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16. Abstract

Testing procedures reported in DOT-HS-803-253 "Calibration Procedures of Test Dummies for Side-Impact Testing" were applied to the testing of six Part 572 test dummies. Three tests to each side of the head, neck, and pelvis were conducted.

The test data are reported and summarized. Modifications in both the test procedures and dummy design are recommended for improvement in test result consistency.

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SIDE-IMPACT DUMMY CALIBRATION TESTING PROGRAM

Report on Dummies Serial Numbers
869, 871, 872, 873, 879, 880

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P.O. #31353, under DOT-HS-9-02225

May 1980

Introduction

This report summarizes work performed by the Highway Safety Research Institute of the University of Michigan on the project entitled "Side-Impact Dummy Calibration Testing Program." This work was performed for the Alderson Research Laboratories on Purchase Order #31353 under the National Highway Traffic Safety Administration contract #DOT-HS-9-02225.

The primary project objective was to subject several Part 572 Dummies to a series of side-impact calibration tests. The resulting data base should allow clarification of the expected dummy response corridors, with the ultimate goal of setting performance standards. A secondary objective was to recommend modifications in both the test procedures and dummy design to achieve consistent results. This secondary objective proved to be of major importance, as dummy-to-dummy response variations were large.

Test Procedures

The head and pelvis tests are conducted with the test probe device developed for dummy chest and knee frontal impact calibration. The probe consists of a 51.5 lb. cylindrical impact mass which has a 6-inch diameter impact face and is guided during impact to produce a linear motion with no significant lateral, vertical,or rotational movement. The acceleration of the probe along its axis is transduced by an axially positioned accelerometer.

A magnetic pick-up is incorporated into the impact probe design to allow velocity measurement. A serrated metal strip which is part of the probe shaft passes under the pick-up and produces a sawtooth voltage output which can be recorded as a function of time. The velocity of the probe can be calculated from the frequency of the sawtooth waveform and the known spacing of the serrations.

In conducting the head impact test, the dummy is seated in a stable upright position and the seat height is adjusted to allow the probe centerline to pass through the head center of gravity. The probe then impacts the dummy head at a test velocity of 7 feet per second. The responses obtained are comparable in magnitude to the Part 572 frontal head impact specifications.

For the pelvis test, the dummy is positioned such that the probe centerline passes through the dummy H-point (3.9 inches above the seat surface and 4.8 inches forward of the back line). A test velocity of 14 feet per second is used.

The neck test procedure represents a modification of the existing Part 572 test procedure for frontal neck response. The modifications

involve mounting the head/neck system at 90 degrees to the impact direction, using a pendulum velocity of 13 fps and increasing the weight of the pendulum to 136.8 lbs. (as opposed to 65.2 lbs.), which changes the moment of inertia about the pivot axis to 185 lb.ft.sec.^{2} (as opposed to 24.5 lb.ft.sec.^{2}). The same deceleration material (Hexcel 1.8 lb./cu.ft. aluminum honeycomb) is used. The head/neck angle and the head chordal displacement are determined from photometric analysis of high-speed movies taken at 1000 frames/second.

A more detailed description of the above testing procedure may be found in DOT-HS-803-253, "Calibration Procedures of Test Dummies for Side Impact Testing," J.W. Melvin and J.B. Benson.

Discussion of Program Results

While the tests produced fairly repeatable results, considerable response variation is evident. Tables 1 through 7 contain summaries of the peak acceleration responses of the tested dummies. Also, time history traces from all tests are presented in the appendix to this report.

A major cause of the response variations appears to be non-uniformity of the vinyl skin covering. An attempt was made to evaluate the influence of this factor on head impact response. By coating the impactor surface with chalk prior to impact, it was discovered that the major area of contact approximated a two-inch diameter circle. This circle is centered on a point 1.25 inches above and .15 inches forward of the point determined by the intersection of the skin surface with a transverse line through the head center of gravity.

The results of measuring the skin thickness in this region appear in Table 8. Measurements were taken at the center point, as well as 5/8" below (Bottom), 5/8" forward (Front), and 5/8" behind (Rear) the center point of the region. The last two columns of this table, the reciprocal of average skin thickness and average impact response, are compared in Figure 1.

It is clear from this data that consistent differences exist between the sides of each dummy head. In each case, the left side shows both a greater skin thickness and a lower impact response. This suggests that skin thickness is a major determining factor in impact response. However, it also appears that this factor alone does not account for the entire response variation, as there are several cases of large differ-

ences in peak acceleration with no significant differences in skin thickness.

A possible explanation of this is suggested by examination of the contact area. The placement of the skin mold sutures creates a ridge of material along the side of the head. This ridge varies in size and shape from dummy to dummy, as well as from side to side on the same dummy. Furthermore, significant differences in skin thickness are often present on opposite sides of the suture ridge. This surface irregularity could well affect the size of the impactor contact area, and thus greatly influence the response magnitude.

Although the results are more consistent, the pelvis impact tests also exhibit some dummy-to-dummy variations. Examination of the dummies again raises suspicion of non-uniformities in the skin covering as a causal factor. While there are no obvious irregularities, the various bolt access holes provide evidence of asymmetry; the flesh appears in most cases to be rotated with respect to the pelvis structure.

In the case of the head/neck tests it is apparent that random factors account for the majority of the observed variance. Average values for several measured parameters for each dummy appear in Table 9. The appendix contains test-by-test results of film analysis.

Recommendations

During the course of conducting these tests, several opportunities for improving dummy design and test procedures became evident. First, the placement of the skin mold sutures prevents the accurate control of skin thickness and uniformity on the side of the head. Moving these suture ridges seems prerequisite to consistent side-impact response.

Secondly, the accelerometer mounting holes in the pelvis seem

inadequate. A modification to allow the use of two 1/4-20 screws instead of the present small #2 screws should rectify this situation. Convenient placement of these holes would allow the use of interchangeable accelerometer mounting blocks in both the head and pelvis.

Also, the accelerometer cover plates do not at present provide for convenient wire routing. To allow impacts on either side of the head without endangering accelerometer cables, wire slots should be machined in both sides of the head plate. Also, the pelvis backing plate should be slotted to allow space for wiring to pass.

Finally, examination of the data reveals that the initial impact response levels are consistently lower than the subsequent test responses. This is apparently due to a conditioning of the skin material. It seems, therefore, that the repeatability of the testing procedure might be improved by the inclusion of break-in impacts prior to data collection.

Table 1

DUMMY SIDE IMPACT CALIBRATION PROGRAM

DUMMY NO. 869:

SUMMARY OF RESULTS

HEAD

	P-A (G)	R-L (G)	I-S (G)	Res (G)	Peak Piston Pulse (G)	Vel (ft/sec)
Left Side						
79Y007	15.5	206	12.6	207	10.5	6.96
79Y008	5.26	186	8.21	186	10.6	6.95
79Y009	2.97	191	10.4	191	11.3	6.99
Average Resultant: Head - Left =				195		
Right Side						
79Y010	20.6	214	10.9	215	10.9	7.03
79Y011	24.1	247	17.3	248	11.0	6.96
79Y012	23.5	210	5.27	211	10.3	6.99
Average Resultant: Head - Right =				225		

PELVIS

	P-A (G)	R-L (G)	S-I (G)	Res (G)	Peak Piston Pulse (G)	Vel (ft/sec)
Left Side						
79Y013	9.66	61.4	24.7	66.9	32.6	14.02
79Y014	11.9	77.2	4.94	78.3	32.6	14.03
79Y015	10.9	75.9	5.00	76.8	33.1	13.97
Average Resultant: Pelvis - Left =				74.0		
Right Side						
79Y016	6.30	67.4	5.21	67.9	31.6	13.97
79Y017	10.3	79.2	5.08	79.9	33.7	13.93
79Y018	10.5	80.3	6.22	81.0	33.9	13.82
Average Resultant: Pelvis - Right =				76.3		

Table 2

DUMMY SIDE IMPACT CALIBRATION PROGRAM

DUMMY NO. 871:

SUMMARY OF RESULTS

HEAD

	P-A (G)	R-L (G)	I-S (G)	Res (G)	Peak Piston Pulse (G)	Vel (ft/sec)
Left Side						
80Y038	10.5	154.	7.47	154.	11.0	7.04
80Y039	11.5	160.	11.5	161.	11.4	7.03
80Y040	6.55	174.	10.1	175.	11.5	6.95
Average Resultant: Head - Left =				163.		
Right Side						
80Y041	7.08	224.	9.01	224.	11.5	7.05
80Y042	5.15	264.	24.7	265	11.5	7.04
80Y043	4.96	257.	17.5	257	11.5	7.08
Average Resultant: Head - Right =				249.		

PELVIS

	P-A (G)	R-L (G)	I-S (G)	Res (G)	Peak Piston Pulse (G)	Vel (ft/sec)
Left Side						
80Y056	7.50	70.9	6.06	71.5	42.5	13.46
80Y057	11.1	83.7	5.74	84.5	44.5	14.04
80Y058	13.4	82.4	4.61	83.6	45.4	14.20
Average Resultant: Pelvis - Left =				79.9		
Right Side						
80Y059	6.21	66.3	3.27	66.7	41.9	13.95
80Y060	5.56	64.7	5.66	64.9	43.3	14.02
80Y061	10.7	65.4	5.88	65.9	42.8	14.02
Average Resultant: Pelvis - Right =				65.8		

Table 3

DUMMY SIDE IMPACT CALIBRATION PROGRAM

DUMMY NO. 872:

SUMMARY OF RESULTS

HEAD

	P-A (G)	R-L (G)	I-S (G)	Res (G)	Peak Piston Pulse (G)	Vel (ft/sec)
Left Side						
80Y044	5.54	206.	16.7	207.	11.5	7.06
80Y045	6.33	204	16.1	204.	11.7	7.08
80Y046	7.18	216	22.2	217.	11.9	7.09
Average Resultant: Head - Left =				209.		
Right Side						
80Y047	7.63	228	8.29	228	11.1	7.13
80Y048	13.1	246.	7.24	246.	11.5	7.19
80Y049	10.7	258.	11.7	259.	11.4	7.23
Average Resultant: Head - Right =				244.		

PELVIS

	P-A (G)	R-L (G)	I-S (G)	Res (G)	Peak Piston Pulse (G)	Vel (ft/sec)
Left Side						
80Y065	8.51	71.6	5.85	72.0	48.6	14.07
80Y066	11.9	88.4	6.56	89.0	49.6	14.05
80Y067	13.2	86.0	6.53	86.4	48.7	14.08
80Y068	11.5	83.1	6.35	83.4	49.7	14.10
Average Resultant: Pelvis - Left =				82.7		
Right Side						
80Y062	9.24	65.1	3.82	65.9	41.6	14.17
80Y063	9.55	69.1	4.48	69.5	43.3	14.17
80Y064	9.54	66.7	4.54	67.1	44.6	13.96
Average Resultant: Pelvis - Right =				67.5		

Table 4

DUMMY SIDE IMPACT CALIBRATION PROGRAM

DUMMY NO. 873:

SUMMARY OF RESULTS

HEAD

	P-A (G)	R-L (G)	I-S (G)	Res (G)	Peak Piston Pulse (G)	Vel (ft/sec)
Left Side						
80Y050	11.3	135	5.33	136	11.3	7.21
80Y051	13.9	148	9.32	149	12.0	7.20
80Y052	11.2	146	5.18	147.	12.0	7.25
Average Resultant: Head - Left =				144.		
Right Side						
80Y053	21.3	217	9.03	218	11.3	7.17
80Y054	19.2	238.	15.4	239.	11.7	7.23
80Y055	20.0	235.	15.1	236.	11.9	7.26
Average Resultant: Head - Right =				231.		

PELVIS

	P-A (G)	R-L (G)	I-S (G)	Res (G)	Peak Piston Pulse (G)	Vel (ft/sec)
Left Side						
80Y069	8.29	68.9	5.31	69.2	45.9	14.02
80Y070	8.40	76.4	4.82	76.6	46.5	14.02
80Y071	9.75	81.1	5.57	81.3	46.8	14.02
Average Resultant: Pelvis - Left =				75.7		
Right Side						
80Y072	10.6	73.1	3.72	73.4	44.6	14.17
80Y073	12.6	79.7	3.94	80.2	45.0	14.12
80Y074	13.6	79.4	4.61	79.9	46.4	14.16
Average Resultant: Pelvis - Right =				77.8		

Table 5

DUMMY SIDE IMPACT CALIBRATION PROGRAM

DUMMY NO. 879:

SUMMARY OF RESULTS

HEAD

	P-A (G)	R-L (G)	I-S (G)	Res (G)	Peak Piston Pulse (G)	Vel (ft/sec)
Left Side						
80Y103	3.90	205.	7.31	205.	11.2	7.03
80Y104	7.37	209.	8.83	209.	12.2	7.03
80Y105	3.15	205.	8.91	205.	12.1	7.04
Average Resultant: Head - Left =				206.		
Right Side						
80Y106	15.2	259.	21.0	260.	11.4	7.01
80Y107	9.50	287.	21.5	288.	11.3	7.01
80Y108	12.3	296.	19.3	297.	12.0	7.01
Average Resultant: Head - Right =				282.		

PELVIS

	P-A (G)	R-L (G)	I-S (G)	Res (G)	Peak Piston Pulse (G)	Vel (ft/sec)
Left Side						
80Y091	8.07	81.1	7.35	81.5	46.8	14.03
80Y092	12.9	99.7	7.97	99.8	47.1	14.04
80Y093	11.7	96.2	8.18	96.6	47.0	14.07
Average Resultant: Pelvis - Left =				92.6		
Right Side						
80Y088	8.77	75.2	4.94	75.4	45.7	14.02
804089	10.2	80.1	4.62	80.3	45.0	14.06
80Y090	11.0	79.9	5.50	80.2	43.1	13.94
Average Resultant: Pelvis - Right =				78.6		

Table 6

DUMMY SIDE IMPACT CALIBRATION PROGRAM

DUMMY NO. 880:

SUMMARY OF RESULTS

HEAD

Left Side	P-A (G)	R-L (G)	I-S (G)	Res (G)	Peak Piston Pulse (G)	Vel (ft/sec)
80Y095	0.68	187.	7.35	187.	12.3	7.10
80Y096	1.05	195.	4.48	195.	11.7	7.07
80Y097	8.23	206.	15.2	206.	11.8	7.13
Average Resultant: Head - Left =				196.		
Right Side						
80Y098	5.37	258.	13.4	258.	11.0	7.20
80Y099	15.1	228.	8.42	229.	12.4	6.92
80Y100	3.61	244.	11.3	244.	10.7	6.91
Average Resultant: Head - Right =				244.		

PELVIS

Left Side	P-A (G)	R-L (G)	I-S (G)	Res (G)	Peak Piston Pulse (G)	Vel (ft/sec)
80Y081	8.26	83.2	5.00	83.6	44.1	13.91
80Y082	7.27	88.3	4.84	88.5	45.7	14.02
80Y083	10.9	95.1	4.96	95.8	46.7	13.93
Average Resultant: Pelvis - Left =				89.3		
Right Side						
80Y084	10.8	83.1	4.87	83.7	43.9	13.95
80Y085	11.8	90.7	5.83	91.4	44.5	13.91
80Y086	12.7	85.5	4.41	86.0	45.7	13.99
80Y087	10.1	89.8	5.84	90.2	43.9	14.01
Average Resultant: Pelvis - Right =				87.8		

Table 7

DUMMY SIDE IMPACT CALIBRATION PROGRAM

DUMMY NO. 881:

SUMMARY OF RESULTS

HEAD

	P-A (G)	R-L (G)	I-S (G)	Res (G)	Peak Piston Pulse (G)	Vel (ft/sec)
Left Side						
80Y109	-	191.	7.34	191.	12.0	7.04
80Y110	8.84	198.	8.34	198.	12.3	7.06
80Y111	8.87	213.	12.5	213.	12.5	7.04
80Y112	10.1	220.	18.6	221.	13.1	7.05
Average Resultant: Head - Left =				206.		
Right Side						
80Y113	16.8	279.	20.0	280.	12.1	7.10
80Y114	21.5	287.	21.0	288.	12.3	7.06
80Y115	23.7	308	31.4	311.	12.6	7.06
Average Resultant: Head - Right =				293.		

PELVIS

	P-A (G)	R-L (G)	I-S (G)	Res (G)	Peak Piston Pulse (G)	Vel (ft/sec)
Left Side						
80Y078	6.17	81.1	7.05	81.6	44.3	14.03
80Y079	7.42	88.5	7.01	88.7	46.2	14.00
80Y080	6.29	94.2	7.87	94.5	45.1	13.94
Average Resultant: Pelvis - Left =				88.3		
Right Side						
80Y075	9.97	66.0	5.20	66.2	43.5	-(LOD)
80Y076	14.9	80.5	9.01	80.8	45.1	13.94
80Y077	19.2	80.6	7.27	81.5	44.8	13.96
Average Resultant: Pelvis - Right =				76.2		

Table 8

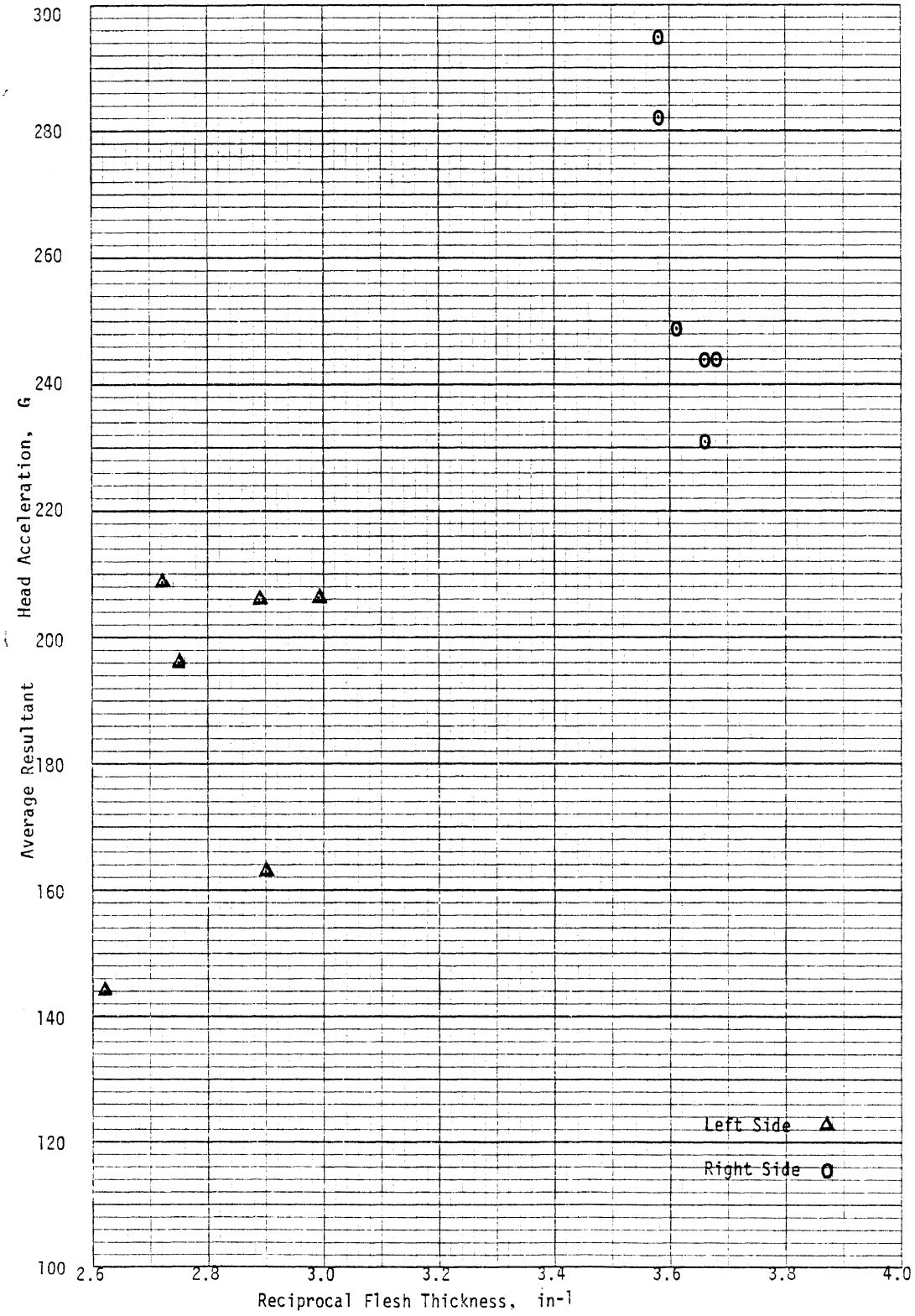
Skin Thickness in Major Contact Area

DUMMY SERIAL #	SIDE	Top	Bottom	Rear	Front	Center	Average	1/Average	Average Resultant Head Acc.
871	L	.356	.367	.330	.335	.335	.345	2.90	163
	R	.224	.297	.283	.265	.296	.277	3.61	249
872	L	.369	.355	.363	.373	.374	.367	2.72	209
	R	.252	.295	.285	.260	.269	.272	3.68	244
873	L	.403	.400	.331	.376	.398	.382	2.62	144
	R	.255	.310	.244	.266	.292	.273	3.66	231
879	L	.372	.338	.292	.344	.330	.335	2.99	206
	R	.249	.312	.275	.274	.283	.279	3.58	282
880	L	.369	.372	.335	.370	.369	.363	2.75	196
	R	.240	.304	.278	.259	.284	.273	3.66	244
	L	.395	.374	.301	.374	.286	.346	2.89	206
	R	.250	.325	.261	.270	.291	.279	3.58	293

Table 9

DUMMY	SIDE	Time @ 20°	Ch. disp. @ 20°	Max Angle	Time @ max	Ch. disp. @ max	Time @ 20°	Ch. disp. @ 20°	Time @ 0°	Ch. disp. @ 0°
869	L	31.21	1.73	38.26	54.97	2.80	82.82	1.16	99.65	.23
	R	34.92	1.91	35.58	57.01	2.99	84.10	1.75	100.13	.25
871	L	26.99	1.81	43.82	53.99	3.33	83.76	.96	99.44	.51
	R	33.56	1.75	39.43	63.76	3.16	91.39	1.74	107.07	.23
872	L	34.18	1.74	35.01	55.58	2.58	81.31	1.15	98.96	.30
	R	36.32	1.71	33.05	55.85	2.59	79.19	1.75	95.45	.27
873	L	32.82	1.83	36.78	55.06	2.83	82.74	1.19	100.22	.20
	R	36.72	1.82	32.90	58.04	2.65	81.76	1.72	99.38	.35
879	L	32.41	1.71	39.82	56.14	2.94	91.07	1.14	108.35	.38
	R	35.98	1.92	37.30	65.48	3.20	90.30	1.89	106.85	.34
880	L	33.30	1.68	37.19	58.26	2.66	87.62	1.02	104.64	.35
	R	37.71	1.82	36.01	62.73	2.80	88.81	1.71	104.67	.33
881	L	32.72	1.64	40.31	60.04	2.81	90.67	1.04	108.45	.41
	R	37.95	1.76	35.98	62.56	2.85	89.61	1.74	105.72	.34

FIGURE 1


Average Resultant Head Acceleration, G
300
280
260
240
220
200
180
160
140
120
100
2.6
2.8
3.0
3.2
3.4
3.6
3.8
4.0
Reciprocal Flesh Thickness, in-1
Left Side
Right Side

APPENDIX

TEST RESULTS

DUMMY NO. 869

HEAD/NECK TEST RESULTS

TEST: 79Y001

TARGET VALUE	ACTUAL VALUES ANGLE (degrees)	CHORDAL DISP. (in.)	TIME (ms.)	FRAME NUMBER
0 deg.	0.20	0.20	0.00	0
20 deg.	20.28	1.70	31.88	30
MAX ANGLE	36.64	2.64	55.25	52
MAX DISP.	36.64	2.64	55.25	52
20 deg.	20.17	1.18	80.75	76
0 deg.	0.14	0.21	97.75	92

TEST: 79Y002

TARGET VALUE	ACTUAL VALUES ANGLE (degrees)	CHORDAL DISP. (in.)	TIME (ms.)	FRAME NUMBER
0 deg.	0.15	0.19	0.00	0
20 deg.	20.03	1.73	31.88	30
MAX ANGLE	38.44	2.83	55.25	52
MAX DISP.	38.44	2.83	55.25	52
20 deg.	20.52	1.19	83.94	79
0 deg.	0.25	0.23	100.94	95

TEST: 79Y003

TARGET VALUE	ACTUAL VALUES ANGLE (degrees)	CHORDAL DISP. (in.)	TIME (ms.)	FRAME NUMBER
0 deg.	-0.46	0.24	0.00	0
20 deg.	20.07	1.77	29.87	28
MAX ANGLE	39.71	2.93	54.40	51
MAX DISP.	39.71	2.93	54.40	51
20 deg.	19.64	1.11	84.27	79
0 deg.	0.23	0.24	100.27	94

TEST: 79Y004

TARGET VALUE	ACTUAL VALUES ANGLE (degrees)	CHORDAL DISP. (in.)	TIME (ms.)	FRAME NUMBER
0 deg.	-2.33	0.07	0.00	0
20 deg.	20.38	1.89	35.28	33
MAX ANGLE	35.37	2.90	54.52	51
MAX DISP.	35.37	2.97	55.59	52
20 deg.	20.14	1.77	83.38	78
0 deg.	-0.46	0.19	100.48	94

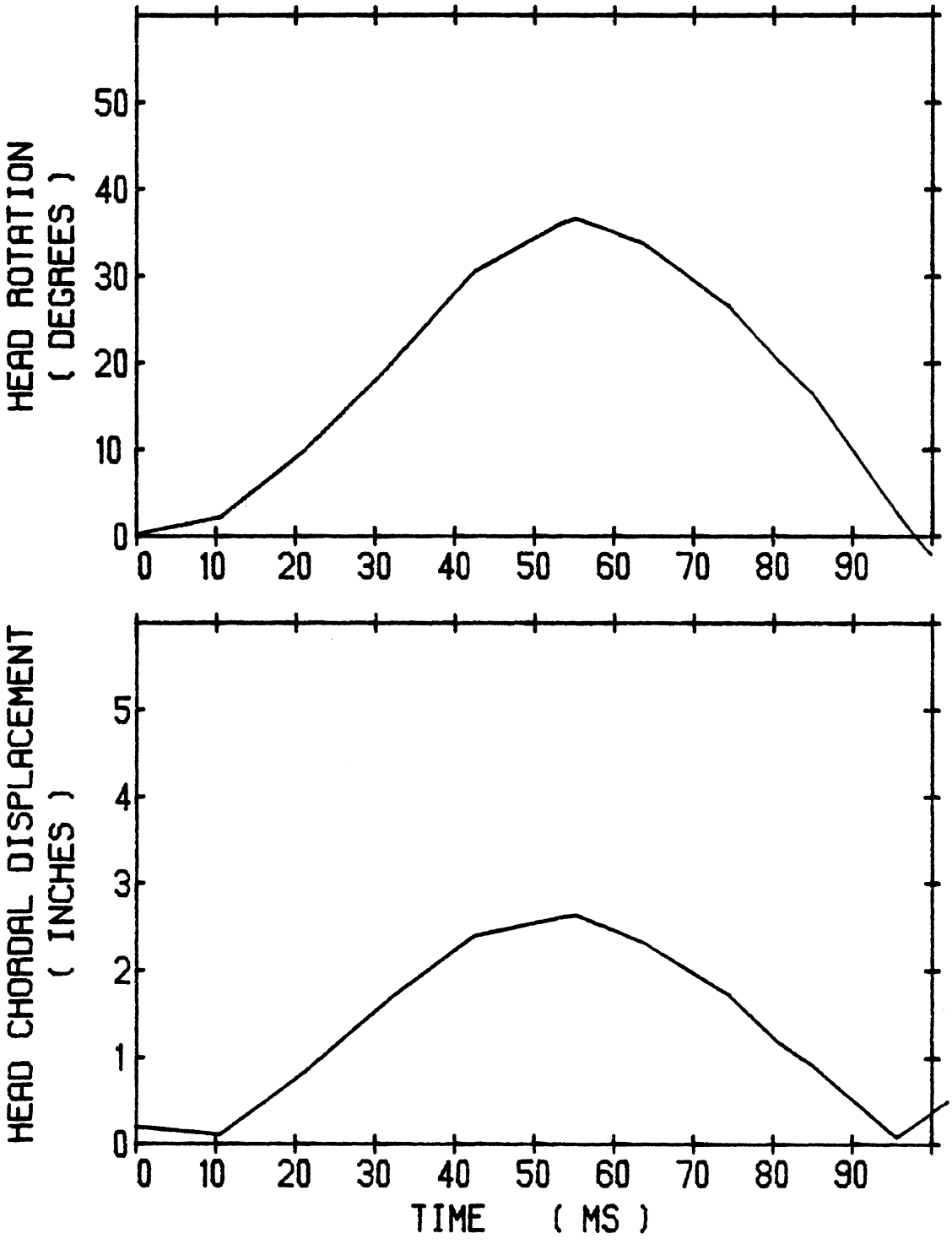
TEST: 79Y005

TARGET VALUE	ACTUAL VALUES ANGLE (degrees)	CHORDAL DISP. (in.)	TIME (ms.)	FRAME NUMBER
0 deg.	-1.29	0.05	0.00	0
20 deg.	20.73	1.92	35.20	33
MAX ANGLE	34.84	2.96	62.93	59
MAX DISP.	34.84	2.96	62.93	59
20 deg.	20.10	1.76	84.27	79
0 deg.	0.32	0.31	100.27	94

TEST: 79Y006

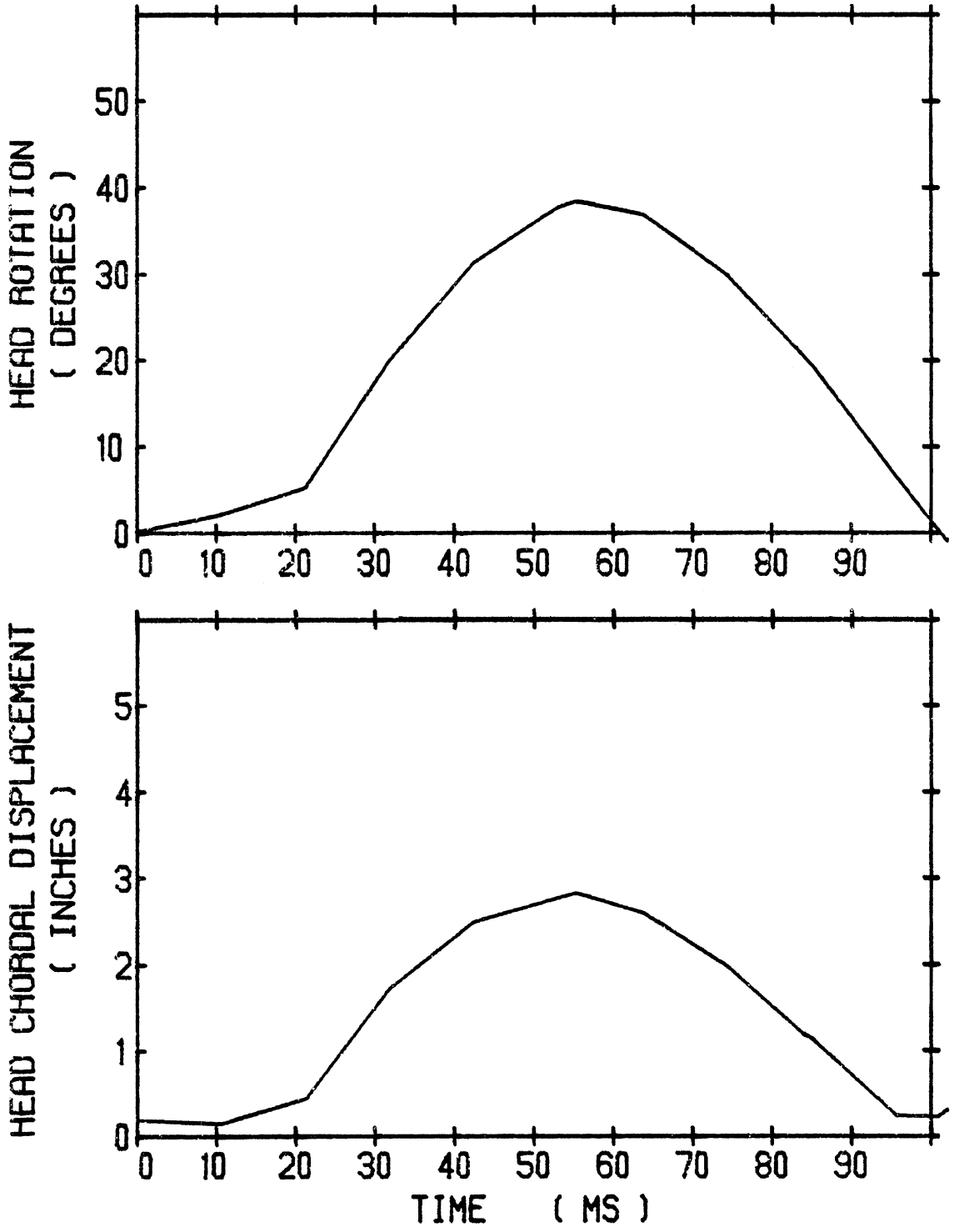
TARGET VALUE	ACTUAL VALUES ANGLE (degrees)	CHORDAL DISP. (in.)	TIME (ms.)	FRAME NUMBER
0 deg.	-1.63	0.05	0.00	0
20 deg.	20.59	1.92	34.29	32
MAX ANGLE	36.52	3.04	53.57	50
MAX DISP.	36.52	3.04	53.57	50
20 deg.	19.94	1.73	84.64	79
0 deg.	0.30	0.26	99.64	93

79Y001



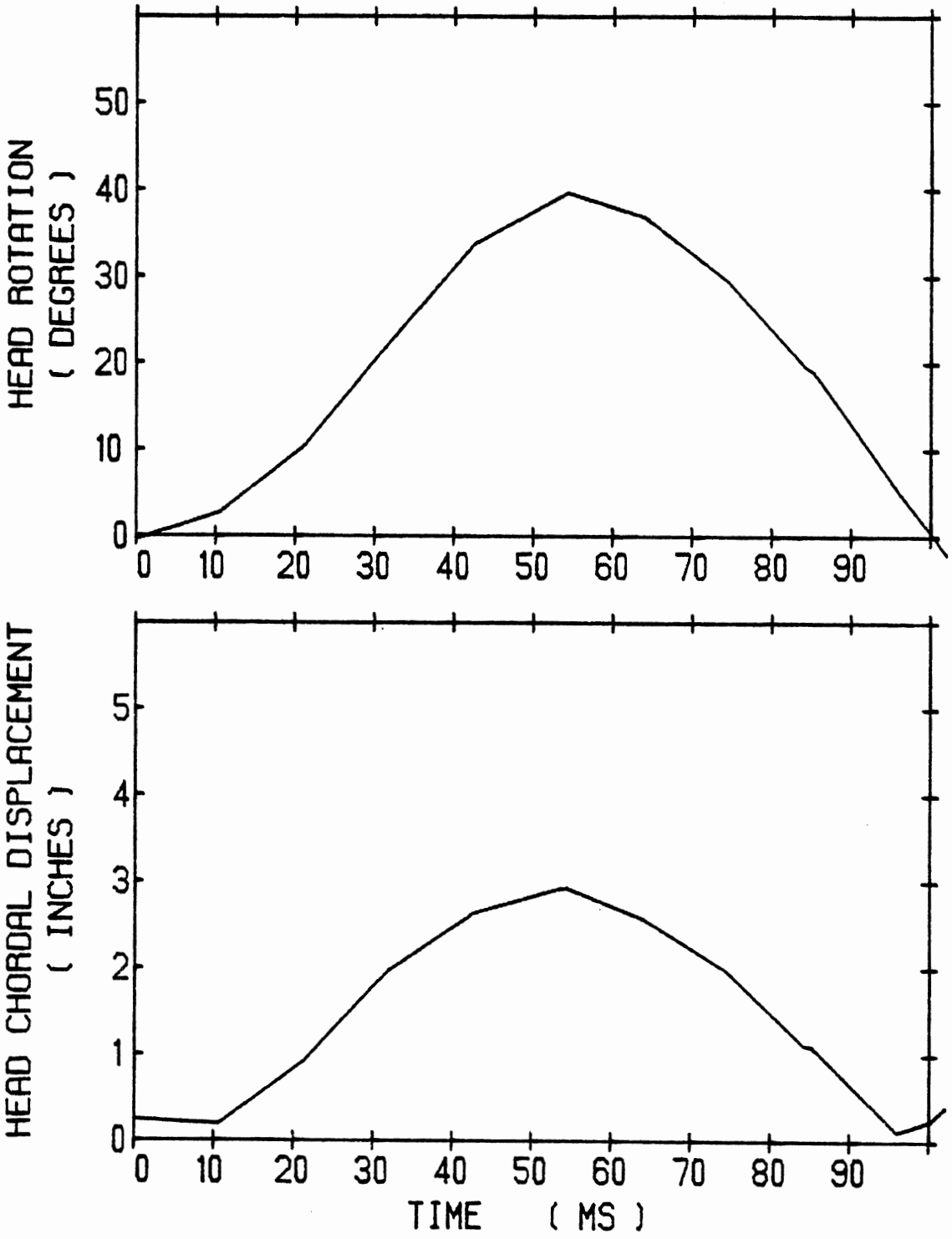
NECK PENDULUM TEST

79Y002



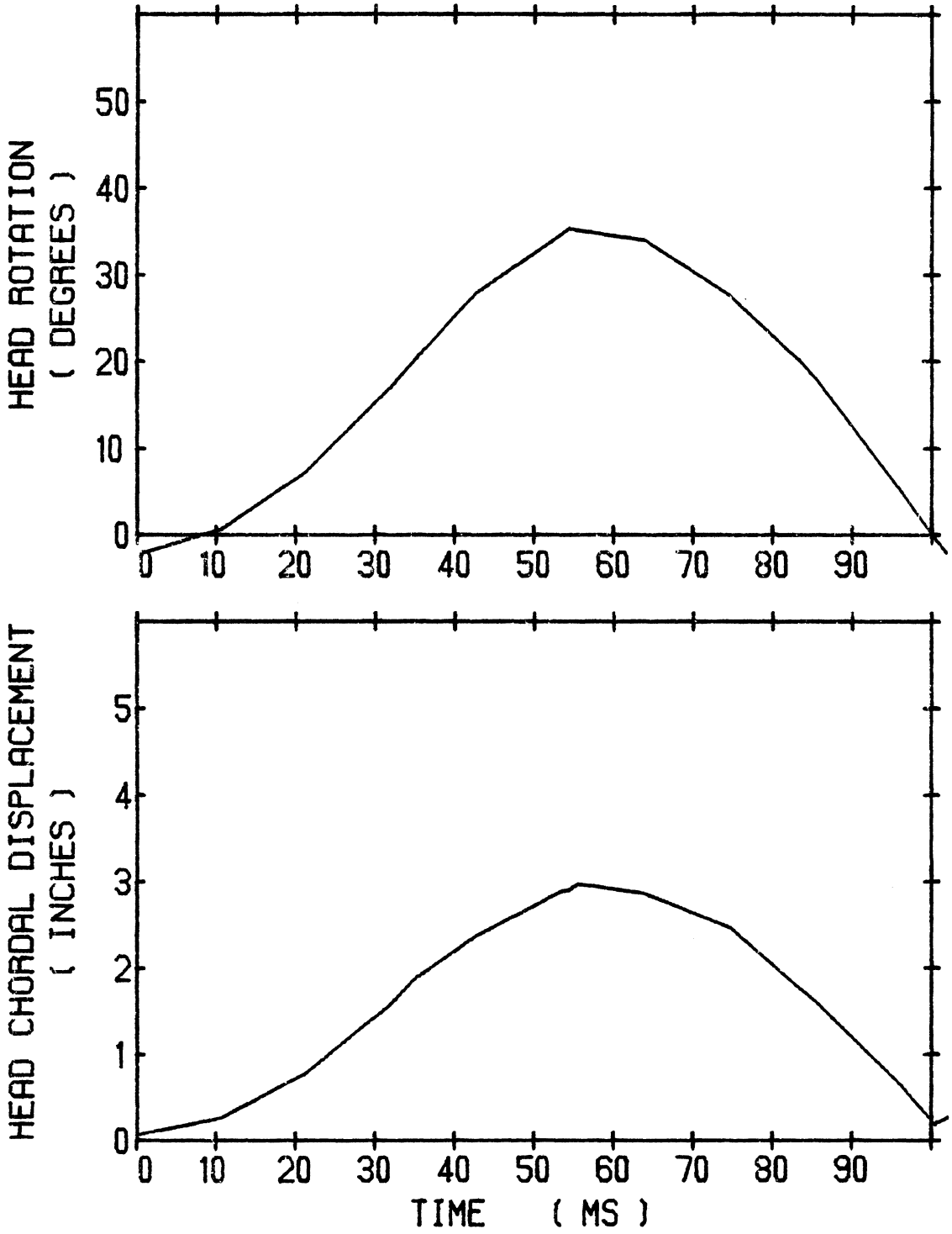
NECK PENDULUM TEST

79Y003



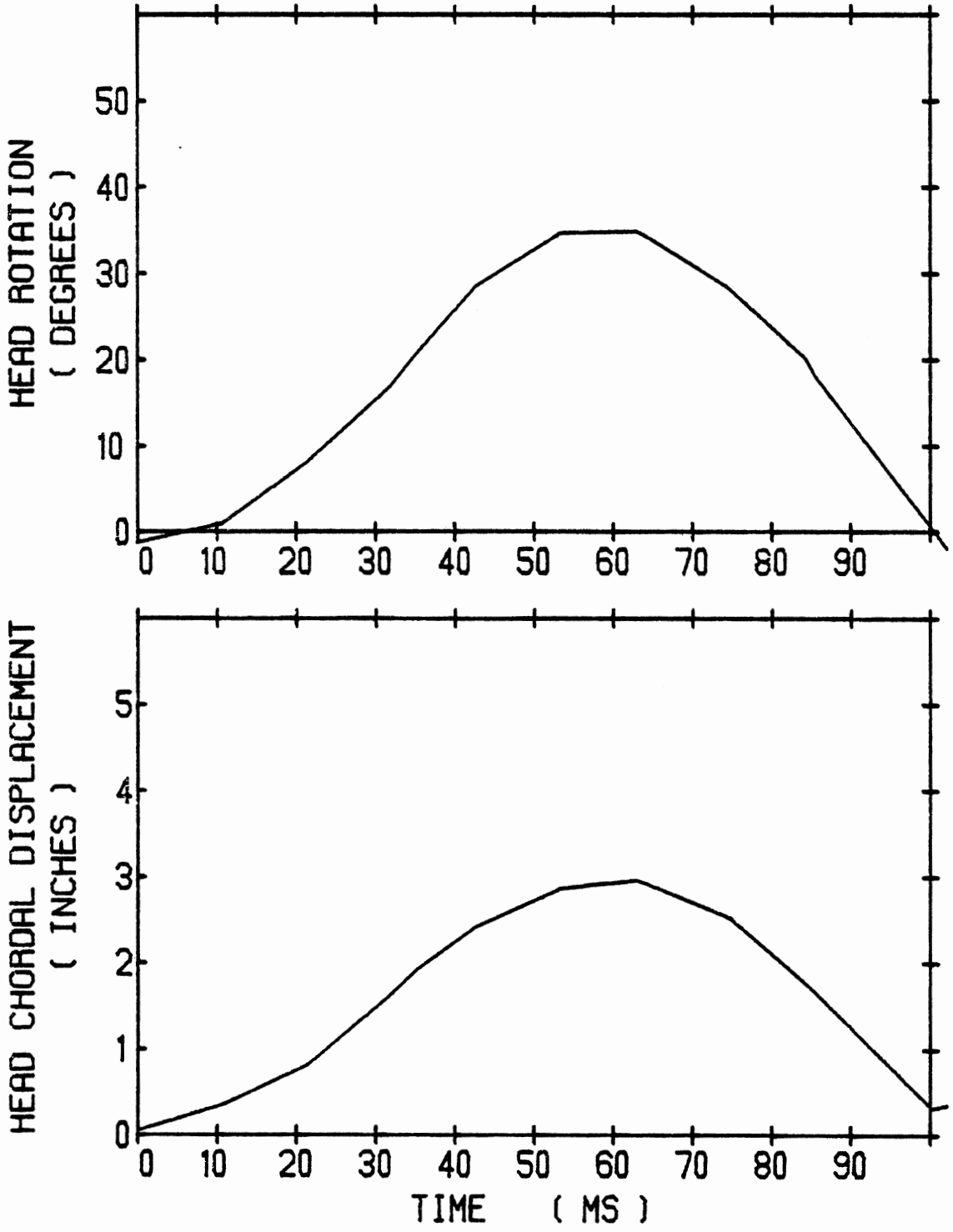
NECK PENDULUM TEST

79Y004



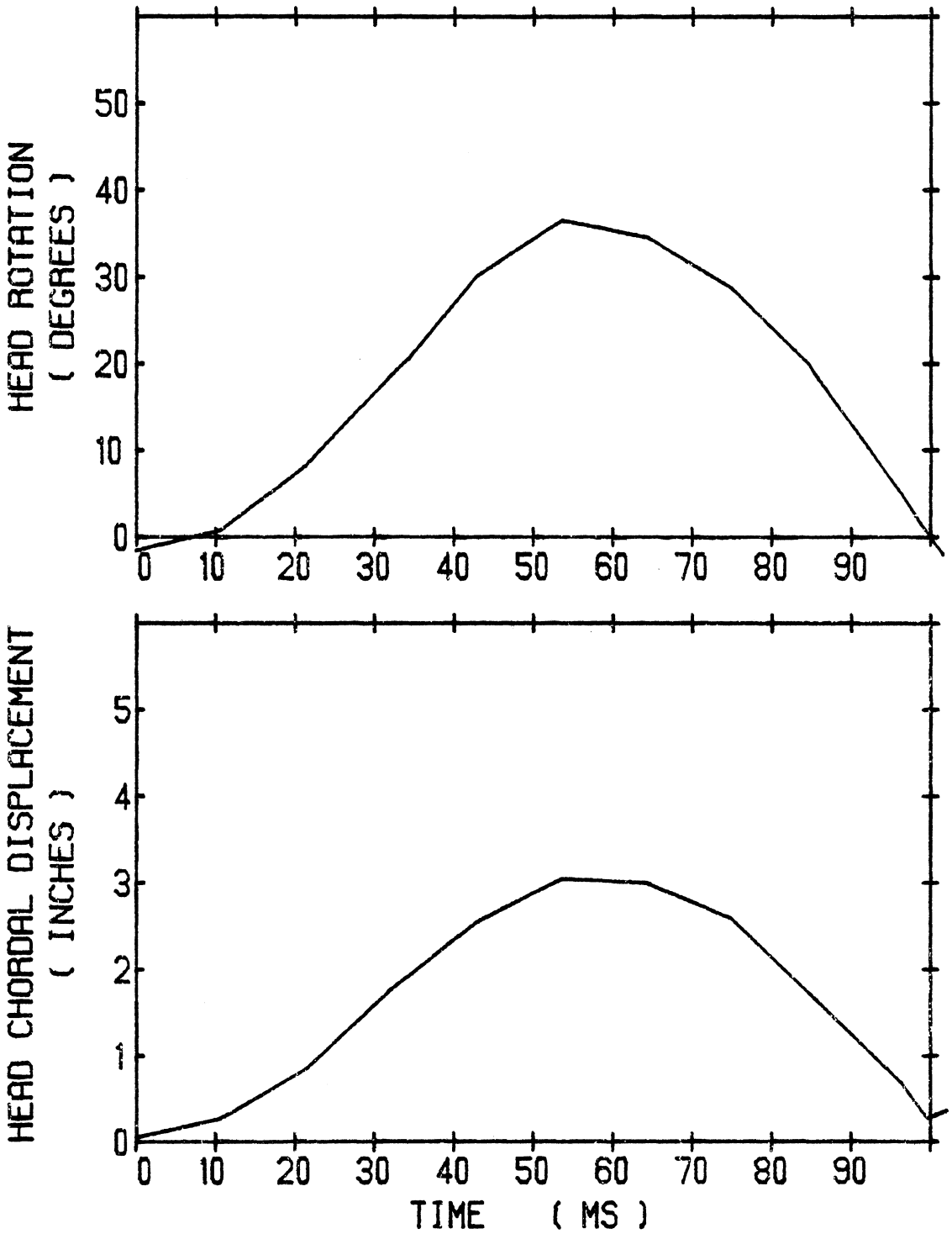
NECK PENDULUM TEST

79Y005

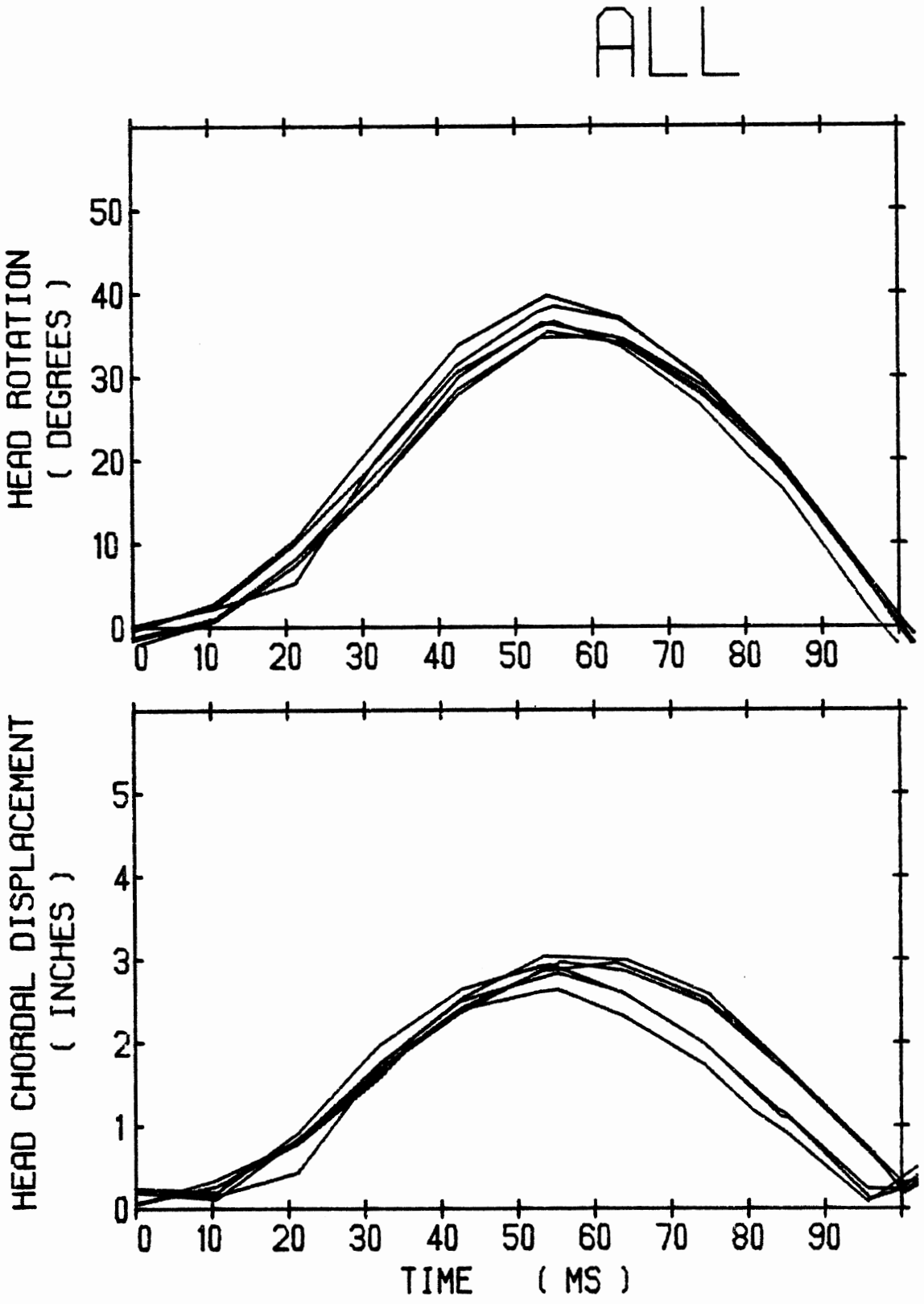


NECK PENDULUM TEST

79Y006



NECK PENDULUM TEST



NECK PENDULUM TEST

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 79Y 001 DUMMY NO. 869

BODY REGION HEAD-NECK SIDE L

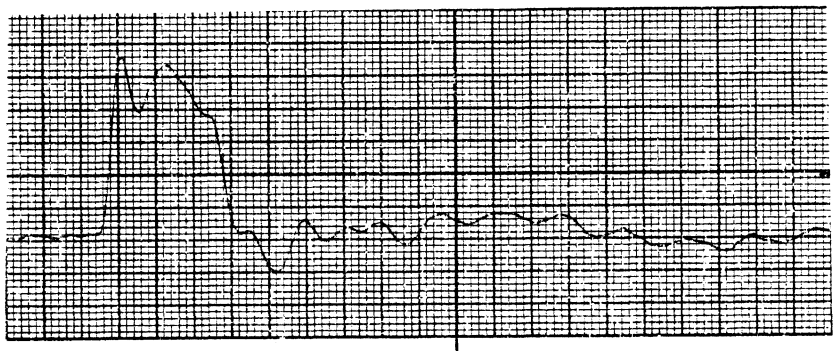
PEAK RESULTANT: 12.7 G

Impact Mass
Deceleration

Peak: 13.5 G

Scale: 5.00 G =

Filter Class: 60

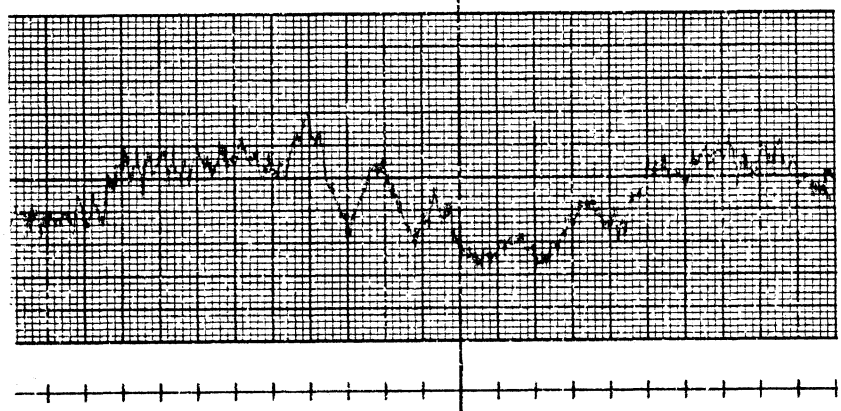


Posterior-Anterior
Acceleration

Peak: 1.64 G

Scale: 0.98 G =

Filter Class: 1000

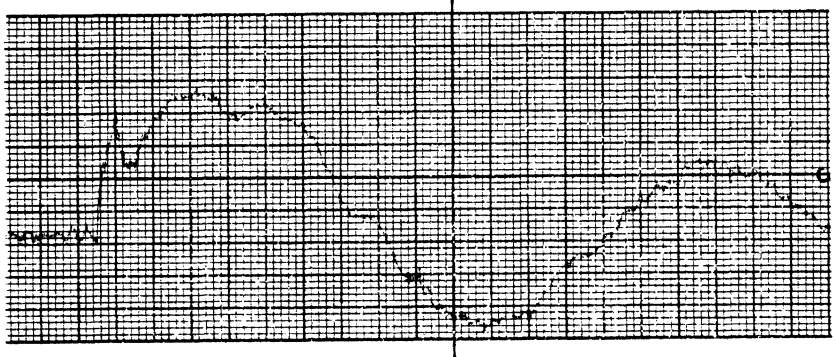


Right-Left
Acceleration

Peak: 10.5 G

Scale: -4.62 G =

Filter Class: 1000



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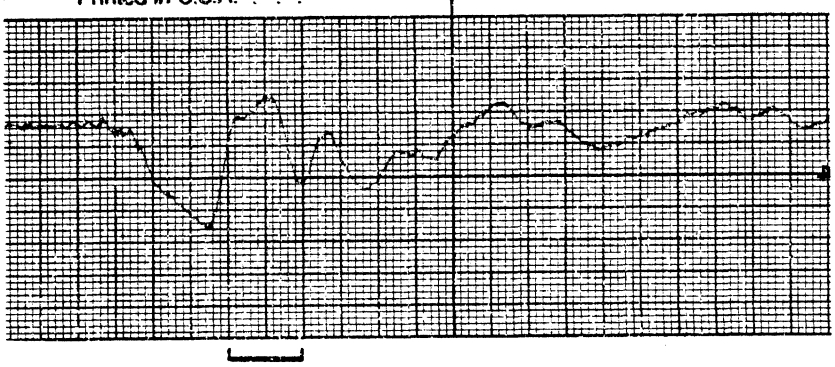
Inferior-Superior
Acceleration

Peak: 6.94 G

Scale: 4.13 G =

Filter Class: 1000



25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 79Y 002 DUMMY NO. 869

BODY REGION HEAD-NECK SIDE L

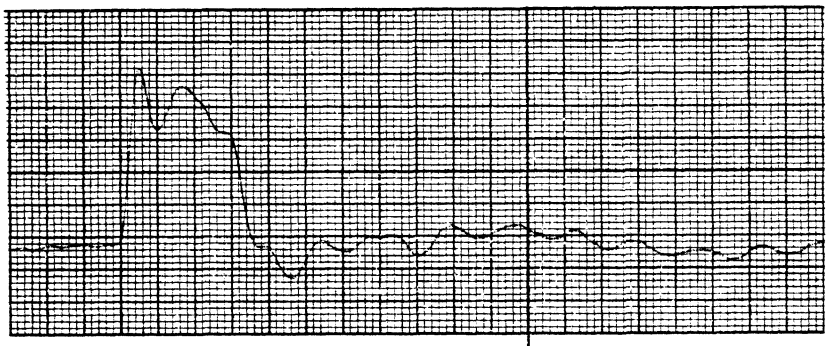
PEAK RESULTANT: 12.5 G

Impact Mass Deceleration

Peak: 13.6 G

Scale: 5.00 G =

Filter Class: 60

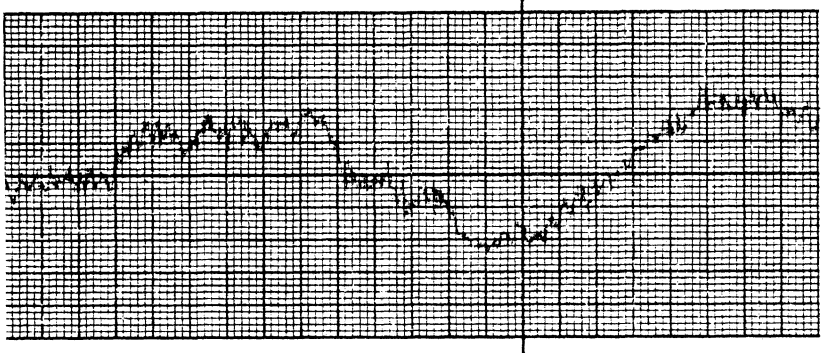


Posterior-Anterior Acceleration

Peak: 1.09 G

Scale: 0.98 G =

Filter Class: 1000

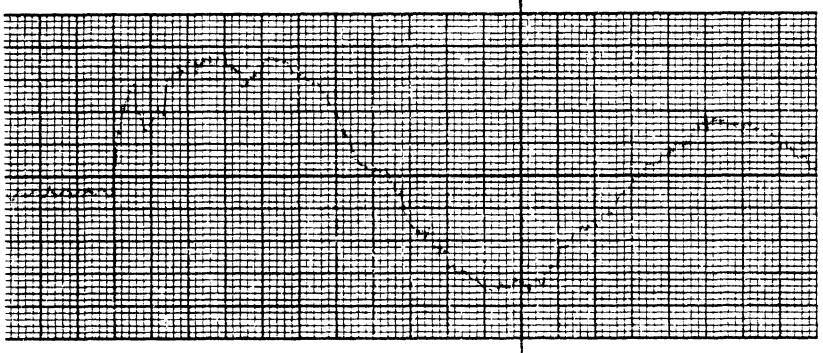


Right-Left Acceleration

Peak: 9.96 G

Scale: -4.62 G =

Filter Class: 1000

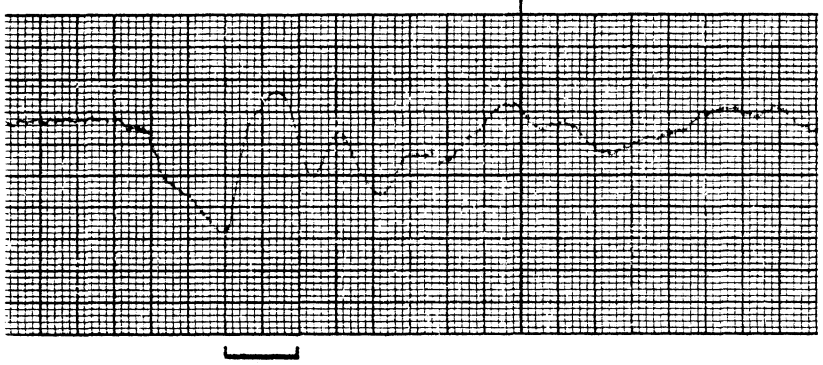


Inferior-Superior Acceleration

Peak: 7.46 G

Scale: 4.13 G =

Filter Class: 1000



25. ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 79Y 003 DUMMY NO. 869

BODY REGION HEAD-NECK SIDE L

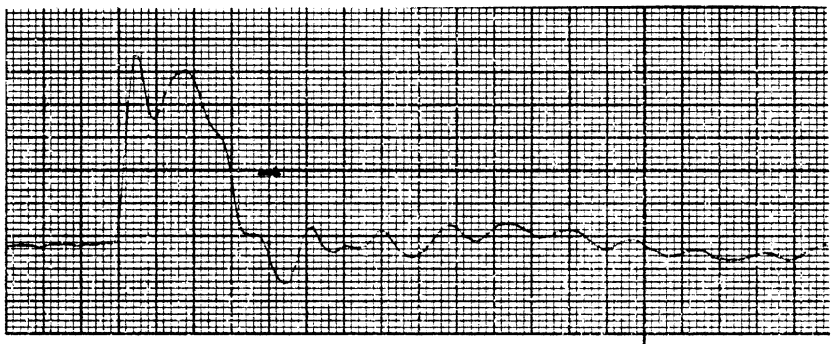
PEAK RESULTANT: 12.2

Impact Mass Deceleration

Peak: 14.7 G

Scale: 5.00 G =

Filter Class: 60

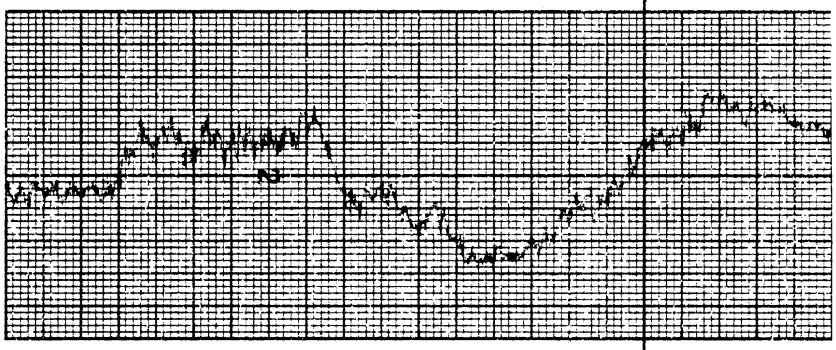


Posterior-Anterior Acceleration

Peak: 0.87 G

Scale: 0.98 G =

Filter Class: 1000

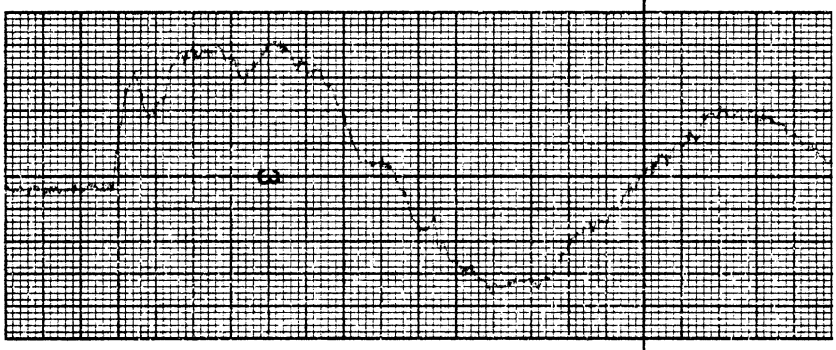


Right-Left Acceleration

Peak: 4.74 G

Scale: -4.62 G =

Filter Class: 1000

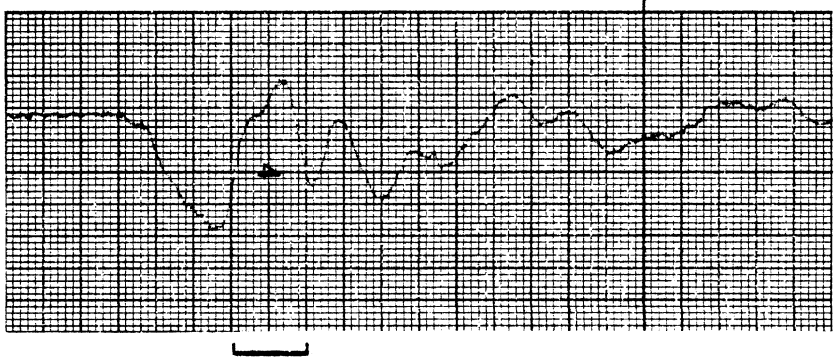


Inferior-Superior Acceleration

Peak: 7.33 G

Scale: 4.13 G =

Filter Class: 1000



25. ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 79Y 004 DUMMY NO. 869

BODY REGION HEAD-NECK SIDE R

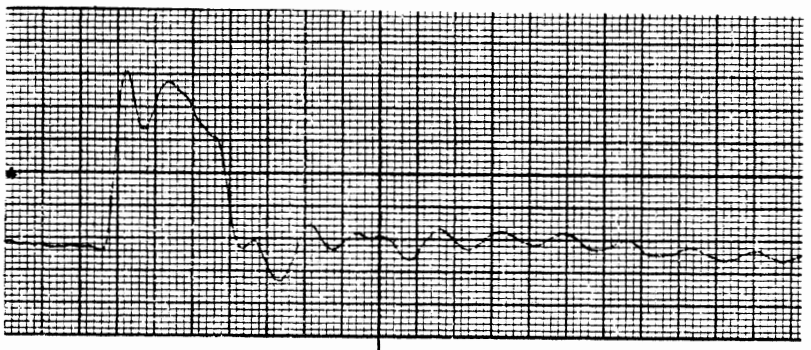
PEAK RESULTANT: 13.1 G

Impact Mass Deceleration

Peak: 13.5 G

Scale: 5.00 G =

Filter Class: 60

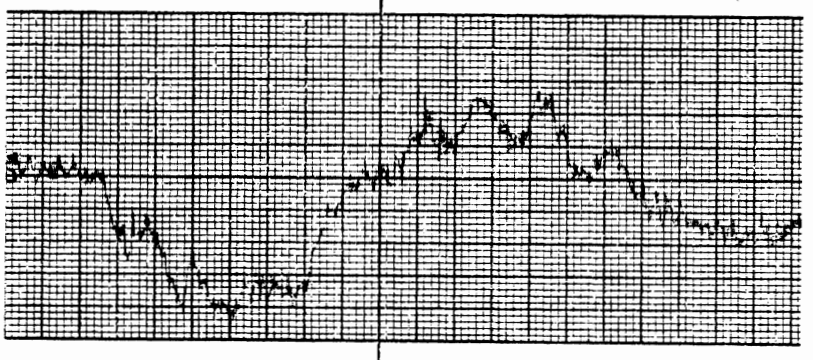


Posterior-Anterior Acceleration

Peak: 2.45 G

Scale: 0.98 G =

Filter Class: 1000

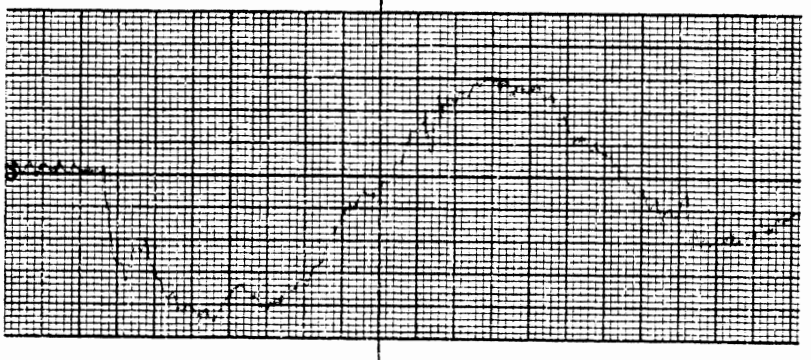


Right-Left Acceleration

Peak: 10.7 G

Scale: -4.62 G =

Filter Class: 1000

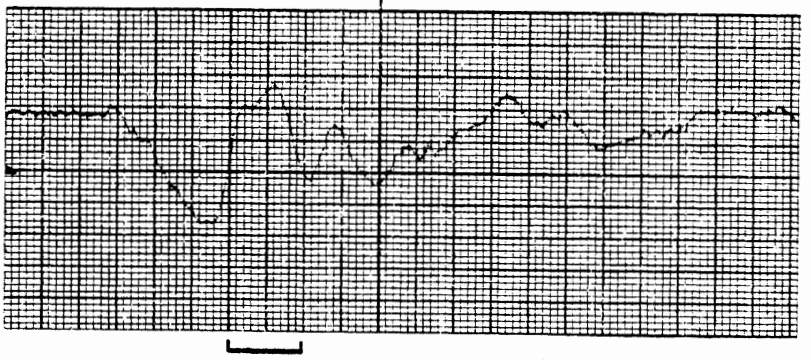


Inferior-Superior Acceleration

Peak: 7.20 G

Scale: 4.13 G =

Filter Class: 1000



25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 79Y 005 DUMMY NO. 869

BODY REGION HEAD-NECK SIDE R

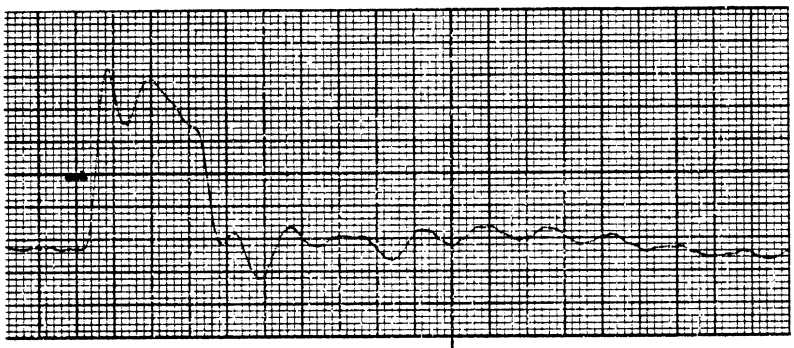
PEAK RESULTANT: 13.3

Impact Mass Deceleration

Peak: 14.1 G

Scale: 5.00 G =

Filter Class: 60

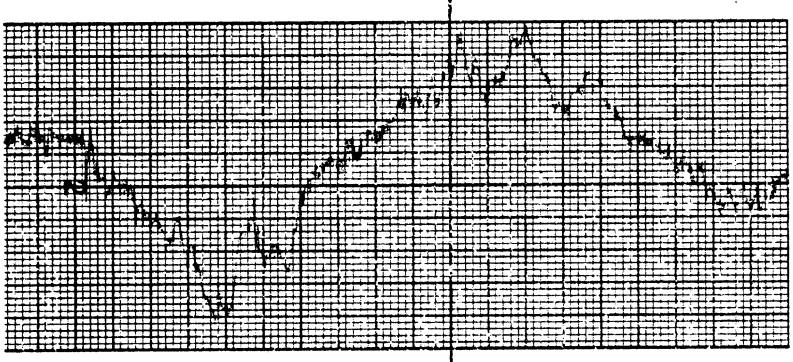


Posterior-Anterior Acceleration

Peak: 2.73 G

Scale: 0.98 G =

Filter Class: 1000

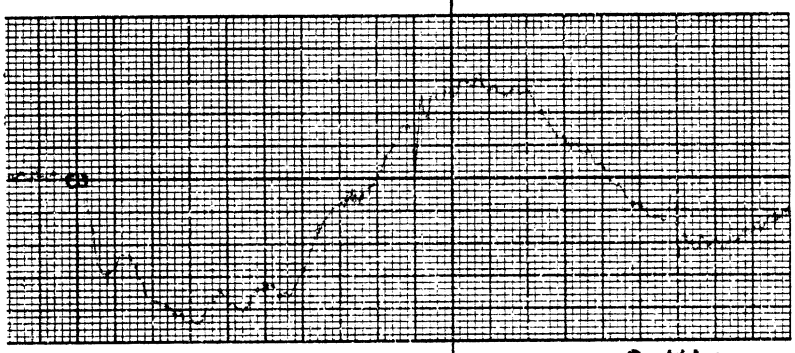


Right-Left Acceleration

Peak: 10.7 G

Scale: 4.62 G =

Filter Class: 1000



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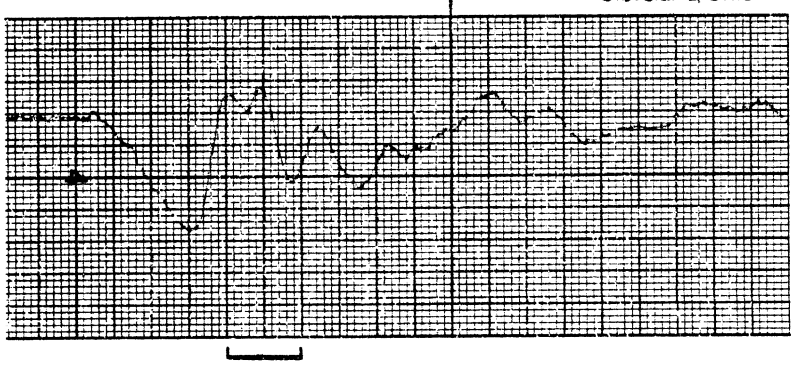
Cleveland, Ohio

