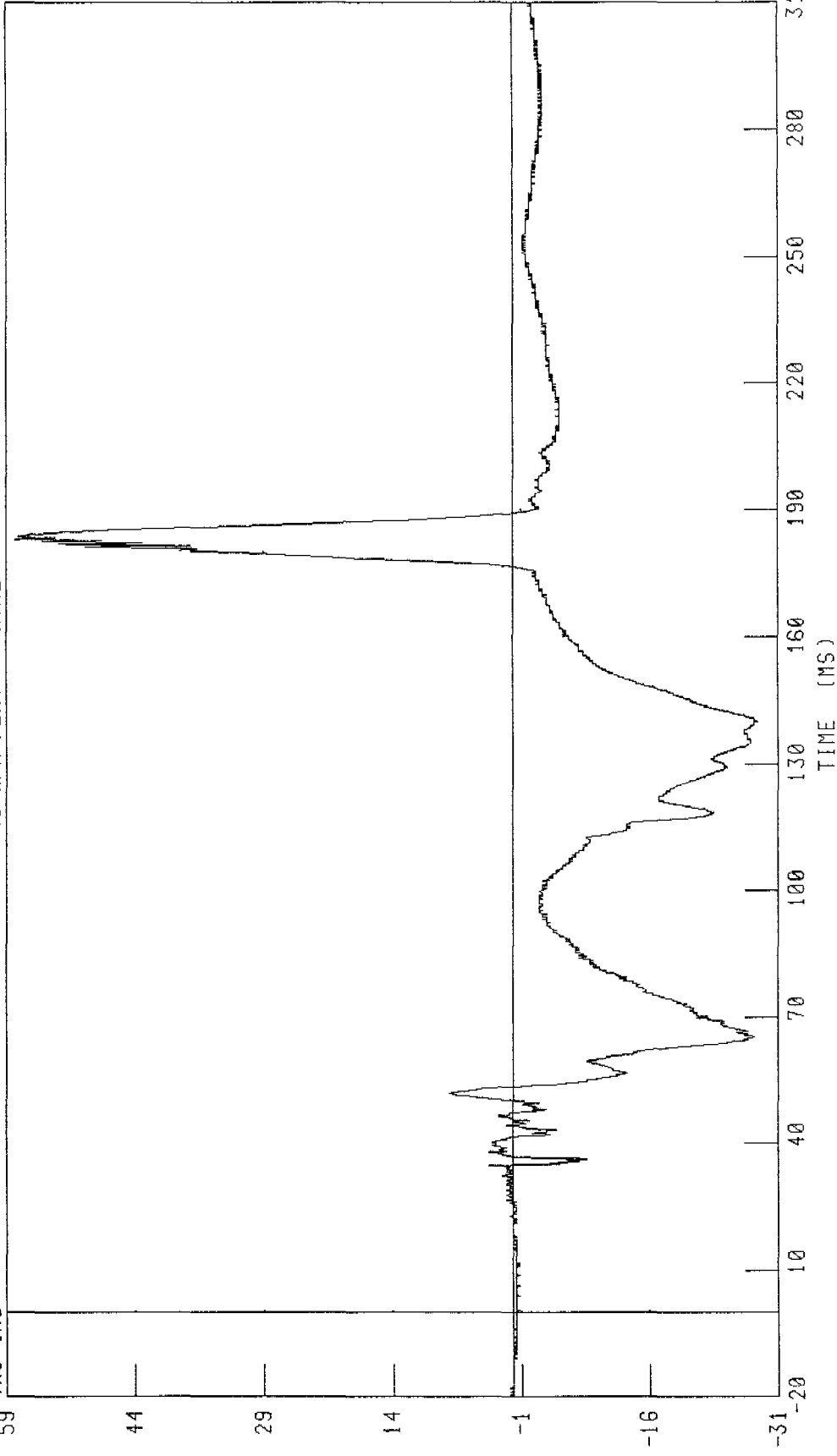
-1

-16

-31

-20

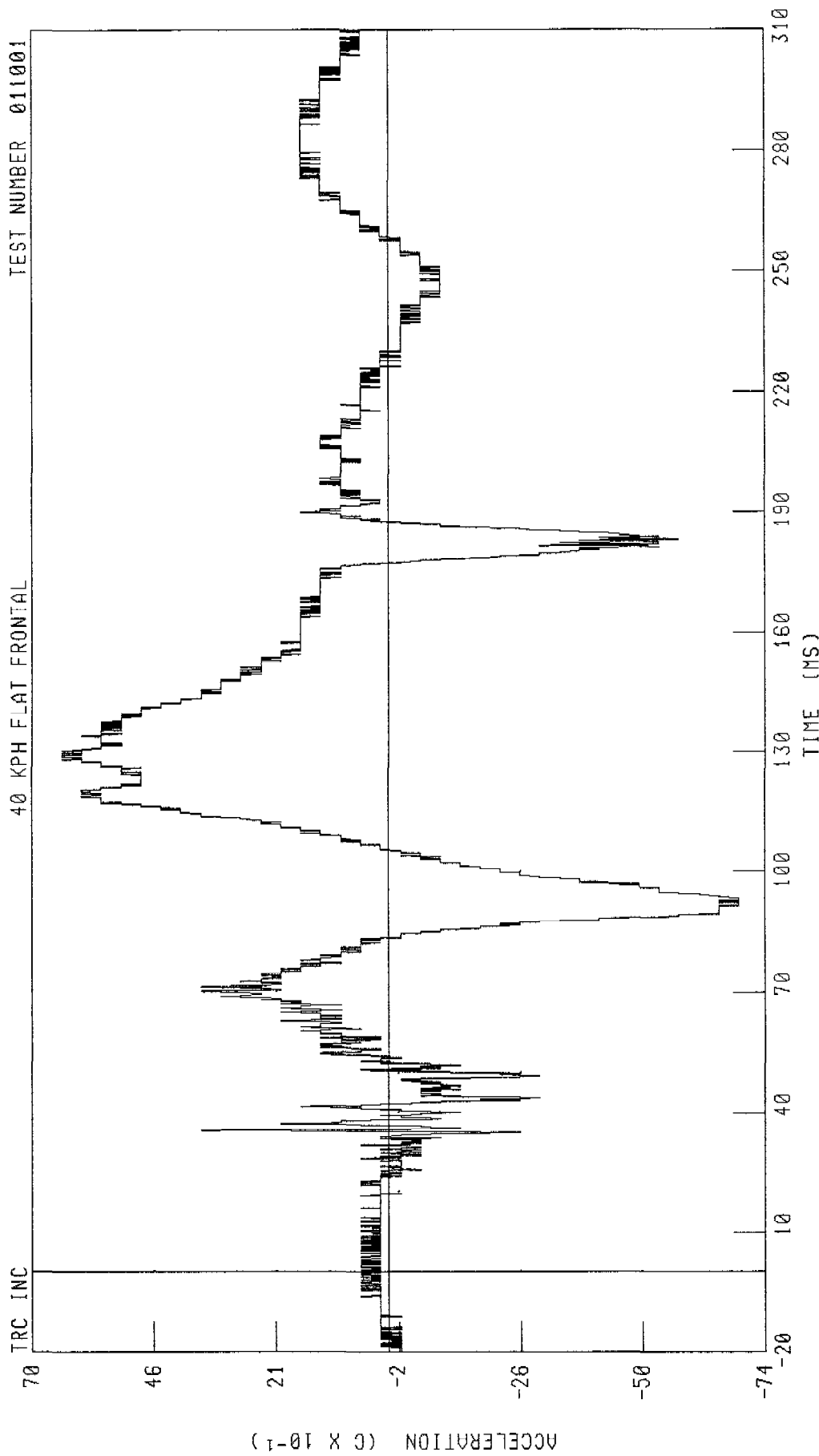
ACCELERATION (G)



PEAK DATA 57 98 G @ 183 28 MS, -28 59 G @ 140 32 MS

CHANNEL HD3XG1 FILTER CH CLASS 1000

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
 DRIVER HEAD Y-AXIS (TP) ACCELERATION



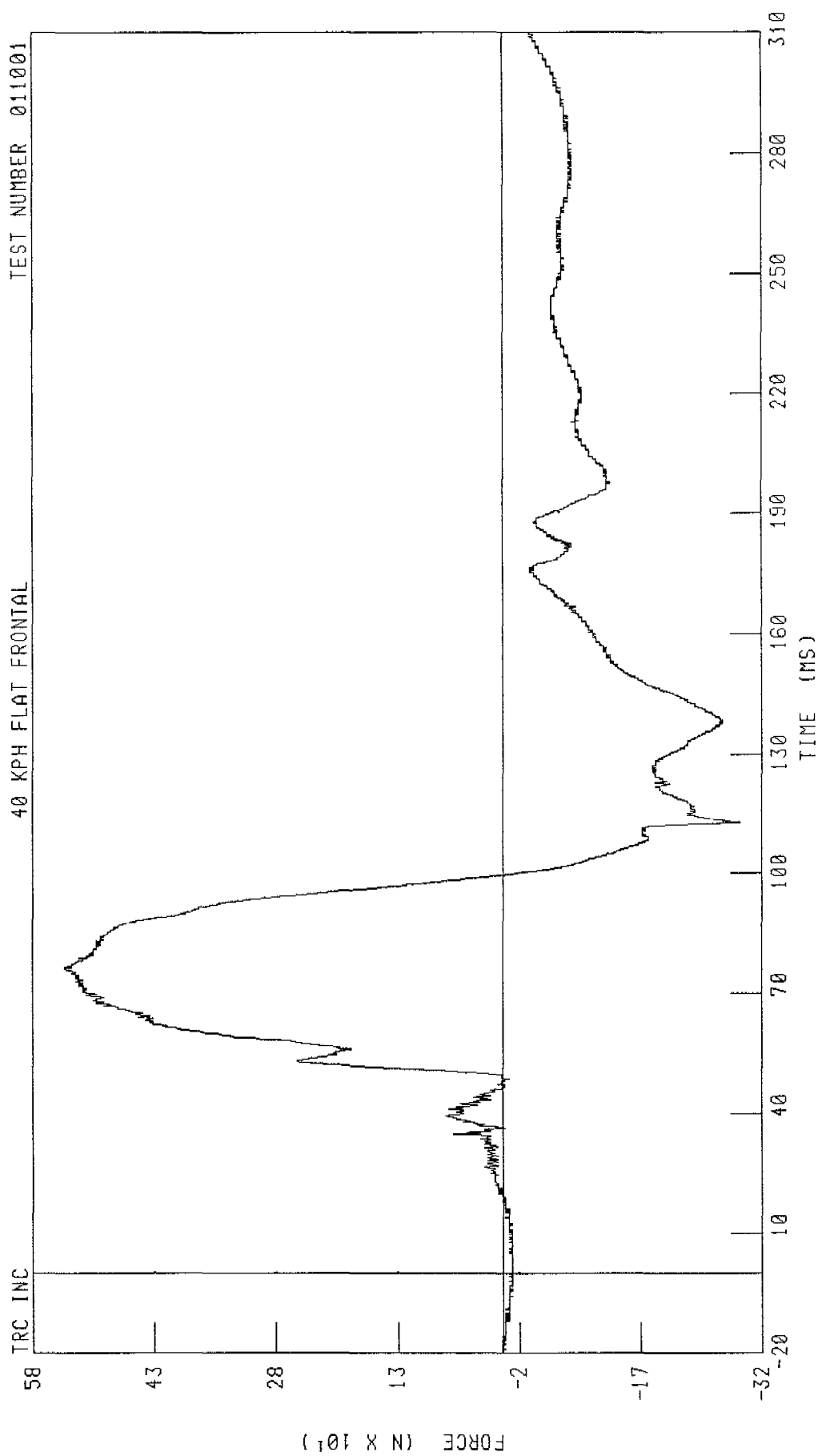
CHANNEL HD3YC1 FILTER CH CLASS 1000

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

DRIVER NECK X-AXIS SHEAR FORCE

40 KPH FLAT FRONTAL

TEST NUMBER 011001



PEAK DATA 540 34 N @ 75 92 MS, -293 94 N @ 112 88 MS

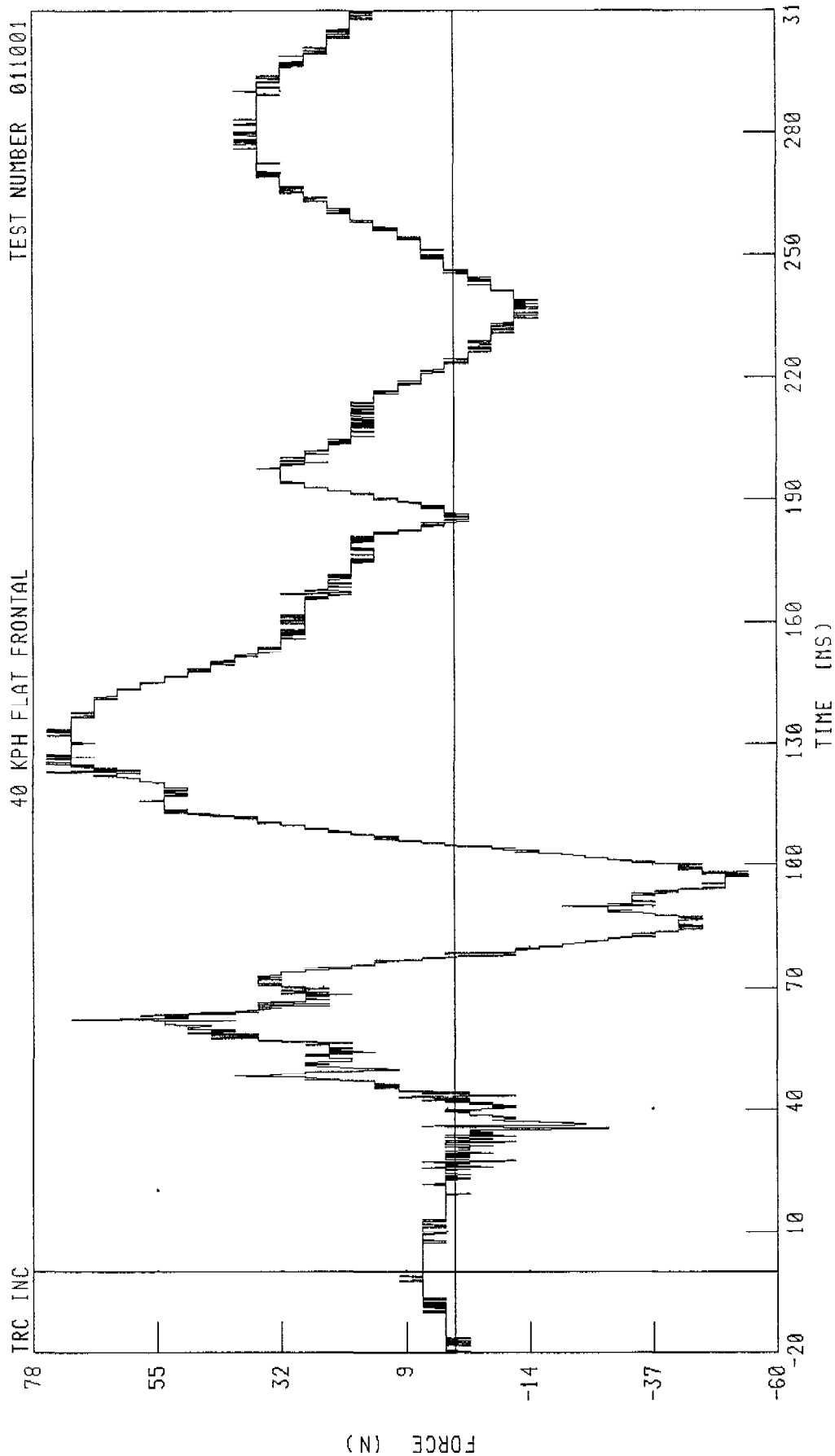
CHANNEL NEKXF1 FILTER CH CLASS 1000

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

DRIVER NECK Y-AXIS SHEAR FORCE

40 KPH FLAT FRONTAL

TEST NUMBER 011001



CHANNEL NEKYF1 FILTER CH CLASS 1000

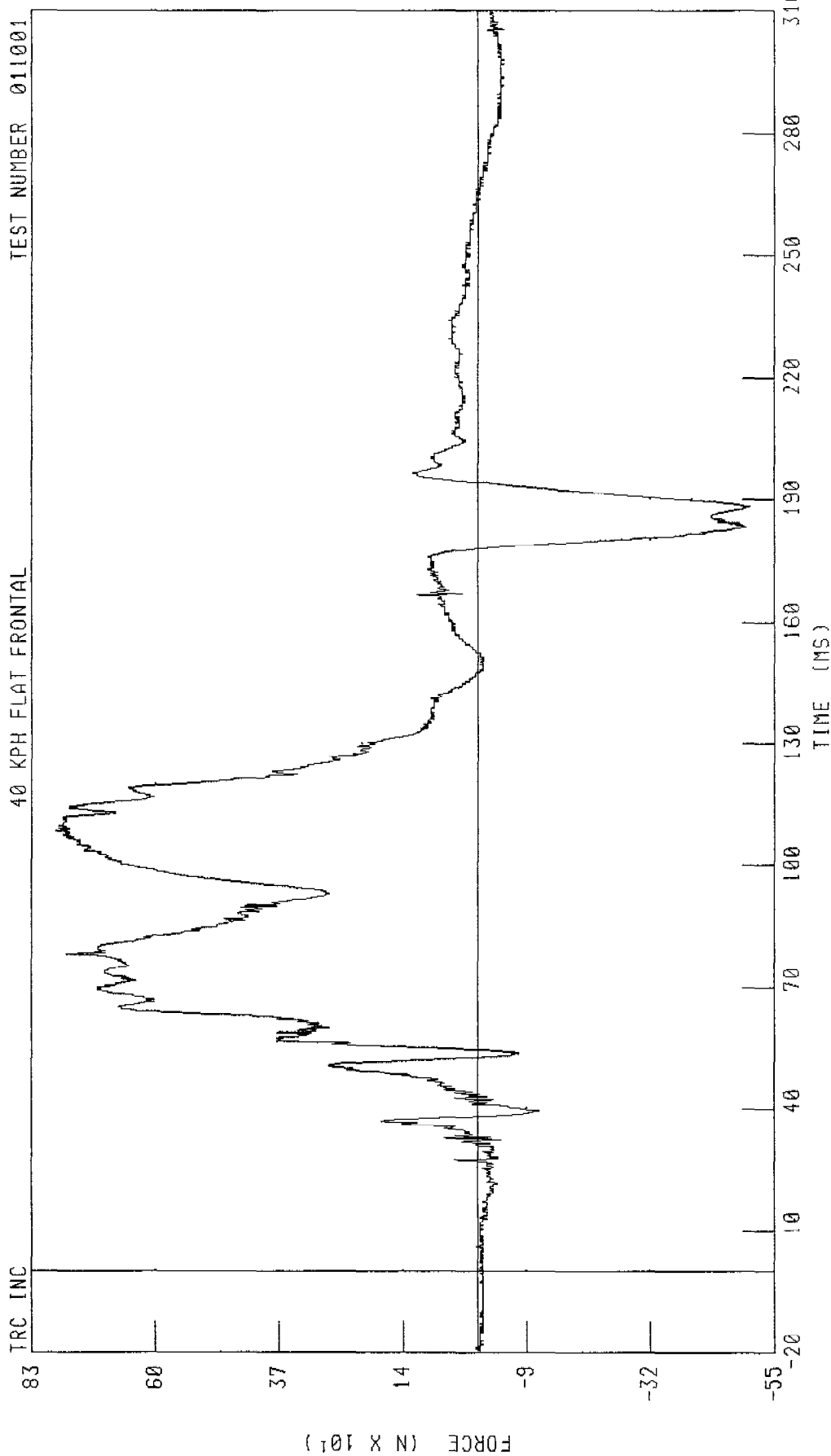
PEAK DATA 75 46 N @ 123 04 MS, -54 82 N @ 97 12 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

DRIVER NECK Z-AXIS AXIAL FORCE

40 KPH FLAT FRONTAL

TEST NUMBER 011001



CHANNEL NEKZF1 FILTER CH CLASS 1000

PEAK DATA 785 85 N @ 108 56 MS, -504 51 N @ 188 24 MS

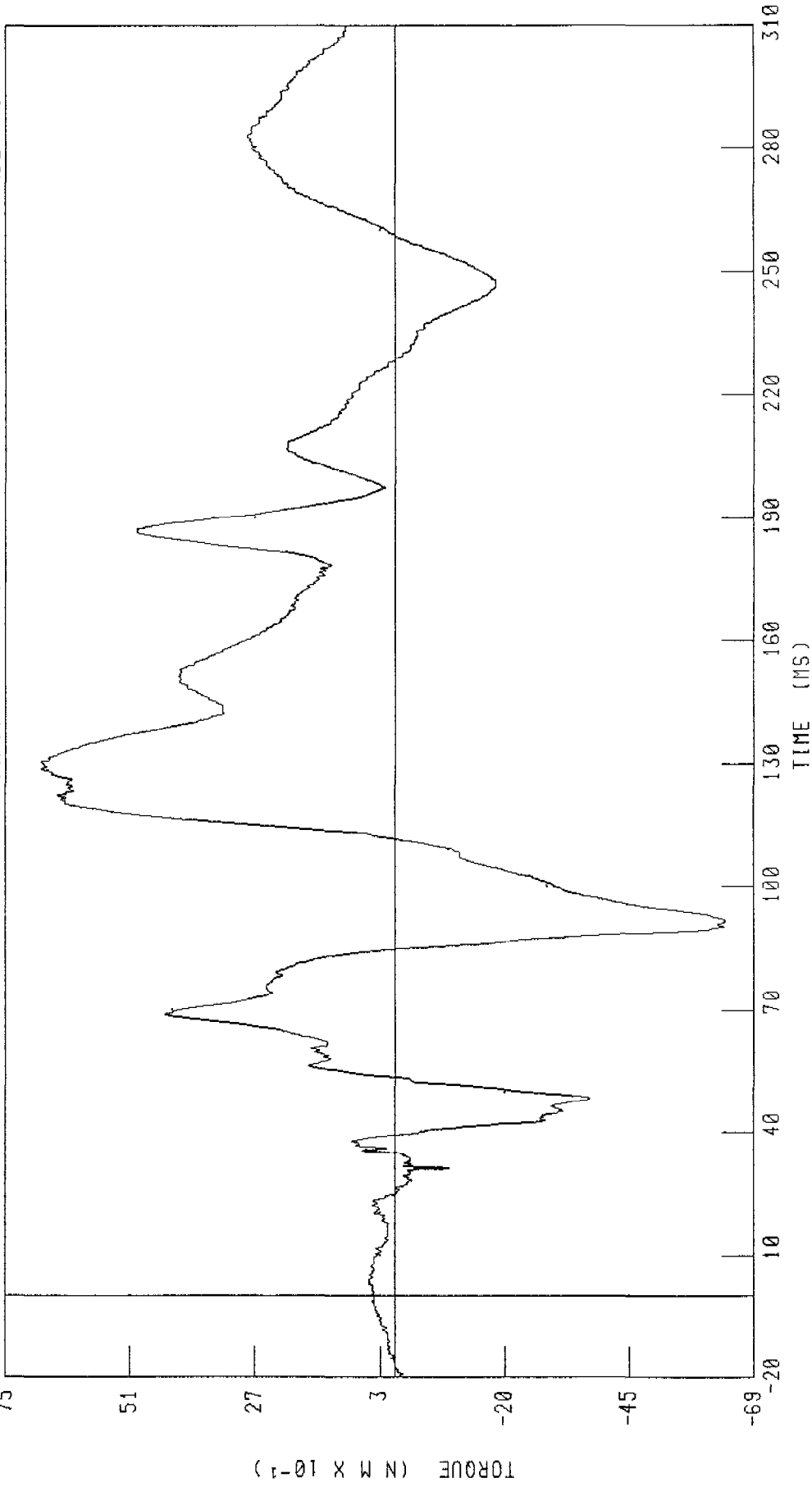
2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

DRIVER NECK MOMENT ABOUT X AXIS

TRC INC

40 KPH FLAT FRONTAL

TEST NUMBER 011001



CHANNEL NEKX11 FILTER CH CLASS 600

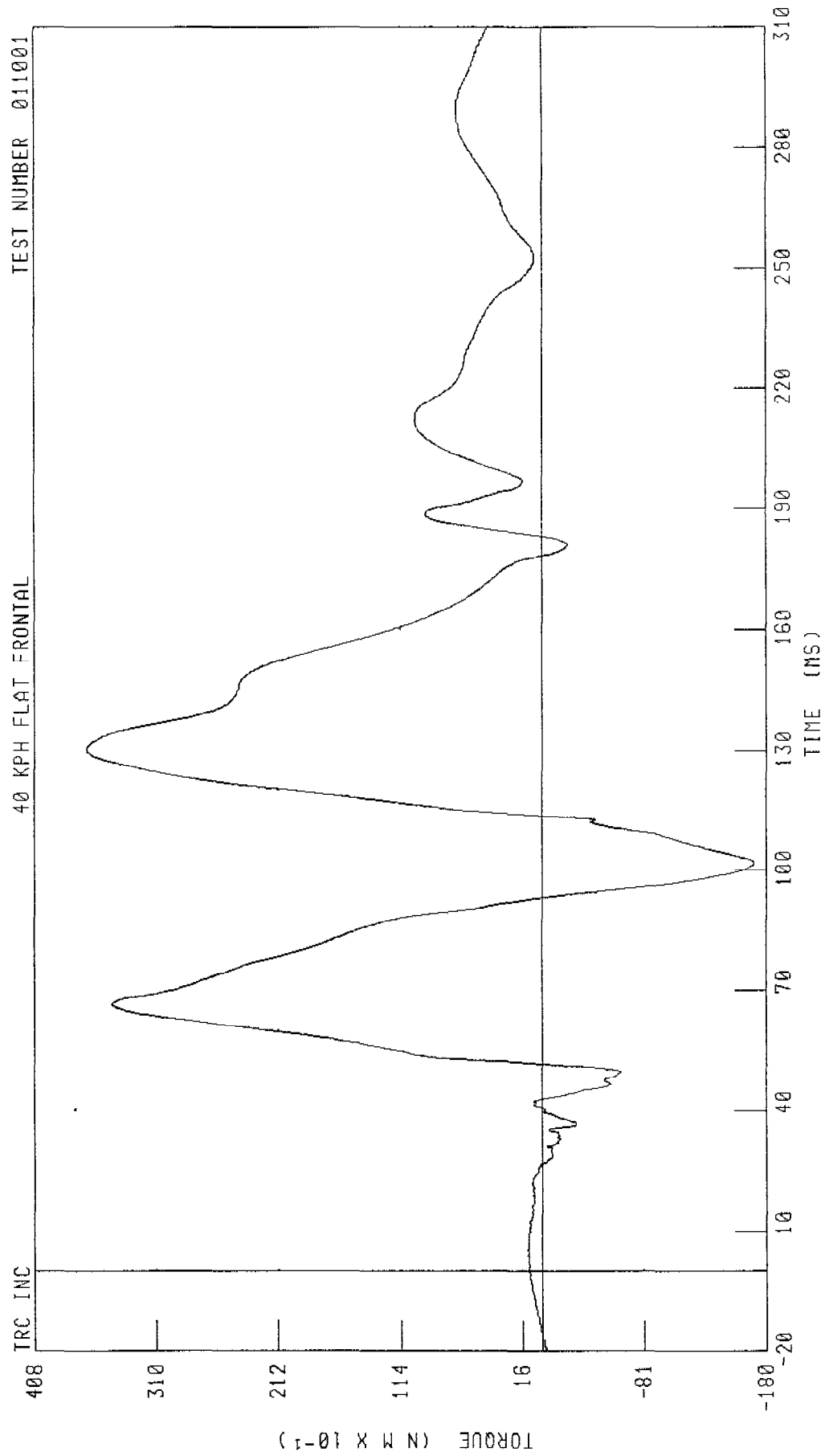
PEAK DATA 6 82 N M @ 128 96 MS, -6 35 N M @ 91 52 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

DRIVER NECK MOMENT ABOUT Y AXIS

40 KPH FLAT FRONTAL

TEST NUMBER 011001



CHANNEL NEKYM1 FILTER CH CLASS 600

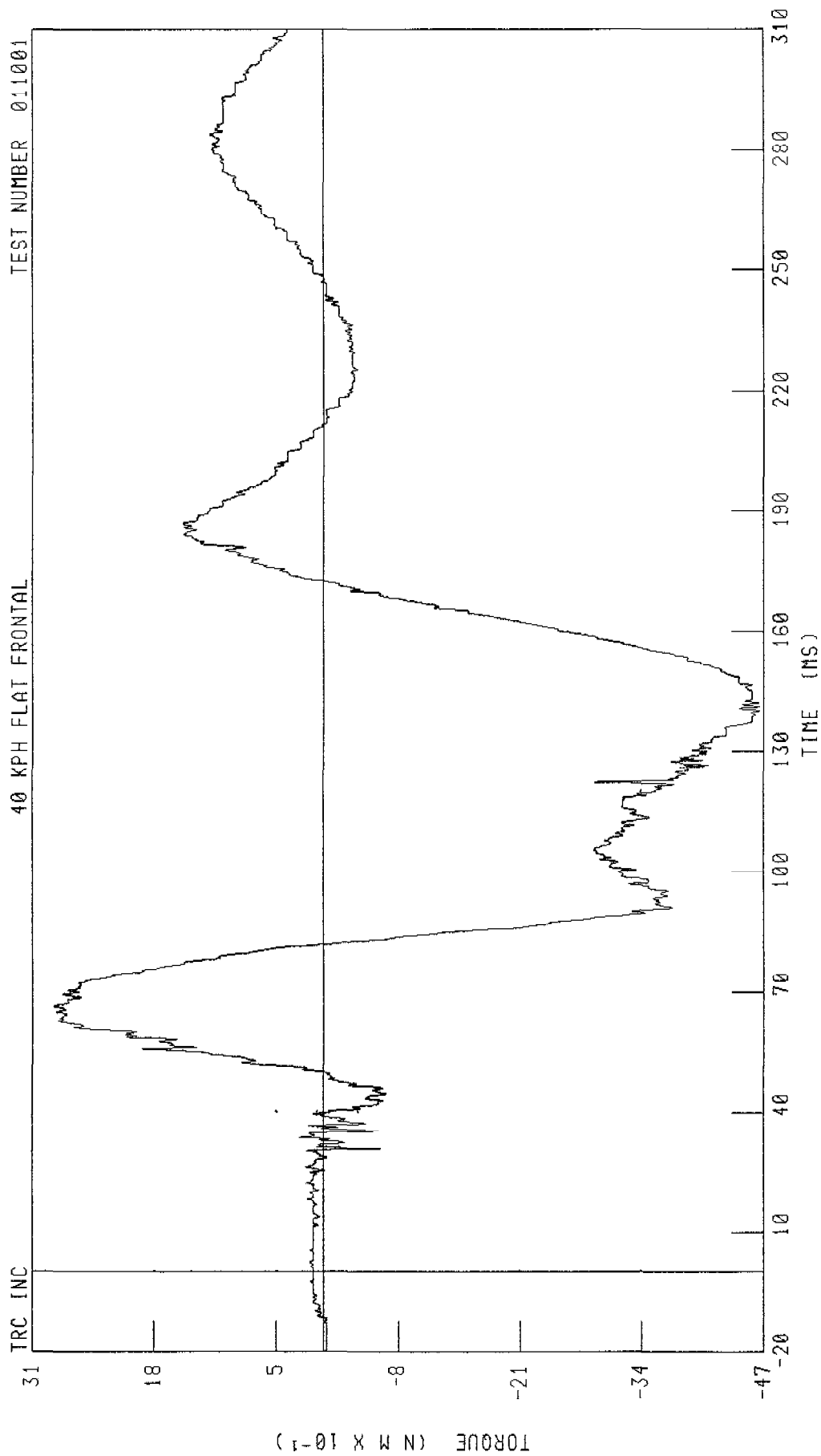
PEAK DATA 36 64 N M @ 130 56 MS, -17 00 N M @ 101 68 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

DRIVER NECK MOMENT ABOUT Z AXIS

40 KPH FLAT FRONTAL

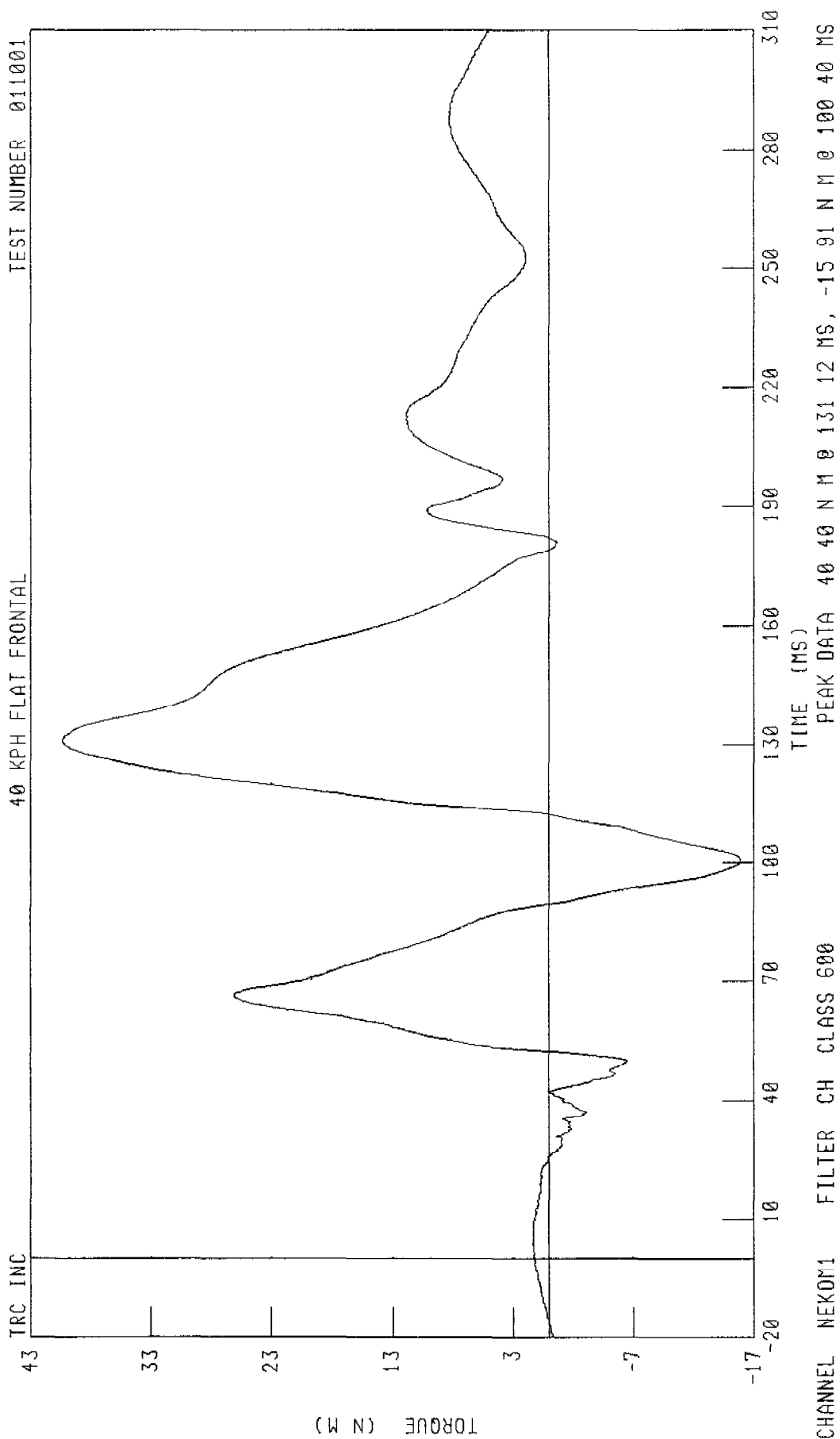
TEST NUMBER 011001



CHANNEL NEKZM1 FILTER CH CLASS 600

PEAK DATA 2 87 N M @ 66 46 MS, -4 66 N M @ 140 24 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
DRIVER NECK OCCIPITAL CONDYLE MOMENT ABOUT Y AXIS



2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
 DRIVER NECK TENSION/EXTENSION

TEST NUMBER 011001

40 KPH FLAT FRONTAL

TRC INC

300

250

200

150

100

50

0

(--- X 10⁻³)

-20

10

40

70

100

130

160

190

220

250

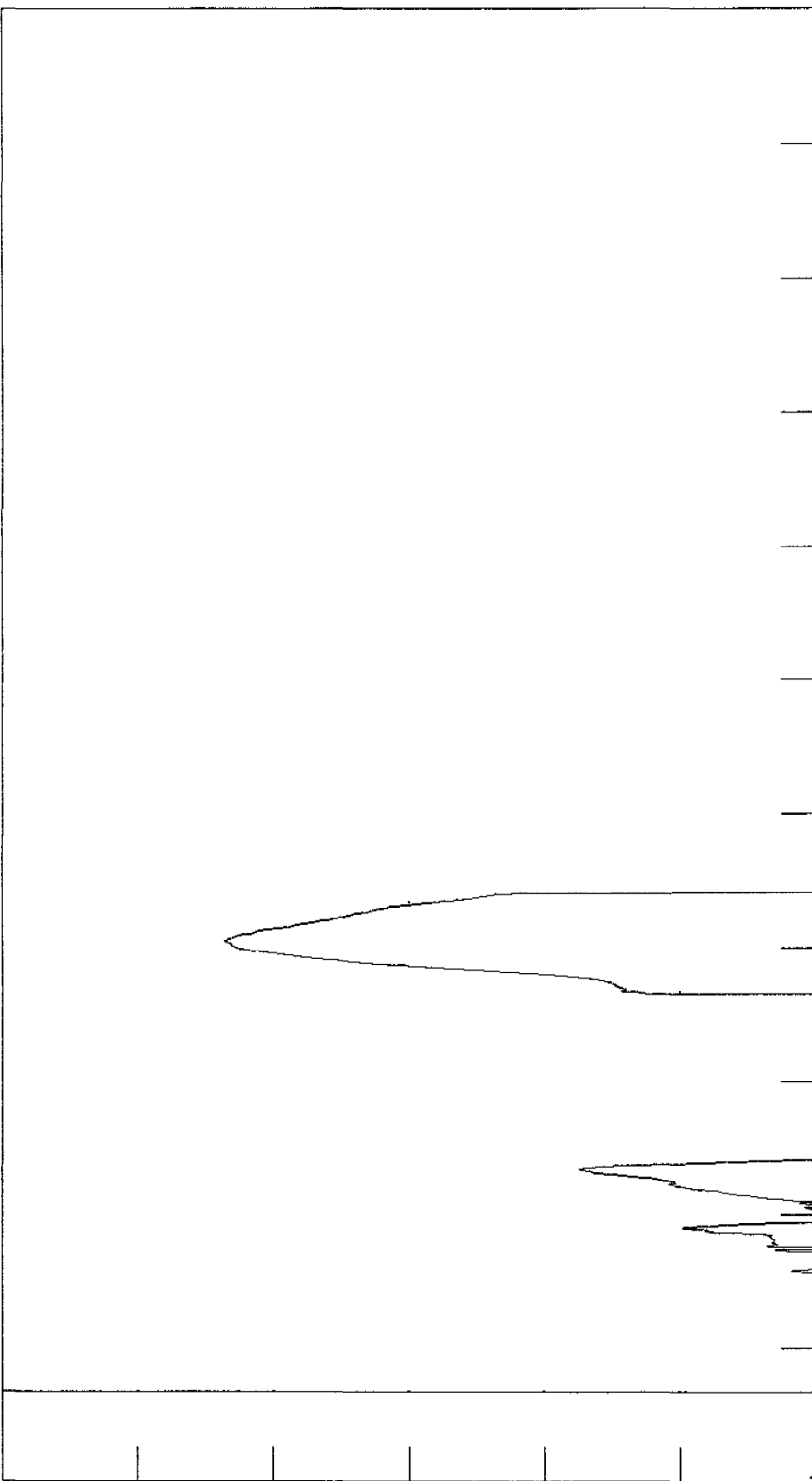
280

310

TIME (MS)

CHANNEL NTE1 FILTER CH CLASS 600

PEAK DATA 0 22 --- 0 101 52 MS, 0 00 --- 0 -20 00 MS

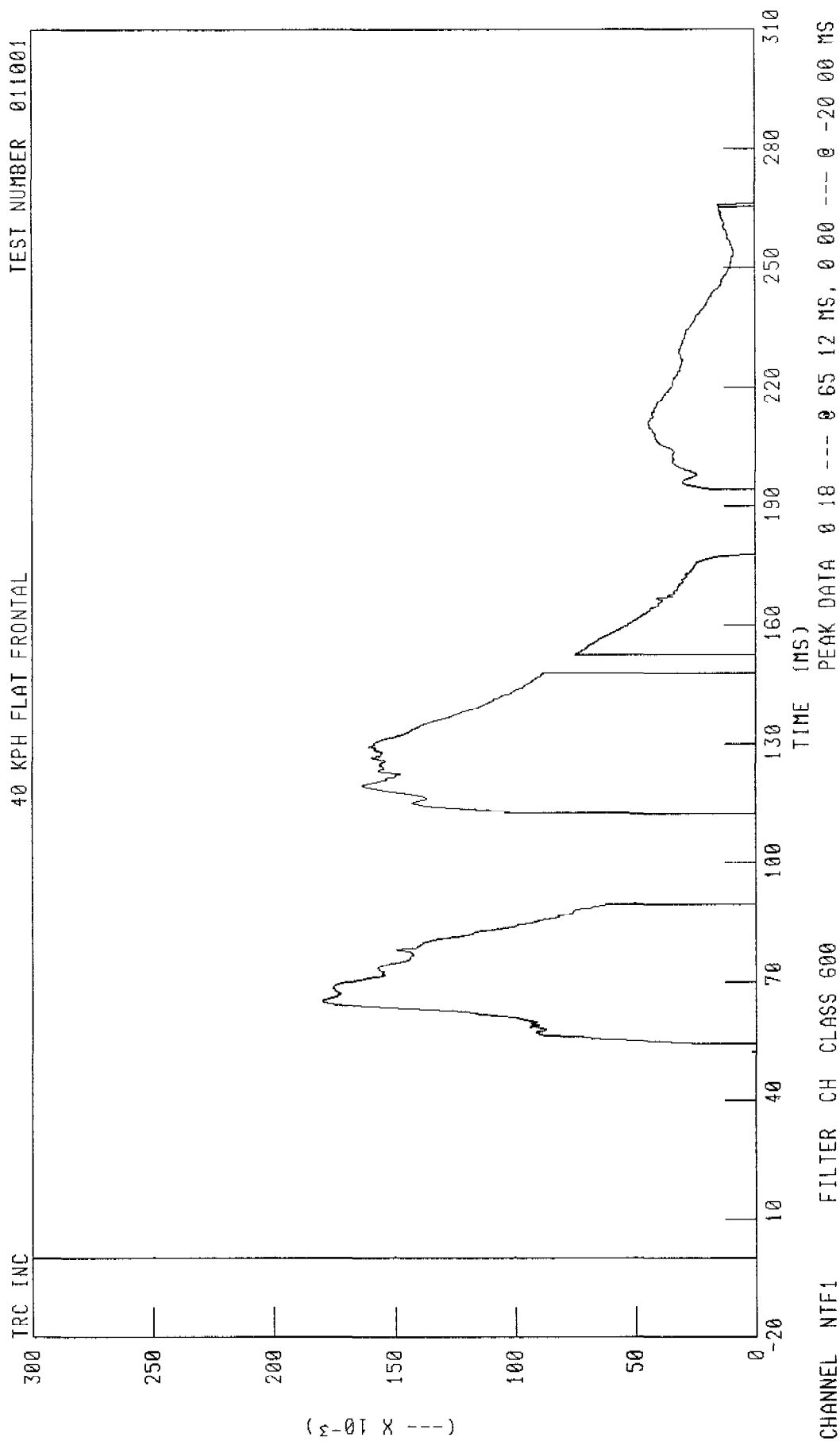


2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

DRIVER NECK TENSION/FLEXION

40 KPH FLAT FRONTAL

TEST NUMBER 011001



CHANNEL NTF1 FILTER CH CLASS 600

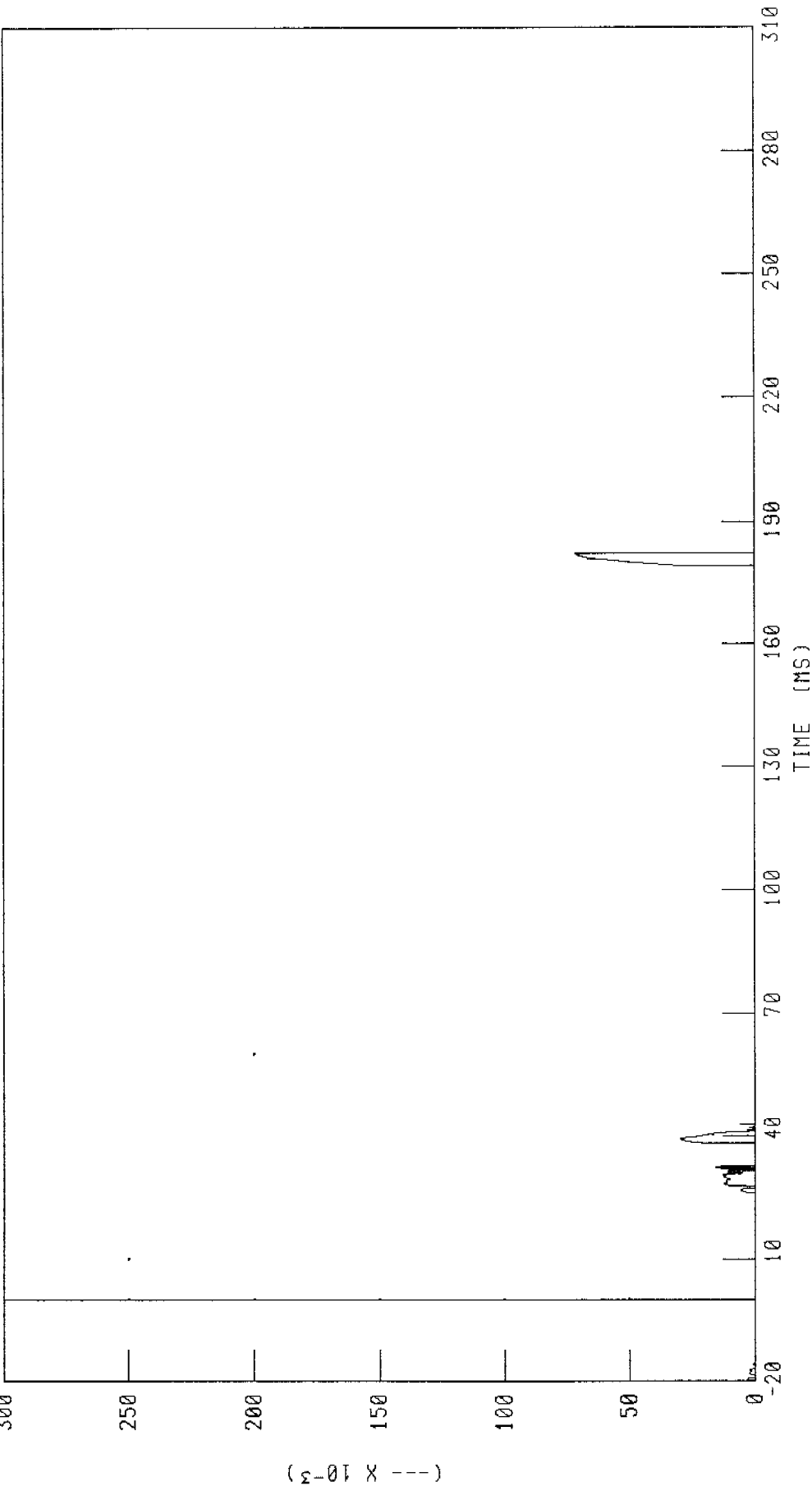
PEAK DATA 0 18 --- 0 65 12 MS, 0 00 --- 0 -20 00 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
DRIVER NECK COMPRESSION/EXTENSION

TRC INC

TEST NUMBER 011001

40 KPH FLAT FRONTAL



CHANNEL NCE1

FILTER CH CLASS 600

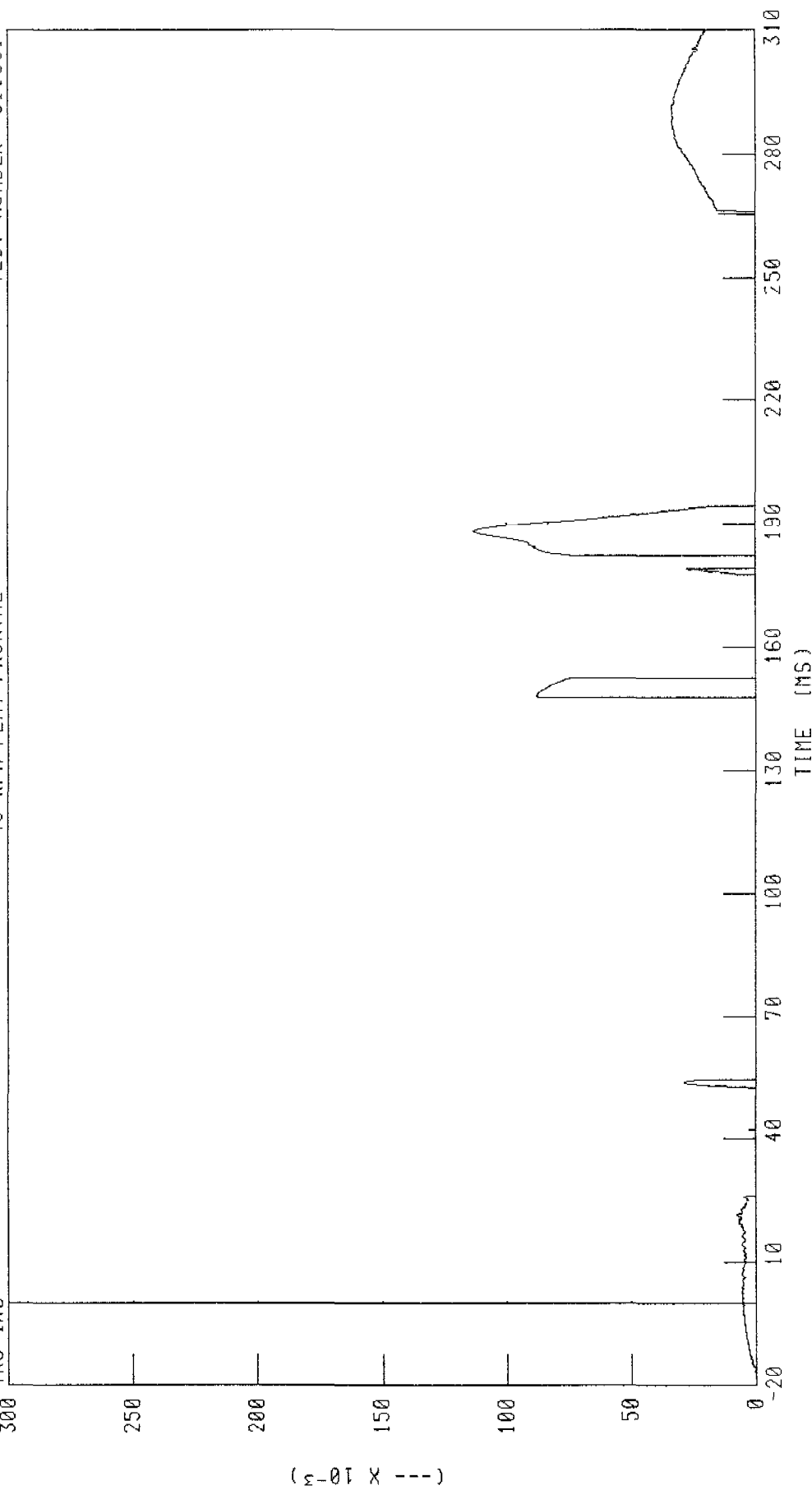
PEAK DATA 0 07 --- 0 182 32 MS, 0 00 --- 0 -19 20 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
DRIVER NECK COMPRESSION/FLEXION

TRC INC

40 KPH FLAT FRONTAL

TEST NUMBER 011001



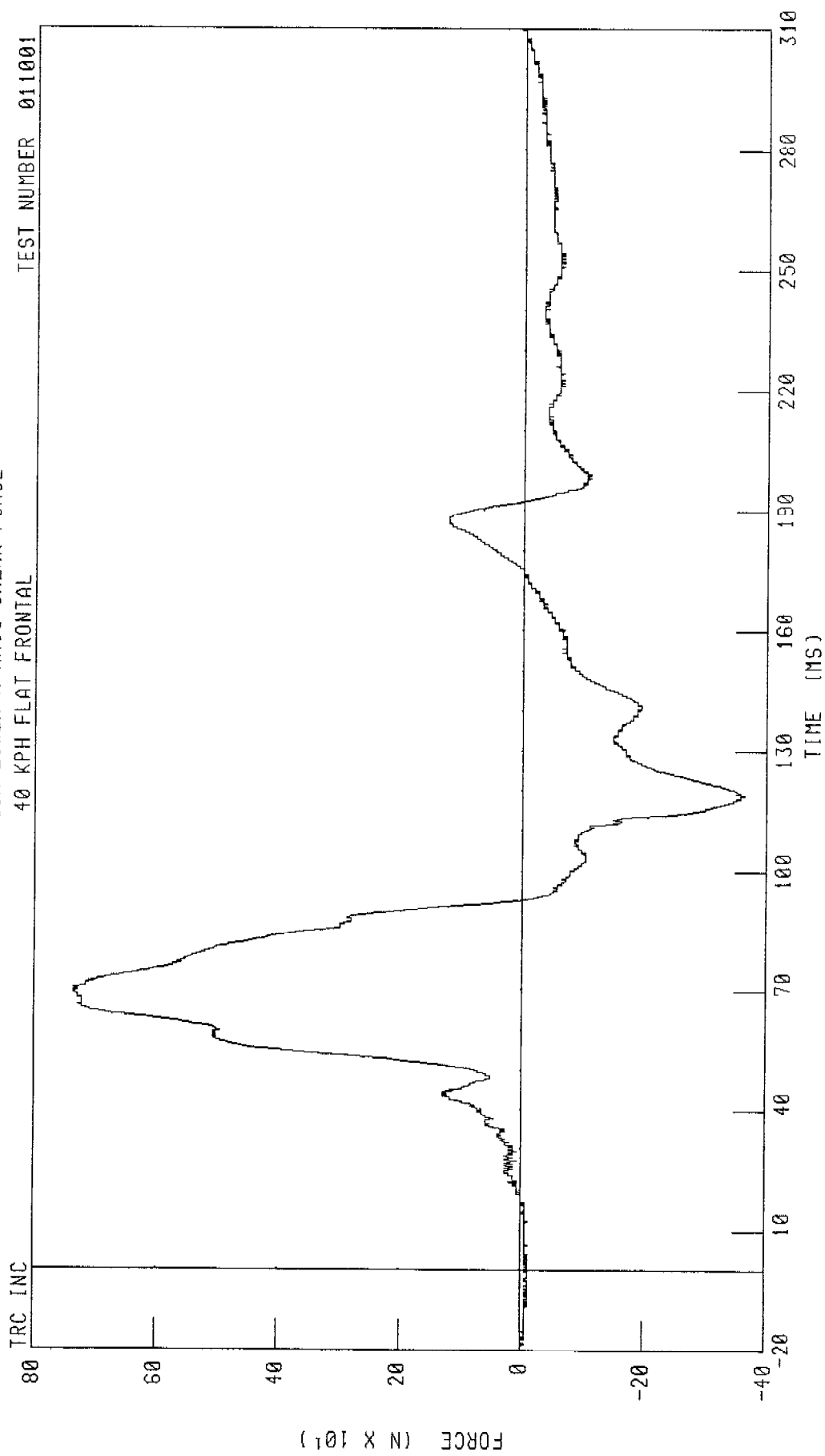
CHANNEL NCF1 FILTER CH CLASS 000

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

DRIVER NECK LOWER X-AXIS SHEAR FORCE

40 KPH FLAT FRONTAL

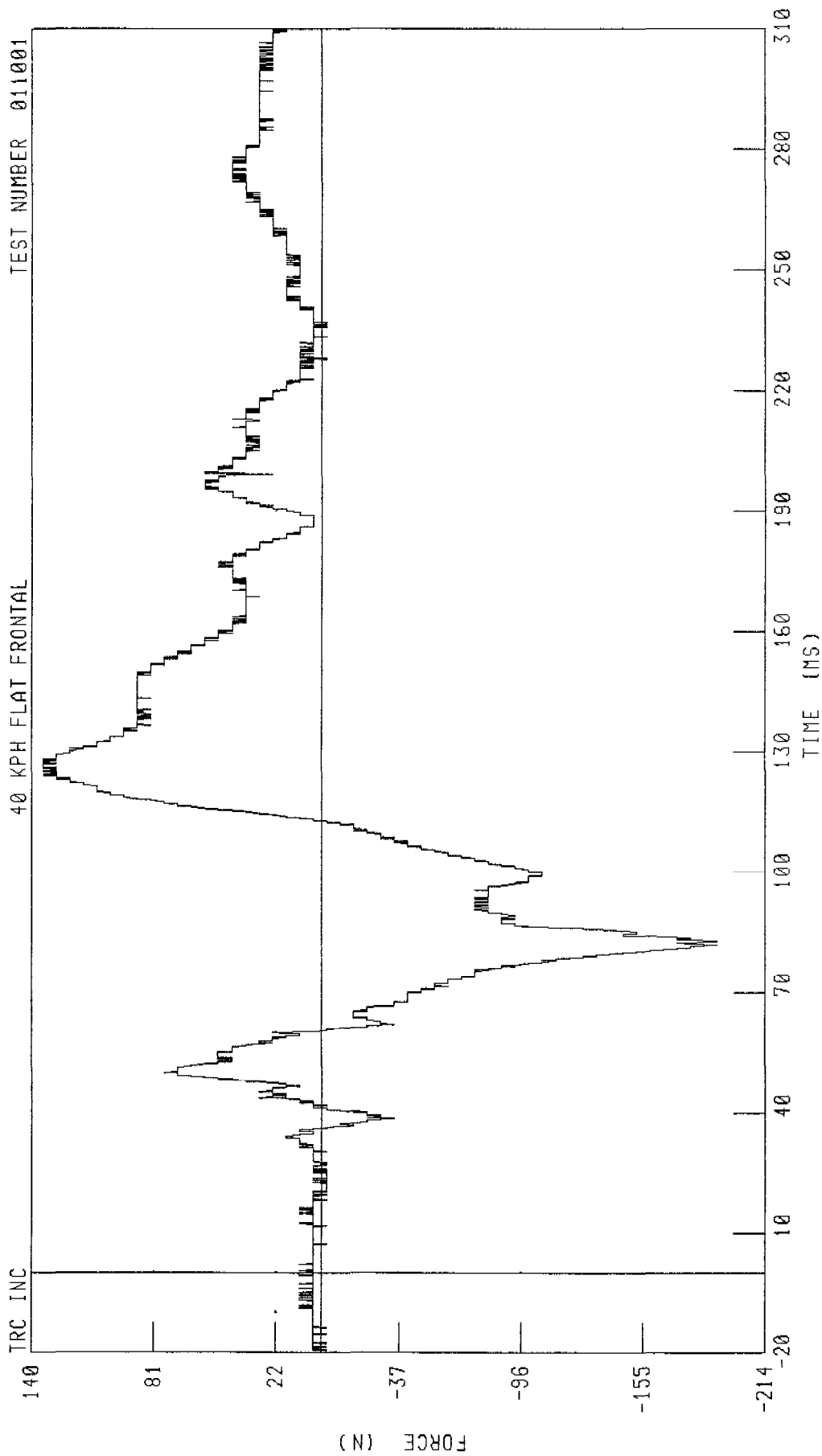
TEST NUMBER 011001



CHANNEL NKLXF1 FILTER CH CLASS 1000

PEAK DATA 736 10 N @ 69 04 MS, -364 86 N @ 118 88 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
 DRIVER NECK LOWER Y-AXIS SHEAR FORCE



PEAK DATA 134 64 N @ 124 08 MS, -191 09 N @ 81 84 MS

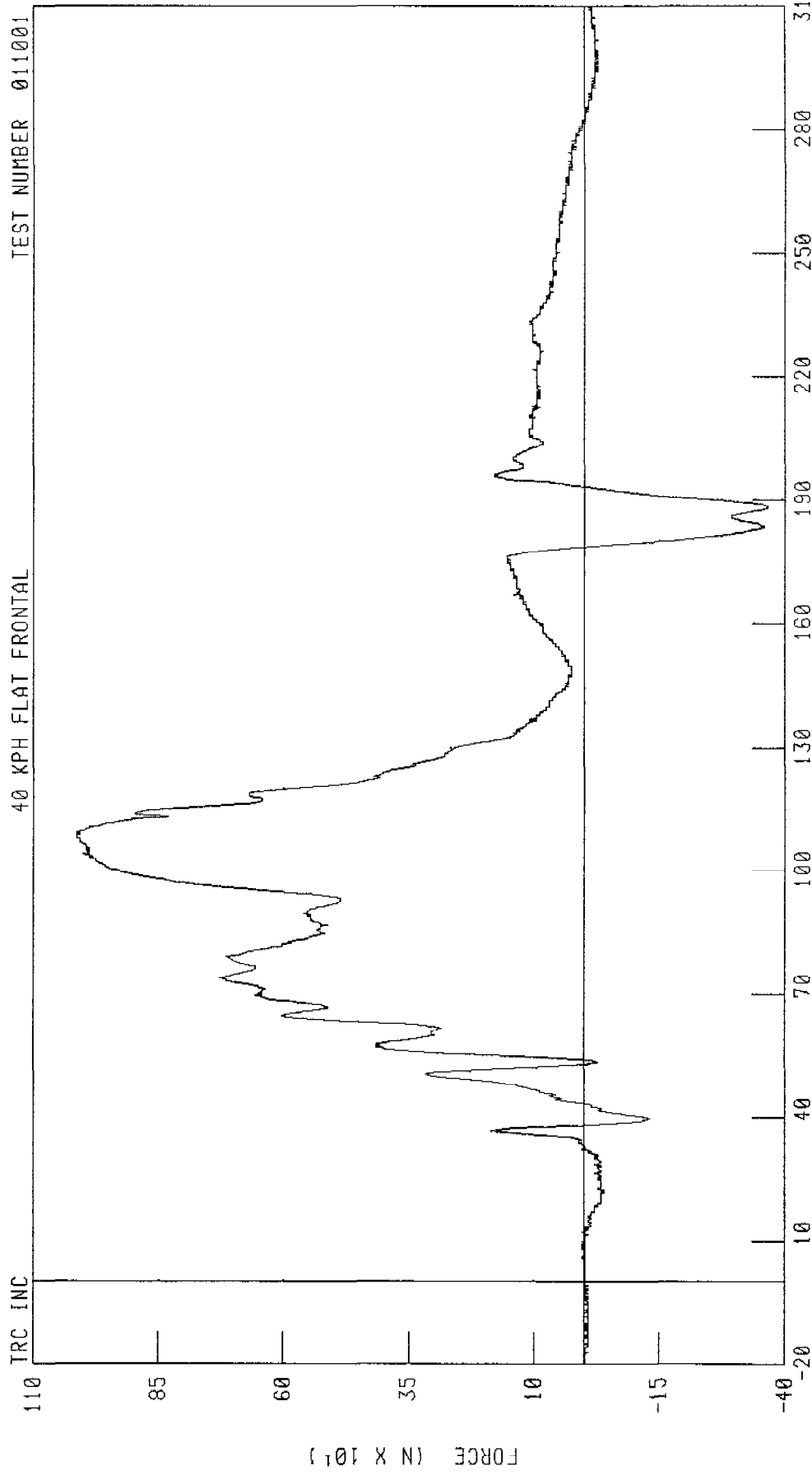
CHANNEL NKLYF1 FILTER CH CLASS 1000

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

DRIVER NECK LOWER Z-AXIS AXIAL FORCE

40 KPH FLAT FRONTAL

TEST NUMBER 011001



TIME (MS)

PEAK DATA 1014 52 N @ 108 00 MS, -366 58 N @ 188 00 MS

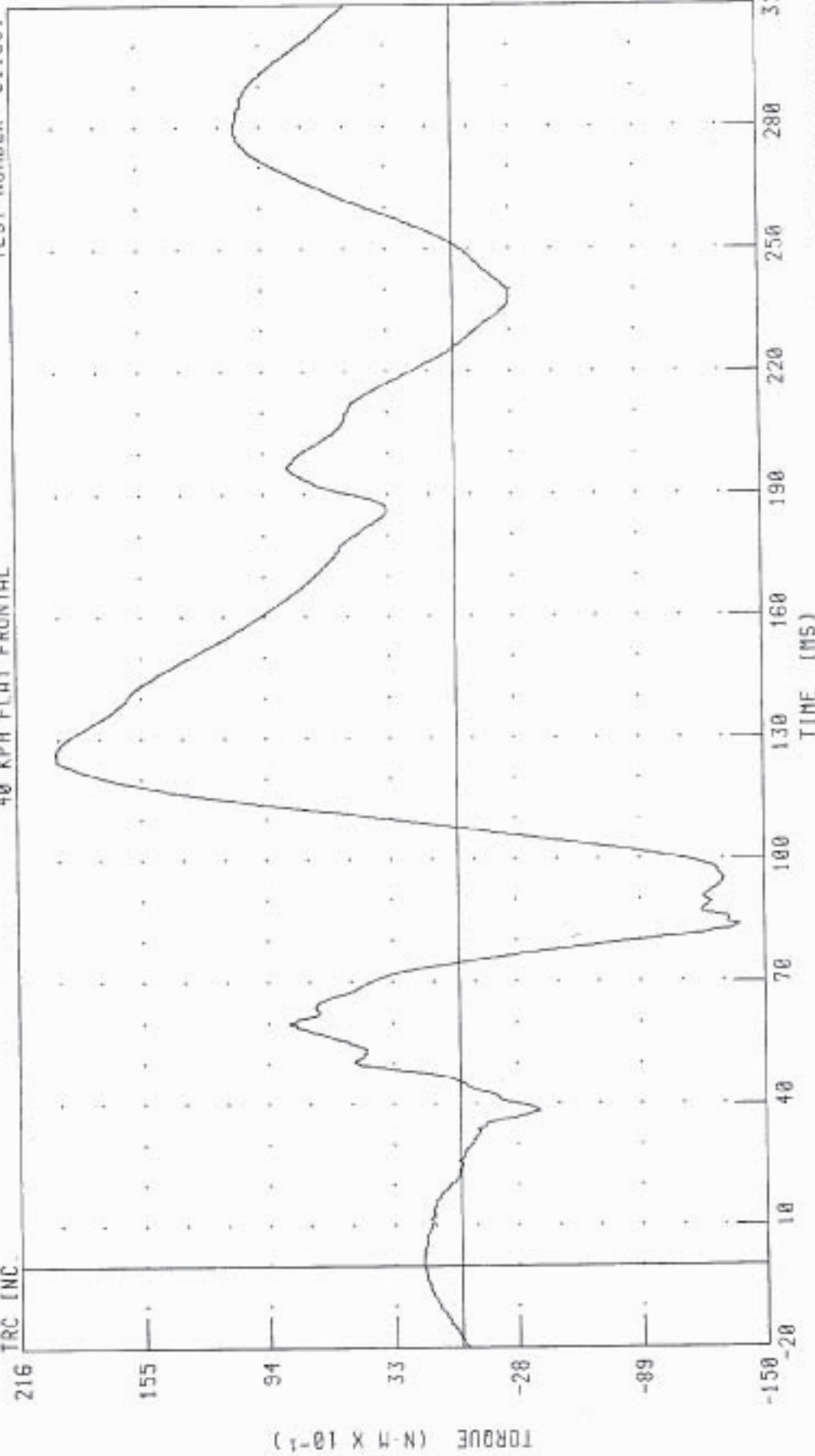
CHANNEL NKLZF1 FILTER CH CLASS 1000

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
DRIVER NECK LOWER MOMENT ABOUT X AXIS

TEST NUMBER: 011001

40 KPH FLAT FRONTAL

TRC INC.



CHANNEL: NKLXM1 FILTER: CH. CLASS 600

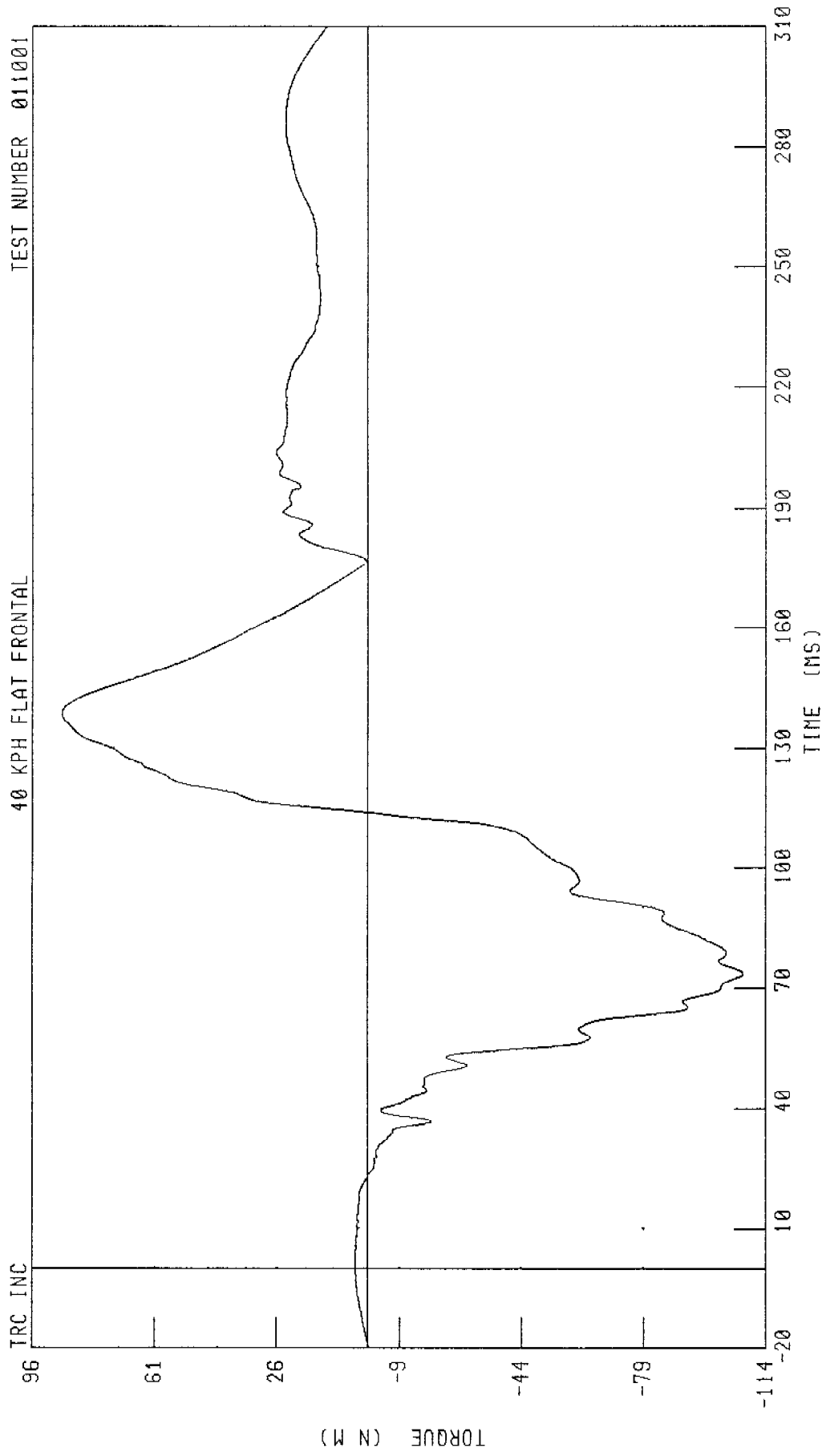
PEAK DATA: 19.70 N M @ 126.48 MS, -13.77 N M @ 83.68 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

DRIVER NECK LOWER MOMENT ABOUT Y AXIS

40 KPH FLAT FRONTAL

TEST NUMBER 011001



PEAK DATA 87 59 N M @ 138 96 MS, -107 60 N M @ 73 52 MS

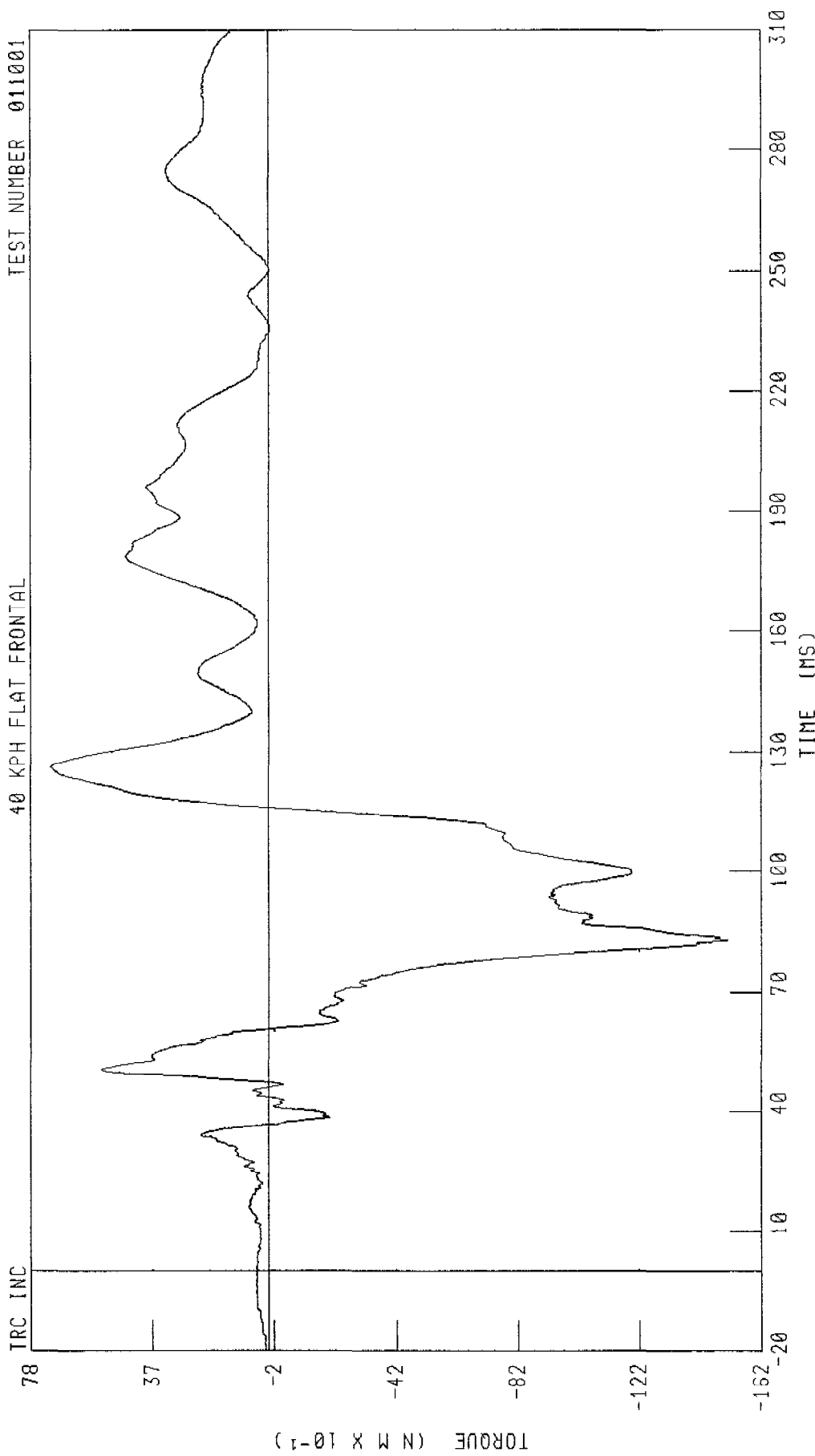
CHANNEL NKLYM1 FILTER CH CLASS 600

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

DRIVER NECK LOWER MOMENT ABOUT Z AXIS

40 KPH FLAT FRONTAL

TEST NUMBER 011001



CHANNEL NKLZM1 FILTER CH CLASS 600

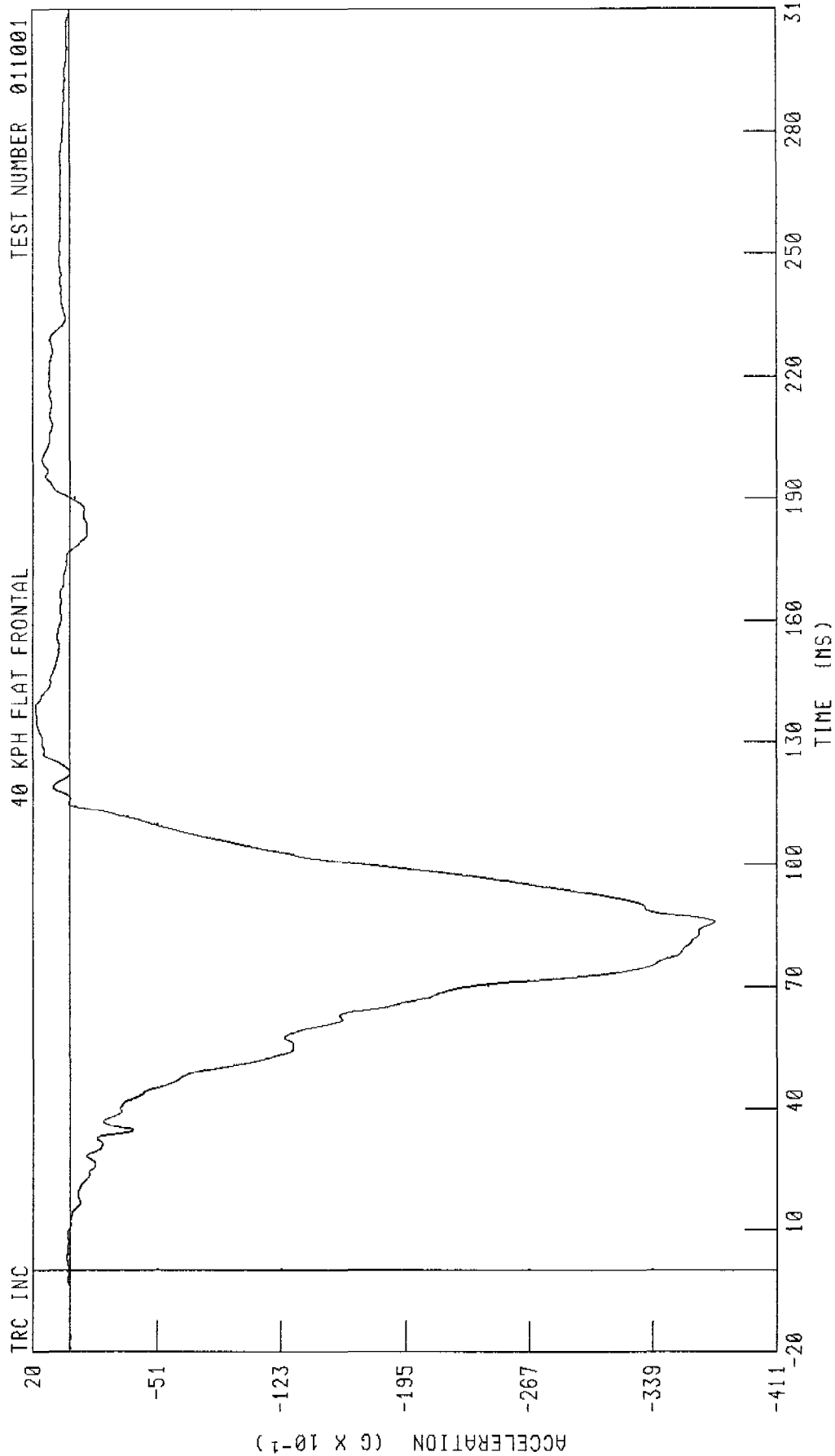
PEAK DATA 7 15 N M @ 126 32 MS, -15 11 N M @ 82 72 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

DRIVER CHEST X-AXIS ACCELERATION

40 KPH FLAT FRONTAL

TEST NUMBER 011001



PEAK DATA 1 95 G @ 138 00 MS, -37 50 G @ 85 68 MS

CHANNEL CSTXG1 FILTER CH CLASS 180

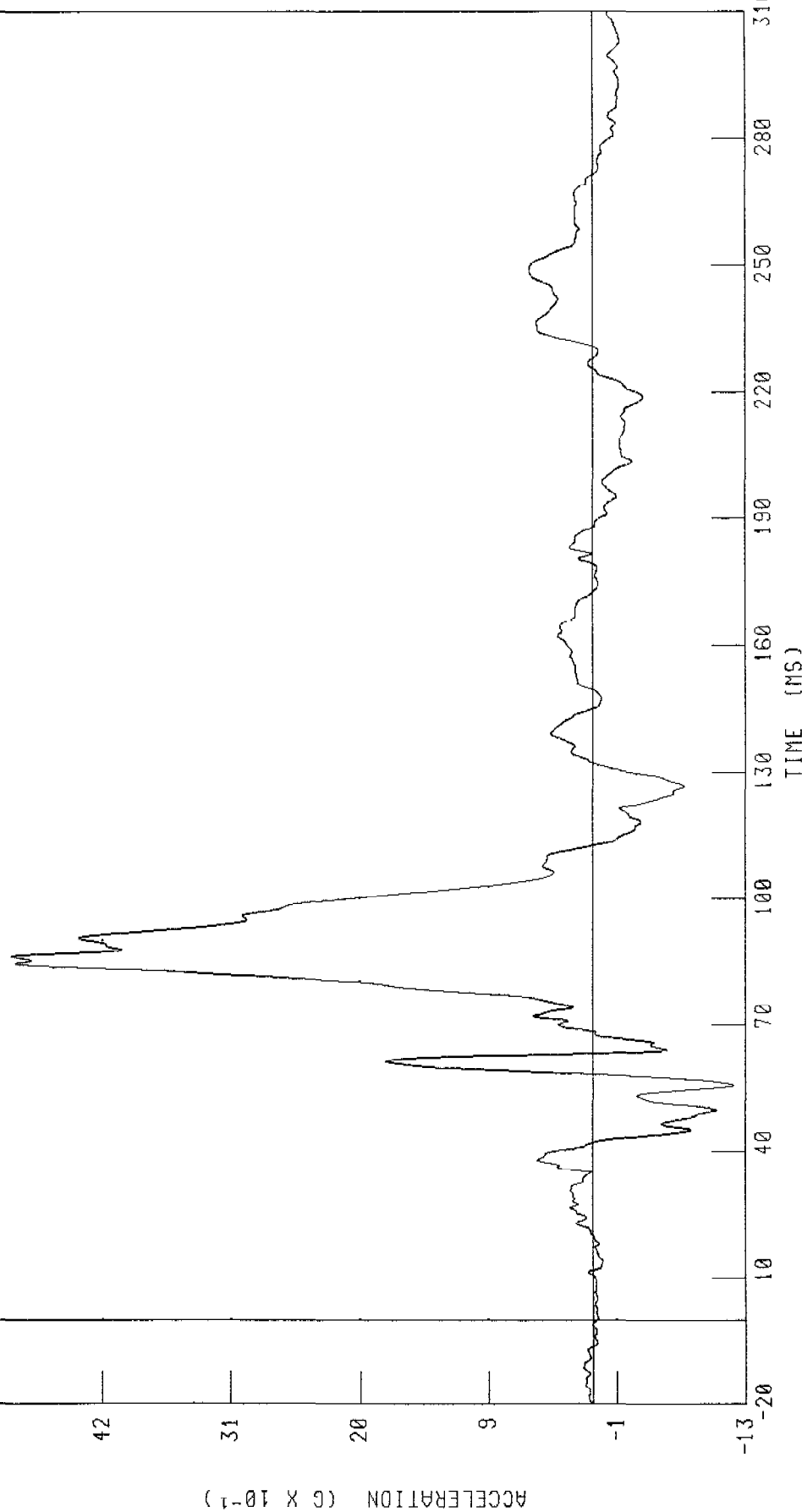
2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

DRIVER CHEST Y-AXIS ACCELERATION

40 KPH FLAT FRONTAL

TEST NUMBER 011001

TRC INC



CHANNEL CSTYC1 FILTER CH CLASS 130

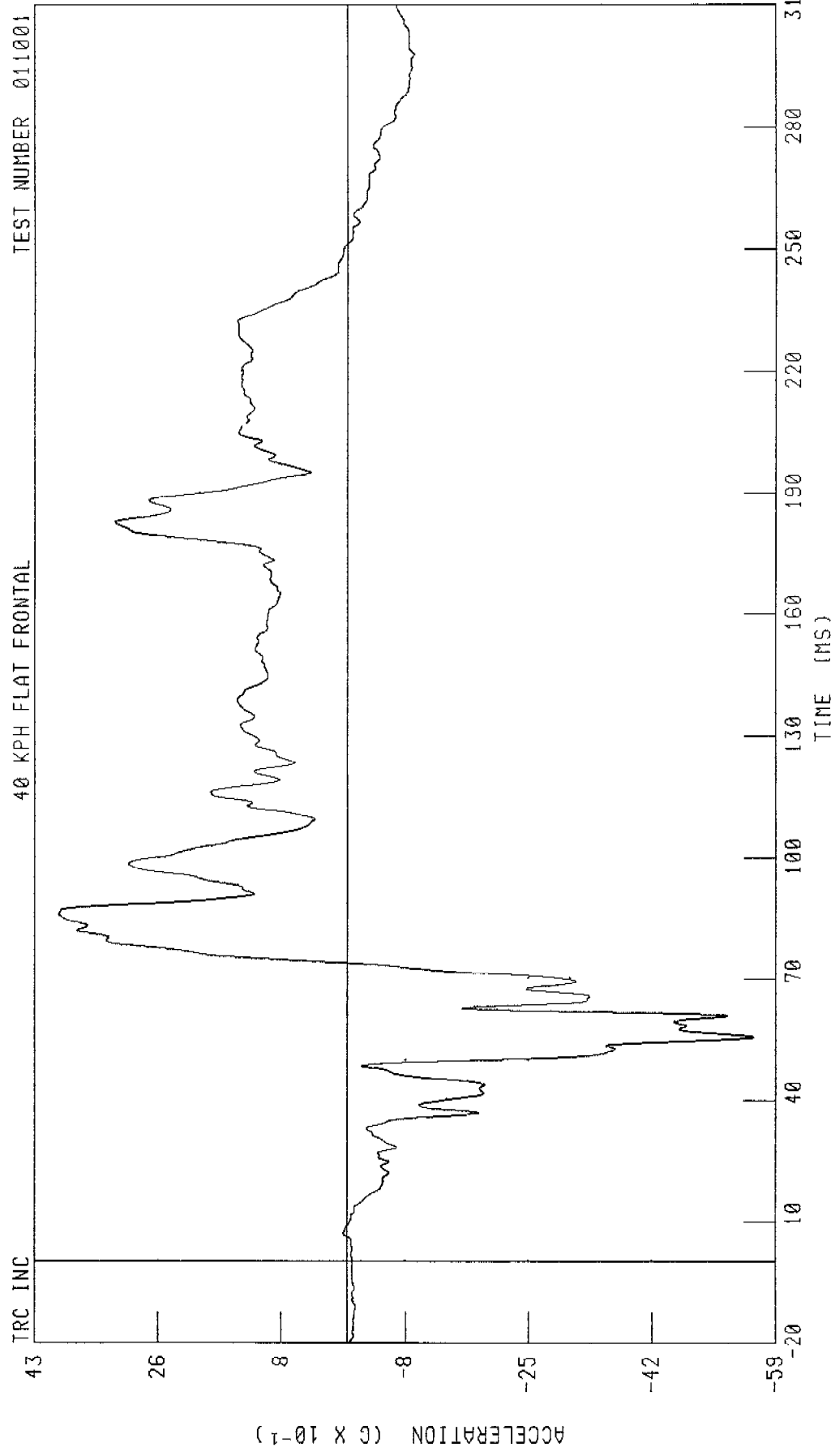
PEAK DATA 4 98 G @ 86 08 MS, -1 20 G @ 55 68 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

DRIVER CHEST Z-AXIS ACCELERATION

40 KPH FLAT FRONTAL

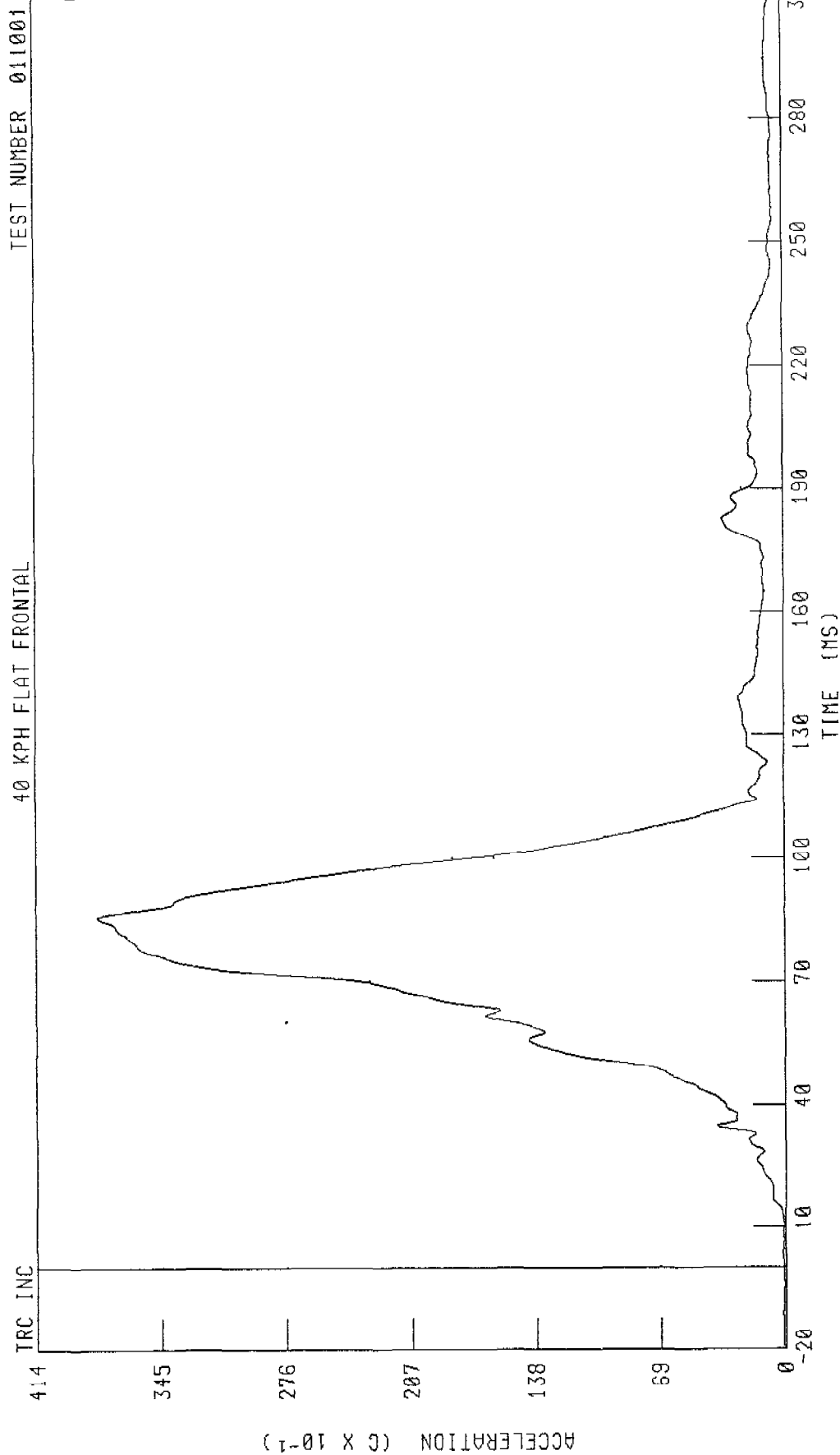
TEST NUMBER 011001



CHANNEL CSTZG1 FILTER CH CLASS 180

PEAK DATA 3 97 G @ 86 16 MS, -5 61 G @ 55 68 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
DRIVER CHEST RESULTANT ACCELERATION
40 KPH FLAT FRONTAL



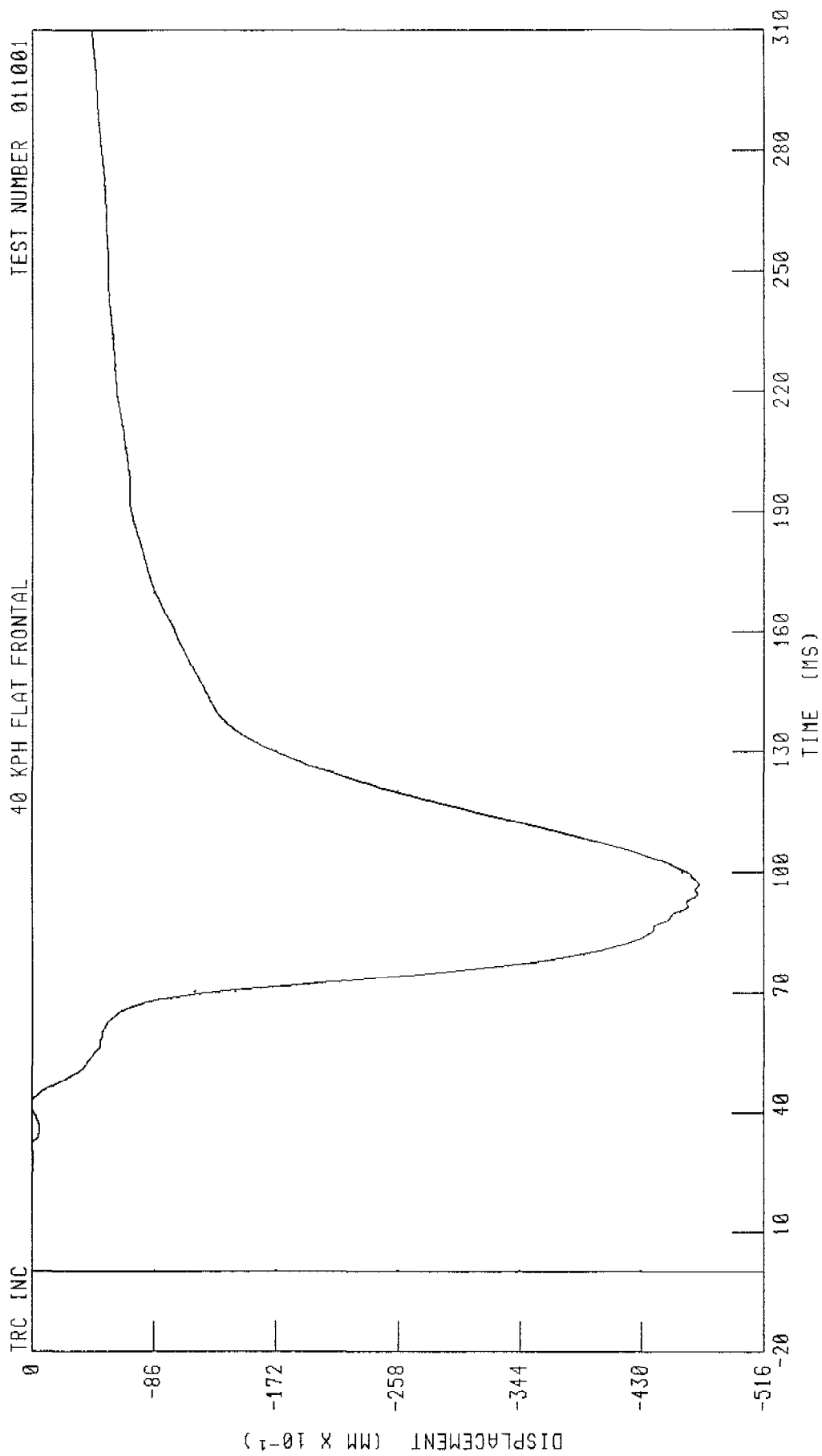
CHANNEL CSTRC1 FILTER CH CLASS 180 PEAK DATA 38 03 G 85 68 MS, 0 01 G 0 -20 00 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

DRIVER CHEST DEFLECTION

40 KPH FLAT FRONTAL

TEST NUMBER 011001



CHANNEL CSTXD1 FILTER CH CLASS 600

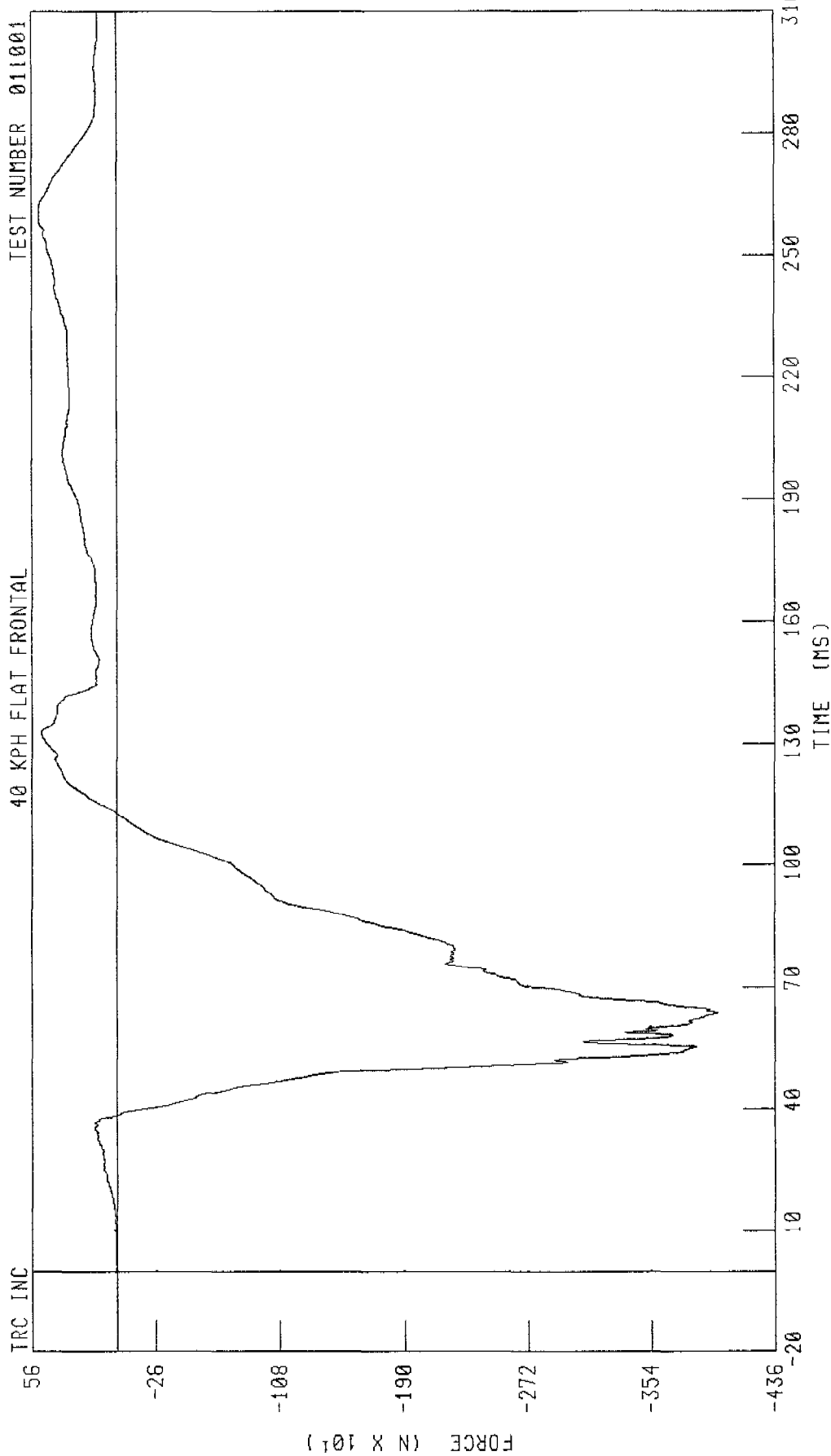
PEAK DATA 0 08 MM @ 42 40 MS, -47 07 MM @ 96 96 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

DRIVER LEFT FEMUR FORCE

40 KPH FLAT FRONTAL

TEST NUMBER 011001



CHANNEL LFMZF1 FILTER CH CLASS 600

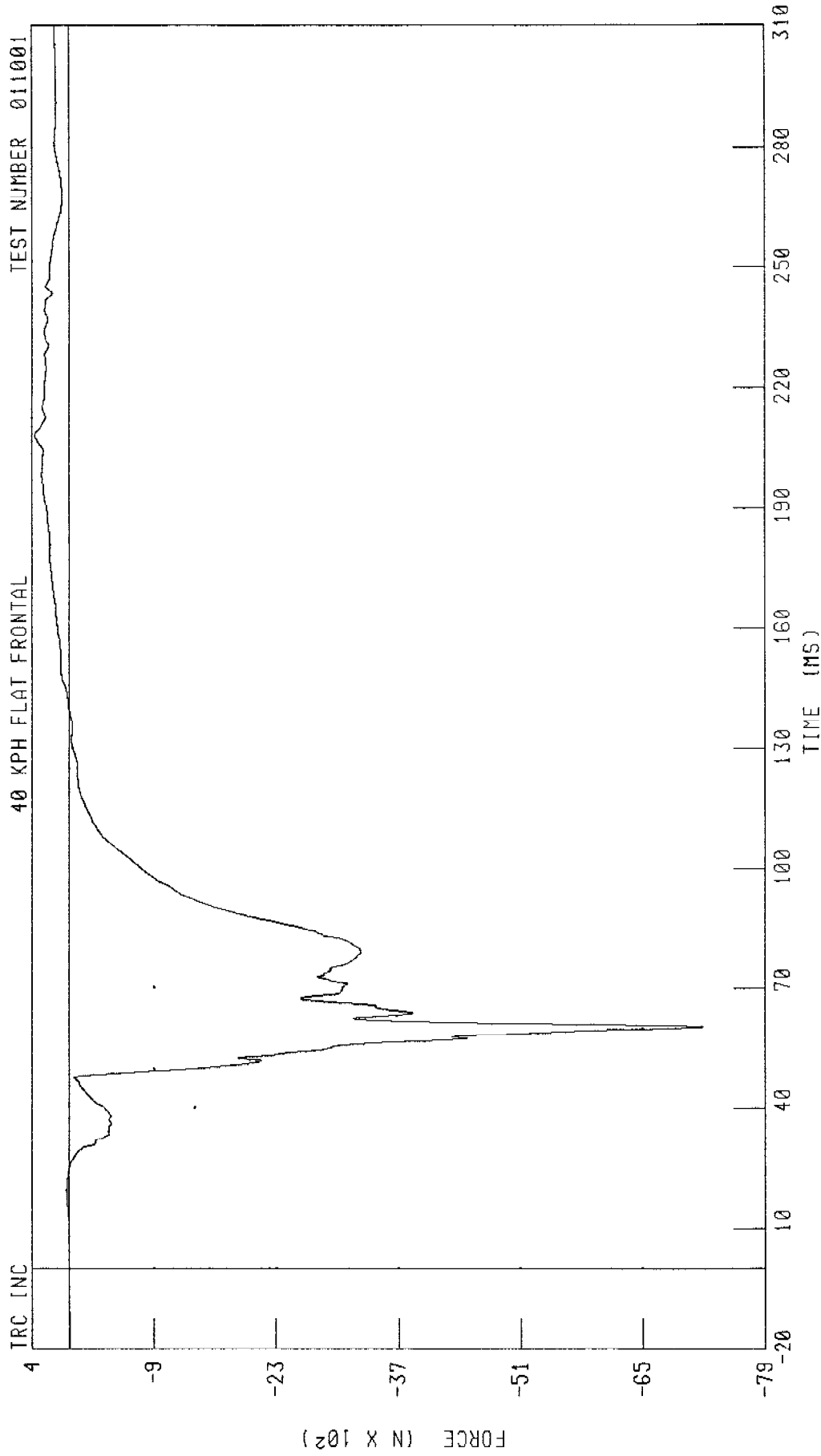
PEAK DATA 514 91 N @ 260 88 MS, -3980 47 N @ 63 68 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

DRIVER RIGHT FEMUR FORCE

40 KPH FLAT FRONTAL

TEST NUMBER 011001



TIME (MS)

PEAK DATA 399 70 N @ 208 16 MS, -7259 78 N @ 60 40 MS

CHANNEL RFMZF1 FILTER CH CLASS 600

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

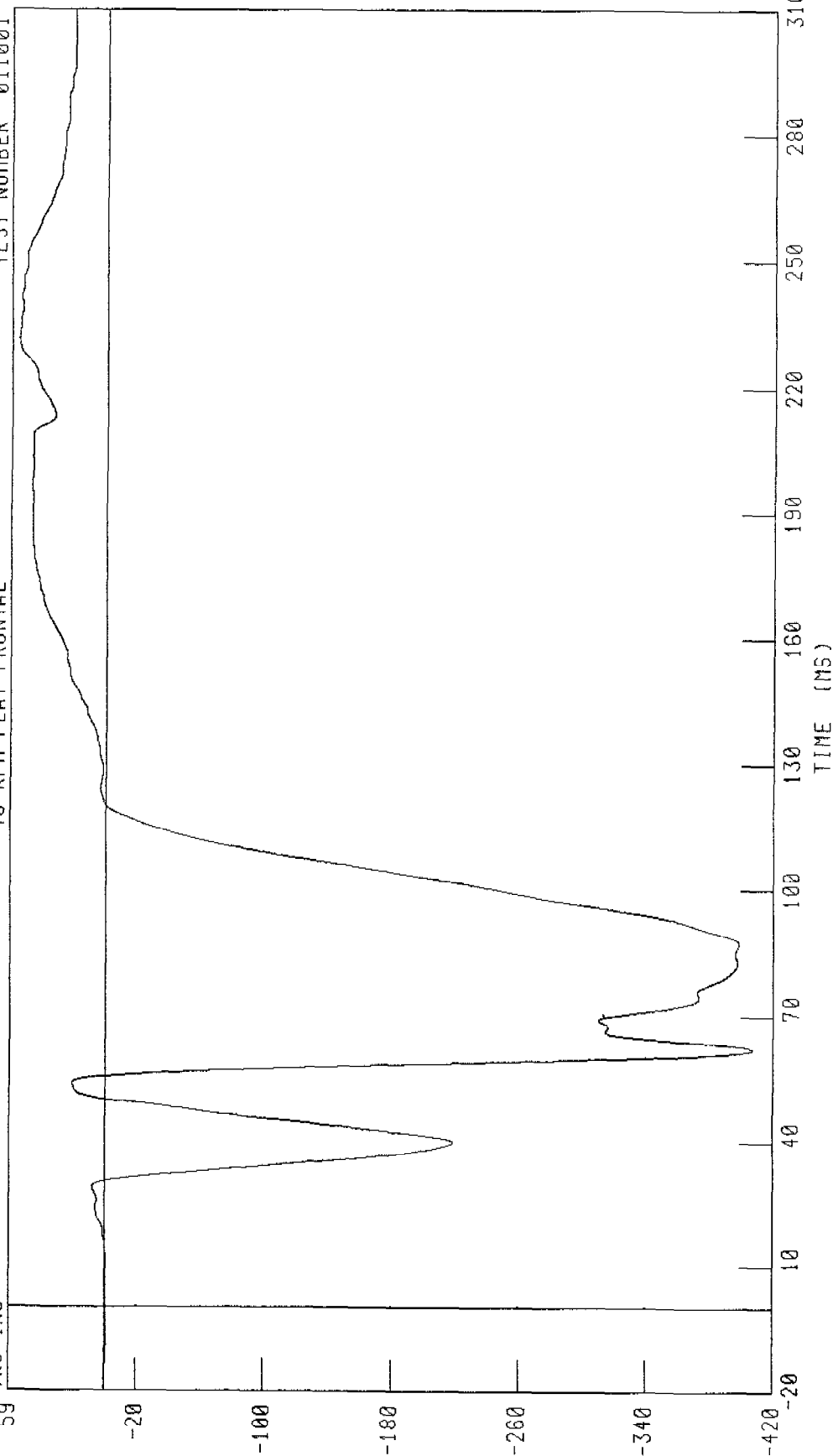
DRIVER LEFT TIBIA TO KNEE DISPLACEMENT

40 KPH FLAT FRONTAL

TEST NUMBER 011001

TRC INC

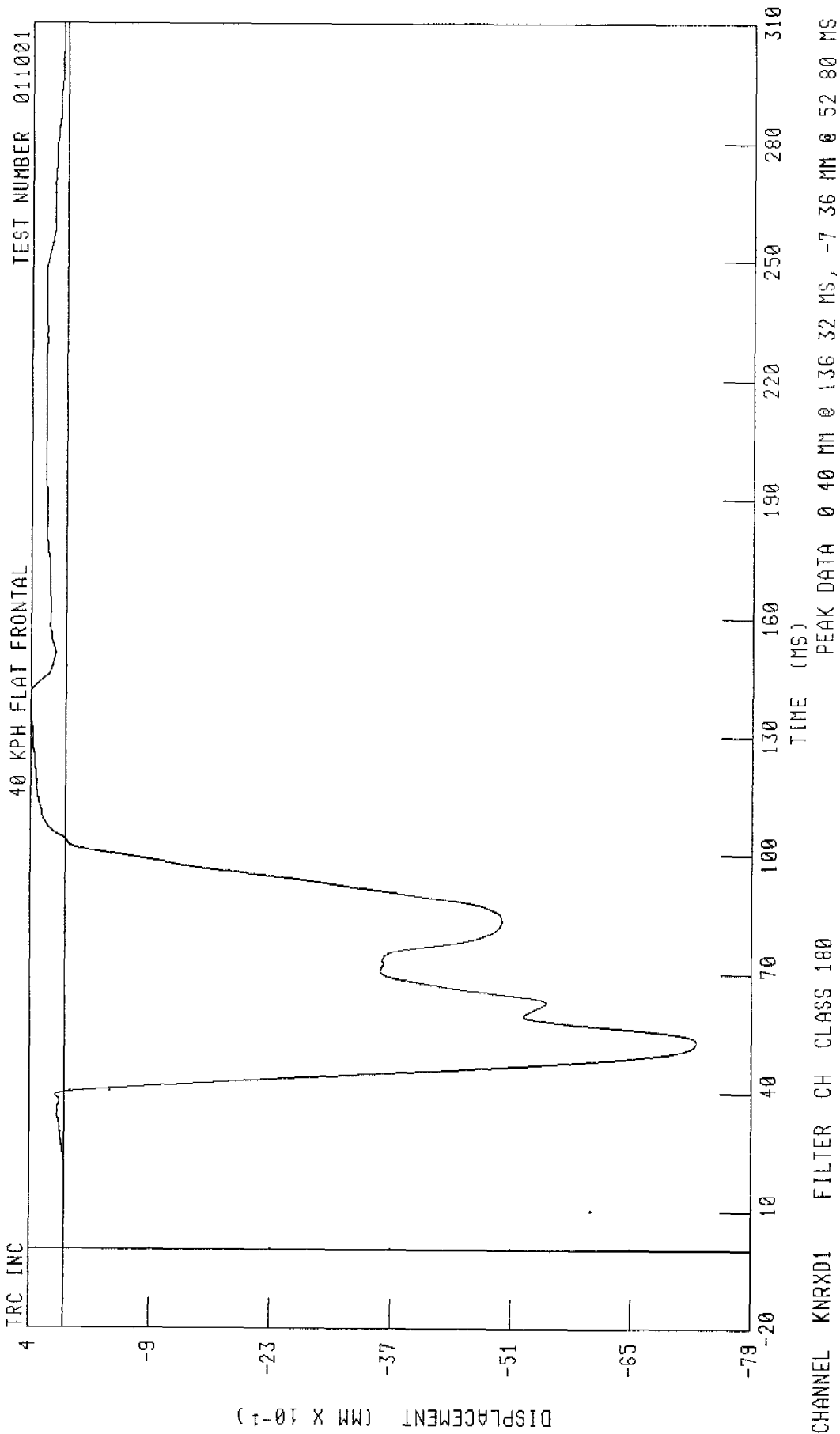
DISPLACEMENT (MM X 10⁻²)



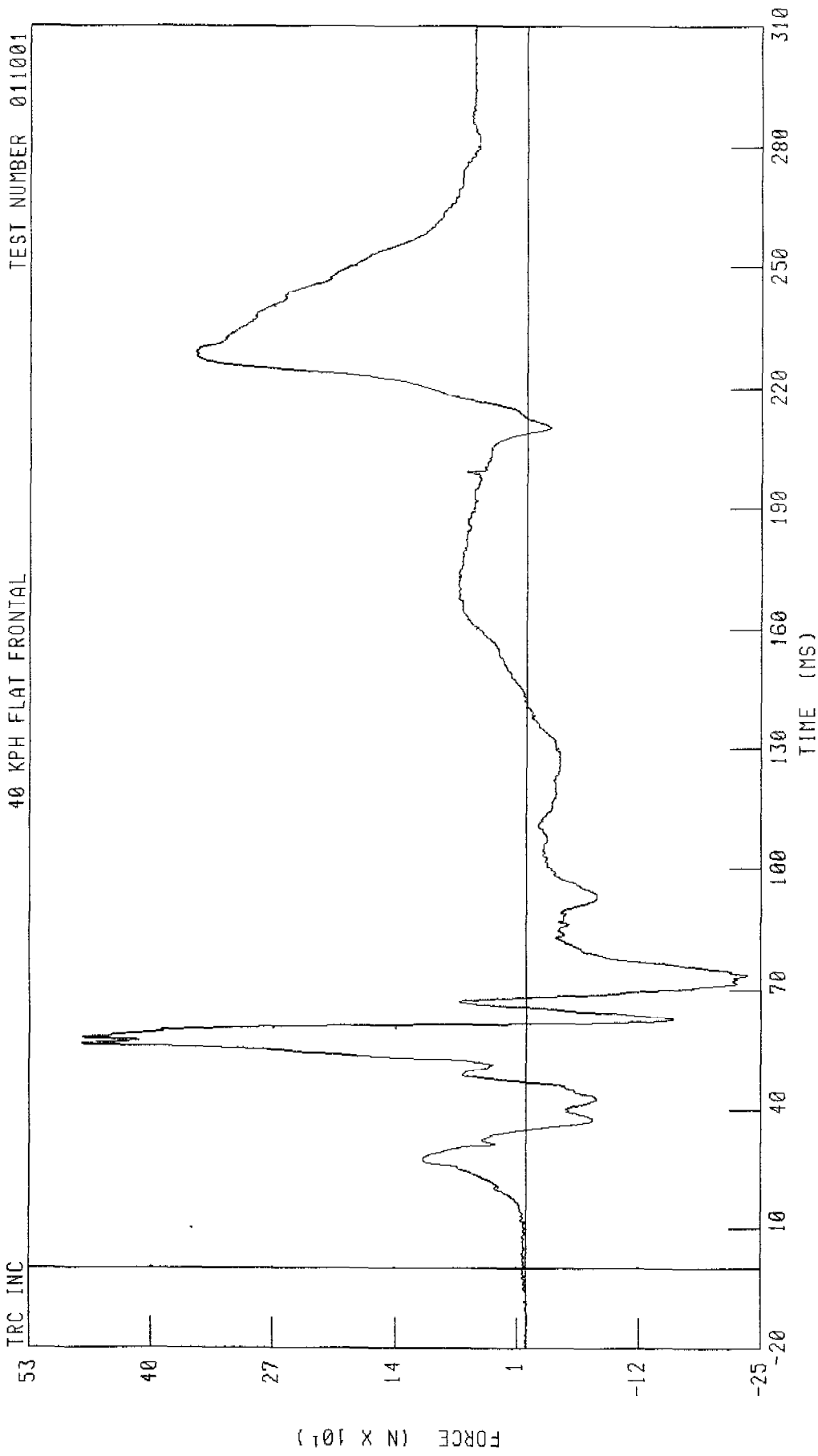
CHANNEL KNLXD1 FILTER CH CLASS 180

PEAK DATA 0 56 MM @ 231 52 MS, -4 07 MM @ 62 00 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
DRIVER RIGHT TIBIA TO KNEE DISPLACEMENT



2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
DRIVER LEFT UPPER TIBIA X-AXIS FORCE



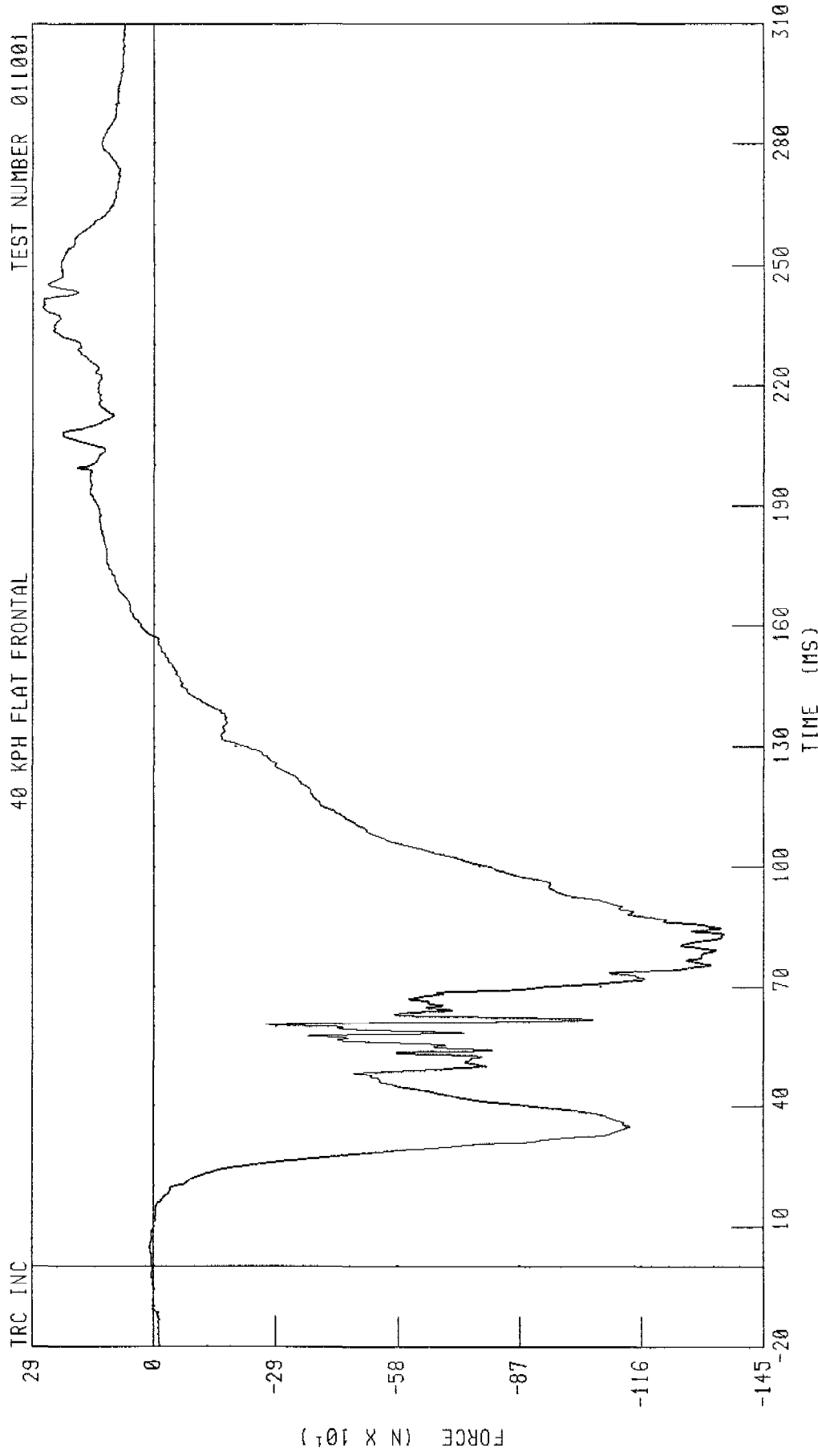
CHANNEL TBLXF1 FILTER CH CLASS 600

PEAK DATA 474 69 N @ 56 08 MS, -236 09 N @ 73 52 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

DRIVER LEFT UPPER TIBIA Z-AXIS FORCE

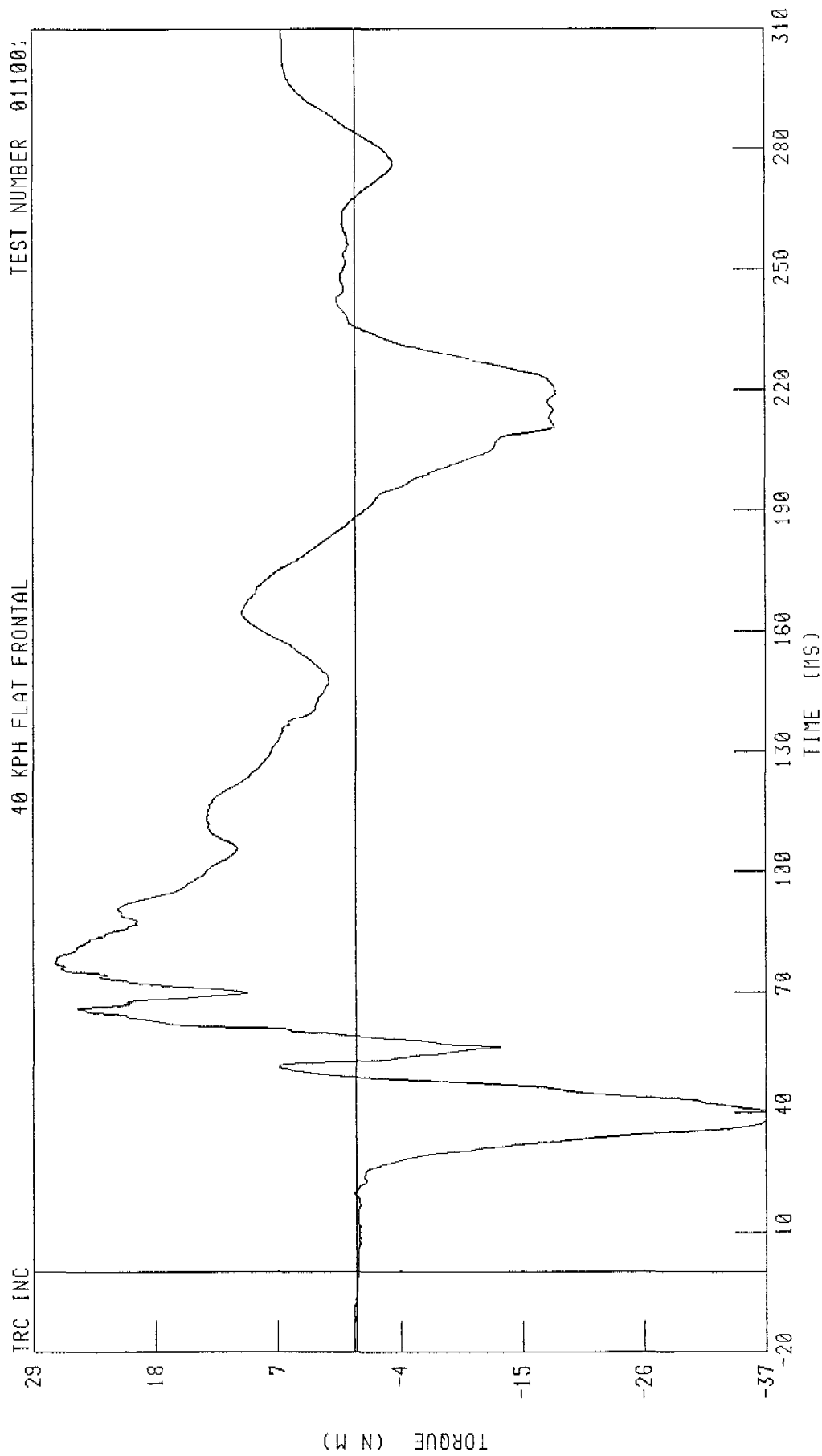
40 KPH FLAT FRONTAL TEST NUMBER 011001



CHANNEL TBLZF1 FILTER CH CLASS 600

PEAK DATA 265 96 N @ 239 52 MS, -1357 51 N @ 83 12 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
DRIVER LEFT UPPER TIBIA MOMENT ABOUT X AXIS

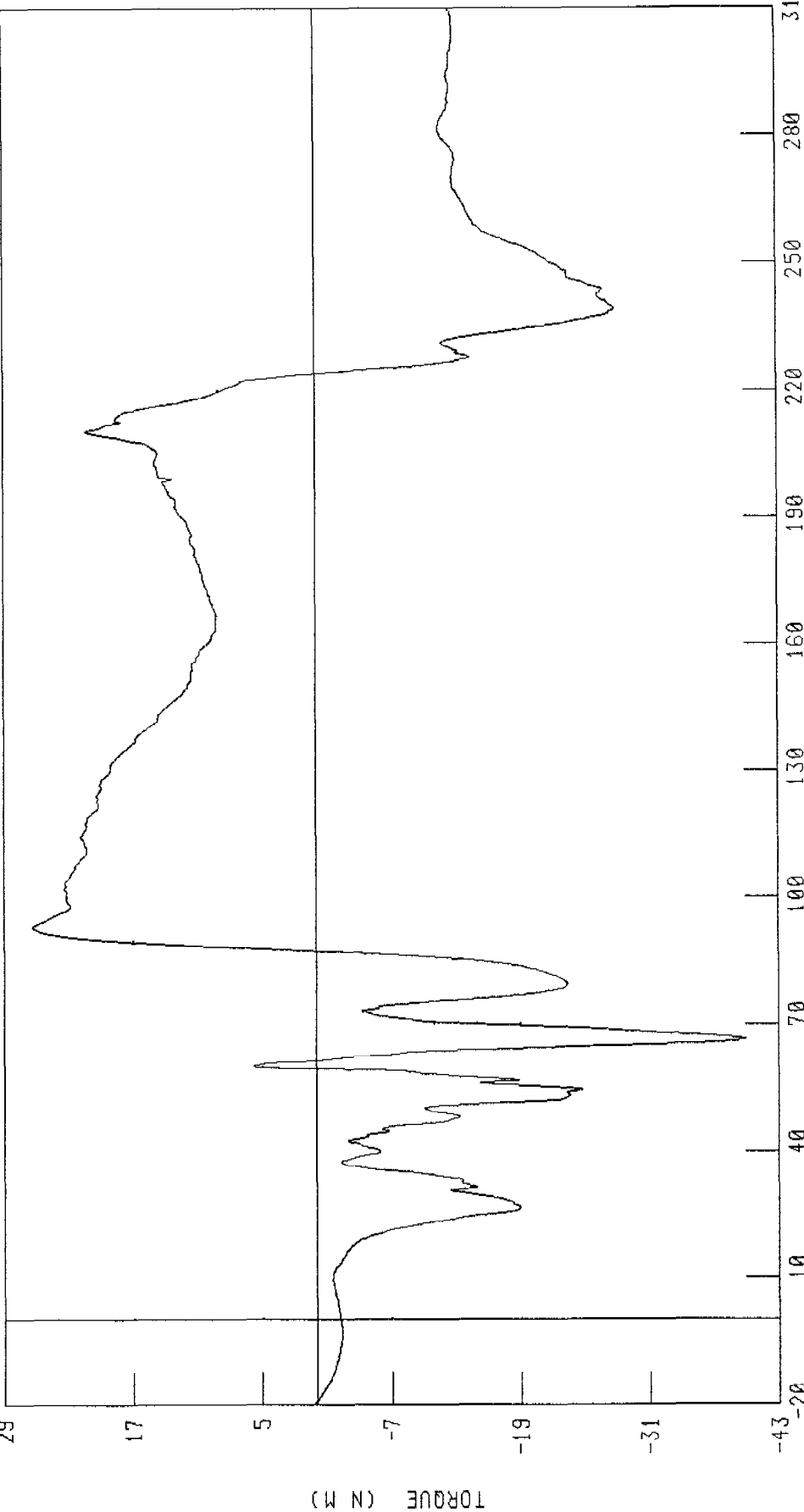


2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
DRIVER LEFT UPPER TIBIA MOMENT ABOUT Y AXIS

TEST NUMBER 011001

40 KPH FLAT FRONTAL

TRC INC



PEAK DATA 26 39 N M @ 93 28 MS, -39 92 N M @ 66 48 MS

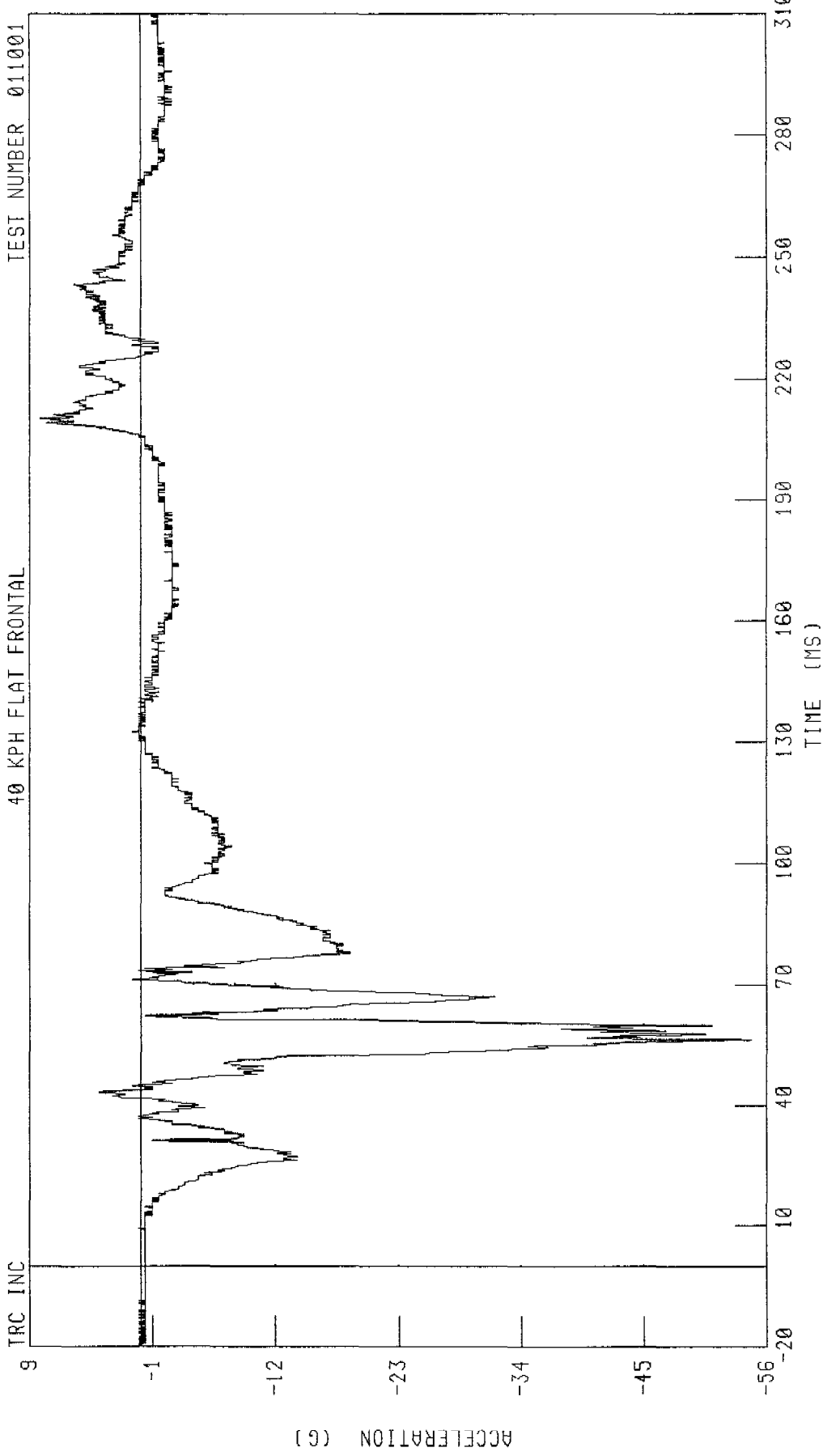
CHANNEL TBLYM1 FILTER CH CLASS 600

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

DRIVER LEFT TIBIA X-AXIS ACCELERATION

40 KPH FLAT FRONTAL

TEST NUMBER 011001



CHANNEL TBLXG1 FILTER CH CLASS 1000

PEAK DATA 9 01 6 0 210 08 MS, -54 75 G @ 56 24 MS

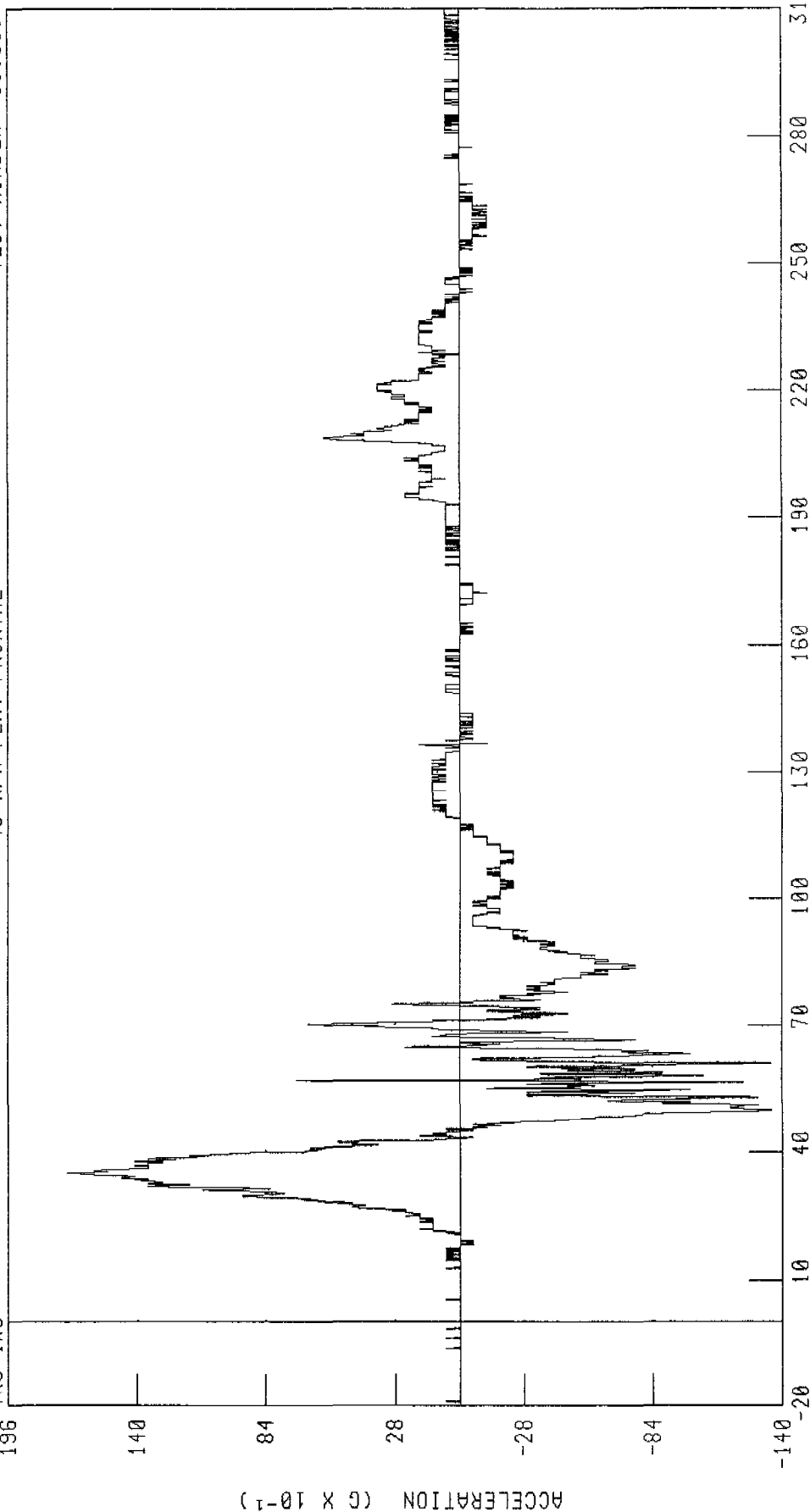
2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

DRIVER LEFT TIBIA Y-AXIS ACCELERATION

TEST NUMBER 011001

40 KPH FLAT FRONTAL

TRC INC



TIME (MS)

CHANNEL TBLYC1 FILTER CH CLASS 1000

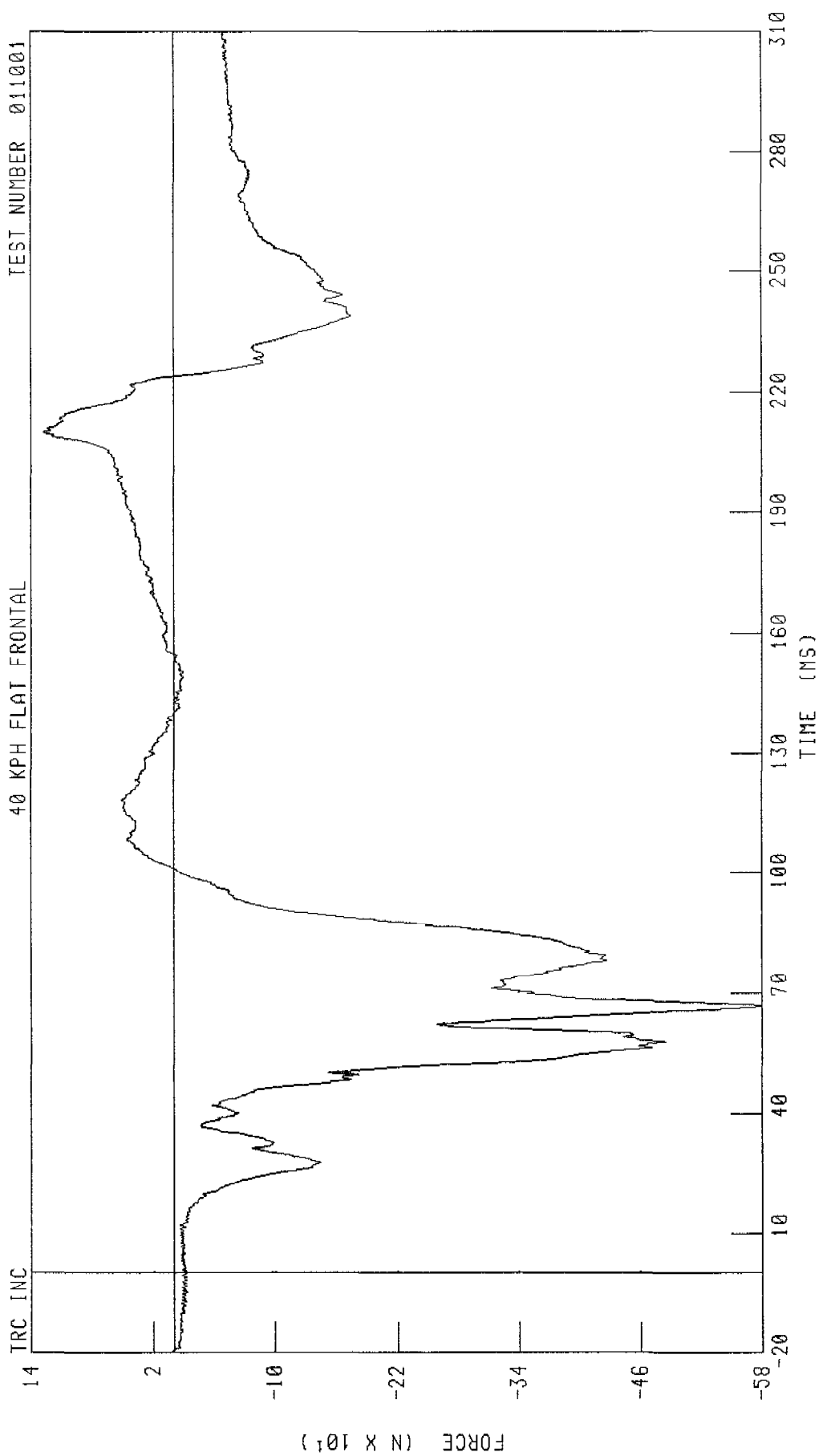
PEAK DATA 17 05 G @ 34 88 MS, -13 54 G @ 49 84 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

DRIVER LEFT LOWER TIBIA X-AXIS FORCE

40 KPH FLAT FRONTAL

TEST NUMBER 011001



CHANNEL ANLXF1 FILTER CH CLASS 600

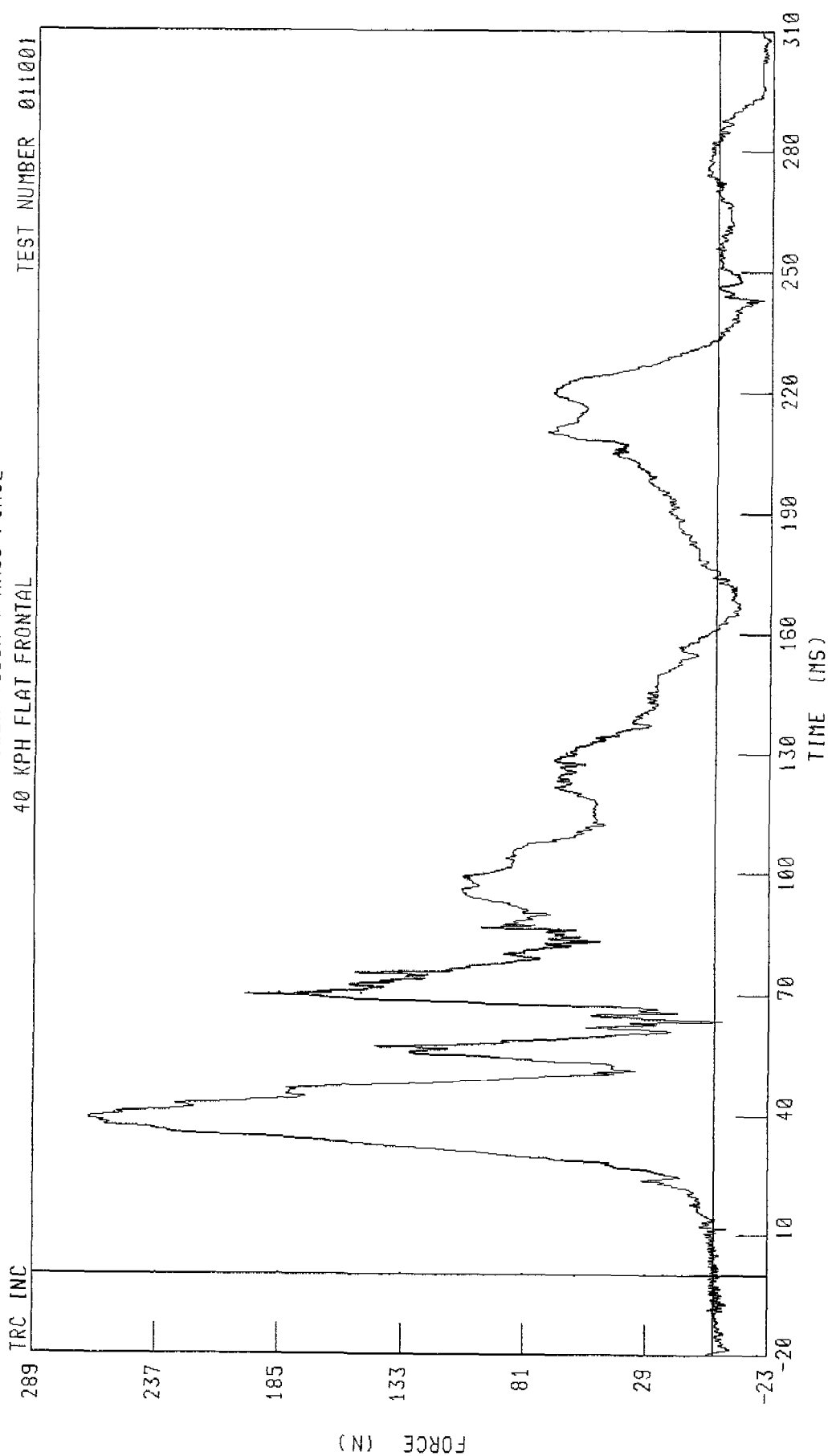
PEAK DATA 127 96 N @ 210 08 MS, -579 93 N @ 66 64 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

DRIVER LEFT LOWER TIBIA Y-AXIS FORCE

40 KPH FLAT FRONTAL

TEST NUMBER 011001



CHANNEL ANLYF1 FILTER CH CLASS 600

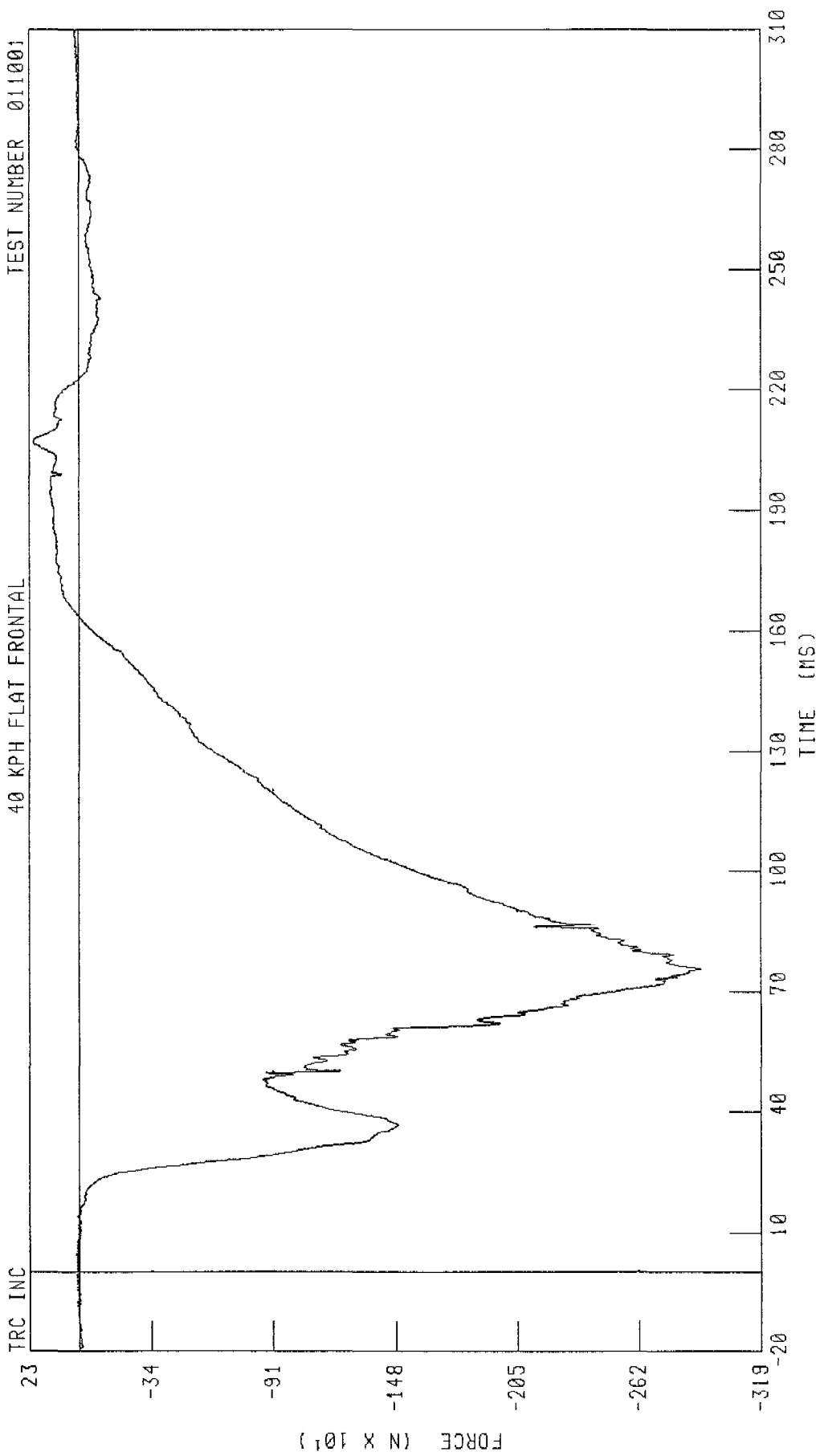
PEAK DATA 265 48 N @ 39 44 MS, -21 73 N @ 307 76 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

DRIVER LEFT LOWER TIBIA Z-AXIS FORCE

40 KPH FLAT FRONTAL

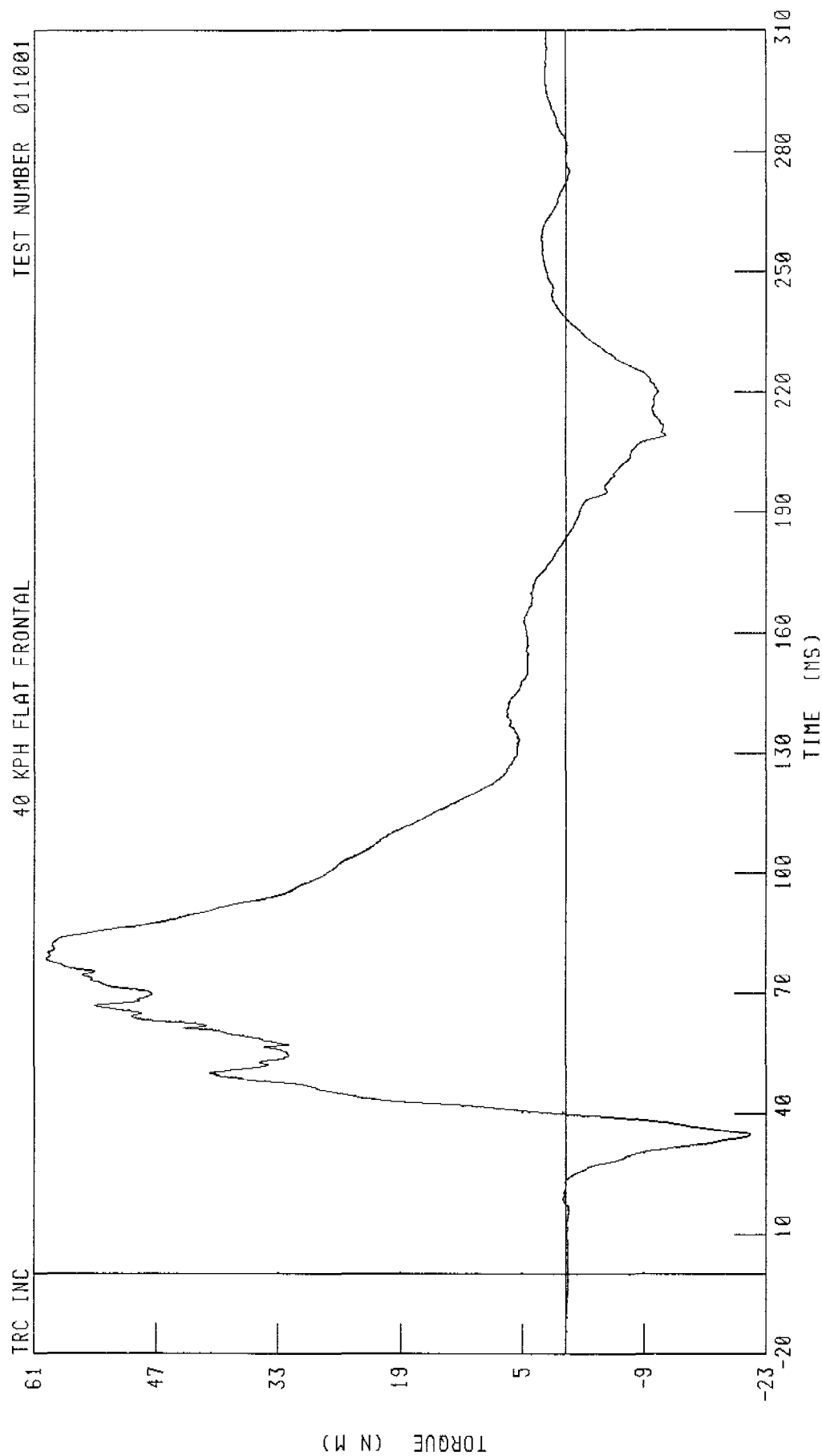
TEST NUMBER 011001



PEAK DATA 212 32 N @ 207 28 MS, -2909 15 N @ 75 84 MS

CHANNEL ANLZF1 FILTER CH CLASS 600

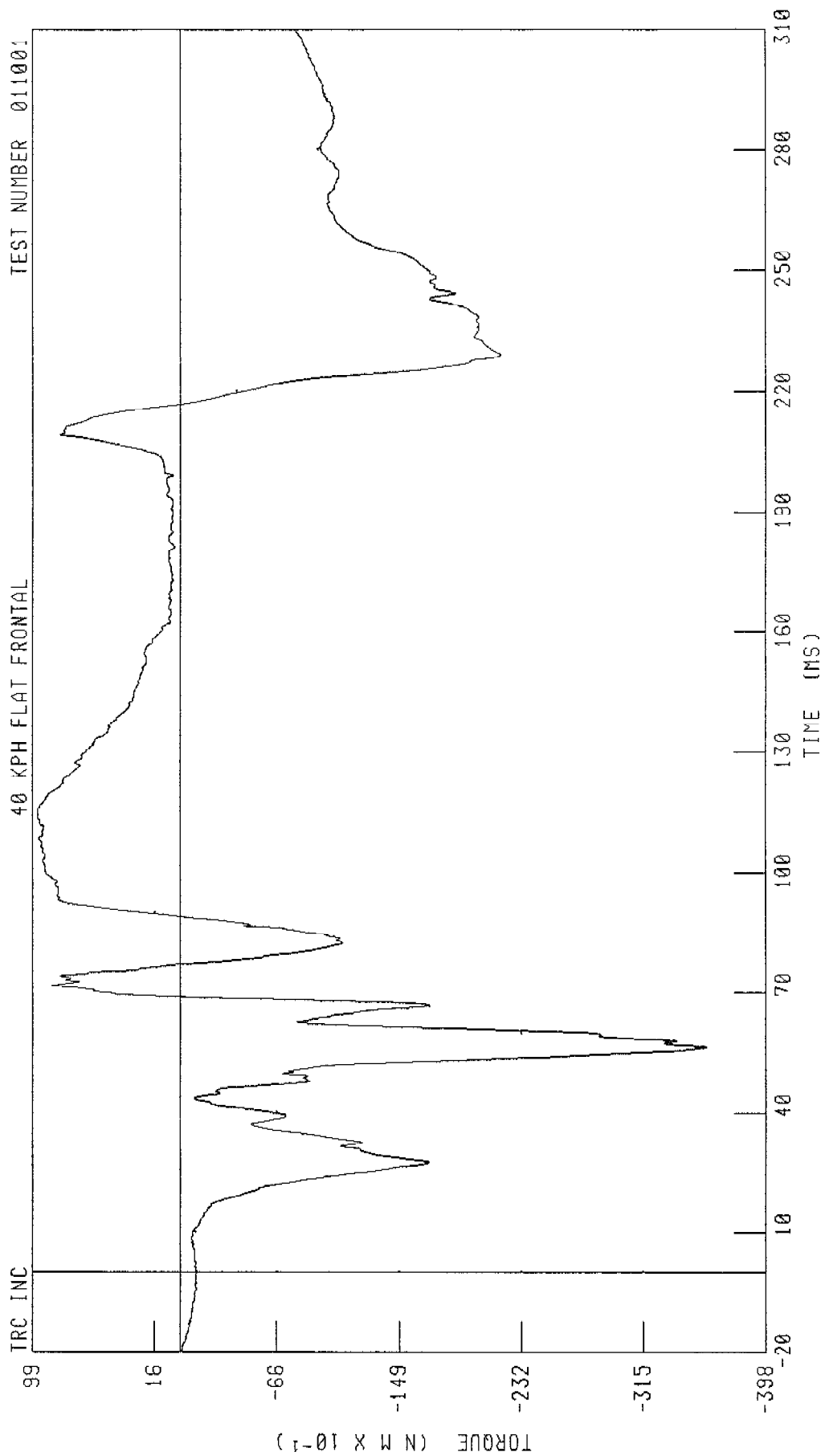
2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
DRIVER LEFT LOWER TIBIA MOMENT ABOUT X AXIS



