

UMTRI-84-28-2

DYNAMIC TESTING OF INNOVATIVE SOLUTIONS TO
CHILD OCCUPANT PROTECTION PROBLEMS

APPENDIX: DATA PLOTS

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John W. Melvin

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Transportation Research Institute
Ann Arbor, Michigan 48109

Contract No. DTNH22-82-C-07176

Contract Amount: \$63,809

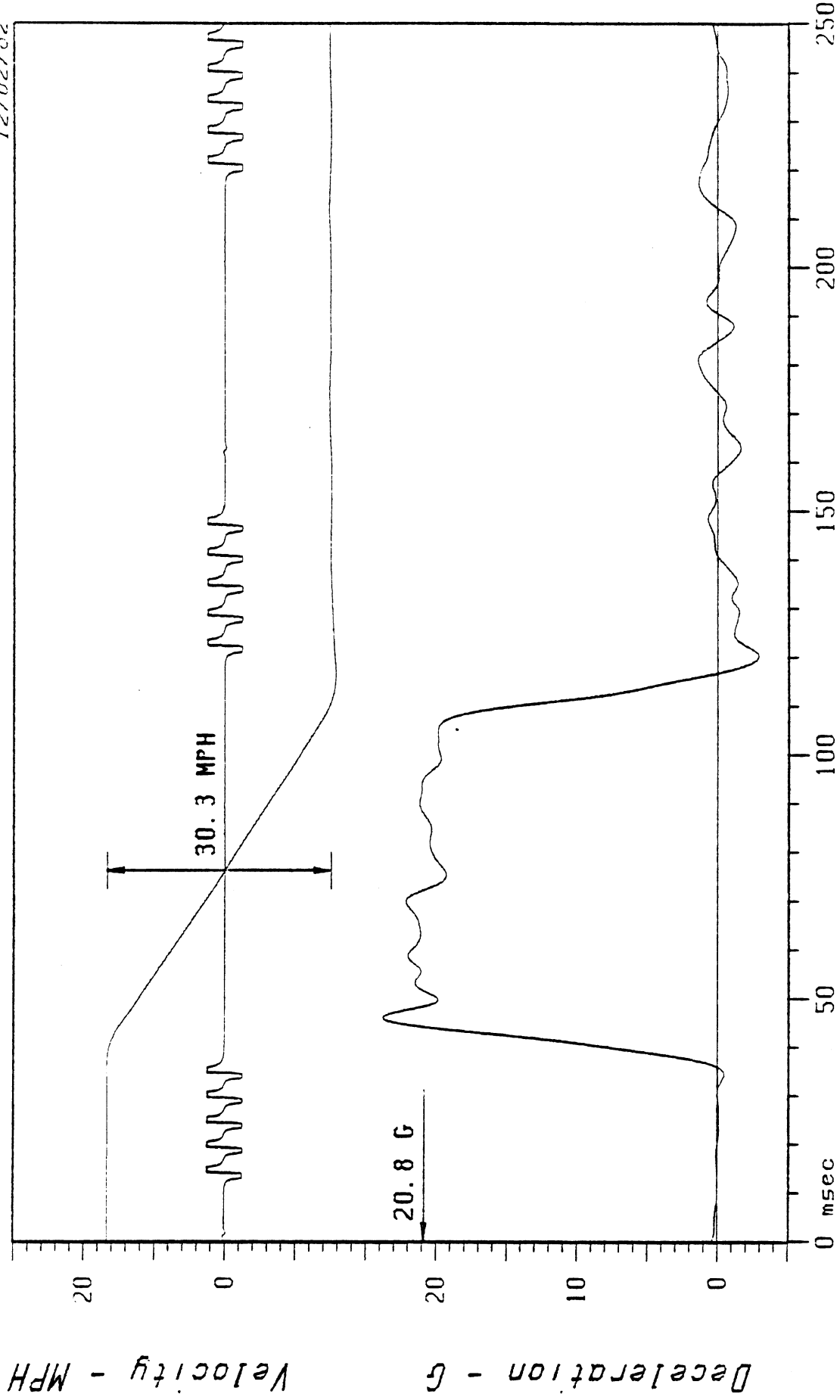
FINAL REPORT
September 1984

Prepared for
U.S. Department of Transportation
National Highway Traffic Safety Administration
Washington, D.C. 20590

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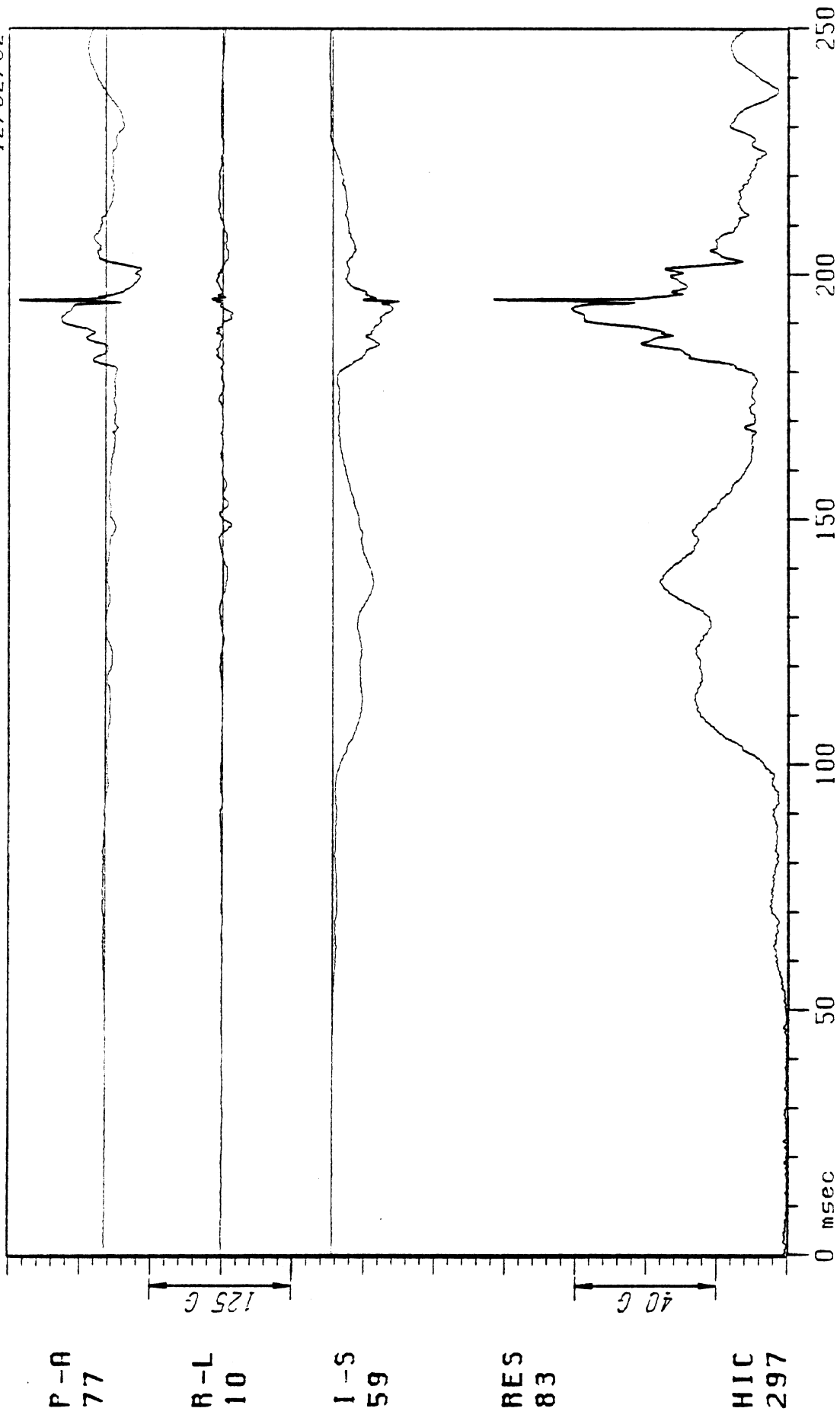
12/02/82



82D 041

SLED PROFILE

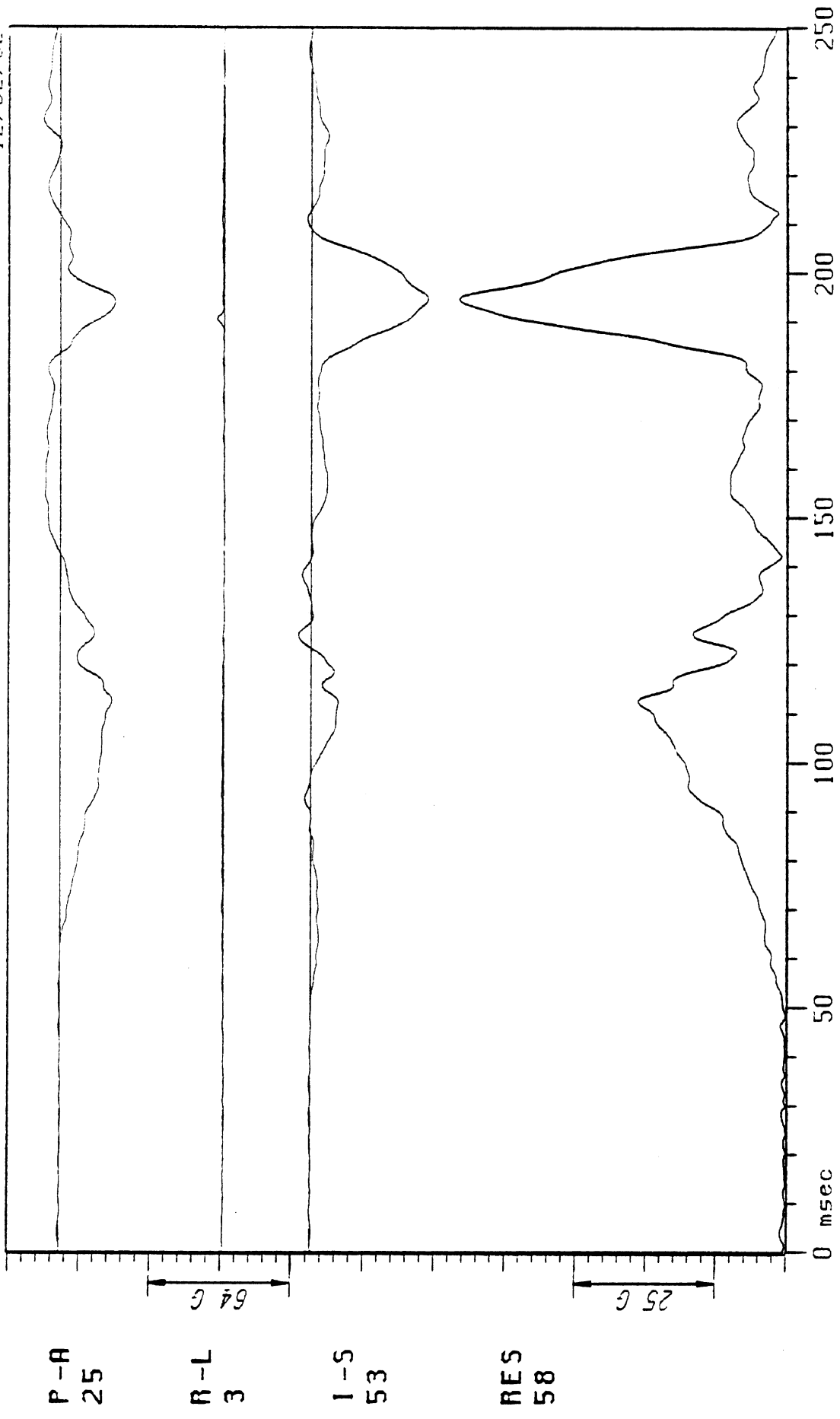
12/02/82



82D 041

HEAD ACCEL.

12/02/82



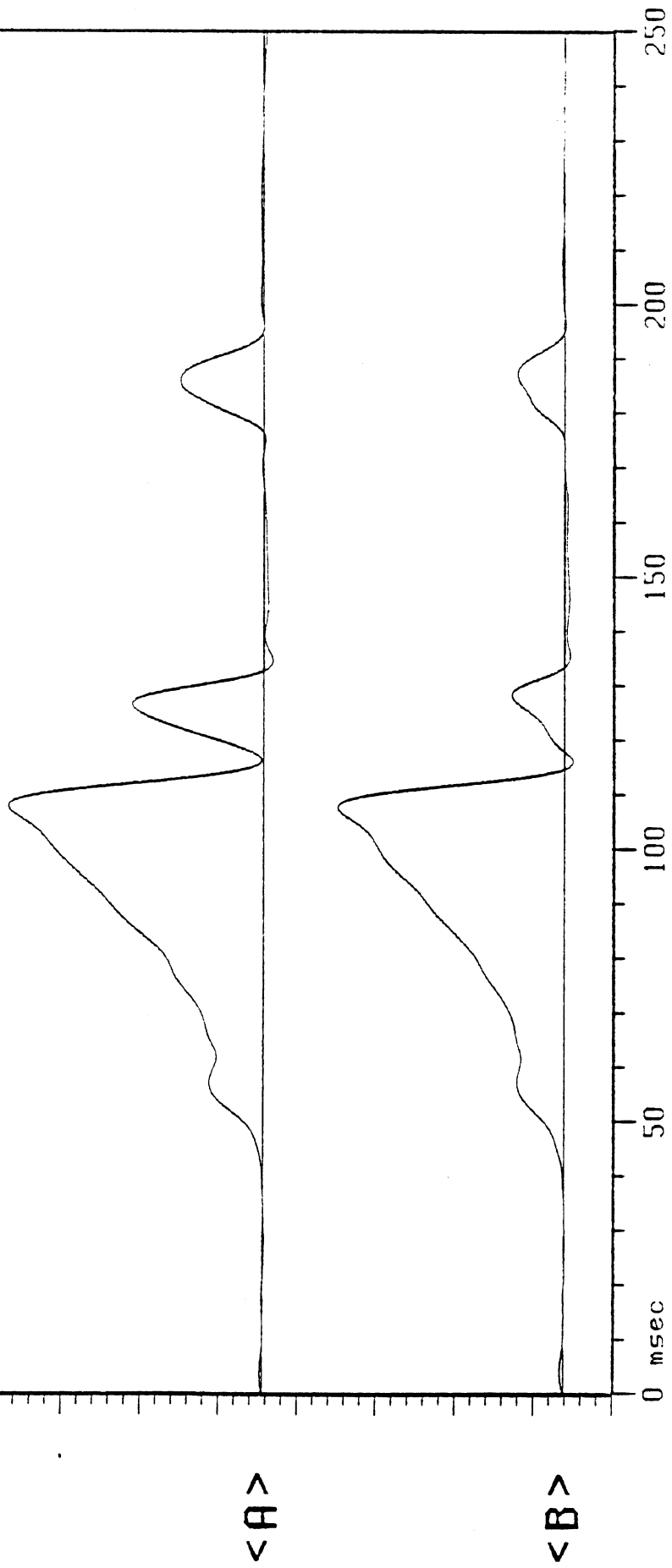
82D 041

CHEST ACCEL.

12/02/82

640

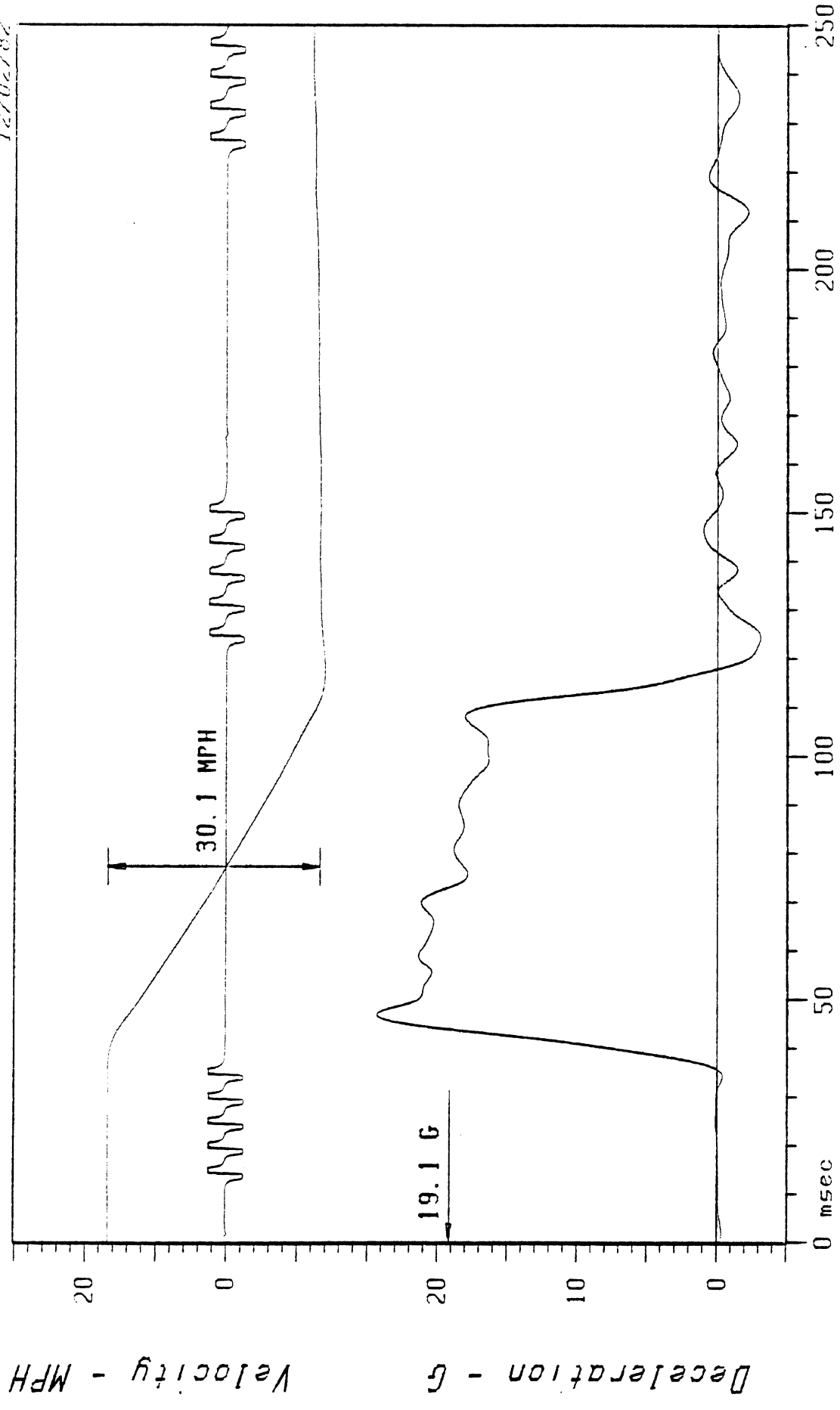
<A> = RIGHT LAP Peak = 1036 LB
 = LEFT LAP Peak = 919 LB