Inferior-Superior Acceleration

Peak: 7.33 G

Scale: 4.13 G =

Filter Class: 1000



25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 79Y 006 DUMMY NO. 869

BODY REGION HEAD - NECK SIDE R

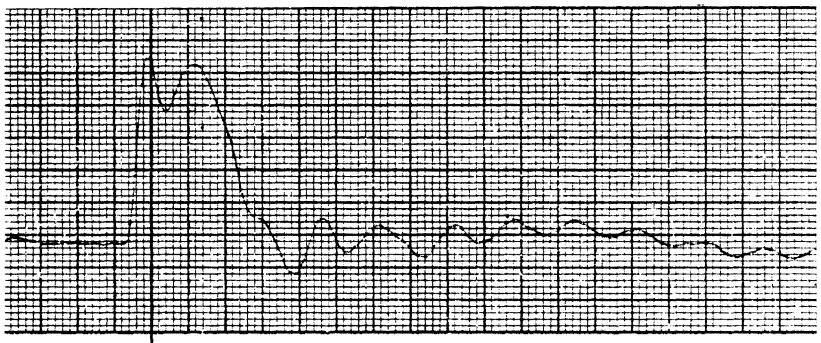
PEAK RESULTANT: 12.9

Impact Mass
Deceleration

Peak: 14.58 G

Scale: 5.00 G =

Filter Class: 60

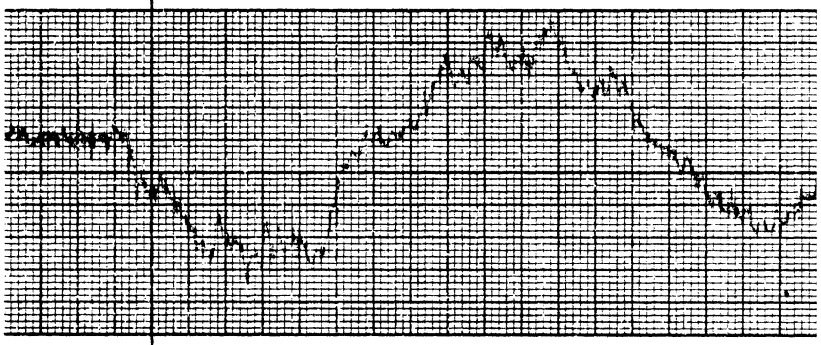


Posterior-Anterior
Acceleration

Peak: 2.28 G

Scale: 0.98 G =

Filter Class: 1000

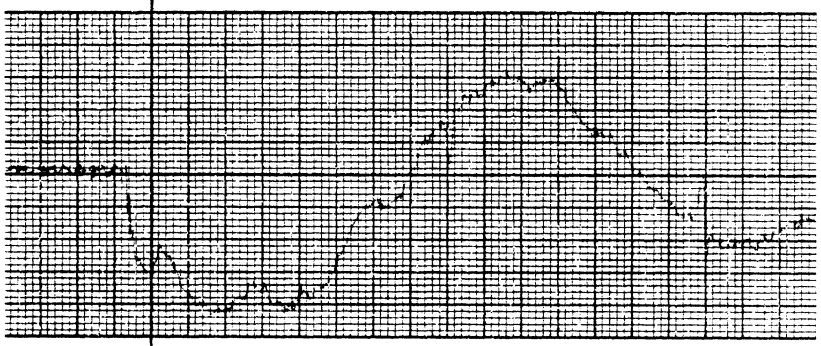


Right-Left
Acceleration

Peak: 10.32 G

Scale: -4.62 G =

Filter Class: 1000

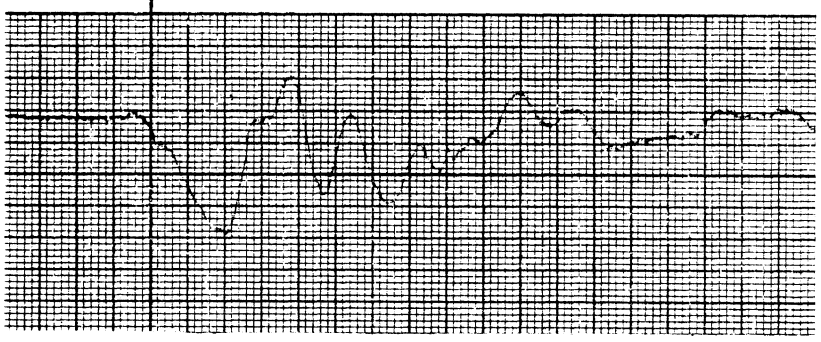


Inferior-Superior
Acceleration

Peak: 7.46 G

Scale: 4.13 G =

Filter Class: 1000



25. ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 79Y 007 DUMMY NO. 869

BODY REGION HEAD SIDE L

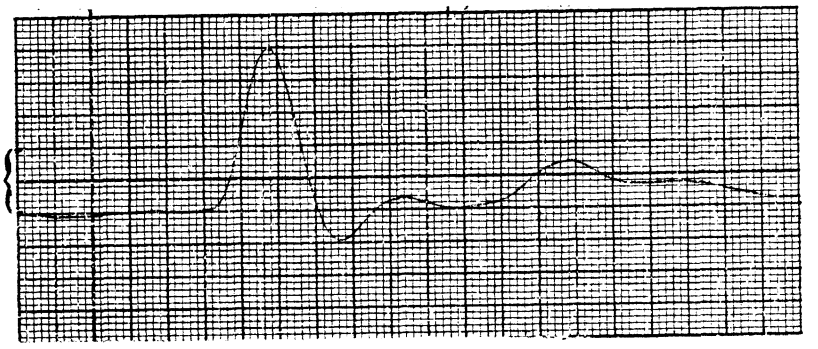
PEAK RESULTANT: 207. G

Impact Mass Deceleration

Peak: 10.5 G

Scale: 4.2 G =

Filter Class: 60

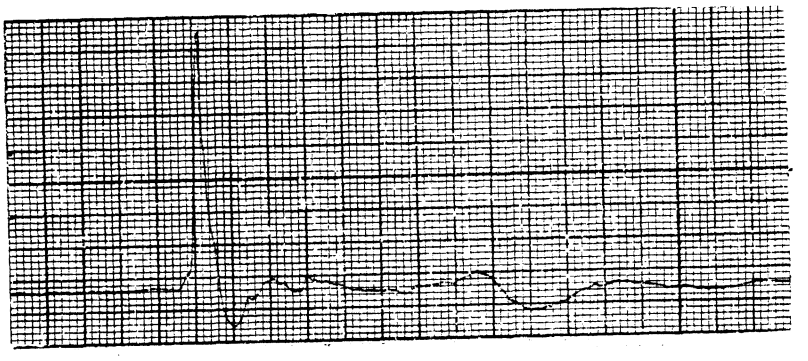


Posterior-Anterior Acceleration

Peak: 15.5 G

Scale: 3.89 G =

Filter Class: 1000

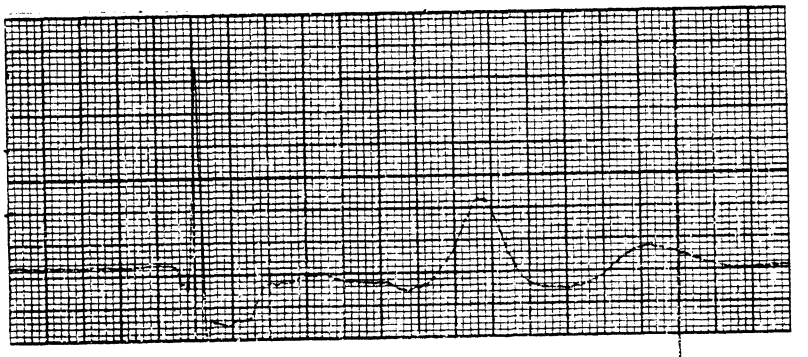


Inferior-Superior Acceleration

Peak: 12.6 G

Scale: 4.13 G =

Filter Class: 1000

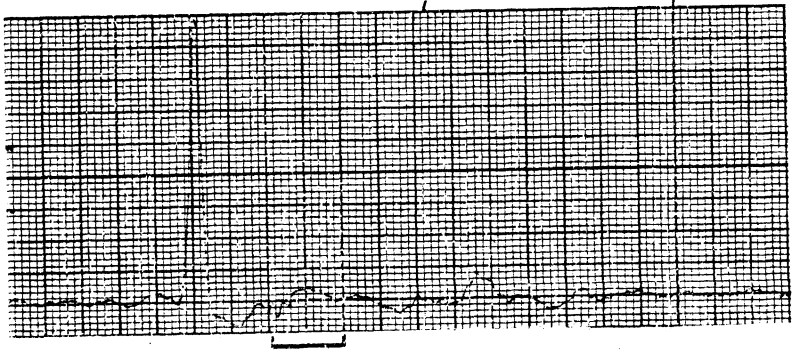


Right-Left Acceleration

Peak: 206. G

Scale: -46.2 G =

Filter Class: 1000



6.25 ms

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 79Y 008 DUMMY NO. 869

BODY REGION HEAD SIDE L

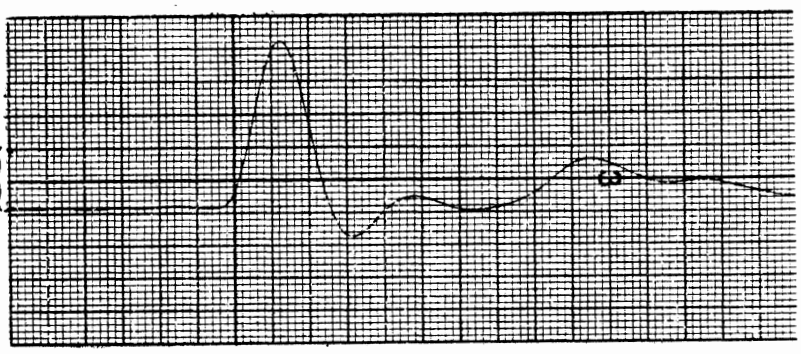
PEAK RESULTANT: 186. G

Impact Mass Deceleration

Peak: 10.6 G

Scale: 4.2 G =

Filter Class: 60

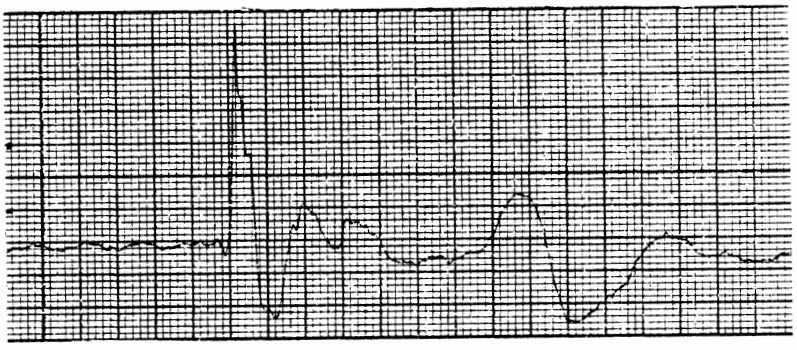


Posterior-Anterior Acceleration

Peak: 5.26 G

Scale: 1.56 G =

Filter Class: 1000



Inferior-Superior Acceleration

Peak: 8.21 G

Scale: 4.13 G =

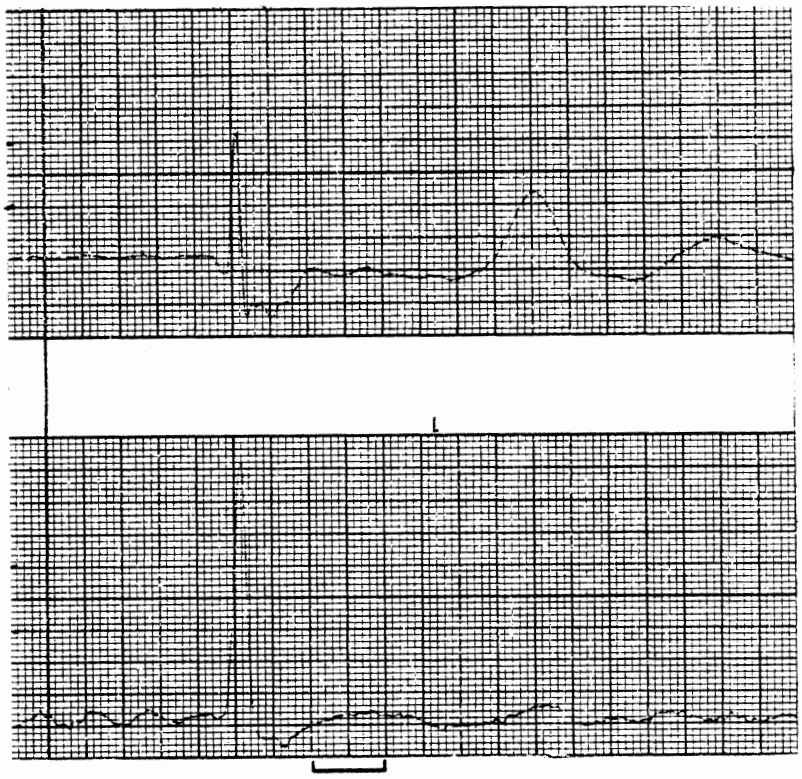
Filter Class: 1000

Right-Left Acceleration

Peak: 186. G

Scale: -46.2 G =

Filter Class: 1000



6.25 ms

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 79Y 009 DUMMY NO. 869

BODY REGION HEAD SIDE L

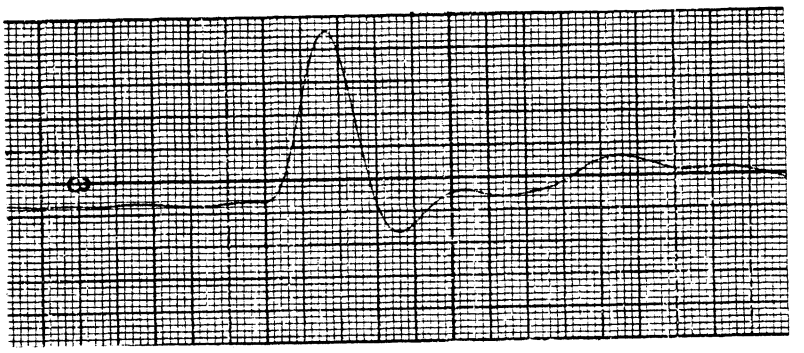
PEAK RESULTANT: 191 G

Impact Mass Deceleration

Peak: 11.3 G

Scale: 4.2 G =

Filter Class: 60

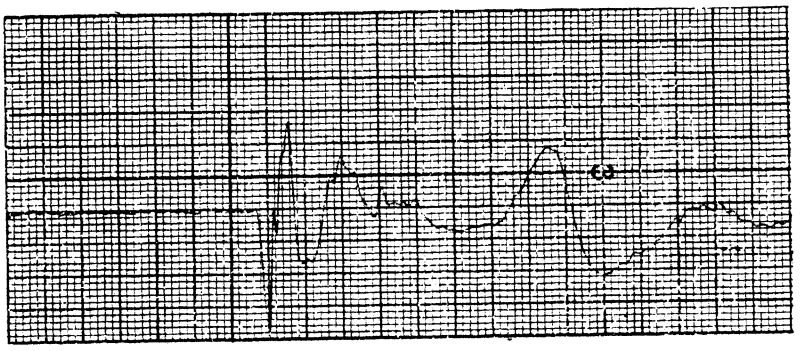


Posterior-Anterior Acceleration

Peak: 2.97 G

Scale: 1.56 G =

Filter Class: 1000

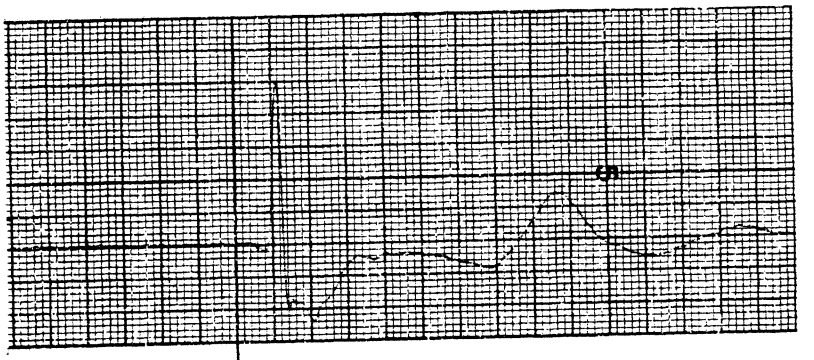


Inferior-Superior Acceleration

Peak: 10.4 G

Scale: 4.13 G =

Filter Class: 1000

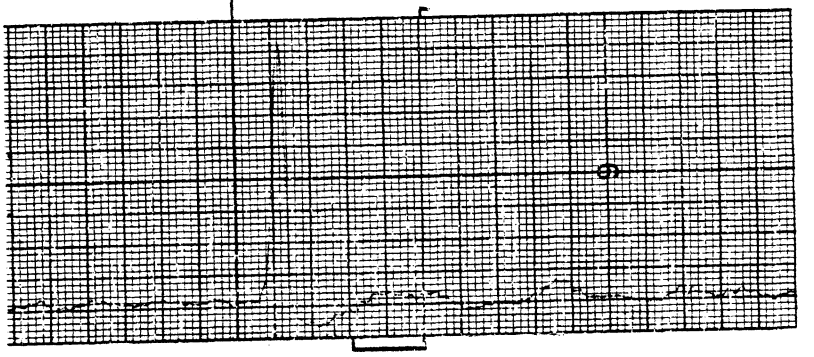


Right-Left Acceleration

Peak: 191 G

Scale: -46.2 G =

Filter Class: 1000



6.25 ms

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 79Y 010 DUMMY NO. 869

BODY REGION HEAD SIDE R

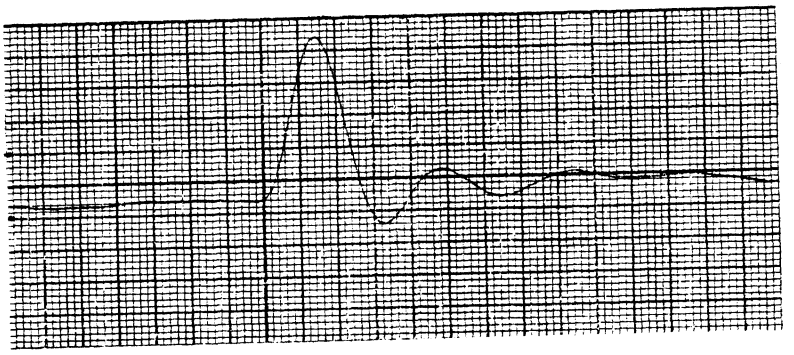
PEAK RESULTANT: 215. G

Impact Mass
Deceleration

Peak: 10.9 G

Scale: 4.2 G =

Filter Class: 60

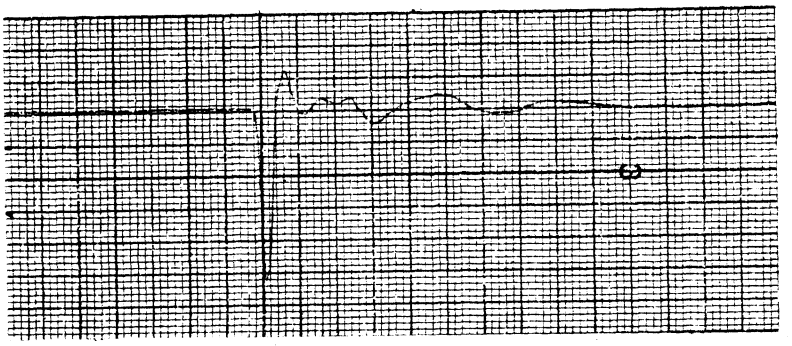


Posterior-Anterior
Acceleration

Peak: 20.6 G

Scale: 7.78 G =

Filter Class: 1000



Inferior-Superior
Acceleration

Peak: 10.9 G

Scale: 4.13 G =

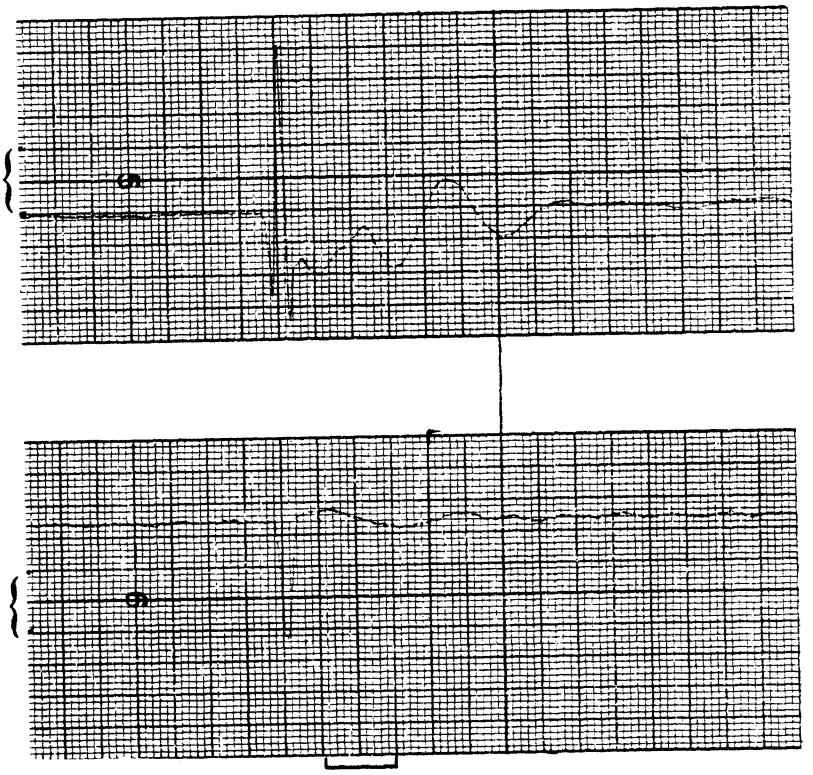
Filter Class: 1000

Right-Left
Acceleration

Peak: 214. G

Scale: 115. G =

Filter Class: 1000



6.25 ms

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 79Y 011 DUMMY NO. 869

BODY REGION HEAD SIDE R

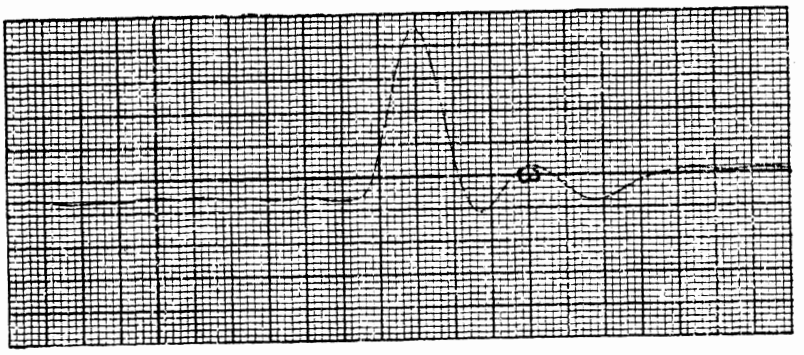
PEAK RESULTANT: 248. G

Impact Mass Deceleration

Peak: 11.0 G

Scale: 4.2 G =

Filter Class: 60

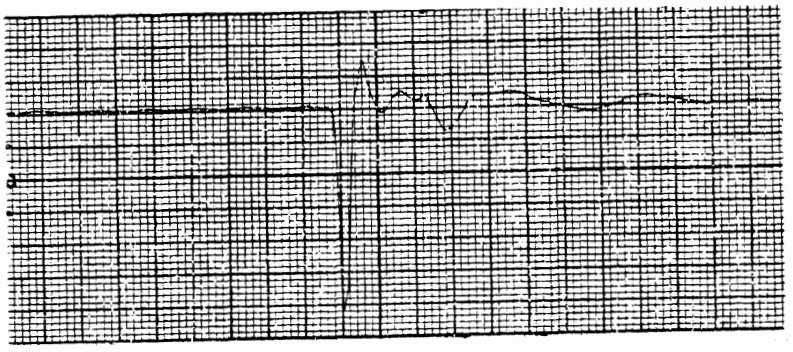


Posterior-Anterior Acceleration

Peak: 24.1 G

Scale: 7.78 G =

Filter Class: 1000

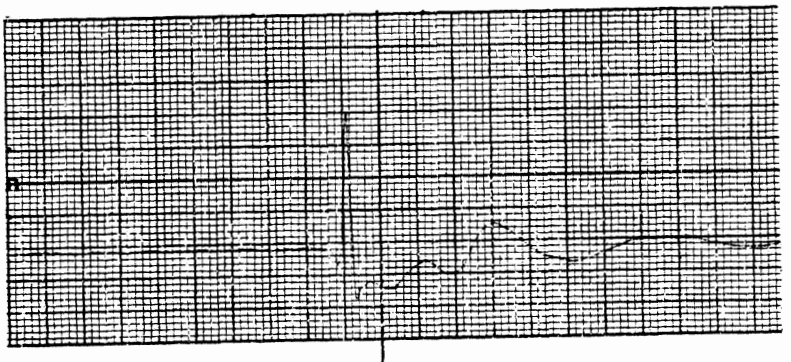


Inferior-Superior Acceleration

Peak: 17.3 G

Scale: 8.26 G =

Filter Class: 1000

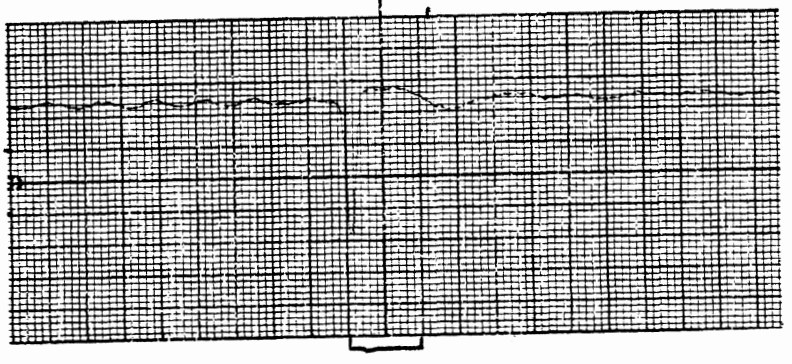


Right-Left Acceleration

Peak: 247 G

Scale: -115. G =

Filter Class: 1000



6.25 ms

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 79Y 012 DUMMY NO. 869

BODY REGION HEAD SIDE R

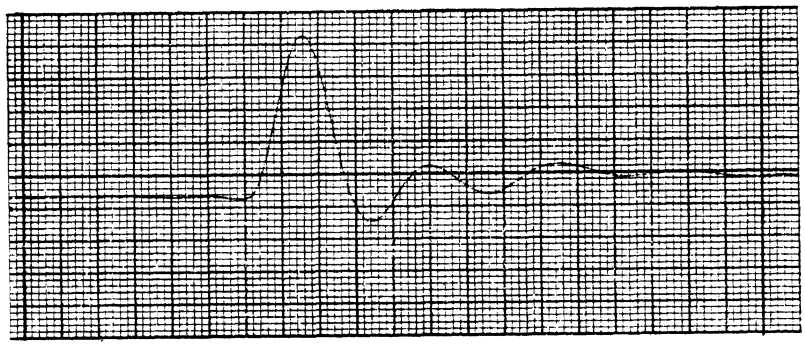
PEAK RESULTANT: 211. G

Impact Mass Deceleration

Peak: 10.3 G

Scale: 4.2 G =

Filter Class: 60

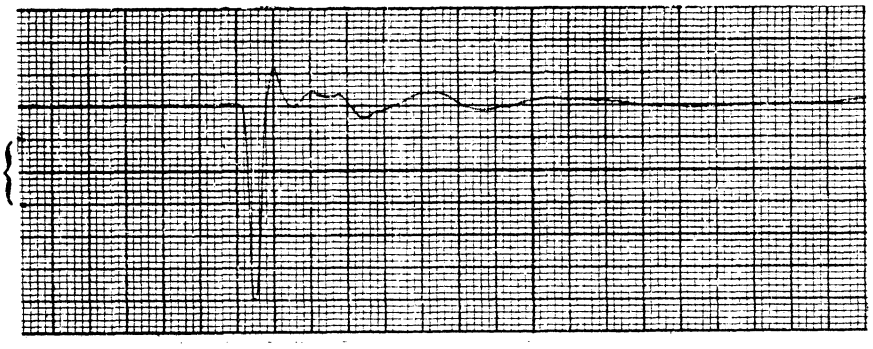


Posterior-Anterior Acceleration

Peak: 23.5 G

Scale: 7.78 G =

Filter Class: 1000



Inferior-Superior Acceleration

Peak: 5.27 G

Scale: 8.26 G =

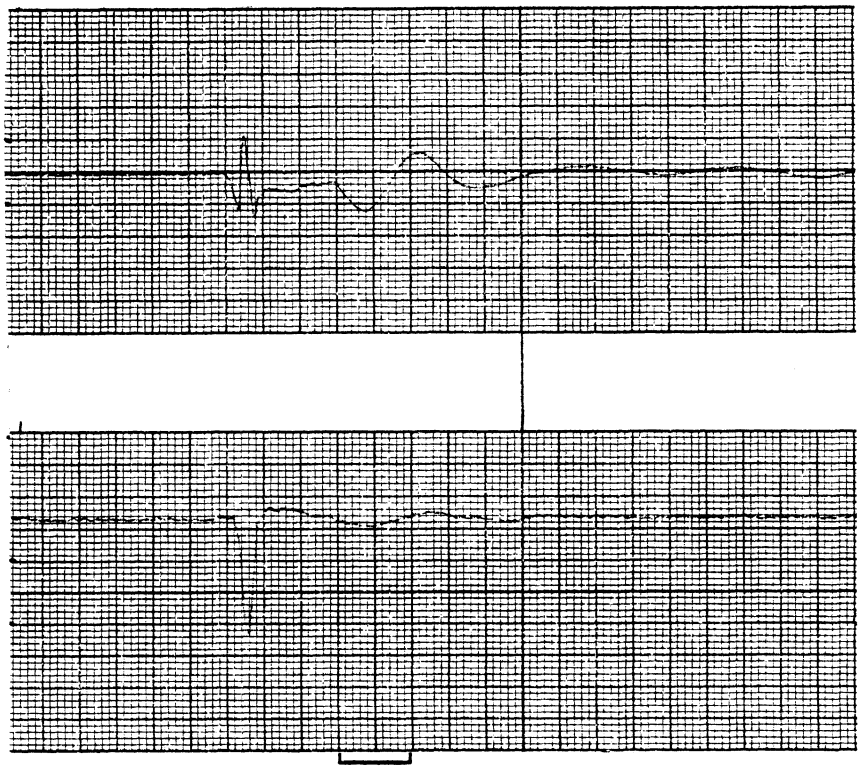
Filter Class: 1000

Right-Left Acceleration

Peak: 210. G

Scale: -115. G =

Filter Class: 1000



6.25 ms

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 79Y 013 DUMMY NO. 869

BODY REGION PELVIS SIDE L

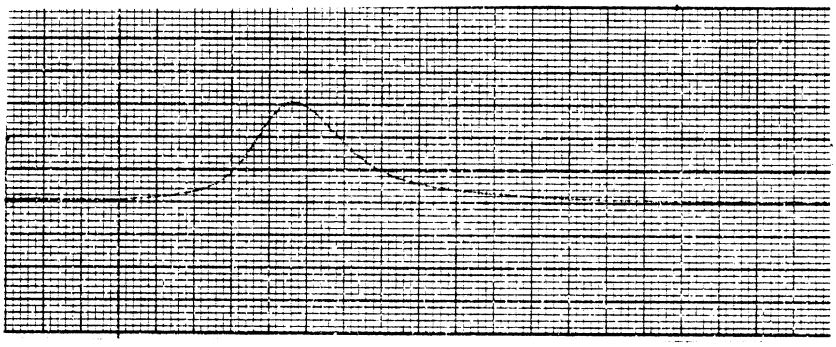
PEAK RESULTANT: 66.9 G

Impact Mass Deceleration

Peak: 32.6 G

Scale: 21.0 G =

Filter Class: 60

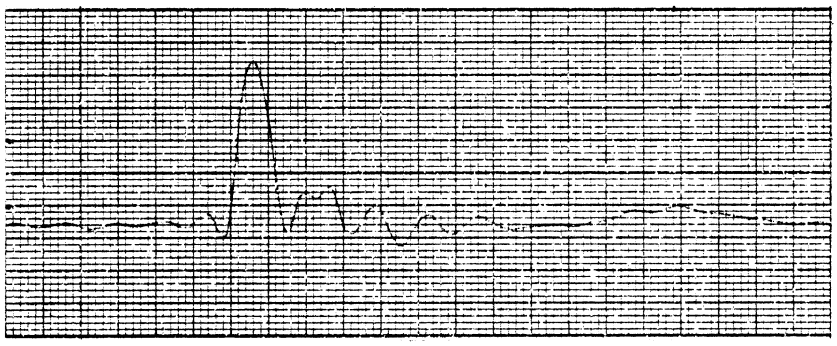


Posterior-Anterior Acceleration

Peak: 9.66 G

Scale: 3.89 G =

Filter Class: 180

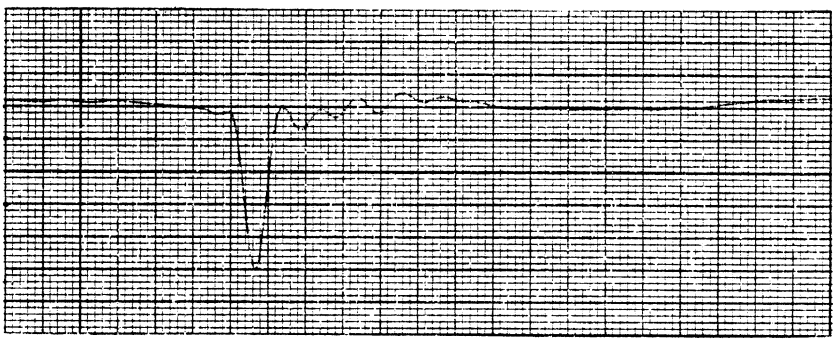


Inferior-Superior Acceleration

Peak: 24.7 G

Scale: -10.0 G =

Filter Class: 180

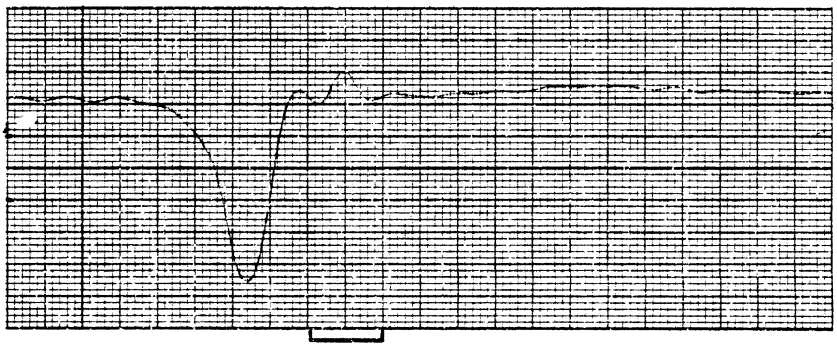


Right-Left Acceleration

Peak: 61.4 G

Scale: 22.0 G =

Filter Class: 180



6.25 ms

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 79Y 014 DUMMY NO. 869

BODY REGION PELVIS SIDE L

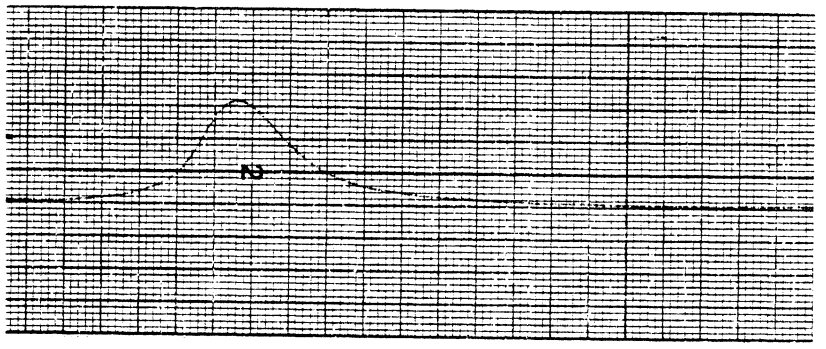
PEAK RESULTANT: 78.3 G

Impact Mass Deceleration

Peak: 32.6 G

Scale: 21.0 G =

Filter Class: 60

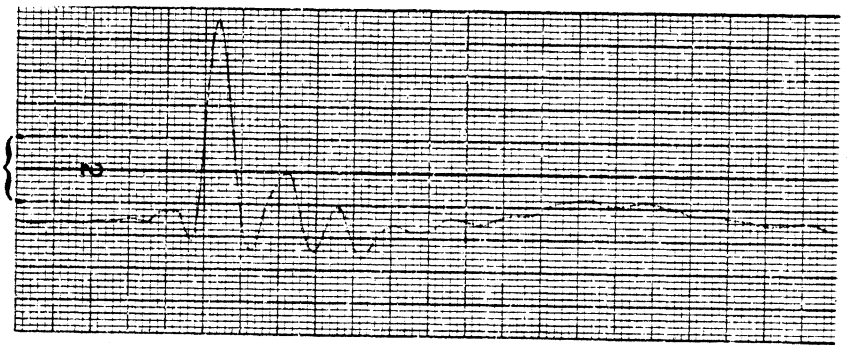


Posterior-Anterior Acceleration

Peak: 11.9 G

Scale: 3.89 G =

Filter Class: 180

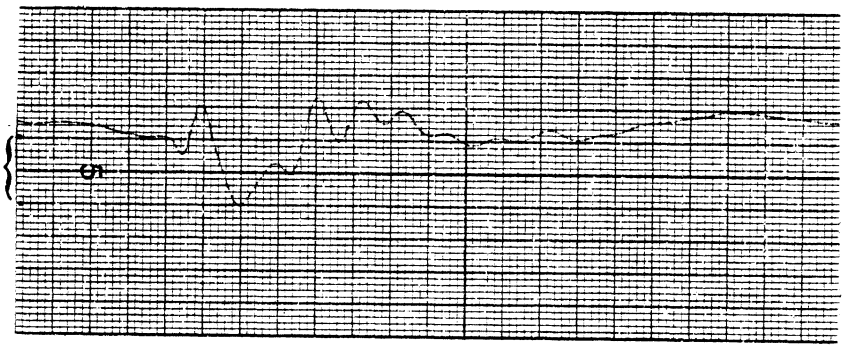


Inferior-Superior Acceleration

Peak: 4.94 G

Scale: -4.01 G =

Filter Class: 180

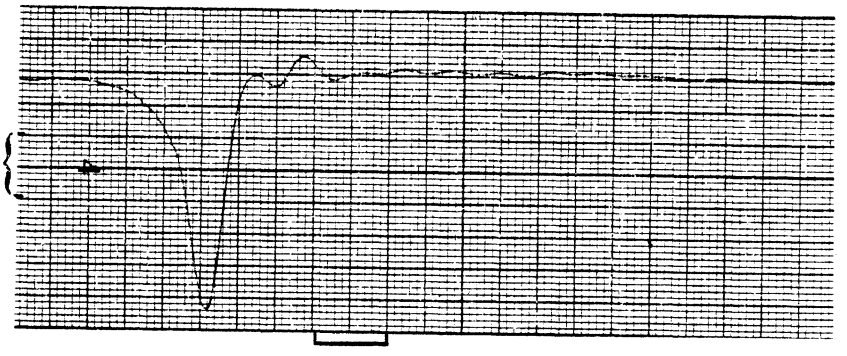


Right-Left Acceleration

Peak: 77.2G

Scale: 22.0G =

Filter Class: 180



6.25 ms

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 79Y 015 DUMMY NO. 869

BODY REGION PELVIS SIDE L

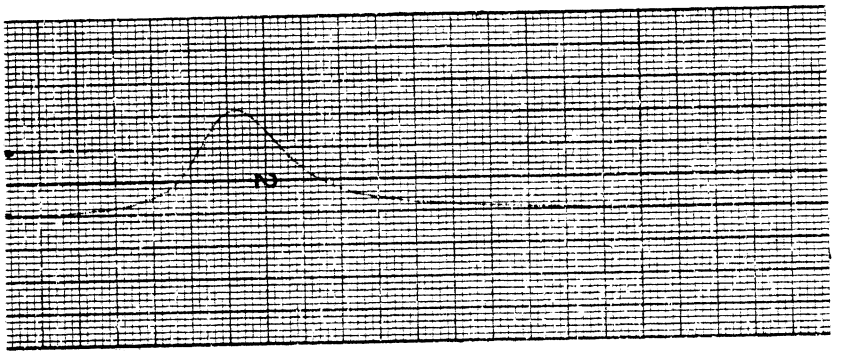
PEAK RESULTANT: 76.8 G

Impact Mass Deceleration

Peak: 33.1 G

Scale: 21.0 G =

Filter Class: 60

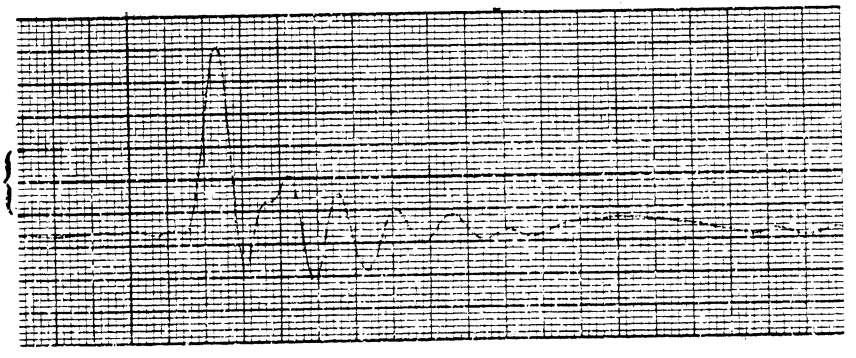


Posterior-Anterior Acceleration

Peak: 10.9 G

Scale: 3.89 G =

Filter Class: 180

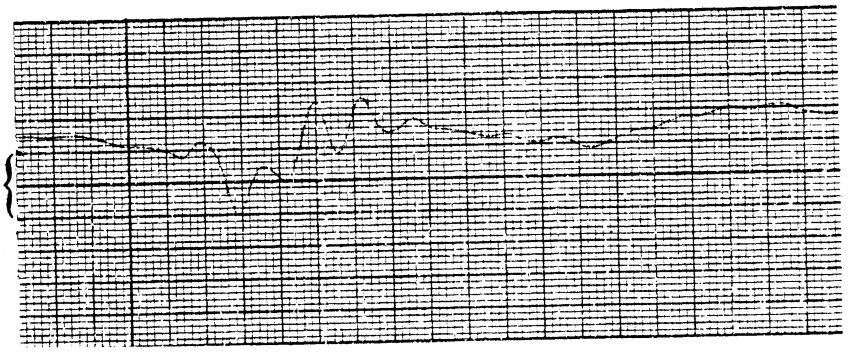


Inferior-Superior Acceleration

Peak: 5.00 G

Scale: -4.01 G =

Filter Class: 180

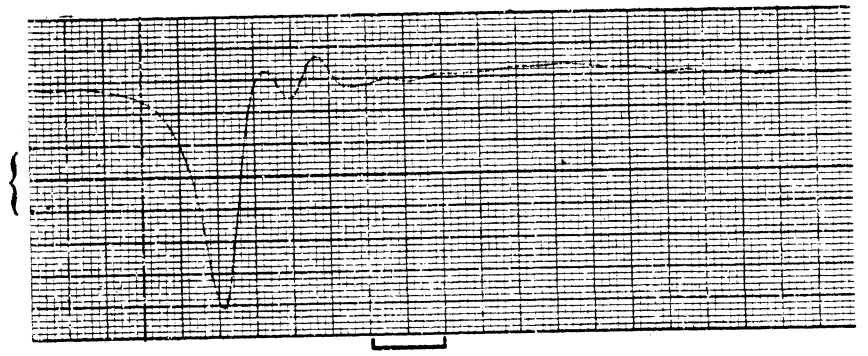


Right-Left Acceleration

Peak: 75.9 G

Scale: 22.0 G =

Filter Class: 180



6.25 ms

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 79Y 016 DUMMY NO. 869

BODY REGION PELVIS SIDE R

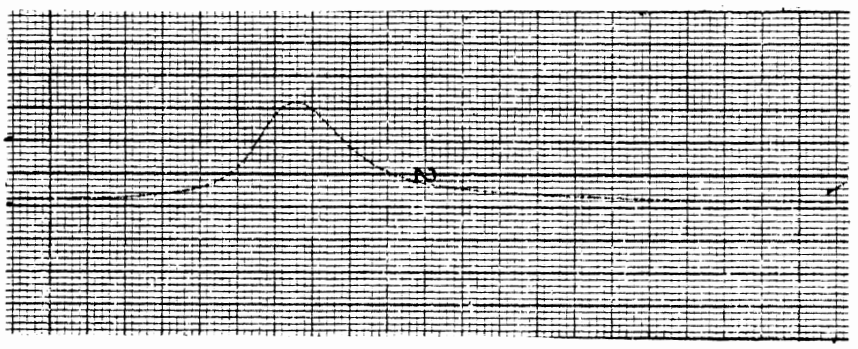
PEAK RESULTANT: 67.9

Impact Mass Deceleration

Peak: 31.6 G

Scale: 21.0 G =

Filter Class: 60

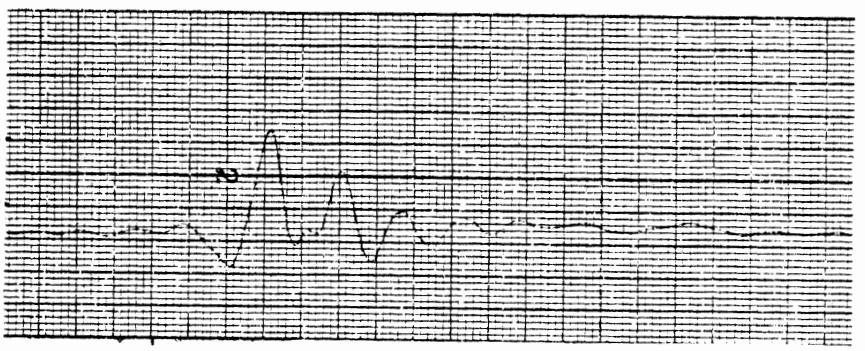


Posterior-Anterior Acceleration

Peak: 6.30 G

Scale: 3.89 G =

Filter Class: 180

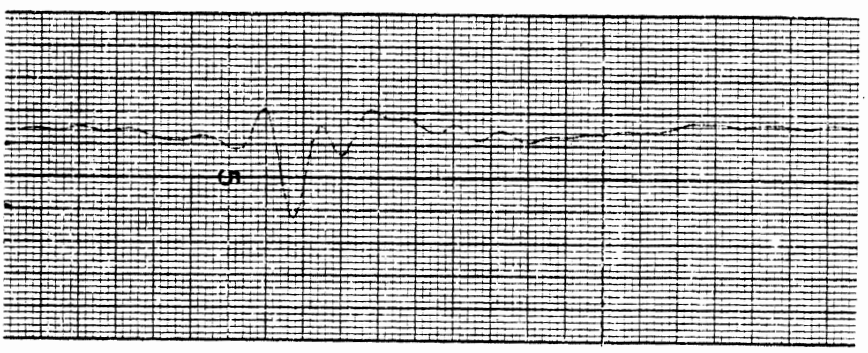


Inferior-Superior Acceleration

Peak: 5.21 G

Scale: -4.01 G =

Filter Class: 180

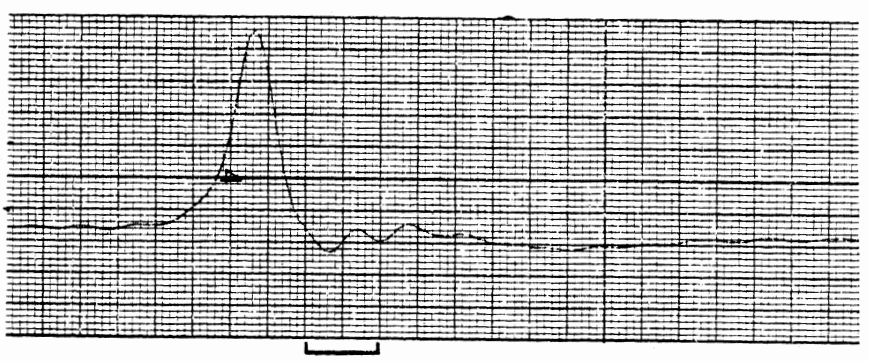


Right-Left Acceleration

Peak: 67.4 G

Scale: 22.0 G =

Filter Class: 180



6.25 ms

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 79Y 017 DUMMY NO. 869

BODY REGION PELVIS SIDE R

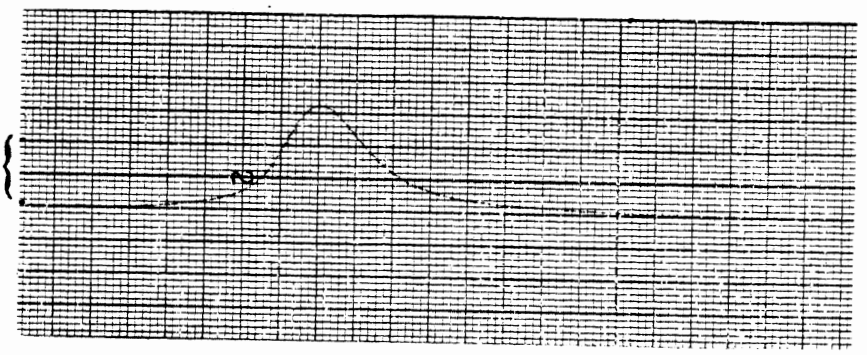
PEAK RESULTANT: 79.9

Impact Mass Deceleration

Peak: 33.7 G

Scale: 21.0 G =

Filter Class: 60

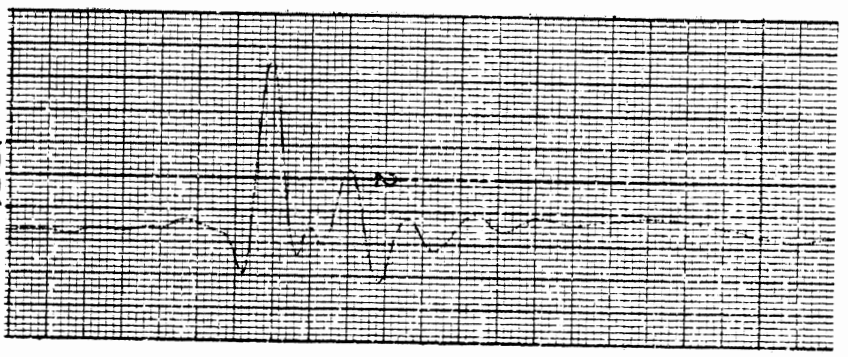


Posterior-Anterior Acceleration

Peak: 10.3 G

Scale: 3.89 G =

Filter Class: 180

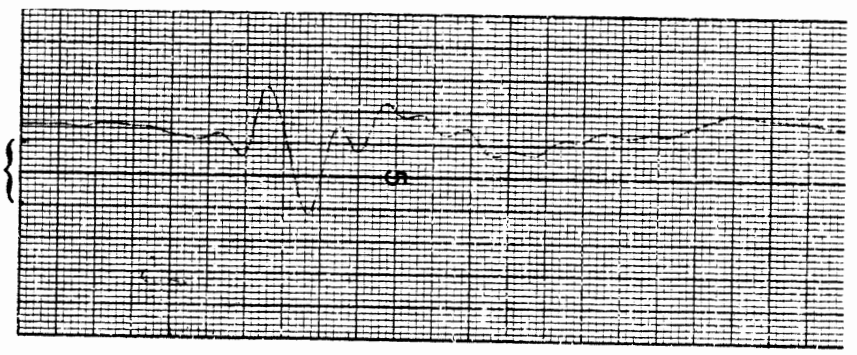


Inferior-Superior Acceleration

Peak: 5.08 G

Scale: -4.01 G =

Filter Class: 180

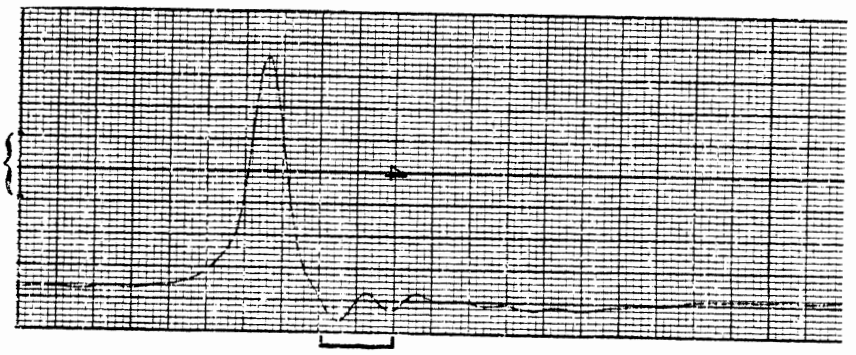


Right-Left Acceleration

Peak: 79.2 G

Scale: 22.0 G =

Filter Class: 180



DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 79Y 018 DUMMY NO. 869

BODY REGION PELVIS SIDE R

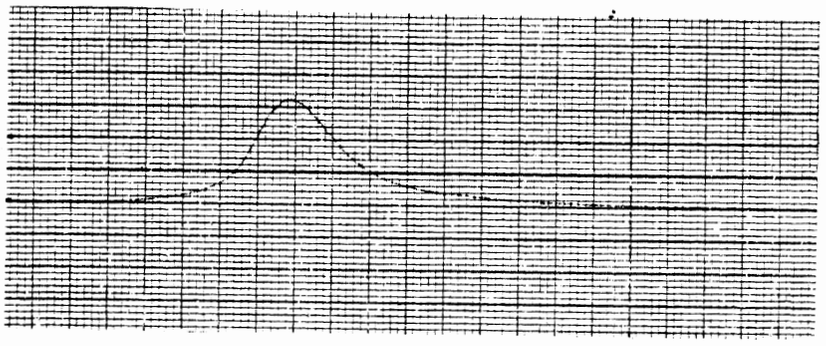
PEAK RESULTANT: 81.0

Impact Mass Deceleration

Peak: 33.9 G

Scale: 21.0 G =

Filter Class: 60

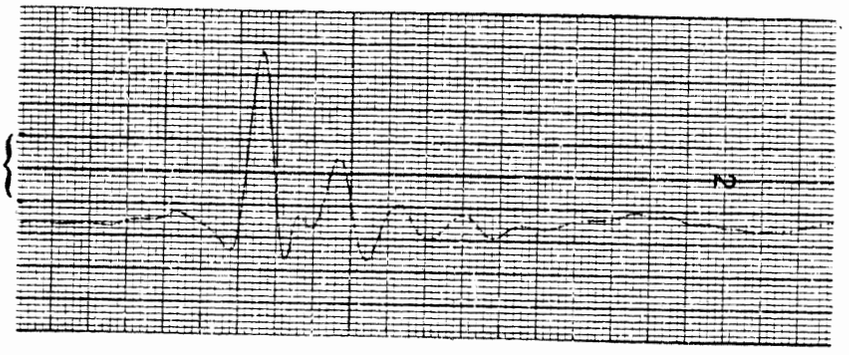


Posterior-Anterior Acceleration

Peak: 10.5 G

Scale: 3.89 G =

Filter Class: 180

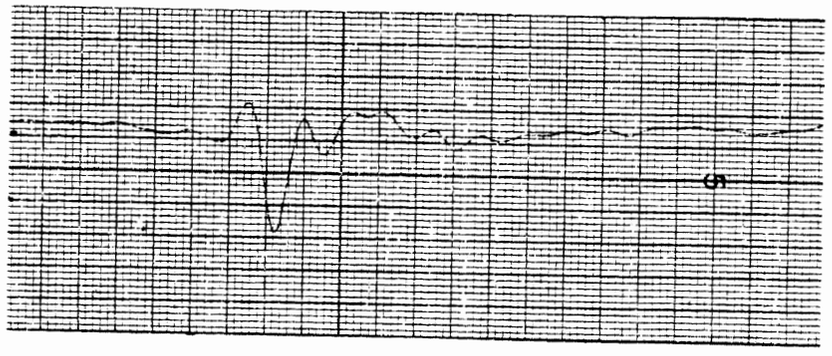


Inferior-Superior Acceleration

Peak: 6.22 G

Scale: -4.01 G =

Filter Class: 180

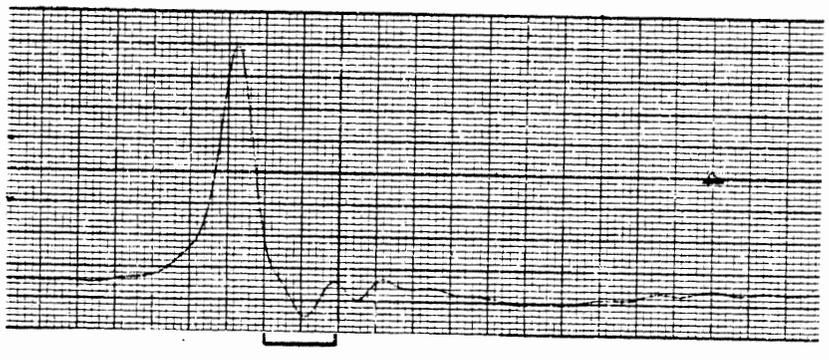


Right-Left Acceleration

Peak: 80.3G

Scale: 22.0 G =

Filter Class: 180



6.25 ms

TEST RESULTS

DUMMY NO. 871

HEAD/NECK TEST RESULTS

TEST: 80Y019 DUMMY #871
IMPACT VELOCITY: 13.28 ft/sec.

TARGET VALUE	ACTUAL VALUES ANGLE (degrees)	CHORDAL DISP. (in.)	TIME (ms.)	FRAME NUMBER
0 deg.	0.92	0.27	0.00	0
20 deg.	20.08	1.80	26.67	25
MAX ANGLE	43.11	3.28	53.33	50
MAX DISP.	43.11	3.28	53.33	50
20 deg.	19.31	0.96	86.40	81
0 deg.	-0.46	0.51	102.40	96

TEST: 80Y020 DUMMY #871
IMPACT VELOCITY: 13.25 ft/sec.

TARGET VALUE	ACTUAL VALUES ANGLE (degrees)	CHORDAL DISP. (in.)	TIME (ms.)	FRAME NUMBER
0 deg.	1.06	0.30	0.00	0
20 deg.	20.47	1.86	27.13	24
MAX ANGLE	43.95	3.29	55.39	49
MAX DISP.	43.95	3.29	55.39	49
20 deg.	20.02	1.02	75.74	67
0 deg.	0.16	0.48	91.57	81

TEST: 80Y021 DUMMY #871
IMPACT VELOCITY: 13.18 ft/sec.

TARGET VALUE	ACTUAL VALUES ANGLE (degrees)	CHORDAL DISP. (in.)	TIME (ms.)	FRAME NUMBER
0 deg.	0.28	0.31	0.00	0
20 deg.	20.13	1.76	27.17	25
MAX ANGLE	44.39	3.42	53.26	49
MAX DISP.	44.39	3.42	53.26	49
20 deg.	19.32	0.91	89.13	82
0 deg.	-0.65	0.55	104.35	96

TEST: 80Y022 DUMMY #871
IMPACT VELOCITY: 13.26 ft/sec.

TARGET VALUE	ACTUAL VALUES ANGLE (degrees)	CHORDAL DISP. (in.)	TIME (ms.)	FRAME NUMBER
0 deg.	-1.36	0.07	0.00	0
20 deg.	19.94	1.73	30.95	27
MAX ANGLE	39.91	3.23	57.32	50
MAX DISP.	39.91	3.23	57.32	50
20 deg.	19.98	1.72	88.27	77
0 deg.	-0.47	0.31	103.17	90

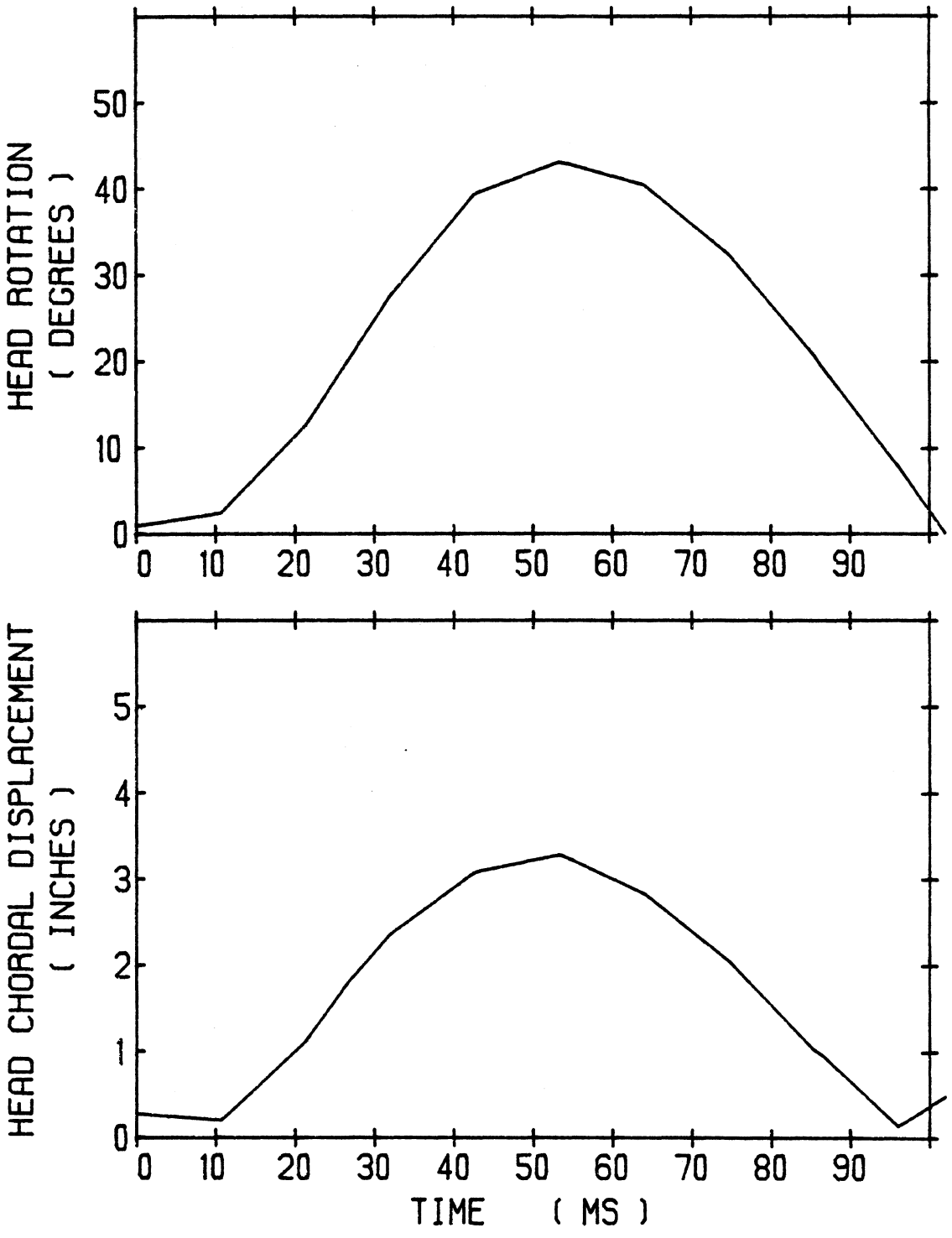
TEST: 80Y023 DUMMY #871
IMPACT VELOCITY: 13.01 ft/sec.

TARGET VALUE	ACTUAL VALUES ANGLE (degrees)	CHORDAL DISP. (in.)	TIME (ms.)	FRAME NUMBER
0 deg.	-1.06	0.08	0.00	0
20 deg.	20.38	1.81	34.30	32
MAX ANGLE	39.31	3.12	65.38	61
MAX DISP.	39.31	3.12	65.38	61
20 deg.	19.44	1.76	92.18	86
0 deg.	-0.08	0.20	107.18	100

TEST: 80Y024 DUMMY #871
IMPACT VELOCITY: 13.06 ft/sec.

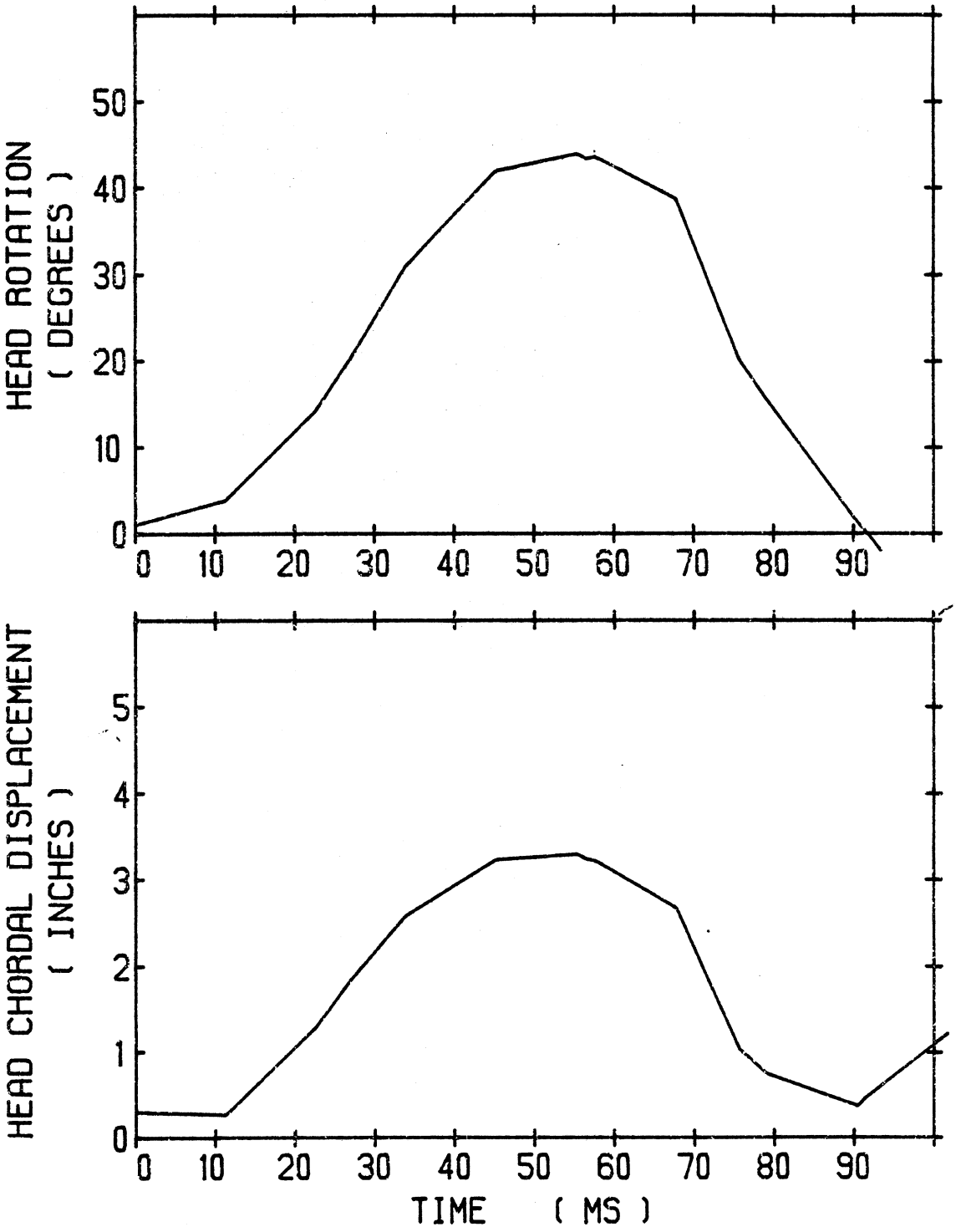
TARGET VALUE	ACTUAL VALUES ANGLE (degrees)	CHORDAL DISP. (in.)	TIME (ms.)	FRAME NUMBER
0 deg.	-1.75	0.06	0.00	0
20 deg.	20.11	1.71	35.43	31
MAX ANGLE	39.07	3.14	68.57	60
MAX DISP.	39.07	3.14	68.57	60
20 deg.	20.31	1.73	93.71	82
0 deg.	-0.50	0.17	110.86	97

80Y019



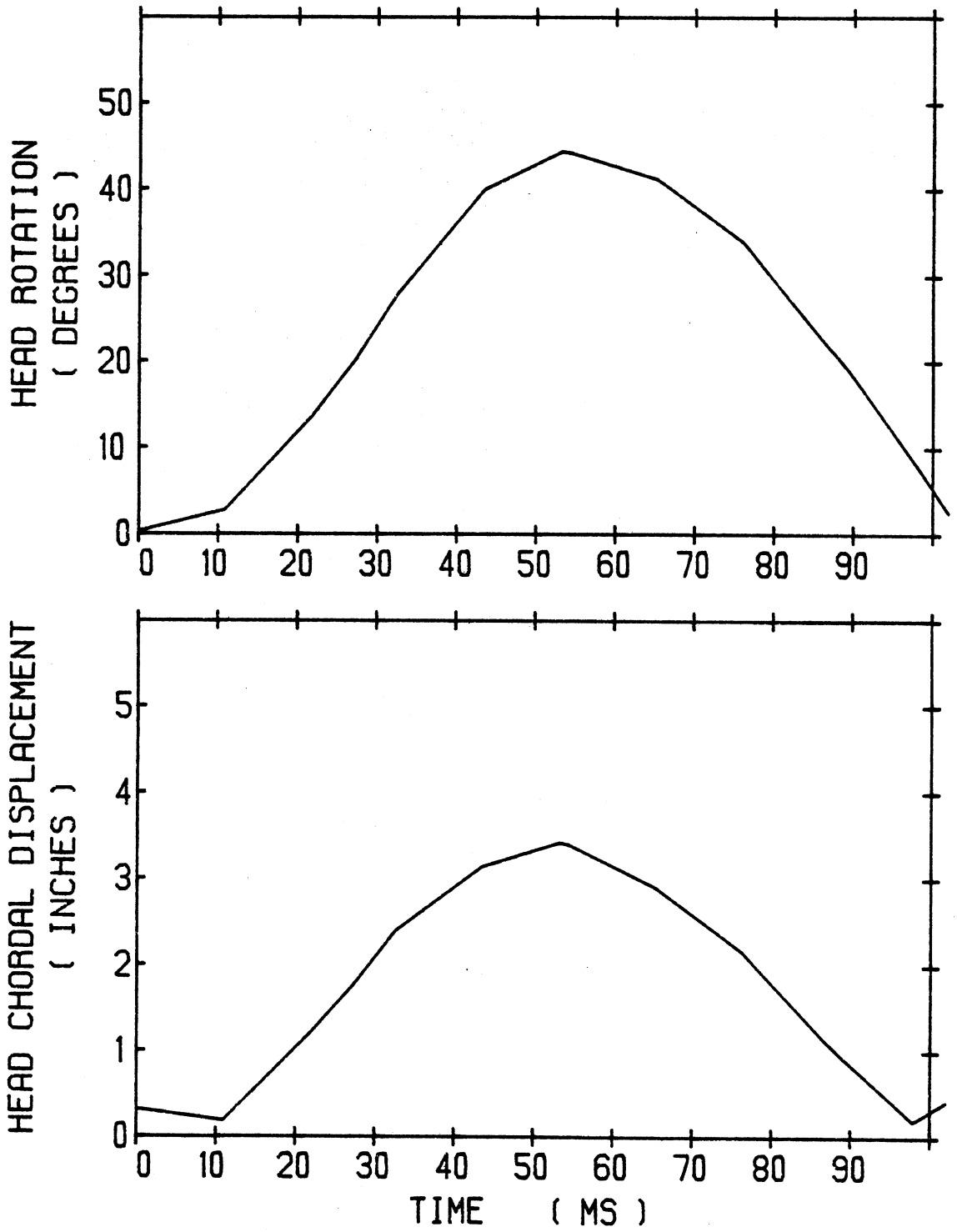
NECK PENDULUM TEST

80Y020



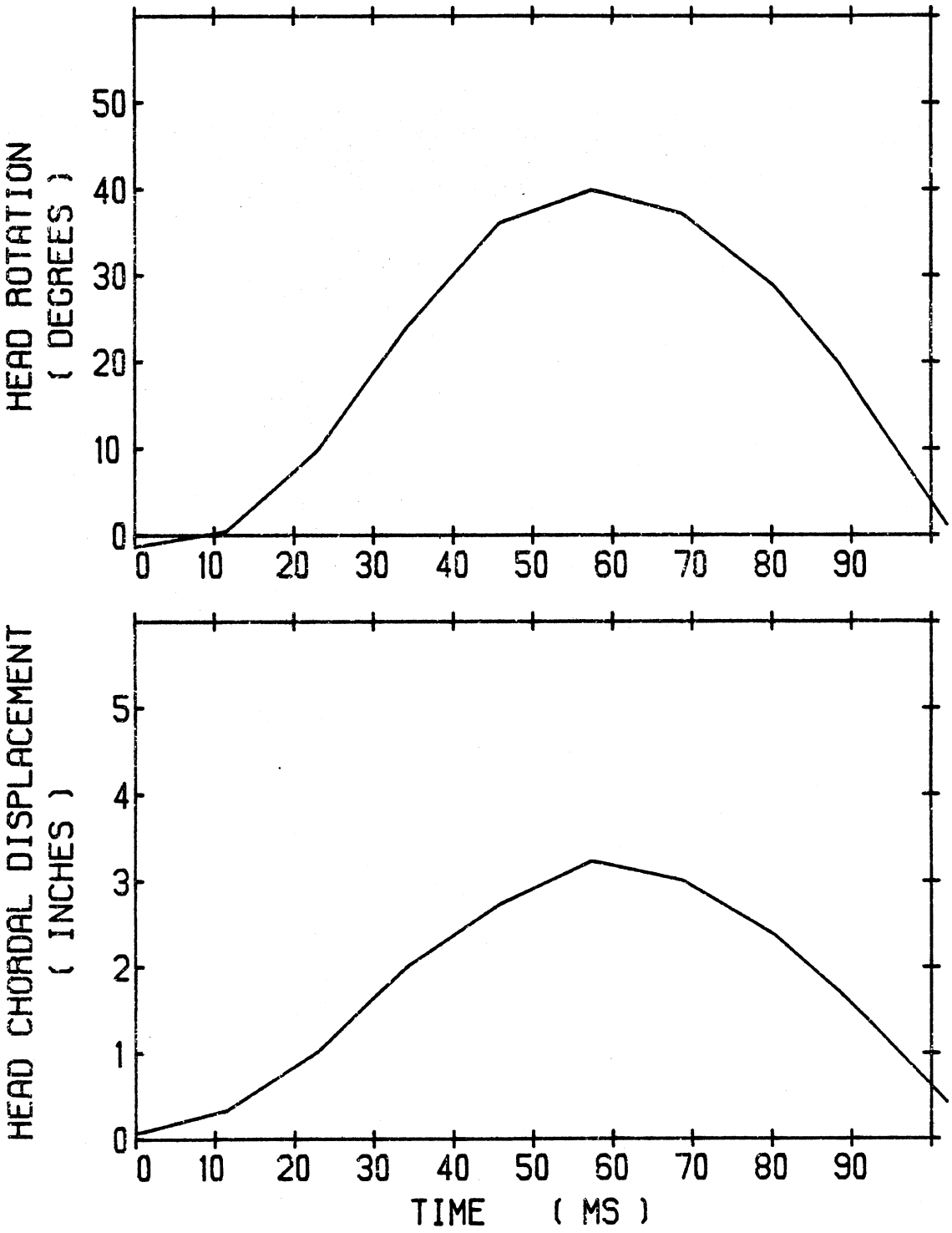
NECK PENDULUM TEST

80Y021



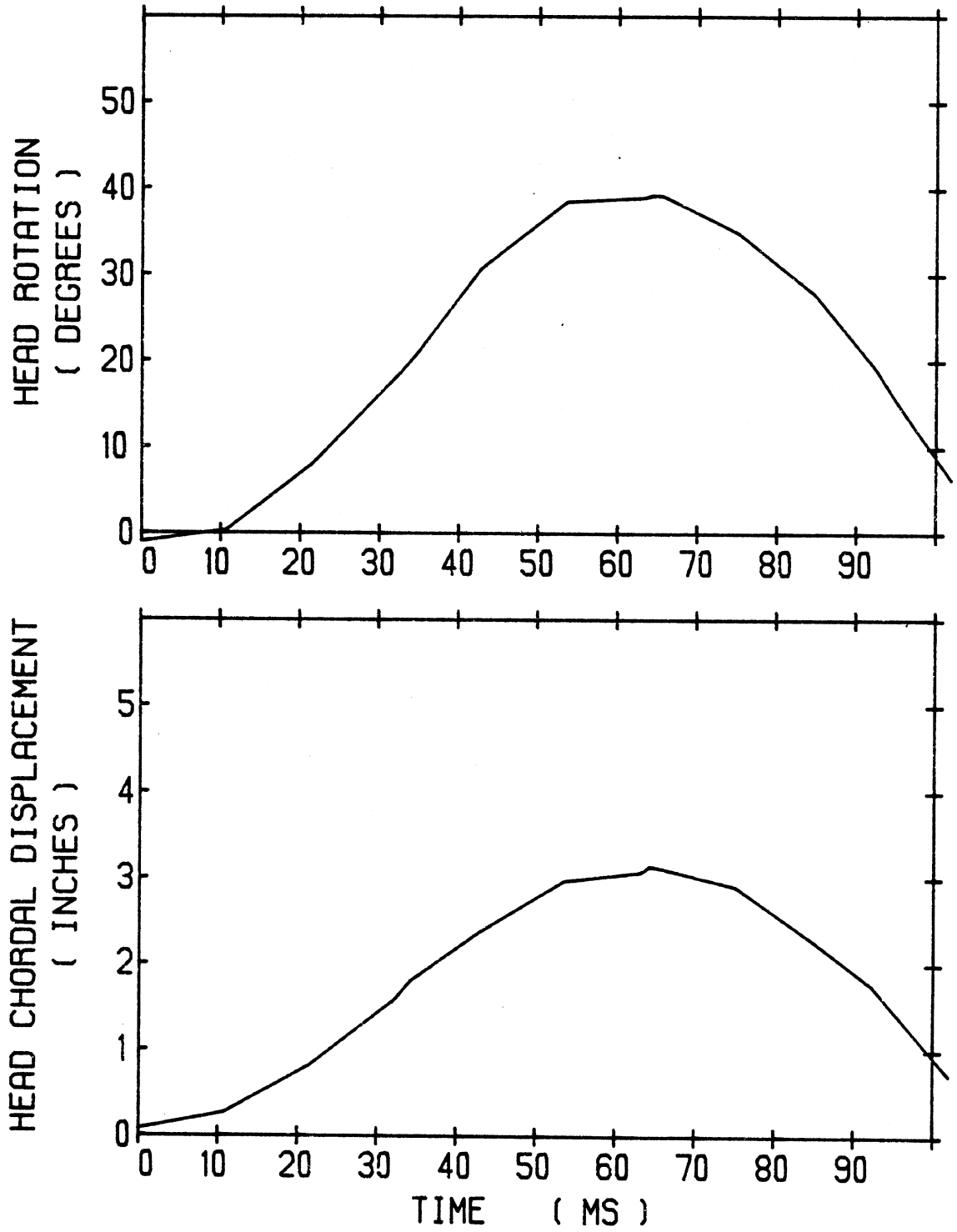
NECK PENDULUM TEST

80Y022



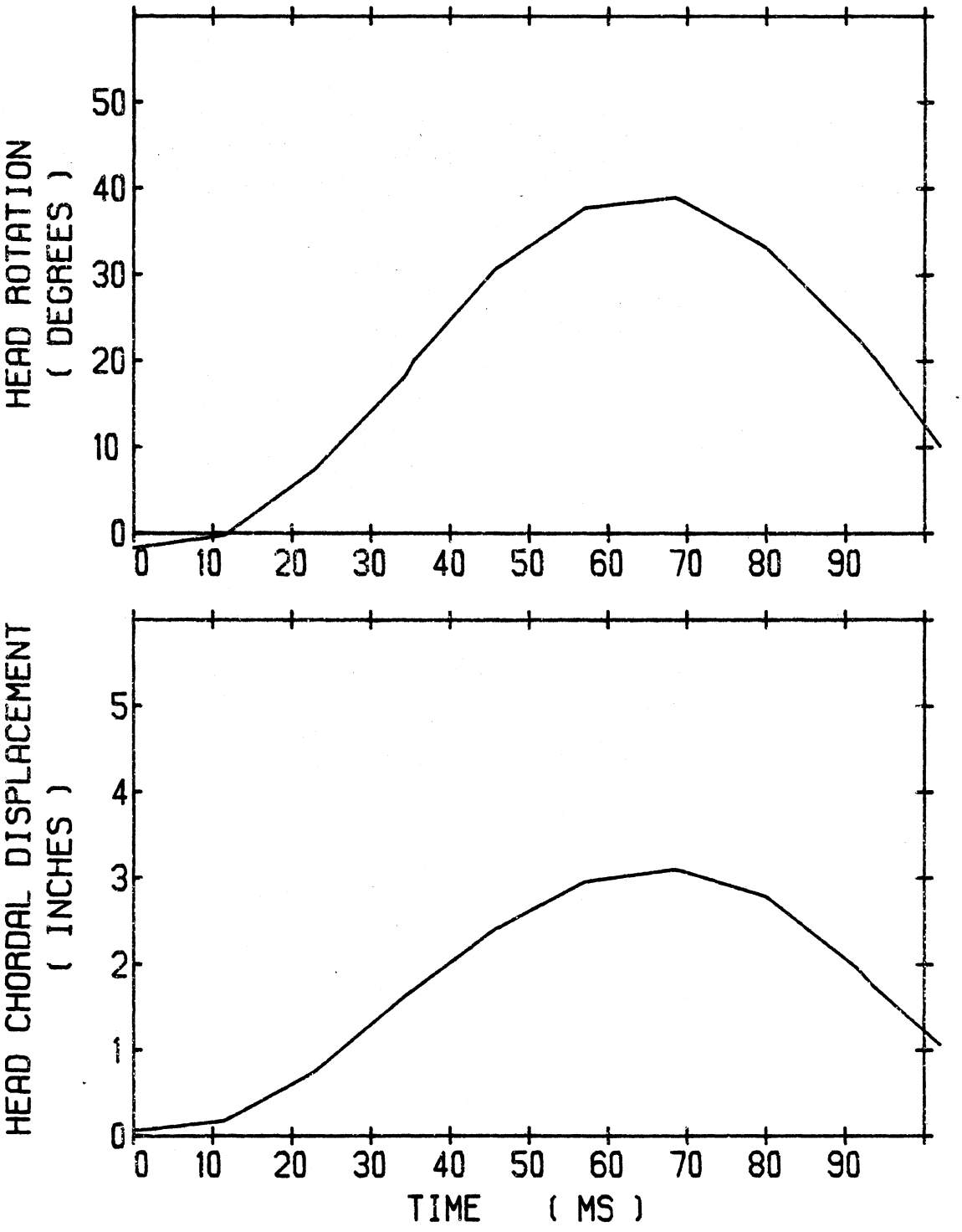
NECK PENDULUM TEST

80Y023



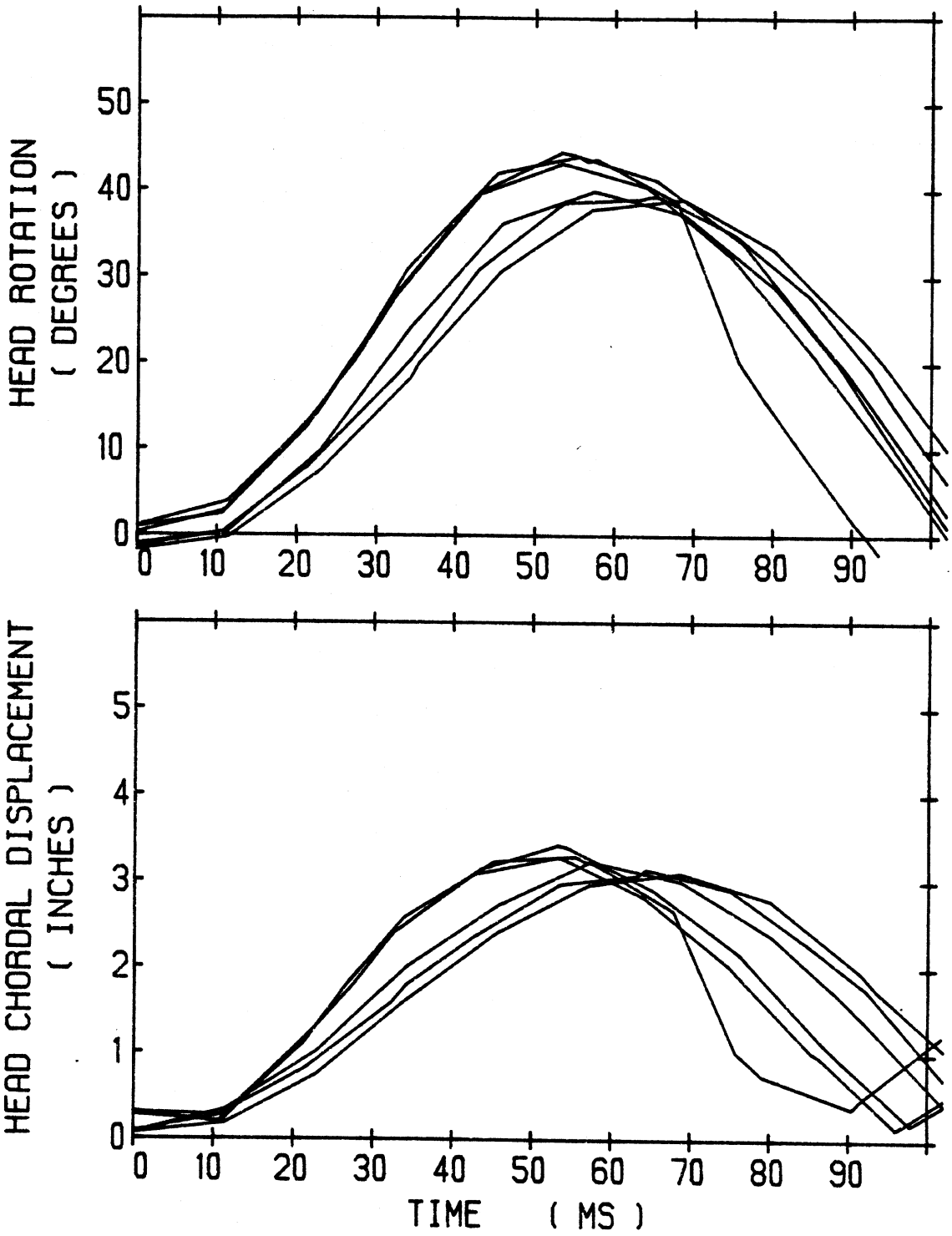
NECK PENDULUM TEST

80Y024



NECK PENDULUM TEST

ALL #871



NECK PENDULUM TEST

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y019 DUMMY NO. 871

BODY REGION HEAD/NECK SIDE L

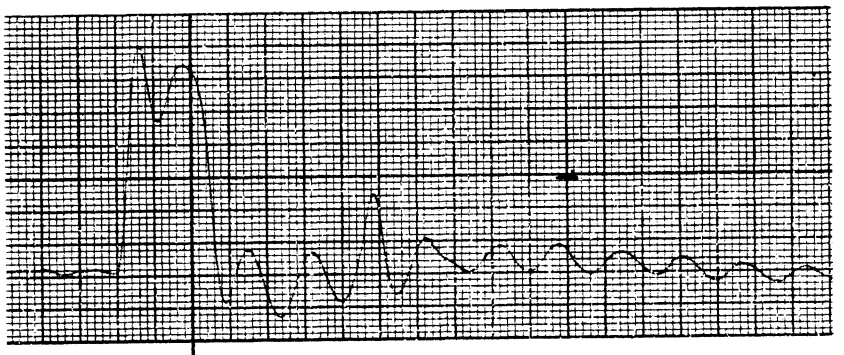
PEAK RESULTANT: 13.7 G

Impact Mass Deceleration

Peak: 18.0 G

Scale: 5.25 G =

Filter Class: 60

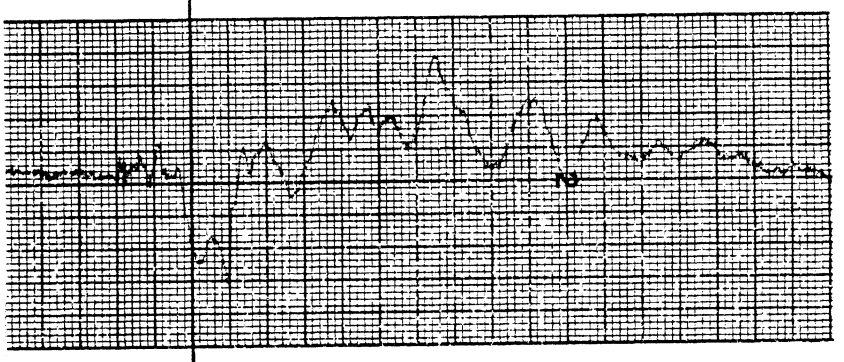


Posterior-Anterior Acceleration

Peak: 1.24 G

Scale: 0.67 G =

Filter Class: 1000

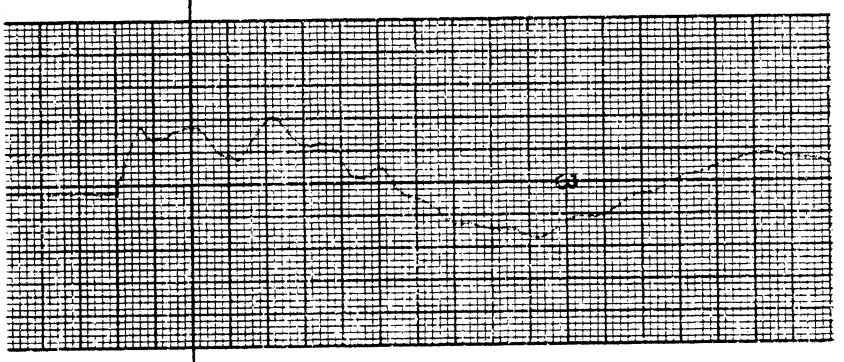


Right-Left Acceleration

Peak: 10.4 G

Scale: -9.87 G =

Filter Class: 1000

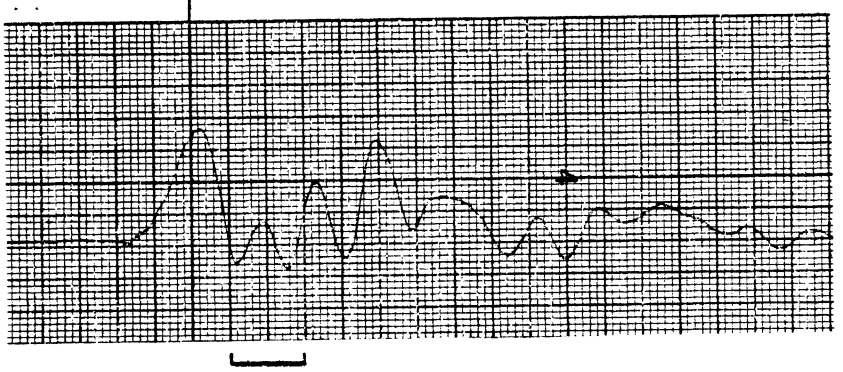


Inferior-Superior Acceleration

Peak: 8.78G

Scale: -5.06 G =

Filter Class: 1000



25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y020 DUMMY NO. 871

BODY REGION HEAD / NECK SIDE L

PEAK RESULTANT: 13.7 G

Impact Mass
Deceleration

Peak: 18.4 G

Scale: 5.25G =

Filter Class: 60

Posterior-Anterior
Acceleration

Peak: 1.23 G

Scale: 0.67 G =

Filter Class: 1000

Right-Left
Acceleration

Peak: 10.0 G

Scale: 9.87 G =

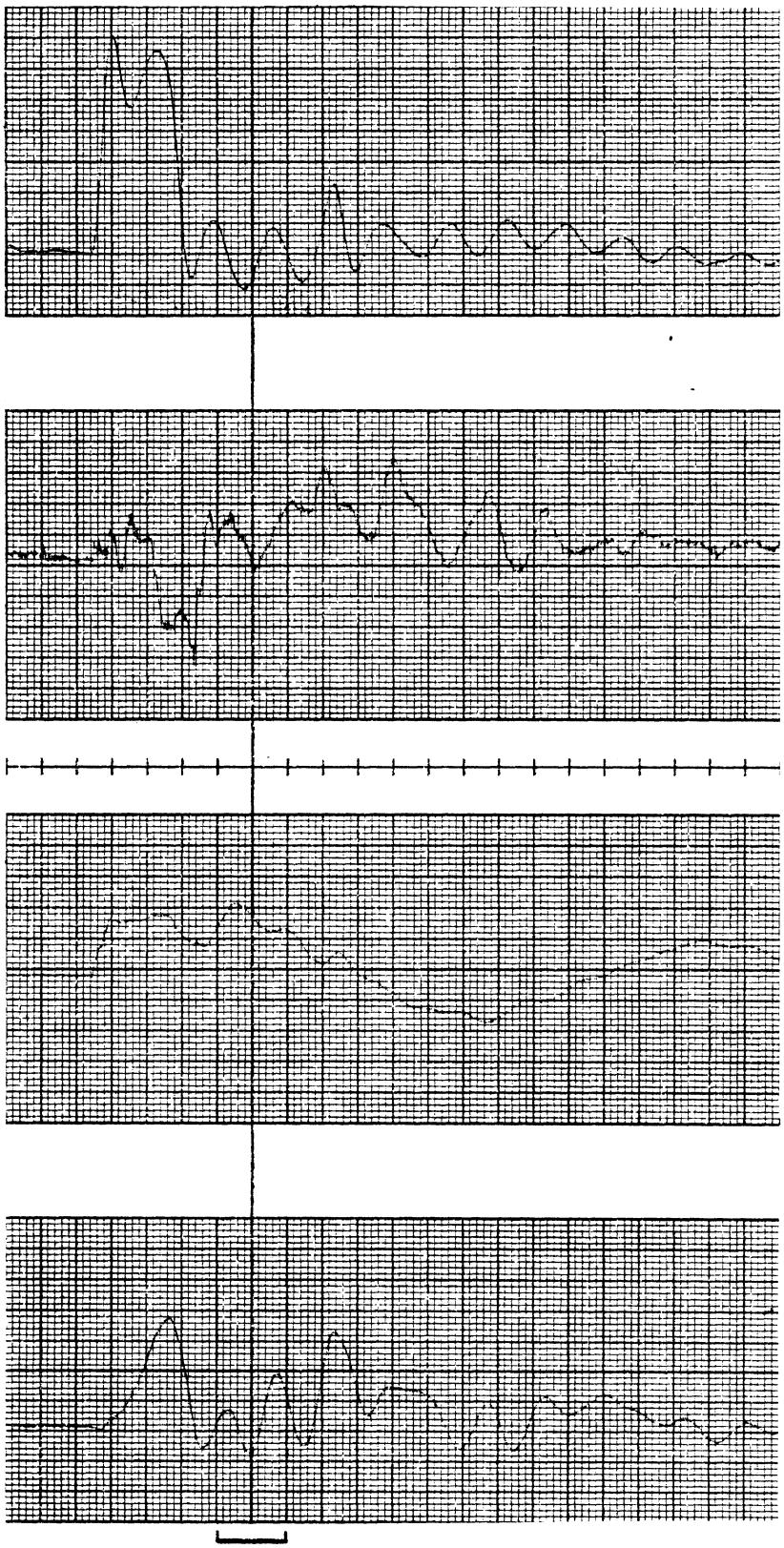
Filter Class: 1000

Inferior-Superior
Acceleration

Peak: 9.33 G

Scale: 5.06 G =

Filter Class: 1000



25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 021 DUMMY NO. 871

BODY REGION HEAD/NECK SIDE L

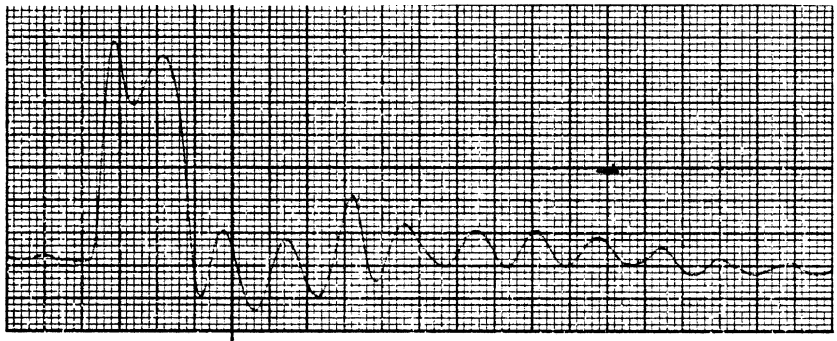
PEAK RESULTANT: 13.0 G

Impact Mass
Deceleration

Peak: 17.7 G

Scale: 5.25 G =

Filter Class: 60

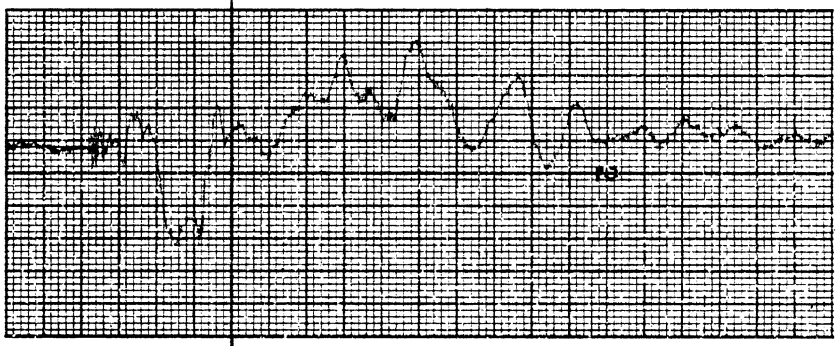


Posterior-Anterior
Acceleration

Peak: 1.02 G

Scale: 0.67 G =

Filter Class: 1000

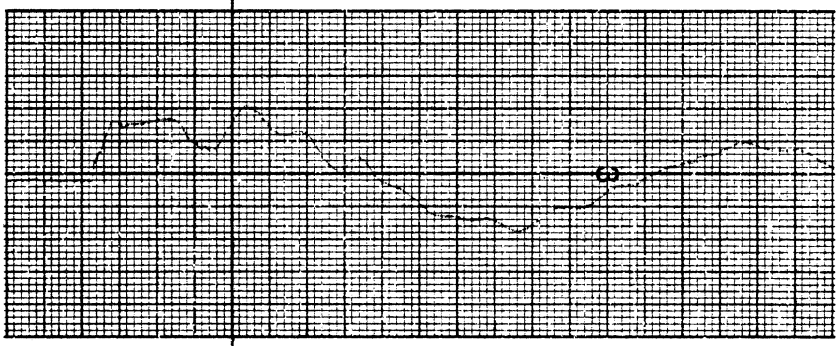


Right-Left
Acceleration

Peak: 11.8 G

Scale: 9.87 G =

Filter Class: 1000

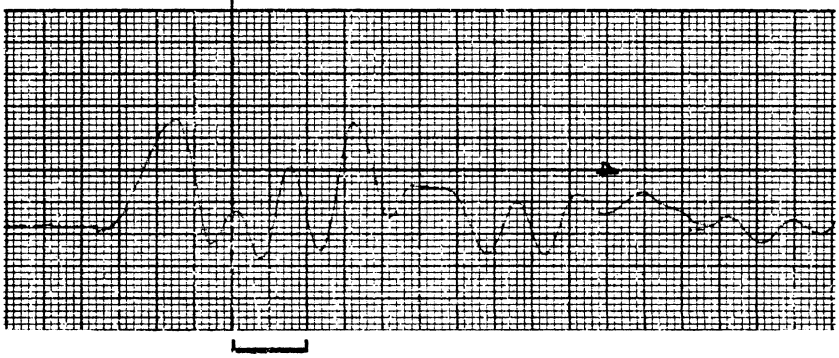


Inferior-Superior
Acceleration

Peak: 8.59 G

Scale: 5.06 G =

Filter Class: 1000



25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 022 DUMMY NO. 871

BODY REGION HEAD/NECK SIDE R

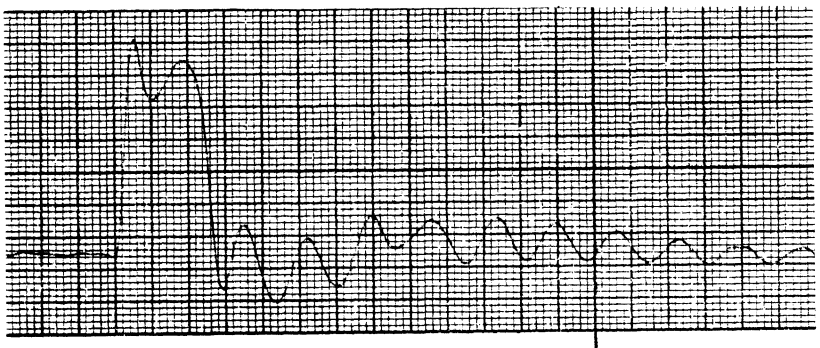
PEAK RESULTANT: 14.6 G

Impact Mass Deceleration

Peak: 17.6 G

Scale: 5.25 G =

Filter Class: 60

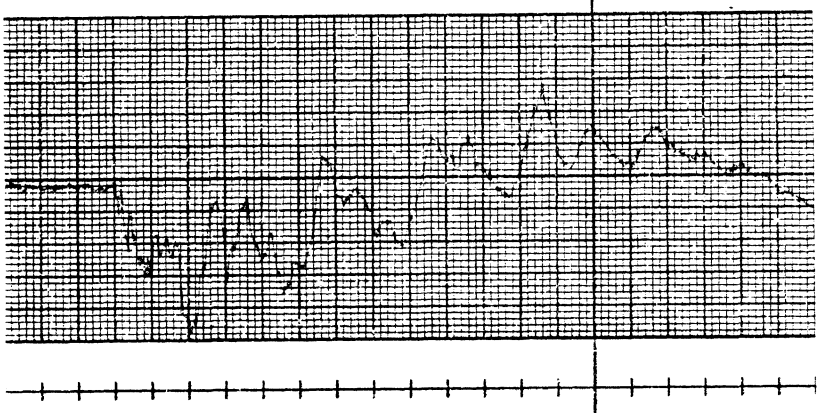


Posterior-Anterior Acceleration

Peak: 1.52 G

Scale: 0.67 G =

Filter Class: 1000

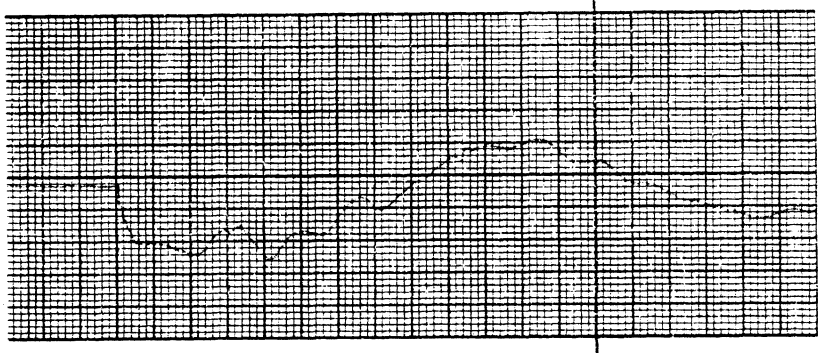


Right-Left Acceleration

Peak: 11.7 G

Scale: 9.87 G =

Filter Class: 1000

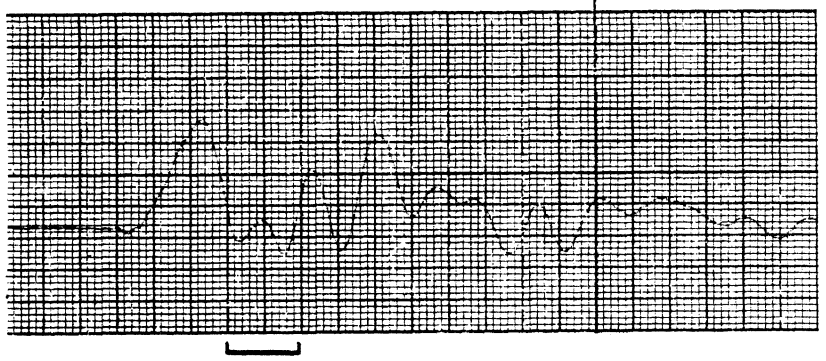


Inferior-Superior Acceleration

Peak: 9.17 G

Scale: 5.06 G =

Filter Class: 1000



25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 023 DUMMY NO. 871

BODY REGION HEAD/NECK SIDE R

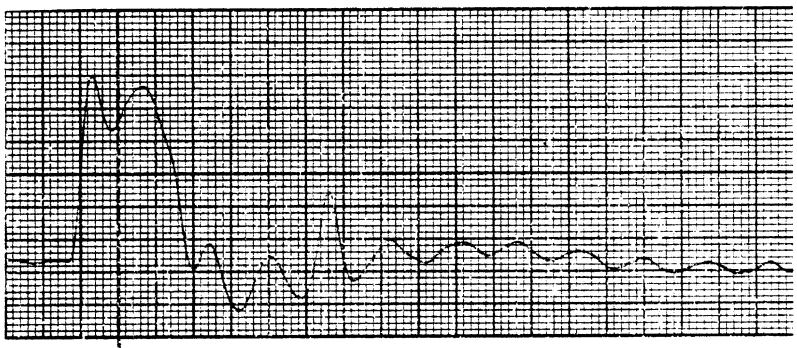
PEAK RESULTANT: 12.4 G

Impact Mass
Deceleration

Peak: 14.8 G

Scale: 5.25 G =

Filter Class: 60

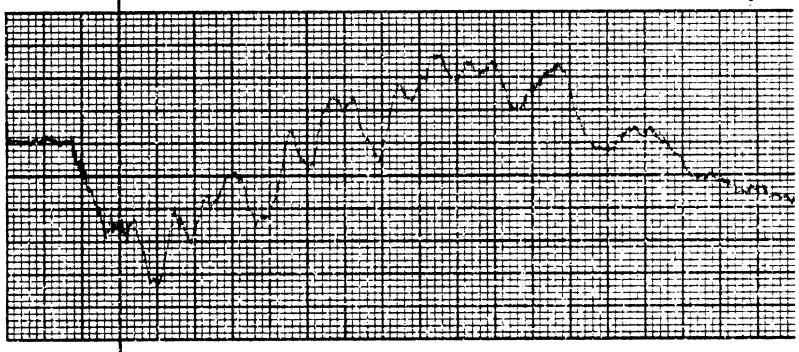


Posterior-Anterior
Acceleration

Peak: 1.49 G

Scale: 0.67 G =

Filter Class: 1000

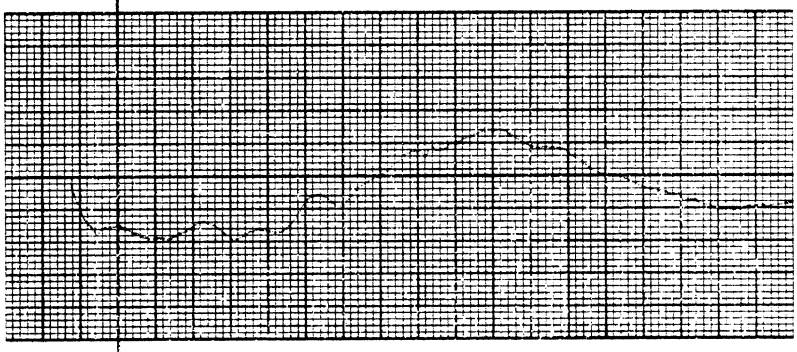


Right-Left
Acceleration

Peak: 9.84 G

Scale: 9.87 G =

Filter Class: 1000

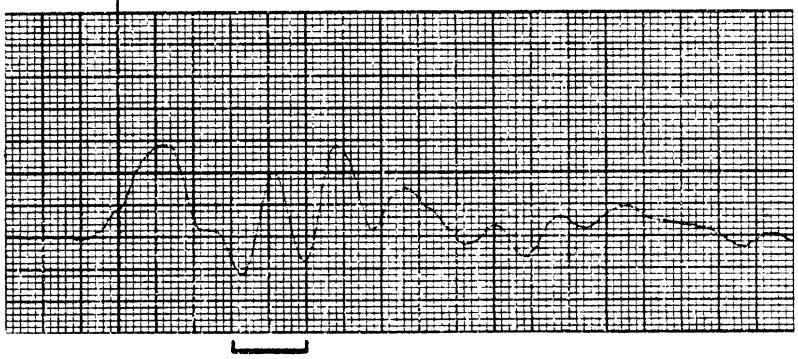


Inferior-Superior
Acceleration

Peak: 7.42 G

Scale: 5.06 G =

Filter Class: 1000



25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 024 DUMMY NO. 871

BODY REGION HEAD/NECK SIDE R

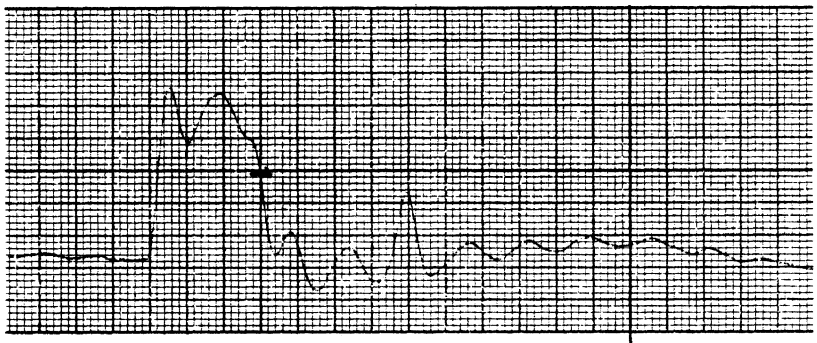
PEAK RESULTANT: 12.0 G

Impact Mass
Deceleration

Peak: 14.1 G

Scale: 5.25 G =

Filter Class: 60

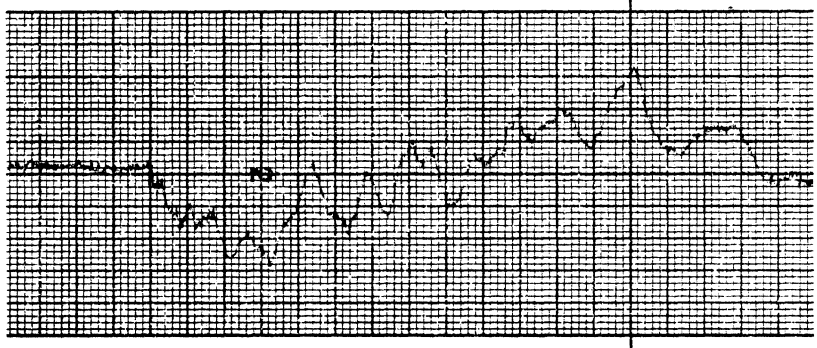


Posterior-Anterior
Acceleration

Peak: 1.06 G

Scale: 0.67 G =

Filter Class: 1000

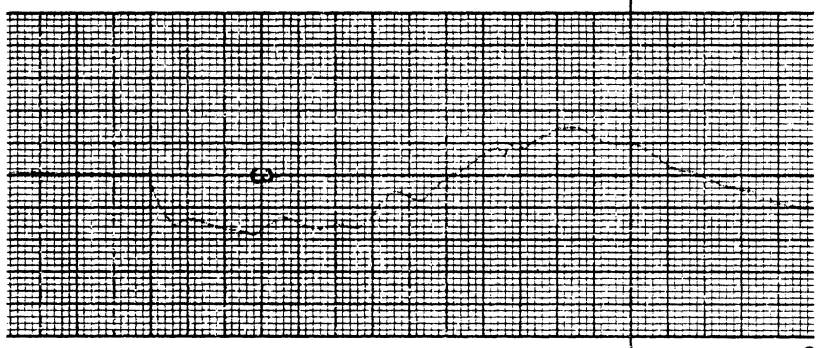


Right-Left
Acceleration

Peak: 9.49 G

Scale: 9.87 G =

Filter Class: 1000

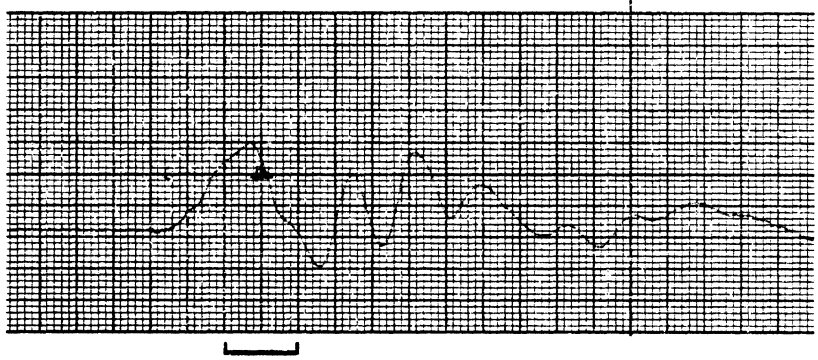


Inferior-Superior
Acceleration

Peak: 7.26 G

Scale: 5.06 G =

Filter Class: 1000



25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 038 DUMMY NO. 871

BODY REGION HEAD SIDE L

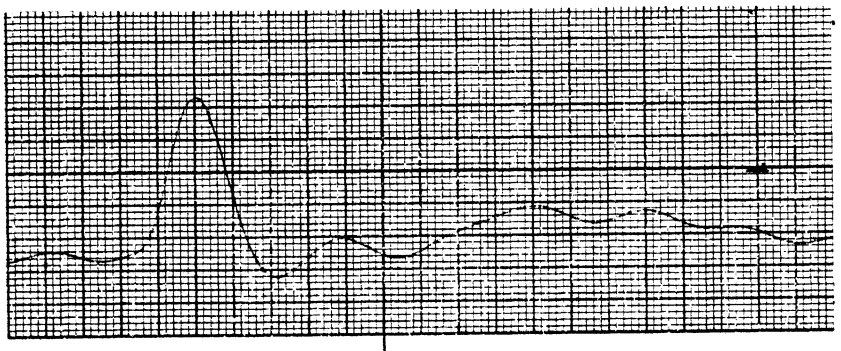
PEAK RESULTANT: 155. G

Impact Mass Deceleration

Peak: 11.0 G

Scale: 4.49 G =

Filter Class: 60

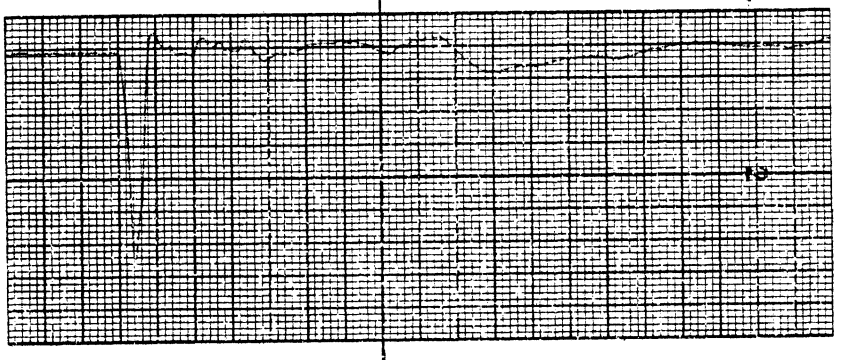


Posterior-Anterior Acceleration

Peak: 10.5 G

Scale: 3.30 G =

Filter Class: 1000

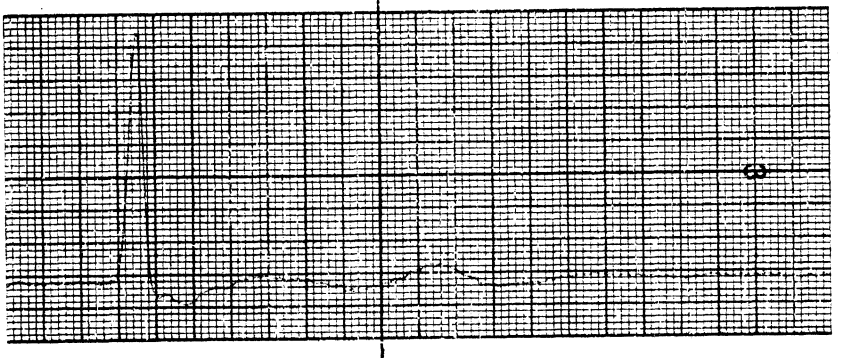


Right-Left Acceleration

Peak: 154. G

Scale: 34.7 G =

Filter Class: 1000

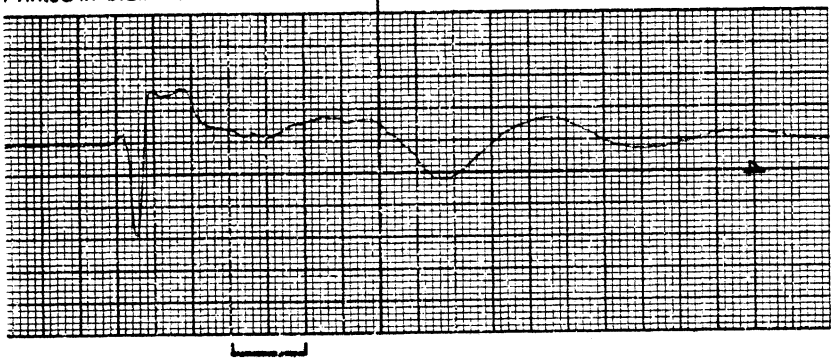


Inferior-Superior Acceleration

Peak: 7.47 G

Scale: 5.05 G =

Filter Class: 1000



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6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 039 DUMMY NO. 871