CHANNEL ANLXN1 FILTER CH CLASS 600

PEAK DATA 59 66 N M @ 78 40 MS, -21 27 N M @ 34 64 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
 DRIVER LEFT LOWER TIBIA MOMENT ABOUT Y AXIS



TEST NUMBER 011001

CHANNEL ANLYM1 FILTER CH CLASS 600

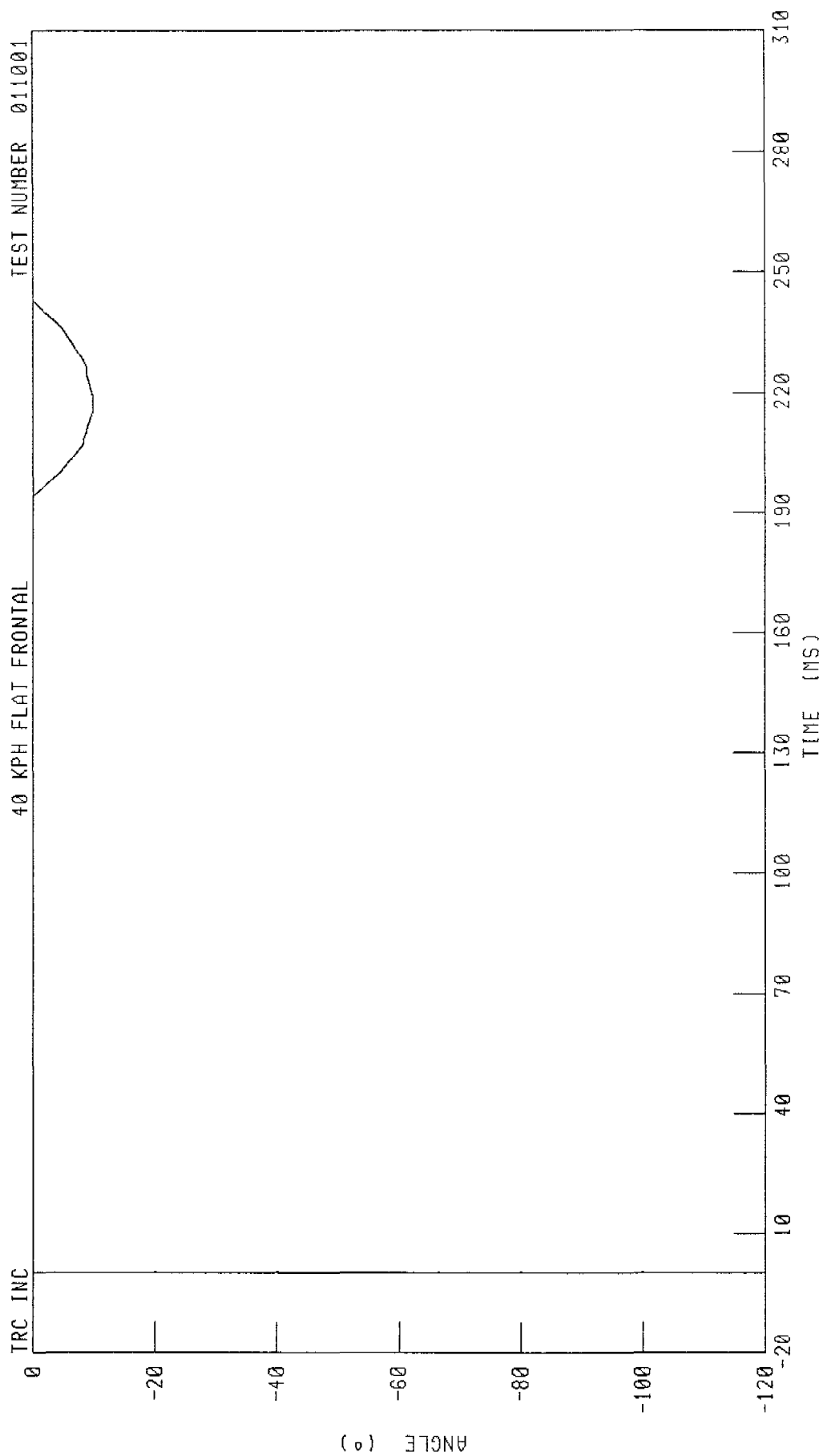
PEAK DATA 9 70 N M @ 113 92 MS, -35 82 N M @ 56 48 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

DRIVER LEFT FOOT TO ANKLE X-AXIS DISPLACEMENT

40 KPH FLAT FRONTAL

TEST NUMBER 011001



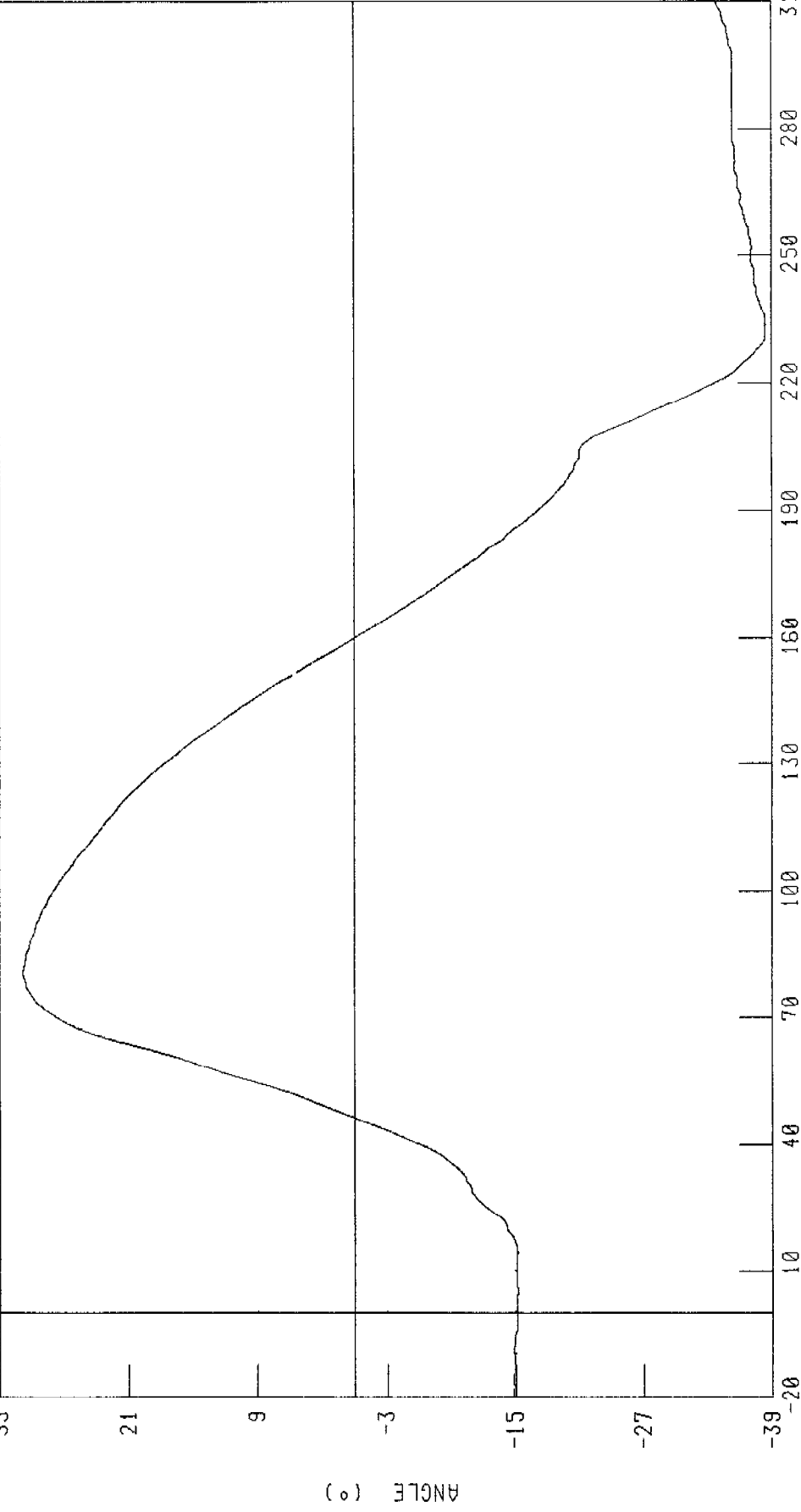
PEAK DATA 36 31 ° @ 79 84 MS, -9 84 ° @ 218 48 MS

CHANNEL FTLXD1 FILTER CH CLASS 130

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
DRIVER LEFT FOOT TO ANKLE Y-AXIS DISPLACEMENT
40 KPH FLAT FRONTAL

TEST NUMBER 011001

TRC INC



TIME (MS)

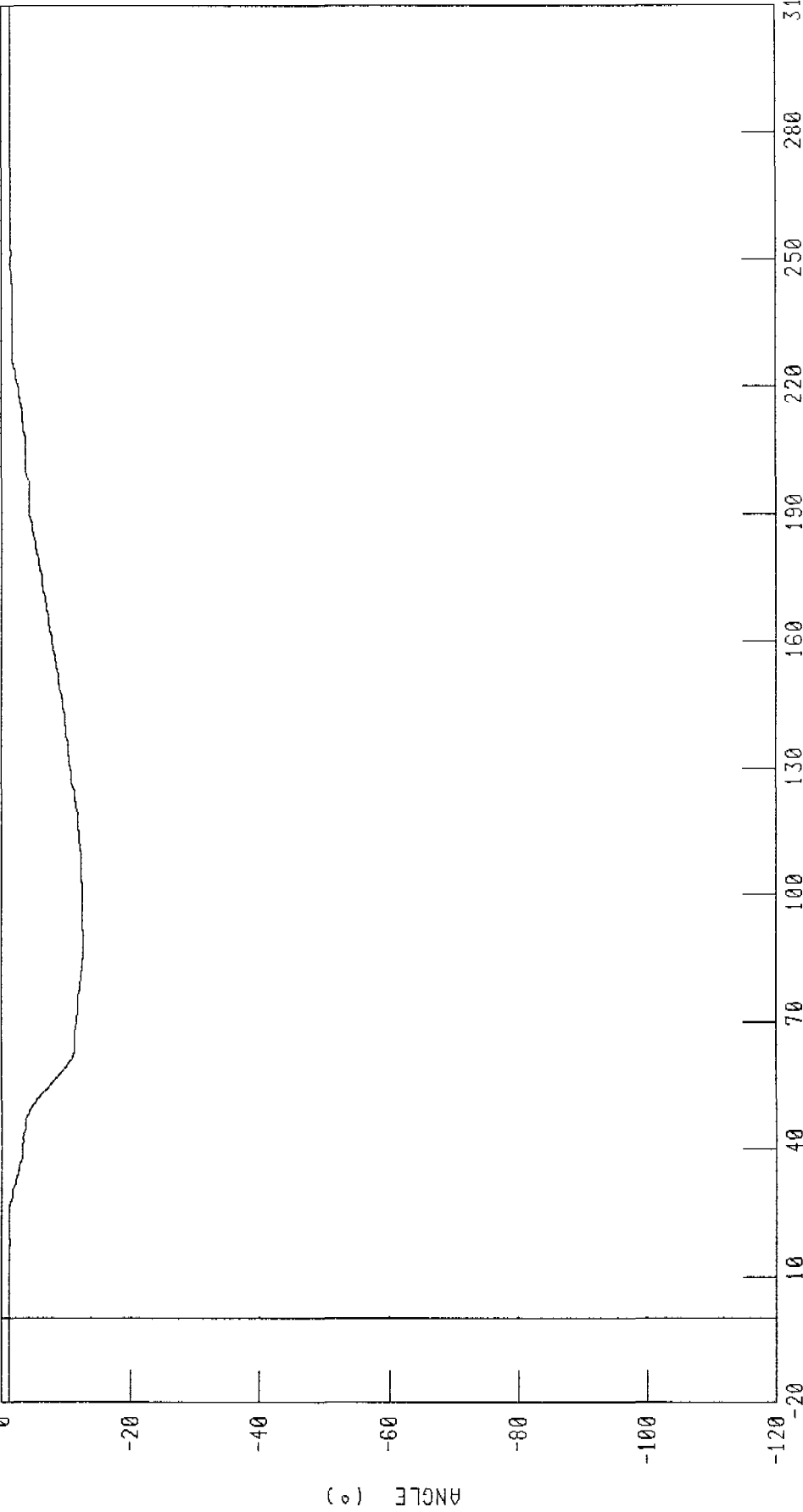
CHANNEL FTLYD1 FILTER CH CLASS 180 PEAK DATA 30 86 ° 0 80 48 MS, -38 45 ° 0 233 84 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
DRIVER LEFT FOOT TO ANKLE Z-AXIS DISPLACEMENT

TEST NUMBER 011001

40 KPH FLAT FRONTAL

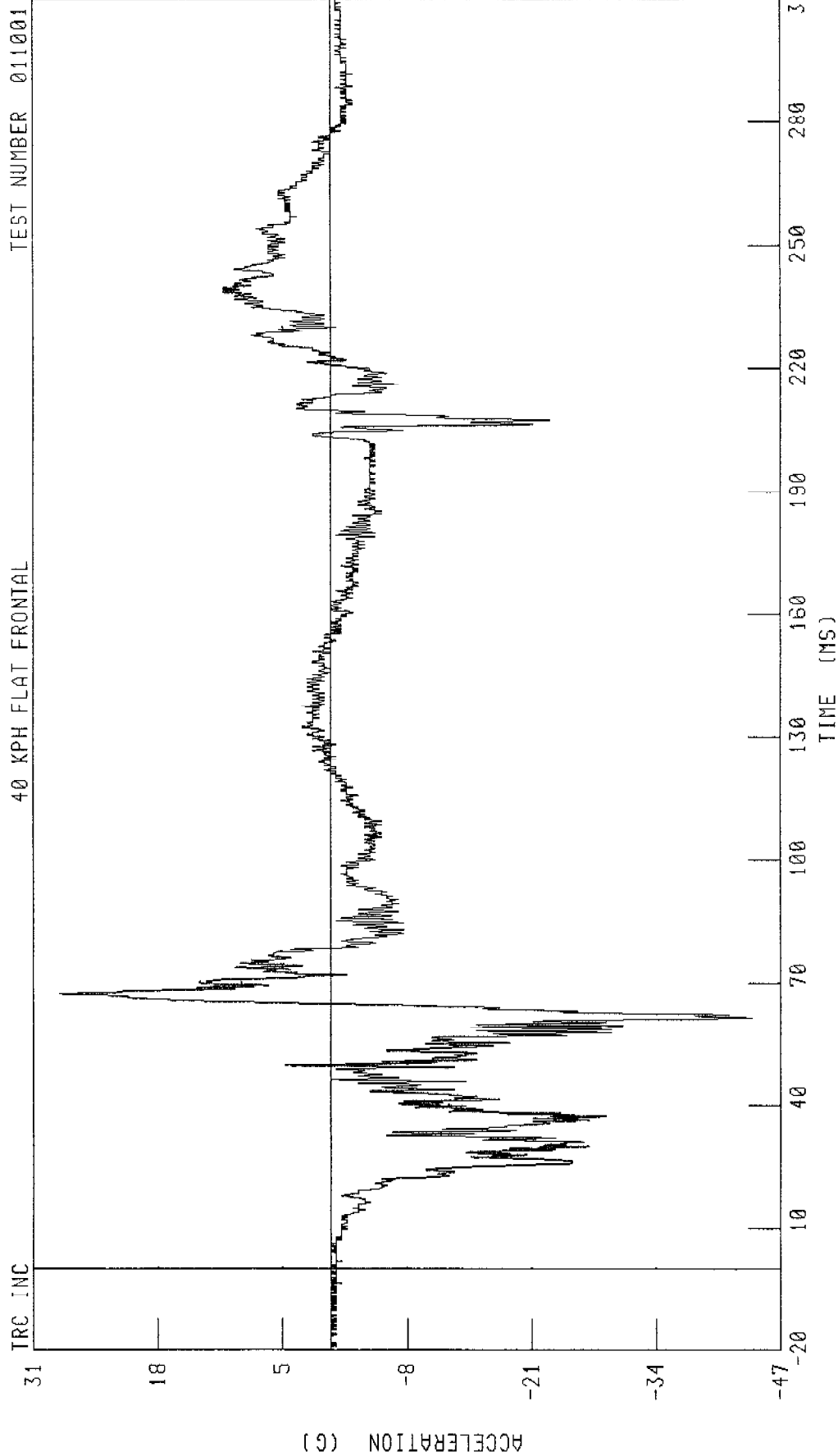
TRC INC



CHANNEL FTLZD1 FILTER CH CLASS 180

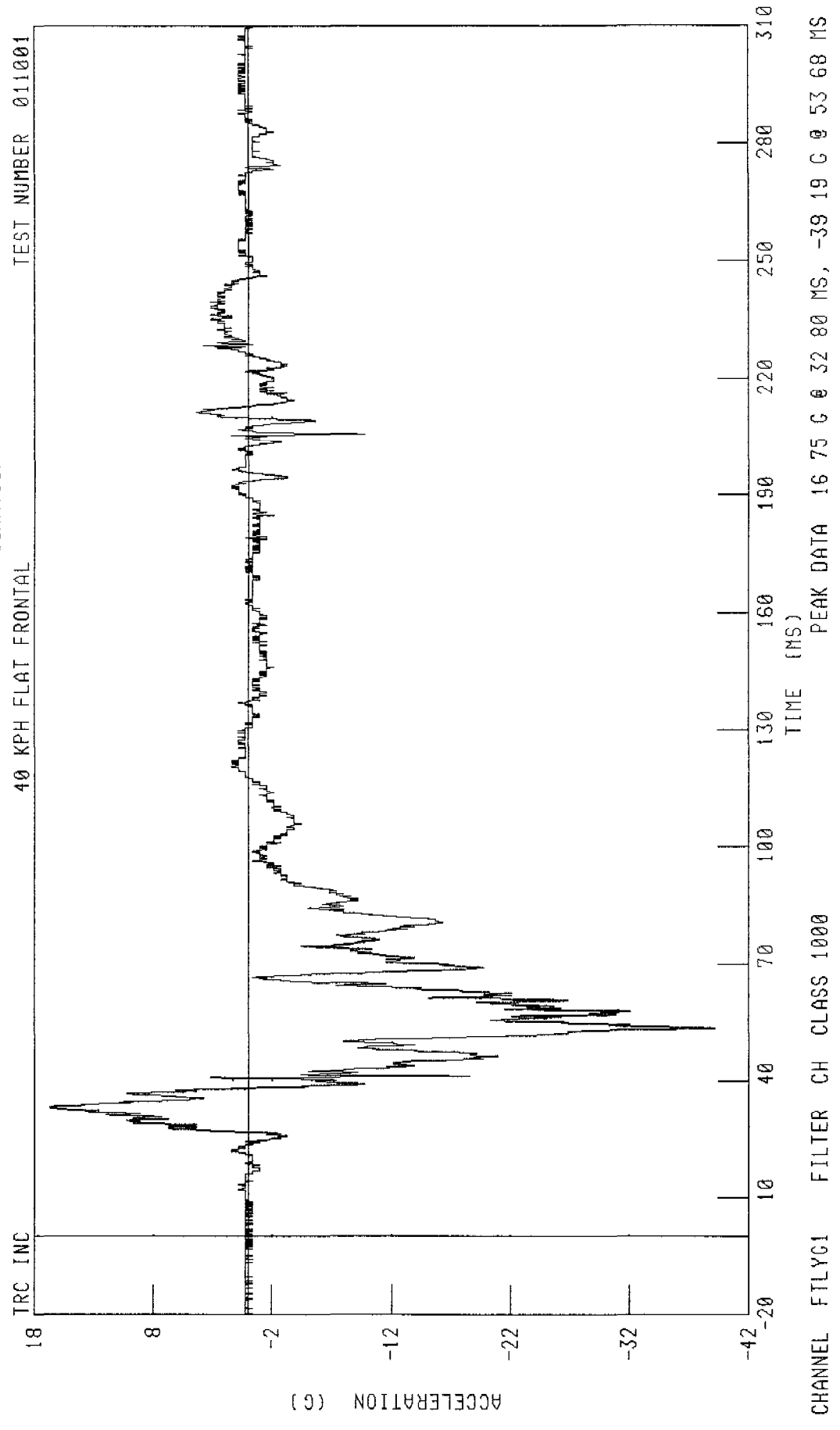
PEAK DATA -1 10 ° @ 3 36 MS, -12 73 ° @ 88 96 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
DRIVER LEFT FOOT X-AXIS ACCELERATION
40 KPH FLAT FRONTAL

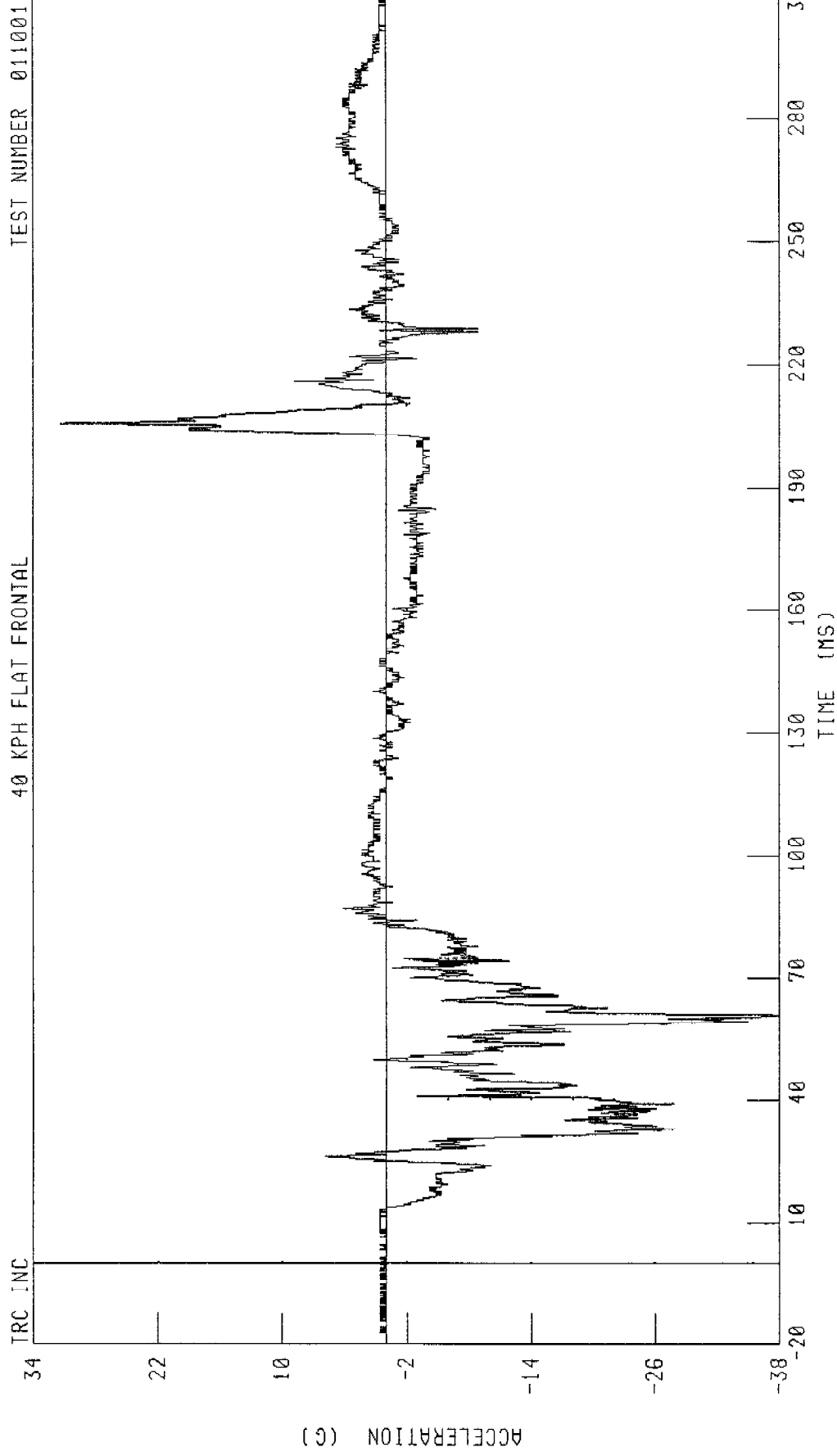


CHANNEL FTLXG1 FILTER CH CLASS 1000 PEAK DATA 28 22 G @ 67 28 MS, -44 00 G @ 61 60 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
DRIVER LEFT FOOT Y-AXIS ACCELERATION



2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
 DRIVER LEFT FOOT Z-AXIS ACCELERATION
 40 KPH FLAT FRONTAL



CHANNEL FTLZG1 FILTER CH CLASS 1000 PEAK DATA 31 39 C 0 205 B4 MS, -37 93 C 0 60 88 MS

TEST NUMBER 011001

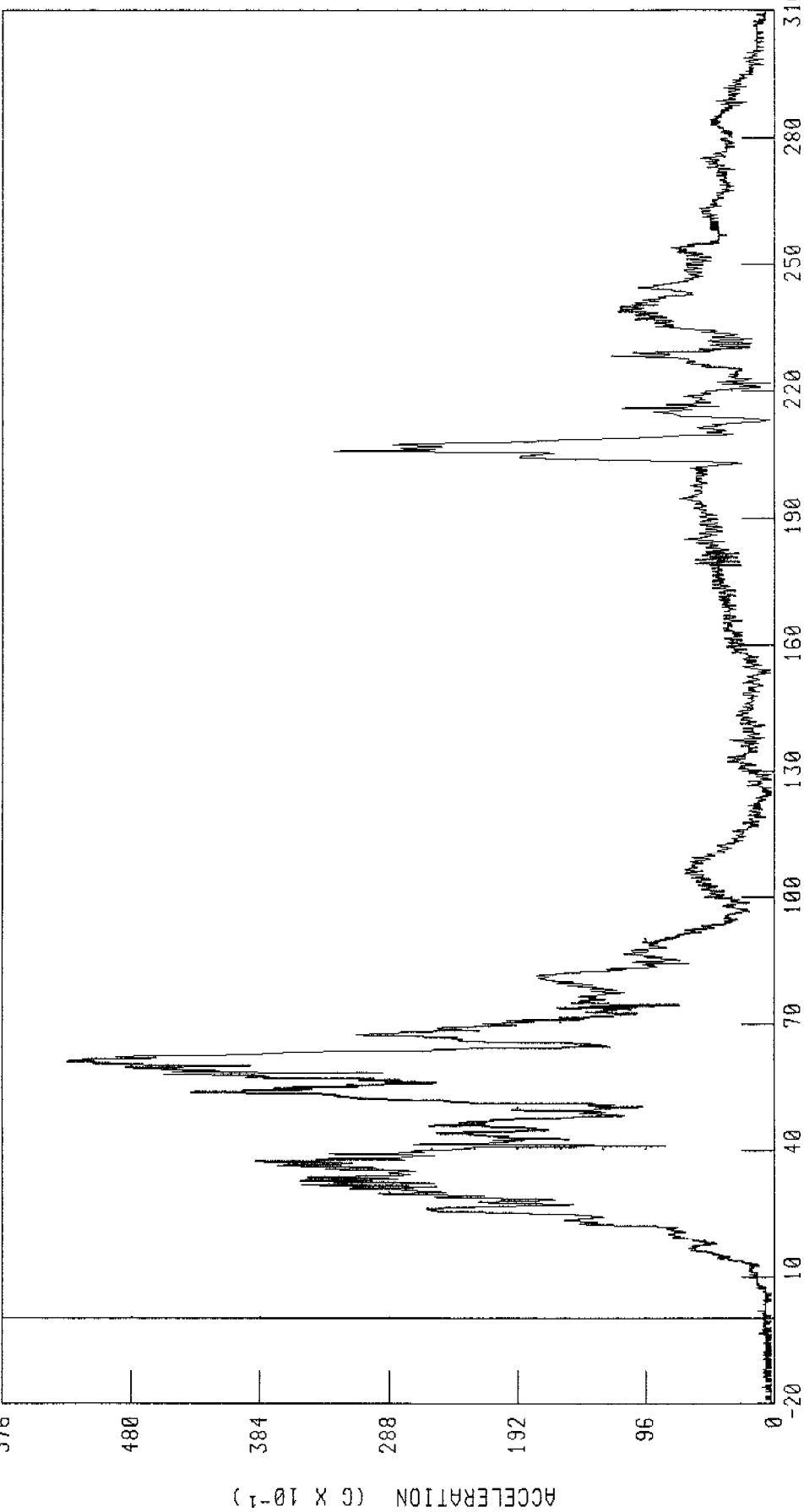
2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

DRIVER LEFT FOOT RESULTANT ACCELERATION

TEST NUMBER 011001

40 KPH FLAT FRONTAL

TRC INC

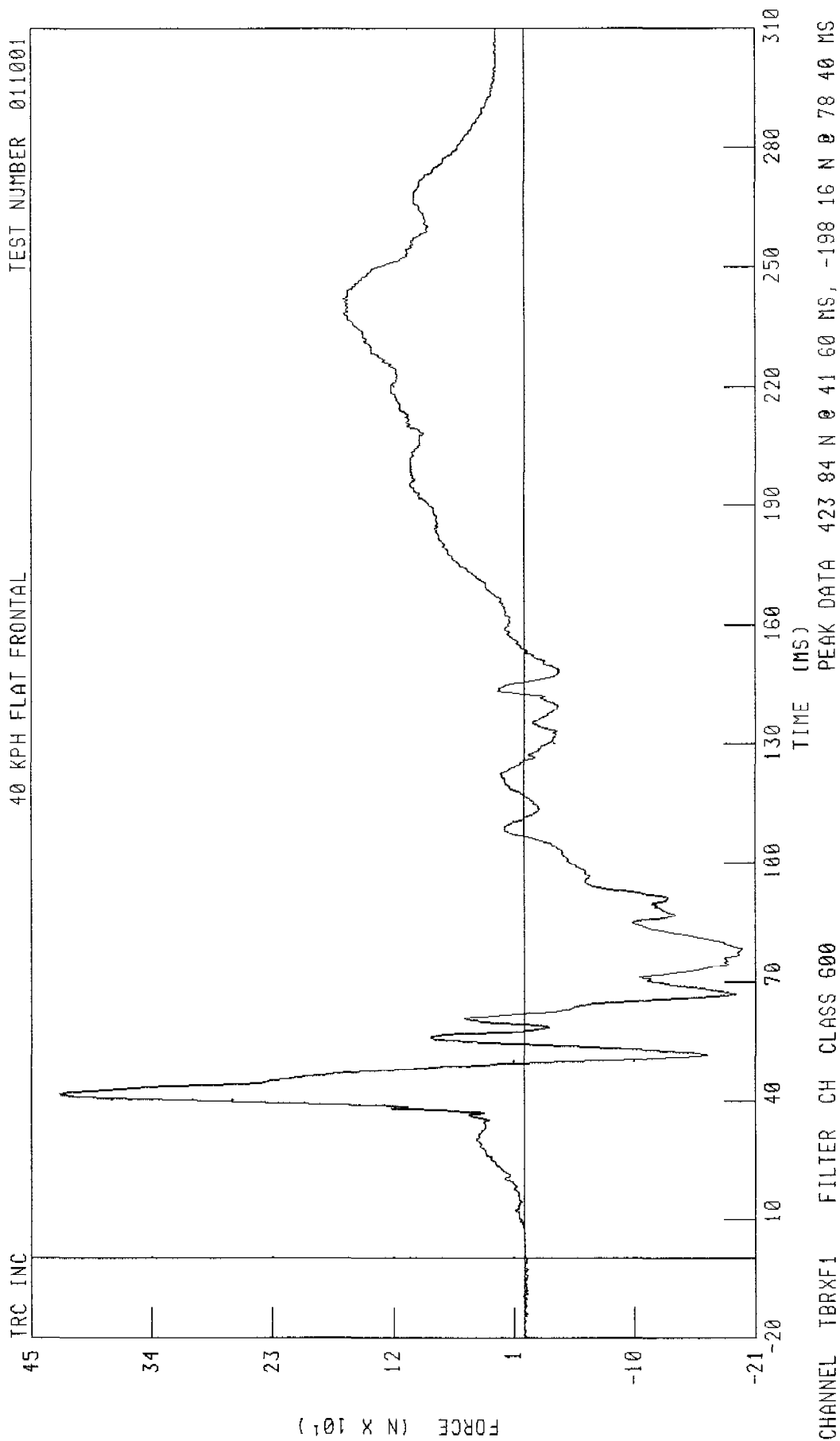


TIME (MS)

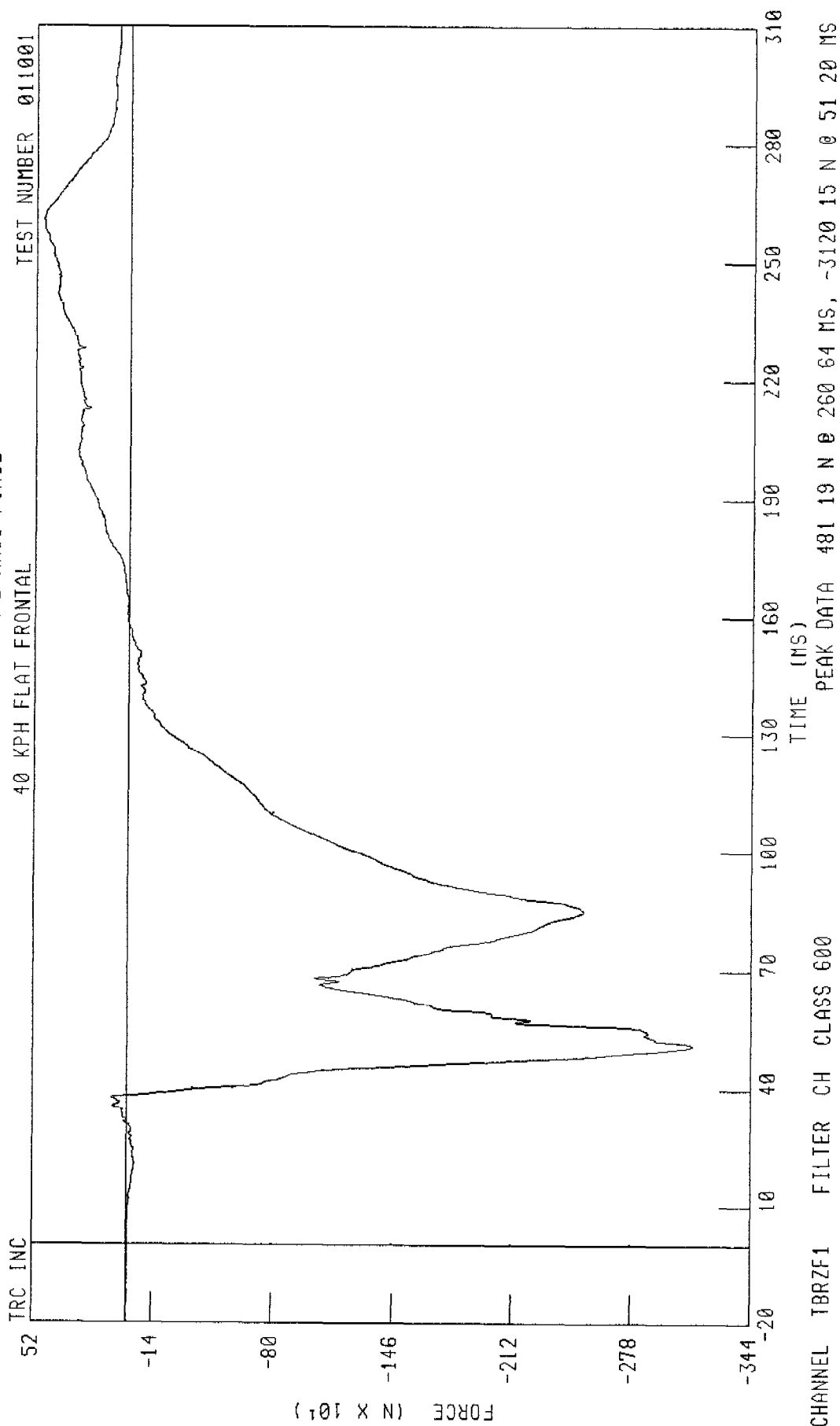
CHANNEL FTLRG1 FILTER CH CLASS 1000

PEAK DATA 52 79 G @ 61 04 MS, 0 26 G @ -19 92 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
DRIVER RIGHT UPPER TIBIA X-AXIS FORCE



2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
DRIVER RIGHT UPPER TIBIA Z-AXIS FORCE

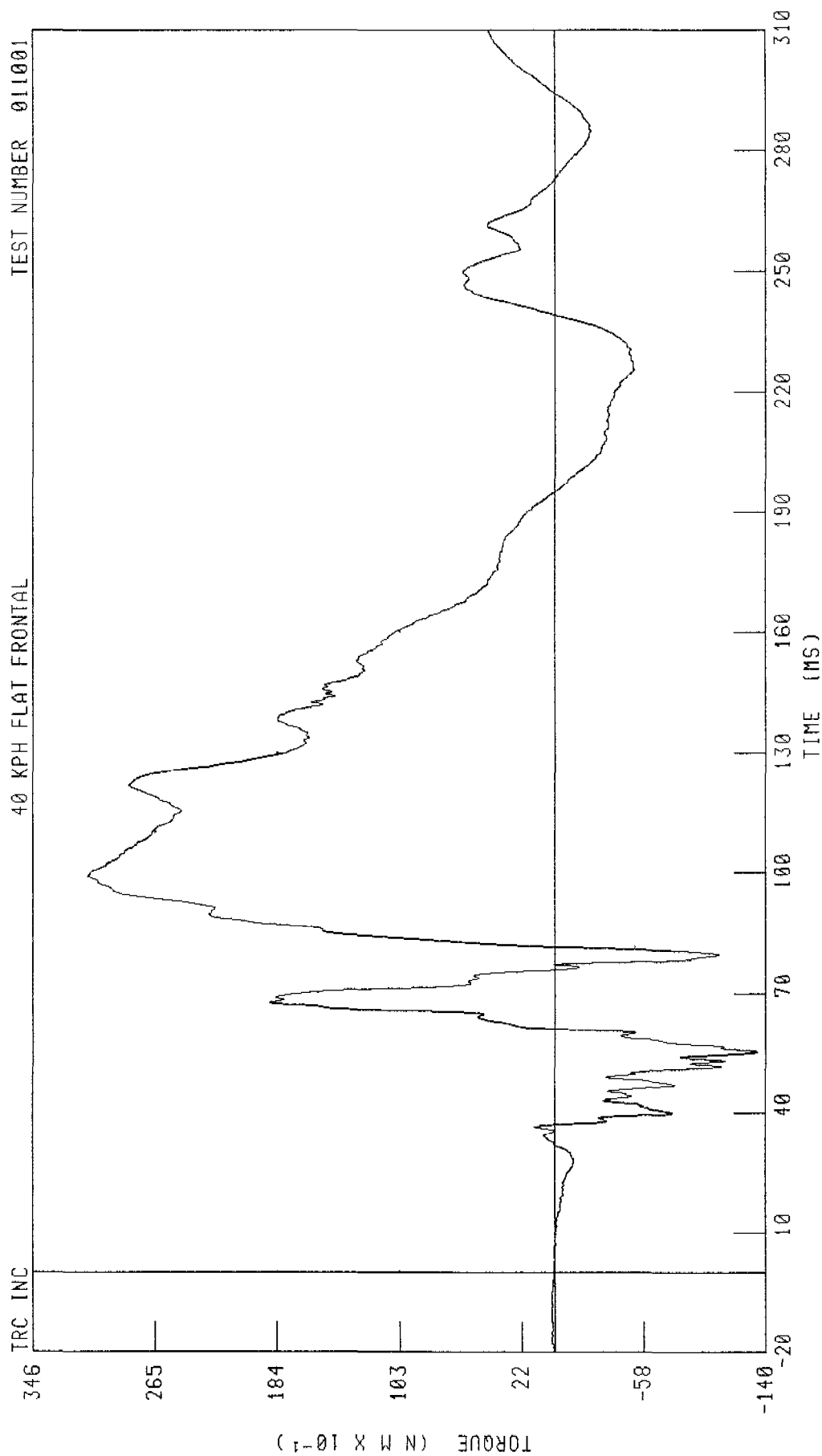


2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

DRIVER RIGHT UPPER TIBIA MOMENT ABOUT X AXIS

40 KPH FLAT FRONTAL

TEST NUMBER 011001



CHANNEL TBRXM1 FILTER CH CLASS 600

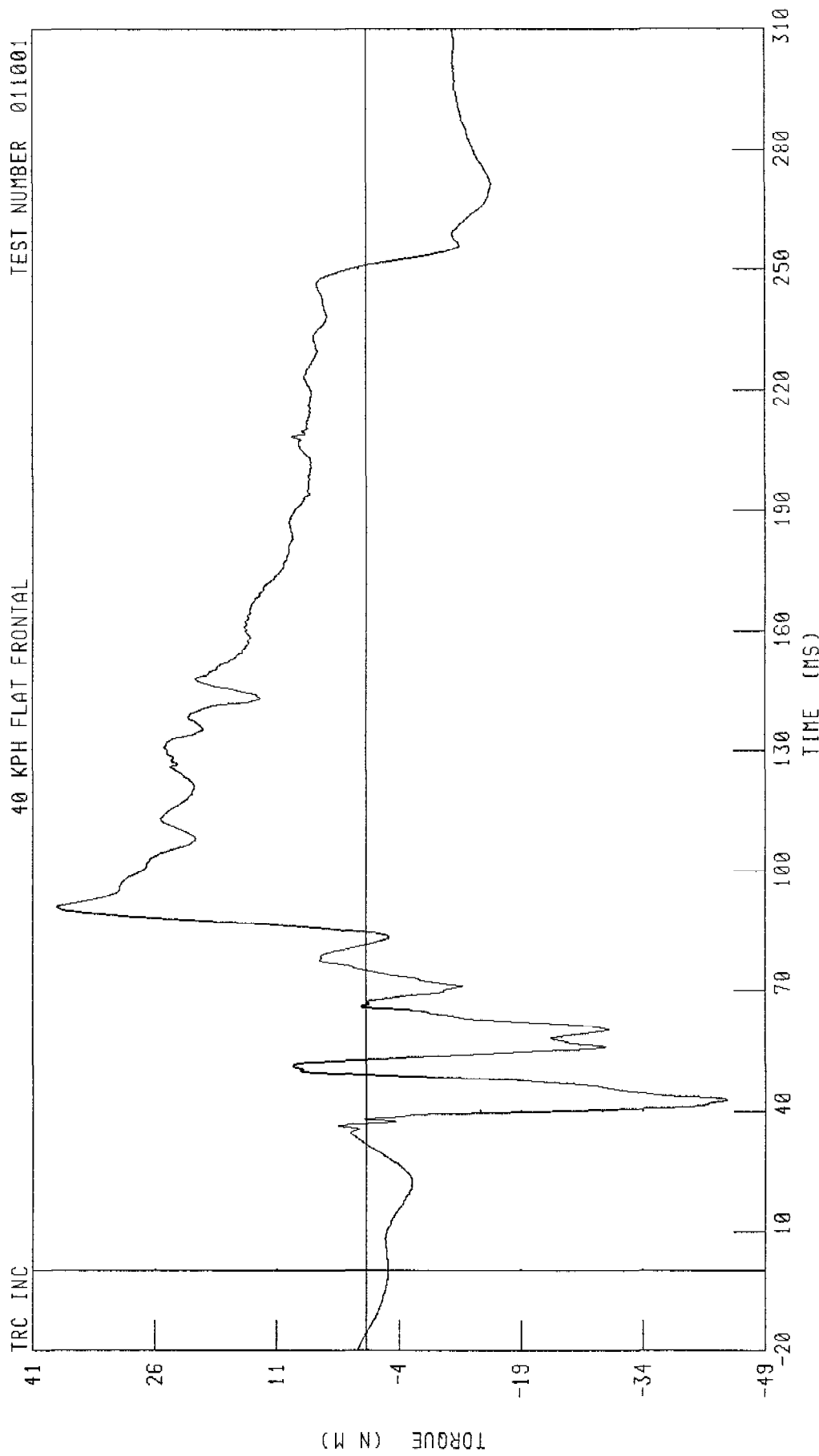
PEAK DATA 30 96 N M @ 99 04 MS, -13 43 N M @ 55 20 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

DRIVER RIGHT UPPER TIBIA MOMENT ABOUT Y AXIS

40 KPH FLAT FRONTAL

TEST NUMBER 011001

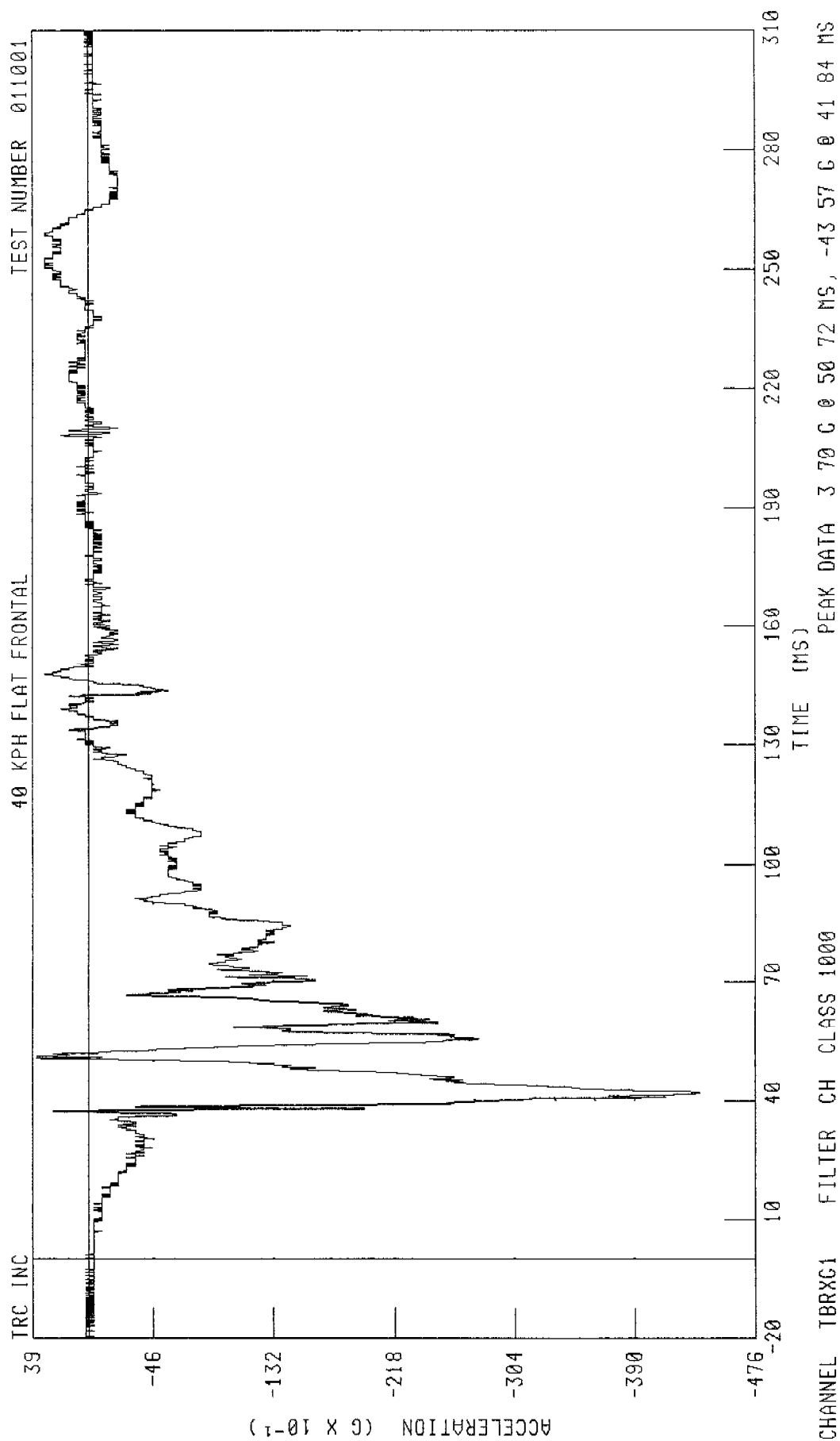


TIME (MS)

PEAK DATA 38 06 N M @ 91 20 MS, -44 37 N M @ 42 88 MS

CHANNEL TBRYM1 FILTER CH CLASS 600

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
 DRIVER RIGHT TIBIA X-AXIS ACCELERATION

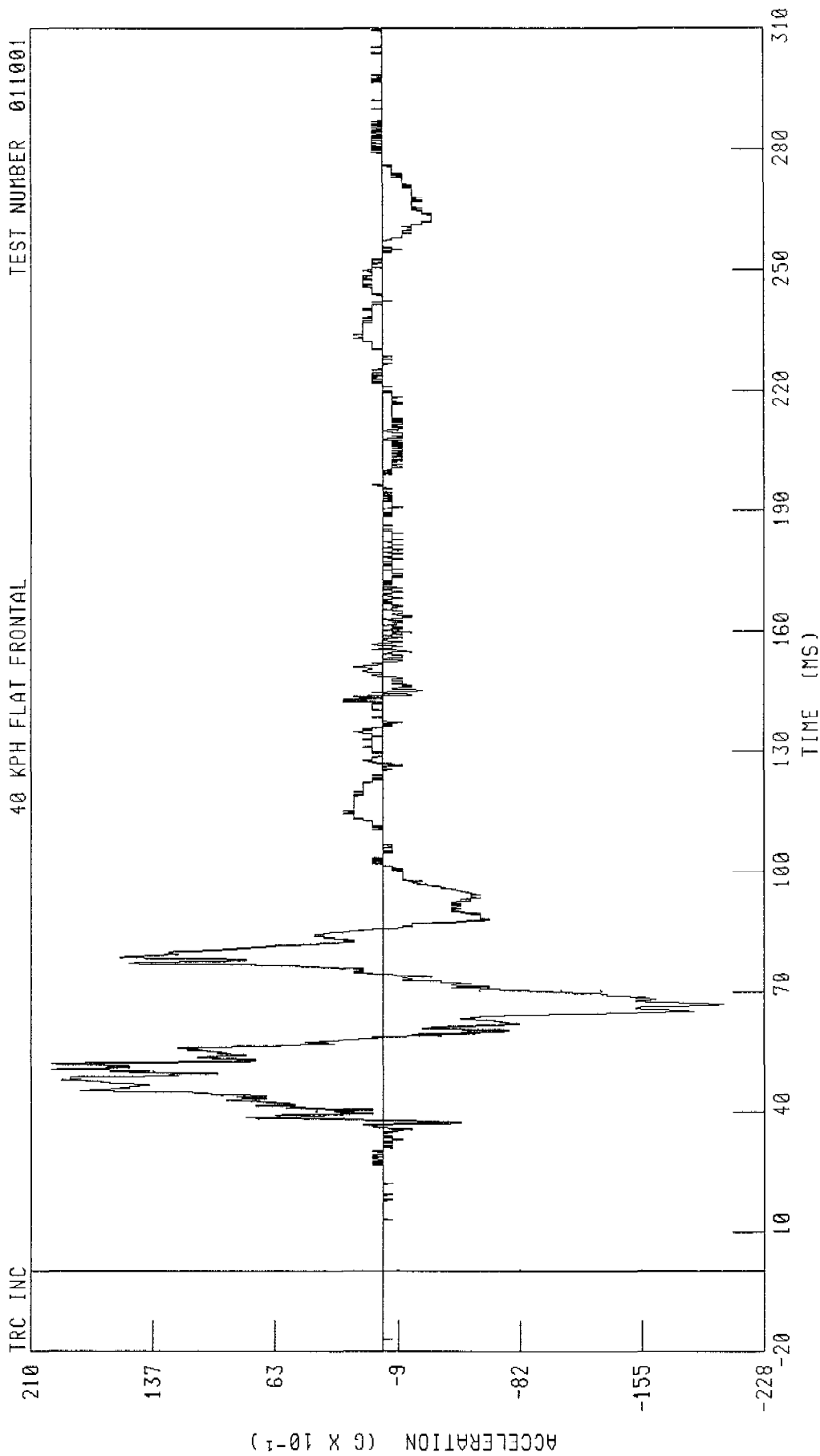


2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

DRIVER RIGHT TIBIA Y-AXIS ACCELERATION

40 KPH FLAT FRONTAL

TEST NUMBER 011001



CHANNEL TBRYG1 FILTER CH CLASS 1000

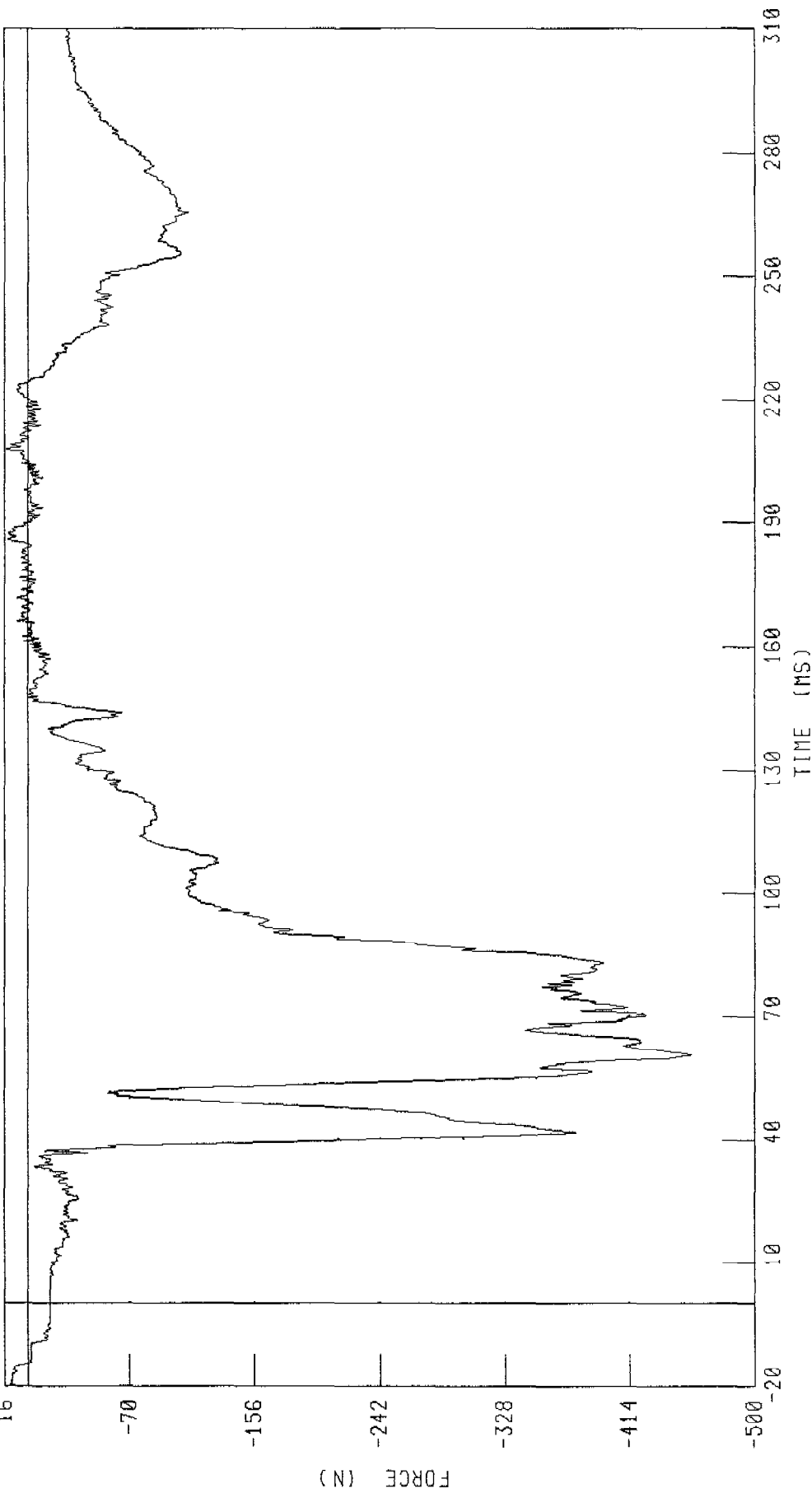
PEAK DATA 19 80 G @ 50 64 MS, -20 37 G @ 66 72 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
DRIVER RIGHT LOWER TIBIA X-AXIS FORCE

TRC INC

40 KPH FLAT FRONTAL

TEST NUMBER 011001



CHANNEL ANRXF1 FILTER CH CLASS 600

PEAK DATA 14 96 N @ 208 24 MS, -456 54 N @ 60 64 MS

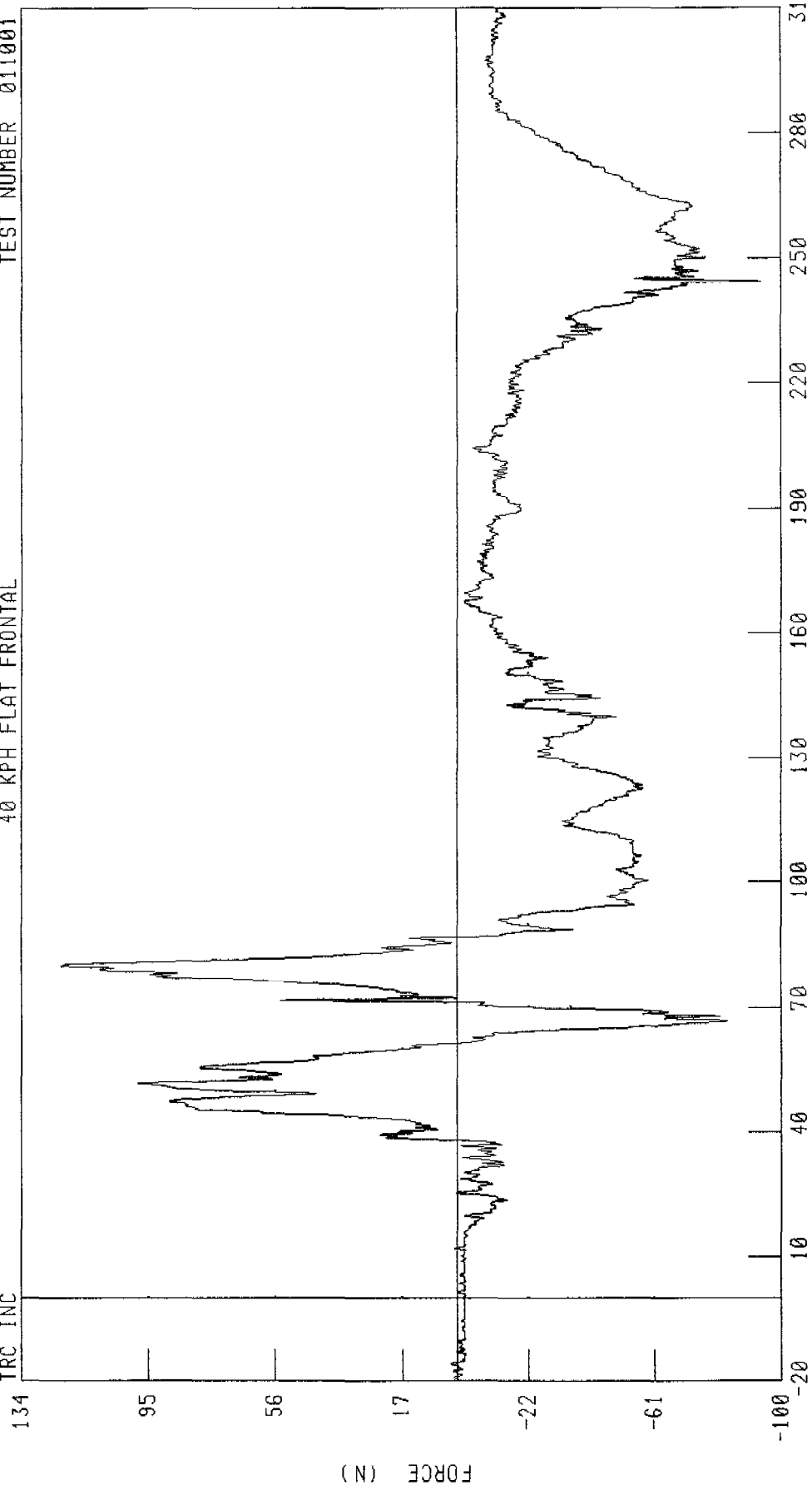
2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

DRIVER RIGHT LOWER TIBIA Y-AXIS FORCE

TEST NUMBER 011001

40 KPH FLAT FRONTAL

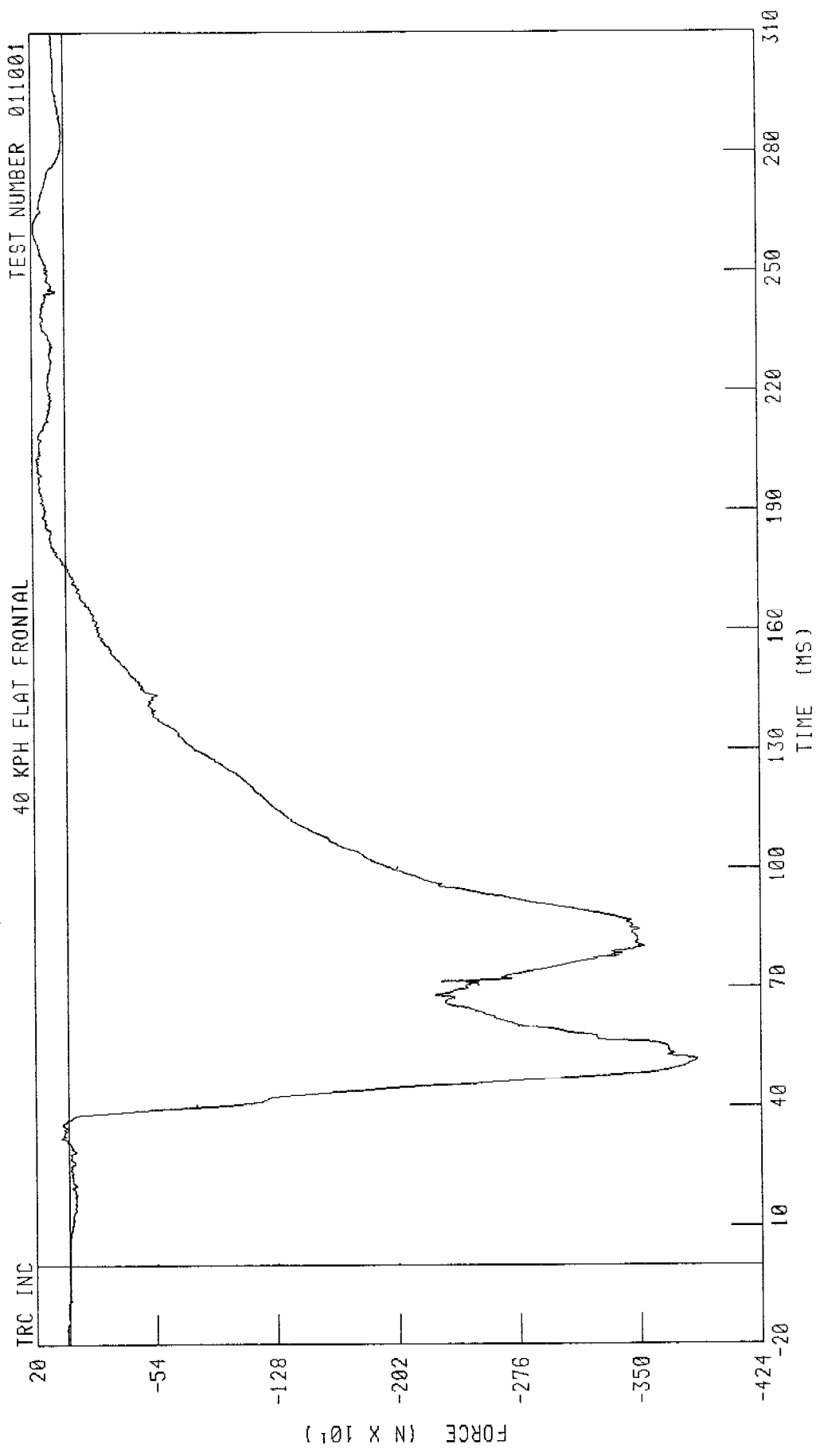
TRC INC



CHANNEL ANRYF1 FILTER CH CLASS 600

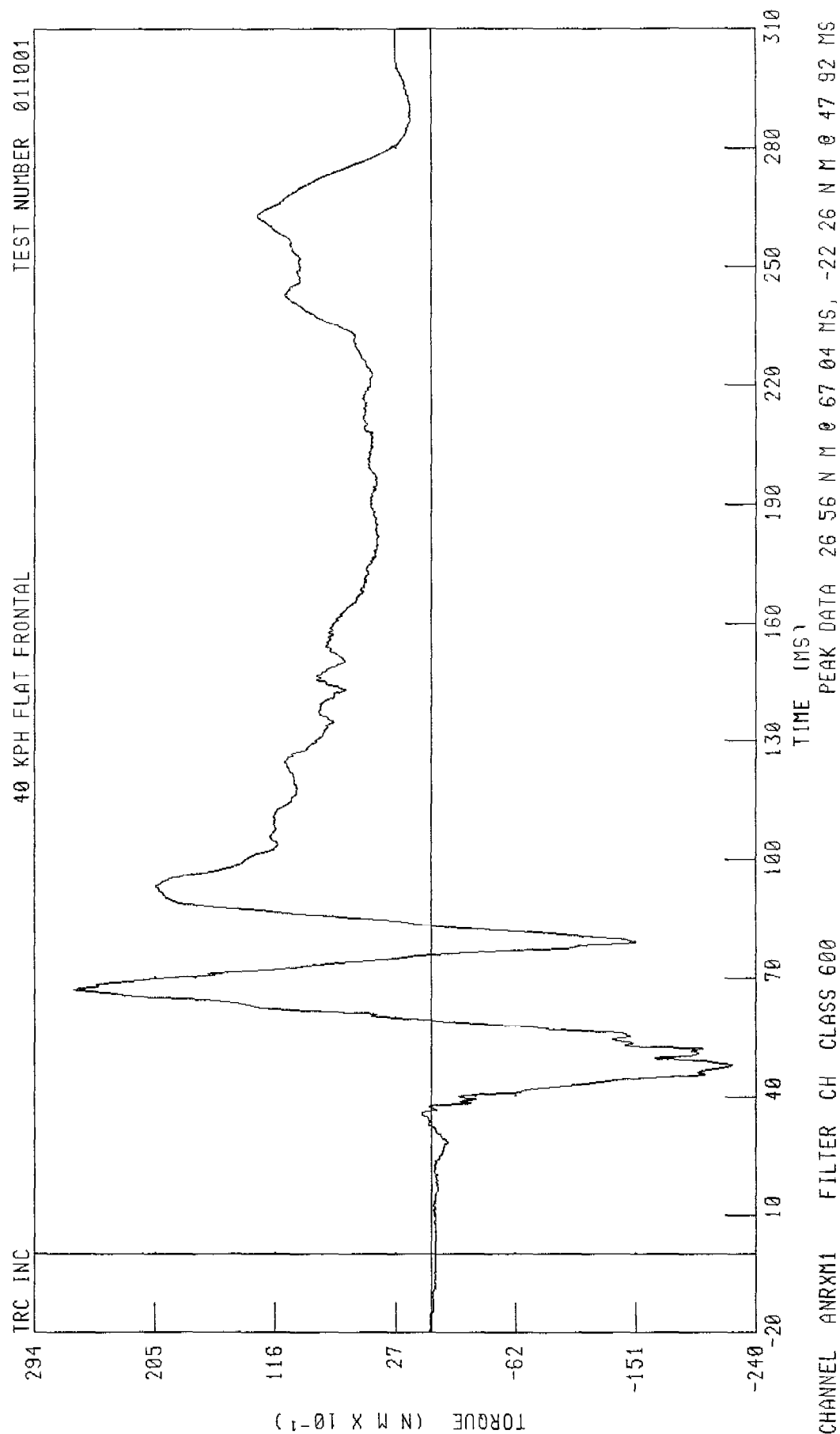
PEAK DATA 121 96 N @ 79 76 MS, -93 62 N @ 244 48 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
DRIVER RIGHT LOWER TIBIA Z-AXIS FORCE
40 KPH FLAT FRONTAL

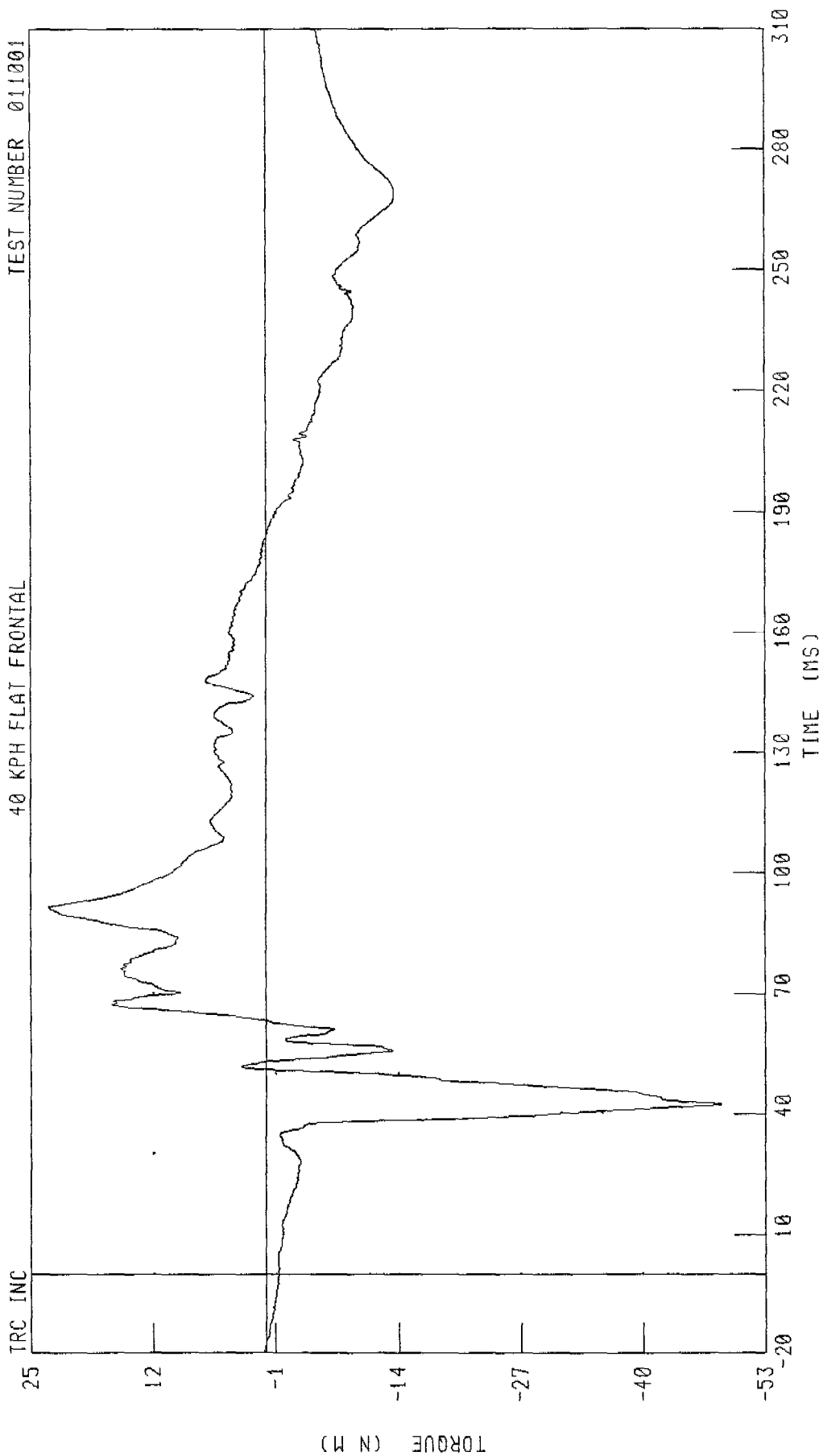


TRC INC TEST NUMBER 011001
CHANNEL ANRZF1 FILTER CH CLASS 600
PEAK DATA 190 82 N @ 261 84 MS, -3853 99 N @ 51 76 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
 DRIVER RIGHT LOWER TIBIA MOMENT ABOUT X AXIS



2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
DRIVER RIGHT LOWER TIBIA MOMENT ABOUT Y AXIS



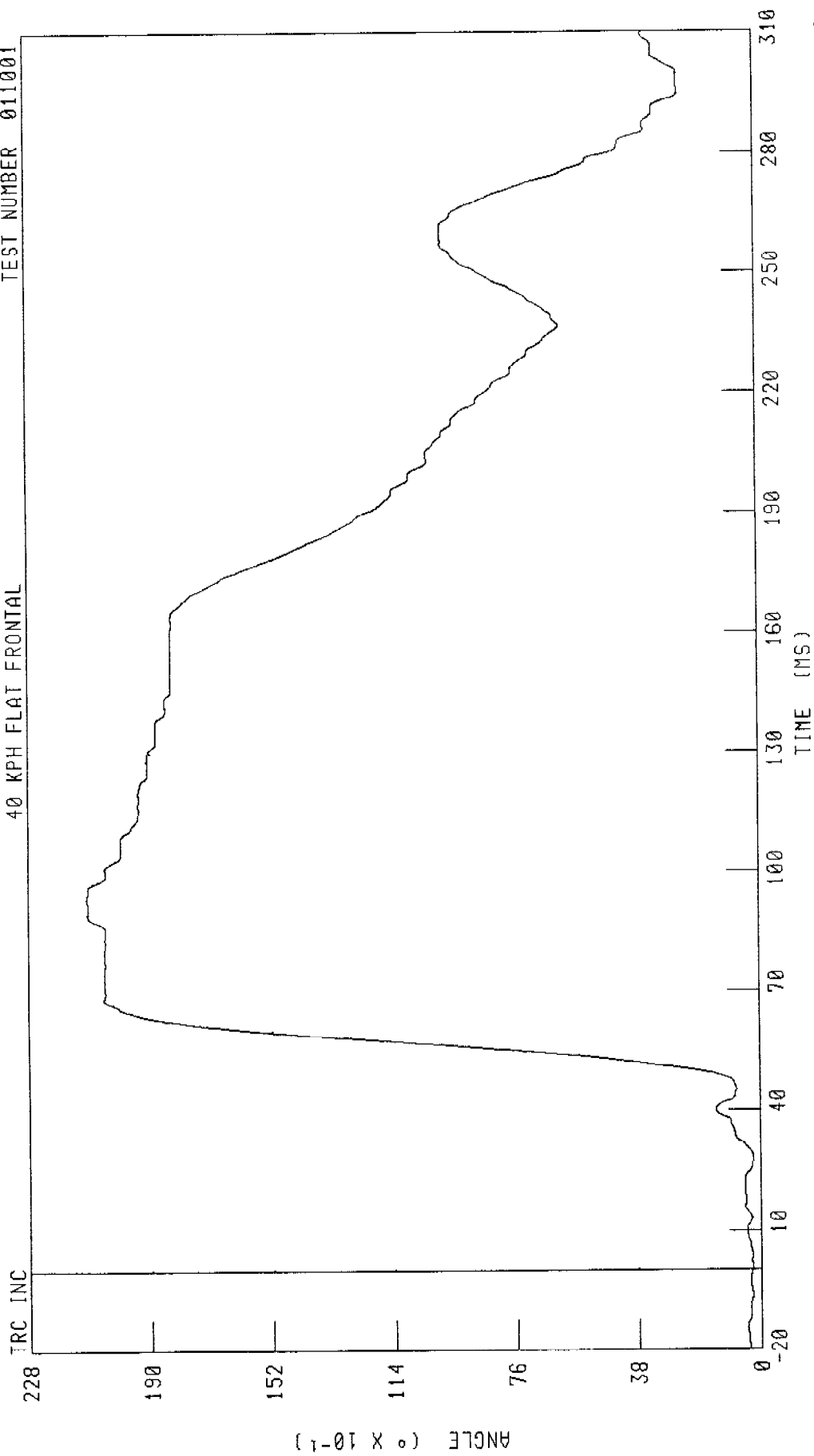
CHANNEL ANRYM1 FILTER CH CLASS 600

PEAK DATA 23 12 N M @ 91 28 MS, -48 32 N M @ 42 32 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
DRIVER RIGHT FOOT TO ANKLE X-AXIS DISPLACEMENT

40 KPH FLAT FRONTAL

TEST NUMBER 011001



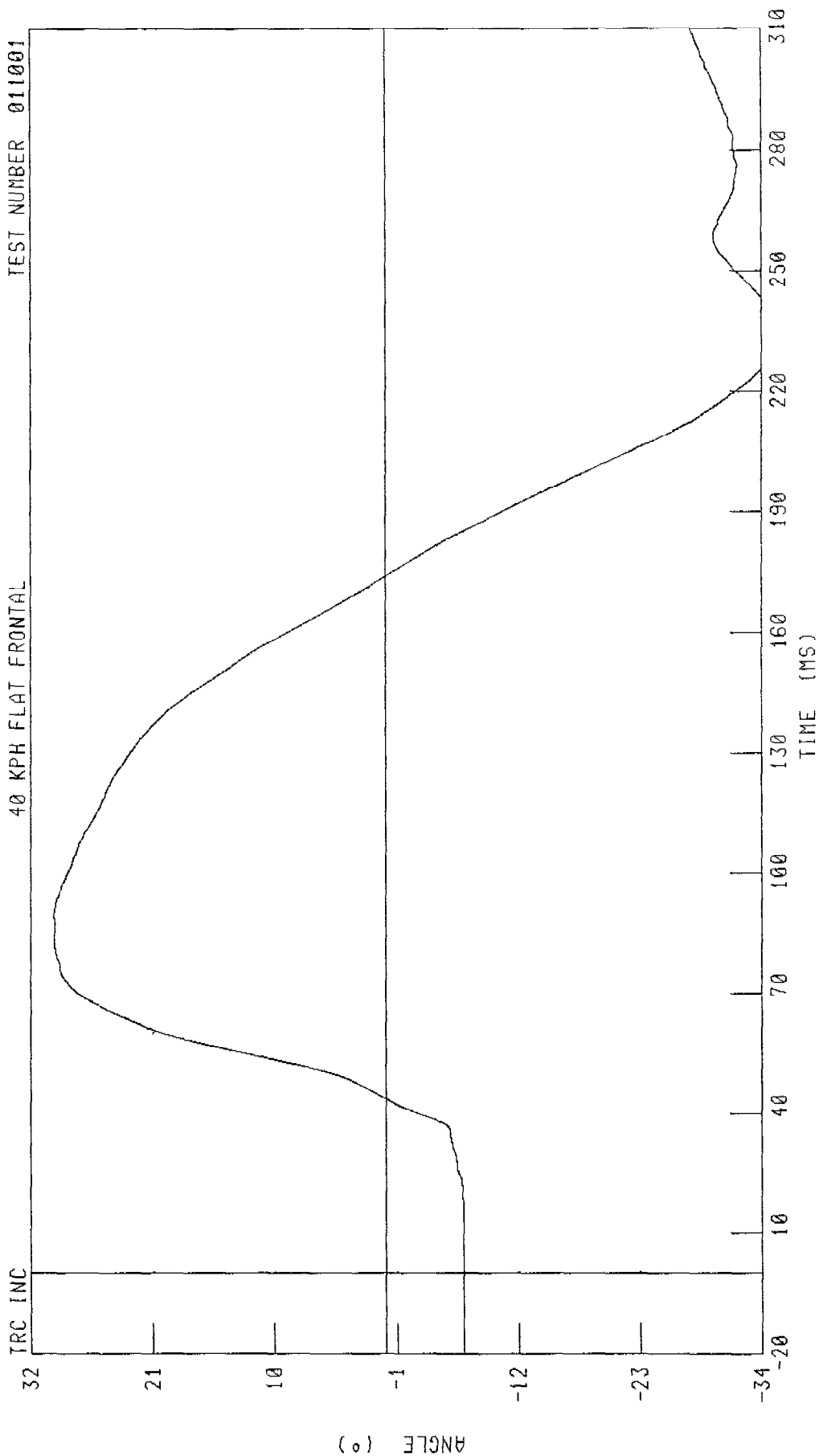
PEAK DATA 20 99 ° 0 93 52 MS, 0 21 ° 0 27 68 MS

CHANNEL FTRXD1 FILTER CH CLASS 180

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
DRIVER RIGHT FOOT TO ANKLE Y-AXIS DISPLACEMENT

TEST NUMBER 011001

40 KPH FLAT FRONTAL



CHANNEL FTRYD1 FILTER CH CLASS 180

PEAK DATA 29 93 ° 0 89 36 MS, -35 34 ° 234 48 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
DRIVER RIGHT FOOT TO ANKLE Z-AXIS DISPLACEMENT

TEST NUMBER 011001

40 KPH FLAT FRONTAL

TRC INC

0

-20

-40

-60

-80

-100

-120

ANGLE (°)

310

280

250

220

190

160

130

100

70

40

10

TIME (MS)

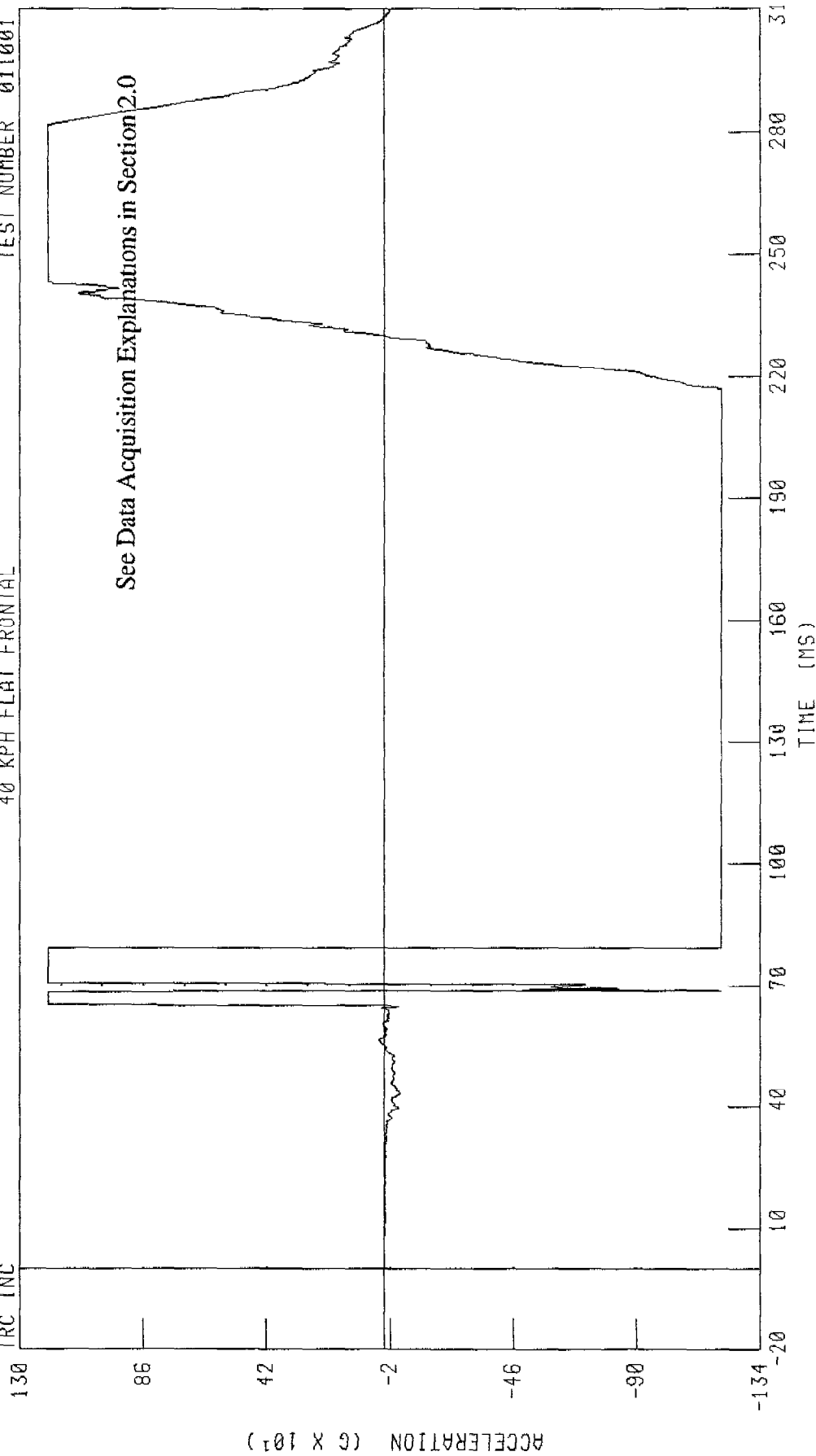
PEAK DATA 6 84 ° 0 47 92 MS, 4 92 ° 0 204 96 MS

CHANNEL FTRZD1 FILTER CH CLASS 180

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
DRIVER RIGHT FOOT X-AXIS ACCELERATION
40 KPH FLAT FRONTAL

TEST NUMBER 011001

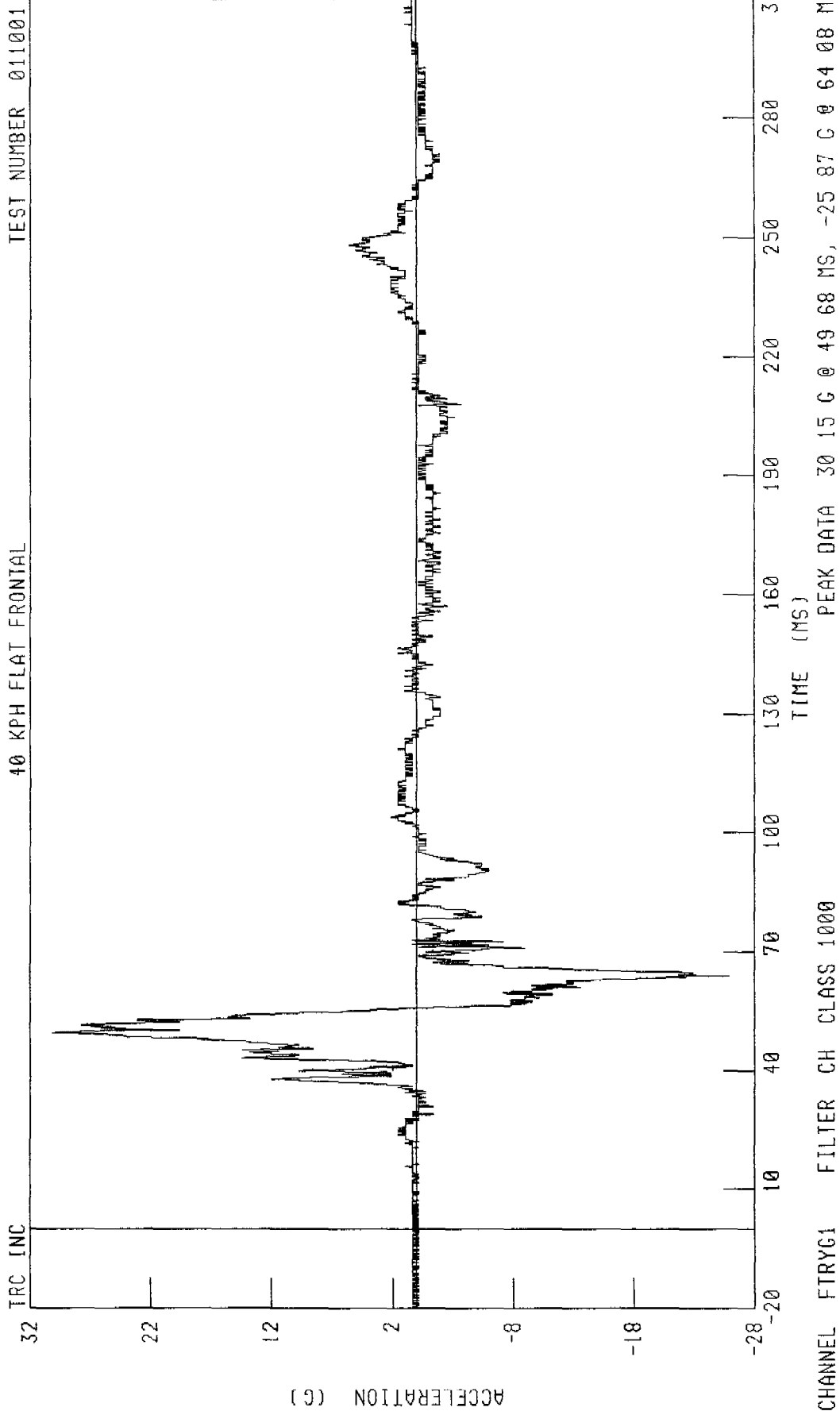
TRC INC



CHANNEL FTRXC1 FILTER CH CLASS 1000

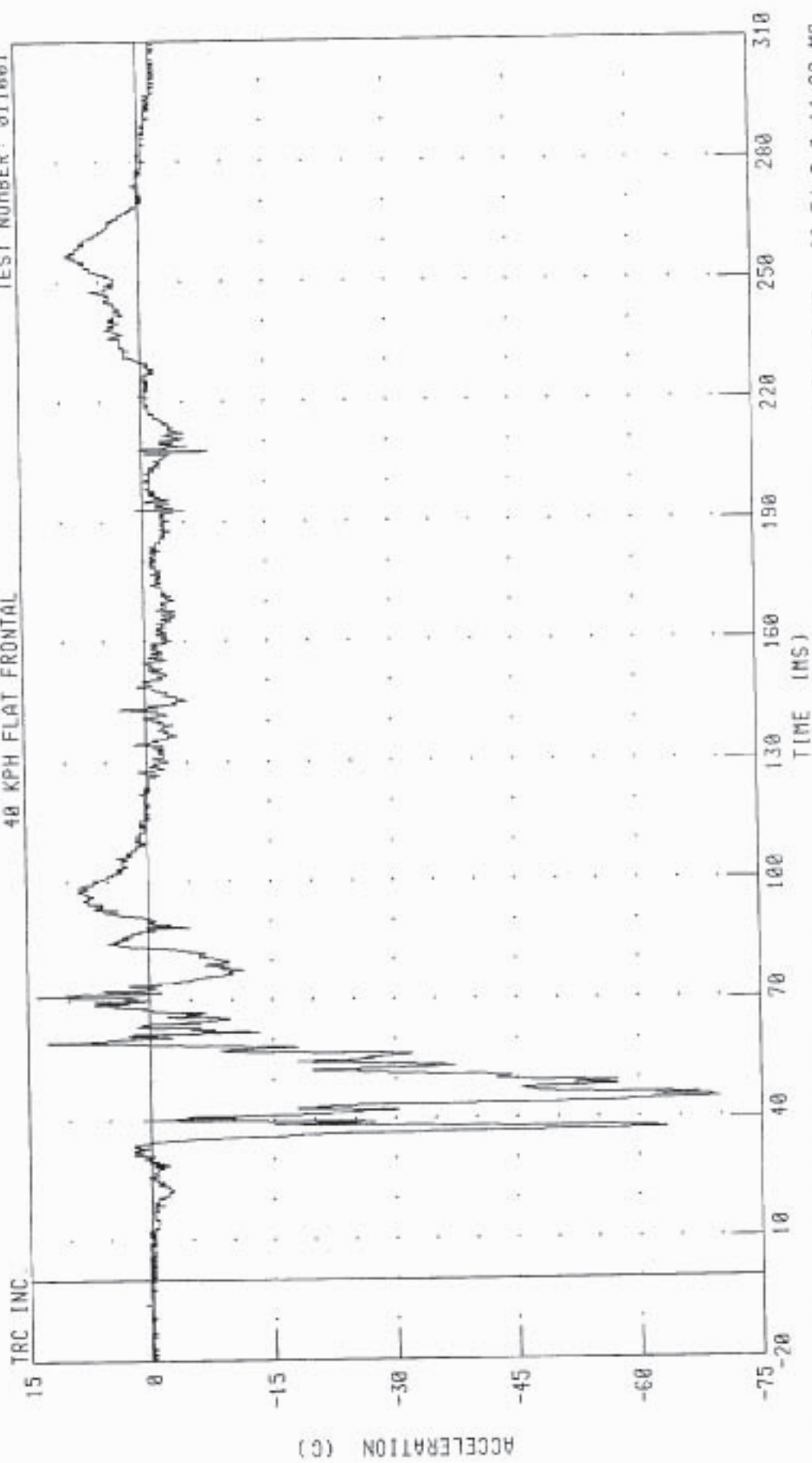
PEAK DATA 1199 54 G @ 65 20 MS, -1200 76 G @ 68 72 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
DRIVER RIGHT FOOT Y-AXIS ACCELERATION
40 KPH FLAT FRONTAL



2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
DRIVER RIGHT FOOT Z-AXIS ACCELERATION
40 KPH FLAT FRONTAL

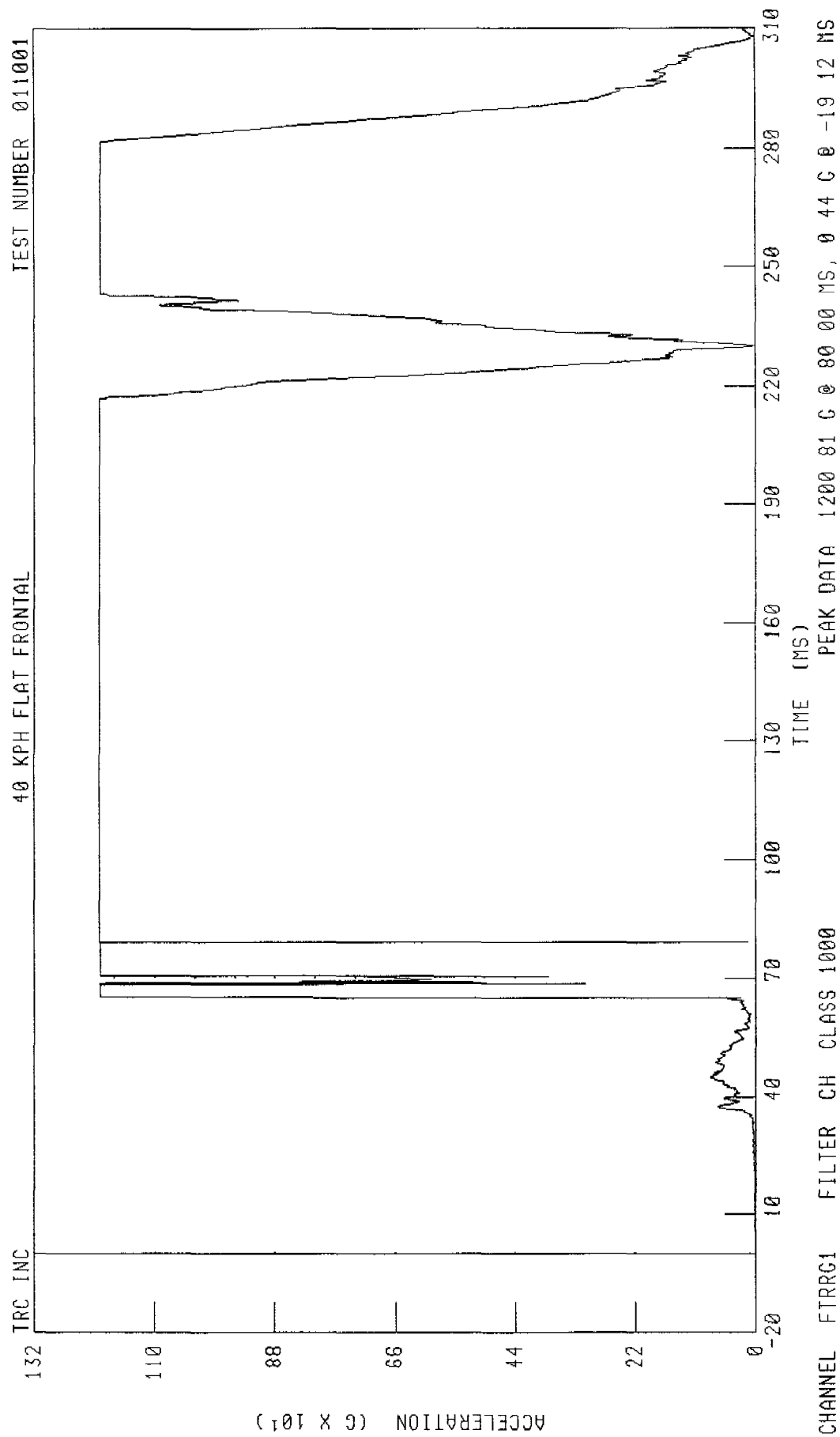
TEST NUMBER: 011001



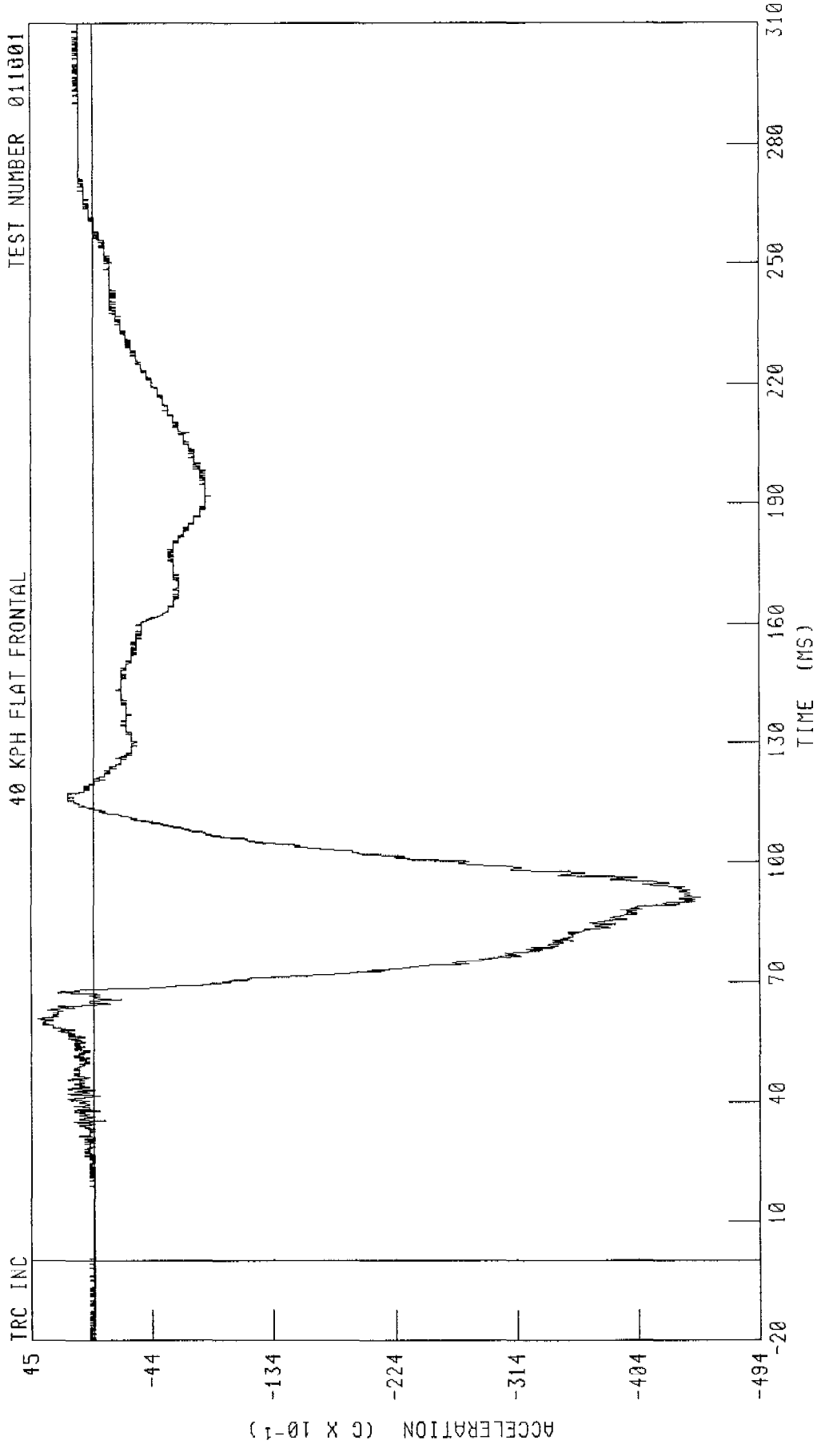
CHANNEL: FTRZG1 FILTER: CH CLASS 1000

PEAK DATA: 13.83 G @ 71.12 MS, -69.74 G @ 44.96 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
 DRIVER RIGHT FOOT RESULTANT ACCELERATION



2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
PASSENGER HEAD X-AXIS ACCELERATION



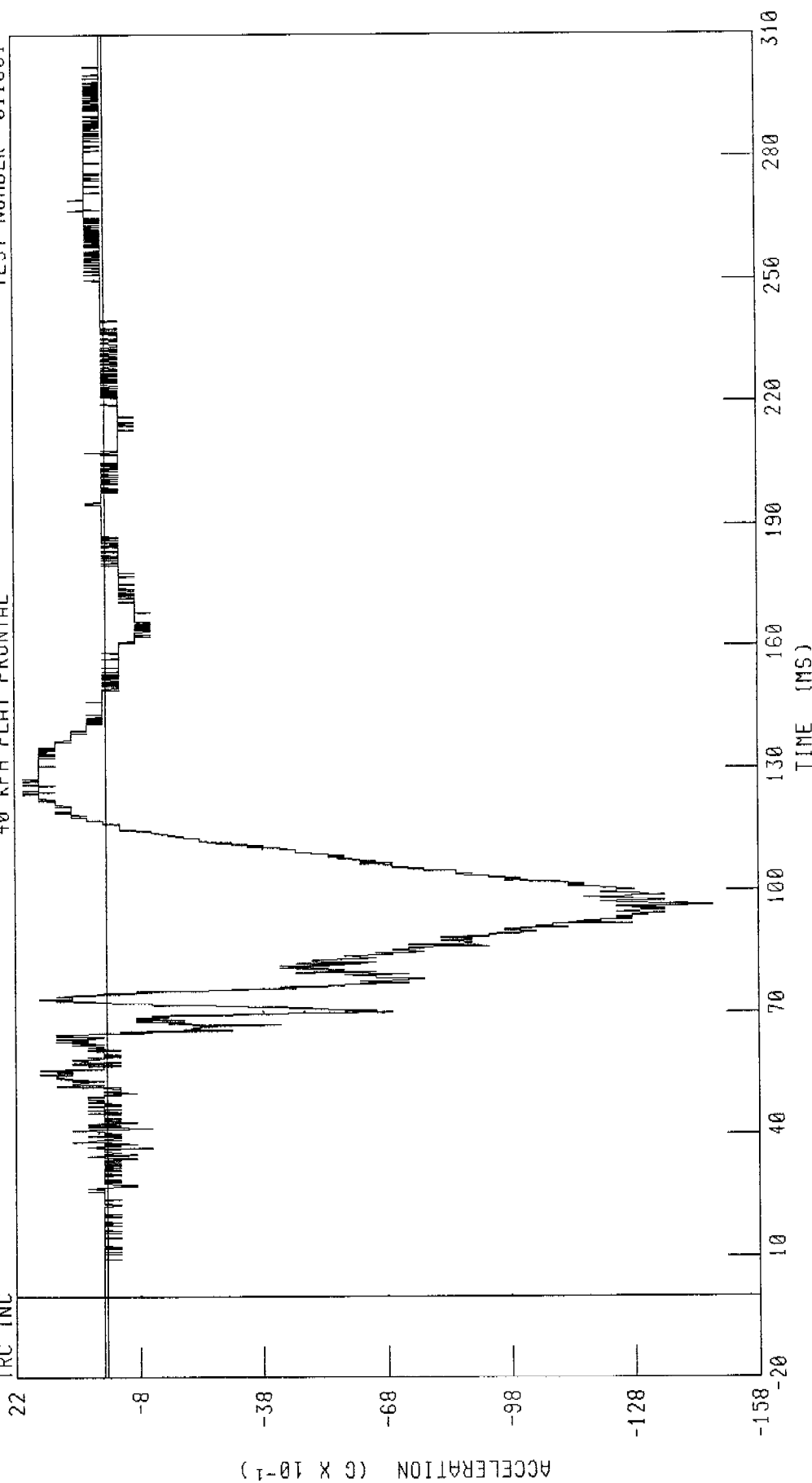
2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

PASSENGER HEAD Y-AXIS ACCELERATION

TEST NUMBER 011001

TRC INC

40 KPH FLAT FRONTAL



CHANNEL HEDYG2 FILTER CH CLASS 1000

PEAK DATA 2 00 G @ 123 76 MS, -14 70 G @ 96 32 MS

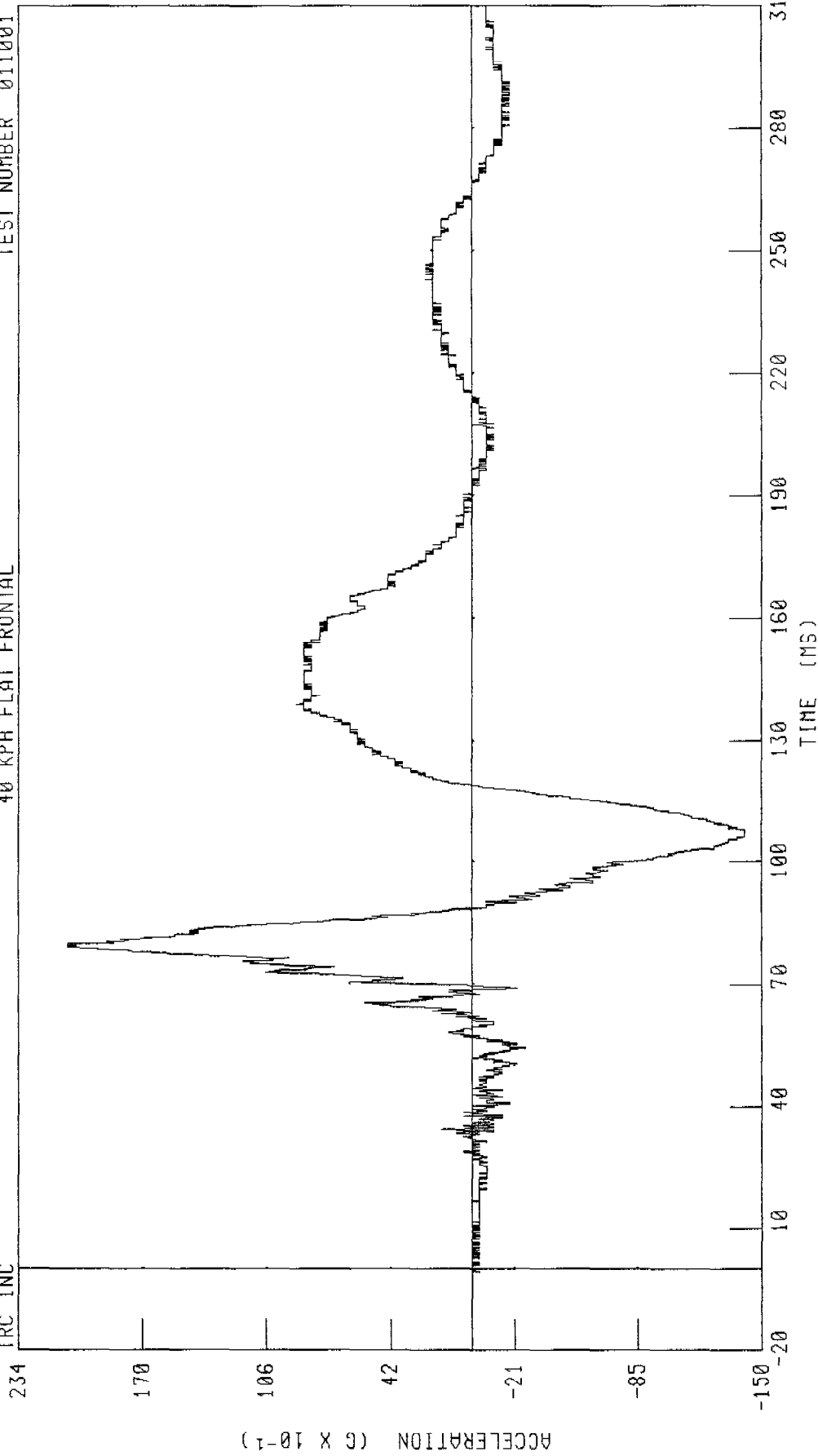
2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

PASSENGER HEAD Z-AXIS ACCELERATION

40 KPH FLAT FRONTAL

TEST NUMBER 011001

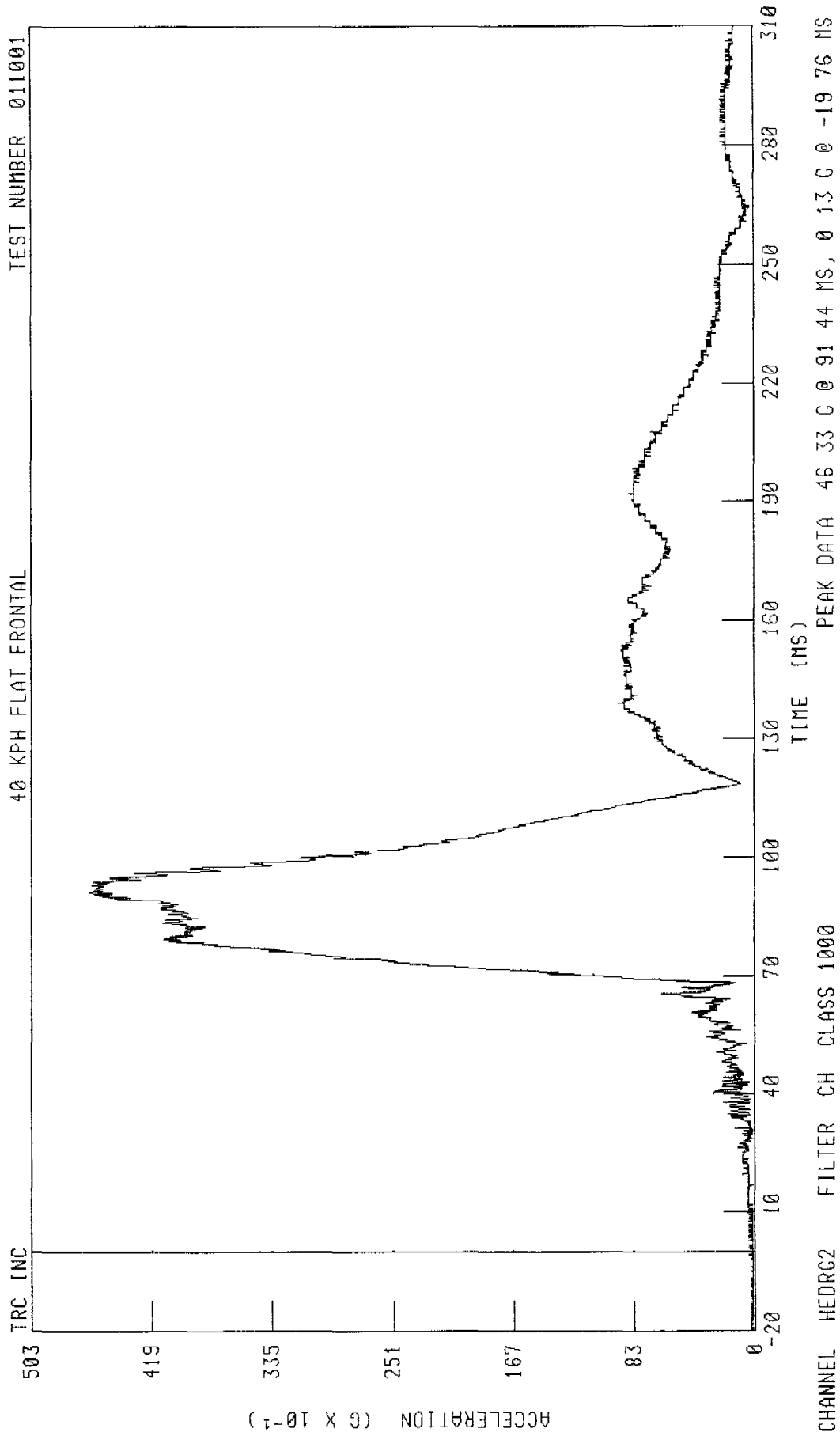
TRC INC



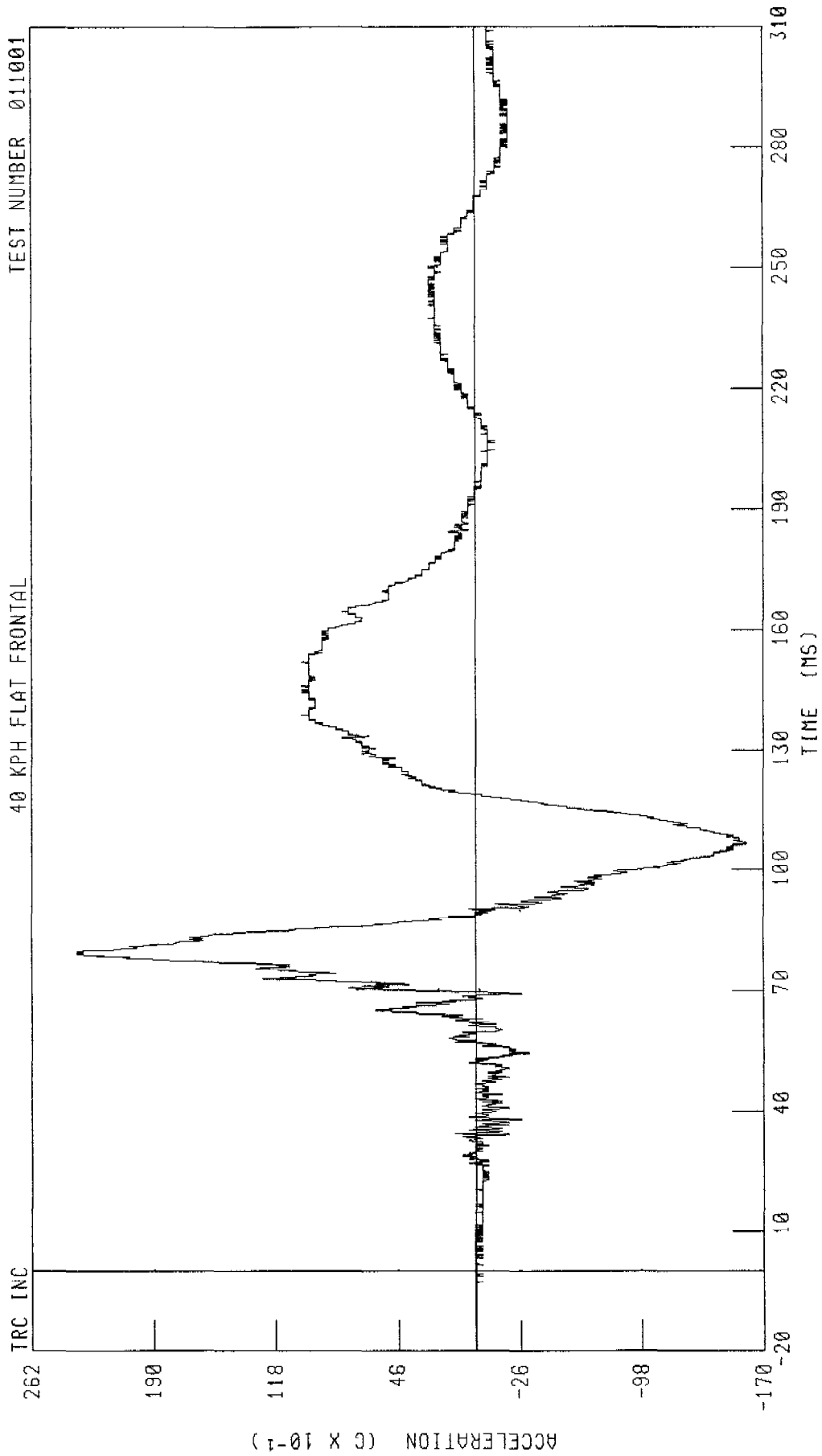
CHANNEL HEDZG2 FILTER CH CLASS 1000

PEAK DATA 20 85 G @ 79 04 MS, -14 13 G @ 106 08 MS

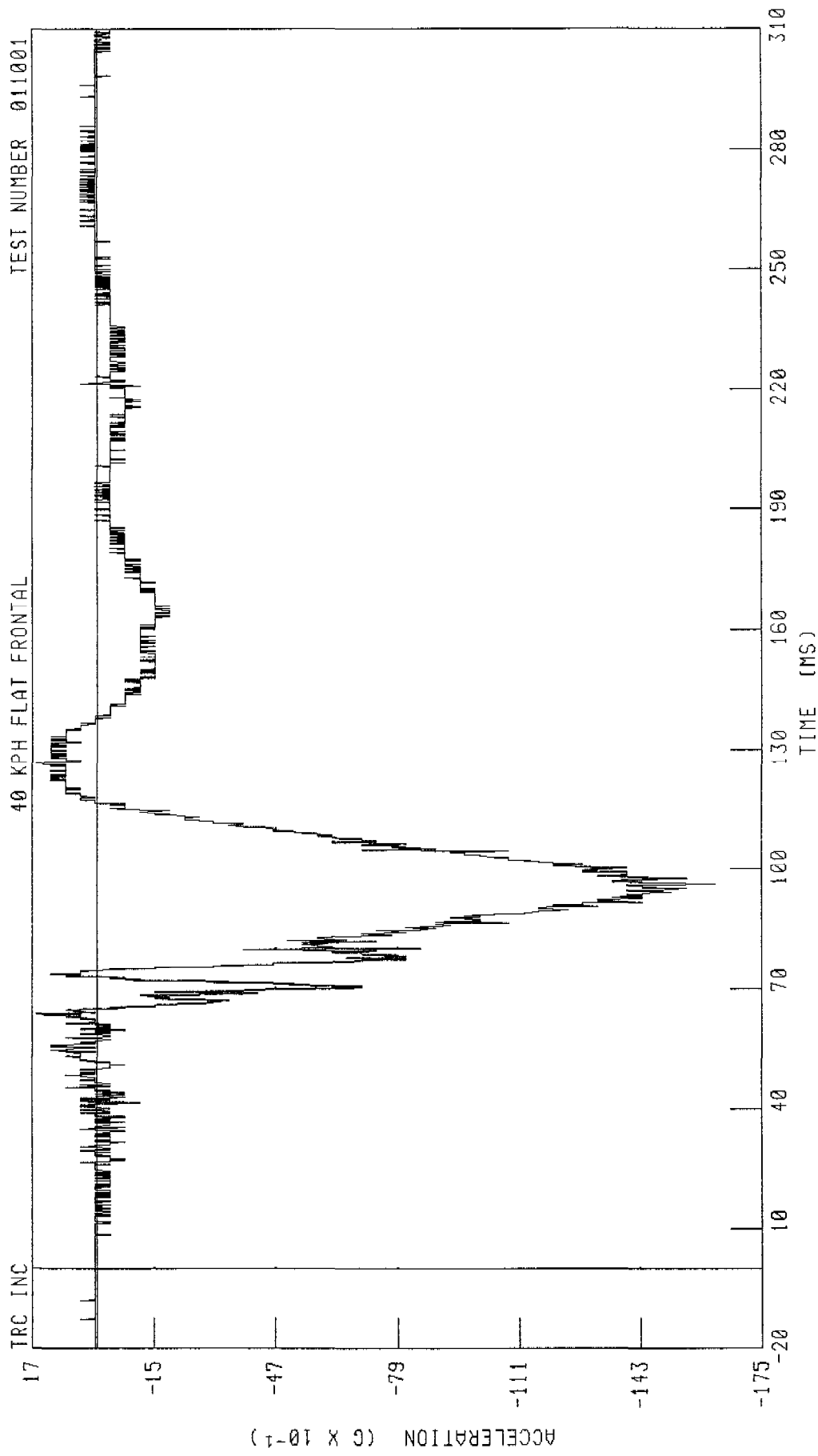
2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
PASSENGER HEAD RESULTANT ACCELERATION



2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
PASSENGER HEAD X-AXIS ACCELERATION REDUNDANT



2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
PASSENGER HEAD Y-AXIS ACCELERATION REDUNDANT



CHANNEL HEDYR2 FILTER CH CLASS 1000

PEAK DATA 1 60 G @ 63 68 MS, -16 29 G @ 96 32 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

PASSENGER HEAD Z-AXIS ACCELERATION REDUNDANT

40 KPH FLAT FRONTAL

TEST NUMBER 011001

TRC INC

43

-37

-117

-197

-277

-357

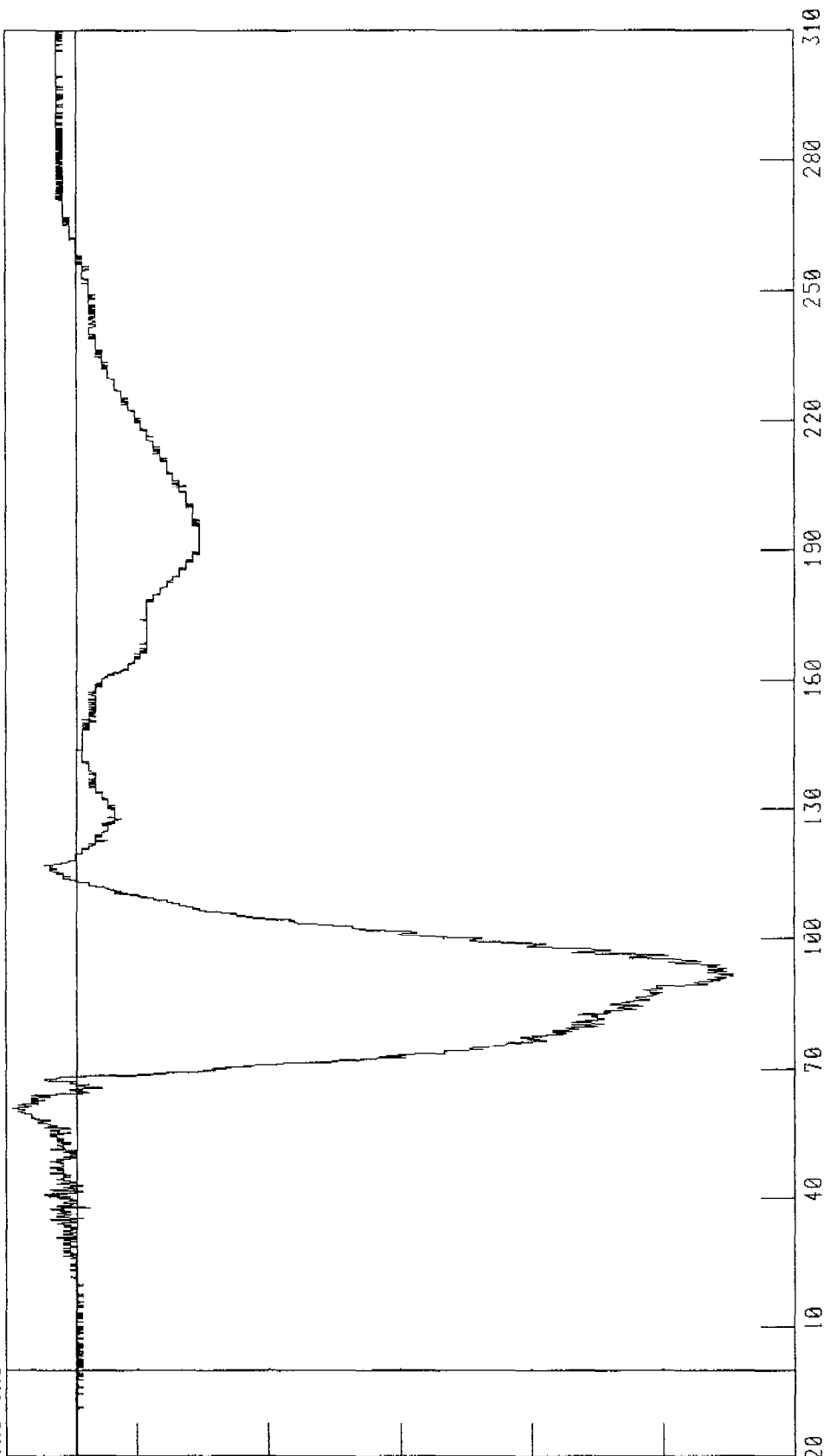
-437

ACCELERATION (G X 10⁻¹)

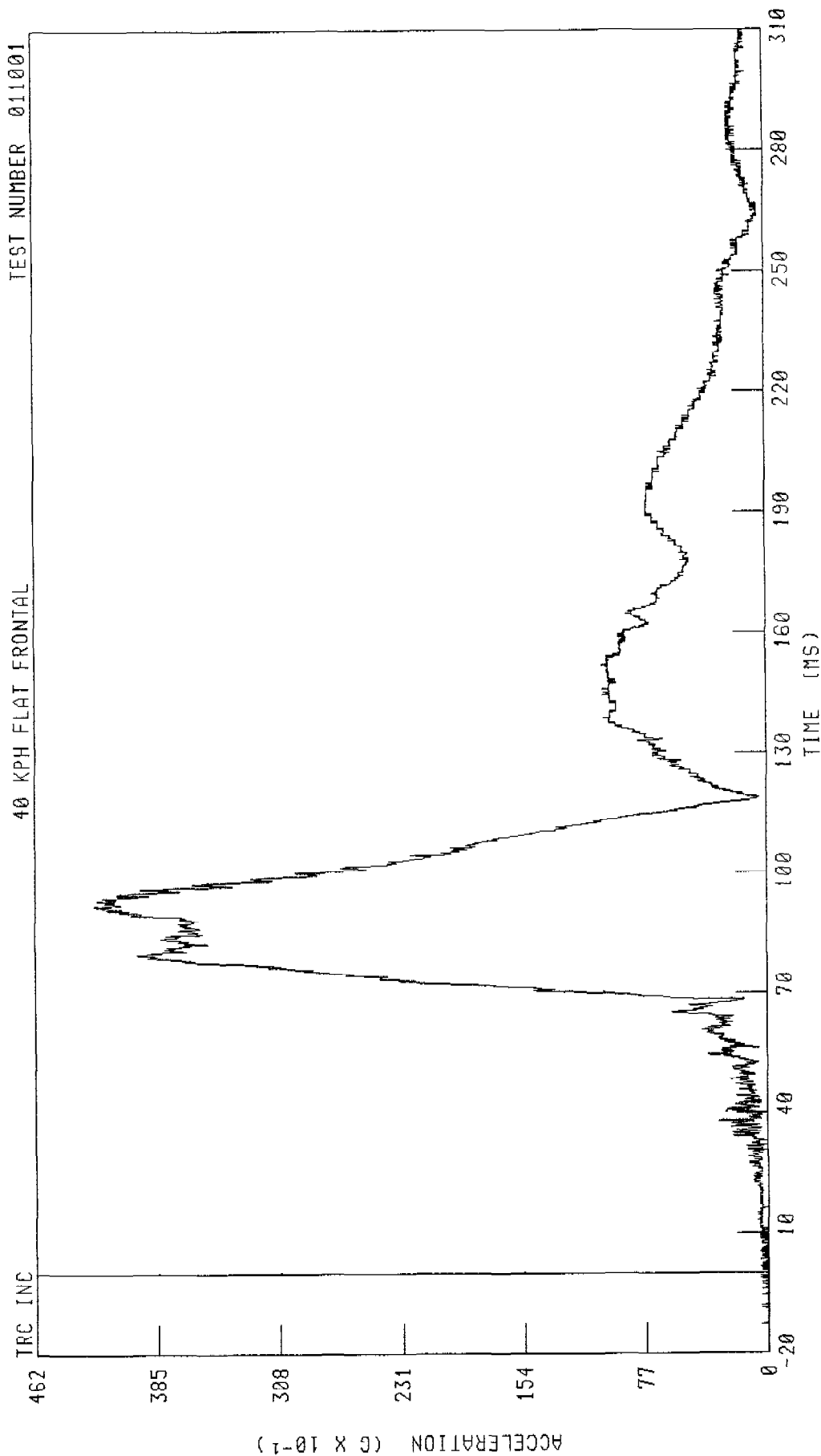
TIME (MS)

CHANNEL HEDZR2 FILTER CH CLASS 1000

PEAK DATA 3 94 G @ 60 72 MS, -39 99 G @ 91 36 MS



2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
PASSENGER HEAD RESULTANT ACCELERATION REDUNDANT



PEAK DATA 42 53 G @ 91 92 MS, 0 05 G @ -20 00 MS

CHANNEL HEDR2 FILTER CH CLASS 1000

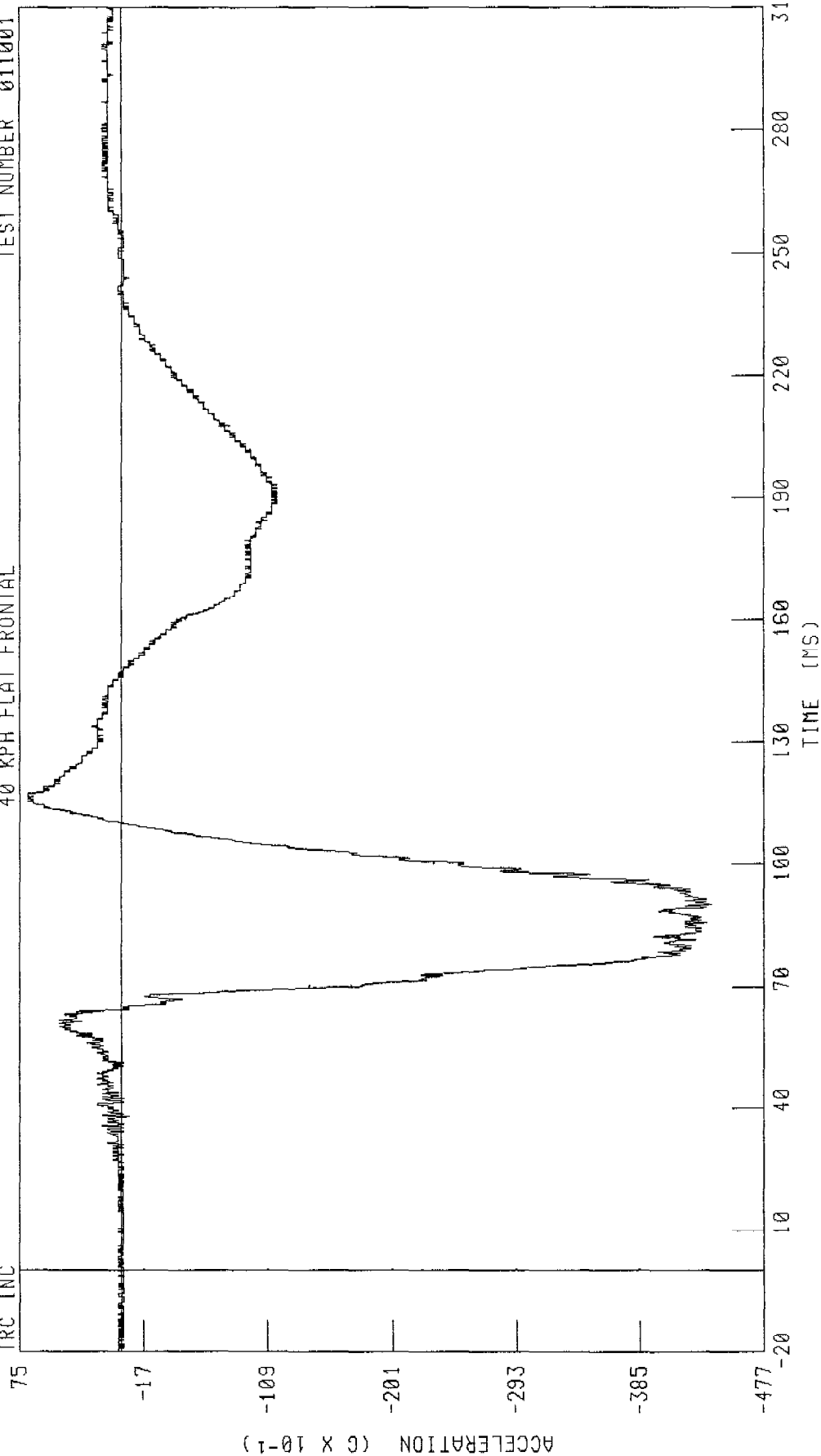
2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

PASSENGER HEAD X-AXIS (LT) ACCELERATION

40 KPH FLAT FRONTAL

TEST NUMBER 011001

TRC INC



CHANNEL HD1XG2 FILTER CH CLASS 1000

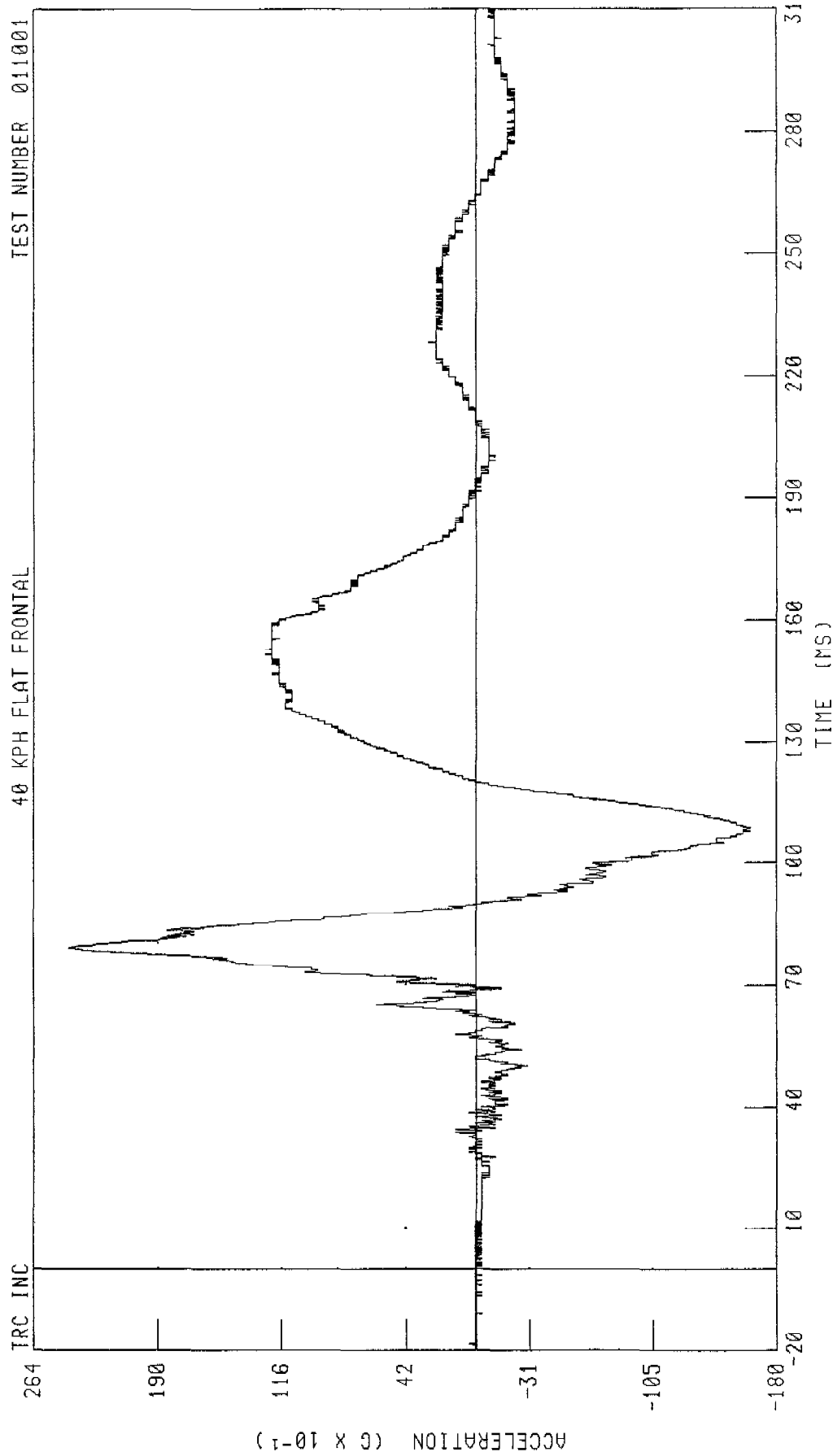
PEAK DATA 6 89 G 115 60 MS, -43 82 G 90 40 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

PASSENGER HEAD Z-AXIS (LT) ACCELERATION

40 KPH FLAT FRONTAL

TEST NUMBER 011001



CHANNEL HD1ZC2 FILTER CH CLASS 1000

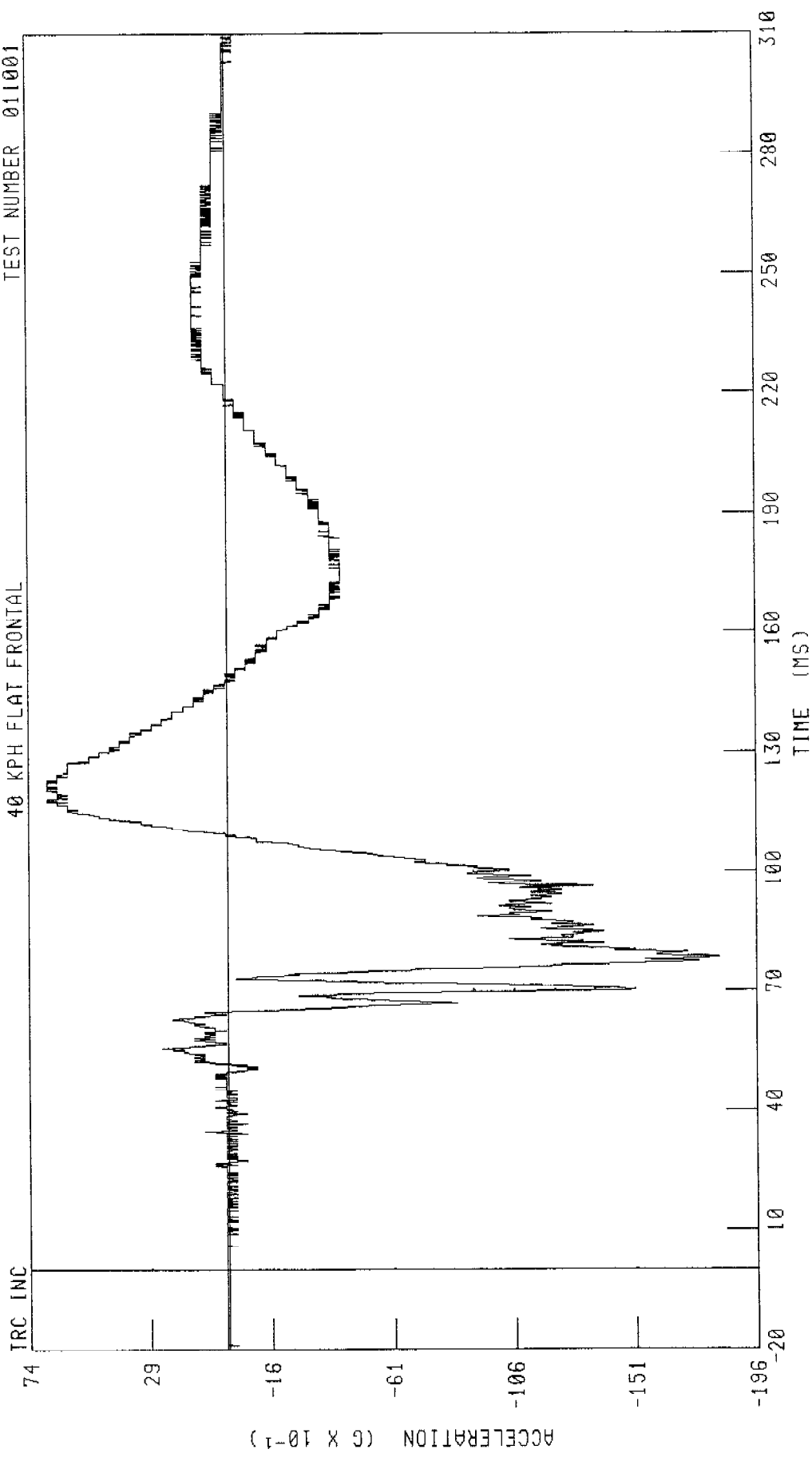
PEAK DATA 24 30 C @ 79 12 MS, -16 42 C @ 107 68 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

PASSENGER HEAD Y-AXIS (FT) ACCELERATION

TEST NUMBER 011001

40 KPH FLAT FRONTAL



CHANNEL HD2YC2 FILTER CH CLASS 1000

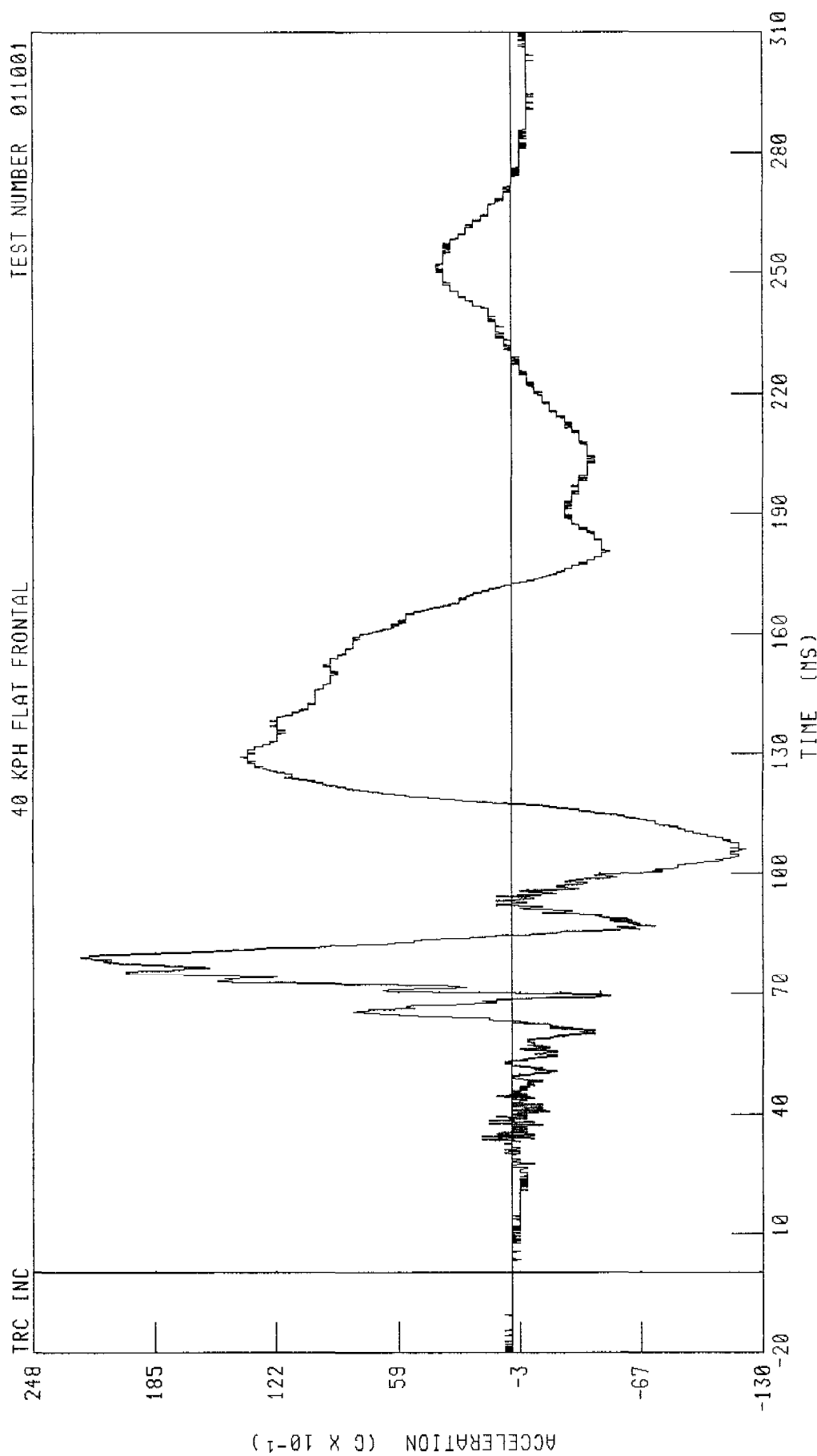
PEAK DATA 6 74 G @ 118 00 MS, -18 23 G @ 78 24 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

PASSENGER HEAD Z-AXIS (FT) ACCELERATION

40 KPH FLAT FRONTAL

TEST NUMBER 011001



CHANNEL HD2ZG2 FILTER CH CLASS 1000

PEAK DATA 22 34 G @ 78 96 MS, -12 15 G @ 106 08 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

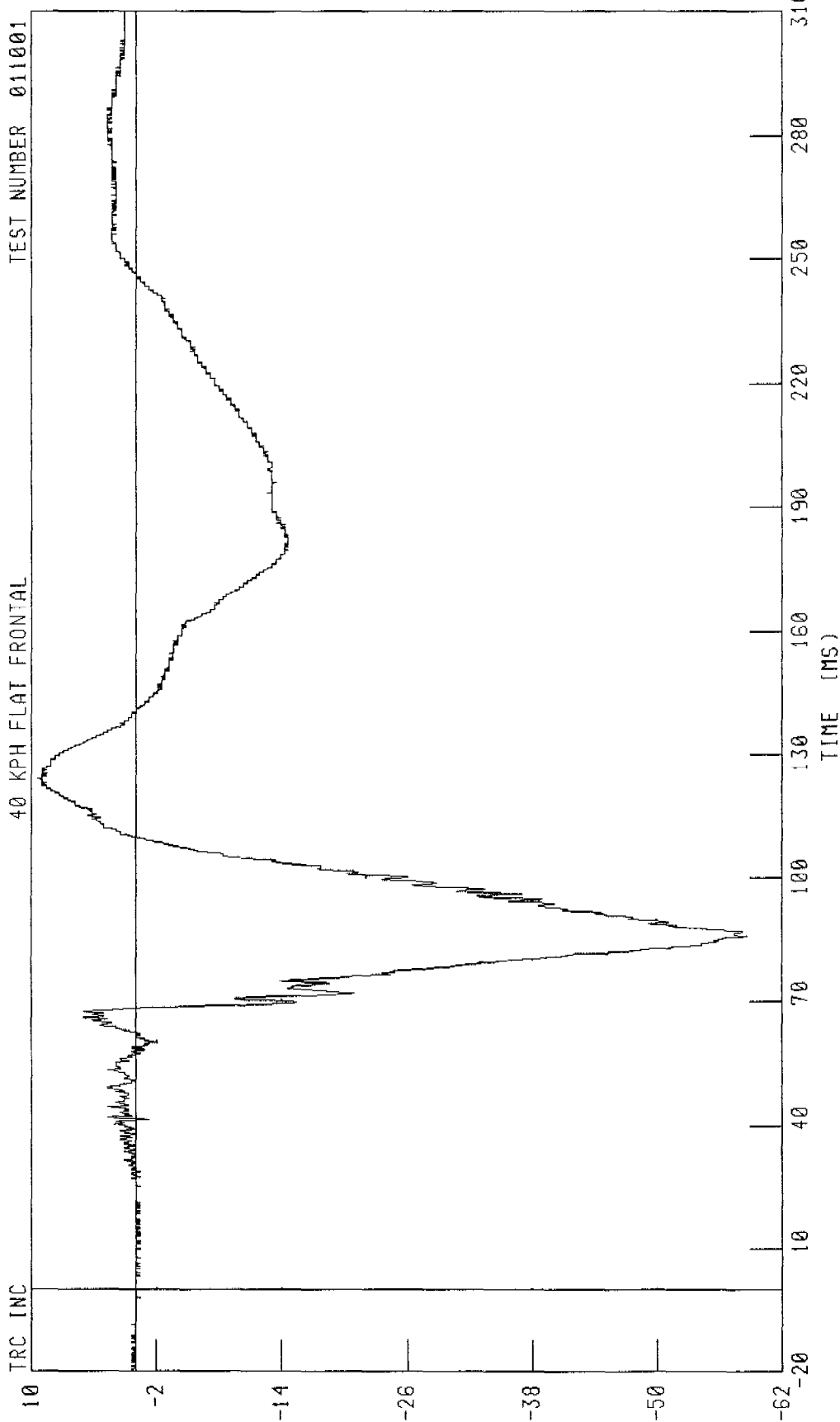
PASSENGER HEAD X-AXIS (TP) ACCELERATION

40 KPH FLAT FRONTAL

TEST NUMBER 011001

TRC INC

ACCELERATION (G)

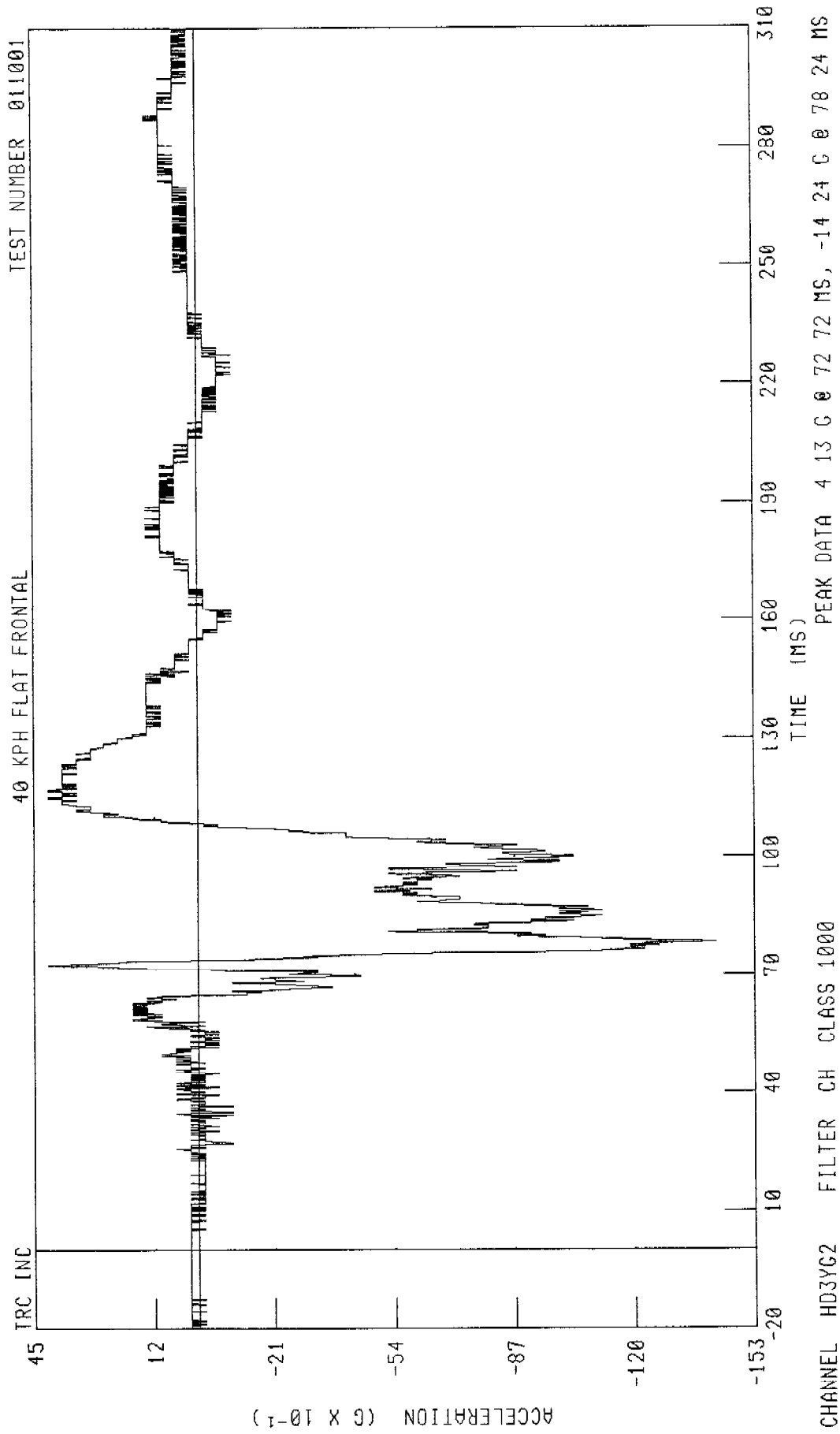


CHANNEL HD3XC2 FILTER CH CLASS 1000

PEAK DATA 9 37 0 124 16 MS, -58 64 0 85 76 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

