

V 2039

1992 HONDA ACCORD 4-DOOR
30 MPH FRONTAL LOAD CELL BARRIER IMPACT
50TH PERCENTILE TAD DUMMIES - TEST 1

PREPARED BY:
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FINAL REPORT
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PREPARED FOR:
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SECTION 1.0

TEST SUMMARY

LOAD CELL BARRIER CRASH TEST INFORMATION

			TEST ENGINEER
			Looker

TEST NO.	TEST DATE	MODEL	IMPACT VELOCITY
940104	01/04/94	ACCORD	30.3 mph

This vehicle crash test was conducted for Honda R & D America, Inc. by Transportation Research Center Inc. (TRC) to determine vehicle and occupant response in the 30 MPH load cell barrier impact mode.

The subject vehicle, a 1992 Honda Accord 4-door was equipped with a 4-cylinder transverse engine and automatic transmission. The vehicle's test weight was 1534.0 kg. The vehicle was impacted into the load cell barrier on January 4, 1994. The vehicle's impact speed was 48.8 km/h. The vehicle sustained 437 mm of static crush.

The driver dummy's Head Injury Criteria (HIC) was 361. The driver dummy's three millisecond chest deceleration was 50.9 g. The driver's maximum left and right axial femur forces were 5745 N and 5719 N, respectively.

The passenger dummy's HIC was 469. The passenger dummy's three millisecond chest deceleration was 53.2 g. The passenger's maximum left and right femur forces were 3392 N and 1591 N, respectively.

The vehicle was instrumented to record data from ten (10) longitudinal axis accelerometers and one (1) airbag pressure transducer. Two (2) Trauma Assessment Device (TAD) dummies were seated in the vehicle by Honda R & D personnel. Each dummy was instrumented with accelerometers in the head, chest, and pelvis oriented to measure longitudinal, lateral, and vertical accelerations, and triaxial displacement potentiometers in the upper left and right and lower left and right quadrants of the chest. The driver dummy contained angular velocity transducers mounted to the upper, middle, and lower sections of the spine and a triaxial load cell mounted to the base of the lumbar spine. The driver dummy's legs were instrumented with four-axis femur load cells, four-axis upper and lower tibia load cells, upper and lower frontal right tibia load cells, biaxial ankle potentiometers, and triaxial

ankle accelerometers. The passenger dummy's femurs contained uniaxial load cells and its lap and shoulder belt were instrumented with individual load cells. The data was multiplexed and recorded on two 14-channel analog tape decks. The analog data was digitally sampled at 12,500 samples per second. The data was digitally filtered per SAE J211 OCT88. The test was filmed by one (1) real-time panning motion picture camera and fifteen (15) high-speed motion picture cameras operating at approximately 1000 frames per second.

Section 1.0 contains the general test, dummy, and vehicle information. Section 2.0 contains the motion picture camera information. Appendix A contains the pre-test and post-test still photographs. Appendix B contains the final data plots. Appendix C contains dummy calibration information.

CRASH TEST SUMMARY

1. TEST DATE & TIME: 01/04/94; 1732 TEST NO.: 940104
2. TEST LOCATION: TRANSPORTATION RESEARCH CENTER INC.
3. TEST VEHICLE PARAMETER DATA

PARAMETER	DATA	REMARKS
VEHICLE (MODEL)	ENGINE NO. <u>F22A13306783</u> FRAME NO. <u>JHMCB7657NC011911</u>	
BODY STYLE	4-door	
TRANSMISSION	<u>X</u> AT (<u>4</u> AT) _____ GM (_____ MT)	
MODEL YEAR	1992	
SIZE	P185/70R14	
TIRE AIR PRESSURE	Fr <u>2.2</u> kgf/cm ² Rr <u>2.2</u> kgf/cm ²	
AIR CONDITIONING	<u>X</u> YES _____ NO	
STEERING	_____ R/H <u>X</u> L/H POWER STEERING: <u>X</u> YES _____ NO	
SUNROOF	_____ YES _____ (FULLY OPENED) _____ (CLOSED) <u>X</u> NO	
CURB WEIGHT	<u>1338</u> Kg	
LUGGAGE WEIGHT	<u>45.0</u> Kg	
WEIGHT OF TEST VEHICLE	Fr <u>880.0</u> Kg Rr <u>654.0</u> Kg TOTAL <u>1534.0</u> Kg	
BALLAST WEIGHT	<u>33</u> Kg LOCATION: Shot in engine and water in fuel tank.	
FUEL TYPE	Water	
FUEL CAPACITY	USABLE CAPACITY <u>64</u> l TEST VOLUME <u>30</u> %	
FUEL SYSTEM TYPE	_____ CAB <u>X</u> EFI	

CRASH TEST SUMMARY, CONT'D.

4. REQUIRED IMPACT VELOCITY

30.3 MPH

5. STATIC ROLLOVER (FMVSS NO. 301) NA

ROTATING DIRECTION	<u> </u> RIGHT <u> </u> LEFT (VIEWED FROM FRONT OF VEHICLE)
TIME REQ. FOR MACHINE TO ROTATE 90°	2 MINUTES 0 SECONDS

6. VEHICLE BODY DECELERATION

LOCATION	FLOOR	FLOOR	ENGINE
MANUFACTURER	Endevco	Endevco	Endevco
MODEL NO.	7264	7264	7264
FULL SCALE	2000	2000	2000

7. POST - IMPACT DATA

7 - 1. IMPACT VELOCITY 30.3 M/H (48.8 KM/H)

7 - 2. VEHICLE REBOUND (FRONT) 724 mm

7 - 3. WINDSHIELD MOUNTING (FMVSS NO. 212) NA



LENGTH OF
FULL PERIPHERY _____ mm

LENGTH OF
RETENTION FAILURE _____ mm

PERCENT RETENTION _____ %

*NOTE 1) RECORD THE AREA OF RETENTION FAILURE

2) RECORD GLAZING DAMAGE

REMARKS:

7 - 4. WINDSHIELD ZONE INTRUSION (FMVSS NO. 219) NA

 PASS, FAIL

CRASH TEST SUMMARY, CONT'D.

7 - 5. FUEL SYSTEM INTEGRITY NA

SOLVENT SPILLAGE _____ YES, _____ NO

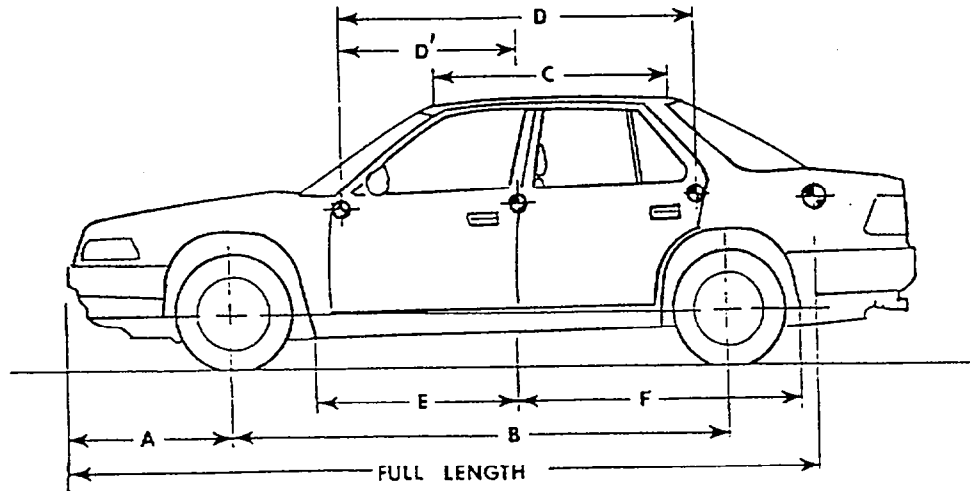
POST-TEST		SOLVENT SPILLAGE LOCATION(S)	VOLUME OF SPILLAGE
S T A T I C R O L L O V E R	0 to 90°	NONE	0
	90°	NA ¹	NA ¹
	90 to 180°	NA	NA
	180°	NA	NA
	180 to 270°	NA	NA
	270°	NA	NA
	270 to 360°	NA	NA
	360°	NA	NA

¹A static rollover test was not performed on the test vehicle.

VEHICLE BODY DEFORMATION

Accord 4-Dr. 30 MPH L. C. Barrier
MODEL NO. TEST TYPE

Looker
TEST ENGINEER

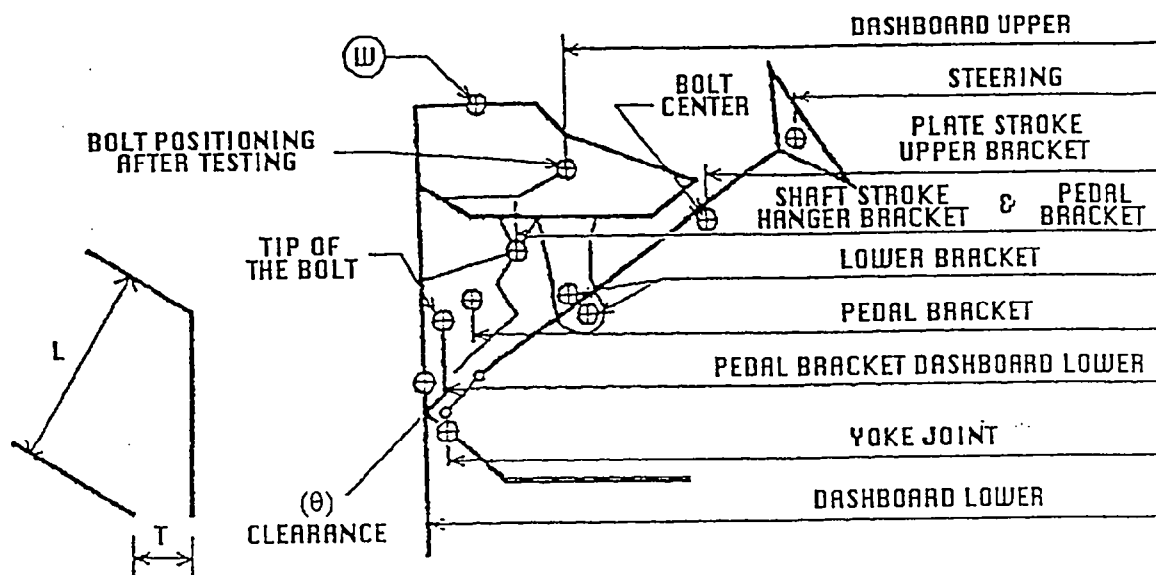


O U T S I D E P A N E L D E F O R M A T I O N W/B	LEFT SIDE				RIGHT SIDE			
	PRE-TEST	POST-TEST	DIFF.	CUM. DEFOR.	PRE-TEST	POST-TEST	DIFF.	CUM. DEFOR.
1	600	260	340	340	600	259	341	341
2	300	274	26	366	300	266	34	375
3	300	272	28	394	300	283	17	392
4	1200	1177	23	417	1200	1162	38	430
5	300	293	7	424	300	294	6	436
6	300	300	0	424	300	299	1	437
7	300	300	0	424	300	300	0	437
8	300	300	0	424	300	300	0	437
9								
10	3600	3176	424		3600	3163	437	
11								
12								
13								
A	890	512	378	453	890	543	347	469
B	2715	2640	75	↑	2715	2593	122	↑
ROOF C	1268	1268	0	(A + B)	1264	1264	0	(A + B)
PLR. D	1060	1052	8		1060	1050	10	
4dr. D'	1952	1947	5		1947	1936	11	
ONLY E	1200	1200	0		1200	1175	25	
F	1600	1600	0		1600	1597	3	

ALL DISTANCE MEASUREMENTS ARE IN MILLIMETERS.

VEHICLE INTERIOR DEFORMATION

Looker
TEST ENGINEER

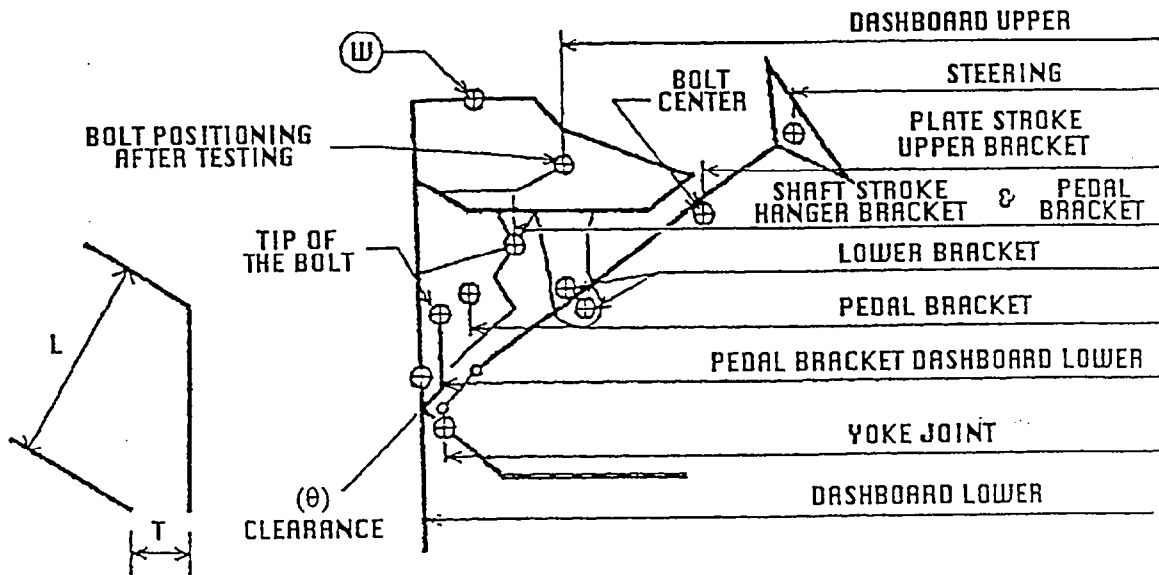


NO.		BEFORE TEST	AFTER TEST	DIFF.	REMARKS
(1) AREA OF WINDSHIELD	R	2200	2184	16	
	3.55 R	2360	2338	22	
	OB	2358	2330	28	
	3.55 L	2360	2342	18	
	L	2200	2186	14	
(2) DA/BD UPPER	R	2041	2028	13	
	3.55 R	2163	2138	25	
	OB	2134	2102	32	
	3.55 L	2156	2130	26	
	L	2042	2025	17	
(3) PILLAR TO PILLAR PIPE BRACKET	R	----	----	---	
	3.55 R	----	----	---	
	OB	----	----	---	
	3.55 L	----	----	---	
	L	----	----	---	
(4) PILLAR TO PILLAR BRACKET (ON HANGER)		----	----	---	

ALL DISTANCE MEASUREMENTS ARE IN MILLIMETERS.

VEHICLE INTERIOR DEFORMATION, CONT'D.

Looker
TEST ENGINEER

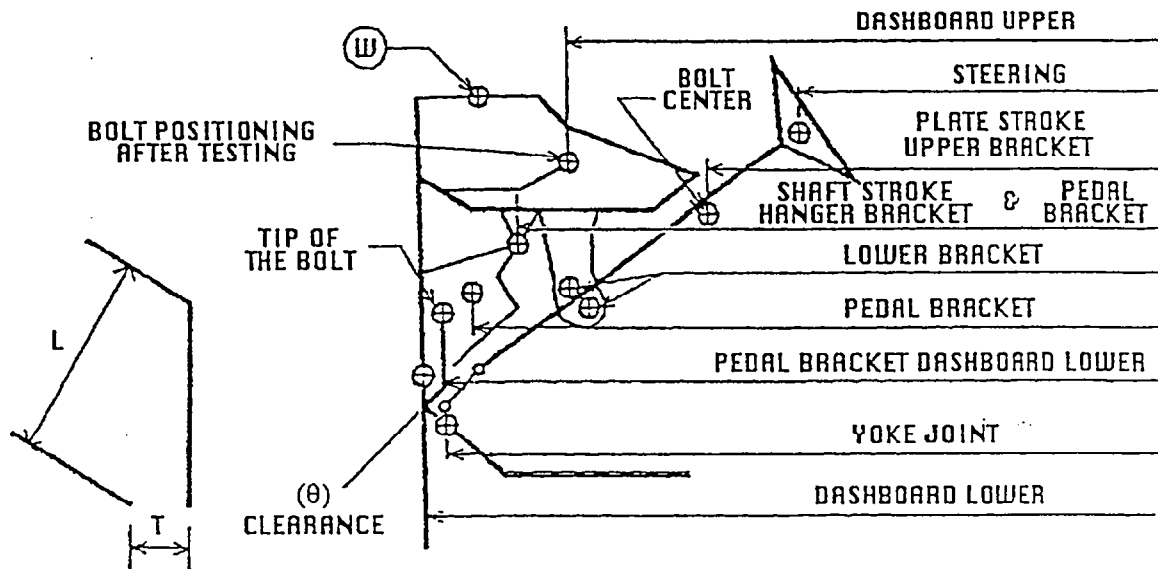


NO.		BEFORE TEST	AFTER TEST	DIFF.	REMARKS
(5) DA/BD LOWER	R	1450	1430	20	
	OB R	1450	1440	10	
	OB L	1550	1517	33	
	L	1550	1520	30	
(6) S/T	B X	1802	1698	104	
	T Y	340	376	-36	
	H Z	519	435	84	
(7) ST. COL. UPPER BRKT.	R	1924	1903	21	
	L	1927	1905	22	
(8) ST. COL. LOWER BRKT.	R	2137	2125	12	
	L	2136	2124	12	
(9) PEDAL BRKT. (PIVOT)		----	----	---	
(10) YOKE JOINT (SHAFT)		1700	1580	120	
(11) CLEARANCE AFTER TEST		----	14	----	
(12) PRIMARY MARGIN		----	35	----	

ALL DISTANCE MEASUREMENTS ARE IN MILLIMETERS.

VEHICLE INTERIOR DEFORMATION, CONT'D.

Looker
TEST ENGINEER

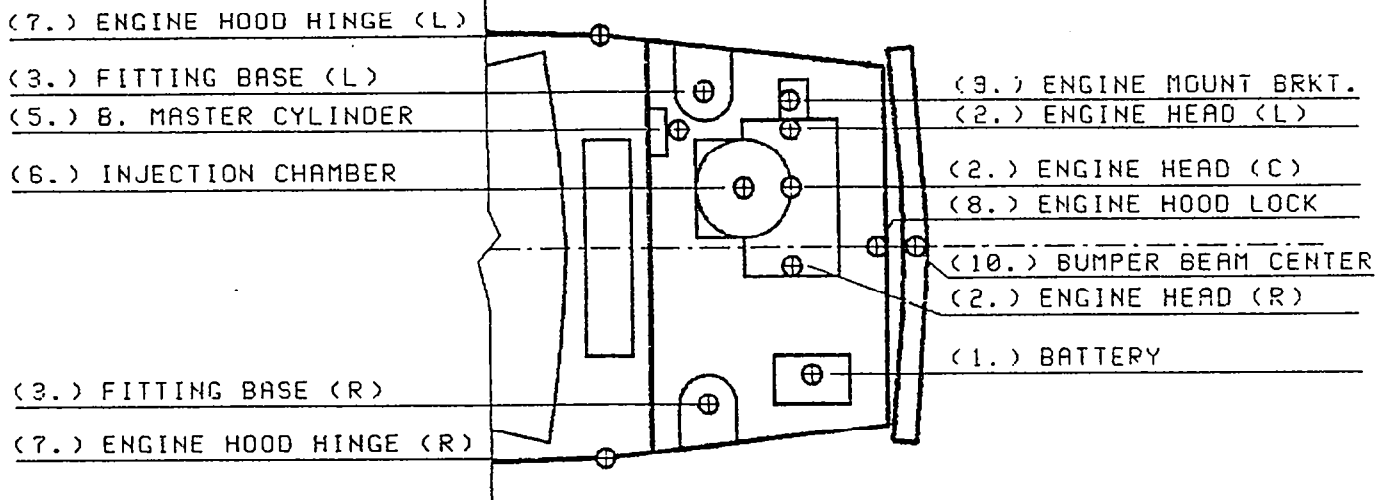


NO.		BEFORE TEST	AFTER TEST	DIFF.	REMARKS
(13) SECONDARY MARGIN		R	0	----	
		L	0	----	
(14)	UPPER LEFT	1606	1551	55	
PEDAL BRKT	LOWER LEFT	1600	1534	66	
FITTED	UPPER RIGHT	----	----	----	
POSITION	LOWER RIGHT	1600	1525	75	
(15)	LOWER RIGHT	1639	1625	14	
	R	1727	1715	12	
	3.55 R	1933	1922	11	
	OB	1878	1868	10	
	3.55 L	1864	1848	16	
	L	1706	1599	107	
	LOWER LEFT	1615	1611	4	
(16)	R	860	845	15	
WINDOW	OB	867	840	27	
(L)	L	861	845	16	
(17)	R	743	712	31	
WINDOW	OB	754	720	34	
(T)	L	747	730	17	

ALL DISTANCE MEASUREMENTS ARE IN MILLIMETERS.

ENGINE COMPARTMENT DEFORMATION (UPPER SIDE)

Looker
TEST ENGINEER

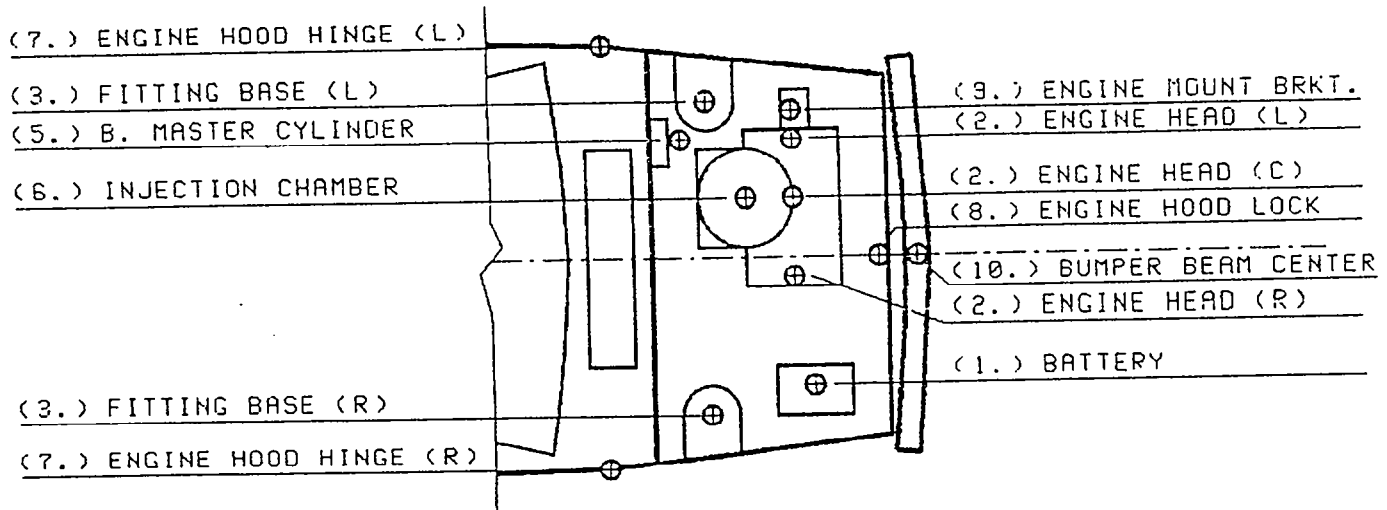


NO.	MEASUREMENT POINT	PRE-TEST	POST-TEST	DIFF.	REMARKS	
1	BATTERY	2842	2588	254		
	R	2651	2463	188	FROM CENTER OF	
2	ENGINE HEAD	C	2650	2452	198	BEND LINE ON
	L	2653	2444	209	HEAD COVER	
3	FITTING BASE	R	2407	2254	153	
	L	2416	2278	138		
4	BETWEEN FITTING BASES	890	850	40		
5	B. MASTER CYLINDER	2302	2220	82		
6	INJECTION	R	2316	2253	63	
	CHAMBER	L	2309	2228	81	
7	ENGINE HOOD HINGE	R	2055	2031	24	
	L	2049	2025	24		
8	ENGINE HOOD LOCK	3160	2788	372		
9	ENGINE MOUNT					
	BRACKET	2624	2465	159		
10	BUMPER BEAM					
	CENTER	3336	2817	519		

ALL DISTANCE MEASUREMENTS ARE IN MILLIMETERS.

ENGINE COMPARTMENT DEFORMATION (UPPER SIDE)

Looker
TEST ENGINEER



NO.	MEASUREMENT POINT	PRE-TEST	POST-TEST	DIFF.	REMARKS
1	BATTERY	2842	2588	254	
2	R	2651	2463	188	FROM CENTER OF
	C	2650	2452	198	BEND LINE ON
	L	2653	2444	209	HEAD COVER
3	R	2407	2254	153	
	L	2416	2278	138	
4	BETWEEN FITTING BASES	890	850	40	
5	B. MASTER CYLINDER	2302	2220	82	
6	R	2316	2253	63	
	L	2309	2228	81	
7	R	2055	2031	24	
	L	2049	2025	24	
8	ENGINE HOOD LOCK	3160	2788	372	
9	ENGINE MOUNT				
	BRACKET	2624	2465	159	
10	BUMPER BEAM				
	CENTER	3336	2817	519	

ALL DISTANCE MEASUREMENTS ARE IN MILLIMETERS.

ENGINE COMPARTMENT DEFORMATION (LOWER SIDE)

Looker
TEST ENGINEER

(1.) FULL LENGTH (FROM CENTER OF BxP.B.H.)

(6.) LOWER ARM (L)

(7.) REAR BEAM (L)

(3.) CENTER BEAM

(7.) REAR BEAM (C)

(8.) GEAR BOX

(7.) REAR BEAM (R)

(6.) LOWER ARM (R)

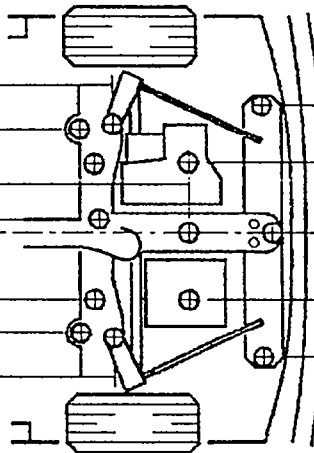
(2.) FRONT BEAM (L)

(5.) TRANSMISSION

(2.) FRONT BEAM (C)

(4.) OIL PAN

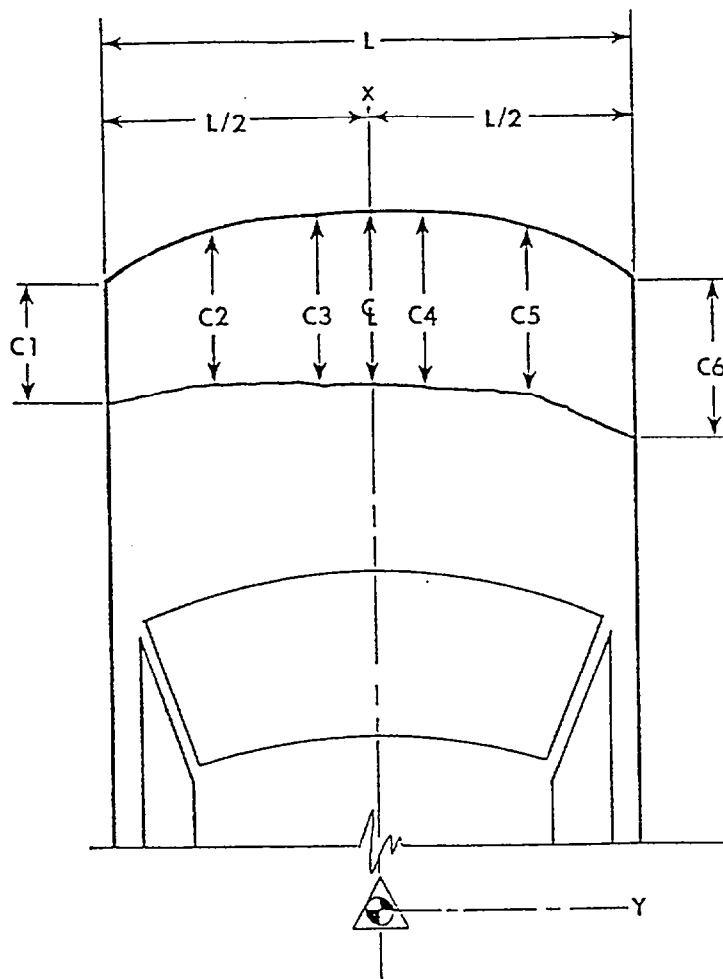
(2.) FRONT BEAM (R)



NO.	MEASUREMENT POINT	PRE-TEST	POST-TEST	DIFF.	REMARKS
1	FULL LENGTH (FROM CENTER OF BxP.B.H.)	4630	4207	423	
	R	4445	4174	271	
2	FRONT BEAM				
	C	4445	4184	261	
	L	4447	4170	277	
3	CENTER BEAM	4023	3852	171	
4	OIL PAN DRAIN PLUG	3934	3740	194	
5	TRANSMISSION DRAIN PLUG	4000	3870	130	
6	LOWER ARM				
	R	3773	3625	148	
	L	3773	3673	100	
	R	3520	3422	98	
7	REAR BEAM				
	C	3669	3547	122	
	L	3524	3460	64	
8	GEAR BOX	3720	3578	142	
9					
10					
11					

ALL DISTANCE MEASUREMENTS ARE IN MILLIMETERS.

VEHICLE CRUSH



NOTES: L is pre-test length of contact surface.
 C1 through C6 are spaced equally apart.
 CL is vehicle centerline.
 All measurements are in millimeters.

Vehicle Accord 4 Door

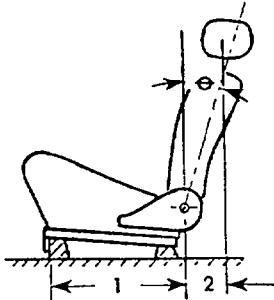
PRE-TEST		POST-TEST		CRUSH	
L	<u>1524</u>				
C1	<u>4470</u>	C1	<u>4132</u>	C1	<u>338</u>
C2	<u>4600</u>	C2	<u>4192</u>	C2	<u>408</u>
C3	<u>4628</u>	C3	<u>4202</u>	C3	<u>426</u>
C4	<u>4630</u>	C4	<u>4198</u>	C4	<u>432</u>
C5	<u>4600</u>	C5	<u>4195</u>	C5	<u>405</u>
C6	<u>4484</u>	C6	<u>4157</u>	C6	<u>327</u>
CL	<u>4630</u>	CL	<u>4207</u>	CL	<u>423</u>

DUMMY POSITIONING DATA

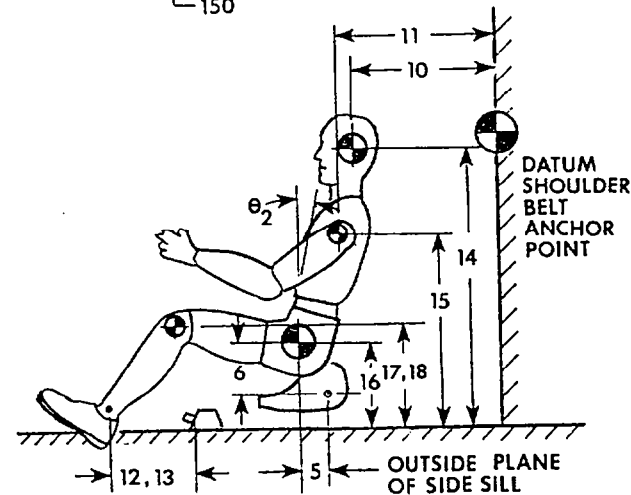
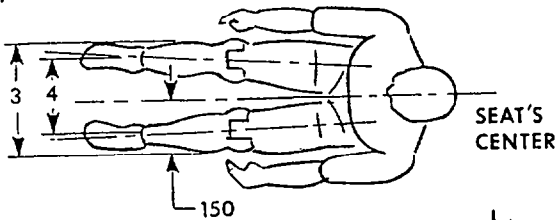
Looker
TEST ENGINEER

Accord 4 Door
TEST VEHICLE

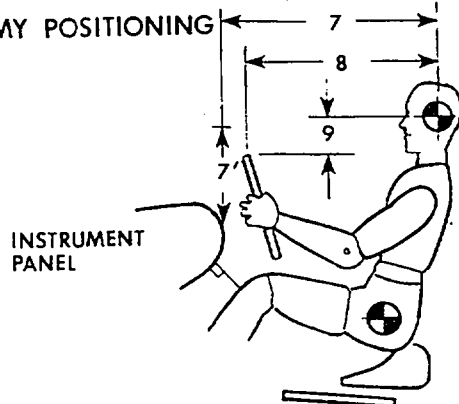
1) DETERMINE THE SEAT POSITION



2.) POSITION DUMMY AT CENTER OF SEAT



4.) DUMMY POSITIONING DATA



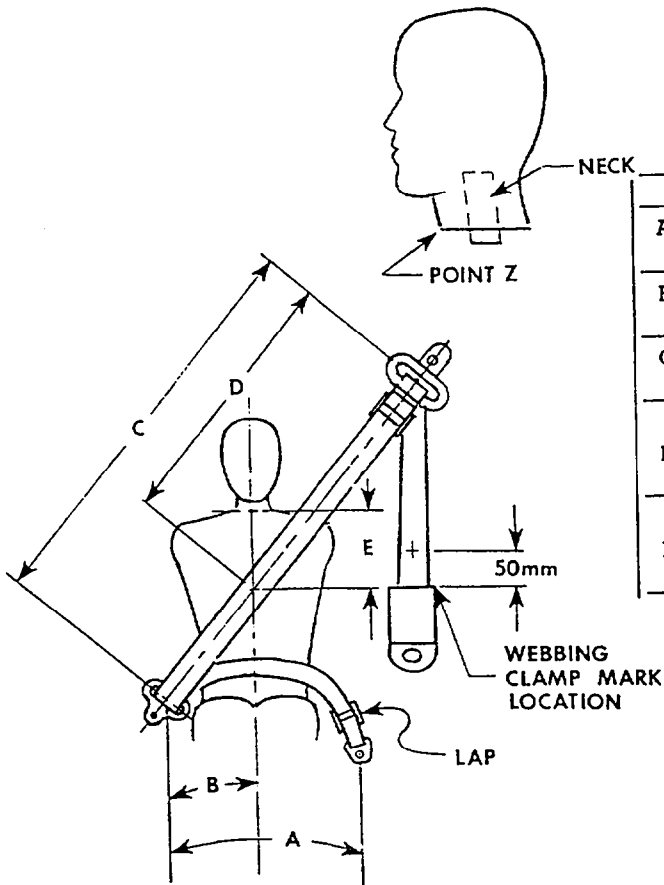
ITEMS	DRIVER	PASS.
DUMMY NUMBER	002	001
SEAT TRACK POSITION	100/200	100/200
SEAT BACK POSITION	0-5	0-5
1 RECLINING CENTER TO SEAT ANCHOR	385	385
2		
3 KNEE TO KNEE	340	270
4 ANKLE TO ANKLE	345	220
5 HIP POINT TO RECLINING CENTER (LONGITUDINAL)	153	152
6 HIP POINT TO RECLINING CENTER (VERTICAL)	100	64
7 HEAD TO INSTRUMENT PANEL (LONGITUDINAL)	---	684
7' HEAD TO INSTRUMENT PANEL (VERTICAL)	---	323
8 KNEE TO STEERING WHEEL TOP (LONGITUDINAL)	554	---
9 HEAD TO STEERING WHEEL TOP (VERTICAL)	99	---
10 HEAD TO SHOULDER ANCHOR (LONGITUDINAL)	202	185
11 SHOULDER TO SHOULDER ANCHOR (LONGITUDINAL)	181	176
12 ANKLE TO SEAT BKT R	---	440
13 ANKLE TO SEAT BKT L	480	---
14 HEAD TO SIDE SILL (VERTICAL)	799	798
15 SHOULDER TO SIDE SILL (VERTICAL)	562	567
16 H. POINT TO SIDE SILL (VERTICAL)	187	162
17 KNEE TO SIDE SILL R (VERTICAL)	---	307
18 KNEE TO SIDE SILL L (VERTICAL)	273	---
θ_1 HEAD ANGLE	0°	1.5°
θ_2 TORSO ANGLE	23°	24°
θ_3 PELVIC ANGLE	22.5°	24.5°

ALL DISTANCE MEASUREMENTS ARE IN MILLIMETERS.

SEAT BELT POSITIONING DATA

Looker
TEST ENGINEER

DUMMY NOS.: DRIVER 002 ; PASSENGER 001



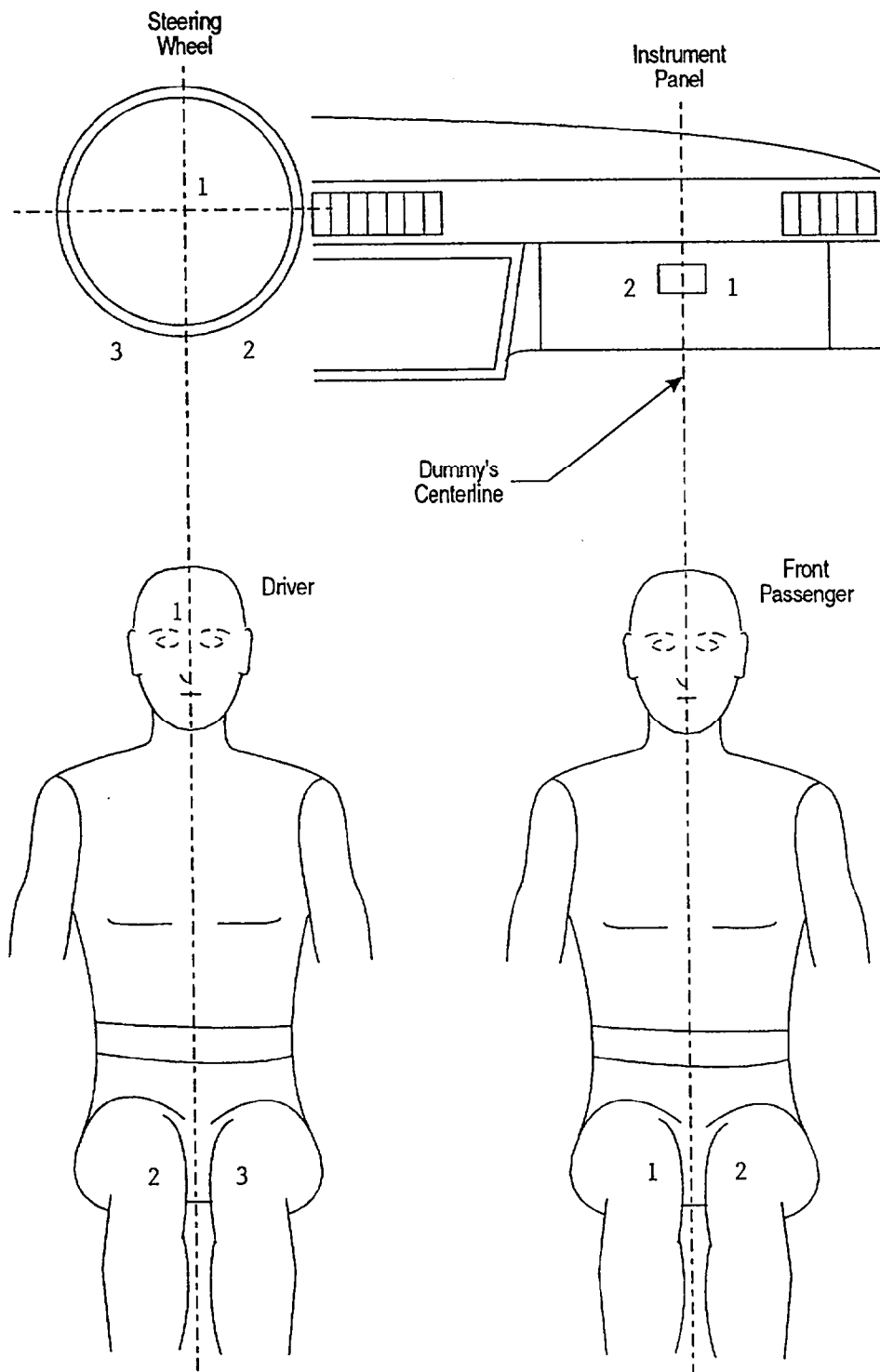
MEASUREMENTS		DRIVER	PSNGR.
A	LENGTH OF LAP BELT	---	875
B	BELT CENTER TO LATCH	---	252
C	LENGTH OF SHOULDER BELT	---	853
D	BELT CENTER ON DUMMY CENTER LINE TO LATCH	---	445
E	BELT CENTER ON DUMMY CENTER LINE TO POINT Z	---	150

ALL DISTANCE MEASUREMENTS ARE IN MILLIMETERS.

DUMMY CONTACT POINTS

Looker
TEST ENGINEER

SHOW LOCATION OF CONTACT POINTS ON DIAGRAMS BELOW.



NOTE: See dummy head contact photographs for head contact points.

DUMMY AND SEAT POSITIONING DATA

PRE-IMPACT DATA:

MAKE/MODEL/BODY STYLE: Honda/Accord EX/4-DOOR
MODEL YEAR: 1992
COLOR: Black

DATA FROM CERTIFICATION LABEL:

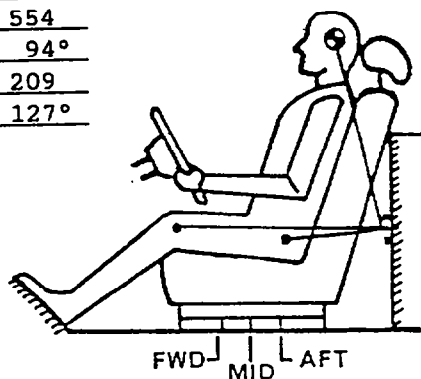
VEHICLE MANUFACTURER: Honda Motor Co. Ltd.
DATE OF MANUFACTURE: 07/91 VIN: JHMCB7657NC011911
GVWR: 3815 LBS.; GAWR: FRONT = 2070 LBS.; REAR = 1860 LBS.

POST-IMPACT DATA:

DATE OF TEST: 01/04/94 TIME: 1732 TEMPERATURE: 20° C
IMPACT VELOCITY: PRIMARY = 48.8 KPH SECONDARY = 48.8 KPH
REQUIRED IMPACT VELOCITY RANGE: 48.0 TO 49.6 KPH
SEAT TYPE: Bucket ADJUSTER TYPE: Manual
FRONT SEAT BACK TYPE: Manually adjustable
TECHNICIANS: B. Crabtree, R. Cribley, D. Summers

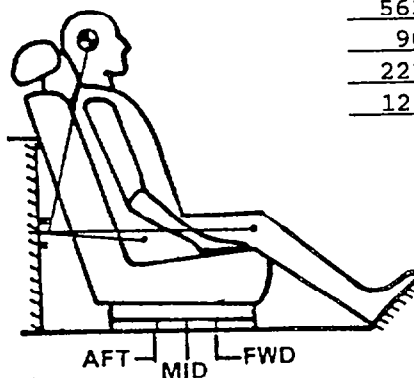
DRIVER DUMMY # 002 TYPE: TAD

HEAD 486
TARGET 6°
KNEE 554
JOINT 94°
APPROX-
IMATE 209
127°
"H"
POINT



PASSENGER DUMMY # 001 TYPE: TAD

HEAD 485
TARGET -2°
KNEE 563
JOINT 90°
APPROX-
IMATE 227
123°
"H"
POINT



A = 1382

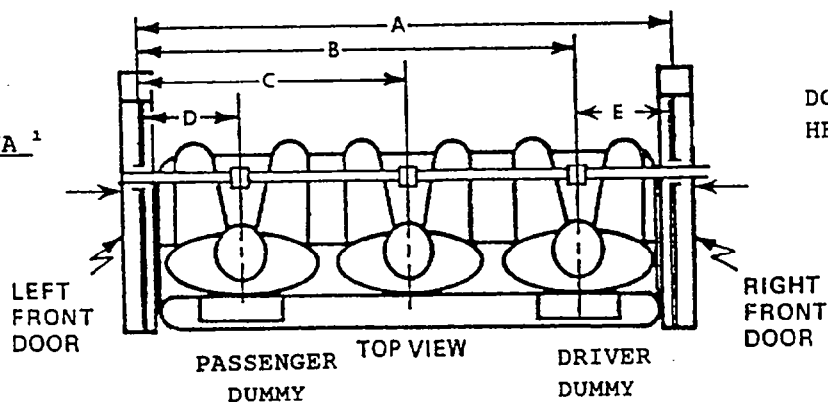
B = 1015

C = NA

D = 295

E = 367

DOOR GLASS
HEIGHT = NA¹



DOOR GLASS
HEIGHT = NA¹

ALL ANGLES ARE RELATIVE TO VERTICAL PLANE THROUGH DOOR STRIKER.

ALL DISTANCE MEASUREMENTS ARE IN MILLIMETERS.

¹The door glass was removed.

DUMMY IN-VEHICLE POSITIONING DATA

	DRIVER	PASSENGER
HH	327	346
HW	537	604
CD	535	559
CS	320	NA
KDL	112	113
KDR	107	112
TA	18°	18°
SA	24°	22°
HSW	456	NA

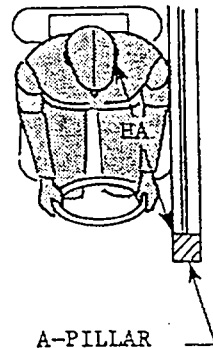
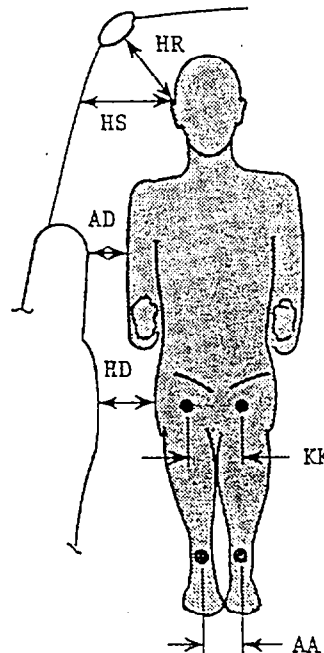
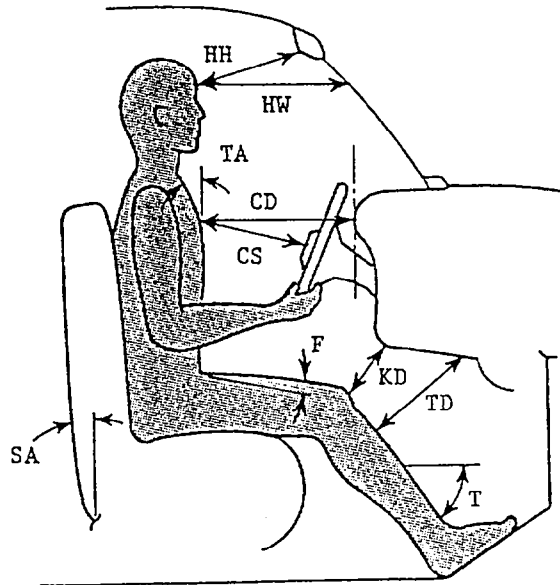
	DRIVER	PASSENGER
HR	180	197
HS	223	275
AD ¹	104	142
HD ¹	284	282
KK	265	202
AA	325	230
HA	490	536

KNEE OUTER CLEVIS TO OUTER CLEVICE SPACING:

DRIVER = 340
PASSENGER = 265

PELVIS ANGLE:

DRIVER = 22.5°
PASSENGER = 24.5°



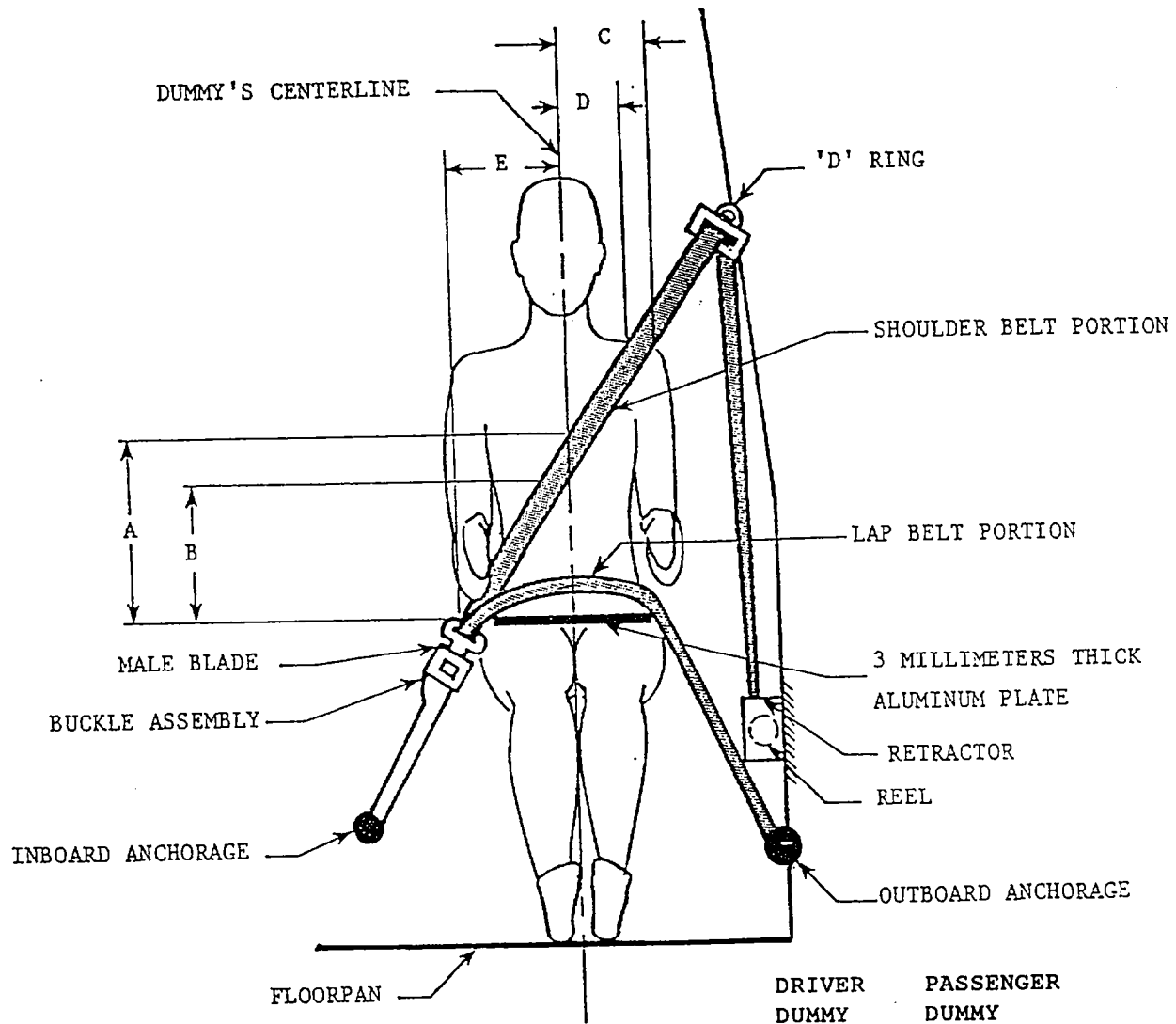
HH = HEAD TO WINDSHIELD HEADER
HW = HEAD TO WINDSHIELD
CD = CHEST TO DASH
CS = CHEST TO STEERING WHEEL
KD = KNEE TO DASH
TA = TORSO ANGLE
SA = SEAT BACK ANGLE
HSW = HEAD TO STEERING WHEEL

HR = HEAD C.G. TARGET TO SIDE ROOF HEADER
HS = HEAD C.G. TARGET TO SIDE WINDOW
AD = ARM TO DOOR
HD = HIP TO DOOR
KK = KNEE TO KNEE
AA = ANKLE TO ANKLE
HA = HEAD C.G. TARGET TO A-PILLAR

TORSO AND SEAT BACK ANGLES ARE RELATIVE TO VERTICAL.
ALL DISTANCE MEASUREMENTS ARE IN MILLIMETERS.

¹Measured to outer surface of door beam.

SEAT BELT POSITIONING DATA



A - TOP SURFACE OF ALUMINUM PLATE TO BELT UPPER EDGE	NA	350
B - TOP SURFACE OF ALUMINUM PLATE TO BELT LOWER EDGE	NA	260
C - DUMMY CENTERLINE TO OUTER EDGE OF BELT AT CHEST FLESH TOP	NA	137
D - DUMMY CENTERLINE TO INNER EDGE OF BELT AT CHEST FLESH TOP	NA	76
E - DUMMY CENTERLINE TO INTERSECTION OF UPPER TORSO BELT AND LAP BELT	NA	250

ALL MEASUREMENTS ARE IN MILLIMETERS.

DATA ACQUISITION EXPLANATIONS

The brake pedal bracket longitudinal axis acceleration data channel, OTHXG1, experienced a zero offset at approximately 200 milliseconds and did not return to its original zero after the impact event.

The left SRS sensor longitudinal axis acceleration data channel, LFFXG1, exceeded its data channel full scale output after approximately 13 milliseconds.

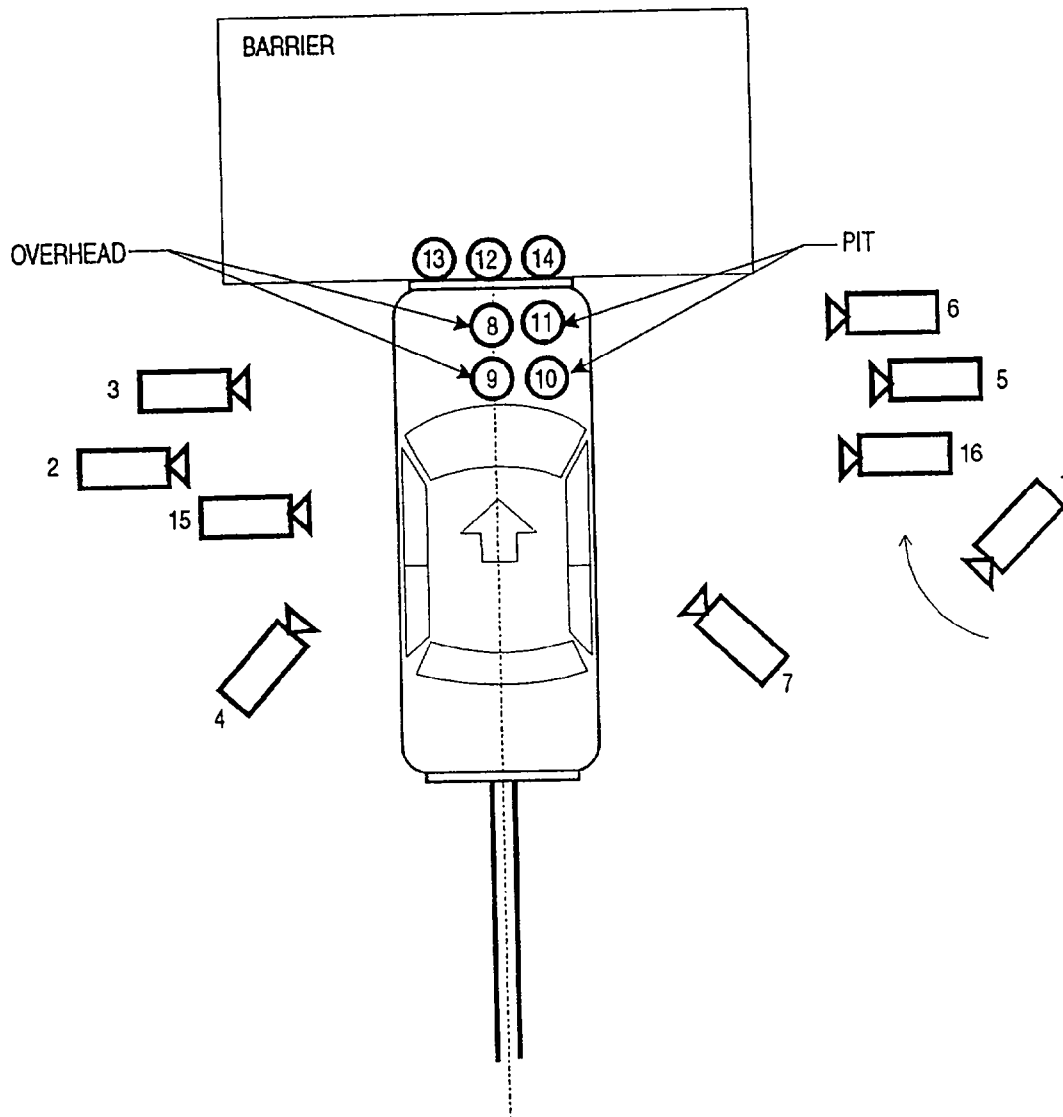
The driver dummy's right upper tibia Y-moment data channel, TBRYM1, recorded questionable data spikes after approximately 60 milliseconds.

The engine bottom longitudinal axis acceleration data channel, ENGXG2, recorded questionable data.

SECTION 2.0

CAMERA INFORMATION

CAMERA POSITIONS



CAMERA INFORMATION

CAMERA NUMBER	LOCATION	TYPE	LENS (mm)	SPEED (fps)	PURPOSE OF CAMERA DATA
1	Right panning	Bolex	16	24	Real-time documentation
2	Left wide	Photosonic	13	1020	Vehicle crush
3	Left medium tight	Hycam	25	998	Dummy kinematics
4	Driver left angle	Stalex	25	993	Dummy kinematics
5	Right wide	Stalex	13	998	Vehicle crush
6	Right medium tight	Stalex	25	1000	Dummy kinematics
7	Pssngr right angle	Stalex	25	978	Dummy kinematics
8	Overhead - tight	Photosonic	25	1002	Vehicle Crush
9	Overhead - wide	Photosonic	13	1010	Vehicle crush
10	Pit - wide	Photosonic	13	998	Vehicle crush
11	Pit - tight	Photosonic	17	998	Vehicle crush
12	Barrier - wide	Photosonic	8.5	973	Dummy kinematics
13	Barrier - driver	Photosonic	17	1000	Dummy kinematics
14	Barrier - passenger	Photosonic	17	1005	Dummy kinematics
15	Driver ankle view	Photosonic	25	1000	Dummy kinematics
16	Passenger ankle view	Photosonic	25	1008	Dummy kinematics

APPENDIX A

PHOTOGRAPHS



Figure A-1 PRE-TEST LEFT SIDE VIEW

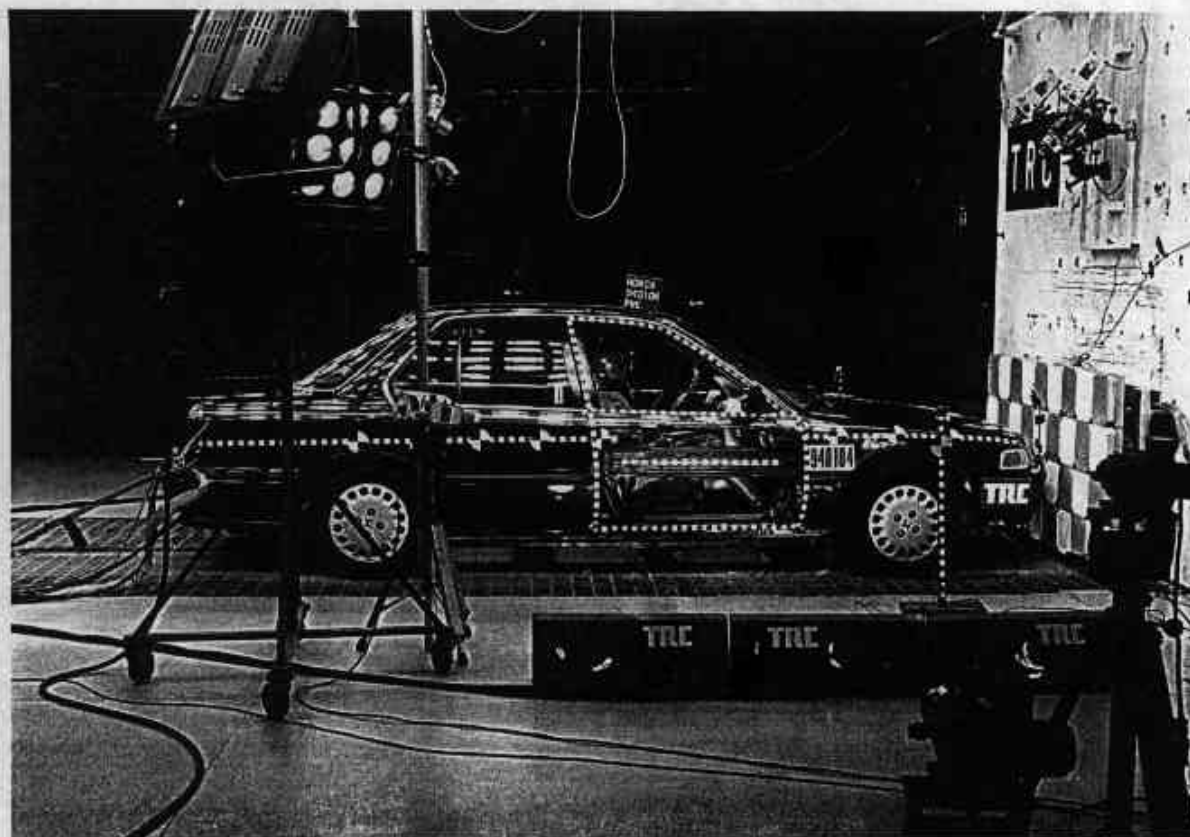


Figure A-2 PRE-TEST RIGHT SIDE VIEW



Figure A-3 PRE-TEST FRONT VIEW

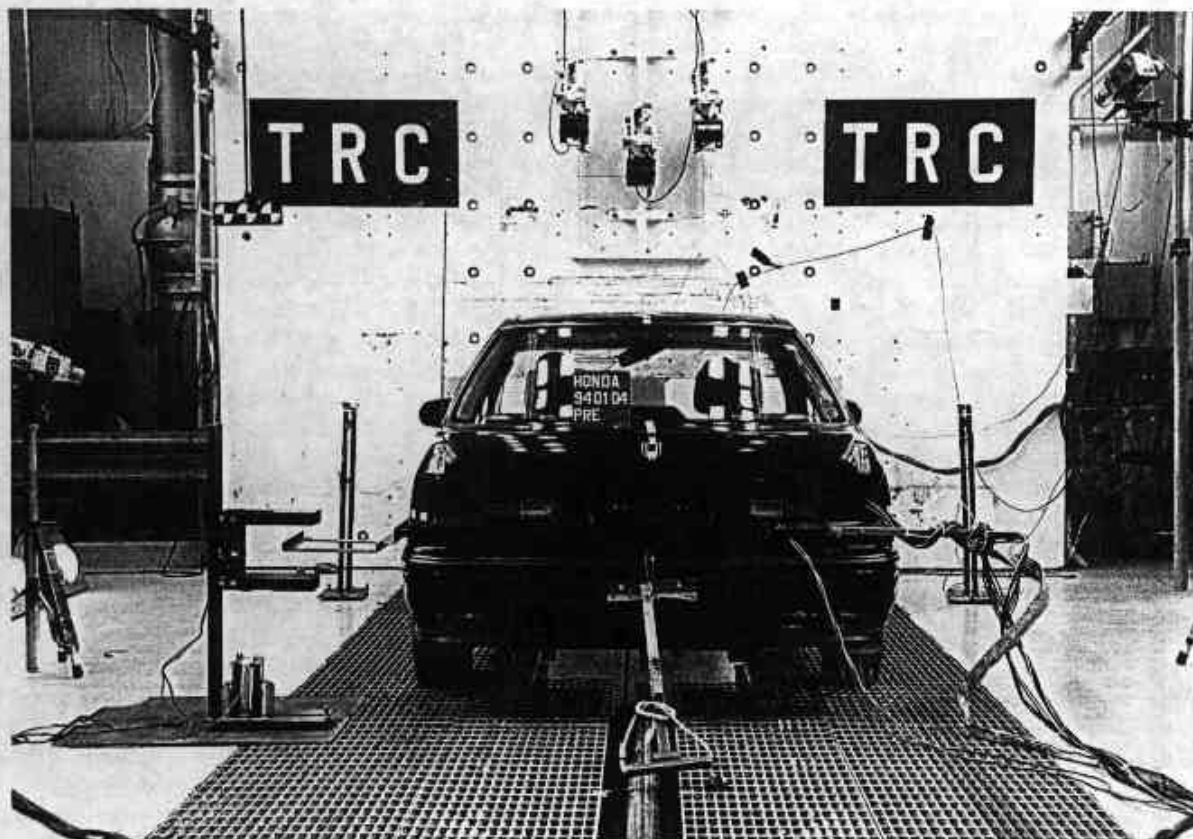


Figure A-4 PRE-TEST REAR VIEW



Figure A-5 PRE-TEST FRONT UNDERBODY VIEW

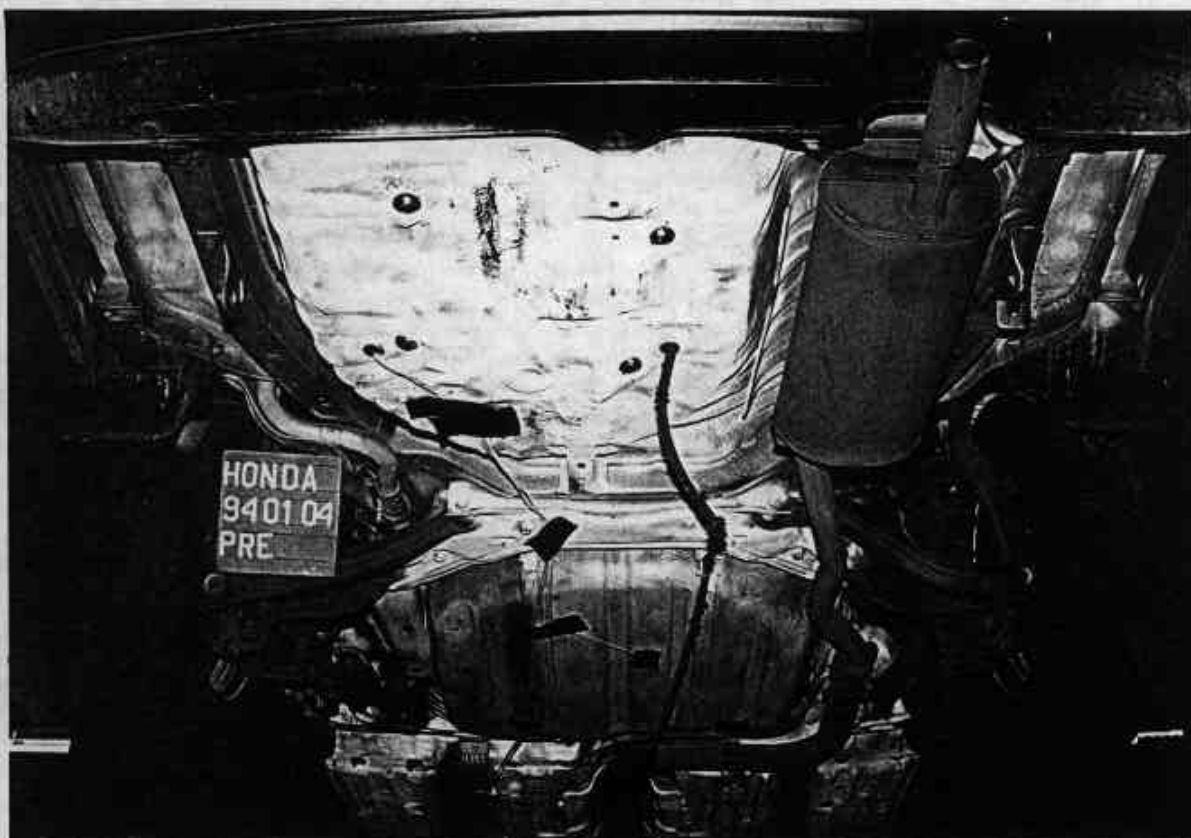


Figure A-6 PRE-TEST REAR UNDERBODY VIEW

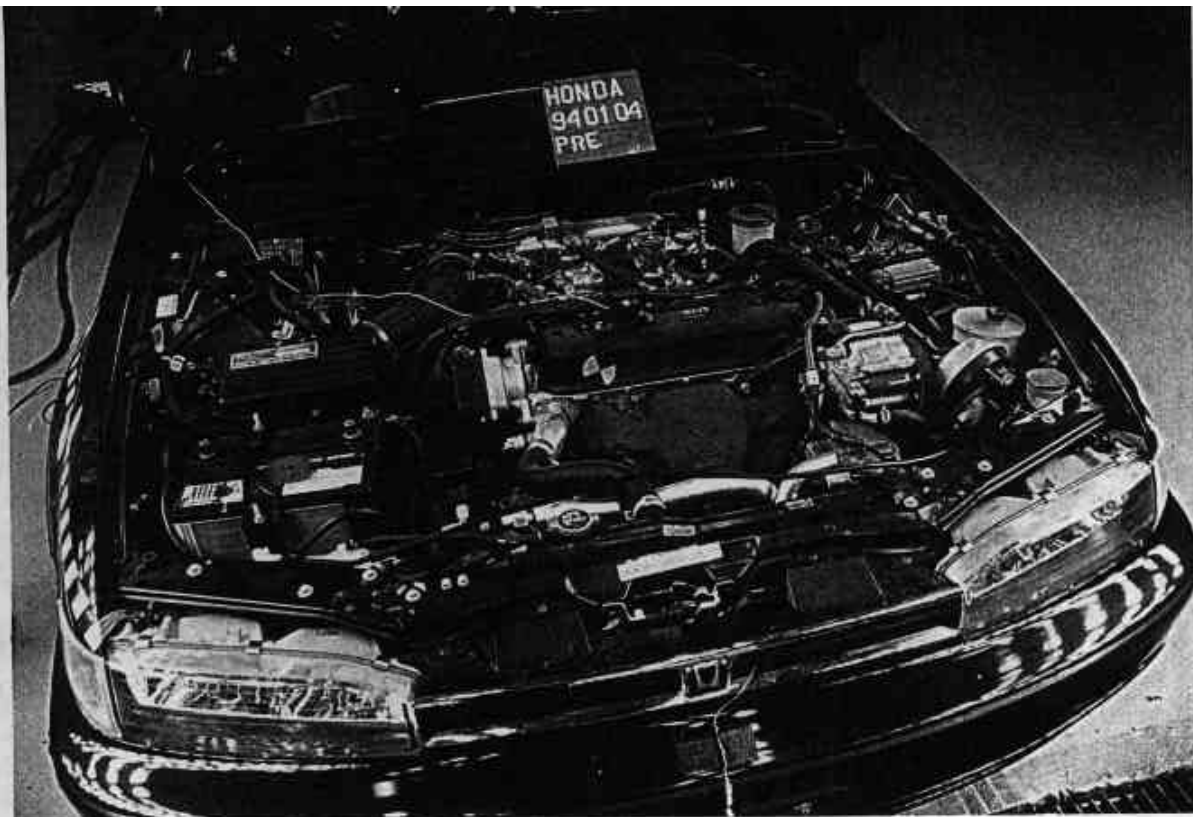


Figure A-7 PRE-TEST ENGINE COMPARTMENT VIEW



Figure A-8 PRE-TEST WINDSHIELD VIEW



Figure A-9 PRE-TEST FUEL FILLER NECK VIEW

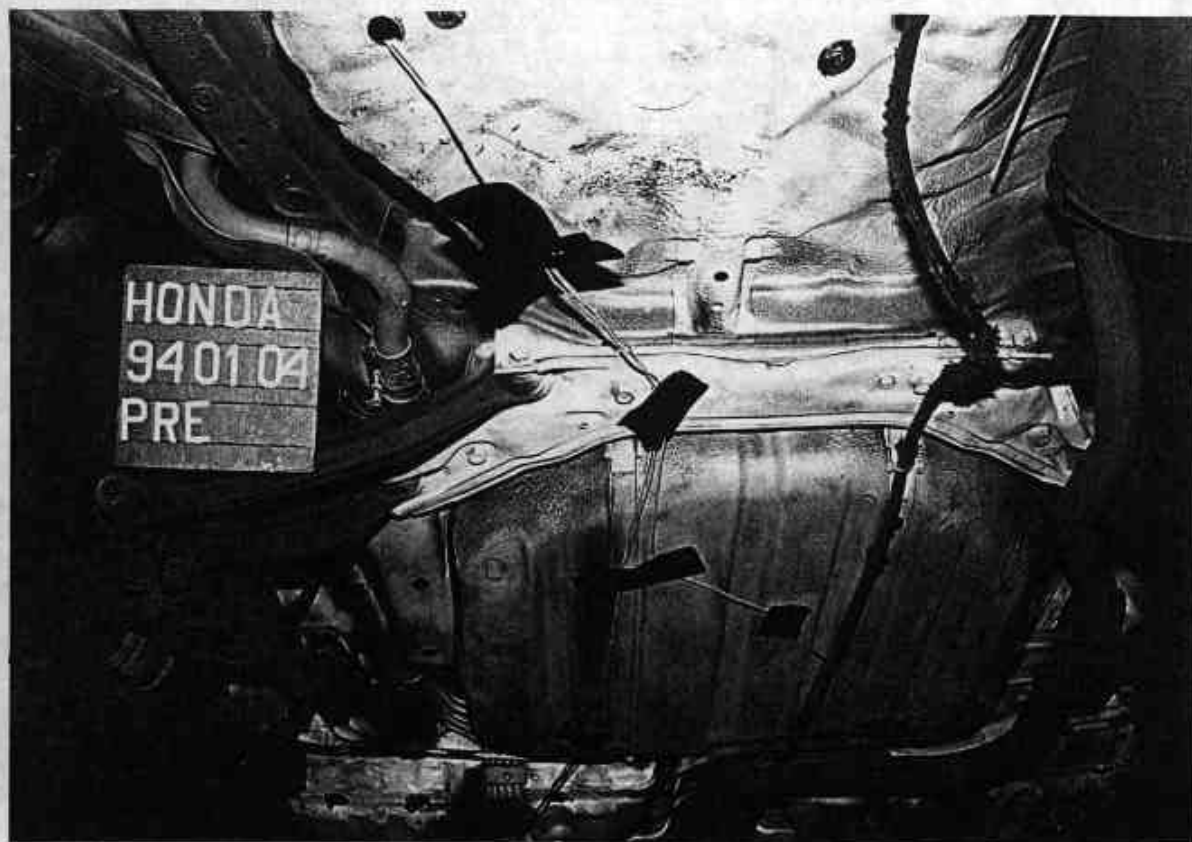


Figure A-10 PRE-TEST FUEL FILLER NECK AND FUEL TANK VIEW



Figure A-11 PRE-TEST DRIVER DUMMY - VIEW 1

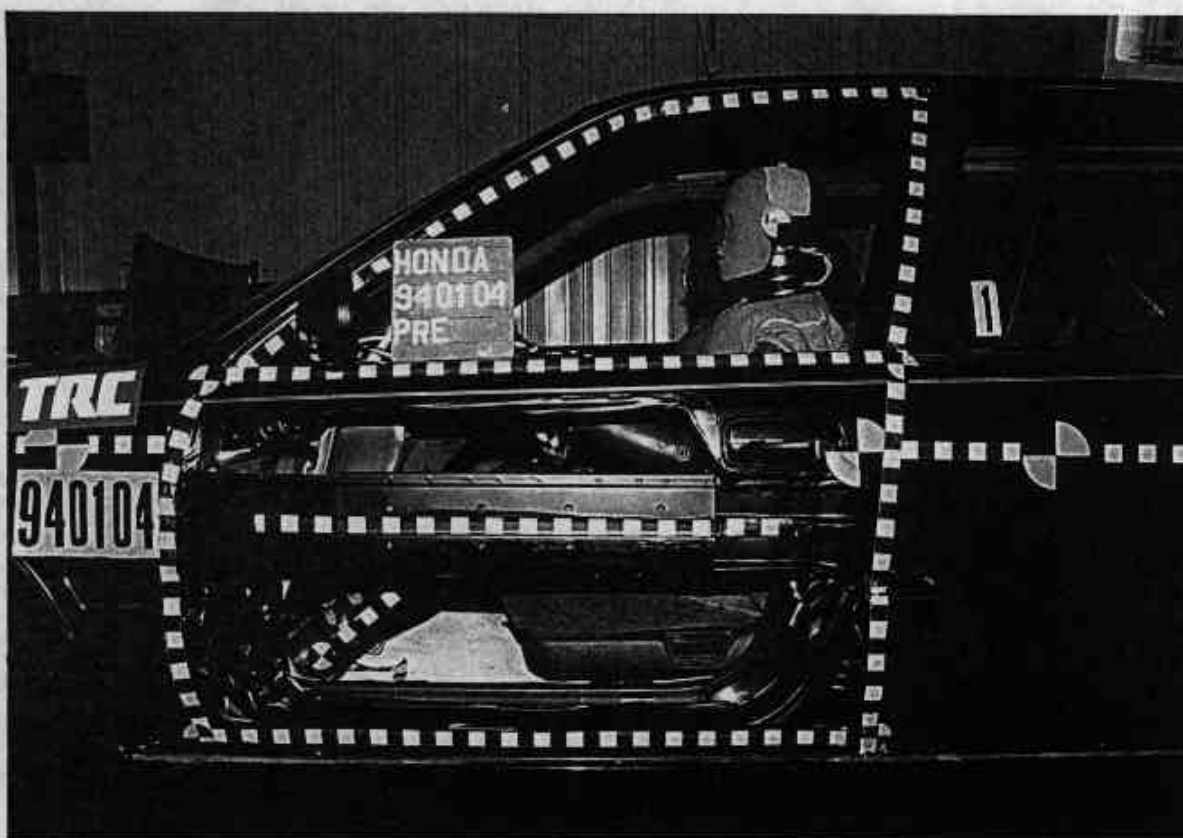


Figure A-12 PRE-TEST DRIVER DUMMY - VIEW 2

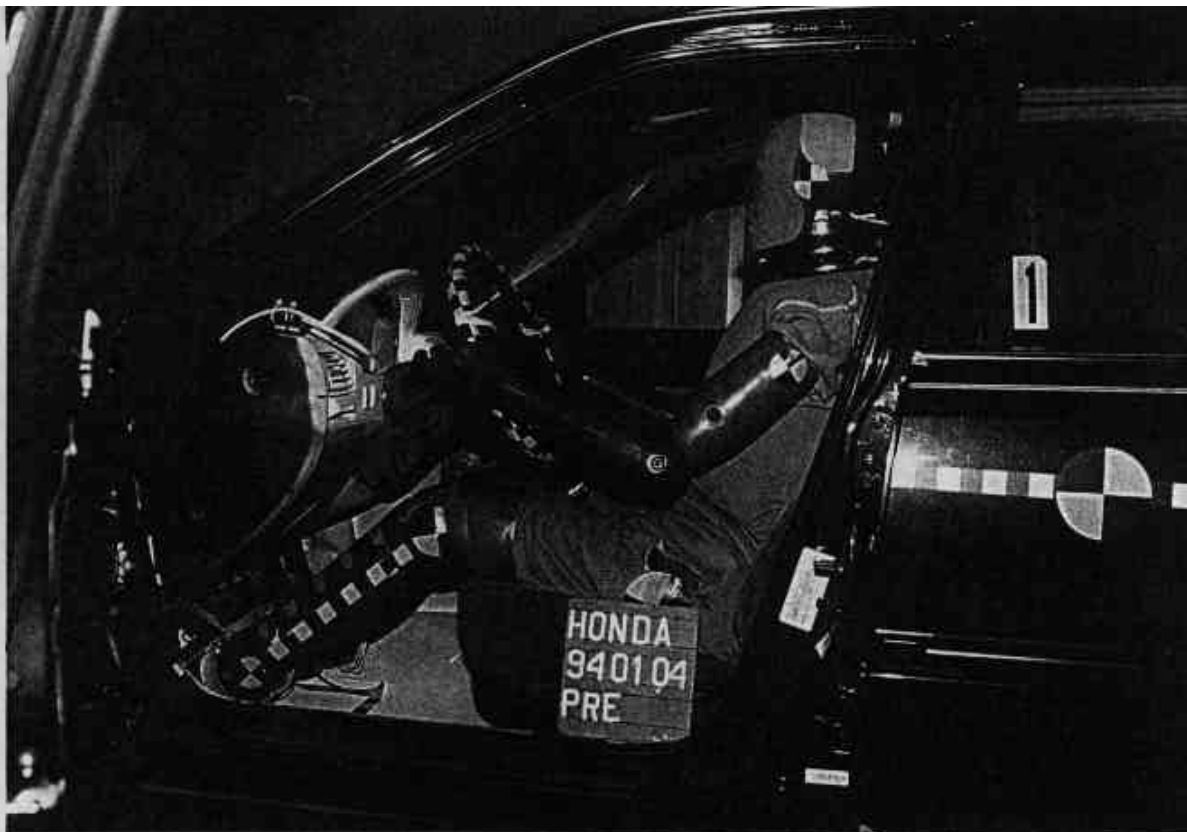


Figure A-13 PRE-TEST DRIVER DUMMY - VIEW 3



Figure A-14 PRE-TEST DRIVER DUMMY - VIEW 4

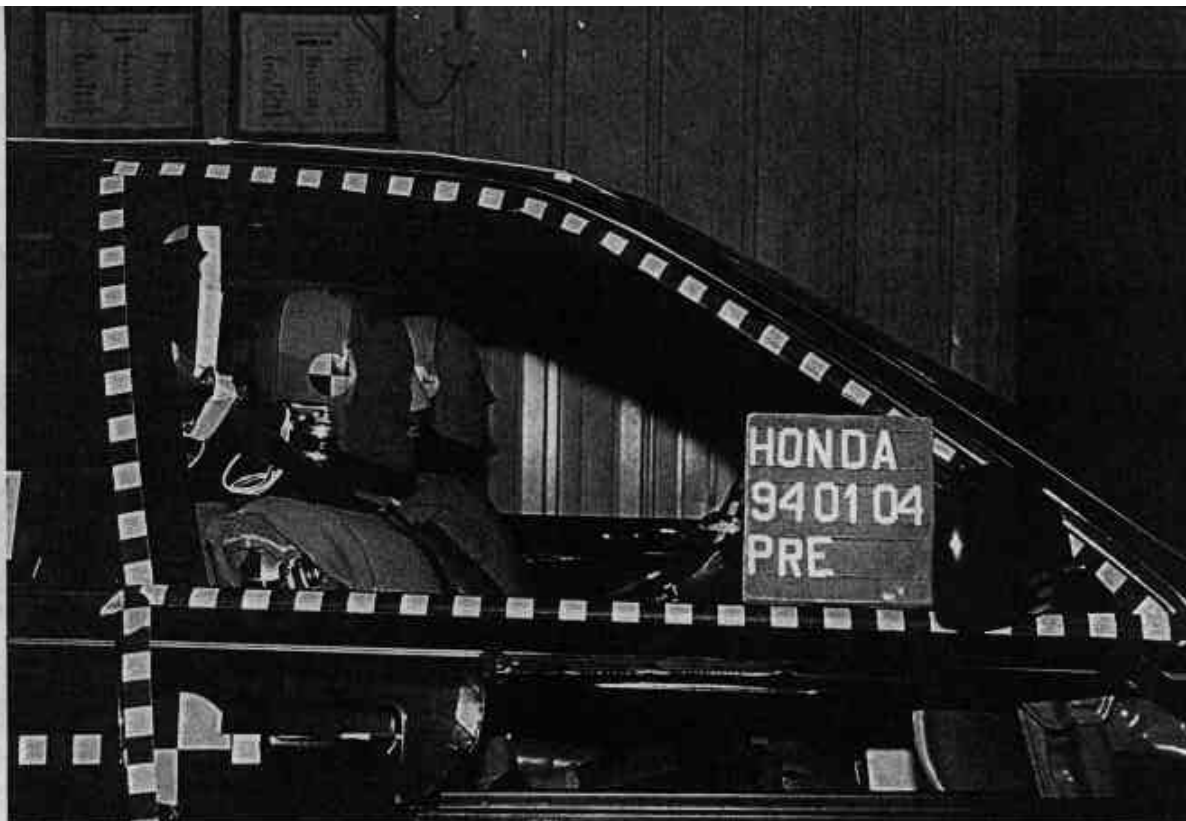


Figure A-15 PRE-TEST PASSENGER DUMMY - VIEW 1

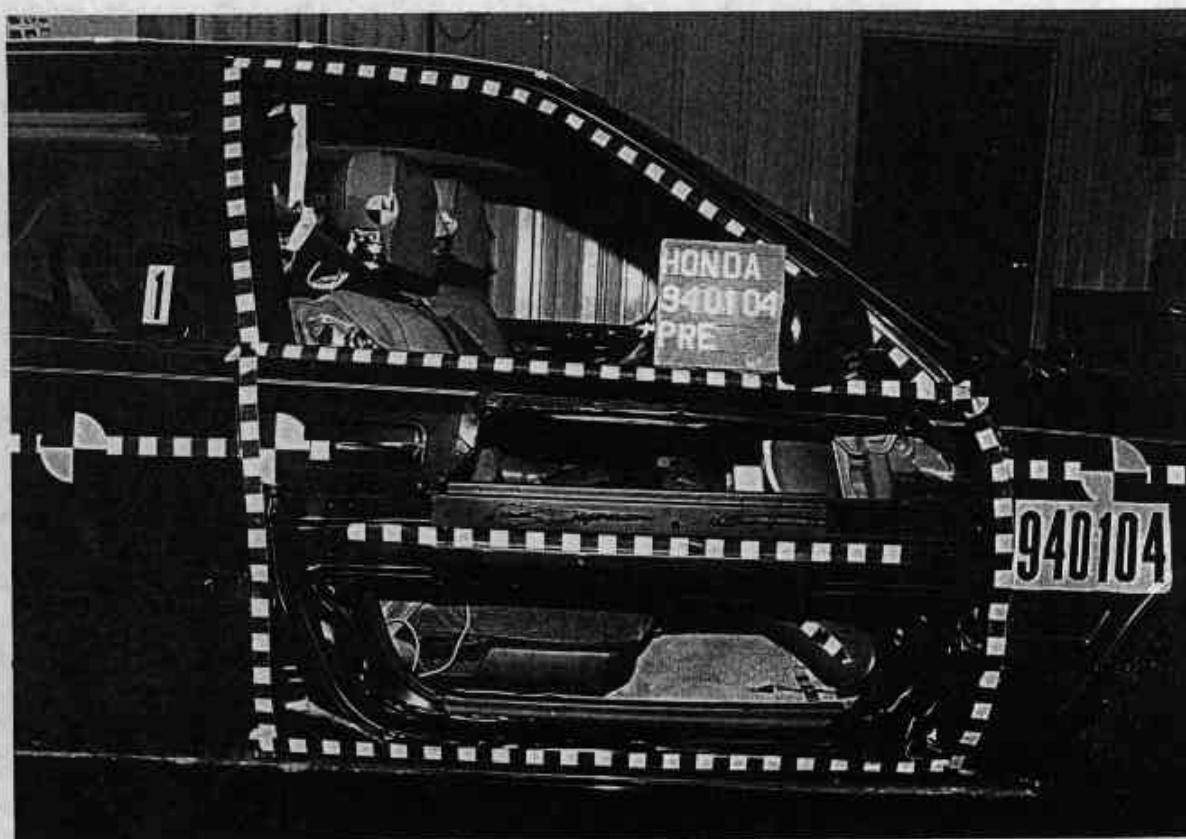


Figure A-16 PRE-TEST PASSENGER DUMMY - VIEW 2

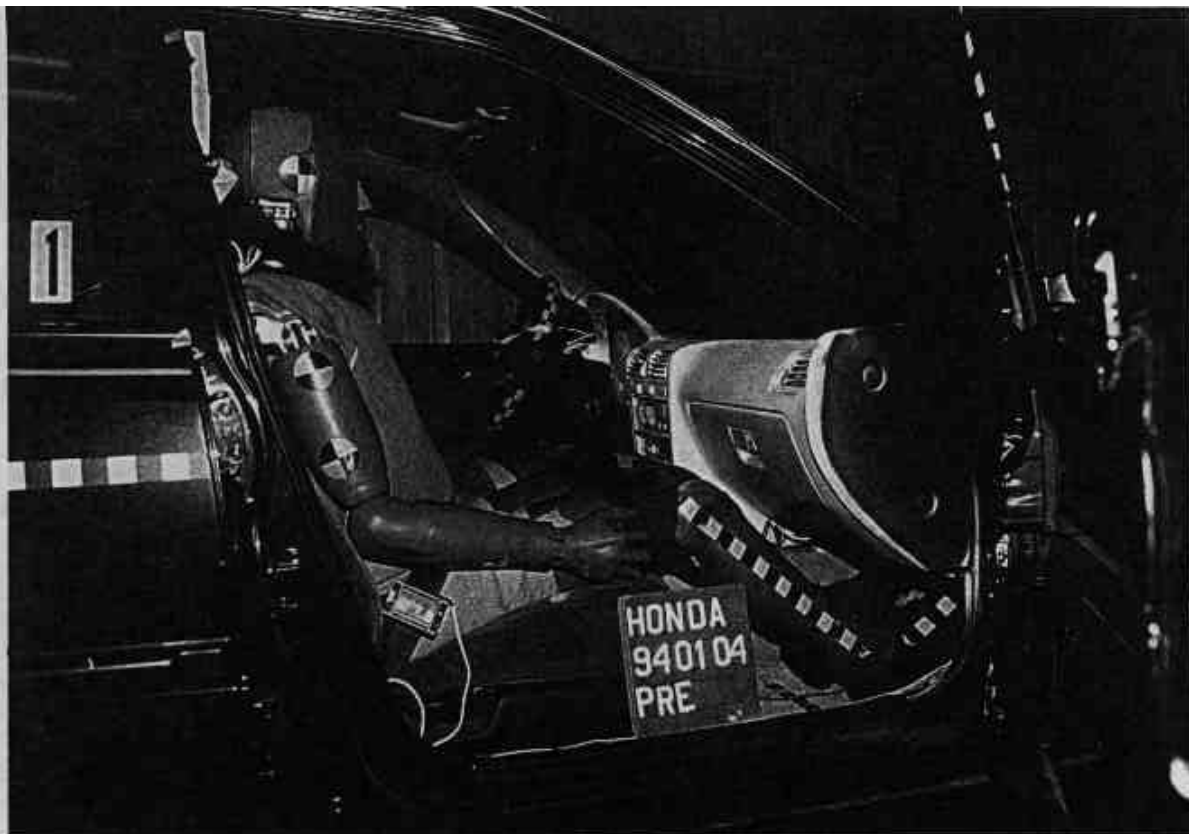


Figure A-17 PRE-TEST PASSENGER DUMMY - VIEW 3

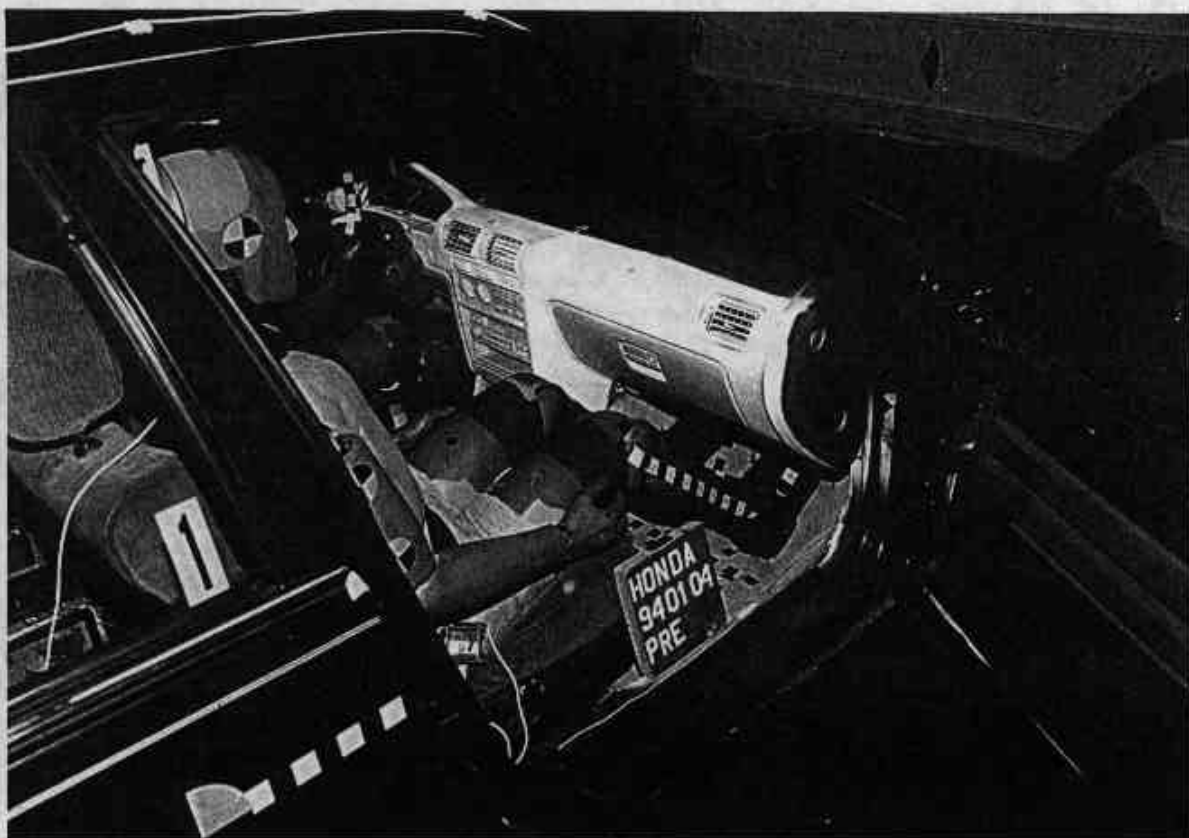


Figure A-18 PRE-TEST PASSENGER DUMMY - VIEW 4



Figure A-19 POST-TEST LEFT SIDE VIEW

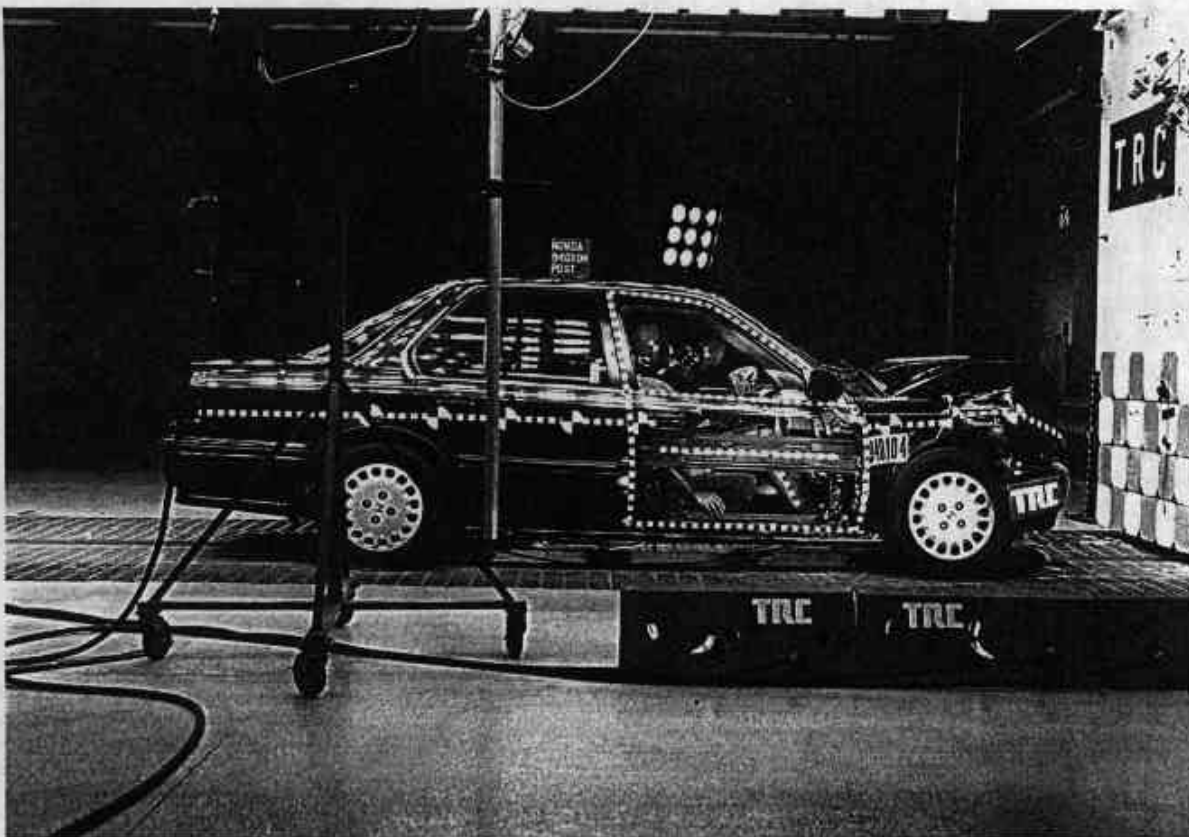


Figure A-20 POST-TEST RIGHT SIDE VIEW



Figure A-21 POST-TEST FRONT VIEW

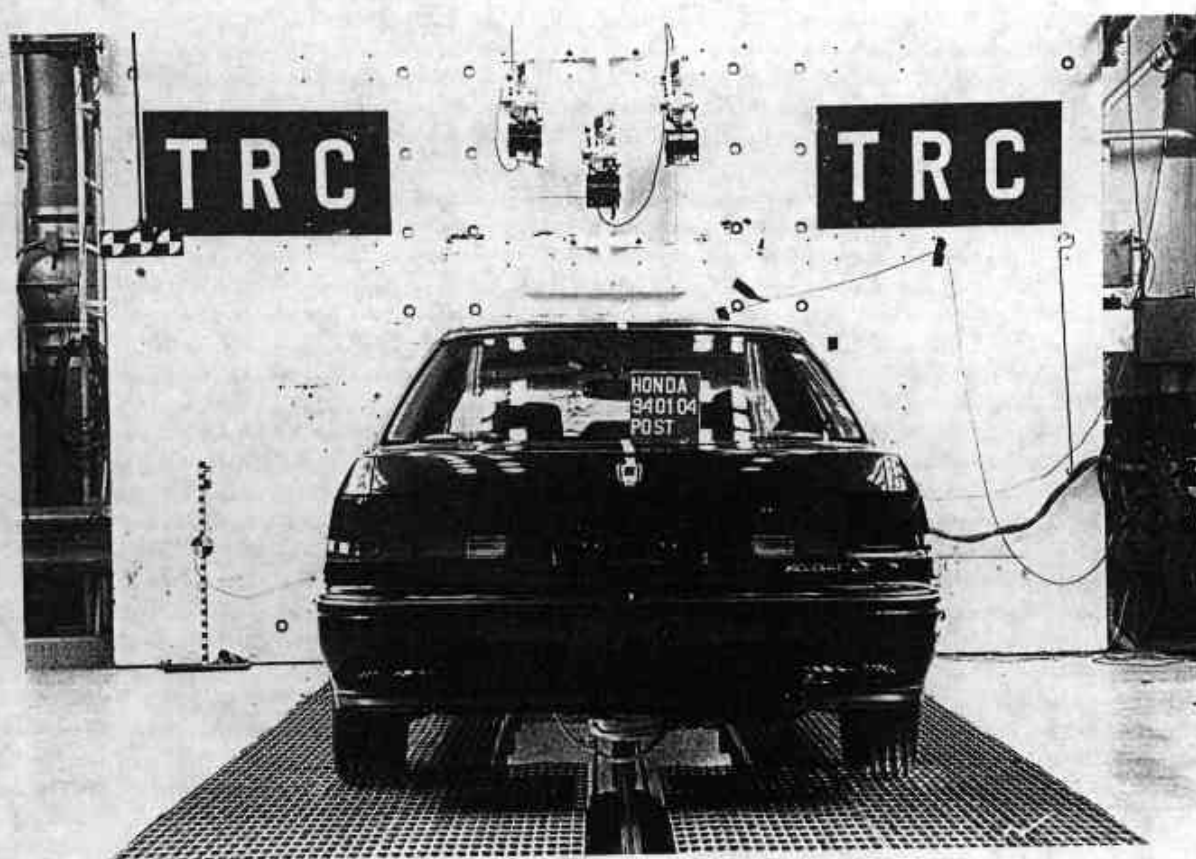


Figure A-22 POST-TEST REAR VIEW

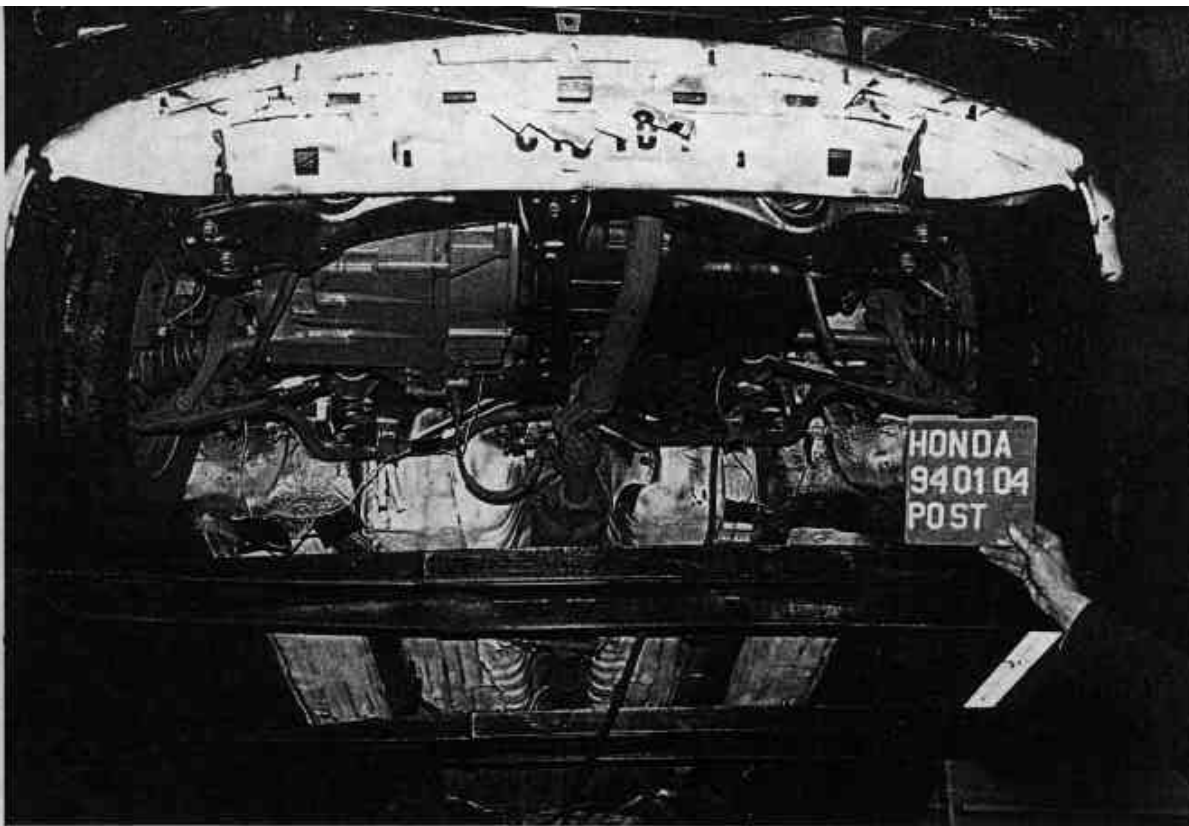


Figure A-23 POST-TEST FRONT UNDERBODY VIEW



Figure A-24 POST-TEST REAR UNDERBODY VIEW



Figure A-25 POST-TEST ENGINE COMPARTMENT VIEW



Figure A-26 POST-TEST WINDSHIELD VIEW



Figure A-27 POST-TEST FUEL FILLER NECK AND FUEL TANK VIEW



Figure A-28 POST-TEST DRIVER DUMMY - VIEW 1

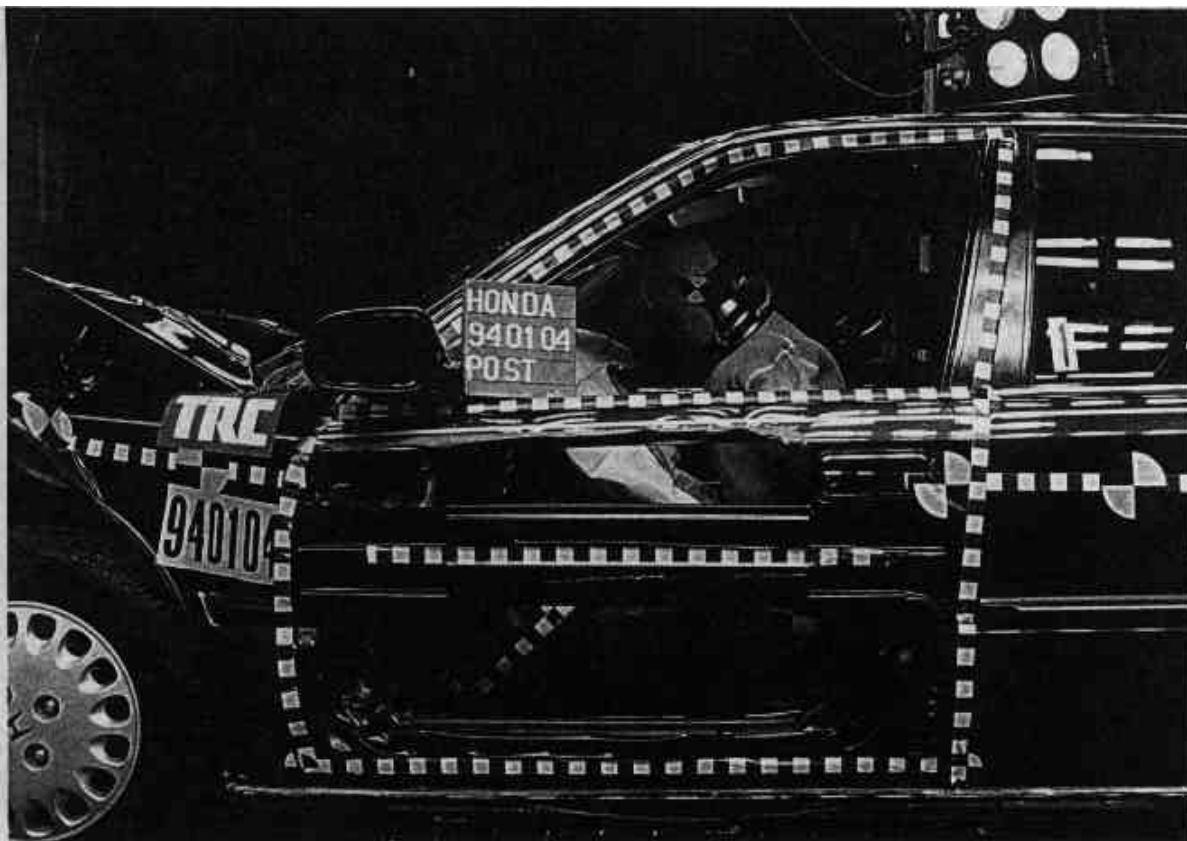


Figure A-29 POST-TEST DRIVER DUMMY - VIEW 2

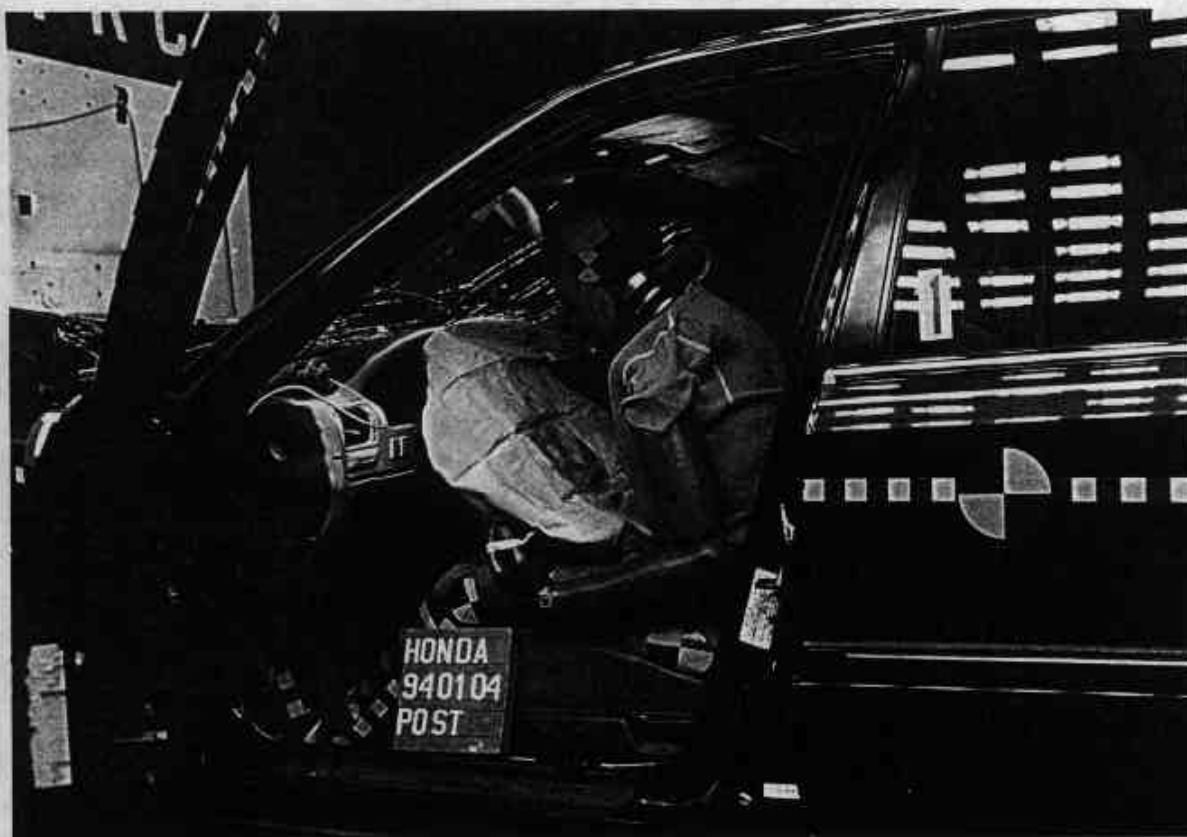


Figure A-30 POST-TEST DRIVER DUMMY - VIEW 3



Figure A-31 POST-TEST DRIVER DUMMY - VIEW 4

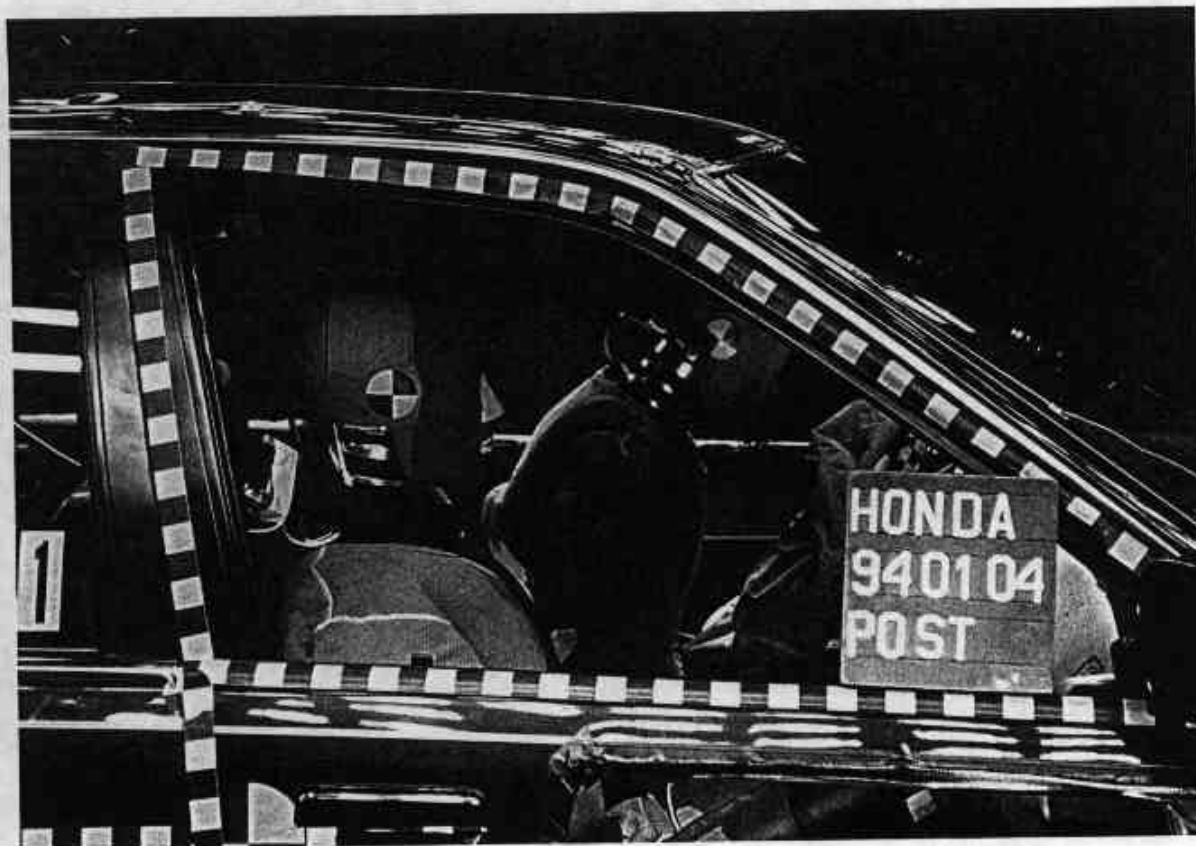


Figure A-32 POST-TEST PASSENGER DUMMY - VIEW 1

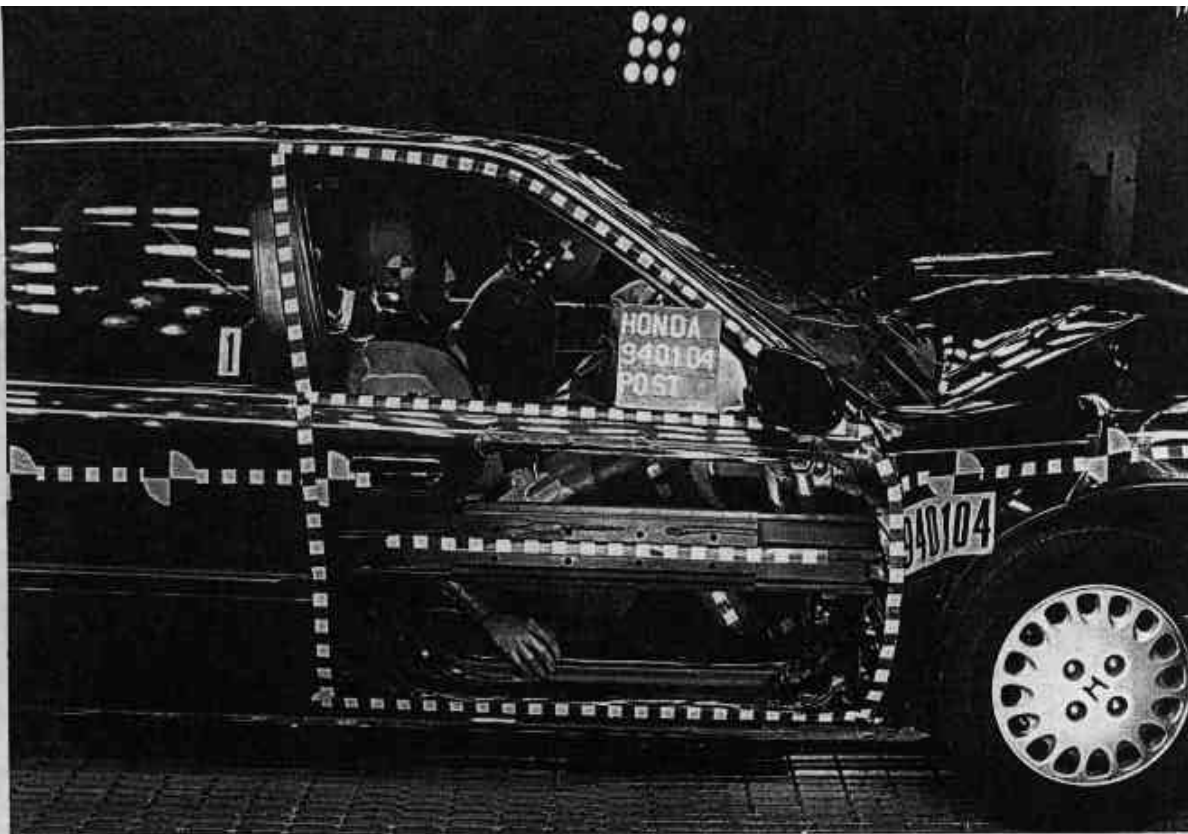


Figure A-33 POST-TEST PASSENGER DUMMY - VIEW 2



Figure A-34 POST-TEST PASSENGER DUMMY - VIEW 3

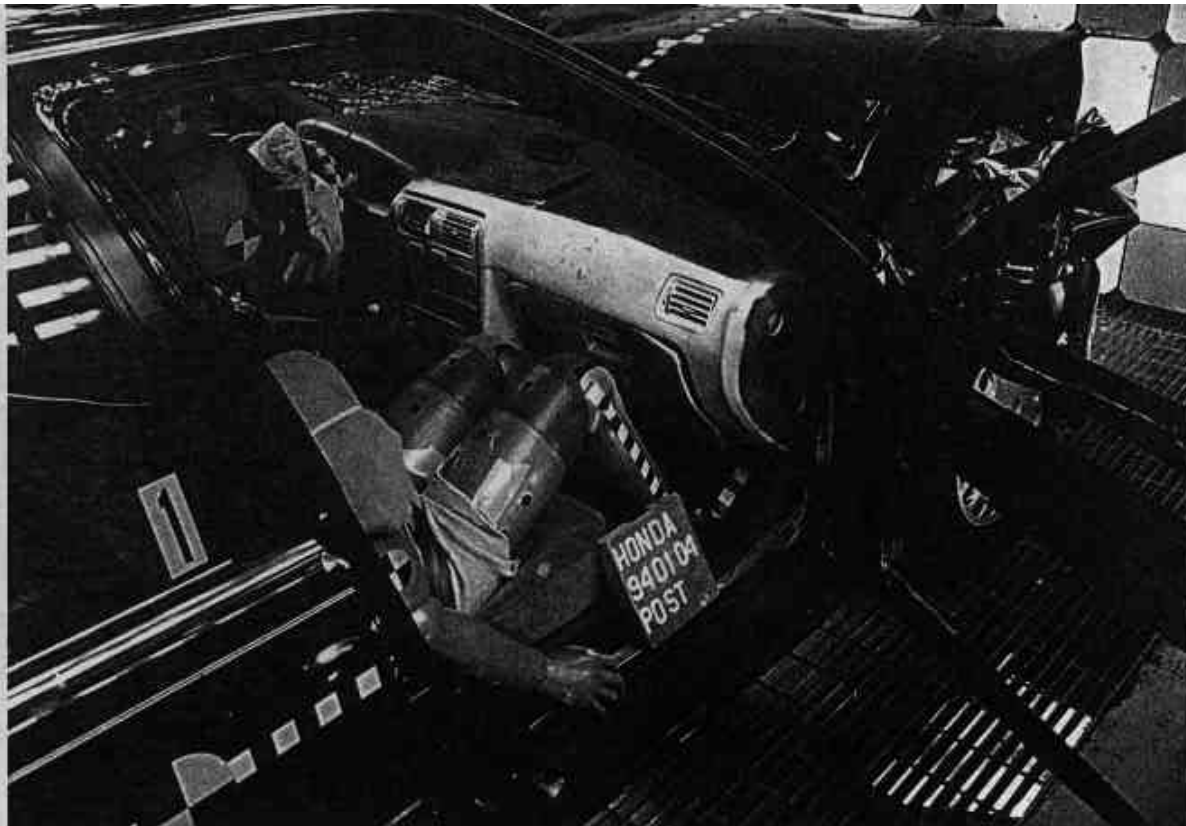


Figure A-35 POST-TEST PASSENGER DUMMY - VIEW 4

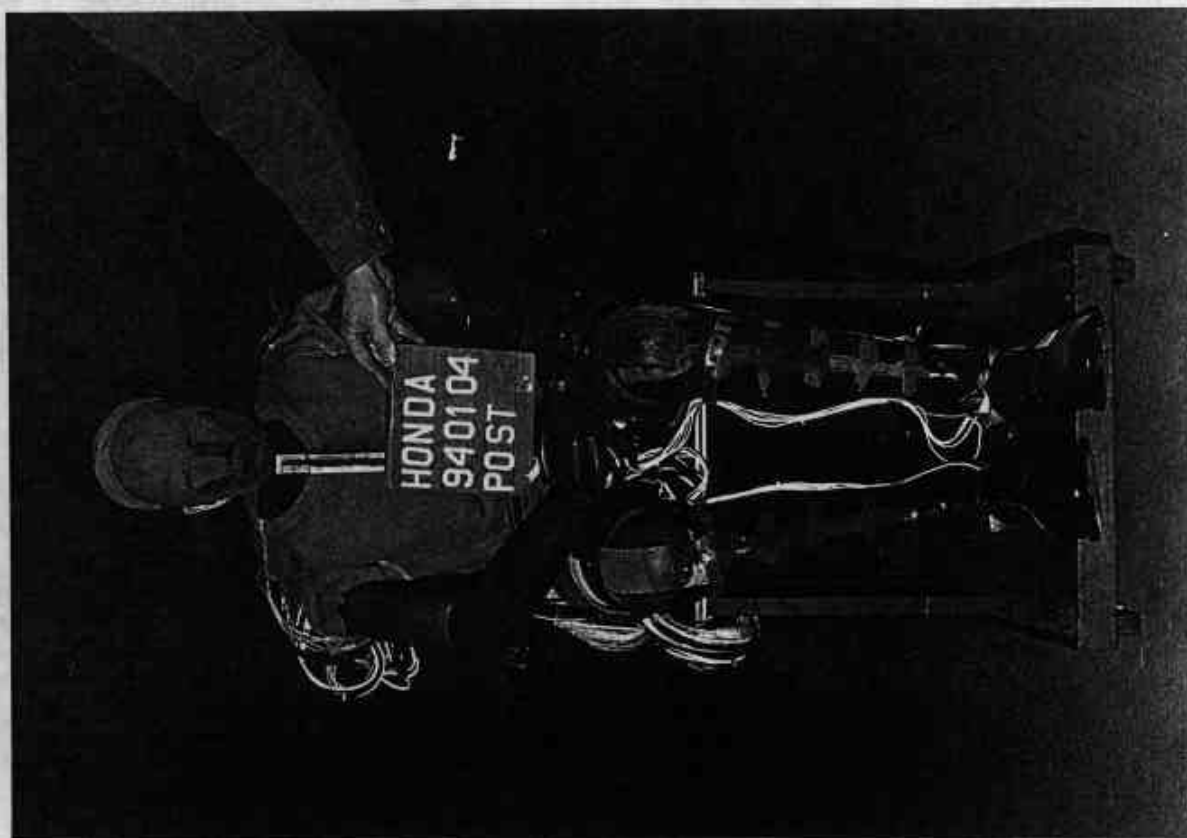


Figure A-36 POST-TEST DRIVER DUMMY CONTACT VIEW

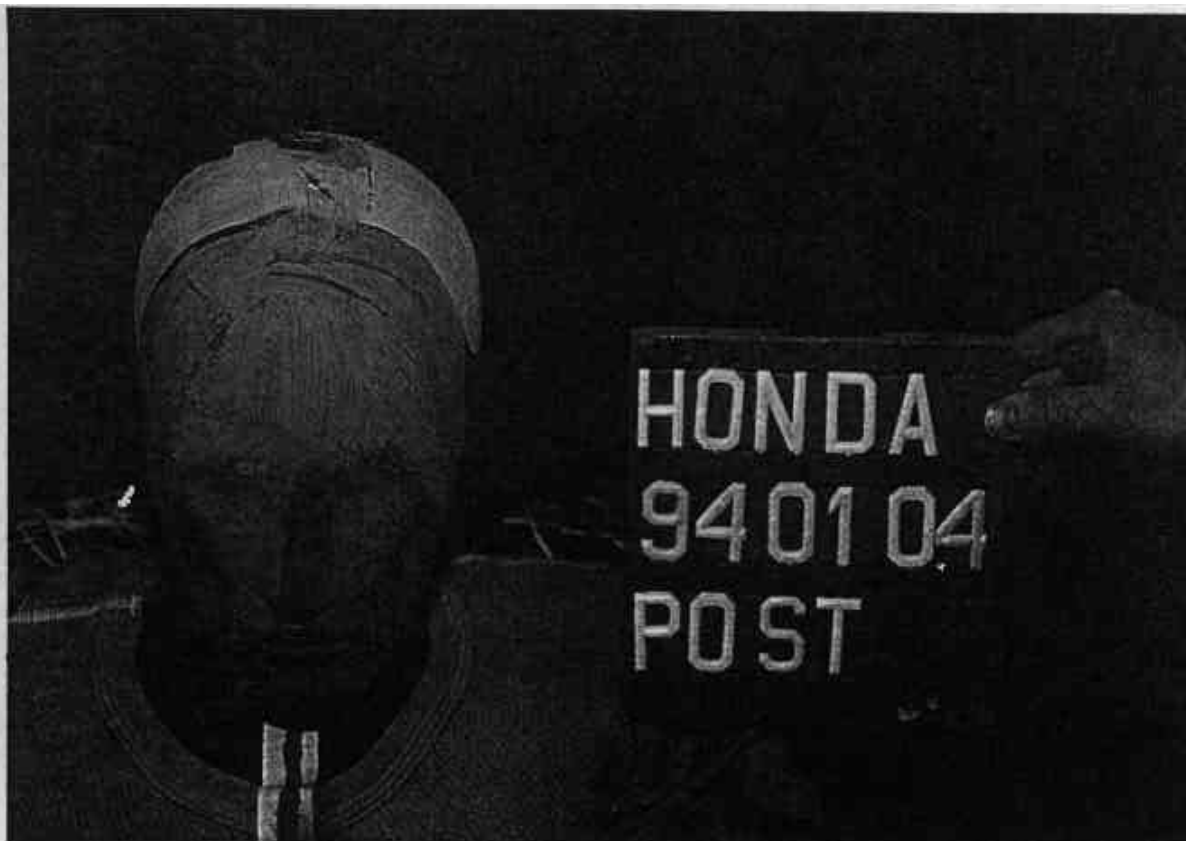


Figure A-37 POST-TEST DRIVER DUMMY HEAD CONTACT - VIEW 1



Figure A-38 POST-TEST DRIVER DUMMY HEAD CONTACT - VIEW 2

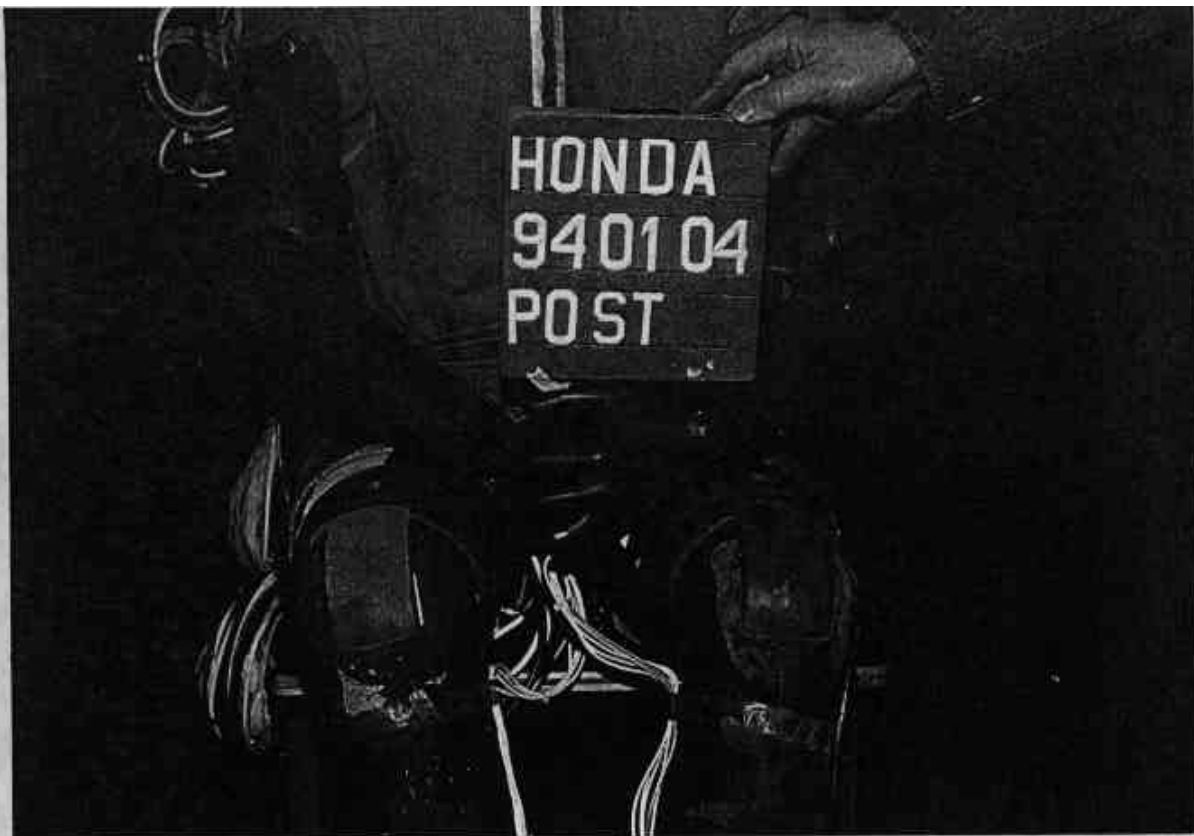


Figure A-39 POST-TEST DRIVER DUMMY KNEE CONTACT - VIEW 1

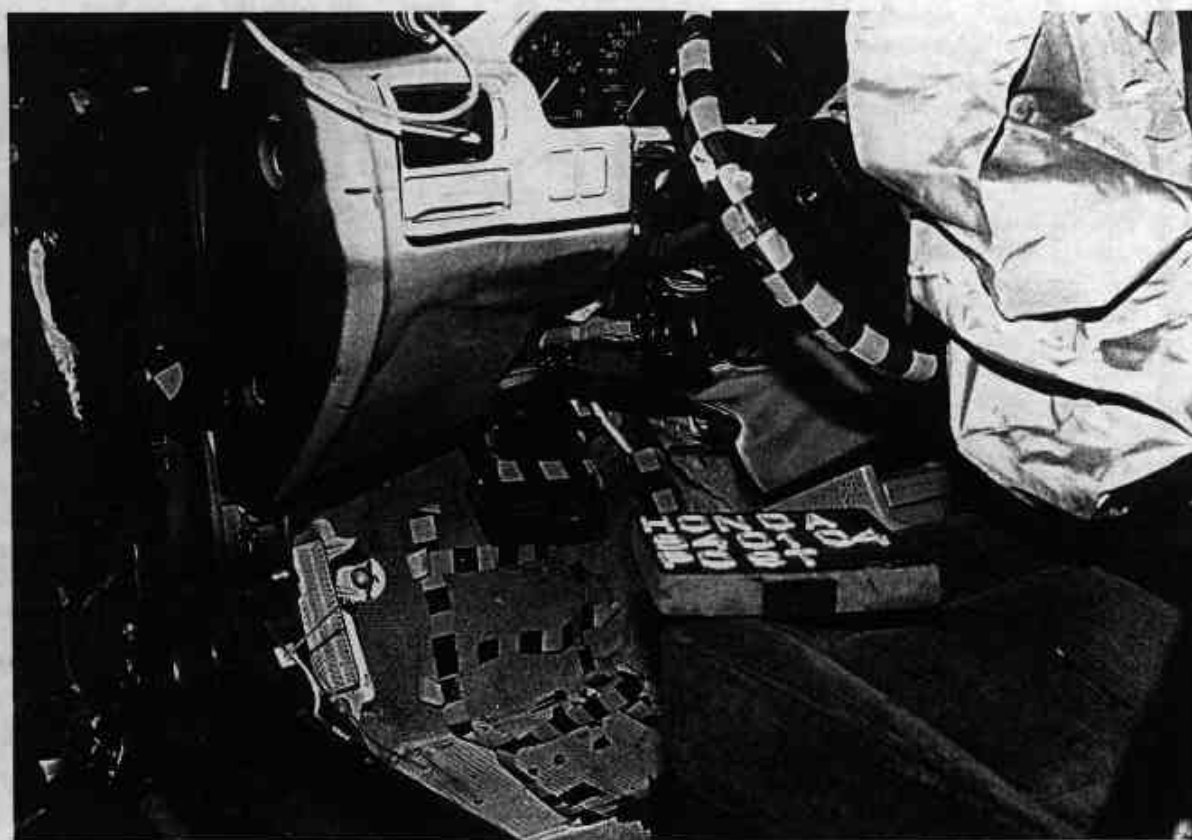


Figure A-40 POST-TEST DRIVER DUMMY KNEE CONTACT - VIEW 2

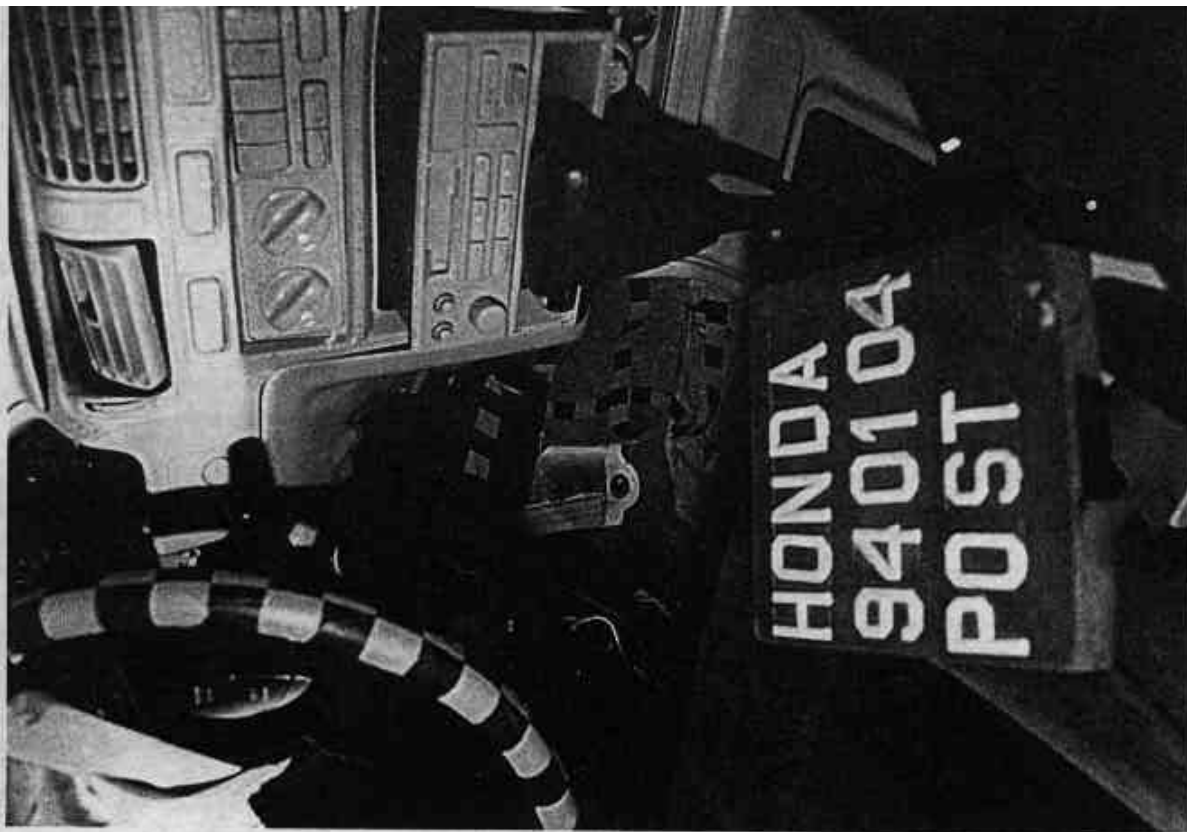


Figure A-41 POST-TEST DRIVER DUMMY KNEE CONTACT - VIEW 3

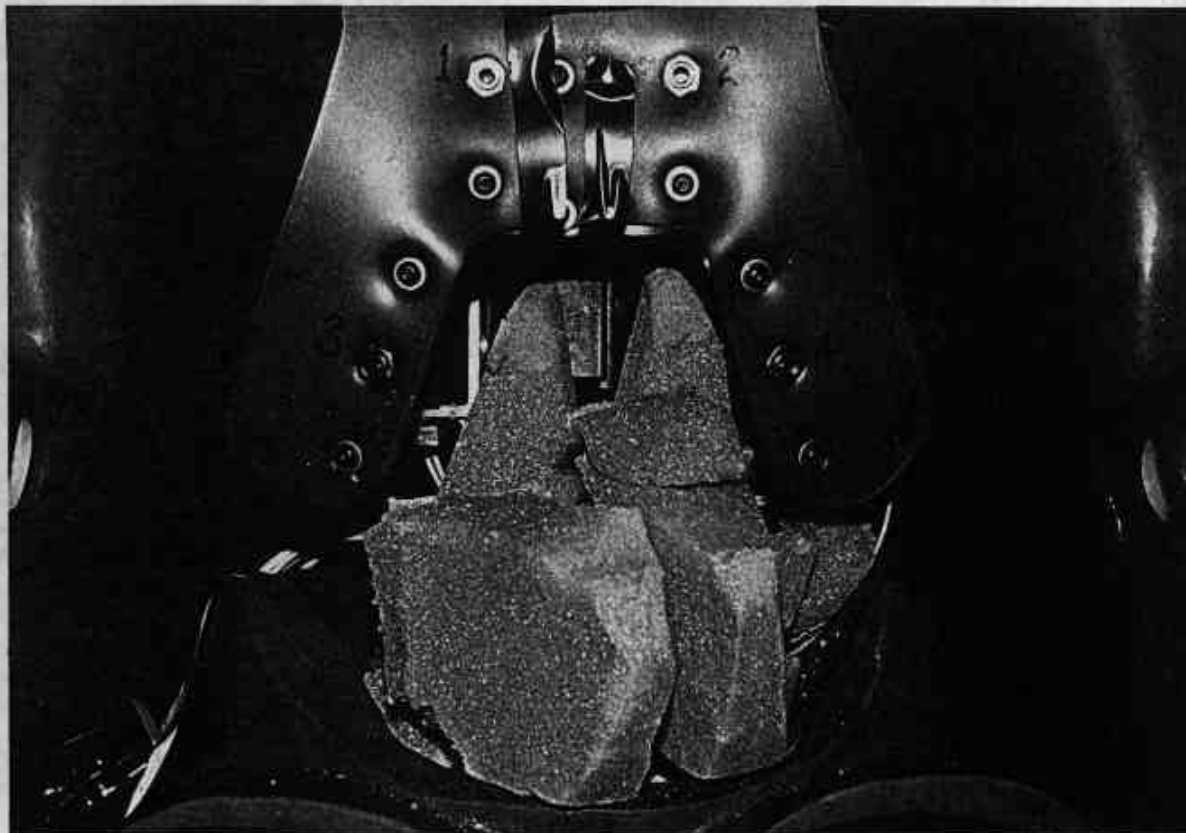


Figure A-42 POST-TEST DRIVER DUMMY ABDOMEN - VIEW 1



Figure A-43 POST-TEST DRIVER DUMMY ABDOMEN - VIEW 2



Figure A-44 POST-TEST DRIVER DUMMY ABDOMEN - VIEW 3

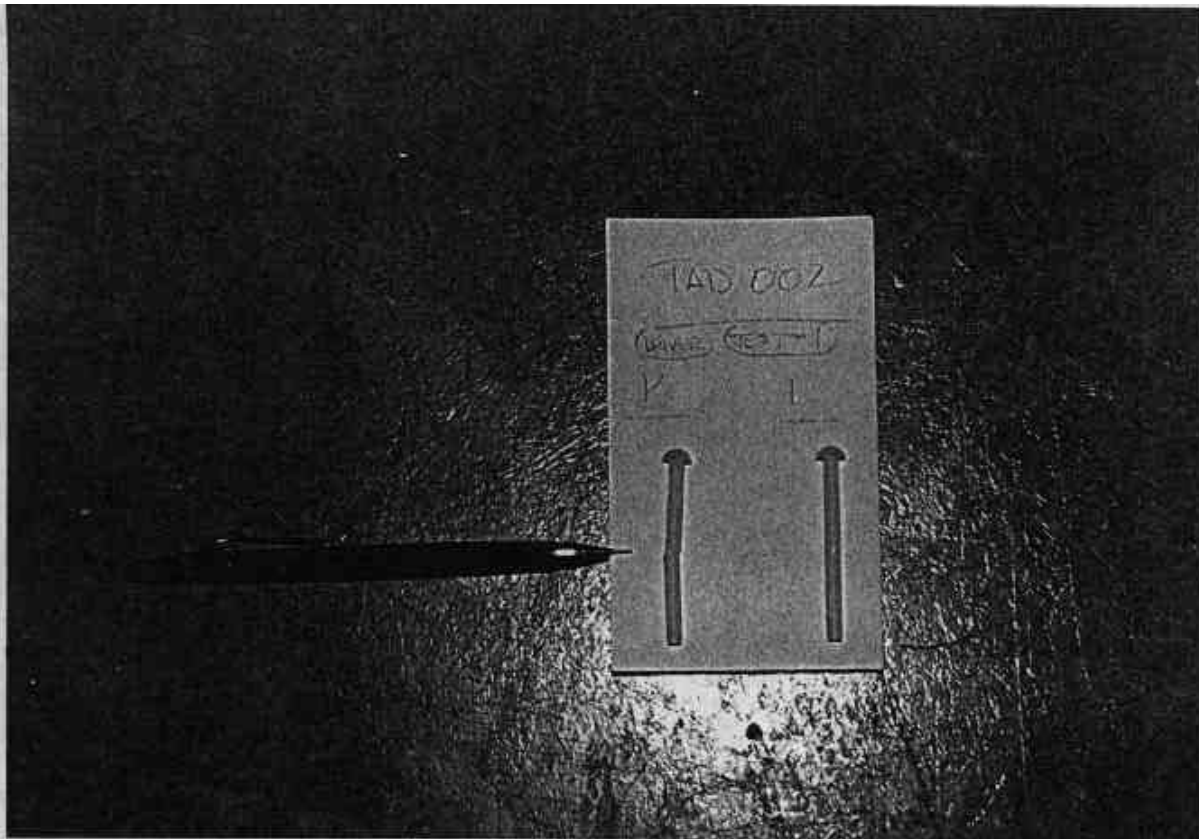


Figure A-45 POST-TEST DRIVER DUMMY CLAVICLE PINS

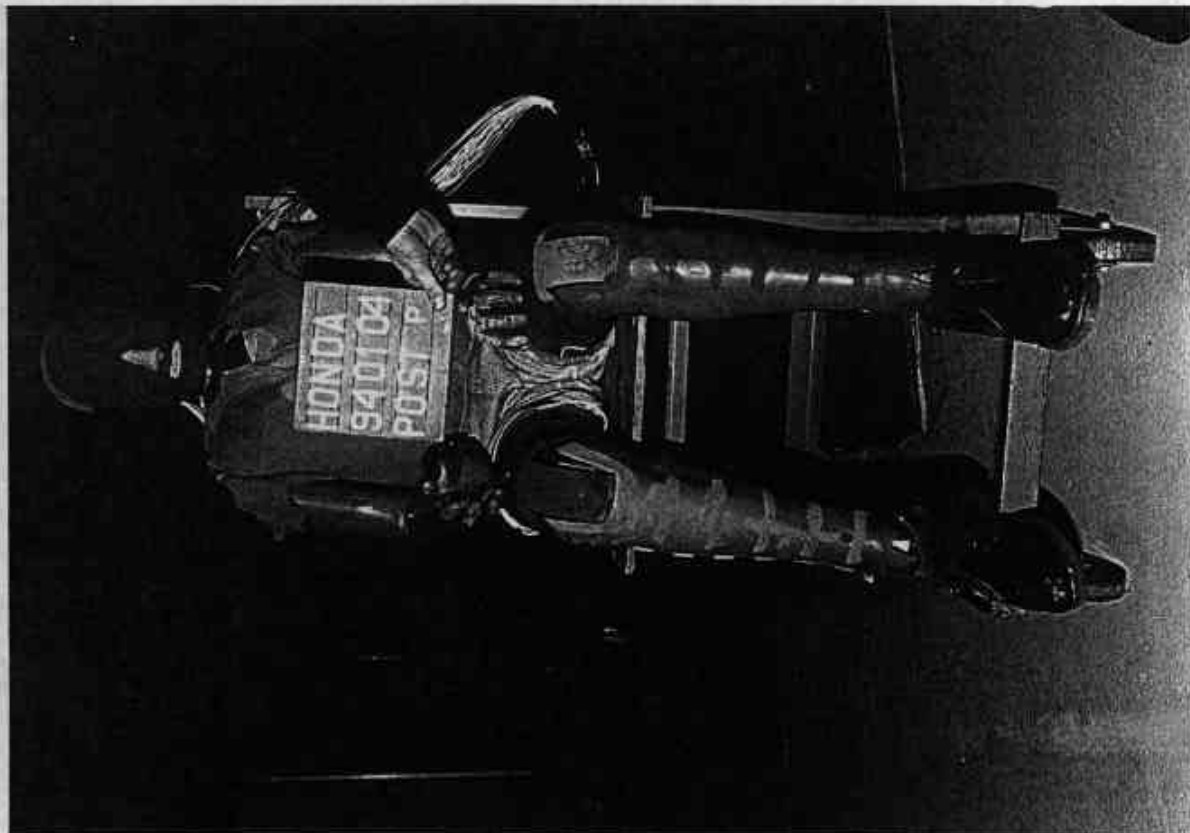


Figure A-46 POST-TEST PASSENGER DUMMY CONTACT VIEW

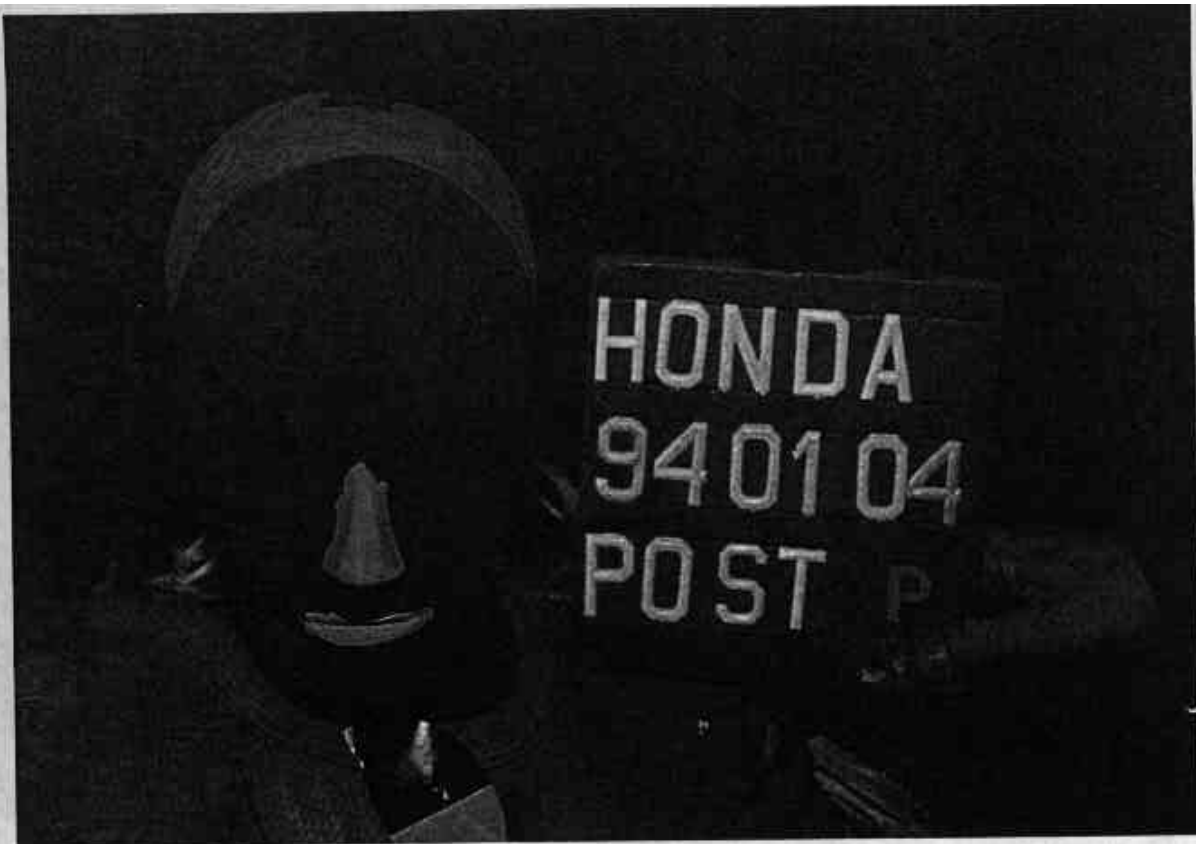


Figure A-47 POST-TEST PASSENGER DUMMY HEAD CONTACT VIEW



Figure A-48 POST-TEST PASSENGER DUMMY KNEE CONTACT - VIEW 1



Figure A-49 POST-TEST PASSENGER DUMMY KNEE CONTACT - VIEW 2

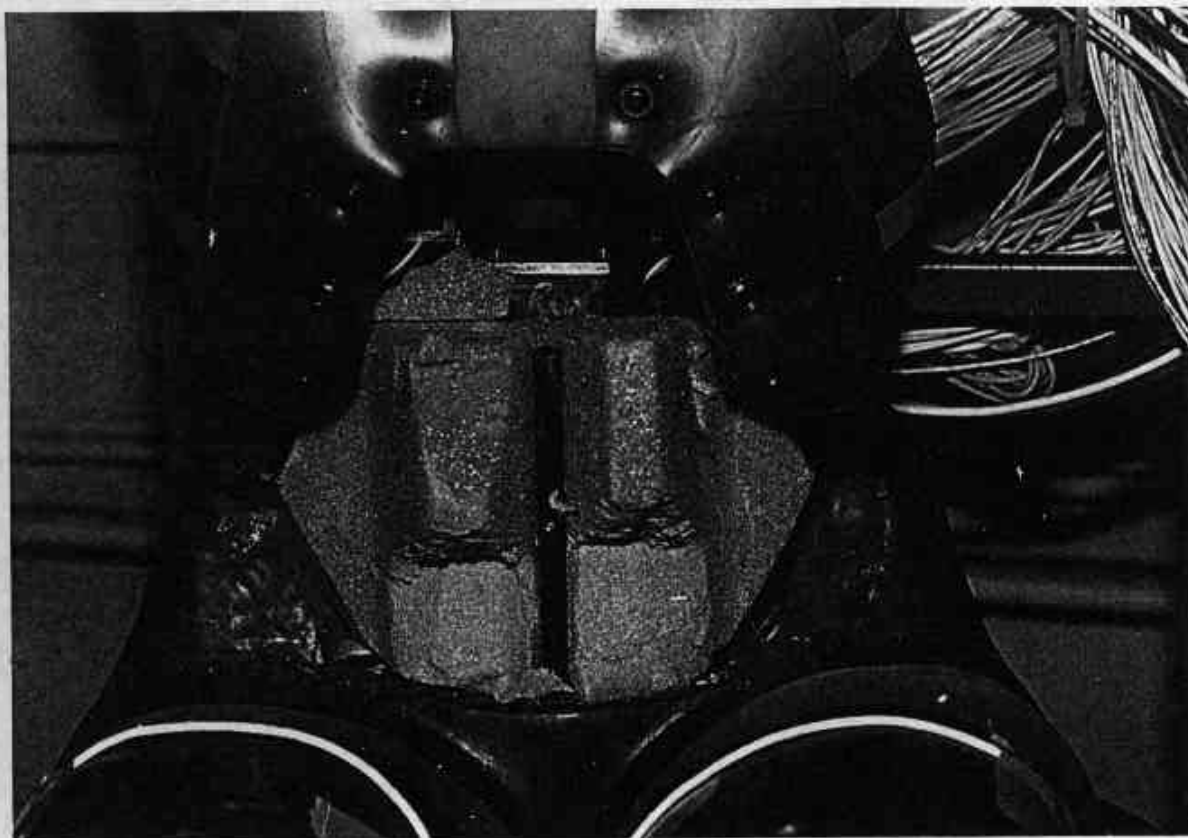


Figure A-50 POST-TEST PASSENGER DUMMY ABDOMEN - VIEW 1



Figure A-51 POST-TEST PASSENGER DUMMY ABDOMEN - VIEW 2



Figure A-52 POST-TEST PASSENGER DUMMY ABDOMEN - VIEW 3

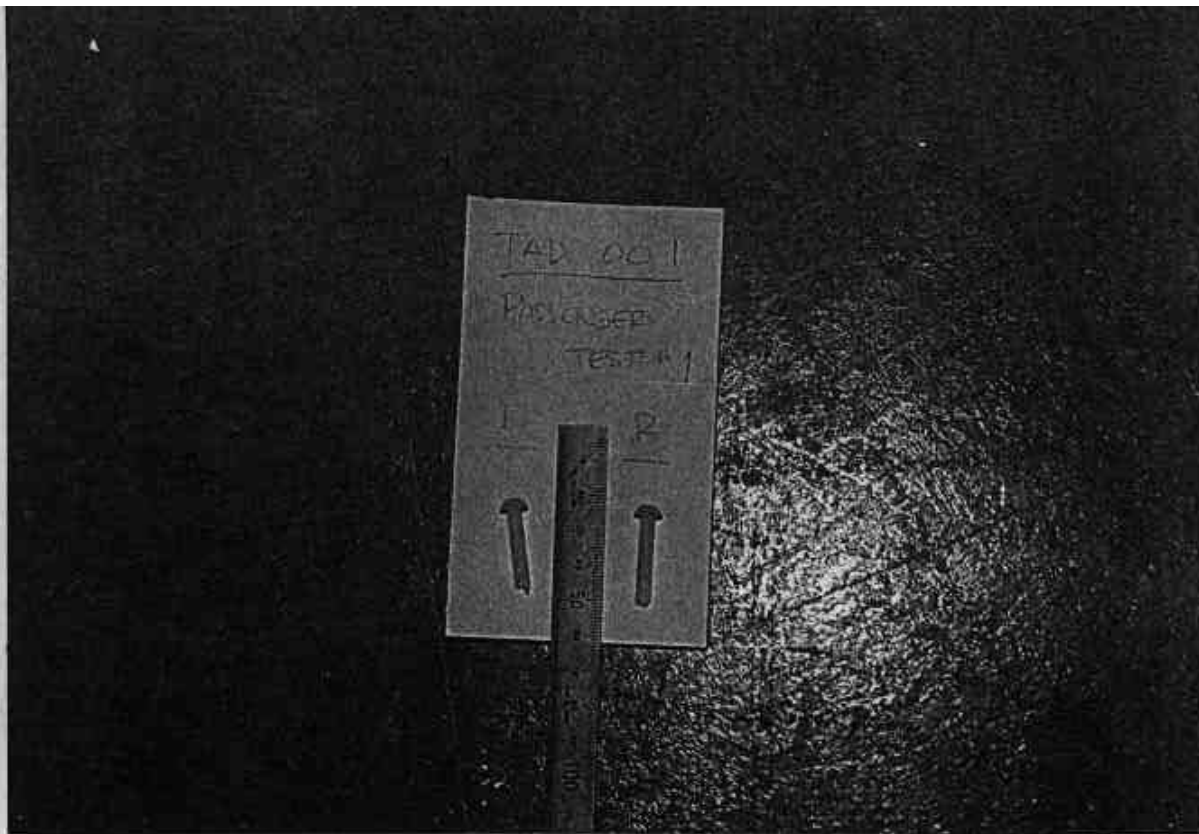


Figure A-53 POST-TEST PASSENGER DUMMY CLAVICLE PINS

APPENDIX B

DATA PLOTS

1. TEST ITEM: TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1

2. TEST DATE: 940104

3. TEST RESULT: SPEED = 48.8 KM/H

4. COMMENT:

	HEAD (HIC)	CHEST (3MS)	FEMUR
Driver	361	50.9 G	R 5718.9 N
			L 5745.3 N
Passenger	469	53.2 G	R 1590.9 N
			L 3391.6 N
REGULATION	1000	60.0 G	10008.5 N

TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1
DRIV. HEAD

940104
CHANNEL CLASS 1000

X: LONGITUDINAL
Y: LATERAL
Z: VERTICAL
R: RESULTANT

HIC = 361 (36.0 MS)
T1 = 77.2 MS
T2 = 113.2 MS
MAX. G = 54.4 G AT 103.0 MS
MAX. HIC = 405 (53.7 MS)

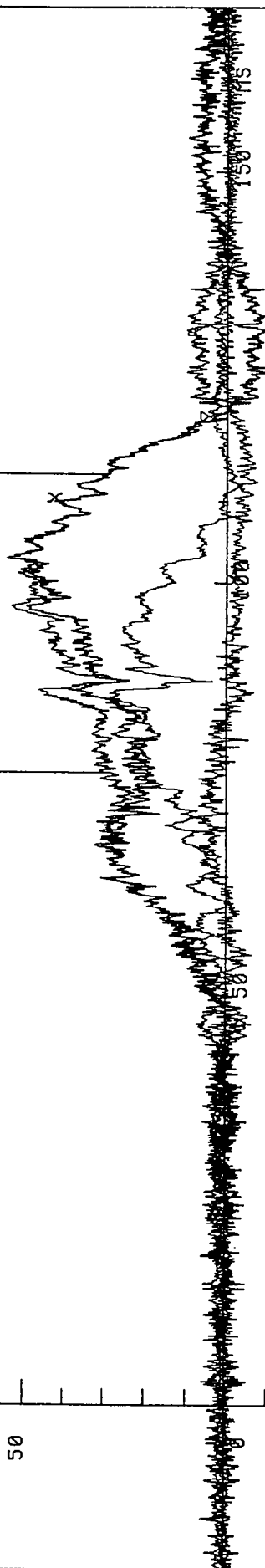
77.2 MS
36.0 MS
113.2 MS

G

100

50

-50



TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1
DRIV. HEAD X

340104
CHANNEL CLASS 1000

1: DECELERATION

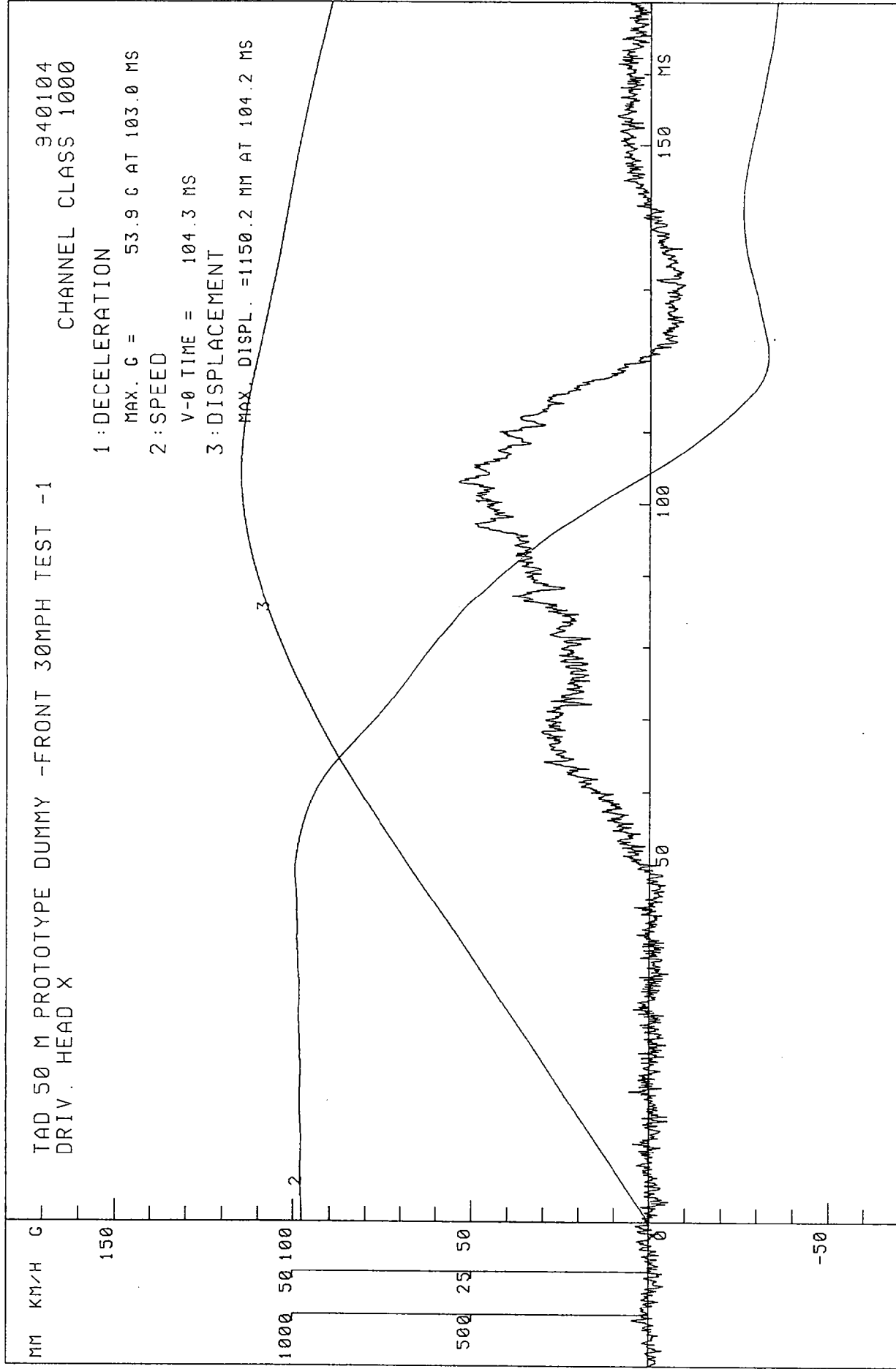
MAX. G = 53.9 G AT 103.0 MS

2: SPEED

V-0 TIME = 104.3 MS

3: DISPLACEMENT

MAX. DISPL. = 1150.2 MM AT 104.2 MS



IAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1 DRIV. NECK

940104

X:NECK FX

CHANNEL CLASS 1000
 MAX. FORWARD = 272.5 N AT 150.1 MS
 MAX. BACKWARD = 939.6 N AT 87.5 MS

Y:NECK MY

CHANNEL CLASS 600
 MAX. FLEXION = 48.5 NM AT 85.0 MS
 MAX. EXTENSION = 6.1 NM AT 49.0 MS

Z:NECK FZ

CHANNEL CLASS 1000
 MAX. TENSION = 1121.1 N AT 70.5 MS
 MAX. COMPRESSION = 542.4 N AT 88.0 MS

R:NECK MR

CHANNEL CLASS 600
 MAX. FLEXION = 41.3 NM AT 85.0 MS
 MAX. EXTENSION = 6.1 NM AT 49.1 MS

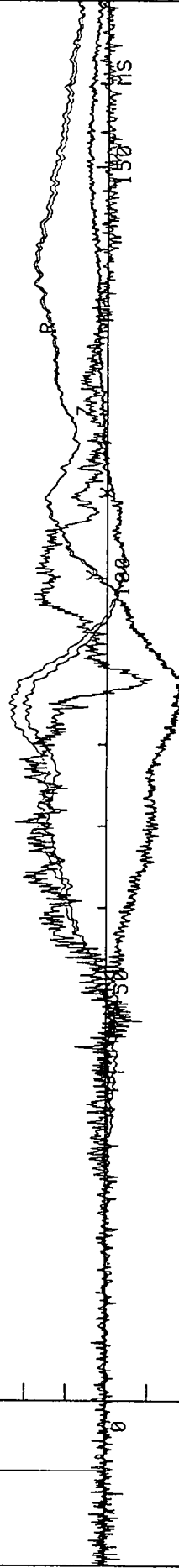
NM

7500

200 5000

100 2500

-2500

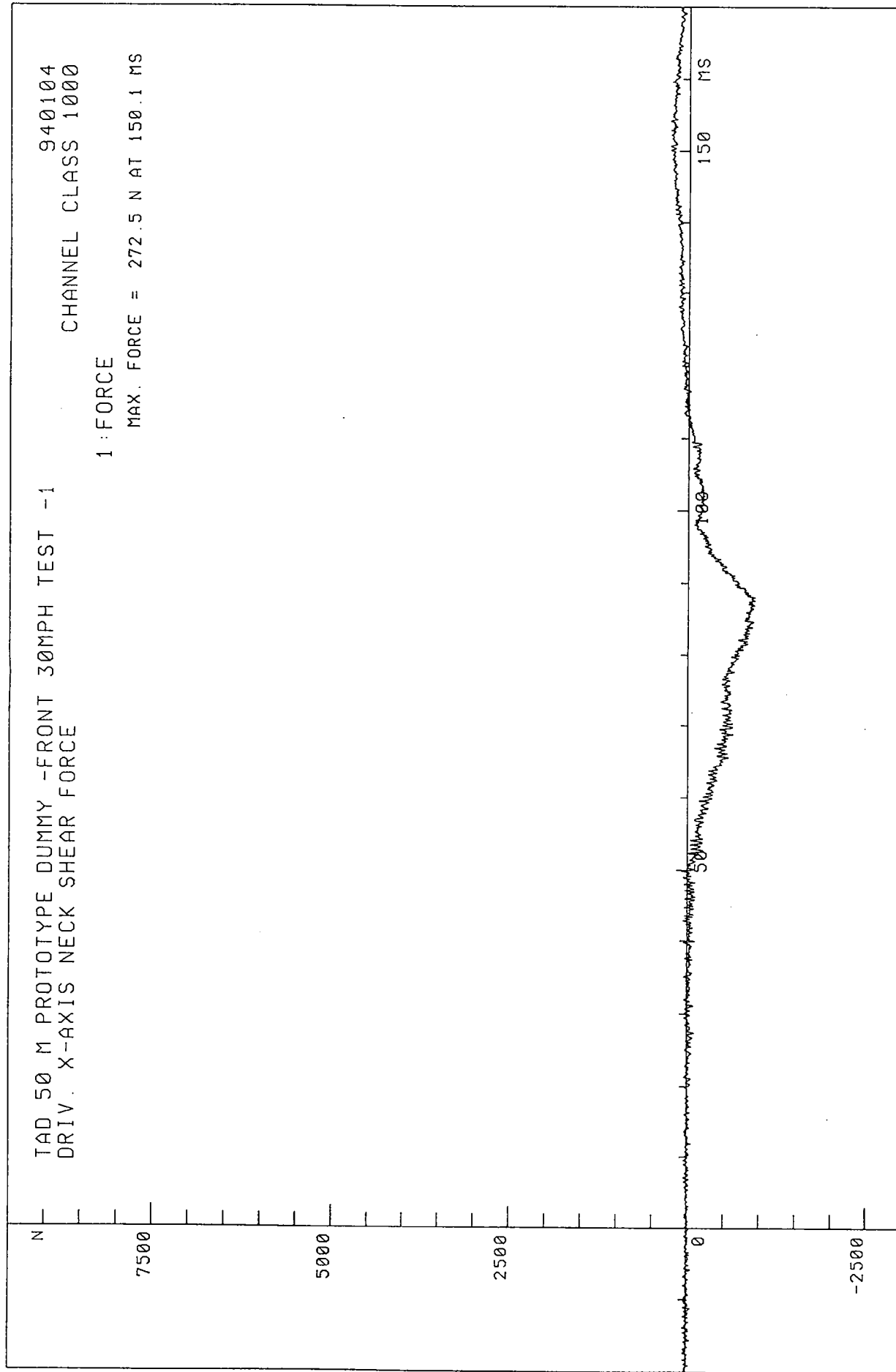


TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1
DRIV. X-AXIS NECK SHEAR FORCE

940104
CHANNEL CLASS 1000

1: FORCE

MAX. FORCE = 272.5 N AT 150.1 MS



TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1
DRIV. Y-AXIS NECK SHEAR FORCE

940104
CHANNEL CLASS 1000

1:FORCE

MAX. FORCE = 161.8 N AT 69.4 MS

N

7500

5000

2500

0

-2500

50

100

150

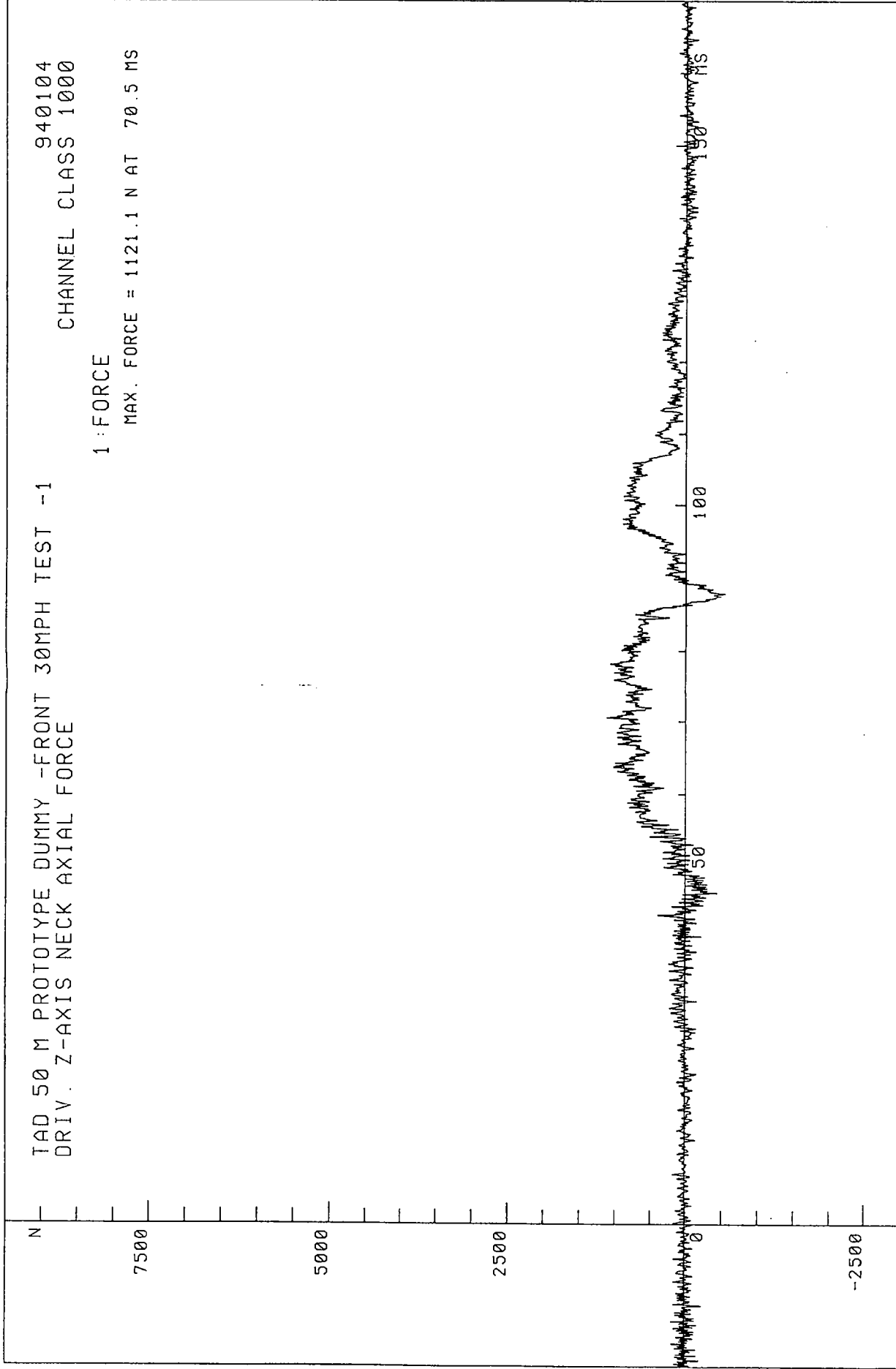
MS

TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1
DRIV. Z-AXIS NECK AXIAL FORCE

940104
CHANNEL CLASS 1000

1:FORCE

MAX. FORCE = 1121.1 N AT 70.5 MS



TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1
DRIV. NECK MOMENT ABOUT X AXIS

940104
CHANNEL CLASS 600

1: MOMENT

MAX. TORQUE = 10.2 N-M AT 85.0 MS

N-M
300
200
100
0
-100

50 100 150 MS

TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1
DRIV. NECK MOMENT ABOUT Y AXIS

940104
CHANNEL CLASS 600

1: MOMENT

MAX. TORQUE = 48.5 N-M AT 85.0 MS

N-M

300

200

100

0

-100

50

100

150

MS

TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1
DRIV. NECK MOMENT ABOUT Z AXIS

940104
CHANNEL CLASS 600

1: MOMENT

MAX. TORQUE = 1.9 N-M AT 57.0 MS

N-M

300

200

100

0

-100

50

100

150

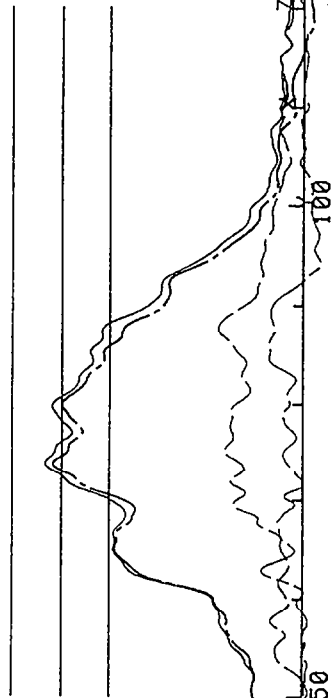
MS

TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1 DRIV. CHEST

940104
 CHANNEL CLASS 180

X: LONGITUDINAL
 Y: LATERAL
 Z: VERTICAL
 R: RESULTANT

50.9 G (3.0 MS)
 T1 = 72.8 MS
 T2 = 75.7 MS
 MAX. G = 53.4 G AT 73.7 MS



G

100

50

0

-50

50

100

150

MS

TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1
DRIV. CHEST X

940104
CHANNEL CLASS 180

1: DECELERATION

MAX. G = 51.8 G AT 73.6 MS

2: SPEED

V-0 TIME = 87.6 MS

3: DISPLACEMENT

MAX. DISPL. = 944.8 MM AT 87.6 MS

MM KM/H G

150

1000 50 100

500 25 50

0

-50

2

3

100

50

150

MS

TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1
DRIV. LUMBAR X-AXIS FORCE

940104
CHANNEL CLASS 1000

1:FORCE

MAX. FORCE = 3380.8 N AT 75.0 MS

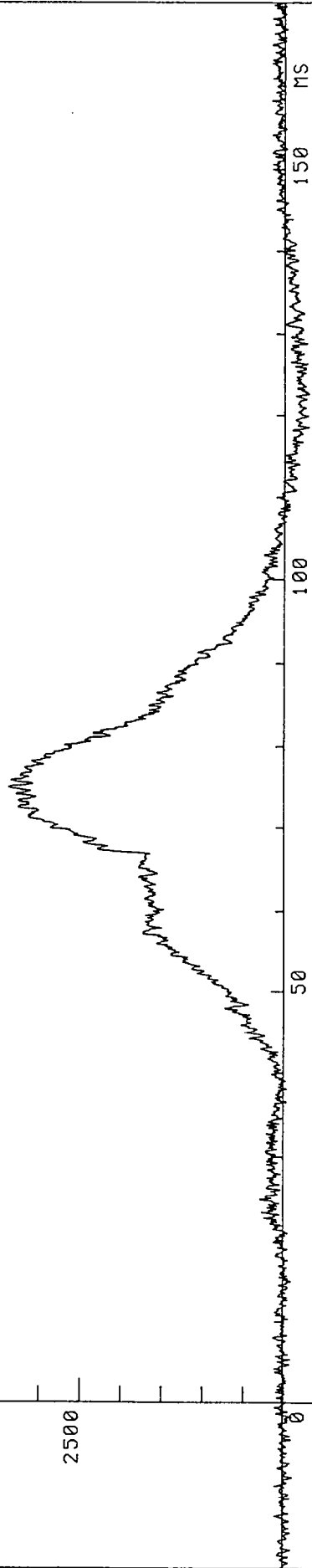
N

7500

5000

2500

-2500

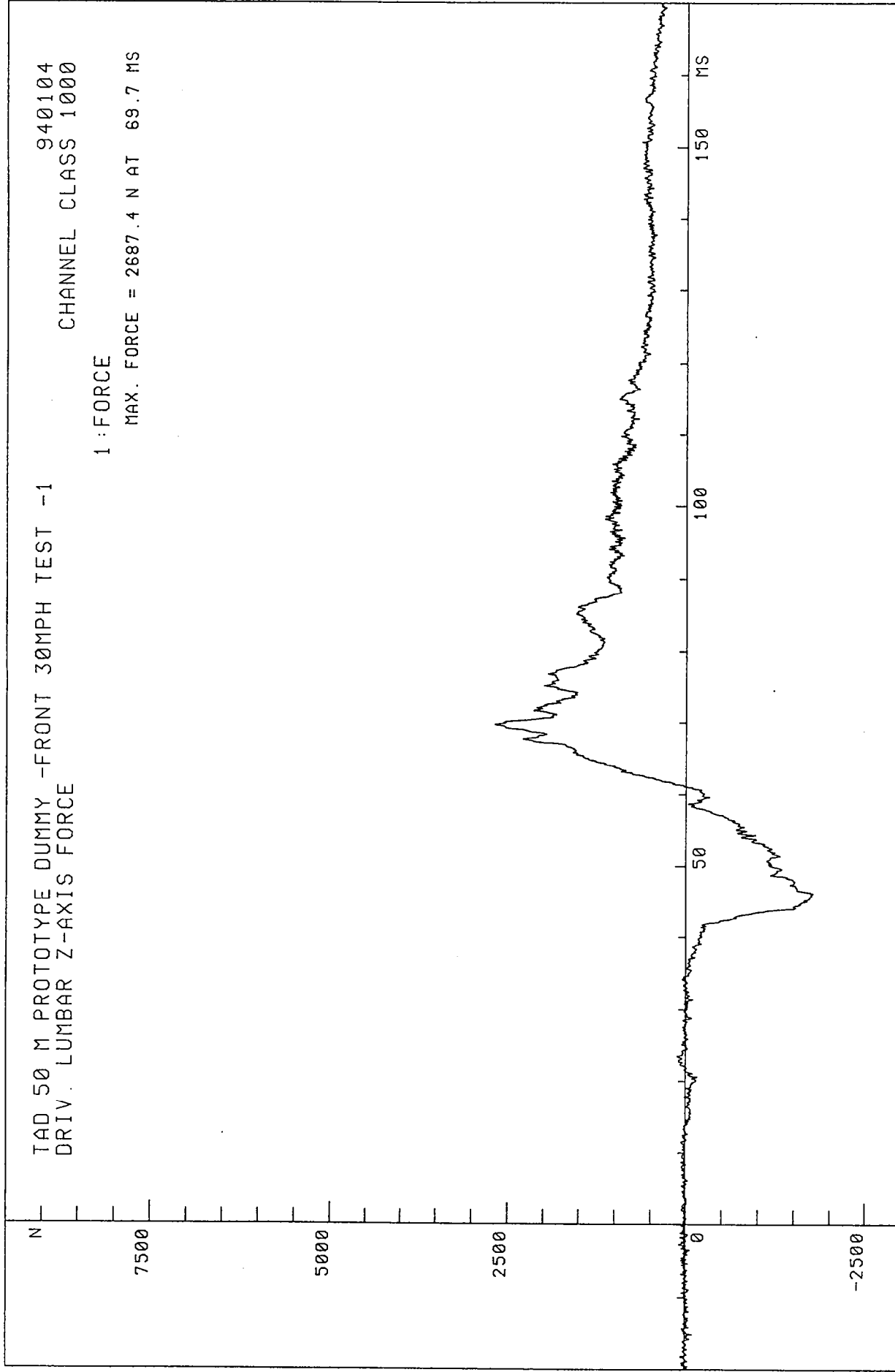


TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1
DRIV. LUMBAR Z-AXIS FORCE

940104
CHANNEL CLASS 1000

1:FORCE

MAX. FORCE = 2687.4 N AT 69.7 MS



TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1
DRIV. LUMBAR MOMENT ABOUT Y AXIS

940104
CHANNEL CLASS 1000

1: MOMENT

MAX. TORQUE = 158.3 N-M AT 78.8 MS

N-M

300

200

100

-100

100

50

MS

50

TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1
DRIV. PELVIS

940104
CHANNEL CLASS 60

X: LONGITUDINAL
Y: LATERAL
Z: VERTICAL
R: RESULTANT

MAX. G = 49.8 G AT 58.6 MS

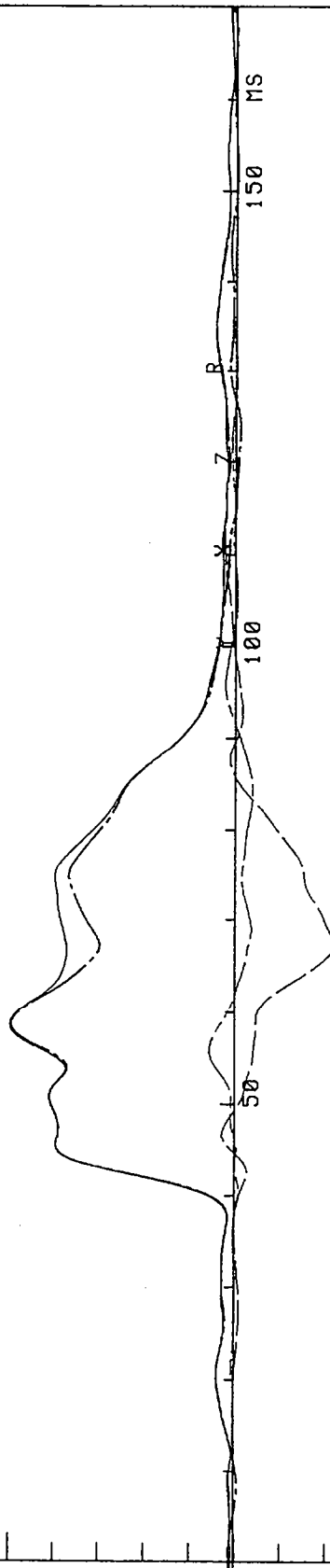
G

100

50

0

-50



100

50

R

Z

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MM KM/H G

TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1
DRIV. PELVIS

940104

150

1000 50 100

500 25 50

0

-50

1: DECELERATION (X)

MAX. G = 49.5 G AT 58.6 MS

2: VELOCITY (X)

V-0 TIME = 76.1 MS

3: DISPLACEMENT (X)

MAX. DISPL. = 770.1 MM AT 76.1 MS

4: DECELERATION (Z)

5: VELOCITY (Z)

6: DISPLACEMENT (Z)

MAX. DISPL. = 324.0 MM AT 170.0 MS

3

5

6

100

50

150

MS

TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1
DRIV. PELVIS X

CHANNEL CLASS 60

940104

1: DECELERATION

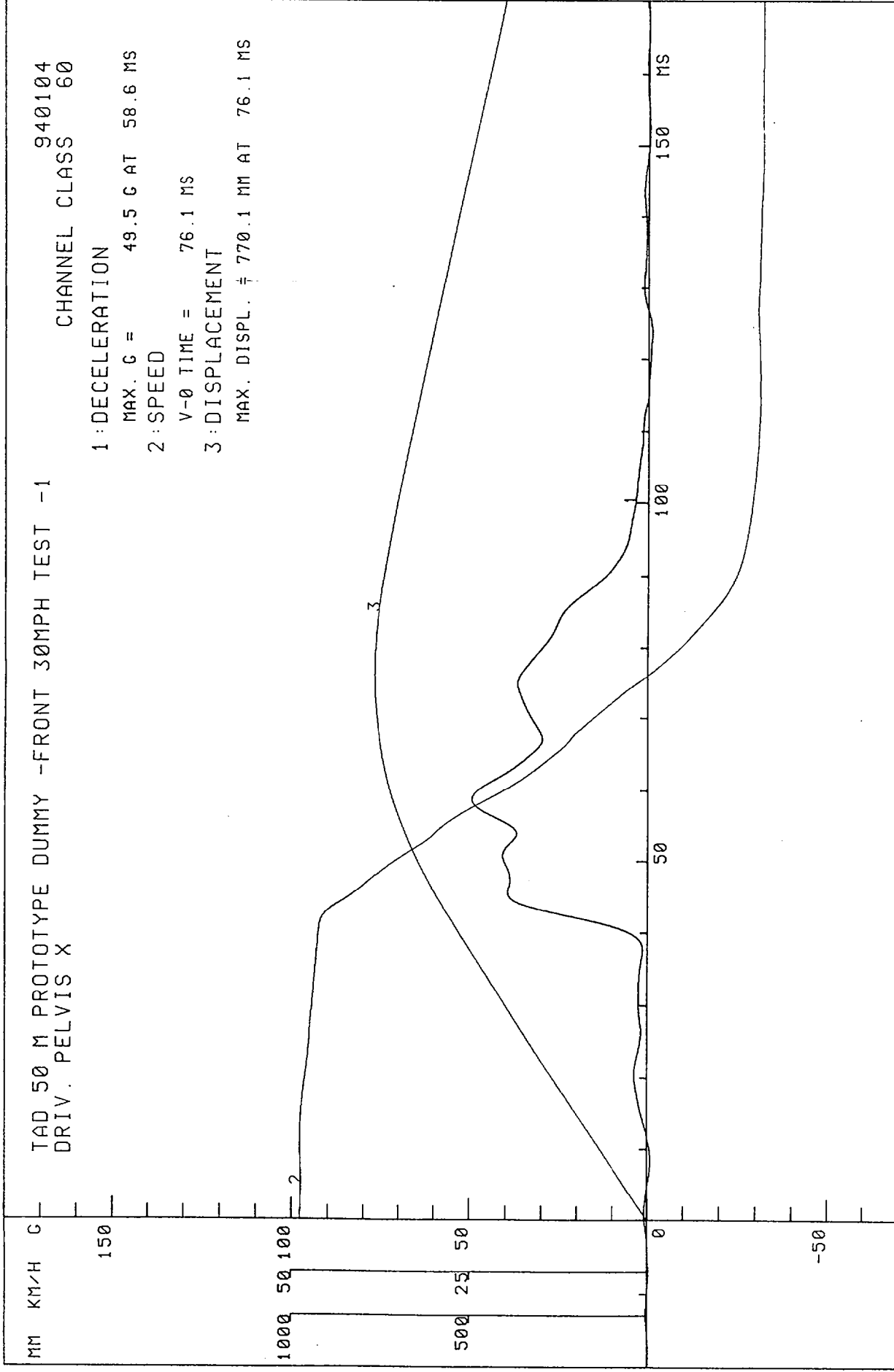
MAX. G = 49.5 G AT 58.6 MS

2: SPEED

V-0 TIME = 76.1 MS

3: DISPLACEMENT

MAX. DISPL. $\pm$ 770.1 MM AT 76.1 MS



TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1
DRIV. PELVIS Y

940104
CHANNEL CLASS 60

1: DECELERATION

MAX. G = 5.7 G AT 55.8 MS

2: SPEED

V-0 TIME = 0.0 MS

3: DISPLACEMENT

MAX. DISPL. = 8.5 MM AT 170.0 MS

MM KM/H G

150

1000 50 100

500 25 50

0

-50

2

50

100

150 MS

TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1
DRIV. PELVIS Z

CHANNEL CLASS 60

940104

1: DECELERATION

MAX. G = 4.3 G AT 134.7 MS

2: SPEED

V-0 TIME = 0.0 MS

3: DISPLACEMENT

MAX. DISPL. = 324.0 MM AT 170.0 MS

MM KM/H G

150

1000 50 100

500 25 50

0

-50

3

100

50

2

150 MS

TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1
DRIV. FEMUR

940104
CHANNEL CLASS 600

L: LEFT FEMUR

MAX. FORCE = 5745.3 N AT 57.4 MS
57.4 % OF FMVSS 208

R: RIGHT FEMUR

MAX. FORCE = 5718.9 N AT 58.5 MS
57.1 % OF FMVSS 208

N

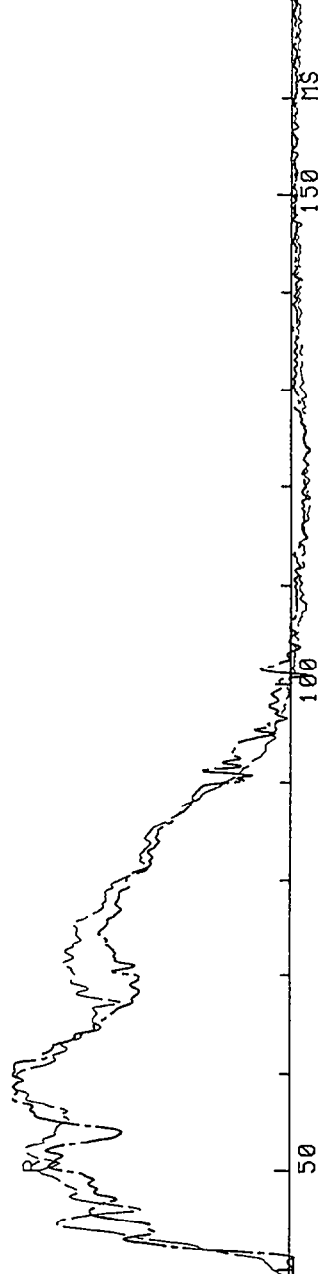
15000

10000

5000

0

-5000

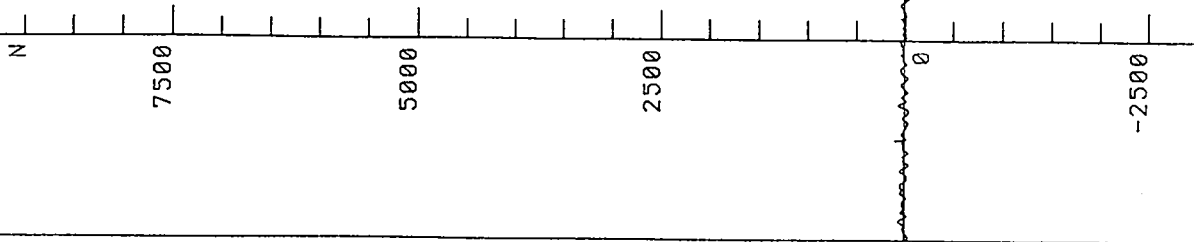


TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1
DRIV. LEFT FEMUR X-AXIS SHEAR FORCE

940104
CHANNEL CLASS 600

1:FORCE

MAX. FORCE = 270.3 N AT 52.2 MS

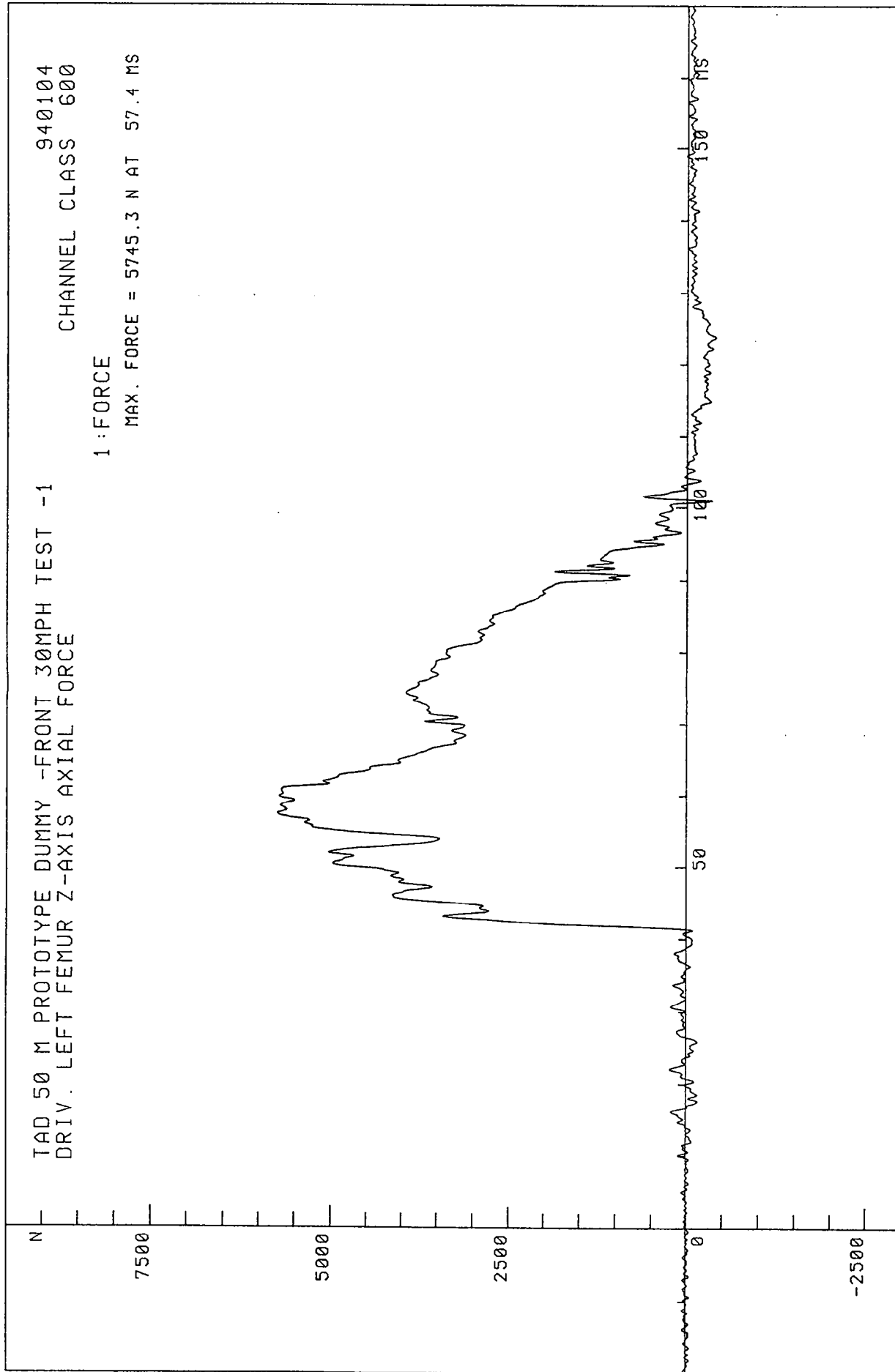


TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1
DRIV. LEFT FEMUR Z-AXIS AXIAL FORCE

940104
CHANNEL CLASS 600

1:FORCE

MAX. FORCE = 5745.3 N AT 57.4 MS



TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1
DRIV. LEFT FEMUR MOMENT ABOUT X-AXIS

940104
CHANNEL CLASS 600

1: MOMENT

MAX. TORQUE = 128.6 N-M AT 82.3 MS

N-M

7500

5000

2500

0

-2500

50

100

150

MS

TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1
DRIV. LEFT FEMUR MOMENT ABOUT Y-AXIS

940104
CHANNEL CLASS 600

1: MOMENT

MAX. TORQUE = 136.0 N-M AT 67.8 MS

N-M

7500

5000

2500

0

-2500

50

100

150

MS

TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1
DRIV. RIGHT FEMUR X-AXIS SHEAR FORCE

940104
CHANNEL CLASS 600

1:FORCE

MAX. FORCE = 2221.8 N AT 69.4 MS

N

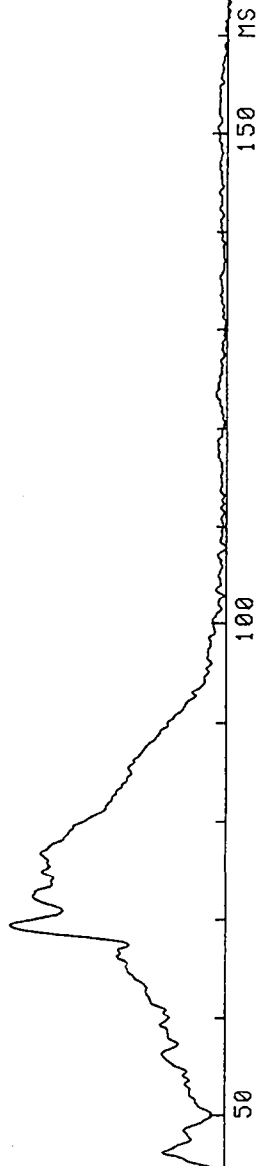
7500

5000

2500

0

-2500

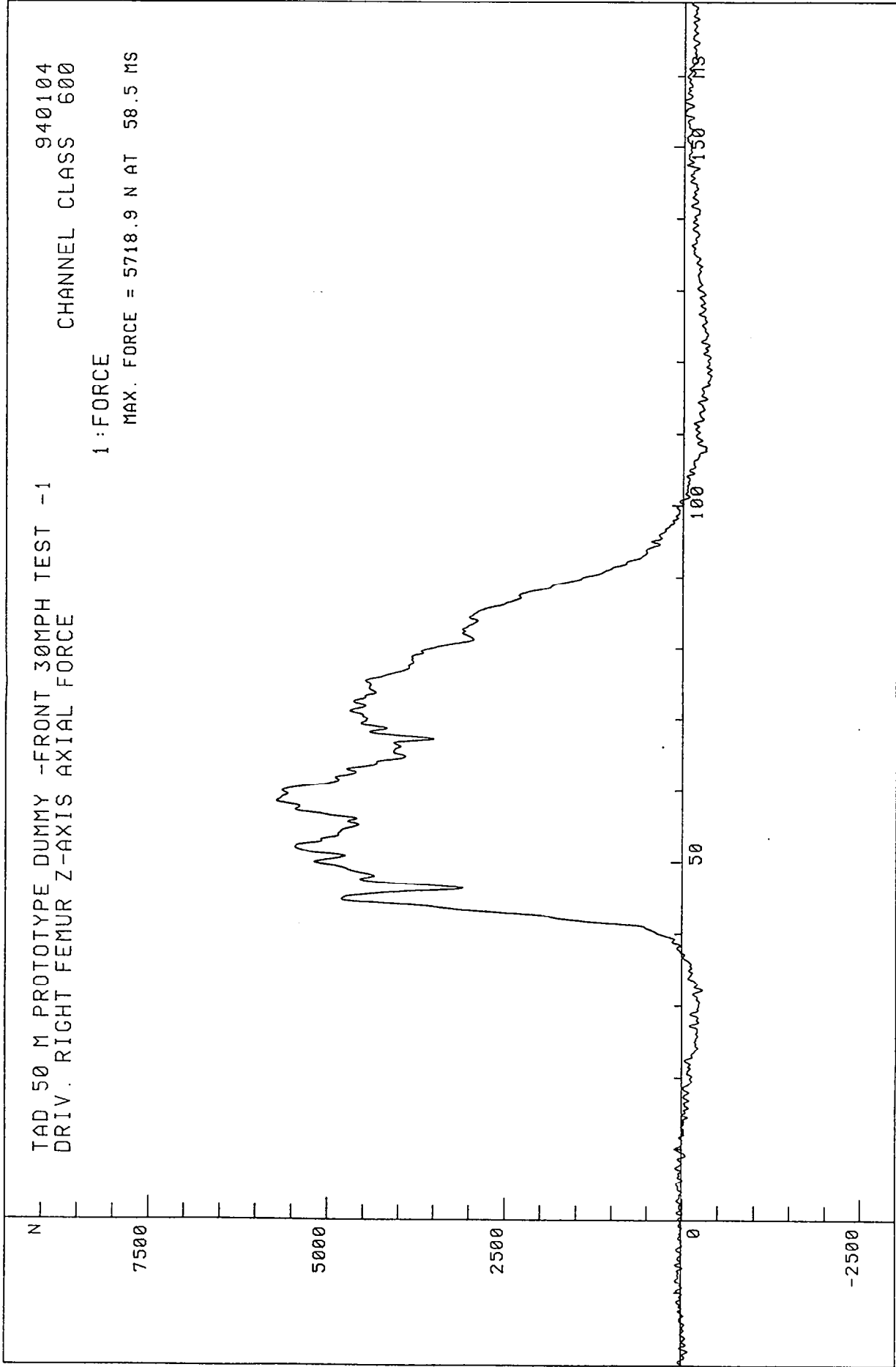


TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1
DRIV. RIGHT FEMUR Z-AXIS AXIAL FORCE

940104
CHANNEL CLASS 600

1:FORCE

MAX. FORCE = 5718.9 N AT 58.5 MS



TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1
DRIV. RIGHT FEMUR MOMENT ABOUT X-AXIS

940104

CHANNEL CLASS 600

1: MOMENT

MAX. TORQUE = 80.8 N-M AT 46.8 MS

N-M

7500

5000

2500

0

-2500

50

100

150

MS

TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1
DRIV. RIGHT FEMUR MOMENT ABOUT Y-AXIS

940104
CHANNEL CLASS 600

1: MOMENT

MAX. TORQUE = 254.7 N-M AT 79.5 MS

N-M

7500

5000

2500

0

-2500

50

100

150

MS

TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1
PASS. HEAD

940104
CHANNEL CLASS 1000

61.8 MS
36.0 MS
97.8 MS

X: LONGITUDINAL
Y: LATERAL
Z: VERTICAL
R: RESULTANT

HIC = 469 (36.0 MS)
T1 = 61.8 MS
T2 = 97.8 MS
MAX. G = 54.0 G AT 87.6 MS
MAX. HIC = 741 (67.2 MS)

G

100

50

-50

50

100

150

MS

R

Z

TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1
PASS. HEAD X

940104
CHANNEL CLASS 1000

1: DECELERATION

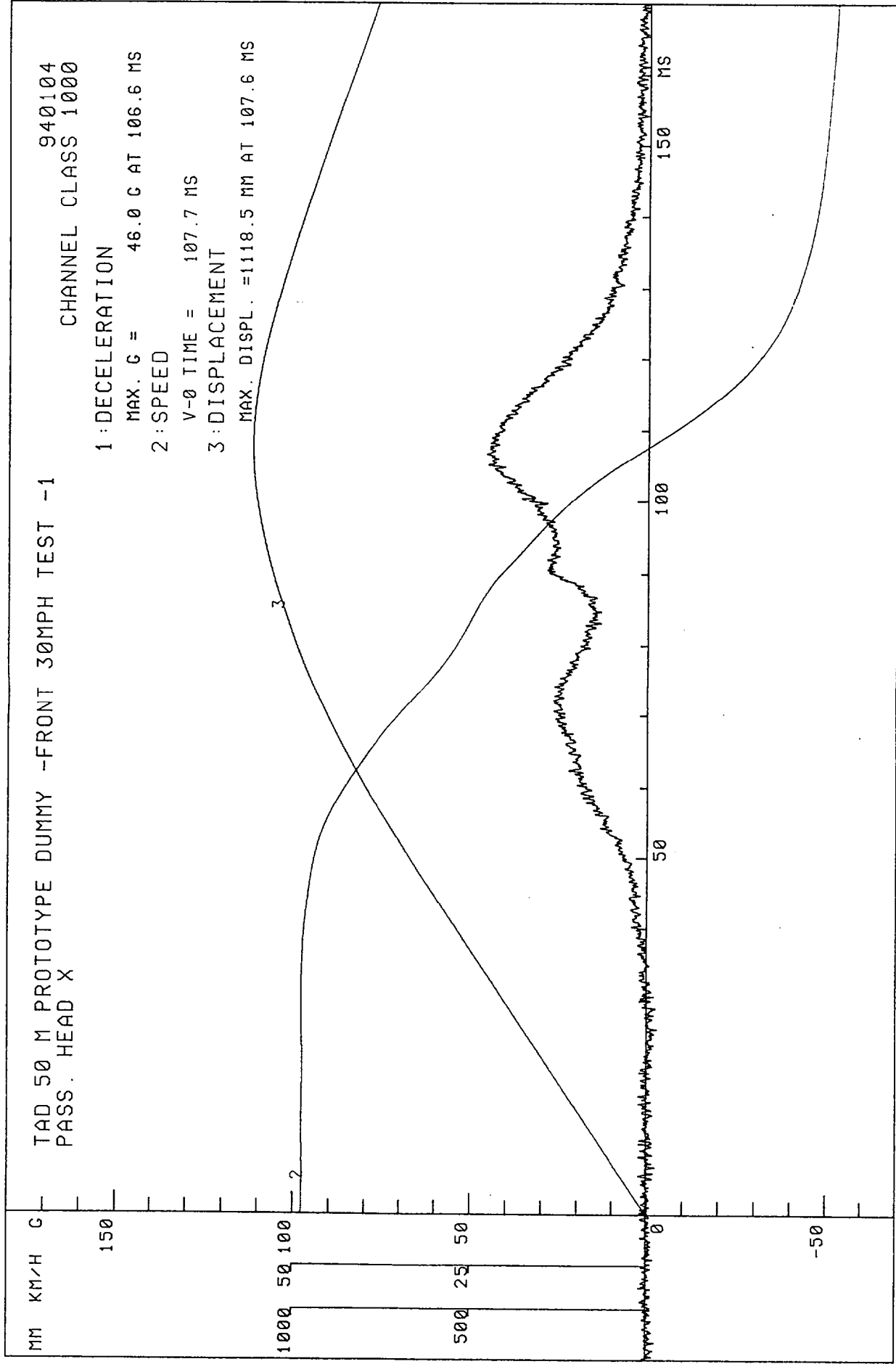
MAX. G = 46.0 G AT 106.6 MS

2: SPEED

V-0 TIME = 107.7 MS

3: DISPLACEMENT

MAX. DISPL. = 1118.5 MM AT 107.6 MS

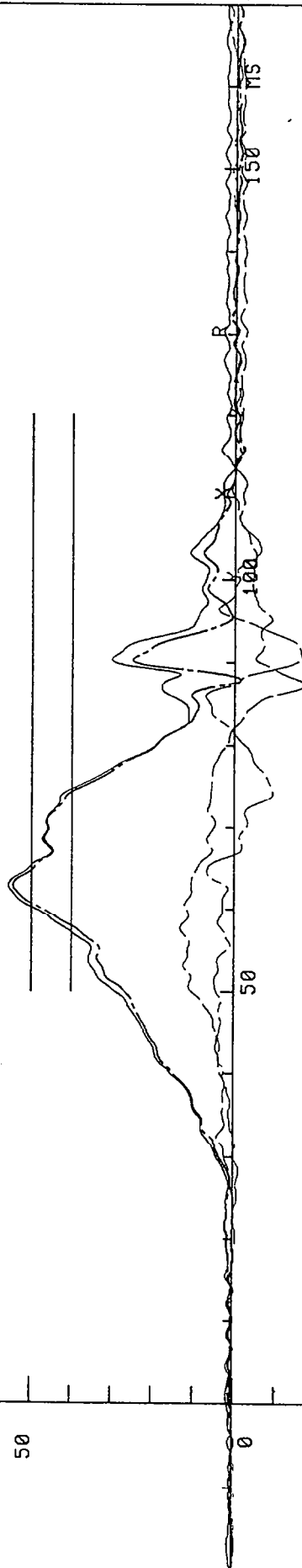


TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1
PASS. CHEST

940104
CHANNEL CLASS 180

X: LONGITUDINAL
Y: LATERAL
Z: VERTICAL
R: RESULTANT

53.2 G (3.0 MS)
T1 = 61.2 MS
T2 = 64.1 MS
MAX. G = 55.5 G AT 62.8 MS



TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1
PASS. CHEST X

940104
CHANNEL CLASS 180

1: DECELERATION

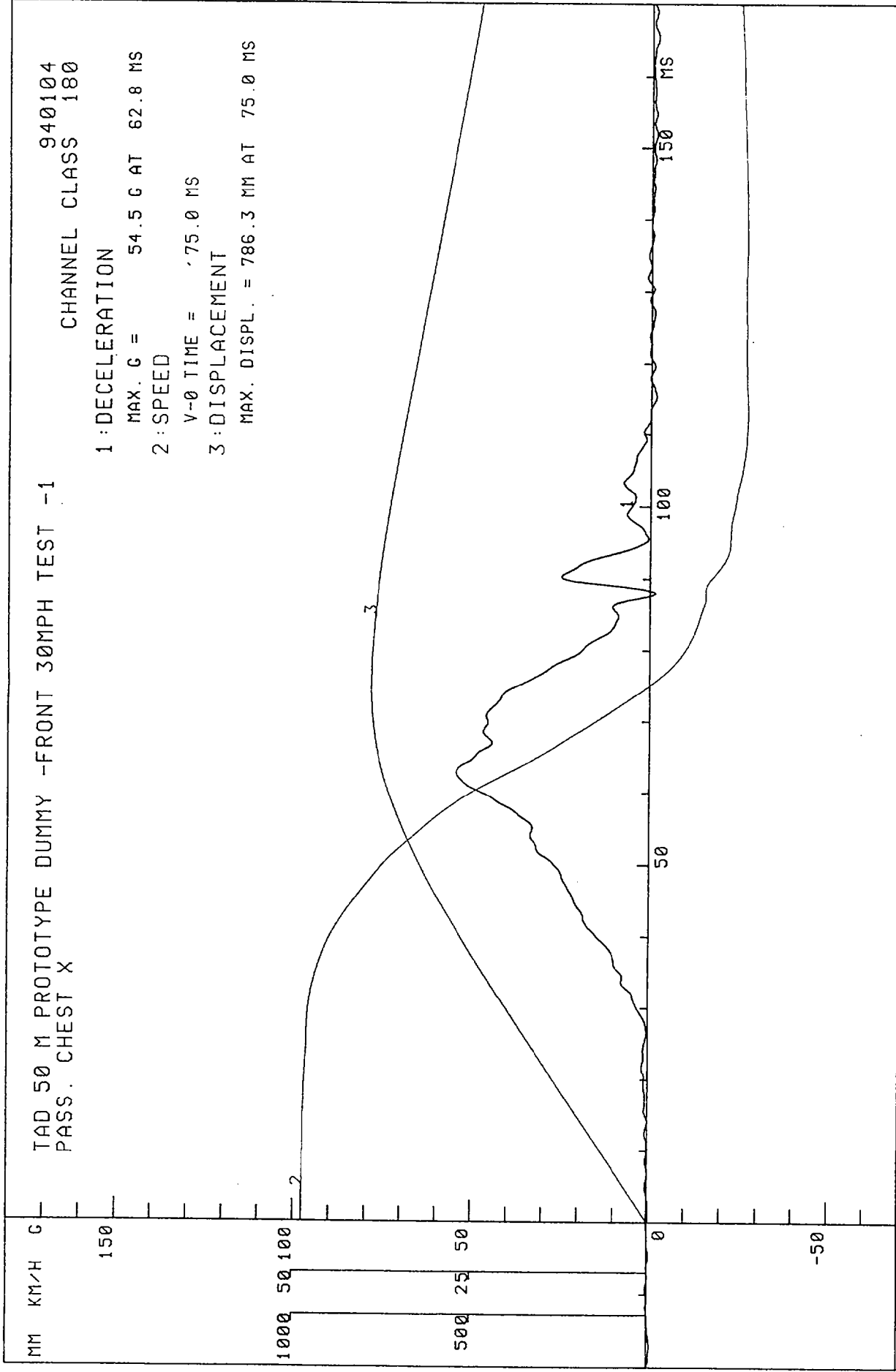
MAX. G = 54.5 G AT 62.8 MS

2: SPEED

V-0 TIME = 75.0 MS

3: DISPLACEMENT

MAX. DISPL. = 786.3 MM AT 75.0 MS

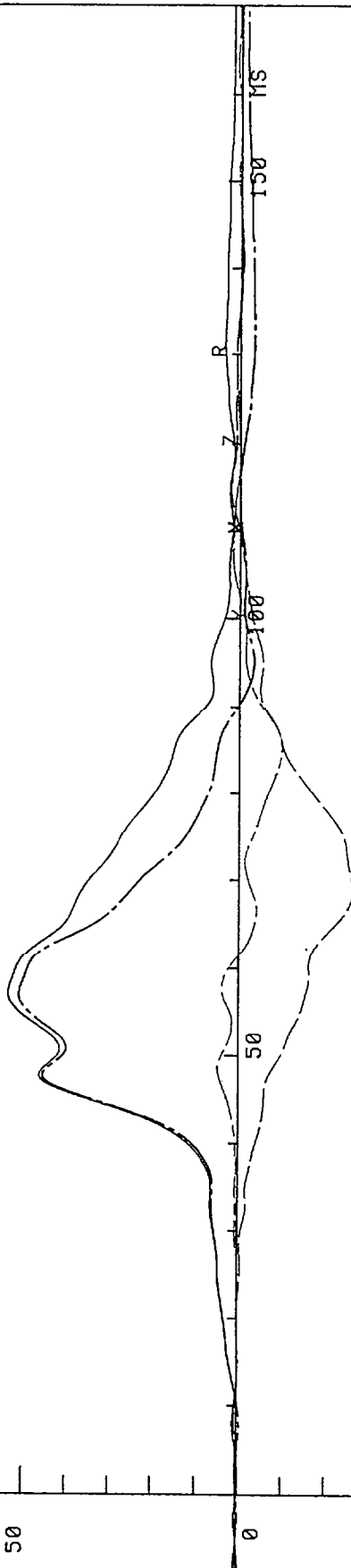


TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1
PASS. PELVIS

940104
CHANNEL CLASS 60

X: LONGITUDINAL
Y: LATERAL
Z: VERTICAL
R: RESULTANT

MAX. G = 53.5 G AT 57.0 MS

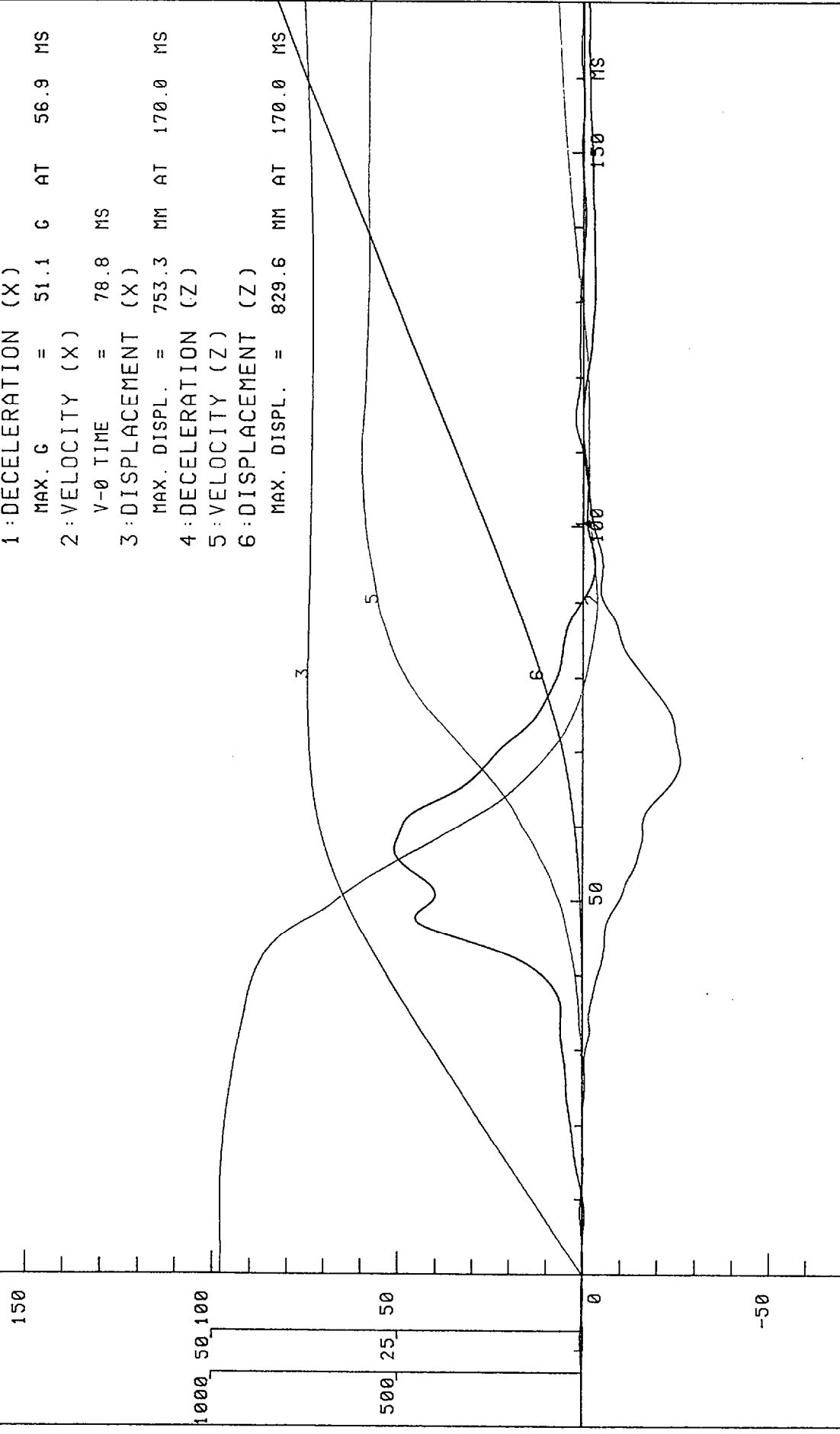


MM KM/H G

TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1
PASS. PELVIS

940104

1: DECELERATION (X)
MAX. G = 51.1 G AT 56.9 MS
2: VELOCITY (X)
V-0 TIME = 78.8 MS
3: DISPLACEMENT (X)
MAX. DISPL. = 753.3 MM AT 170.0 MS
4: DECELERATION (Z)
5: VELOCITY (Z)
6: DISPLACEMENT (Z)
MAX. DISPL. = 829.6 MM AT 170.0 MS



TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1
PASS. PELVIS X

MM KM/H G

940104
CHANNEL CLASS 60

1: DECELERATION

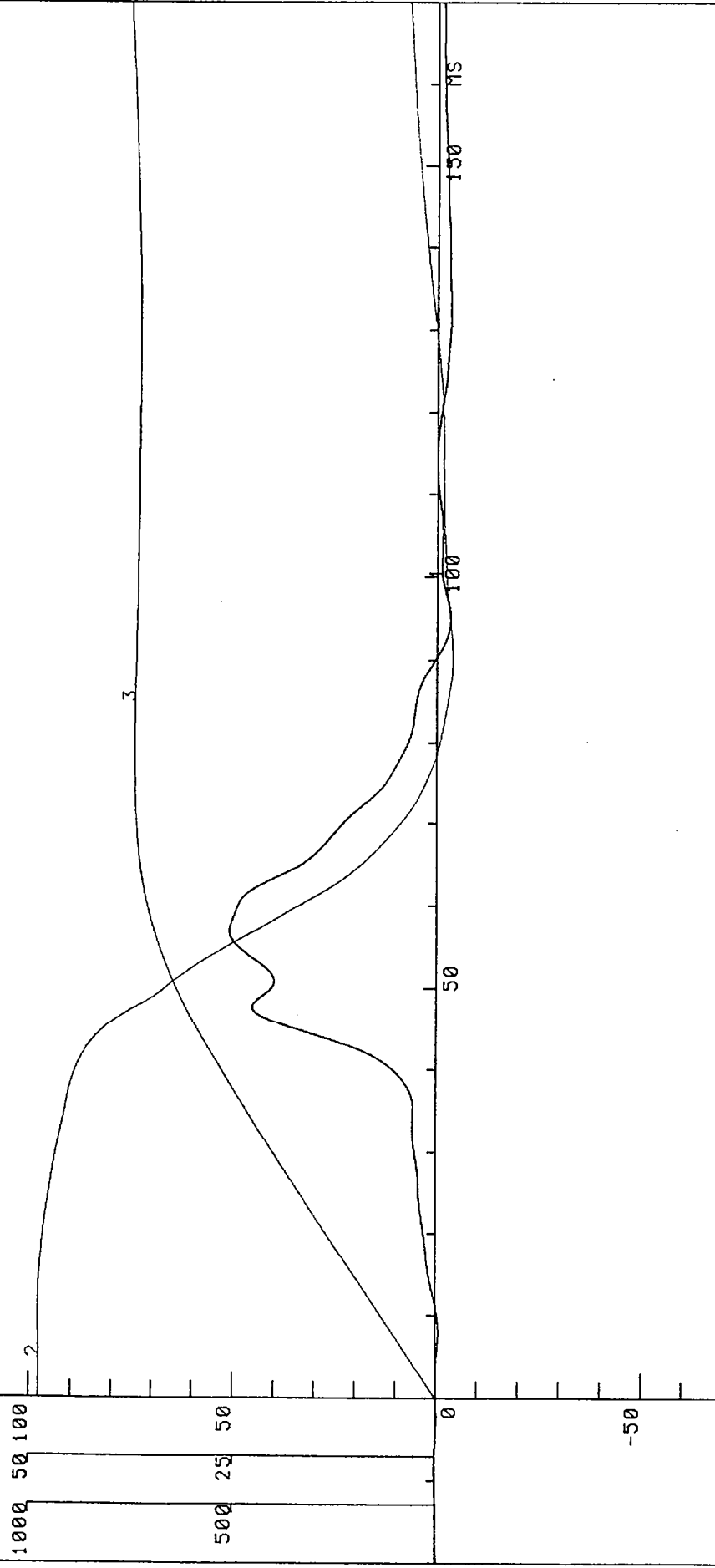
MAX. G = 51.1 G AT 56.9 MS

2: SPEED

V-0 TIME = 78.8 MS

3: DISPLACEMENT

MAX. DISPL. = 753.3 MM AT 170.0 MS



TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1
PASS. PELVIS Y

CHANNEL CLASS 60 940104

1: DECELERATION

MAX. G = 4.8 G AT 48.5 MS

2: SPEED

V-0 TIME = 0.0 MS

3: DISPLACEMENT

MAX. DISPL. = 51.6 MM AT 170.0 MS

MM KM/H G

150

1000 50 100

500 25 50

0

-50

50 100 150 MS

TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1
PASS. PELVIS Z

CHANNEL CLASS 60 940104

1: DECELERATION

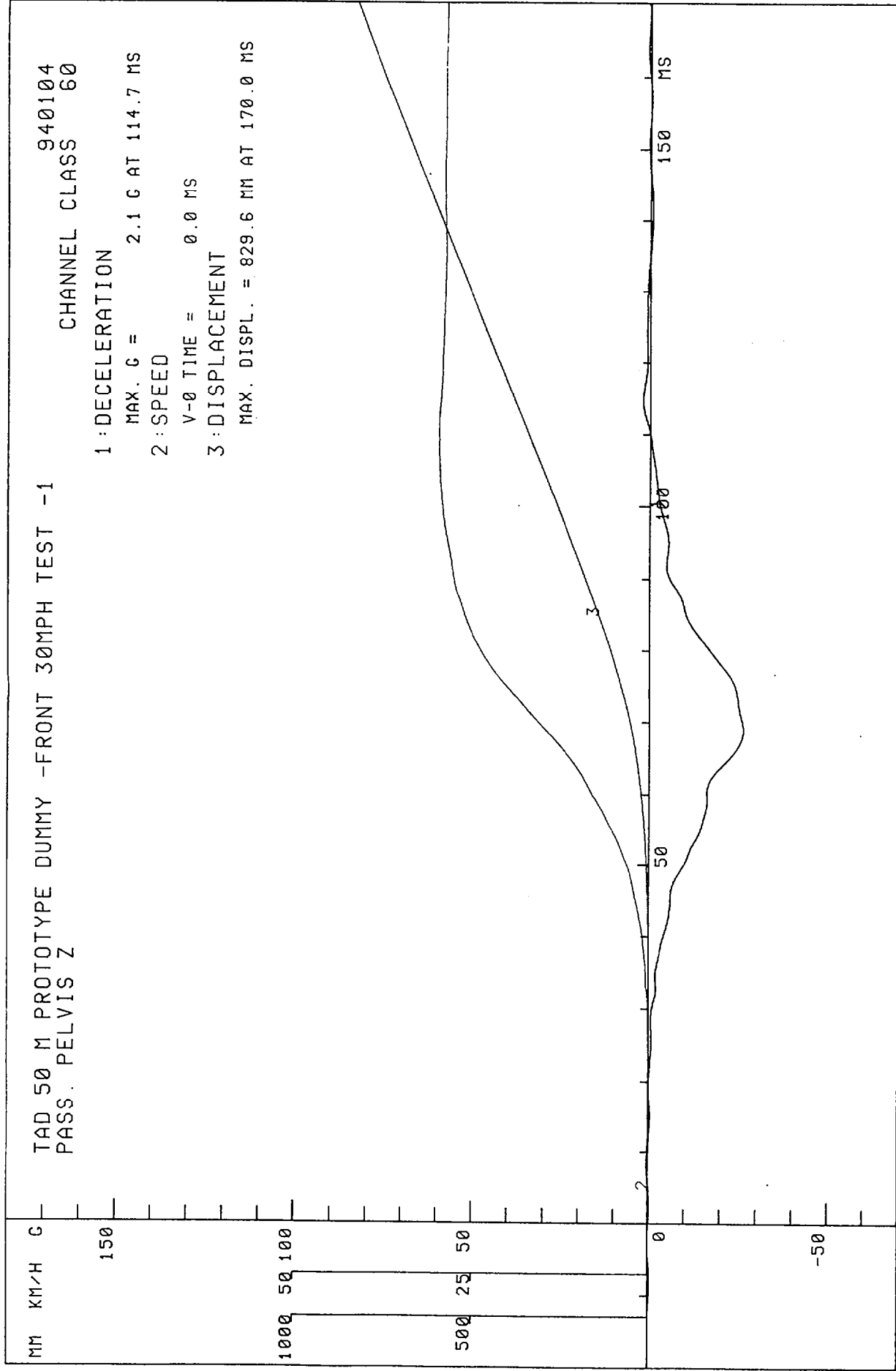
MAX. G = 2.1 G AT 114.7 MS

2: SPEED

V-0 TIME = 0.0 MS

3: DISPLACEMENT

MAX. DISPL. = 829.6 MM AT 170.0 MS



TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1
PASS. FEMUR

940104
CHANNEL CLASS 600

L: LEFT FEMUR

MAX. FORCE = 3391.6 N AT 47.4 MS
33.9 % OF FMVSS 208

R: RIGHT FEMUR

MAX. FORCE = 1590.9 N AT 47.4 MS
15.9 % OF FMVSS 208

N

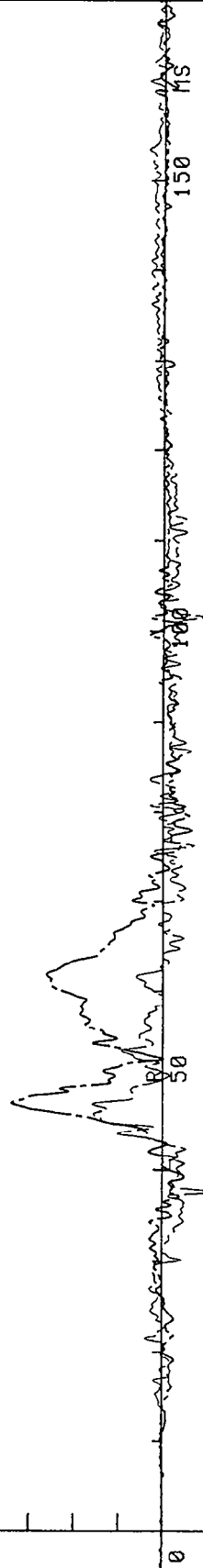
15000

10000

5000

0

-5000



TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1
DRIVER AIRBAG PRESSURE

940104
CHANNEL CLASS 60

1: DRIVER AIRBAG

MAX. PRESSURE = 103.9 KPA AT 21.1 MS

KPA

300

200

100

0

-100

50

100

150

MS



TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1 BELT LOAD

940104
CHANNEL CLASS 60

1: PASSENGER LAP

MAX. FORCE = 7393.1 N AT 58.6 MS
490.0 N AT 27.6 MS

2: PASSENGER SHOULDER

MAX. FORCE = 9279.8 N AT 68.2 MS
490.0 N AT 27.1 MS

N

10000

7500

5000

2500

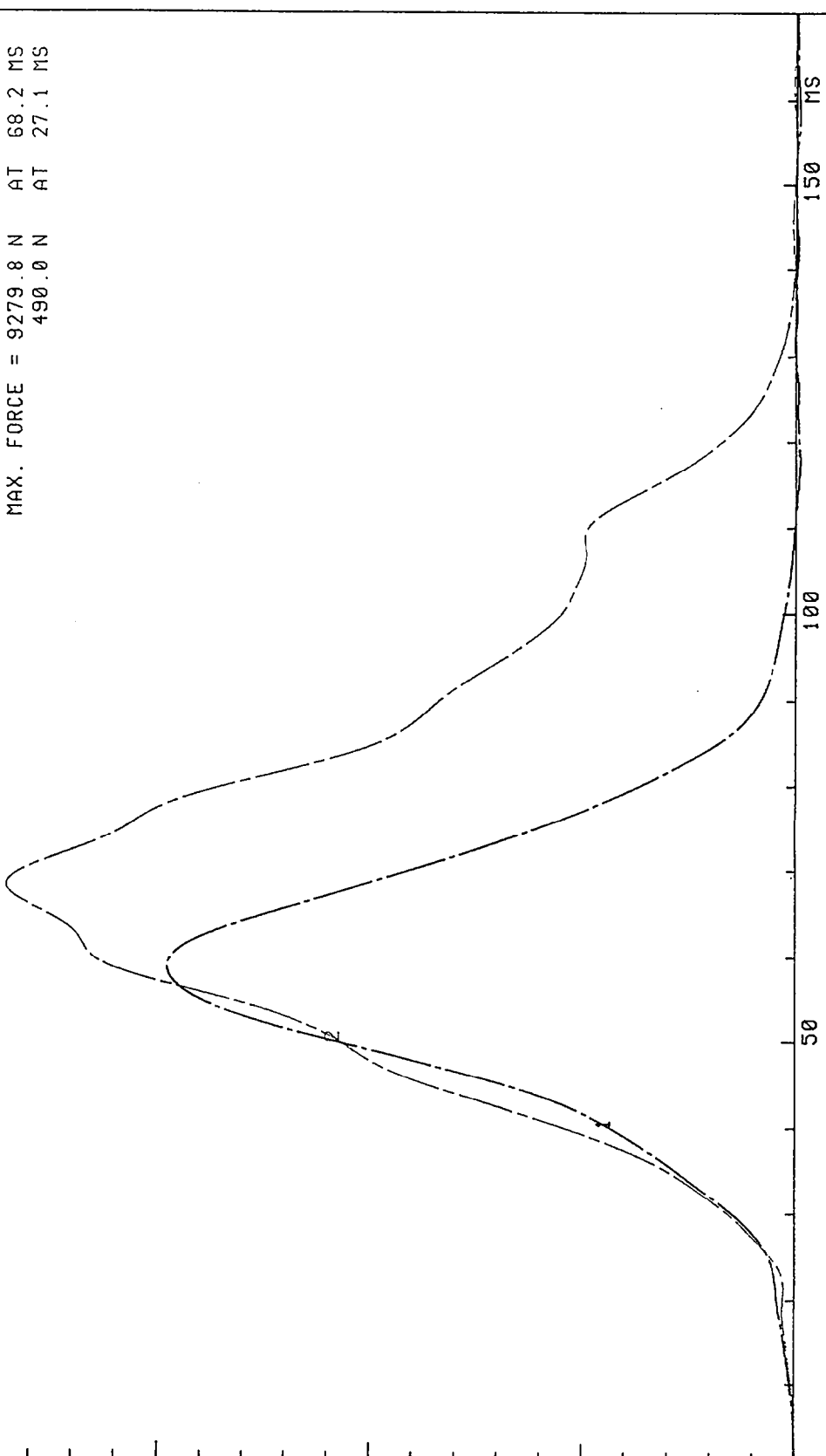
0

50

100

150

MS



TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1
 ENG TOP G LONG.

MM KM/H G

150

1000 50 100

500 25 50

0

-50

940104
 CHANNEL CLASS 60

1: DECELERATION

MAX. G = 98.3 G AT 27.9 MS

2: SPEED

V-0 TIME = 33.4 MS

3: DISPLACEMENT

MAX. DISPL. = 339.4 MM AT 53.0 MS

2

3

100

50

150

MS

TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1
ENG BOTTOM G LONG.

CHANNEL CLASS 60

940104

1: DECELERATION

MAX. G = 153.8 G AT 32.1 MS

2: SPEED

V-0 TIME = 29.1 MS

3: DISPLACEMENT

MAX. DISPL. = 321.7 MM AT 29.0 MS

MM KM/H G

150

1000 50 100

500 25 50

0

-50

100

50

150

MS

TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1
FLOOR G LONG.

MM KM/H G

940104
CHANNEL CLASS 60

1: DECELERATION

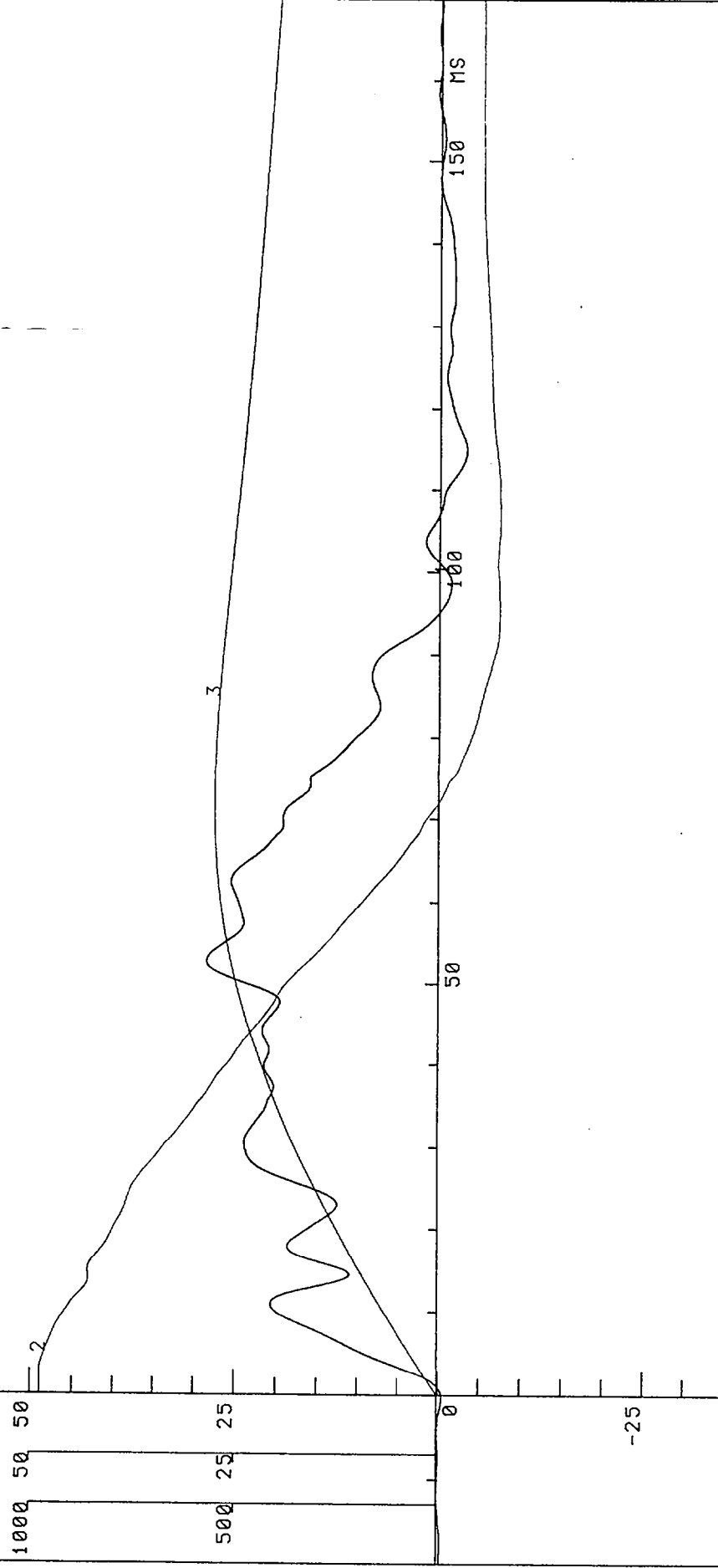
MAX. G = 28.5 G AT 52.6 MS

2: SPEED

V-0 TIME = 71.9 MS

3: DISPLACEMENT

MAX. DISPL. = 552.5 MM AT 71.9 MS



TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1 FLOOR G LONG

MM KM/H G

1000 500 250 125 62.5 31.25 15.625 7.8125 3.90625 1.953125 0.9765625 0.48828125 0.244140625 0.1220703125 0.06103515625 0.030517578125 0.0152587890625 0.00762939453125 0.003814697265625 0.0019073486328125 0.00095367431640625 0.000476837158203125 0.0002384185791015625 0.00011920928955078125 0.000059604644775390625 0.0000298023223876953125 0.00001490116119384765625 0.000007450580596923828125 0.0000037252902984619140625 0.00000186264514923095703125 0.000000931322574615478515625 0.0000004656612873077392578125 0.00000023283064365386962890625 0.000000116415321826934814453125 0.000000582076609134674072265625 0.0000002910383045673370361328125 0.00000014551915228366851806640625 0.000000072759576141834259033203125 0.0000000363797880709171295166015625 0.00000001818989403545856475830078125 0.000000009094947017729282379150390625 0.0000000045474735088646411895751953125 0.00000000227373675443232059478759765625 0.000000001136868377216160297393798828125 0.0000000005684341886080801486968994140625 0.00000000028421709430404007434844970703125 0.000000000142108547152020037174224853515625 0.0000000000710542735760100185871124267578125 0.00000000003552713678800500929355621337890625 0.000000000017763568394002504646778106689453125 0.0000000000088817841970012523233890533447265625 0.00000000000444089209850062616169452667236328125 0.000000000002220446049250313080847263336181640625 0.0000000000011102230246251565404236316680908203125 0.00000000000055511151231257827021181583404541015625 0.000000000000277555756156289135105907917022705078125 0.0000000000001387778780781445675529539585113525390625 0.00000000000006938893903907228377647697925567626953125 0.000000000000034694469519536141888238489627838134765625 0.0000000000000173472347597680709441192448139190673828125 0.000000000000008673617379884035472059622406959533940625 0.0000000000000043368086899420177360298112034797669703125 0.00000000000000216840434497100886801490560173988348515625 0.000000000000001084202172485504434007452800869941742578125 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0.000000000000000000033087224502121106994856347682798515093326568603515625 0.0000000000000000000165436122510605534974281738413992575466632843017578125 0.00000000000000000000827180612553027674871408692069962877333164215087890625 0.000000000000000000004135903062765138374357043460349814386665821075439453125 0.0000000000000000000020679515313825691871785217301749071933329105377197265625 0.00000000000000000000103397576569128459358926086508745359666645526885986328125 0.000000000000000000000516987882845642296794630432543726798333227634429931640625 0.0000000000000000000002584939414228211483973152162718633991666138172149658203125 0.00000000000000000000012924697071141057419865760813593169958330690860748291015625 0.000000000000000000000064623485355705287099328804067965849791653454303741455078125 0.0000000000000000000000323117426778526435496644020339829248958267271518707275390625 0.00000000000000000000001615587133892632177483220101699146244791336357593536376953125 0.000000000000000000000008077935669463160887416100508495731223956681787967681884765625 0.0000000000000000000000040389678347315804437080502542478656119783408939838409423828125 0.00000000000000000000000201948391736579022185402512712393280598917044699192047119140625 0.000000000000000000000001009741958682895110927012563561966402994585223495960235595703125 0.0000000000000000000000005048709793414475554635062817809832014972926117479801177978515625 0.00000000000000000000000025243548967072377773175314089049160074864630587399005889892578125 0.000000000000000000000000126217744835361888865876570445245800374323152636995029449462890625 0.0000000000000000000000000631088724176809444329382852226229001871615763184975147247314453125 0.00000000000000000000000003155443620884047221646914261131145009358078815924875736236572265625 0.000000000000000000000000015777218104420236108234571305655725046790394079624378681182861328125 0.0000000000000000000000000078886090522101180541172856528278625233975970398121893405914306640625 0.00000000000000000000000000394430452610505902705864282641393126198879851990609467029571533203125 0.000000000000000000000000001972152263052529513529321413206965630994399259953047335147857666015625 0.0000000000000000000000000009860761315262647567646607066034828154971996299765236675723928330078125 0.000000000000000000000000000493038065763132378382330353301741407748599814988261833786196416650390625 0.0000000000000000000000000002465190328815661891911651766508707038742999074941309168930982083251953125 0.00000000000000000000000000012325951644078309459558258832543535193714995374706545844649610416259765625 0.000000000000000000000000000061629758220391547297791294162717675968574997687532729223248052081298828125 0.0000000000000000000000000000308148791101957736488956470813588379842874988437663646116240260406494140625 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0.0000000000000000000000000000000000018367099231598242312011508394082524656312912727864583361012333941879833639055490494384765625 0.00000000000000000000000000000000000091835496157991211560057541970412623281564561364322916780561669709399168195277452471921875 0.000000000000000000000000000000000000459177480789956057800287709852063116407822806821614583902808348546995840976387262359609375 0.0000000000000000000000000000000000002295887403949780289001438549260315582039114034108072919514041742734979204881936311798046875 0.00000000000000000000000000000000000011479437019748901445007192746301577910195570170540364597570208713674896024409681558990234375 0.000000000000000000000000000000000000057397185098744507225003593731501588950097785085270182297851043568374480122048407794951171875 0.0000000000000000000000000000000000000286985925493722536125017968657507944750488925426350911489255217841872400610242038974755859375 0.00000000000000000000000000000000000001434929627468612680625089843287539723752444627131754557446276089209362003051210194873779296875 0.000000000000000000000000000000000000007174648137343063403125049461637698618762223135658772787231380446046810015256050974368896484375 0.0000000000000000000000000000000000000035873240686715317015625024708188493093811115678293863936156902230234050076280254871844482421875 0.00000000000000000000000000000000000000179366203433576585078125012350942465469055578391469319680784511151170250381401274359222412109375 0.000000000000000000000000000000000000000896831017167882925390625006175472327345027786957346598403922555755851251907006371796112061046875 0.00000000000000000000000000000000000000004484155085839414626953125003087736136725138934786732992019612778779256259535031858980560305234375 0.0000000000000000000000000000000000000000022420775429197073134765625001543868183625694673933664960098063893896281297675159294902801526171875 0.00000000000000000000000000000000000000000112103877145985365673828125000771933918128473369668324800490319469481406488375796474514007630859375 0.000000000000000000000000000000000000000000560519385729926828369140625000385966959064366848341624002451597347407032441878982372570038154296875 0.0000000000000000000000000000000000000000002802596928649634141845703125000192983479521834241708120012257986737035162209394911862850190771471875 0.00000000000000000000000000000000000000000014012984643248170709228515625000096491739760671208540600061289933685175811046974559314250953857359375 0.000000000000000000000000000000000000000000070064923216240853546142578125000048245869803356042703000306449668425879055234872796571254769286796875 0.0000000000000000000000000000000000000000000350324616081204267730712890625000024122934901678023515000153224834214395276174363982856273846433984375 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0.000000000000000000000000000000000000000000000273691106313440834164619445800781250000001884604289193595859375001197055035

TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1
SRS SENSOR LEFT G LONG.

CHANNEL CLASS 60

940104

1: DECELERATION

MAX. G = 57.1 G AT 43.2 MS

2: SPEED

V-0 TIME = 85.6 MS

3: DISPLACEMENT

MAX. DISPL. = 481.7 MM AT 85.5 MS

MM KM/H G

150

1000 50 100

500 25 50

0

-50

2

3

100

50

150

MS

TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1
SRS SENSOR RIGHT G LONG.

CHANNEL CLASS 60 940104

1: DECELERATION

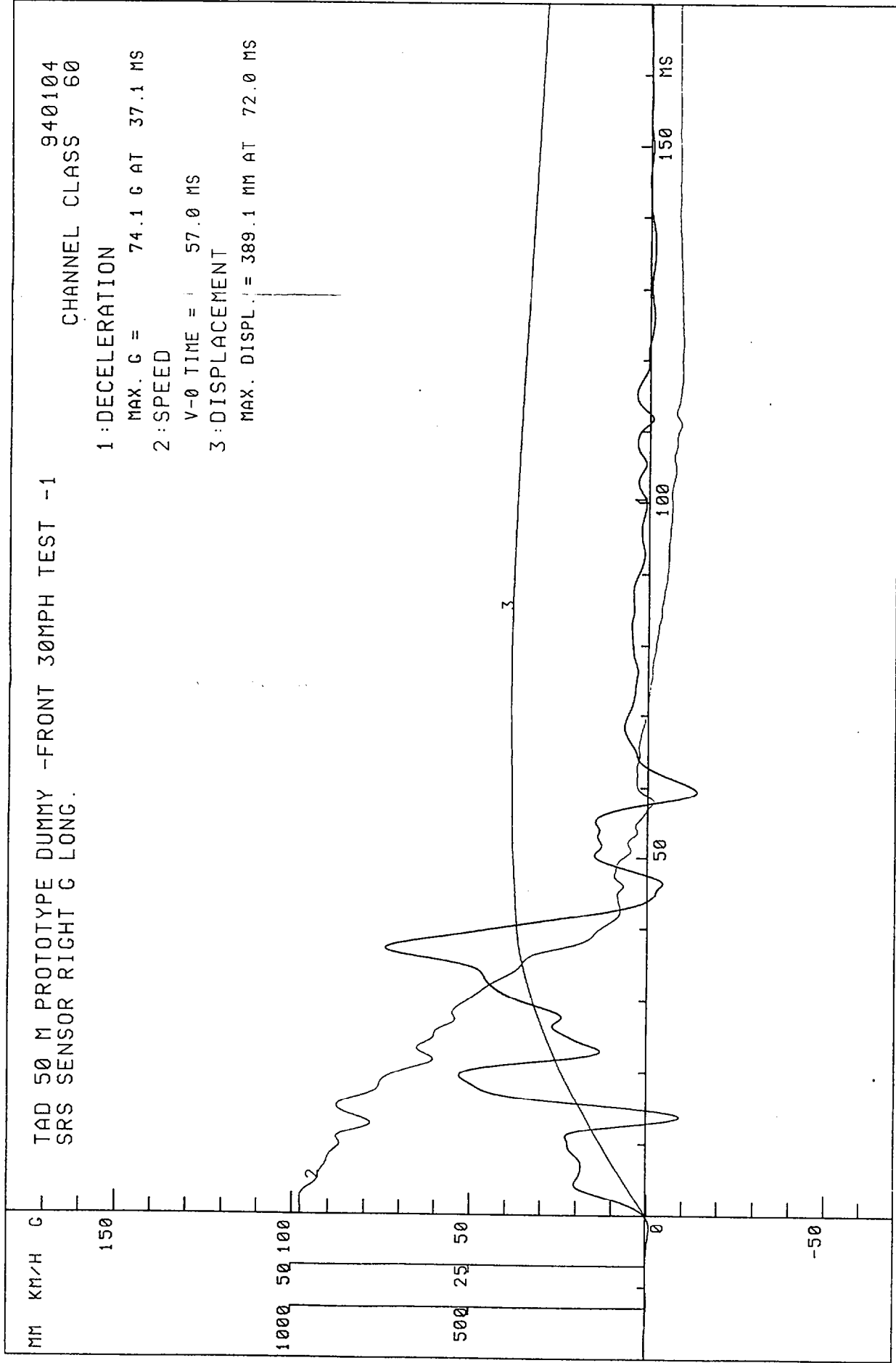
MAX. G = 74.1 G AT 37.1 MS

2: SPEED

V-0 TIME = 57.0 MS

3: DISPLACEMENT

MAX. DISPL. = 389.1 MM AT 72.0 MS



TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1
LEFT BRAKE CALIPER G LONG.

MM KM/H G

150

1000 50 100

500 25 50

0

-50

940104
CHANNEL CLASS 60

1: DECELERATION

MAX. G = 58.3 G AT 42.6 MS

2: SPEED

V-0 TIME = 53.4 MS

3: DISPLACEMENT

MAX. DISPL. = 436.2 MM AT 53.4 MS

2

3

50

100

150

MS

TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1
RIGHT BRAKE CALIPER G LONG.

CHANNEL CLASS 60

940104

1: DECELERATION

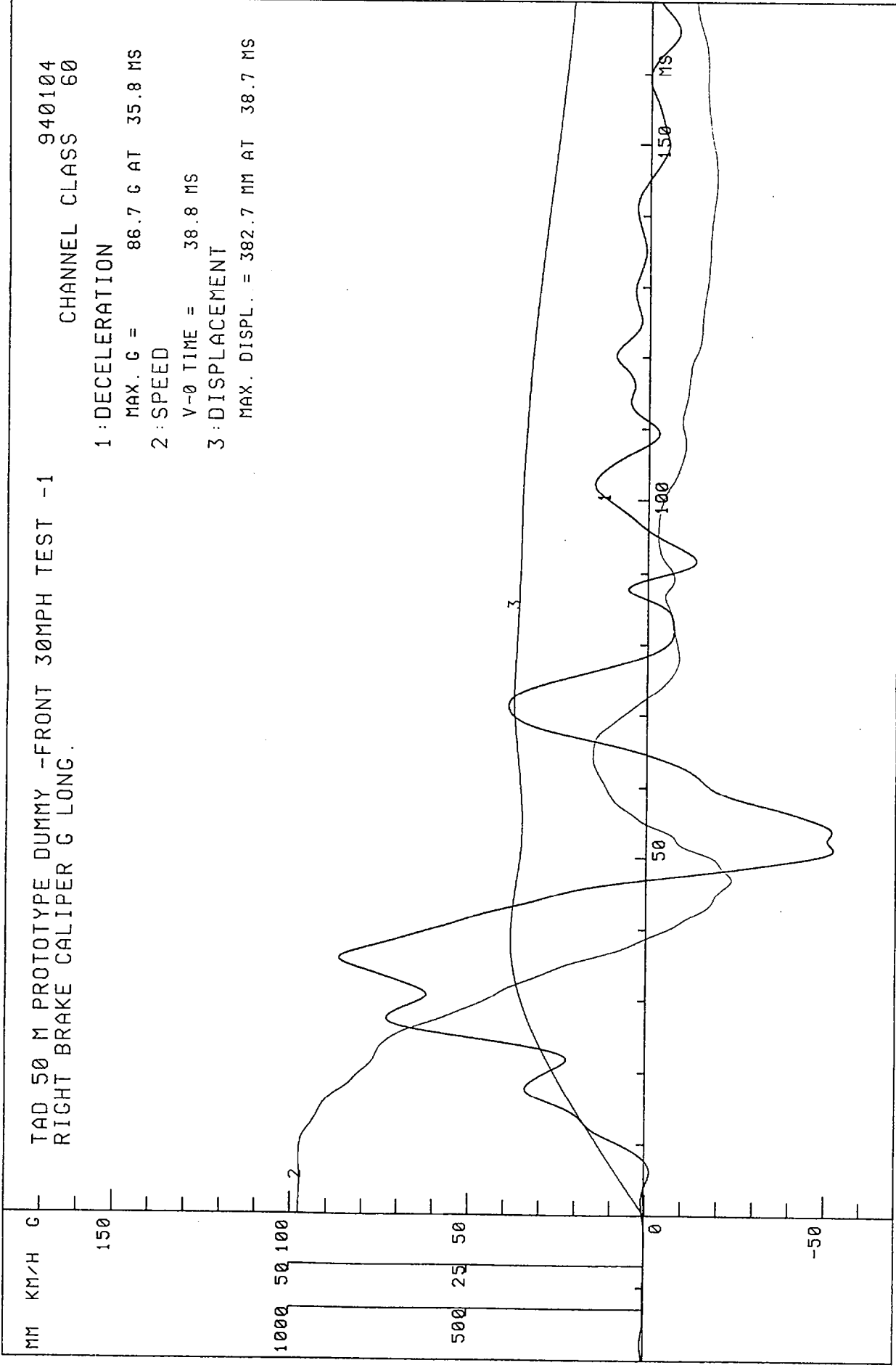
MAX. G = 86.7 G AT 35.8 MS

2: SPEED

V-0 TIME = 38.8 MS

3: DISPLACEMENT

MAX. DISPL. = 382.7 MM AT 38.7 MS



TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1
BRAKE PEDAL BRACKET C LONG.

MM KM/H C

940104
CHANNEL CLASS 60

1: DECELERATION

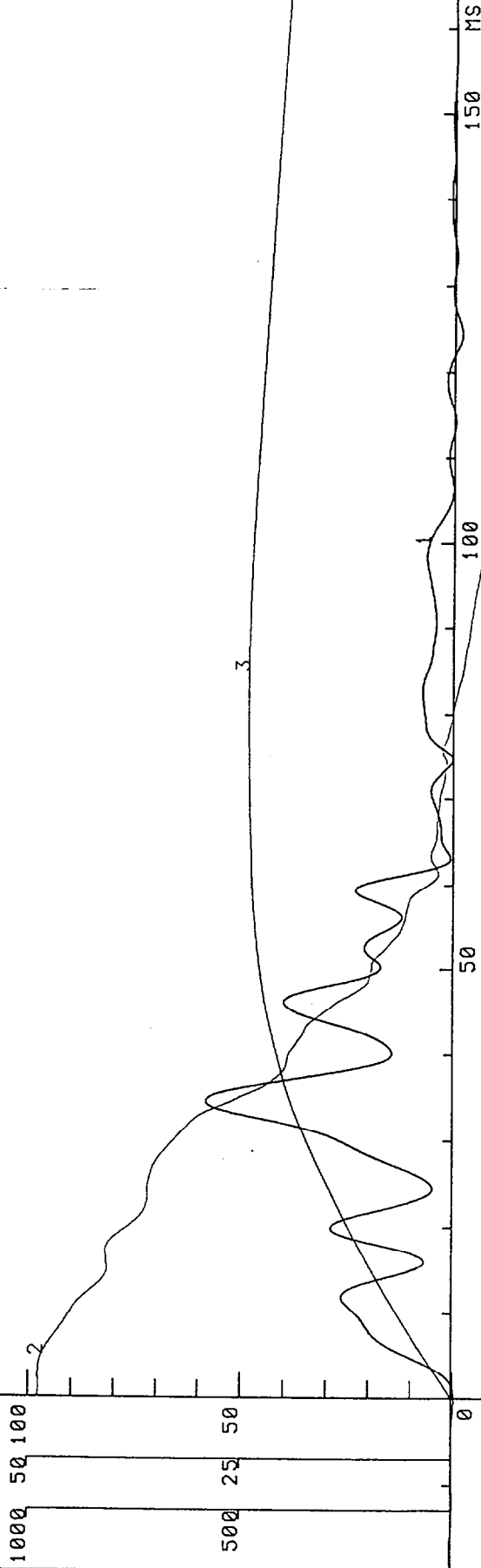
MAX. G = 58.3 G AT 34.5 MS

2: SPEED

V-0 TIME = 80.6 MS

3: DISPLACEMENT

MAX. DISPL. = 484.7 MM AT 80.6 MS



TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1
FRONT CROSSMEMBER G LONG.

MM KM/H G

150

1000 50 100

500 25 50

0

-50

CHANNEL CLASS 60

940104

1: DECELERATION

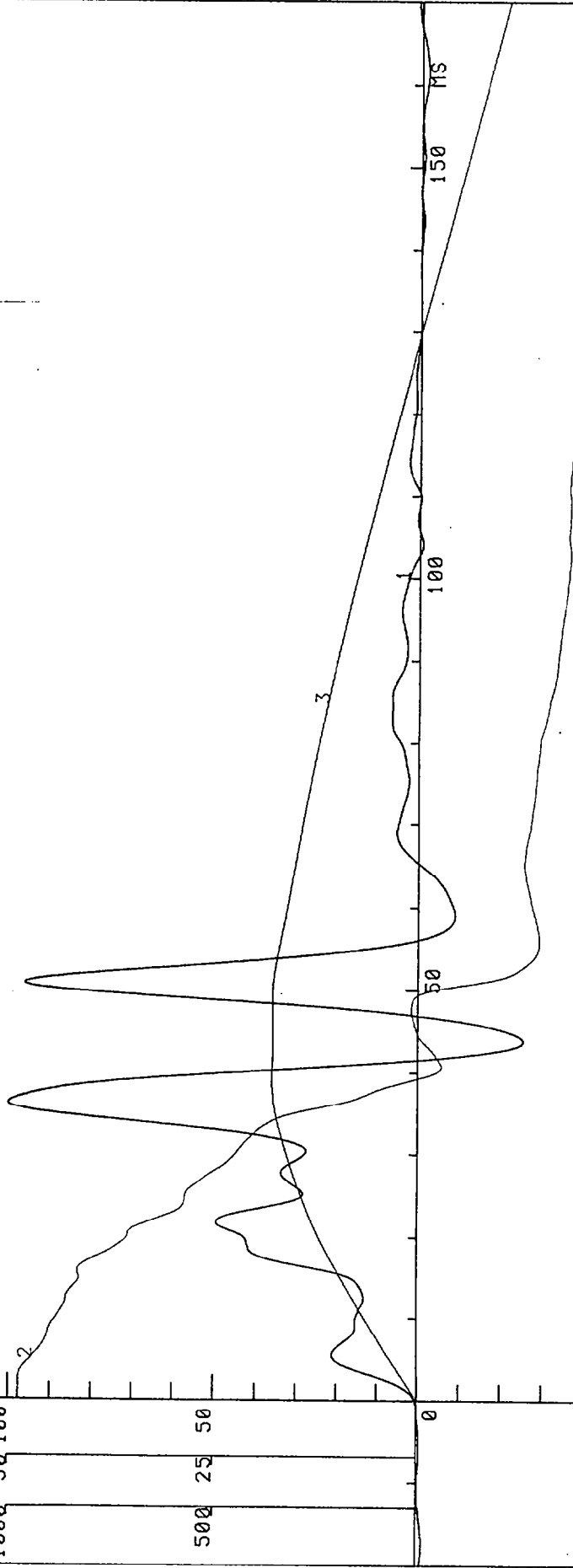
MAX. G = 100.2 G AT 36.2 MS

2: SPEED

V-0 TIME = 39.3 MS

3: DISPLACEMENT

MAX. DISPL. = 358.7 MM AT 39.3 MS



TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1
BARRIER LOAD

940104
CHANNEL CLASS 180

L: LEFT SIDE LOAD

MAX. FORCE = 167.8 KN AT 19.5 MS

C: CENTER LOAD

MAX. FORCE = 279.9 KN AT 28.4 MS

R: RIGHT SIDE LOAD

MAX. FORCE = 180.3 KN AT 24.2 MS

T: TOTAL LOAD

MAX. FORCE = 591.1 KN AT 28.0 MS

KN

750

500

250

0

50

100

150

MS



TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1
F-S L-SIDE

CHANNEL CLASS 180 940104

D: DEFORMATION

DEFORMATION ENERGY = 42448.8 J

R: REBOUND

REBOUND ENERGY = 1056.1 J

A: ACCUM. ENERGY

% KN

800

600

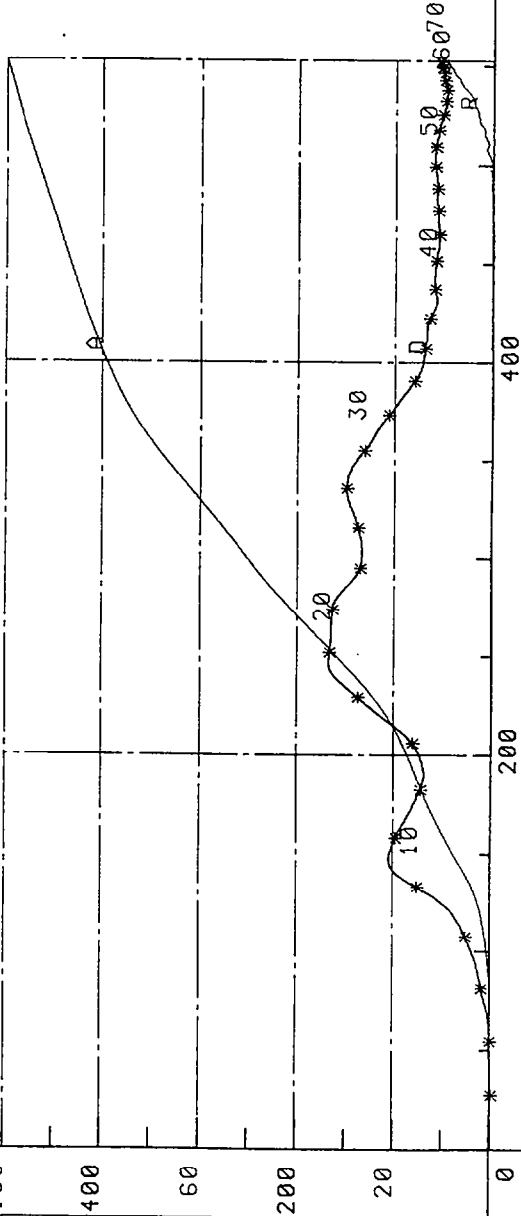
400

200

20

0

-200



MM

800

600

400

200

-200

TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1 F-S CENTER

940104
CHANNEL CLASS 180

D: DEFORMATION

DEFORMATION ENERGY = 86519.5 J

R: REBOUND

REBOUND ENERGY = 2192.3 J

A: ACCUM. ENERGY

% KN

800

600

400

200

0

-200

100

60

20

20

0

-200

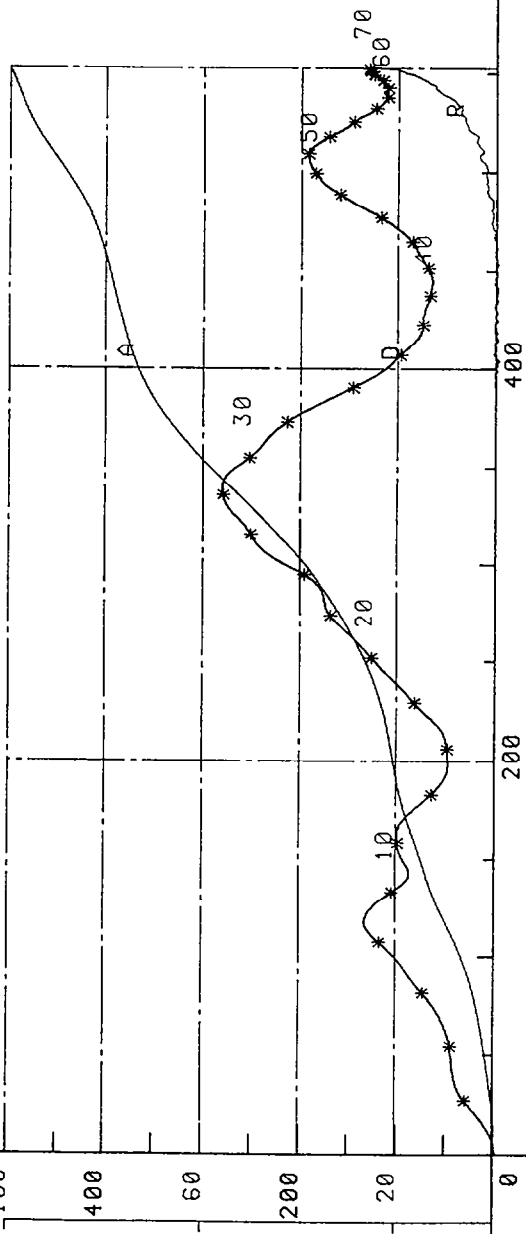
200

400

600

800

MM



TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1
F-S R-SIDE

CHANNEL CLASS 180 940104

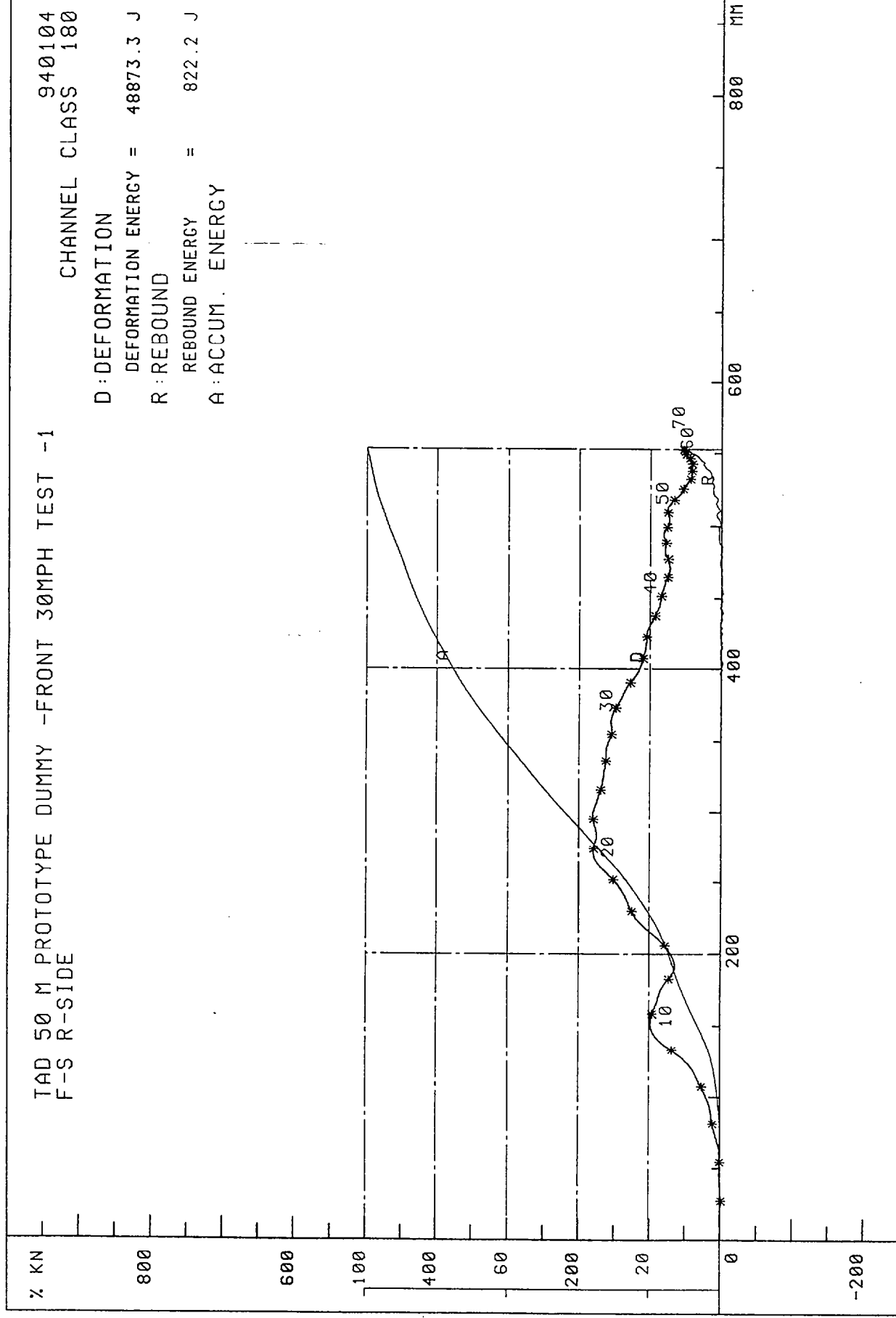
D: DEFORMATION

DEFORMATION ENERGY = 48873.3 J

R: REBOUND

REBOUND ENERGY = 822.2 J

A: ACCUM. ENERGY



TAD 50 M PROTOTYPE DUMMY -FRONT 30MPH TEST -1 F-S TOTAL

940104
CHANNEL CLASS 180

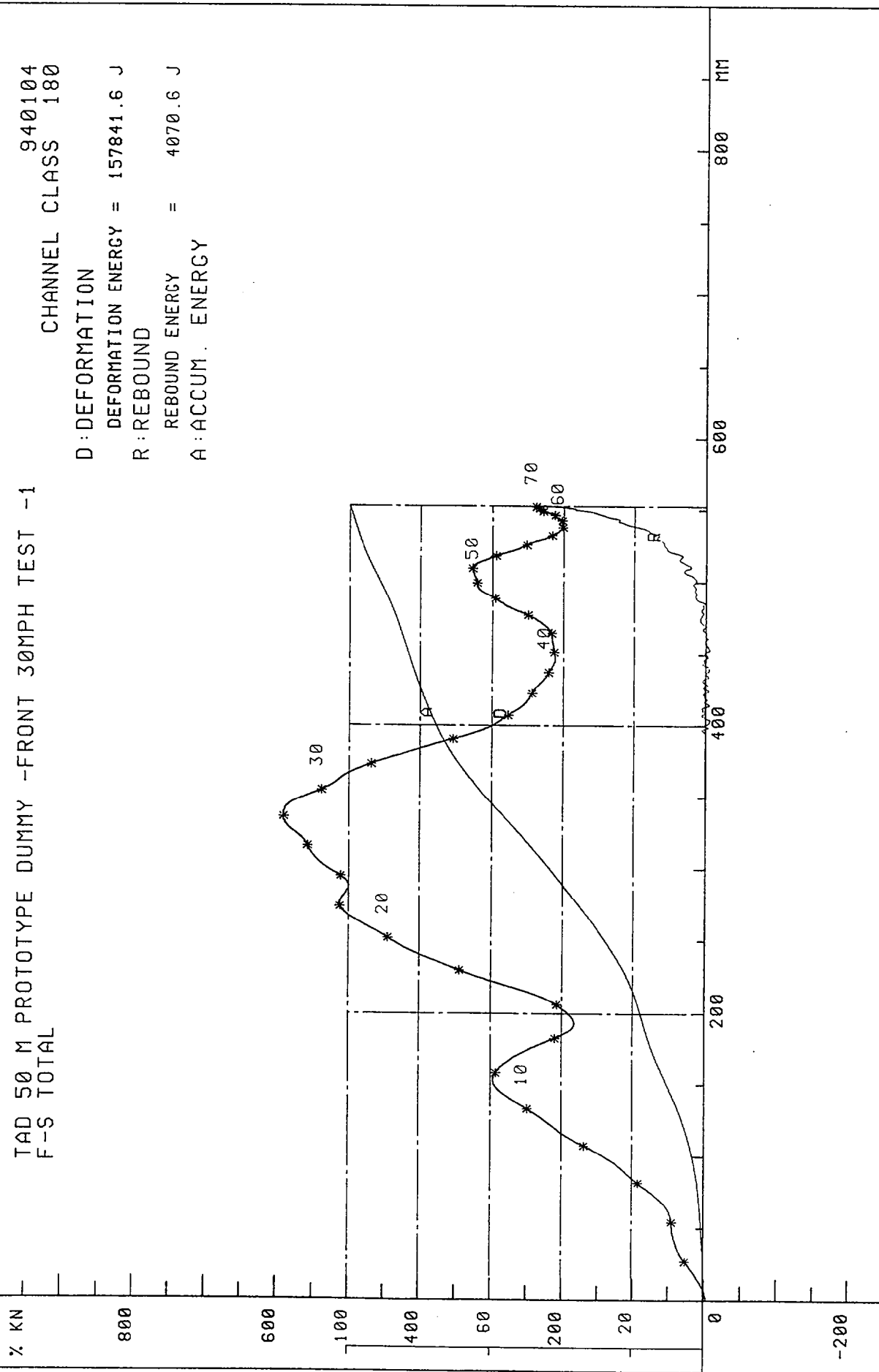
D: DEFORMATION

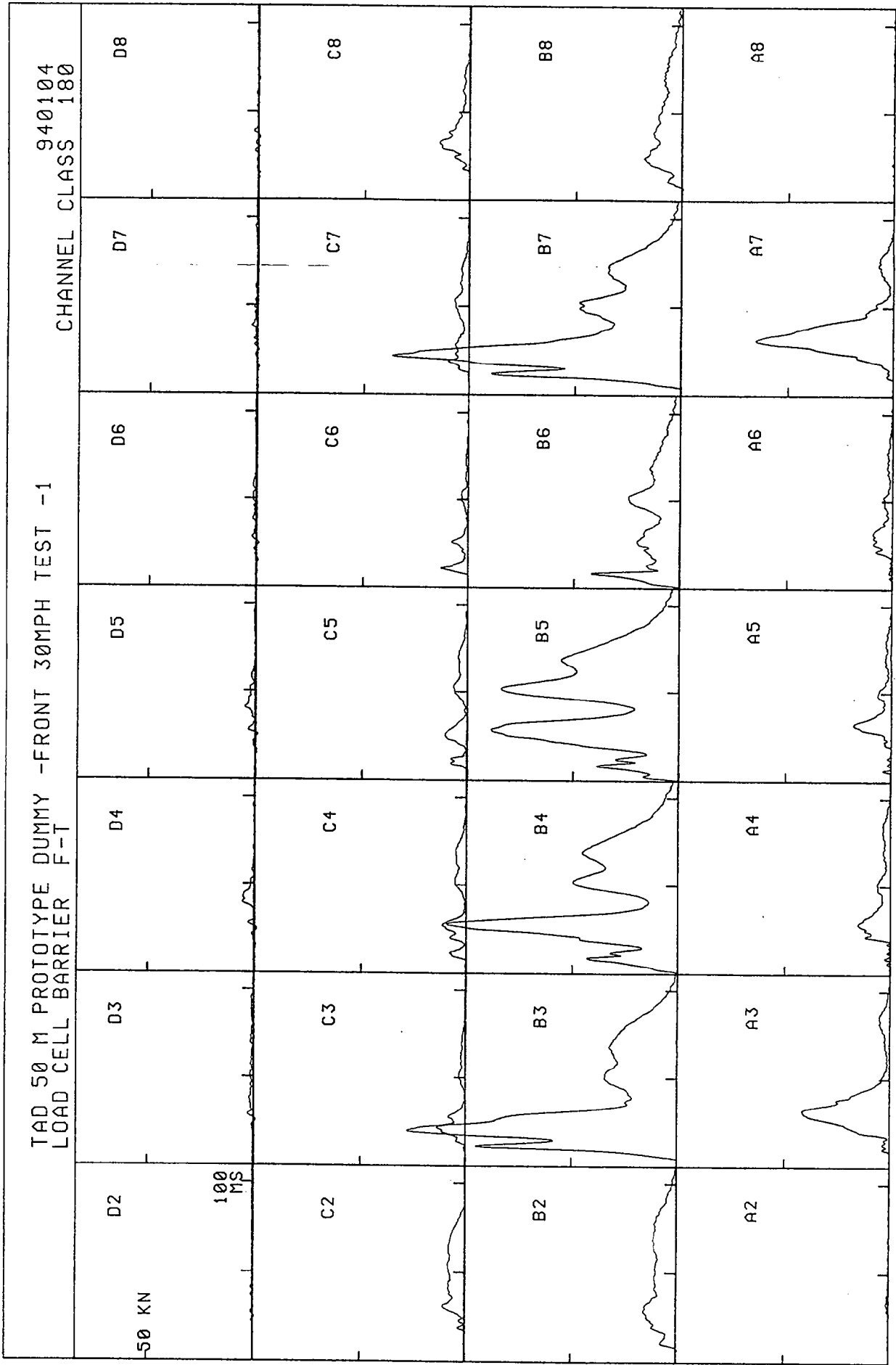
DEFORMATION ENERGY = 157841.6 J

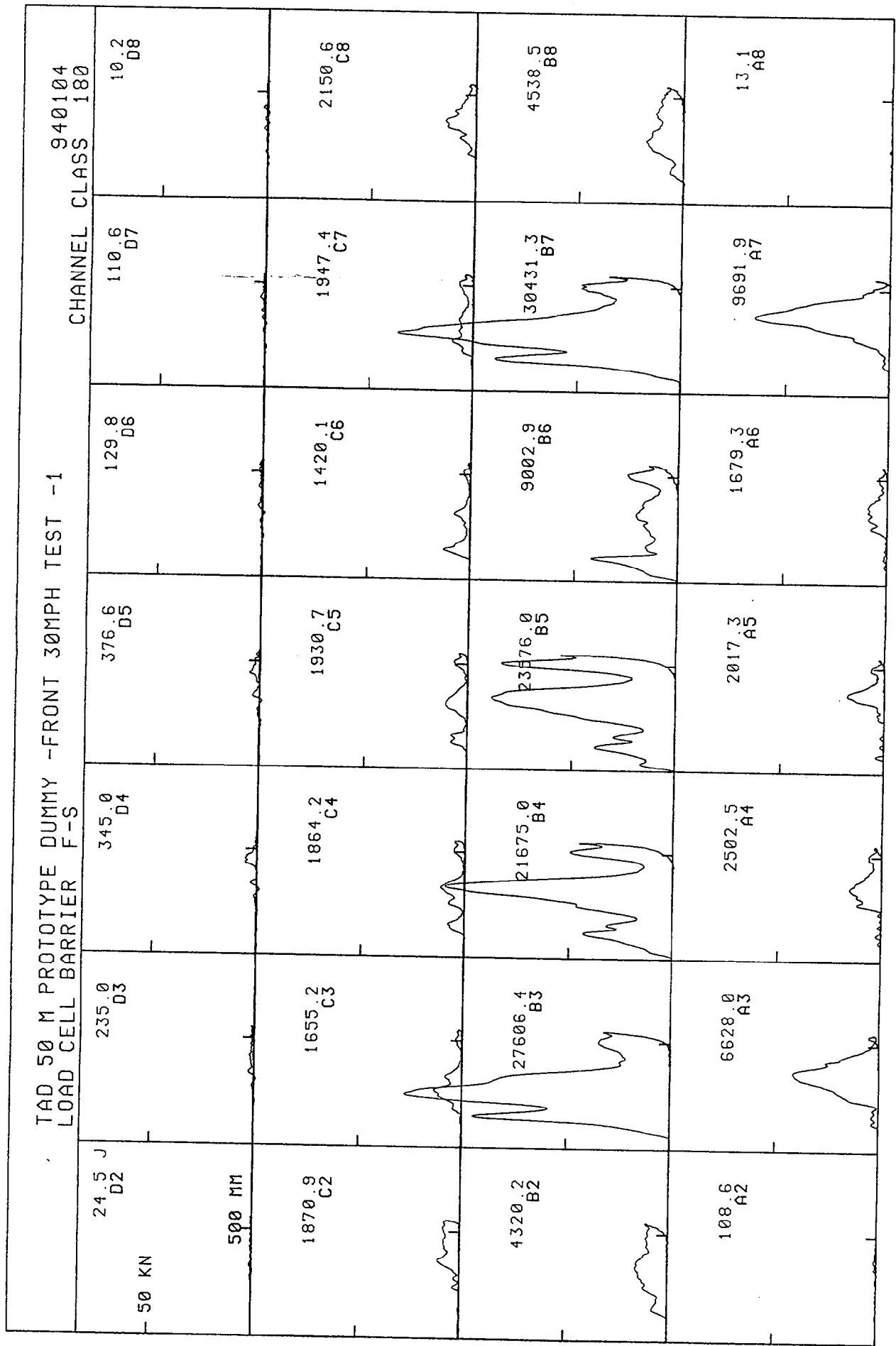
R: REBOUND

REBOUND ENERGY = 4070.6 J

A: ACCUM. ENERGY



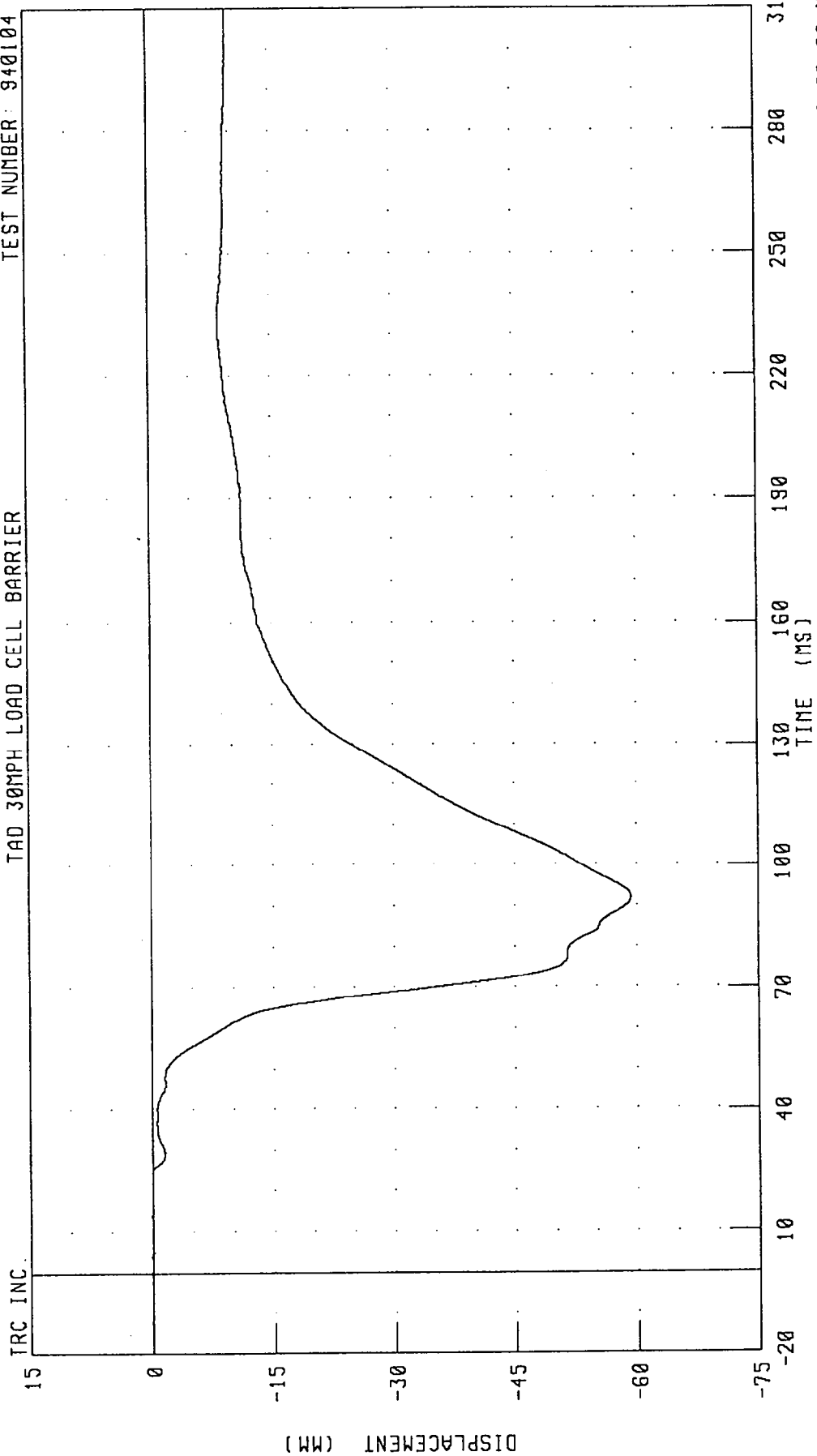




TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER CHEST LOCATION 1 POSTERIOR-ANTERIOR

TAD 30MPH LOAD CELL BARRIER

TEST NUMBER: 940104



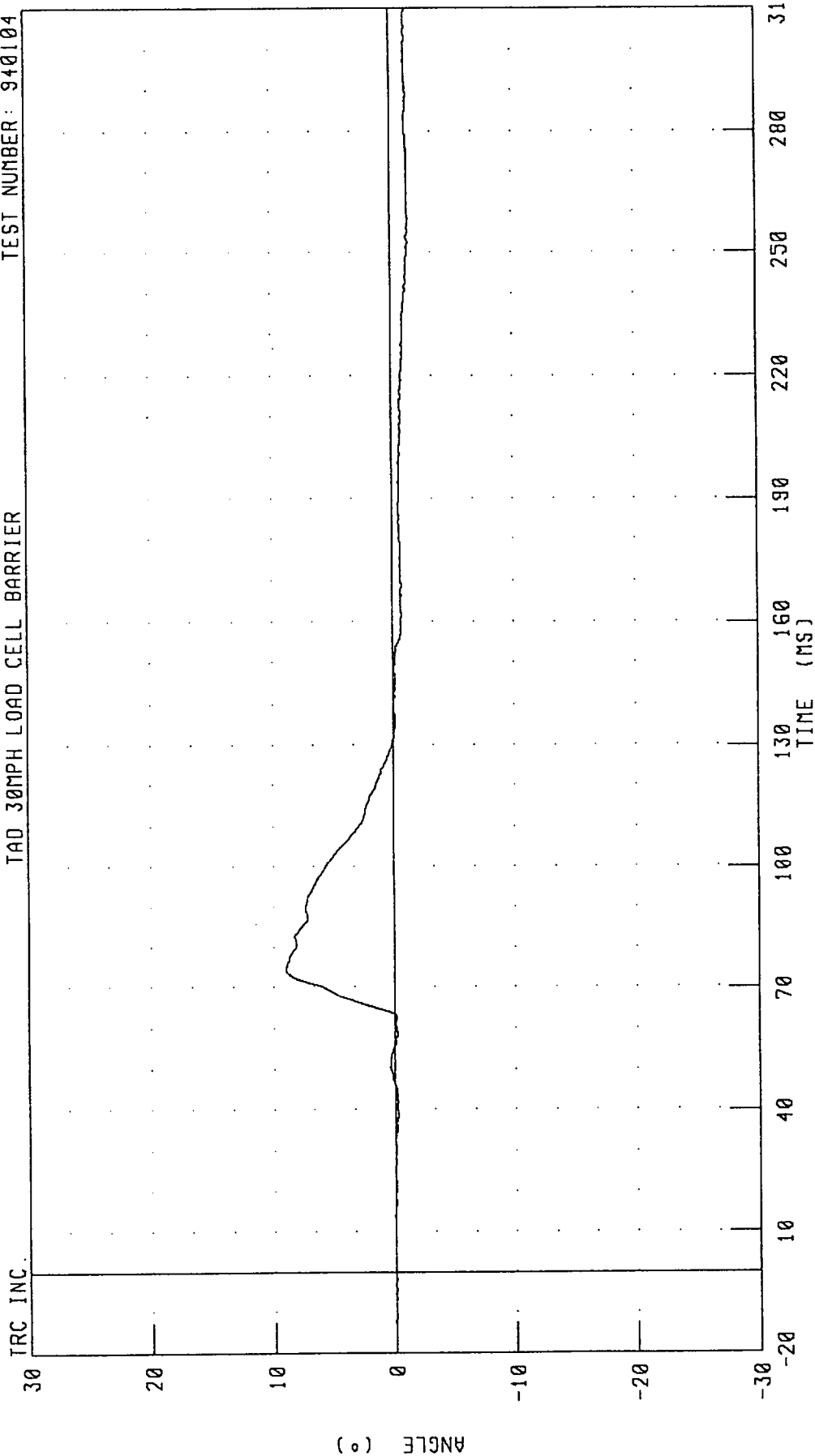
CHANNEL: CS1PA1 FILTER: CH. CLASS 180

PEAK DATA: 0.07 MM @ -0.40 MS; -59.27 MM @ 92.00 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER CHEST LOCATION 1 RIGHT/LEFT

TAD 30MPH LOAD CELL BARRIER

TEST NUMBER: 940104

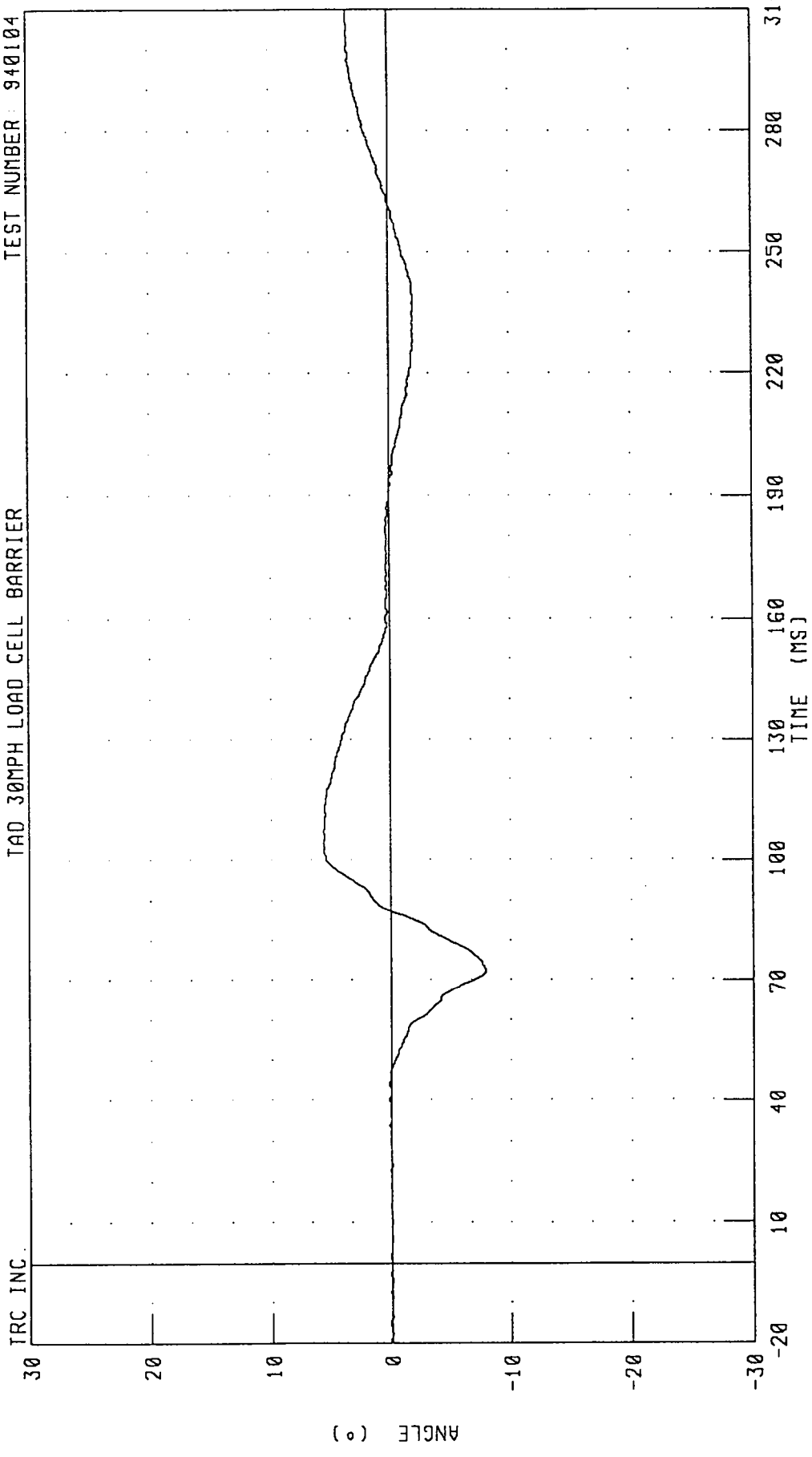


CHANNEL: CS1RL1 FILTER: CH. CLASS 180

PEAK DATA: 8.98 ° @ 74.64 MS; -1.41 ° @ 252.64 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER CHEST LOCATION 1 INFERIOR/SUPERIOR

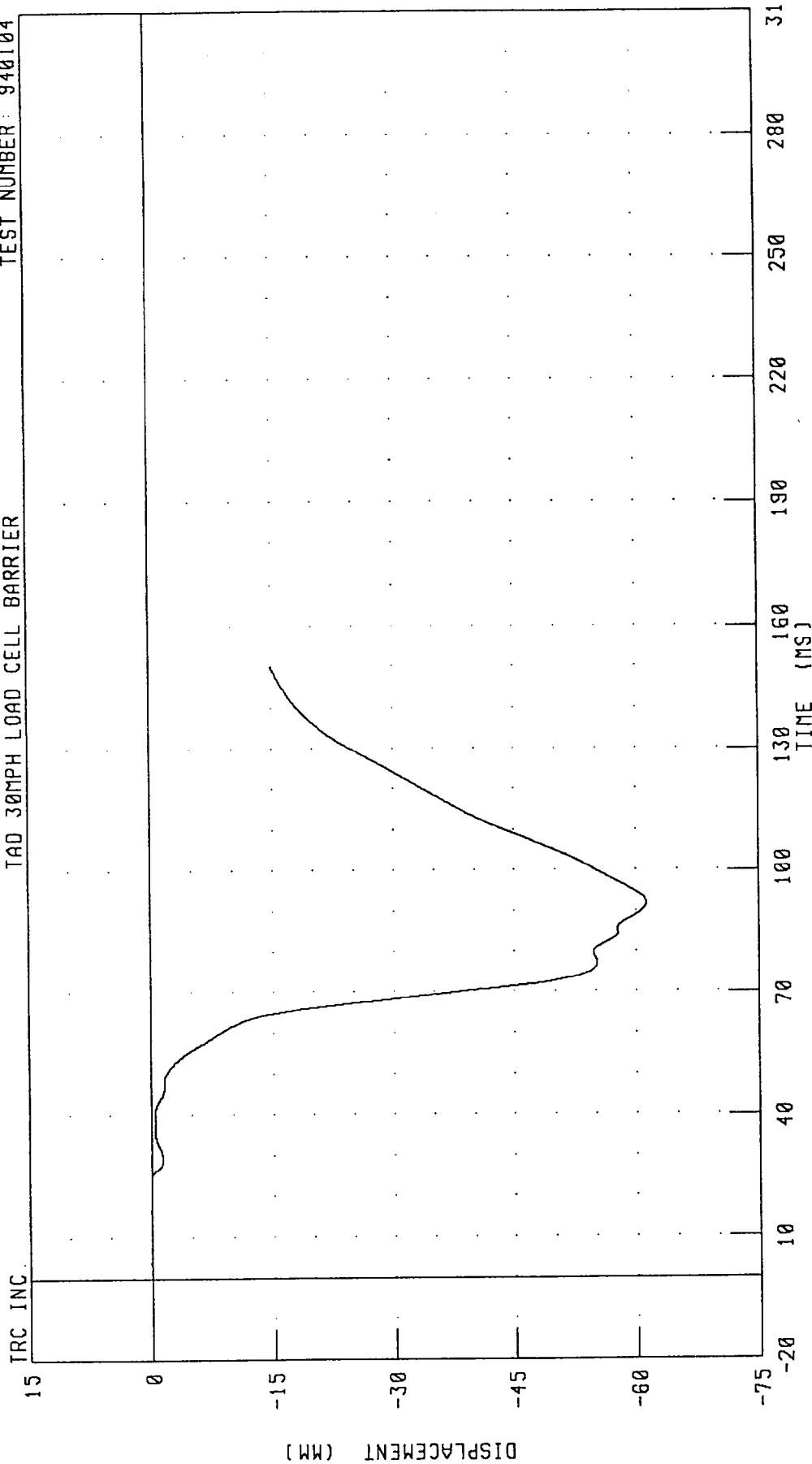
TAD 30MPH LOAD CELL BARRIER
TEST NUMBER: 940104



CHANNEL: CS11S1 FILTER: CH. CLASS 180 PEAK DATA: 5.62 ° @ 104.40 MS; -7.93 ° @ 72.16 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -I
DRIVER POSITION 1 X-AXIS CHEST DEFLECTION
TAD 30MPH LOAD CELL BARRIER

TEST NUMBER: 940104



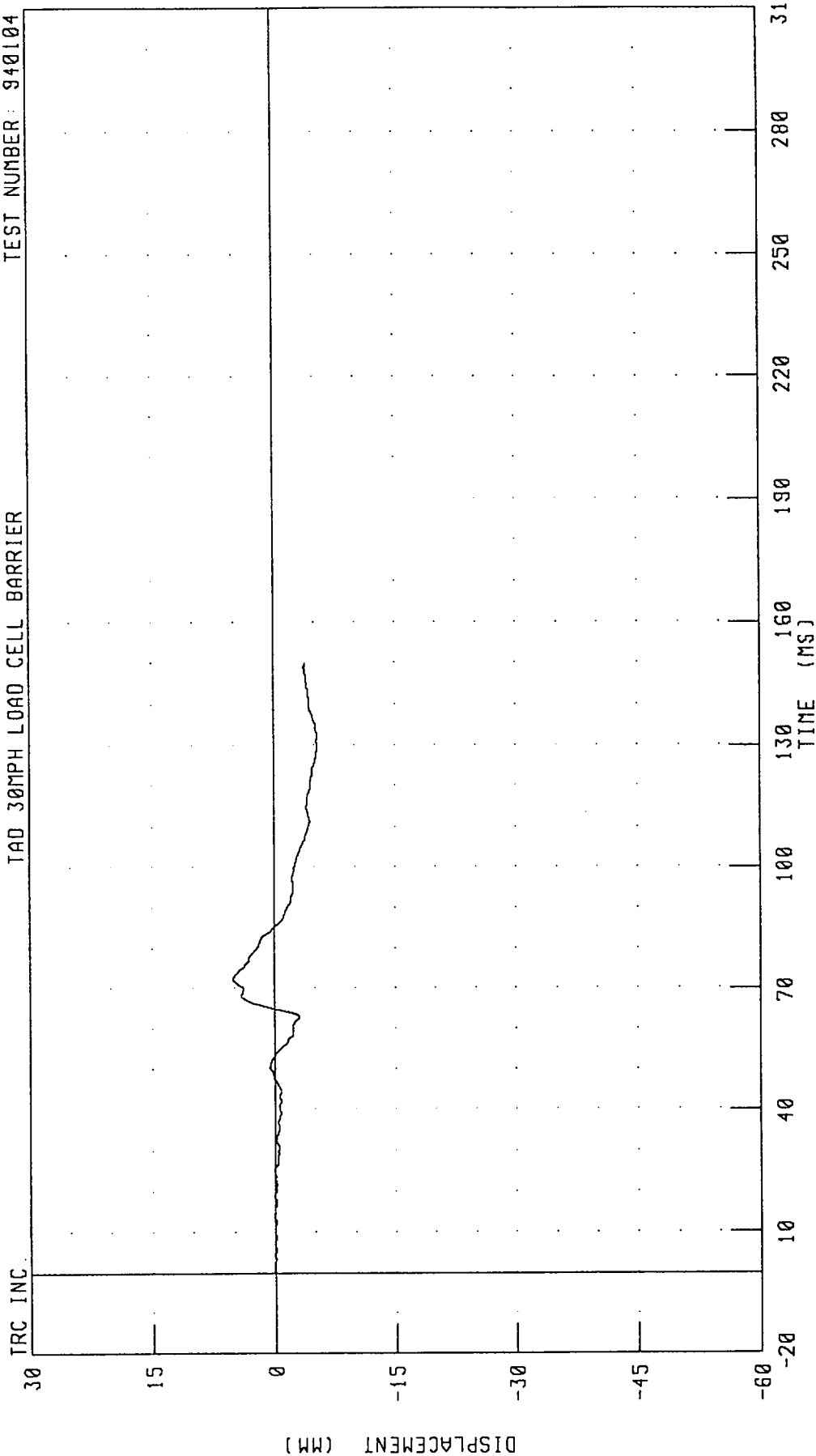
CHANNEL: 1DELX1 FILTER: CH. CLASS 180

PEAK DATA: 0.05 MM @ 3.76 MS; -61.20 MM @ 92.00 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
 DRIVER POSITION 1 Y-AXIS CHEST DEFLECTION

TEST NUMBER: 940104

TAD 30MPH LOAD CELL BARRIER



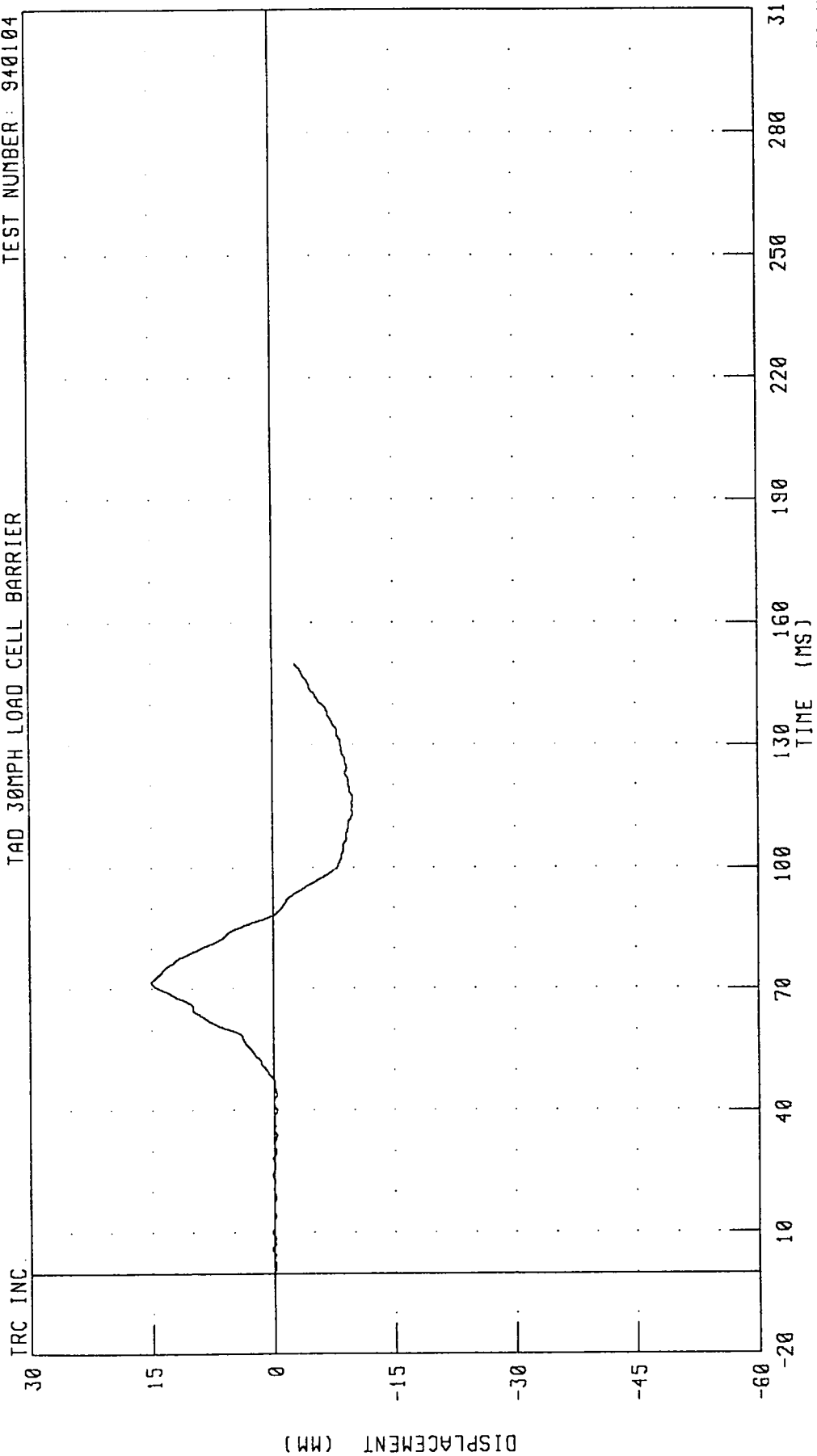
CHANNEL: 1DELY1 FILTER: CH. CLASS 180

PEAK DATA: 5.08 MM @ 72.40 MS; -5.40 MM @ 132.24 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER POSITION 1 Z-AXIS CHEST DEFLECTION

TAD 30MPH LOAD CELL BARRIER

TEST NUMBER: 940104

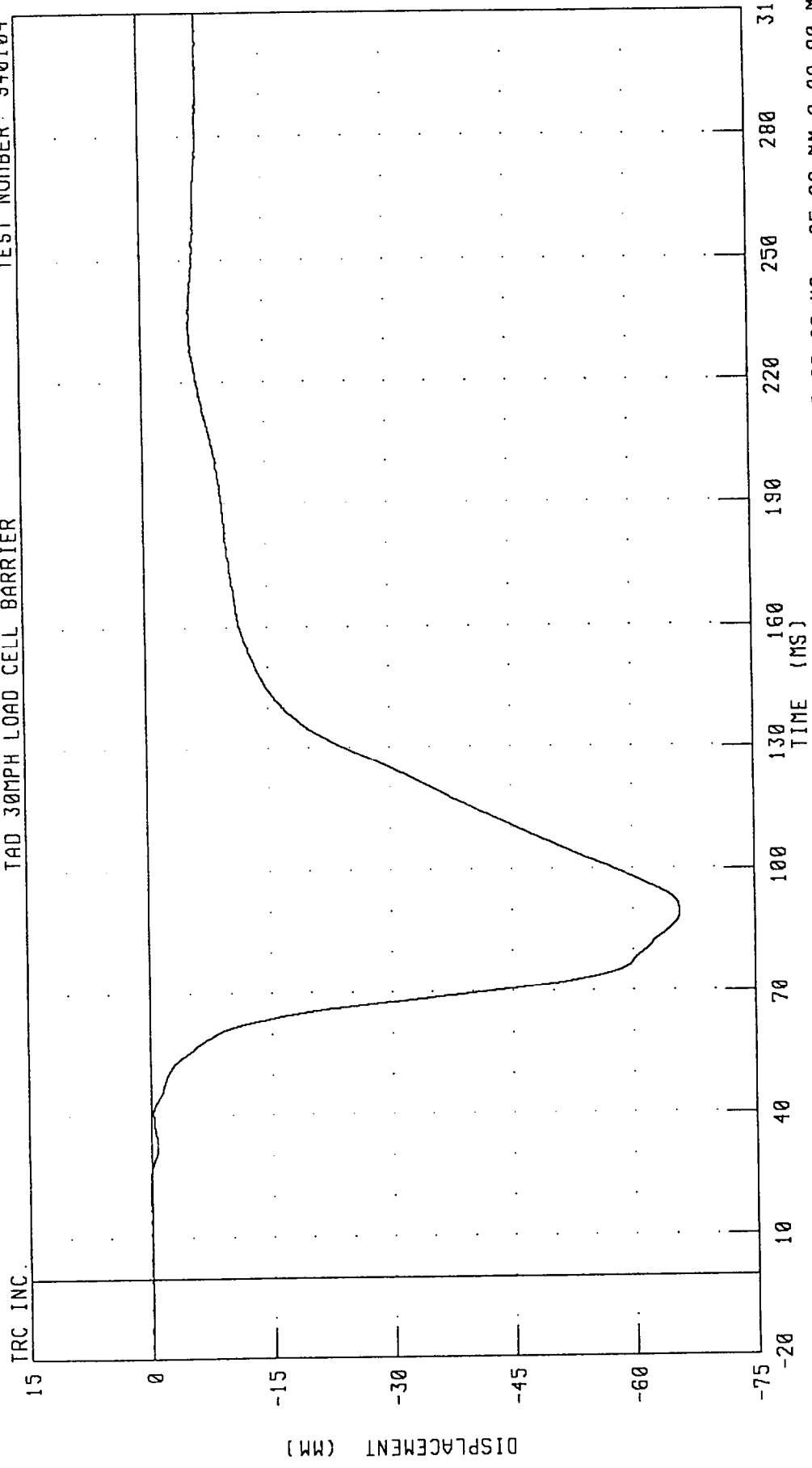


CHANNEL: 1DELZ1 FILTER: CH. CLASS 180

PEAK DATA: 14.99 MM @ 71.76 MS; -9.95 MM @ 117.20 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER CHEST LOCATION 2 POSTERIOR/ANTERIOR
TAD 30MPH LOAD CELL BARRIER