BODY REGION HEAD SIDE L

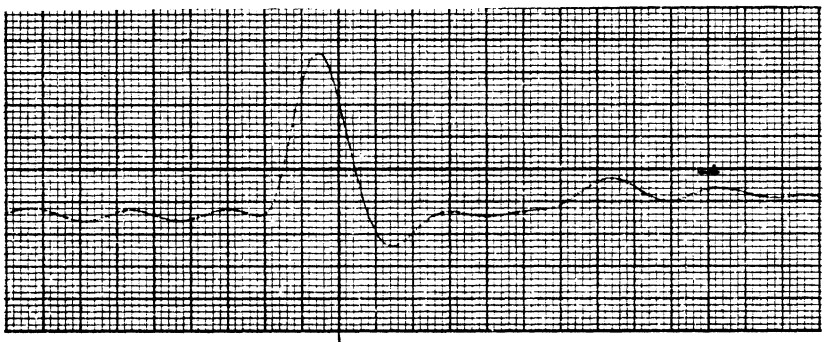
PEAK RESULTANT: 161. G

Impact Mass
Deceleration

Peak: 11.4 G

Scale: 4.49 G =

Filter Class: 60



Posterior-Anterior
Acceleration

Peak: 11.5 G

Scale: 2.30 G =

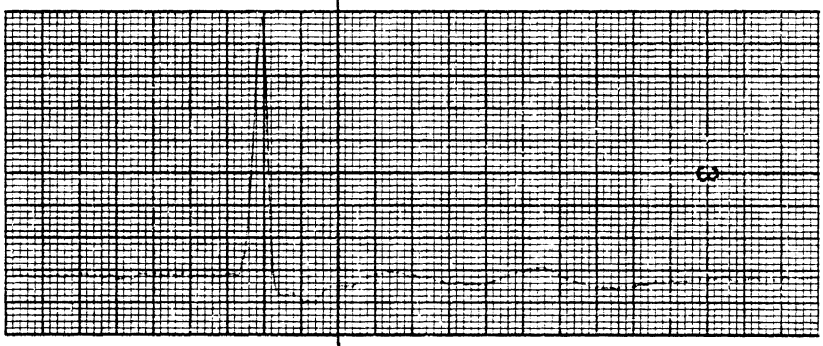
Filter Class: 1000

Right-Left
Acceleration

Peak: 160. G

Scale: 39.7 G =

Filter Class: 1000



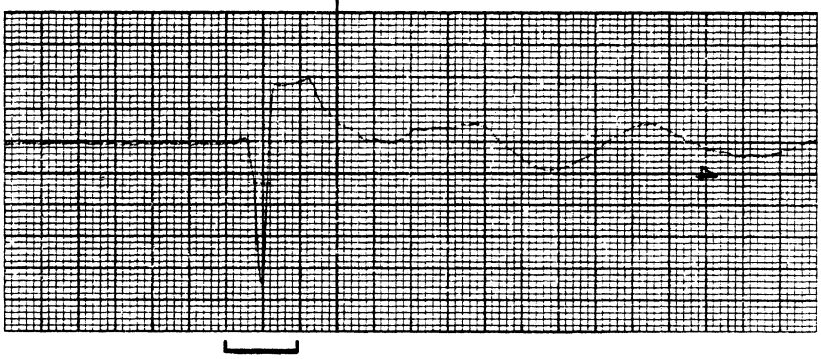
ACCUCHART

Inferior-Superior
Acceleration

Peak: 11.5 G

Scale: 5.05 G =

Filter Class: 1000



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 040 DUMMY NO. 871

BODY REGION HEAD SIDE L

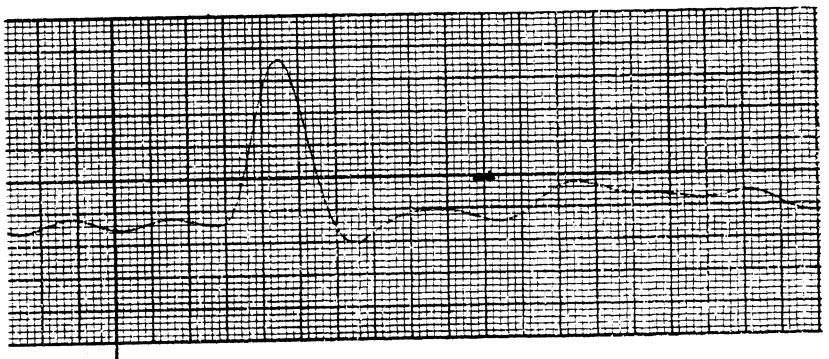
PEAK RESULTANT: 175. G

Impact Mass Deceleration

Peak: 11.5 G

Scale: 4.49 G =

Filter Class: 60

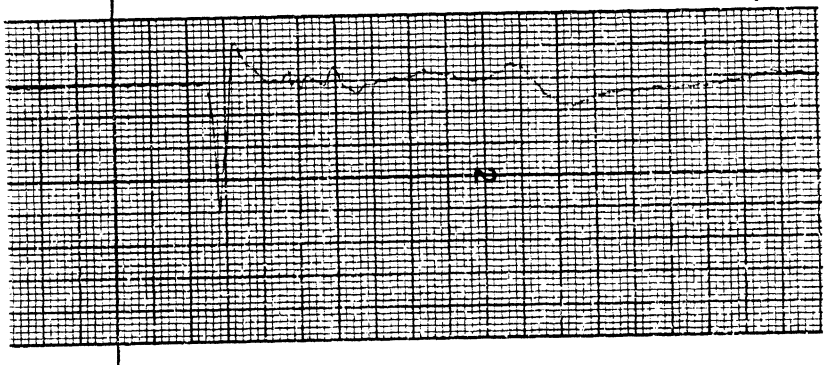


Posterior-Anterior Acceleration

Peak: 6.55 G

Scale: 3.30 G =

Filter Class: 1000

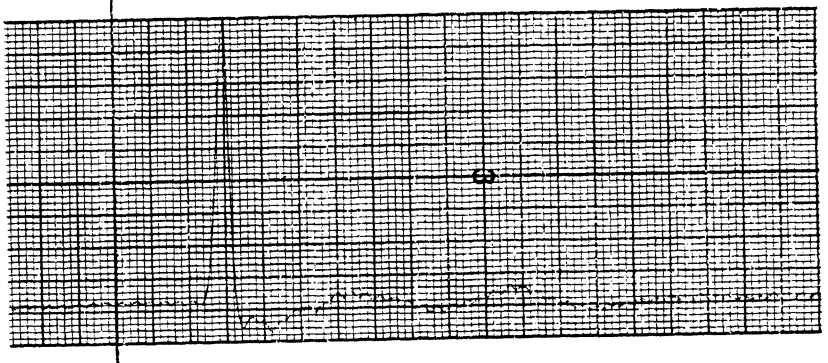


Right-Left Acceleration

Peak: 174. G

Scale: 39.7 G =

Filter Class: 1000

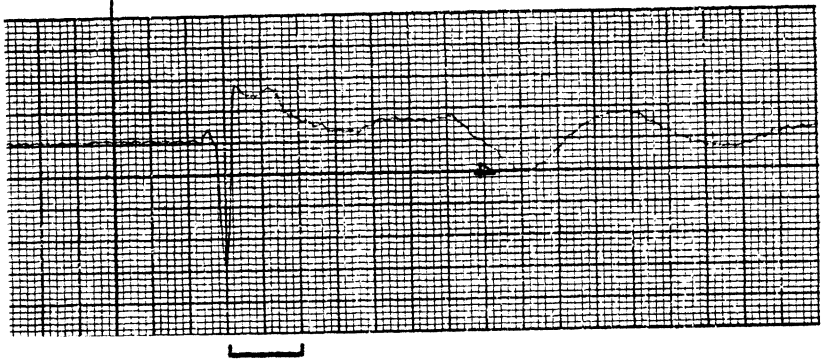


Inferior-Superior Acceleration

Peak: 10.1 G

Scale: 5.05 G =

Filter Class: 1000



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 041 DUMMY NO. 871

BODY REGION HEAD SIDE R

PEAK RESULTANT: 224. G

Impact Mass Deceleration

Peak: 11.5 G

Scale: 4.49 G =

Filter Class: 60

Posterior-Anterior Acceleration

Peak: 7.08 G

Scale: 3.30 G =

Filter Class: 1000

Right-Left Acceleration

Peak: 224 G

Scale: 99.1 G =

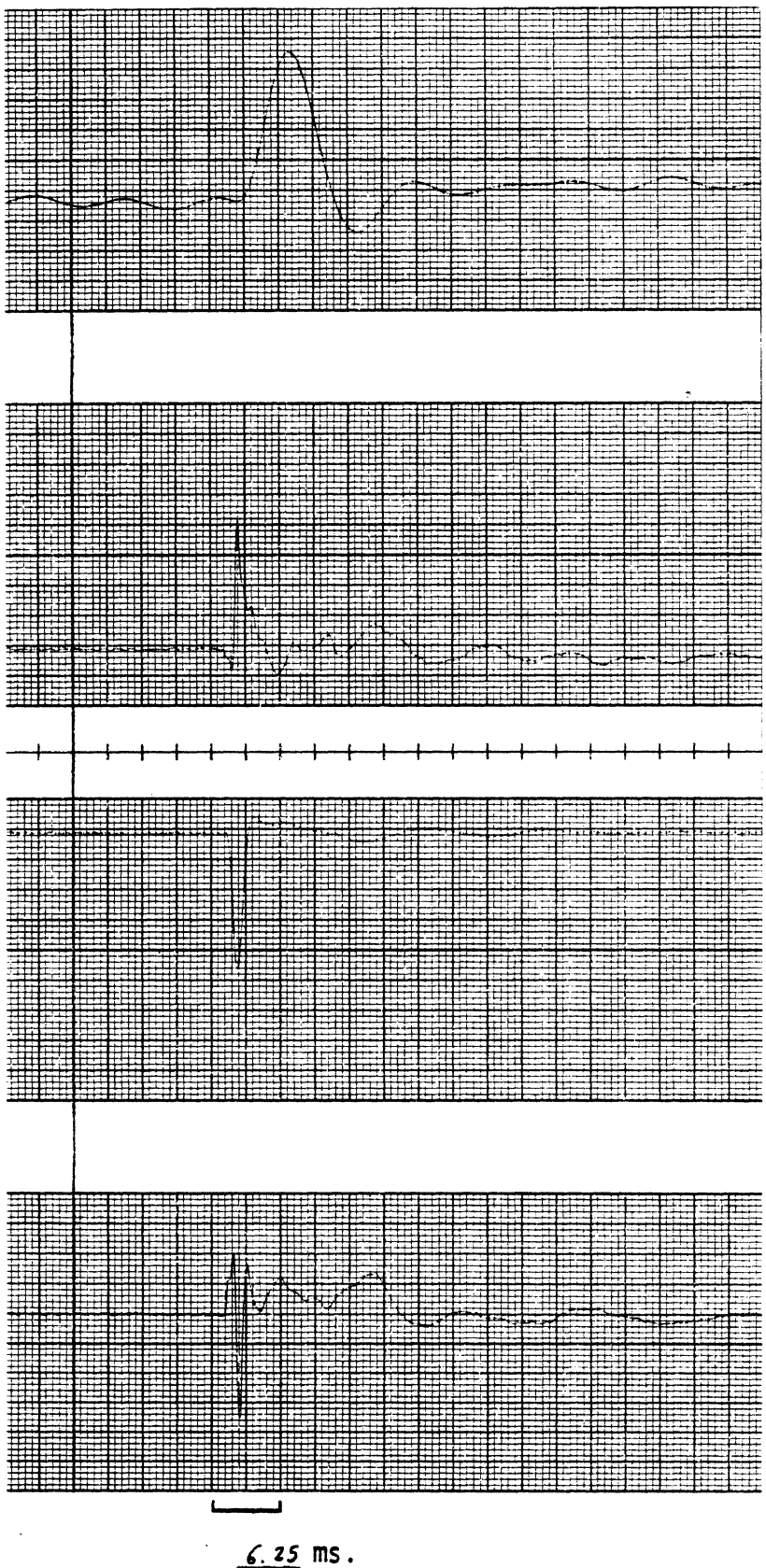
Filter Class: 1000

Inferior-Superior Acceleration

Peak: 9.01 G

Scale: 5.05 G =

Filter Class: 1000



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 042 DUMMY NO. 871

BODY REGION HEAD SIDE R

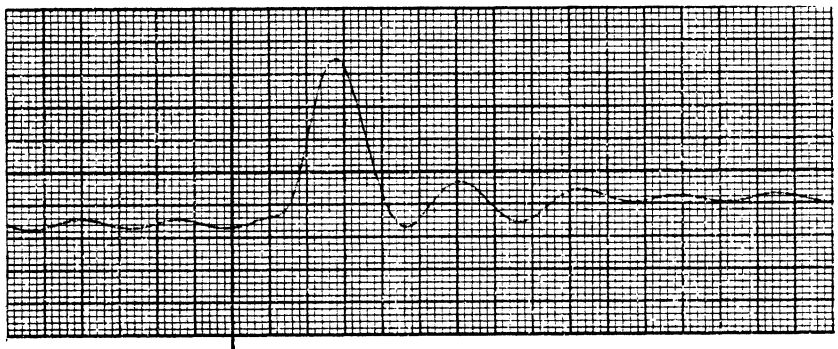
PEAK RESULTANT: 265. G

Impact Mass
Deceleration

Peak: 11.5 G

Scale: 4.44 G =

Filter Class: 60

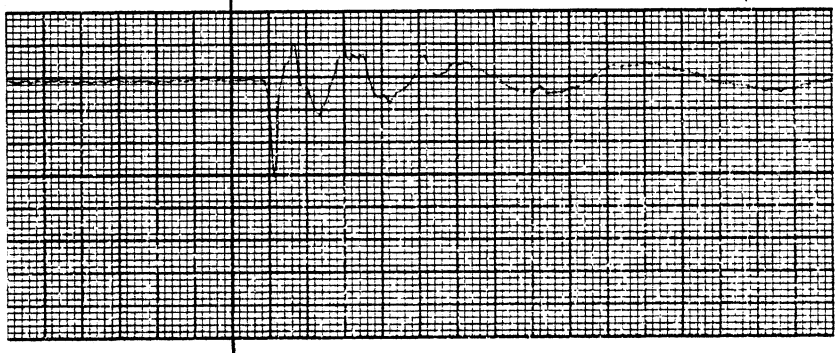


Posterior-Anterior
Acceleration

Peak: 5.15 G

Scale: 3.30 G =

Filter Class: 1000

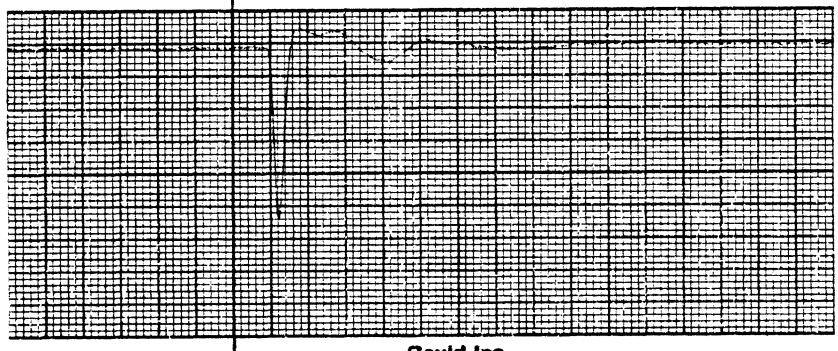


Right-Left
Acceleration

Peak: 264. G

Scale: 99.1 G =

Filter Class: 1000



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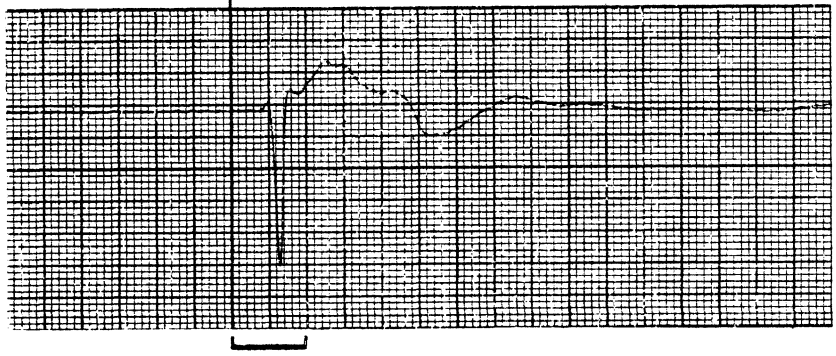
Inferior-Superior
Acceleration

Peak: 24.7 G

Scale: 10.1 G =

Filter Class: 1000



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 043 DUMMY NO. 871

BODY REGION HEAD SIDE R

PEAK RESULTANT: 257. G

Impact Mass Deceleration

Peak: 11.5 G

Scale: 4.49 G =

Filter Class: 60

Posterior-Anterior Acceleration

Peak: 4.96 G

Scale: 1.32 G =

Filter Class: 1000

Right-Left Acceleration

Peak: 257. G

Scale: 99.1 G =

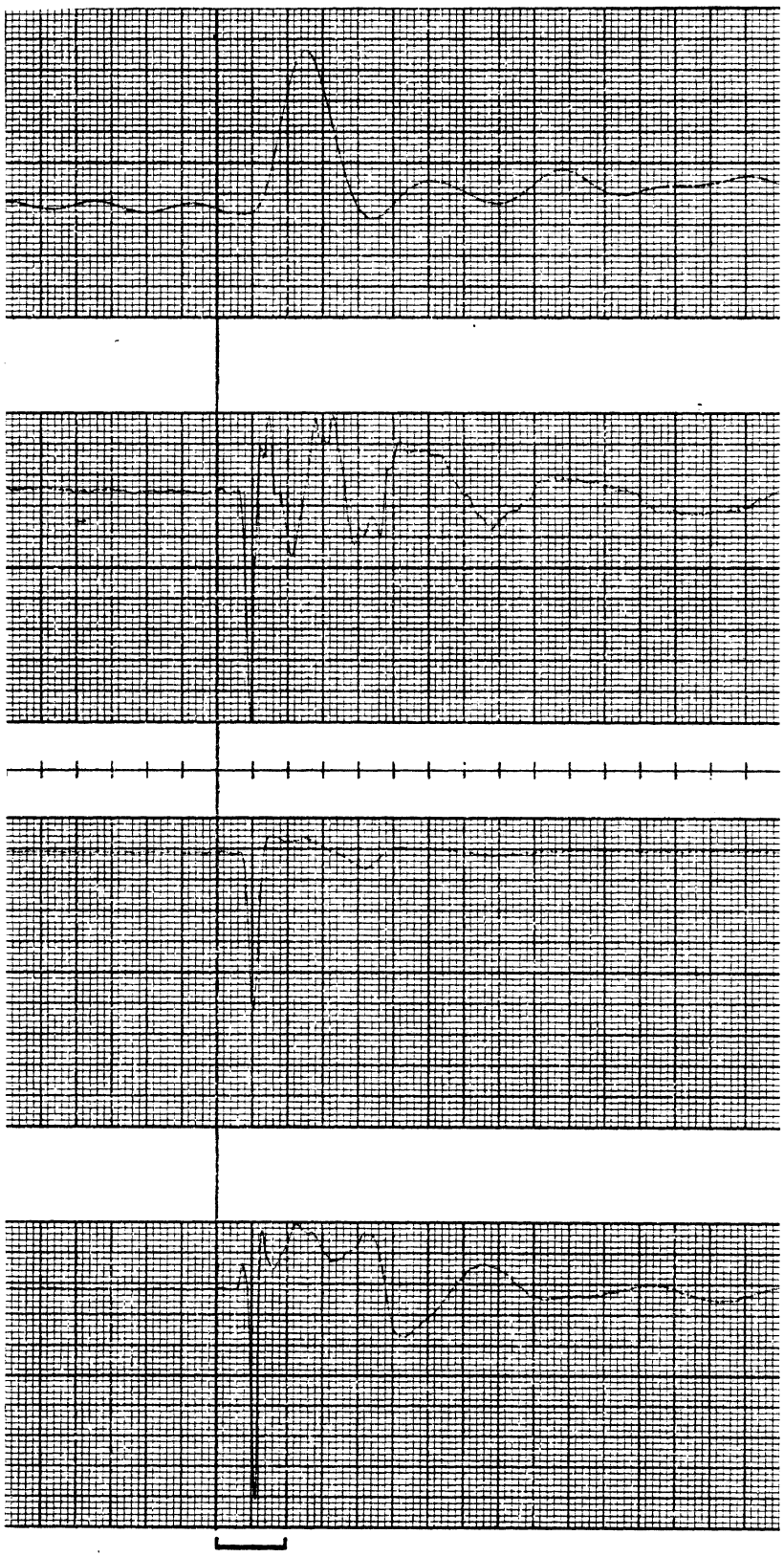
Filter Class: 1000

Inferior-Superior Acceleration

Peak: 17.5 G

Scale: 5.05 G =

Filter Class: 1000



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 056 DUMMY NO. 871

BODY REGION PELVIS SIDE L

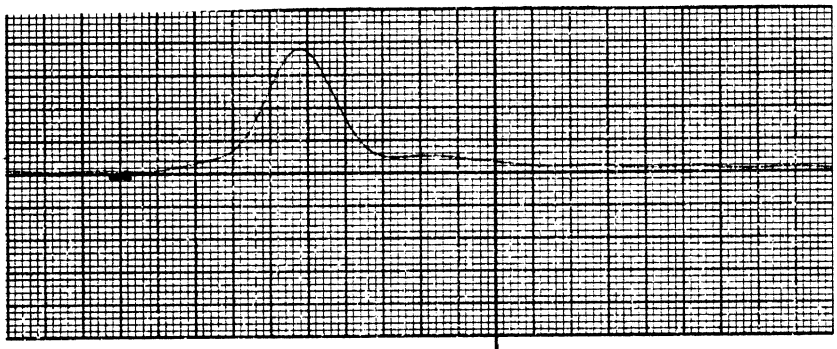
PEAK RESULTANT: 71.5 G

Impact Mass Deceleration

Peak: 42.5 G

Scale: 22.3 G =

Filter Class: 60

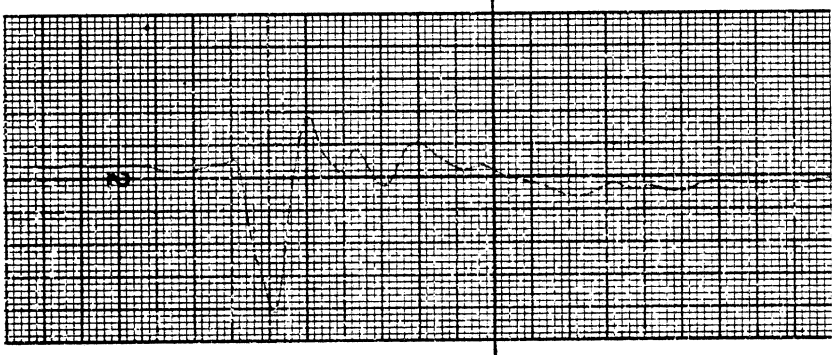


Posterior-Anterior Acceleration

Peak: 7.50 G

Scale: 3.30 G =

Filter Class: 180

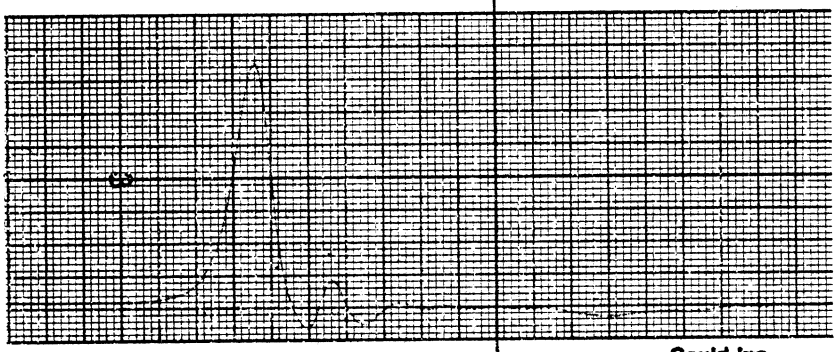


Right-Left Acceleration

Peak: 70.9 G

Scale: 19.3 G =

Filter Class: 180



ACCUCHART

Gould Inc.

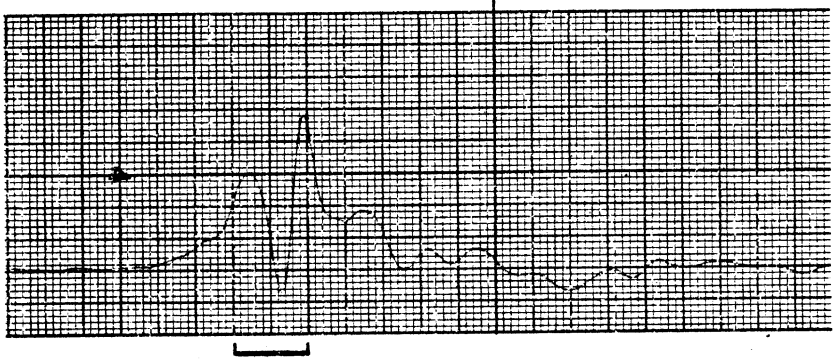
Cleveland, Ohio

Inferior-Superior Acceleration

Peak: 6.06 G

Scale: 2.51 G =

Filter Class: 180



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 057 DUMMY NO. 871

BODY REGION PELVIS SIDE L

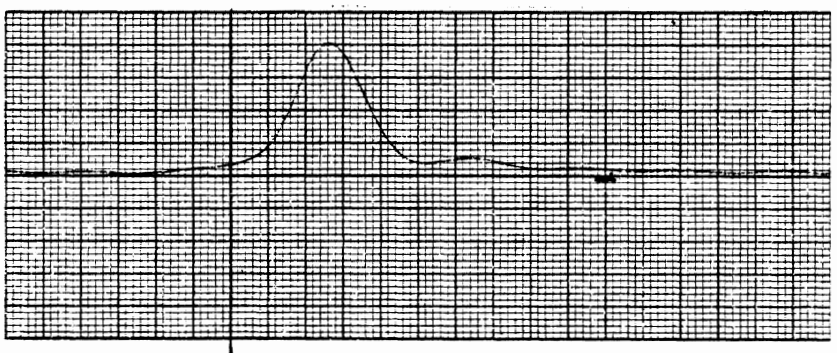
PEAK RESULTANT: 84.5 G

Impact Mass Deceleration

Peak: 44.5 G

Scale: 22.3 G =

Filter Class: 60

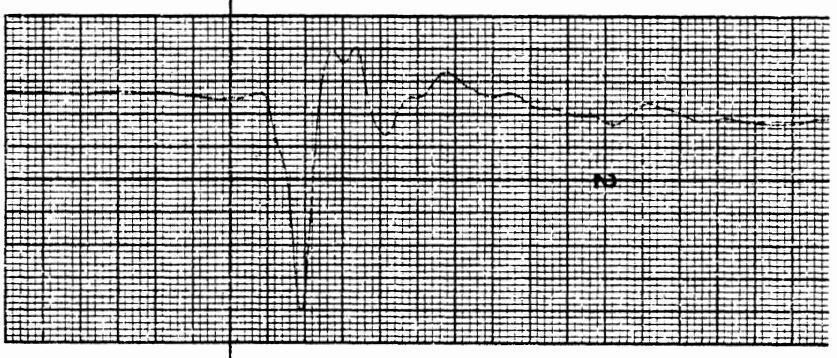


Posterior-Anterior Acceleration

Peak: 11.1 G

Scale: 3.30 G =

Filter Class: 180

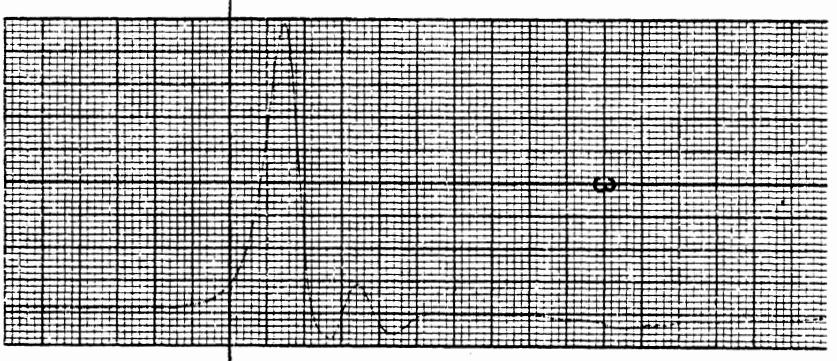


Right-Left Acceleration

Peak: 83.7 G

Scale: 19.3 G =

Filter Class: 180

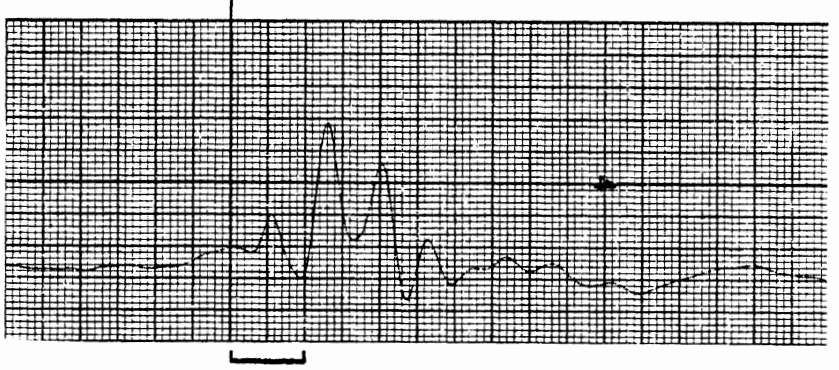


Inferior-Superior Acceleration

Peak: 5.74 G

Scale: 2.51 G =

Filter Class: 180



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 058 DUMMY NO. 871

BODY REGION PELVIS SIDE L

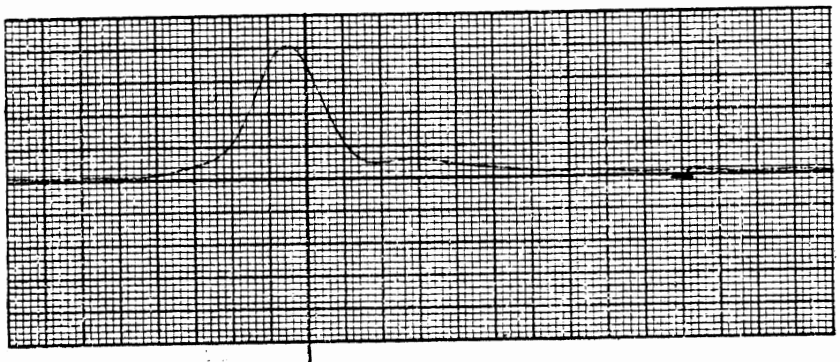
PEAK RESULTANT: 83.6 G

Impact Mass Deceleration

Peak: 45.4 G

Scale: 22.3 G =

Filter Class: 60

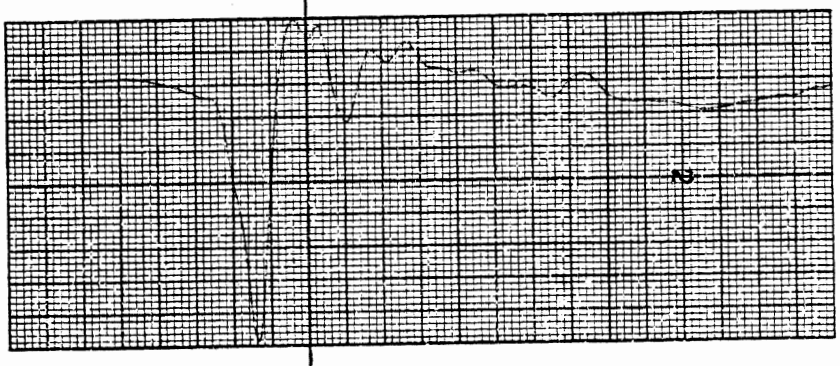


Posterior-Anterior Acceleration

Peak: 13.4 G

Scale: 3.30 G =

Filter Class: 180

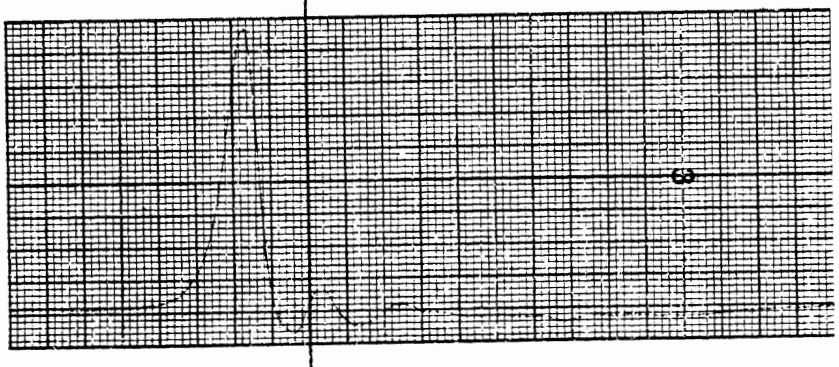


Right-Left Acceleration

Peak: 82.4 G

Scale: 19.3 G =

Filter Class: 180

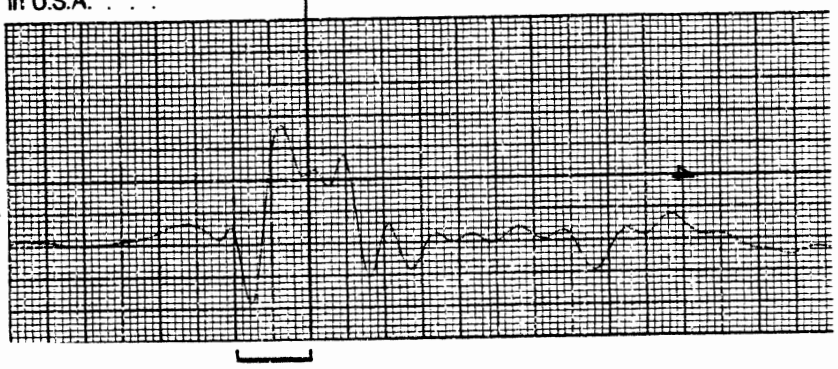


Inferior-Superior Acceleration

Peak: 4.61 G

Scale: 2.51 G =

Filter Class: 180



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 059 DUMMY NO. 871

BODY REGION PELVIS SIDE R

PEAK RESULTANT: 66.7 G

Impact Mass Deceleration

Peak: 41.9 G

Scale: 21.8 G =

Filter Class: 60

Posterior-Anterior Acceleration

Peak: 6.21 G

Scale: 3.30 G =

Filter Class: 180

Right-Left Acceleration

Peak: 66.3 G

Scale: 19.1 G =

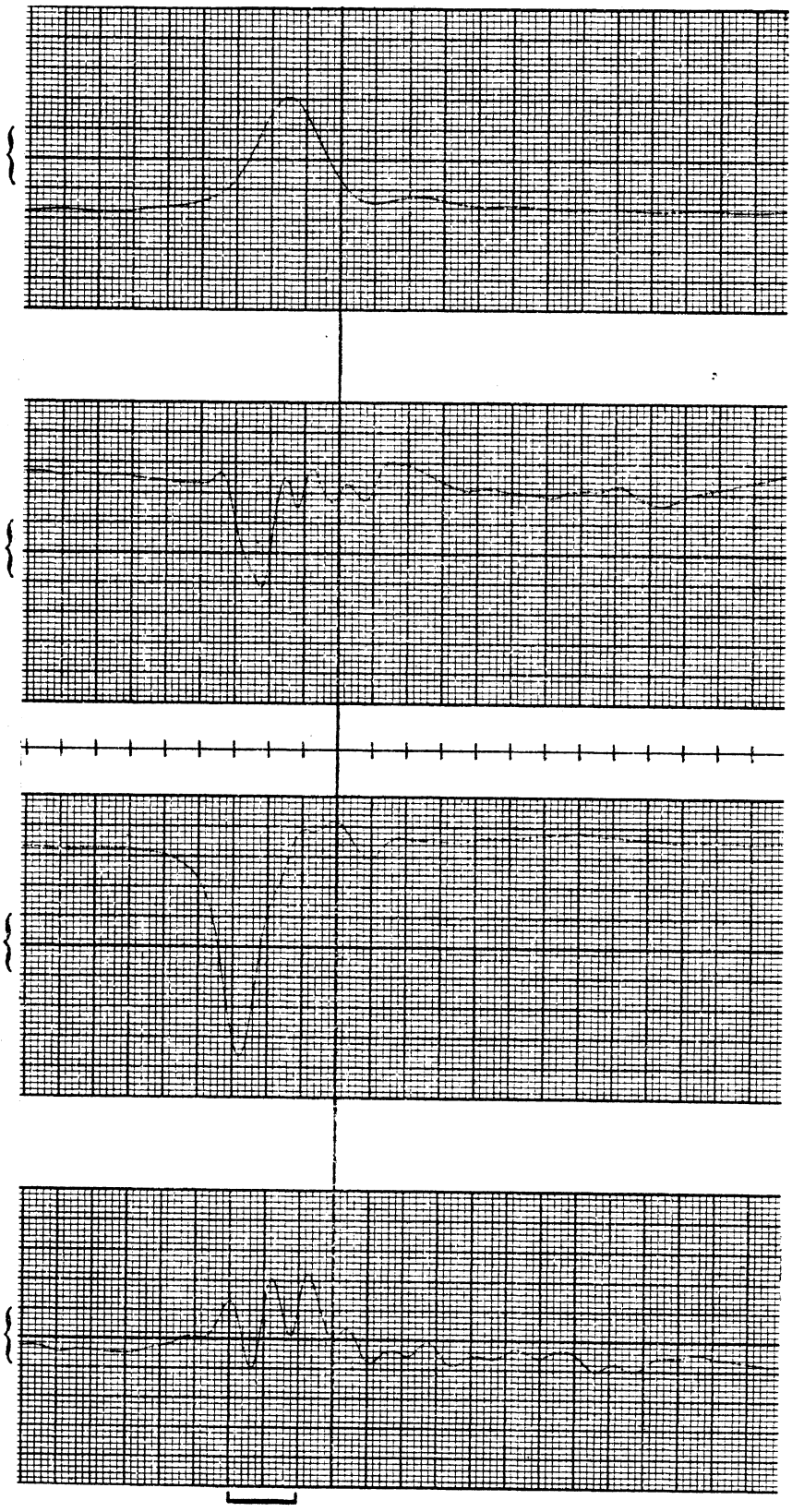
Filter Class: 180

Inferior-Superior Acceleration

Peak: 3.27 G

Scale: 2.51 G =

Filter Class: 180



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 060 DUMMY NO. 871

BODY REGION PELVIS SIDE R

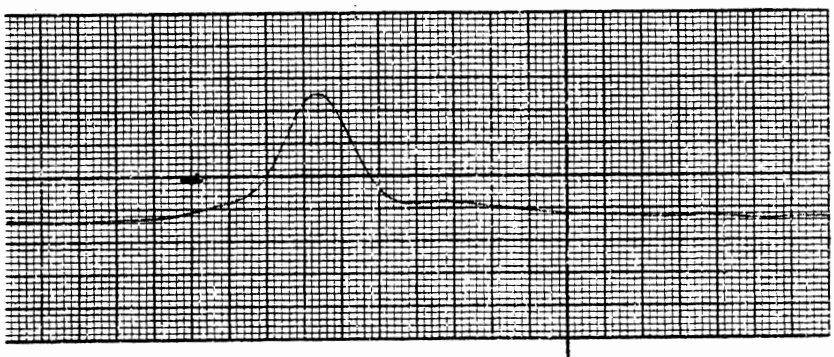
PEAK RESULTANT: 64.9 G

Impact Mass Deceleration

Peak: 43.3 G

Scale: 21.8 G =

Filter Class: 60

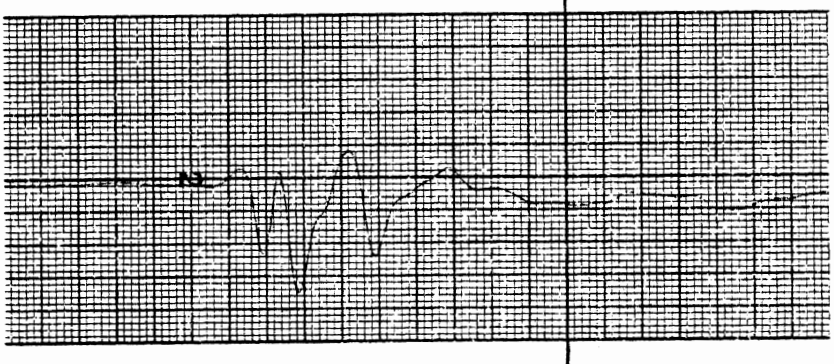


Posterior-Anterior Acceleration

Peak: 5.56 G

Scale: 3.30 G =

Filter Class: 180

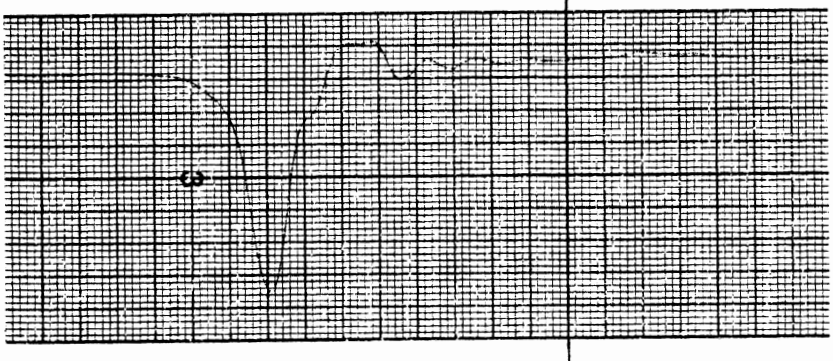


Right-Left Acceleration

Peak: 64.7 G

Scale: 19.1 G =

Filter Class: 180

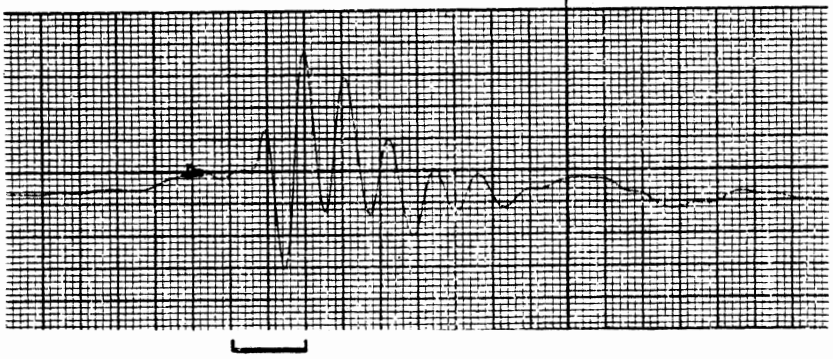


Inferior-Superior Acceleration

Peak: 5.66 G

Scale: 2.51 G =

Filter Class: 180



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 061 DUMMY NO. 871

BODY REGION PELVIS SIDE R

PEAK RESULTANT: 65.9 G

Impact Mass Deceleration

Peak: 42.8 G

Scale: 21.8 G =

Filter Class: 60

Posterior-Anterior Acceleration

Peak: 10.7 G

Scale: 3.30 G =

Filter Class: 180

Right-Left Acceleration

Peak: 65.4G

Scale: 19.1 G =

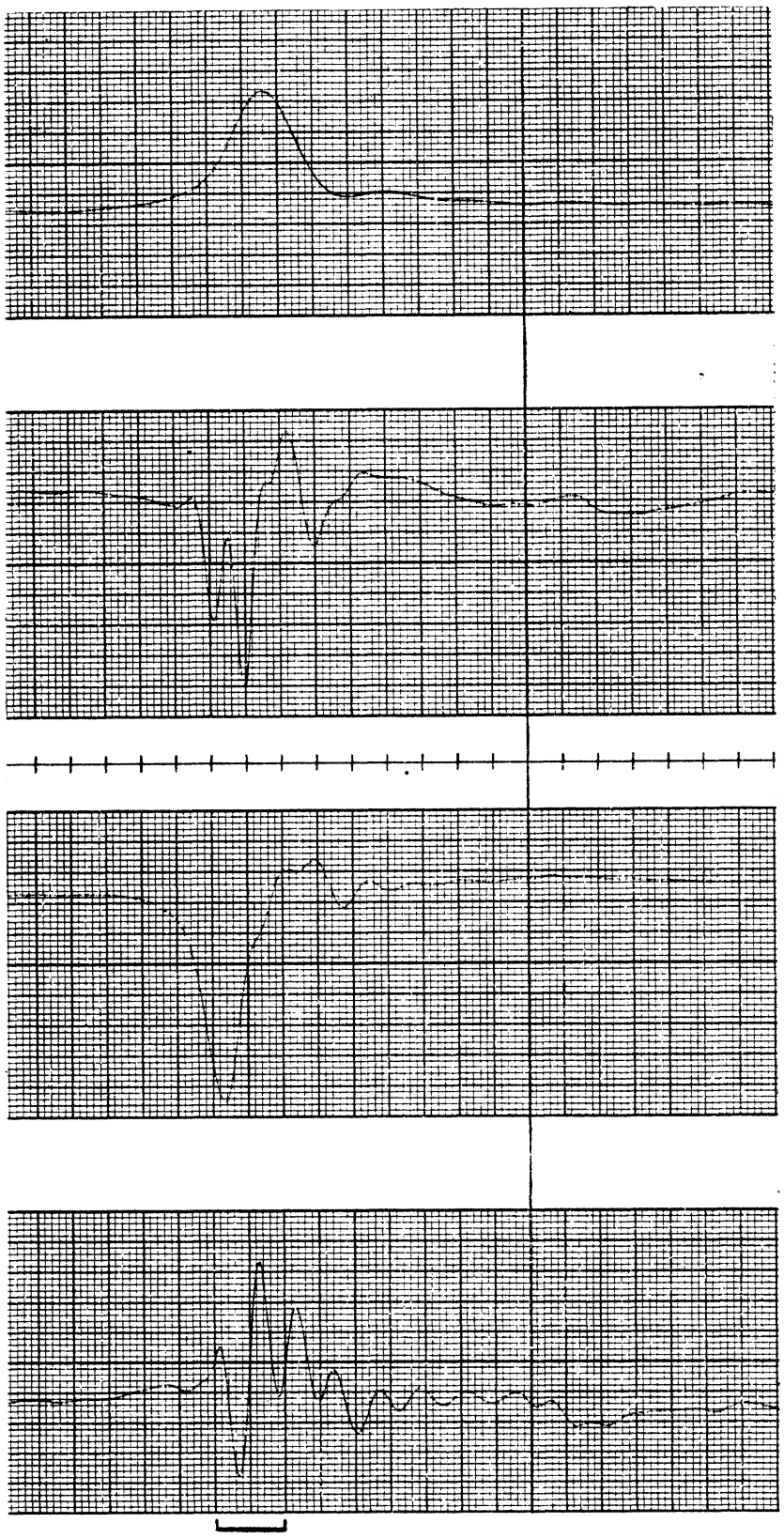
Filter Class: 180

Inferior-Superior Acceleration

Peak: 5.88 G

Scale: 2.51 G =

Filter Class: 180



6.25 ms.

TEST RESULTS

DUMMY NO. 872

HEAD/NECK TEST RESULTS

TEST: 80Y032 DUMMY #872
IMPACT VELOCITY: 13.28 ft/sec.

TARGET VALUE	ACTUAL VALUES ANGLE (degrees)	CHORDAL DISP. (in.)	TIME (ms.)	FRAME NUMBER
0 deg.	-0.83	0.29	0.00	0
20 deg.	20.89	1.78	32.79	30
MAX ANGLE	34.87	2.58	56.84	52
MAX DISP.	34.87	2.58	56.84	52
20 deg.	20.55	1.19	79.79	73
0 deg.	0.0	0.29	98.37	90

TEST: 80Y033 DUMMY #872
IMPACT VELOCITY: 13.05 ft/sec.

TARGET VALUE	ACTUAL VALUES ANGLE (degrees)	CHORDAL DISP. (in.)	TIME (ms.)	FRAME NUMBER
0 deg.	-0.14	0.25	0.00	0
20 deg.	20.47	1.70	34.29	30
MAX ANGLE	35.41	2.56	57.14	50
MAX DISP.	35.11	2.57	56.00	49
20 deg.	20.32	1.18	82.29	72
0 deg.	0.02	0.30	99.43	87

TEST: 80Y034 DUMMY #872
IMPACT VELOCITY: 13.11 ft/sec.

TARGET VALUE	ACTUAL VALUES ANGLE (degrees)	CHORDAL DISP. (in.)	TIME (ms.)	FRAME NUMBER
0 deg.	-1.35	0.37	0.00	0
20 deg.	20.29	1.73	34.46	32
MAX ANGLE	34.74	2.61	52.77	49
MAX DISP.	34.74	2.61	52.77	49
20 deg.	20.11	1.09	81.85	76
0 deg.	-0.13	0.30	99.08	92

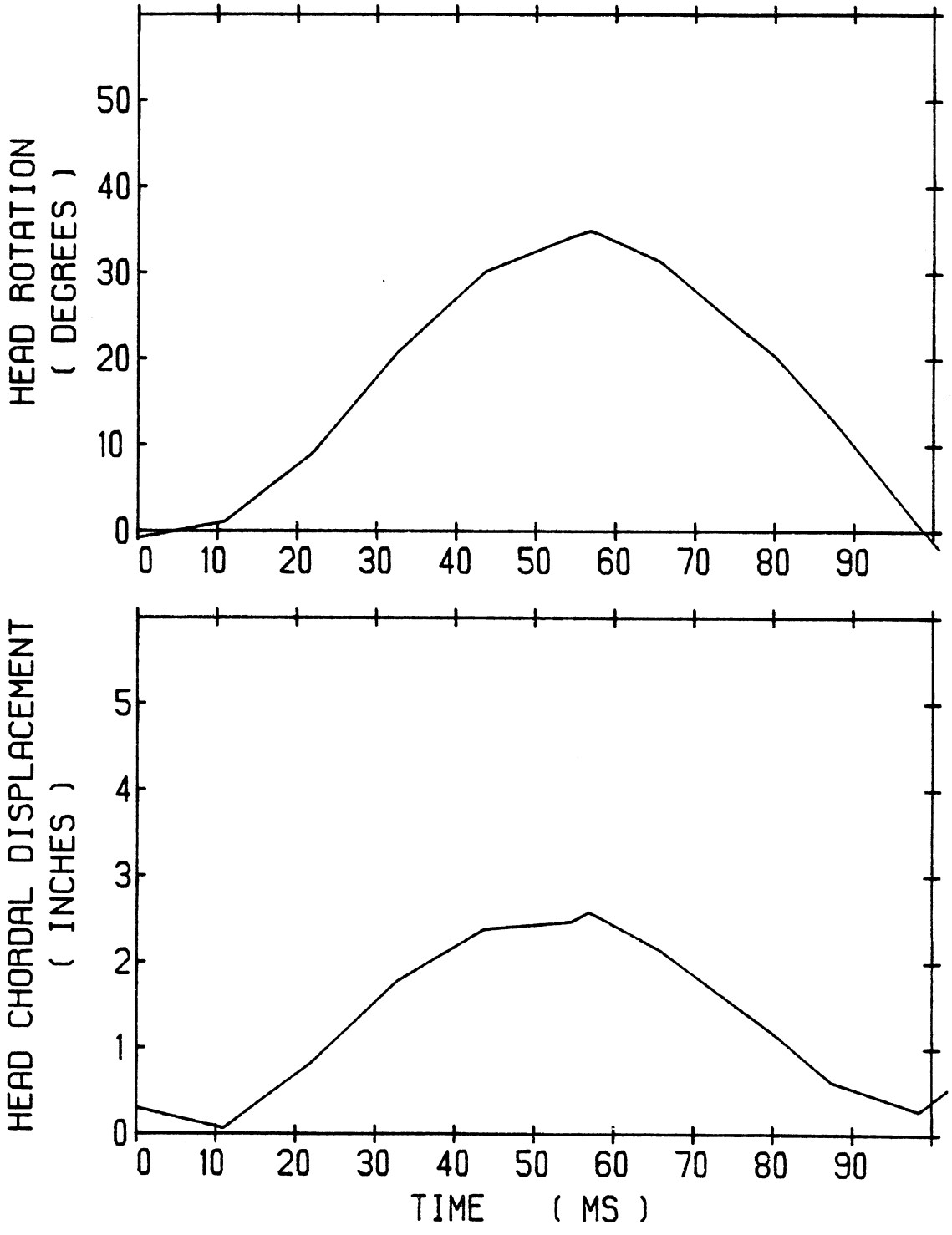
TEST: 80Y035 DUMMY #872
IMPACT VELOCITY: 13.59 ft/sec.

TARGET VALUE	ACTUAL VALUES ANGLE (degrees)	CHORDAL DISP. (in.)	TIME (ms.)	FRAME NUMBER
0 deg.	-4.00	0.30	0.00	0
20 deg.	20.10	1.72	36.34	34
MAX ANGLE	32.93	2.54	55.59	52
MAX DISP.	32.93	2.54	55.59	52
20 deg.	20.52	1.81	76.97	72
0 deg.	0.18	0.31	93.00	87

TEST: 80Y036 DUMMY #872
IMPACT VELOCITY: 13.21 ft/sec.

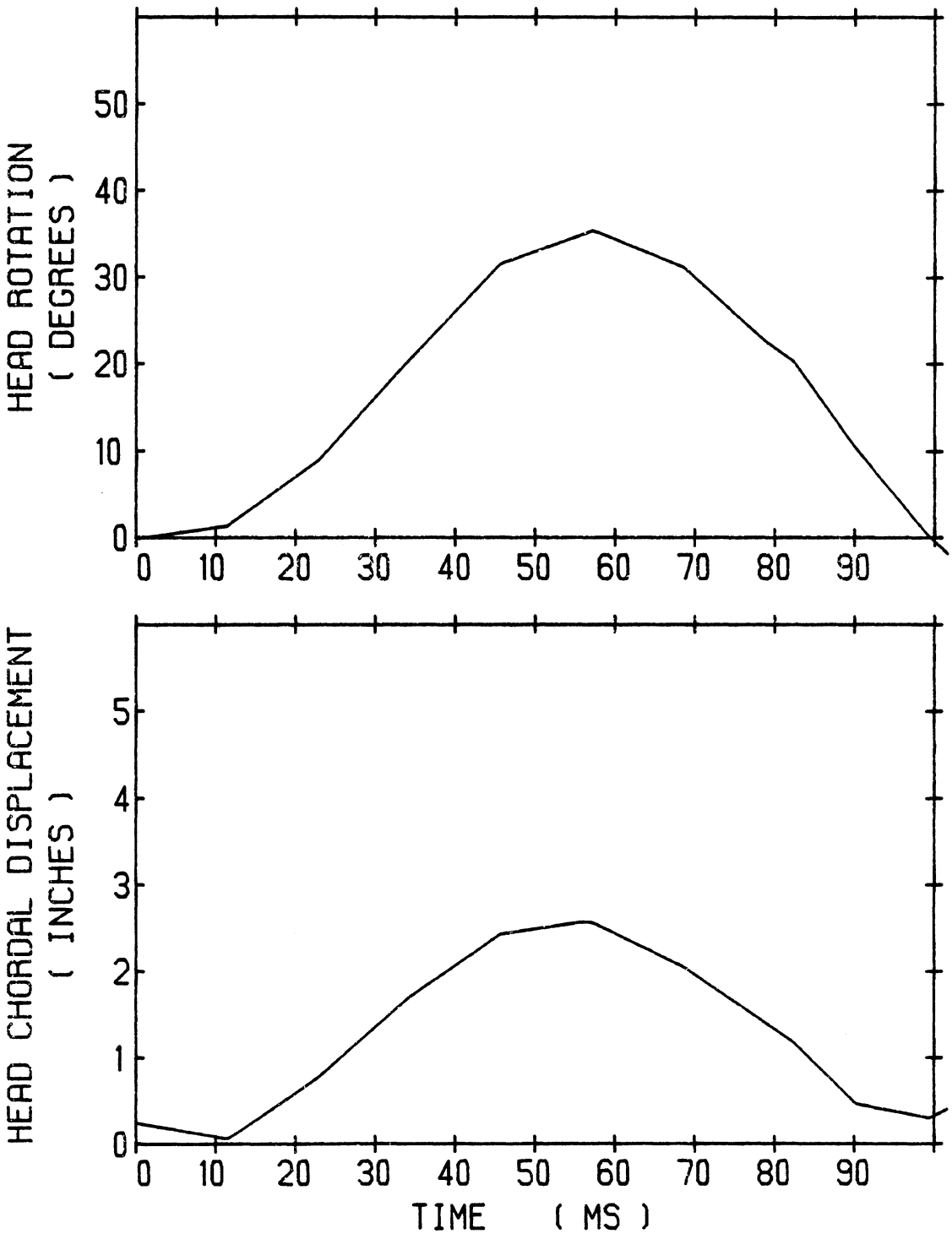
TARGET VALUE	ACTUAL VALUES ANGLE (degrees)	CHORDAL DISP. (in.)	TIME (ms.)	FRAME NUMBER
0 deg.	-3.84	0.29	0.00	0
20 deg.	19.18	1.70	36.30	33
MAX ANGLE	33.17	2.63	56.10	51
MAX DISP.	33.17	2.63	56.10	51
20 deg.	19.82	1.69	81.40	74
0 deg.	0.01	0.23	97.90	89

80Y032



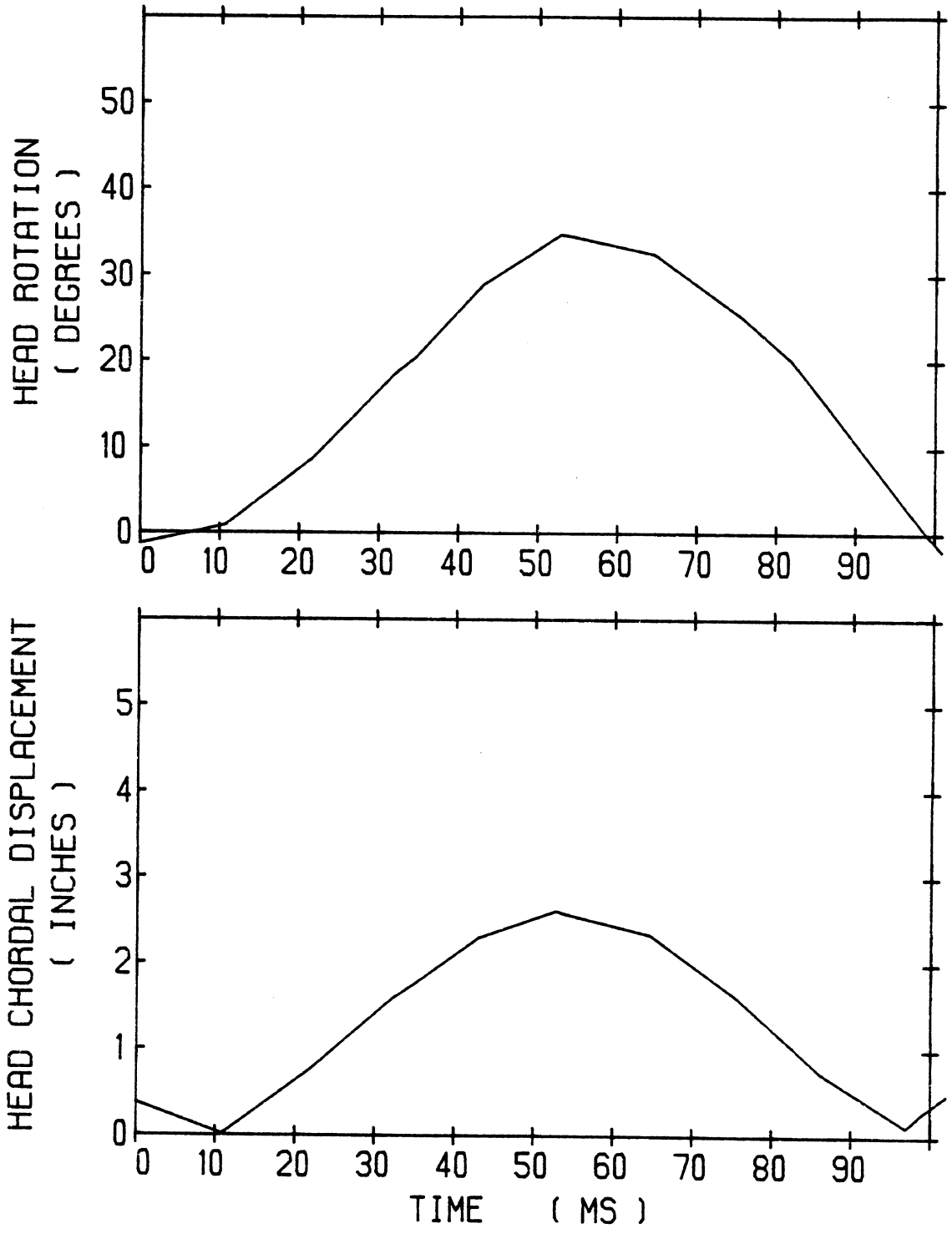
NECK PENDULUM TEST

80Y033



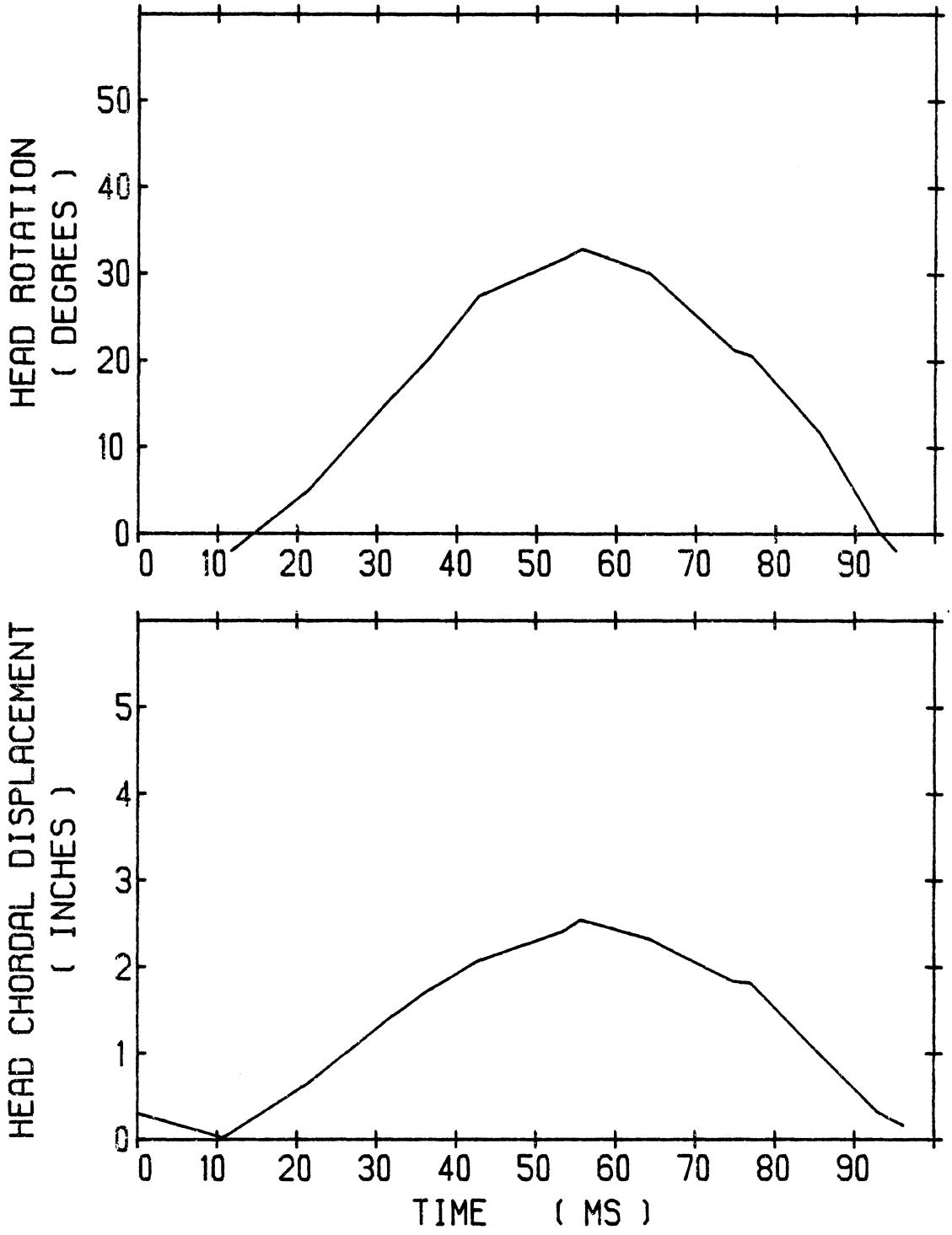
NECK PENDULUM TEST

80Y034



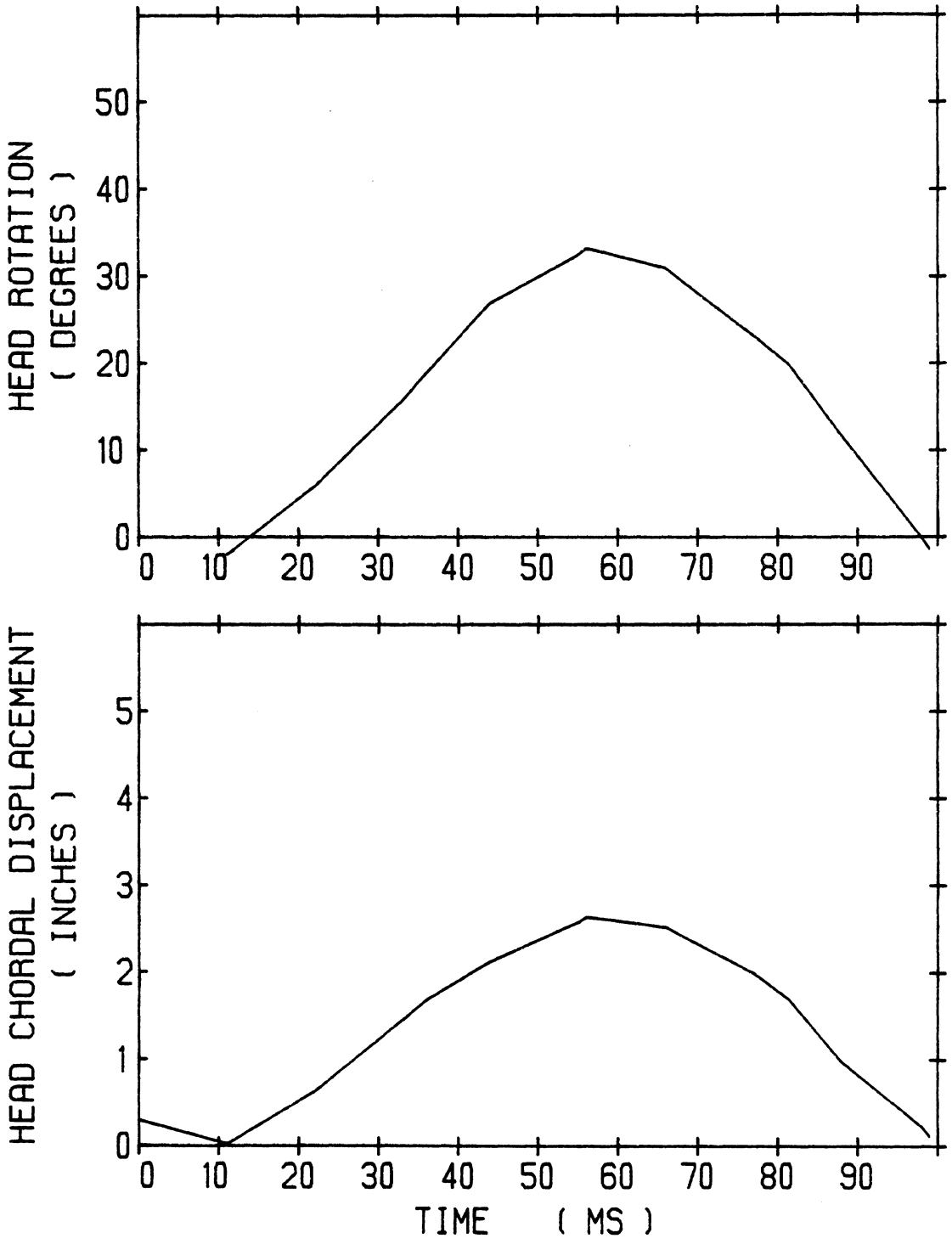
NECK PENDULUM TEST

80Y035



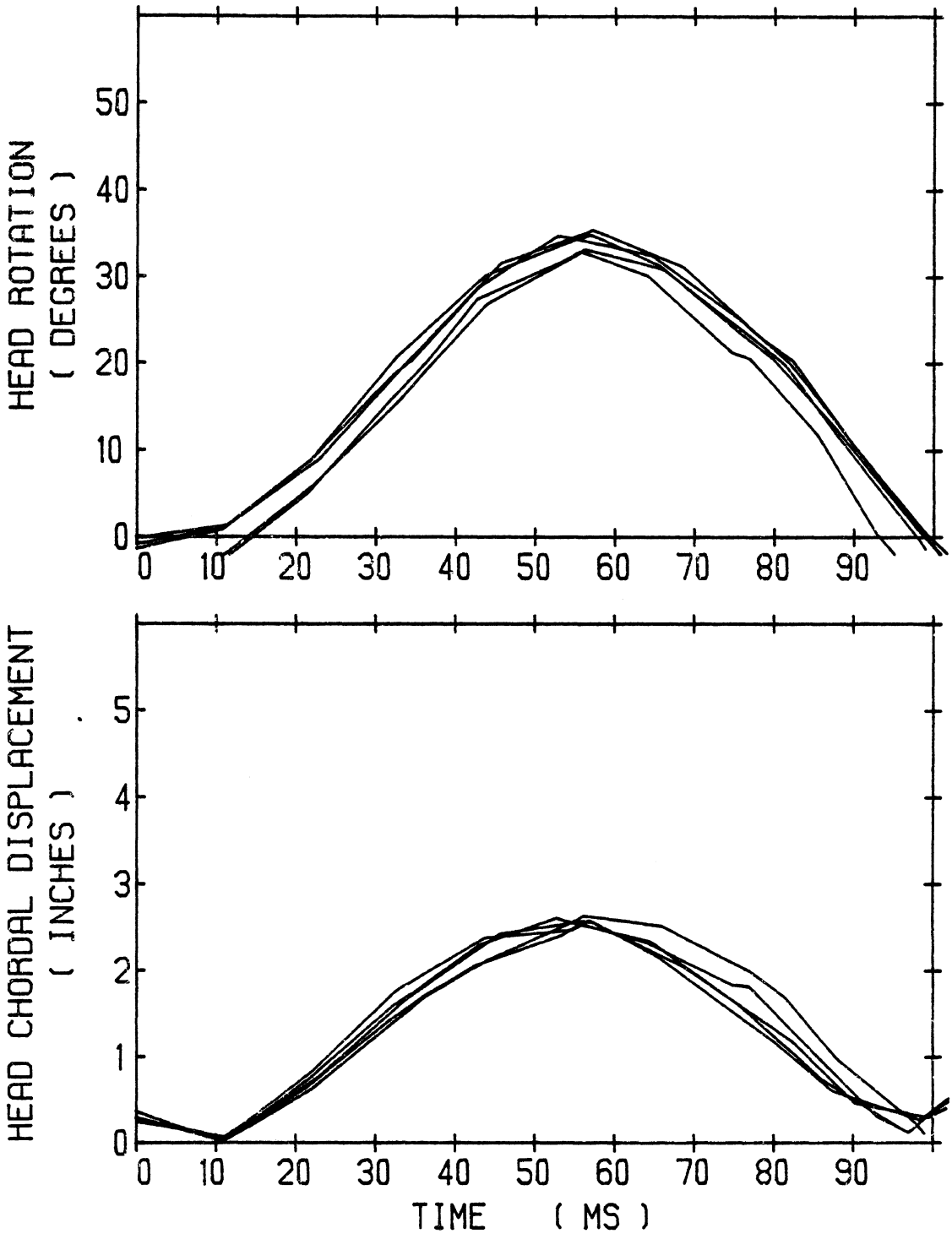
NECK PENDULUM TEST

80Y036



NECK PENDULUM TEST

ALL #872



NECK PENDULUM TEST

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 032 DUMMY NO. 872

BODY REGION HEAD/NECK SIDE L

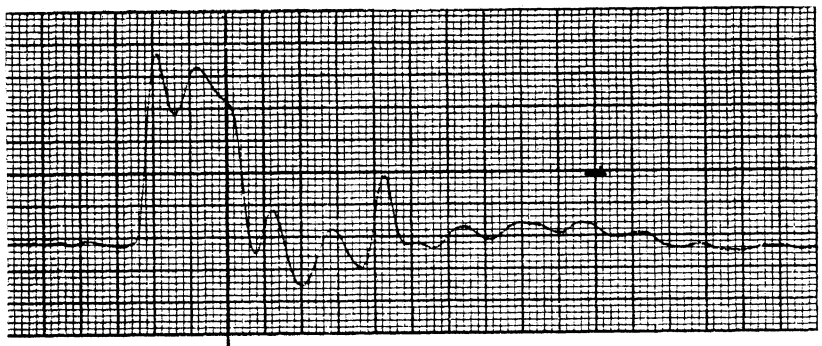
PEAK RESULTANT: 12.1 G

Impact Mass Deceleration

Peak: 15.8 G

Scale: 5.30 G =

Filter Class: 60

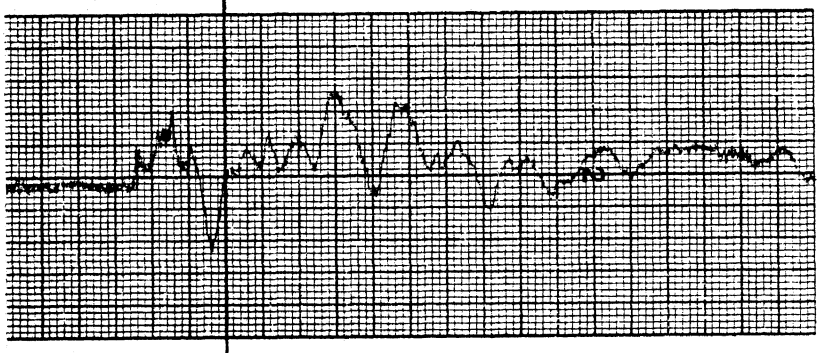


Posterior-Anterior Acceleration

Peak: 0.96 G

Scale: 0.66 G =

Filter Class: 1000

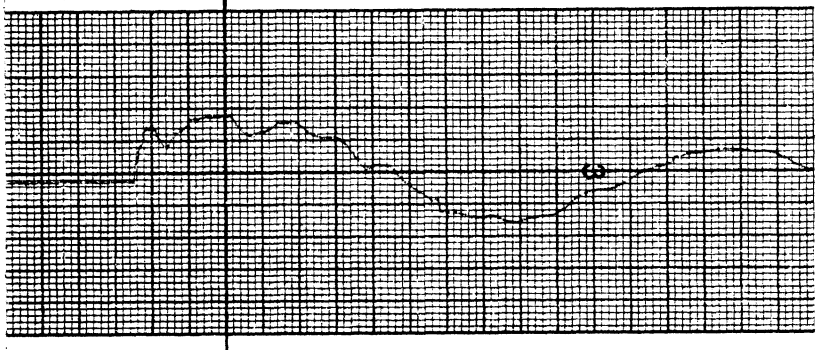


Right-Left Acceleration

Peak: 10.4 G

Scale: 9.82 G =

Filter Class: 1000

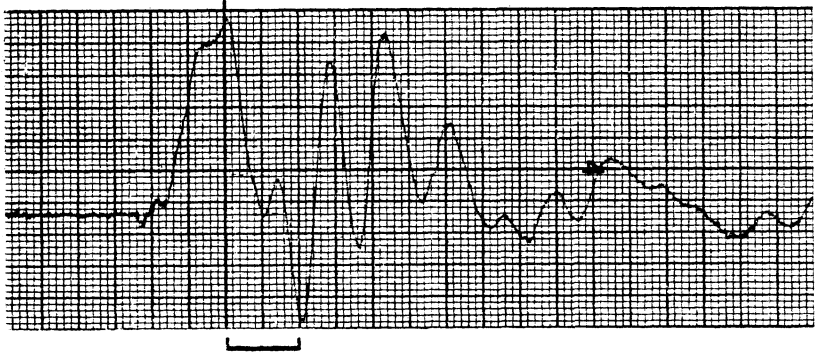


Inferior-Superior Acceleration

Peak: 6.17 G

Scale: 2.00 G =

Filter Class: 1000



25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 033 DUMMY NO. 872

BODY REGION HEAD / NECK SIDE L

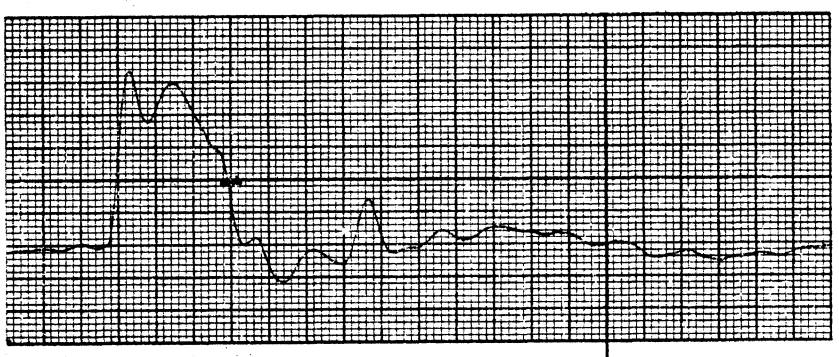
PEAK RESULTANT: 10.6 G

Impact Mass Deceleration

Peak: 14.7 G

Scale: 5.30 G =

Filter Class: 60

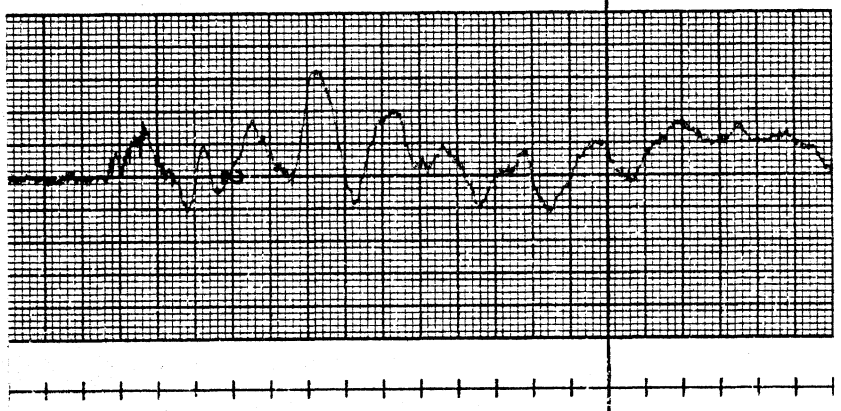


Posterior-Anterior Acceleration

Peak: 1.08 G

Scale: 0.66 G =

Filter Class: 1000

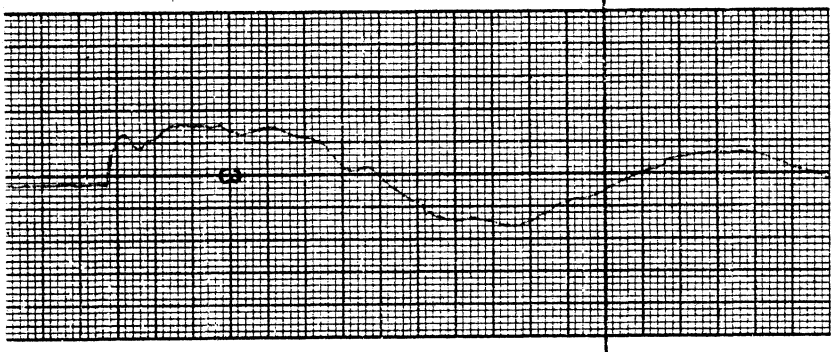


Right-Left Acceleration

Peak: 9.07 G

Scale: 9.82 G =

Filter Class: 1000

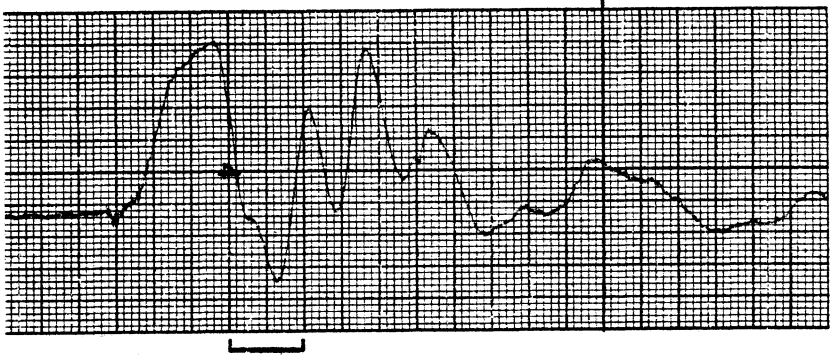


Inferior-Superior Acceleration

Peak: 5.52 G

Scale: 2.00 G =

Filter Class: 1000



25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 034 DUMMY NO. 872

BODY REGION HEAD/NECK SIDE L

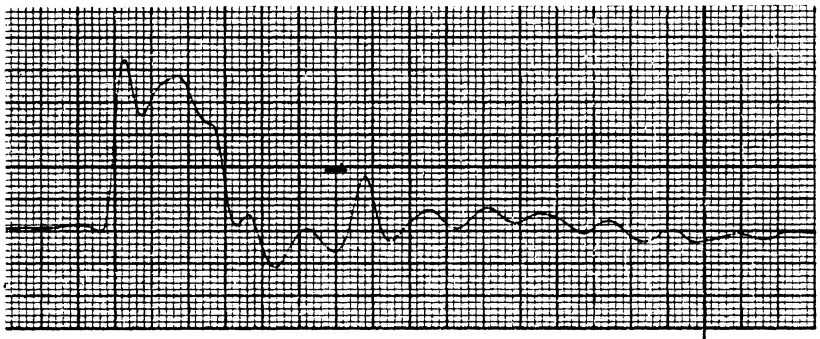
PEAK RESULTANT: 10.7 G

Impact Mass Deceleration

Peak: 14.06 G

Scale: 5.30 G =

Filter Class: 60

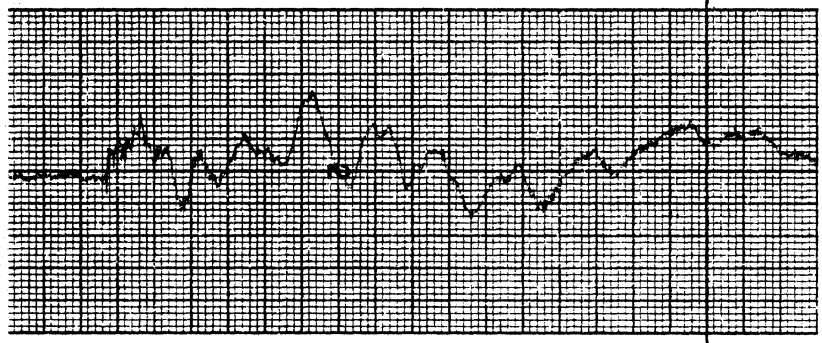


Posterior-Anterior Acceleration

Peak: 0.86 G

Scale: 0.66 G =

Filter Class: 1000

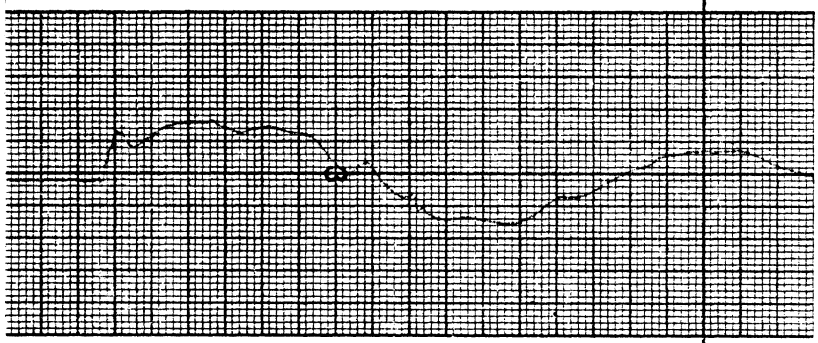


Right-Left Acceleration

Peak: 9.13 G

Scale: 9.82 G =

Filter Class: 1000



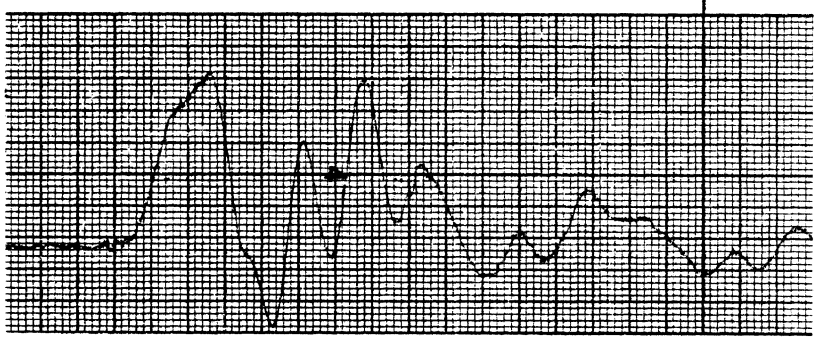
ACCUCHART

Inferior-Superior Acceleration

Peak: 5.52 G

Scale: 2.00 G =

Filter Class: 1000



25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 035 DUMMY NO. 872

BODY REGION HEAD/NECK SIDE R

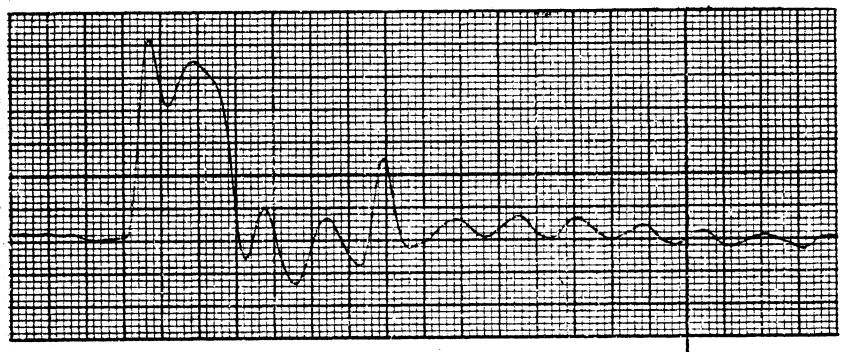
PEAK RESULTANT: 13.8 G

Impact Mass Deceleration

Peak: 15.9 G

Scale: 5.30 G =

Filter Class: 60

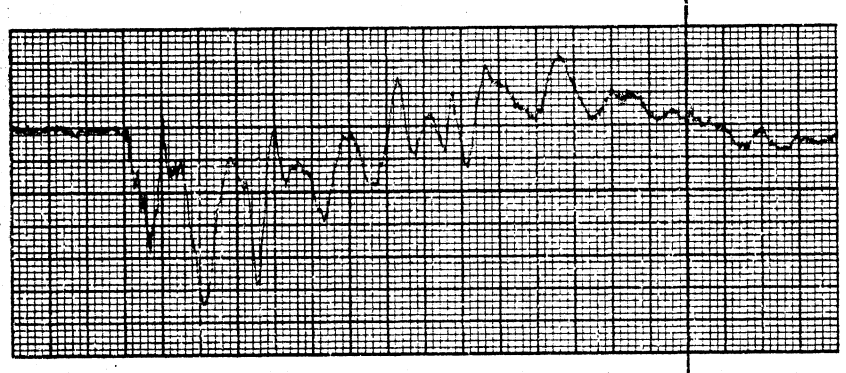


Posterior-Anterior Acceleration

Peak: 1.84 G

Scale: 0.66 G =

Filter Class: 1000

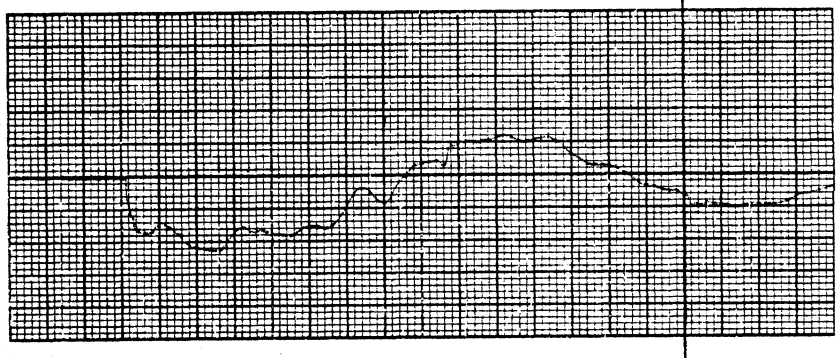


Right-Left Acceleration

Peak: 11.5 G

Scale: 9.82 G =

Filter Class: 1000

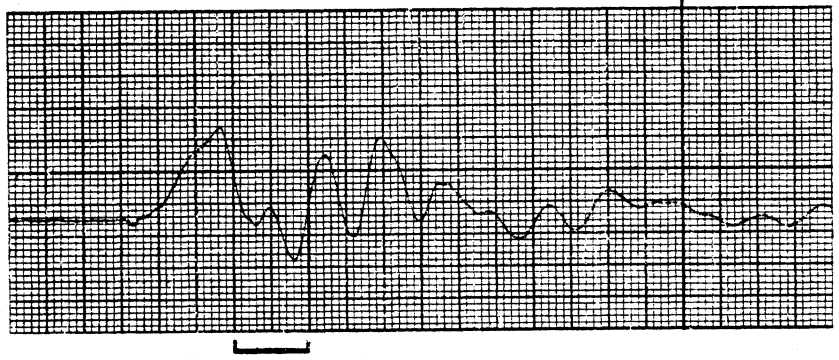


Inferior-Superior Acceleration

Peak: 7.37G

Scale: 5.00 G =

Filter Class: 1000



25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 036 DUMMY NO. 872

BODY REGION HEAD / NECK SIDE R

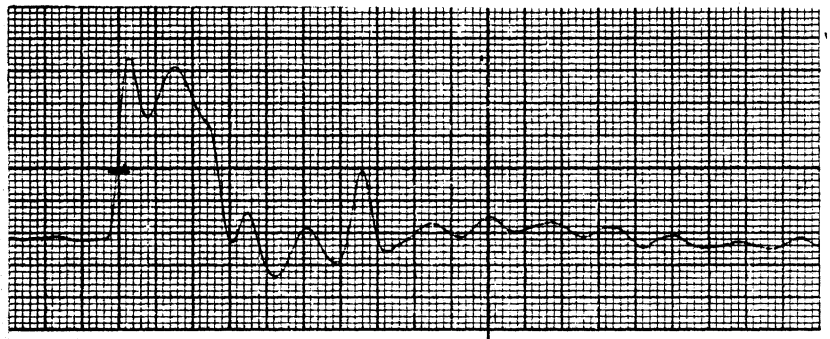
PEAK RESULTANT: 12.9 G

Impact Mass
Deceleration

Peak: 15.0 G

Scale: 5.30 G =

Filter Class: 60

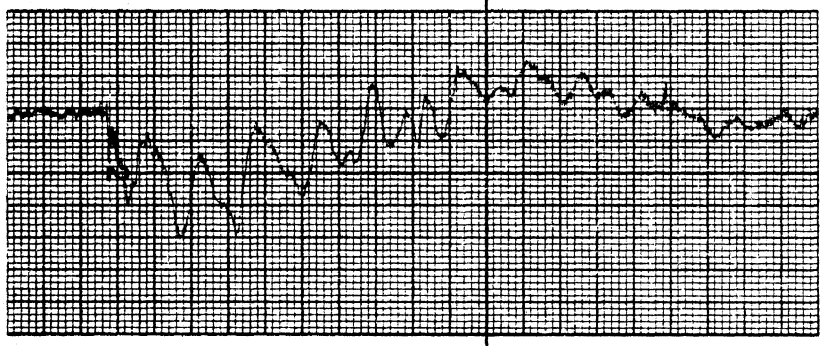


Posterior-Anterior
Acceleration

Peak: 1.36 G

Scale: 0.66 G =

Filter Class: 1000

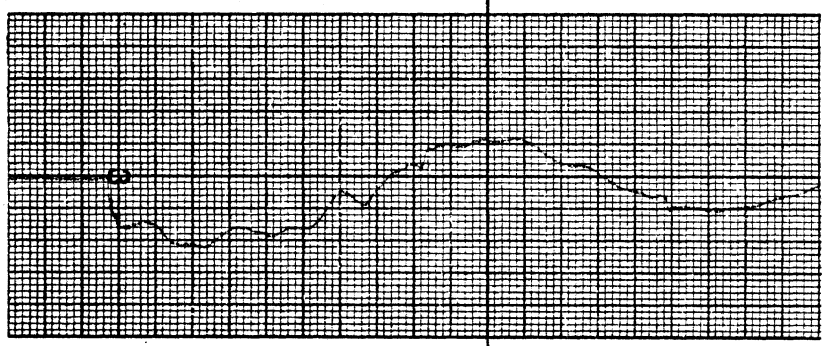


Right-Left
Acceleration

Peak: 11.0 G

Scale: 9.82 G =

Filter Class: 1000



ACCUCHART

Gould Inc.