PASSENGER HEAD Y-AXIS (1P) ACCELERATION

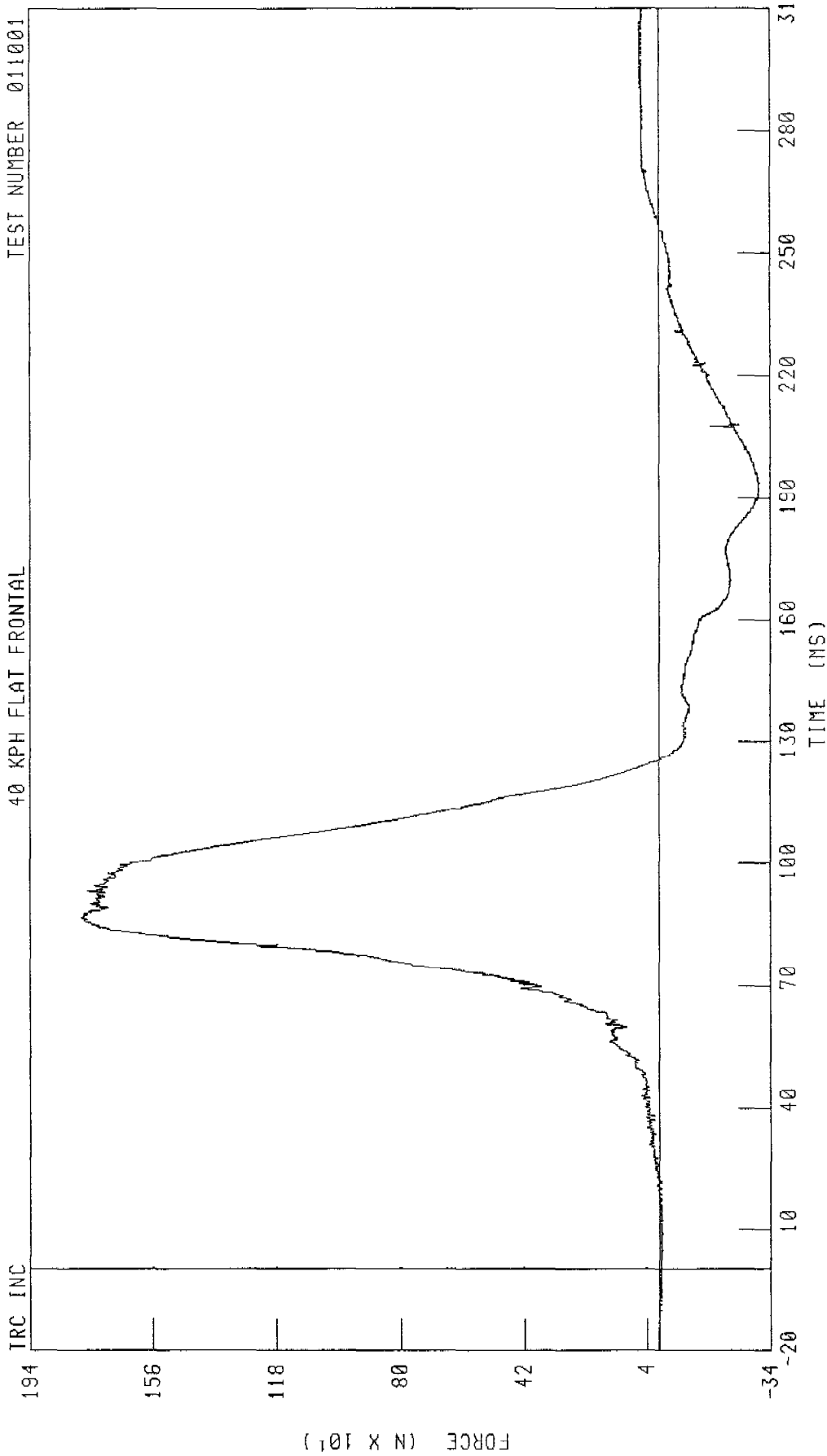


2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

PASSENGER NECK X-AXIS SHEAR FORCE

40 KPH FLAT FRONTAL

TEST NUMBER 011001



CHANNEL NEKXF2 FILTER CH CLASS 1000

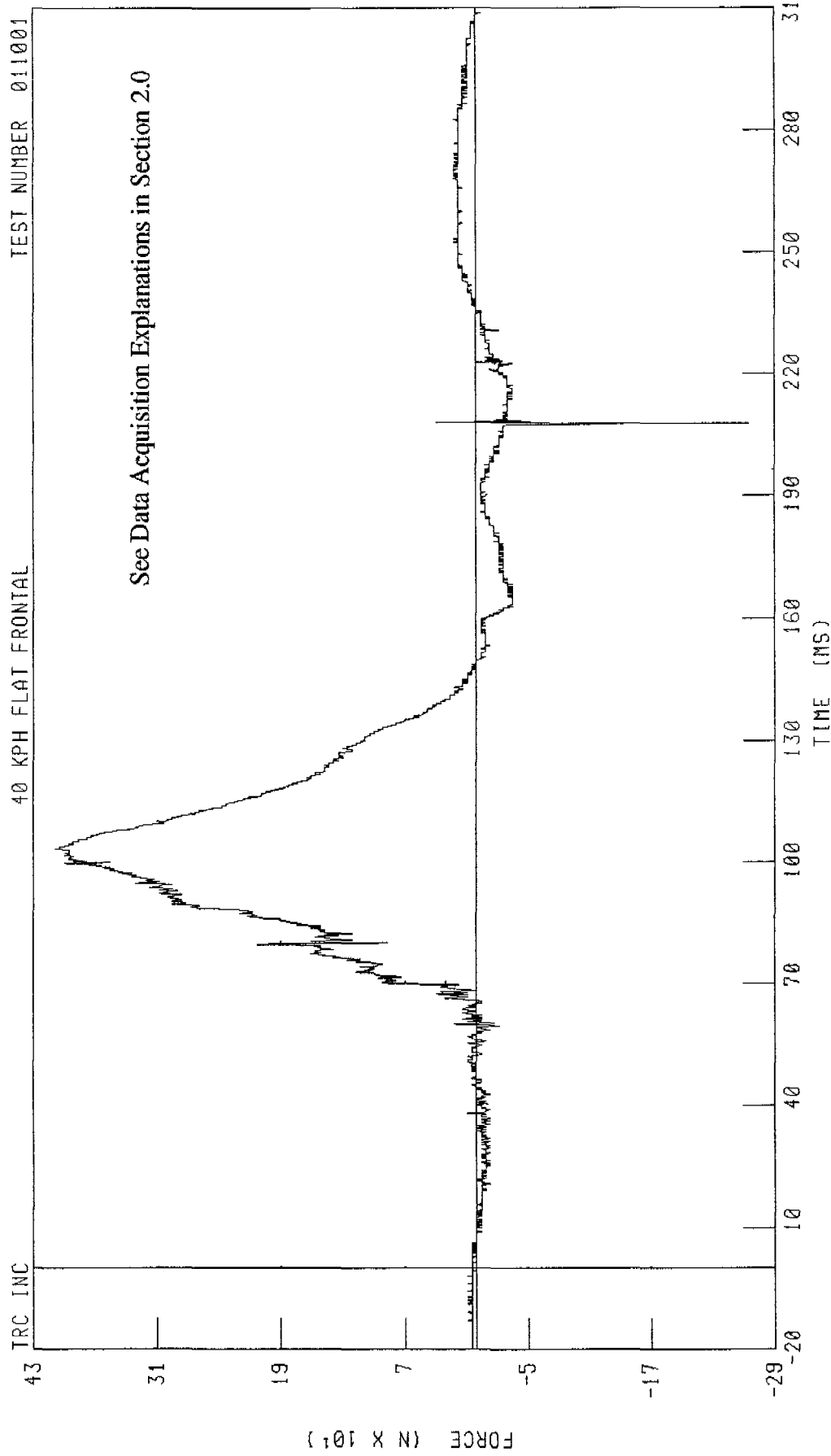
PEAK DATA 1781 59 N @ 86 56 MS, -309 21 N @ 193 92 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

PASSENGER NECK Y-AXIS SHEAR FORCE

40 KPH FLAT FRONTAL

TEST NUMBER 011001



CHANNEL NEKYF2 FILTER CH CLASS 1000

PEAK DATA 408 68 N @ 103 44 MS, -264 96 N @ 207 76 MS

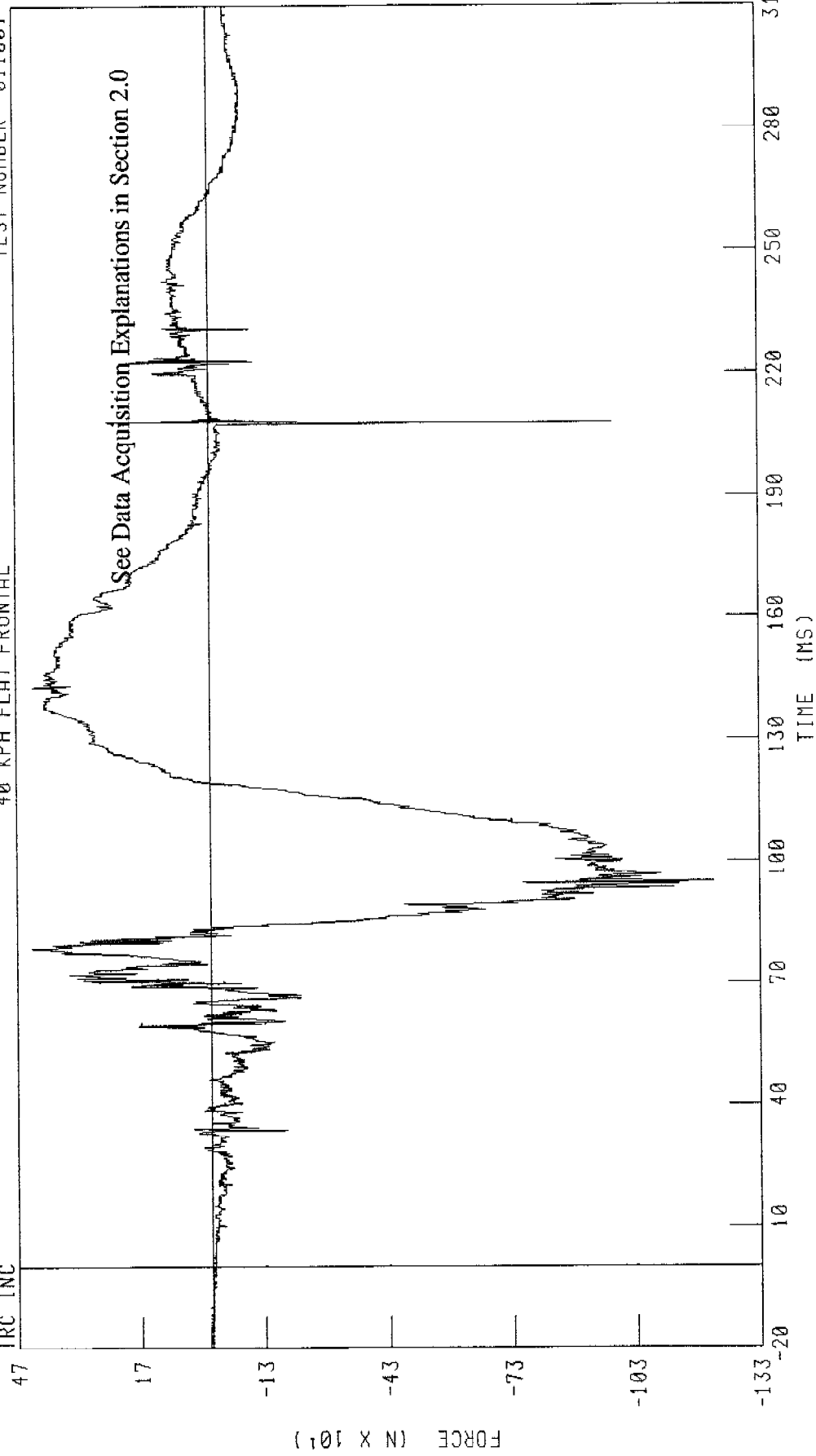
2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

PASSENGER NECK Z-AXIS AXIAL FORCE

40 KPH FLAT FRONTAL

TEST NUMBER 011001

TRC INC



PEAK DATA 435 42 N @ 78 72 MS, -1219 16 N @ 94 96 MS

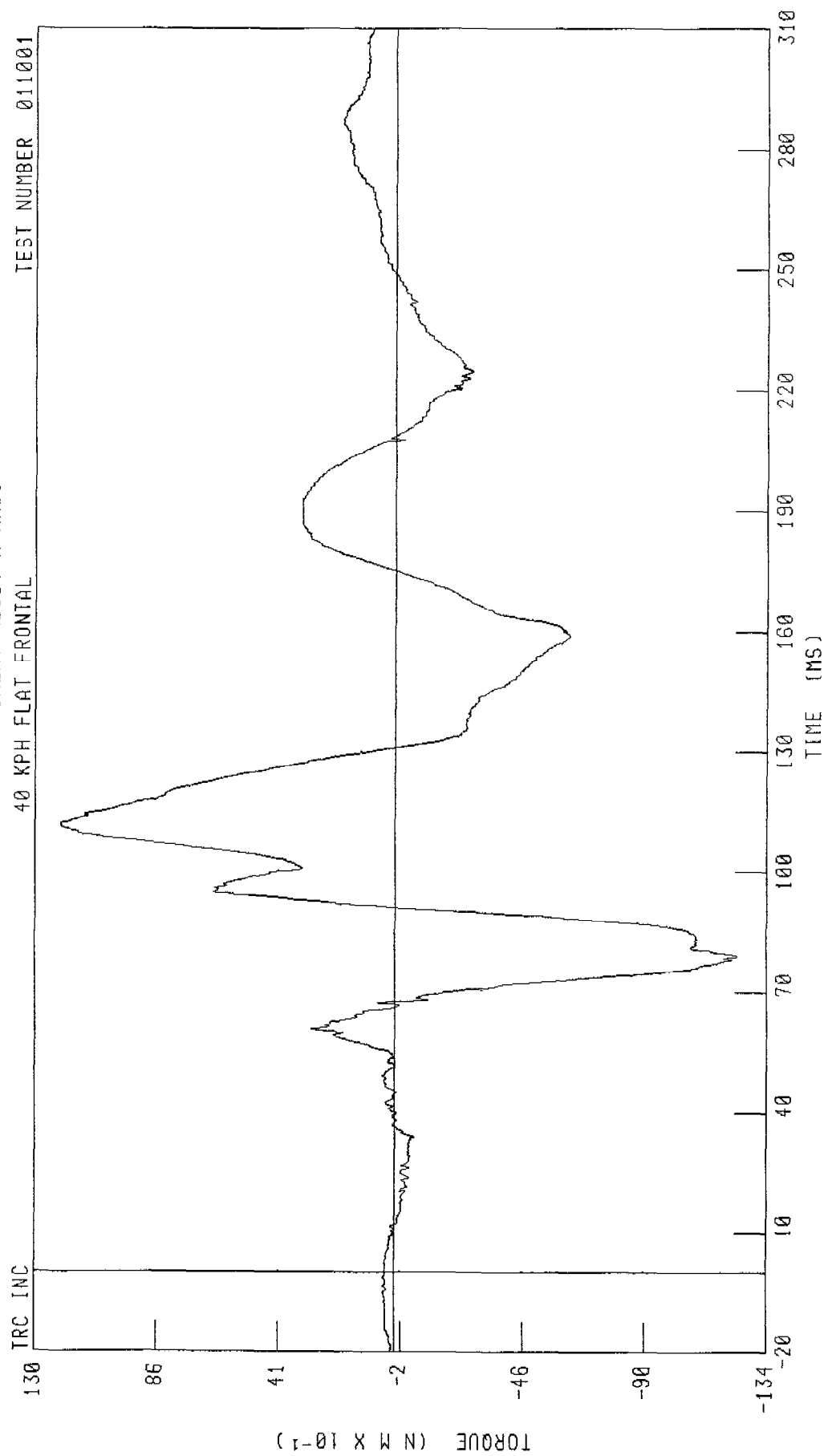
CHANNEL NEKZF2 FILTER CH CLASS 1000

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

PASSENGER NECK MOMENT ABOUT X AXIS

40 KPH FLAT FRONTAL

TEST NUMBER 011001



TIME (MS)

CHANNEL NEKX12 FILTER CH CLASS 600

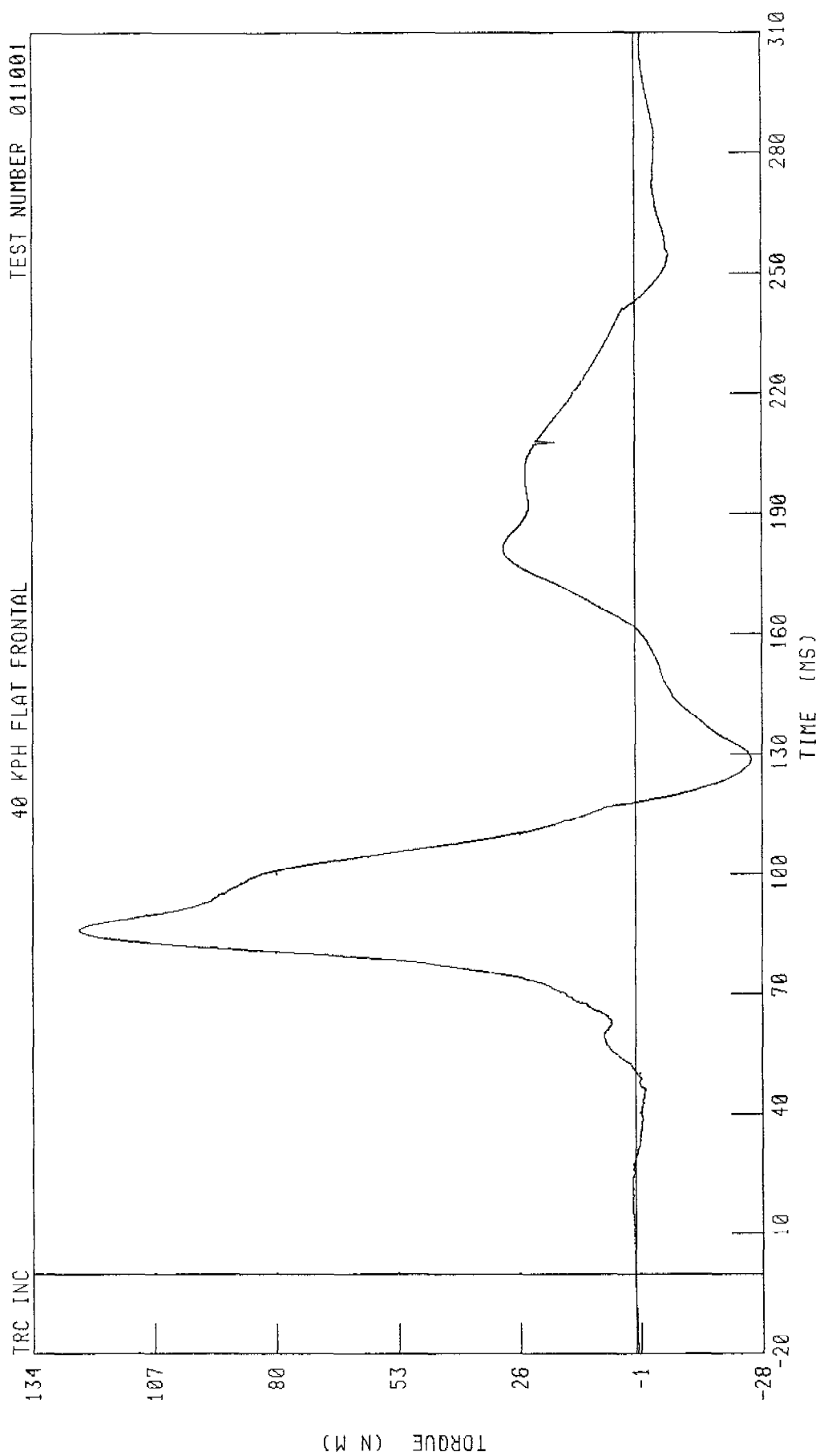
PEAK DATA 12 06 N M 0 111 68 MS, -12 36 N M 0 79 04 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

PASSENGER NECK MOMENT ABOUT Y AXIS

40 KPH FLAT FRONTAL

TEST NUMBER 011001



CHANNEL NEYM2 FILTER CH CLASS 600

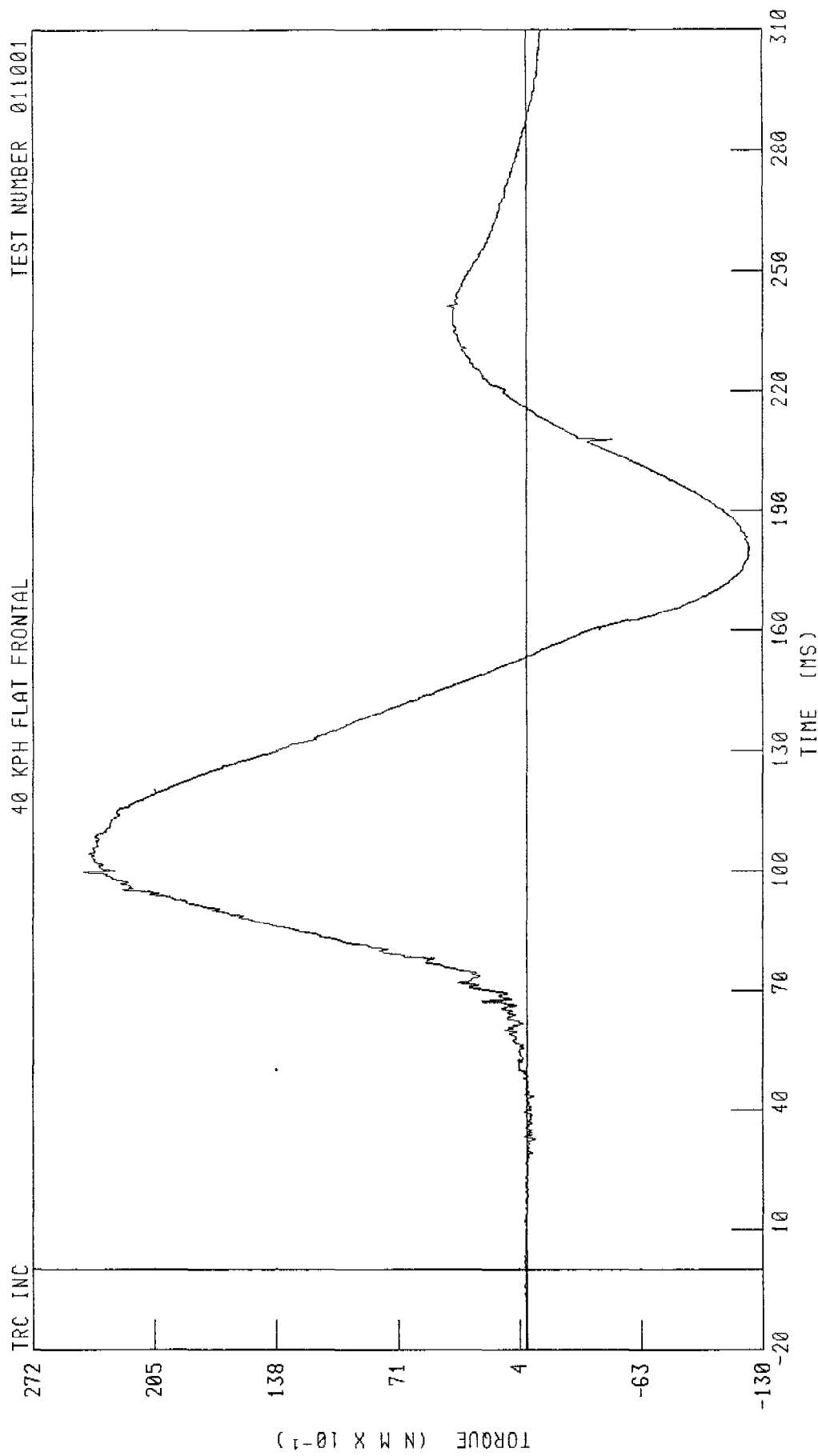
PEAK DATA 123 87 N M @ 85 84 MS, -25 66 N M @ 128 88 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

PASSENGER NECK MOMENT ABOUT Z AXIS

40 KPH FLAT FRONTAL

TEST NUMBER 011001



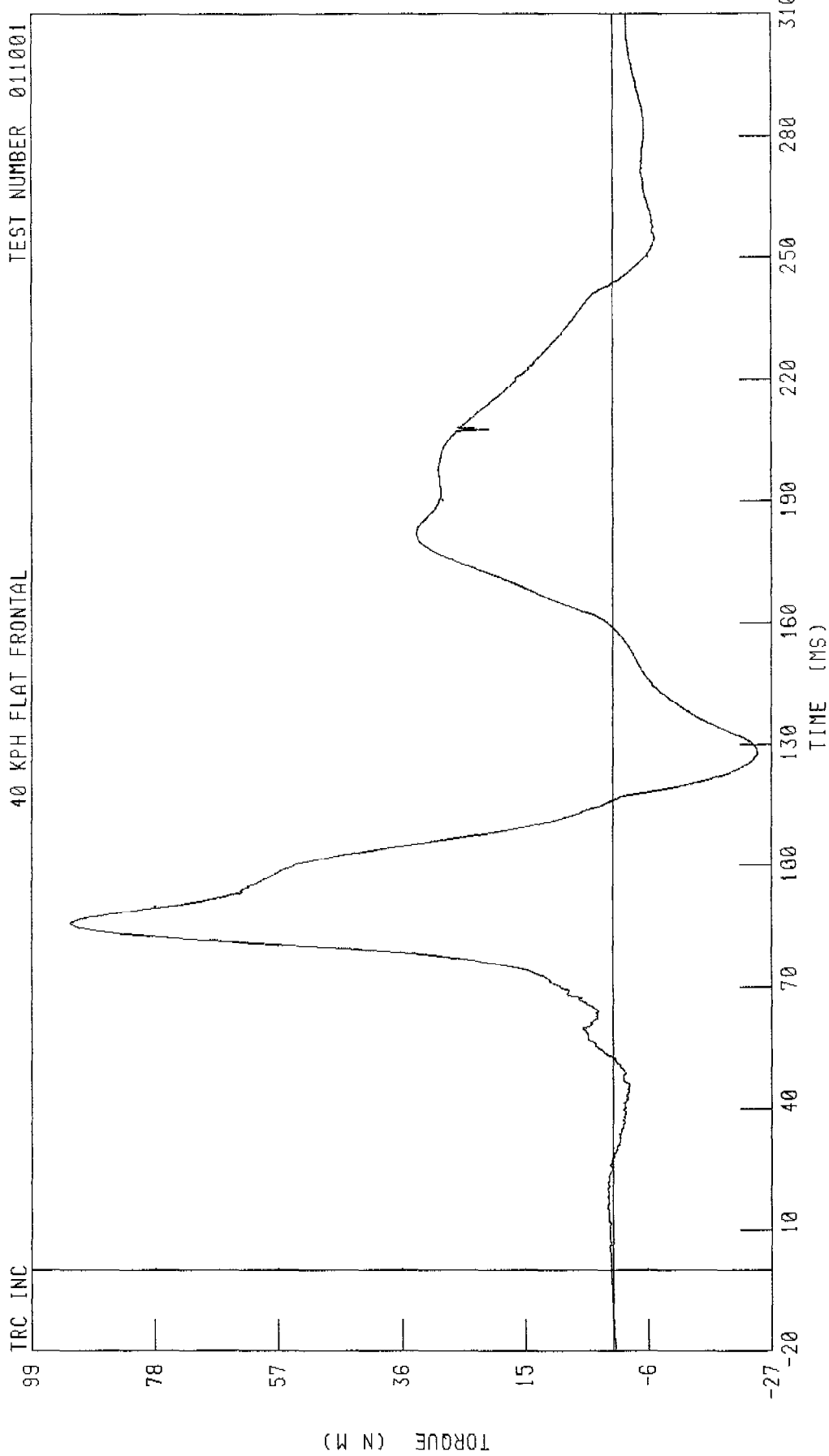
CHANNEL NEKZM2 FILTER CH CLASS 600

PEAK DATA 24 44 N M 0 99 84 MS, -12 27 N M 0 181 12 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
PASSENGER NECK OCCIPITAL CONDYLE MOMENT ABOUT Y AXIS

TEST NUMBER 011001

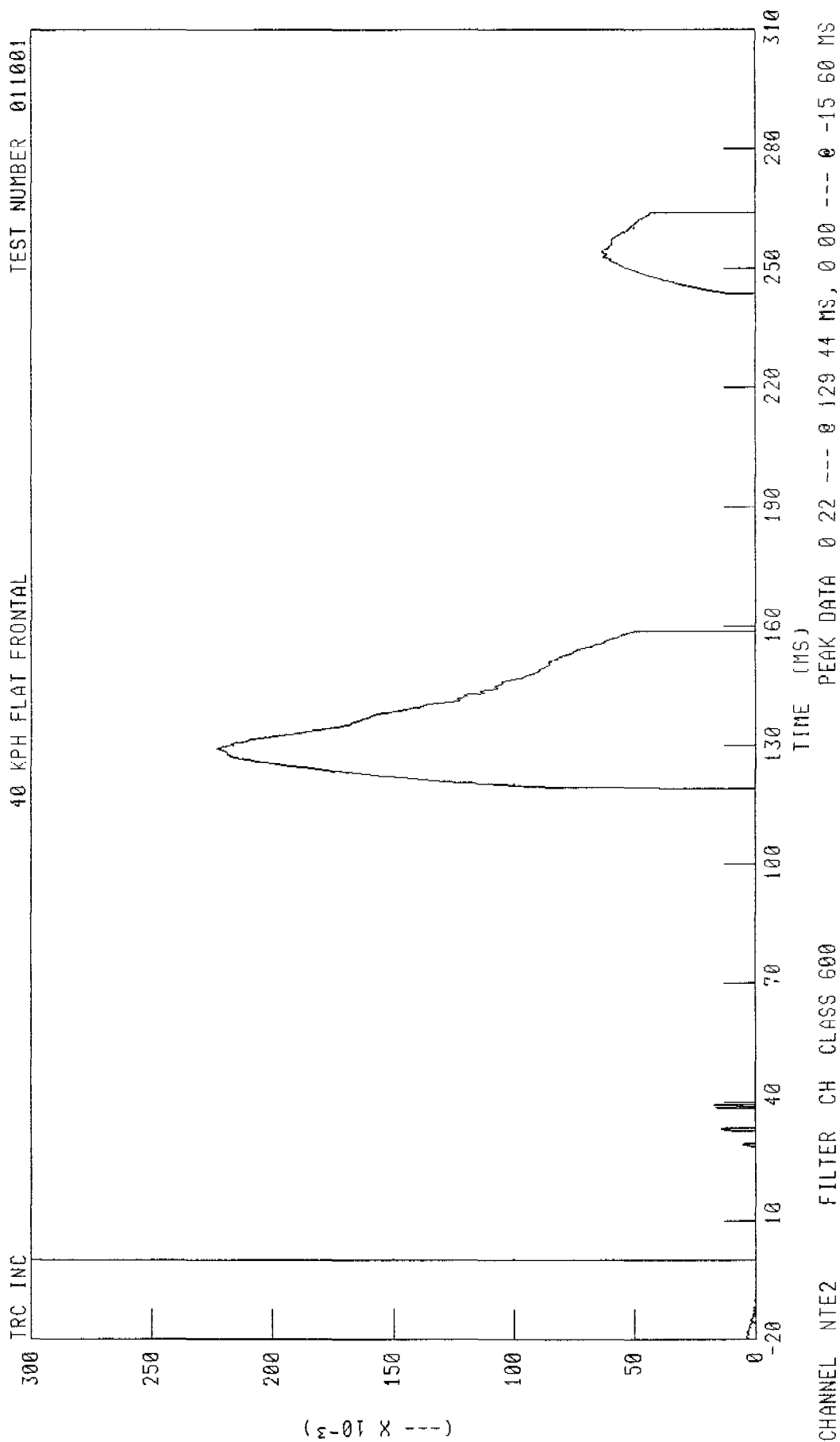
40 KPH FLAT FRONTAL



CHANNEL NEKOM2 FILTER CH CLASS 600

PEAK DATA 92 42 N M 0 85 68 MS, -24 66 N M 0 128 00 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
PASSENGER NECK TENSION/EXTENSION

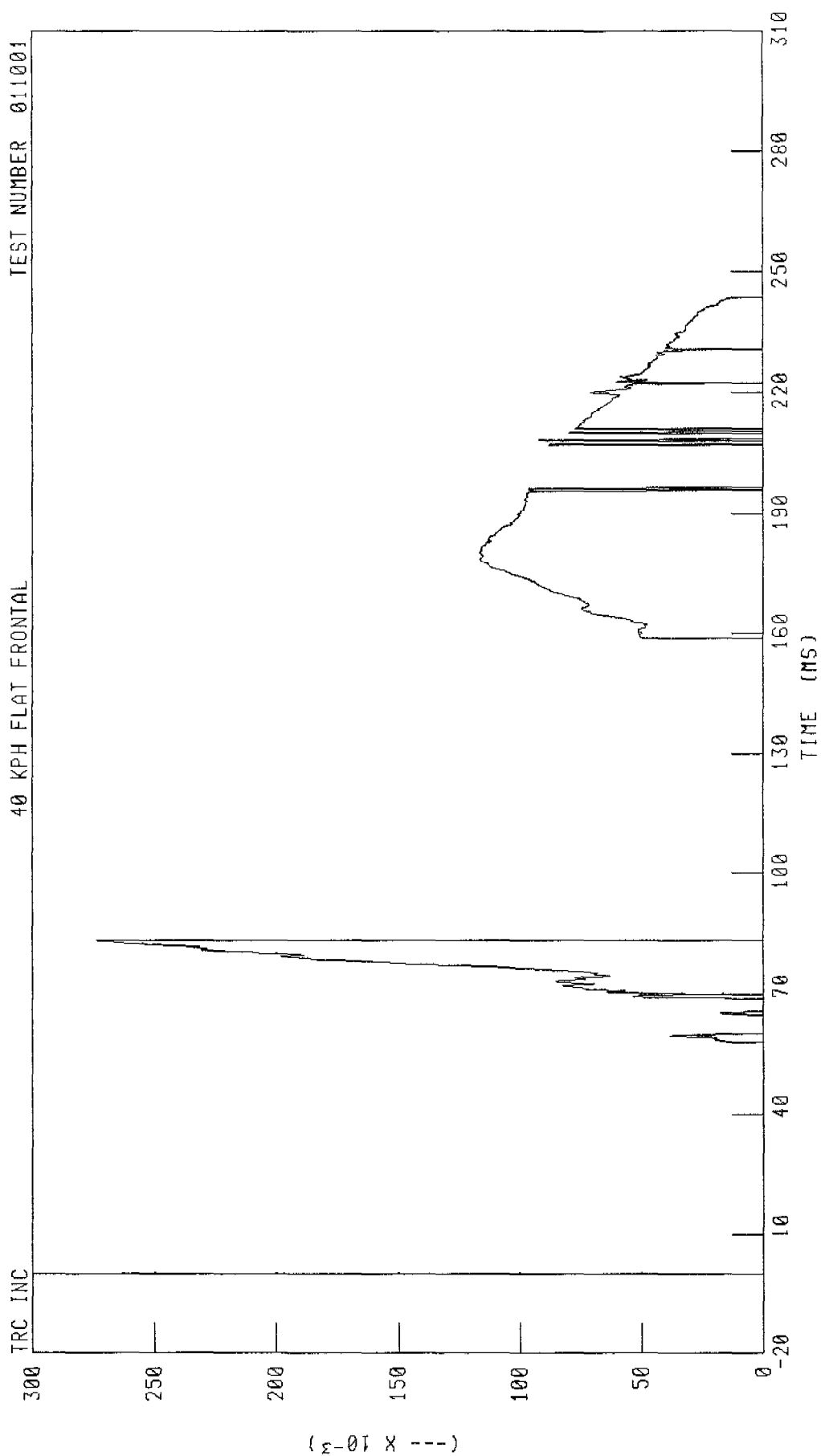


2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

PASSENGER NECK TENSION/FLEXION

40 KPH FLAT FRONTAL

TEST NUMBER 011001



TIME (MS)

PEAK DATA 0 27 --- 0 83 36 MS, 0 00 --- 0 -20 00 MS

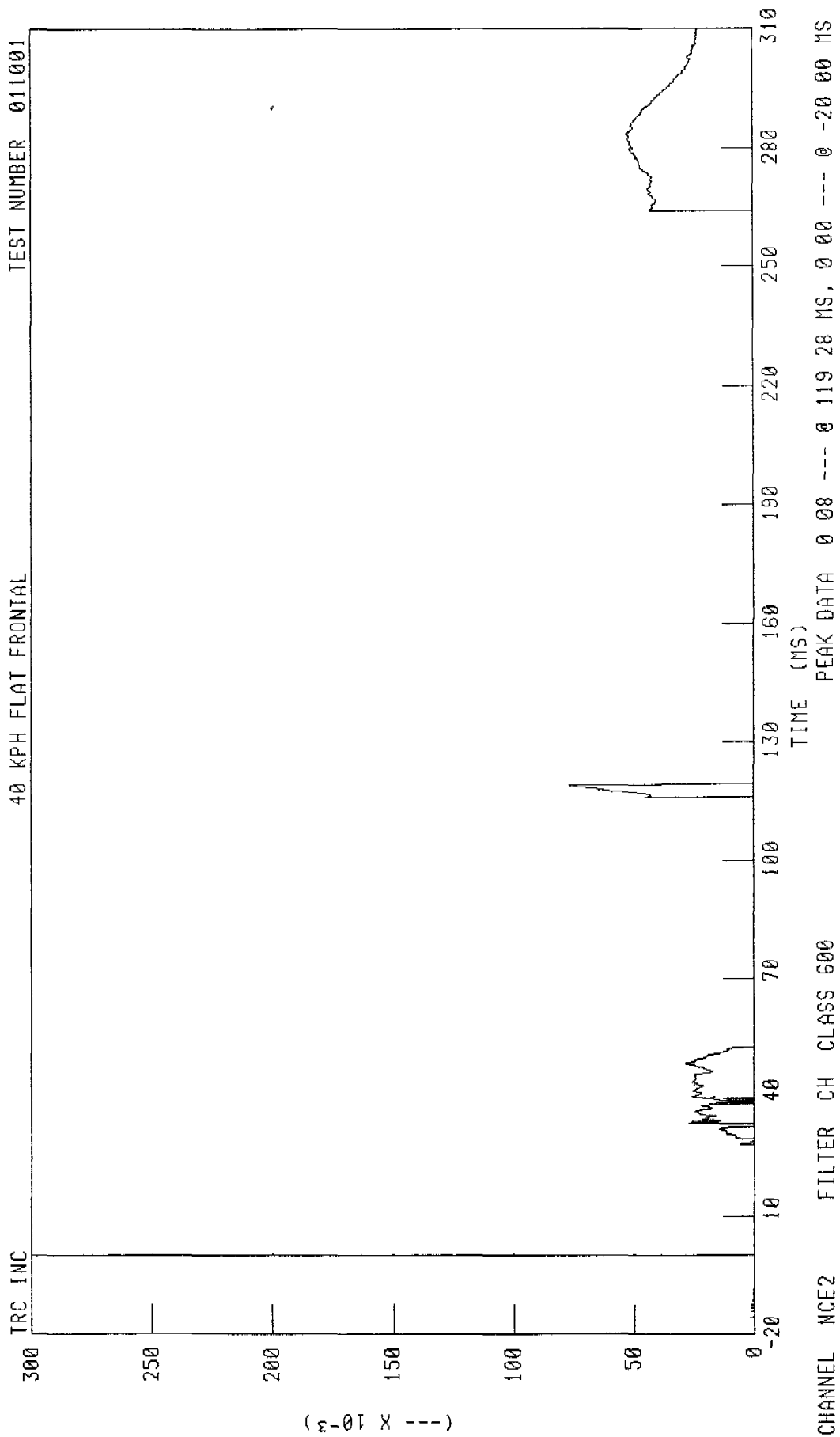
CHANNEL NTF2 FILTER CH CLASS 600

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

PASSENGER NECK COMPRESSION/EXTENSION

40 KPH FLAT FRONTAL

TEST NUMBER 011001



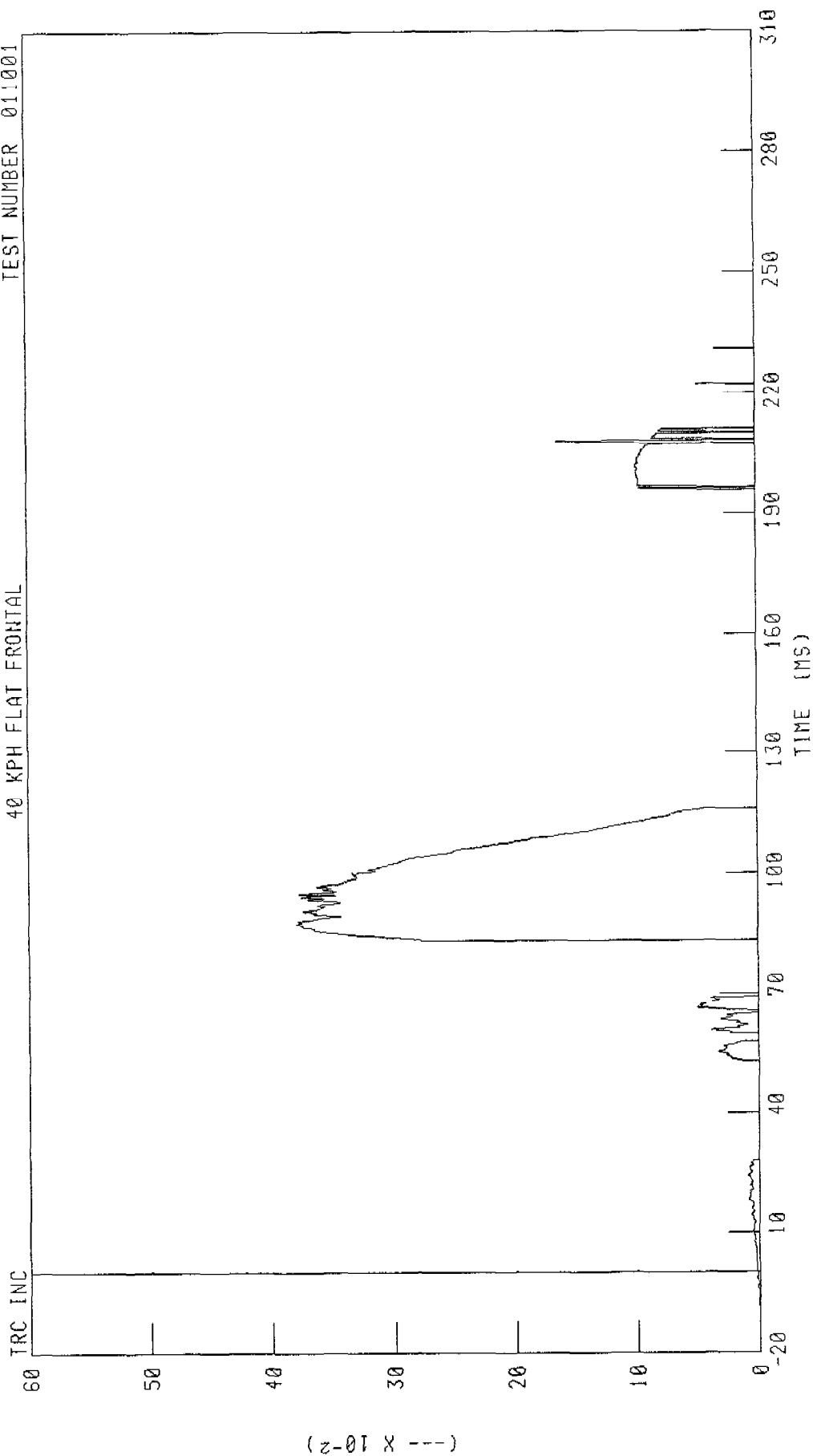
PEAK DATA 0 08 --- 0 119 28 MS, 0 00 --- 0 -20 00 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

PASSENGER NECK COMPRESSION/FLEXION

40 KPH FLAT FRONTAL

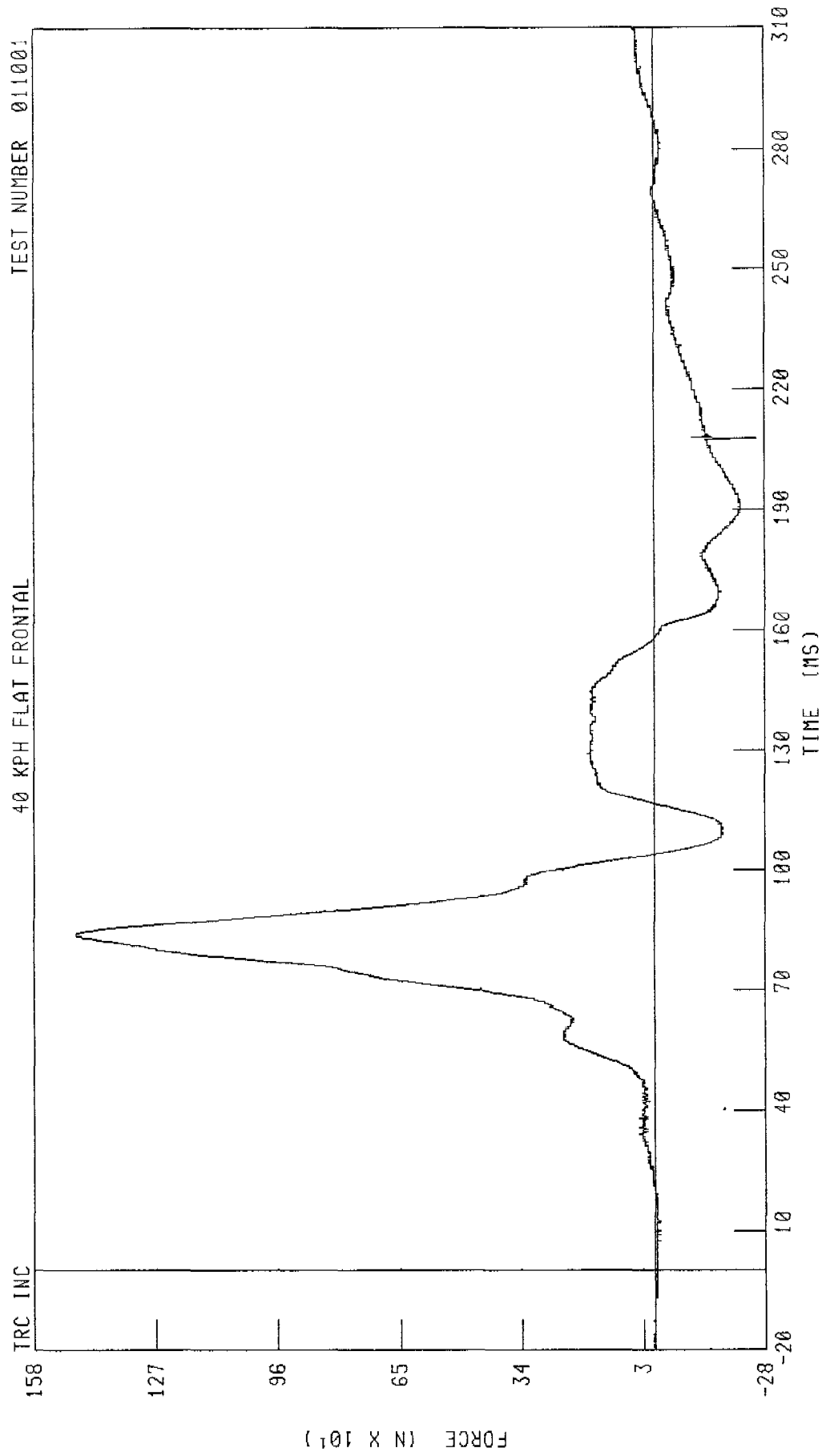
TEST NUMBER 011001



CHANNEL NCF2 FILTER CH CLASS 600

PEAK DATA 0 38 --- 0 87 44 MS, 0 00 --- 0 -20 00 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
PASSENGER NECK LOWER X-AXIS SHEAR FORCE



CHANNEL NKLF2 FILTER CH CLASS 1000

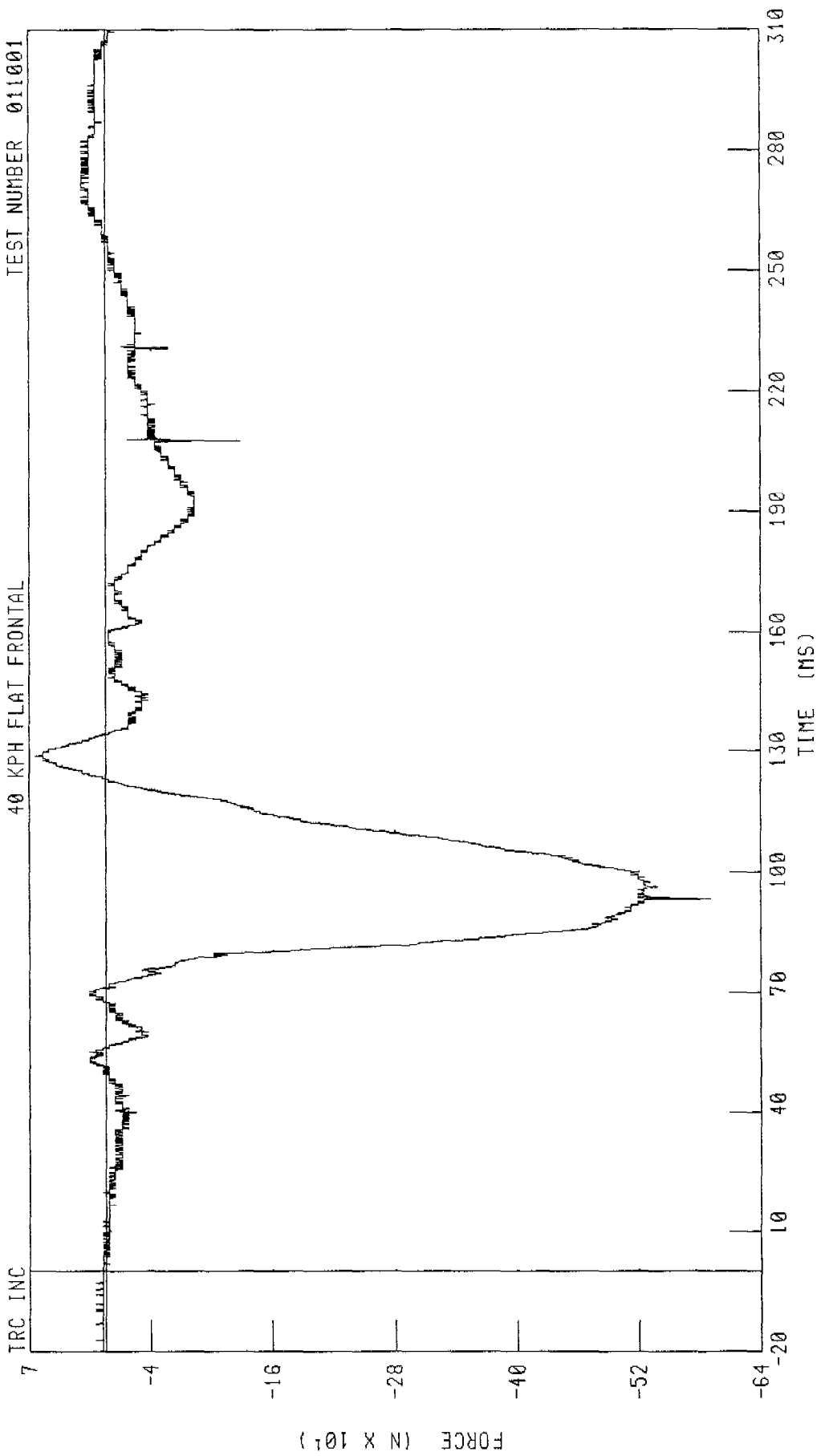
PEAK DATA 1473 74 N @ 83 68 MS, -260 08 N @ 207 76 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

PASSENGER NECK LOWER Y-AXIS SHEAR FORCE

40 KPH FLAT FRONTAL

TEST NUMBER 011001



CHANNEL NKLYF2 FILTER CH CLASS 1000

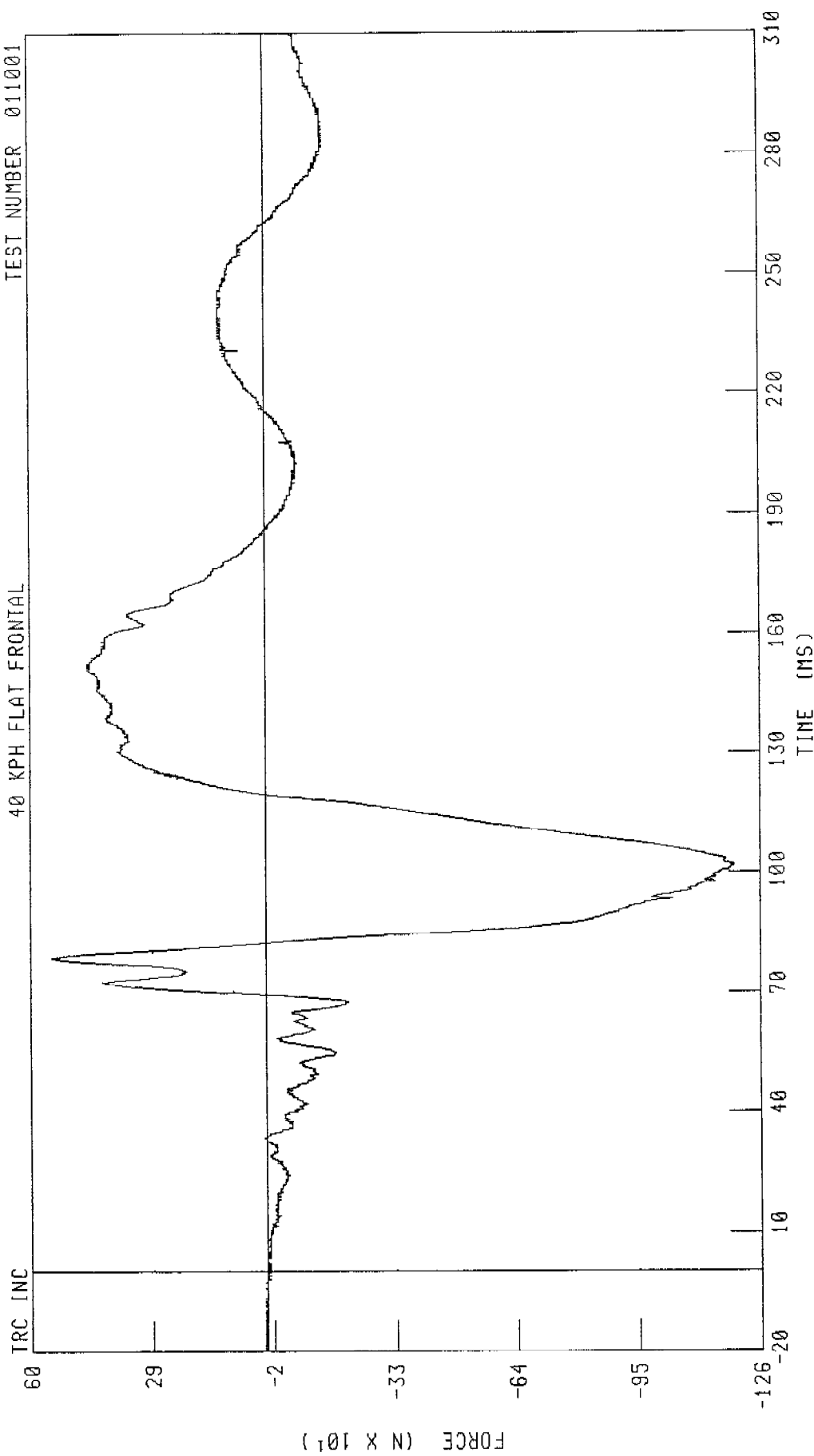
PEAK DATA 68 72 N @ 128 88 MS, -595 48 N @ 93 44 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

PASSENGER NECK LOWER Z-AXIS AXIAL FORCE

TEST NUMBER 011001

40 KPH FLAT FRONTAL

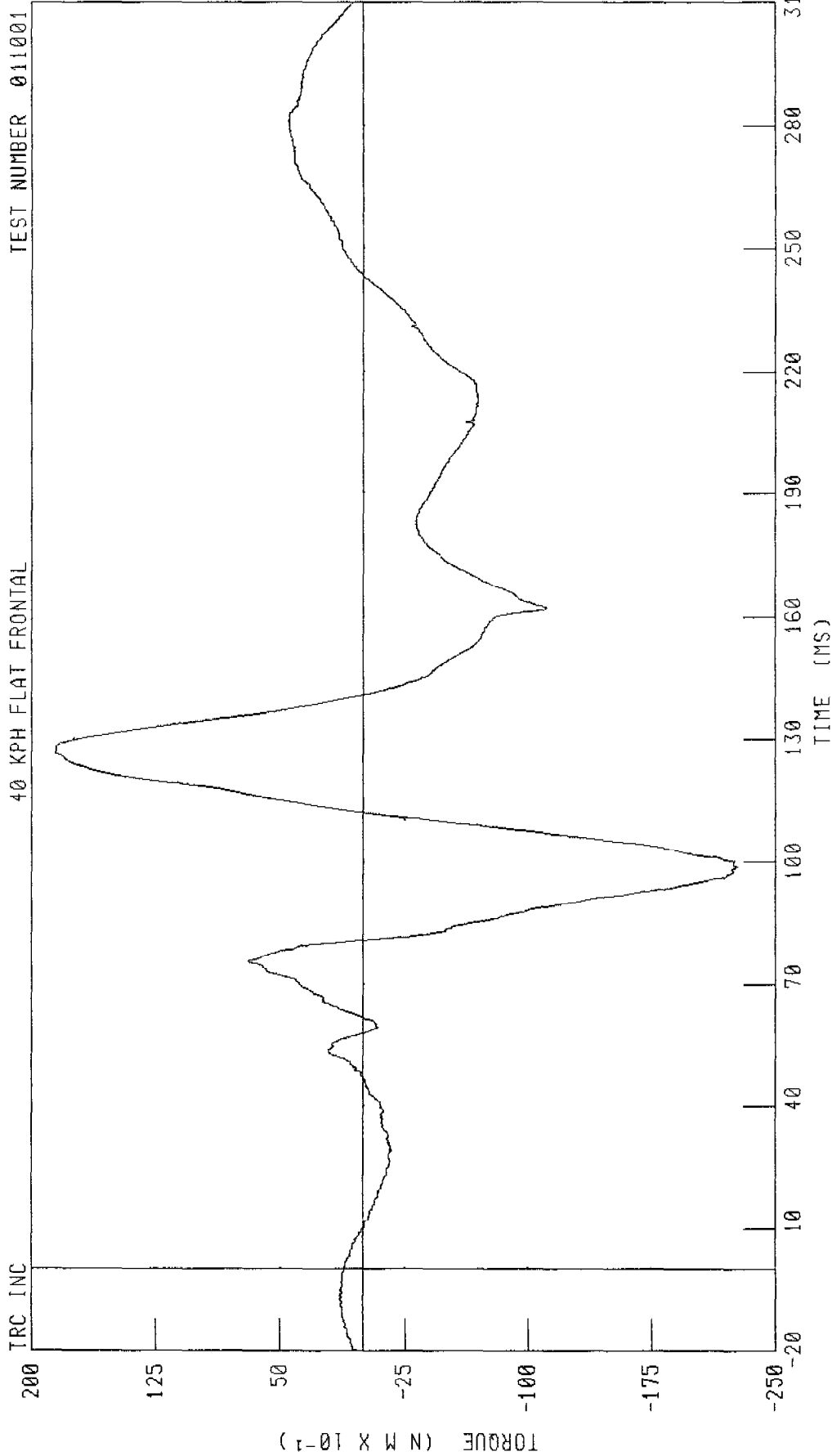


TIME (MS)

PEAK DATA 546 92 N @ 78 80 MS, -1194 12 N @ 101 68 MS

CHANNEL NKLZF2 FILTER CH CLASS 1000

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
PASSENGER NECK LOWER MOMENT ABOUT X AXIS

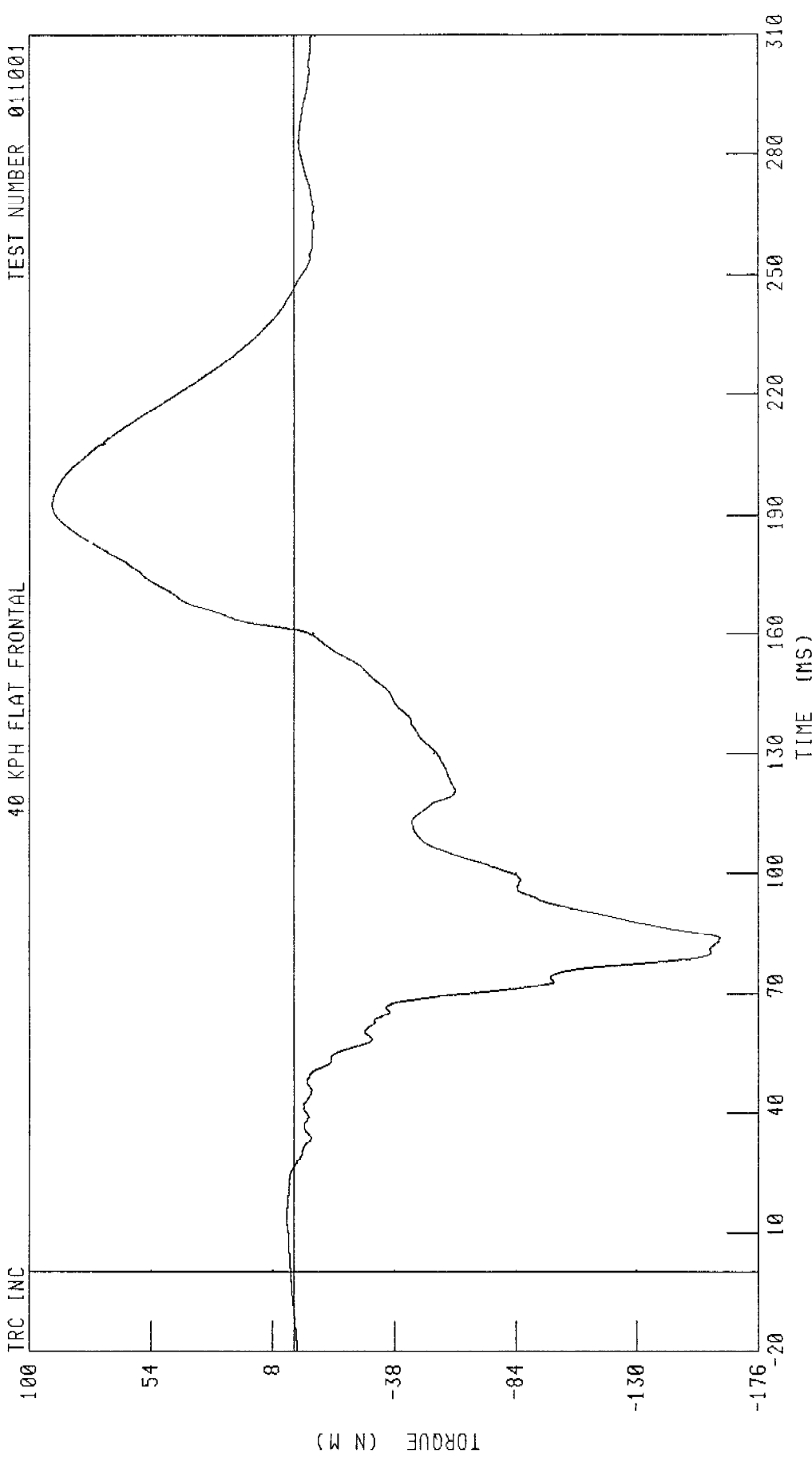


2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

PASSENGER NECK LOWER MOMENT ABOUT Y AXIS

40 KPH FLAT FRONTAL

TEST NUMBER 011001



CHANNEL NKLYM2 FILTER CH CLASS 600

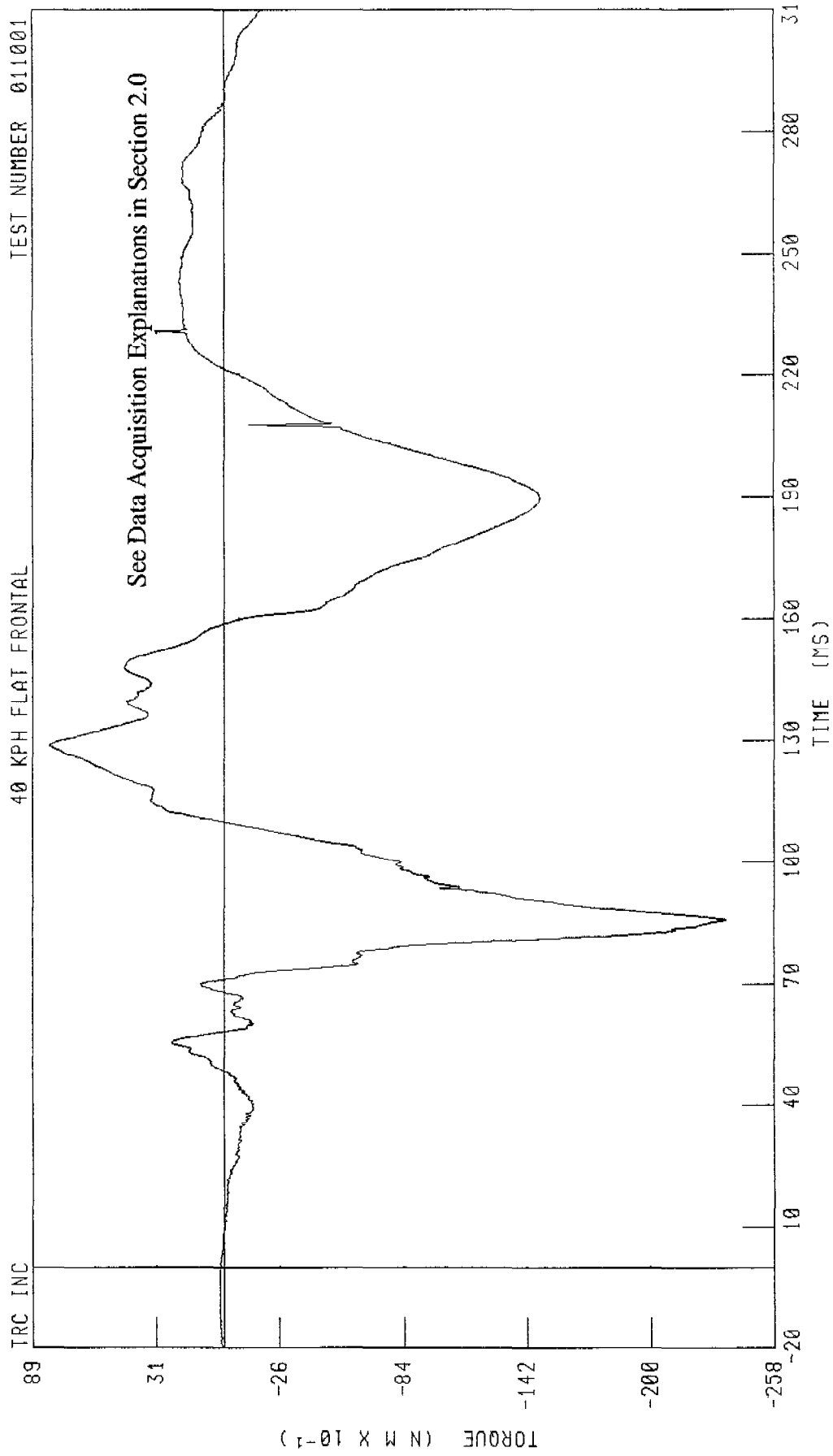
TIME (MS)

PEAK DATA 91 48 N M @ 192 32 MS, -161 51 N M @ 83 68 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
 PASSENGER NECK LOWER MOMENT ABOUT Z AXIS

TEST NUMBER 011001

40 KPH FLAT FRONTAL



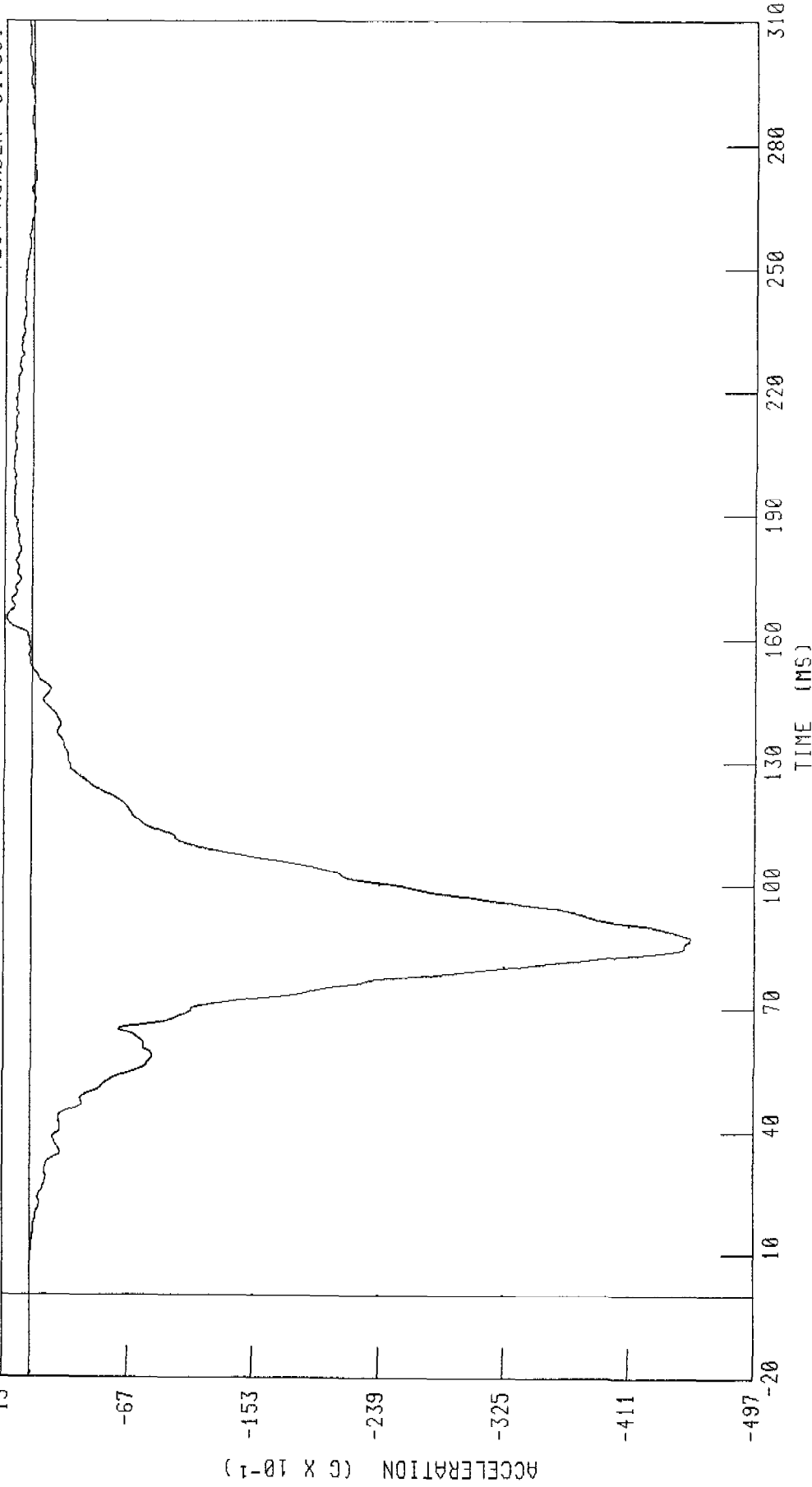
CHANNEL NKLZM2 FILTER CH CLASS 600

PEAK DATA 8 21 N M @ 128 96 MS, -23 53 N M @ 85 68 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
PASSENGER CHEST X-AXIS ACCELERATION
40 KPH FLAT FRONTAL

TRC INC

TEST NUMBER 011001



CHANNEL CSTXG2 FILTER CH CLASS 180

PEAK DATA 1 78 6 0 164 80 MS, -45 35 G @ 87 04 MS

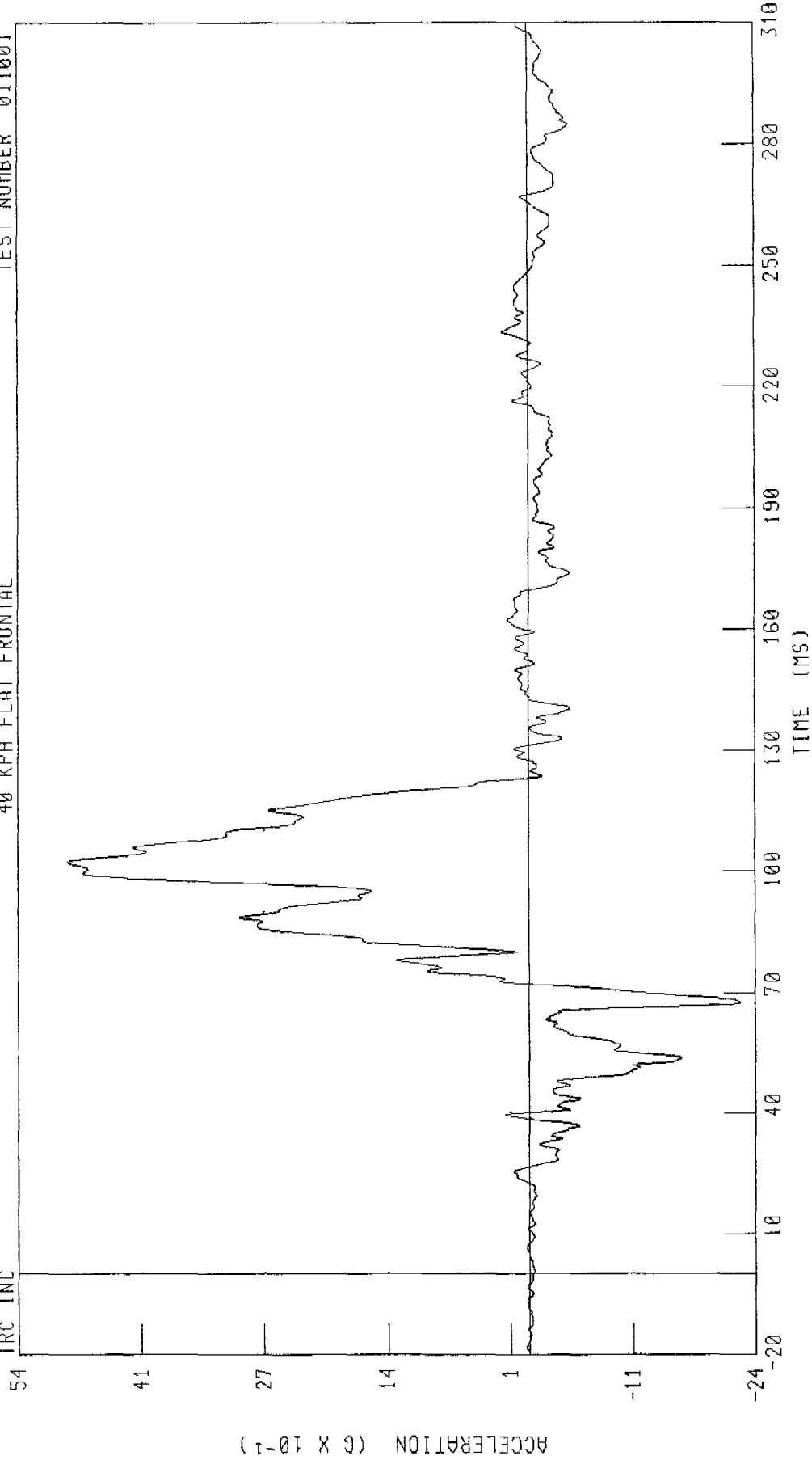
2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

PASSENGER CHEST Y-AXIS ACCELERATION

40 KPH FLAT FRONTAL

TEST NUMBER 011001

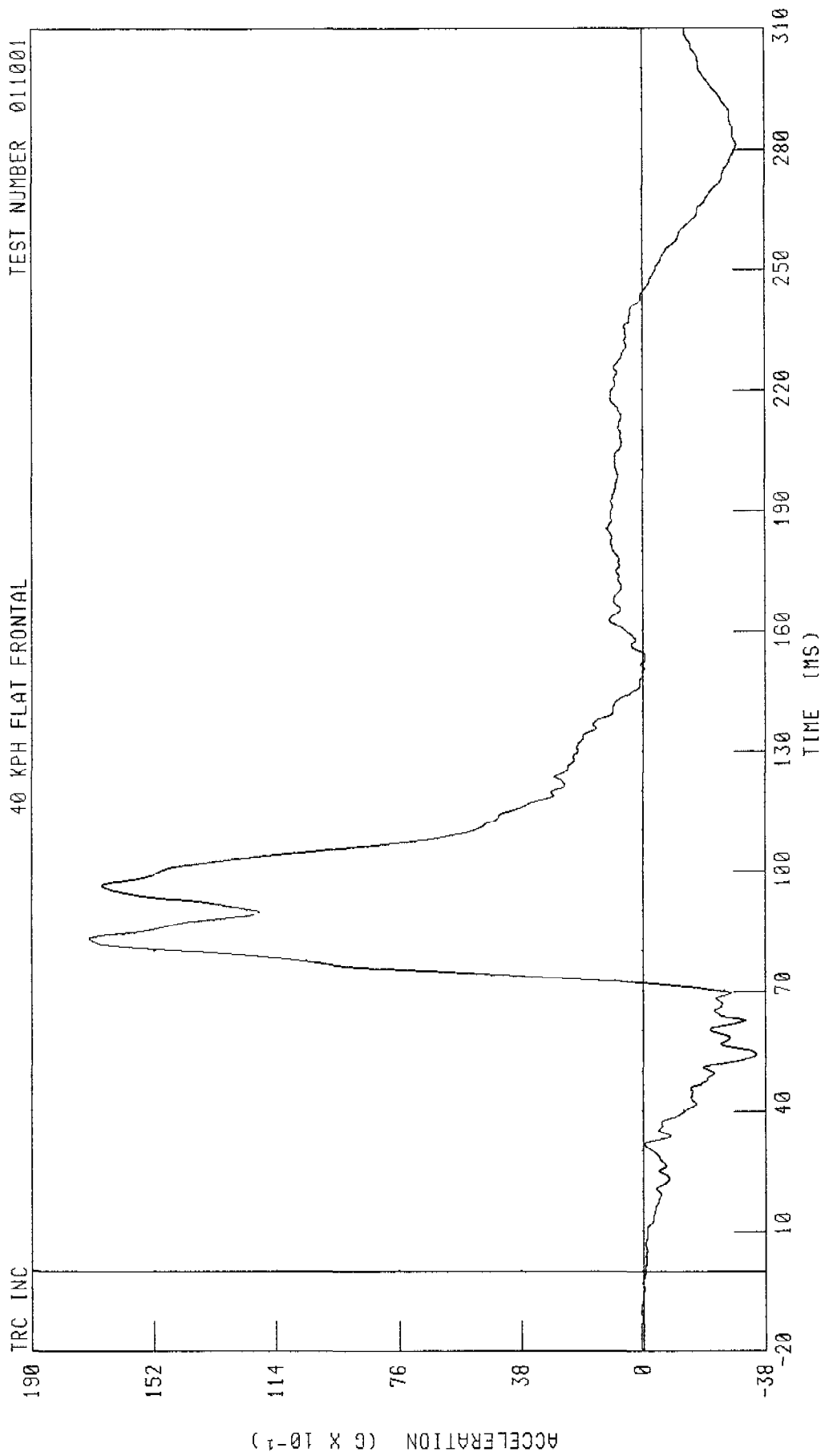
TRC INC



CHANNEL CSTYC2 FILTER CH CLASS 180

PEAK DATA 4 88 G @ 102 32 MS, -2 25 G @ 67 60 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
PASSENGER CHEST Z-AXIS ACCELERATION



CHANNEL CSTZG2 FILTER CH CLASS 180

PEAK DATA 17 22 G @ 83 12 MS, -3 52 G @ 54 08 MS

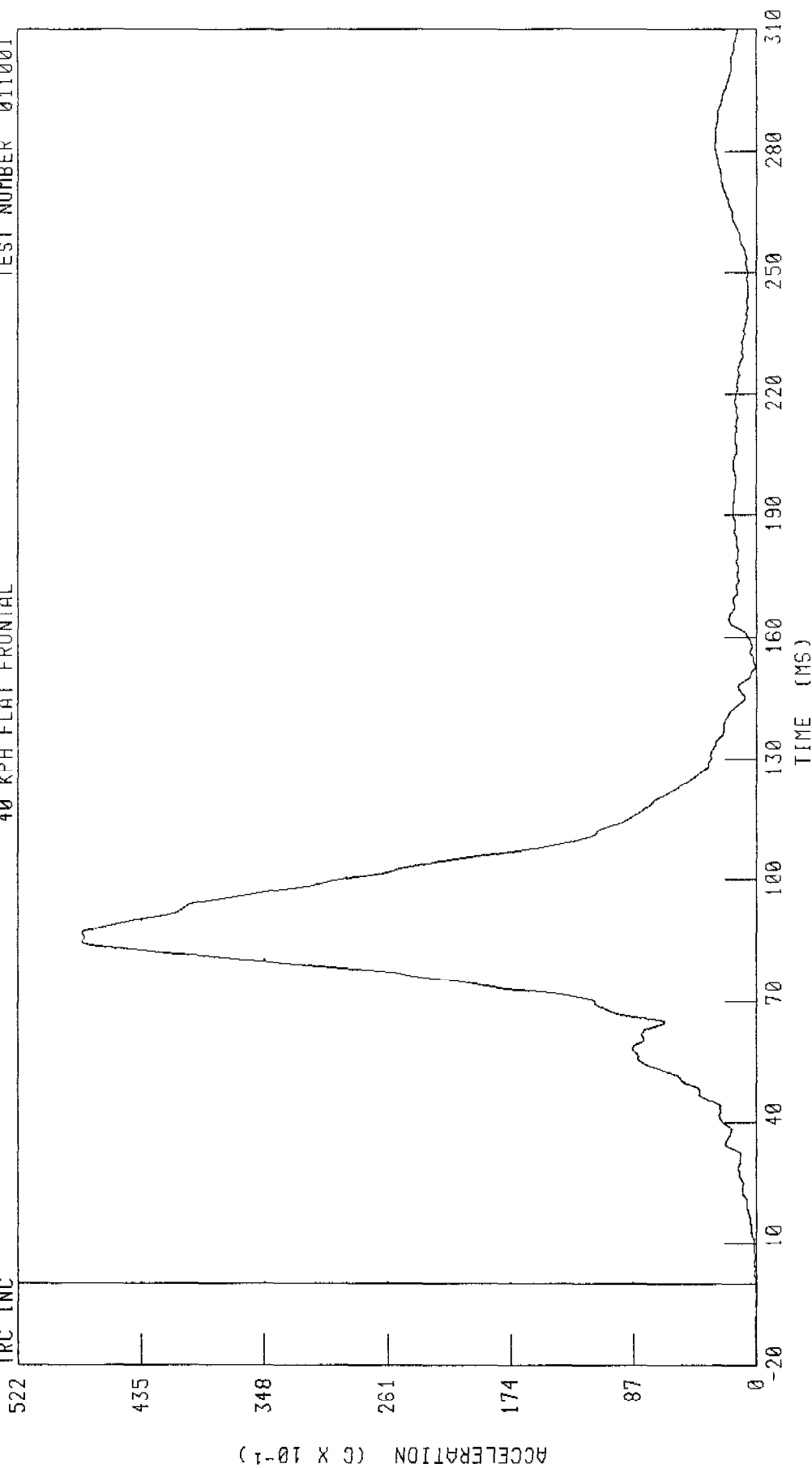
2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

PASSENGER CHEST RESULTANT ACCELERATION

40 KPH FLAT FRONTAL

TEST NUMBER 011001

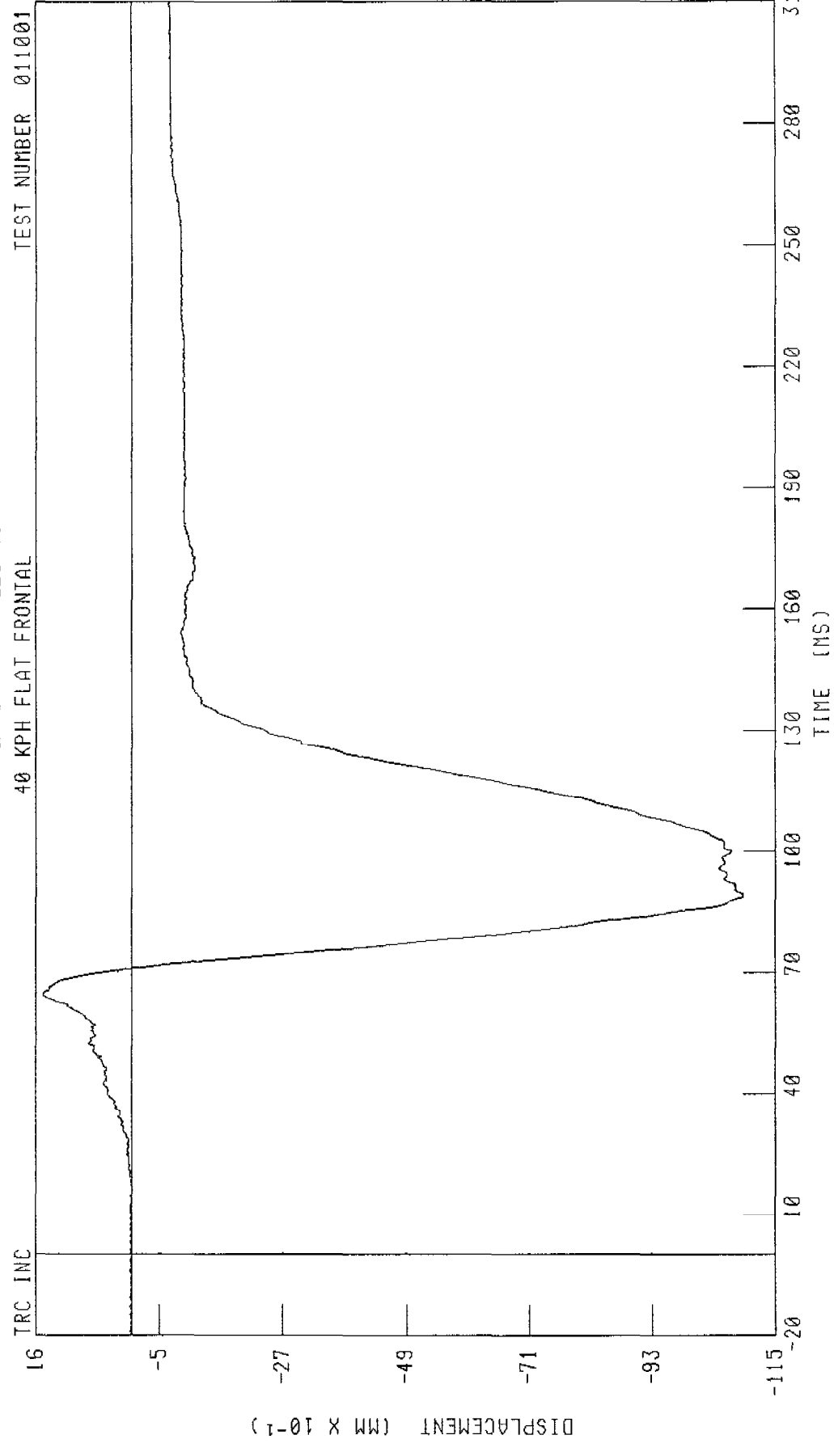
TRC INC



CHANNEL CSTRC2 FILTER CH CLASS 180

PEAK DATA 47 67 0 84 56 MS, 0 01 0 0 -2 56 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
 PASSENGER CHEST DEFLECTION
 40 KPH FLAT FRONTAL



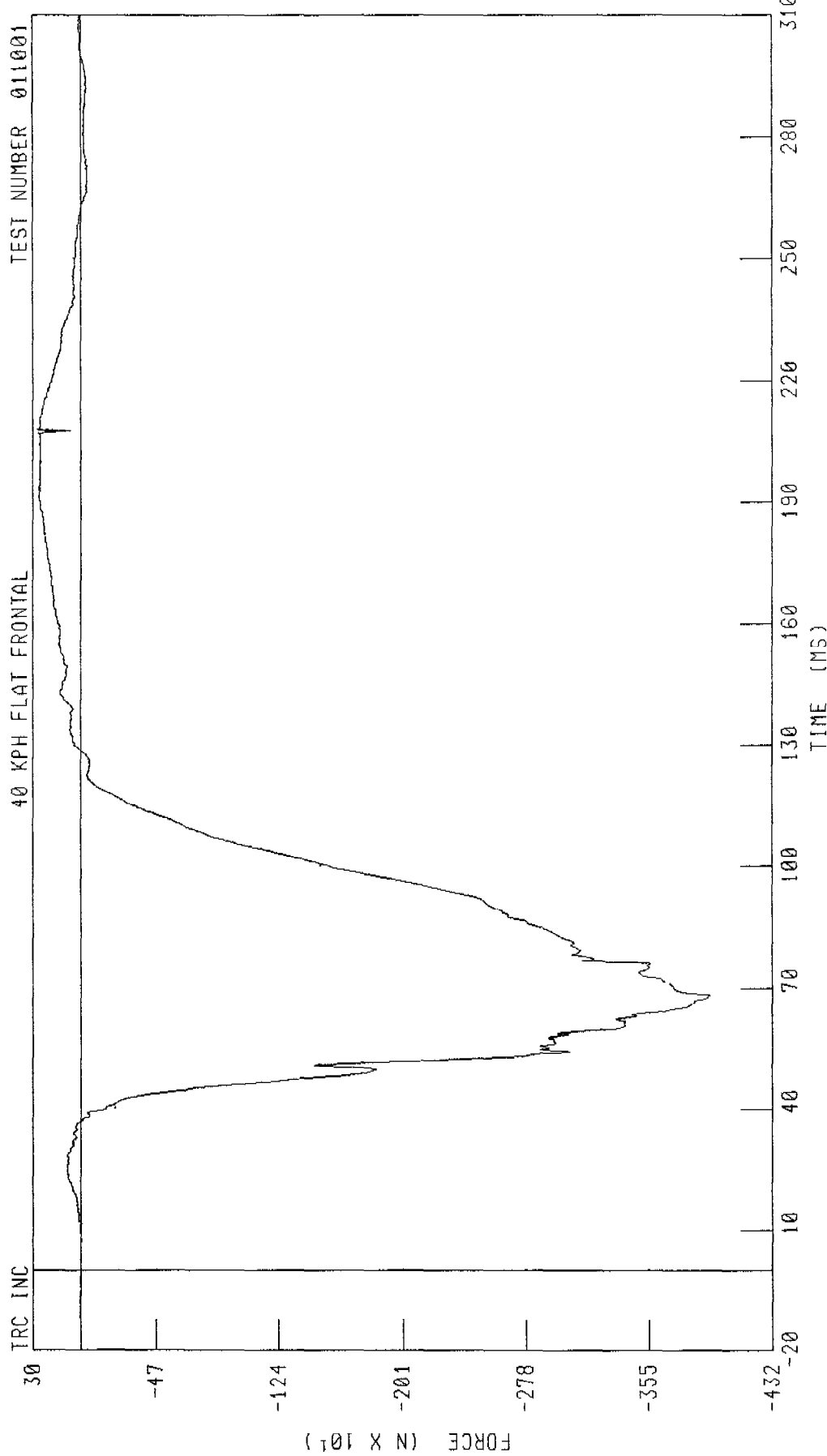
CHANNEL CSTXD2 FILTER CH CLASS 600 PEAK DATA 1 58 MM @ 64 40 MS, -10 93 MM @ 89 28 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

PASSENGER LEFT FEMUR FORCE

40 KPH FLAT FRONTAL

TEST NUMBER 011001



CHANNEL LFMZF2 FILTER CH CLASS 600

PEAK DATA 276 36 N @ 208 24 MS, -3929 08 N @ 68 16 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

PASSENGER RIGHT FEMUR FORCE

40 KPH FLAT FRONTAL

TEST NUMBER 011001

TRC INC

21

-72

-165

-258

-351

-444

-537

FORCE (N X 10¹)

TIME (MS)

10 40 70 100 130 160 190 220 250 280 310

CHANNEL RFMZF2 FILTER CH CLASS 600

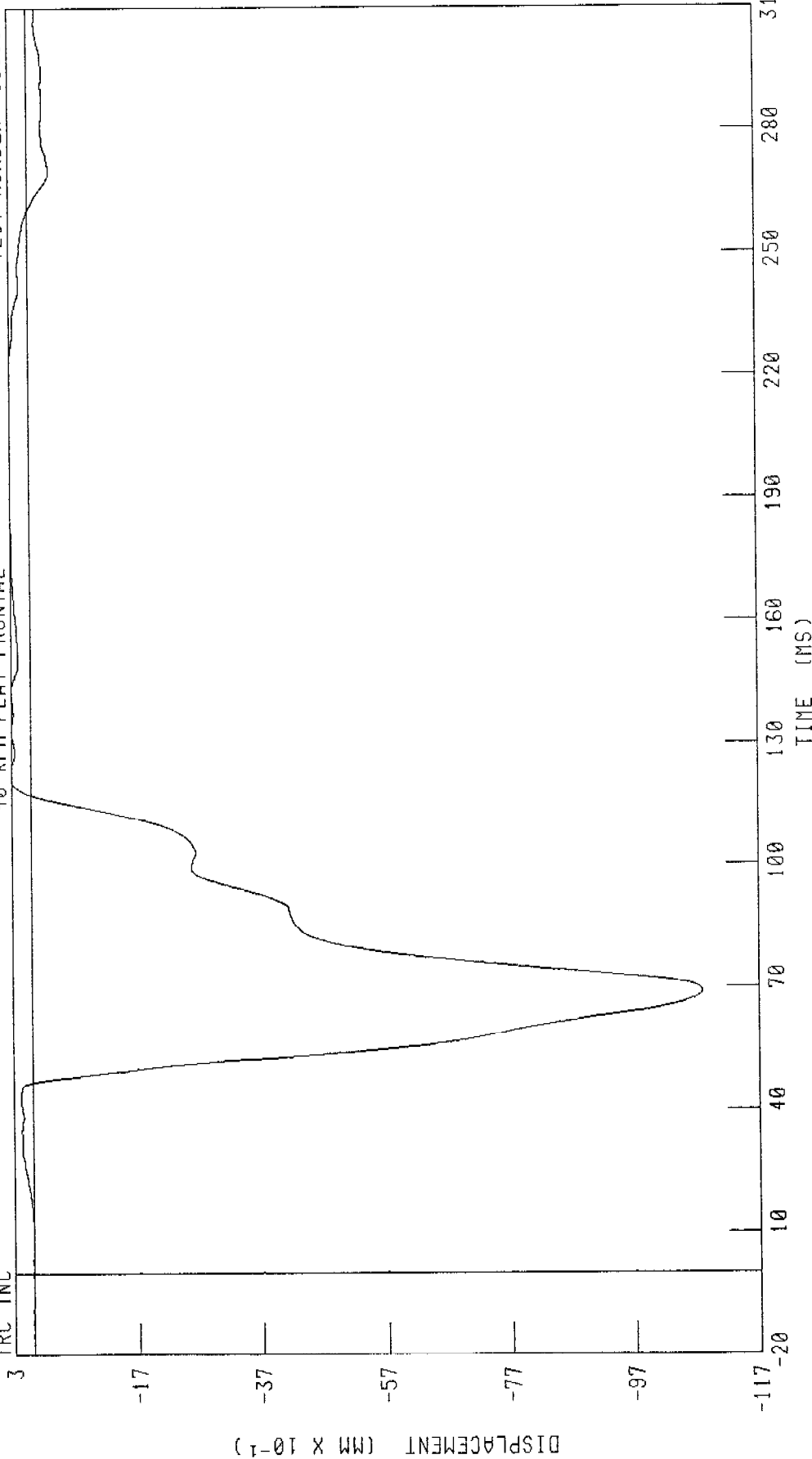
PEAK DATA 193 04 N 0 208 24 MS, -4897 04 N 0 77 04 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
PASSENGER LEFT TIBIA TO KNEE DISPLACEMENT

TEST NUMBER 011001

40 KPH FLAT FRONTAL

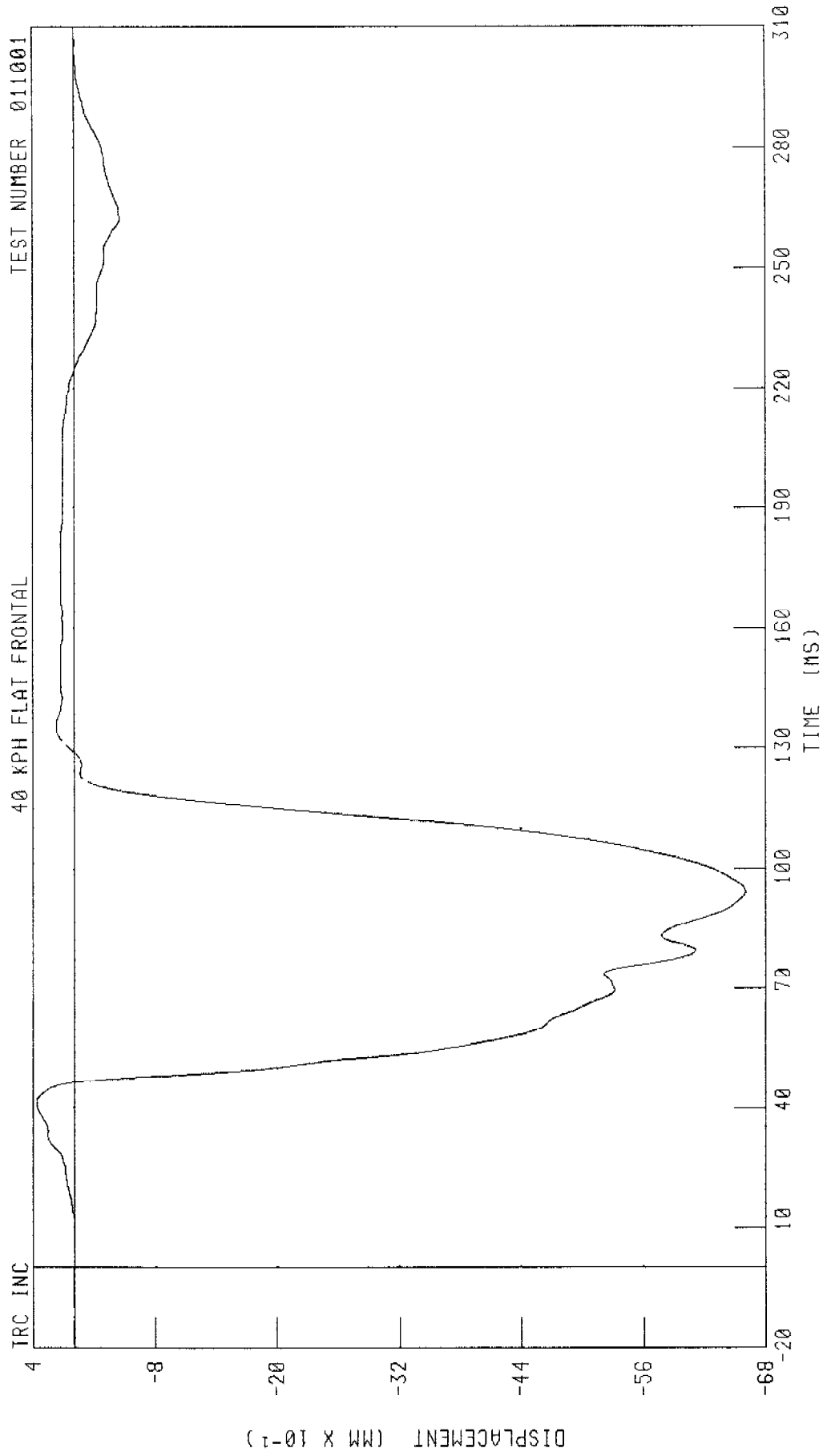
TRC INC



CHANNEL KNLX02 FILTER CH CLASS 180

PEAK DATA 0 36 MM @ 121 92 MS, -10 79 MM @ 68 72 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
PASSENGER RIGHT TIBIA TO KNEE DISPLACEMENT



CHANNEL KNRXD2 FILTER CH CLASS 180

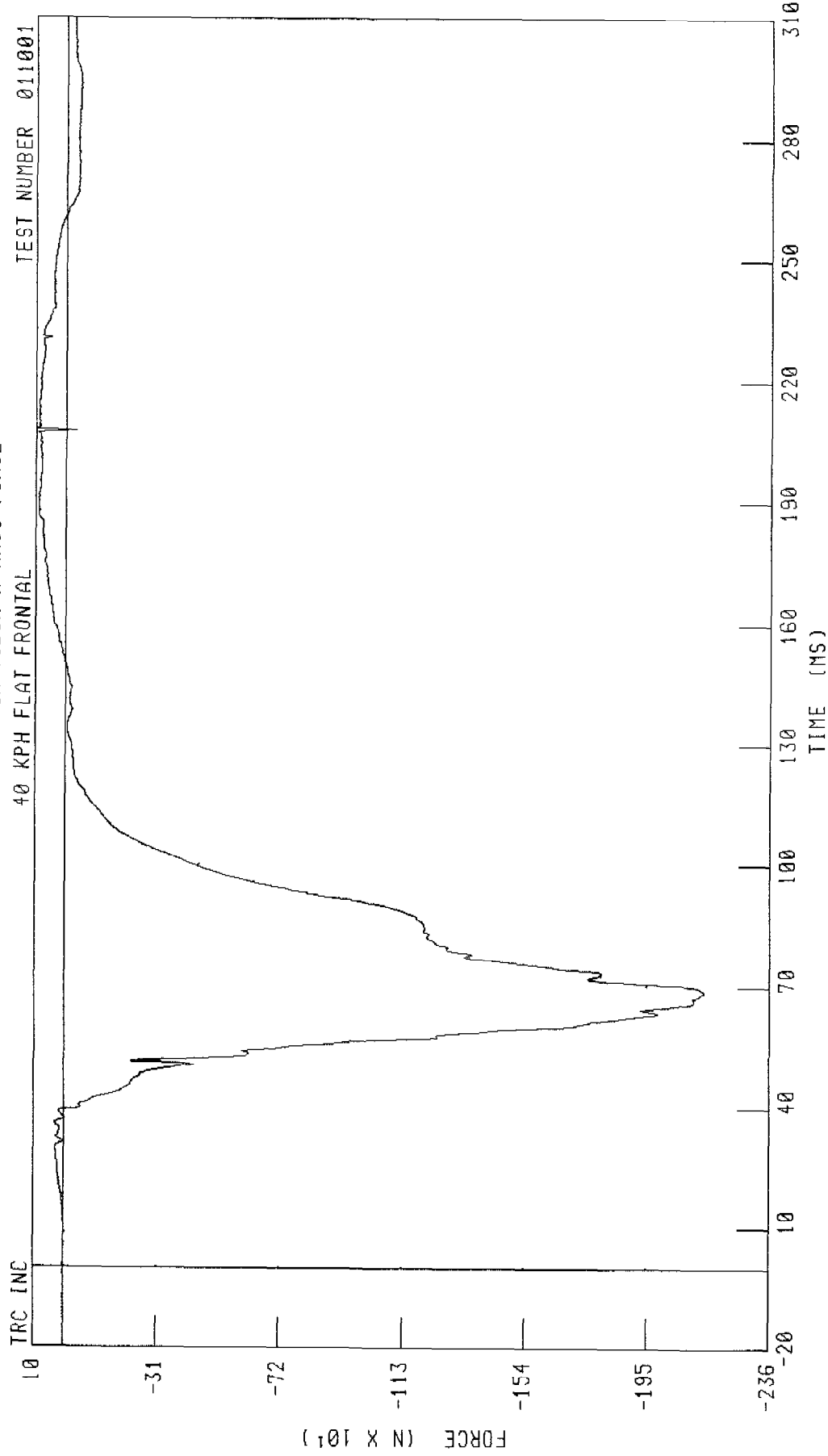
PEAK DATA 0 37 MM 0 41 36 MS, -6 60 MM 0 94 24 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

PASSENGER LEFT UPPER TIBIA X-AXIS FORCE

40 KPH FLAT FRONTAL

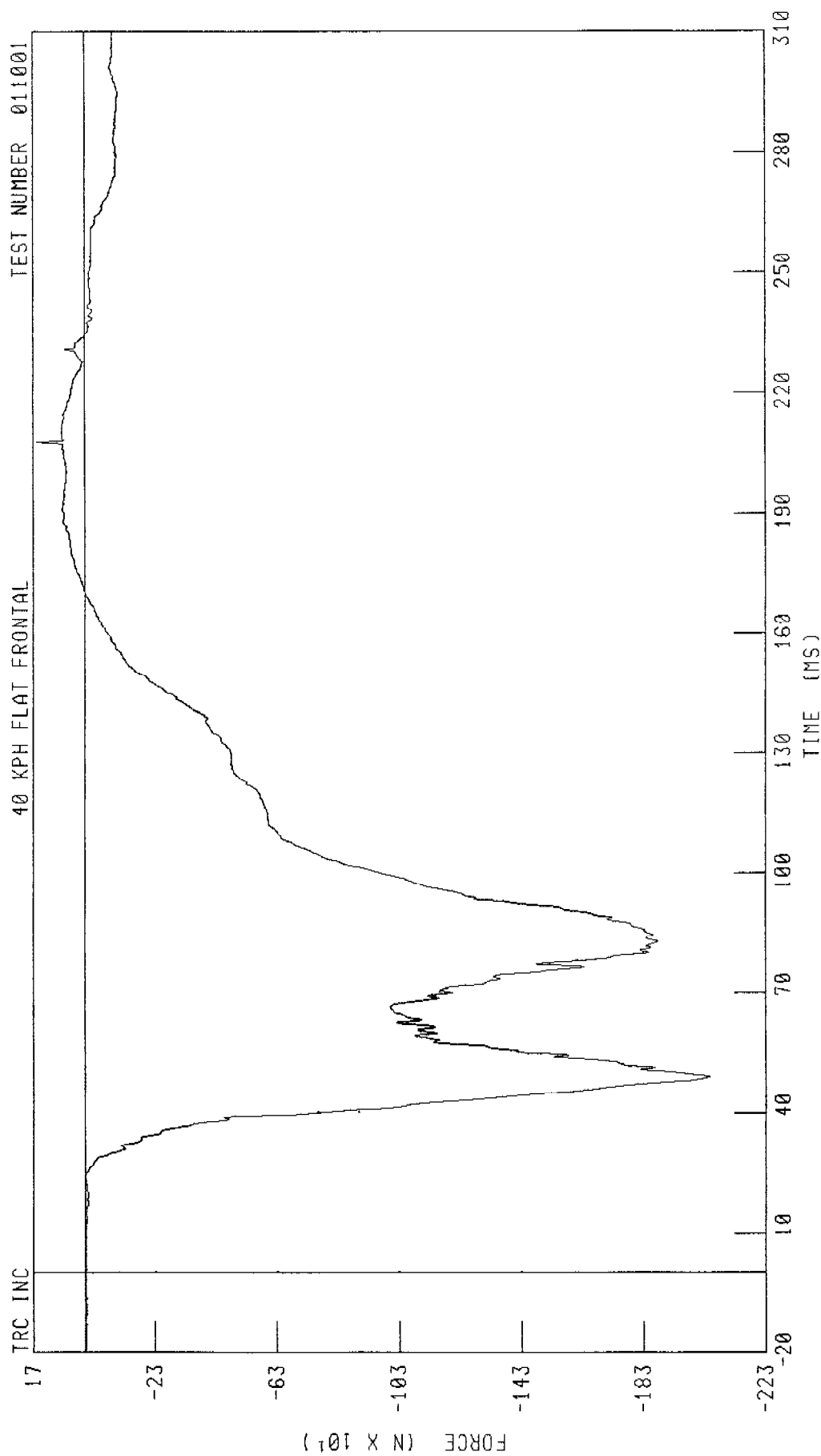
TEST NUMBER 011001



CHANNEL TBLXF2 FILTER CH CLASS 600

PEAK DATA 99 19 N @ 208 24 MS, -2142 20 N @ 68 56 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
PASSENGER LEFT UPPER TIBIA Z-AXIS FORCE

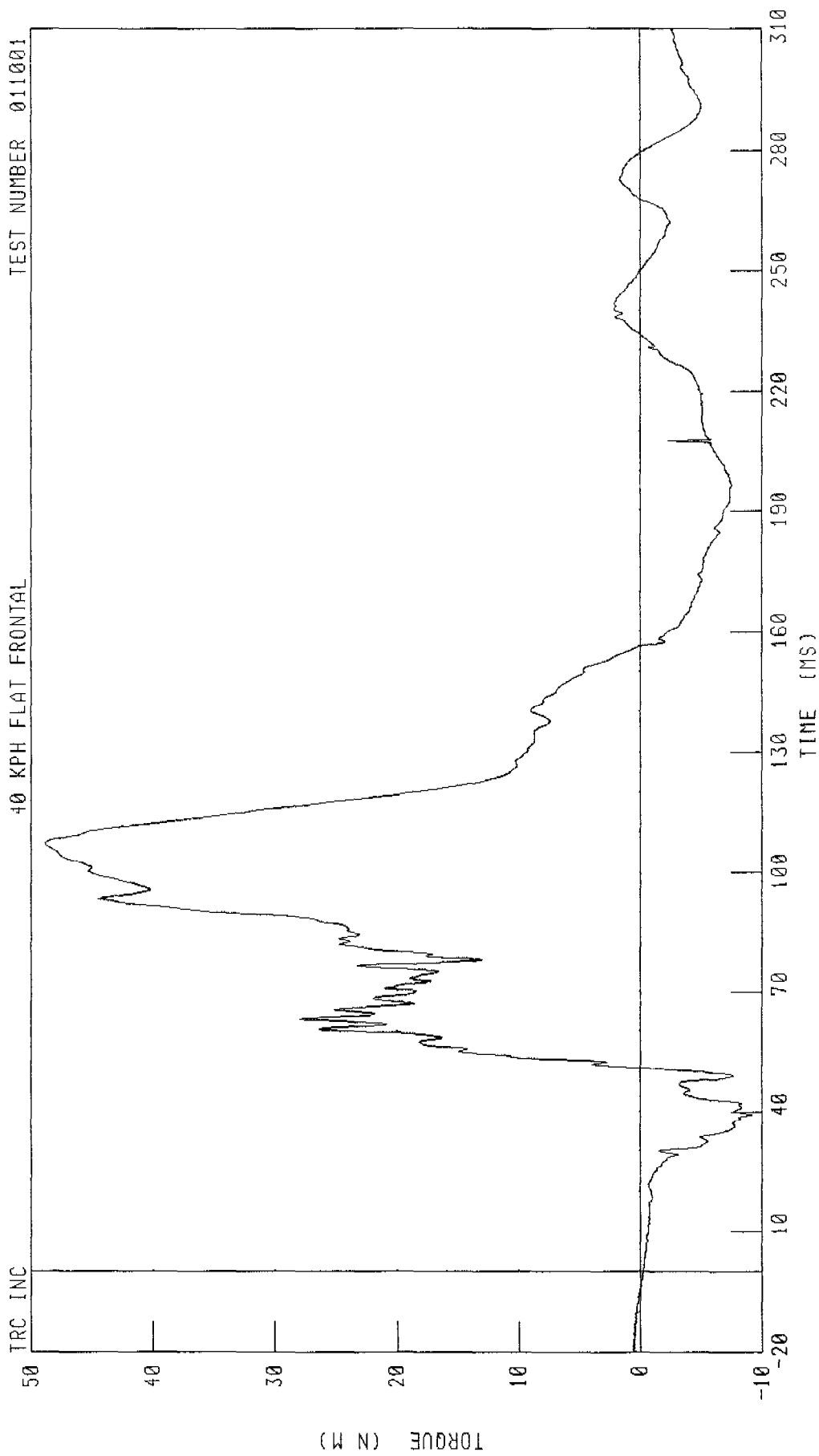


CHANNEL TBLZF2 FILTER CH CLASS 600

PEAK DATA 157 61 N @ 207 76 MS, -2045 97 N @ 49 12 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
PASSENGER LEFT UPPER TIBIA MOMENT ABOUT X AXIS

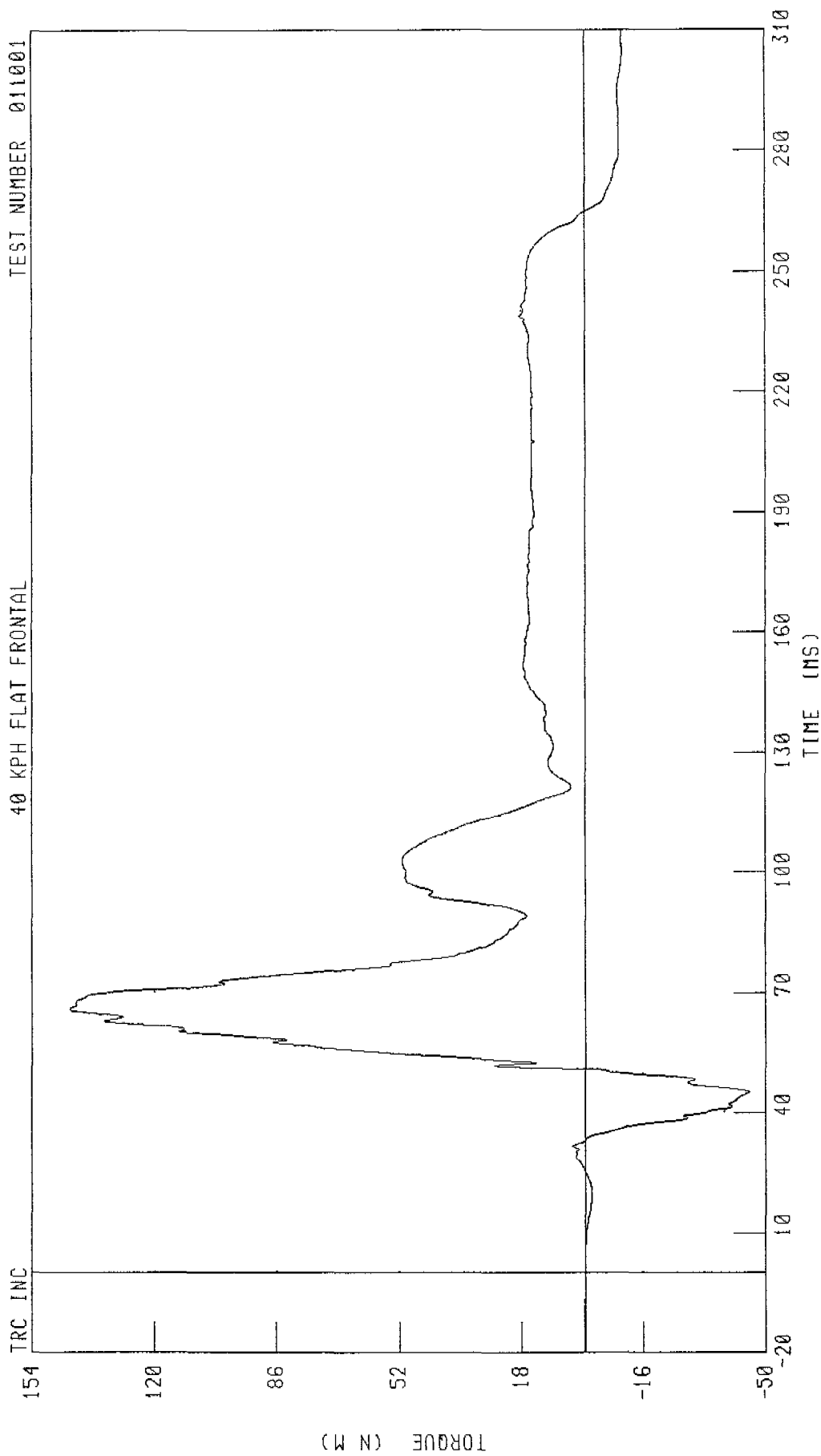
40 KPH FLAT FRONTAL TEST NUMBER 011001



CHANNEL TBLXM2 FILTER CH CLASS 600

PEAK DATA 48 86 N M @ 107 04 MS, -9 15 N M @ 39 28 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
PASSENGER LEFT UPPER TIBIA MOMENT ABOUT Y AXIS

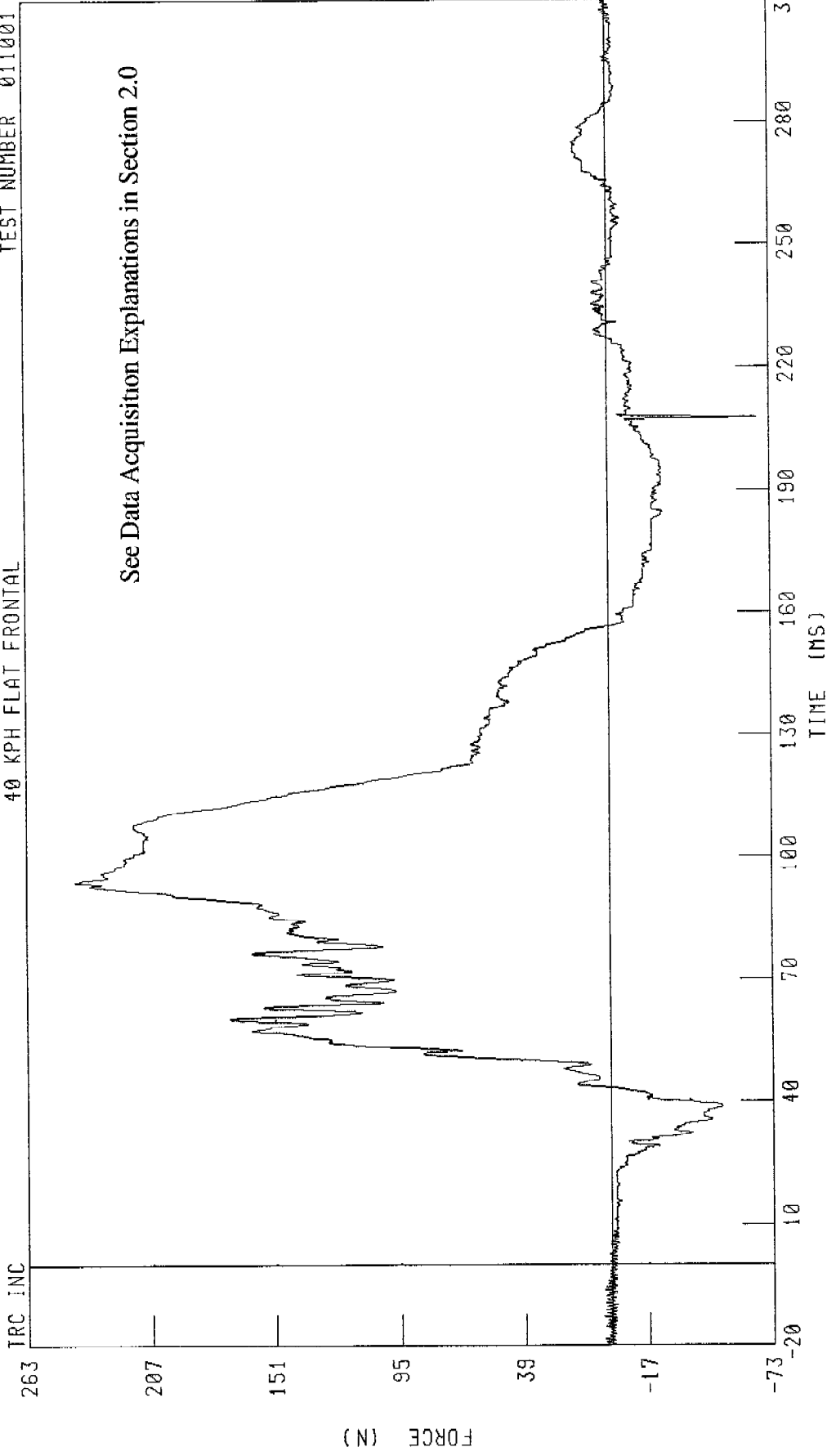


CHANNEL TBLYN2 FILTER CH CLASS 600

PEAK DATA 143 48 N M @ 66 00 MS, -45 66 N M @ 45 20 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
PASSENGER LEFT LOWER TIBIA X-AXIS FORCE
40 KPH FLAT FRONTAL

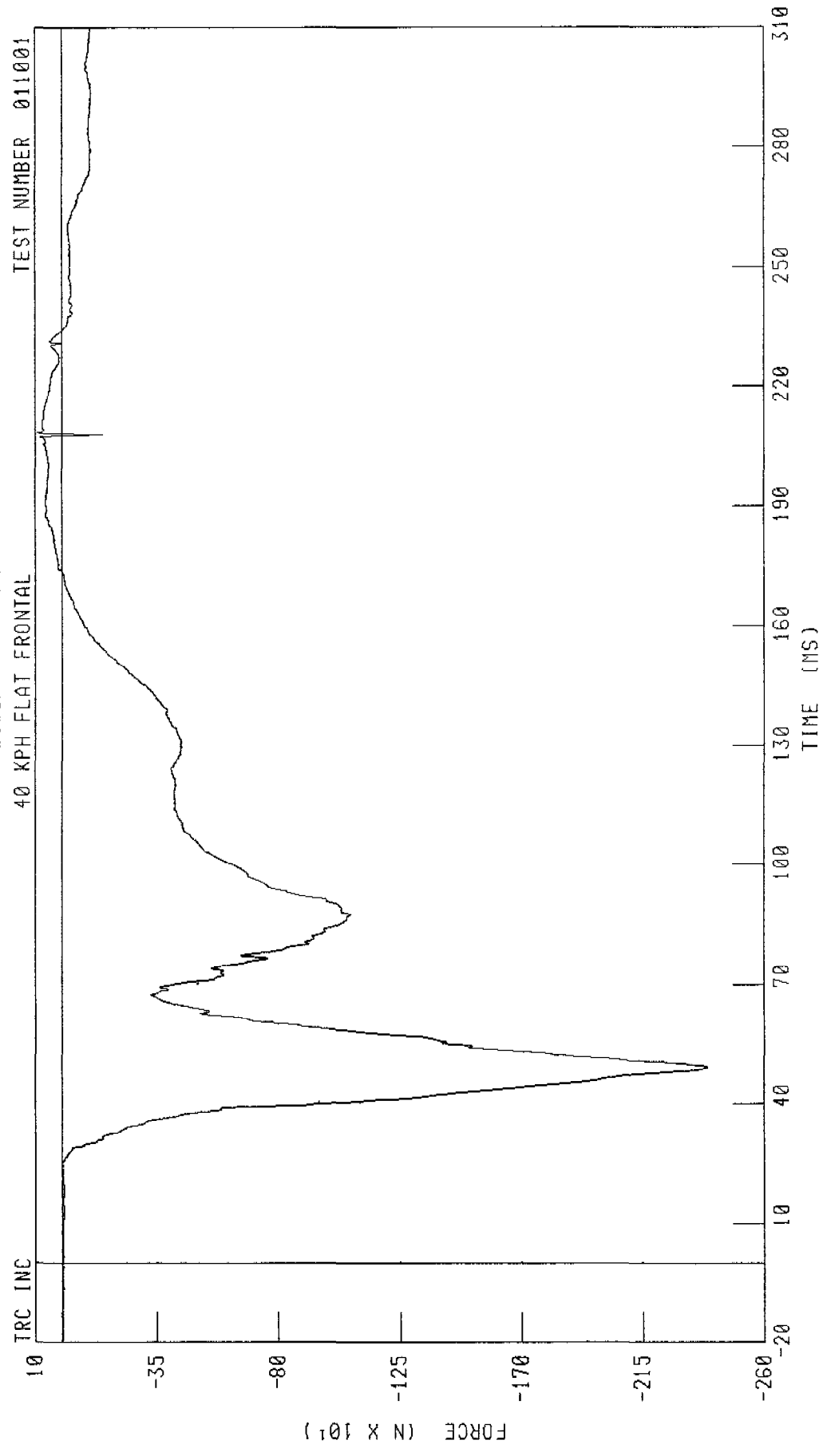
TEST NUMBER 011001



CHANNEL ANLXF2 FILTER CH CLASS 600

PEAK DATA 241 10 N @ 93 92 MS, -67 16 N @ 207 76 MS

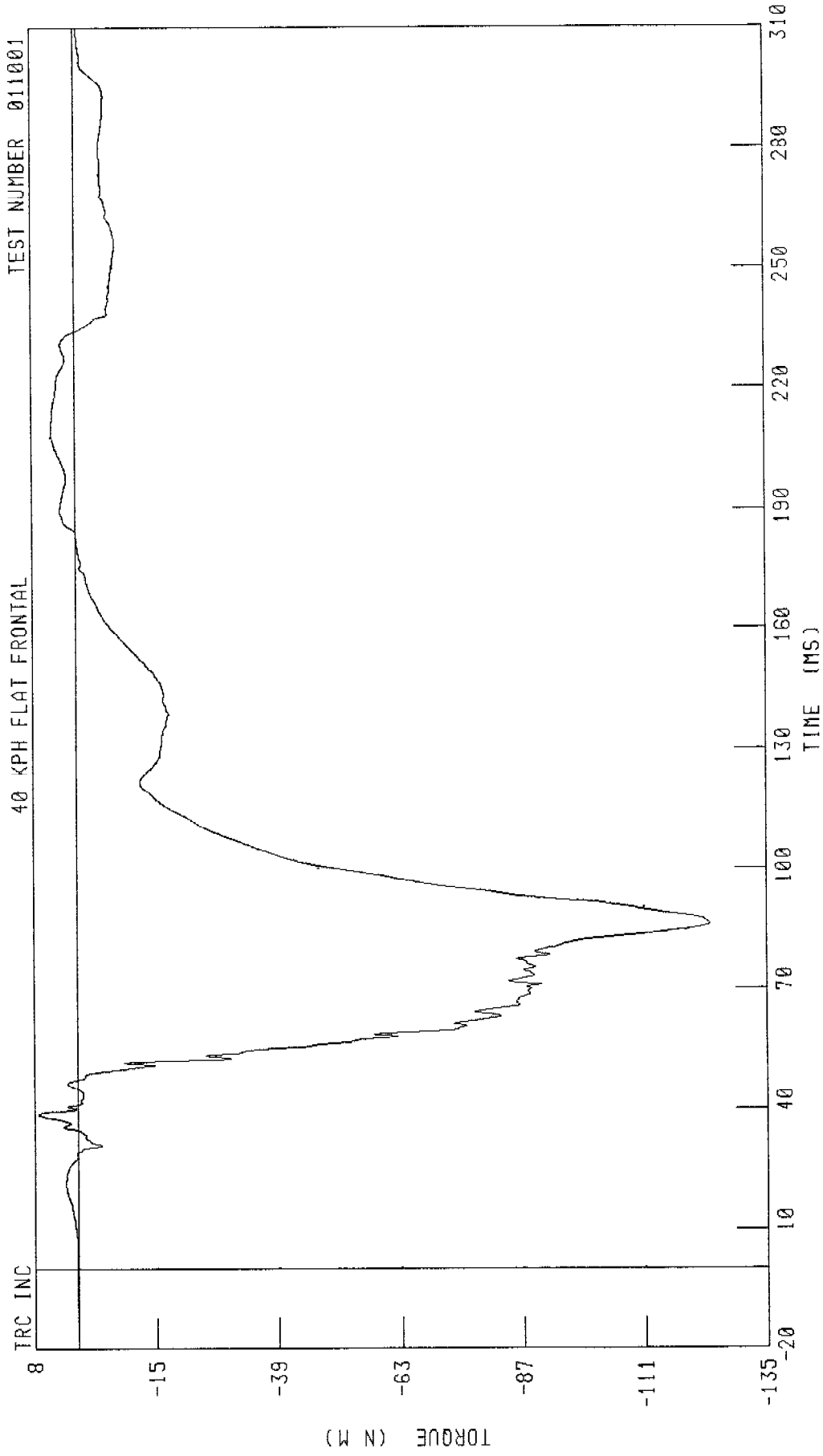
2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
PASSENGER LEFT LOWER TIBIA Z-AXIS FORCE



CHANNEL ANLZF2 FILTER CH CLASS 600

PEAK DATA 92 48 N @ 208 24 MS, -2391 38 N @ 49 12 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
PASSENGER LEFT LOWER TIBIA MOMENT ABOUT X AXIS



CHANNEL ANLXM2 FILTER CH CLASS 600

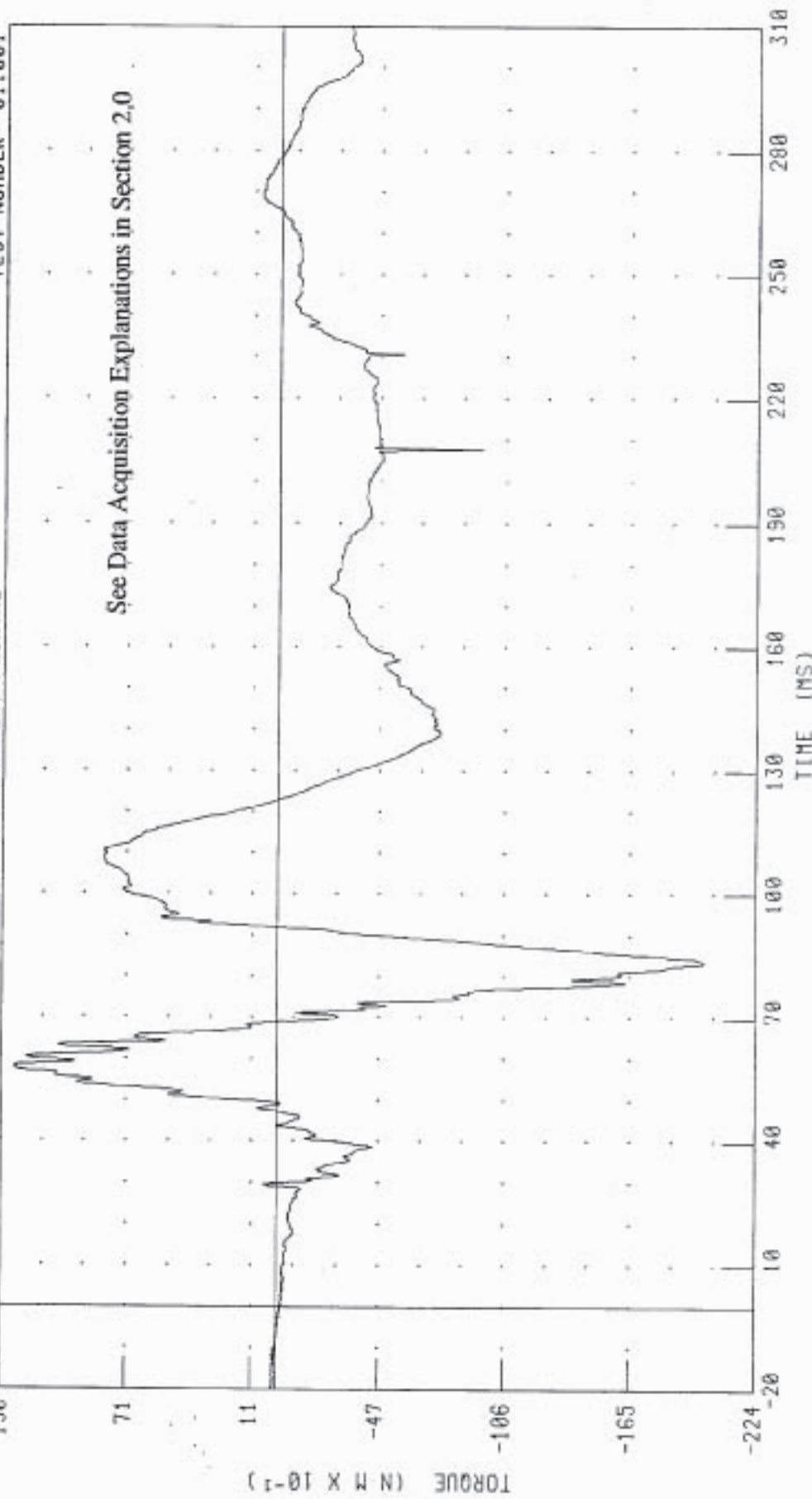
2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

PASSENGER LEFT LOWER TIBIA MOMENT ABOUT Y AXIS

40 KPH FLAT FRONTAL

TRC INC.

TEST NUMBER: 011001



CHANNEL: ANLYM2 FILTER: CH CLASS 600

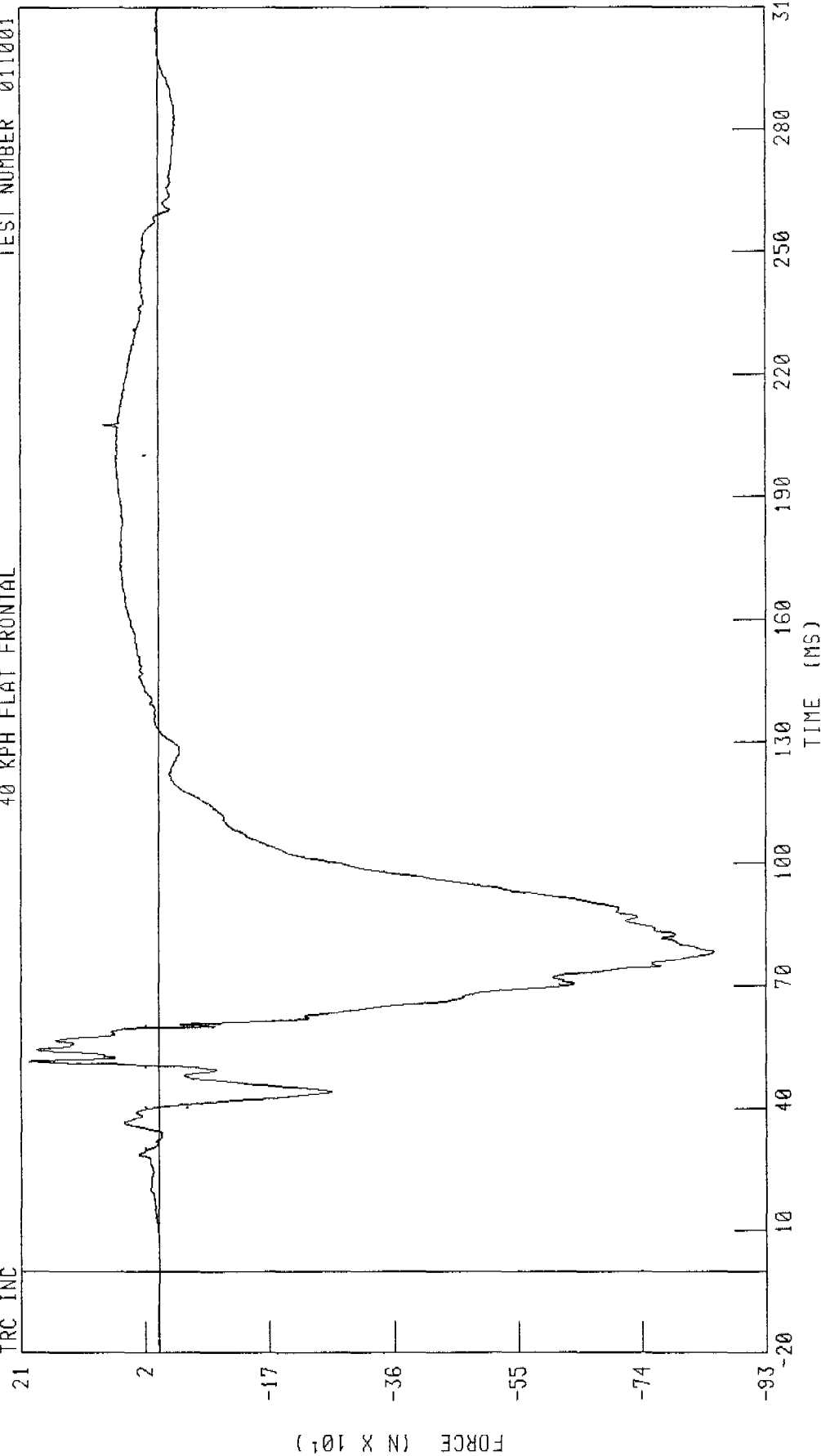
PEAK DATA: 12.38 N M @ 58.00 MS, -20.00 N M @ 83.52 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
PASSENGER RIGHT UPPER TIBIA X-AXIS FORCE

TEST NUMBER 011001

40 KPH FLAT FRONTAL

TRC INC



CHANNEL TBRXF2 FILTER CH CLASS 600

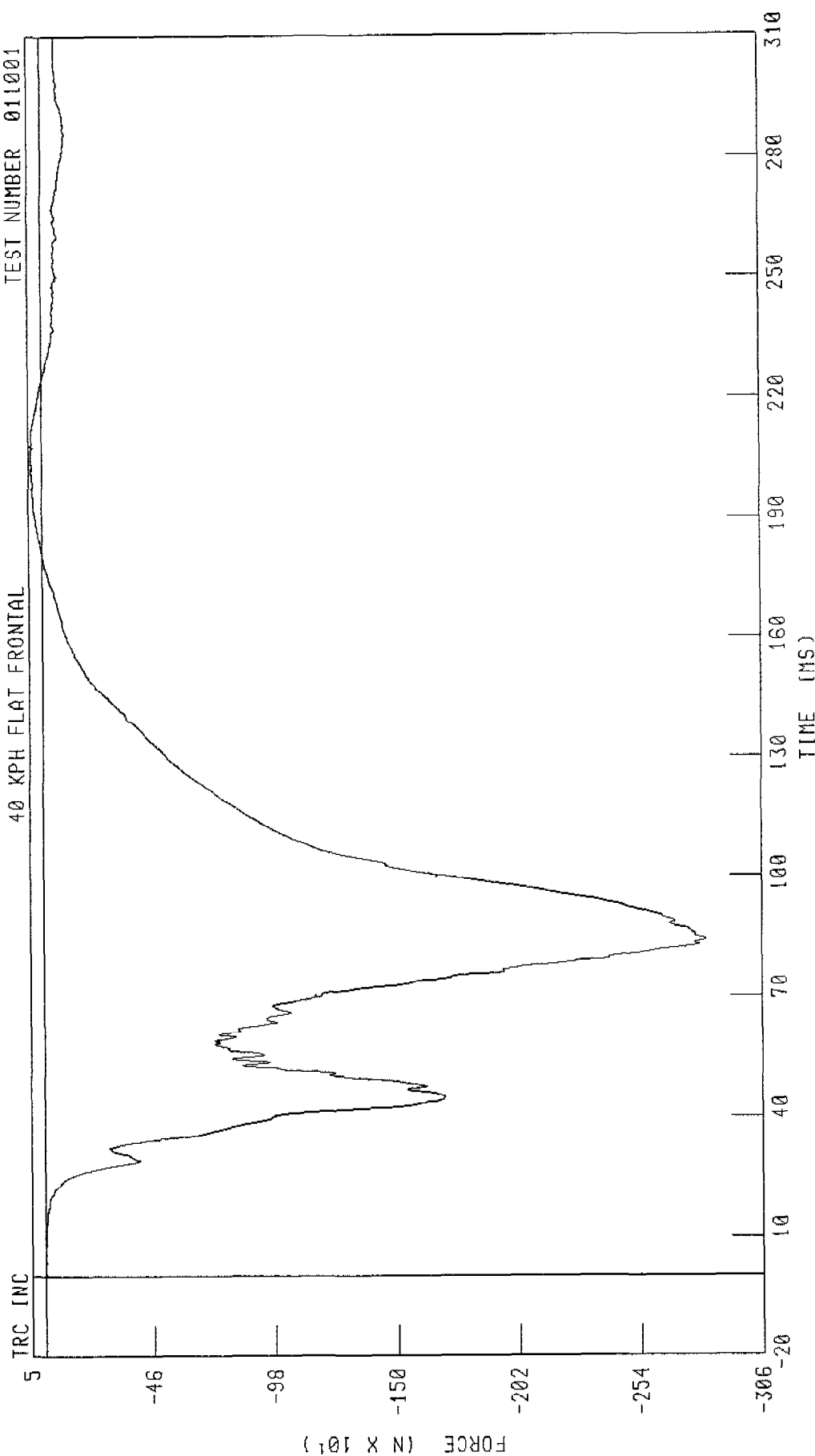
PEAK DATA 197 20 N @ 51 68 MS, -850 86 N @ 78 24 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

PASSENGER RIGHT UPPER TIBIA Z-AXIS FORCE

40 KPH FLAT FRONTAL

TEST NUMBER 011001

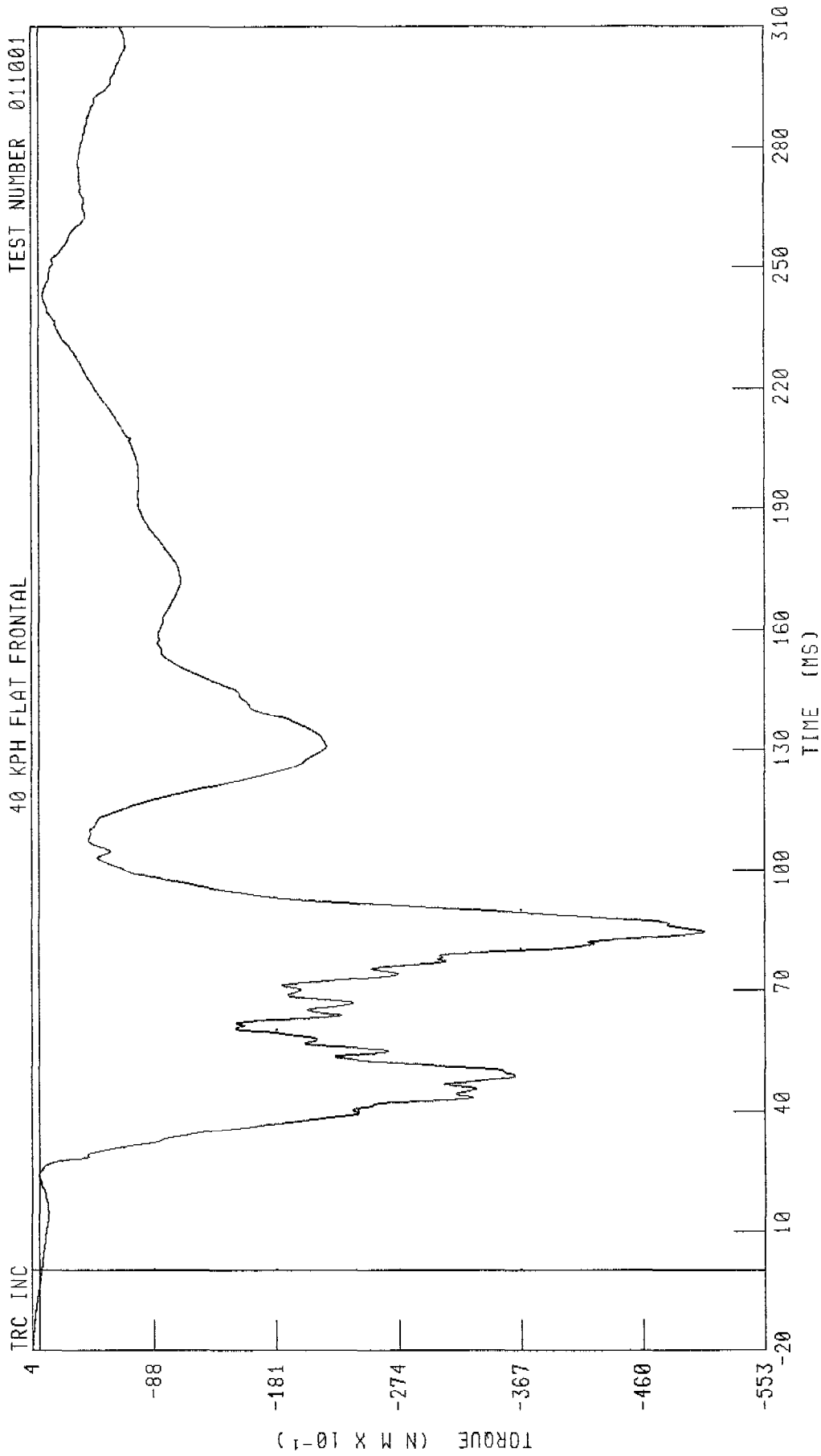


TIME (MS)

PEAK DATA 51 96 N @ 207 92 MS, -2826 52 N @ 84 16 MS

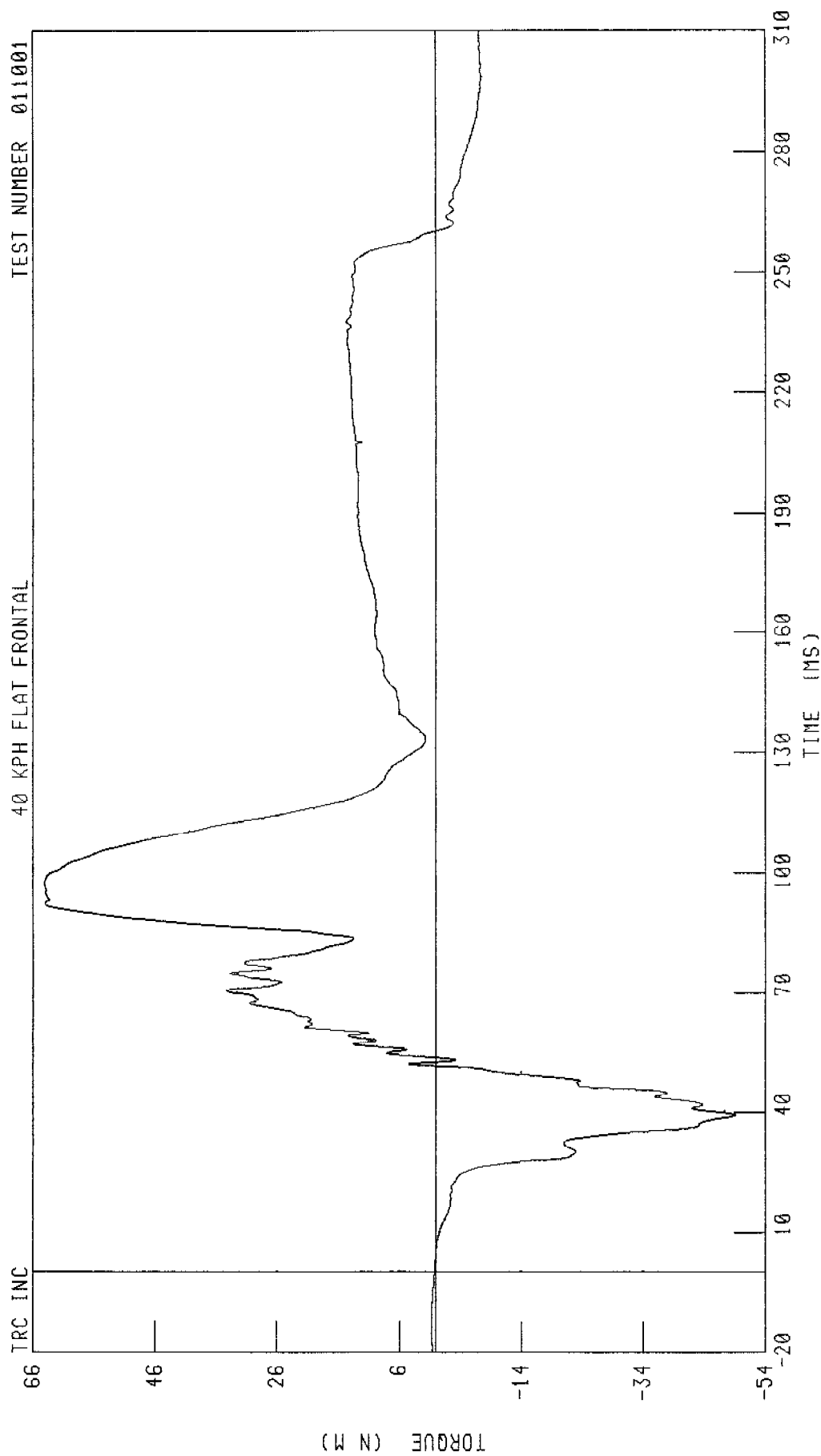
CHANNEL TBRZF2 FILTER CH CLASS 600

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
PASSENGER RIGHT UPPER TIBIA MOMENT ABOUT X AXIS



CHANNEL TBRX12 FILTER CH CLASS 600

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
PASSENGER RIGHT UPPER TIBIA MOMENT ABOUT Y AXIS



CHANNEL TBRYM2 FILTER CH CLASS 600

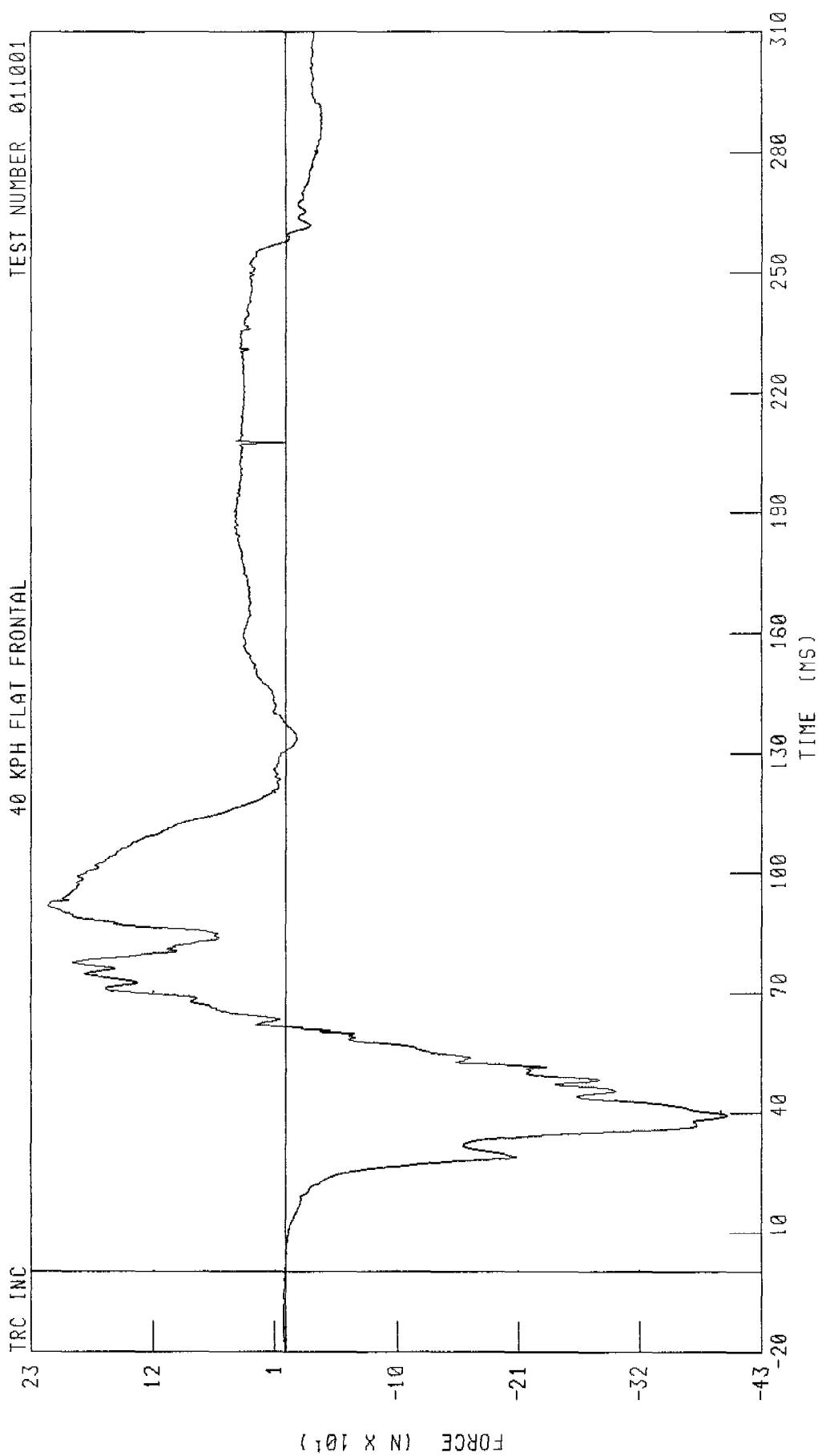
PEAK DATA 64 26 N M @ 97 60 MS, -49 12 N M @ 39 28 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

PASSENGER RIGHT LOWER TIBIA X-AXIS FORCE

40 KPH FLAT FRONTAL

TEST NUMBER 011001



CHANNEL ANRXP2 FILTER CH CLASS 600

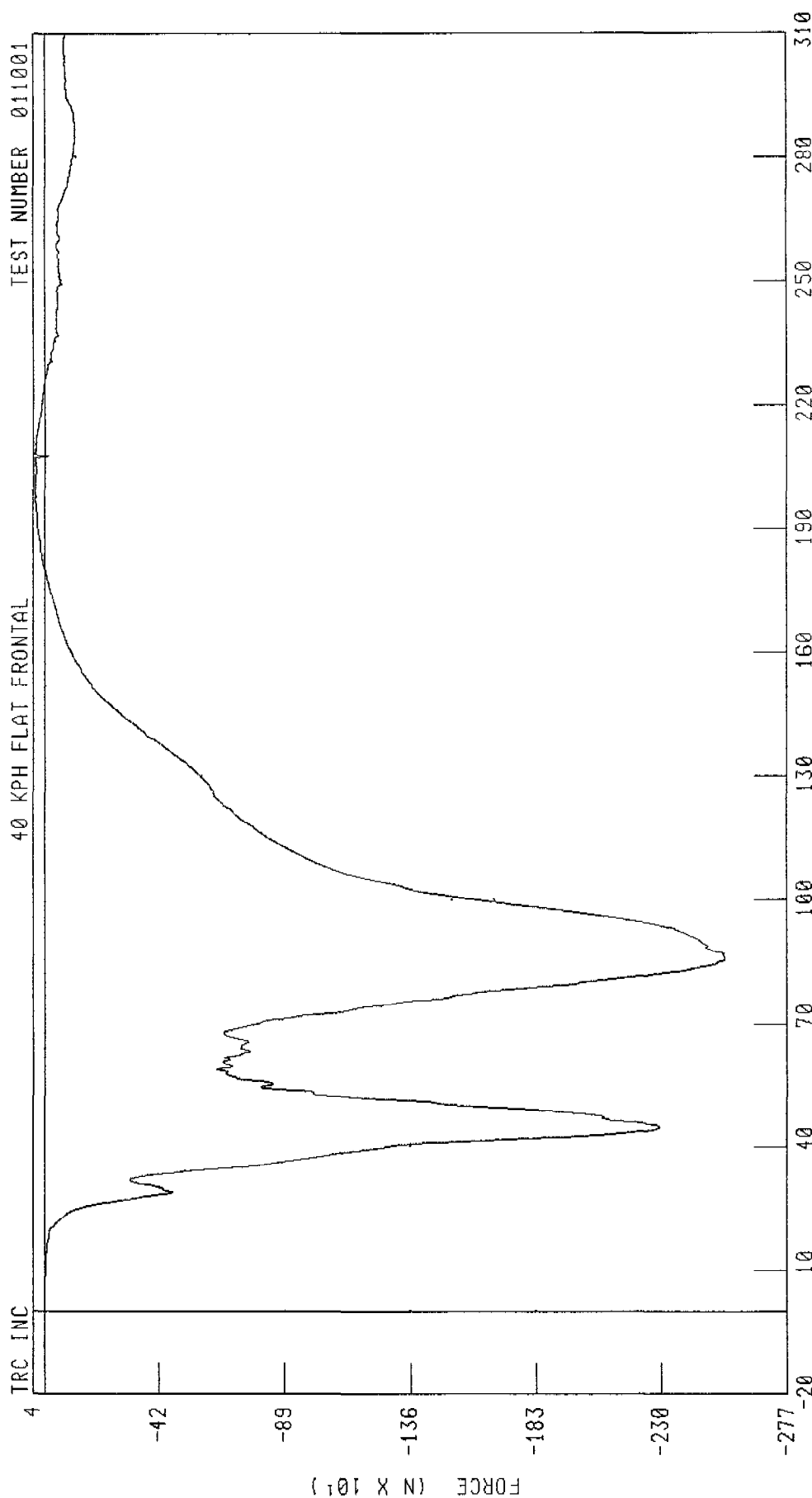
PEAK DATA 215 04 N 0 91 92 MS, -399 00 N 0 39 28 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

PASSENGER RIGHT LOWER TIBIA Z-AXIS FORCE

40 KPH FLAT FRONTAL

TEST NUMBER 011001

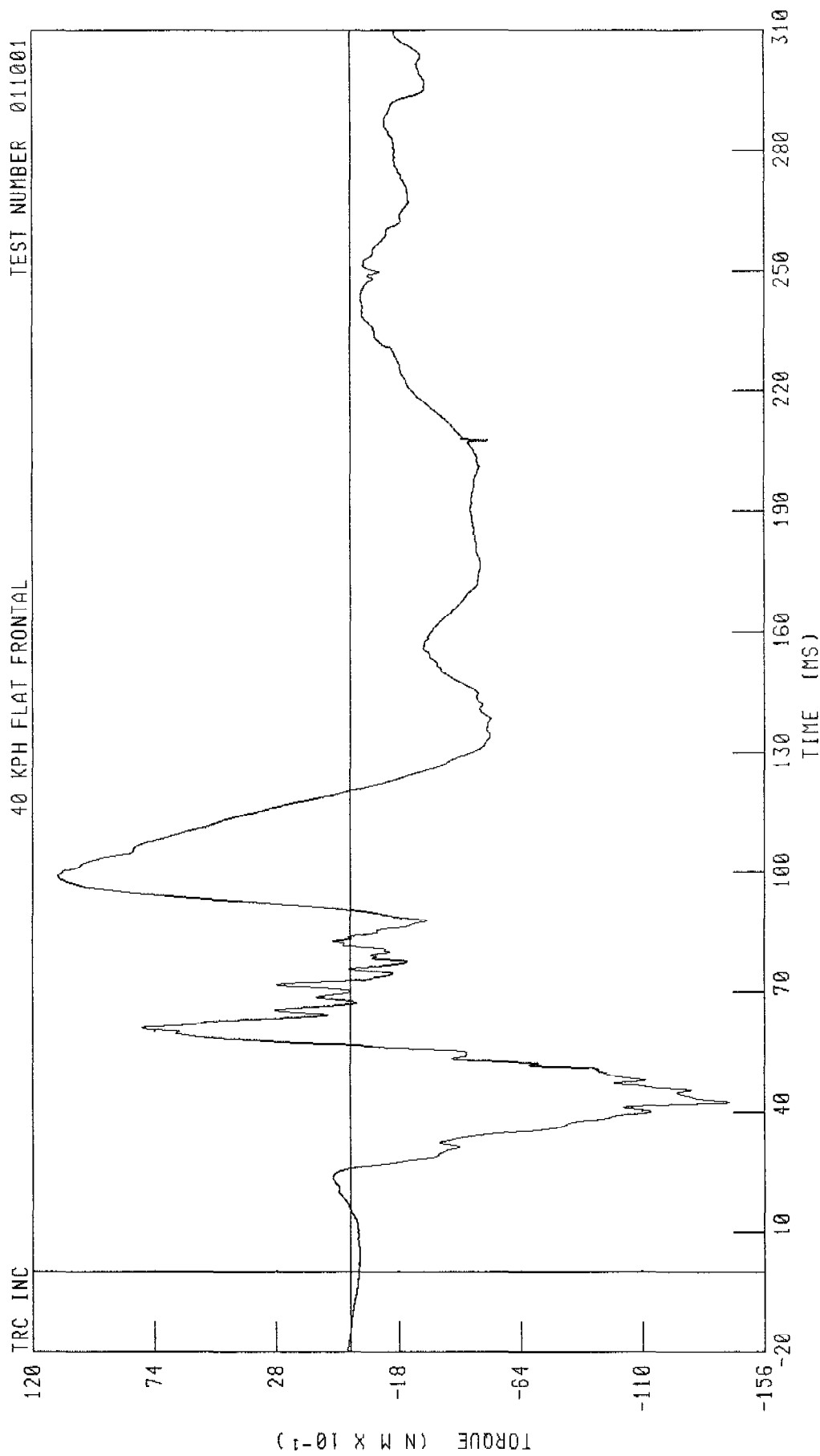


TIME (MS)