82D 041

BELT LOADS

12/02/82



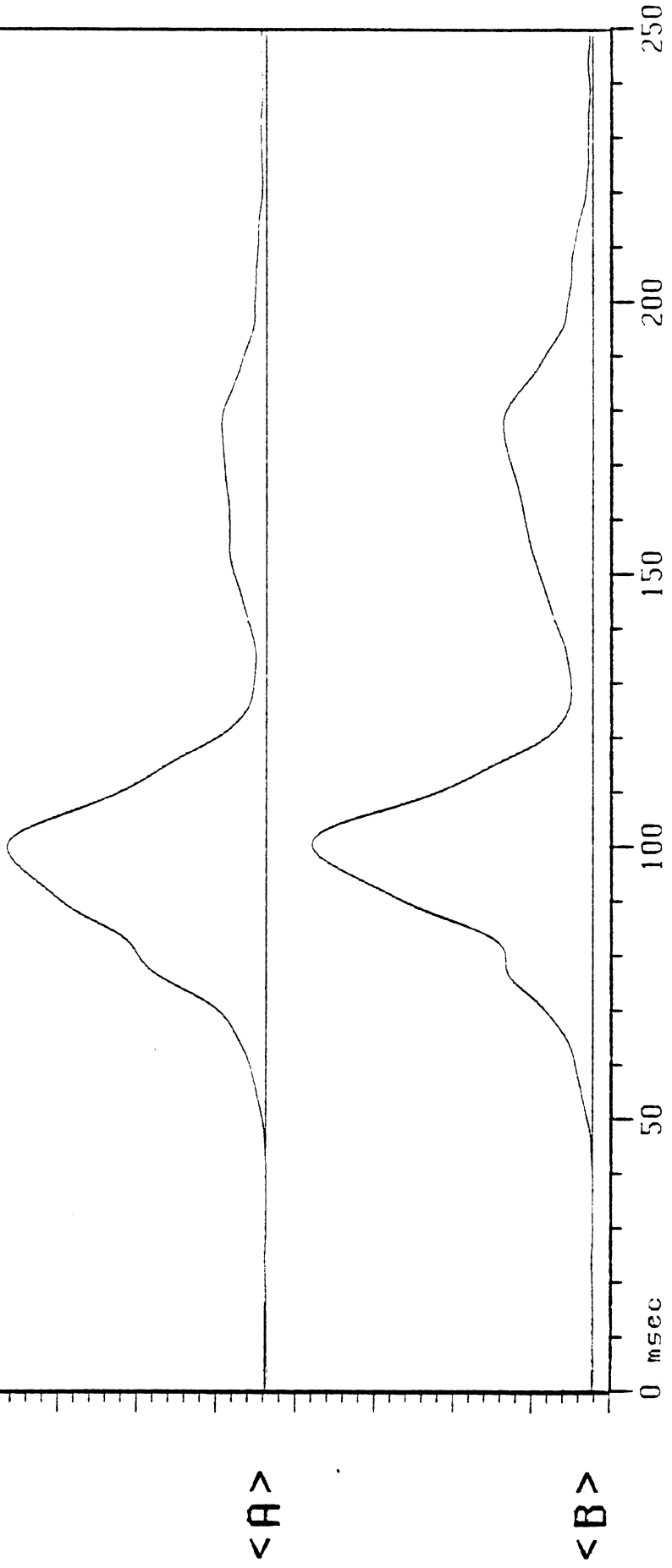
82D 042

SLED PROFILE

12/02/82

800

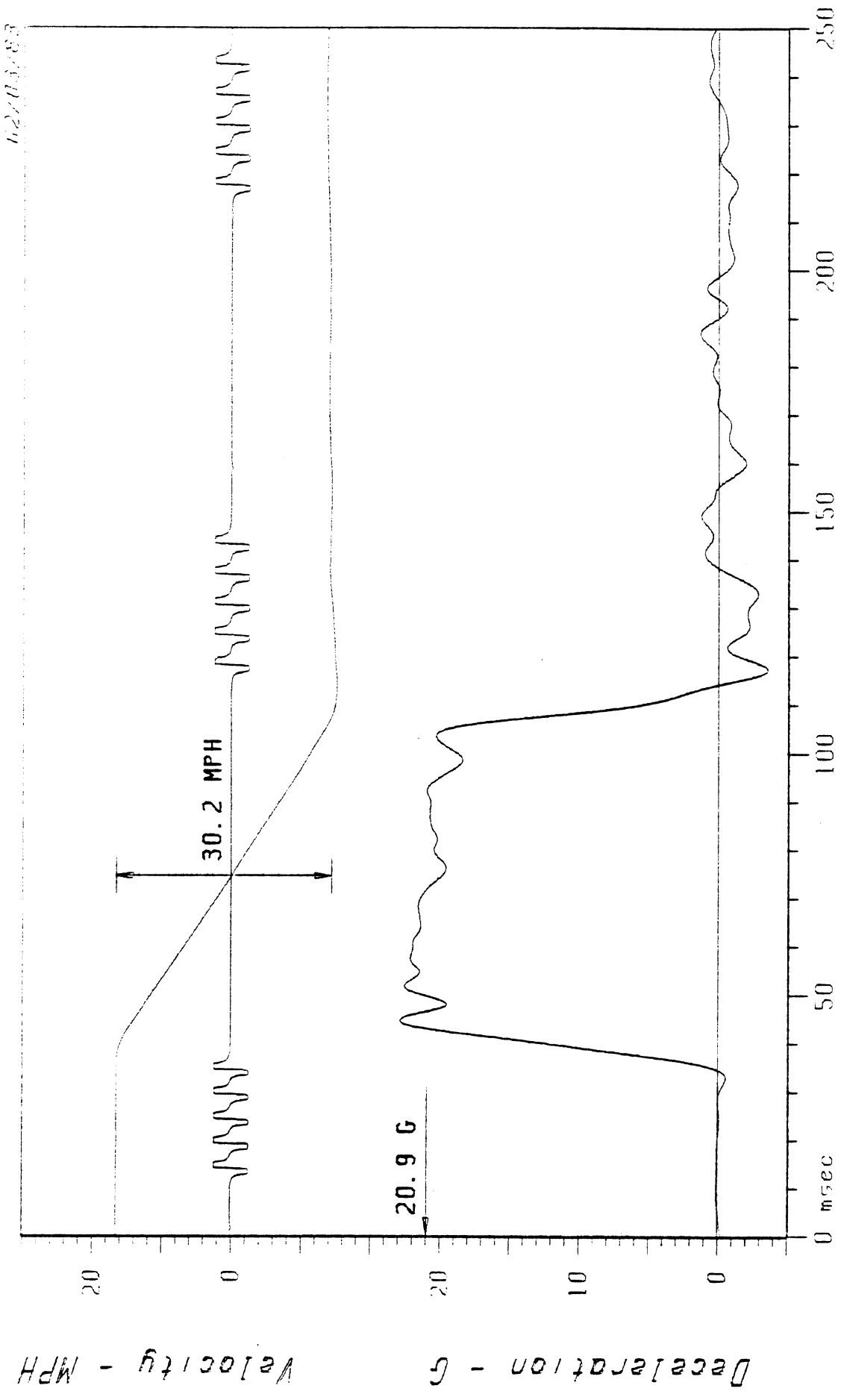
<A> = RIGHT LAP Peak = 1315 LB
 = LEFT LAP Peak = 1428 LB



82D 042

BELT LOADS

627113-83

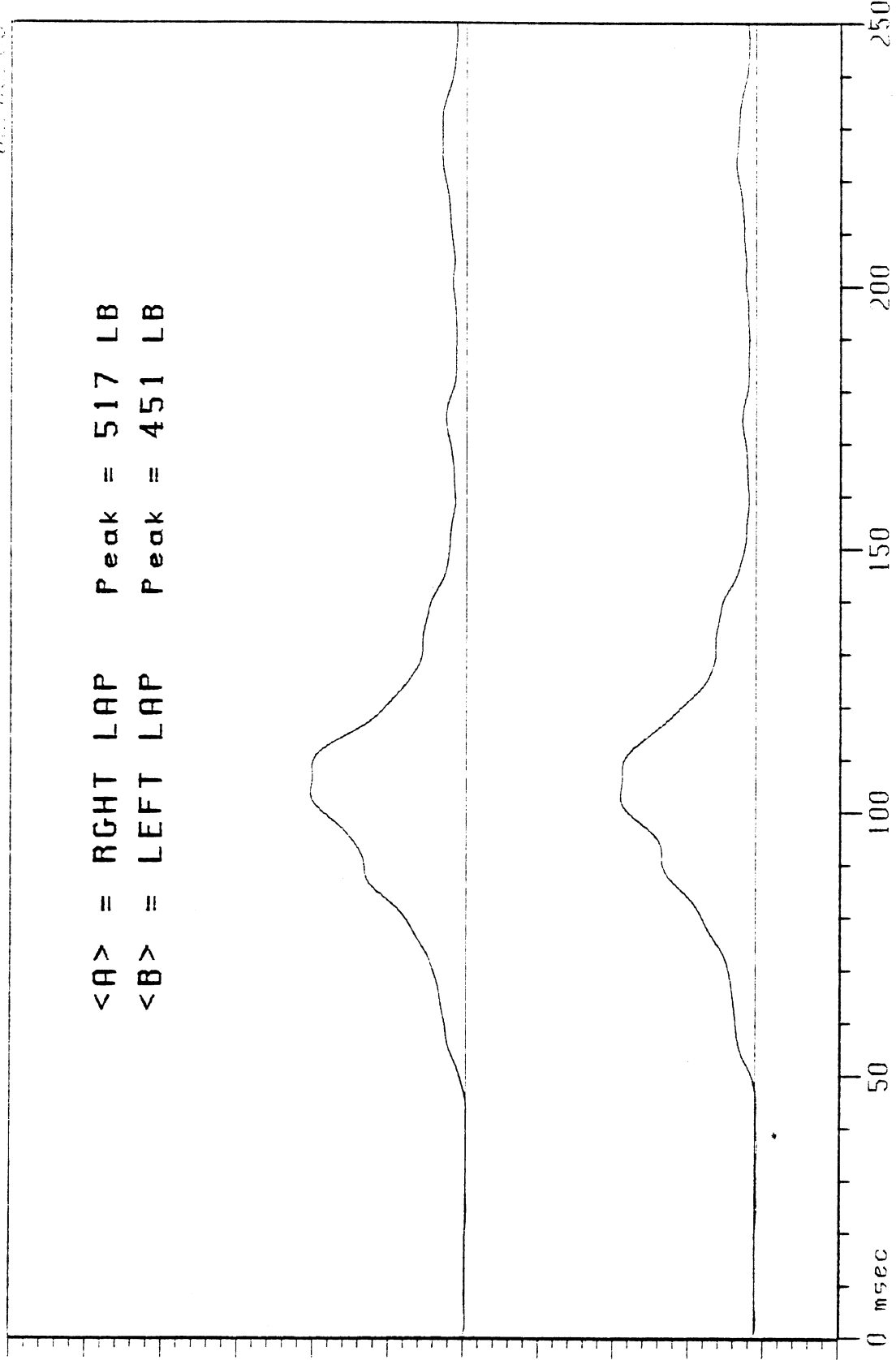


SLED PROFILE 83D 001

02/13/83

500

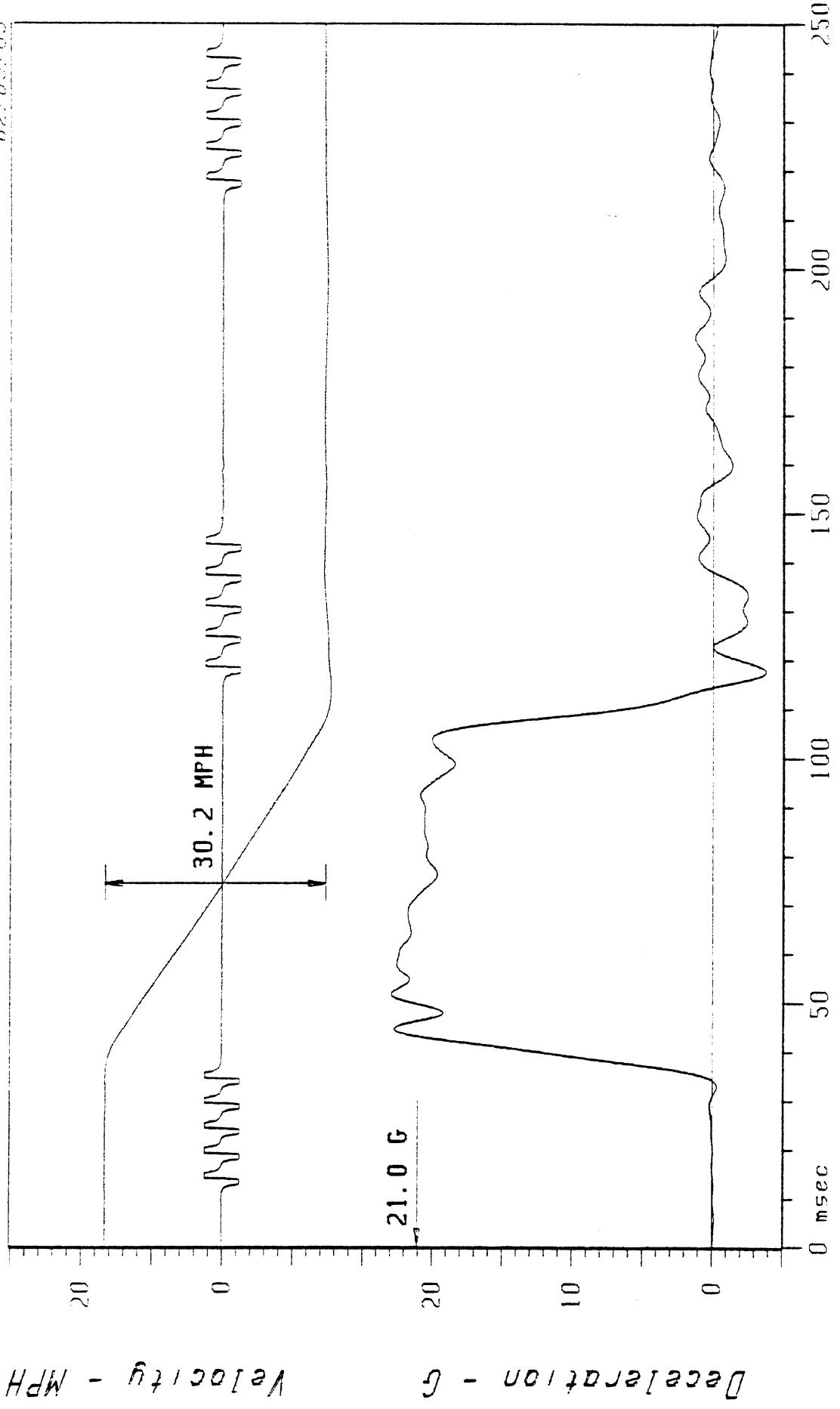
<A> = RGHT LAP Peak = 517 LB
 = LEFT LAP Peak = 451 LB