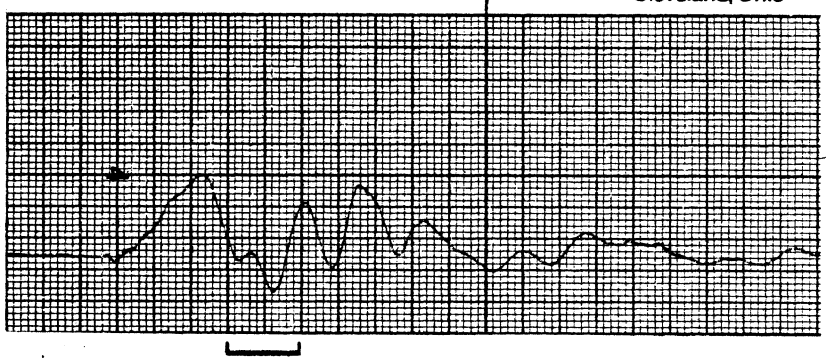
Cleveland, Ohio

Inferior-Superior
Acceleration

Peak: 6.62 G

Scale: 5.00 G =

Filter Class: 1000



25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 037 DUMMY NO. 872

BODY REGION HEAD / NECK SIDE R

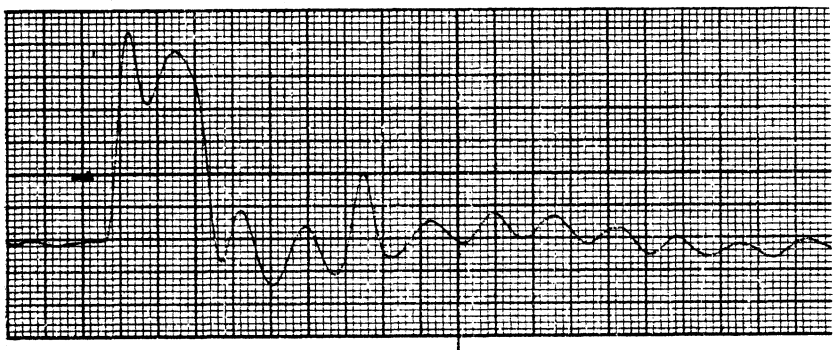
PEAK RESULTANT: 13.9 G

Impact Mass Deceleration

Peak: 17.2 G

Scale: 5.30 G =

Filter Class: 60

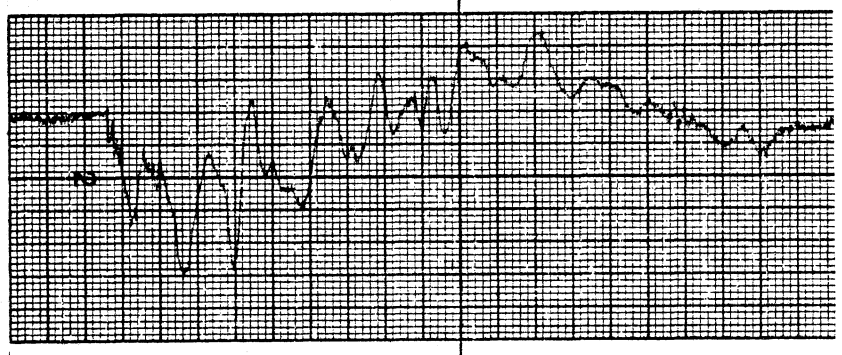


Posterior-Anterior Acceleration

Peak: 1.62 G

Scale: 0.66 G =

Filter Class: 1000

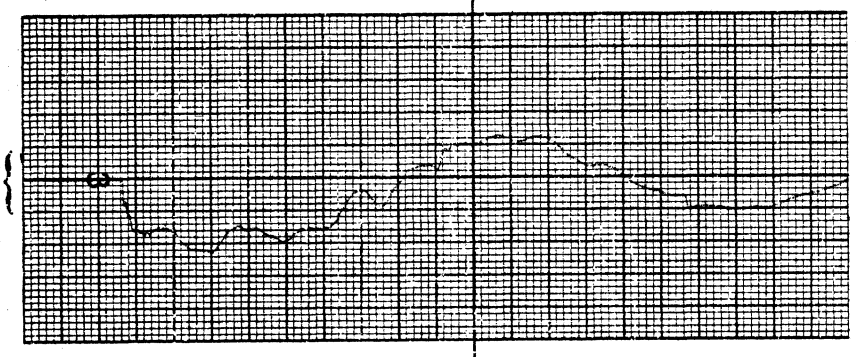


Right-Left Acceleration

Peak: 11.4 G

Scale: 9.82 G =

Filter Class: 1000

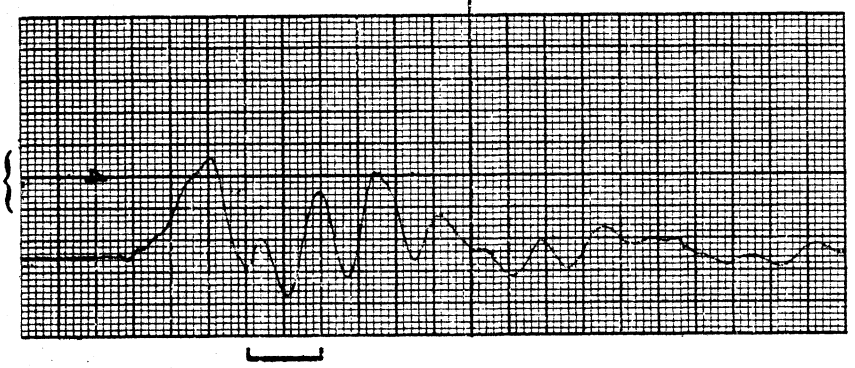


Inferior-Superior Acceleration

Peak: 7.86 G

Scale: 5.00 G =

Filter Class: 1000



25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 044 DUMMY NO. 872

BODY REGION HEAD SIDE L

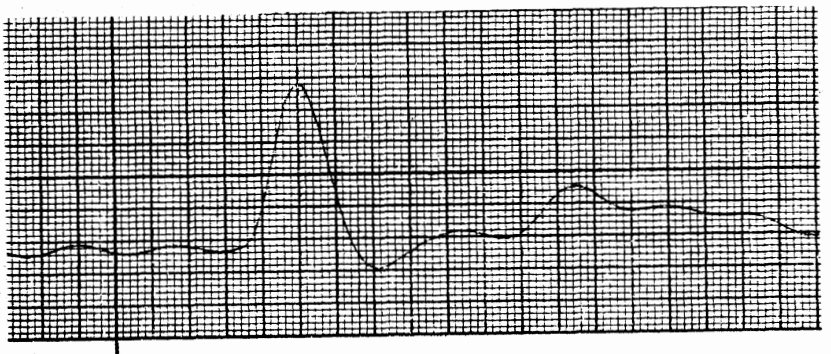
PEAK RESULTANT: 207. G

Impact Mass Deceleration

Peak: 11.5 G

Scale: 4.45 G =

Filter Class: 60

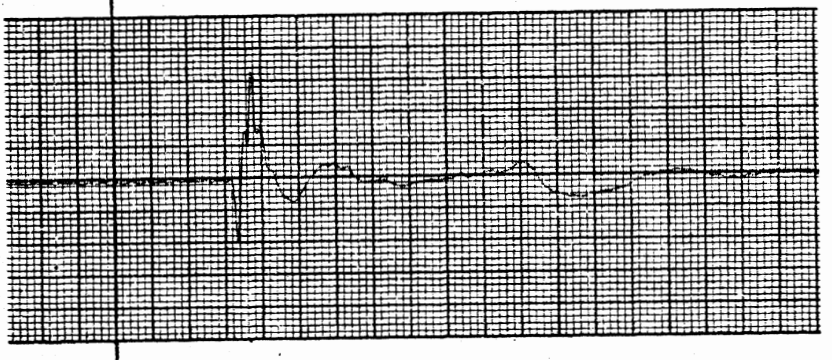


Posterior-Anterior Acceleration

Peak: 5.54 G

Scale: 3.27 G =

Filter Class: 1000

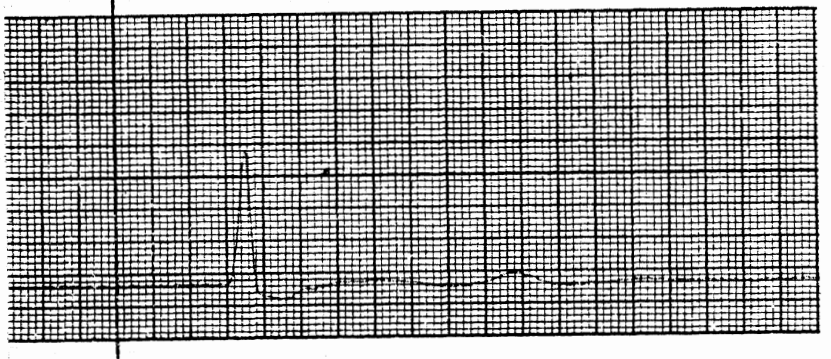


Right-Left Acceleration

Peak: 206. G

Scale: 98.2 G =

Filter Class: 1000

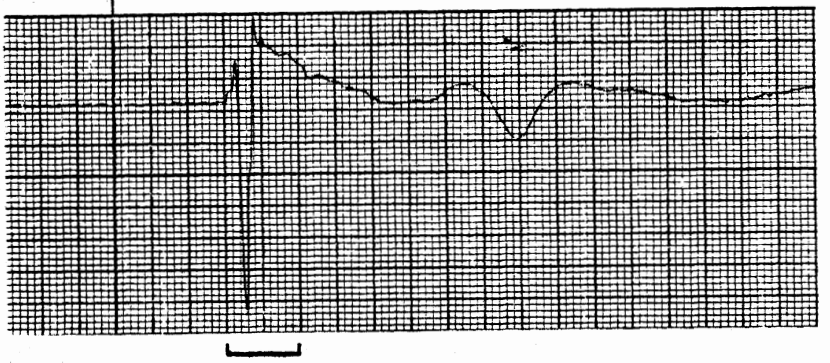


Inferior-Superior Acceleration

Peak: 16.7 G

Scale: 5.00 G =

Filter Class: 1000



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 045 DUMMY NO. 872

BODY REGION HEAD SIDE L

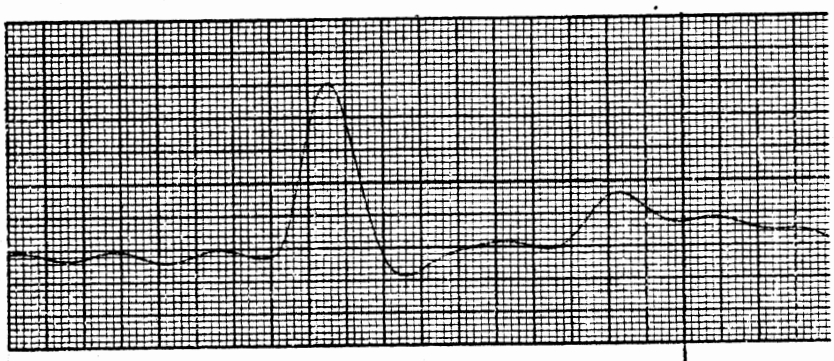
PEAK RESULTANT: 204. G

Impact Mass Deceleration

Peak: 11.7 G

Scale: 4.45 G =

Filter Class: 60

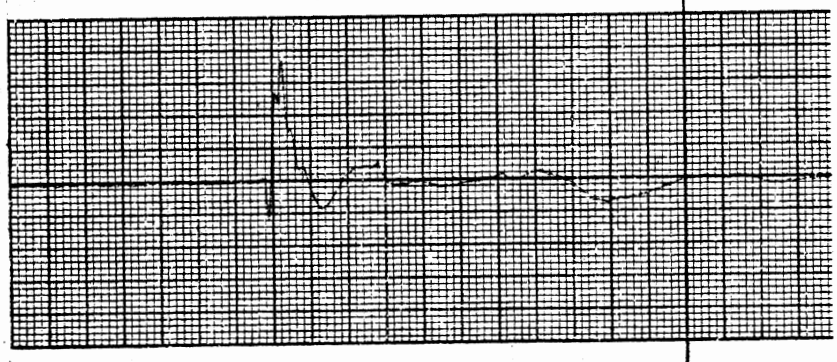


Posterior-Anterior Acceleration

Peak: 6.33 G

Scale: 3.27 G =

Filter Class: 1000

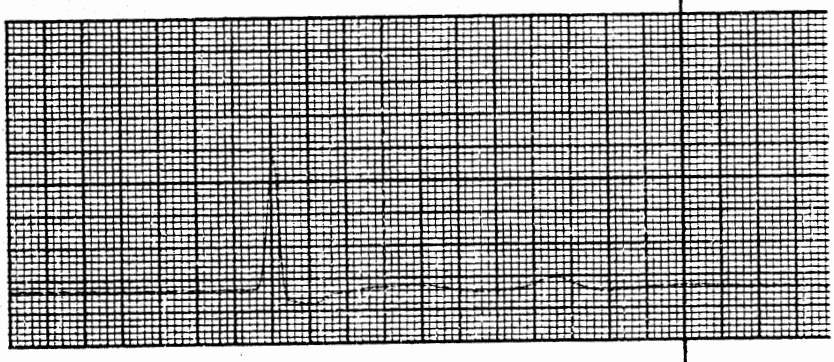


Right-Left Acceleration

Peak: 204. G

Scale: 98.2 G =

Filter Class: 1000

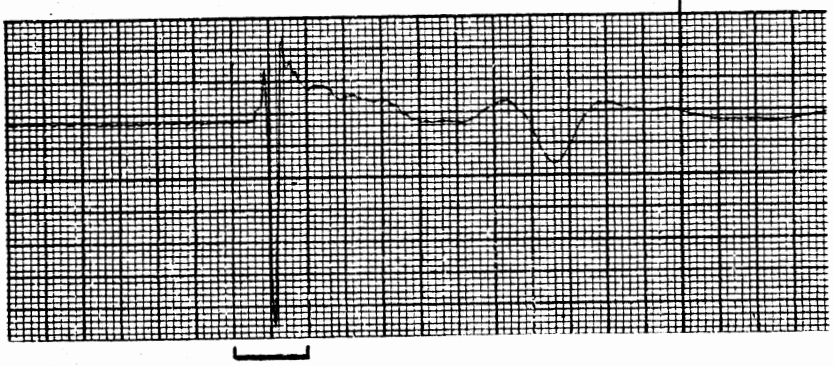


Inferior-Superior Acceleration

Peak: 16.1 G

Scale: 5.00 G =

Filter Class: 1000



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 046 DUMMY NO. 872

BODY REGION HEAD SIDE L

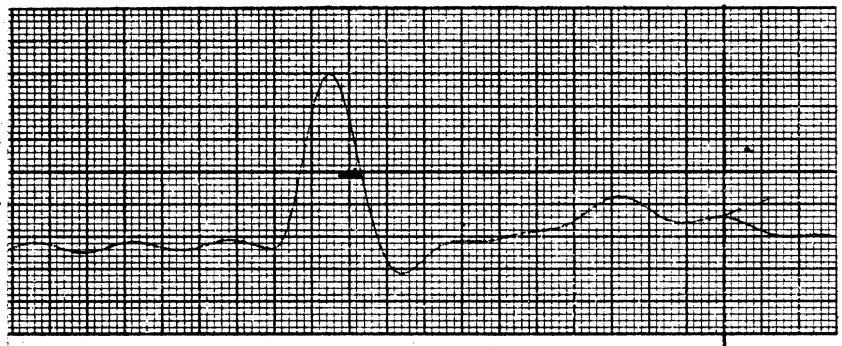
PEAK RESULTANT: 217. G

Impact Mass Deceleration

Peak: 11.9 G

Scale: 4.45 G =

Filter Class: 60

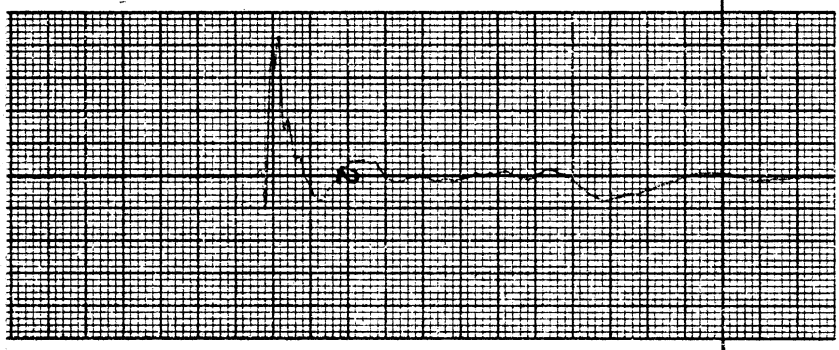


Posterior-Anterior Acceleration

Peak: 7.18 G

Scale: 3.27 G =

Filter Class: 1000

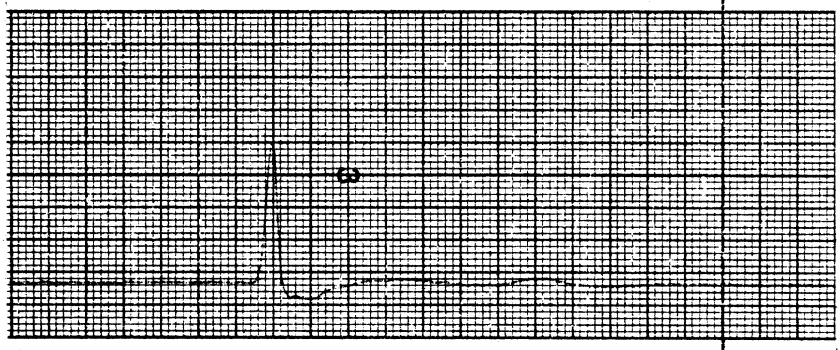


Right-Left Acceleration

Peak: 216. G

Scale: 98.2 G =

Filter Class: 1000

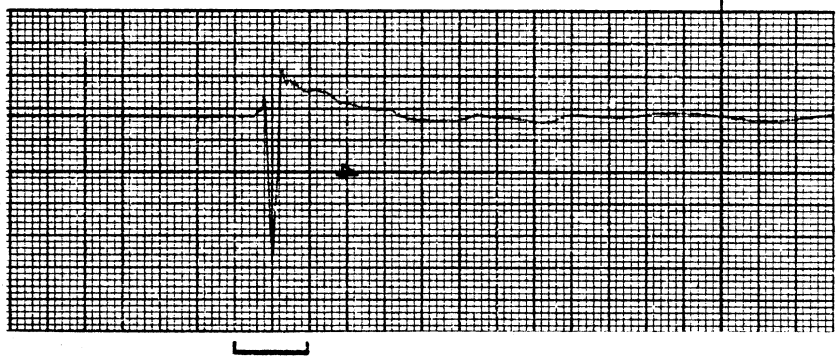


Inferior-Superior Acceleration

Peak: 22.2 G

Scale: 10.0 G =

Filter Class: 1000



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 047 DUMMY NO. 872

BODY REGION HEAD SIDE R

PEAK RESULTANT: 228. G

Impact Mass Deceleration

Peak: 11.1 G

Scale: 4.45 G =

Filter Class: 60

Posterior-Anterior Acceleration

Peak: 7.63 G

Scale: 3.27 G =

Filter Class: 1000

Right-Left Acceleration

Peak: 228. G

Scale: 98.2 G =

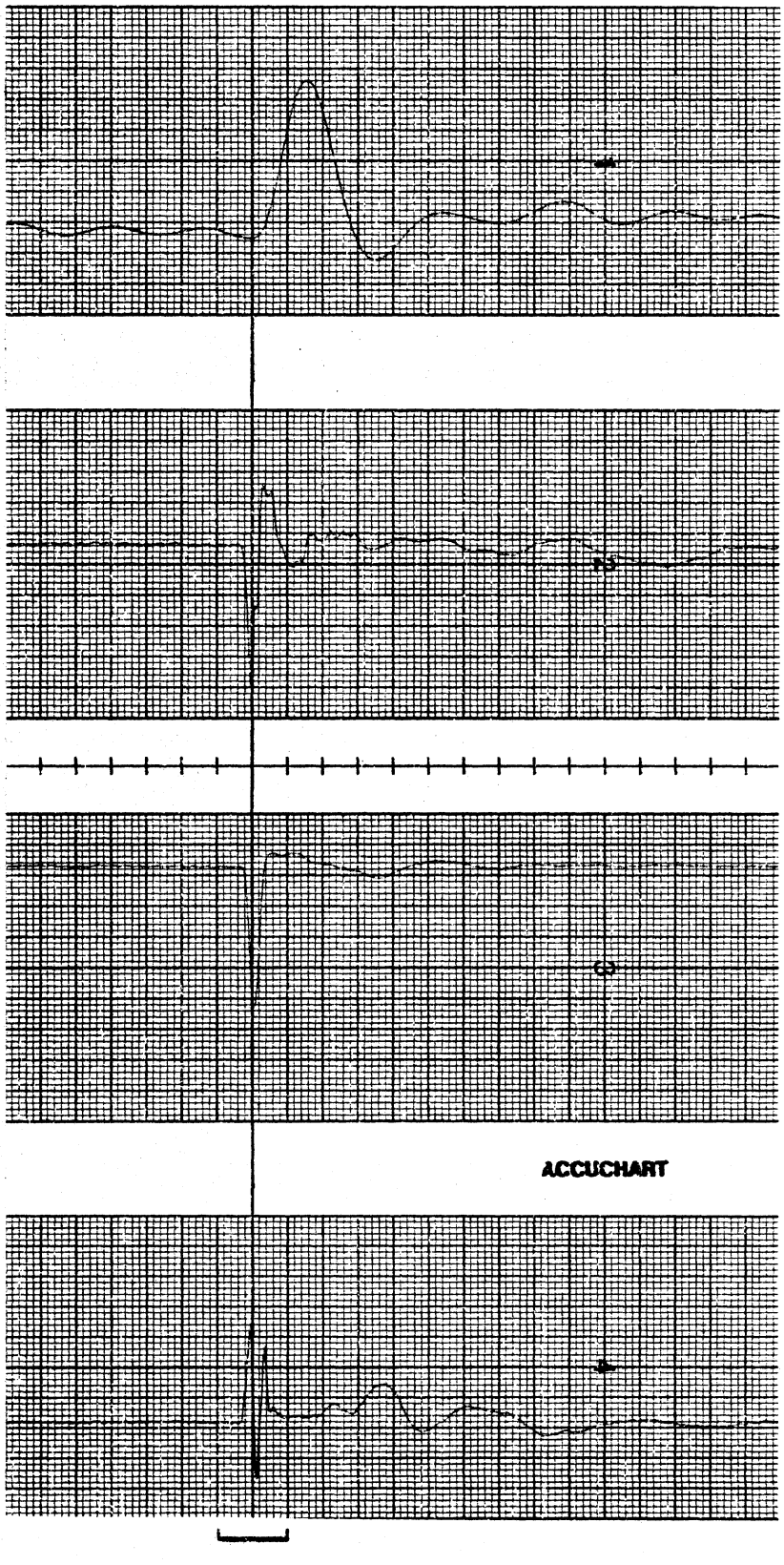
Filter Class: 1000

Inferior-Superior Acceleration

Peak: 8.29 G

Scale: 5.00 G =

Filter Class: 1000



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 048 DUMMY NO. 872

BODY REGION HEAD SIDE R

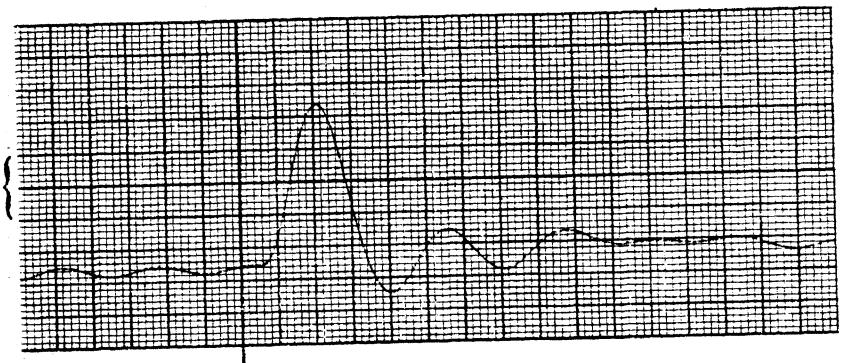
PEAK RESULTANT: 246. G

Impact Mass Deceleration

Peak: 11.5 G

Scale: 4.45 G =

Filter Class: 60

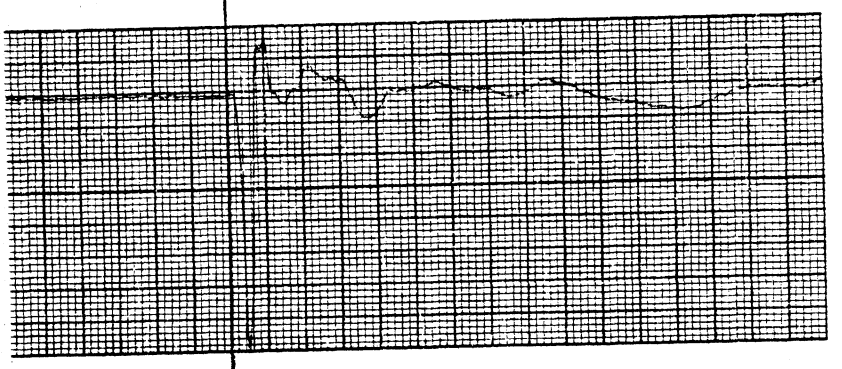


Posterior-Anterior Acceleration

Peak: 13.1 G

Scale: 3.27 G =

Filter Class: 1000

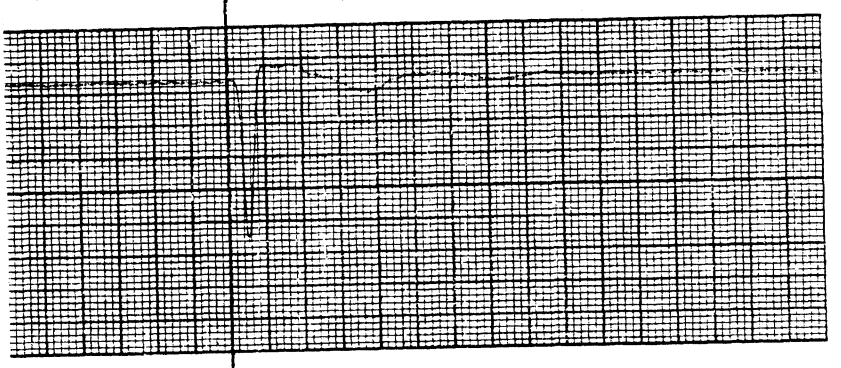


Right-Left Acceleration

Peak: 246. G

Scale: 98.2 G =

Filter Class: 1000

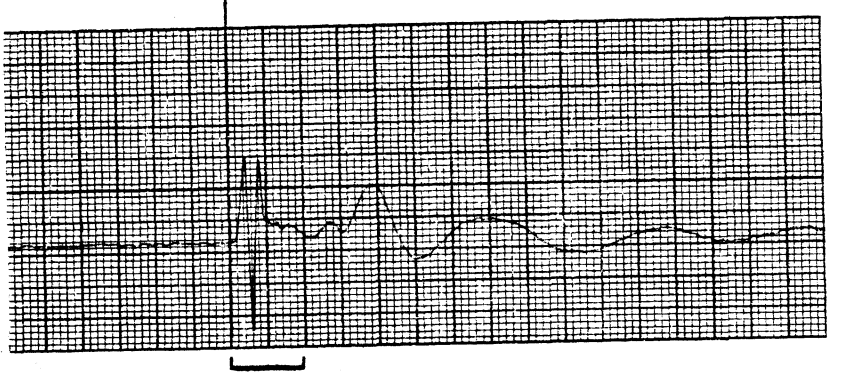


Inferior-Superior Acceleration

Peak: 7.24G

Scale: 5.00 G =

Filter Class: 1000



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 049 DUMMY NO. 872

BODY REGION HEAD SIDE R

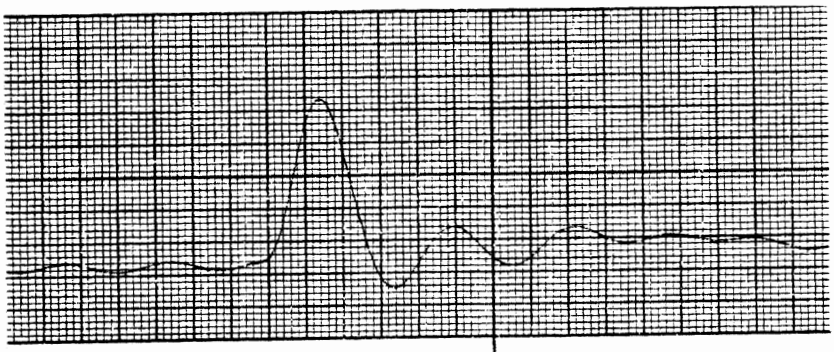
PEAK RESULTANT: 259. G

Impact Mass Deceleration

Peak: 11.4 G

Scale: 4.45 G =

Filter Class: 60

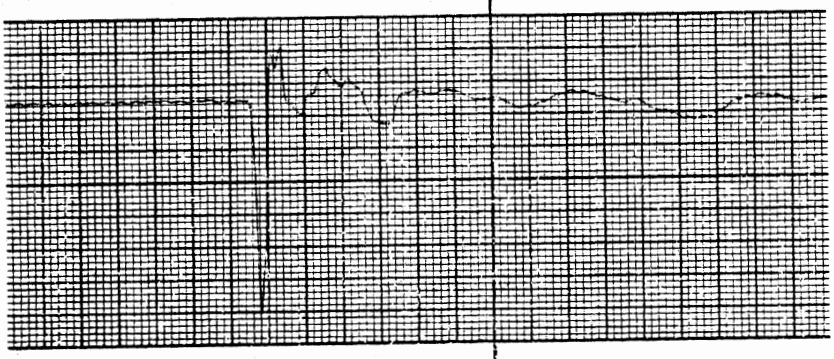


Posterior-Anterior Acceleration

Peak: 10.7 G

Scale: 3.27 G =

Filter Class: 1000

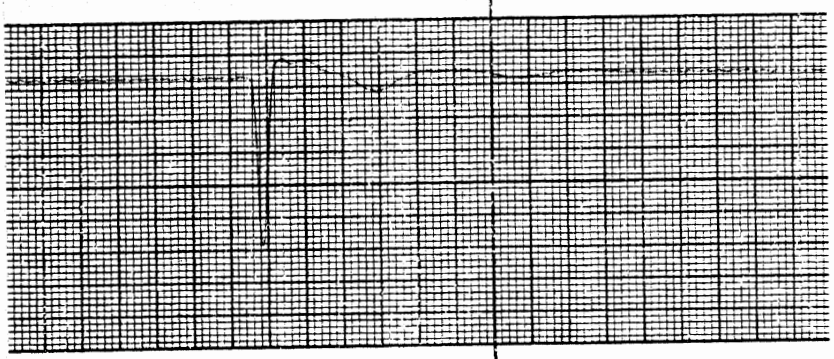


Right-Left Acceleration

Peak: 258. G

Scale: 98.2 G =

Filter Class: 1000



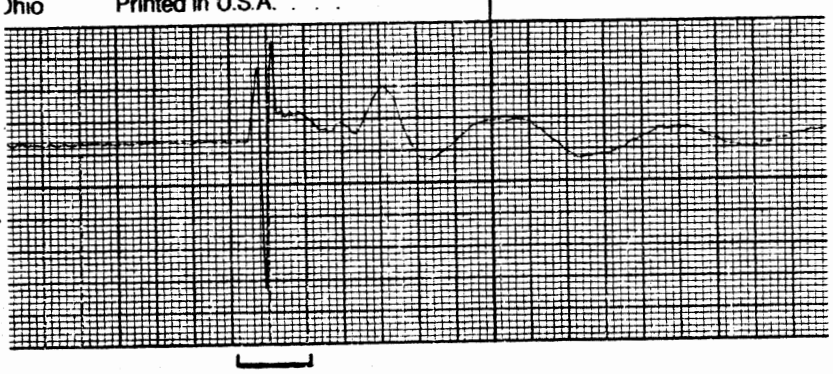
Ohio Printed in U.S.A. . . .

Inferior-Superior Acceleration

Peak: 11.7 G

Scale: 5.00 G =

Filter Class: 1000



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 065 DUMMY NO. 872

BODY REGION PELVIS SIDE L

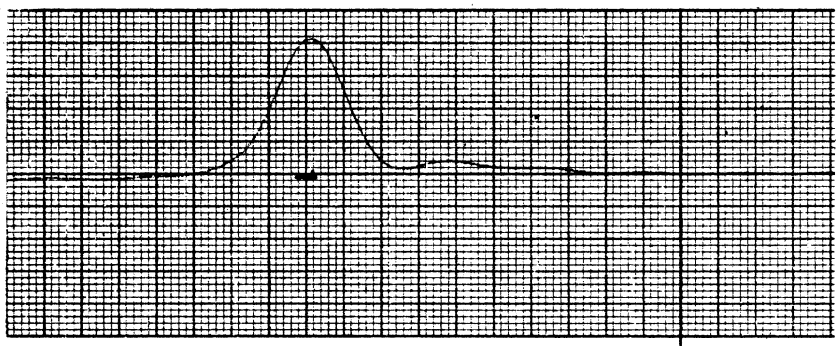
PEAK RESULTANT: 72.0 G

Impact Mass Deceleration

Peak: 48.6 G

Scale: 22.3 G =

Filter Class: 60



Posterior-Anterior Acceleration

Peak: 8.51 G

Scale: 3.30 G =

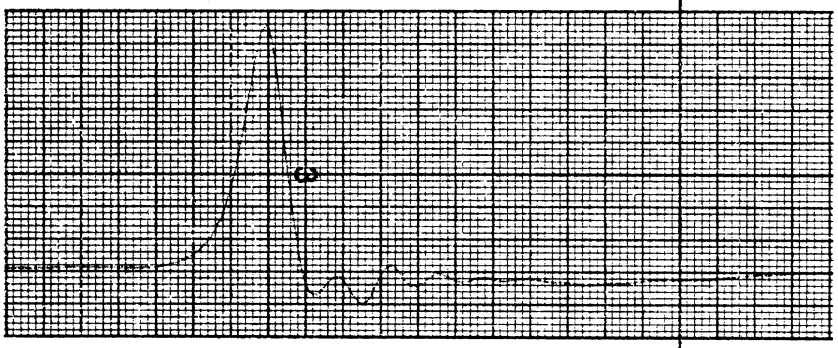
Filter Class: 180

Right-Left Acceleration

Peak: 71.6 G

Scale: 19.1 G =

Filter Class: 180



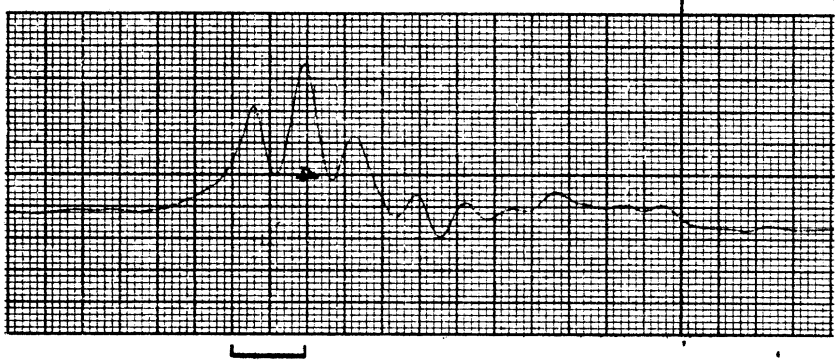
ACCUCHART

Inferior-Superior Acceleration

Peak: 5.85 G

Scale: 2.48 G =

Filter Class: 180



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 066 DUMMY NO. 872

BODY REGION PELVIS SIDE L

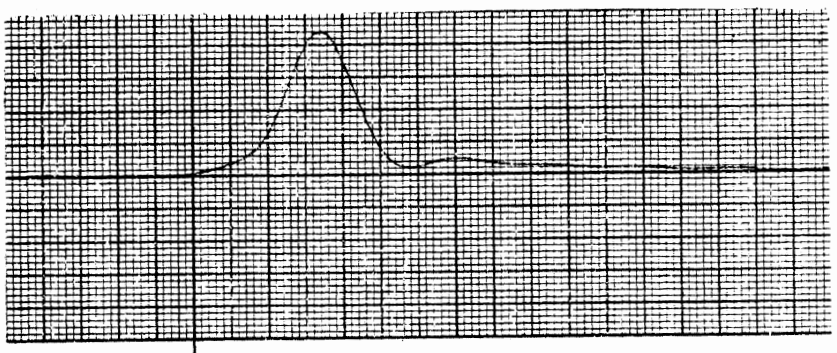
PEAK RESULTANT: 89.0 G

Impact Mass
Deceleration

Peak: 49.6 G

Scale: 22.3 G =

Filter Class: 60

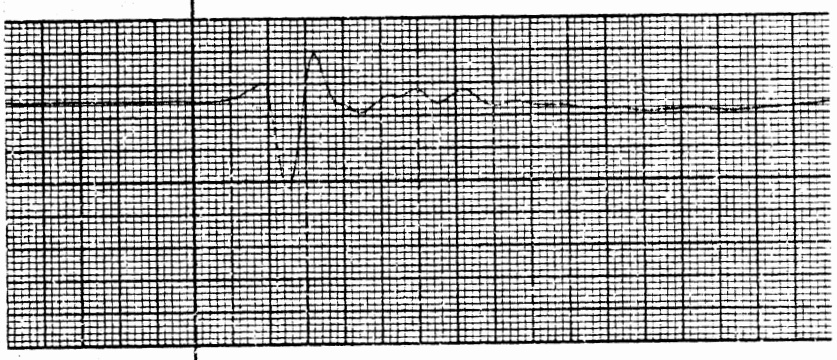


Posterior-Anterior
Acceleration

Peak: 11.9 G

Scale: 8.26 G =

Filter Class: 180

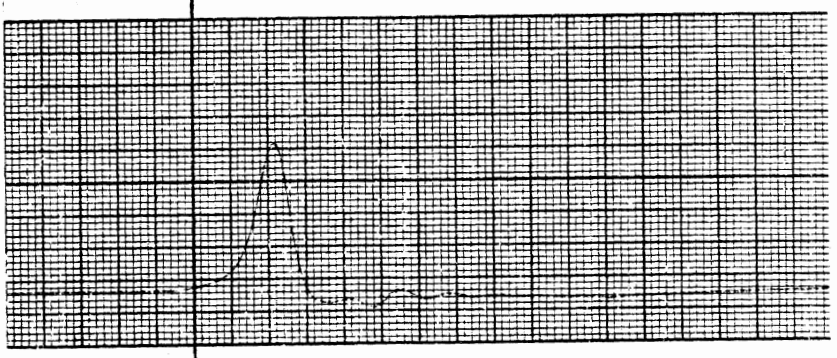


Right-Left
Acceleration

Peak: 88.4 G

Scale: 38.2 G =

Filter Class: 180

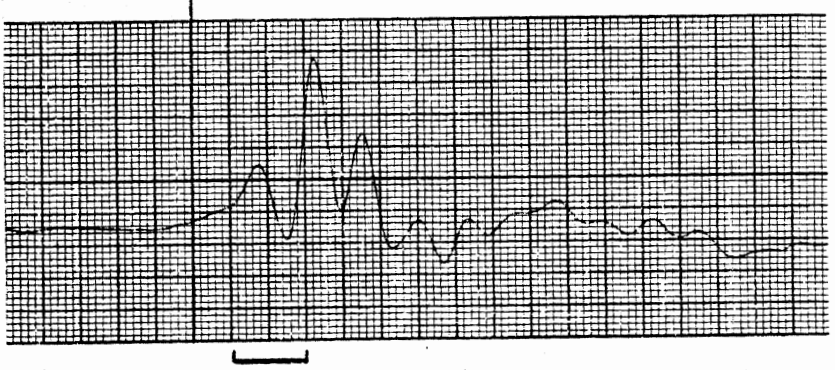


Inferior-Superior
Acceleration

Peak: 6.56 G

Scale: 2.48 G =

Filter Class: 180



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 067 DUMMY NO. 872

BODY REGION PELVIS SIDE L

PEAK RESULTANT: 86.4 G

Impact Mass Deceleration

Peak: 48.7 G

Scale: 22.3 G =

Filter Class: 60

Posterior-Anterior Acceleration

Peak: 13.2 G

Scale: 8.26 G =

Filter Class: 180

Right-Left Acceleration

Peak: 86.0 G

Scale: 38.2 G =

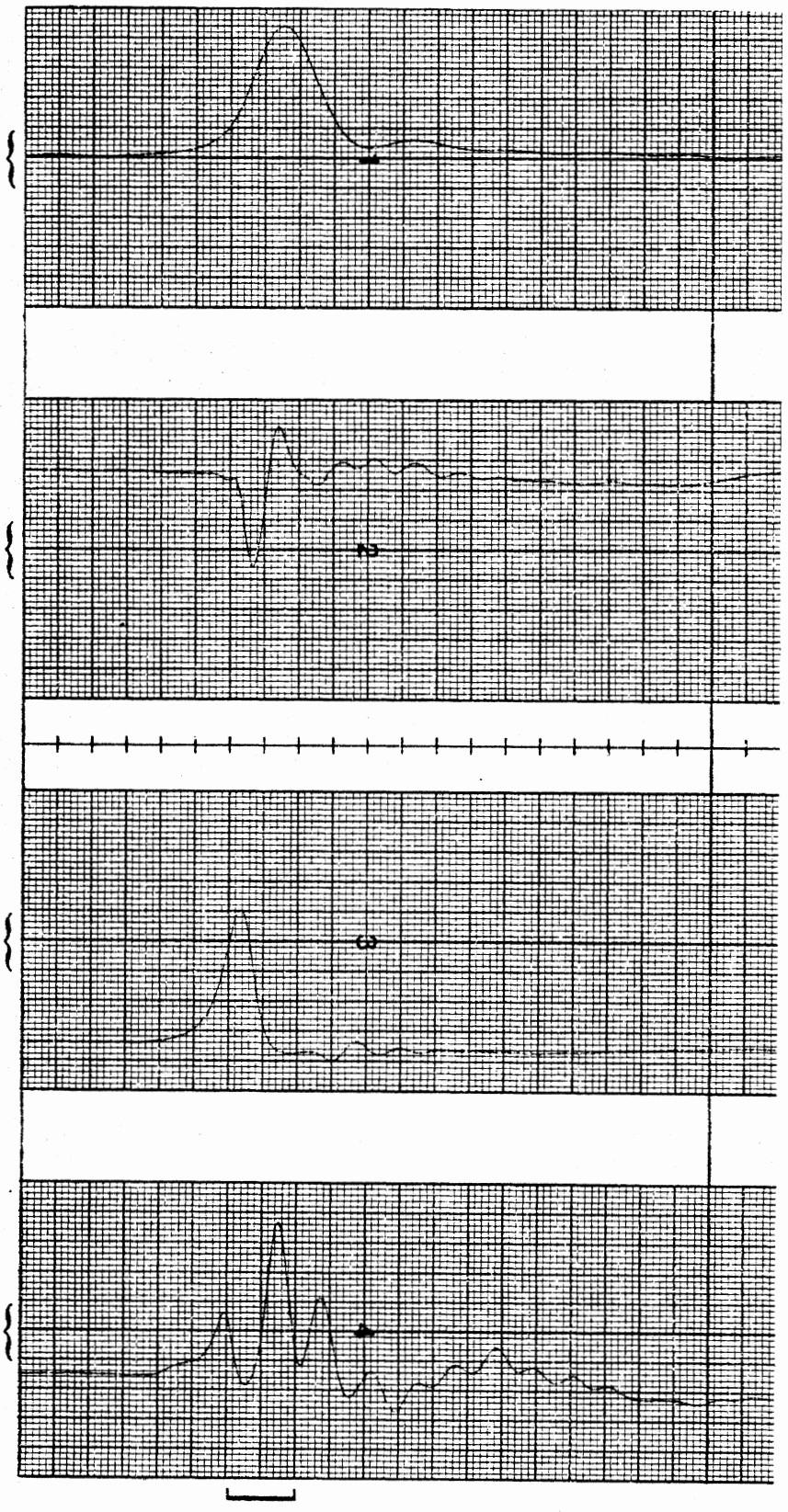
Filter Class: 180

Inferior-Superior Acceleration

Peak: 6.53 G

Scale: 2.48 G =

Filter Class: 180



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 068 DUMMY NO. 872

BODY REGION PELVIS SIDE L

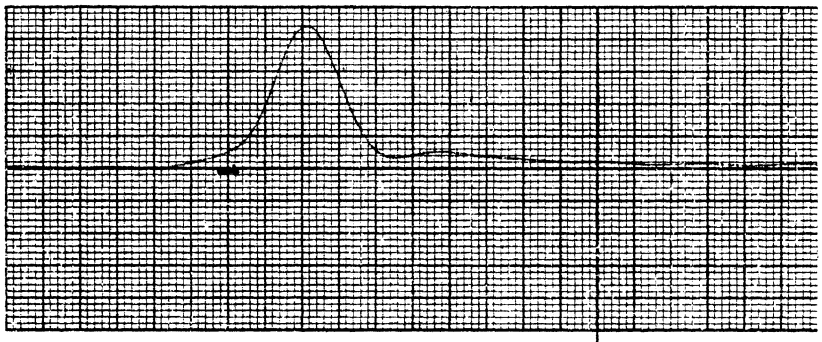
PEAK RESULTANT: 83.4 G

Impact Mass Deceleration

Peak: 49.7G

Scale: 22.3 G =

Filter Class: 60

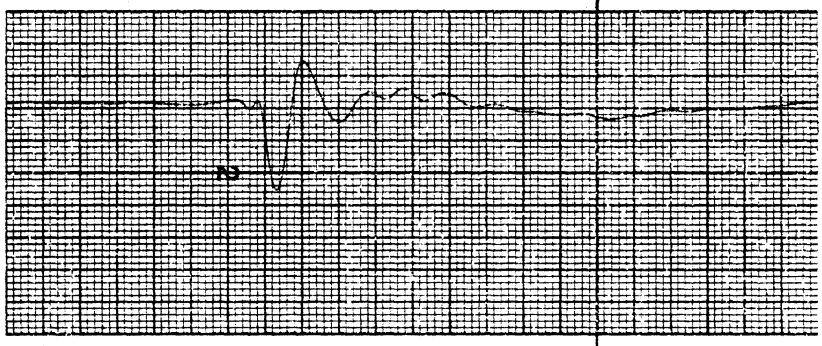


Posterior-Anterior Acceleration

Peak: 11.5 G

Scale: 8.26 G =

Filter Class: 180

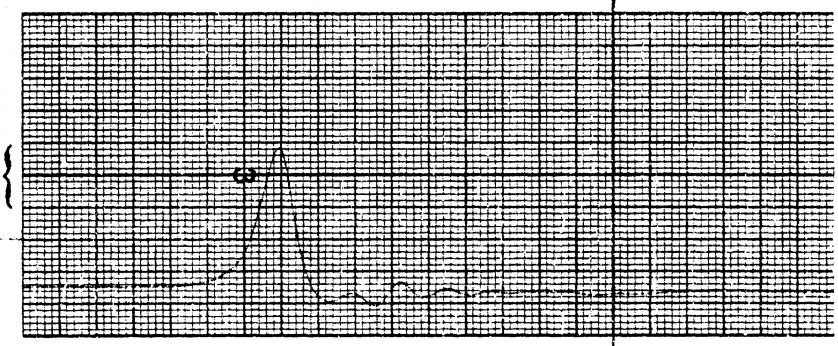


Right-Left Acceleration

Peak: 83.1 G

Scale: 38.2 G =

Filter Class: 180

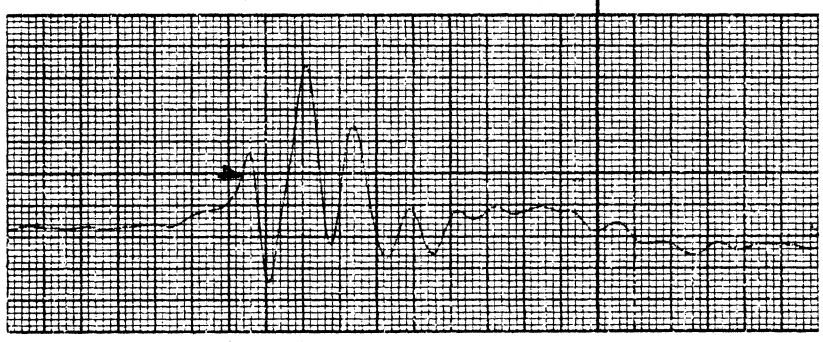


Inferior-Superior Acceleration

Peak: 6.35 G

Scale: 2.48 G =

Filter Class: 180



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 062 DUMMY NO. 872

BODY REGION PELVIS SIDE R

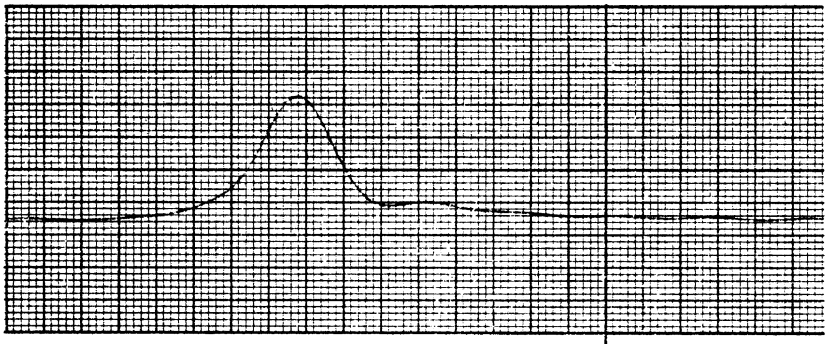
PEAK RESULTANT: 65.9 G

Impact Mass Deceleration

Peak: 41.6 G

Scale: 21.8 G =

Filter Class: 60

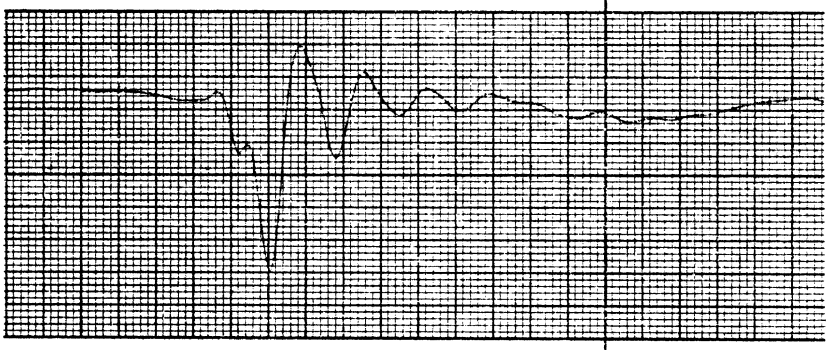


Posterior-Anterior Acceleration

Peak: 9.24 G

Scale: 3.30 G =

Filter Class: 180

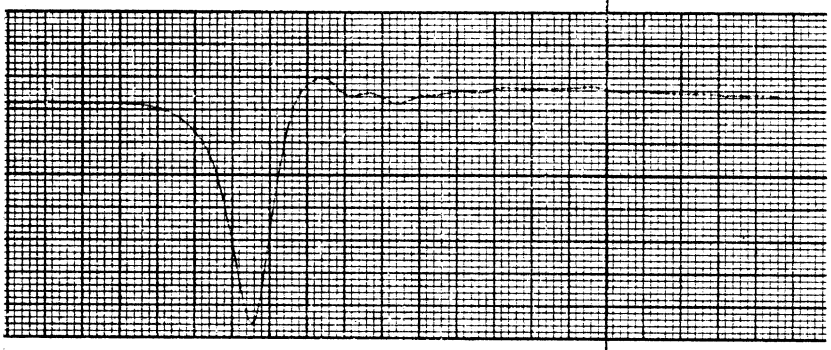


Right-Left Acceleration

Peak: 65.1 G

Scale: 19.1 G =

Filter Class: 180

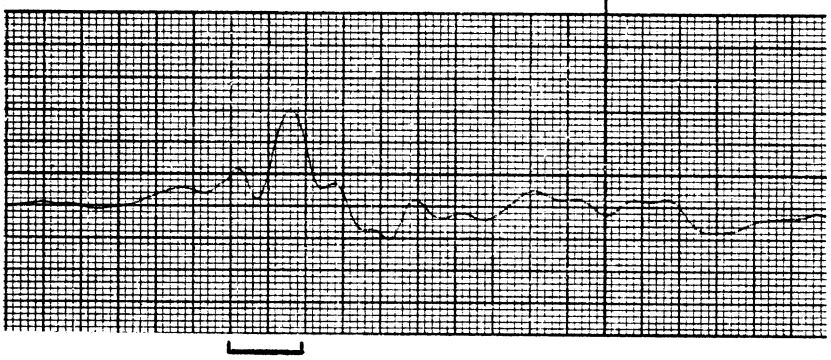


Inferior-Superior Acceleration

Peak: 3.82 G

Scale: 2.51 G =

Filter Class: 180



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 063 DUMMY NO. 872

BODY REGION PELVIS SIDE R

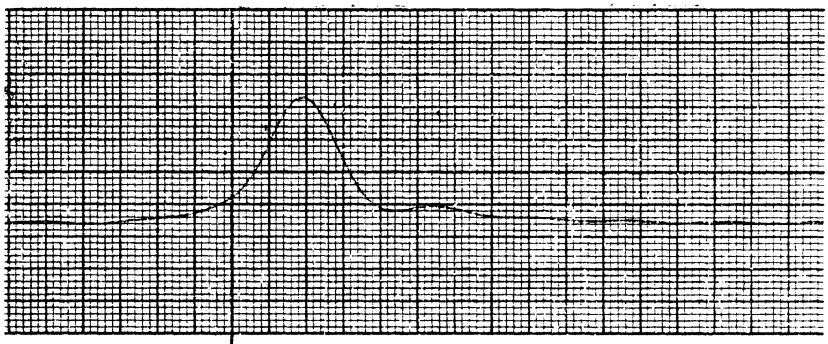
PEAK RESULTANT: 69.5 G

Impact Mass
Deceleration

Peak: 43.3 G

Scale: 21.8 G =

Filter Class: 60

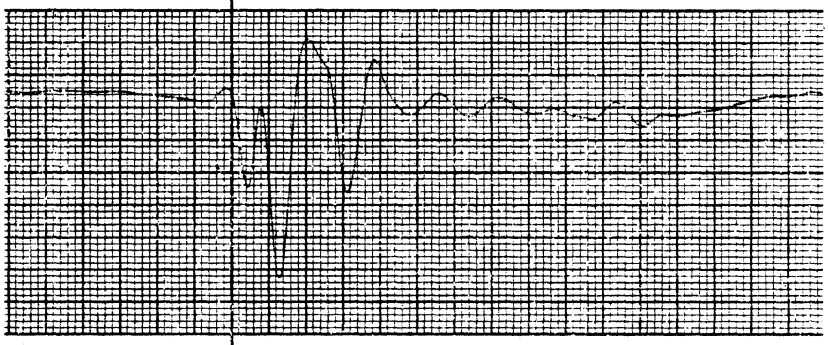


Posterior-Anterior
Acceleration

Peak: 9.55 G

Scale: 3.30 G =

Filter Class: 180

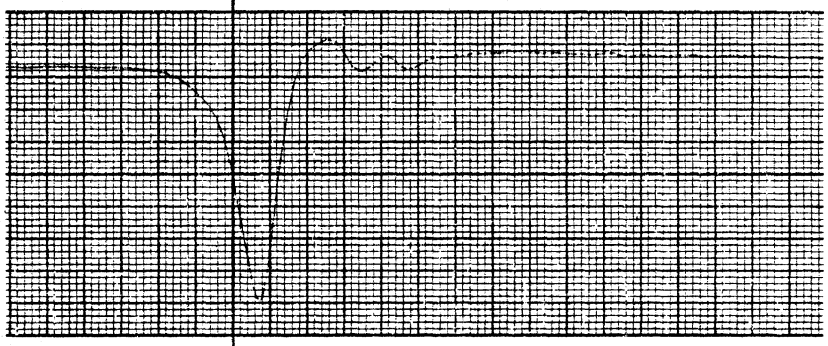


Right-Left
Acceleration

Peak: 69.1 G

Scale: 19.1 G =

Filter Class: 180



Inferior-Superior
Acceleration

Peak: 4.48 G

Scale: 2.51 G =

Filter Class: 180

6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 064 DUMMY NO. 872

BODY REGION PELVIS SIDE R

PEAK RESULTANT: 67.1 G

Impact Mass
Deceleration

Peak: 44.6 G

Scale: 22.3 G =

Filter Class: 60

Posterior-Anterior
Acceleration

Peak: 9.54 G

Scale: 3.30 G =

Filter Class: 180

Right-Left
Acceleration

Peak: 66.7 G

Scale: 19.1 G =

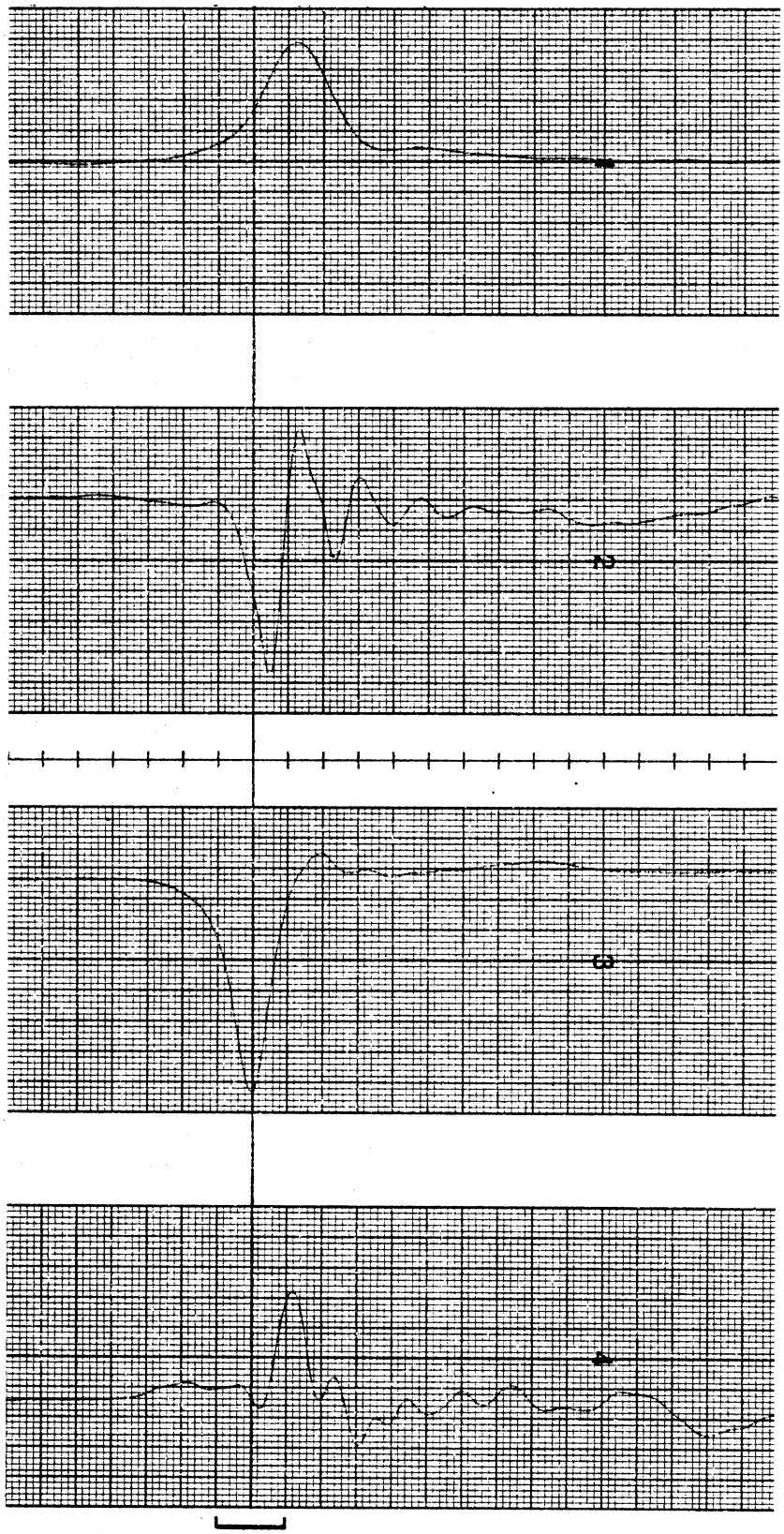
Filter Class: 180

Inferior-Superior
Acceleration

Peak: 4.54 G

Scale: 2.48 G =

Filter Class: 180



6.25 ms.

TEST RESULTS

DUMMY NO. 873

HEAD/NECK TEST RESULTS

TEST: 80Y025 DUMMY #873
IMPACT VELOCITY: 13.38 ft/sec.

TARGET VALUE	ACTUAL VALUES ANGLE (degrees)	CHORDAL DISP. (in.)	TIME (ms.)	FRAME NUMBER
0 deg.	-1.64	0.29	0.00	0
20 deg.	19.58	1.86	32.07	30
MAX ANGLE	36.75	2.83	53.45	50
MAX DISP.	36.75	2.83	53.45	50
20 deg.	20.14	1.16	81.24	76
0 deg.	-0.33	0.26	99.41	93

TEST: 80Y027 DUMMY #873
IMPACT VELOCITY: 13.61 ft/sec.

TARGET VALUE	ACTUAL VALUES ANGLE (degrees)	CHORDAL DISP. (in.)	TIME (ms.)	FRAME NUMBER
0 deg.	-2.02	0.34	0.00	0
20 deg.	19.67	1.85	32.25	30
MAX ANGLE	37.58	2.93	54.82	51
MAX DISP.	37.58	2.93	54.82	51
20 deg.	20.39	1.20	82.77	77
0 deg.	0.94	0.15	99.97	93

TEST: 80Y028 DUMMY #873
IMPACT VELOCITY: 13.28 ft/sec.

TARGET VALUE	ACTUAL VALUES ANGLE (degrees)	CHORDAL DISP. (in.)	TIME (ms.)	FRAME NUMBER
0 deg.	-4.06	0.16	0.00	0
20 deg.	19.92	1.79	36.84	35
MAX ANGLE	31.99	2.55	52.63	50
MAX DISP.	31.99	2.55	52.63	50
20 deg.	20.22	1.73	80.00	76
0 deg.	-0.44	0.32	98.95	94

TEST: 80Y029 DUMMY #873
IMPACT VELOCITY: 13.53 ft/sec.

TARGET VALUE	ACTUAL VALUES ANGLE (degrees)	CHORDAL DISP. (in.)	TIME (ms.)	FRAME NUMBER
0 deg.	-3.83	0.13	0.00	0
20 deg.	21.37	1.90	37.24	34
MAX ANGLE	33.05	2.69	63.52	58
MAX DISP.	33.05	2.69	63.52	58
20 deg.	19.64	1.69	83.24	76
0 deg.	0.35	0.40	99.67	91

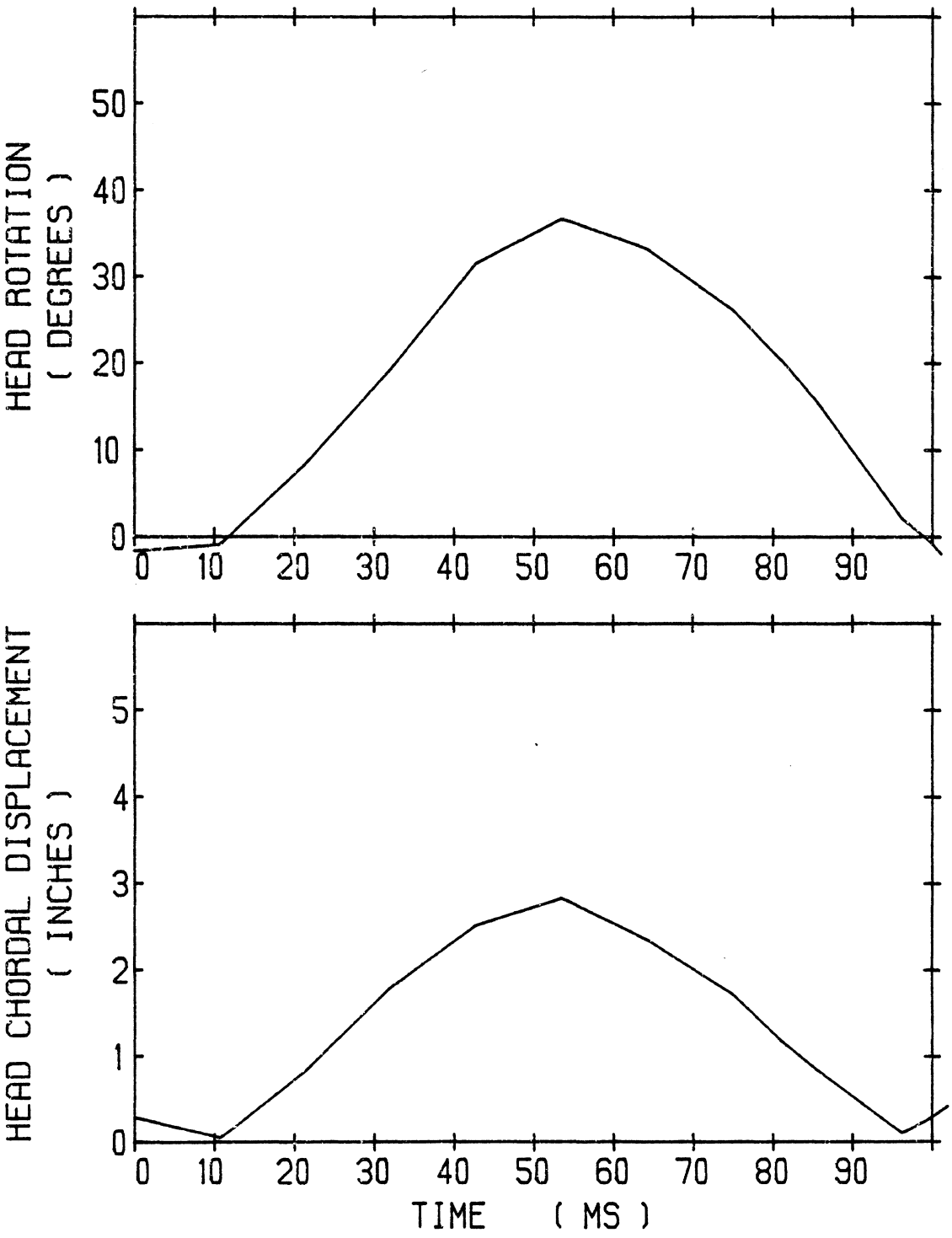
TEST: 80Y030 DUMMY #873
IMPACT VELOCITY: 13.17 ft/sec.

TARGET VALUE	ACTUAL VALUES ANGLE (degrees)	CHORDAL DISP. (in.)	TIME (ms.)	FRAME NUMBER
0 deg.	-3.85	0.17	0.00	0
20 deg.	20.41	1.78	36.09	33
MAX ANGLE	33.67	2.72	57.97	53
MAX DISP.	33.67	2.72	57.97	53
20 deg.	20.26	1.75	82.03	75
0 deg.	-0.03	0.34	99.53	91

TEST: 80Y031 DUMMY #873
IMPACT VELOCITY: 13.44 ft/sec.

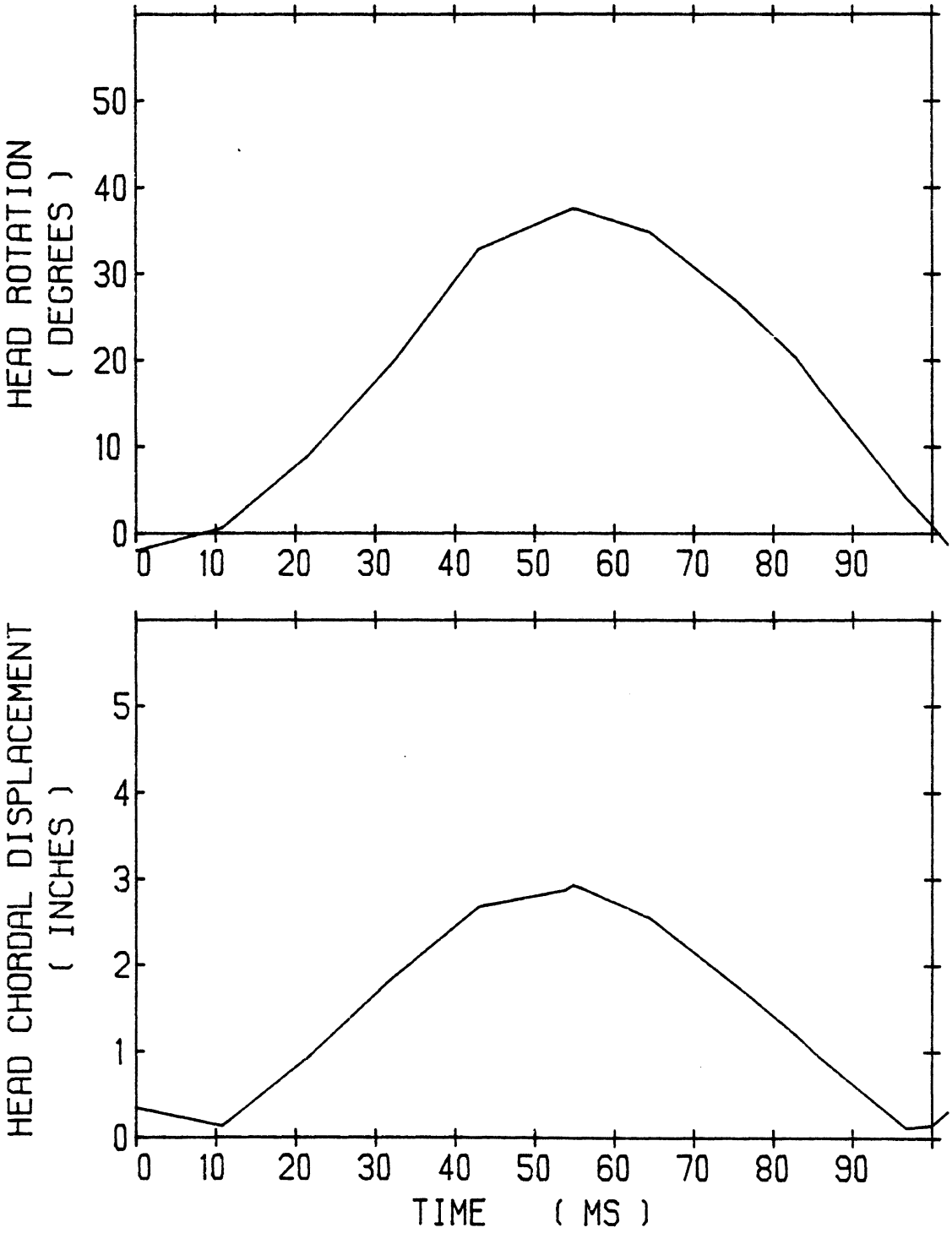
TARGET VALUE	ACTUAL VALUES ANGLE (degrees)	CHORDAL DISP. (in.)	TIME (ms.)	FRAME NUMBER
0 deg.	-1.91	0.29	0.00	0
20 deg.	19.46	1.79	34.14	30
MAX ANGLE	36.02	2.72	56.90	50
MAX DISP.	36.02	2.72	56.90	50
20 deg.	19.86	1.20	84.21	74
0 deg.	0.38	0.20	101.28	89

80Y025



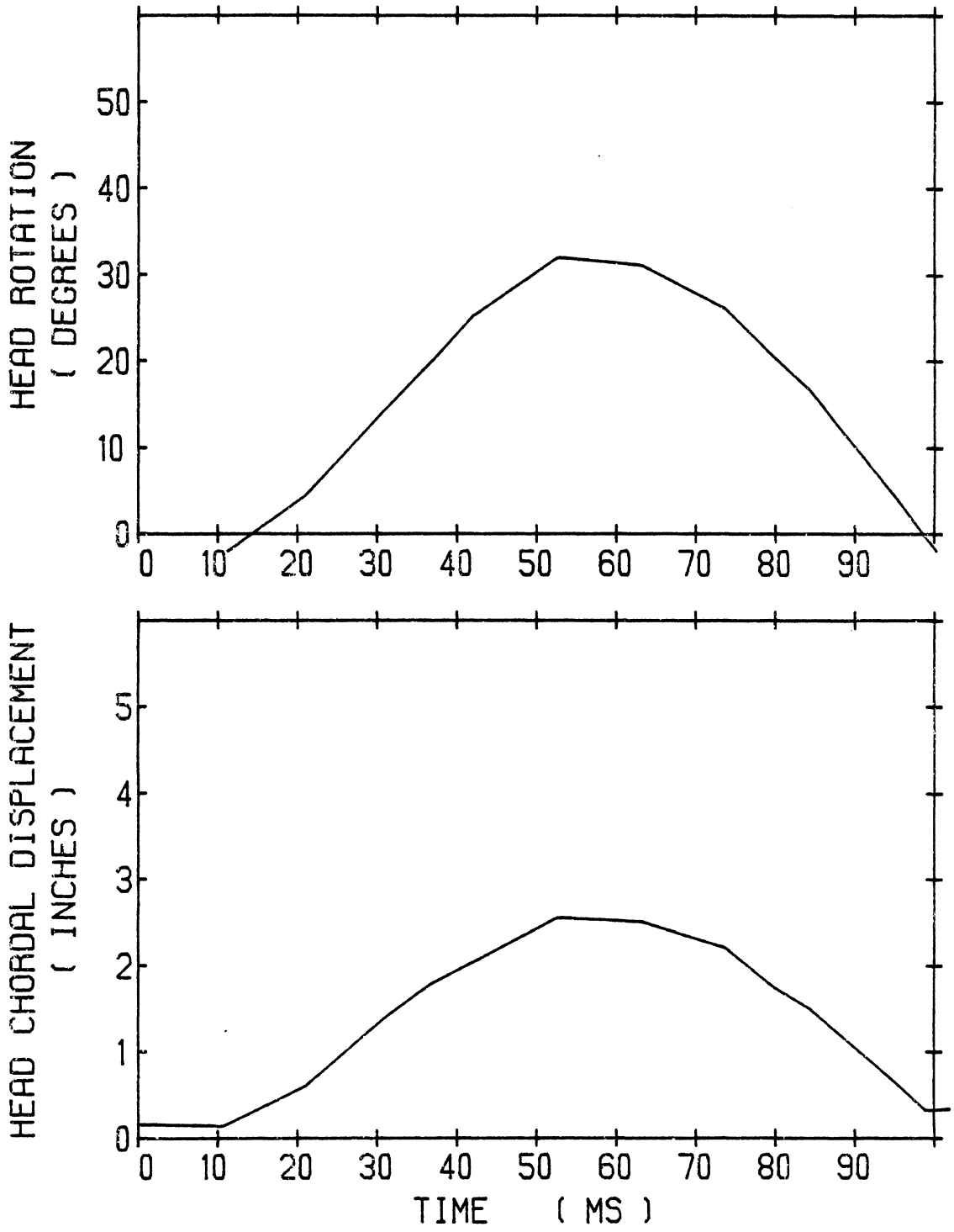
NECK PENDULUM TEST

80Y027



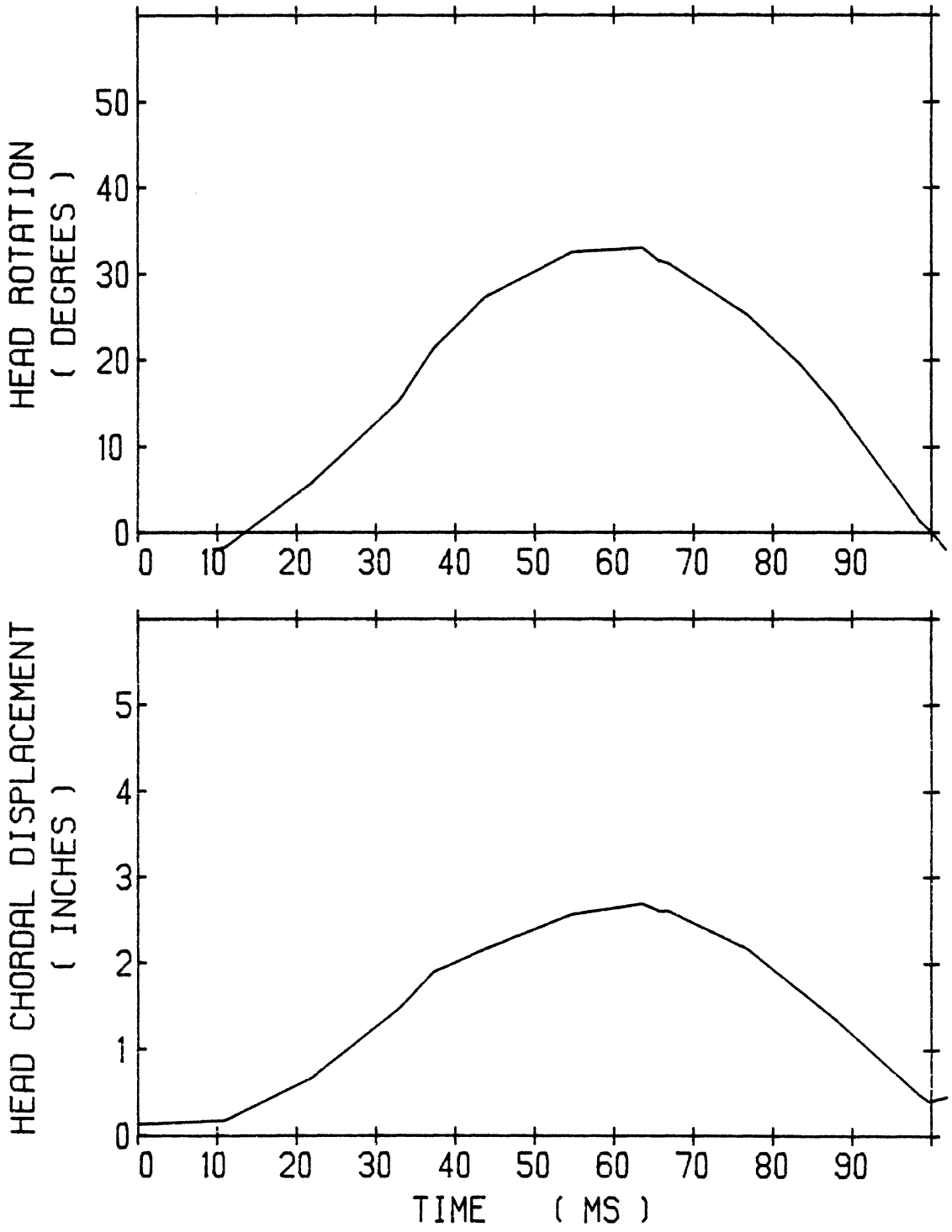
NECK PENDULUM TEST

80Y028



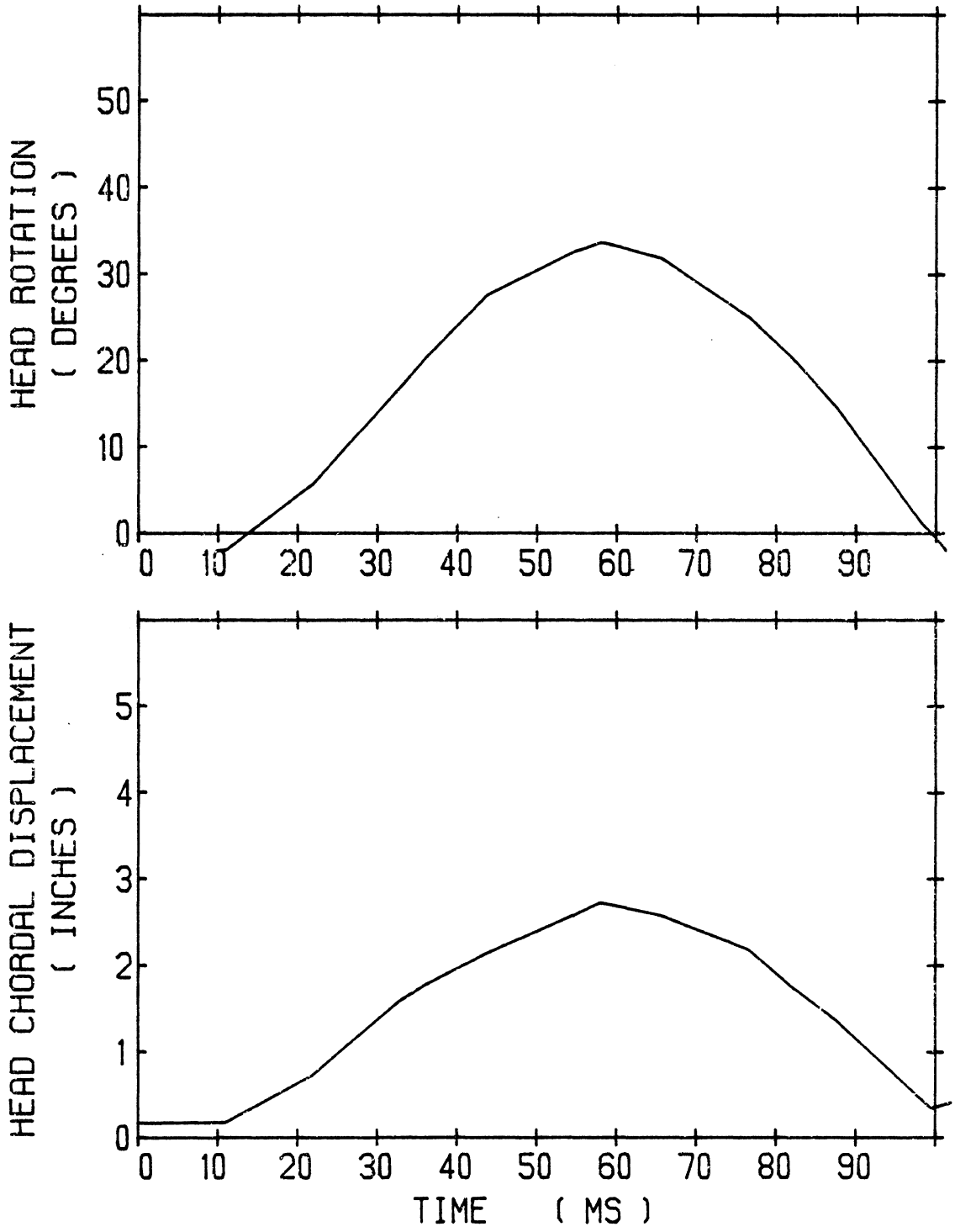
NECK PENDULUM TEST

80Y029



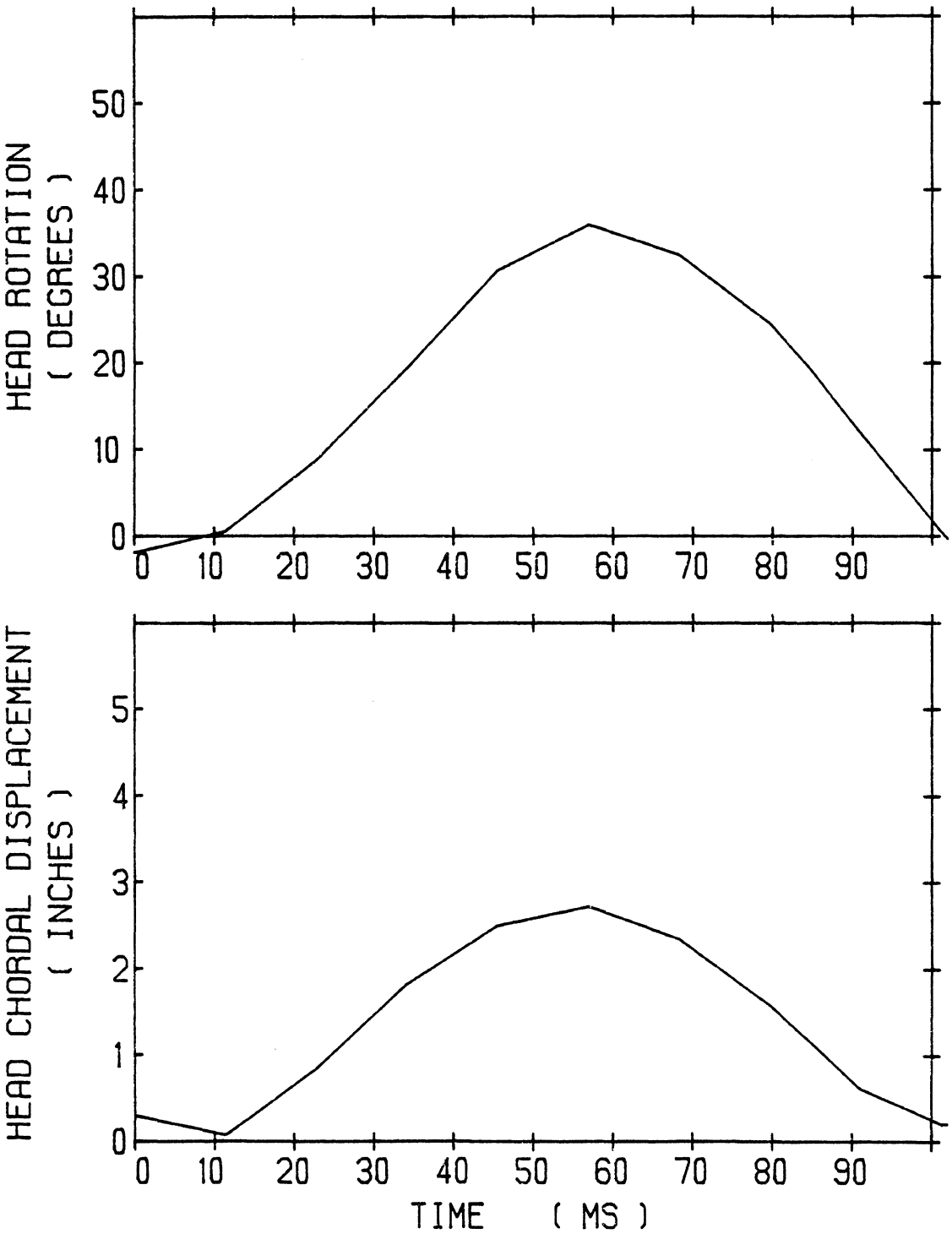
NECK PENDULUM TEST

80Y030



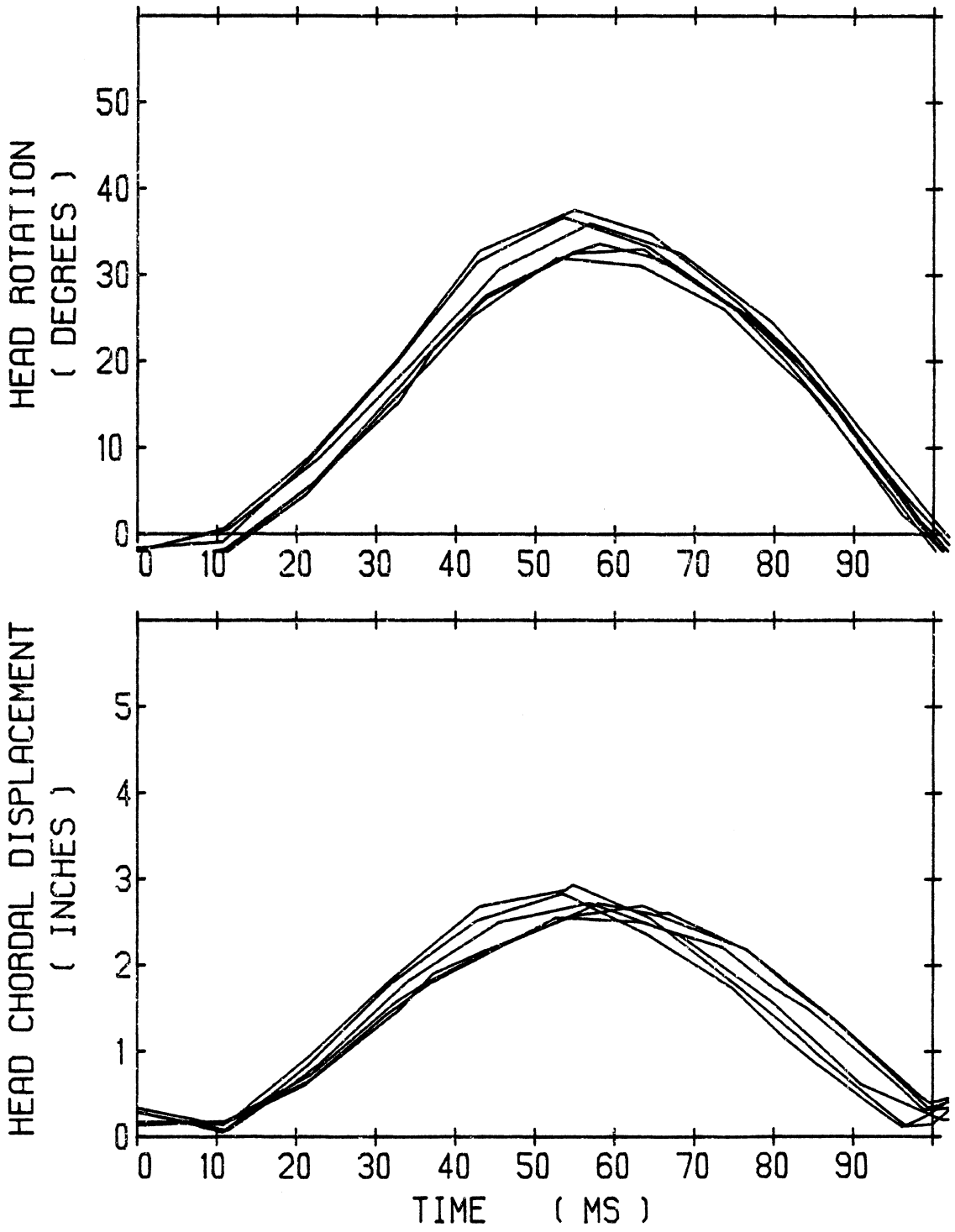
NECK PENDULUM TEST

80Y031



NECK PENDULUM TEST

ALL #873



NECK PENDULUM TEST

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 025 DUMMY NO. 873

BODY REGION HEAD/NECK SIDE L

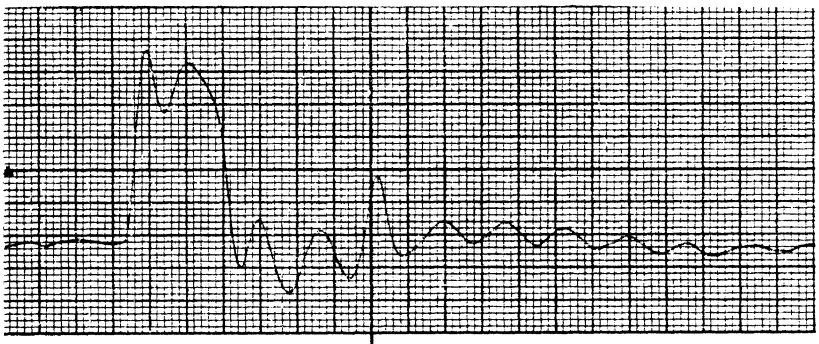
PEAK RESULTANT: 12.2 G

Impact Mass
Deceleration

Peak: 15.8 G

Scale: 5.25 G =

Filter Class: 60

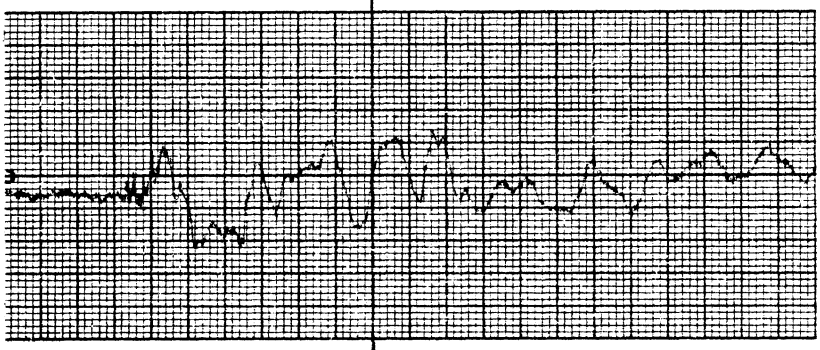


Posterior-Anterior
Acceleration

Peak: 0.57 G

Scale: 0.67 G =

Filter Class: 1000

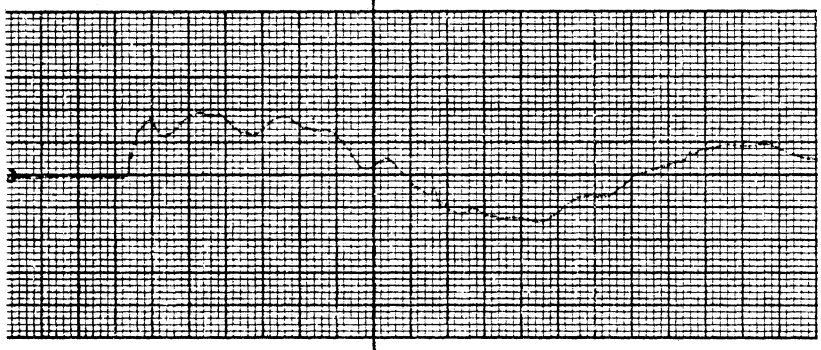


Right-Left
Acceleration

Peak: 9.93 G

Scale: 9.87 G =

Filter Class: 1000

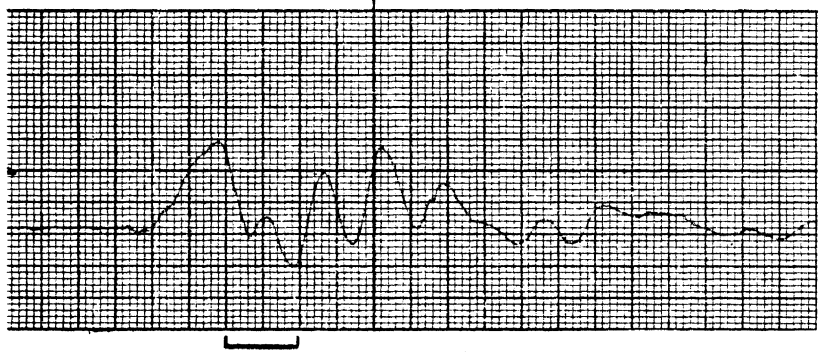


Inferior-Superior
Acceleration

Peak: 7.04 G

Scale: 5.06 G =

Filter Class: 1000



25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 026 DUMMY NO. 873

BODY REGION HEAD/NECK SIDE L

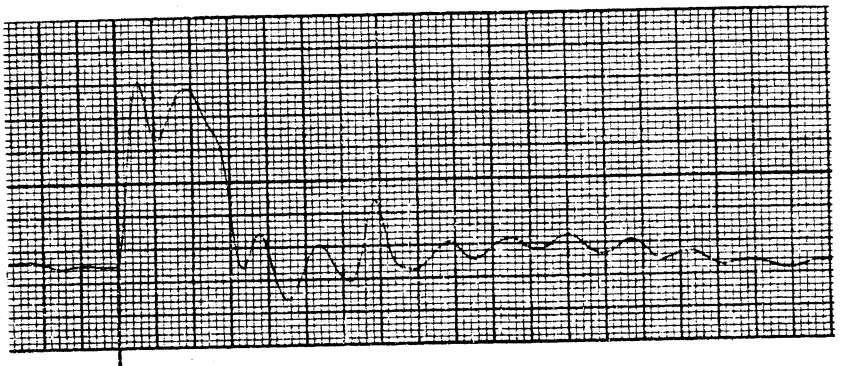
PEAK RESULTANT: 12.0 G

Impact Mass Deceleration

Peak: 14.6 G

Scale: 5.25 G =

Filter Class: 60

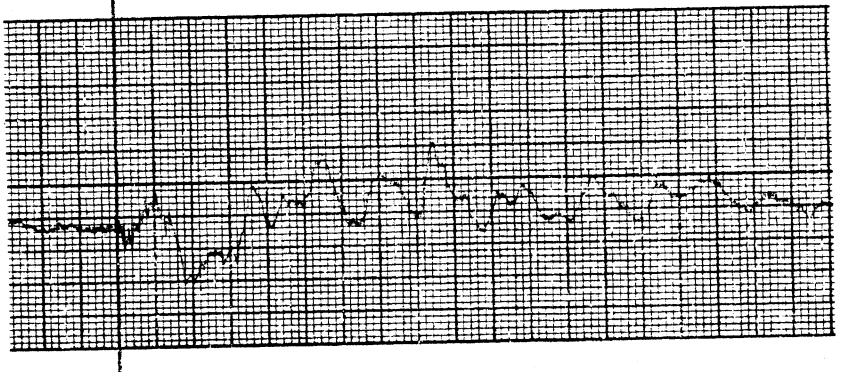


Posterior-Anterior Acceleration

Peak: 0.67 G

Scale: 0.67 G =

Filter Class: 1000

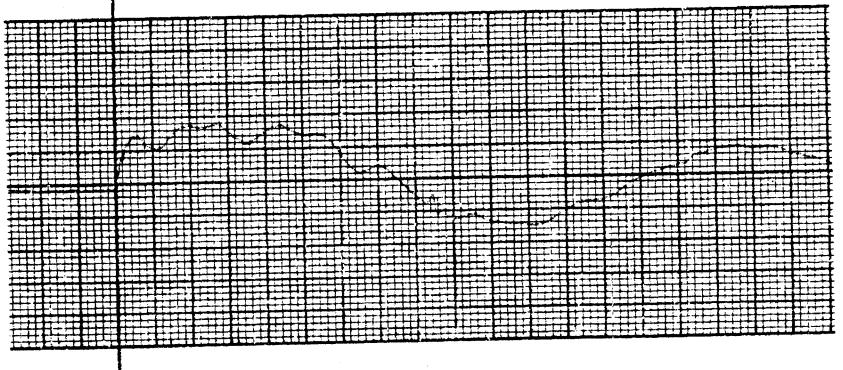


Right-Left Acceleration

Peak: 10.0 G

Scale: 9.87 G =

Filter Class: 1000

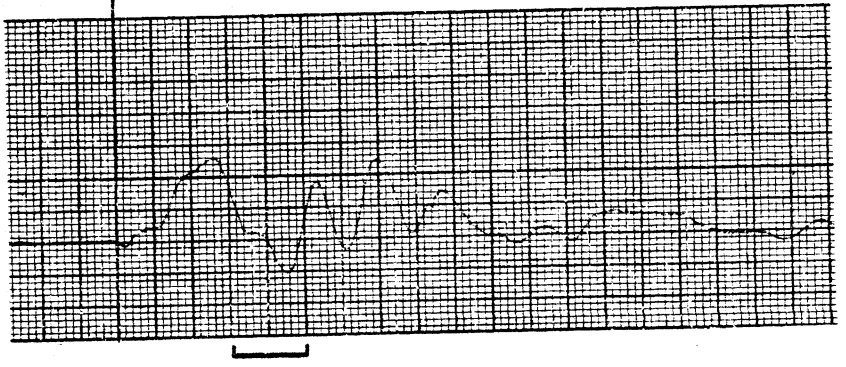


Inferior-Superior Acceleration

Peak: 6.63 G

Scale: 5.06 G =

Filter Class: 1000



25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 027 DUMMY NO. 873

BODY REGION HEAD/NECK SIDE L

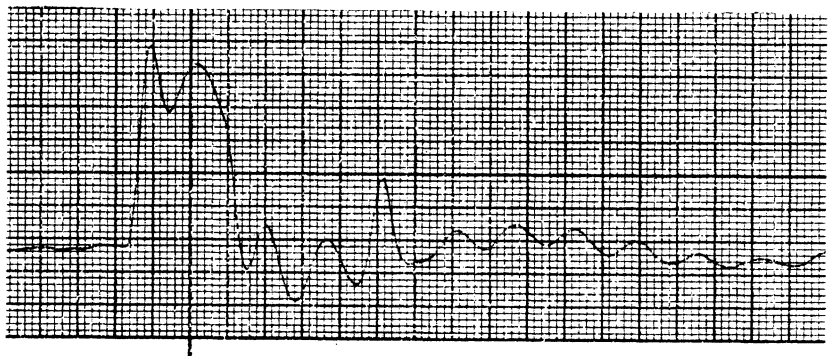
PEAK RESULTANT: 12.4 G

Impact Mass Deceleration

Peak: 16.3 G

Scale: 5.25 G =

Filter Class: 60

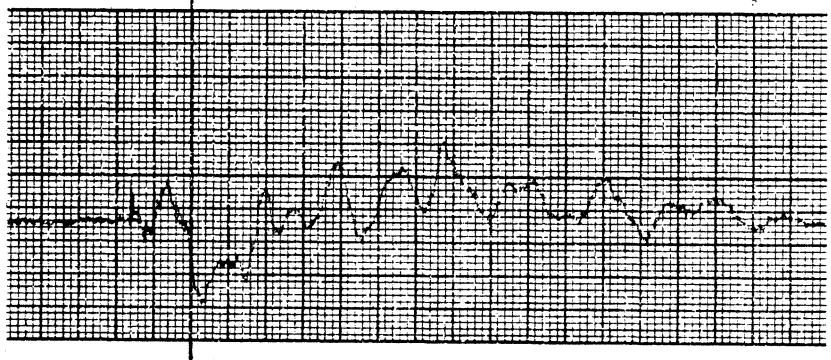


Posterior-Anterior Acceleration

Peak: 0.87 G

Scale: 0.67 G =

Filter Class: 1000

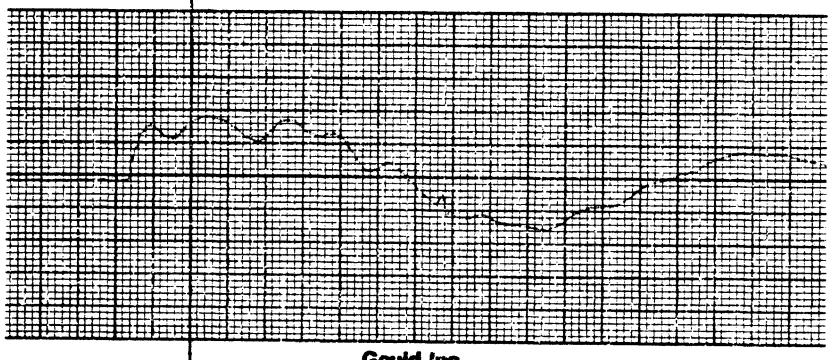


Right-Left Acceleration

Peak: 10.1 G

Scale: 9.87 G =

Filter Class: 1000



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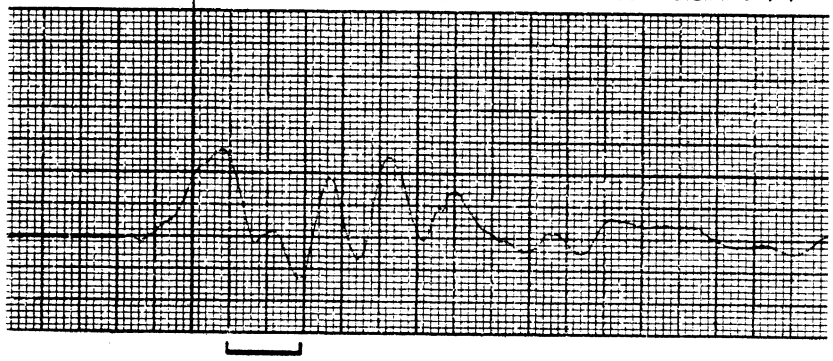
Cleveland, Ohio Printed in U.S.A.