PEAK DATA 38 08 N @ 208 16 MS, -2550 43 N @ 86 00 MS

CHANNEL ANRZF2 FILTER CH CLASS 600

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
PASSENGER RIGHT LOWER TIBIA MOMENT ABOUT X AXIS



CHANNEL ANRXM2 FILTER CH CLASS 600

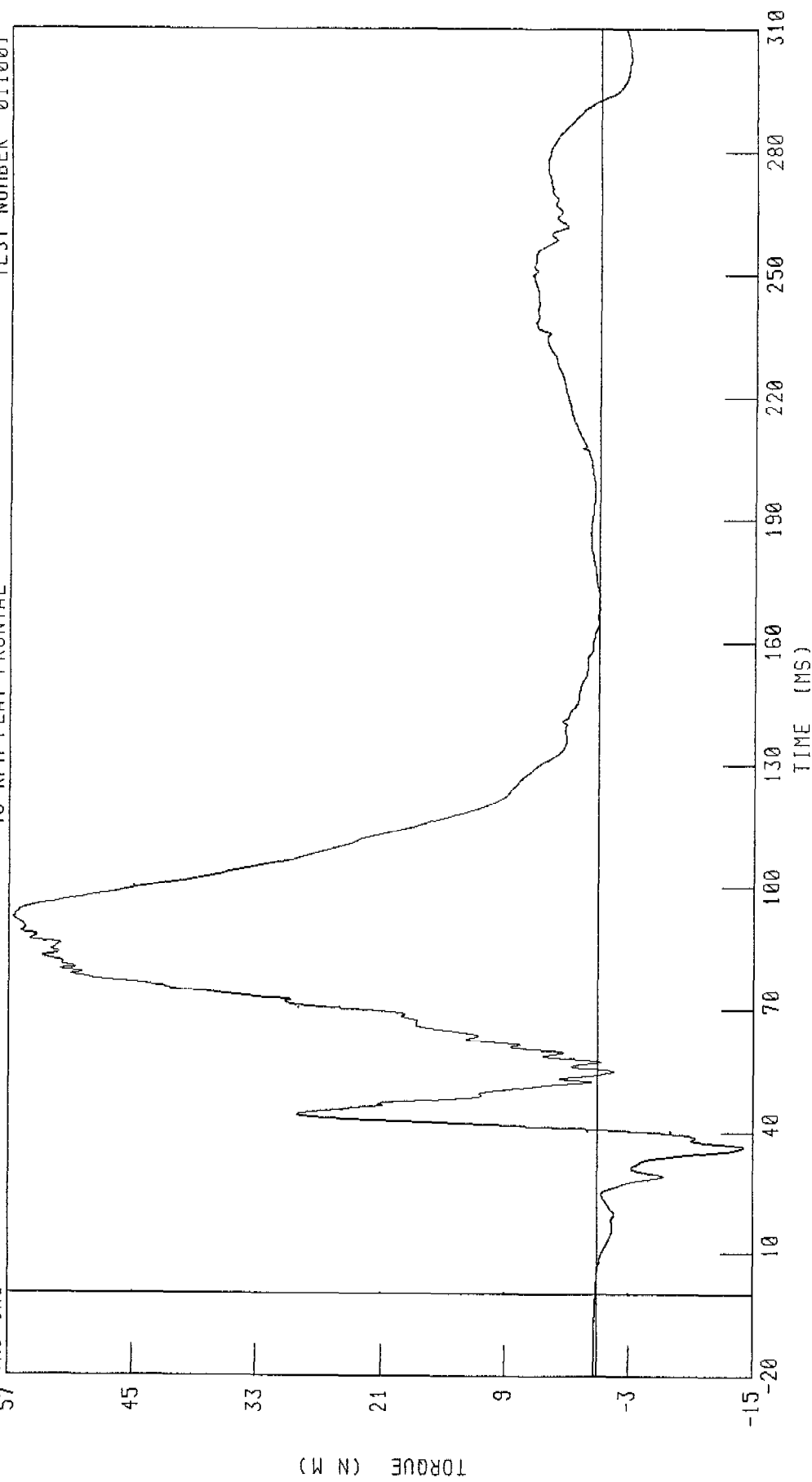
PEAK DATA 11 06 N M 0 99 20 MS. -14 30 N M 0 42 48 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
PASSENGER RIGHT LOWER TIBIA MOMENT ABOUT Y AXIS

TRC INC

40 KPH FLAT FRONTAL

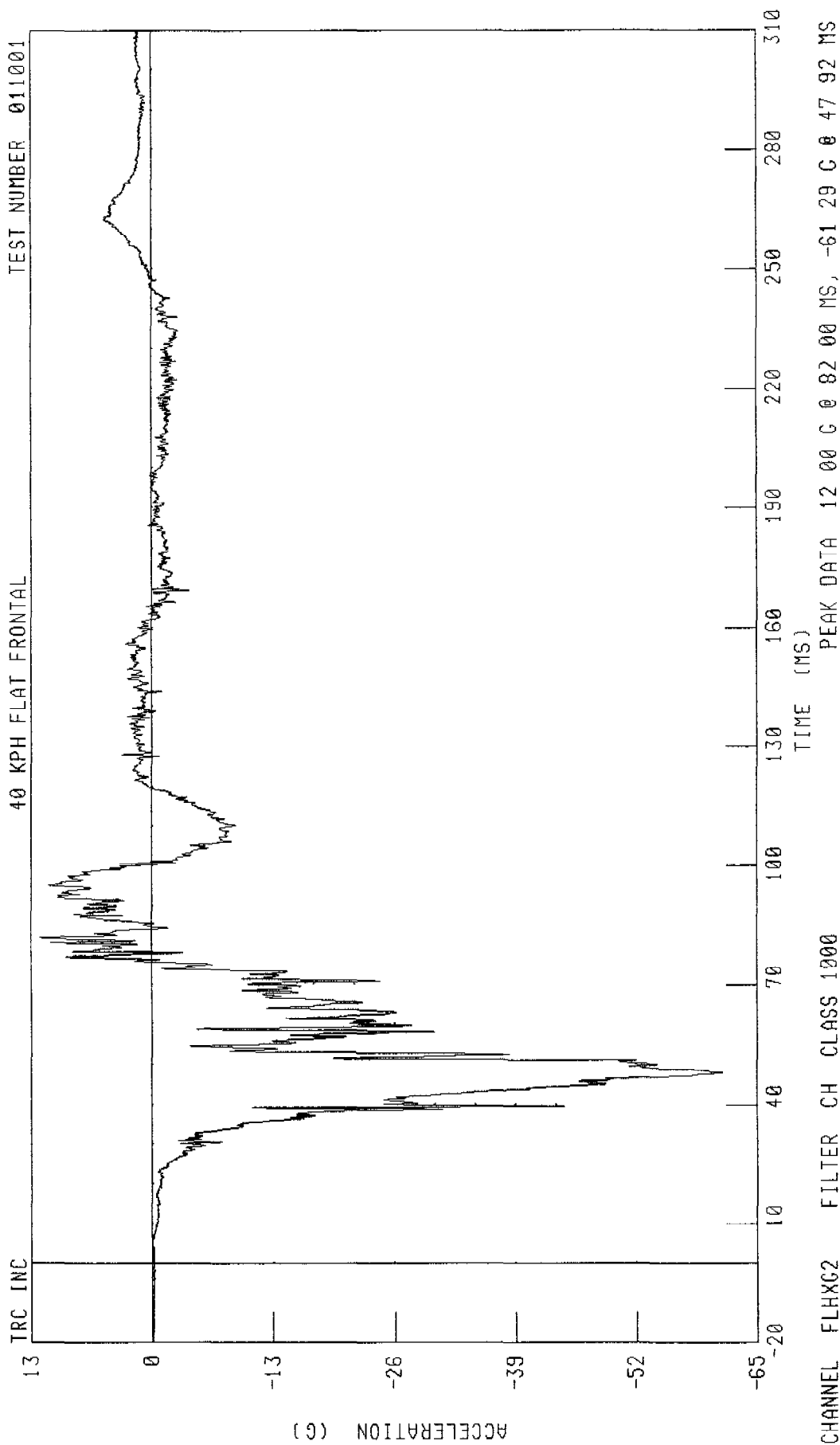
TEST NUMBER 011001



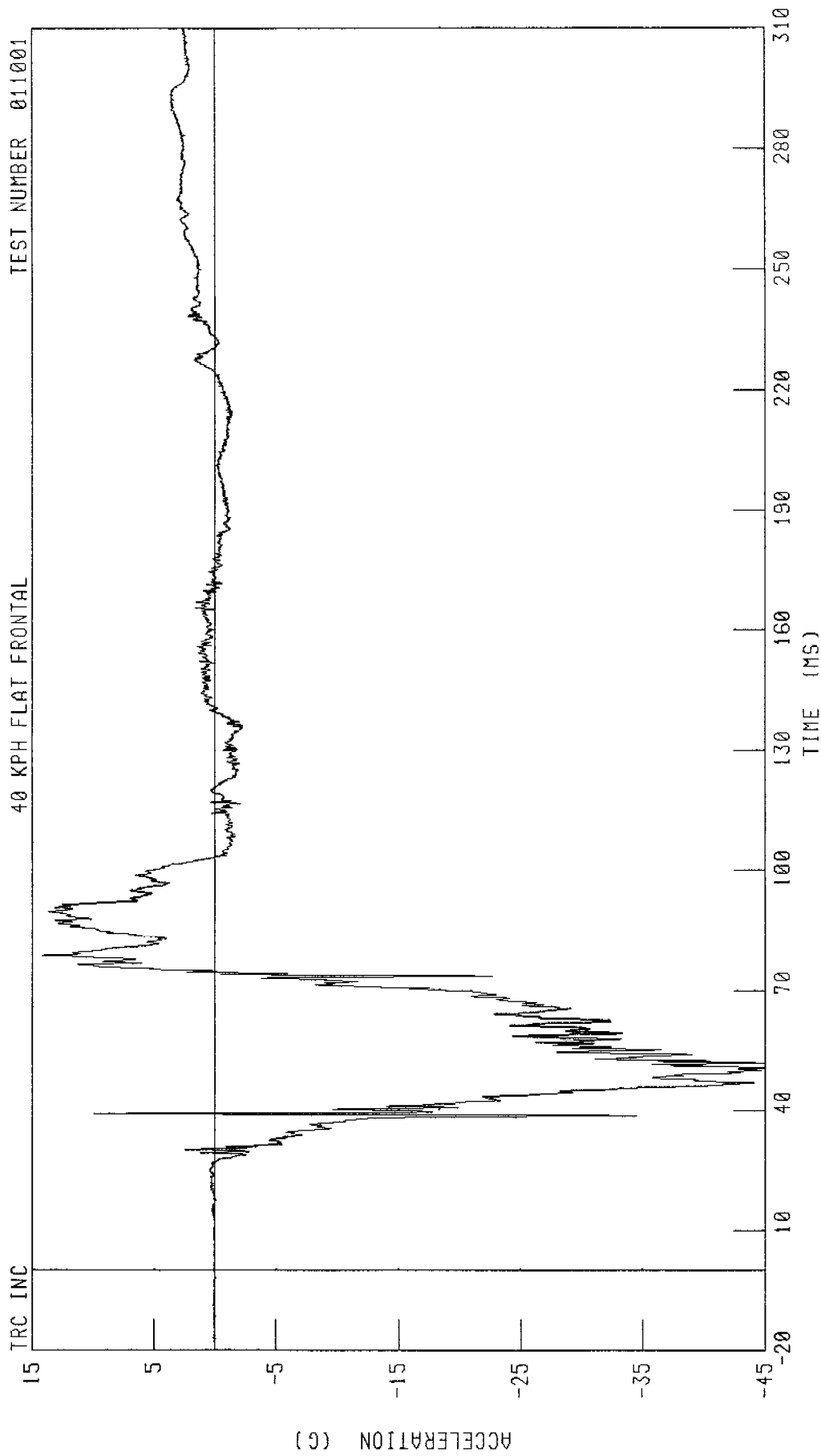
CHANNEL ANRYM2 FILTER CH CLASS 600

PEAK DATA 56 57 N M @ 92 40 MS, -14 12 N M @ 36 24 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
PASSENGER LEFT FOOT HEEL X-AXIS ACCELERATION



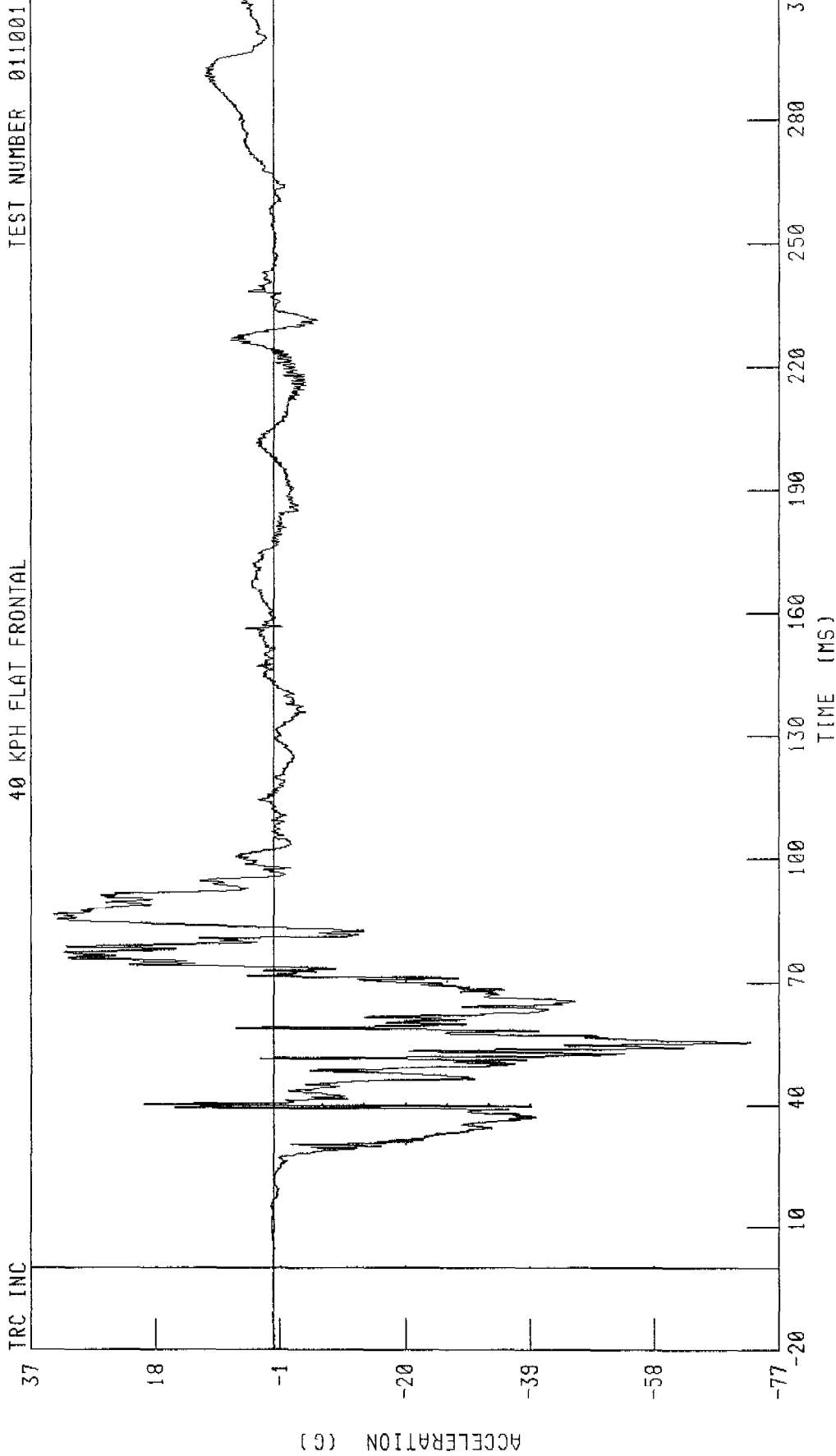
2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
PASSENGER LEFT FOOT HEEL Z-AXIS ACCELERATION



CHANNEL FLHZG2 FILTER CH CLASS 1000

PEAK DATA 14 18 G @ 78 88 MS, -45 81 G @ 50 80 MS

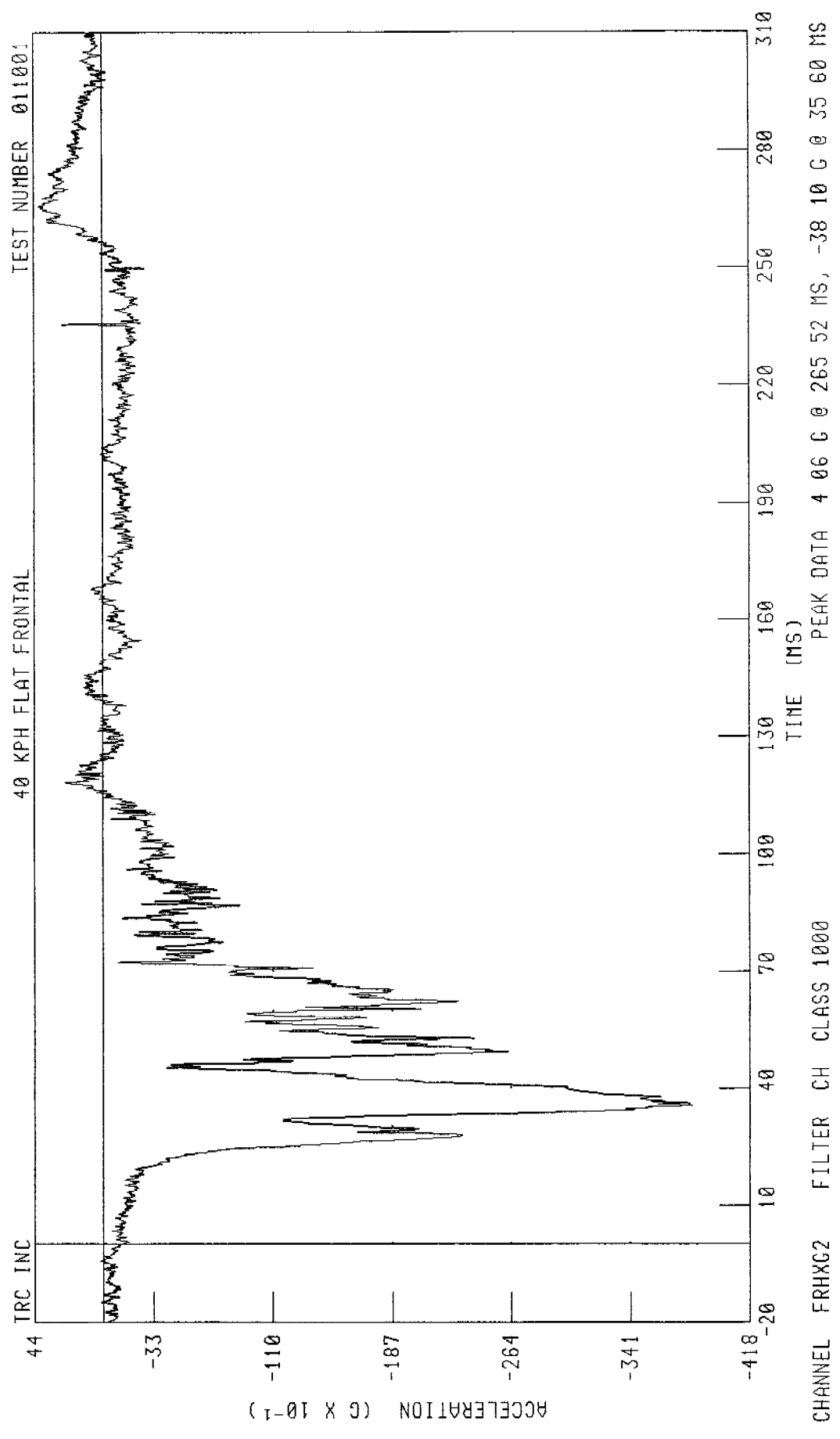
2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
PASSENGER LEFT FOOT TOE Z-AXIS ACCELERATION



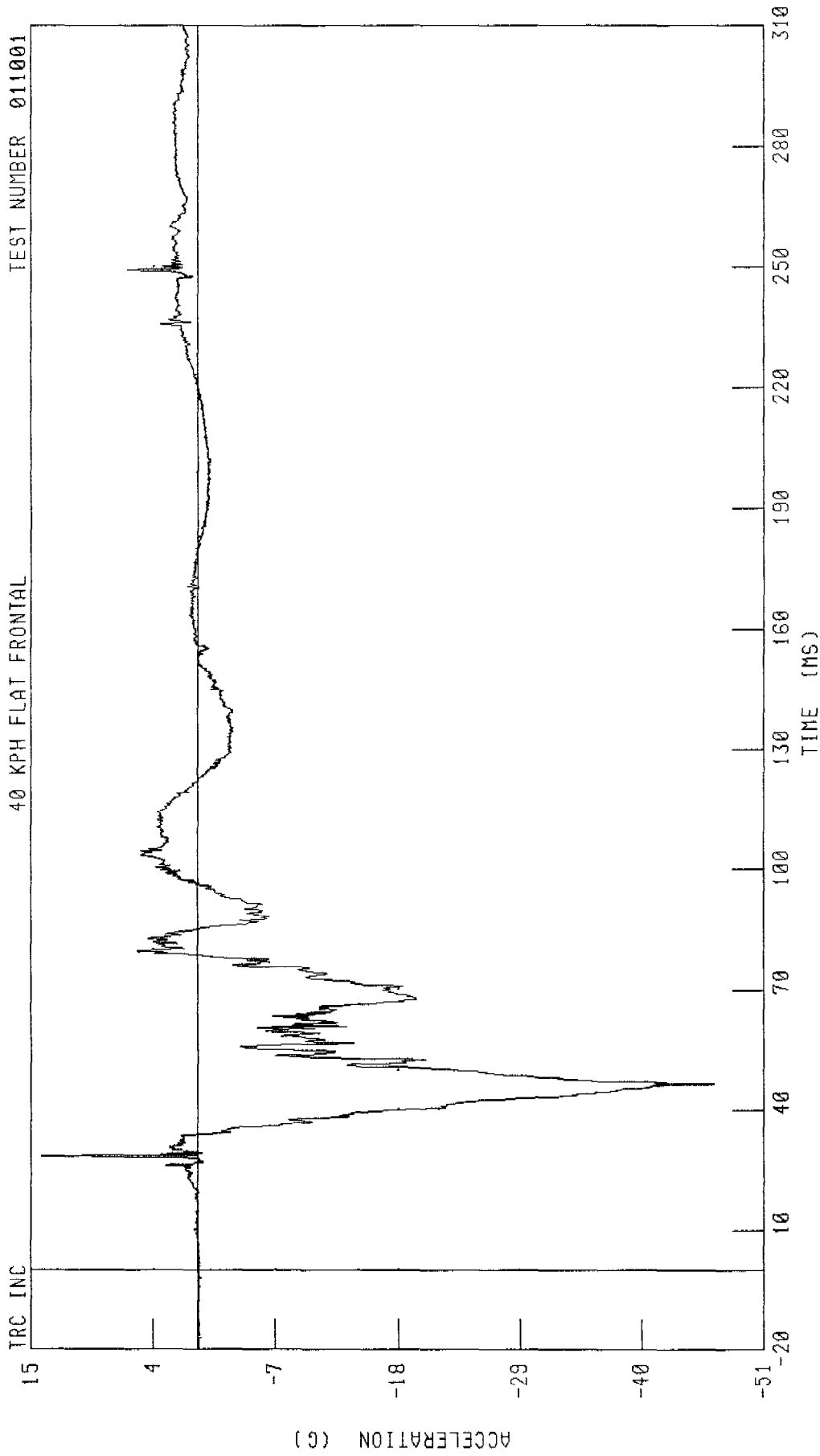
CHANNEL FLTZC2 FILTER CH CLASS 1000

PEAK DATA 33 70 0 86 48 MS, -72 60 0 55 28 MS

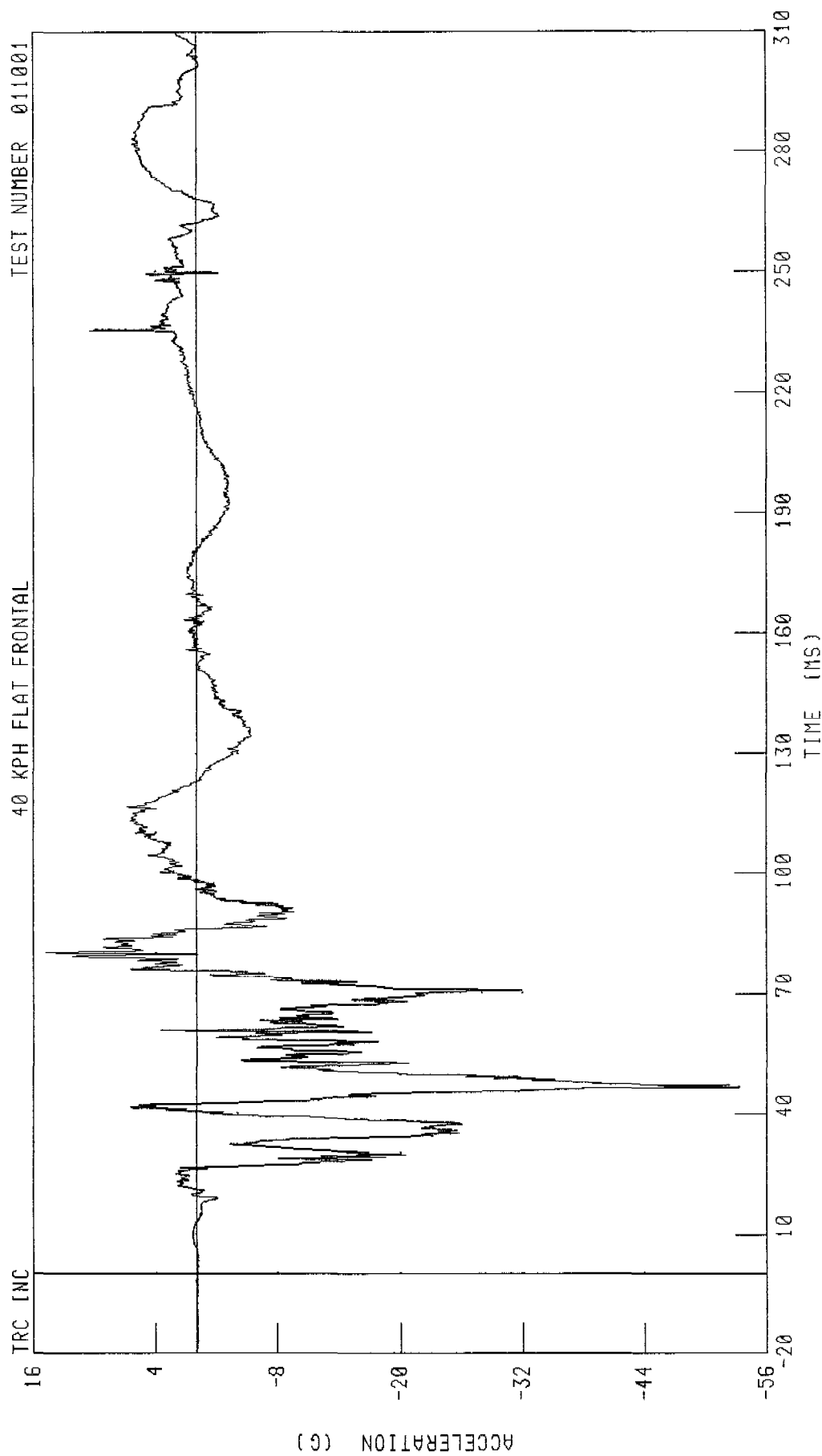
2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
PASSENGER RIGHT FOOT HEEL X-AXIS ACCELERATION



2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
PASSENGER RIGHT FOOT HEEL Z-AXIS ACCELERATION



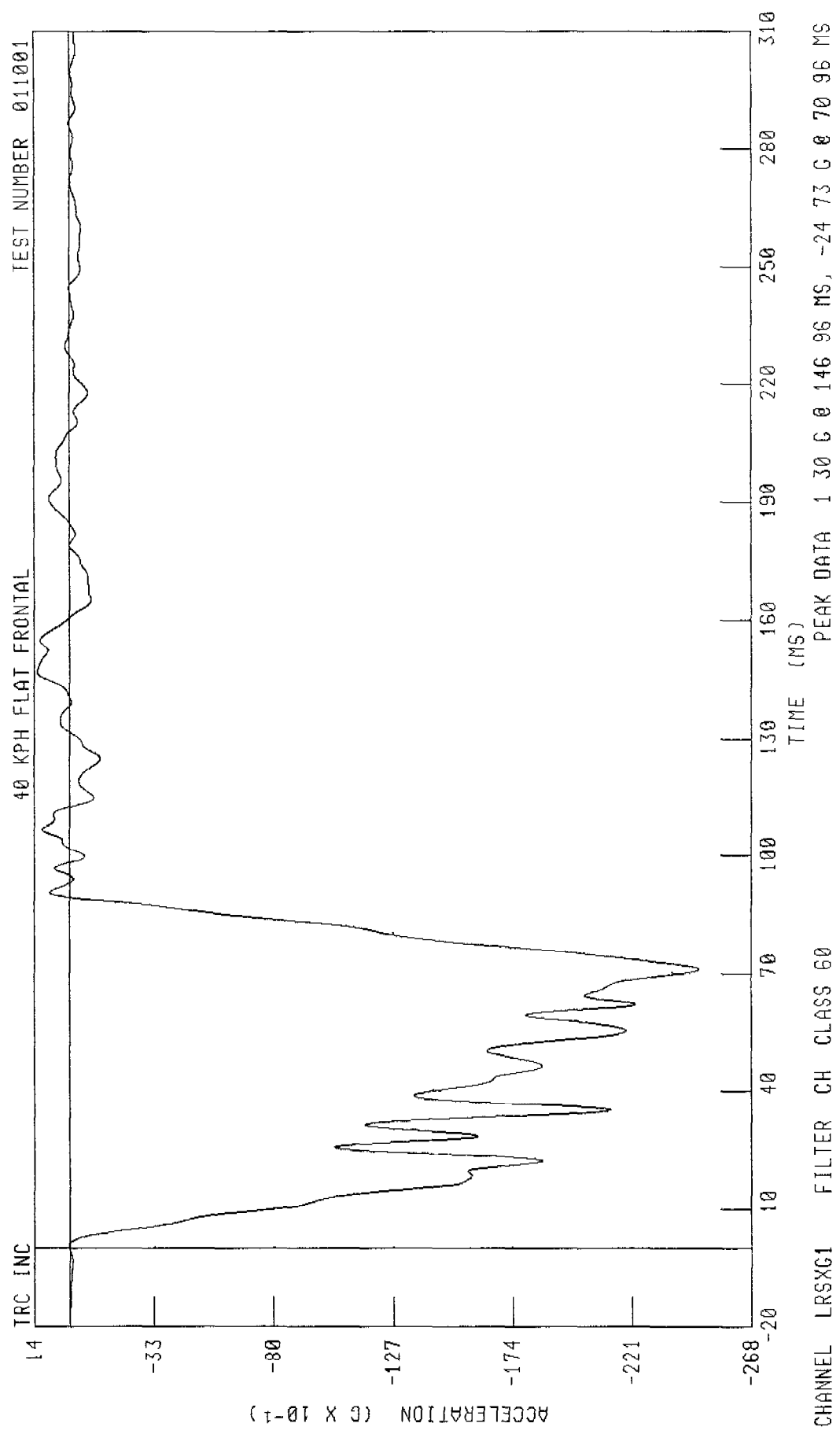
2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
PASSENGER RIGHT FOOT TOE Z-AXIS ACCELERATION



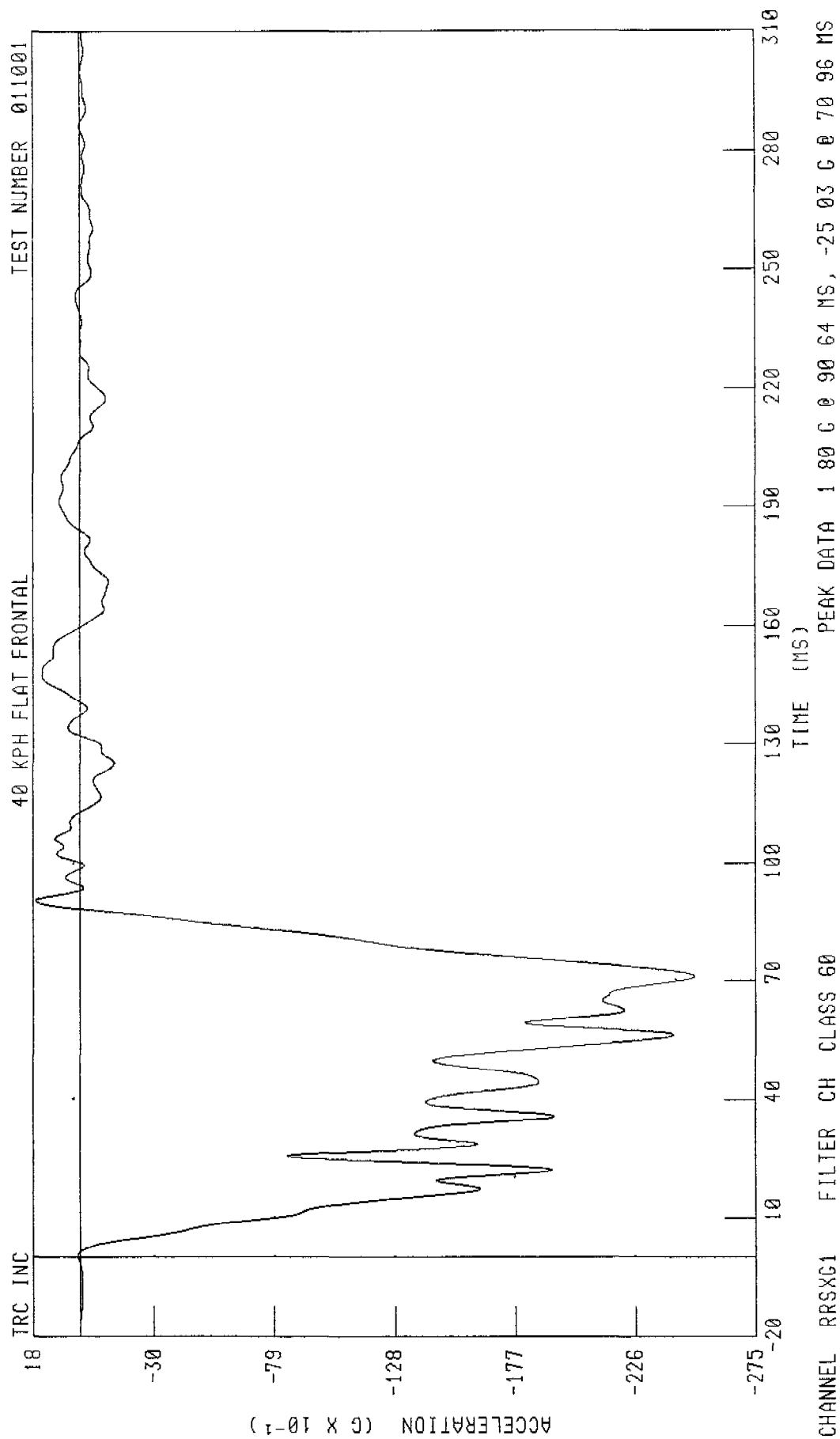
CHANNEL FRIZC2 FILTER CH CLASS 1000

PEAK DATA 14 82 G @ 80 24 MS, -53 38 G @ 46 72 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
LEFT REAR SEAT CROSSMEMBER X-AXIS ACCELERATION



2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
RIGHT REAR SEAT CROSSMEMBER X-AXIS ACCELERATION

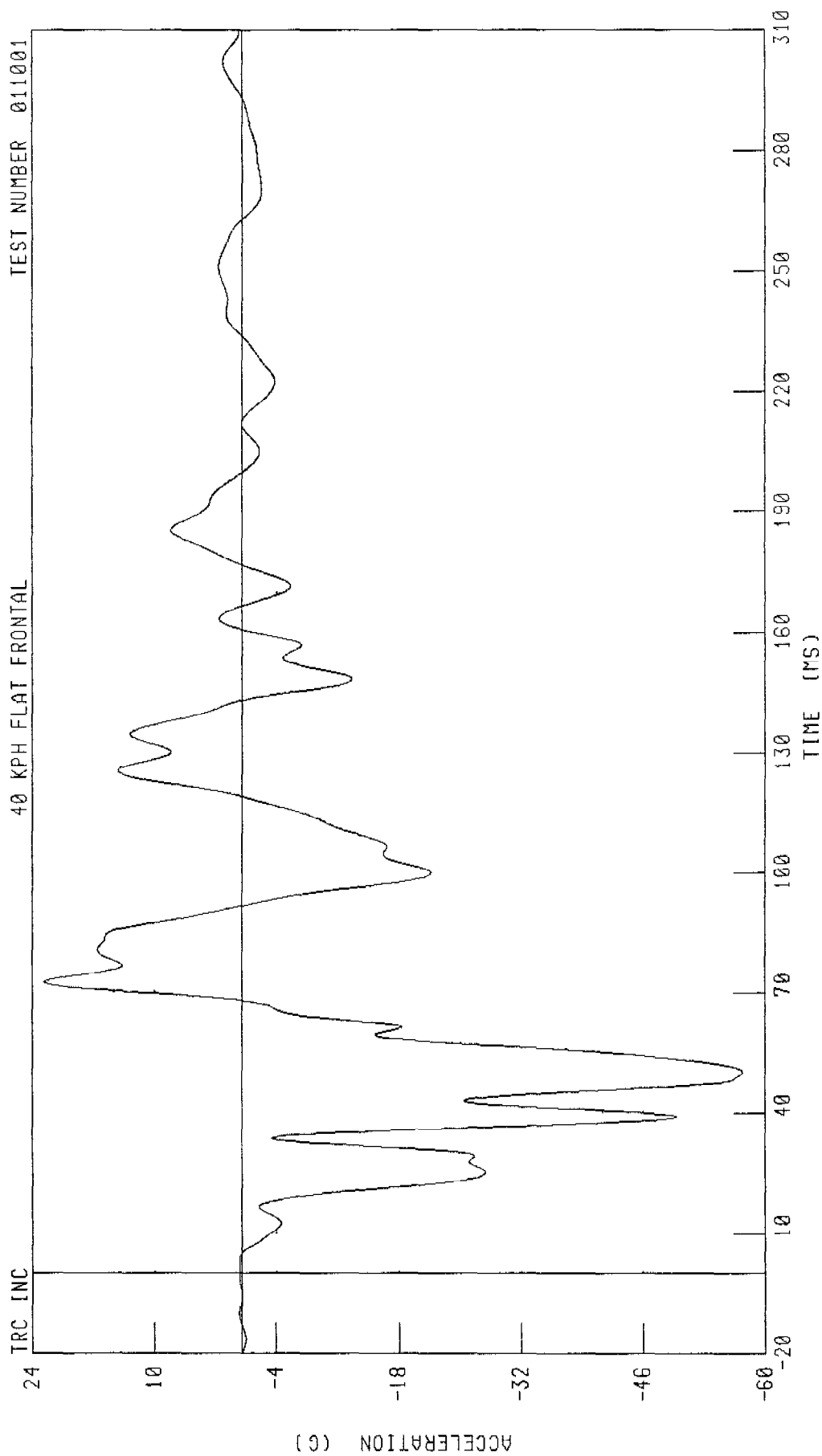


2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

FRONT BRAKE CALIPER LEFT X-AXIS ACCELERATION

40 KPH FLAT FRONTAL

TEST NUMBER 011001

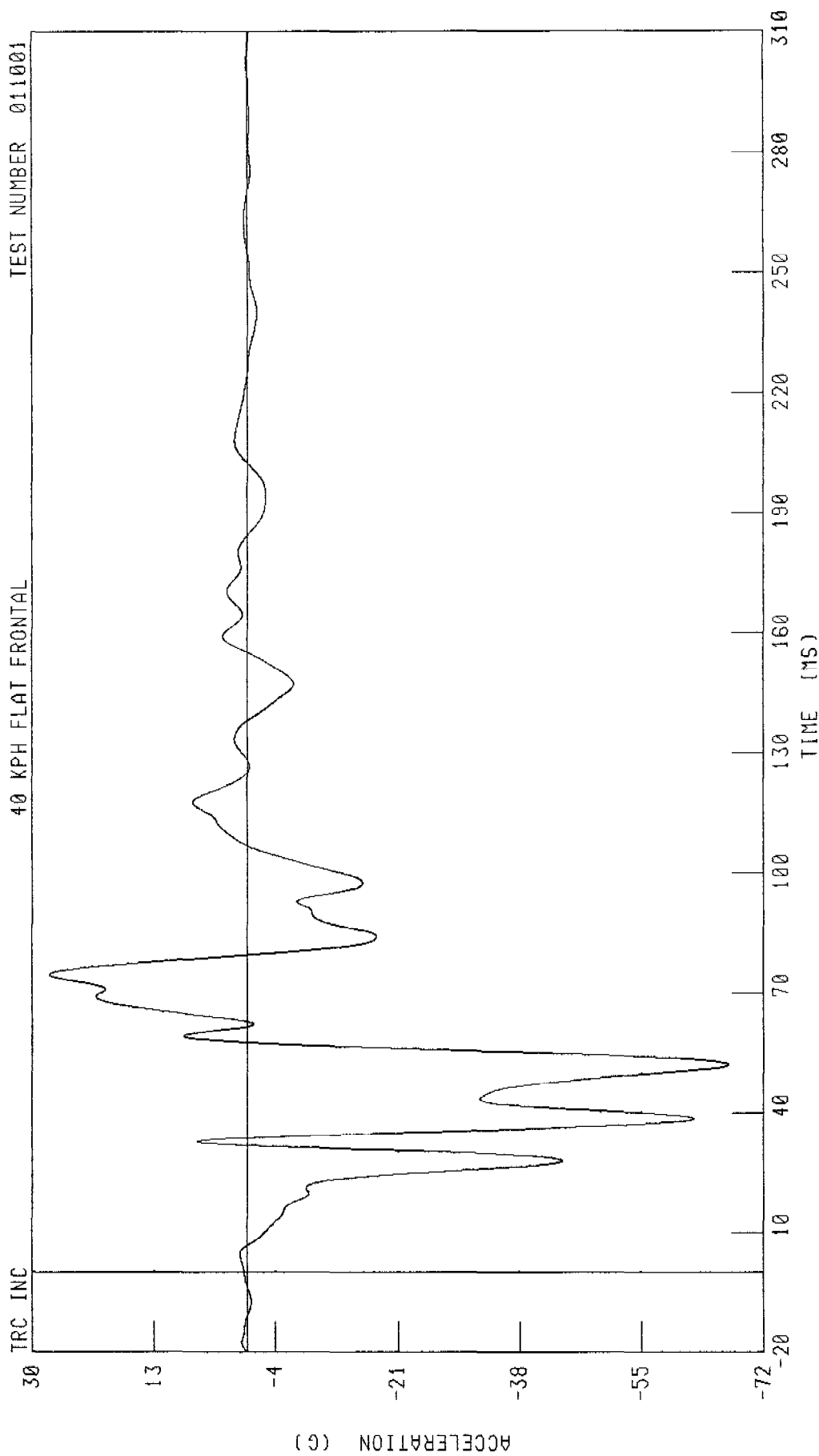


CHANNEL BCLXG1 FILTER CH CLASS 60

PEAK DATA 22 67 G @ 72 48 MS, -57 43 G @ 50 24 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
FRONT BRAKE CALIPER RIGHT X-AXIS ACCELERATION
40 KPH FLAT FRONTAL

TEST NUMBER 011001



CHANNEL BCRXS1 FILTER CH CLASS 60

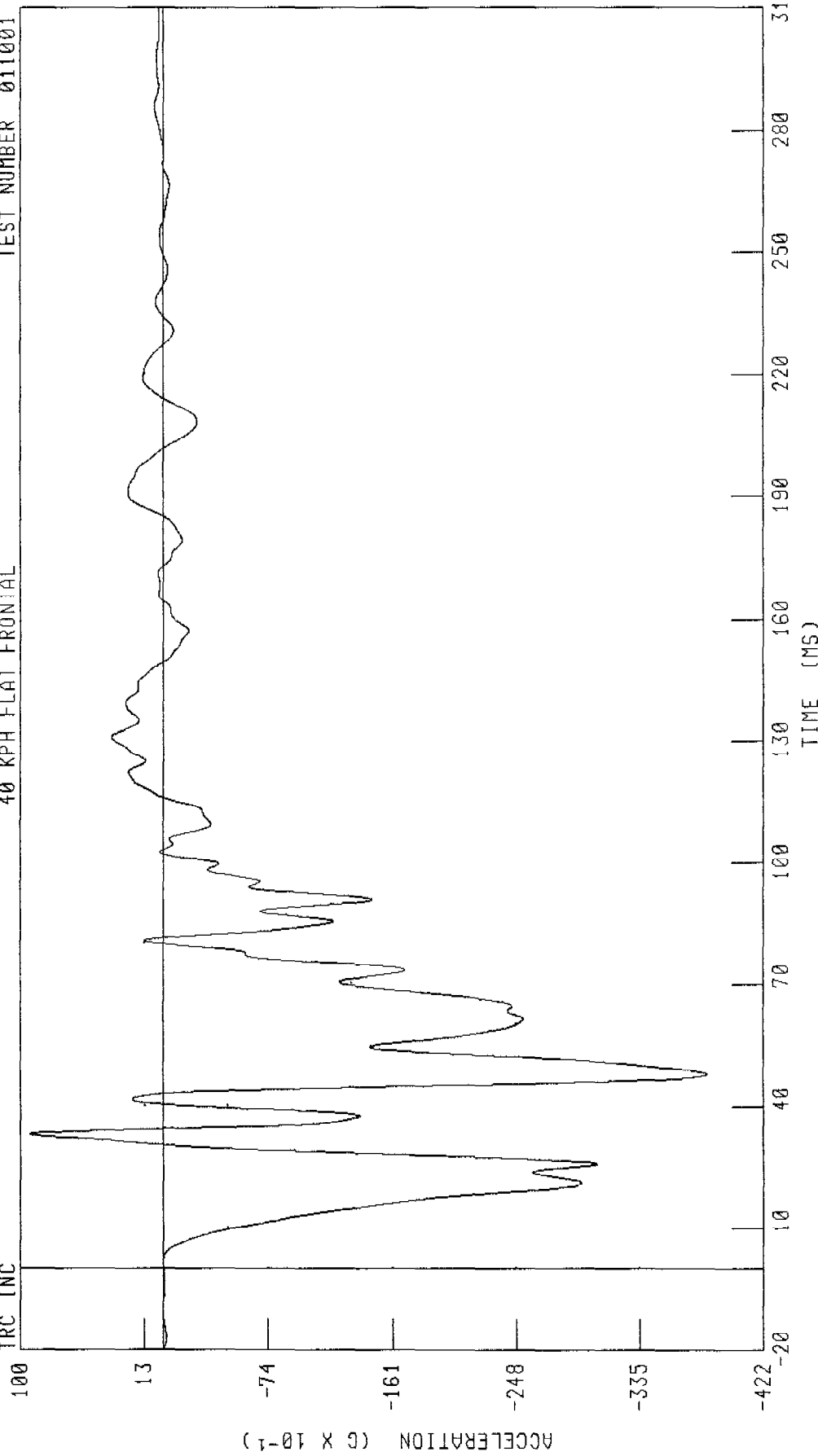
PEAK DATA 27 56 0 74 72 MS, -67 14 0 52 16 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
 DASH PANEL CENTER X-AXIS ACCELERATION

TEST NUMBER 011001

40 KPH FLAT FRONTAL

TRC INC

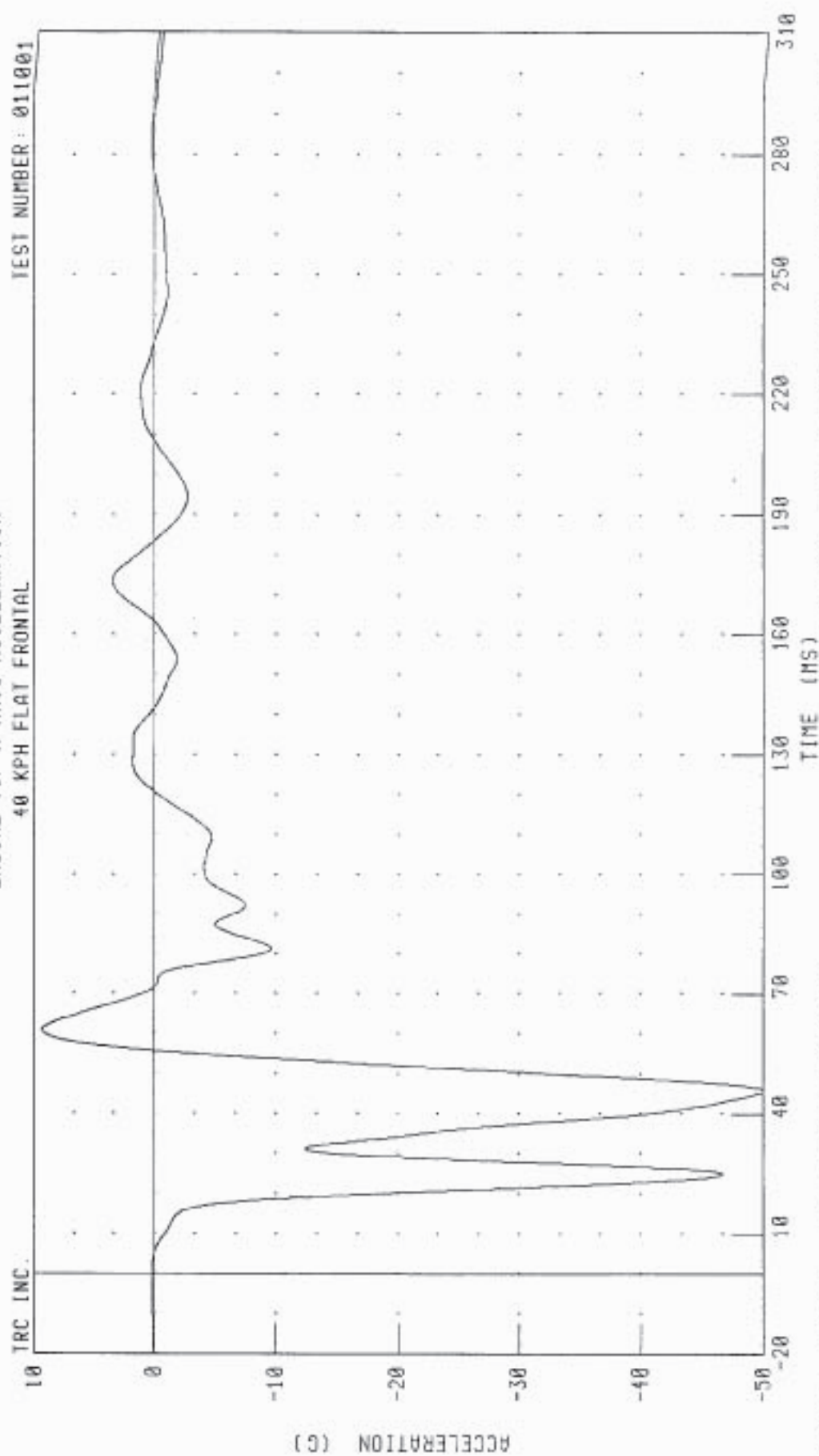


CHANNEL DPCXG1 FILTER CH CLASS 60

PEAK DATA 9 34 G @ 33 12 MS, -38 25 G @ 47 92 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
ENGINE TOP X-AXIS ACCELERATION
40 KPH FLAT FRONTAL

TEST NUMBER: 011001

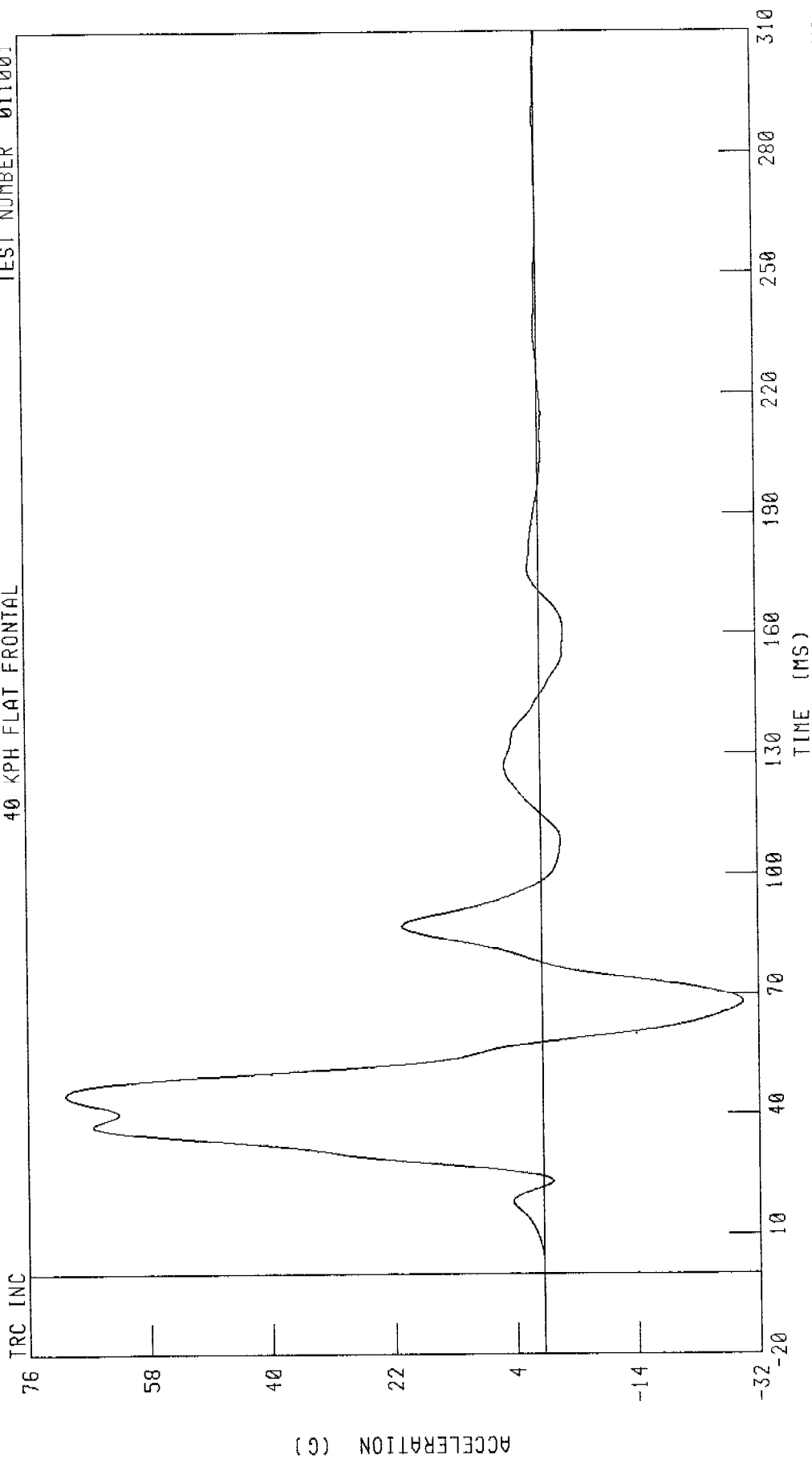


CHANNEL: ENXC01 FILTER: CH. CLASS 60

PEAK DATA: 9.33 G @ 60.80 MS, -50.14 G @ 45.84 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
ENGINE BOTTOM X-AXIS ACCELERATION
40 KPH FLAT FRONTAL

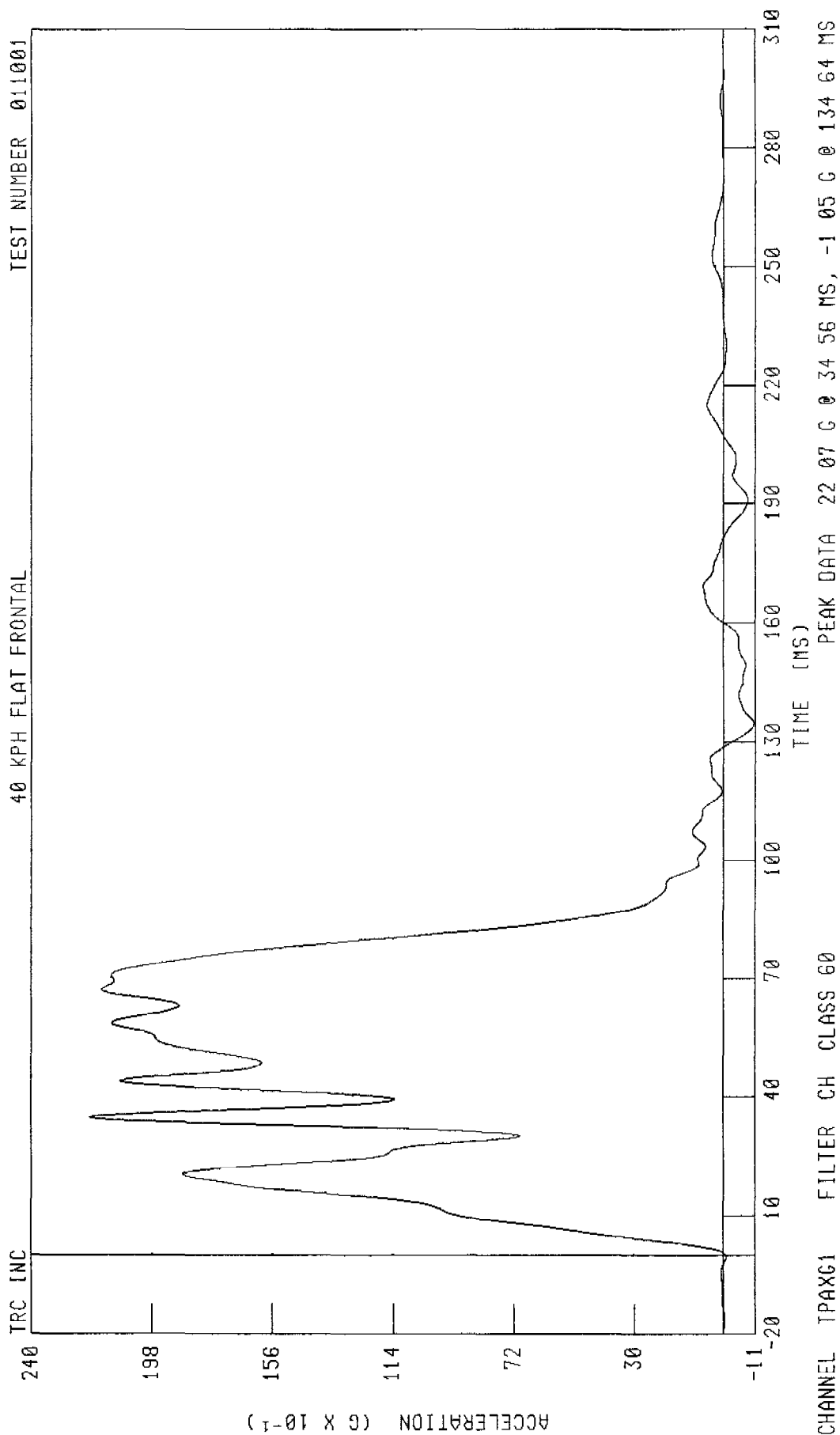
TEST NUMBER 011001



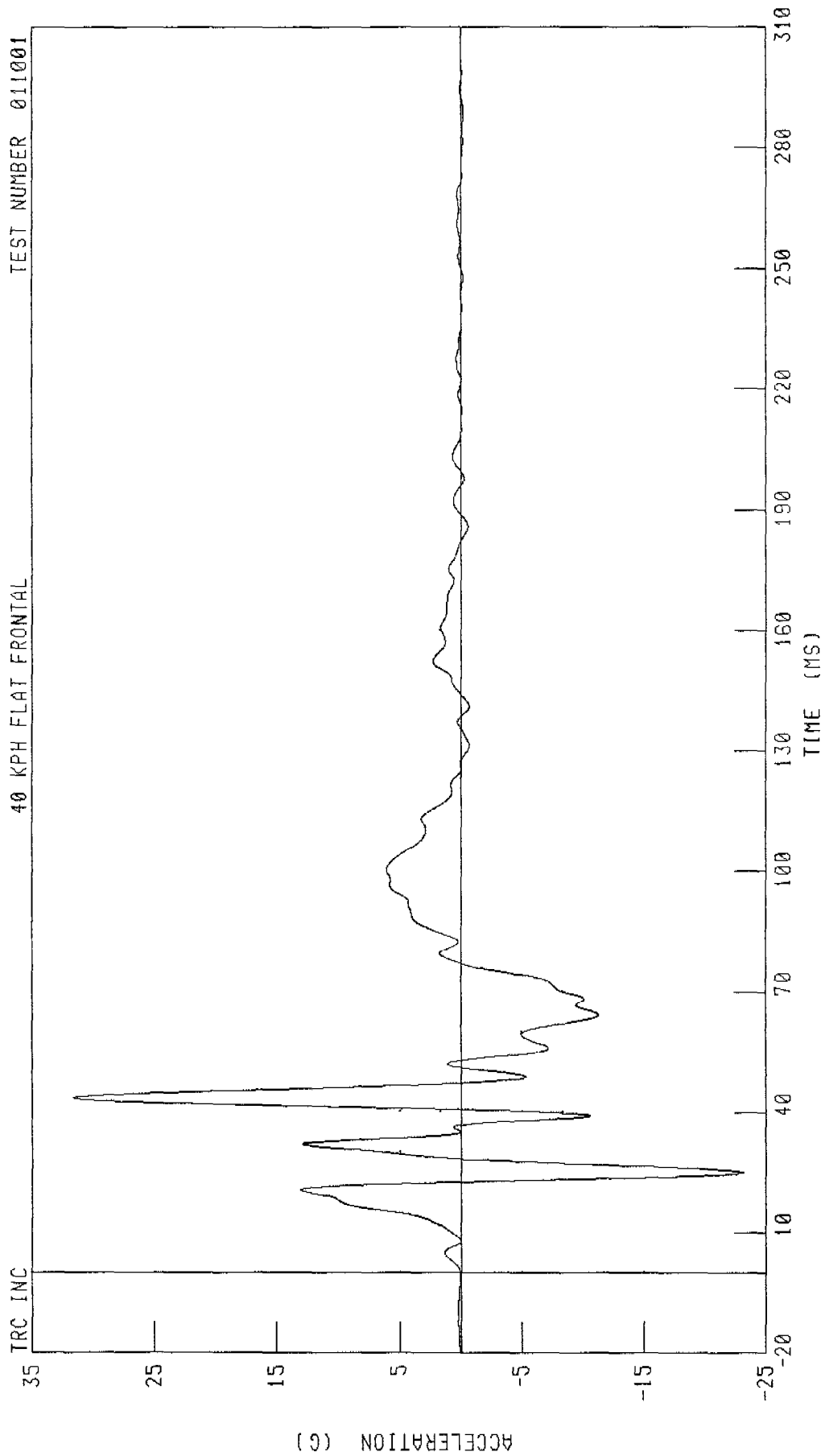
CHANNEL ENGXC2 FILTER CH CLASS 60

PEAK DATA 70 49 G @ 44 88 MS, -29 73 G @ 67 92 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
TOEPAN NEXT TO ACCELERATOR X-AXIS ACCELERATION



2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
TOEPAN NEXT TO ACCELERATOR Z-AXIS ACCELERATION

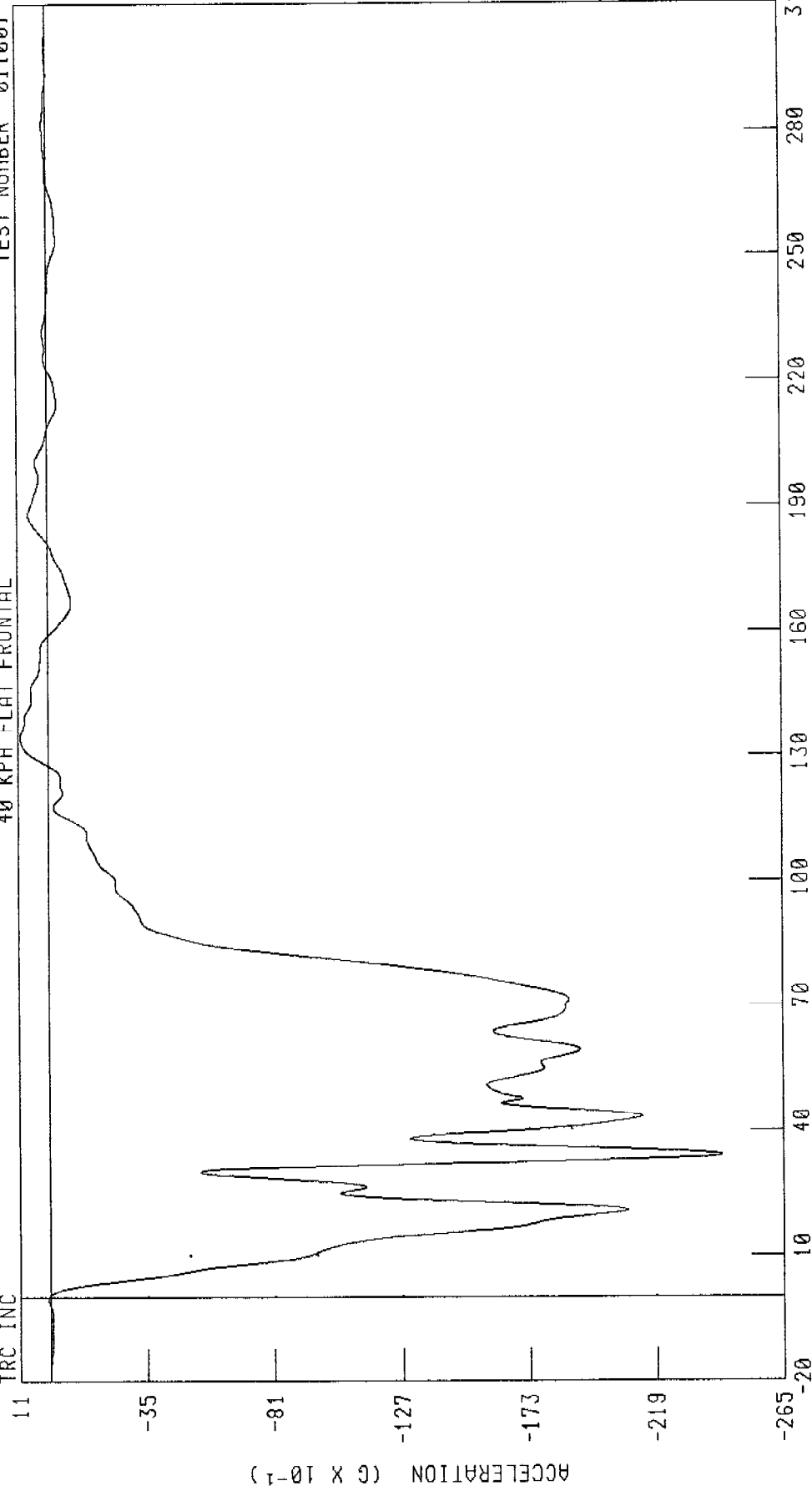


2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
TOEPAN NEXT TO FOOTREST X-AXIS ACCELERATION

TEST NUMBER 011001

40 KPH FLAT FRONTAL

TRC INC

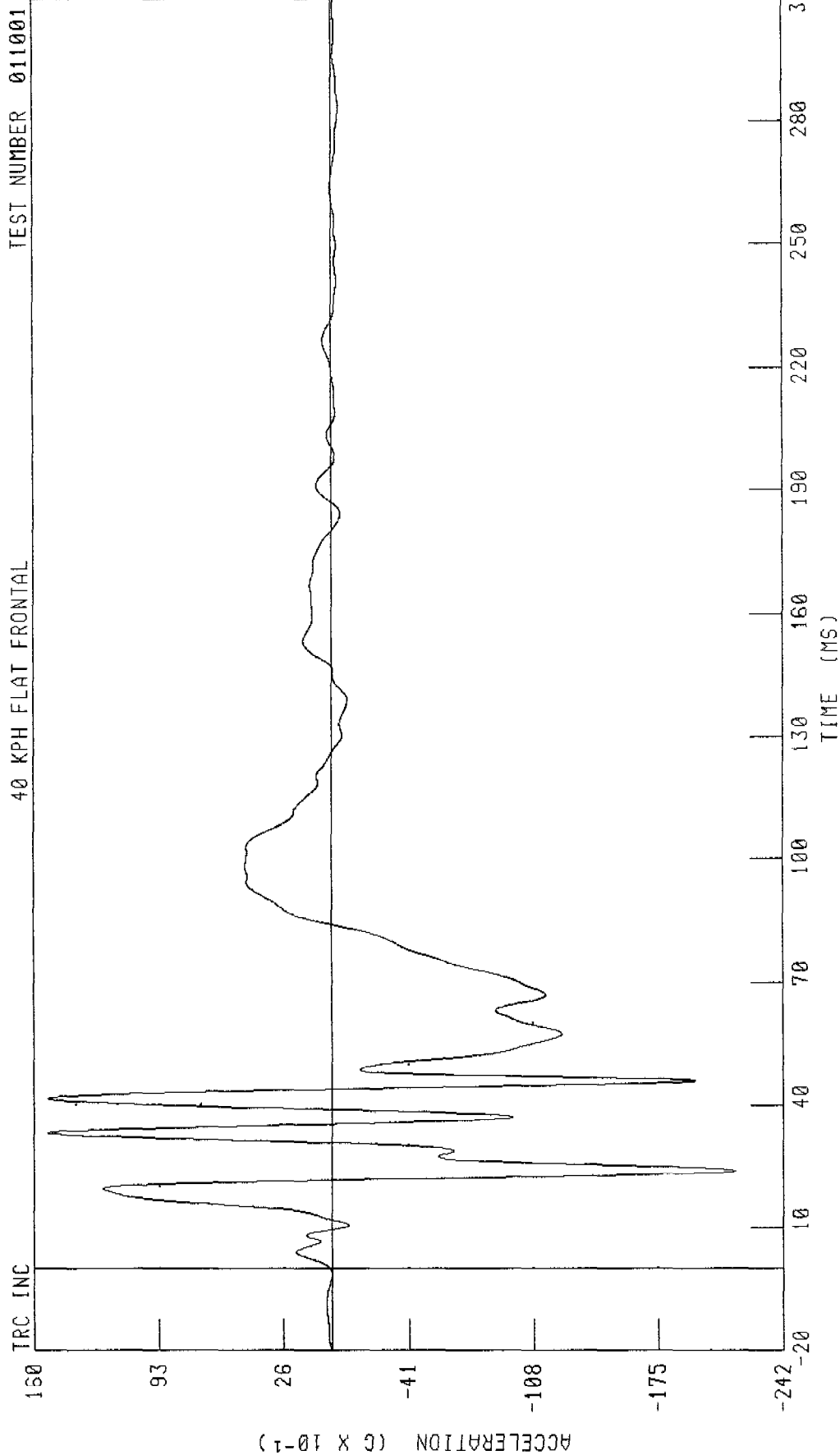


TIME (MS)

CHANNEL TPFXG1 FILTER CH CLASS 60

PEAK DATA 1 03 G 0 134 56 MS, -24 30 G 0 34 16 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
 TOEPAN NEXT TO FOOTREST Z-AXIS ACCELERATION
 40 KPH FLAT FRONTAL



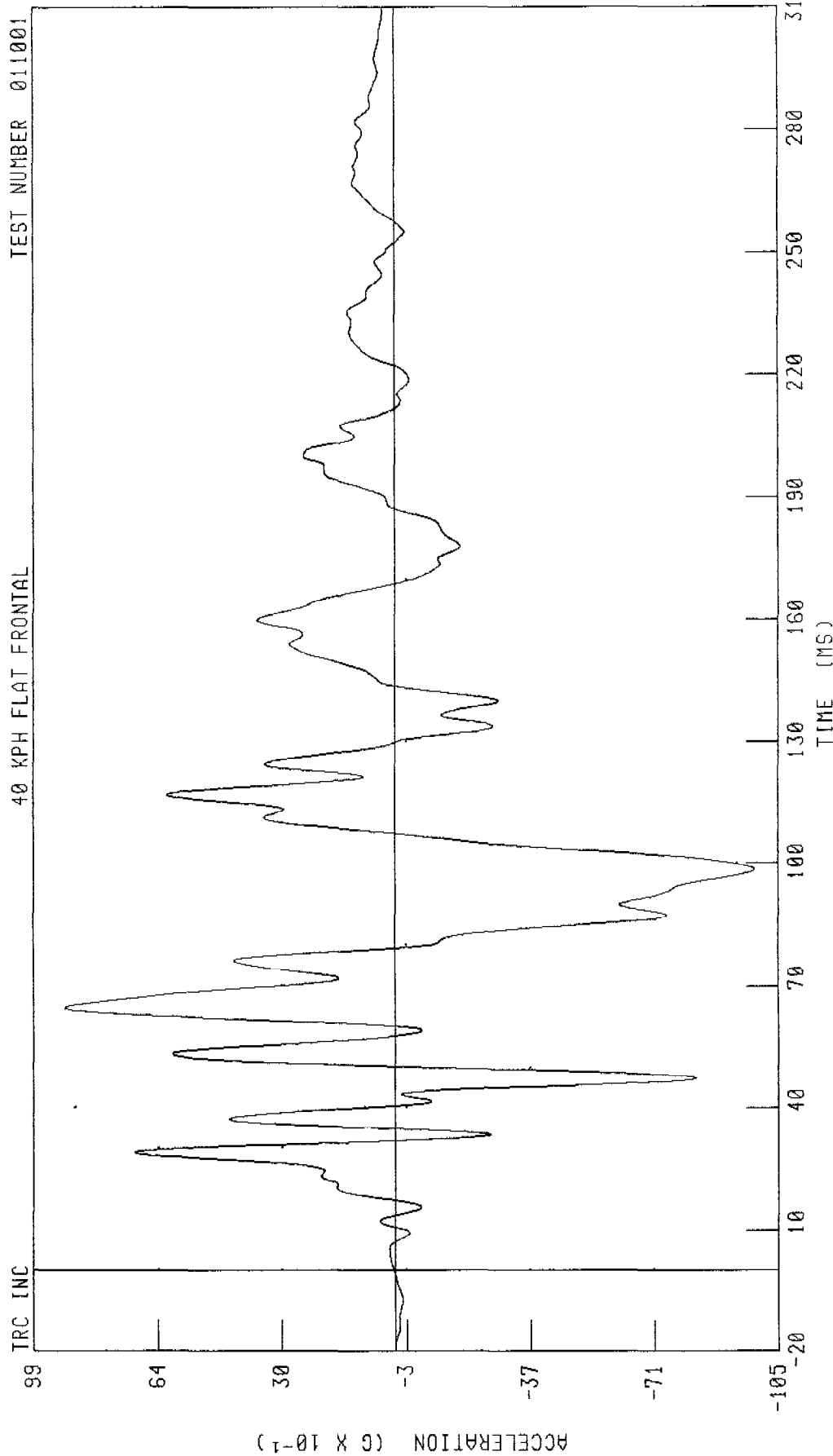
CHANNEL TPFZG1 FILTER CH CLASS 60 PEAK DATA 15 28 G @ 33 04 MS, -21 63 G @ 23 92 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH

REAR DECK Z-AXIS ACCELERATION

40 KPH FLAT FRONTAL

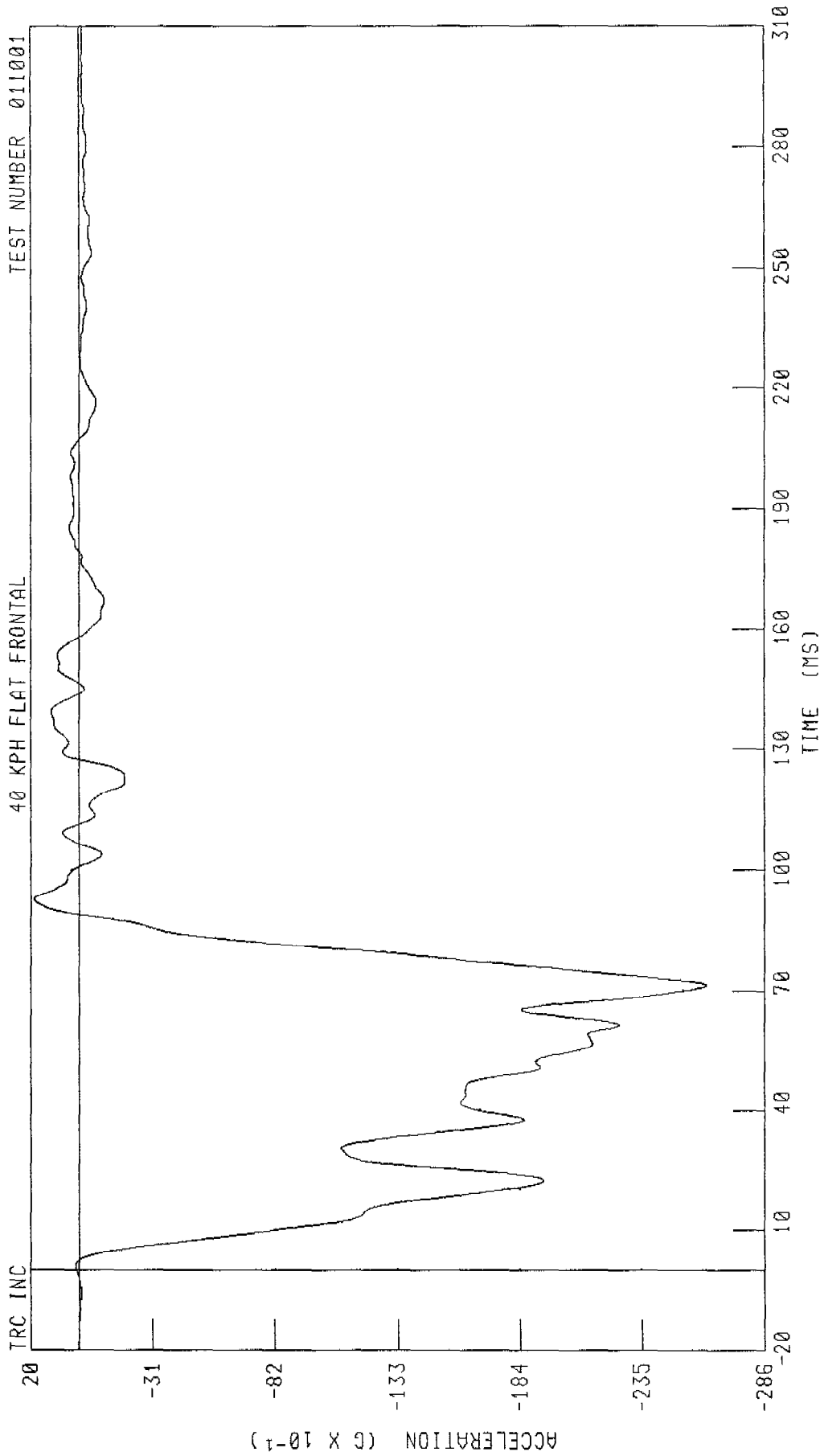
TEST NUMBER 011001



PEAK DATA 9 05 G @ 64 72 MS, -9 85 G @ 98 48 MS

CHANNEL RDKZC1 FILTER CH CLASS 60

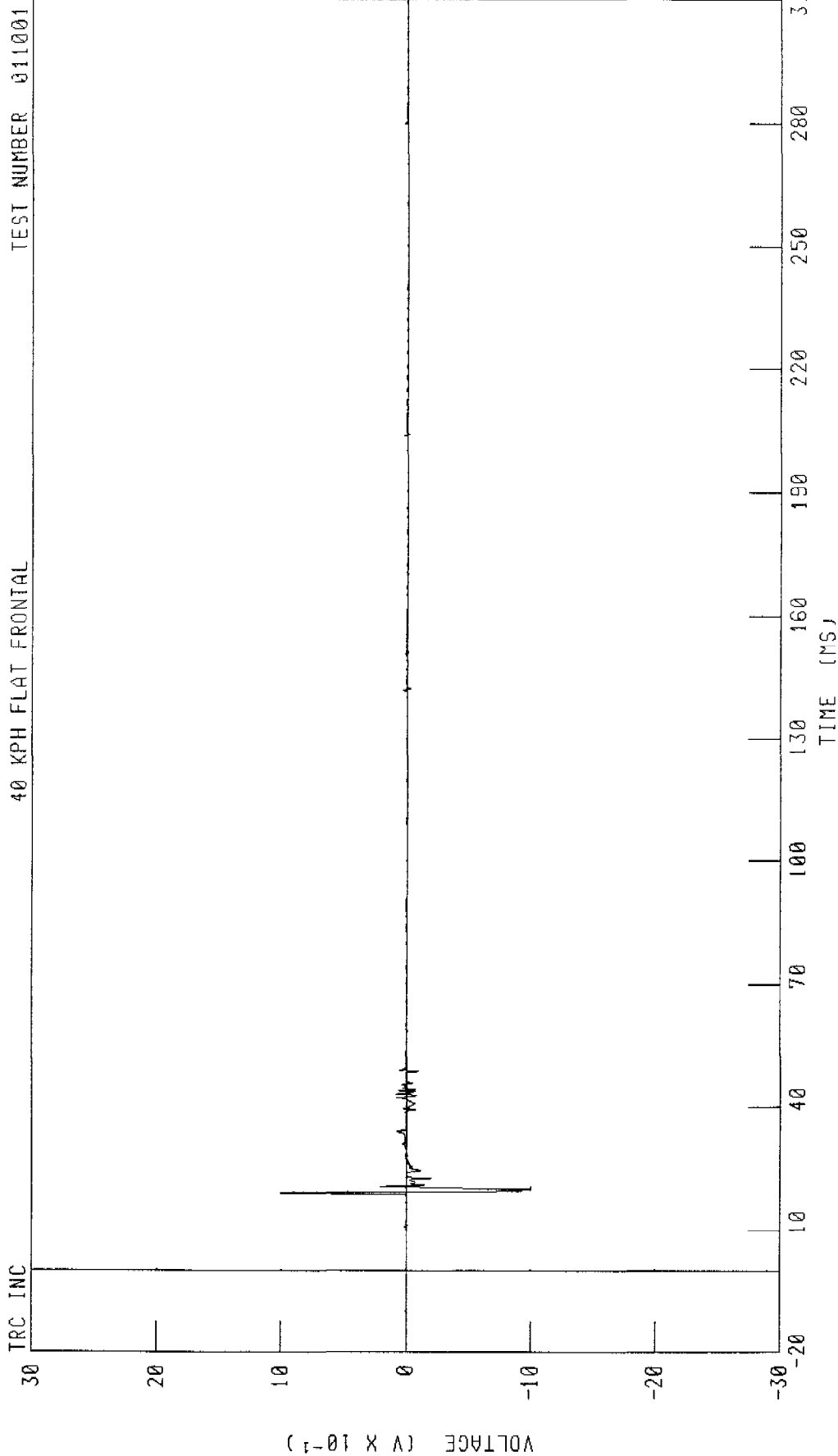
2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
REAR COMPARTMENT CENTER X-AXIS ACCELERATION



CHANNEL RDCXG1 FILTER CH CLASS 60

PEAK DATA 1 88 G @ 92 80 MS, -26 19 G @ 71 28 MS

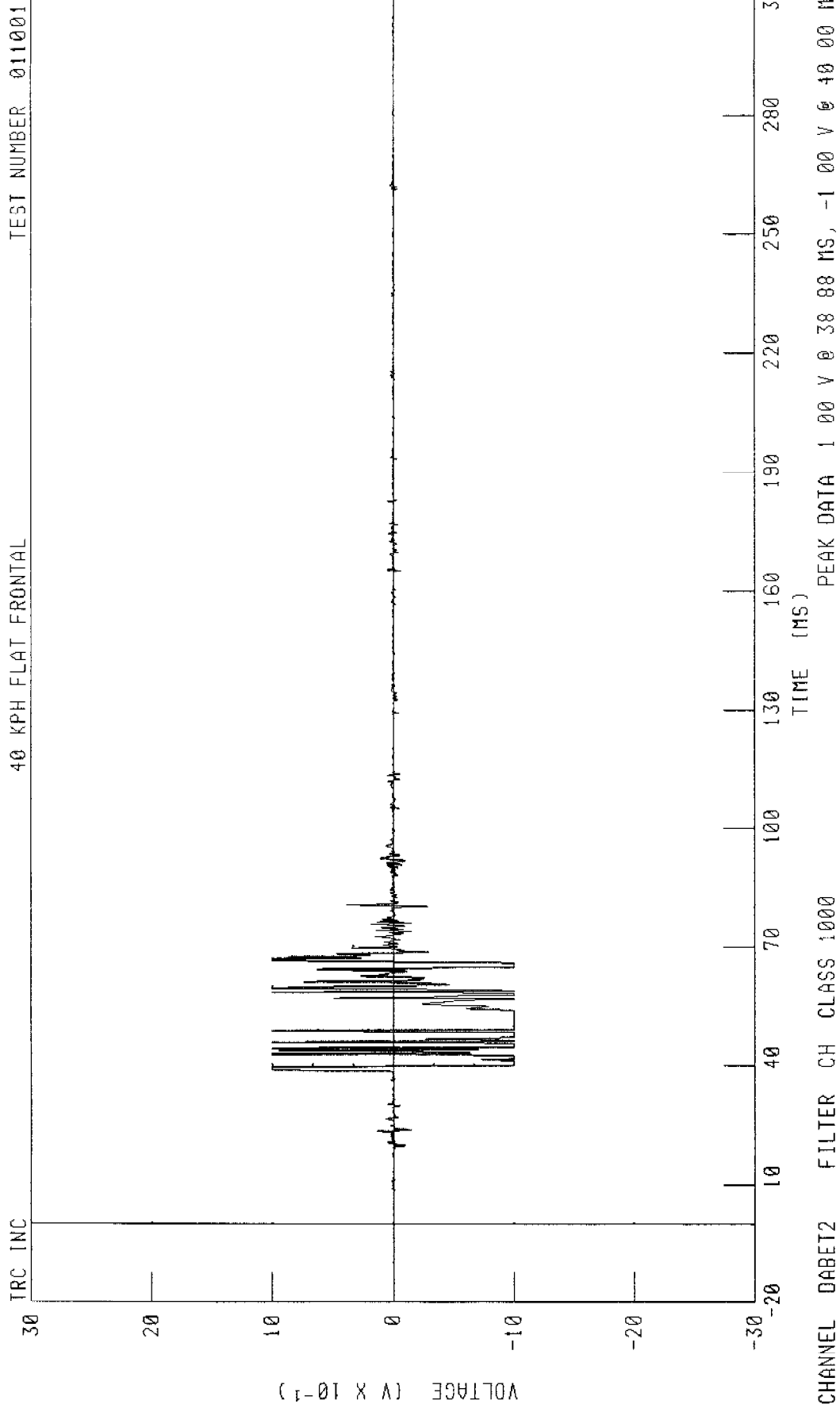
2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
DRIVER AIRBAG EVENT PRIMARY
40 KPH FLAT FRONTAL



CHANNEL DABET1 FILTER CH CLASS 1000

PEAK DATA 1 00 V @ 18 80 MS, -1 00 V @ 19 52 MS

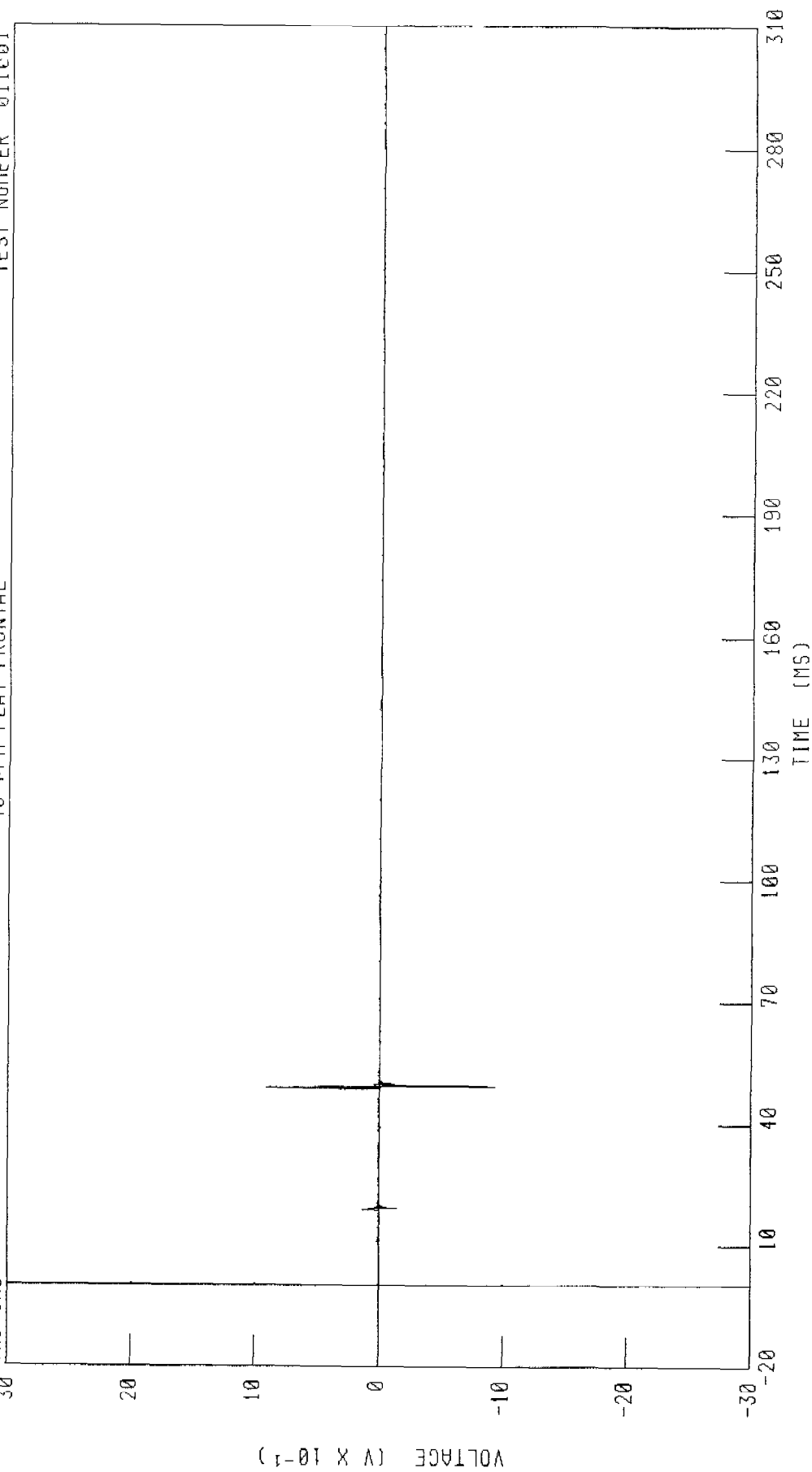
2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
DRIVER AIRBAG EVENT SECONDARY
40 KPH FLAT FRONTAL



2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 MPH
PASSENGER AIRBAG EVENT PRIMARY
40 MPH FLAT FRONTAL

TRC INC

TEST NUMBER 011001



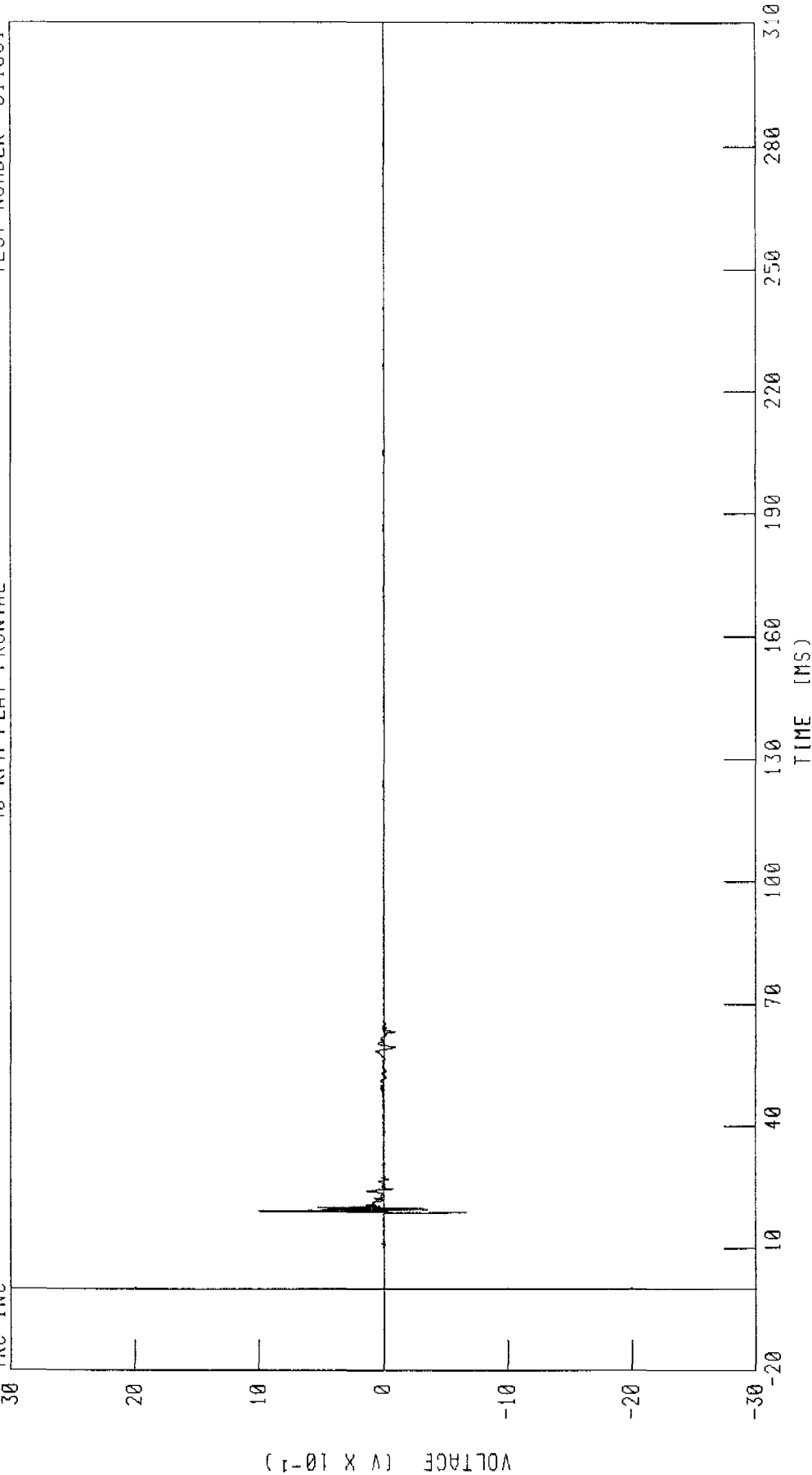
CHANNEL PABET1 FILTER CH CLASS 1000

PEAK DATA 0 31 V @ 48 80 MS, -0 94 V @ 49 12 MS

2001 HONDA ACCORD INTO FLAT FRONTAL BARRIER AT 40 KPH
PASSENGER AIRBAG EVENT SECONDARY
40 KPH FLAT FRONTAL

TEST NUMBER 011001

TRC INC



CHANNEL PABET2 FILTER CH CLASS 1000

PEAK DATA 1 00 V @ 19 28 MS, -0 67 V @ 18 72 MS

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

27-SEP-01

TRC INC. TEST NO: 206C04ED1 572E SN206 EXT.DIMENSION CAL04

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	848. 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	135. MM
SKULL CAP TO BACKLINE	(H)	41 - 46 MM	43. MM
TOTAL SITTING HEIGHT	(A)	879 - 889 MM	879. MM
THIGH CLEARANCE	(F)	140 - 155 MM	145. MM
BUTTOCK KNEE LENGTH	(K)	579 - 605 MM	597. MM
BUTTOCK POPLITEAL LENGTH	(N)	452 - 478 MM	462. MM
POPLITEAL HEIGHT	(L)	429 - 455 MM	447. MM
KNEE PIVOT HEIGHT	(M)	485 - 500 MM	488. 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	84. MM
SHOULDER BREADTH	(V)	422 - 437 MM	434. MM
SHOULDER PIVOT HEIGHT	(B)	506 - 521 MM	518. MM
ELBOW REST HEIGHT	(J)	191 - 211 MM	203. MM
SHOULDER-ELBOW LENGTH	(I)	330 - 345 MM	343. MM
BACK OF ELBOW TO WRIST PIVOT	(G)	290 - 305 MM	300. MM

572E SN206 EXT.DIMENSION CAL04
DUMMY MEETS SPECIFICATIONS
TECHNICIAN 

RUN NUMBER: 092701.0747

TRANSPORTATION RESEARCH CENTER INC.

HEAD DROP TEST

HYBRID III 50th

25-SEP-01

TRC INC.

TEST NO: 206C04HD2

572E SN206 HEAD DROP CAL 04

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	42.0 %
PEAK RESULTANT ACCELERATION	225 - 275 G	225.84 G
PEAK LATERAL ACCELERATION	15 G MAX	7.18 G
IS ACCELERATION CURVE UNIMODAL?	YES	YES

TEST MEETS SPECIFICATIONS

TECHNICIAN

J. C. Miller

RUN NUMBER: 092601.1228;1

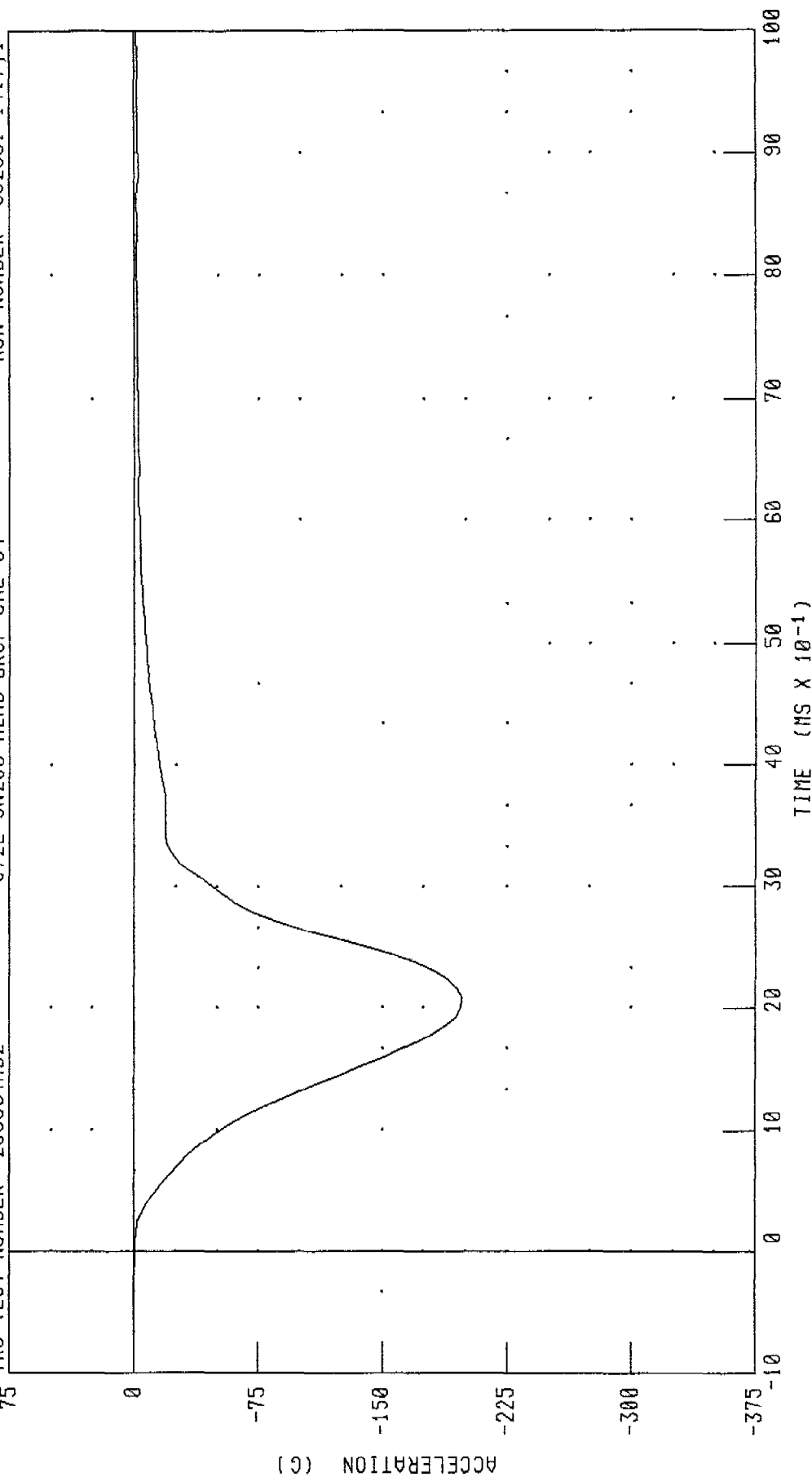
PART 572-E HYBRID III HEAD CALIBRATION

HEAD ACCELERATION X AXIS

TRC TEST NUMBER 206C04HD2

572E SN206 HEAD DROP CAL 04

RUN NUMBER 092601 1417,1



CHANNEL HEDXC FILTER CH CLASS 1000

PEAK DATA 0 04 G 0 -0 96 MS, -198 21 G 0 2 08 MS

PART 572-E HYBRID III HEAD CALIBRATION

HEAD ACCELERATION Y AXIS

TRC TEST NUMBER 206C04HD2

572E SN206 HEAD DROP CAL 04

RUN NUMBER 092601 1417,1

CHANNEL HEDYC

225

150

75

0

-75

-150

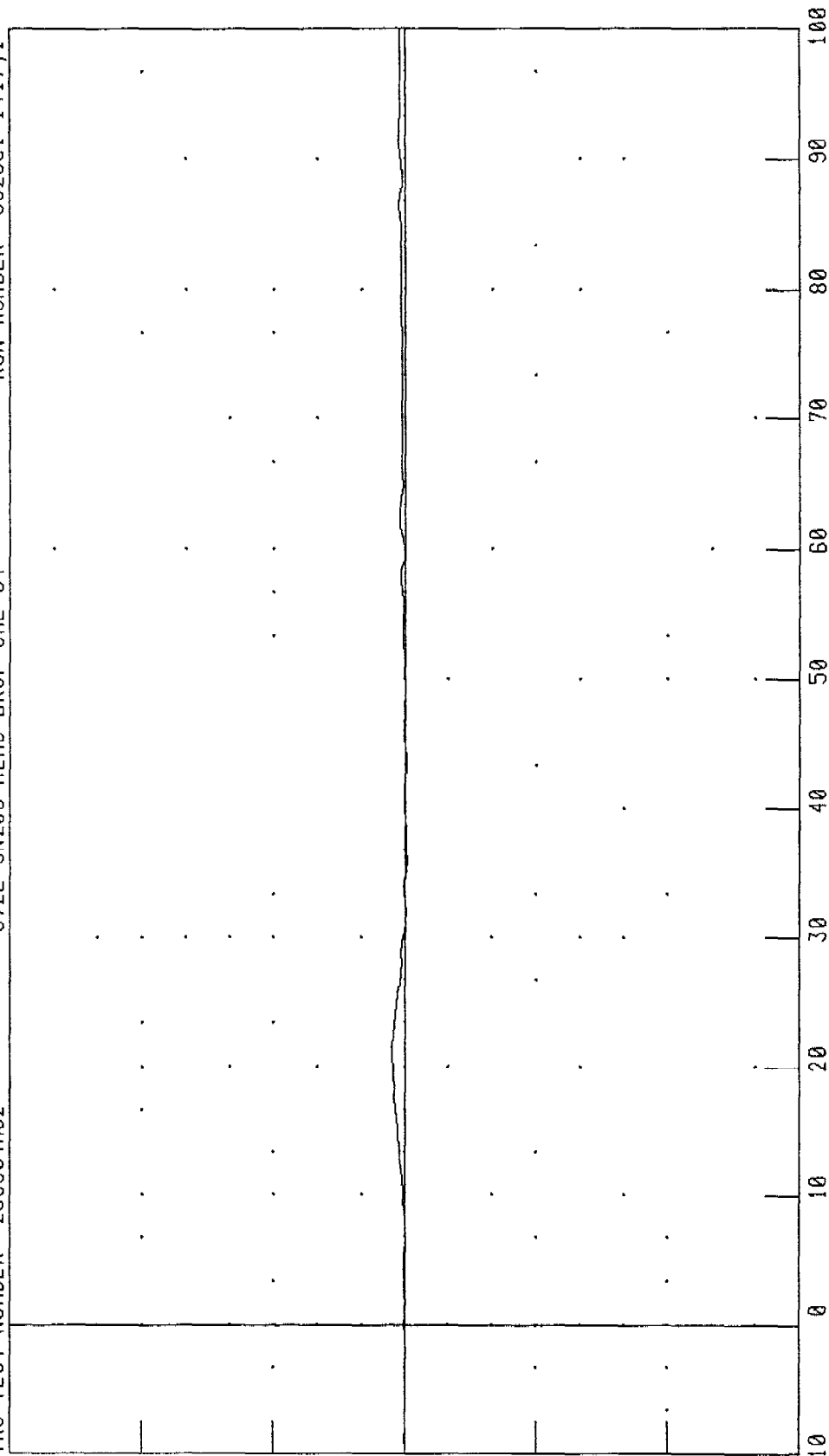
-225

ACCELERATION (G)

TIME (MS X 10⁻¹)

FILTER CH CLASS 1000

PEAK DATA 7 18 G 0 2 08 MS, -1 43 G 0 3 60 MS



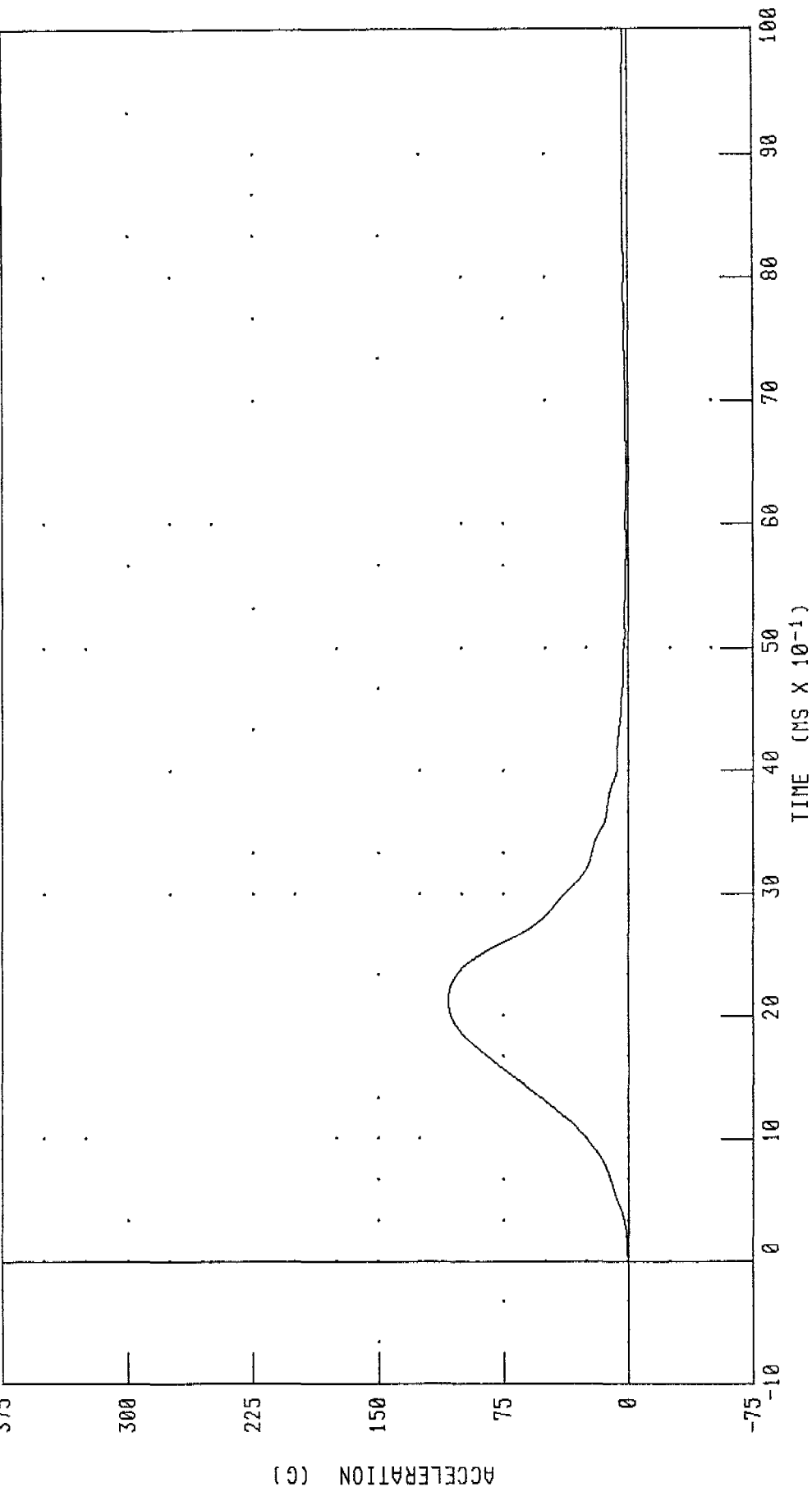
PART 572-E HYBRID III HEAD CALIBRATION

HEAD ACCELERATION Z AXIS

TRC TEST NUMBER 206C04HD2

572E SN206 HEAD DROP CAL 04

RUN NUMBER 092601 1417,1



CHANNEL HEDZG FILTER CH CLASS 1000

PEAK DATA 100 02 G @ 2 00 MS, -0 00 G @ -0 88 MS

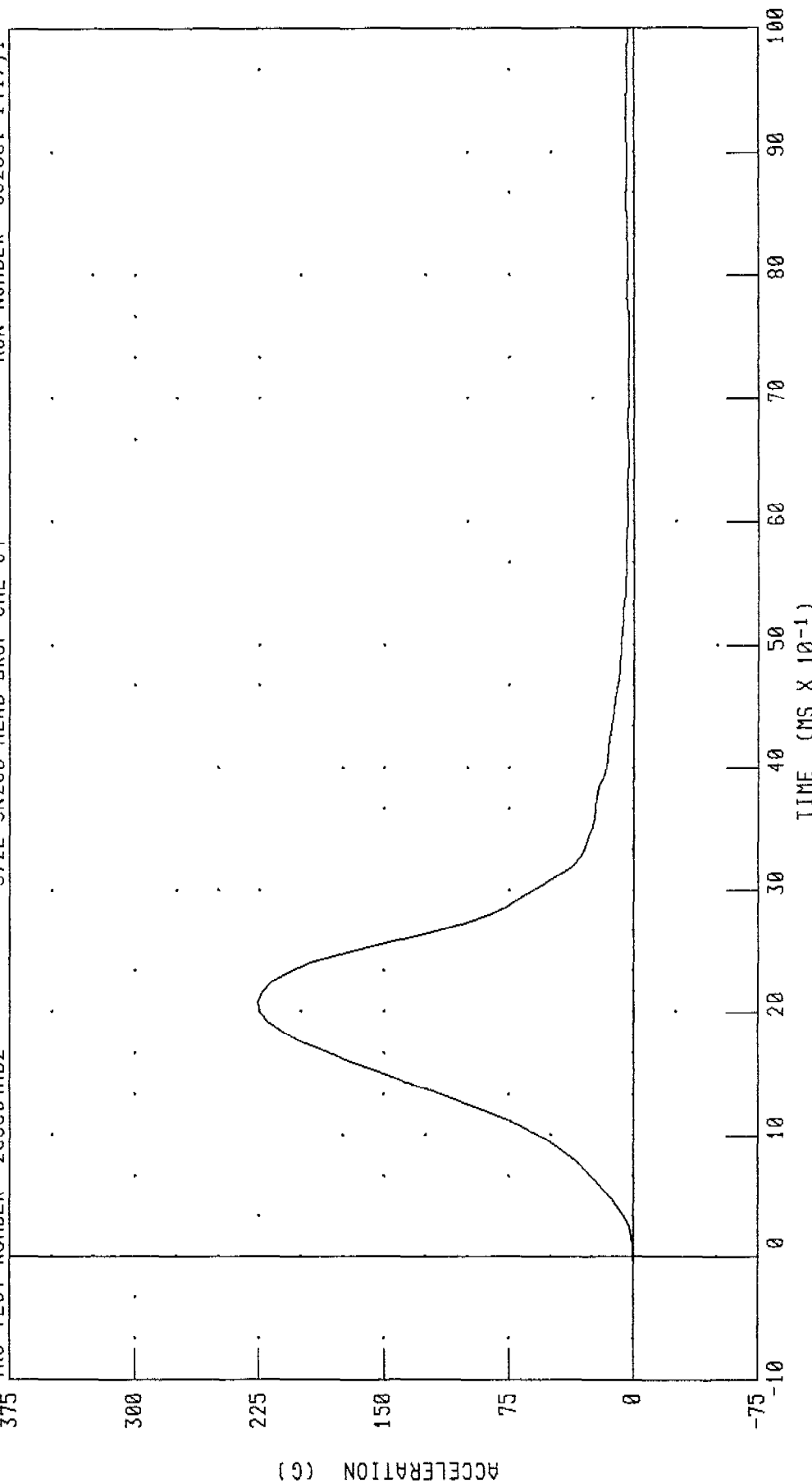
PART 572-E HYBRID III HEAD CALIBRATION

HEAD RESULTANT ACCELERATION

TRC TEST NUMBER 206C04HD2

572E SN206 HEAD DROP CAL 04

RUN NUMBER 092601 1417,1



CHANNEL HEDRG FILTER CH CLASS 1000

PEAK DATA 225 85 G @ 2 08 MS, 0 05 G @ -0 96 MS

TRANSPORTATION RESEARCH CENTER INC.

HYBRID III 50th

26-SEP-01

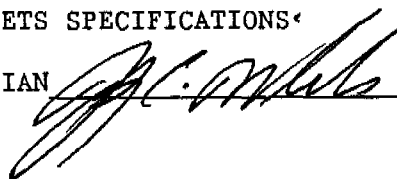
NECK FLEXION TEST - 6 CHANNEL TRANSDUCER

TRC INC. TEST NO: 206C04NF1 572E SN206 NECK FLEXION CAL04

TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE		20.6-22.2 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY		10 - 70 %	37.0 %
IMPACT VELOCITY		6.89 - 7.13 M/S	6.93 M/S
PENDULUM DECELERATION	10 MS	22.50 - 27.50 G	23.38 G
	20 MS	17.60 - 22.60 G	22.16 G
	30 MS	12.50 - 18.50 G	18.30 G
MAX PENDULUM G		29 G MAX	23.70 G
MAX PENDULUM G ABOVE 30 MS		29 G MAX	18.24 G
DECELERATION-TIME CURVE DECAY TIME TO 5 G		34 - 42 MS	38.64 MS
D PLANE	MAX	64 - 78 DEG.	72.29 DEG.
ROTATION	TIME	57 - 64 MS	62.40 MS
MOMENT ABOUT OCCIPITAL CONDYLE	MAX	88.2 - 108.5 NM	102.18 NM
	TIME	47 - 58 MS	51.44 MS
ROTATION ANGLE-TIME CURVE DECAY TIME TO ZERO		113 - 128 MS	118.96 MS
POSITIVE MOMENT-TIME CURVE DECAY TIME TO ZERO		97 - 107 MS	102.08 MS

TEST MEETS SPECIFICATIONS.

TECHNICIAN

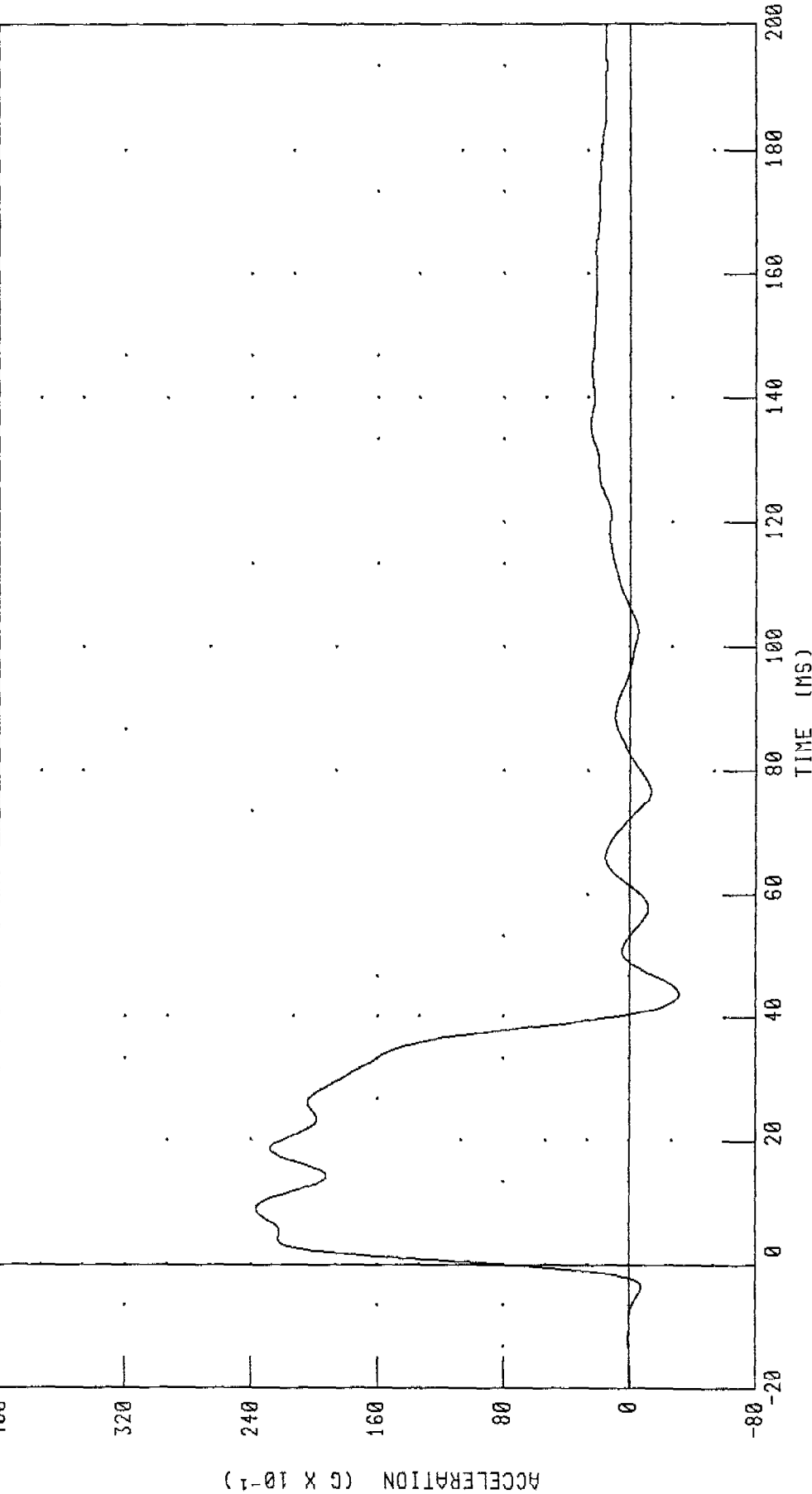


RUN NUMBER: 092601.1123;1

PART 572-E HYBRID III NECK FLEXION CALIBRATION

PENDULUM DECELERATION

TRC TEST NUMBER 206C04NF1 572E SN206 NECK FLEXION CAL04 RUN NUMBER 092601 1124,1



CHANNEL PENXC FILTER CH CLASS 60 PEAK DATA 23 71 C 0 9 04 MS, -3 12 C 0 43 92 MS

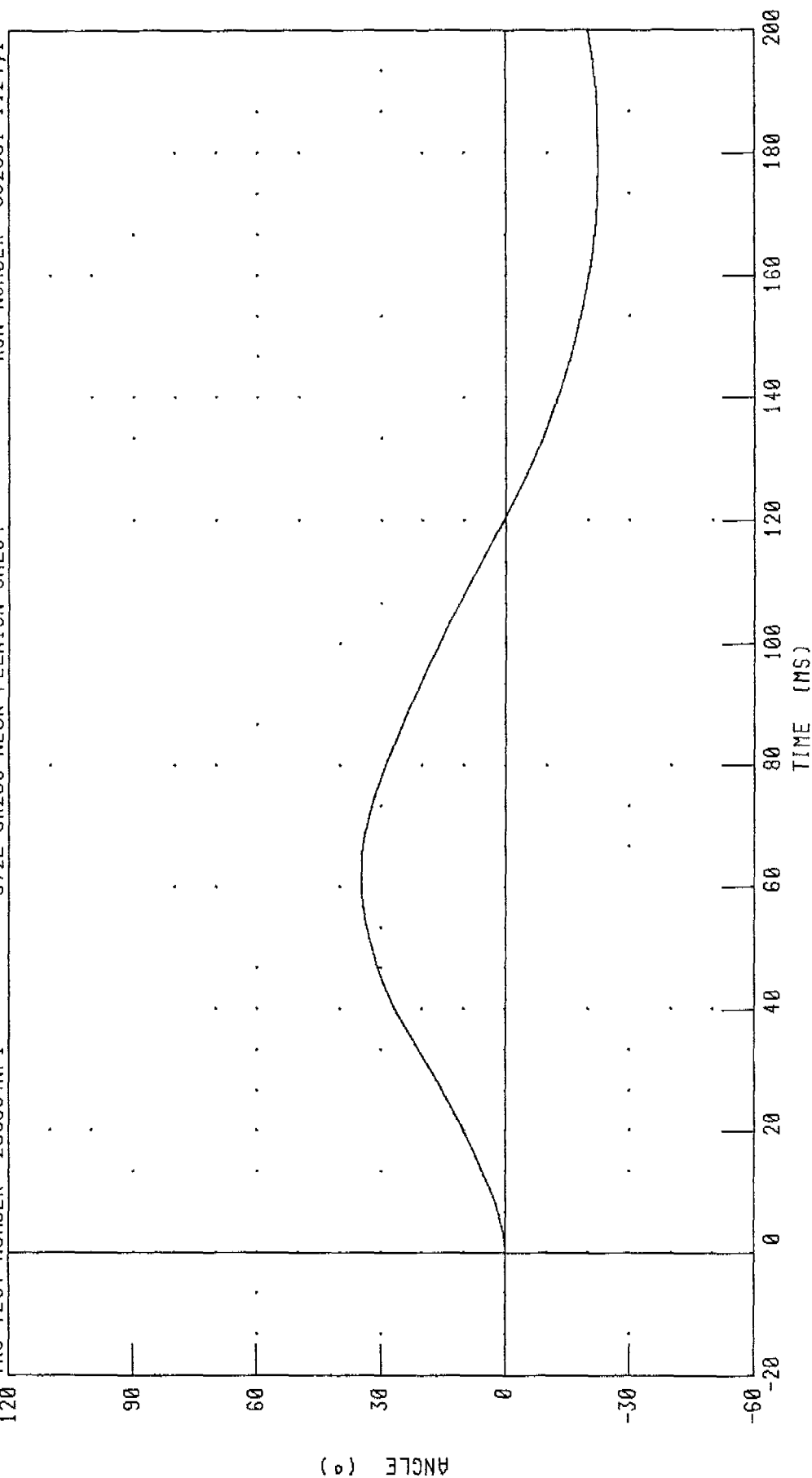
PART 572-E HYBRID III NECK FLEXION CALIBRATION

ROTATION ABOUT BASE OF NECK

TRC TEST NUMBER 206C04NF1

572E SN206 NECK FLEXION CAL04

RUN NUMBER 092601 1124,1



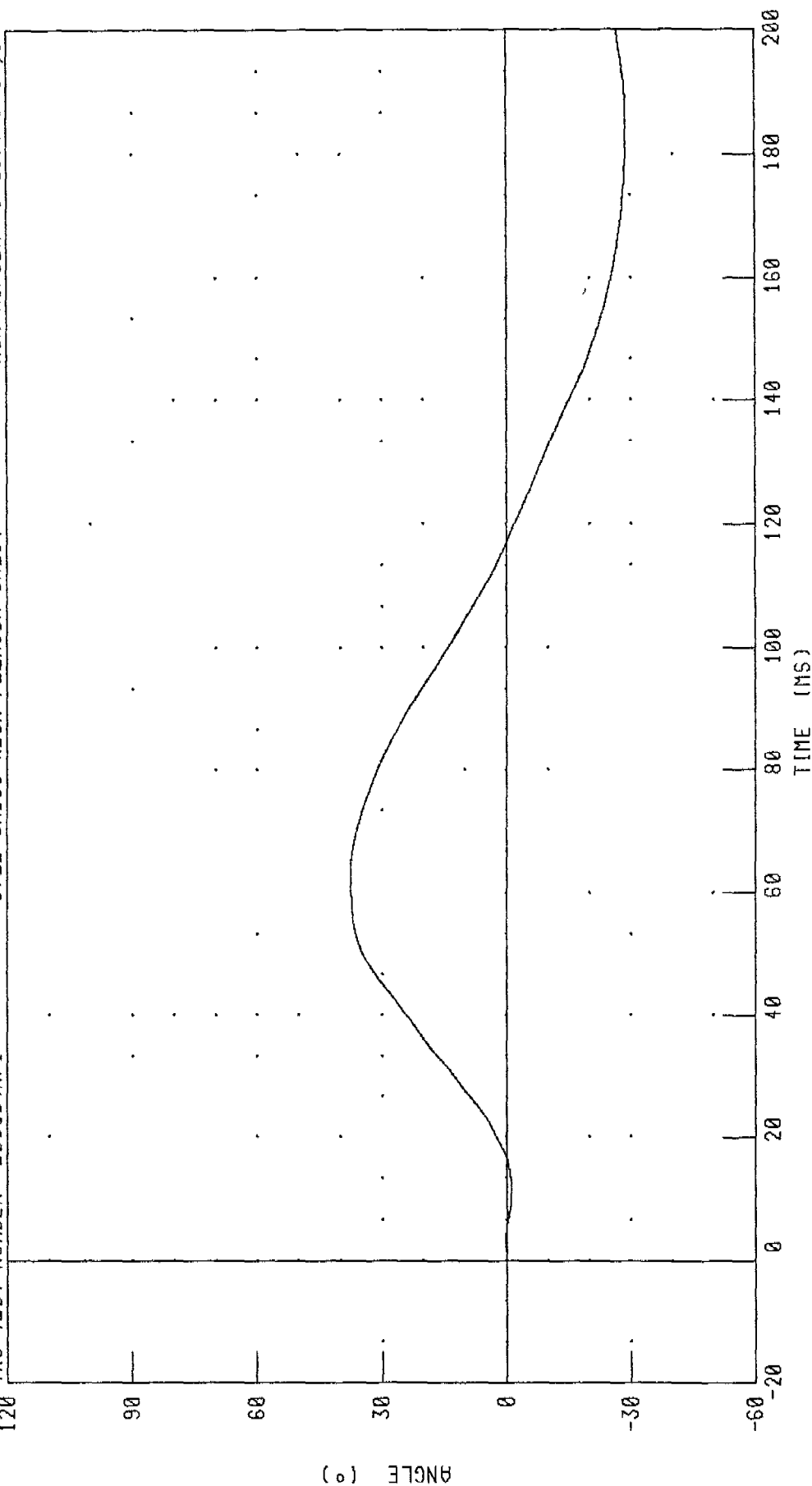
CHANNEL BETA FILTER CH CLASS 60

PEAK DATA 34 84 ° @ 62 00 MS, -22 33 ° @ 178 56 MS

PART 572-E HYBRID III NECK FLEXION CALIBRATION

ROTATION ABOUT OCCIPITAL CONDYLE

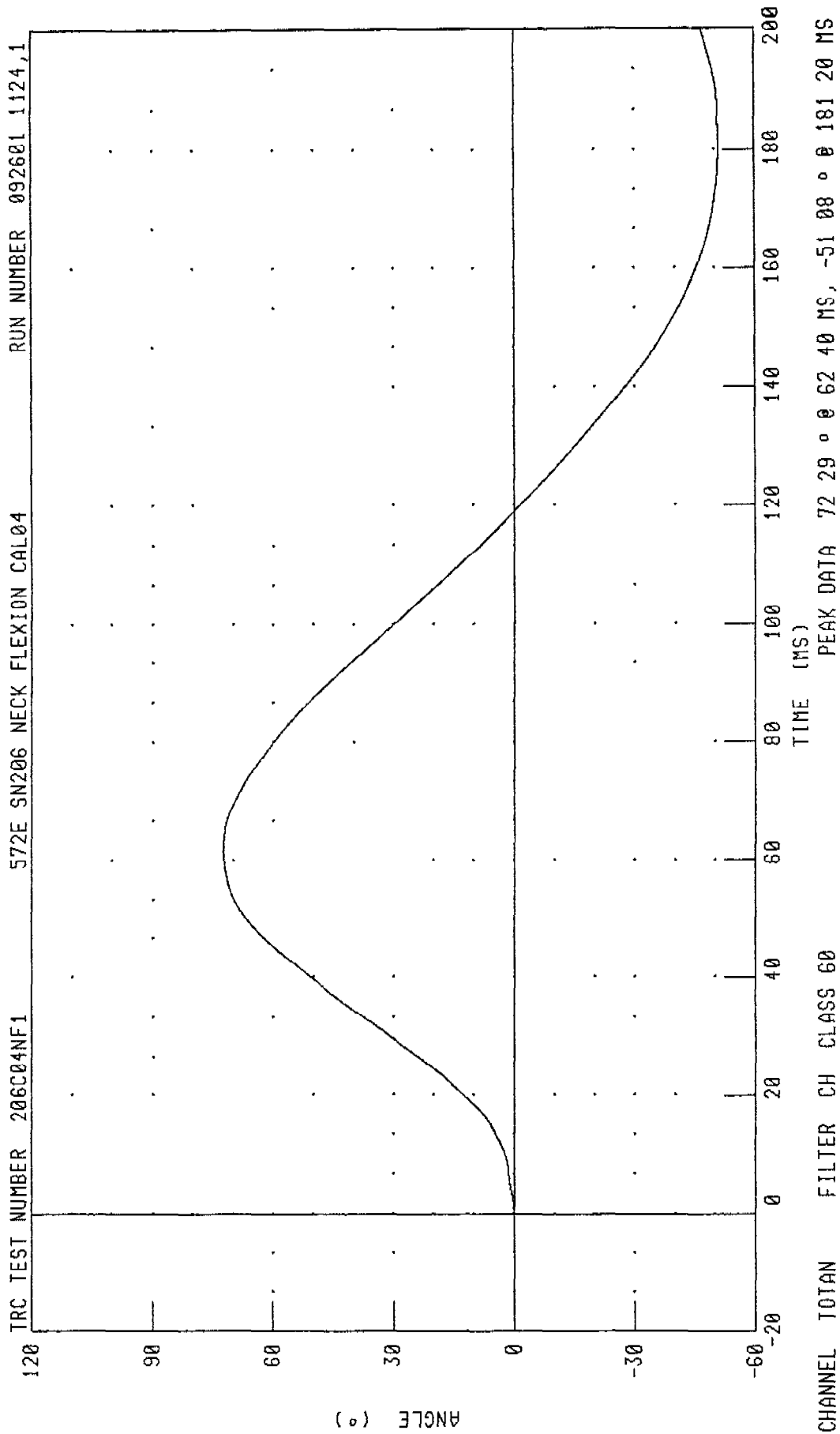
TRC TEST NUMBER 206C04NF1 572E SN206 NECK FLEXION CAL04 RUN NUMBER 092601 1124,1



CHANNEL THETA FILTER CH CLASS 60 PEAK DATA 37 46 ° 63 12 MS, -28 80 ° 184 16 MS

PART 572-E HYBRID III NECK FLEXION CALIBRATION

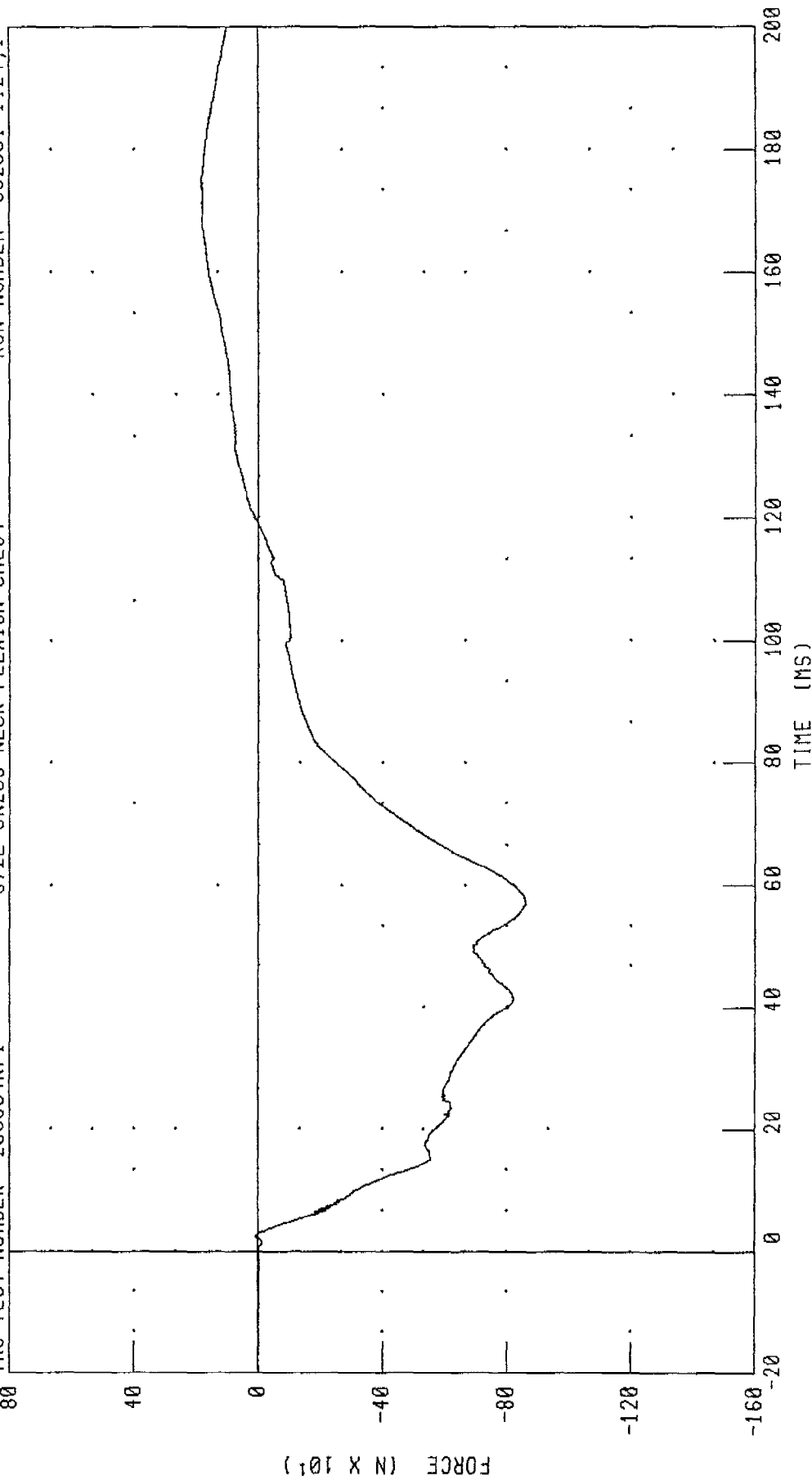
TOTAL ROTATION



PART 572-E HYBRID III NECK FLEXION CALIBRATION

NECK FORCE X AXIS

TRC TEST NUMBER 206C04NF1 572E SN206 NECK FLEXION CAL04 RUN NUMBER 092601 1124,1

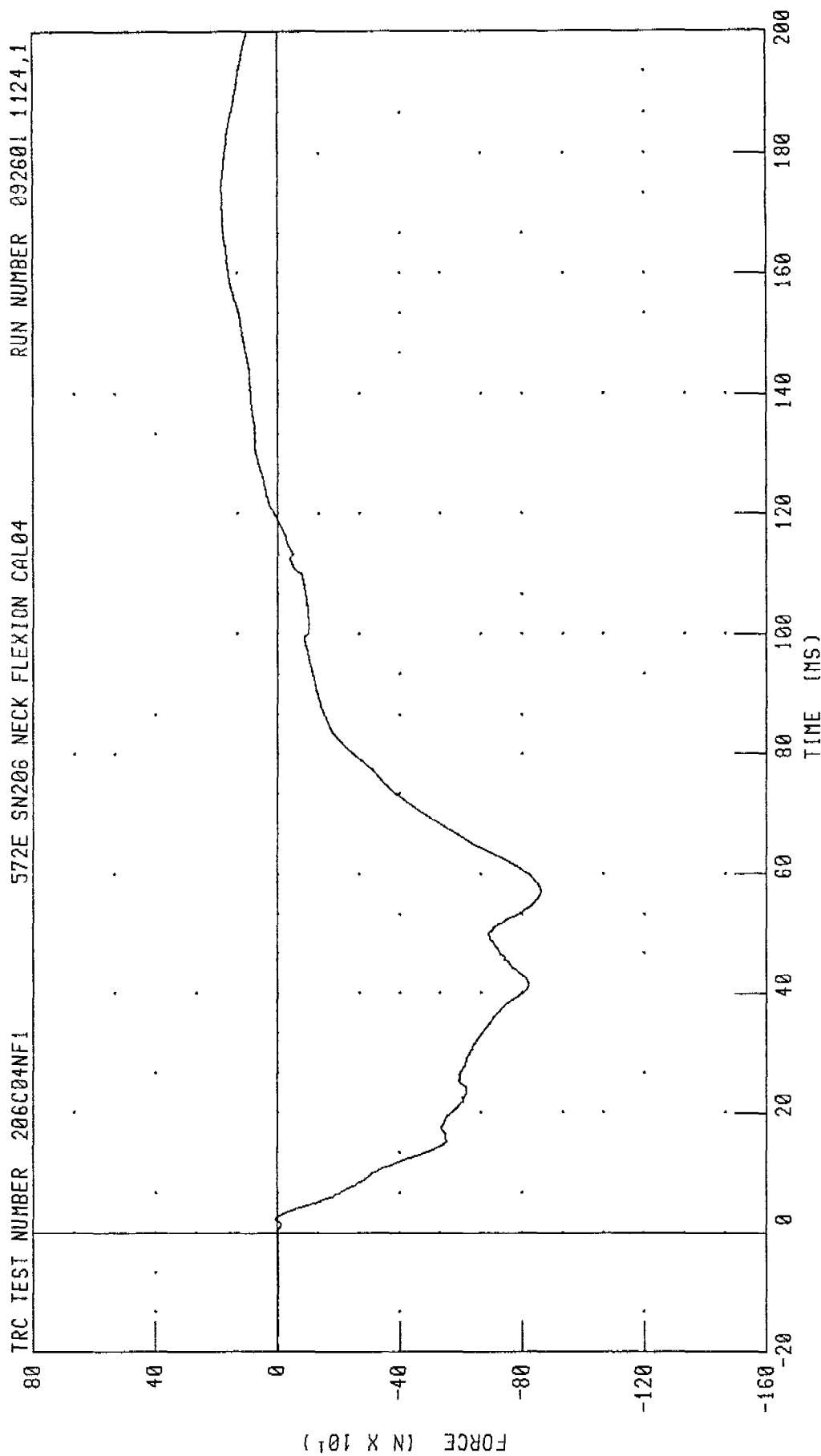


CHANNEL NEKXF FILTER CH CLASS 1000

PEAK DATA 184 13 N 0 175 12 MS, -860 89 N 0 57 04 MS

PART 572-E HYBRID III NECK FLEXION CALIBRATION

NECK FORCE X AXIS FILTERED FOR USE IN OCCIPITAL MOMENT CALCULATION



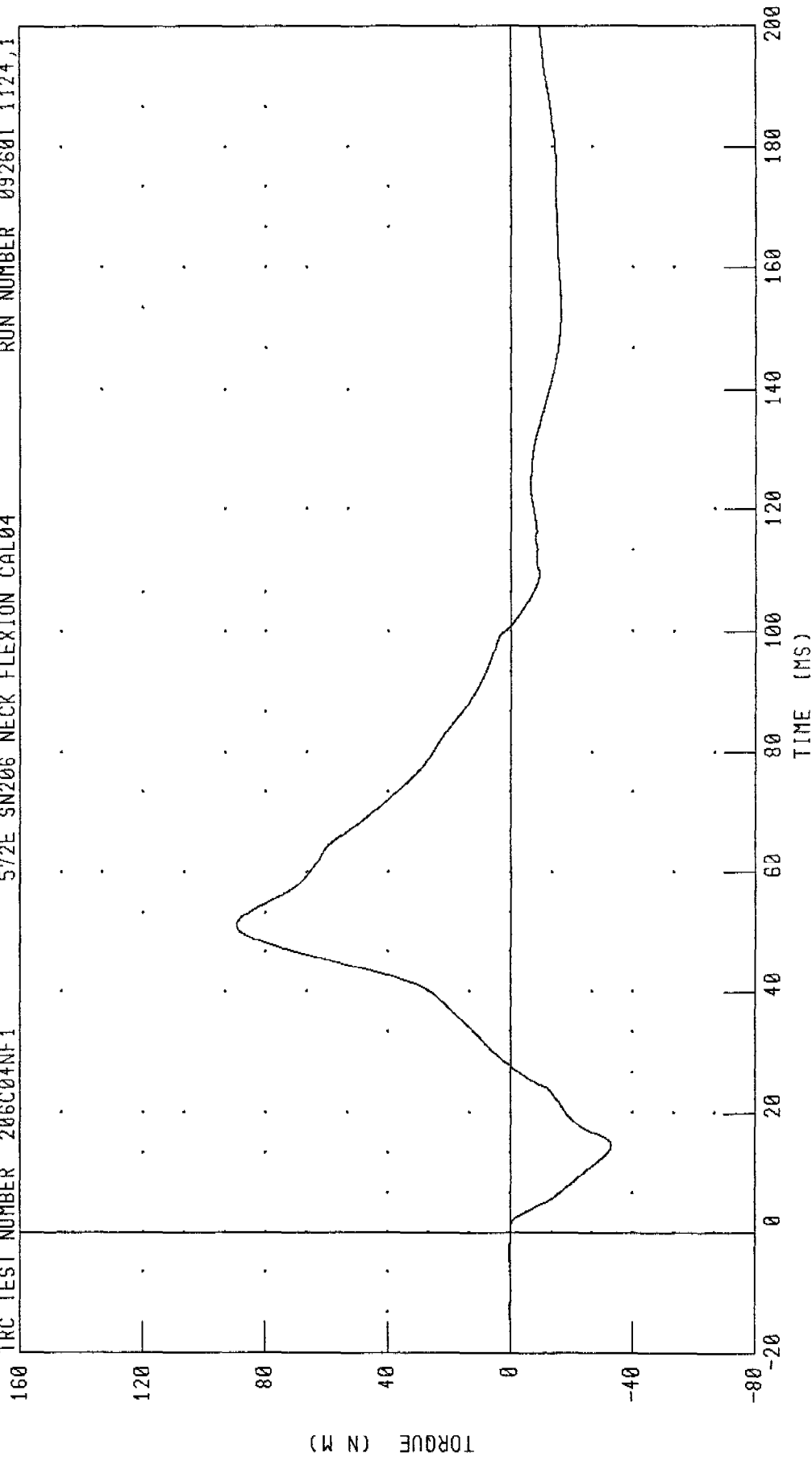
PEAK DATA 183 59 N @ 175 04 MS, -860 82 N @ 57 20 MS

CHANNEL NEKXFC FILTER CH CLASS 600

PART 572-E HYBRID III NECK FLEXION CALIBRATION

NECK MOMENT Y AXIS

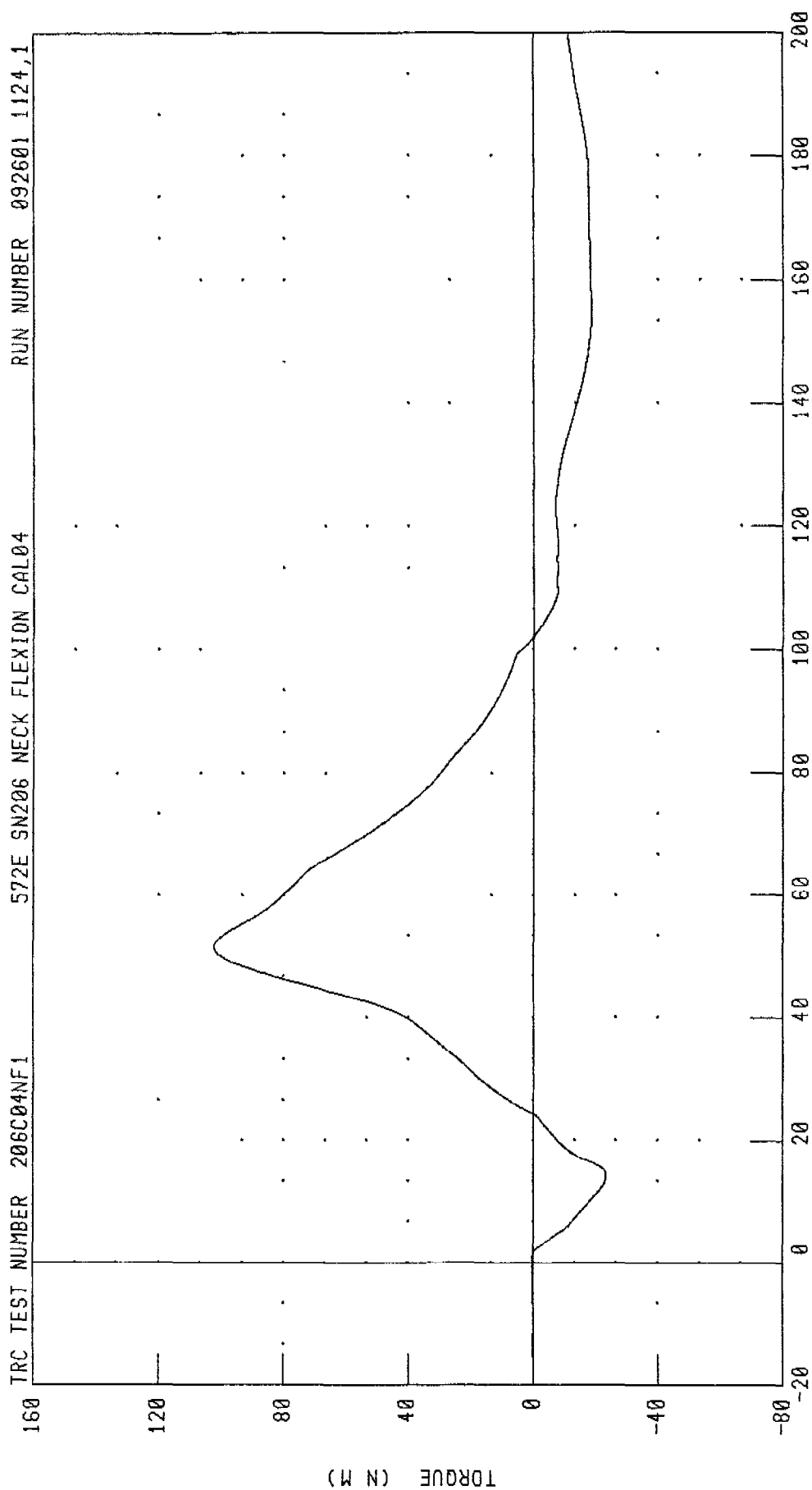
TRC TEST NUMBER 206C04NF1 572E SN206 NECK FLEXION CAL04 RUN NUMBER 092601 1124,1



CHANNEL NEKYM FILTER CH CLASS 600

PEAK DATA 89 43 N M @ 51 20 MS, -33 11 N M @ 14 72 MS

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



CHANNEL NEKOM FILTER CH CLASS 600 PEAK DATA 102 18 N M 0 51 44 MS, -23 62 N M 0 14 16 MS

TRANSPORTATION RESEARCH CENTER INC.

HYBRID III 50th

26-SEP-01

NECK EXTENSION TEST - 6 CHANNEL TRANSDUCER

TRC INC.