BELT LOADS

83D 001

02/03/83



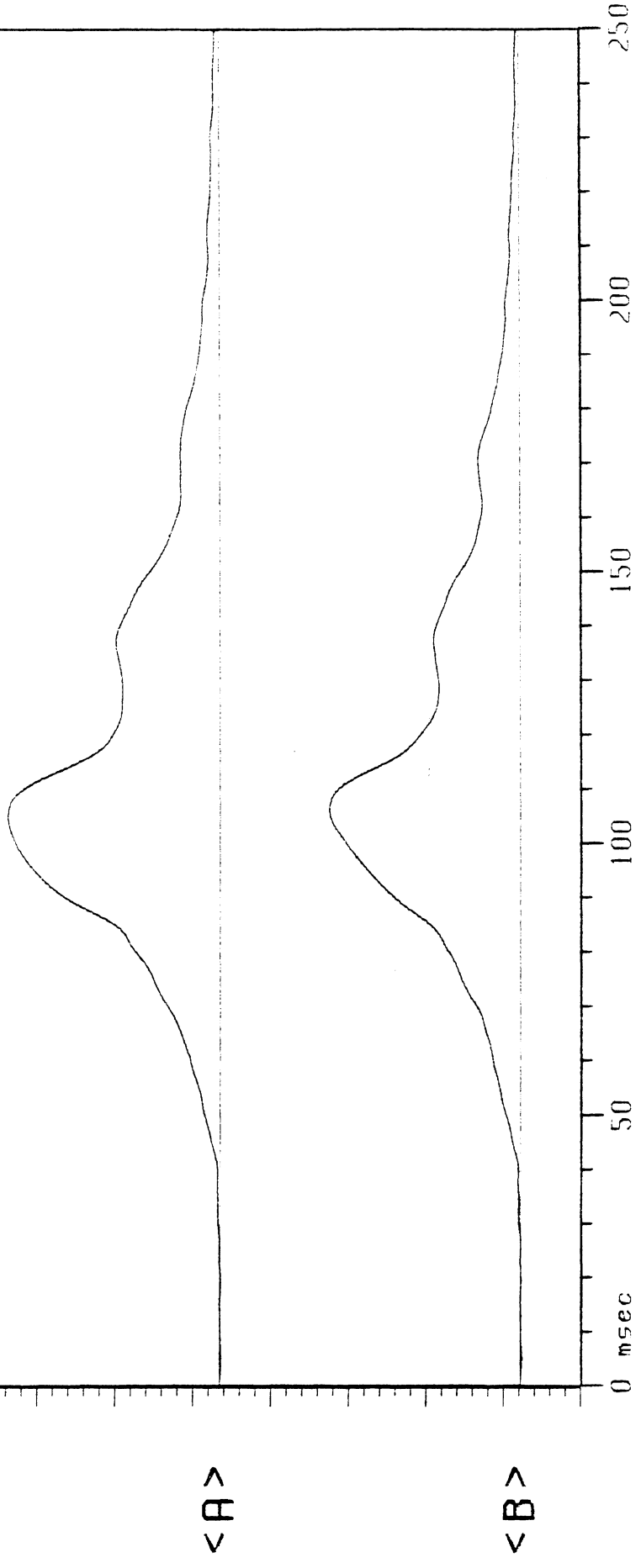
83D 002

SLED PROFILE

02/03/83

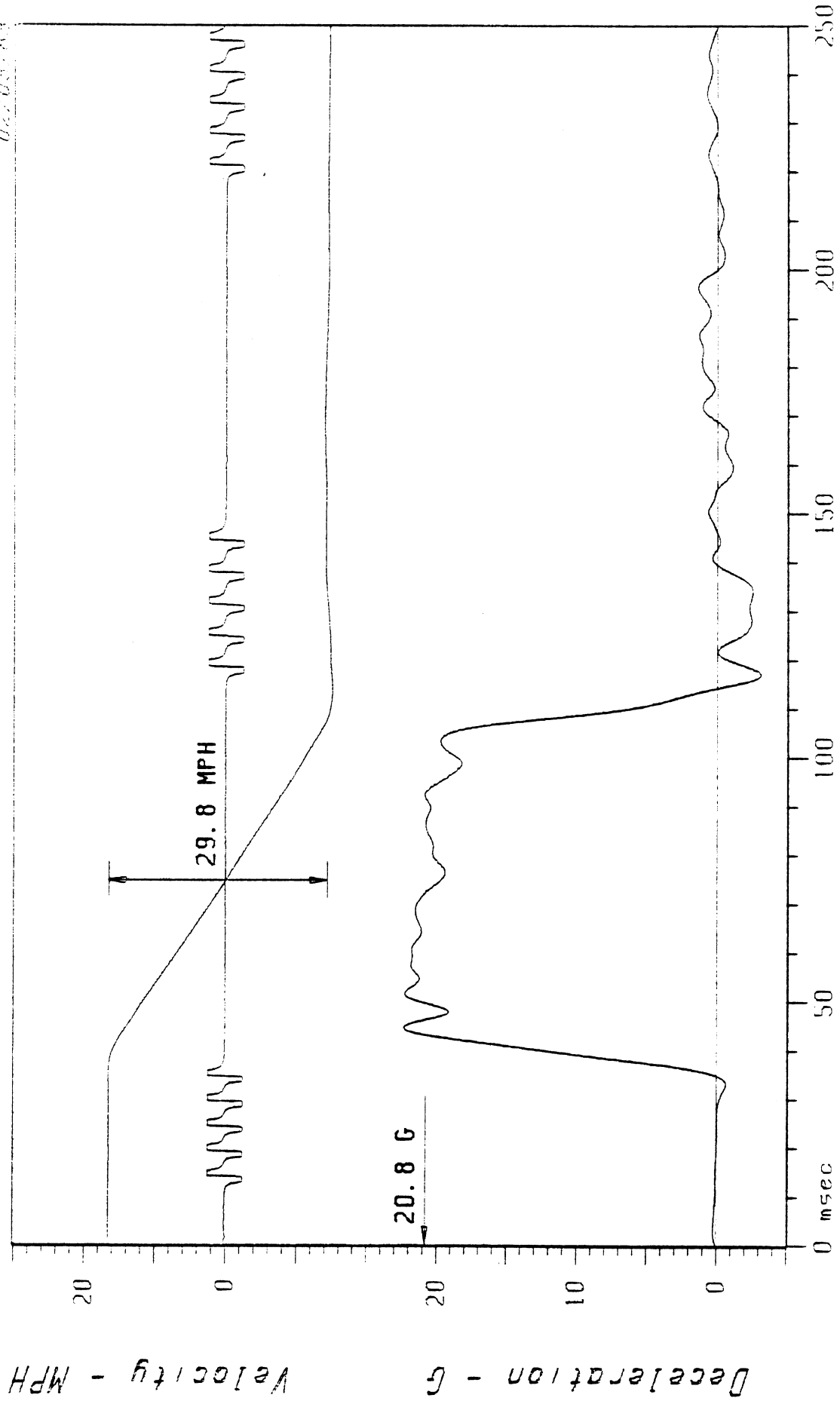
500

<A> = RIGHT LAP Peak = 680 LB
 = LEFT LAP Peak = 616 LB



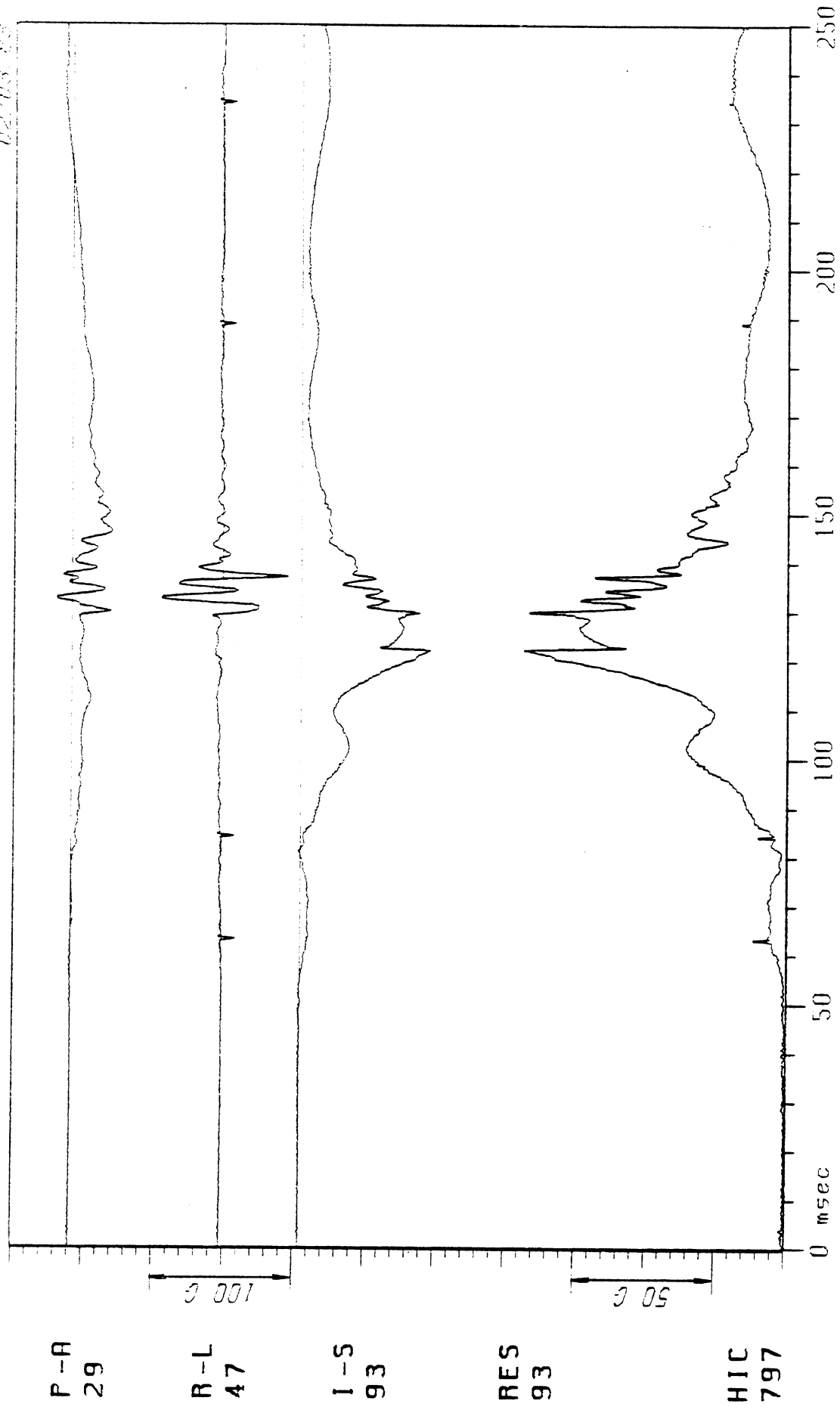
BELT LOADS 83D 002

02-03-83



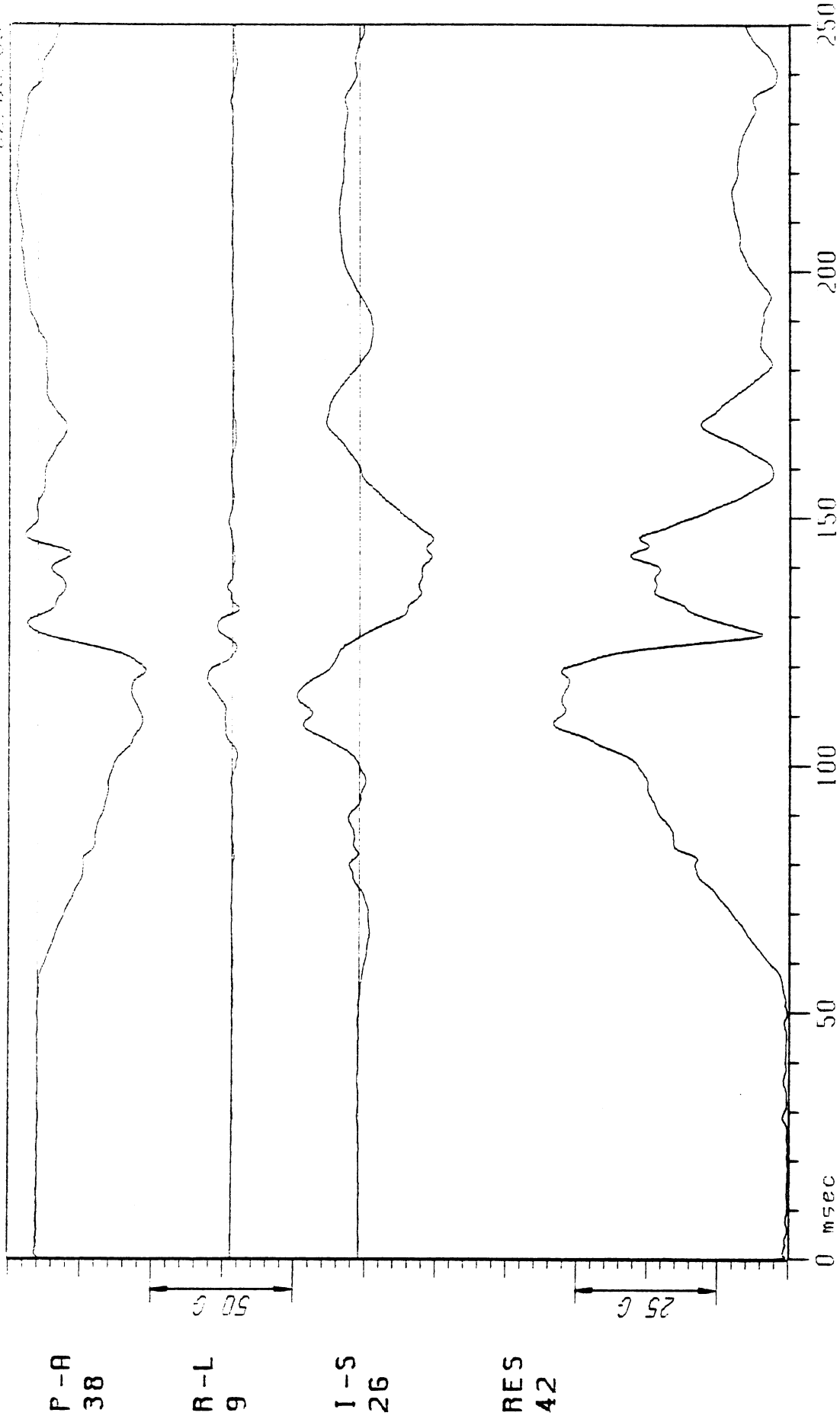
SLED PROFILE 83D 003

02/03 83



HEAD ACCEL. 83D 003

02/03/85



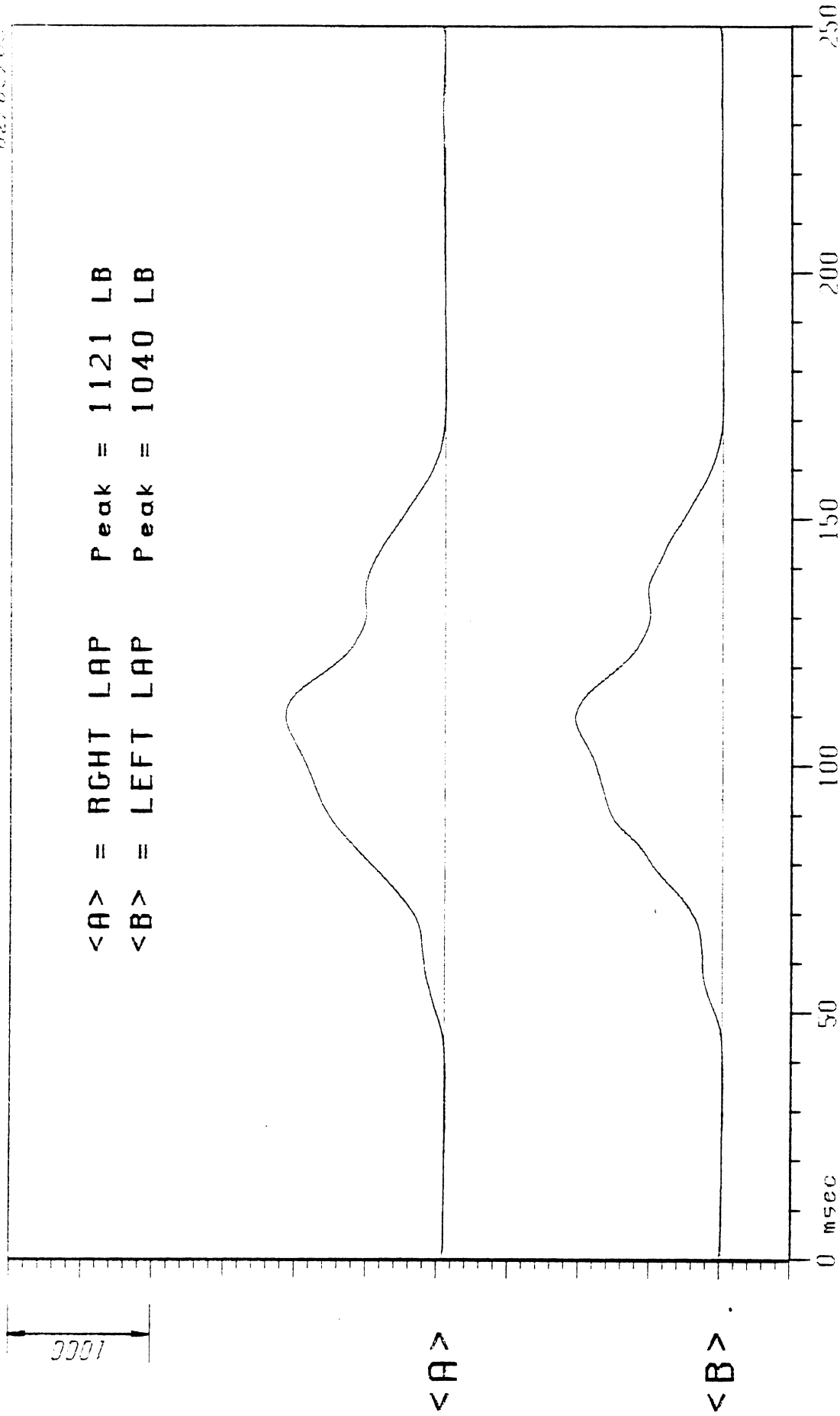
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CHEST ACCEL.

02/03/83

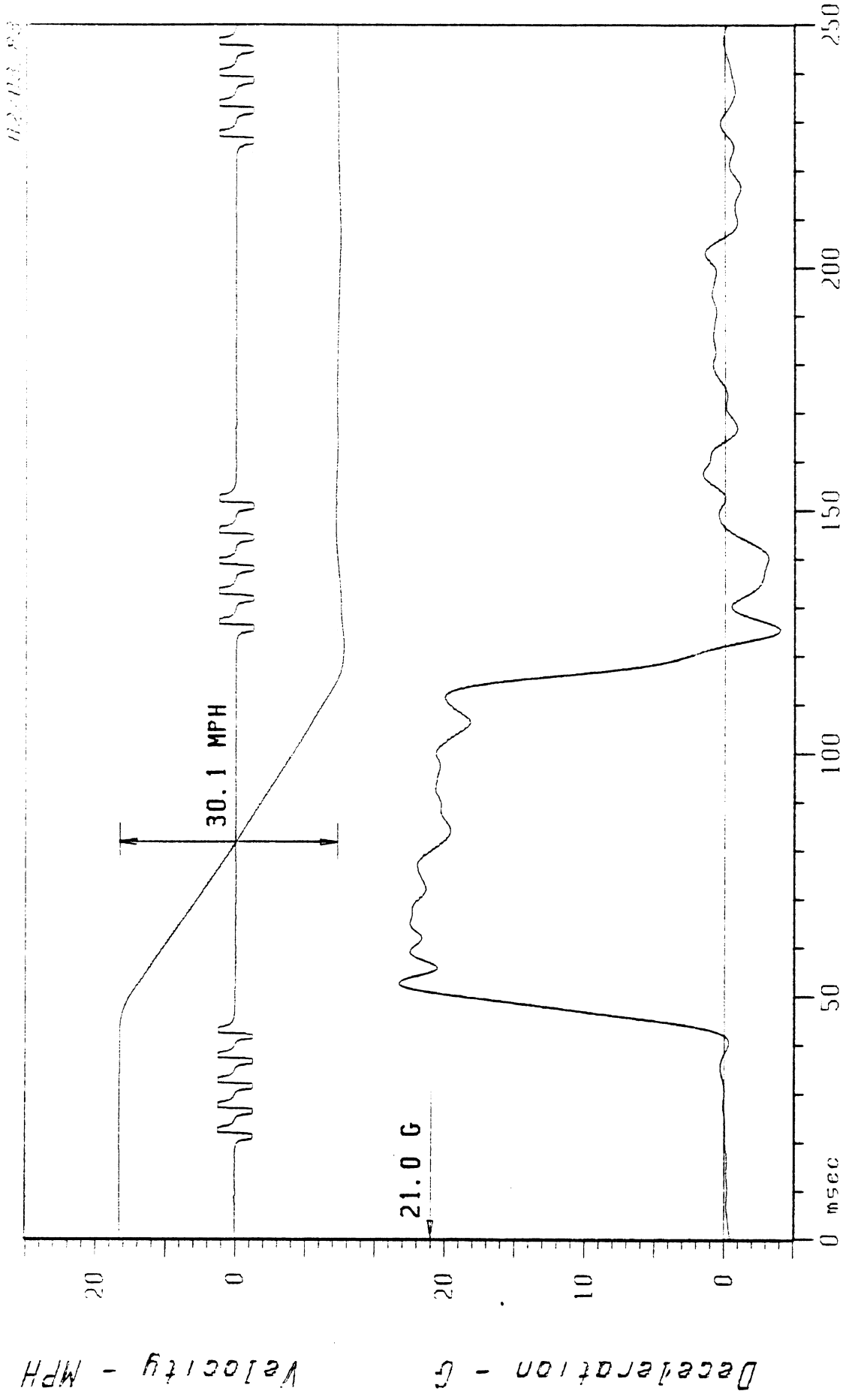
1000

<A> = RIGHT LAP Peak = 1121 LB
 = LEFT LAP Peak = 1040 LB



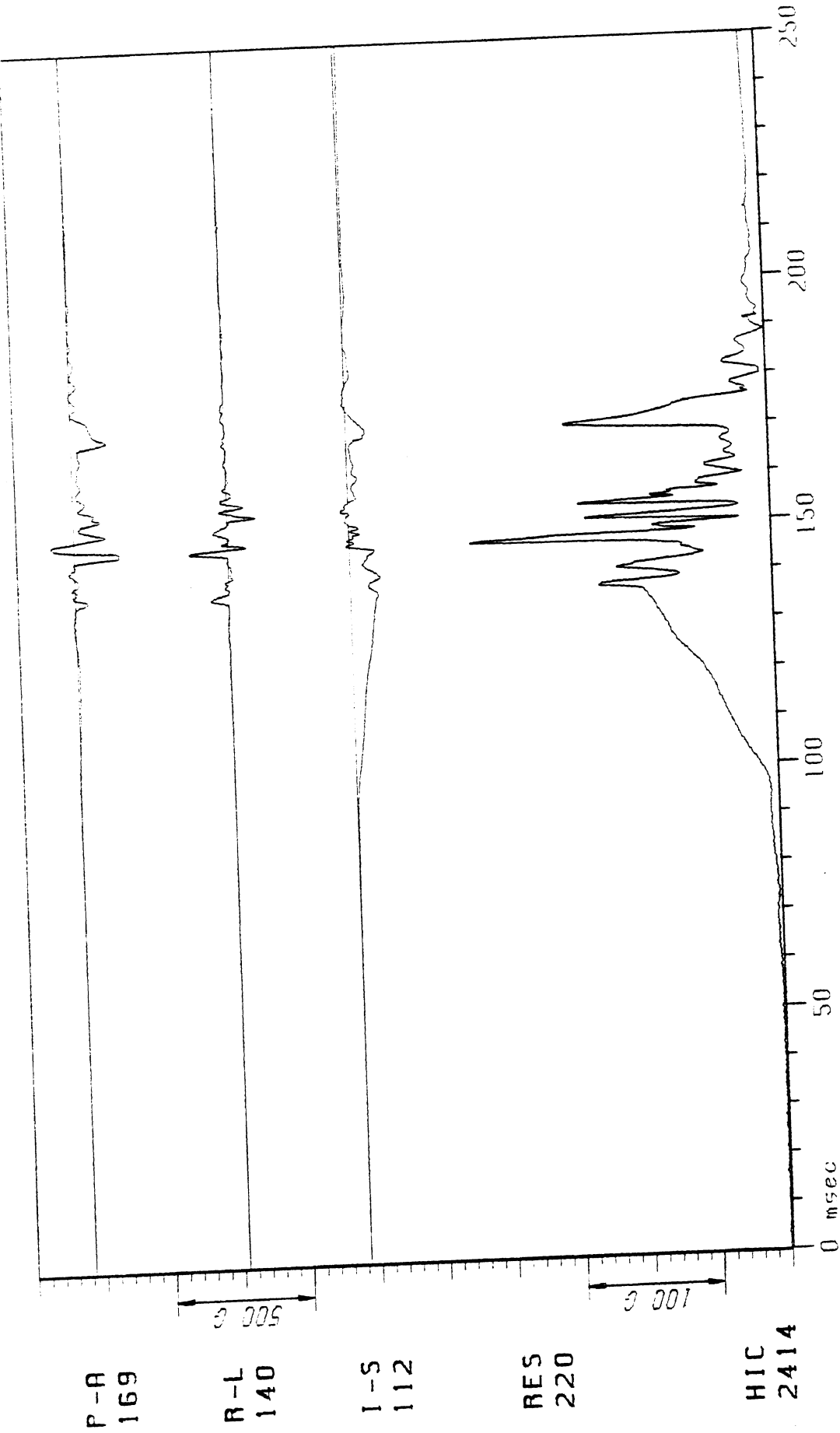
83D 003

BELT LOADS



SLED PROFILE 83D 004

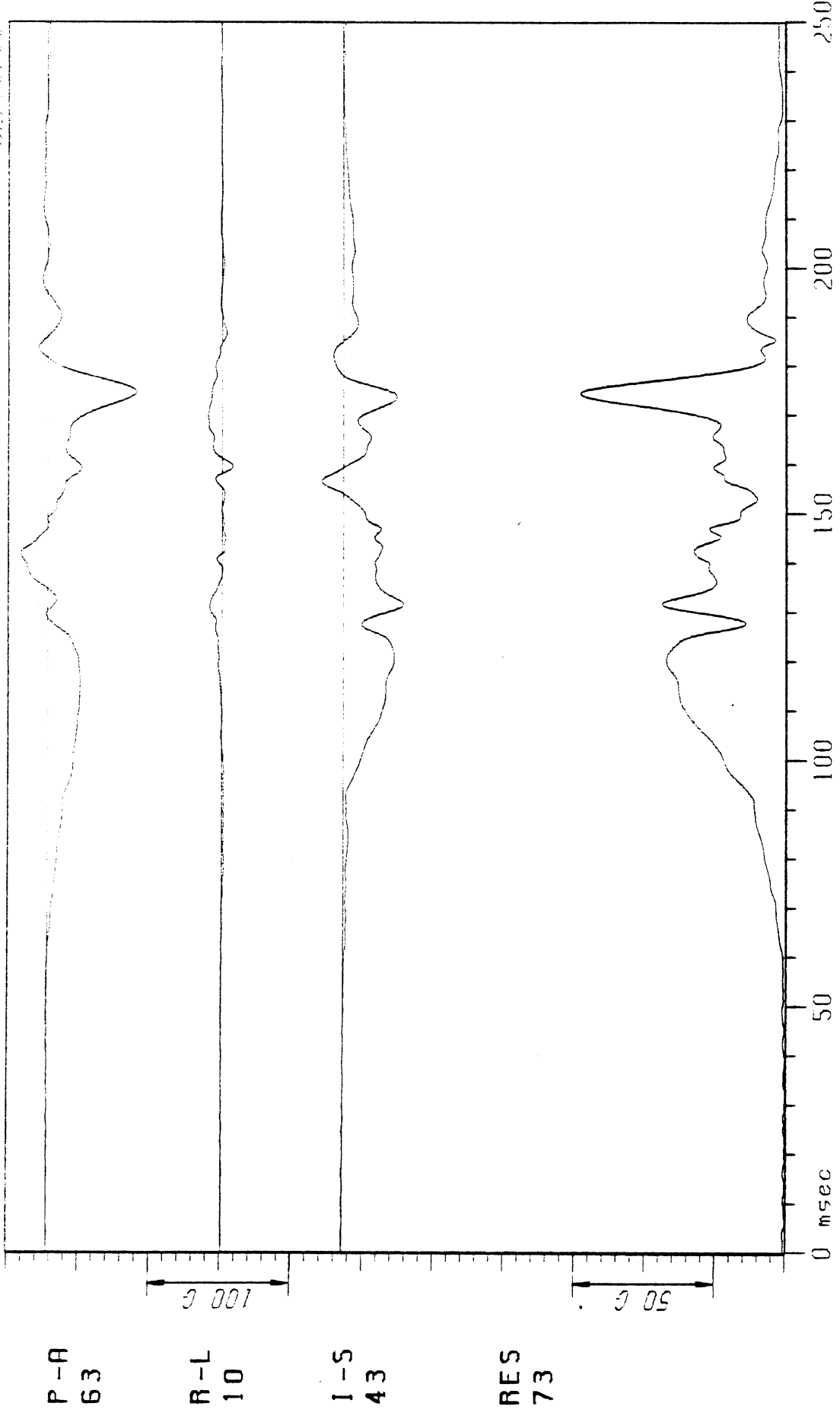
112 113 88



83D 004

HEAD ACCEL.

02, 03, 83



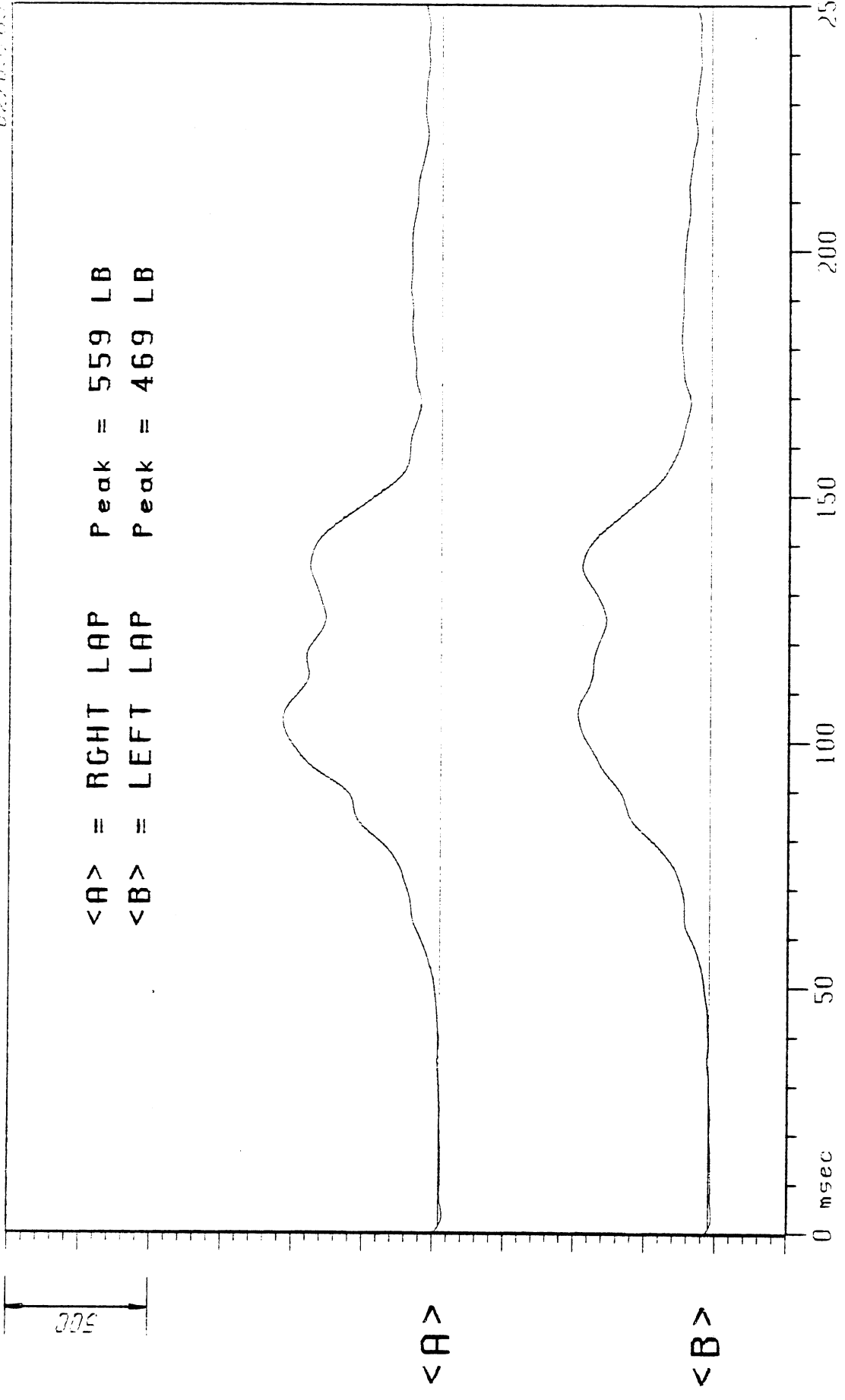
83D 004

CHEST ACCEL.