TEST NUMBER: 940104



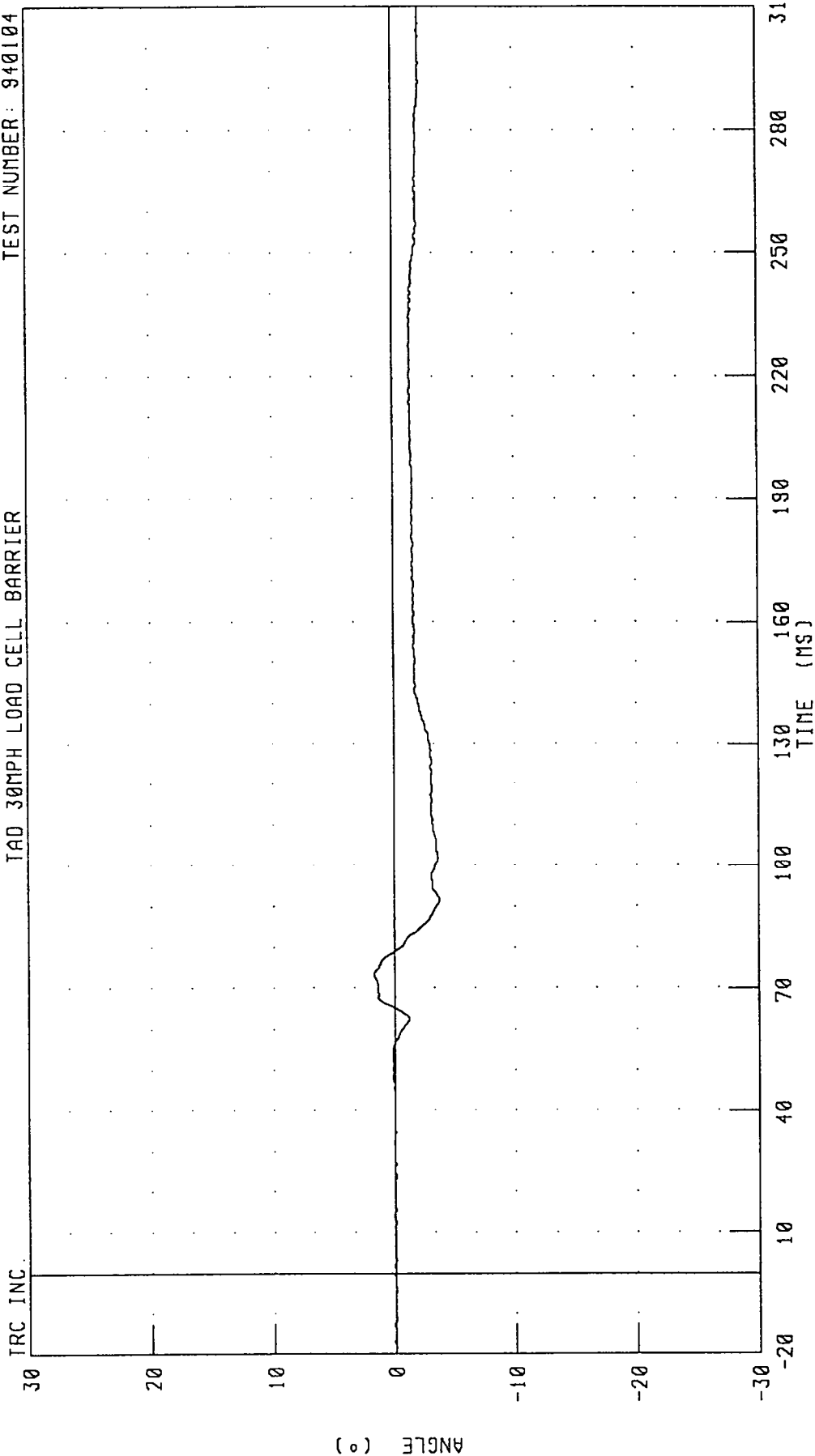
CHANNEL: CS2PA1 FILTER: CH. CLASS 180

PEAK DATA: 0.12 MM @ 22.80 MS; -65.69 MM @ 88.80 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER CHEST LOCATION 2 RIGHT/LEFT

TAD 30MPH LOAD CELL BARRIER

TEST NUMBER: 940104



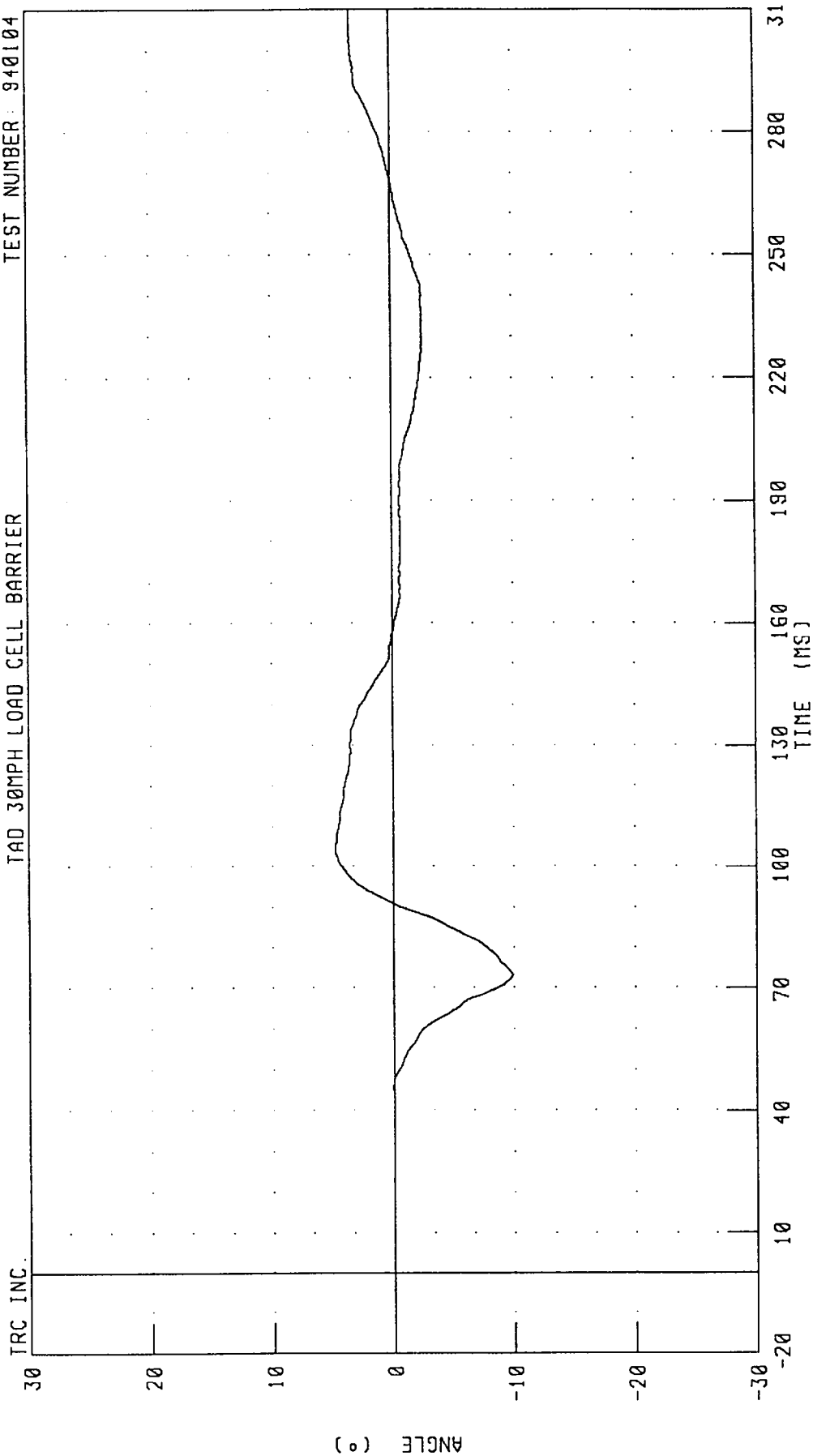
CHANNEL: CS2RL1 FILTER: CH. CLASS 180

PEAK DATA: 1.72 ° @ 73.60 MS; -3.71 ° @ 91.44 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER CHEST LOCATION 2 INFERIOR/SUPERIOR

TAD 30MPH LOAD CELL BARRIER

TEST NUMBER: 940104

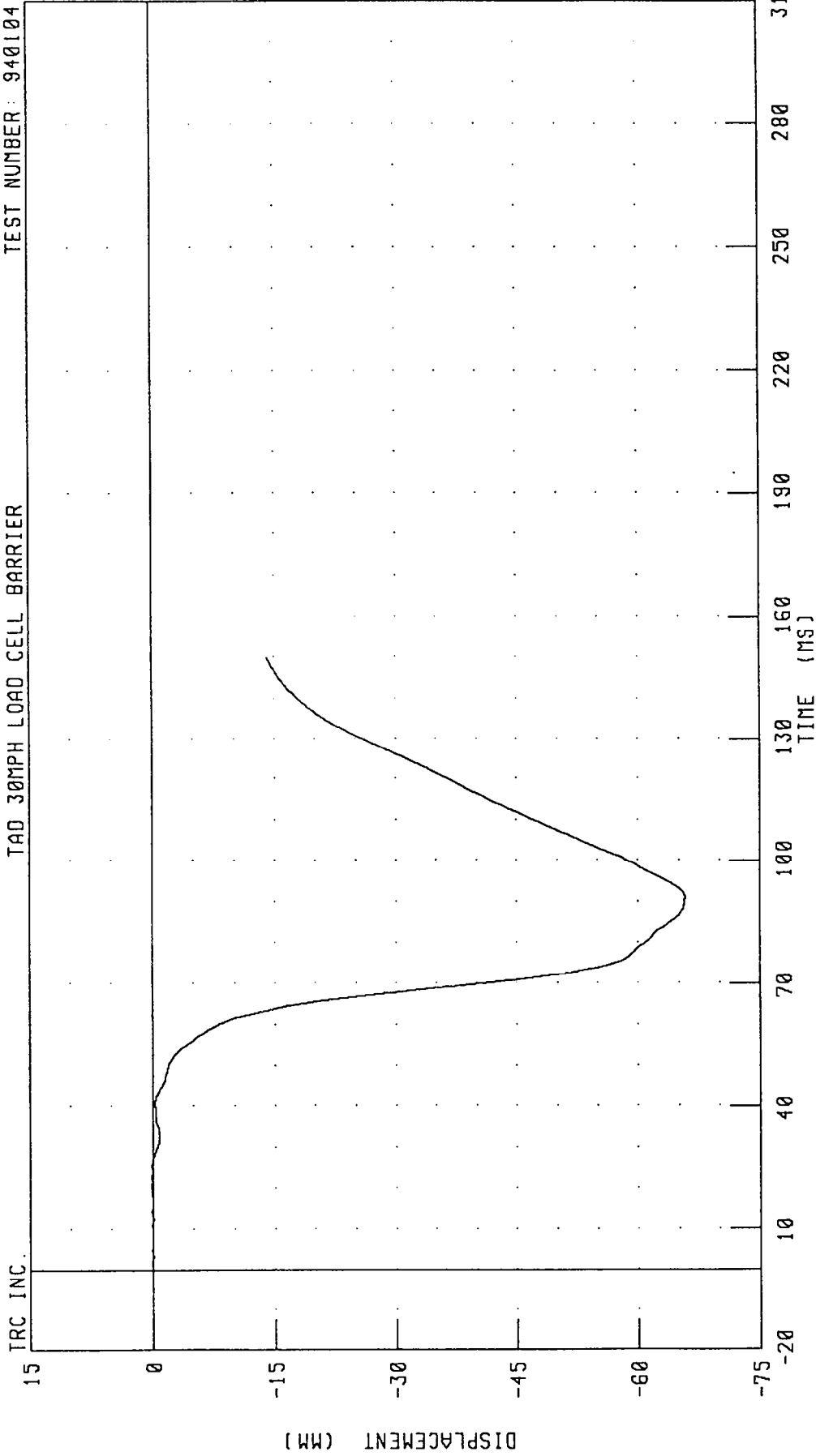


CHANNEL: CS2IS1 FILTER: CH. CLASS 180

PEAK DATA: 4.76 ° @ 104.16 MS; -9.86 ° @ 73.04 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER POSITION 2 X-AXIS CHEST DEFLECTION

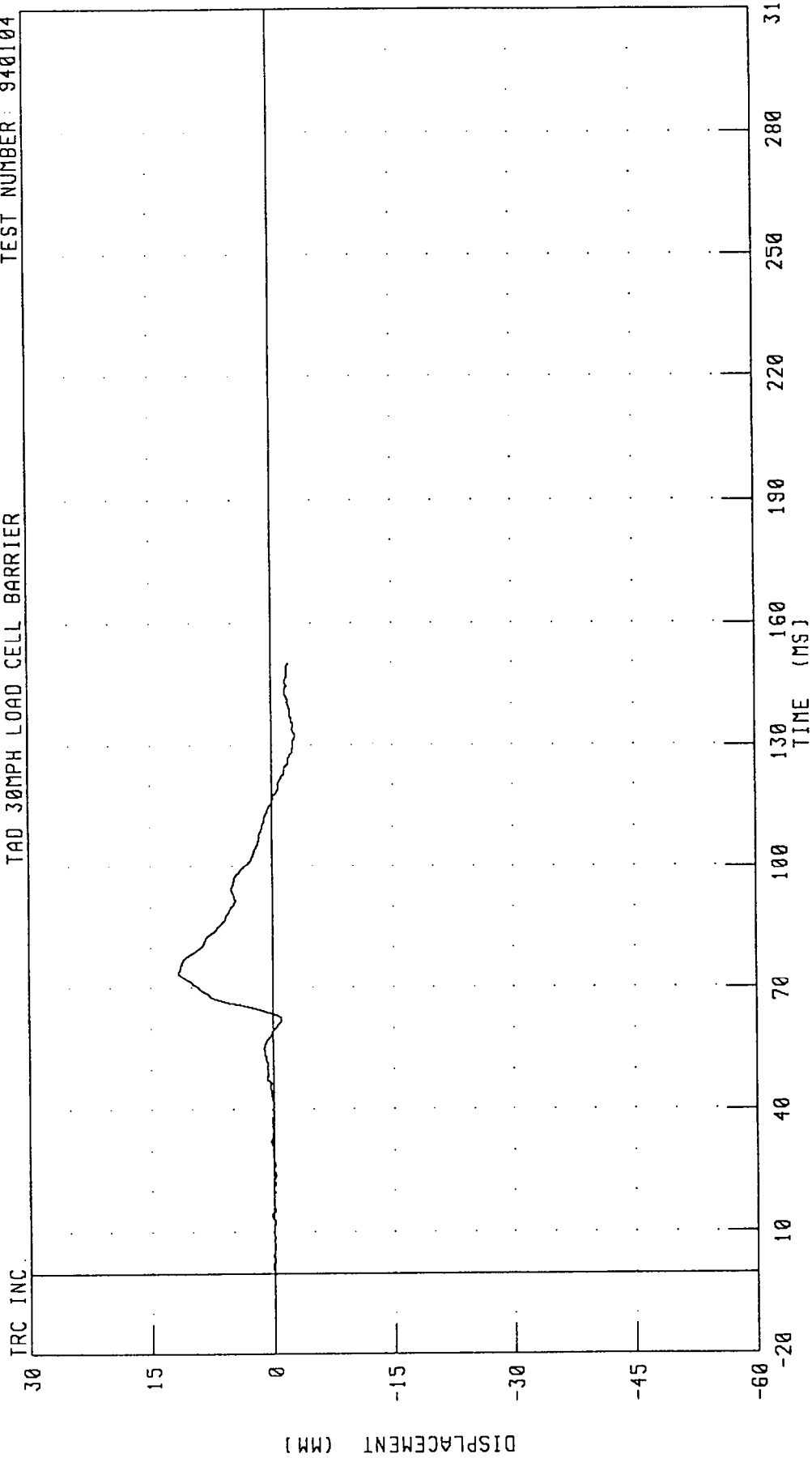
TAD 30MPH LOAD CELL BARRIER TEST NUMBER: 940104



CHANNEL: 2DELX1 FILTER: CH. CLASS 180 PEAK DATA: 0.12 MM @ 14.00 MS; -65.76 MM @ 91.04 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER POSITION 2 Y-AXIS CHEST DEFLECTION

TAD 30MPH LOAD CELL BARRIER TEST NUMBER: 940104



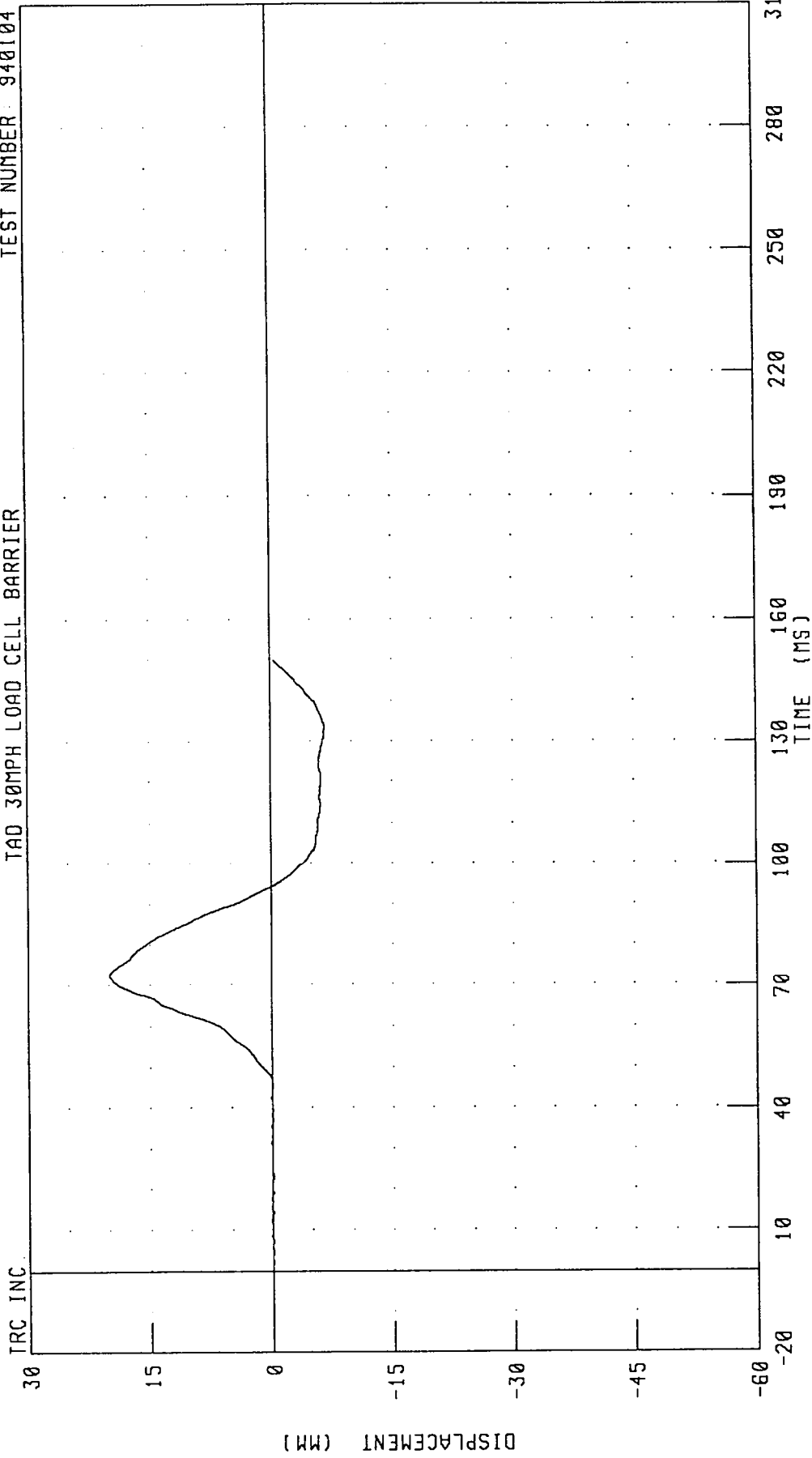
CHANNEL: 2DELY1 FILTER: CH. CLASS 180

PEAK DATA: 11.58 MM @ 73.84 MS; -2.92 MM @ 132.40 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER POSITION 2 Z-AXIS CHEST DEFLECTION

TEST NUMBER: 940104

TAD 30MPH LOAD CELL BARRIER



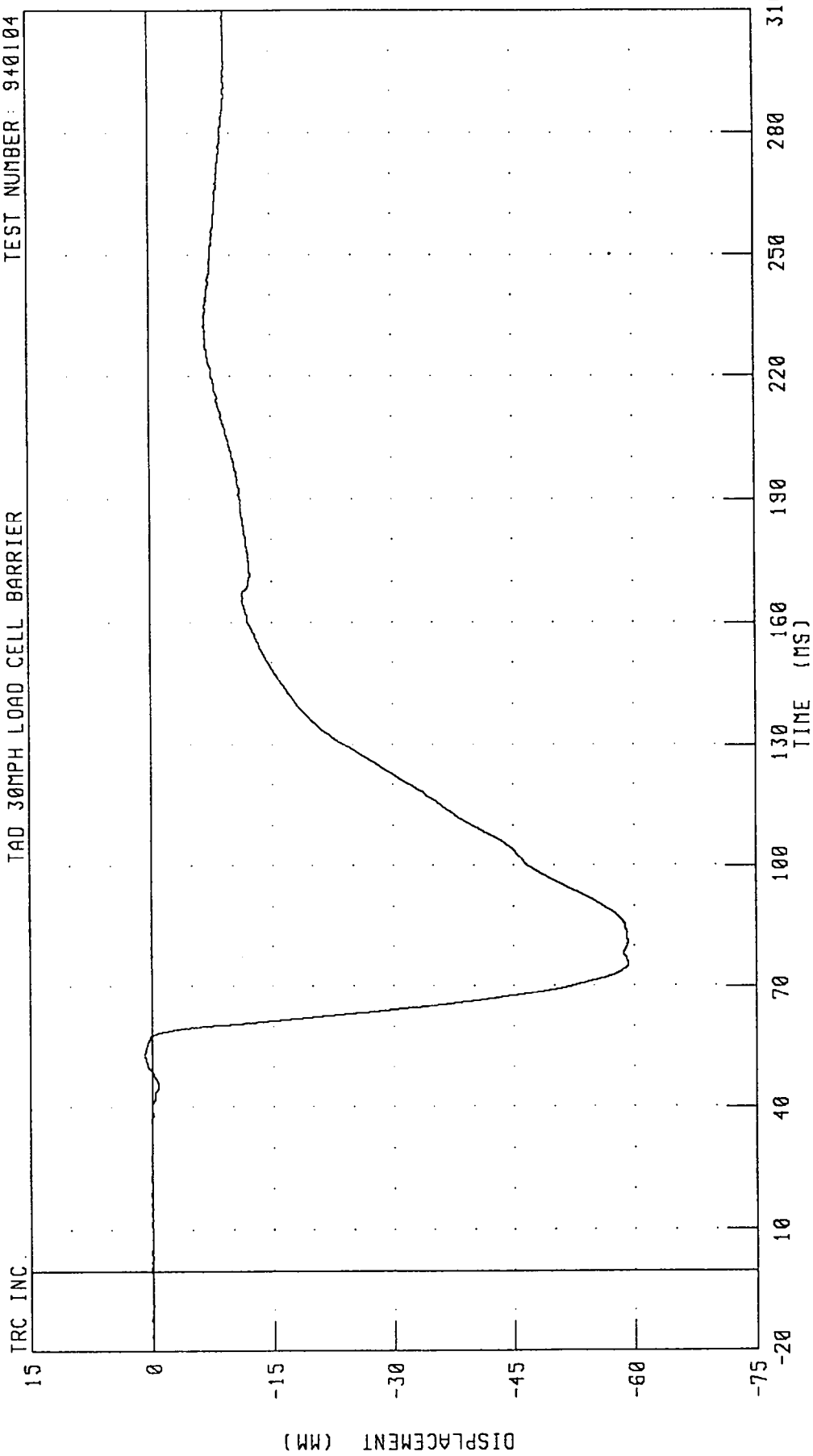
PEAK DATA: 19.93 MM @ 72.48 MS; -6.75 MM @ 133.68 MS

CHANNEL: 20ELZ1 FILTER: CH. CLASS 180

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER CHEST LOCATION 3 POSTERIOR/ANTERIOR

TAD 30MPH LOAD CELL BARRIER

TEST NUMBER: 940104



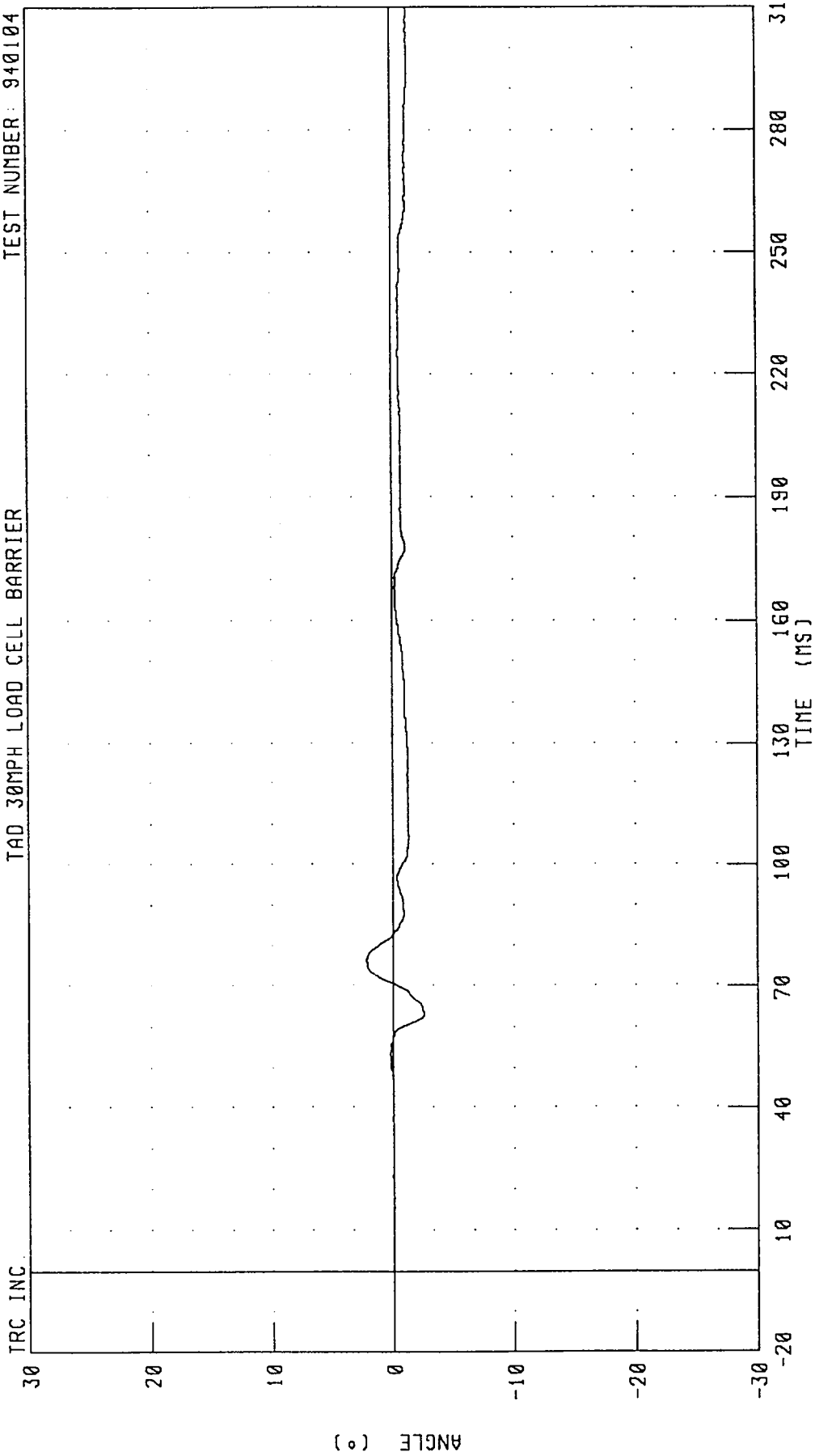
CHANNEL: CS3PA1 FILTER: CH. CLASS 180

PEAK DATA: 0.82 MM @ 53.36 MS; -59.22 MM @ 75.60 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER CHEST LOCATION 3 RIGHT/LEFT

TAD 30MPH LOAD CELL BARRIER

TEST NUMBER: 940104



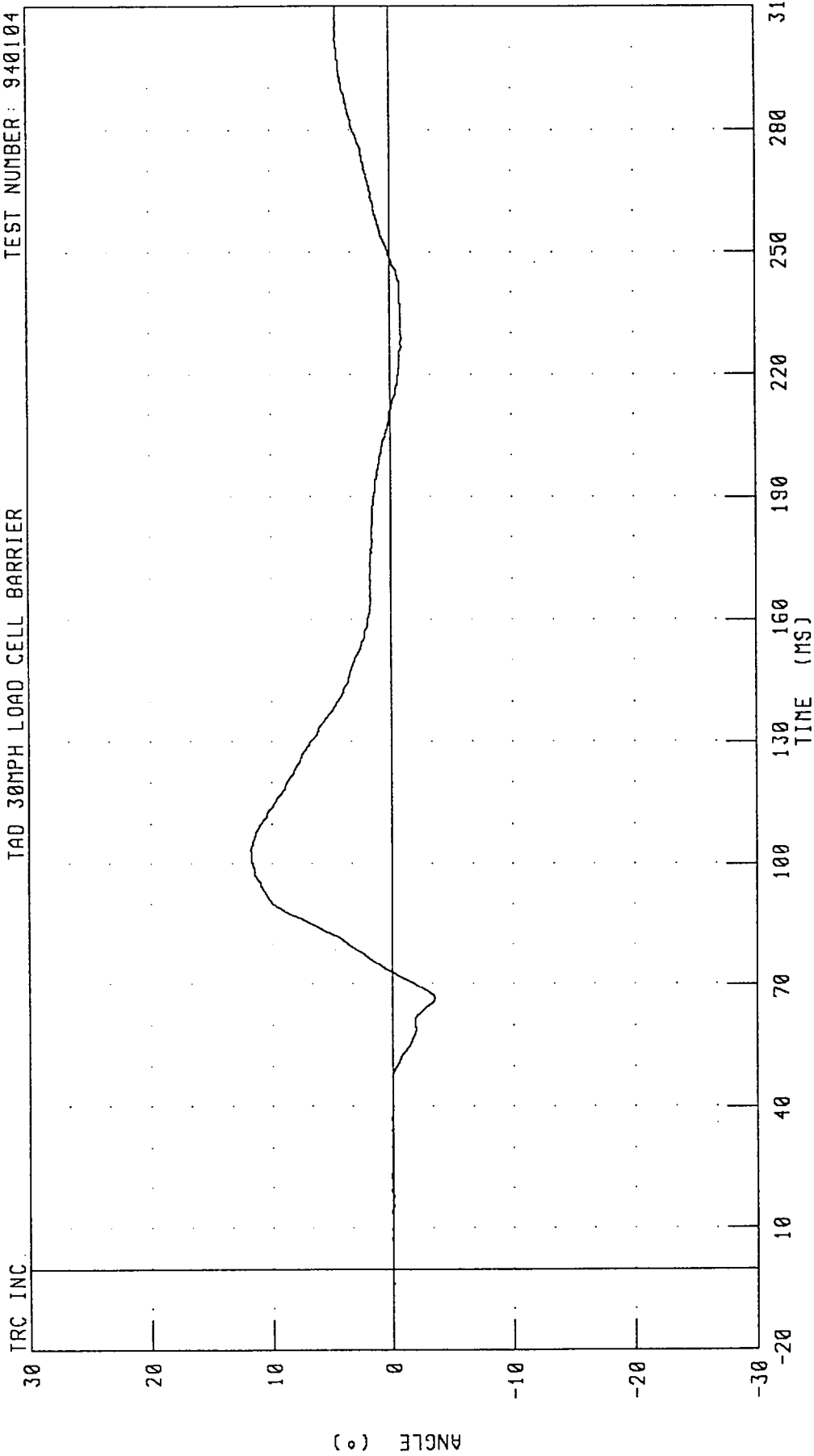
CHANNEL: CS3RL1 FILTER: CH. CLASS 180

PEAK DATA: 2.17 ° @ 76.40 MS; -2.56 ° @ 63.12 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER CHEST LOCATION 3 INFERIOR/SUPERIOR

TAD 30MPH LOAD CELL BARRIER

TEST NUMBER: 940104

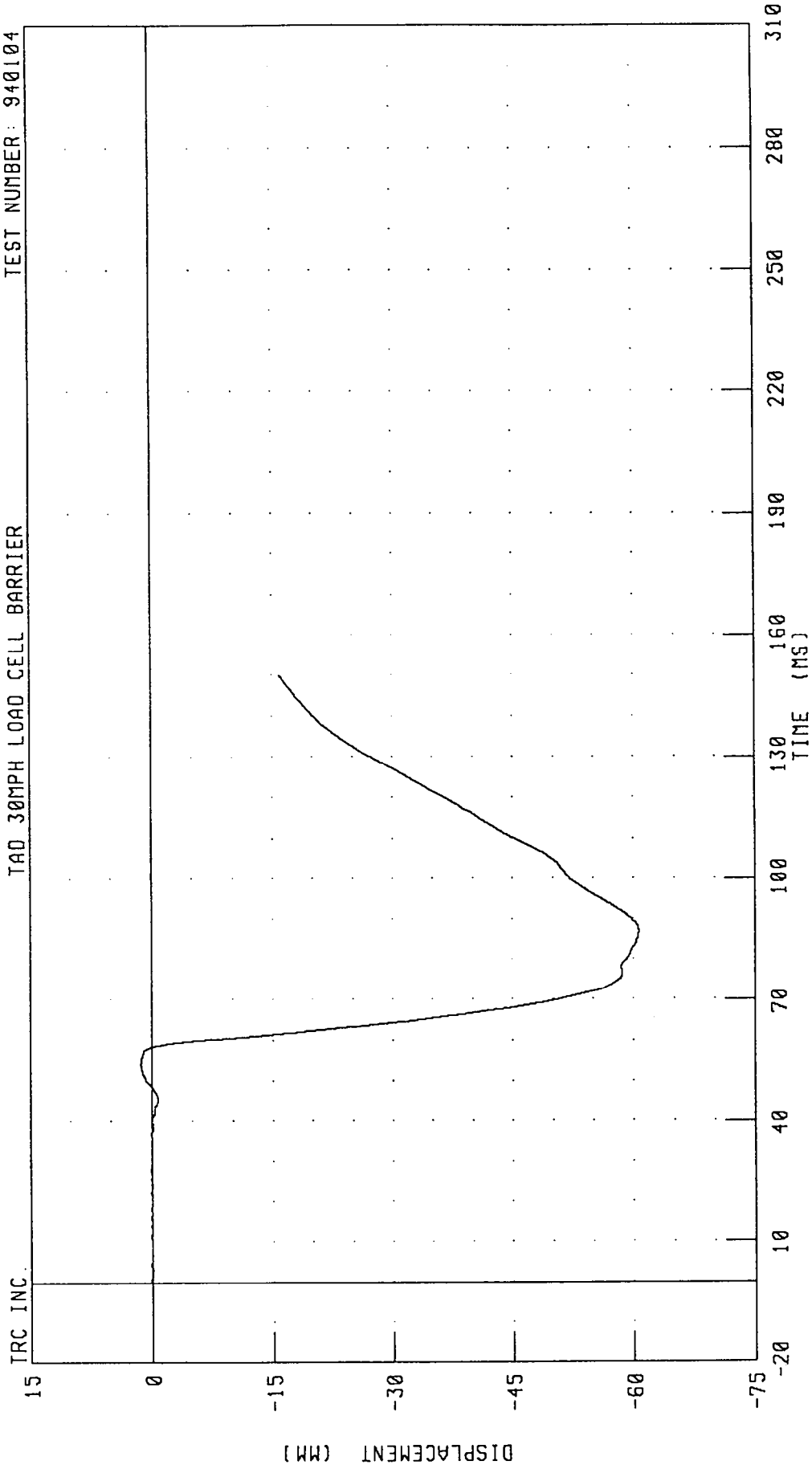


CHANNEL: CS3IS1 FILTER: CH. CLASS 180 PEAK DATA: 11.75 ° @ 103.60 MS; -3.51 ° @ 66.40 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER POSITION 3 X-AXIS CHEST DEFLECTION

TAD 30MPH LOAD CELL BARRIER

TEST NUMBER: 940104



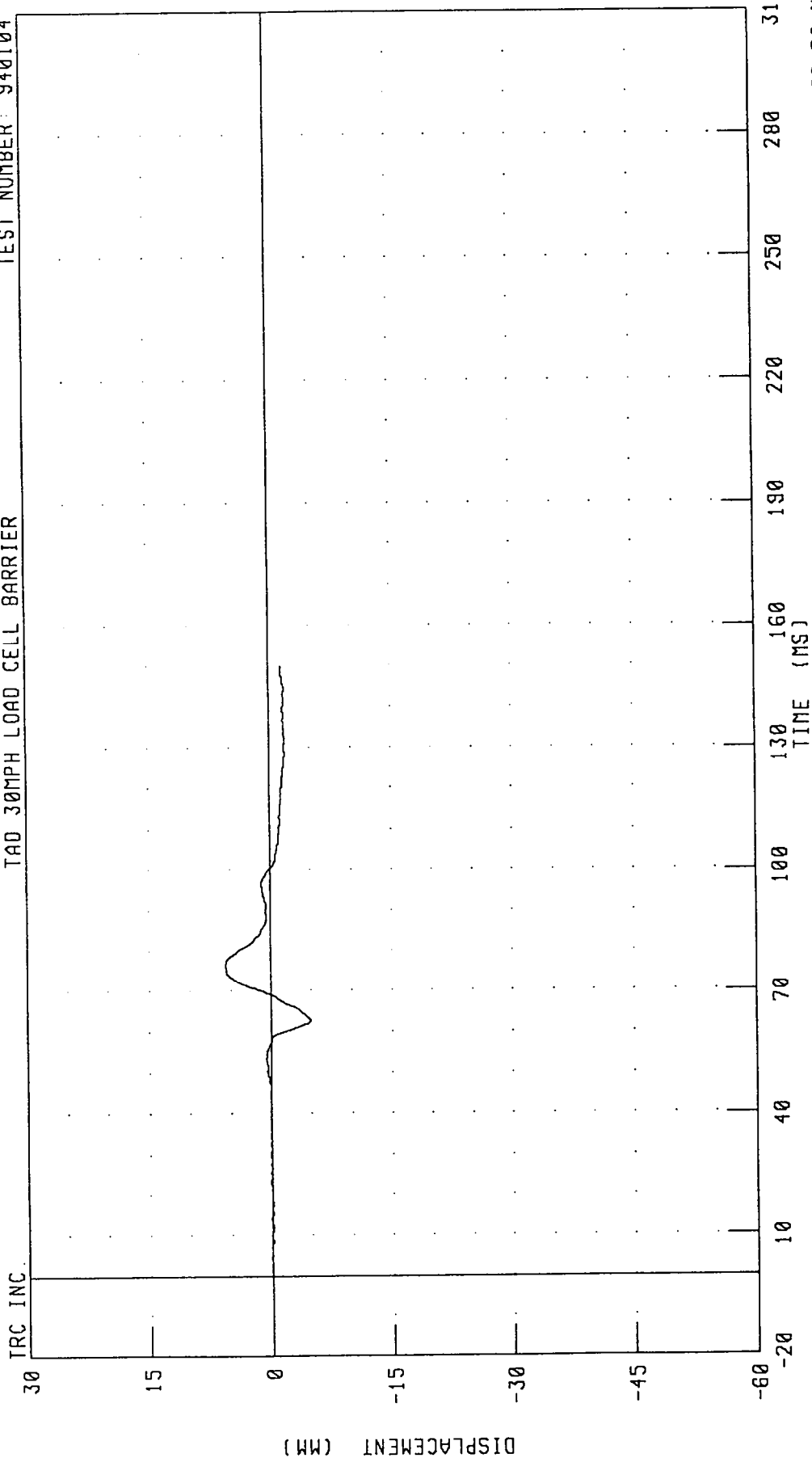
CHANNEL: 3DELX1 FILTER: CH. CLASS 180

PEAK DATA: 1.33 MM @ 54.24 MS; -60.70 MM @ 86.80 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER POSITION 3 Y-AXIS CHEST DEFLECTION

TAD 30MPH LOAD CELL BARRIER

TEST NUMBER: 940104



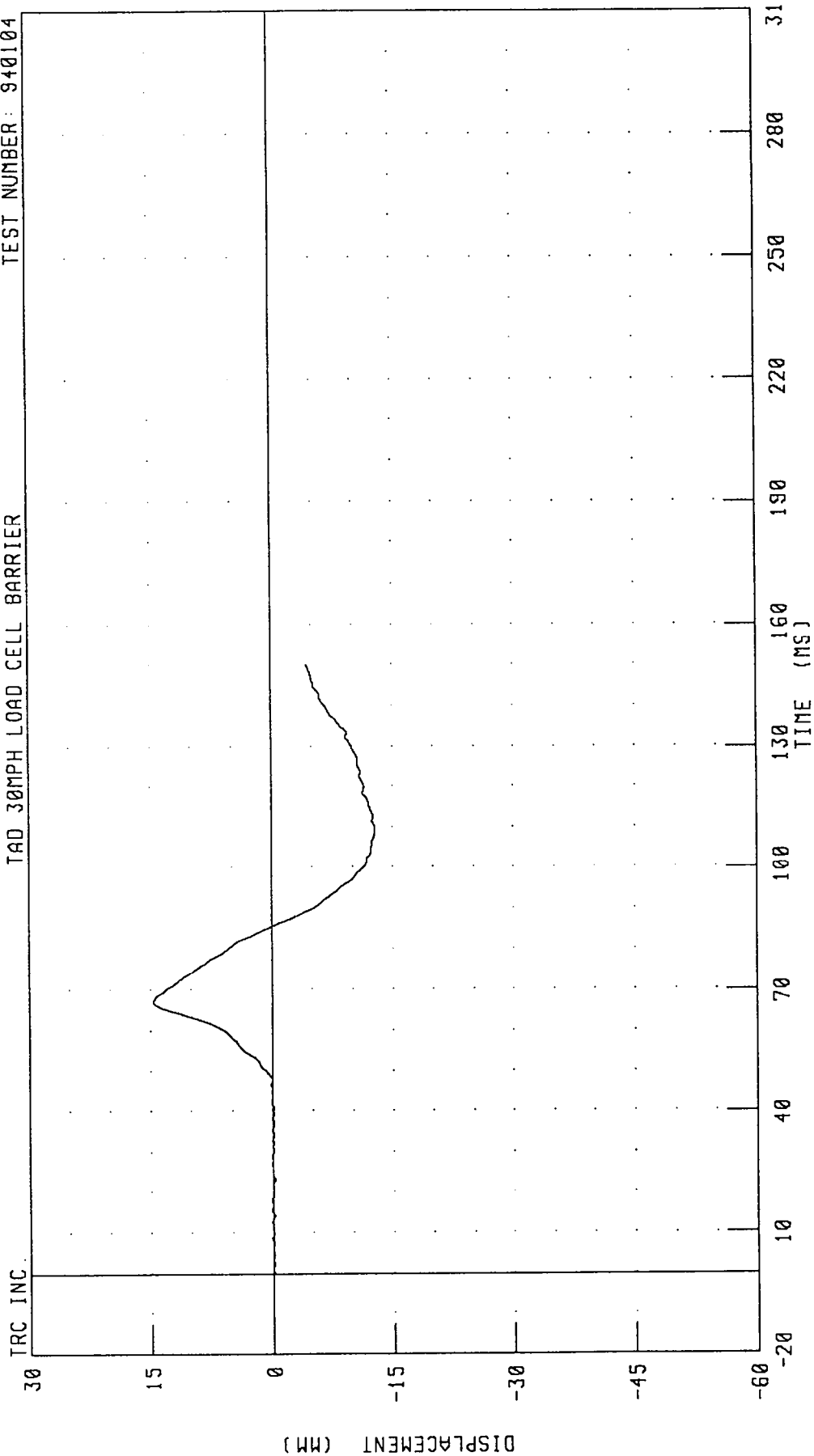
CHANNEL: 30ELY1 FILTER: CH. CLASS 180

PEAK DATA: 5.56 MM @ 76.40 MS; -4.91 MM @ 62.72 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER POSITION 3 Z-AXIS CHEST DEFLECTION

TAD 30MPH LOAD CELL BARRIER

TEST NUMBER: 940104



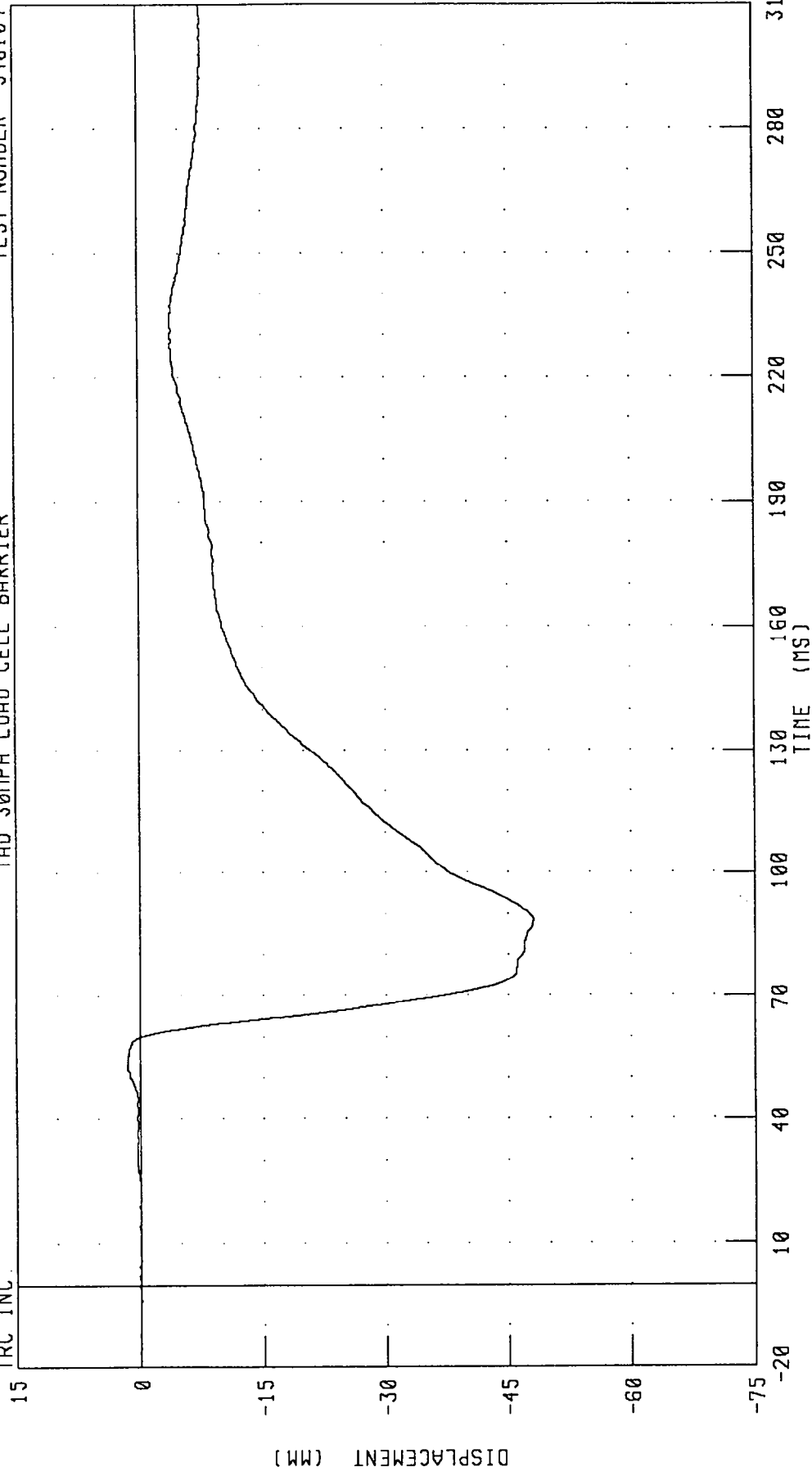
CHANNEL: 3DELZ1 FILTER: CH. CLASS 180

PEAK DATA: 14.59 MM @ 67.04 MS; -12.81 MM @ 109.84 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER CHEST LOCATION 4 POSTERIOR/ANTERIOR
TAD 30MPH LOAD CELL BARRIER

TEST NUMBER 940104

TRC INC.



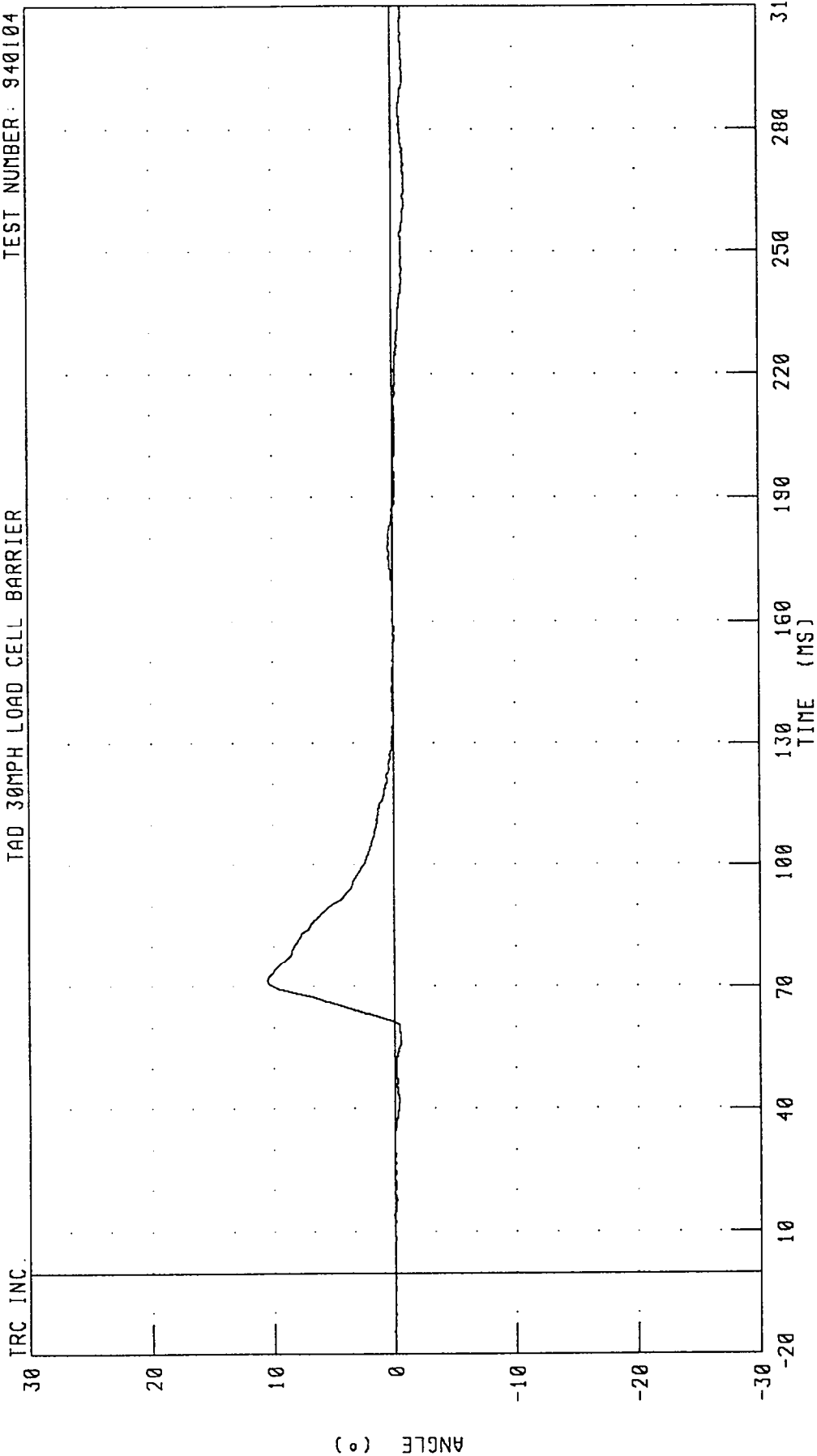
CHANNEL: CS4PA1 FILTER: CH. CLASS 180

PEAK DATA: 1.55 MM @ 54.08 MS; -48.10 MM @ 88.64 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER CHEST LOCATION 4 RIGHT/LEFT

TAD 30MPH LOAD CELL BARRIER

TEST NUMBER: 940104

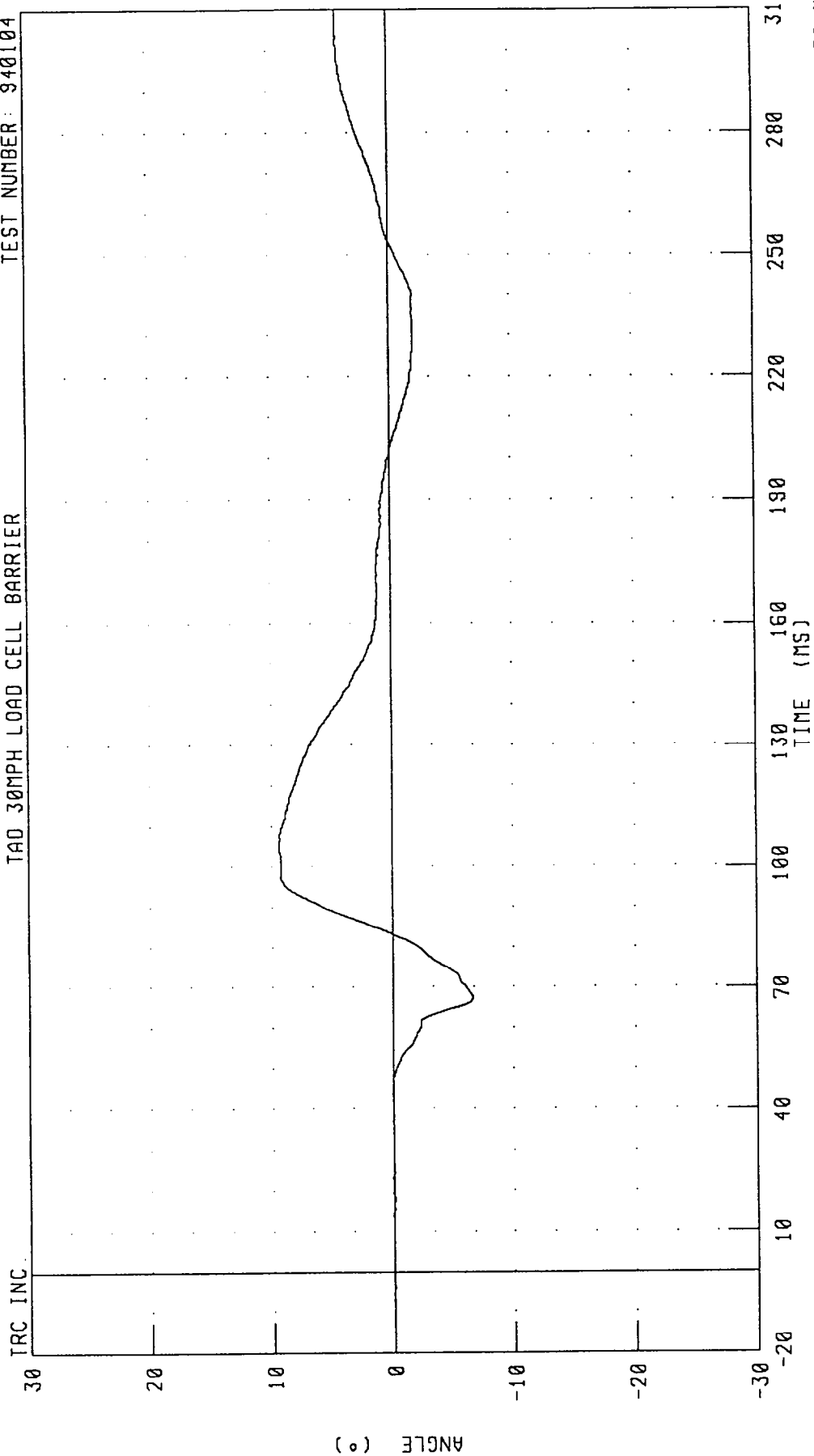


CHANNEL: CS4RL1 FILTER: CH. CLASS 180

PEAK DATA: 10.50 ° @ 71.52 MS; -1.06 ° @ 264.64 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER CHEST LOCATION 4 INFERIOR/SUPERIOR

TAD 30MPH LOAD CELL BARRIER
TEST NUMBER: 940104



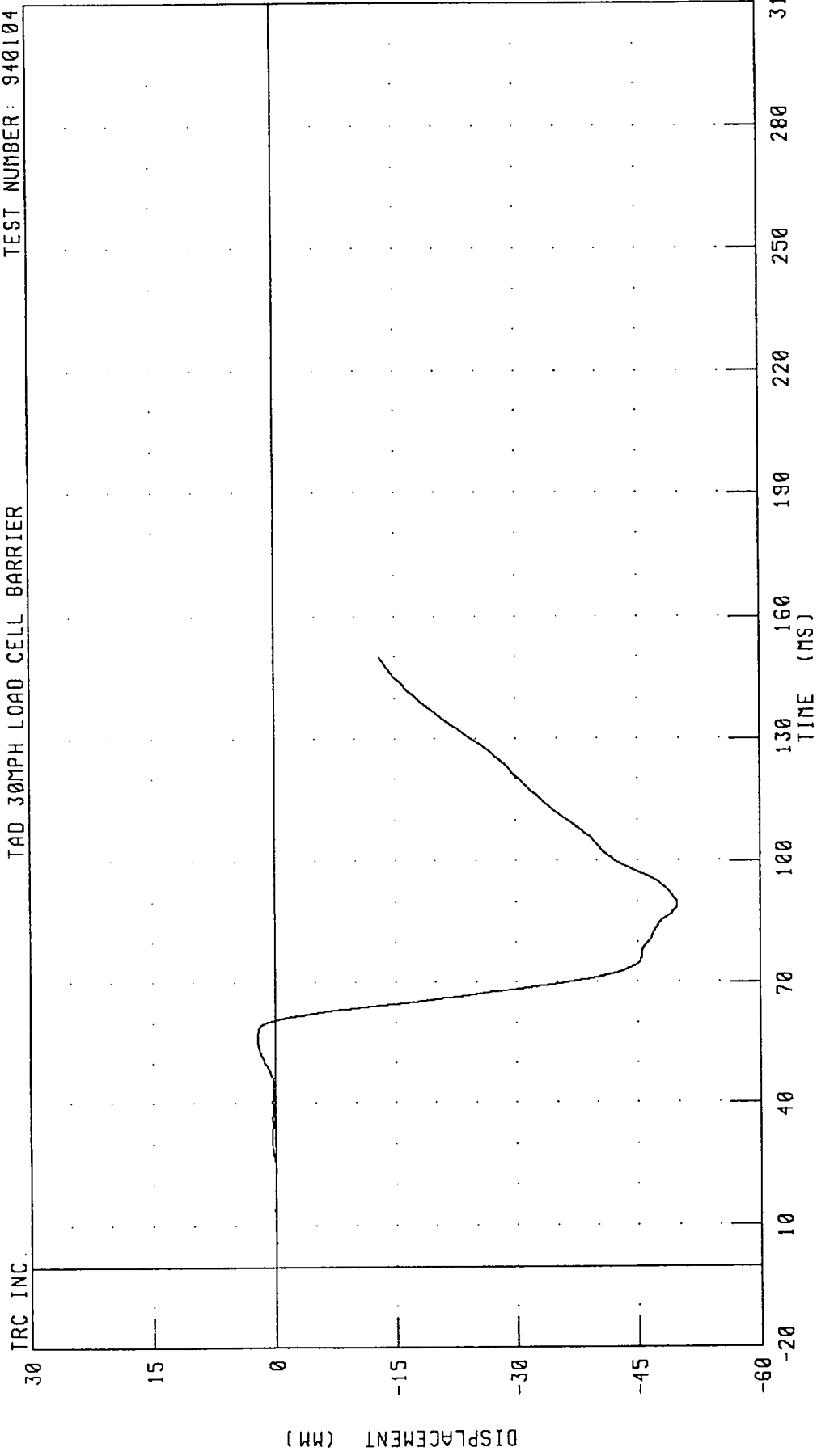
CHANNEL: CS4IS1 FILTER: CH. CLASS 180

PEAK DATA: 9.41 ° @ 105.92 MS; -6.59 ° @ 67.36 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER POSITION 4 X-AXIS CHEST DEFLECTION

TEST NUMBER: 940104

TAD 30MPH LOAD CELL BARRIER

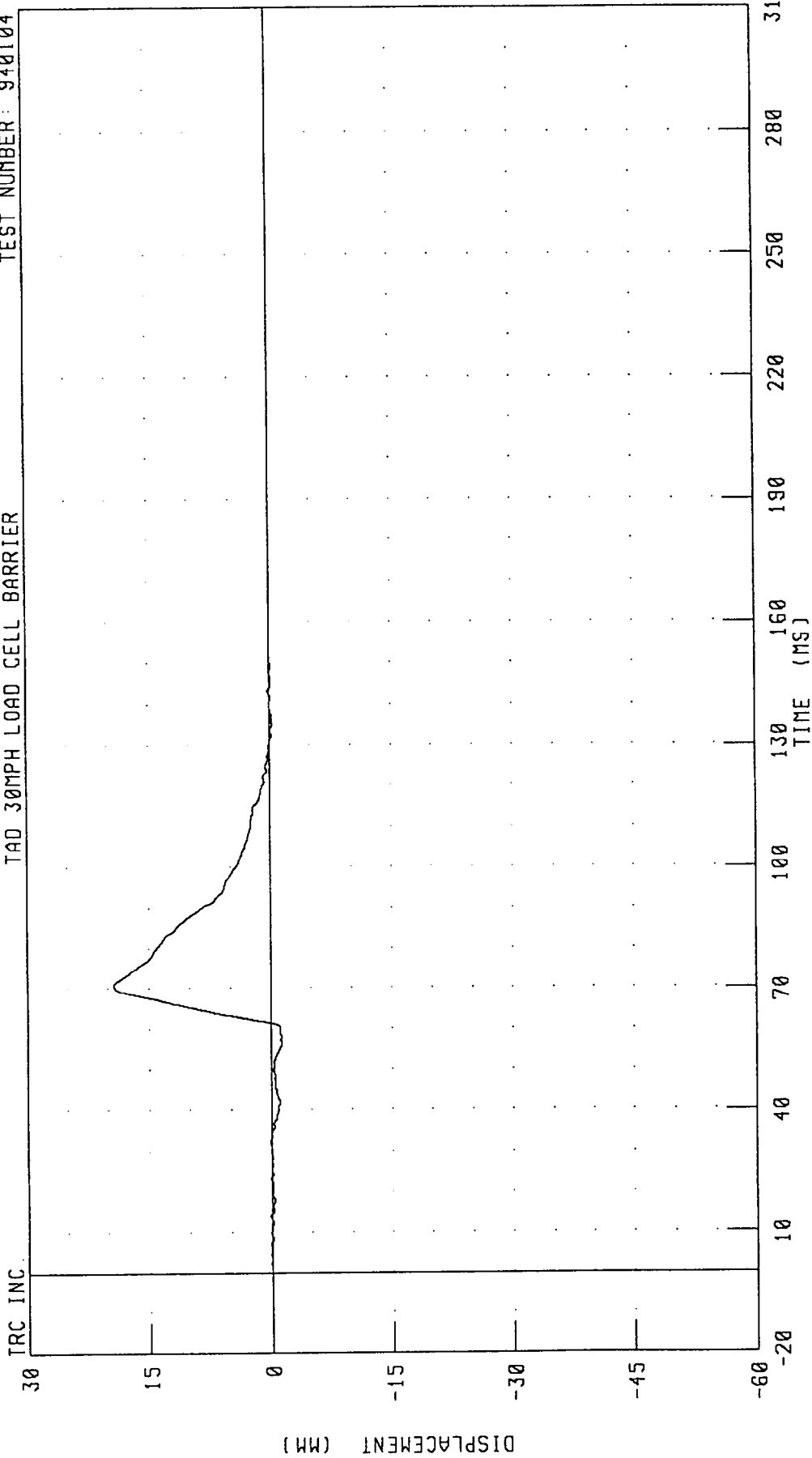


CHANNEL: 4DELX1 FILTER: CH. CLASS 180

PEAK DATA: 2.20 MM @ 57.20 MS; -49.84 MM @ 89.44 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER POSITION 4 Y-AXIS CHEST DEFLECTION
TAD 30MPH LOAD CELL BARRIER

TEST NUMBER: 940104

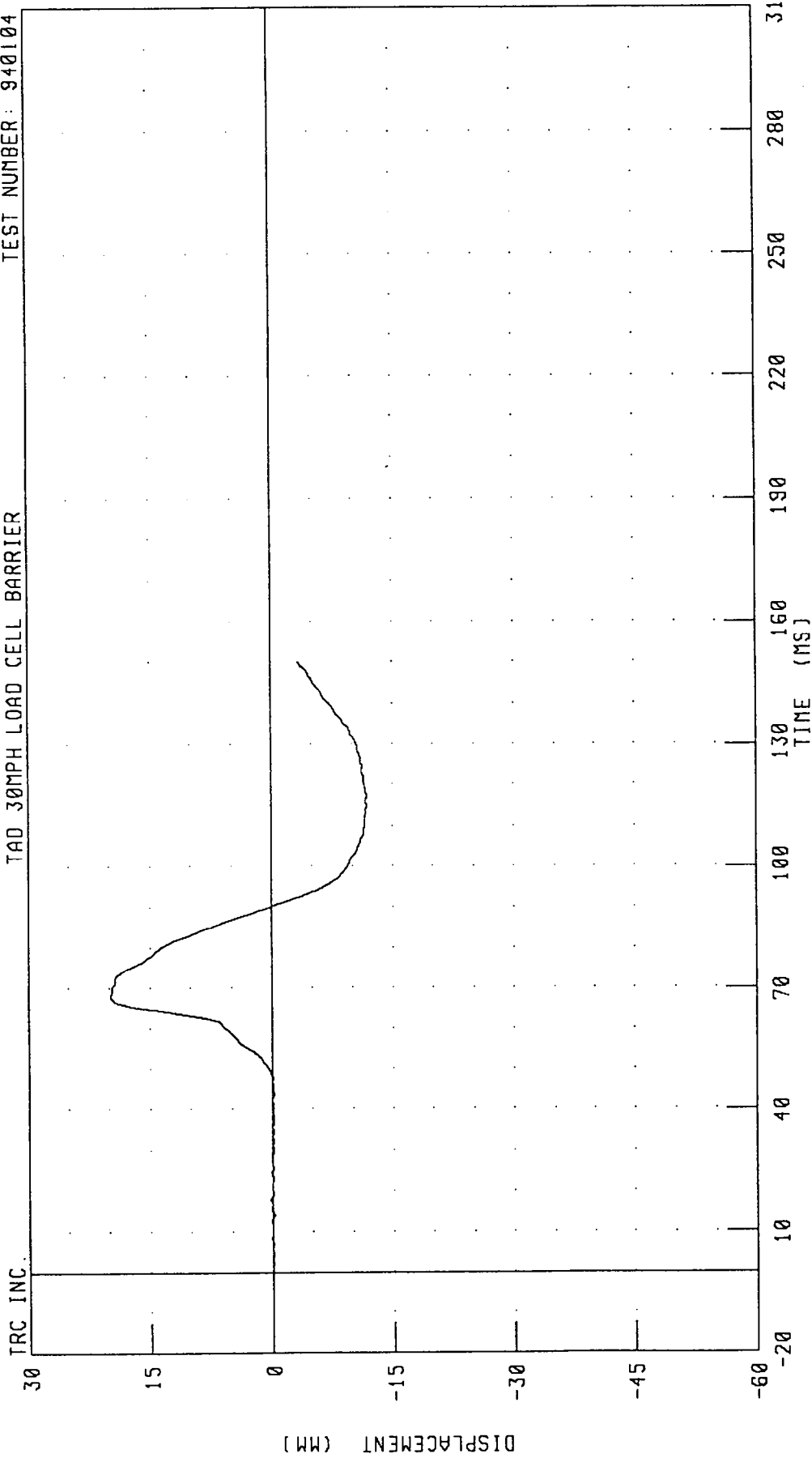


CHANNEL: 4DELY1 FILTER: CH. CLASS 180

PEAK DATA: 19.27 MM @ 70.80 MS; -1.26 MM @ 56.08 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER POSITION 4 Z-AXIS CHEST DEFLECTION
TAD 30MPH LOAD CELL BARRIER

TEST NUMBER: 940104



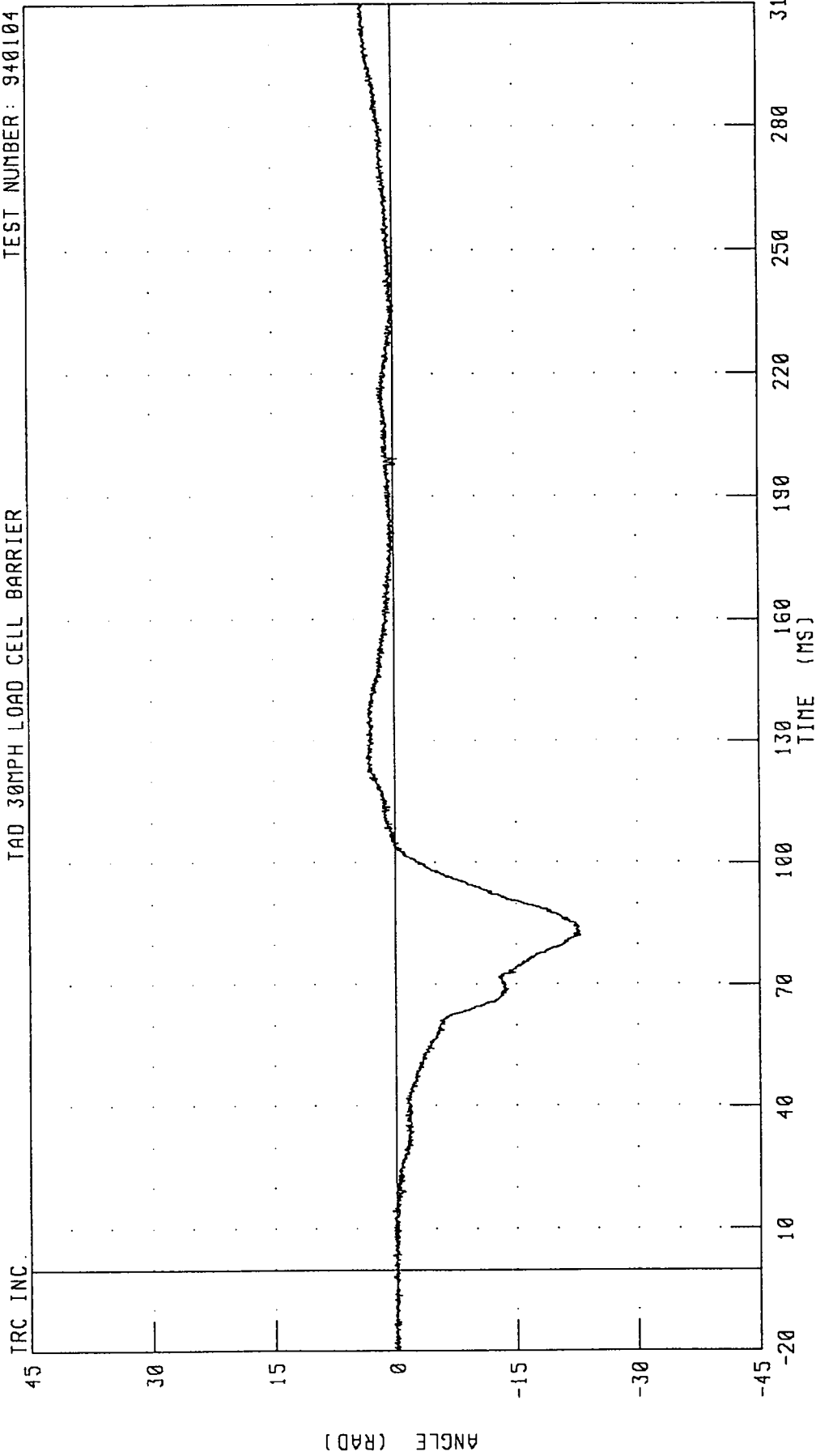
CHANNEL: 4DELZ1 FILTER: CH. CLASS 180

PEAK DATA: 19.84 MM @ 67.92 MS; -11.85 MM @ 117.36 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER UPPER CHEST ANGULAR VELOCITY ABOUT Y AXIS

TAD 30MPH LOAD CELL BARRIER

TEST NUMBER: 940104



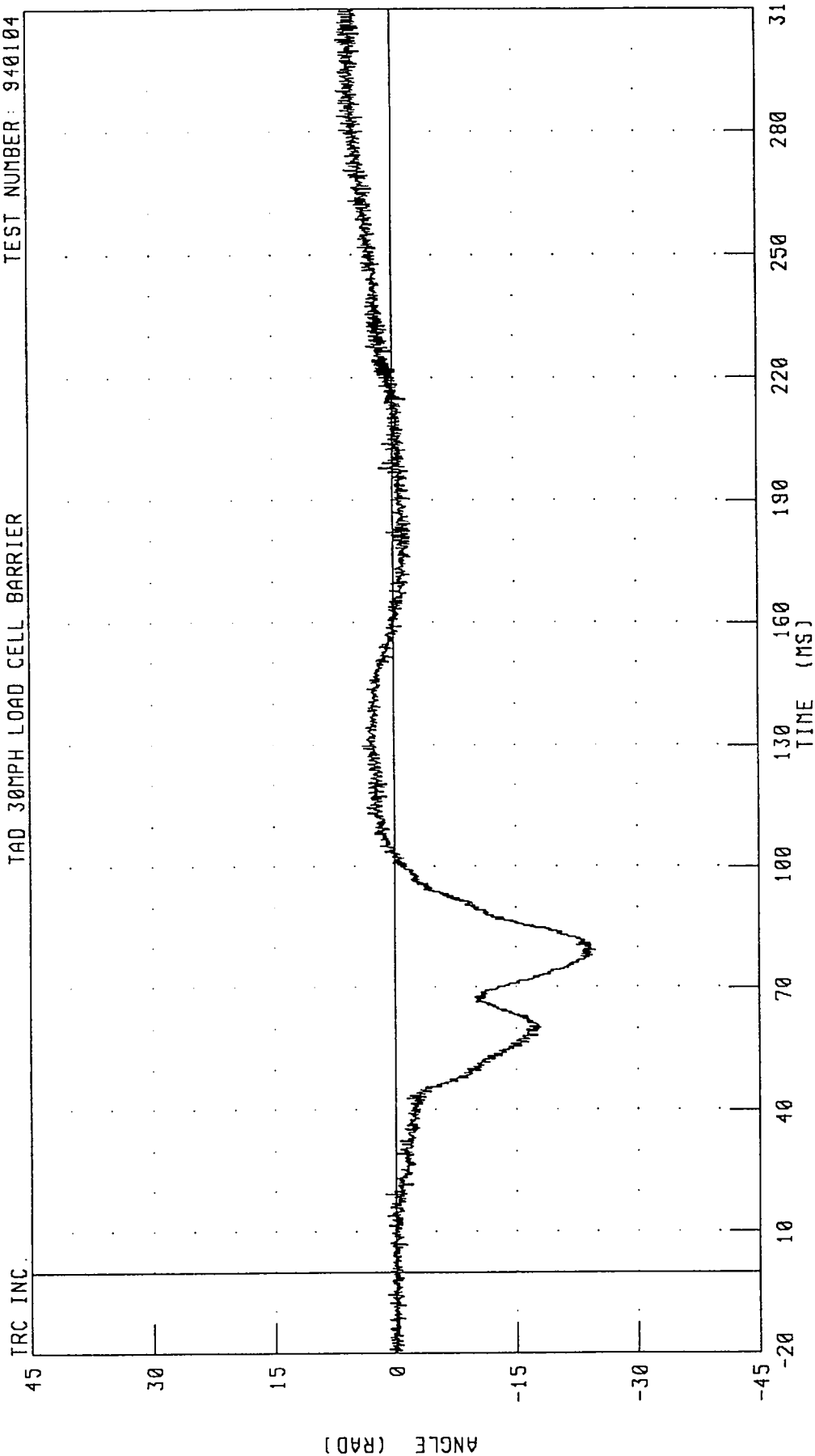
CHANNEL: CSUYV1 FILTER: CH. CLASS 1000

PEAK DATA: 3.96 RAD @ 303.68 MS; -22.86 RAD @ 83.20 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER MIDDLE CHEST ANGULAR VELOCITY ABOUT Y AXIS

TAD 30MPH LOAD CELL BARRIER

TEST NUMBER: 940104



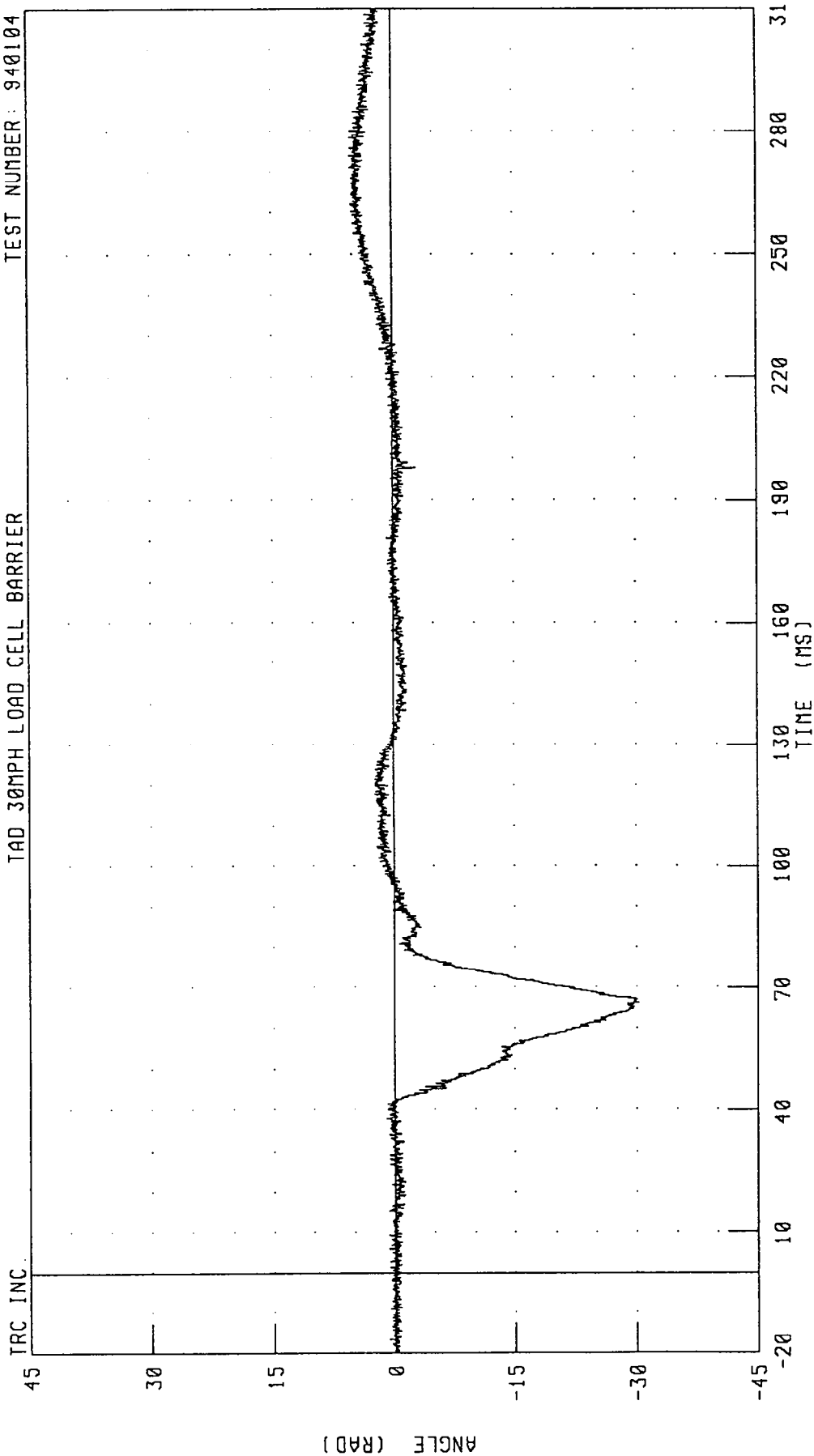
CHANNEL: CSNYY1 FILTER: CH. CLASS 1000

PEAK DATA: 6.79 RAD @ 289.92 MS; -24.74 RAD @ 79.36 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER LOWER CHEST ANGULAR VELOCITY ABOUT Y AXIS

TAD 30MPH LOAD CELL BARRIER

TEST NUMBER: 940104



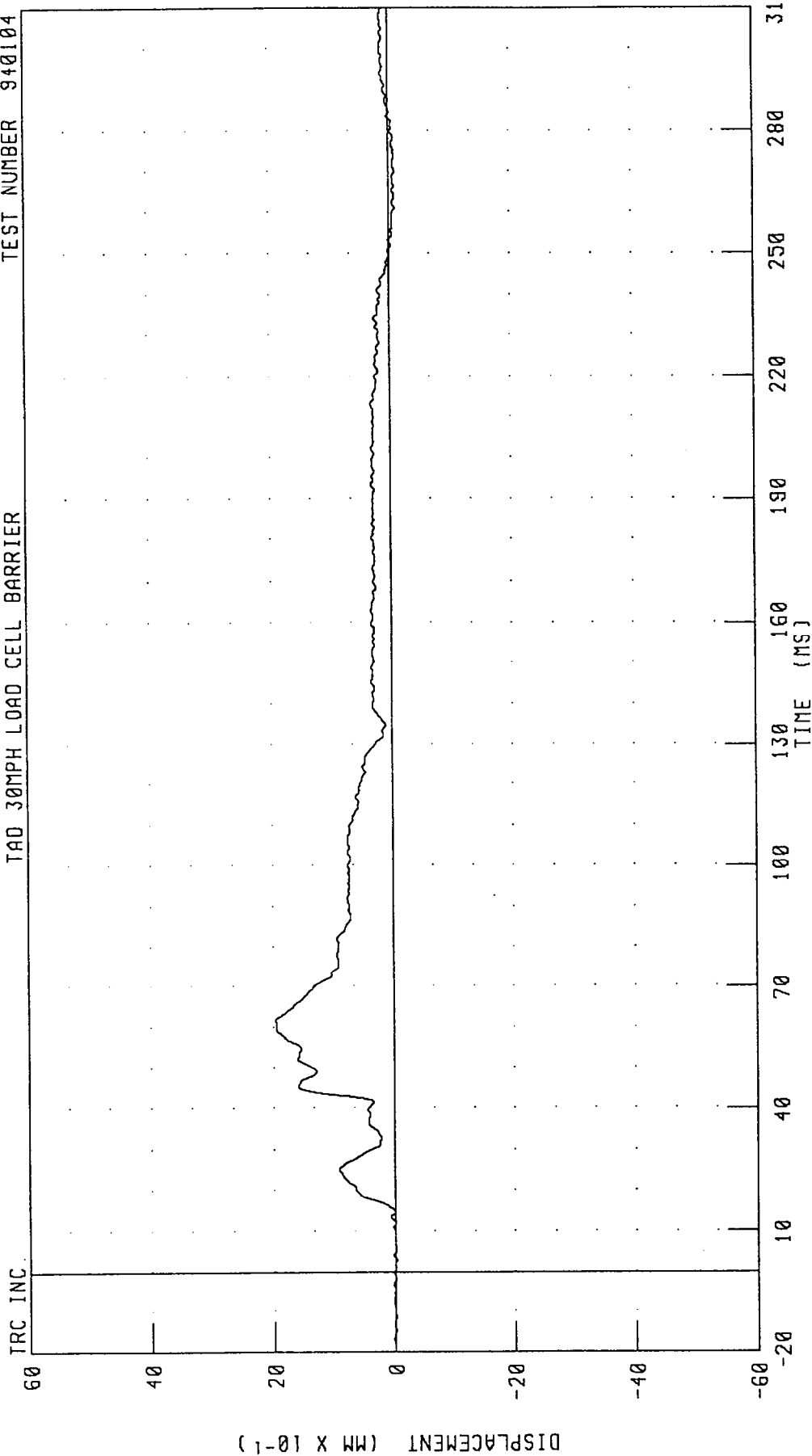
CHANNEL: CSLYV1 FILTER: CH. CLASS 1000

PEAK DATA: 5.27 RAD @ 271.20 MS; -30.18 RAD @ 66.08 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
 DRIVER LEFT KNEE X-AXIS DISPLACEMENT

TAD 30MPH LOAD CELL BARRIER

TEST NUMBER 940104



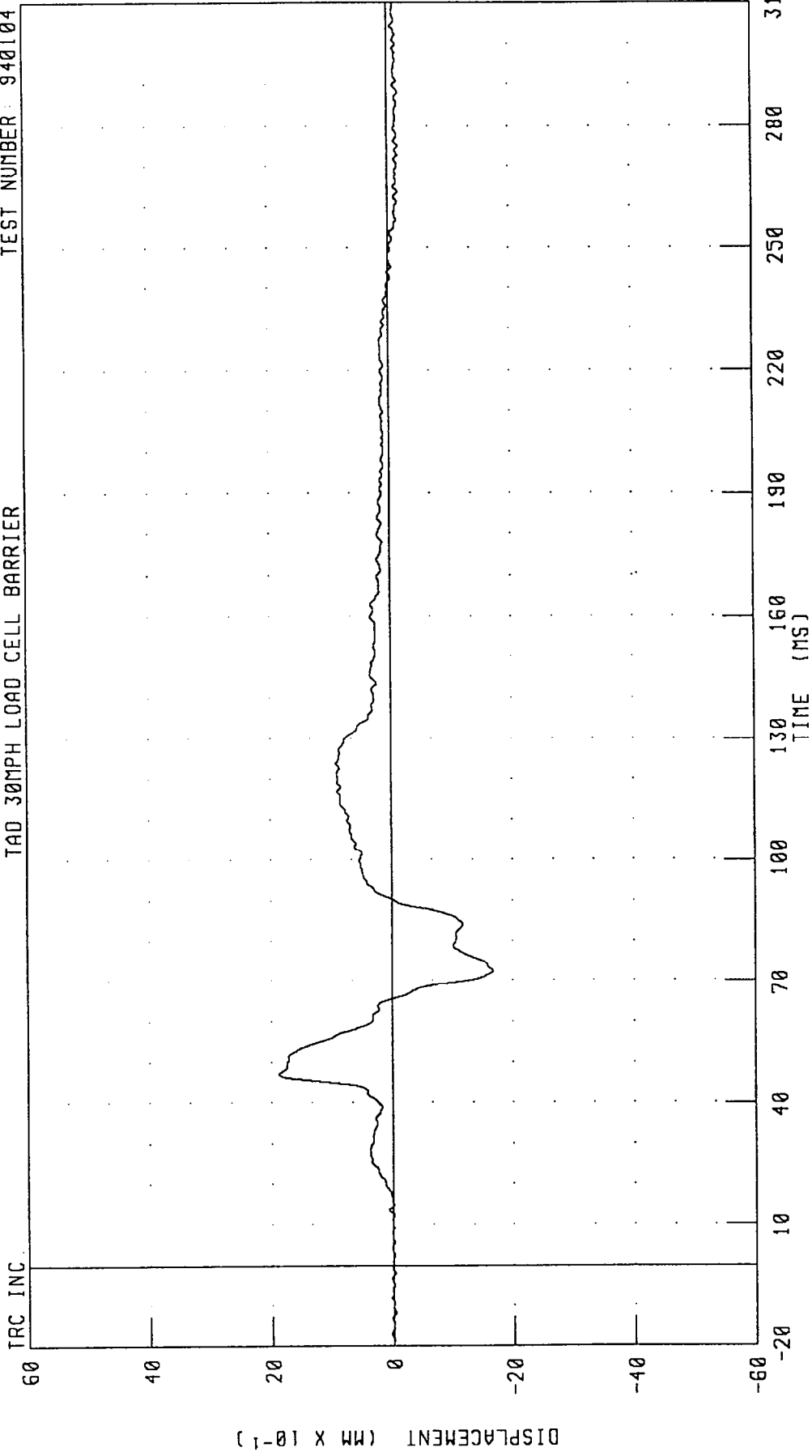
CHANNEL: KNLXD1 FILTER: CH. CLASS 180

PEAK DATA: 1.96 MM @ 61.52 MS; -0.10 MM @ 269.92 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER RIGHT KNEE X-AXIS DISPLACEMENT

TAD 30MPH LOAD CELL BARRIER

TEST NUMBER: 940104



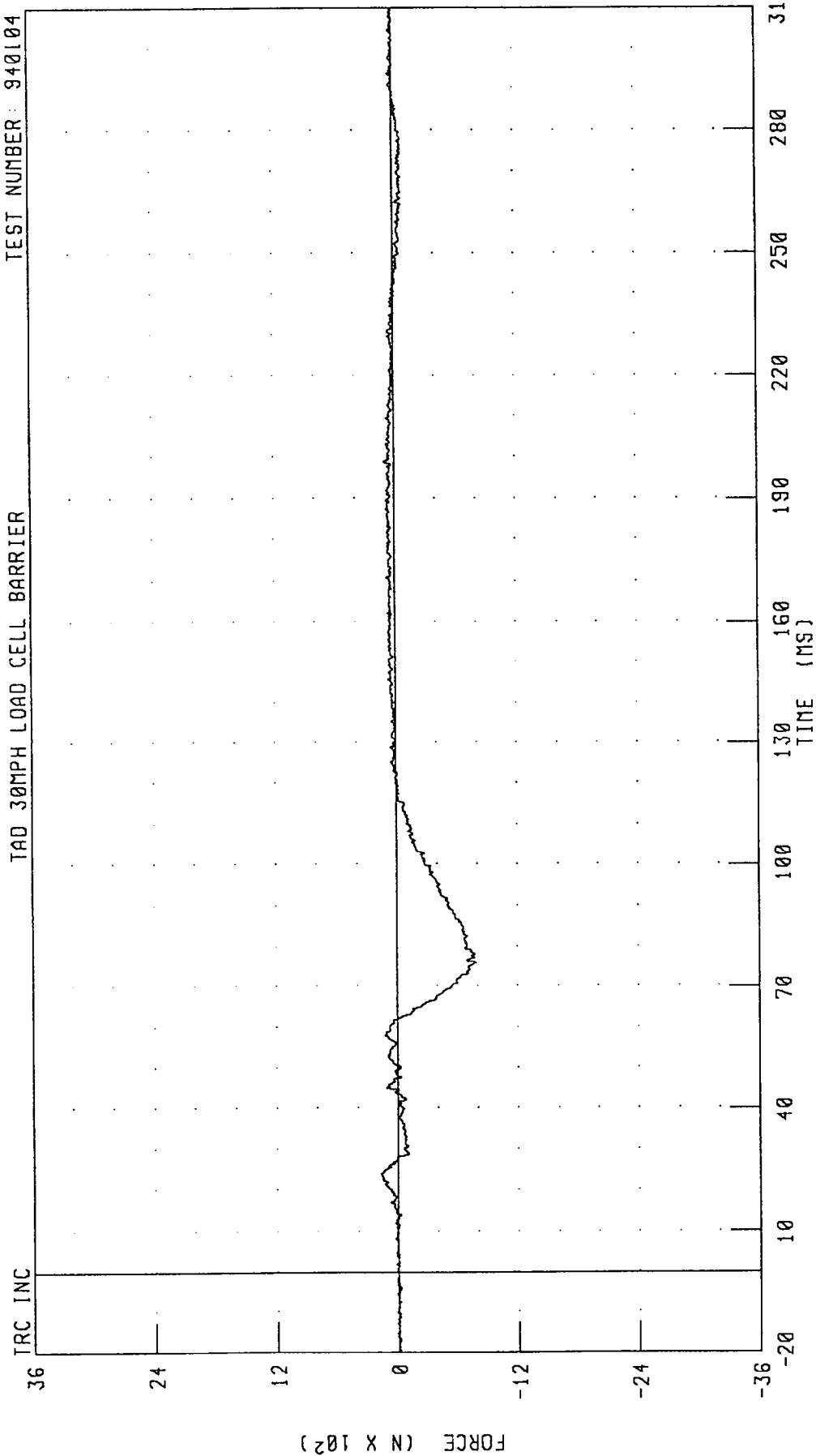
CHANNEL: KNRXD1 FILTER: CH. CLASS 180

PEAK DATA: 1.88 NM @ 47.04 MS; -1.67 NM @ 72.40 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER LEFT UPPER TIBIA X-AXIS FORCE

TEST NUMBER: 940104

TAD 30MPH LOAD CELL BARRIER



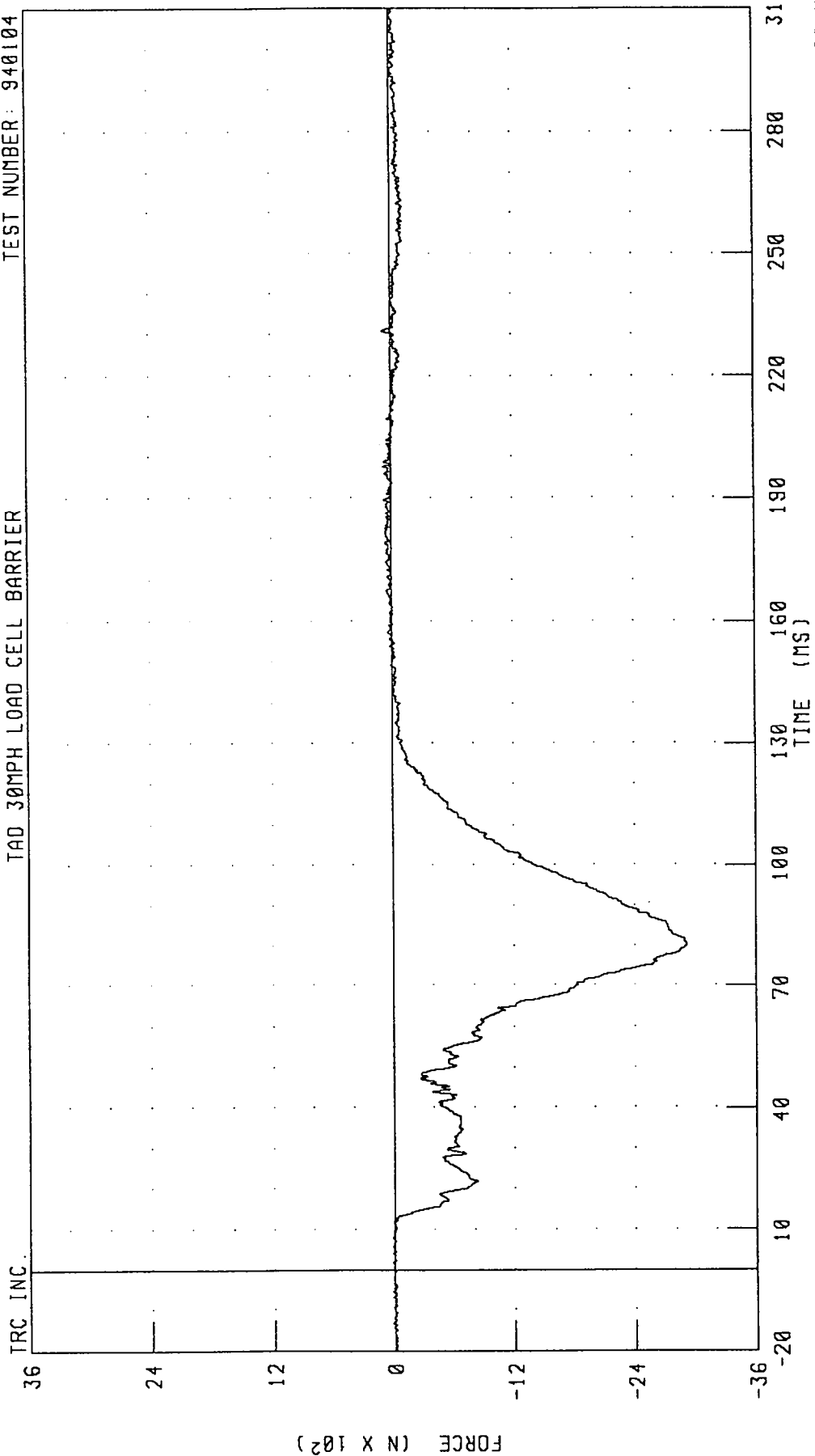
CHANNEL: TBLXF1 FILTER: CH. CLASS 600

PEAK DATA: 169.23 N @ 24.00 MS; -787.38 N @ 76.00 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER LEFT UPPER TIBIA Z-AXIS FORCE

TAD 30MPH LOAD CELL BARRIER

TEST NUMBER: 940104



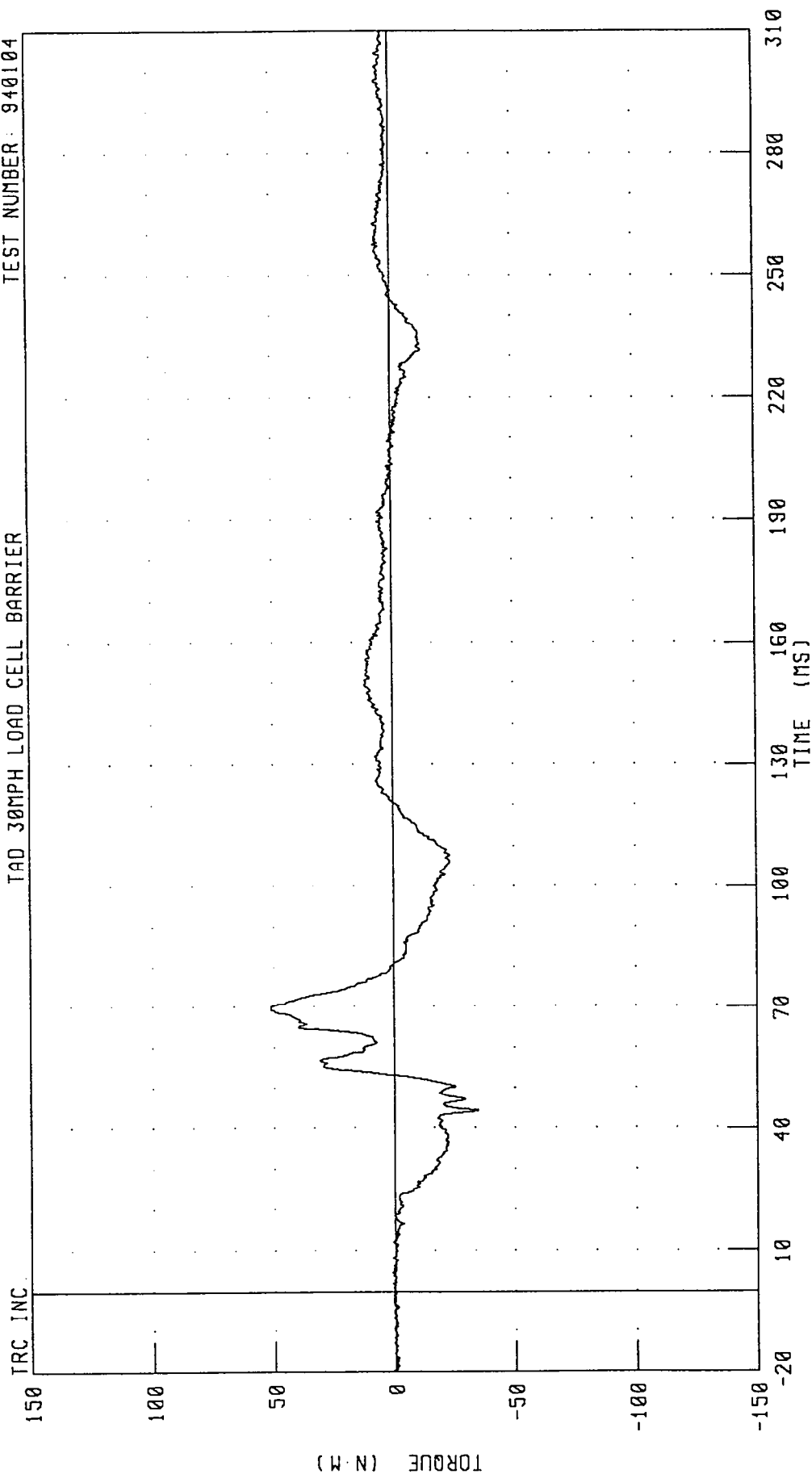
PEAK DATA: 84.60 N @ 197.68 MS; -2914.03 N @ 80.00 MS

CHANNEL: TBLZF1 FILTER: CH. CLASS 600

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER LEFT UPPER TIBIA MOMENT ABOUT X AXIS

TAD 30MPH LOAD CELL BARRIER

TEST NUMBER: 940104



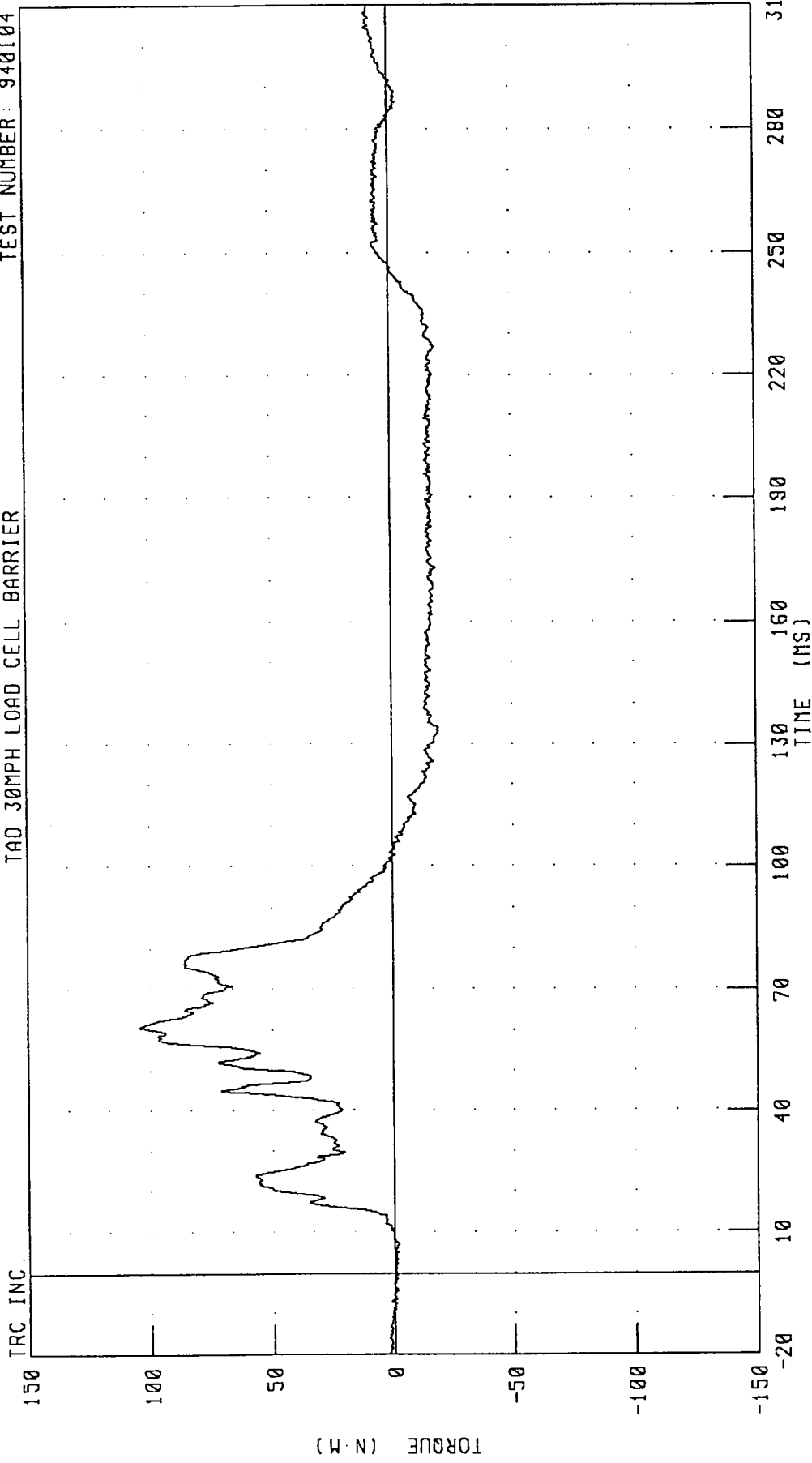
PEAK DATA: 51.27 N-M @ 69.28 MS; -34.51 N-M @ 44.40 MS

CHANNEL: TBLXM1 FILTER: CH. CLASS 600

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER LEFT UPPER TIBIA MOMENT ABOUT Y AXIS

TAD 30MPH LOAD CELL BARRIER

TEST NUMBER: 940104

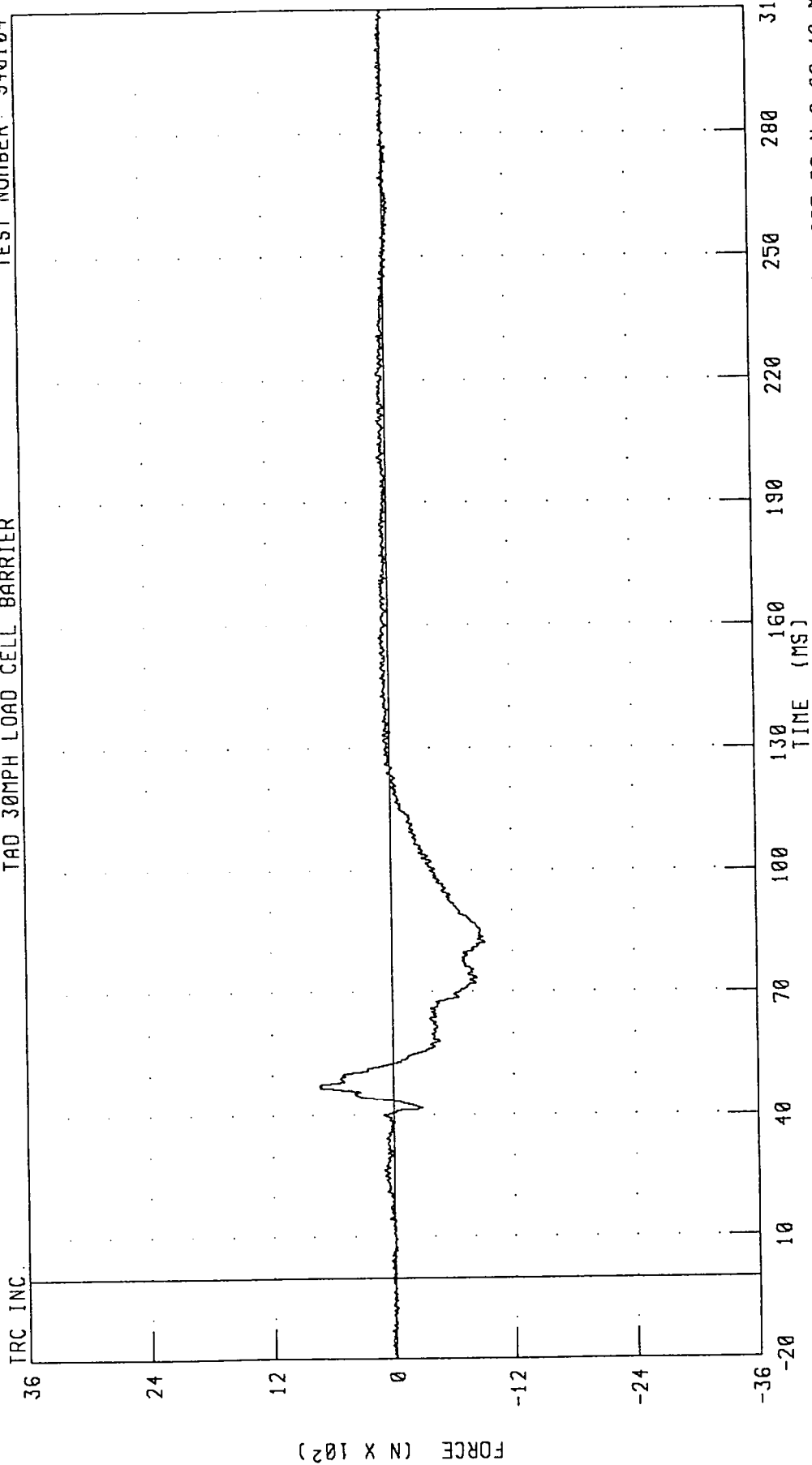


CHANNEL: TBLYM1 FILTER: CH. CLASS 600

PEAK DATA: 104.31 N·M @ 60.80 MS; -19.51 N·M @ 133.36 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER RIGHT UPPER TIBIA X-AXIS FORCE
TAD 30MPH LOAD CELL BARRIER

TEST NUMBER: 940104

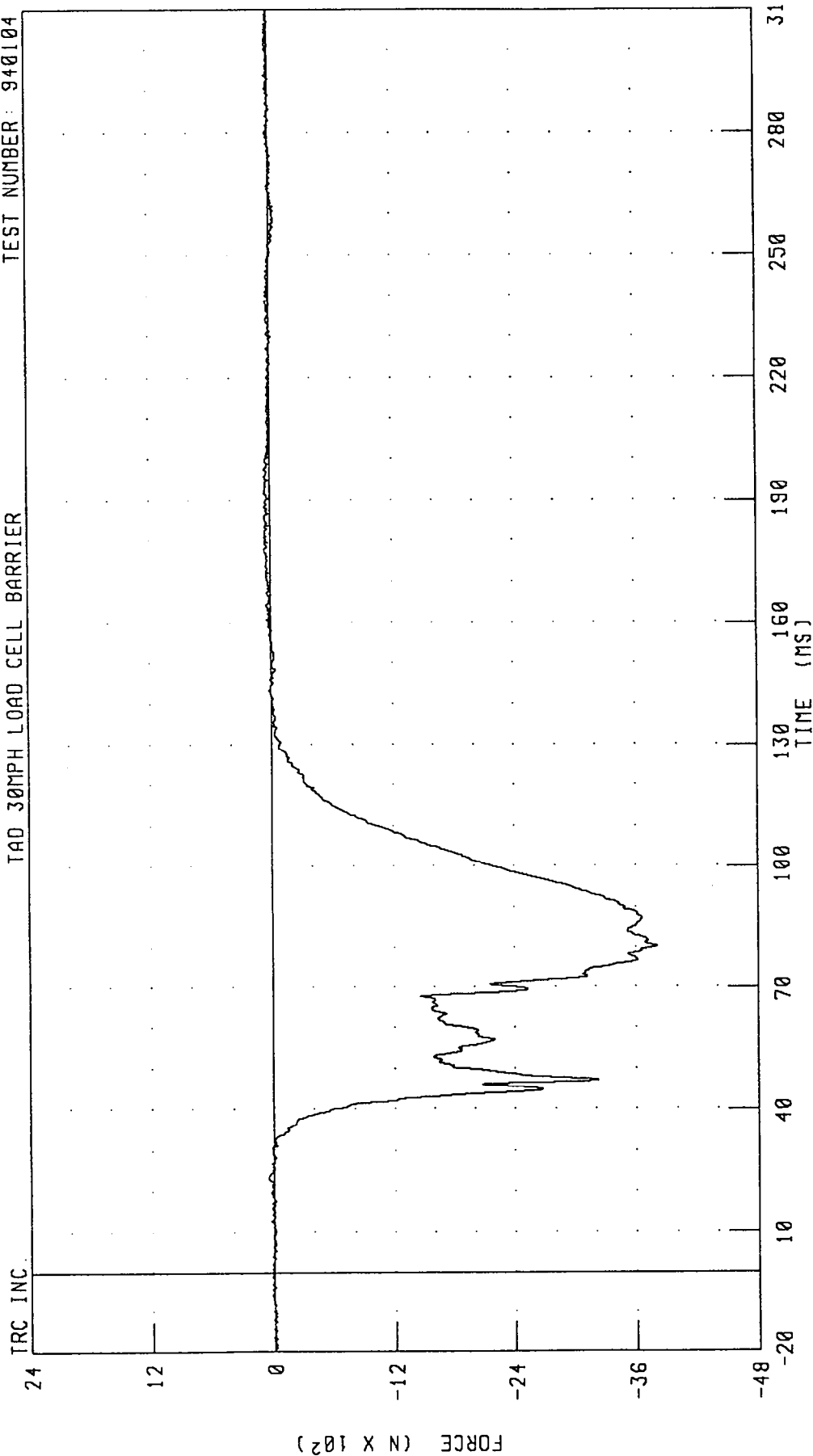


CHANNEL: TBRXF1 FILTER: CH. CLASS 600

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER RIGHT UPPER TIBIA Z-AXIS FORCE

TAD 30MPH LOAD CELL BARRIER

TEST NUMBER: 940104



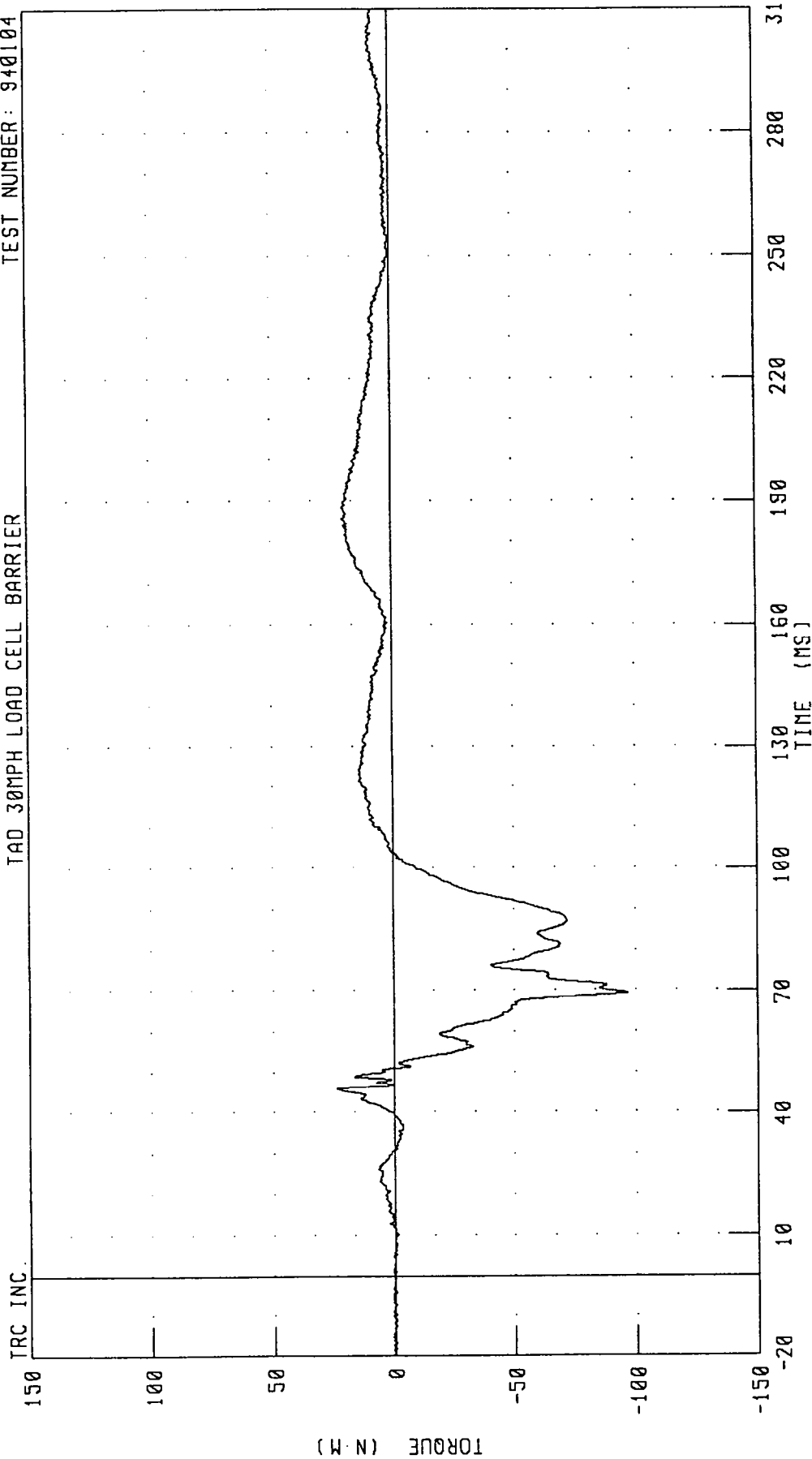
CHANNEL: TBRZF1 FILTER: CH. CLASS 600

PEAK DATA: 63.75 N @ 177.44 MS; -3808.23 N @ 80.40 MS

TAD 50 N PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER RIGHT UPPER TIBIA MOMENT ABOUT X AXIS

TAD 30MPH LOAD CELL BARRIER

TEST NUMBER: 940104



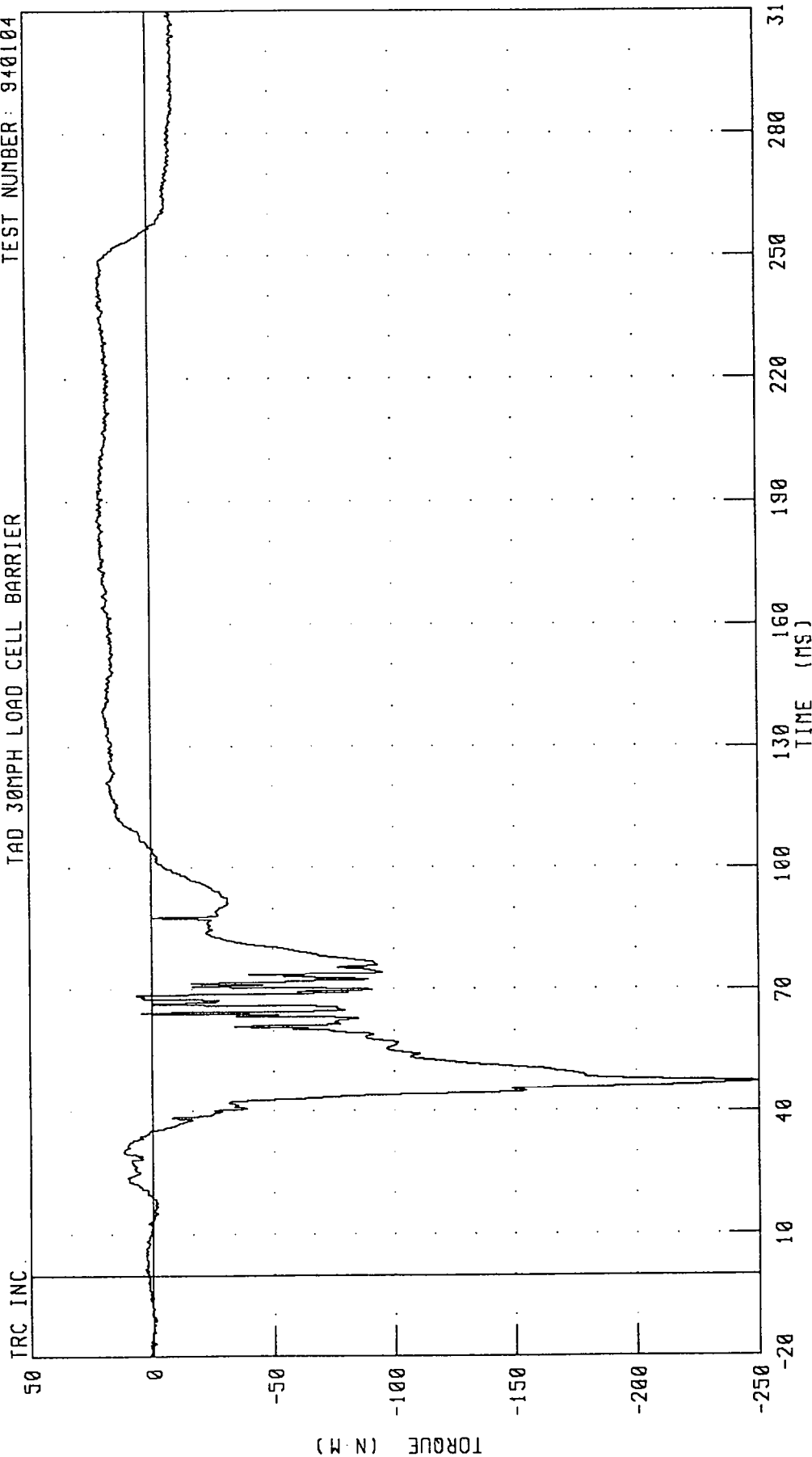
CHANNEL: TBRXM1 FILTER: CH. CLASS 600

PEAK DATA: 23.82 N·M @ 45.92 MS; -96.62 N·M @ 69.36 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER RIGHT UPPER TIBIA MOMENT ABOUT Y AXIS

TAD 30MPH LOAD CELL BARRIER

TEST NUMBER: 940104

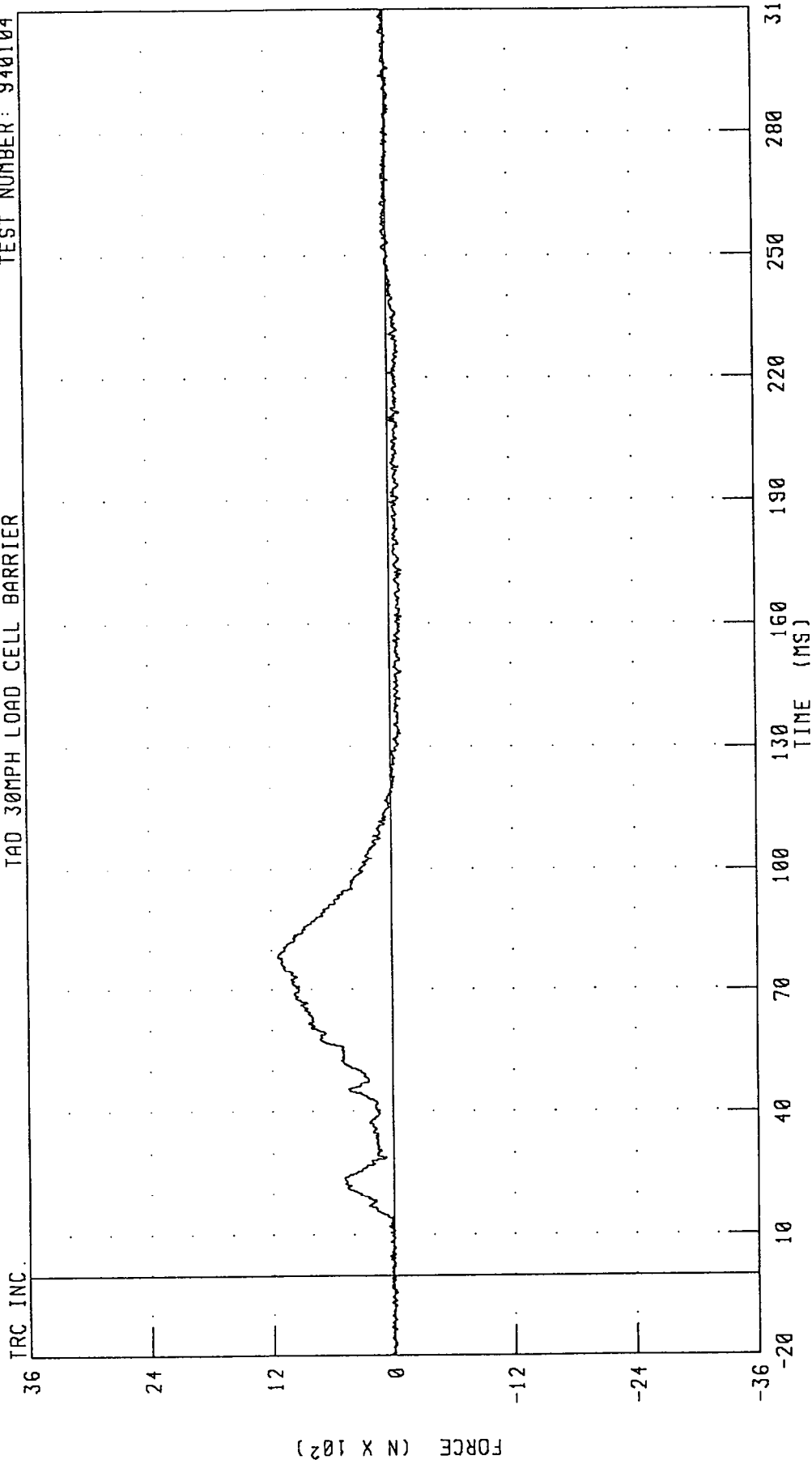


CHANNEL: TBRYM1 FILTER: CH. CLASS 600

PEAK DATA: 21.31 N-M @ 185.60 MS; -250.13 N-M @ 47.36 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER LEFT LOWER TIBIA X-AXIS FORCE
TAD 30MPH LOAD CELL BARRIER

TEST NUMBER: 940104



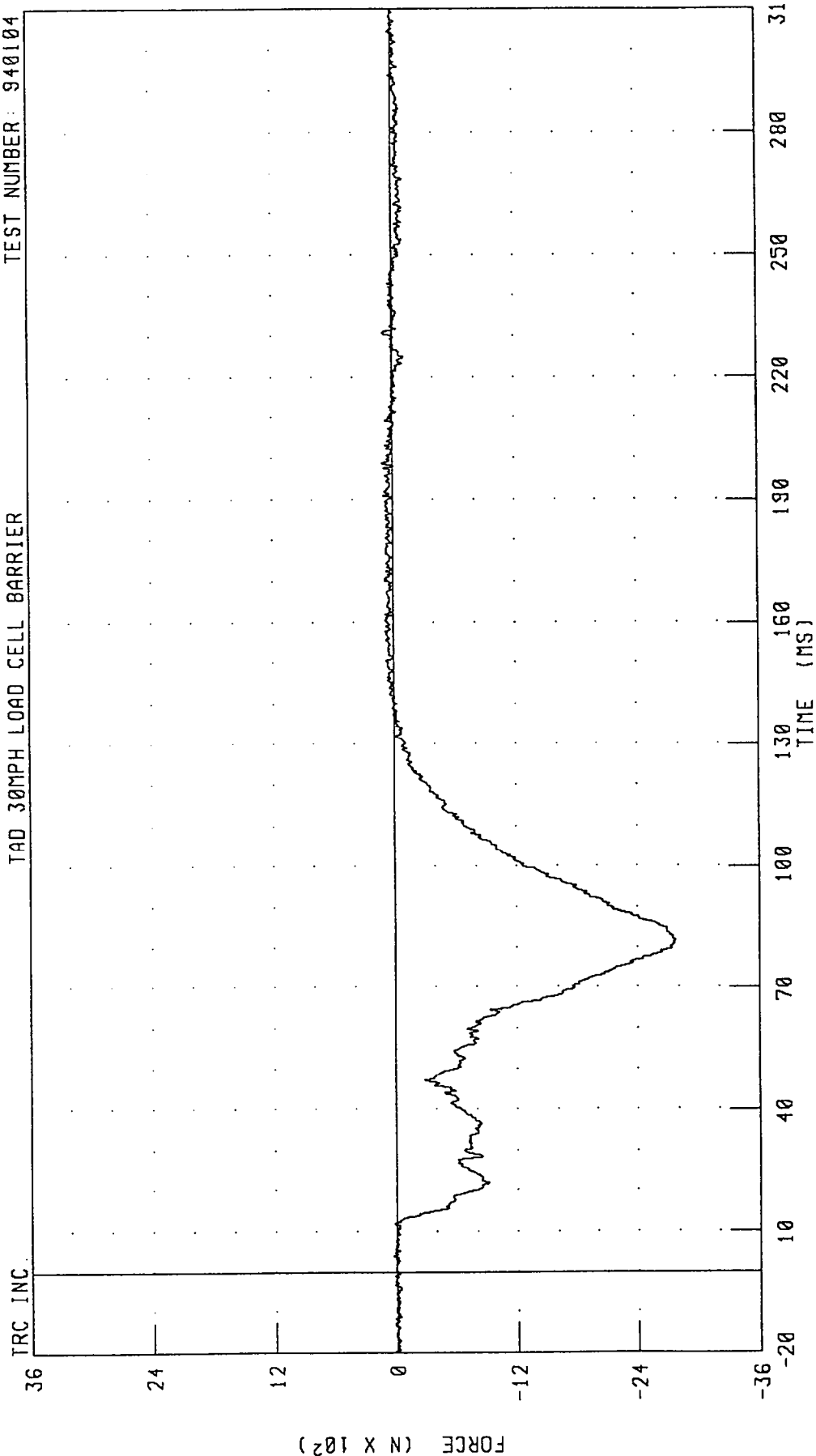
CHANNEL: ANLXF1 FILTER: CH. CLASS 600

PEAK DATA: 1143.00 N @ 78.40 MS; -121.72 N @ 172.00 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER LEFT LOWER TIBIA Z-AXIS FORCE

TEST NUMBER: 940104

TAD 30MPH LOAD CELL BARRIER



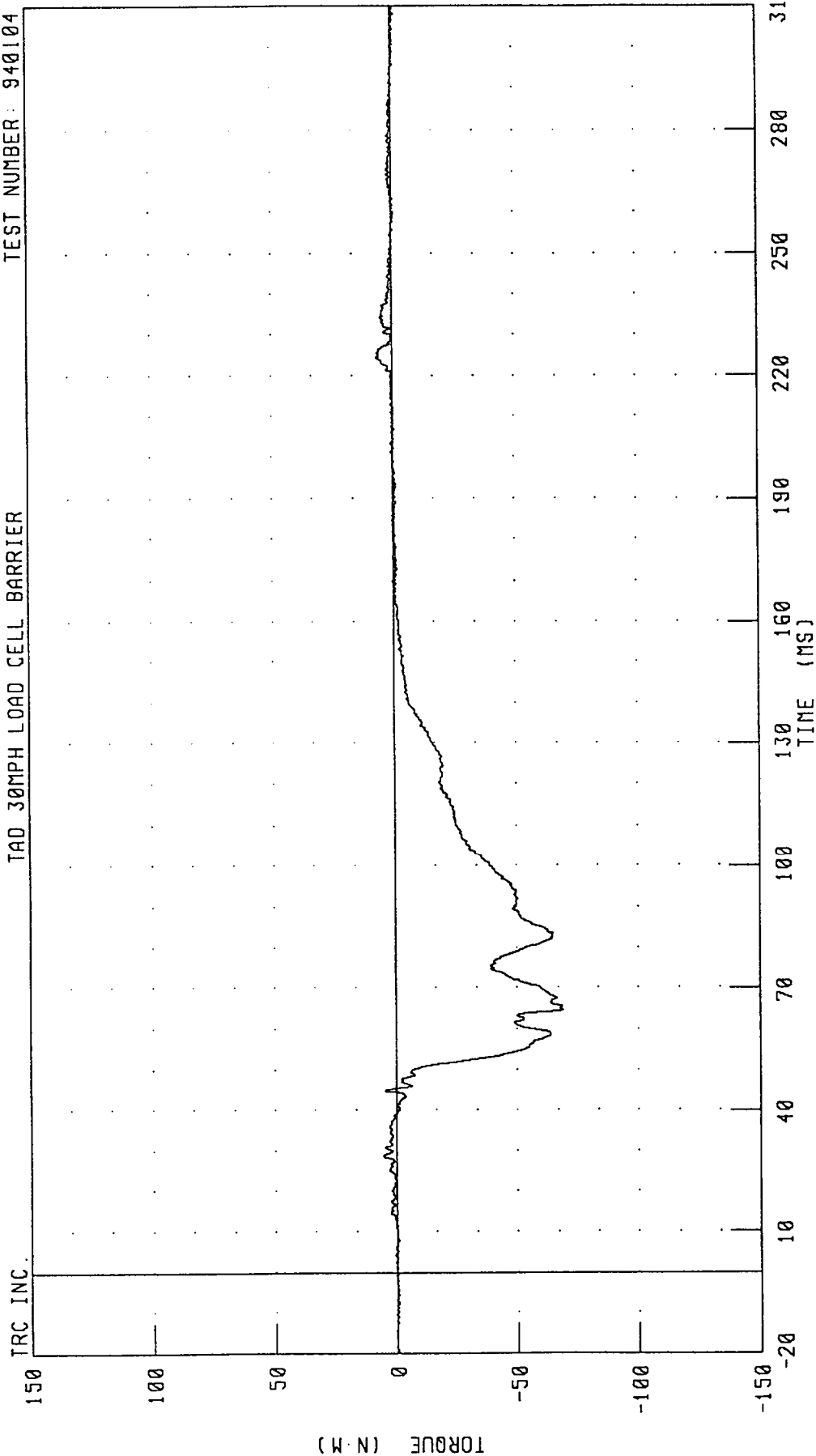
CHANNEL: ANLZF1 FILTER: CH. CLASS 600

PEAK DATA: 104.18 N @ 198.96 MS; -2772.45 N @ 81.84 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER LEFT LOWER TIBIA MOMENT ABOUT X AXIS

TAD 30MPH LOAD CELL BARRIER

TEST NUMBER: 940104



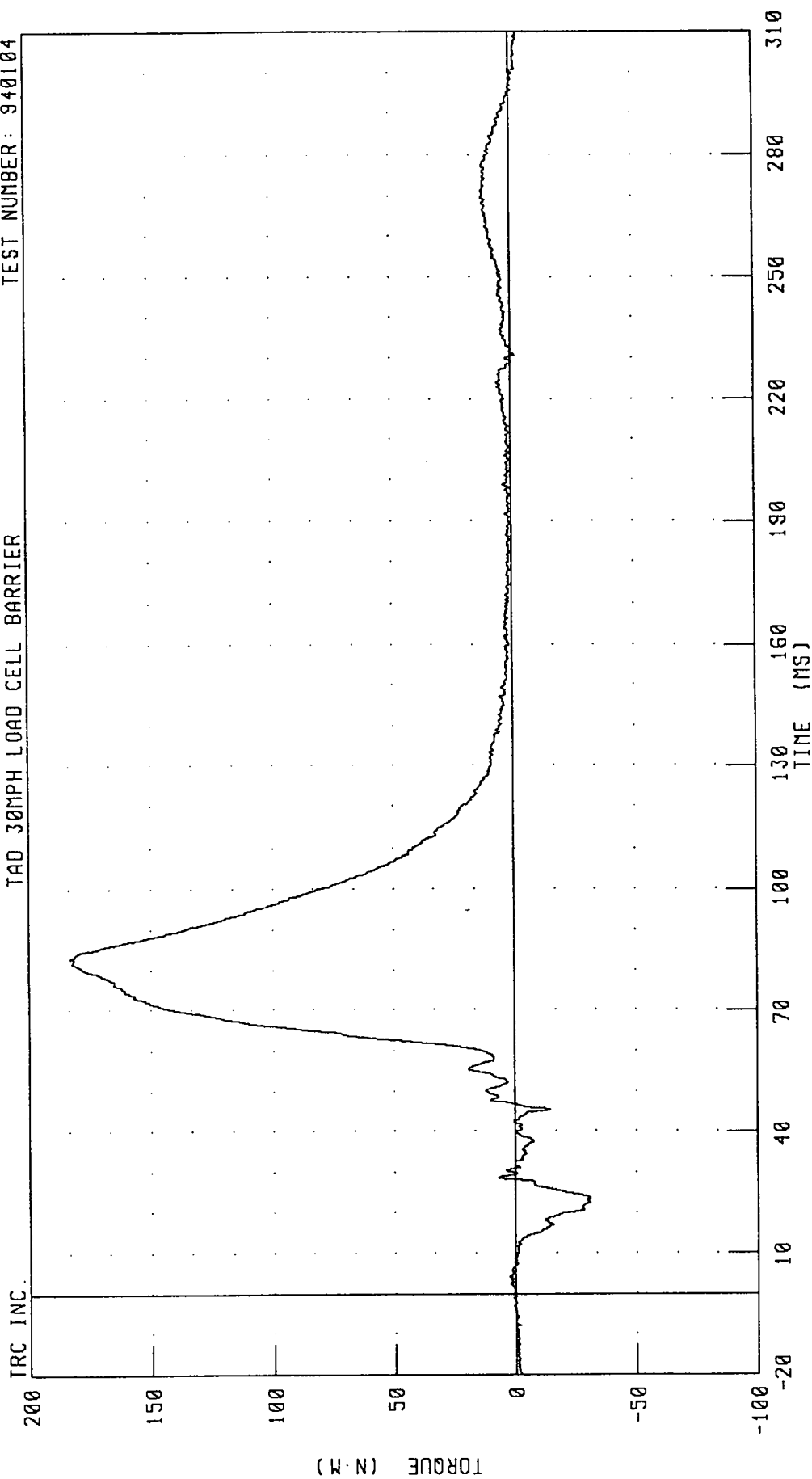
CHANNEL: ANLXM1 FILTER: CH. CLASS 600

PEAK DATA: 6.69 N·M @ 224.40 MS; -68.79 N·M @ 64.64 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER LEFT LOWER TIBIA MOMENT ABOUT Y AXIS

TAD 30MPH LOAD CELL BARRIER

TEST NUMBER: 940104

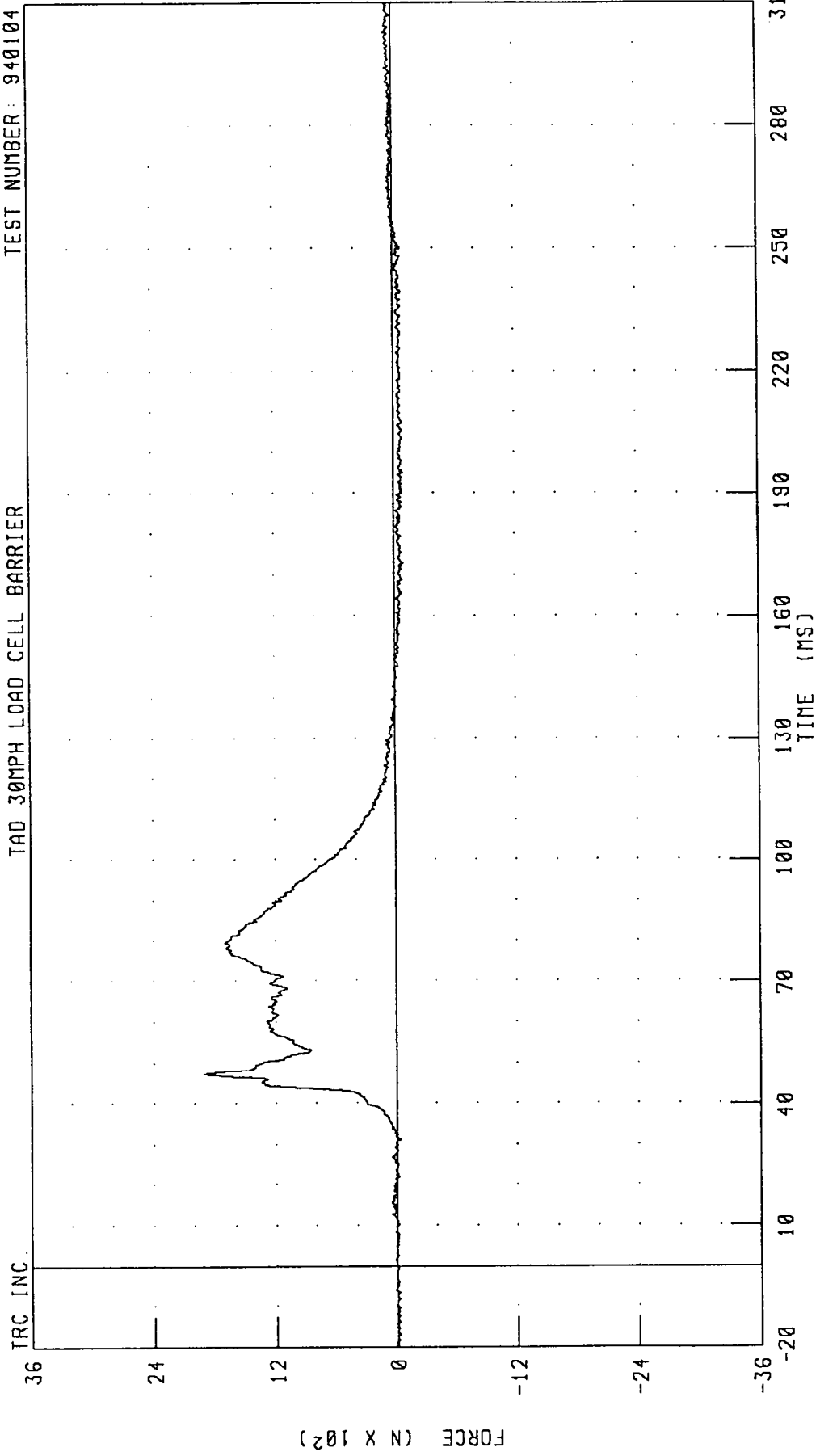


CHANNEL: ANLYM1 FILTER: CH. CLASS 600

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER RIGHT LOWER TIBIA X-AXIS FORCE

TEST NUMBER: 940104

TAD 30MPH LOAD CELL BARRIER



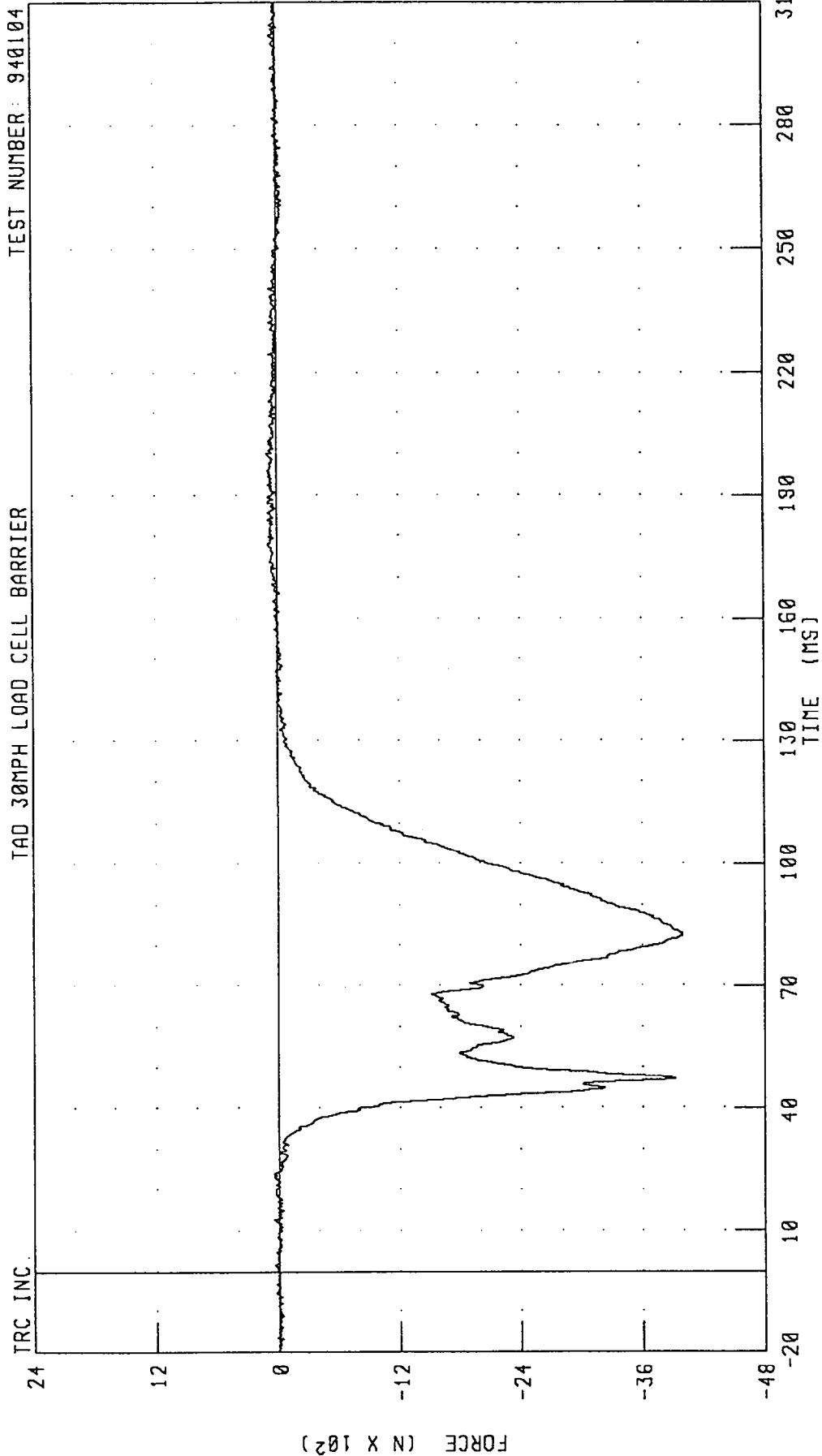
PEAK DATA: 1907.26 N @ 47.36 MS; -92.17 N @ 195.04 MS

CHANNEL: ANRXF1 FILTER: CH. CLASS 600

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER RIGHT LOWER TIBIA Z-AXIS FORCE

TAD 30MPH LOAD CELL BARRIER

TEST NUMBER: 940104



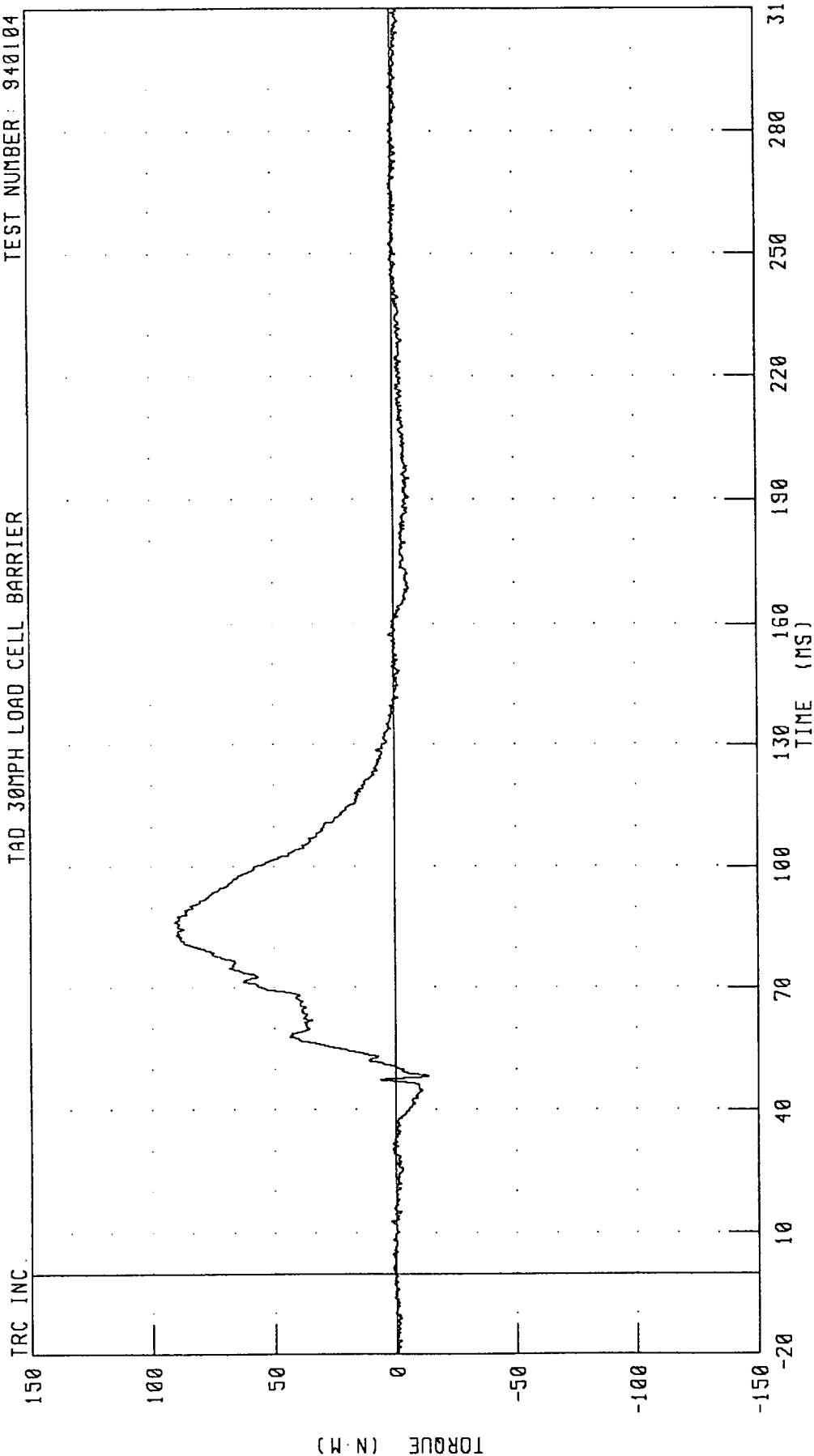
CHANNEL: ANRZF1 FILTER: CH. CLASS 600

PEAK DATA: 102.96 N @ 200.08 MS; -3994.84 N @ 82.40 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER RIGHT LOWER TIBIA MOMENT ABOUT X AXIS