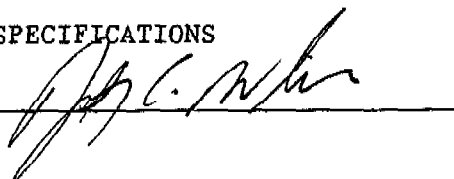
TEST NO: 206C04NE1

572E SN206 NECK EXT CAL04

TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE		20.6 - 22.2 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY		10 - 70 %	37.0 %
IMPACT VELOCITY		5.95 - 6.19 M/S	6.00 M/S
PENDULUM DECELERATION	10 MS	17.20 - 21.20 G	18.25 G
	20 MS	14.00 - 19.00 G	17.35 G
	30 MS	11.00 - 16.00 G	14.50 G
MAX PENDULUM G		22 G MAX	18.34 G
MAX PENDULUM G ABOVE 30 MS		22 G MAX	14.45 G
DECELERATION-TIME CURVE DECAY TIME TO 5 G		38 - 46 MS	42.96 MS
D PLANE	MAX	81 - 106 DEG.	96.90 DEG.
ROTATION	TIME	72 - 82 MS	79.84 MS
MOMENT ABOUT OCCIPITAL CONDYLE	MIN	-80.0/-52.9 NM	-65.96 NM
	TIME	65 - 79 MS	73.84 MS
ROTATION ANGLE-TIME CURVE DECAY TIME TO ZERO		147 - 174 MS	161.44 MS
NEGATIVE MOMENT-TIME CURVE DECAY TIME TO ZERO		120 - 148 MS	146.16 MS

TEST MEETS SPECIFICATIONS

TECHNICIAN



RUN NUMBER: 092601.1239;1

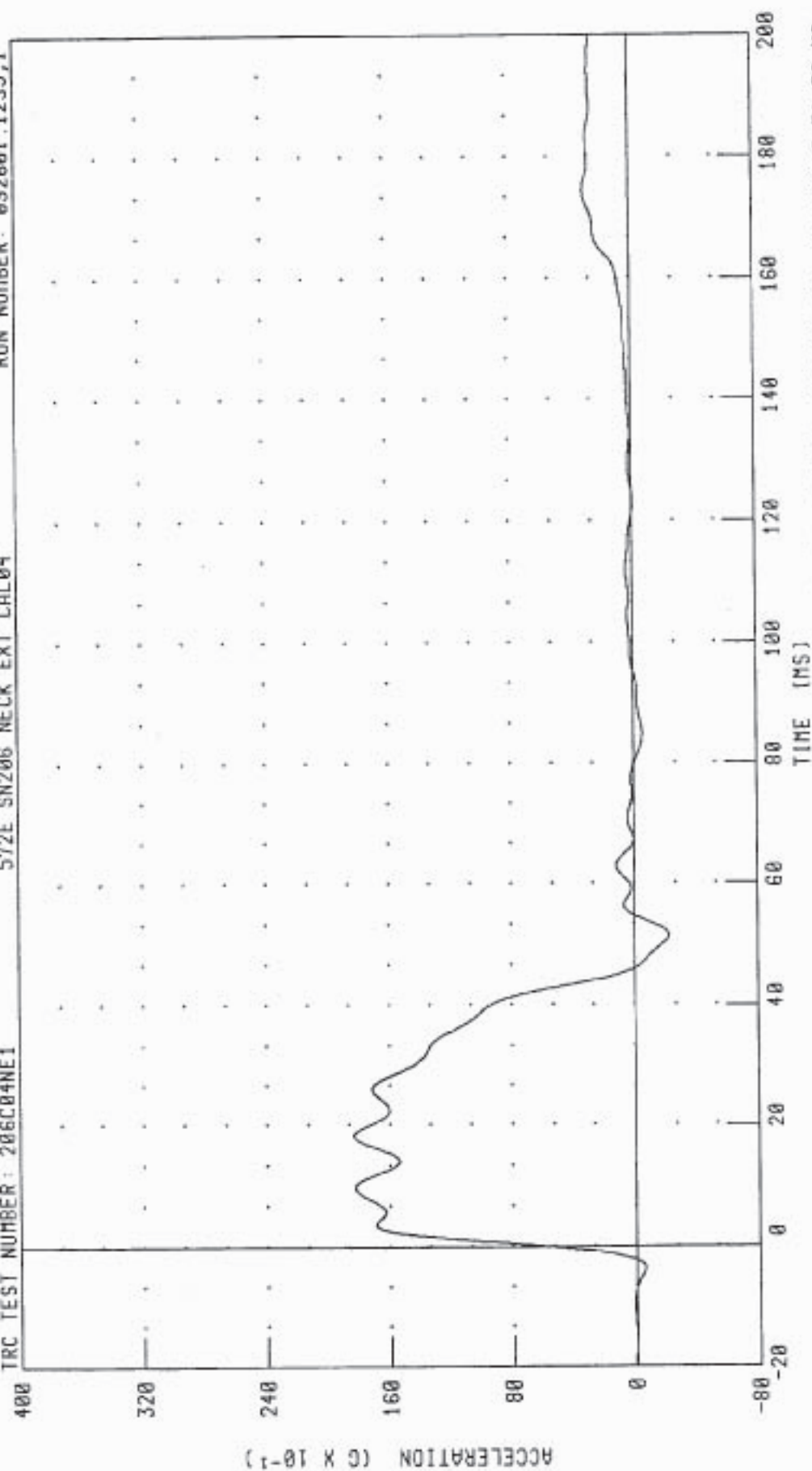
PART 572-E HYBRID III NECK EXTENSION CALIBRATION

PENDULUM DECELERATION

RUN NUMBER: 092601.1239,1

572E SN206 NECK EXT CAL04

TRC TEST NUMBER: 206CB4NE1



CHANNEL: PENXG FILTER: CH. CLASS 60

PEAK DATA: 18.34 G @ 18.24 MS; -2.22 G @ 51.36 MS

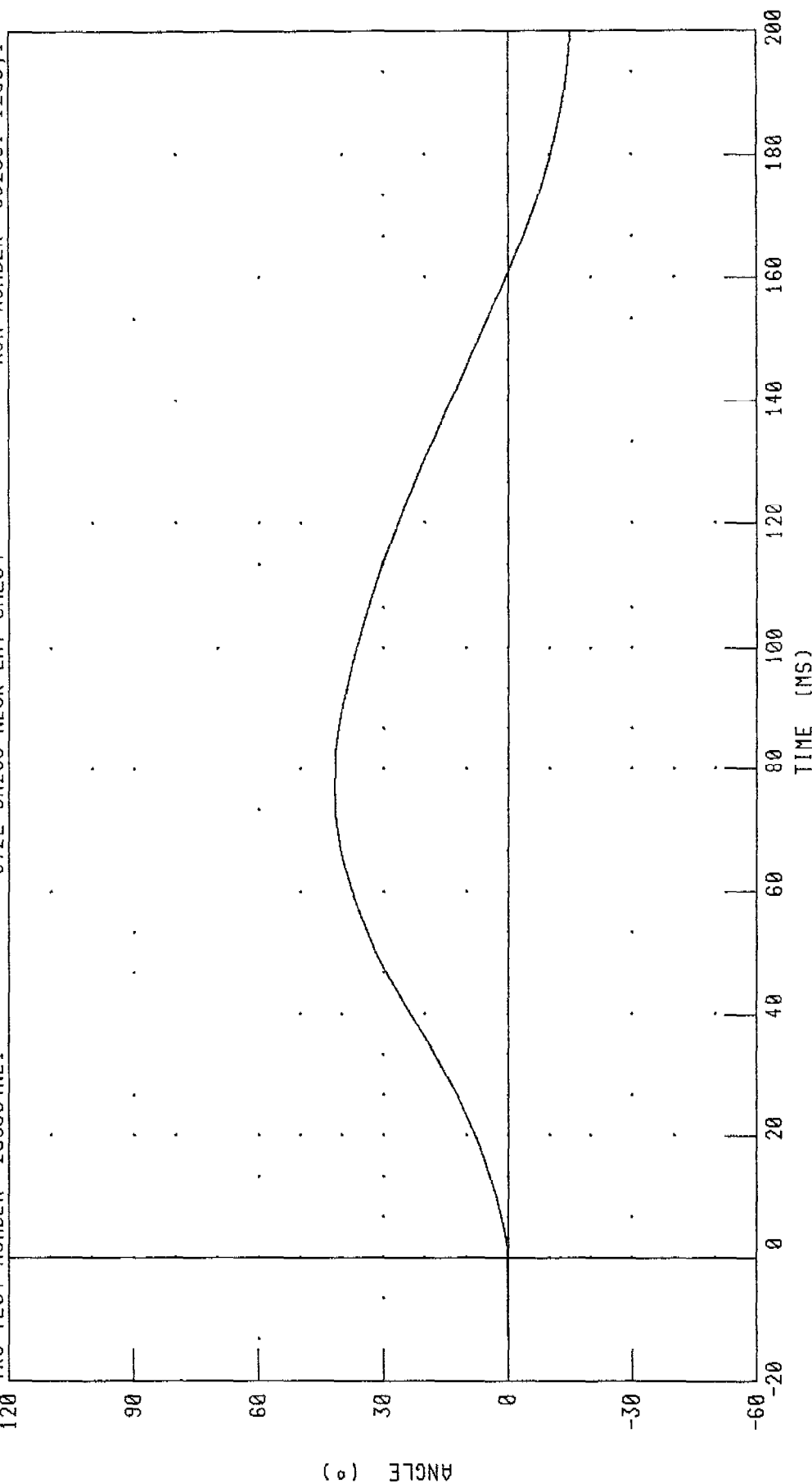
PART 572-E HYBRID III NECK EXTENSION CALIBRATION

ROTATION ABOUT BASE OF NECK

TRC TEST NUMBER 206C04NE1

572E SN206 NECK EXT CAL04

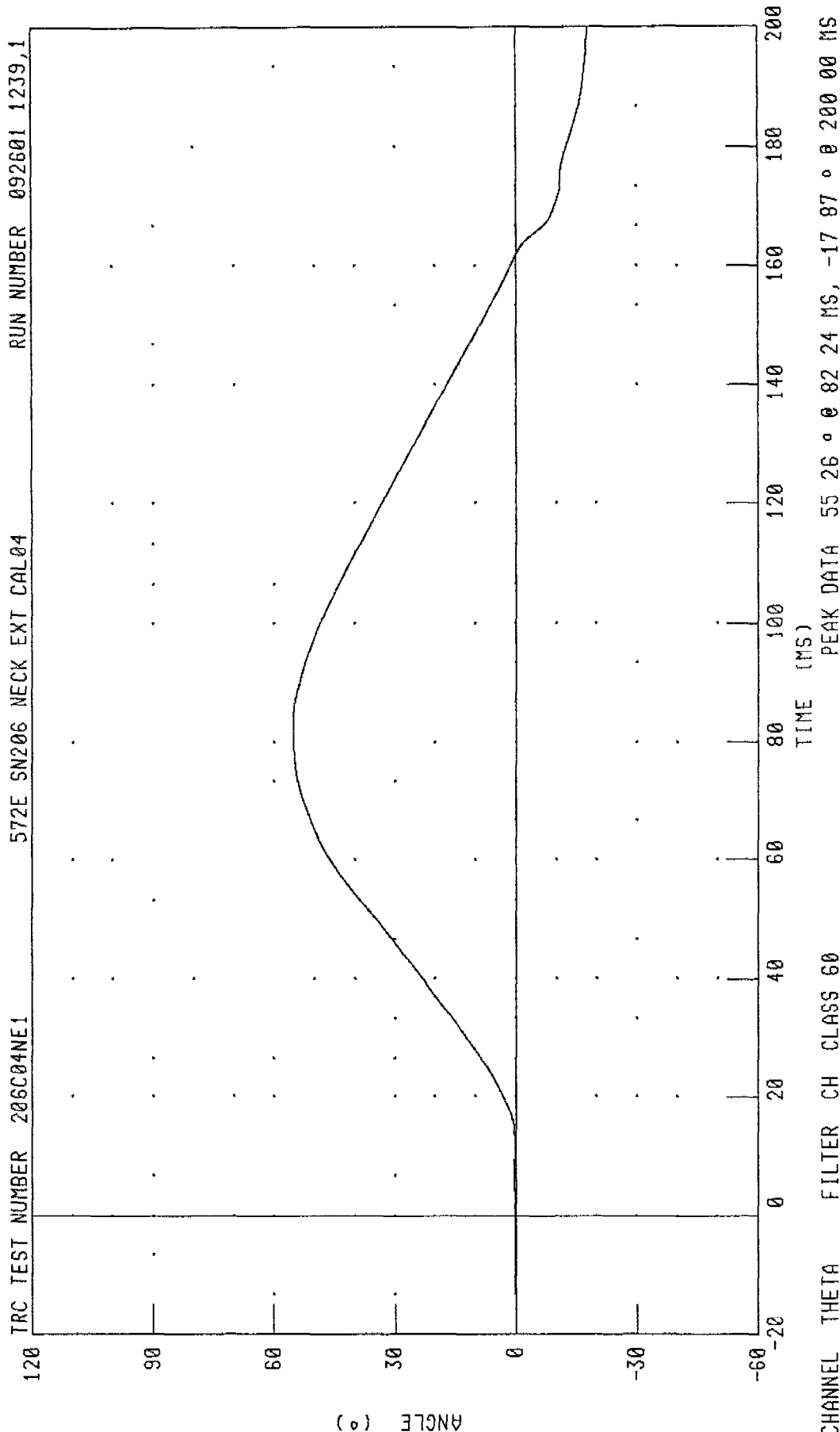
RUN NUMBER 092601 1239,1



CHANNEL BETA FILTER CH CLASS 60

PEAK DATA 41 72 ° @ 77 12 MS, -15 13 ° @ 200 00 MS

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



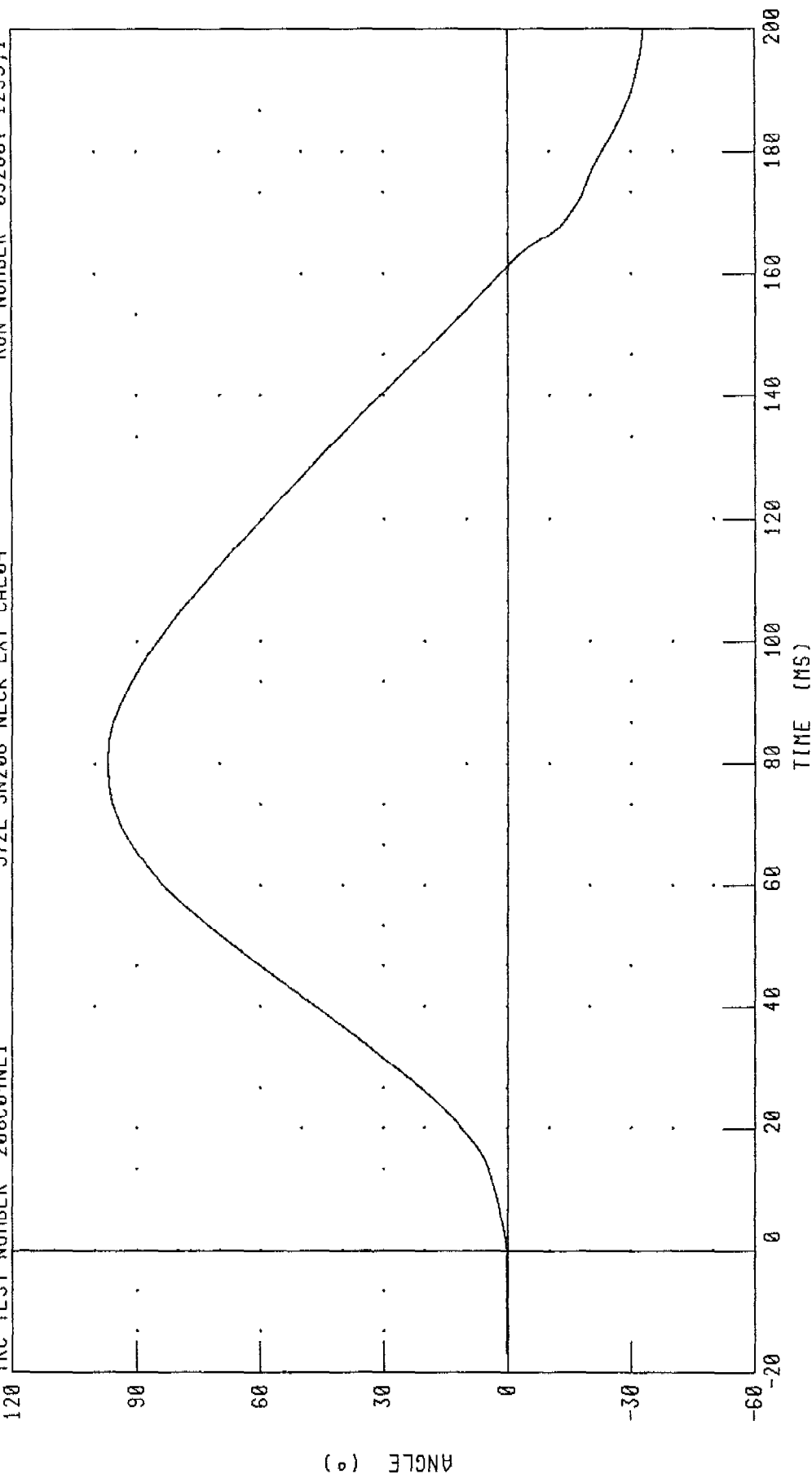
PART 572-E HYBRID III NECK EXTENSION CALIBRATION

TOTAL ROTATION

TRC TEST NUMBER 206C04NE1

572E SN206 NECK EXT CAL04

RUN NUMBER 092601 1239,1



CHANNEL TOTAL FILTER CH CLASS 60

PEAK DATA 96 90 ° @ 79 84 MS, -33 00 ° @ 200 00 MS

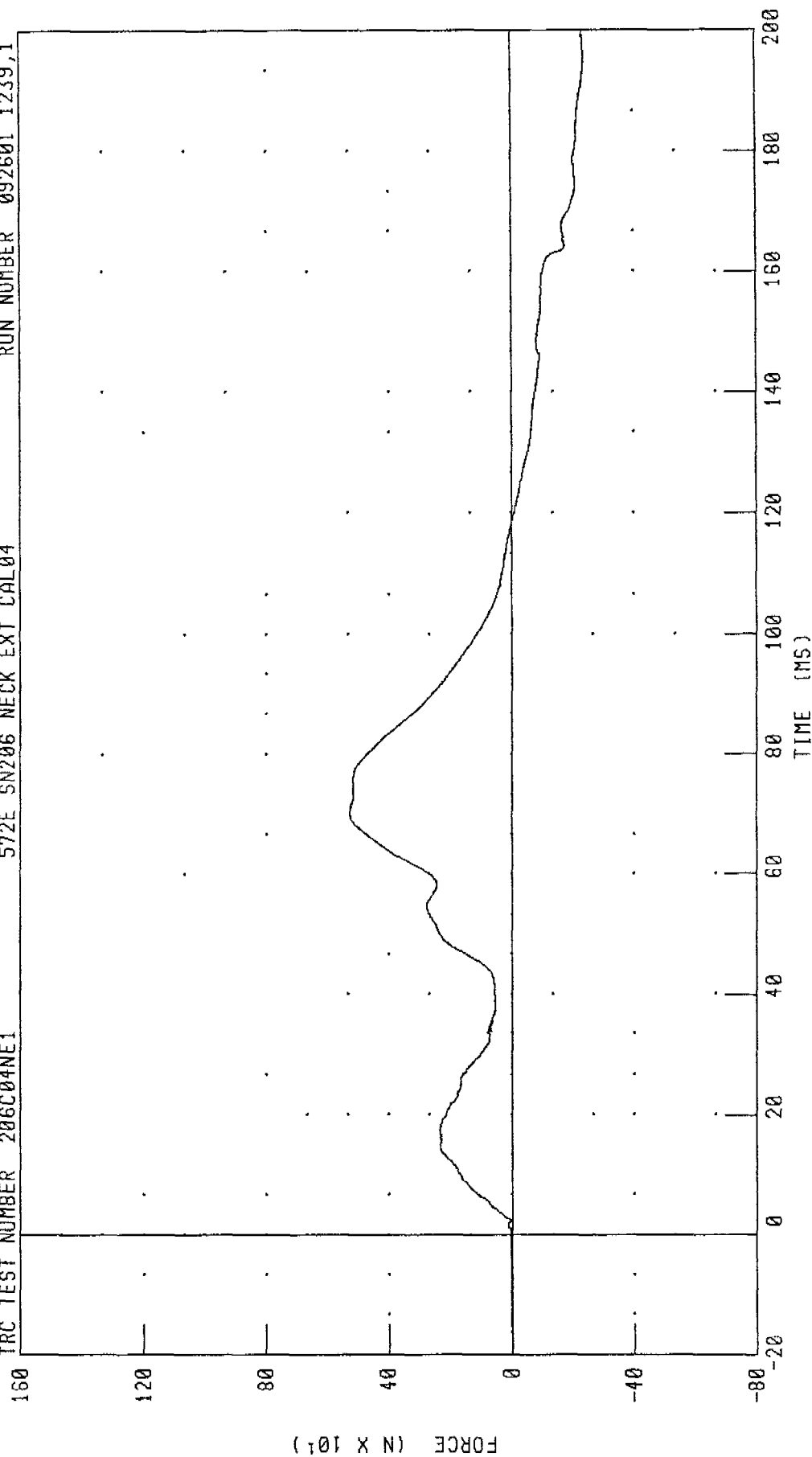
PART 572-E HYBRID III NECK EXTENSION CALIBRATION

NECK FORCE X AXIS

TRC TEST NUMBER 206C04NE1

572E SN206 NECK EXT CAL04

RUN NUMBER 092601 1239,1

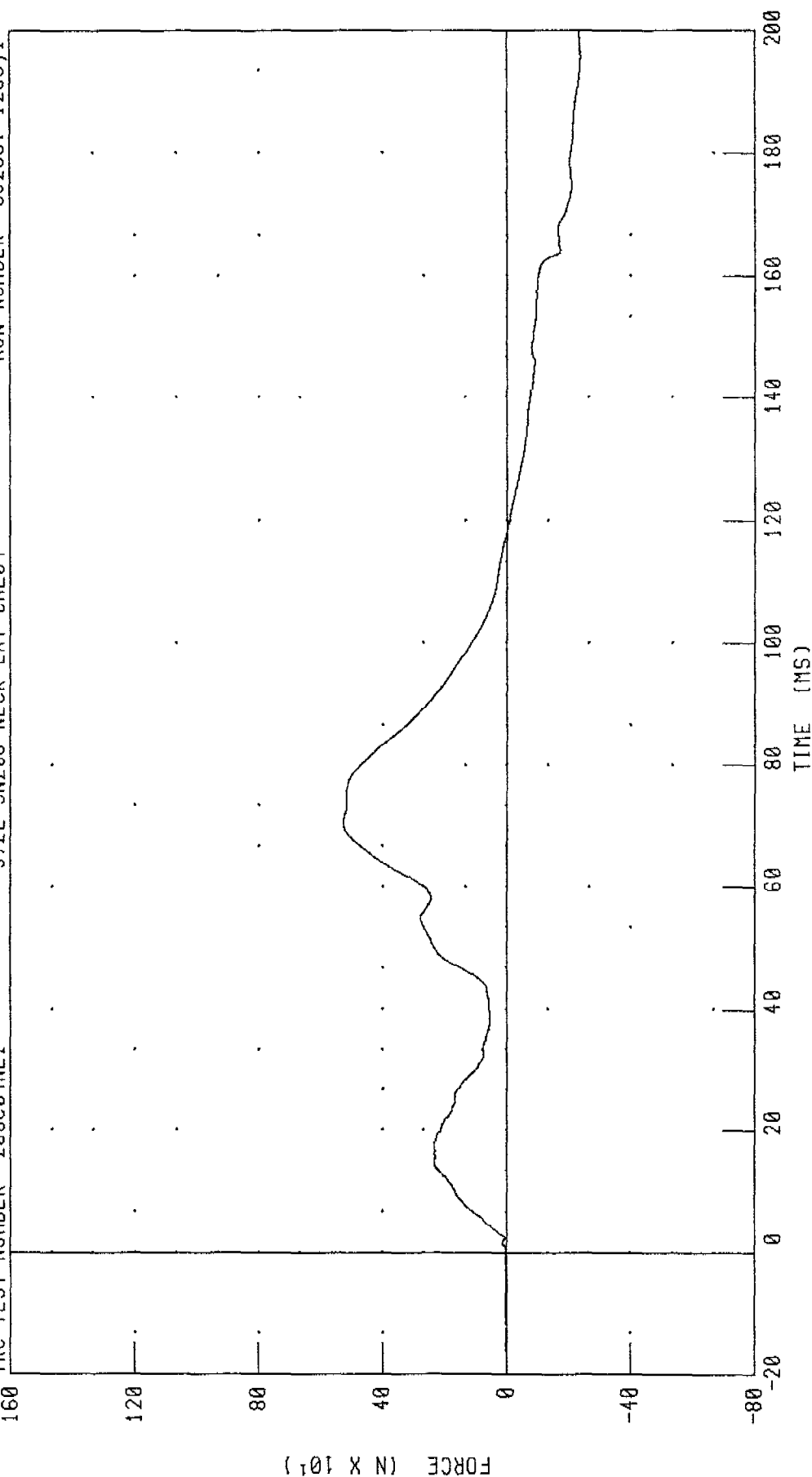


PEAK DATA 527 98 N @ 70 00 MS, -240 58 N @ 195 36 MS

CHANNEL NEKXF FILTER CH CLASS 1000

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

TRC TEST NUMBER 206C04NE1 572E SN206 NECK EXT CAL04 RUN NUMBER 092601 1239,1



CHANNEL NEKXFC FILTER CH CLASS 600

PEAK DATA 527 18 N 0 70 72 MS, -240 30 N 0 195 44 MS

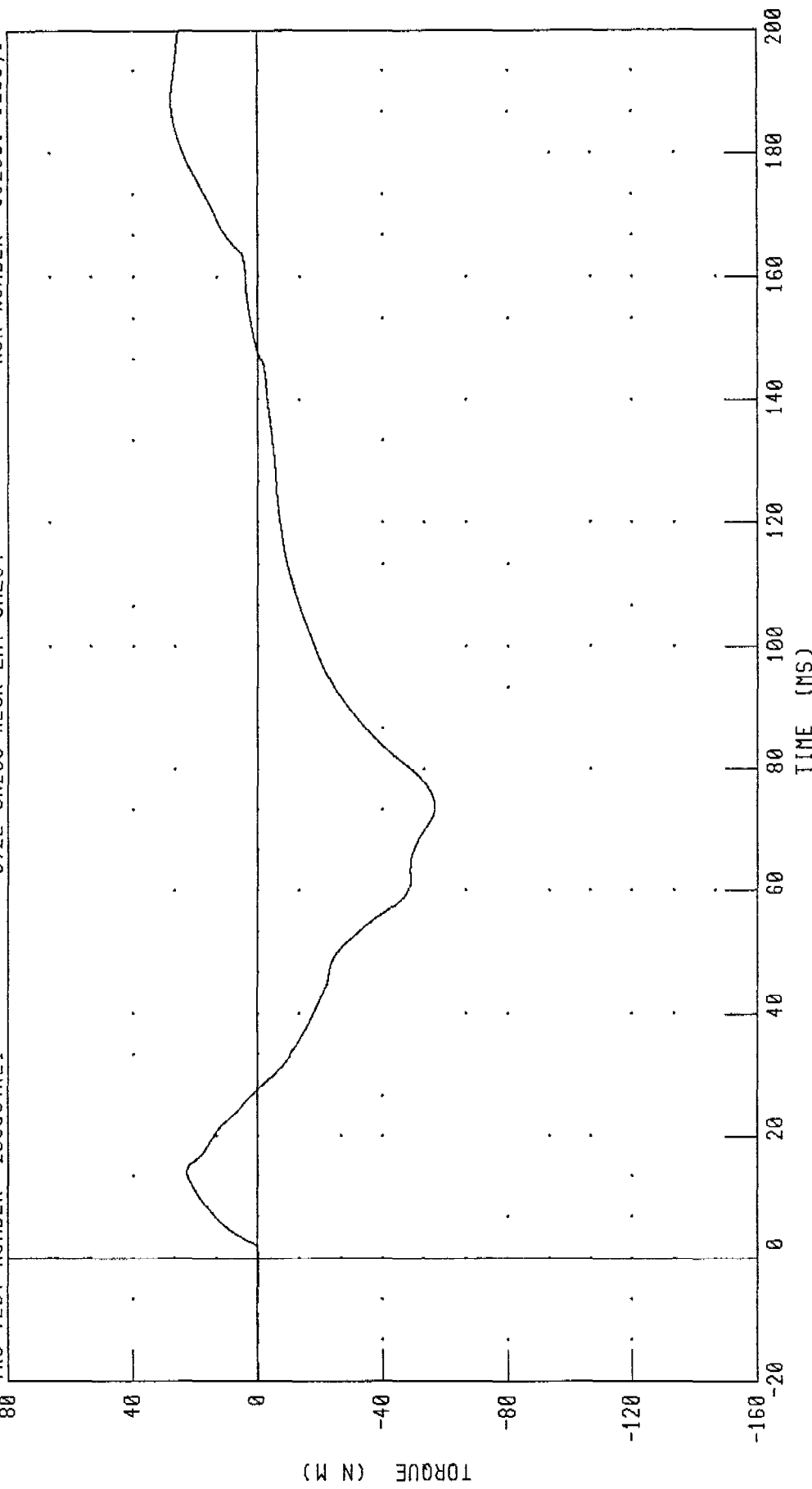
PART 572-E HYBRID III NECK EXTENSION CALIBRATION

NECK MOMENT Y AXIS

TRC TEST NUMBER 206C04NE1

572E SN206 NECK EXT CAL04

RUN NUMBER 092601 1239,1



TIME (MS)

CHANNEL NEKYM FILTER CH CLASS 600

PEAK DATA 27 86 N M @ 188 64 MS, -56 77 N M @ 73 76 MS

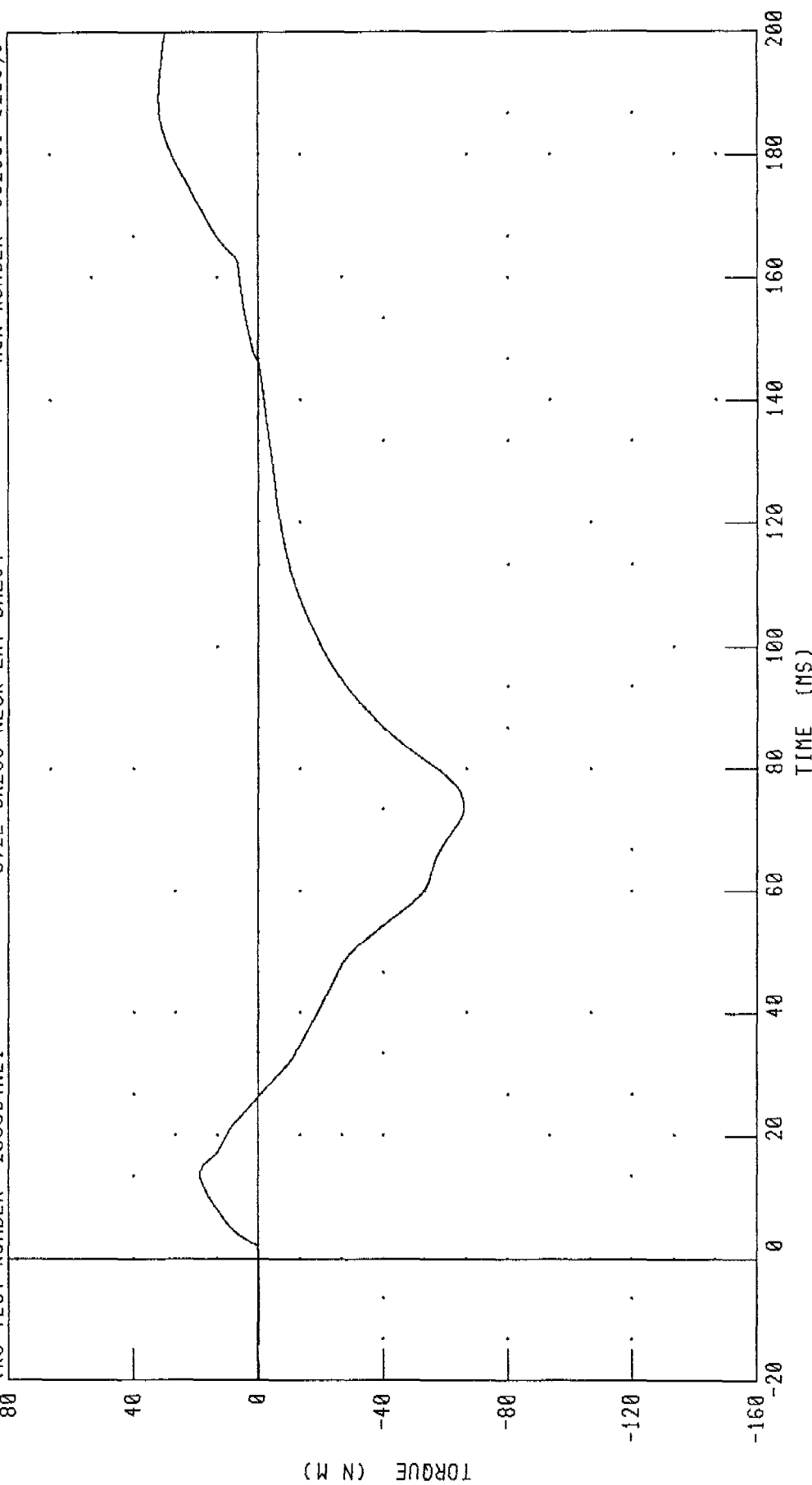
PART 572-E HYBRID III NECK EXTENSION CALIBRATION

TOTAL MOMENT ABOUT OCCIPITAL CONDYLE

TRC TEST NUMBER 206C04NE1

572E SN206 NECK EXT CAL04

RUN NUMBER 092601 1239,1



CHANNEL NEKOM FILTER CH CLASS 600

PEAK DATA 31 85 N M 0 189 20 MS, -65 96 N M 0 73 84 MS

TRANSPORTATION RESEARCH CENTER INC.

THORAX IMPACT TEST

HYBRID III 50th

26-SEP-01

TRC INC.

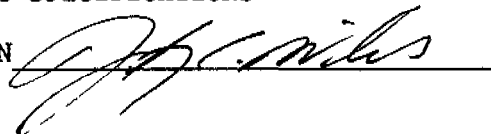
TEST NO: 206C04TH1

572E SN206 H.S.THORAX CAL04

TEST PARAMETER	HIGH SPEED TEST	TEST RESULTS
	SPECIFICATION	
TEMPERATURE	20.6-22.2 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	37.0 %
PENDULUM VELOCITY	6.59 - 6.83 M/S	6.59 M/S
MAXIMUM DEFLECTION	63.5 - 72.6 MM	65.6 MM
MAXIMUM RESISTIVE FORCE	5159 - 5894 N	5669. N
INTERNAL HYSTERESIS	69% - 85%	71.5%

TEST MEETS SPECIFICATIONS

TECHNICIAN



RUN NUMBER: 092601.1446;1

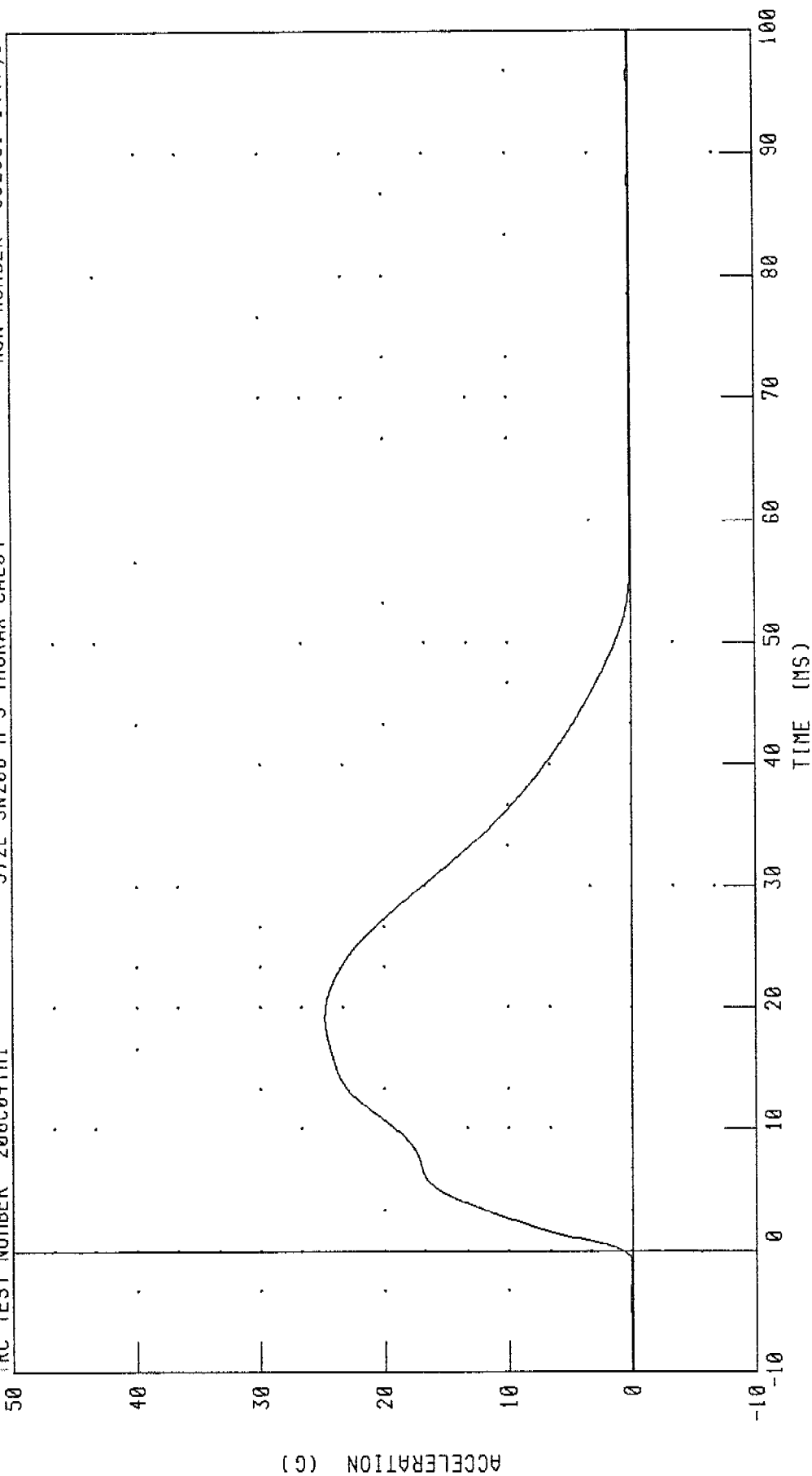
PART 572-E HYBRID III THORAX CALIBRATION

PENDULUM DECELERATION

TRC TEST NUMBER 206C04TH1

572E SN206 H S THORAX CAL04

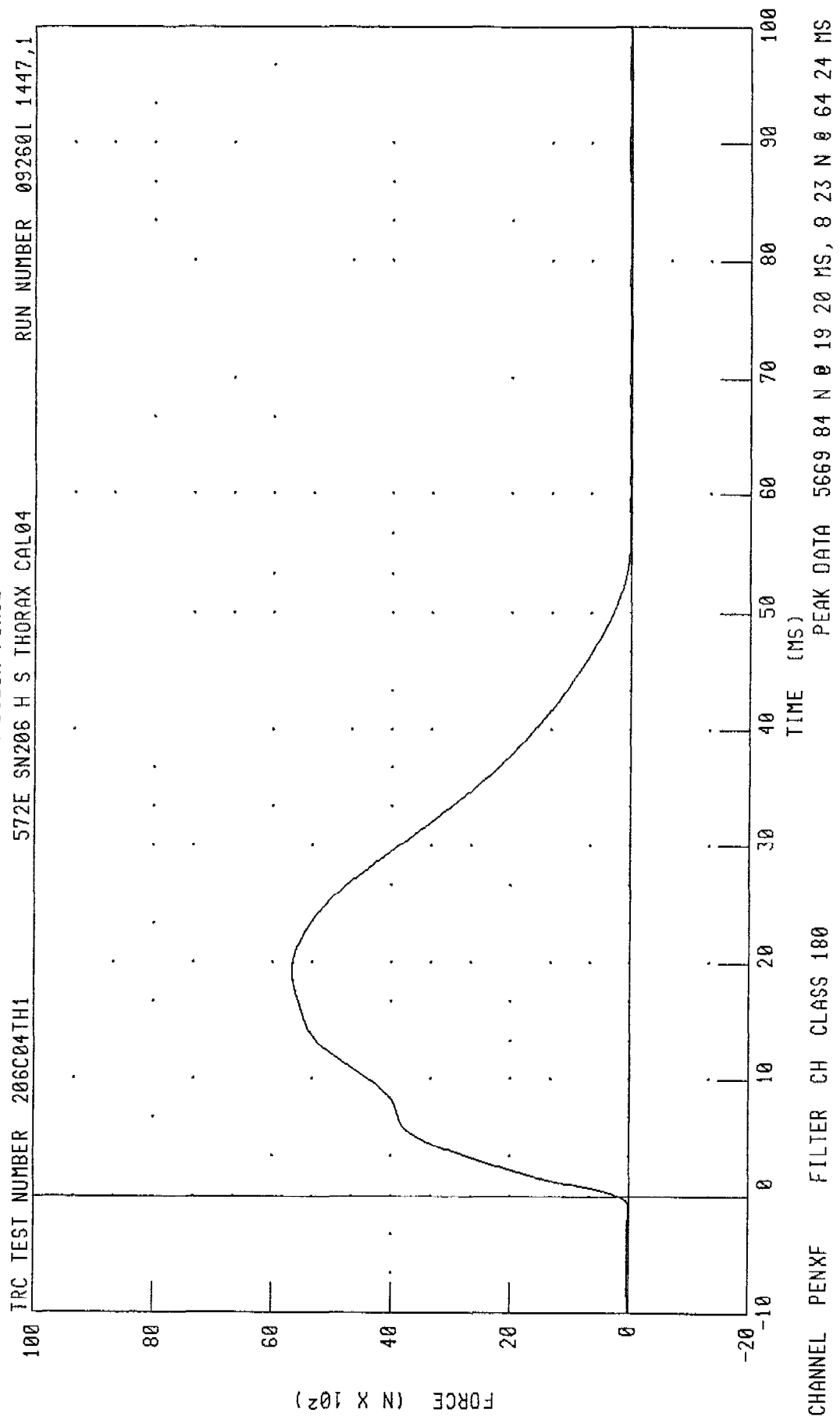
RUN NUMBER 092601 1447,1



CHANNEL PENXC FILTER CH CLASS 180

PEAK DATA 24 75 G 0 19 20 MS, 0 04 G 0 84 24 MS

PART 572-E HYBRID III THORAX CALIBRATION
 PENDULUM FORCE



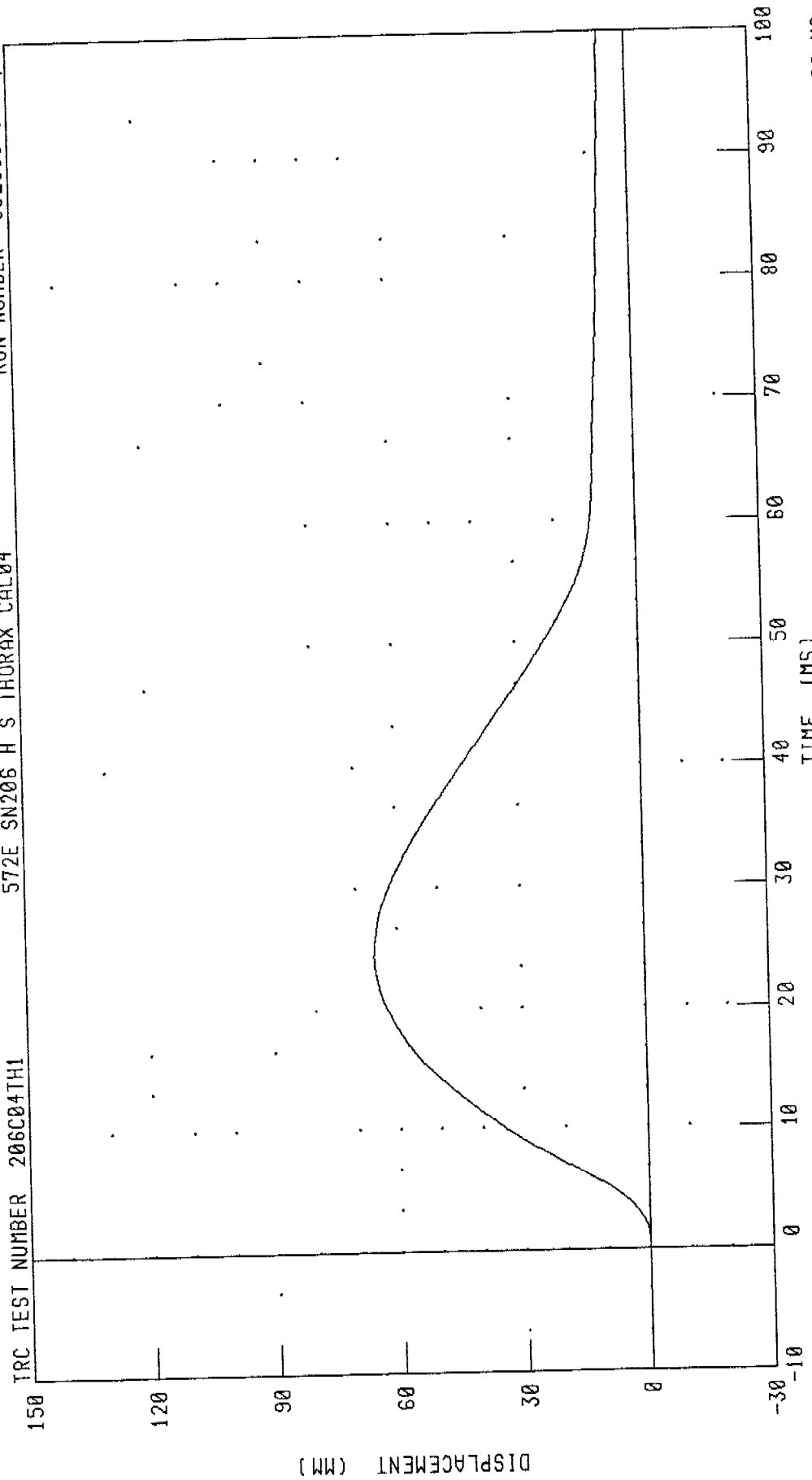
PART 572-E HYBRID III THORAX CALIBRATION

STERNUM DISPLACEMENT

572E SN206 H S THORAX CAL04

RUN NUMBER 092601 1447,1

TRC TEST NUMBER 206C04TH1



TIME (MS)

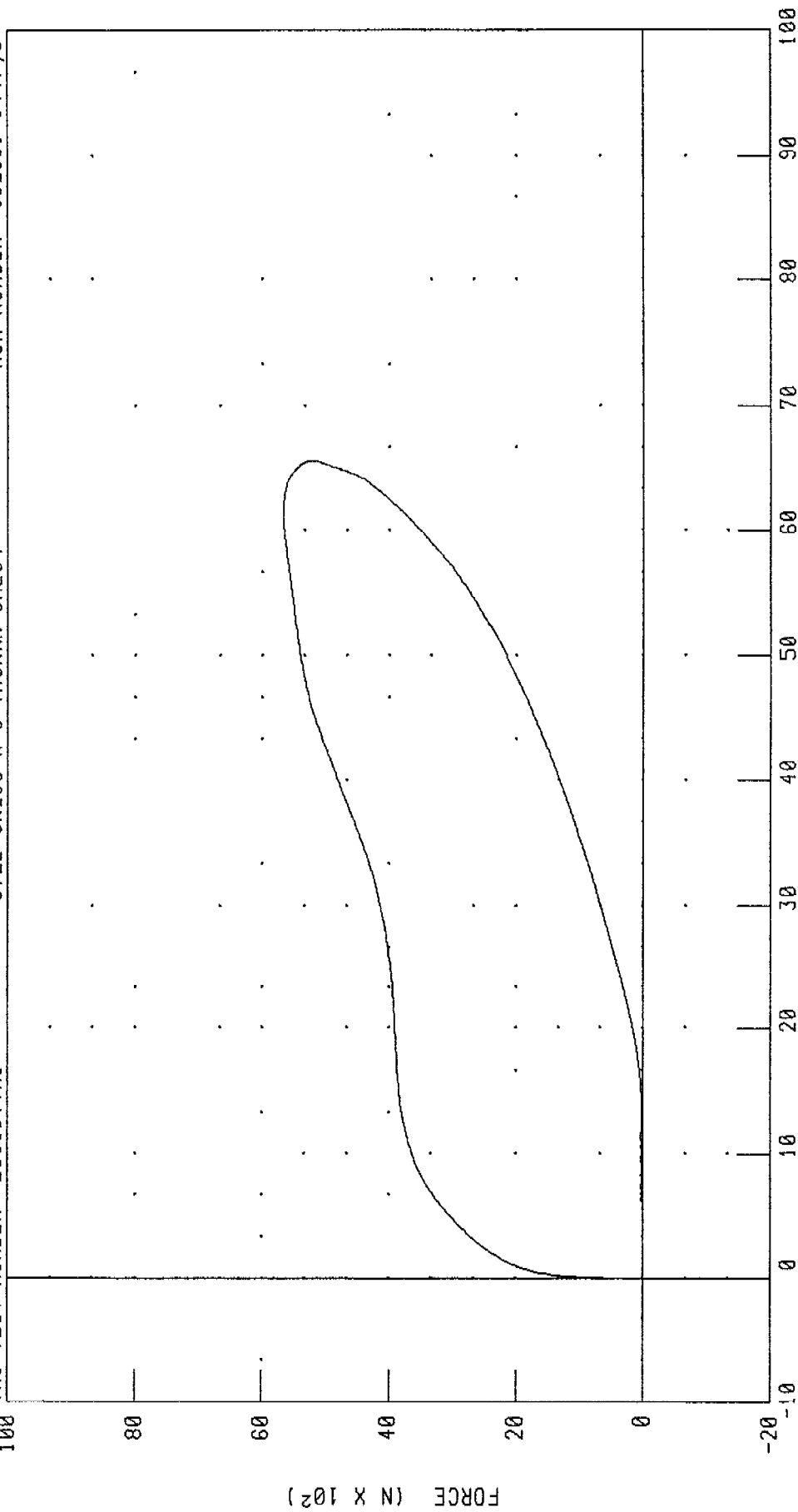
PEAK DATA 65 61 MM @ 24 40 MS, 0 00 MM @ 0 08 MS

CHANNEL CSTXD FILTER CH CLASS 180

RUN NUMBER 092601 1447,1

TRC TEST NUMBER 206C04TH1

102



CHANNEL	CSTD	FILTER	CLASS 180
	PENXF	CH	CLASS 180

65 61 MM @ 24 40 MS, 0 00 MM @ 0 08 MS
5669 84 N @ 19 20 MS, 8 23 N @ 64 24 MS

Transportation Research Center Inc

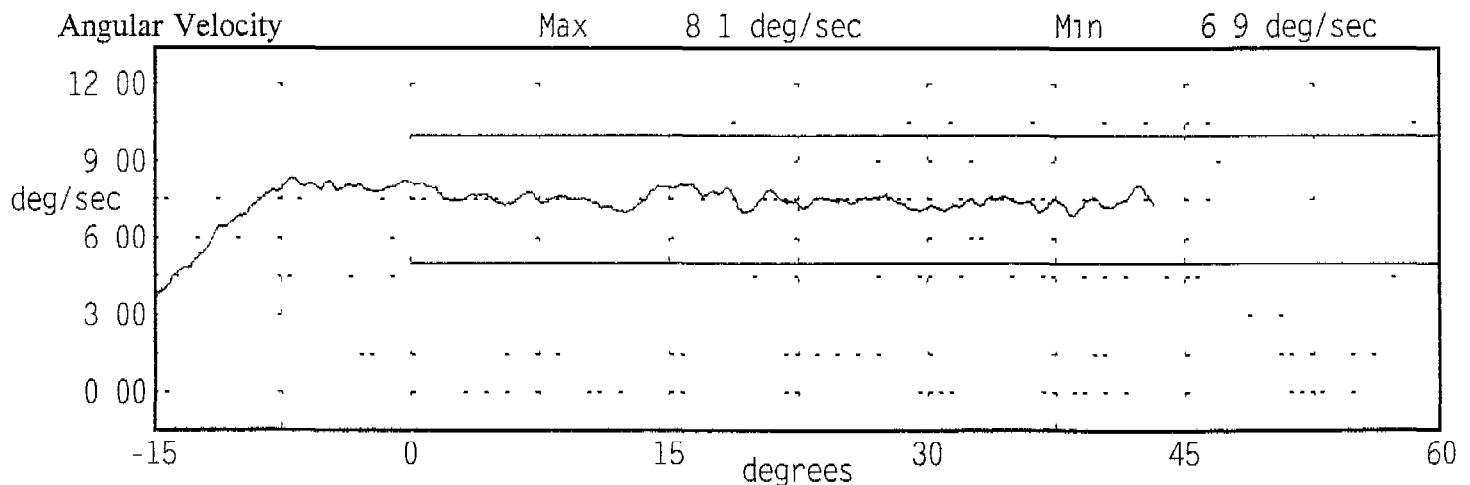
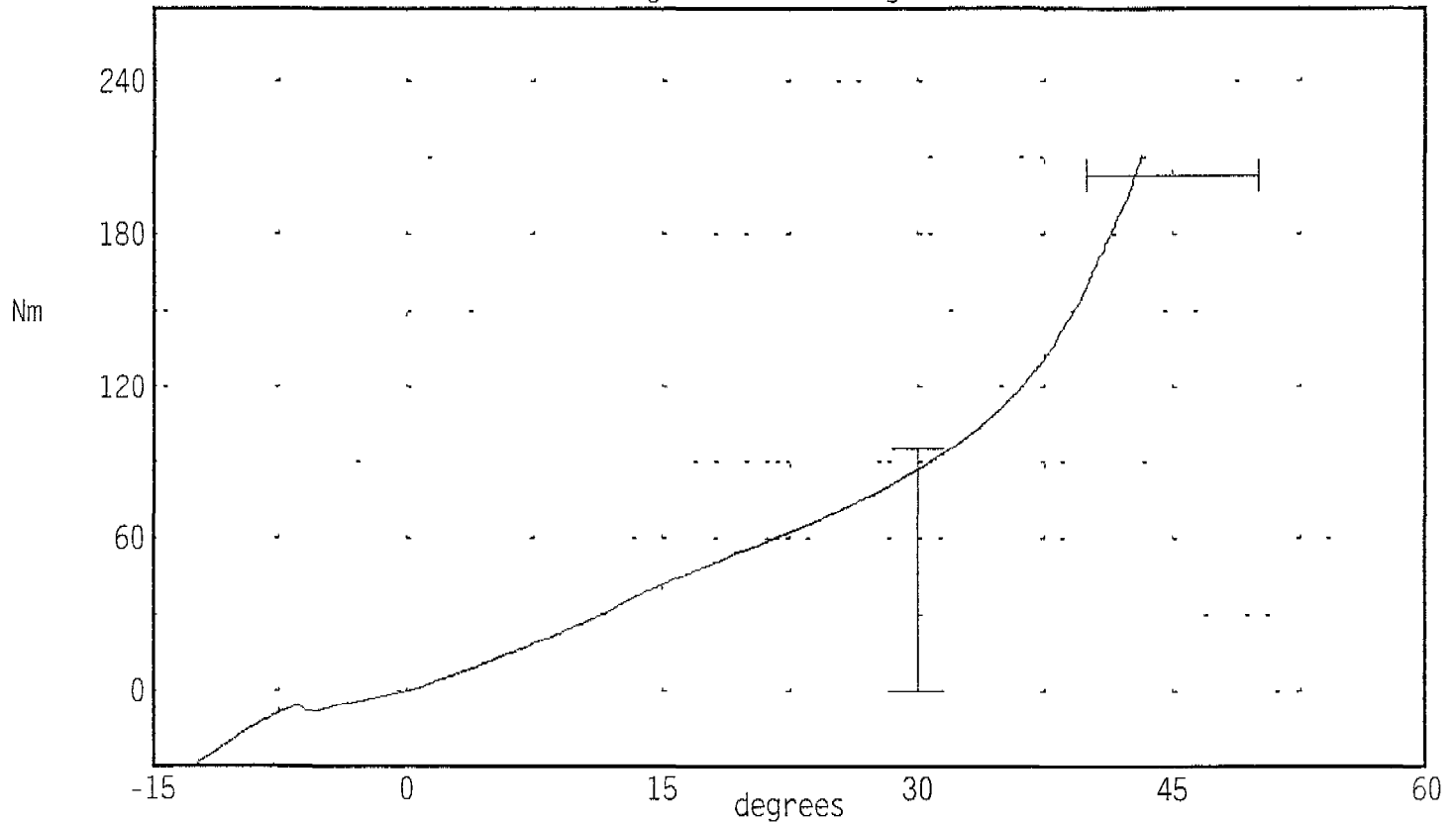
Hybrid III Hip Range of Motion

Serial Number 206L
Test Number 206C04
Comments.

Date: 09/26/2001
Time: 09:42

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	18.9 - 25.6	21.7 °C Pass
Humidity	10 - 70	37 % Pass
Moment at 30 deg	<= 94.9	87.0 Nm Pass
Angle at 203 Nm	40.0 - 50.0	42.9 deg Pass
Average Velocity	5.0 - 10.0	7.5 deg/sec Pass

Moment About H-Point
Peak Moment 210.9 Nm at 43.2 deg
Peak Angle 43.2 deg at 210.9 Nm



Transportation Research Center Inc

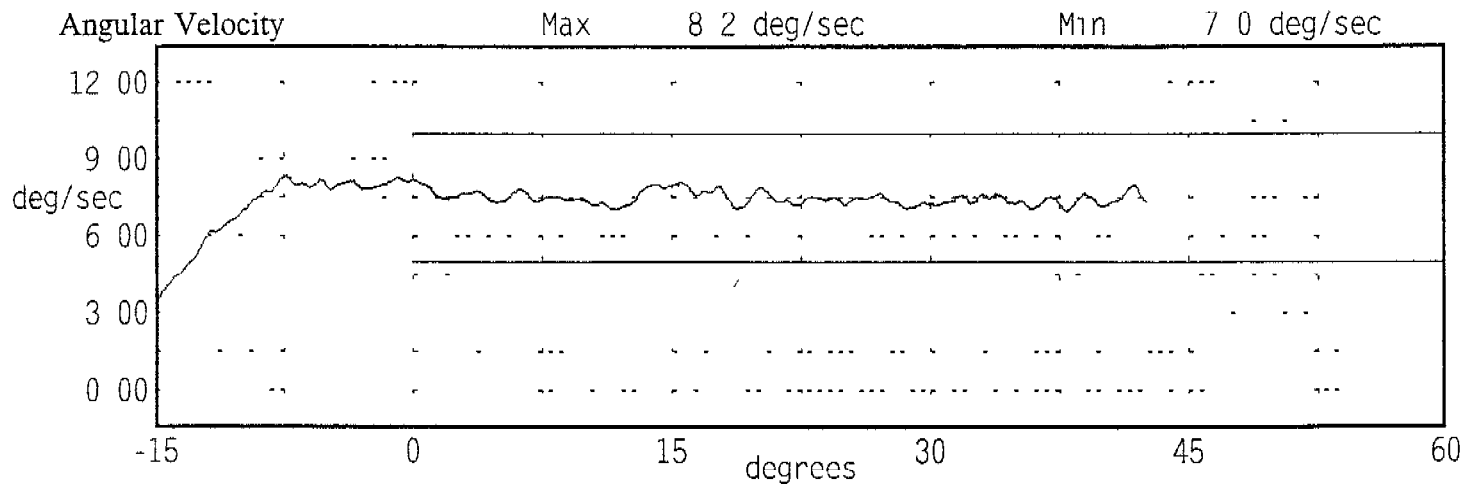
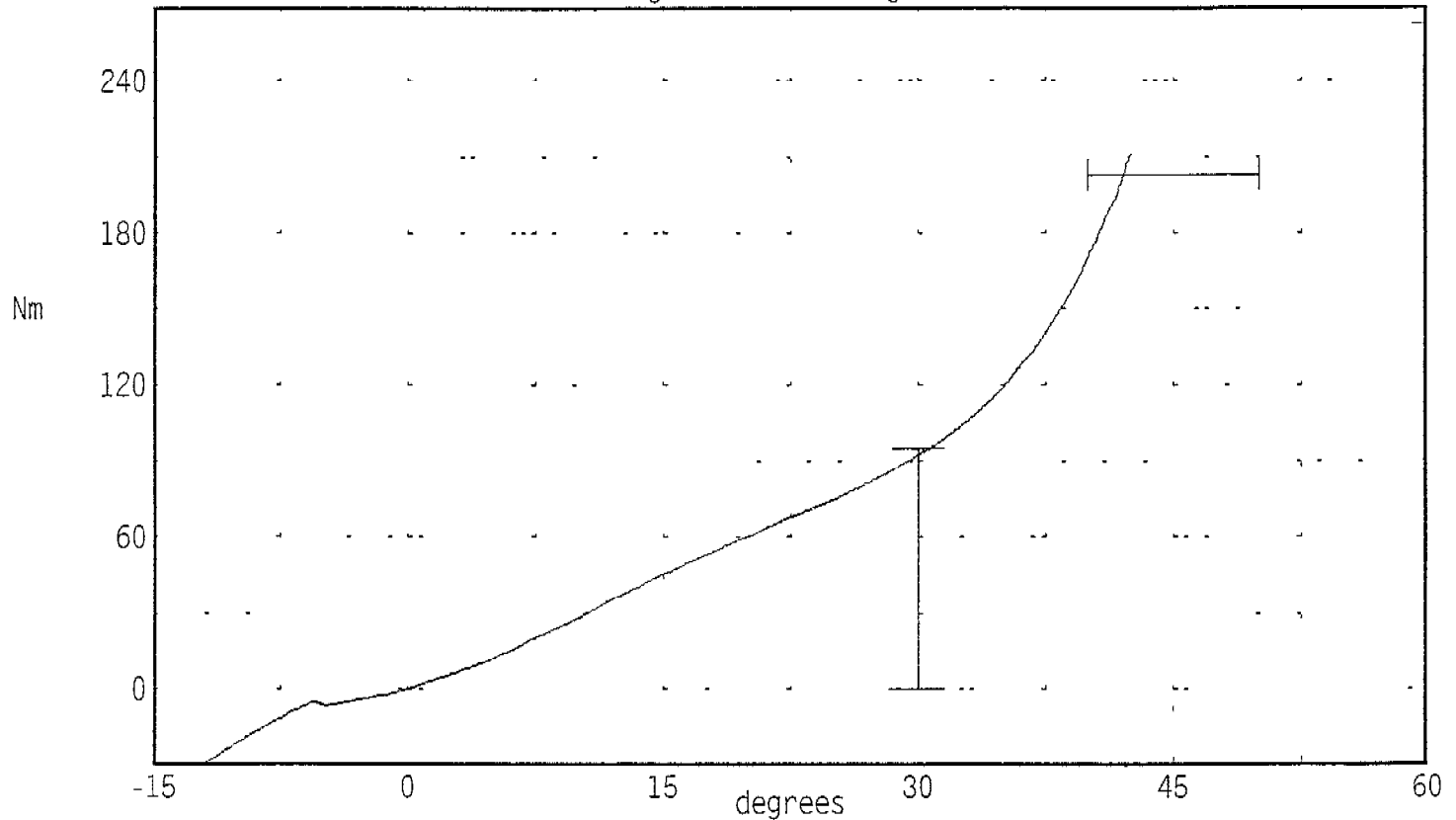
Hybrid III Hip Range of Motion

Serial Number 206R
Test Number 206C04
Comments

Date 09/26/2001
Time 09 37

TEST PARAMETER	SPECIFICATION	TEST RESULTS	
Temperature	18 9 - 25 6	21 7 °C	Pass
Humidity	10 - 70	37 %	Pass
Moment at 30 deg	<= 94 9	93 1 Nm	Pass
Angle at 203 Nm	40 0 - 50 0	42 1 deg	Pass
Average Velocity	5 0 - 10 0	7 5 deg/sec	Pass

Moment About H-Point
Peak Moment 211 2 Nm at 42 5 deg
Peak Angle 42 5 deg at 211 2 Nm



TRANSPORTATION RESEARCH CENTER INC.

LEFT KNEE IMPACT TEST

HYBRID III 50th

25-SEP-01

TRC INC.

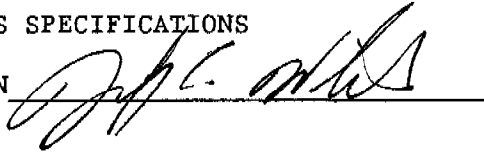
TEST NO: 206C04LK1

572E SN206 LEFT KNEE CAL 04

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	40.0 %
PROBE VELOCITY	2.07 - 2.13 M/S	2.10 M/S
PEAK KNEE IMPACT FORCE 5.0 KG PENDULUM	4715 - 5782 N	5364.7 N

TEST MEETS SPECIFICATIONS

TECHNICIAN



RUN NUMBER: 092501.1823;1

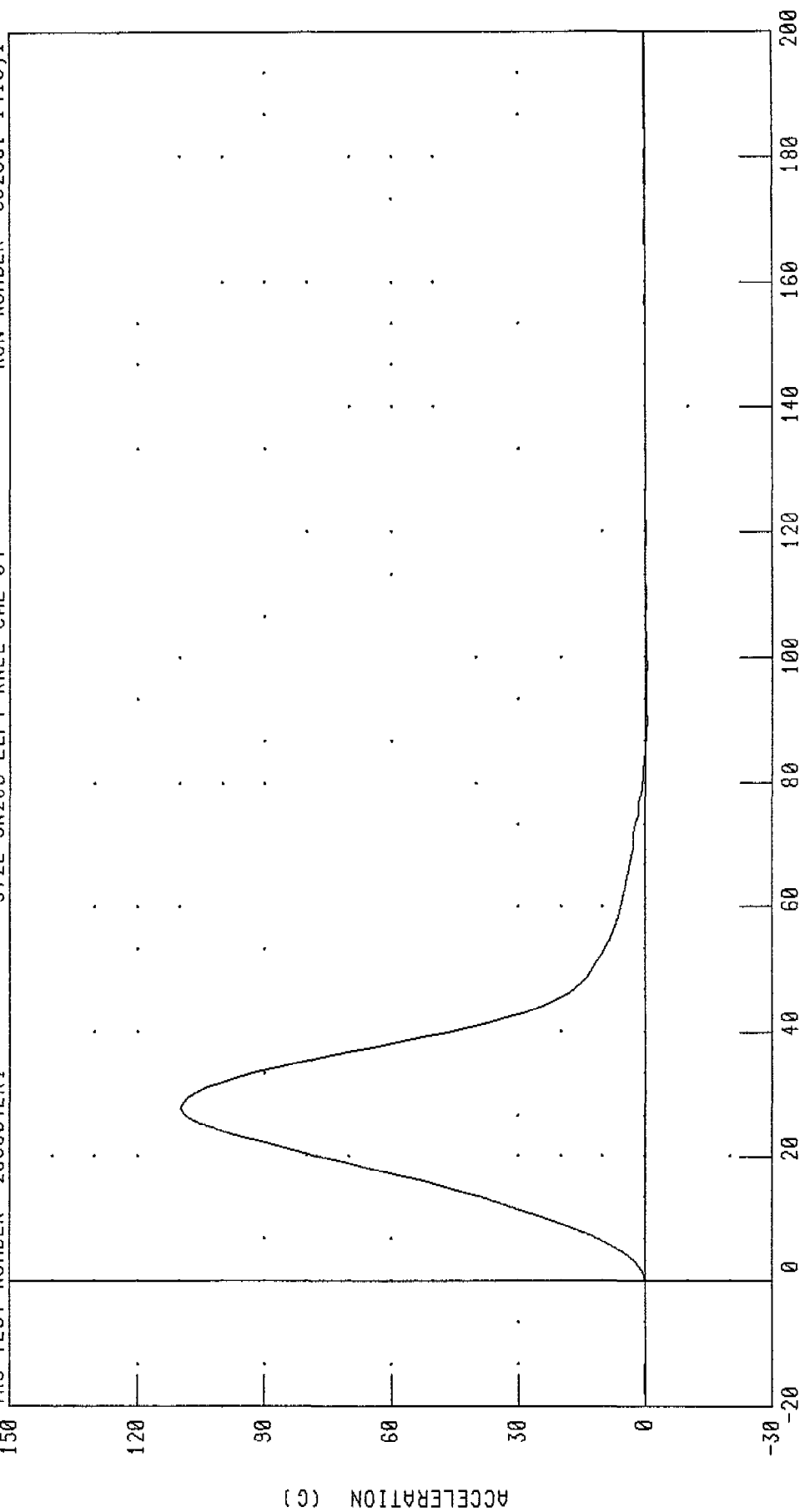
PART 572-E HYBRID III LEFT KNEE CALIBRATION

PENDULUM DECELERATION (5 KG PEND)

TRC TEST NUMBER 206C04LK1

572E SN206 LEFT KNEE CAL 04

RUN NUMBER 092601 1415,1



TIME (MS X 10⁻¹)

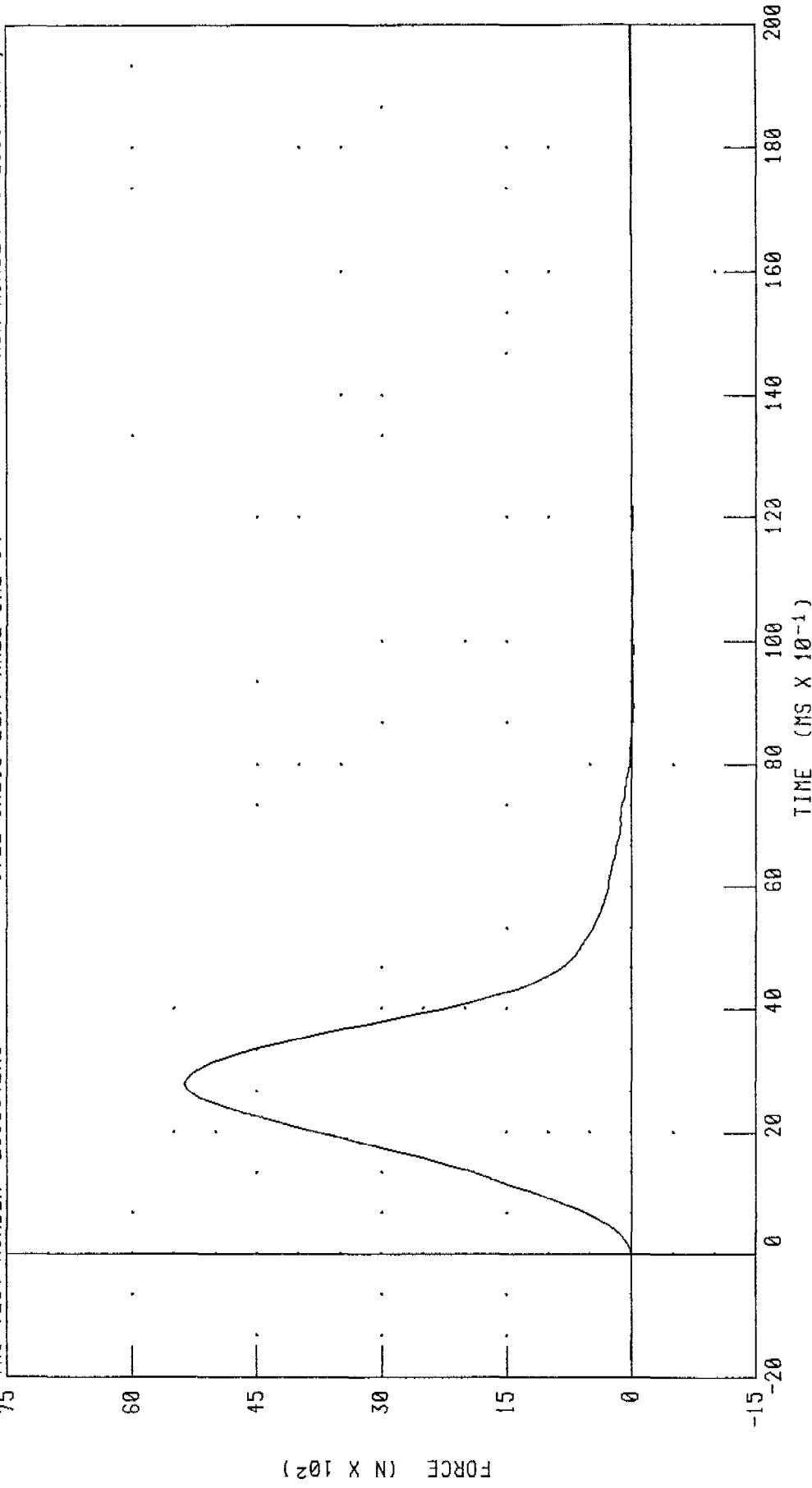
CHANNEL PENXC FILTER CH CLASS 600

PEAK DATA 109 65 G @ 2 80 MS, -0 46 G @ 9 84 MS

PART 572-E HYBRID III LEFT KNEE CALIBRATION

PENDULUM FORCE (5 KG PEND)

TRC TEST NUMBER 206C04LK1 572E SN206 LEFT KNEE CAL 04 RUN NUMBER 092601 1415,1



CHANNEL PENXF FILTER CH CLASS 600

PEAK DATA 5364 75 N 0 2 80 MS, -22 46 N 0 9 84 MS

TRANSPORTATION RESEARCH CENTER INC.

KNEE SLIDER TEST

HYBRID III 50th

25-SEP-01

LEFT KNEE

TRC INC.

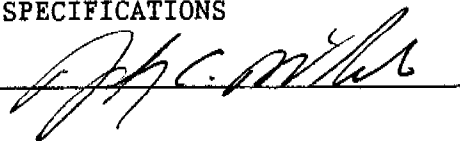
TEST NO: 206C04LS1

572E SN206 LEFT SLIDER CAL 04

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	2.75 M/S
FORCE AT 10.0 MM DISPLACEMENT	1259 - 1721 N	1382. N
FORCE AT 18.0 MM DISPLACEMENT	2268 - 3096 N	2485. N

TEST MEETS SPECIFICATIONS

TECHNICIAN



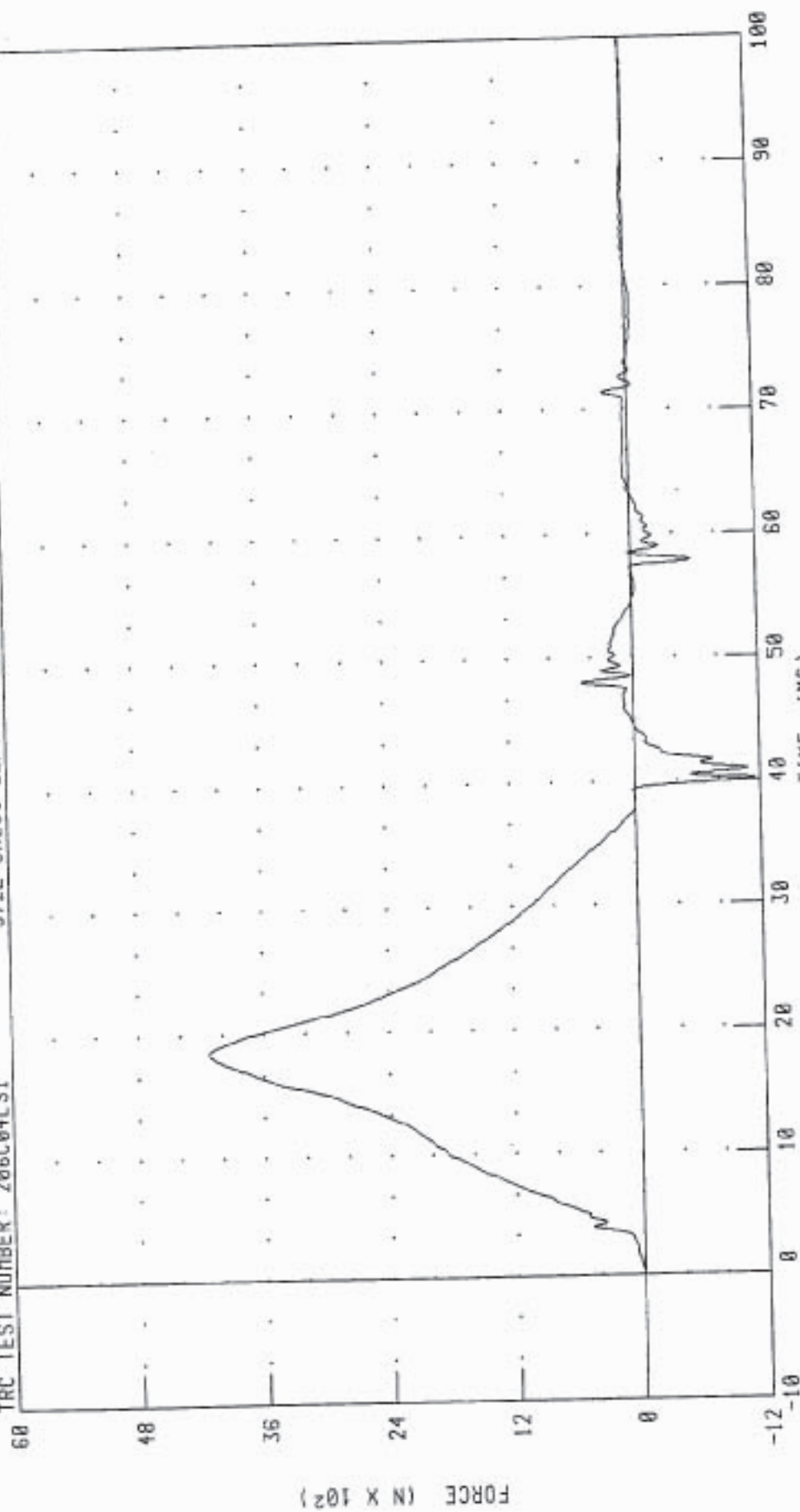
RUN NUMBER: 092601.1225;2

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

RUN NUMBER: 092601.1417;2

572E SN206 LEFT SLIDER CAL 04

TRC TEST NUMBER: 206C04LS1

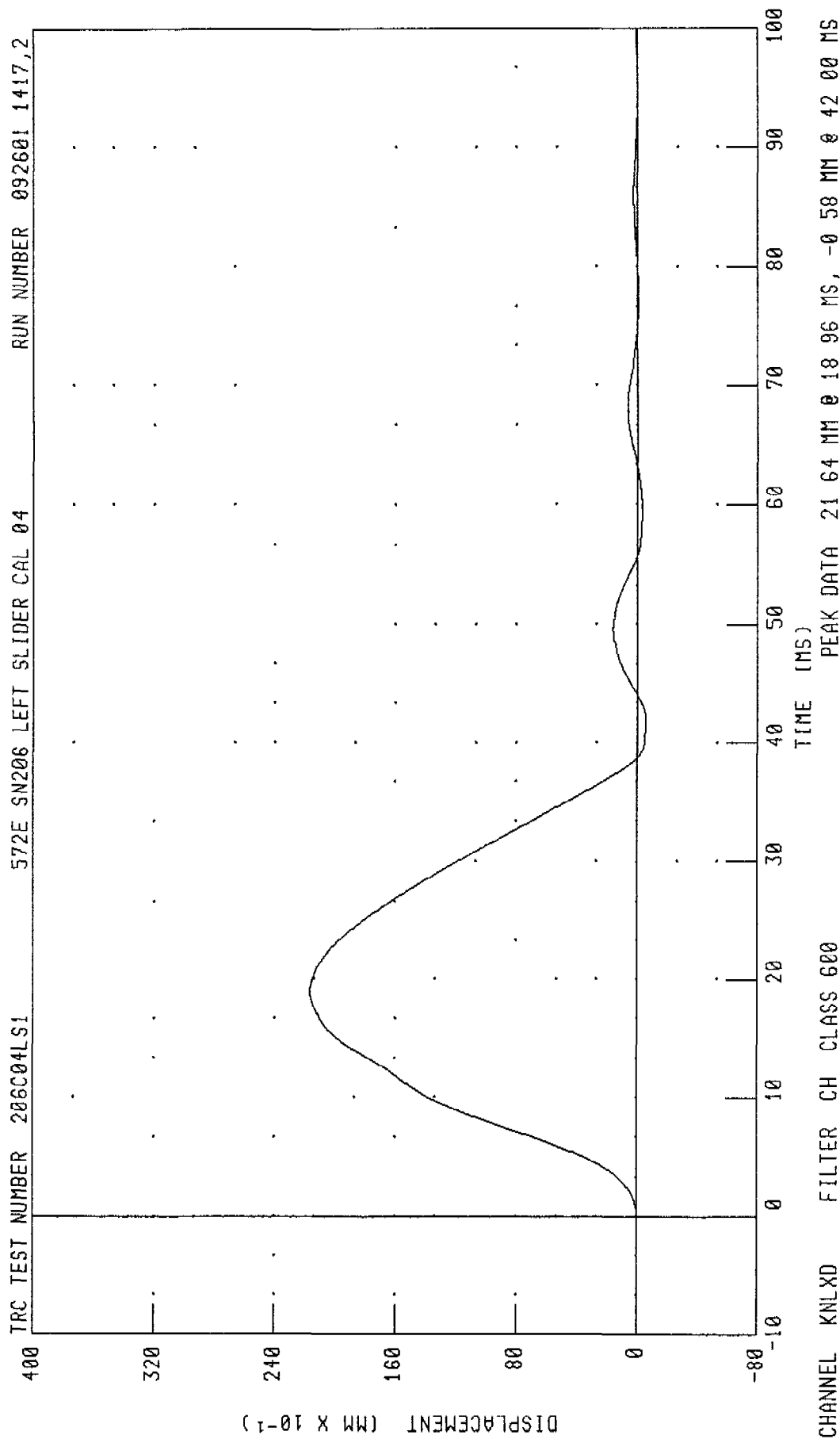


TIME (MS)

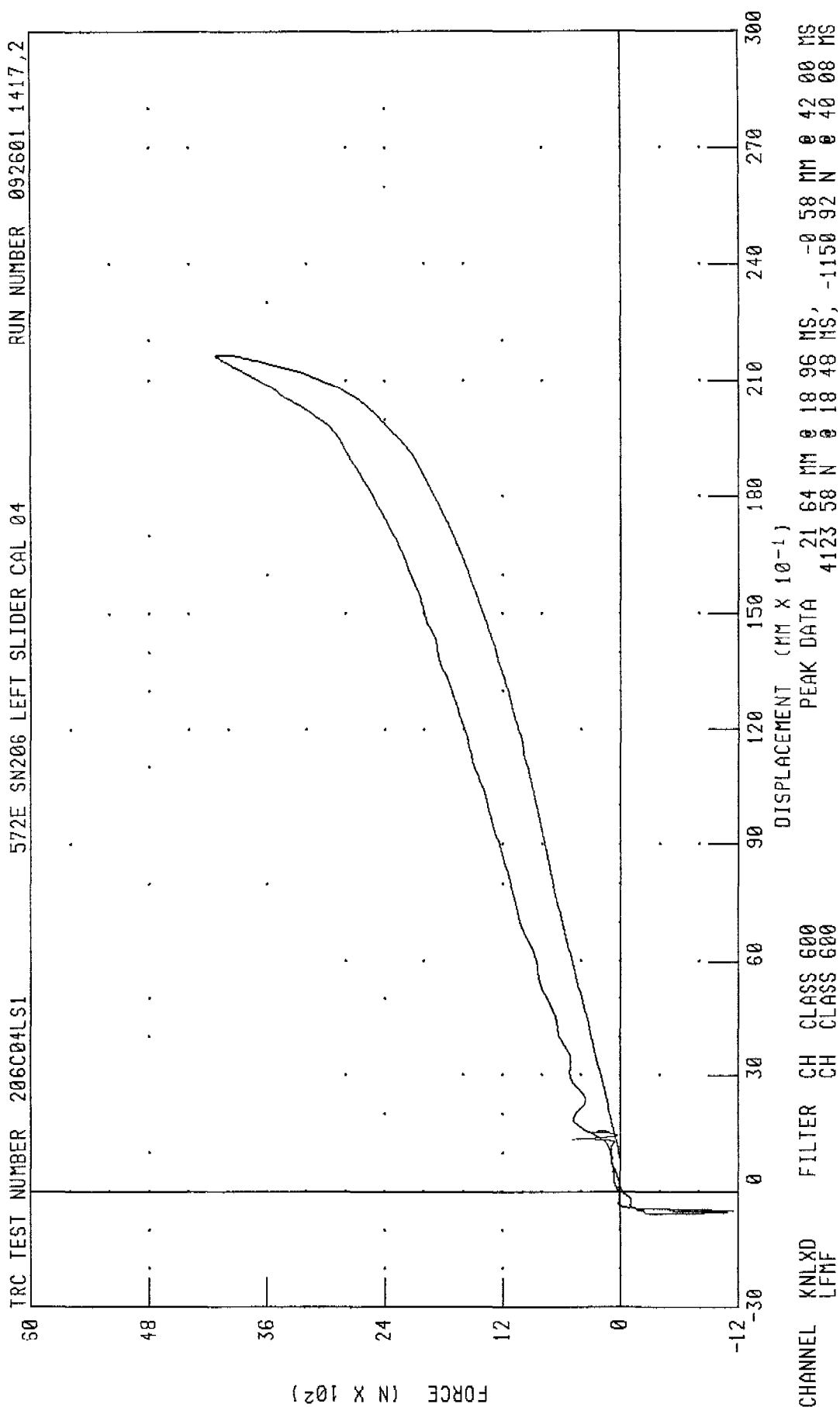
PEAK DATA: 4123.58 N @ 18.48 MS; -1150.92 N @ 40.00 MS

CHANNEL: LFMF FILTER: CH. CLASS 600

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.

RIGHT KNEE IMPACT TEST

HYBRID III 50th

25-SEP-01

TRC INC.

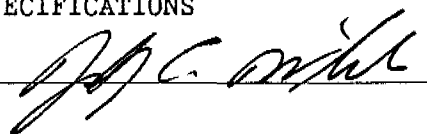
TEST NO: 206C04RK1

572E SN206 RIGHT KNEE CAL 04

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	40.0 %
PROBE VELOCITY	2.07 - 2.13 M/S	2.10 M/S
PEAK KNEE IMPACT FORCE 5.0 KG PENDULUM	4715 - 5782 N	4754.0 N

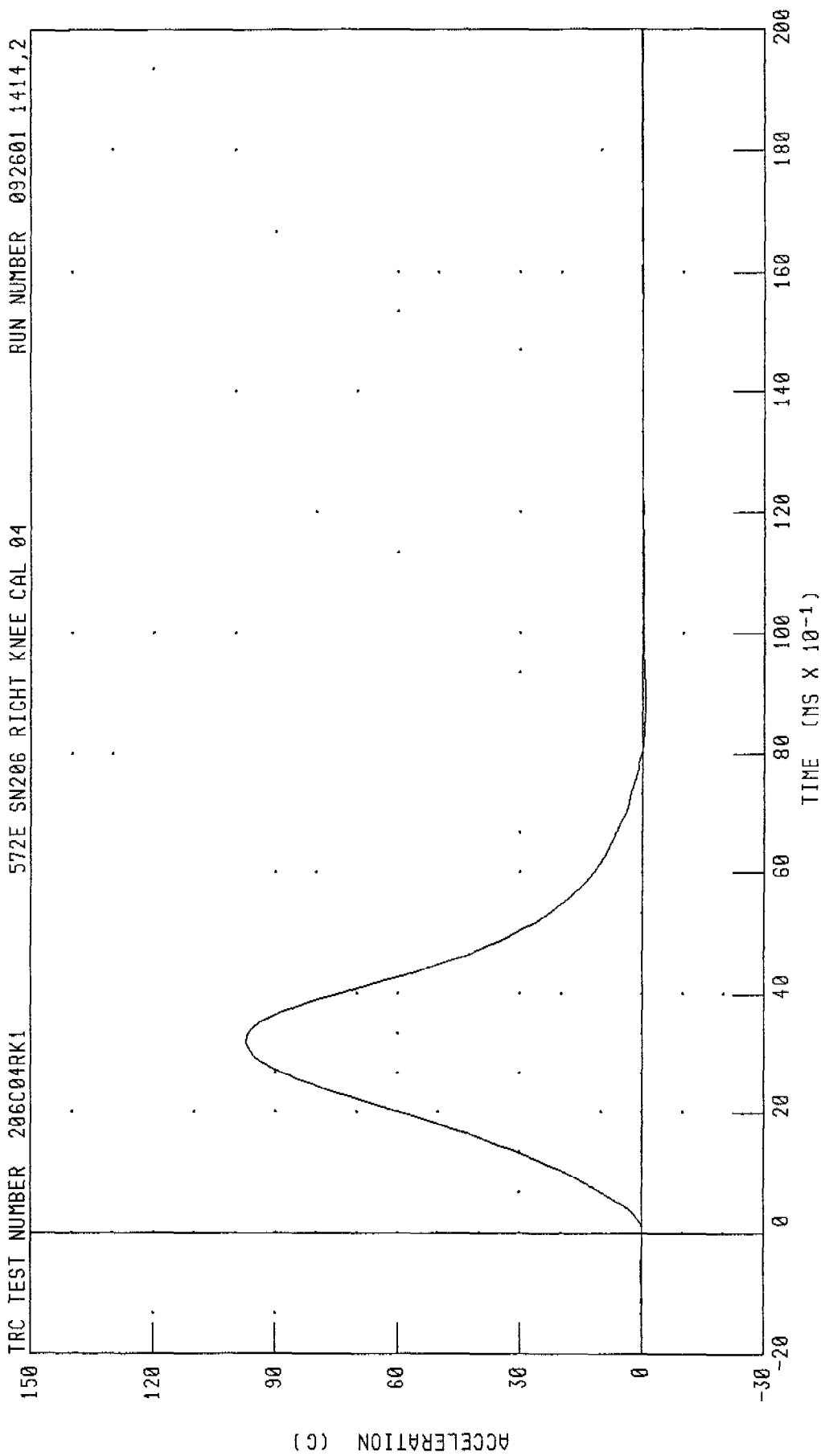
TEST MEETS SPECIFICATIONS

TECHNICIAN



RUN NUMBER: 092501.1842;2

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



CHANNEL PENXC FILTER CH CLASS 600

PEAK DATA 97 16 G 0 3 20 MS, -0 88 G 0 9 04 MS

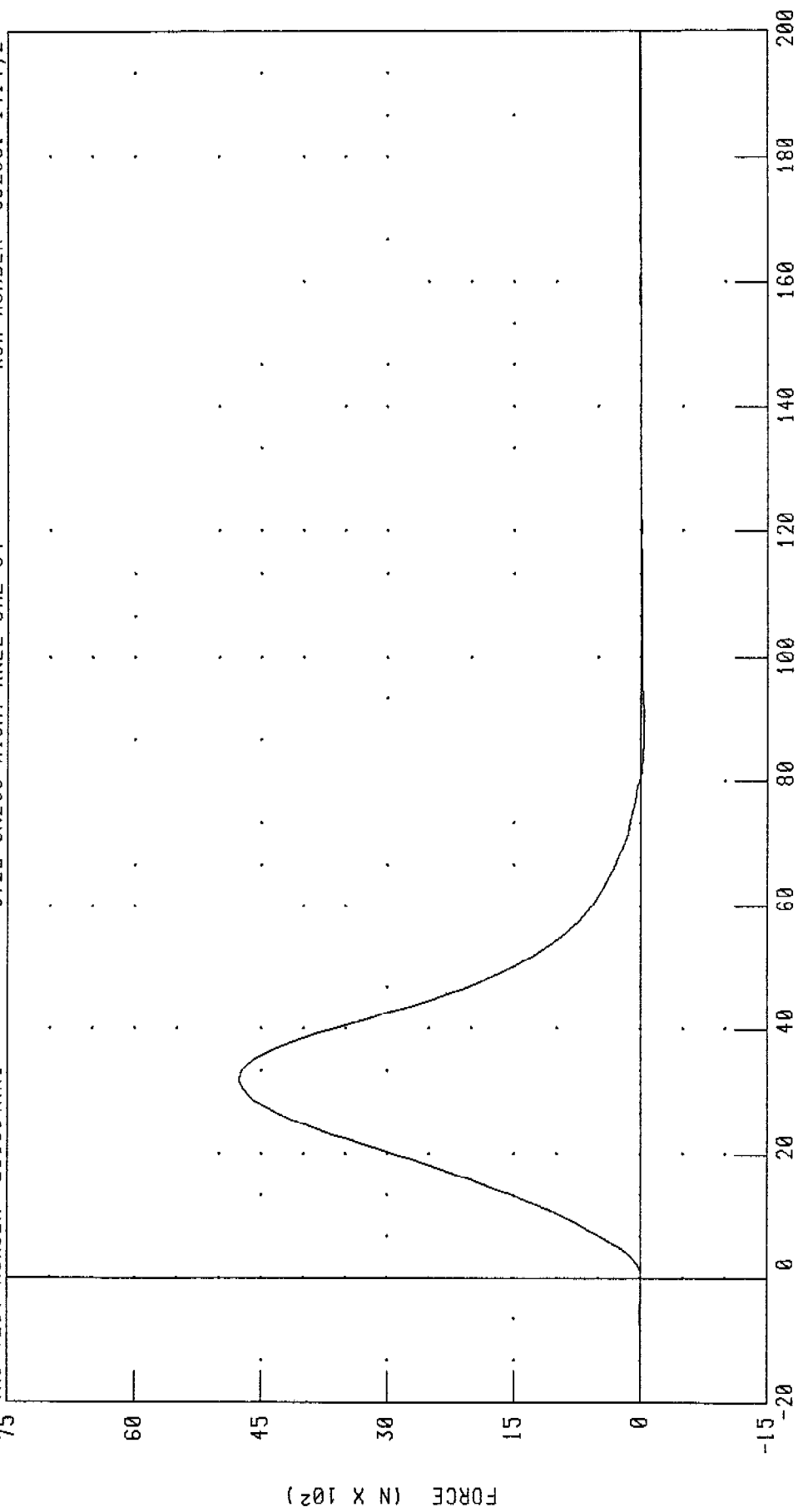
PART 572-E HYBRID III RIGHT KNEE CALIBRATION

PENDULUM FORCE (5 KC PEND)

TRC TEST NUMBER 206C04RK1

572E SN206 RIGHT KNEE CAL 04

RUN NUMBER 092601 1414,2



CHANNEL PENXF FILTER CH CLASS 600

PEAK DATA 4754 01 N 0 3 20 MS, -43 08 N 0 9 04 MS

TRANSPORTATION RESEARCH CENTER INC.

KNEE SLIDER TEST

HYBRID III 50th

25-SEP-01

RIGHT KNEE

TRC INC.

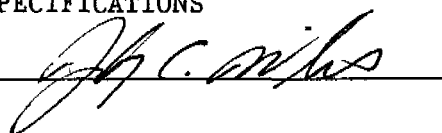
TEST NO: 206C04RS1

572E SN206 RIGHT SLIDER CAL 04

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	40.0 %
PENDULUM VELOCITY	2.70-2.80 M/S	2.73 M/S
FORCE AT 10.0 MM DISPLACEMENT	1259 - 1721 N	1545. N
FORCE AT 18.0 MM DISPLACEMENT	2268 - 3096 N	2880. N

TEST MEETS SPECIFICATIONS

TECHNICIAN

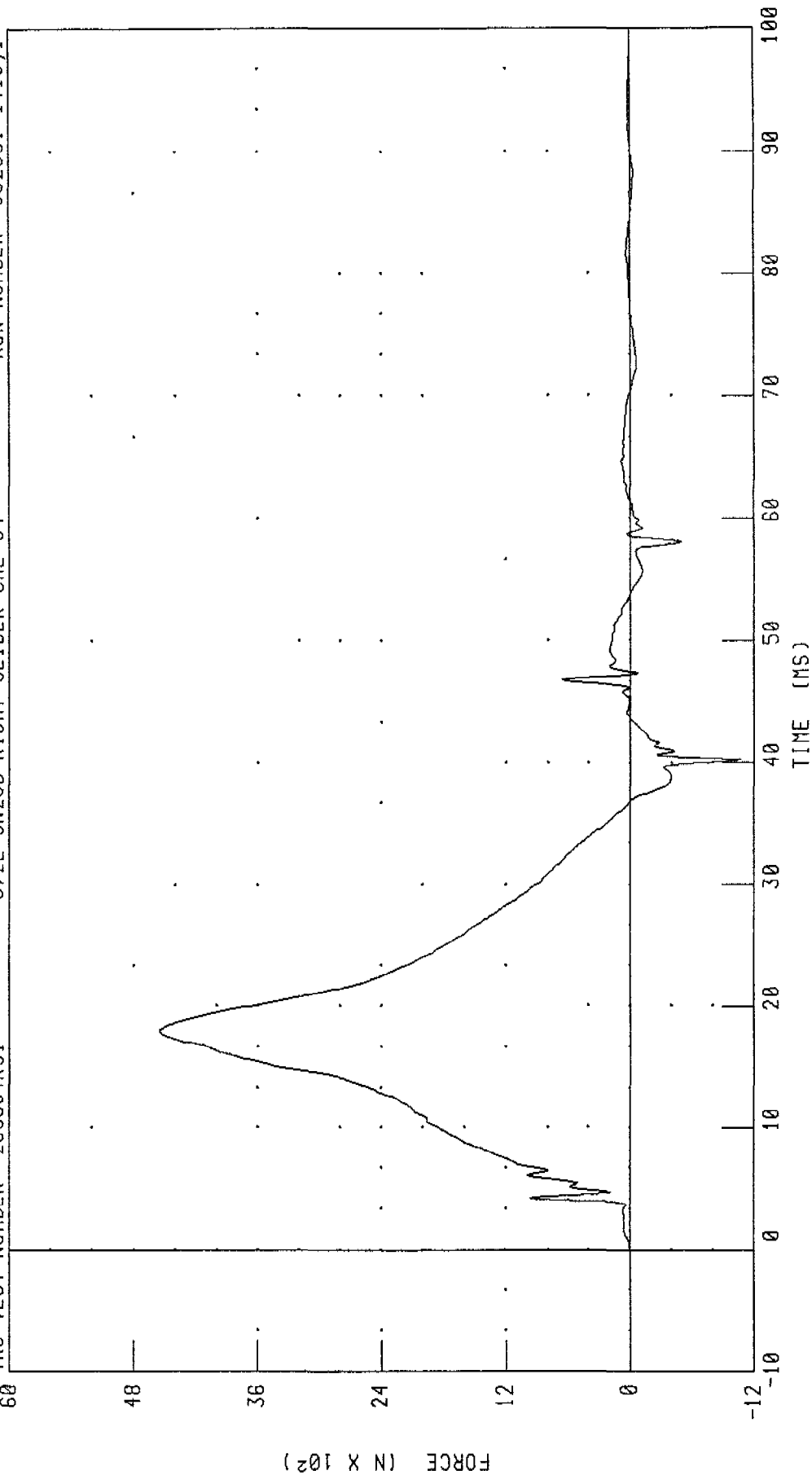


RUN NUMBER: 092501.1951;1

PART 572-E HYBRID III RIGHT KNEE SLIDER CALIBRATION

RIGHT FEMUR FORCE

TRC TEST NUMBER 206C04RS1 572E SN206 RIGHT SLIDER CAL 04 RUN NUMBER 092601 1416,1



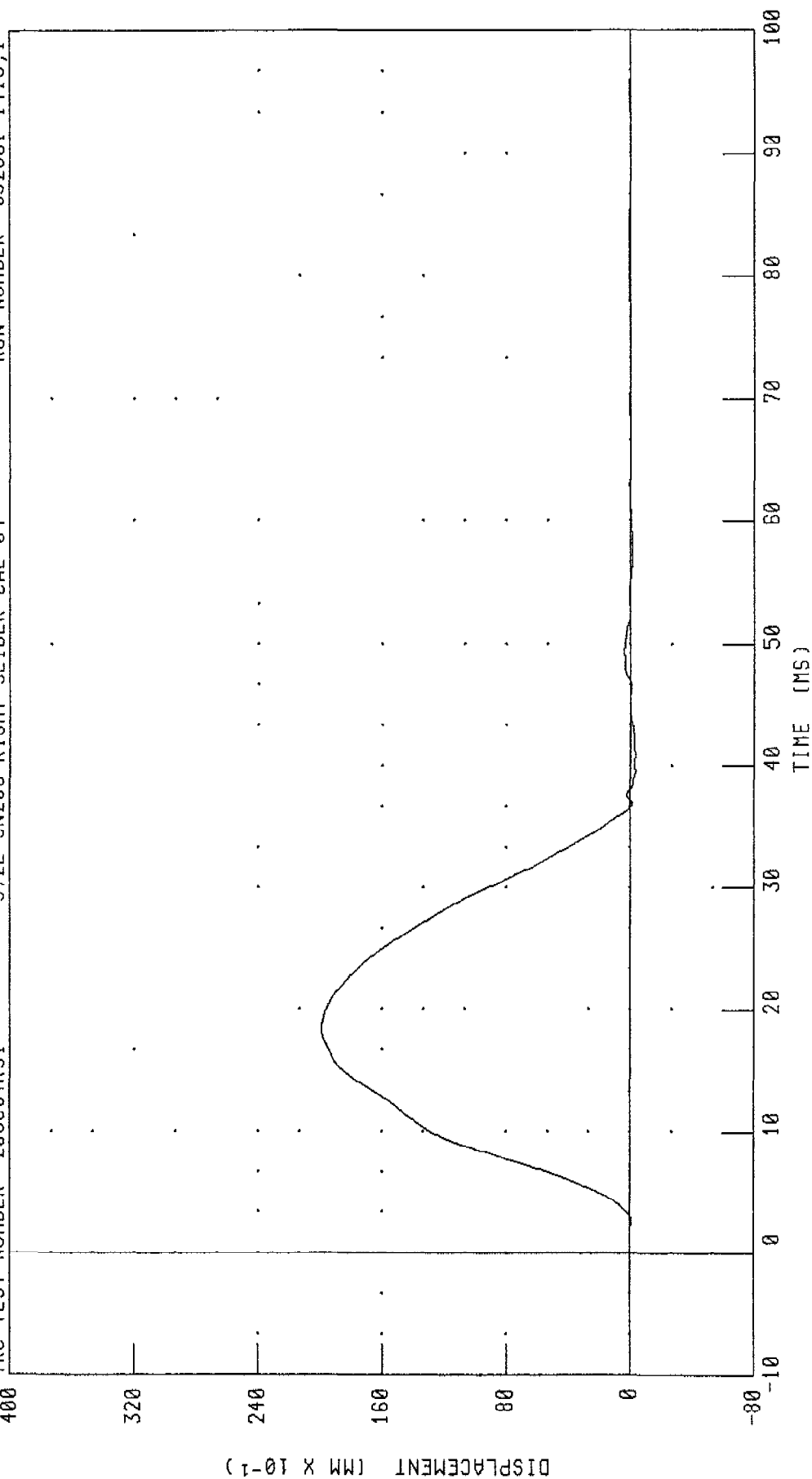
CHANNEL RFMF FILTER CH CLASS 600

PEAK DATA 4551 39 N @ 18 00 MS, -1066 18 N @ 40 24 MS

PART 572-E HYBRID III RIGHT KNEE SLIDER CALIBRATION

RIGHT KNEE DISPLACEMENT

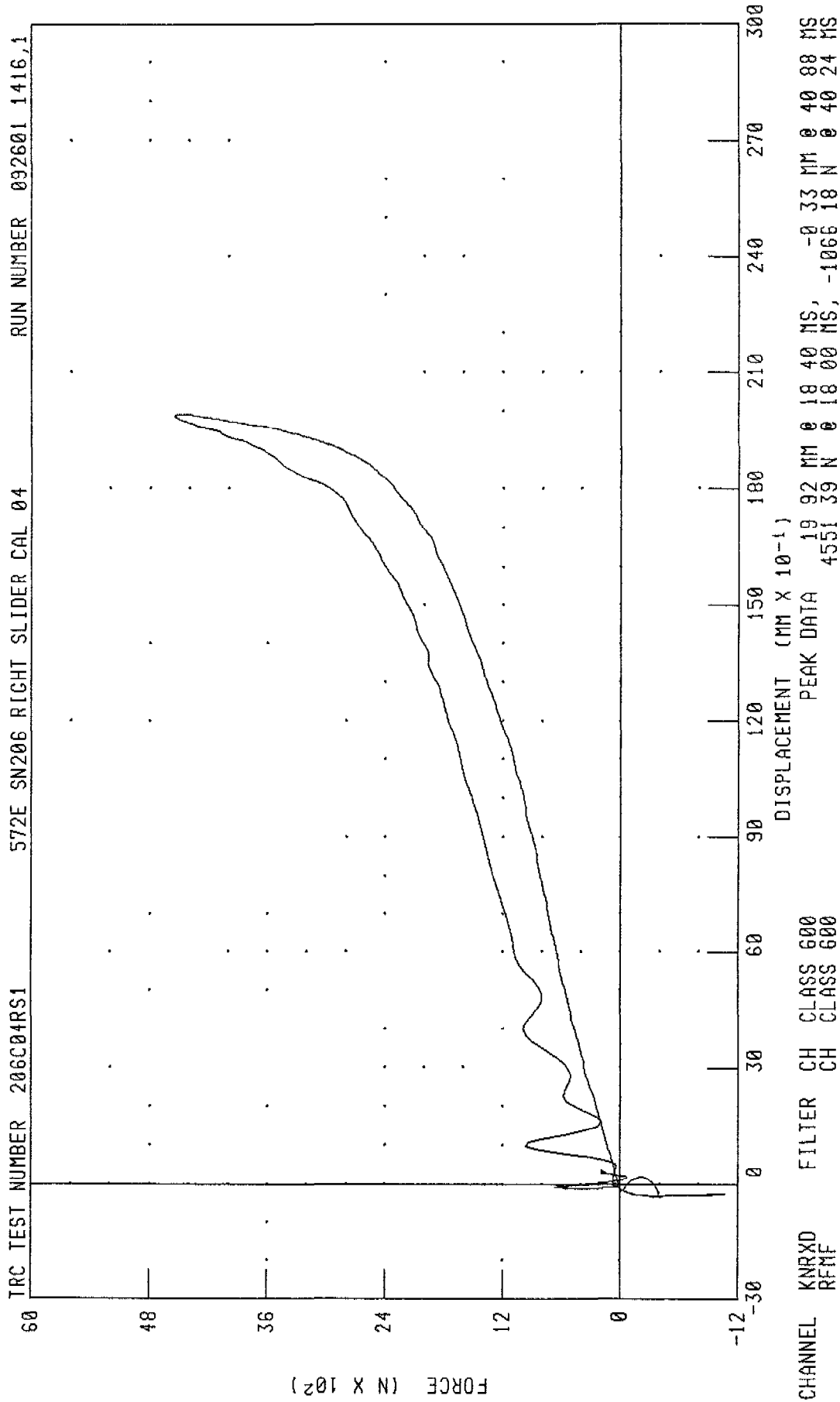
TRC TEST NUMBER 206C04RS1 572E SN206 RIGHT SLIDER CAL 04 RUN NUMBER 092601 1416,1



CHANNEL KNRXD FILTER CH CLASS 600 PEAK DATA 19 92 MM @ 18 40 MS, -0 33 MM @ 40 88 MS

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

26-SEP-01

TRC INC. TEST NO: 202C05ED1 572E SN202 EXT.DIMENSION CAL05

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	853. 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	145. MM
BUTTOCK KNEE LENGTH	(K)	579 - 605 MM	599. 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	488. 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	94. MM
SHOULDER BREADTH	(V)	422 - 437 MM	434. MM
SHOULDER PIVOT HEIGHT	(B)	506 - 521 MM	508. MM
ELBOW REST HEIGHT	(J)	191 - 211 MM	206. MM
SHOULDER-ELBOW LENGTH	(I)	330 - 345 MM	340. MM
BACK OF ELBOW TO WRIST PIVOT	(G)	290 - 305 MM	300. MM

572E SN202 EXT.DIMENSION CAL05

DUMMY MEETS SPECIFICATIONS

TECHNICIAN

[Signature]

RUN NUMBER: 092601.1240

TRANSPORTATION RESEARCH CENTER INC.

HEAD DROP TEST

HYBRID III 50th

25-SEP-01

TRC INC.

TEST NO: 202C05HD1

572E SN202 HEAD DROP CAL 05

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	20.6 DEG. C
RELATIVE HUMIDITY	10 - 70 %	42.0 %
PEAK RESULTANT ACCELERATION	225 - 275 G	241.67 G
PEAK LATERAL ACCELERATION	15 G MAX	4.32 G
IS ACCELERATION CURVE UNIMODAL?	YES	YES

TEST MEETS SPECIFICATIONS

TECHNICIAN

J.P.C. Miller

RUN NUMBER: 092501.1533;1

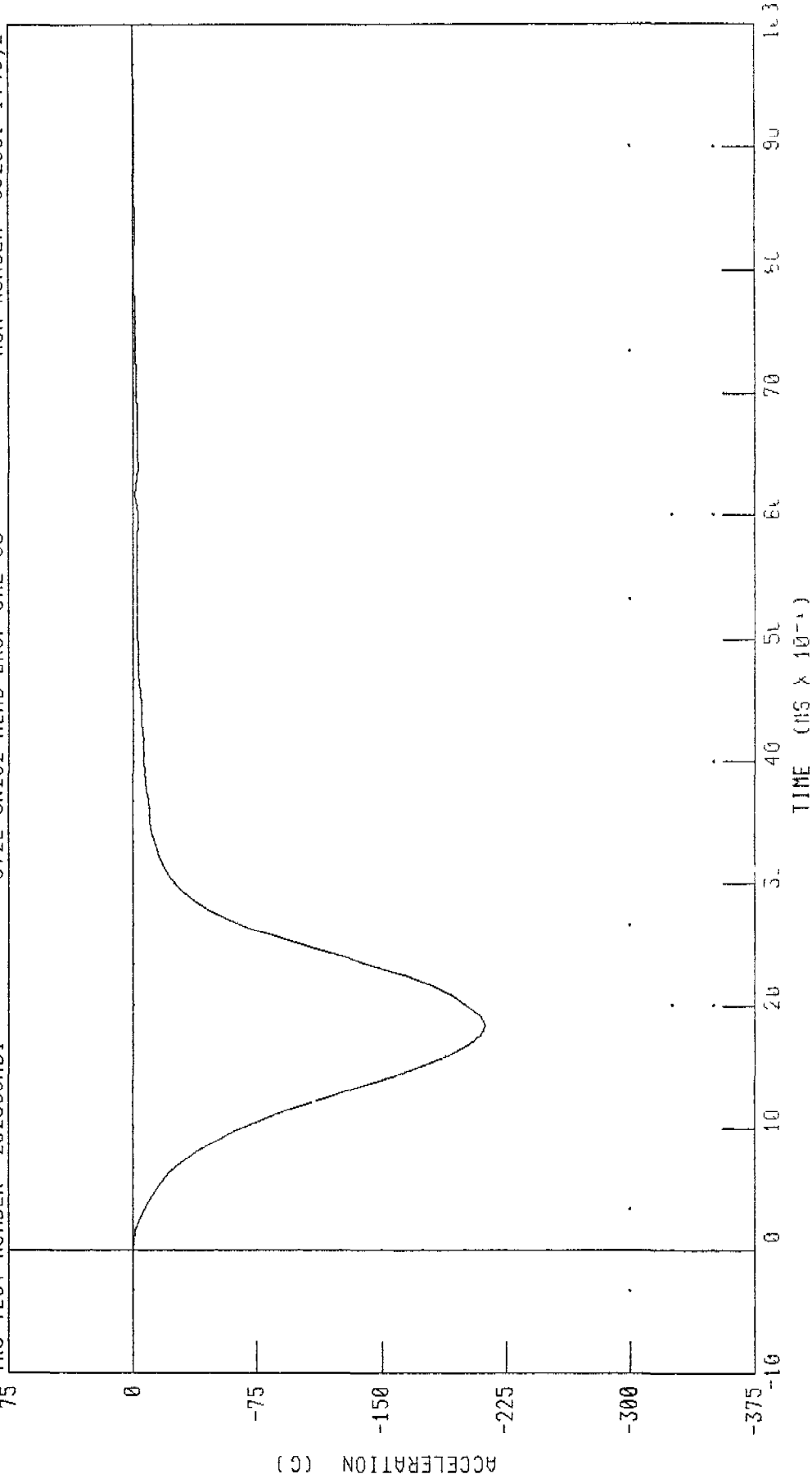
PART 572-E HYBRID III HEAD CALIBRATION

HEAD ACCELERATION X AXIS

TRC TEST NUMBER 202C05HD1

572E SN202 HEAD DROP CAL 05

RUN NUMBER 092501 1749,2



CHANNEL HEDXG FILTER CH CLASS 1000

PEAK DATA 0 16 G 0 9 76 Ms, -212 37 G 0 1 84 Ms

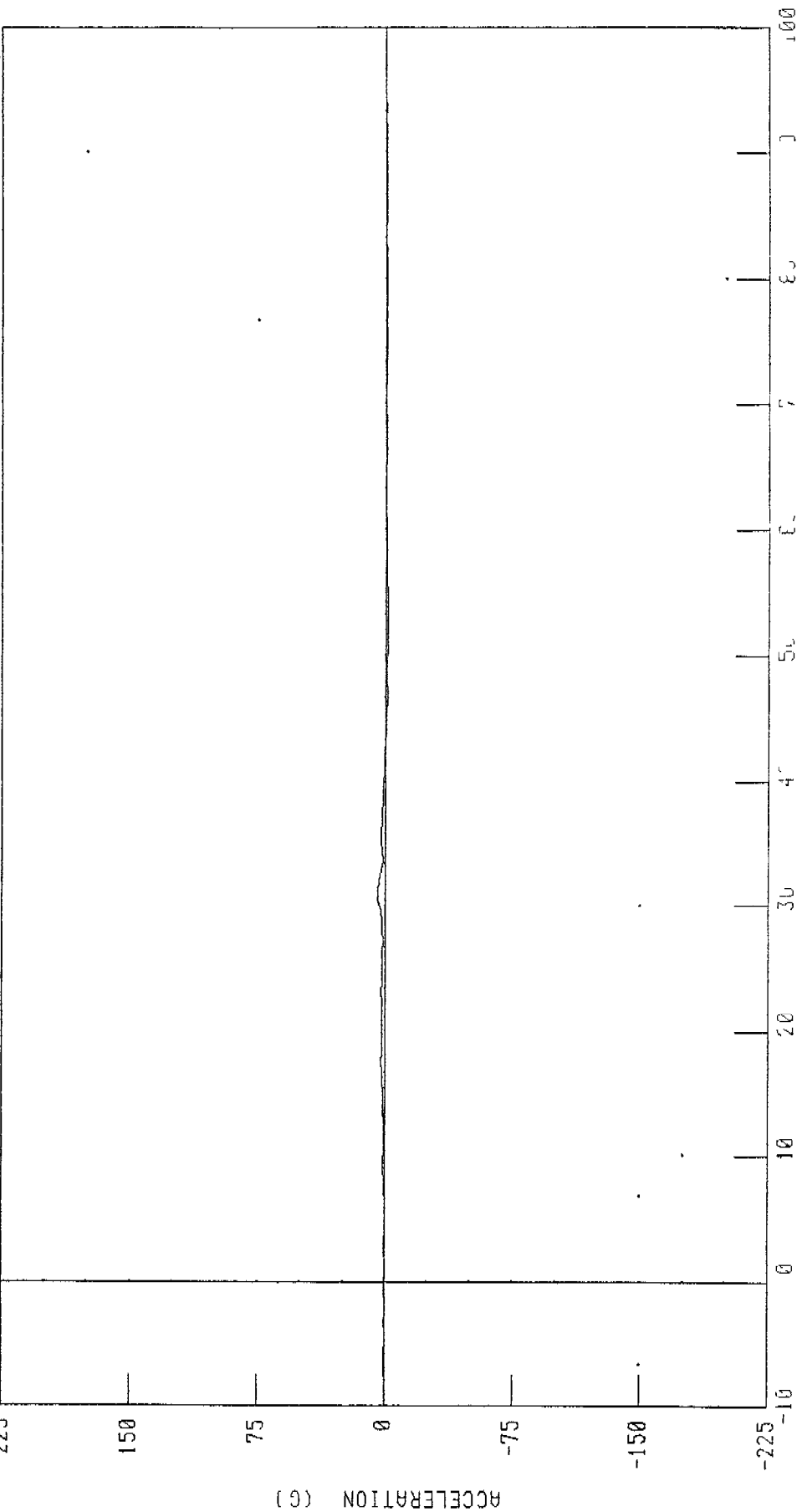
PART 572-E HYBRID III HEAD CALIBRATION

HEAD ACCELERATION Y AXIS

IRC TEST NUMBER 202C05HD1

572E SN202 HEAD DROP CAL 05

RUN NUMBER 092501 1749,2



TIME (μs × 10⁻⁴)

CHANNEL HEDYG FILTER CH CLASS 1000

PEAK DATA 4 32 0 3 12 MS, -1 60 0 0 5 04 MS

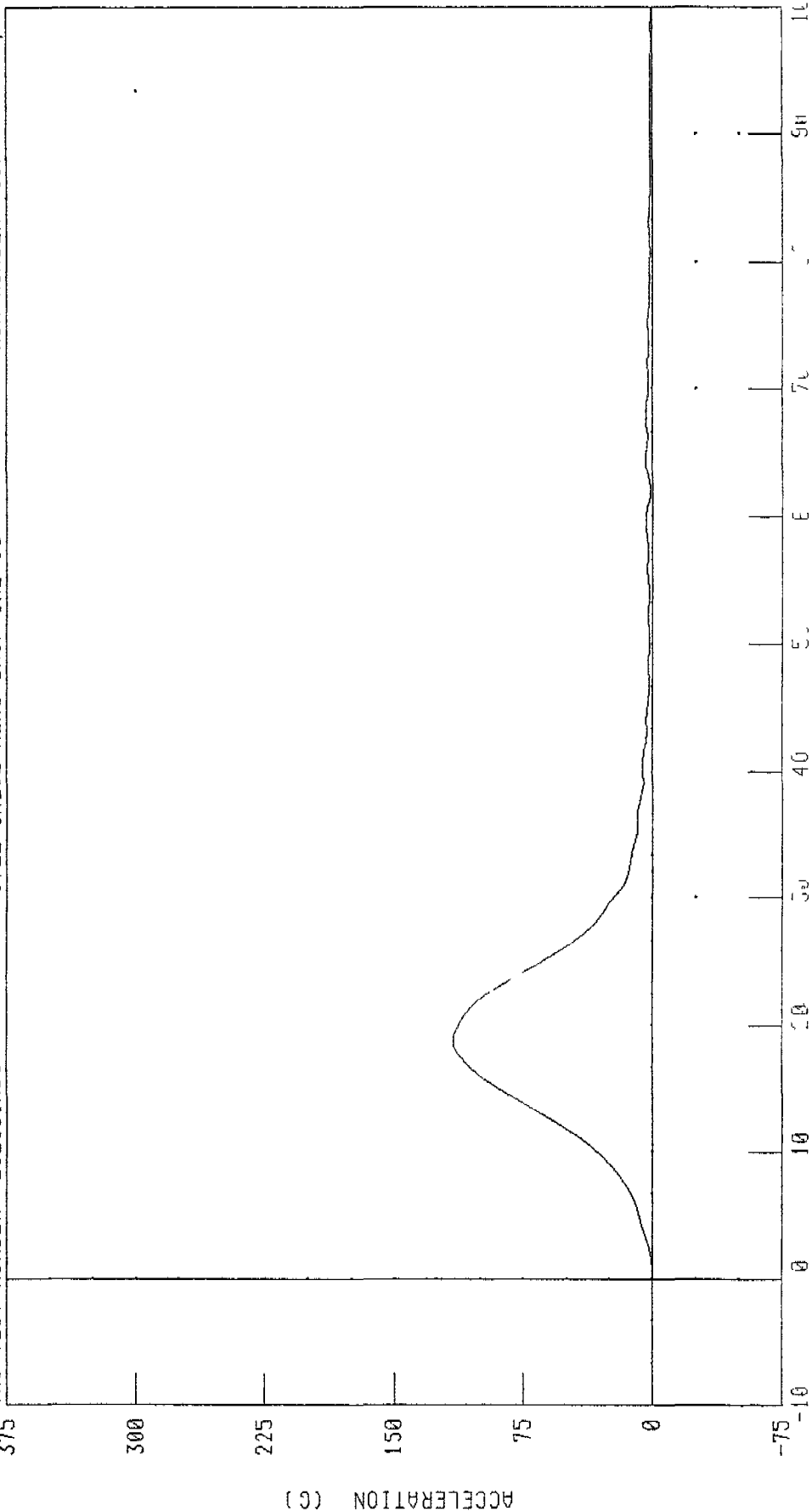
PART 572-E HYBRID III HEAD CALIBRATION

HEAD ACCELERATION Z AXIS

TRC TEST NUMBER 202C05HD1

572E SN202 HEAD DROP CAL 05

RUN NUMBER 092501 1749,2



TIME (MS, 10⁻¹)

CHANNEL HEDZG FILTER CH CLASS 1001

PEAK DATA 115 40 G @ 1 54 MS, -0 13 G @ -0 80 MS

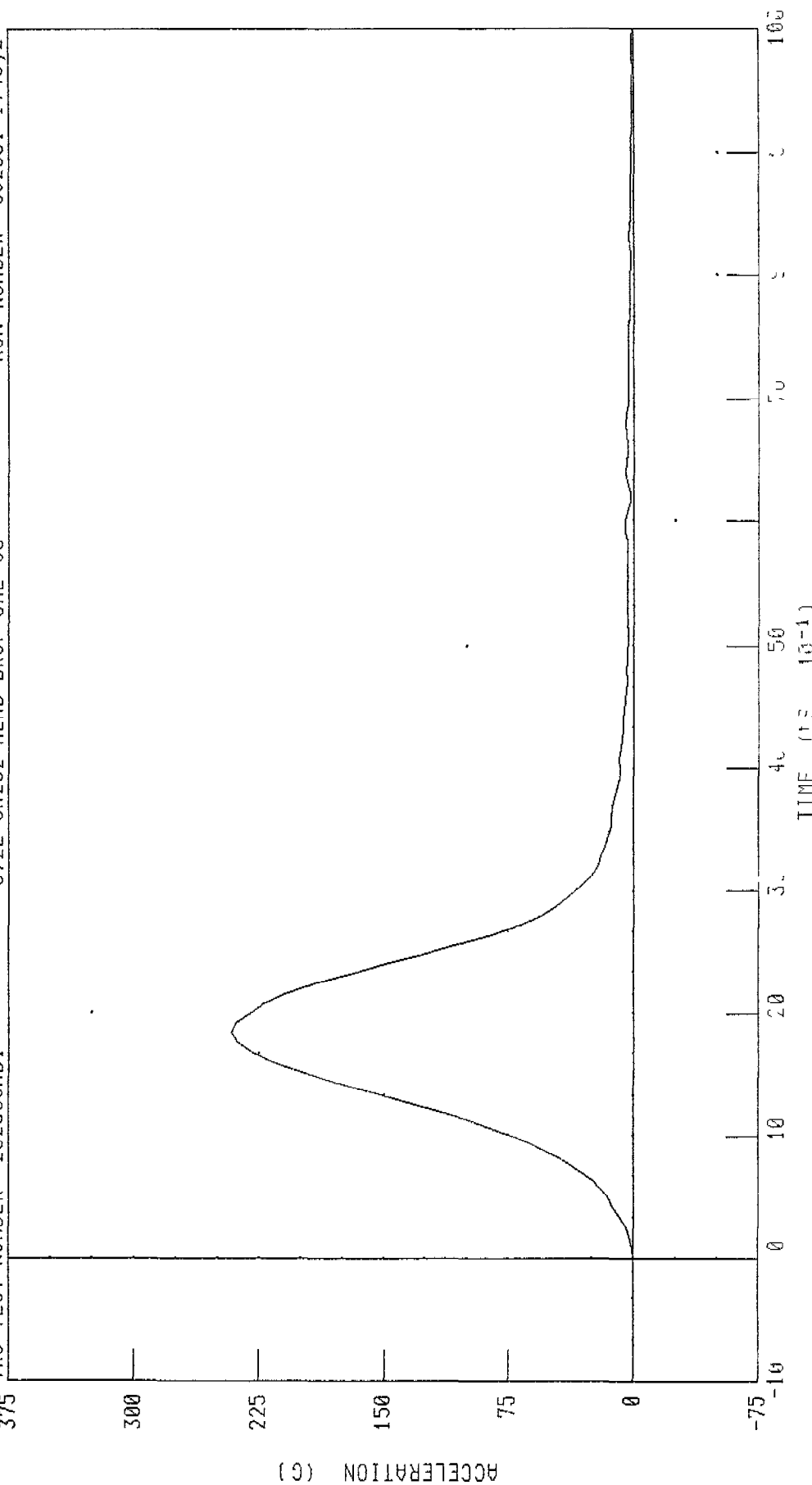
PART 572-E HYBRID III HEAD CALIBRATION

HEAD RESULTANT ACCELERATION

TRC TEST NUMBER 202C05HD1

572E SN202 HEAD DROP CAL 05

RUN NUMBER 092501 1749,2



CHANNEL HEDRG FILTER CH CLASS 1000 PEAK DATA 241 68 0 0 1 84 MS, 0 06 0 0 -0 80 MS

TRANSPORTATION RESEARCH CENTER INC.

HYBRID III 50th

25-SEP-01

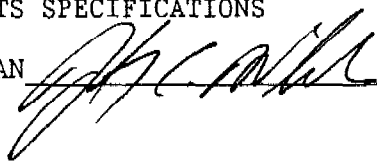
NECK FLEXION TEST - 6 CHANNEL TRANSDUCER

TRC INC. TEST NO: 202C05NF1 572E SN202 NECK FLEXION CAL05

TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE		20.6-22.2 DEG. C	21.1 DEG. C
RELATIVE HUMIDITY		10 - 70 %	41.0 %
IMPACT VELOCITY		6.89 - 7.13 M/S	6.93 M/S
PENDULUM DECELERATION	10 MS	22.50 - 27.50 G	22.94 G
	20 MS	17.60 - 22.60 G	21.43 G
	30 MS	12.50 - 18.50 G	16.09 G
MAX PENDULUM G		29 G MAX	23.44 G
MAX PENDULUM G ABOVE 30 MS		29 G MAX	15.99 G
DECELERATION-TIME CURVE DECAY TIME TO 5 G		34 - 42 MS	41.84 MS
D PLANE	MAX	64 - 78 DEG.	68.79 DEG.
ROTATION	TIME	57 - 64 MS	62.32 MS
MOMENT ABOUT OCCIPITAL CONDYLE	MAX	88.2 - 108.5 NM	101.45 NM
	TIME	47 - 58 MS	54.96 MS
ROTATION ANGLE-TIME CURVE DECAY TIME TO ZERO		113 - 128 MS	116.48 MS
POSITIVE MOMENT-TIME CURVE DECAY TIME TO ZERO		97 - 107 MS	101.52 MS

TEST MEETS SPECIFICATIONS

TECHNICIAN

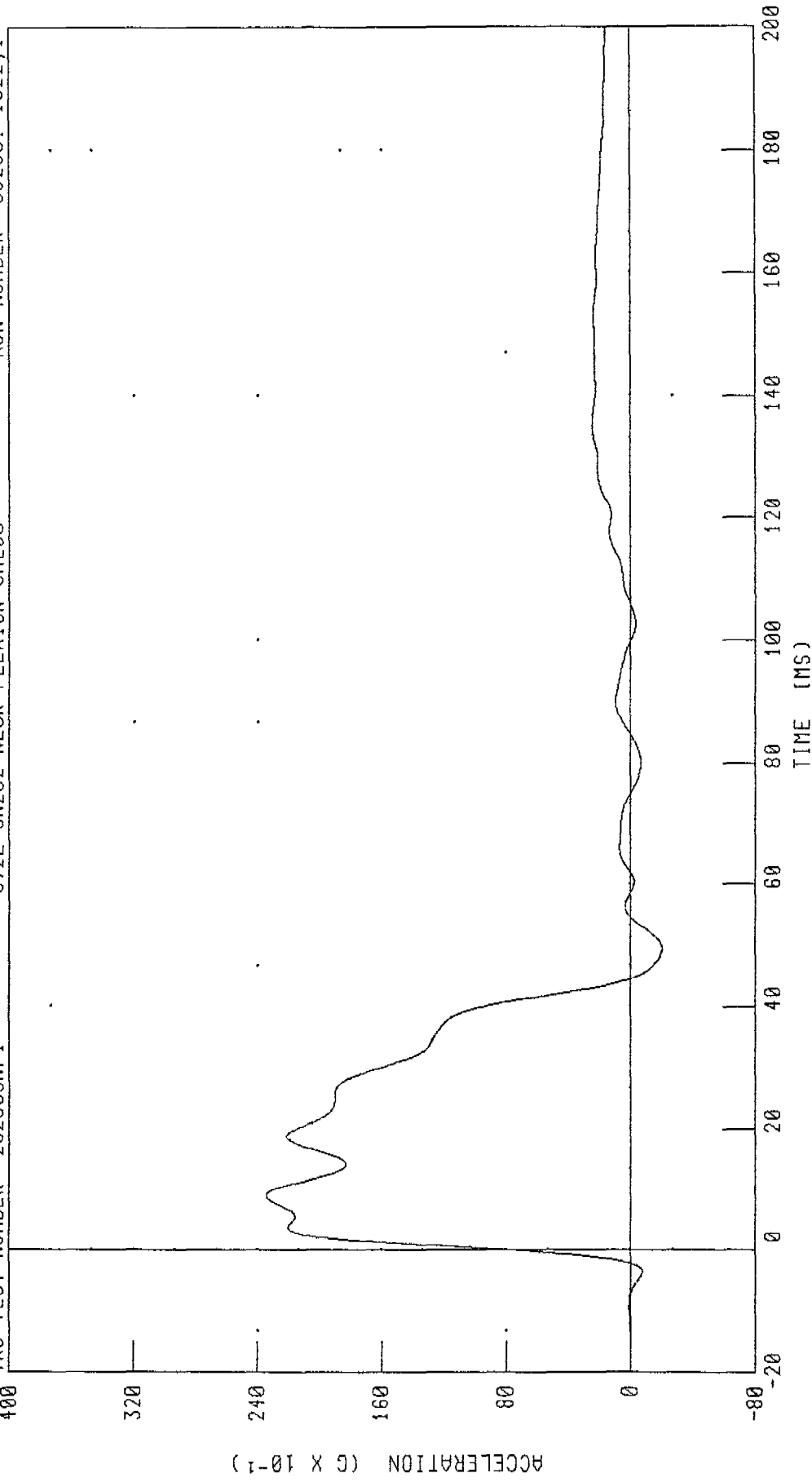


RUN NUMBER: 092501.1622;1

PART 572-E HYBRID III NECK FLEXION CALIBRATION

PENDULUM DECELERATION

TRC TEST NUMBER 202C05NF1 572E SN202 NECK FLEXION CAL05 RUN NUMBER 092501 1622,1



CHANNEL PENXC FILTER CH CLASS 60 PEAK DATA 23 45 G 0 8 96 MS, -2 03 G 0 49 52 MS

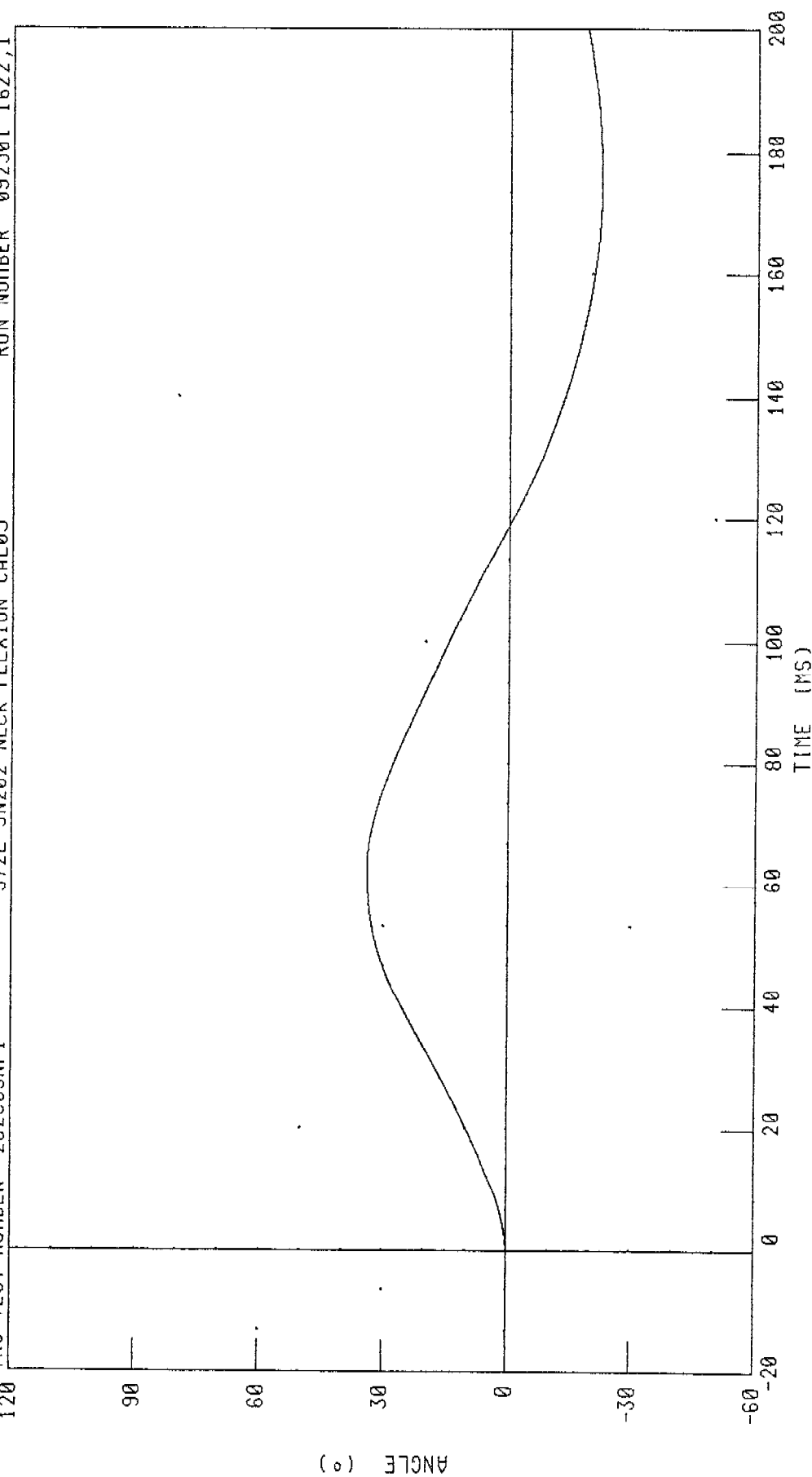
PART 572-E HYBRID III NECK FLEXION CALIBRATION

ROTATION ABOUT BASE OF NECK

TRC TEST NUMBER 202C05NF1

572E SN202 NECK FLEXION CAL05

RUN NUMBER 092501 1622,1



PEAK DATA 34 00 ° @ 62 40 MS, -22 20 ° @ 175 68 MS

CHANNEL BETA FILTER CH CLASS 60

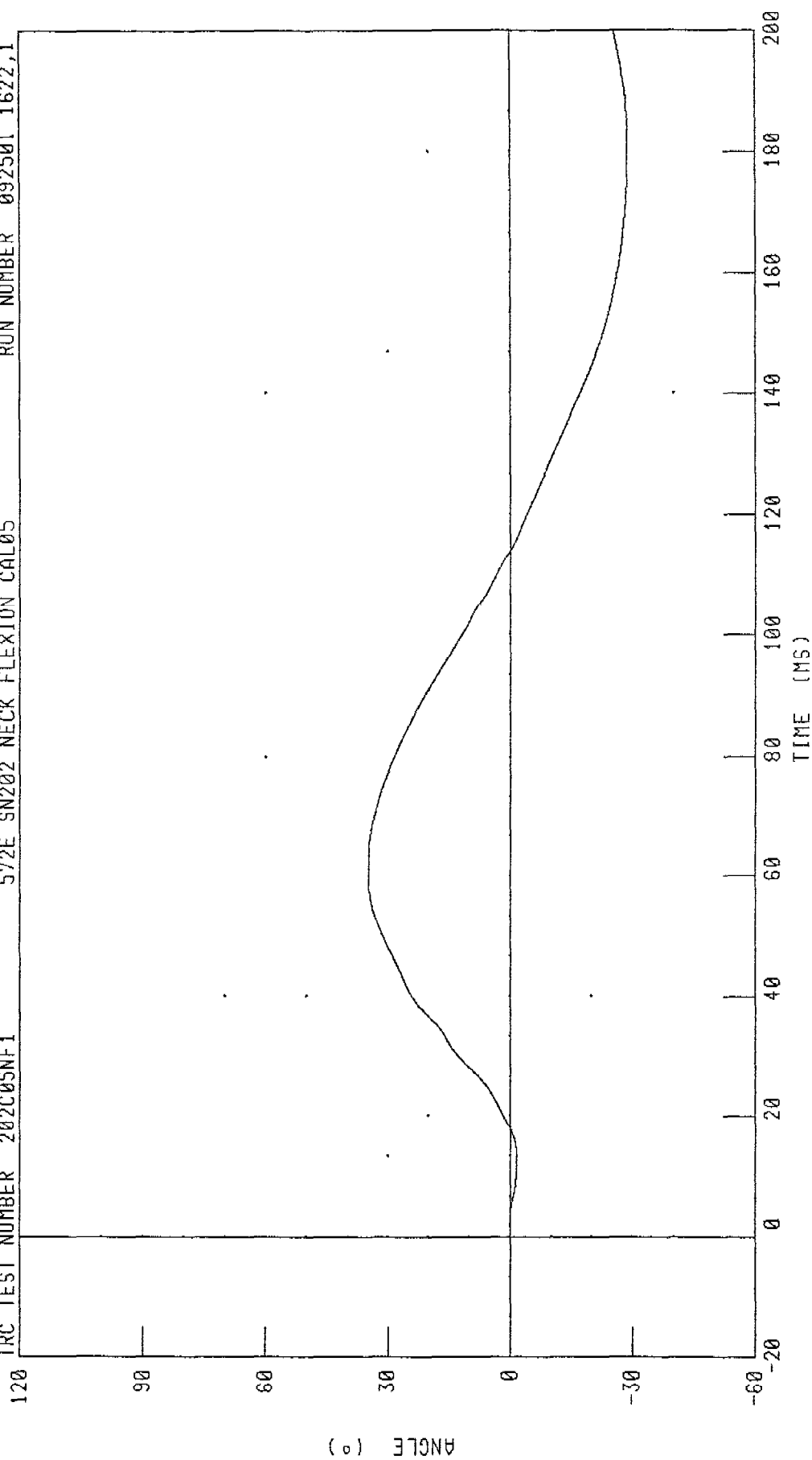
PART 572-E HYBRID III NECK FLEXION CALIBRATION

ROTATION ABOUT OCCIPITAL CONDYLE

TRC TEST NUMBER 202C05NF1

572E SN202 NECK FLEXION CAL05

RUN NUMBER 092501 1622,1



PEAK DATA 34 80 ° 0 62 08 MS, -28 85 ° 0 179 84 MS

CHANNEL THETA FILTER CH CLASS 60

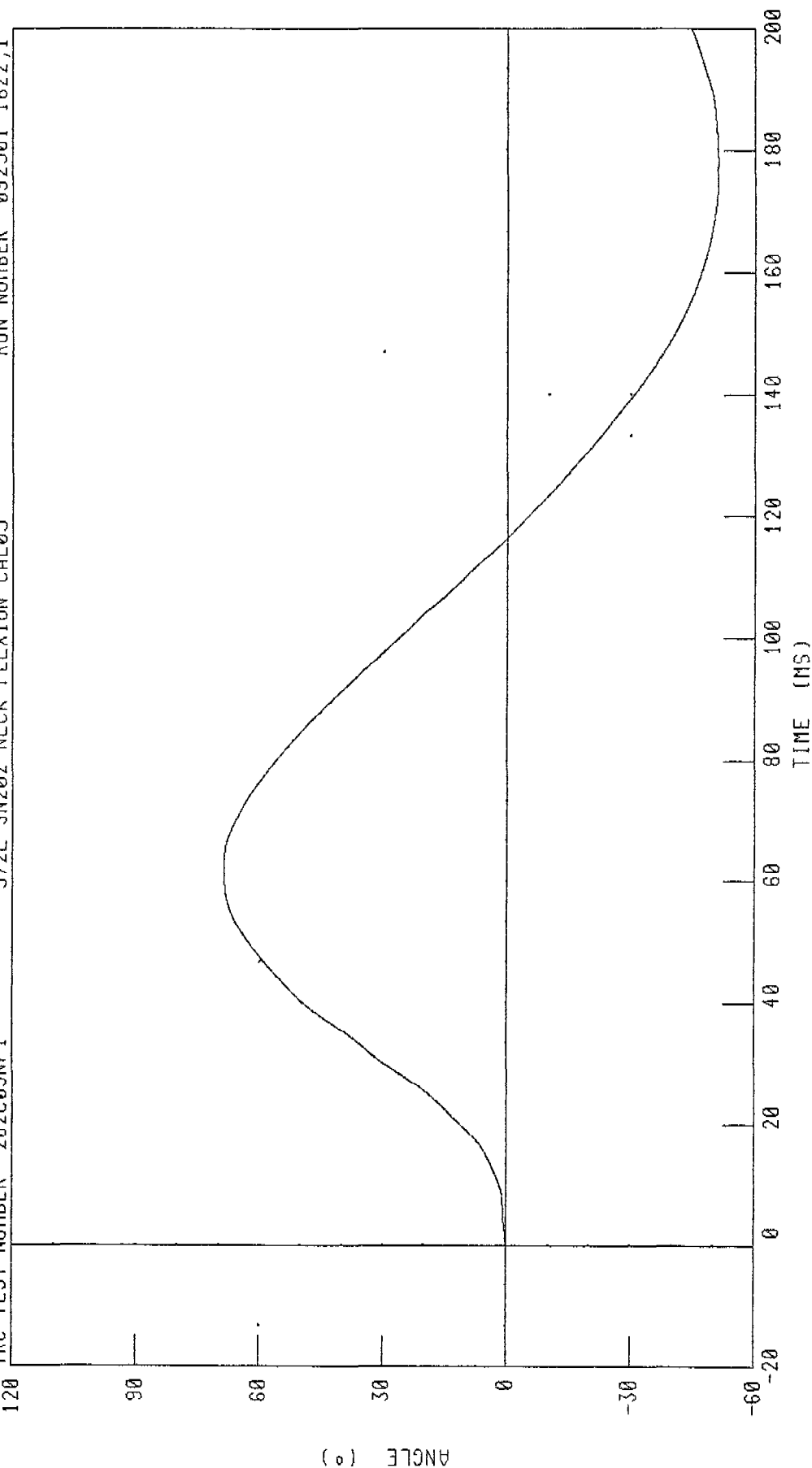
PART 572-E HYBRID III NECK FLEXION CALIBRATION

TOTAL ROTATION

TRC TEST NUMBER 202C05NF1

572E SN202 NECK FLEXION CAL05

RUN NUMBER 092501 1622,1



CHANNEL TOTAL FILTER CH CLASS 60

PEAK DATA 68 80 ° 0 62 32 MS, -51 02 ° 0 178 24 MS

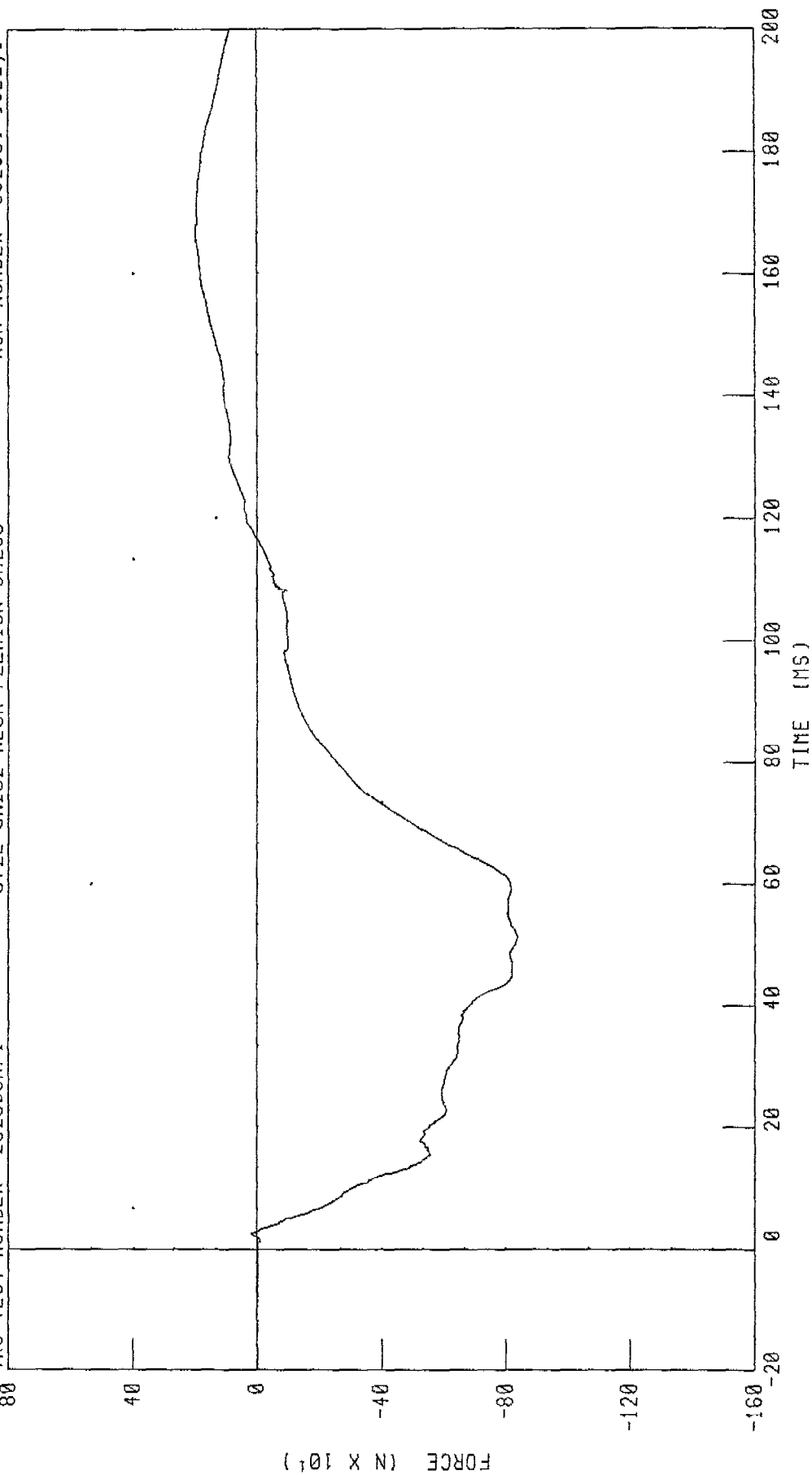
PART 572-E HYBRID III NECK FLEXION CALIBRATION

NECK FORCE X AXIS

TRC TEST NUMBER 202C05NF1

572E SN202 NECK FLEXION CAL05

RUN NUMBER 092501 1622,1



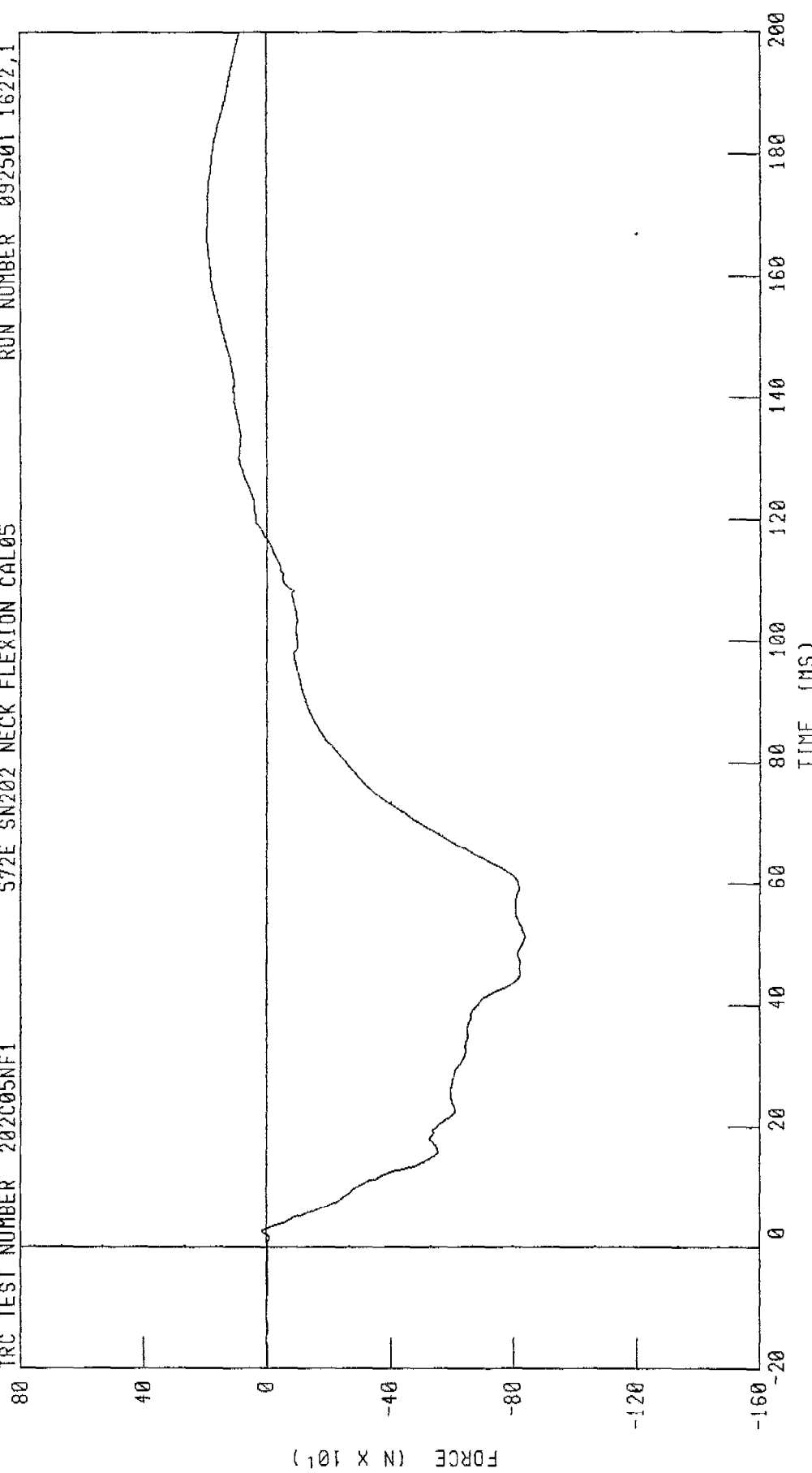
CHANNEL NEKXF FILTER CH CLASS 1000

PEAK DATA 198 14 N 0 166 32 MS, -837 31 N 0 51 12 MS

PART 572-E HYBRID III NECK FLEXION CALIBRATION

NECK FORCE X AXIS FILTERED FOR USE IN OCCIPITAL MOMENT CALCULATION

TRC TEST NUMBER 202C05NF1 572E SN202 NECK FLEXION CAL05 RUN NUMBER 092501 1622,1



CHANNEL NEKXFC FILTER CH CLASS 600 PEAK DATA 197 85 N 0 166 40 MS, -837 21 N 0 51 28 MS

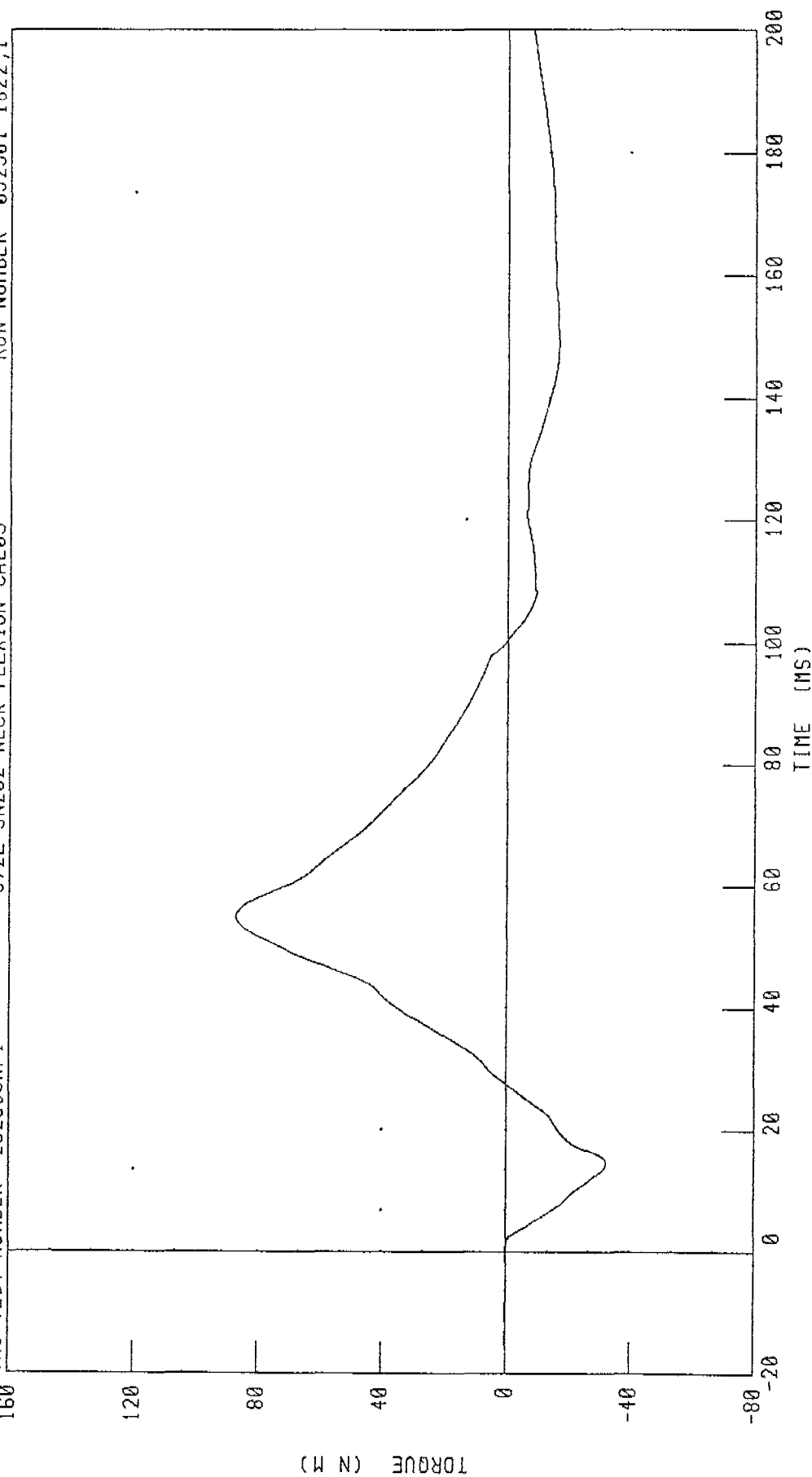
PART 572-E HYBRID III NECK FLEXION CALIBRATION

NECK MOMENT Y AXIS

TRC TEST NUMBER 202C05NF1

572E SN202 NECK FLEXION CAL05

RUN NUMBER 092501 1622,1



CHANNEL NEKYM FILTER CH CLASS 600

PEAK DATA 87 11 N M 0 54 96 MS, -32 27 N M 0 14 56 MS

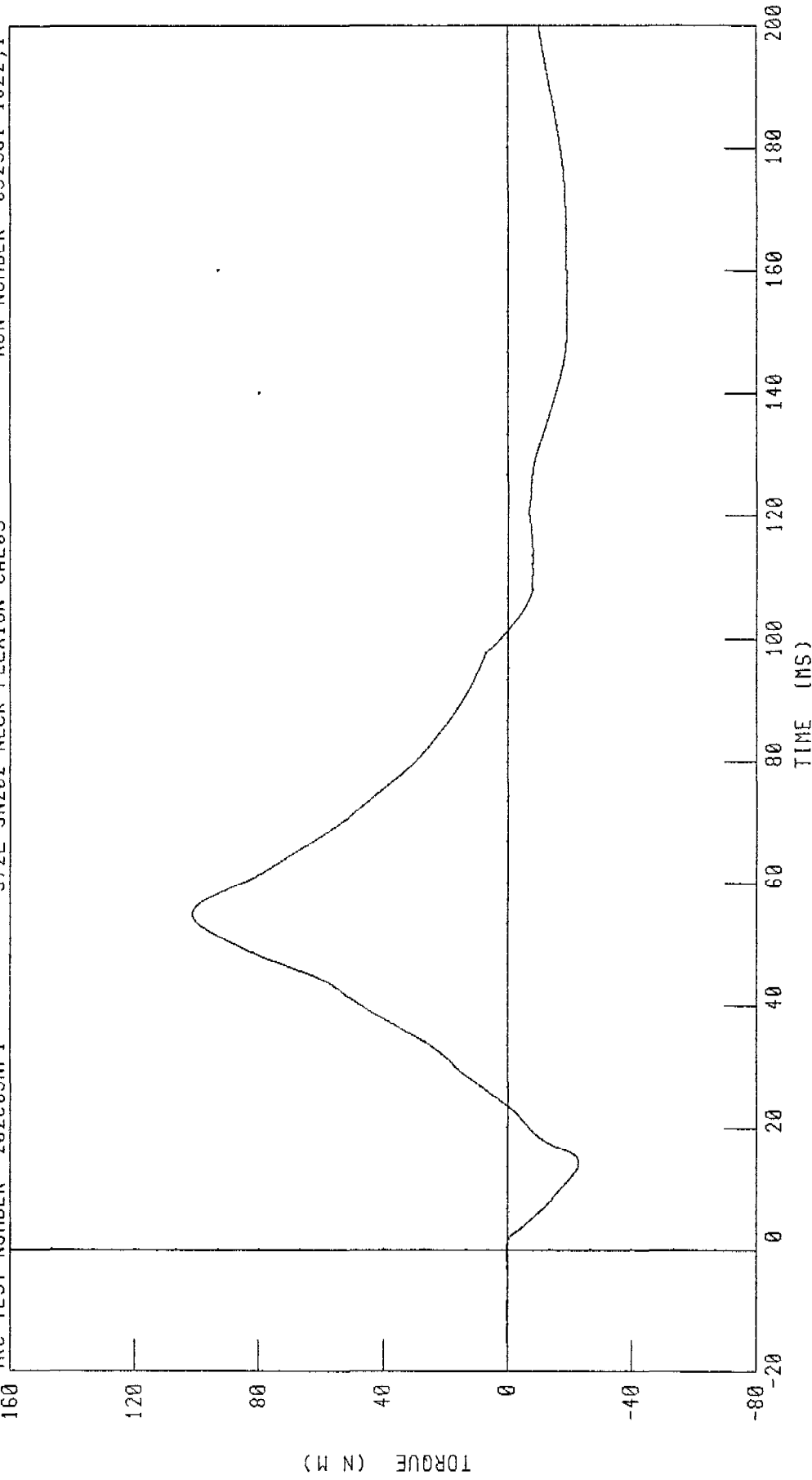
PART 572-E HYBRID III NECK FLEXION CALIBRATION

TOTAL MOMENT ABOUT OCCIPITAL CONDYLE

TRC TEST NUMBER 202C05NF1

572E SN202 NECK FLEXION CAL05

RUN NUMBER 092501 1622,1



CHANNEL NEKOM FILTER CH CLASS 600

PEAK DATA 101 45 N M @ 54 96 MS, -22 96 N M @ 13 92 MS

TRANSPORTATION RESEARCH CENTER INC.

HYBRID III 50th

25-SEP-01

NECK EXTENSION TEST - 6 CHANNEL TRANSDUCER

TRC INC.