02/02/83

500

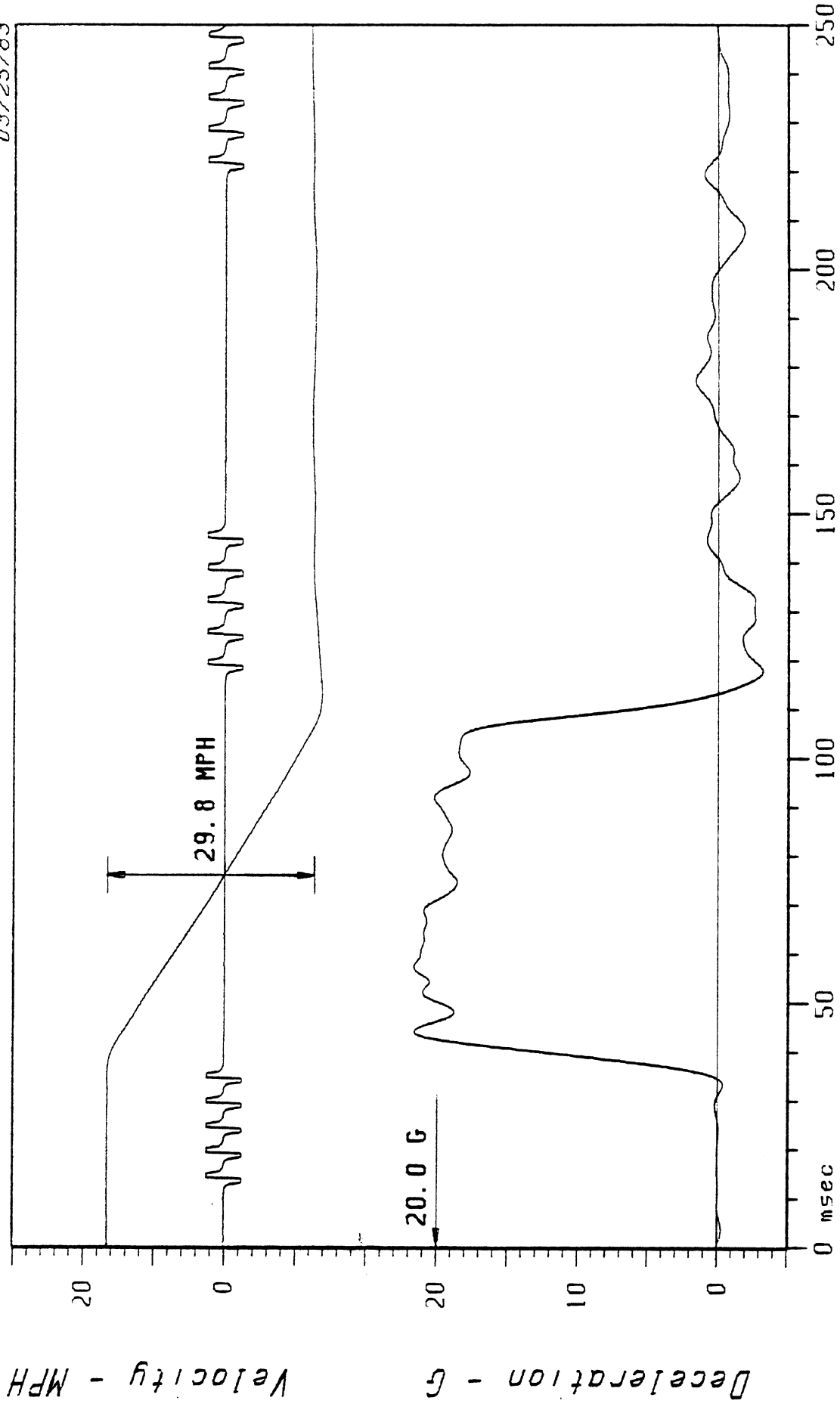
<A> = RGHT LAP Peak = 559 LB
 = LEFT LAP Peak = 469 LB



83D 004

BELT LOADS

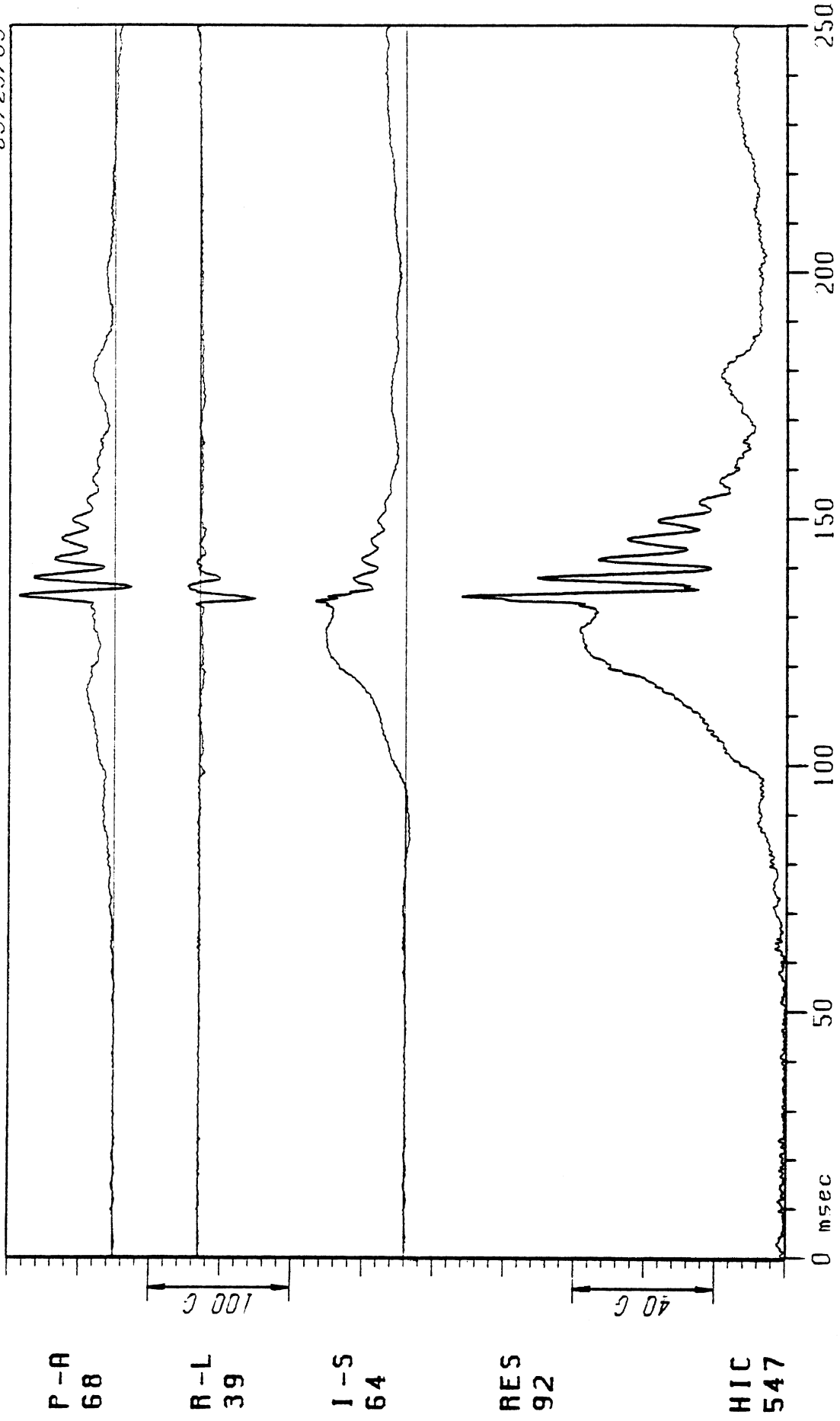
03/25/83



83D 005

SLED PROFILE

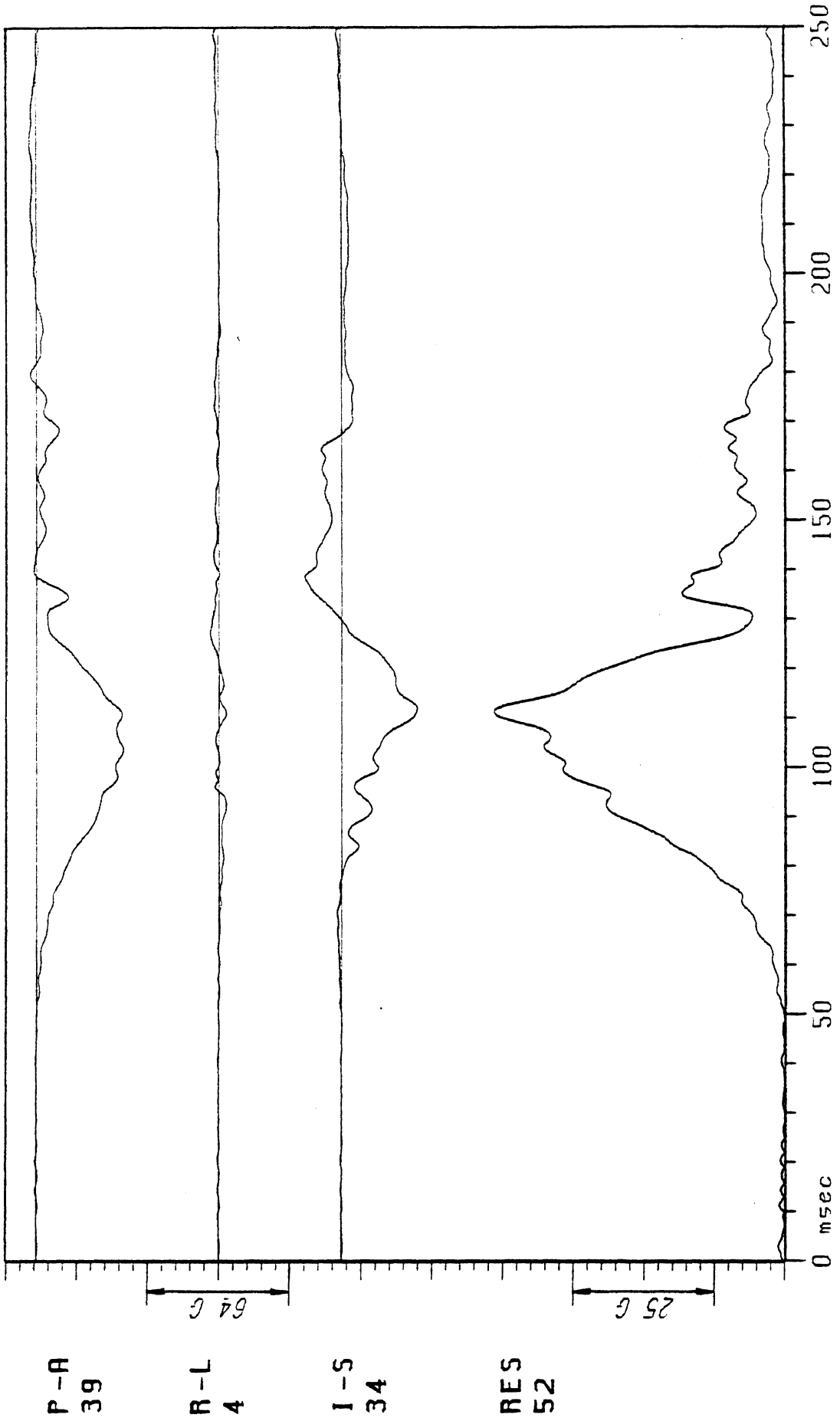
03/25/83



83D 005

HEAD ACCEL.

03/25/83



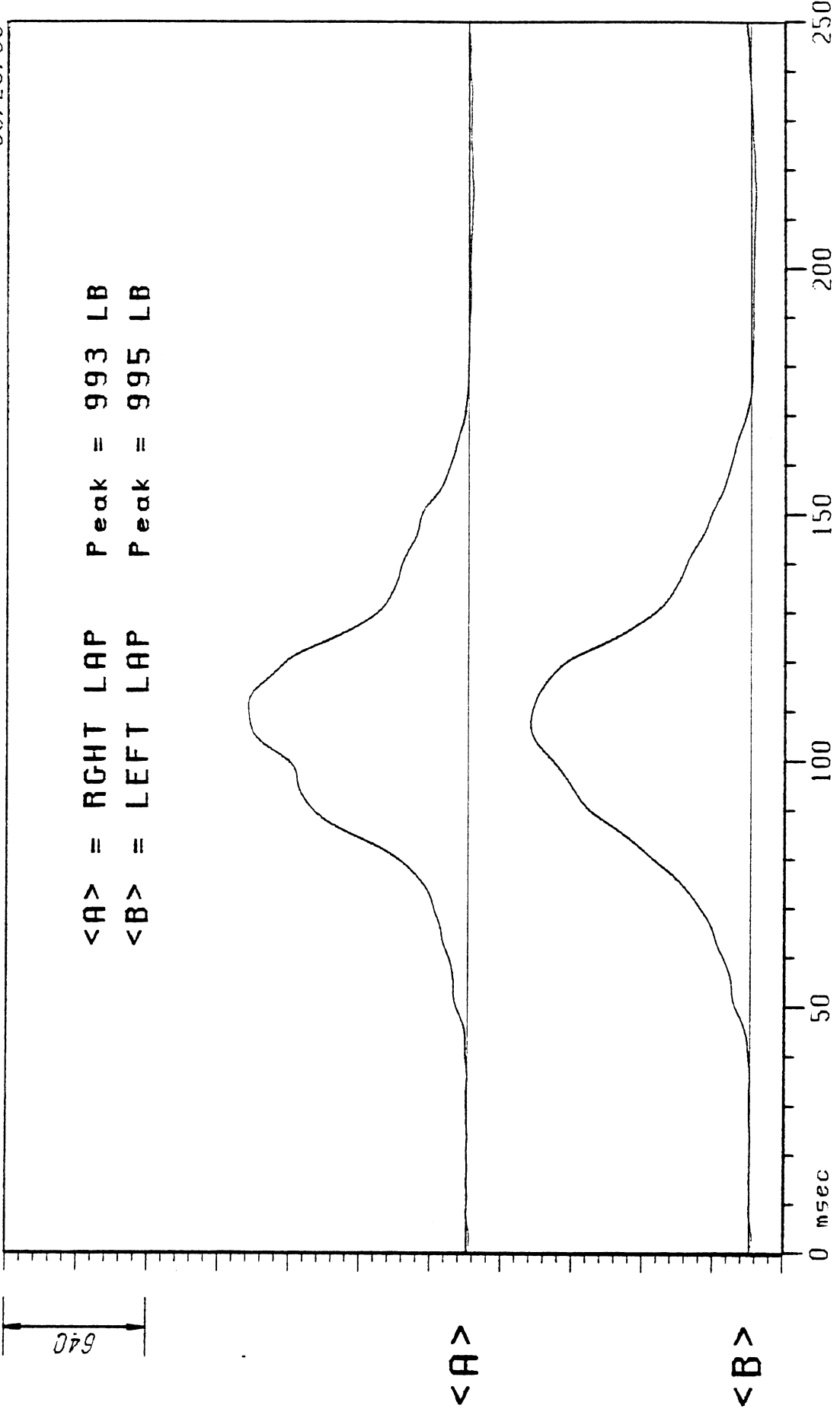
83D 005

CHEST ACCEL.

03/25/83

640

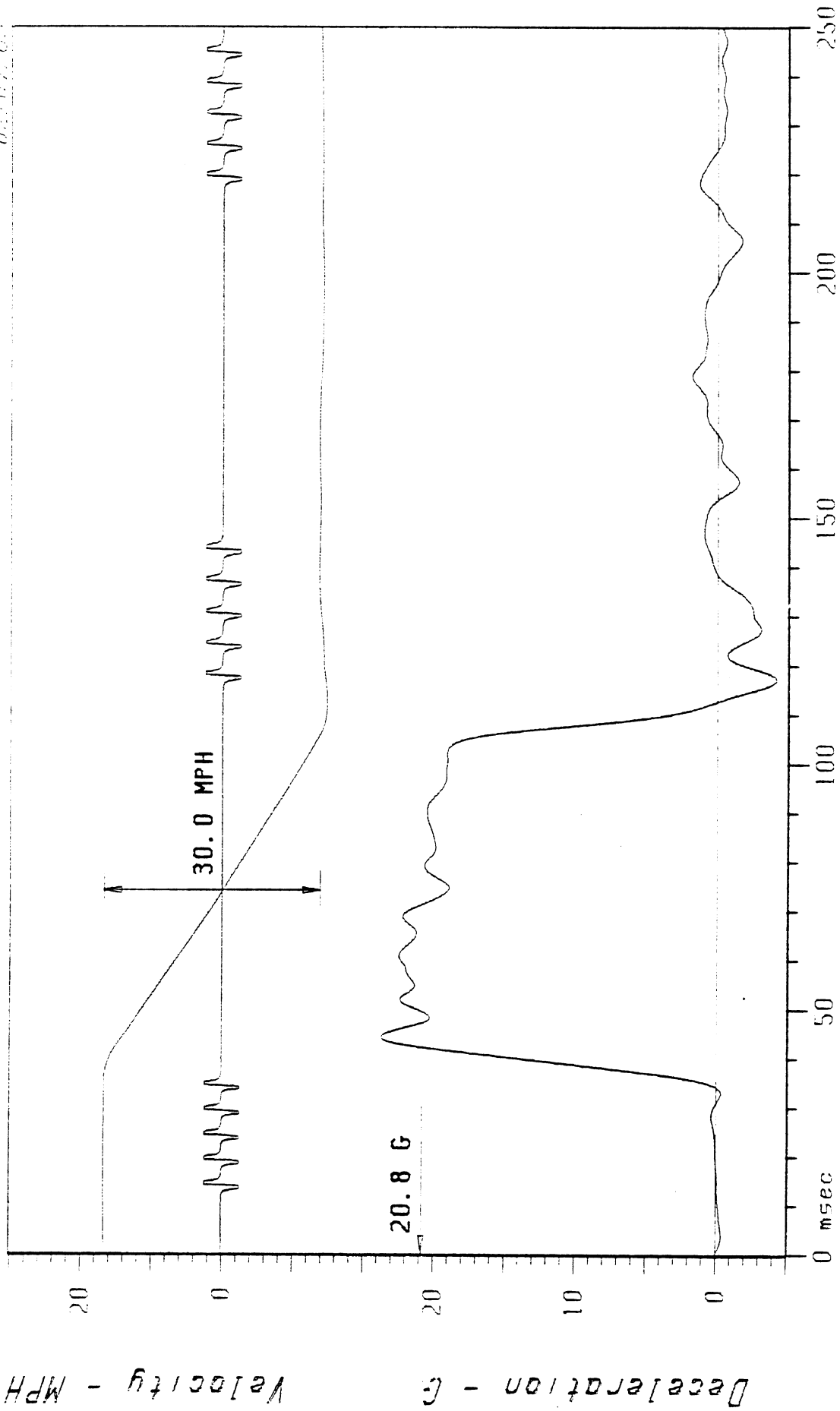
<A> = RIGHT LAP Peak = 993 LB
 = LEFT LAP Peak = 995 LB