TAD 30MPH LOAD CELL BARRIER

TEST NUMBER: 940104



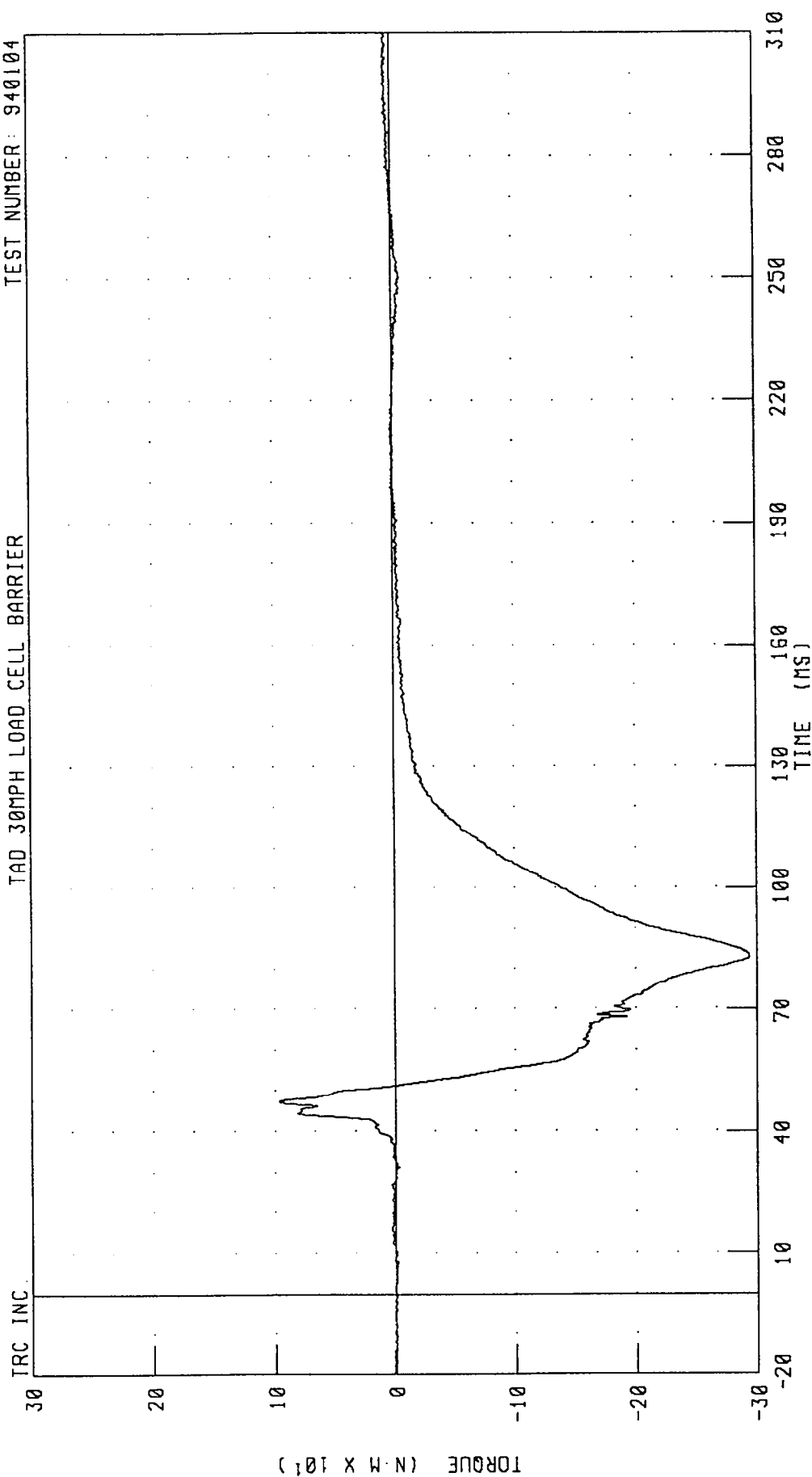
PEAK DATA: 90.46 N·M @ 86.56 MS; -13.71 N·M @ 48.32 MS

CHANNEL: ANRXM1 FILTER: CH. CLASS 600

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER RIGHT LOWER TIBIA MOMENT ABOUT Y AXIS

TAD 30MPH LOAD CELL BARRIER

TEST NUMBER: 940104



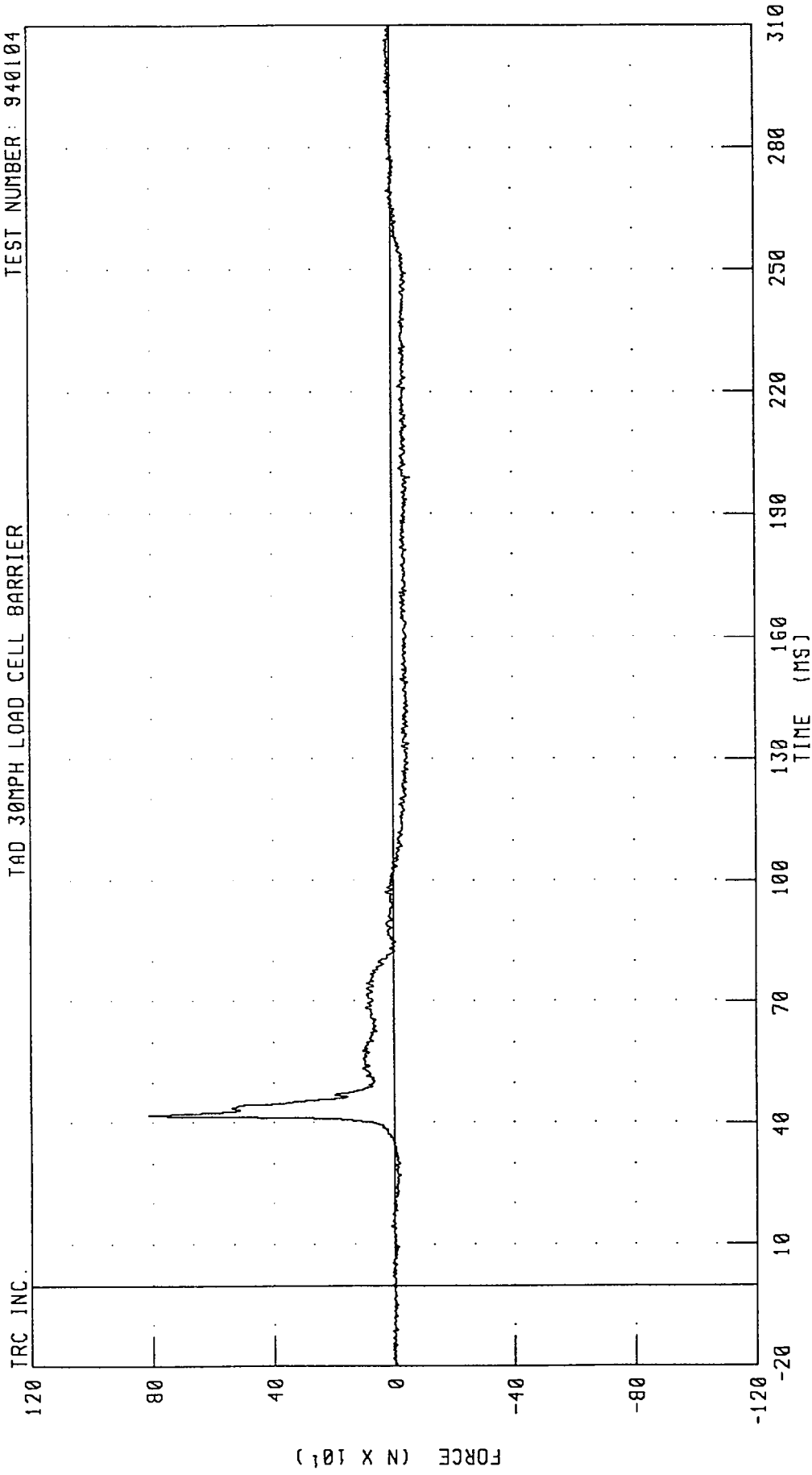
CHANNEL: ANRYM1 FILTER: CH. CLASS 600

PEAK DATA: 96.43 N·M @ 47.36 MS; -293.94 N·M @ 82.88 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER RIGHT UPPER TIBIA ANTERIOR LOAD CELL TOP

TAD 30MPH LOAD CELL BARRIER

TEST NUMBER: 940104

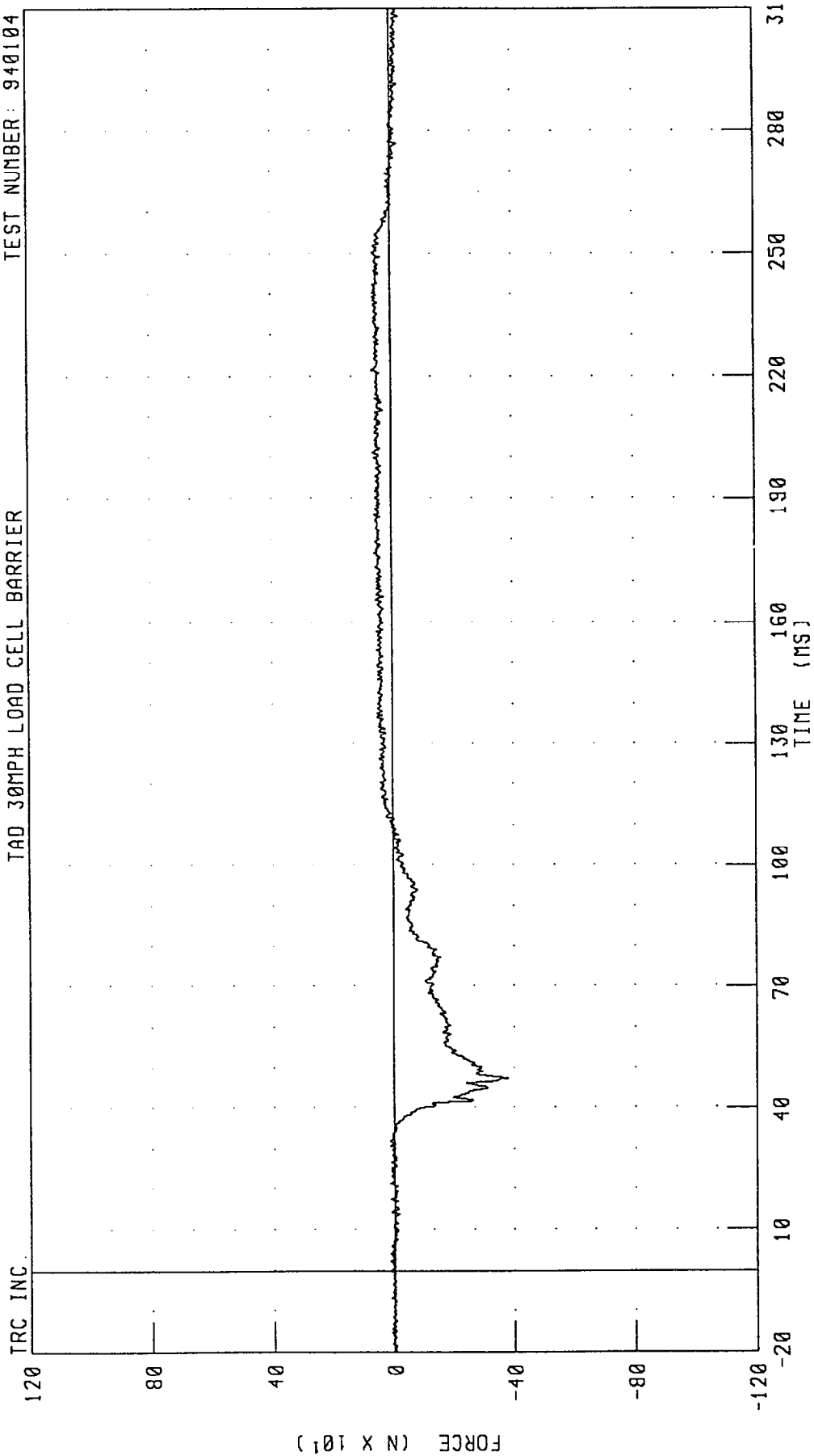


CHANNEL: RTAUT1 FILTER: CH. CLASS 600

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER RIGHT UPPER TIBIA ANTERIOR LOAD CELL BOTTOM

TAD 30MPH LOAD CELL BARRIER

TEST NUMBER: 940104

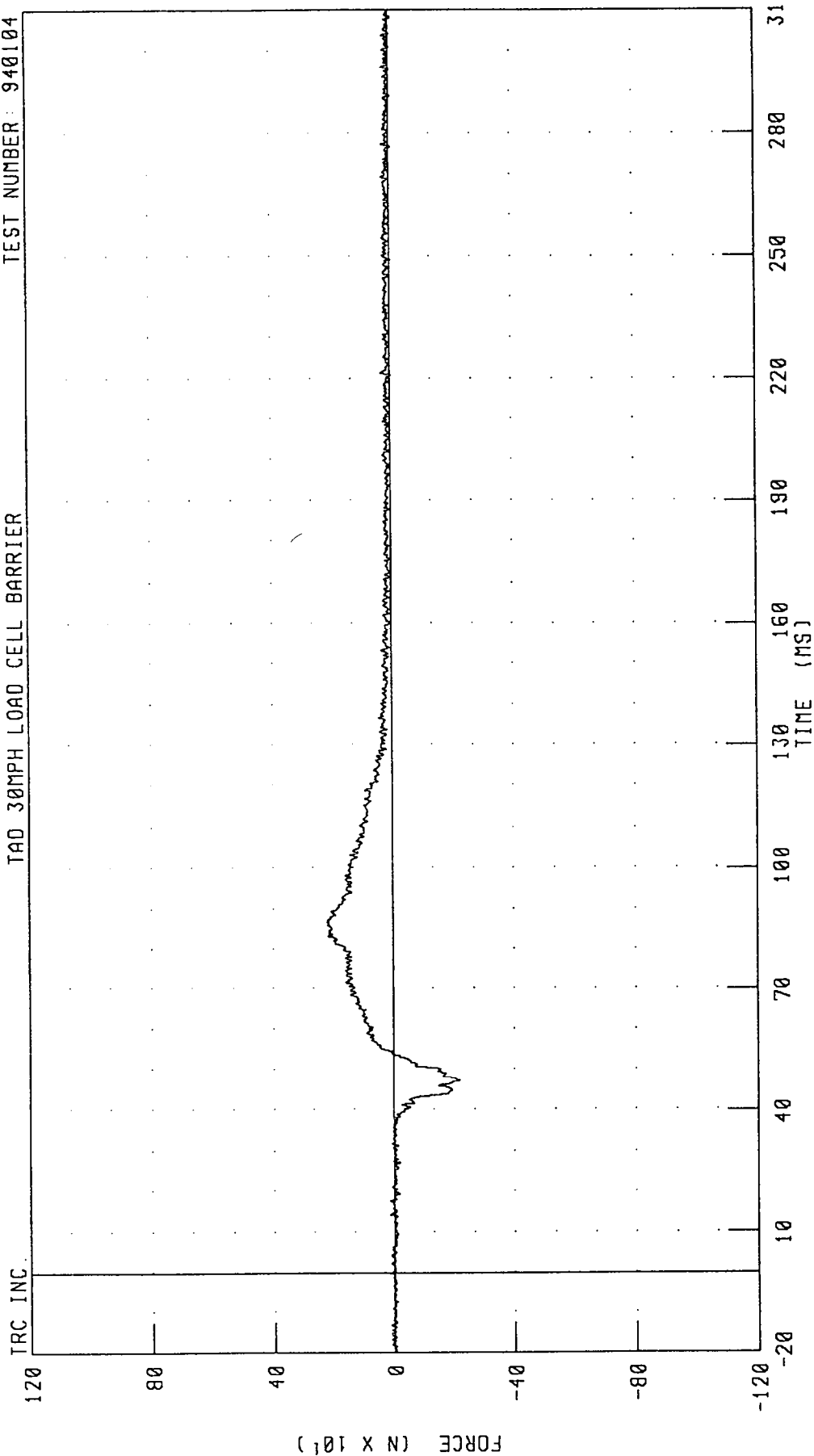


CHANNEL: RTAUB1 FILTER: CH. CLASS 600

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER RIGHT TIBIA ANTERIOR LOAD CELL TOP

TAD 30MPH LOAD CELL BARRIER

TEST NUMBER: 940104

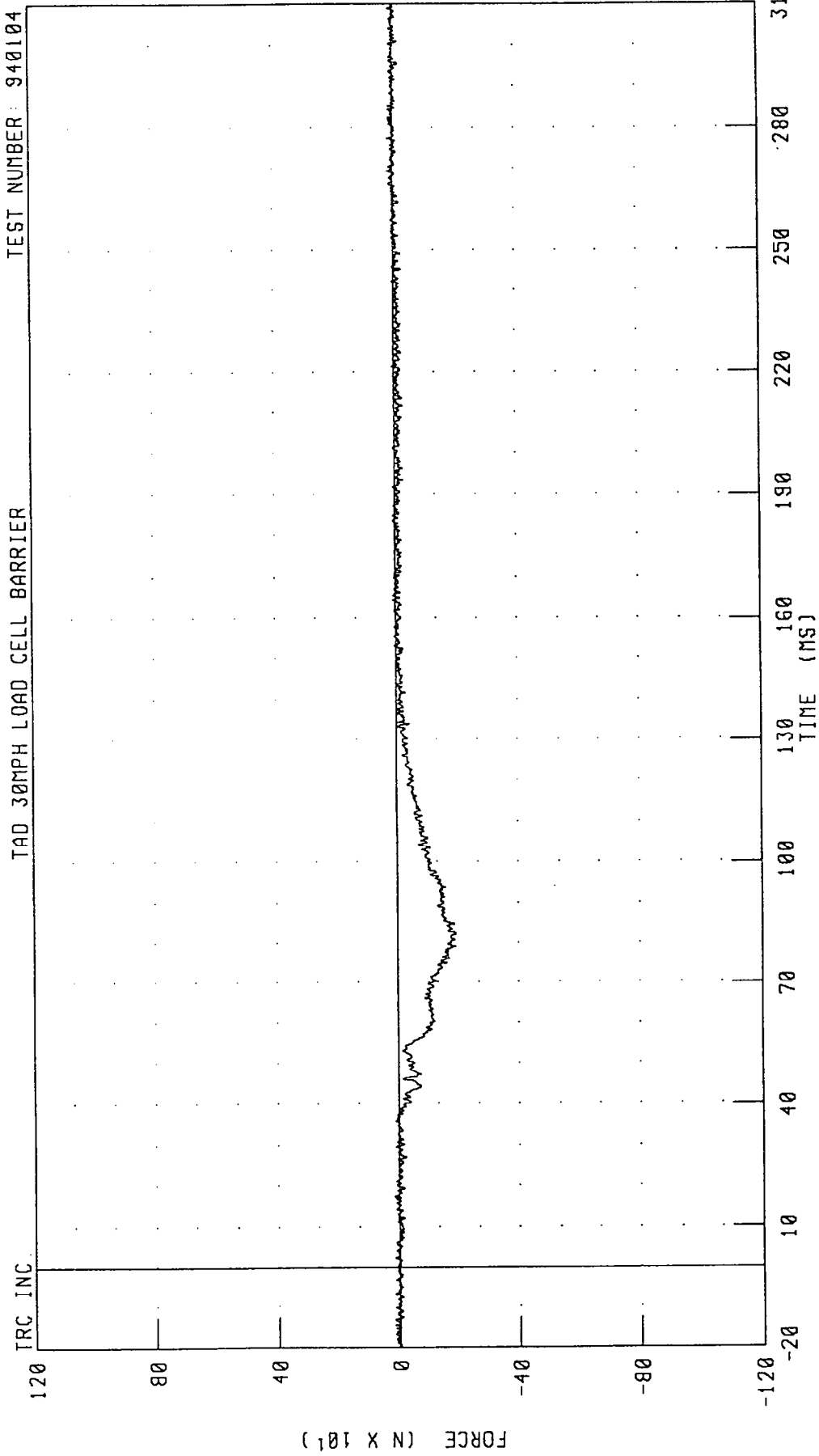


CHANNEL: RTALT1 FILTER: CH. CLASS 600

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER RIGHT LOWER TIBIA ANTERIOR LOAD CELL BOTTOM

TEST NUMBER: 940104

TAD 30MPH LOAD CELL BARRIER



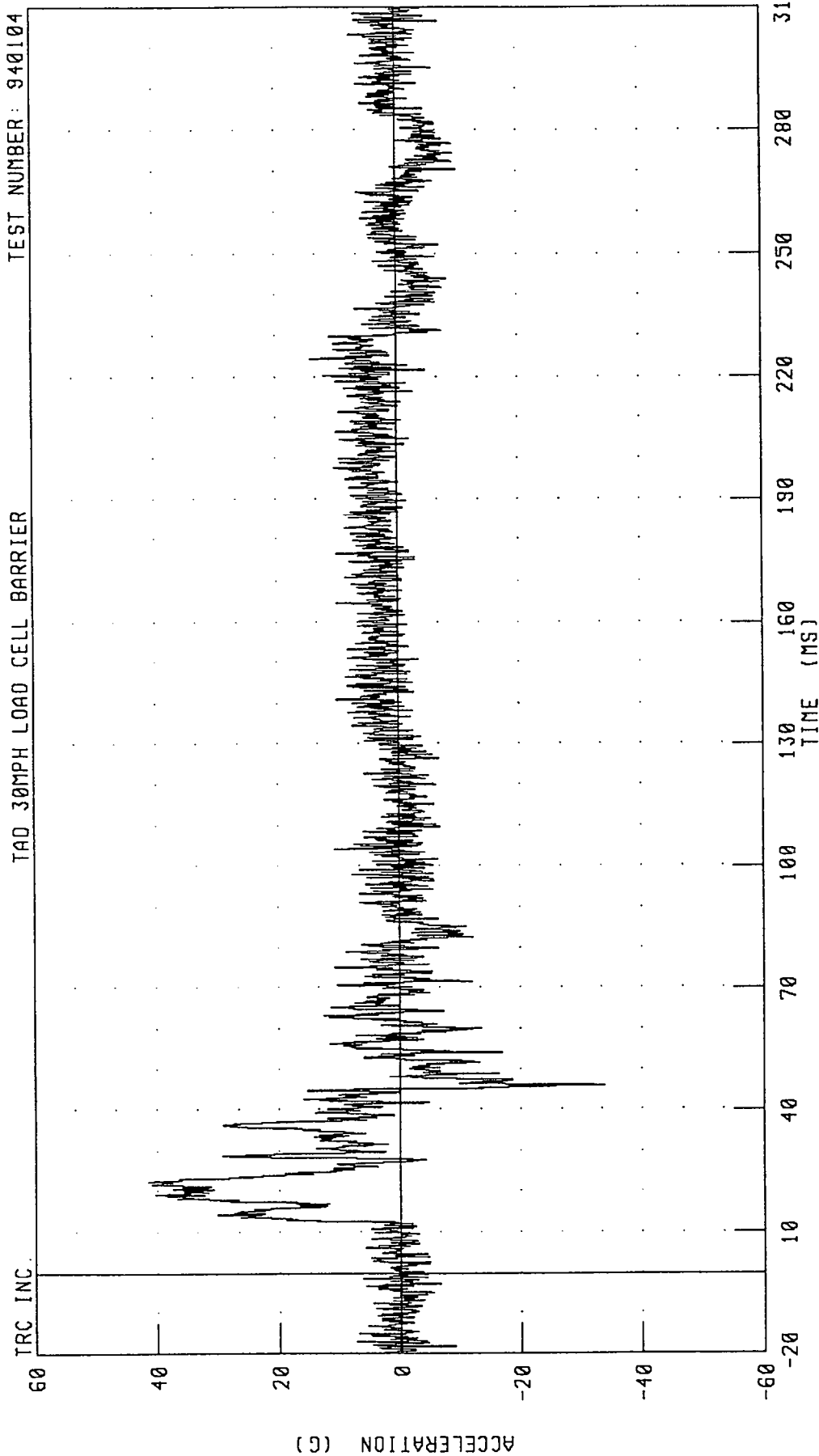
CHANNEL: RTALB1 FILTER: CH. CLASS 600

PEAK DATA: 17.80 N @ -16.64 MS; -192.72 N @ 82.56 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER LEFT ANKLE X-AXIS ACCELERATION

TEST NUMBER: 940104

TAD 30MPH LOAD CELL BARRIER



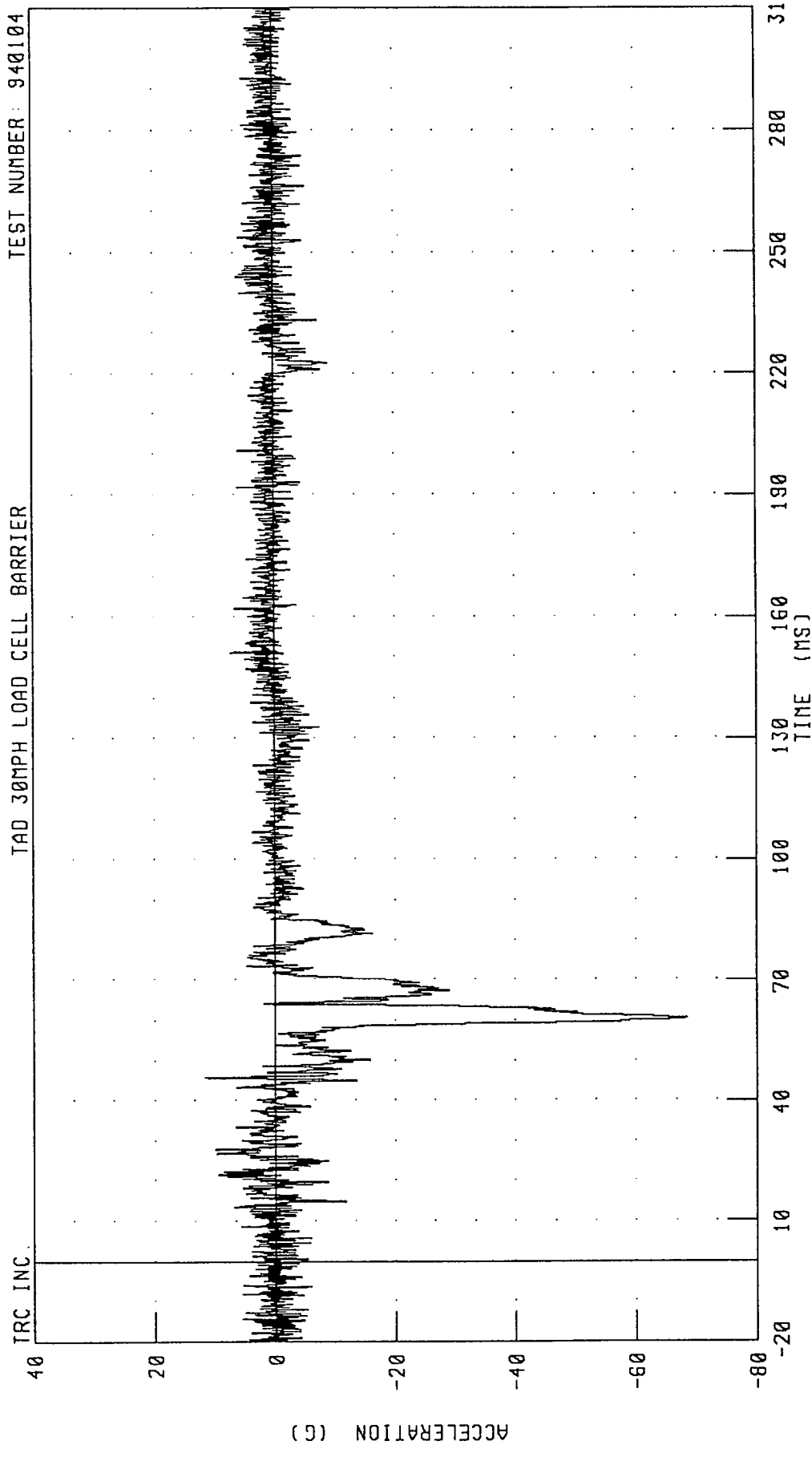
CHANNEL: ANLXG1 FILTER: CH. CLASS 1000

PEAK DATA: 41.56 G @ 22.48 MS; -33.93 G @ 45.84 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER LEFT ANKLE Y-AXIS ACCELERATION

TEST NUMBER: 940104

TAD 30MPH LOAD CELL BARRIER



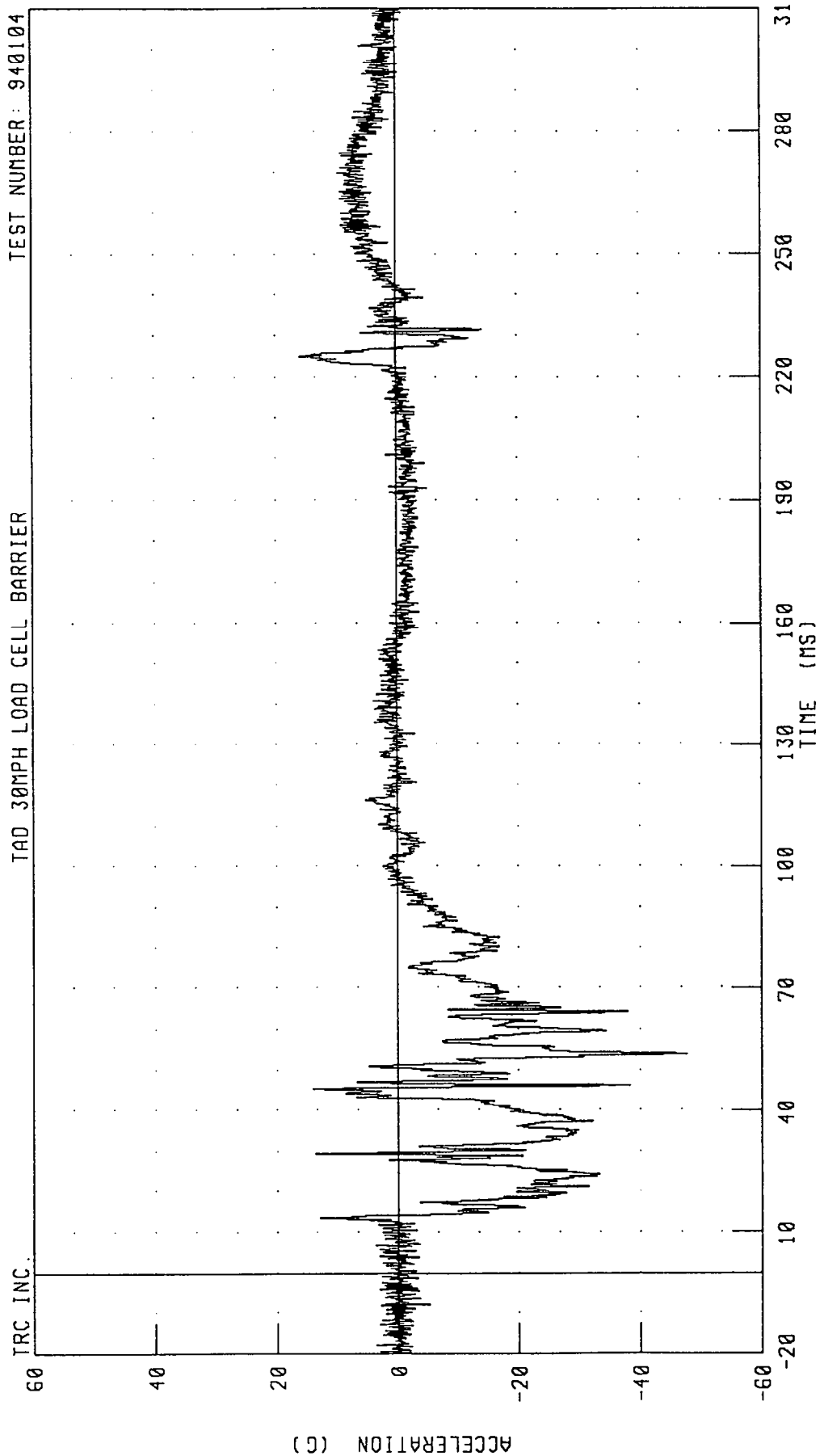
CHANNEL: ANLYG1 FILTER: CH CLASS 1000

PEAK DATA: 11.61 G @ 45.76 MS; -68.42 G @ 60.56 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER LEFT ANKLE Z-AXIS ACCELERATION

TEST NUMBER: 940104

TAD 30MPH LOAD CELL BARRIER



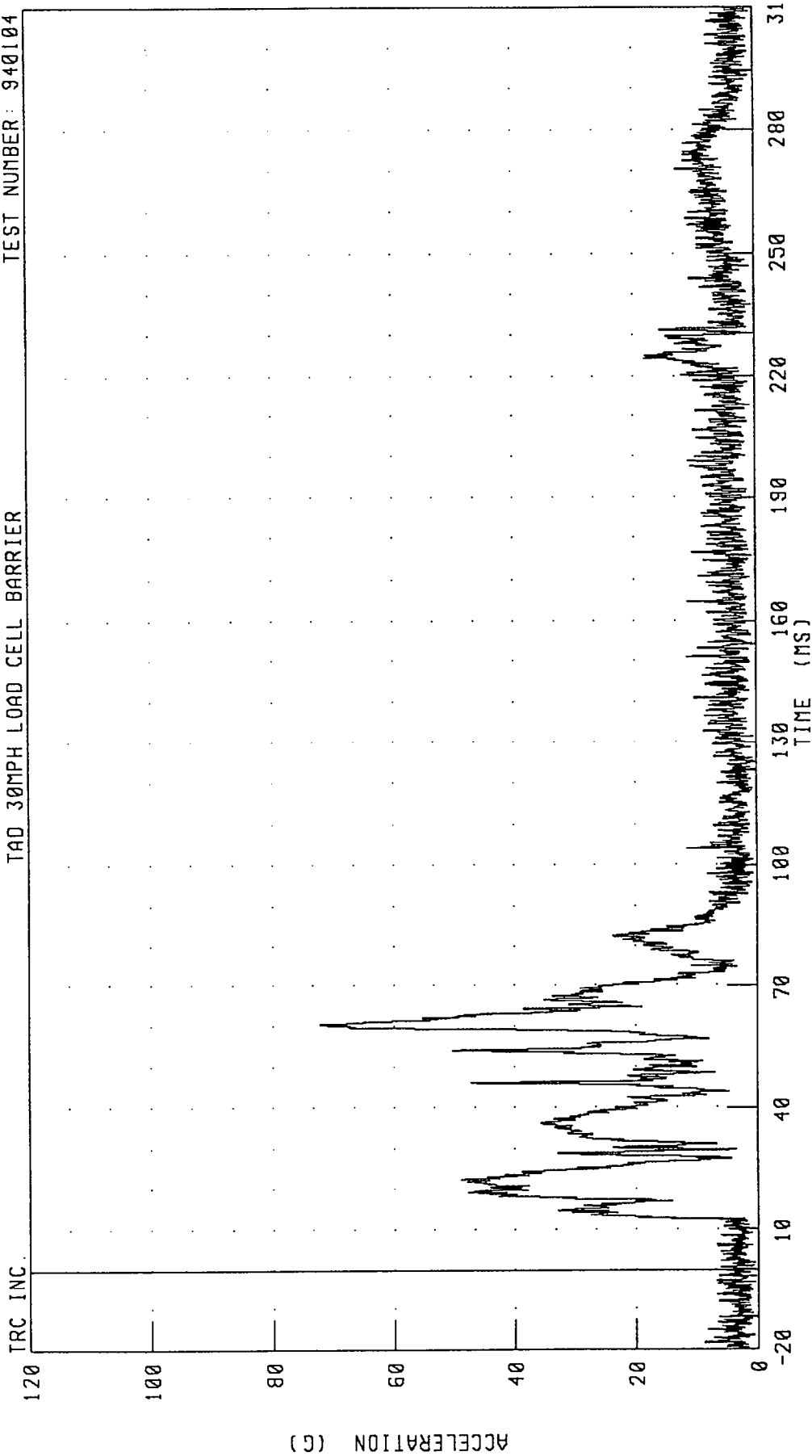
CHANNEL: ANLZG1 FILTER: CH. CLASS 1000

PEAK DATA: 15.99 G @ 225.04 MS; -47.55 G @ 54.00 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER LEFT ANKLE RESULTANT ACCELERATION

TAD 30MPH LOAD CELL BARRIER

TEST NUMBER: 940104

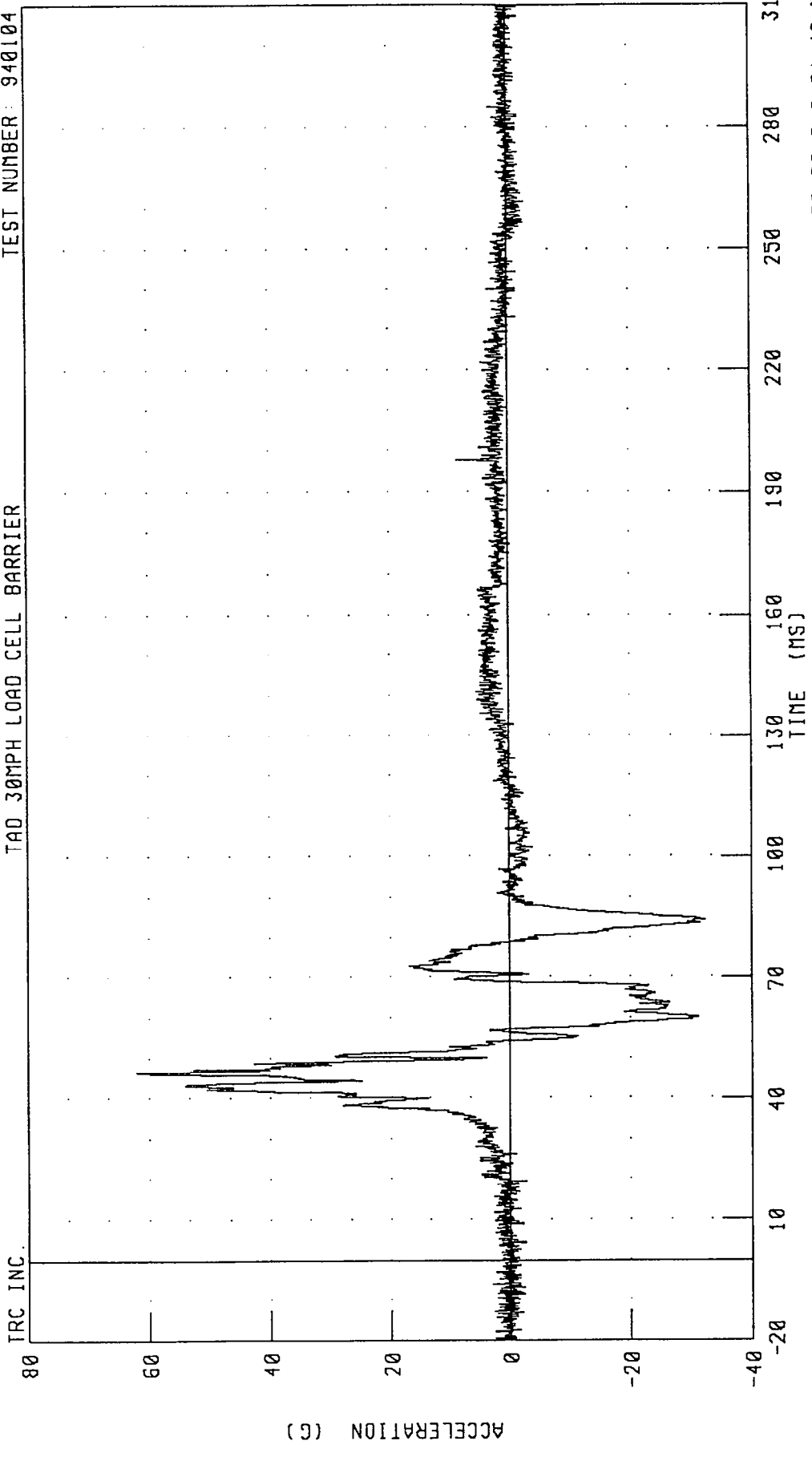


CHANNEL: ANLRG1 FILTER: CH. CLASS 1000

PEAK DATA: 72.21 G @ 60.48 MS; 0.26 G @ 154.08 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER RIGHT ANKLE X-AXIS ACCELERATION

TAD 30MPH LOAD CELL BARRIER
TEST NUMBER: 940104



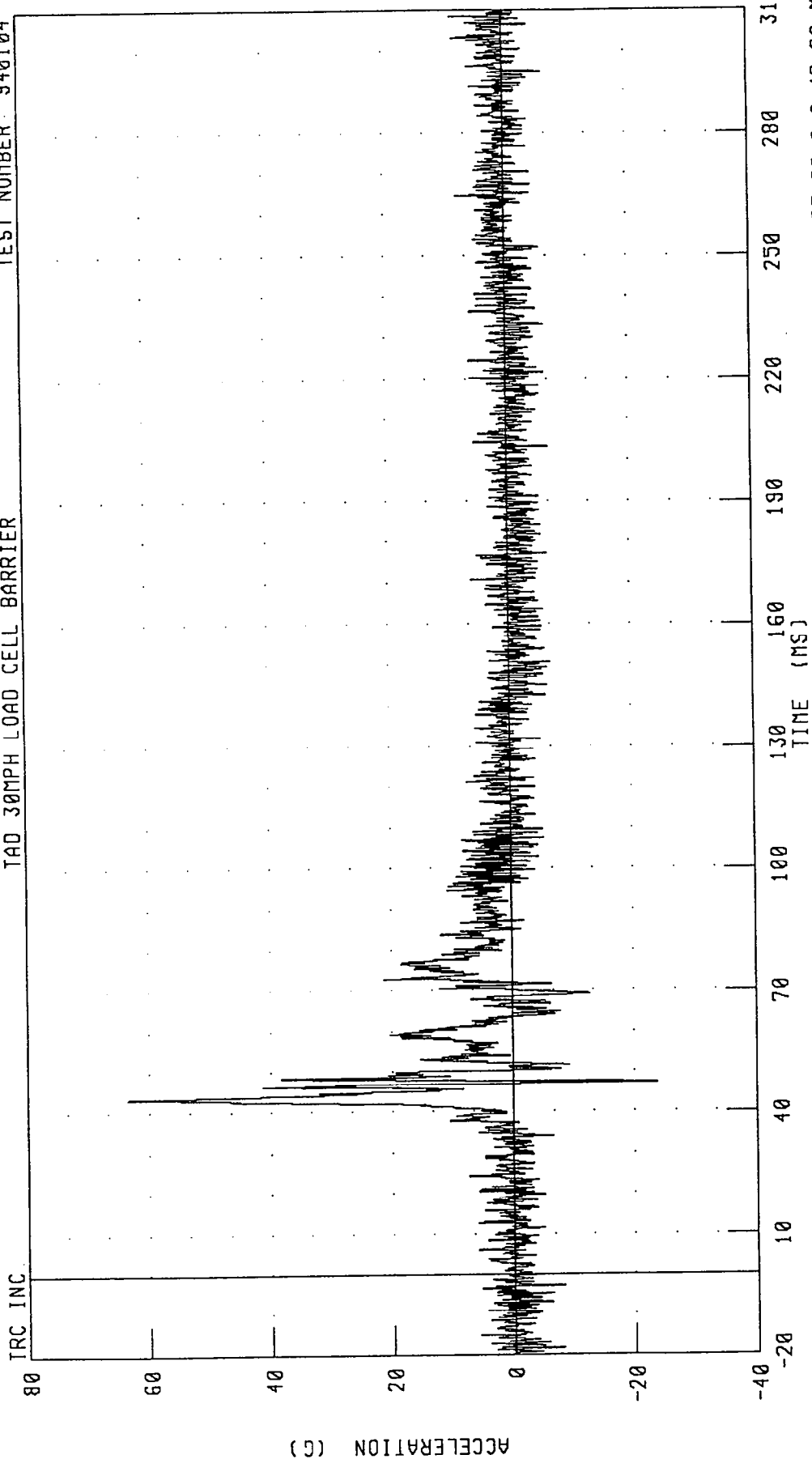
CHANNEL: ANRXG1 FILTER: CH. CLASS 1000
PEAK DATA: 61.94 G @ 46.48 MS; -32.30 G @ 84.48 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1

DRIVER RIGHT ANKLE Y-AXIS ACCELERATION

TAD 30MPH LOAD CELL BARRIER

TEST NUMBER 940104

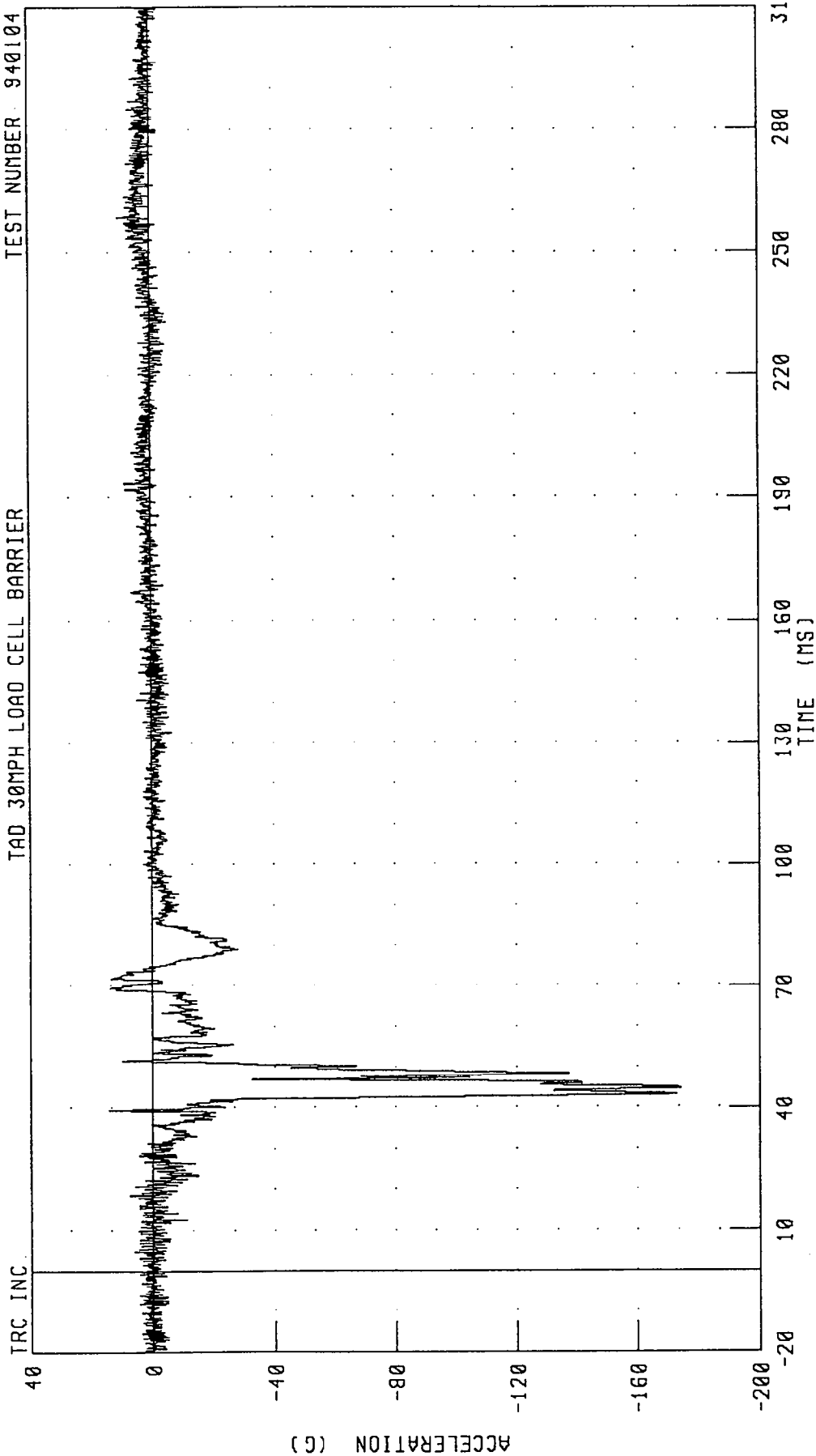


CHANNEL: ANRYG1 FILTER: CH. CLASS 1000

PEAK DATA: 63.55 G @ 43.36 MS; -23.60 G @ 47.20 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
 DRIVER RIGHT ANKLE Z-AXIS ACCELERATION

TAD 30MPH LOAD CELL BARRIER TEST NUMBER 940104



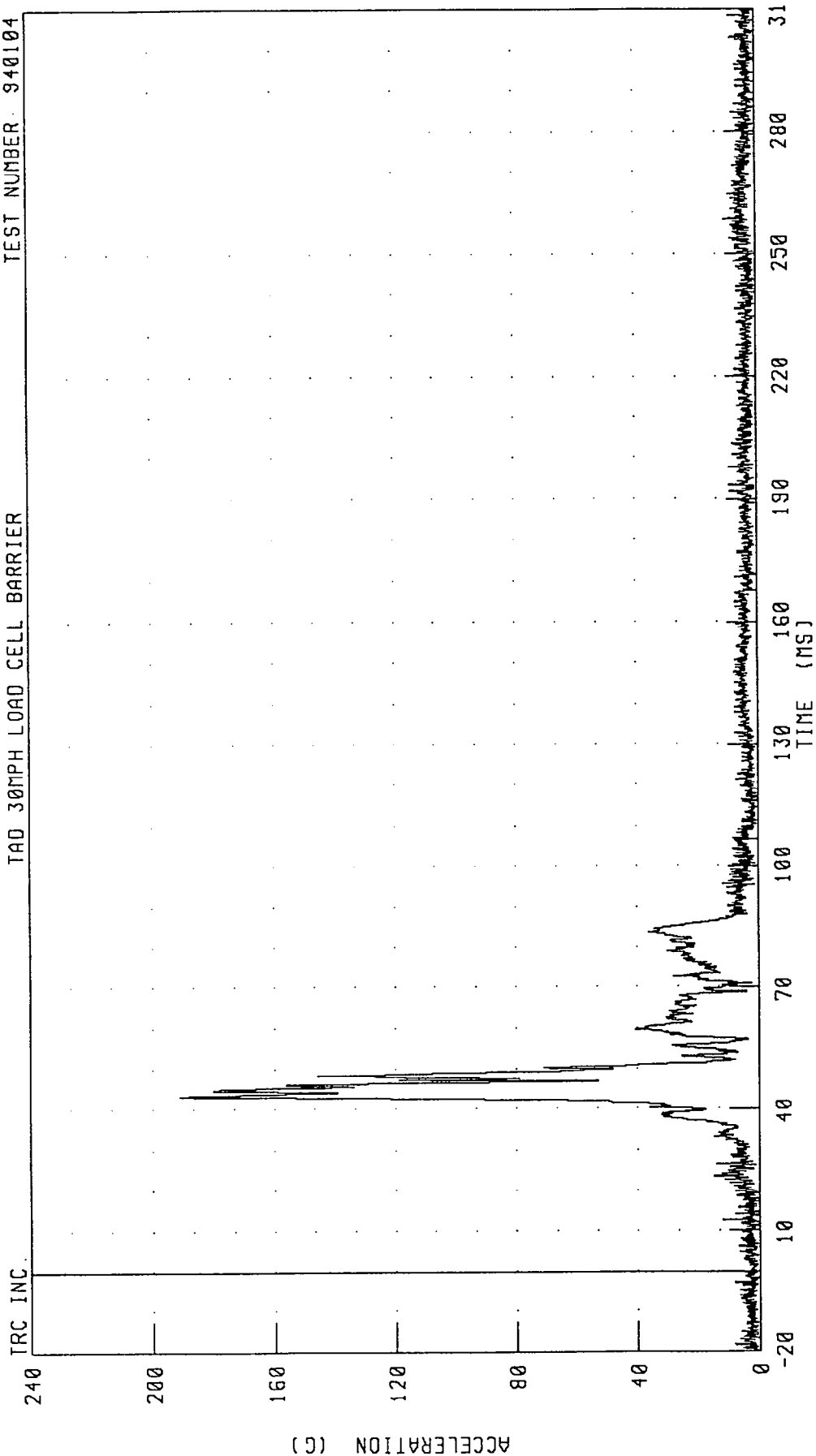
CHANNEL: ANRZG1 FILTER: CH. CLASS 1000

PEAK DATA: 14.30 G @ 39.44 MS; -174.01 G @ 44.72 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER RIGHT ANKLE RESULTANT ACCELERATION

TEST NUMBER 940104

TAD 30MPH LOAD CELL BARRIER



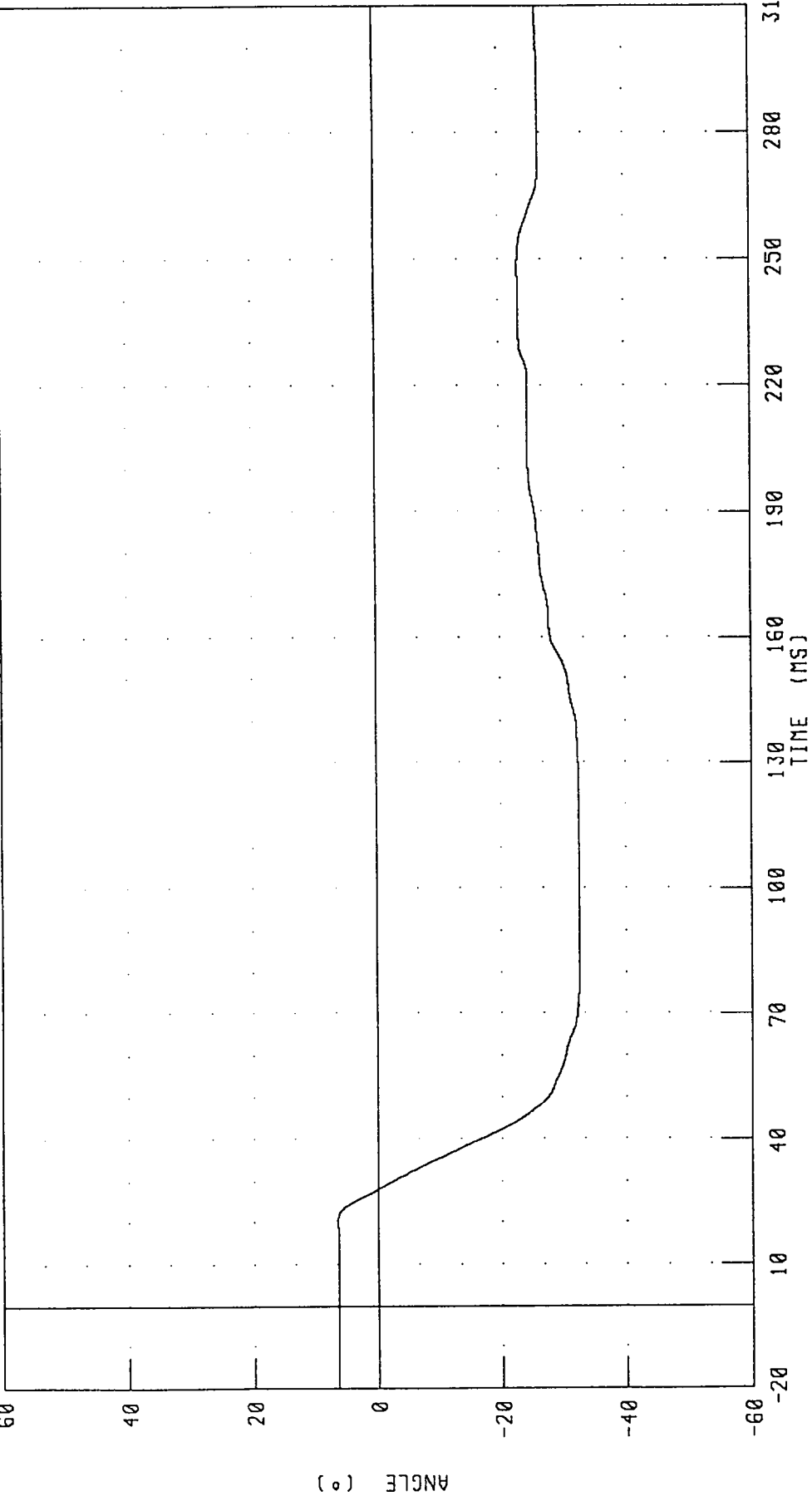
CHANNEL: ANRRG1 FILTER: CH. CLASS 1000

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
 DRIVER LEFT ANKLE DEFLECTION ABOUT Y AXIS

TEST NUMBER 940104

TAD 30MPH LOAD CELL BARRIER

TRC INC.



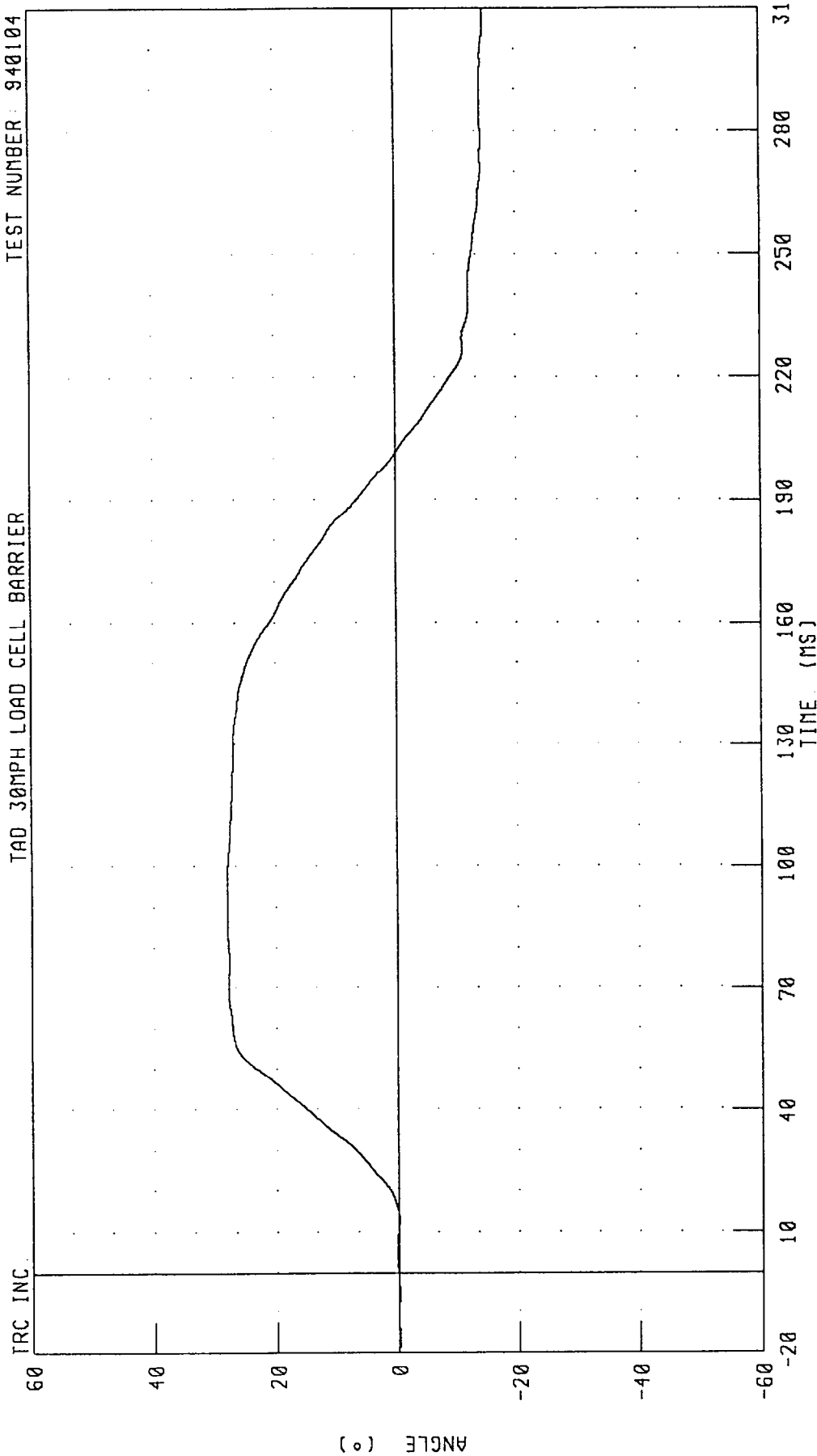
CHANNEL: ANL001 FILTER: CH. CLASS 60

PEAK DATA: 6.57 ° @ 20.24 MS; -32.57 ° @ 85.20 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
DRIVER LEFT ANKLE DEFLECTION ABOUT X AXIS

TEST NUMBER: 940104

TAD 30MPH LOAD CELL BARRIER



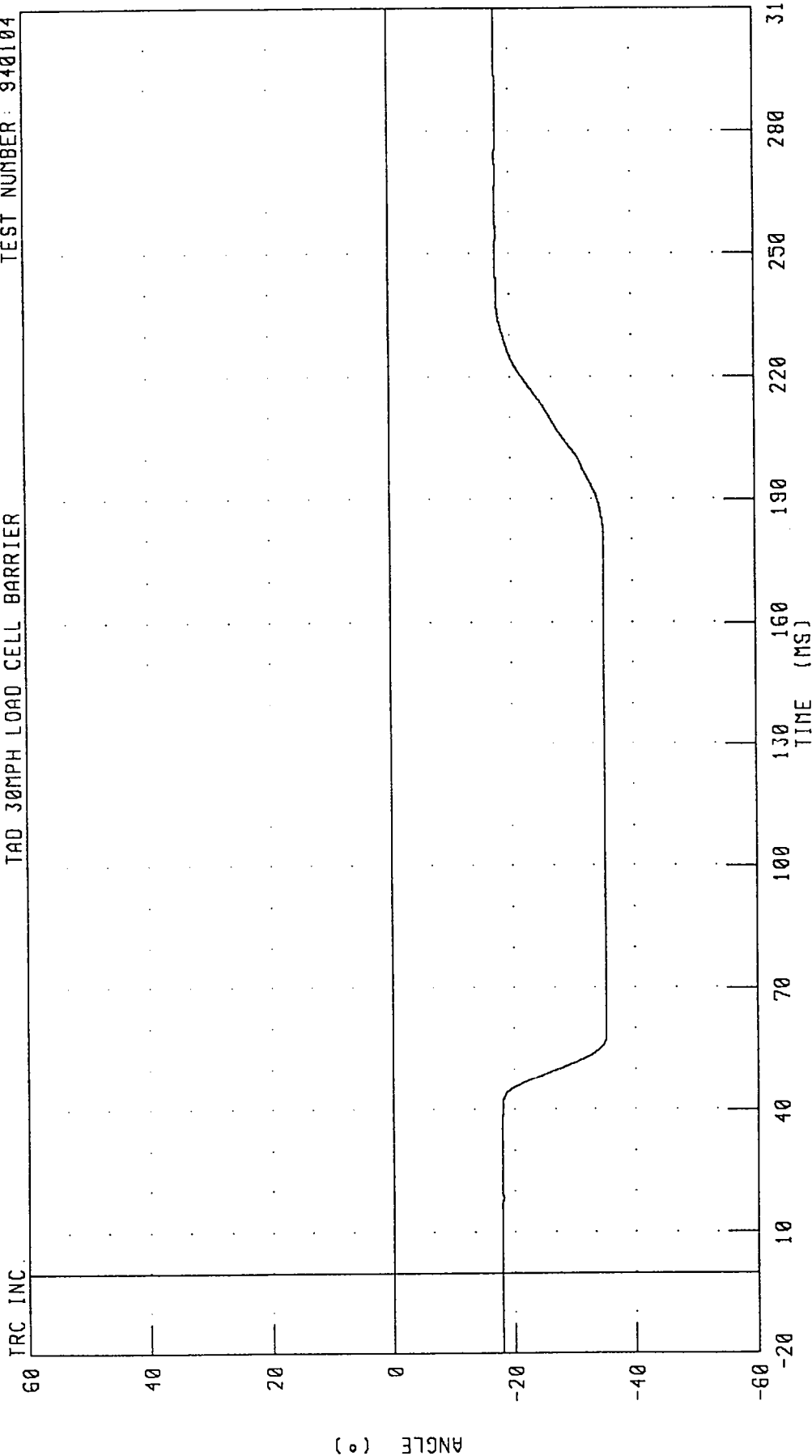
CHANNEL: ANLI01 FILTER: CH. CLASS 60

PEAK DATA: 28.01 ° @ 94.56 MS; -14.75 ° @ 305.36 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
 DRIVER RIGHT ANKLE DEFLECTION ABOUT Y AXIS

TEST NUMBER: 940104

TAD 30MPH LOAD CELL BARRIER



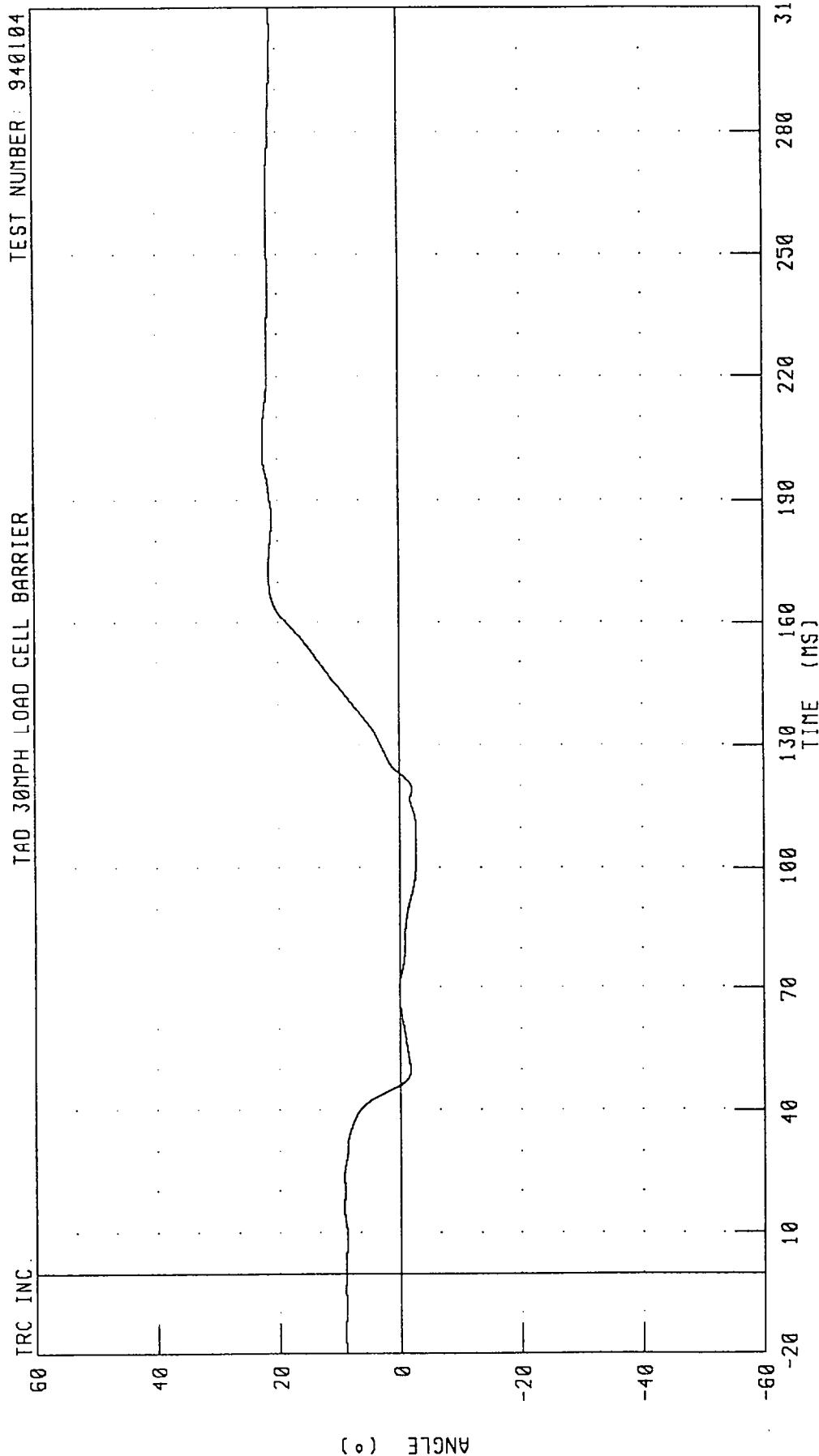
CHANNEL: ANROD1 FILTER: CH. CLASS 60

PEAK DATA: -17.53 ° @ 309.36 MS; -35.29 ° @ 58.88 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
 DRIVER RIGHT ANKLE DEFLECTION ABOUT X AXIS

TEST NUMBER: 940104

TAD 30MPH LOAD CELL BARRIER

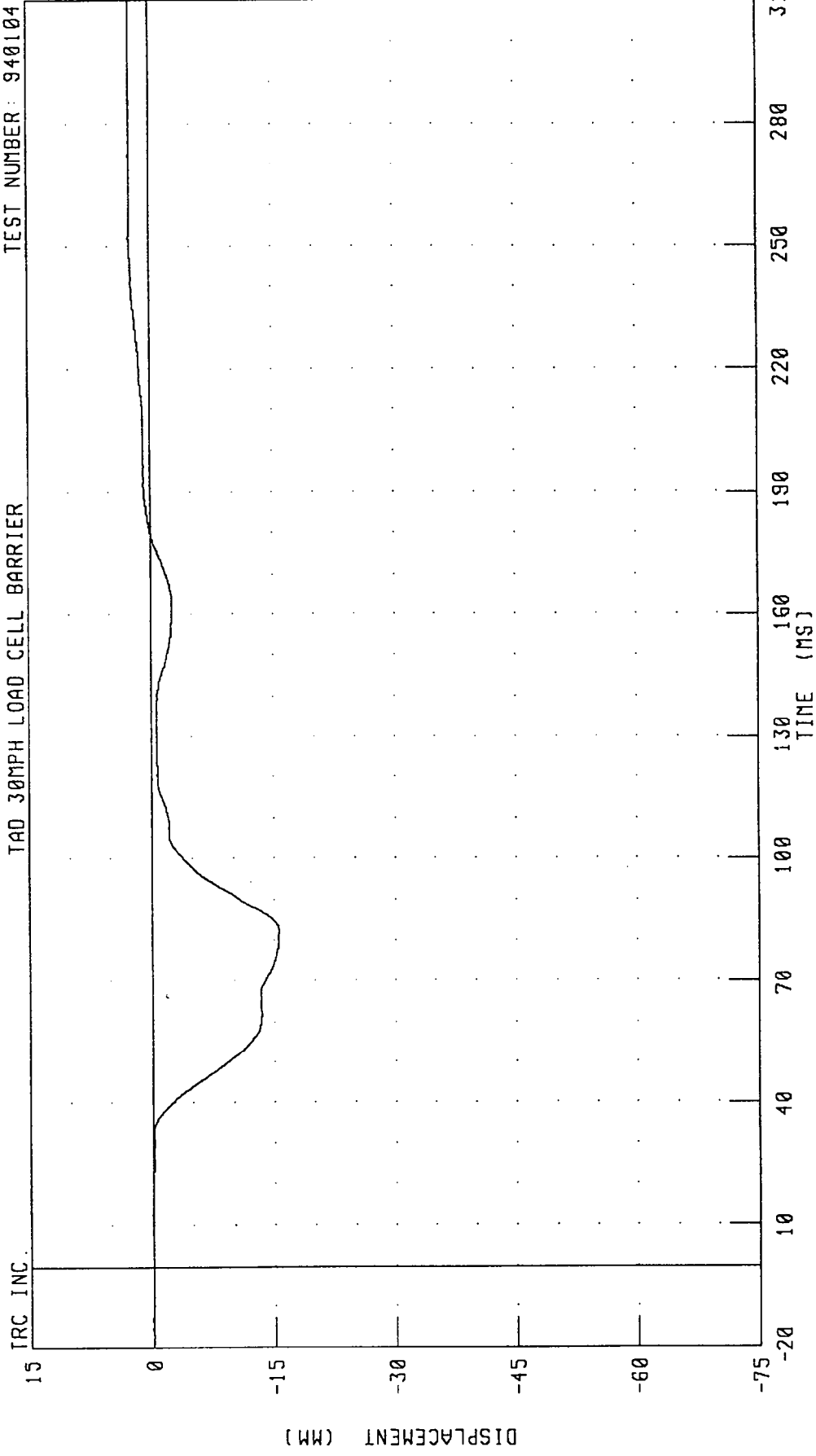


CHANNEL: ANR101 FILTER: CH. CLASS 60

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
PASSENGER CHEST LOCATION 1 POSTERIOR/ANTERIOR

TEST NUMBER: 940104

TAD 30MPH LOAD CELL BARRIER



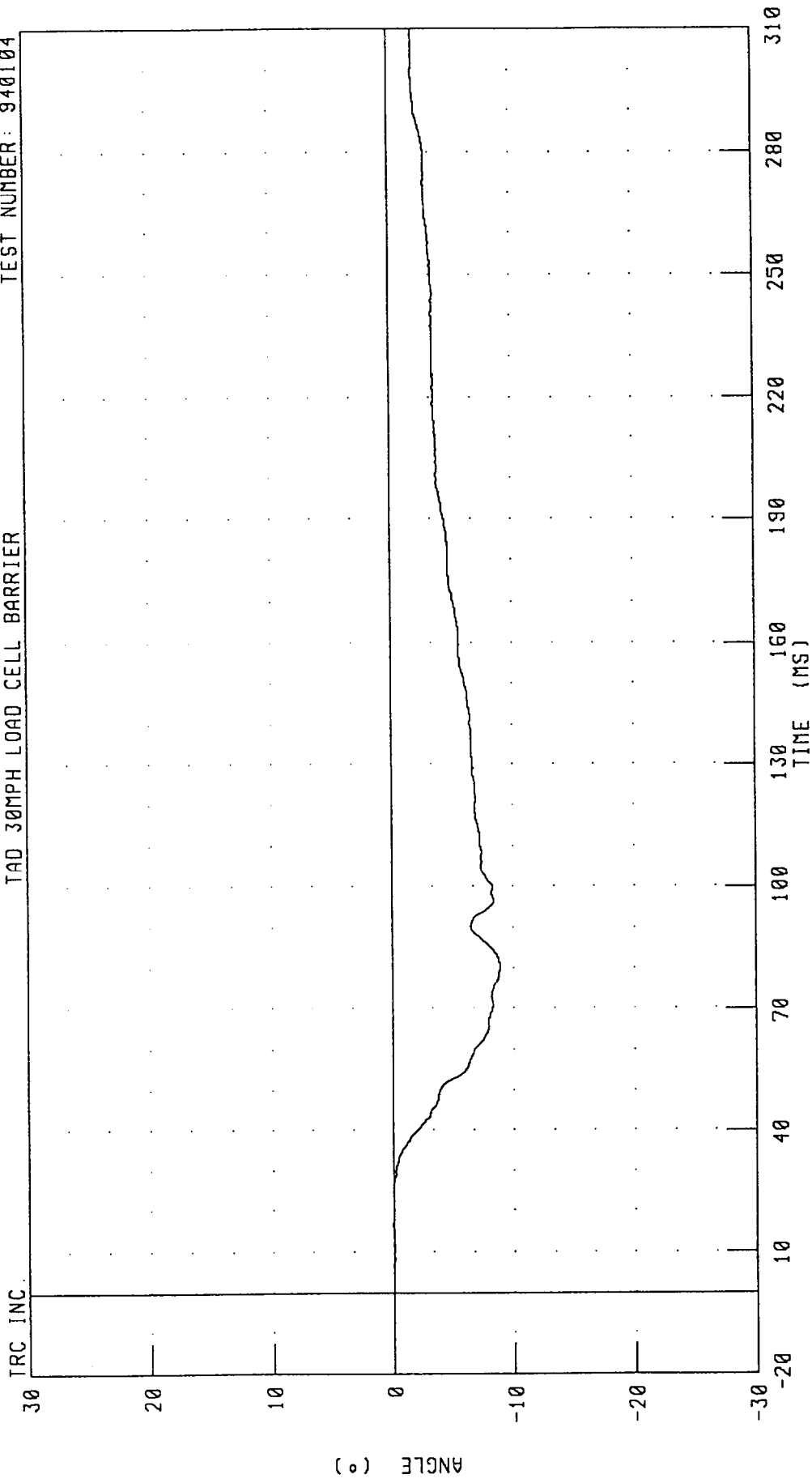
CHANNEL: CS1PA2 FILTER: CH. CLASS 180

PEAK DATA: 2.48 MM @ 252.24 MS; -15.61 MM @ 82.24 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
PASSENGER CHEST LOCATION 1 RIGHT/LEFT

TAD 30MPH LOAD CELL BARRIER

TEST NUMBER: 940104



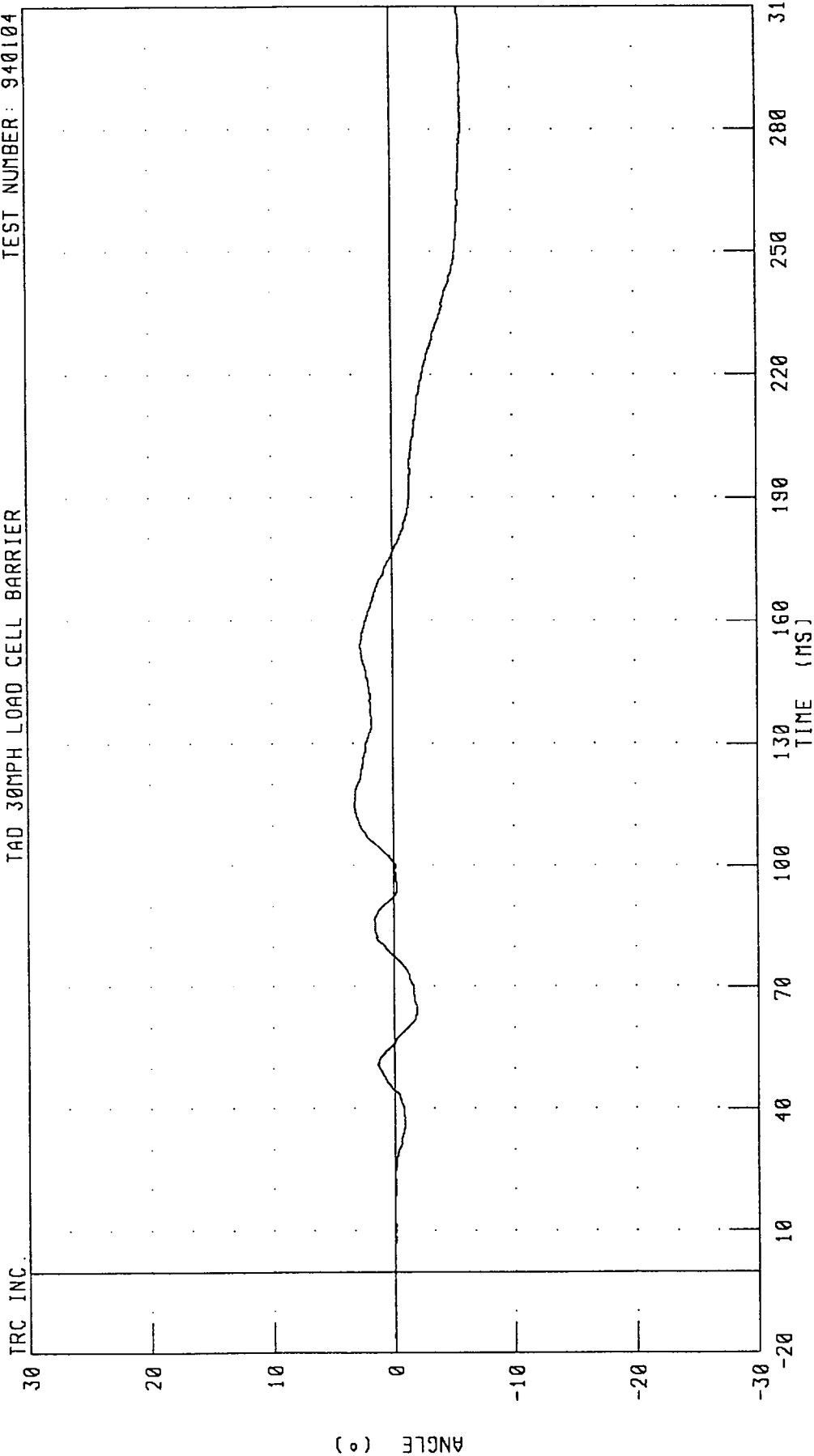
CHANNEL: CS1RL2 FILTER: CH. CLASS 180

PEAK DATA: 0.06 ° @ 16.48 MS; -8.87 ° @ 80.64 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
PASSENGER CHEST LOCATION 1 INFERIOR/SUPERIOR

TAD 30MPH LOAD CELL BARRIER

TEST NUMBER: 940104

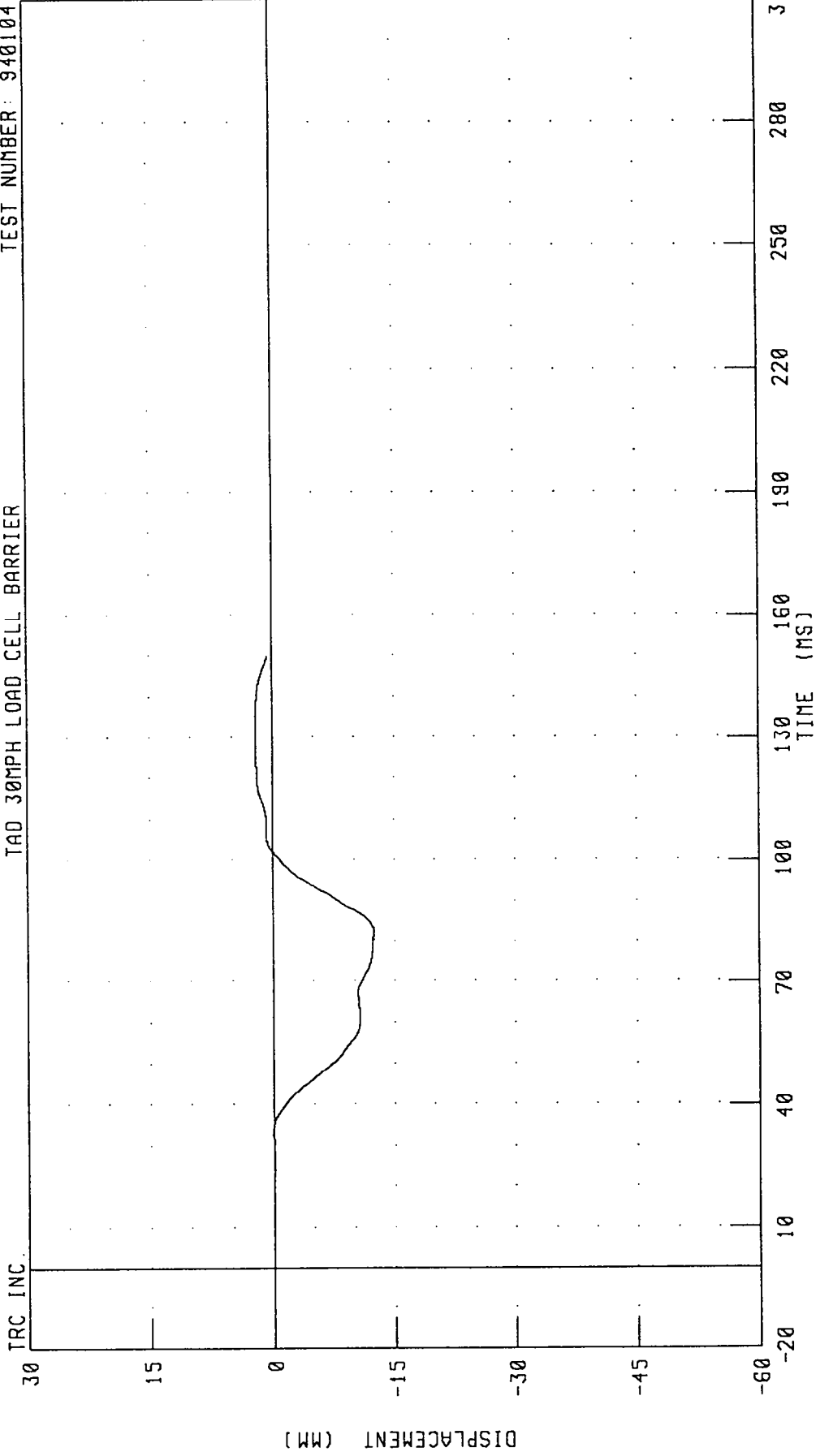


CHANNEL: CS11S2 FILTER: CH. CLASS 180

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
PASSENGER POSITION 1 X-AXIS CHEST DEFLECTION

TEST NUMBER: 940104

TAD 30MPH LOAD CELL BARRIER

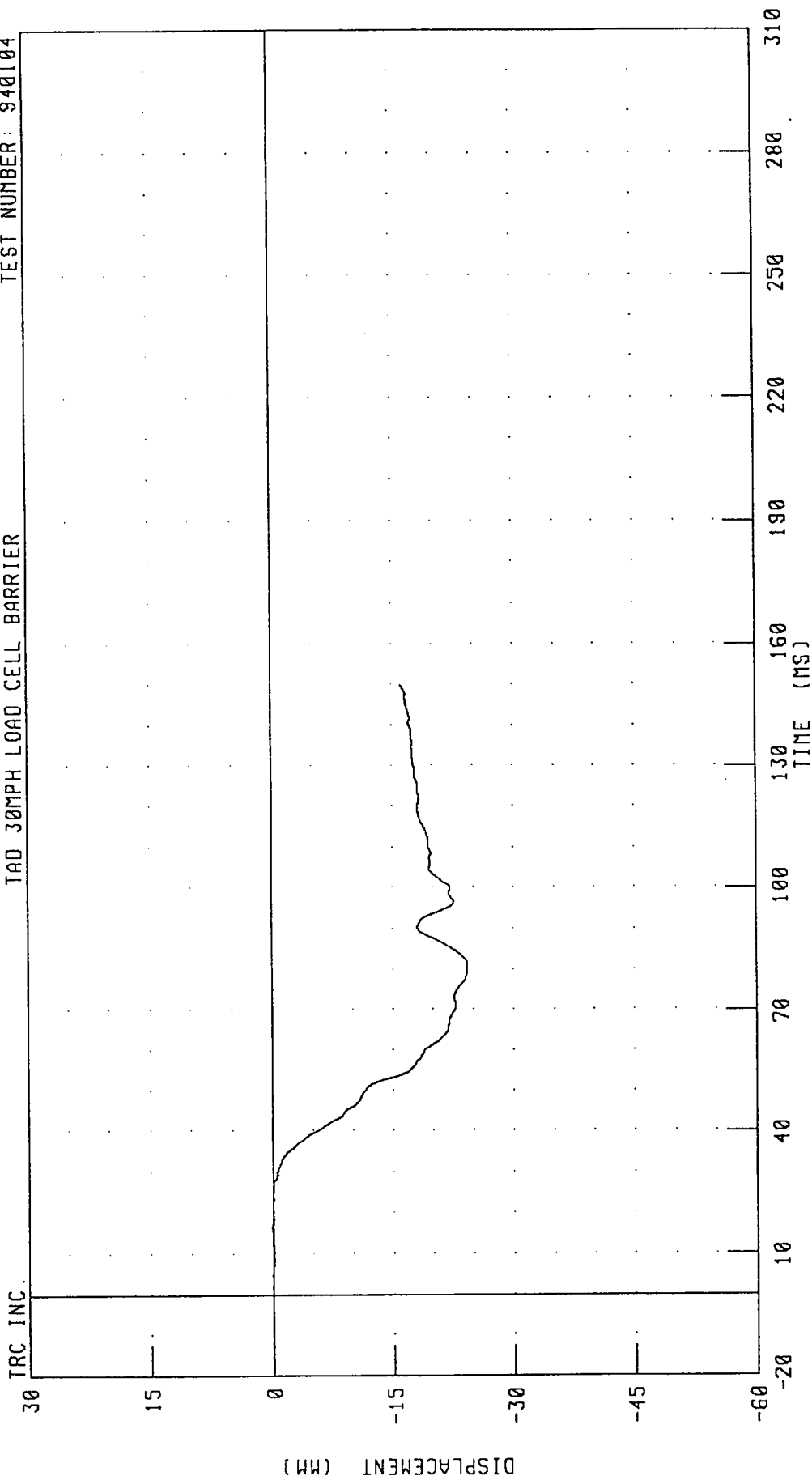


CHANNEL: 1DELX2 FILTER: CH. CLASS 180

PEAK DATA: 2.04 MM @ 134.56 MS; -12.46 MM @ 82.48 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
PASSENGER POSITION 1 Y-AXIS CHEST DEFLECTION
TAD 30MPH LOAD CELL BARRIER

TEST NUMBER: 940104



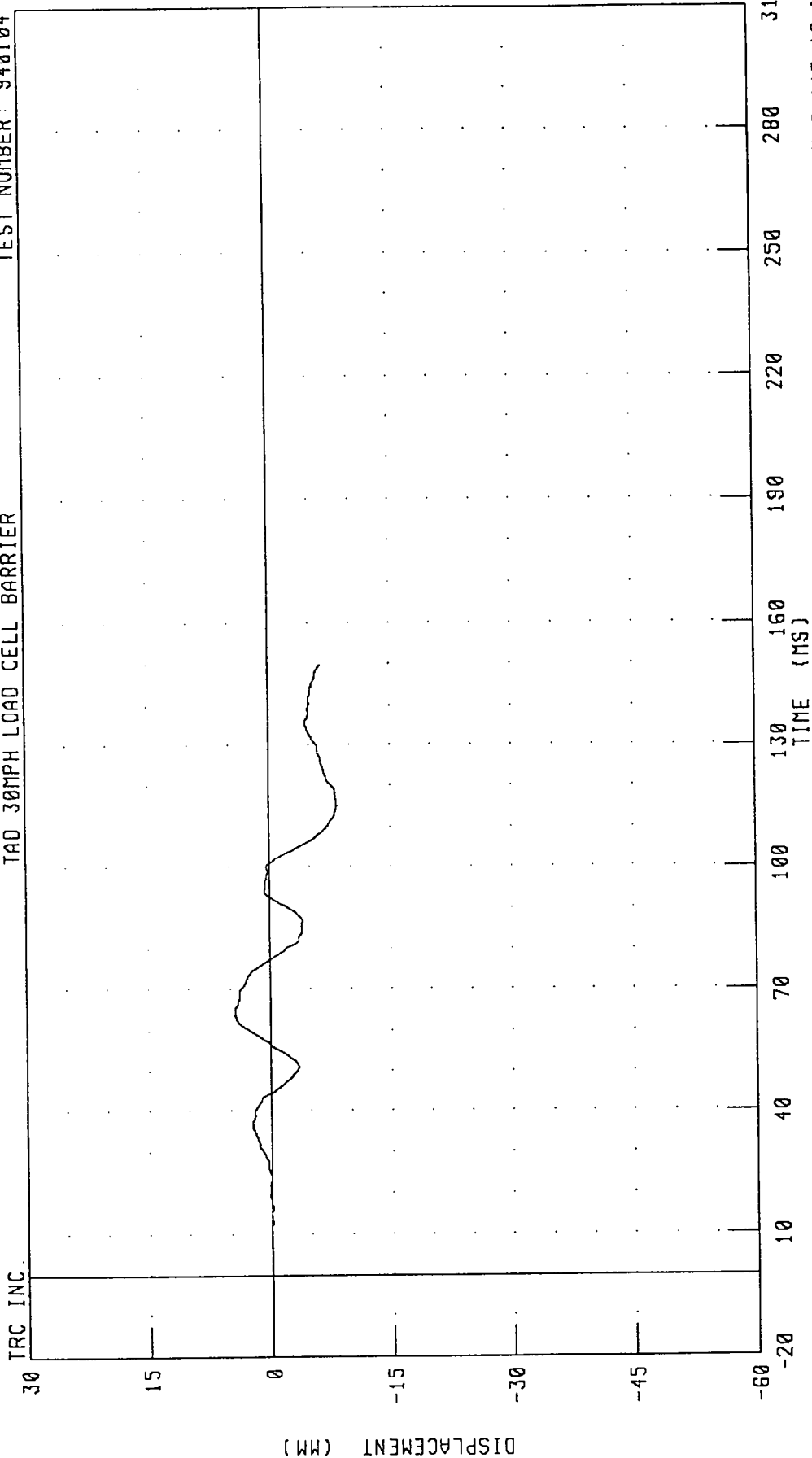
CHANNEL: 1DELY2 FILTER: CH. CLASS 180

PEAK DATA: 0.15 MM @ 16.48 MS; -24.30 MM @ 80.64 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
PASSENGER POSITION 1 Z-AXIS CHEST DEFLECTION

TEST NUMBER: 940104

TAD 30MPH LOAD CELL BARRIER

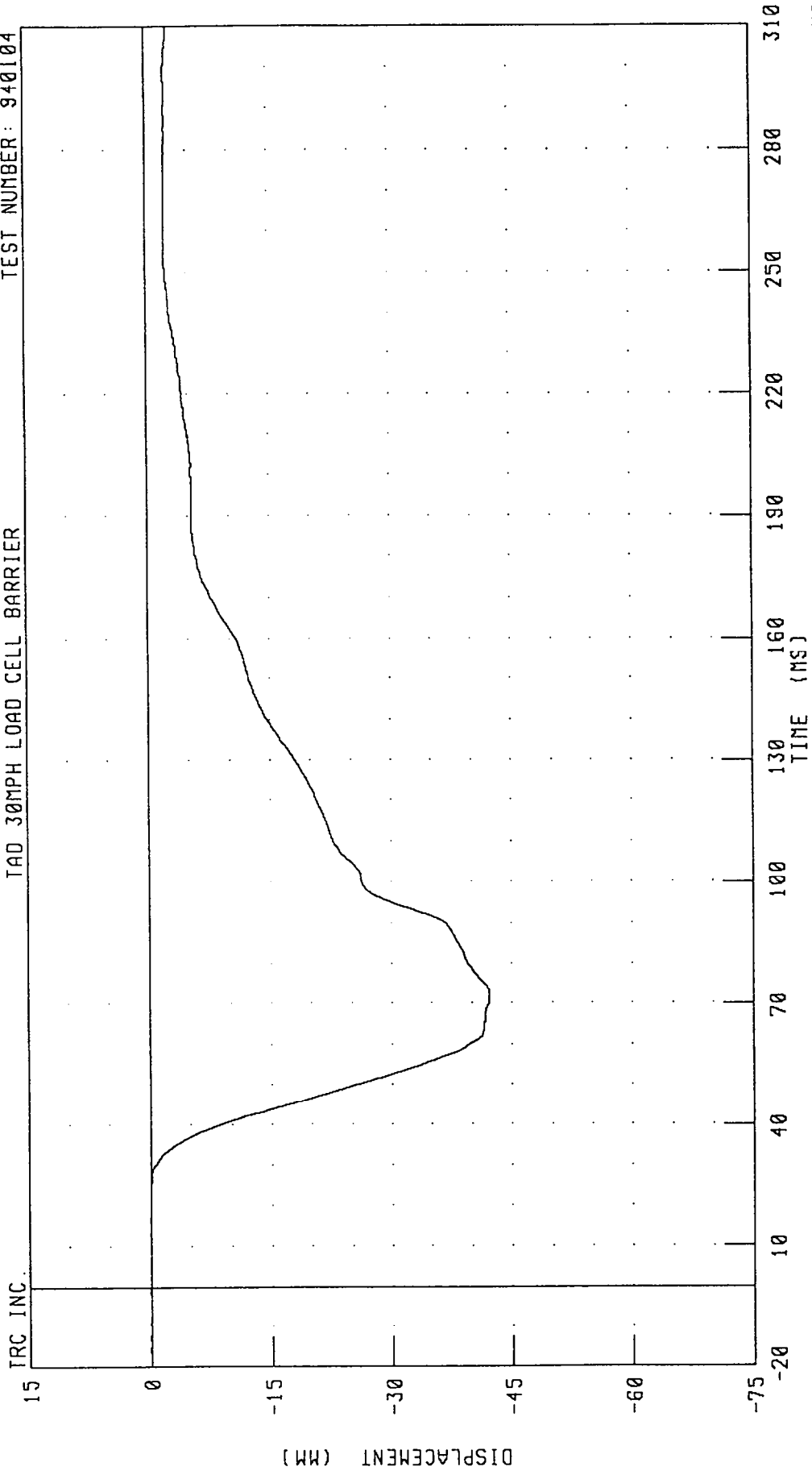


PEAK DATA: 4.36 MM @ 64.80 MS; -8.46 MM @ 115.12 MS

CHANNEL: 1DEL22 FILTER: CH. CLASS 180

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
PASSENGER CHEST LOCATION 2 POSTERIOR/ANTERIOR
TAD 30MPH LOAD CELL BARRIER

TEST NUMBER: 940104



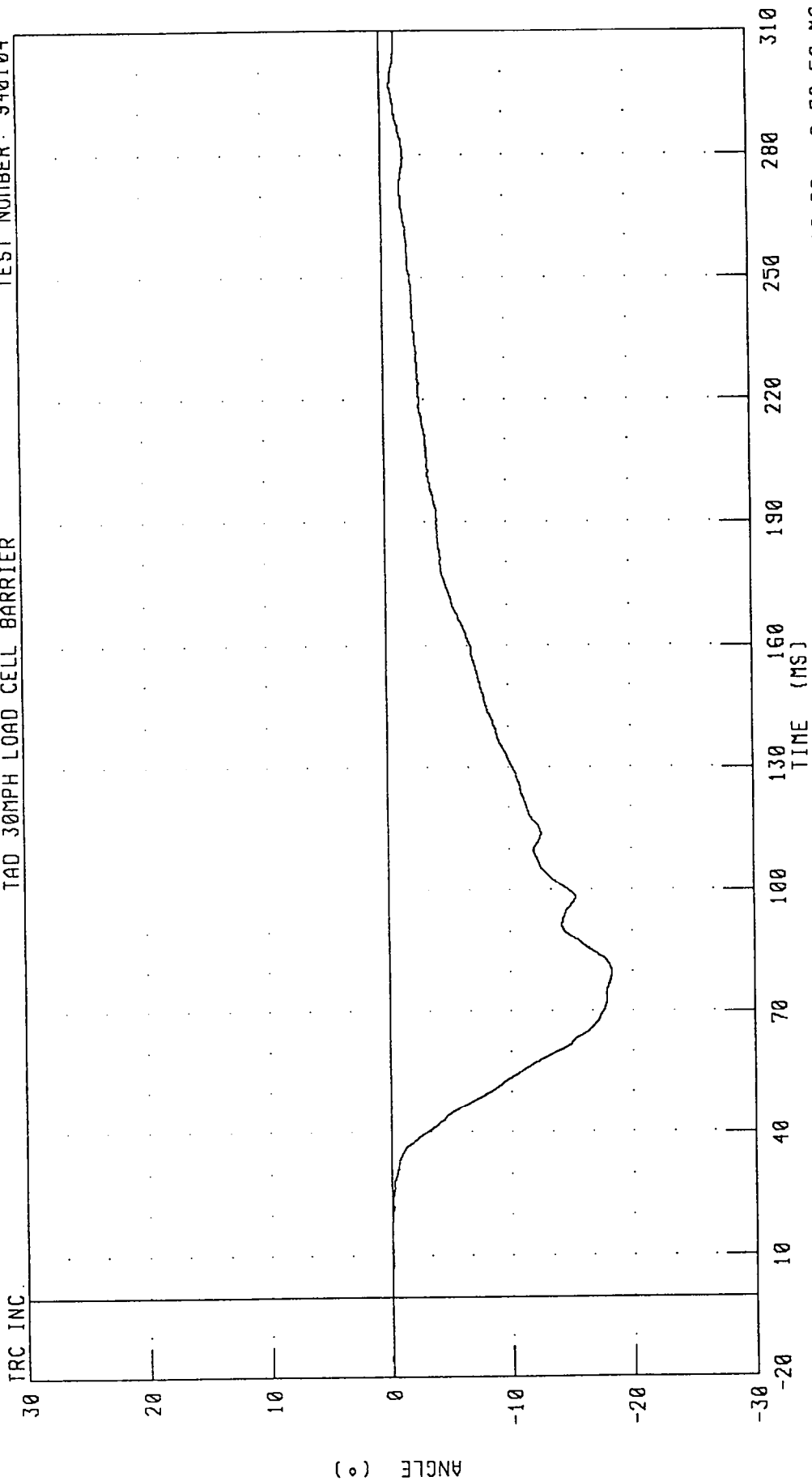
CHANNEL: CS2PA2 FILTER: CH. CLASS 180 PEAK DATA: 0.08 MM @ 16.16 MS; -42.23 MM @ 72.16 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1

PASSENGER CHEST LOCATION 2 RIGHT/LEFT

TAD 30MPH LOAD CELL BARRIER

TEST NUMBER: 940104



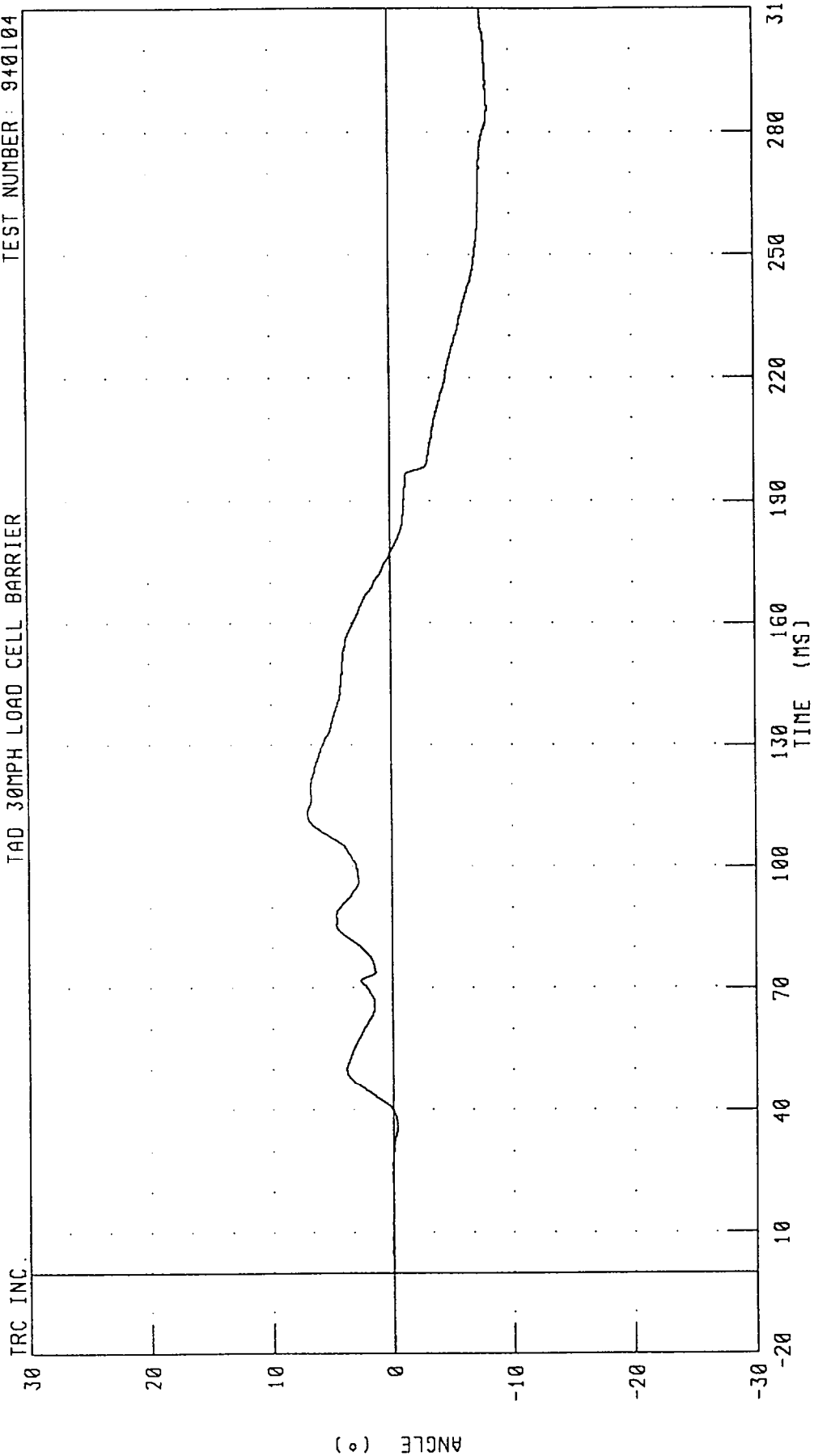
CHANNEL: CS2RL2 FILTER: CH. CLASS 180

PEAK DATA: 0.08 ° @ -15.60 MS; -18.28 ° @ 79.52 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
PASSENGER CHEST LOCATION 2 INFERIOR/SUPERIOR

TAD 30MPH LOAD CELL BARRIER

TEST NUMBER: 940104



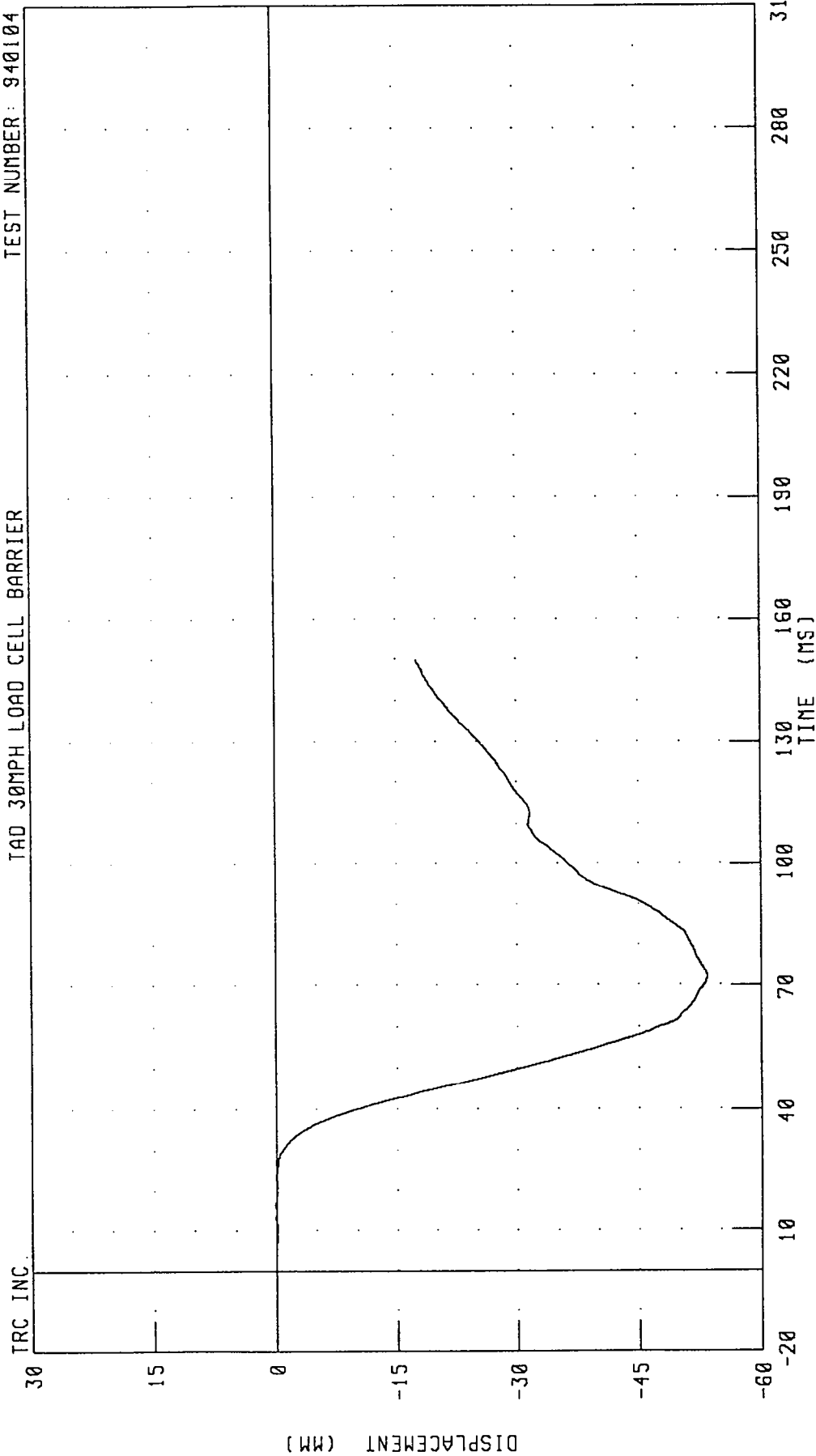
CHANNEL: CS21S2 FILTER: CH. CLASS 180

PEAK DATA: 7.04 ° @ 112.80 MS; -8.19 ° @ 285.68 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
PASSENGER POSITION 2 X-AXIS CHEST DEFLECTION

TEST NUMBER: 940104

TAD 30MPH LOAD CELL BARRIER



CHANNEL: 2DELX2 FILTER: CH. CLASS 180

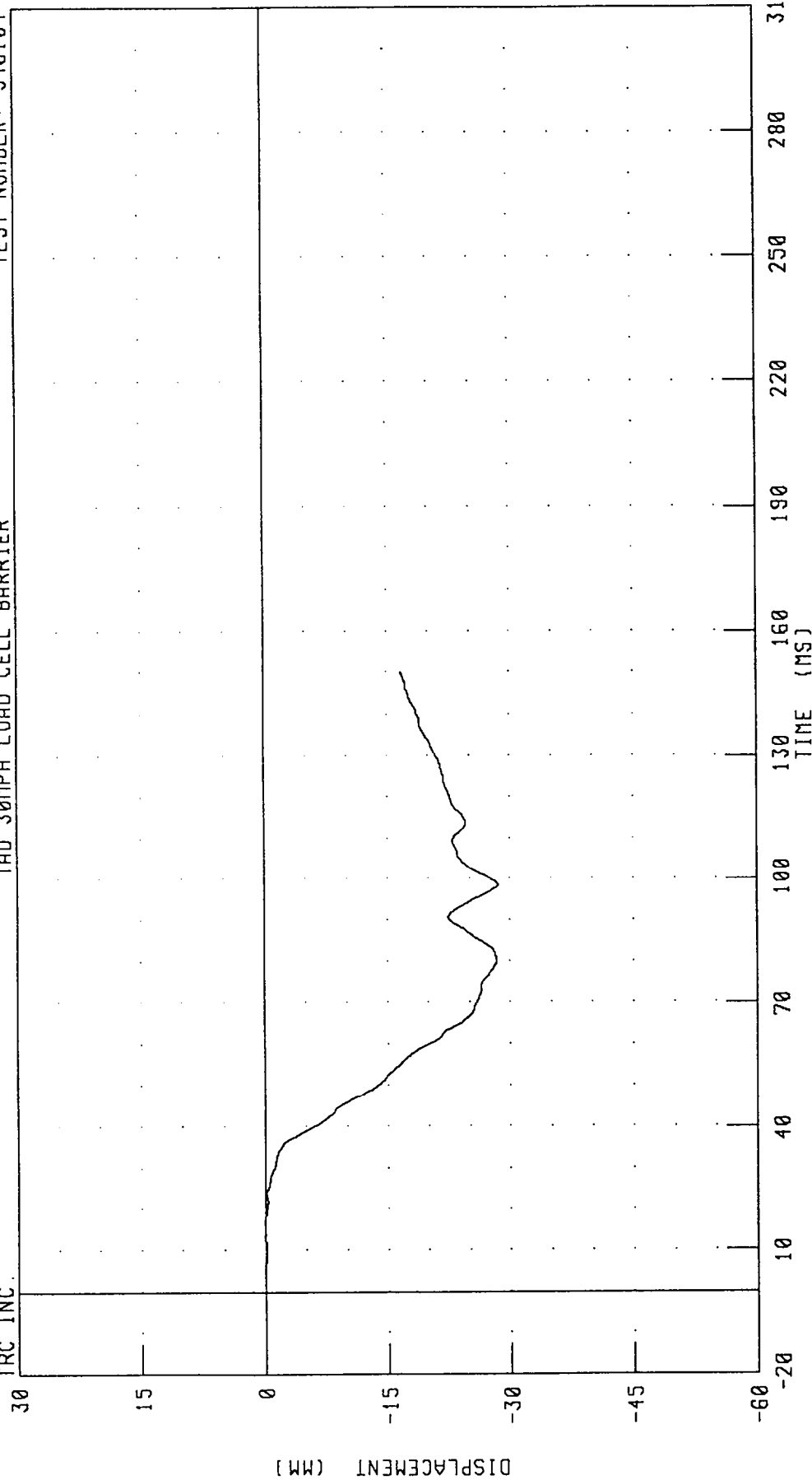
PEAK DATA: 0.09 MM @ 16.24 MS; -53.37 MM @ 72.32 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
PASSENGER POSITION 2 Y-AXIS CHEST DEFLECTION

TEST NUMBER: 940104

TAD 30MPH LOAD CELL BARRIER

TRC INC.

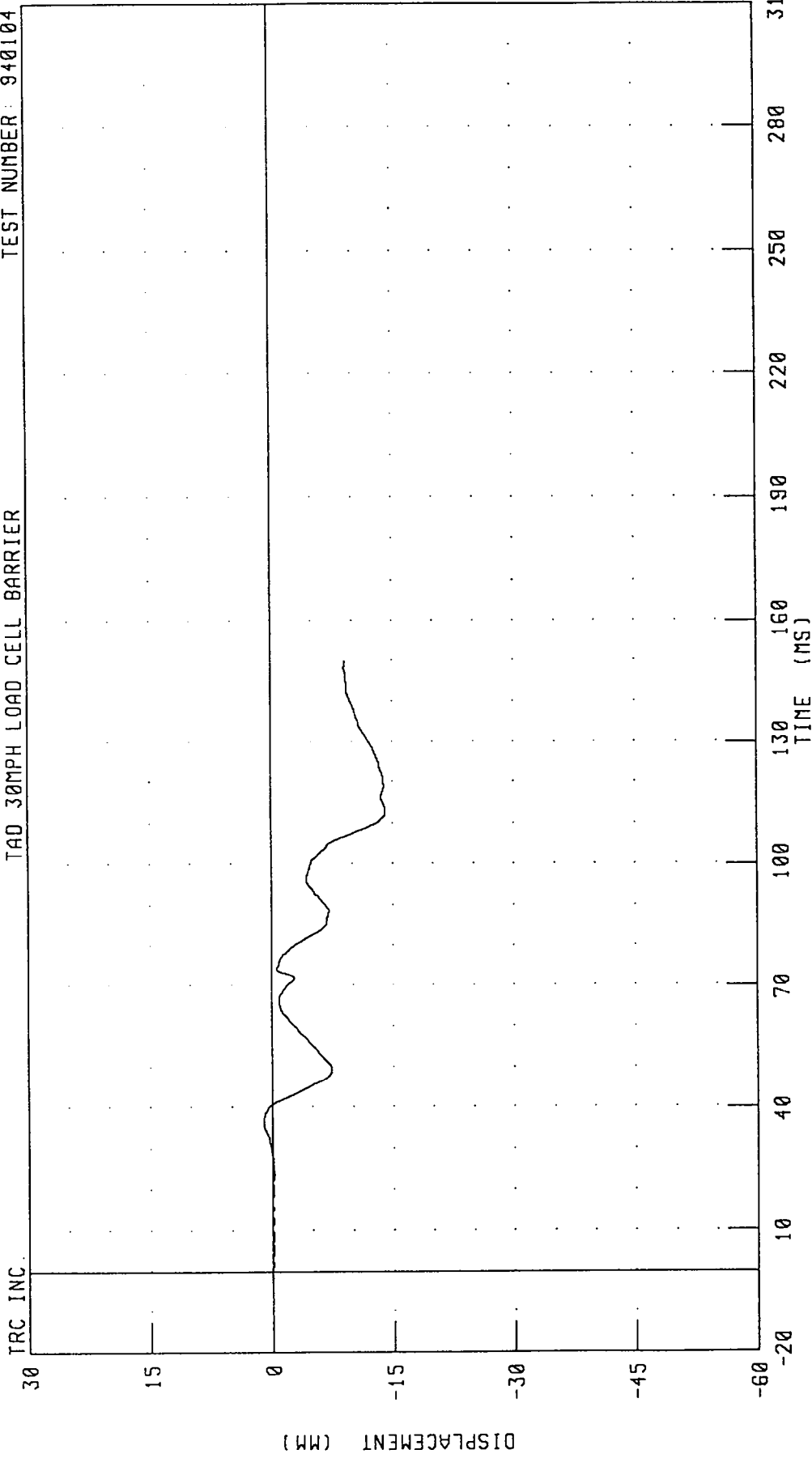


CHANNEL: 2DELY2 FILTER: CH. CLASS 180

PEAK DATA: 0.11 MM @ 16.72 MS; -28.56 MM @ 98.48 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
 PASSENGER POSITION 2 Z-AXIS CHEST DEFLECTION
 TAD 30MPH LOAD CELL BARRIER

TEST NUMBER: 940104



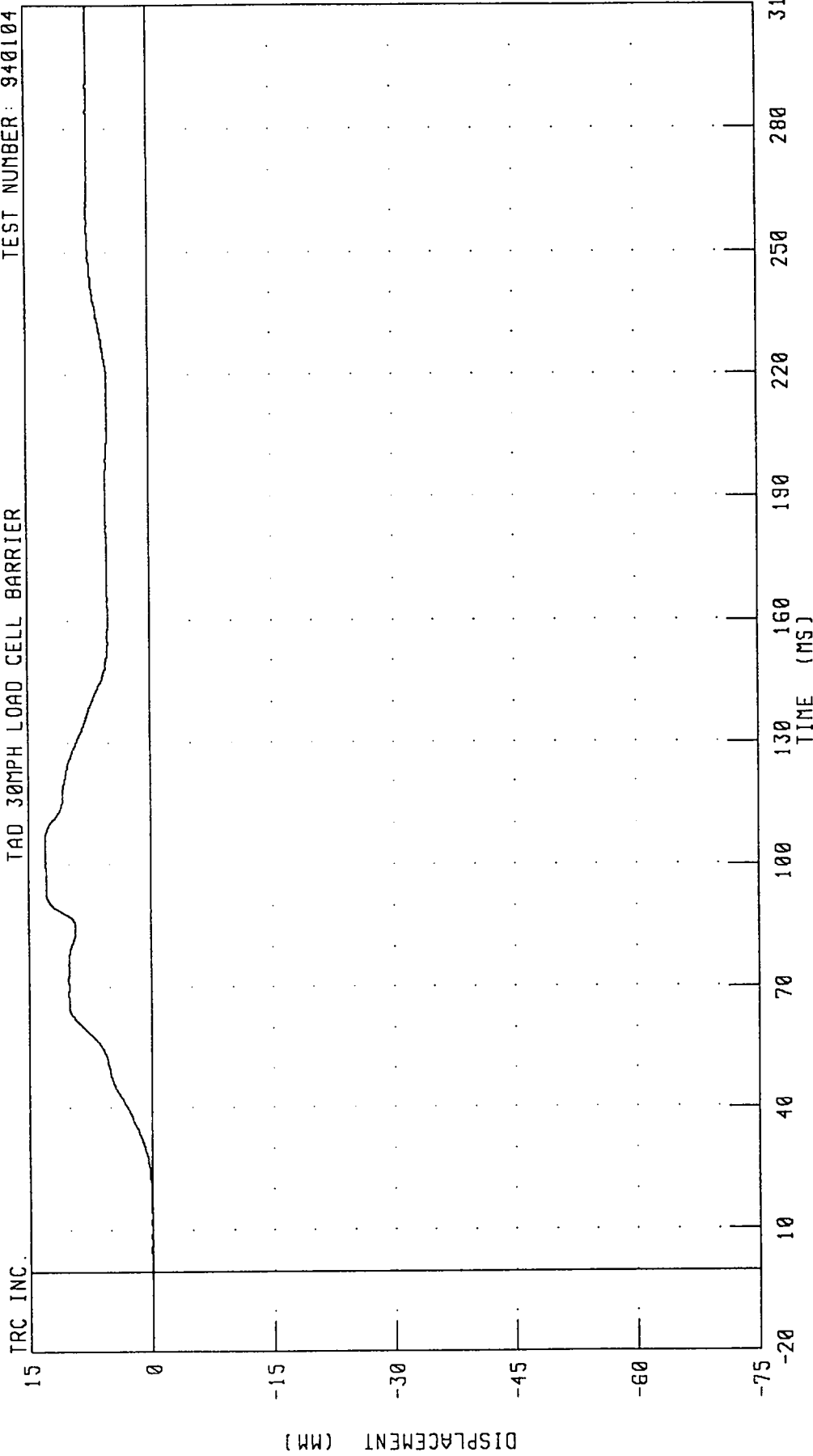
CHANNEL: 20ELZ2 FILTER: CH. CLASS 180

PEAK DATA: 0.99 MM @ 37.36 MS; -14.15 MM @ 112.80 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
PASSENGER CHEST LOCATION 3 POSTERIOR/ANTERIOR

TEST NUMBER: 940104

TAD 30MPH LOAD CELL BARRIER



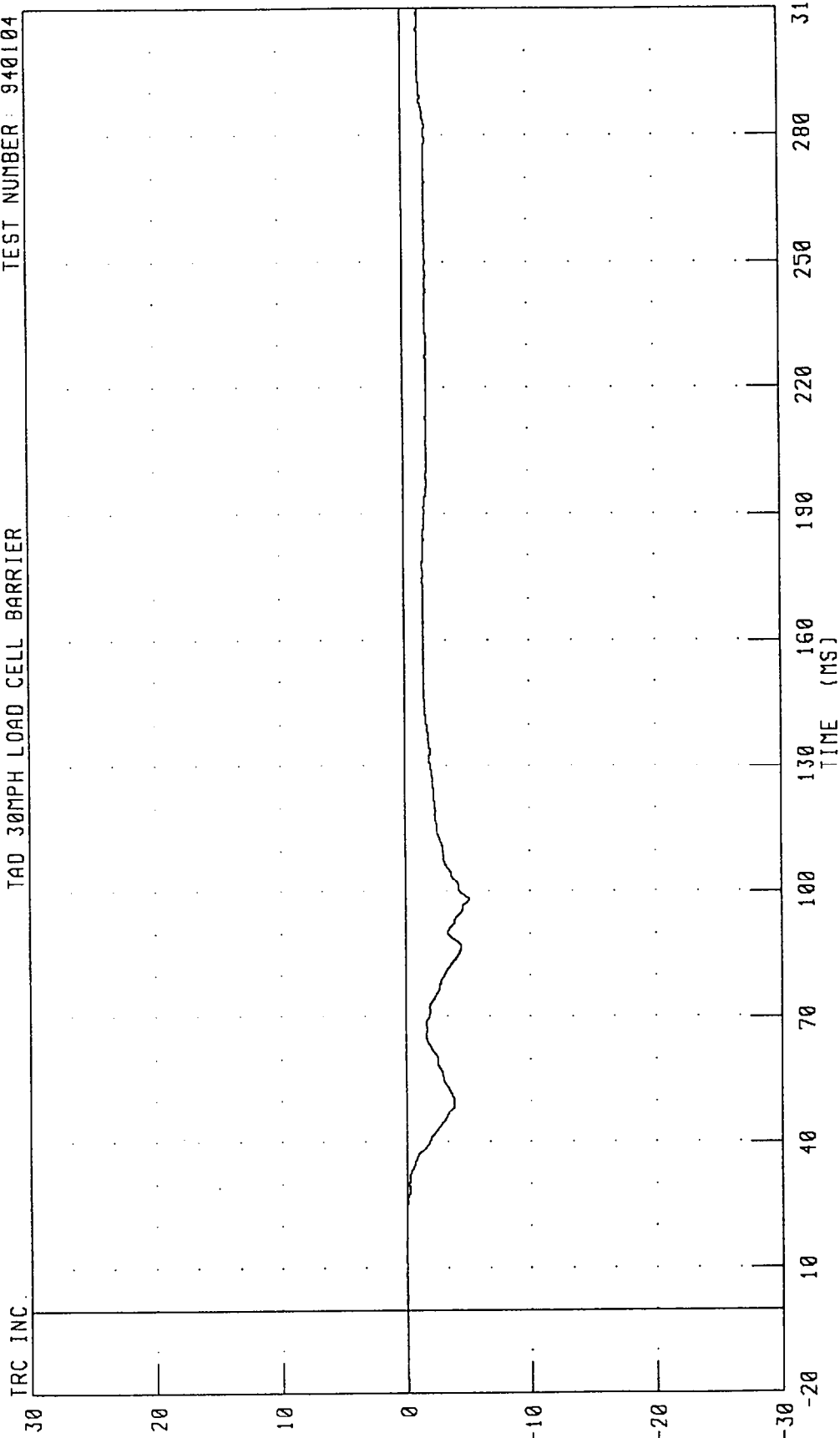
CHANNEL: CS3PA2 FILTER: CH. CLASS 180

PEAK DATA: 12.93 MM @ 103.68 MS; -0.06 MM @ -19.20 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
PASSENGER CHEST LOCATION 3 RIGHT/LEFT

TAD 30MPH LOAD CELL BARRIER

TEST NUMBER: 940104



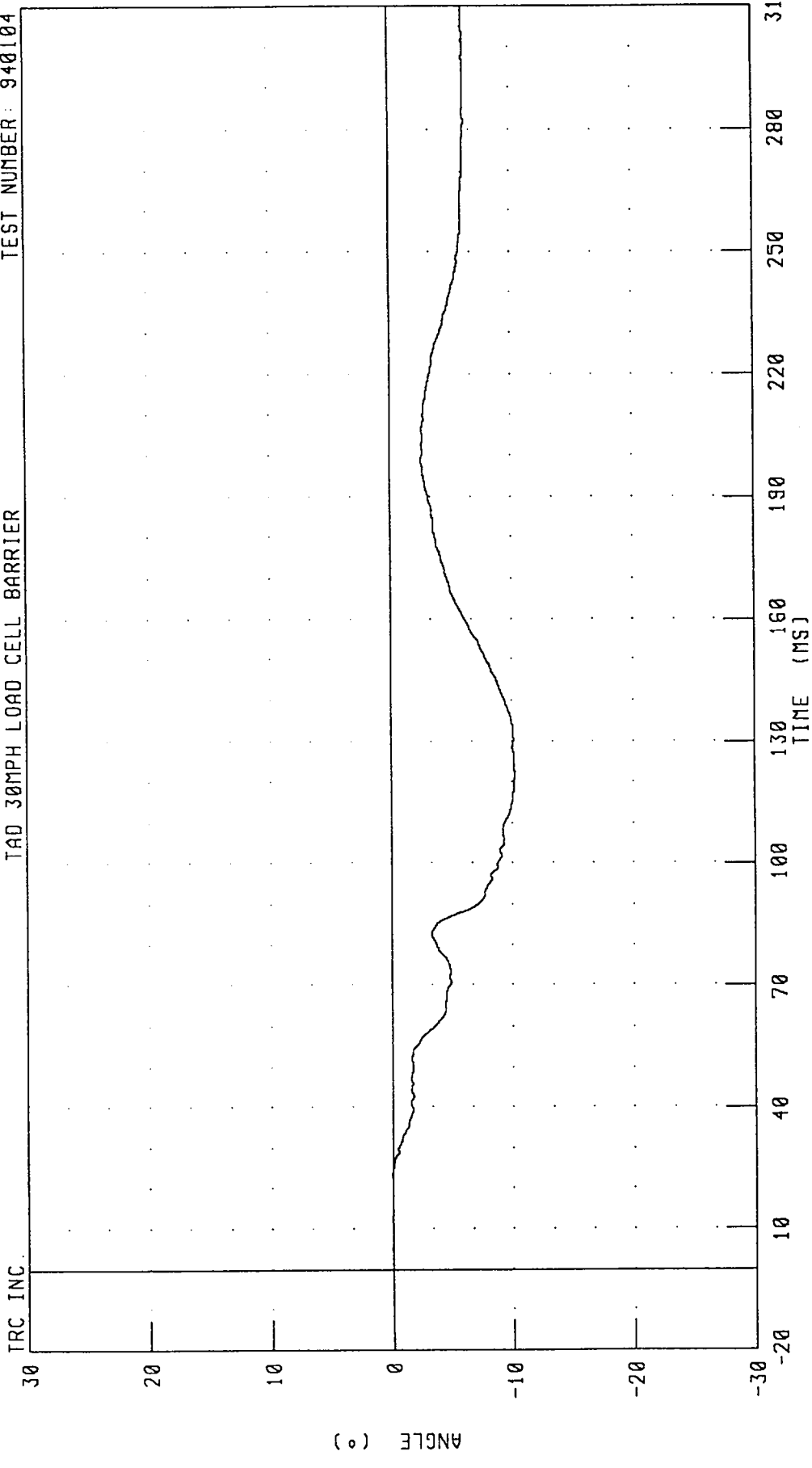
CHANNEL: CS3RL2 FILTER: CH. CLASS 180

PEAK DATA: 0.08 ° @ 12.24 MS; -5.06 ° @ 98.16 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
PASSENGER CHEST LOCATION 3 INFERIOR/SUPERIOR

TAD 30MPH LOAD CELL BARRIER

TEST NUMBER: 940104

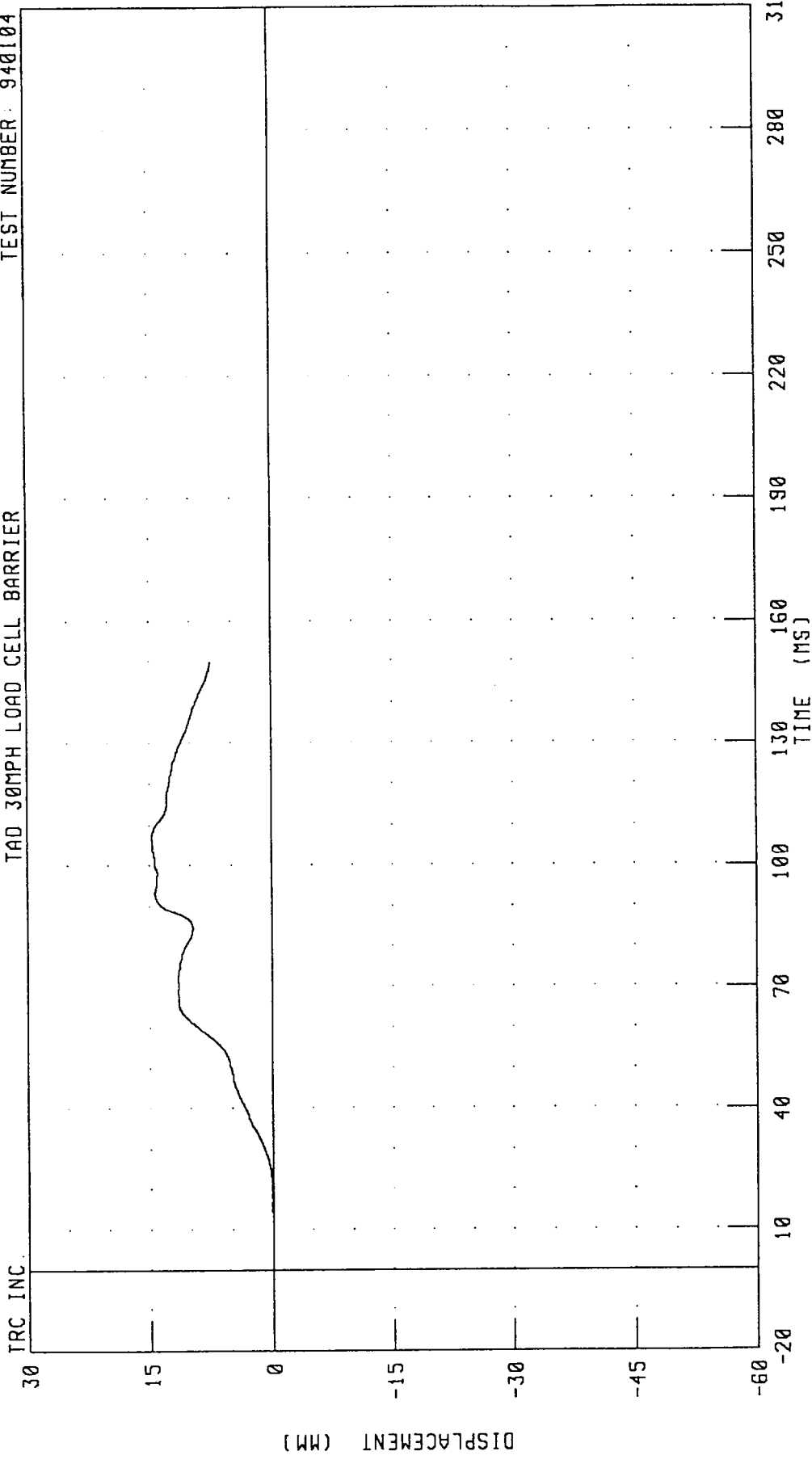


CHANNEL: CS3IS2 FILTER: CH. CLASS 180 PEAK DATA: 0.10 @ 23.12 MS; -10.22 @ 121.68 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
PASSENGER POSITION 3 X-AXIS CHEST DEFLECTION

TEST NUMBER: 940104

TAD 30MPH LOAD CELL BARRIER



CHANNEL: 3DELX2 FILTER: CH. CLASS 180

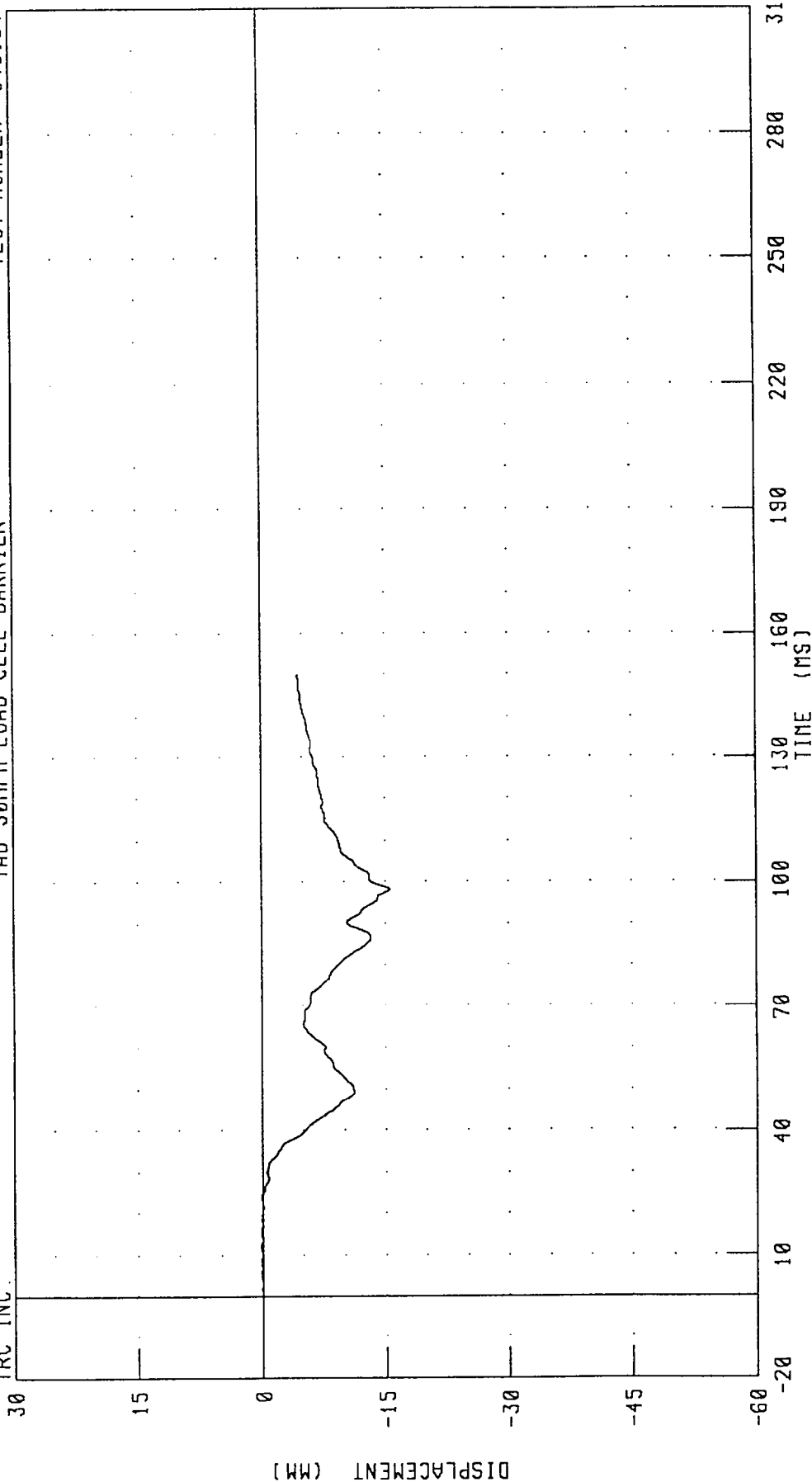
PEAK DATA: 14.71 MM @ 107.20 MS; -0.03 MM @ 13.36 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
PASSENGER POSITION 3 Y-AXIS CHEST DEFLECTION

TEST NUMBER: 940104

TAD 30MPH LOAD CELL BARRIER

TRC INC.



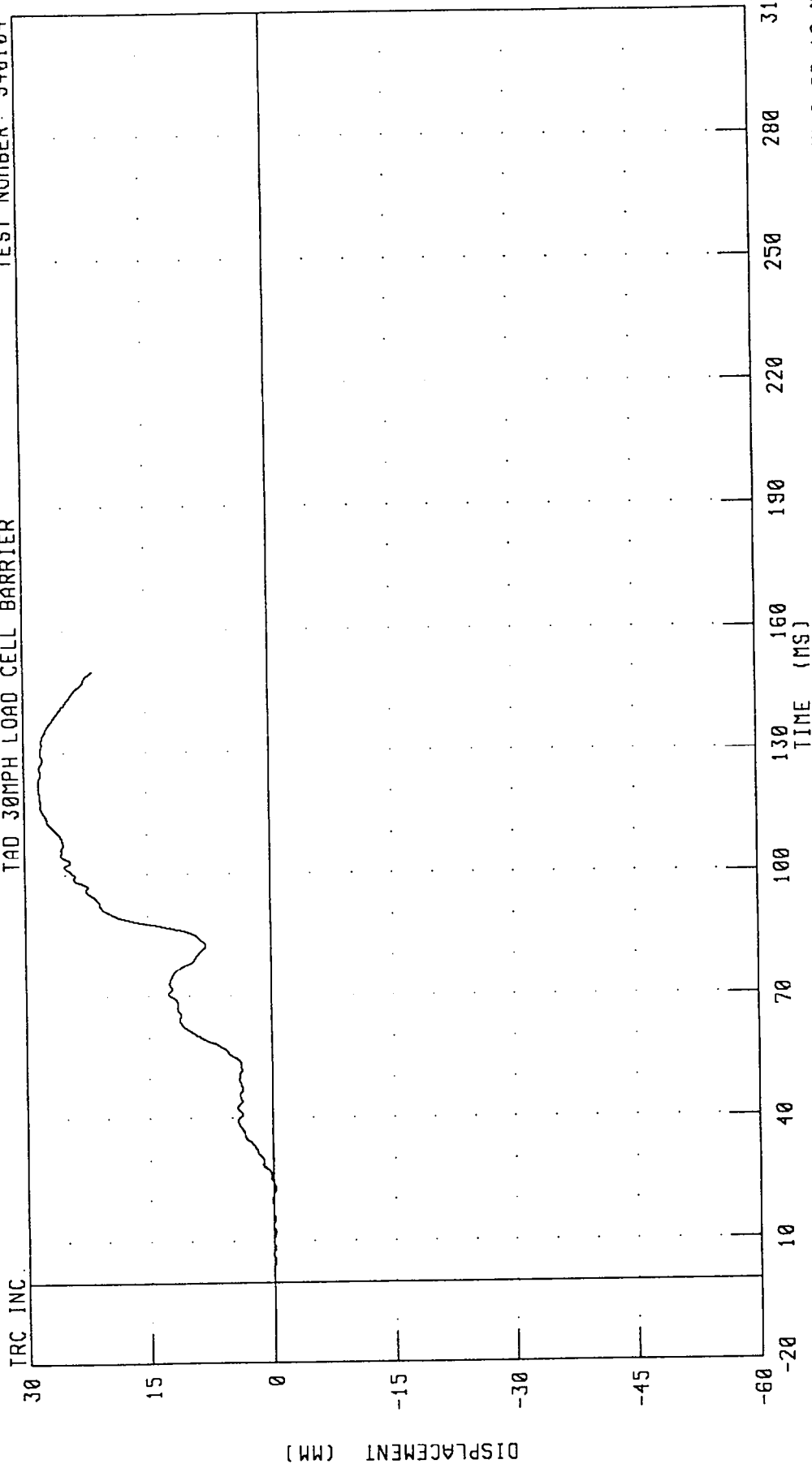
CHANNEL: 30ELV2 FILTER: CH. CLASS 180

PEAK DATA: 0.23 MM @ 12.24 MS; -15.57 MM @ 98.16 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
PASSENGER POSITION 3 Z-AXIS CHEST DEFLECTION

TEST NUMBER: 940104

TAD 30MPH LOAD CELL BARRIER



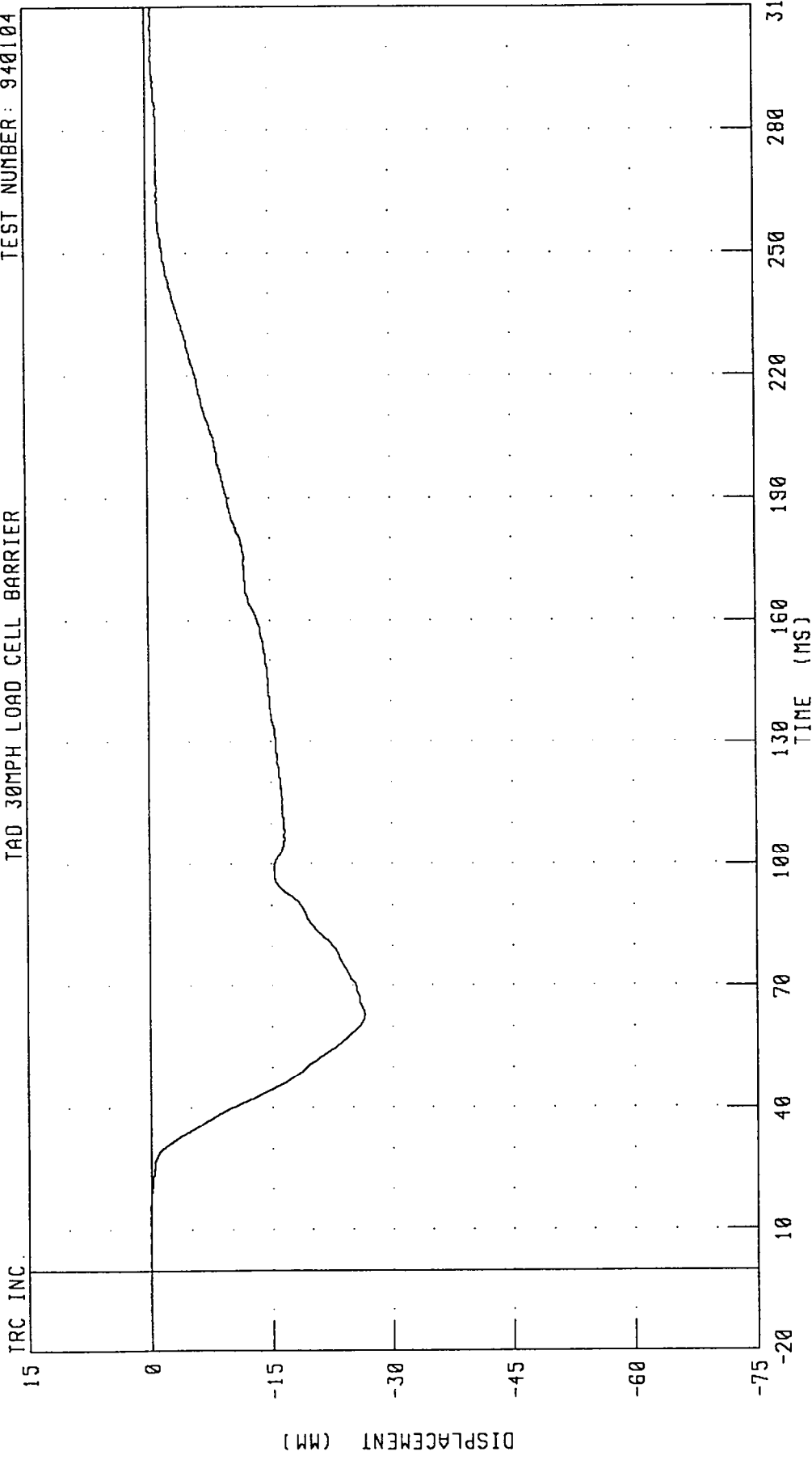
CHANNEL: 3DELZ2 FILTER: CH. CLASS 180

PEAK DATA: 28.23 MM @ 121.68 MS; -0.32 MM @ 23.12 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
PASSENGER CHEST LOCATION 4 POSTERIOR/ANTERIOR

TEST NUMBER: 940104

TAD 30MPH LOAD CELL BARRIER



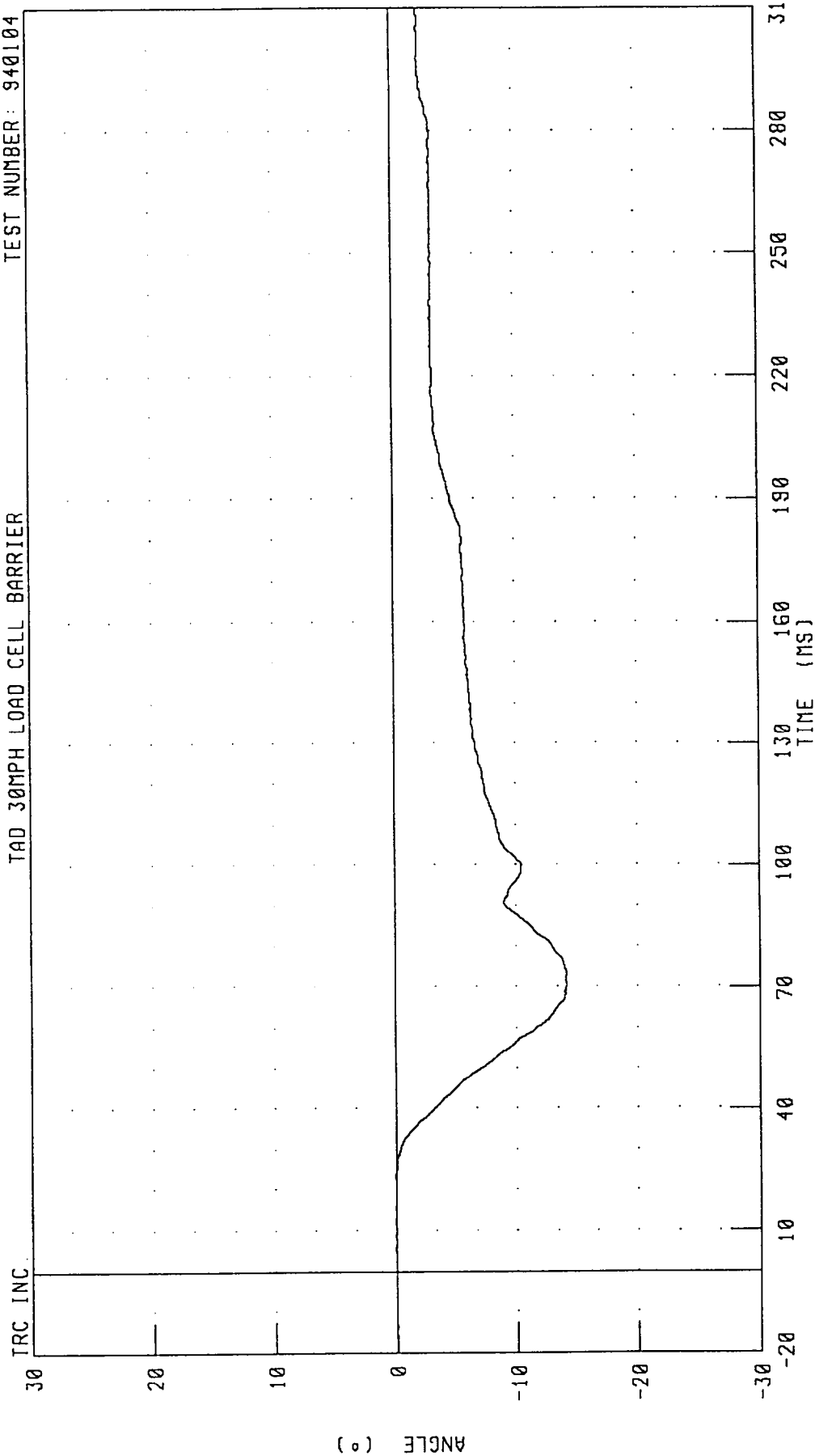
CHANNEL: CS4PA2 FILTER: CH. CLASS 180

PEAK DATA: 0.11 MM @ 15.12 MS; -26.53 MM @ 62.96 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
PASSENGER CHEST LOCATION 4 RIGHT/LEFT

TEST NUMBER: 940104

TAD 30MPH LOAD CELL BARRIER

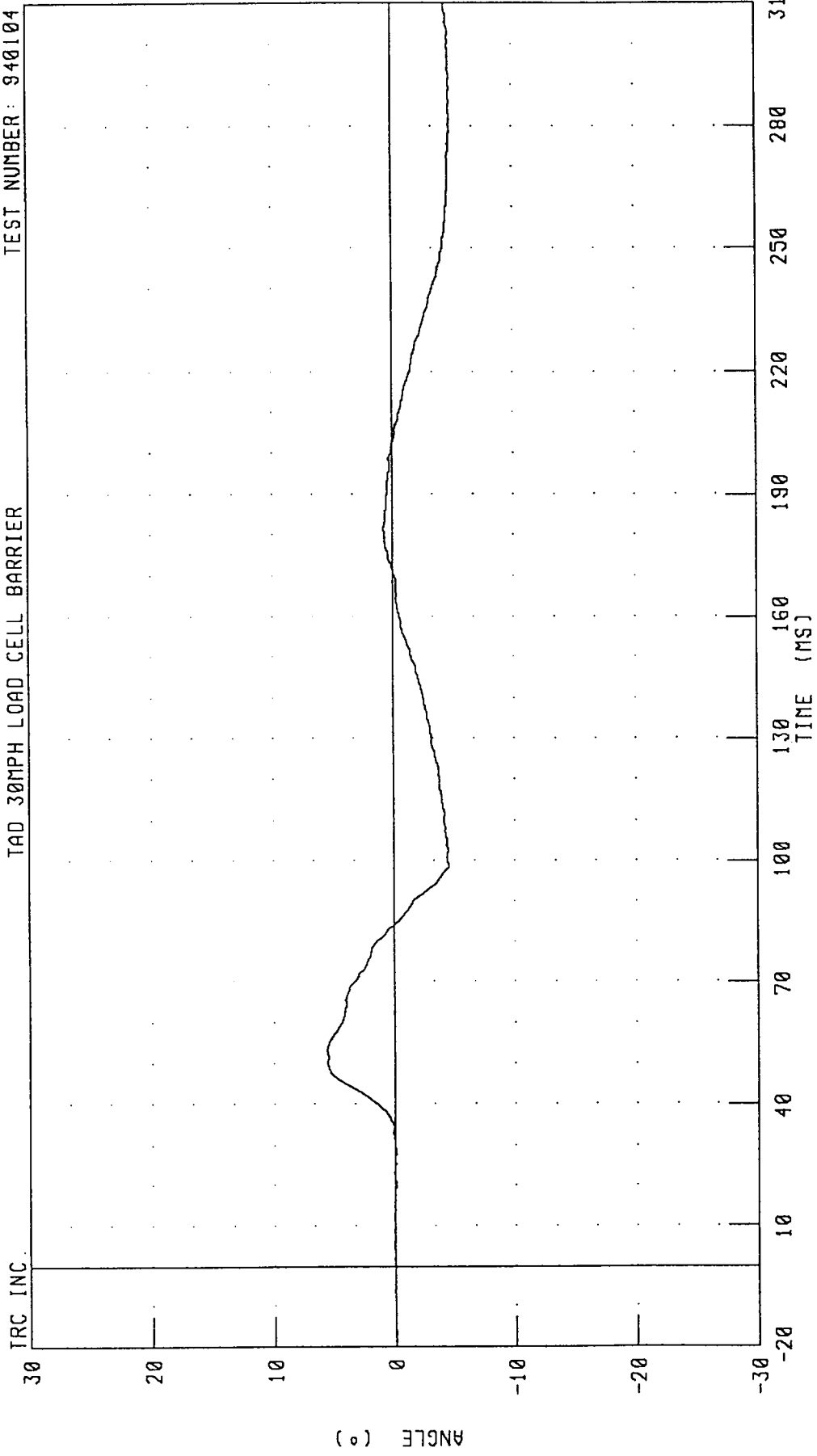


CHANNEL: CS4RL2 FILTER: CH. CLASS 180

PEAK DATA: 0.12 ° @ 12.24 MS; -14.14 ° @ 70.64 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
PASSENGER CHEST LOCATION 4 INFERIOR/SUPERIOR

TAD 30MPH LOAD CELL BARRIER TEST NUMBER: 940104

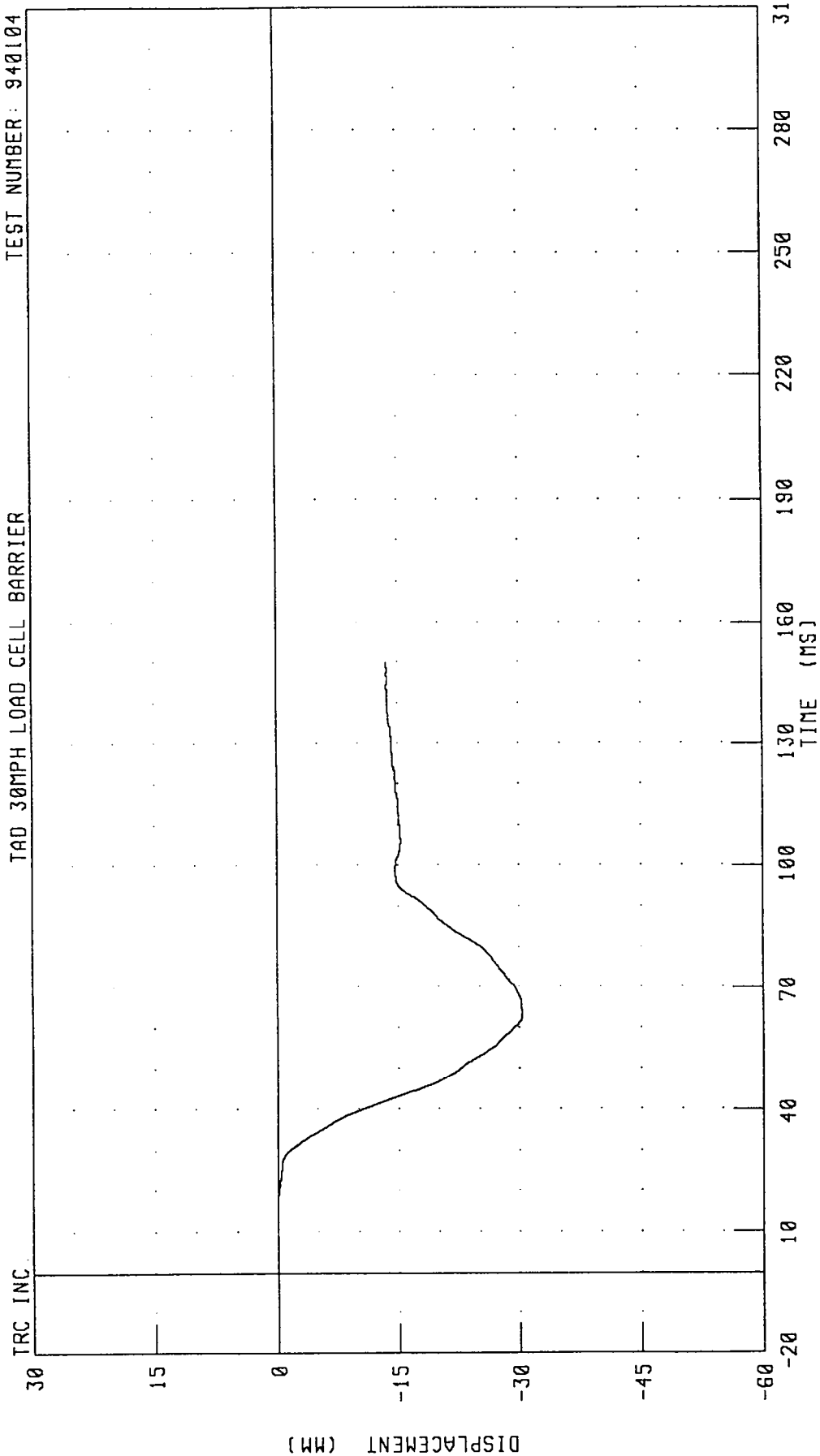


CHANNEL: CS4IS2 FILTER: CH. CLASS 180 PEAK DATA: 5.57 ° @ 53.20 MS; -4.82 ° @ 279.04 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
PASSENGER POSITION 4 X-AXIS CHEST DEFLECTION

TEST NUMBER: 940104

TAD 30MPH LOAD CELL BARRIER

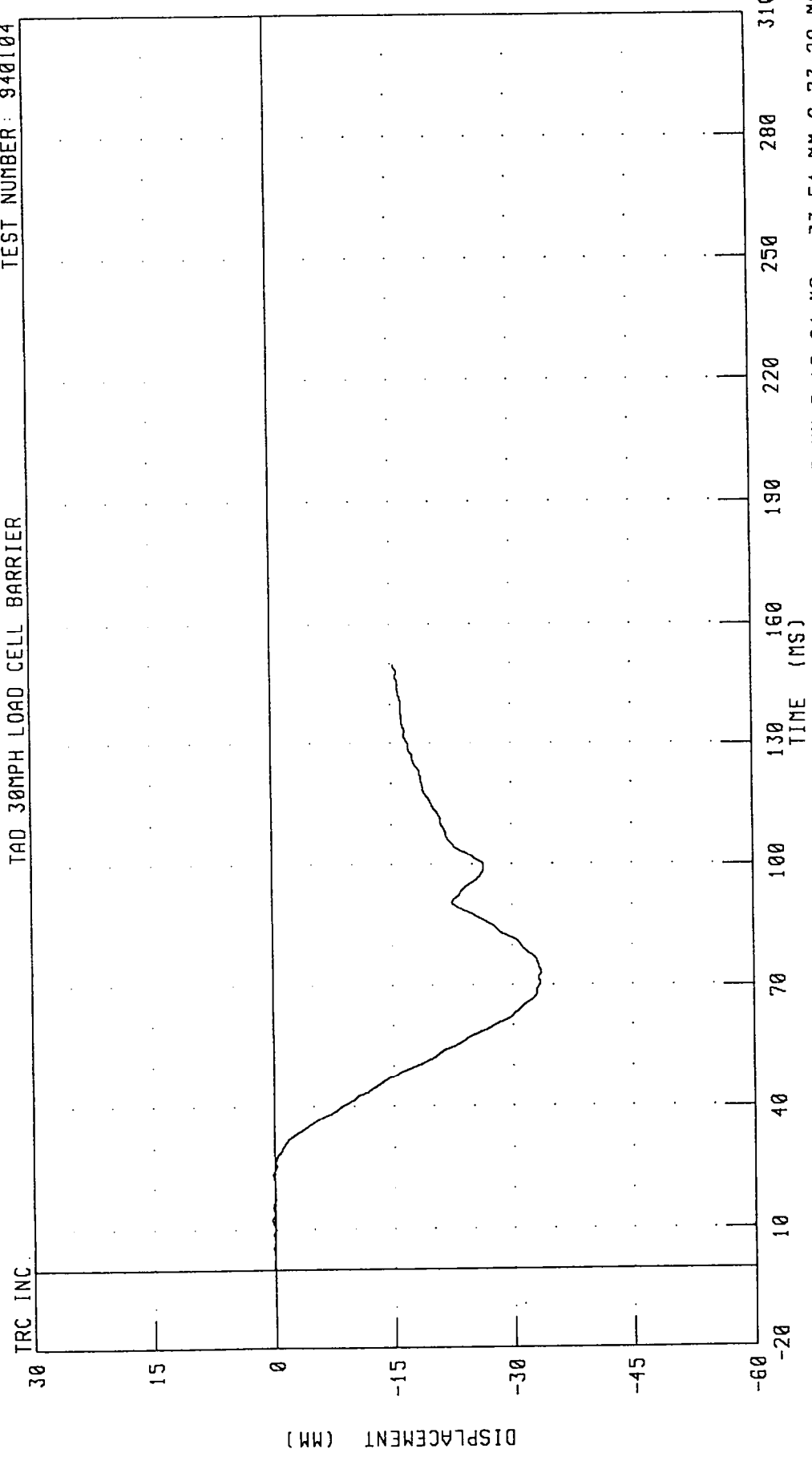


CHANNEL: 4DELX2 FILTER: CH. CLASS 180

PEAK DATA: 0.06 MM @ 14.96 MS; -30.42 MM @ 63.12 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
PASSENGER POSITION 4 Y-AXIS CHEST DEFLECTION
TAD 30MPH LOAD CELL BARRIER

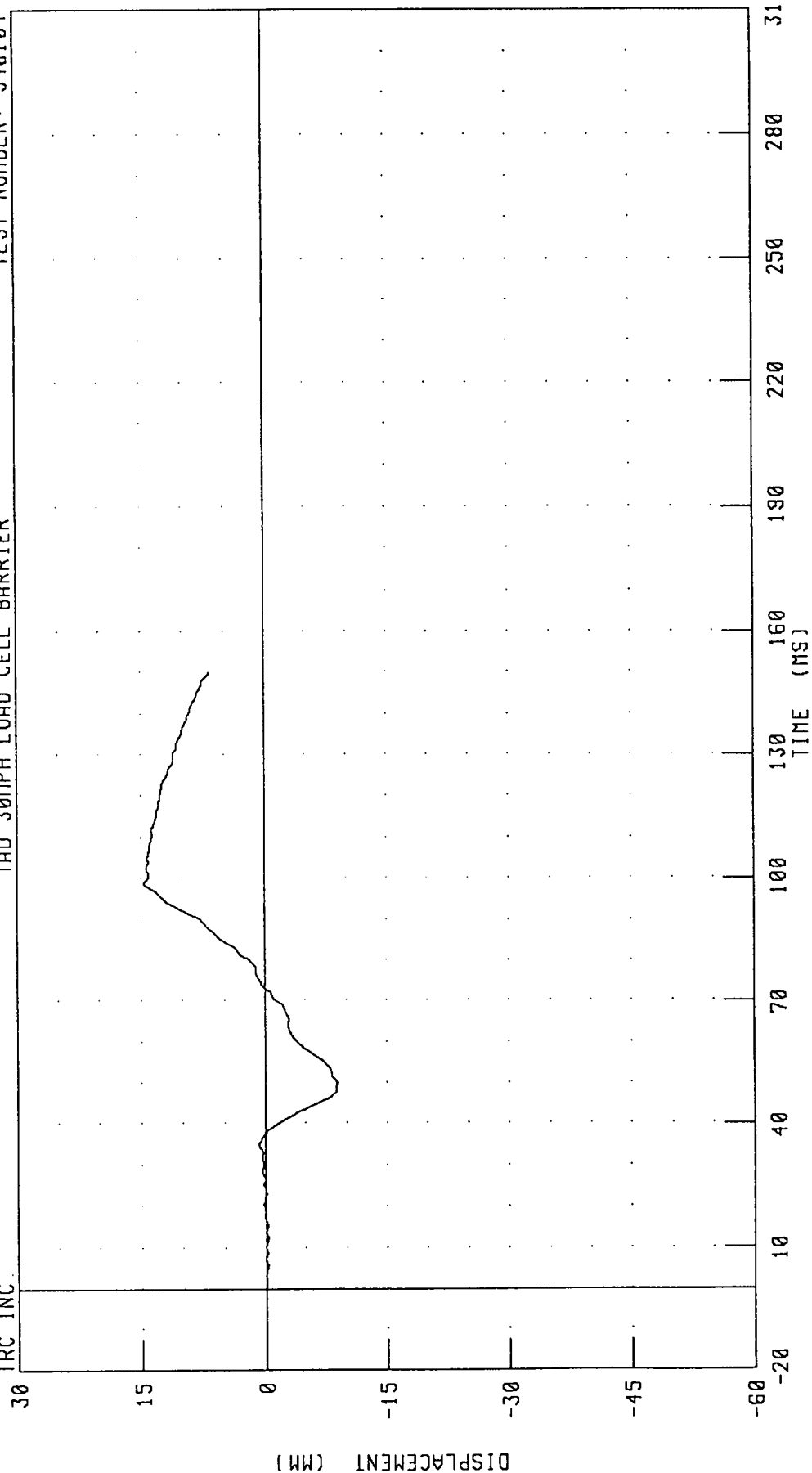
TEST NUMBER: 940104



CHANNEL: 4DELY2 FILTER: CH. CLASS 180
PEAK DATA: 0.35 MM @ 12.24 MS; -33.54 MM @ 73.28 MS

TAD 50 M PROTOTYPE DUMMY - FRONT 30 MPH TEST -1
PASSENGER POSITION 4 Z-AXIS CHEST DEFLECTION

TRC INC. TAD 30MPH LOAD CELL BARRIER TEST NUMBER: 940104



CHANNEL: 4DEL22 FILTER: CH. CLASS 180 PEAK DATA: 14.62 MM @ 98.80 MS; -8.85 MM @ 49.92 MS

APPENDIX C

DUMMY CALIBRATION INFORMATION

PRE-TEST CALIBRATION

DRIVER DUMMY

SN 002

TRANSPORTATION RESEARCH CENTER INC.