Inferior-Superior Acceleration

Peak: 7.07 G

Scale: 5.06 G =

Filter Class: 1000



25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. SOY 028 DUMMY NO. 873

BODY REGION HEAD/NECK SIDE R

PEAK RESULTANT: 13.6 G

Impact Mass Deceleration

Peak: 14.5 G

Scale: 5.25 G =

Filter Class: 60

Posterior-Anterior Acceleration

Peak: 0.91 G

Scale: 0.67 G =

Filter Class: 1000

Right-Left Acceleration

Peak: 11.6 G

Scale: 9.87 G =

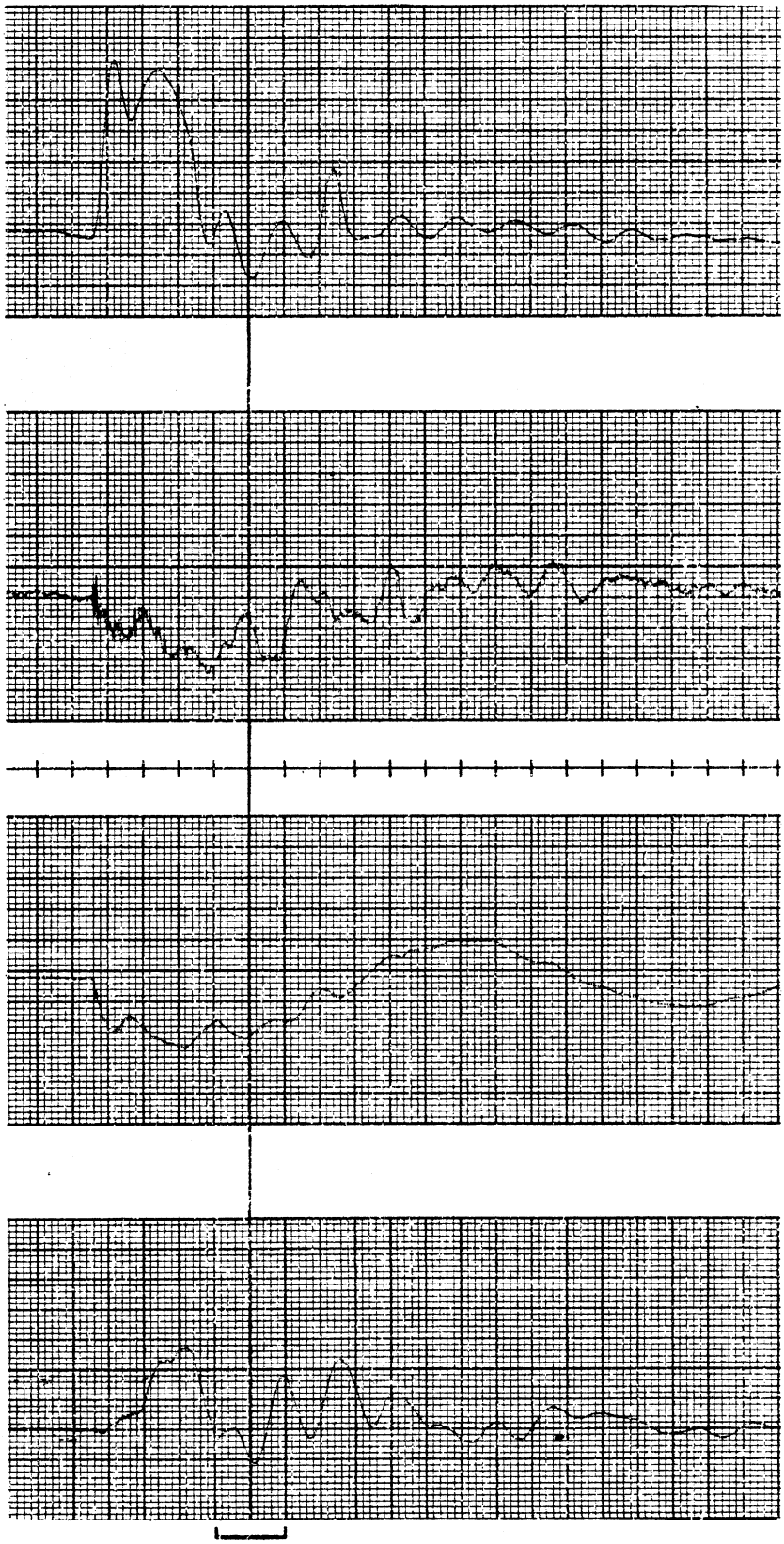
Filter Class: 1000

Inferior-Superior Acceleration

Peak: 7.10 G

Scale: 5.06 G =

Filter Class: 1000



25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 029 DUMMY NO. 873

BODY REGION HEAD / NECK SIDE R

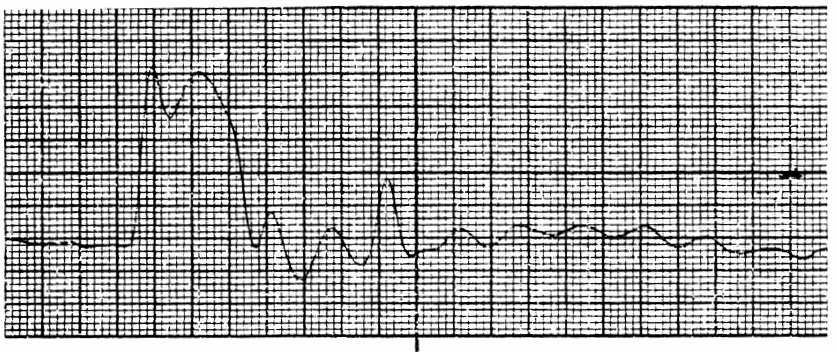
PEAK RESULTANT: 12.6 G

Impact Mass
Deceleration

Peak: 14.3 G

Scale: 5.25 G =

Filter Class: 60

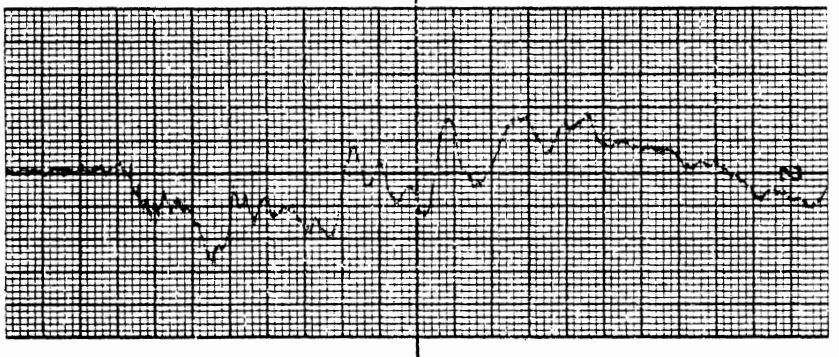


Posterior-Anterior
Acceleration

Peak: 1.00 G

Scale: 0.67 G =

Filter Class: 1000

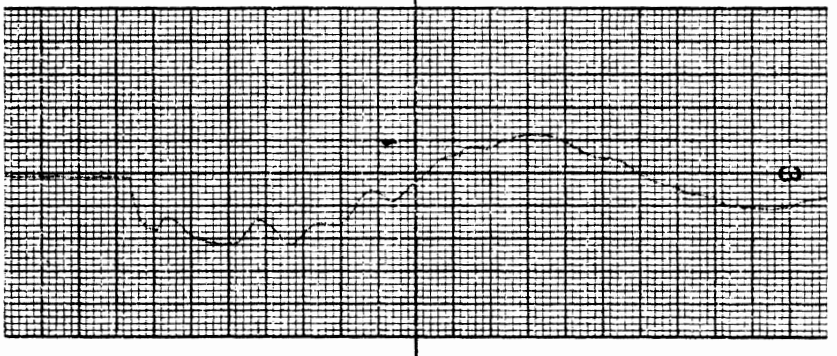


Right-Left
Acceleration

Peak: 10.5 G

Scale: 9.87 G =

Filter Class: 1000



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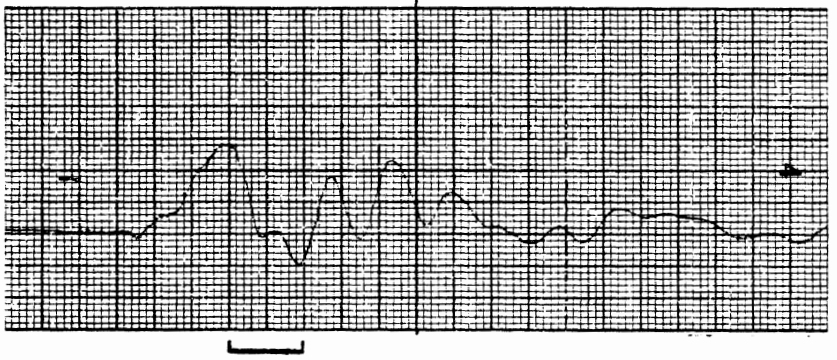
Inferior-Superior
Acceleration

Peak: 6.89 G

Scale: 5.06 G =

Filter Class: 1000



25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 030 DUMMY NO. 873

BODY REGION HEAD/NECK SIDE R

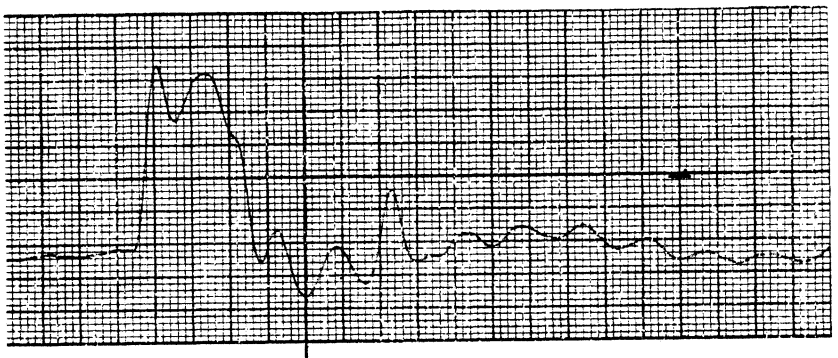
PEAK RESULTANT: 12.7 G

Impact Mass Deceleration

Peak: 15.1 G

Scale: 5.25 G =

Filter Class: 60

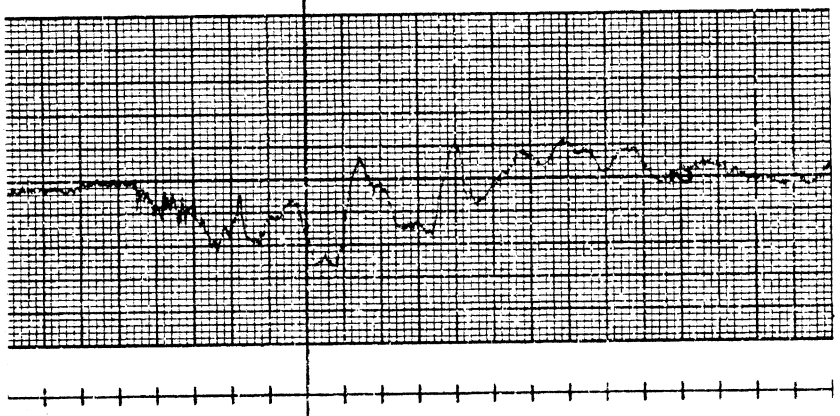


Posterior-Anterior Acceleration

Peak: 0.83 G

Scale: 0.67 G =

Filter Class: 1000

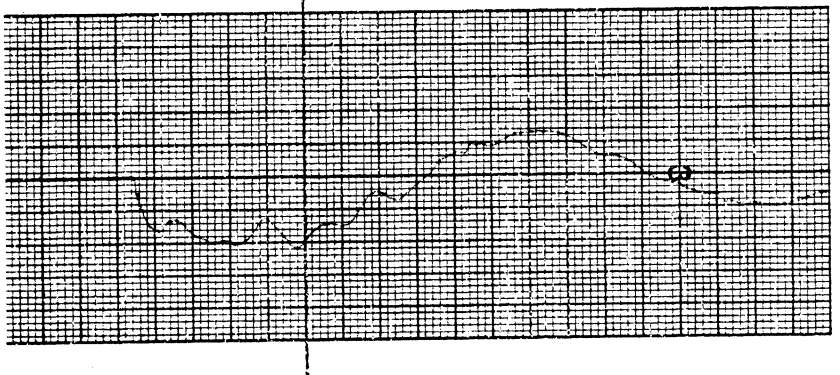


Right-Left Acceleration

Peak: 10.9 G

Scale: 9.87 G =

Filter Class: 1000

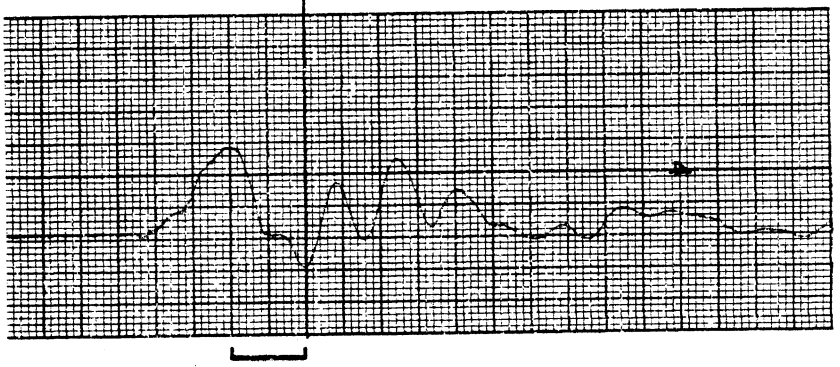


Inferior-Superior Acceleration

Peak: 6.83 G

Scale: 5.06 G =

Filter Class: 1000



25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 031 DUMMY NO. 873

BODY REGION HEAD/NECK SIDE L

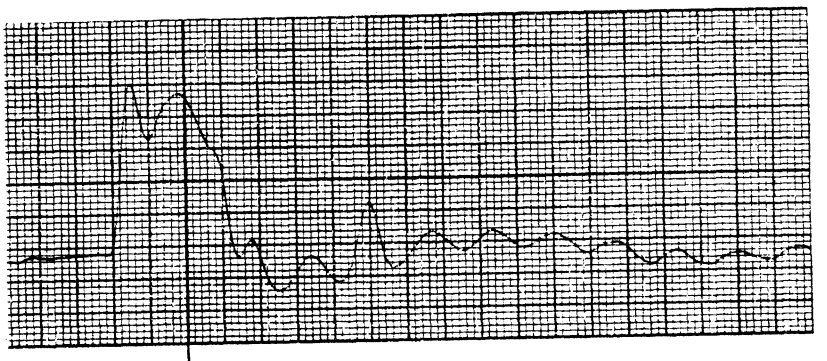
PEAK RESULTANT: 11.6 G

Impact Mass Deceleration

Peak: 14.2 G

Scale: 5.30 G =

Filter Class: 60

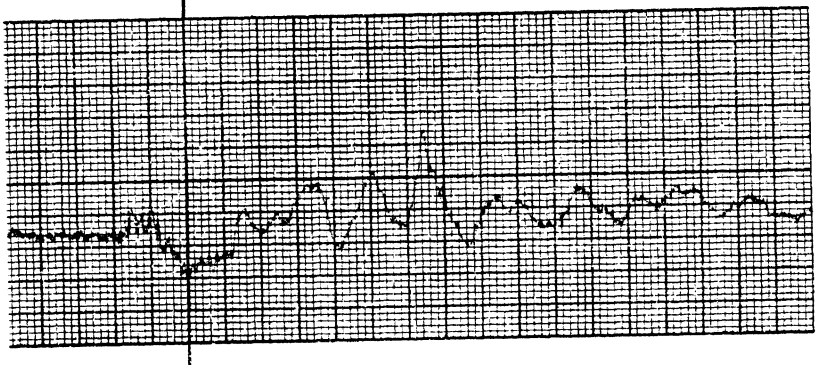


Posterior-Anterior Acceleration

Peak: 0.97 G

Scale: 0.66 G =

Filter Class: 1000

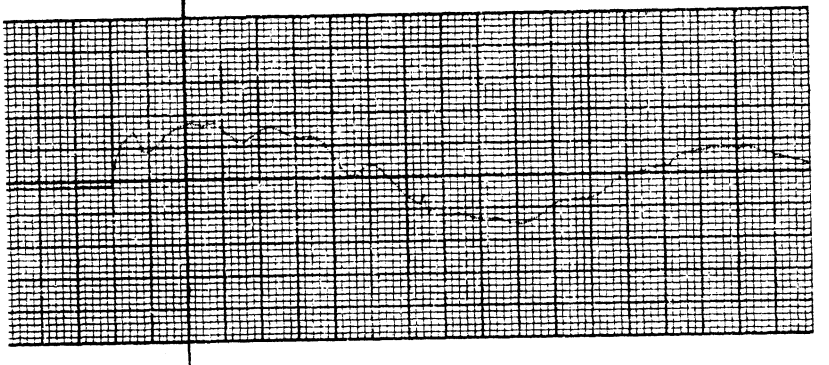


Right-Left Acceleration

Peak: 9.85 G

Scale: 9.82 G =

Filter Class: 1000

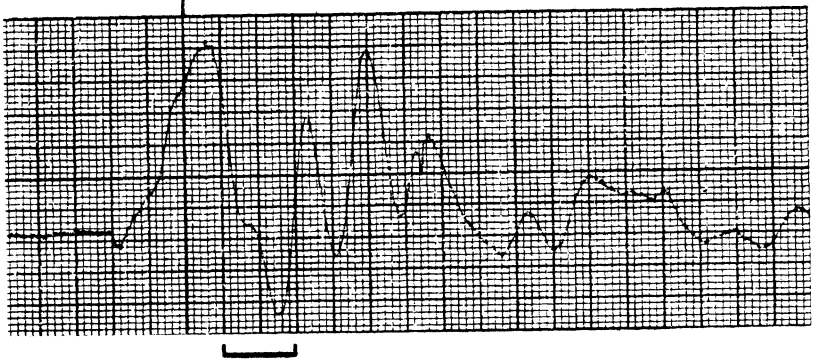


Inferior-Superior Acceleration

Peak: 6.03 G

Scale: 2.00 G =

Filter Class: 1000



25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 050 DUMMY NO. 873

BODY REGION HEAD SIDE L

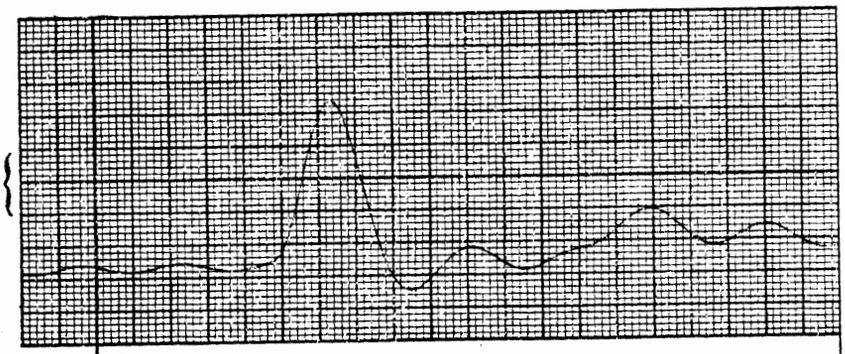
PEAK RESULTANT: 136. G

Impact Mass Deceleration

Peak: 11.3 G

Scale: 4.45 G =

Filter Class: 60

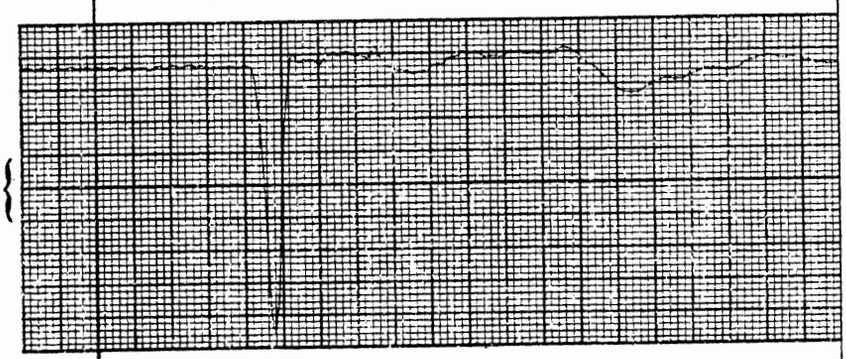


Posterior-Anterior Acceleration

Peak: 13.5 G

Scale: 3.27 G =

Filter Class: 1000

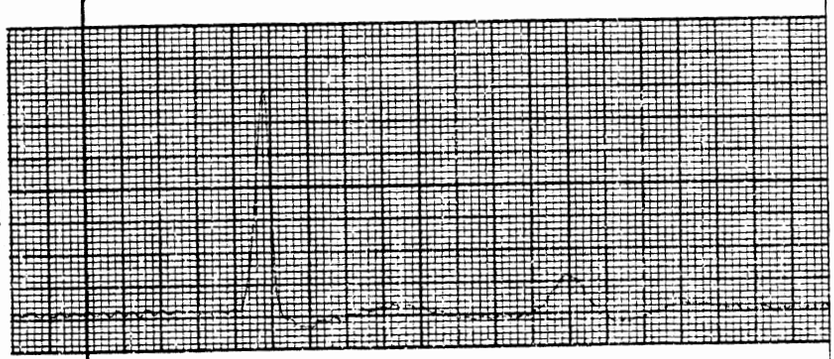


Right-Left Acceleration

Peak: 135 G

Scale: 39.3 G =

Filter Class: 1000

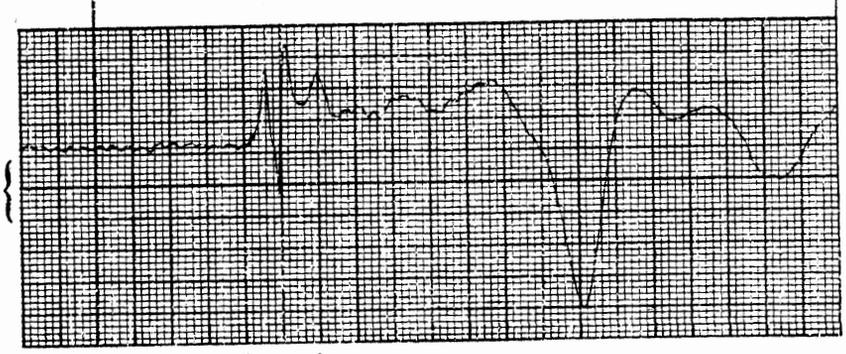


Inferior-Superior Acceleration

Peak: 5.33 G

Scale: 2.00 G =

Filter Class: 1000



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 051 DUMMY NO. 873

BODY REGION HEAD SIDE L

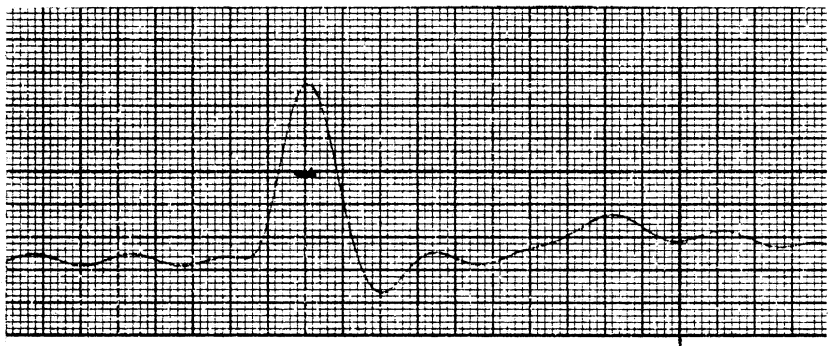
PEAK RESULTANT: 149. G

Impact Mass Deceleration

Peak: 12.0 G

Scale: 4.45 G =

Filter Class: 60

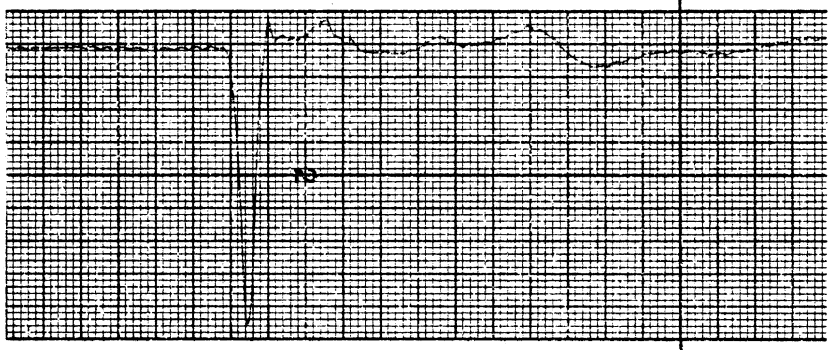


Posterior-Anterior Acceleration

Peak: 13.9 G

Scale: 3.27 G =

Filter Class: 1000

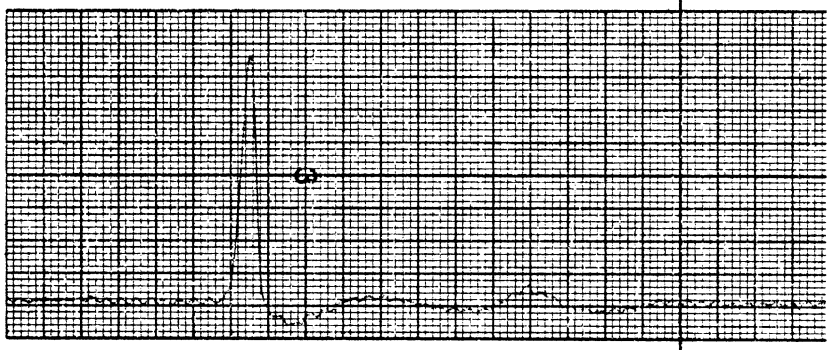


Right-Left Acceleration

Peak: 148 G

Scale: 34.3 G =

Filter Class: _____

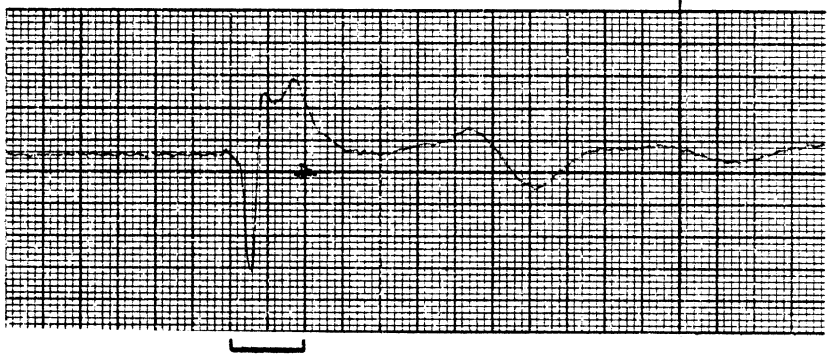


Inferior-Superior Acceleration

Peak: 9.32 G

Scale: 5.00 G =

Filter Class: 1000



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 052 DUMMY NO. 873

BODY REGION HEAD SIDE L

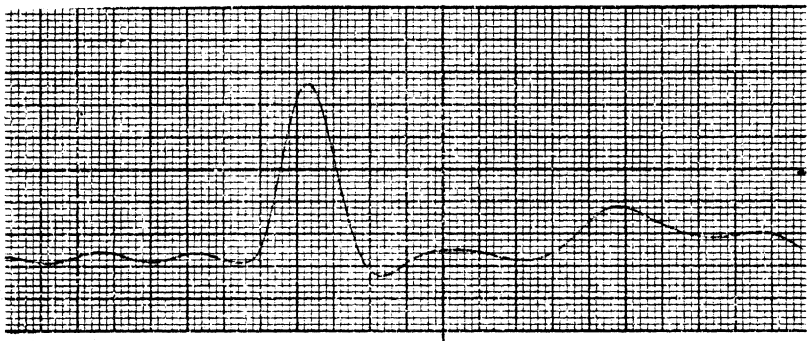
PEAK RESULTANT: 147. G

Impact Mass Deceleration

Peak: 12.0 G

Scale: 4.45 G =

Filter Class: 60



Posterior-Anterior Acceleration

Peak: 11.2 G

Scale: 3.27 G =

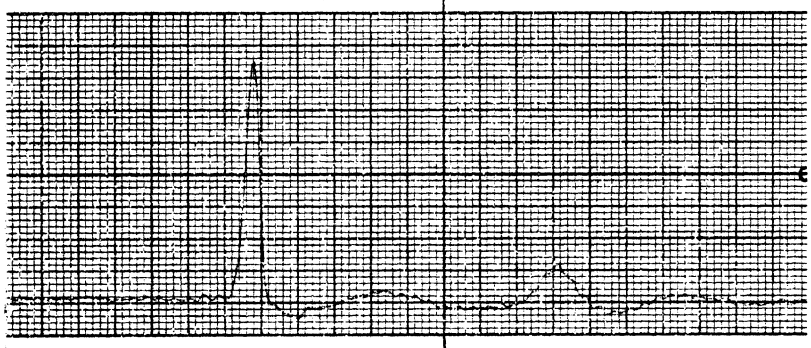
Filter Class: 1000

Right-Left Acceleration

Peak: 146. G

Scale: 39.3 G =

Filter Class: 1000

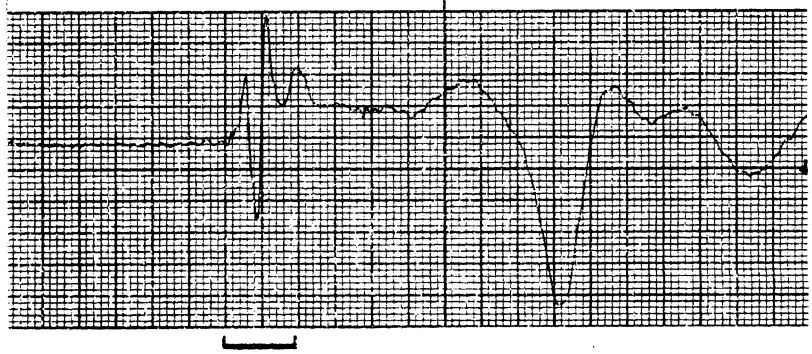


Inferior-Superior Acceleration

Peak: 5.18 G

Scale: 2.00 G =

Filter Class: 1000



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 053 DUMMY NO. 873

BODY REGION HEAD SIDE R

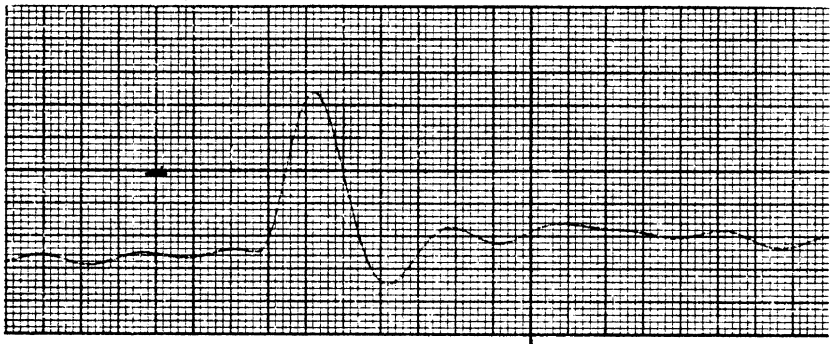
PEAK RESULTANT: 218. G

Impact Mass Deceleration

Peak: 11.3 G

Scale: 4.45 G =

Filter Class: 60

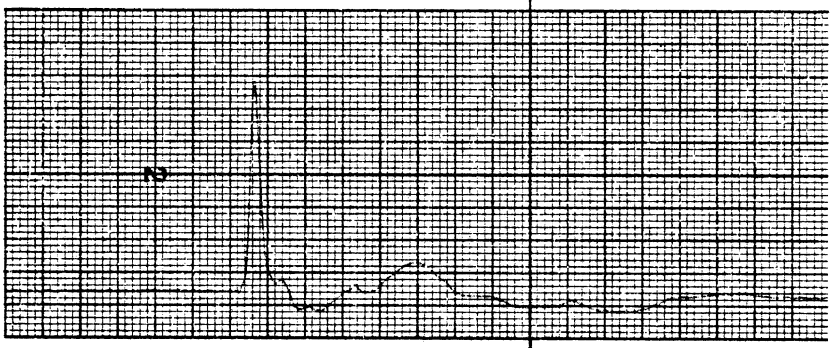


Posterior-Anterior Acceleration

Peak: 21.3 G

Scale: 6.54 G =

Filter Class: 1000

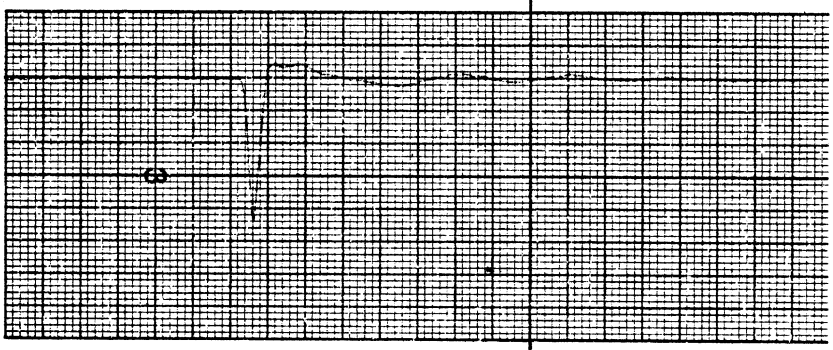


Right-Left Acceleration

Peak: 217. G

Scale: 98.2 G =

Filter Class: 1000

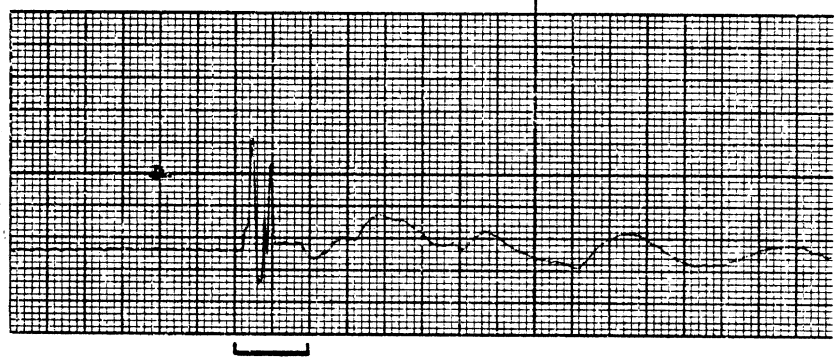


Inferior-Superior Acceleration

Peak: 9.03 G

Scale: 5.00 G =

Filter Class: 1000



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 054 DUMMY NO. 873

BODY REGION HEAD SIDE R

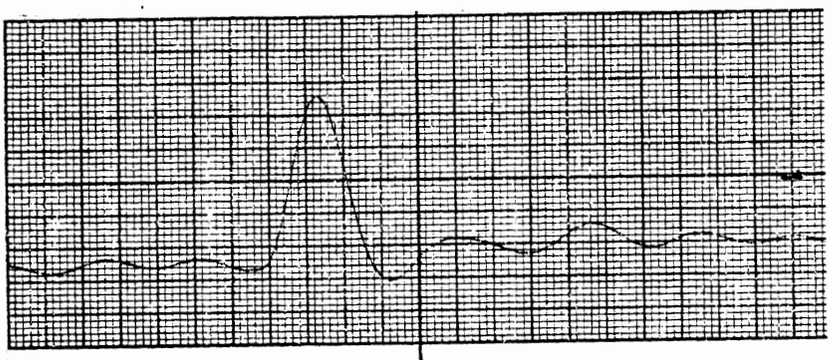
PEAK RESULTANT: 239. G

Impact Mass Deceleration

Peak: 11.7 G

Scale: 4.45 G =

Filter Class: 60

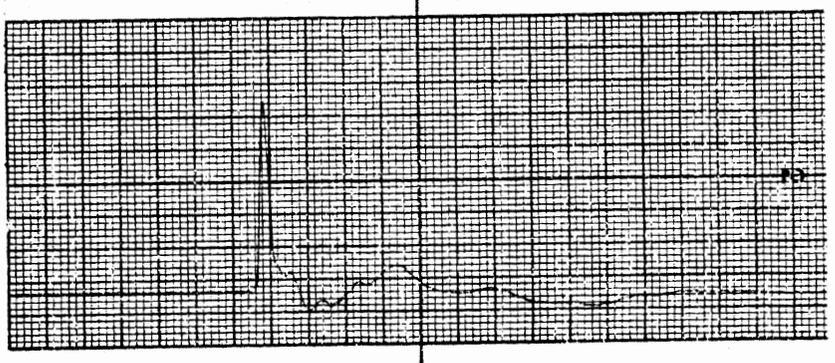


Posterior-Anterior Acceleration

Peak: 19.2 G

Scale: 6.54 G =

Filter Class: 1000

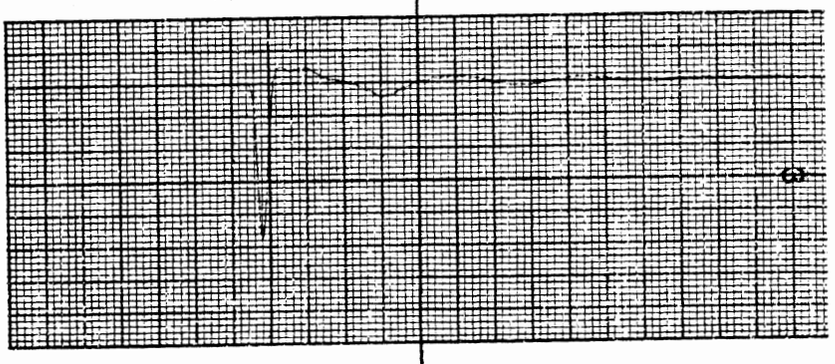


Right-Left Acceleration

Peak: 238. G

Scale: 98.2 G =

Filter Class: 1000



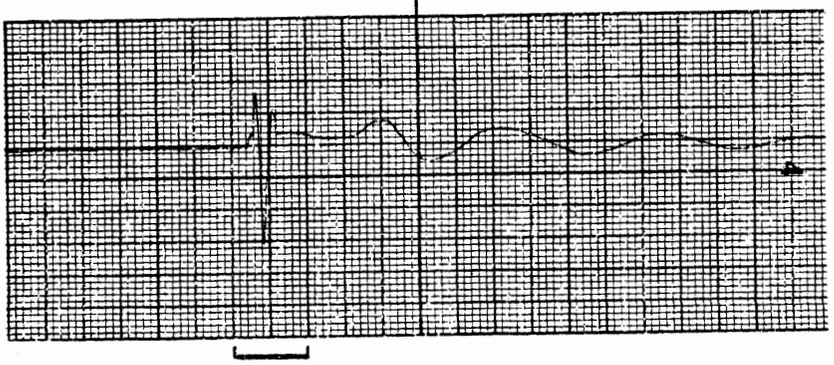
ACCUCHA

Inferior-Superior Acceleration

Peak: 15.4 G

Scale: 10.0 G =

Filter Class: 1000



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 055 DUMMY NO. 873

BODY REGION HEAD SIDE R

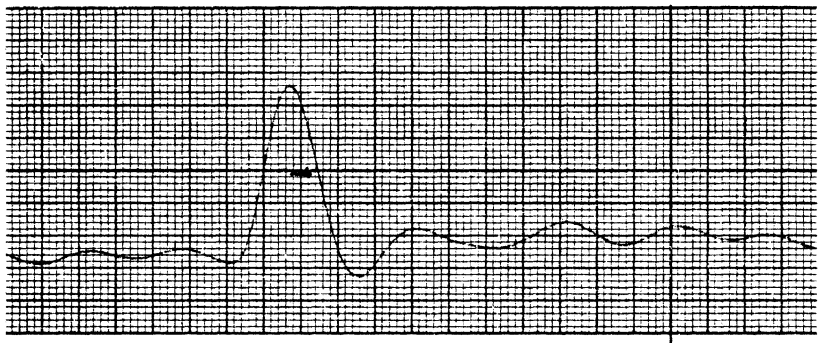
PEAK RESULTANT: 236. G

Impact Mass Deceleration

Peak: 11.9 G

Scale: 4.45 G =

Filter Class: 60

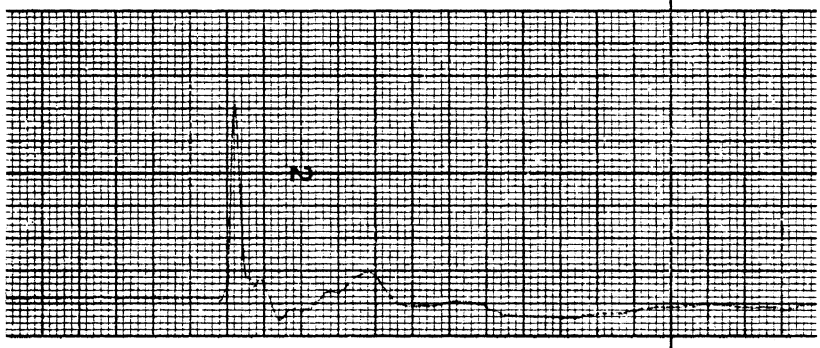


Posterior-Anterior Acceleration

Peak: 20.0 G

Scale: 6.54 G =

Filter Class: 1000

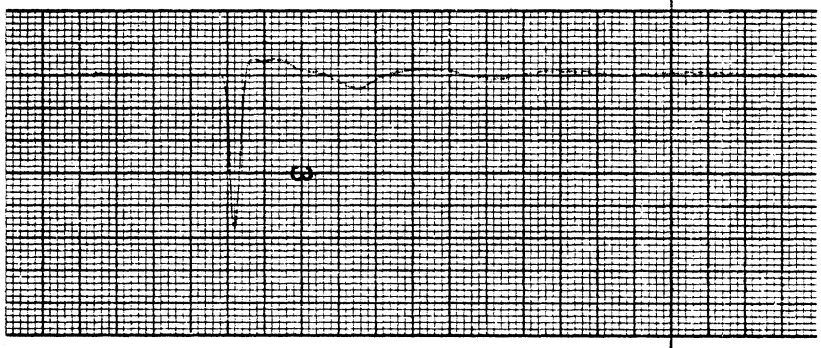


Right-Left Acceleration

Peak: 235. G

Scale: 98.2 G =

Filter Class: 1000

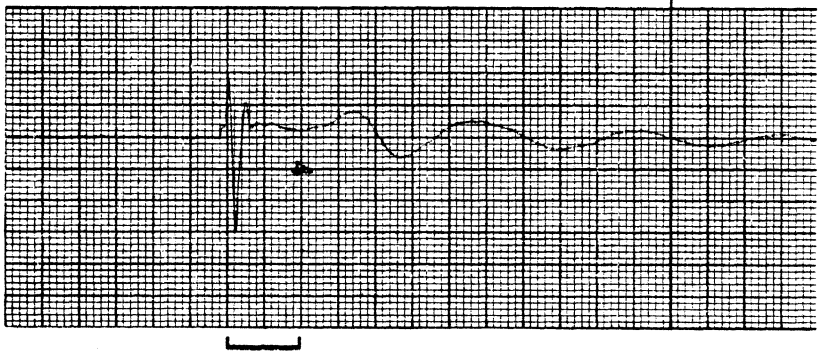


Inferior-Superior Acceleration

Peak: 15.1 G

Scale: 10.0 G =

Filter Class: 1000



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 069 DUMMY NO. 873

BODY REGION PELVIS SIDE L

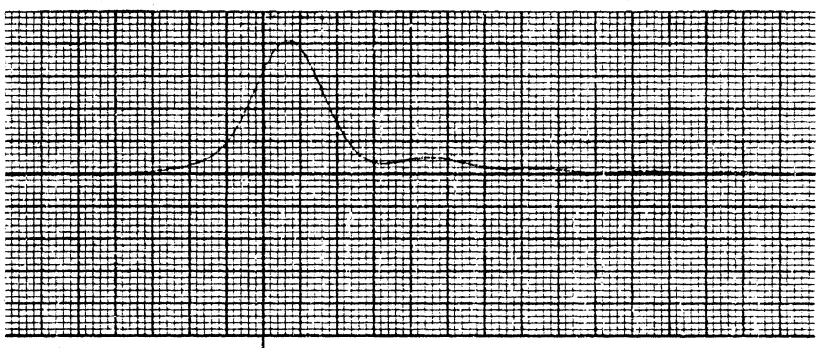
PEAK RESULTANT: 69.2 G

Impact Mass Deceleration

Peak: 45.9 G

Scale: 22.3 G =

Filter Class: 60

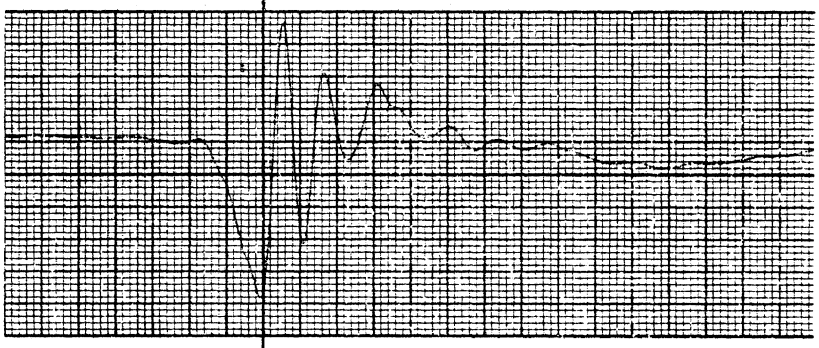


Posterior-Anterior Acceleration

Peak: 8.29 G

Scale: 3.30 G =

Filter Class: 180

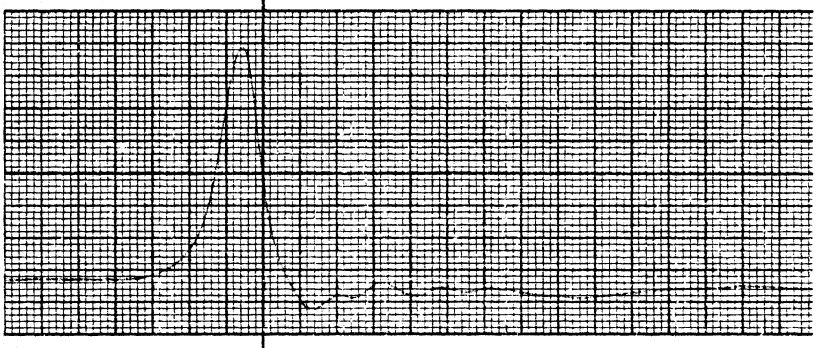


Right-Left Acceleration

Peak: 68.9 G

Scale: 19.1 G =

Filter Class: 180

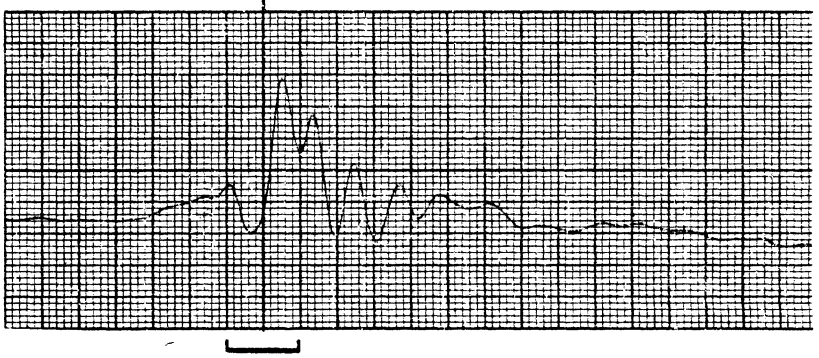


Inferior-Superior Acceleration

Peak: 5.51 G

Scale: 2.48 G =

Filter Class: 180



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 070 DUMMY NO. 873

BODY REGION PELVIS SIDE L

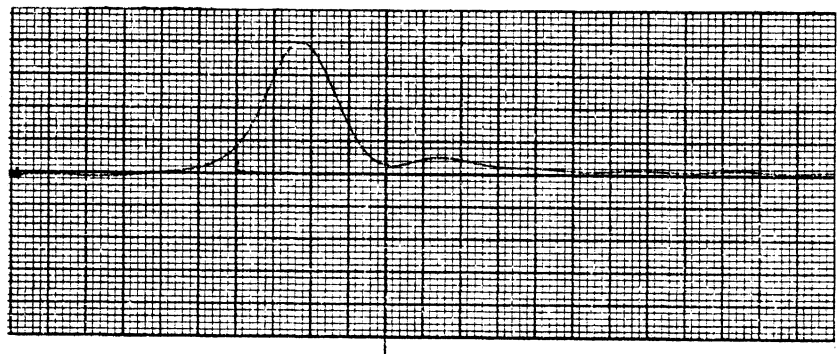
PEAK RESULTANT: 76.6 G

Impact Mass Deceleration

Peak: 46.5 G

Scale: 22.3 G =

Filter Class: 60

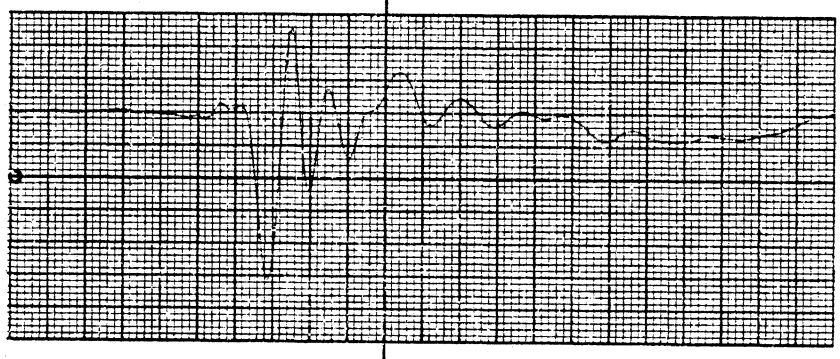


Posterior-Anterior Acceleration

Peak: 8.40 G

Scale: 3.30 G =

Filter Class: 180

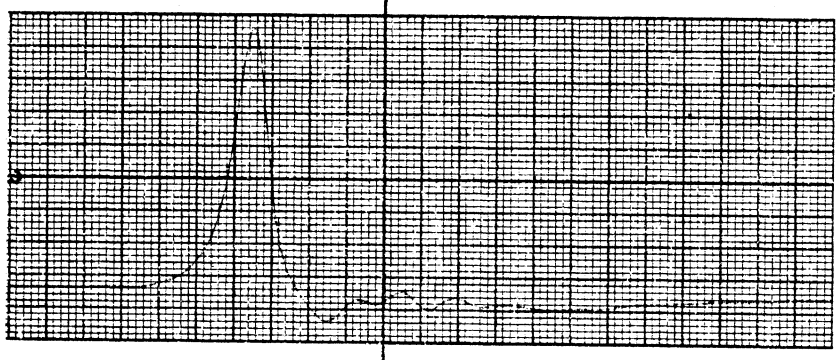


Right-Left Acceleration

Peak: 76.4 G

Scale: 19.1 G =

Filter Class: 180

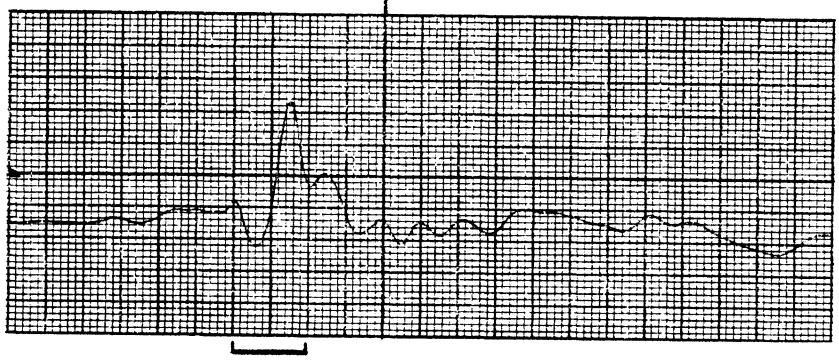


Inferior-Superior Acceleration

Peak: 4.82 G

Scale: 2.48 G =

Filter Class: 180



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 071 DUMMY NO. 873

BODY REGION PELVIS SIDE L

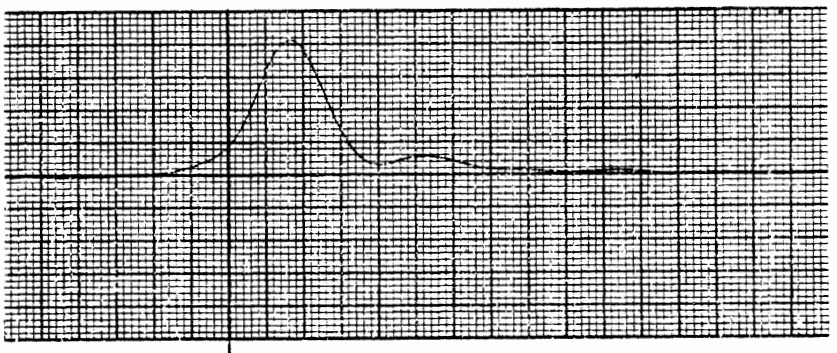
PEAK RESULTANT: 81.3 G

Impact Mass Deceleration

Peak: 46.8 G

Scale: 22.3 G =

Filter Class: 60

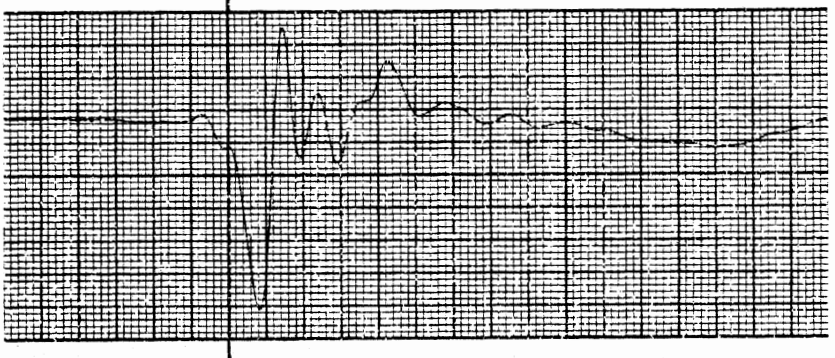


Posterior-Anterior Acceleration

Peak: 9.75 G

Scale: 3.30 G =

Filter Class: 180

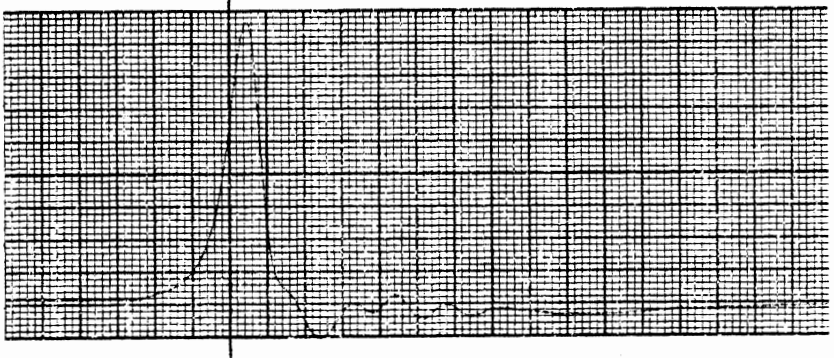


Right-Left Acceleration

Peak: 81.1 G

Scale: 19.1 G =

Filter Class: 180

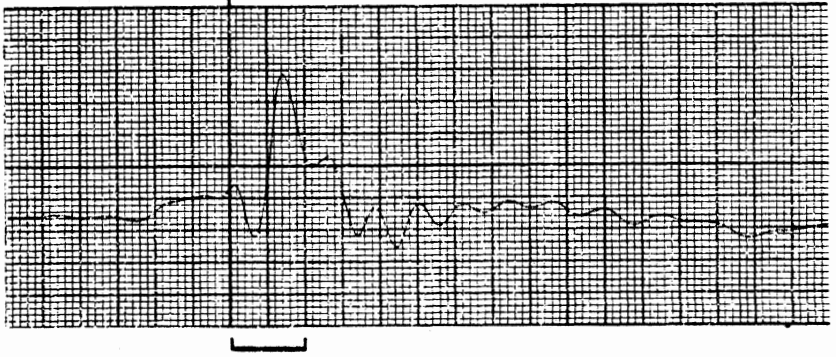


Inferior-Superior Acceleration

Peak: 5.57 G

Scale: 2.48 G =

Filter Class: 180



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 072 DUMMY NO. 873

BODY REGION PELVIS SIDE R

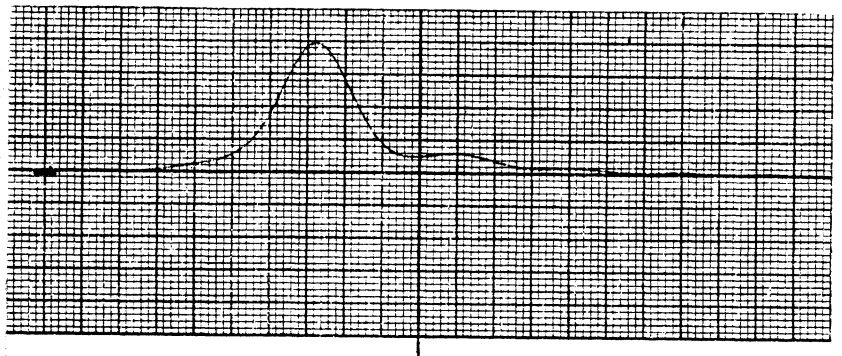
PEAK RESULTANT: 73.4 G

Impact Mass Deceleration

Peak: 44.6 G

Scale: 22.3 G =

Filter Class: 60

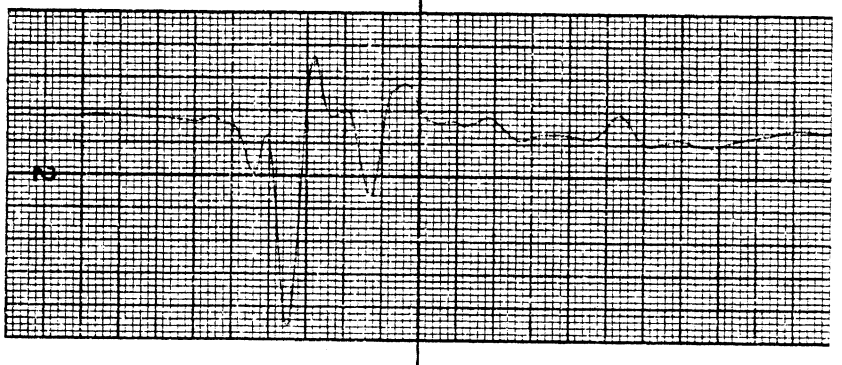


Posterior-Anterior Acceleration

Peak: 10.6 G

Scale: 3.30 G =

Filter Class: 180

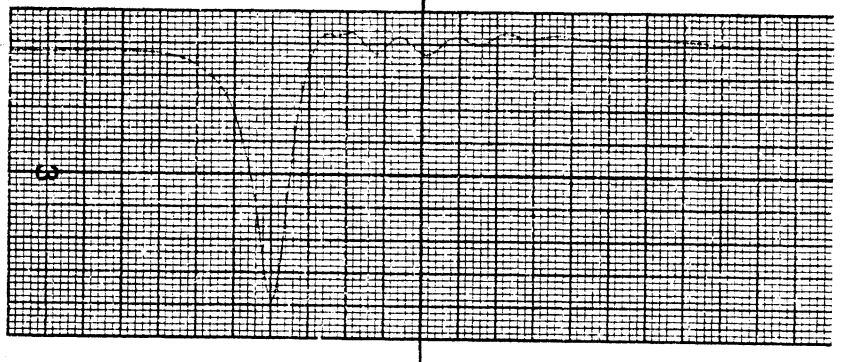


Right-Left Acceleration

Peak: 73.1 G

Scale: 19.1 G =

Filter Class: 180

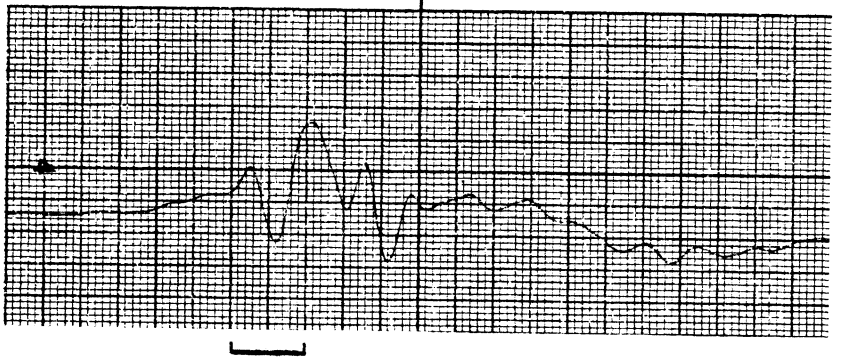


Inferior-Superior Acceleration

Peak: 3.72 G

Scale: 2.48 G =

Filter Class: 180



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 073 DUMMY NO. 873

BODY REGION PELVIS SIDE R

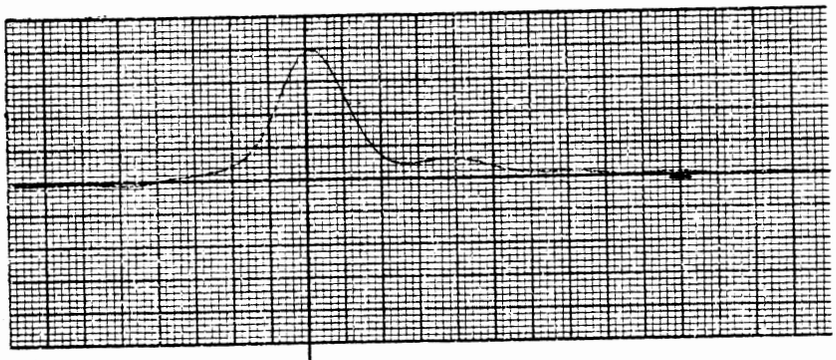
PEAK RESULTANT: 80.2 G

Impact Mass Deceleration

Peak: 45.6 G

Scale: 22.3G =

Filter Class: 60

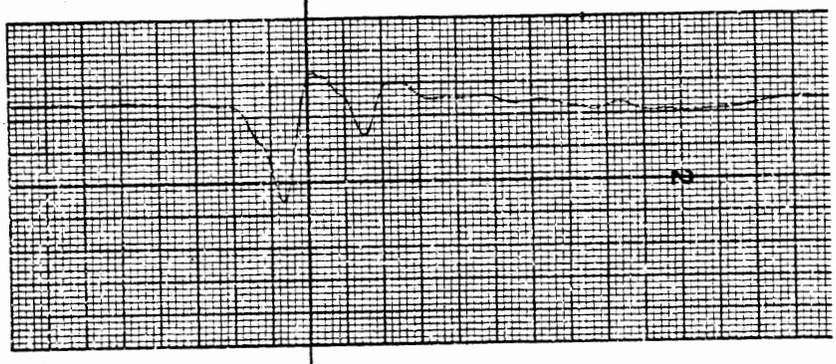


Posterior-Anterior Acceleration

Peak: 12.6 G

Scale: 8.26G =

Filter Class: 180

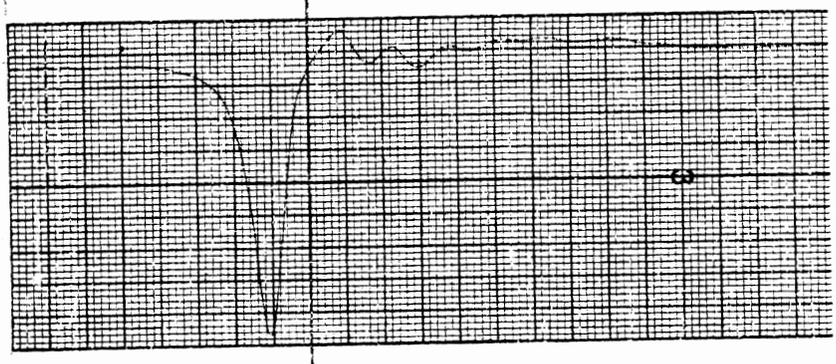


Right-Left Acceleration

Peak: 79.7 G

Scale: 19.1 G =

Filter Class: 180

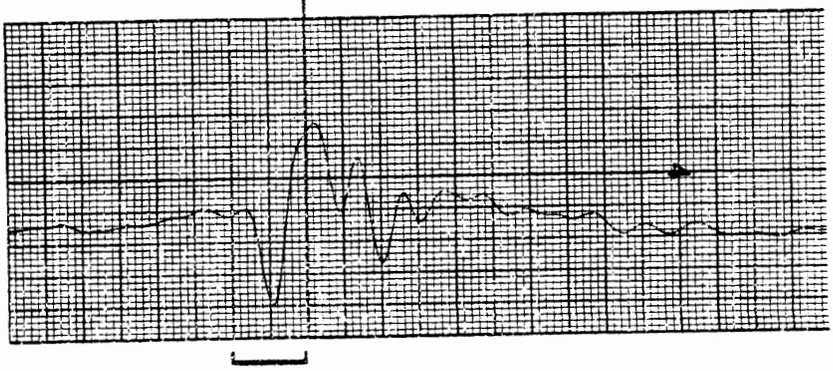


Inferior-Superior Acceleration

Peak: 3.94G

Scale: 2.48 G =

Filter Class: 180



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 074 DUMMY NO. 873

BODY REGION PELVIS SIDE R

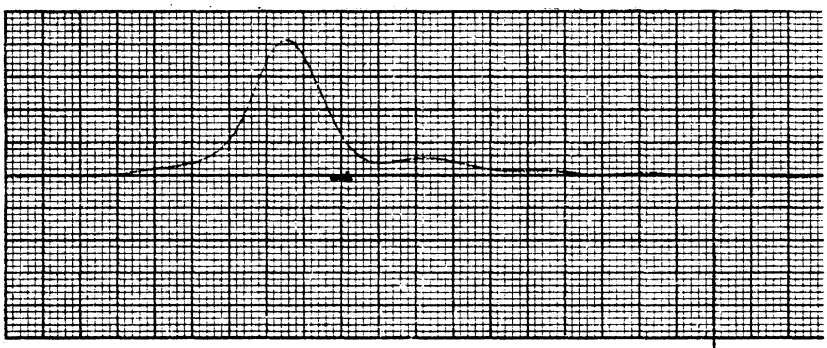
PEAK RESULTANT: 79.9 G

Impact Mass Deceleration

Peak: 46.4 G

Scale: 22.3 G =

Filter Class: 60

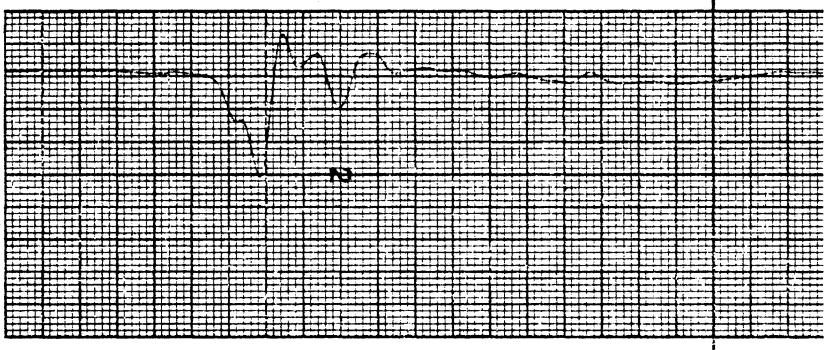


Posterior-Anterior Acceleration

Peak: 13.6 G

Scale: 8.26 G =

Filter Class: 180

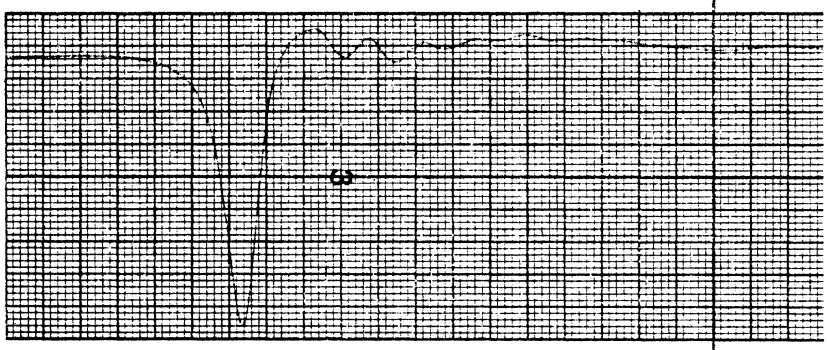


Right-Left Acceleration

Peak: 79.4 G

Scale: 19.1 G =

Filter Class: 180

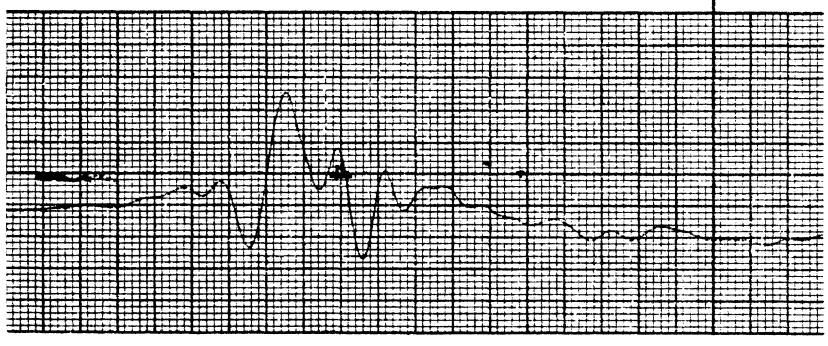


Inferior-Superior Acceleration

Peak: 4.61 G

Scale: 2.48 G =

Filter Class: 180



6.25 ms.

TEST RESULTS

DUMMY NO. 879

HEAD/NECK TEST RESULTS

TEST: 80Y116 DUMMY #879
IMPACT VELOCITY: 13.27 ft/sec.

TARGET VALUE	ACTUAL VALUES ANGLE (degrees)	CHORDAL DISP. (in.)	TIME (ms.)	FRAME NUMBER
0 deg.	-3.60	0.17	0.00	0
20 deg.	20.70	1.95	35.20	33
MAX ANGLE	36.35	3.14	65.07	61
MAX DISP.	36.35	3.14	65.07	61
20 deg.	20.44	1.90	88.53	83
0 deg.	0.54	0.37	104.53	98

TEST: 80Y117 DUMMY #879
IMPACT VELOCITY: 13.16 ft/sec.

TARGET VALUE	ACTUAL VALUES ANGLE (degrees)	CHORDAL DISP. (in.)	TIME (ms.)	FRAME NUMBER
0 deg.	-2.31	0.06	0.00	0
20 deg.	19.56	1.90	36.30	33
MAX ANGLE	37.40	3.17	66.00	60
MAX DISP.	37.40	3.17	66.00	60
20 deg.	19.54	1.86	91.30	83
0 deg.	-0.09	0.31	107.80	98

TEST: 80Y118 DUMMY #879
IMPACT VELOCITY: 13.18 ft/sec.

TARGET VALUE	ACTUAL VALUES ANGLE (degrees)	CHORDAL DISP. (in.)	TIME (ms.)	FRAME NUMBER
0 deg.	-2.49	0.01	0.00	0
20 deg.	20.32	1.92	36.43	34
MAX ANGLE	38.14	3.30	65.36	61
MAX DISP.	38.14	3.30	65.36	61
20 deg.	20.46	1.91	91.07	85
0 deg.	0.35	0.35	108.21	101

TEST: 80Y119 DUMMY #879
IMPACT VELOCITY: 13.26 ft/sec.

TARGET VALUE	ACTUAL VALUES ANGLE (degrees)	CHORDAL DISP. (in.)	TIME (ms.)	FRAME NUMBER
0 deg.	-1.47	0.48	0.00	0
20 deg.	19.49	1.66	32.31	30
MAX ANGLE	39.41	2.95	53.85	50
MAX DISP.	39.41	2.95	53.85	50
20 deg.	21.05	1.10	90.46	84
0 deg.	0.12	0.39	107.69	100

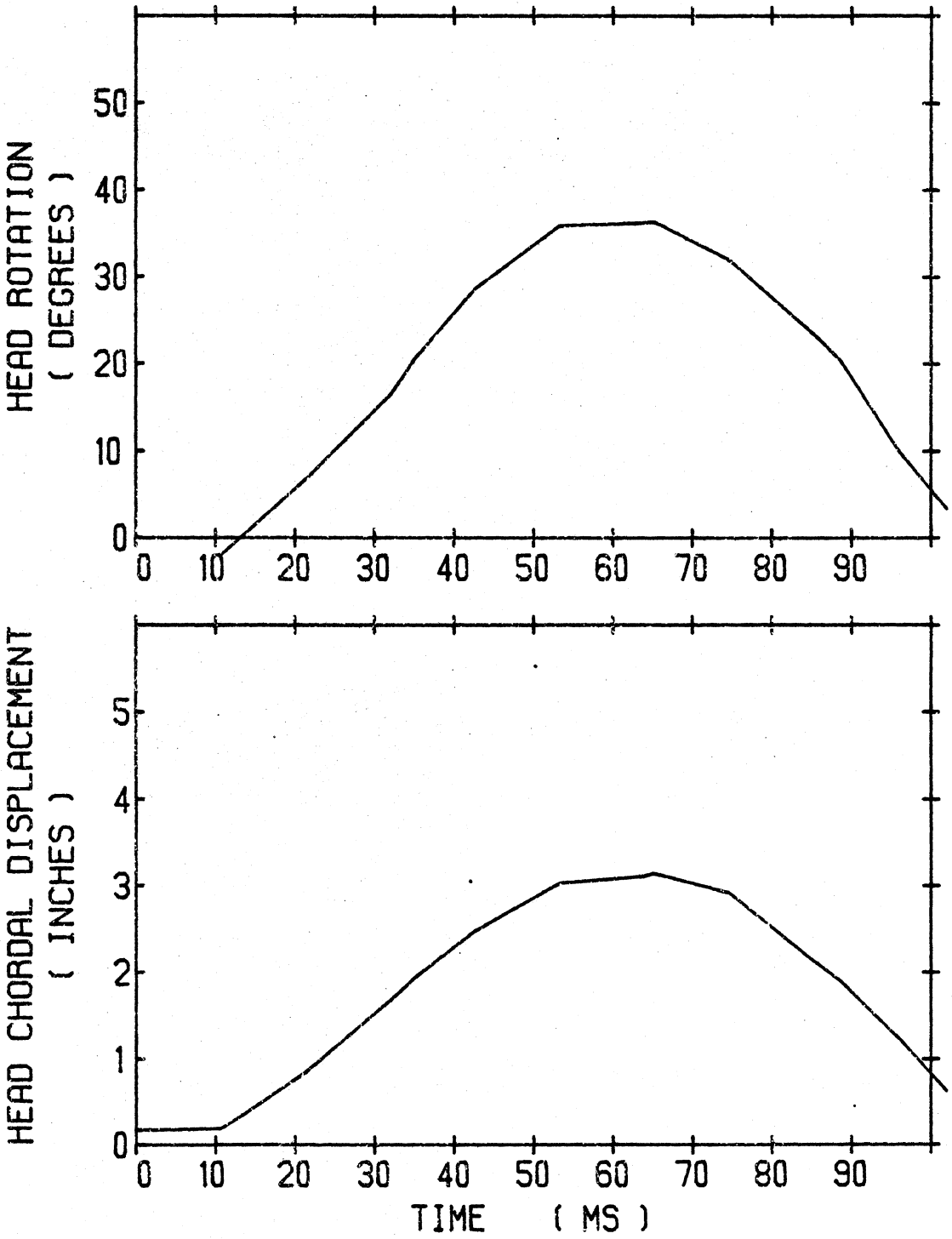
TEST: 80Y020 DUMMY #879
IMPACT VELOCITY: 13.14 ft/sec.

TARGET VALUE	ACTUAL VALUES ANGLE (degrees)	CHORDAL DISP. (in.)	TIME (ms.)	FRAME NUMBER
0 deg.	-1.23	0.36	0.00	0
20 deg.	19.79	1.66	33.33	30
MAX DISP.	39.19	2.90	55.56	50
MAX ANGLE	39.19	2.89	56.67	51
20 deg.	20.04	1.17	92.22	83
0 deg.	-0.44	0.35	110.00	99

TEST: 80Y122 DUMMY #879
IMPACT VELOCITY: 13.30 ft/sec.

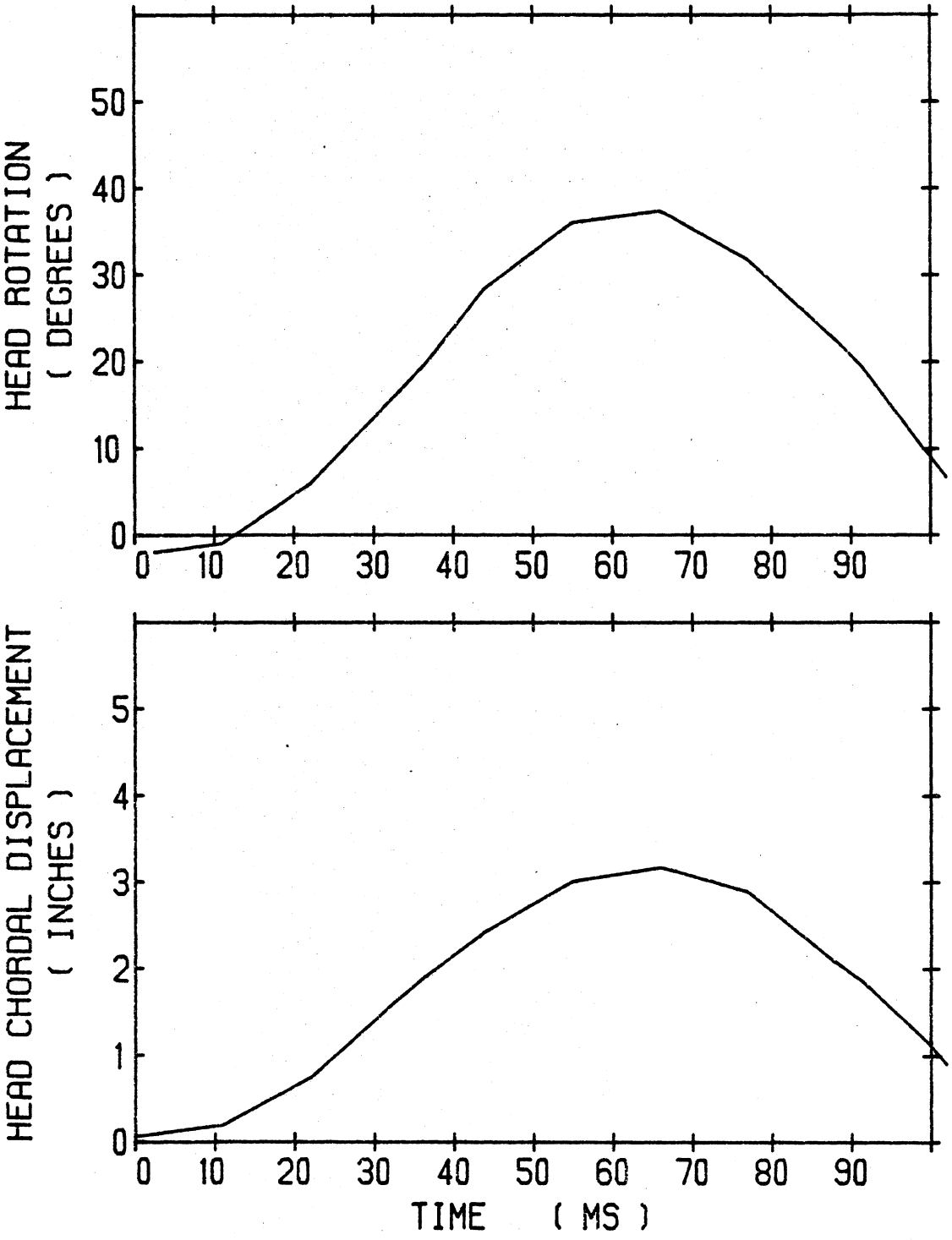
TARGET VALUE	ACTUAL VALUES ANGLE (degrees)	CHORDAL DISP. (in.)	TIME (ms.)	FRAME NUMBER
0 deg.	-0.77	0.35	0.00	0
20 deg.	20.49	1.81	31.58	30
MAX DISP.	40.85	3.05	56.84	54
MAX ANGLE	40.85	2.98	57.89	55
20 deg.	20.35	1.14	90.53	86
0 deg.	0.52	0.41	107.37	102

80Y116



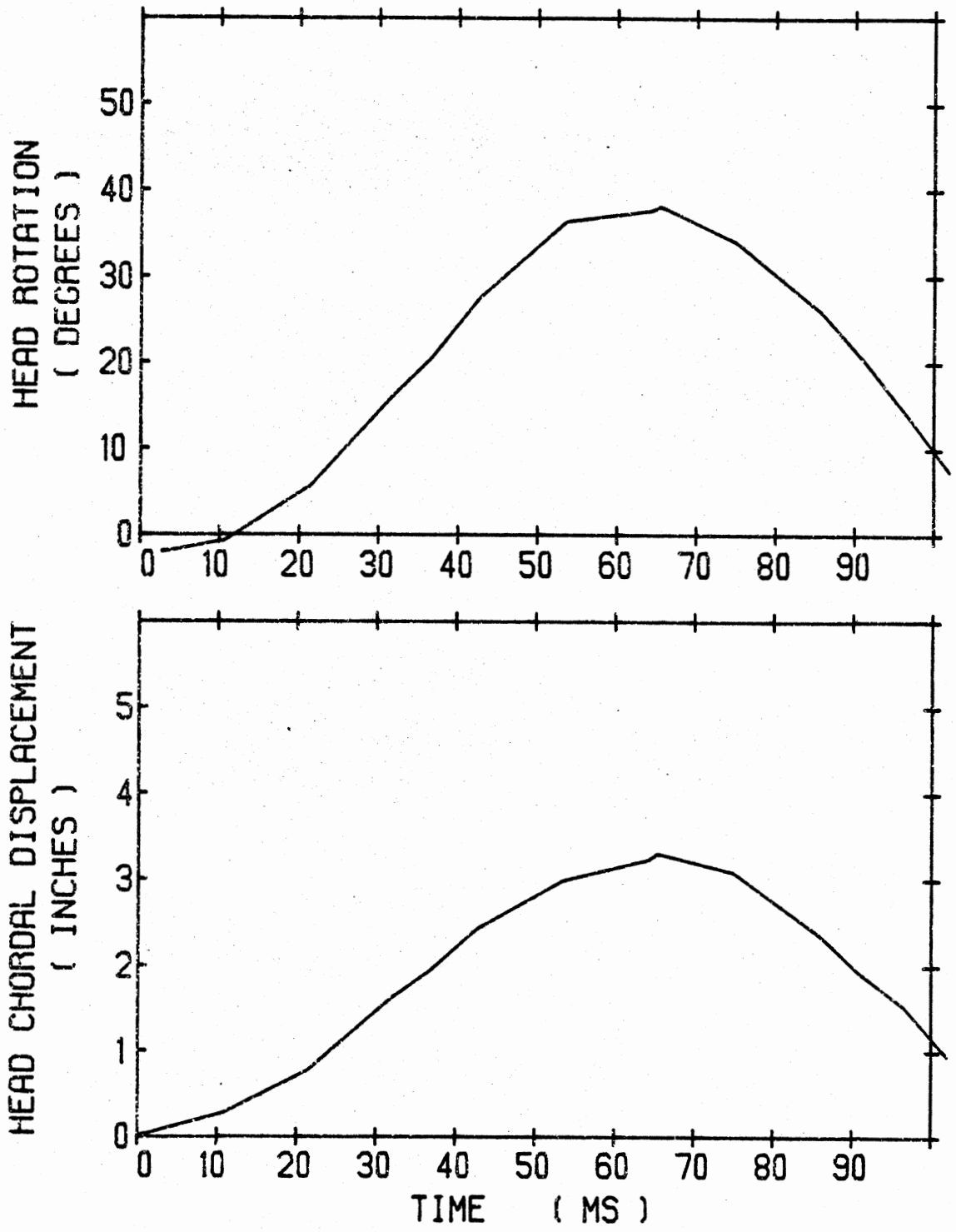
NECK PENDULUM TEST

80Y117



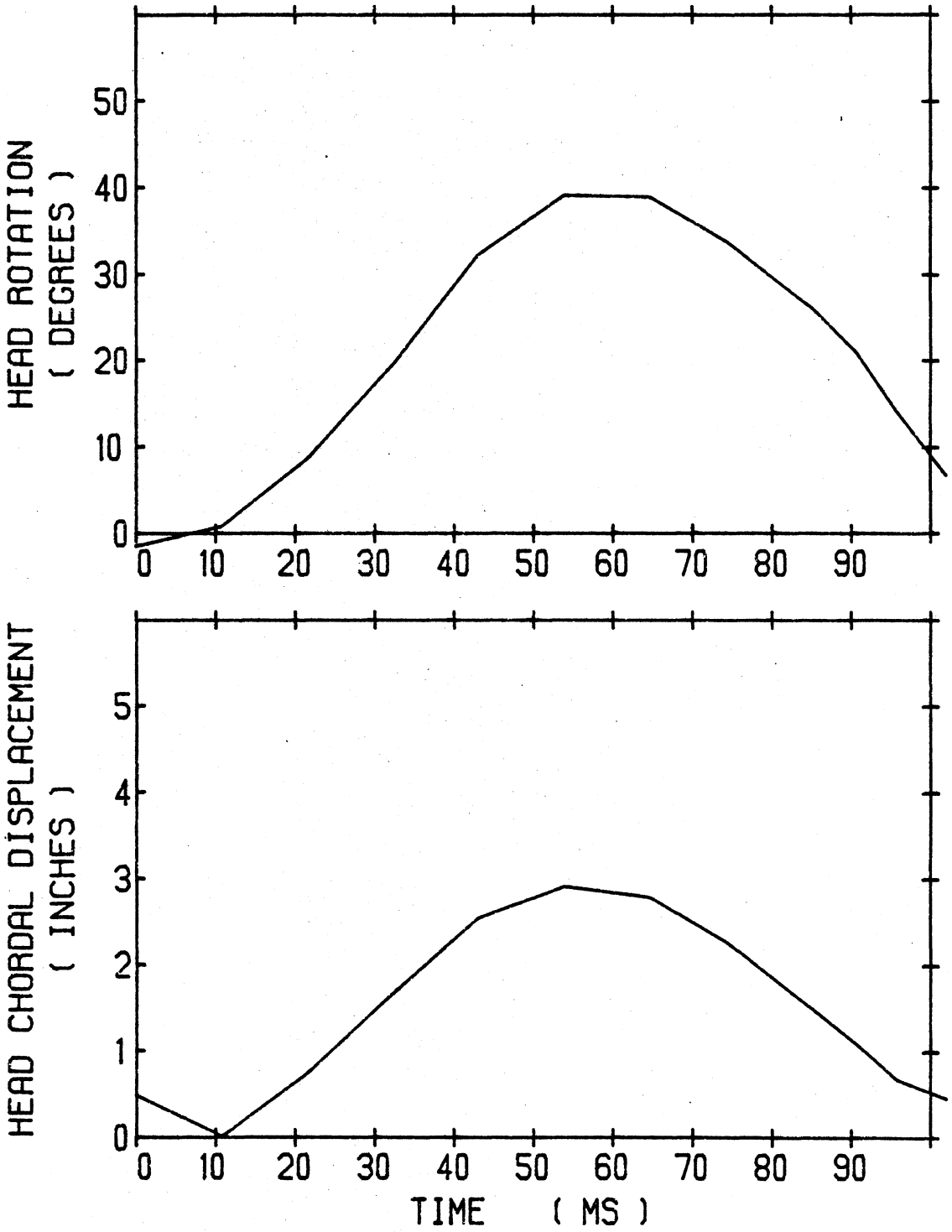
NECK PENDULUM TEST

80Y118



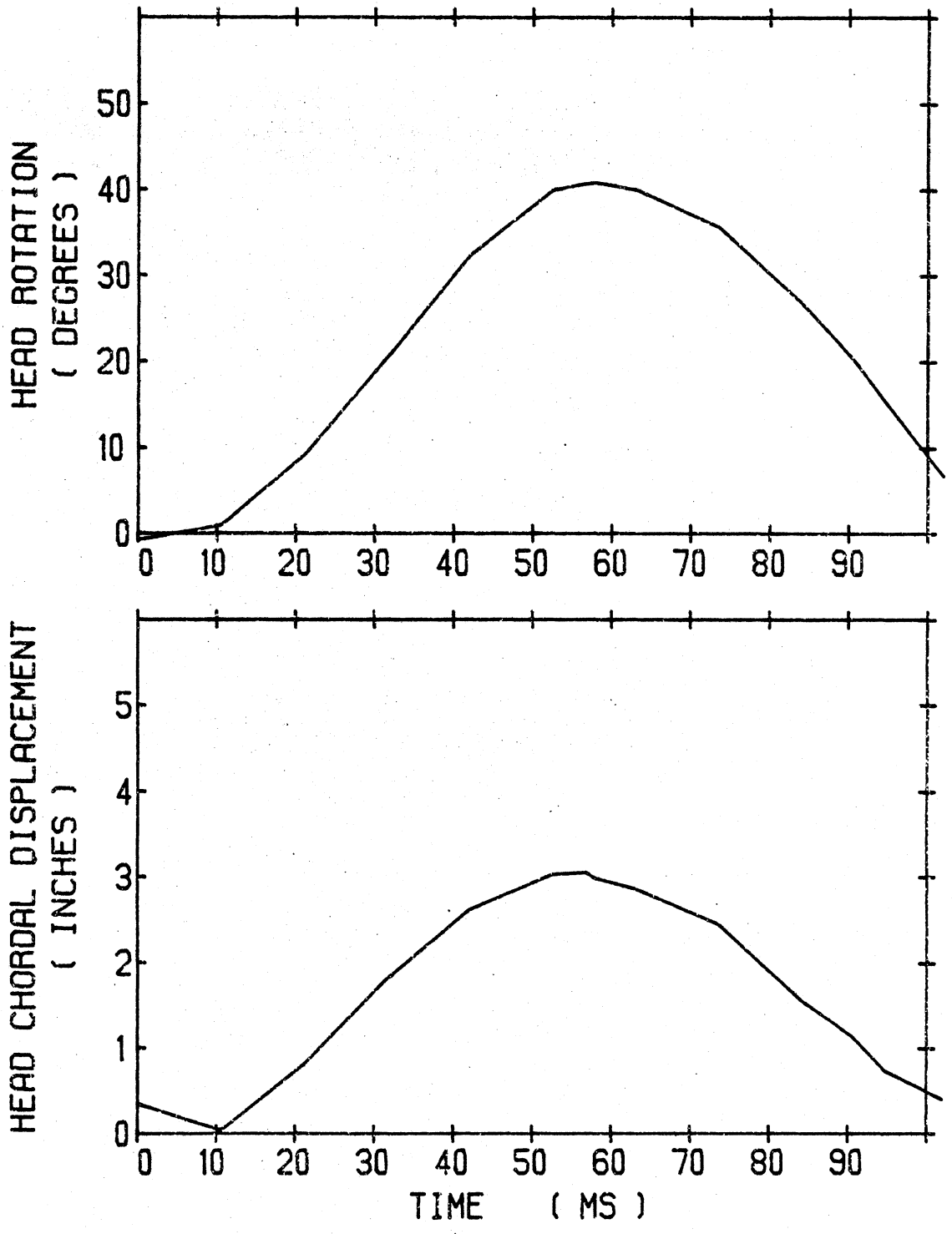
NECK PENDULUM TEST

80Y119



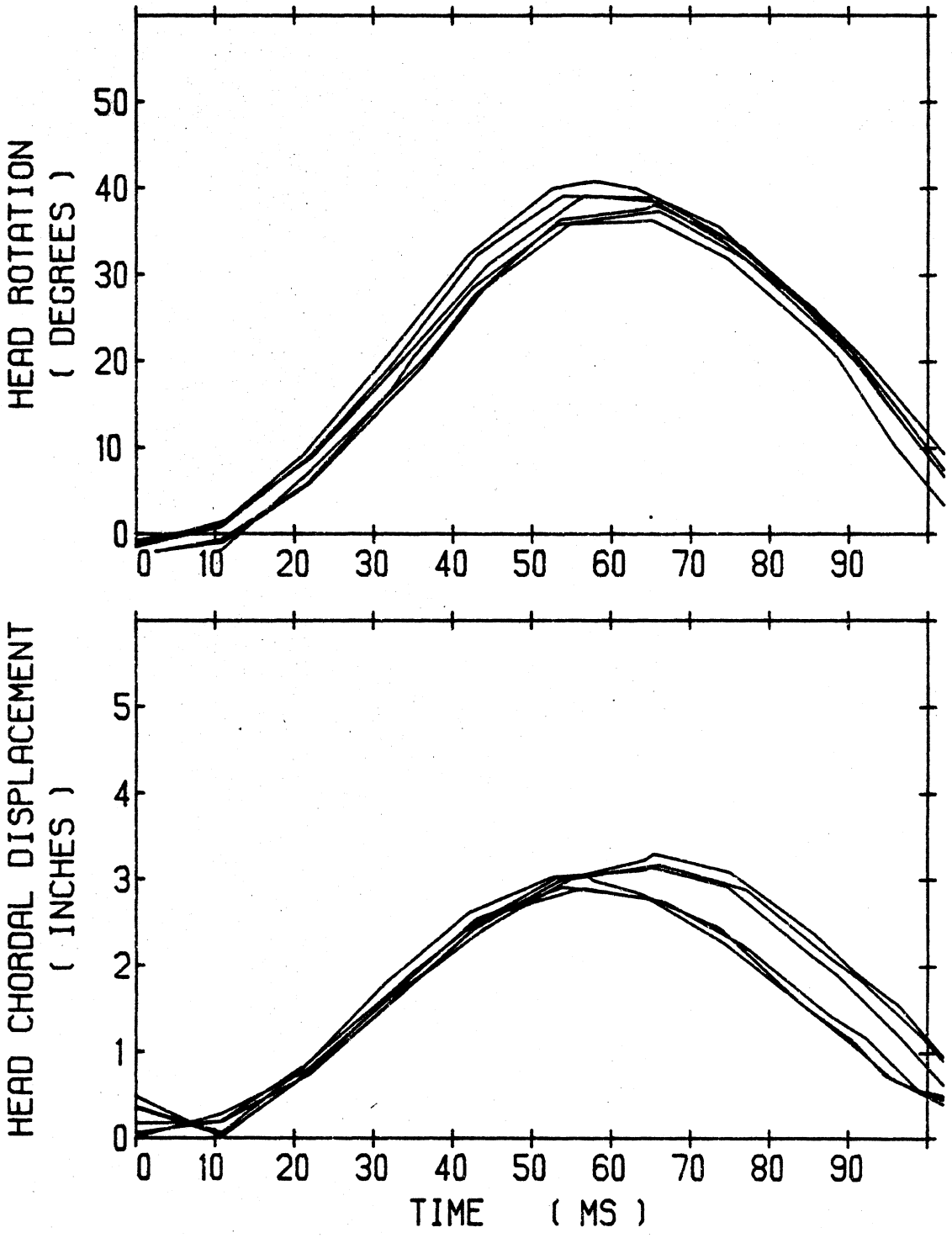
NECK PENDULUM TEST

80Y122



NECK PENDULUM TEST

ALL #879



NECK PENDULUM TEST

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 116 DUMMY NO. 879

BODY REGION HEAD/NECK SIDE R

PEAK RESULTANT: 12.4 G

Impact Mass Deceleration

Peak: 15.3 G

Scale: 5.25 G =

Filter Class: 60

Posterior-Anterior Acceleration

Peak: 0.93 G

Scale: .66 G =

Filter Class: 1000

Right-Left Acceleration

Peak: 9.99 G

Scale: -3.89 G =

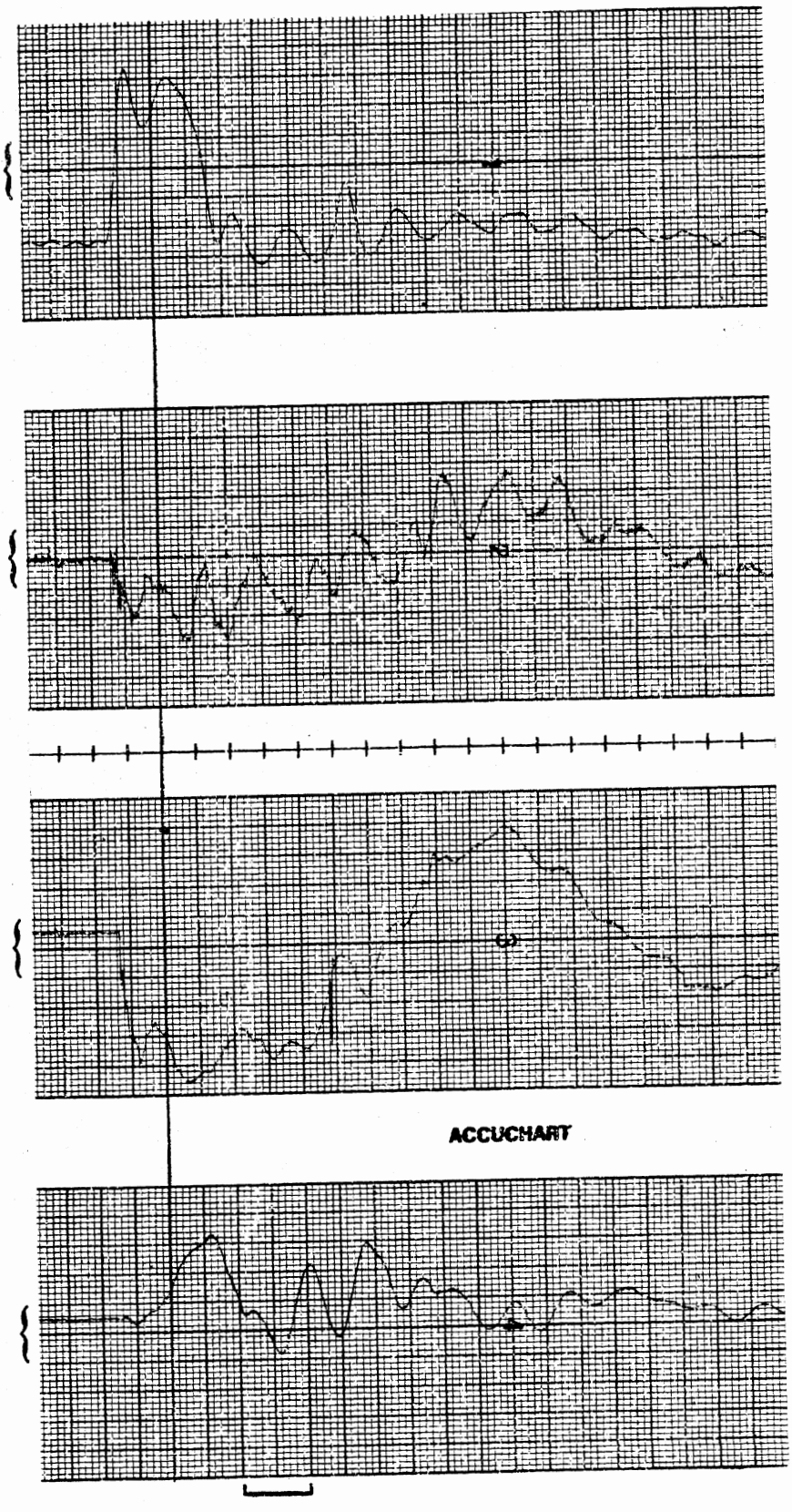
Filter Class: 1000

Inferior-Superior Acceleration

Peak: 7.26 G

Scale: -4.95 G =

Filter Class: 1000



25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 117 DUMMY NO. 879

BODY REGION HEAD/NECK SIDE R

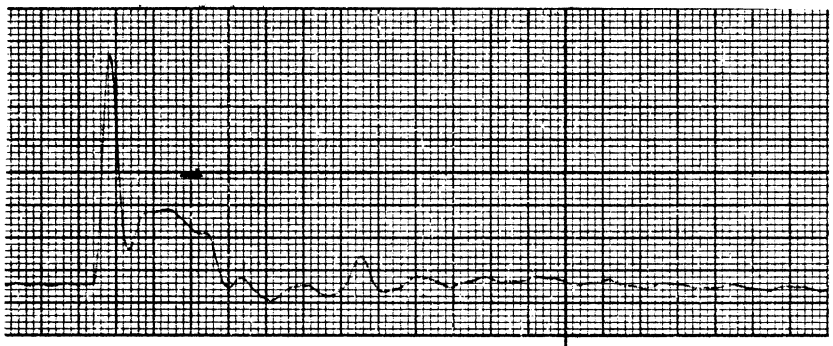
PEAK RESULTANT: 12.0 G

Impact Mass Deceleration

Peak: 36.7 G

Scale: 10.5 G =

Filter Class: 60

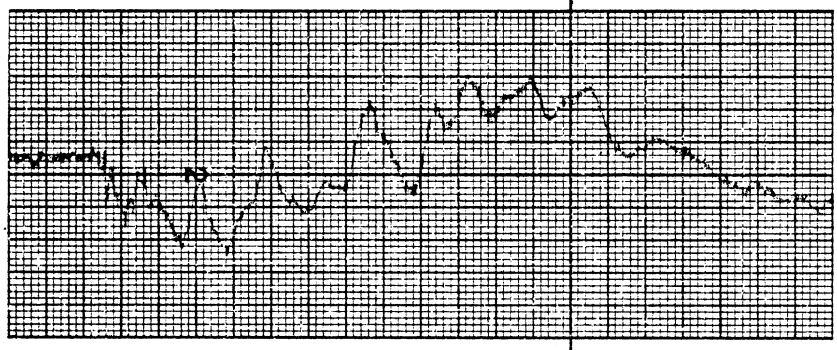


Posterior-Anterior Acceleration

Peak: 1.04 G

Scale: .66 G =

Filter Class: 1000

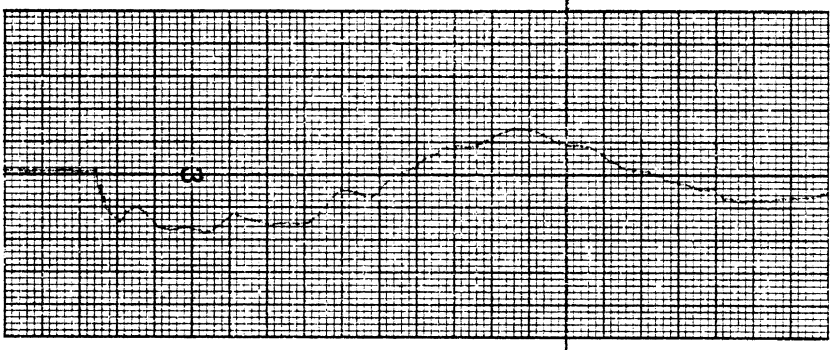


Right-Left Acceleration

Peak: 9.65 G

Scale: -9.74 G =

Filter Class: 1000

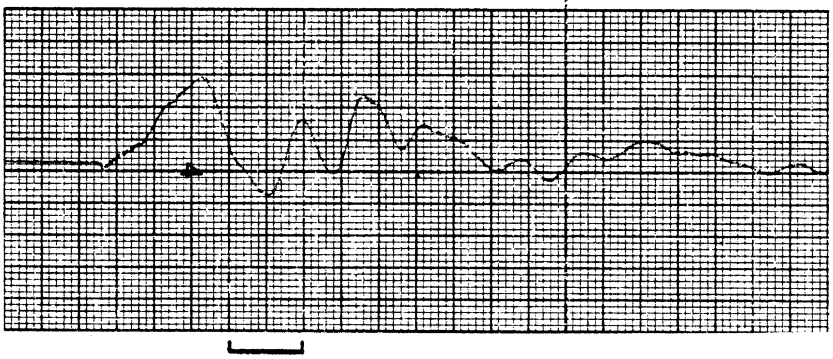


Inferior-Superior Acceleration

Peak: 6.99 G

Scale: -4.95 G =

Filter Class: 1000



25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 118 DUMMY NO. 879

BODY REGION HEAD/NECK SIDE R

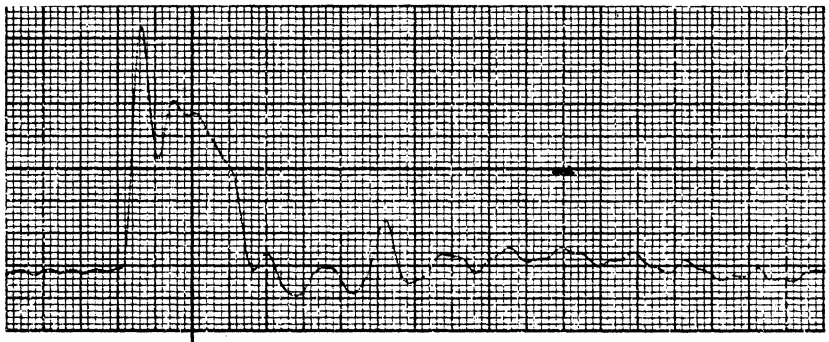
PEAK RESULTANT: 11.8 G

Impact Mass
Deceleration

Peak: 19.8 G

Scale: 5.25 G =

Filter Class: 60

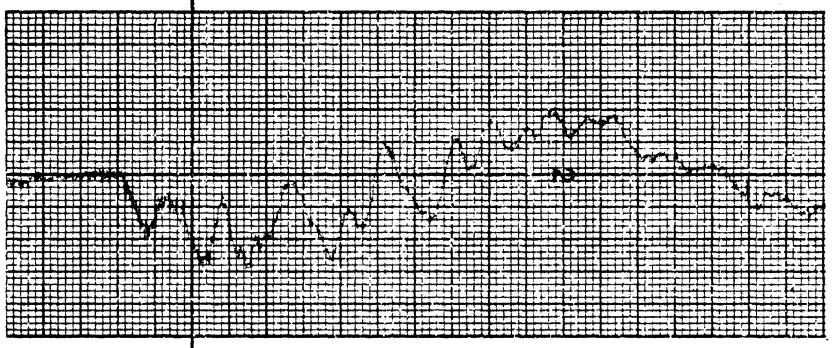


Posterior-Anterior
Acceleration

Peak: 0.94 G

Scale: 0.66 G =

Filter Class: 1000

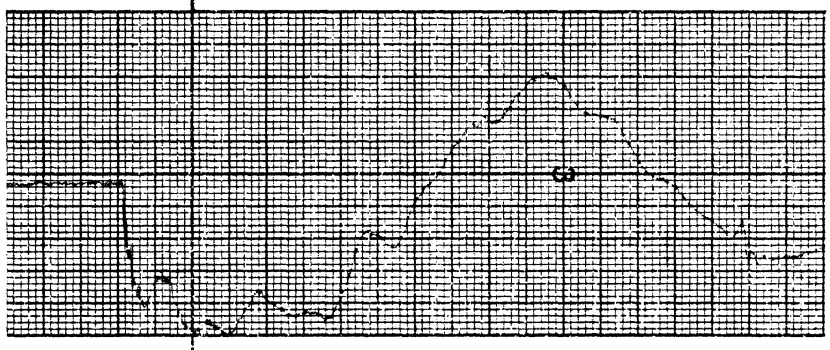


Right-Left
Acceleration

Peak: 9.30 G

Scale: -3.89 G =

Filter Class: 1000

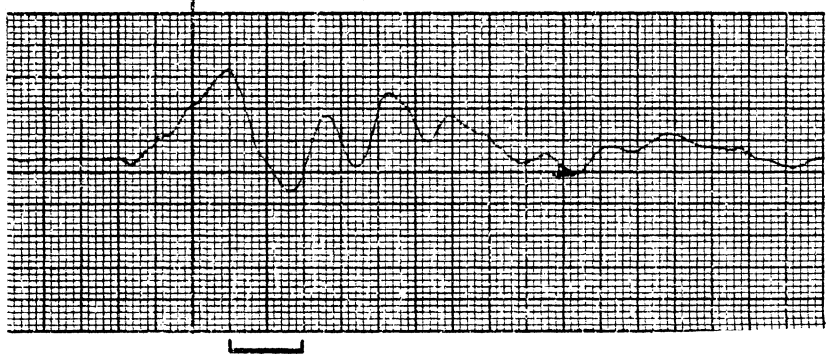


Inferior-Superior
Acceleration

Peak: 7.21 G

Scale: -4.95 G =

Filter Class: 1000



25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 119 DUMMY NO. 879

BODY REGION HEAD/NECK SIDE L

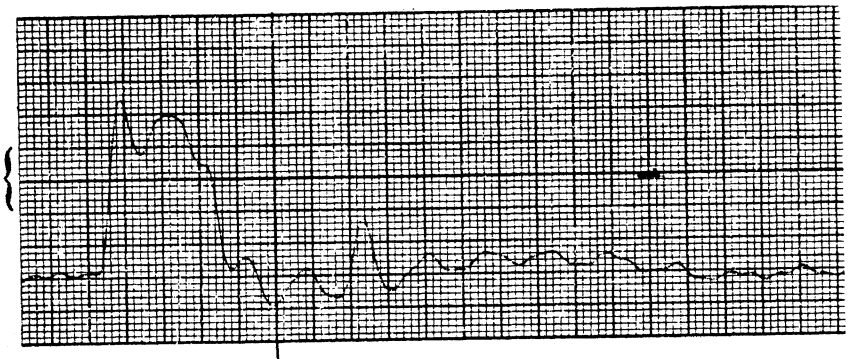
PEAK RESULTANT: 10.8 G

Impact Mass Deceleration

Peak: 14.1 G

Scale: 5.25 G =

Filter Class: 60

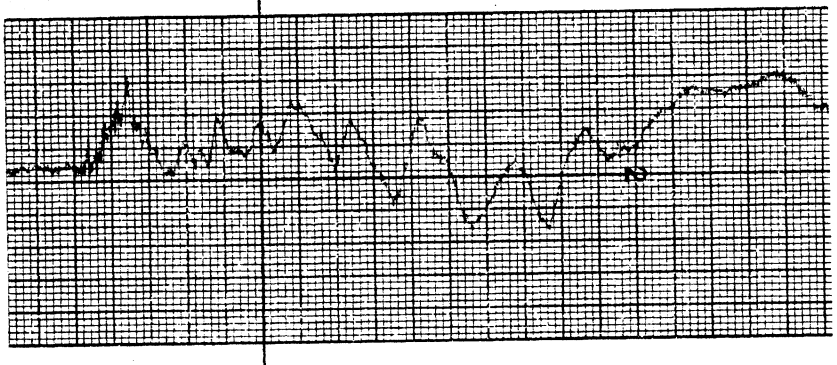


Posterior-Anterior Acceleration

Peak: .95 G

Scale: 0.66 G =

Filter Class: 1000

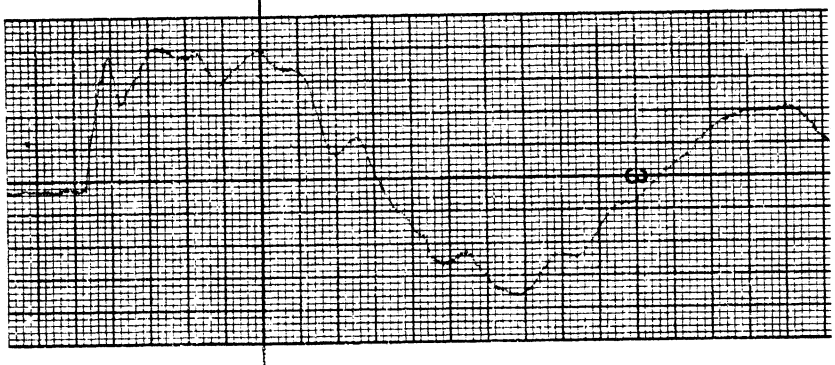


Right-Left Acceleration

Peak: 8.60 G

Scale: -3.89 G =

Filter Class: 1000



Inferior-Superior Acceleration

Peak: 6.49 G

Scale: -4.95 G =

Filter Class: 1000

25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 120 DUMMY NO. 879

BODY REGION HEAD/NECK SIDE L

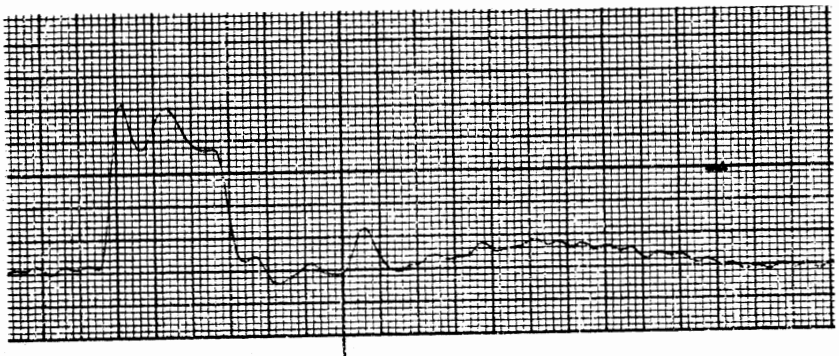
PEAK RESULTANT: 11.0 G

Impact Mass Deceleration

Peak: 14.9 G

Scale: 5.25 G =

Filter Class: 60

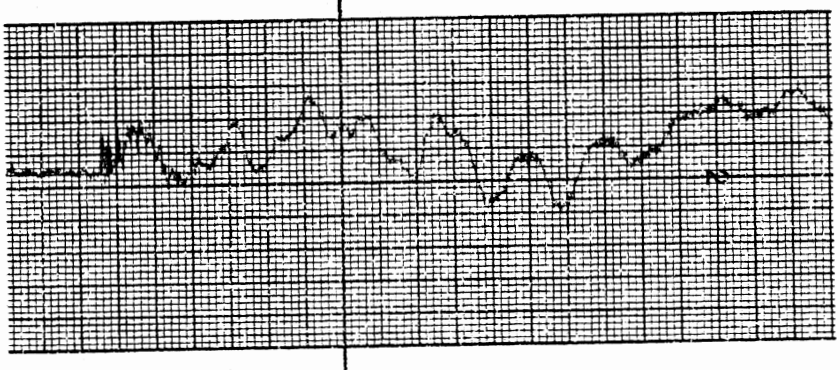


Posterior-Anterior Acceleration

Peak: 0.74 G

Scale: 0.66 G =

Filter Class: 1000

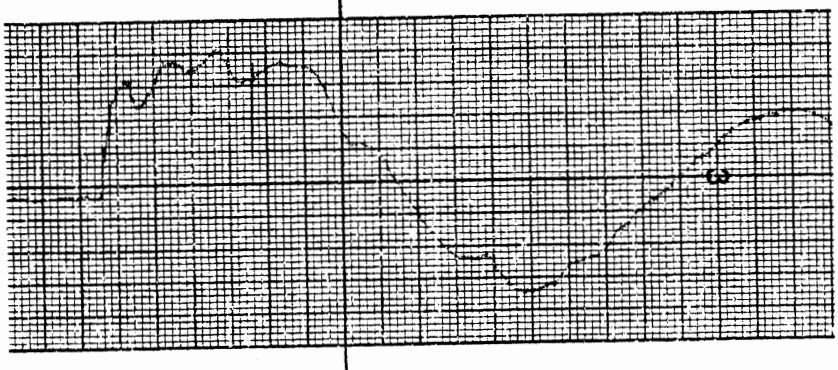


Right-Left Acceleration

Peak: 8.90 G

Scale: -3.89 G =

Filter Class: 1000



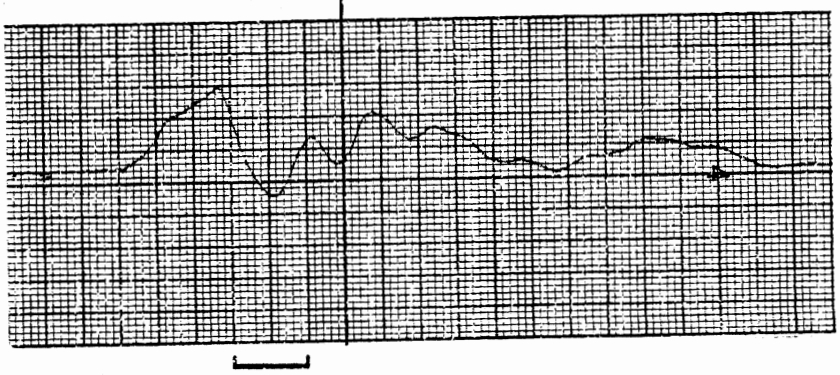
ACCUCHART

Inferior-Superior Acceleration

Peak: 6.40 G

Scale: -4.95 G =

Filter Class: 1000



25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 121 DUMMY NO. 879

BODY REGION HEAD/NECK SIDE L

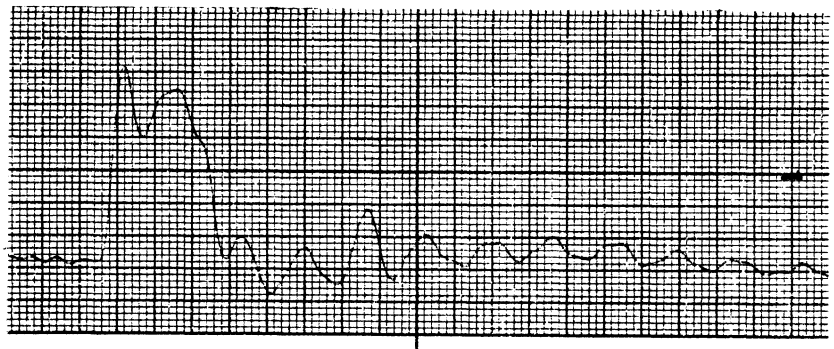
PEAK RESULTANT: 11.5 G

Impact Mass Deceleration

Peak: 15.7 G

Scale: 5.25 G =

Filter Class: 60

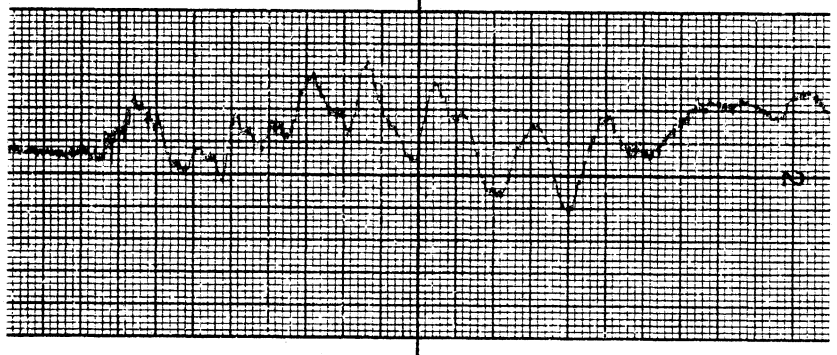


Posterior-Anterior Acceleration

Peak: 0.95 G

Scale: 0.66 G =

Filter Class: 1000

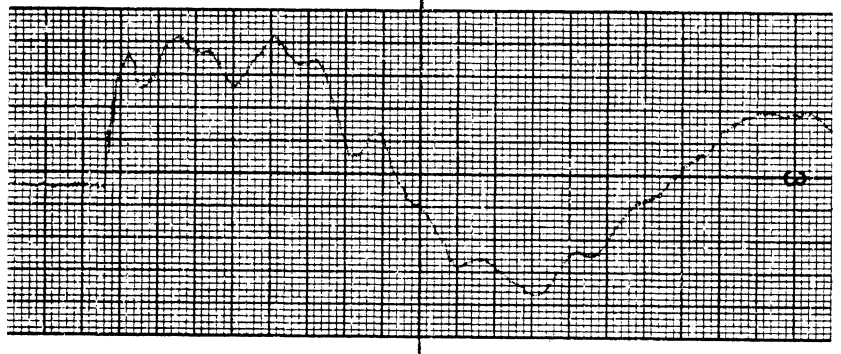


Right-Left Acceleration

Peak: 9.00 G

Scale: -3.89 G =

Filter Class: 1000



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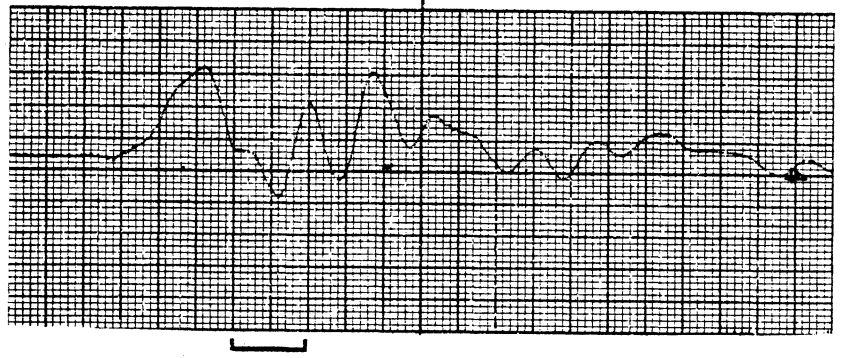
Inferior-Superior Acceleration