83D 005

BELT LOADS

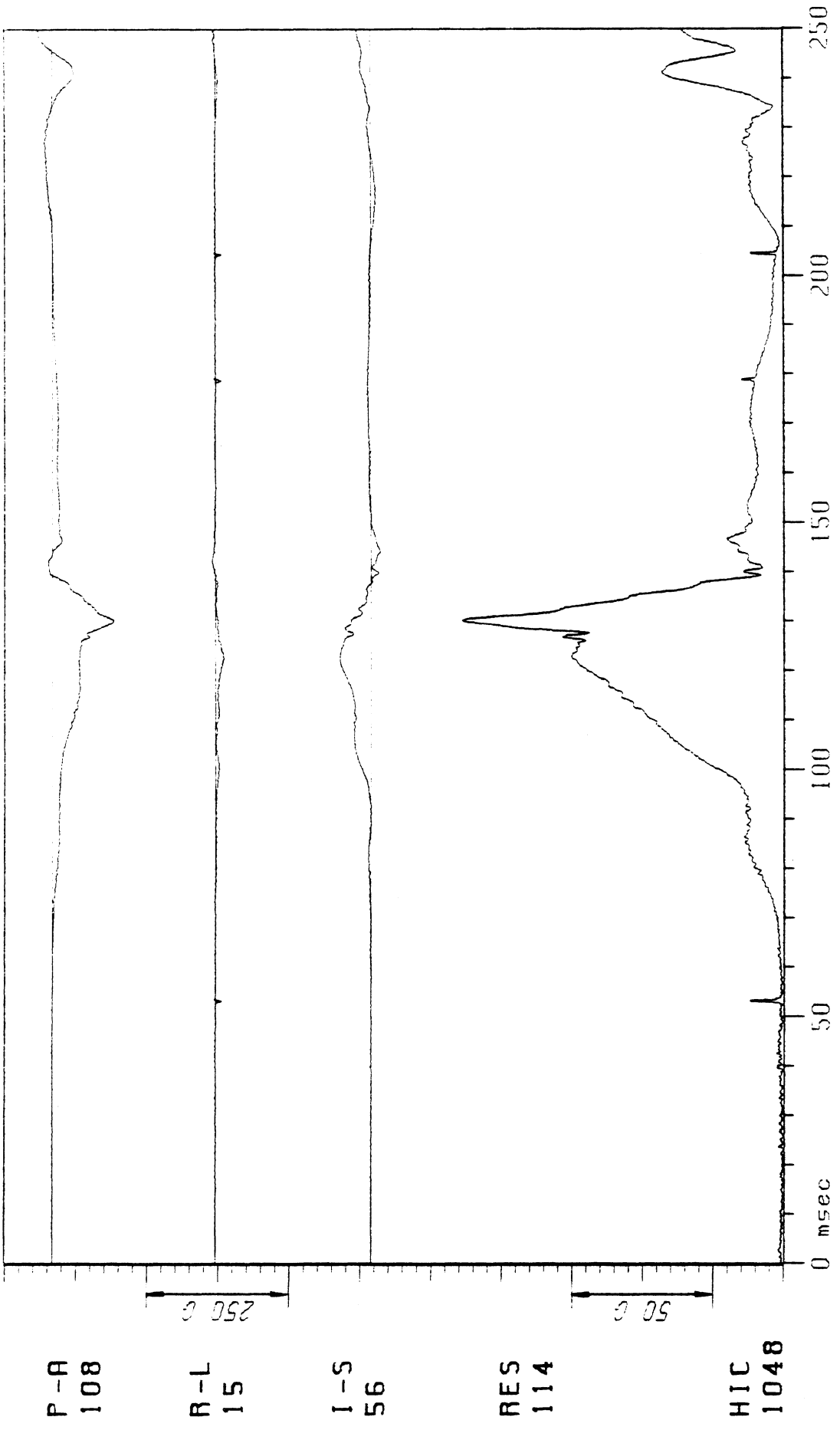
03-17-83



83D 006

SLED PROFILE

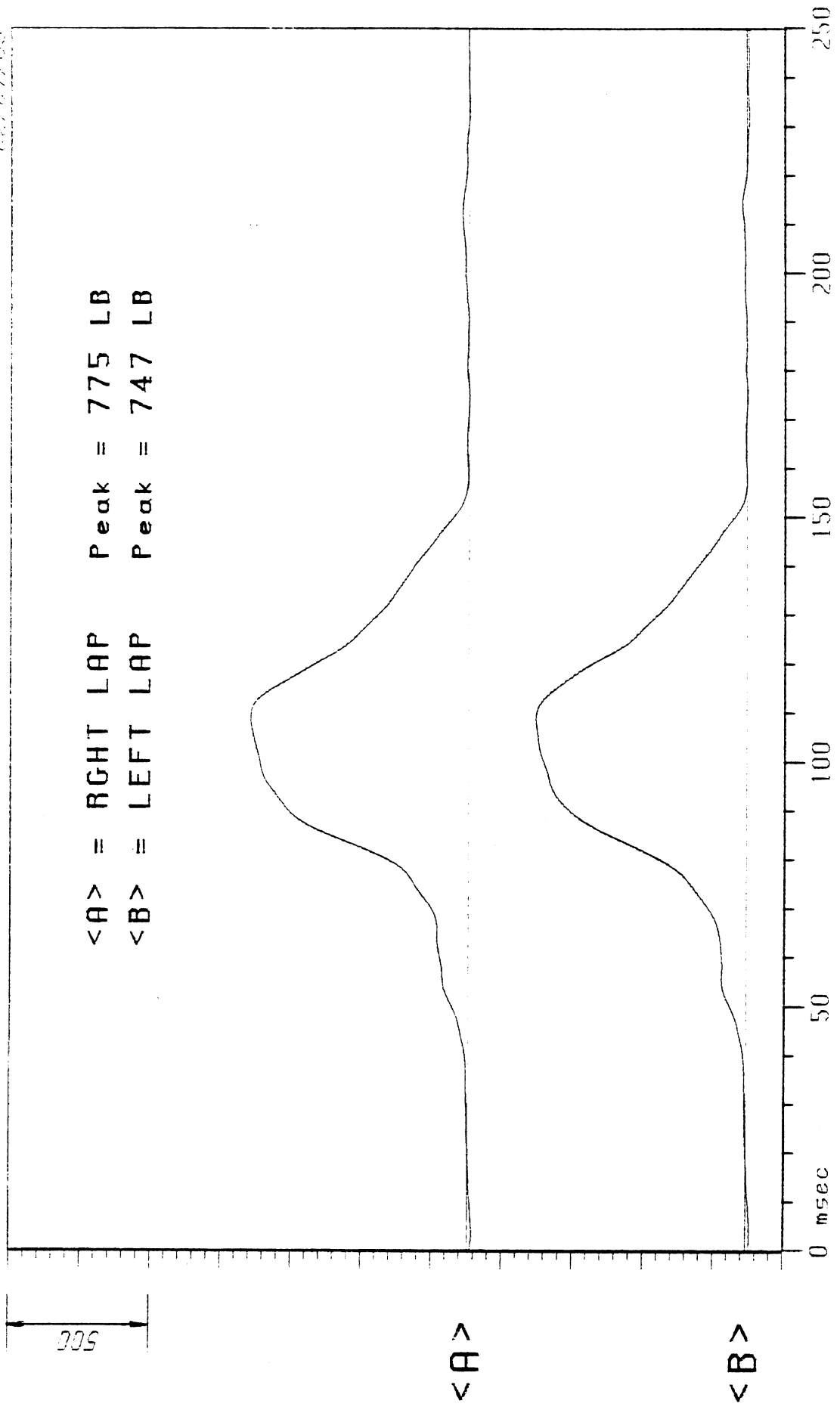
02-07-83



83D 006

HEAD ACCEL.

12/11/83



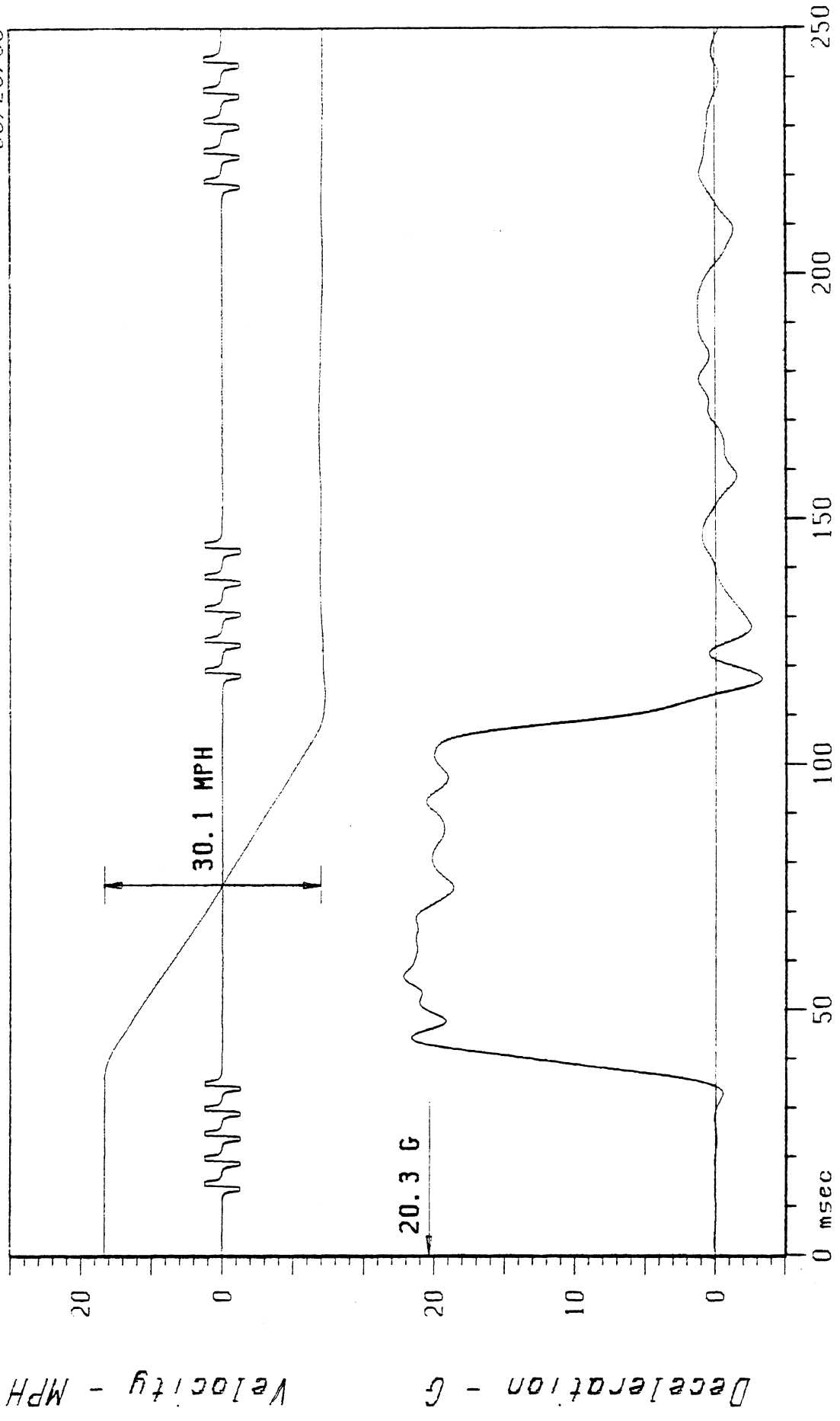
<A> = RIGHT LAP Peak = 775 LB
 = LEFT LAP Peak = 747 LB

500

830 006

BELT LOADS

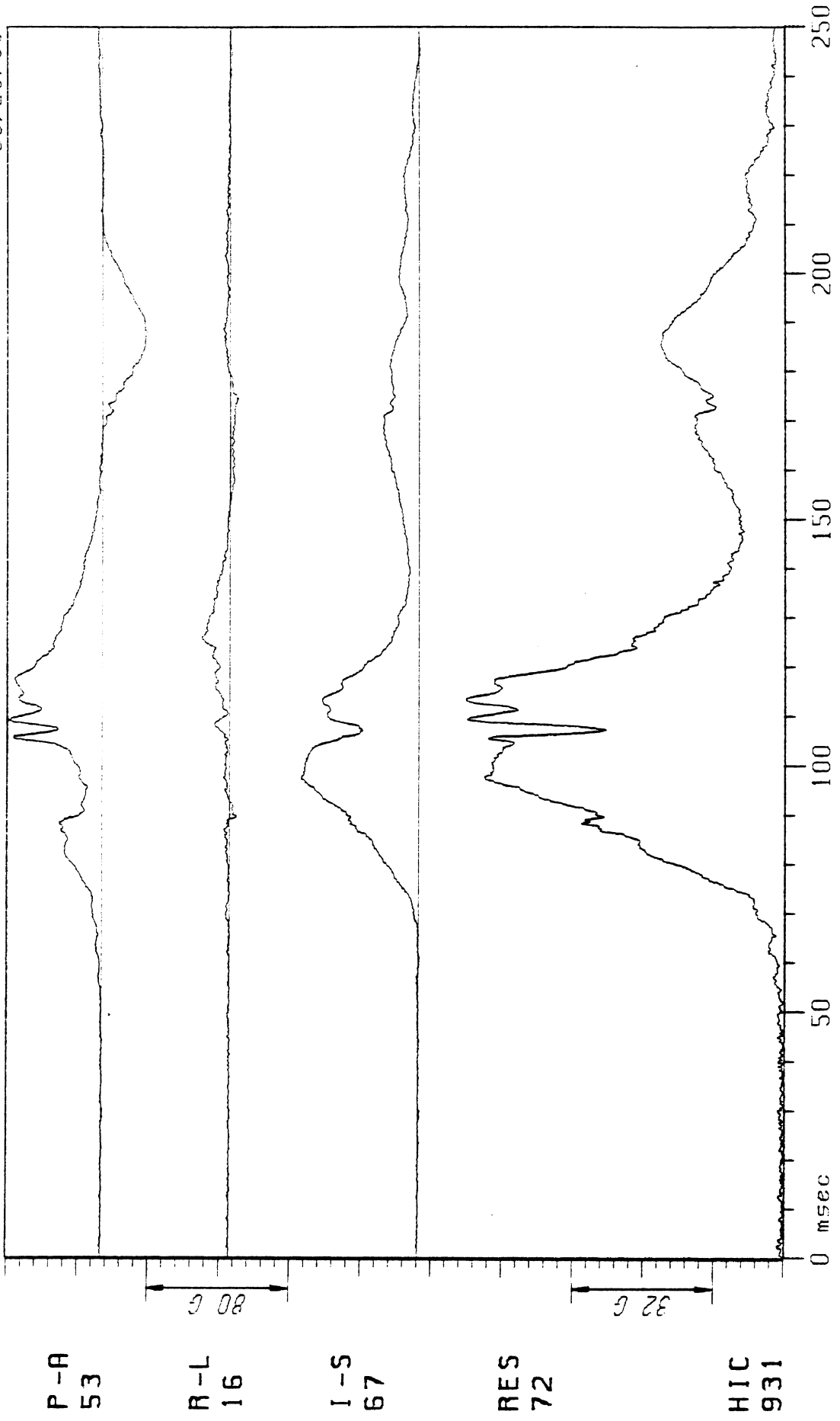
03/23/83



83D 007

SLED PROFILE

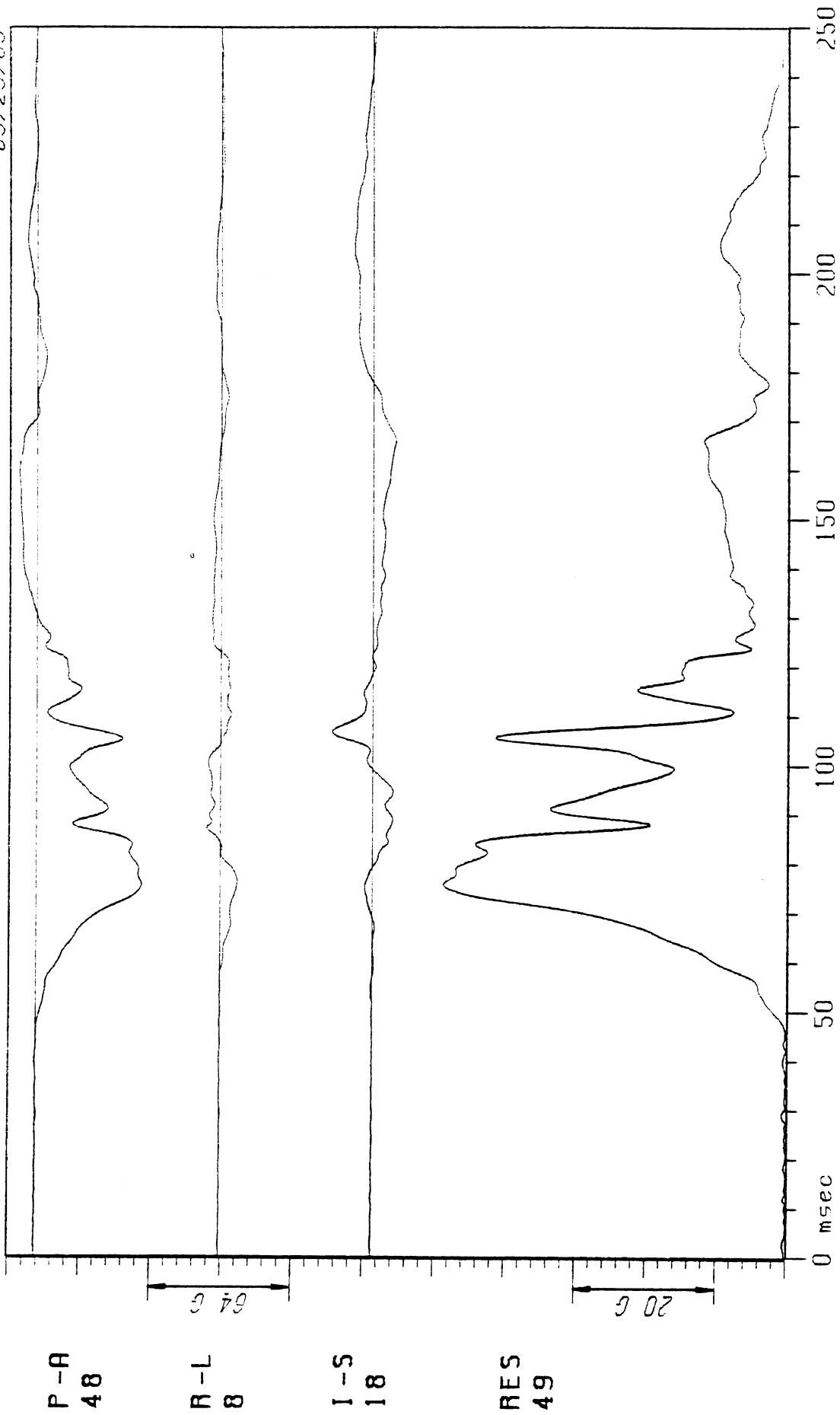
03/23/83



83D 007

HEAD ACCEL.

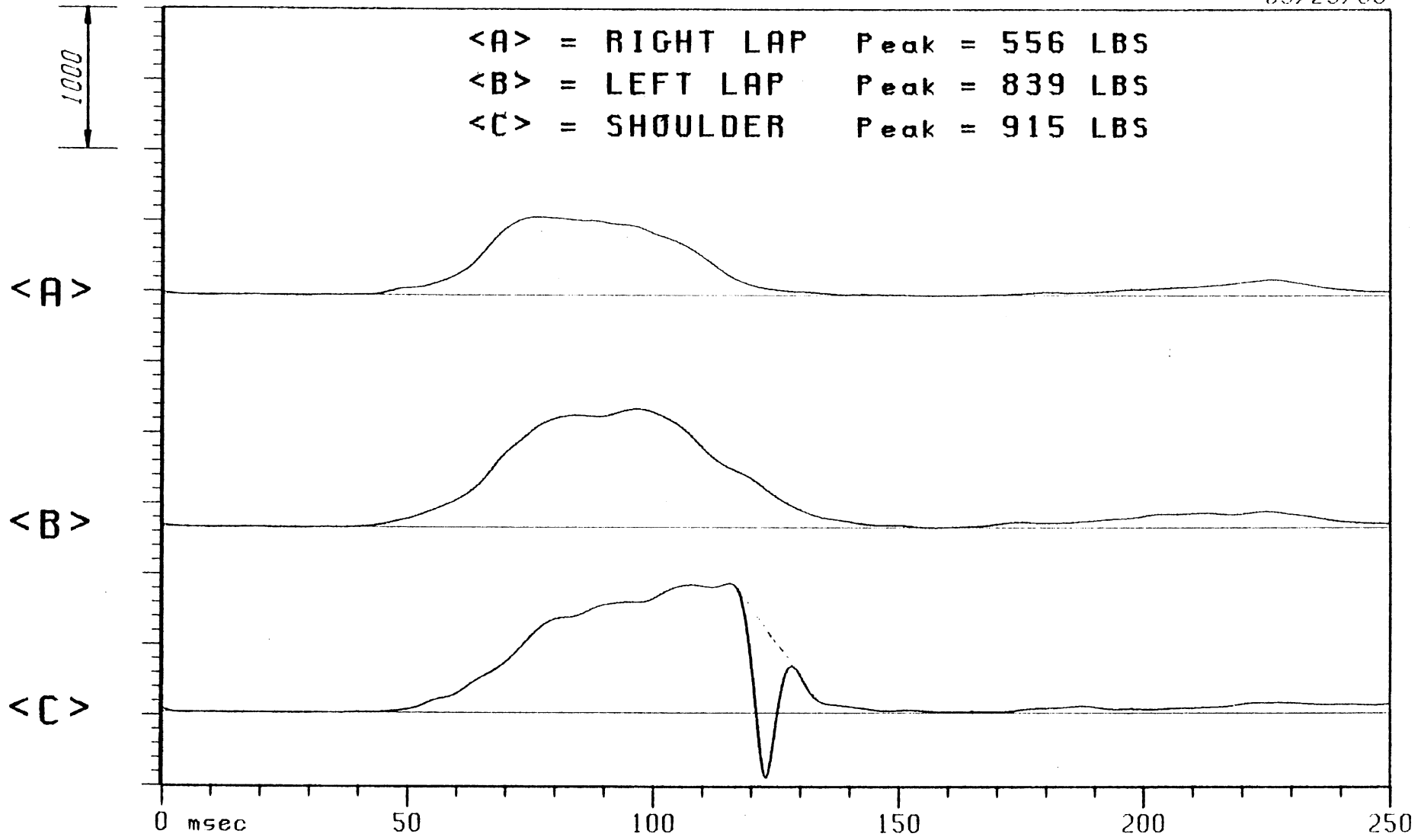
U3/23/83



83D 007

CHEST ACCEL.