HEAD DROP TEST

HYBRID III

14-DEC-93

TRC INC.

TEST NO: T02C2HD2

572E SN02 HEAD DROP CAL 02

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	55.0 %
PEAK RESULTANT ACCELERATION	225 - 275 G	235.51 G
PEAK LATERAL ACCELERATION	15 G MAX	4.02 G
IS ACCELERATION CURVE UNIMODAL?	YES	YES

SKULL SURFACE WAS LUBRICATED TO ADJUST RESPONSE

TEST MEETS SPECIFICATIONS

TECHNICIAN

V.L. Watters

RUN NUMBER: 011494.1243;1

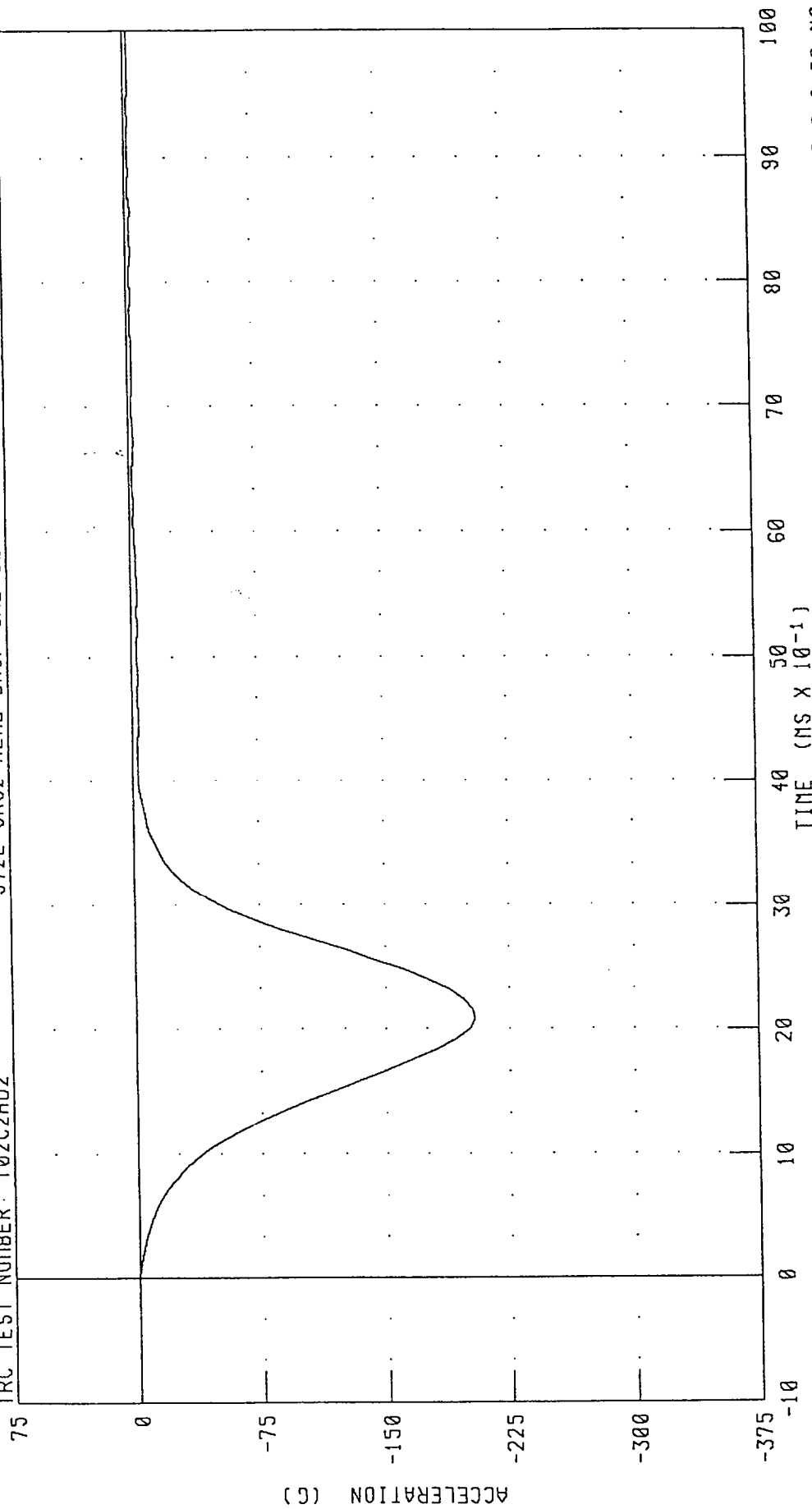
PART 572-E HYBRID III HEAD CALIBRATION

HEAD ACCELERATION X AXIS

572E SN02 HEAD DROP CAL 02

RUN NUMBER: 011494.1320;1

TRC TEST NUMBER: T02C2HD2



PEAK DATA: 0.08 G @ -0.08 MS; -204.19 G @ 2.08 MS

CHANNEL: HEDXC FILTER: CH. CLASS 1000

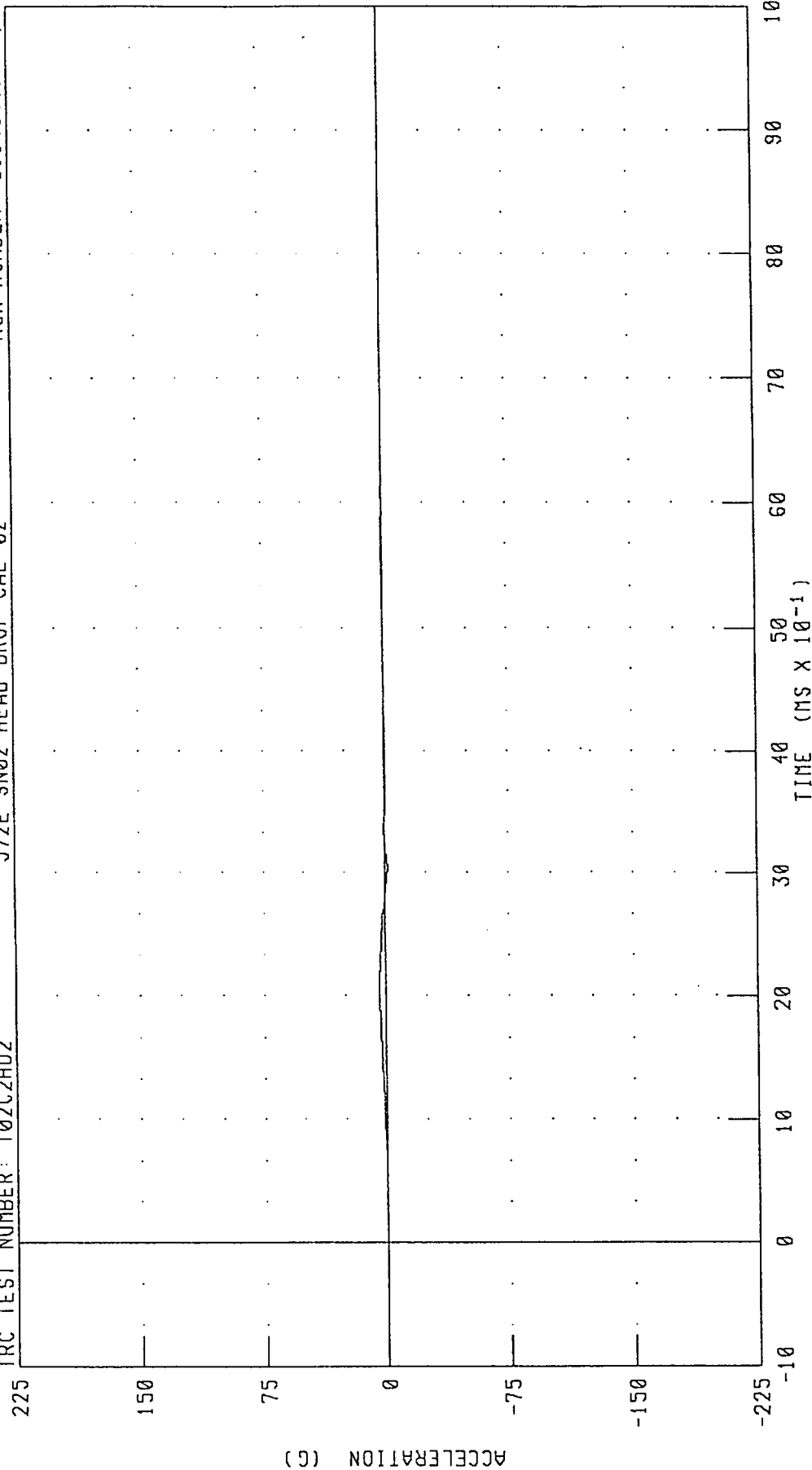
PART 572-E HYBRID III HEAD CALIBRATION

HEAD ACCELERATION Y AXIS

572E SN02 HEAD DROP CAL 02

RUN NUMBER: 011494.1320.1

TRC TEST NUMBER: T02C2HD2



CHANNEL: HEDYG FILTER: CH. CLASS 1000

PEAK DATA: 4.02 G @ 2.08 MS; -1.56 G @ 3.04 MS

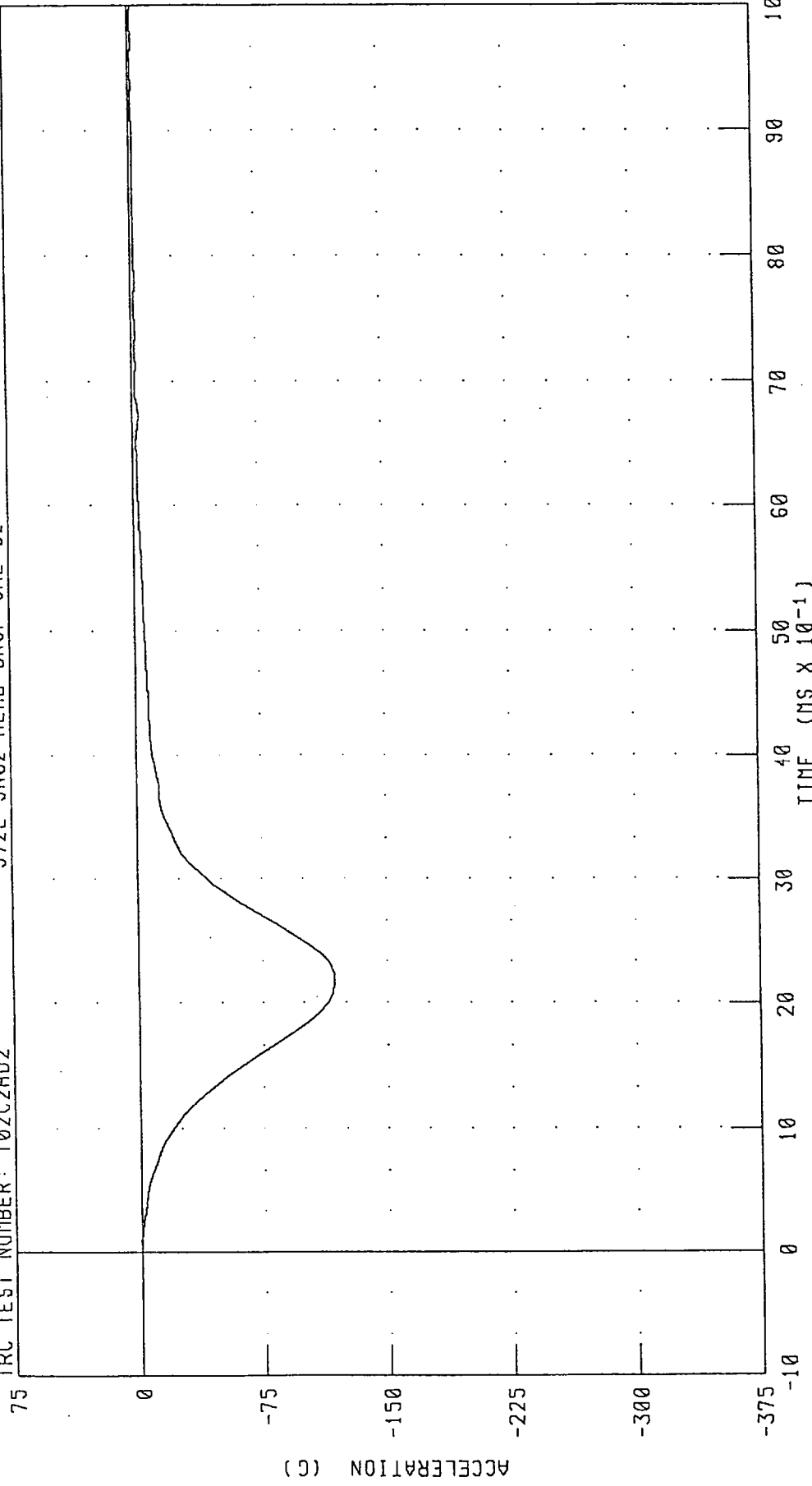
PART 572-E HYBRID III HEAD CALIBRATION

HEAD ACCELERATION Z AXIS

572E SN02 HEAD DROP CAL 02

RUN NUMBER: 011494.1320;1

TRC TEST NUMBER: T02C2HD2



PEAK DATA: 0.05 G @ 0.00 MS; -118.52 G @ 2.16 MS

CHANNEL: HEDZG FILTER: CH. CLASS 1000

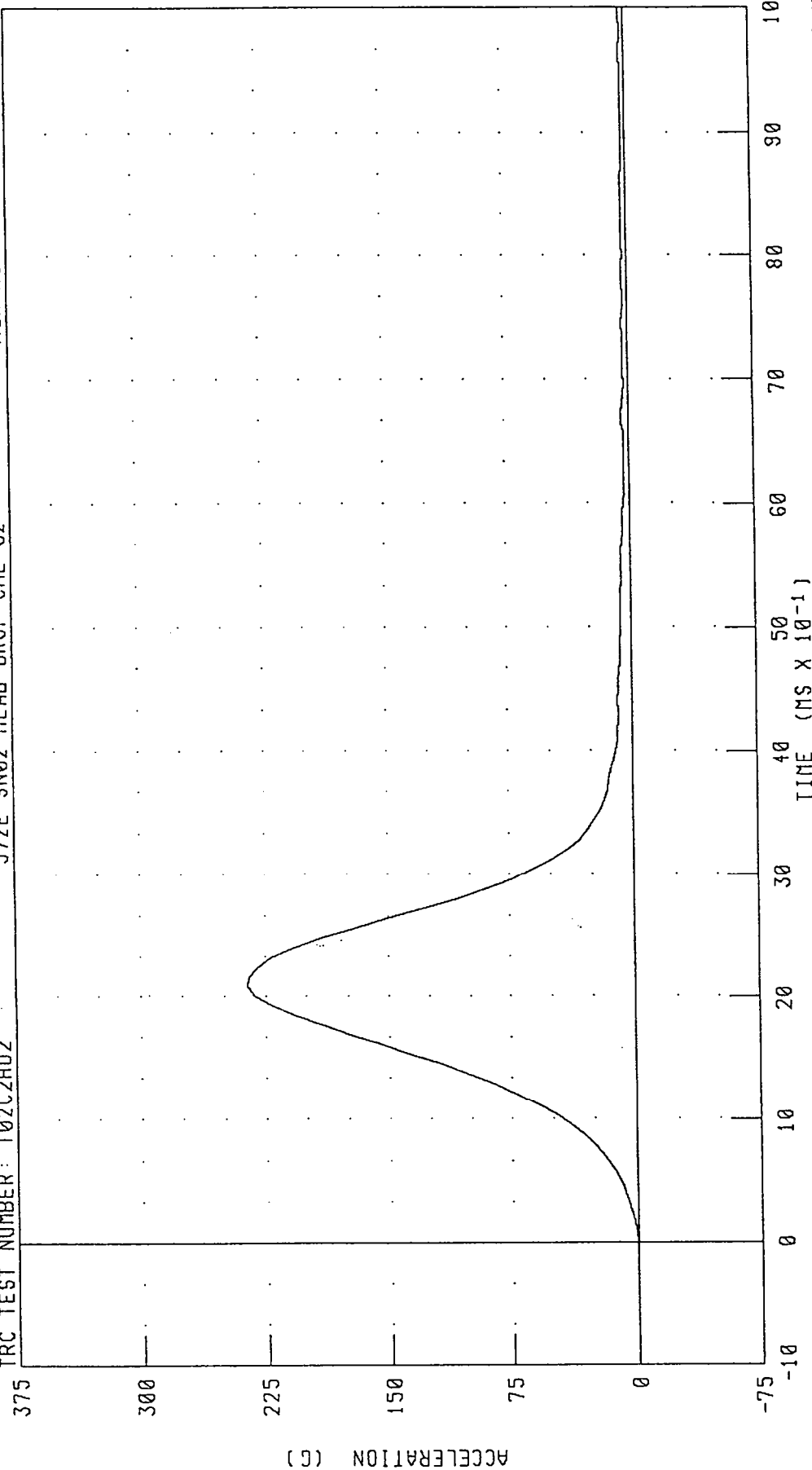
PART 572-E HYBRID III HEAD CALIBRATION

HEAD RESULTANT ACCELERATION

572E SN02 HEAD DROP CAL 02

RUN NUMBER: 011494.1320;1

TRC TEST NUMBER: T02C2H02



PEAK DATA: 235.52 G @ 2.08 MS; 0.03 G @ -0.32 MS

CHANNEL: HEDRG FILTER: CH. CLASS 1000

TRANSPORTATION RESEARCH CENTER INC.

NECK FLEXION TEST

HYBRID III

15-DEC-93

6 AXIS NECK TRANSDUCER

TRC INC.

TEST NO: T02C2NF1

572E SN02 NECK FLEXION CAL02

TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE		20.6-22.2 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY		10 - 70 %	54.0 %
IMPACT VELOCITY		6.89 - 7.13 M/S	7.06 M/S
PENDULUM DECELERATION	10 MS	22.50 - 27.50 G	24.13 G
	20 MS	17.60 - 22.60 G	19.61 G
	30 MS	12.50 - 18.50 G	15.11 G
MAX PENDULUM G		29 G MAX	24.62 G
MAX PENDULUM G ABOVE 30 MS		29 G MAX	15.04 G
DECELERATION-TIME CURVE DECAY TIME TO 5 G		34 - 42 MS	40.72 MS
D PLANE	MAX	64 - 78 DEG.	69.45 DEG.
ROTATION	TIME	57 - 64 MS	58.80 MS
MOMENT ABOUT OCCIPITAL CONDYLE	MAX	88.2 - 108.5 NM	99.78 NM
	TIME	47 - 58 MS	52.48 MS
ROTATION ANGLE-TIME CURVE DECAY TIME TO ZERO		113 - 128 MS	113.20 MS
POSITIVE MOMENT-TIME CURVE DECAY TIME TO ZERO		97 - 107 MS	99.28 MS

TEST MEETS SPECIFICATIONS

TECHNICIAN Pete Raut

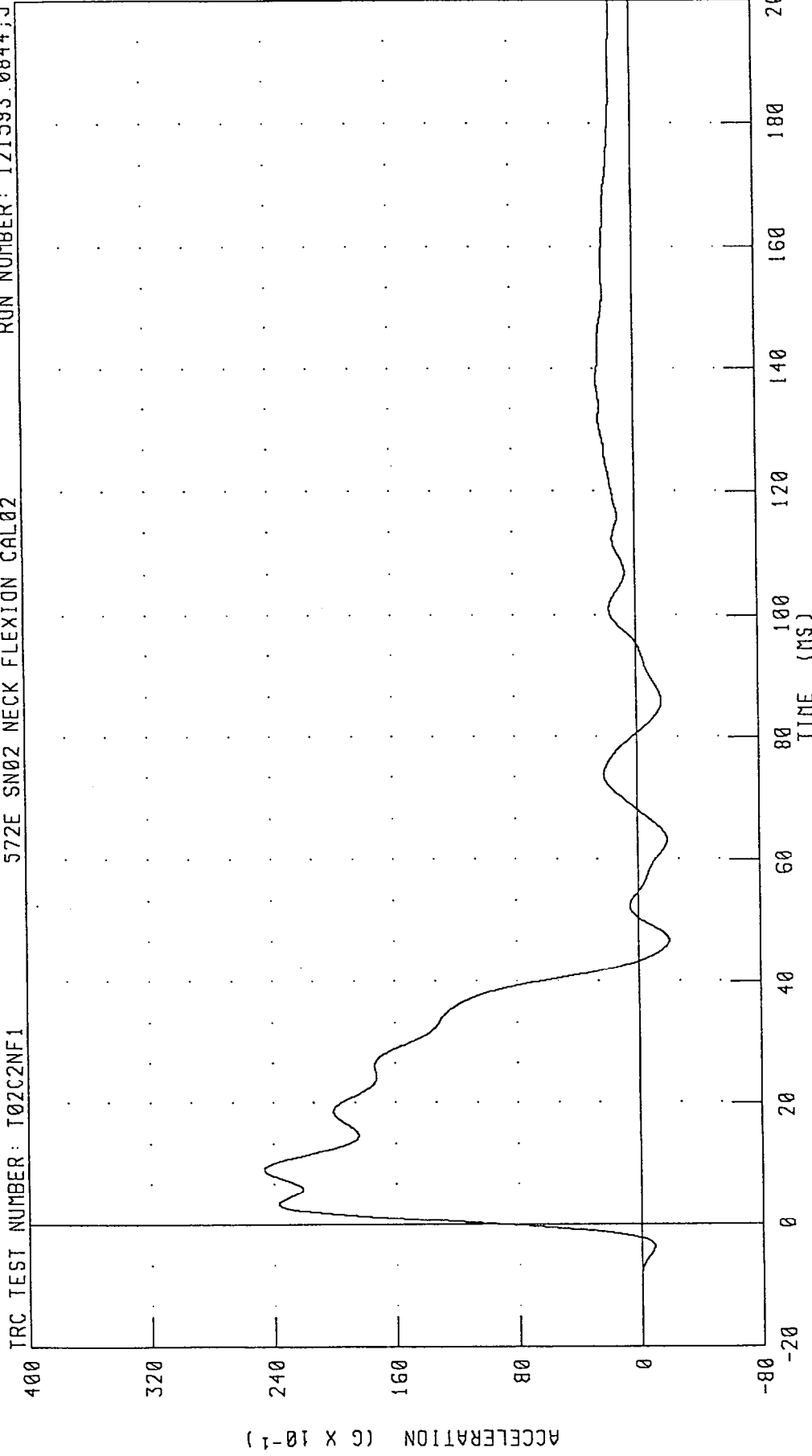
RUN NUMBER: 121593.0843;5

PART 572-E HYBRID III NECK FLEXION CALIBRATION
PENDULUM DECELERATION

TRC TEST NUMBER: T02C2NF1

572E SN02 NECK FLEXION CAL02

RUN NUMBER: 121593 0844;5



PEAK DATA: 24.63 G @ 9.12 MS; -1.99 G @ 46.80 MS

CHANNEL: PENXG FILTER: CH. CLASS 60

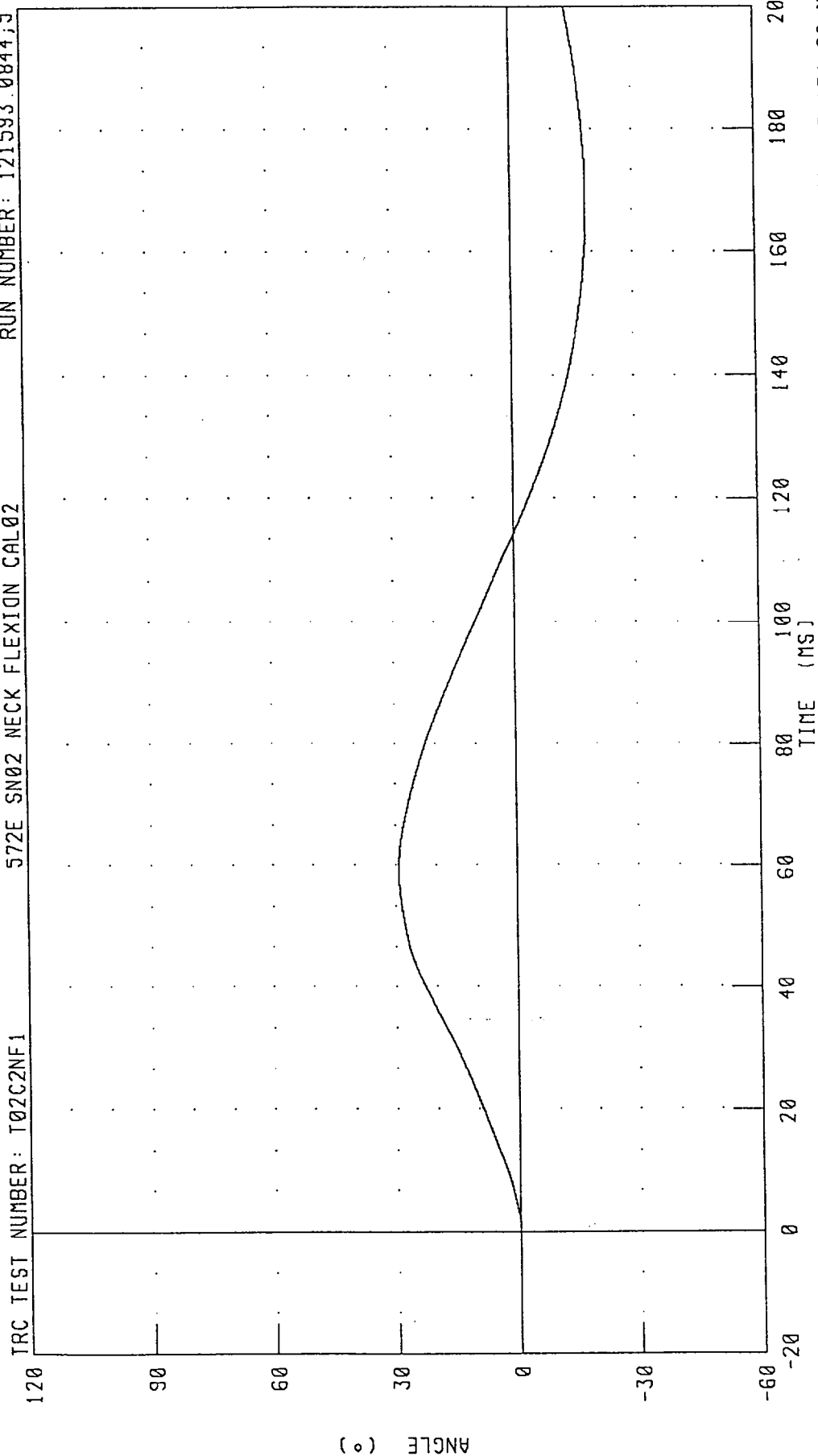
PART 572-E HYBRID III NECK FLEXION CALIBRATION

ROTATION ABOUT BASE OF NECK

TRC TEST NUMBER: T02C2NF1

572E SN02 NECK FLEXION CAL02

RUN NUMBER: 121593.0844;5



CHANNEL: BETA FILTER: CH. CLASS 60

PEAK DATA: 29.23 ° @ 59.04 MS; -18.53 ° @ 171.20 MS

PART 572-E HYBRID III NECK FLEXION CALIBRATION

ROTATION ABOUT OCCIPITAL CONDYLE

572E SN02 NECK FLEXION CAL02

TRC TEST NUMBER: T02C2NF1

120

90

60

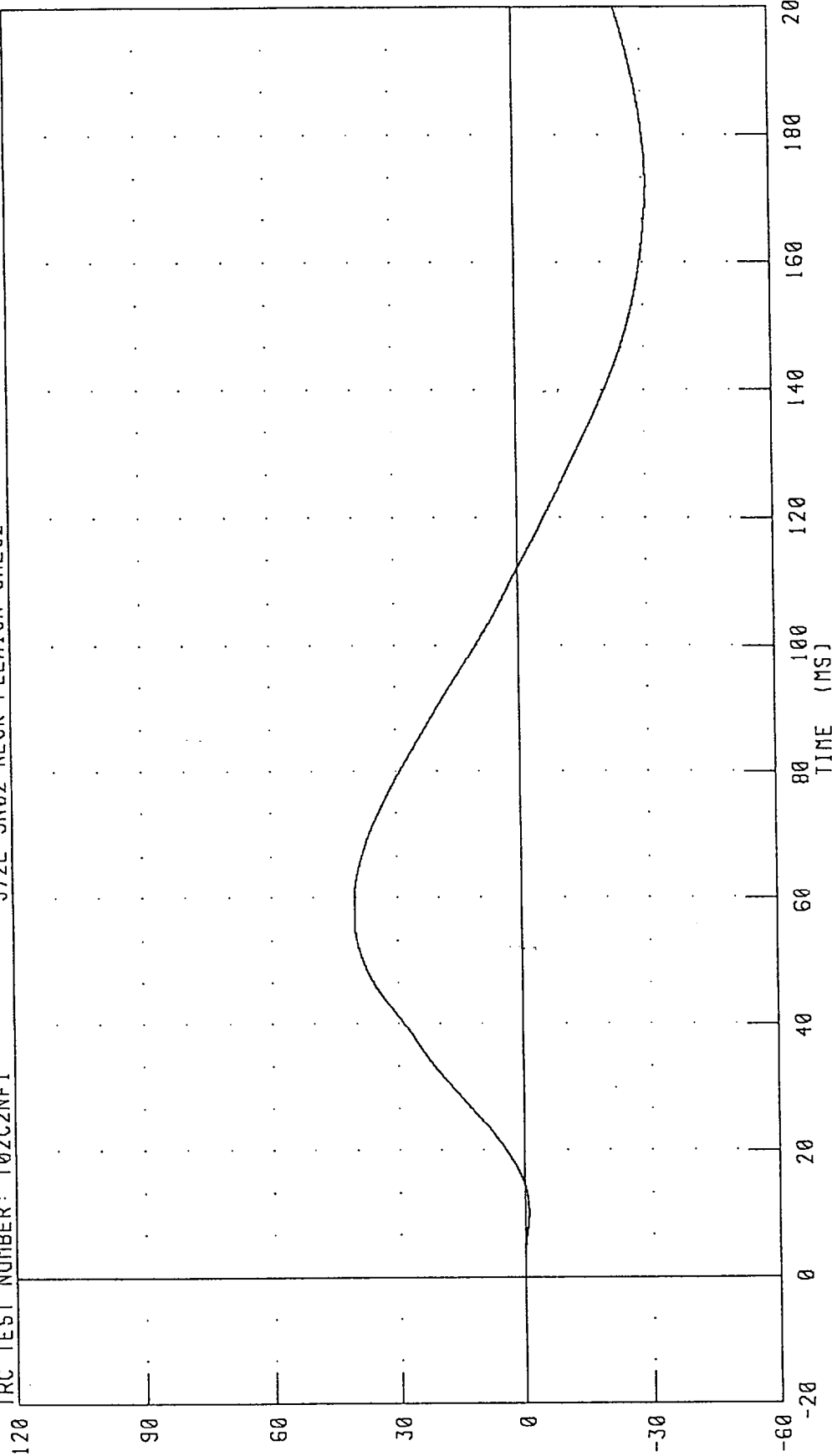
30

0

-30

-60

ANGLE (°)



CHANNEL: THETA FILTER: CH. CLASS 60

PEAK DATA: 40.23 ° @ 57.52 MS; -30.82 ° @ 172.88 MS

RUN NUMBER: 121593.0844;5

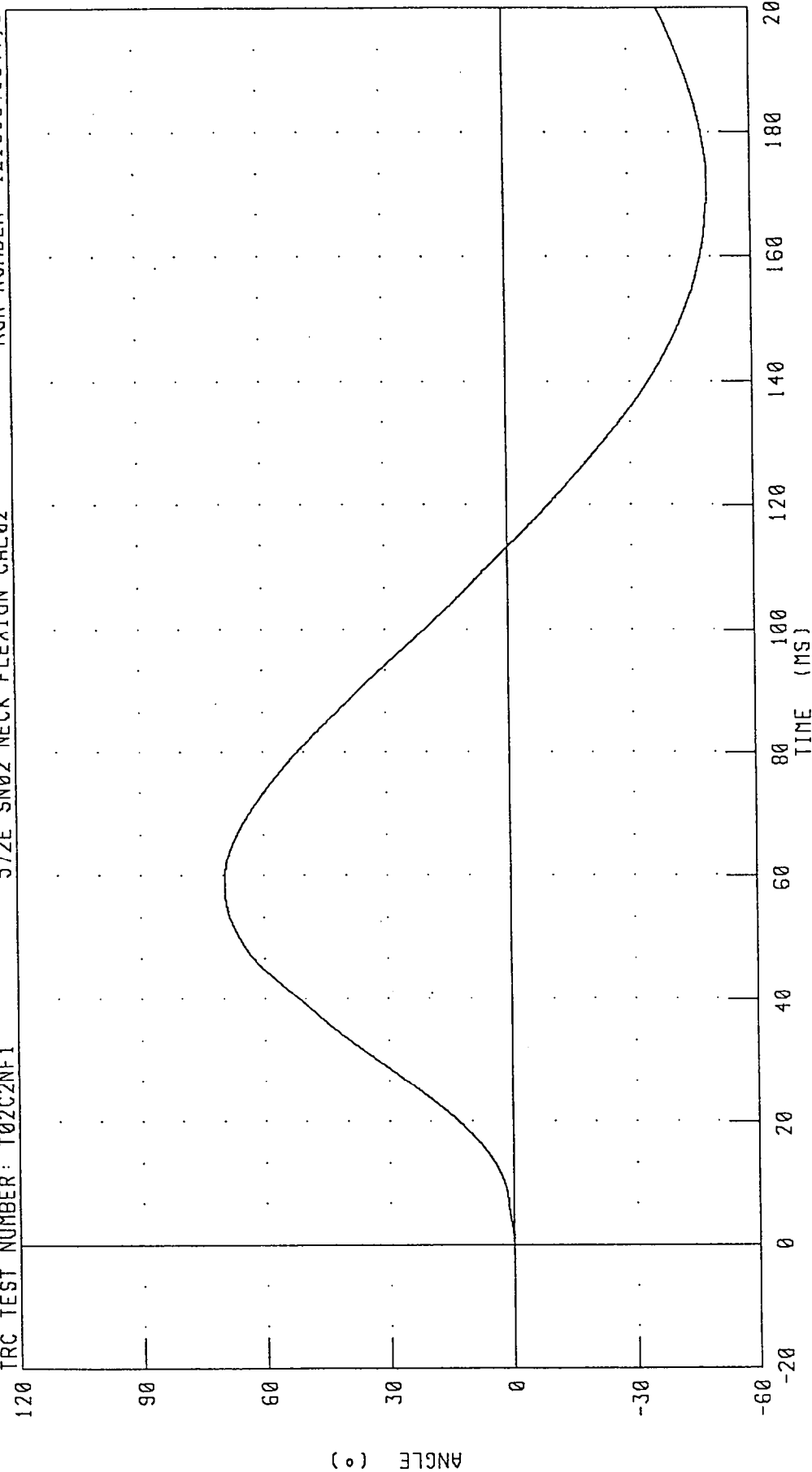
PART 572-E HYBRID III NECK FLEXION CALIBRATION

TOTAL ROTATION

TRC TEST NUMBER: T02C2NF1

572E SN02 NECK FLEXION CAL02

RUN NUMBER: 121593.0844,5



CHANNEL: TOTAL FILTER: CH. CLASS 60

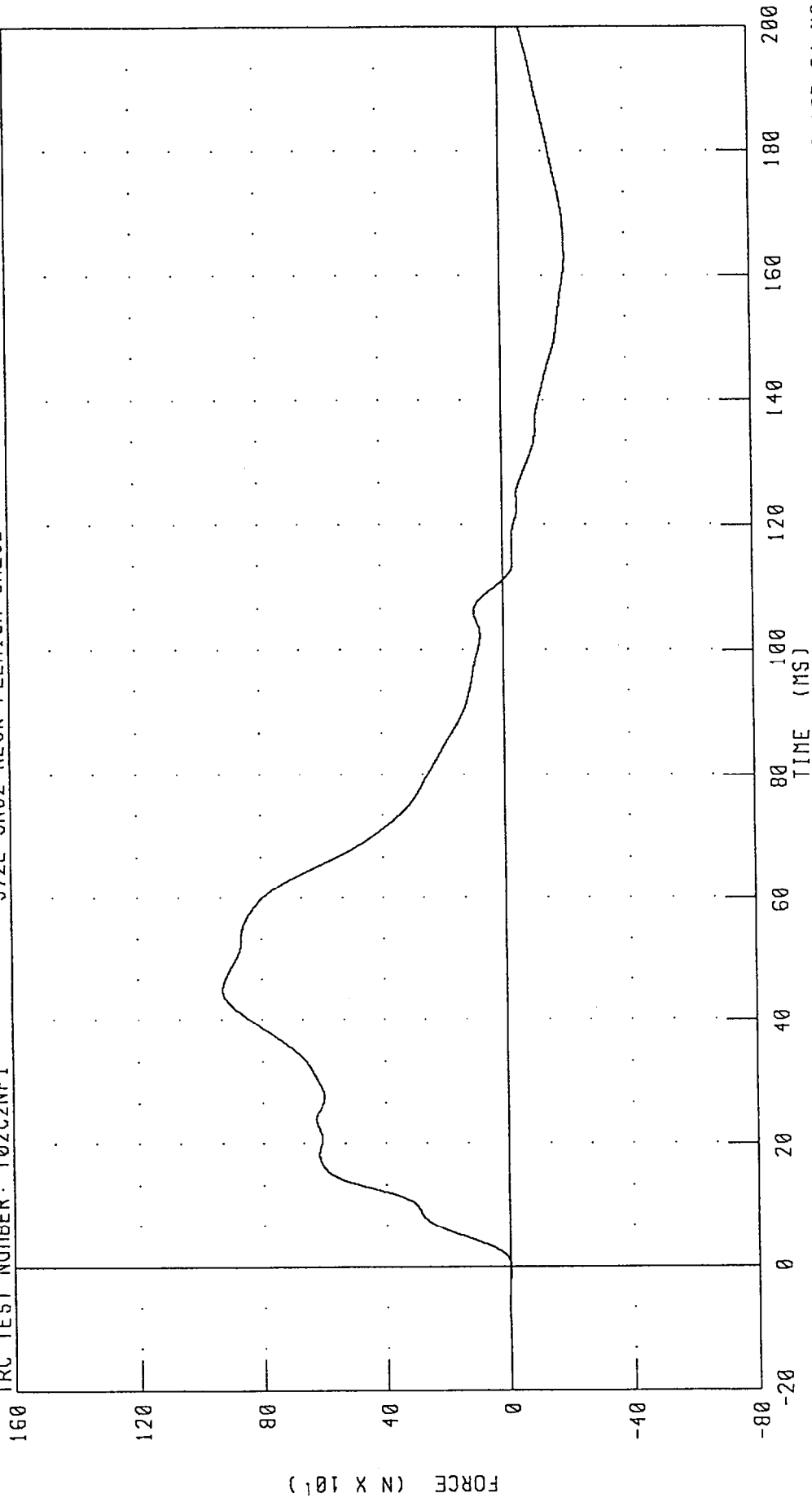
PART 572-E HYBRID III NECK FLEXION CALIBRATION

NECK FORCE X AXIS

TRC TEST NUMBER: T02C2NF1

572E SN02 NECK FLEXION CAL02

RUN NUMBER: 121593.0844,5



CHANNEL: NEKXF FILTER: CH. CLASS 60

PEAK DATA: 927.55 N @ 44.96 MS; -207.96 N @ 163.04 MS

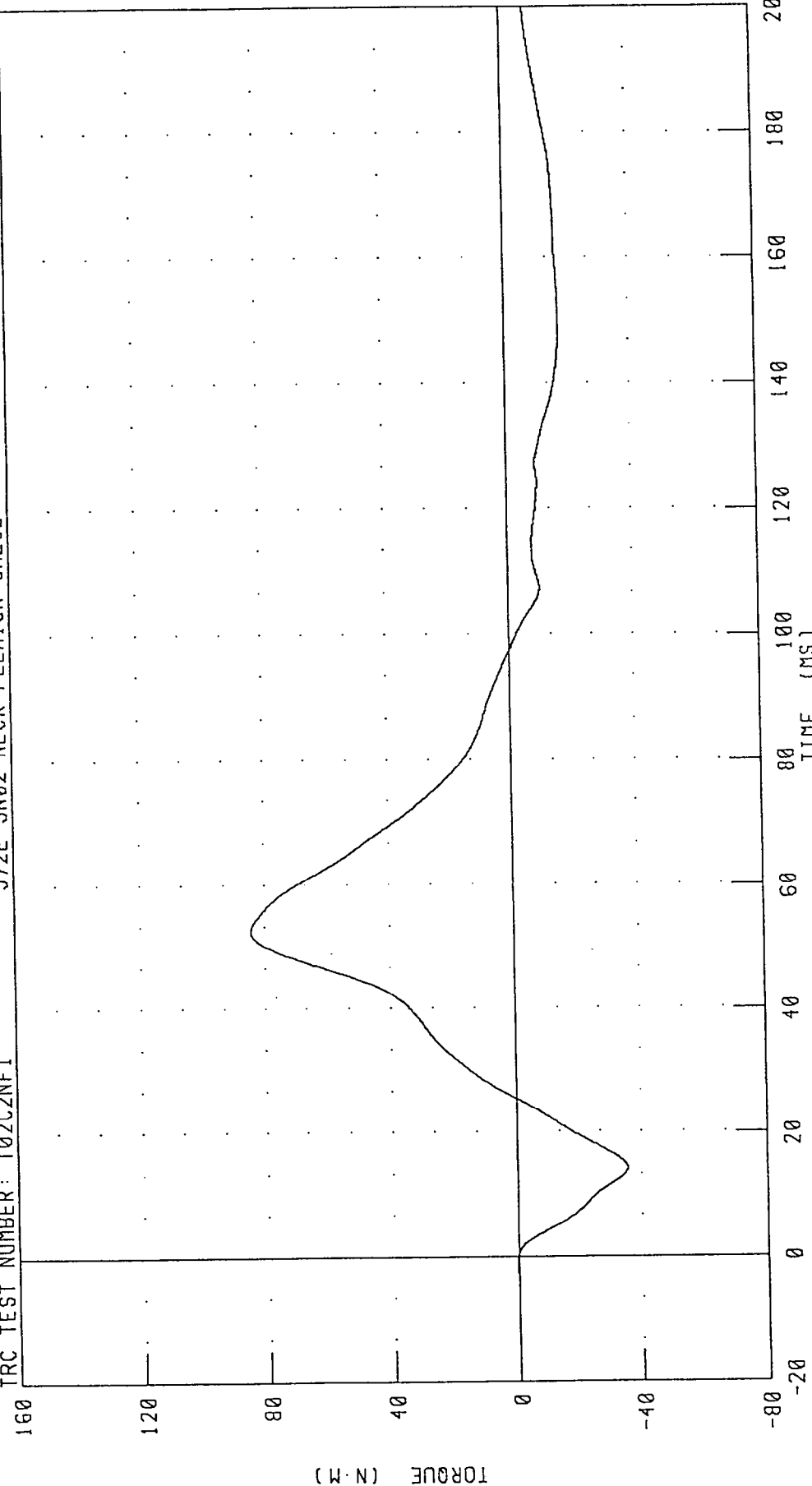
PART 572-E HYBRID III NECK FLEXION CALIBRATION

NECK MOMENT Y AXIS

RUN NUMBER: 121593.0844;5

TRC TEST NUMBER: T02C2NF1

572E SN02 NECK FLEXION CAL02



CHANNEL: NEKYM FILTER: CH. CLASS 60

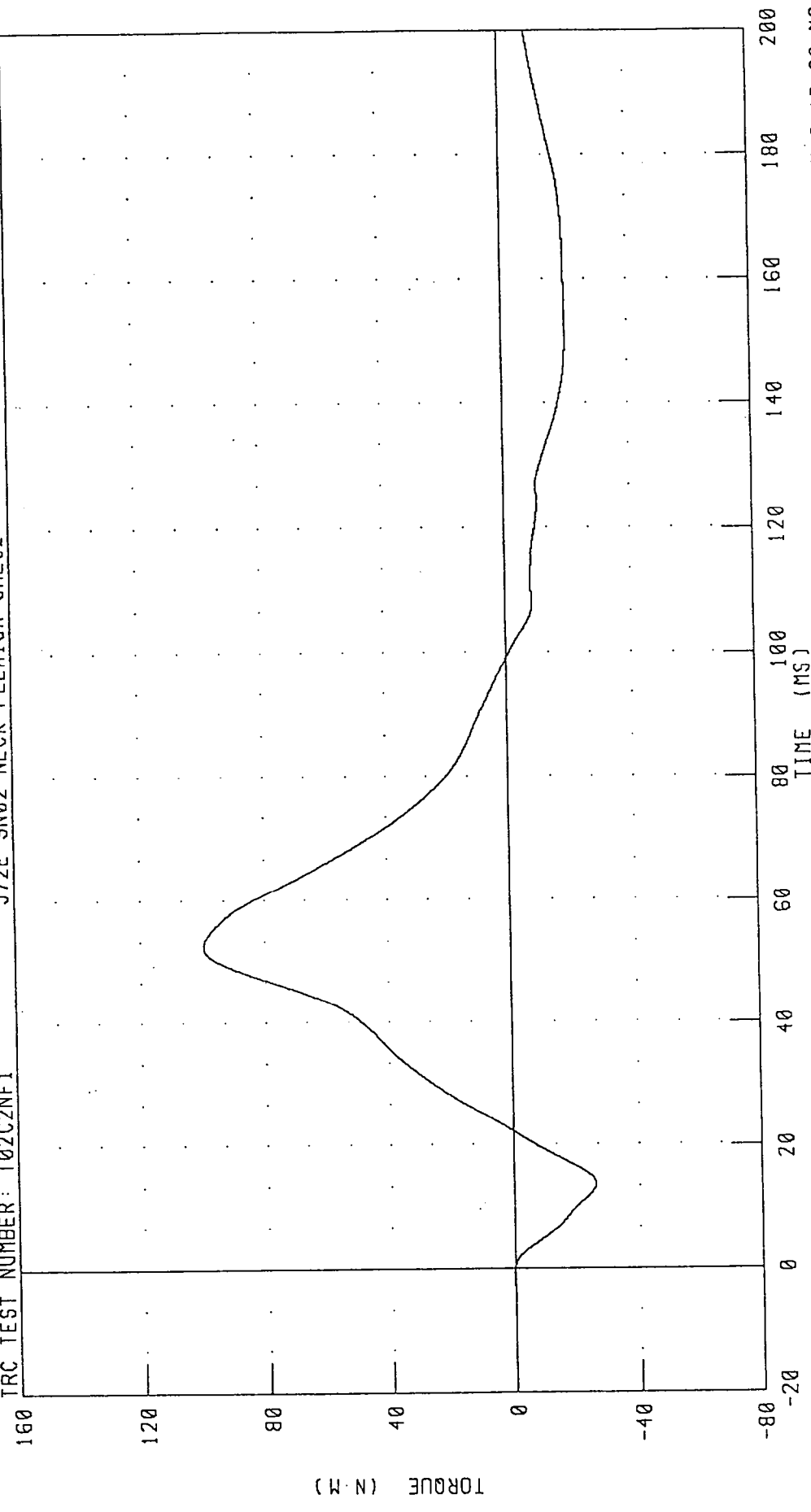
PART 572-E HYBRID III NECK FLEXION CALIBRATION

TOTAL MOMENT ABOUT OCCIPITAL CONDYLE

572E SN02 NECK FLEXION CAL02

RUN NUMBER: 121593.0844;5

TRC TEST NUMBER: T02C2NF1



PEAK DATA: 99.78 N·M @ 52.48 MS; -26.03 N·M @ 13.68 MS

CHANNEL: NEKOM FILTER: CH. CLASS 60

TRANSPORTATION RESEARCH CENTER INC.

NECK EXTENSION TEST

HYBRID III

15-DEC-93

6 AXIS NECK TRANSDUCER

TRC INC.

TEST NO: T02C2NE1

572E SN02 NECK EXT. CAL02

TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE		20.6-22.2 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY		10 - 70 %	54.0 %
IMPACT VELOCITY		5.95 - 6.19 M/S	6.02 M/S
PENDULUM DECELERATION	10 MS	17.20 - 21.20 G	18.57 G
	20 MS	14.00 - 19.00 G	16.81 G
	30 MS	11.00 - 16.00 G	12.95 G
MAX PENDULUM G		22 G MAX	19.55 G
MAX PENDULUM G ABOVE 30 MS		22 G MAX	12.91 G
DECELERATION-TIME CURVE DECAY TIME TO 5 G		38 - 46 MS	40.80 MS
D PLANE	MAX	81 - 106 DEG.	90.95 DEG.
ROTATION	TIME	72 - 82 MS	73.04 MS
MOMENT ABOUT OCCIPITAL CONDYLE	MIN	-80.0/-52.9 NM	-69.31 NM
	TIME	65 - 79 MS	68.64 MS
ROTATION ANGLE-TIME CURVE DECAY TIME TO ZERO		147 - 174 MS	149.28 MS
NEGATIVE MOMENT-TIME CURVE DECAY TIME TO ZERO		120 - 148 MS	134.48 MS

TEST MEETS SPECIFICATIONS

TECHNICIAN

Steve Font

RUN NUMBER: 121593.0854;1

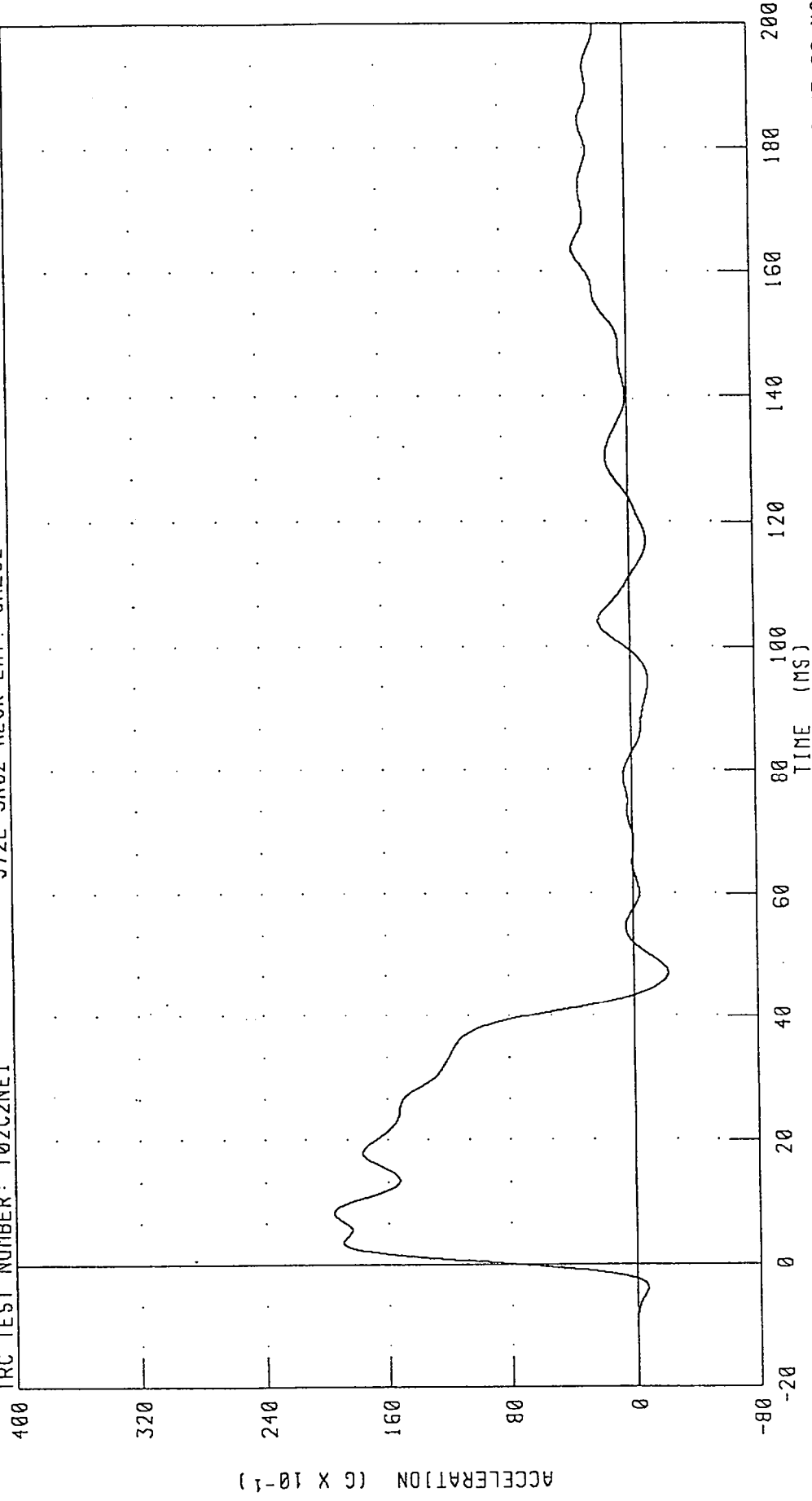
PART 572-E HYBRID III NECK EXTENSION CALIBRATION

PENDULUM DECELERATION

572E SN02 NECK EXT. CAL02

RUN NUMBER: 121593.0857,1

TRC TEST NUMBER: T02C2NE1



PEAK DATA: 19.56 G @ 8.40 MS, -2.19 G @ 47.20 MS

CHANNEL: PENXG FILTER: CH. CLASS 60

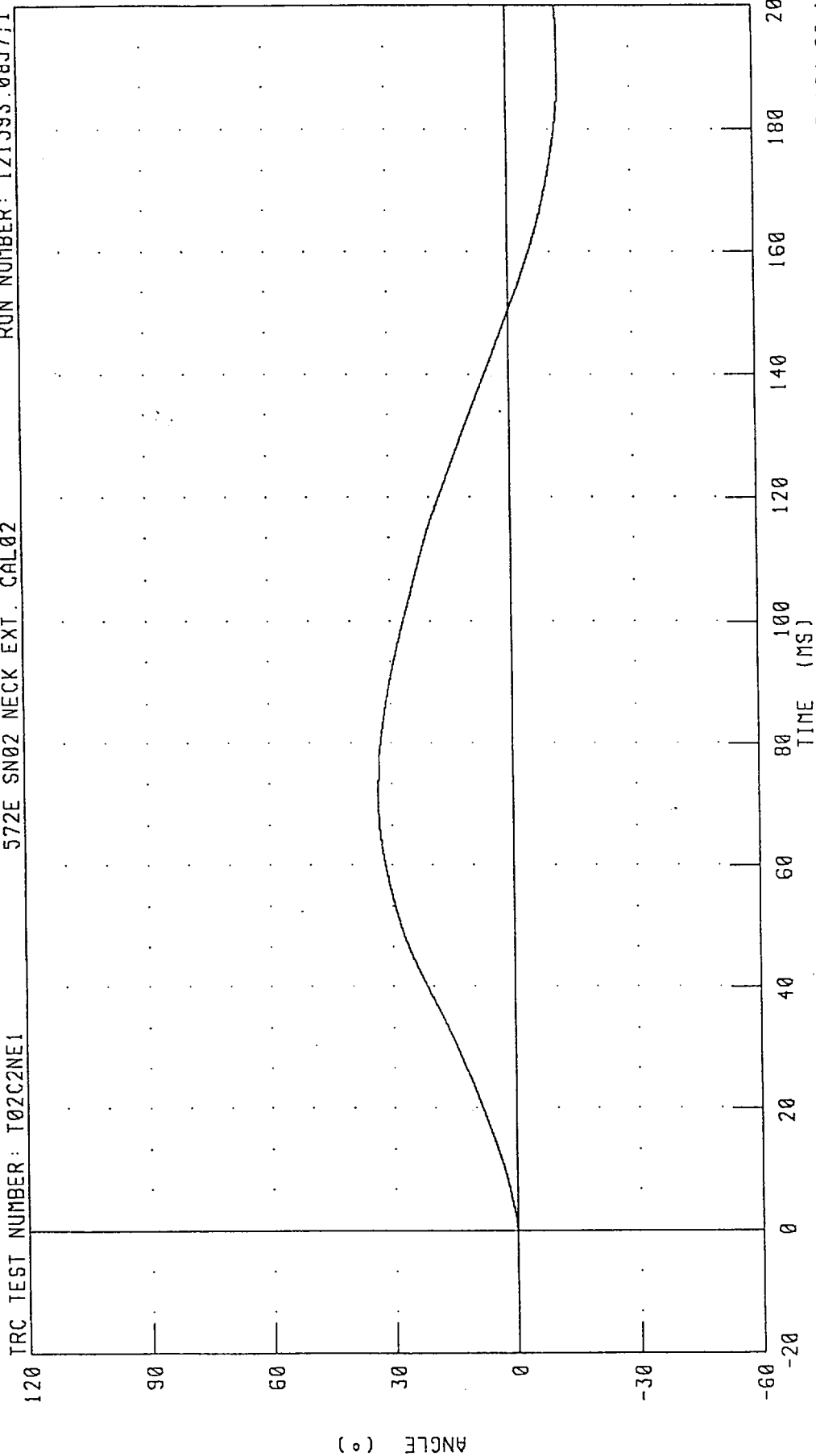
PART 572-E HYBRID III NECK EXTENSION CALIBRATION

ROTATION ABOUT BASE OF NECK

TRC TEST NUMBER: T02C2NE1

572E SN02 NECK EXT. CAL02

RUN NUMBER: 121593.0857;1



PEAK DATA: 33.29 ° @ 71.12 MS; -12.45 ° @ 194.08 MS

FILTER: CH. CLASS 60

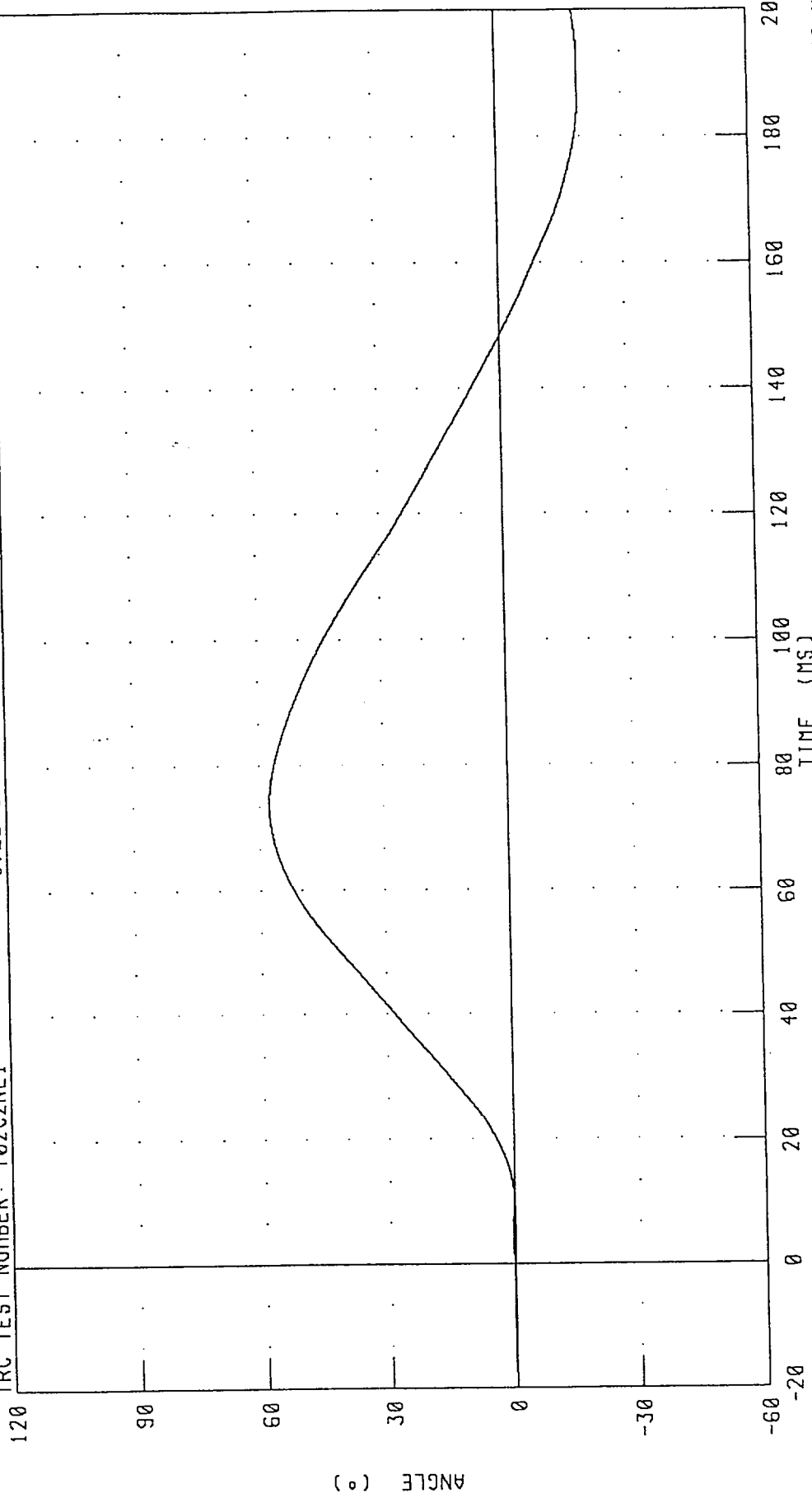
CHANNEL: BETA

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

TRC TEST NUMBER: T02C2NE1

572E SN02 NECK EXT. CAL02

RUN NUMBER: 121593.0857;1



CHANNEL: THETA FILTER: CH. CLASS 60

PEAK DATA: 57.74 ° @ 73.60 MS; -19.53 ° @ 186.40 MS

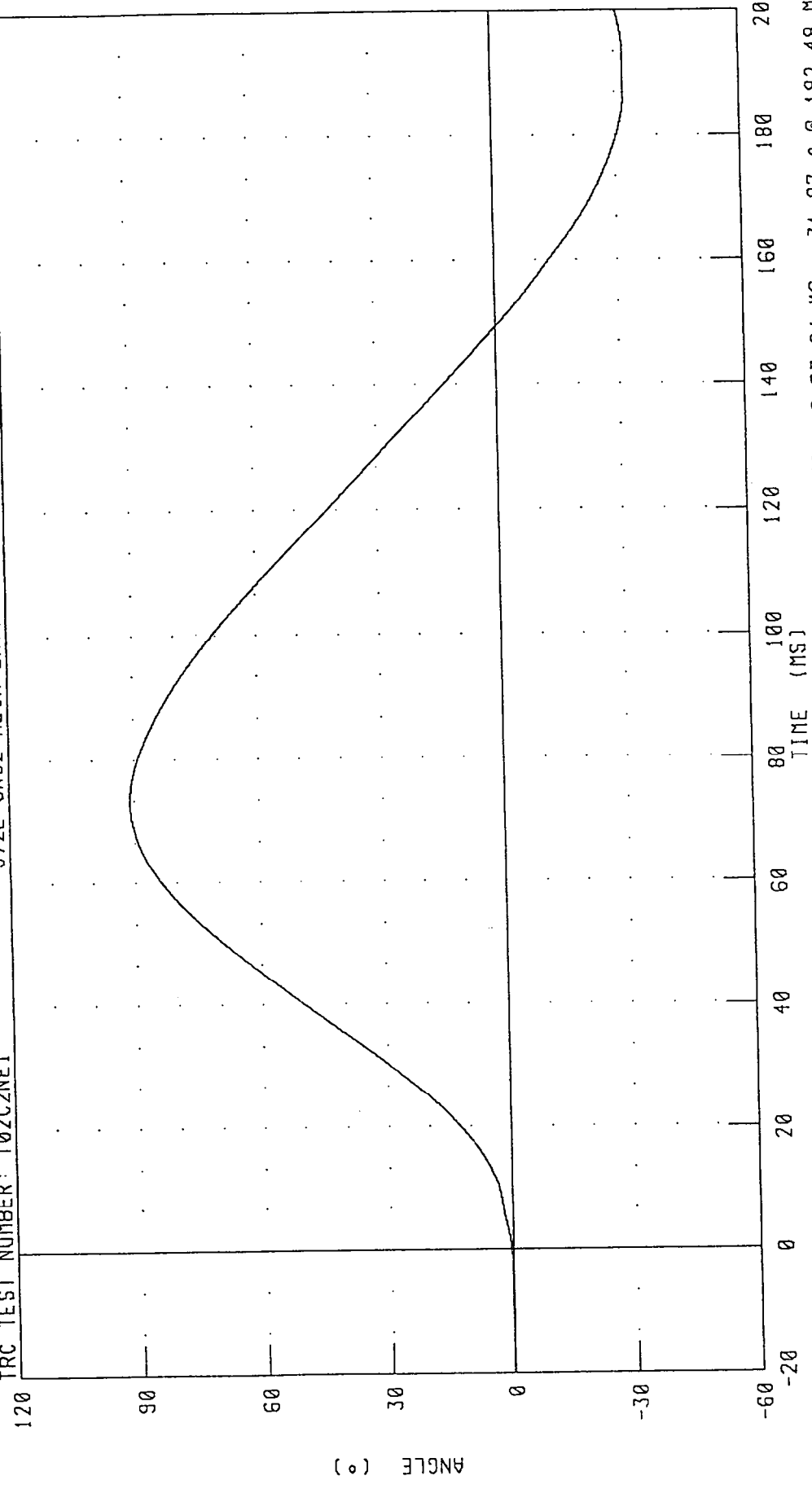
PART 572-E HYBRID III NECK EXTENSION CALIBRATION

TOTAL ROTATION

TRC TEST NUMBER: T02C2NE1

572E SN02 NECK EXT. CAL02

RUN NUMBER: 121593.0857;1



CHANNEL: TOTAL FILTER: CH. CLASS 60

PEAK DATA: 90.96 ° @ 73.04 MS; -31.97 ° @ 192.48 MS

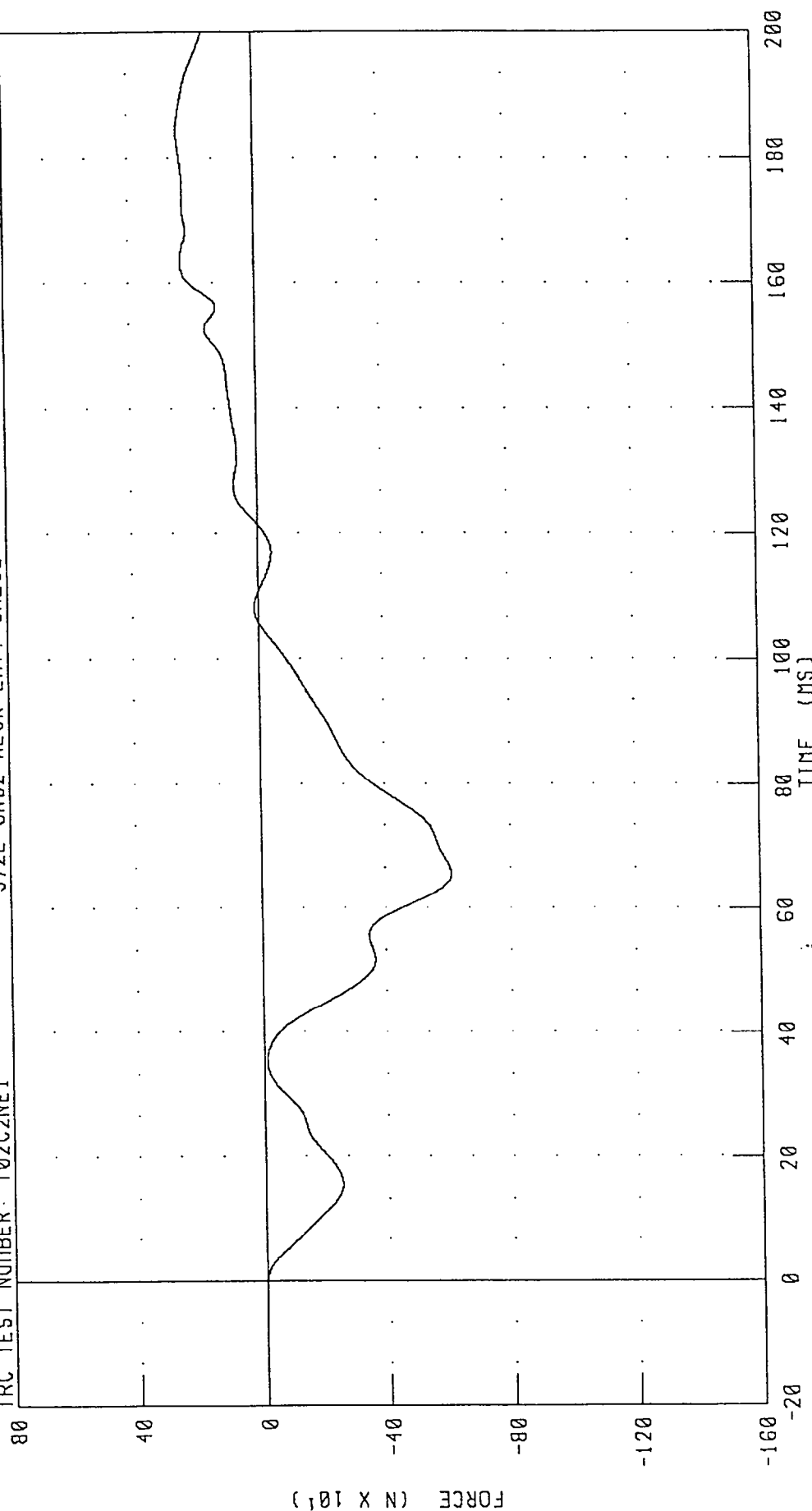
PART 572-E HYBRID III NECK EXTENSION CALIBRATION

NECK FORCE X AXIS

TRC TEST NUMBER: T02C2NE1

572E SN02 NECK EXT. CAL02

RUN NUMBER: 121593.0857;1



PEAK DATA: 242.69 N @ 184.00 MS; -610.39 N @ 65.68 MS

CHANNEL: NEKXF FILTER: CH. CLASS 60

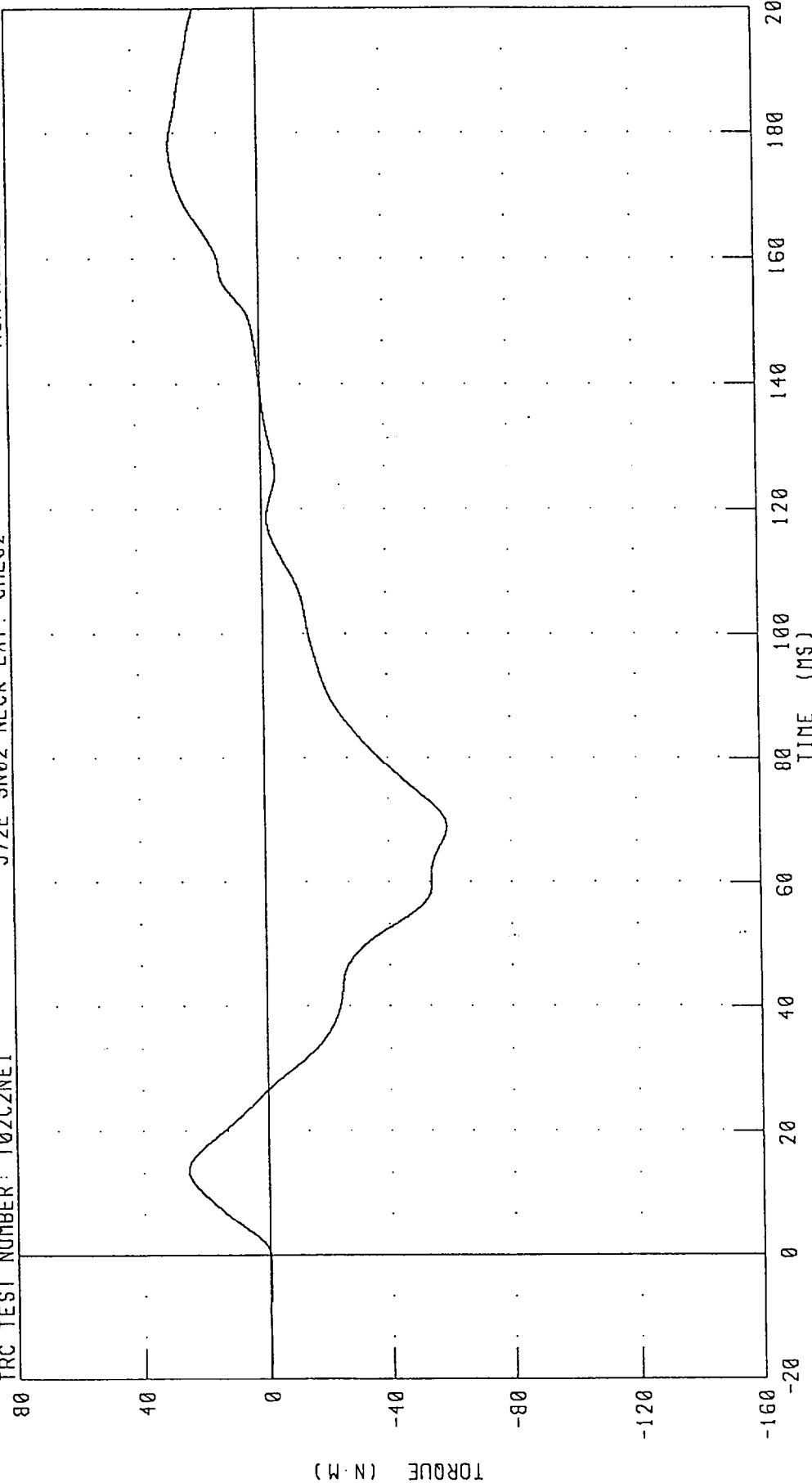
PART 572-E HYBRID III NECK EXTENSION CALIBRATION

NECK MOMENT Y AXIS

TRC TEST NUMBER: T02C2NE1

572E SN02 NECK EXT. CAL02

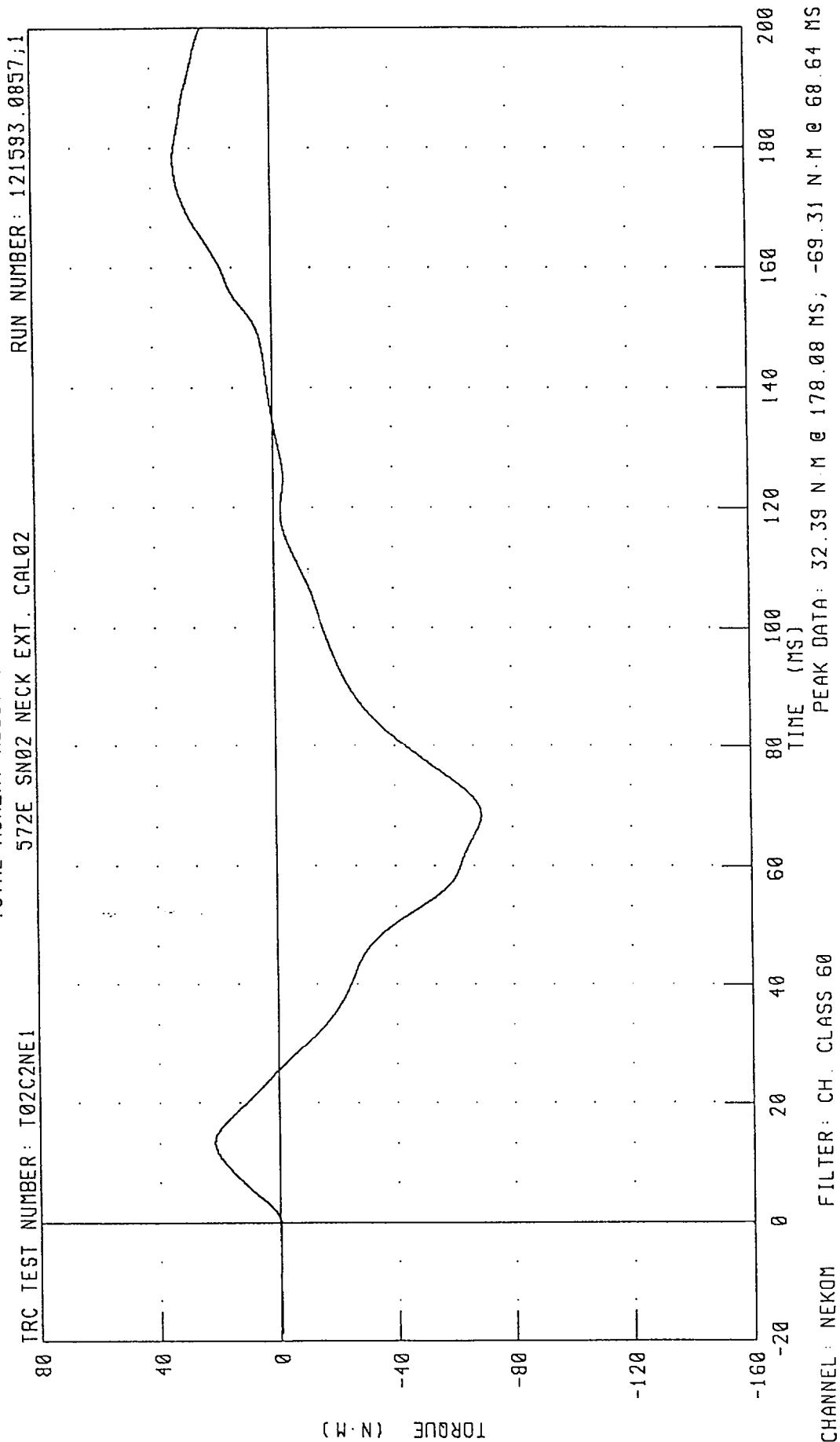
RUN NUMBER: 121593.0857;1



PEAK DATA: 28.32 N·M @ 177.84 MS; -58.95 N·M @ 68.96 MS

CHANNEL: NEKYM FILTER: CH. CLASS 60

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



TRANSPORTATION RESEARCH CENTER INC.

RIGHT KNEE IMPACT TEST

HYBRID III

23-DEC-93

TRC INC.

TEST NO: T02C2RK1

572E SNT02 RIGHT KNEE CAL 02

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	52.0 %
PROBE VELOCITY	2.07 - 2.13 M/S	2.11 M/S
PEAK KNEE IMPACT FORCE 5.0 KG PENDULUM	4714 - 5783 N	5258.1 N

TEST MEETS SPECIFICATIONS

TECHNICIAN

V.F. Watter

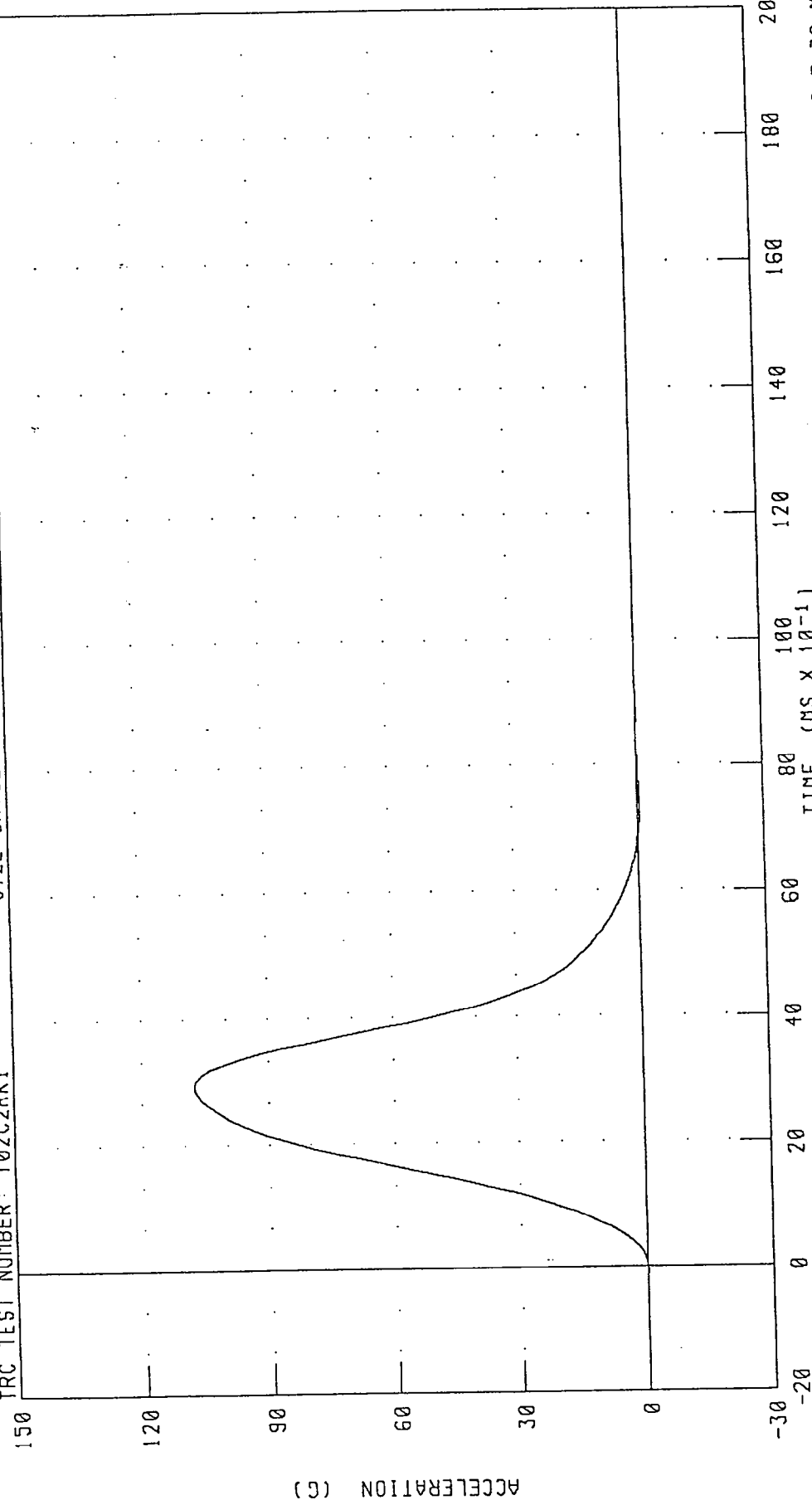
RUN NUMBER: 011494.0926;2

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

RUN NUMBER: 011494.0927.2

TRC TEST NUMBER: T02C2RK1

572E SNT02 RIGHT KNEE CAL 02



CHANNEL: PENXG FILTER: CH. CLASS 600

PEAK DATA: 107.47 G @ 2.96 MS; -0.53 G @ 7.36 MS

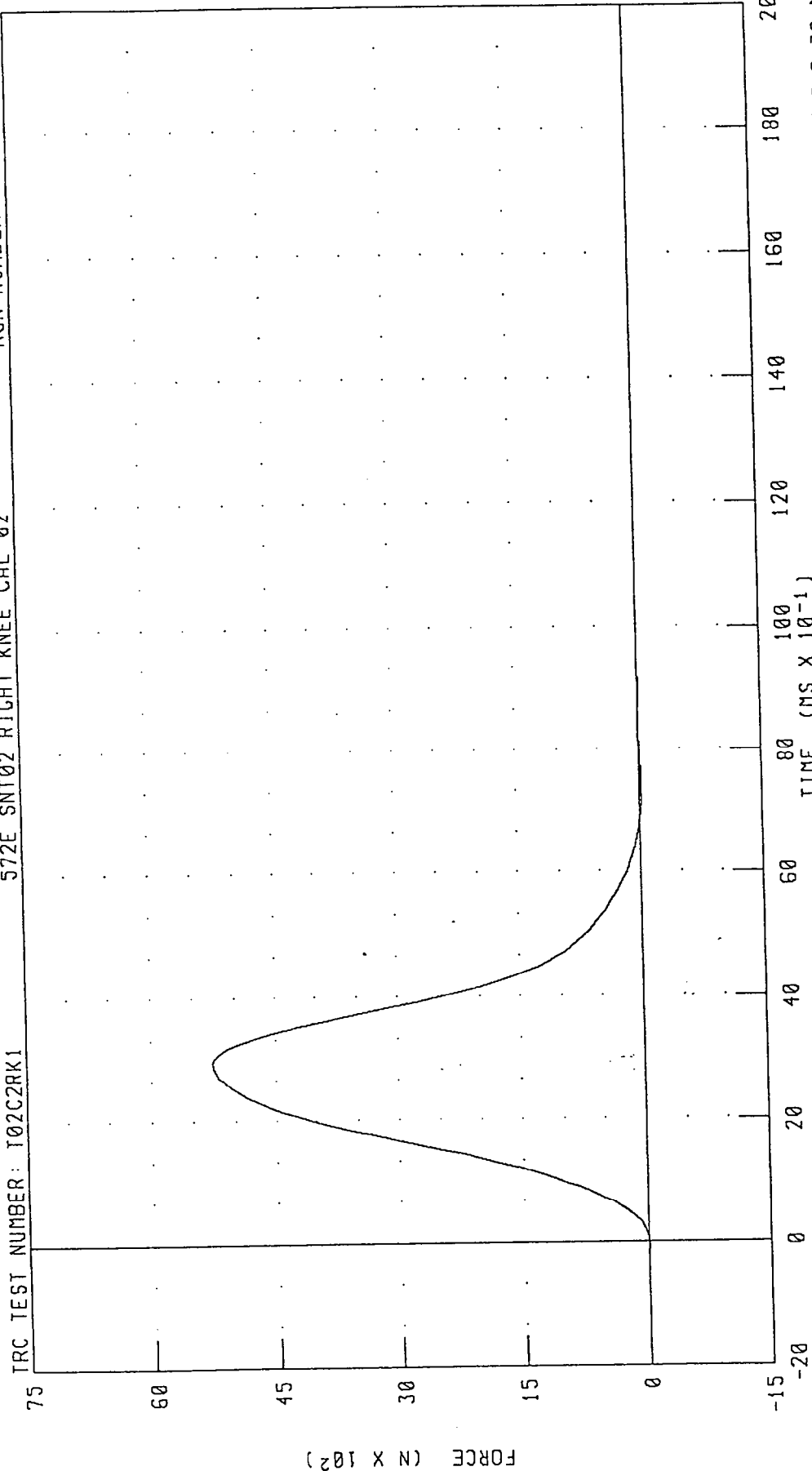
PART 572-E HYBRID I11 RIGHT KNEE CALIBRATION

PENDULUM FORCE (5 KG PEND.)

572E SNT02 RIGHT KNEE CAL 02

RUN NUMBER: 011494 0927;2

TRC TEST NUMBER: T02C2RK1



PEAK DATA: 5258.17 N @ 2.96 MS; -25.97 N @ 7.36 MS

CHANNEL: PENXF FILTER: CH. CLASS 600

TRANSPORTATION RESEARCH CENTER INC.

LEFT KNEE IMPACT TEST

HYBRID III

23-DEC-93

TRC INC.

TEST NO: T02C2LK1

572E SNT02 LEFT KNEE CAL 2

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	52.0 %
PROBE VELOCITY	2.07 - 2.13 M/S	2.11 M/S
PEAK KNEE IMPACT FORCE 5.0 KG PENDULUM	4714 - 5783 N	5317.7 N

TEST MEETS SPECIFICATIONS

TECHNICIAN

V. F. Watters

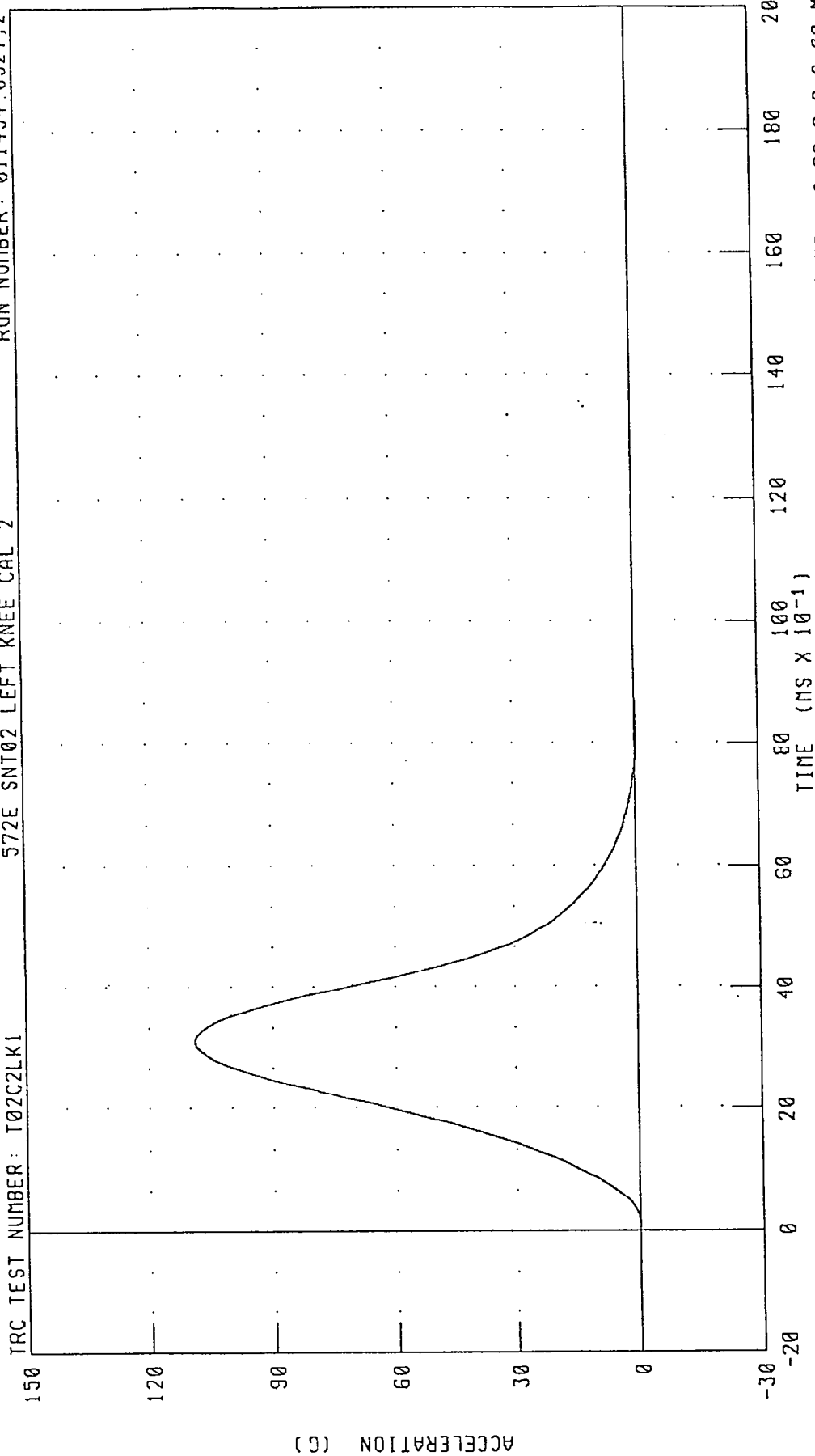
RUN NUMBER: 011494.0925;2

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

TRC TEST NUMBER: T02C2LK1

572E SNT02 LEFT KNEE CAL 2

RUN NUMBER: 011494.0927;2



CHANNEL: PENXG FILTER: CH. CLASS 600

PEAK DATA: 108.69 G @ 3.12 MS; -0.28 G @ 8.00 MS

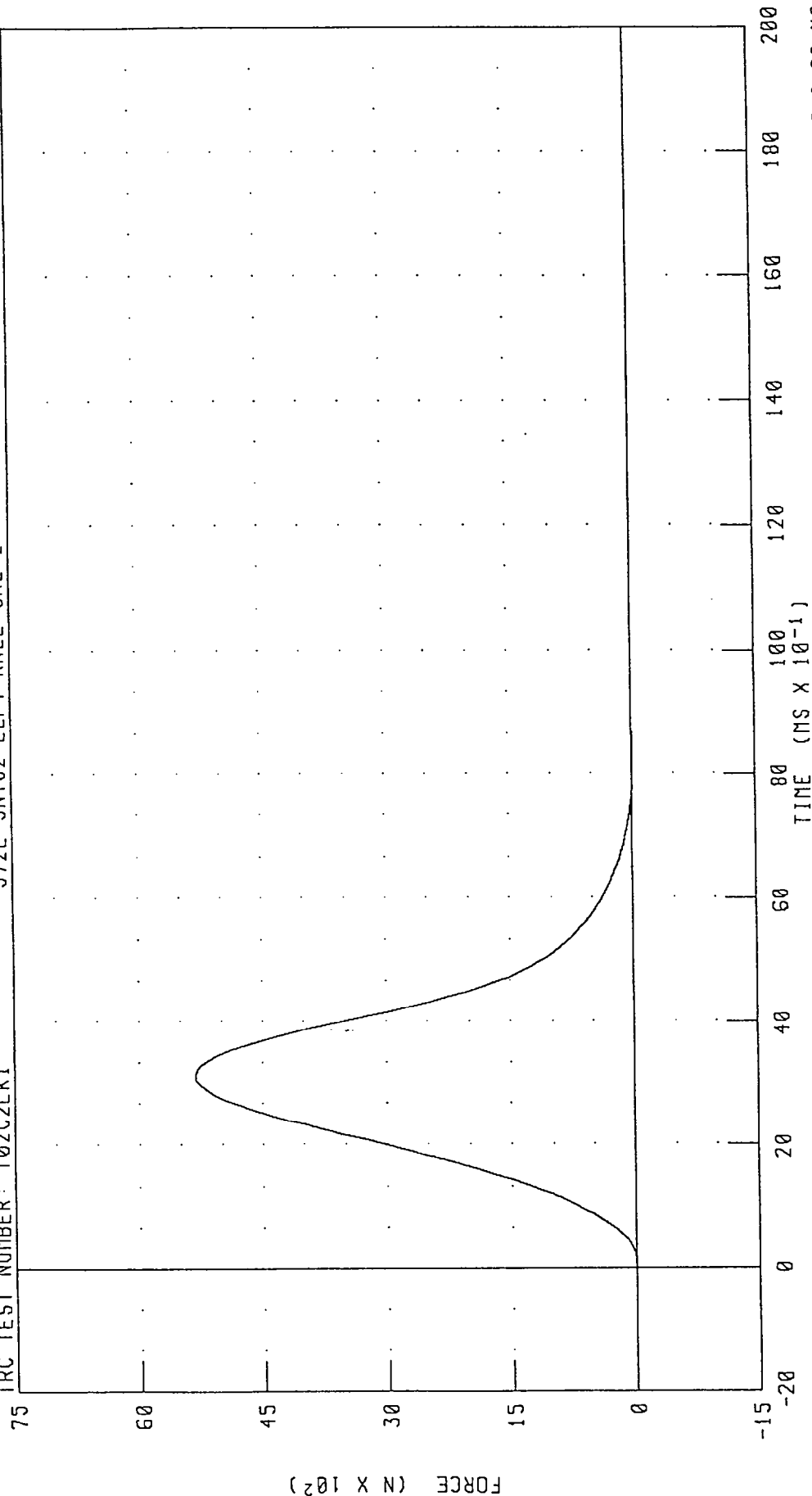
PART 572-E HYBRID III LEFT KNEE CALIBRATION

PENDULUM FORCE (5 KG PEND.)

572E SNT02 LEFT KNEE CAL 2

IRC TEST NUMBER: T02C2LK1

RUN NUMBER: 011494.0927;2



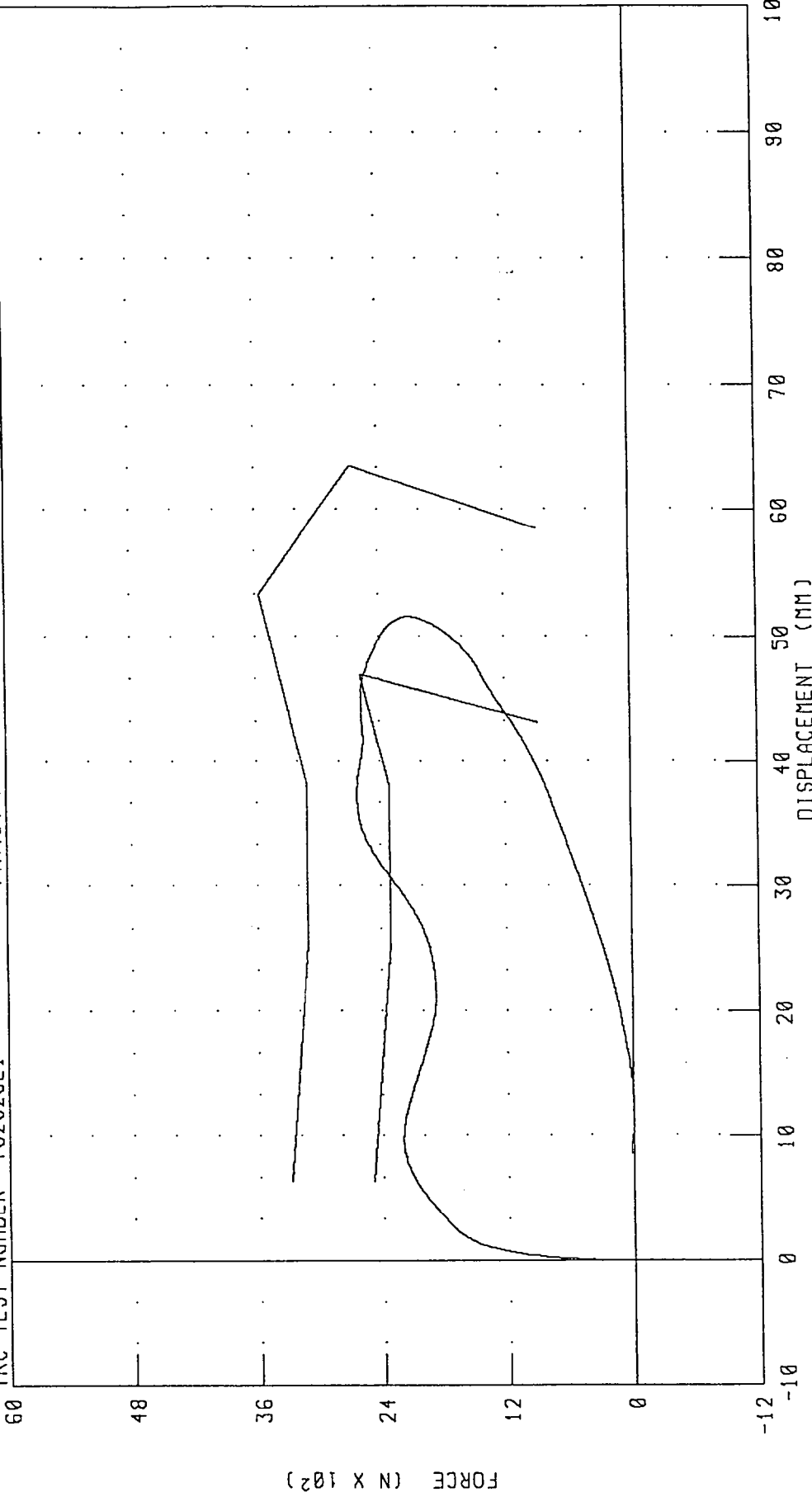
PEAK DATA: 5317.77 N @ 3.12 MS; -13.65 N @ 8.00 MS

FILTER: CH. CLASS 600

CHANNEL: PENXF

T.A.D. DUMMY MID STERNUM IMPACT TEST 4.3 N/SEC
POSITION I ALT. A/P-AXIS CHEST DEFLECTION VS PENDULUM FORCE

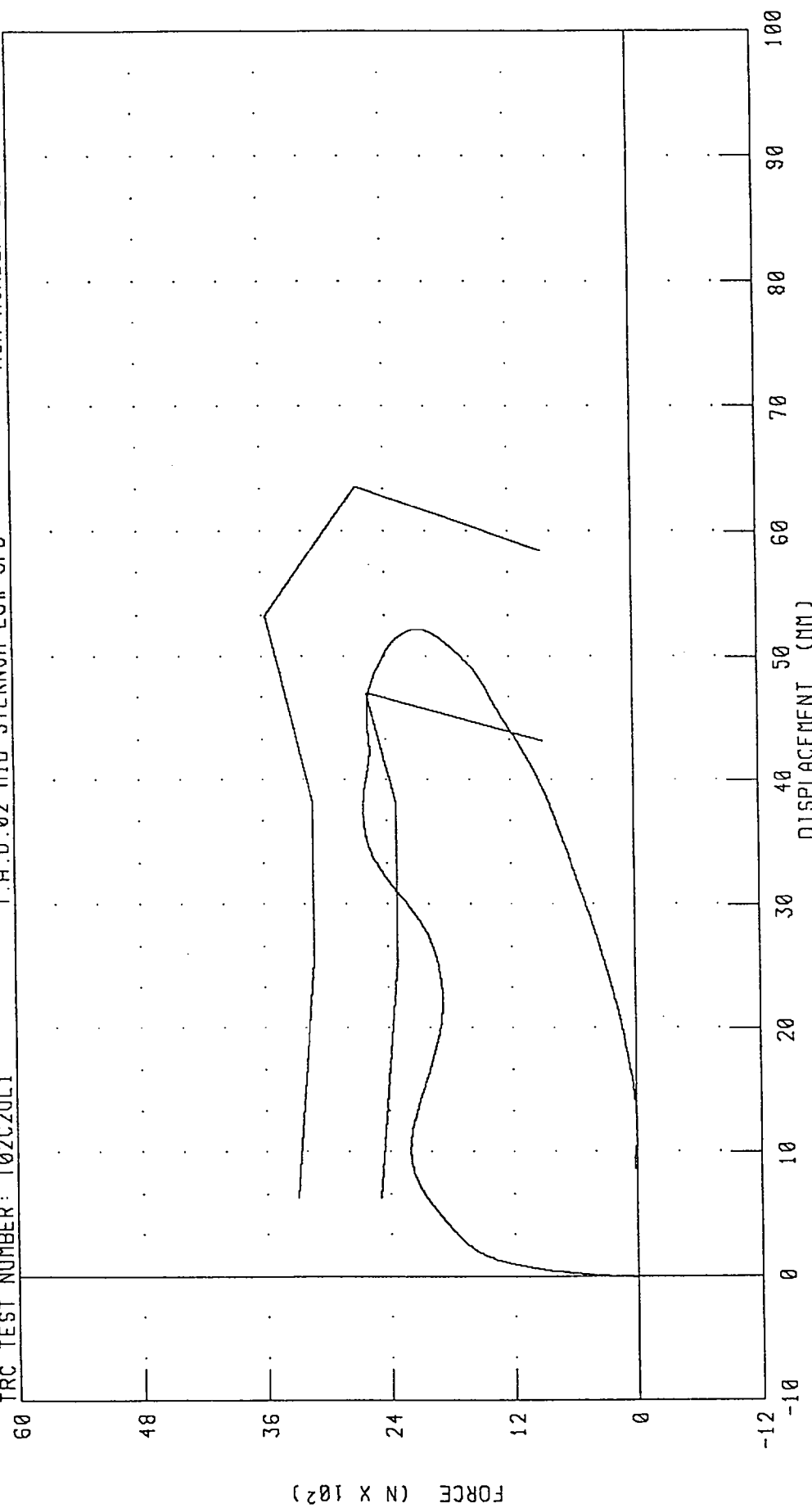
TRC TEST NUMBER: T02C2UL1 T.A.D.02 MID STERNUM LOW SPD RUN NUMBER: 121693.1505.2



CHANNEL: COMPI FILTER: CH. CLASS 180
FORCE CH. CLASS 180
PEAK DATA: 51.56 NM @ 30.88 MS; -0.01 NM @ 0.40 MS
2621.32 N @ 15.44 MS; -0.58 N @ 78.32 MS

T.A.D. DUMMY MID STERNUM IMPACT TEST 4.3 M/SEC
 POSITION 2 ALT. A/P-AXIS CHEST DEFLECTION VS PENDULUM FORCE

TRC TEST NUMBER: T02C2UL1 T.A.D.02 MID STERNUM LOW SPD RUN NUMBER: 121693.1505;2

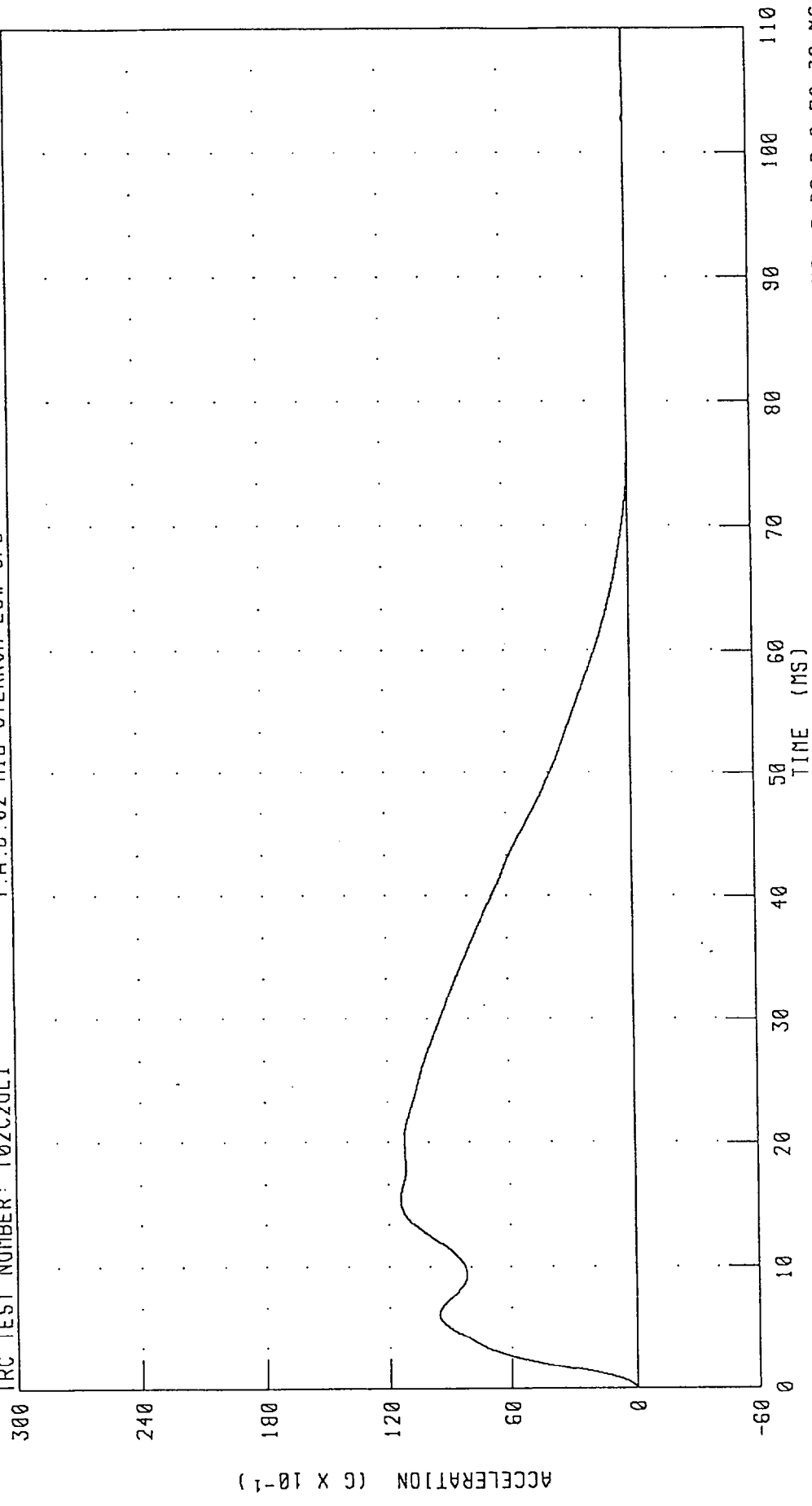


CHANNEL: COMP2 FORCE FILTER: CH. CLASS 180 CH. CLASS 180
 PEAK DATA: 52.21 MM @ 31.36 MS; -0.02 MM @ 0.24 MS
 2621.32 N @ 15.44 MS; -0.58 N @ 78.32 MS

T.A.D. DUMMY MID STERNUM IMPACT TEST 6.7 M/SEC

PENDULUM DECELERATION

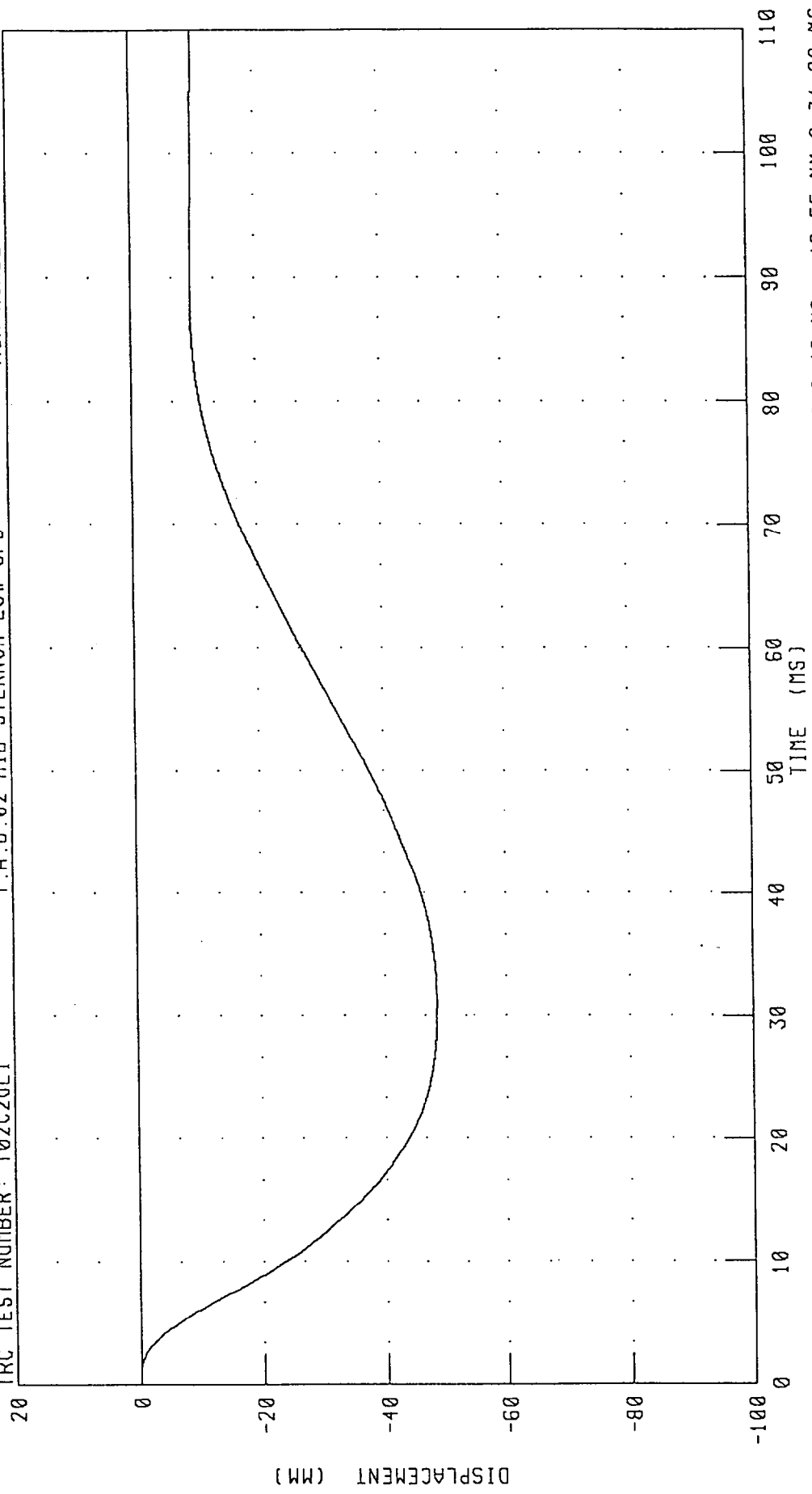
TRC TEST NUMBER: T02C2UL1 T.A.D. 02 MID STERNUM LOW SPD RUN NUMBER: 121693.1501,4



CHANNEL: PENXG FILTER: CH. CLASS 180 PEAK DATA: 11.41 G @ 15.44 MS; 0.00 G @ 78.32 MS

T.A.D. DUMMY MID STERNUM IMPACT TEST 6.7 M/SEC
POSITION 1 POSTERIOR/ANTERIOR CHEST POTENTIOMETER

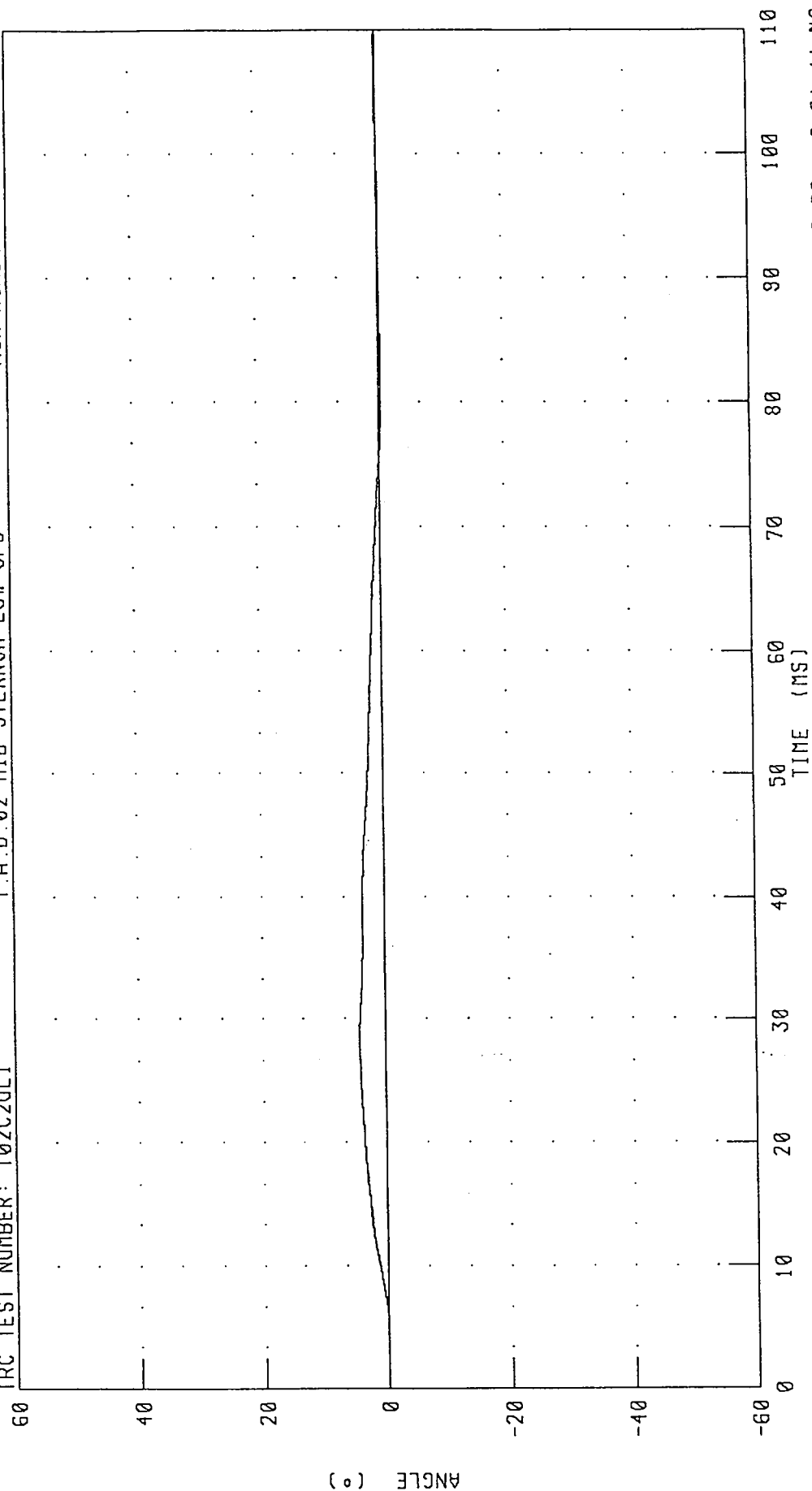
TRC TEST NUMBER: T02C2UL1 T.A.D.02 MID STERNUM LOW SPD RUN NUMBER: 121693.1501.4



CHANNEL: CST1PA FILTER: CH. CLASS 180 PEAK DATA: 0.01 MM @ 0.40 MS; -48.55 MM @ 31.28 MS

T.A.D. DUNNY MID STERNUM IMPACT TEST 6.7 M/SEC
POSITION 1 RIGHT/LEFT CHEST POTENTIOMETER

TRC TEST NUMBER: T02C2UL1 T.A.D.02 MID STERNUM LOW SPD RUN NUMBER: 121693.1501;4

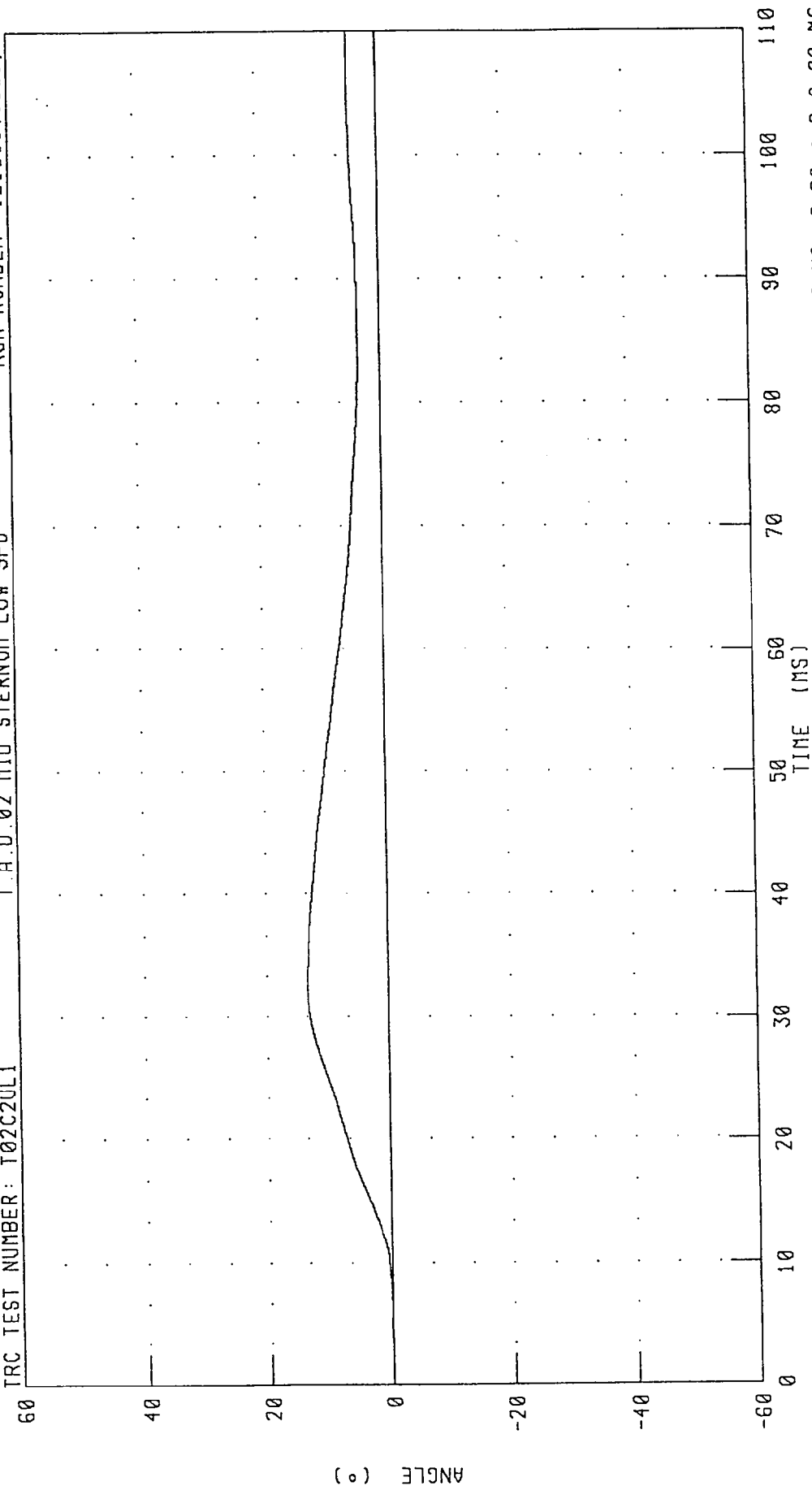


PEAK DATA: 4.25 ° @ 28.24 MS; -0.36 ° @ 81.44 MS

CHANNEL: CSTIRL FILTER: CH. CLASS 180

T.A.D. DUMMY MID STERNUM IMPACT TEST 6.7 M/SEC
POSITION 1 INFERIOR/SUPERIOR CHEST POTENTIOMETER

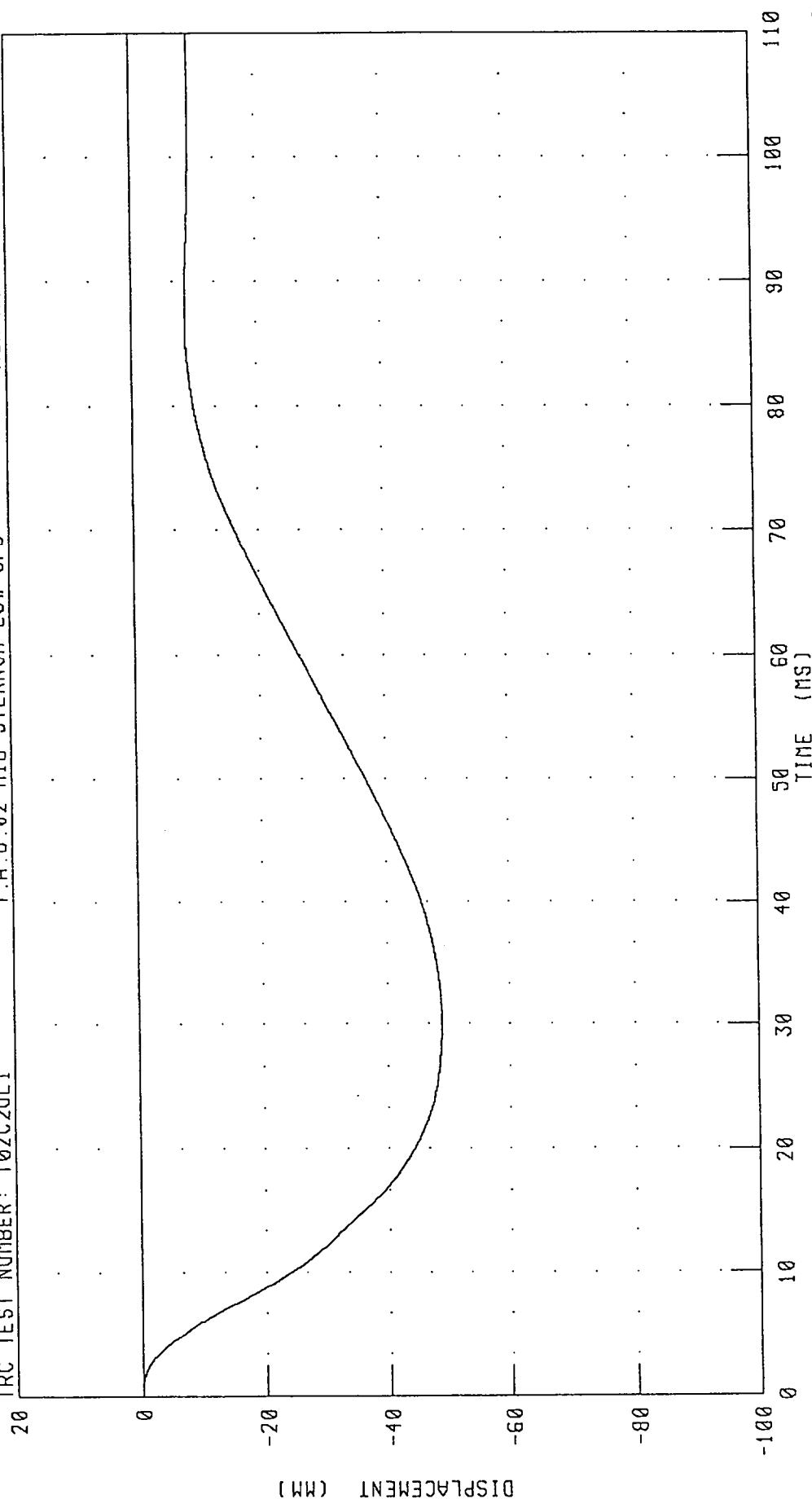
TRC TEST NUMBER: T02C2UL1 T.A.D.02 MID STERNUM LOW SPD RUN NUMBER: 121693.1501;4



CHANNEL: CSTIIS FILTER: CH. CLASS 180 PEAK DATA: 13.20 ° @ 32.16 MS; 0.00 ° @ 0.00 MS

T.A.D. DUMMY MID STERNUM IMPACT TEST 6.7 M/SEC
POSITION 2 POSTERIOR/ANTERIOR CHEST POTENTIOMETER

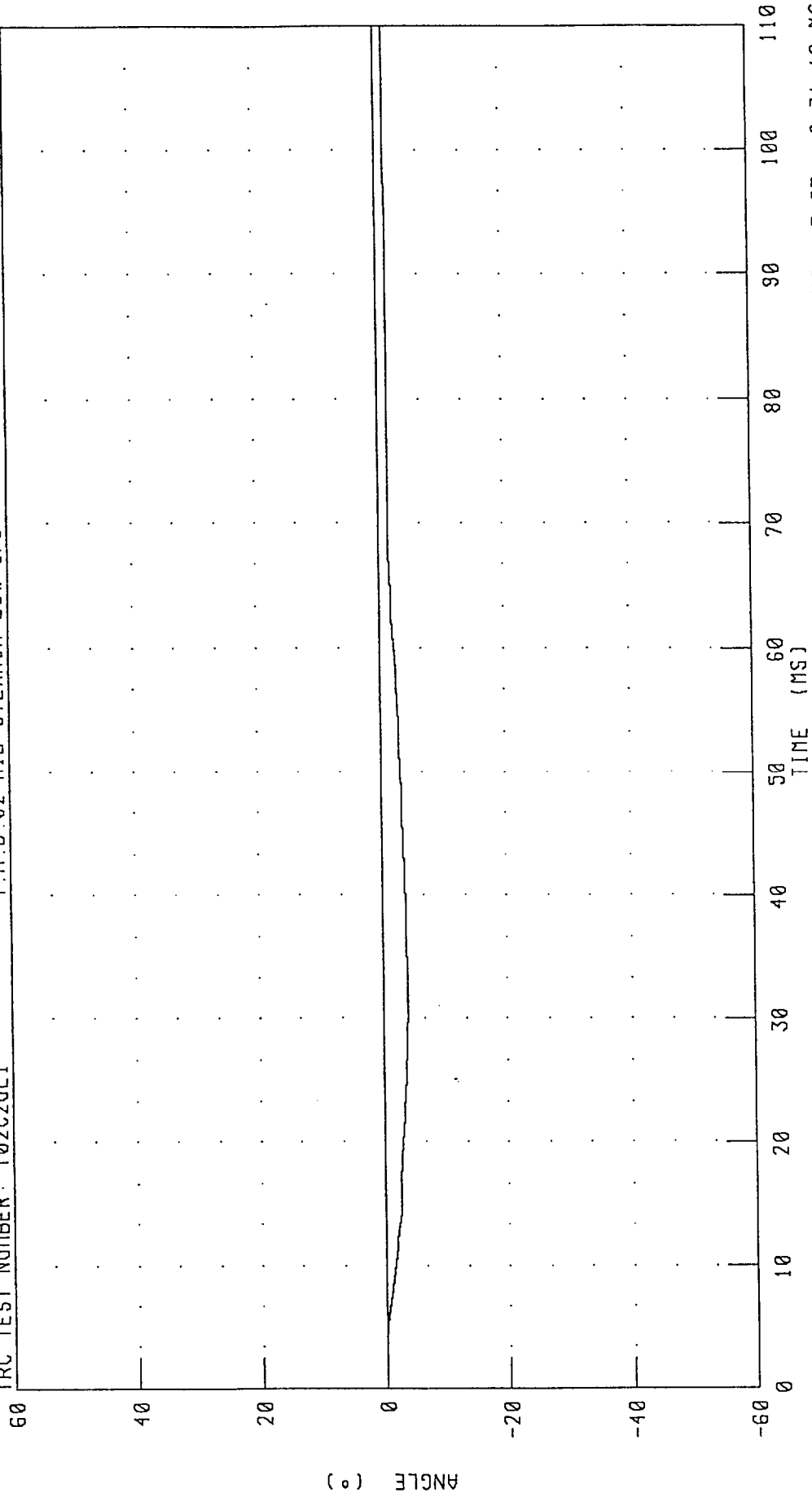
TRC TEST NUMBER: T02C2UL1 T.A.D.02 MID STERNUM LOW SPD RUN NUMBER: 121693.1501.4



CHANNEL: CST2PA FILTER: CH. CLASS 180 PEAK DATA: 0.02 MM @ 0.24 MS; -48.77 MM @ 30.16 MS

T.A.O. DUMMY MID STERNUM IMPACT TEST 6.7 M/SEC
POSITION 2 RIGHT/LEFT CHEST POTENTIOMETER

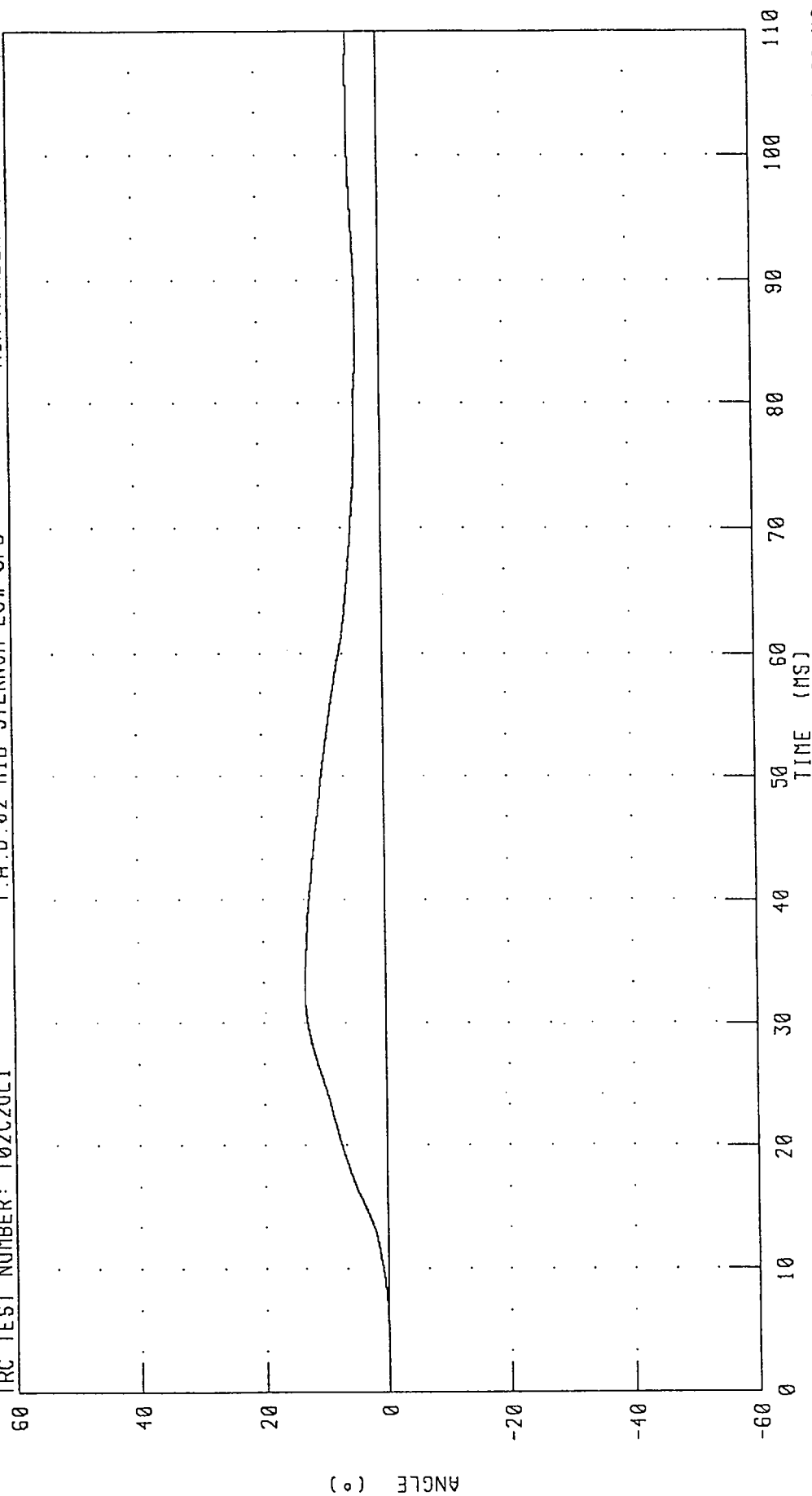
TRC TEST NUMBER: T02C2UL1 T.A.O. 02 MID STERNUM LOW SPD RUN NUMBER: 121693.1501;4



CHANNEL: CST2RL FILTER: CH. CLASS 180 PEAK DATA: 0.00 ° @ 0.00 MS; -3.87 ° @ 31.12 MS

T.A.D. DUMMY MID STERNUM IMPACT TEST 6.7 M/SEC
POSITION 2 INFERIOR/SUPERIOR CHEST POTENTIOMETER

TRC TEST NUMBER: T02C2UL1 T.A.D.02 MID STERNUM LOW SPD RUN NUMBER: 121693.1501;4



CHANNEL: CST2IS FILTER: CH. CLASS 180. PEAK DATA: 13.27 ° @ 32.72 MS; 0.00 ° @ 2.00 MS

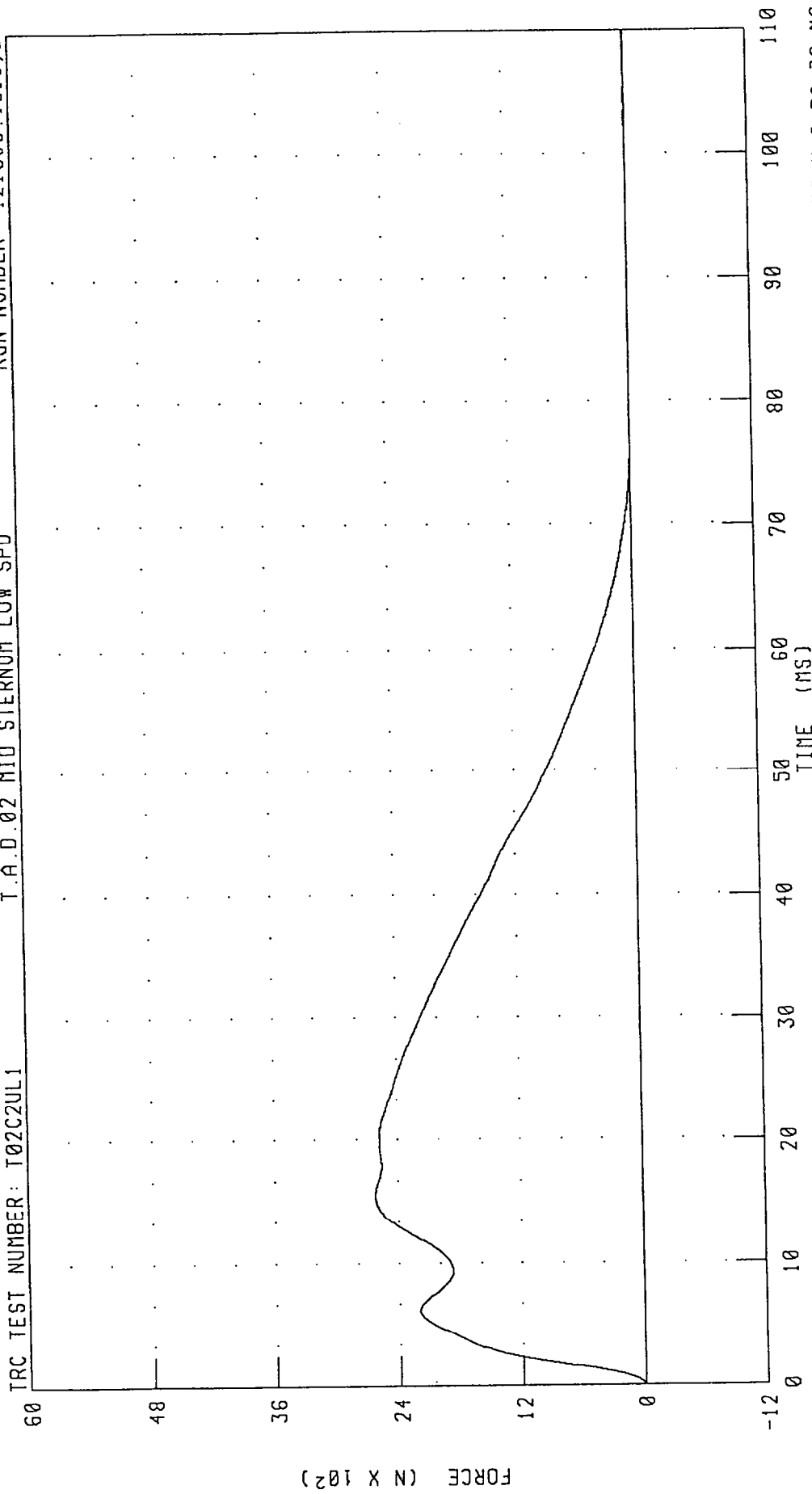
T.A.D. DUMMY MID STERNUM IMPACT TEST 4.3 M/SEC

PENDULUM FORCE

TRC TEST NUMBER: T02C2UL1

T.A.D.02 MID STERNUM LOW SPD

RUN NUMBER: 121693.1619;3



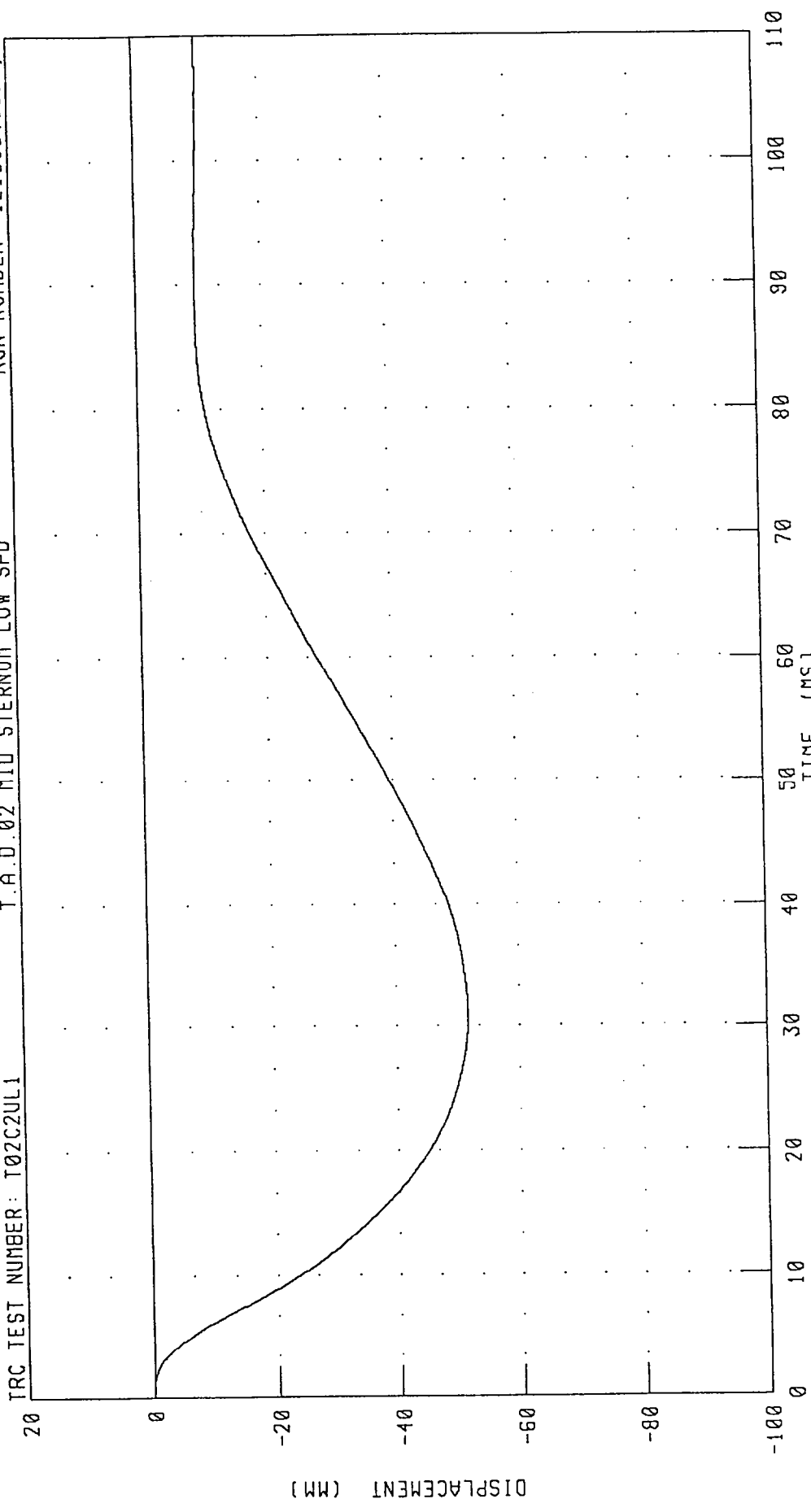
CHANNEL: FORCE FILTER: CH. CLASS 180 PEAK DATA: 2621.32 N @ 15.44 MS; -0.58 N @ 78.32 MS