Peak: 7.04 G

Scale: -4.95 G =

Filter Class: 1000



25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 122 DUMMY NO. 879

BODY REGION HEAD/NECK SIDE L

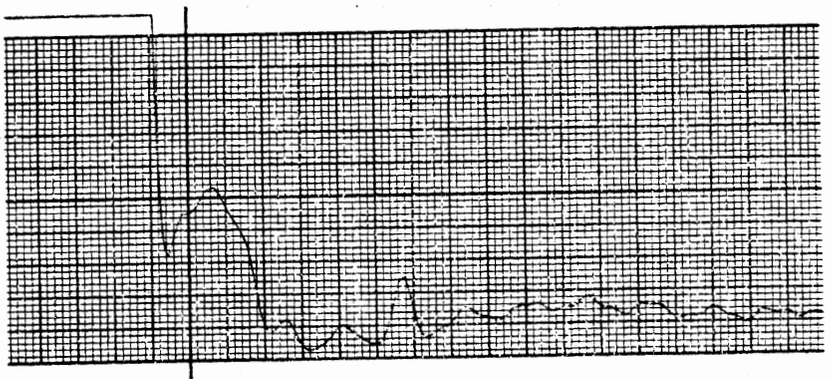
PEAK RESULTANT: 11.3 G

Impact Mass Deceleration

Peak: (L.O.O.) G

Scale: 5.25 G =

Filter Class: 60

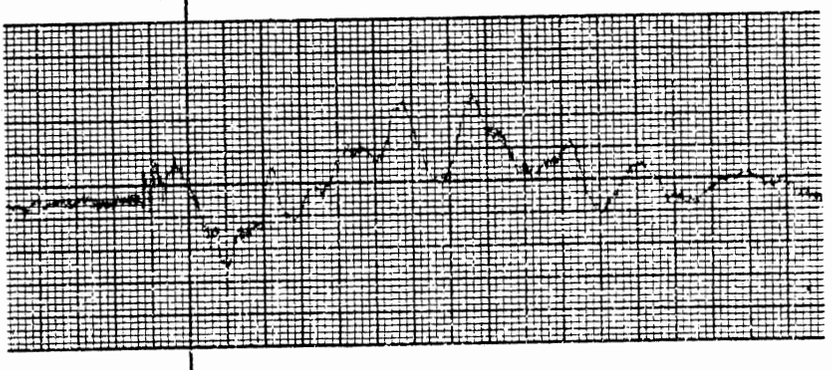


Posterior-Anterior Acceleration

Peak: 1.00 G

Scale: 0.66 G =

Filter Class: 1000

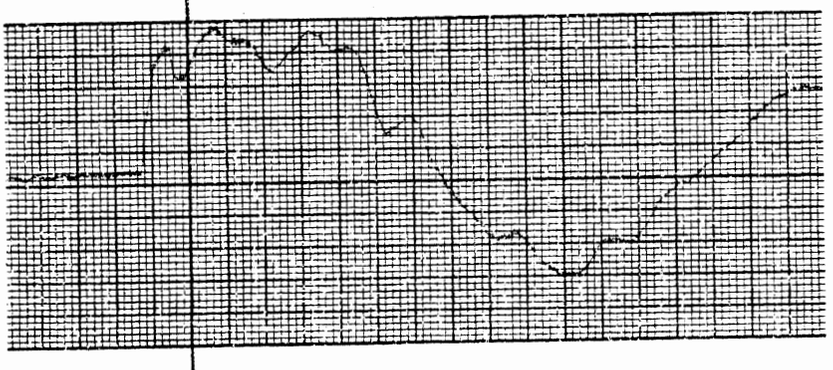


Right-Left Acceleration

Peak: 8.82 G

Scale: -3.89 G =

Filter Class: 1000

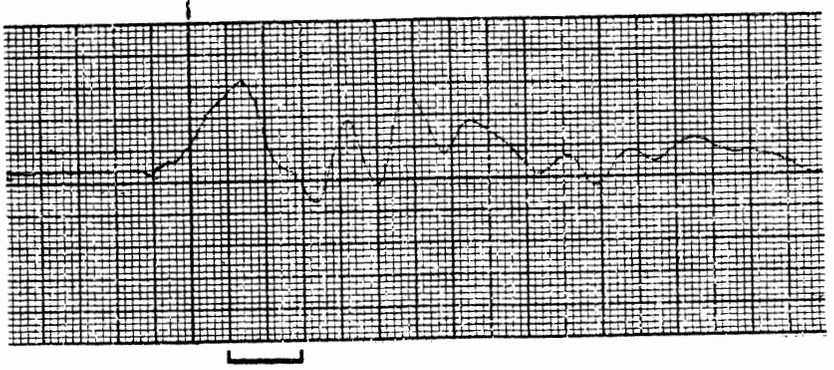


Inferior-Superior Acceleration

Peak: 6.98 G

Scale: -4.95 G =

Filter Class: 1000



____ ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 103 DUMMY NO. 879

BODY REGION HEAD SIDE L

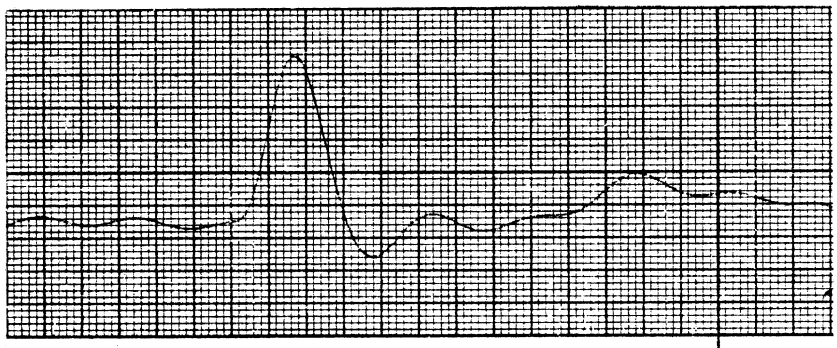
PEAK RESULTANT: 205. G

Impact Mass Deceleration

Peak: 11.2 G

Scale: 4.41 G =

Filter Class: 60

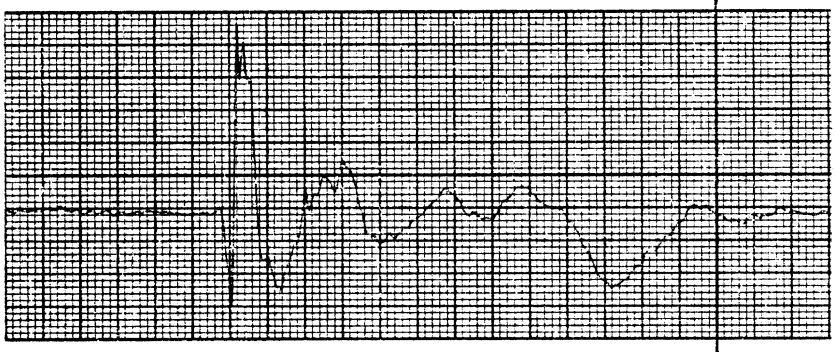


Posterior-Anterior Acceleration

Peak: 3.90 G

Scale: 1.33 G =

Filter Class: 1000

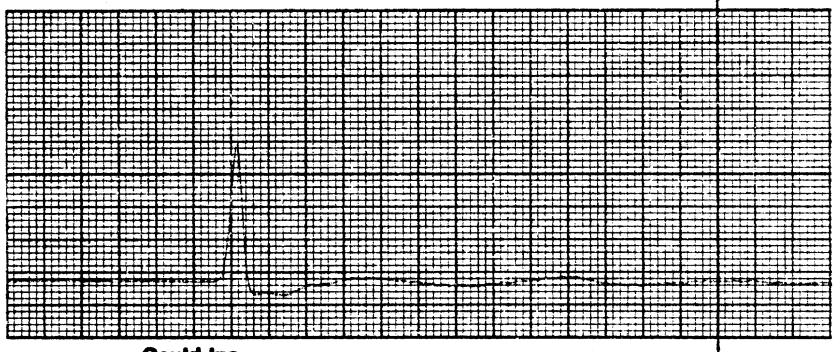


Right-Left Acceleration

Peak: 205. G

Scale: -96.5 G =

Filter Class: 1000



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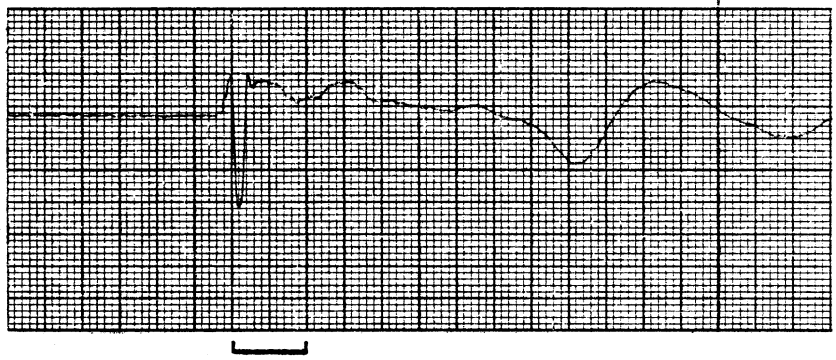
Cleveland, Ohio Printed in U.S.A. . . .

Inferior-Superior Acceleration

Peak: 7.31 G

Scale: -4.95 G =

Filter Class: 1000



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 104 DUMMY NO. 879

BODY REGION HEAD SIDE L

PEAK RESULTANT: 209. G

Impact Mass Deceleration

Peak: 12.2 G

Scale: 4.41 G =

Filter Class: 60

Posterior-Anterior Acceleration

Peak: 7.37 G

Scale: 3.34 G =

Filter Class: 1000

Right-Left Acceleration

Peak: 209. G

Scale: -96.5 G =

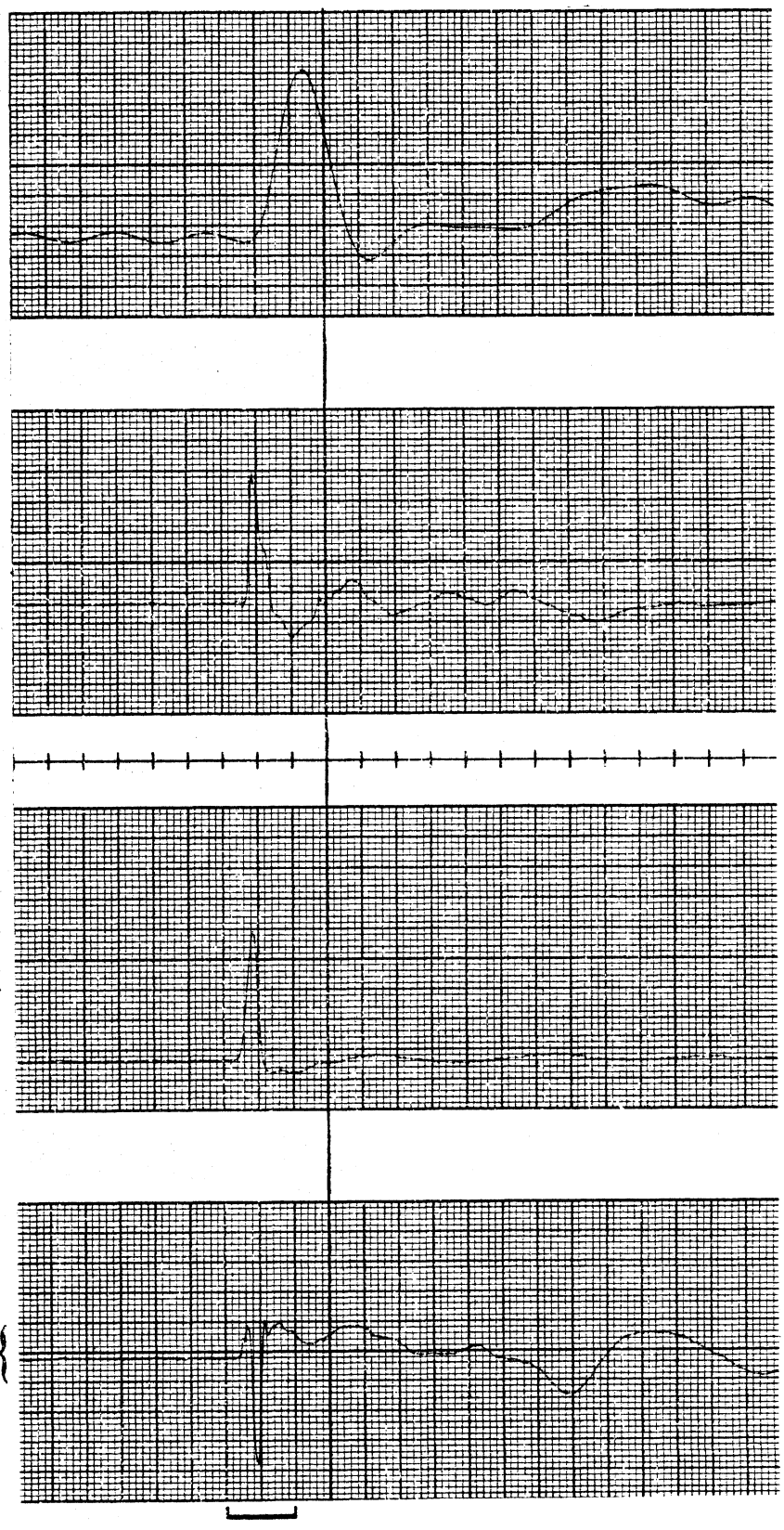
Filter Class: 1000

Inferior-Superior Acceleration

Peak: 8.83 G

Scale: -4.95 G =

Filter Class: 1000



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 105 DUMMY NO. 879

BODY REGION HEAD SIDE L

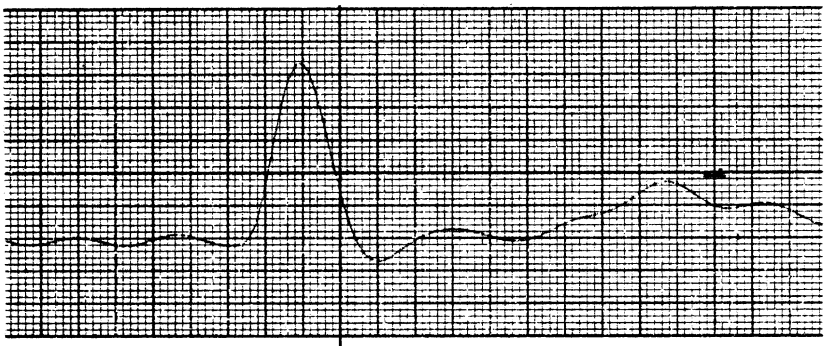
PEAK RESULTANT: 205. G

Impact Mass Deceleration

Peak: 12.1 G

Scale: 4.41 G =

Filter Class: 60

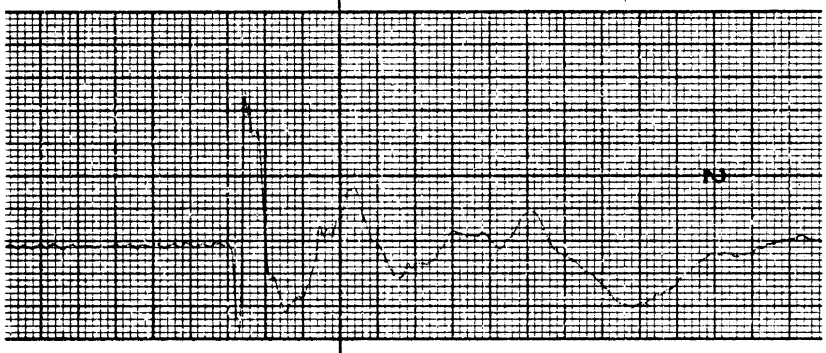


Posterior-Anterior Acceleration

Peak: 3.15 G

Scale: 1.33 G =

Filter Class: 1000

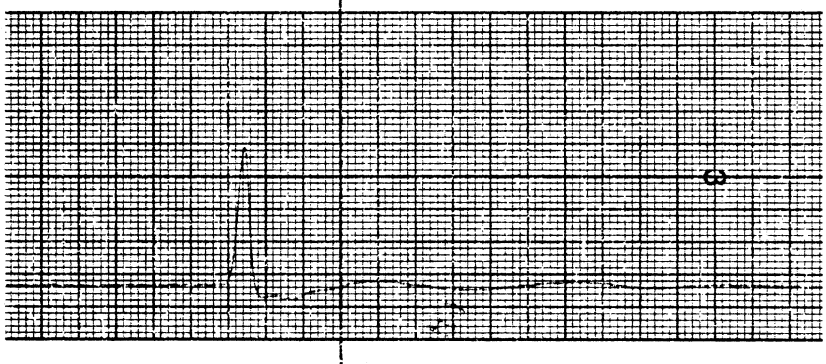


Right-Left Acceleration

Peak: 205. G

Scale: -96.5G =

Filter Class: 1000



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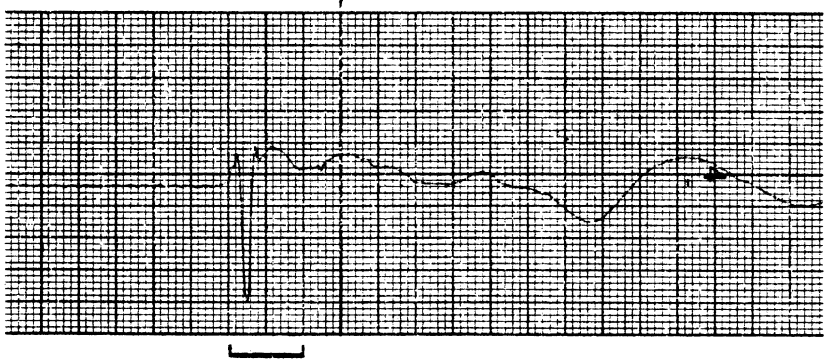
Inferior-Superior Acceleration

Peak: 8.91 G

Scale: -4.95 G =

Filter Class: 1000



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. SOY 106 DUMMY NO. 879

BODY REGION HEAD SIDE R

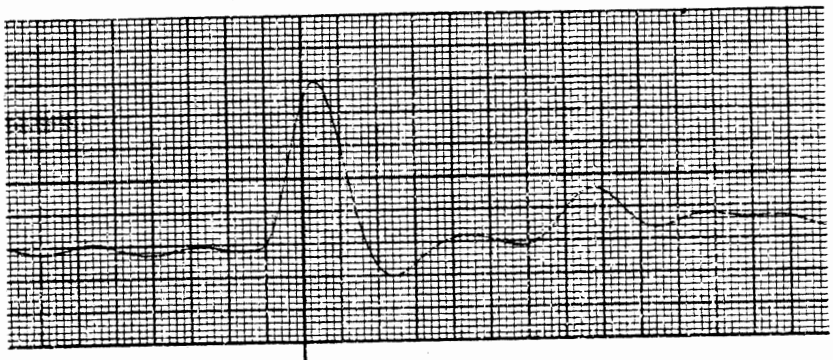
PEAK RESULTANT: 260. G

Impact Mass Deceleration

Peak: 11.4 G

Scale: 4.41 G =

Filter Class: 60

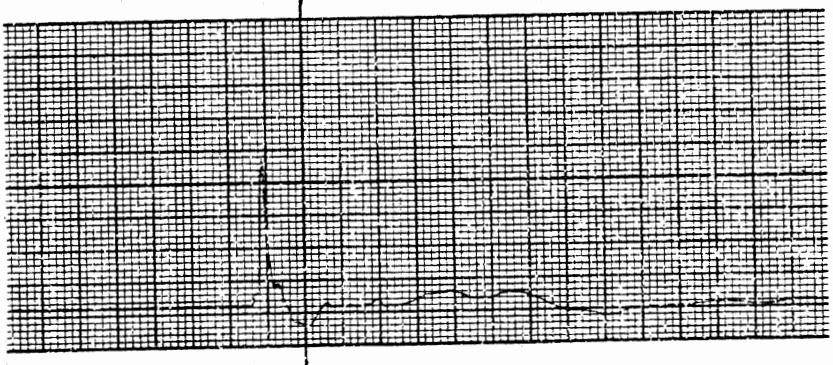


Posterior-Anterior Acceleration

Peak: 15.2 G

Scale: 6.67 G =

Filter Class: 1000

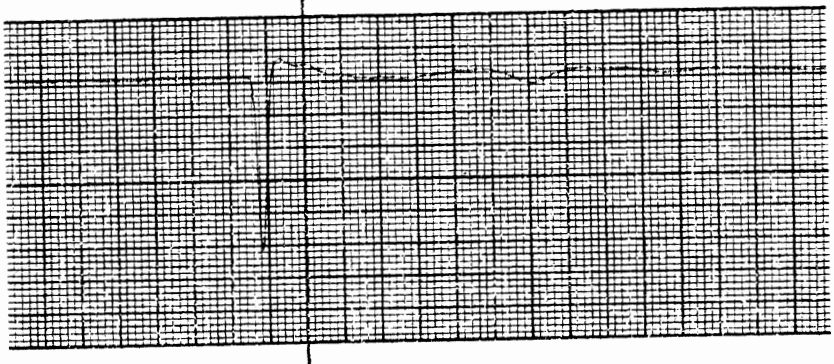


Right-Left Acceleration

Peak: 259. G

Scale: -96.5 G =

Filter Class: 1000



Inferior-Superior Acceleration

Peak: 21.0 G

Scale: -9.91 G =

Filter Class: 1000

6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 107 DUMMY NO. 879

BODY REGION HEAD SIDE R

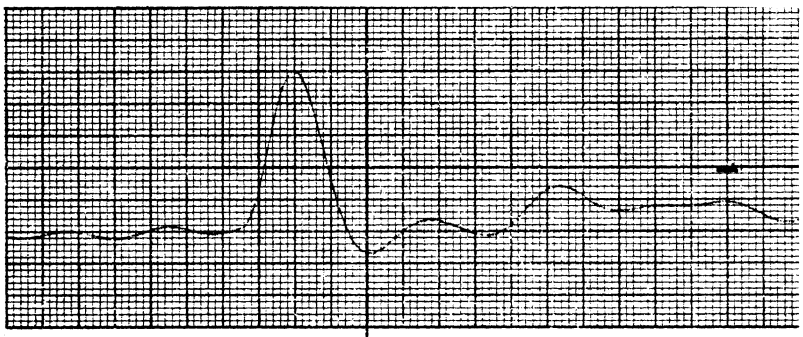
PEAK RESULTANT: 288. G

Impact Mass Deceleration

Peak: 11.3 G

Scale: 4.41 G =

Filter Class: 60

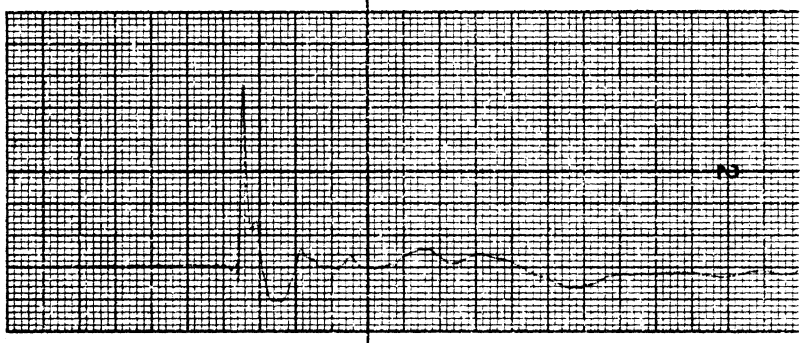


Posterior-Anterior Acceleration

Peak: 9.50 G

Scale: 3.34 G =

Filter Class: 1000

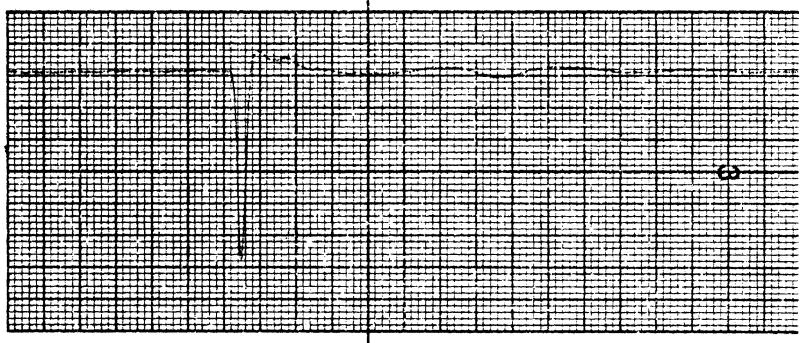


Right-Left Acceleration

Peak: 287. G

Scale: -96.5 G =

Filter Class: 1000



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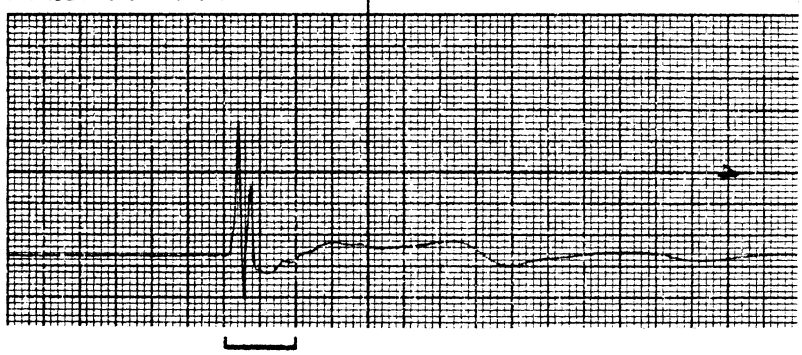
Inferior-Superior Acceleration

Peak: 21.5 G

Scale: -9.91 G =

Filter Class: 1000



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. SOY 108 DUMMY NO. 879

BODY REGION HEAD SIDE R

PEAK RESULTANT: 297 G

Impact Mass Deceleration

Peak: 12.0 G

Scale: 4.41 G =

Filter Class: 60

Posterior-Anterior Acceleration

Peak: 12.3 G

Scale: 3.34 G =

Filter Class: 1000

Right-Left Acceleration

Peak: 296 G

Scale: -96.5 G =

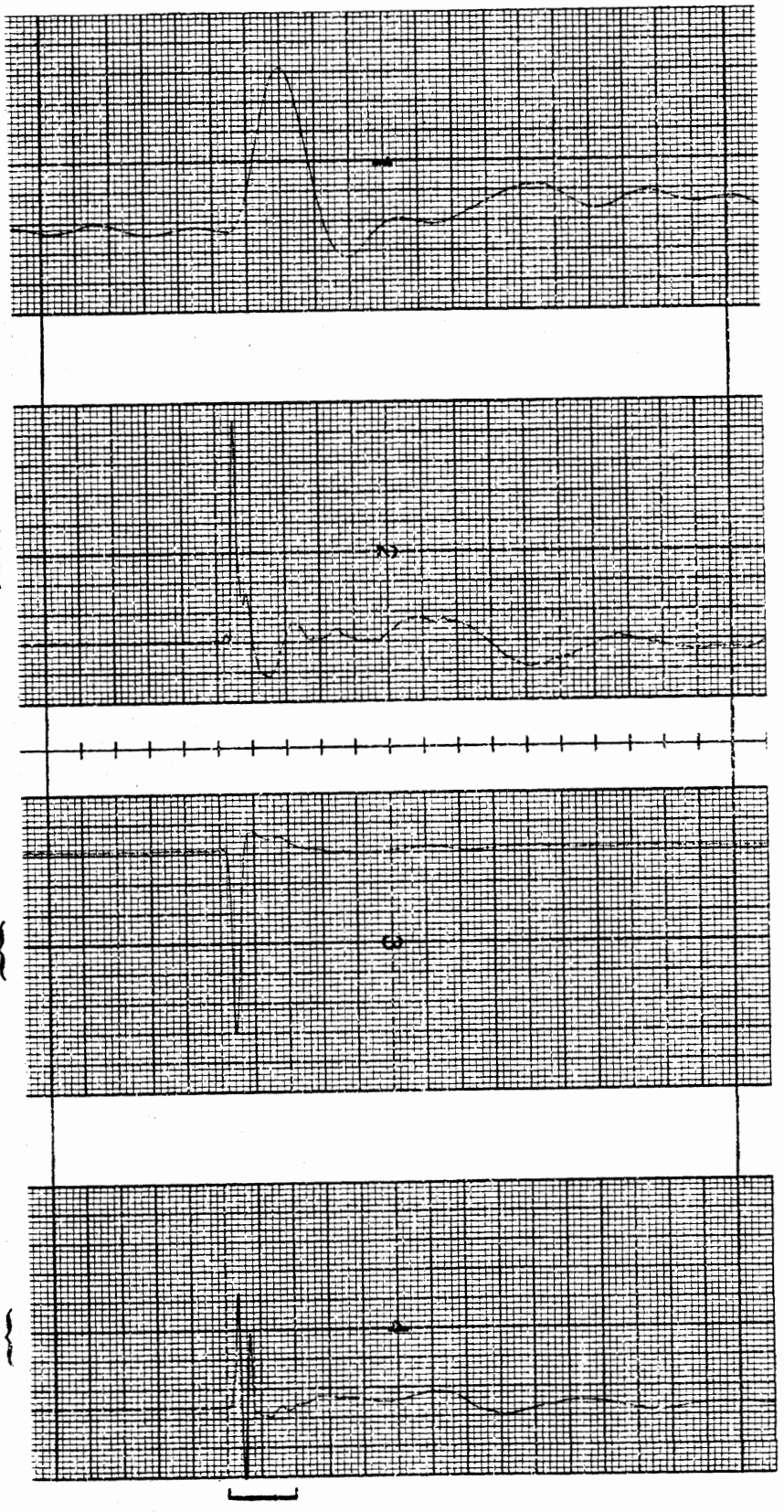
Filter Class: 1000

Inferior-Superior Acceleration

Peak: 19.3 G

Scale: -9.91 G =

Filter Class: 1000



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 090 DUMMY NO. 879

BODY REGION PELVIS SIDE R

PEAK RESULTANT: 80.2 G

Impact Mass Deceleration

Peak: 43.1 G

Scale: 22.1 G =

Filter Class: 60

Posterior-Anterior Acceleration

Peak: 11.0 G

Scale: -3.34 G =

Filter Class: 180

Right-Left Acceleration

Peak: 79.9 G

Scale: -19.8 G =

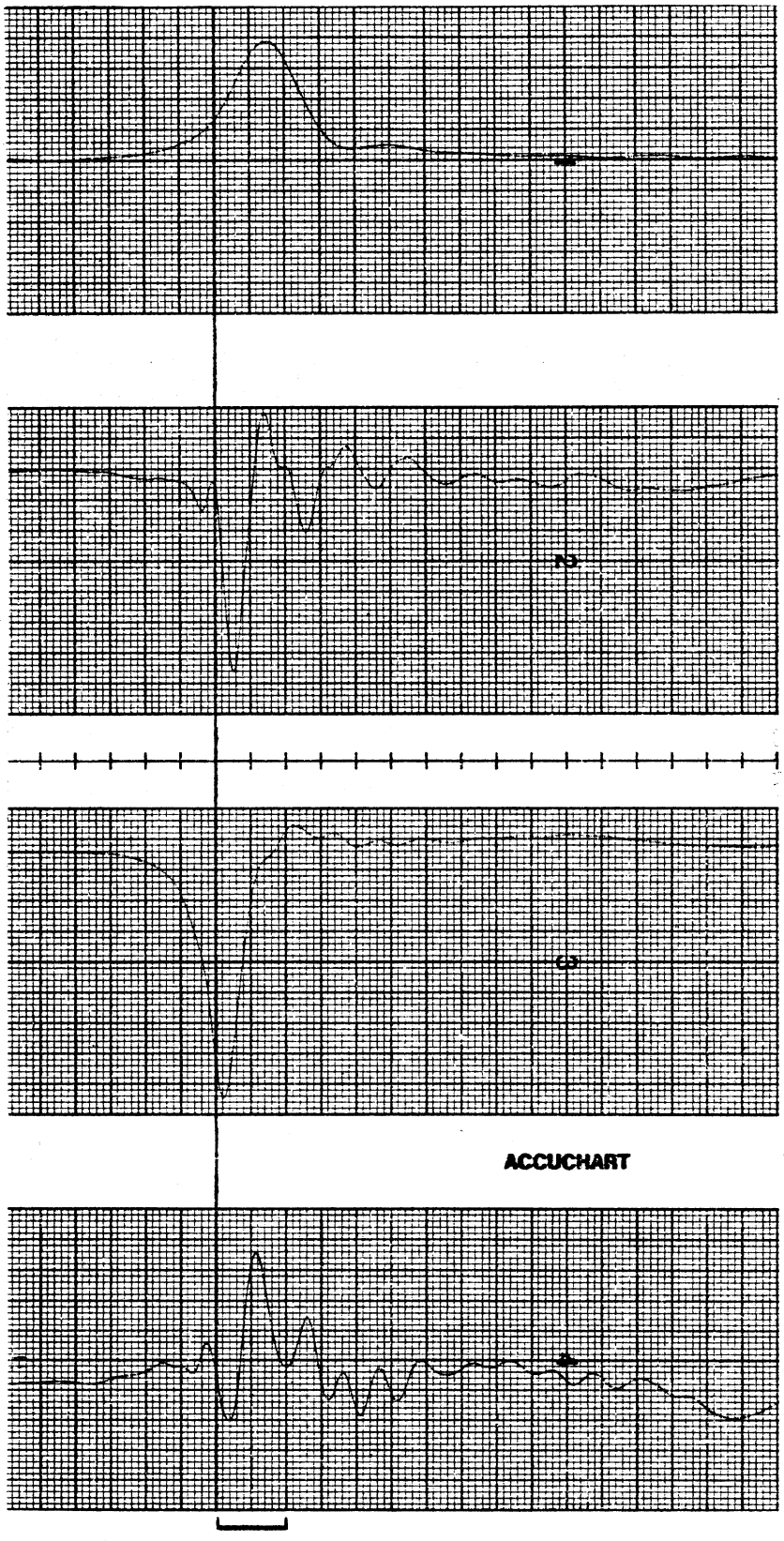
Filter Class: 180

Inferior-Superior Acceleration

Peak: 5.50 G

Scale: 2.51 G =

Filter Class: 180



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 092 DUMMY NO. 879

BODY REGION PELVIS SIDE L

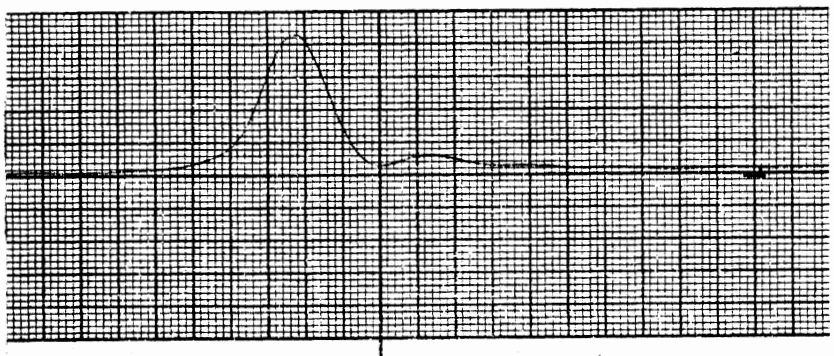
PEAK RESULTANT: 99.8 G

Impact Mass Deceleration

Peak: 47.1 G

Scale: 22.1 G =

Filter Class: 60

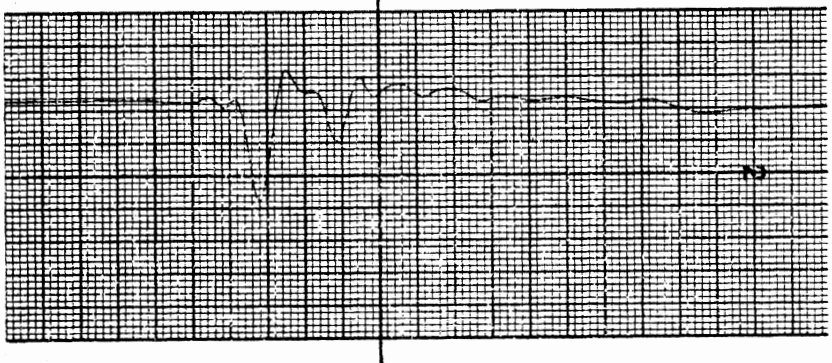


Posterior-Anterior Acceleration

Peak: 12.9 G

Scale: -8.34 G =

Filter Class: 180

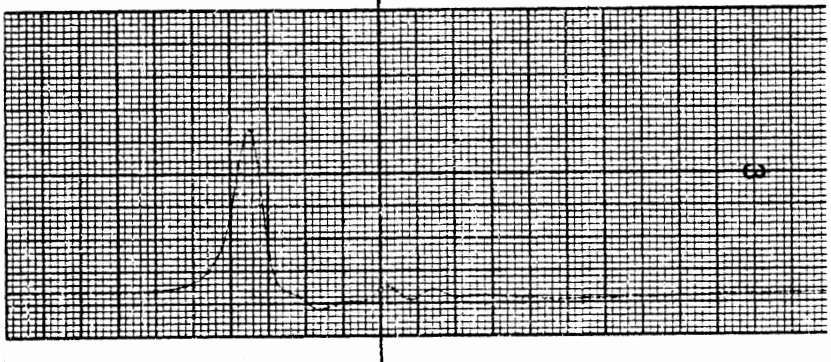


Right-Left Acceleration

Peak: 99.7 G

Scale: -39.6 G =

Filter Class: 180

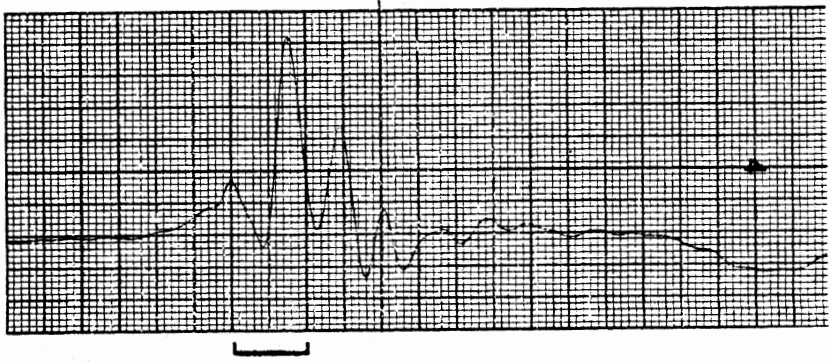


Inferior-Superior Acceleration

Peak: 7.97 G

Scale: 2.51 G =

Filter Class: 180



6.25 ms.

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DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 092 DUMMY NO. 879

BODY REGION PELVIS SIDE L

PEAK RESULTANT: 99.8 G

Impact Mass
Deceleration

Peak: 47.1 G

Scale: 22.1 G =

Filter Class: 60

Posterior-Anterior
Acceleration

Peak: 12.9 G

Scale: -8.34 G =

Filter Class: 180

Right-Left
Acceleration

Peak: 99.7 G

Scale: -39.6 G =

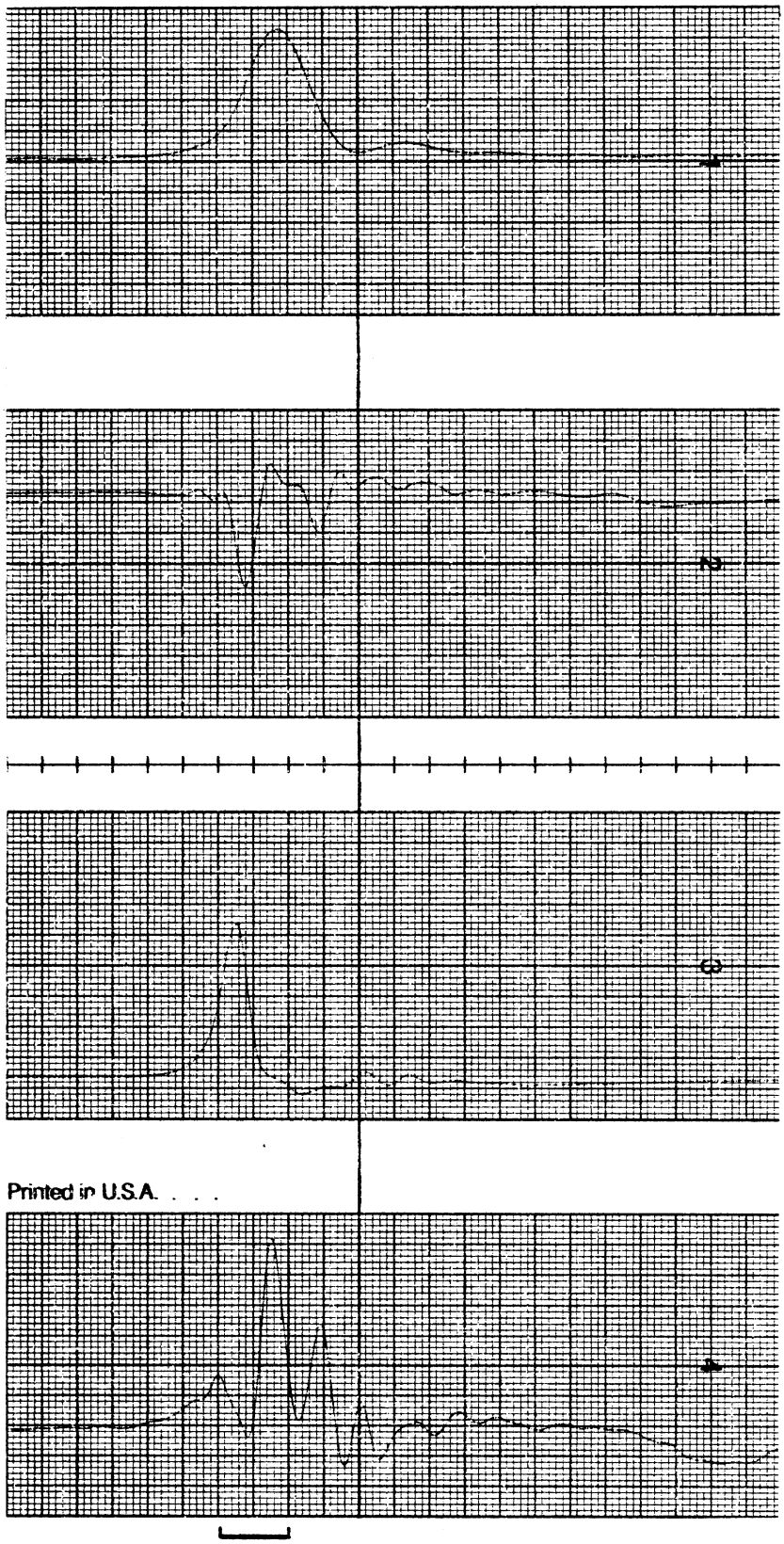
Filter Class: 180

Inferior-Superior
Acceleration

Peak: 7.97 G

Scale: 2.51 G =

Filter Class: 180



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6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 093 DUMMY NO. 879

BODY REGION PELVIS SIDE L

PEAK RESULTANT: 96.6 G

Impact Mass Deceleration

Peak: 47.0G

Scale: 22.1 G =

Filter Class: 60

Posterior-Anterior Acceleration

Peak: 11.7 G

Scale: -3.34 G =

Filter Class: 180

Right-Left Acceleration

Peak: 96.2G

Scale: -39.6 G =

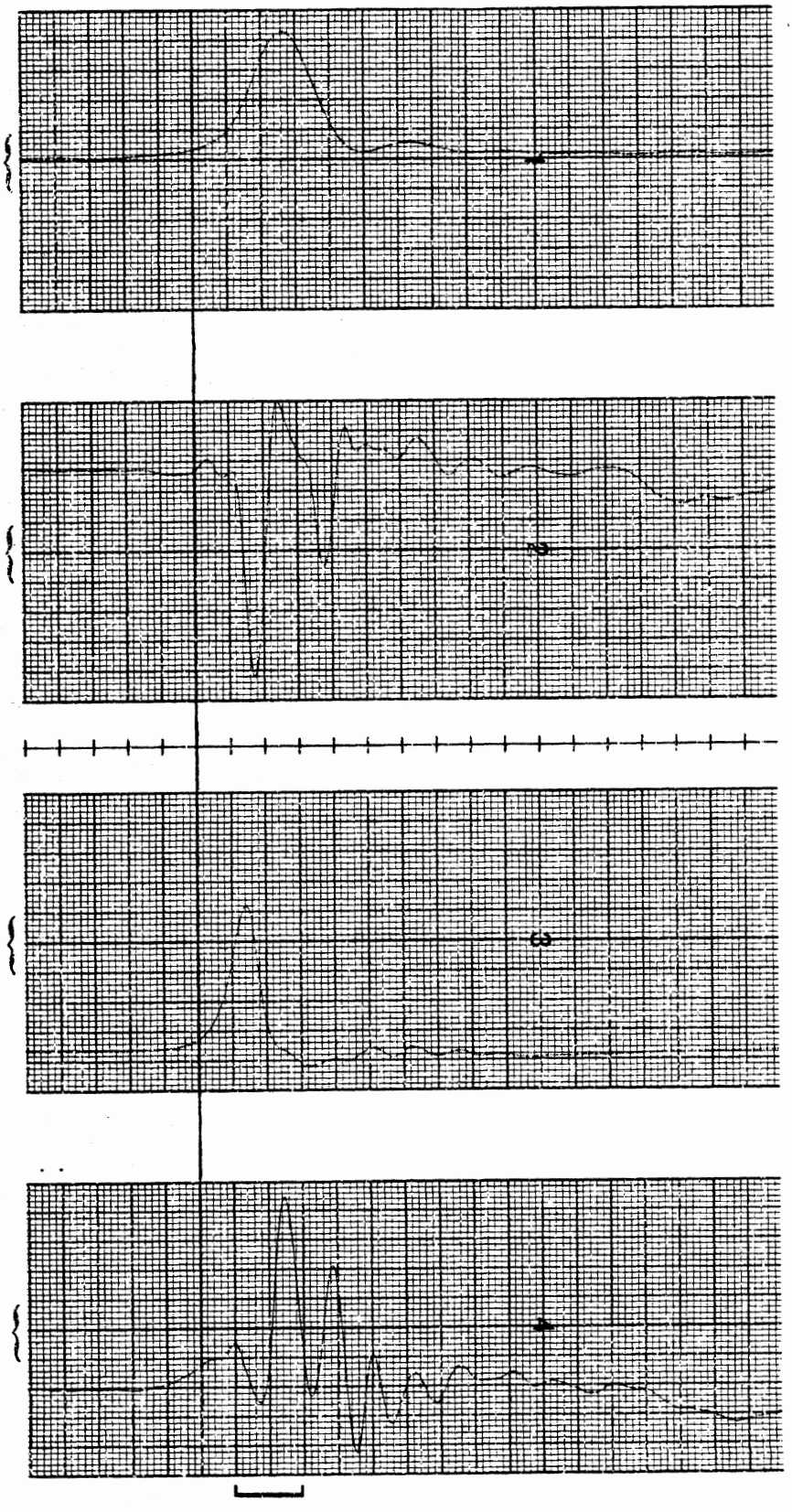
Filter Class: 180

Inferior-Superior Acceleration

Peak: 8.18 G

Scale: 2.51 G =

Filter Class: 180



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 088 DUMMY NO. 879

BODY REGION PELVIS SIDE R

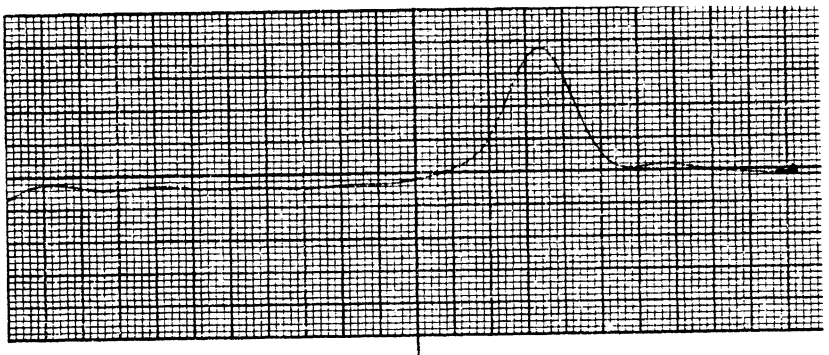
PEAK RESULTANT: 75.4 G

Impact Mass Deceleration

Peak: 45.7G

Scale: 21.8 G =

Filter Class: 60

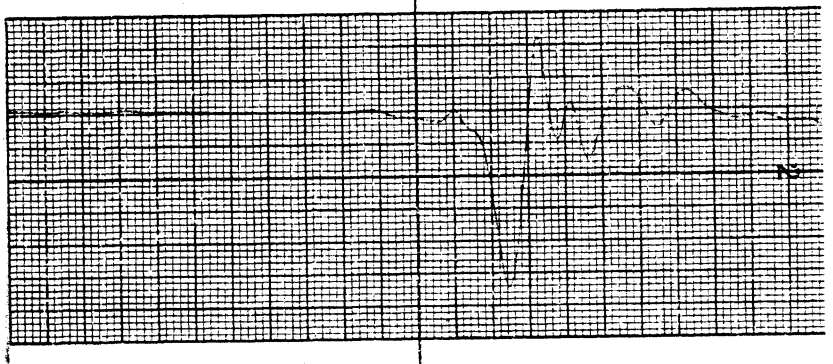


Posterior-Anterior Acceleration

Peak: 8.77 G

Scale: -3.24G =

Filter Class: 180

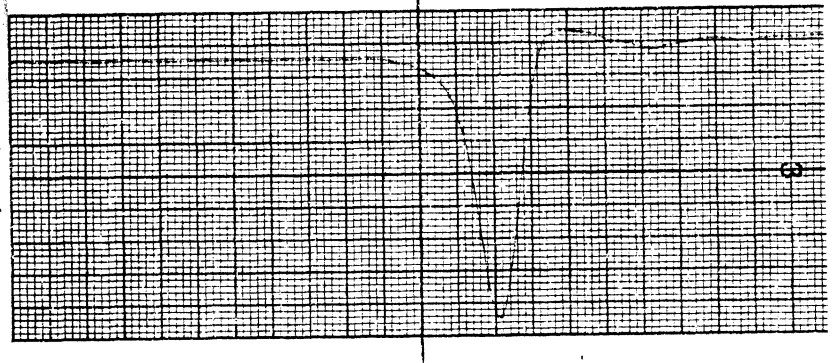


Right-Left Acceleration

Peak: 75.2 G

Scale: -18.8 G =

Filter Class: 180

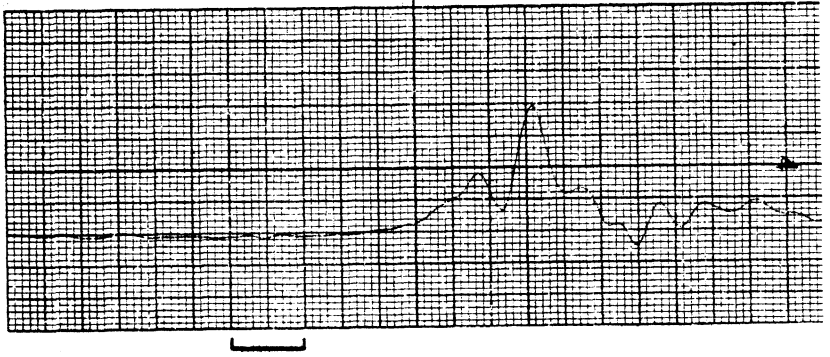


Inferior-Superior Acceleration

Peak: 4.94 G

Scale: 2.46 G =

Filter Class: 180



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 089 DUMMY NO. 879

BODY REGION PELVIS SIDE R

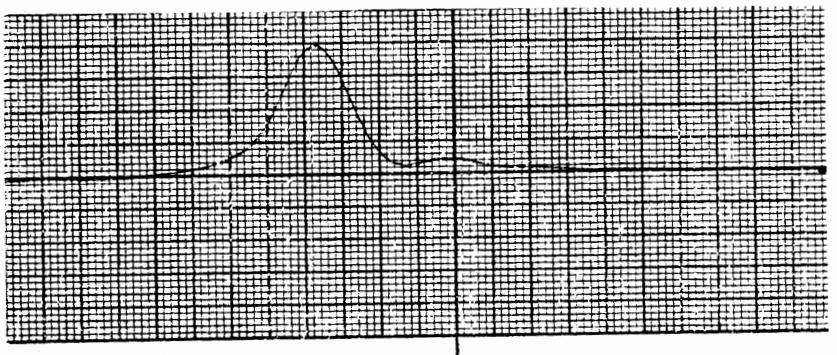
PEAK RESULTANT: 80.3 G

Impact Mass Deceleration

Peak: 45.0 G

Scale: 22.3 G =

Filter Class: 60

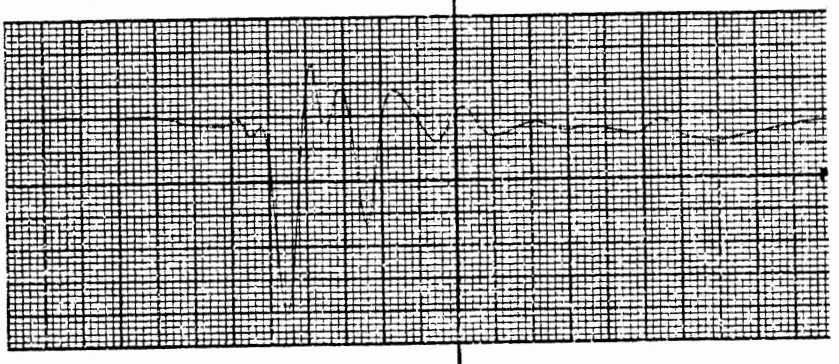


Posterior-Anterior Acceleration

Peak: 10.2 G

Scale: -3.34 G =

Filter Class: 180

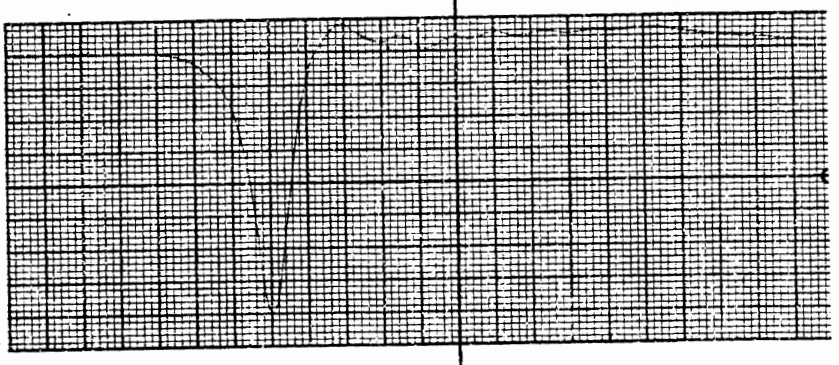


Right-Left Acceleration

Peak: 80.1 G

Scale: -20.0 G =

Filter Class: 180

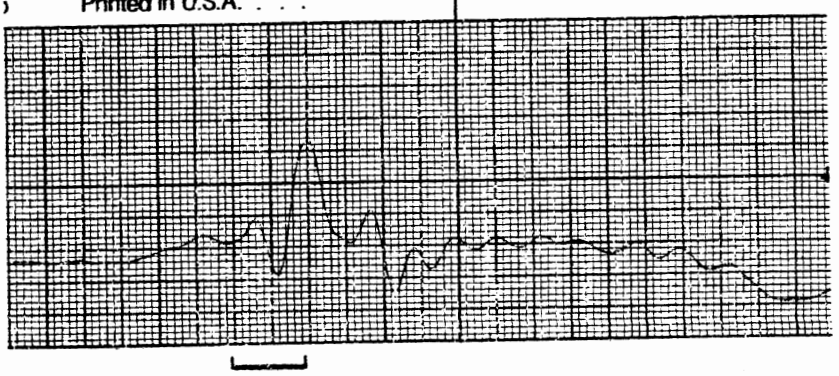


Inferior-Superior Acceleration

Peak: 4.62 G

Scale: 2.48 G =

Filter Class: 180



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6.25 ms.

TEST RESULTS

DUMMY NO. 880

HEAD/NECK TEST RESULTS

TEST: 80Y123 DUMMY #880
IMPACT VELOCITY: 13.42 ft/sec.

TARGET VALUE	ACTUAL VALUES ANGLE (degrees)	CHORDAL DISP. (in.)	TIME (ms.)	FRAME NUMBER
0 deg.	-2.04	0.38	0.00	0
20 deg.	20.37	1.70	34.46	32
MAX ANGLE	35.96	2.61	53.85	50
MAX DISP.	35.96	2.61	53.85	50
20 deg.	20.09	1.04	88.31	82
0 deg.	0.64	0.35	105.54	98

TEST: 80Y124 DUMMY #880
IMPACT VELOCITY: 13.41 ft/sec.

TARGET VALUE	ACTUAL VALUES ANGLE (degrees)	CHORDAL DISP. (in.)	TIME (ms.)	FRAME NUMBER
0 deg.	-1.56	0.37	0.00	0
20 deg.	19.82	1.68	33.03	31
MAX ANGLE	36.81	2.60	63.93	60
MAX DISP.	36.81	2.60	63.93	60
20 deg.	19.75	1.01	87.38	82
0 deg.	0.04	0.34	104.43	98

TEST: 80Y126 DUMMY #880
IMPACT VELOCITY: 13.24 ft/sec.

TARGET VALUE	ACTUAL VALUES ANGLE (degrees)	CHORDAL DISP. (in.)	TIME (ms.)	FRAME NUMBER
0 deg.	-1.28	0.40	0.00	0
20 deg.	19.74	1.67	32.41	29
MAX ANGLE	38.81	2.78	57.00	51
MAX DISP.	38.81	2.82	54.76	49
20 deg.	20.54	1.00	87.18	78
0 deg.	0.11	0.35	103.94	93

TEST: 80Y127 DUMMY #880
IMPACT VELOCITY: 13.27 ft/sec.

TARGET VALUE	ACTUAL VALUES ANGLE (degrees)	CHORDAL DISP. (in.)	TIME (ms.)	FRAME NUMBER
0 deg.	-4.03	0.23	0.00	0
20 deg.	20.31	1.80	36.67	35
MAX DISP.	35.90	2.84	62.86	60
MAX ANGLE	35.90	2.79	63.90	61
20 deg.	20.36	1.70	86.95	83
0 deg.	0.23	0.35	102.67	98

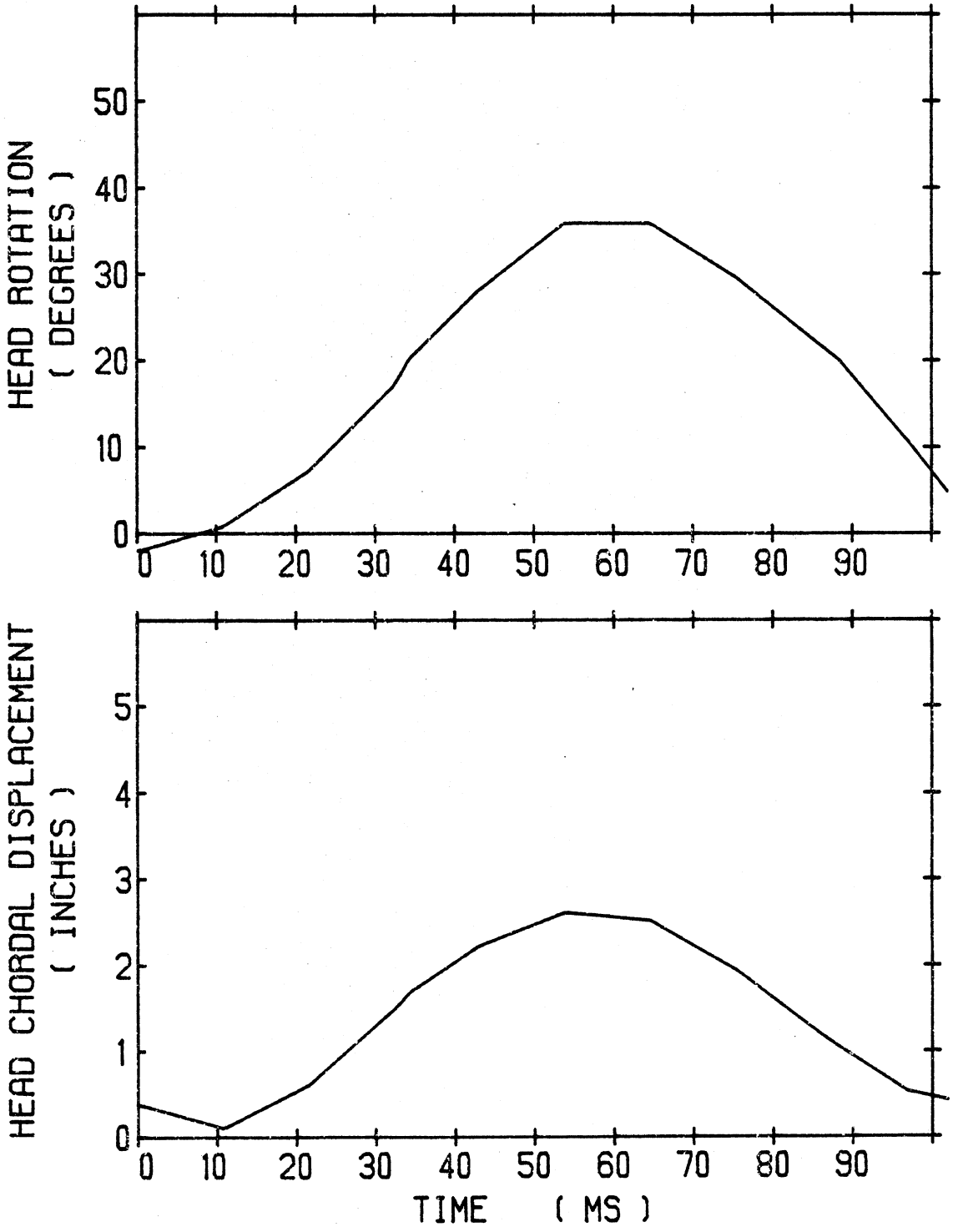
TEST: 80Y128 DUMMY #880
IMPACT VELOCITY: 13.28 ft/sec.

TARGET VALUE	ACTUAL VALUES ANGLE (degrees)	CHORDAL DISP. (in.)	TIME (ms.)	FRAME NUMBER
0 deg.	-3.62	0.15	0.00	0
20 deg.	20.56	1.83	37.92	35
MAX DISP.	36.31	2.85	63.92	59
MAX ANGLE	36.31	2.84	62.83	58
20 deg.	19.83	1.71	88.83	82
0 deg.	-0.05	0.32	105.08	97

TEST: 80Y129 DUMMY #880
IMPACT VELOCITY: 13.08 ft/sec.

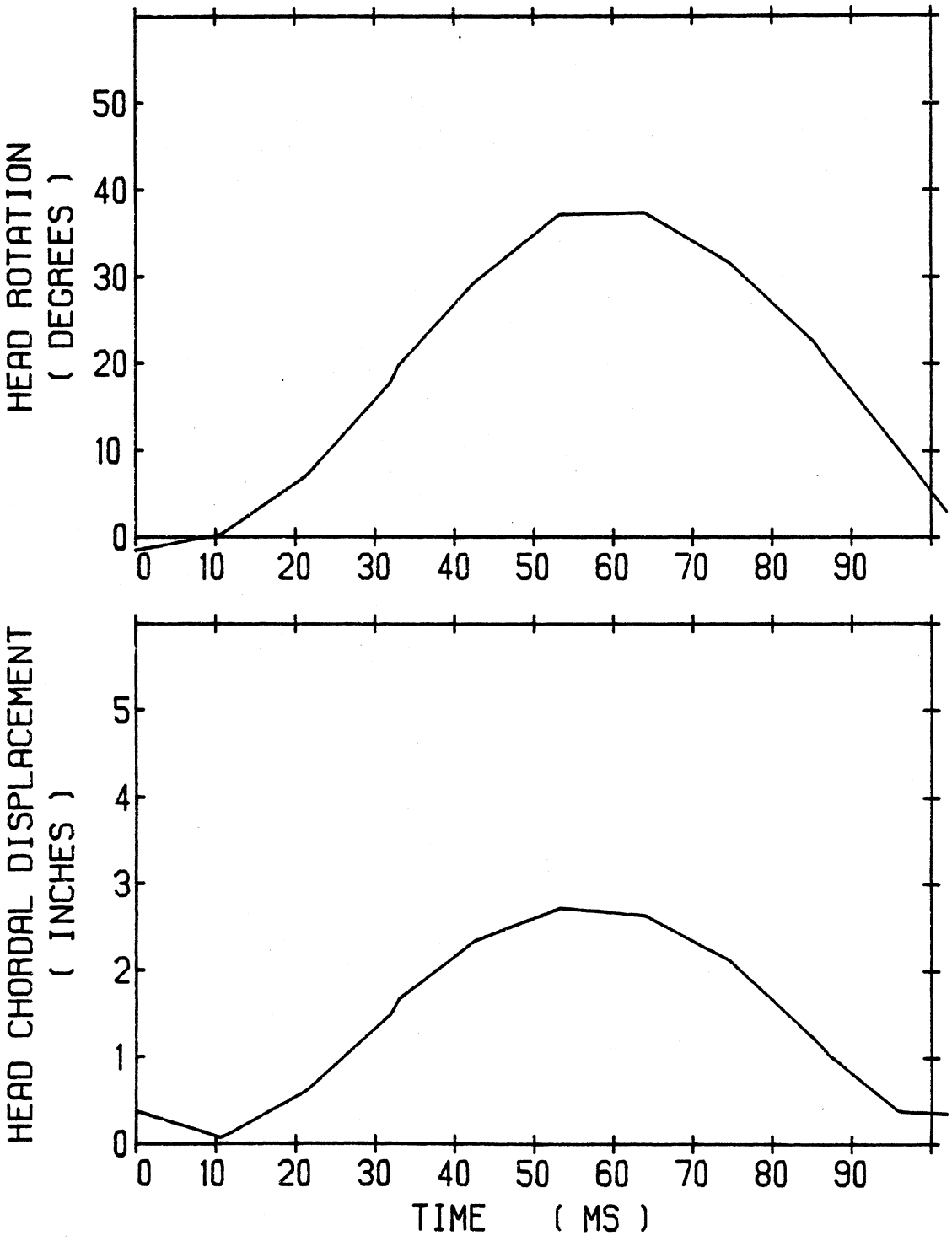
TARGET VALUE	ACTUAL VALUES ANGLE (degrees)	CHORDAL DISP. (in.)	TIME (ms.)	FRAME NUMBER
0 deg.	-3.88	0.16	0.00	0
20 deg.	20.57	1.82	38.55	37
MAX ANGLE	35.82	2.78	61.47	59
MAX DISP.	35.82	2.78	61.47	59
20 deg.	19.84	1.72	90.64	87
0 deg.	0.09	0.33	106.26	102

80Y123



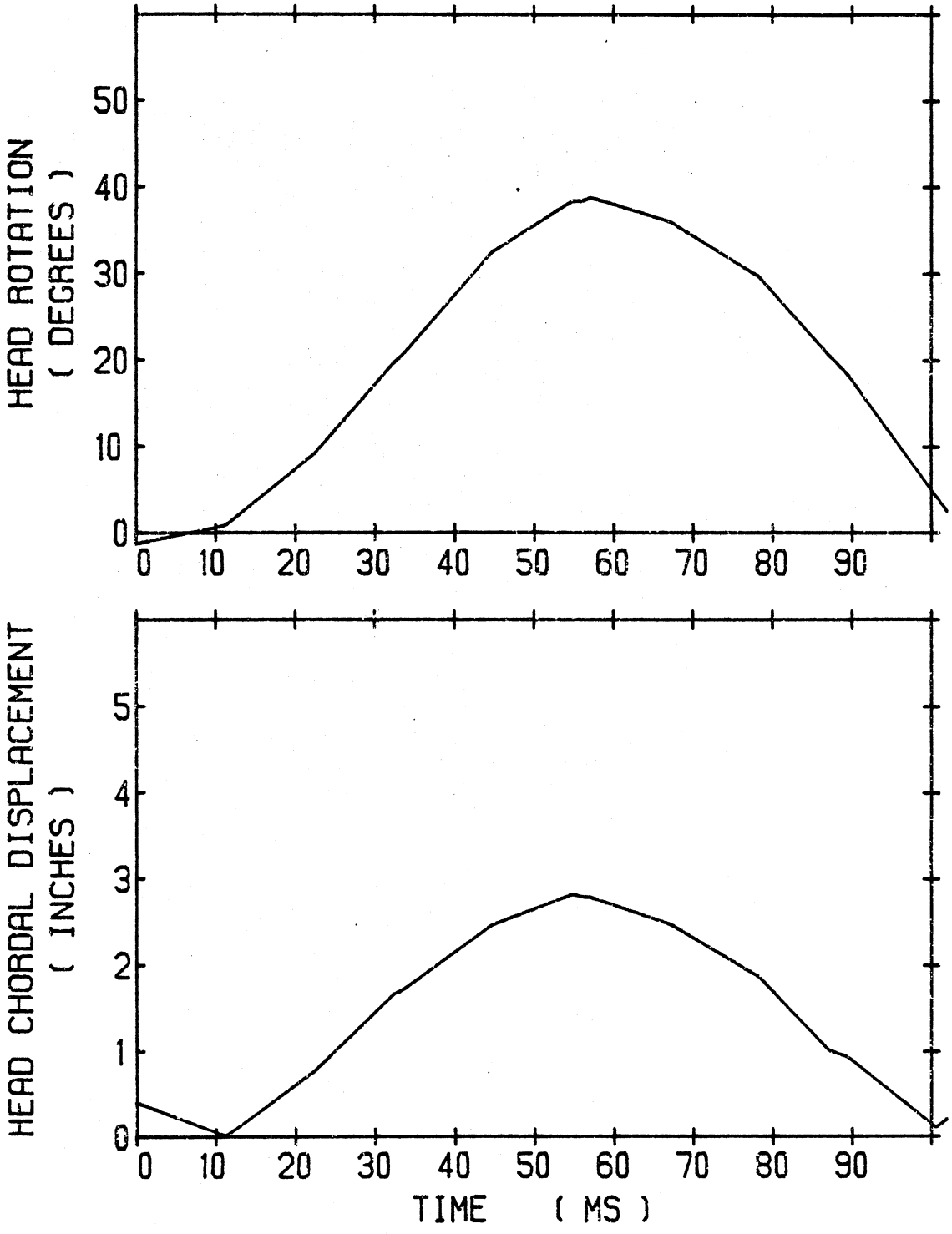
NECK PENDULUM TEST

80Y124



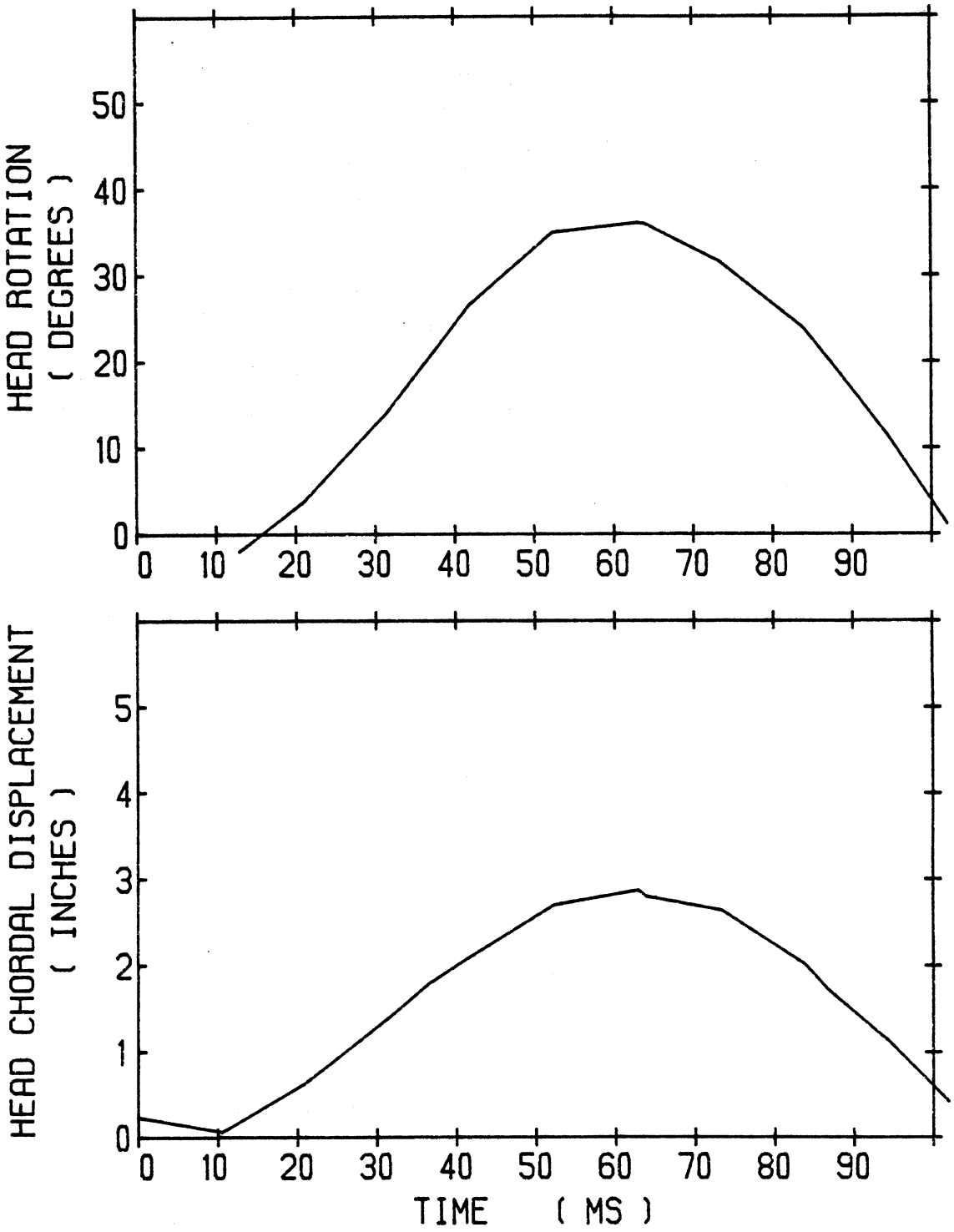
NECK PENDULUM TEST

80Y126



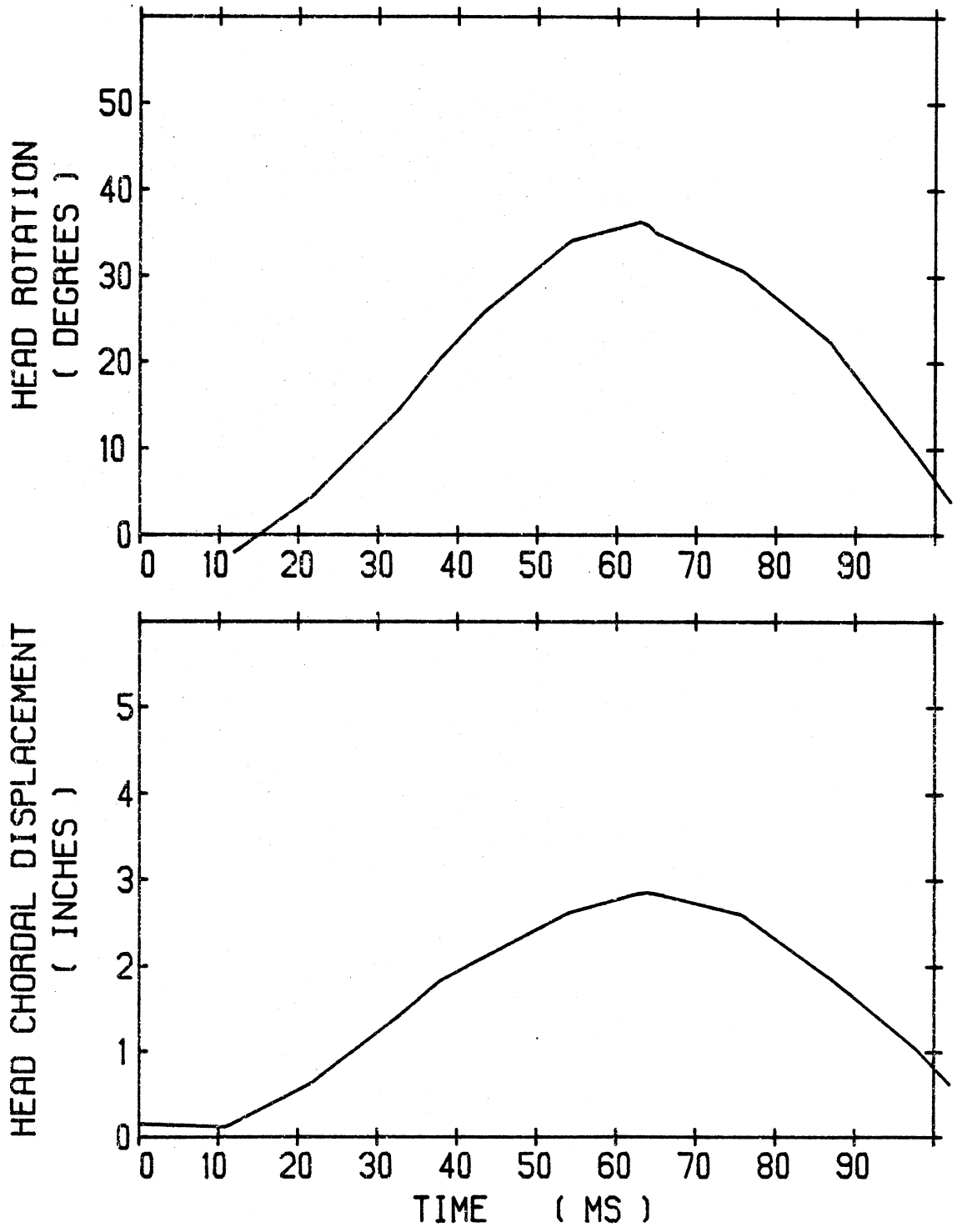
NECK PENDULUM TEST

80Y127



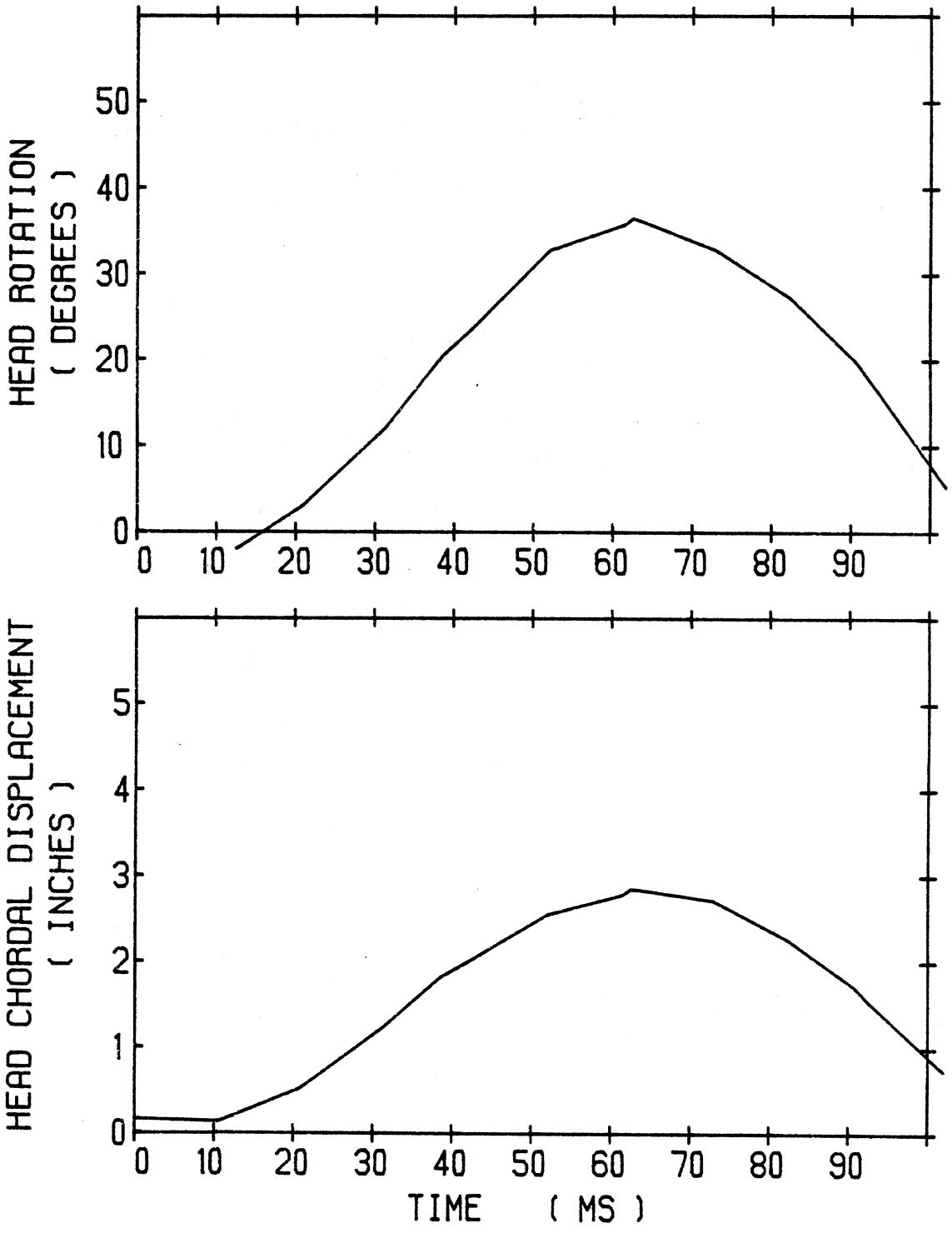
NECK PENDULUM TEST

80Y128



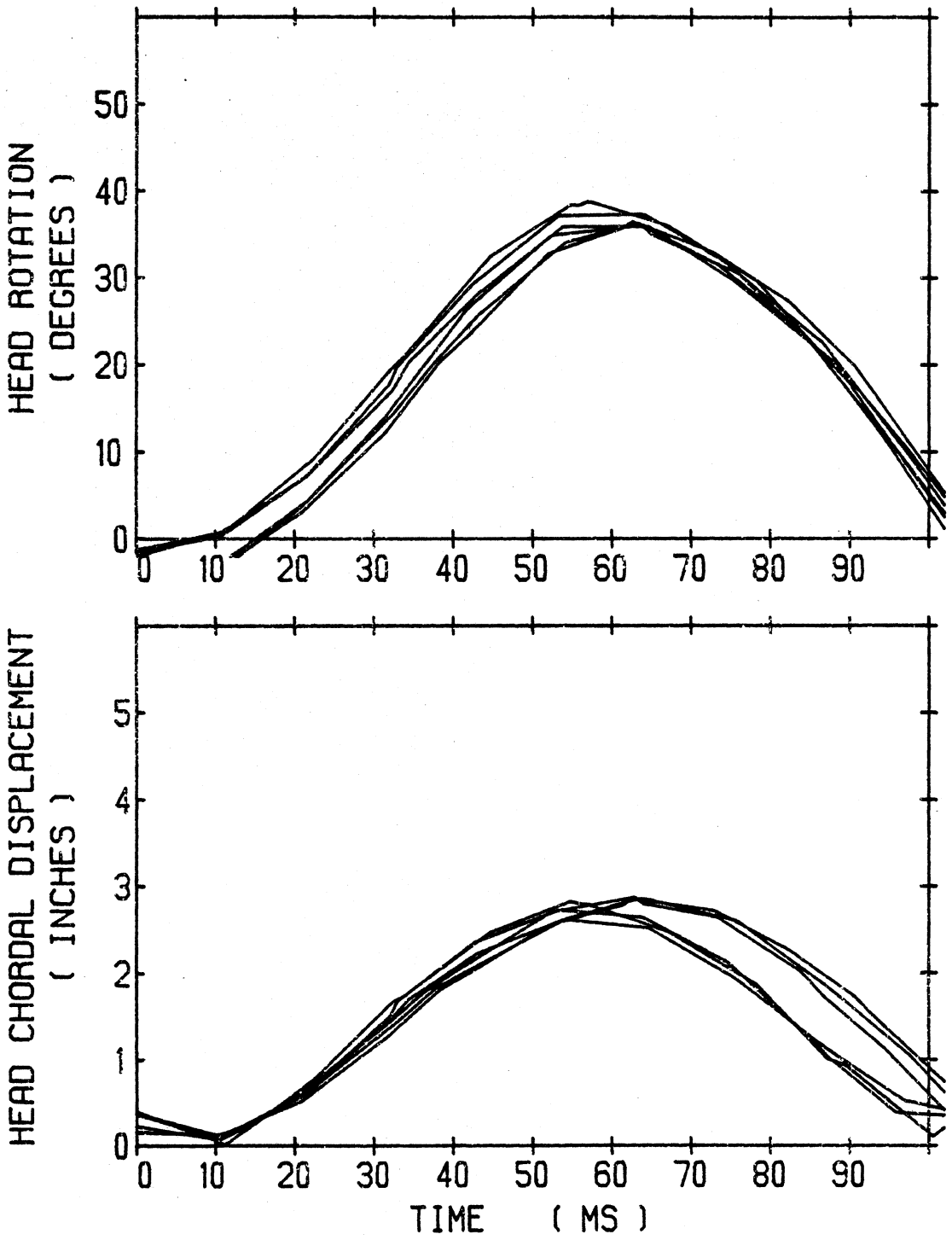
NECK PENDULUM TEST

80Y129



NECK PENDULUM TEST

ALL #880



NECK PENDULUM TEST

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 091 DUMMY NO. 879

BODY REGION PELVIS SIDE L

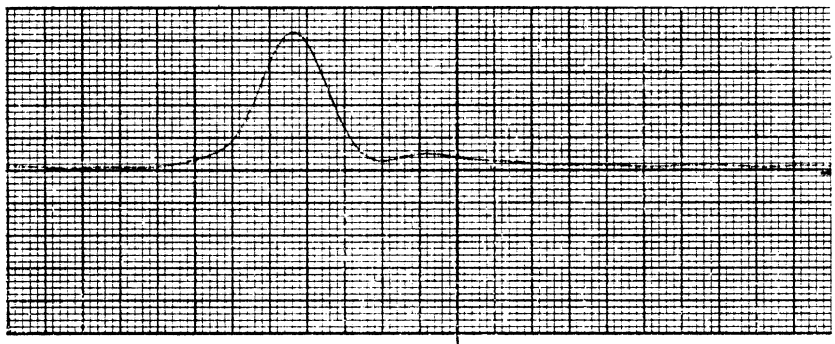
PEAK RESULTANT: 81.5 G

Impact Mass
Deceleration

Peak: 46.8 G

Scale: 22.1 G =

Filter Class: 60

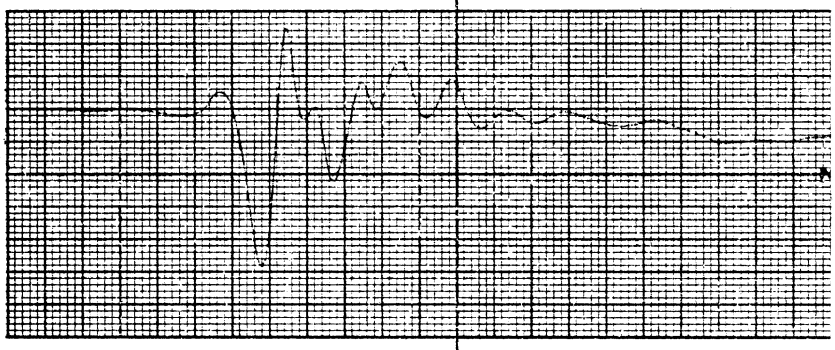


Posterior-Anterior
Acceleration

Peak: 8.07G

Scale: -3.34G =

Filter Class: 180

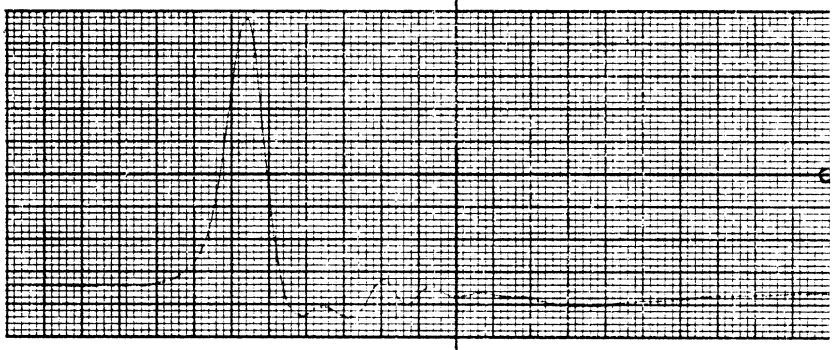


Right-Left
Acceleration

Peak: 81.1 G

Scale: -19.8 G =

Filter Class: 180



Inferior-Superior
Acceleration

Peak: 7.35 G

Scale: 2.51 G =

Filter Class: 180

6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 123 DUMMY NO. 880

BODY REGION HEAD/NECK SIDE L

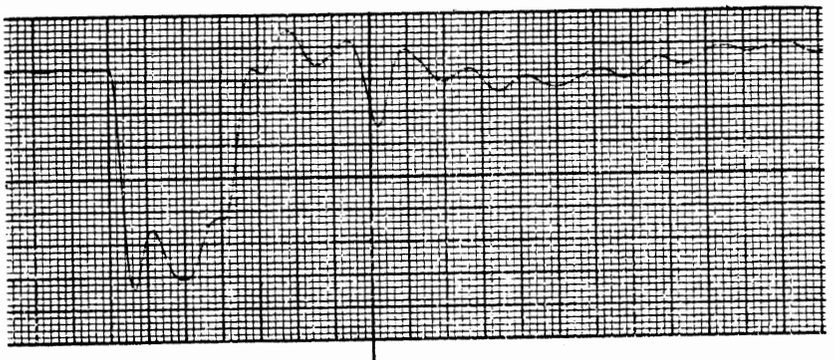
PEAK RESULTANT: 10.0 G

Impact Mass
Deceleration

Peak: 13.5 G

Scale: -3.96 G =

Filter Class: 60

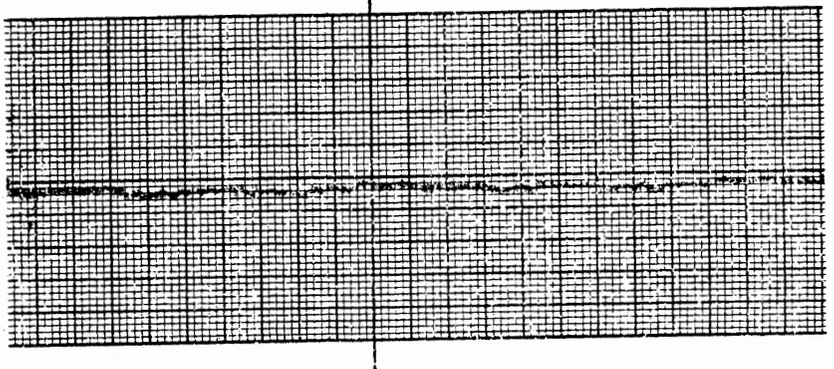


Posterior-Anterior
Acceleration

Peak: 0.0 G

Scale: 0.00 G =

Filter Class: 1000

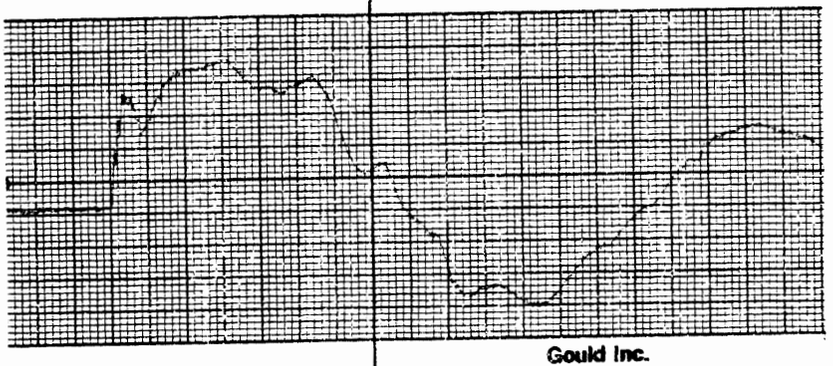


Right-Left
Acceleration

Peak: 8.34G

Scale: -3.65 G =

Filter Class: 1000



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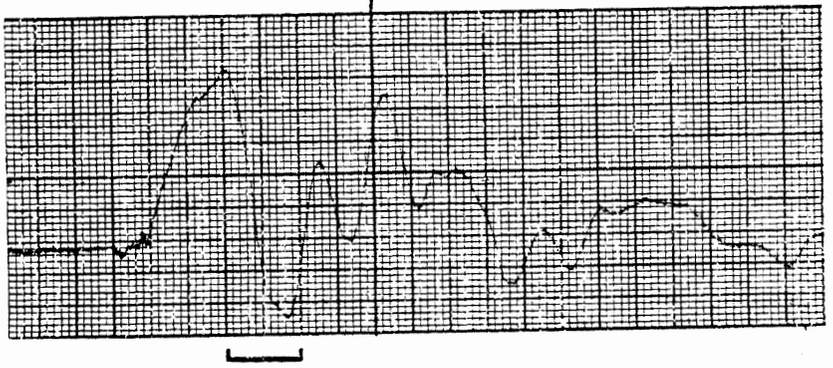
Cleveland, Ohio Printed