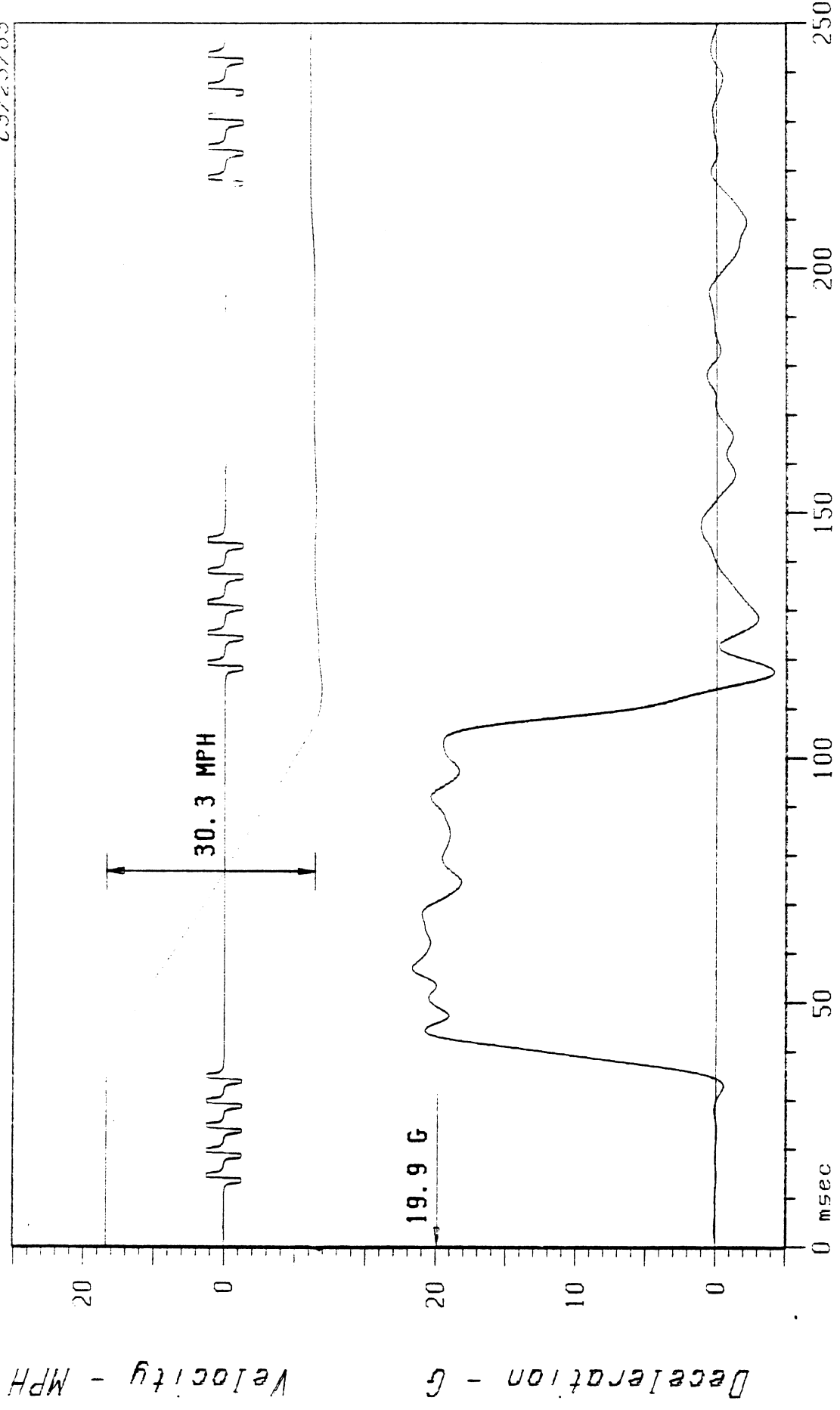
03/23/83



BELT LOADS

83D 007

03/25/83



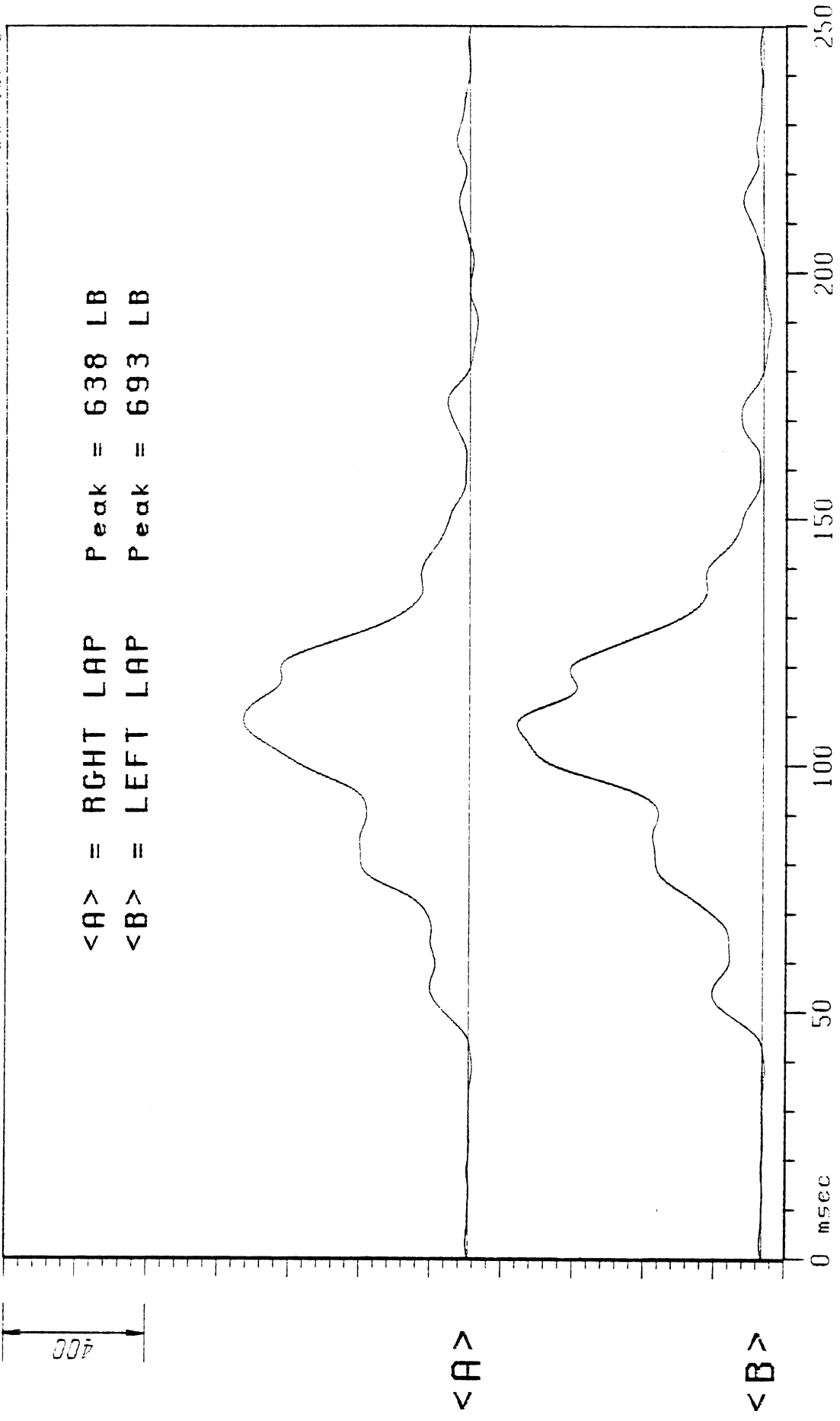
83D 008

SLED PROFILE

03 25 83

400

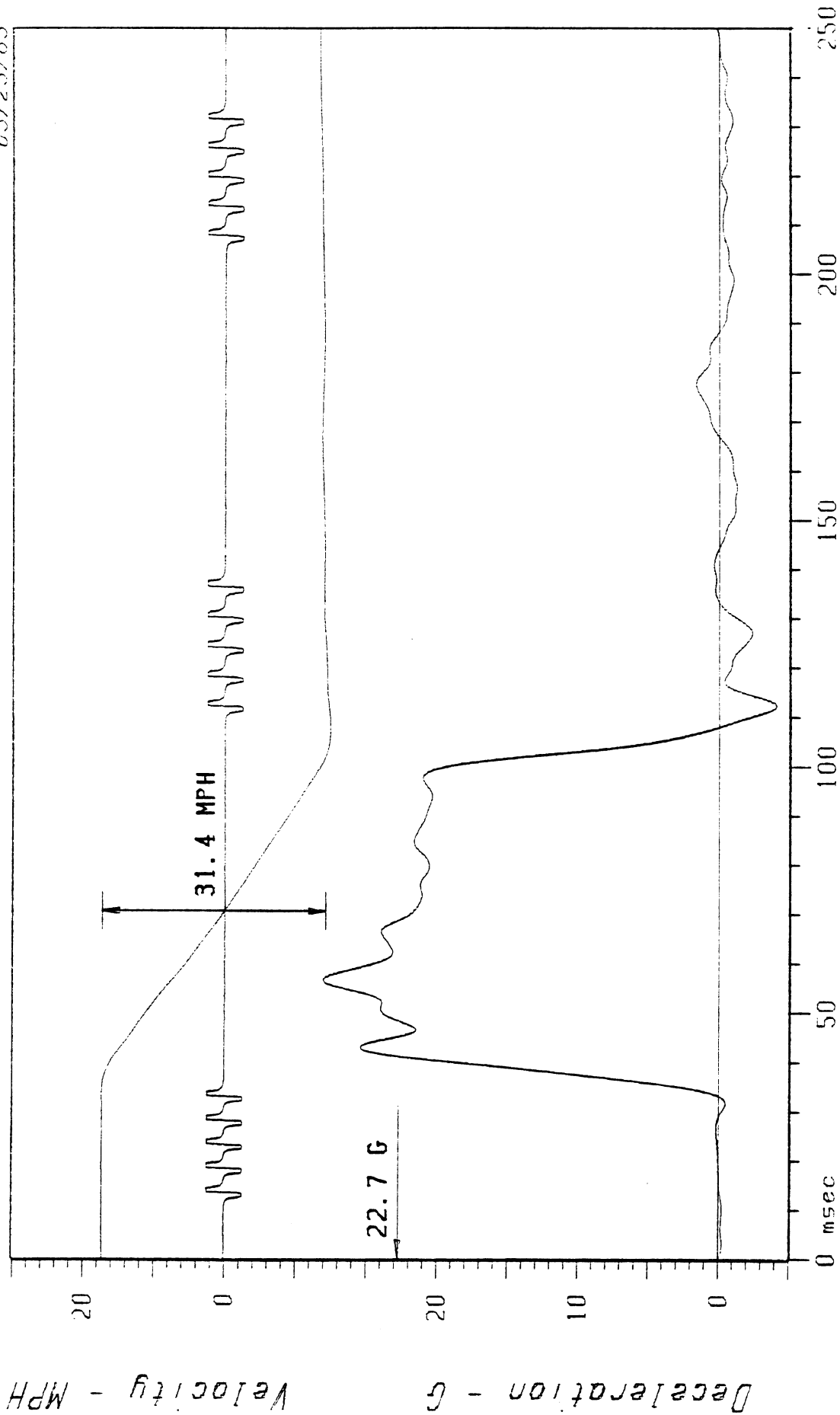
<A> = RGHT LAP Peak = 638 LB
 = LEFT LAP Peak = 693 LB



83D 008

BELT LOADS

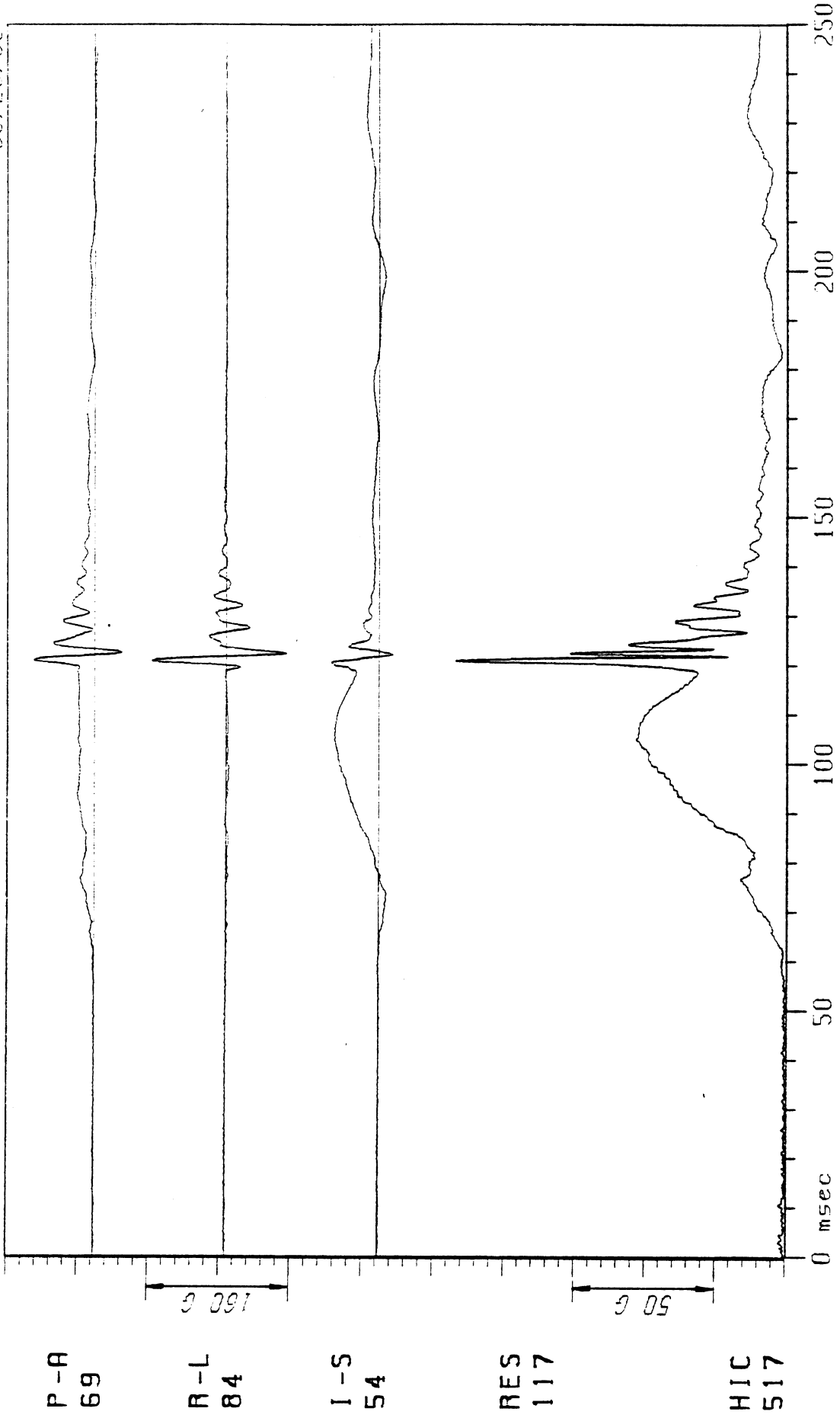
03/25/83



83D 009

SLED PROFILE

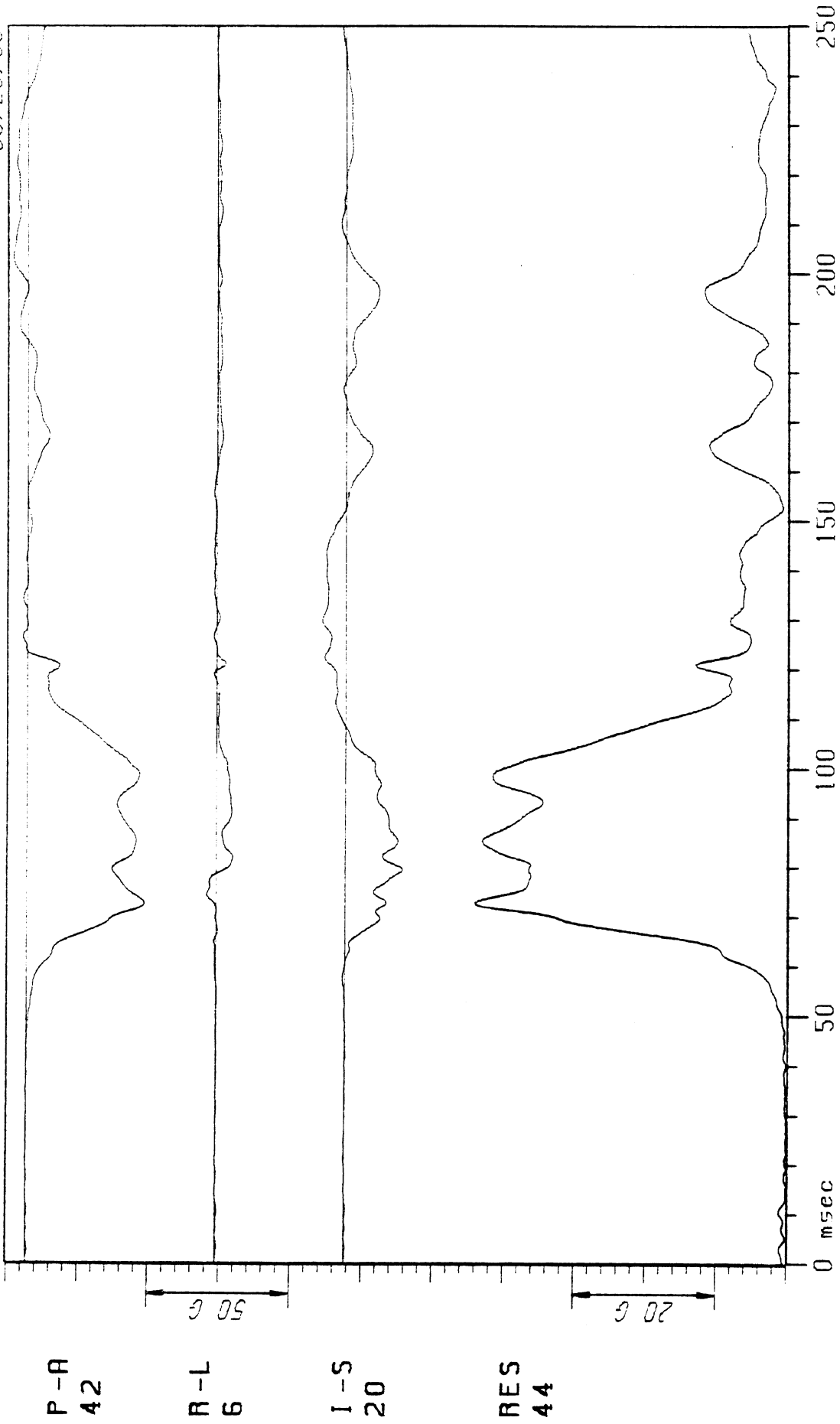
63/25/83



83D 009

HEAD ACCEL.

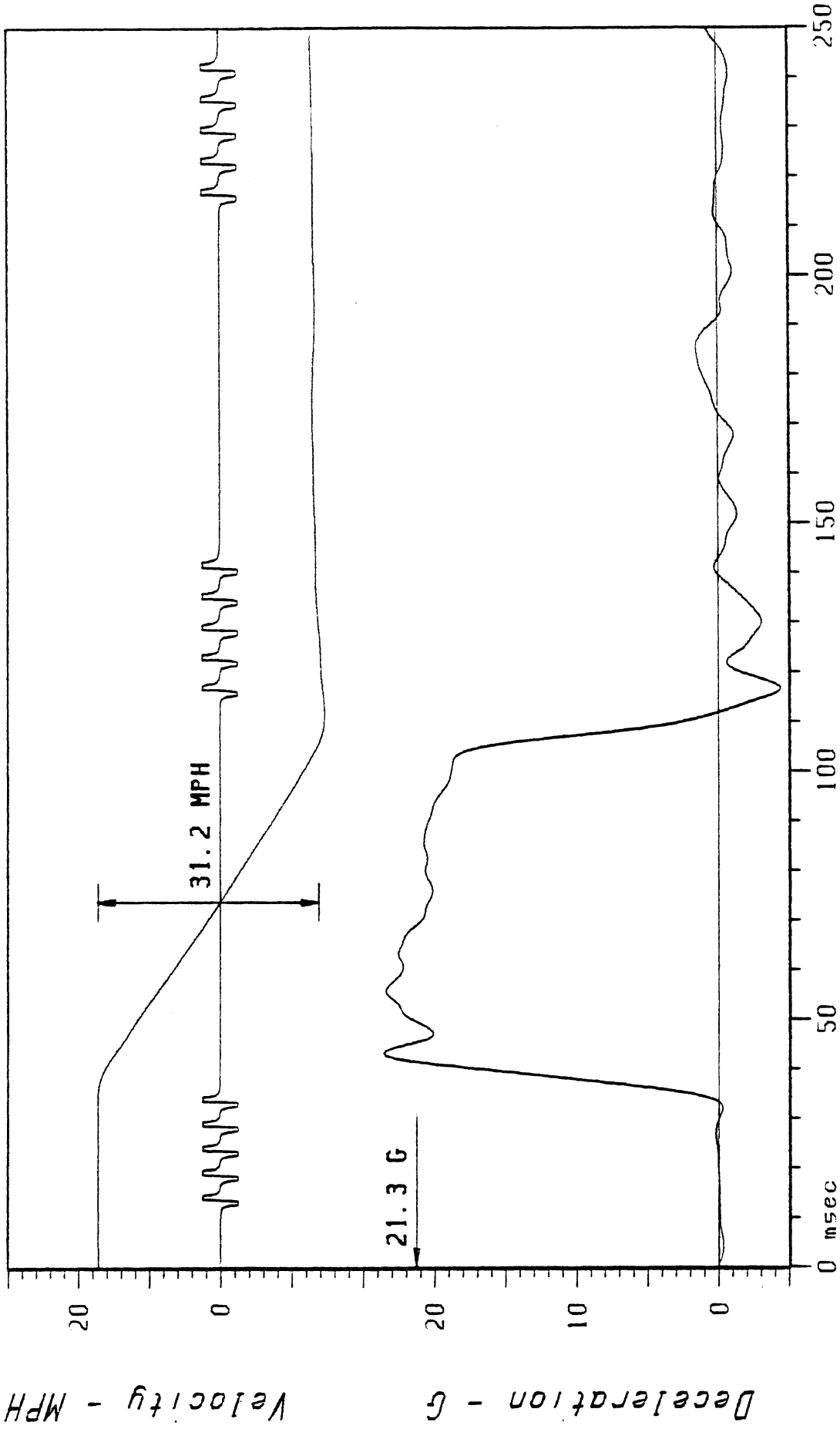
03/25/83



83D 009

CHEST ACCEL.