T.A.D. DUMMY MID STERNUM IMPACT TEST 4.3 M/SEC

POSITION 1 X-AXIS CHEST DEFLECTION

T.A.D.02 MID STERNUM LOW SPD RUN NUMBER: 121693.1619;3

TRC TEST NUMBER: T02C2UL1



PEAK DATA: 0.01 MM @ 0.40 MS; -51.56 MM @ 30.88 MS

CHANNEL: DELXI FILTER: CH. CLASS 180

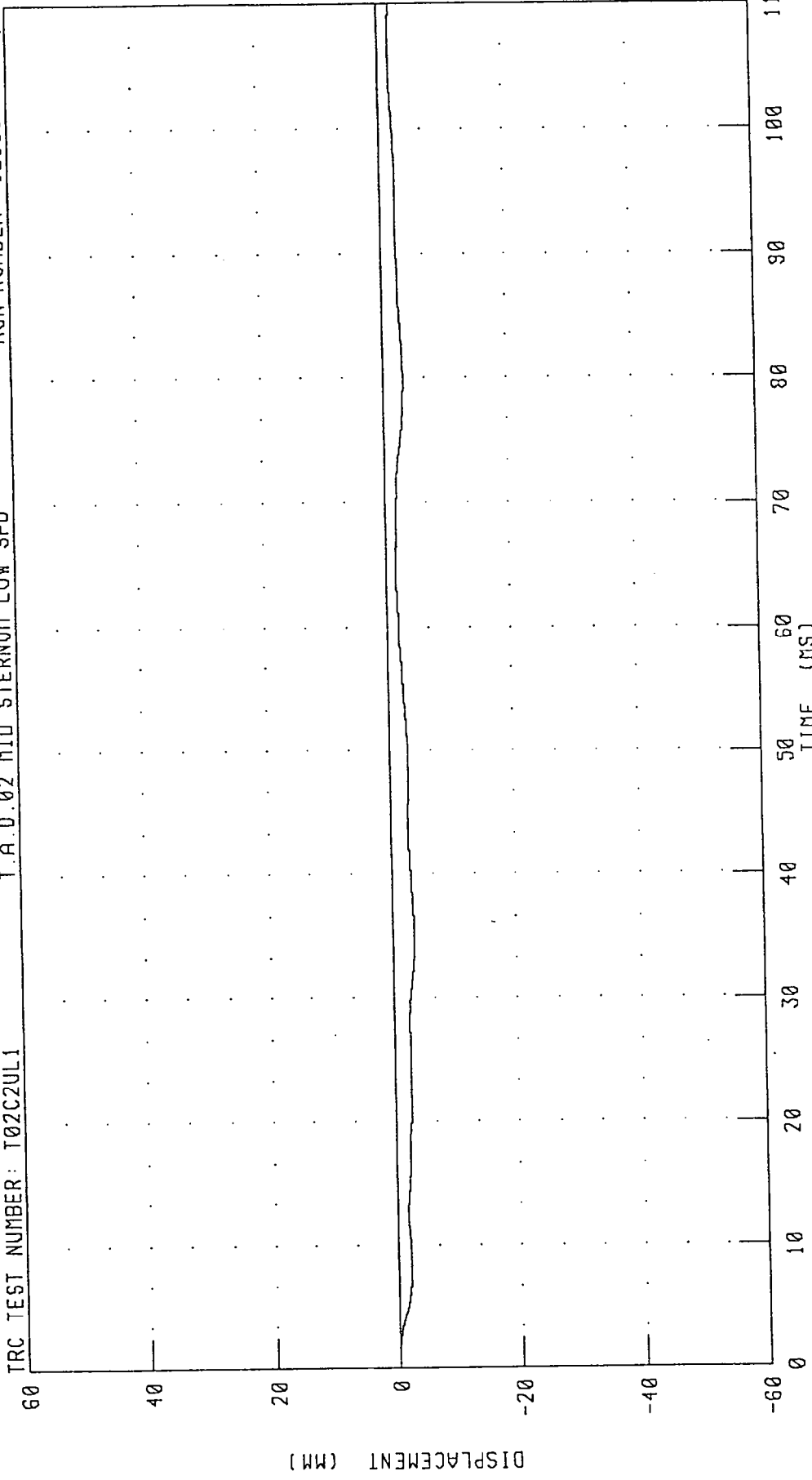
T.A.D. DUMMY MID STERNUM IMPACT TEST 4.3 M/SEC

POSITION 1 Y-AXIS CHEST DEFLECTION

RUN NUMBER: 121693.1619;3

TRC TEST NUMBER: T02C2UL1

T.A.D.02 MID STERNUM LOW SPD



PEAK DATA: 0.01 MM @ 0.00 MS; -3.39 MM @ 34.80 MS

CHANNEL: DELY1 FILTER: CH. CLASS 180

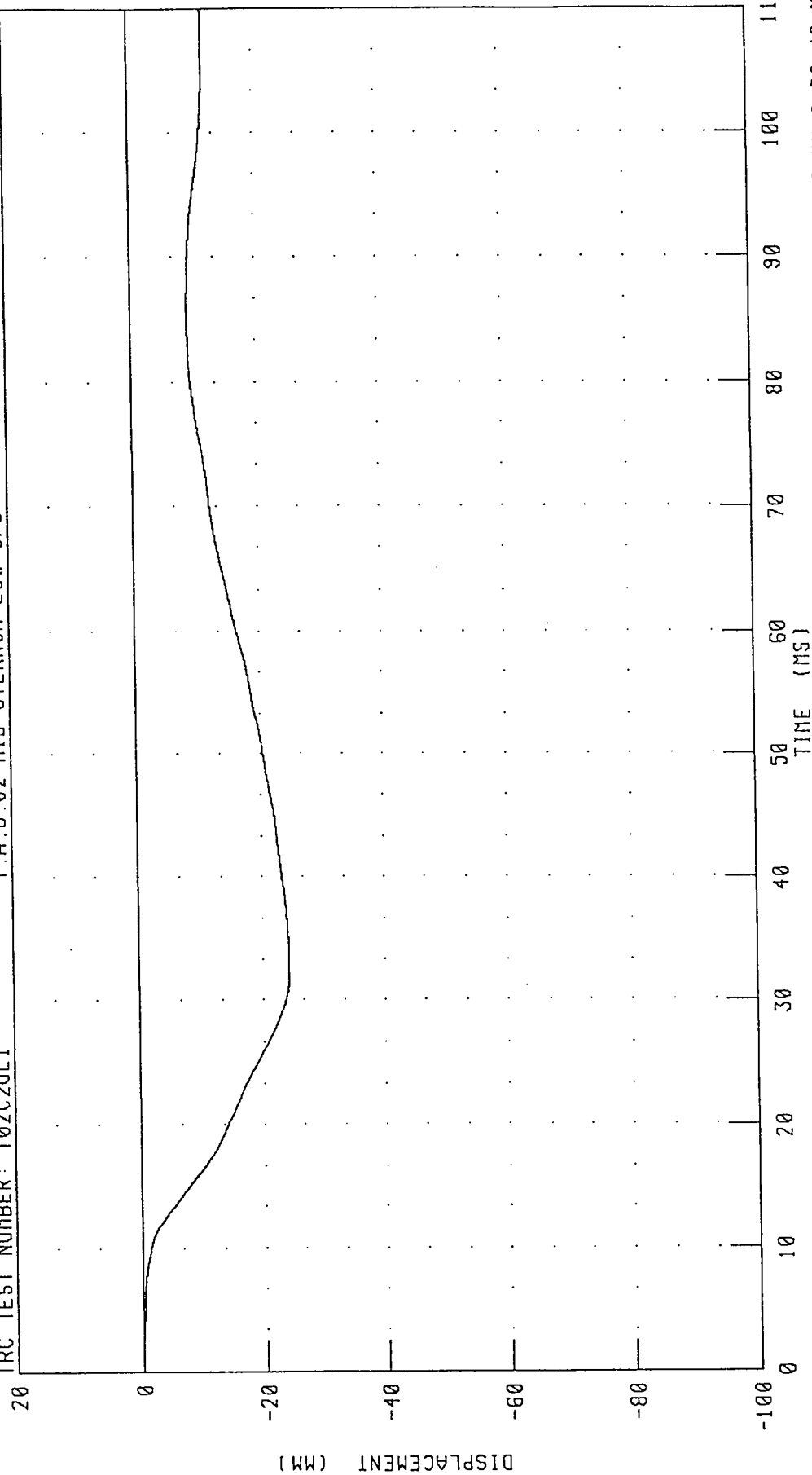
T.A.D. DUMMY MID STERNUM IMPACT TEST 4.3 M/SEC

POSITION 1 Z-AXIS CHEST DEFLECTION

RUN NUMBER: 121693.1619;3

TRC TEST NUMBER: T02C2UL1

T.A.D.02 MID STERNUM LOW SPD

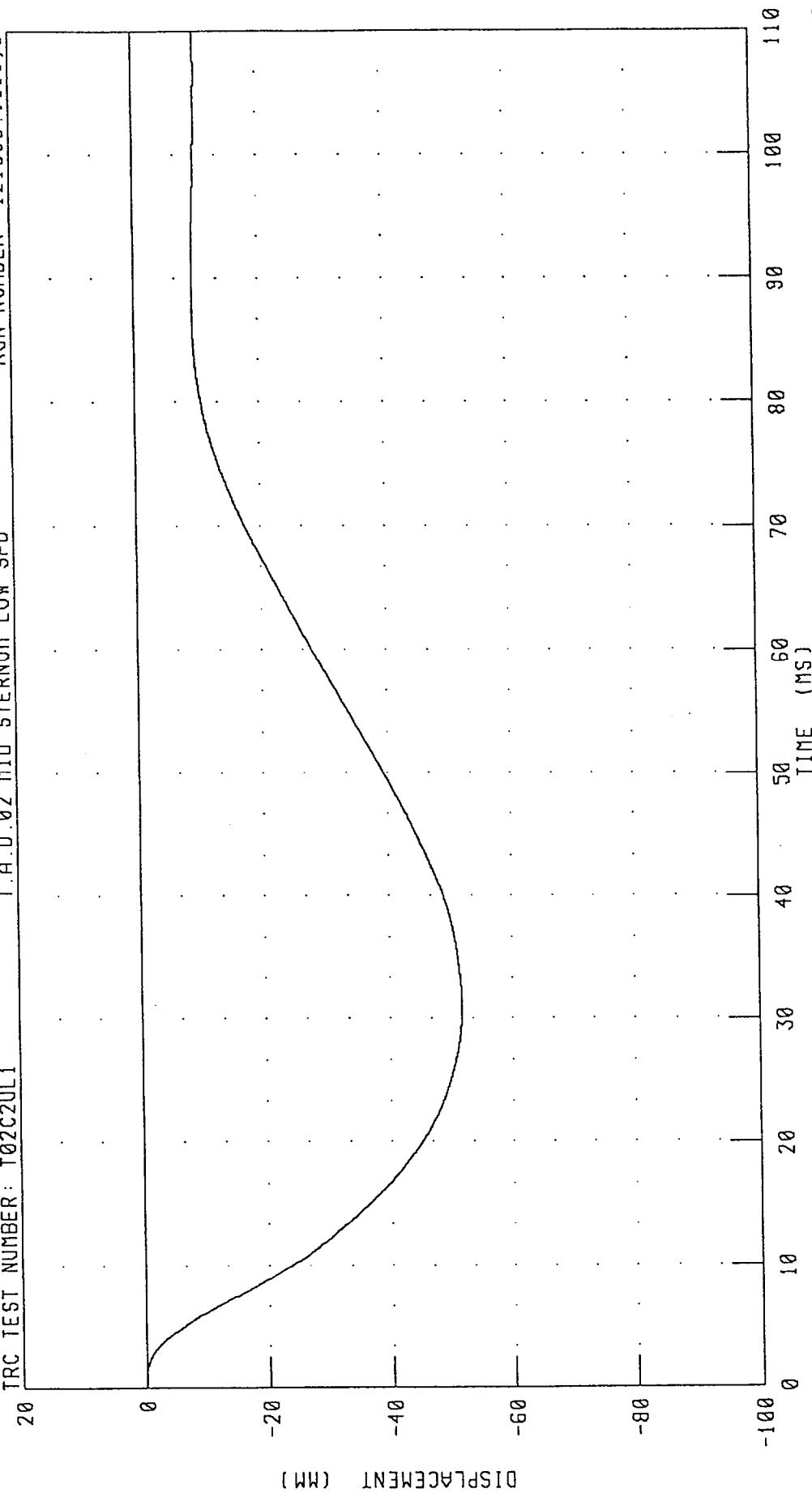


PEAK DATA: 0.01 MM @ 0.00 MS; -24.28 MM @ 32.48 MS

CHANNEL: DELZI FILTER: CH. CLASS 180

T.A.D. DUMMY MID STERNUM IMPACT TEST 4.3 M/SEC
POSITION 1 ALT. A/P-AXIS CHEST DEFLECTION

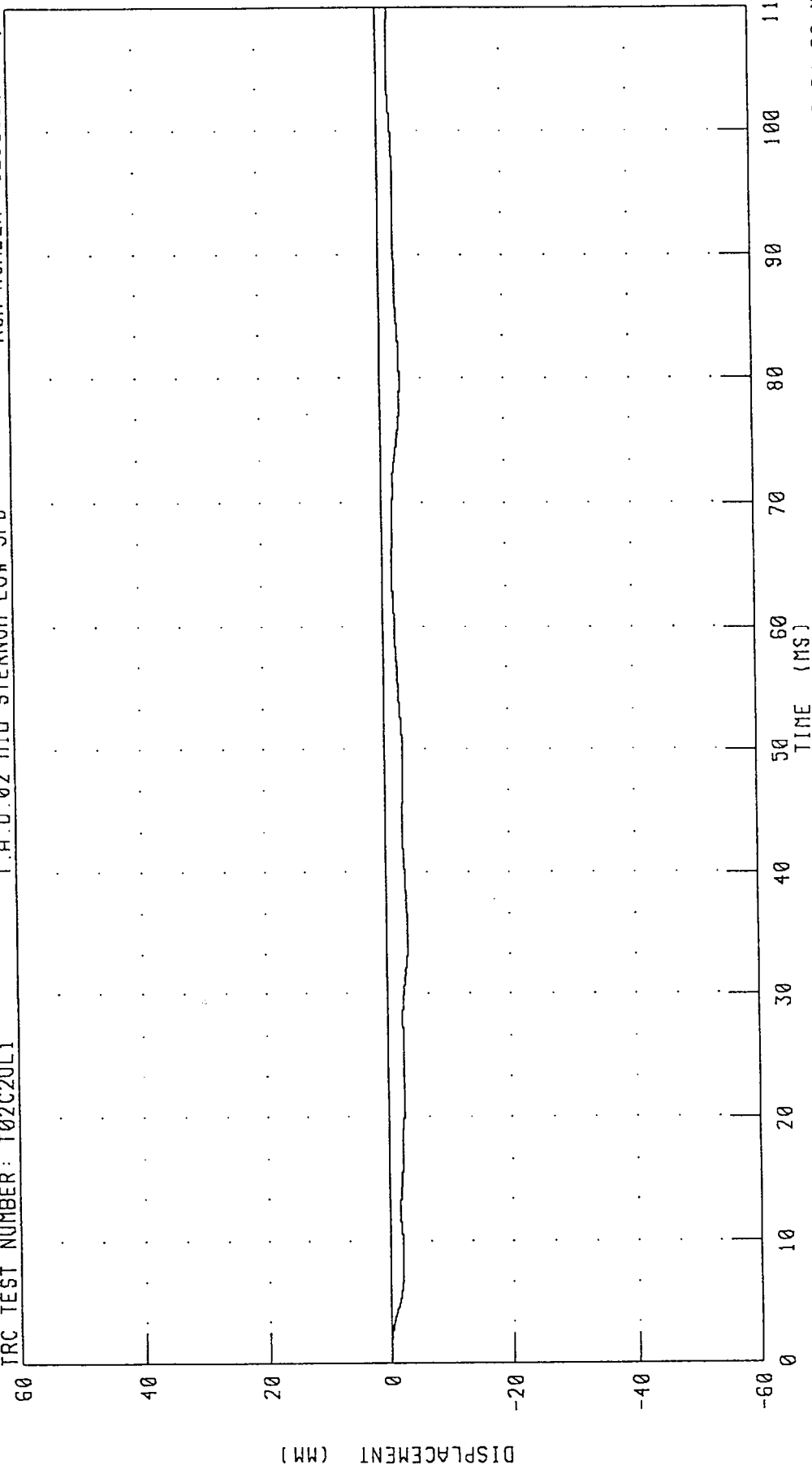
TRC TEST NUMBER: T02C2UL1 T.A.D.02 MID STERNUM LOW SPD RUN NUMBER: 121693.1619,3



CHANNEL: COMPI FILTER: CH. CLASS 180 PEAK DATA: 0.01 MM @ 0.40 MS; -51.56 NM @ 30.88 MS

T.A.D. DUMMY MID STERNUM IMPACT TEST 4.3 M/SEC
POSITION 1 ALT. R/L-AXIS CHEST DEFLECTION

TRC TEST NUMBER: T02C2UL1 T.A.D.02 MID STERNUM LOW SPD RUN NUMBER: 121693.1619;3

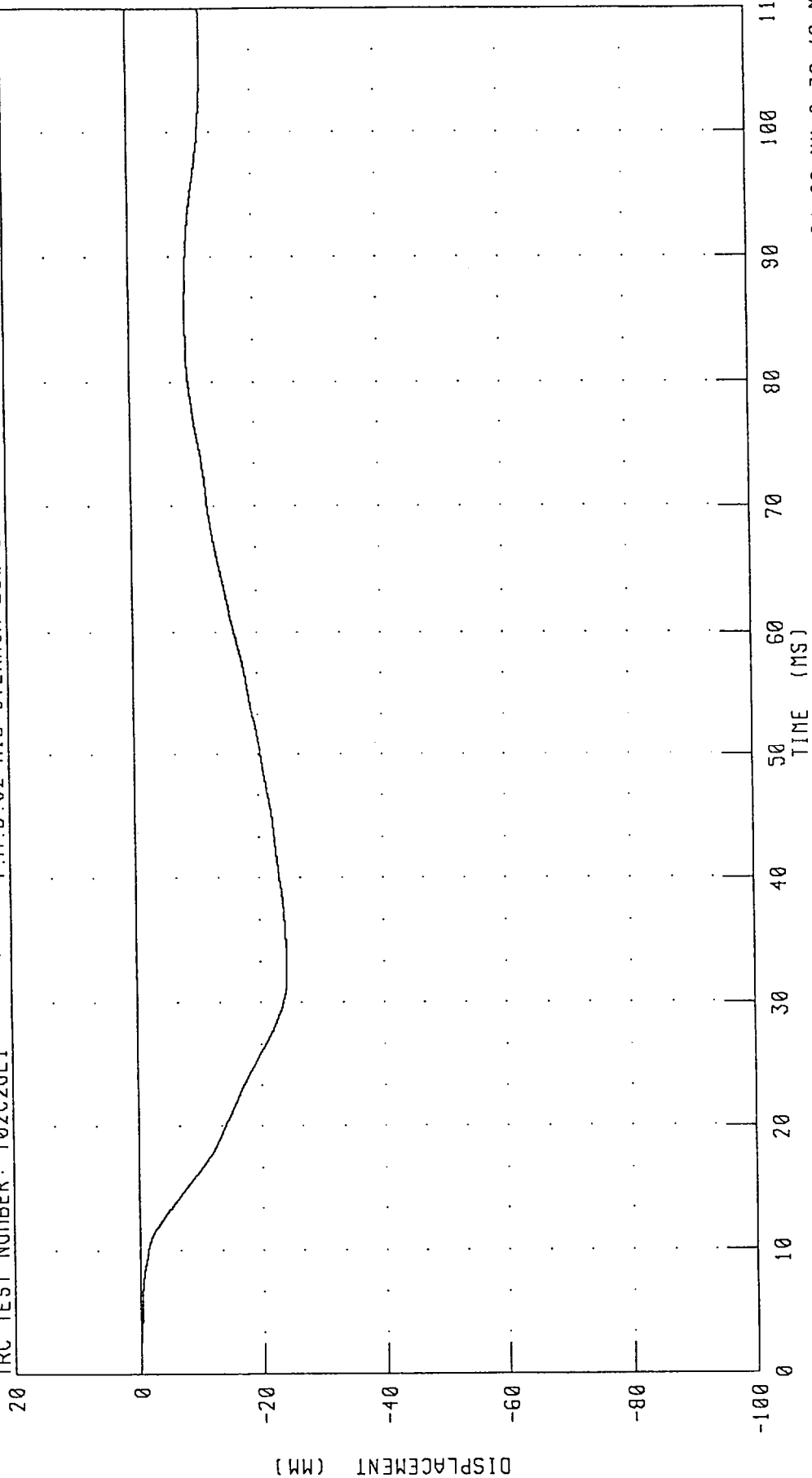


CHANNEL: TWIST1 FILTER: CH. CLASS 180 PEAK DATA: 0.01 MM @ 0.00 MS; -3.39 MM @ 34.80 MS

T.A.D. DUMMY MID STERNUM IMPACT TEST 4.3 M/SEC

POSITION 1 ALT. I/S-AXIS CHEST DEFLECTION

TRC TEST NUMBER: T02C2UL1 T.A.D.02 MID STERNUM LOW SPD RUN NUMBER: 121693.1619,3



CHANNEL: LIFT1 FILTER: CH. CLASS 180

PEAK DATA: 0.01 MM @ 0.00 MS; -24.28 MM @ 32.48 MS

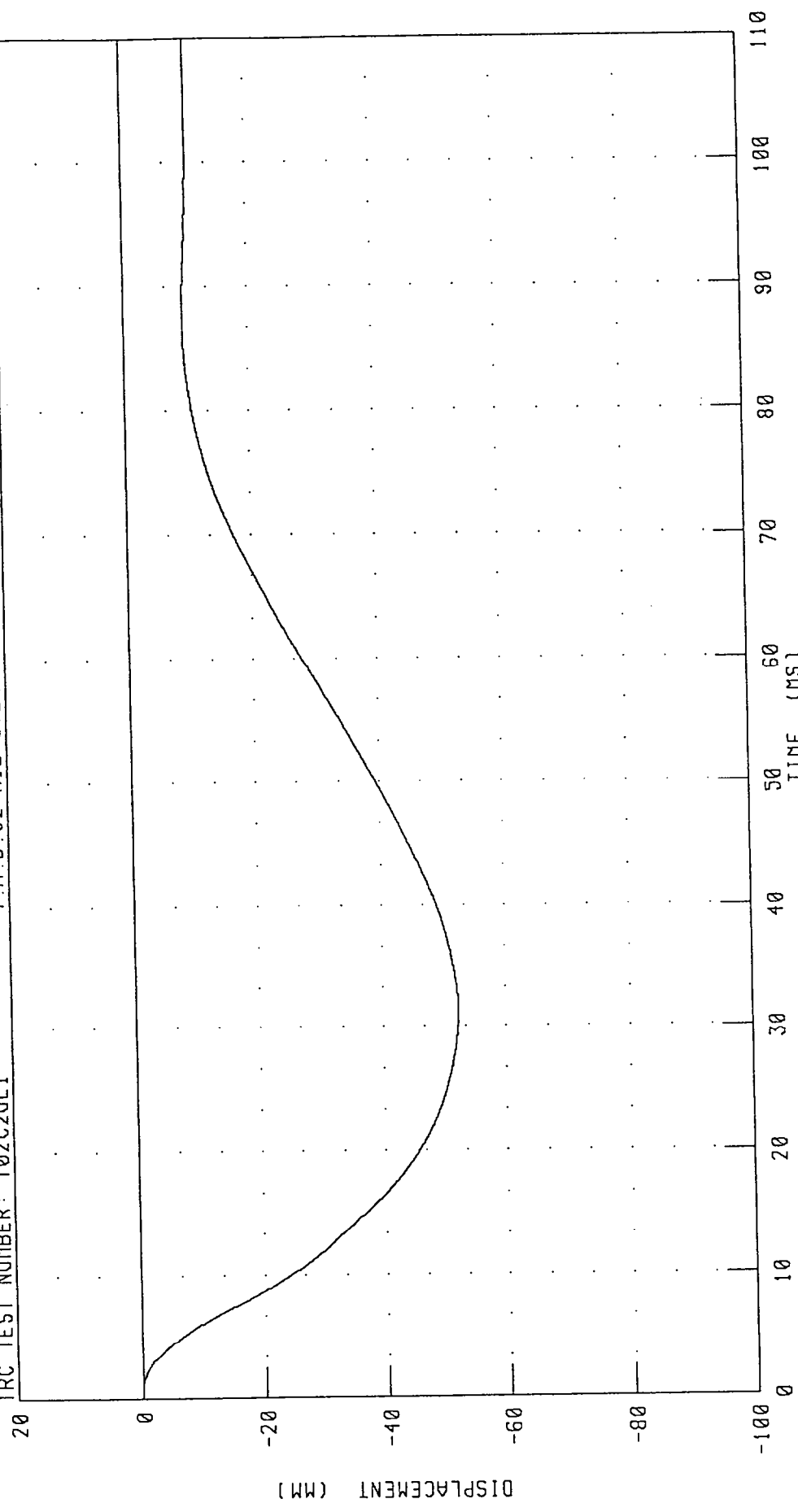
T.A.D. DUMMY MID STERNUM IMPACT TEST 4.3 M/SEC

POSITION 2 X-AXIS CHEST DEFLECTION

RUN NUMBER: 121693.1619;3

T.A.D.02 MID STERNUM LOW SPD

TRC TEST NUMBER: T02C2UL1



PEAK DATA: 0.02 MM @ 0.24 MS; -52.21 MM @ 31.36 MS

CHANNEL: DELX2 FILTER: CH. CLASS 180

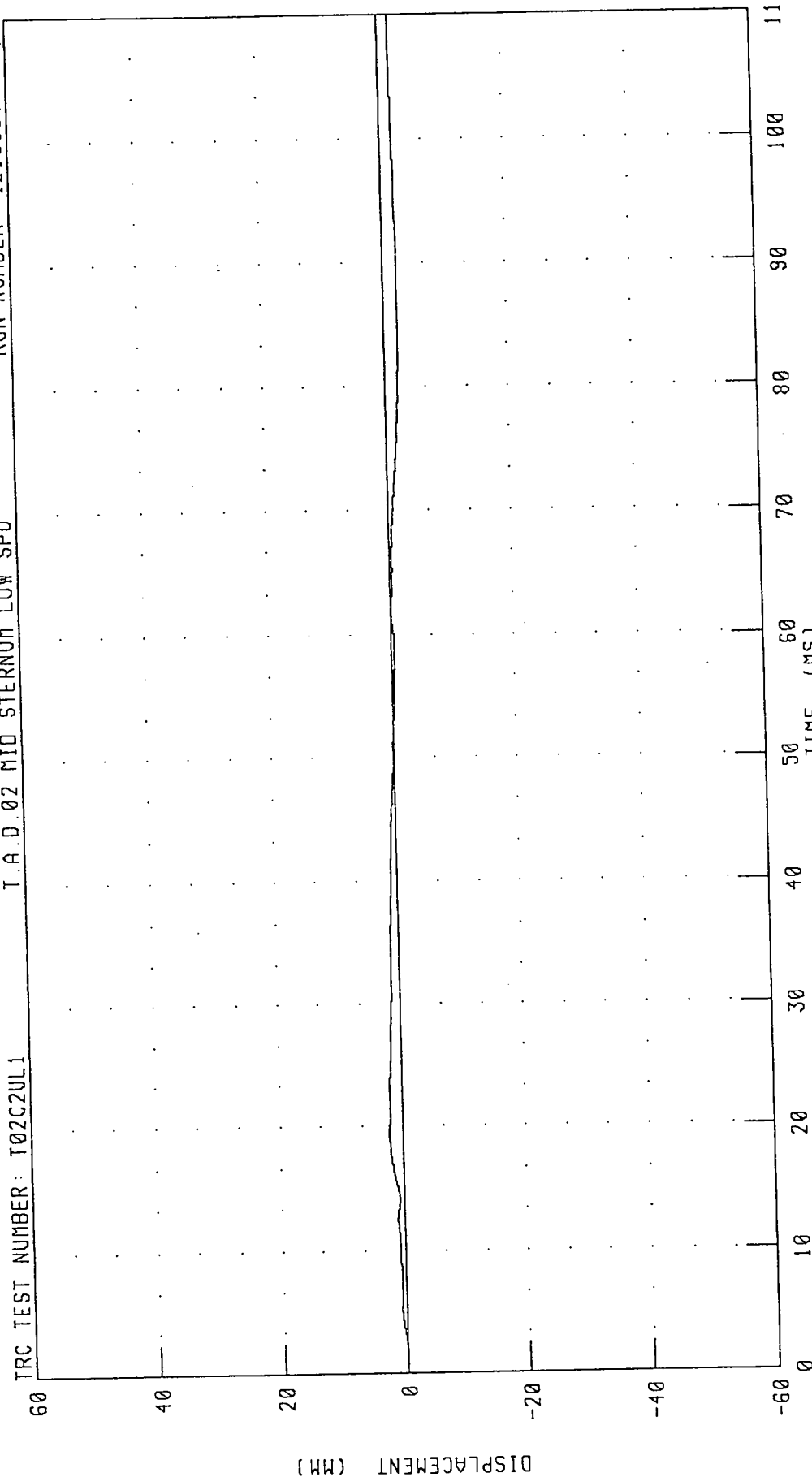
T.A.D. DUMMY MID STERNUM IMPACT TEST 4.3 M/SEC

POSITION 2 Y-AXIS CHEST DEFLECTION

RUN NUMBER: 121693.1619;3

TRC TEST NUMBER: T02C2UL1

T.A.D. 02 MID STERNUM LOW SPD



CHANNEL: DELY2 FILTER: CH CLASS 180

PEAK DATA: 2.15 MM @ 19.36 MS; -2.20 MM @ 89.20 MS

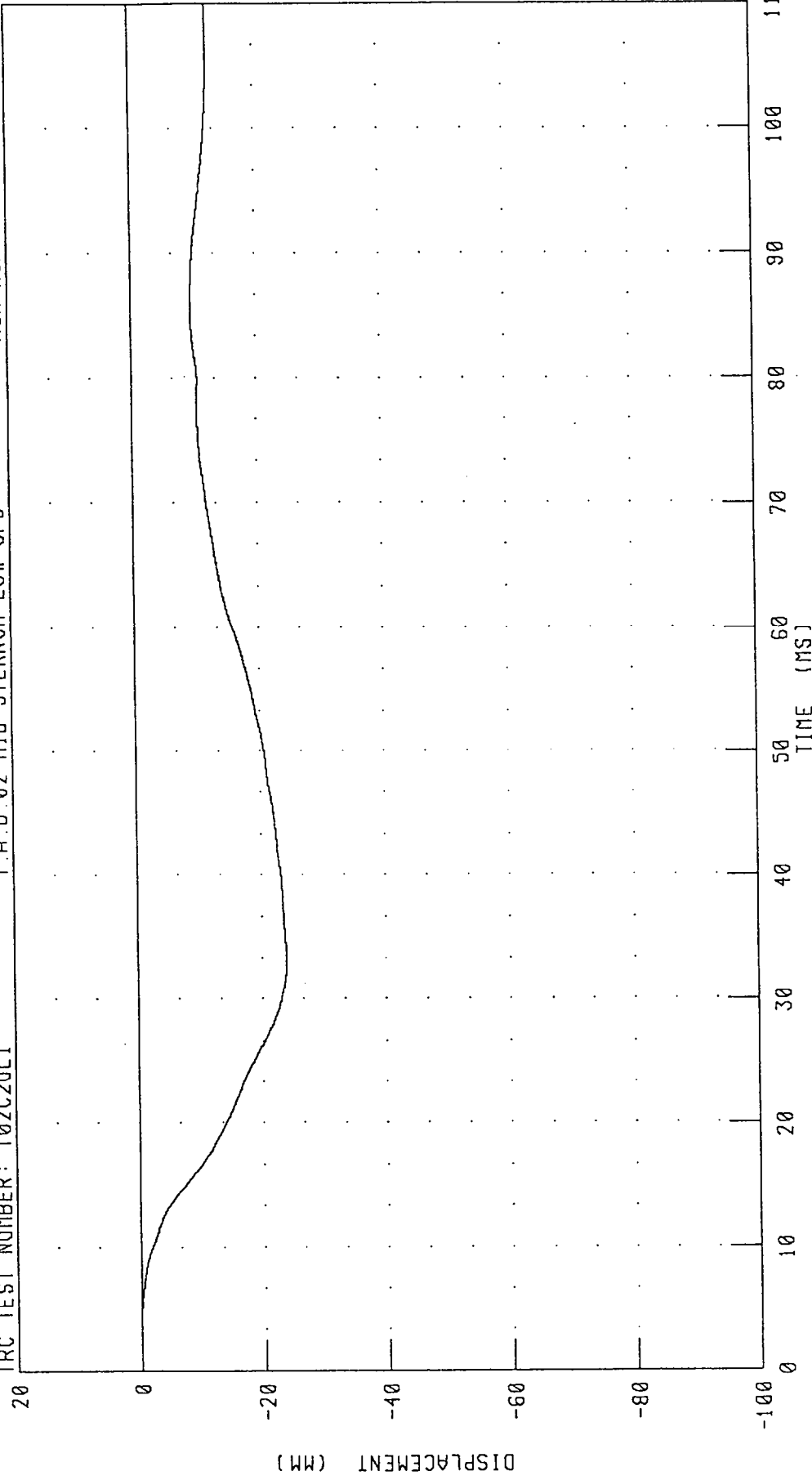
T.A.D. DUMMY MID STERNUM IMPACT TEST 4.3 M/SEC

POSITION 2 Z-AXIS CHEST DEFLECTION

TRC TEST NUMBER: T02C2UL1

T.A.D. 02 MID STERNUM LOW SPD

RUN NUMBER: 121693.1619,3

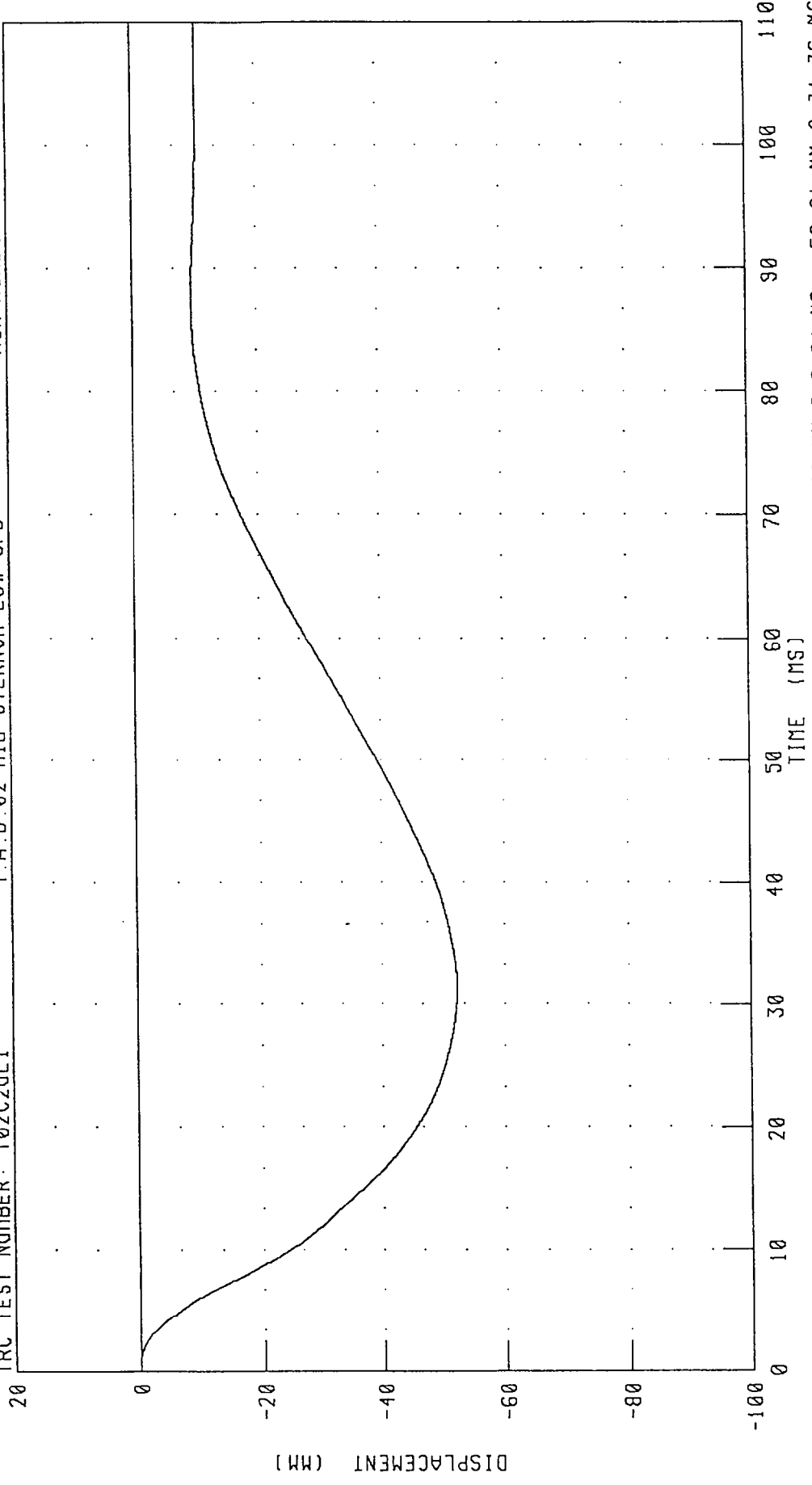


PEAK DATA: 0.01 MM @ 2.00 MS; -23.94 MM @ 32.88 MS

CHANNEL: DELZ2 FILTER: CH. CLASS 180

T.A.D. DUMMY MID STERNUM IMPACT TEST 4.3 M/SEC
POSITION 2 ALT. A/P-AXIS CHEST DEFLECTION

TRC TEST NUMBER: T02C2UL1 T.A.D.02 MID STERNUM LOW SPD RUN NUMBER: 121693.1619,3



CHANNEL: COMP2 FILTER: CH. CLASS 180 PEAK DATA: 0.02 MM @ 0.24 MS, -52.21 MM @ 31.36 MS

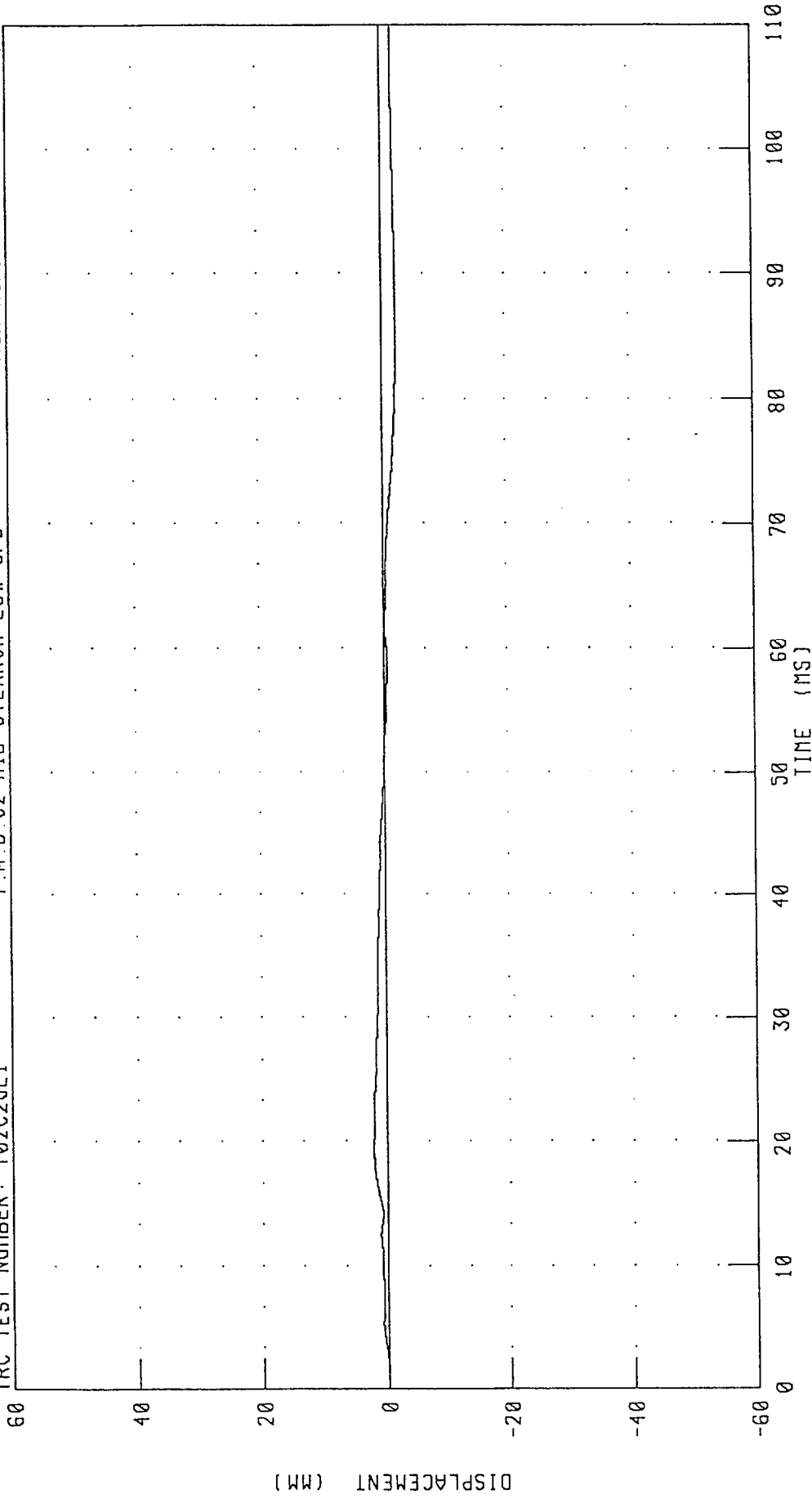
T.A.D. DUMMY MID STERNUM IMPACT TEST 4.3 M/SEC

POSITION 2 ALT. R/L-AXIS CHEST DEFLECTION

TRC TEST NUMBER: T02C2UL1

T.A.D.02 MID STERNUM LOW SPD

RUN NUMBER: 121693.1619;3



PEAK DATA: 2.15 MM @ 19.36 MS; -2.20 MM @ 89.20 MS

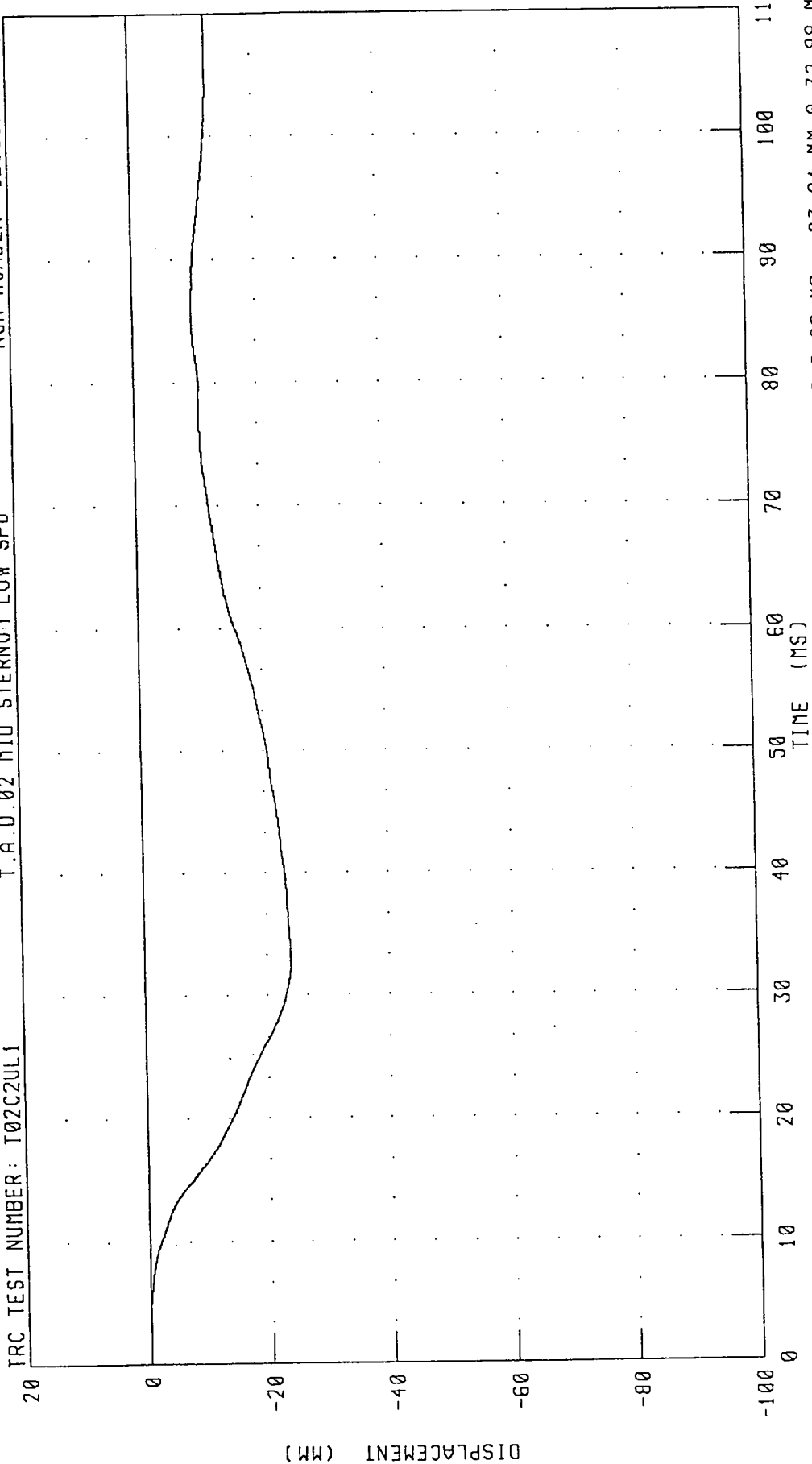
CHANNEL: TWIST2 FILTER: CH. CLASS 180

T.A.D. DUMMY MID STERNUM IMPACT TEST 4.3 M/SEC
POSITION 2 ALT. I/S-AXIS CHEST DEFLECTION

TRC TEST NUMBER: T02C2UL1

T.A.D.02 MID STERNUM LOW SPD

RUN NUMBER: 121693.1619,3

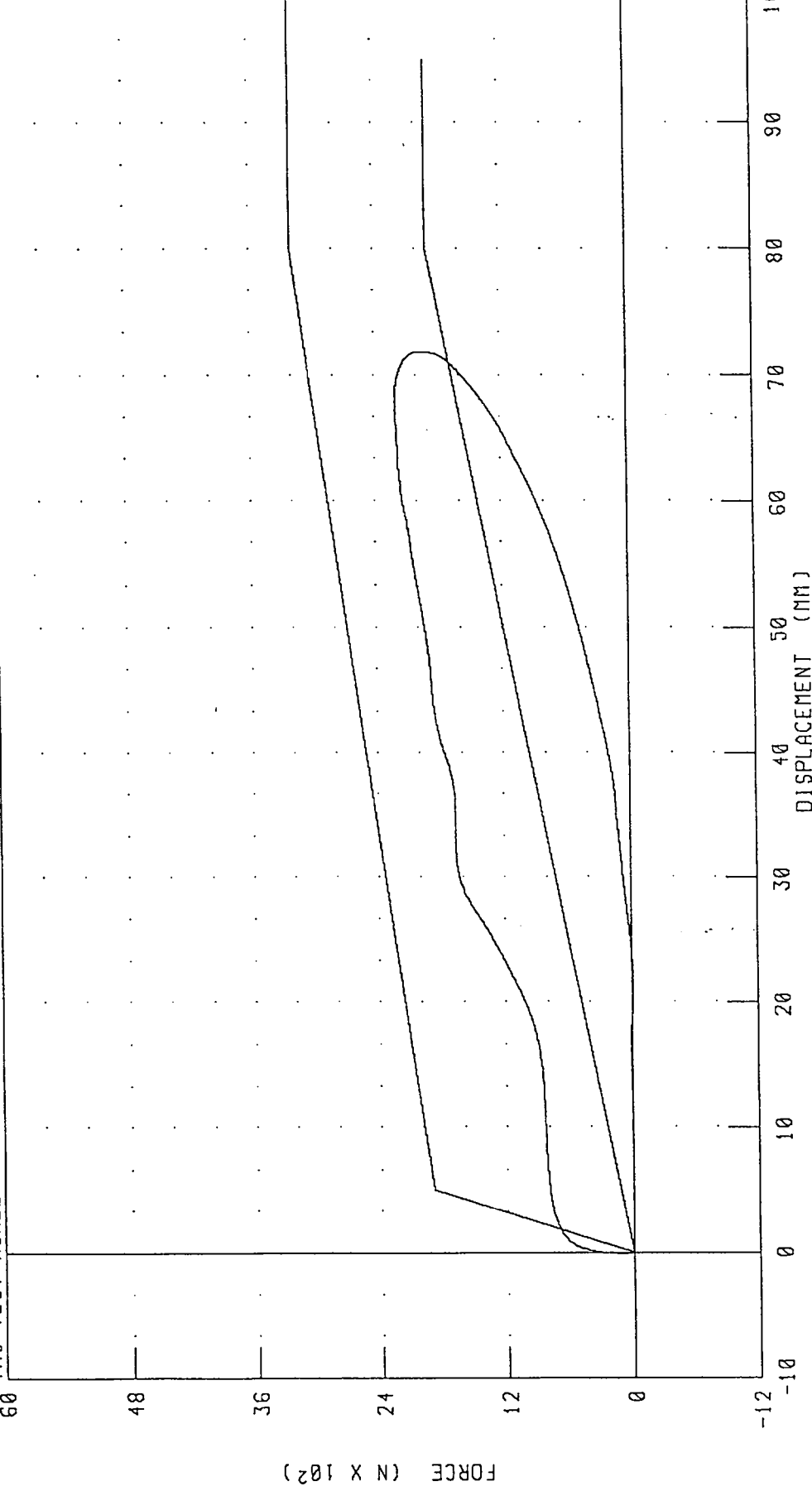


CHANNEL: LIFT2 FILTER: CH. CLASS 180

PEAK DATA: 0.01 MM @ 2.00 MS; -23.94 MM @ 32.88 MS

T.A.D. DUMMY LOWER RIGHT RIB CAGE IMPACT TEST 4.3 M/SEC
POSITION 3 ALT. A/P-AXIS CHEST DEFLECTION VS PENDULUM FORCE

TRC TEST NUMBER: T02C2LR1 T.A.D.02 LOWER RIGHT RIB RUN NUMBER: 121693.1633;2

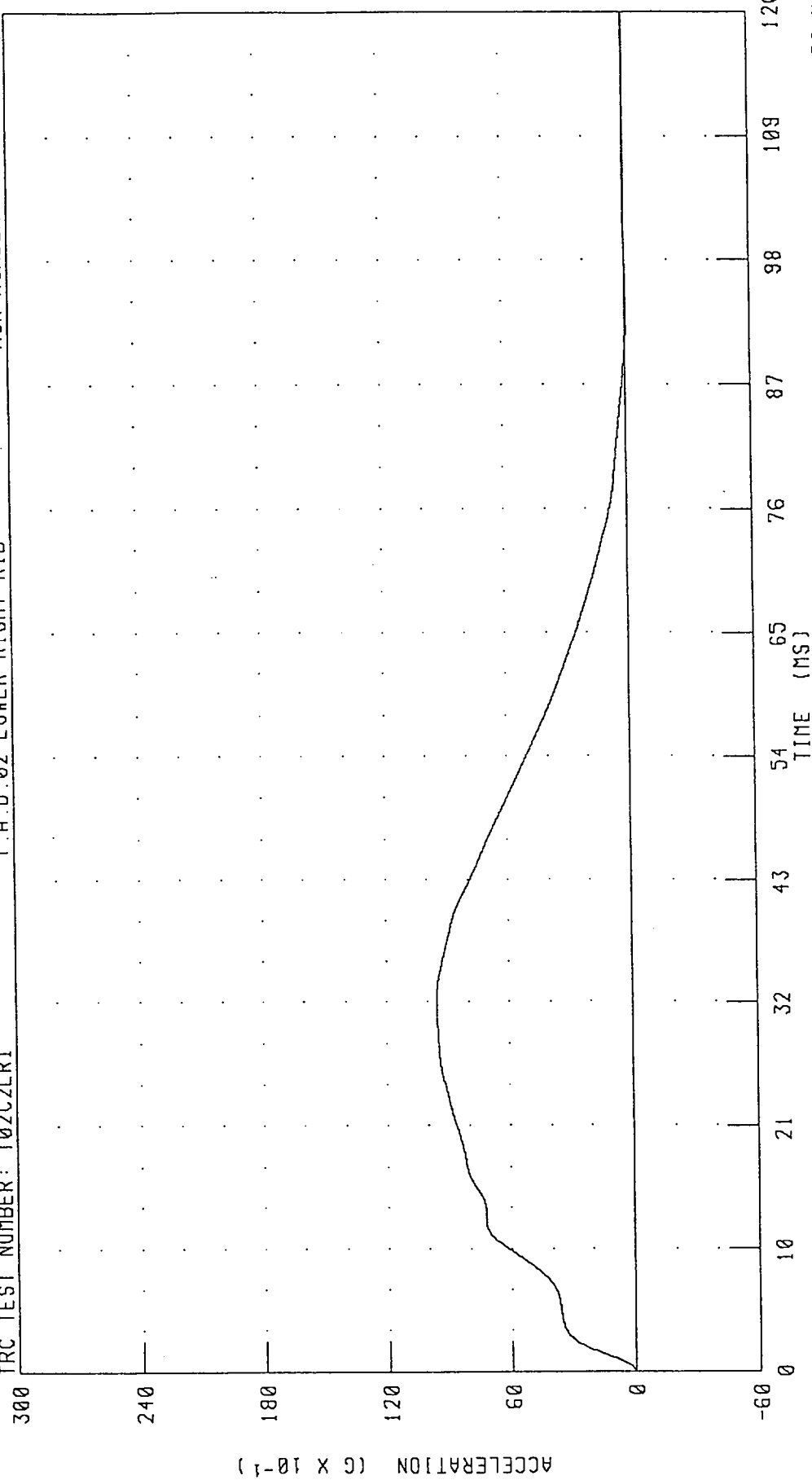


CHANNEL: COMP3 FILTER: CH: CLASS 180
FORCE CH: CLASS 180
PEAK DATA: 71.80 NM @ 40.80 MS; -0.03 NM @ 0.72 MS
2195.73 N @ 33.12 MS; -8.94 N @ 94.32 MS

T.A.D. DUMMY LOWER RIGHT RIB CAGE IMPACT TEST 4.3 M/SEC

PENDULUM DECELERATION

TRC TEST NUMBER: T02C2LR1 T.A.D.02 LOWER RIGHT RIB RUN NUMBER: 121693.1630,3



PEAK DATA: 9.55 G @ 33.12 MS; -0.04 G @ 94.32 MS

CHANNEL: PENXC FILTER: CH. CLASS 180

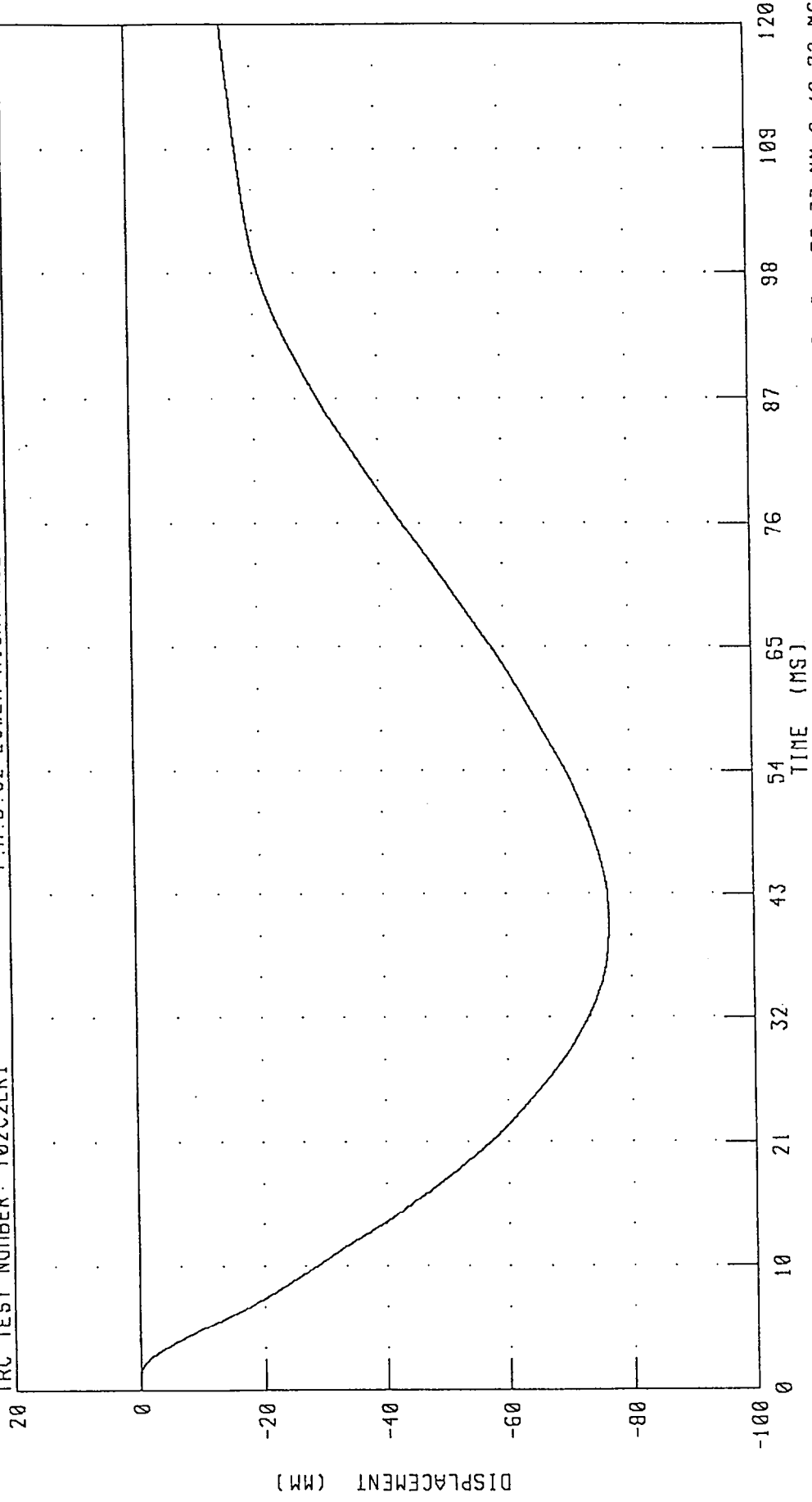
T.A.D. DUMMY LOWER RIGHT RIB CAGE IMPACT TEST 4.3 M/SEC

POSITION 3 POSTERIOR/ANTERIOR CHEST POTENTIOMETER

RUN NUMBER: 121693.1630;3

TRC TEST NUMBER: T02C2LR1

T.A.D.02 LOWER RIGHT RIB



CHANNEL: CST3PA FILTER: CH. CLASS 180

PEAK DATA: 0.03 MM @ 0.72 MS; -76.33 MM @ 40.72 MS

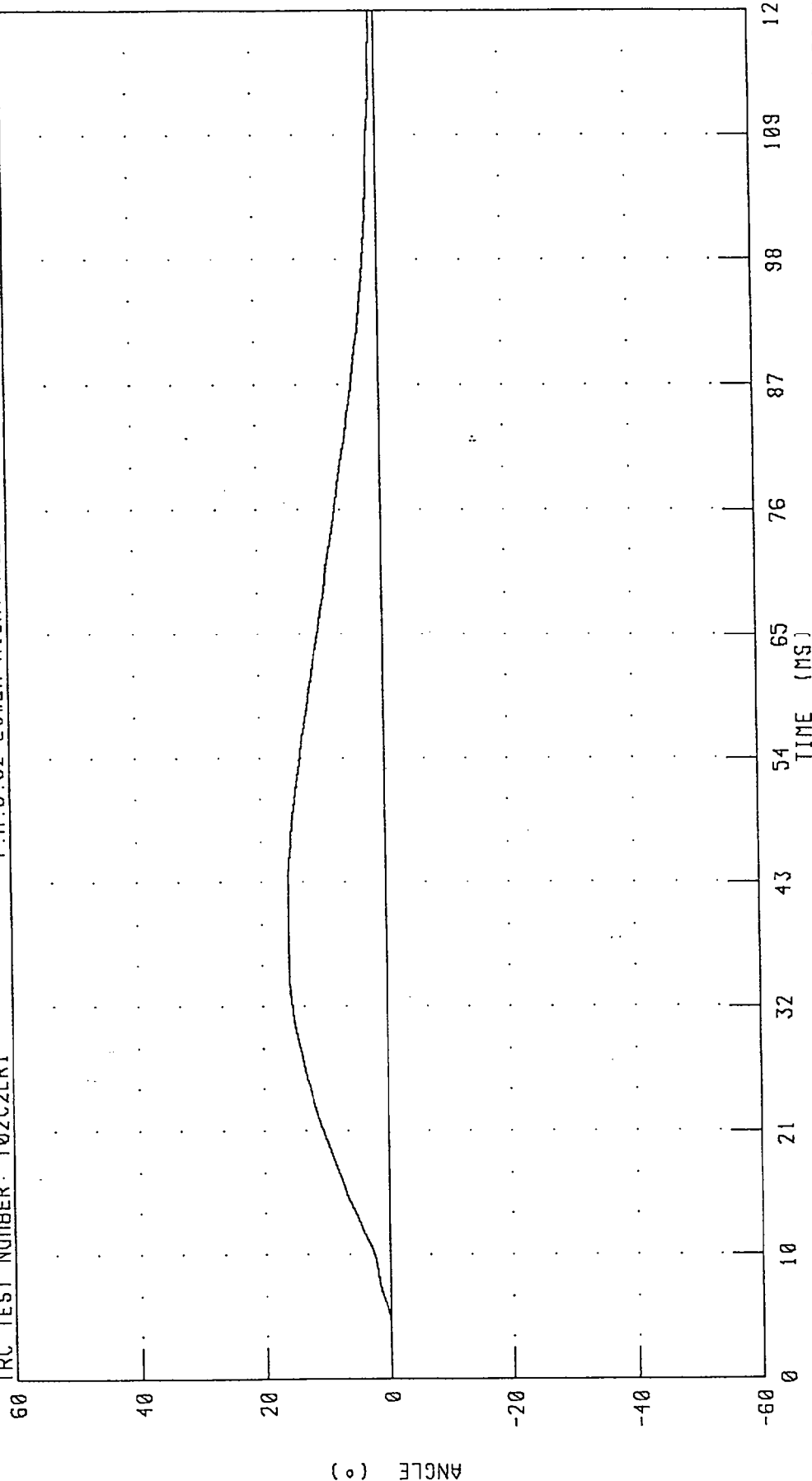
T.A.D. DUMMY LOWER RIGHT RIB CAGE IMPACT TEST 4.3 M/SEC

POSITION 3 RIGHT/LEFT CHEST POTENTIOMETER

TRC TEST NUMBER: T02C2LR1

T.A.D.02 LOWER RIGHT RIB

RUN NUMBER: 121693.1630,3



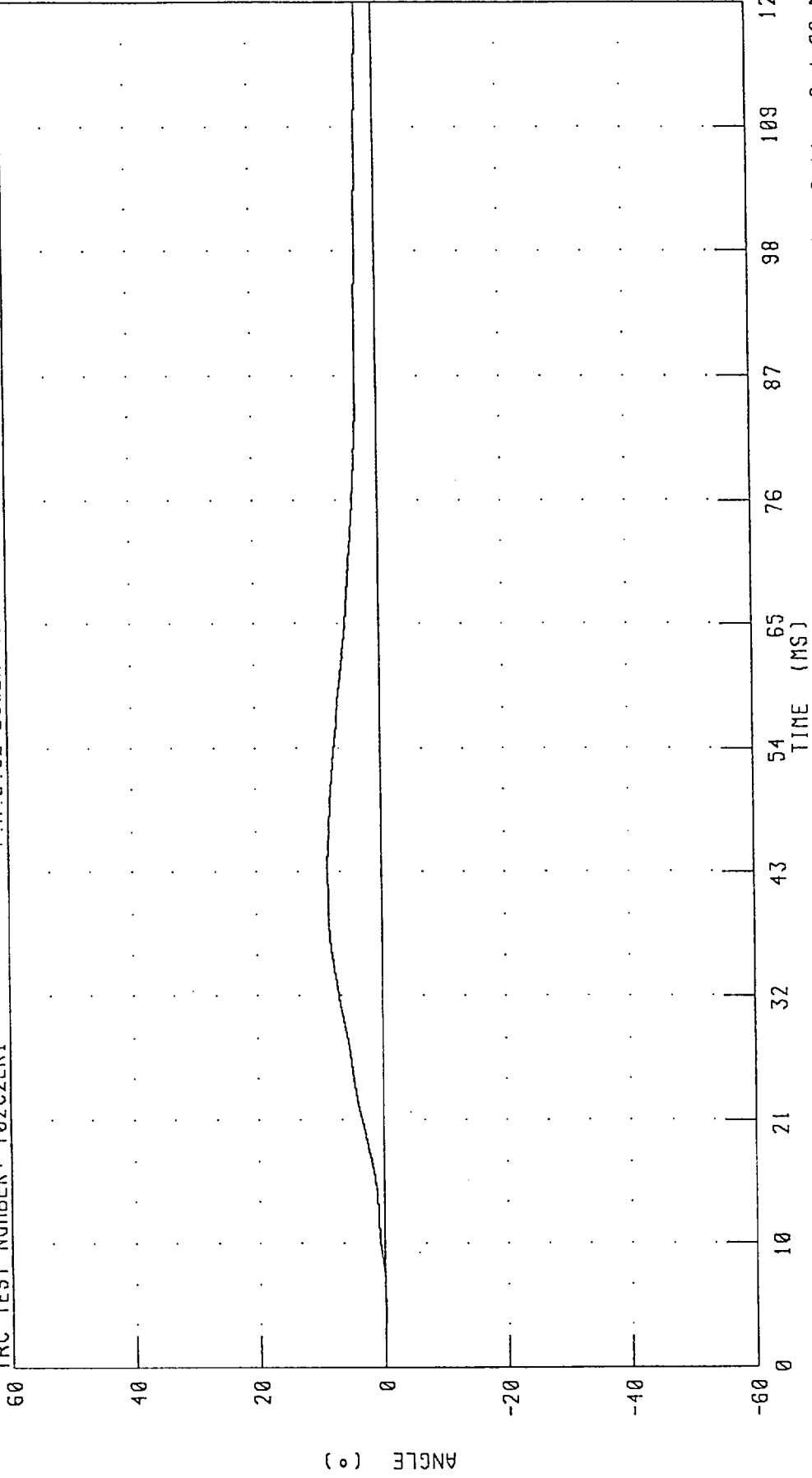
CHANNEL: CST3RL FILTER: CH. CLASS 180

PEAK DATA: 15.80 ° @ 39.04 MS; -0.01 ° @ 3.76 MS

T.A.D. DUMMY LOWER RIGHT RIB CAGE IMPACT TEST 4.3 M/SEC

POSITION 3 INFERIOR/SUPERIOR CHEST POTENTIOMETER

TRC TEST NUMBER: T02C2LR1 T.A.D.02 LOWER RIGHT RIB RUN NUMBER: 121693.1630;3



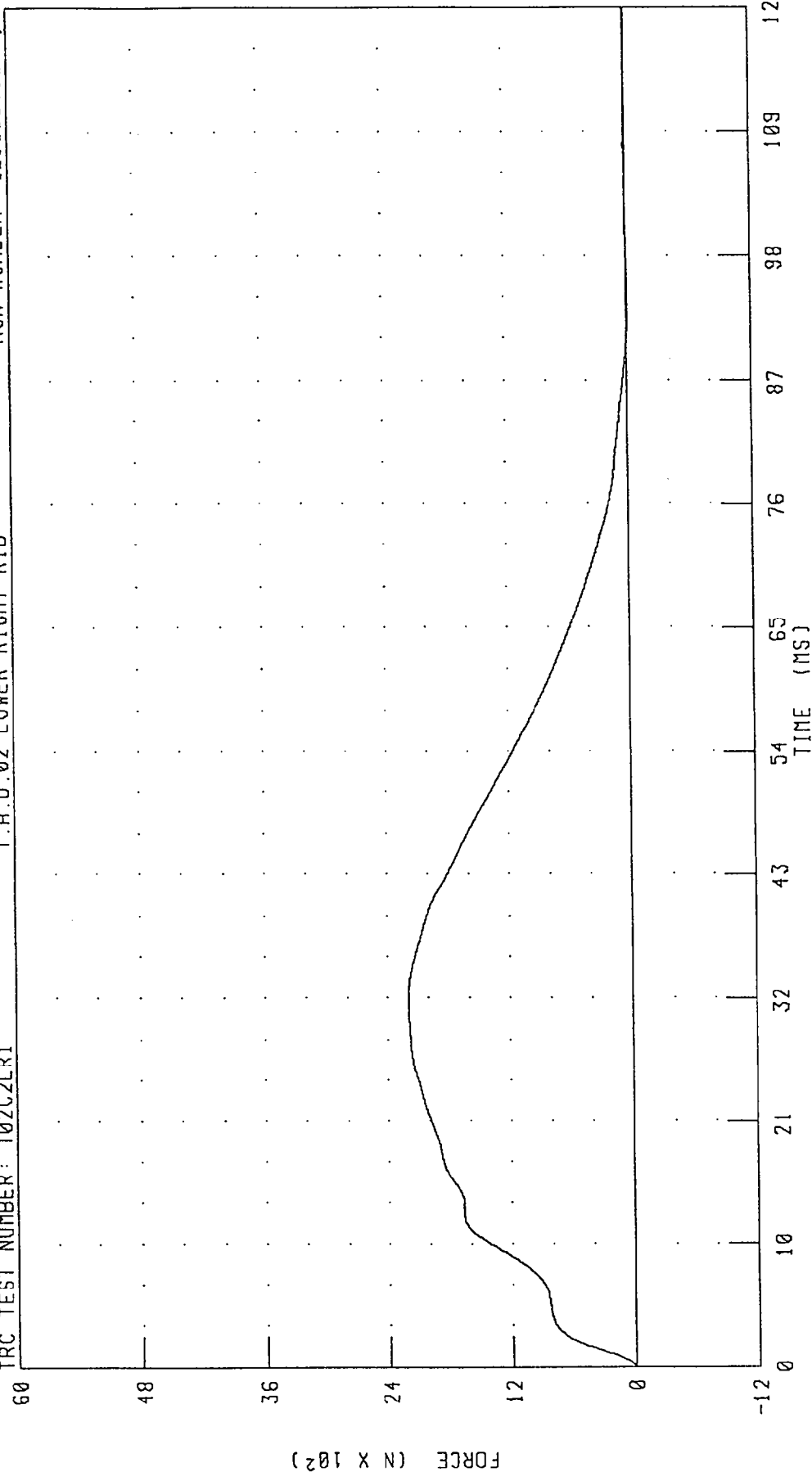
PEAK DATA: 8.59 ° @ 44.08 MS; -0.11 ° @ 4.80 MS

CHANNEL: CST31S FILTER: CH. CLASS 180

T.A.D. DUMMY LOWER RIGHT RIB CAGE IMPACT TEST 4.3 M/SEC

PENDULUM FORCE

TRC TEST NUMBER: T02C2LR1 T.A.D.02 LOWER RIGHT RIB RUN NUMBER: 121693.1630;2



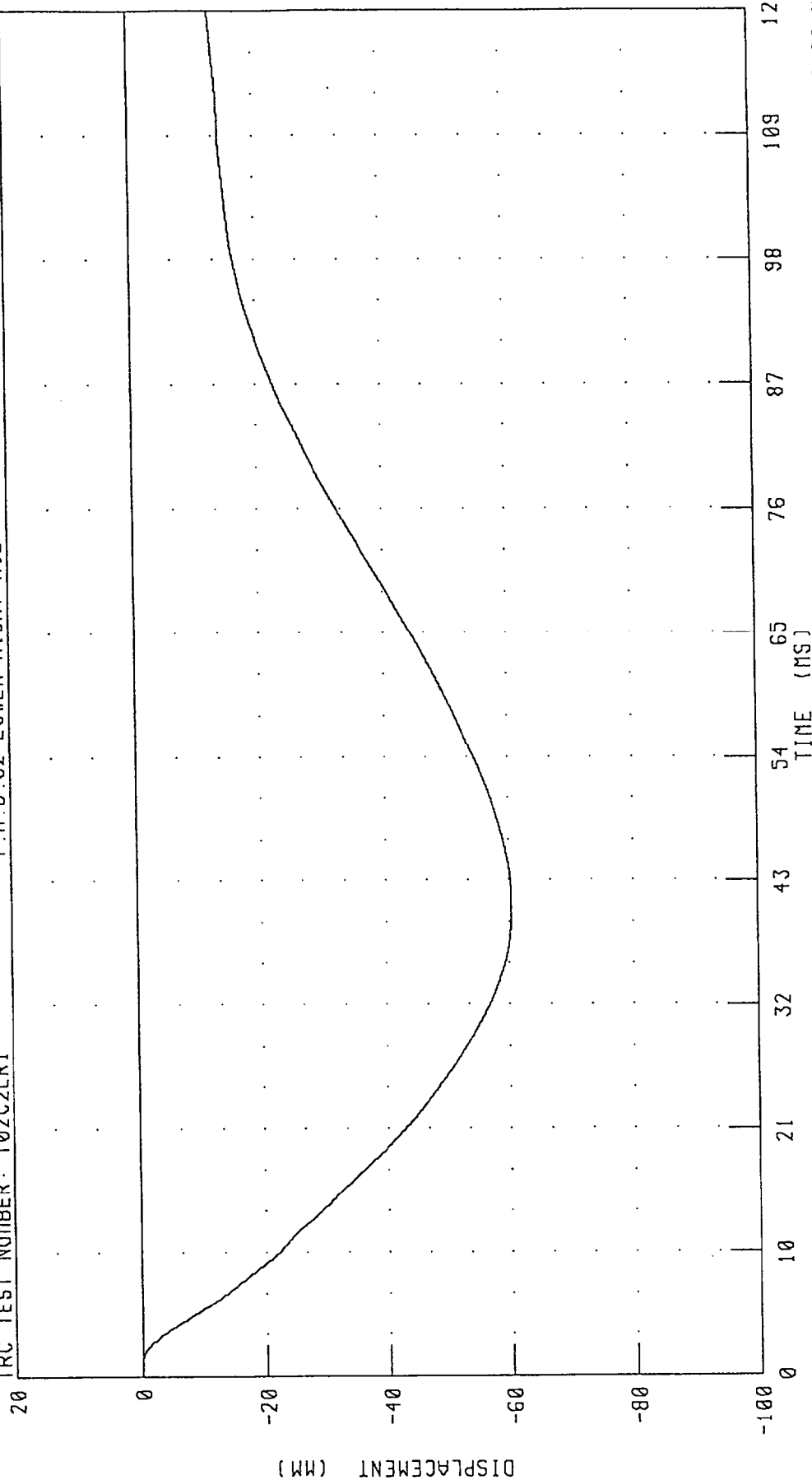
CHANNEL: FORCE FILTER: CH. CLASS 180

PEAK DATA: 2195.73 N @ 33.12 MS; -8.94 N @ 94.32 MS

T.A.D. DUMMY LOWER RIGHT RIB CAGE IMPACT TEST 4.3 M/SEC

POSITION 3 X-AXIS CHEST DEFLECTION

TRC TEST NUMBER: T02C2LR1 T.A.D.02 LOWER RIGHT RIB RUN NUMBER: 121693.1630;2



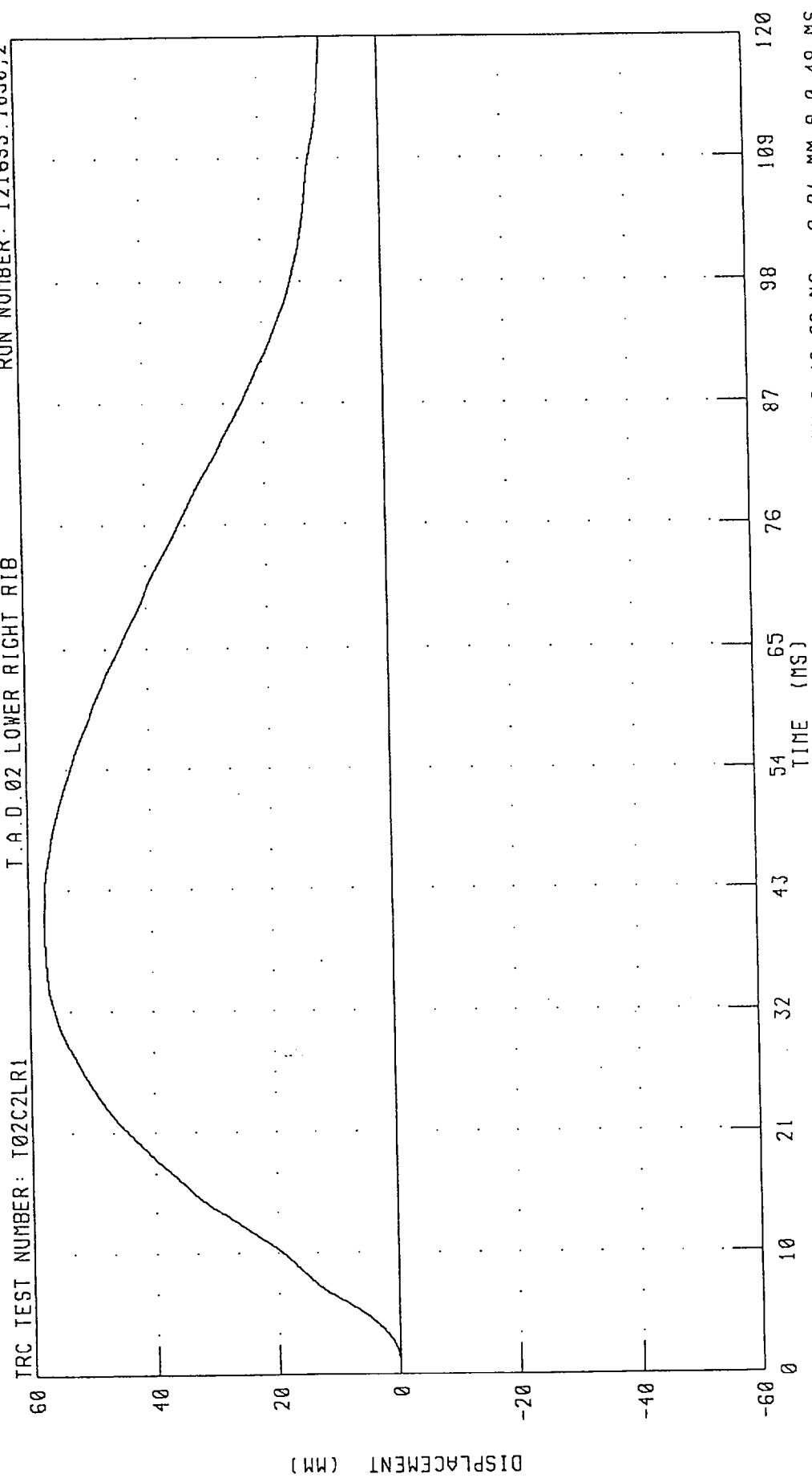
PEAK DATA: 0.03 MM @ 0.72 MS; -60.32 MM @ 42.32 MS

CHANNEL: DELX3 FILTER: CH. CLASS 180

T.A.D. DUMMY LOWER RIGHT RIB CAGE IMPACT TEST 4.3 M/SEC

POSITION 3 Y-AXIS CHEST DEFLECTION

T.A.D.02 LOWER RIGHT RIB RUN NUMBER: 121693.1630;2

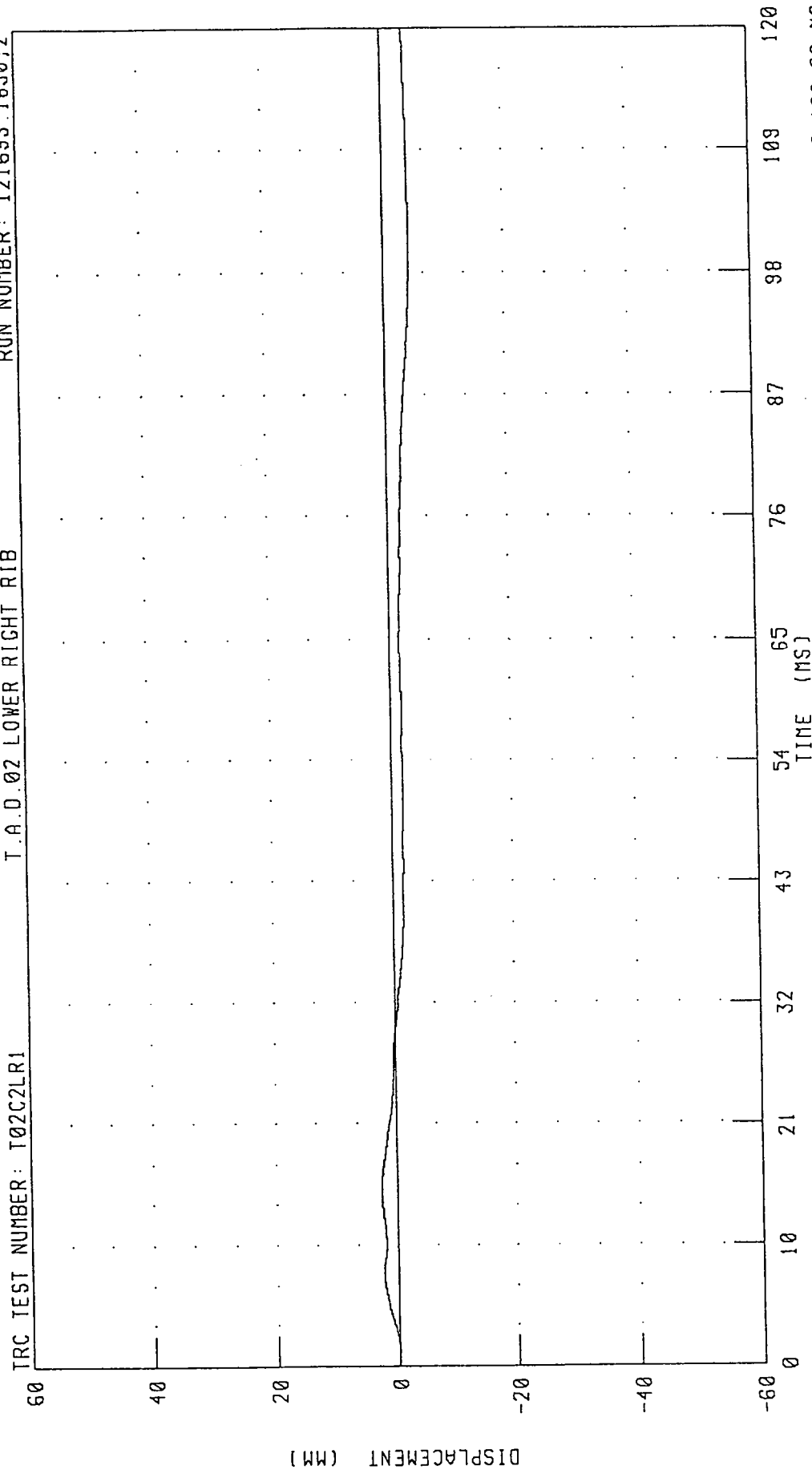


CHANNEL: DELY3 FILTER: CH. CLASS 180 PEAK DATA: 57.36 MM @ 40.00 MS; -0.01 MM @ 0.48 MS

T.A.D. DUMMY LOWER RIGHT RIB CAGE IMPACT TEST 4.3 M/SEC

POSITION 3 Z-AXIS CHEST DEFLECTION

T.A.D.02 LOWER RIGHT RIB RUN NUMBER: 121693.1630;2



CHANNEL: DELZ3 FILTER: CH. CLASS 180 PEAK DATA: 2.63 MM @ 15.44 MS; -4.22 MM @ 100.08 MS

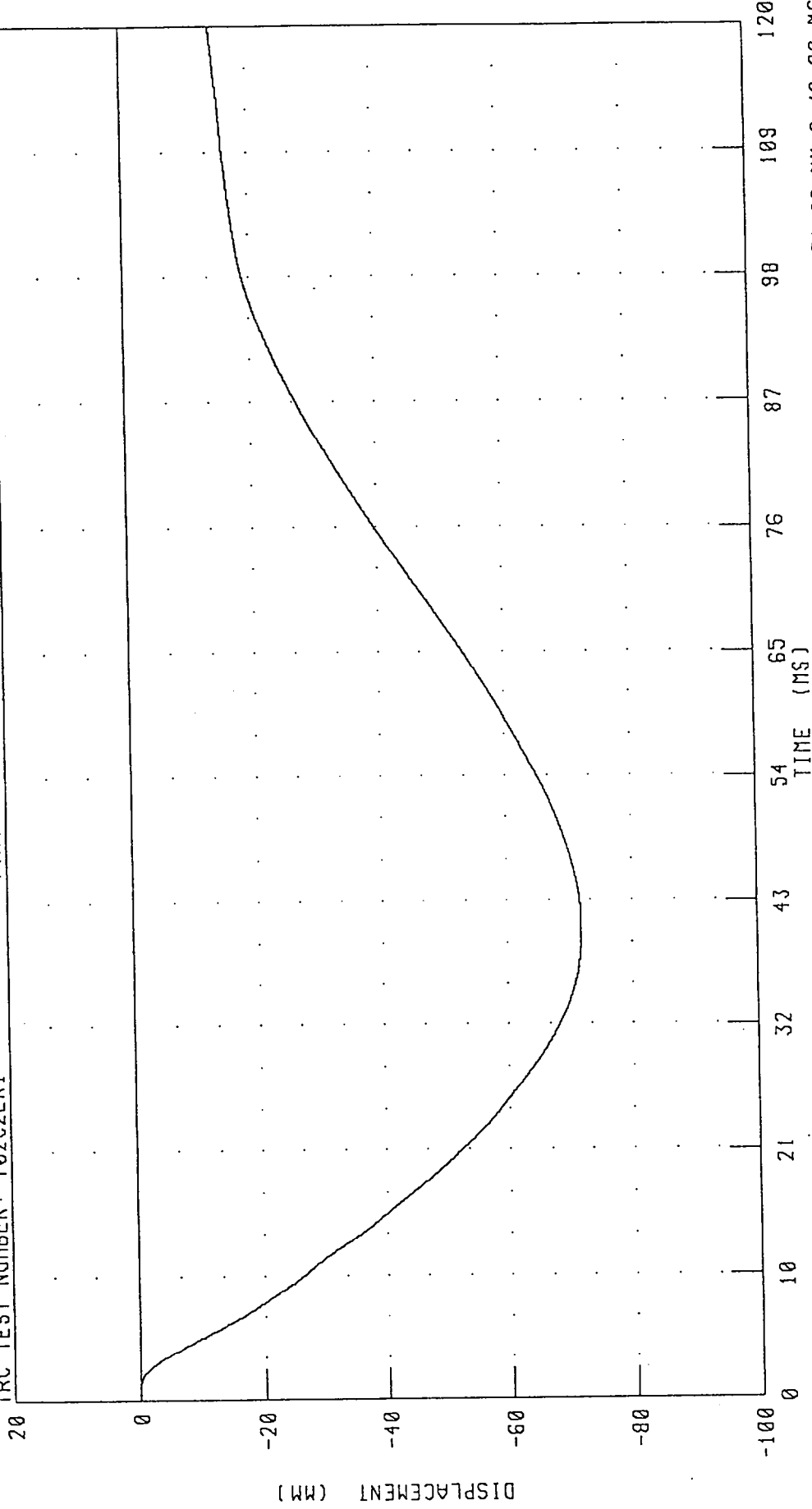
T.A.D. DUMMY LOWER RIGHT RIB CAGE IMPACT TEST 4.3 M/SEC

POSITION 3 ALT. A/P-AXIS CHEST DEFLECTION

RUN NUMBER: 121693.1630;2

TRC TEST NUMBER: T02C2LR1

T.A.D. 02 LOWER RIGHT RIB



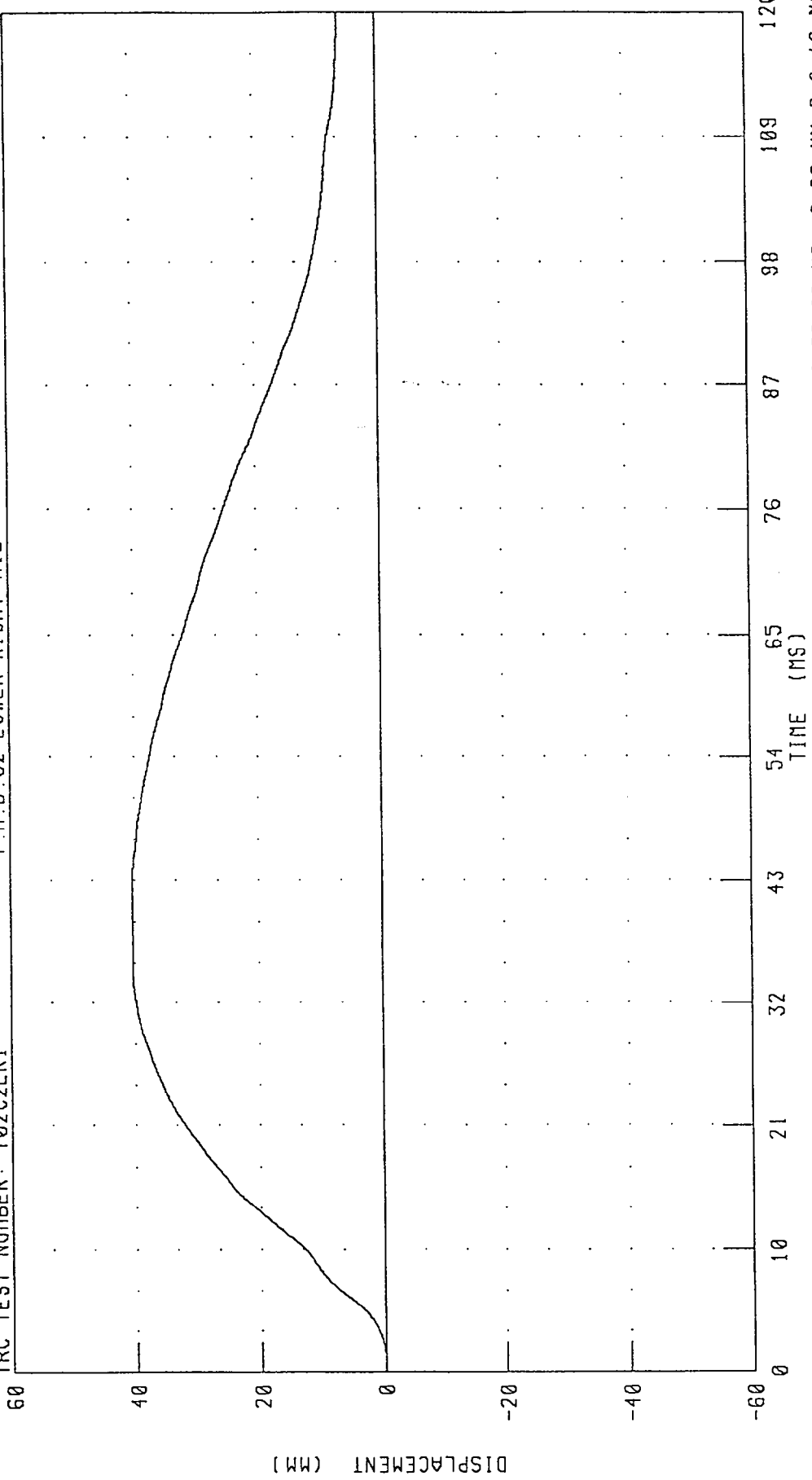
CHANNEL: COMP3 FILTER: CH. CLASS 180

PEAK DATA: 0.03 MM @ 0.72 MS, -71.80 MM @ 40.80 MS

T.A.D. DUMMY LOWER RIGHT RIB CAGE IMPACT TEST 4.3 N/SEC

POSITION 3 ALT. R/L-AXIS CHEST DEFLECTION

TRC TEST NUMBER: T02C2LR1 T.A.D.02 LOWER RIGHT RIB RUN NUMBER: 121693.1630;2

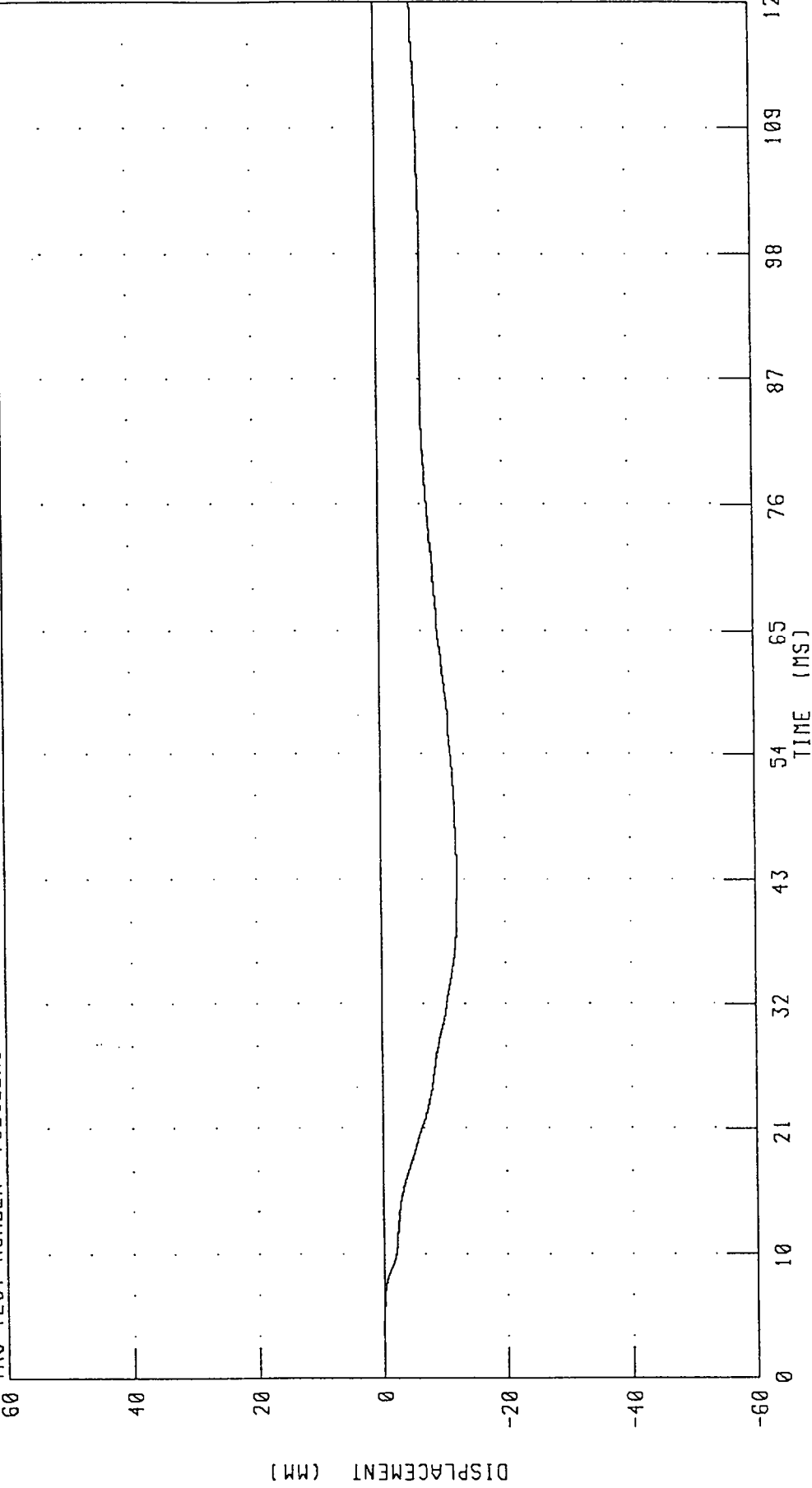


CHANNEL: TWIST3 FILTER: CH. CLASS 180 PEAK DATA: 40.40 MM @ 38.88 MS; 0.00 MM @ 0.16 MS

T.A.D. DUMMY LOWER RIGHT RIB CAGE IMPACT TEST 4.3 M/SEC

POSITION 3 ALT. I/S-AXIS CHEST DEFLECTION

TRC TEST NUMBER: T02C2LR1 T.A.D.02 LOWER RIGHT RIB RUN NUMBER: 121693.1630;2



CHANNEL: LIFT3 FILTER: CH. CLASS 180

PEAK DATA: 0.13 MM @ 4.40 MS; -12.18 MM @ 44.48 MS

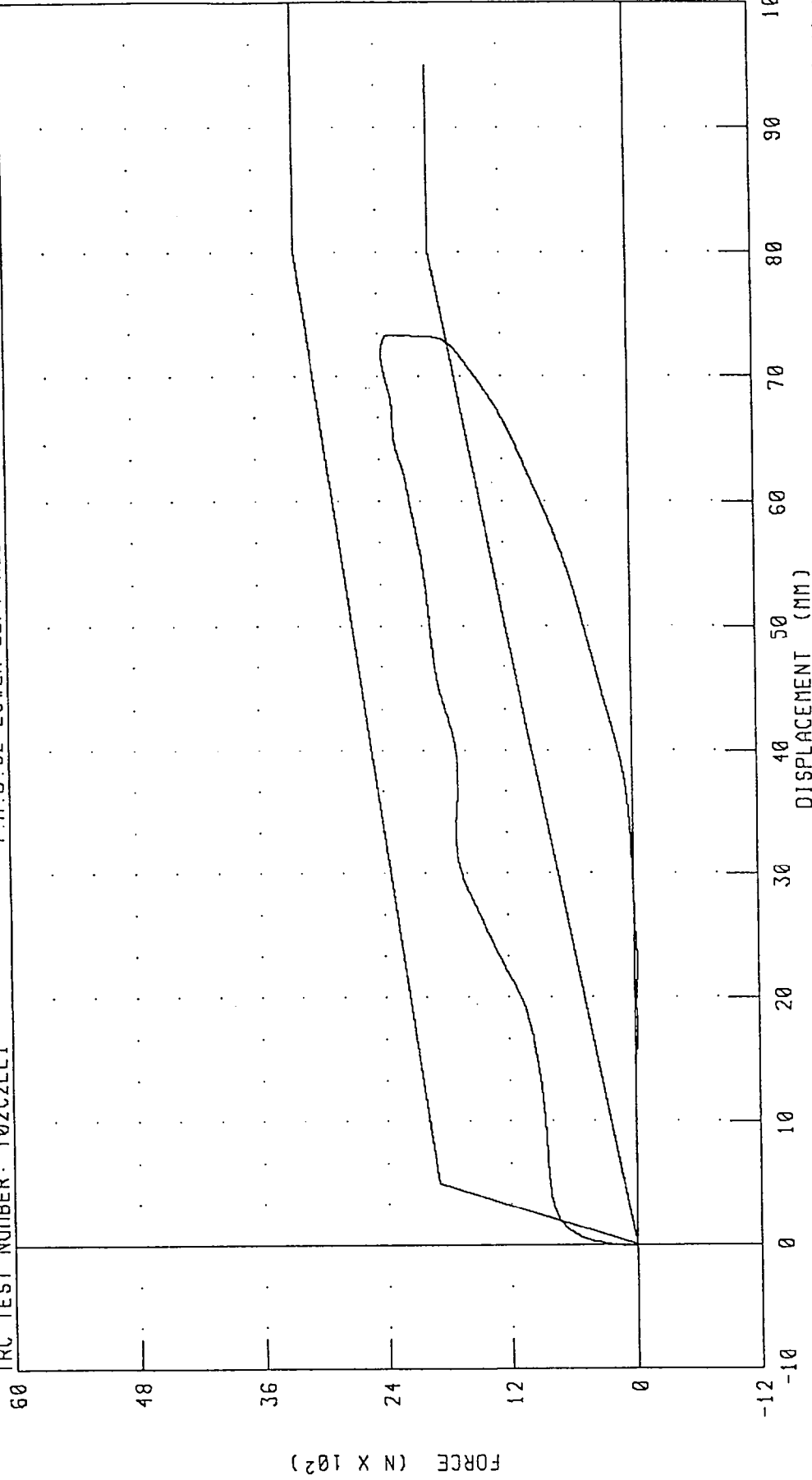
T.A.D. DUMMY LOWER LEFT RIB CAGE IMPACT TEST 4.3 M/SEC

POSITION 4 ALT. A/P-AXIS CHEST DEFLECTION VS PENDULUM FORCE

RUN NUMBER: 121693.1653;1

T.A.D.02 LOWER LEFT RIB

TRC TEST NUMBER: T02C2LL1



CHANNEL: COMP4
FORCE

DISPLACEMENT (MM)

PEAK DATA:

73.27 MM @ 38.40 MS; -0.05 MM @ 0.48 MS
2358.57 N @ 33.20 MS; -26.16 N @ 90.16 MS

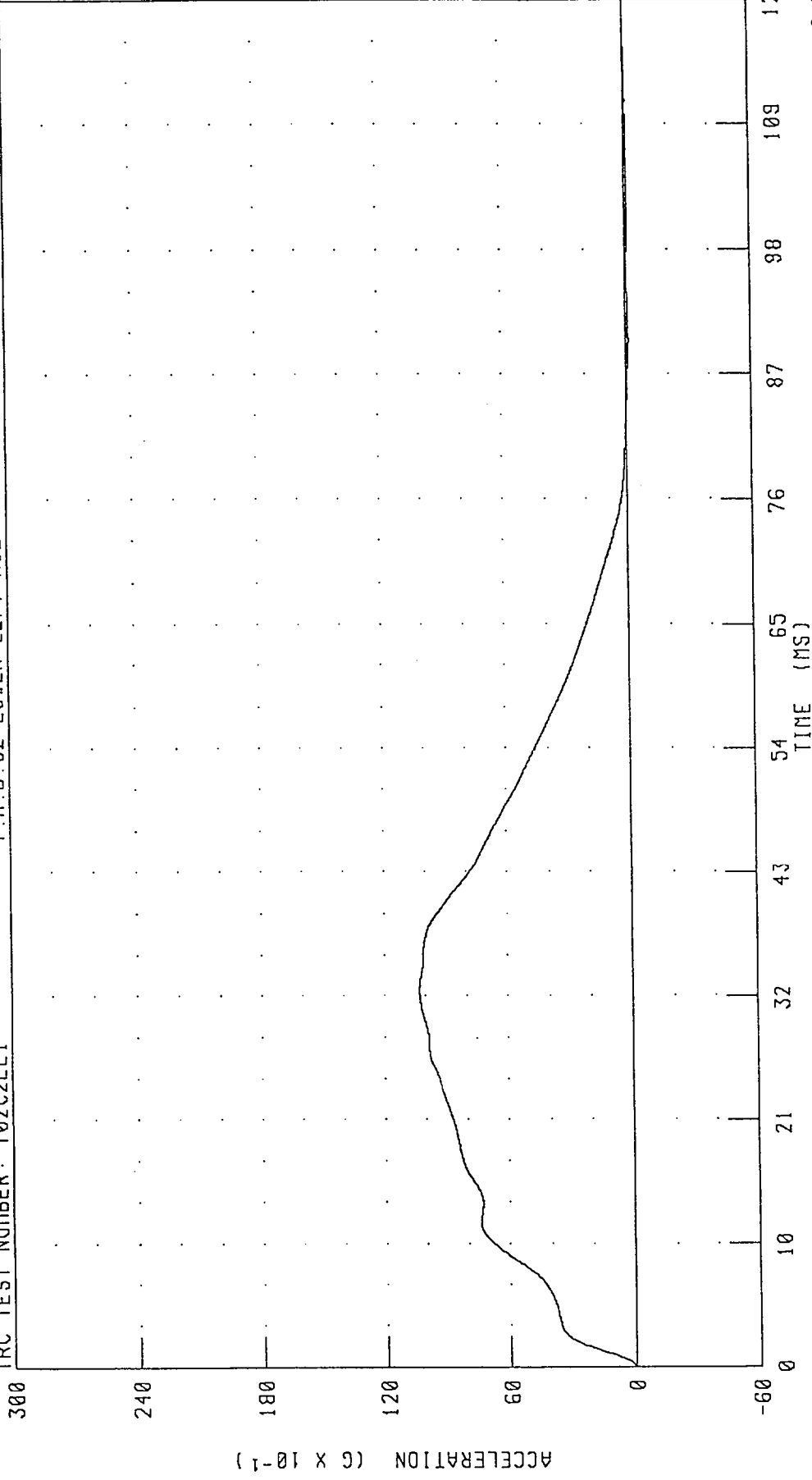
T.A.D. DUMMY LOWER LEFT RIB CAGE IMPACT TEST 4.3 M/SEC

PENDULUM DECELERATION

TRC TEST NUMBER: T02C2LL1

T.A.D.02 LOWER LEFT RIB

RUN NUMBER: 121693.1650;2



CHANNEL: PENXC FILTER: CH. CLASS 180

PEAK DATA: 10.31 G @ 33.20 MS; -0.11 G @ 90.16 MS

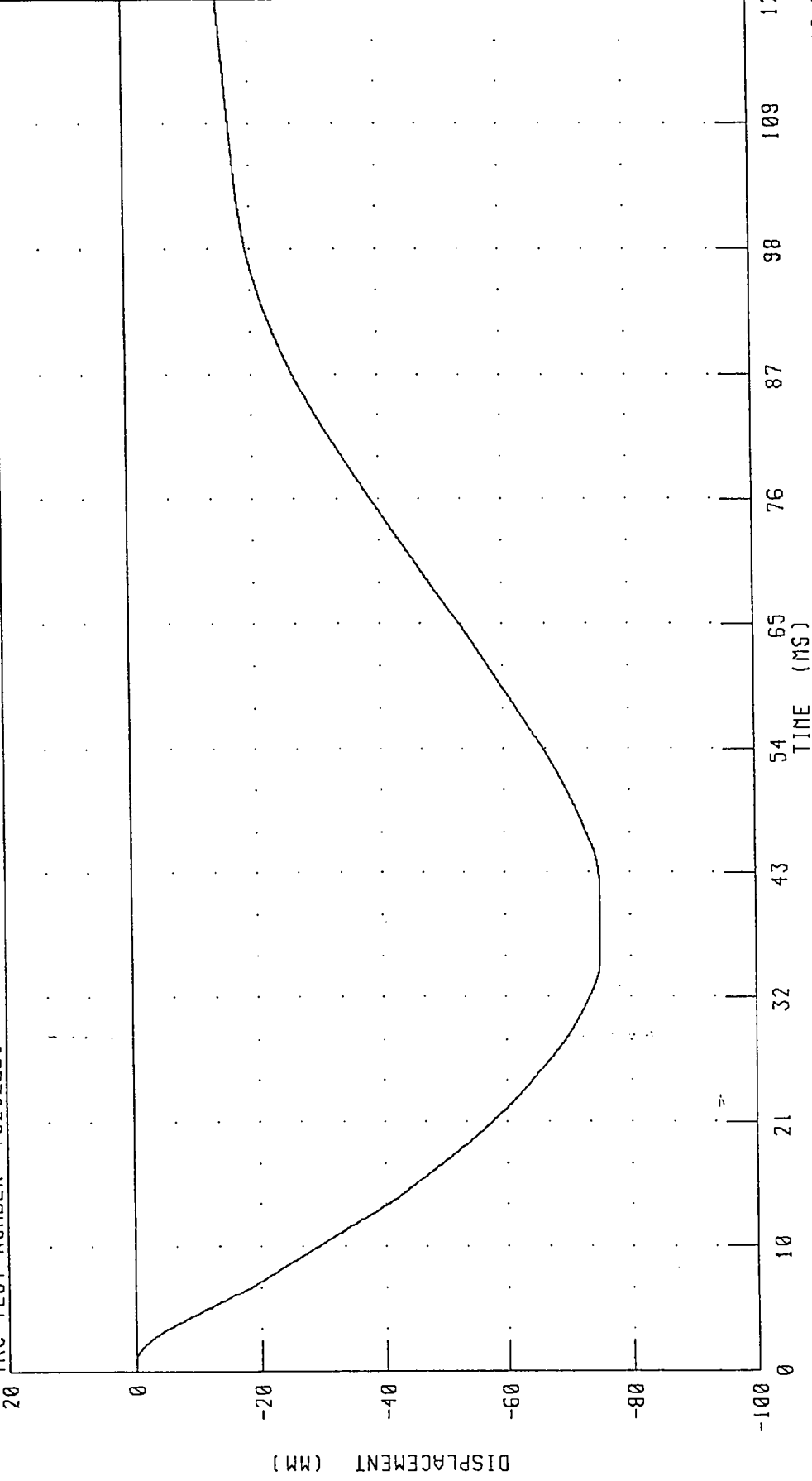
T.A.D. DUMMY LOWER LEFT RIB CAGE IMPACT TEST 4.3 M/SEC

POSITION 4 POSTERIOR/ANTERIOR CHEST POTENTIOMETER

RUN NUMBER: 121693.1650;2

TRC TEST NUMBER: T02C2LL1

T.A.D.02 LOWER LEFT RIB



CHANNEL: CST4PA FILTER: CH. CLASS 180

PEAK DATA: 0.05 MM @ 0.48 MS; -75.03 MM @ 42.16 MS

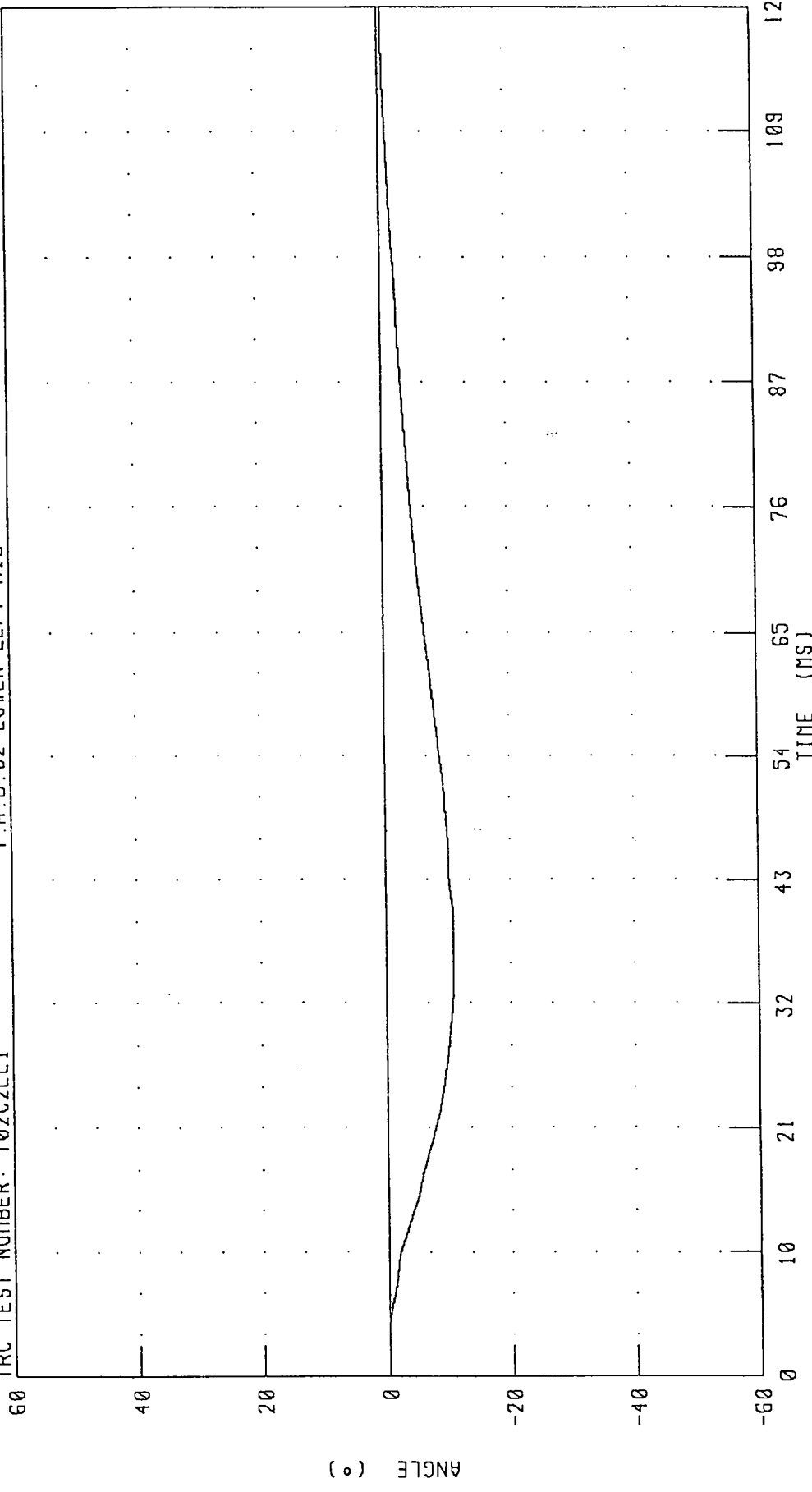
T.A.D. DUMMY LOWER LEFT RIB CAGE IMPACT TEST 4.3 M/SEC

POSITION 4 RIGHT/LEFT CHEST POTENTIOMETER

RUN NUMBER: 121693.1650;2

TRC TEST NUMBER: T02C2LL1

T.A.D.02 LOWER LEFT RIB

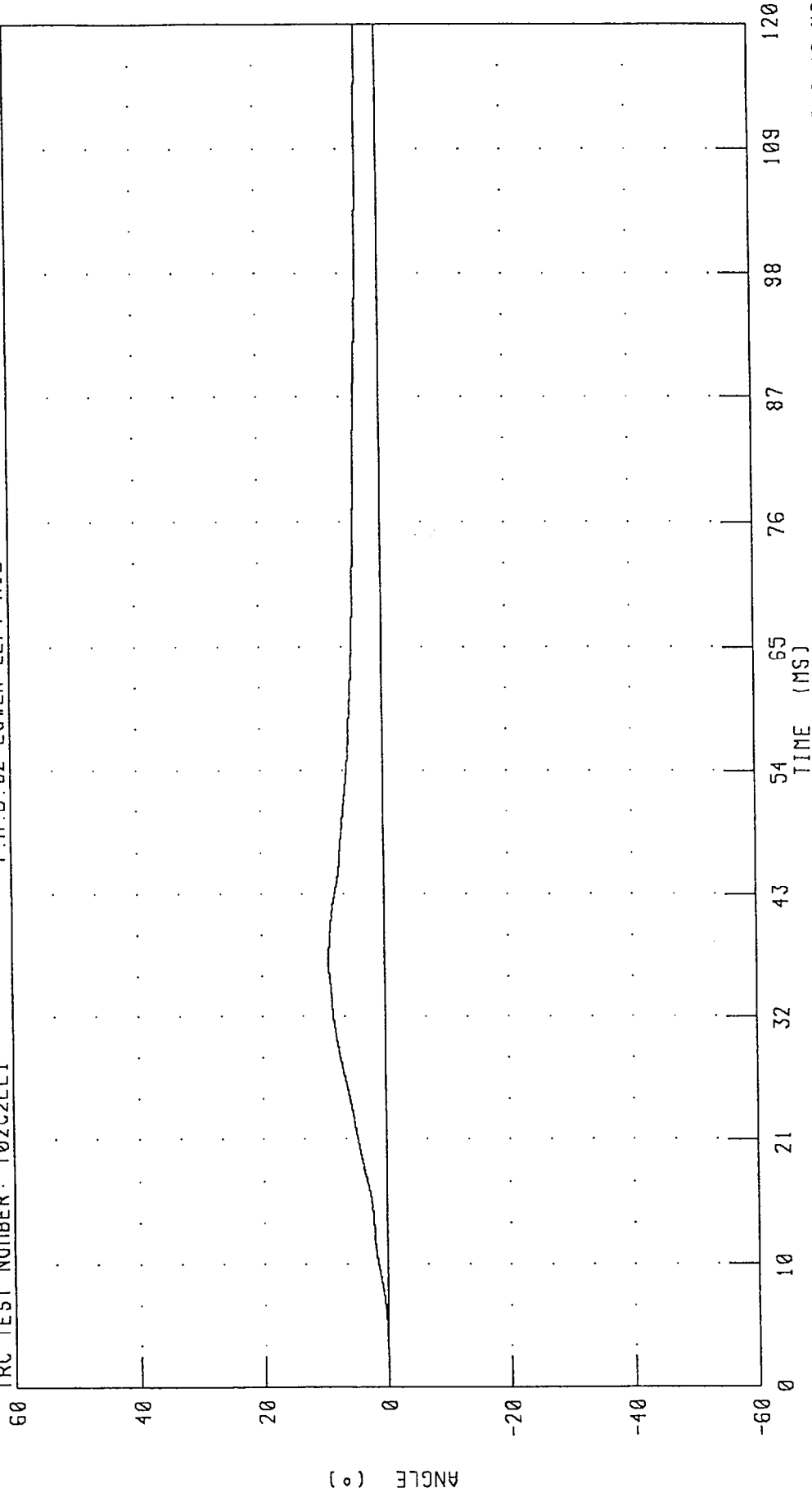


CHANNEL: CST4RL FILTER: CH. CLASS 180 PEAK DATA: 0.03 ° @ 3.76 MS; -10.72 ° @ 37.76 MS

T.A.O. DUMMY LOWER LEFT RIB CAGE IMPACT TEST 4.3 M/SEC

POSITION 4 INFERIOR/SUPERIOR CHEST POTENTIOMETER

TRC TEST NUMBER: T02C2LL1 T.A.O.02 LOWER LEFT RIB RUN NUMBER: 121693.1650;2



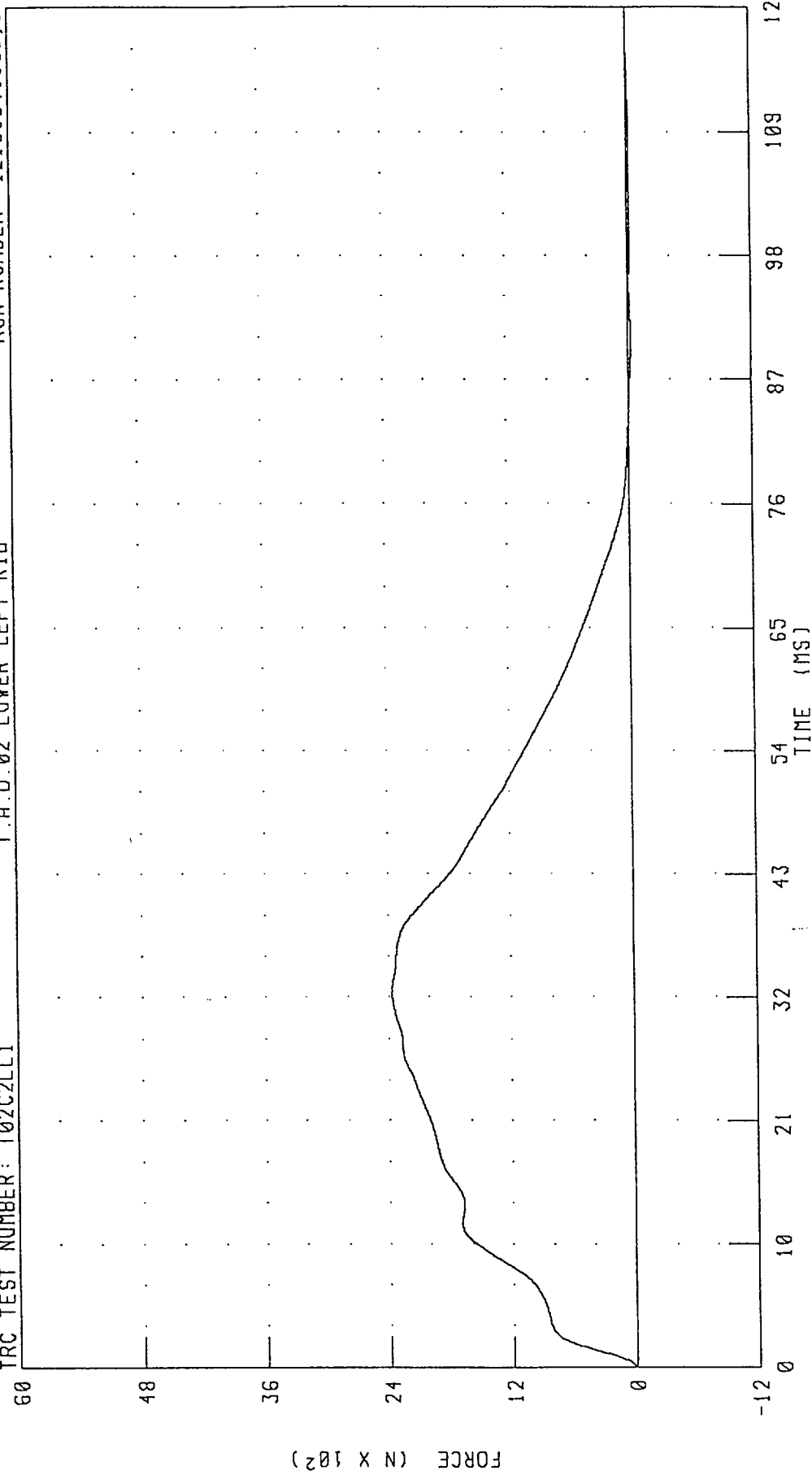
CHANNEL: CST4IS FILTER: CH. CLASS 180

PEAK DATA: 9.11 ° @ 37.84 MS; 0.00 ° @ 0.48 MS

T.A.D. DUMMY LOWER LEFT RIB CAGE IMPACT TEST 4.3 M/SEC

PENDULUM FORCE

TRC TEST NUMBER: T02C2LL1 T.A.D.02 LOWER LEFT RIB RUN NUMBER: 121693.1650;1



CHANNEL: FORCE FILTER: CH. CLASS 180 PEAK DATA: 2368.57 N @ 33.20 MS; -26.16 N @ 90.16 MS

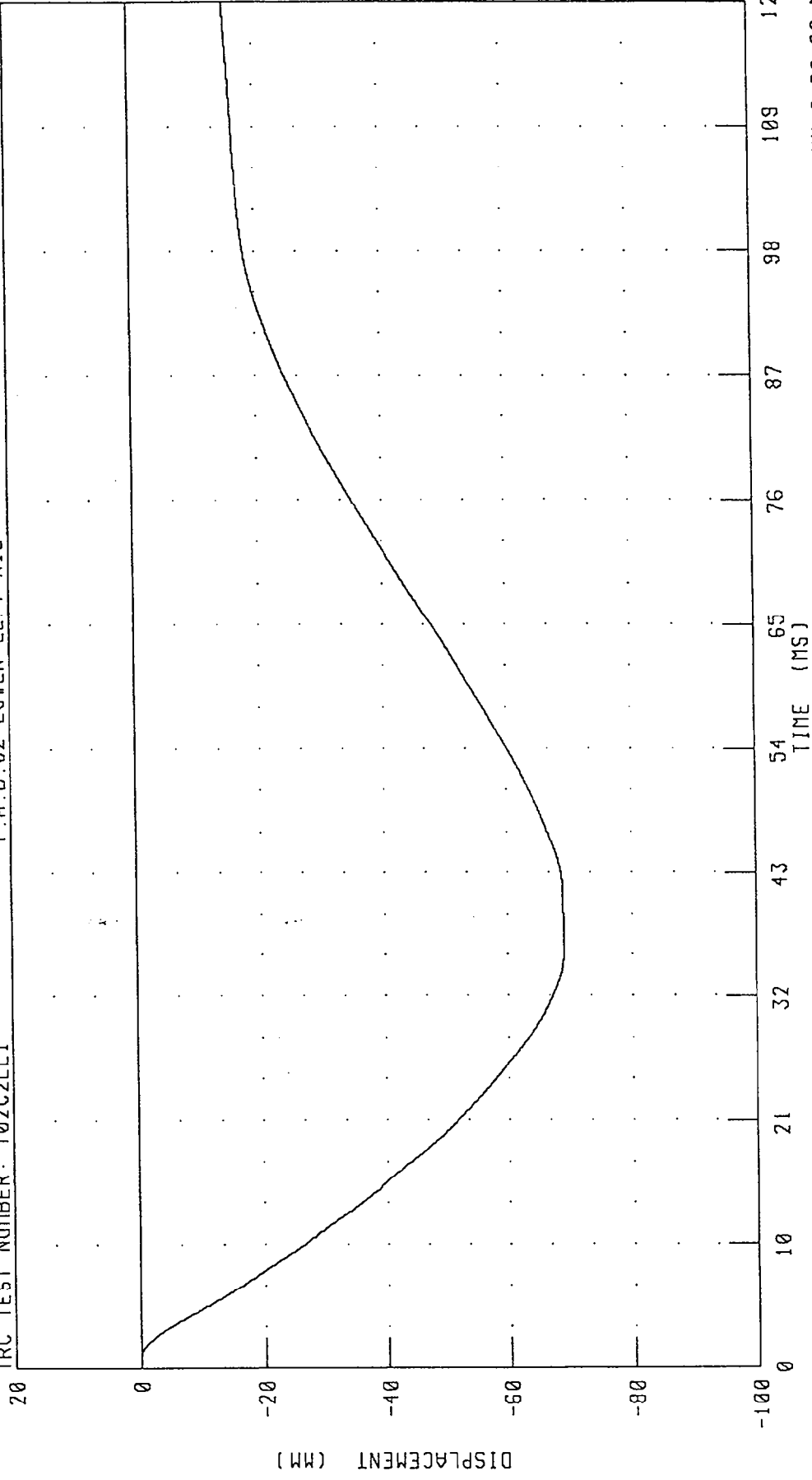
T.A.D. DUMMY LOWER LEFT RIB CAGE IMPACT TEST 4.3 M/SEC

POSITION 4 X-AXIS CHEST DEFLECTION

TRC TEST NUMBER: T02C2LL1

T.A.D.02 LOWER LEFT RIB

RUN NUMBER: 121693.1650;1



PEAK DATA: 0.04 MM @ 0.48 MS; -69.11 MM @ 36.96 MS

CHANNEL: DELX4 FILTER: CH. CLASS 180

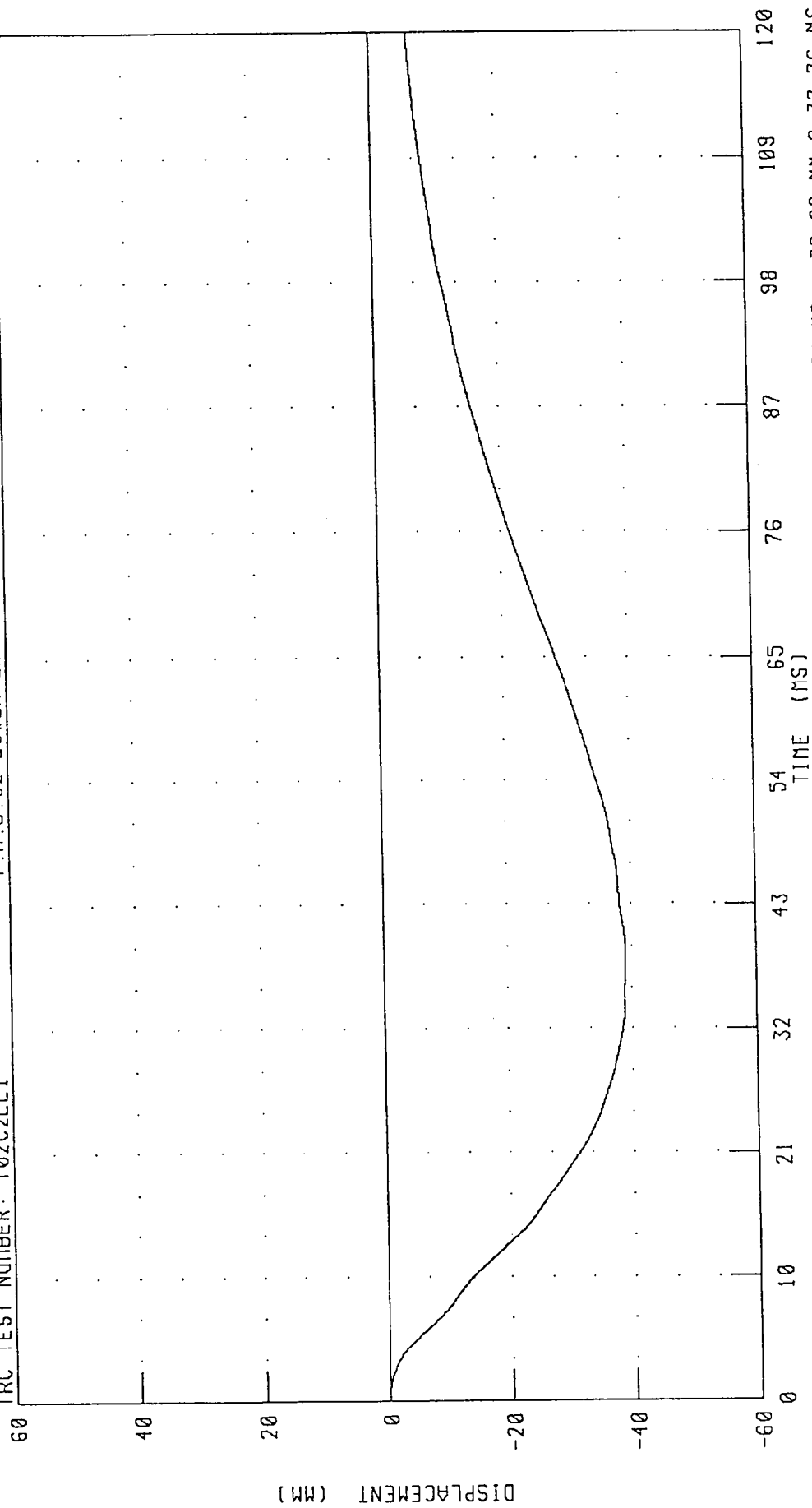
T.A.D. DUMMY LOWER LEFT RIB CAGE IMPACT TEST 4.3 M/SEC

POSITION 4 Y-AXIS CHEST DEFLECTION

RUN NUMBER: 121693.1650;1

T.A.D. 02 LOWER LEFT RIB

TRC TEST NUMBER: T02C2LL1



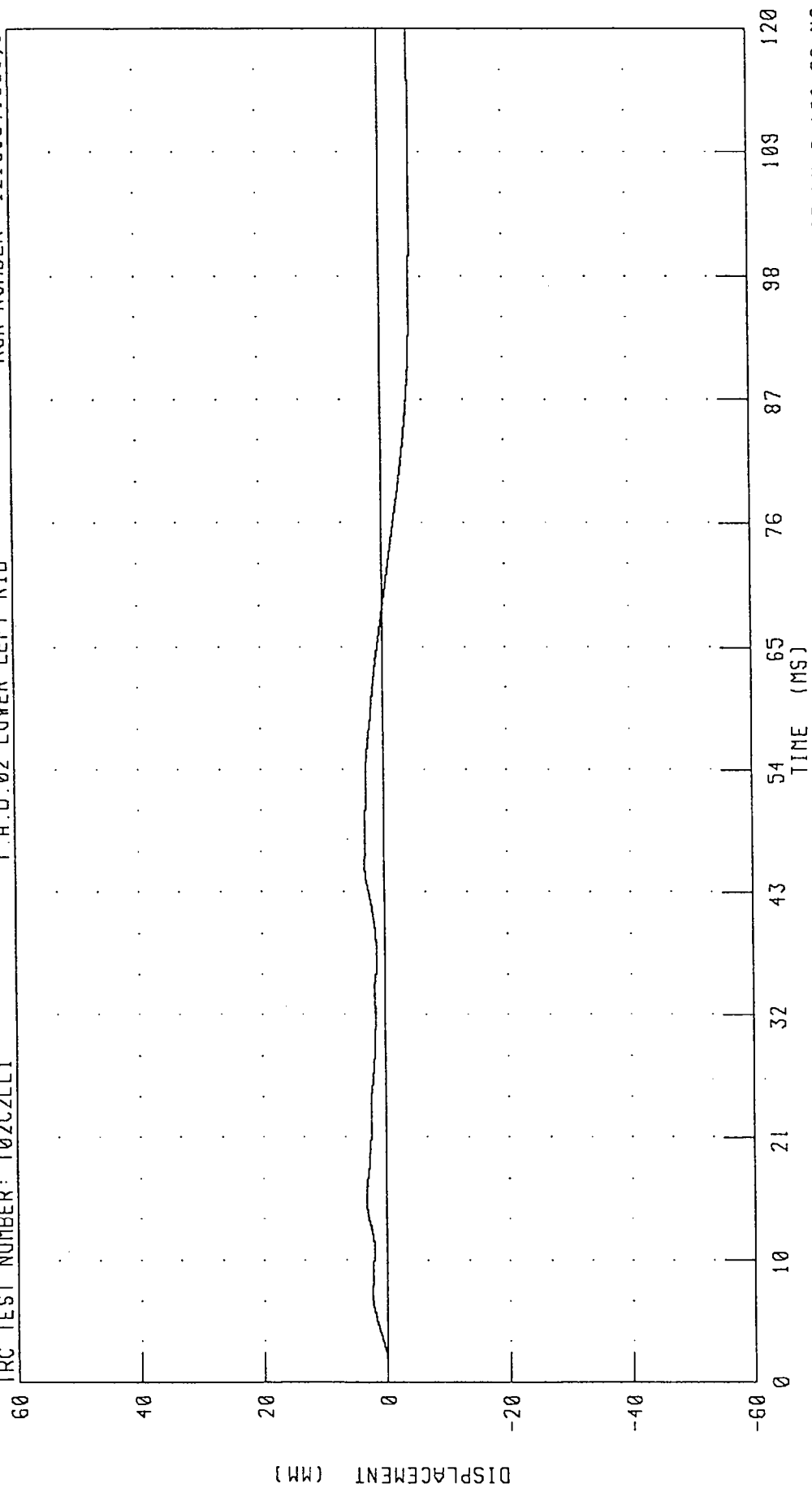
PEAK DATA: 0.02 MM @ 0.24 MS; -38.99 MM @ 37.76 MS

CHANNEL: DELY4 FILTER: CH. CLASS 180

T.A.D. DUMMY LOWER LEFT RIB CAGE IMPACT TEST 4.3 M/SEC

POSITION 4 Z-AXIS CHEST DEFLECTION

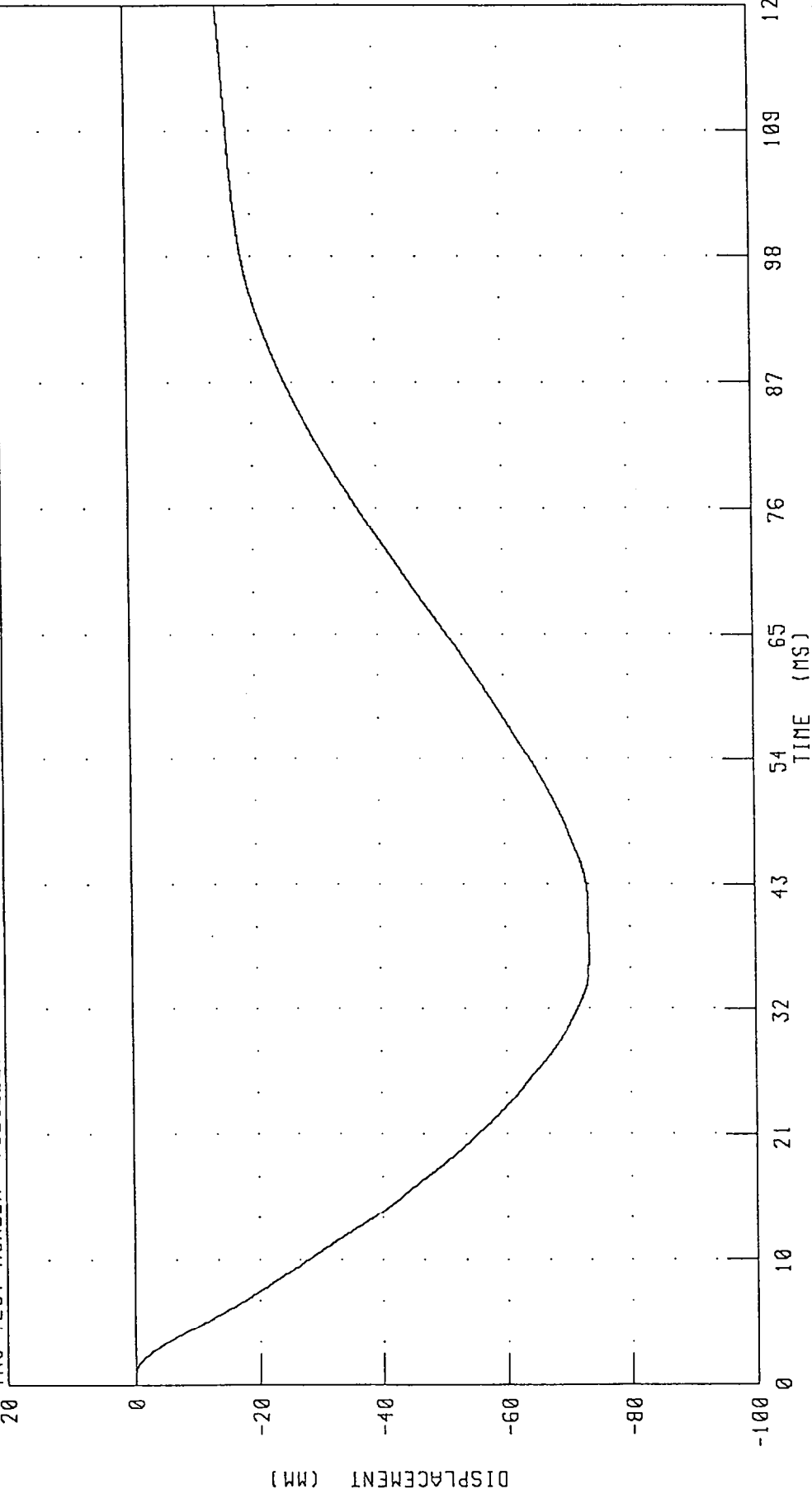
TRC TEST NUMBER: T02C2LL1 T.A.D.02 LOWER LEFT RIB RUN NUMBER: 121693.1650;1



CHANNEL: DELZ4 FILTER: CH. CLASS 180 PEAK DATA: 3.24 MM @ 16.48 MS; -4.93 MM @ 108.88 MS

T.A.D. DUMMY LOWER LEFT RIB CAGE IMPACT TEST 4.3 M/SEC
POSITION 4 ALT. A/P-AXIS CHEST DEFLECTION

TRC TEST NUMBER: T02C2LL1 T.A.D. 02 LOWER LEFT RIB RUN NUMBER: 121693.1650.1



CHANNEL: COMP4 FILTER: CH. CLASS 180 PEAK DATA: 0.05 MM @ 0.48 MS; -73.27 MM @ 38.40 MS

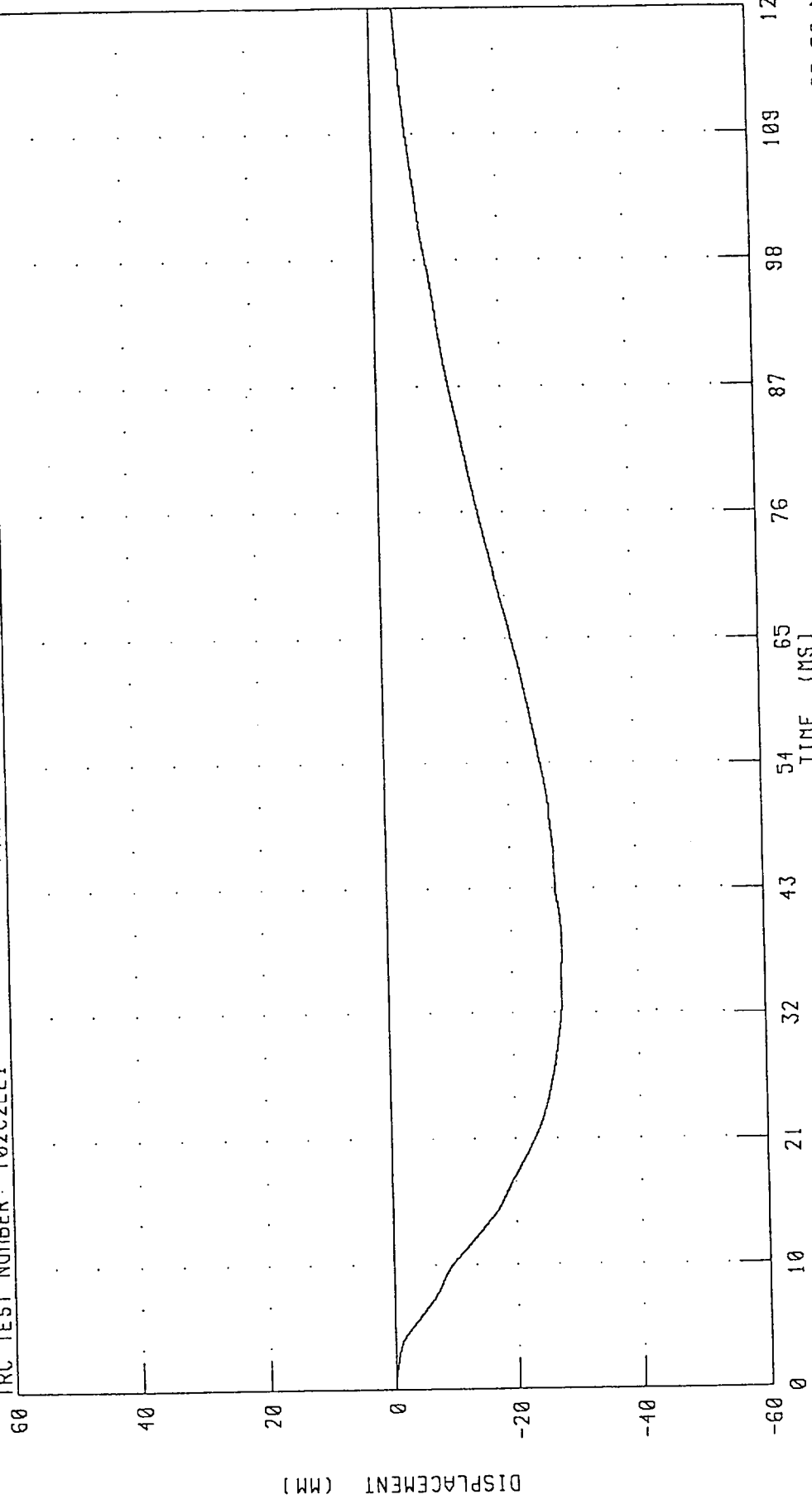
T.A.D. DUMMY LOWER LEFT RIB CAGE IMPACT TEST 4.3 M/SEC

POSITION 4 ALT. R/L-AXIS CHEST DEFLECTION

RUN NUMBER: 121693.1650;1

T.A.D.02 LOWER LEFT RIB

TRC TEST NUMBER: T02C2LL1



PEAK DATA: 0.01 MM @ 0.16 MS; -28.07 MM @ 37.76 MS

CHANNEL: TWIST4 FILTER: CH. CLASS 180

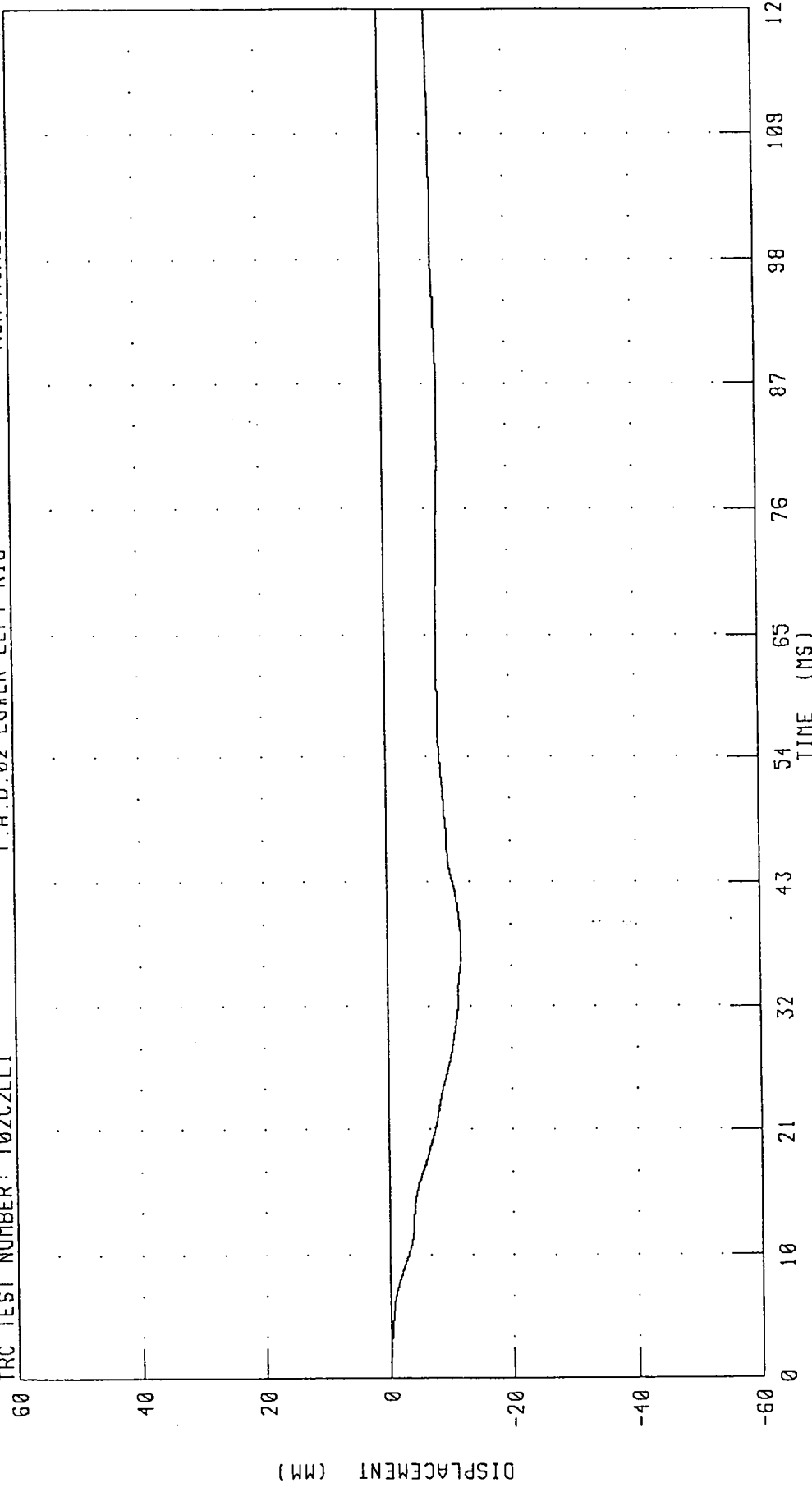
T.A.O. DUMMY LOWER LEFT RIB CAGE IMPACT TEST 4.3 M/SEC

POSITION 4 ALT. I/S-AXIS CHEST DEFLECTION

RUN NUMBER: 121693.1650;1

T.A.D.02 LOWER LEFT RIB

TRC TEST NUMBER: T02C2L11



PEAK DATA: 0.01 MM @ 0.48 MS; -11.88 MM @ 37.84 MS

CHANNEL: LIFT4 FILTER: CH. CLASS 180

PRE-TEST CALIBRATION

PASSENGER DUMMY

SN 001

TRANSPORTATION RESEARCH CENTER INC.

HEAD DROP TEST

HYBRID III

24-DEC-93

TRC INC.