Inferior-Superior
Acceleration

Peak: 5.51 G

Scale: -1.98 G =

Filter Class: 1000



25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 124 DUMMY NO. 880

BODY REGION HEAD/NECK SIDE L

PEAK RESULTANT: 10.3 G

Impact Mass Deceleration

Peak: 14.1 G

Scale: -3.96 G =

Filter Class: 60

Posterior-Anterior Acceleration

Peak: 0.84 G

Scale: 0.66 G =

Filter Class: 1000

Right-Left Acceleration

Peak: 8.13 G

Scale: -3.65 G =

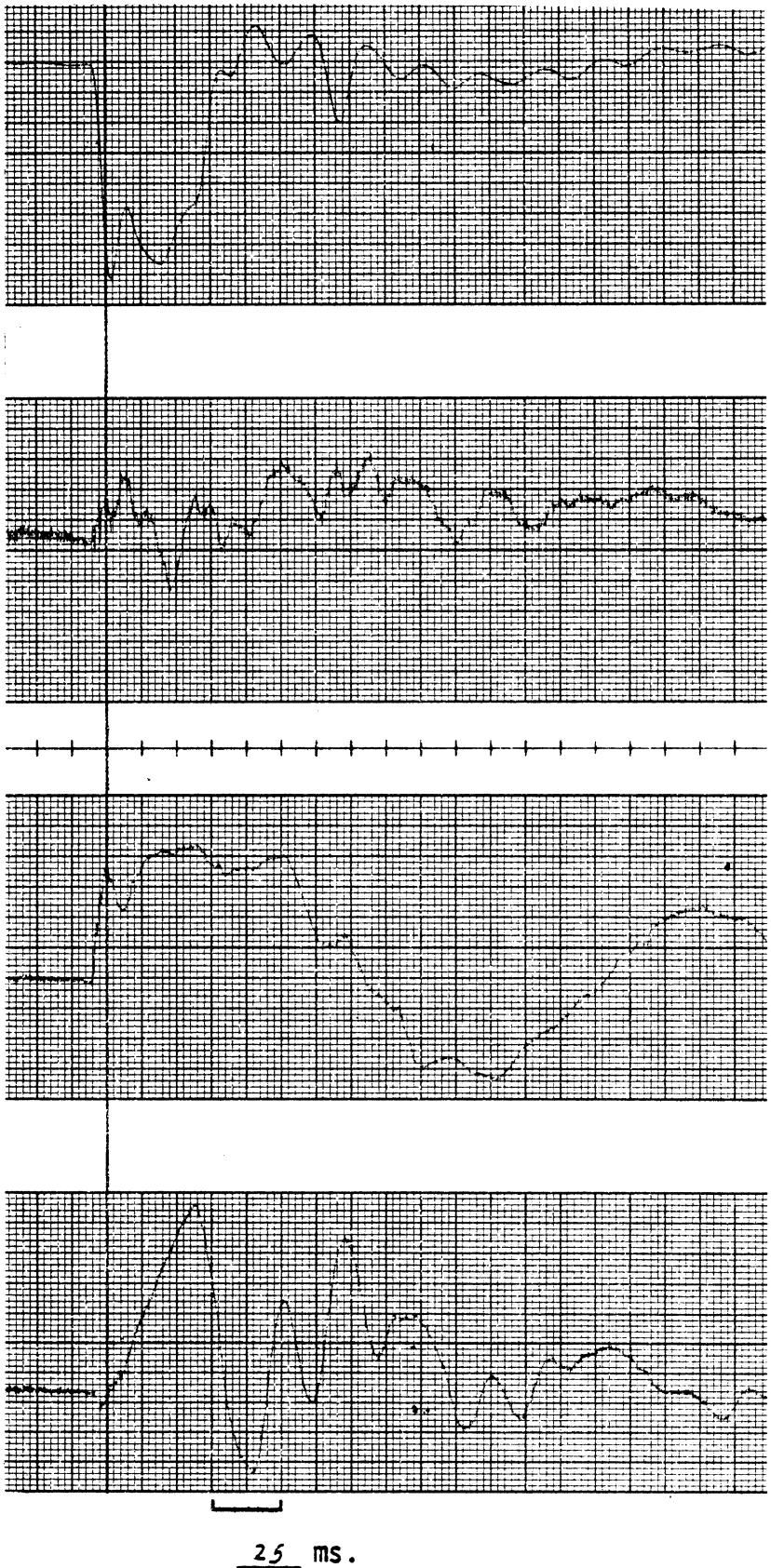
Filter Class: 1000

Inferior-Superior Acceleration

Peak: 6.24 G

Scale: -1.98 G =

Filter Class: 1000



25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 126 DUMMY NO. 880

BODY REGION HEAD/NECK SIDE L

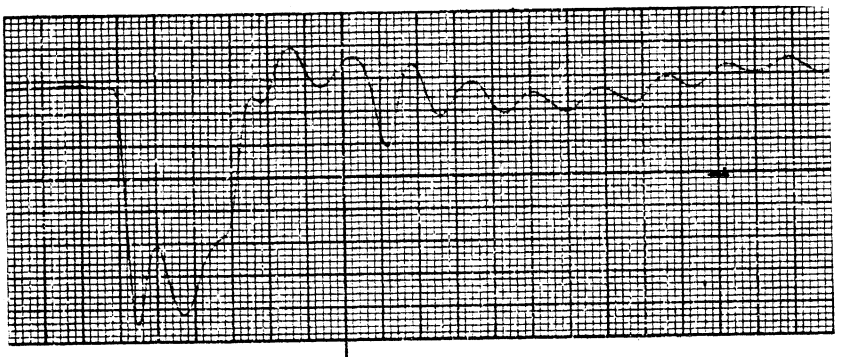
PEAK RESULTANT: 10.2 G

Impact Mass Deceleration

Peak: 14.4 G

Scale: -3.96 G =

Filter Class: 60

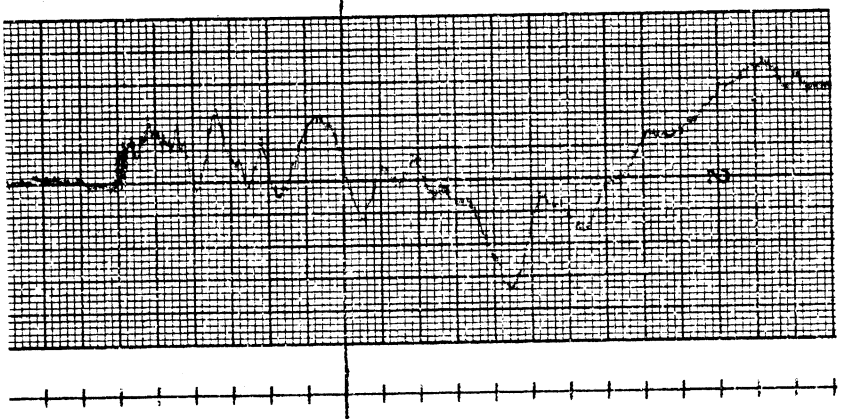


Posterior-Anterior Acceleration

Peak: 1.11 G

Scale: 0.66 G =

Filter Class: 1000

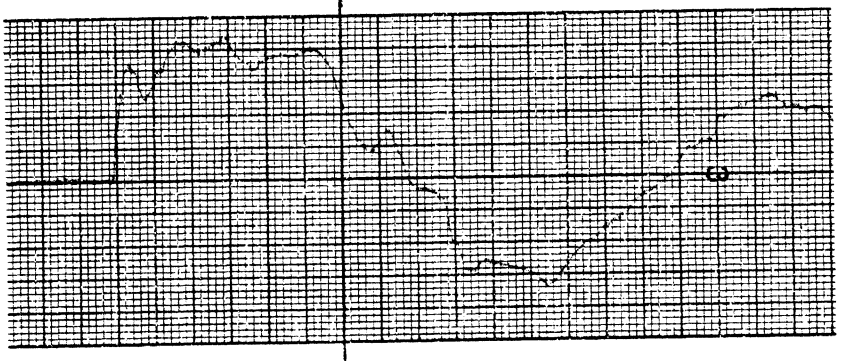


Right-Left Acceleration

Peak: 8.12 G

Scale: -3.65 G =

Filter Class: 1000



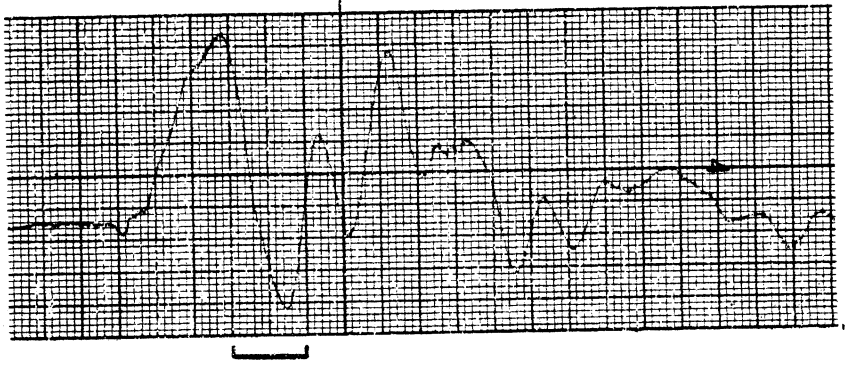
ACCUCHART

Inferior-Superior Acceleration

Peak: 6.10 G

Scale: -1.98 G =

Filter Class: 1000



25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 127 DUMMY NO. 880

BODY REGION HEAD/NECK SIDE R

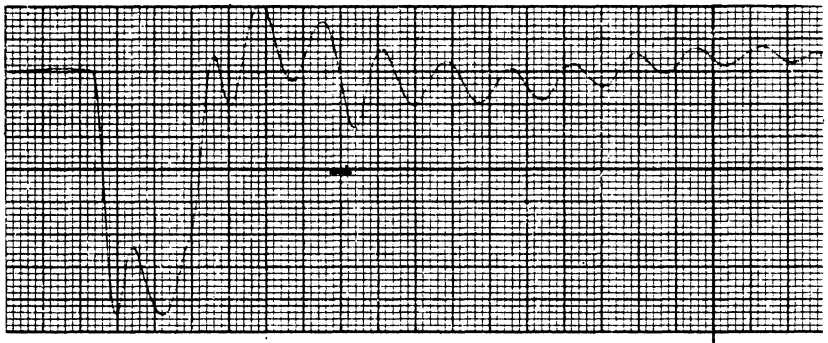
PEAK RESULTANT: 11.9 G

Impact Mass Deceleration

Peak: 15.0 G

Scale: -3.96 G =

Filter Class: 60

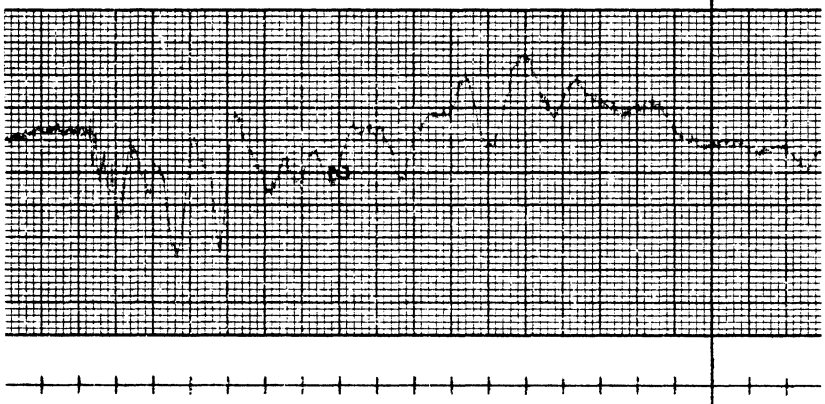


Posterior-Anterior Acceleration

Peak: 1.33 G

Scale: 0.66 G =

Filter Class: 1000

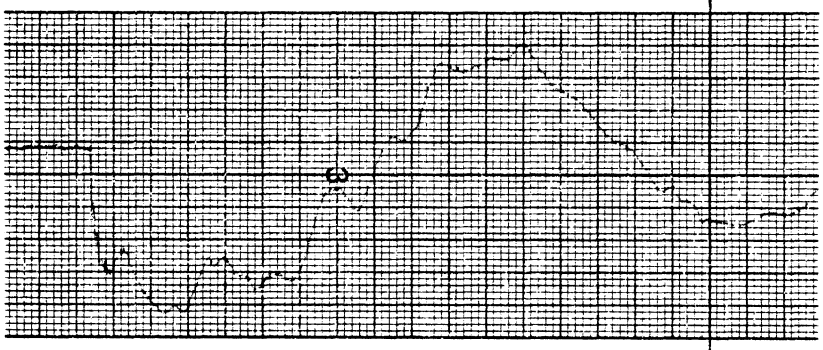


Right-Left Acceleration

Peak: 9.42 G

Scale: -3.65 G =

Filter Class: 1000

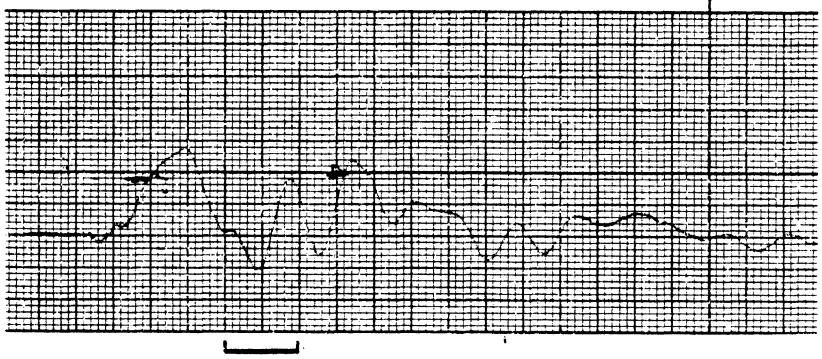


Inferior-Superior Acceleration

Peak: 7.07 G

Scale: -4.95 G =

Filter Class: 1000



25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 128 DUMMY NO. 880

BODY REGION HEAD/NECK SIDE R

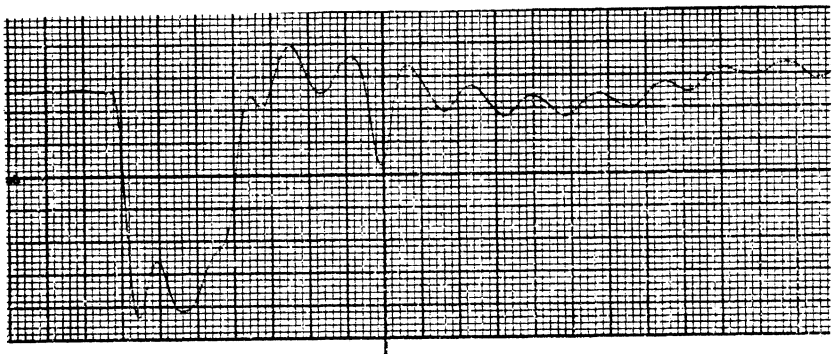
PEAK RESULTANT: 11.2 G

Impact Mass Deceleration

Peak: 13.7 G

Scale: -3.96 G =

Filter Class: 60

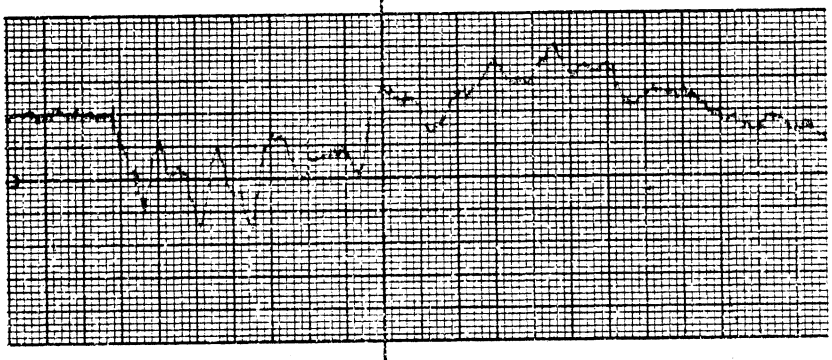


Posterior-Anterior Acceleration

Peak: 1.18 G

Scale: 0.66 G =

Filter Class: 1000

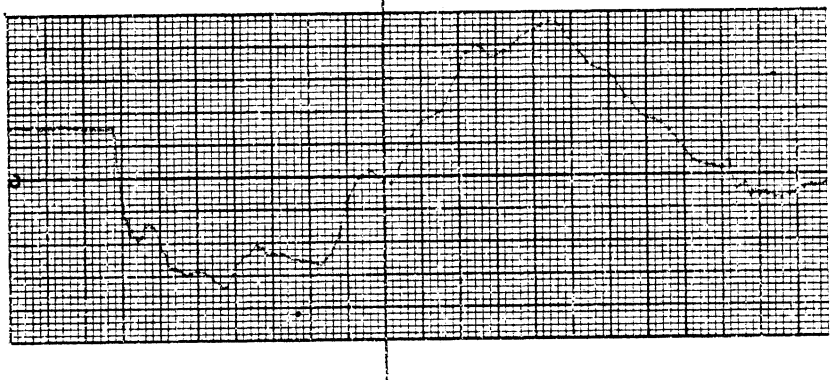


Right-Left Acceleration

Peak: 9.12 G

Scale: -3.65 G =

Filter Class: 1000



Inferior-Superior Acceleration

Peak: 6.41 G

Scale: -4.95 G =

Filter Class: 1000

25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 129 DUMMY NO. 880

BODY REGION HEAD/NECK SIDE R

PEAK RESULTANT: 11.0 G

Impact Mass Deceleration

Peak: 13.4 G

Scale: -3.96 G =

Filter Class: 60

Posterior-Anterior Acceleration

Peak: 1.15 G

Scale: 0.66 G =

Filter Class: 1000

Right-Left Acceleration

Peak: 8.88 G

Scale: -3.65 G =

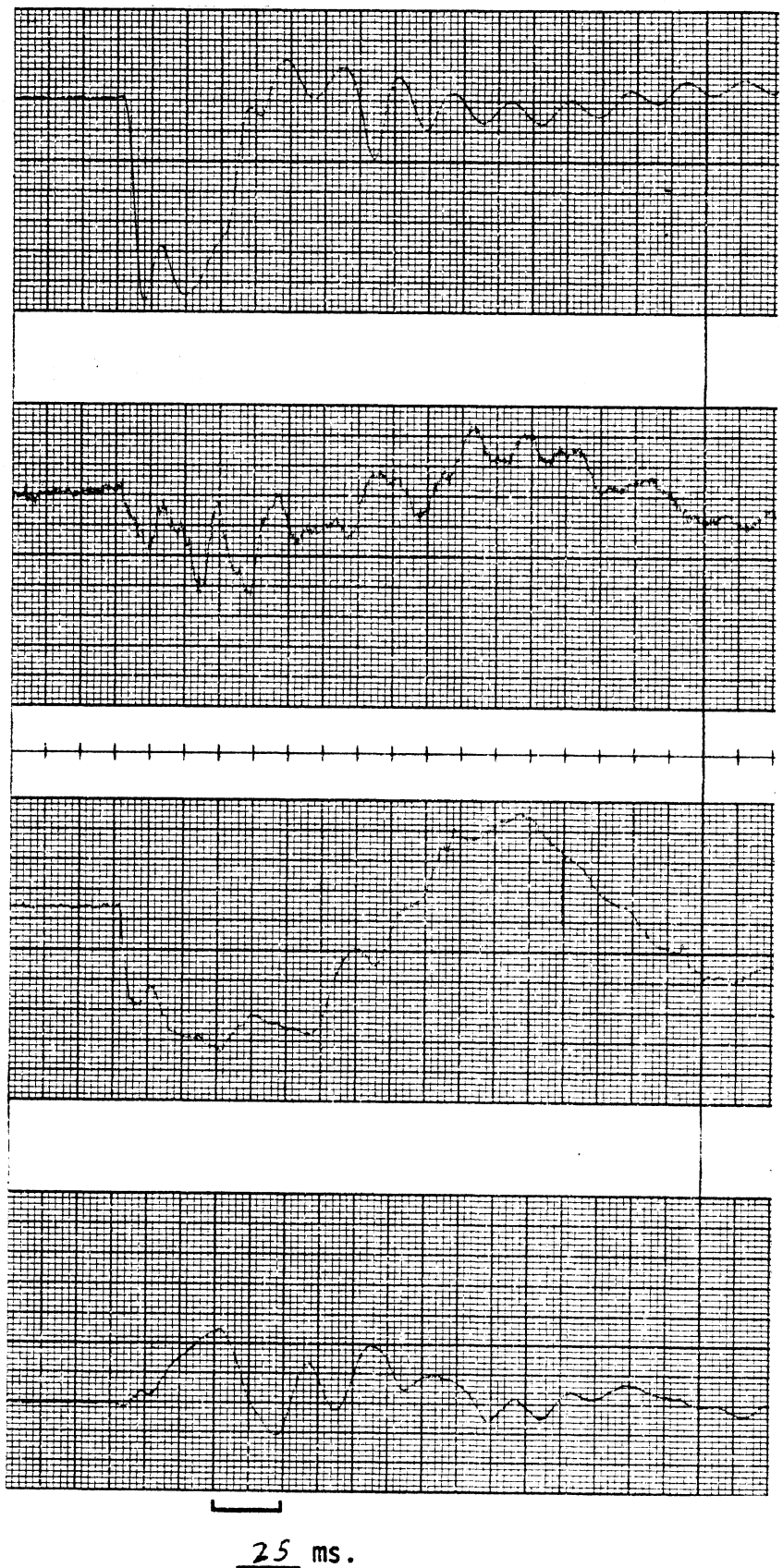
Filter Class: 1000

Inferior-Superior Acceleration

Peak: 6.41 G

Scale: -4.95 G =

Filter Class: 1000



25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 097 DUMMY NO. 880

BODY REGION HEAD SIDE L

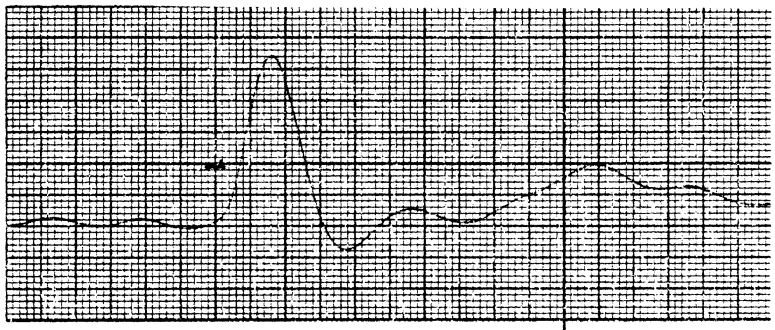
PEAK RESULTANT: 206. G

Impact Mass
Deceleration

Peak: 11.8 G

Scale: 4.41 G =

Filter Class: 60

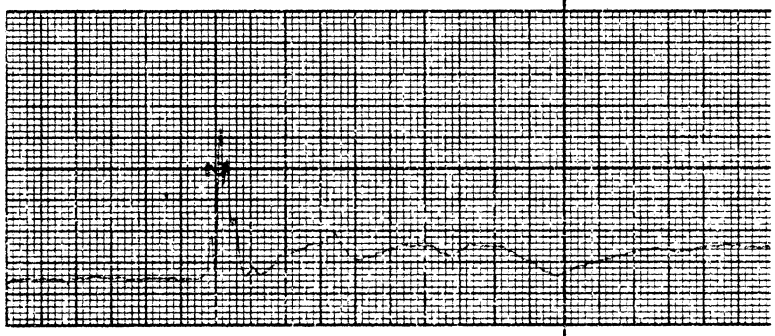


Posterior-Anterior
Acceleration

Peak: 8.23 G

Scale: 3.34 G =

Filter Class: 1000

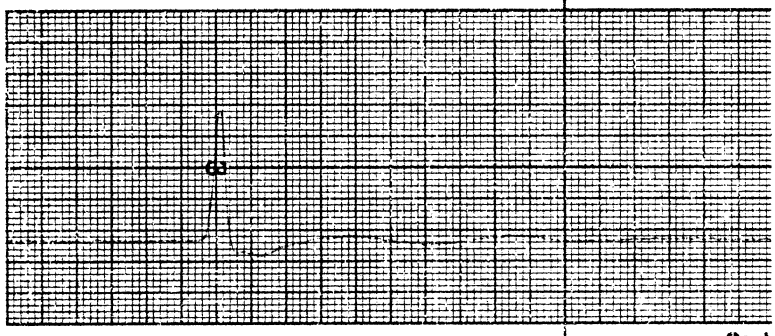


Right-Left
Acceleration

Peak: 206. G

Scale: -96.5 G =

Filter Class: 1000



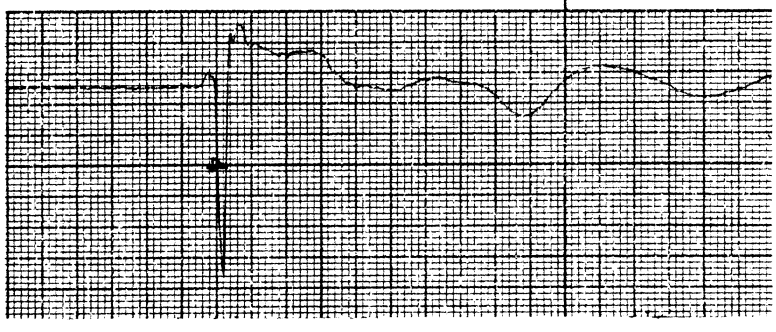
ACCUCHART

Inferior-Superior
Acceleration

Peak: 15.2 G

Scale: 4.95 G =

Filter Class: 1000



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 098 DUMMY NO. 880

BODY REGION HEAD SIDE R

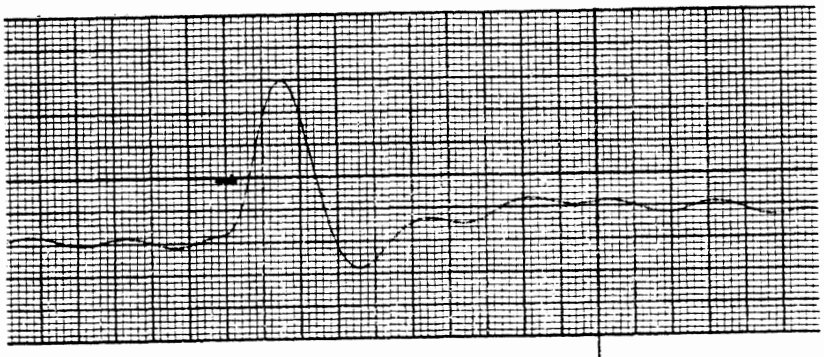
PEAK RESULTANT: 258. G

Impact Mass Deceleration

Peak: 11.0 G

Scale: 4.41 G =

Filter Class: 60

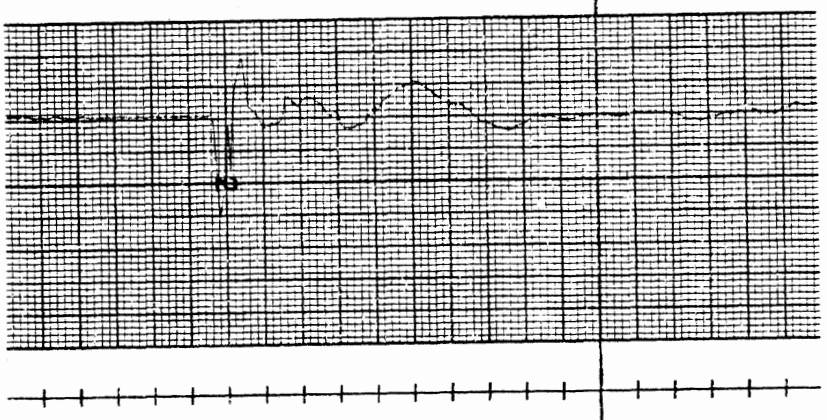


Posterior-Anterior Acceleration

Peak: 5.37 G

Scale: 3.34 G =

Filter Class: 1000

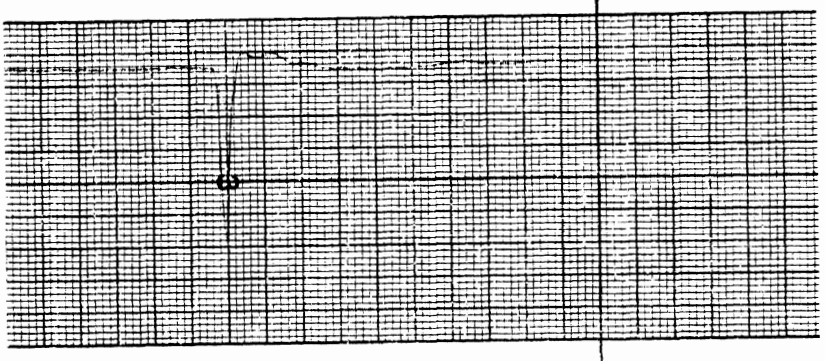


Right-Left Acceleration

Peak: 258. G

Scale: -96.5 G =

Filter Class: 1000

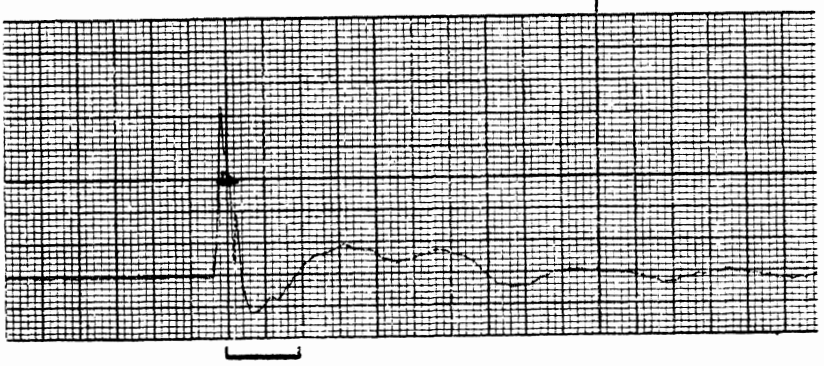


Inferior-Superior Acceleration

Peak: 13.4 G

Scale: -4.95 G =

Filter Class: 1000



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 099 DUMMY NO. 880

BODY REGION HEAD SIDE R

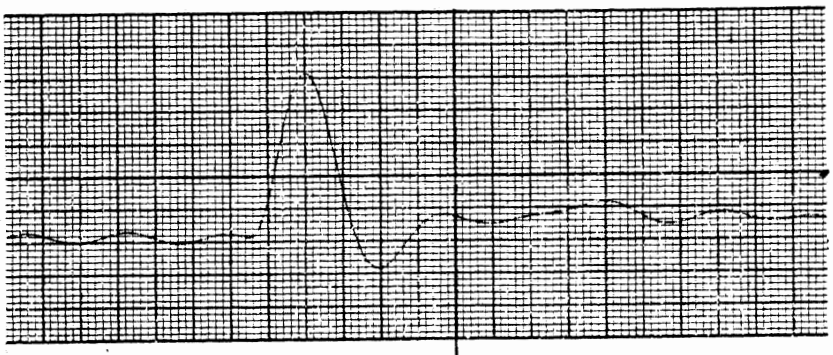
PEAK RESULTANT: 229. G

Impact Mass
Deceleration

Peak: 12.4 G

Scale: 4.41 G =

Filter Class: 60

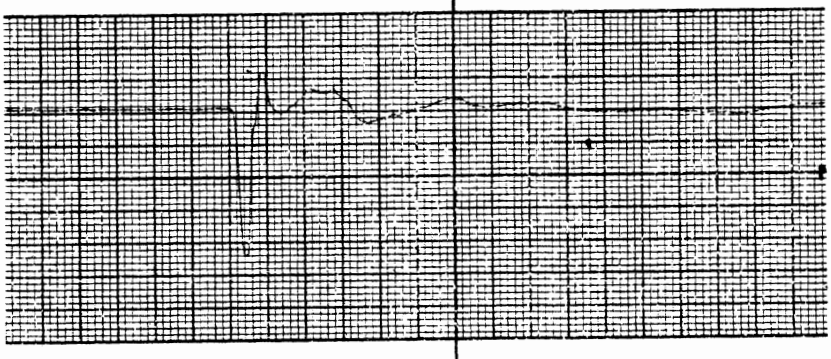


Posterior-Anterior
Acceleration

Peak: 15.1 G

Scale: 6.67 G =

Filter Class: 1000

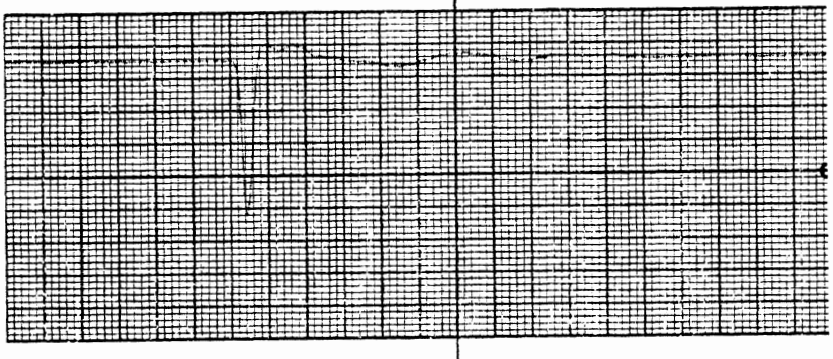


Right-Left
Acceleration

Peak: 228. G

Scale: -96.5 G =

Filter Class: 1000



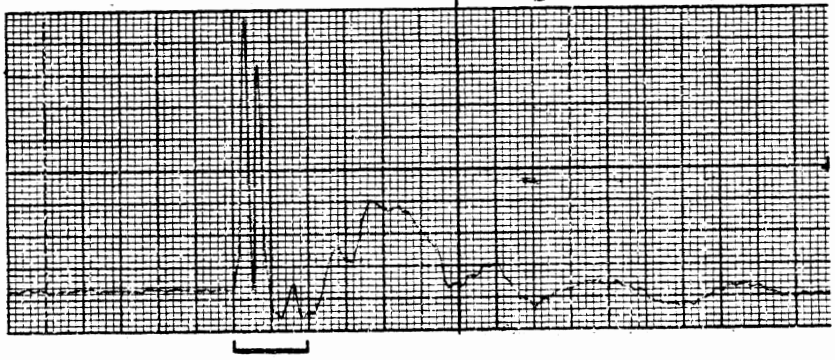
ACCU

Inferior-Superior
Acceleration

Peak: 8.42 G

Scale: -1.98 G =

Filter Class: 1000



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 100 DUMMY NO. 880

BODY REGION HEAD SIDE R

PEAK RESULTANT: 244. G

Impact Mass
Deceleration

Peak: 10.7 G

Scale: 4.41 G =

Filter Class: 60

Posterior-Anterior
Acceleration

Peak: 3.61 G

Scale: 3.34 G =

Filter Class: 1000

Right-Left
Acceleration

Peak: 244. G

Scale: -96.5 G =

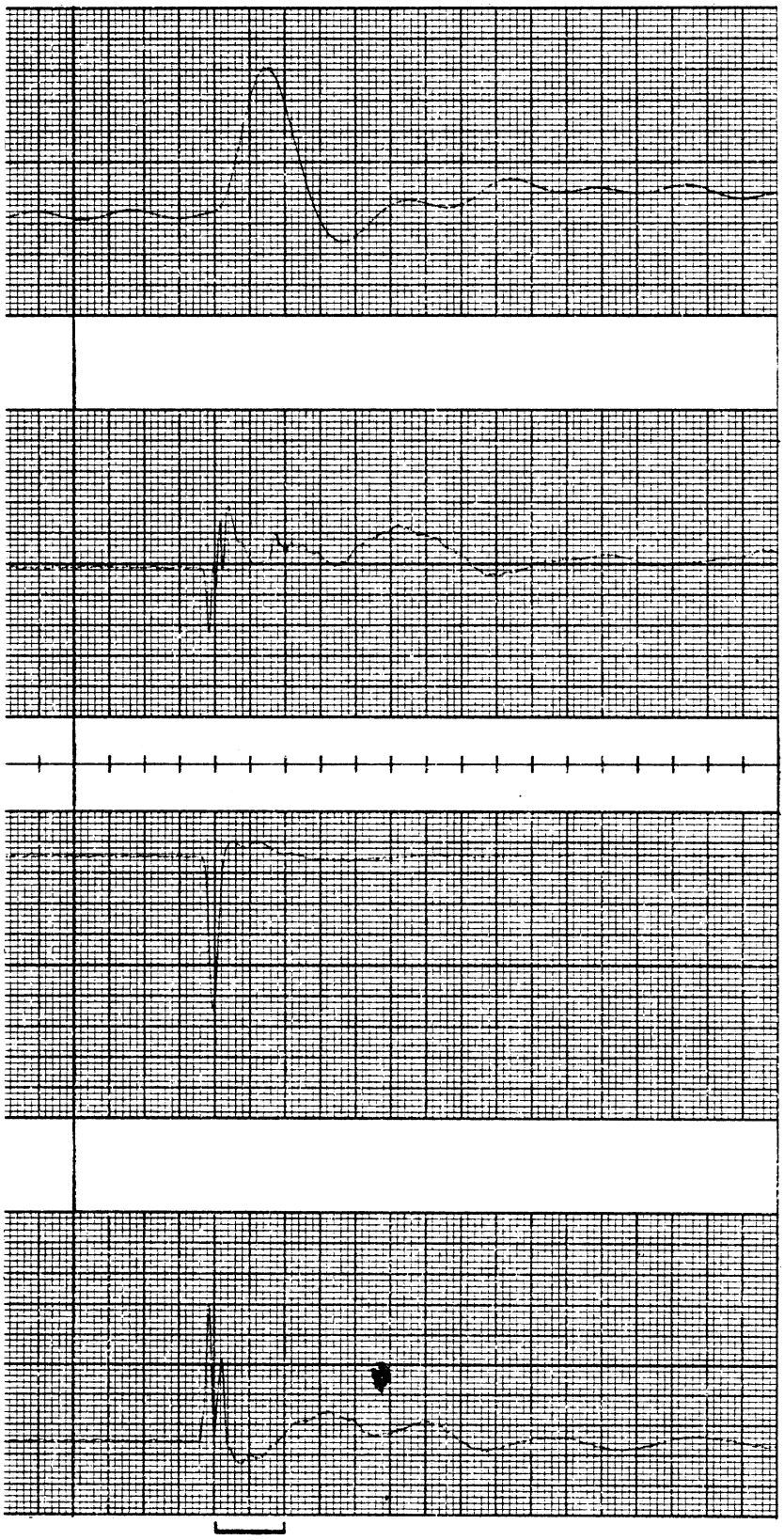
Filter Class: 1000

Inferior-Superior
Acceleration

Peak: 11.3 G

Scale: -4.95 G =

Filter Class: 1000



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 096 DUMMY NO. 880

BODY REGION HEAD SIDE L

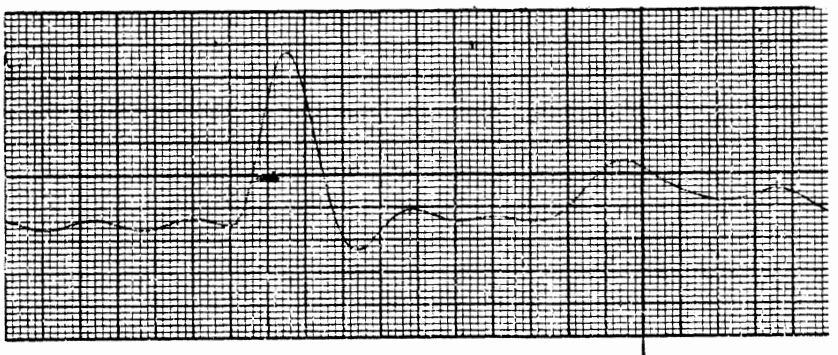
PEAK RESULTANT: 195. G

Impact Mass
Deceleration

Peak: 11.7 G

Scale: 4.41 G =

Filter Class: 60

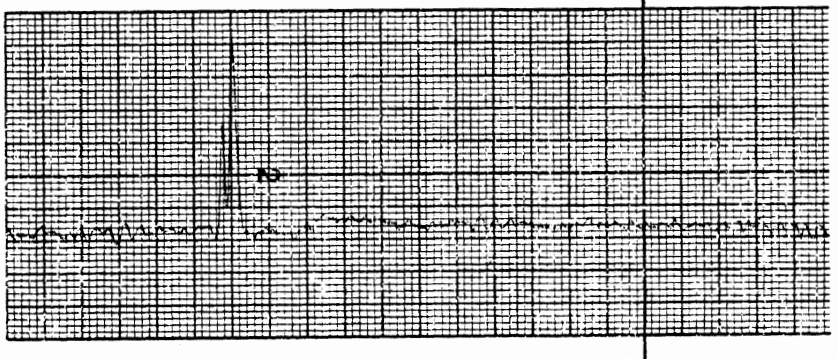


Posterior-Anterior
Acceleration

Peak: 1.05 G

Scale: 0.33 G =

Filter Class: 1000

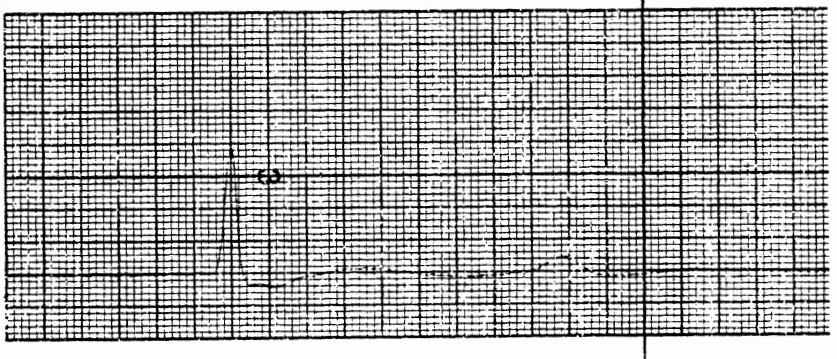


Right-Left
Acceleration

Peak: 195. G

Scale: -100. G =

Filter Class: 1000

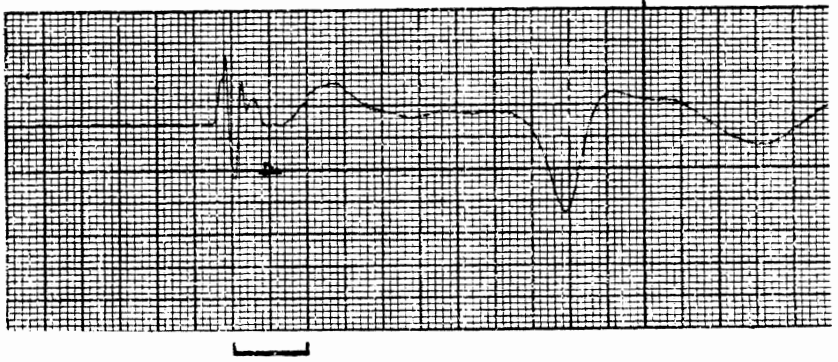


Inferior-Superior
Acceleration

Peak: 4.48G

Scale: -5.00 G =

Filter Class: 1000



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 095 DUMMY NO. 880

BODY REGION HEAD SIDE L

PEAK RESULTANT: 187. G

Impact Mass Deceleration

Peak: 12.3 G

Scale: 4.41 G =

Filter Class: 60

Posterior-Anterior Acceleration

Peak: 0.68 G

Scale: 0.33 G =

Filter Class: 1000

Right-Left Acceleration

Peak: 187. G

Scale: -100. G =

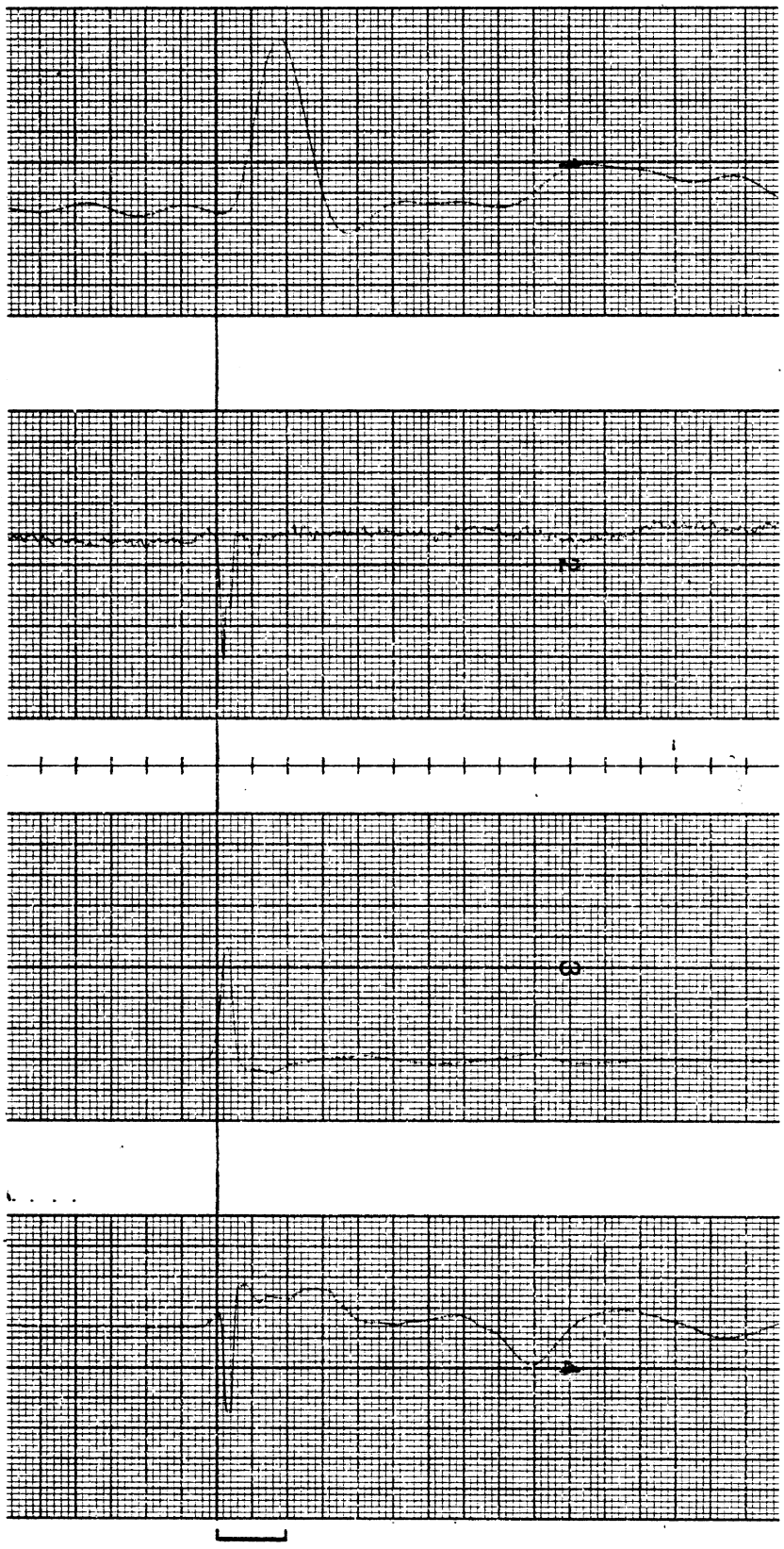
Filter Class: 1000

Inferior-Superior Acceleration

Peak: 7.35 G

Scale: -5.00 G =

Filter Class: 1000



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 087 DUMMY NO. 880

BODY REGION PELVIS SIDE R

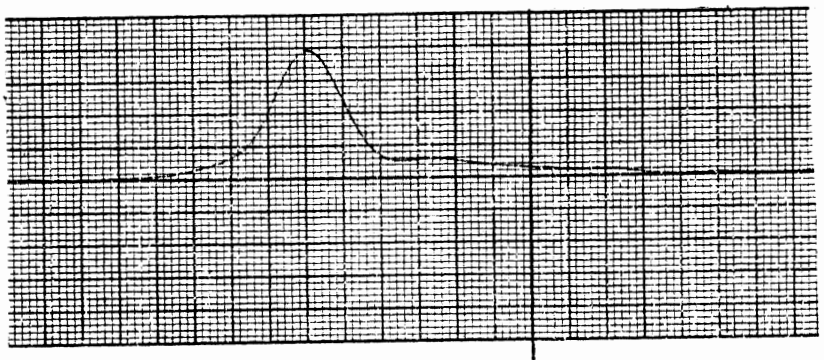
PEAK RESULTANT: 90.2 G

Impact Mass Deceleration

Peak: 43.9 G

Scale: 22.3 G =

Filter Class: 60

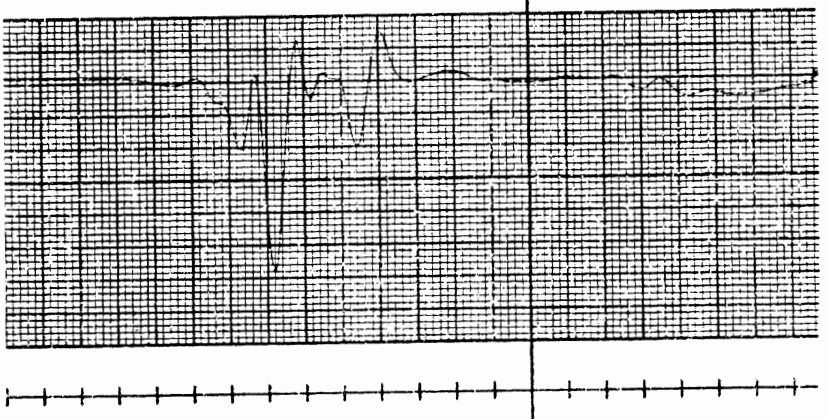


Posterior-Anterior Acceleration

Peak: 10.1 G

Scale: -3.34 G =

Filter Class: 180

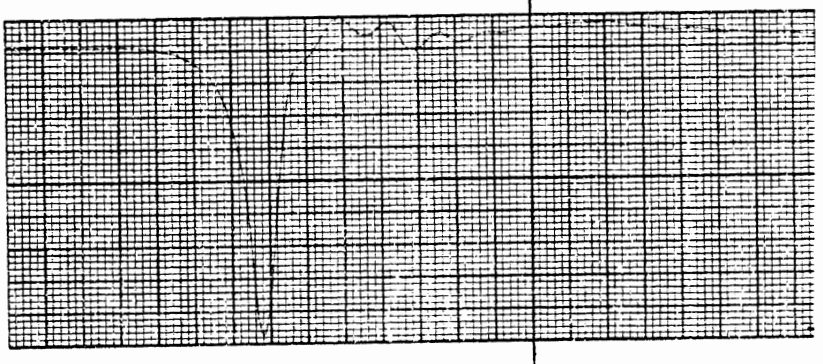


Right-Left Acceleration

Peak: 89.8 G

Scale: -20.0 G =

Filter Class: 180

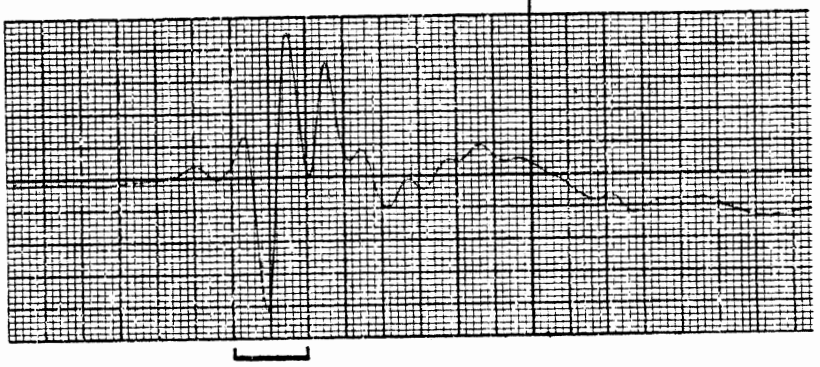


Inferior-Superior Acceleration

Peak: 5.84 G

Scale: 2.48 G =

Filter Class: 180



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 086 DUMMY NO. 880

BODY REGION PELVIS SIDE R

PEAK RESULTANT: 86.0 G

Impact Mass Deceleration

Peak: 45.7 G

Scale: 22.3 G =

Filter Class: 60

Posterior-Anterior Acceleration

Peak: 12.7 G

Scale: -8.34 G =

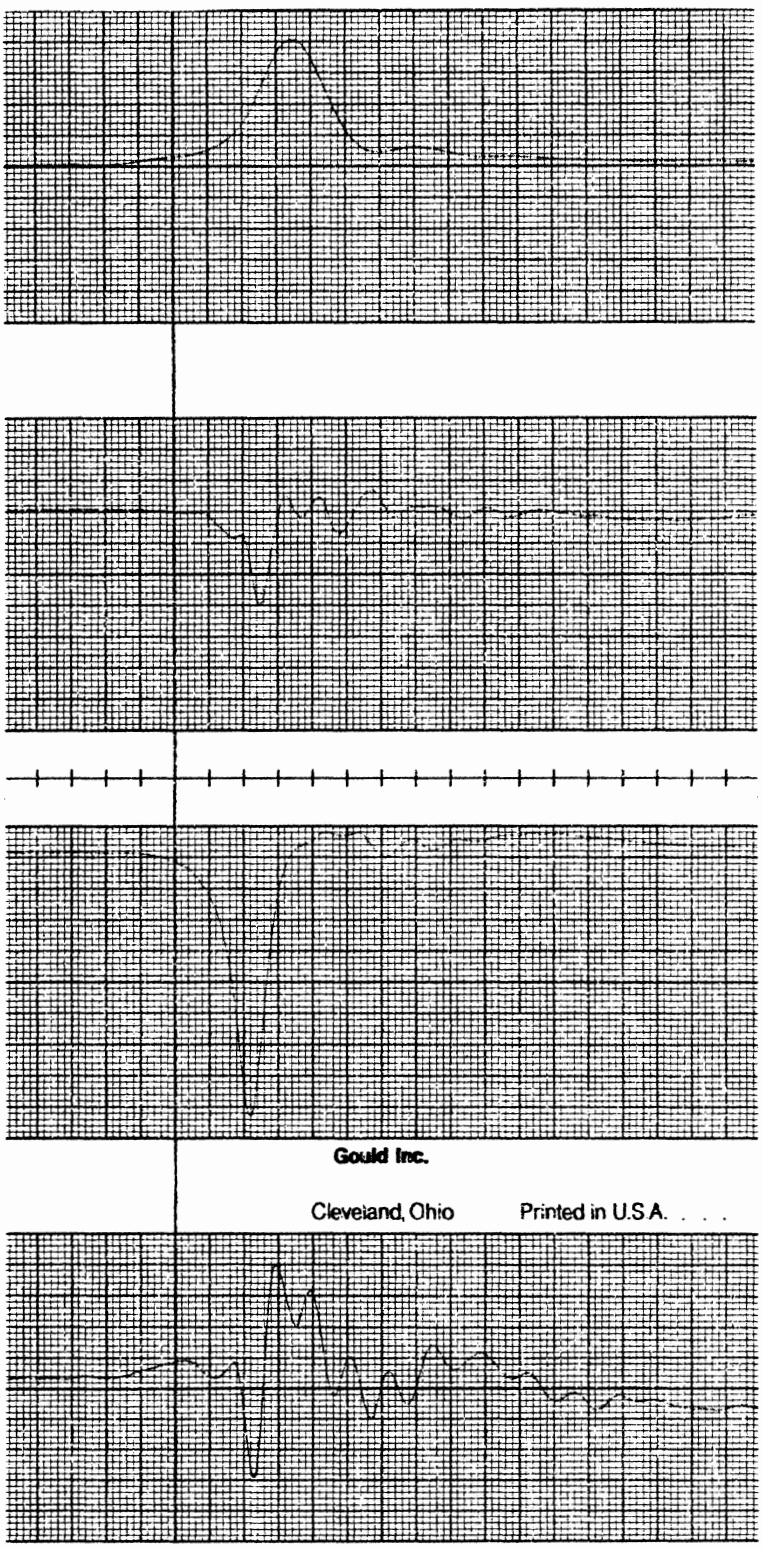
Filter Class: 180

Right-Left Acceleration

Peak: 85.5 G

Scale: -20.0 G =

Filter Class: 180



Inferior-Superior Acceleration

Peak: 4.41 G

Scale: 2.48 G =

Filter Class: 180

6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 085 DUMMY NO. 880

BODY REGION PELVIS SIDE R

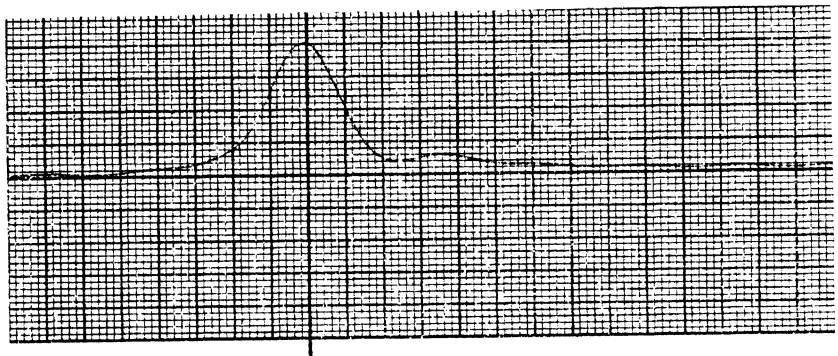
PEAK RESULTANT: 91.4 G

Impact Mass Deceleration

Peak: 44.5 G

Scale: 22.3 G =

Filter Class: 60

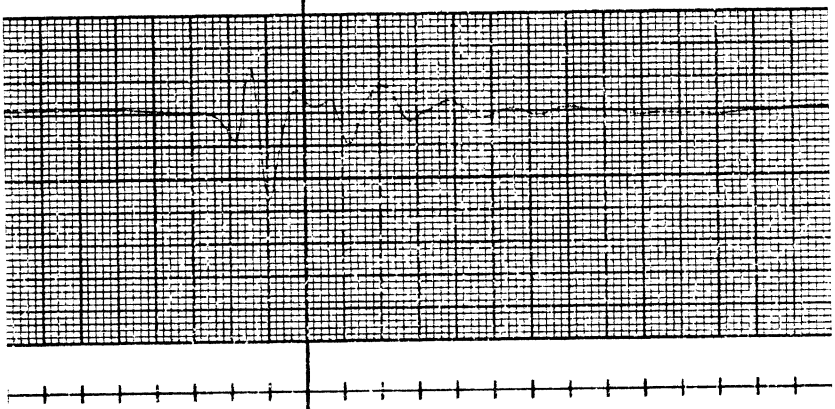


Posterior-Anterior Acceleration

Peak: 11.8 G

Scale: -8.34 G =

Filter Class: 180

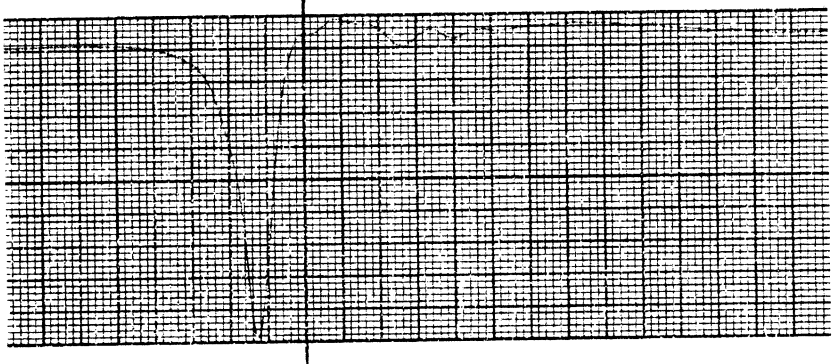


Right-Left Acceleration

Peak: 90.7 G

Scale: -20.0 G =

Filter Class: 180

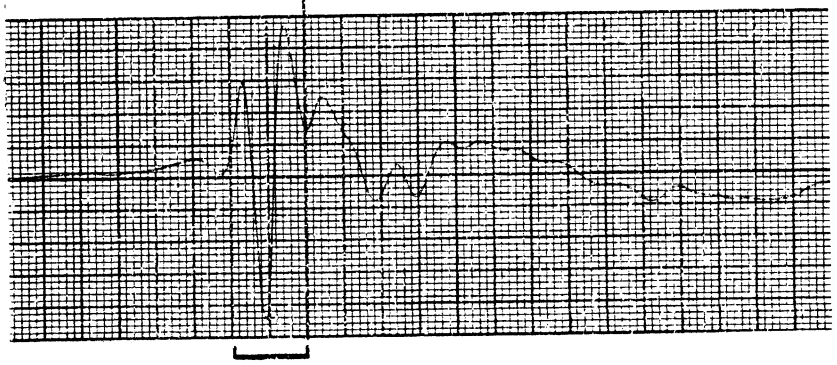


Inferior-Superior Acceleration

Peak: 5.83 G

Scale: 2.48 G =

Filter Class: 180



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 084 DUMMY NO. 880

BODY REGION PELVIS SIDE R

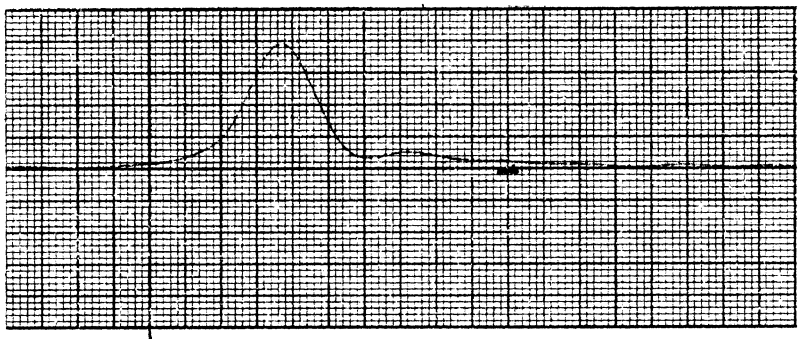
PEAK RESULTANT: 83.7 G

Impact Mass Deceleration

Peak: 43.9 G

Scale: 22.3 G =

Filter Class: 60



Posterior-Anterior Acceleration

Peak: 10.8 G

Scale: -3.34 G =

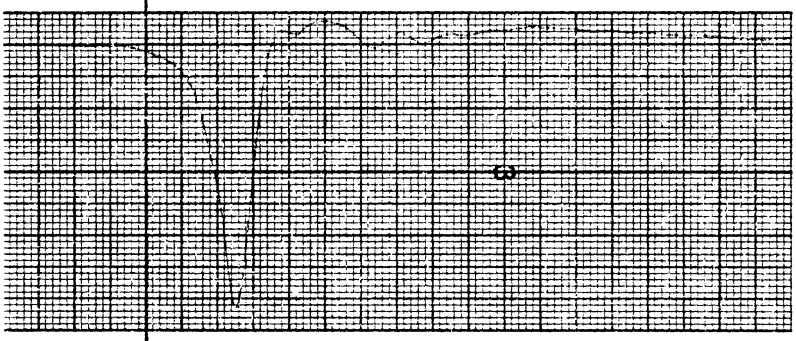
Filter Class: 180

Right-Left Acceleration

Peak: 83.1 G

Scale: -20.0 G =

Filter Class: 180

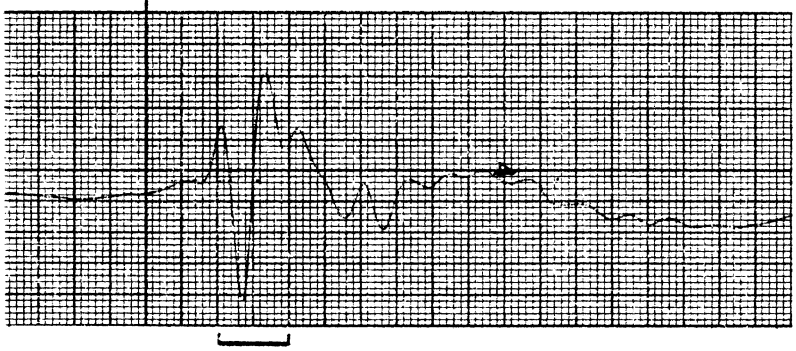


Inferior-Superior Acceleration

Peak: 4.87 G

Scale: 2.48 G =

Filter Class: 180



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 083 DUMMY NO. 880

BODY REGION PELVIS SIDE L

PEAK RESULTANT: 95.8 G

Impact Mass Deceleration

Peak: 46.7 G

Scale: 22.3 G =

Filter Class: 60

Posterior-Anterior Acceleration

Peak: 10.9 G

Scale: -8.34 G =

Filter Class: 180

Right-Left Acceleration

Peak: 95.1 G

Scale: -40.0 G =

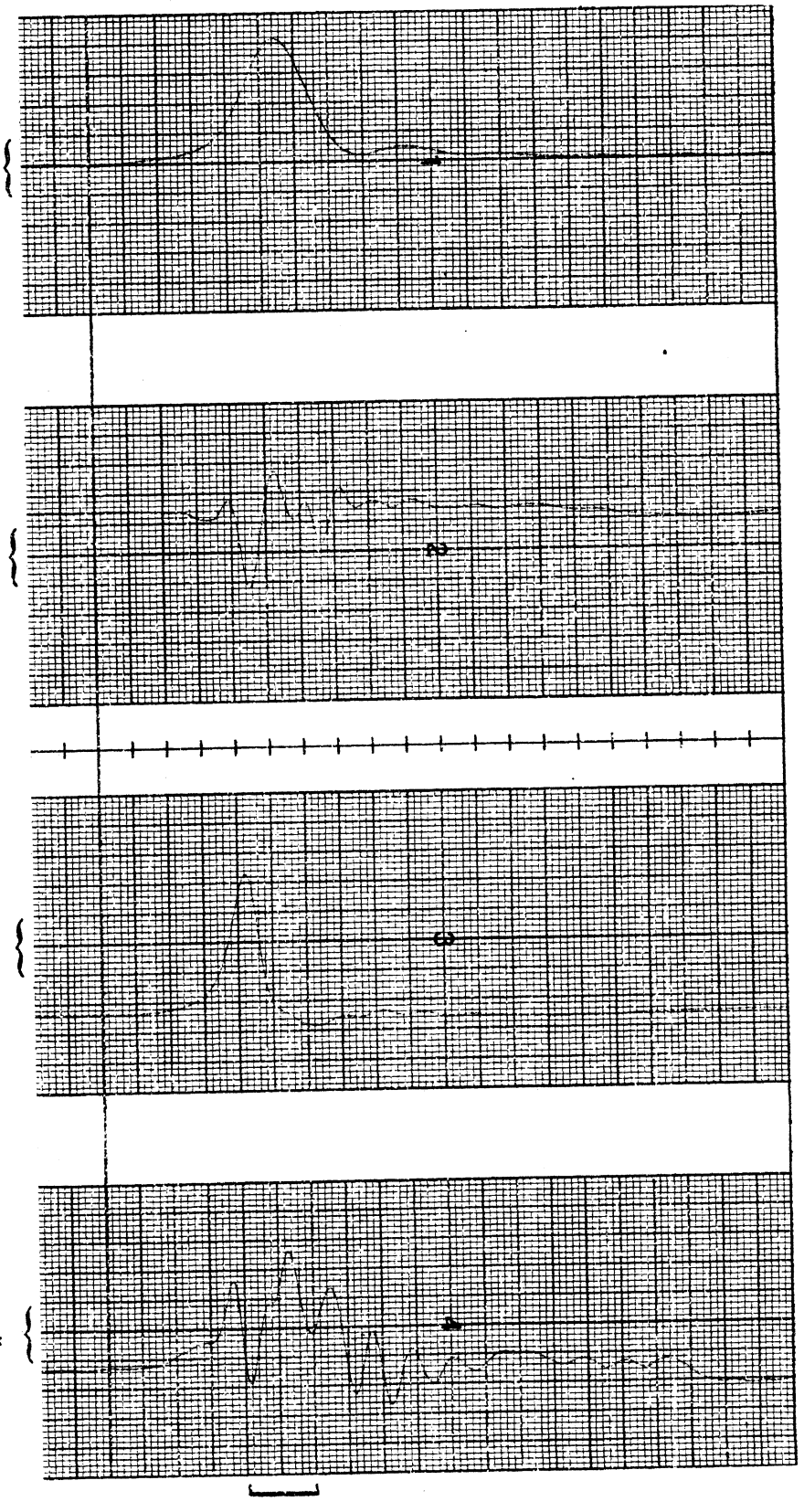
Filter Class: 180

Inferior-Superior Acceleration

Peak: 4.96 G

Scale: 2.48 G =

Filter Class: 180



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 082 DUMMY NO. 880

BODY REGION PELVIS SIDE L

PEAK RESULTANT: 88.5 G

Impact Mass Deceleration

Peak: 45.7 G

Scale: 22.3 G =

Filter Class: 60

Posterior-Anterior Acceleration

Peak: 7.27 G

Scale: -3.34 G =

Filter Class: 180

Right-Left Acceleration

Peak: 88.3 G

Scale: -20.0 G =

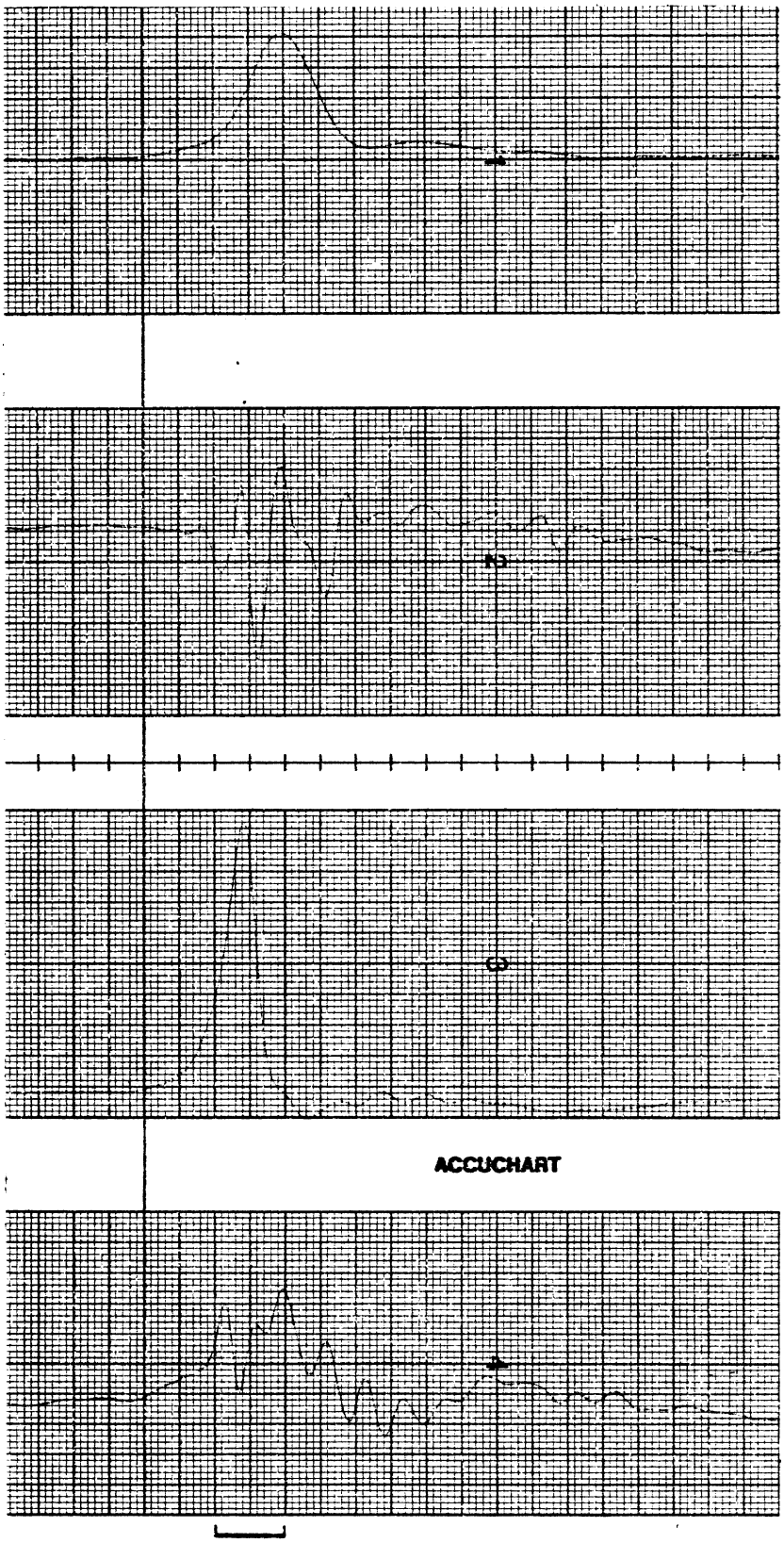
Filter Class: 180

Inferior-Superior Acceleration

Peak: 4.84 G

Scale: 2.48 G =

Filter Class: 180



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 081 DUMMY NO. 880

BODY REGION PELVIS SIDE L

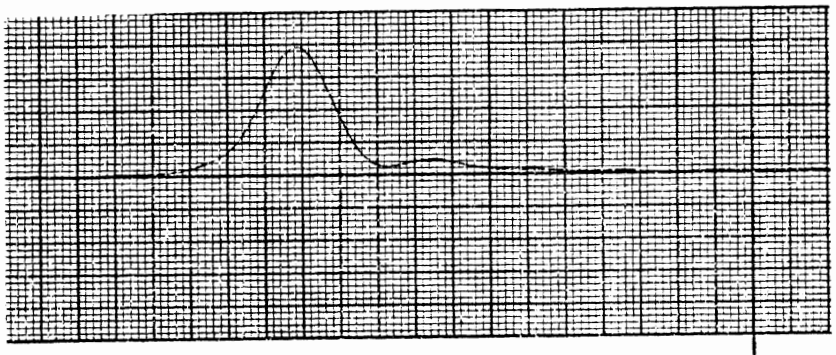
PEAK RESULTANT: 83.6 G

Impact Mass Deceleration

Peak: 44.1 G

Scale: 22.3 G =

Filter Class: 60

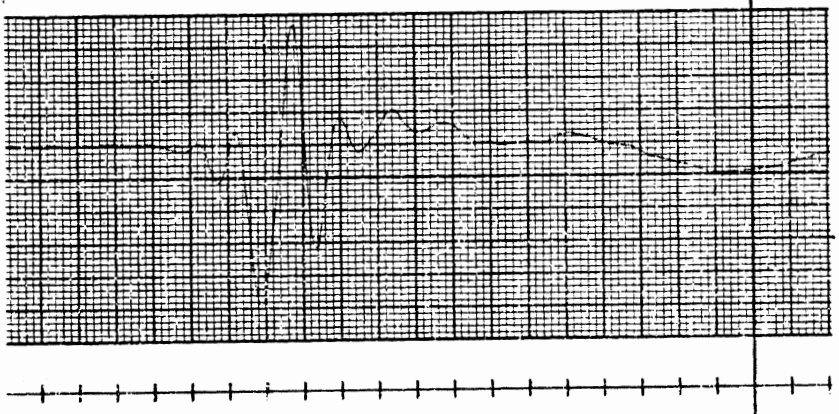


Posterior-Anterior Acceleration

Peak: 8.26 G

Scale: -3.34 G =

Filter Class: 180

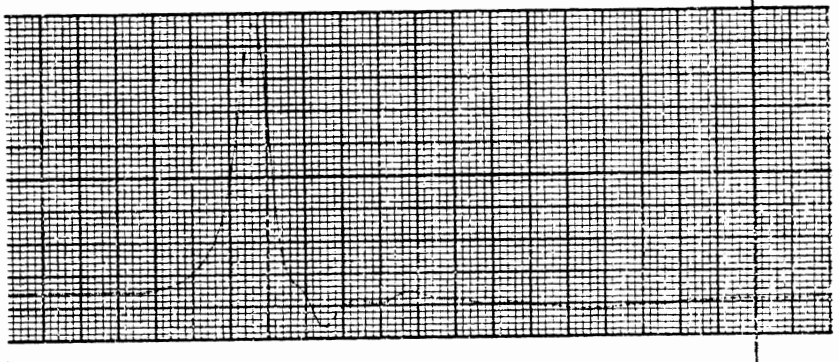


Right-Left Acceleration

Peak: 83.2 G

Scale: -20.0 G =

Filter Class: 180

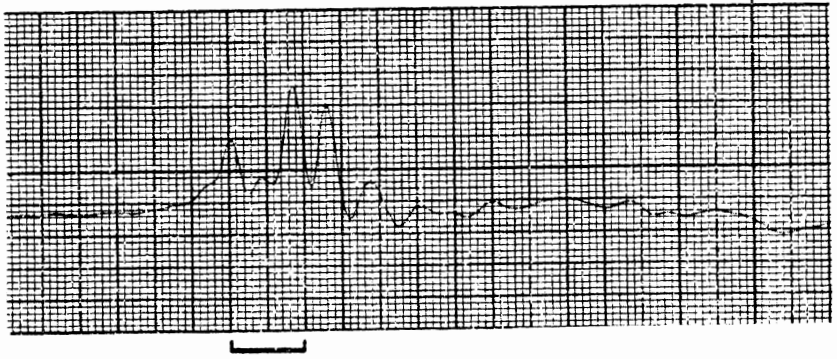


Inferior-Superior Acceleration

Peak: 5.00 G

Scale: 2.48 G =

Filter Class: 180



6.25 ms.

TEST RESULTS

DUMMY NO. 881

HEAD/NECK TEST RESULTS

TEST: 80Y130 DUMMY #881
IMPACT VELOCITY: 13.29 ft/sec.

TARGET VALUE	ACTUAL VALUES ANGLE (degrees)	CHORDAL DISP. (in.)	TIME (ms.)	FRAME NUMBER
0 deg.	-0.01	0.28	0.00	0
20 deg.	19.88	1.63	32.35	31
MAX ANGLE	39.39	2.72	62.61	60
MAX DISP.	39.39	2.72	62.61	60
20 deg.	20.26	1.02	89.74	86
0 deg.	-0.40	0.40	107.48	103

TEST: 80Y131 DUMMY #881
IMPACT VELOCITY: 13.43 ft/sec.

TARGET VALUE	ACTUAL VALUES ANGLE (degrees)	CHORDAL DISP. (in.)	TIME (ms.)	FRAME NUMBER
0 deg.	0.13	0.33	0.00	0
20 deg.	20.32	1.66	32.73	30
MAX ANGLE	40.91	2.90	55.64	51
MAX DISP.	40.91	2.90	55.64	51
20 deg.	20.19	0.99	90.55	83
0 deg.	-0.11	0.40	108.00	99

TEST: 80Y133 DUMMY #881
IMPACT VELOCITY: 13.15 ft/sec.

TARGET VALUE	ACTUAL VALUES ANGLE (degrees)	CHORDAL DISP. (in.)	TIME (ms.)	FRAME NUMBER
0 deg.	-0.01	0.31	0.00	0
20 deg.	20.31	1.62	33.07	31
MAX ANGLE	40.63	2.82	61.87	58
MAX DISP.	40.63	2.82	61.87	58
20 deg.	20.51	1.11	91.73	86
0 deg.	-0.47	0.43	109.87	103

TEST: 80Y134 DUMMY #881
IMPACT VELOCITY: 13.43 ft/sec.

TARGET VALUE	ACTUAL VALUES ANGLE (degrees)	CHORDAL DISP. (in.)	TIME (ms.)	FRAME NUMBER
0 deg.	-4.85	0.29	0.00	0
20 deg.	19.34	1.71	38.85	37
MAX ANGLE	35.13	2.76	61.95	59
MAX DISP.	35.13	2.76	61.95	59
20 deg.	20.51	1.73	89.25	85
0 deg.	-0.34	0.29	106.05	101

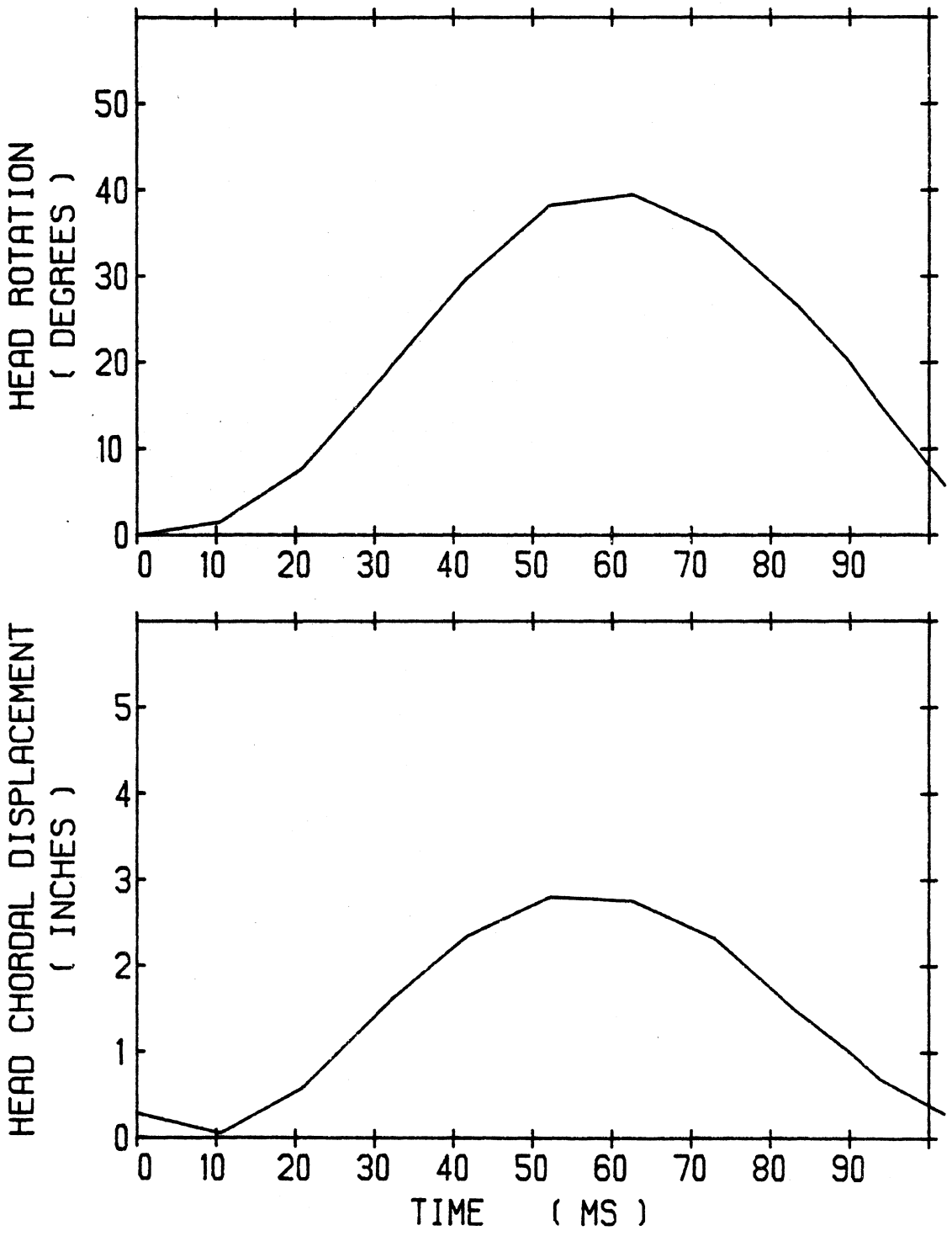
TEST: 80Y135 DUMMY #881
IMPACT VELOCITY: 13.28 ft/sec.

TARGET VALUE	ACTUAL VALUES ANGLE (degrees)	CHORDAL DISP. (in.)	TIME (ms.)	FRAME NUMBER
0 deg.	-4.68	0.19	0.00	0
20 deg.	20.38	1.79	37.50	35
MAX ANGLE	36.45	2.89	63.22	59
MAX DISP.	36.45	2.89	63.22	59
20 deg.	19.96	1.75	90.00	84
0 deg.	0.20	0.36	105.00	98

TEST: 80Y136 DUMMY #881
IMPACT VELOCITY: 13.28 ft/sec.