03/25/83



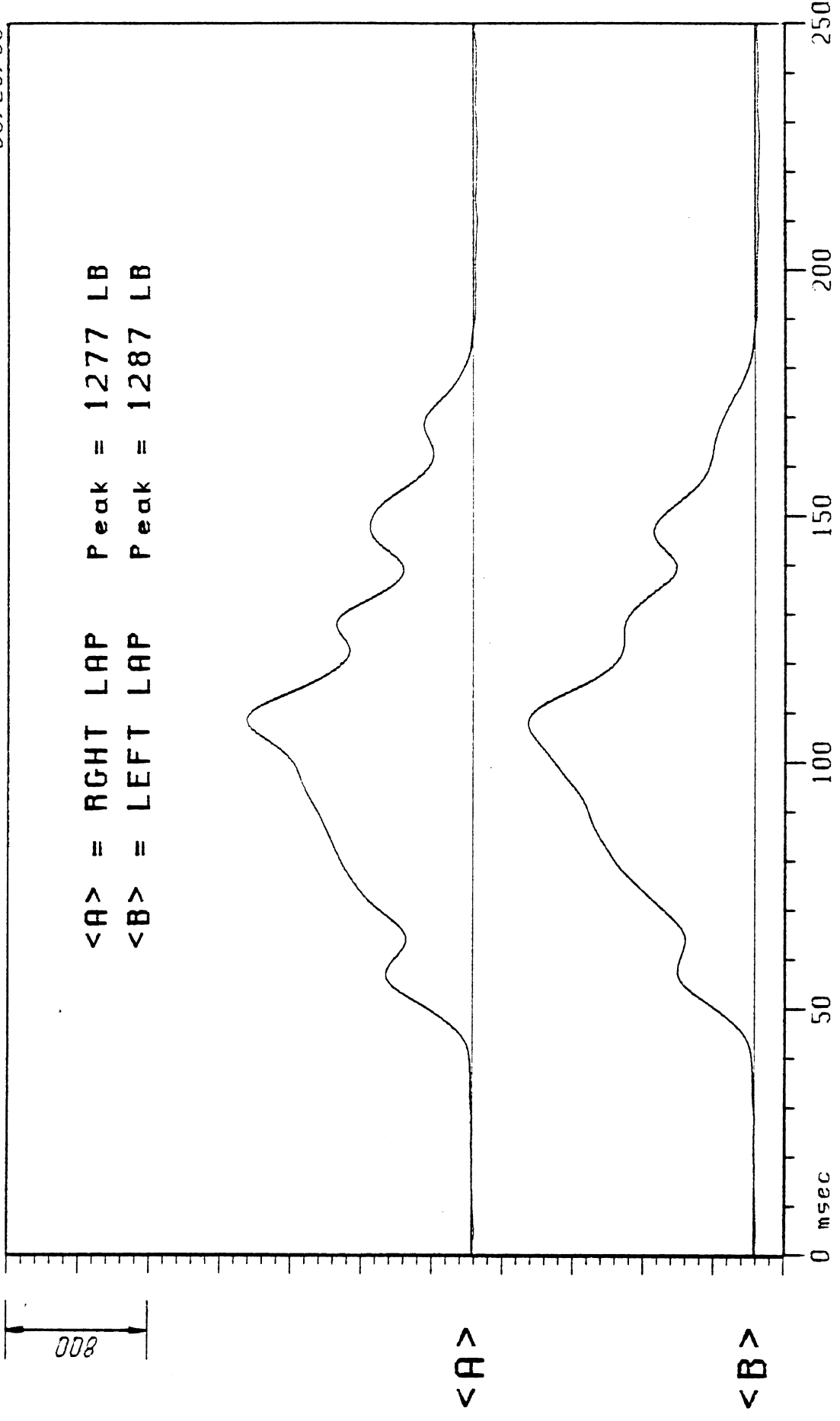
83D 010

SLED PROFILE

03/25/83

800

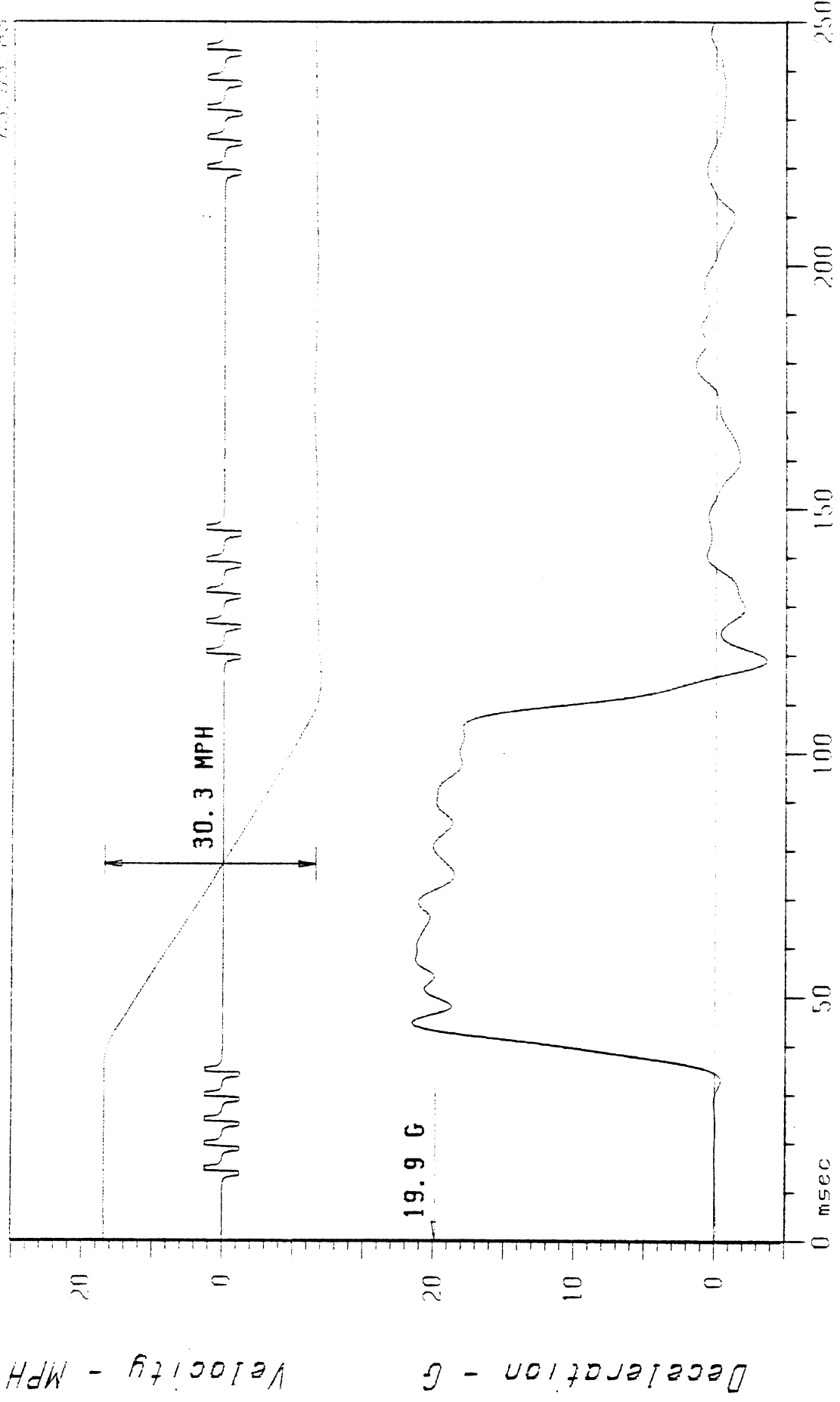
<A> = RIGHT LAP Peak = 1277 LB
 = LEFT LAP Peak = 1287 LB



83D 010

BELT LOADS

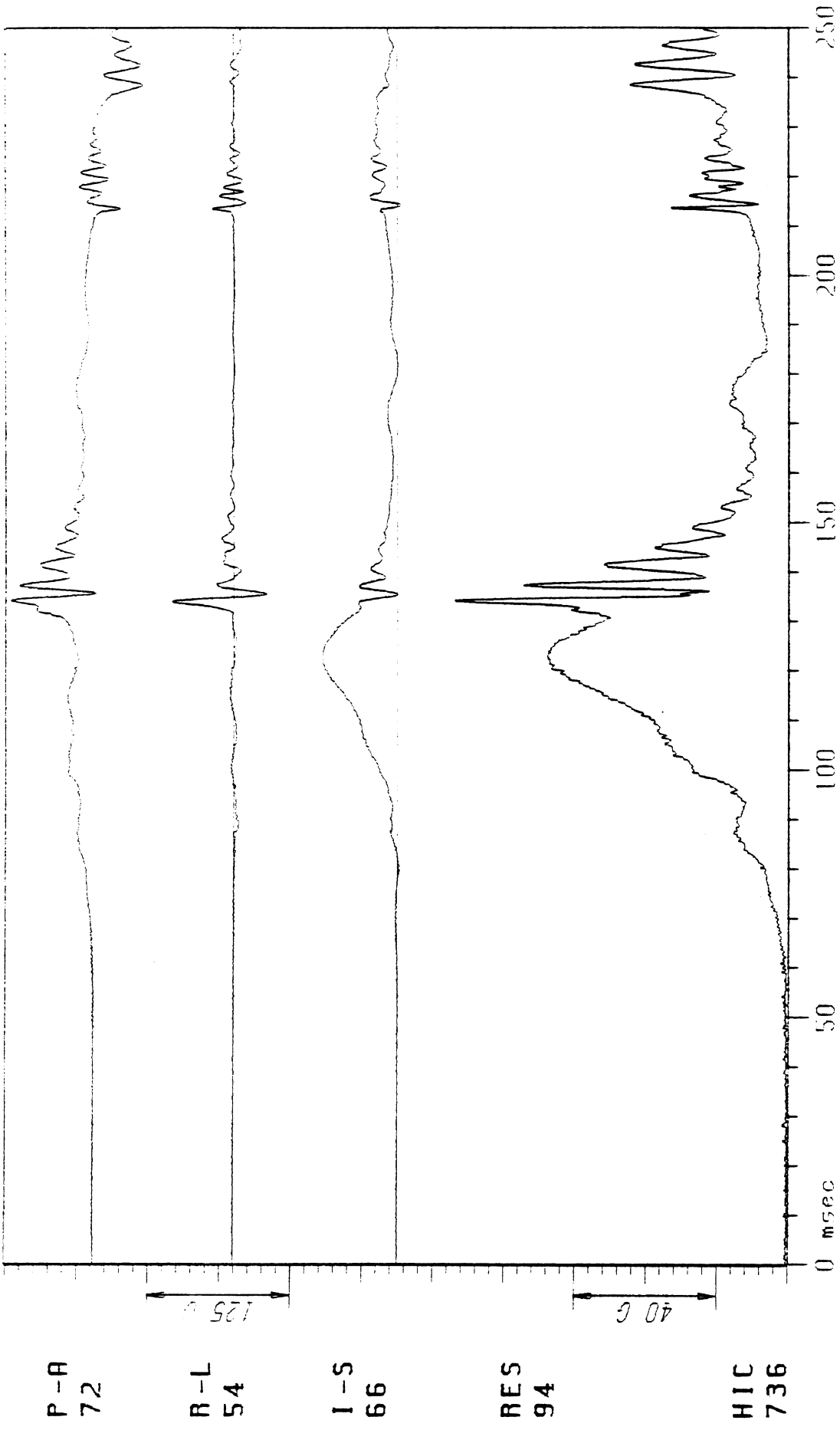
15-73 85



83D 013

SLED PROFILE

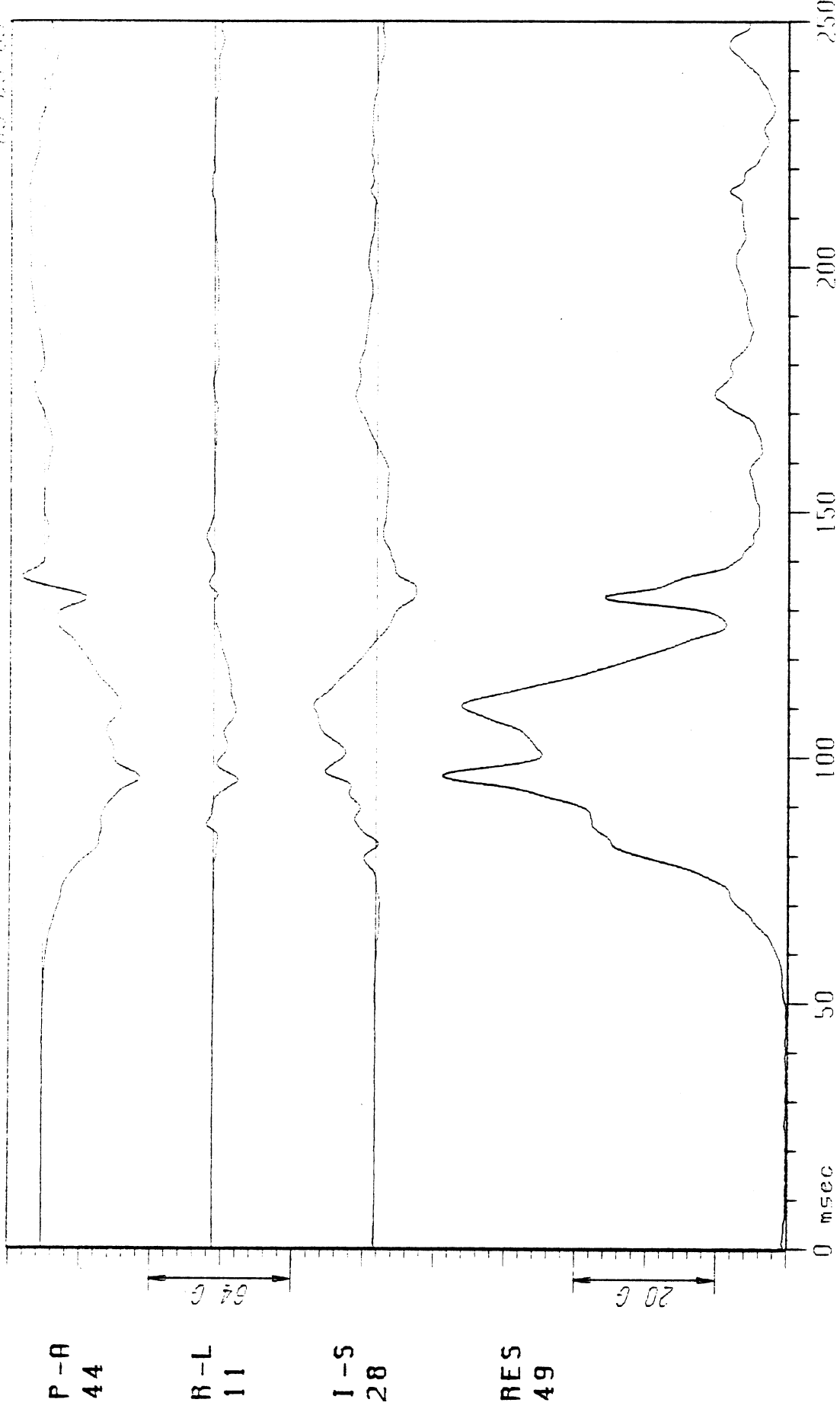
155 73 83



83D 013

HEAD ACCEL.

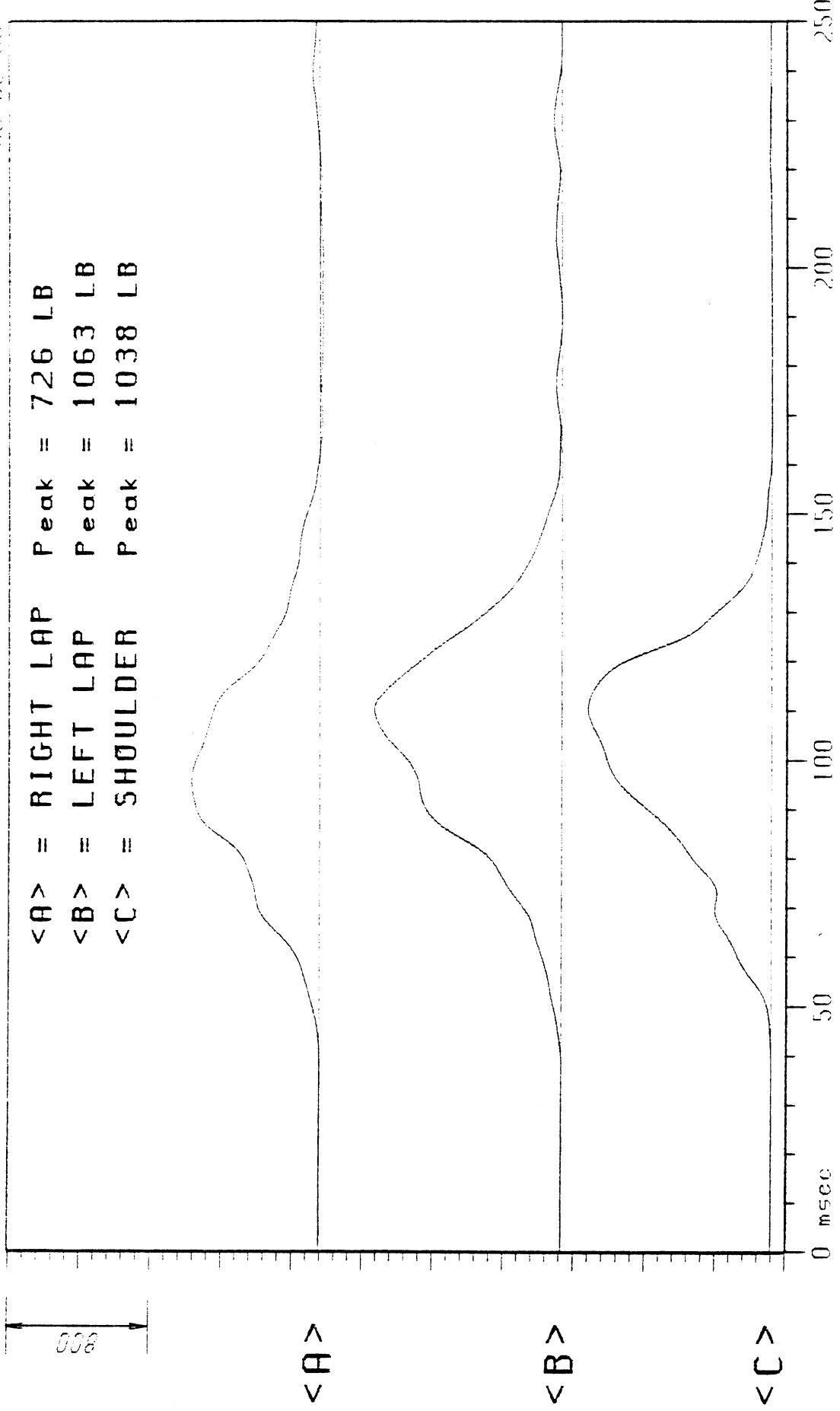
15 03 83



830 013

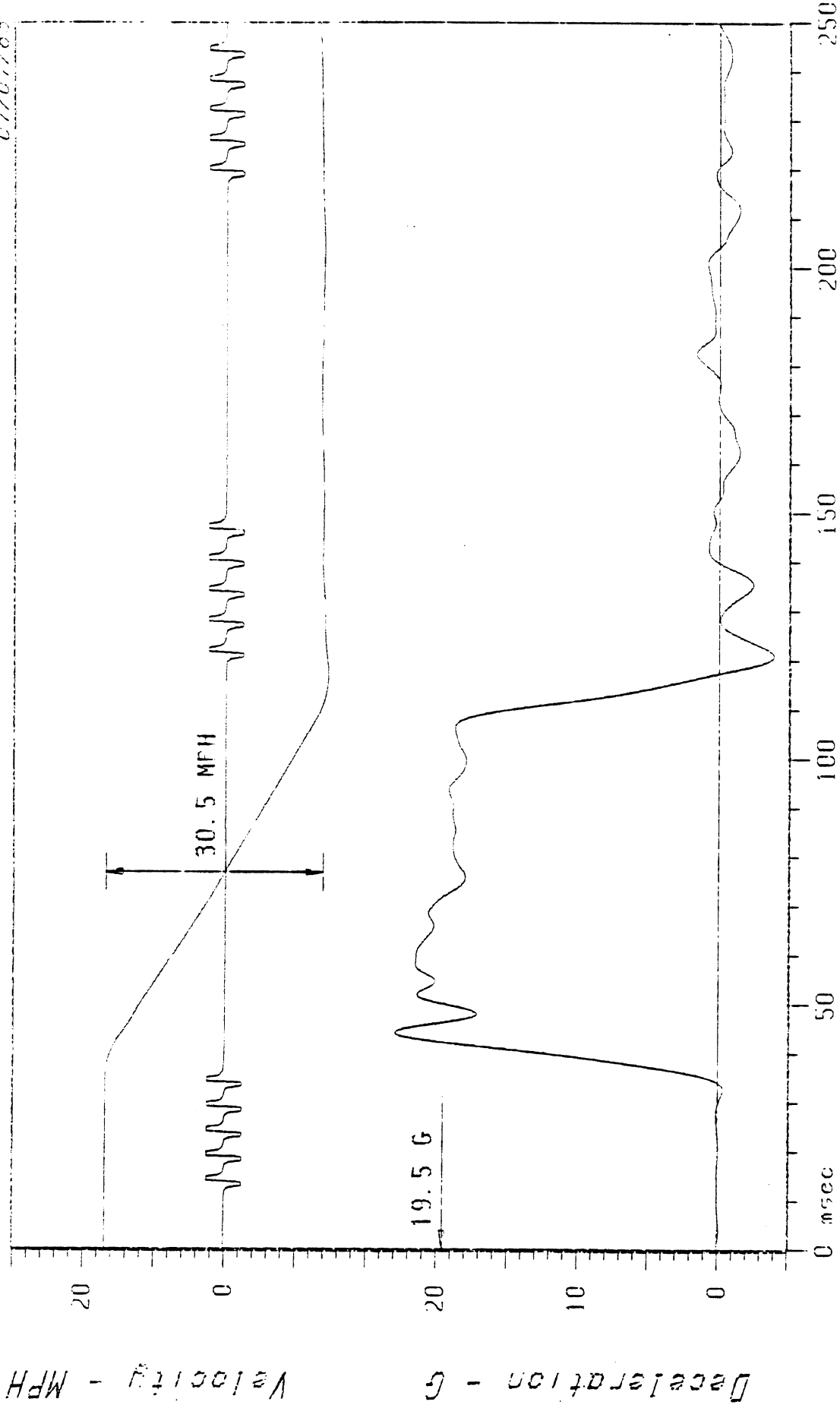
CHEST ACCEL.