TEST NO: T01C4HD1

572E SNT01 HEAD DROP CAL04

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	52.0 %
PEAK RESULTANT ACCELERATION	225 - 275 G	233.19 G
PEAK LATERAL ACCELERATION	15 G MAX	6.70 G
IS ACCELERATION CURVE UNIMODAL?	YES	YES

SKULL SURFACE WAS LUBRICATED TO ADJUST RESPONSE

TEST MEETS SPECIFICATIONS

TECHNICIAN

V. F. Watters

RUN NUMBER: 122493.1157;4

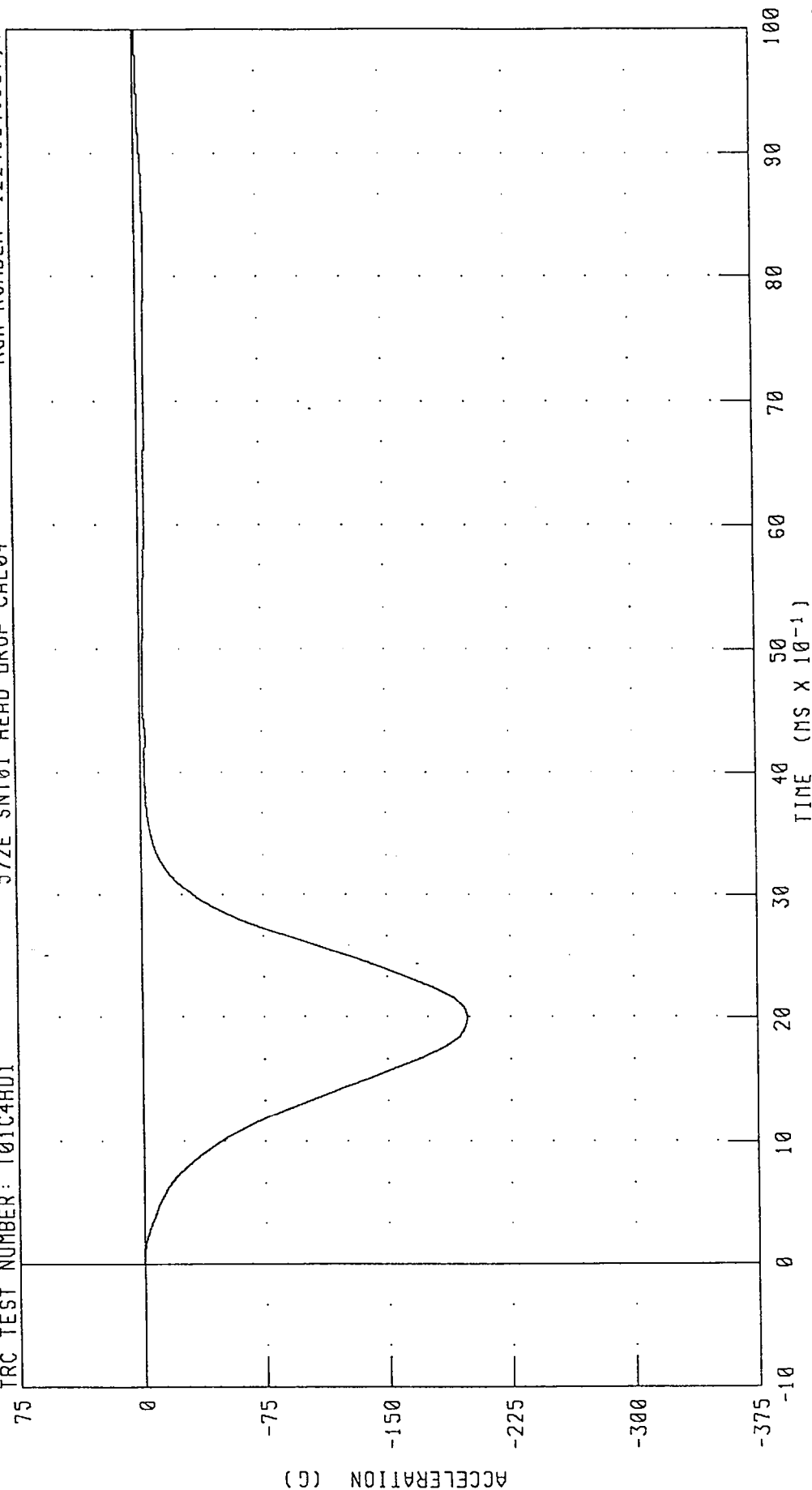
PART 572-E HYBRID III HEAD CALIBRATION

HEAD ACCELERATION X AXIS

TRC TEST NUMBER: T01C4HD1

572E SNT01 HEAD DROP CAL04

RUN NUMBER: 122493.1157,4



PEAK DATA: -0.04 G @ 0.00 MS; -198.58 G @ 2.00 MS

CHANNEL: HEDXC FILTER: CH. CLASS 1000

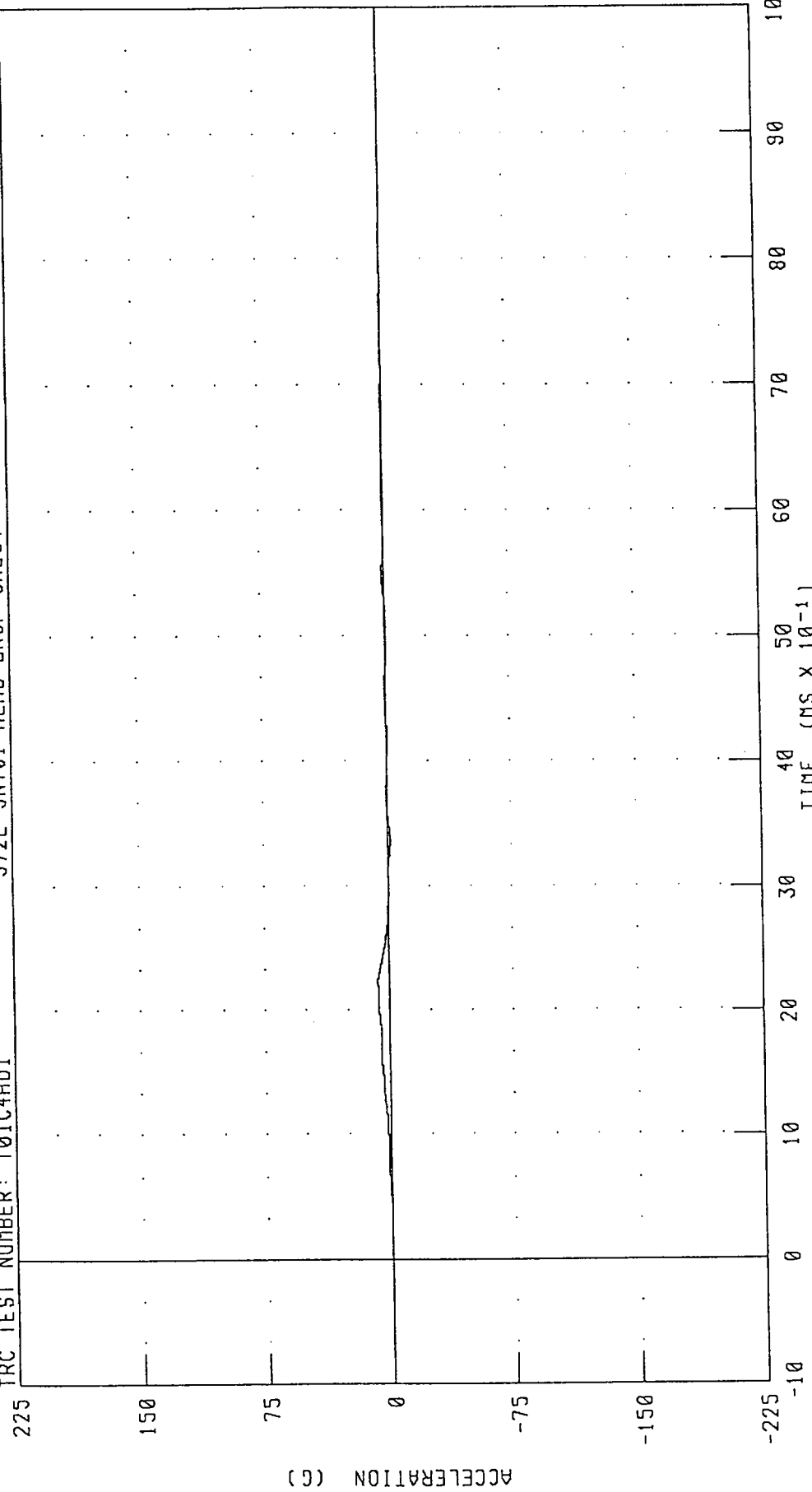
PART 572-E HYBRID III HEAD CALIBRATION

HEAD ACCELERATION Y AXIS

572E SNT01 HEAD DROP CAL04

TRC TEST NUMBER: T01C4HD1

RUN NUMBER: 122493.1157;4



CHANNEL: HEDYG FILTER: CH. CLASS 1000

PEAK DATA: 6.71 G @ 2.24 MS, -1.60 G @ 3.36 MS

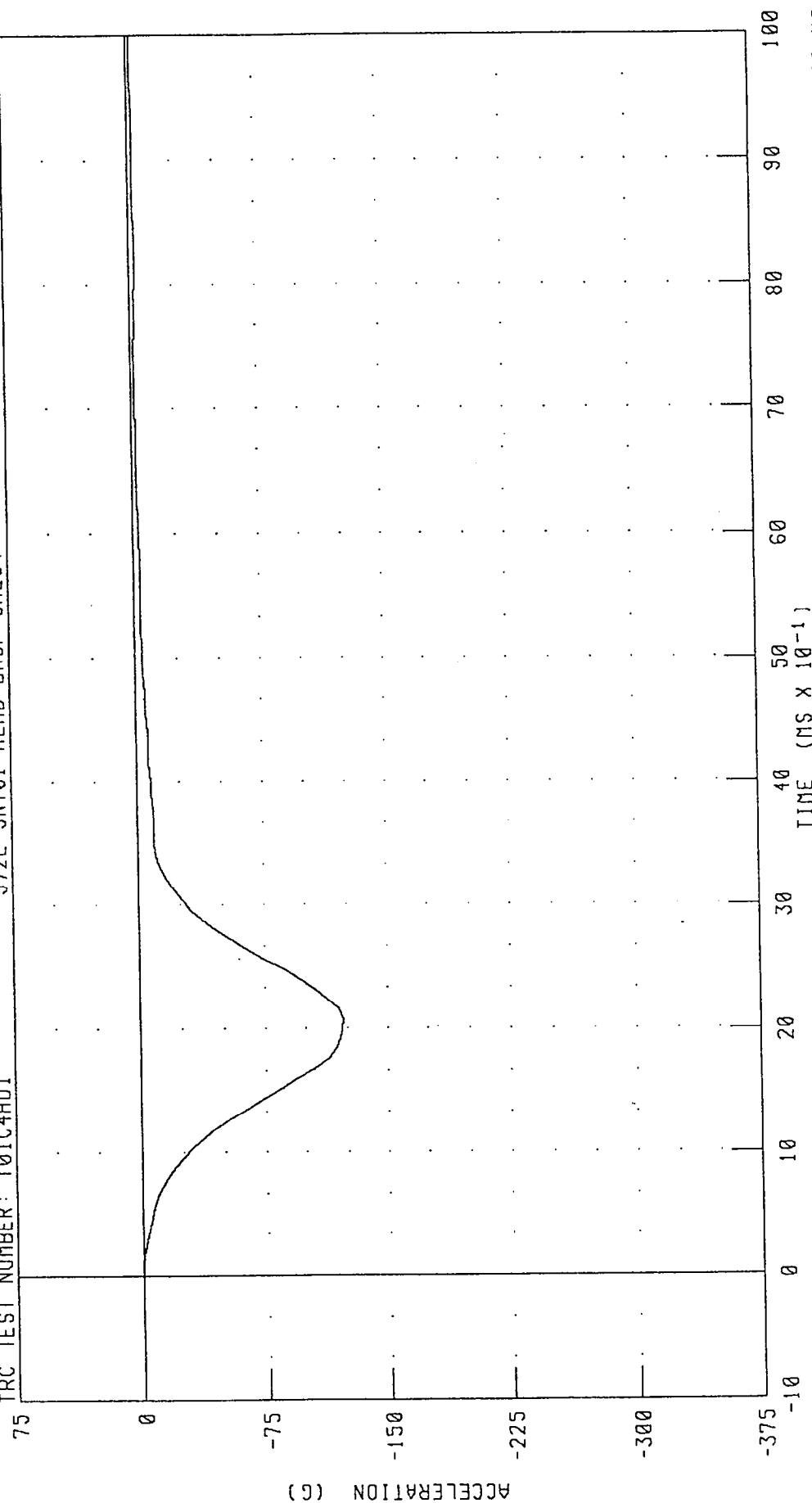
PART 572-E HYBRID III HEAD CALIBRATION

HEAD ACCELERATION Z AXIS

572E SNT01 HEAD DROP CAL04

RUN NUMBER: 122493.1157.4

TRC TEST NUMBER: T01C4HD1



PEAK DATA: 0.10 G @ -0.32 MS; -122.72 G @ 2.08 MS

CHANNEL: HEDZG FILTER: CH. CLASS 1000

PART 572-E HYBRID III HEAD CALIBRATION

HEAD RESULTANT ACCELERATION

572E SNT01 HEAD DROP CAL04

TRC TEST NUMBER: T01C4HD1

375

300

225

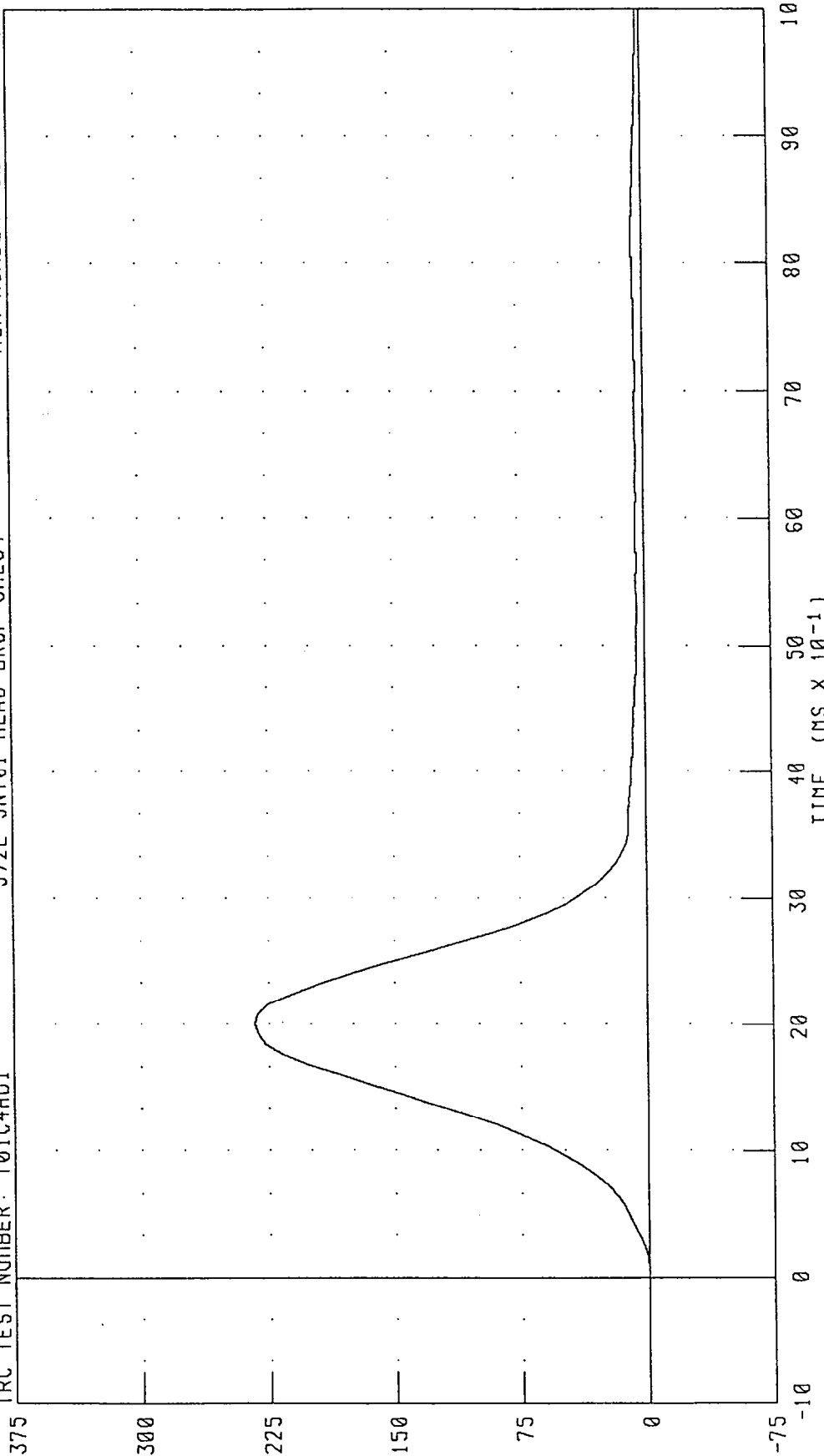
150

75

0

-75

ACCELERATION (G)



TIME (MS X 10⁻¹)

PEAK DATA: 233.19 G @ 2.00 MS; 0.06 G @ -0.88 MS

FILTER: CH CLASS 1000

CHANNEL: HEDRG

TRANSPORTATION RESEARCH CENTER INC.

NECK FLEXION TEST - 3 CHANNEL TRANSDUCER

HYBRID III

24-DEC-93

TRC INC. TEST NO: T01C4NF1 572E SNT01 NECK FLEXION CAL04

TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE		20.6-22.2 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY		10 - 70 %	52.0 %
IMPACT VELOCITY		6.89 - 7.13 M/S	7.06 M/S
PENDULUM DECELERATION	10 MS	22.50 - 27.50 G	22.61 G
	20 MS	17.60 - 22.60 G	19.55 G
	30 MS	12.50 - 18.50 G	15.12 G
MAX PENDULUM G		29 G MAX	24.06 G
MAX PENDULUM G ABOVE 30 MS		29 G MAX	15.09 G
DECELERATION-TIME CURVE DECAY TIME TO 5 G		34 - 42 MS	41.92 MS
D PLANE	MAX	64 - 78 DEG.	67.89 DEG.
ROTATION	TIME	57 - 64 MS	58.72 MS
MOMENT ABOUT OCCIPITAL CONDYLE	MAX	88.2 - 108.5 NM	101.53 NM
	TIME	47 - 58 MS	54.08 MS
ROTATION ANGLE-TIME CURVE DECAY TIME TO ZERO		113 - 128 MS	114.08 MS
POSITIVE MOMENT-TIME CURVE DECAY TIME TO ZERO		97 - 107 MS	102.16 MS

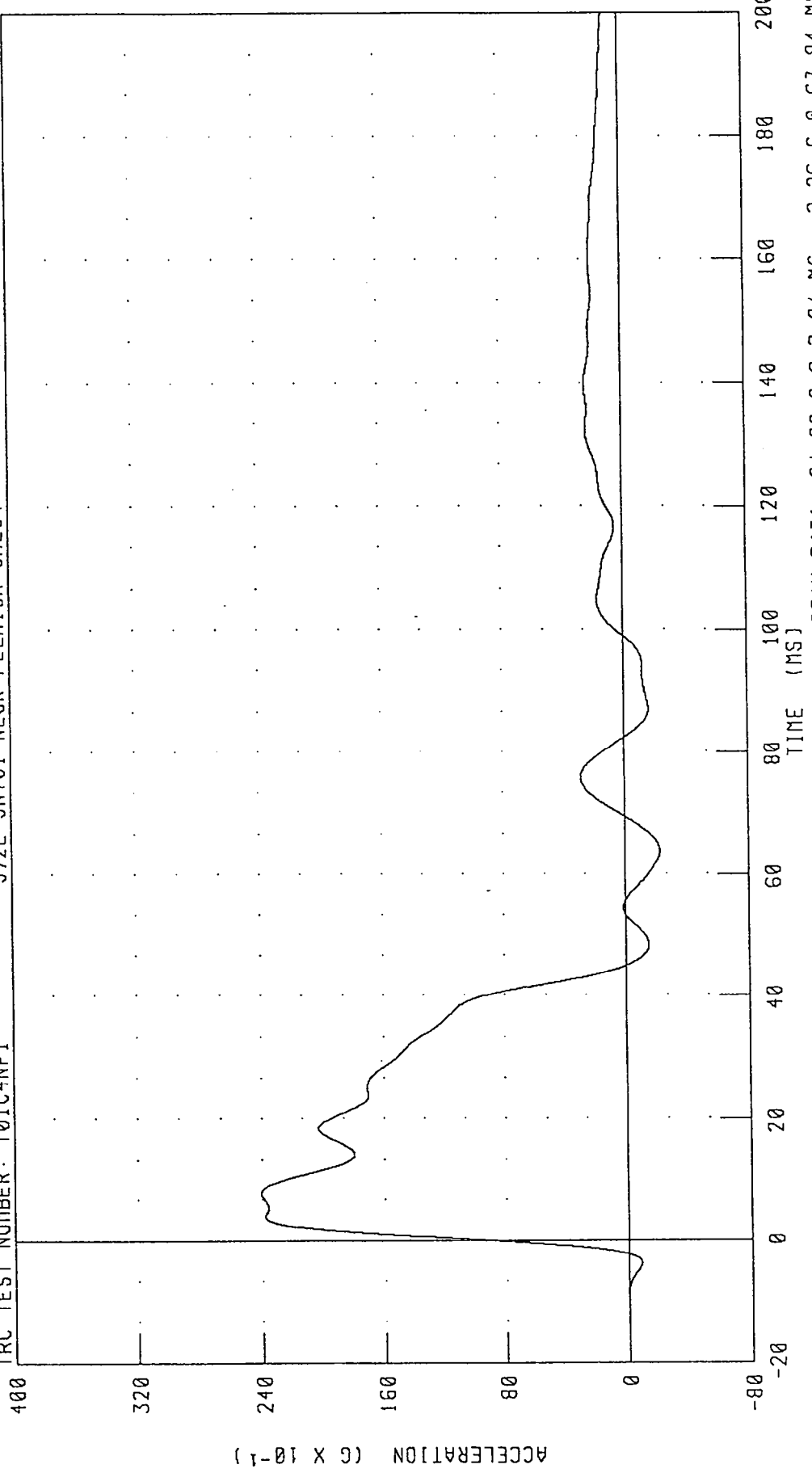
TEST MEETS SPECIFICATIONS

TECHNICIAN Pete Fox

RUN NUMBER: 122493.1132;9

PART 572-E HYBRID III NECK FLEXION CALIBRATION
PENDULUM DECELERATION

TRC TEST NUMBER: T01C4NF1 572E SNT01 NECK FLEXION CAL04 RUN NUMBER: 122493.1133.9



CHANNEL: PENXG FILTER: CH. CLASS 60 PEAK DATA: 24.06 G @ 7.84 MS; -2.26 G @ 63.84 MS

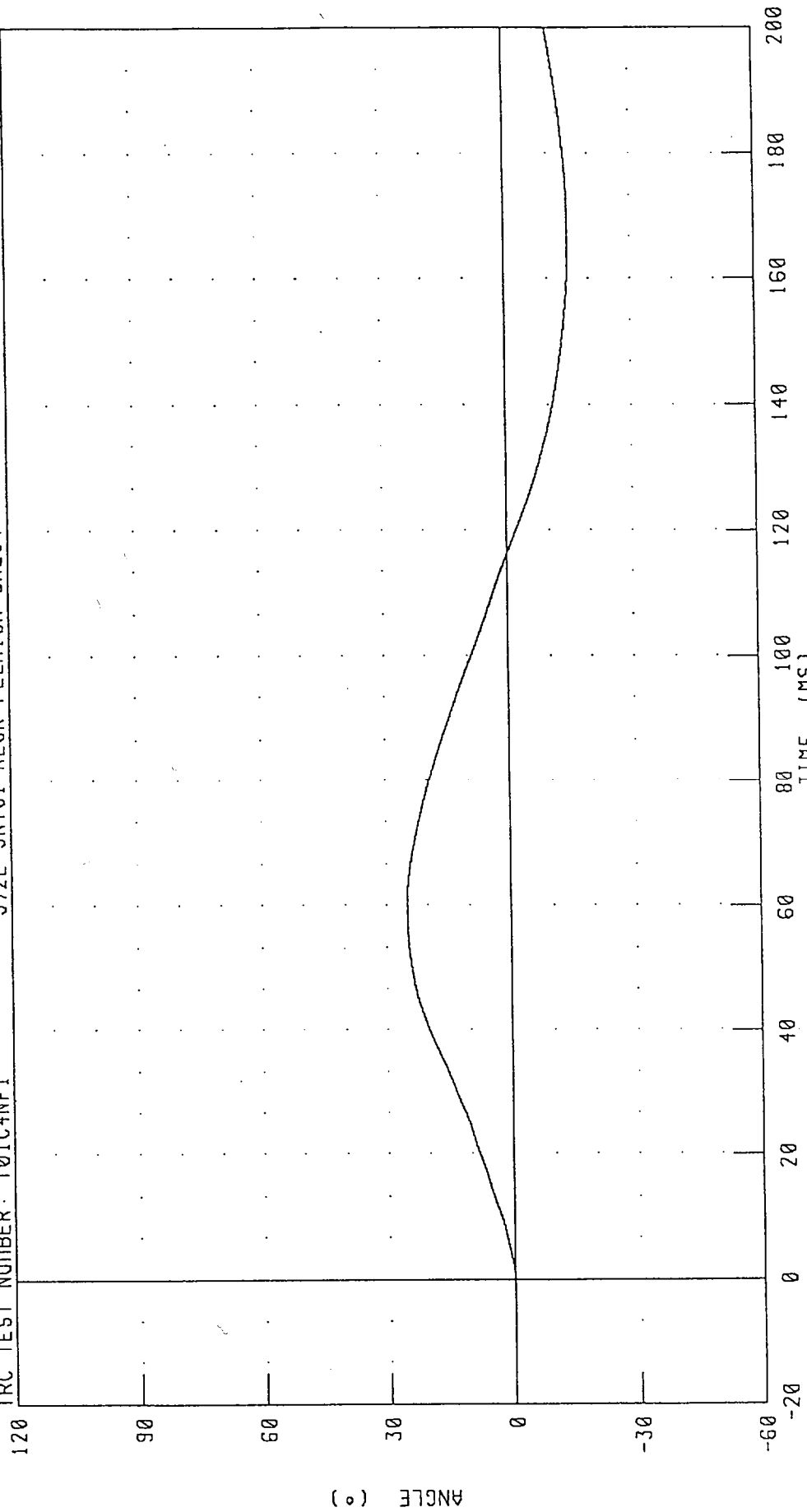
PART 572-E HYBRID III NECK FLEXION CALIBRATION

ROTATION ABOUT BASE OF NECK

572E SNT01 NECK FLEXION CAL04

RUN NUMBER: 122493.1133;9

TRC TEST NUMBER: T01C4NF1

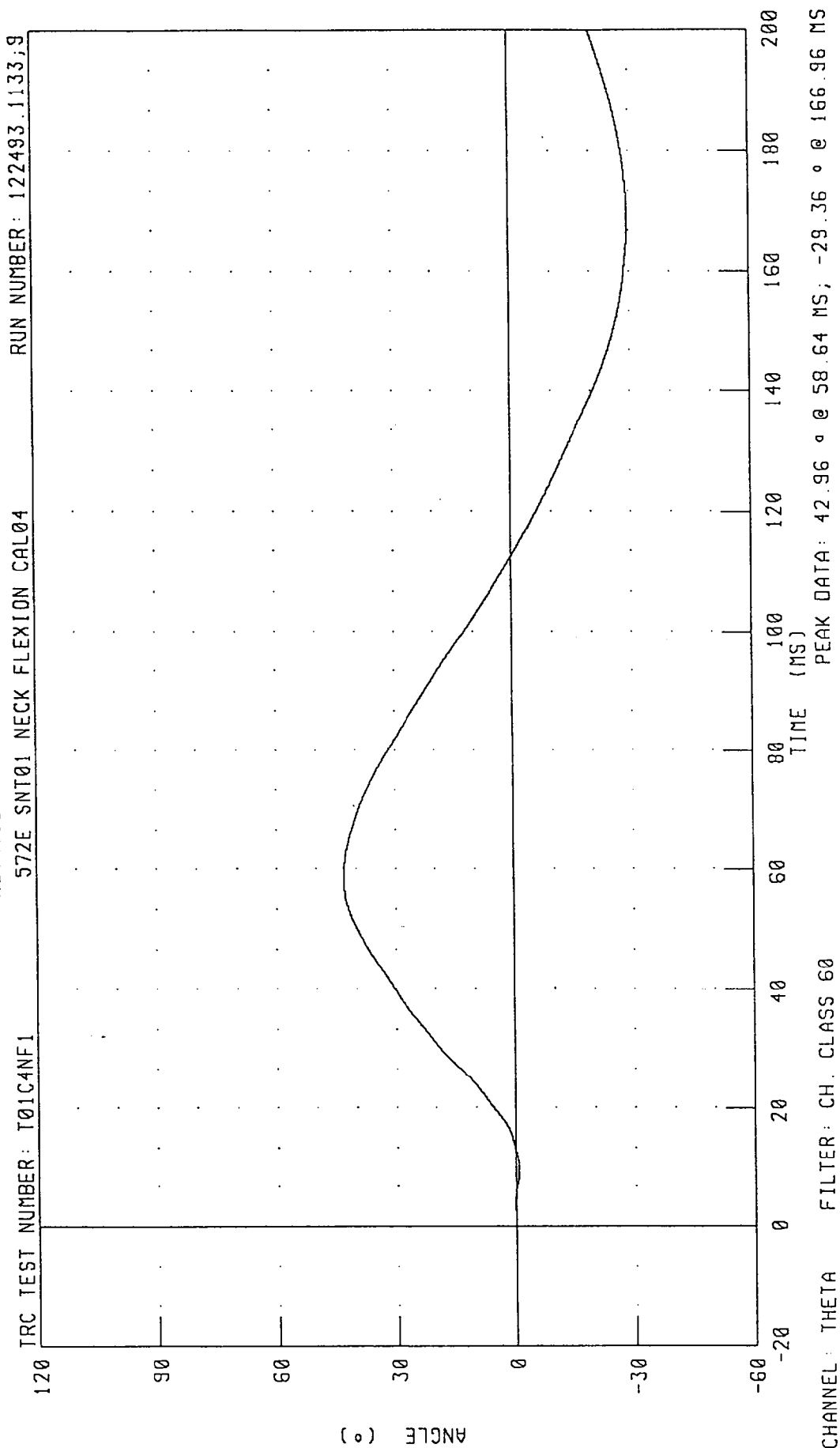


PEAK DATA: 24.93 ° @ 59.60 MS; -15.07 ° @ 166.32 MS

FILTER: CH. CLASS 60

CHANNEL: BETA

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



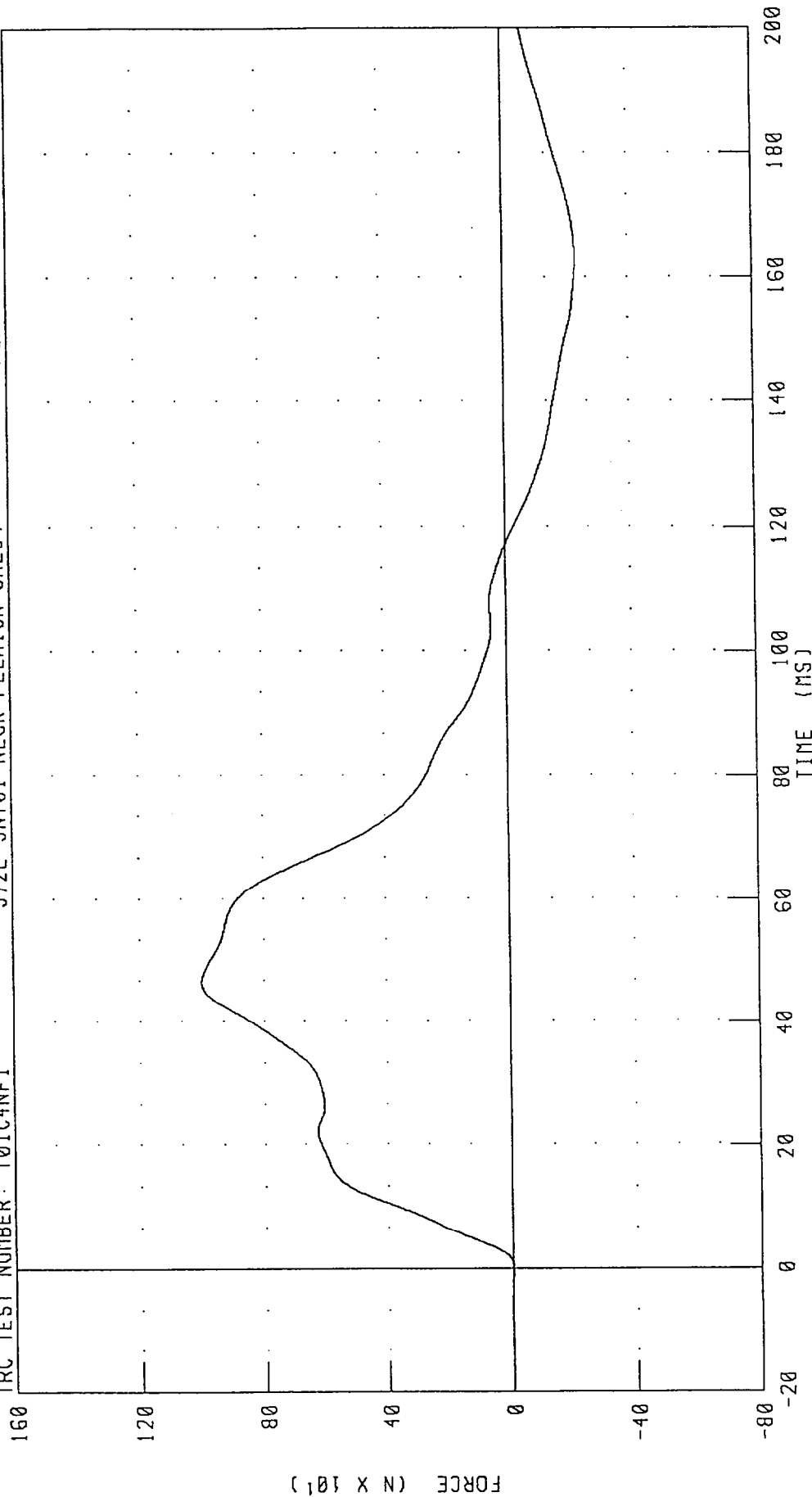
PART 572-E HYBRID III NECK FLEXION CALIBRATION

NECK FORCE X AXIS

TRC TEST NUMBER: T01C4NF1

572E SNT01 NECK FLEXION CAL04

RUN NUMBER: 122493.1133;9

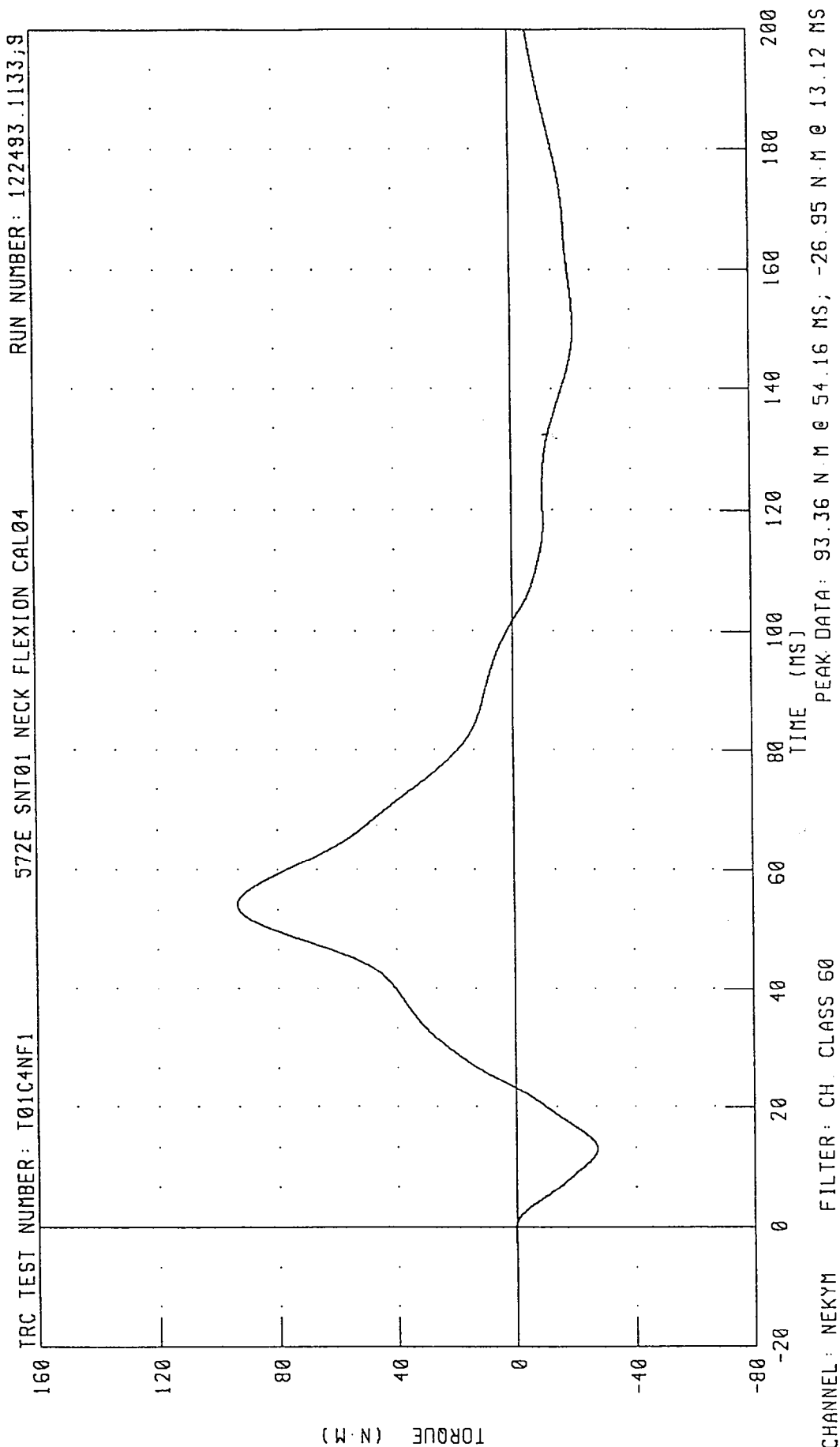


PEAK DATA: 1001.59 N @ 46.40 MS; -232.40 N @ 162.96 MS

CHANNEL: NEKXF FILTER: CH. CLASS 60

PART 572-E HYBRID III NECK FLEXION CALIBRATION

NECK MOMENT Y AXIS

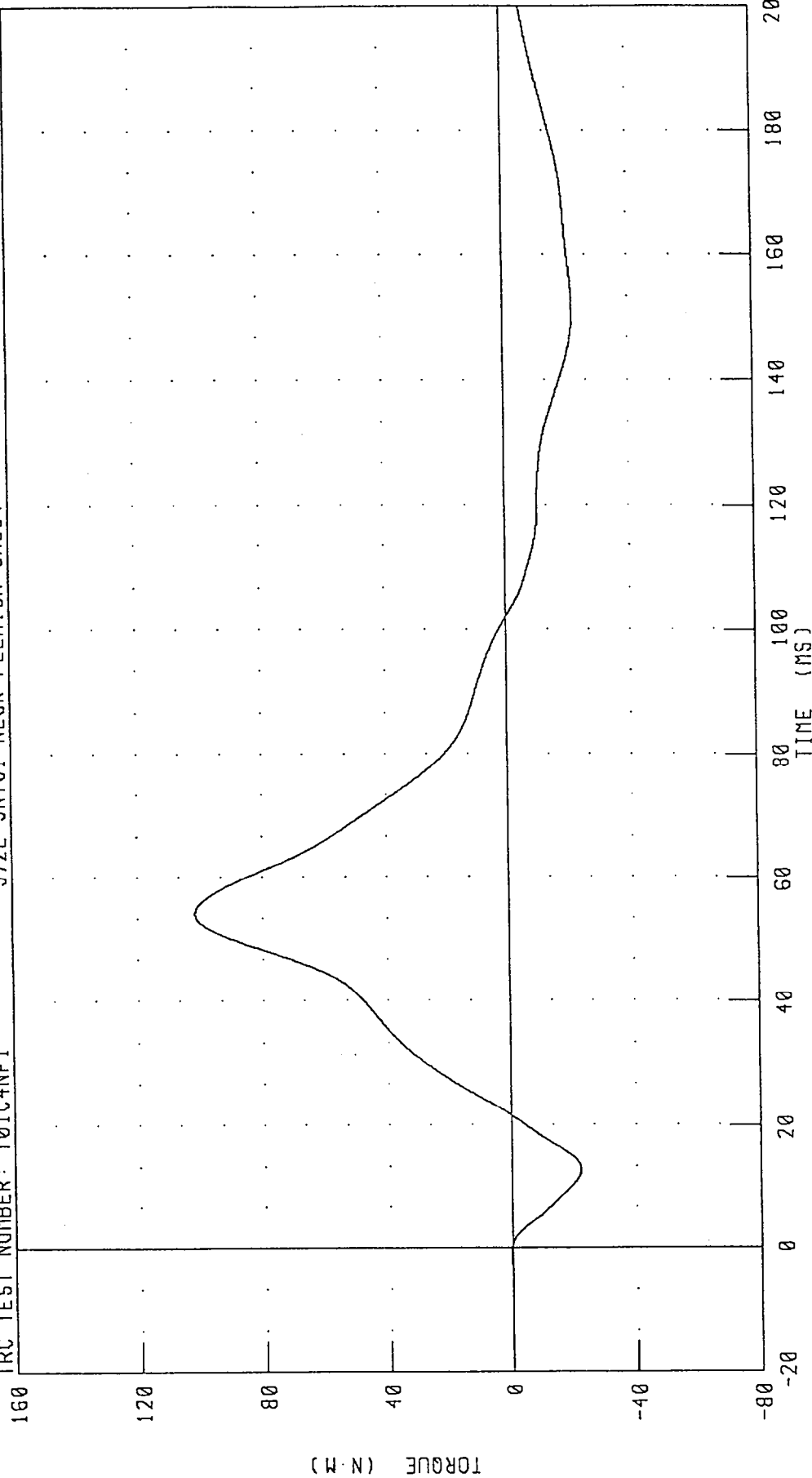


PART 572-E HYBRID III NECK FLEXION CALIBRATION
TOTAL MOMENT ABOUT OCCIPITAL CONDYLE

TRC TEST NUMBER: T01C4NF1

572E SNT01 NECK FLEXION CAL04

RUN NUMBER: 122493.1133,9



PEAK DATA: 101.53 N·M @ 54.08 MS; -22.45 N·M @ 12.80 MS

CHANNEL: NEKOM FILTER: CH. CLASS 60

TRANSPORTATION RESEARCH CENTER INC.

NECK EXTENSION TEST - 3 CHANNEL TRANSDUCER

HYBRID III

24-DEC-93

TRC INC. TEST NO: T01C4NE1 572E SNT01 NECK EXT. CAL04

TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE		20.6-22.2 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY		10 - 70 %	52.0 %
IMPACT VELOCITY		5.95 - 6.19 M/S	6.02 M/S
PENDULUM DECELERATION	10 MS	17.20 - 21.20 G	19.48 G
	20 MS	14.00 - 19.00 G	16.62 G
	30 MS	11.00 - 16.00 G	14.15 G
MAX PENDULUM G		22 G MAX	19.70 G
MAX PENDULUM G ABOVE 30 MS		22 G MAX	14.14 G
DECELERATION-TIME CURVE DECAY TIME TO 5 G		38 - 46 MS	40.64 MS
D PLANE	MAX	81 - 106 DEG.	87.93 DEG.
ROTATION	TIME	72 - 82 MS	73.84 MS
MOMENT ABOUT OCCIPITAL CONDYLE	MIN	-80.0/-52.9 NM	-65.45 NM
	TIME	65 - 79 MS	69.36 MS
ROTATION ANGLE-TIME CURVE DECAY TIME TO ZERO		147 - 174 MS	149.20 MS
NEGATIVE MOMENT-TIME CURVE DECAY TIME TO ZERO		120 - 148 MS	134.72 MS

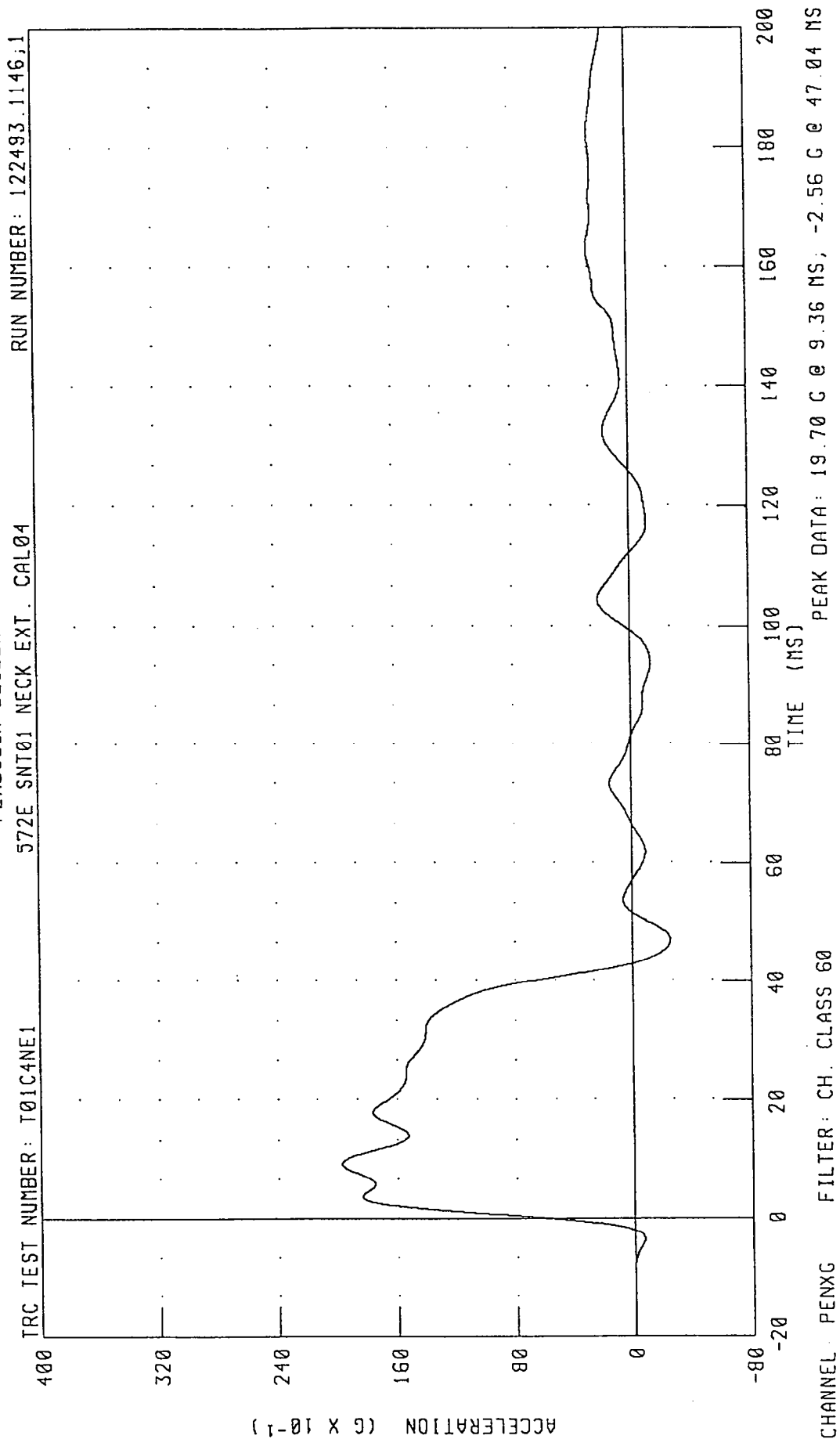
TEST MEETS SPECIFICATIONS

TECHNICIAN Pete Ross

RUN NUMBER: 122493.1146;1

PART 572-E HYBRID III NECK EXTENSION CALIBRATION

PENDULUM DECELERATION



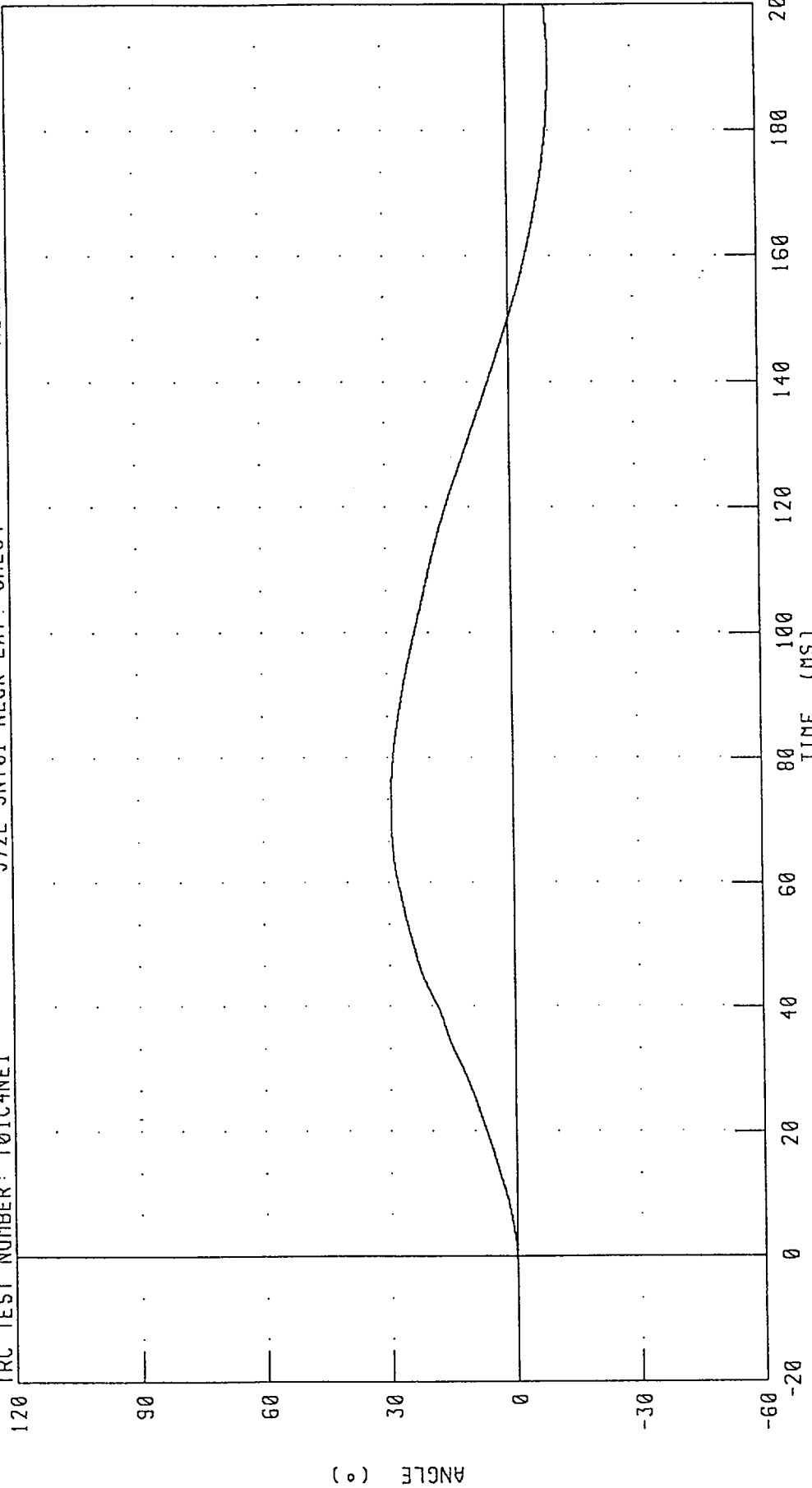
PART 572-E HYBRID III NECK EXTENSION CALIBRATION

ROTATION ABOUT BASE OF NECK

572E SNT01 NECK EXT. CAL04

RUN NUMBER: 122493.1146;1

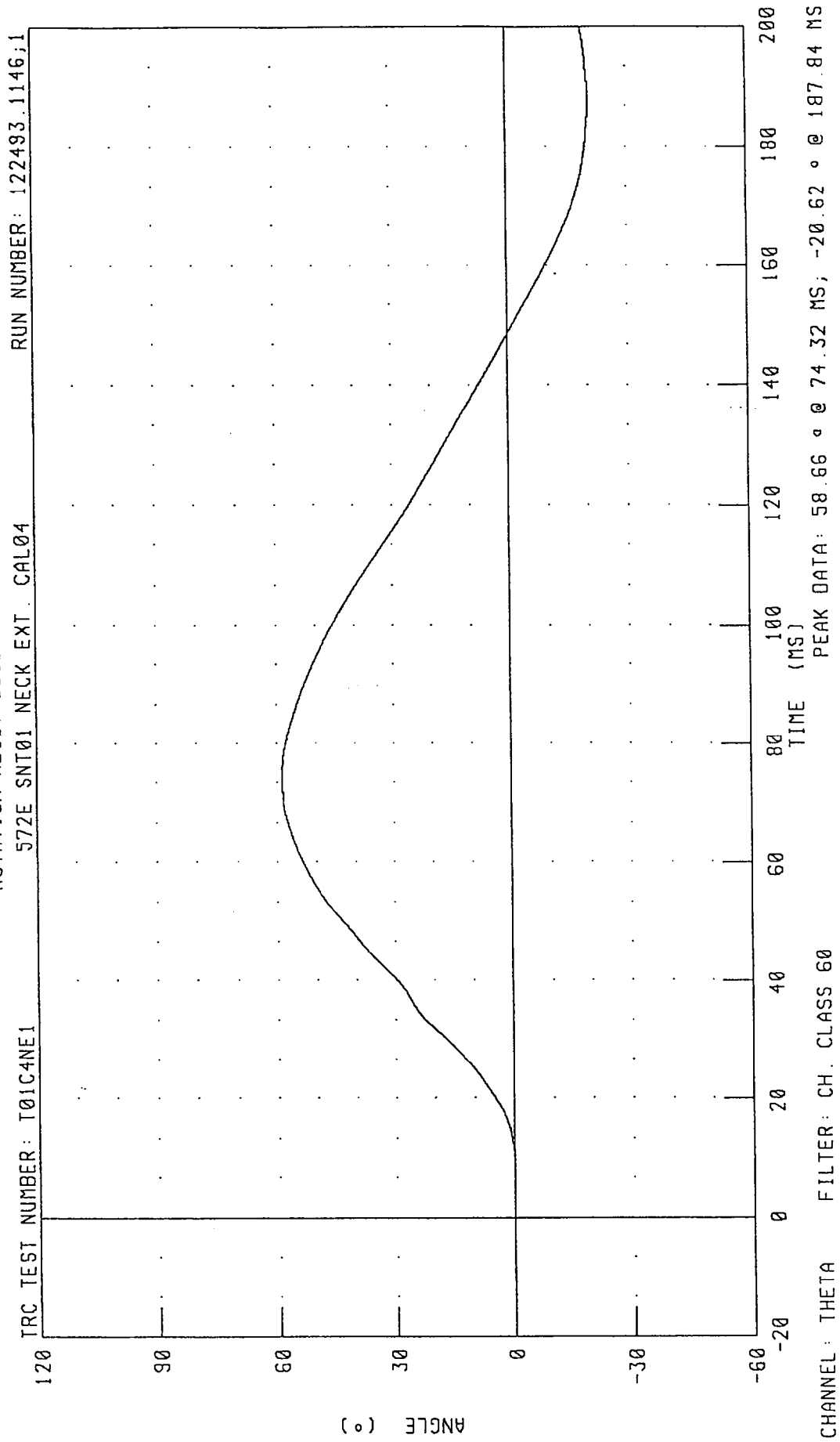
TRC TEST NUMBER: T01C4NE1



PEAK DATA: 29.29 ° @ 72.24 MS; -10.21 ° @ 191.04 MS

CHANNEL: BETA FILTER: CH. CLASS 60

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



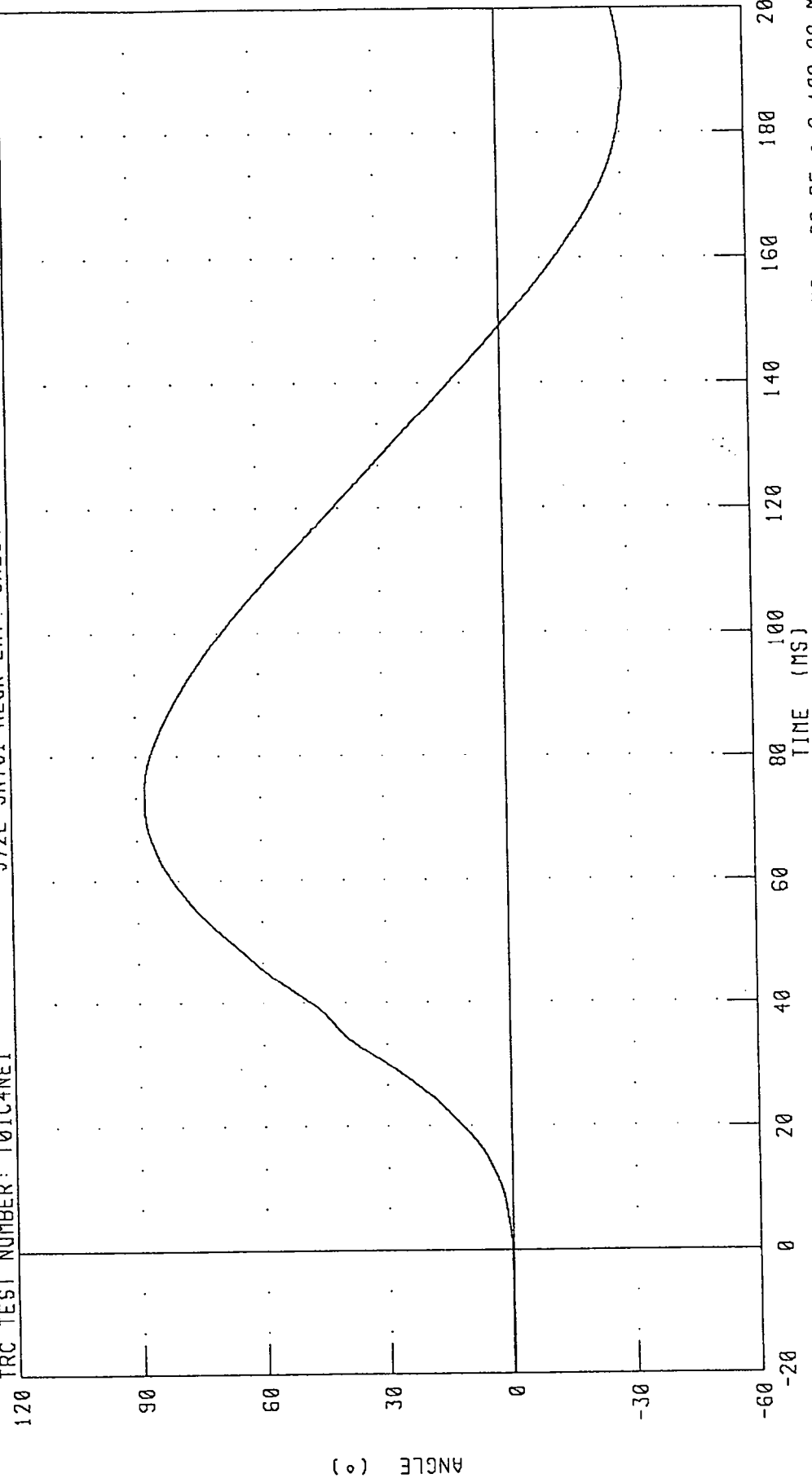
PART 572-E HYBRID III NECK EXTENSION CALIBRATION

TOTAL ROTATION

TRC TEST NUMBER: T01C4NE1

572E SNT01 NECK EXT. CAL04

RUN NUMBER: 122493.1146.1



CHANNEL: TOTAN FILTER: CH. CLASS 60

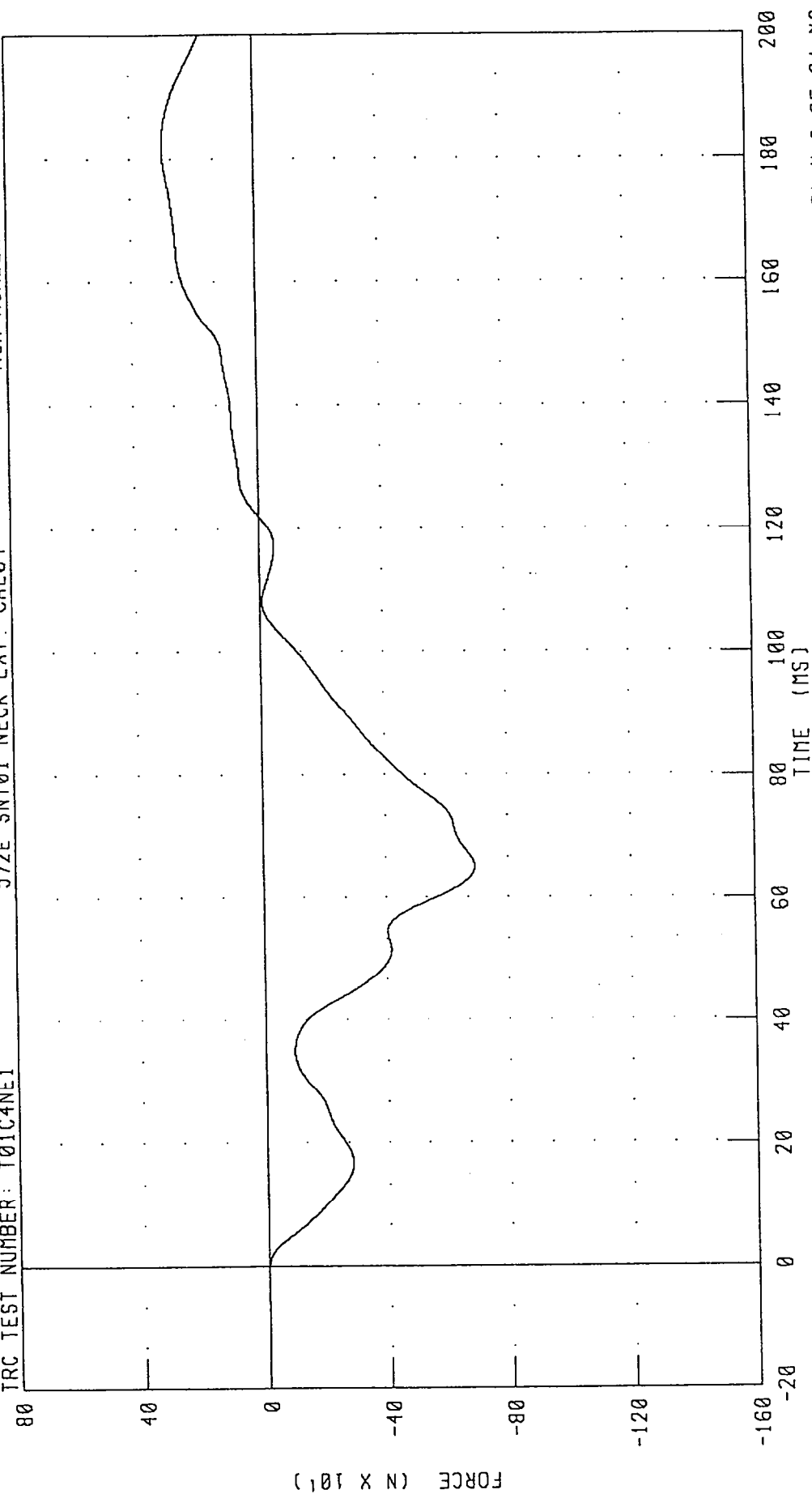
PART 572-E HYBRID III NECK EXTENSION CALIBRATION

NECK FORCE X AXIS

TRC TEST NUMBER: T01C4NE1

572E SNT01 NECK EXT. CAL04

RUN NUMBER: 122493.1146.1



PEAK DATA: 295.72 N @ 182.16 MS; -691.31 N @ 65.04 MS

CHANNEL: NEKXF FILTER: CH. CLASS 60

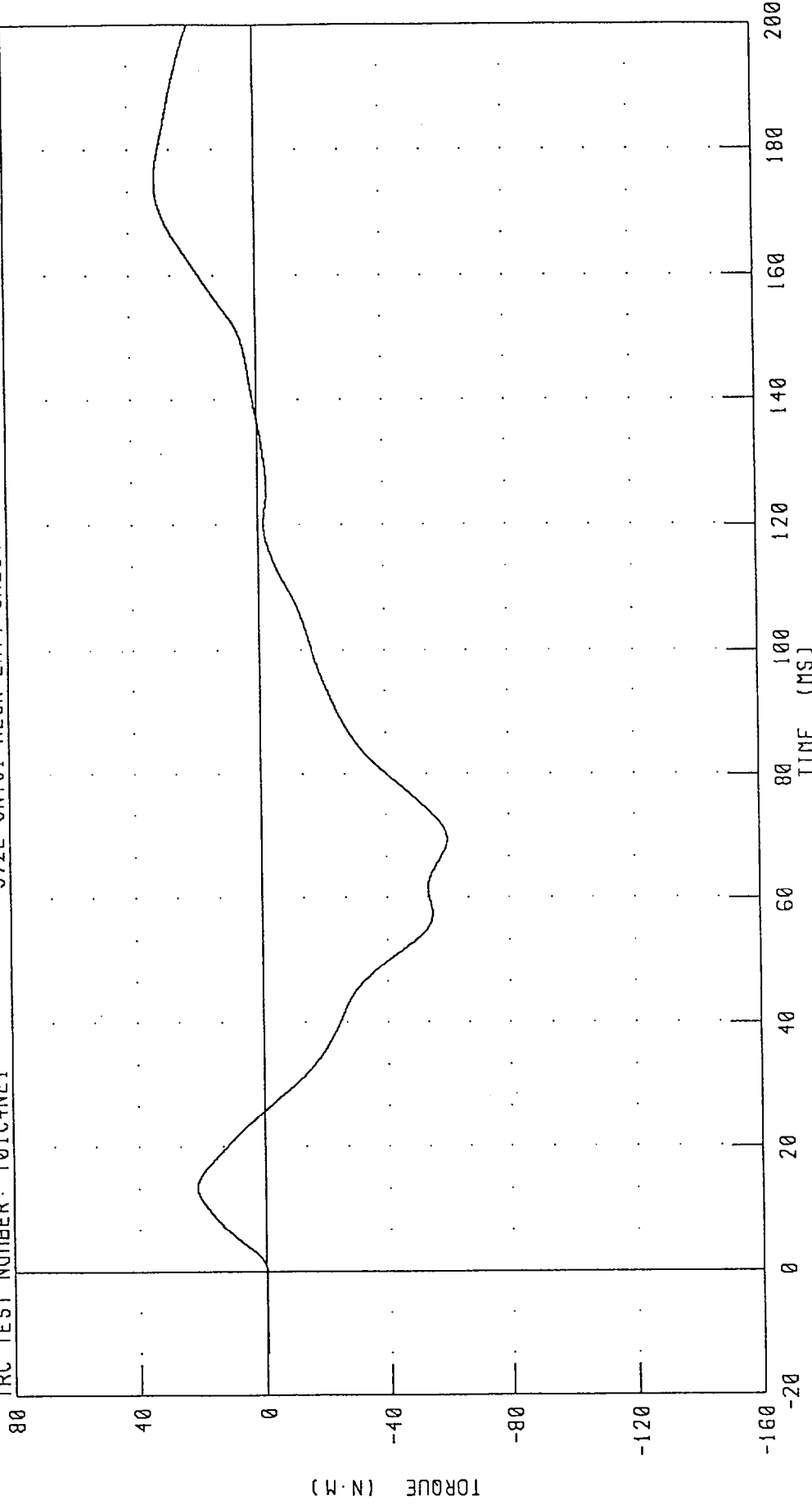
PART 572-E HYBRID III NECK EXTENSION CALIBRATION

NECK MOMENT Y AXIS

572E SNT01 NECK EXT. CAL04

RUN NUMBER: 122493.1146;1

TRC TEST NUMBER: T01C4NE1



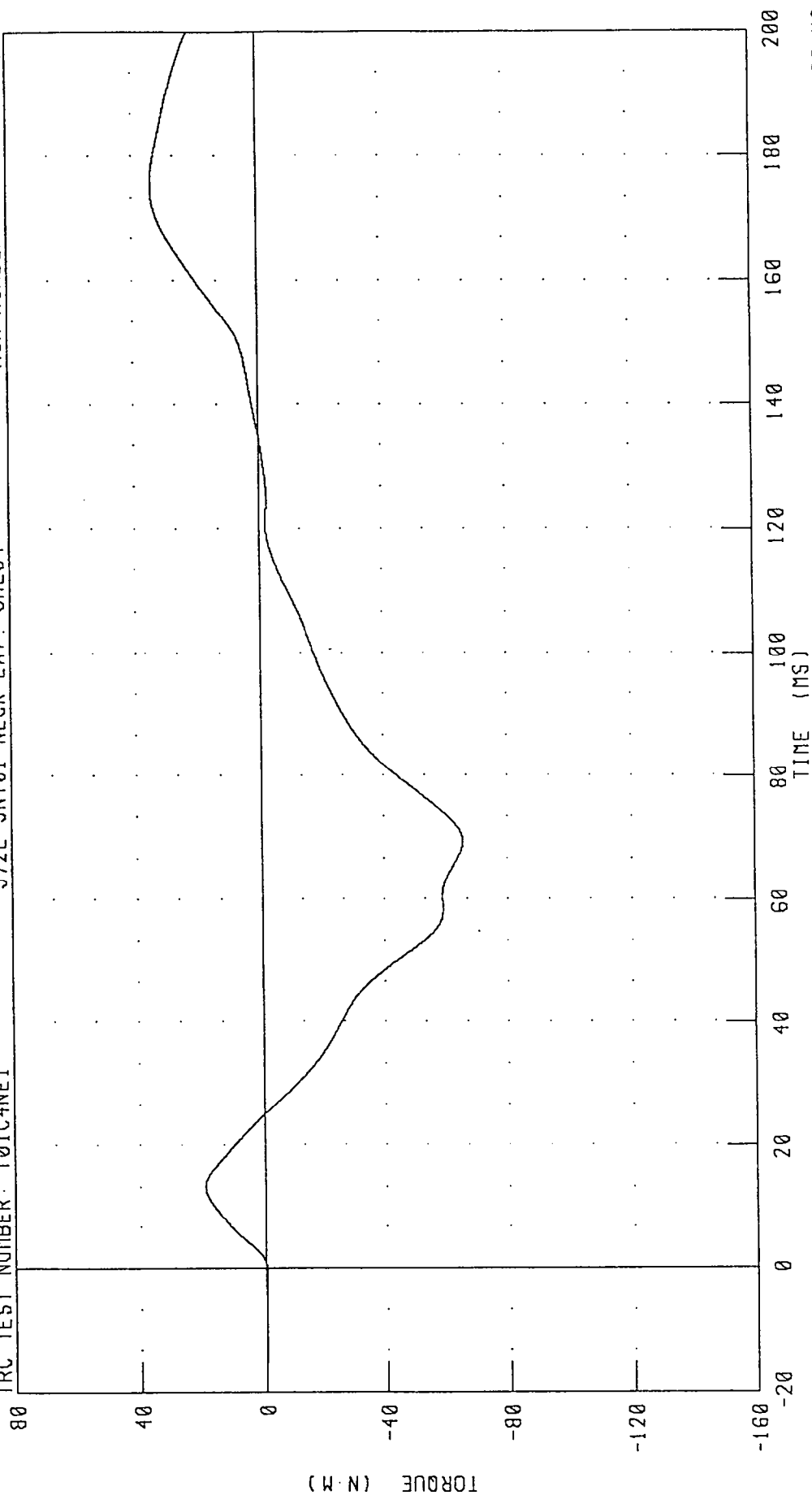
PEAK DATA: 31.56 N·M @ 175.04 MS; -59.85 N·M @ 69.52 MS

CHANNEL: NEKYM FILTER: CH. CLASS 60

PART 572-E HYBRID III NECK EXTENSION CALIBRATION

TOTAL MOMENT ABOUT OCCIPITAL CONDYLE :

IRC TEST NUMBER: T01C4NE1 572E SNT01 NECK EXT. CAL04 RUN NUMBER: 122493.1146;1



PEAK DATA: 34.00 N.M @ 175.28 MS; -65.45 N.M @ 69.36 MS

CHANNEL: NEKOM FILTER: CH. CLASS 60

TRANSPORTATION RESEARCH CENTER INC.

LEFT KNEE IMPACT TEST

HYBRID III

14-DEC-93

TRC INC.

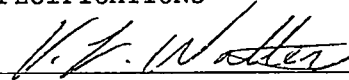
TEST NO: T01C4LK1

572E SN01 LEFT KNEE CAL 04

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	2.10 M/S
PEAK KNEE IMPACT FORCE 5.0 KG PENDULUM	4714 - 5783 N	5497.6 N

TEST MEETS SPECIFICATIONS

TECHNICIAN



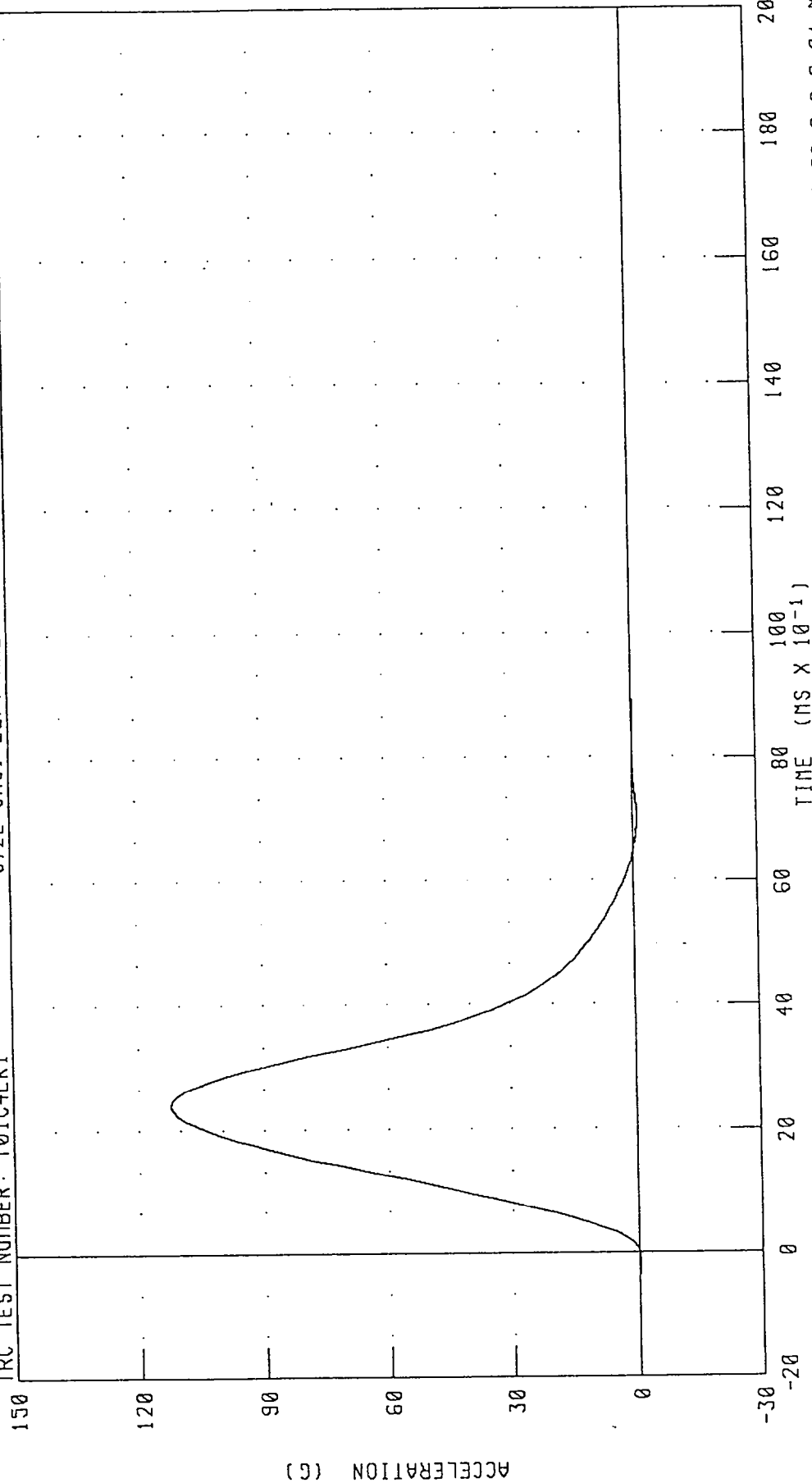
RUN NUMBER: 011394.1443;2

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

TRC TEST NUMBER: T01C4LK1

572E SN01 LEFT KNEE CAL 04

RUN NUMBER: 011394.1527,2



PEAK DATA: 112.36 G @ 2.40 MS, -1.02 G @ 7.04 MS

CHANNEL: PENXC FILTER: CH. CLASS 600

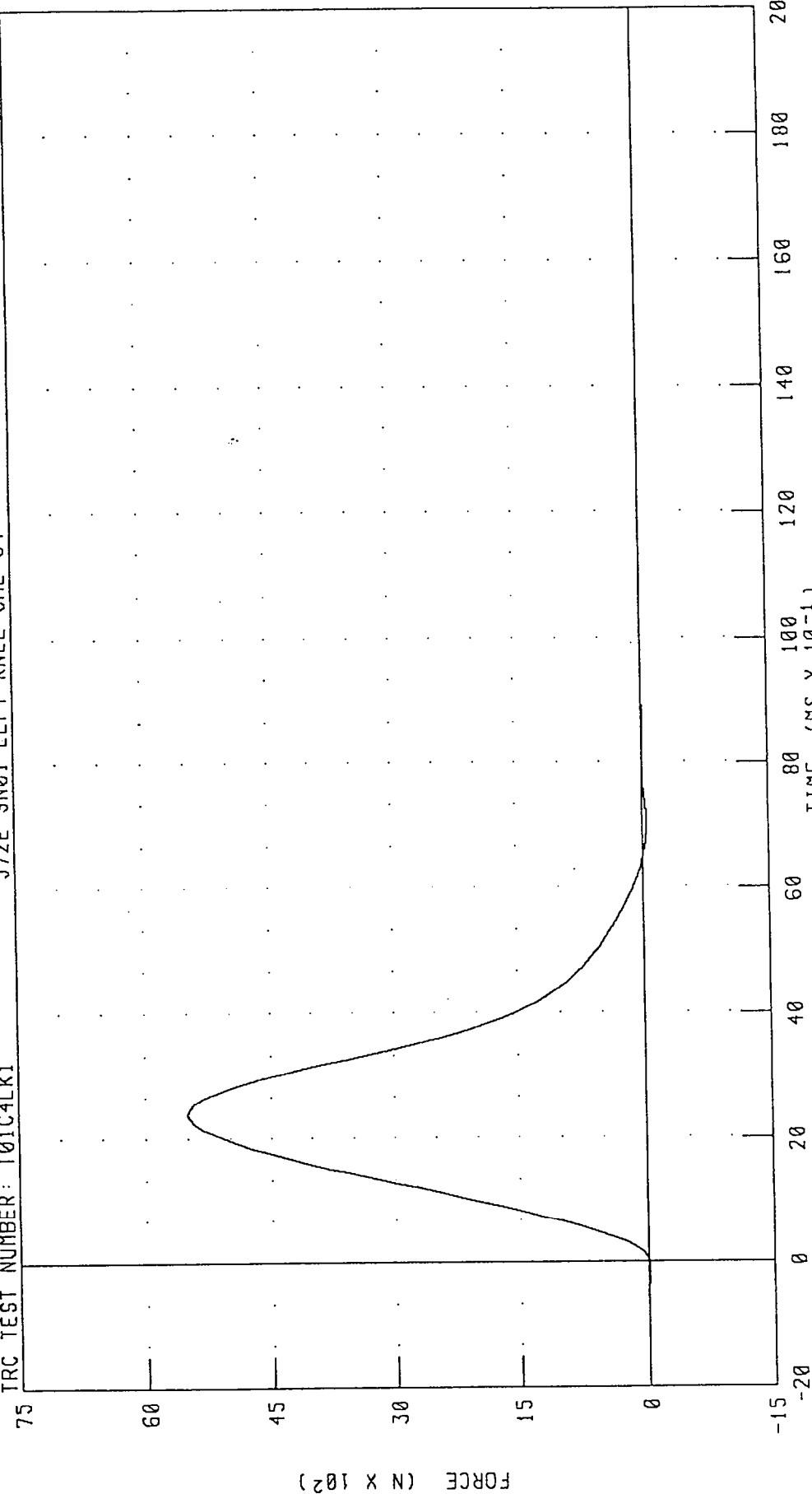
PART 572-E HYBRID III LEFT KNEE CALIBRATION

PENDULUM FORCE (5 KG PEND.)

572E SN01 LEFT KNEE CAL 04

RUN NUMBER: 011394.1527;2

TRC TEST NUMBER: T01C4LK1



PEAK DATA: 5497.63 N @ 2.40 MS; -49.91 N @ 7.04 MS

CHANNEL: PENXF FILTER: CH. CLASS 600

TRANSPORTATION RESEARCH CENTER INC.

RIGHT KNEE IMPACT TEST

HYBRID III

14-DEC-93

TRC INC.

TEST NO: T01C4RK1

572E SN01 RIGHT KNEE CAL 04

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	2.10 M/S
PEAK KNEE IMPACT FORCE 5.0 KG PENDULUM	4714 - 5783 N	5544.9 N

TEST MEETS SPECIFICATIONS

TECHNICIAN

V.L. Watters

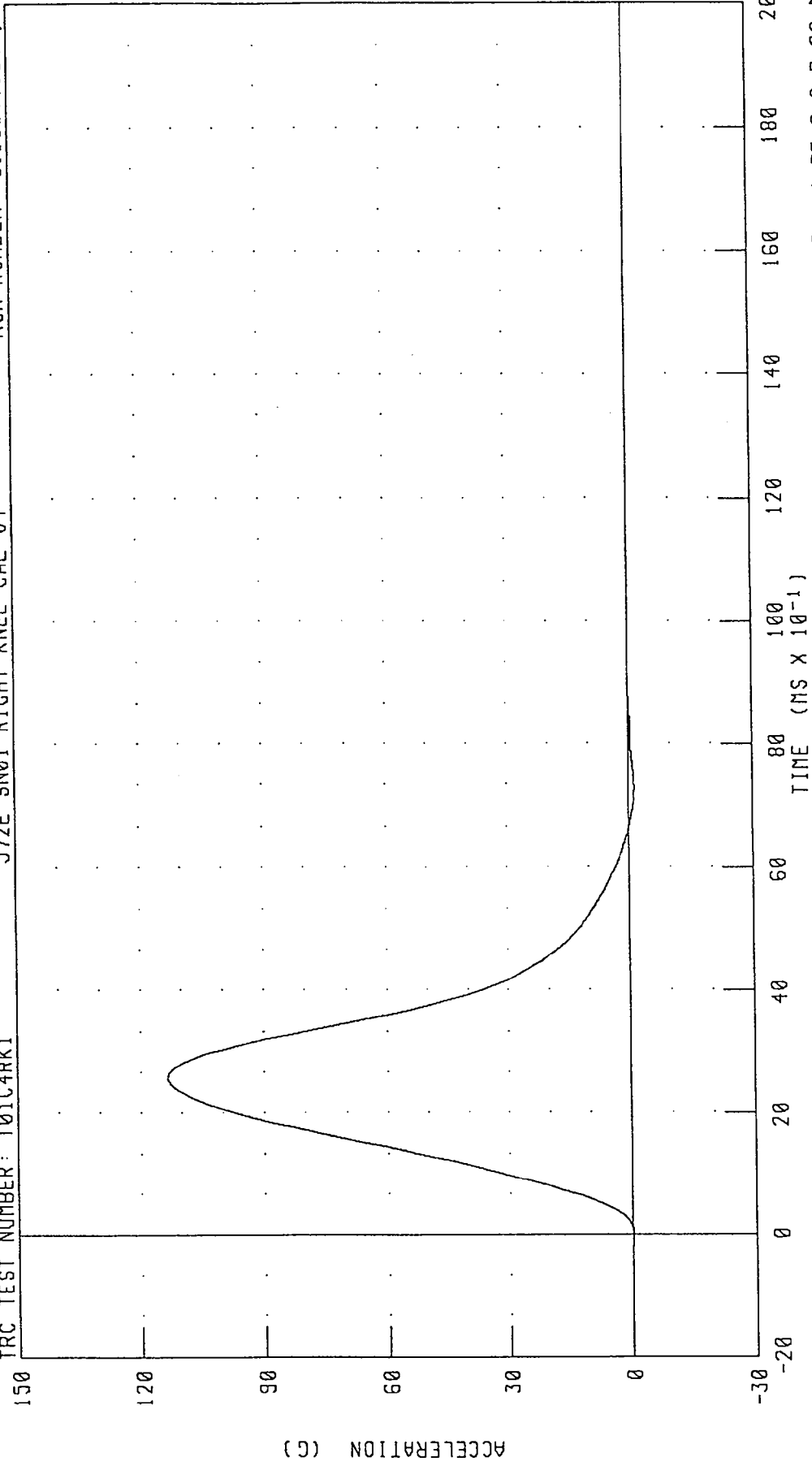
RUN NUMBER: 011394.1444;2

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

TRC TEST NUMBER: T01C4RK1

572E SN01 RIGHT KNEE CAL 04

RUN NUMBER: 011394.1528,2



CHANNEL: PENXG FILTER: CH. CLASS 600

PEAK DATA: 113.33 G @ 2.56 MS; -1.35 G @ 7.28 MS

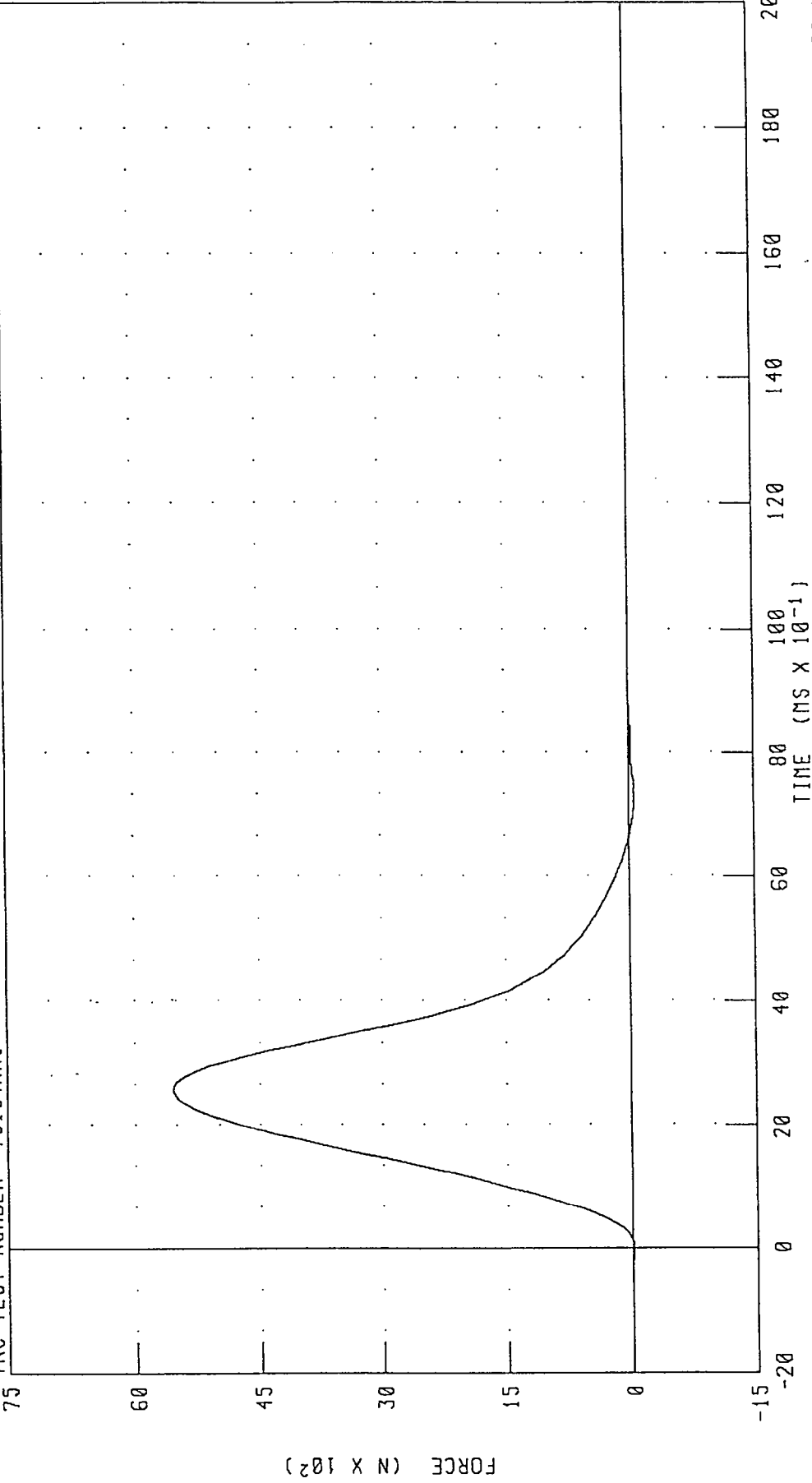
PART 572-E HYBRID III RIGHT KNEE CALIBRATION

PENDULUM FORCE (5 KC PEND.)

TRC TEST NUMBER: T01C4RK1

572E SN01 RIGHT KNEE CAL 04

RUN NUMBER: 011394.1528,2



CHANNEL: PENXF FILTER: CH. CLASS 600

PEAK DATA: 5544.93 N @ 2.56 MS, -65.97 N @ 7.28 MS

TRANSPORTATION RESEARCH CENTER INC.

KNEE SLIDER TEST

HYBRID III

21-DEC-93

LEFT KNEE
TRC INC.

TEST NO: T01C4LS2

572E SN01 LEFT SLIDER CAL04

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	55.0 %
PENDULUM VELOCITY	2.70-2.80 M/S	2.70 M/S
FORCE AT 10.0 MM DISPLACEMENT	1259 - 1721 N	1558. N
FORCE AT 18.0 MM DISPLACEMENT	2268 - 3096 N	3160. N *

* TEST DOES NOT MEET SPECIFICATIONS

TECHNICIAN

V. L. Watters

RUN NUMBER: 011394.1524;1

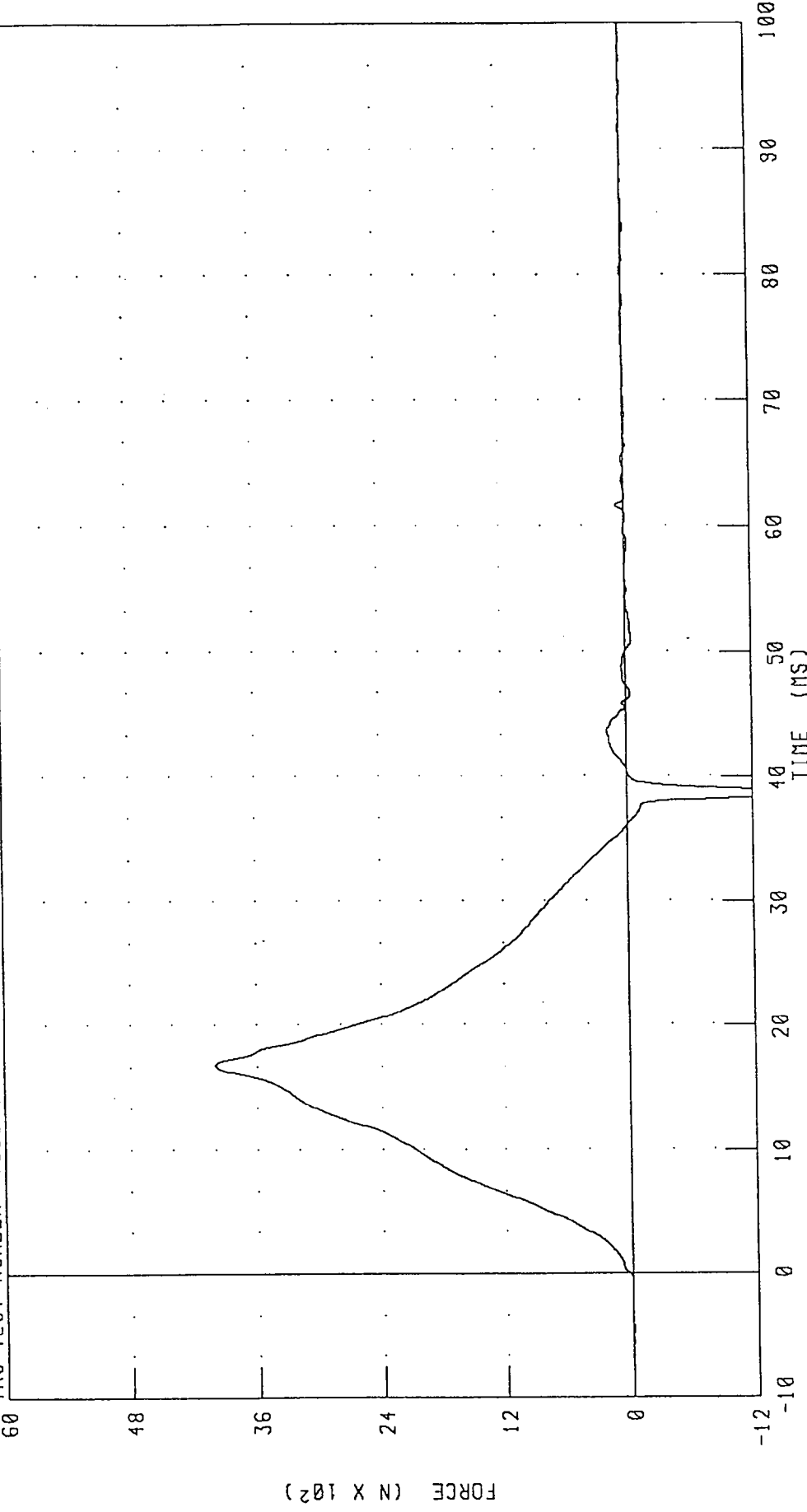
PART 572-E HYBRID III LEFT KNEE SLIDER CALIBRATION

LEFT FEMUR FORCE

TRC TEST NUMBER: T01C4LS2

572E SN01 LEFT SLIDER CAL04

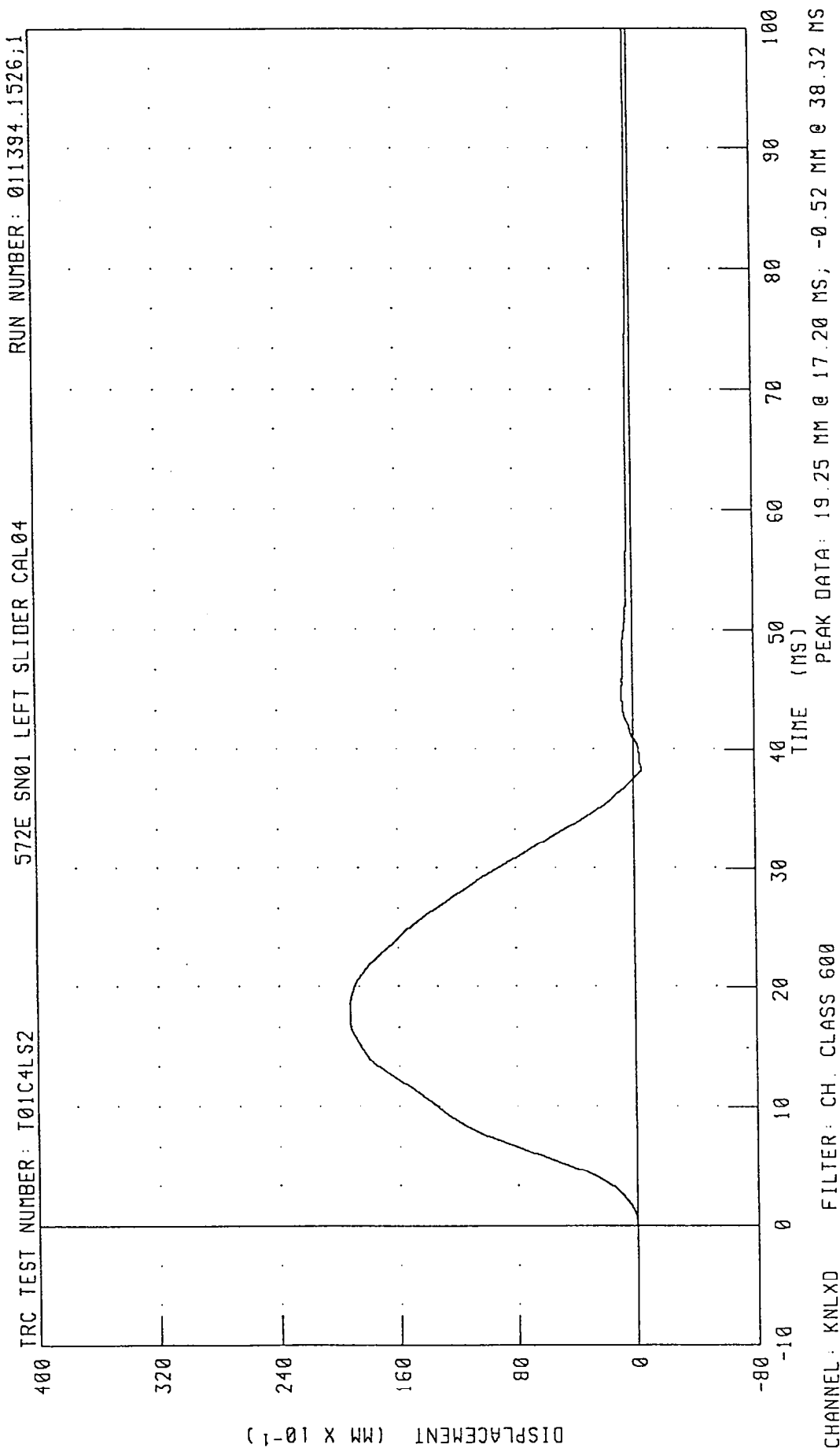
RUN NUMBER: 011394.1526;1



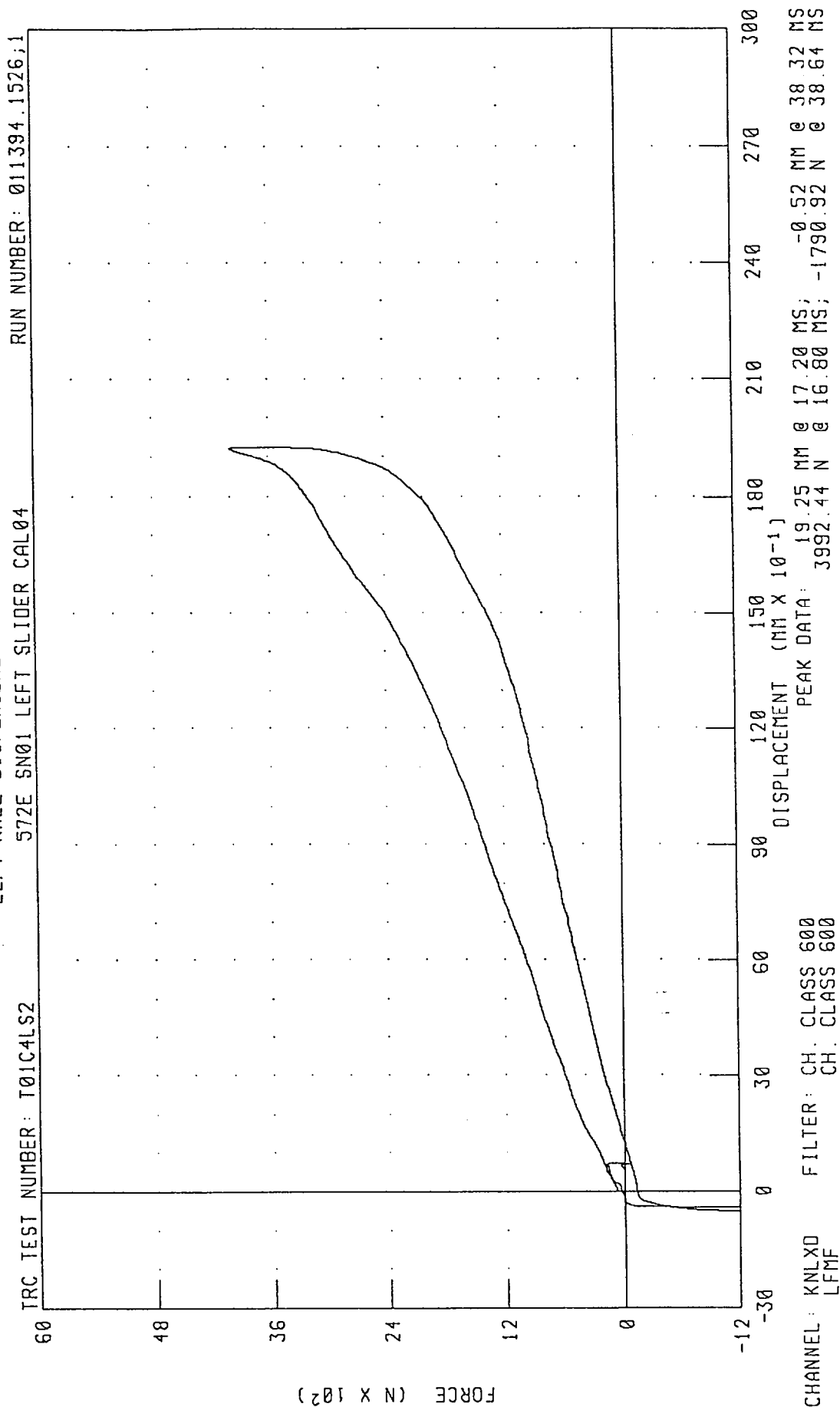
PEAK DATA: 3992.44 N @ 16.80 MS; -1790.92 N @ 38.64 MS

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.

KNEE SLIDER TEST

HYBRID III

14-DEC-93

RIGHT KNEE

TRC INC.

TEST NO: T01C4RS1

572E SN01 RIGHT SLIDER CAL04

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	55.0 %
PENDULUM VELOCITY	2.70-2.80 M/S	2.77 M/S
FORCE AT 10.0 MM DISPLACEMENT	1259 - 1721 N	1668. N
FORCE AT 18.0 MM DISPLACEMENT	2268 - 3096 N	3061. N

TEST MEETS SPECIFICATIONS

TECHNICIAN

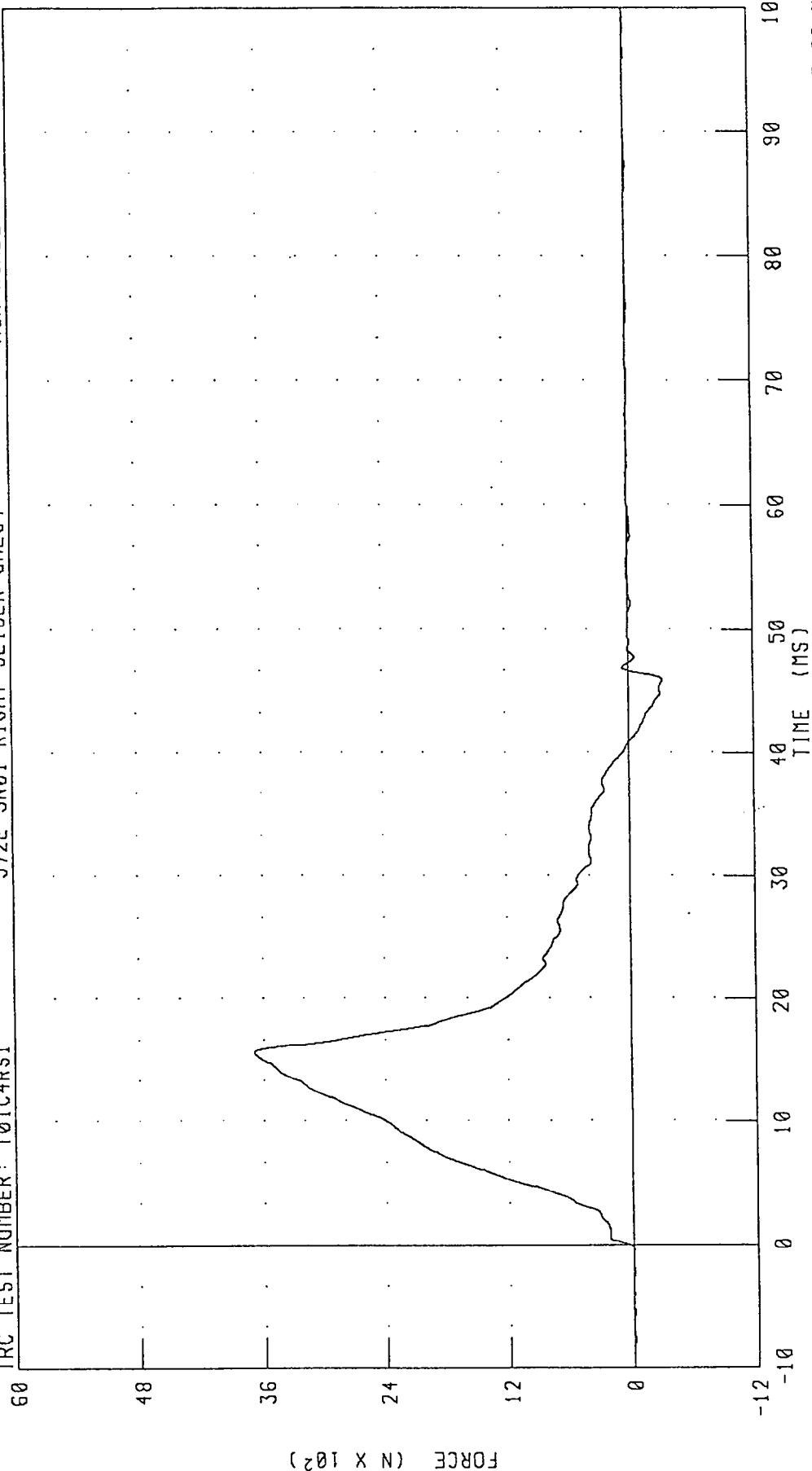
V. Z. Watter

RUN NUMBER: 011394.1525;1

PART 572-E HYBRID III RIGHT KNEE SLIDER CALIBRATION

RIGHT FEMUR FORCE

TRC TEST NUMBER: T01C4RS1 572E SN01 RIGHT SLIDER CAL04 RUN NUMBER: 011394.1526.1



CHANNEL: RFMF FILTER: CH. CLASS 600 PEAK DATA: 3691.51 N @ 15.68 MS; -321.65 N @ 45.92 MS

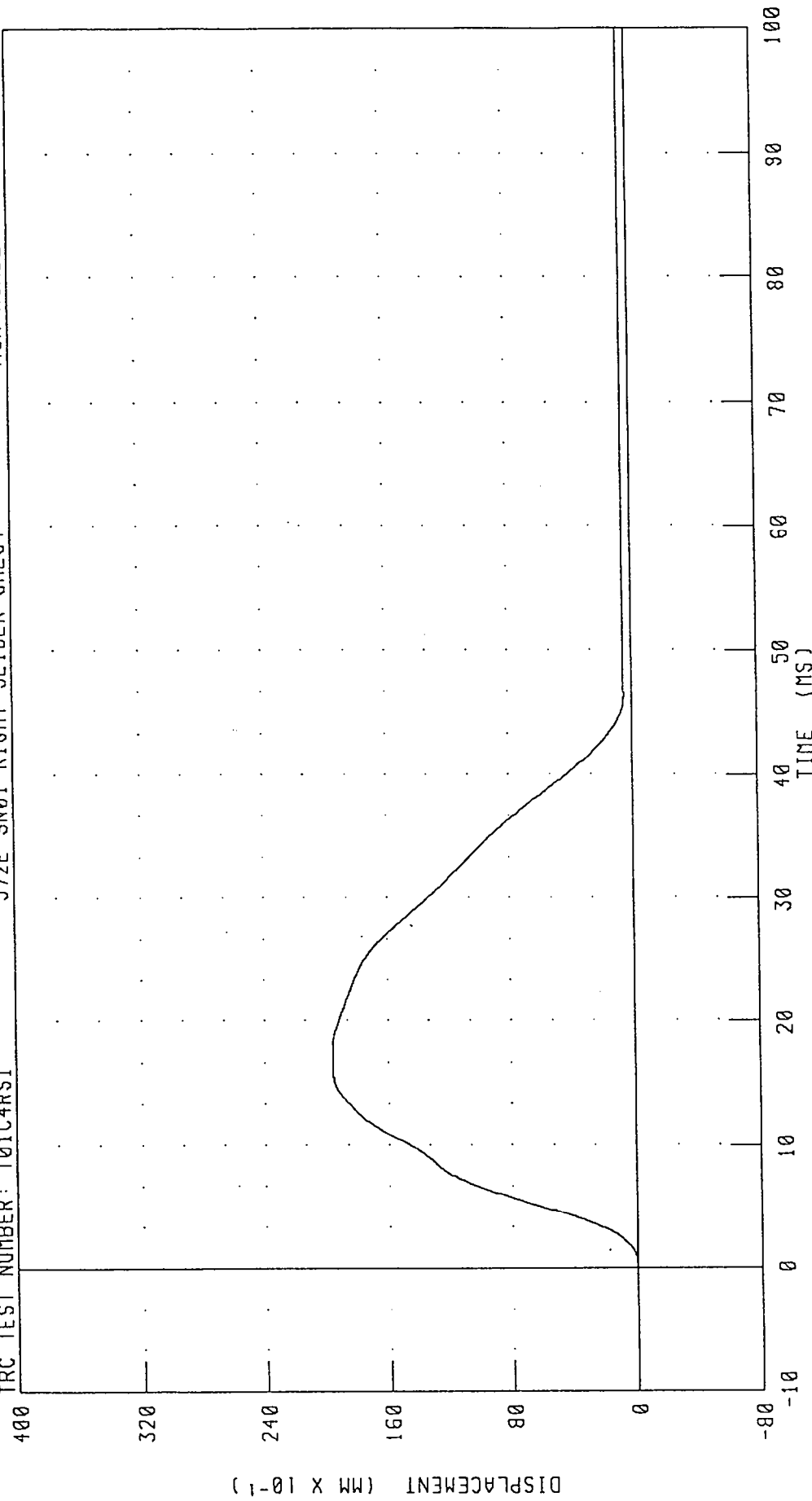
PART 572-E HYBRID III RIGHT KNEE SLIDER CALIBRATION

RIGHT KNEE DISPLACEMENT

TRC TEST NUMBER: T01C4RS1

572E SN01 RIGHT SLIDER CAL04

RUN NUMBER: 011394.1526;1



PEAK DATA: 18.24 MS; 0.00 MM @ 0.08 MS

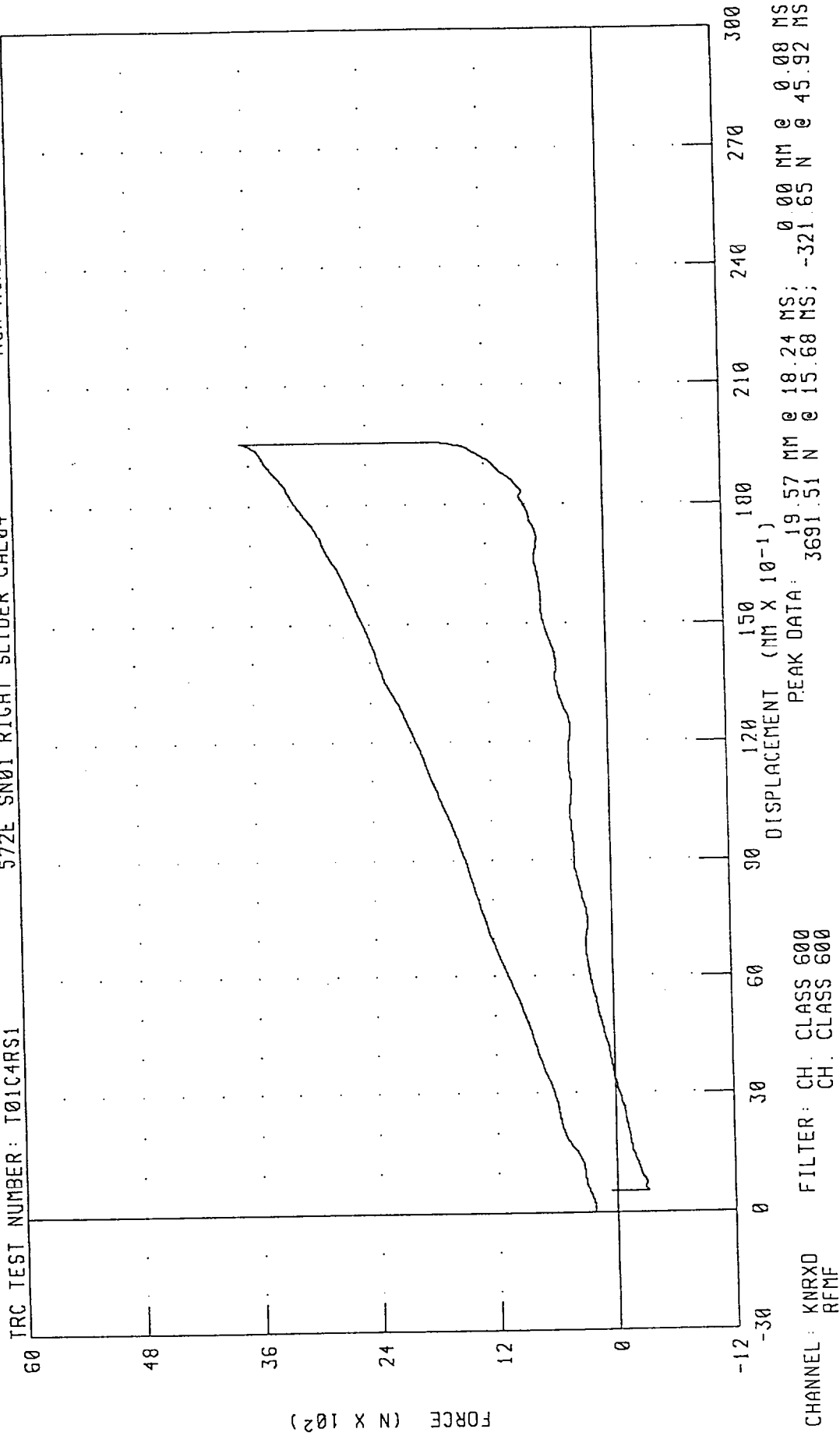
CHANNEL: KNRXD FILTER: CH. CLASS 600

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

TRC TEST NUMBER: T01C4RS1

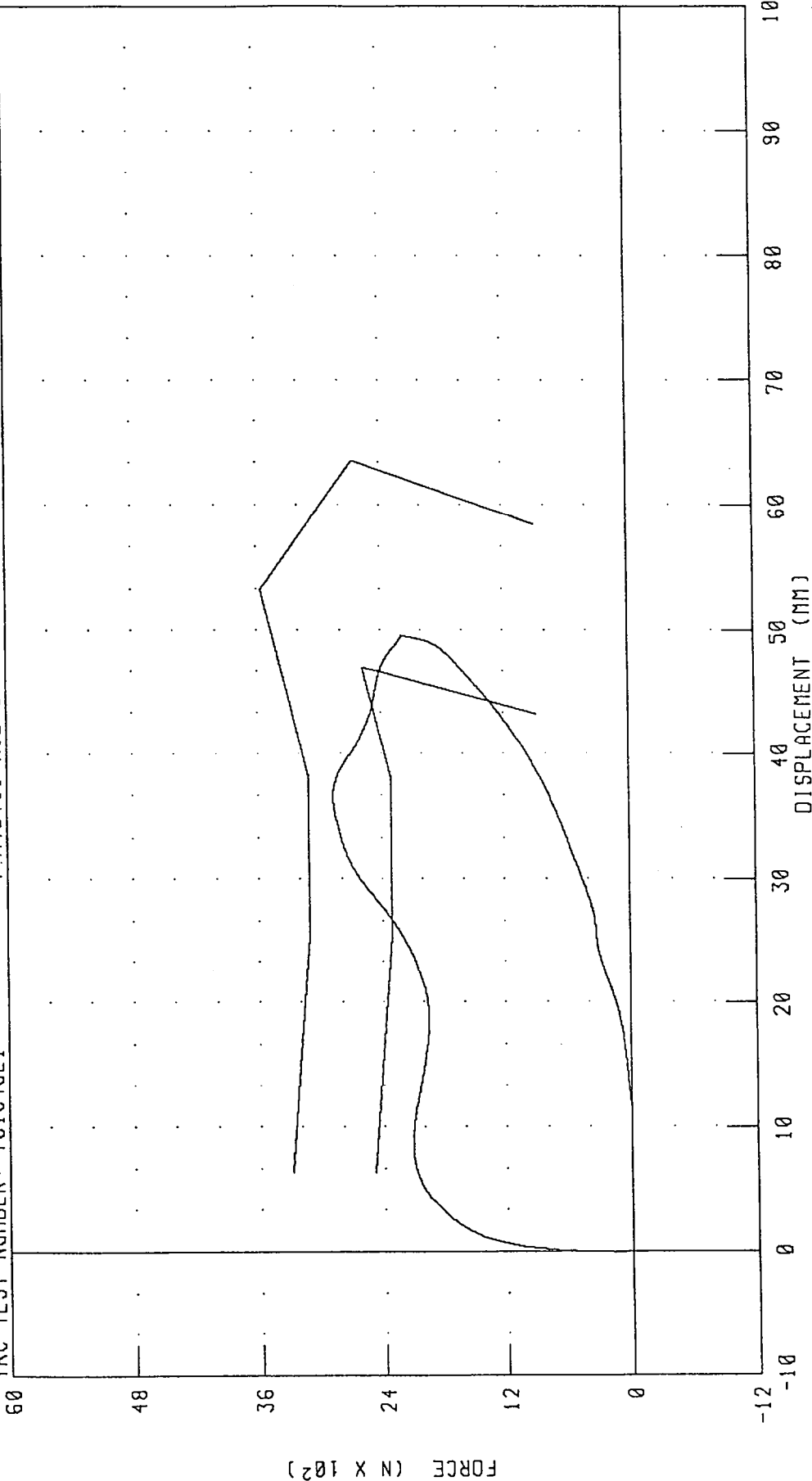
572E SN01 RIGHT SLIDER CAL04

RUN NUMBER: 011394.1526;1



T.A.D. DUMMY MID STERNUM IMPACT TEST 4.3 M/SEC
POSITION I ALT. A/P-AXIS CHEST DEFLECTION VS PENDULUM FORCE

TRC TEST NUMBER: T01C4UL1 T.A.D.01 MID STERNUM LOW SPD RUN NUMBER: 122293.2314;1



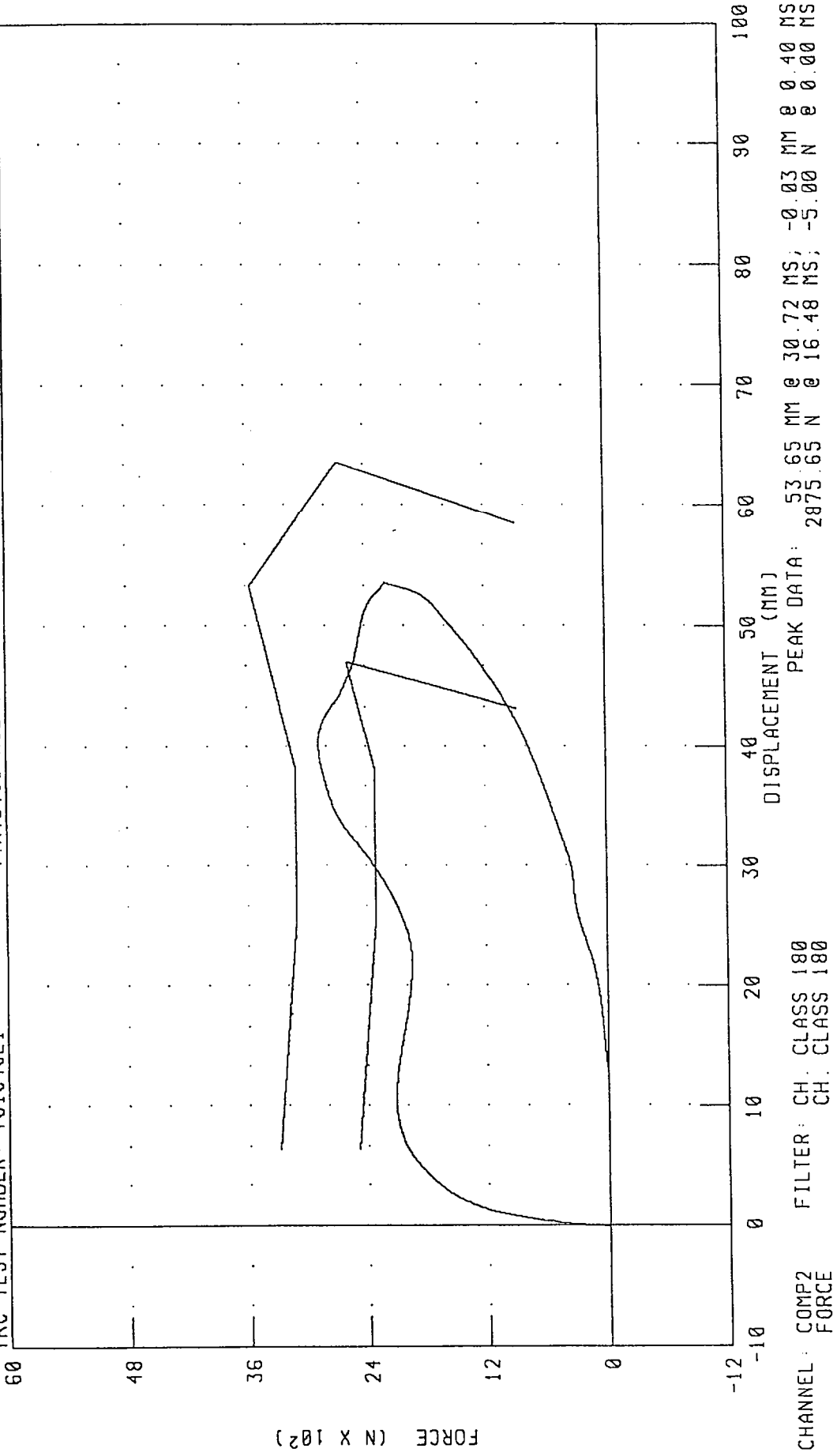
CHANNEL: COMPI FILTER: CH: CLASS 180
FORCE CH: CLASS 180
PEAK DATA: 49.60 MM @ 30.96 MS; -0.02 MM @ 0.88 MS
2875.65 N @ 16.48 MS; -5.00 N @ 0.00 MS

T.A.D. DUMMY MID STERNUM IMPACT TEST 4.3 M/SEC
POSITION 2 ALT: A/P-AXIS CHEST DEFLECTION VS PENDULUM FORCE

TRC TEST NUMBER: T01C4UL1

T.A.D.01 MID STERNUM LOW SPD

RUN NUMBER: 122293.2314.1



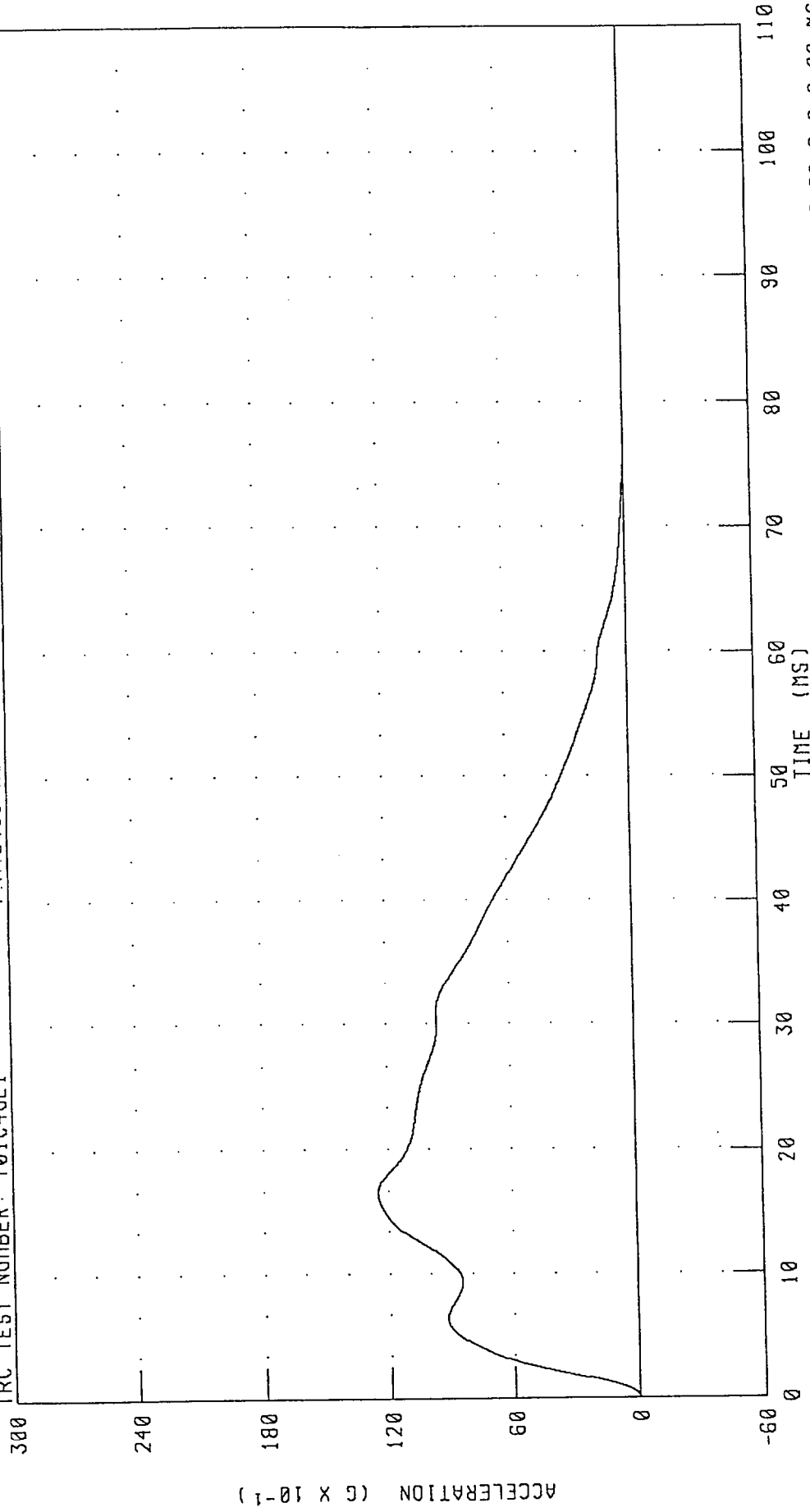
T.A.D. DUMMY MID STERNUM IMPACT TEST 4.3 M/SEC

PENDULUM DECELERATION

TRC TEST NUMBER: T01C4UL1

T.A.D.01 MID STERNUM LOW SPD

RUN NUMBER: 122293.2315;1



PEAK DATA: 12.51 G @ 16.48 MS; -0.02 G @ 0 00 MS

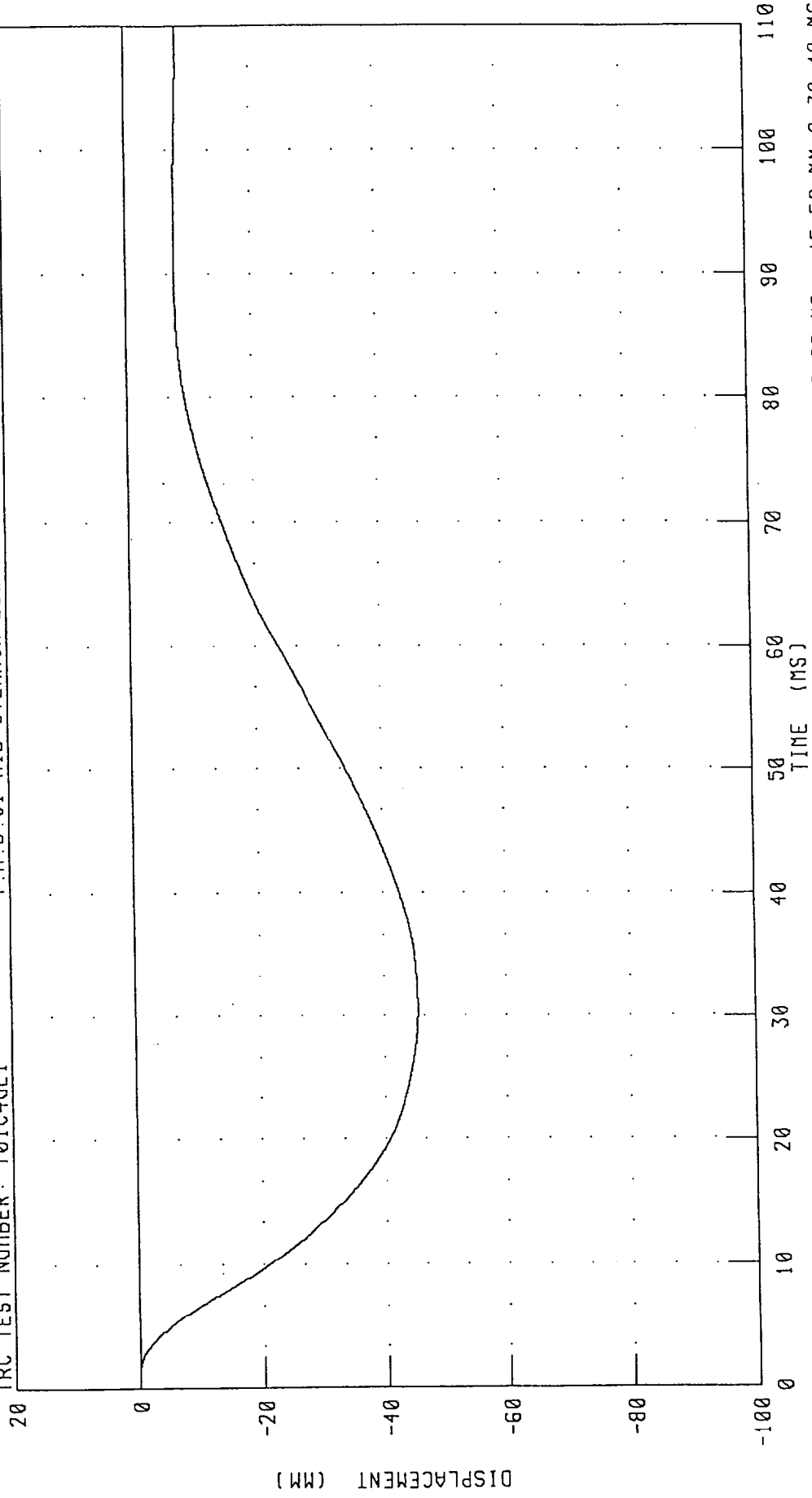
CHANNEL: PENXG FILTER: CH. CLASS 180

T.A.D. DUMMY MID STERNUM IMPACT TEST 4.3 M/SEC
POSITION 1 POSTERIOR/ANTERIOR CHEST POTENTIOMETER

TRC TEST NUMBER: T01C4UL1

T.A.D. 01 MID STERNUM LOW SPD

RUN NUMBER: 122293.2315,1

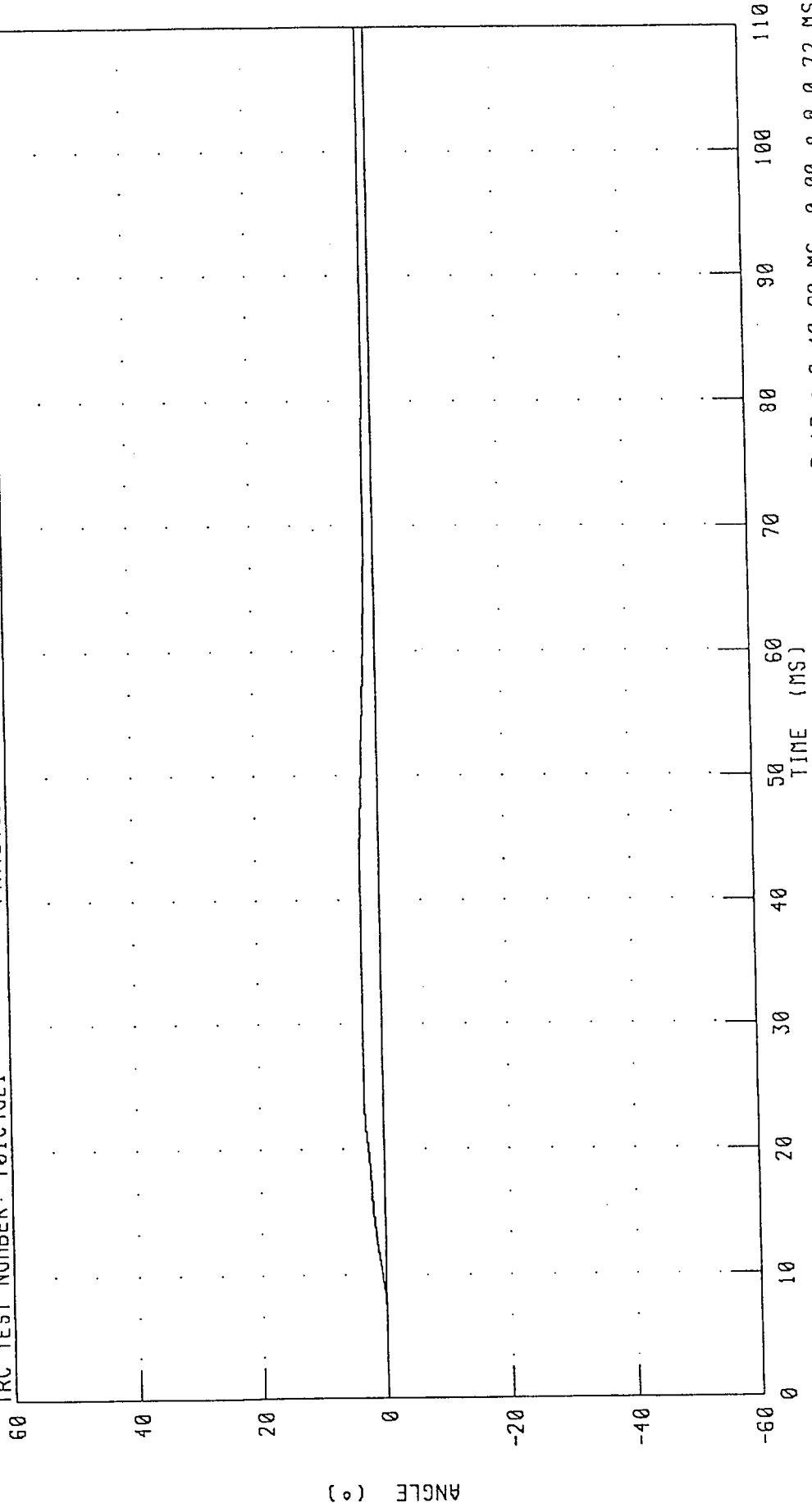


CHANNEL: CSTIPA FILTER: CH. CLASS 180

PEAK DATA: 0.02 MM @ 0.88 MS, -45 50 MM @ 30.48 MS

T.A.D. DUMMY MID STERNUM IMPACT TEST 4.3 M/SEC
POSITION 1 RIGHT/LEFT CHEST POTENTIOMETER

TRC TEST NUMBER: T01C4UL1 T.A.D.01 MID STERNUM LOW SPD RUN NUMBER: 122293.2315;1



PEAK DATA: 3.13 ° @ 40.88 MS; 0.00 ° @ 0.72 MS

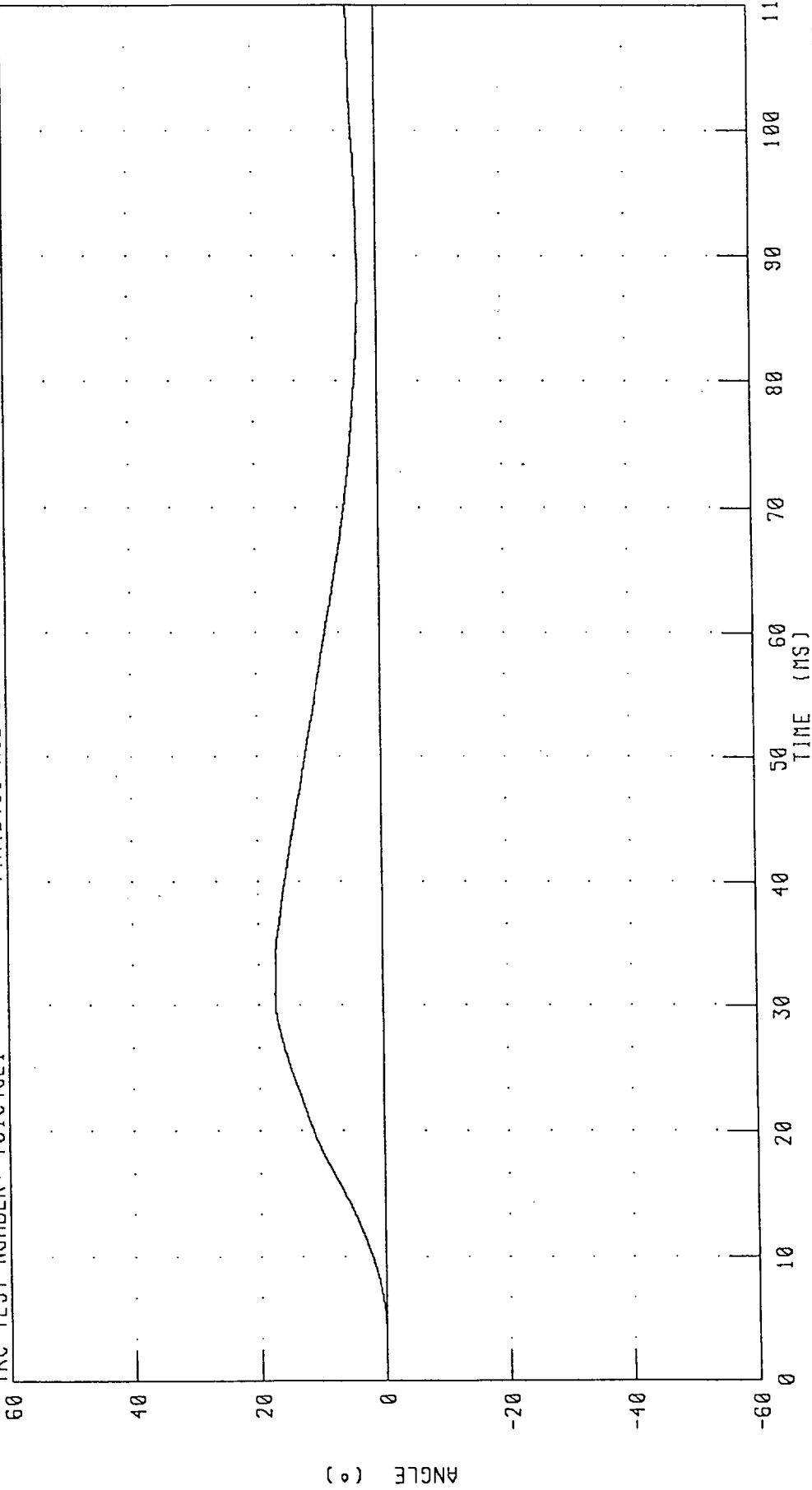
CHANNEL: CST1RL FILTER: CH. CLASS 180

T.A.D. DUMMY MID STERNUM IMPACT TEST 4.3 M/SEC
POSITION 1 INFERIOR/SUPERIOR CHEST POTENTIOMETER

TRC TEST NUMBER: T01C4UL1

T.A.D. 01 MID STERNUM LOW SPD

RUN NUMBER: 122293.2315;1

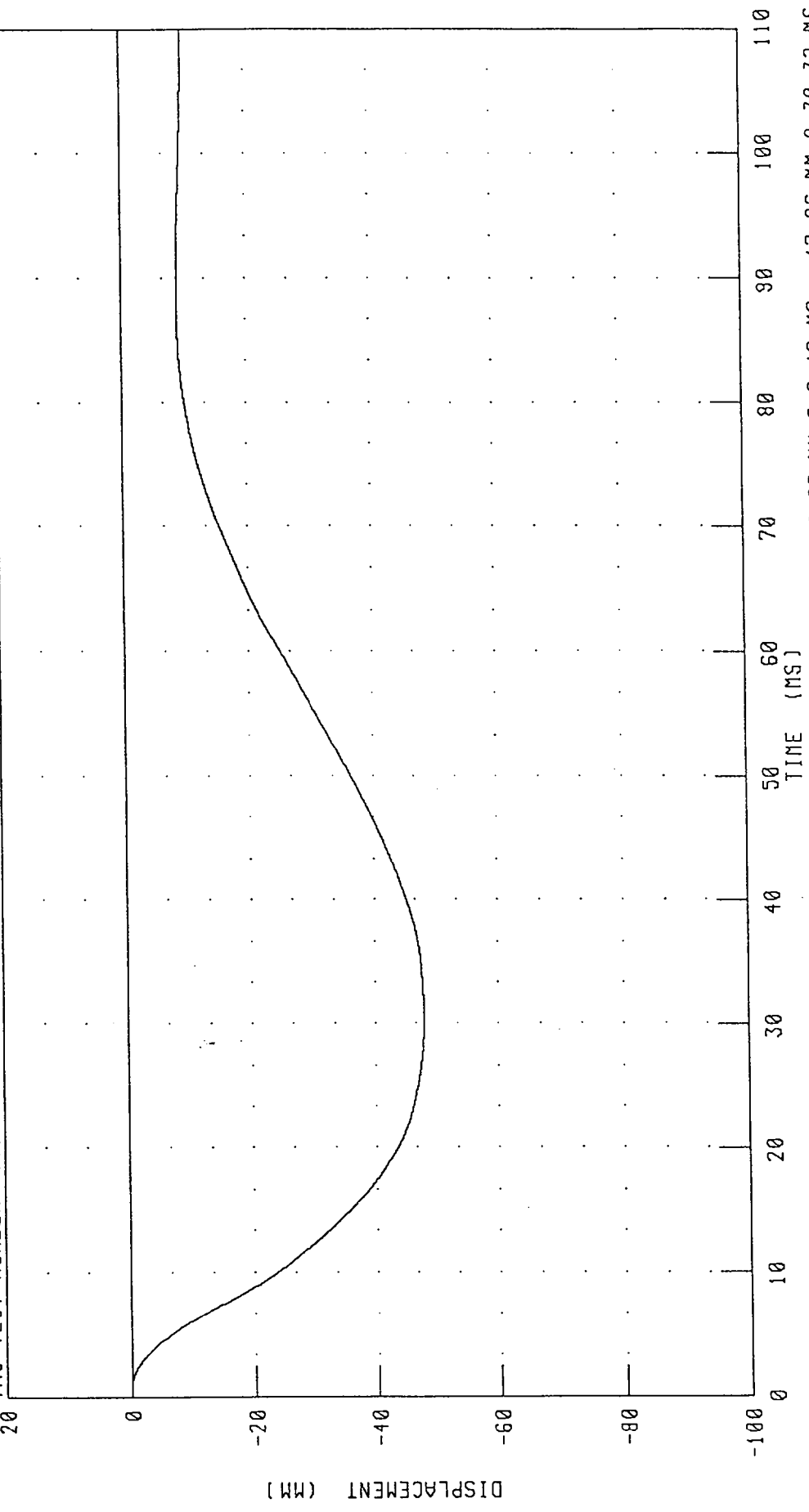


CHANNEL: CST11S FILTER: CH. CLASS 180

PEAK DATA: 17.36 ° @ 30.96 MS; 0.00 ° @ 1.36 MS

T.A.D. DUMMY MID STERNUM IMPACT TEST 4.3 M/SEC
POSITION 2 POSTERIOR/ANTERIOR CHEST POTENTIOMETER

TRC TEST NUMBER: T01C4UL1 T.A.D. 01 MID STERNUM LOW SPD RUN NUMBER: 122293.2315;1



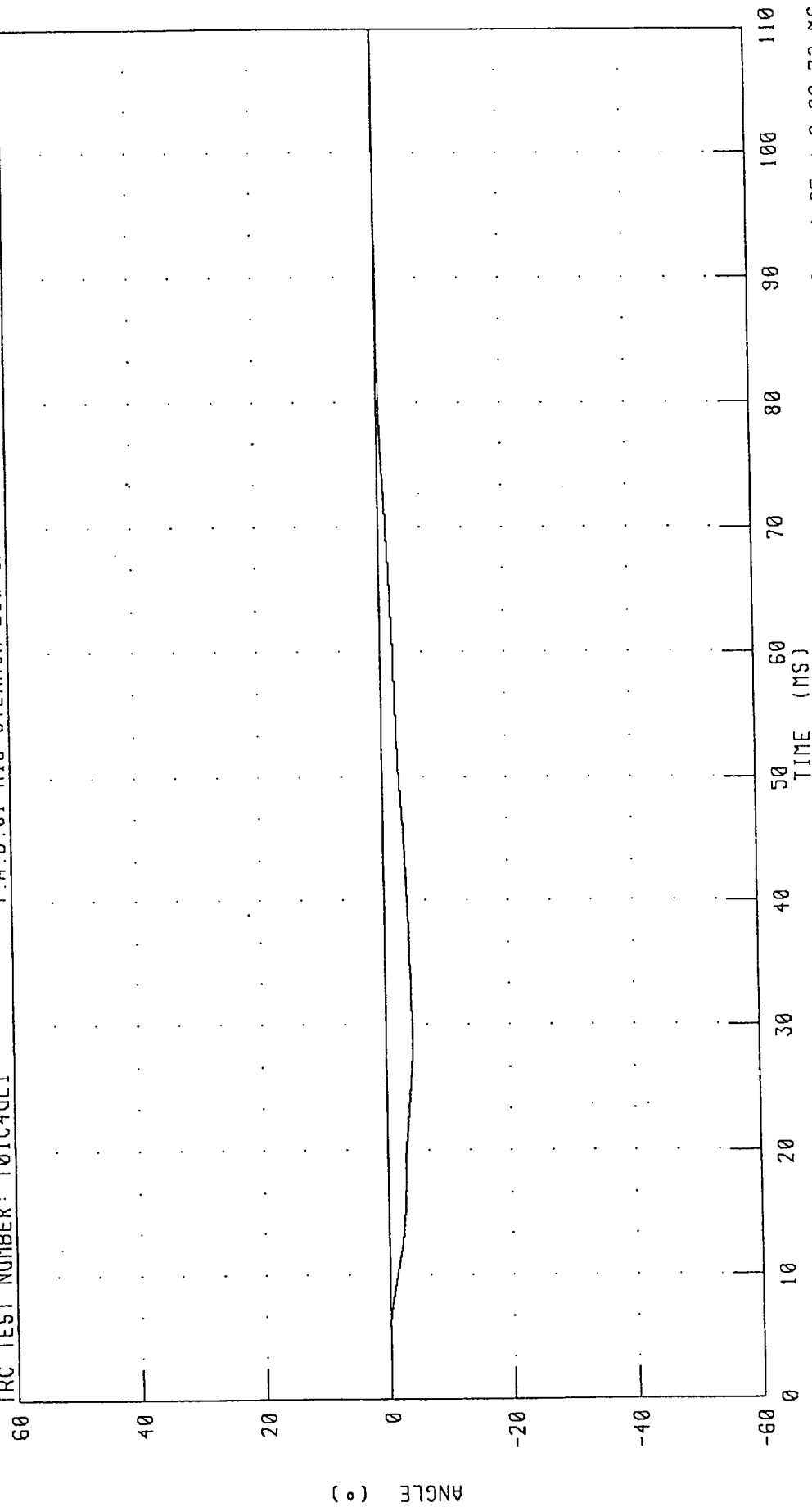
CHANNEL: CST2PA FILTER: CH. CLASS 180 PEAK DATA: 0.03 MM @ 0.40 MS; -47.96 MM @ 30.32 MS

T.A.D. DUMMY MID STERNUM IMPACT TEST 4.3 M/SEC
POSITION 2 RIGHT/LEFT CHEST POTENTIOMETER

TRC TEST NUMBER: T01C4UL1

T.A.D.01 MID STERNUM LOW SPD

RUN NUMBER: 122293.2315;1



CHANNEL: CST2RL FILTER: CH. CLASS 180

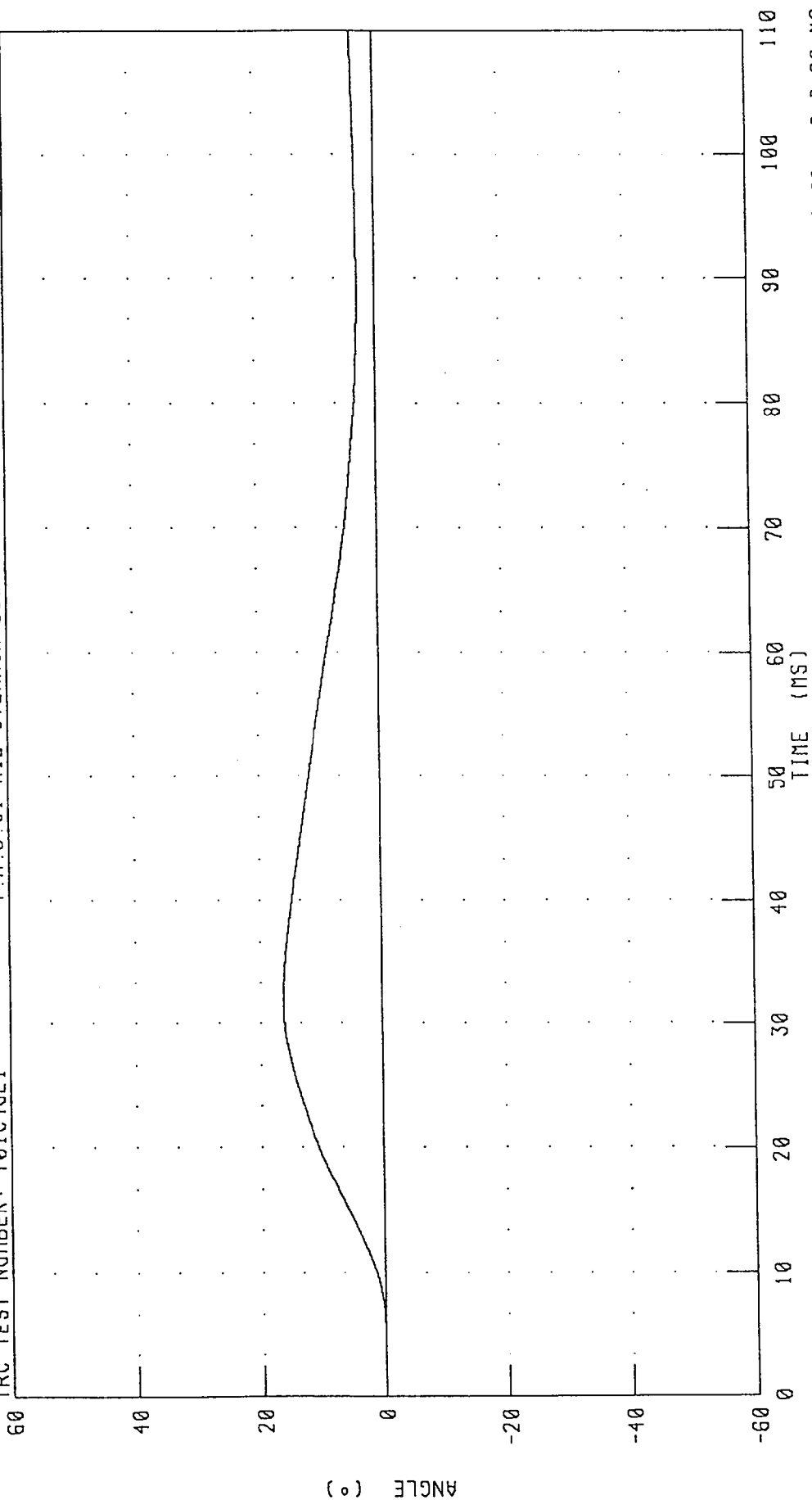
PEAK DATA: 0.22 ° @ 107.52 MS; -4.25 ° @ 28.72 MS