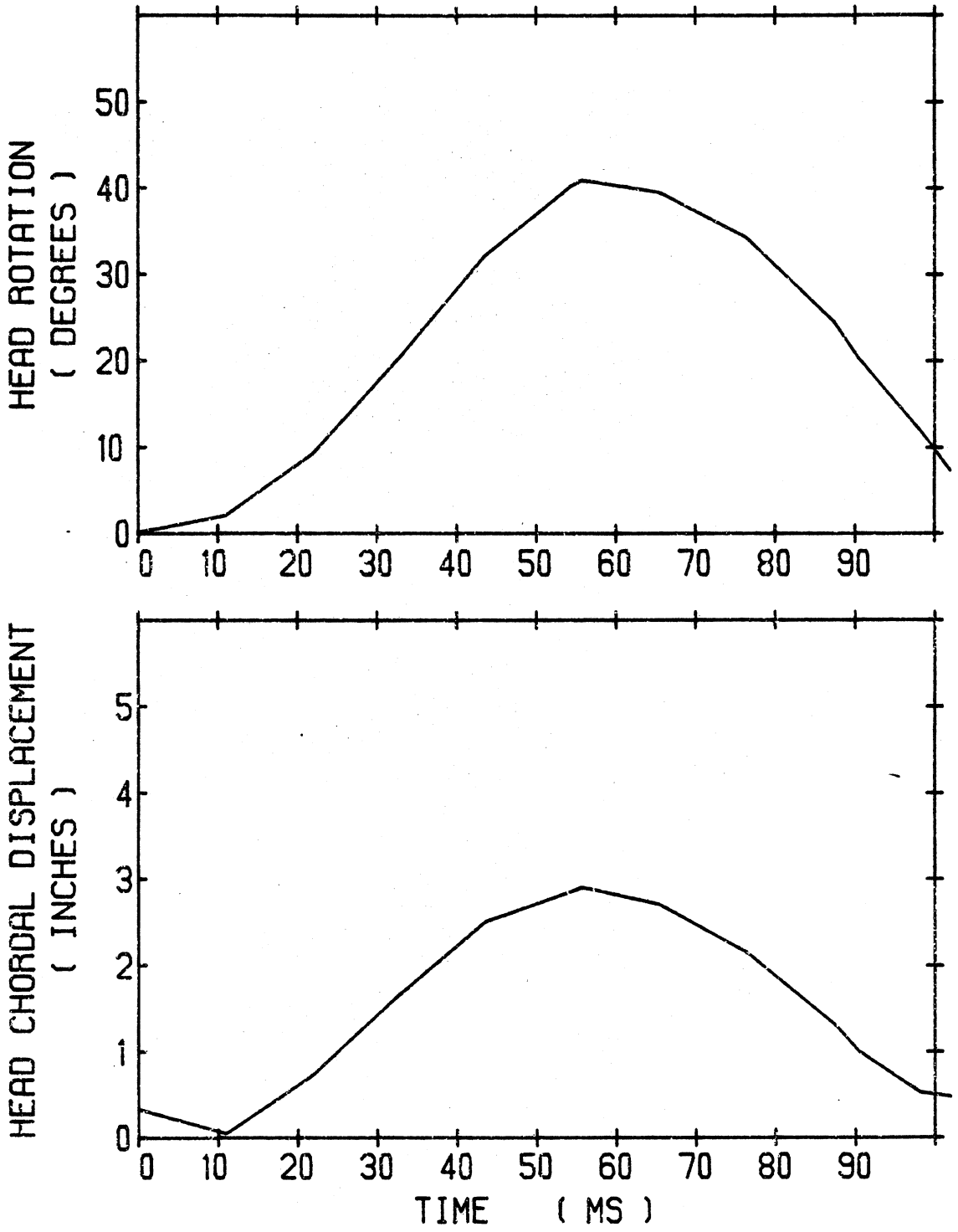
TARGET VALUE	ACTUAL VALUES ANGLE (degrees)	CHORDAL DISP. (in.)	TIME (ms.)	FRAME NUMBER
0 deg.	-4.32	0.14	0.00	0
20 deg.	19.68	1.77	37.50	36
MAX ANGLE	36.36	2.91	62.50	60
MAX DISP.	36.36	2.91	62.50	60
20 deg.	20.14	1.74	89.58	86
0 deg.	0.38	0.37	105.21	101

80Y130



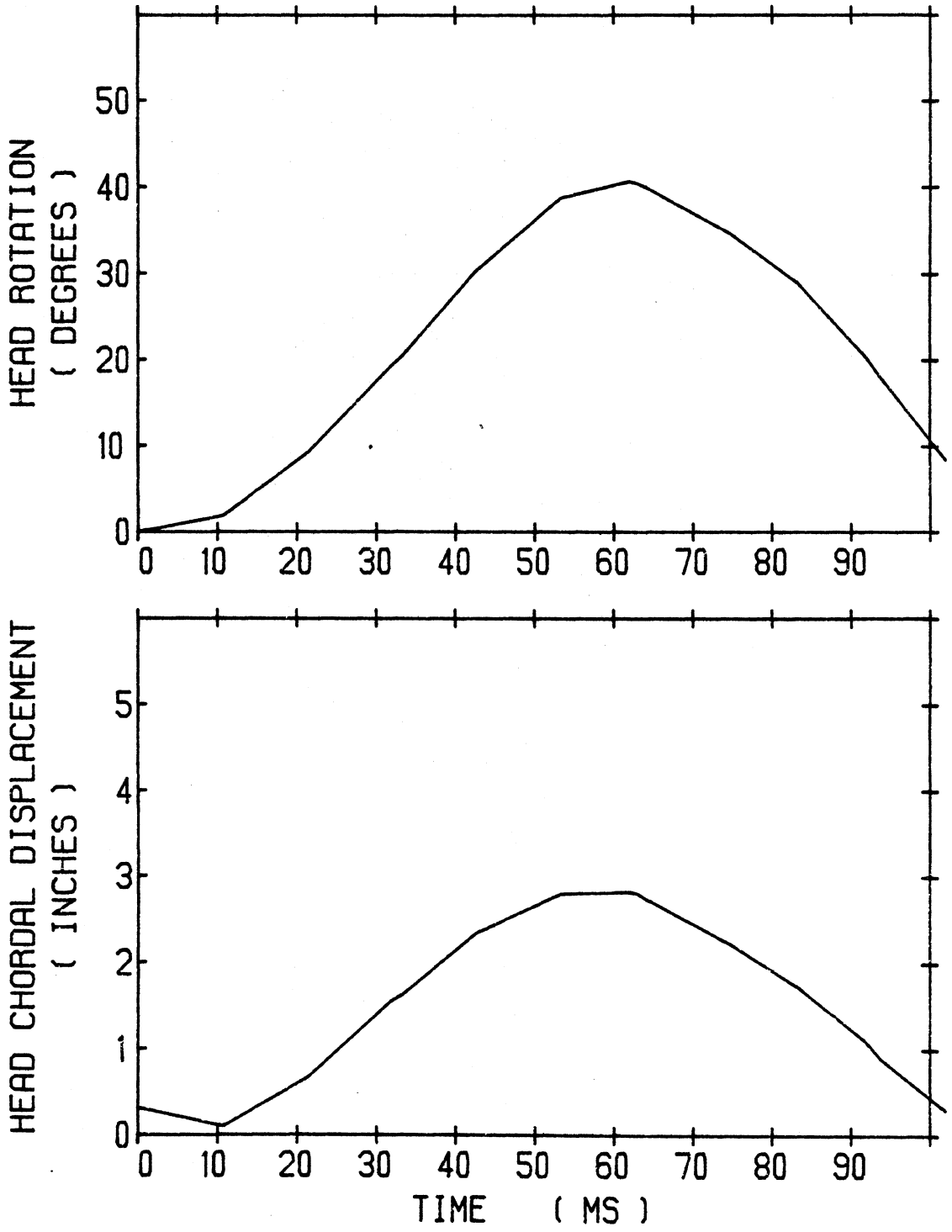
NECK PENDULUM TEST

80Y131



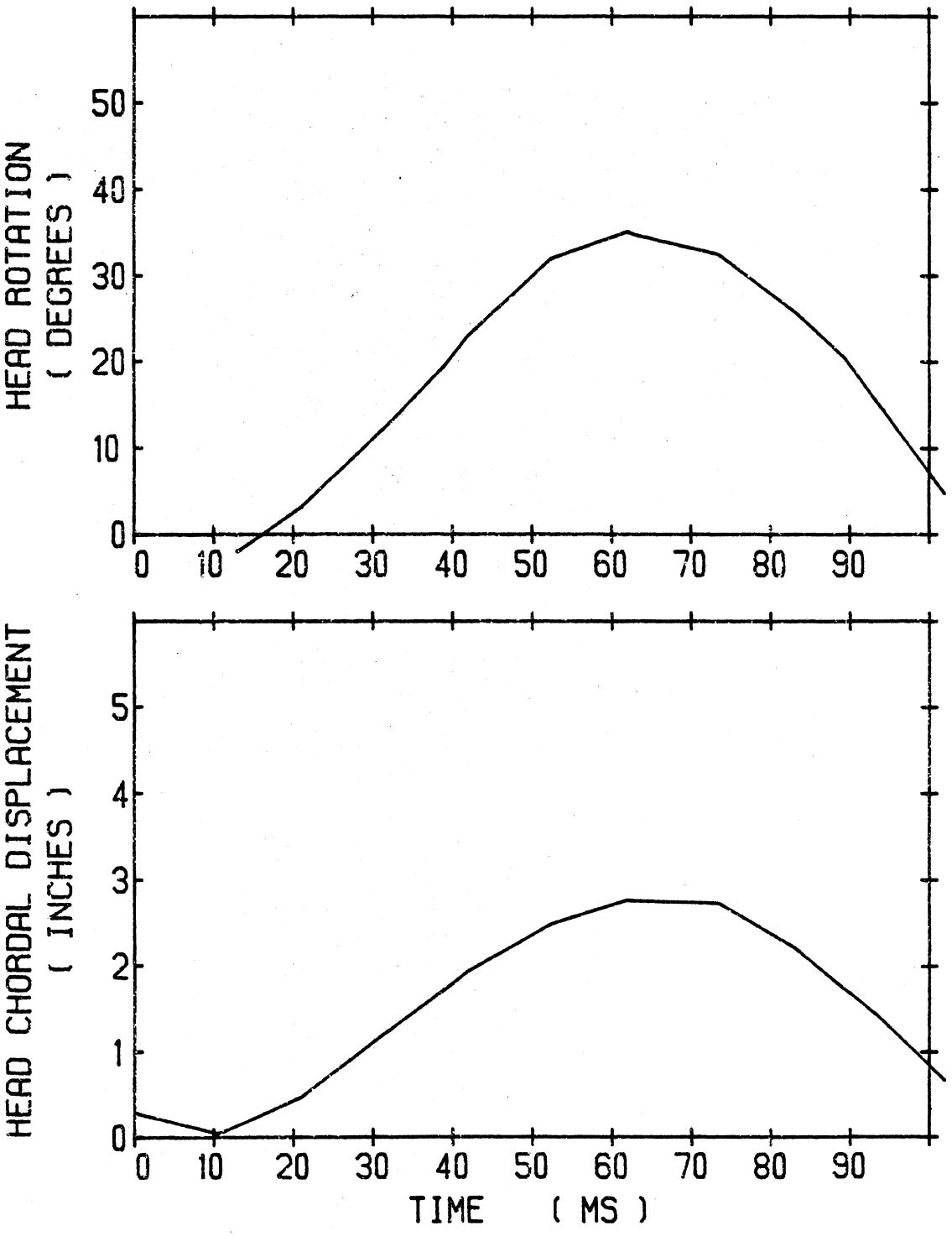
NECK PENDULUM TEST

80Y133



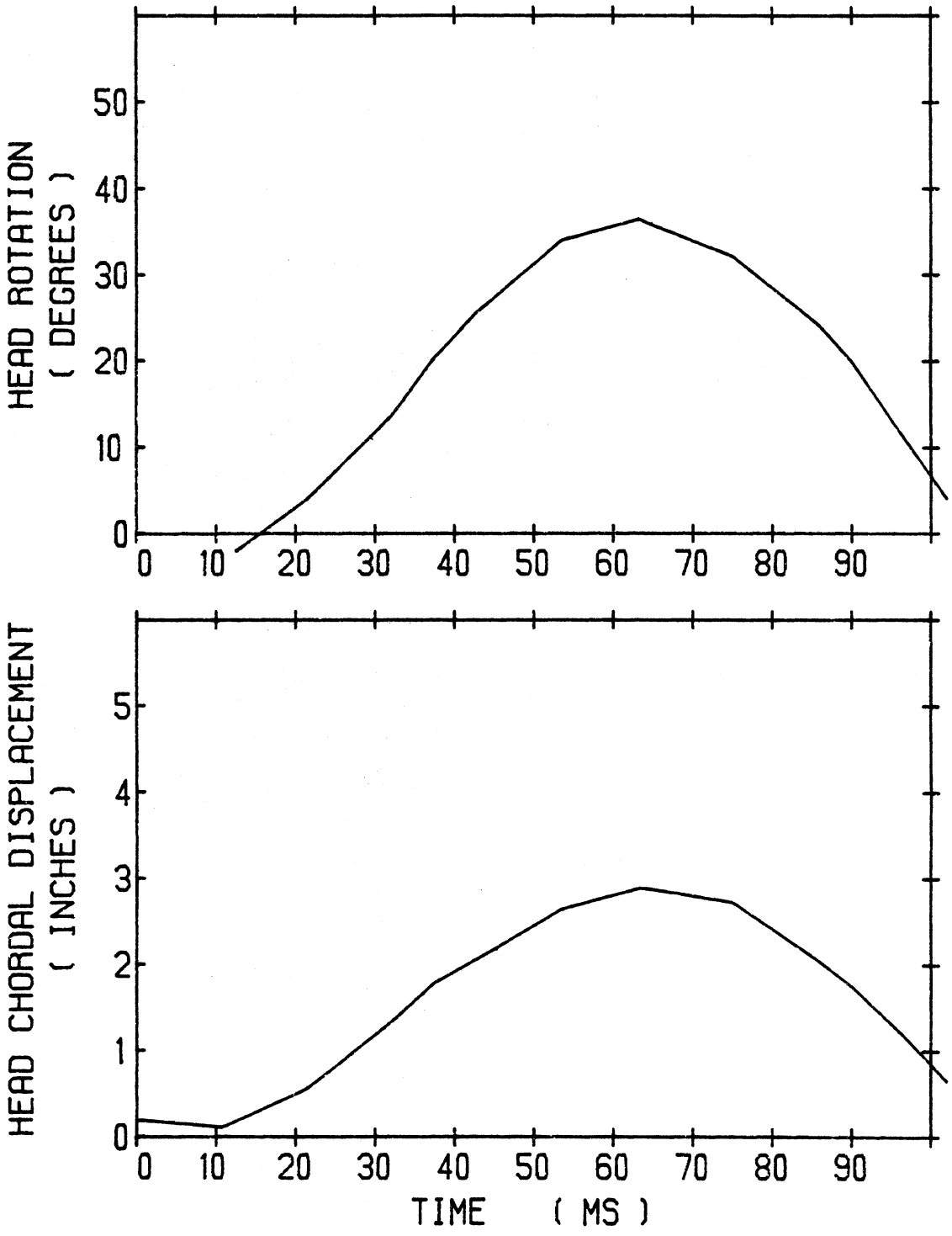
NECK PENDULUM TEST

80Y134



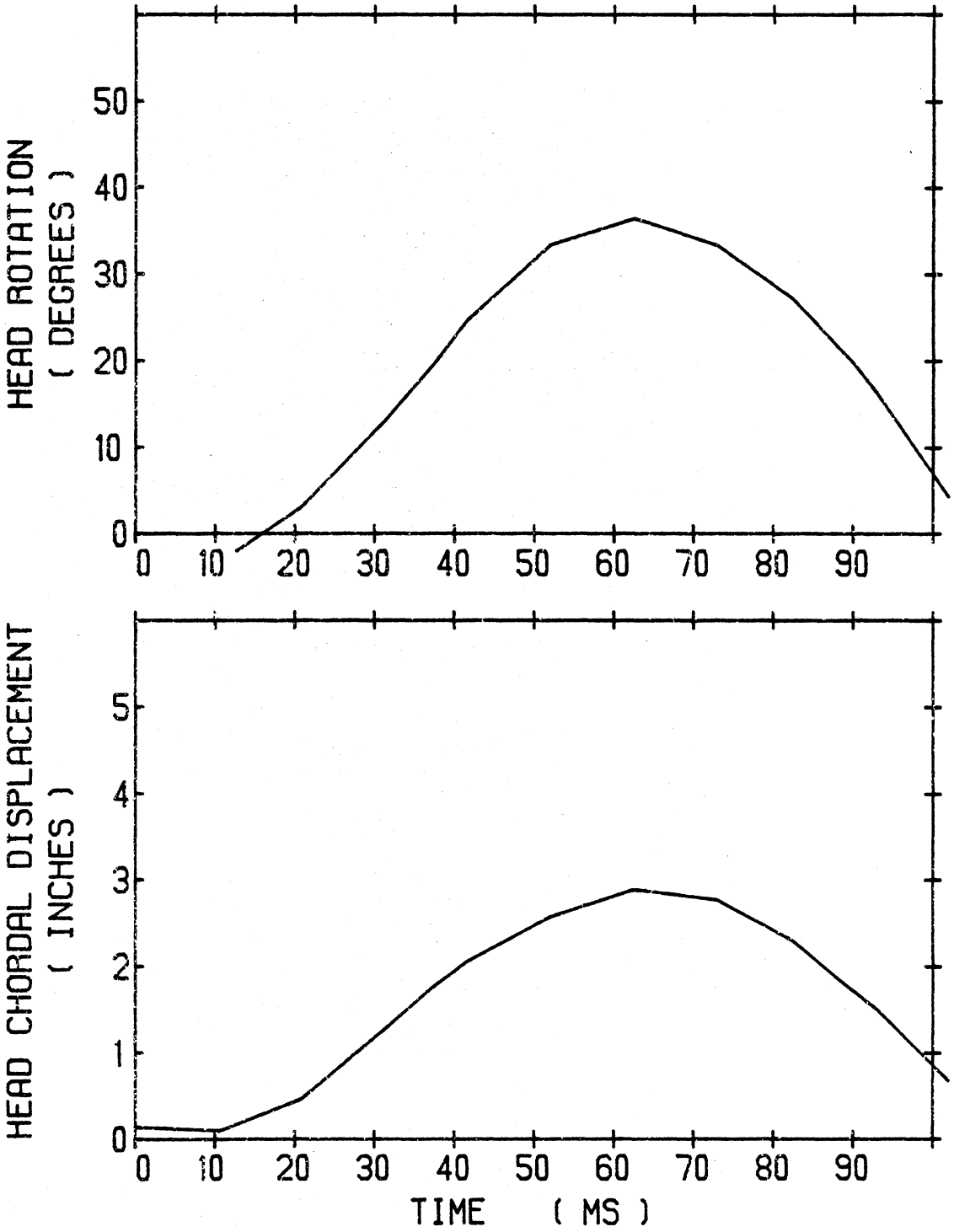
NECK PENDULUM TEST

80Y135



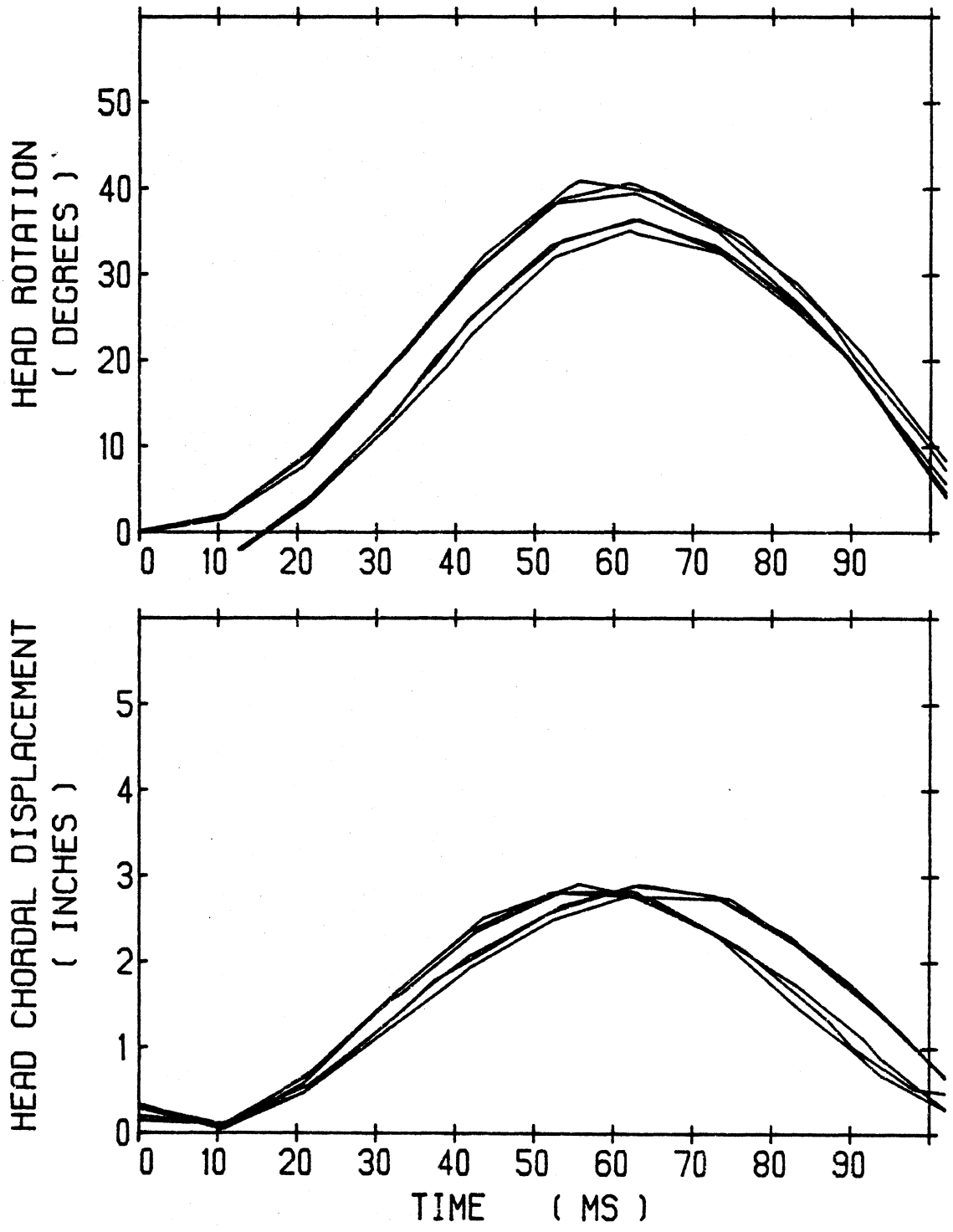
NECK PENDULUM TEST

80Y136



NECK PENDULUM TEST

ALL #881



NECK PENDULUM TEST

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 130 DUMMY NO. 881

BODY REGION HEAD/NECK SIDE L

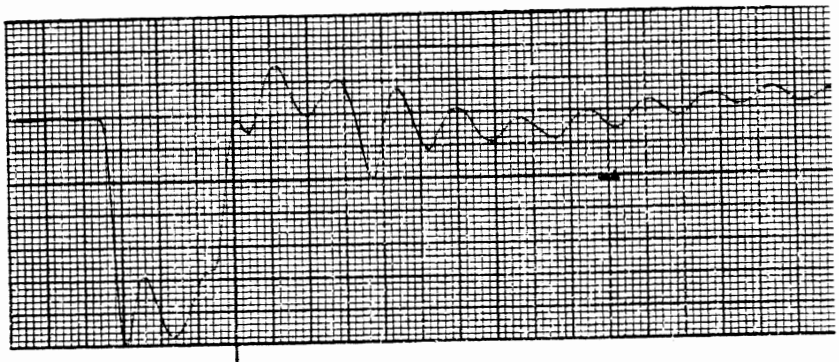
PEAK RESULTANT: 10.5 G

Impact Mass Deceleration

Peak: 13.8 G

Scale: -3.96 G =

Filter Class: 60

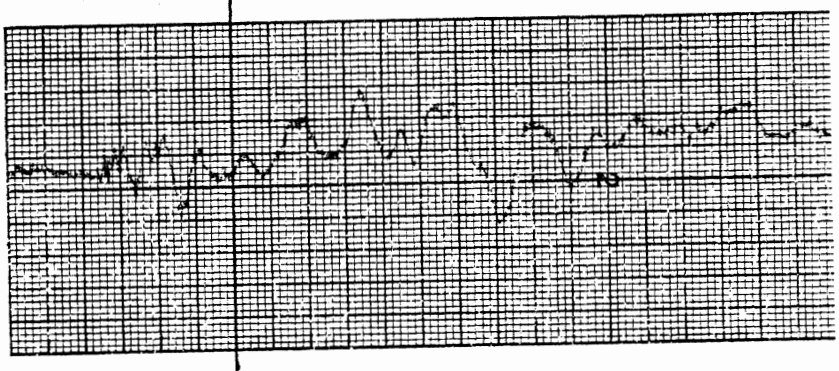


Posterior-Anterior Acceleration

Peak: 0.76 G

Scale: 0.66 G =

Filter Class: 1000

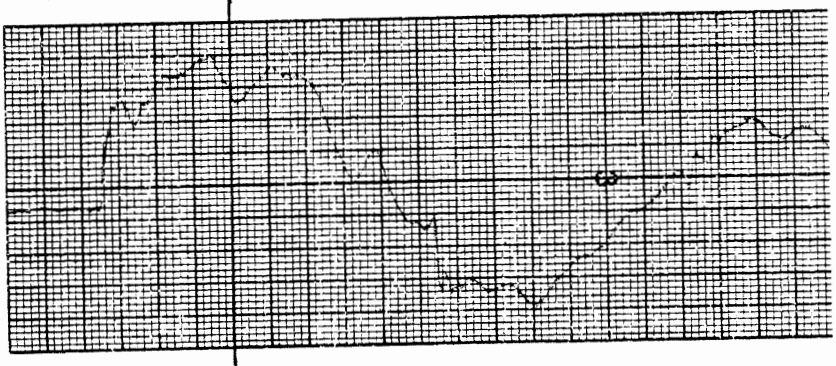


Right-Left Acceleration

Peak: 8.38 G

Scale: -3.65 G =

Filter Class: 1000



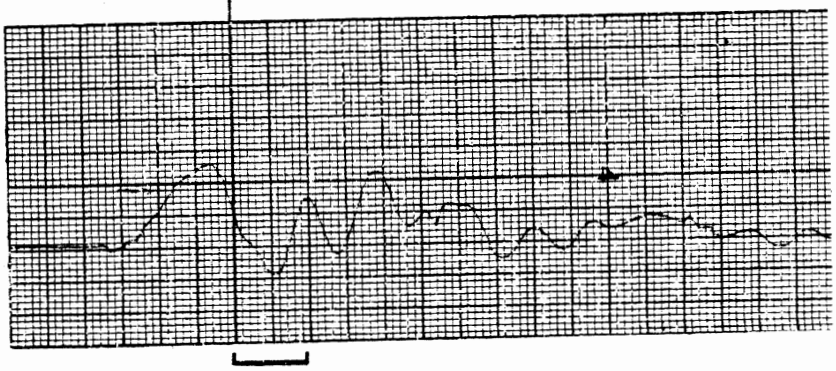
ACCUCHART

Inferior-Superior Acceleration

Peak: 6.29 G

Scale: -4.95 G =

Filter Class: 1000



25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 131 DUMMY NO. 881

BODY REGION HEAD/NECK SIDE L

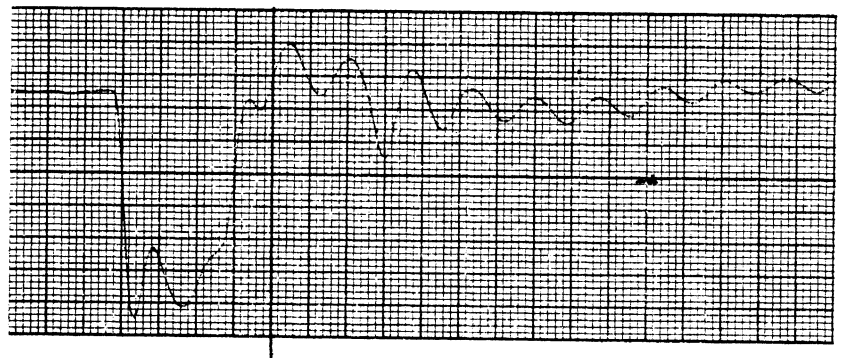
PEAK RESULTANT: 10.9 G

Impact Mass Deceleration

Peak: 13.7 G

Scale: -3.96 G =

Filter Class: 60

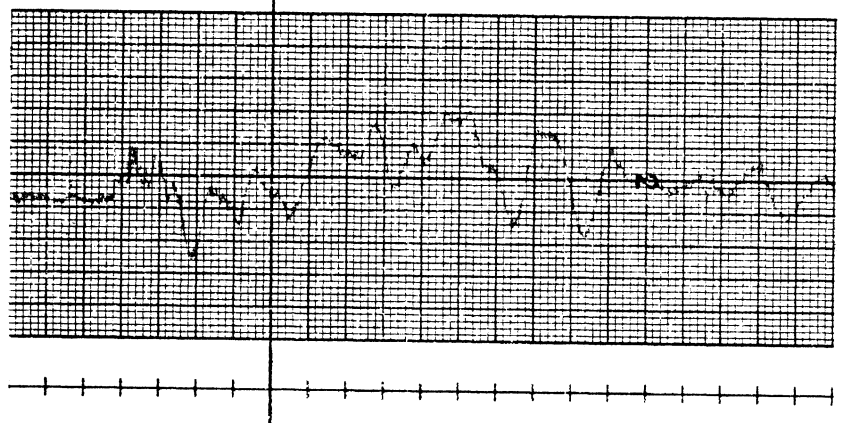


Posterior-Anterior Acceleration

Peak: 0.84 G

Scale: 0.66 G =

Filter Class: 1000

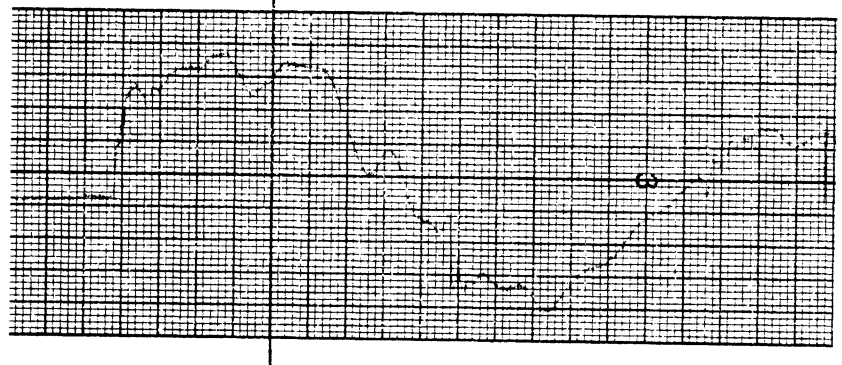


Right-Left Acceleration

Peak: 8.41 G

Scale: -3.65 G =

Filter Class: 1000

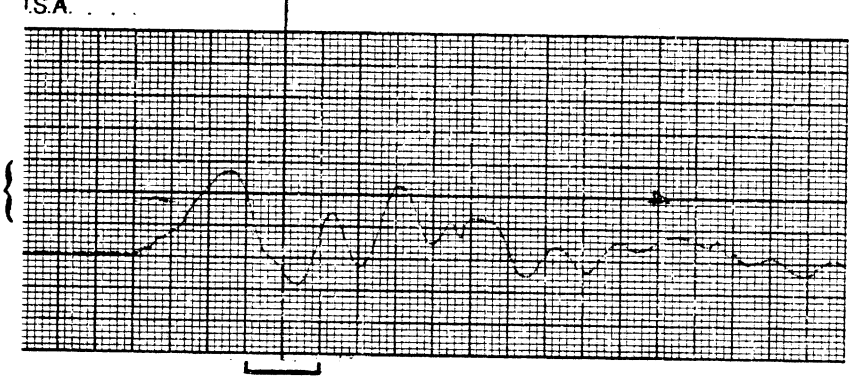


Inferior-Superior Acceleration

Peak: 6.84 G

Scale: -4.95 G =

Filter Class: 1000



25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 132 DUMMY NO. 881

BODY REGION HEAD/NECK SIDE L

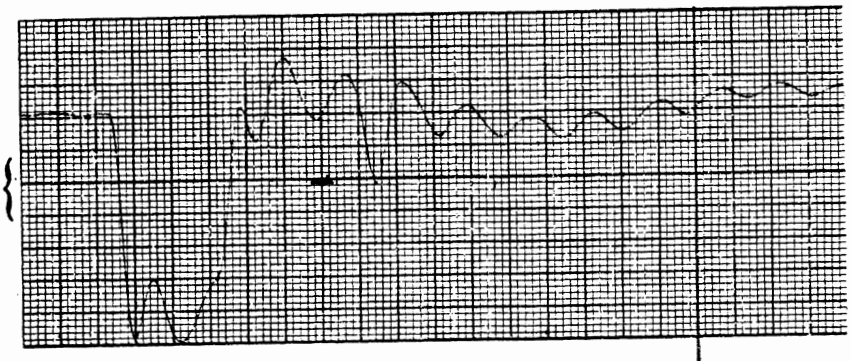
PEAK RESULTANT: _____ G

Impact Mass Deceleration

Peak: _____G

Scale: -3.96 G =

Filter Class: 60

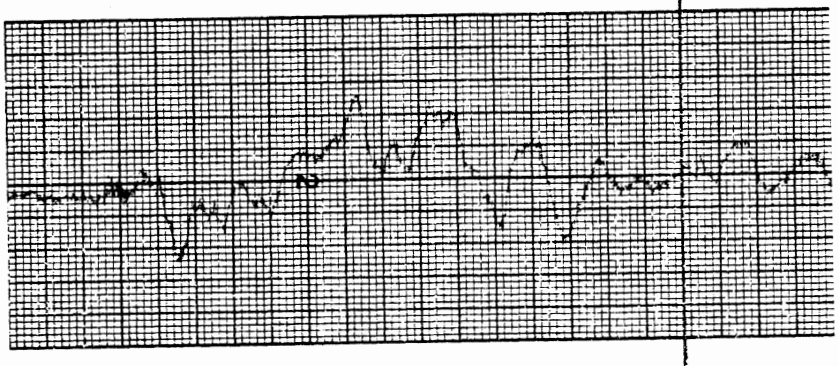


Posterior-Anterior Acceleration

Peak: _____G

Scale: 0.66 G =

Filter Class: _____

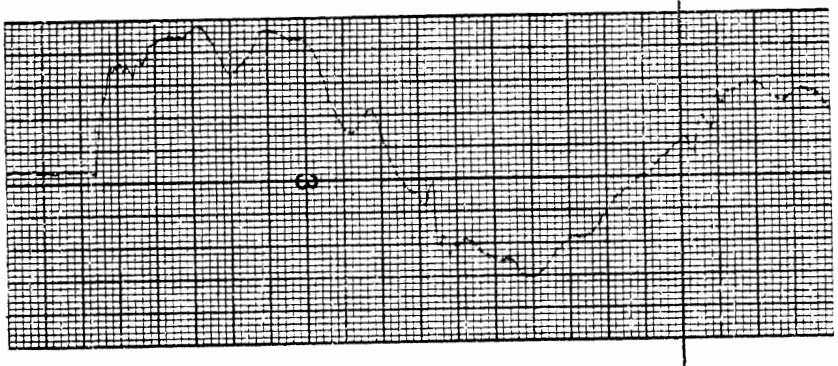


Right-Left Acceleration

Peak: _____G

Scale: -3.65 G =

Filter Class: _____

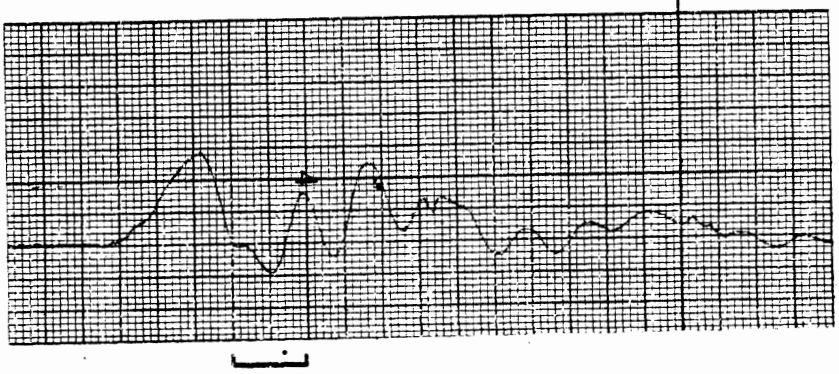


Inferior-Superior Acceleration

Peak: _____G

Scale: -4.95 G =

Filter Class: _____



_____ ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 133 DUMMY NO. 881

BODY REGION HEAD/NECK SIDE L

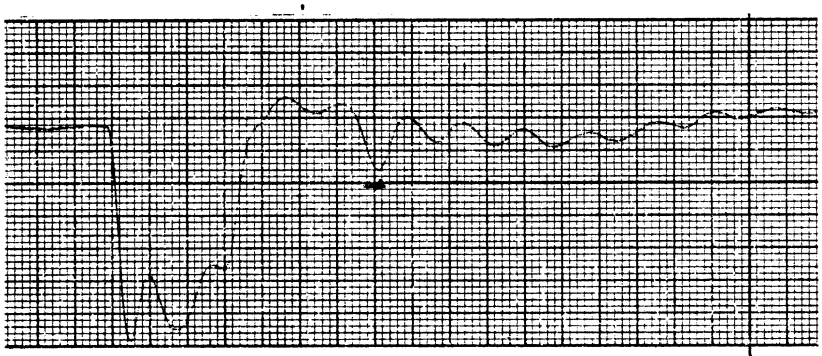
PEAK RESULTANT: 10.4 G

Impact Mass Deceleration

Peak: 13.1 G

Scale: -3.96 G =

Filter Class: 60

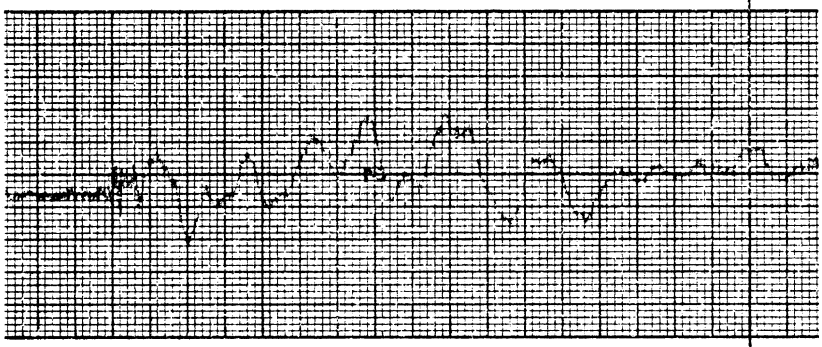


Posterior-Anterior Acceleration

Peak: 0.76 G

Scale: 0.66 G =

Filter Class: 1000

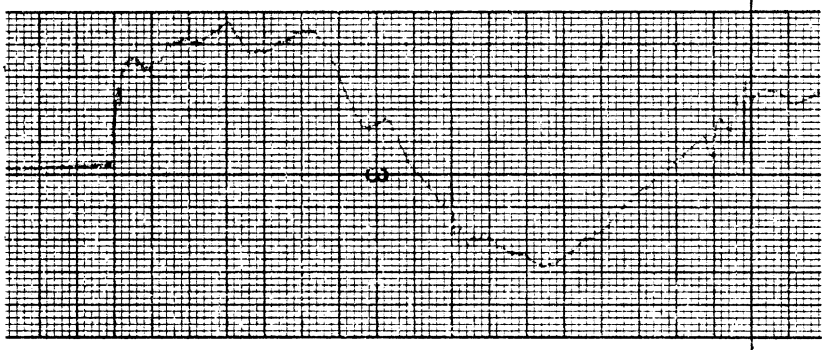


Right-Left Acceleration

Peak: 8.37 G

Scale: -3.65 G =

Filter Class: 1000



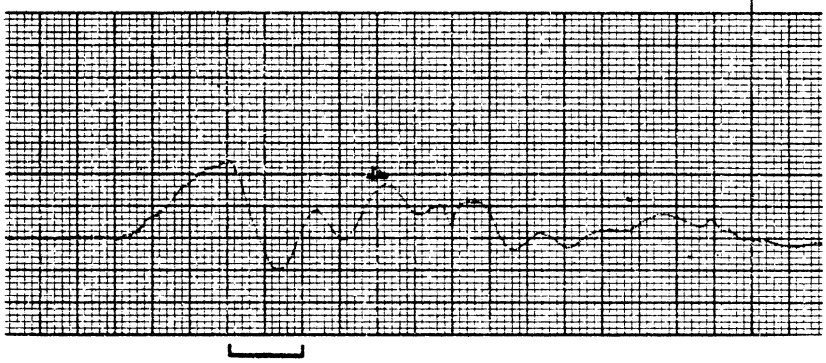
ACCUCHART

Inferior-Superior Acceleration

Peak: 6.14 G

Scale: -4.95 G =

Filter Class: 1000



25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 134 DUMMY NO. 881

BODY REGION HEAD/NECK SIDE R

PEAK RESULTANT: 10.8 G

Impact Mass Deceleration

Peak: 13.6 G

Scale: -3.96 G =

Filter Class: 60

Posterior-Anterior Acceleration

Peak: 0.76 G

Scale: 0.66 G =

Filter Class: 1000

Right-Left Acceleration

Peak: 8.92 G

Scale: -3.65 G =

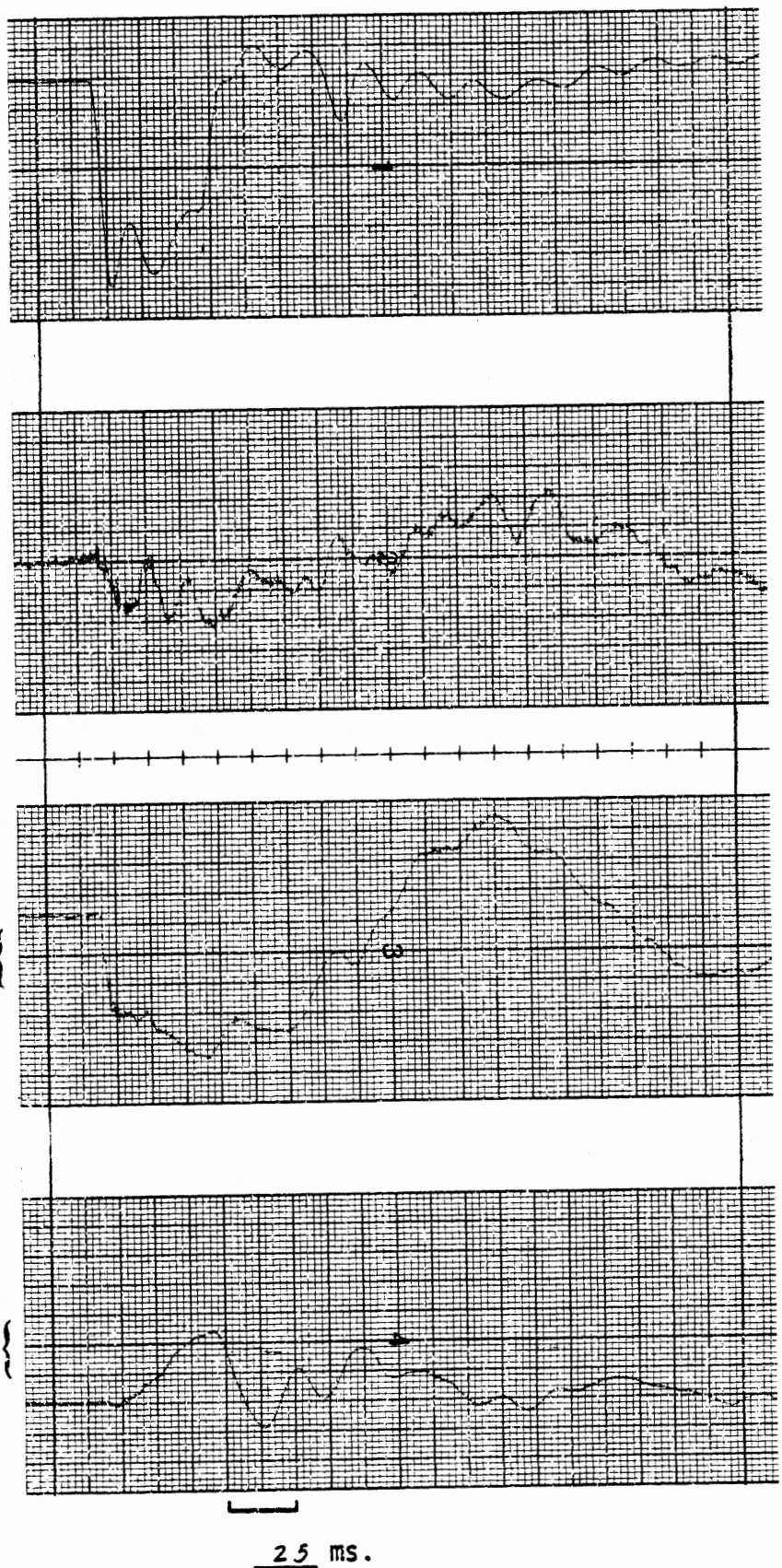
Filter Class: 1000

Inferior-Superior Acceleration

Peak: 6.07 G

Scale: 4.95 G =

Filter Class: 1000



25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 135 DUMMY NO. 881

BODY REGION HEAD/NECK SIDE R

PEAK RESULTANT: 11.0 G

Impact Mass Deceleration

Peak: 13.9 G

Scale: -3.96 G =

Filter Class: 60

Posterior-Anterior Acceleration

Peak: 0.87 G

Scale: 0.66 G =

Filter Class: 1000

Right-Left Acceleration

Peak: 8.96 G

Scale: -3.65 G =

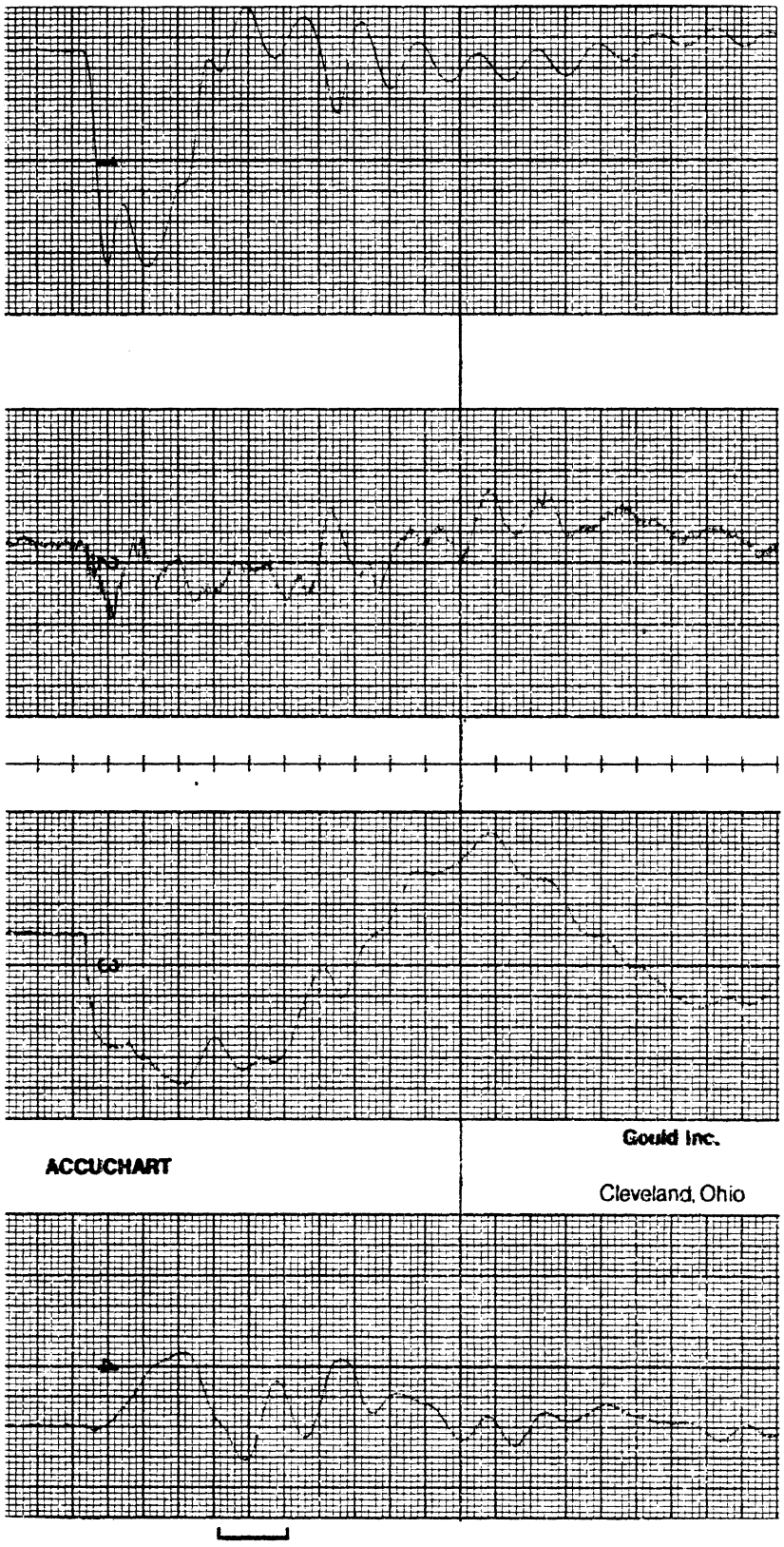
Filter Class: 1000

Inferior-Superior Acceleration

Peak: 6.32 G

Scale: -4.95 G =

Filter Class: 1000



25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 136 DUMMY NO. 881

BODY REGION HEAD/NECK SIDE R

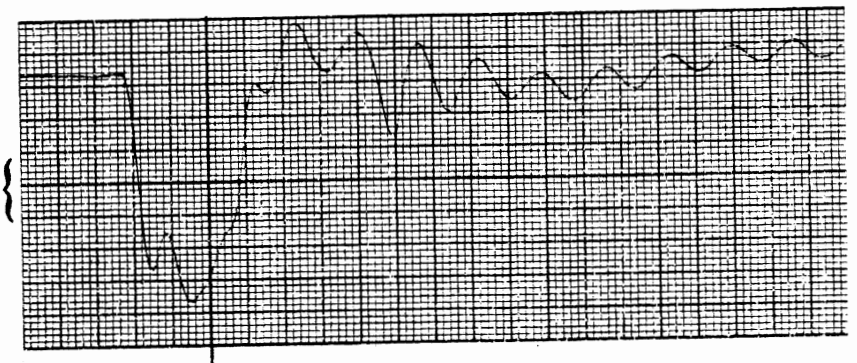
PEAK RESULTANT: 11.5 G

Impact Mass Deceleration

Peak: 13.8 G

Scale: -3.96 G =

Filter Class: 60

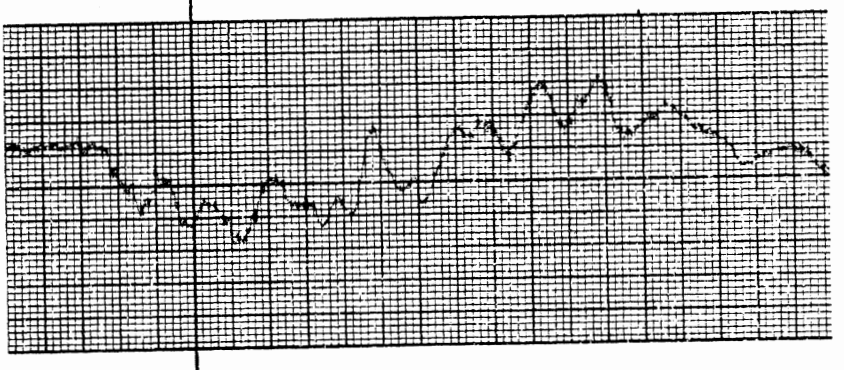


Posterior-Anterior Acceleration

Peak: 1.06 G

Scale: 0.66 G =

Filter Class: 1000

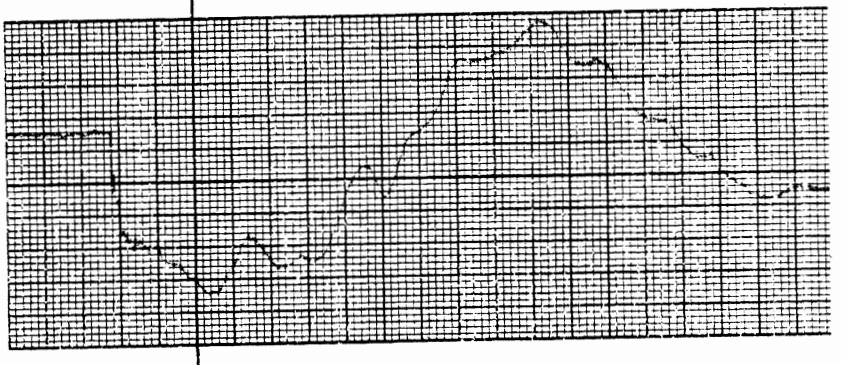


Right-Left Acceleration

Peak: 9.30 G

Scale: -3.65 G =

Filter Class: 1000

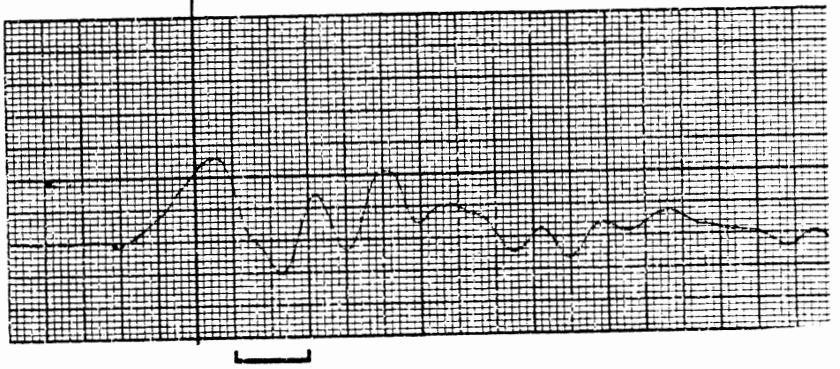


Inferior-Superior Acceleration

Peak: 6.65 G

Scale: -4.95 G =

Filter Class: 1000



25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 115 DUMMY NO. 881

BODY REGION HEAD SIDE R

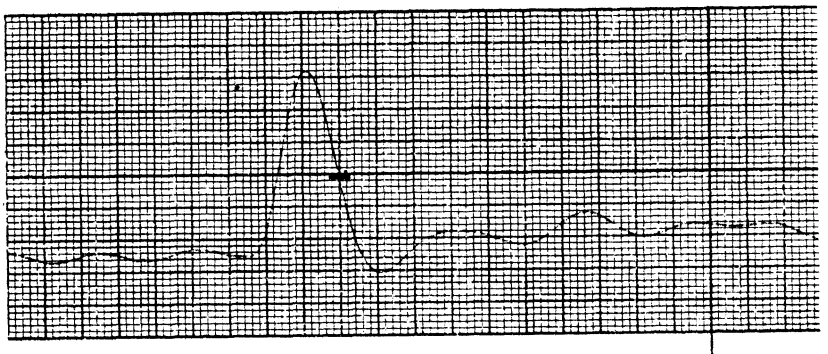
PEAK RESULTANT: 311. G

Impact Mass Deceleration

Peak: 12.6 G

Scale: 4.41 G =

Filter Class: 60

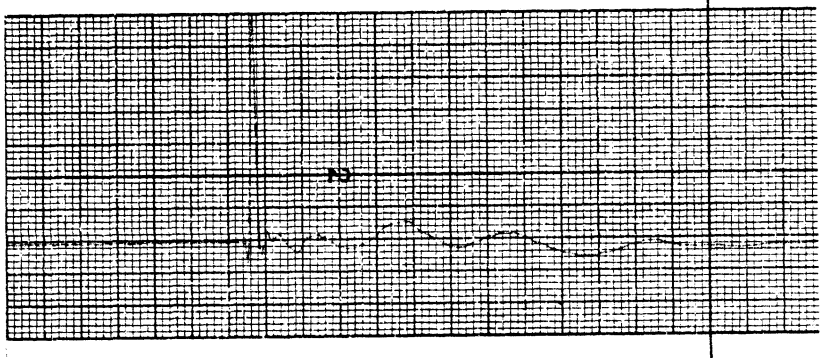


Posterior-Anterior Acceleration

Peak: 23.7 G

Scale: 6.67 G =

Filter Class: 1000

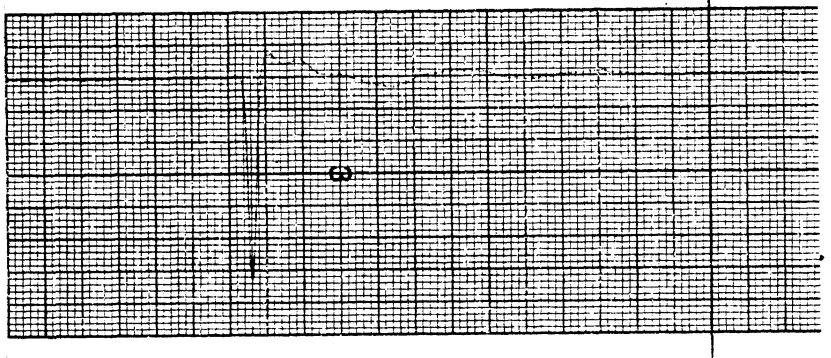


Right-Left Acceleration

Peak: 308. G

Scale: -96.5 G =

Filter Class: 1000

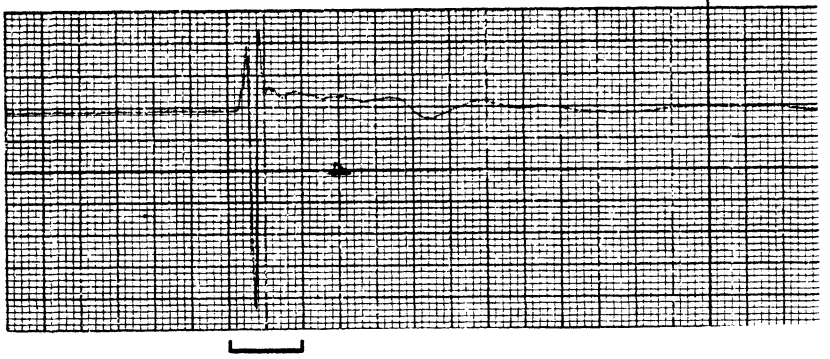


Inferior-Superior Acceleration

Peak: 31.4 G

Scale: -9.91 G =

Filter Class: 1000



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 114 DUMMY NO. 881

BODY REGION HEAD SIDE R

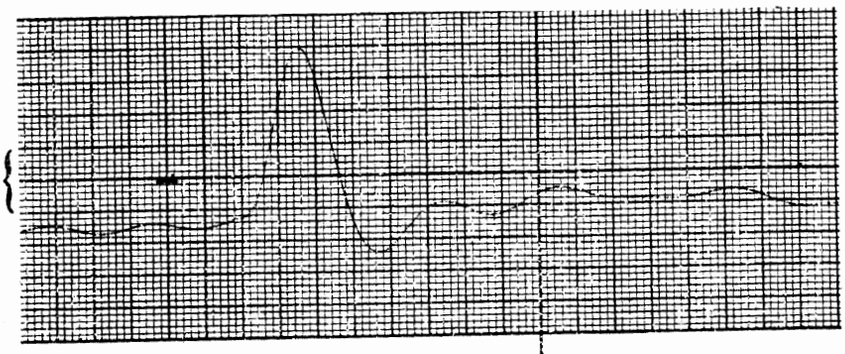
PEAK RESULTANT: 288. G

Impact Mass Deceleration

Peak: 12.3 G

Scale: 4.41 G =

Filter Class: 60

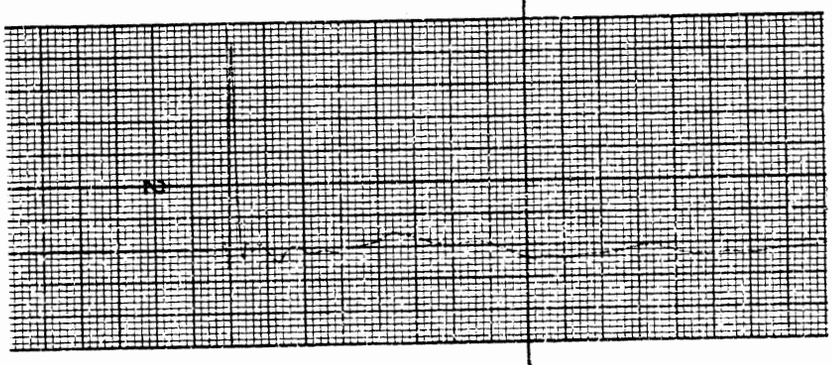


Posterior-Anterior Acceleration

Peak: 21.5 G

Scale: 6.67 G =

Filter Class: 1000

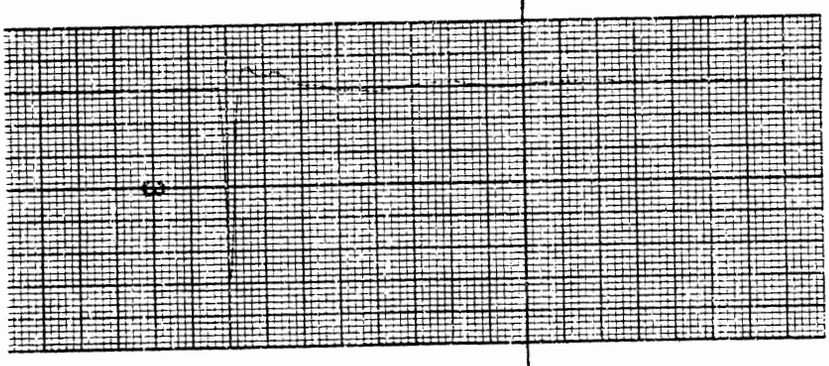


Right-Left Acceleration

Peak: 287 G

Scale: -96.5 G =

Filter Class: 1000

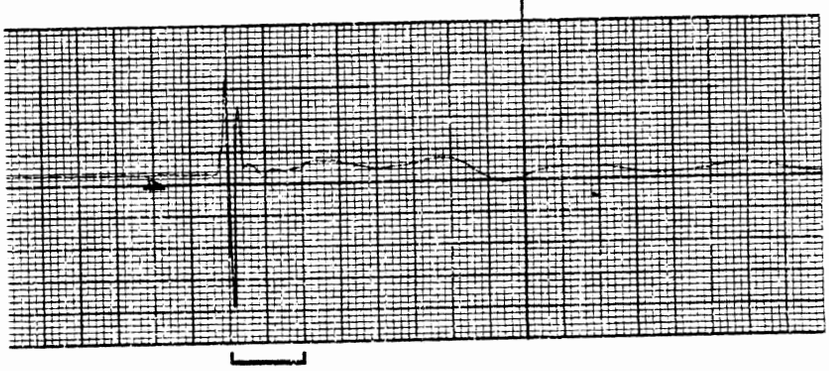


Inferior-Superior Acceleration

Peak: 21.0 G

Scale: -9.91 G =

Filter Class: 1000



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 113 DUMMY NO. 881

BODY REGION HEAD SIDE R

PEAK RESULTANT: 280. G

Impact Mass Deceleration

Peak: 12.1 G

Scale: 4.41 G =

Filter Class: 60

Posterior-Anterior Acceleration

Peak: 16.8 G

Scale: 6.67 G =

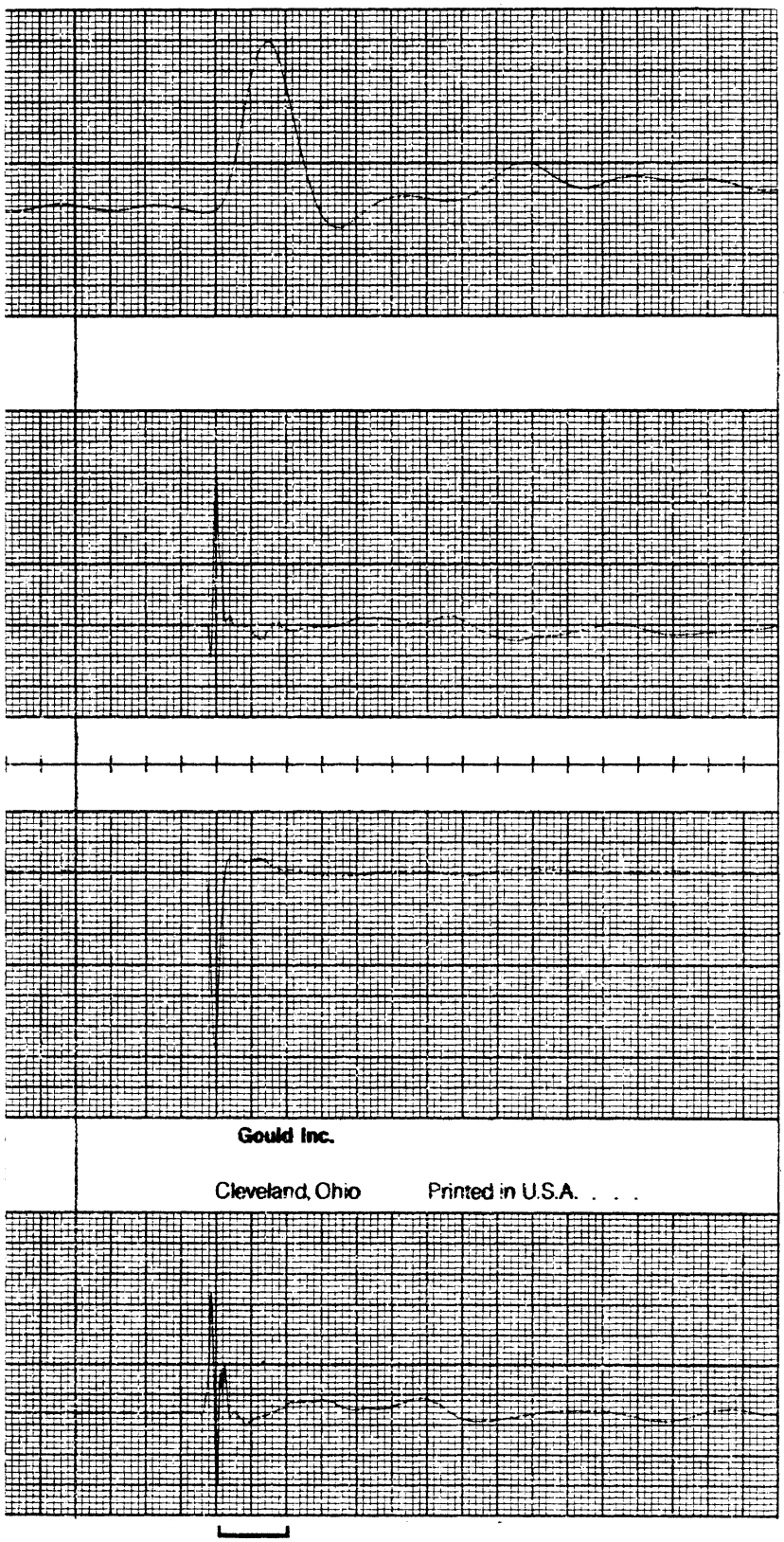
Filter Class: 1000

Right-Left Acceleration

Peak: 279. G

Scale: -96.5 G =

Filter Class: 1000



Inferior-Superior Acceleration

Peak: 20.0 G

Scale: -9.91 G =

Filter Class: 1000

6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 112 DUMMY NO. 881

BODY REGION HEAD SIDE L

PEAK RESULTANT: 221. G

Impact Mass Deceleration

Peak: 13.1 G

Scale: 4.41 G =

Filter Class: 60

Posterior-Anterior Acceleration

Peak: 10.1 G

Scale: 3.34 G =

Filter Class: 1000

Right-Left Acceleration

Peak: 220. G

Scale: -96.5 G =

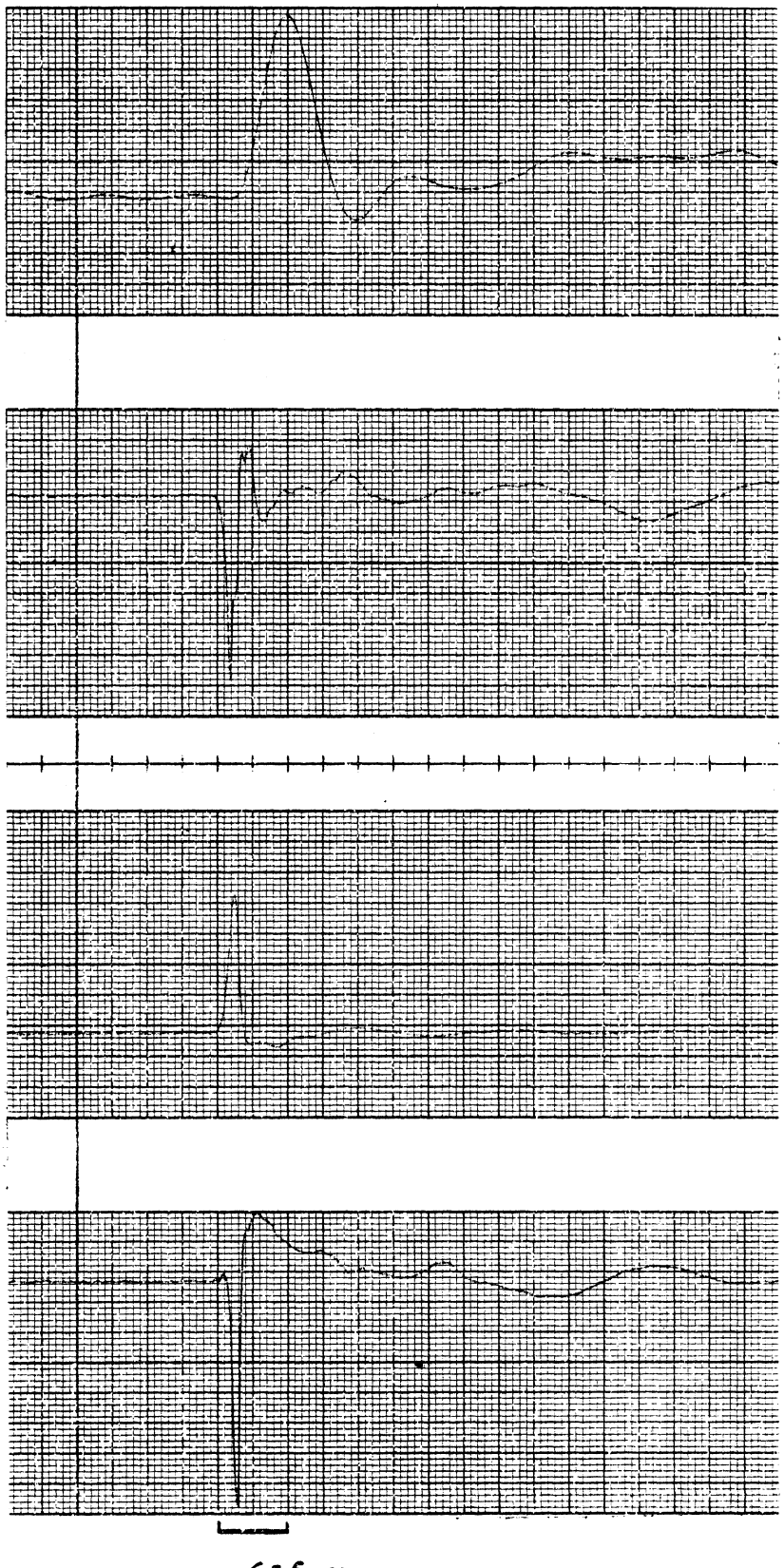
Filter Class: 1000

Inferior-Superior Acceleration

Peak: 18.6 G

Scale: -4.95 G =

Filter Class: 1000



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 111 DUMMY NO. 881

BODY REGION HEAD SIDE L

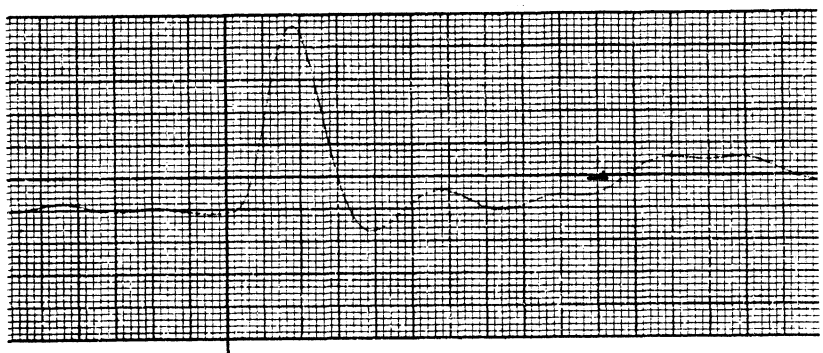
PEAK RESULTANT: 213. G

Impact Mass
Deceleration

Peak: 12.5 G

Scale: 4.41 G =

Filter Class: 60

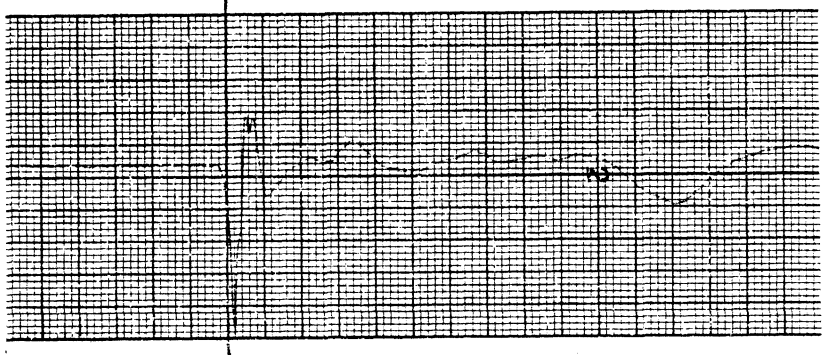


Posterior-Anterior
Acceleration

Peak: 8.87 G

Scale: 3.34 G =

Filter Class: 1000

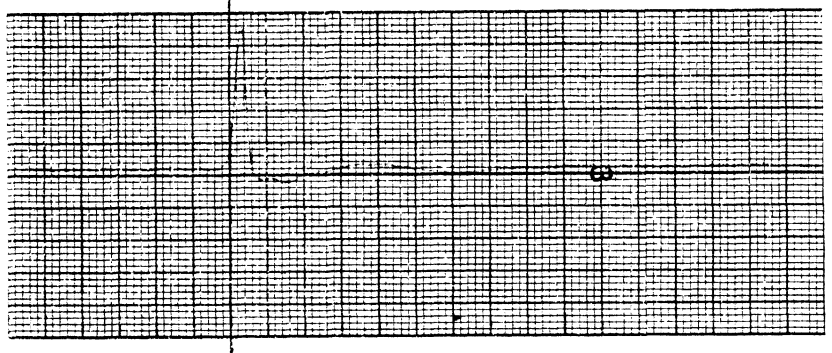


Right-Left
Acceleration

Peak: 213. G

Scale: -96.5 G =

Filter Class: 1000



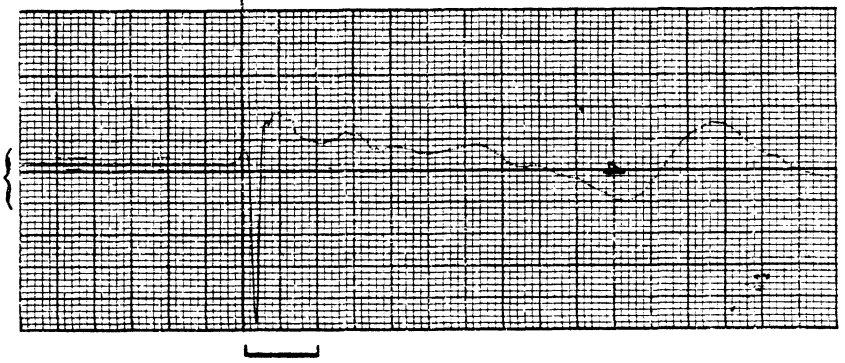
ACCUCHART

Inferior-Superior
Acceleration

Peak: 12.5 G

Scale: -4.95 G =

Filter Class: 1000



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 110 DUMMY NO. 881

BODY REGION HEAD SIDE L

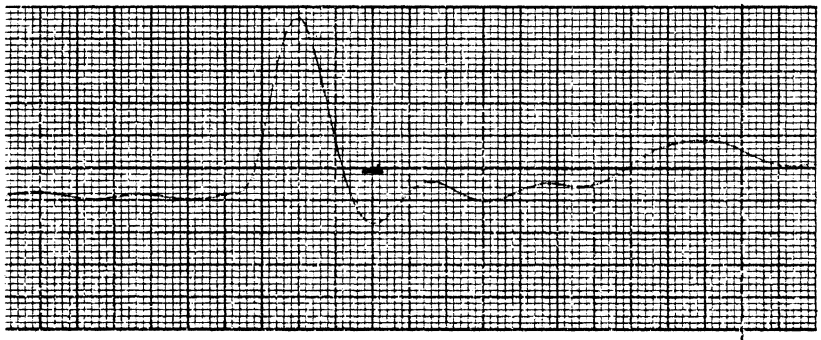
PEAK RESULTANT: 198. G

Impact Mass Deceleration

Peak: 12.3 G

Scale: 4.41 G =

Filter Class: 60

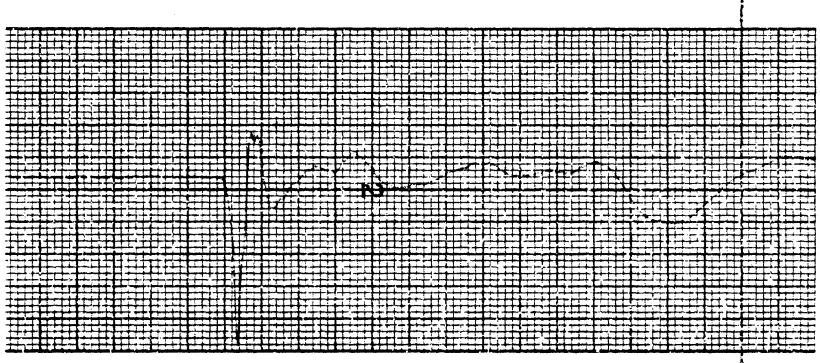


Posterior-Anterior Acceleration

Peak: 8.84G

Scale: 3.34 G =

Filter Class: 1000

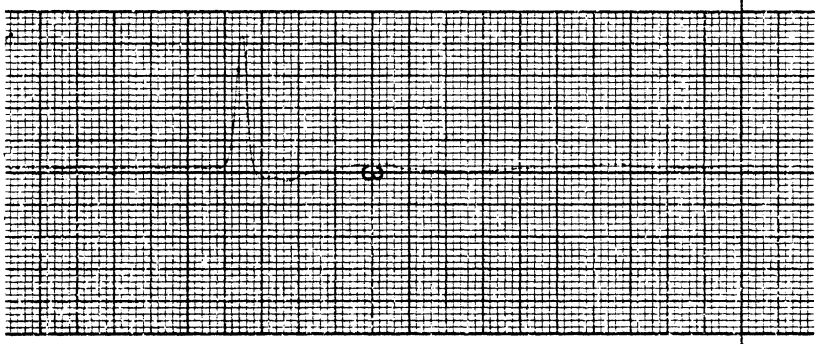


Right-Left Acceleration

Peak: 198. G

Scale: -96.5 G =

Filter Class: 1000

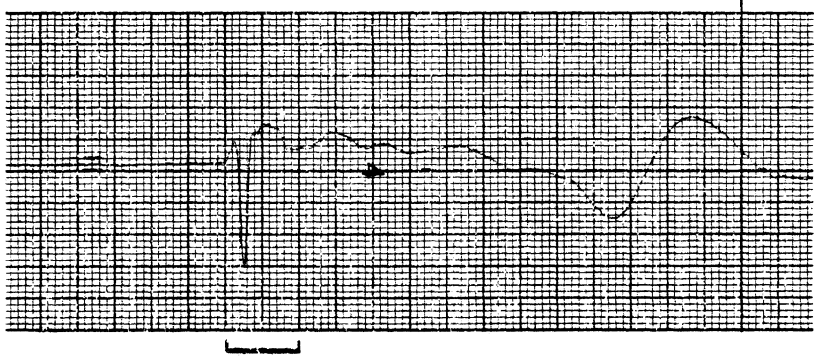


Inferior-Superior Acceleration

Peak: 8.34G

Scale: -4.95 G =

Filter Class: 1000



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 109 DUMMY NO. 881

BODY REGION HEAD SIDE L

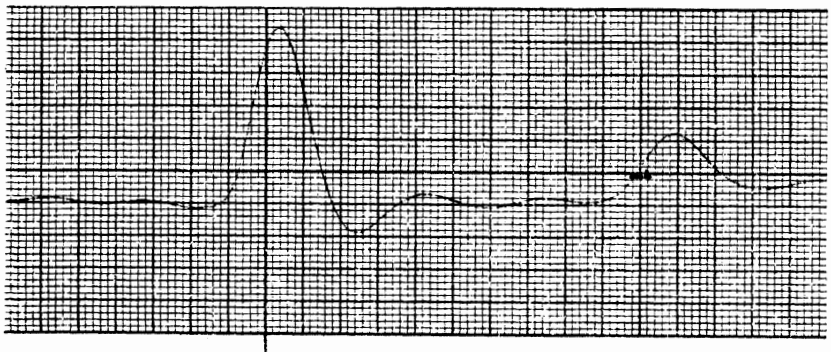
PEAK RESULTANT: 191. G

Impact Mass Deceleration

Peak: 12.0 G

Scale: 4.41 G =

Filter Class: 60

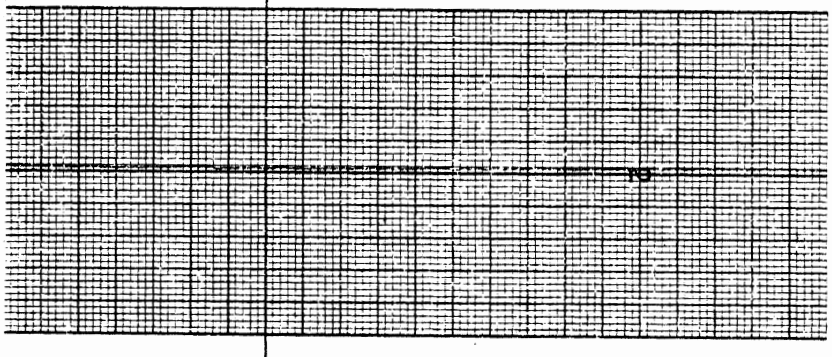


Posterior-Anterior Acceleration

Peak: 40.0 G

Scale: 0 G =

Filter Class: 1000

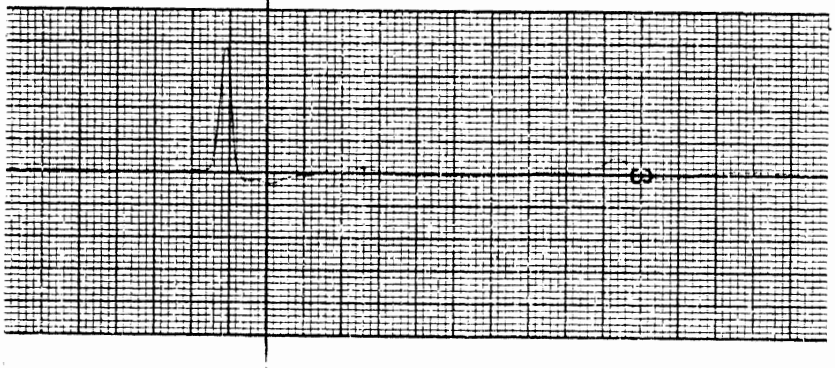


Right-Left Acceleration

Peak: 191. G

Scale: -96.5 G =

Filter Class: 1000

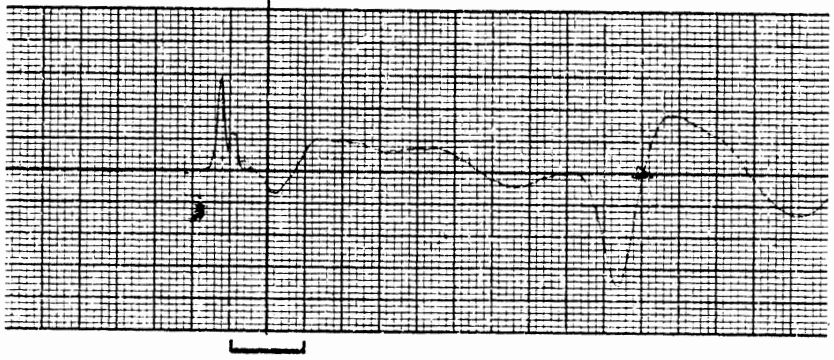


Inferior-Superior Acceleration

Peak: 7.34 G

Scale: -4.95 G =

Filter Class: 1000



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 075 DUMMY NO. 881

BODY REGION PELVIS SIDE R

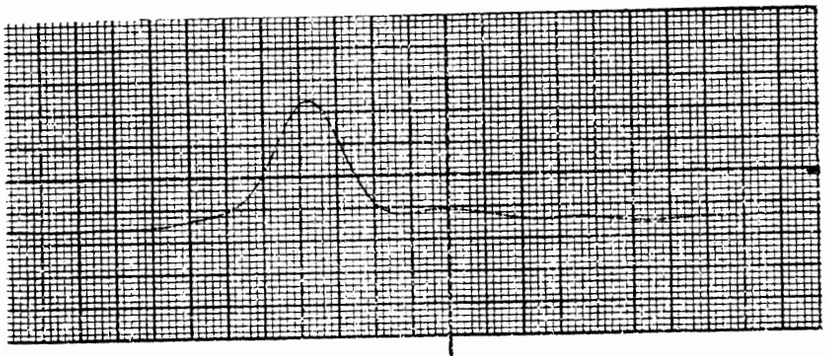
PEAK RESULTANT: 66.2 G

Impact Mass Deceleration

Peak: 43.5 G

Scale: 21.8 G =

Filter Class: 60

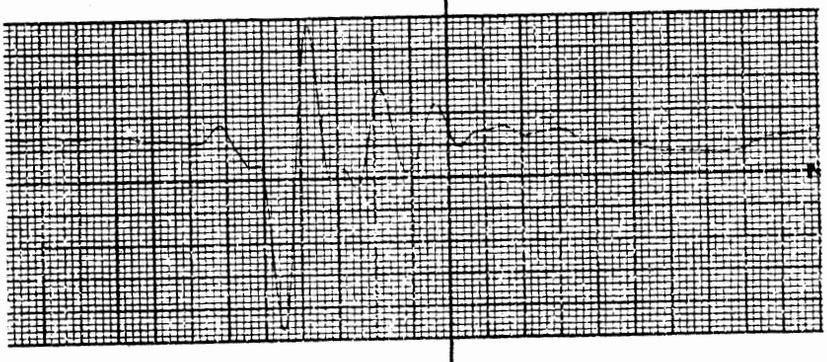


Posterior-Anterior Acceleration

Peak: 9.97 G

Scale: -3.27 G =

Filter Class: 180

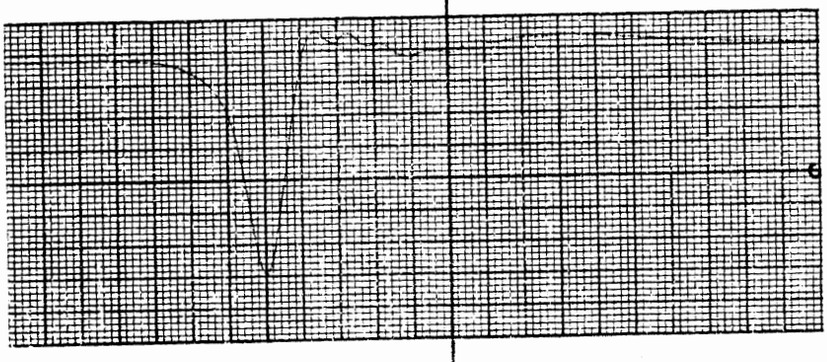


Right-Left Acceleration

Peak: 66.0 G

Scale: -19.6 G =

Filter Class: 180

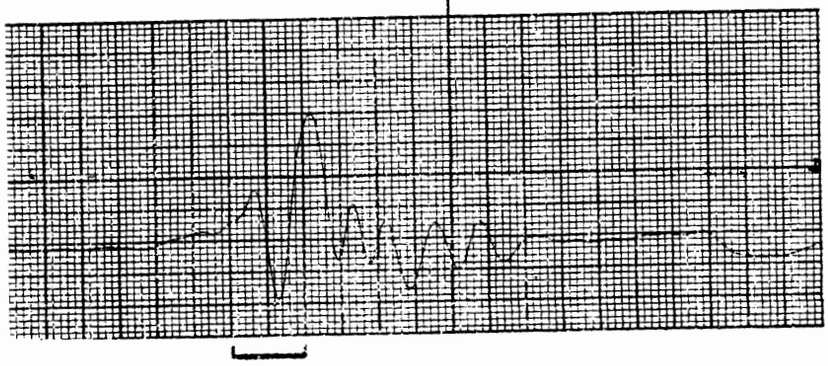


Inferior-Superior Acceleration

Peak: 5.20 G

Scale: 2.48 G =

Filter Class: 180



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 076 DUMMY NO. 881

BODY REGION PELVIS SIDE R

PEAK RESULTANT: 80.8 G

Impact Mass Deceleration

Peak: 45.1 G

Scale: 21.8 G =

Filter Class: 60

Posterior-Anterior Acceleration

Peak: 14.9 G

Scale: -8.18 G =

Filter Class: 180

Right-Left Acceleration

Peak: 80.5 G

Scale: -19.6 G =

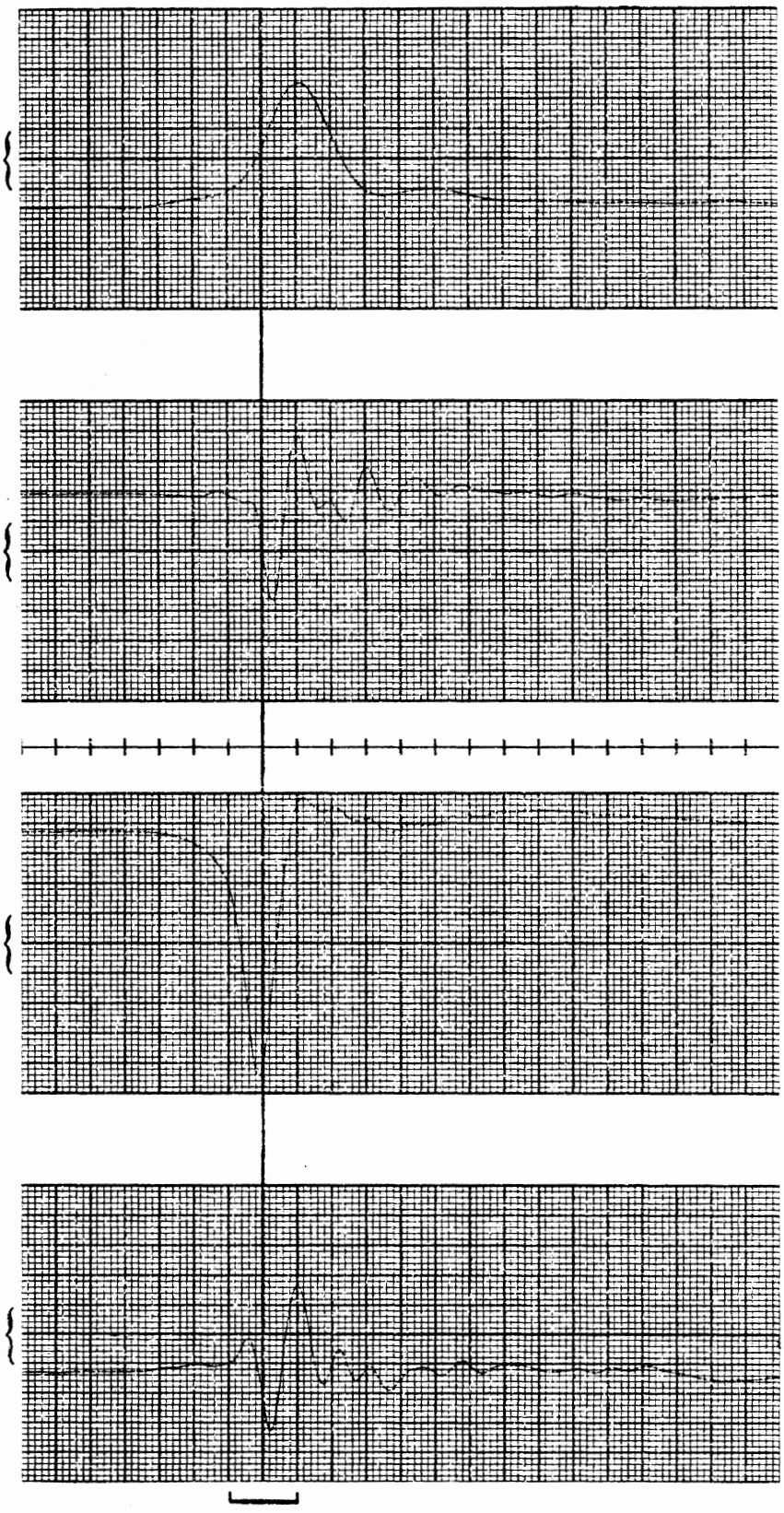
Filter Class: 180

Inferior-Superior Acceleration

Peak: 9.01 G

Scale: 4.96 G =

Filter Class: 180



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 077 DUMMY NO. 881

BODY REGION PELVIS SIDE R

PEAK RESULTANT: 81.5 G

Impact Mass Deceleration

Peak: 44.8 G

Scale: 21.8 G =

Filter Class: 60

Posterior-Anterior Acceleration

Peak: 19.2 G

Scale: -8.18 G =

Filter Class: 180

Right-Left Acceleration

Peak: 30.6 G

Scale: -19.6 G =

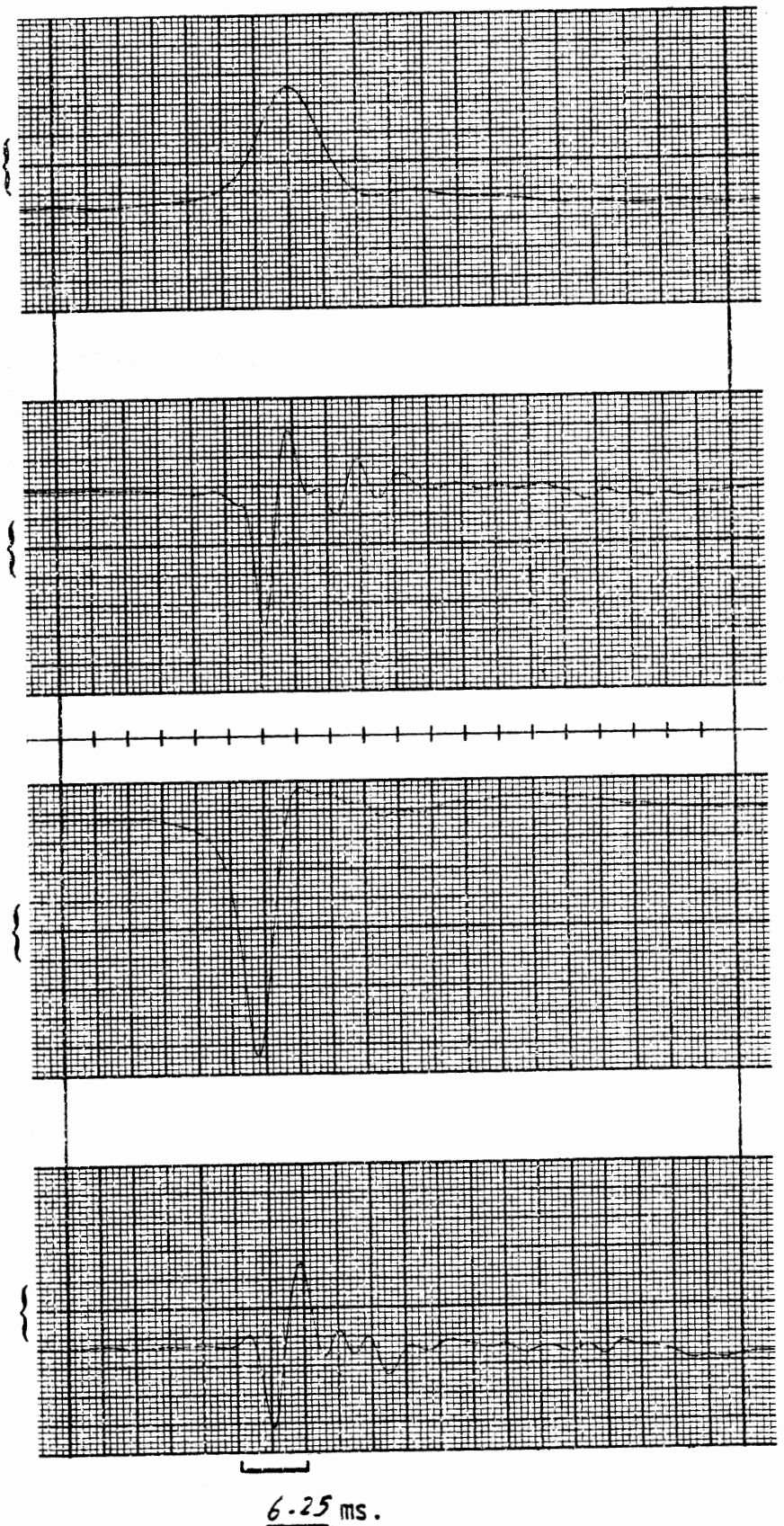
Filter Class: 180

Inferior-Superior Acceleration

Peak: 7.27 G

Scale: 4.96 G =

Filter Class: 180



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 078 DUMMY NO. 881

BODY REGION PELVIS SIDE L

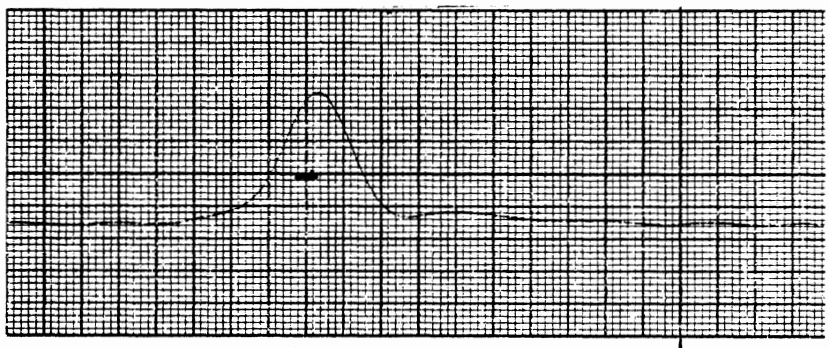
PEAK RESULTANT: 81.6 G

Impact Mass Deceleration

Peak: 44.3 G

Scale: 21.8 G =

Filter Class: 60

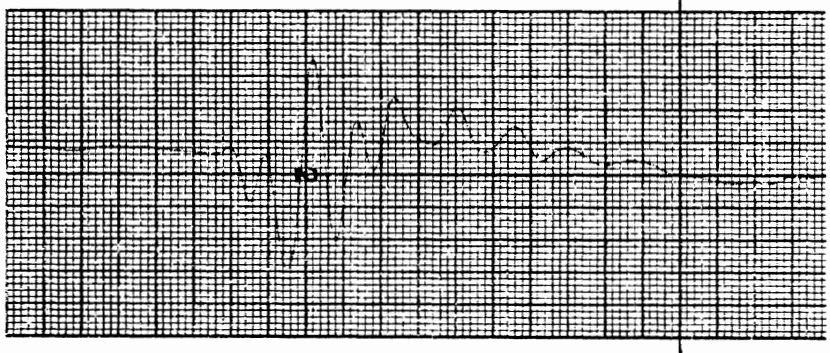


Posterior-Anterior Acceleration

Peak: 6.17 G

Scale: -3.27 G =

Filter Class: 180

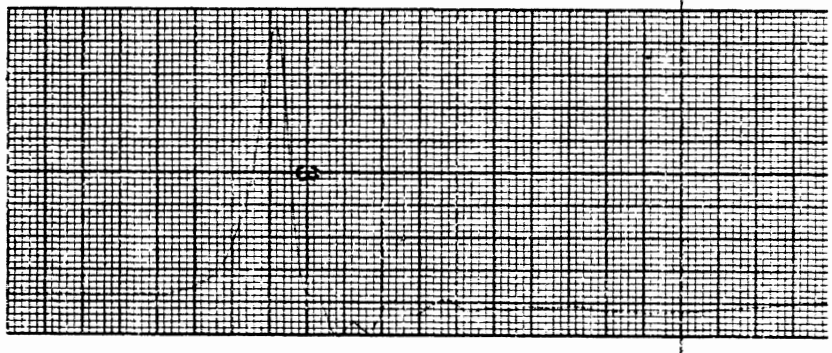


Right-Left Acceleration

Peak: 81.1 G

Scale: -19.6 G =

Filter Class: 180



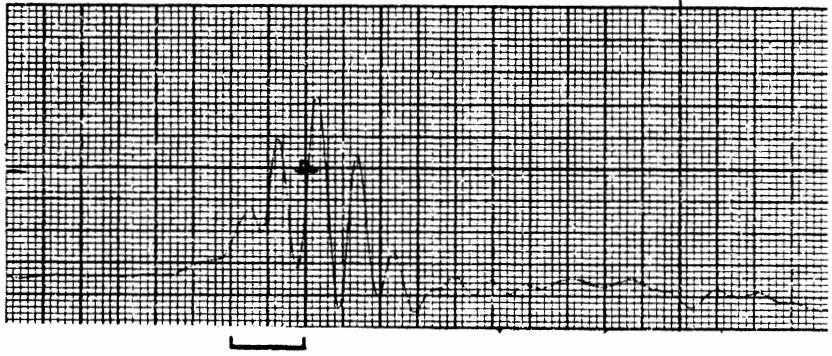
ACCUCHART

Inferior-Superior Acceleration

Peak: 7.05 G

Scale: 2.48 G =

Filter Class: 180



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 079 DUMMY NO. 881

BODY REGION PELVIS SIDE L

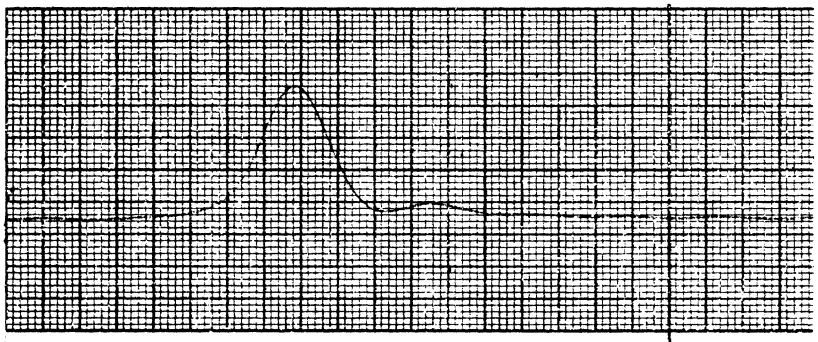
PEAK RESULTANT: 88.7 G

Impact Mass Deceleration

Peak: 46.2 G

Scale: 21.8 G =

Filter Class: 60

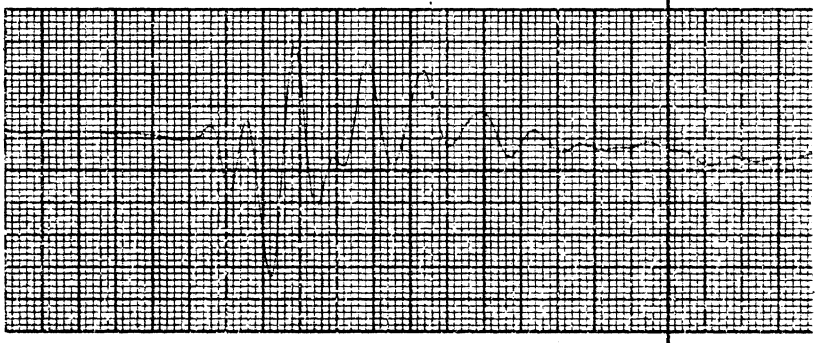


Posterior-Anterior Acceleration

Peak: 7.42 G

Scale: -3.27 G =

Filter Class: 180

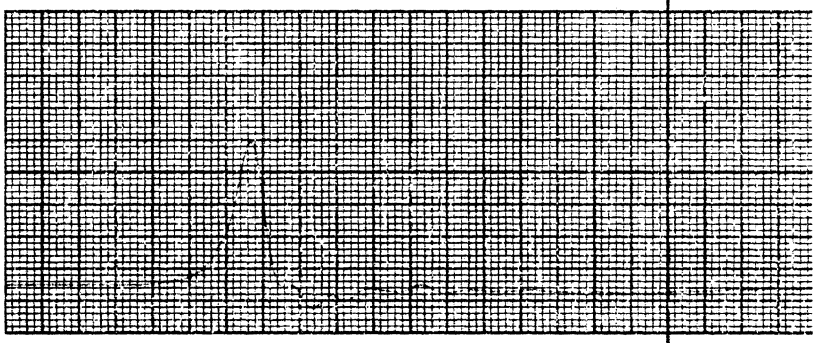


Right-Left Acceleration

Peak: 88.5 G

Scale: -39.3 G =

Filter Class: 180

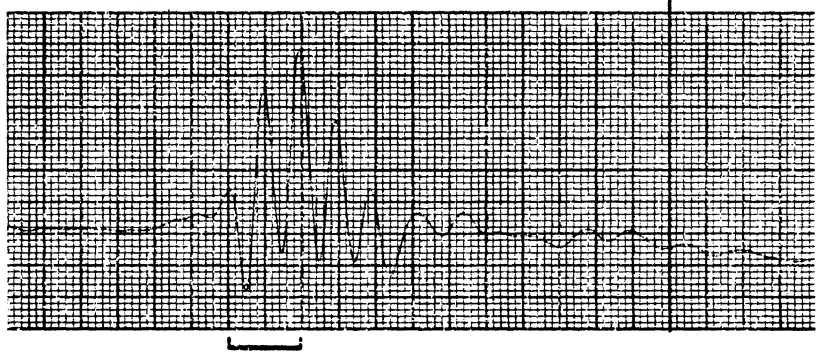


Inferior-Superior Acceleration

Peak: 7.01 G

Scale: 2.48 G =

Filter Class: 180



6.25 ms.

DUMMY SIDE IMPACT CALIBRATION PROGRAM

TEST NO. 80Y 080 DUMMY NO. 881

BODY REGION PELVIS SIDE L

PEAK RESULTANT: 94.5 G

Impact Mass Deceleration

Peak: 45.1 G

Scale: 21.8 G =

Filter Class: 60

Posterior-Anterior Acceleration

Peak: 6.29 G

Scale: -3.27 G =

Filter Class: 180

Right-Left Acceleration

Peak: 94.2 G

Scale: -39.3 G =

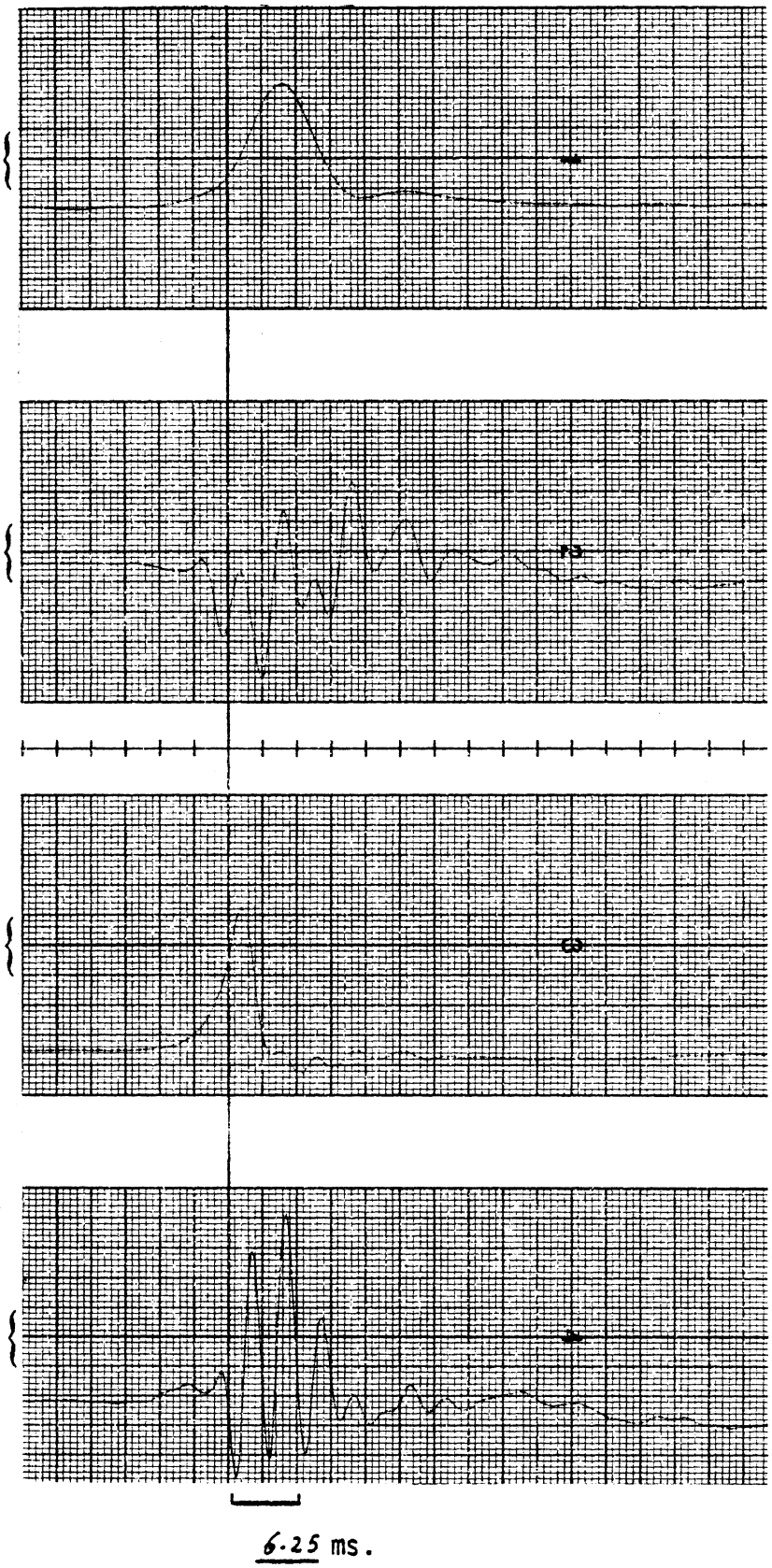
Filter Class: 180

Inferior-Superior Acceleration

Peak: 7.87 G

Scale: 2.48 G =

Filter Class: 180



6.25 ms.