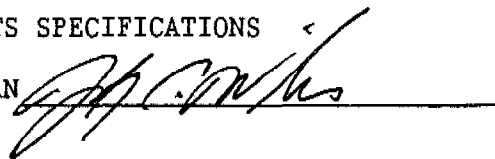
TEST NO: 202C05NE1

572E SN202 NECK EXT CAL05

TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE		20.6 - 22.2 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY		10 - 70 %	40.0 %
IMPACT VELOCITY		5.95 - 6.19 M/S	6.00 M/S
PENDULUM DECELERATION	10 MS	17.20 - 21.20 G	20.76 G
	20 MS	14.00 - 19.00 G	18.19 G
	30 MS	11.00 - 16.00 G	15.81 G
MAX PENDULUM G		22 G MAX	20.80 G
MAX PENDULUM G ABOVE 30 MS		22 G MAX	15.75 G
DECELERATION-TIME CURVE DECAY TIME TO 5 G		38 - 46 MS	39.76 MS
D PLANE	MAX	81 - 106 DEG.	95.22 DEG.
ROTATION	TIME	72 - 82 MS	76.88 MS
MOMENT ABOUT OCCIPITAL	MIN	-80.0/-52.9 NM	-71.90 NM
CONDYLE	TIME	65 - 79 MS	71.28 MS
ROTATION ANGLE-TIME CURVE DECAY TIME TO ZERO		147 - 174 MS	155.84 MS
NEGATIVE MOMENT-TIME CURVE DECAY TIME TO ZERO		120 - 148 MS	139.76 MS

TEST MEETS SPECIFICATIONS

TECHNICIAN



RUN NUMBER: 092501.1759;1

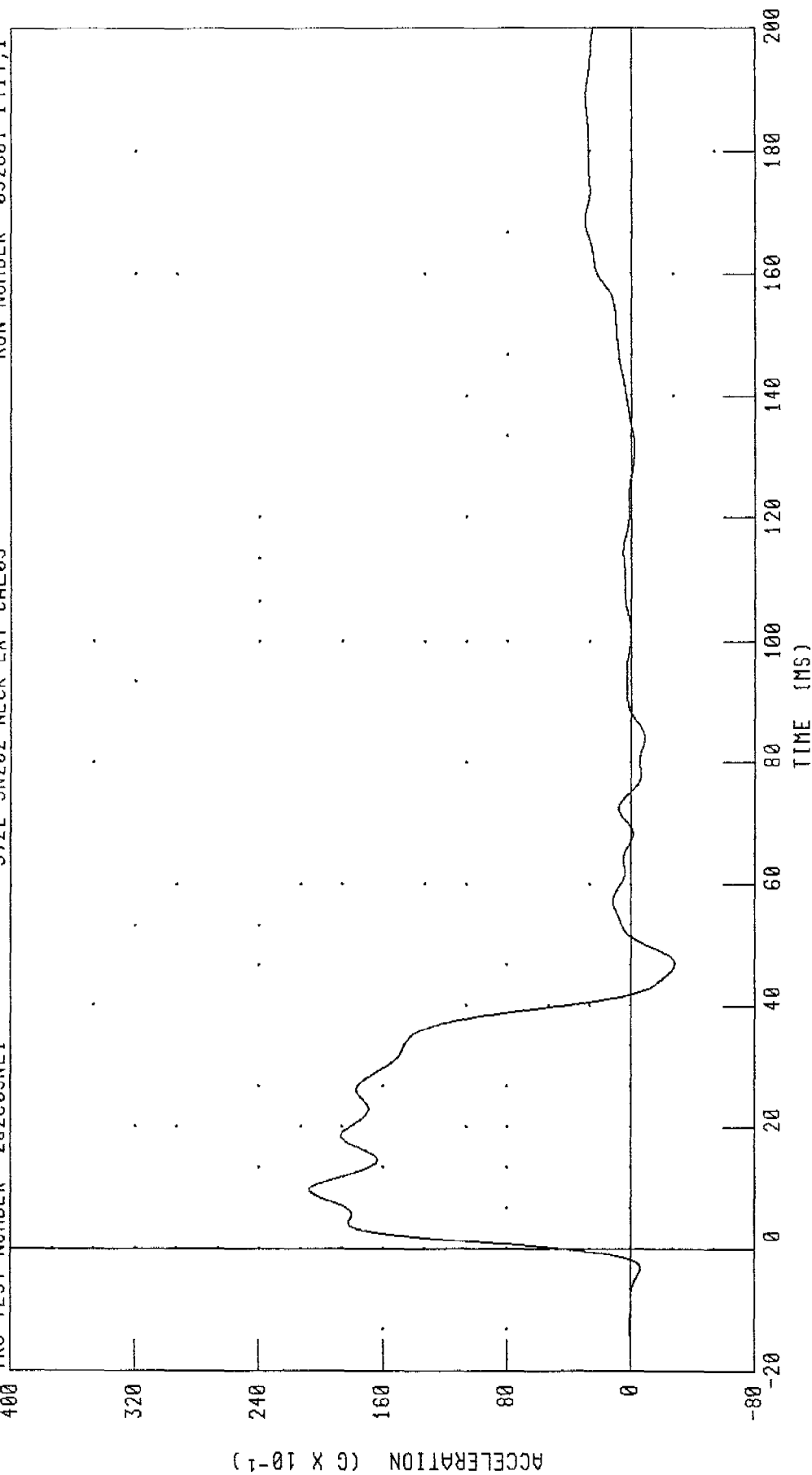
PART 572-E HYBRID III NECK EXTENSION CALIBRATION

PENDULUM DECELERATION

TRC TEST NUMBER 202C05NE1

572E SN202 NECK EXT CAL05

RUN NUMBER 092601 1414,1



PEAK DATA 20 81 G 0 9 68 MS, -2 83 G 0 47 04 MS

CHANNEL PENXG FILTER CH CLASS 60

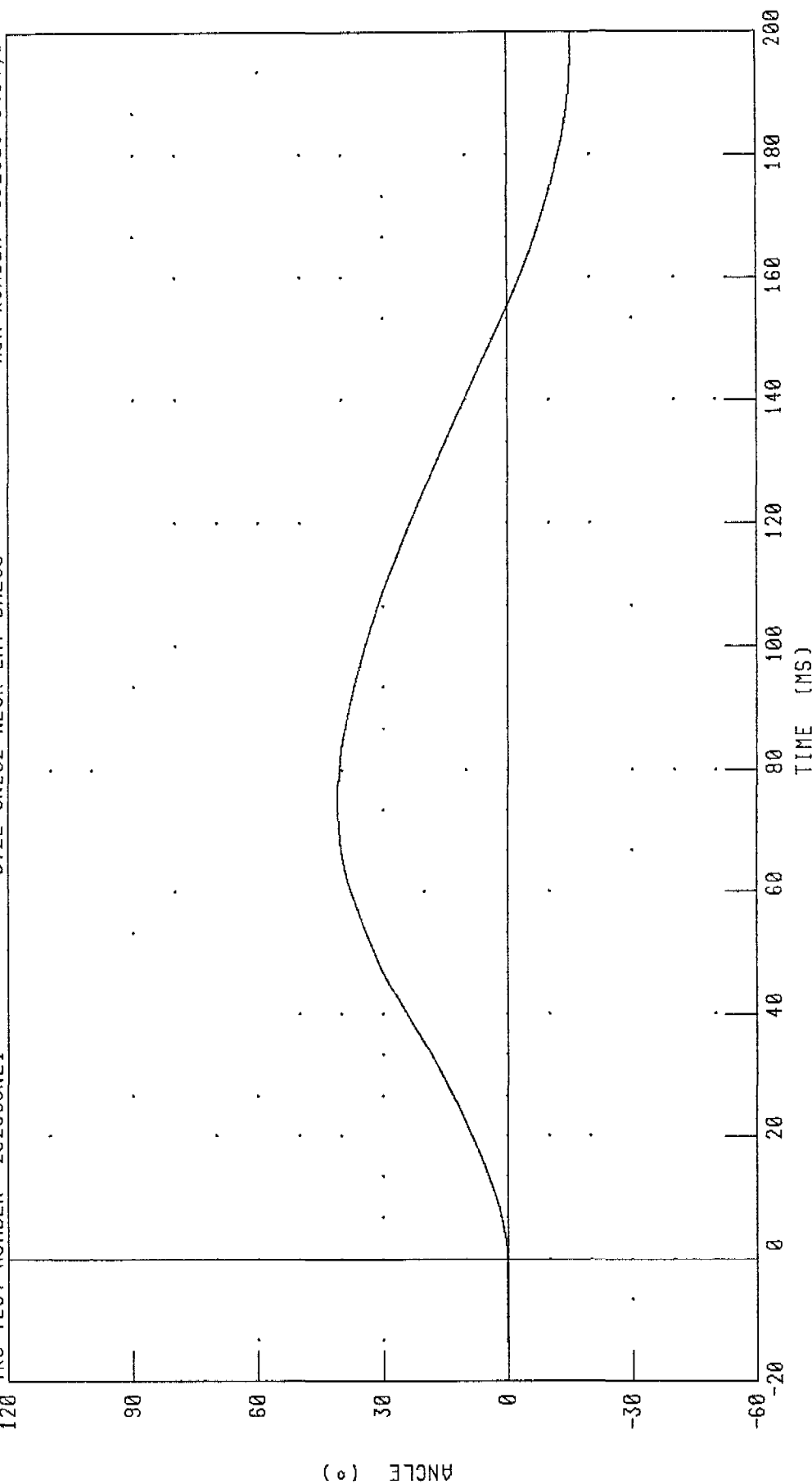
PART 572-E HYBRID III NECK EXTENSION CALIBRATION

ROTATION ABOUT BASE OF NECK

TRC TEST NUMBER 202C05NE1

572E SN202 NECK EXT CAL05

RUN NUMBER 092601 1414,1



PEAK DATA 40 80 ° @ 74 88 MS, -15 57 ° @ 198 80 MS

CHANNEL BETA FILTER CH CLASS 60

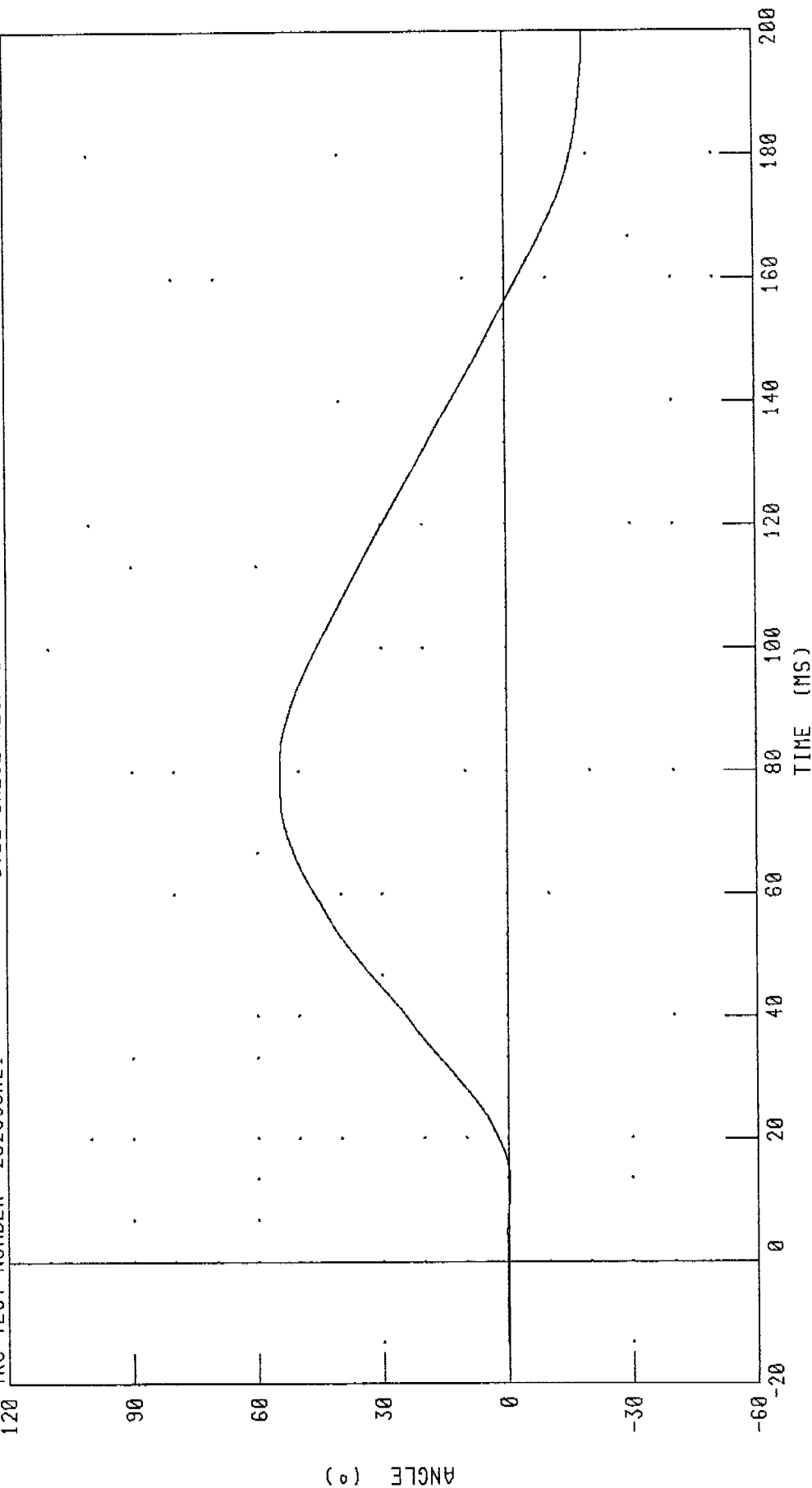
PART 572-E HYBRID III NECK EXTENSION CALIBRATION

ROTATION ABOUT OCCIPITAL CONDYLE

TRC TEST NUMBER 202C05NE1

572E SN202 NECK EXT CAL05

RUN NUMBER 092601 1414,1



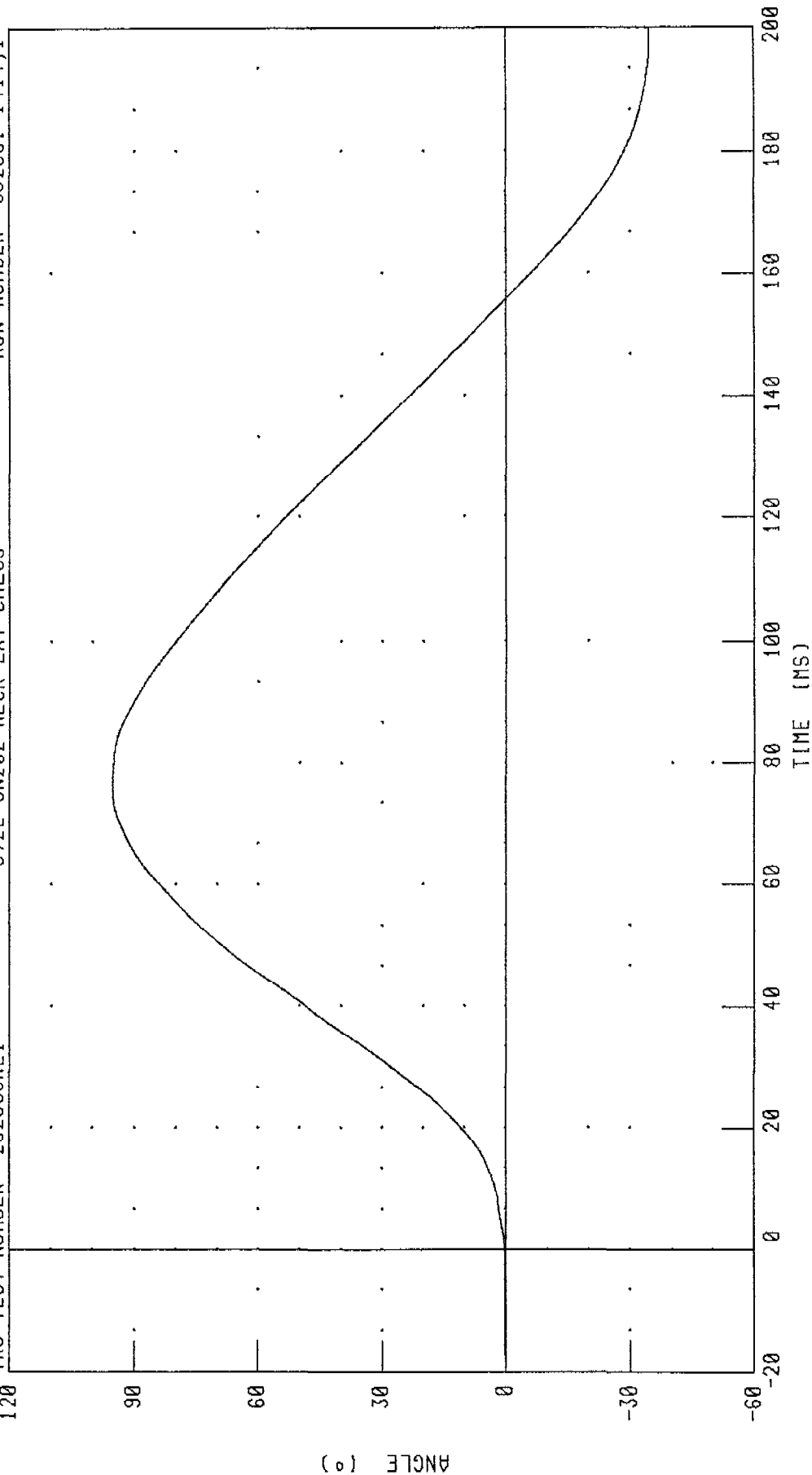
PEAK DATA 54 50 ° 0 79 68 MS, -19 15 ° 0 198 40 MS

CHANNEL THETA FILTER CH CLASS 60

PART 572-E HYBRID III NECK EXTENSION CALIBRATION

TOTAL ROTATION

TRC TEST NUMBER 202C05NE1 572E SN202 NECK EXT CAL05 RUN NUMBER 092601 1414,1



CHANNEL TOTALAN FILTER CH CLASS 60 PEAK DATA 95 23 ° @ 76 88 MS, -34 72 ° @ 198 64 MS

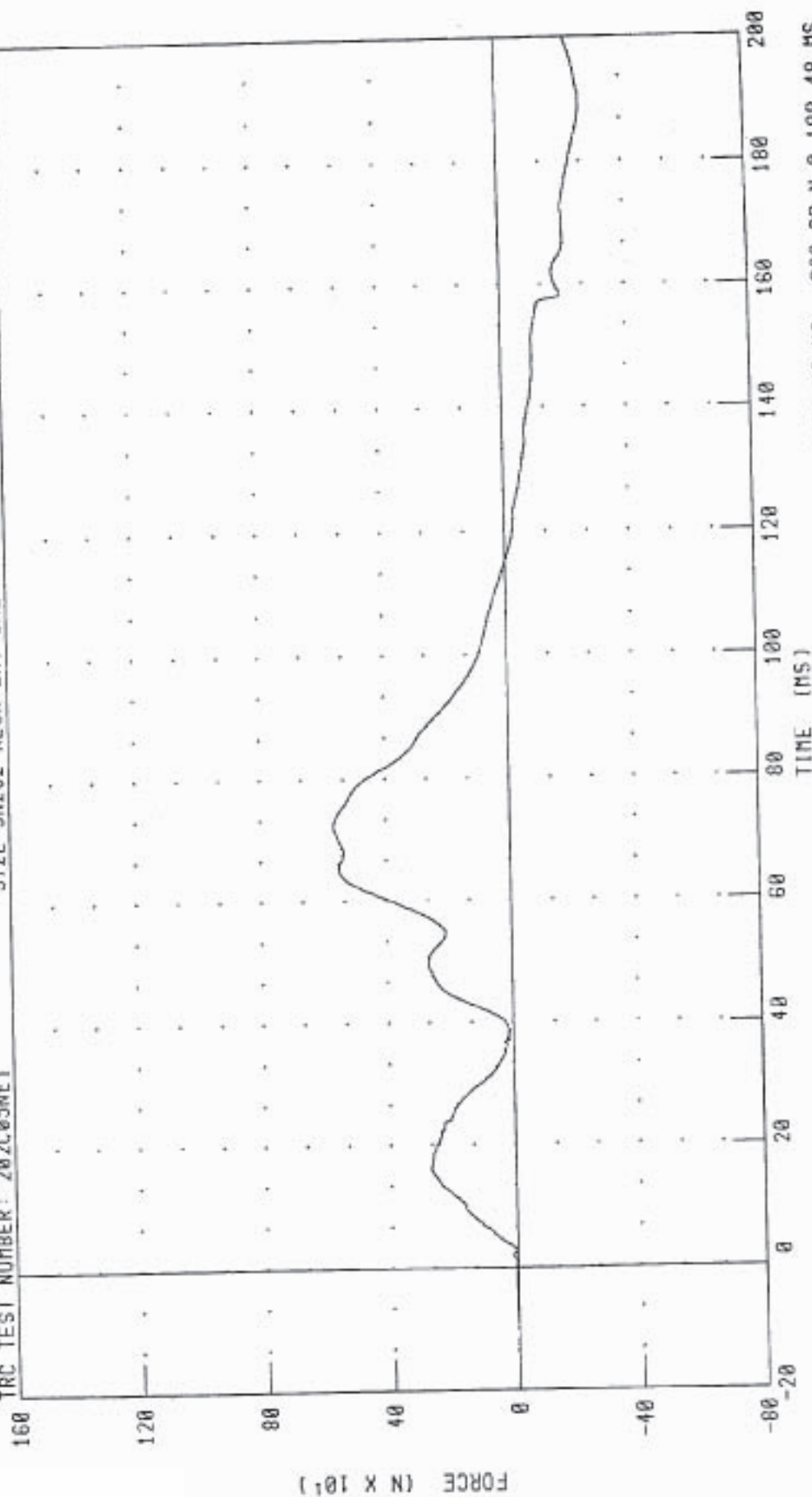
PART 572-E HYBRID III NECK EXTENSION CALIBRATION

NECK FORCE X AXIS

RUN NUMBER: 092601.1414.1

TRC TEST NUMBER: 202C05NE1

572E SN202 NECK EXT CAL05



CHANNEL: NEKXF FILTER: CH. CLASS 1000

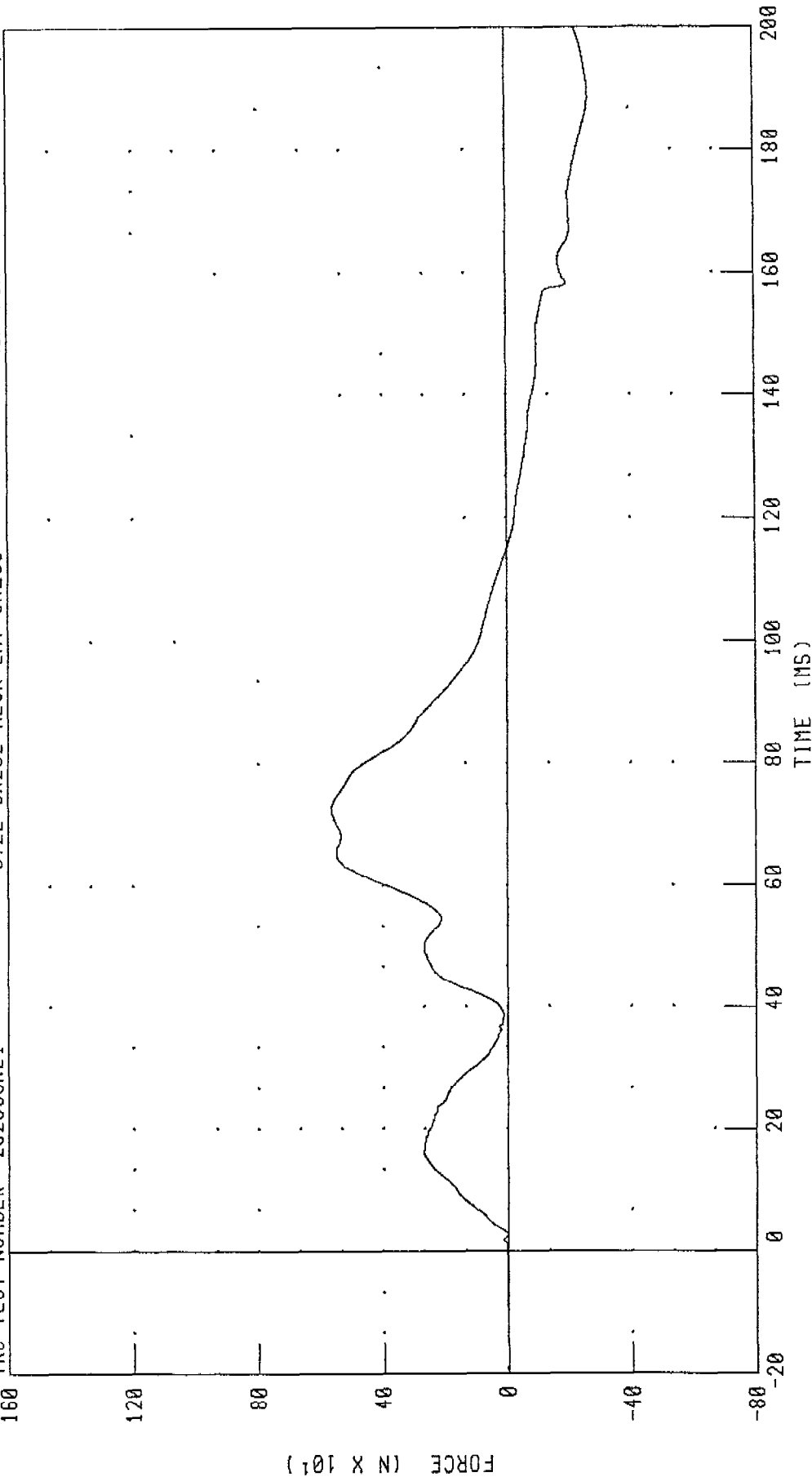
TIME (ms)

PEAK DATA: 564.78 N @ 72.00 MS; -269.02 N @ 188.48 MS

PART 572-E HYBRID III NECK EXTENSION CALIBRATION

NECK FORCE X AXIS FILTERED FOR USE IN OCCIPITAL MOMENT CALCULATION

TRC TEST NUMBER 202C05NE1 572E SN202 NECK EXT CAL05 RUN NUMBER 092601 1414,1

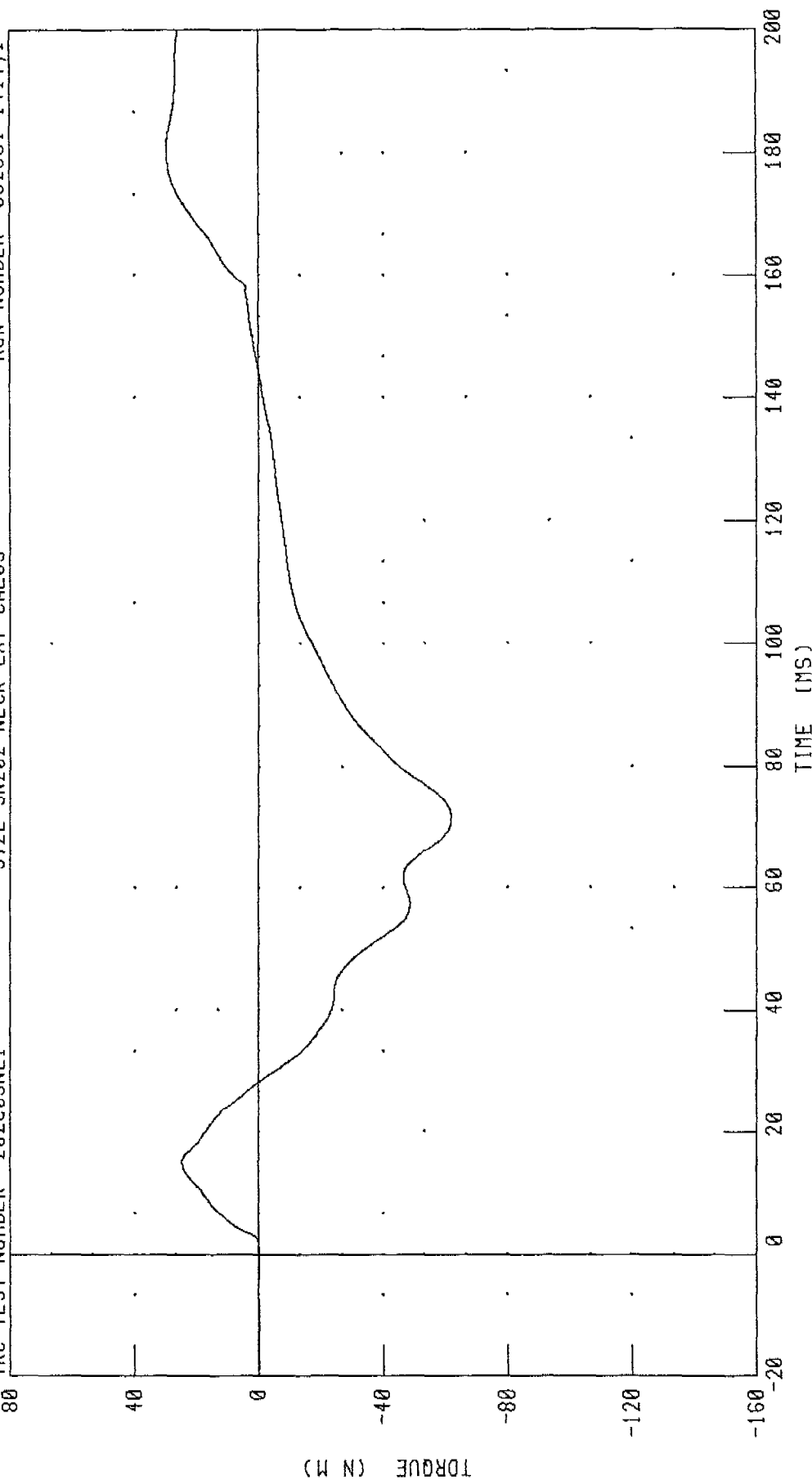


CHANNEL NEKXFC FILTER CH CLASS 600 TIME (MS) PEAK DATA 564 62 N @ 72 24 MS, -268 64 N @ 189 52 MS

PART 572-E HYBRID III NECK EXTENSION CALIBRATION

NECK MOMENT Y AXIS

TRC TEST NUMBER 202C05NE1 572E SN202 NECK EXT CAL05 RUN NUMBER 092601 1414,1



CHANNEL NEKYM FILTER CH CLASS 600 PEAK DATA 29 69 N M @ 180 48 MS, -61 99 N M @ 71 04 MS

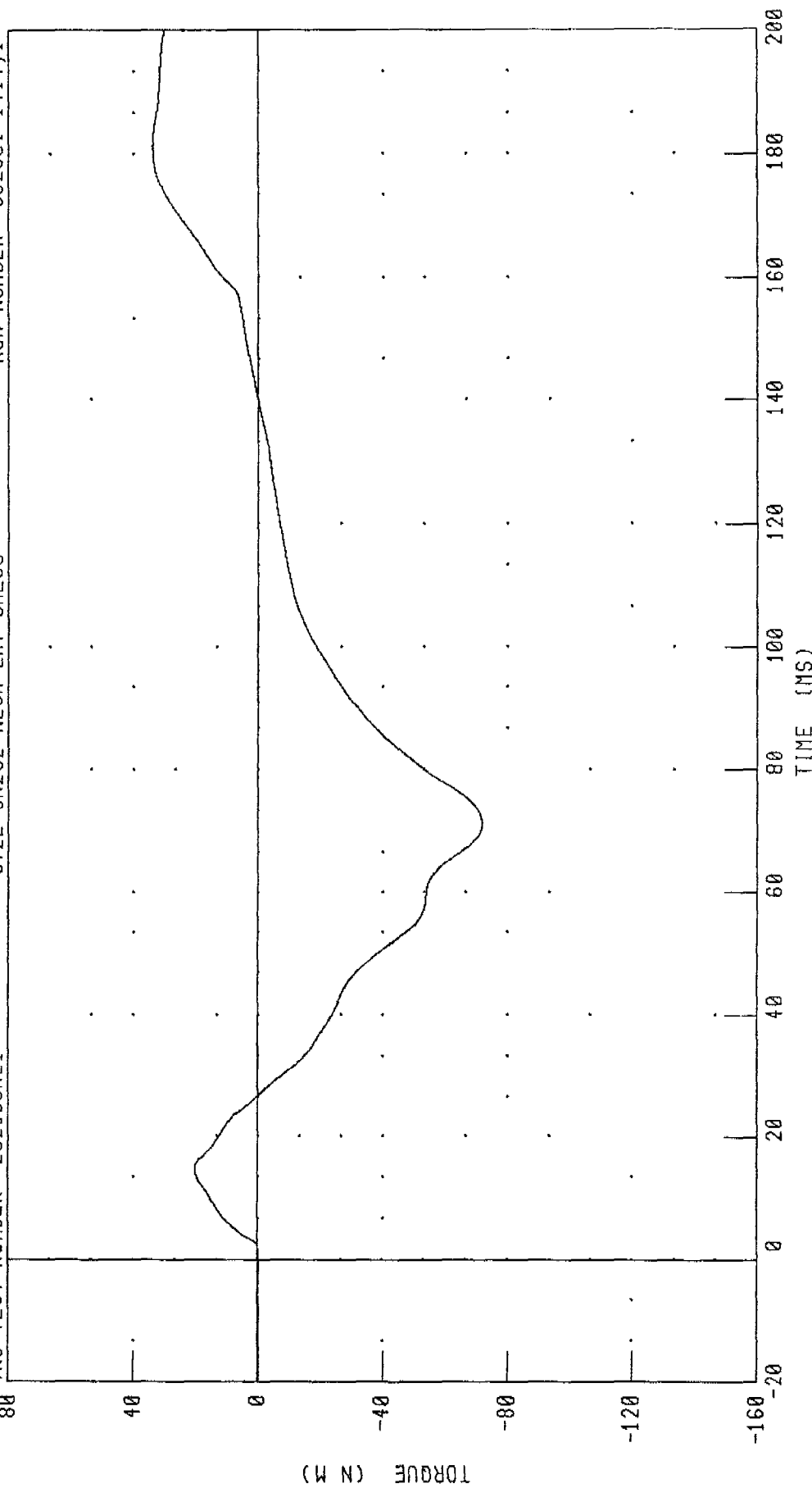
PART 572-E HYBRID III NECK EXTENSION CALIBRATION

TOTAL MOMENT ABOUT OCCIPITAL CONDYLE

TRC TEST NUMBER 202C05NE1

572E SN202 NECK EXT CAL05

RUN NUMBER 092601 1414,1



CHANNEL NEKOM FILTER CH CLASS 600

PEAK DATA 33 85 N M 180 64 MS, -71 90 N M 71 28 MS

TRANSPORTATION RESEARCH CENTER INC.

THORAX IMPACT TEST

HYBRID III 50th

26-SEP-01

TRC INC.

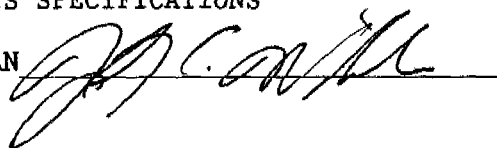
TEST NO: 202C05TH1

572E SN202 H.S.THORAX CAL05

TEST PARAMETER	HIGH SPEED TEST	TEST RESULTS
	SPECIFICATION	
TEMPERATURE	20.6-22.2 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	37.0 %
PENDULUM VELOCITY	6.59 - 6.83 M/S	6.59 M/S
MAXIMUM DEFLECTION	63.5 - 72.6 MM	67.4 MM
MAXIMUM RESISTIVE FORCE	5159 - 5894 N	5780. N
INTERNAL HYSTERESIS	69% - 85%	71.4%

TEST MEETS SPECIFICATIONS

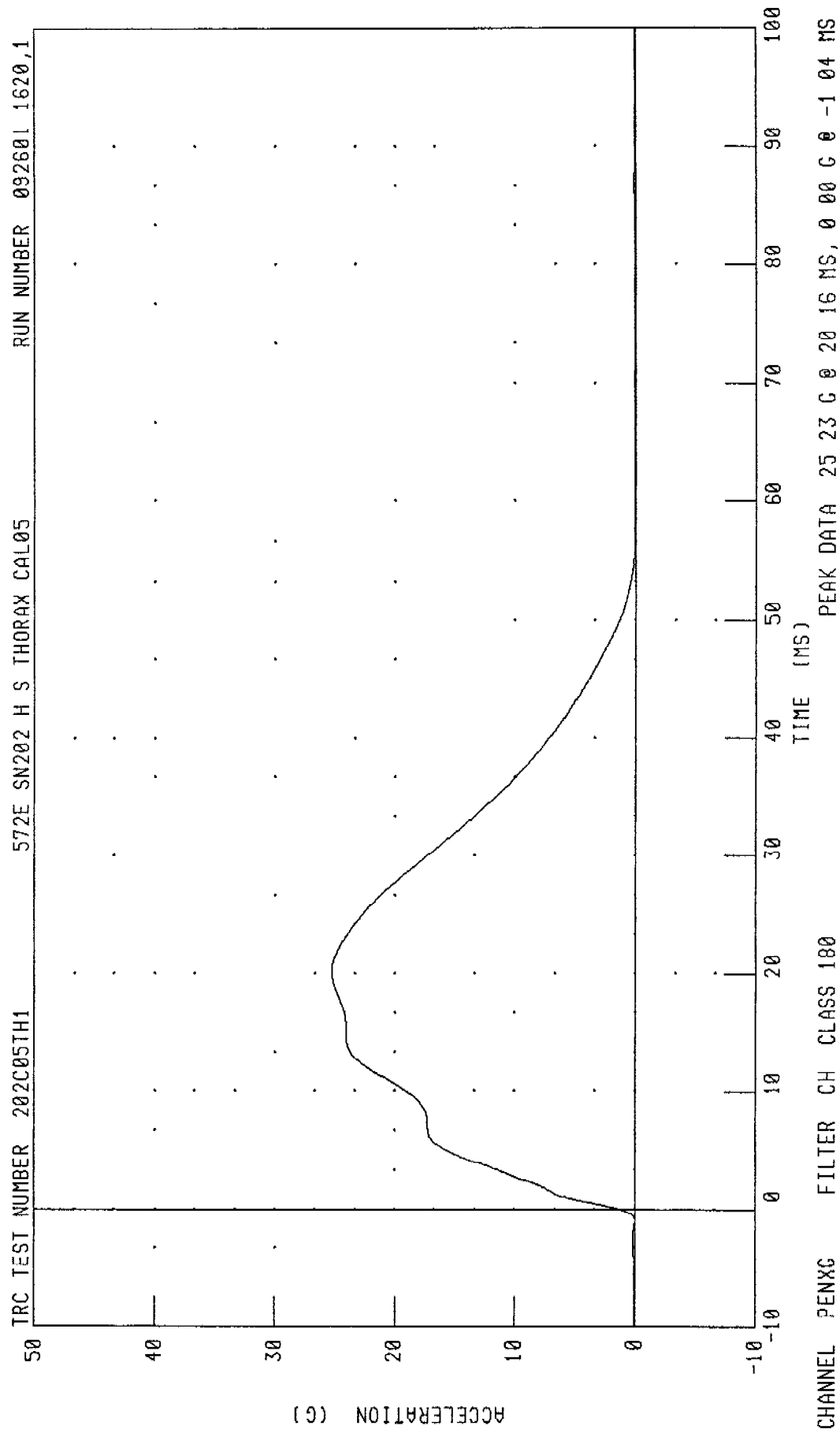
TECHNICIAN



RUN NUMBER: 092601.1617;1

PART 572-E HYBRID III THORAX CALIBRATION

PENDULUM DECELERATION



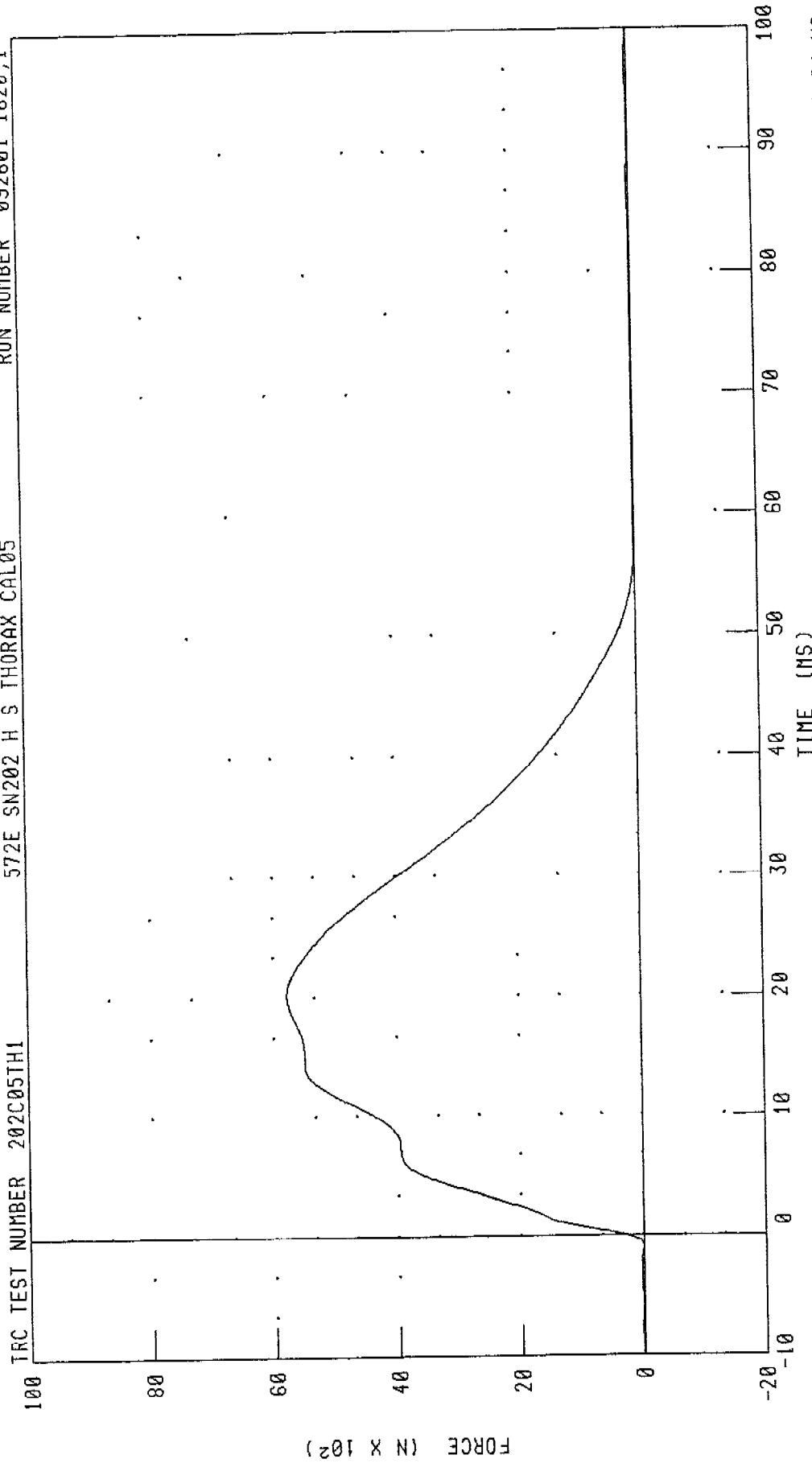
PART 572-E HYBRID III THORAX CALIBRATION

PENDULUM FORCE

TRC TEST NUMBER 202C05TH1

572E SN202 H S THORAX CAL05

RUN NUMBER 092601 1620,1



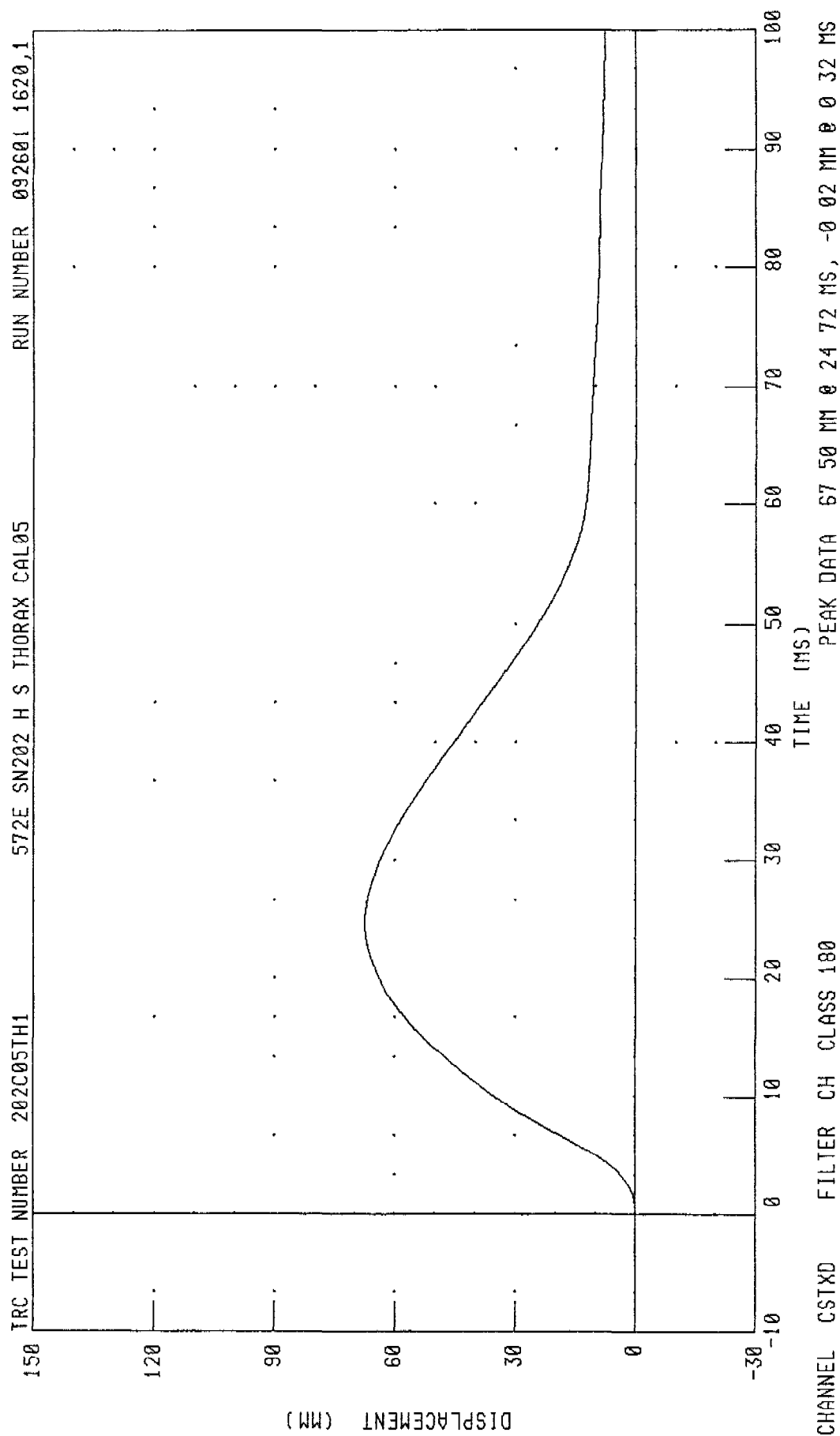
CHANNEL PENXF FILTER CH CLASS 180

TIME (MS)

PEAK DATA 5780 76 N 0 20 16 MS, 0 31 N 0 -1 04 MS

PART 572-E HYBRID III THORAX CALIBRATION

STERNUM DISPLACEMENT

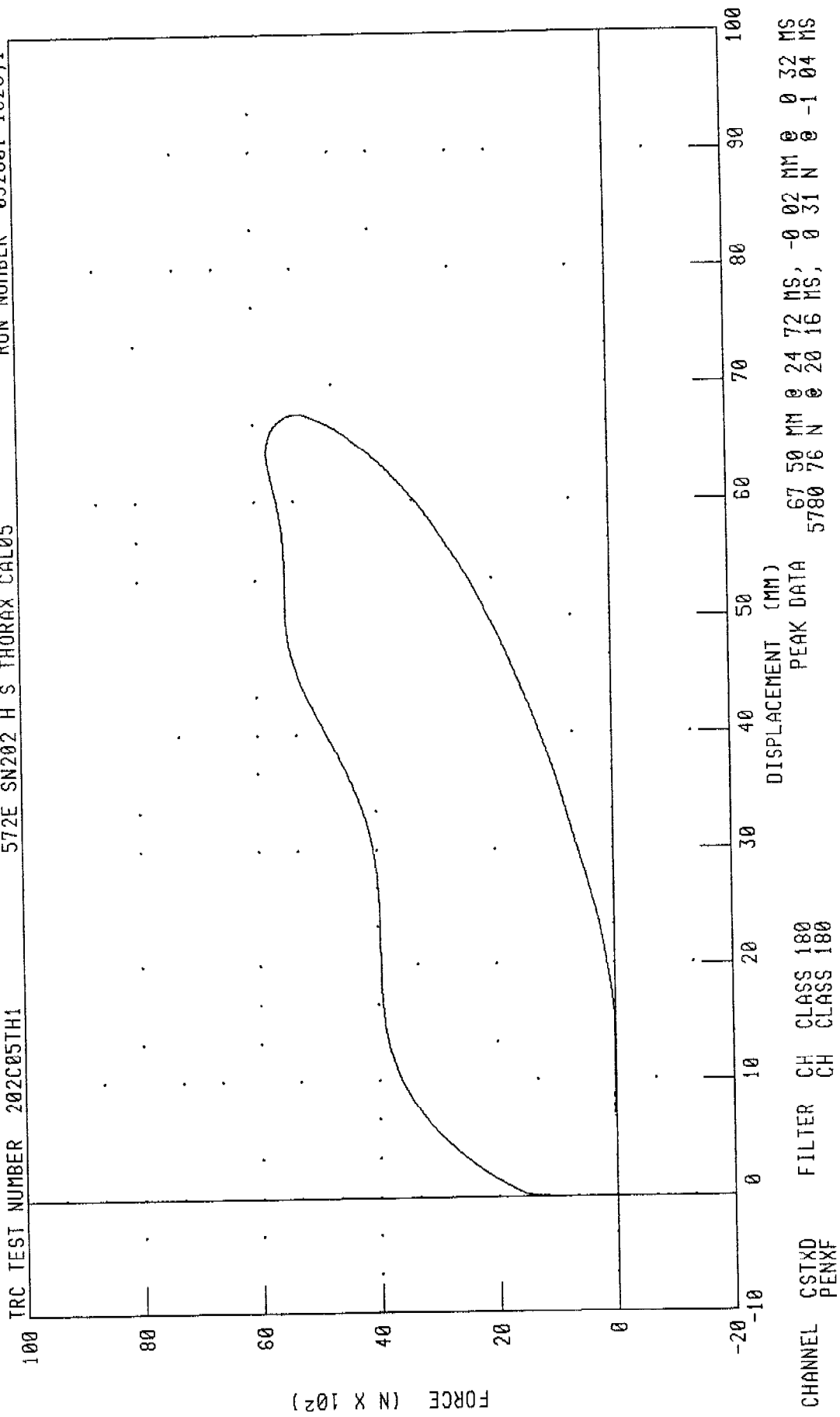


PART 572-E HYBRID III THORAX CALIBRATION
CHEST DISPLACEMENT VS PENDULUM FORCE

TRC TEST NUMBER 202005TH1

572E SN202 H S THORAX CAL05

RUN NUMBER 092601 1620,1



Transportation Research Center Inc

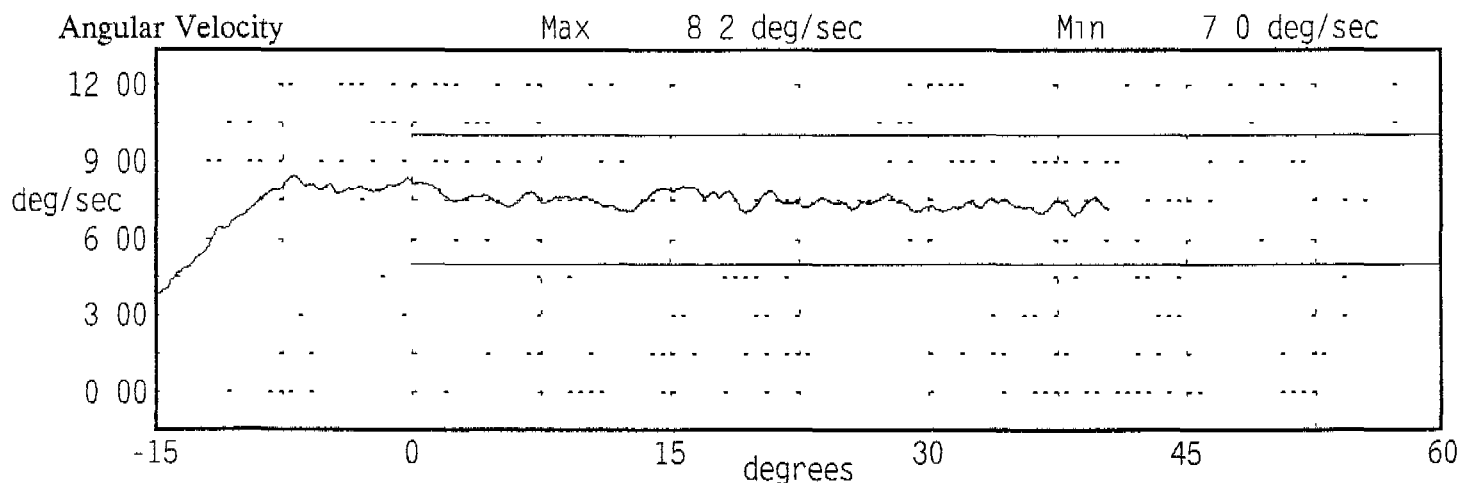
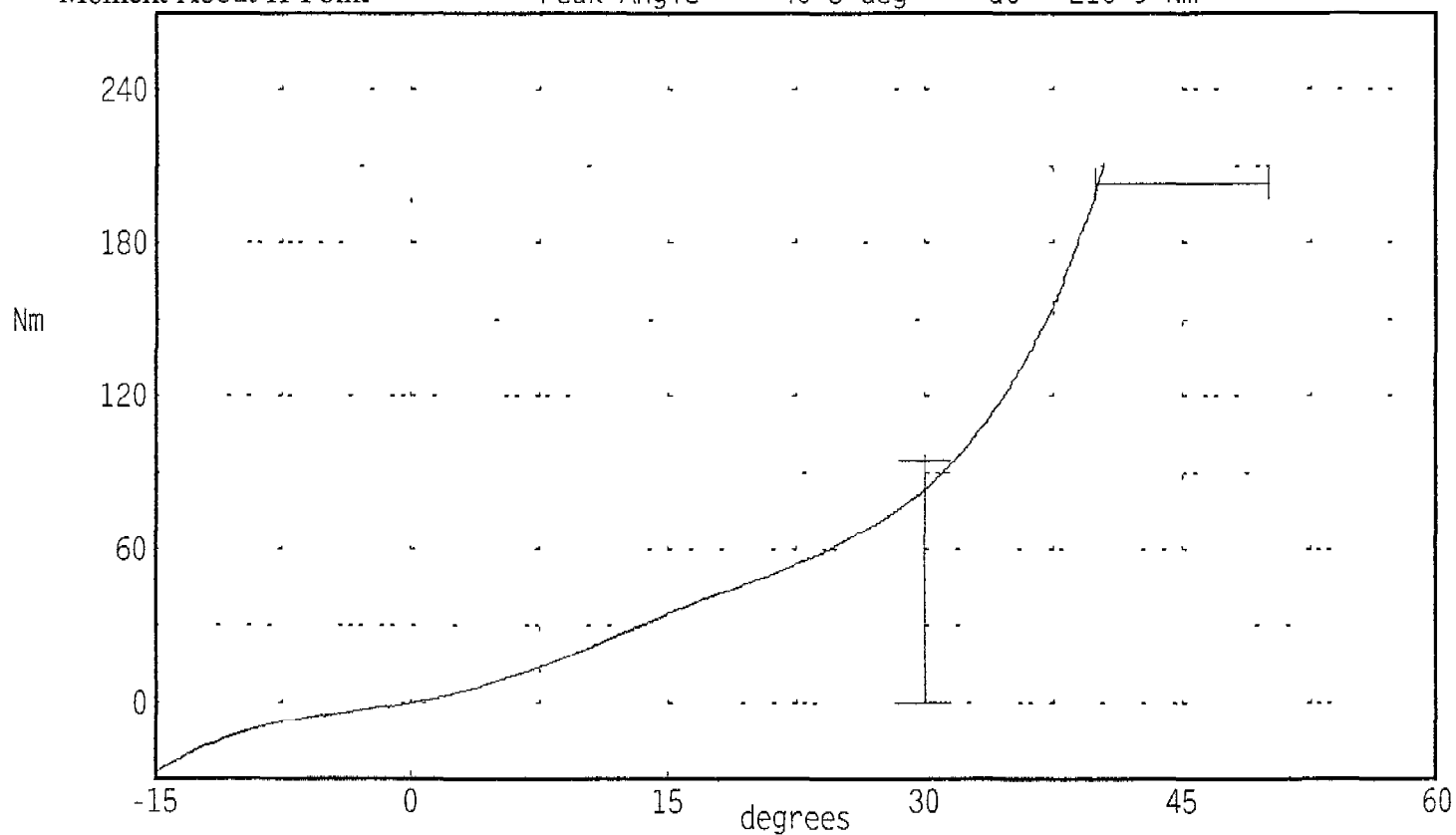
Hybrid III Hip Range of Motion

Serial Number 202L
Test Number. 202C05
Comments:

Date: 09/25/2001
Time: 08:42

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	18.9 - 25.6	20.6 °C Pass
Humidity	10 - 70	43 % Pass
Moment at 30 deg	<= 94.9	83.4 Nm Pass
Angle at 203 Nm	40.0 - 50.0	40.1 deg Pass
Average Velocity	5.0 - 10.0	7.5 deg/sec Pass

Moment About H-Point
Peak Moment 210.9 Nm at 40.5 deg
Peak Angle 40.5 deg at 210.9 Nm



Transportation Research Center Inc

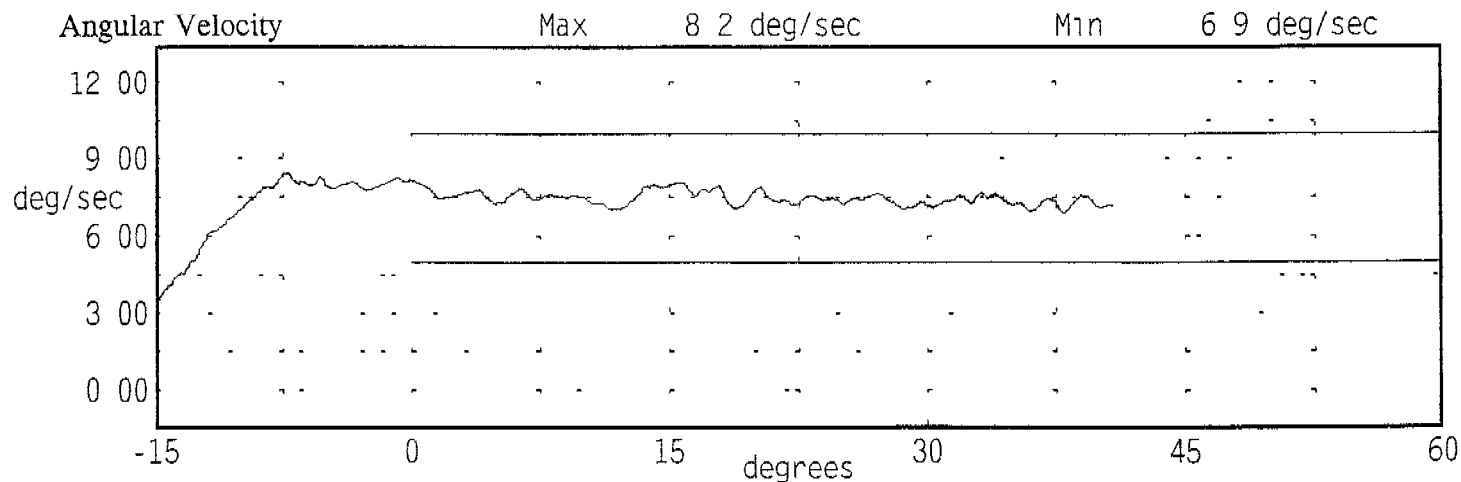
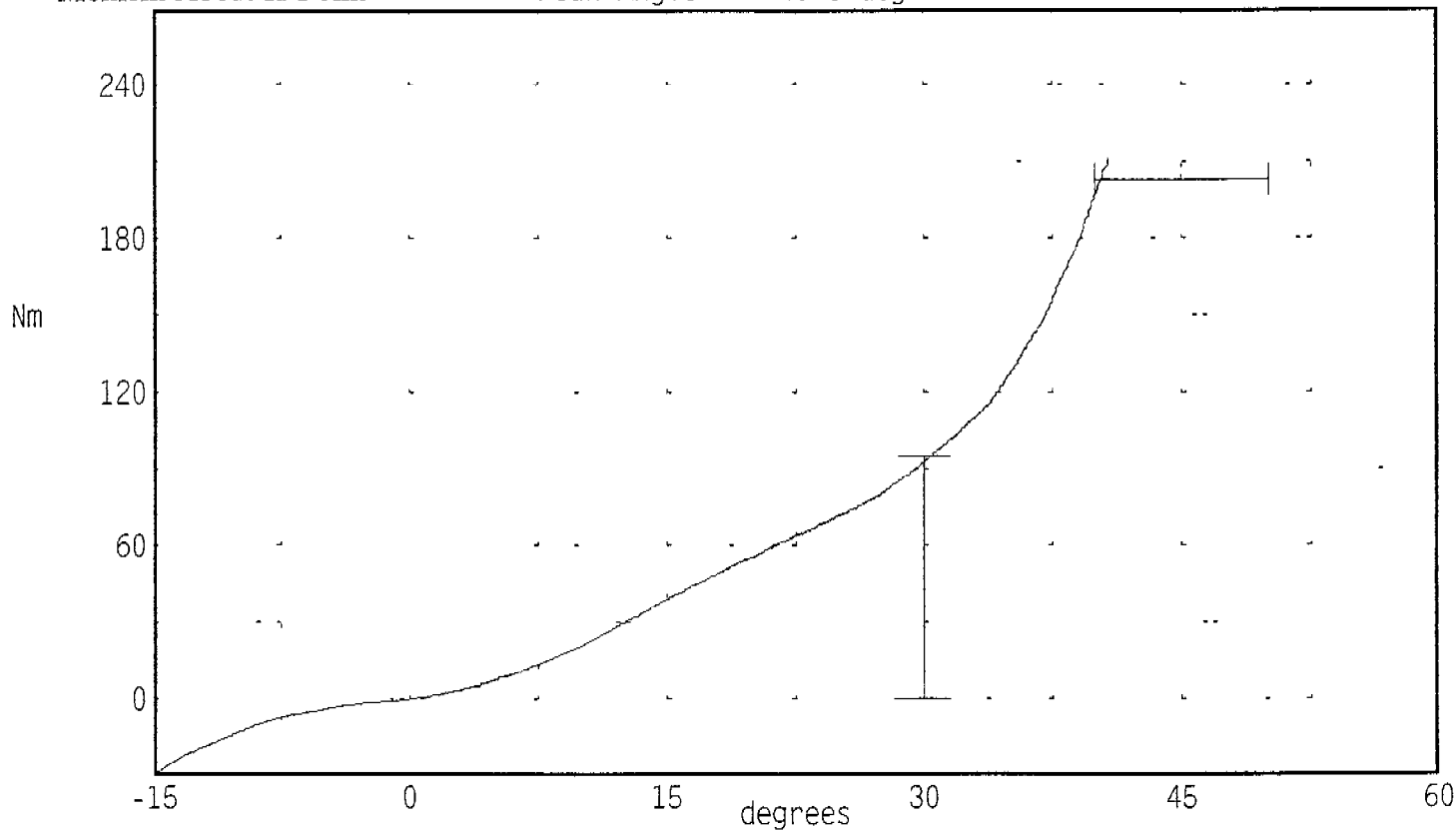
Hybrid III Hip Range of Motion

Serial Number 202R
Test Number 202C05
Comments

Date: 09/25/2001
Time: 08:50

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	18.9 - 25.6	20.6 °C Pass
Humidity	10 - 70	43 % Pass
Moment at 30 deg	<= 94.9	92.8 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 210.8 Nm at 40.8 deg
Peak Angle 40.8 deg at 210.8 Nm



TRANSPORTATION RESEARCH CENTER INC.

LEFT KNEE IMPACT TEST

HYBRID III 50th

25-SEP-01

TRC INC.

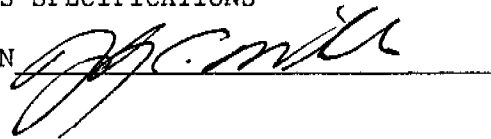
TEST NO: 202C05LK1

572E SN202 LEFT KNEE CAL 05

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.1 DEG. C
RELATIVE HUMIDITY	10 - 70 %	41.0 %
PROBE VELOCITY	2.07 - 2.13 M/S	2.13 M/S
PEAK KNEE IMPACT FORCE 5.0 KG PENDULUM	4715 - 5782 N	5301.2 N

TEST MEETS SPECIFICATIONS

TECHNICIAN



RUN NUMBER: 092501.1644;1

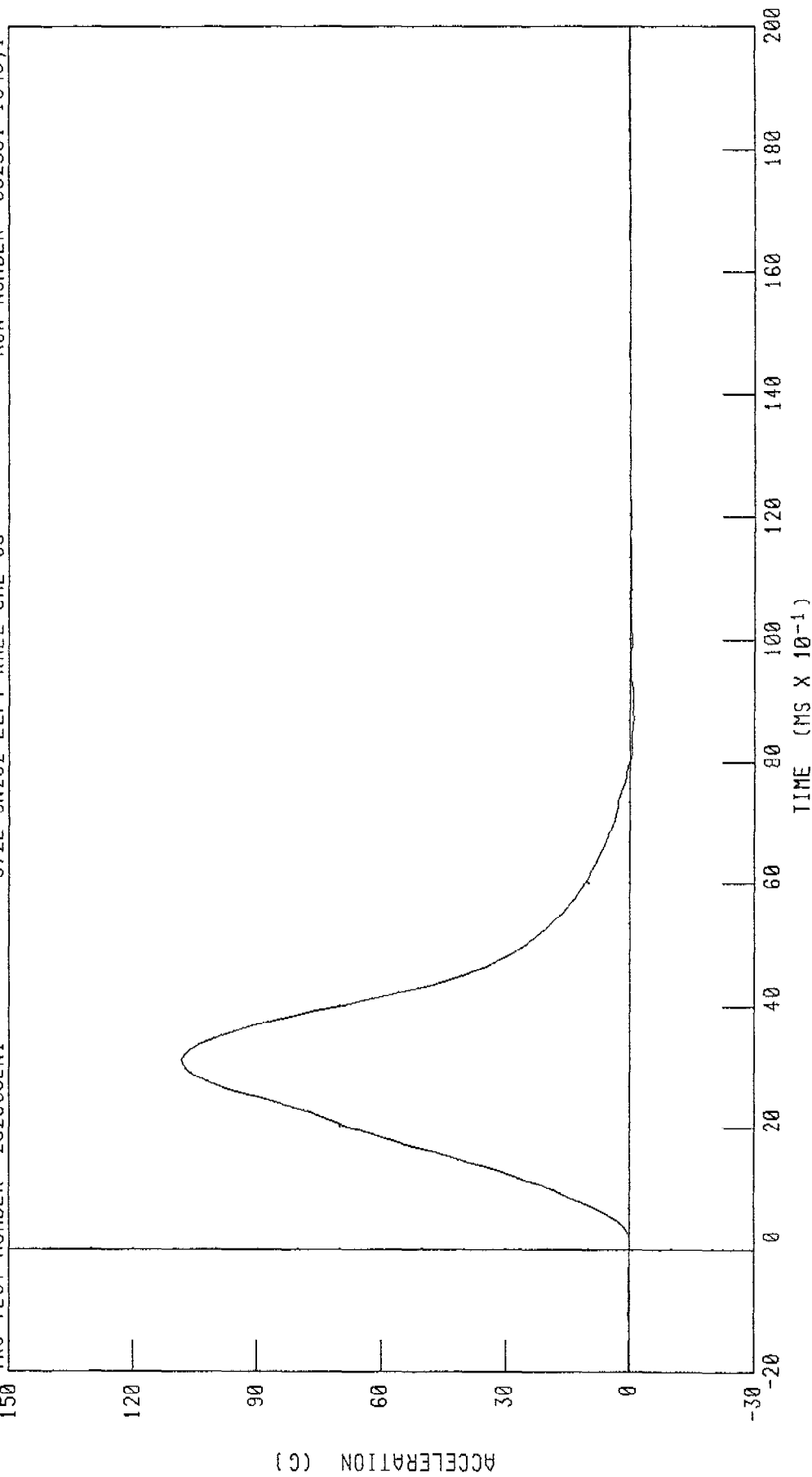
PART 572-E HYBRID [II LEFT KNEE CALIBRATION

PENDULUM DECELERATION (5 KG PEND)

TRC TEST NUMBER 202C05LK1

572E SN202 LEFT KNEE CAL 05

RUN NUMBER 092501 1645,1



CHANNEL PENXC FILTER CH CLASS 600 PEAK DATA 108 35 G 0 3 12 MS, -0 95 G 0 8 72 MS

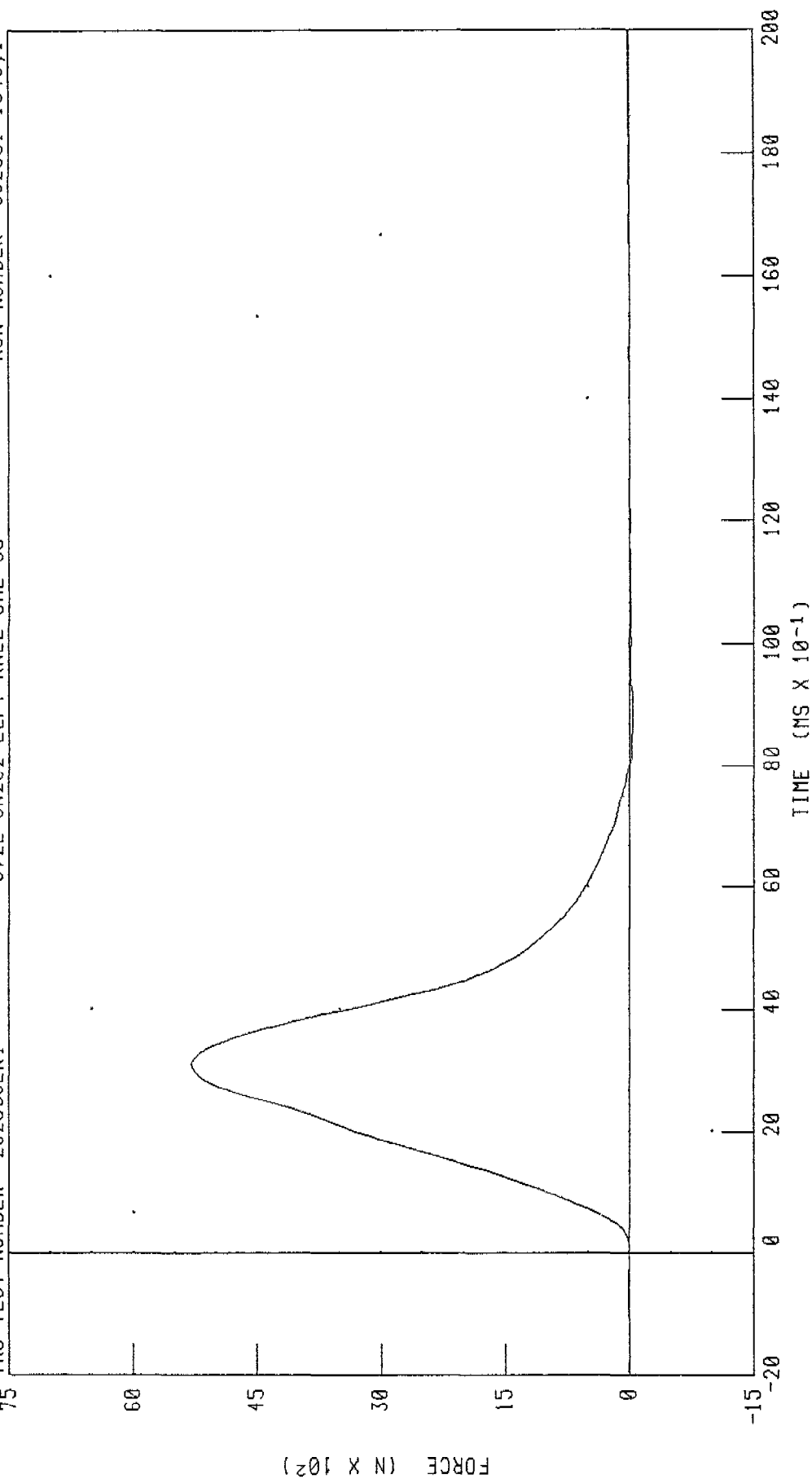
PART 572-E HYBRID III LEFT KNEE CALIBRATION

PENDULUM FORCE (5 KG PEND)

TRC TEST NUMBER 202C05LK1

572E SN202 LEFT KNEE CAL 05

RUN NUMBER 092501 1645,1



TIME (MS X 10⁻¹)

CHANNEL PENXF FILTER CH CLASS 600

PEAK DATA 5301 20 N 0 3 12 MS, -46 63 N 0 8 72 MS

TRANSPORTATION RESEARCH CENTER INC.

RIGHT KNEE IMPACT TEST

HYBRID III 50th

25-SEP-01

TRC INC.

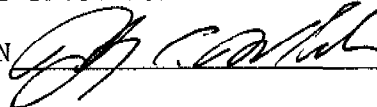
TEST NO: 202C05RK1

572E SN202 RIGHT KNEE CAL 05

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.1 DEG. C
RELATIVE HUMIDITY	10 - 70 %	41.0 %
PROBE VELOCITY	2.07 - 2.13 M/S	2.13 M/S
PEAK KNEE IMPACT FORCE 5.0 KG PENDULUM	4715 - 5782 N	5696.4 N

TEST MEETS SPECIFICATIONS ✓

TECHNICIAN



RUN NUMBER: 092501.1645;1

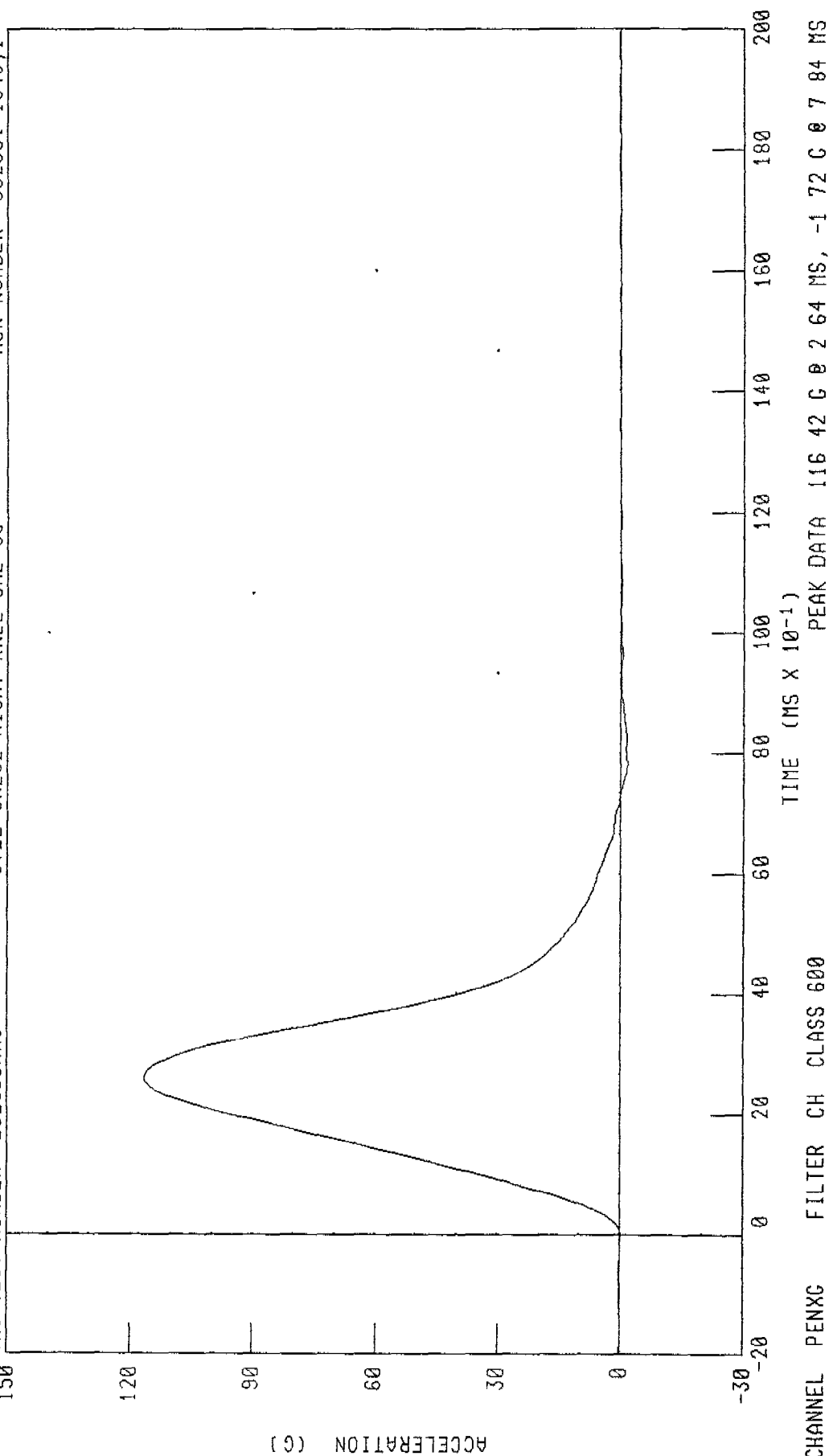
PART 572-E HYBRID III RIGHT KNEE CALIBRATION

PENDULUM DECELERATION (5 KG PEND)

TRC TEST NUMBER 202C05RK1

572E SN202 RIGHT KNEE CAL 05

RUN NUMBER 092501 1646,1



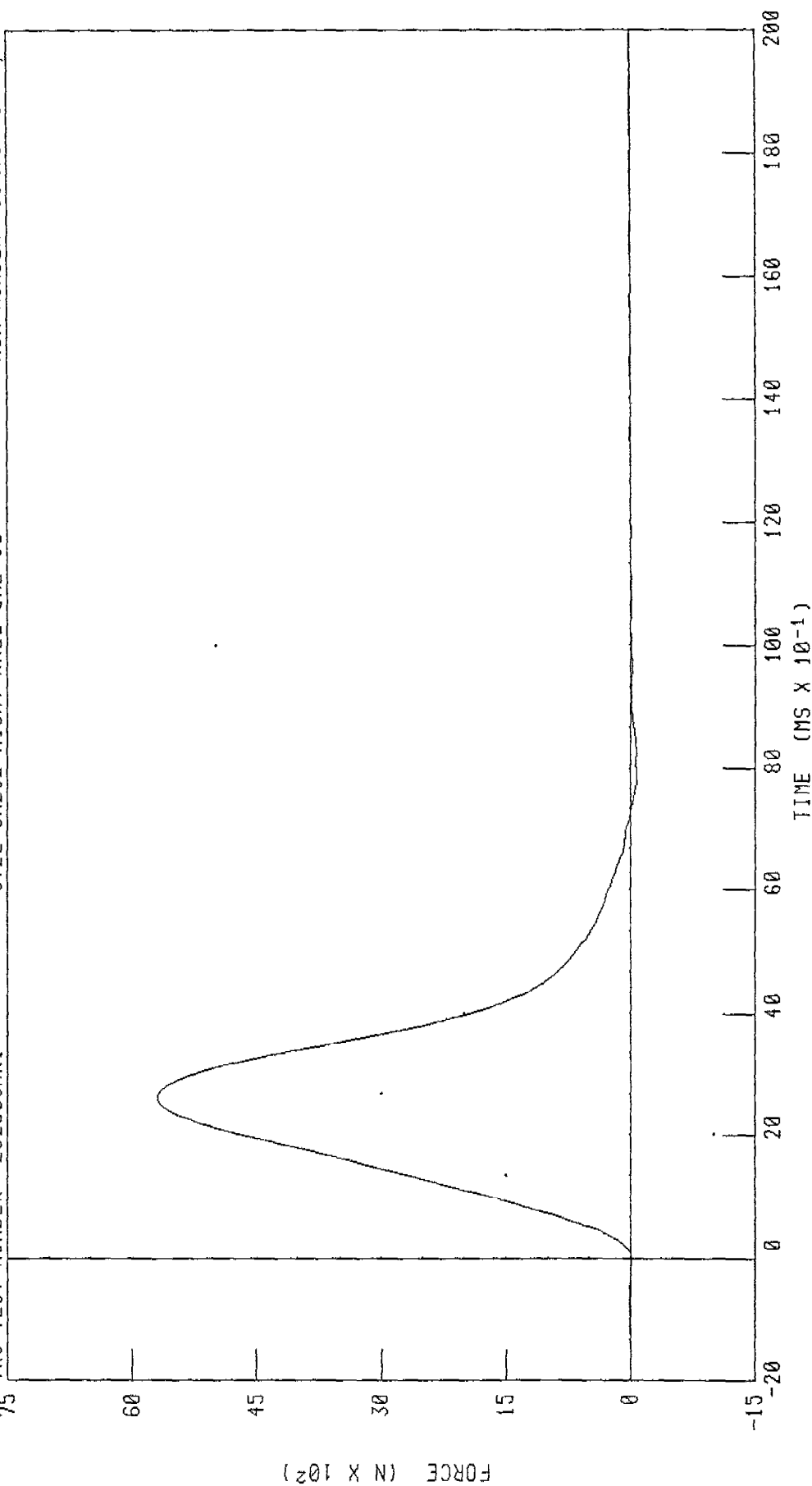
PART 572-E HYBRID III RIGHT KNEE CALIBRATION

PENDULUM FORCE (5 KG PEND)

TRC TEST NUMBER 202C05RK1

572E SN202 RIGHT KNEE CAL 05

RUN NUMBER 092501 1648,1



CHANNEL PENXF FILTER CH CLASS 600

PEAK DATA 5696 42 N 0 2 64 MS, -84 35 N 0 7 84 MS

TRANSPORTATION RESEARCH CENTER INC.

KNEE SLIDER TEST

HYBRID III 50th

26-SEP-01

LEFT KNEE
TRC INC.

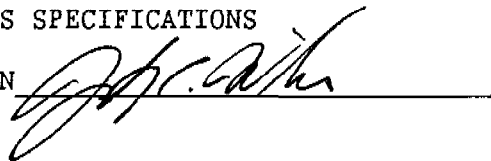
TEST NO: 202C05LS1

572E SN202 LEFT SLIDER CAL 05

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	36.0 %
PENDULUM VELOCITY	2.70-2.80 M/S	2.76 M/S
FORCE AT 10.0 MM DISPLACEMENT	1259 - 1721 N	1429. N
FORCE AT 18.0 MM DISPLACEMENT	2268 - 3096 N	2615. N

TEST MEETS SPECIFICATIONS

TECHNICIAN

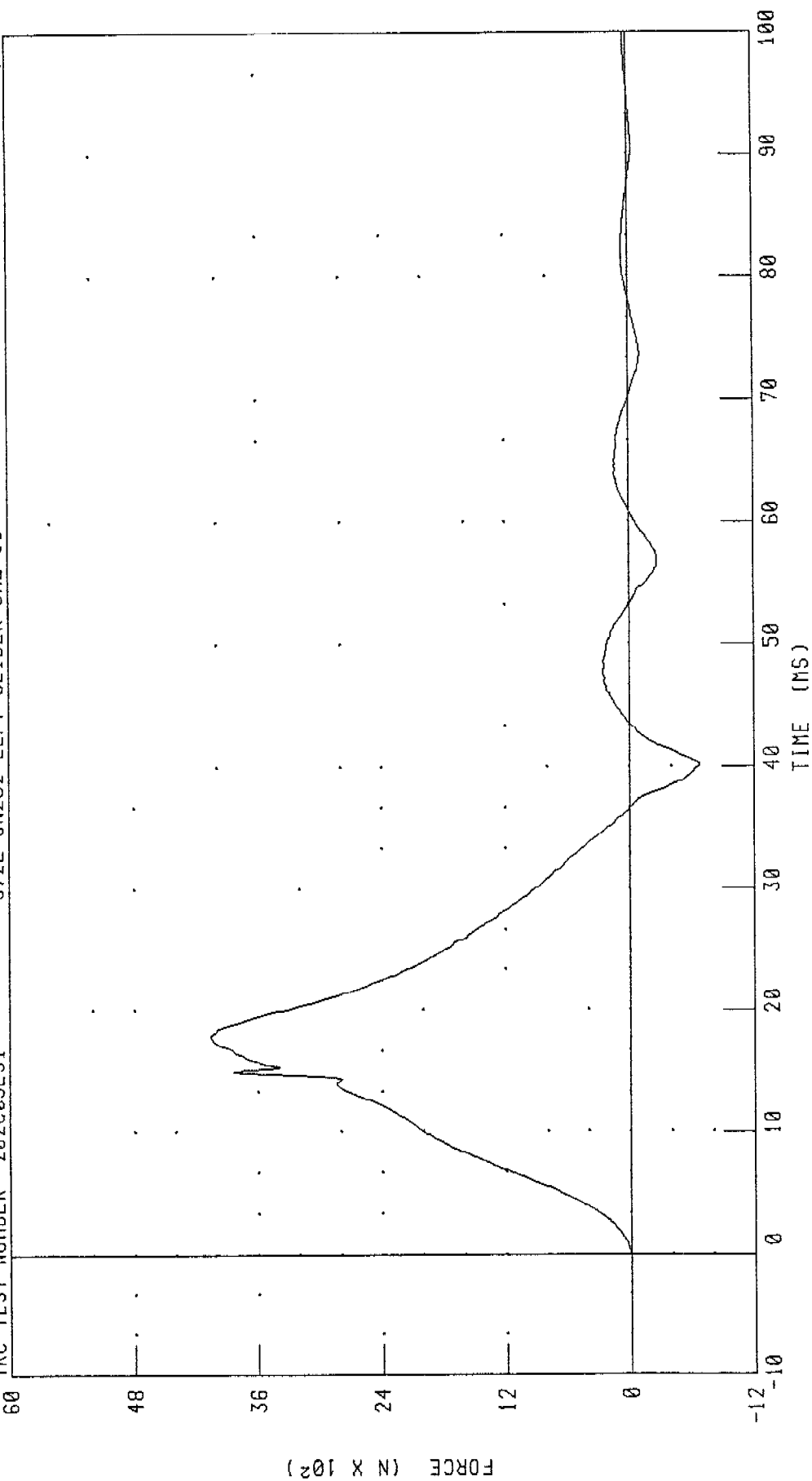


RUN NUMBER: 092601.1412;1

PART 572-E HYBRID III LEFT KNEE SLIDER CALIBRATION

LEFT FEMUR FORCE

TRC TEST NUMBER 202C05LS1 572E SN202 LEFT SLIDER CAL 05 RUN NUMBER 092601 1413,1

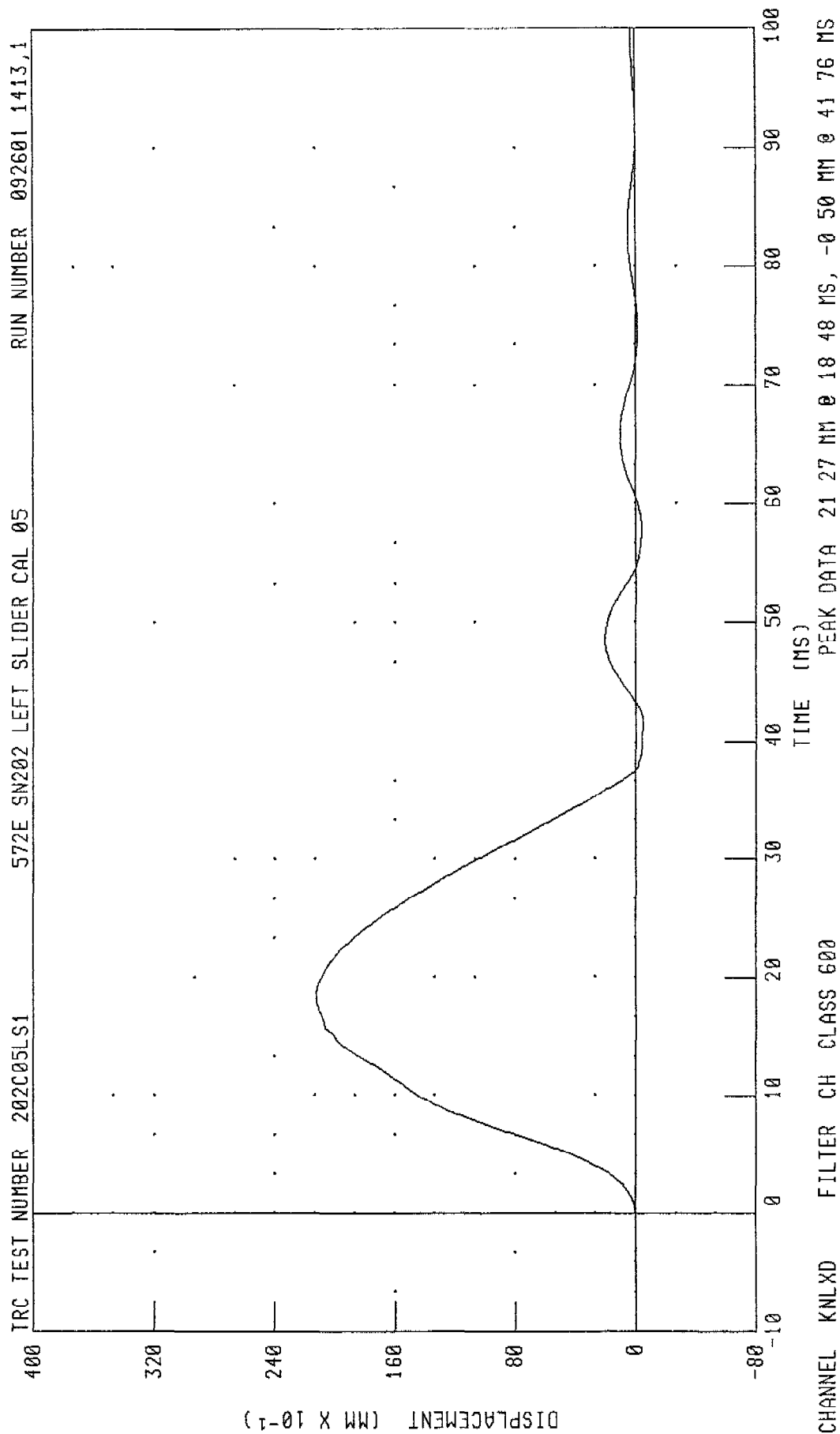


PEAK DATA 4064 40 N @ 17 92 MS, -675 74 N @ 40 16 MS

CHANNEL LFMF FILTER CH CLASS 600

PART 572-E HYBRID III LEFT KNEE SLIDER CALIBRATION

LEFT KNEE DISPLACEMENT



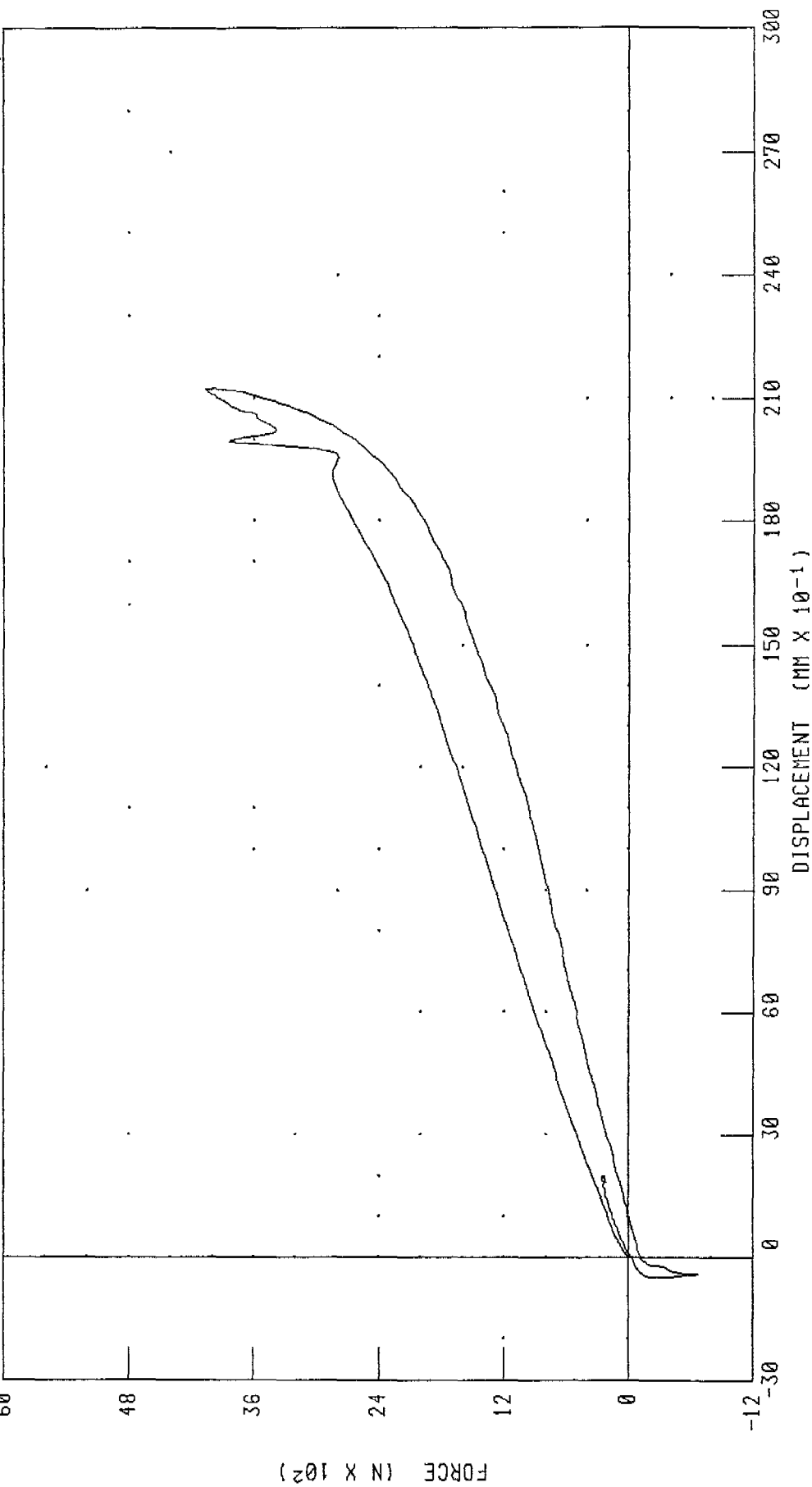
PART 572-E HYBRID III LEFT KNEE SLIDER CALIBRATION

LEFT KNEE DISPLACEMENT VS FEMUR FORCE

TRC TEST NUMBER 202C05LS1

572E SN202 LEFT SLIDER CAL 05

RUN NUMBER 092601 1413,1



CHANNEL KNLXD
LFHF

FILTER CH CLASS 600
CH CLASS 600

DISPLACEMENT (MM X 10⁻¹)

PEAK DATA 21 27 MM @ 18 48 MS, -0 50 MM @ 41 76 MS
4064 40 N @ 17 92 MS, -675 74 N @ 40 16 MS

TRANSPORTATION RESEARCH CENTER INC.

KNEE SLIDER TEST

HYBRID III 50th

26-SEP-01

RIGHT KNEE

TRC INC.

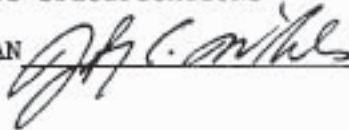
TEST NO: 202C05RS1

572E SN202 RIGHT SLIDER CAL 05

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	36.0 %
PENDULUM VELOCITY	2.70-2.80 M/S	2.70 M/S
FORCE AT 10.0 MM DISPLACEMENT	1259 - 1721 N	1273. N
FORCE AT 18.0 MM DISPLACEMENT	2268 - 3096 N	2307. N

TEST MEETS SPECIFICATIONS

TECHNICIAN



RUN NUMBER: 092601.1443;1

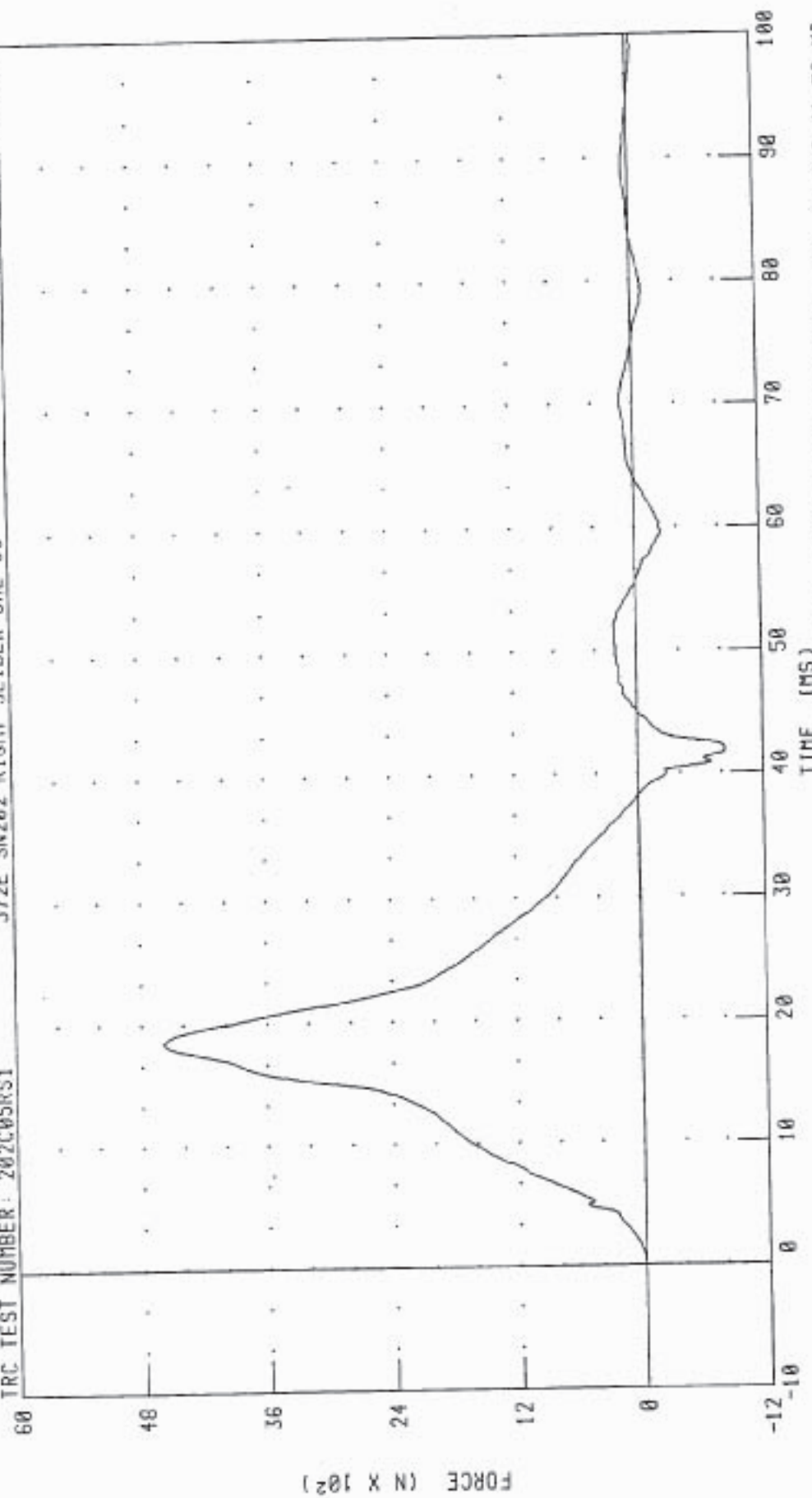
PART 572-E HYBRID III RIGHT KNEE SLIDER CALIBRATION

RIGHT FEMUR FORCE

RUN NUMBER: 092601.1444;1

572E SN282 RIGHT SLIDER CAL 05

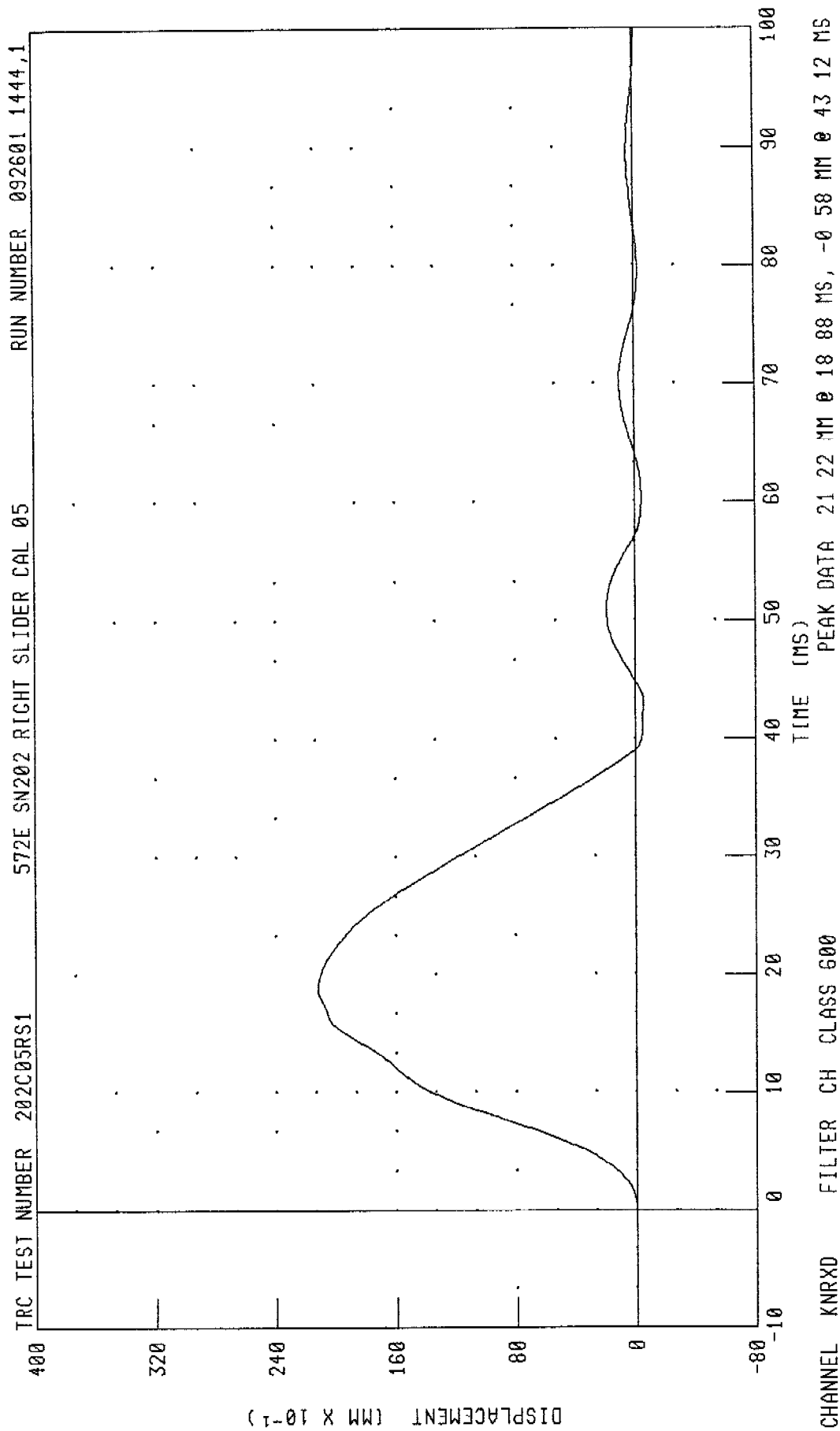
TRC TEST NUMBER: 202C05RS1



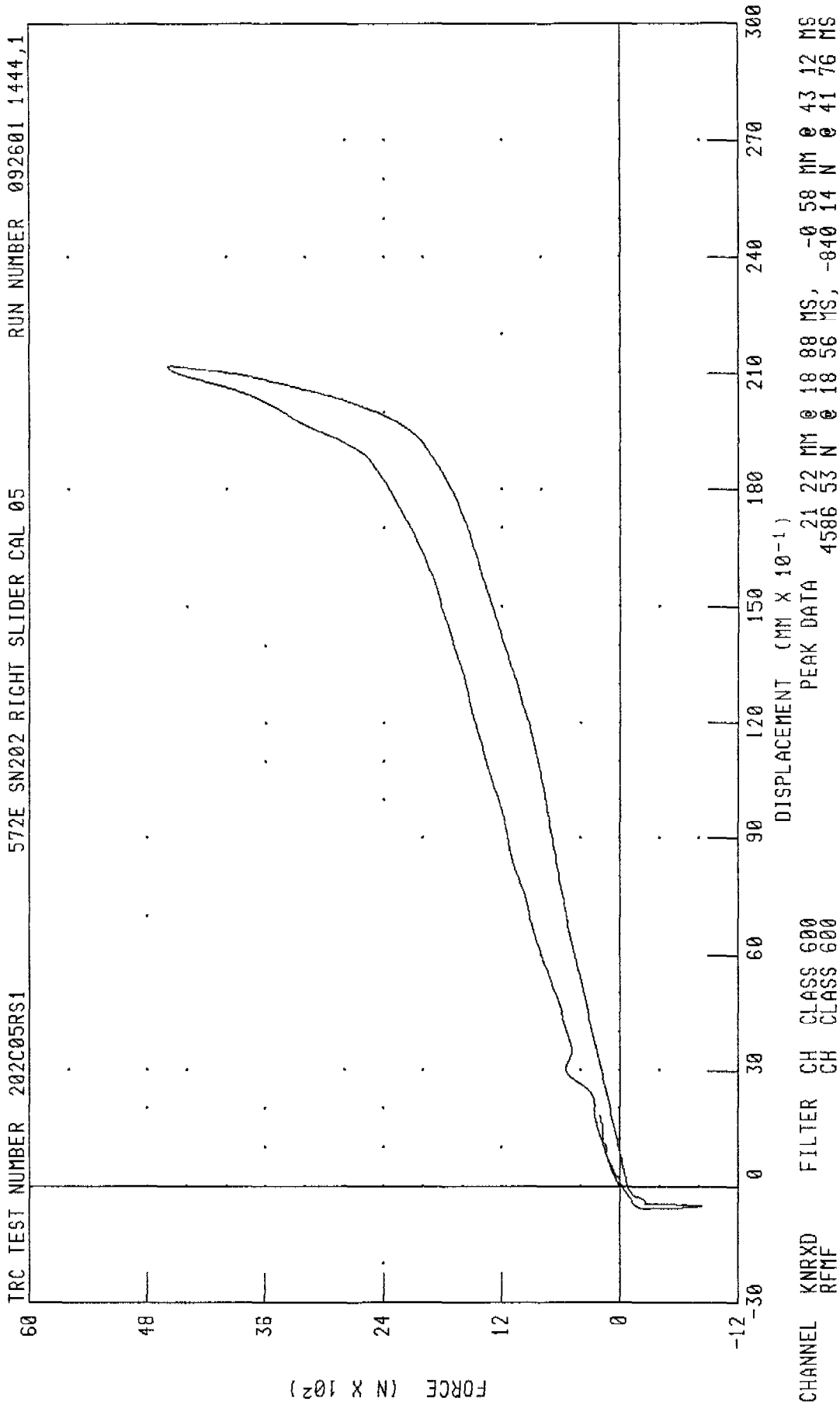
CHANNEL: RFMF FILTER: CH, CLASS 600

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

Driver Dummy S/N: 206

TRANSPORTATION RESEARCH CENTER INC.
HYBRID III EXTERNAL DIMENSIONS

206

04-OCT-01

TRC INC. TEST NO: 206C05ED1 572E SN206 EXT.DIMENSION CAL05

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	84. 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	145. MM
BUTTOCK KNEE LENGTH (K)		579 - 605 MM	587. MM
BUTTOCK POPLITEAL LENGTH (N)		452 - 478 MM	472. MM
POPLITEAL HEIGHT (L)		429 - 455 MM	445. MM
KNEE PIVOT HEIGHT (M)		485 - 500 MM	498. 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	437. MM
SHOULDER PIVOT HEIGHT (B)		506 - 521 MM	521. MM
ELBOW REST HEIGHT (J)		191 - 211 MM	206. MM
SHOULDER-ELBOW LENGTH (I)		330 - 345 MM	343. MM
BACK OF ELBOW TO WRIST PIVOT (G)		290 - 305 MM	297. MM

572E SN206 EXT.DIMENSION CAL05

DUMMY MEETS SPECIFICATIONS

TECHNICIAN 

RUN NUMBER: 100501.1317

TRANSPORTATION RESEARCH CENTER INC.

HEAD DROP TEST

HYBRID III 50th

03-OCT-01

TRC INC.

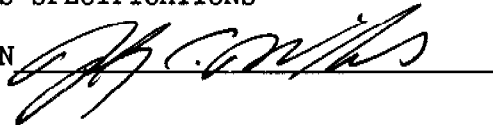
TEST NO: 206C05HD1

572E SN206 HEAD DROP CAL 05

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	53.0 %
PEAK RESULTANT ACCELERATION	225 - 275 G	272.22 G
PEAK LATERAL ACCELERATION	15 G MAX	-2.81 G
IS ACCELERATION CURVE UNIMODAL?	YES	YES

TEST MEETS SPECIFICATIONS

TECHNICIAN



RUN NUMBER: 100301.1349;3

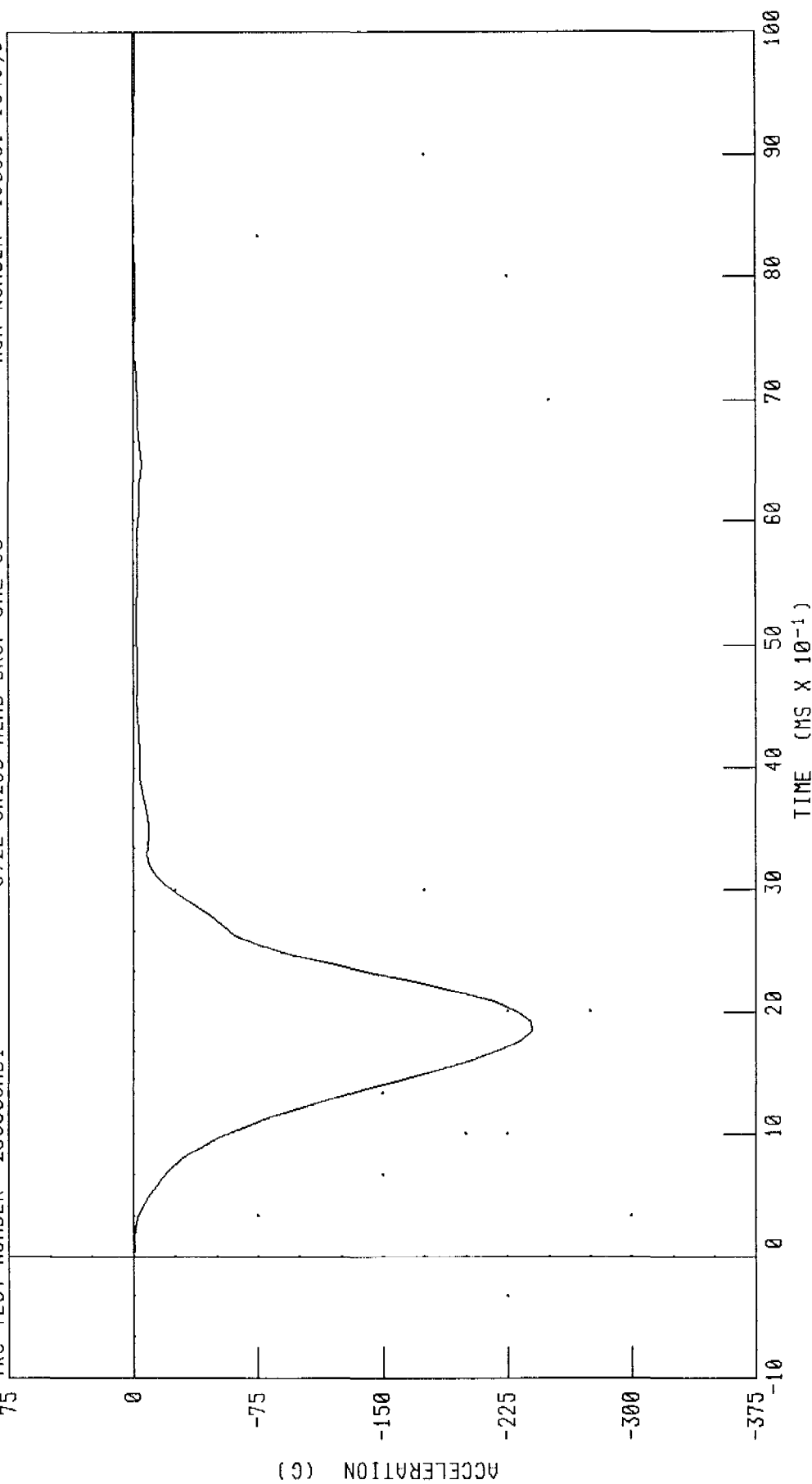
PART 572-E HYBRID III HEAD CALIBRATION

HEAD ACCELERATION X AXIS

TRC TEST NUMBER 206C05HD1

572E SN206 HEAD DROP CAL 05

RUN NUMBER 100301 1349,3



CHANNEL HEDXC FILTER CH CLASS 1000

PEAK DATA 0 44 G 0 8 96 MS, -239 72 G 0 1 84 MS

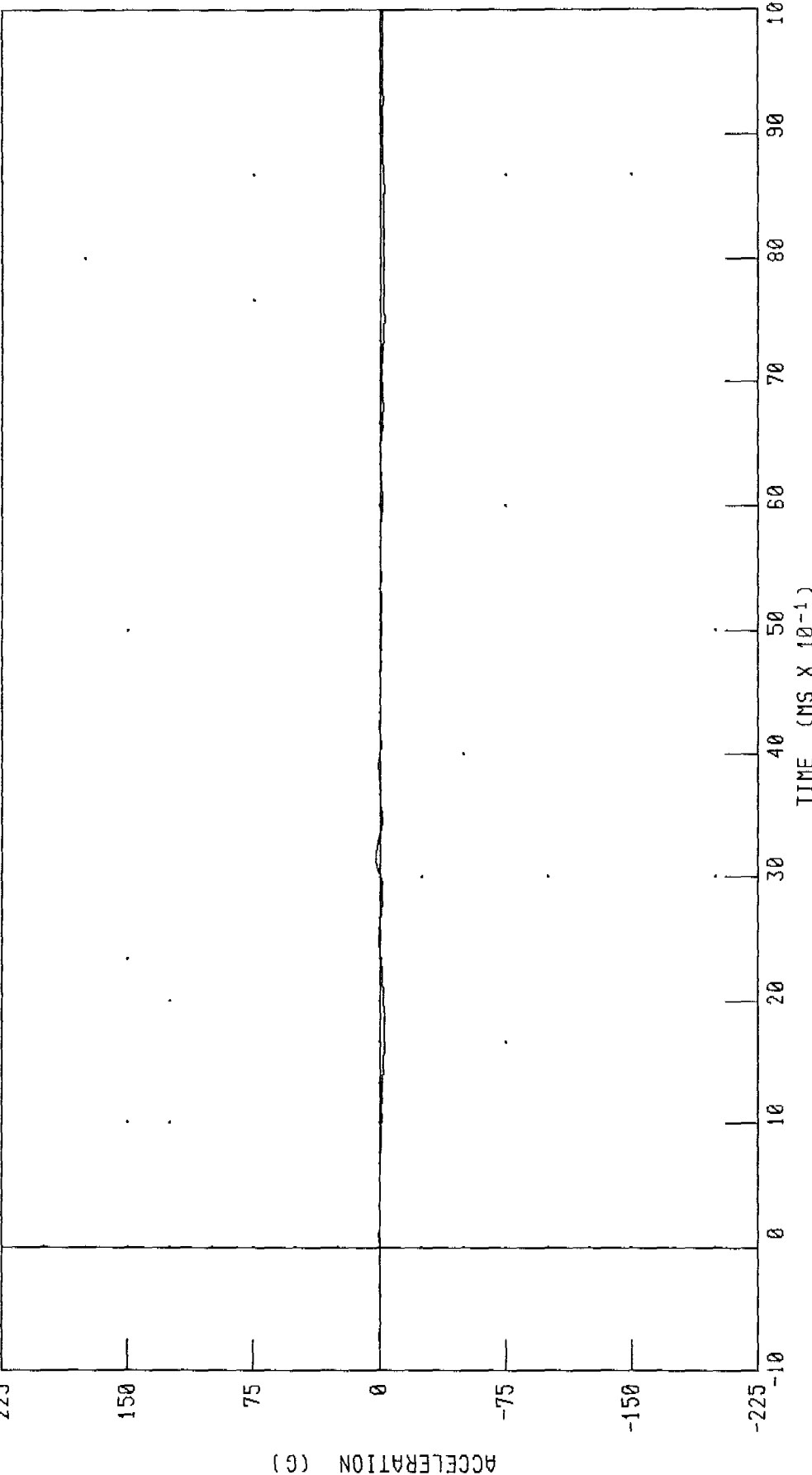
PART 572-E HYBRID III HEAD CALIBRATION

HEAD ACCELERATION Y AXIS

TRC TEST NUMBER 206C05HD1

572E SN206 HEAD DROP CAL 05

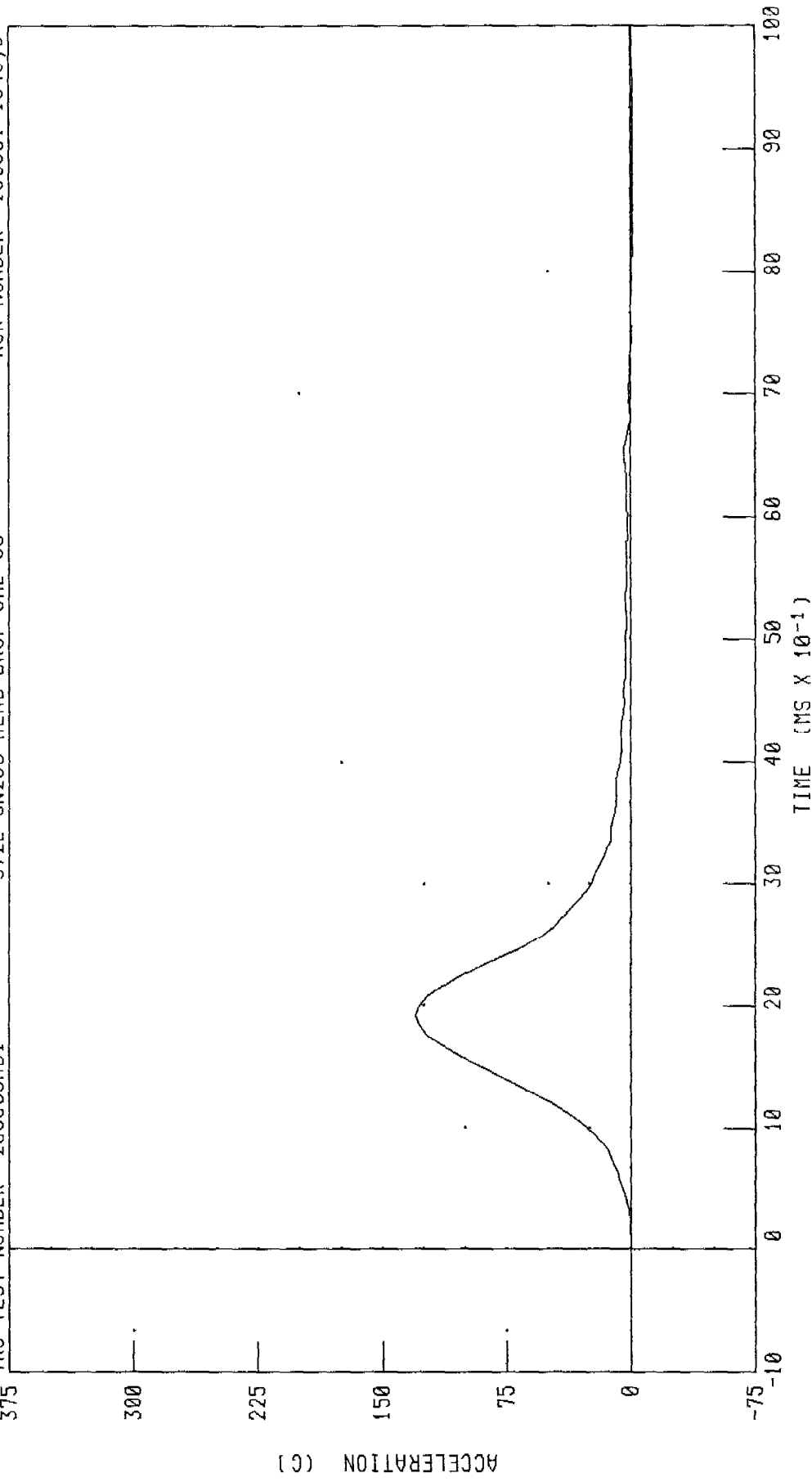
RUN NUMBER 100301 1349,3



CHANNEL HEDYG FILTER CH CLASS 1000

PEAK DATA 2 35 G 0 3 20 MS, -2 82 G 0 1 76 MS

275



PEAK DATA	129	74	C @ 1	92 MS,	-1	58 C @ 8	64 MS
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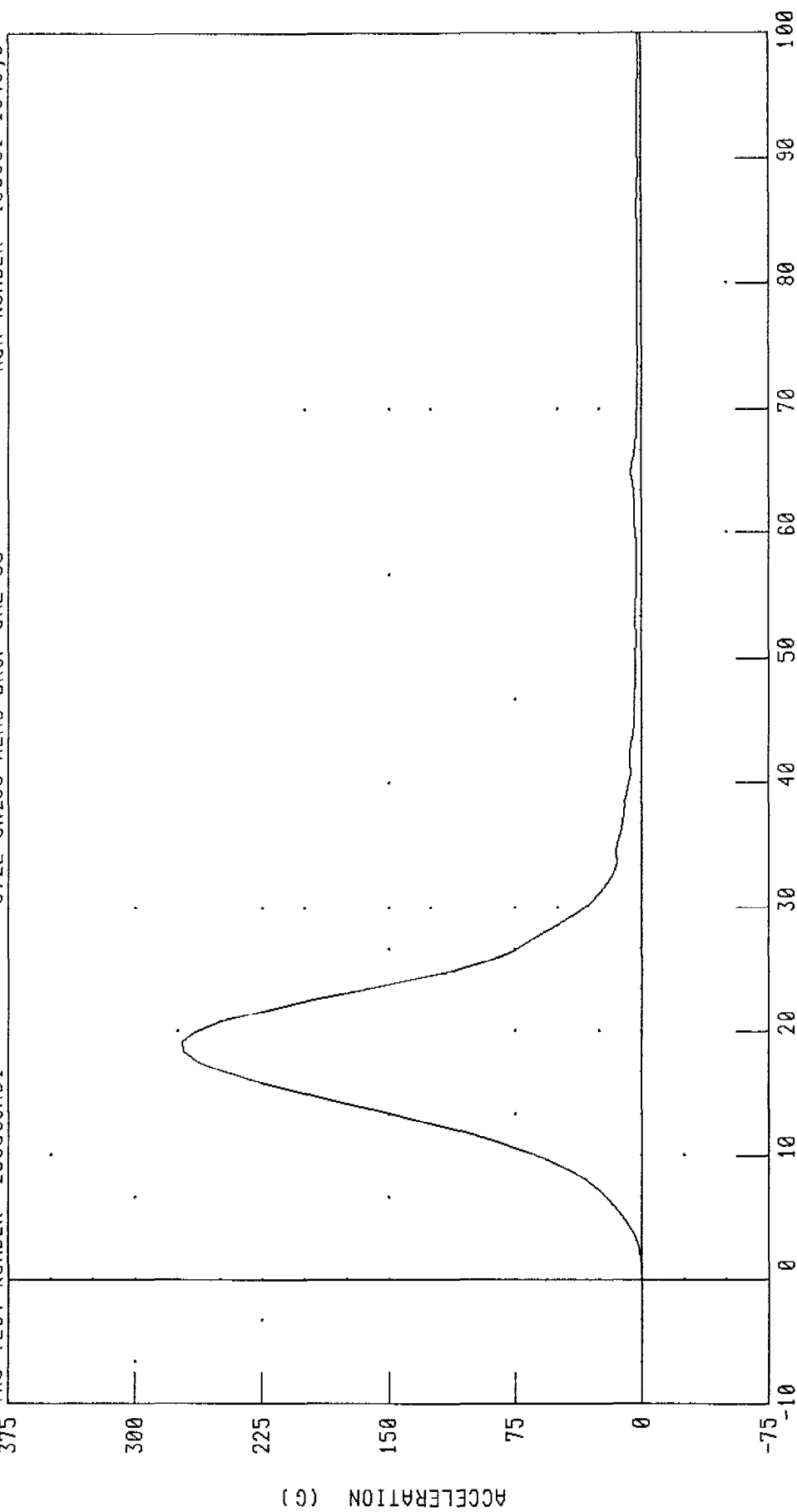
PART 572-E HYBRID III HEAD CALIBRATION

HEAD RESULTANT ACCELERATION

572E SN206 HEAD DROP CAL 05

TRC TEST NUMBER 206C05HD1

RUN NUMBER 100301 1349,3



TIME (MS X 10⁻¹)

CHANNEL HEDRC FILTER CH CLASS 1000

PEAK DATA 272 22 G 0 1 92 MS, 0 03 G 0 -0 96 MS

TRANSPORTATION RESEARCH CENTER INC.

HYBRID III 50th

03-OCT-01

NECK FLEXION TEST - 6 CHANNEL TRANSDUCER

TRC INC.

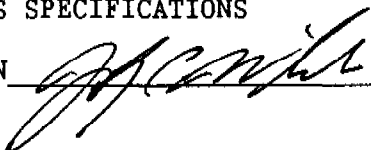
TEST NO: 206C05NF2

572E SN206 NECK FLEXION CAL05

TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE		20.6-22.2 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY		10 - 70 %	53.0 %
IMPACT VELOCITY		6.89 - 7.13 M/S	6.99 M/S
PENDULUM DECELERATION	10 MS	22.50 - 27.50 G	22.62 G
	20 MS	17.60 - 22.60 G	21.18 G
	30 MS	12.50 - 18.50 G	16.38 G
MAX PENDULUM G		29 G MAX	23.00 G
MAX PENDULUM G ABOVE 30 MS		29 G MAX	16.30 G
DECELERATION-TIME CURVE DECAY TIME TO 5 G		34 - 42 MS	41.84 MS
D PLANE	MAX	64 - 78 DEG.	72.90 DEG.
ROTATION	TIME	57 - 64 MS	63.60 MS
MOMENT ABOUT OCCIPITAL CONDYLE	MAX	88.2 - 108.5 NM	98.15 NM
	TIME	47 - 58 MS	55.52 MS
ROTATION ANGLE-TIME CURVE DECAY TIME TO ZERO		113 - 128 MS	121.52 MS
POSITIVE MOMENT-TIME CURVE DECAY TIME TO ZERO		97 - 107 MS	104.24 MS

TEST MEETS SPECIFICATIONS

TECHNICIAN



RUN NUMBER: 100301.1046;1

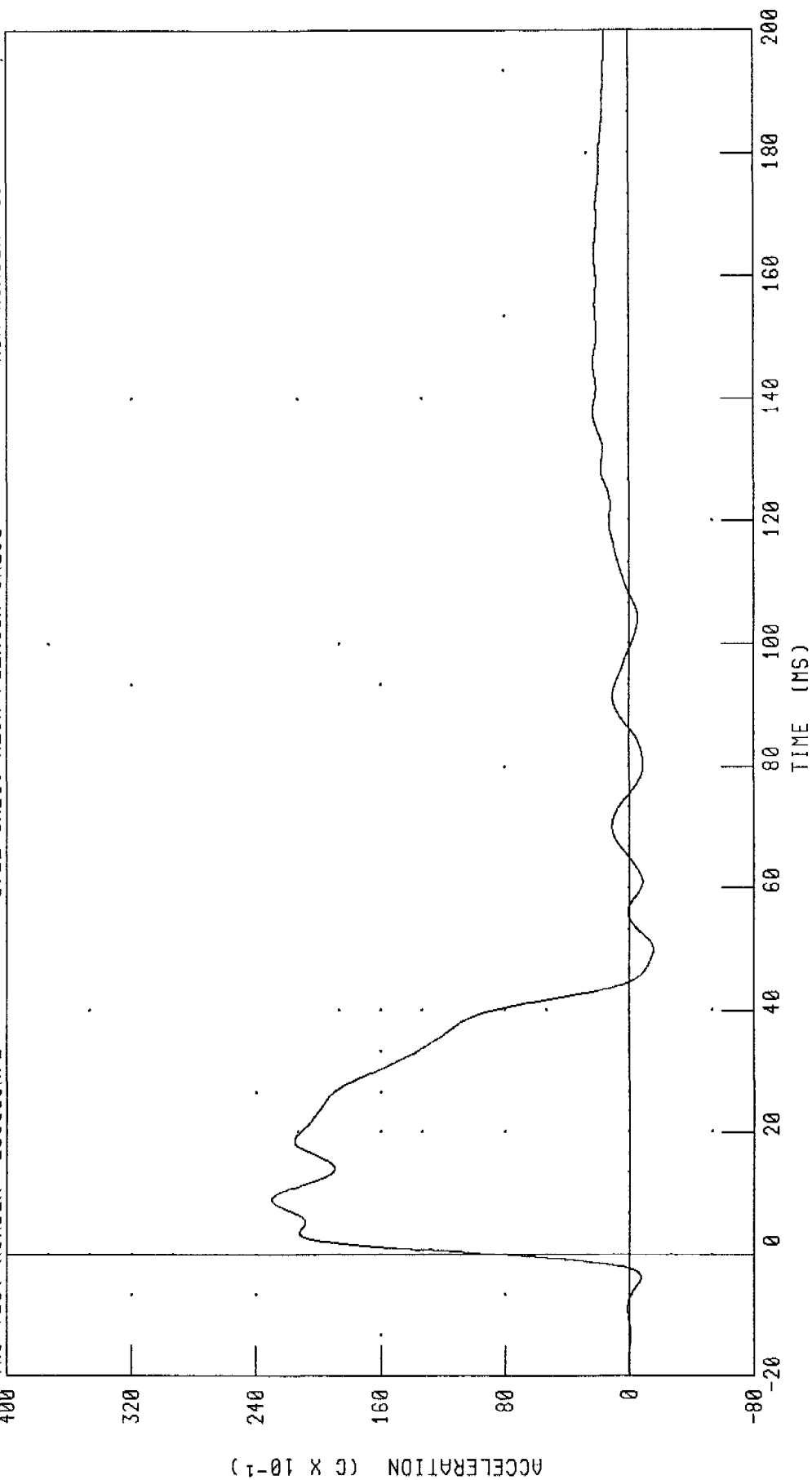
PART 572-E HYBRID III NECK FLEXION CALIBRATION

PENDULUM DECELERATION

TRC TEST NUMBER 206C05NF2

572E SN206 NECK FLEXION CAL05

RUN NUMBER 100301 1046,1



PEAK DATA 23 00 C 0 9 04 MS, -1 55 C 0 50 00 MS

CHANNEL PENXC FILTER CH CLASS 60

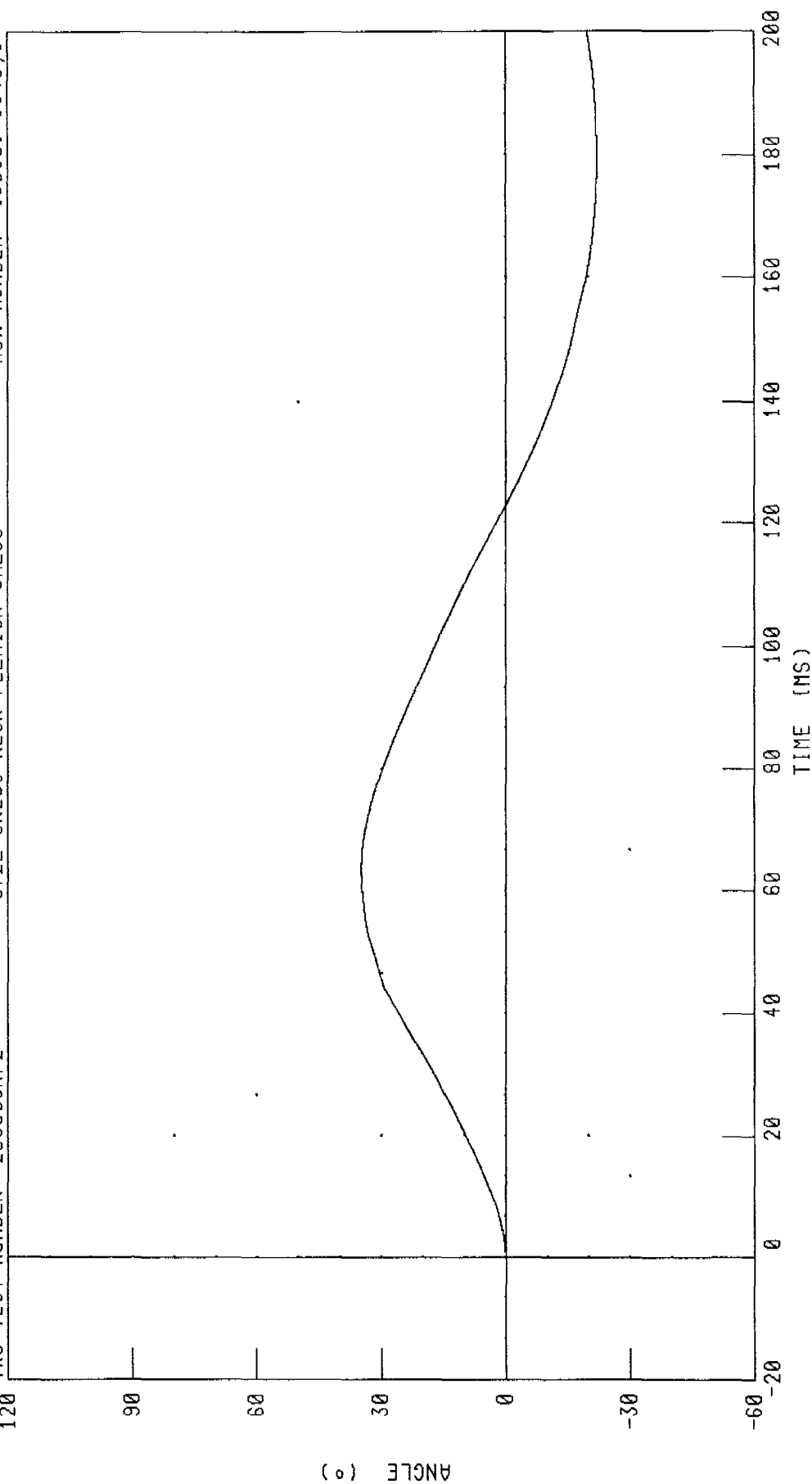
PART 572-E HYBRID III NECK FLEXION CALIBRATION

ROTATION ABOUT BASE OF NECK

TRC TEST NUMBER 206C05NF2

572E SN206 NECK FLEXION CAL05

RUN NUMBER 100301 1046,1



CHANNEL BETA FILTER CH CLASS 60 PEAK DATA 34 87 ° @ 63 60 MS, -22 10 ° @ 179 28 MS

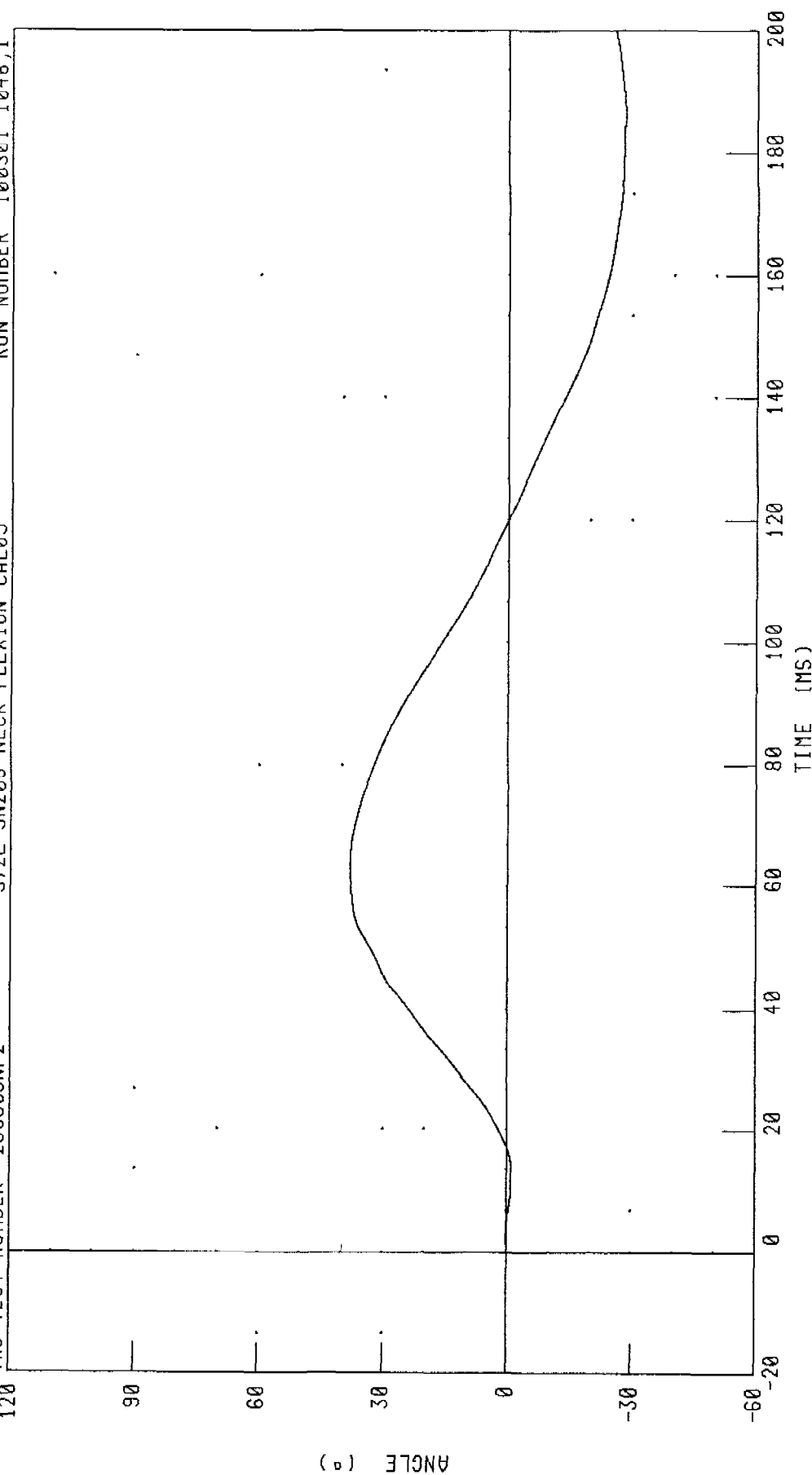
PART 572-E HYBRID III NECK FLEXION CALIBRATION

ROTATION ABOUT OCCIPITAL CONDYLE

TRC TEST NUMBER 206C05NF2

572E SN206 NECK FLEXION CAL05

RUN NUMBER 100301 1046,1



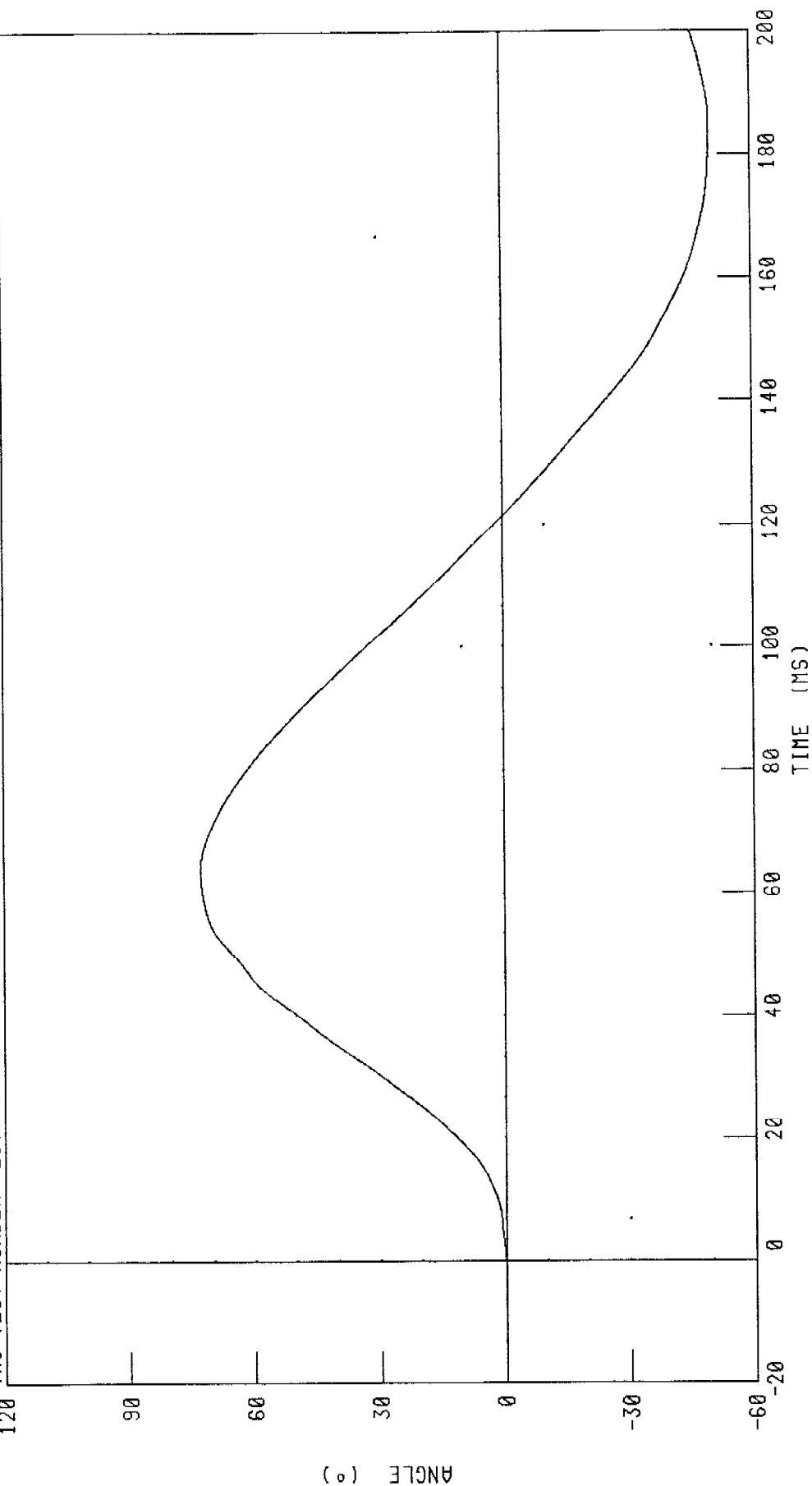
PEAK DATA 38 03 ° 0 63 52 MS, -28 19 ° 0 186 08 MS

CHANNEL THETA FILTER CH CLASS 60

PART 572-E HYBRID III NECK FLEXION CALIBRATION

TOTAL ROTATION

TRC TEST NUMBER 206C05NF2 572E SN206 NECK FLEXION CAL05 RUN NUMBER 100301 1046,1



CHANNEL TOTAL FILTER CH CLASS 60

PEAK DATA 72 90 ° 0 63 60 MS, -50 18 ° 0 184 88 MS

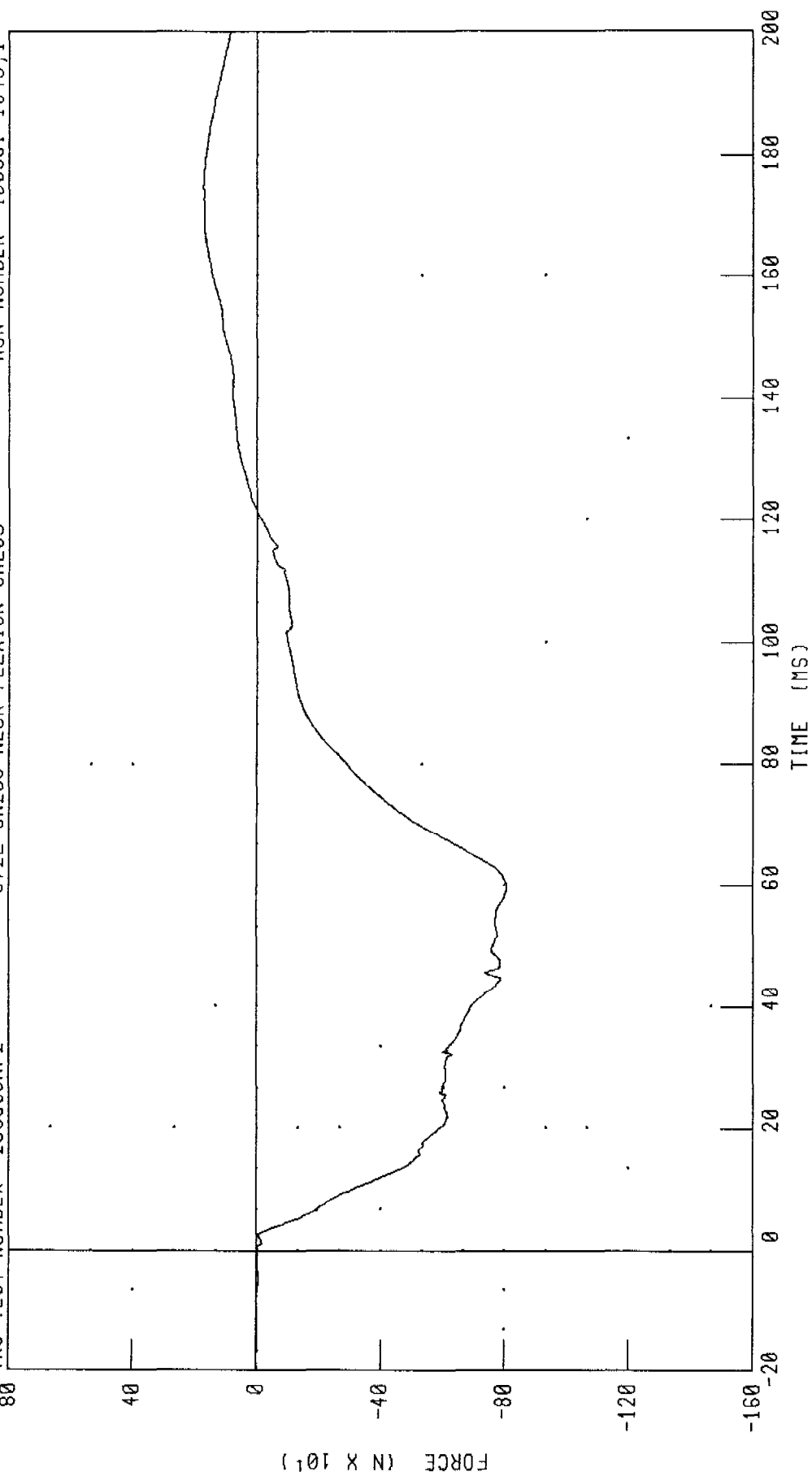
PART 572-E HYBRID III NECK FLEXION CALIBRATION

NECK FORCE X AXIS

TRC TEST NUMBER 206C05NF2

572E SN206 NECK FLEXION CAL05

RUN NUMBER 100301 1046,1



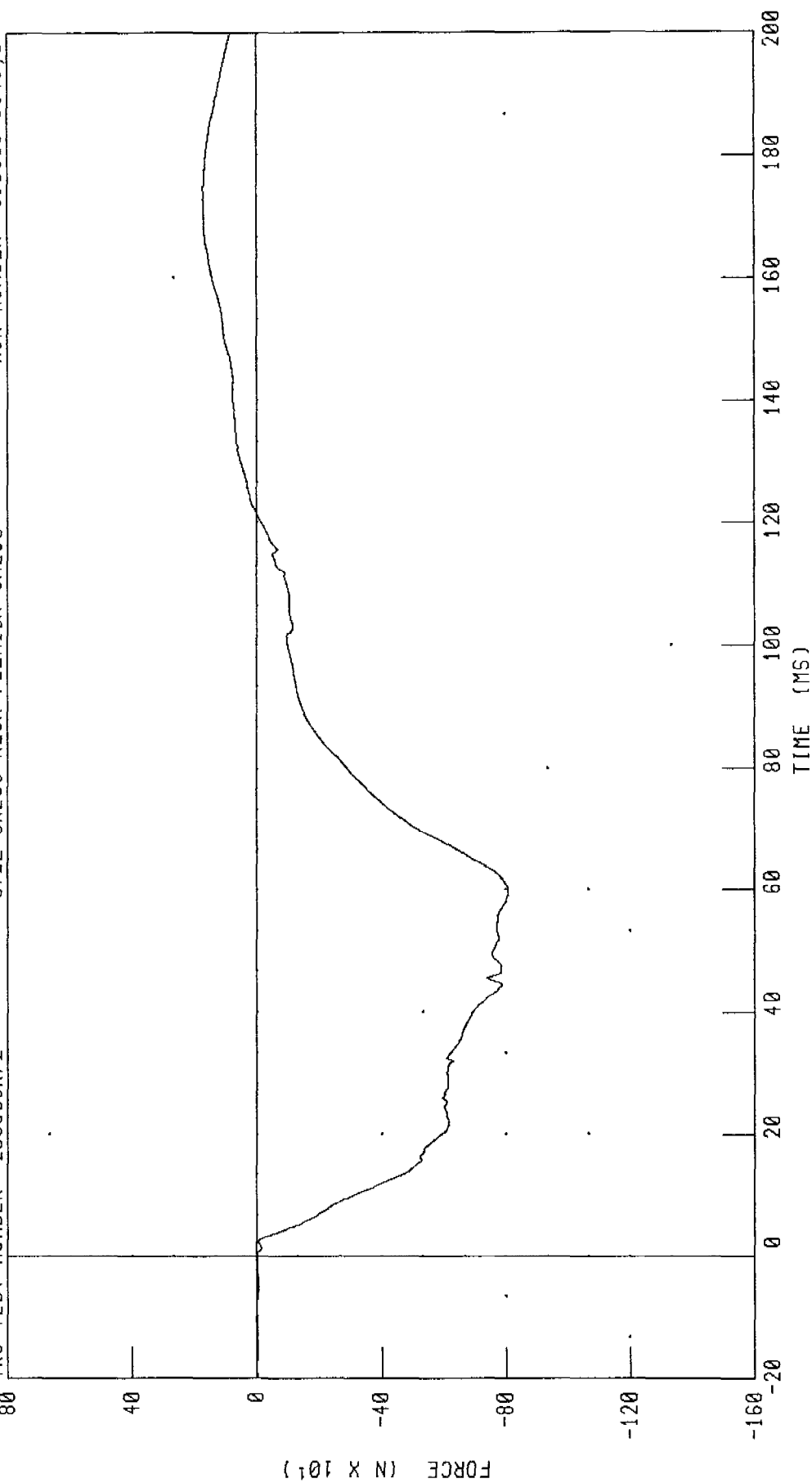
CHANNEL NEKXF FILTER CH CLASS 1000

PEAK DATA 173 64 N @ 172 72 MS, -807 84 N @ 59 28 MS

PART 572-E HYBRID III NECK FLEXION CALIBRATION

NECK FORCE X AXIS FILTERED FOR USE IN OCCIPITAL MOMENT CALCULATION

TRC TEST NUMBER 206C05NF2 572E SN206 NECK FLEXION CAL05 RUN NUMBER 100301 1046,1



CHANNEL NEKXFC FILTER CH CLASS 600

PEAK DATA 173 29 N @ 174 56 MS, -807 67 N @ 59 44 MS

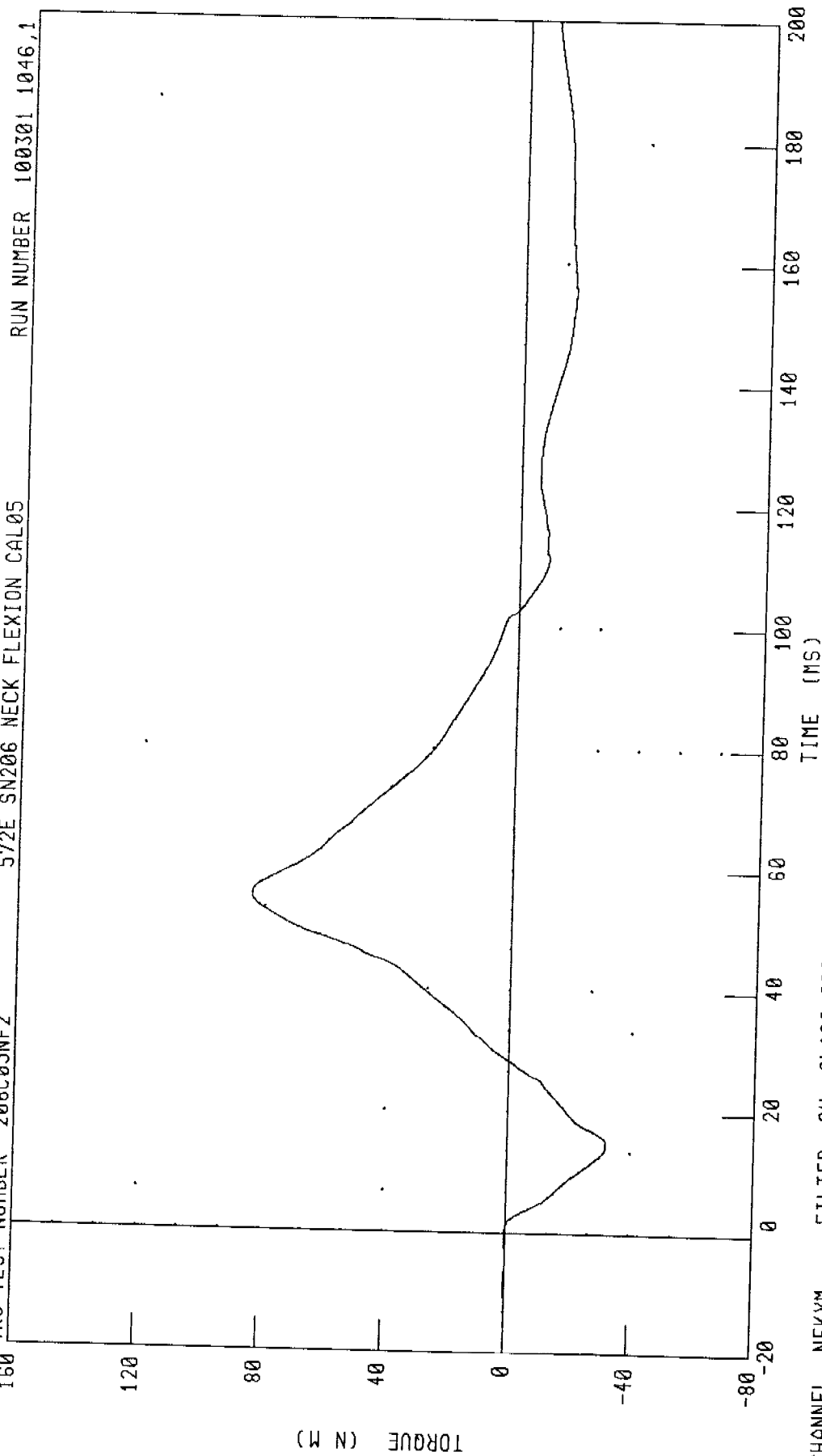
PART 572-E HYBRID III NECK FLEXION CALIBRATION

NECK MOMENT Y AXIS

IRC TEST NUMBER 206C05NF2

572E SN206 NECK FLEXION CAL05

RUN NUMBER 100301 1046,1



CHANNEL NEKYM FILTER CH CLASS 600

PEAK DATA 84 39 N M @ 55 52 MS, -32 06 N M @ 14 64 MS

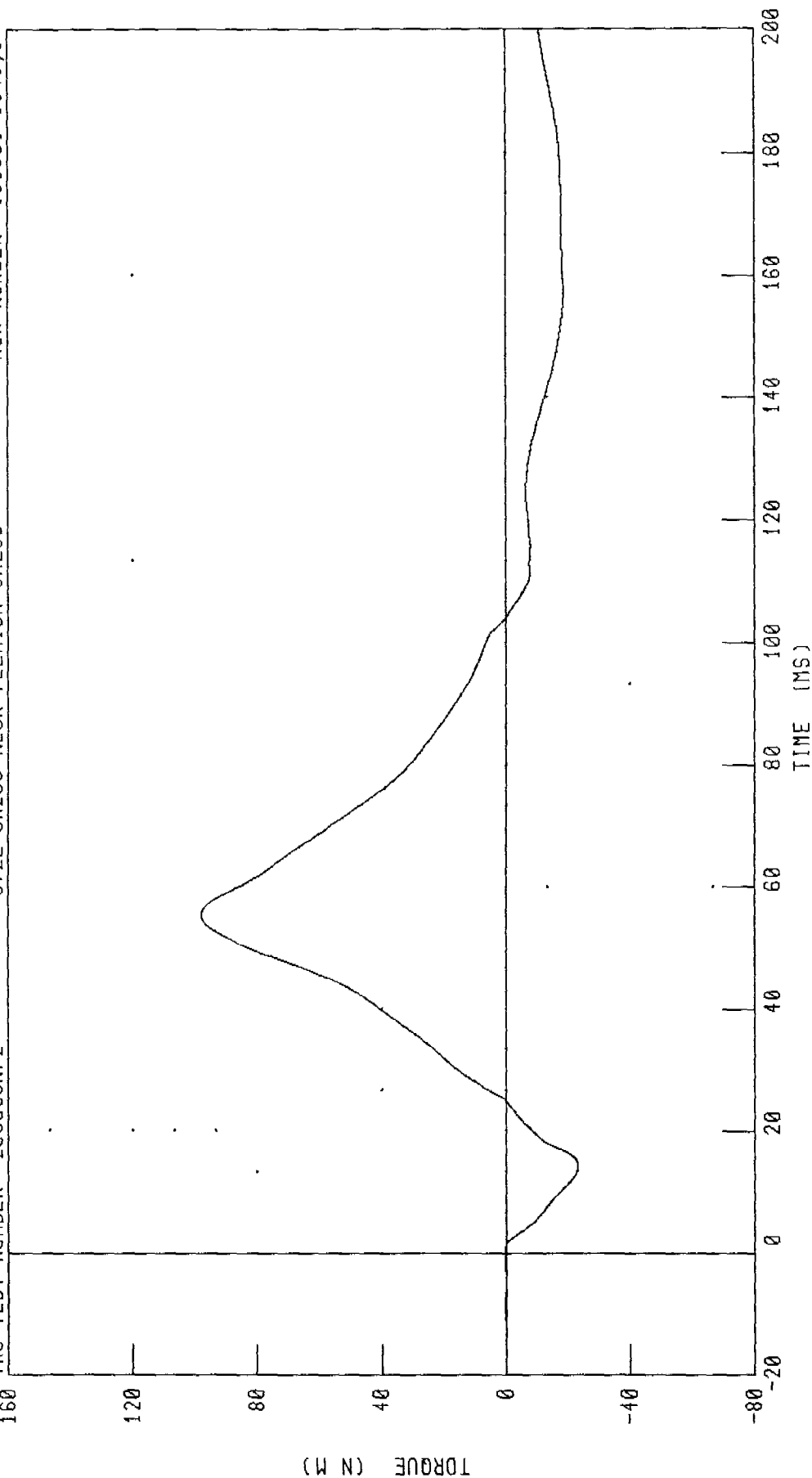
PART 572-E HYBRID III NECK FLEXION CALIBRATION

TOTAL MOMENT ABOUT OCCIPITAL CONDYLE

572E SN206 NECK FLEXION CAL05

TRC TEST NUMBER 206C05NF2

RUN NUMBER 100301 1046,1



CHANNEL NEKOM FILTER CH CLASS 600

PEAK DATA 98 15 N M @ 55 52 MS, -23 15 N M @ 14 16 MS

TRANSPORTATION RESEARCH CENTER INC.