T.A.D. DUMMY MID STERNUM IMPACT TEST 4.3 M/SEC
POSITION 2 INFERIOR/SUPERIOR CHEST POTENTIOMETER

TRC TEST NUMBER: T01C4UL1

T.A.D. 01 MID STERNUM LOW SPD

RUN NUMBER: 122293.2315;1



PEAK DATA: 16.30 ° @ 31.44 MS; 0.00 ° @ 3.68 MS

CHANNEL: CST21S FILTER: CH. CLASS 180

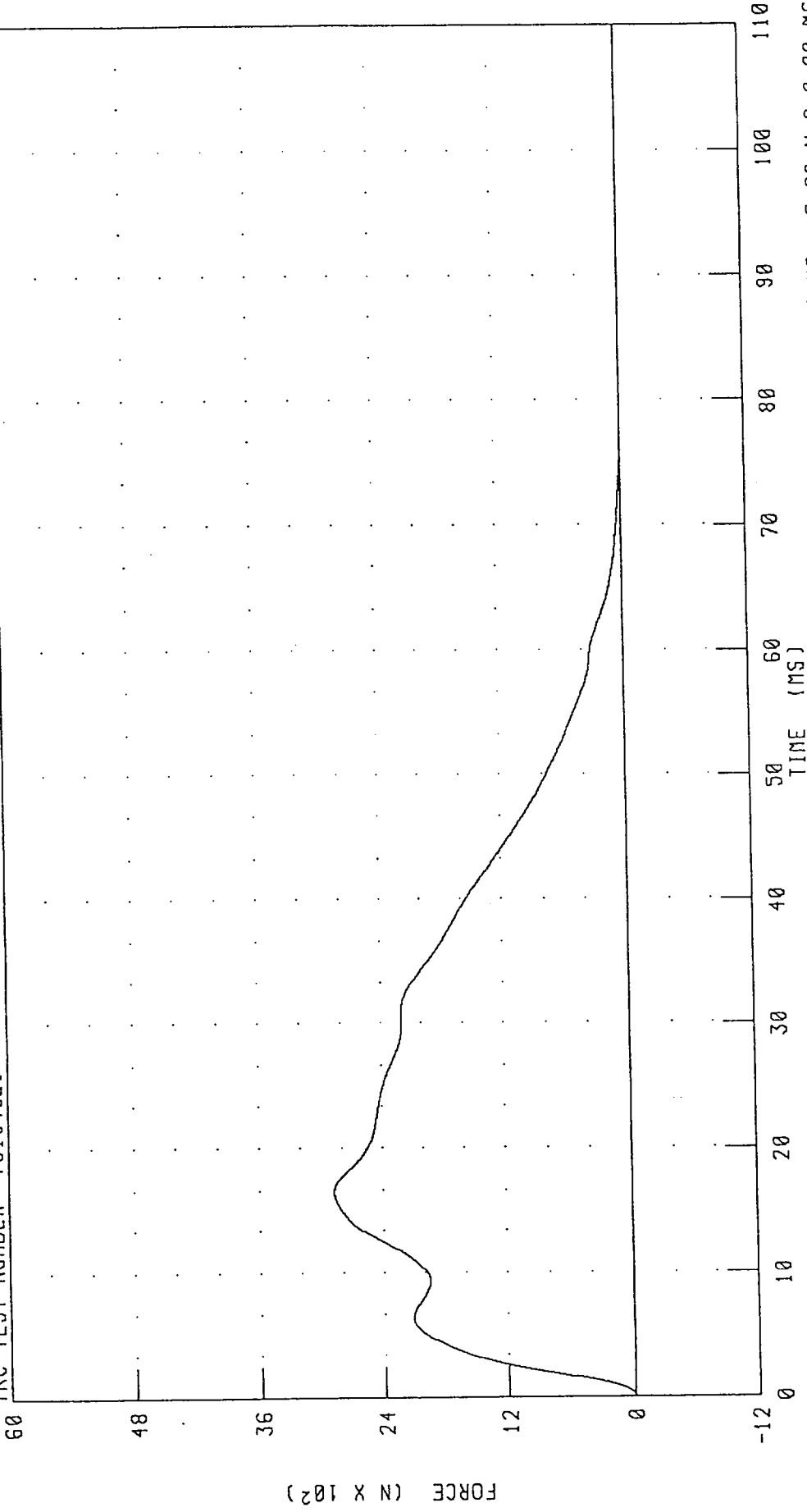
T.A.D. DUMMY MID STERNUM IMPACT TEST 4.3 M/SEC

PENDULUM FORCE

TRC TEST NUMBER: T01C4UL1

T.A.D.01 MID STERNUM LOW SPD

RUN NUMBER: 122293.2315.1



PEAK DATA: 2875.65 N @ 16.48 MS; -5.00 N @ 0.00 MS

CHANNEL: FORCE FILTER: CH. CLASS 180

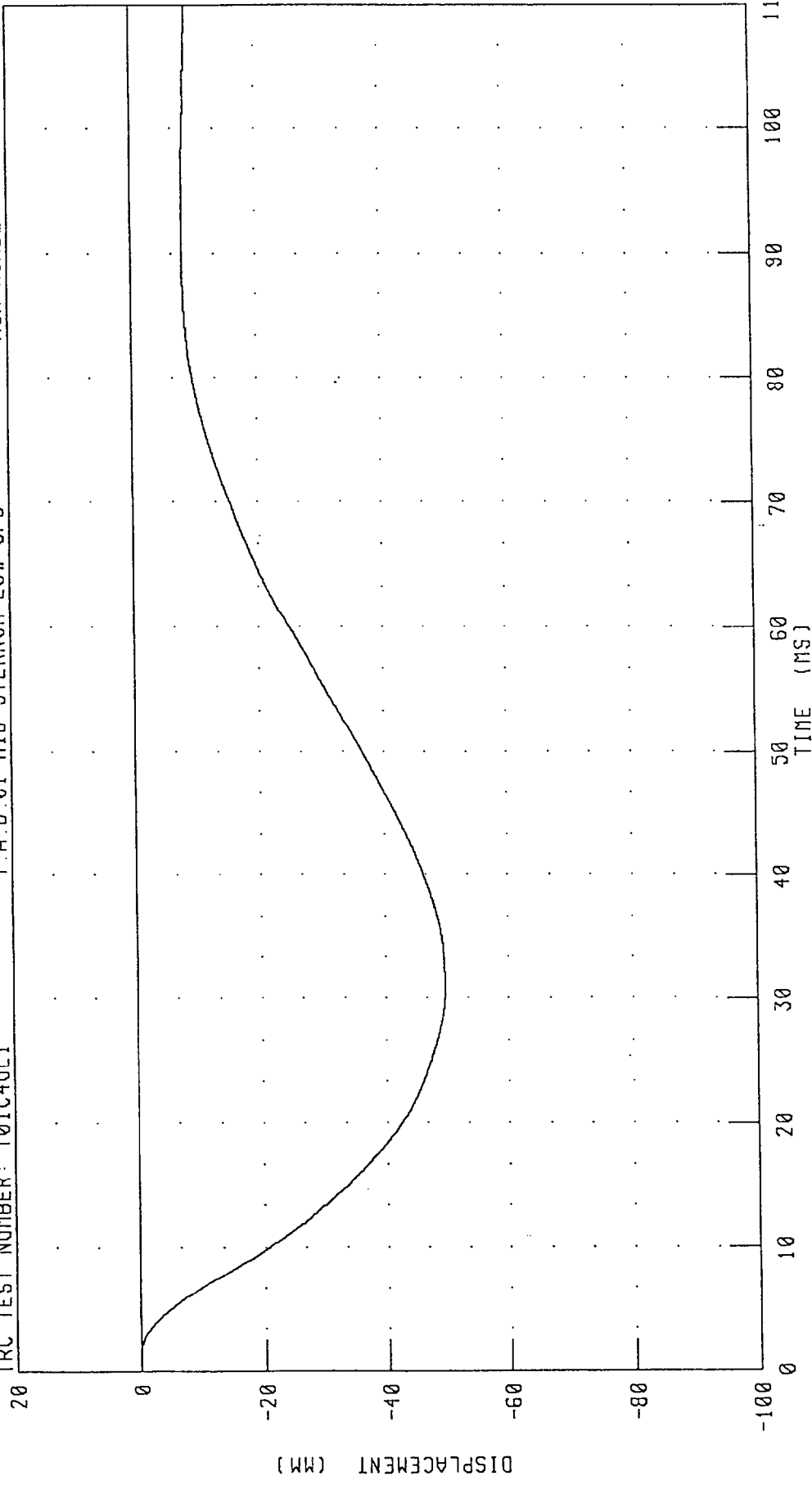
T.A.D. DUMMY MID STERNUM IMPACT TEST 4.3 M/SEC

POSITION 1 X-AXIS CHEST DEFLECTION

TRC TEST NUMBER: T01C4UL1

T.A.D. 01 MID STERNUM LOW SPD

RUN NUMBER: 122293.2315,1



CHANNEL: DELXI FILTER: CH. CLASS 180

PEAK DATA: 0 02 MM @ 0.88 MS, -49.60 MM @ 30.96 MS

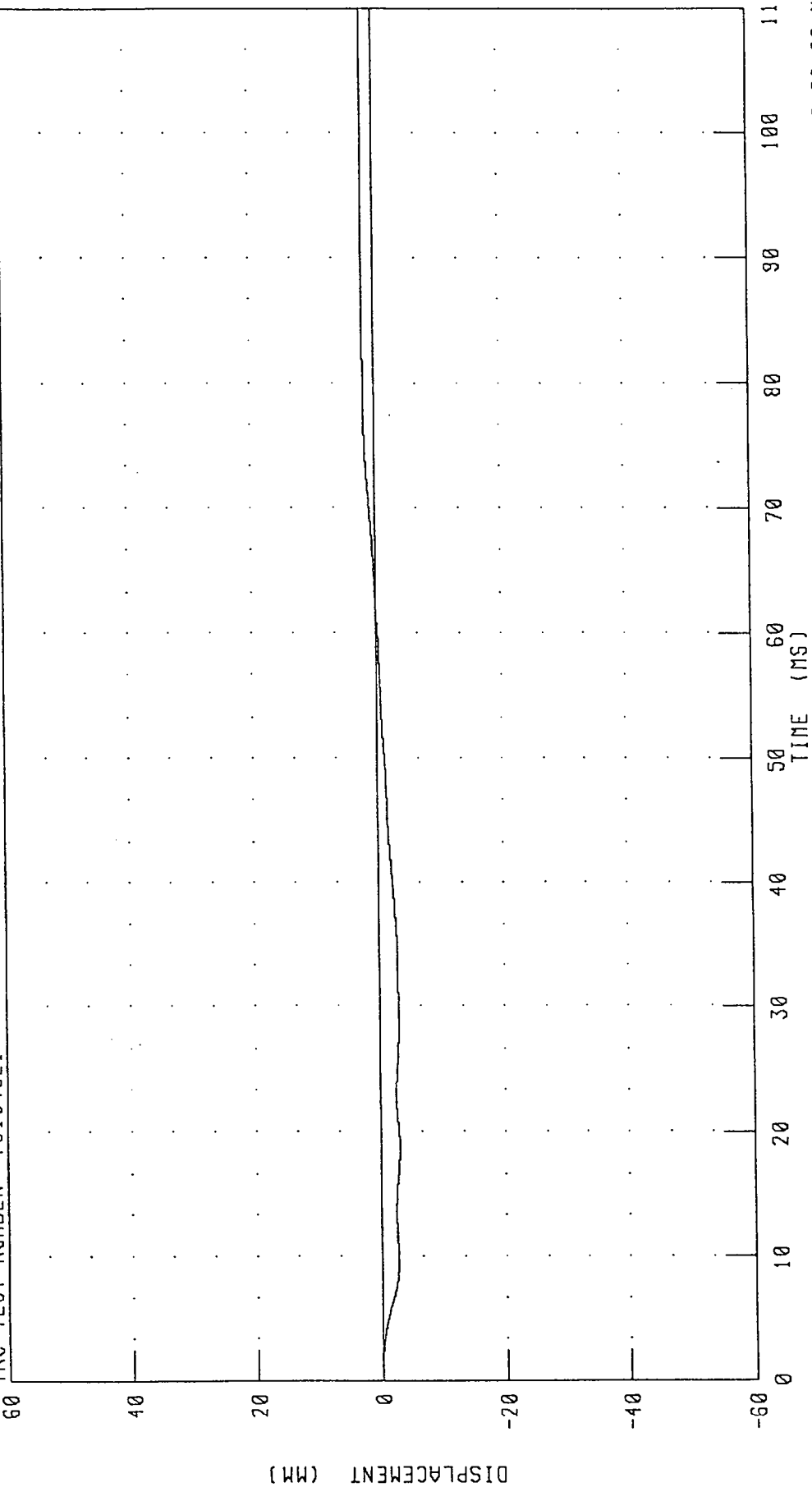
T.A.D. DUMMY MID STERNUM IMPACT TEST 4.3 M/SEC

POSITION 1 Y-AXIS CHEST DEFLECTION

TRC TEST NUMBER: T01C4UL1

T.A.D. 01 MID STERNUM LOW SPD

RUN NUMBER: 122293.2315,1



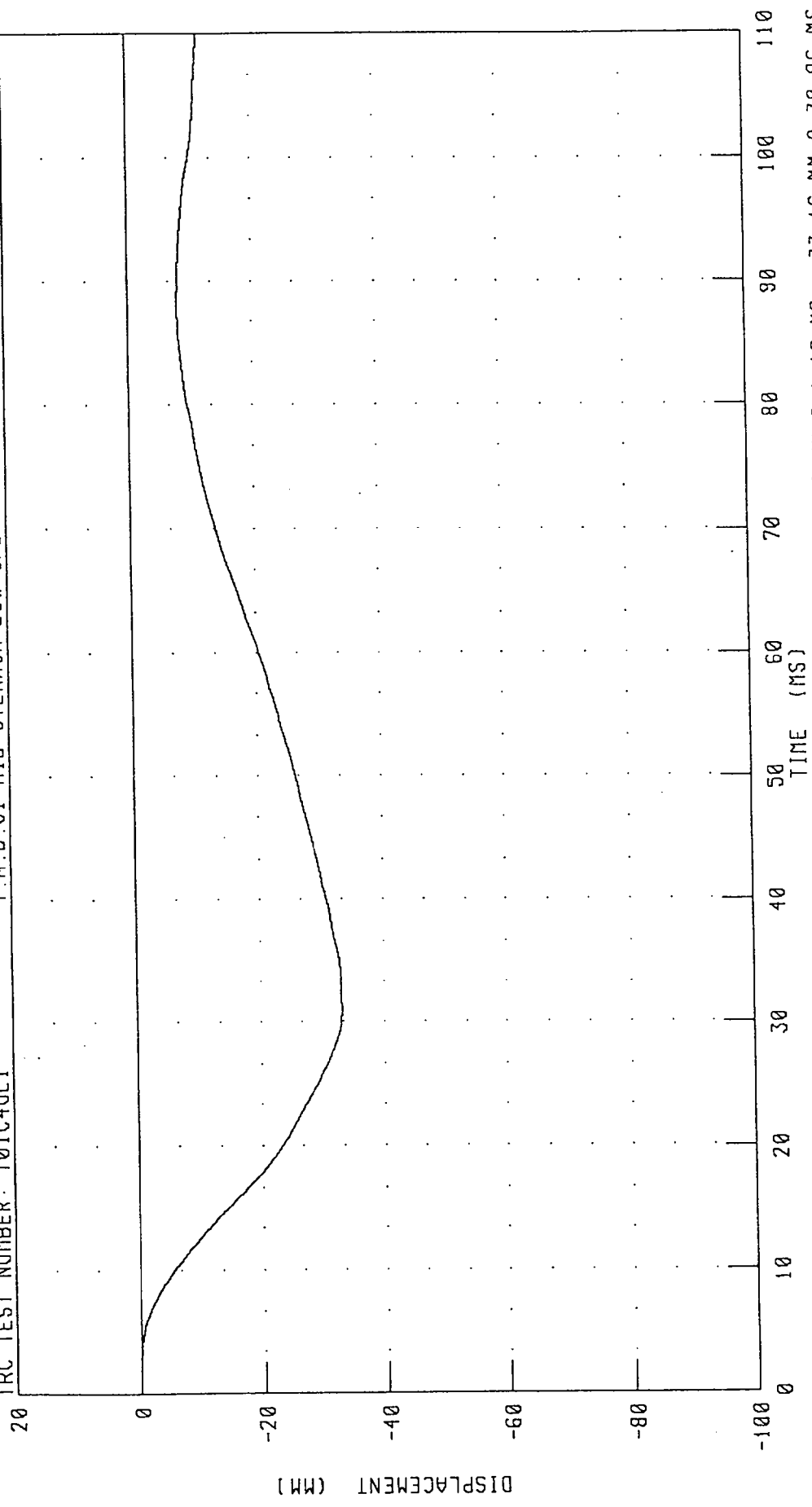
CHANNEL: DELY1 FILTER: CH. CLASS 180

PEAK DATA: 1.95 MM @ 92.40 MS; -3.04 MM @ 28.80 MS

T.A.D. DUMMY MID STERNUM IMPACT TEST 4.3 M/SEC

POSITION 1 Z-AXIS CHEST DEFLECTION

TRC TEST NUMBER: T01C4UL1 T.A.D.01 MID STERNUM LOW SPD RUN NUMBER: 122293.2315;1



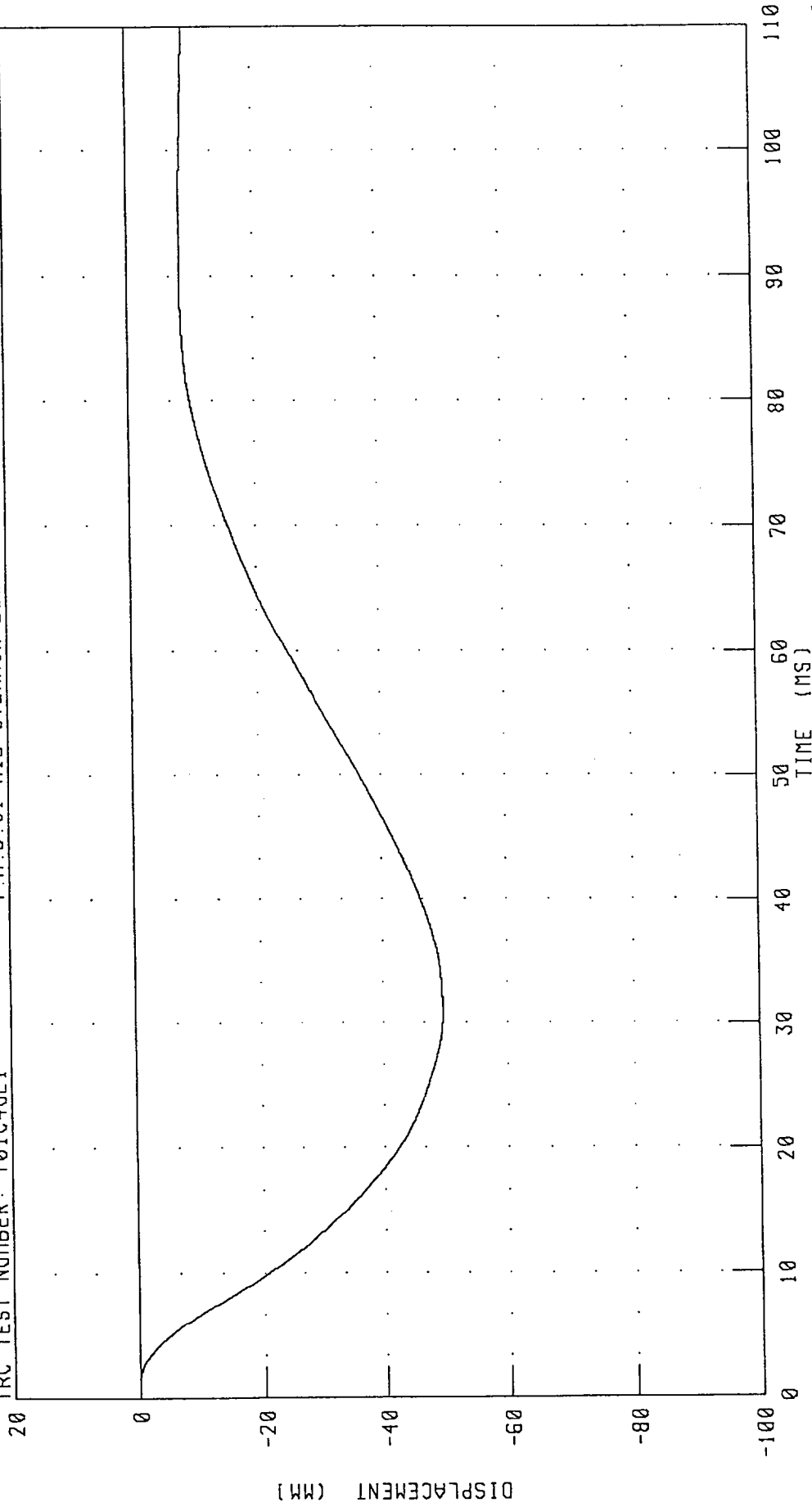
CHANNEL: DELZI FILTER: CH. CLASS 180 PEAK DATA: 0.00 MM @ 1.12 MS; -33.16 MM @ 30.96 MS

T.A.D. DUMMY MID STERNUM IMPACT TEST 4.3 M/SEC
POSITION 1 ALT. A/P-AXIS CHEST DEFLECTION

TRC TEST NUMBER: T01C4UL1

T.A.D.01 MID STERNUM LOW SPD

RUN NUMBER: 122293.2315,1



CHANNEL: COMPI FILTER: CH. CLASS 180 PEAK DATA: 0.02 MM @ 0.88 MS; -49.60 MM @ 30.96 MS

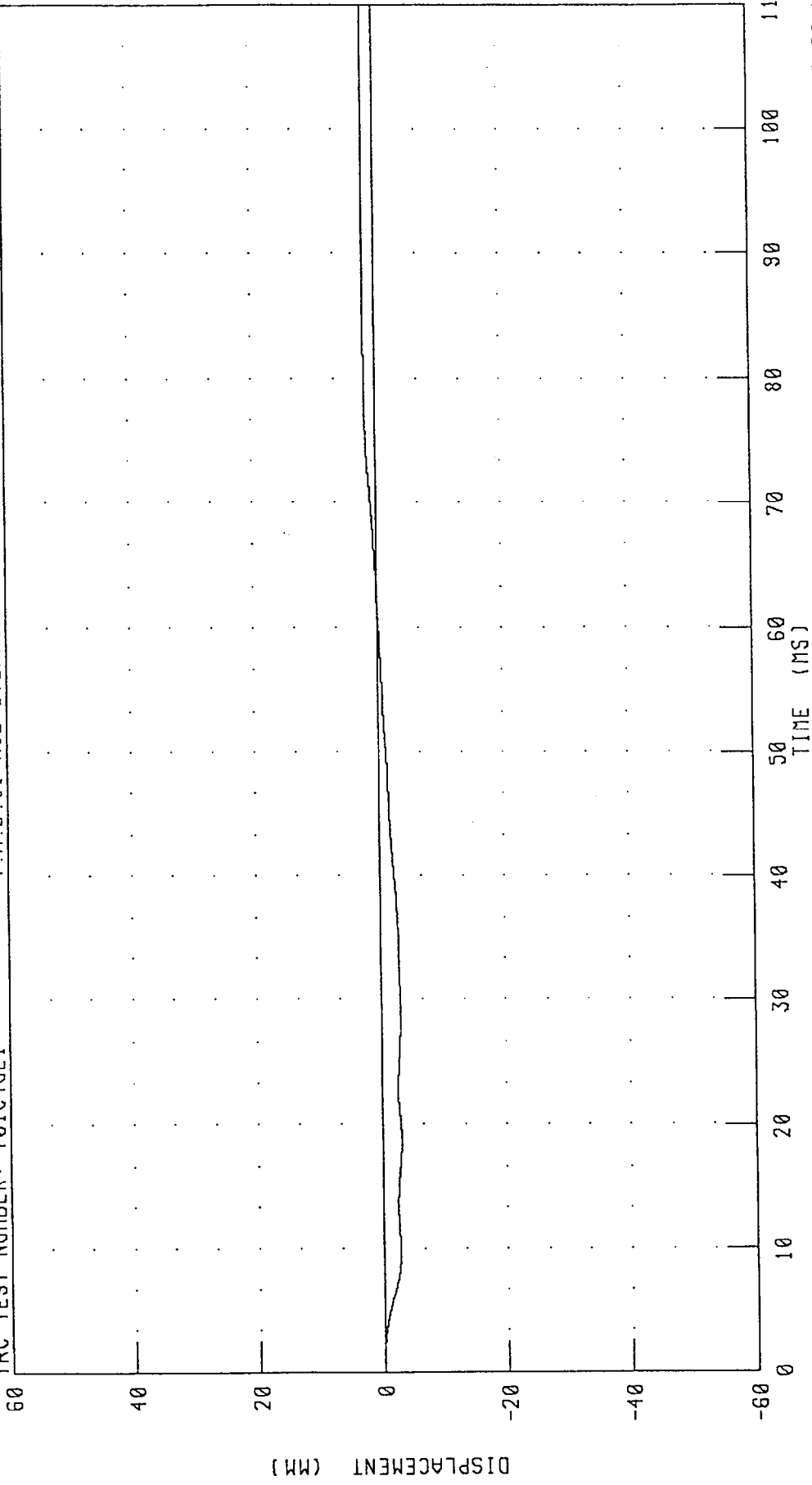
T.A.D. DUMMY MID STERNUM IMPACT TEST 4.3 M/SEC

POSITION I ALT. R/L-AXIS CHEST DEFLECTION

TRC TEST NUMBER: T01C4UL1

T.A.D.01 MID STERNUM LOW SPD

RUN NUMBER: 122293.2315;1

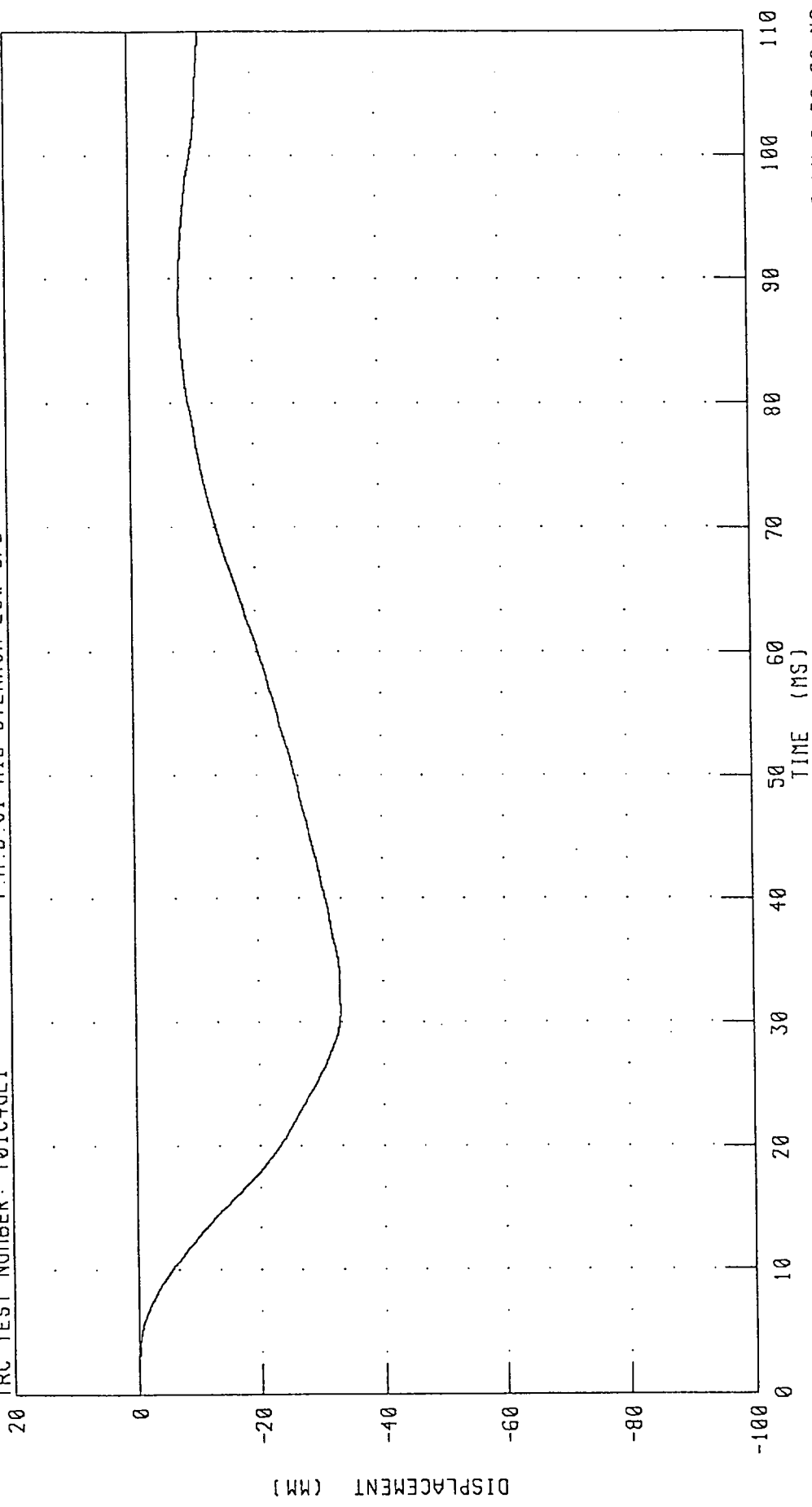


PEAK DATA: 1.95 MM @ 92.40 MS; -3.04 MM @ 28.80 MS

CHANNEL: TWIST1 FILTER: CH. CLASS 180

T.A.D. DUMMY MID STERNUM IMPACT TEST 4.3 M/SEC
POSITION 1 ALT. I/S-AXIS CHEST DEFLECTION

TRC TEST NUMBER: T01C4UL1 T.A.D. 01 MID STERNUM LOW SPD RUN NUMBER: 122293.2315.1



CHANNEL: LIFT1 FILTER: CH. CLASS 180 PEAK DATA: 0.00 MM @ 1.12 MS; -33.16 MM @ 30.96 MS

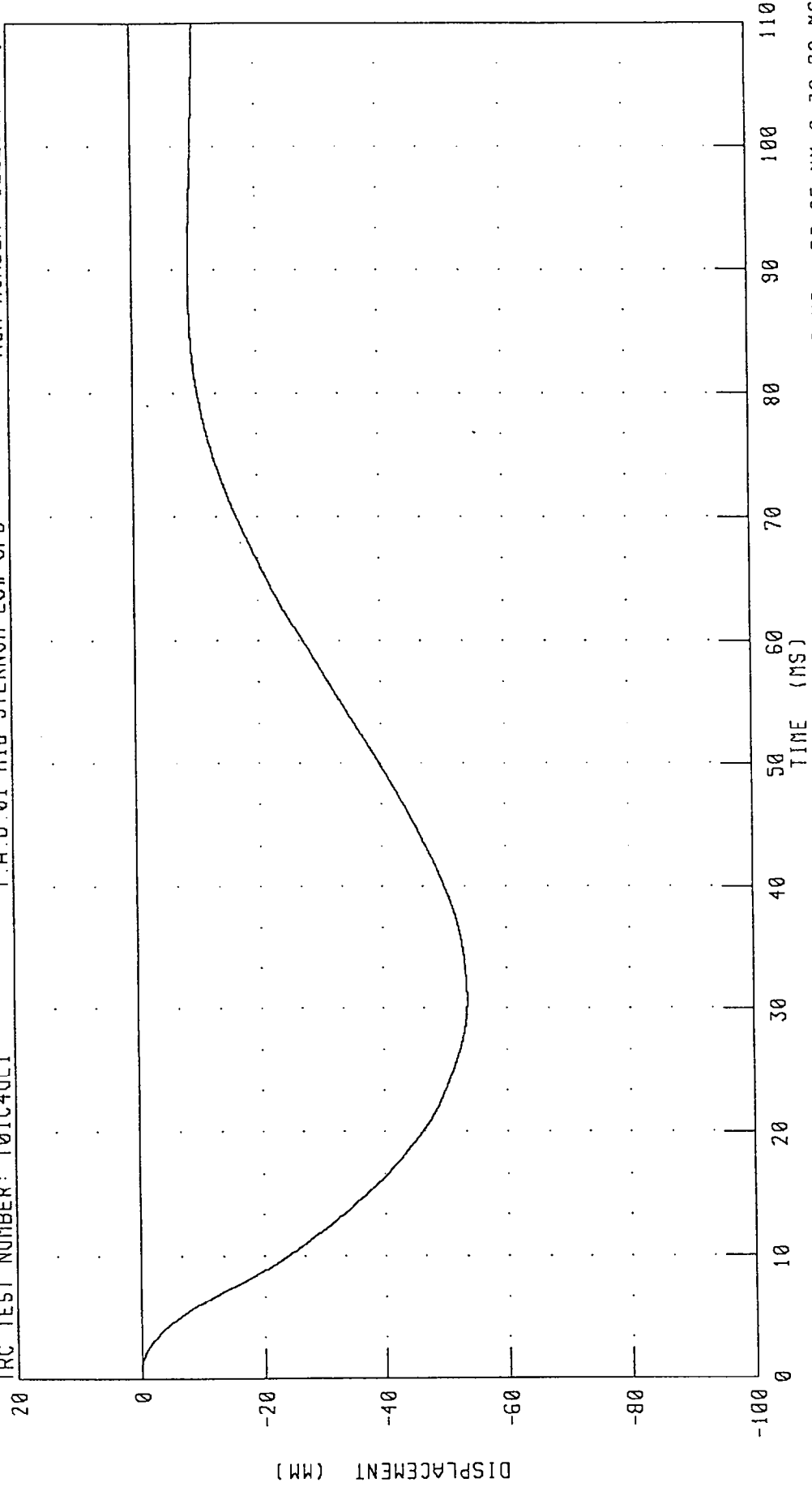
T.A.D. DUMMY MID STERNUM IMPACT TEST 4.3 M/SEC

POSITION 2 X-AXIS CHEST DEFLECTION

TRC TEST NUMBER: T01C4UL1

T.A.D. 01 MID STERNUM LOW SPD

RUN NUMBER: 122293.2315,1



CHANNEL: DELX2 FILTER: CH. CLASS 180

PEAK DATA: 0.03 MM @ 0.40 MS; -53.65 MM @ 30.72 MS

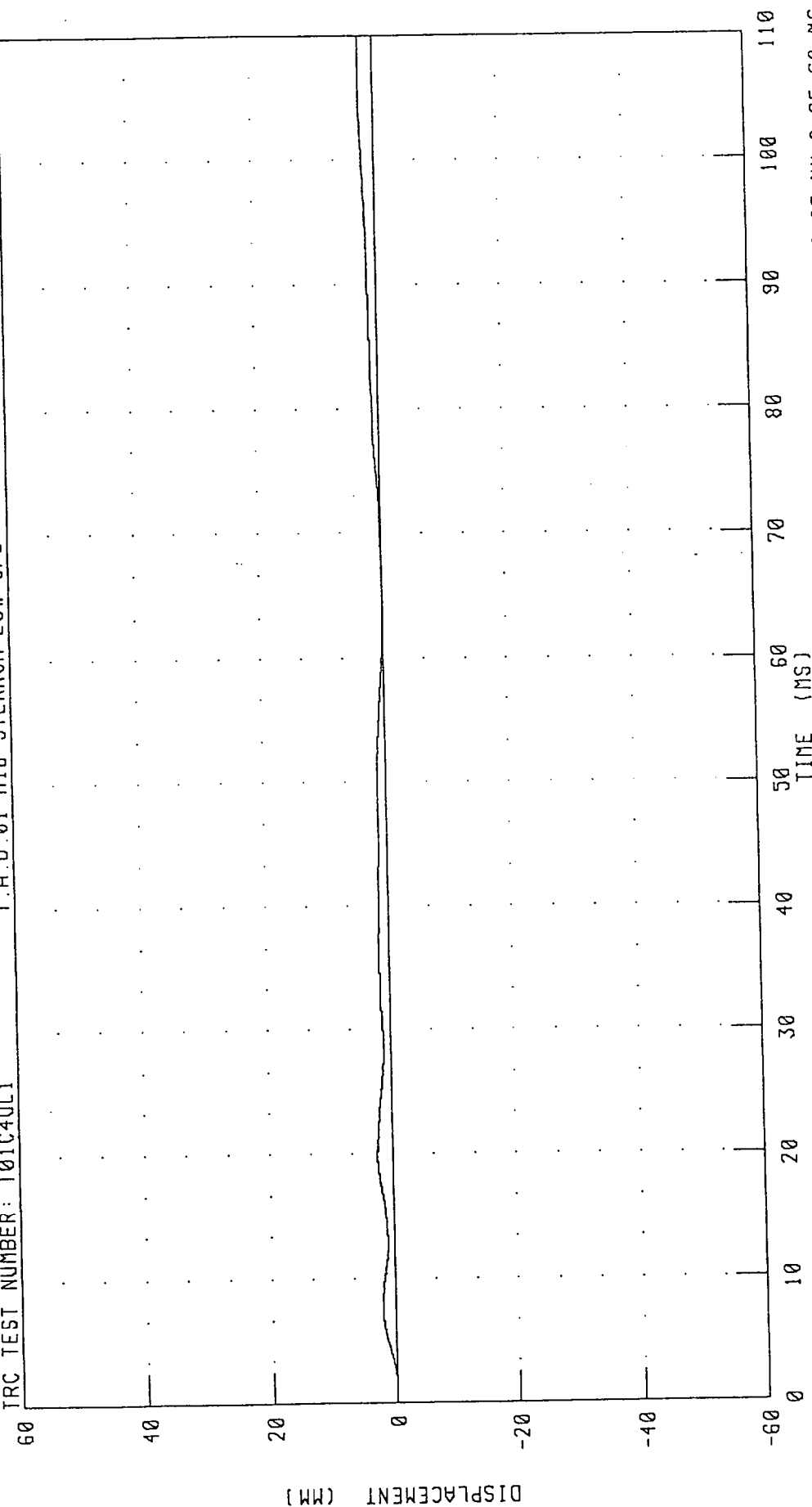
T.A.D. DUMMY MID STERNUM IMPACT TEST 4.3 M/SEC

POSITION 2 Y-AXIS CHEST DEFLECTION

TRC TEST NUMBER: T01C4UL1

T.A.D.01 MID STERNUM LOW SPD

RUN NUMBER: 122293.2315.1



PEAK DATA: 2.49 MM @ 19.84 MS; -0.07 MM @ 65.60 MS

CHANNEL: DELY2 FILTER: CH. CLASS 180

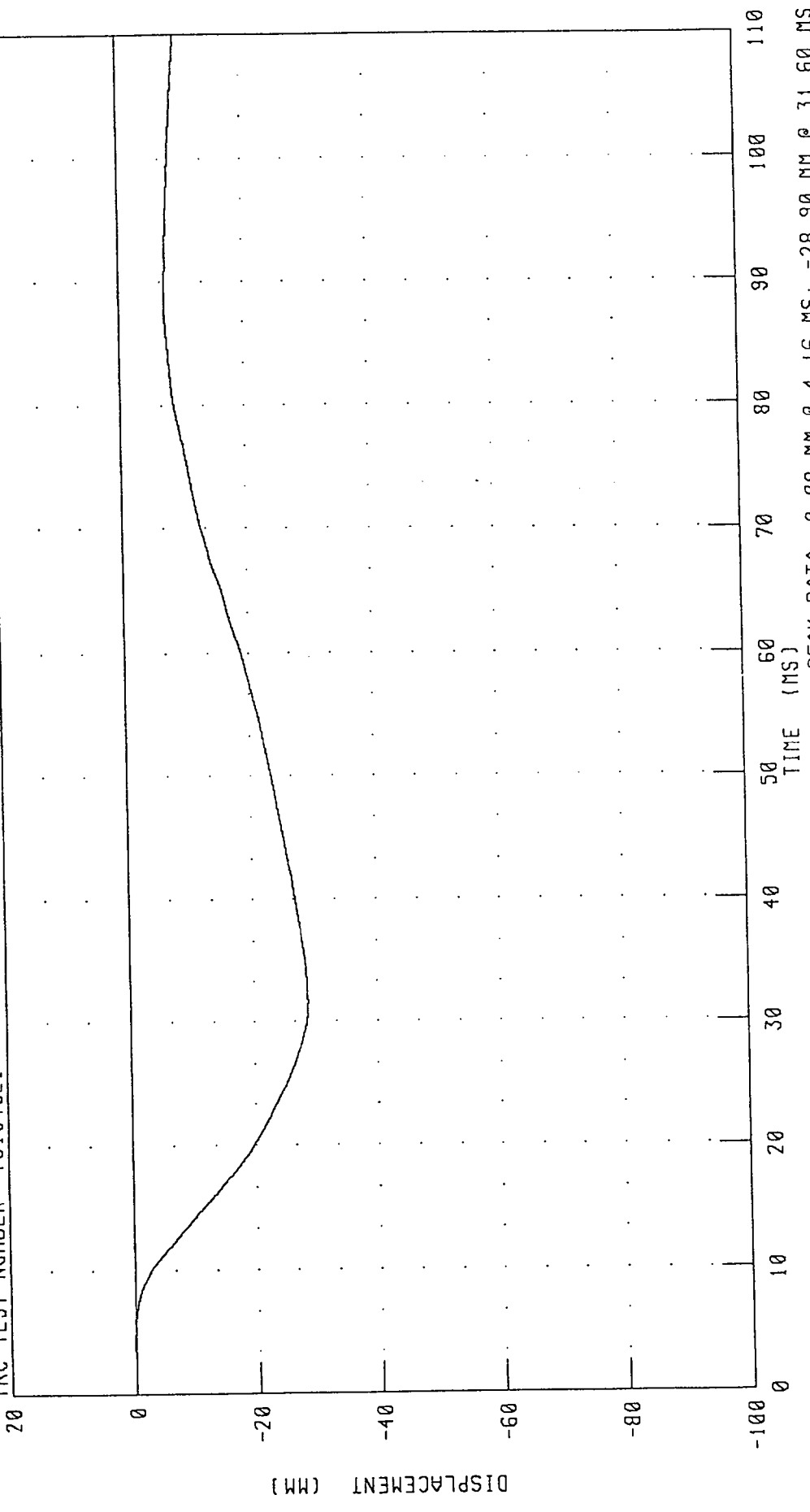
T.A.D. DUMMY MID STERNUM IMPACT TEST 4.3 M/SEC

POSITION 2 Z-AXIS CHEST DEFLECTION

RUN NUMBER: 122293.2315;1

TRC TEST NUMBER: T01C4UL1

T.A.D. 01 MID STERNUM LOW SPD



CHANNEL: DELZ2 FILTER: CH. CLASS 180 PEAK DATA: 0.08 MM @ 4.16 MS; -28.90 MM @ 31.60 MS

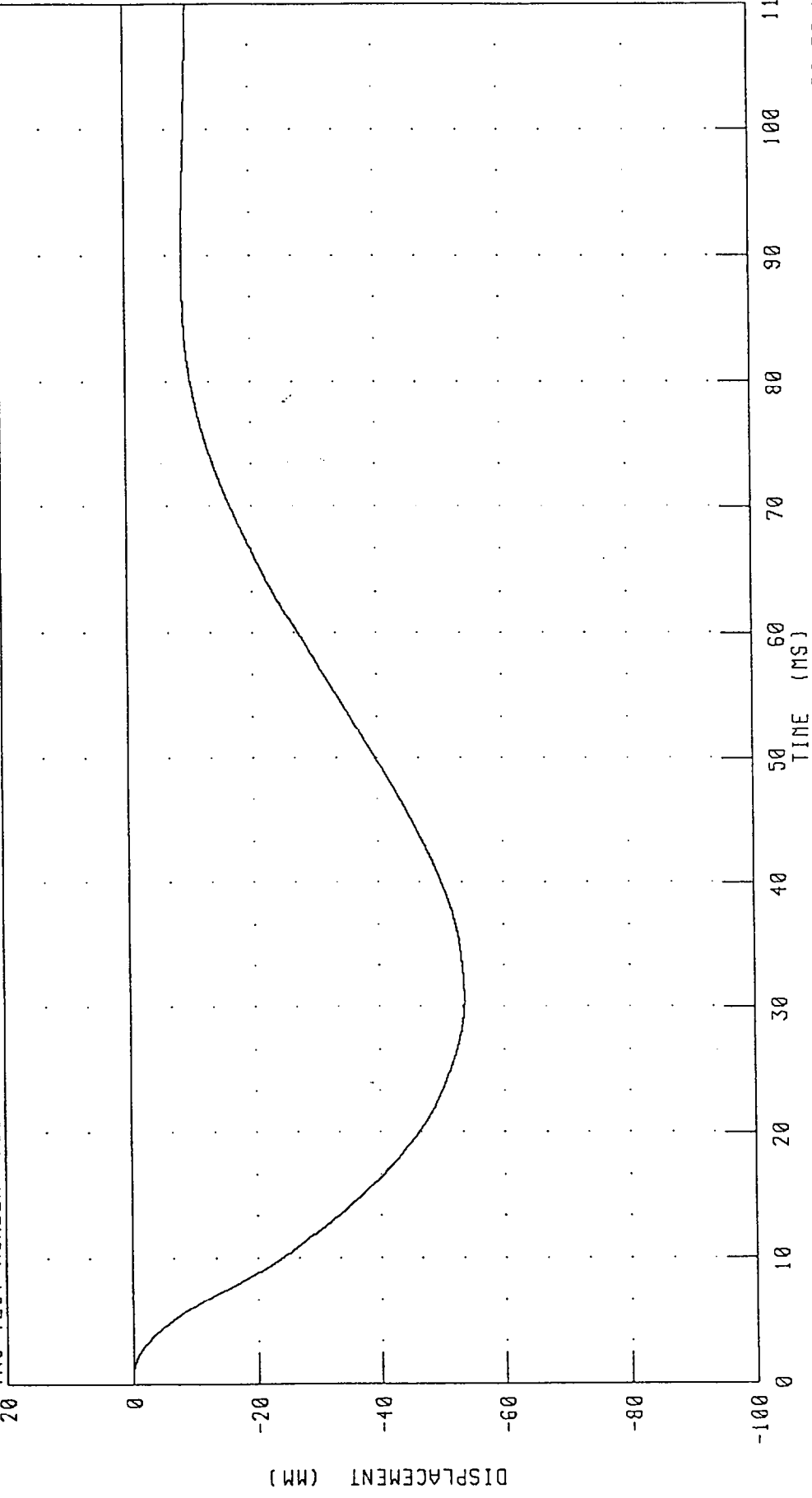
T.A.D. DUMMY MID STERNUM IMPACT TEST 4.3 M/SEC

POSITION 2 ALT. A/P-AXIS CHEST DEFLECTION

TRC TEST NUMBER: T01C4UL1

T.A.D.01 MID STERNUM LOW SPD

RUN NUMBER: 122293.2315;1



CHANNEL: COMP2 FILTER: CH. CLASS 180

PEAK DATA: 0.03 MM @ 0.40 MS; -53.65 MM @ 30.72 MS

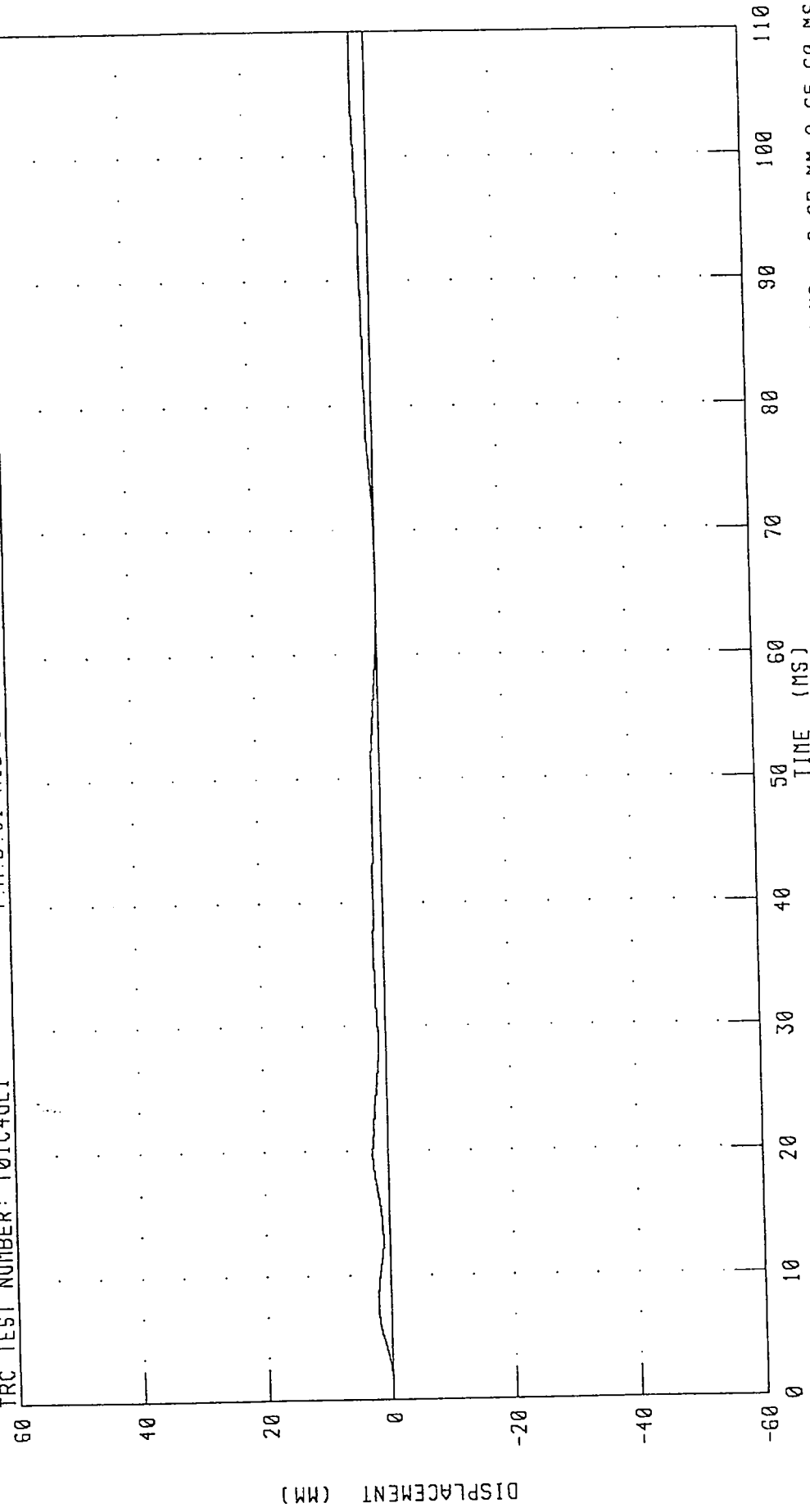
T.A.D. DUMMY MID STERNUM IMPACT TEST 4.3 M/SEC

POSITION 2 ALT. R/L-AXIS CHEST DEFLECTION

RUN NUMBER: 122293.2315;1

TRC TEST NUMBER: T01C4UL1

T.A.D. 01 MID STERNUM LOW SPD



PEAK DATA: 2.49 MM @ 19.84 MS; -0.07 MM @ 65.60 MS

CHANNEL: TWIST2 FILTER: CH. CLASS 180

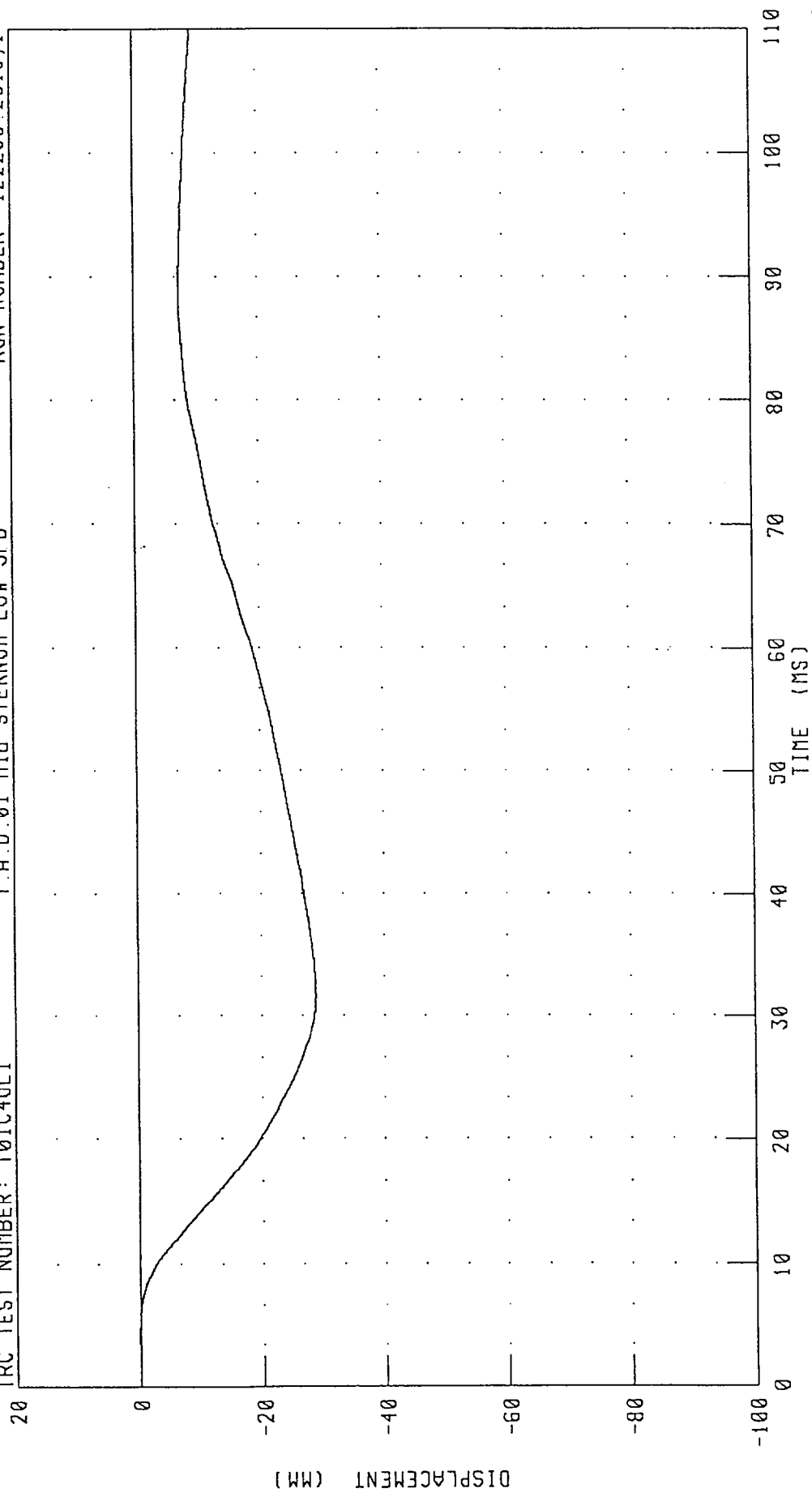
T.A.D. DUMMY MID STERNUM IMPACT TEST 4.3 N/SEC

POSITION 2 ALT. I/S-AXIS CHEST DEFLECTION

TRC TEST NUMBER: T01C4UL1

T.A.D.01 MID STERNUM LOW SPD

RUN NUMBER: 122293.2315.1

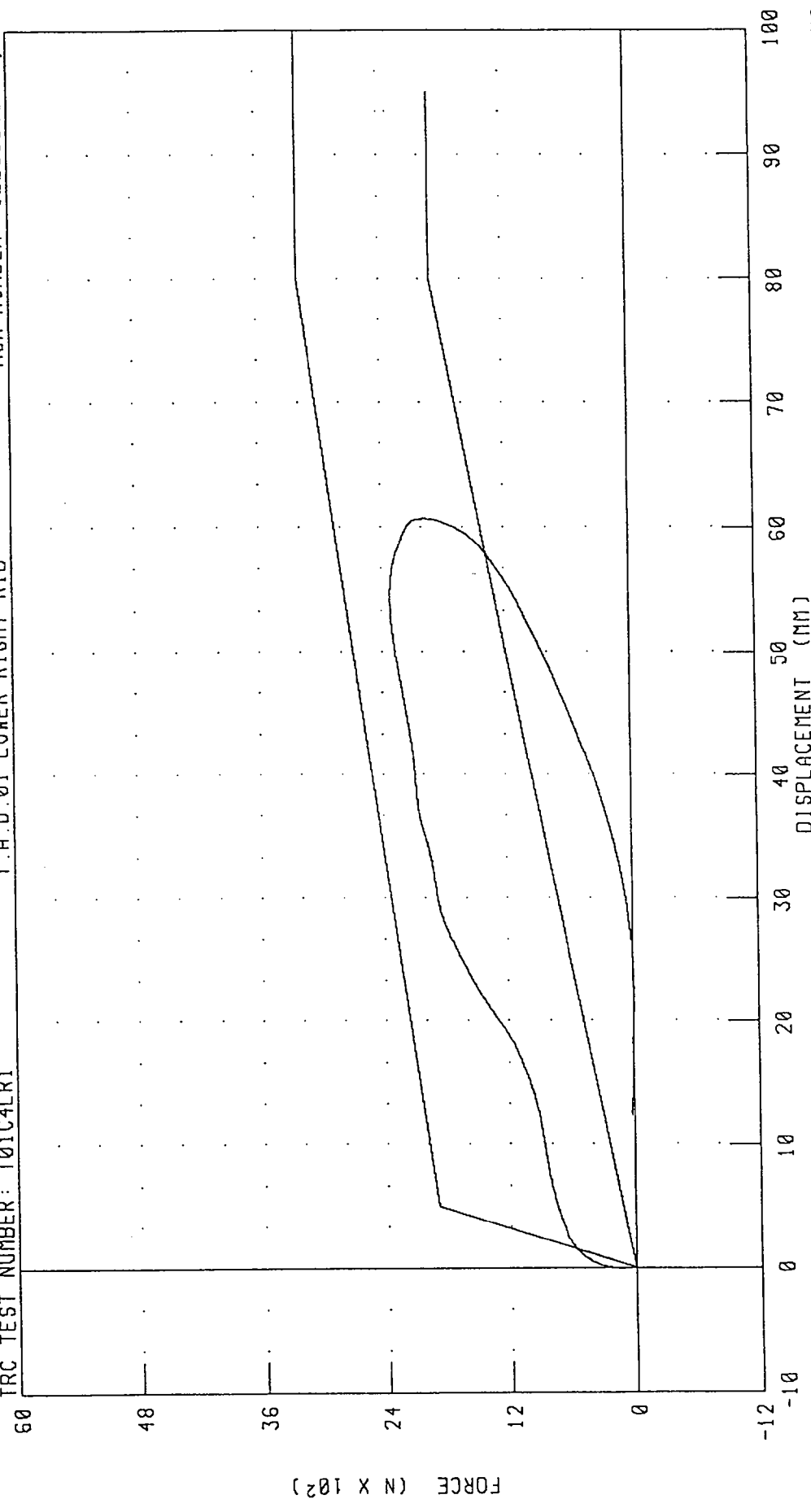


PEAK DATA: 0.08 MM @ 4.16 MS; -28.90 MM @ 31.60 MS

CHANNEL: LIFT2 FILTER: CH. CLASS 180

T.A.D. DUMMY LOWER RIGHT RIB CAGE IMPACT TEST 4.3 M/SEC
POSITION 3 ALT. A/P-AXIS CHEST DEFLECTION VS PENDULUM FORCE

TRC TEST NUMBER: T01C4LR1 T.A.D.01 LOWER RIGHT RIB RUN NUMBER: 122393.1009.1



CHANNEL: COMP3 FILTER: CH. CLASS 180
FORCE CH. CLASS 180
PEAK DATA: 60.69 MM @ 37.36 MS; -0.05 MM @ 0.00 MS
2315.53 N @ 25.68 MS; -6.25 N @ 85.04 MS

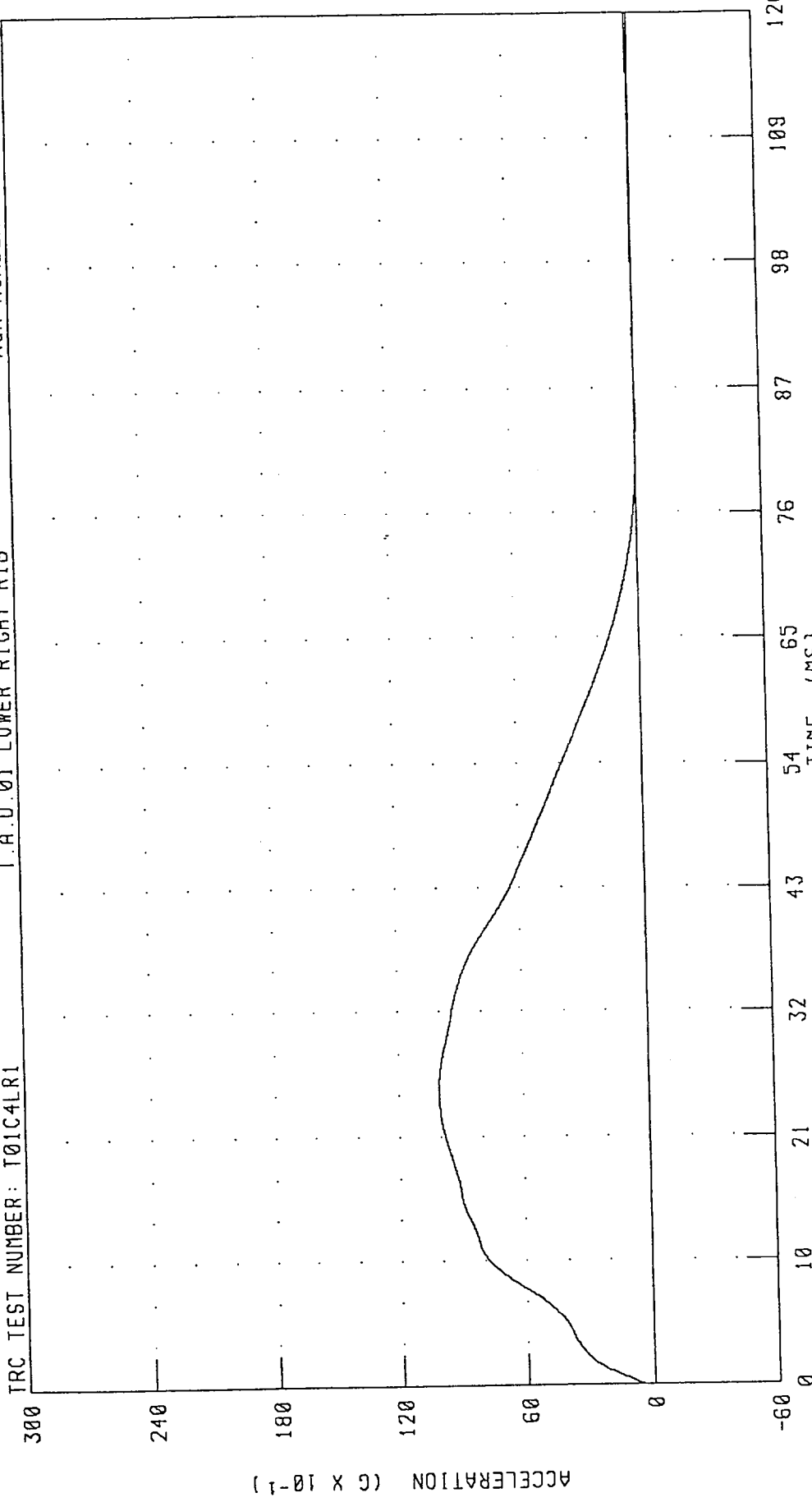
T.A.D. DUMMY LOWER RIGHT RIB CAGE IMPACT TEST 4.3 M/SEC

PENDULUM DECELERATION

TRC TEST NUMBER: T01C4LR1

T.A.D.01 LOWER RIGHT RIB

RUN NUMBER: 122393.1006;1

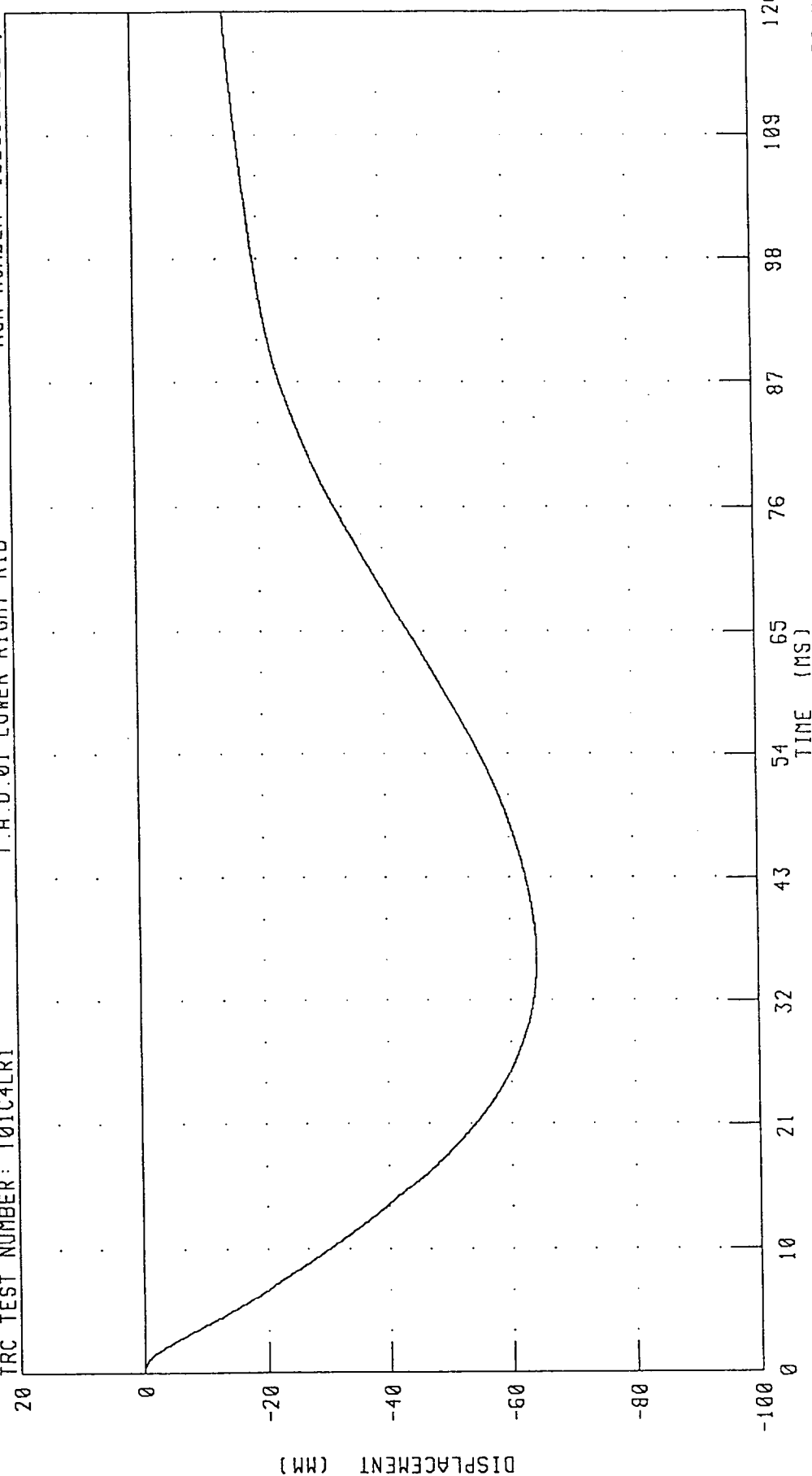


PEAK DATA: 10.08 G @ 25.68 MS; -0.03 G @ 85.04 MS

CHANNEL: PENXC FILTER: CH. CLASS 180

T.A.O. DUMMY LOWER RIGHT RIB CAGE IMPACT TEST 4.3 M/SEC
POSITION 3 POSTERIOR/ANTERIOR CHEST POTENTIOMETER

TRC TEST NUMBER: T01C4LR1 T.A.D.01 LOWER RIGHT RIB RUN NUMBER: 122393.1006.1



CHANNEL: CST3PA FILTER: CH. CLASS 180 PEAK DATA: 0.05 MM @ 0.00 MS; -64.21 MM @ 36.72 MS

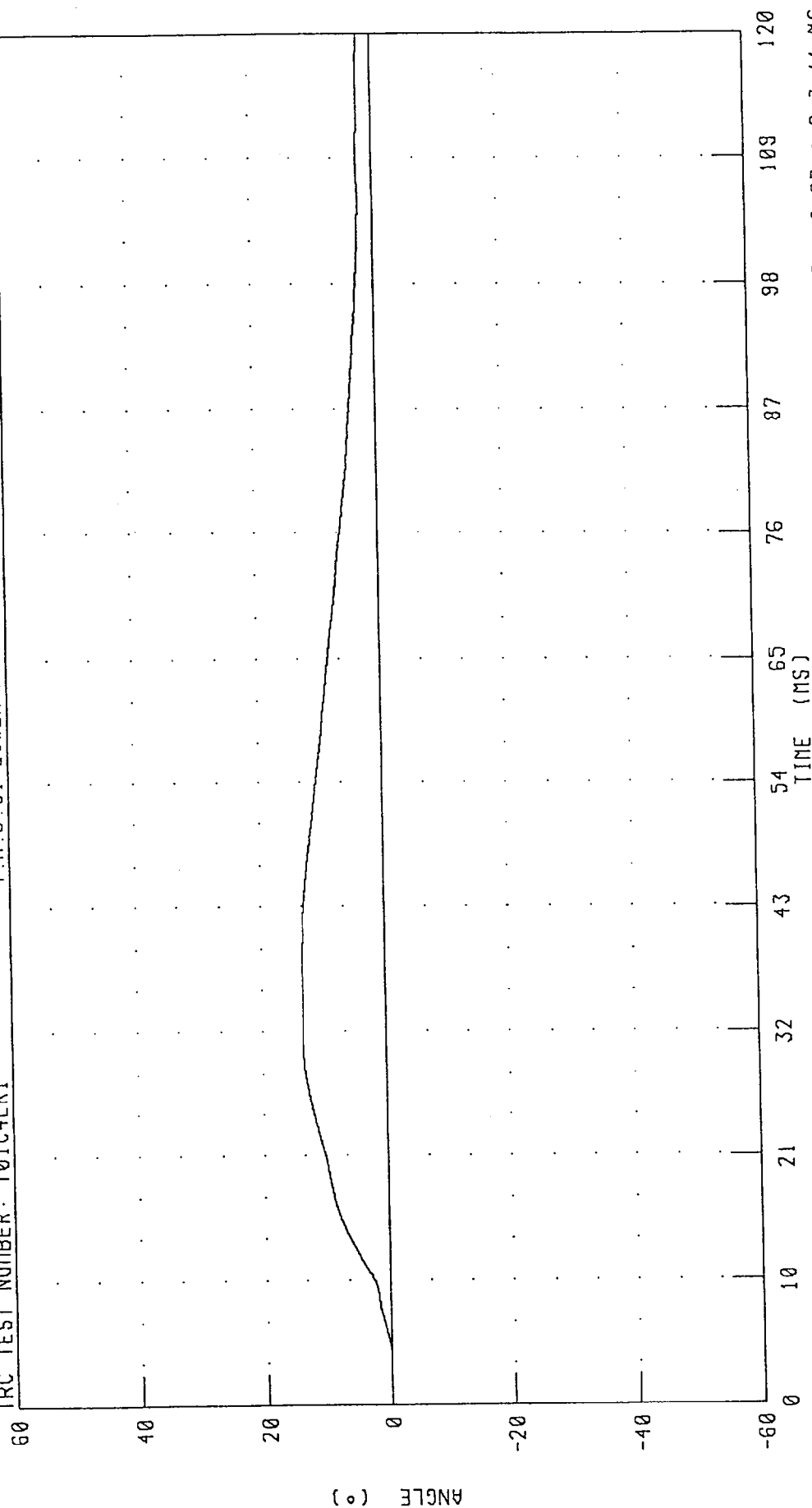
T.A.D. DUMMY LOWER RIGHT RIB CAGE IMPACT TEST 4.3 M/SEC

POSITION 3 RIGHT/LEFT CHEST POTENTIOMETER

TRC TEST NUMBER: T01C4LR1

T.A.D. 01 LOWER RIGHT RIB

RUN NUMBER: 122393.1006;1

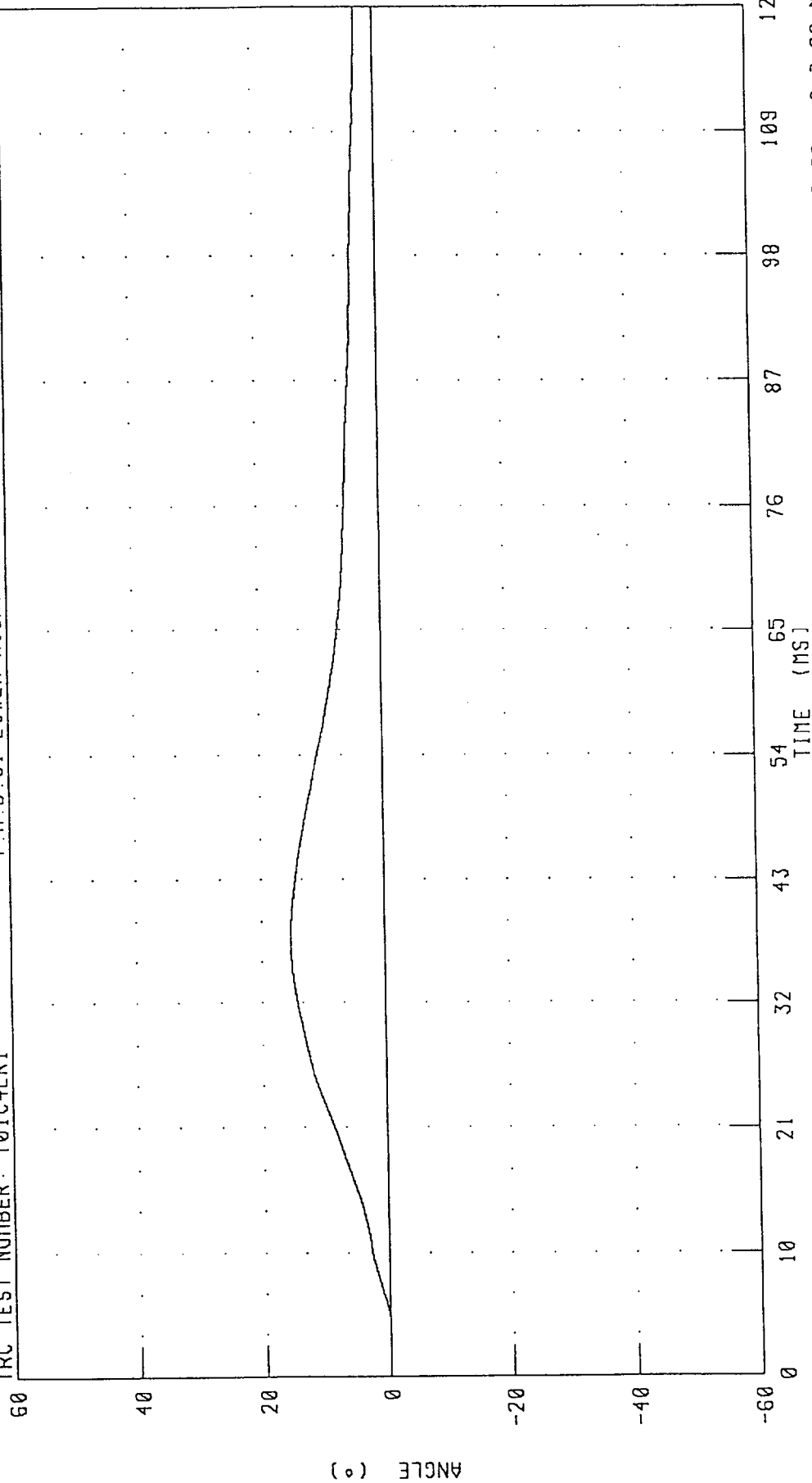


PEAK DATA: 13.44 ° @ 32.64 MS; -0.03 ° @ 3.44 MS

CHANNEL: CST3RL FILTER: CH. CLASS 180

T.A.D. DUMMY LOWER RIGHT RIB CAGE IMPACT TEST 4.3 M/SEC
POSITION 3 INFERIOR/SUPERIOR CHEST POTENTIOMETER

TRC TEST NUMBER: T01C4LR1 T.A.D.01 LOWER RIGHT RIB RUN NUMBER: 122393.1006;1



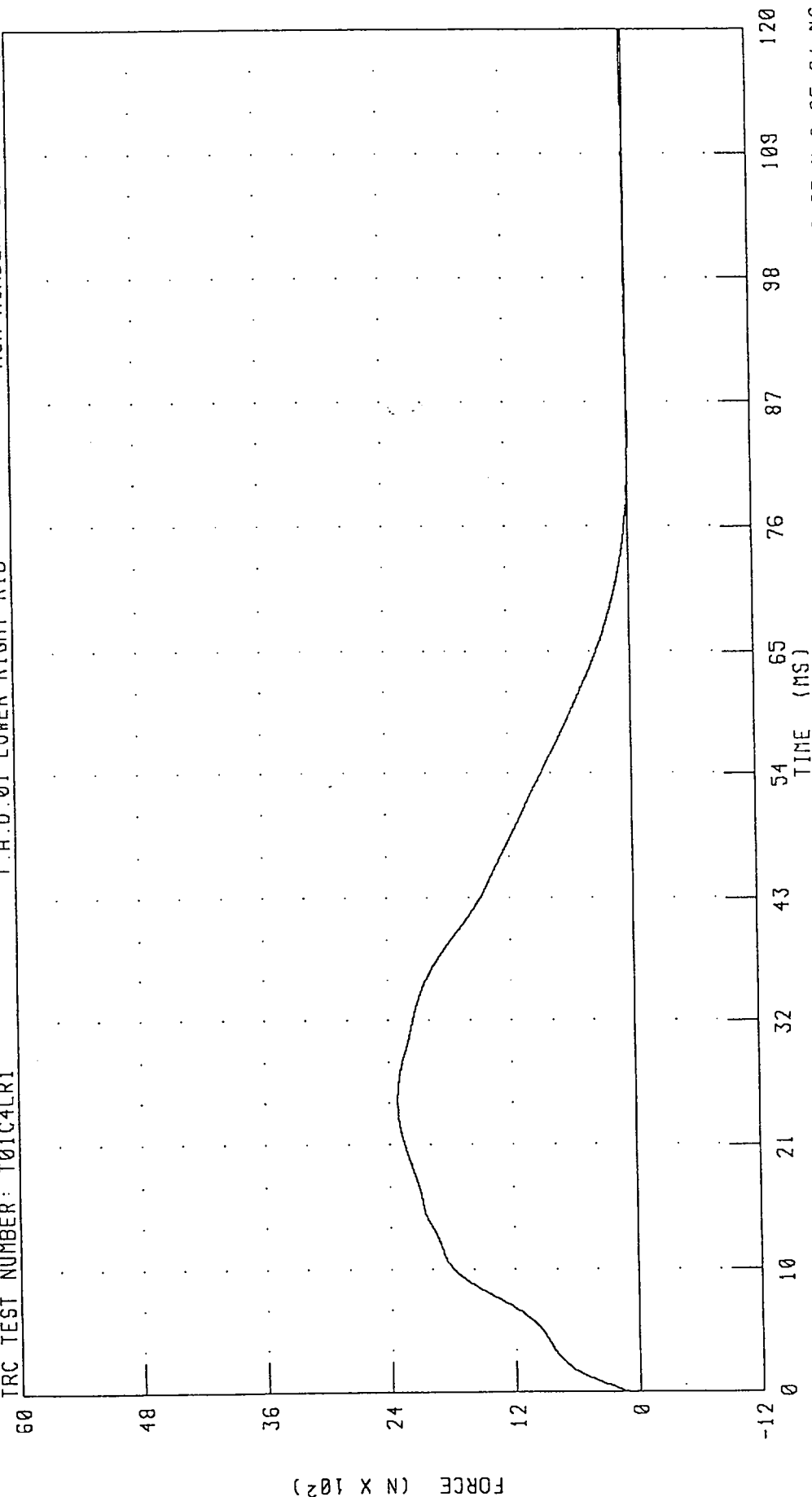
CHANNEL: CST3IS FILTER: CH. CLASS 180

PEAK DATA: 15.26 ° @ 38.32 MS; -0.08 ° @ 3.68 MS

T.A.D. DUNNY LOWER RIGHT RIB CAGE IMPACT TEST 4.3 M/SEC

PENDULUM FORCE

TRC TEST NUMBER: T01C4LR1 T.A.D.01 LOWER RIGHT RIB RUN NUMBER: 122393.1006;1



CHANNEL: FORCE FILTER: CH. CLASS 180 PEAK DATA: 2315.53 N @ 25.68 MS, -6.25 N @ 85.04 MS

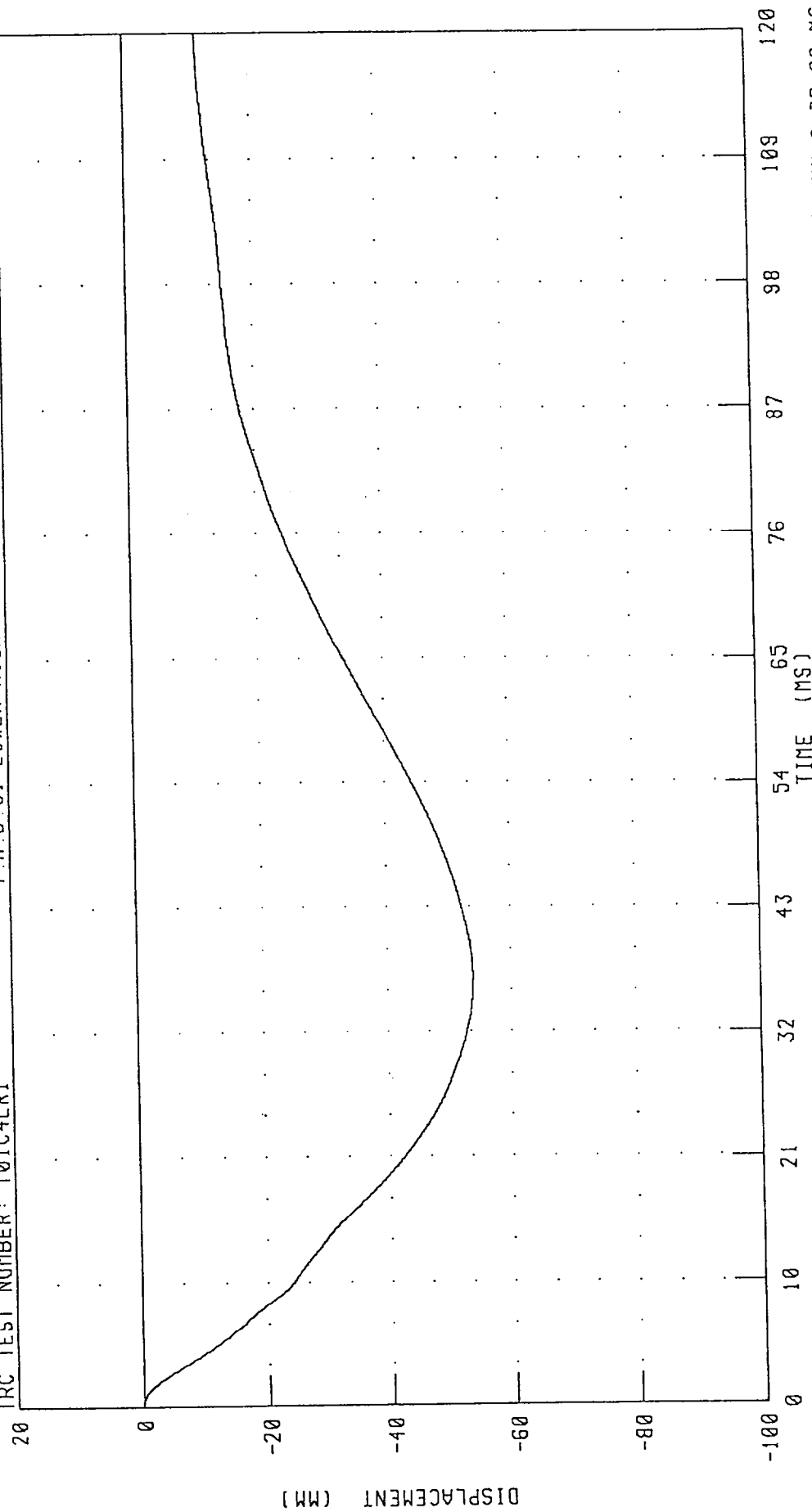
T.A.D. DUMMY LOWER RIGHT RIB CAGE IMPACT TEST 4.3 N/SEC

POSITION 3 X-AXIS CHEST DEFLECTION

TRC TEST NUMBER: T01C4LR1

T.A.D. 01 LOWER RIGHT RIB

RUN NUMBER: 122393.1006;1



PEAK DATA: 0.05 MM @ 0.00 MS, -53.79 MM @ 37.68 MS

CHANNEL: DELX3 FILTER: CH. CLASS 180

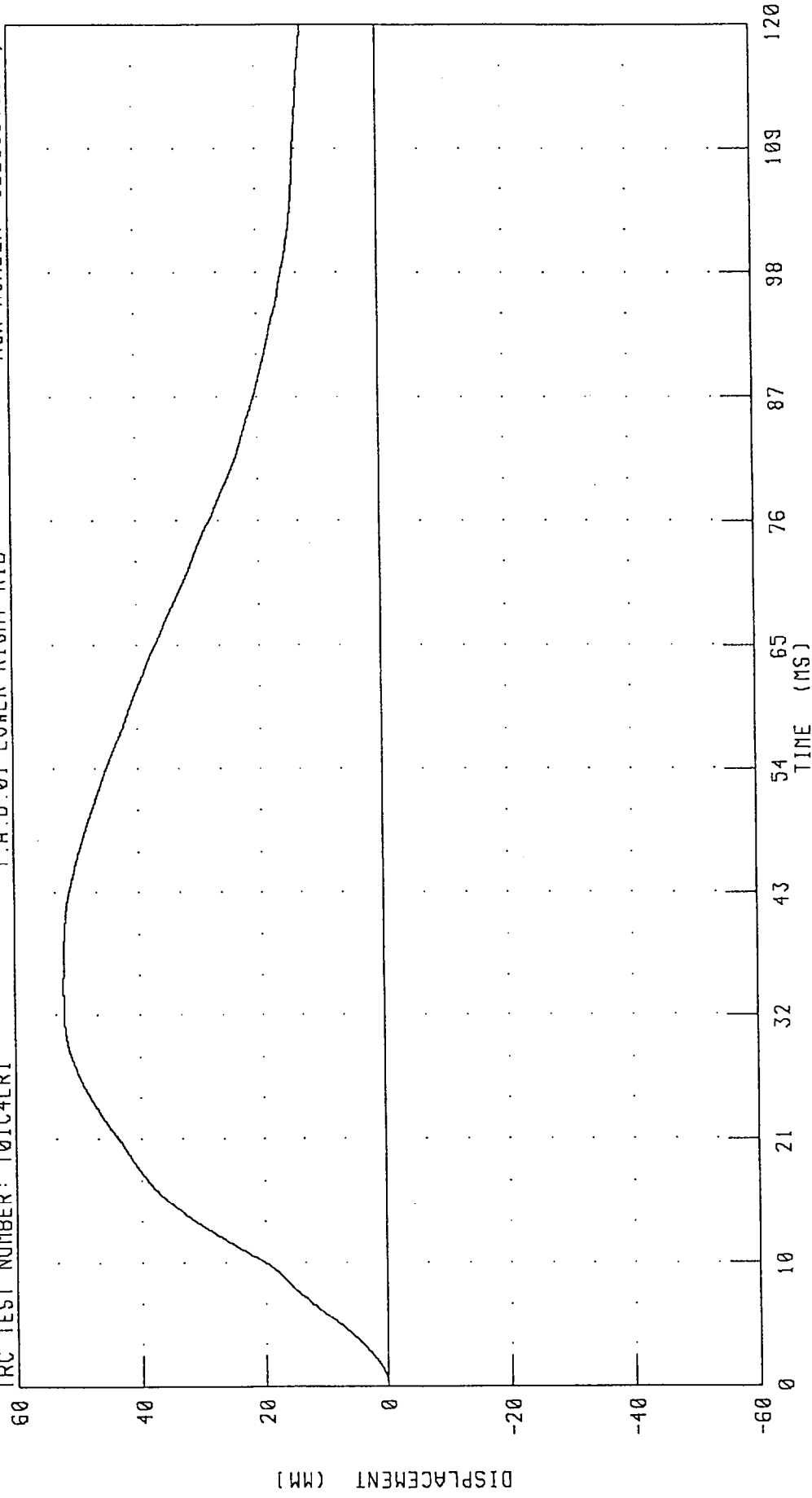
T.A.D. DUMMY LOWER RIGHT RIB CAGE IMPACT TEST 4.3 M/SEC

POSITION 3 Y-AXIS CHEST DEFLECTION

TRC TEST NUMBER: T01C4LR1

T.A.D.01 LOWER RIGHT RIB

RUN NUMBER: 122393.1006;1



CHANNEL: DELY3 FILTER: CH. CLASS 180 PEAK DATA: 52.09 MM @ 35.28 MS; -0.01 MM @ 0.00 MS

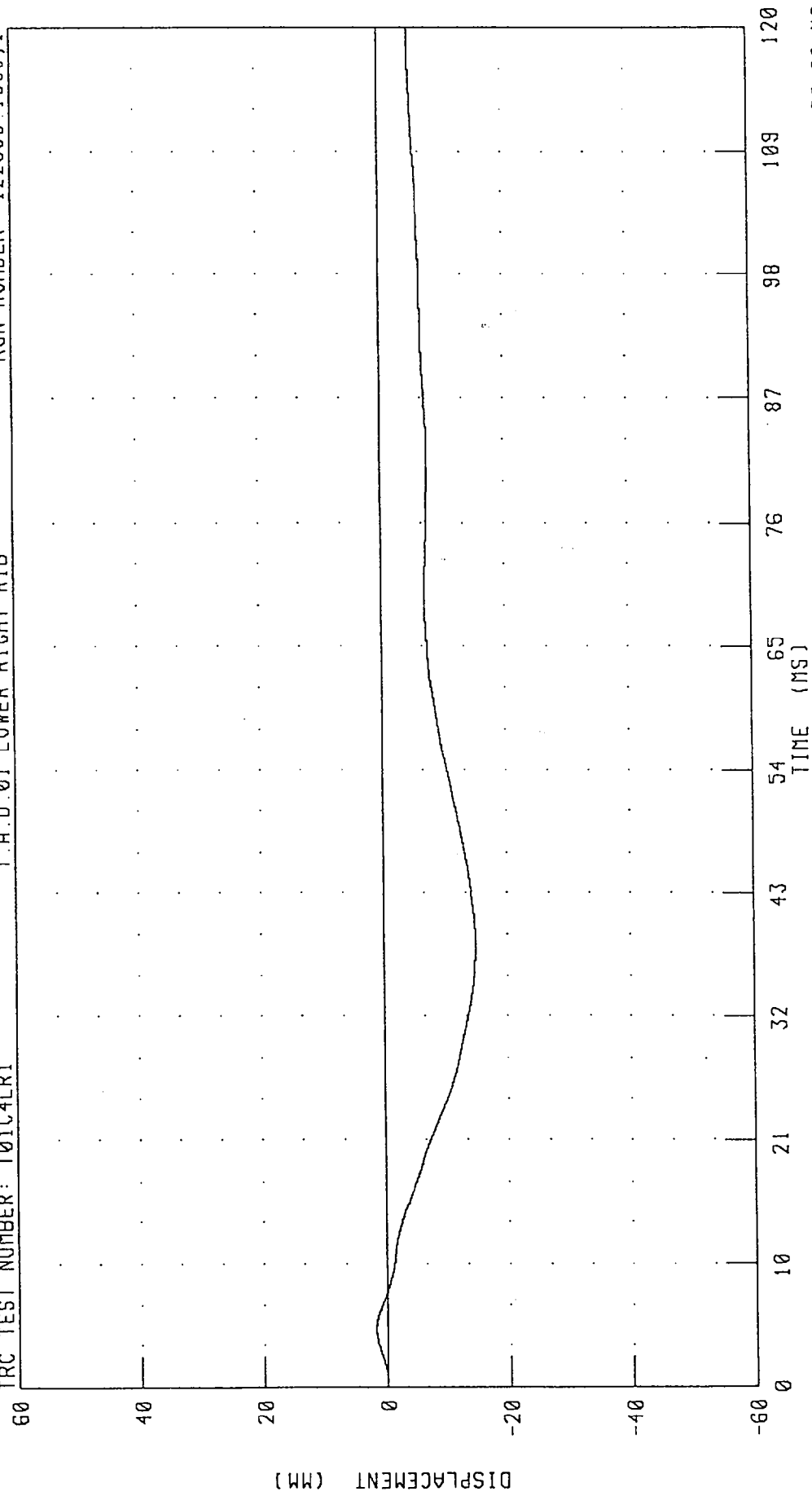
T.A.D. DUMMY LOWER RIGHT RIB CAGE IMPACT TEST 4.3 M/SEC

POSITION 3 Z-AXIS CHEST DEFLECTION

TRC TEST NUMBER: T01C4LR1

T.A.D. 01 LOWER RIGHT RIB

RUN NUMBER: 122393.1006;1



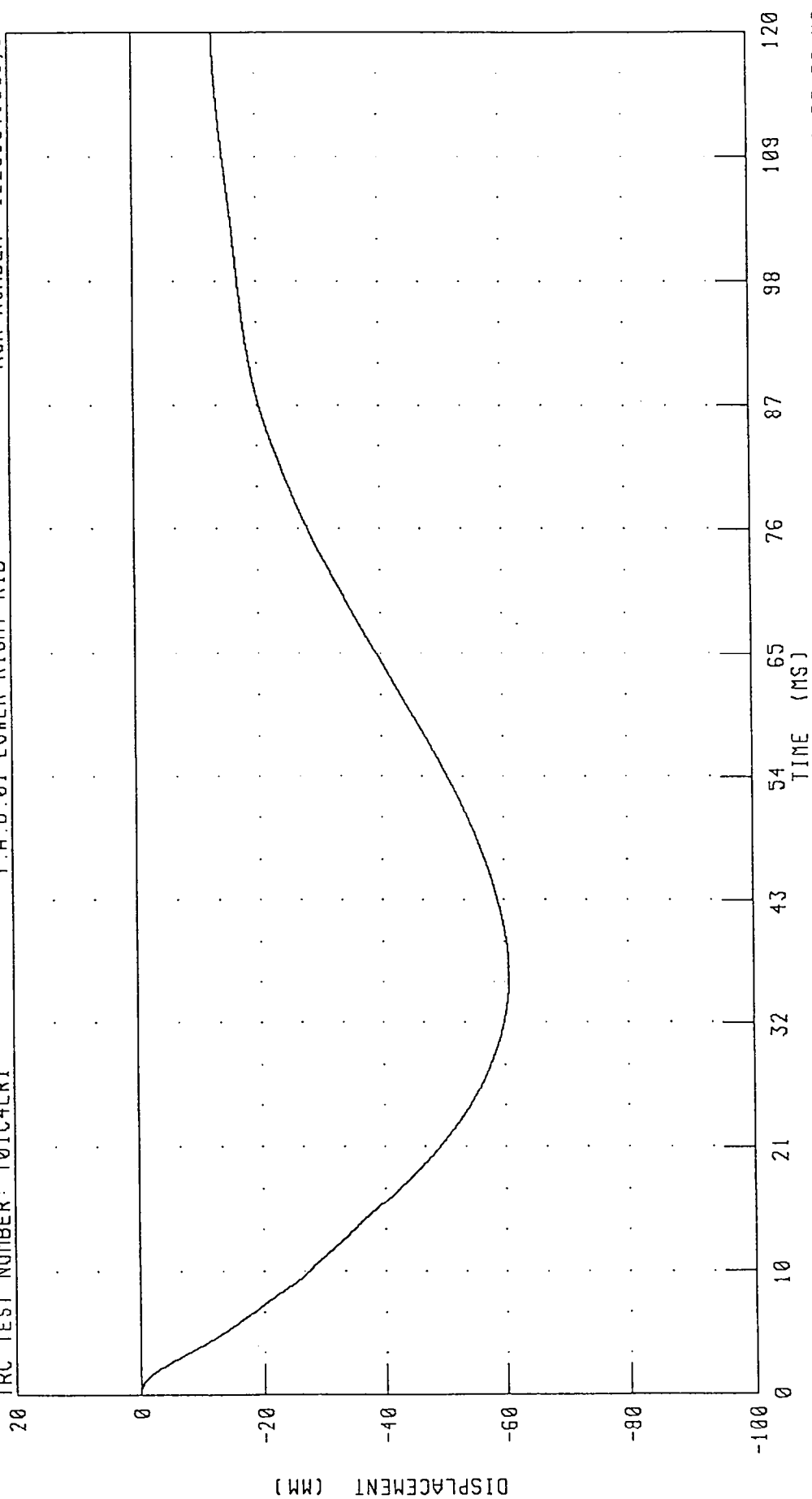
CHANNEL: DELZ3 FILTER: CH. CLASS 180 PEAK DATA: 1.82 MM @ 5.04 MS, -14.85 MM @ 38.80 MS

T.A.D. DUMMY LOWER RIGHT RIB CAGE IMPACT TEST 4.3 M/SEC
POSITION 3 ALT. A/P-AXIS CHEST DEFLECTION

TRC TEST NUMBER: T01C4LR1

T.A.D.01 LOWER RIGHT RIB

RUN NUMBER: 122393.1006;1



CHANNEL: COMP3 FILTER: CH. CLASS 180 PEAK DATA: 0.05 MM @ 0.00 MS, -60.69 MM @ 37.36 MS

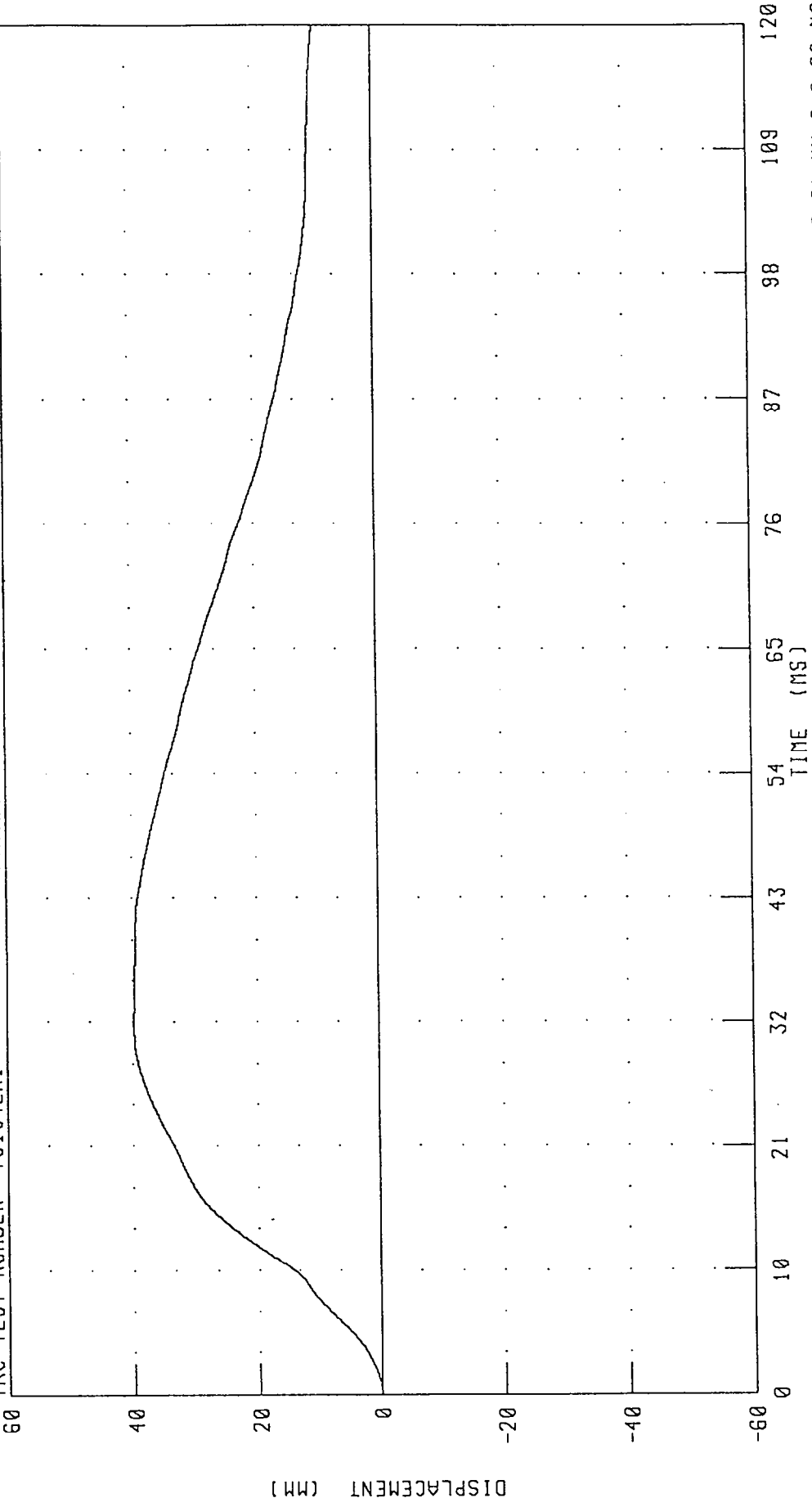
T.A.D. DUMMY LOWER RIGHT RIB CAGE IMPACT TEST 4.3 M/SEC

POSITION 3 ALT. R/L-AXIS CHEST DEFLECTION

TRC TEST NUMBER: T01C4LR1

T.A.D.01 LOWER RIGHT RIB

RUN NUMBER: 122393.1006,1

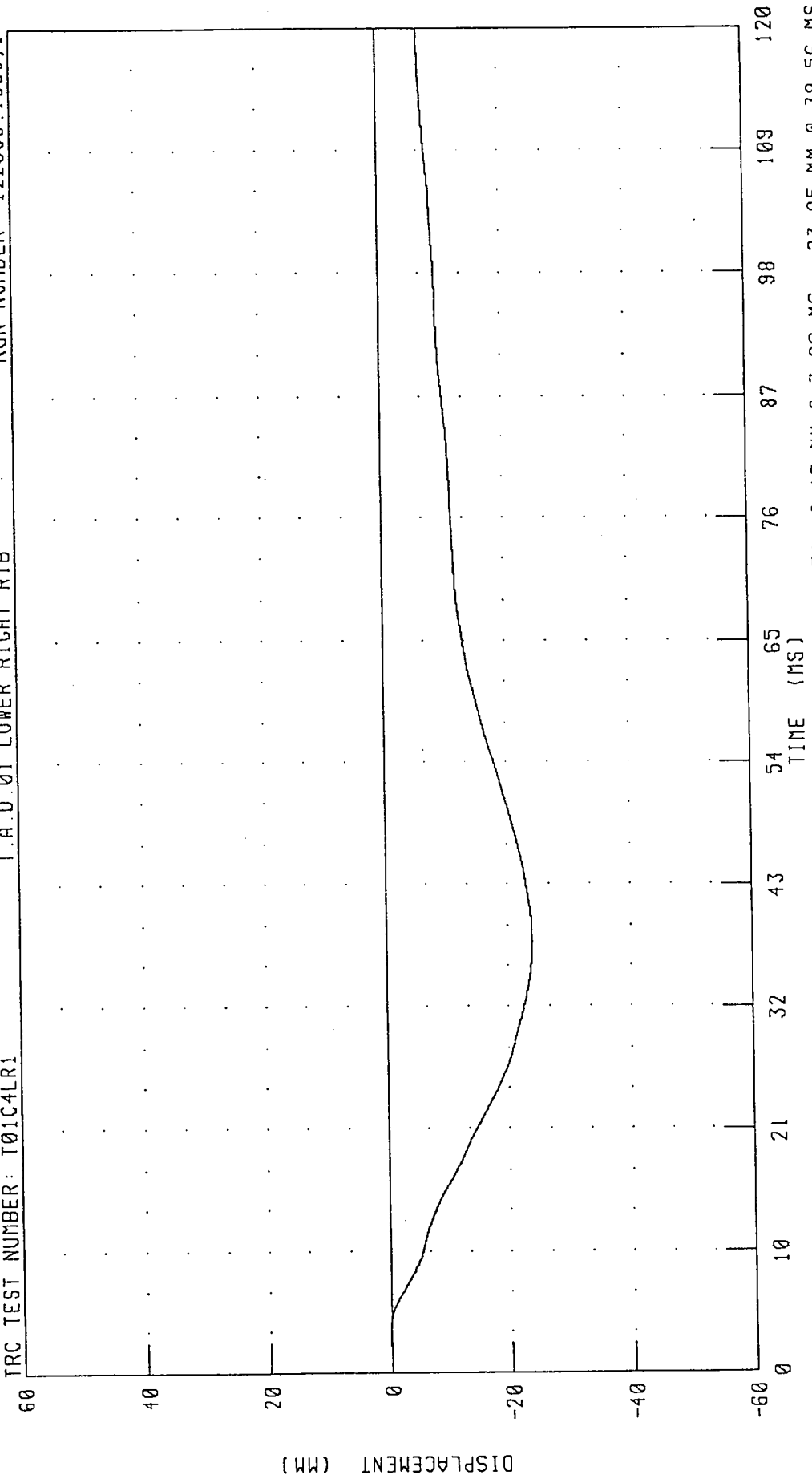


CHANNEL: TWIST3 FILTER: CH. CLASS 180

PEAK DATA: 39.75 MM @ 32.56 MS, 0.01 MM @ 0.00 MS

T.A.D. DUMMY LOWER RIGHT RIB CAGE IMPACT TEST 4.3 M/SEC
POSITION 3 ALT. I/S-AXIS CHEST DEFLECTION

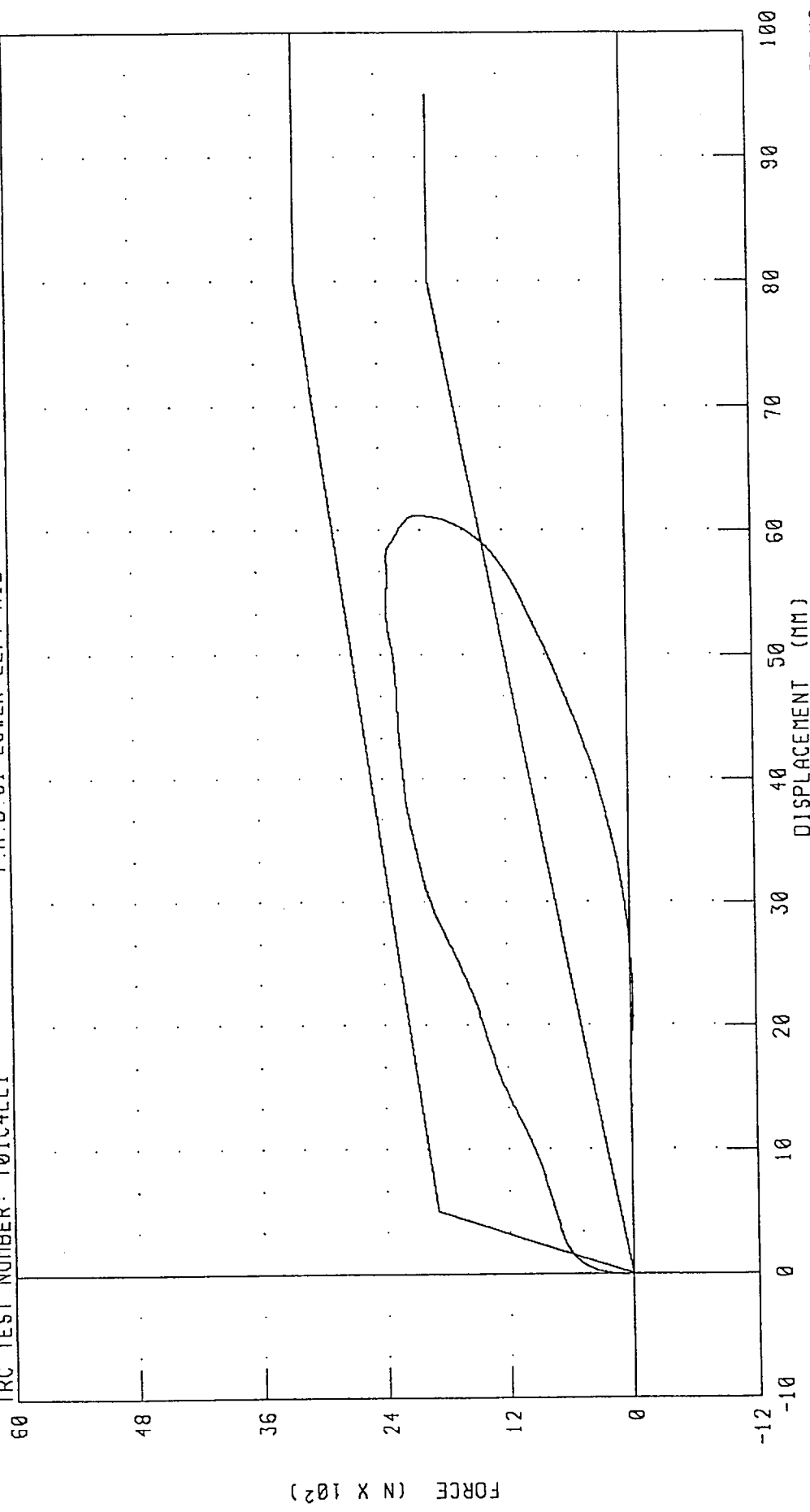
TRC TEST NUMBER: T01C4LR1 T.A.D.01 LOWER RIGHT RIB RUN NUMBER: 122393.1006;1



CHANNEL: LIFT3 FILTER: CH. CLASS 180 PEAK DATA: 0.17 MM @ 3.68 MS; -23.95 MM @ 38.56 MS

T.A.D. DUMMY LOWER LEFT RIB CAGE IMPACT TEST 4.3 M/SEC
 POSITION 4 ALT. A/P-AXIS CHEST DEFLECTION VS PENDULUM FORCE

TRC TEST NUMBER: T01C4LL1 T.A.D. 01 LOWER LEFT RIB RUN NUMBER: 122393.1145.1



CHANNEL: COMP4 FORCE FILTER: CH. CLASS 180 CH. CLASS 180
 PEAK DATA: 2337.58 N @ 25.20 MS; -22.72 N @ 88.56 MS
 61.22 MM @ 36.80 MS; -0.03 MM @ 0.00 MS

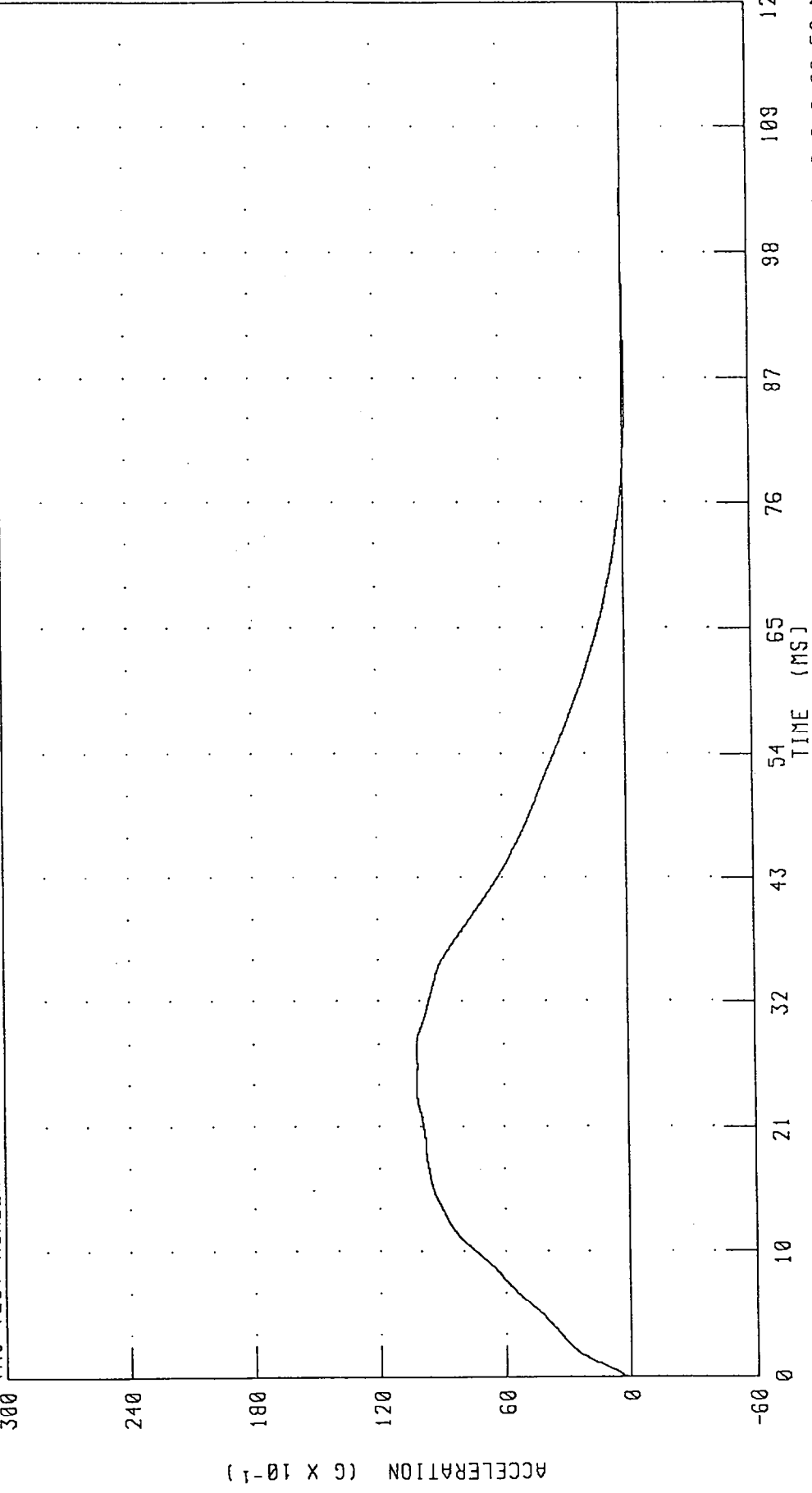
T.A.O. DUMMY LOWER LEFT RIB CAGE IMPACT TEST 4.3 M/SEC

PENDULUM DECELERATION

TRC TEST NUMBER: T01C4LL1

T.A.O. 01 LOWER LEFT RIB

RUN NUMBER: 122393.1054,1

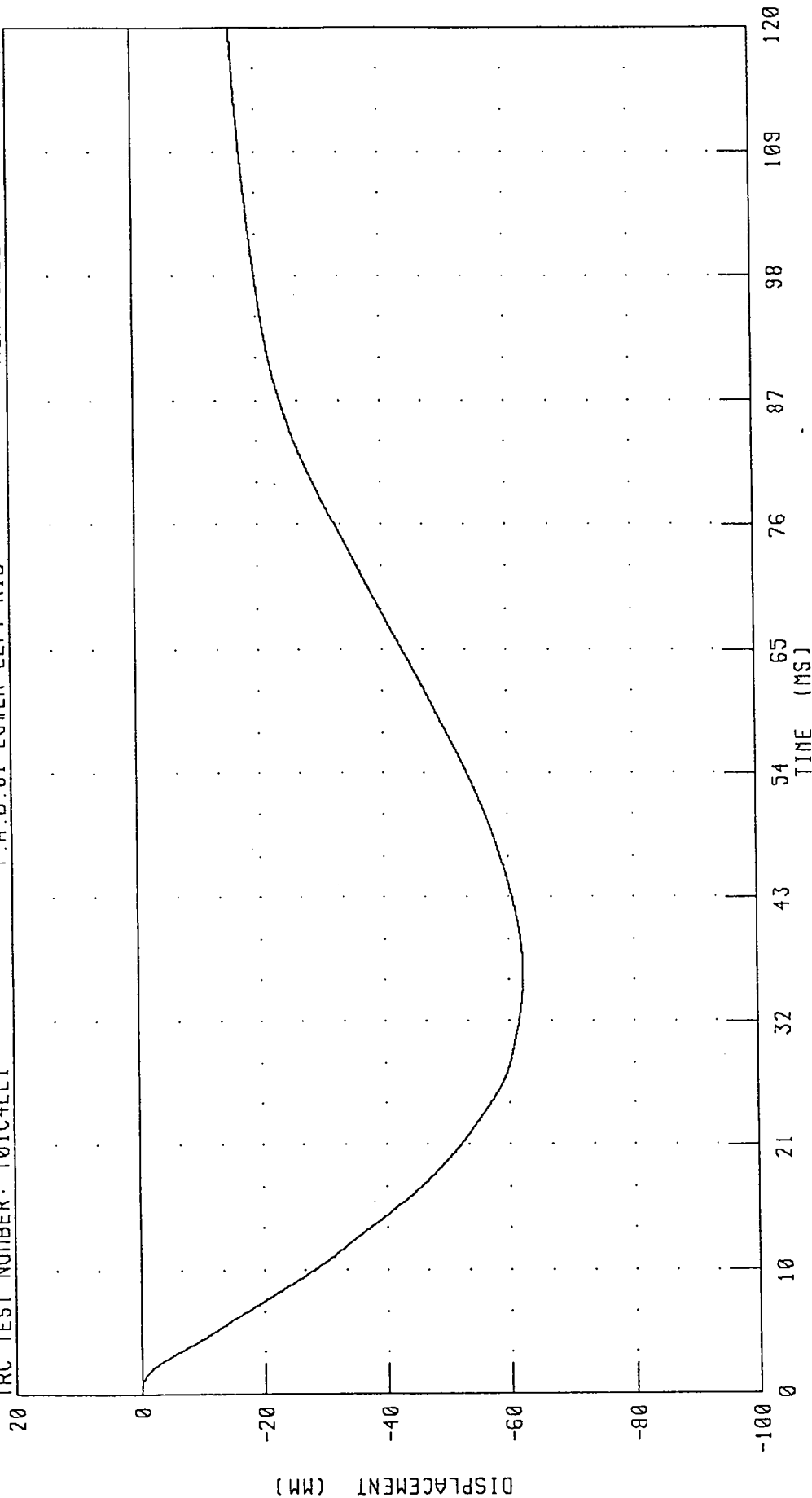


PEAK DATA: 10.17 G @ 25.20 MS, -0.10 G @ 88.56 MS

CHANNEL: PENXC FILTER: CH. CLASS 180

T.A.D. DUMMY LOWER LEFT RIB CAGE IMPACT TEST 4.3 M/SEC
POSITION 4 POSTERIOR/ANTERIOR CHEST POTENTIOMETER

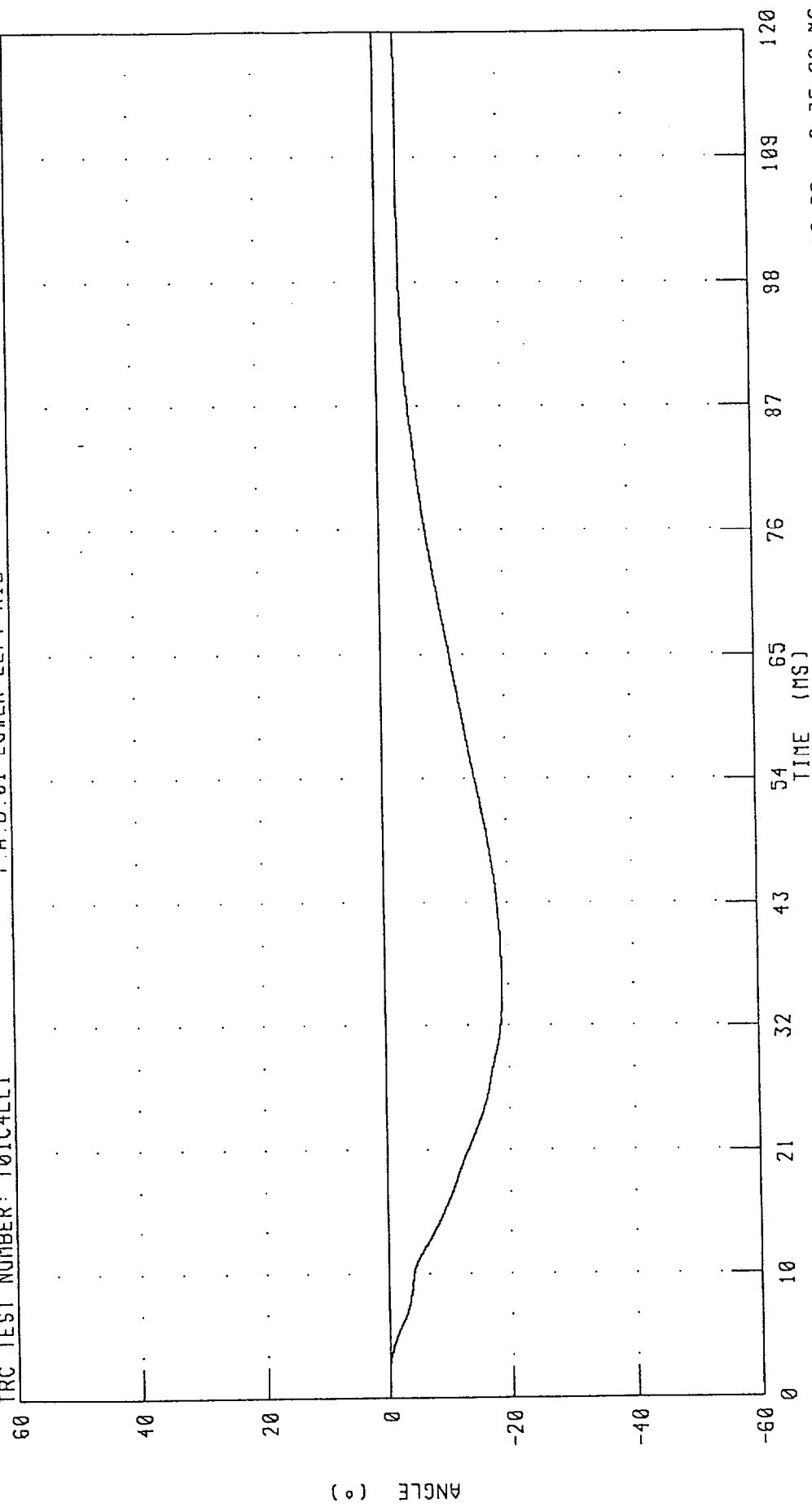
TRC TEST NUMBER: T01C4LL1 T.A.D.01 LOWER LEFT RIB RUN NUMBER: 122393.1054;1



CHANNEL: CST4PA FILTER: CH. CLASS 180 PEAK DATA: 0.03 MM @ 0.00 MS; -62.21 MM @ 36.64 MS

T.A.D. DUMMY LOWER LEFT RIB CAGE IMPACT TEST 4.3 M/SEC
POSITION 4 RIGHT/LEFT CHEST POTENTIOMETER

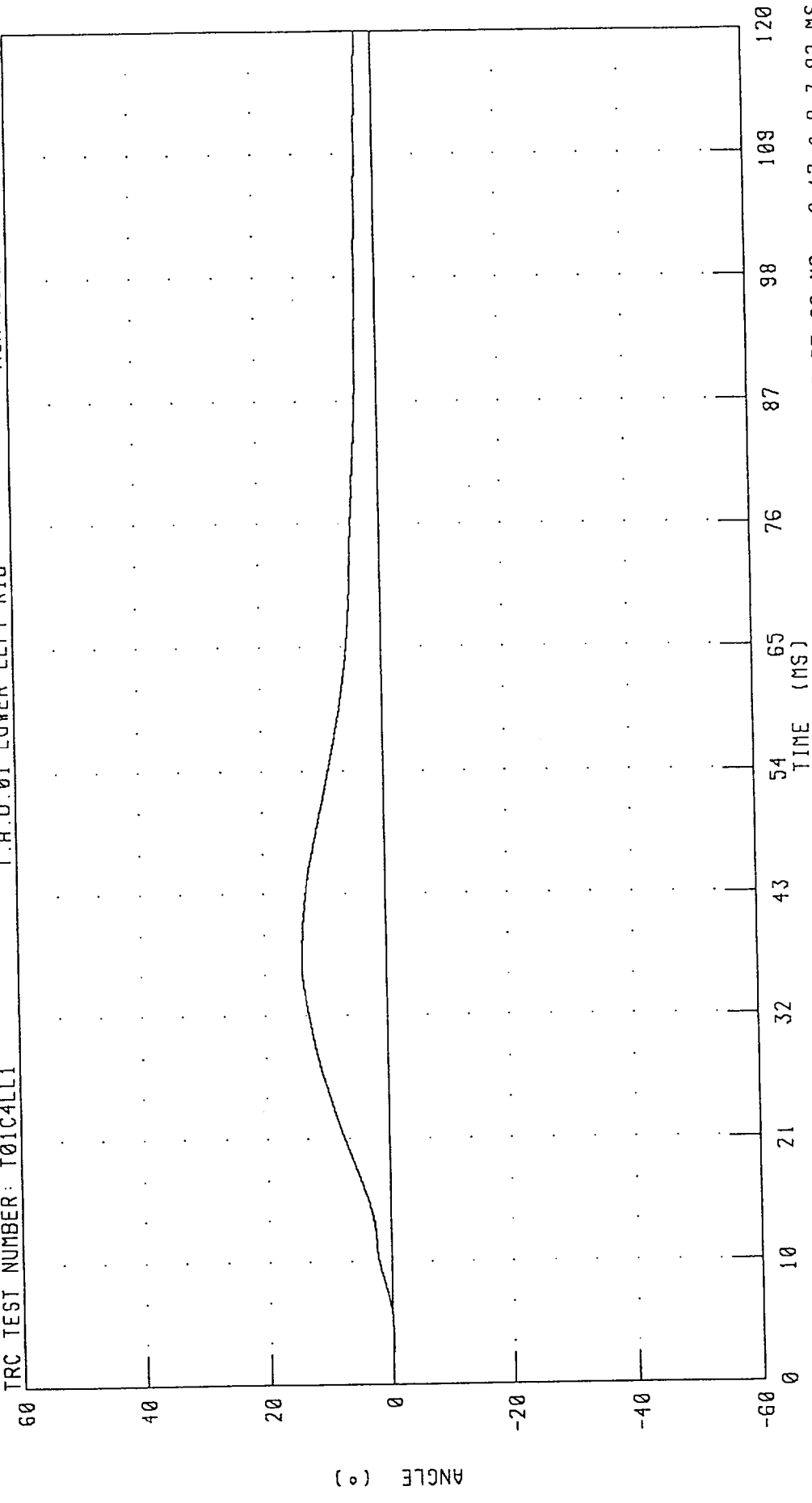
TRC TEST NUMBER: T01C4LL1 T.A.D.01 LOWER LEFT RIB RUN NUMBER: 122393.1054;1



CHANNEL: CST4RL FILTER: CH. CLASS 180 PEAK DATA: 0.01 ° @ 2.08 MS; -18.92 ° @ 35.20 MS

T.A.D. DUMMY LOWER LEFT RIB CAGE IMPACT TEST 4.3 M/SEC
POSITION 4 INFERIOR/SUPERIOR CHEST POTENTIOMETER

TRC TEST NUMBER: T01C4LL1 T.A.D.01 LOWER LEFT RIB RUN NUMBER: 122393.1054,1



CHANNEL: CST4IS FILTER: CH. CLASS 180 PEAK DATA: 13.89 ° @ 37.28 MS; -0.17 ° @ 3.92 MS

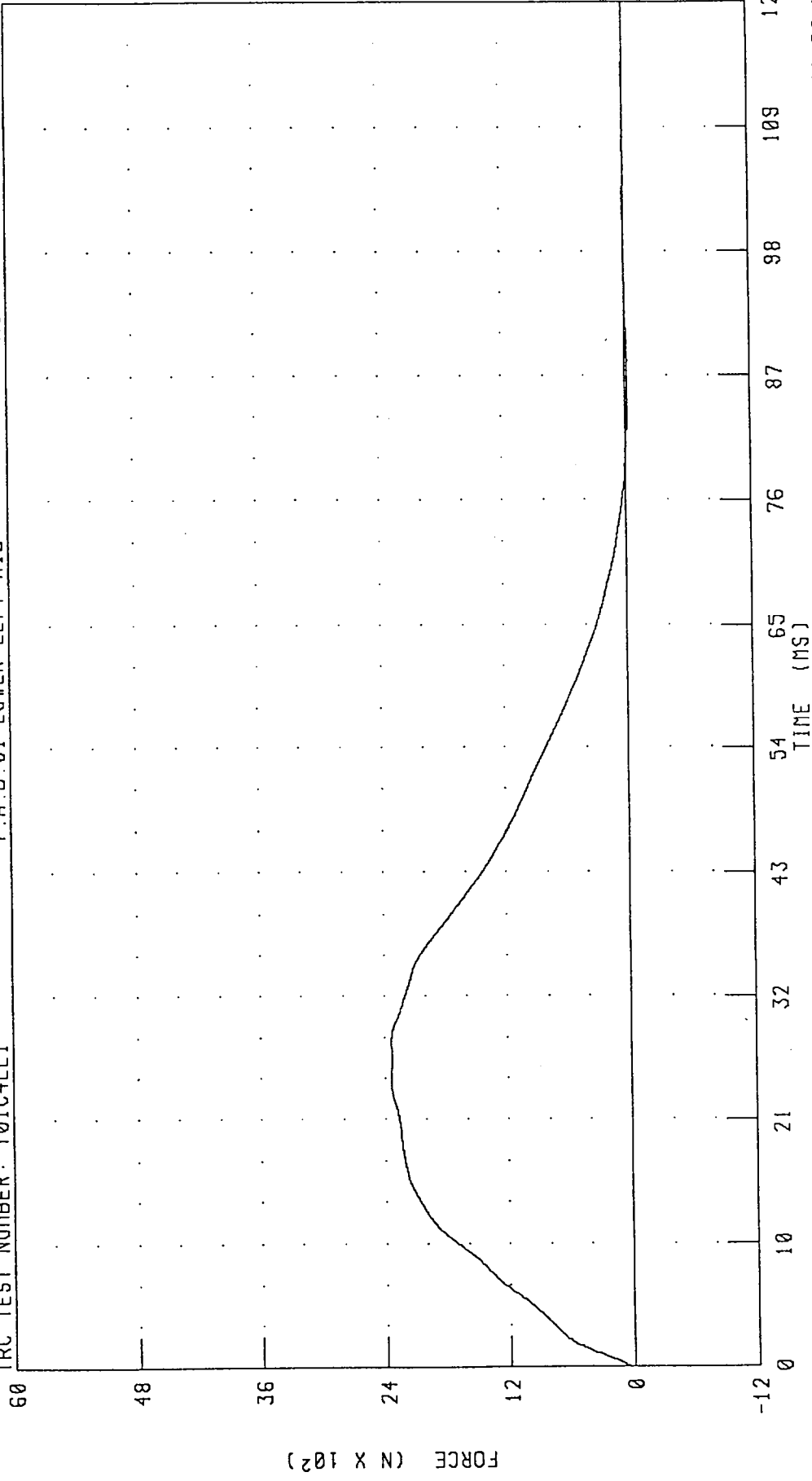
T.A.D. DUMMY LOWER LEFT RIB CAGE IMPACT TEST 4.3 M/SEC

PENDULUM FORCE

TRC TEST NUMBER: T01C4LL1

T.A.D. 01 LOWER LEFT RIB

RUN NUMBER: 122393.1054;1



CHANNEL: FORCE FILTER: CH. CLASS 180

PEAK DATA: 2337.58 N @ 25.20 MS; -22 72 N @ 88.56 MS

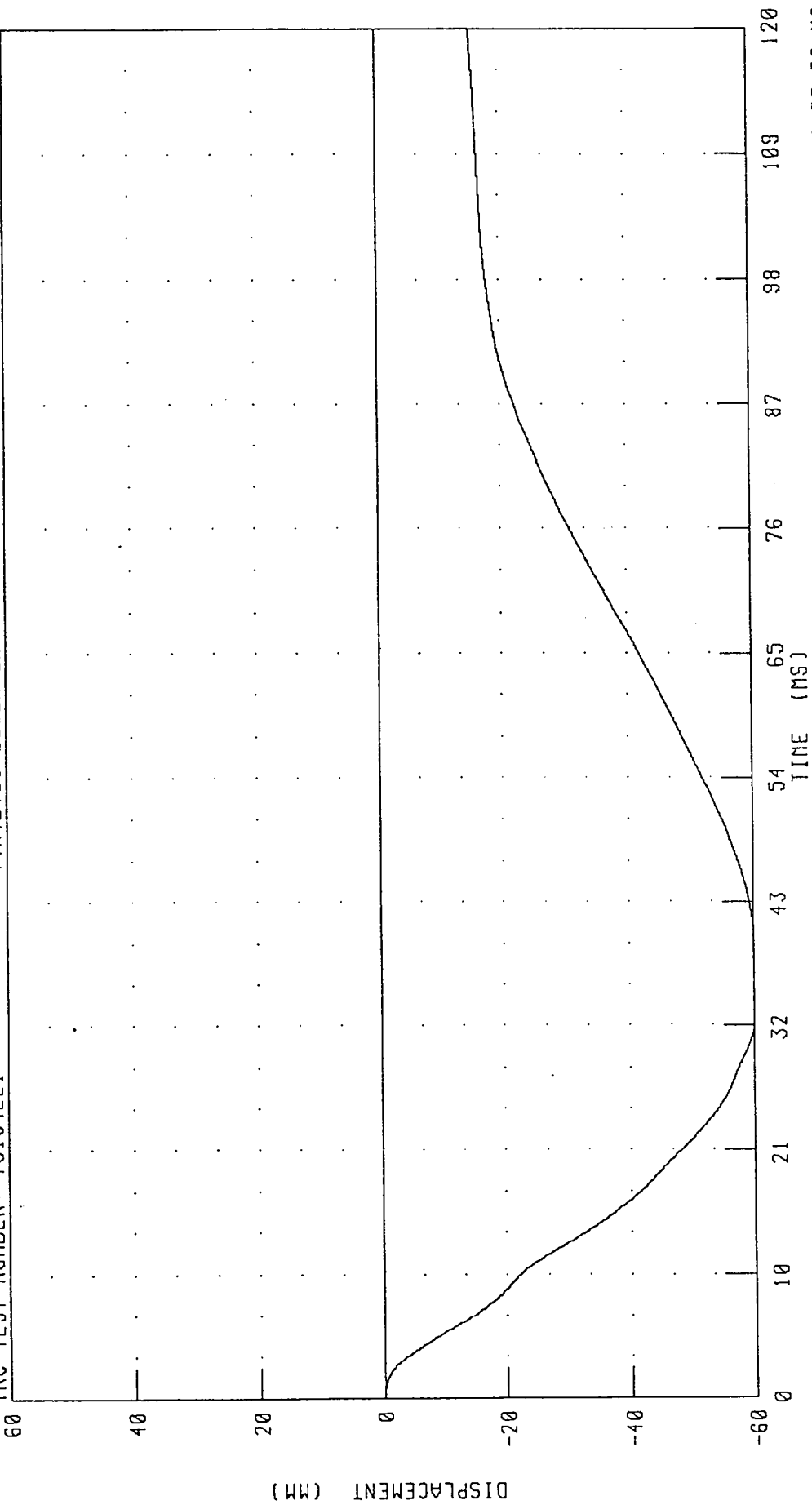
T.A.D. DUMMY LOWER LEFT RIB CAGE IMPACT TEST 4.3 M/SEC

POSITION 4 Y-AXIS CHEST DEFLECTION

TRC TEST NUMBER: T01C4LL1

T.A.D.01 LOWER LEFT RIB

RUN NUMBER: 122393.1054;1

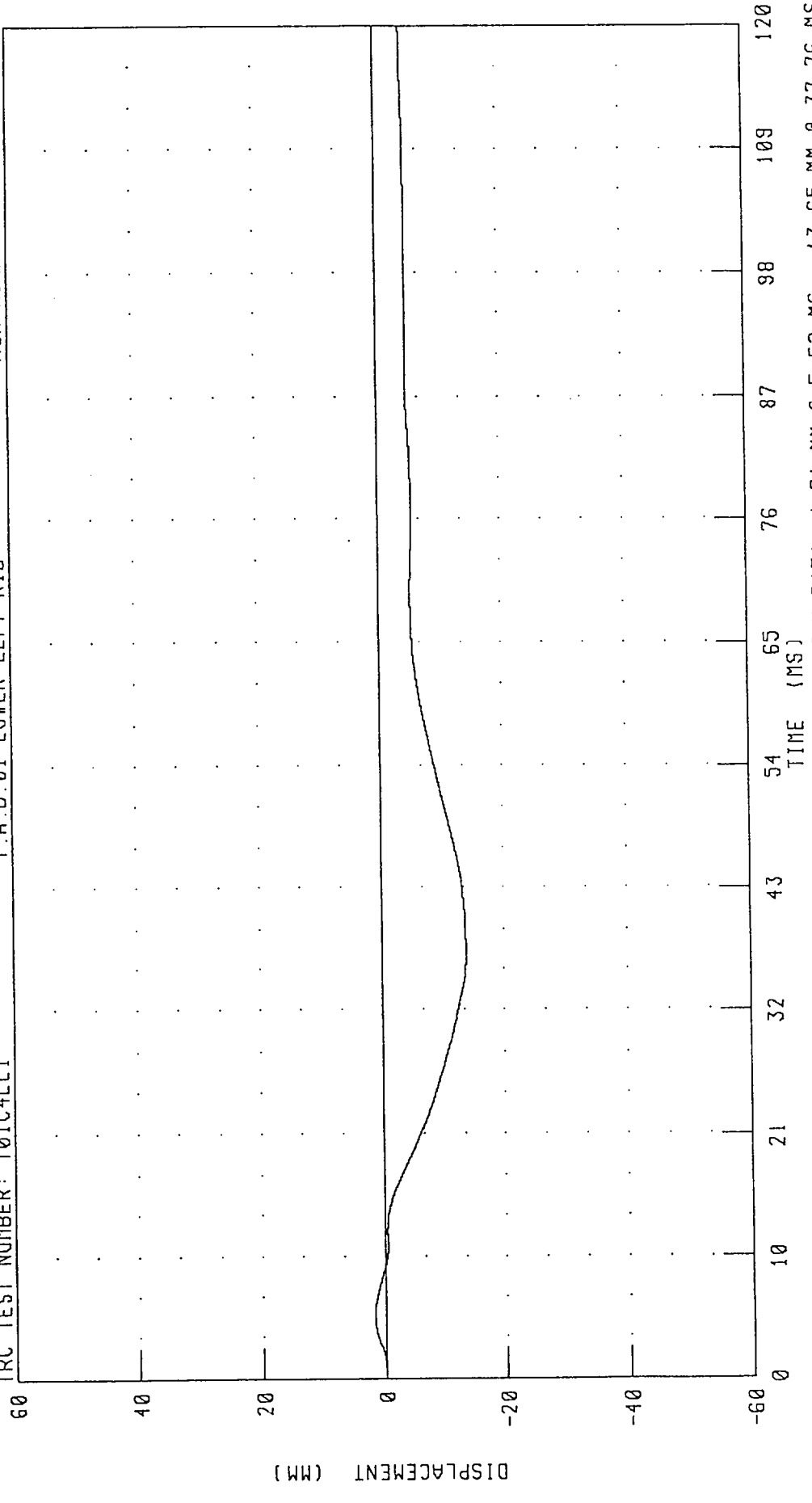


CHANNEL: DELY4 FILTER: CH. CLASS 180 PEAK DATA: 0.01 MM @ 0 00 MS; -60.53 MM @ 37.52 MS

T.A.D. DUMMY LOWER LEFT RIB CAGE IMPACT TEST 4.3 M/SEC

POSITION 4 Z-AXIS CHEST DEFLECTION

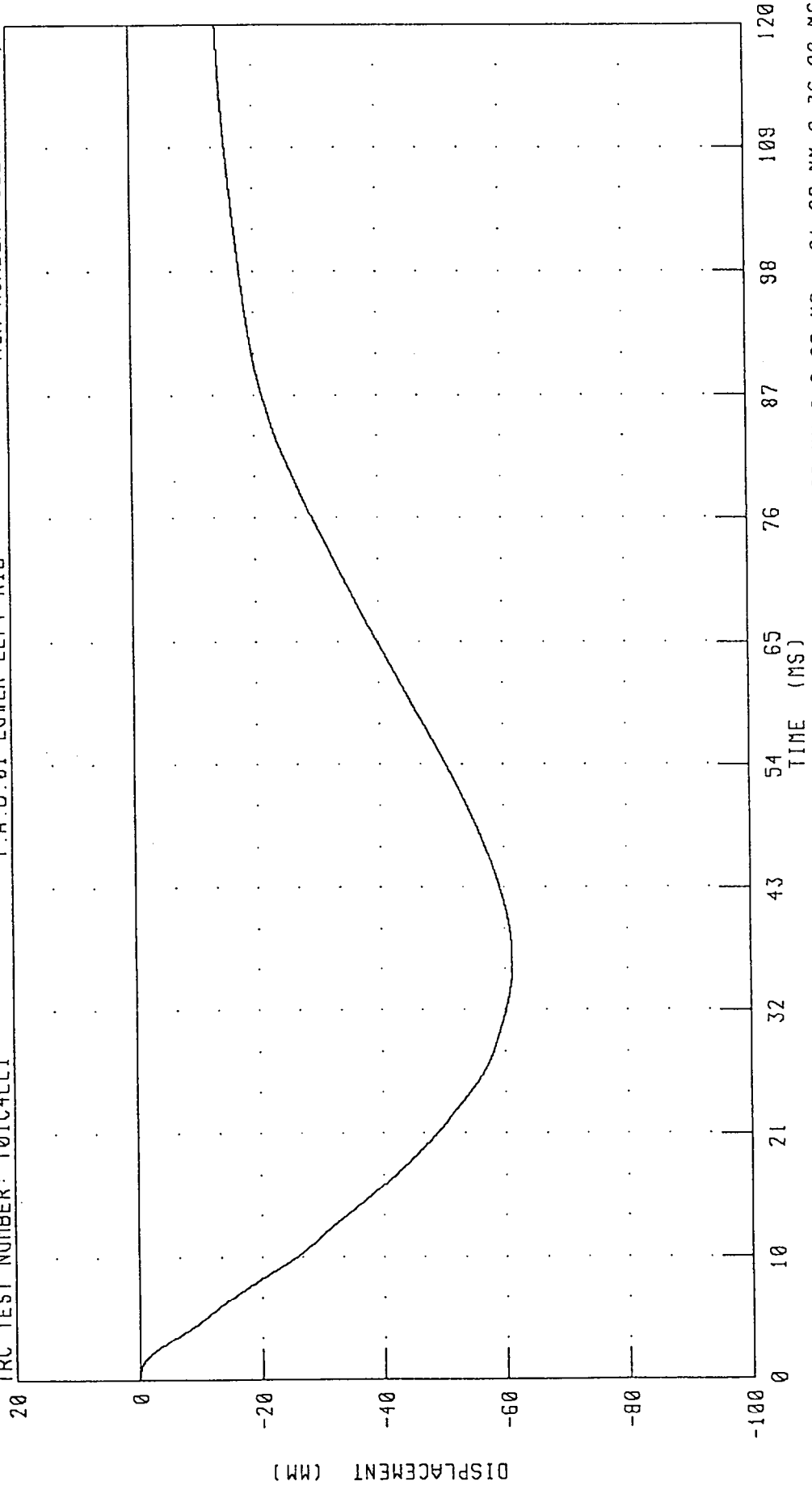
TRC TEST NUMBER: T01C4LL1 T.A.D.01 LOWER LEFT RIB RUN NUMBER: 122393.1054.1



CHANNEL: DELZ4 FILTER: CH. CLASS 180 PEAK DATA: 1.71 MM @ 5.52 MS; -13.65 MM @ 37.76 MS

T.A.D. DUMMY LOWER LEFT RIB CAGE IMPACT TEST 4.3 M/SEC
POSITION 4 ALT. A/P-AXIS CHEST DEFLECTION

TRC TEST NUMBER: T01C4LL1 T.A.D.01 LOWER LEFT RIB RUN NUMBER: 122393.1054.1



CHANNEL: COMP4 FILTER: CH. CLASS 180 PEAK DATA: 0.03 MM @ 0.00 MS; -61.22 MM @ 36.80 MS

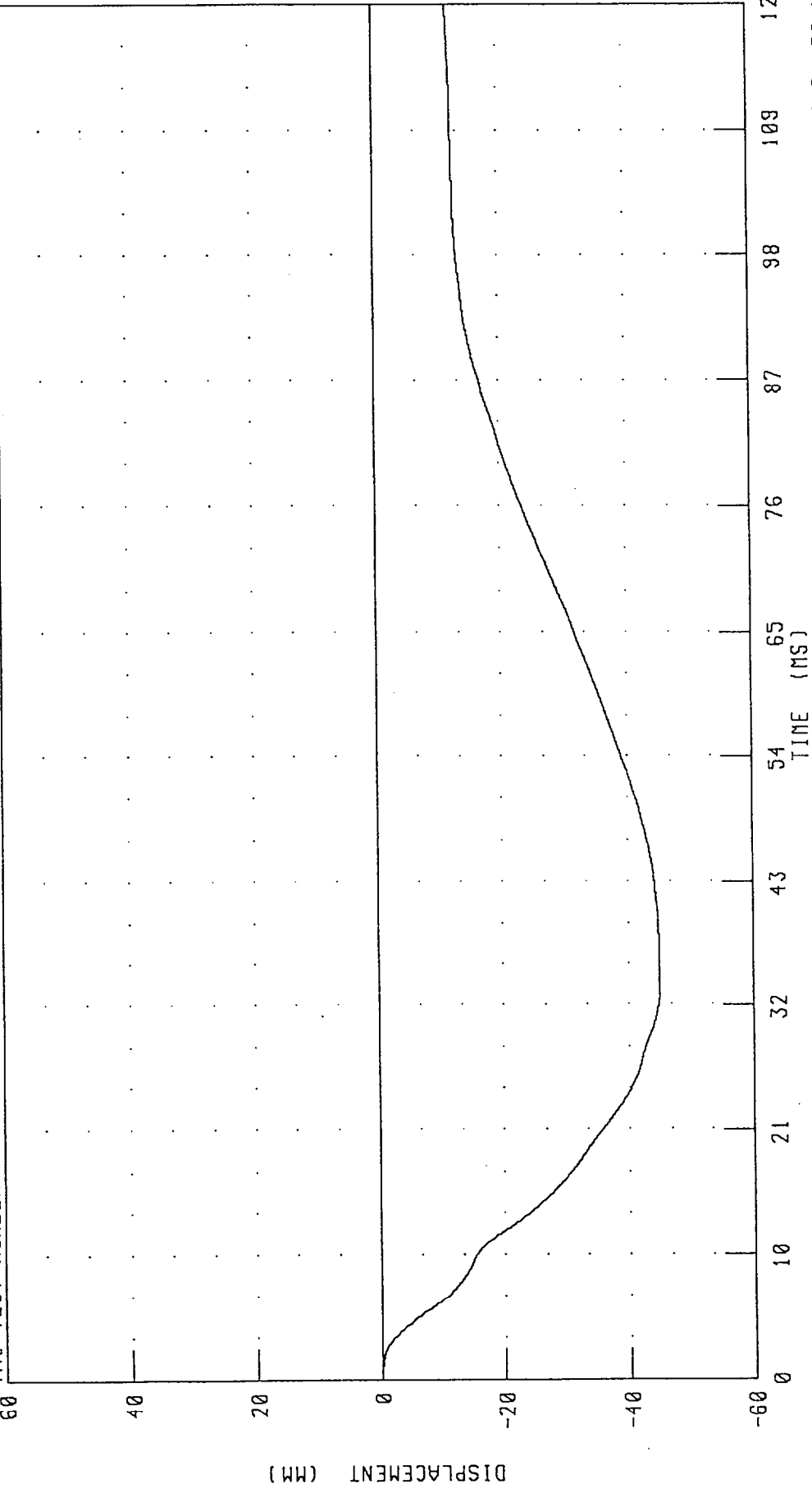
T.A.D. DUMMY LOWER LEFT RIB CAGE IMPACT TEST 4.3 M/SEC

POSITION 4 ALT. R/L-AXIS CHEST DEFLECTION

TRC TEST NUMBER: T01C4LL1

T.A.D.01 LOWER LEFT RIB

RUN NUMBER: 122393.1054;1



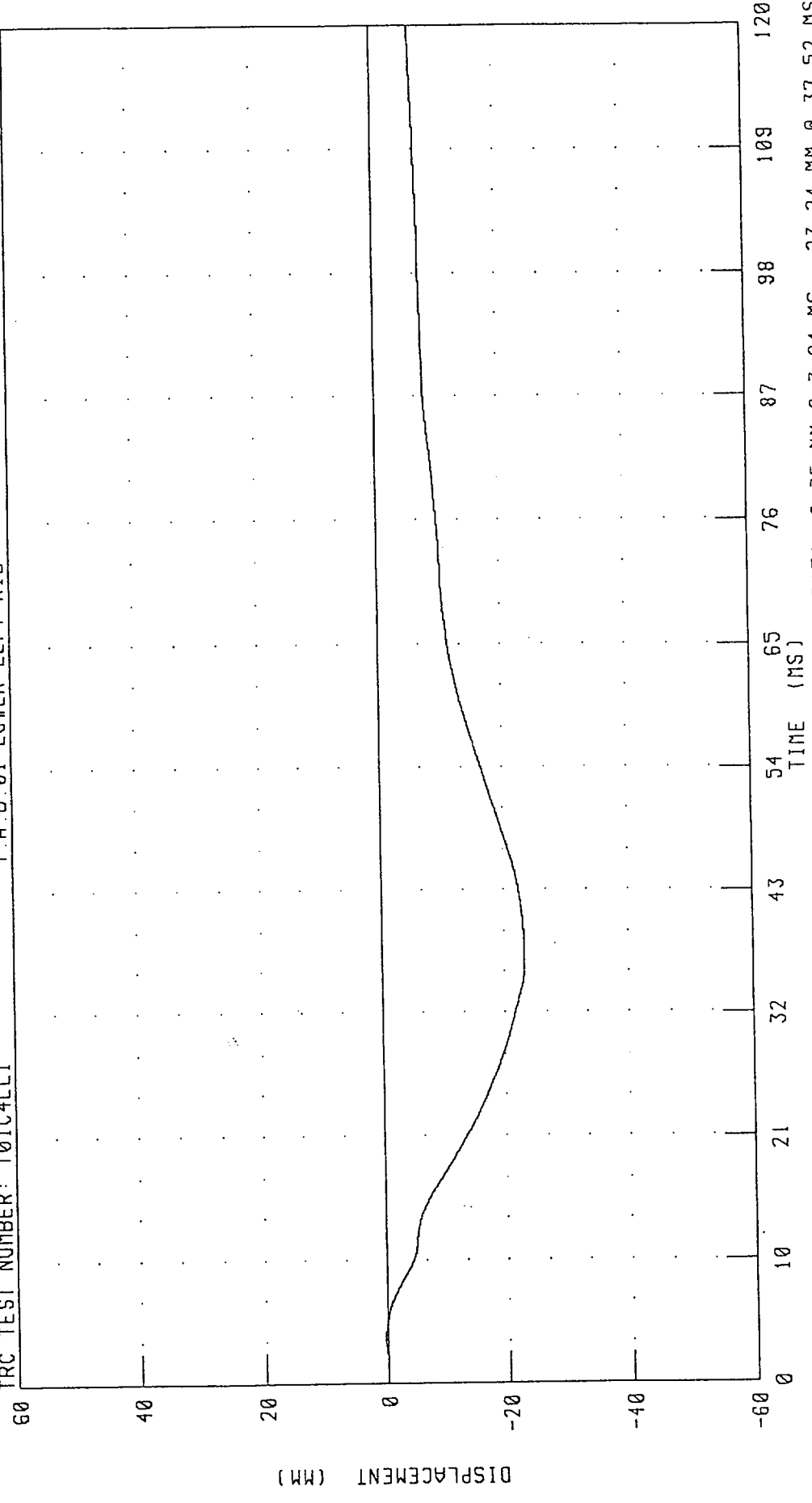
CHANNEL: TWIST4 FILTER: CH. CLASS 180

PEAK DATA: 0.00 MM @ 0.00 MS; -44.91 MM @ 34.72 MS

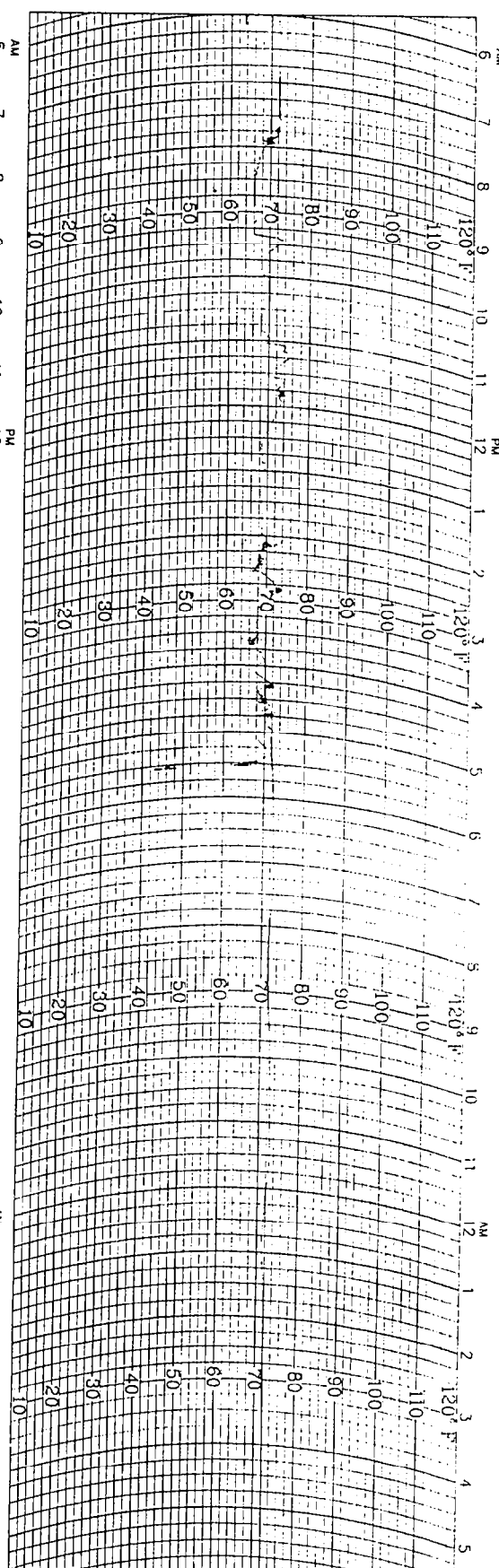
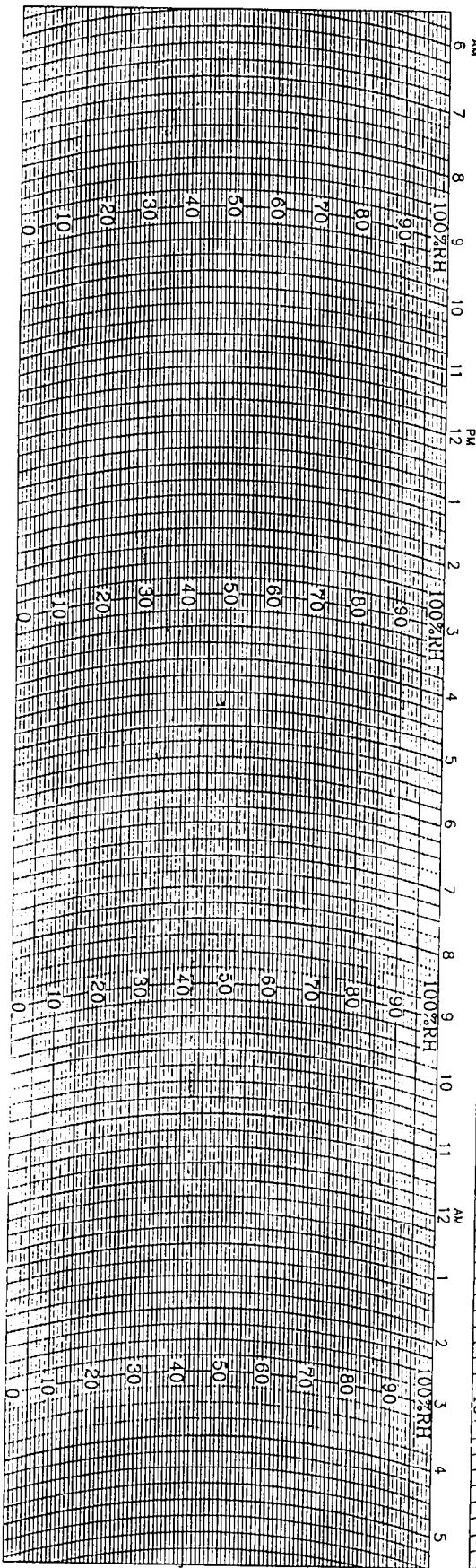
J.A.D. DUMMY LOWER LEFT RIB CAGE IMPACT TEST 4.3 M/SEC

POSITION 4 ALT. I/S-AXIS CHEST DEFLECTION

TRC TEST NUMBER: T01C4LL1 T.A.D.01 LOWER LEFT RIB RUN NUMBER: 122393.1054;1



CHANNEL: LIFT4 FILTER: CH. CLASS 180 PEAK DATA: 0.35 MM @ 3.84 MS; -23.24 MM @ 37.52 MS




Weather Measure
WEATHERtronics
 Division of **QUALIMETRICS, Inc.**

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HYGROTHERMOGRAPH
 1 DAY

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 C311-D-HF
 ECN 2717
 6-9-87

STATION 940104 DATE ON _____ DATE OFF _____