HYBRID III 50th

03-OCT-01

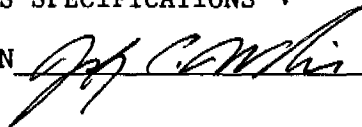
NECK EXTENSION TEST - 6 CHANNEL TRANSDUCER

TRC INC. TEST NO: 206C05NE1 572E SN206 NECK EXT CAL05

TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE		20.6 - 22.2 DEG. C	22.2 DEG. C
RELATIVE HUMIDITY		10 - 70 %	55.0 %
IMPACT VELOCITY		5.95 - 6.19 M/S	6.10 M/S
PENDULUM DECELERATION	10 MS	17.20 - 21.20 G	17.90 G
	20 MS	14.00 - 19.00 G	17.85 G
	30 MS	11.00 - 16.00 G	14.51 G
MAX PENDULUM G		22 G MAX	18.20 G
MAX PENDULUM G ABOVE 30 MS		22 G MAX	14.42 G
DECELERATION-TIME CURVE DECAY TIME TO 5 G		38 - 46 MS	43.76 MS
D PLANE	MAX	81 - 106 DEG.	96.96 DEG.
ROTATION	TIME	72 - 82 MS	78.88 MS
MOMENT ABOUT OCCIPITAL CONDYLE	MIN	-80.0/-52.9 NM	-69.47 NM
	TIME	65 - 79 MS	72.88 MS
ROTATION ANGLE-TIME CURVE DECAY TIME TO ZERO		147 - 174 MS	157.44 MS
NEGATIVE MOMENT-TIME CURVE DECAY TIME TO ZERO		120 - 148 MS	142.72 MS

TEST MEETS SPECIFICATIONS .

TECHNICIAN



RUN NUMBER: 100301.1115;1

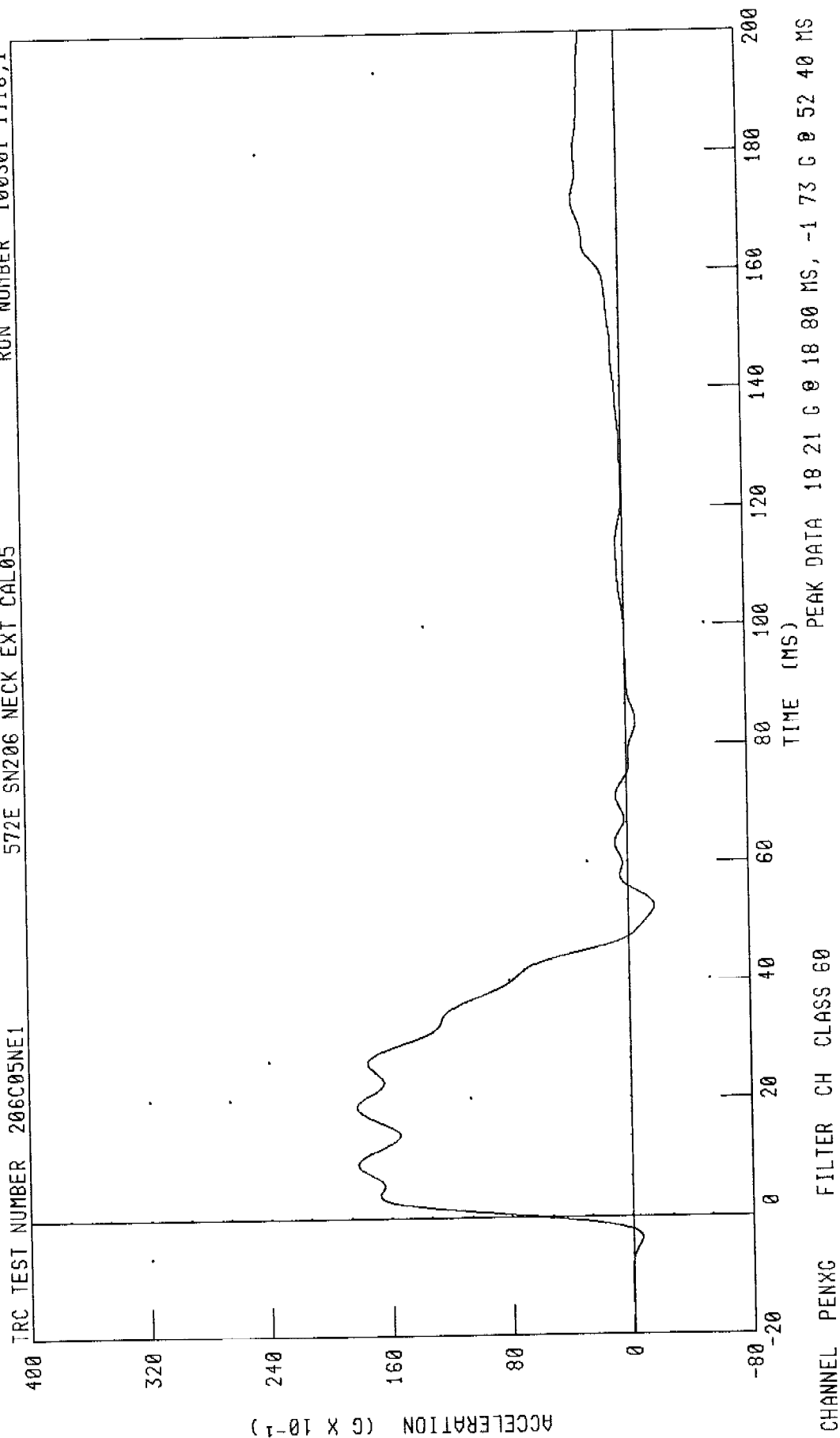
PART 572-E HYBRID III NECK EXTENSION CALIBRATION

PENDULUM DECELERATION

572E SN206 NECK EXT CAL05

RUN NUMBER 100301 1116,1

TRC TEST NUMBER 206C05NE1



PEAK DATA 18 21 G @ 18 80 MS, -1 73 G @ 52 40 MS

CHANNEL PENXC FILTER CH CLASS 60

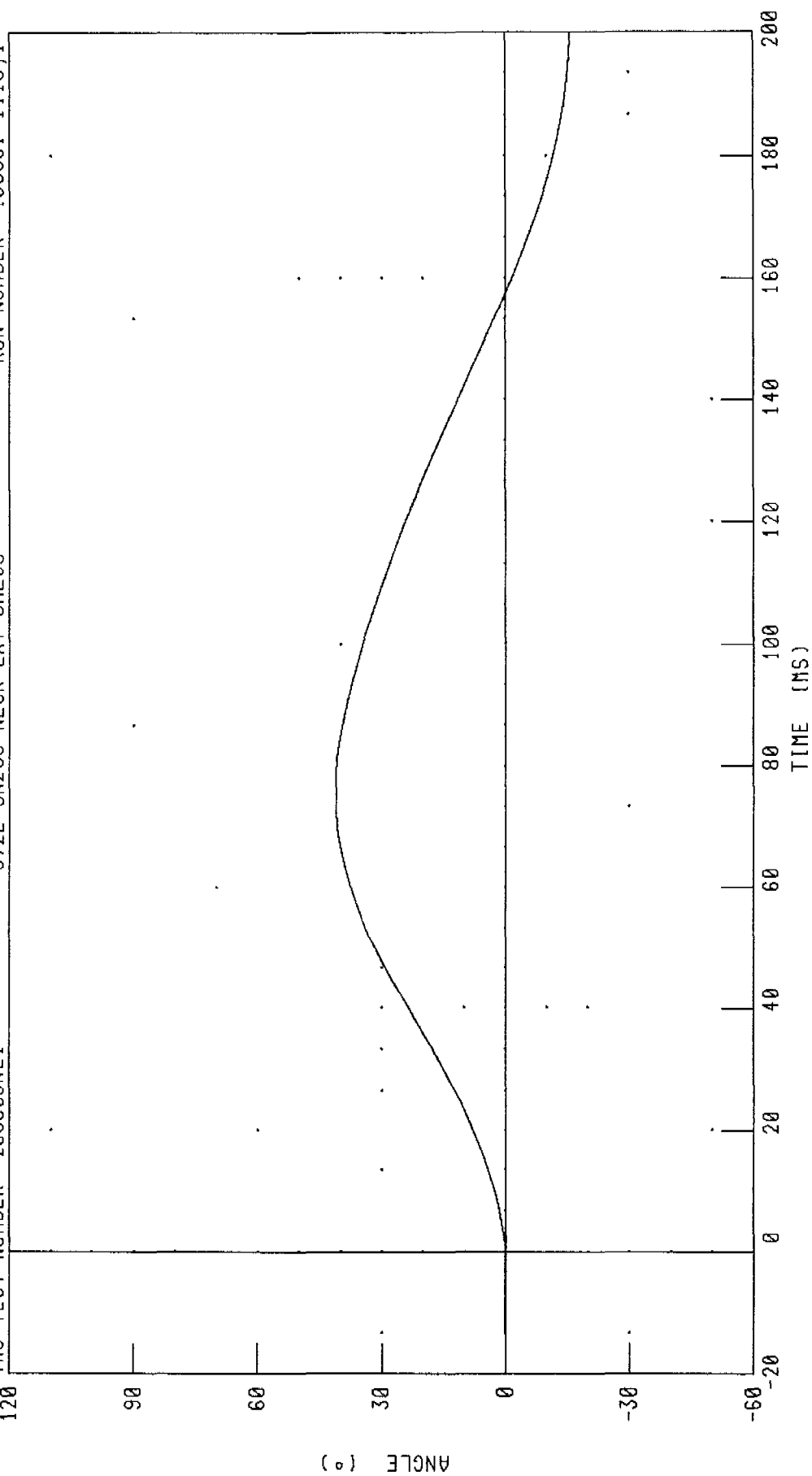
PART 572-E HYBRID III NECK EXTENSION CALIBRATION

ROTATION ABOUT BASE OF NECK

TRC TEST NUMBER 206C05NE1

572E SN206 NECK EXT CAL05

RUN NUMBER 100301 1116,1



CHANNEL BETA FILTER CH CLASS 60

PEAK DATA 41 09 ° @ 75 60 MS, -15 84 ° @ 200 00 MS

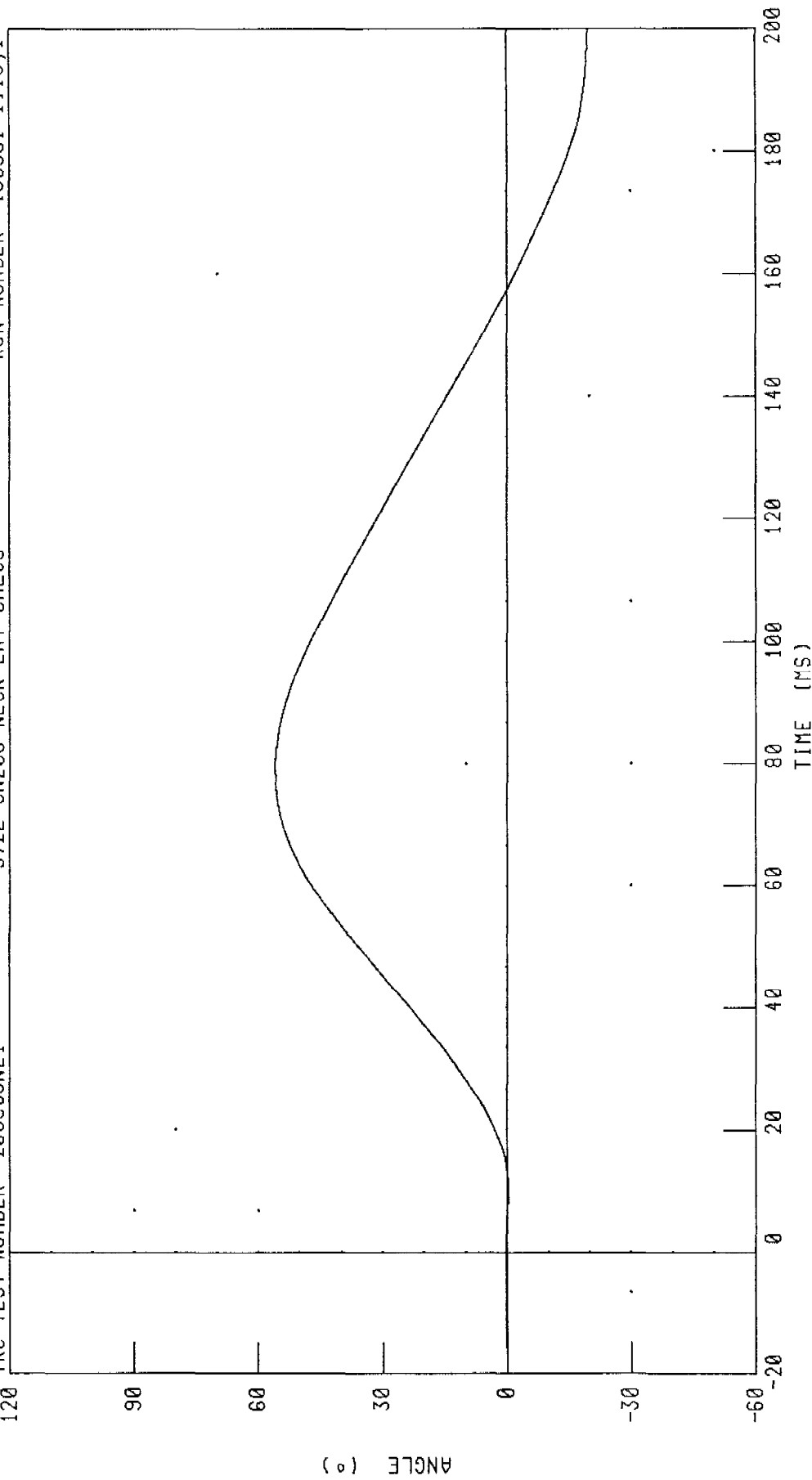
PART 572-E HYBRID III NECK EXTENSION CALIBRATION

ROTATION ABOUT OCCIPITAL CONDYLE

TRC TEST NUMBER 206C05NE1

572E SN206 NECK EXT CAL05

RUN NUMBER 100301 1116,1



CHANNEL THETA FILTER CH CLASS 60

PEAK DATA 55 97 ° 0 79 76 MS, -19 66 ° 0 200 00 MS

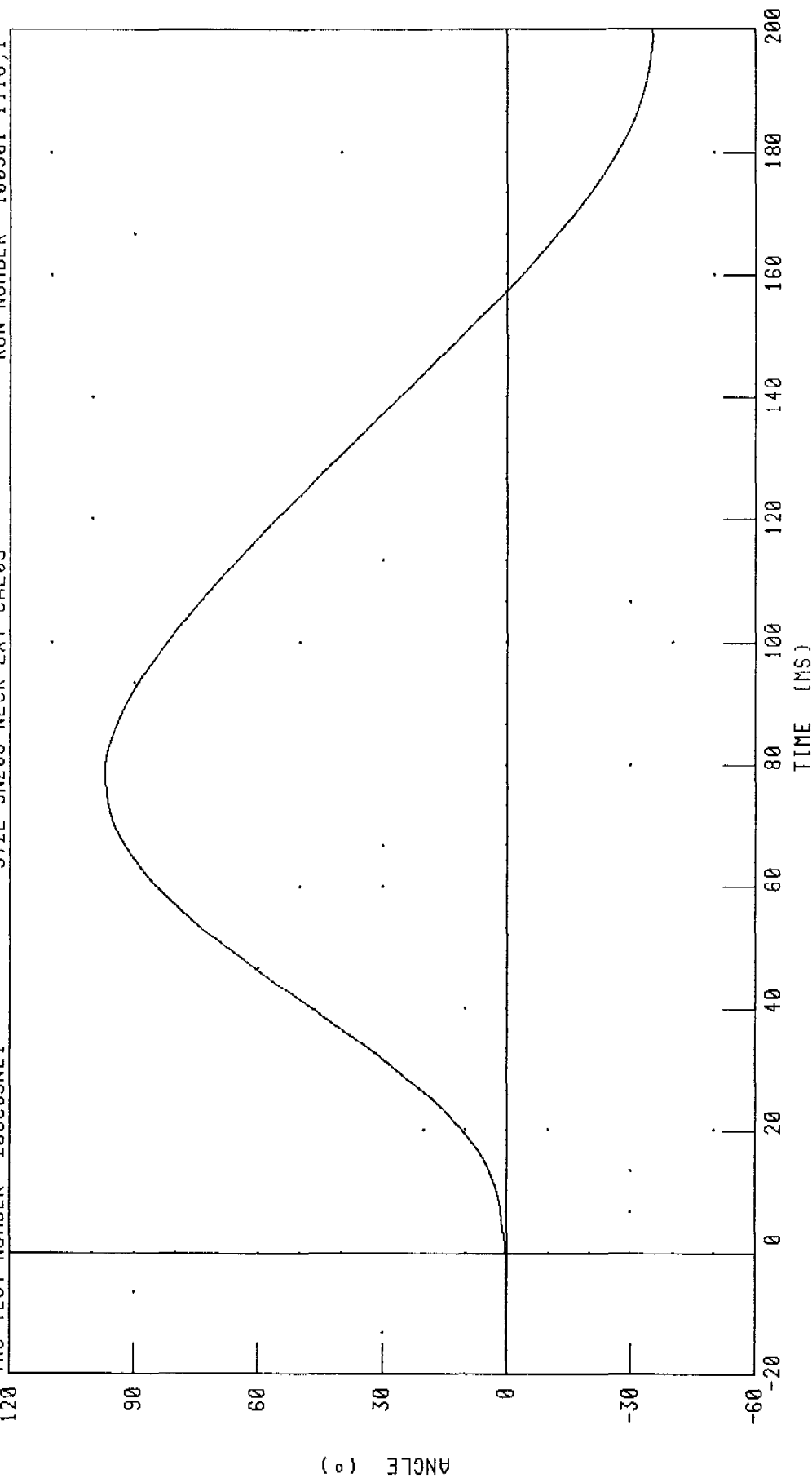
PART 572-E HYBRID III NECK EXTENSION CALIBRATION

TOTAL ROTATION

TRC TEST NUMBER 206C05NE1

572E SN206 NECK EXT CAL05

RUN NUMBER 100301 1116,1



PEAK DATA 96 96 ° @ 78 88 MS, -35 49 ° @ 200 00 MS

CHANNEL TOTAL FILTER CH CLASS 60

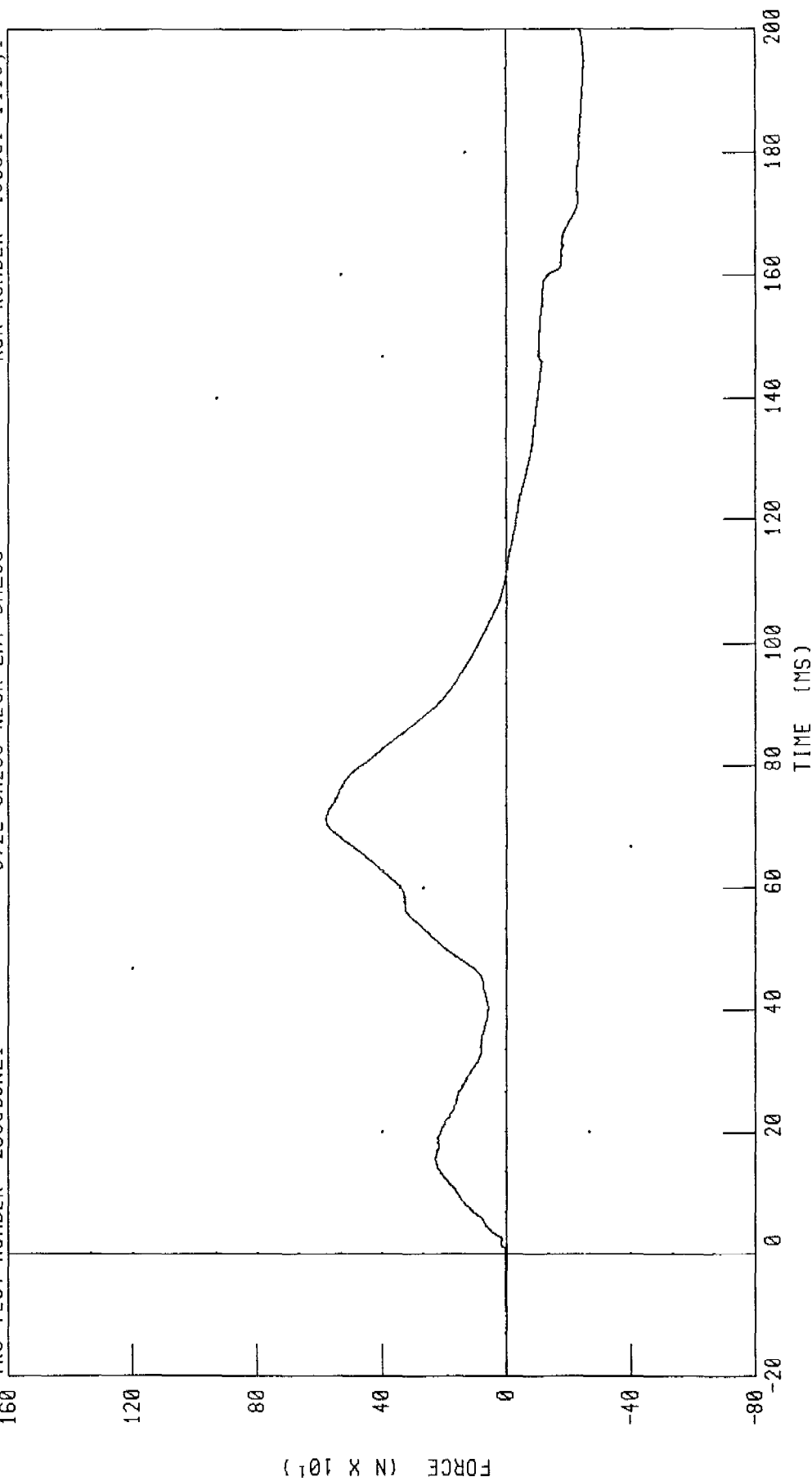
PART 572-E HYBRID III NECK EXTENSION CALIBRATION

NECK FORCE X AXIS

TRC TEST NUMBER 206C05NE1

572E SN206 NECK EXT CAL05

RUN NUMBER 100301 1116,1

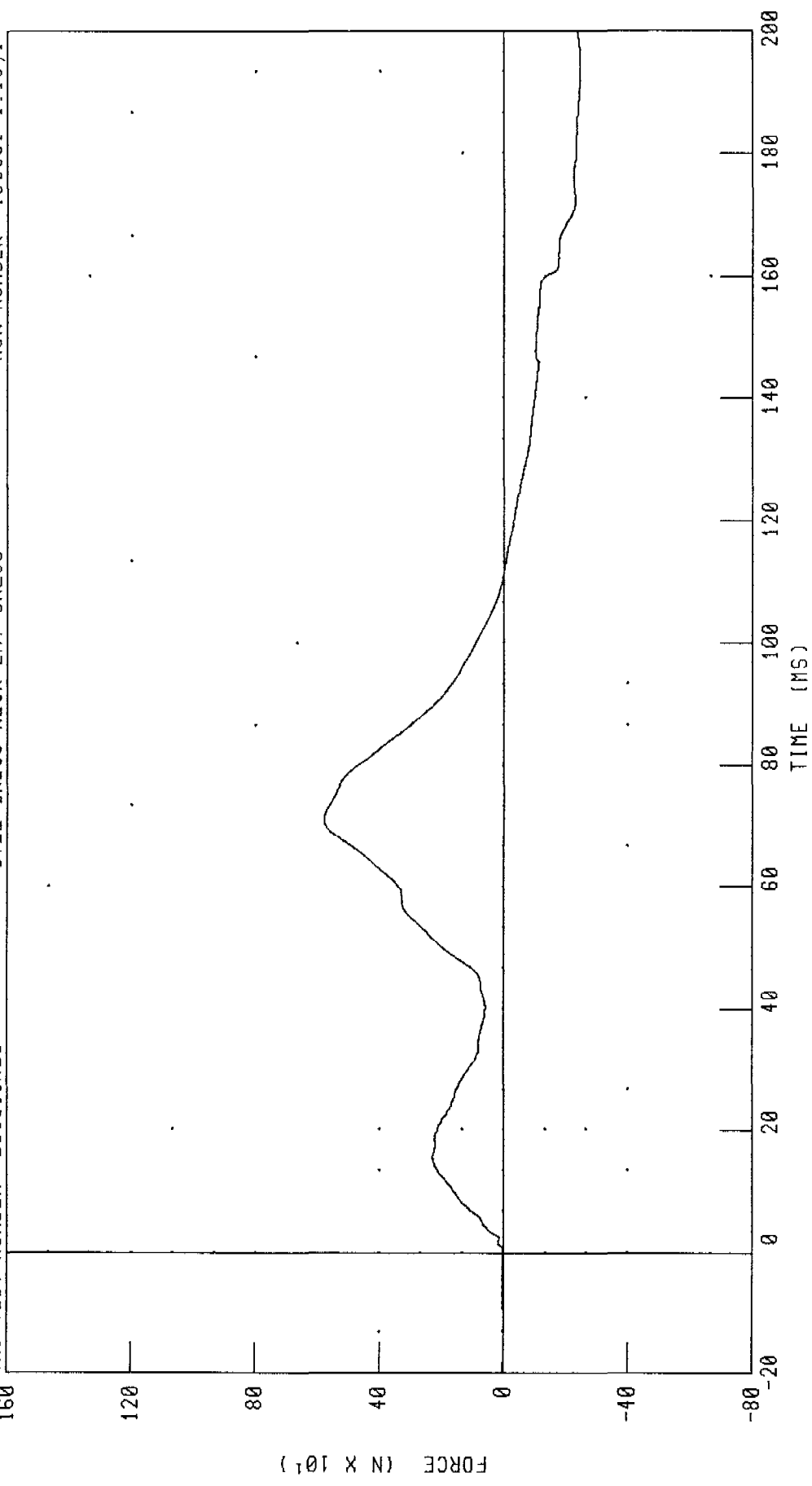


CHANNEL NEKXF FILTER CH CLASS 1000

PEAK DATA 579 99 N @ 71 36 MS, -250 49 N @ 194 64 MS

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

TRC TEST NUMBER 206C05NE1 572E SN206 NECK EXT CAL05 RUN NUMBER 100301 1116.1

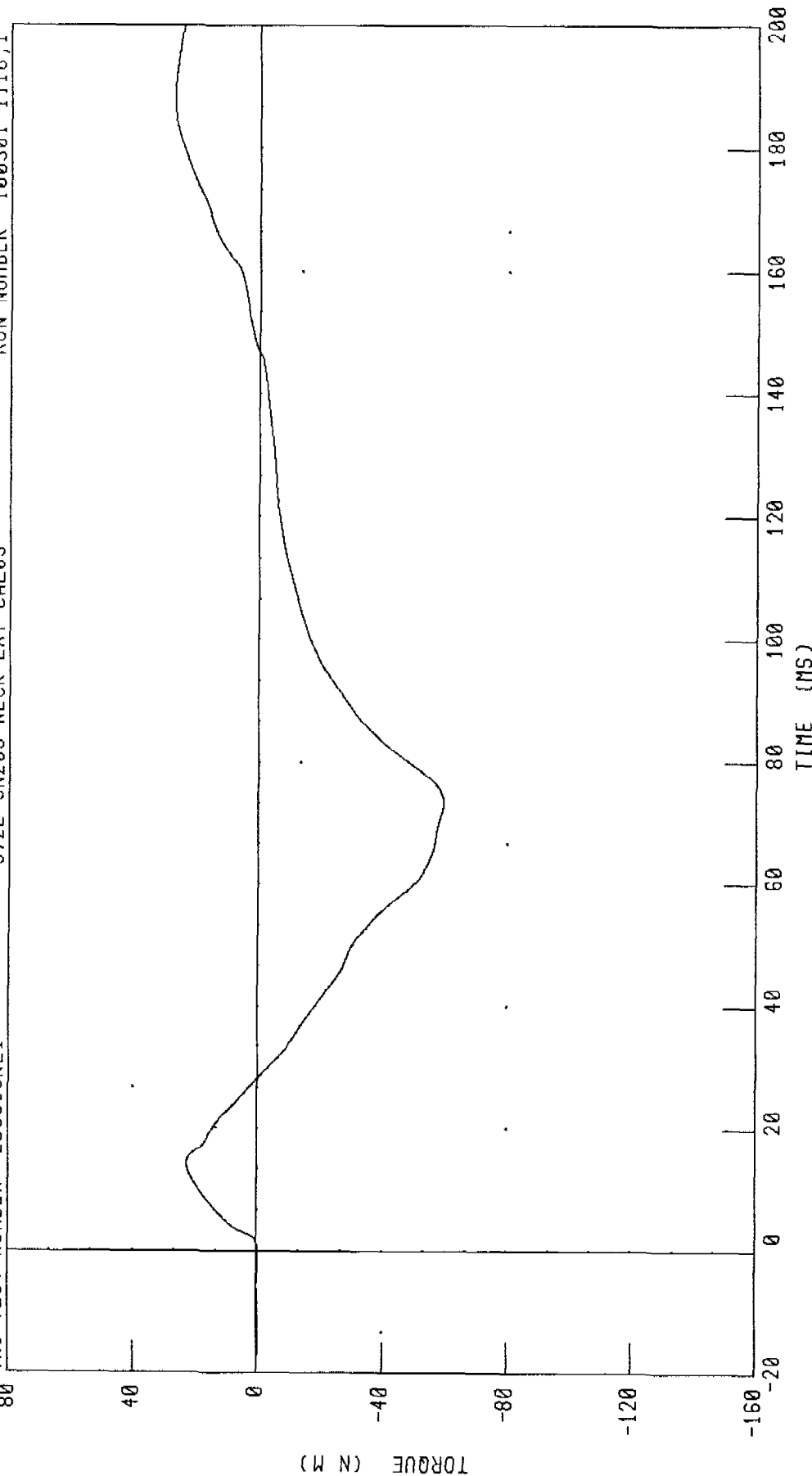


CHANNEL NEKXFC FILTER CH CLASS 600 PEAK DATA 579 52 N 0 71 28 MS, -249 95 N 0 193 68 MS

PART 572-E HYBRID III NECK EXTENSION CALIBRATION

NECK MOMENT Y AXIS

TRC TEST NUMBER 206C05NE1 572E SN206 NECK EXT CAL05 RUN NUMBER 100301 1116,1



CHANNEL NEKYM FILTER CH CLASS 600

PEAK DATA 27 65 N M @ 188 16 MS, -59 45 N M @ 73 60 MS

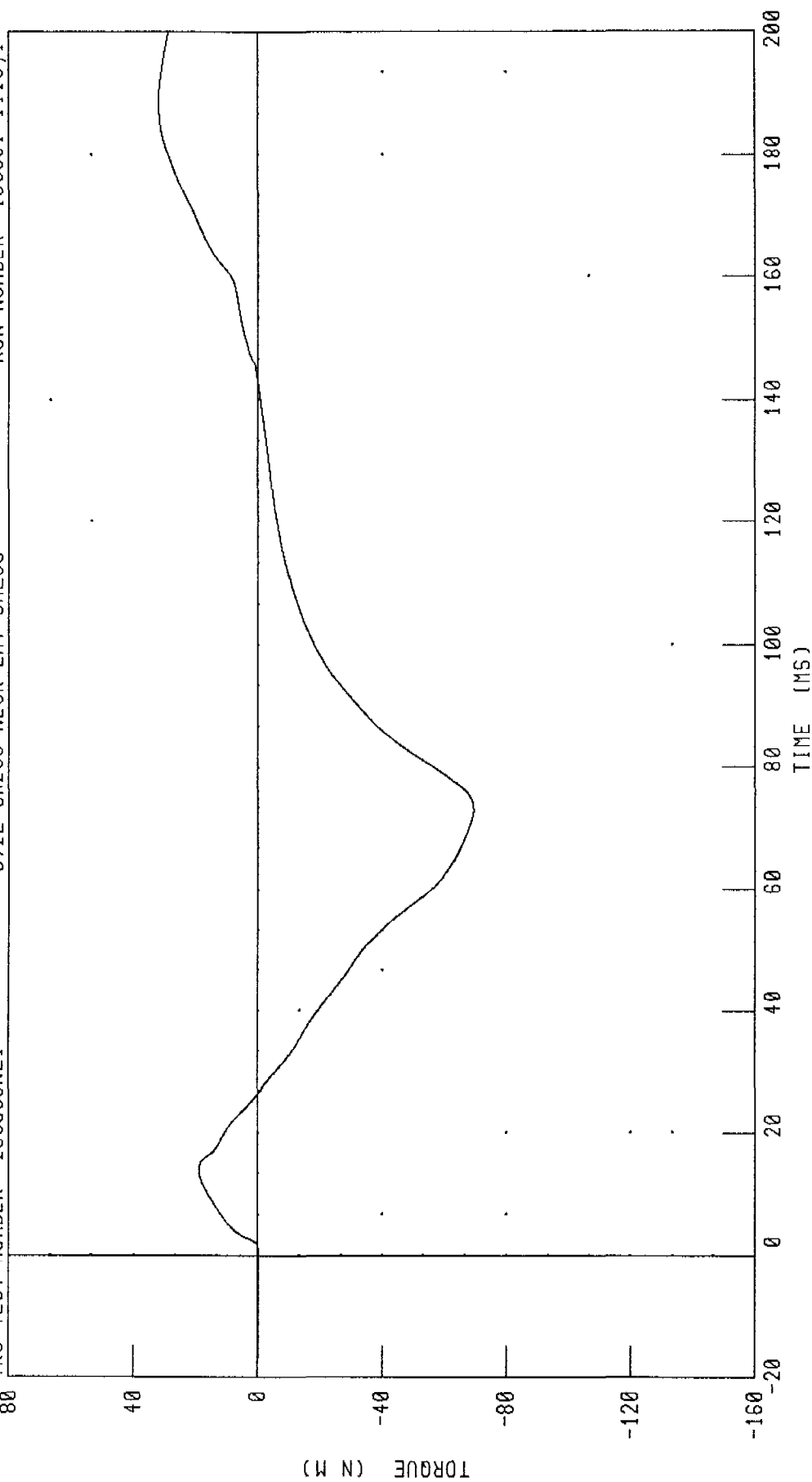
PART 572-E HYBRID III NECK EXTENSION CALIBRATION

TOTAL MOMENT ABOUT OCCIPITAL CONDYLE

TRC TEST NUMBER 206C05NE1

572E SN206 NECK EXT CAL05

RUN NUMBER 100301 1116,1



CHANNEL NEKOM FILTER CH CLASS 600

PEAK DATA 31 97 N M @ 188 16 MS, -69 47 N M @ 72 88 MS

TRANSPORTATION RESEARCH CENTER INC.

THORAX IMPACT TEST

HYBRID III 50th

04-OCT-01

TRC INC.

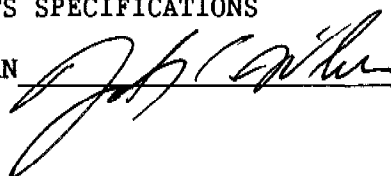
TEST NO: 206C05TH1

572E SN206 H.S.THORAX CAL05

TEST PARAMETER	HIGH SPEED TEST	TEST RESULTS
	SPECIFICATION	
TEMPERATURE	20.6-22.2 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	48.0 %
PENDULUM VELOCITY	6.59 - 6.83 M/S	6.59M/S
MAXIMUM DEFLECTION	63.5 - 72.6 MM	68.7 MM
MAXIMUM RESISTIVE FORCE	5159 - 5894 N	5669. N
INTERNAL HYSTERESIS	69% - 85%	70.4%

TEST MEETS SPECIFICATIONS

TECHNICIAN



RUN NUMBER: 100401.1117;3

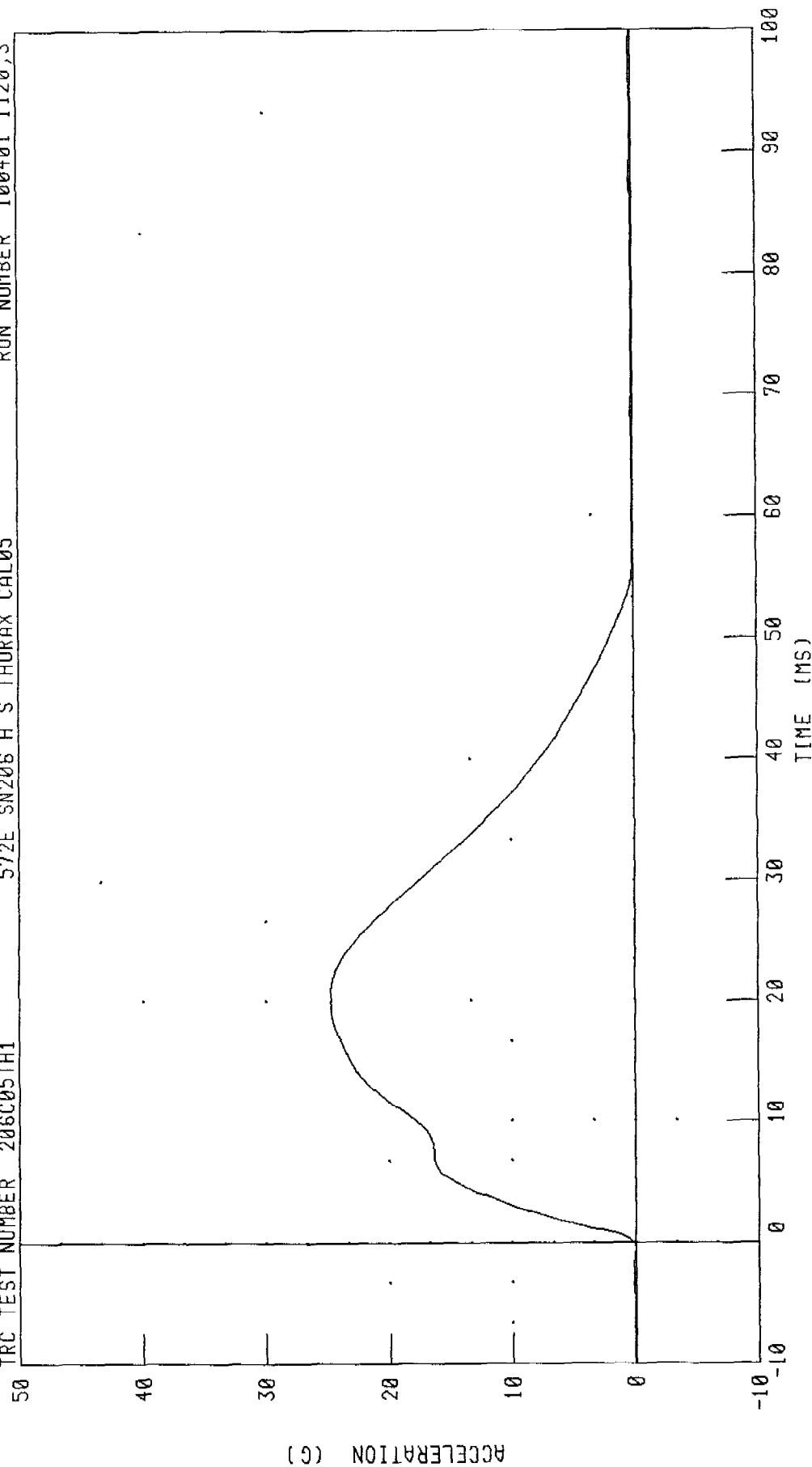
PART 572-E HYBRID III THORAX CALIBRATION

PENDULUM DECELERATION

TRC TEST NUMBER 206C05TH1

572E SN206 H S THORAX CAL05

RUN NUMBER 100401 1120,3



CHANNEL PENXC FILTER CH CLASS 180

PEAK DATA 24 75 G 0 19 84 MS, 0 01 G 0 -0 48 MS

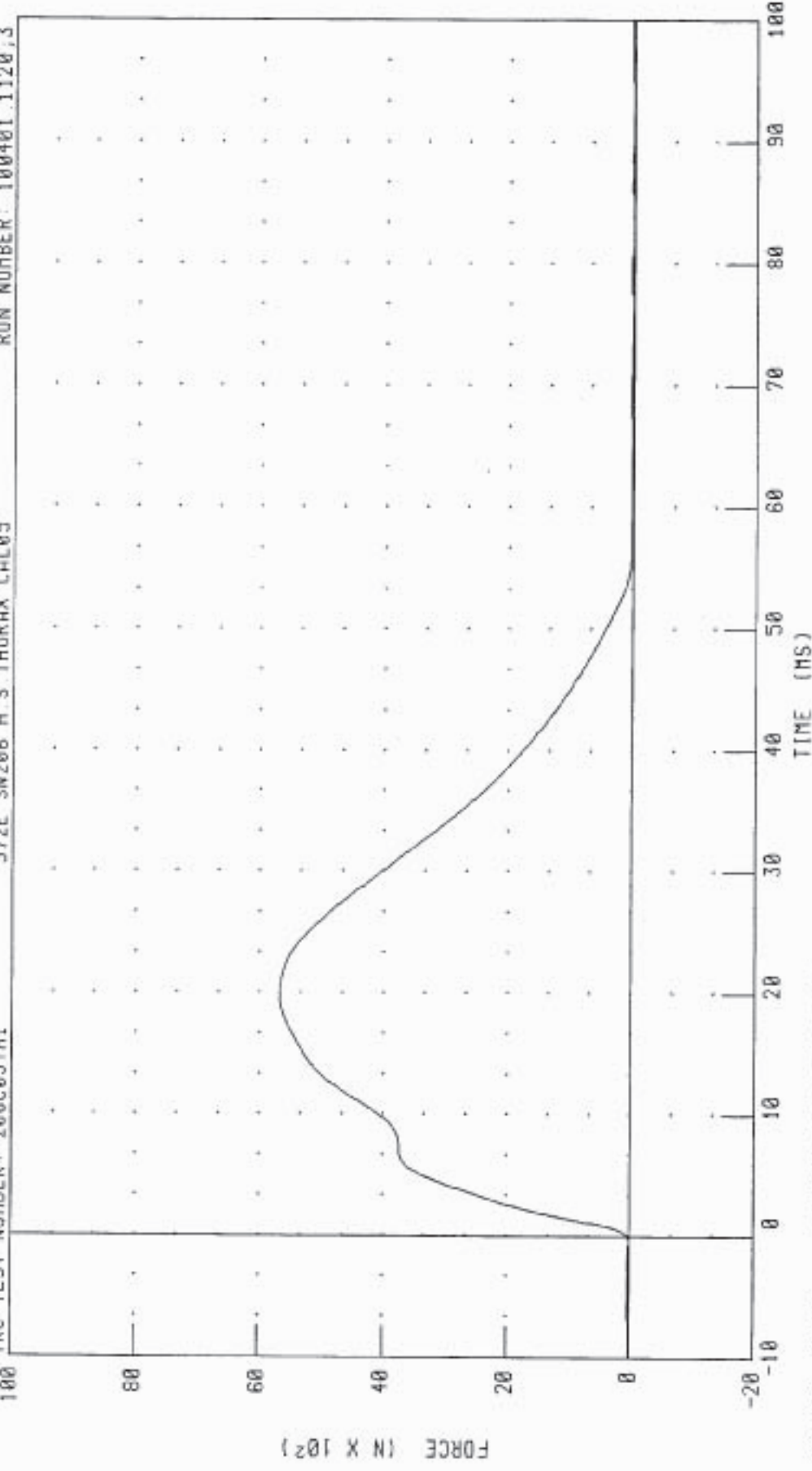
PART 572-E HYBRID III THORAX CALIBRATION

PENDULUM FORCE

TRC TEST NUMBER: 206C05TH1

572E SN206 H.S. THORAX CAL05

RUN NUMBER: 100401.1120.3



CHANNEL: PENXF FILTER: CH. CLASS 180

PEAK DATA: 5669.04 N @ 19.84 MS, 1.38 N @ -0.46 MS

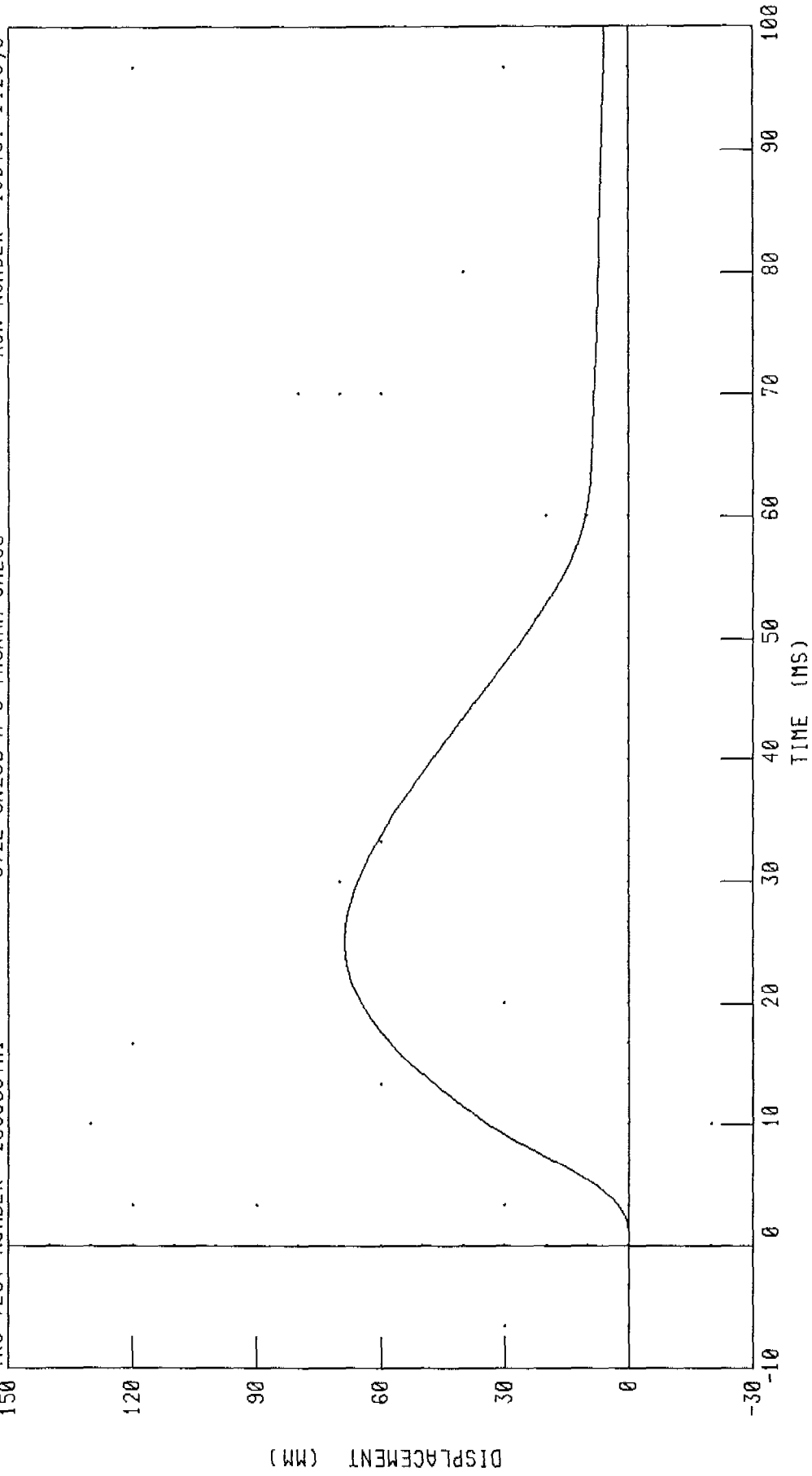
PART 572-E HYBRID III THORAX CALIBRATION

STERNUM DISPLACEMENT

TRC TEST NUMBER 206C05TH1

572E SN206 H S THORAX CAL05

RUN NUMBER 100401 1120,3



CHANNEL CSTXD FILTER CH CLASS 180

PEAK DATA 68 71 MM @ 25 04 MS, -0 02 MM @ 0 64 MS

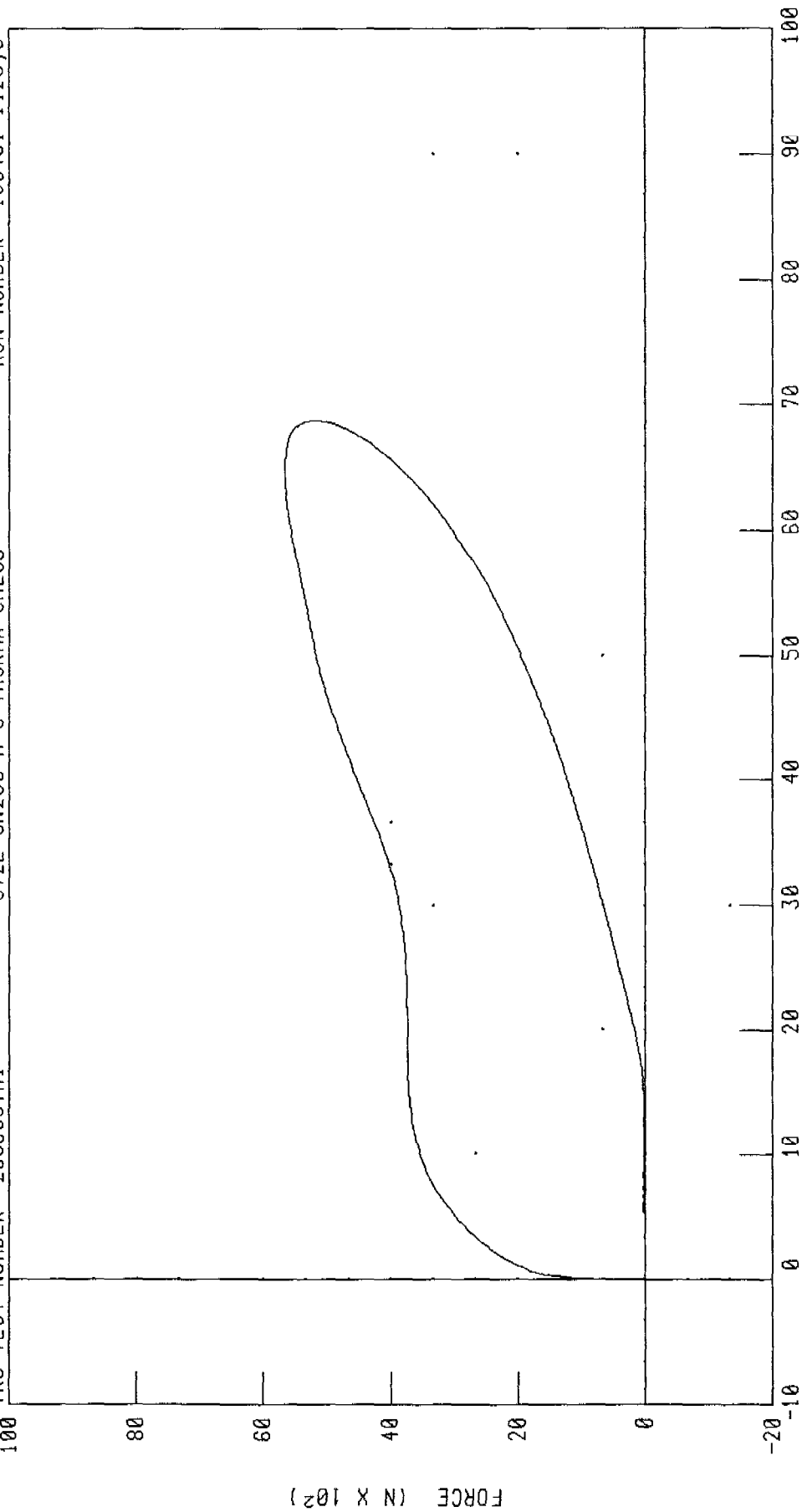
PART 572-E HYBRID III THORAX CALIBRATION

CHEST DISPLACEMENT VS PENDULUM FORCE

TRC TEST NUMBER 206C05TH1

572E SN206 H S THORAX CAL05

RUN NUMBER 100401 1120,3



DISPLACEMENT (MM)

CHANNEL CSTXD
PENXF

FILTER CH CLASS 180
CH CLASS 180

PEAK DATA

68 71 MM @ 25 04 MS, -0 02 MM @ 0 64 MS
5669 04 N @ 19 84 MS, 1 38 N @ -0 48 MS

Transportation Research Center Inc

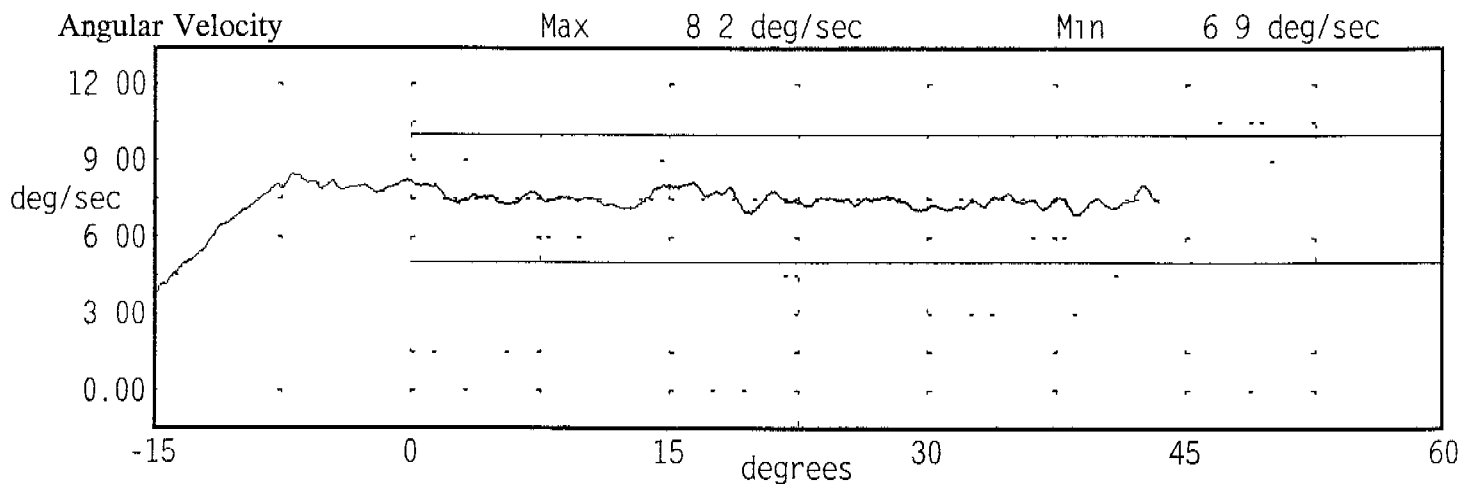
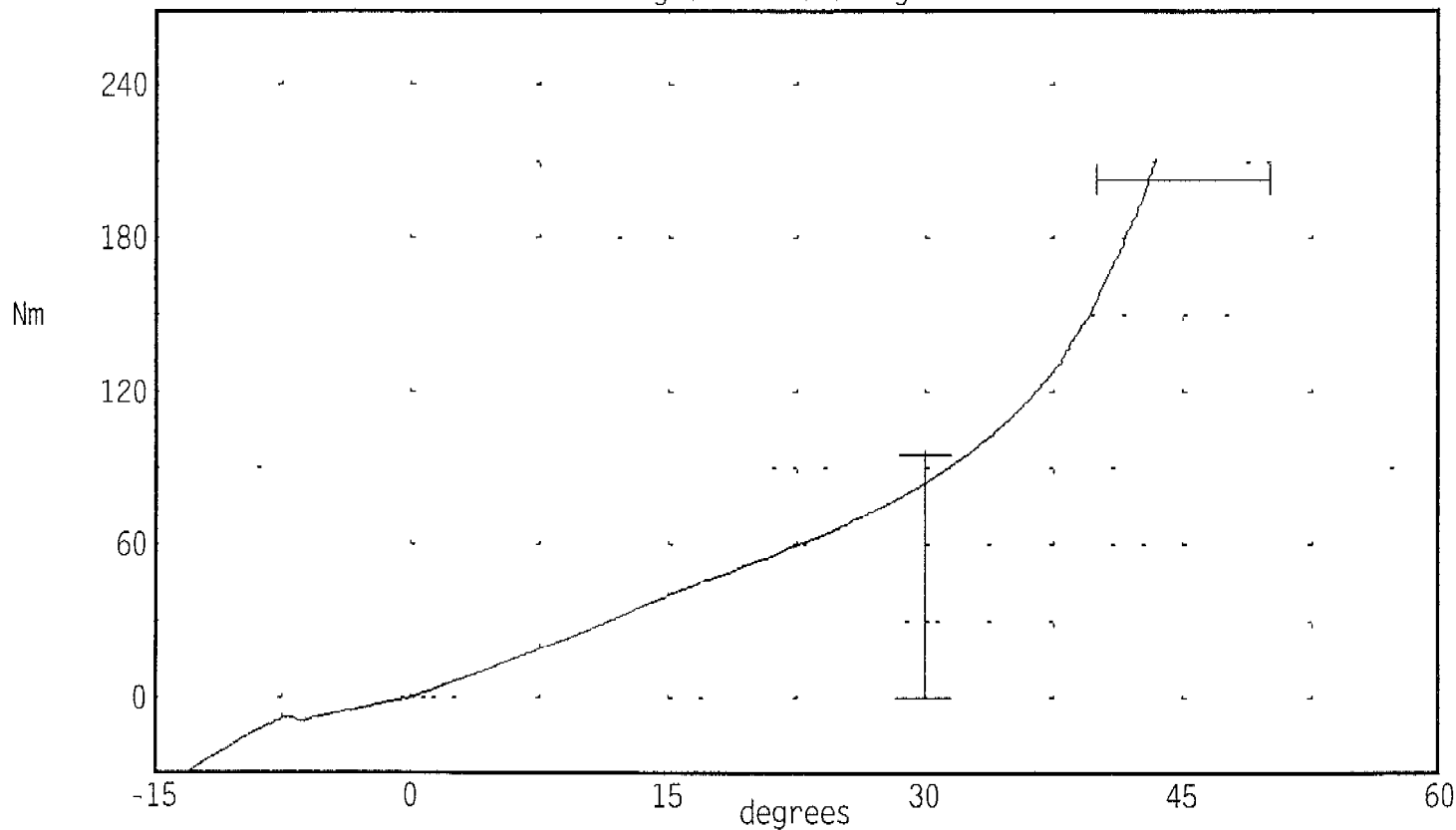
Hybrid III Hip Range of Motion

Serial Number 206L
Test Number 206C05
Comments:

Date: 10/02/2001
Time: 05:29

TEST PARAMETER	SPECIFICATION	TEST RESULTS	
Temperature	18.9 - 25.6	22.2 °C	Pass
Humidity	10 - 70	40 %	Pass
Moment at 30 deg	<= 94.9	84.0 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 211.1 Nm at 43.5 deg
Peak Angle 43.5 deg at 211.1 Nm



Transportation Research Center Inc

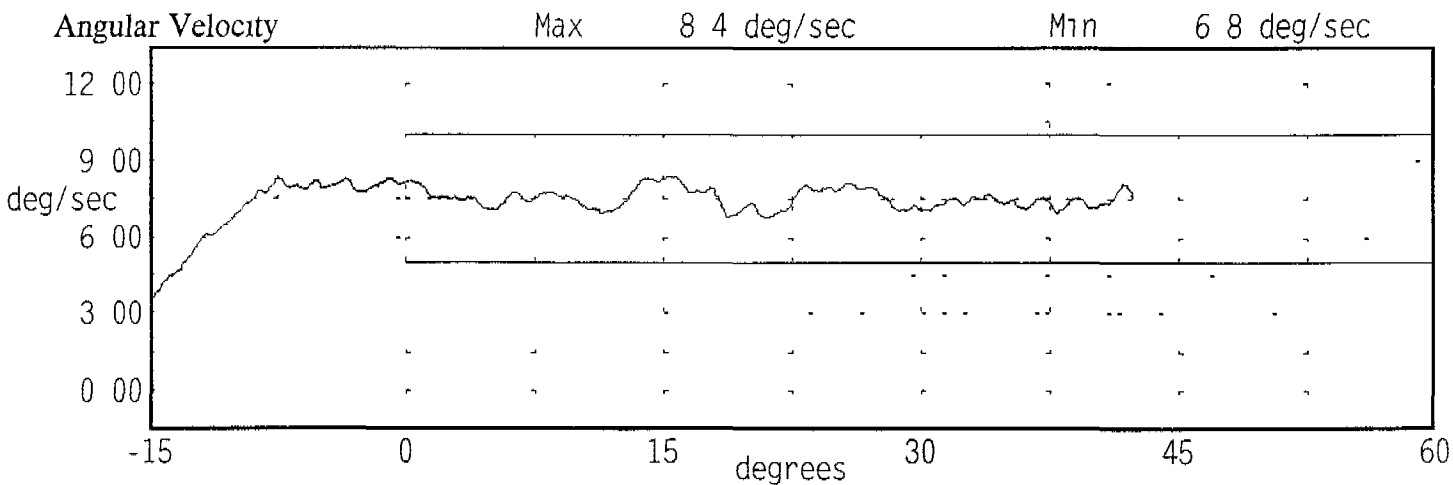
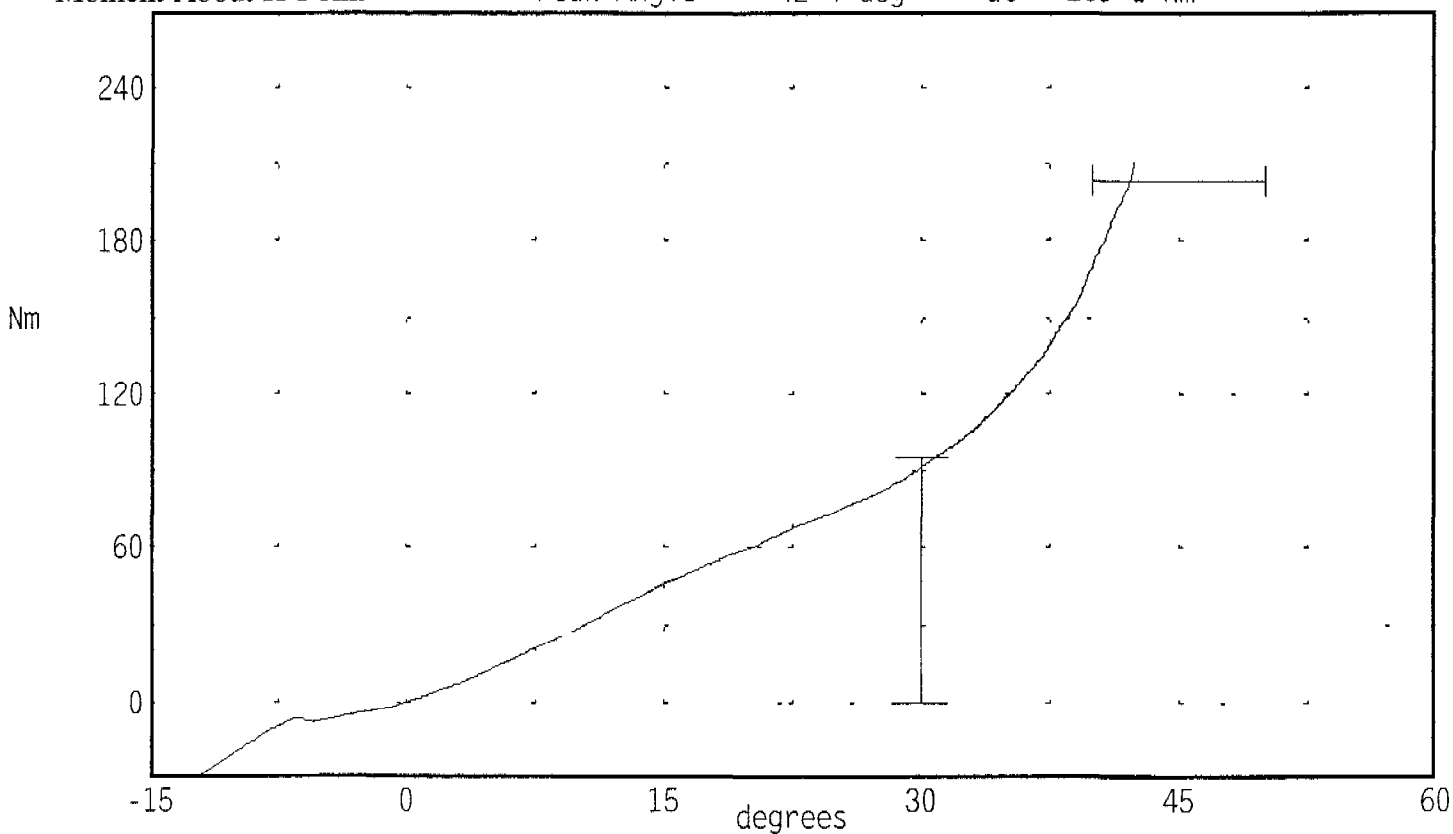
Hybrid III Hip Range of Motion

Serial Number: 206R
Test Number 206C05
Comments

Date: 10/02/2001
Time: 05:38

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	18.9 - 25.6	22.2 °C Pass
Humidity	10 - 70	40 % Pass
Moment at 30 deg	<= 94.9	91.3 Nm Pass
Angle at 203 Nm	40.0 - 50.0	42.1 deg Pass
Average Velocity	5.0 - 10.0	7.5 deg/sec Pass

Moment About H-Point
Peak Moment 210.4 Nm at 42.4 deg
Peak Angle 42.4 deg at 209.1 Nm



TRANSPORTATION RESEARCH CENTER INC.

LEFT KNEE IMPACT TEST

HYBRID III 50th

02-OCT-01

TRC INC.

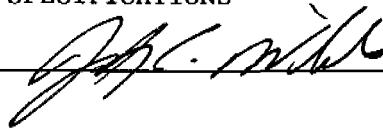
TEST NO: 206C05LK1

572E SN206 LEFT KNEE CAL 05

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	55.0 %
PROBE VELOCITY	2.07 - 2.13 M/S	2.07 M/S
PEAK KNEE IMPACT FORCE 5.0 KG PENDULUM	4715 - 5782 N	5225.5 N

TEST MEETS SPECIFICATIONS

TECHNICIAN



RUN NUMBER: 100201.1512;1

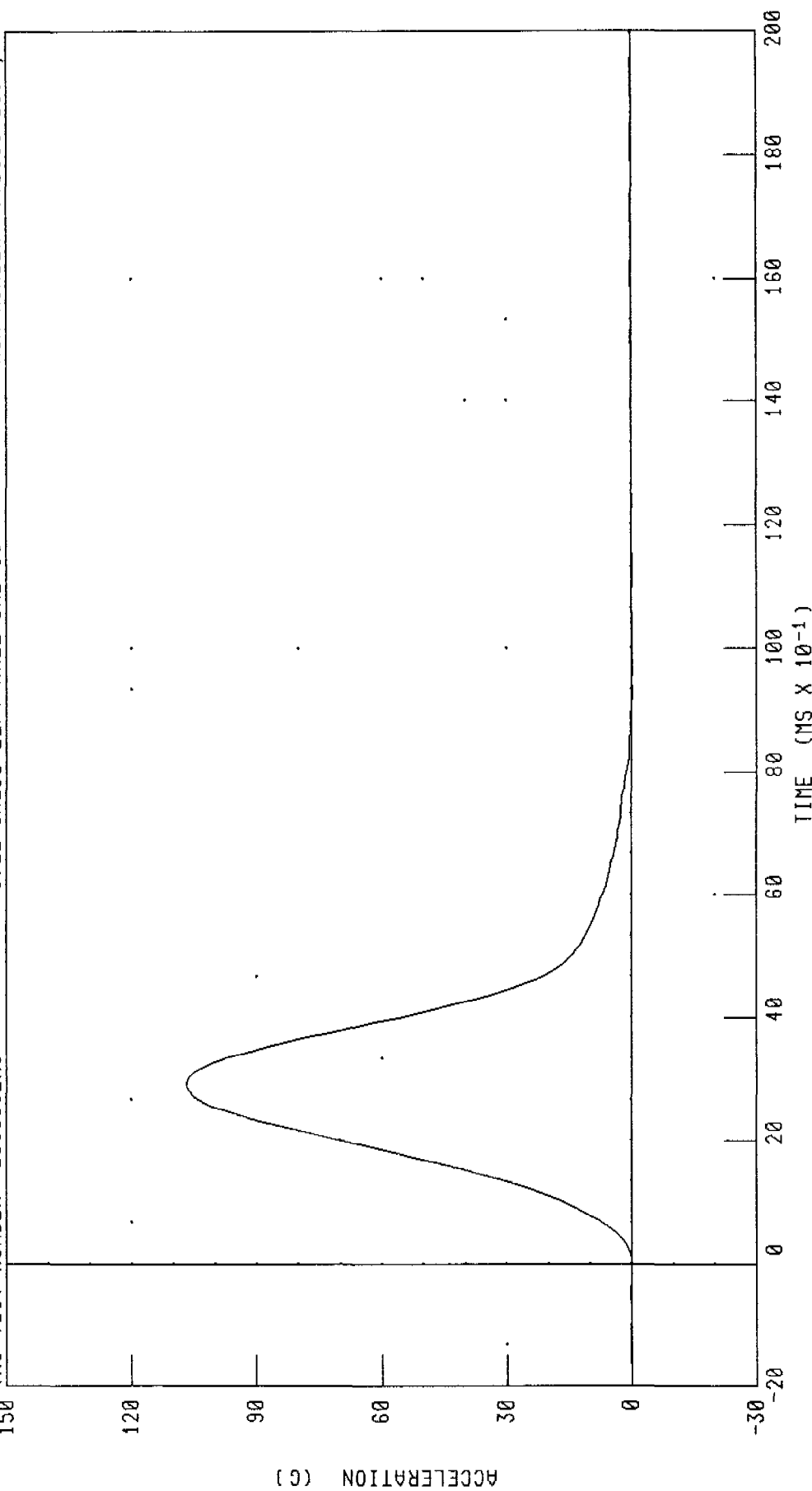
PART 572-E HYBRID III LEFT KNEE CALIBRATION

PENDULUM DECELERATION (5 KG PEND)

TRC TEST NUMBER 206C05LK1

572E SN206 LEFT KNEE CAL 05

RUN NUMBER 100501 1307,1



CHANNEL PENXC FILTER CH CLASS 600

PEAK DATA 106 80 C 0 2 88 MS, -0 40 C 0 10 32 MS

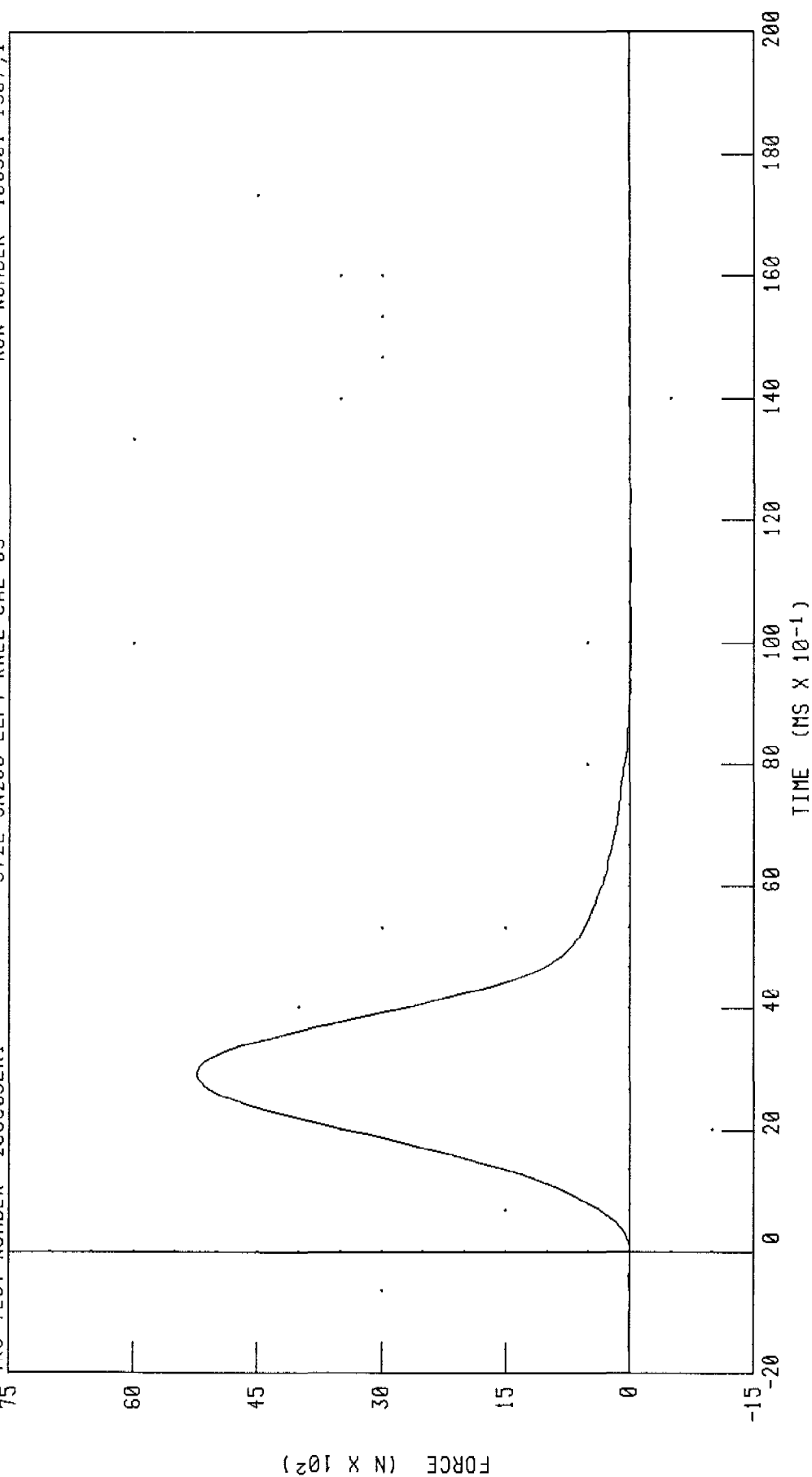
PART 572-E HYBRID III LEFT KNEE CALIBRATION

PENDULUM FORCE (5 KG PEND)

TRC TEST NUMBER 206C05LK1

572E SN206 LEFT KNEE CAL 05

RUN NUMBER 100501 1307,1



CHANNEL PENXF FILTER CH CLASS 600

PEAK DATA 5225 53 N @ 2 88 MS, -19 70 N @ 10 32 MS

TRANSPORTATION RESEARCH CENTER INC.

RIGHT KNEE IMPACT TEST

HYBRID III 50th

02-OCT-01

TRC INC.

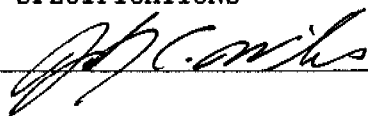
TEST NO: 206C05RK1

572E SN206 RIGHT KNEE CAL 05

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	55.0 %
PROBE VELOCITY	2.07 - 2.13 M/S	2.13 M/S
PEAK KNEE IMPACT FORCE 5.0 KG PENDULUM	4715 - 5782 N	5144.7 N

TEST MEETS SPECIFICATIONS

TECHNICIAN

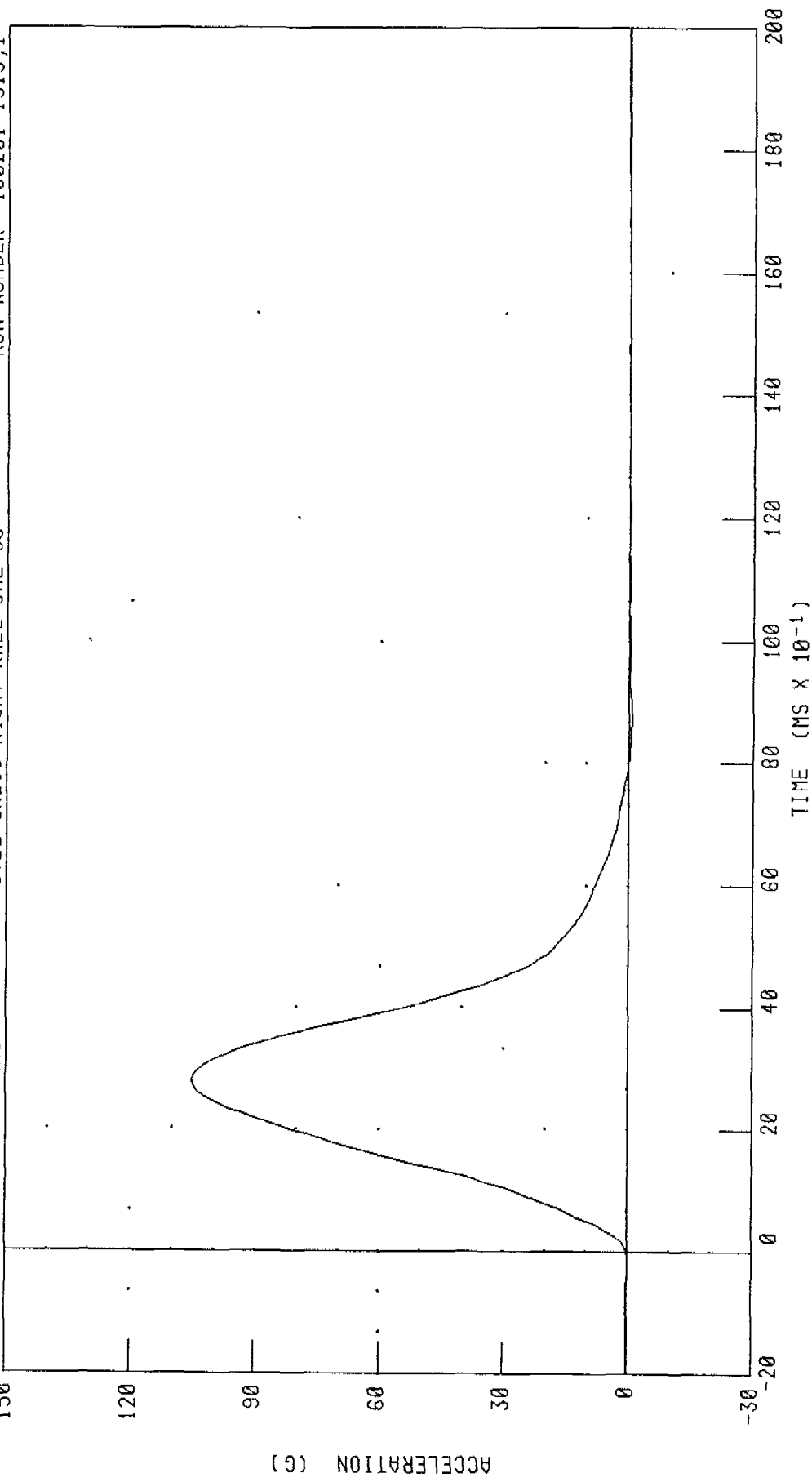


RUN NUMBER: 100201.1512;1

PART 572-E HYBRID III RIGHT KNEE CALIBRATION

PENDULUM DECELERATION (5 KG PEND)

TRC TEST NUMBER 206C05RK1 572E SN206 RIGHT KNEE CAL 05 RUN NUMBER 100201 1513,1



CHANNEL PENXG FILTER CH CLASS 600

PEAK DATA 105 15 G 0 2 80 MS, -0 81 G 0 8 96 MS

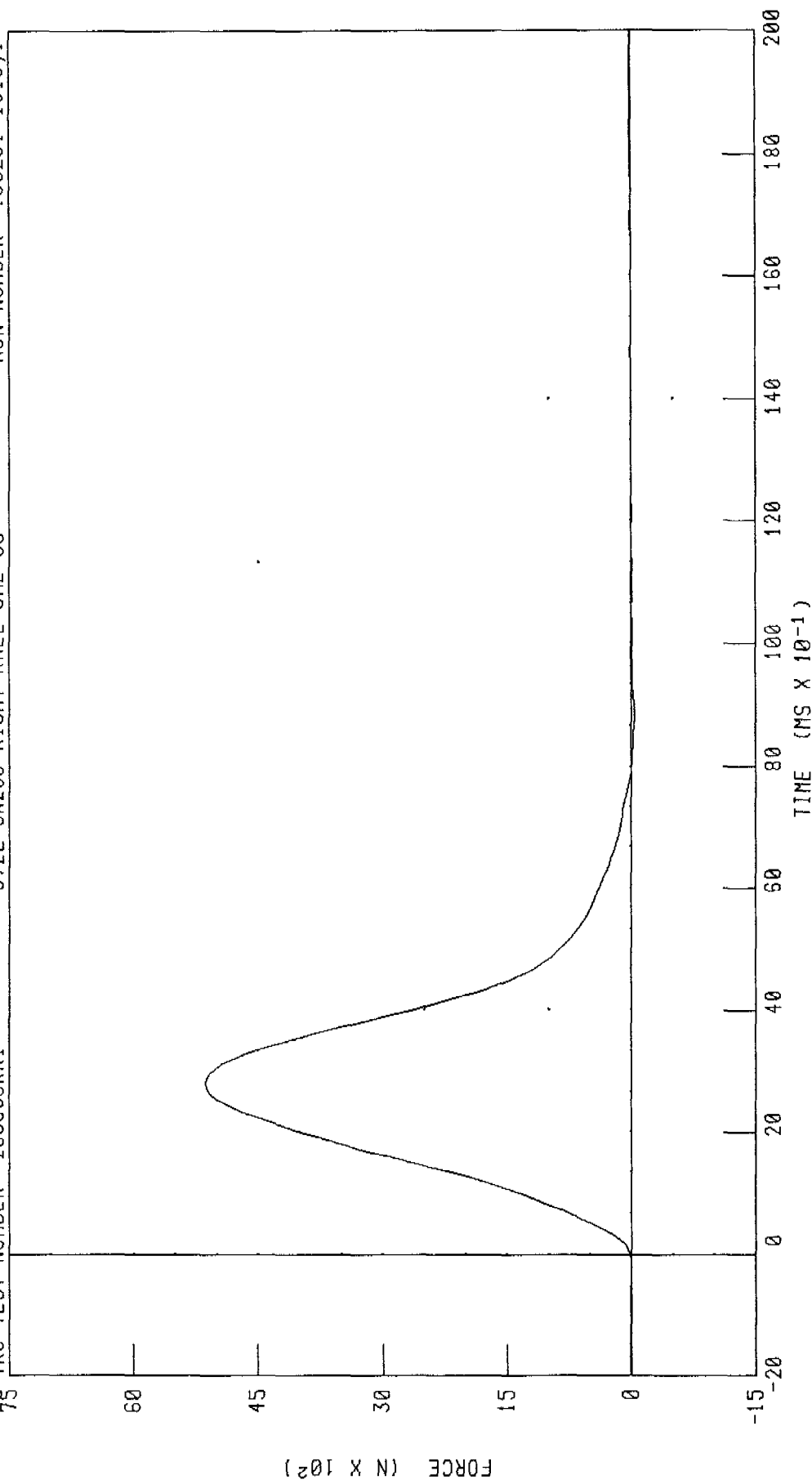
PART 572-E HYBRID III RIGHT KNEE CALIBRATION

PENDULUM FORCE (5 KG PEND)

TRC TEST NUMBER 206C05RK1

572E SN206 RIGHT KNEE CAL 05

RUN NUMBER 100201 1513,1



CHANNEL PENXF FILTER CH CLASS 600

PEAK DATA 5144 80 N 0 2 80 MS, -39 84 N 0 8 96 MS

TRANSPORTATION RESEARCH CENTER INC.

KNEE SLIDER TEST

HYBRID III 50th

02-OCT-01

LEFT KNEE

TRC INC.

TEST NO: 206C05LS1

572E SN206 LEFT SLIDER CAL 05

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	22.2 DEG. C
RELATIVE HUMIDITY	10 - 70 %	48.0 %
PENDULUM VELOCITY	2.70-2.80 M/S	2.80 M/S
FORCE AT 10.0 MM DISPLACEMENT	1259 - 1721 N	1383. N
FORCE AT 18.0 MM DISPLACEMENT	2268 - 3096 N	2478. N

TEST MEETS SPECIFICATIONS

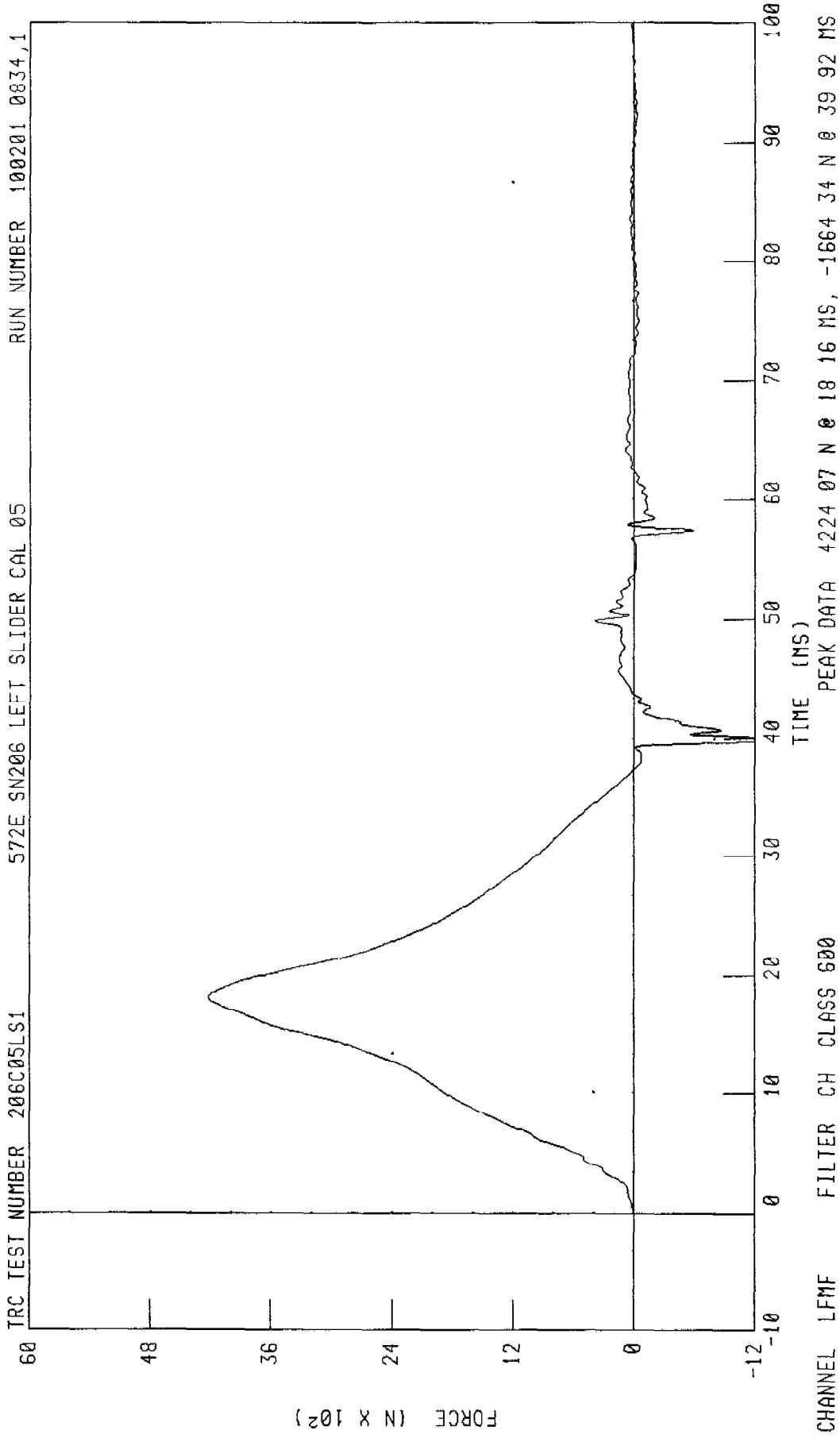
TECHNICIAN



RUN NUMBER: 100201.0834;1

PART 572-E HYBRID III LEFT KNEE SLIDER CALIBRATION

LEFT FEMUR FORCE



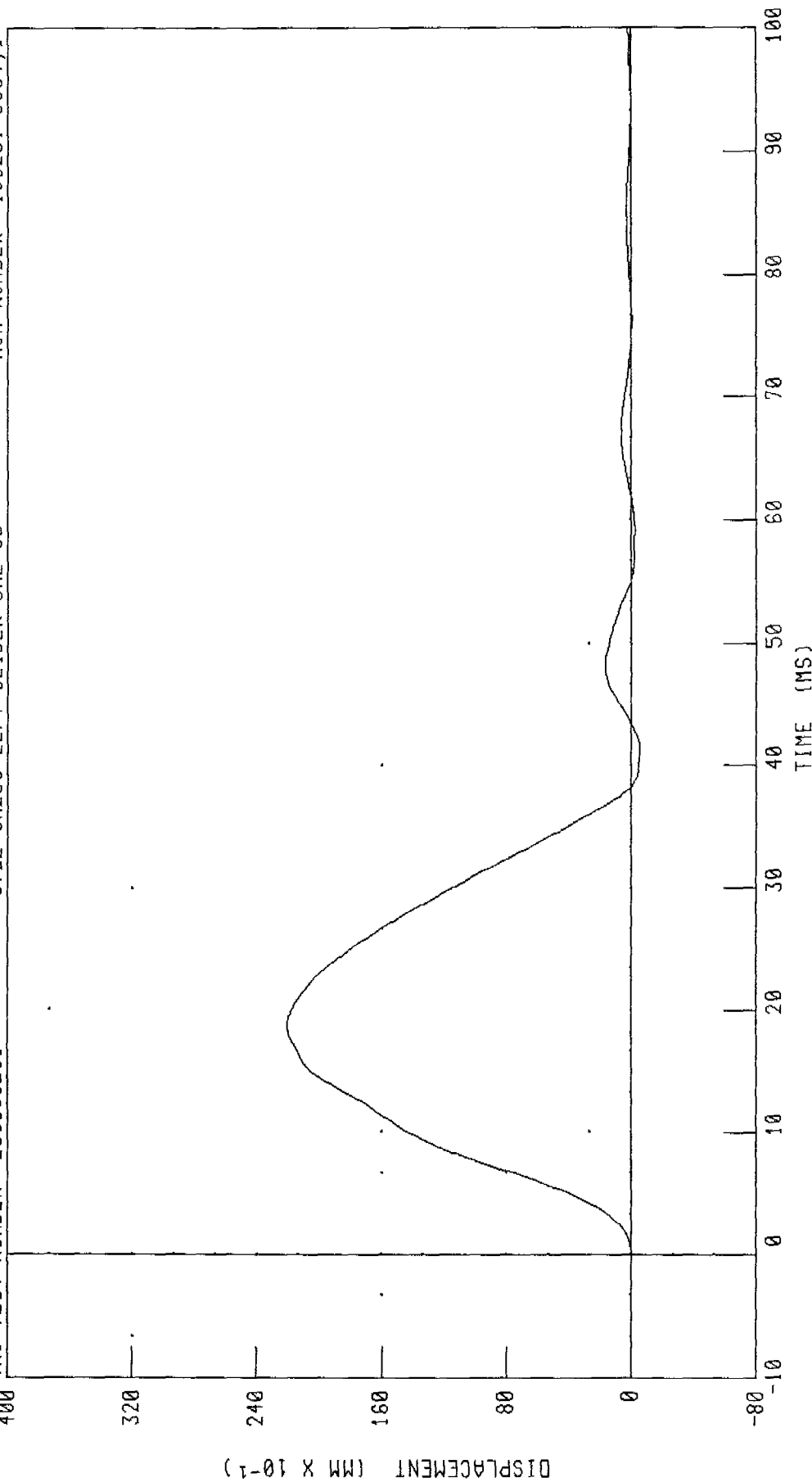
PART 572-E HYBRID III LEFT KNEE SLIDER CALIBRATION

LEFT KNEE DISPLACEMENT

TRC TEST NUMBER 206C05LS1

572E SN206 LEFT SLIDER CAL 05

RUN NUMBER 100201 0834,1



CHANNEL KNLXD FILTER CH CLASS 600

PEAK DATA 22 07 MM @ 18 80 MS, -0 57 MM @ 41 36 MS

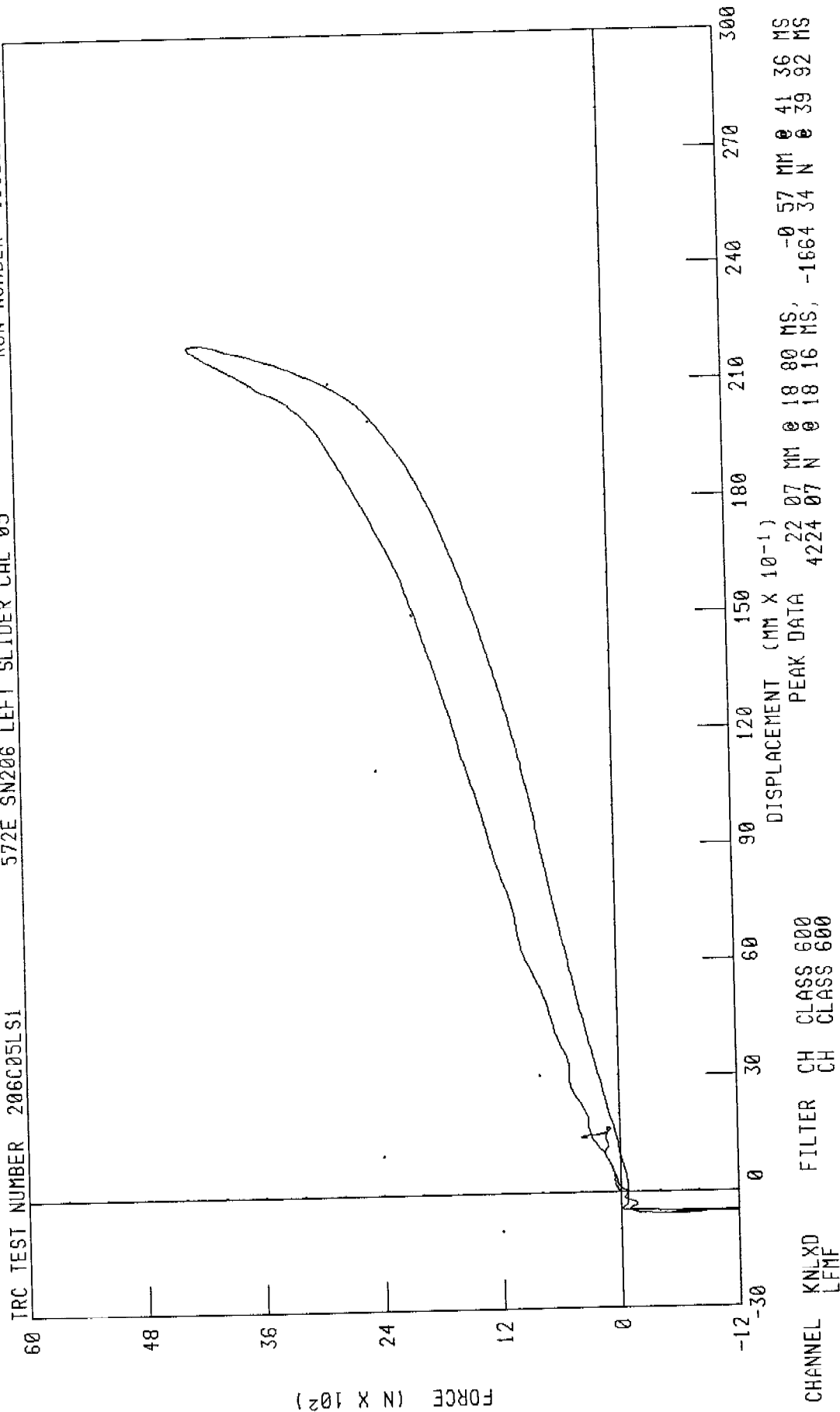
PART 572-E HYBRID III LEFT KNEE SLIDER CALIBRATION

LEFT KNEE DISPLACEMENT VS FEMUR FORCE

RUN NUMBER 100201 0834,1

572E SN206 LEFT SLIDER CAL 05

TRC TEST NUMBER 206C05LS1



CHANNEL KNLXD
LTMF

FILTER CH CLASS 600
CH CLASS 600

PEAK DATA 22 07 MM 22 07 N

4224 07 N 4224 07 N
-1664 34 N -1664 34 N
-0 57 MM -0 57 MM
41 36 MS 41 36 MS
39 92 MS 39 92 MS

TRANSPORTATION RESEARCH CENTER INC.

KNEE SLIDER TEST

HYBRID III 50th

02-OCT-01

RIGHT KNEE

TRC INC.

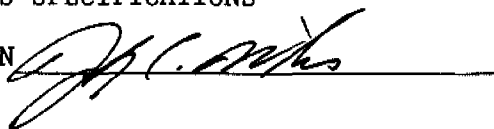
TEST NO: 206C05RS1

572E SN206 RIGHT SLIDER CAL 05

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	50.0 %
PENDULUM VELOCITY	2.70-2.80 M/S	2.80 M/S
FORCE AT 10.0 MM DISPLACEMENT	1259 - 1721 N	1582. N
FORCE AT 18.0 MM DISPLACEMENT	2268 - 3096 N	2940. N

TEST MEETS SPECIFICATIONS

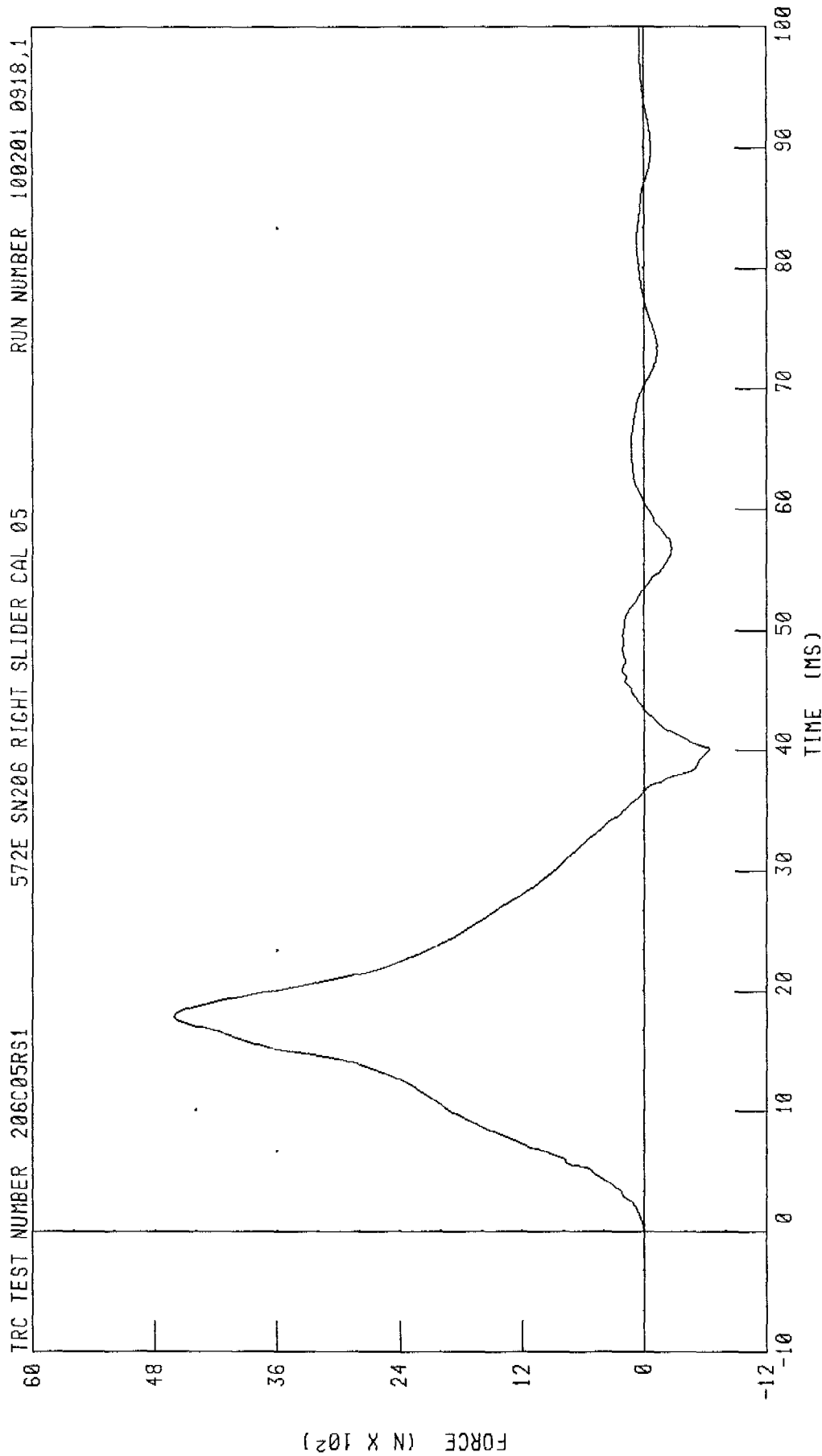
TECHNICIAN



RUN NUMBER: 100201.0917;1

PART 572-E HYBRID III RIGHT KNEE SLIDER CALIBRATION

RIGHT FEMUR FORCE



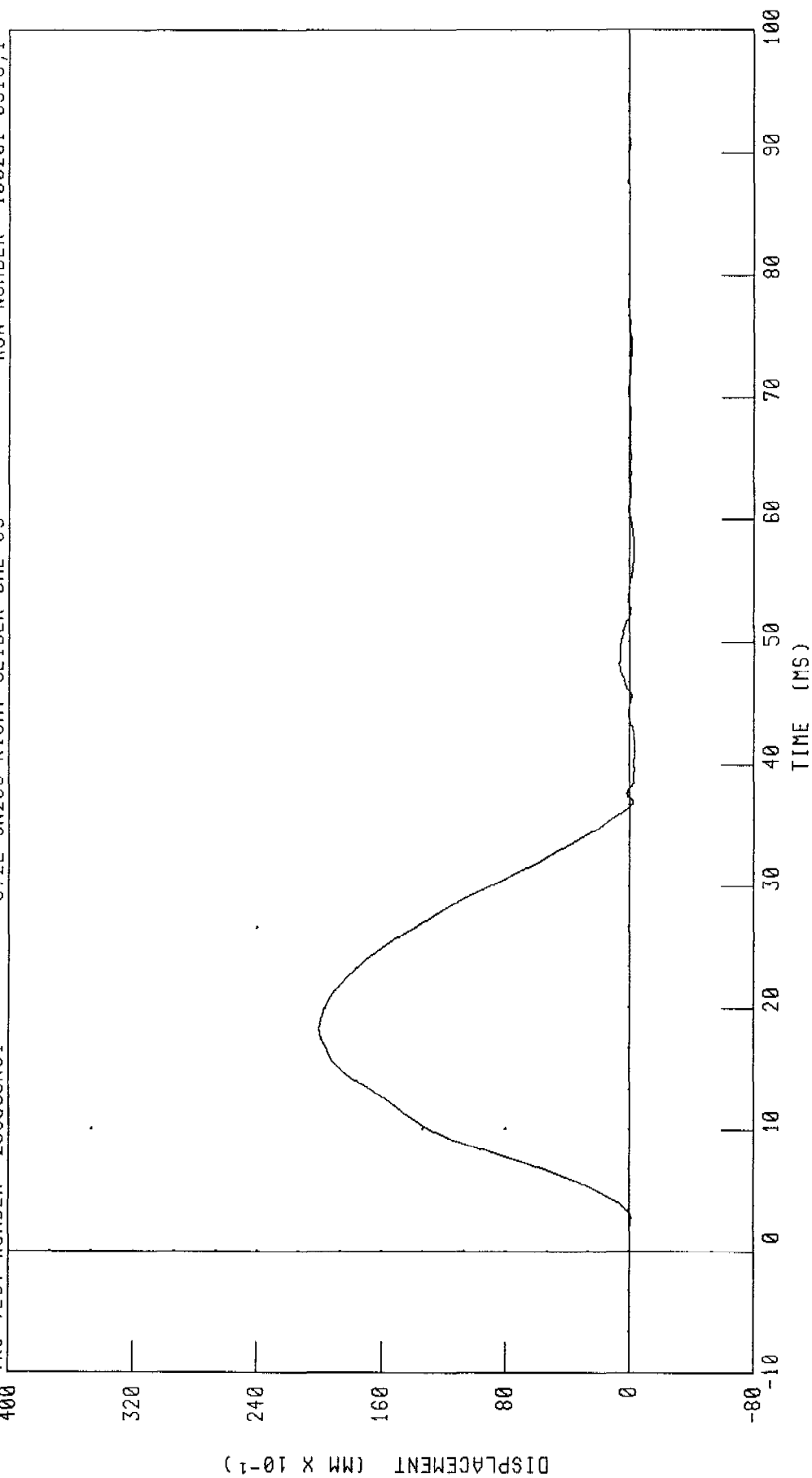
CHANNEL RFMF FILTER CH CLASS 600

PEAK DATA 4616 02 N 0 17 84 MS, -639 24 N 0 40 08 MS

PART 572-E HYBRID III RIGHT KNEE SLIDER CALIBRATION

RIGHT KNEE DISPLACEMENT

TRC TEST NUMBER 206C05RS1 572E SN206 RIGHT SLIDER CAL 05 RUN NUMBER 100201 0918,1



CHANNEL KNRXD FILTER CH CLASS 600 PEAK DATA 20 01 MM @ 18 32 MS, -0 38 MM @ 41 20 MS

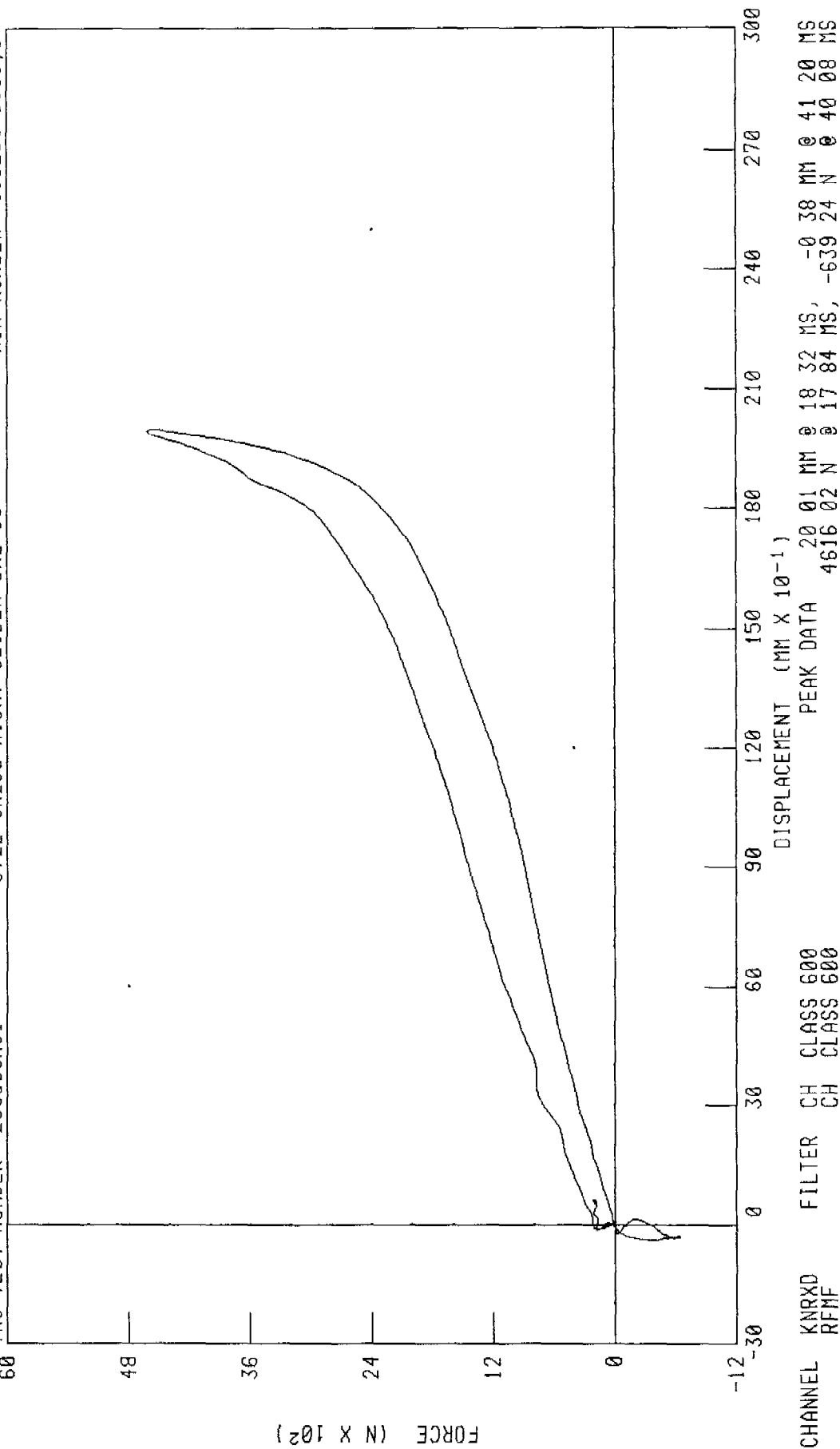
PART 572-E HYBRID III RIGHT KNEE SLIDER CALIBRATION

RIGHT KNEE DISPLACEMENT VS FEMUR FORCE

TRC TEST NUMBER 206C05RS1

572E SN206 RIGHT SLIDER CAL 05

RUN NUMBER 100201 0918,1



Post-Test Dummy Configuration and Performance Verification Data

Passenger Dummy S/N: 202

TRANSPORTATION RESEARCH CENTER INC.
HYBRID III EXTERNAL DIMENSIONS

202

04-OCT-01

TRC INC. TEST NO: 202C06ED1 572E SN202 EXT.DIMENSION CAL06

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	884. 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	475. MM
POPLITEAL HEIGHT (L)	429 - 455 MM	445. 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	338. MM
BACK OF ELBOW TO WRIST PIVOT (G)	290 - 305 MM	297. MM

572E SN202 EXT.DIMENSION CAL06

DUMMY MEETS SPECIFICATIONS

TECHNICIAN

[Signature]

RUN NUMBER: 100501.1313

TRANSPORTATION RESEARCH CENTER INC.

HEAD DROP TEST

HYBRID III 50th

02-OCT-01

TRC INC.

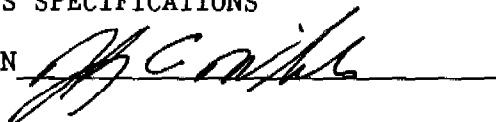
TEST NO: 202C06HD1

572E SN202 HEAD DROP CAL 06

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	53.0 %
PEAK RESULTANT ACCELERATION	225 - 275 G	243.44 G
PEAK LATERAL ACCELERATION	15 G MAX	12.61 G
IS ACCELERATION CURVE UNIMODAL?	YES	YES

TEST MEETS SPECIFICATIONS

TECHNICIAN



RUN NUMBER: 100301.1345;2

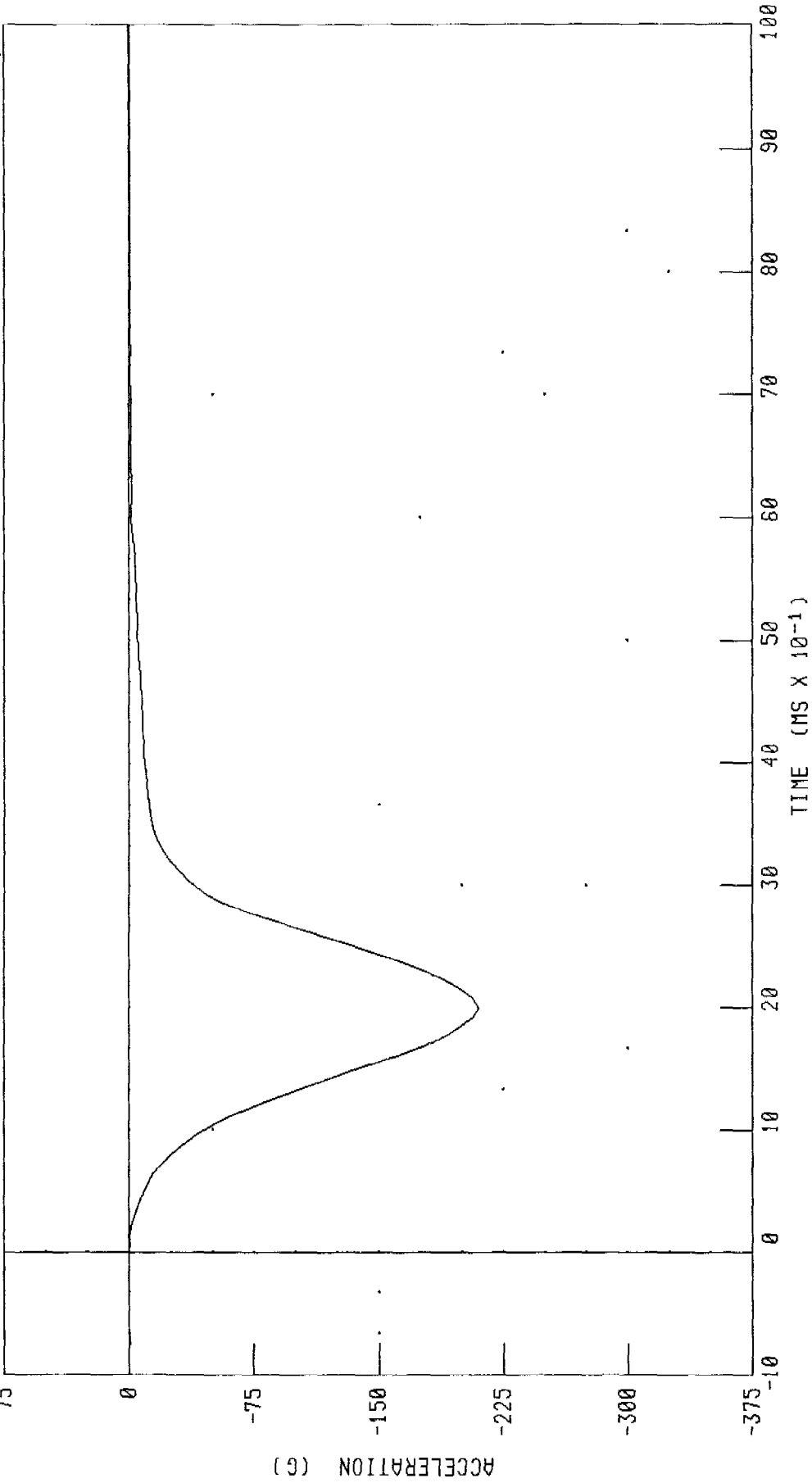
PART 572-E HYBRID III HEAD CALIBRATION

HEAD ACCELERATION X AXIS

IRC TEST NUMBER 202C06HD1

572E SN202 HEAD DROP CAL 06

RUN NUMBER 100301 1345,2



CHANNEL HEDXC FILTER CH CLASS 1000

TIME (MS X 10^-1)

PEAK DATA 0 05 0 0 -0 56 MS, -210 24 0 2 00 MS

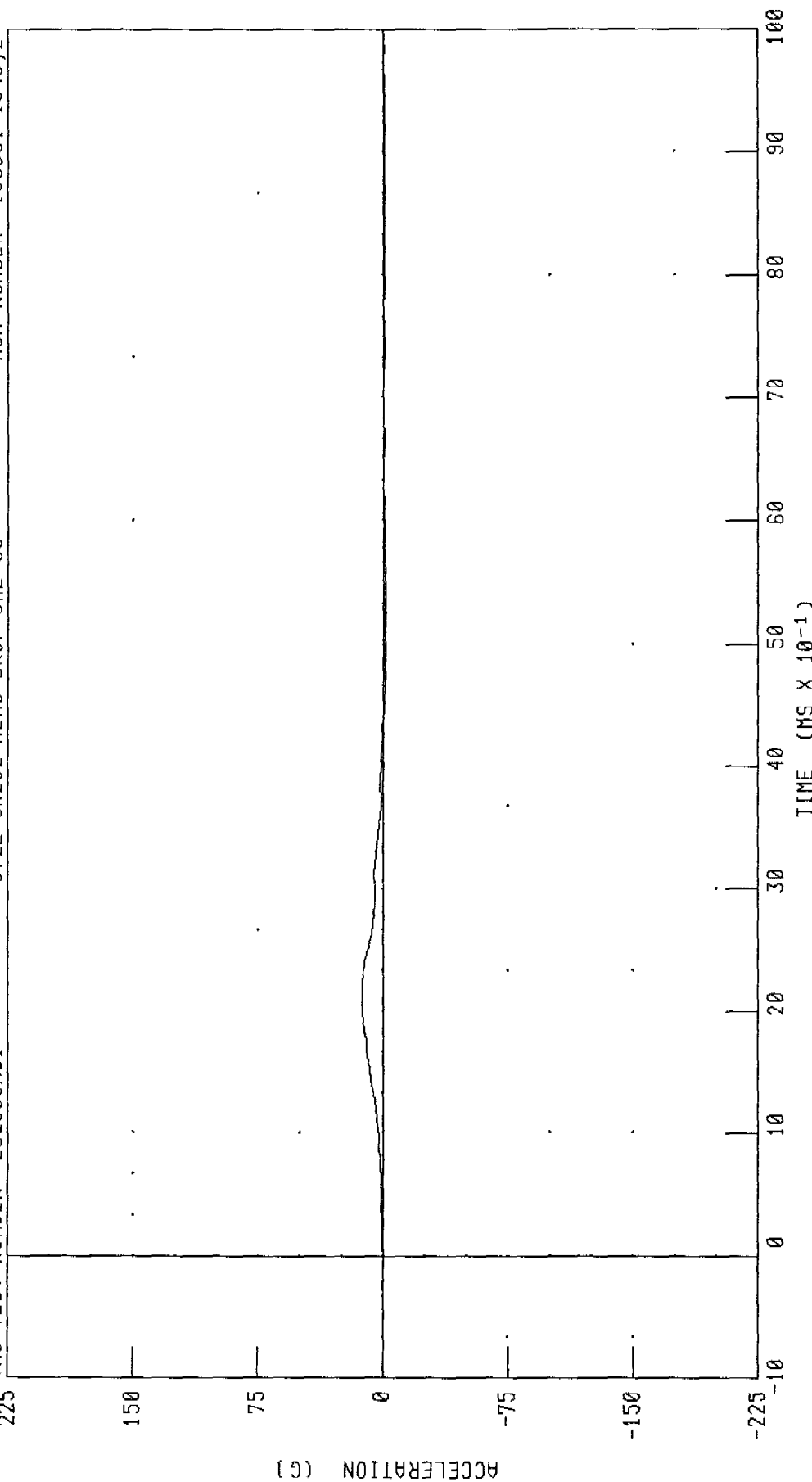
PART 572-E HYBRID III HEAD CALIBRATION

HEAD ACCELERATION Y AXIS

572E SN202 HEAD DROP CAL 06

TRC TEST NUMBER 202C06HD1

RUN NUMBER 100301 1345,2



CHANNEL HEDYG FILTER CH CLASS 1000

PEAK DATA 12 62 G 0 2 16 MS, -1 73 G 0 5 20 MS

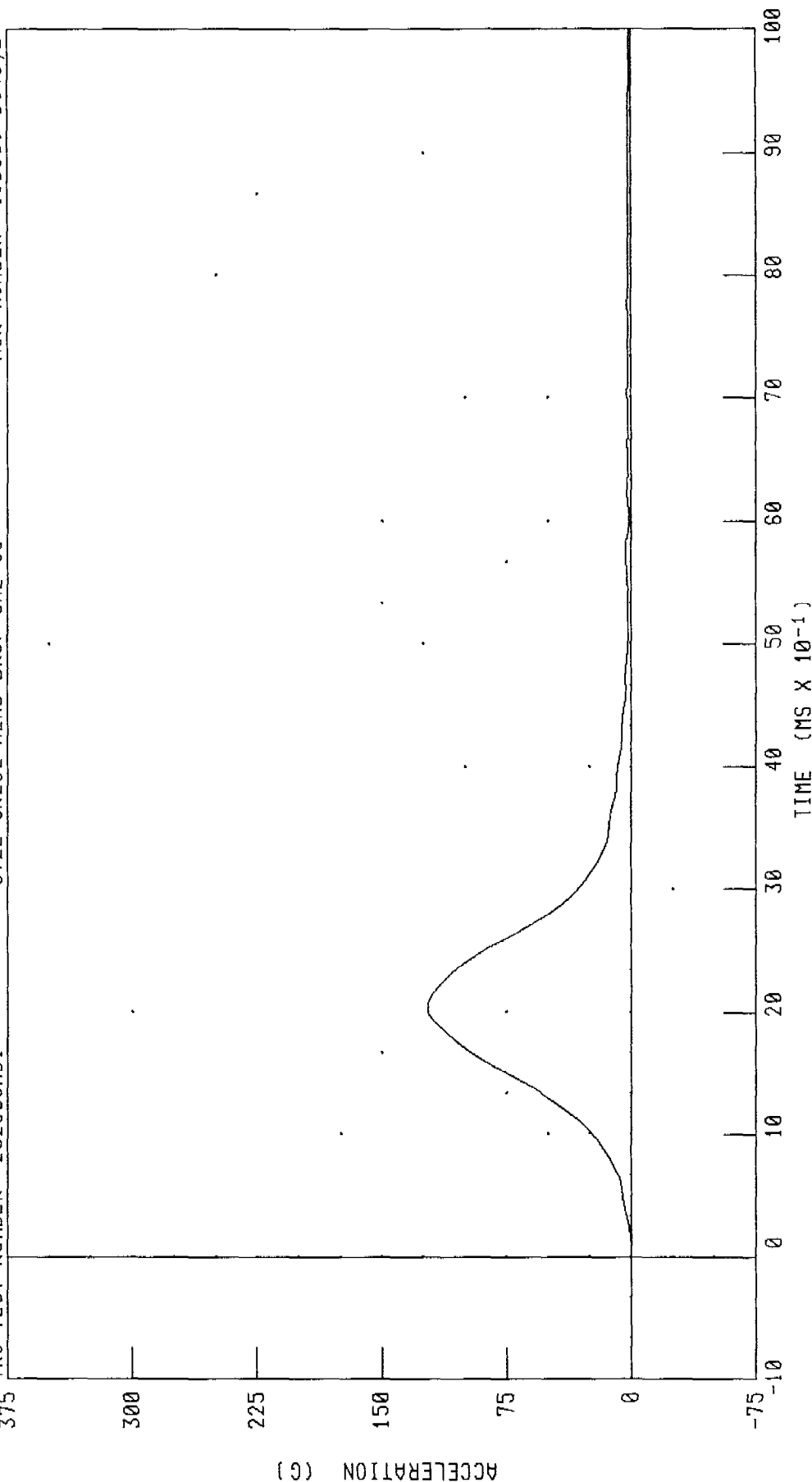
PART 572-E HYBRID III HEAD CALIBRATION

HEAD ACCELERATION Z AXIS

TRC TEST NUMBER 202C06HD1

572E SN202 HEAD DROP CAL 06

RUN NUMBER 100301 1345,2



CHANNEL HEDZG FILTER CH CLASS 1000

PEAK DATA 122 37 G 2 08 MS, -0 09 G 0 -0 80 MS

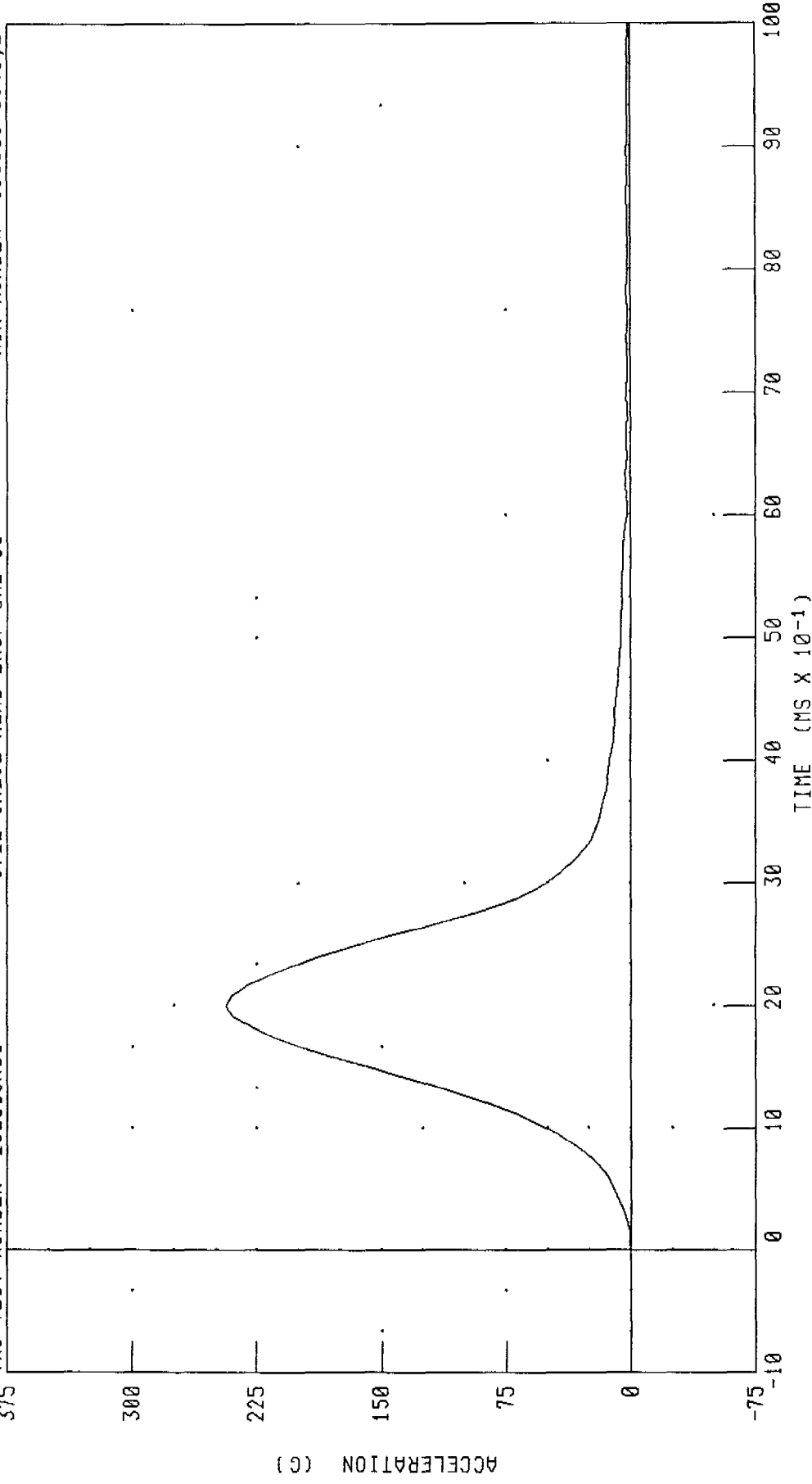
PART 572-E HYBRID III HEAD CALIBRATION

HEAD RESULTANT ACCELERATION

TRC TEST NUMBER 202C06HD1

572E SN202 HEAD DROP CAL 06

RUN NUMBER 100301 1345,2



CHANNEL HEDRC FILTER CH CLASS 1000

PEAK DATA 243 44 G 0 2 00 MS, 0 03 G 0 -0 16 MS

TRANSPORTATION RESEARCH CENTER INC.

HYBRID III 50th

02-OCT-01

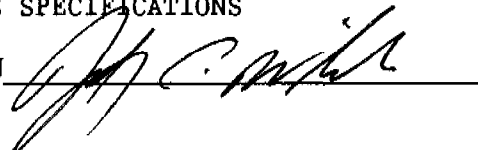
NECK FLEXION TEST - 6 CHANNEL TRANSDUCER

TRC INC. TEST NO: 202C06NF1 572E SN202 NECK FLEXION CAL06

TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE		20.6-22.2 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY		10 - 70 %	55.0 %
IMPACT VELOCITY		6.89 - 7.13 M/S	6.99 M/S
PENDULUM DECELERATION	10 MS	22.50 - 27.50 G	22.51 G
	20 MS	17.60 - 22.60 G	21.41 G
	30 MS	12.50 - 18.50 G	15.89 G
MAX PENDULUM G		29 G MAX	22.75 G
MAX PENDULUM G ABOVE 30 MS		29 G MAX	15.80 G
DECELERATION-TIME CURVE DECAY TIME TO 5 G		34 - 42 MS	41.68 MS
D PLANE	MAX	64 - 78 DEG.	70.14 DEG.
ROTATION	TIME	57 - 64 MS	60.96 MS
MOMENT ABOUT OCCIPITAL CONDYLE	MAX	88.2 - 108.5 NM	100.56 NM
	TIME	47 - 58 MS	55.12 MS
ROTATION ANGLE-TIME CURVE DECAY TIME TO ZERO		113 - 128 MS	119.52 MS
POSITIVE MOMENT-TIME CURVE DECAY TIME TO ZERO		97 - 107 MS	102.40 MS

TEST MEETS SPECIFICATIONS

TECHNICIAN



RUN NUMBER: 100201.1525;2

PART 572-E HYBRID III NECK FLEXION CALIBRATION

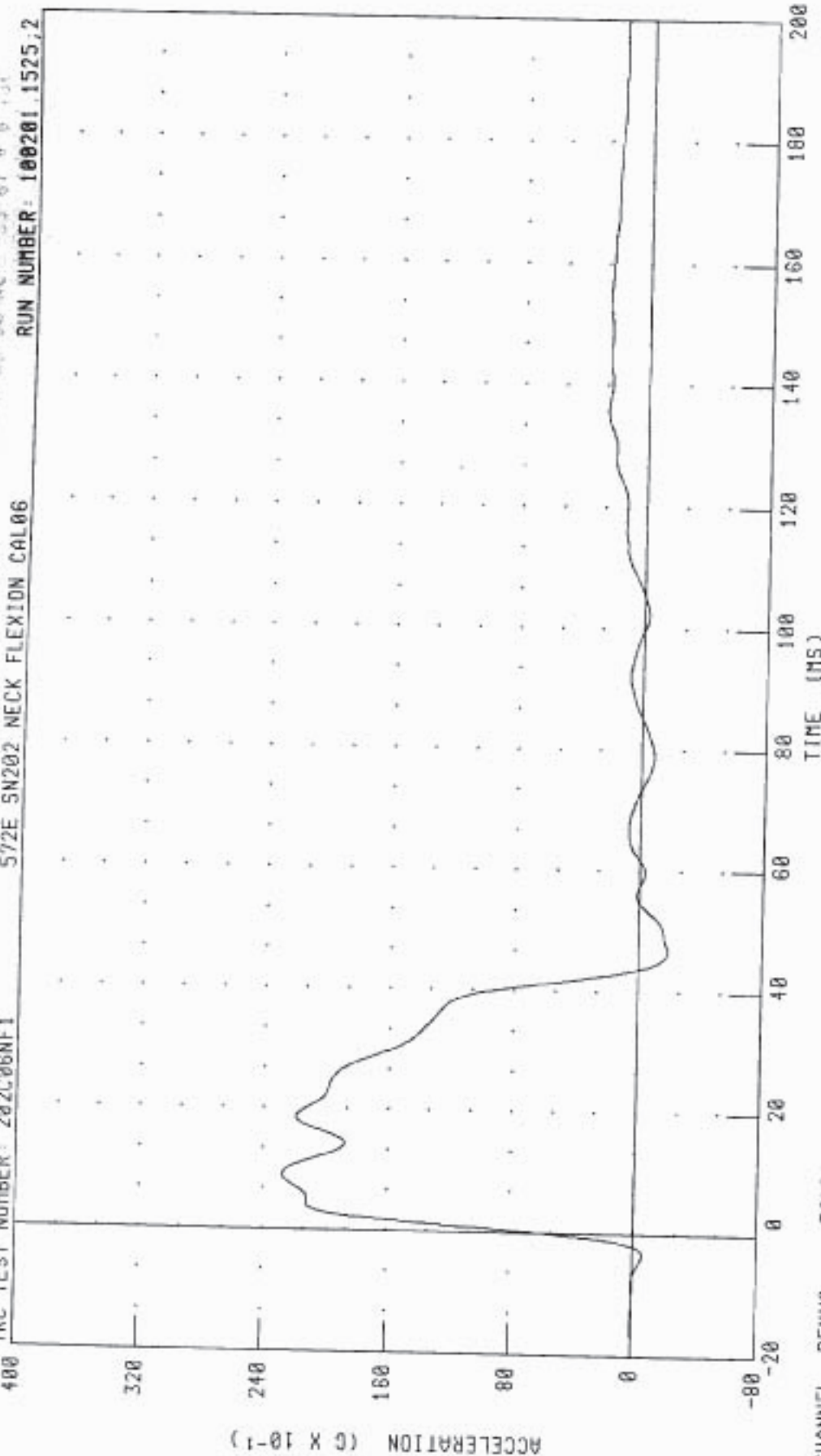
PENDULUM DECELERATION

TRC TEST NUMBER: 202C06NF1

572E SN202 NECK FLEXION CAL06

10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200

RUN NUMBER: 100201, 1525, 2



ACCELERATION (G X 10⁻¹)

CHANNEL: PENXC FILTER: CH. CLASS 60

TIME (MS)

PEAK DATA: 22.76 G @ 9.04 MS, -1.89 G @ 46.72 MS

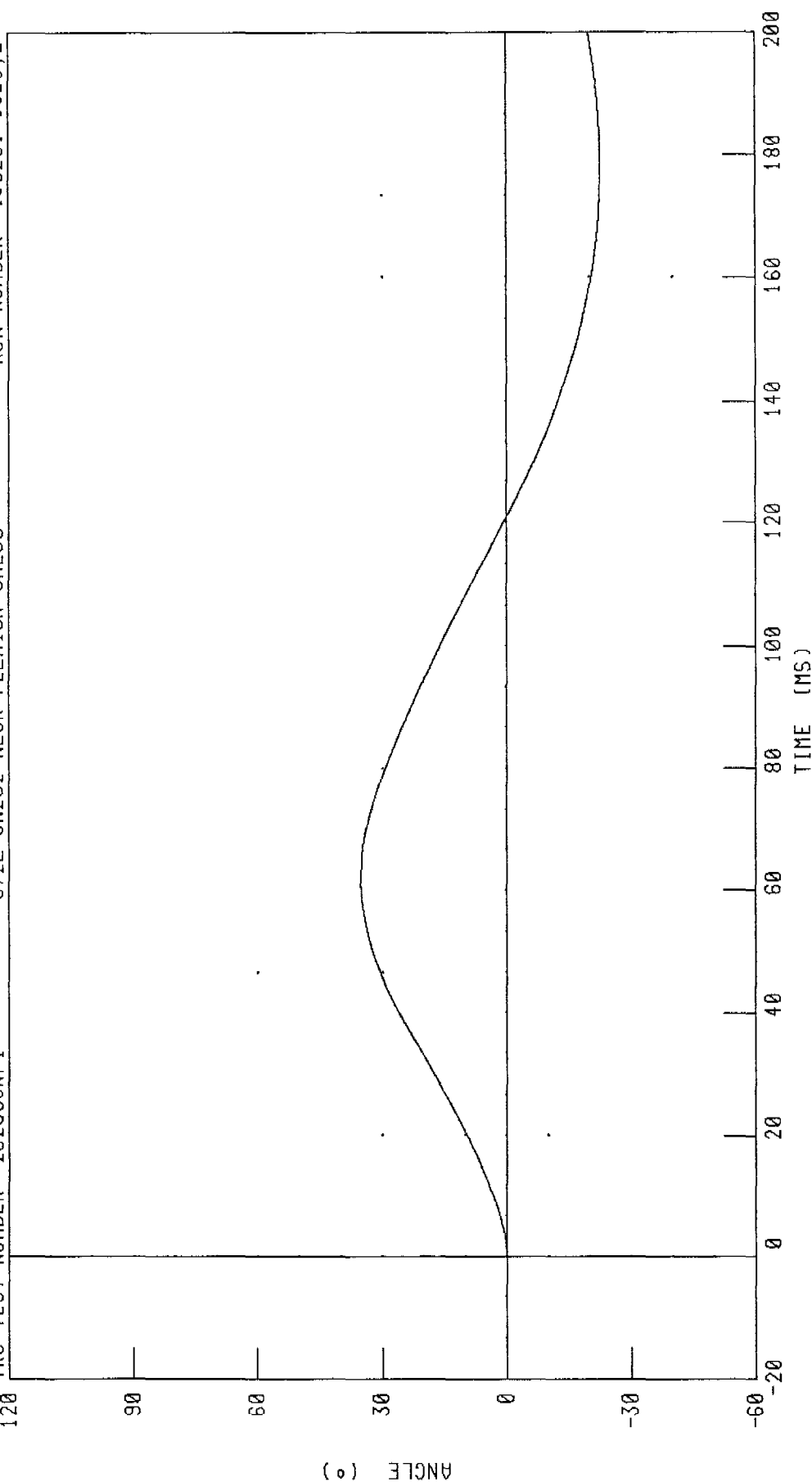
PART 572-E HYBRID III NECK FLEXION CALIBRATION

ROTATION ABOUT BASE OF NECK

TRC TEST NUMBER 202C06NF1

572E SN202 NECK FLEXION CAL06

RUN NUMBER 100201 1525,2



PEAK DATA 35 12 ° 0 62 08 MS, -22 81 ° 0 178 00 MS

CHANNEL BETA FILTER CH CLASS 60

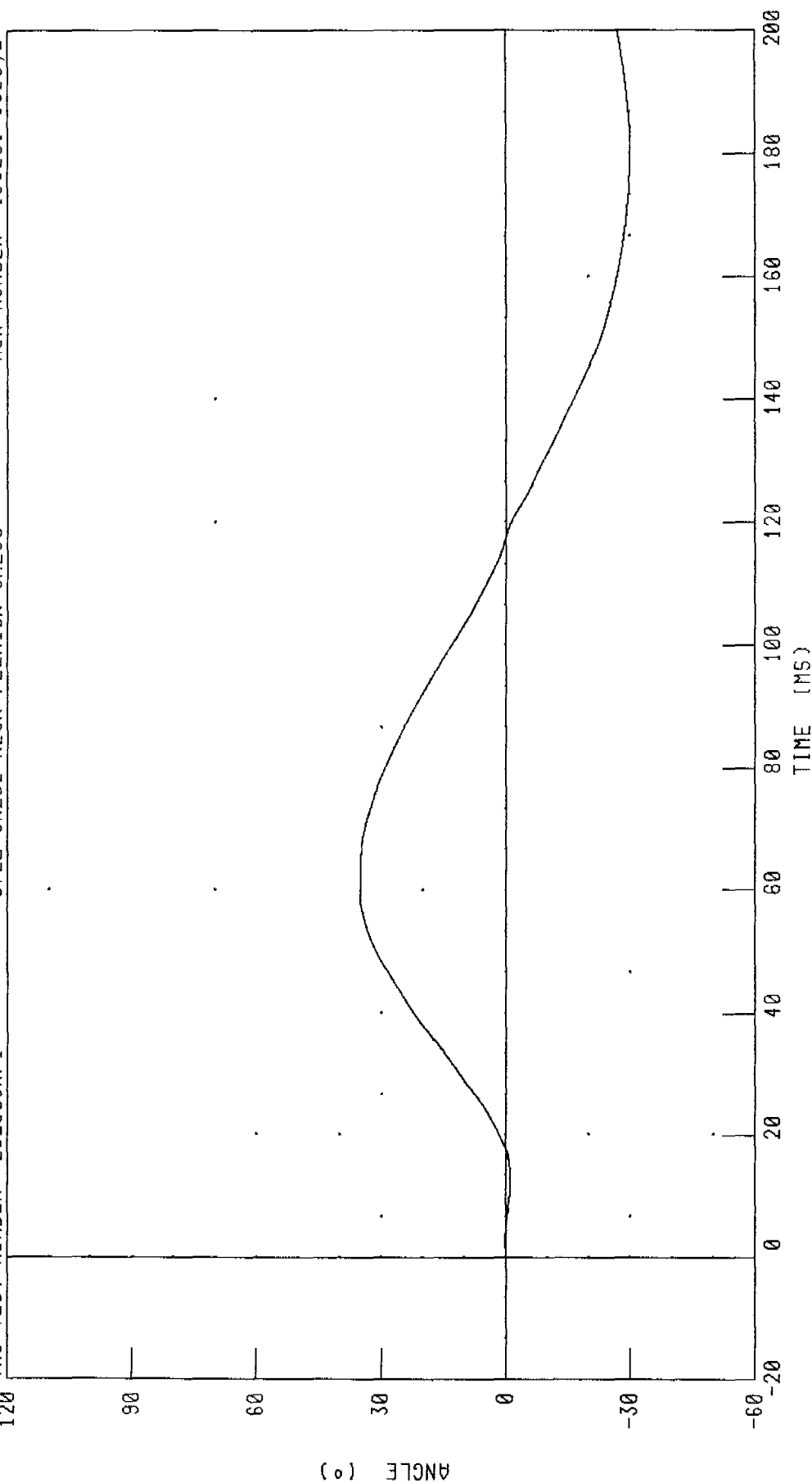
PART 572-E HYBRID III NECK FLEXION CALIBRATION

ROTATION ABOUT OCCIPITAL CONDYLE

TRC TEST NUMBER 202C06NF1

572E SN202 NECK FLEXION CAL06

RUN NUMBER 100201 1525,2



CHANNEL THETA FILTER CH CLASS 60 PEAK DATA 35 05 ° 0 50 08 MS, -30 09 ° 0 181 12 MS

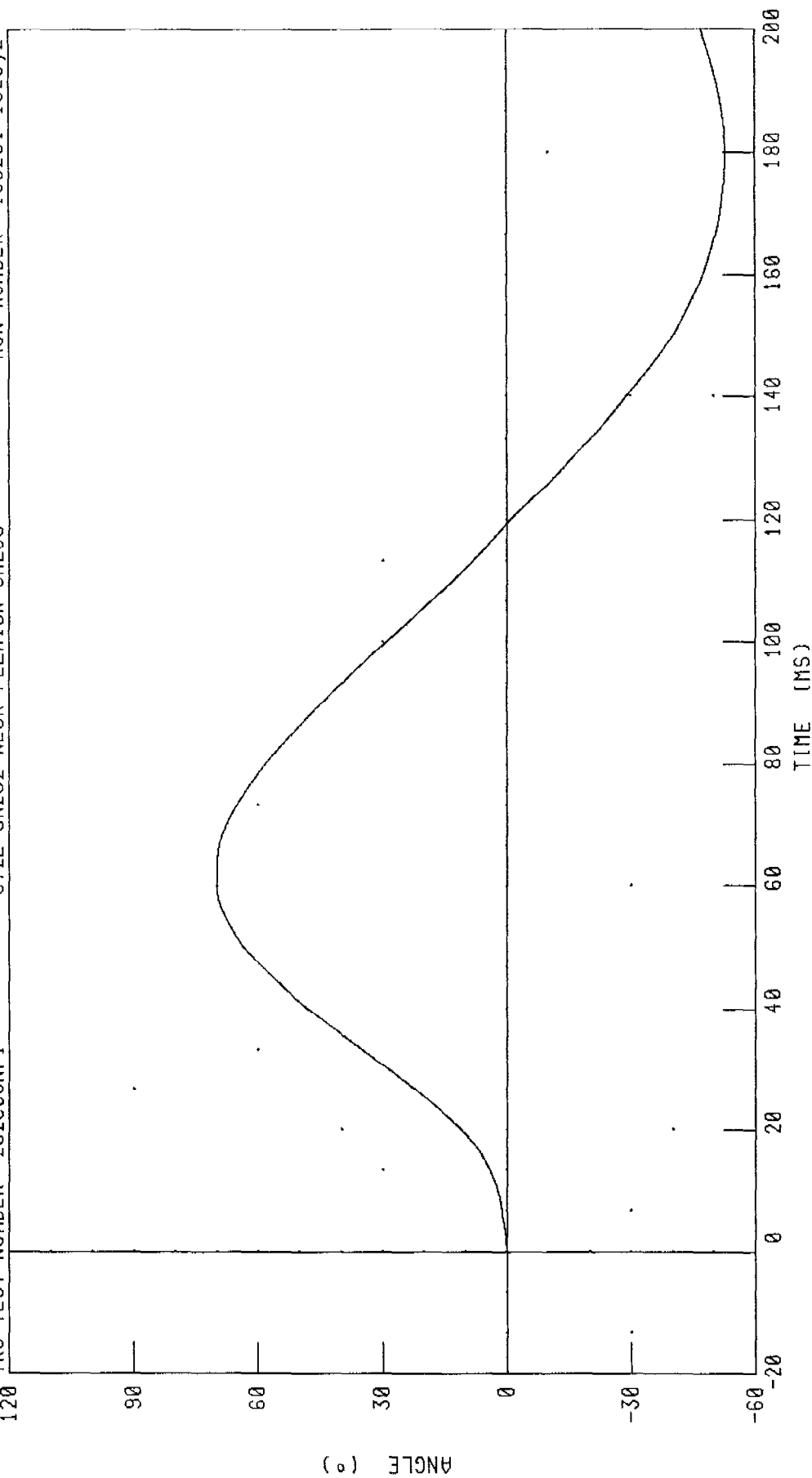
PART 572-E HYBRID III NECK FLEXION CALIBRATION

TOTAL ROTATION

TRC TEST NUMBER 202C06NF1

572E SN202 NECK FLEXION CAL06

RUN NUMBER 100201 1525,2



PEAK DATA 70 15 ° 60 96 MS, -52 87 ° @ 180 08 MS

CHANNEL TOTAL FILTER CH CLASS 60

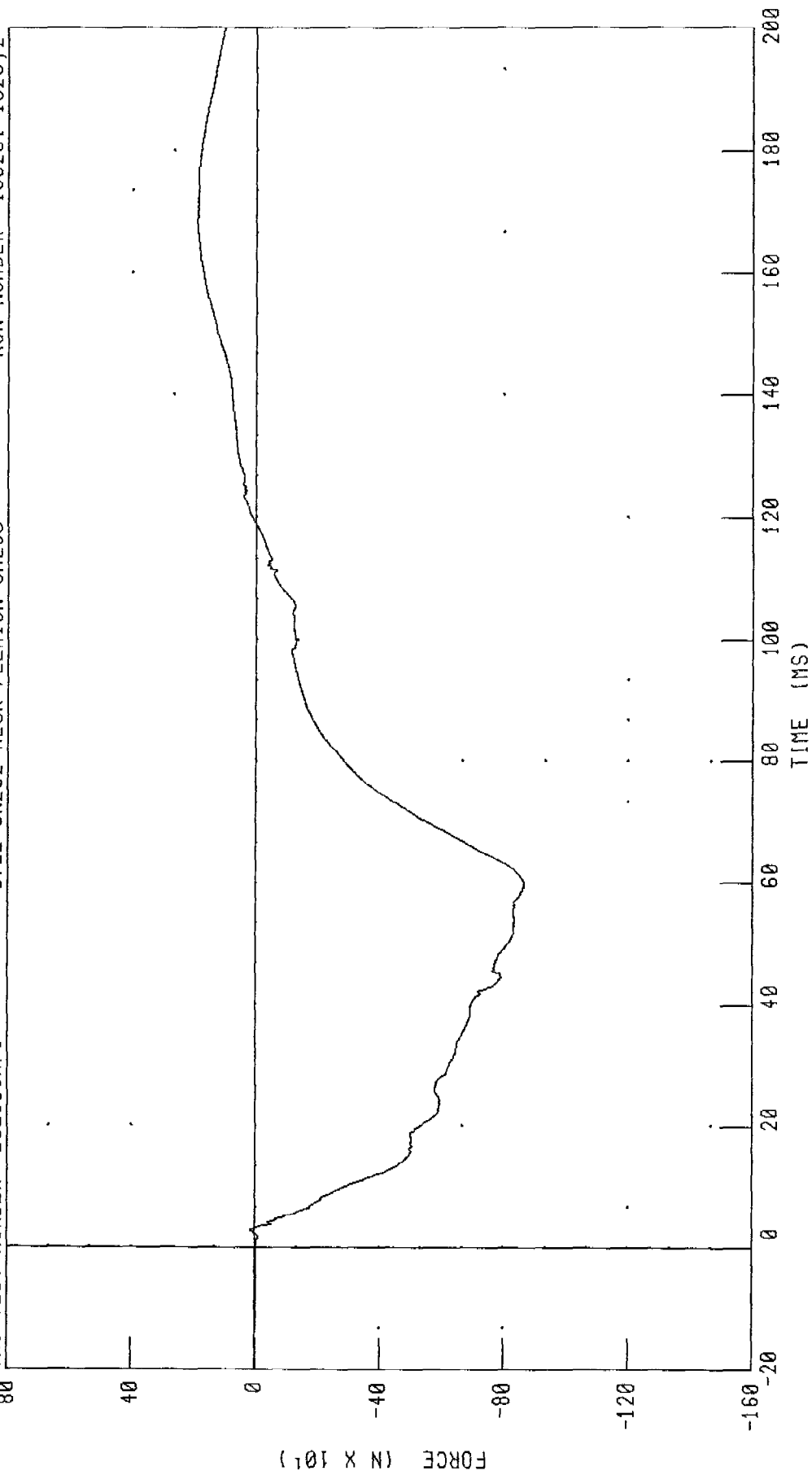
PART 572-E HYBRID III NECK FLEXION CALIBRATION

NECK FORCE X AXIS

TRC TEST NUMBER 202C06NF1

572E SN202 NECK FLEXION CAL06

RUN NUMBER 100201 1525,2



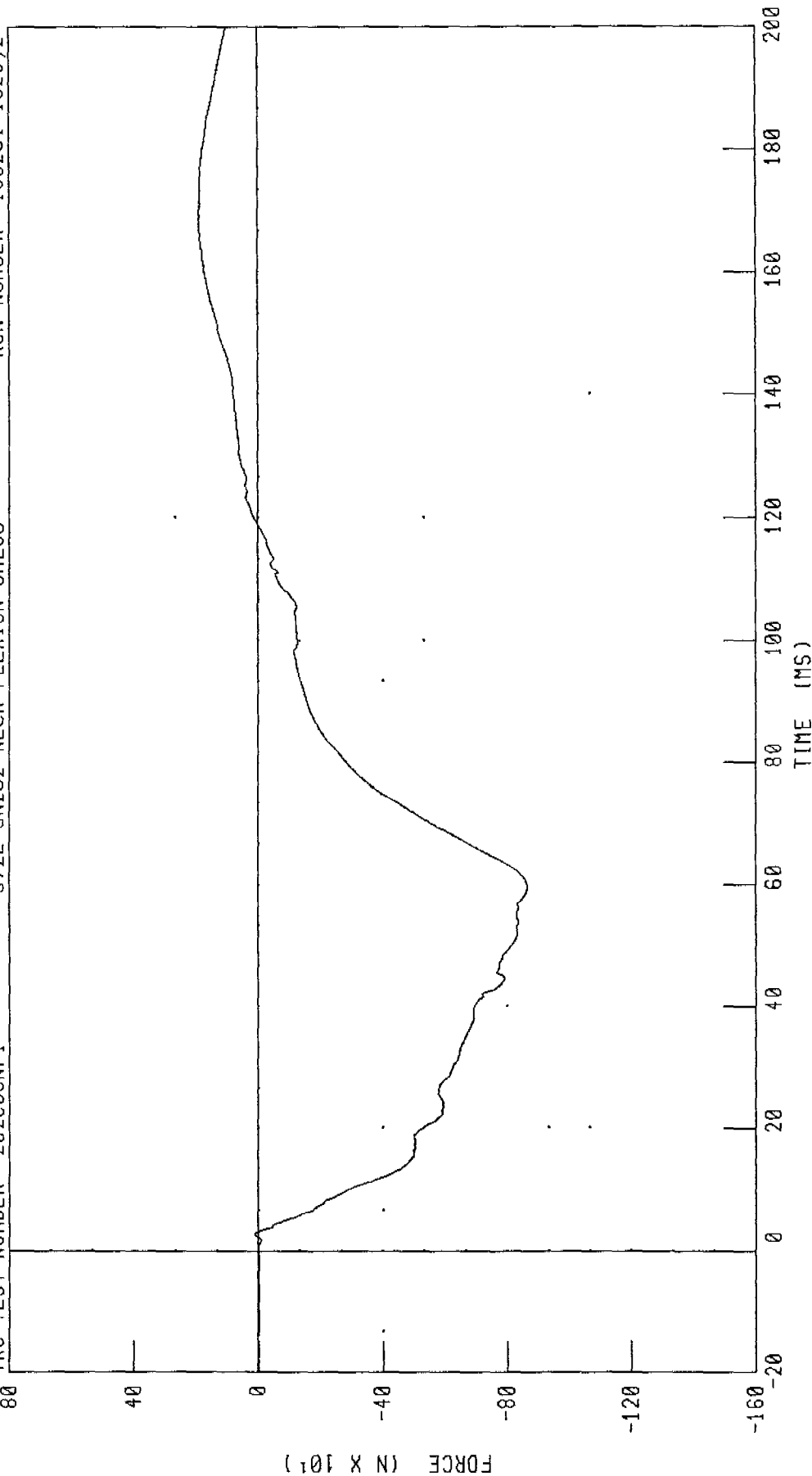
CHANNEL NEKXF FILTER CH CLASS 1000

PEAK DATA 191 05 N @ 168 00 MS, -865 36 N @ 59 36 MS

PART 572-E HYBRID III NECK FLEXION CALIBRATION

NECK FORCE X AXIS FILTERED FOR USE IN OCCIPITAL MOMENT CALCULATION

TRC TEST NUMBER 202C06NF1 572E SN202 NECK FLEXION CAL06 RUN NUMBER 100201 1525,2



CHANNEL NEKXFC FILTER CH CLASS 600

PEAK DATA 190 91 N @ 168 08 MS, -865 39 N @ 59 68 MS

PART 572-E HYBRID III NECK FLEXION CALIBRATION

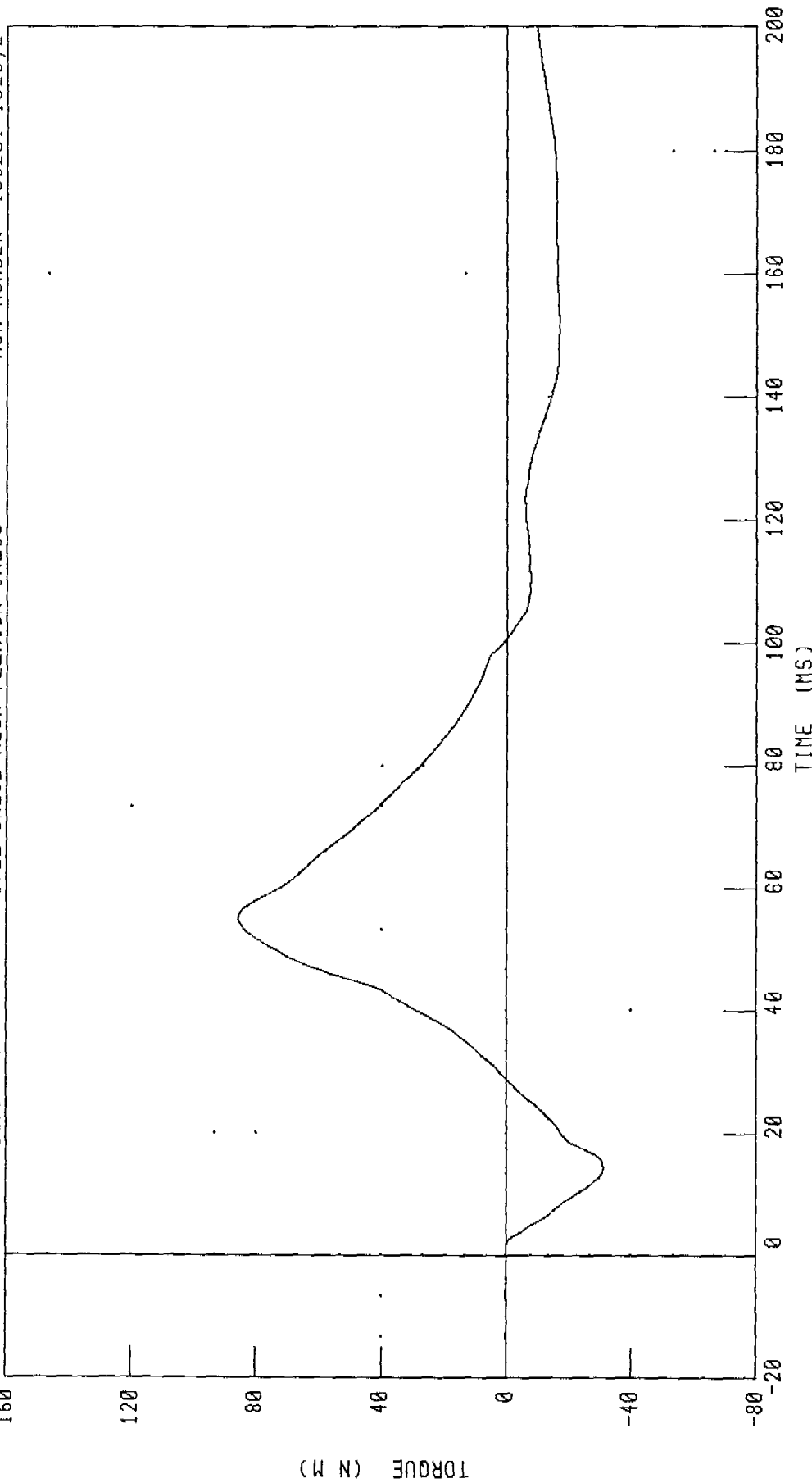
NECK MOMENT Y AXIS

TRC TEST NUMBER 202006NF1

572E SN202 NECK FLEXION CAL06

RUN NUMBER 100201

1525,2



CHANNEL NEKYM FILTER CH CLASS 600

PEAK DATA 85 78 N M @ 55 12 MS, -31 11 N M @ 14 32 MS

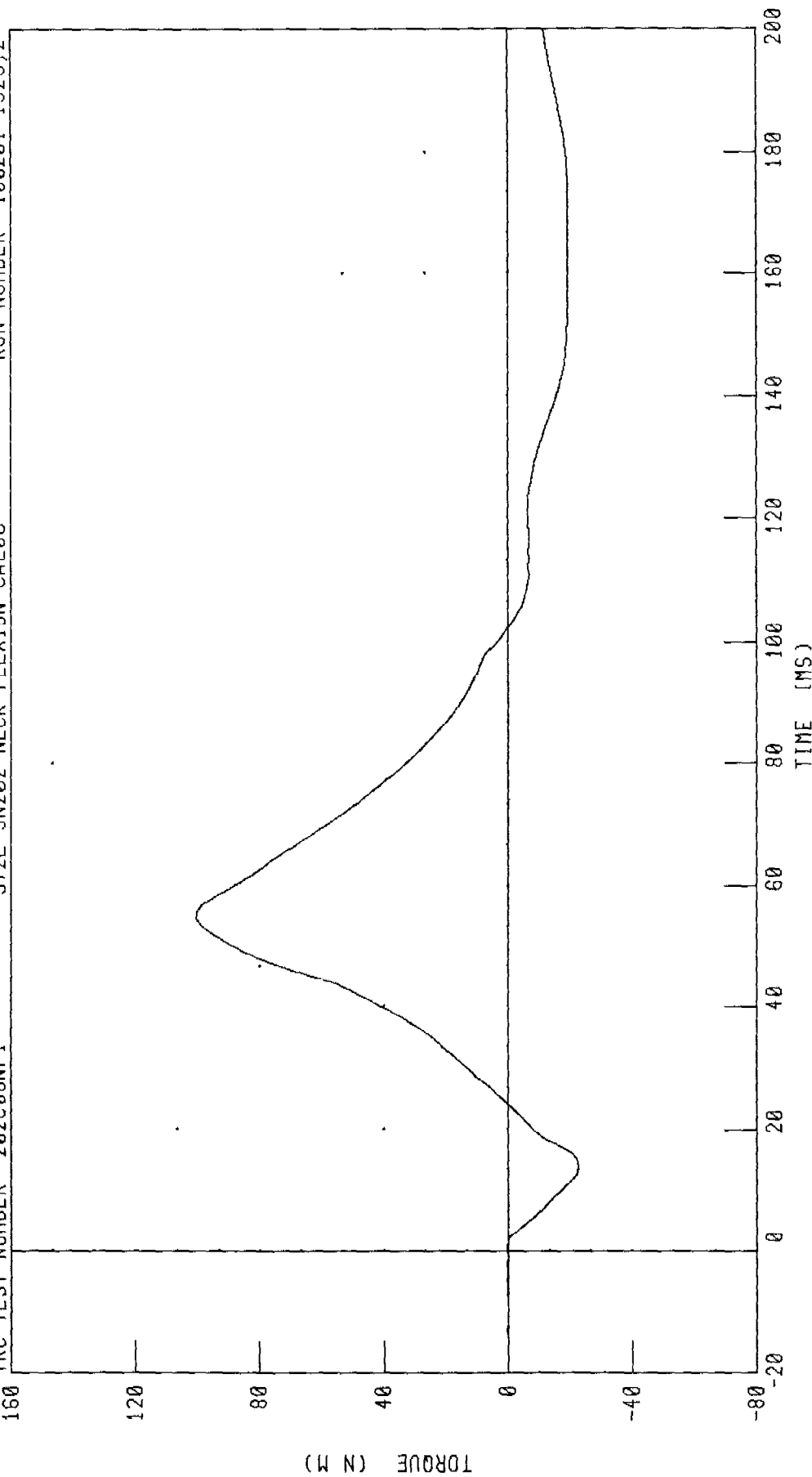
PART 572-E HYBRID III NECK FLEXION CALIBRATION

TOTAL MOMENT ABOUT OCCIPITAL CONDYLE

TRC TEST NUMBER 202C06NF1

572E SN202 NECK FLEXION CAL06

RUN NUMBER 100201 1525,2



CHANNEL NEKOM FILTER CH CLASS 600

PEAK DATA 100 56 N M 0 55 12 MS, -22 72 N M 0 13 84 MS

TRANSPORTATION RESEARCH CENTER INC.

HYBRID III 50th

03-OCT-01

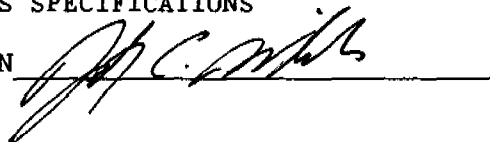
NECK EXTENSION TEST - 6 CHANNEL TRANSDUCER

TRC INC. TEST NO: 202C06NE1 572E SN202 NECK EXT CAL06

TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE		20.6 - 22.2 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY		10 - 70 %	53.0 %
IMPACT VELOCITY		5.95 - 6.19 M/S	6.00 M/S
PENDULUM DECELERATION	10 MS	17.20 - 21.20 G	18.67 G
	20 MS	14.00 - 19.00 G	17.63 G
	30 MS	11.00 - 16.00 G	15.41 G
MAX PENDULUM G		22 G MAX	18.86 G
MAX PENDULUM G ABOVE 30 MS		22 G MAX	15.35 G
DECELERATION-TIME CURVE DECAY TIME TO 5 G		38 - 46 MS	41.52 MS
D PLANE	MAX	81 - 106 DEG.	96.81 DEG.
ROTATION	TIME	72 - 82 MS	78.72 MS
MOMENT ABOUT OCCIPITAL CONDYLE	MIN	-80.0/-52.9 NM	-70.69 NM
	TIME	65 - 79 MS	72.88 MS
ROTATION ANGLE-TIME CURVE DECAY TIME TO ZERO		147 - 174 MS	158.32 MS
NEGATIVE MOMENT-TIME CURVE DECAY TIME TO ZERO		120 - 148 MS	142.48 MS

TEST MEETS SPECIFICATIONS

TECHNICIAN



RUN NUMBER: 100301.0826;1

PART 572-E HYBRID III NECK EXTENSION CALIBRATION

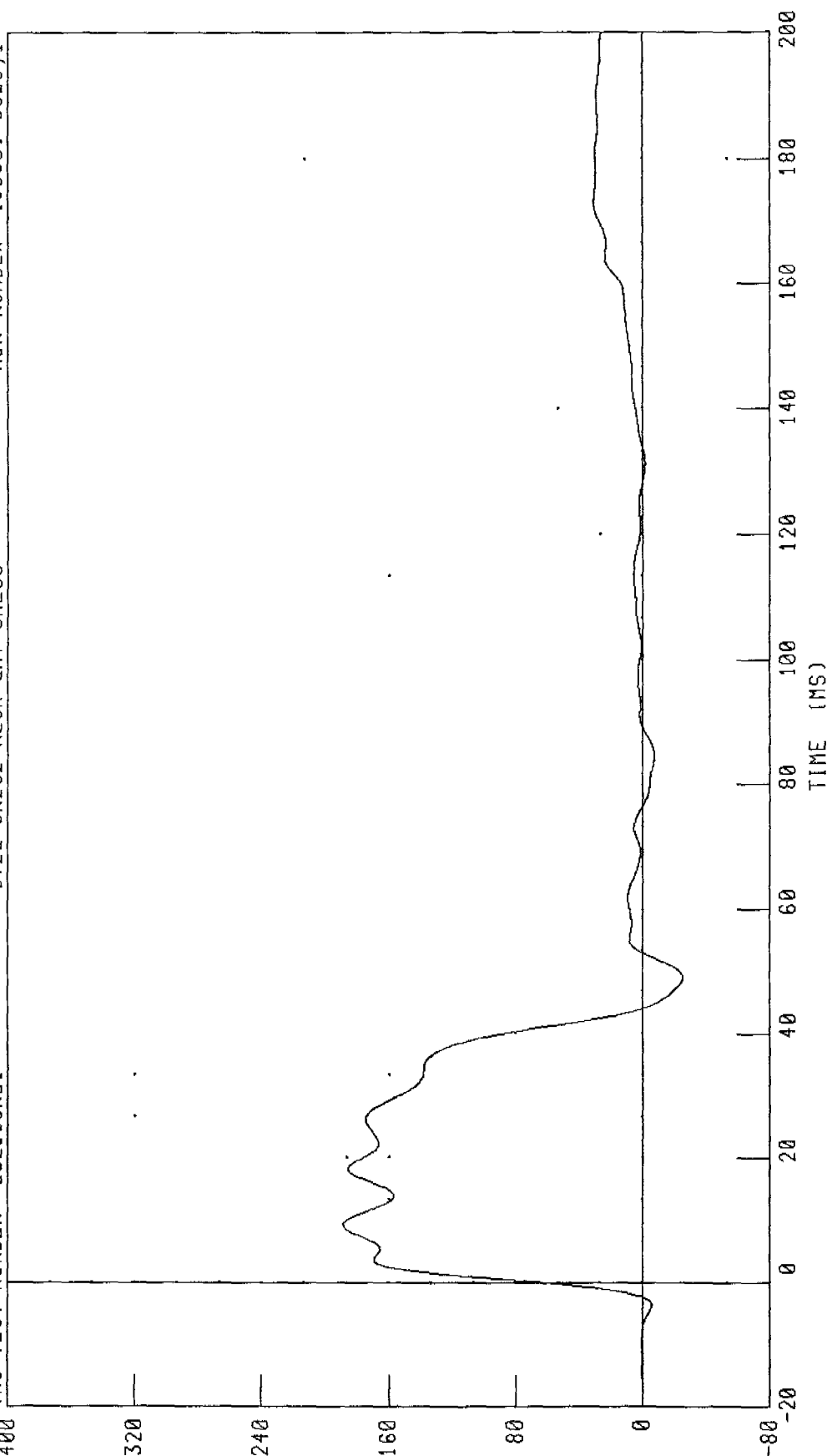
PENDULUM DECELERATION

TRC TEST NUMBER 202C06NE1

572E SN202 NECK EXT CAL06

RUN NUMBER 100301 0826,1

ACCELERATION (G X 10⁻¹)



CHANNEL PENXC FILTER CH CLASS 60

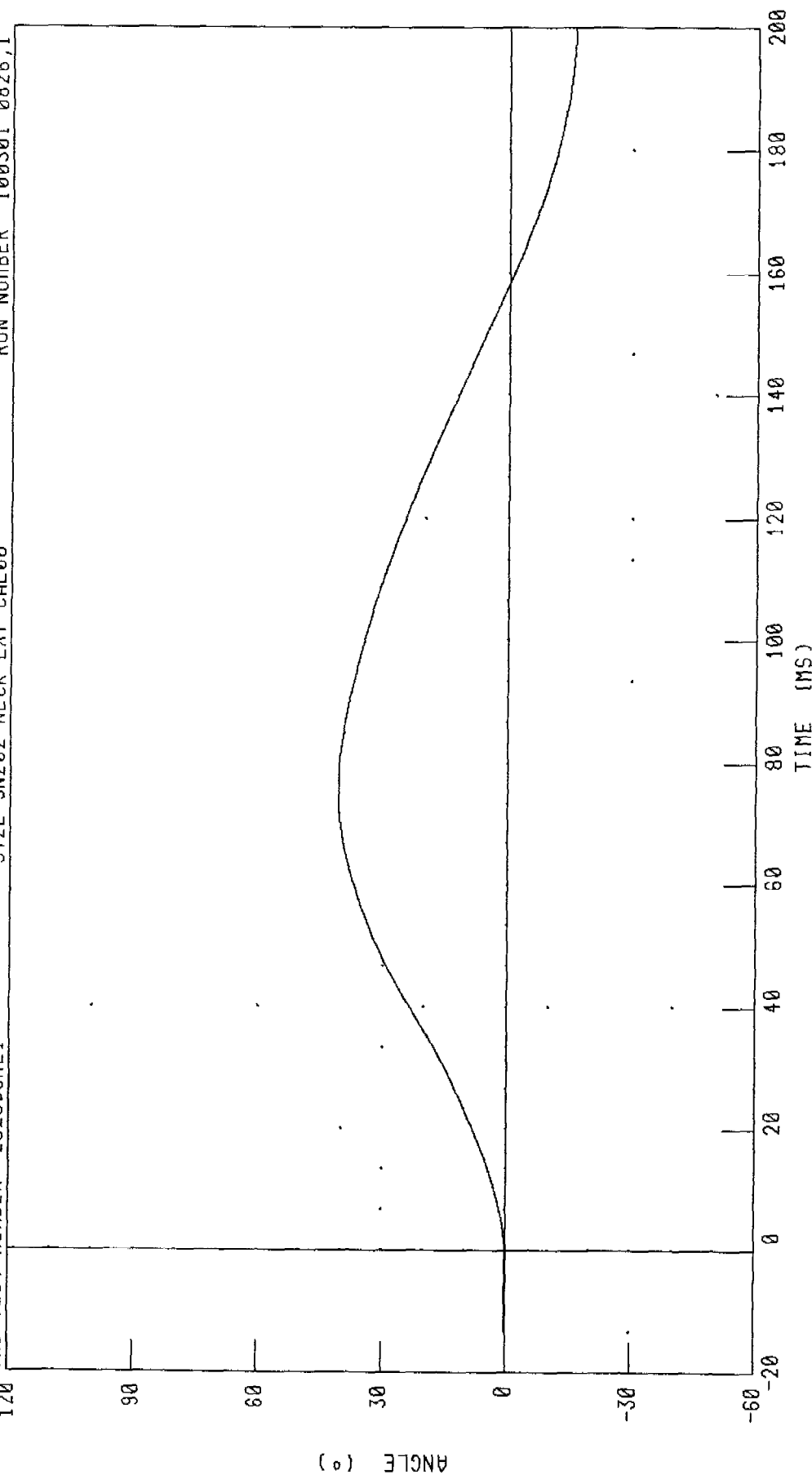
TIME (MS)

PEAK DATA 18 86 C 0 9 28 MS, -2 52 C 0 49 04 MS

PART 572-E HYBRID III NECK EXTENSION CALIBRATION

ROTATION ABOUT BASE OF NECK

TRC TEST NUMBER 202C06NE1 572E SN202 NECK EXT CAL06 RUN NUMBER 100301 0826,1



CHANNEL BETA FILTER CH CLASS 60 PEAK DATA 40 91 ° @ 76 40 MS, -16 07 ° @ 200 00 MS

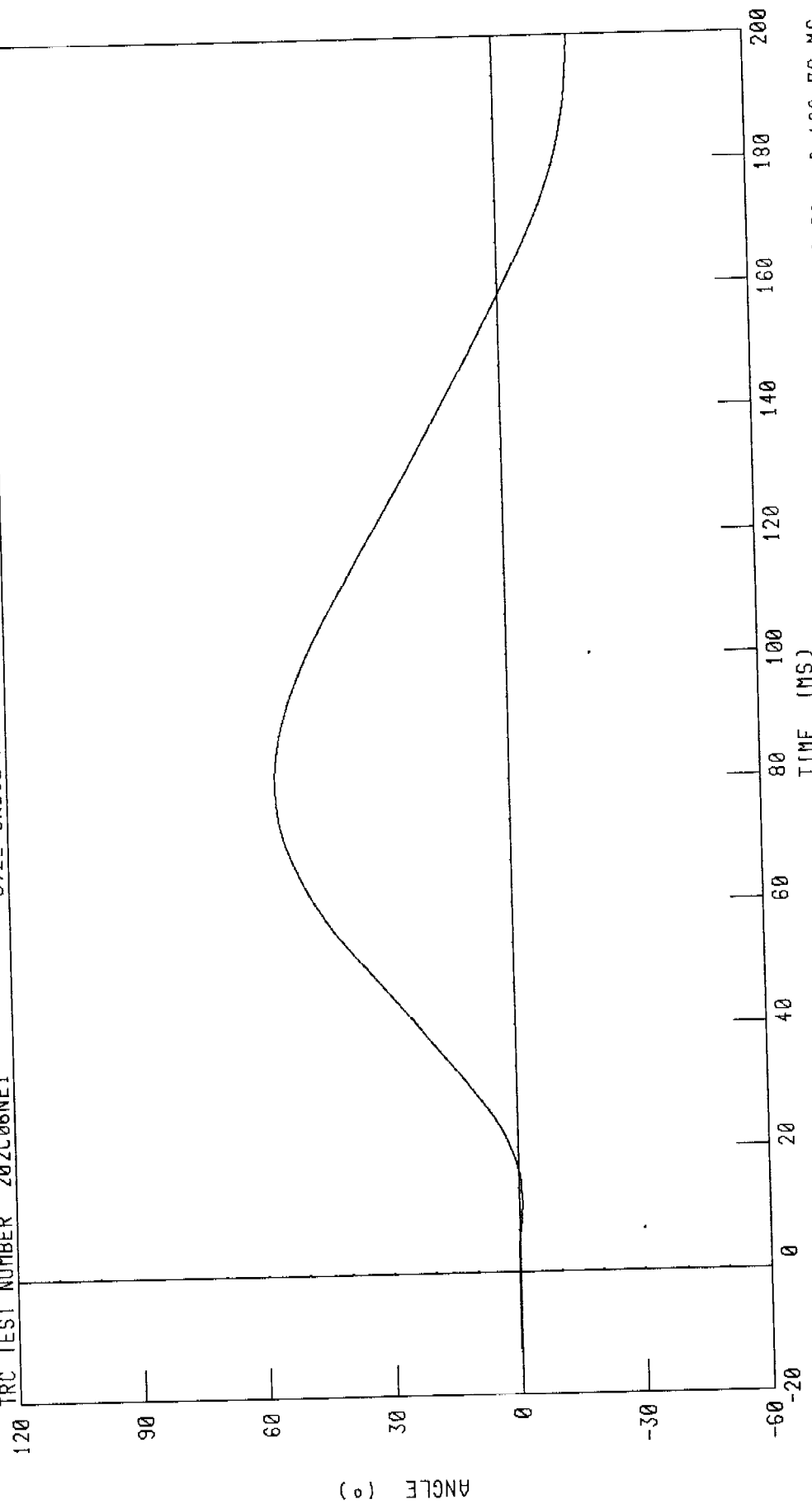
PART 572-E HYBRID III NECK EXTENSION CALIBRATION

ROTATION ABOUT OCCIPITAL CONDYLE

RUN NUMBER 100301 0826,1

TRC TEST NUMBER 202C06NE1

572E SN202 NECK EXT CAL06



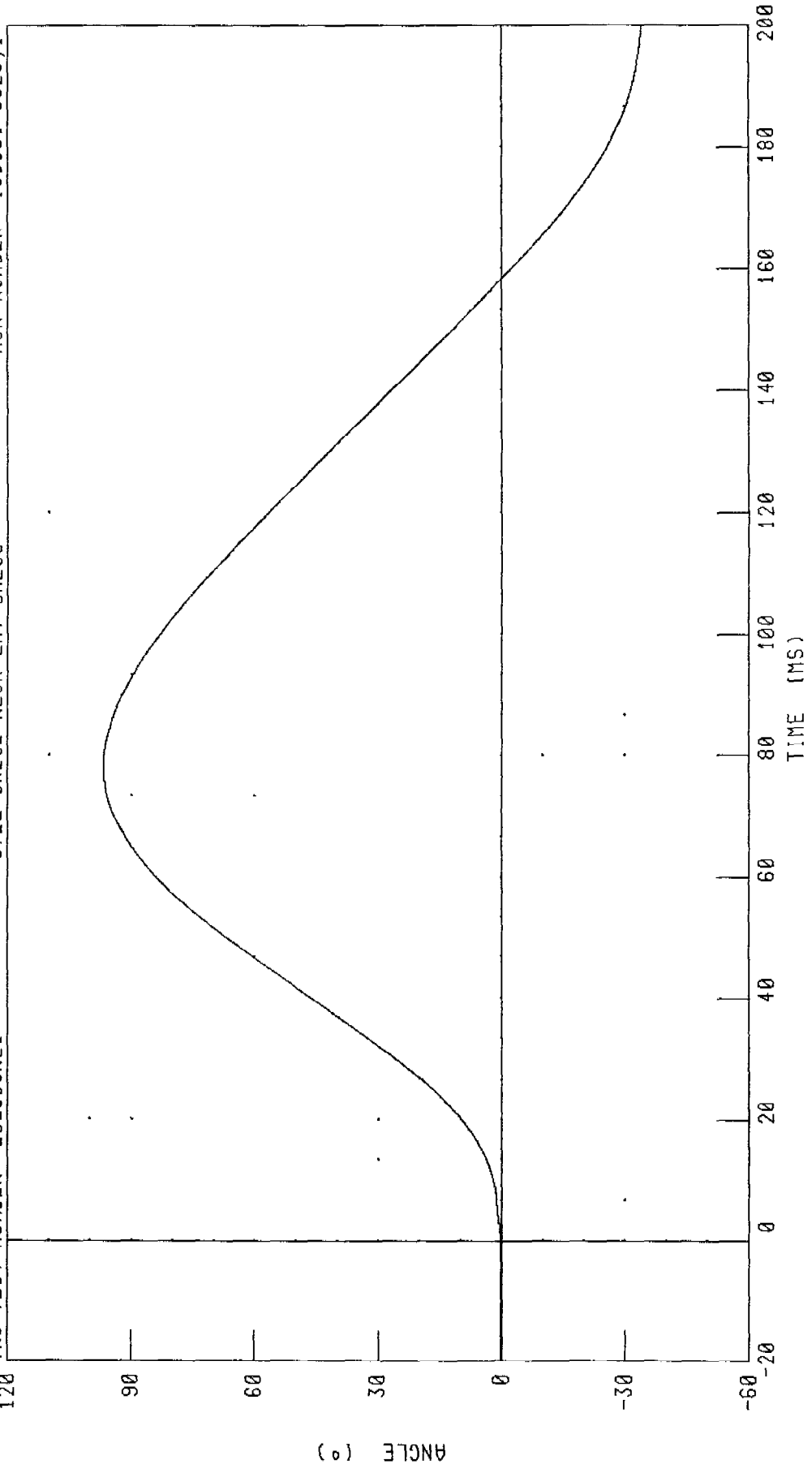
PEAK DATA 56 01 ° 0 80 08 MS, -18 02 ° 0 199 76 MS

CHANNEL THETA FILTER CH CLASS 60

PART 572-E HYBRID III NECK EXTENSION CALIBRATION

TOTAL ROTATION

TRC TEST NUMBER 202C06NE1 572E SN202 NECK EXT CAL06 RUN NUMBER 100301 0826,1



CHANNEL TOTAL FILTER CH CLASS 60 PEAK DATA 96 81 ° @ 78 72 MS, -34 10 ° @ 200 00 MS

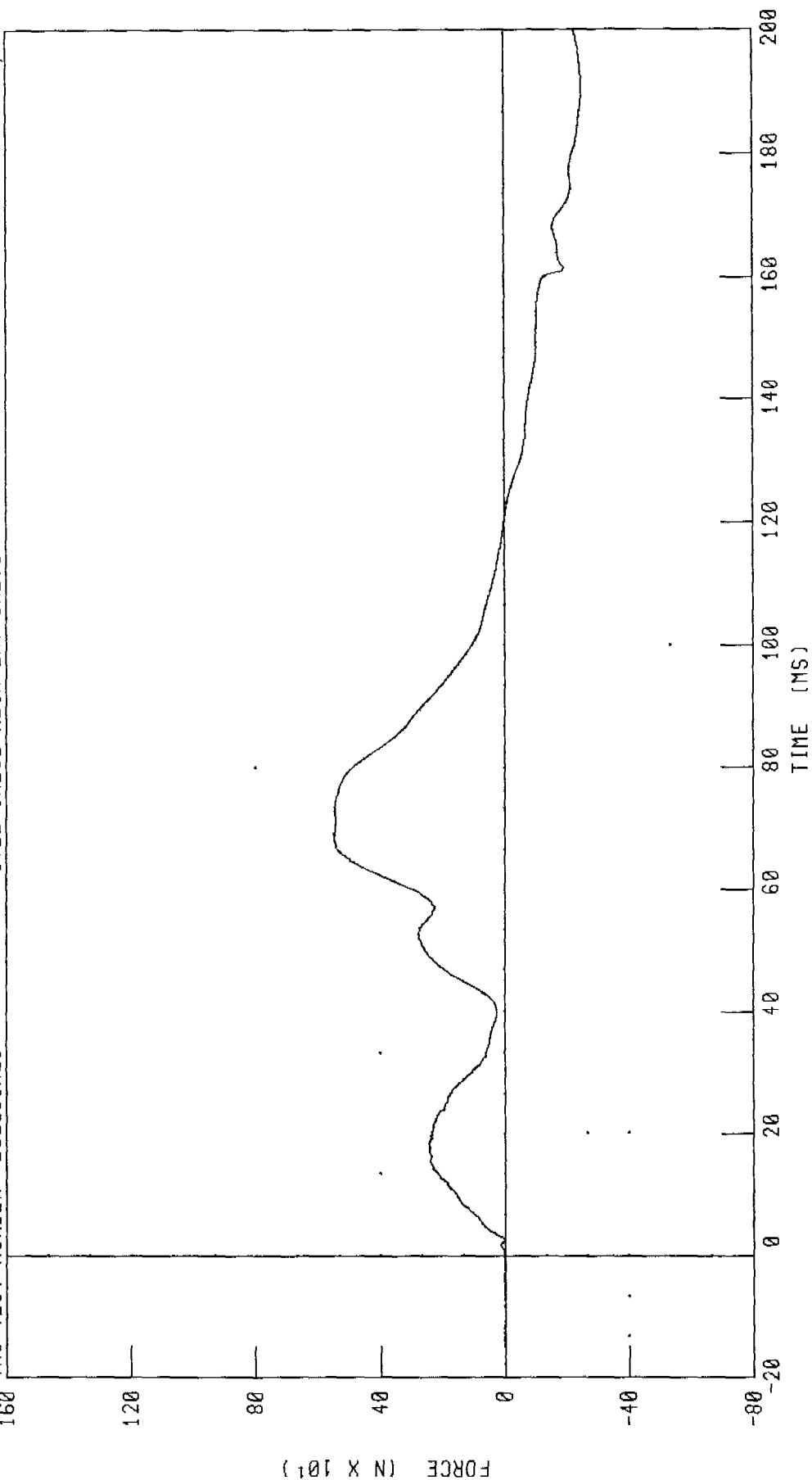
PART 572-E HYBRID III NECK EXTENSION CALIBRATION

NECK FORCE X AXIS

TRC TEST NUMBER 202C06NE1

572E SN202 NECK EXT CAL06

RUN NUMBER 100301 0826,1



CHANNEL NEKXF

FILTER CH CLASS 1000

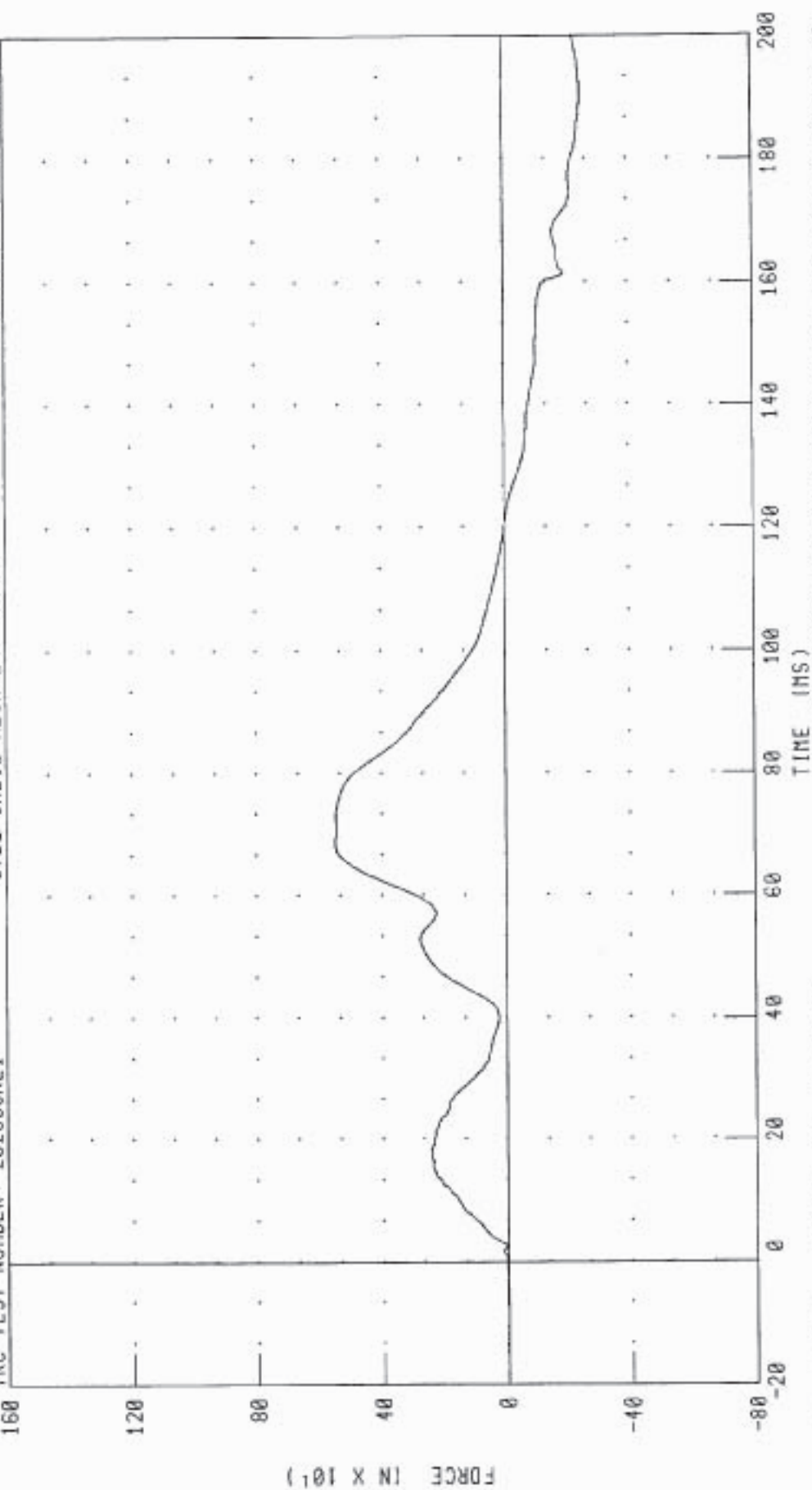
PEAK DATA 550 69 N 0 69 36 MS, -251 81 N 0 189 76 MS

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

TRC TEST NUMBER: 202C06NE1

572E SN202 NECK EXT CAL06

RUN NUMBER: 100301.0826;1



CHANNEL: NEKXFC FILTER: CH. CLASS 600

PEAK DATA: 548.15 N @ 69.28 MS; -251.61 N @ 191.04 MS

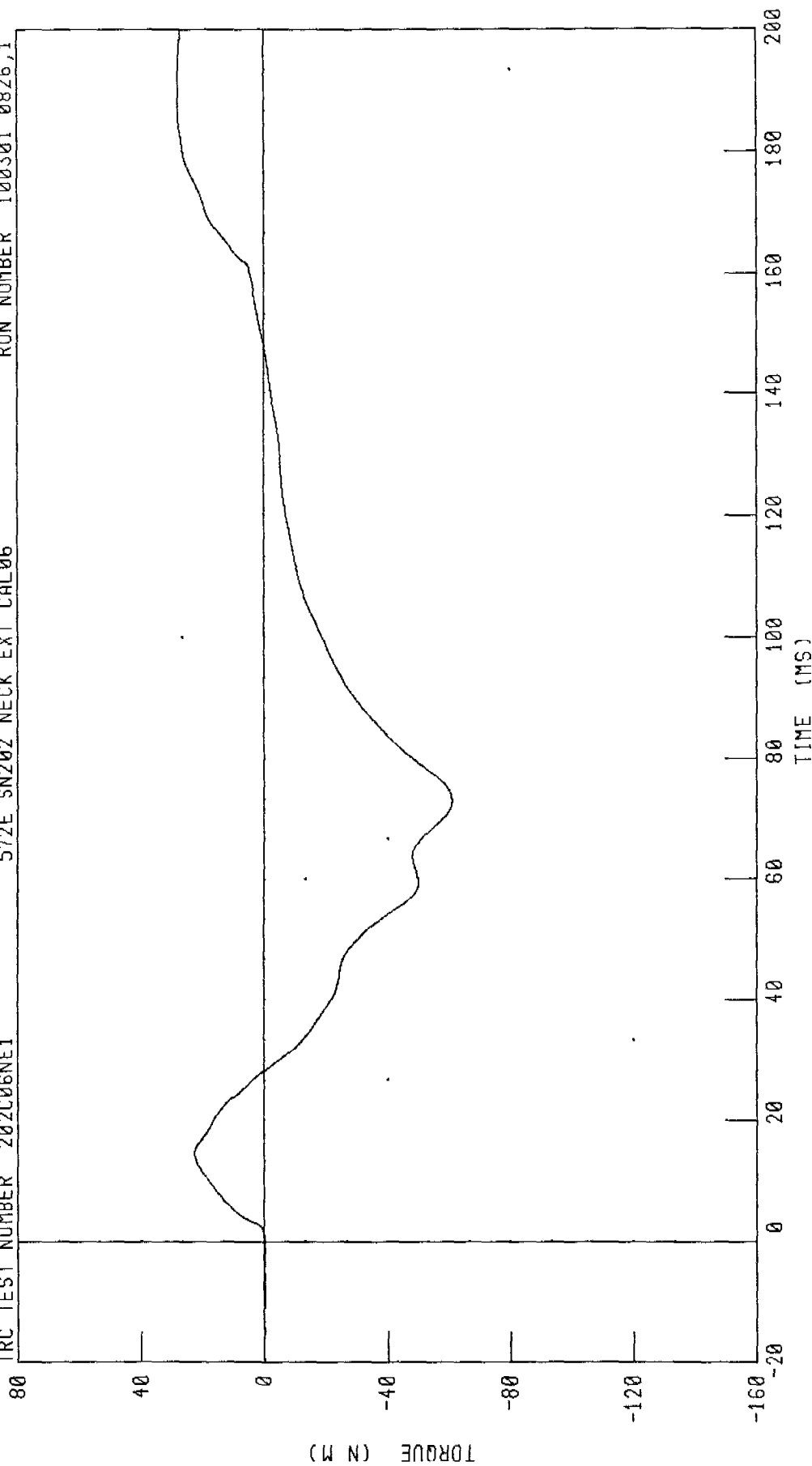
PART 572-E HYBRID III NECK EXTENSION CALIBRATION

NECK MOMENT Y AXIS

TRC TEST NUMBER 202C06NE1

572E SN202 NECK EXT CAL06

RUN NUMBER 100301 0826,1

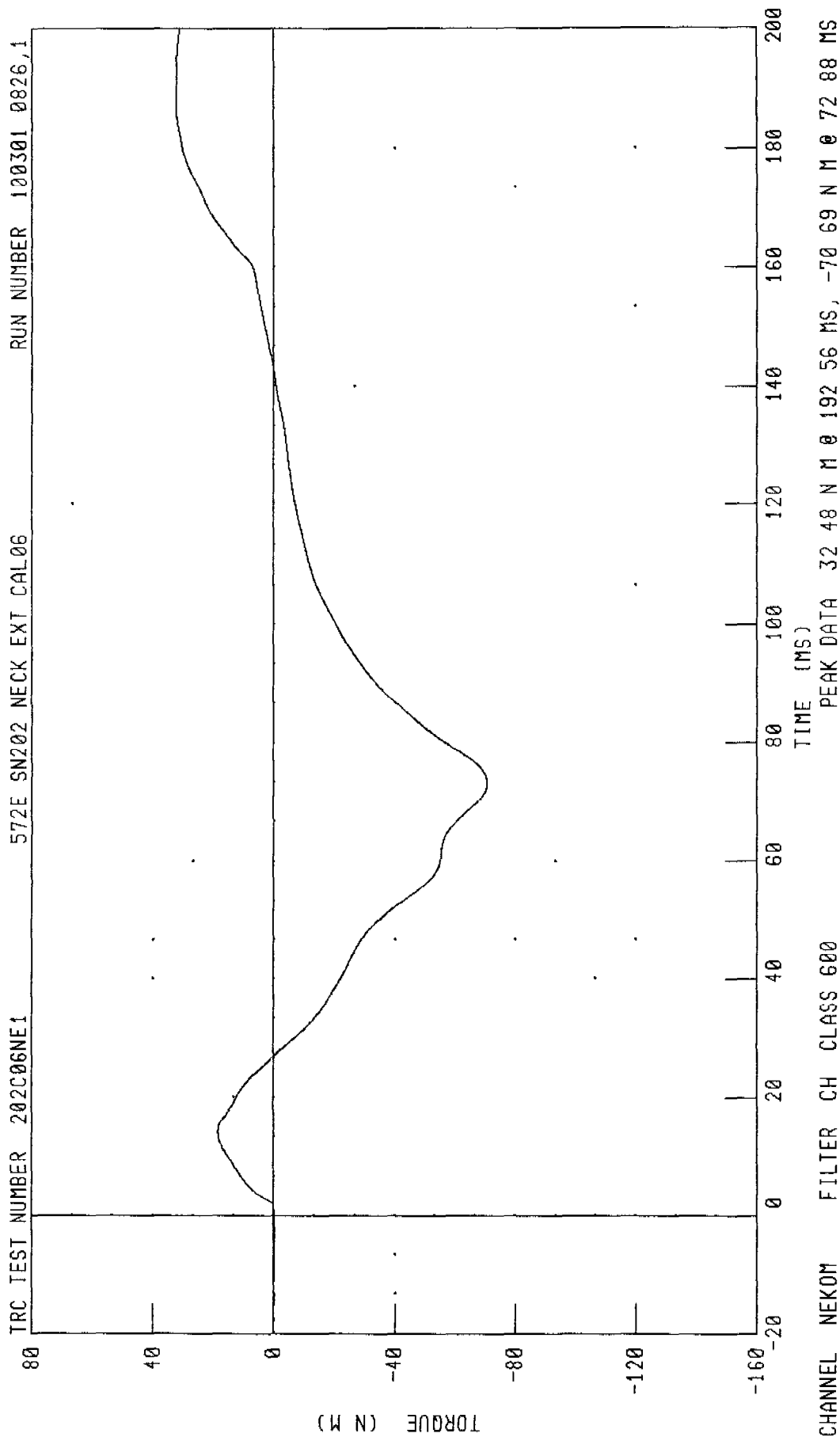


CHANNEL NEYM FILTER CH CLASS 600

TIME (MS)

PEAK DATA 28 04 N M @ 192 64 MS, -60 98 N M @ 73 04 MS

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



TRANSPORTATION RESEARCH CENTER INC.

THORAX IMPACT TEST

HYBRID III 50th

03-OCT-01

TRC INC.

TEST NO: 202C06TH1

572E SN202 H.S.THORAX CAL06

TEST PARAMETER	HIGH SPEED TEST	TEST RESULTS
	SPECIFICATION	
TEMPERATURE	20.6-22.2 DEG. C	21.1 DEG. C
RELATIVE HUMIDITY	10 - 70 %	54.0 %
PENDULUM VELOCITY	6.59 - 6.83 M/S	6.62 M/S
MAXIMUM DEFLECTION	63.5 - 72.6 MM	66.0 MM
MAXIMUM RESISTIVE FORCE	5159 - 5894 N	5779. N
INTERNAL HYSTERESIS	69% - 85%	72.2%

TEST MEETS SPECIFICATIONS

TECHNICIAN

[Signature]

RUN NUMBER: 100301.1245;1

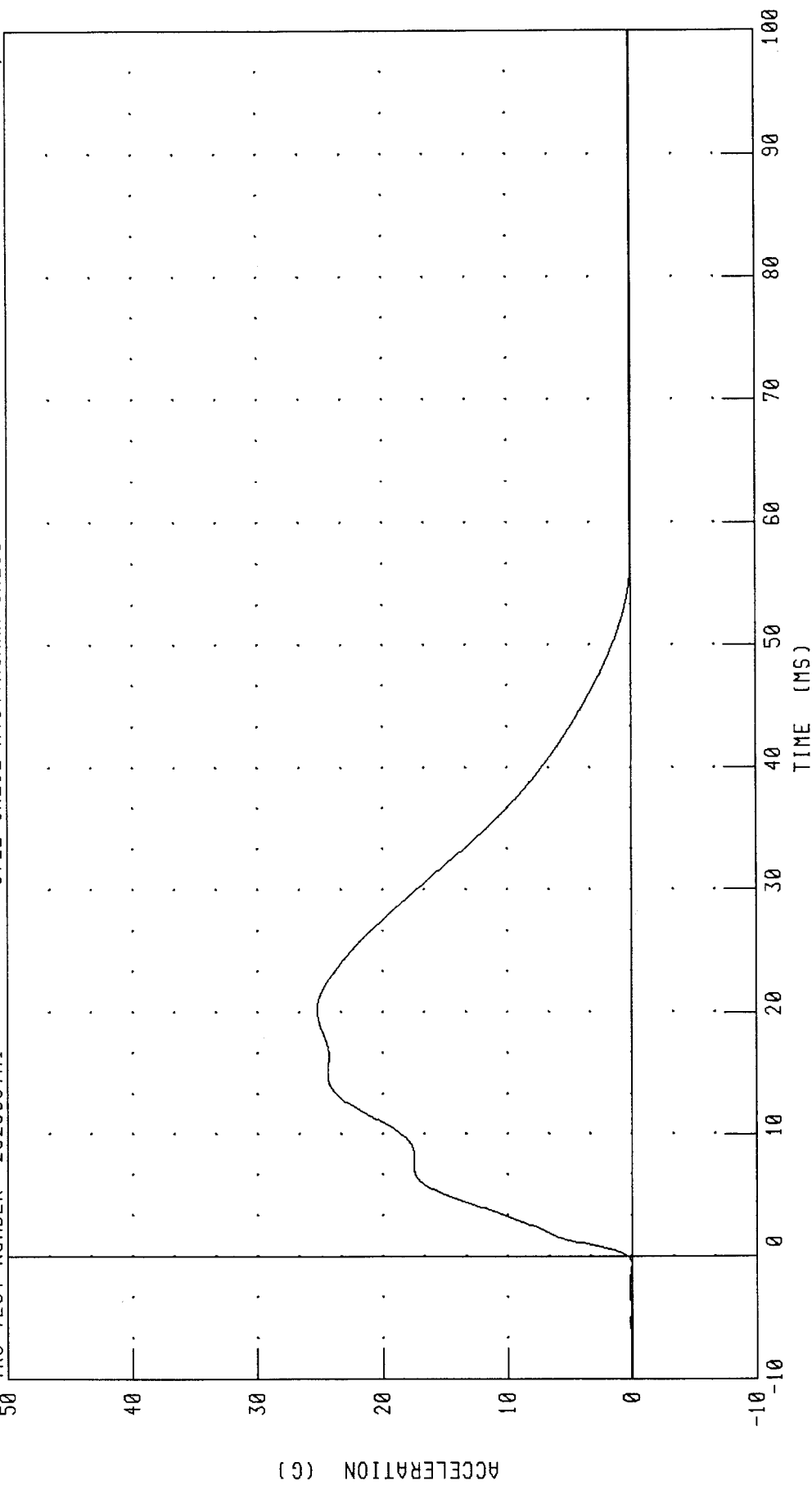
PART 572-E HYBRID III THORAX CALIBRATION

PENDULUM DECELERATION

TRC TEST NUMBER: 202C06TH1

572E SN202 H.S. THORAX CAL06

RUN NUMBER: 100301.1245;1



PEAK DATA: 25.23 G @ 20.24 MS; 0.02 G @ -0.64 MS

CHANNEL: PENXC FILTER: CH. CLASS 180

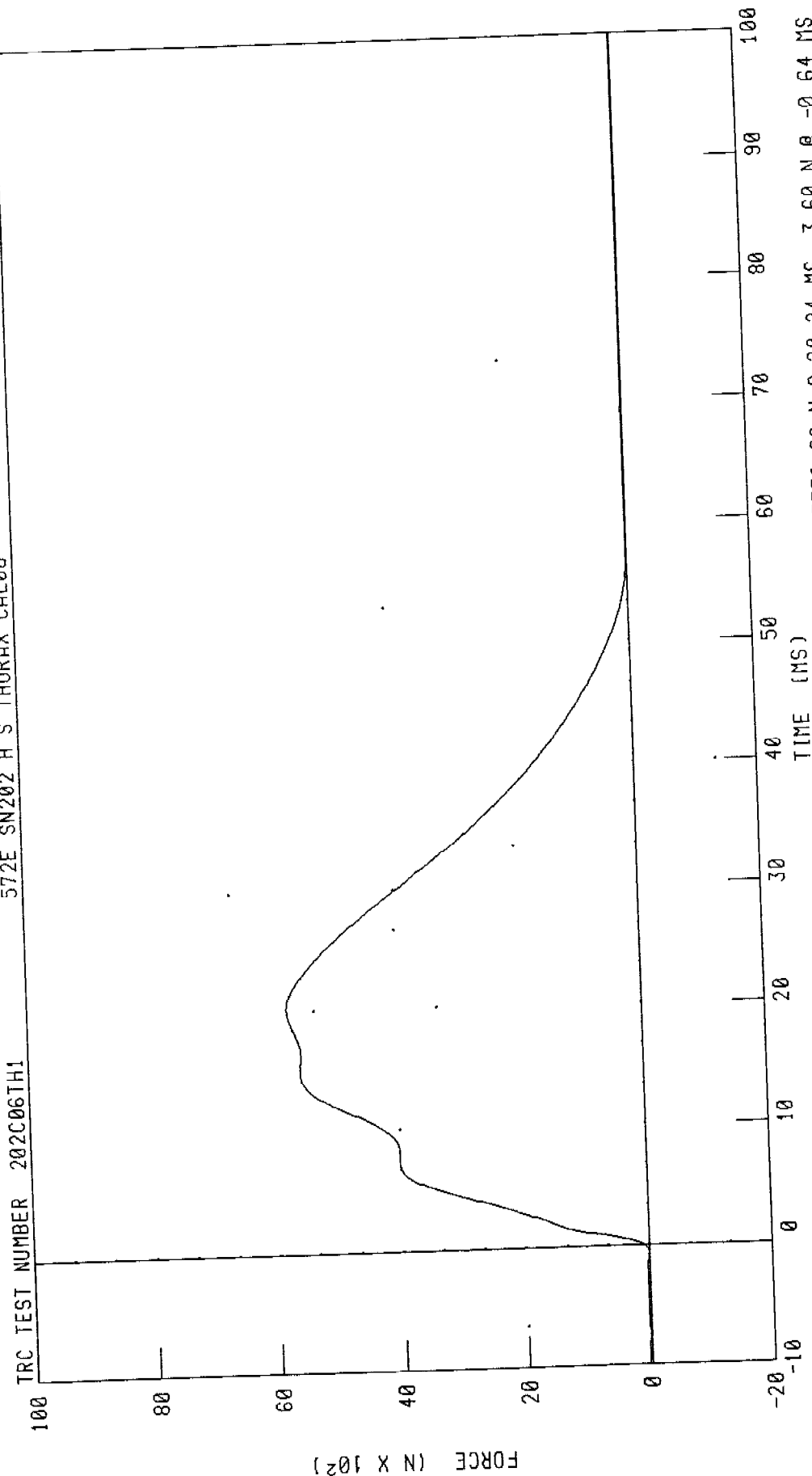
PART 572-E HYBRID III THORAX CALIBRATION

PENDULUM FORCE

572E SN202 H S THORAX CAL06

RUN NUMBER 100301 1245,1

TRC TEST NUMBER 202C06TH1



PEAK DATA 5779 69 N @ 20 24 MS, 3 60 N @ -0 64 MS

CHANNEL PENXF FILTER CH CLASS 180

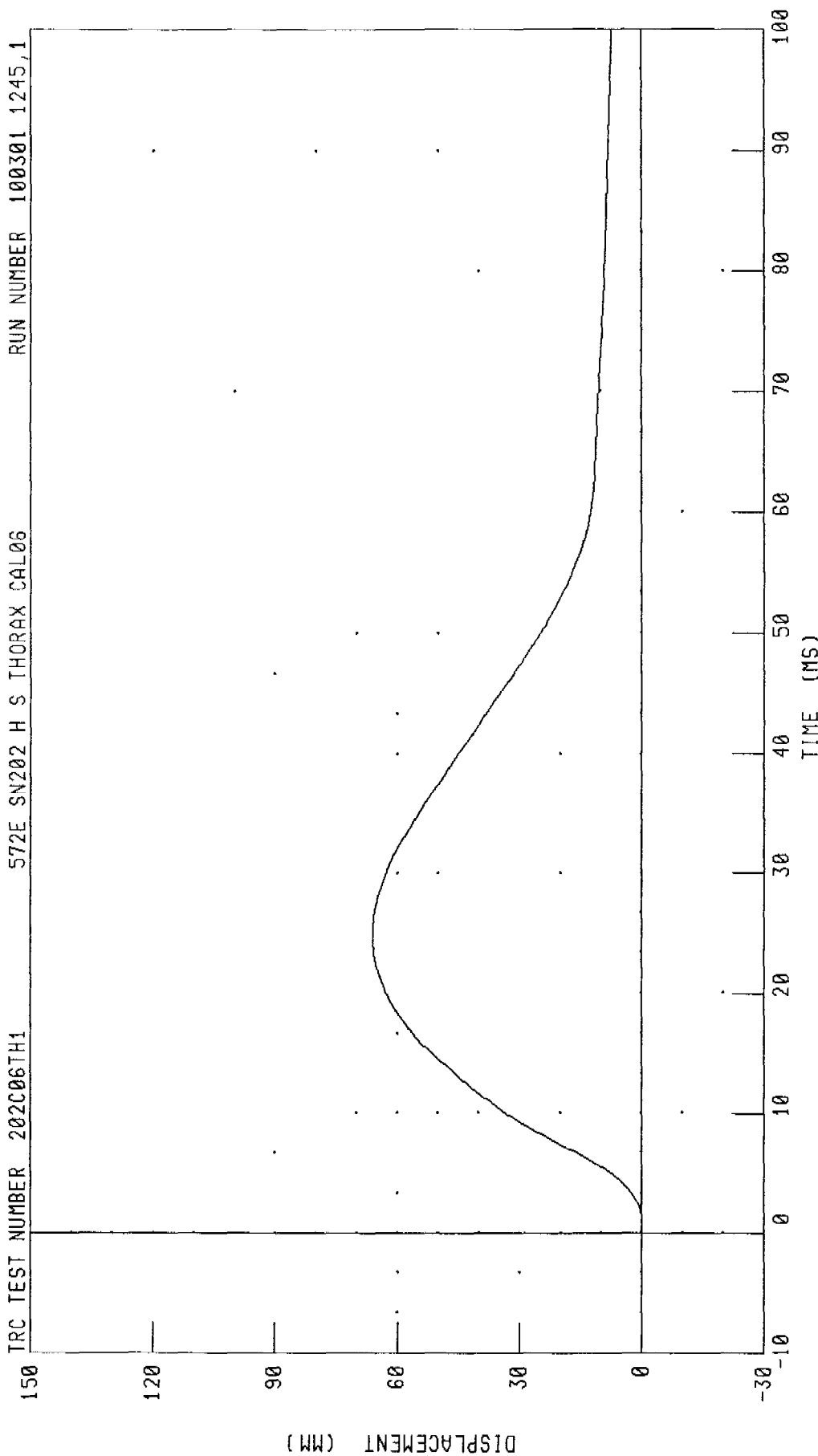
PART 572-E HYBRID III THORAX CALIBRATION

STERNUM DISPLACEMENT

TRC TEST NUMBER 202C06TH1

572E SN202 H S THORAX CAL06

RUN NUMBER 100301 1245,1



CHANNEL CSTXD FILTER CH CLASS 180

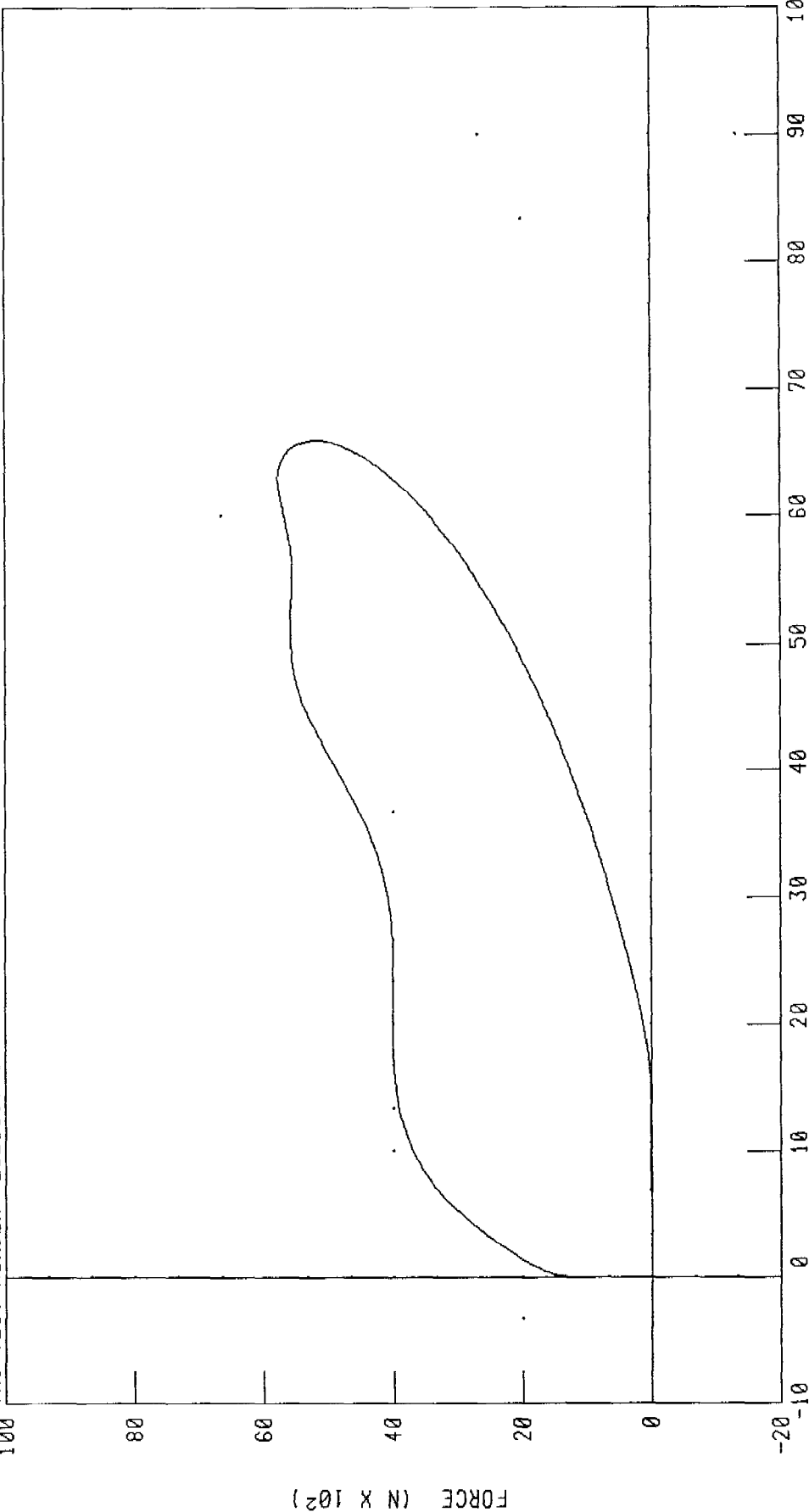
PEAK DATA 66 02 MM @ 24 96 MS, -0 03 MM @ 0 96 MS

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

TRC TEST NUMBER 202C06TH1

572E SN202 H S THORAX CAL06

RUN NUMBER 100301 1245,1



DISPLACEMENT (MM)

PEAK DATA

FILTER CH CLASS 180
CH CLASS 180

CHANNEL CSTXD
PENXF

66 02 MM @ 24 96 MS, -0 03 MM @ 0 96 MS
5779 69 N @ 20 24 MS, 3 60 N @ -0 64 MS

Transportation Research Center Inc

Hybrid III Hip Range of Motion

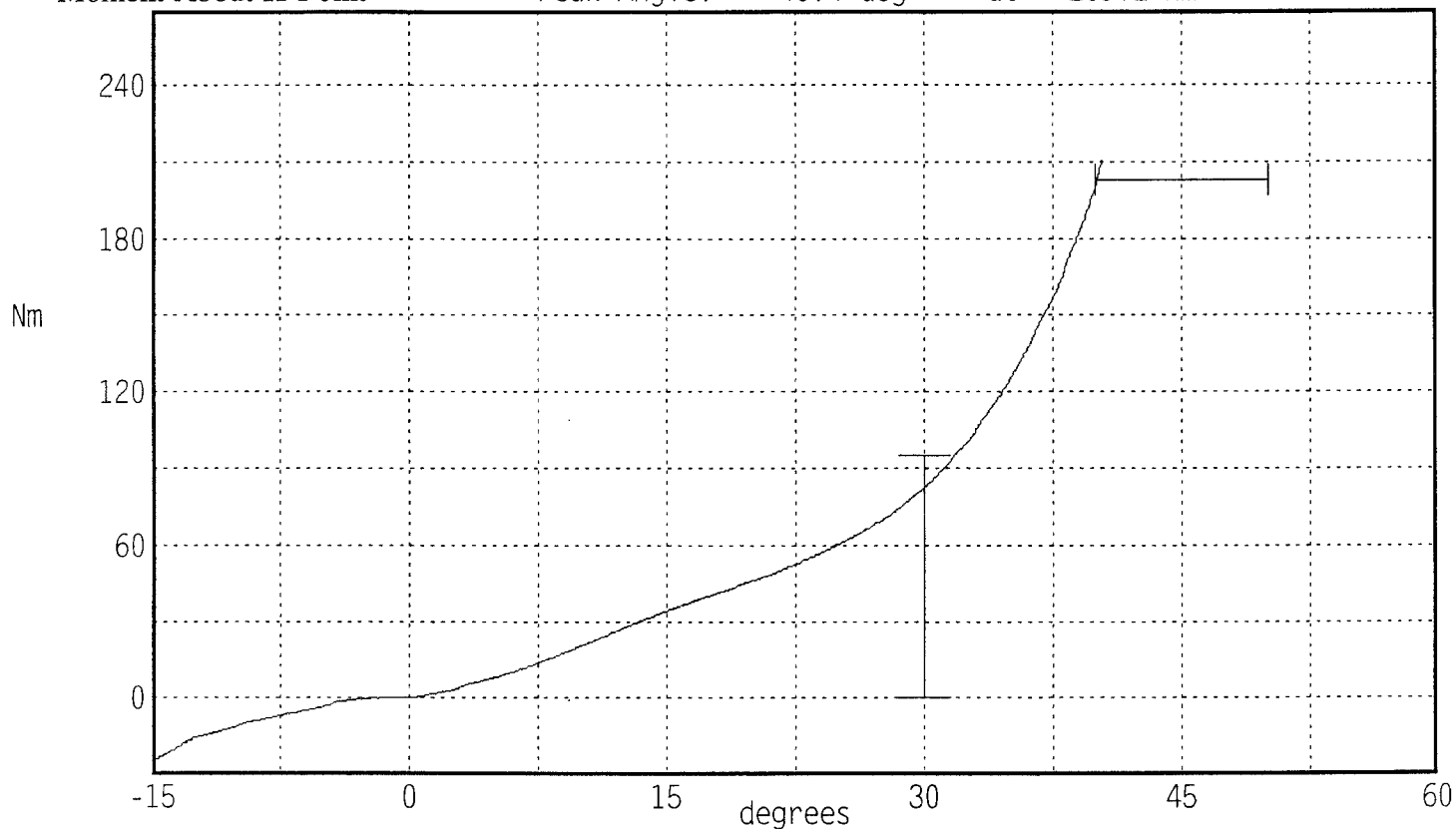
Serial Number: 202L
Test Number: 202C06
Comments:

Date: 10/02/2001
Time: 06:48

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	18.9 - 25.6	22.2 °C Pass
Humidity	10 - 70	40 % Pass
Moment at 30 deg	<= 94.9	82.5 Nm Pass
Angle at 203 Nm	40.0 - 50.0	40.1 deg Pass
Average Velocity	5.0 - 10.0	7.5 deg/sec Pass

Peak Moment: 210.5 Nm at 40.4 deg
Peak Angle: 40.4 deg at 209.2 Nm

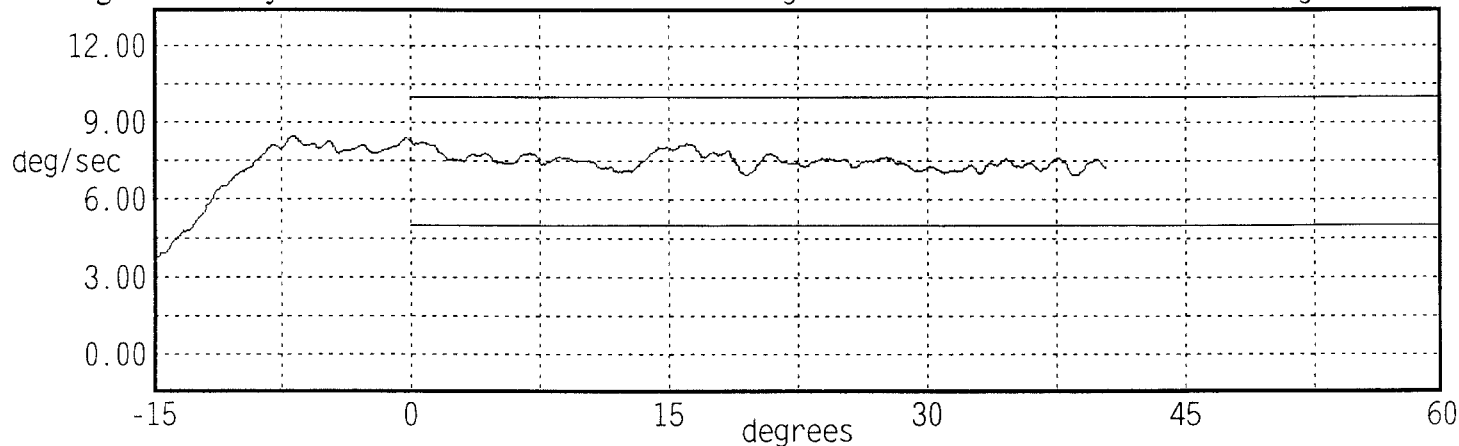
Moment About H-Point



Angular Velocity

Max: 8.3 deg/sec

Min: 6.9 deg/sec



Transportation Research Center Inc

Hybrid III Hip Range of Motion

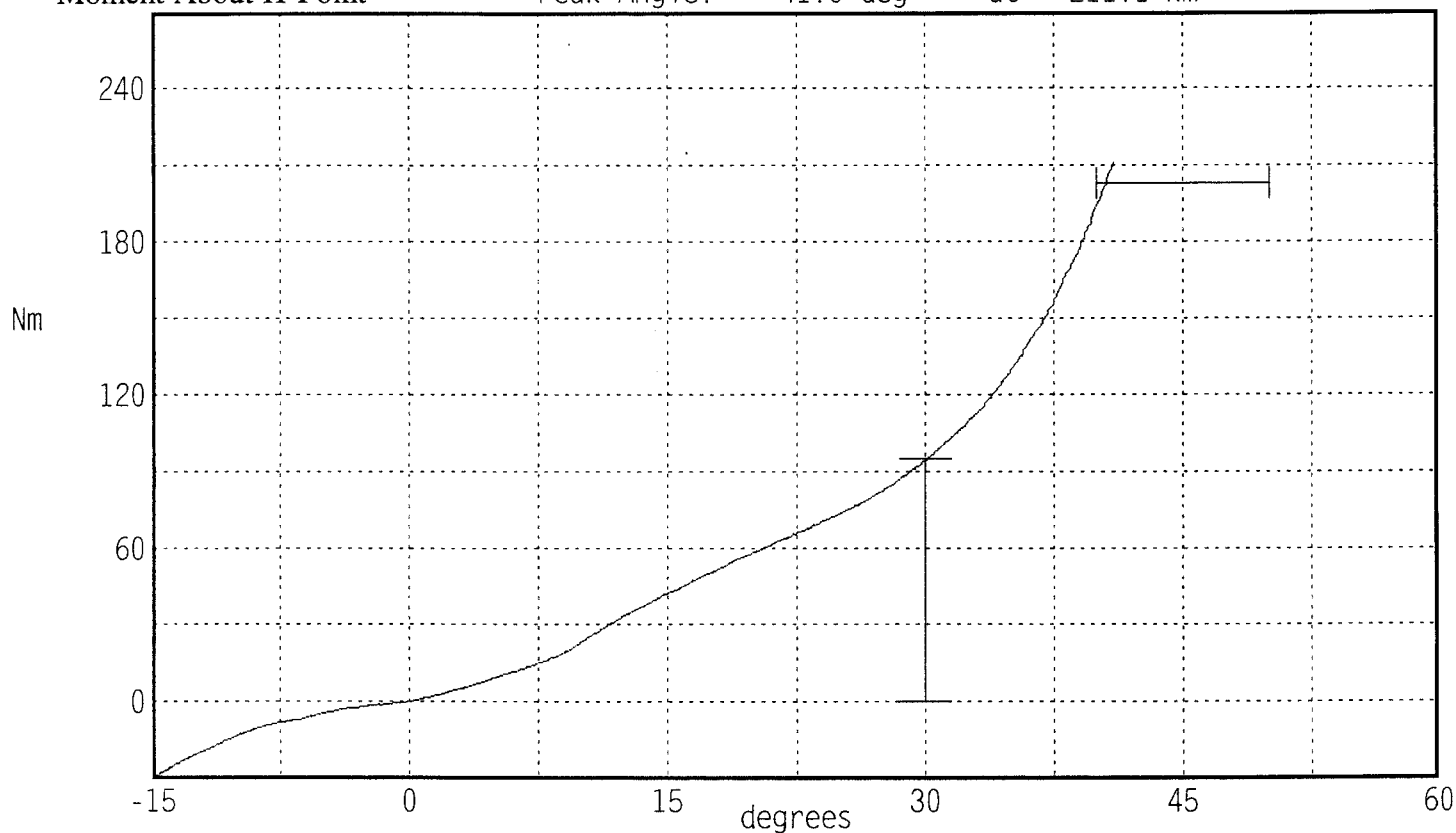
Serial Number: 202R
Test Number: 202C06
Comments:

Date: 10/02/2001
Time: 06:41

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	18.9 - 25.6	22.2 °C Pass
Humidity	10 - 70	40 % Pass
Moment at 30 deg	<= 94.9	94.5 Nm Pass
Angle at 203 Nm	40.0 - 50.0	40.6 deg Pass
Average Velocity	5.0 - 10.0	7.5 deg/sec Pass

Peak Moment: 211.1 Nm at 41.0 deg
Peak Angle: 41.0 deg at 211.1 Nm

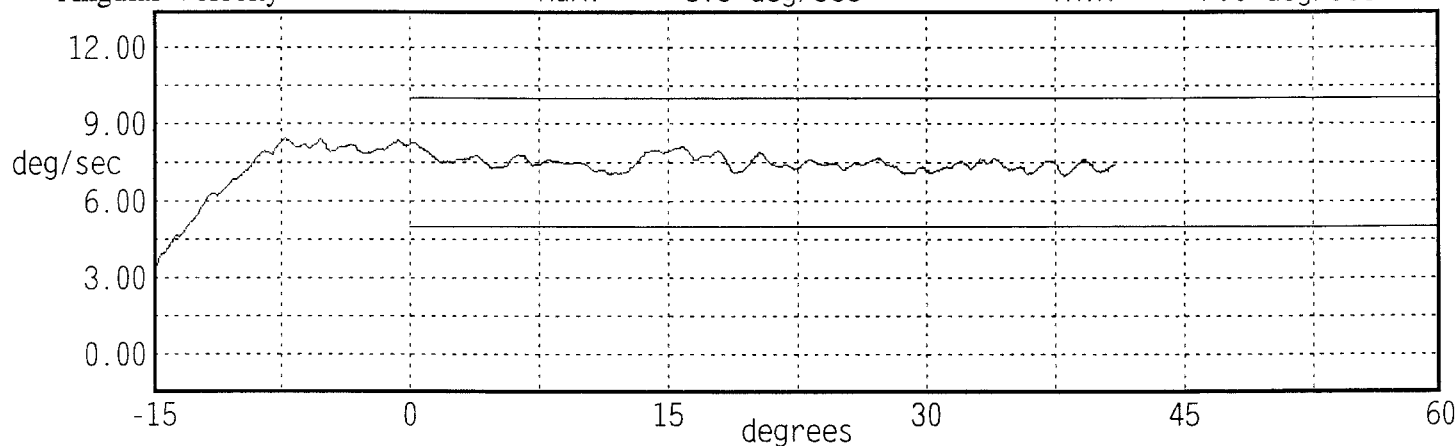
Moment About H-Point



Angular Velocity

Max: 8.3 deg/sec

Min: 7.0 deg/sec



TRANSPORTATION RESEARCH CENTER INC.

LEFT KNEE IMPACT TEST

HYBRID III 50th

02-OCT-01

TRC INC.

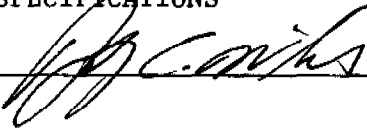
TEST NO: 202C06LK1

572E SN202 LEFT KNEE CAL 06

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	55.0 %
PROBE VELOCITY	2.07 - 2.13 M/S	2.13 M/S
PEAK KNEE IMPACT FORCE 5.0 KG PENDULUM	4715 - 5782 N	5054.5 N

TEST MEETS SPECIFICATIONS

TECHNICIAN



RUN NUMBER: 100201.1335;1

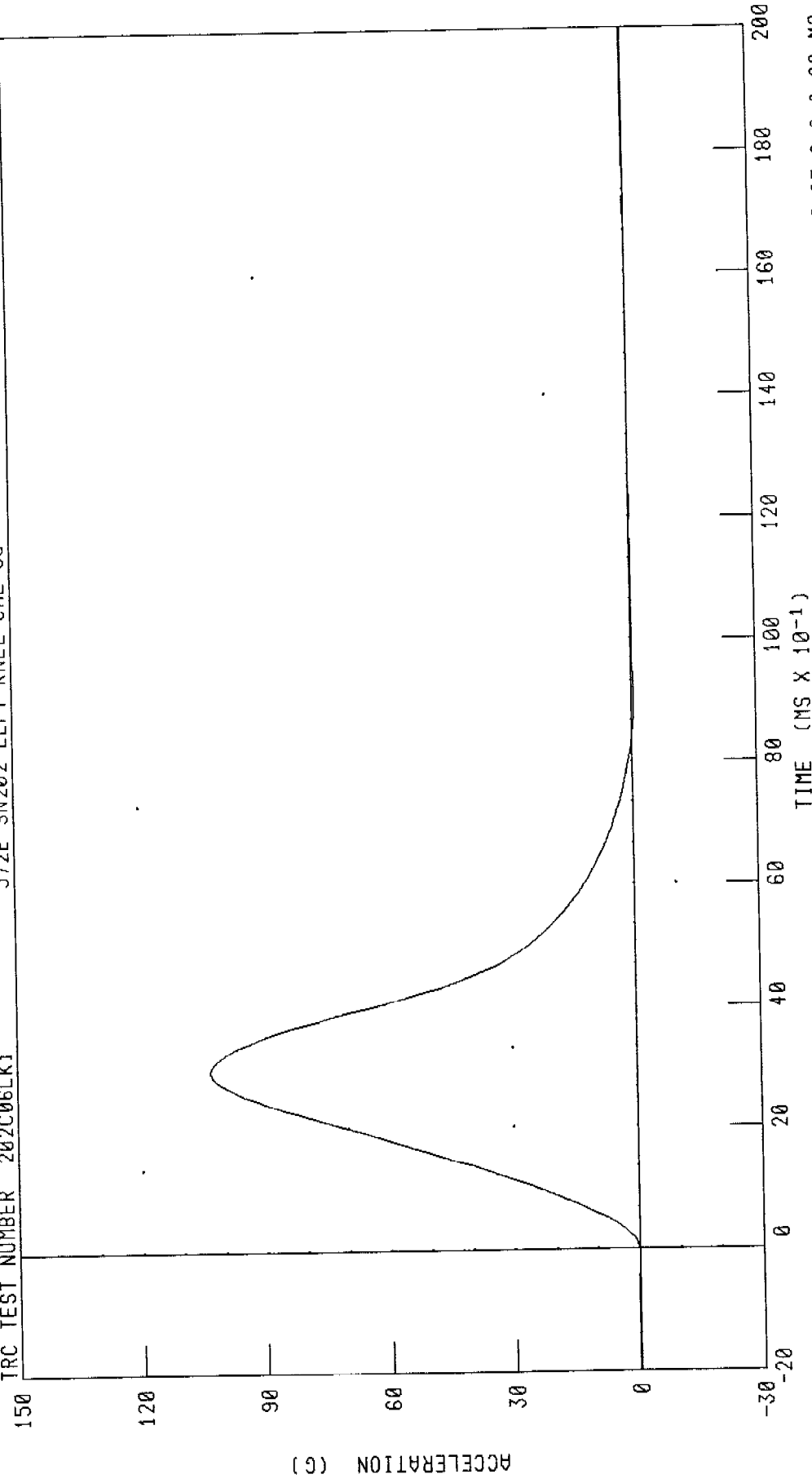
PART 572-E HYBRID III LEFT KNEE CALIBRATION

PENDULUM DECELERATION (5 KG PEND)

TRC TEST NUMBER 202C06LK1

572E SN202 LEFT KNEE CAL 06

RUN NUMBER 100201 1335,1



CHANNEL PENXC FILTER CH CLASS 600

PEAK DATA 103 31 G @ 2 96 MS, -0 67 G @ 9 20 MS

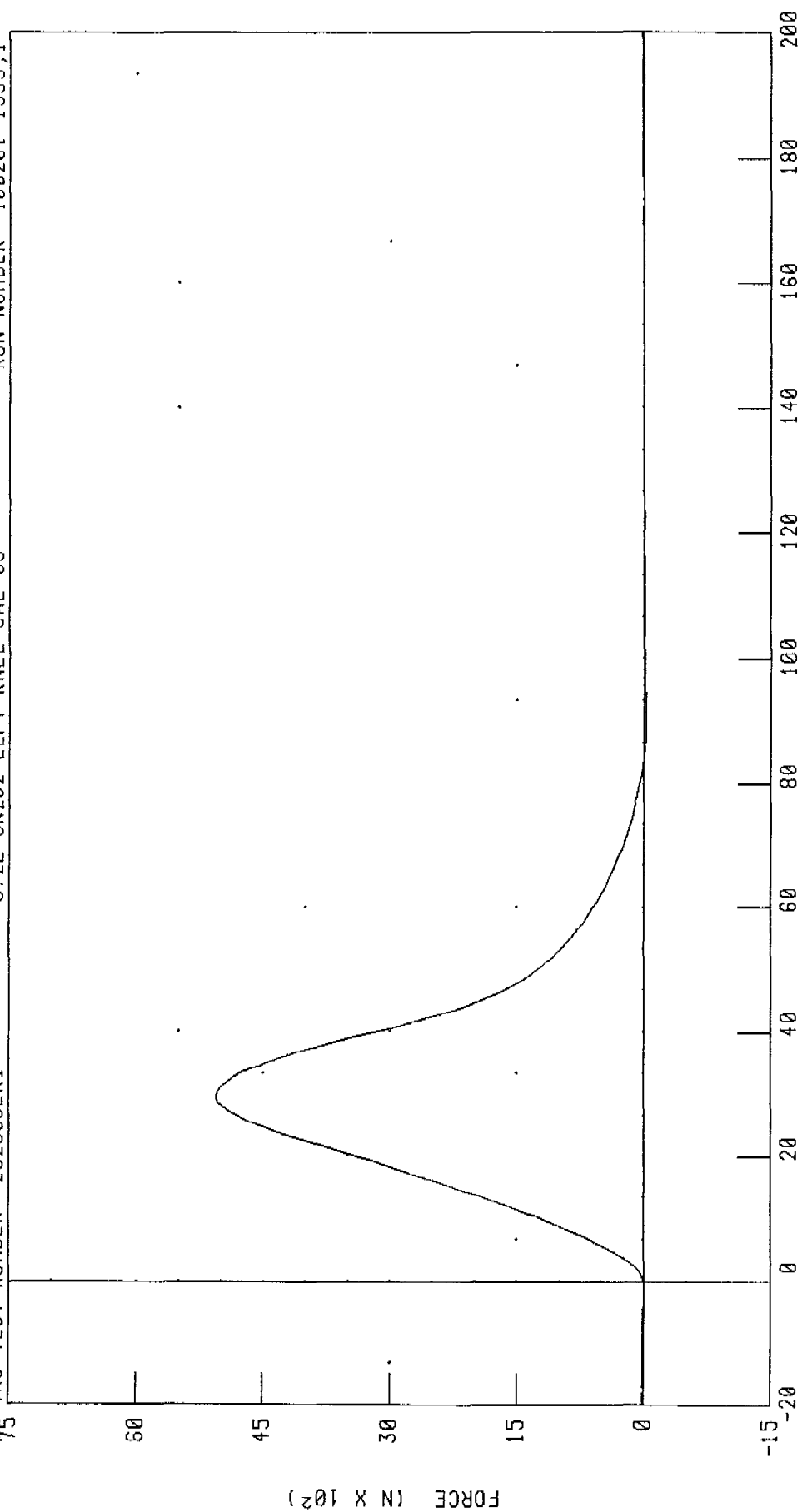
PART 572-E HYBRID III LEFT KNEE CALIBRATION

PENDULUM FORCE (5 KG PEND)

TRC TEST NUMBER 202C06LK1

572E SN202 LEFT KNEE CAL 06

RUN NUMBER 100201 1335,1



CHANNEL PENXF FILTER CH CLASS 600

TIME (MS X 10⁻¹)

PEAK DATA 5054 55 N 0 2 96 MS, -32 80 N 0 9 20 MS

TRANSPORTATION RESEARCH CENTER INC.

RIGHT KNEE IMPACT TEST

HYBRID III 50th

02-OCT-01

TRC INC.

TEST NO: 202C06RK1

572E SN202 RIGHT KNEE CAL 06

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	55.0 %
PROBE VELOCITY	2.07 - 2.13 M/S	2.13 M/S
PEAK KNEE IMPACT FORCE 5.0 KG PENDULUM	4715 - 5782 N	5370.9 N

TEST MEETS SPECIFICATIONS

TECHNICIAN



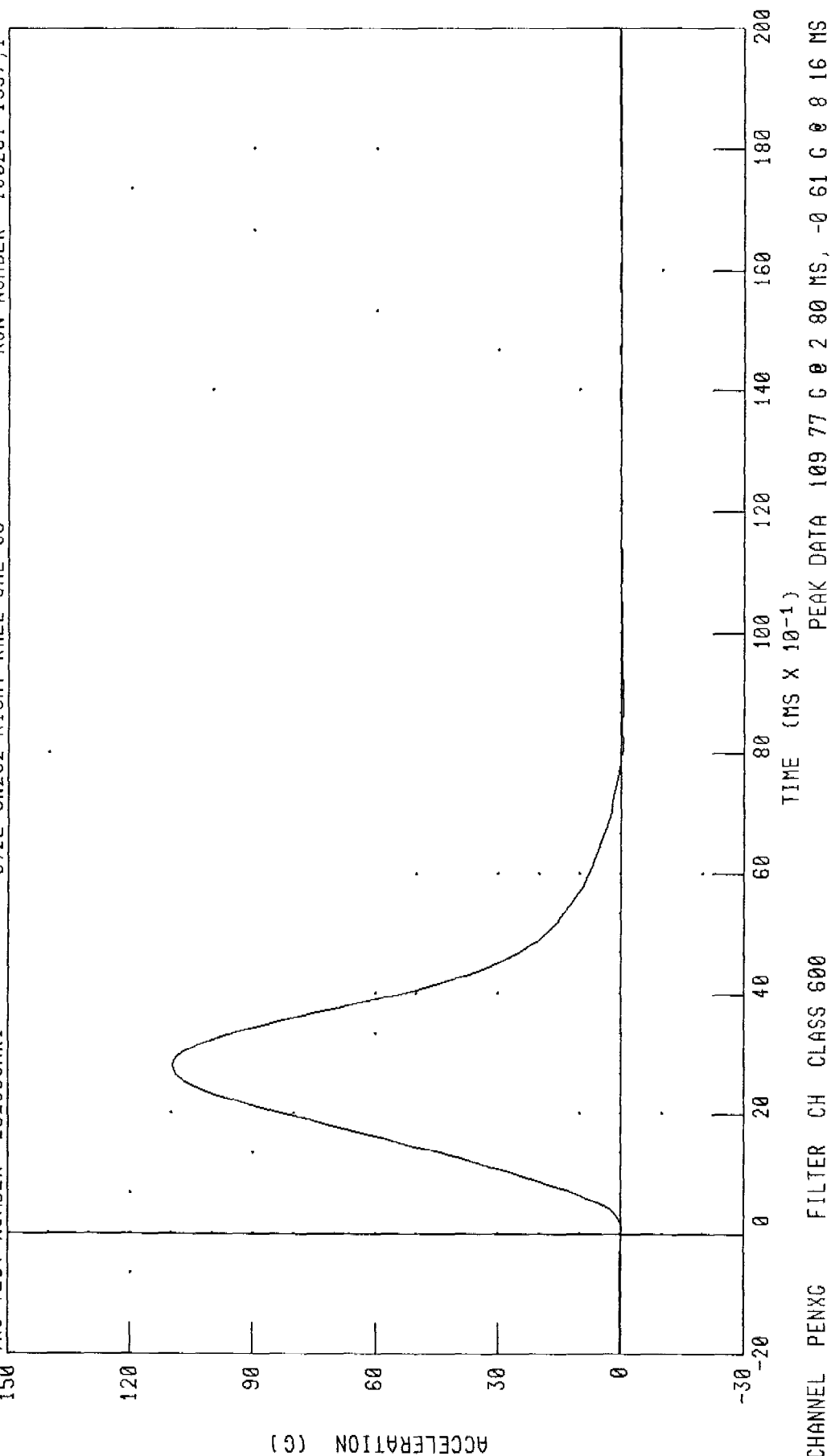
RUN NUMBER: 100201.1337;1

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

TRC TEST NUMBER 202C06RK1

572E SN202 RIGHT KNEE CAL 06

RUN NUMBER 100201 1337,1



PEAK DATA 109 77 G 0 2 80 MS, -0 61 G 0 8 16 MS

CHANNEL PENXC FILTER CH CLASS 600

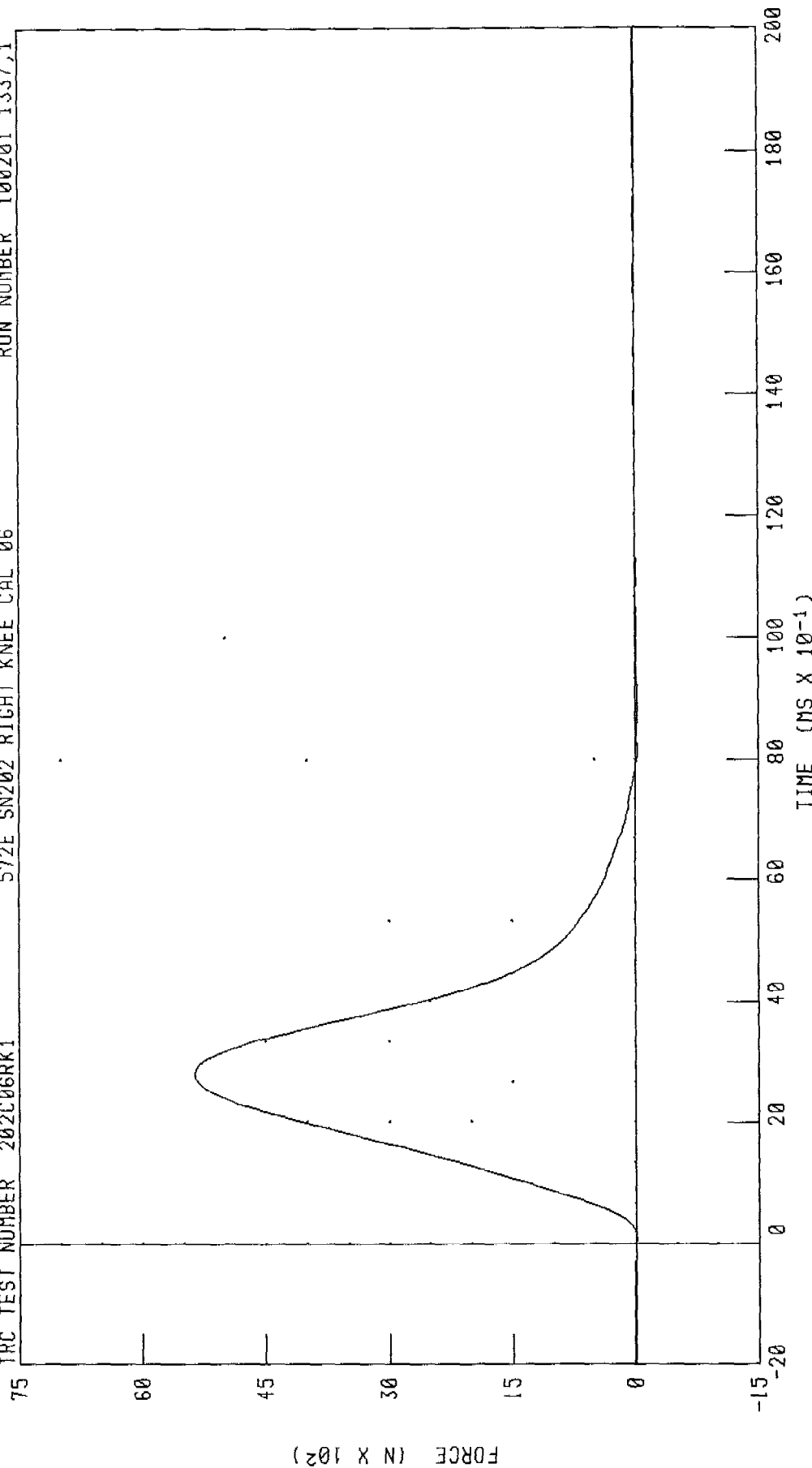
PART 572-E HYBRID III RIGHT KNEE CALIBRATION

PENDULUM FORCE (5 KG PEND)

572E SN202 RIGHT KNEE CAL 06

TRC TEST NUMBER 202C06RK1

RUN NUMBER 100201 1337,1



CHANNEL PENXF FILTER CH CLASS 600

PEAK DATA 5370 99 N @ 2 80 MS, -29 90 N @ 8 16 MS

TRANSPORTATION RESEARCH CENTER INC.

KNEE SLIDER TEST

HYBRID III 50th

02-OCT-01

LEFT KNEE

TRC INC.

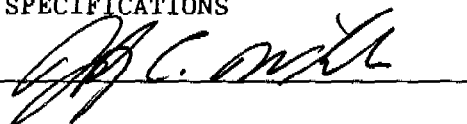
TEST NO: 202C06LS1

572E SN202 LEFT SLIDER CAL 06

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	52.0 %
PENDULUM VELOCITY	2.70-2.80 M/S	2.79 M/S
FORCE AT 10.0 MM DISPLACEMENT	1259 - 1721 N	1431. N
FORCE AT 18.0 MM DISPLACEMENT	2268 - 3096 N	2573. N

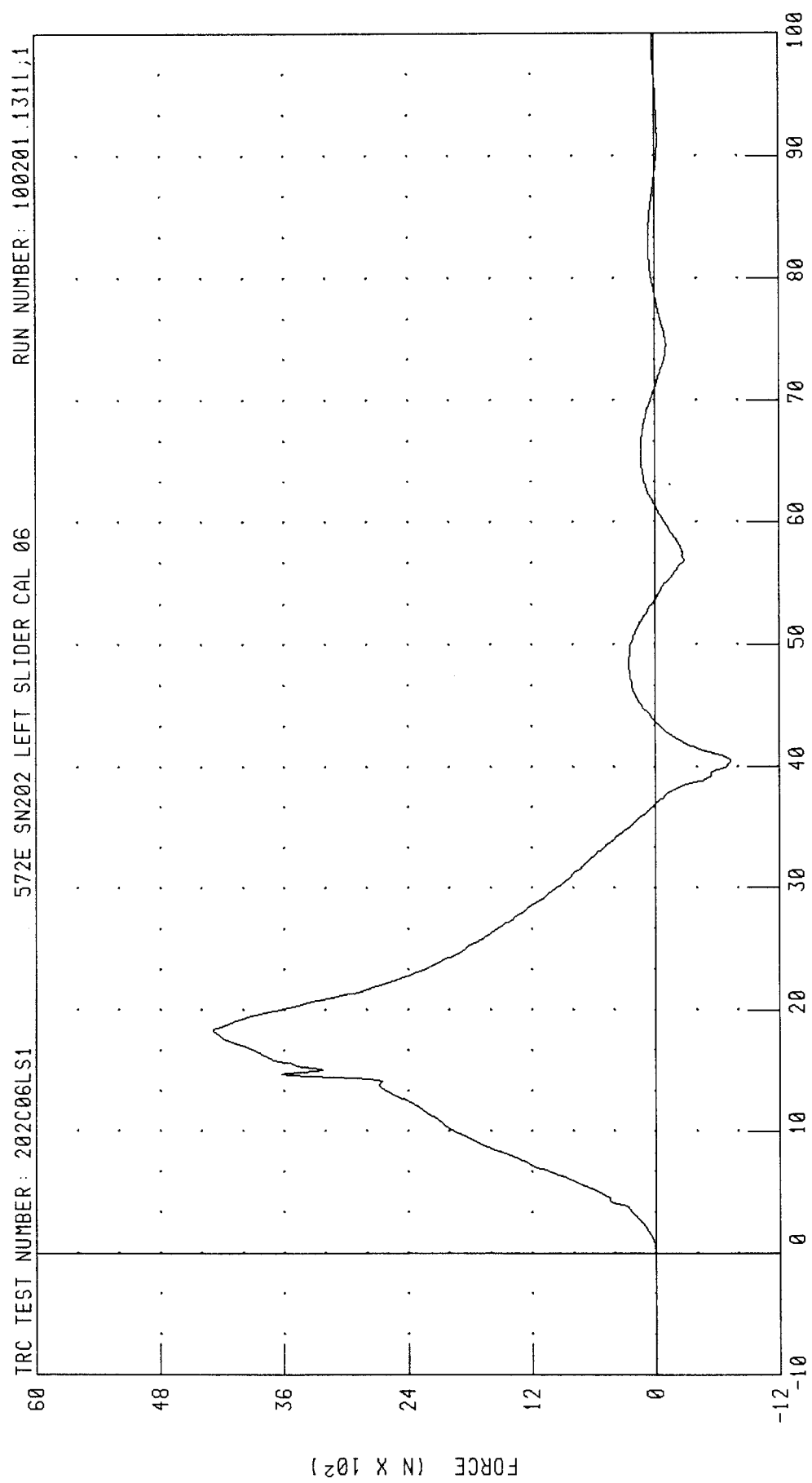
TEST MEETS SPECIFICATIONS

TECHNICIAN



RUN NUMBER: 100201.1117;1

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



CHANNEL: LFMF FILTER: CH. CLASS 600 PEAK DATA: 4287.38 N @ 18.32 MS; -737.28 N @ 40.56 MS

PART 572-E HYBRID III LEFT KNEE SLIDER CALIBRATION

LEFT KNEE DISPLACEMENT

TRC TEST NUMBER 202C06LS1

572E SN202 LEFT SLIDER CAL 06

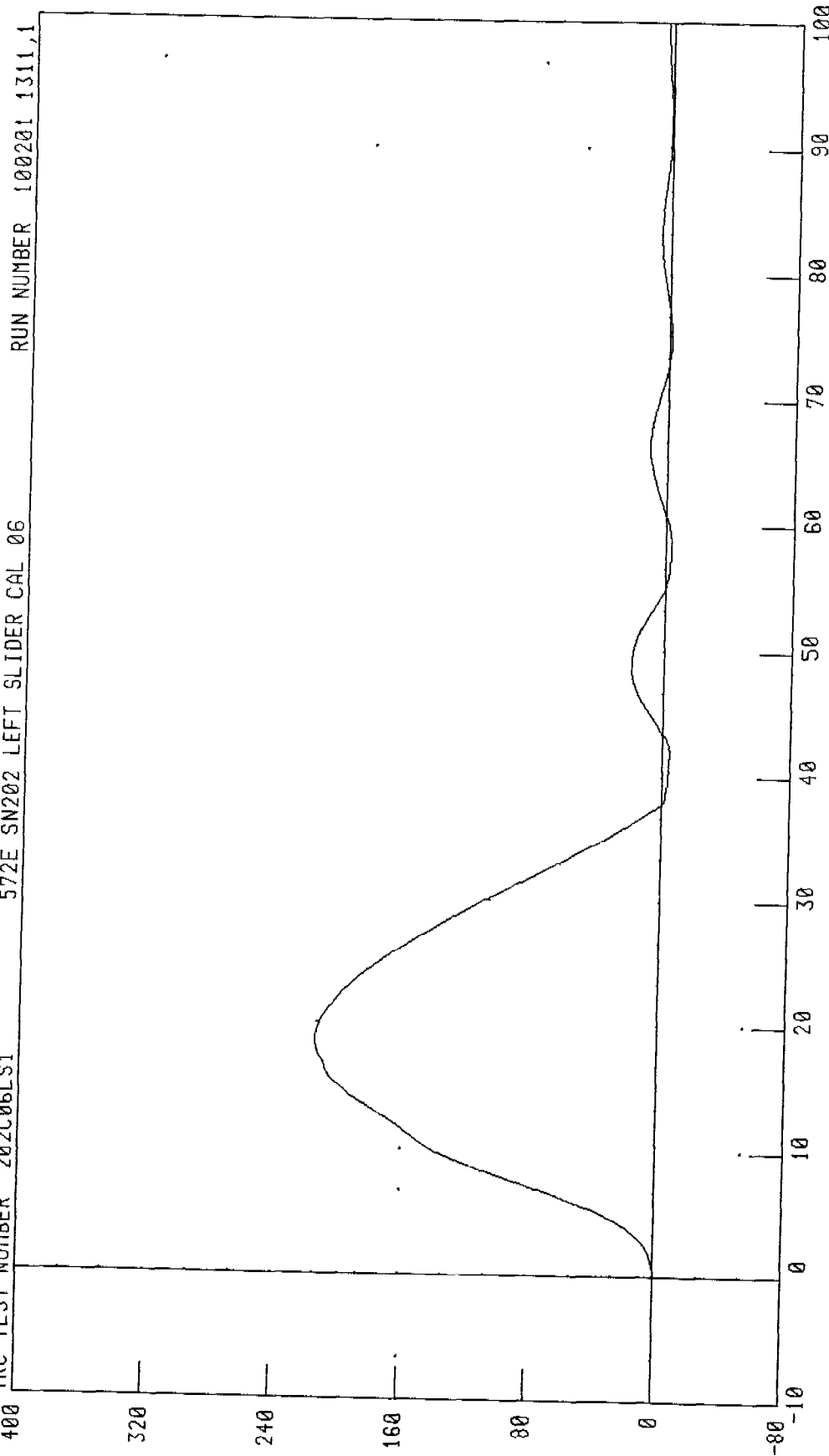
RUN NUMBER 100201 1311,1

DISPLACEMENT (MM X 10⁻¹)

TIME (MS)

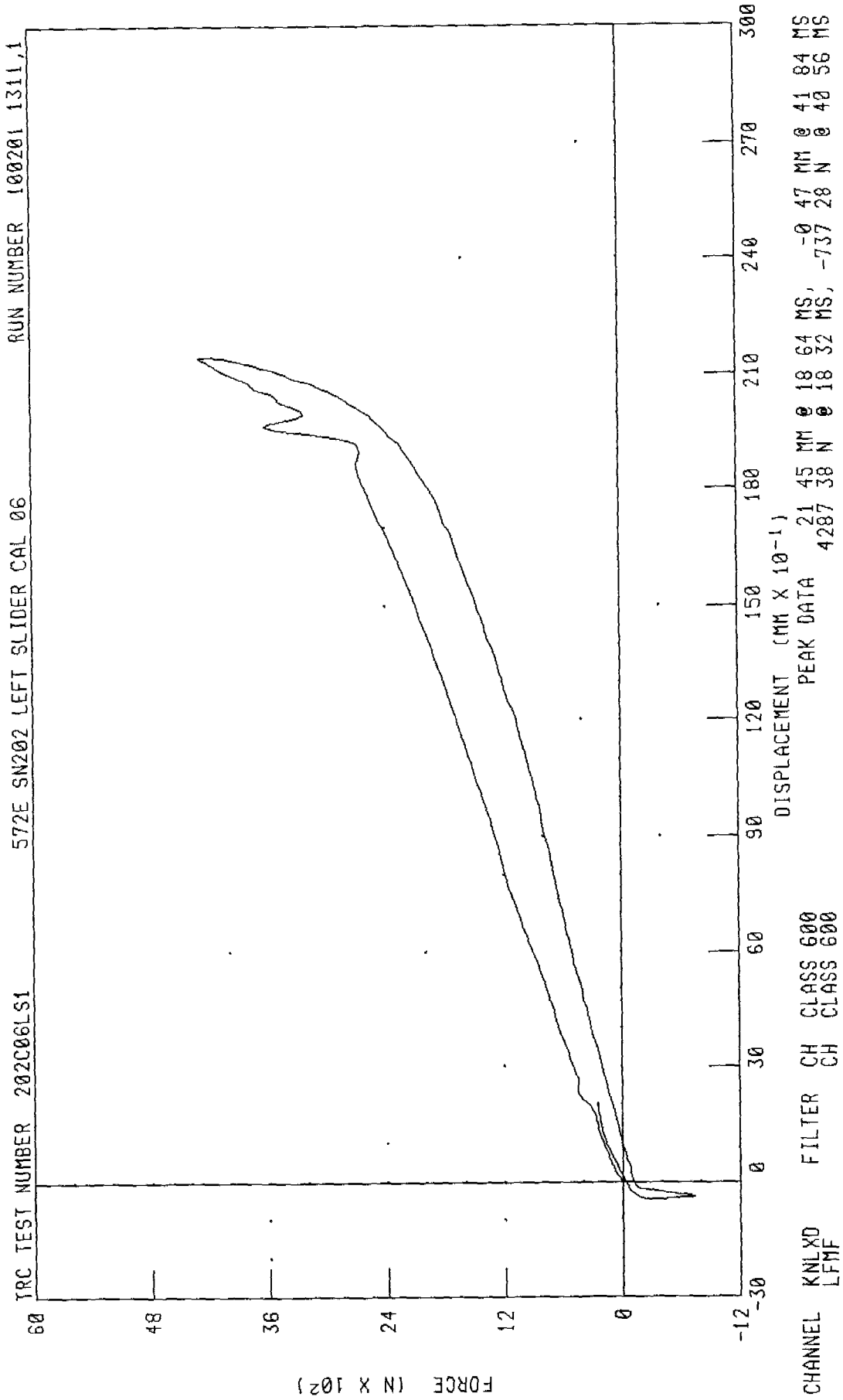
CHANNEL KNLXD FILTER CH CLASS 600

PEAK DATA 21 45 MM @ 18 64 MS, -0 47 MM @ 41 84 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

02-OCT-01

RIGHT KNEE

TRC INC.

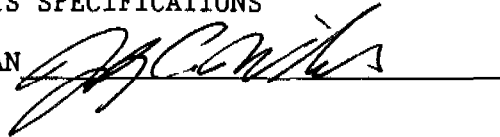
TEST NO: 202C06RS1

572E SN202 RIGHT SLIDER CAL 06

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	53.0 %
PENDULUM VELOCITY	2.70-2.80 M/S	2.78 M/S
FORCE AT 10.0 MM DISPLACEMENT	1259 - 1721 N	1322. N
FORCE AT 18.0 MM DISPLACEMENT	2268 - 3096 N	2659. N

TEST MEETS SPECIFICATIONS

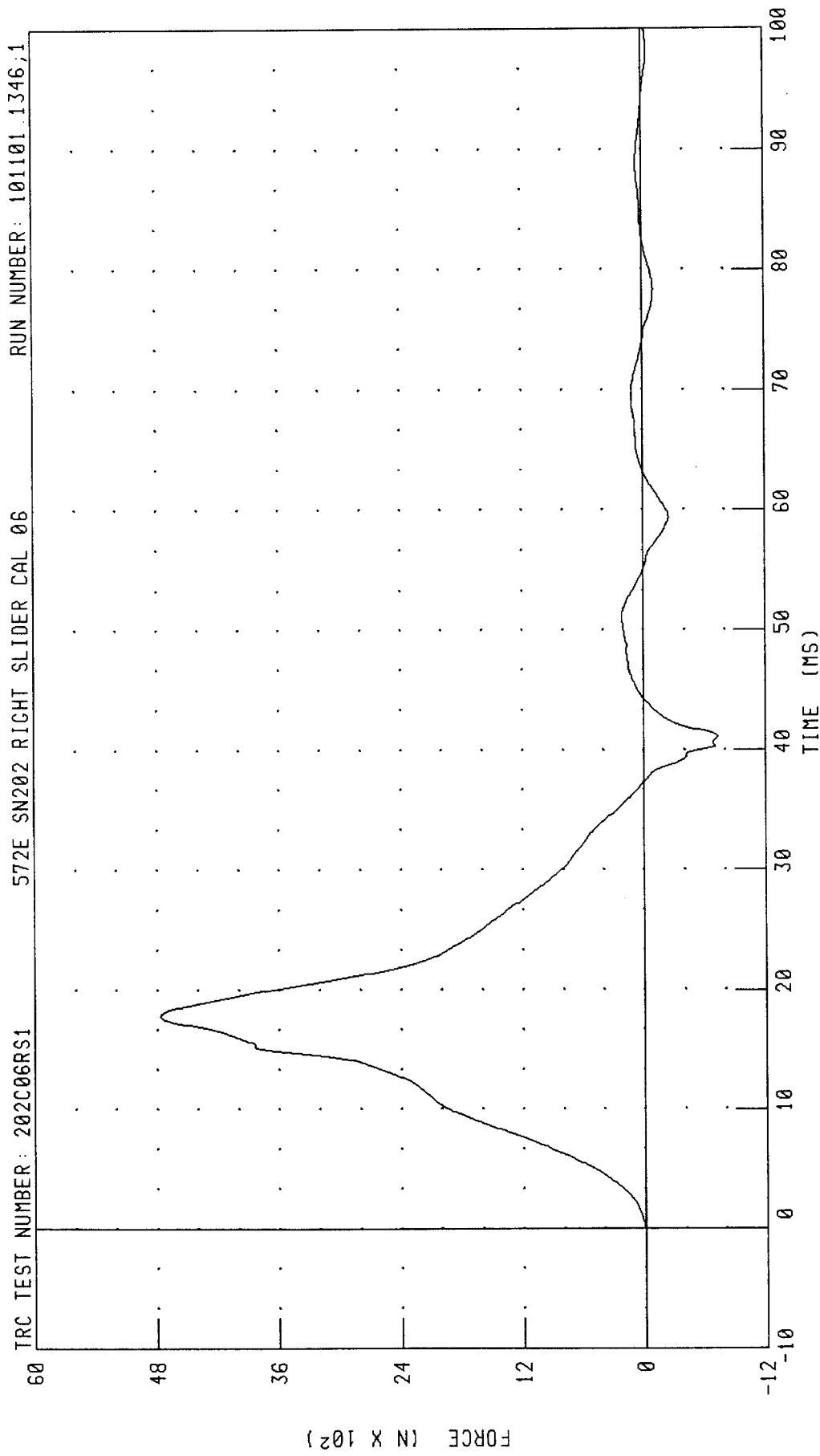
TECHNICIAN



RUN NUMBER: 100201.1248;1

PART 572-E HYBRID III RIGHT KNEE SLIDER CALIBRATION

RIGHT FEMUR FORCE



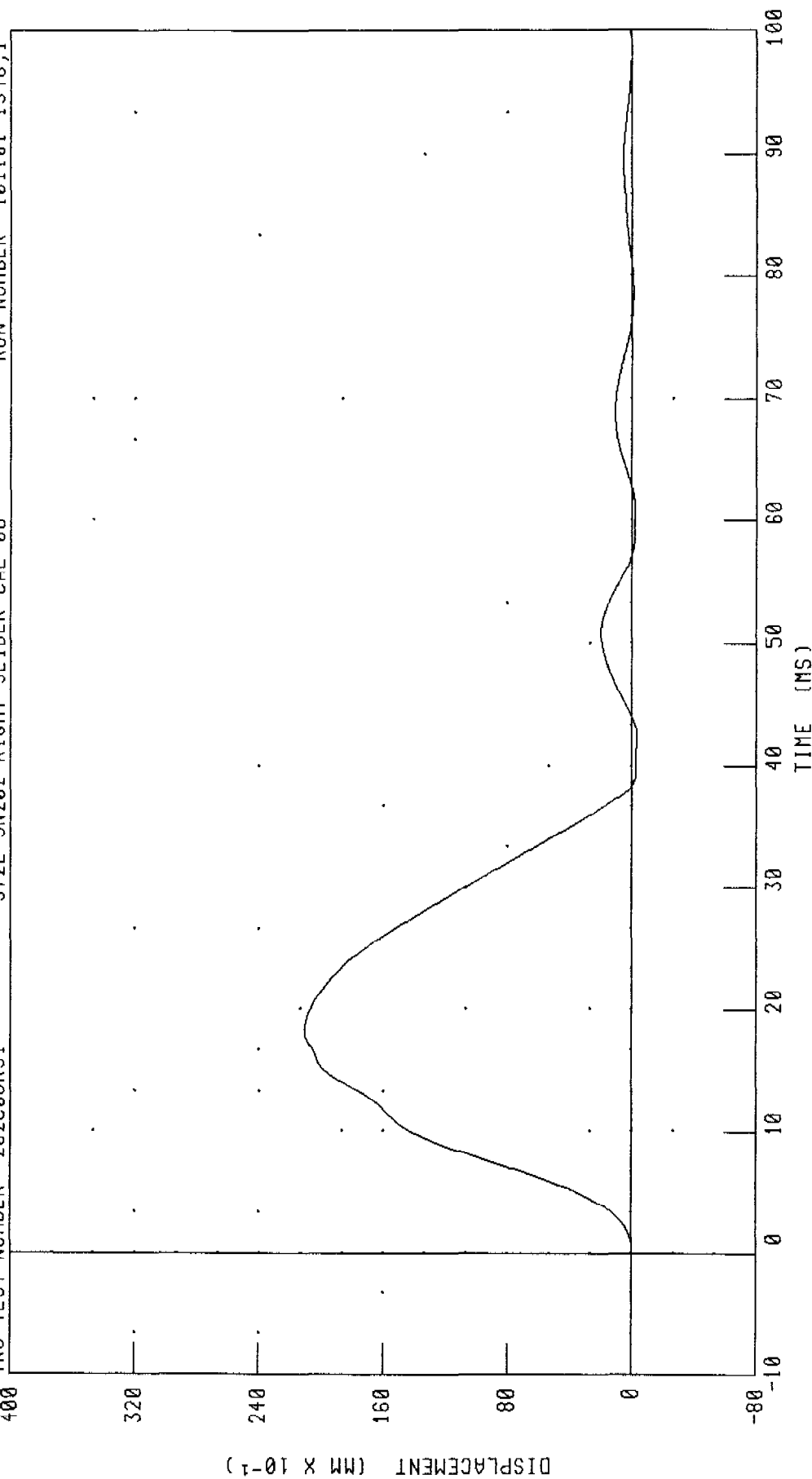
PEAK DATA: 4768.82 N @ 17.84 MS, -729.00 N @ 41.12 MS

CHANNEL: RFMF FILTER: CH. CLASS 600

PART 572-E HYBRID III RIGHT KNEE SLIDER CALIBRATION

RIGHT KNEE DISPLACEMENT

TRC TEST NUMBER 202C06RS1 572E SN202 RIGHT SLIDER CAL 06 RUN NUMBER 101101 1346,1



CHANNEL KNRXD FILTER CH CLASS 600

PEAK DATA 21 07 MM @ 18 24 MS, -0 37 MM @ 42 32 MS

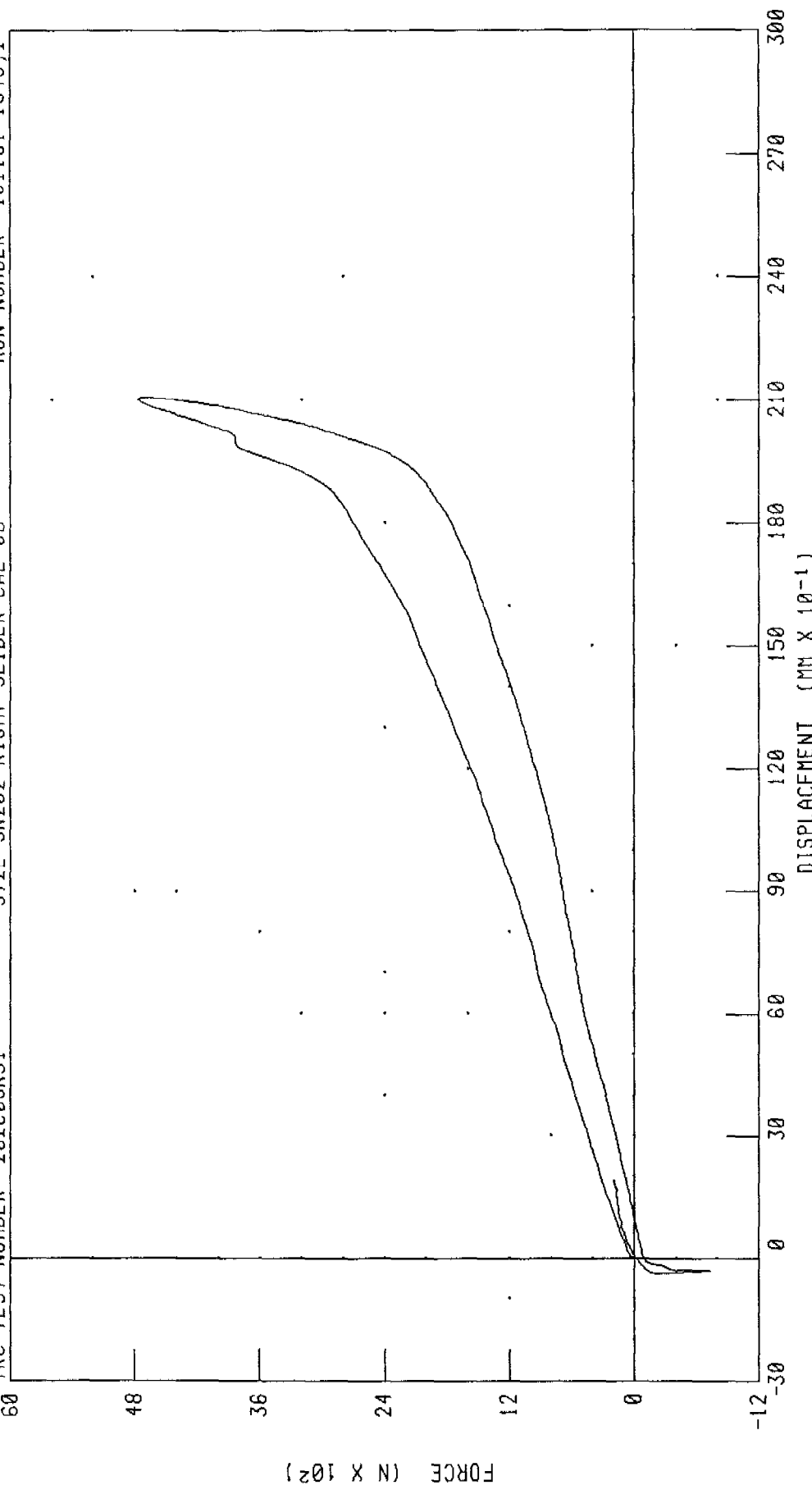
PART 572-E HYBRID III RIGHT KNEE SLIDER CALIBRATION

RIGHT KNEE DISPLACEMENT VS FEMUR FORCE

TRC TEST NUMBER 202C06RS1

572E SN202 RIGHT SLIDER CAL 06

RUN NUMBER 101101 1346,1



CHANNEL KNRXD
RFMF

DISPLACEMENT (MM X 10⁻¹)

PEAK DATA

21 07 MM @ 18 24 MS,

4768 82 N @ 17 84 MS,

-0 37 MM @ 42 32 MS

-729 00 N @ 41 12 MS

Appendix D

Test Equipment and Instrumentation Calibration Information

Report Sign Convention
SAE J211 MAR95¹

Accelerometers: +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)

Rotation potentiometers:

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

<u>Load cells:</u>	+Femur force:	Tension
	+Seat belt force:	Tension
	+Barrier force:	Tension

Neck load cells:

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

<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.

Dummy	206v	Type	HIH 50TH	Description	VOLPE (NIHTSA) - 206 HYBRID III 50TH (DKS 9-26-01) J211				
Chsnam	Location	Model	Name	Manufacturer	Sens./m V/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	7264C-2KLC-2-	P17196	Endevco	0 02095 G	2000	08/28/2001	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 000137546 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
NKLYM	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

Chsnam	Location	Model	Name	Manufacturer	Sens./m V/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	1.1403362 MM	100	09/07/2001	Strmm Away Frm Spn	0
LFMZP	Left Femur Force Z	2121	2121-0160	Denton	0.000098324 N	13344.6	08/24/2001	Knee Fd,Pel Rr	0
RFMZP	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-13741	SpaceAge	23.39429 MM	40	11/30/2000	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	0.00017364 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 DE	318	07/31/2001	Eversion	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	7264-2000TZ	J38856	Endevco	0.02426 G	2000	05/23/2001	Rt	0
FTLZG	Left Foot Accel Z	EGE-73B6Q-20	01H02-N01	Entran	0.02164 G	2000	08/21/2001	Dn	0
KNRDX	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

Chsnam	Location	Model	Name	Manufacturer	Sens./m V/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	4929J	4929J-86-FX	Denton	0 0001716 N	11120	12/22/2000	Ank Fd,Knee Rr	0
ANRYF	Right Lower Tibia Force Y	4929J	4929J-86-FY	Denton	0 0001746 N	11120	12/22/2000	Ank Rt,Knee Lft	0
ANRZF	Right Lower Tibia Force Z	4929J	4929J 86-FZ	Denton	0 000095461 N	11120	12/22/2000	Ank Dn,Knee Up	0
ANRXM	Right Lower Tibia Moment X	4929J	4929J-86-MX	Denton	0 0074837 NM	395.4	12/22/2000	Ank Lt,Hld Knee	0
ANRYM	Right Lower Tibia Moment Y	4929J	4929J-86-MY	Denton	0 0073843 NM	395.4	12/22/2000	Ank Fd,Hld Knee	0
FTRXD	Right Foot Disp. X	POT1		CONTELEC	3.1631 DE	318	07/31/2001	Inersion	0
FTRYD	Right Foot Disp. Y	POT2		CONTELEC	3 1586 DE	318	07/31/2001	Dorsiflexion	0
FTRZD	Right Foot Disp. Z	POT3		CONTELEC	3 1497 DE	318	07/31/2001	External Rotation	0
FTRXG	Right Foot Accel X	EGE-73B6Q-20	01G19-F06	Entran	0 02031 G	2000	08/21/2001	Fwd	0
FTRYG	Right Foot Accel Y	7264-2000TZ	J38787	Endevco	0 02316 G	2000	05/24/2001	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 Description VOLPE (NHTSA) - 202 HYBRID III 50TH (DKS 9-26-01) J211

Chsnam	Location	Model	Name	Manufacturer	Sens./mV/V/U	Fullscale	Caldat	Pos Output	Flip
HEDXG	Head Accel X	EGE-73B6Q-20	01G25-N07	Entran	0.02208 G	2000	08/10/2001	Fwd	0
HEDYG	Head Accel Y	EGE-73B6Q-20	01G25-N20	Entran	0.02011 G	2000	08/10/2001	Lft	1
HEDZG	Head Accel Z	EGE-73B6Q-20	01G25-N17	Entran	0.01957 G	2000	08/10/2001	Up	1
HEDXR	Head Accel Red X VRTC10	7264C-2KLC-2-	P15951	Endevco	0.01358 G	2000	08/28/2001	Rwd	1
HEDYR	Head Accel Red Y VRTC3	7264C-2KLC-2-	P16328	Endevco	0.01461 G	2000	08/28/2001	Rgt	0
HEDZR	Head Accel Red Z VRTC9	7264C-2KLC-2-	P16899	Endevco	0.015 G	2000	08/28/2001	Up	1
HDIXG	Head (LT) Accel X	EGE-73B6Q-20	01G19-P03	Entran	0.02156 G	2000	08/10/2001	Fwd	0
HDIZG	Head (LT) Accel Z	EGE-73B6Q-20	01G25-N18	Entran	0.01906 G	2000	08/10/2001	Up	1
HD2YG	Head (FT) Accel Y	EGE-73B6Q-20	01G25-N10	Entran	0.02248 G	2000	08/10/2001	Lft	1
HD2ZG	Head (FT) Accel Z	EGE-73B6Q-20	01G25-N03	Entran	0.01933 G	2000	08/10/2001	Up	1
HD3XG	Head (TP) Accel X	EGE-73B6Q-20	01G25-N15	Entran	0.02019 G	2000	08/10/2001	Fwd	0
HD3YG	Head (TP) Accel Y	EGE-73B6Q-20	01G25-N02	Entran	0.01968 G	2000	08/10/2001	Lft	1
NEKXF	Neck Force X	1716	1716-0628-FX	Denton	0.000192033 N	8896.4	08/16/2001	Hd Fd,Cst Rr	1
NEKYF	Neck Force Y	1716	1716-0628-FY	Denton	0.000184075 N	8896.4	08/16/2001	Hd L4,Cst Rt	0
NEKZF	Neck Force Z	1716	1716-0628-FZ	Denton	0.00008605 N	13344.6	08/16/2001	Hd Up,Cst Dn	0
NEKXM	Neck Moment X	1716	1716-0628-MX	Denton	0.005770973 NM	282.5	08/16/2001	Rt Ear to Rt Shld	1
NEKYM	Neck Moment Y	1716	1716-0628-MY	Denton	0.005887788 NM	282.5	08/16/2001	Chn to Strum	0
NEKZM	Neck Moment Z	1716	1716-0628-MZ	Denton	0.008187257 NM	282.5	08/16/2001	Chn to Lt Shld	0
NKLXF	Lwr Neck Force X	1794A	1794A-215-FX	Denton	0.000140236 N	13344.6	07/05/2001	Hd Fd,Cst Rr	1
NKLYF	Lwr Neck Force Y	1794A	1794A-215-FY	Denton	0.000137853 N	13344.6	07/05/2001	Hd L4,Cst Rt	0
NKLZF	Lwr Neck Force Z	1794A	1794A-215-FZ	Denton	0.000069204 N	13344.6	07/05/2001	Hd Up,Cst Dn	0
NKLXM	Lwr Neck Moment X	1794A	1794A-215-MX	Denton	0.003864601 NM	452	07/05/2001	Rt Ear to Rt Shld	1
NKLYM	Lwr Neck Moment Y	1794A	1794A-215-MY	Denton	0.003795796 NM	452	07/05/2001	Chn to Strum	0
NKLZM	Lwr Neck Moment Z	1794A	1794A-215-MZ	Denton	0.006828982 NM	452	07/05/2001	Chn to Lt Shld	0
CSTXG	Chest Accel X	7264-2000TZ	AJ460	Endevco	0.02863 G	2000	08/24/2001	Fwd	0
CSTYG	Chest Accel Y	7264-2000TZ	J14404	Endevco	0.028 G	2000	08/24/2001	Lft	1

Chsnam	Location	Model	Name	Manufacturer	Sens./m V/V/U	Fullscale	Caldate	Pos Output	Flip
CSTZG	Chest Accel Z	7264-2000TZ	J14144	Endevco	0 03795 G	2000	08/24/2001	Up	1
CSTXD	Chest Deflection X	14CB1-2847	14CB1-2847-0137	Servo	1 1347019 MM	100	09/07/2001	Strmm Away Frm Spn	0
LFMZP	Left Femur Force Z	2121	2121-0226	Denton	0 000098729 N	1334 6	08/24/2001	Knee Fd,Pel Rr	0
RFMZP	Right Femur Force Z	2121	2121-0227	Denton	0 000098759 N	13344 6	08/24/2001	Knee Fd,Pel Rrxt	0
KNLXD	Left Knee Displacement	150-0121VR	150-0121VR-13739	SpaceAge	23 10643 MM	40	11/30/2000	Tib Rr,Hld Fem	1
TBLXF	Left Upper Tibia Force X	3115	3115-199-FX	Denton	0.000172571 N	11120	03/02/2001	Tib Rr,Knee Fd	1
TBLZF	Left Upper Tibia Force Z	3115	3115-199-FZ	Denton	0.000095782 N	11120 5	03/02/2001	Tib Dn,Knee Up	0
TBLXM	Left Upper Tibia Moment X	3115	3115-199-MX	Denton	0 007356348 NM	395.5	03/02/2001	Tib Rt,Hld Knee	1
TBLYM	Left Upper Tibia Moment Y	3115	3115 199-MY	Denton	0 007476226 NM	395 5	03/02/2001	Tib Fd,Hld Knee	0
ANLXF	Left Lower Tibia Force X	3287	3287-128-FX	Denton	0 000174361 N	11120 5	03/05/2001	Ank Rr,Knee Fd	1
ANLZF	Left Lower Tibia Force Z	3287	3287-128-FZ	Denton	0.000096879 N	11120 5	03/05/2001	Ank Dn,Knee Up	0
ANLXM	Left Lower Tibia Moment X	3287	3287-128-MX	Denton	0 007693474 NM	395.4	03/05/2001	Ank Rt,Hld Knee	1
ANLYM	Left Lower Tibia Moment Y	3287	3287-128-MY	Denton	0.007630753 NM	395 4	03/05/2001	Ank Fd,Hld Knee	0
FLHXG	Left Foot-Heel Accel X	7264-2KMST	J27387	Endevco	0 0241 G	2000	08/24/2001	Fwd	0
FLHZG	Left Foot-Heel Accel Z	7264-2KMST	J27553	Endevco	0.02754 G	2000	08/24/2001	Dwn	0
FLTZG	Left Foot-Toe Accel Z	7264-2KMST	J27474	Endevco	0 02712 G	2000	08/24/2001	Up	1
KNRXD	Right Knee Displacement	150-0121VL	150-0121VL-13723	SpaceAge	23 5714 MM	40	11/30/2000	Tib Rr,Hld Fem	1
TBRXF	Right Upper Tibia Force X	3115	3115-200-FX	Denton	0 000170179 N	11120	03/05/2001	Tib Rr,Knee Fd	1
TBRZF	Right Upper Tibia Force Z	3115	3115-200-FZ	Denton	0.000094433 N	11120	03/05/2001	Tib Dn,Knee Up	0
TBRXM	Right Upper Tibia Moment X	3115	3115-200-MX	Denton	0 007369499 NM	395 5	03/05/2001	Tib Rt,Hld Knee	1
TBRYM	Right Upper Tibia Moment Y	3115	3115-200-MY	Denton	0 007401618 NM	395.5	03/05/2001	Tib Fd,Hld Knee	0
ANRXF	Right Lower Tibia Force X	3287	3287-129 FX	Denton	0 000173435 N	11120 5	03/07/2001	Ank Rr,Knee Fd	1
ANRZF	Right Lower Tibia Force Z	3287	3287-129-FZ	Denton	0 000096573 N	11120.5	03/07/2001	Ank Dn,Knee Up	0
ANRXM	Right Lower Tibia Moment X	3287	3287-129-MX	Denton	0.007584977 NM	395 4	03/07/2001	Ank Rt,Hld Knee	1
ANRYM	Right Lower Tibia Moment Y	3287	3287-129-MY	Denton	0 007643146 NM	395 4	03/07/2001	Ank Fd,Hld Knee	0
FRHXG	Right Foot-Heel Accel X	7264-2000T	J17976	Endevco	0.02777 G	2000	08/24/2001	Fwd	0
FRHZG	Right Foot-Heel Accel Z	7264-2000TZ	J38801	Endevco	0.02707 G	2000	05/23/2001	Dwn	0
FRTZG	Right Foot-Toe Accel Z	7264-2KMST	J28727	Endevco	0 02393 G	2000	08/24/2001	Up	1

Channel Report

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Name of Test 011001 Name of DAU DAU1 System K3600

Chan.#	Sensor #	Mnemonic	Description	Dir.	Range	Pol.	Cal. Date/Status	Group	Mfg.	Model
1000	EVENT1	BACKUP	BACKUP EVENT		10.24	+	06/29/2000	-1	TRC	Event
1001	01G25-N01	HEDXG1	DRIVER HEAD X-AXIS	Fwd	796.1684393G	+	08/10/2001	OK	Entran	EGE-73B6Q-2000J
1002	01G25-N14	HEDYG1	DRIVER HEAD Y-AXIS	Lft	801.4275428G	-	08/10/2001	OK	Entran	EGE-73B6Q-2000J
1003	01G25-N08	HEDZG1	DRIVER HEAD Z-AXIS	Up	794.2910331G	-	08/10/2001	OK	Entran	EGE-73B6Q-2000J
1004	P12566	HEDXR1	DRIVER HEAD X-AXIS	Rwd	799.7500781G	-	08/28/2001	OK	Endevco	7264C-2K-2-180
1005	P17196	HEDYR1	DRIVER HEAD Y-AXIS	Rgt	801.2833052G	+	08/28/2001	OK	Endevco	7264C-2KLC-2-24
1006	P17858	HEDZR1	DRIVER HEAD Z-AXIS	Up	803.1498533G	-	08/28/2001	OK	Endevco	7264C-2KLC-2-24
1007	01G25-N06	HD1XG1	DRIVER HEAD X-AXIS (LT)	Fwd	802.1557936G	+	08/10/2001	OK	Entran	EGE-73B6Q-2000J
1008	01G25-N05	HD1ZG1	DRIVER HEAD Z-AXIS (LT)	Up	805.8233326G	-	08/10/2001	OK	Entran	EGE-73B6Q-2000J
1009	01G25-N04	HD2YG1	DRIVER HEAD Y-AXIS (FT)	Lft	796.8561534G	-	08/10/2001	OK	Entran	EGE-73B6Q-2000J
1010	01G25-N13	HD2ZG1	DRIVER HEAD Z-AXIS (FT)	Up	803.6162732G	-	08/10/2001	OK	Entran	EGE-73B6Q-2000J
1011	01G25-N09	HD3XG1	DRIVER HEAD X-AXIS (TP)	Fwd	802.2312055G	+	08/10/2001	OK	Entran	EGE-73B6Q-2000J
1012	01G25-N16	HD3YG1	DRIVER HEAD Y-AXIS (TP)	Lft	802.2814879G	-	08/10/2001	OK	Entran	EGE-73B6Q-2000J
1013	1716A-858-FX	NEKXF1	DRIVER NECK X-AXIS SHEAR	Hd	8899.001770N	-	08/16/2001	OK	Denton	1716A
1014	1716A-858-FY	NEKYF1	DRIVER NECK Y-AXIS SHEAR	Hd	8893.929399N	+	08/16/2001	OK	Denton	1716A
1015	1716A-858-FZ	NEKZF1	DRIVER NECK Z-AXIS AXIAL	Hd	13346.73011N	+	08/16/2001	OK	Denton	1716A
1016	1716A-858-MX	NEKXM1	DRIVER NECK MOMENT	Rt Ear	282.4832082NM	-	08/16/2001	OK	Denton	1716A
1017	1716A-858-MY	NEKYM1	DRIVER NECK MOMENT	Chn	282.7321336NM	+	08/16/2001	OK	Denton	1716A
1018	1716A-858-MZ	NEKZM1	DRIVER NECK MOMENT	Chn	282.2177713NM	+	08/16/2001	OK	Denton	1716A
1019	1794A-216-FX	NKLXF1	DRIVER NECK LOWER X-AXIS	Hd	13341.89994N	-	07/05/2001	OK	Denton	1794A
1020	1794A-216-FY	NKLYF1	DRIVER NECK LOWER Y-AXIS	Hd	13341.90342N	+	07/05/2001	OK	Denton	1794A
1021	1794A-216-FZ	NKLZF1	DRIVER NECK LOWER Z-AXIS	Hd	13341.96739N	+	07/05/2001	OK	Denton	1794A
1022	1794A-216-MX	NKLXM1	DRIVER NECK LOWER	Rt Ear	340.0016488NM	-	07/05/2001	OK	Denton	1794A
1023	1794A-216-MY	NKL YM1	DRIVER NECK LOWER	Chn	339.9226543NM	+	07/05/2001	OK	Denton	1794A
1024	1794A-216-MZ	NKLZM1	DRIVER NECK LOWER	Chn	181.0661391NM	+	07/05/2001	OK	Denton	1794A
1025	ACCM9	CSTXG1	DRIVER CHEST X-AXIS	Fwd	398.1863854G	+	08/24/2001	OK	Endevco	7264-2000TZ
1026	J15368	CSTYG1	DRIVER CHEST Y-AXIS	Lft	397.2641535G	-	08/24/2001	OK	Endevco	7264-2000TZ
1027	J20184	CSTZG1	DRIVER CHEST Z-AXIS	Up	398.2235496G	-	08/24/2001	OK	Endevco	7264-2000TZ
1028	14CB1-2847-206	CSTXD1	DRIVER CHEST DEFFLECTION	Strmm	99.77651813MM	+	09/07/2001	OK	Servo	14CB1-2847
1029	2121-0160	LFMZFI	DRIVER LEFT FEMUR FORCE	Knee	13351.98438N	+	08/24/2001	OK	Denton	2121

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1030	2121-0161	RFMZF1	DRIVER RIGHT FEMUR FORCE	Knee	13336.30969N	+	08/24/2001	OK	206v	Denton	2121
1031	150-0121VR-13741	KNLXD1	DRIVER LEFT KNEE	Tib	43.77136472MM	-	11/30/2000	OK	206v	SpaceAge	150-0121VR
1032	150-0121VL-18123	KNRDXD1	DRIVER RIGHT KNEE	Tib	43.27979712MM	-	04/26/2001	OK	-1	SpaceAge	150-0121VL
1033	43531-82-FX	TBLXF1	DRIVER LEFT UPPER TIBIA	Tib	8894.284909N	+	08/03/2001	OK	206v	Denton	4353J
1034	43531-82-FZ	TBLZF1	DRIVER LEFT UPPER TIBIA	Tib	8893.542249N	+	08/03/2001	OK	206v	Denton	4353J
1035	43531-82-MX	TBLXM1	DRIVER LEFT UPPER TIBIA	Ank	281.7203495NM	+	08/03/2001	OK	206v	Denton	4353J
1036	43531-82-MY	TBLYM1	DRIVER LEFT UPPER TIBIA	Ank	281.7203495NM	+	08/03/2001	OK	206v	Denton	4353J
1037	01G19-F02	TBLXG1	DRIVER LEFT TIBIA X-AXIS	Fwd	1208.972845G	+	08/21/2001	OK	206v	Entran	EGE-73B6Q-2000J
1038	01H02-N02	TBLYG1	DRIVER LEFT TIBIA Y-AXIS	Rt	1204.705882G	+	08/21/2001	OK	206v	Entran	EGE-73B6Q-2000J
1039	4929J-87-FX	ANLXF1	DRIVER LEFT LOWER TIBIA	Ank	8892.680629N	+	12/22/2000	OK	206v	Denton	4929J
1040	4929J-87-FY	ANLYF1	DRIVER LEFT LOWER TIBIA	Ank	8892.260537N	+	12/22/2000	OK	206v	Denton	4929J
1041	4929J-87-FZ	ANLZF1	DRIVER LEFT LOWER TIBIA	Ank	8902.242252N	+	12/22/2000	OK	206v	Denton	4929J
1042	4929J-87-MX	ANLXM1	DRIVER LEFT LOWER TIBIA	Ank	282.2327432NM	+	12/22/2000	OK	206v	Denton	4929J
1043	4929J-87-MY	ANLYM1	DRIVER LEFT LOWER TIBIA	Ank	281.7363244NM	+	12/22/2000	OK	206v	Denton	4929J
1044	PD210-4B-AK-060	FTLXD1	DRIVER LEFT FOOT TO ANKLE	Eversi	324.6567959DEG	+	07/31/2001	OK	206v	CONTELEC	PD210-4B
1045	PD210-4B-AK-061	FTLYD1	DRIVER LEFT FOOT TO ANKLE	Dorsif	323.2425265DEG	+	07/31/2001	OK	206v	CONTELEC	PD210-4B
1046	PD210-4B-AK-062	FTLZD1	DRIVER LEFT FOOT TO ANKLE	Intern	321.8202960DEG	+	07/31/2001	OK	206v	CONTELEC	PD210-4B
1047	01H02-N05	FTLXG1	DRIVER LEFT FOOT X-AXIS	Fwd	1202.484822G	+	08/21/2001	OK	206v	Entran	EGE-73B6Q-2000J
1048	J38856	FTLYG1	DRIVER LEFT FOOT Y-AXIS	Rt	1205.982805G	+	05/23/2001	OK	-1	Endevco	7264-2000TZ
1049	01H02-N01	FTLZG1	DRIVER LEFT FOOT Z-AXIS	Dn	1213.327645G	+	08/21/2001	OK	206v	Entran	EGE-73B6Q-2000J
1050	43531-81-FX	TBRXF1	DRIVER RIGHT UPPER TIBIA	Tib	8895.282373N	+	08/03/2001	OK	206v	Denton	4353J
1051	43531-81-FZ	TBRZF1	DRIVER RIGHT UPPER TIBIA	Tib	8904.739944N	+	08/03/2001	OK	-1	Denton	4353J
1052	43531-81-MX	TBRXM1	DRIVER RIGHT UPPER TIBIA	Ank	281.7704894NM	+	08/03/2001	OK	206v	Denton	4353J
1053	43531-81-MY	TBRYM1	DRIVER RIGHT UPPER TIBIA	Ank	281.7477428NM	+	08/03/2001	OK	206v	Denton	4353J
1054	01H02-N07	TBRXG1	DRIVER RIGHT TIBIA X-AXIS	Fwd	1195.144724G	+	08/21/2001	OK	206v	Entran	EGE-73B6Q-2000J
1055	01H02-N03	TBRYG1	DRIVER RIGHT TIBIA Y-AXIS	Rt	1192.361434G	+	08/21/2001	OK	206v	Entran	EGE-73B6Q-2000J
1056	4929J-86-FX	ANRXF1	DRIVER RIGHT LOWER TIBIA	Ank	8893.242872N	+	12/22/2000	OK	206v	Denton	4929J
1057	4929J-86-FY	ANRYF1	DRIVER RIGHT LOWER TIBIA	Ank	8899.596215N	+	12/22/2000	OK	206v	Denton	4929J
1058	4929J-86-FZ	ANRZF1	DRIVER RIGHT LOWER TIBIA	Ank	8894.605062N	+	12/22/2000	OK	206v	Denton	4929J
1059	4929J-86-MX	ANRXM1	DRIVER RIGHT LOWER TIBIA	Ank	282.1251795NM	+	12/22/2000	OK	206v	Denton	4929J
1060	4929J-86-MY	ANRYM1	DRIVER RIGHT LOWER TIBIA	Ank	281.8548559NM	+	12/22/2000	OK	206v	Denton	4929J
1061	PD210-4B-AK-057	FTRXD1	DRIVER RIGHT FOOT TO	Inersi	323.7330466DEG	+	07/31/2001	OK	206v	CONTELEC	PD210-4B
1062	PD210-4B-AK-058	FTRYD1	DRIVER RIGHT FOOT TO	Dorsif	324.1942632DEG	+	07/31/2001	OK	206v	CONTELEC	PD210-4B
1063	PD210-4B-AK-059	FTRZD1	DRIVER RIGHT FOOT TO	Extern	325.1103279DEG	+	07/31/2001	OK	206v	CONTELEC	PD210-4B
1064	01G19-F06	FTRXG1	DRIVER RIGHT FOOT X-AXIS	Fwd	1200.440786G	+	08/21/2001	OK	206v	Entran	EGE-73B6Q-2000J

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1065	138787	FTRYG1	DRIVER RIGHT FOOT Y-AXIS	Rt	1194 977360G	OK	-1	Endevco	7264-2000TZ
1066	01G19-F05	FTRZG1	DRIVER RIGHT FOOT X-AXIS	Dn	1205 273069G	OK	206v	Entran	EGE-73B6Q-2000J
1067	01G25-N07	HEDYG2	PASSENGER HEAD X-AXIS	Fwd	799 6001999G	OK	202v	Entran	EGE-73B6Q-2000J
1068	01G25-N20	HEDYG2	PASSENGER HEAD Y-AXIS	Lft	795 6240676G	OK	202v	Entran	EGE-73B6Q-2000J
1069	01G25-N17	HEDYG2	PASSENGER HEAD Z-AXIS	Up	804 9998034G	OK	202v	Entran	EGE-73B6Q-2000J
1070	P15951	HEDXR2	PASSENGER HEAD X-AXIS	Rwd	802 1809294G	OK	202v	Endevco	7264C-2KLC-2-24
1071	P16328	HEDYR2	PASSENGER HEAD Y-AXIS	Rgt	796 4656835G	OK	202v	Endevco	7264C-2KLC-2-24
1072	P16899	HEDZR2	PASSENGER HEAD Z-AXIS	Up	803 1372549G	OK	202v	Endevco	7264C-2KLC-2-24
1073	01G19-F03	HD1XG2	PASSENGER HEAD X-AXIS	Fwd	805 0061318G	OK	202v	Entran	EGE-73B6Q-2000J
1074	01G25-N18	HD1ZG2	PASSENGER HEAD Z-AXIS(LT)	Up	801 8668462G	OK	202v	Entran	EGE-73B6Q-2000J
1075	01G25-N10	HD2YG2	PASSENGER HEAD Y-AXIS (FT)	Lft	799 1509021G	OK	202v	Entran	EGE-73B6Q-2000J
1076	01G25-N03	HD2ZG2	PASSENGER HEAD Z-AXIS (FT)	Up	802 6462242G	OK	202v	Entran	EGE-73B6Q-2000J
1077	01G25-N15	HD3XG2	PASSENGER HEAD X-AXIS	Fwd	805 0504335G	OK	202v	Entran	EGE-73B6Q-2000J
1078	01G25-N02	HD3YG2	PASSENGER HEAD Y-AXIS (TP)	Lft	800 5003126G	OK	202v	Entran	EGE-73B6Q-2000J
1079	1716-0628-FX	NEKXF2	PASSENGER NECK X-AXIS	Hd	8902 198370N	OK	202v	Denton	1716
1080	1716-0628-FY	NEKYF2	PASSENGER NECK Y-AXIS	Hd	8900 719815N	OK	202v	Denton	1716
1081	1716-0628-FZ	NEKZF2	PASSENGER NECK Z-AXIS	Hd	13340 87231N	OK	202v	Denton	1716
1082	1716-0628-MX	NEKXM2	PASSENGER NECK MOMENT	Rt Ear	282 5473708NM	OK	202v	Denton	1716
1083	1716-0628-MY	NEKYM2	PASSENGER NECK MOMENT	Chn	282 3365349NM	OK	202v	Denton	1716
1084	1716-0628-MZ	NEKZM2	PASSENGER NECK MOMENT	Chn	282 3305064NM	OK	202v	Denton	1716
1085	1794A-215-FX	NKLYF2	PASSENGER NECK LOWER	Hd	13349 13467N	OK	202v	Denton	1794A
1086	1794A-215-FY	NKLYF2	PASSENGER NECK LOWER	Hd	13336 09067N	OK	202v	Denton	1794A
1087	1794A-215-FZ	NKLYF2	PASSENGER NECK LOWER	Hd	13354 54201N	OK	202v	Denton	1794A
1088	1794A-215-MX	NKLYM2	PASSENGER NECK LOWER	Rt Ear	340 1401015NM	OK	202v	Denton	1794A
1089	1794A-215-MY	NKLYM2	PASSENGER NECK LOWER	Chn	340 1918504NM	OK	202v	Denton	1794A
1090	1794A-215-MZ	NKLYM2	PASSENGER NECK LOWER	Chn	181 0979990NM	OK	202v	Denton	1794A
1091	A1460	CSTYG2	PASSENGER CHEST X-AXIS	Fwd	401 8727899G	OK	-1	Endevco	7264-2000TZ
1092	J14404	CSTYG2	PASSENGER CHEST Y-AXIS	Lft	401 8838304G	OK	-1	Endevco	7264-2000TZ
1093	J14144	CSTZG2	PASSENGER CHEST Z-AXIS	Up	402 7294358G	OK	-1	Endevco	7264-2000TZ
1094	14CB1-2847-0137	CSTXD2	PASSENGER CHEST	Strum	100 2710736MM	OK	202v	Servo	14CB1-2847
1095	2121-0226	LFMZP2	PASSENGER LEFT FEMUR	Knee	13348 55329N	OK	202v	Denton	2121
1096	2121-0227	RFMZP2	PASSENGER RIGHT FEMUR	Knee	13344 49840N	OK	202v	Denton	2121
1097	150-0121VR-13739	KNLXD2	PASSENGER LEFT KNEE	Tib	44 31666856MM	OK	202v	SpaceAge	150-0121VR
1098	150-0121VL-13723	KNRXD2	PASSENGER RIGHT KNEE	Tib	43 44247689MM	OK	202v	SpaceAge	150-0121VL
1099	3115-199-FX	TBLXF2	PASSENGER LEFT UPPER	Tib	8896 236237N	OK	202v	Denton	3115

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1100	3115-199-FZ	TBLZF2	PASSENGER LEFT UPPER	Tib	8894 296188 N	+	03/02/2001	OK	202v	Denton	3115
1101	3115-199-MX	TBLXM2	PASSENGER LEFT UPPER	Tib	281.7803744 NM	-	03/02/2001	OK	202v	Denton	3115
1102	3115-199-MY	TBLYM2	PASSENGER LEFT UPPER	Tib	281 8261359 NM	+	03/02/2001	OK	202v	Denton	3115
1103	3287-128-FX	ANLXF2	PASSENGER LEFT LOWER	Ank	8898.292344 N	-	03/05/2001	OK	202v	Denton	3287
1104	3287-128-FZ	ANLZF2	PASSENGER LEFT LOWER	Ank	8897 210561 N	+	03/05/2001	OK	202v	Denton	3287
1105	3287-128-MX	ANLXM2	PASSENGER LEFT LOWER	Ank	281 9911428 NM	-	03/05/2001	OK	202v	Denton	3287
1106	3287-128-MY	ANLYM2	PASSENGER LEFT LOWER	Ank	281.9198189 NM	+	03/05/2001	OK	202v	Denton	3287
1107	J30424	ENGXG1	TOP ENGINE X-AXIS	FWD	1007 804580 G	+	09/07/2001	OK	-1	Endevco	7264-2000TZ

Channel Report

Name of Test 011001

System MINIDAU Name of DAU DAU6

10/04/2001 9:14:00 AM

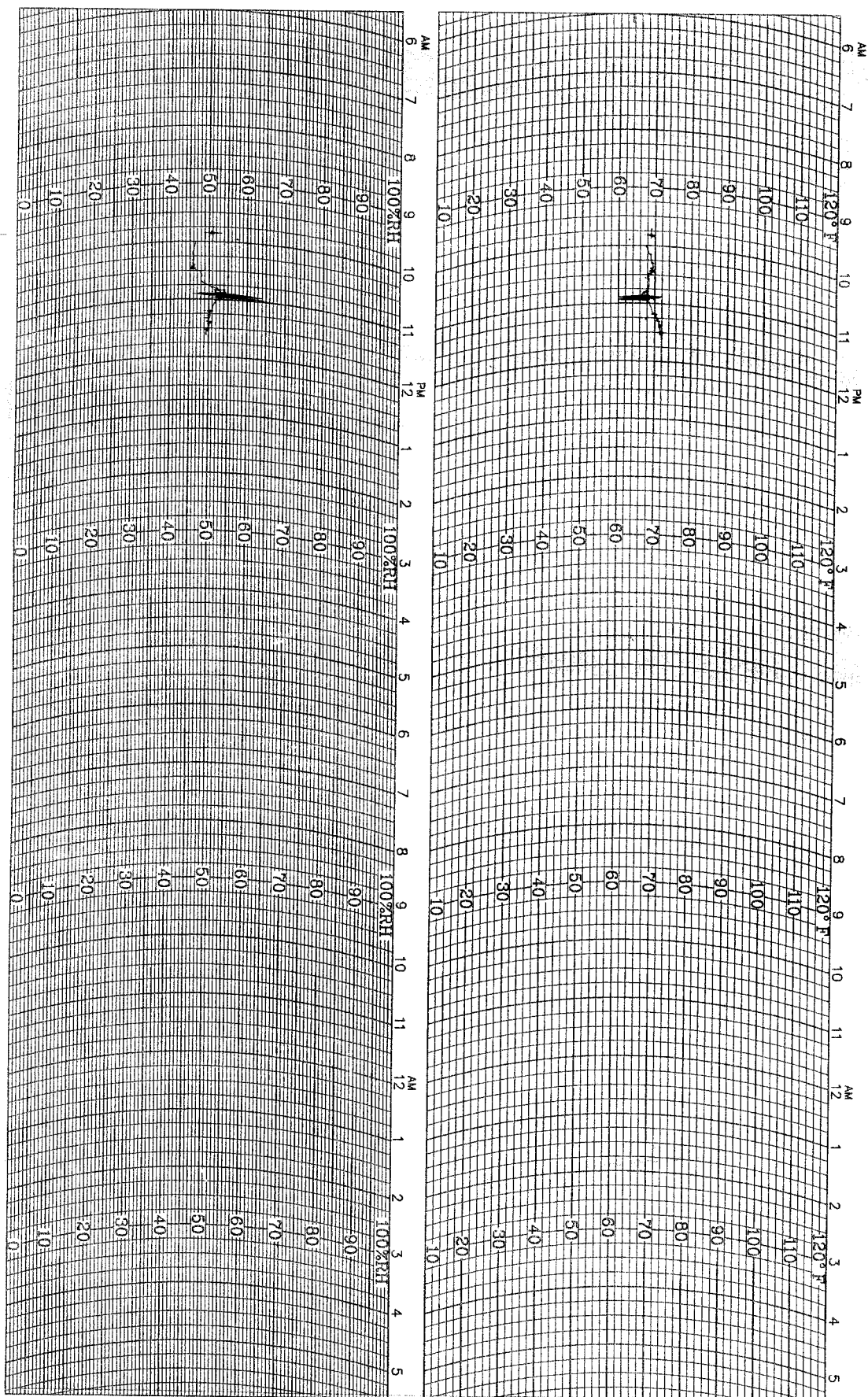
Chan.#	Sensor #	Mnemonic	Description	Dir.	Range	Pol.	Cal. Date/Status	Group	Mfg.	Model
6001	J27387	FLHXG2	PASSENGER LEFT FOOT HEEL	Fwd	1180 267404 G	+	08/24/2001	OK	Endevco	7264-2KM5T
6002	J27553	FLHZG2	PASSENGER LEFT FOOT HEEL	Dwn	1239 409343 G	+	08/24/2001	OK	Endevco	7264-2KM5T
6003	J27474	FLTZG2	PASSENGER LEFT FOOT TOE	Up	1179 941002 G	-	08/24/2001	OK	Endevco	7264-2KM5T
6004	3115-200-FX	TBRXF2	PASSENGER RIGHT UPPER	Tib	8901 174054 N	-	03/05/2001	OK	Denton	3115
6005	3115-200-FZ	TBRZF2	PASSENGER RIGHT UPPER	Tib	8902 846419 N	+	03/05/2001	OK	Denton	3115
6006	3115-200-MX	TBRXM2	PASSENGER RIGHT UPPER	Tib	282 4209370 NM	-	03/05/2001	OK	Denton	3115
6007	3115-200-MY	TBRYM2	PASSENGER RIGHT UPPER	Tib	282 3431198 NM	+	03/05/2001	OK	Denton	3115
6008	3287-129-FX	ANRXF2	PASSENGER RIGHT LOWER	Ank	8891.911521 N	-	03/07/2001	OK	Denton	3287
6009	3287-129-FZ	ANRZF2	PASSENGER RIGHT LOWER	Ank	8895 451137 N	+	03/07/2001	OK	Denton	3287
6010	3287-129-MX	ANRXM2	PASSENGER RIGHT LOWER	Ank	282.4345300 NM	-	03/07/2001	OK	Denton	3287
6011	3287-129-MY	ANRYM2	PASSENGER RIGHT LOWER	Ank	281 4626992 NM	+	03/07/2001	OK	Denton	3287
6012	J17976	FRHXG2	PASSENGER RIGHT FOOT HEEL	Fwd	1229 144160 G	+	08/24/2001	OK	Endevco	7264-2000T
6013	J38801	FRHZG2	PASSENGER RIGHT FOOT HEEL	Dwn	1182 120428 G	+	05/23/2001	OK	Endevco	7264-2000TZ
6014	J28727	FRTZG2	PASSENGER RIGHT FOOT TOE	Up	1188 652087 G	-	08/24/2001	OK	Endevco	7264-2KM5T
6015	J37957	LRSXG	LEFT REAR SEAT	FWD	1025 394536 G	+	08/13/2001	OK	Endevco	7264-2000TZ
6016	J38643	RRSXG	RIGHT REAR SEAT	FWD	981.9527818 G	+	09/19/2001	OK	Endevco	7264-2000TZ
6017	J36259	BCLXG	FRONT BRAKE CALIPER LEFT	RR	998 4009984 G	-	10/03/2001	OK	Endevco	7264-2000TZ
6018	J38640	BCRXG	FRONT BRAKE CALIPER	RR	987 3876653 G	-	09/19/2001	OK	Endevco	7264-2000TZ
6019	J38047	DPCXG	DASHBOARD CENTER X-AXIS	FWD	1007 001809 G	+	09/19/2001	OK	Endevco	7264-2000TZ
6020	J37170	ENGXG2	BOTTOM ENGINE X-AXIS	FWD	980 2232305 G	+	08/10/2001	OK	Endevco	7264-2000TZ
6021	J35696	TPAXG	TOEPAN(NEXT TO	RR	1006 625641 G	-	04/10/2001	OK	Endevco	7264-2000TZ
6022	J36229	TPAZG	TOEPAN(NEXT TO	UP	1029 269861 G	-	04/10/2001	OK	Endevco	7264-2000TZ
6023	J38245	TPFXG	TOEPAN(NEXT TO FOOT	FWD	987 1782512 G	+	08/30/2001	OK	Endevco	7264-2000TZ
6024	J38775	TPFZG	TOEPAN(NEXT TO FOOT	UP	992 2480620 G	-	05/23/2001	OK	Endevco	7264-2000TZ
6025	A51JJ	RDKZG	REAR DECK Z-AXIS	UP	973 4580576 G	-	06/01/2001	OK	Endevco	7264-2000TZ
6026	J37159	RDCXG	REAR COMPARTMENT	RR	992 7097874 G	-	05/29/2001	OK	Endevco	7264-2000TZ
6027	IP1	DABET1	DRIVER AIRBAG EVENT	H	1 003921568 V	+	06/15/2000	---	FLUKE	Y8101A
6028	IP2	DABET2	DRIVER AIRBAG EVENT	F	1 003921568 V	+	06/15/2000	---	FLUKE	Y8101A
6029	IP3	PABET1	PASSENGER AIRBAG EVENT	G	1 003921568 V	+	06/15/2000	---	FLUKE	Y8101A
6030	IP4	PABET2	PASSENGER AIRBAG EVENT	J	1.003921568 V	+	06/15/2000	---	FLUKE	Y8101A

Digital and System Channel Report

2001-10-04 09.14 52

Name of Test	011001	System	K3600	Name of DAU	DAU1	description
enabled Channel	Short Name	Type		Data File	Module Type	
Yes 1500	DIG0	dig0		DAT11500	KM3650 Sequencer	

bit position	bit selector	short name	long name	description
MSB = bit 15	0			
bit 14	1	EVENT	EVENT	
bit 13	0			
bit 12	0			
bit 11	0			
bit 10	0			
bit 09	0			
bit 08	0			
bit 07	0			
bit 06	0			
bit 05	0			
bit 04	0			
bit 03	0			
bit 02	0			
bit 01	0			
LSB = bit 00	0			



WeatherMeasure
WEATHERtronics
 Division of QUALIMETRICS, Inc.

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HYGROTHERMOGRAPH
 1 DAY

CHART NO. M699123
 C311-D-HF
 ECN 2717
 6-9-87

STATION 16/pe 10/1/01 DATE ON _____ DATE OFF _____