AS 05 83



BELT LOADS 83D 013

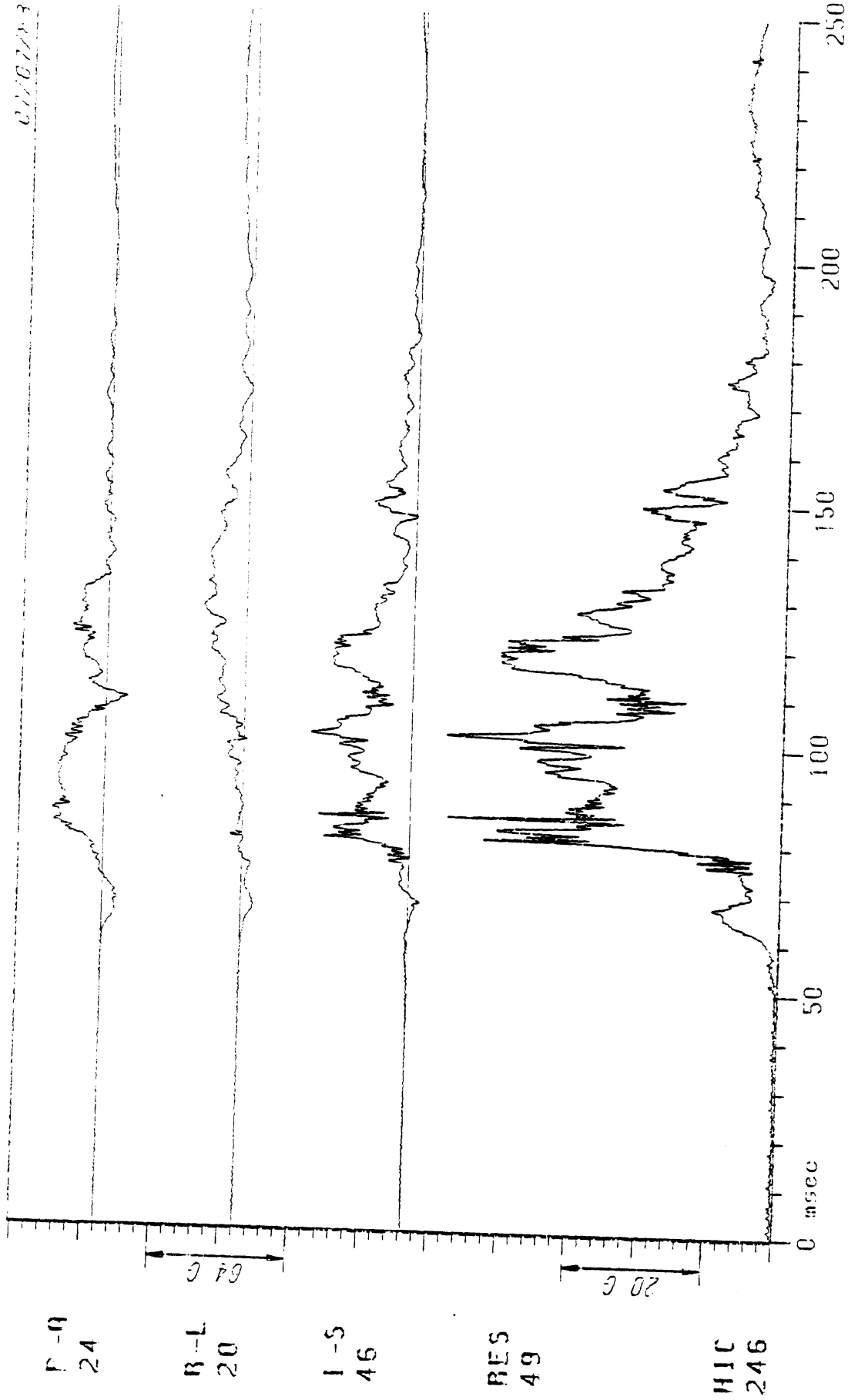
07701783



83D 017

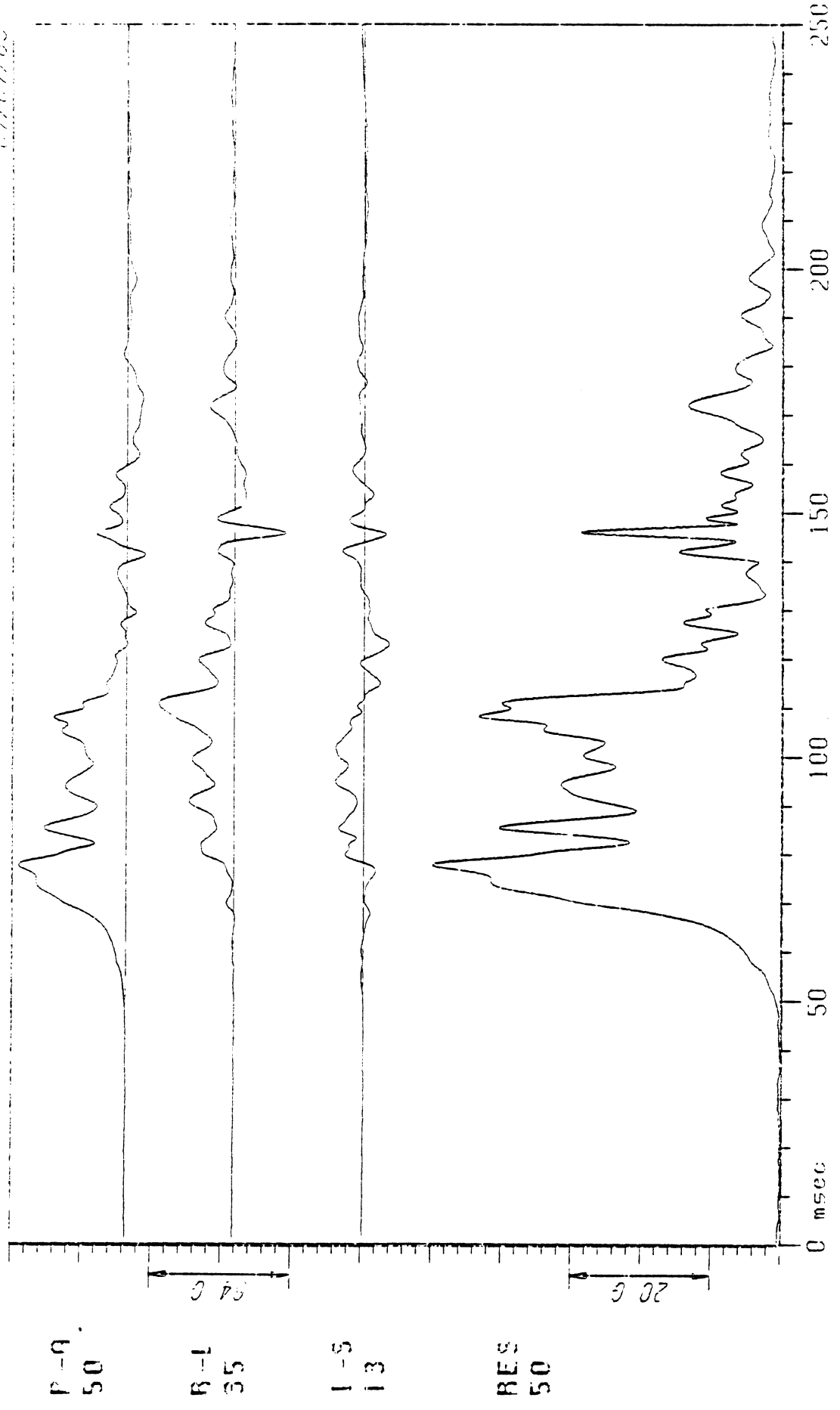
SLED PROFILE

01107783



HEAD ACCEL. 83D 017

000083

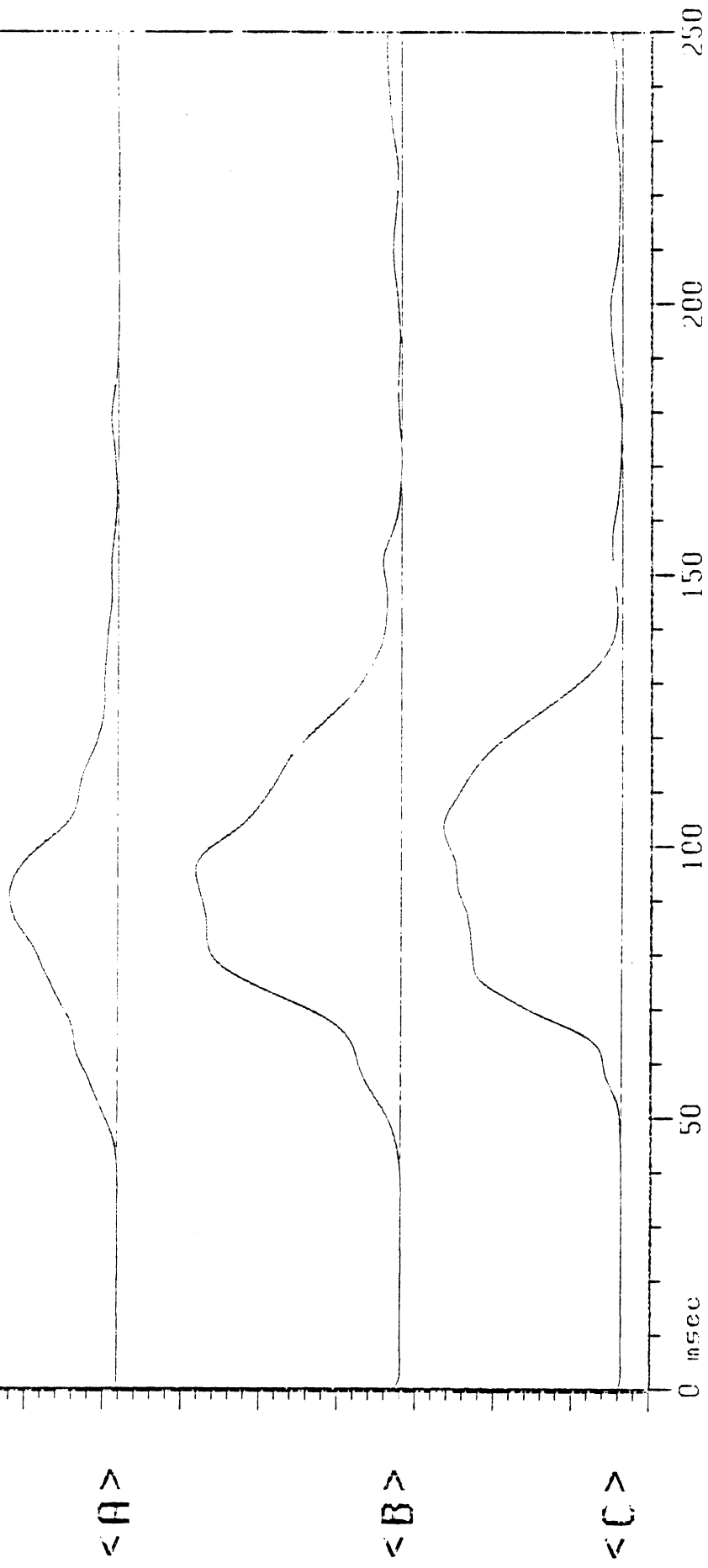


CHEST ACCEL. 83D 017

6770783

1.250

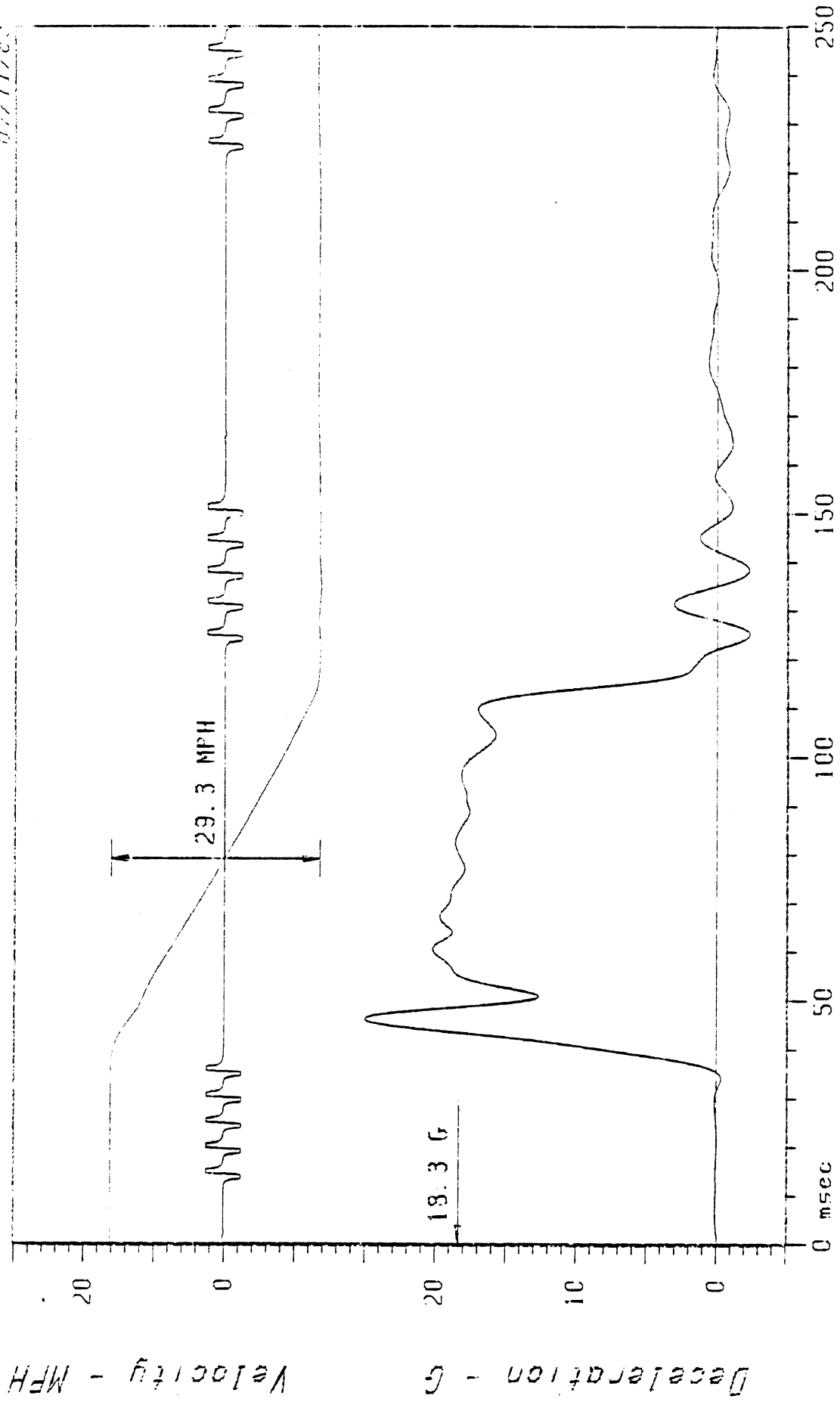
<A> =	RIGHT LAP	Peak =	872 LB
 =	LEFT LAP	Peak =	1646 LB
<C> =	SHOULDER	Peak =	1431 LB



83D 017

BELT LOADS

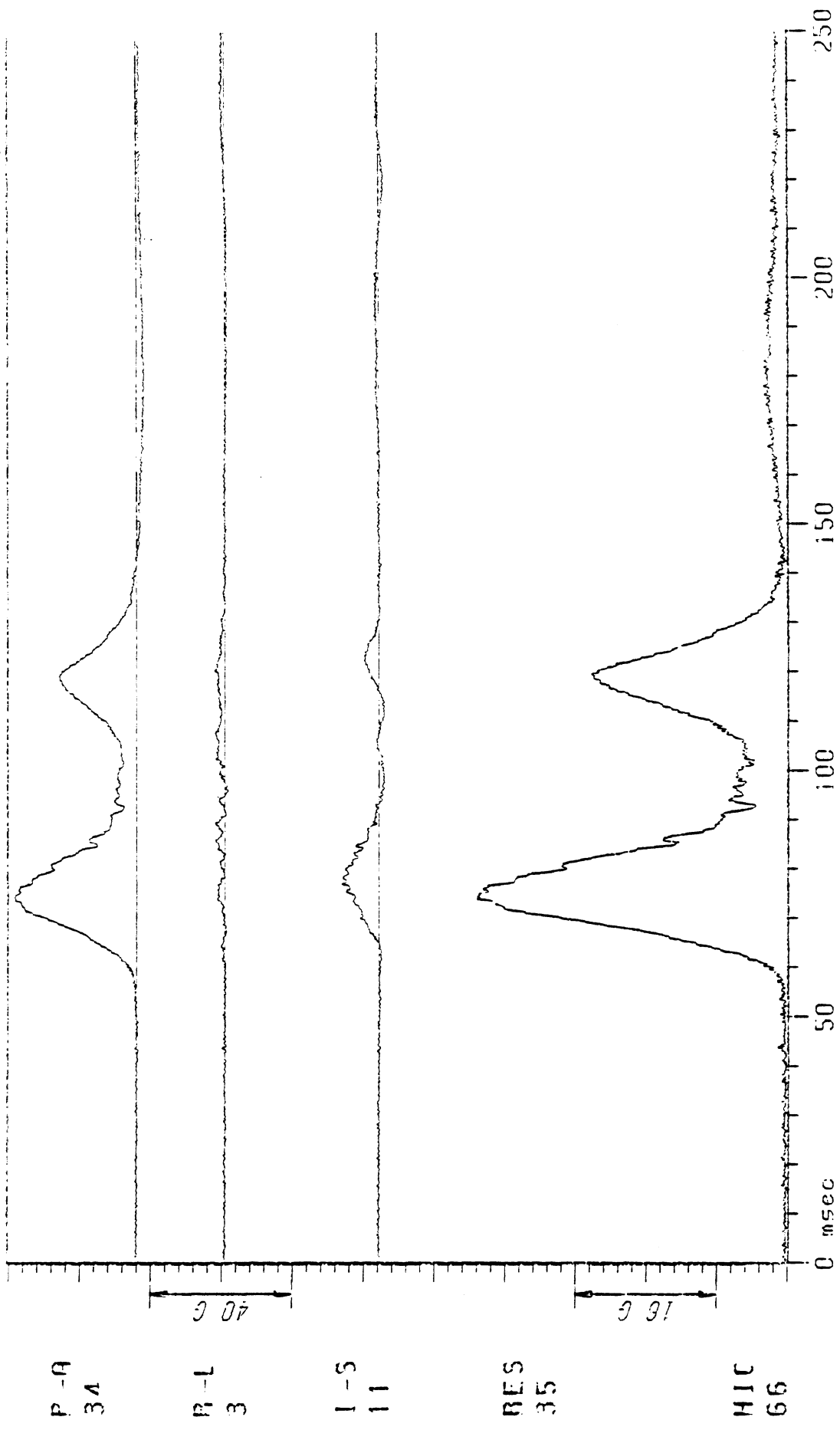
83118



83D 018

SLED PROFILE

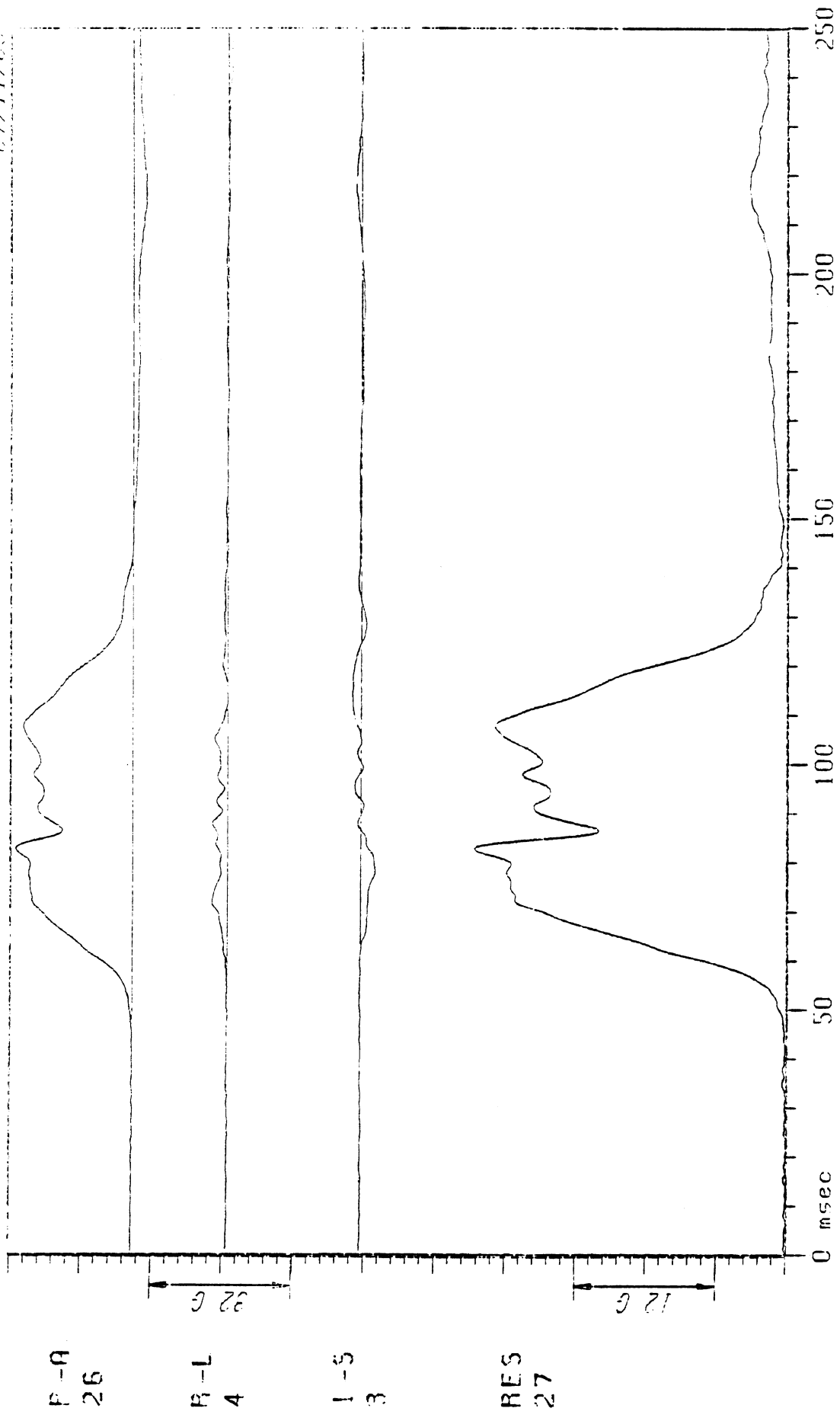
07/11/83



83D 018

HEAD ACCEL.

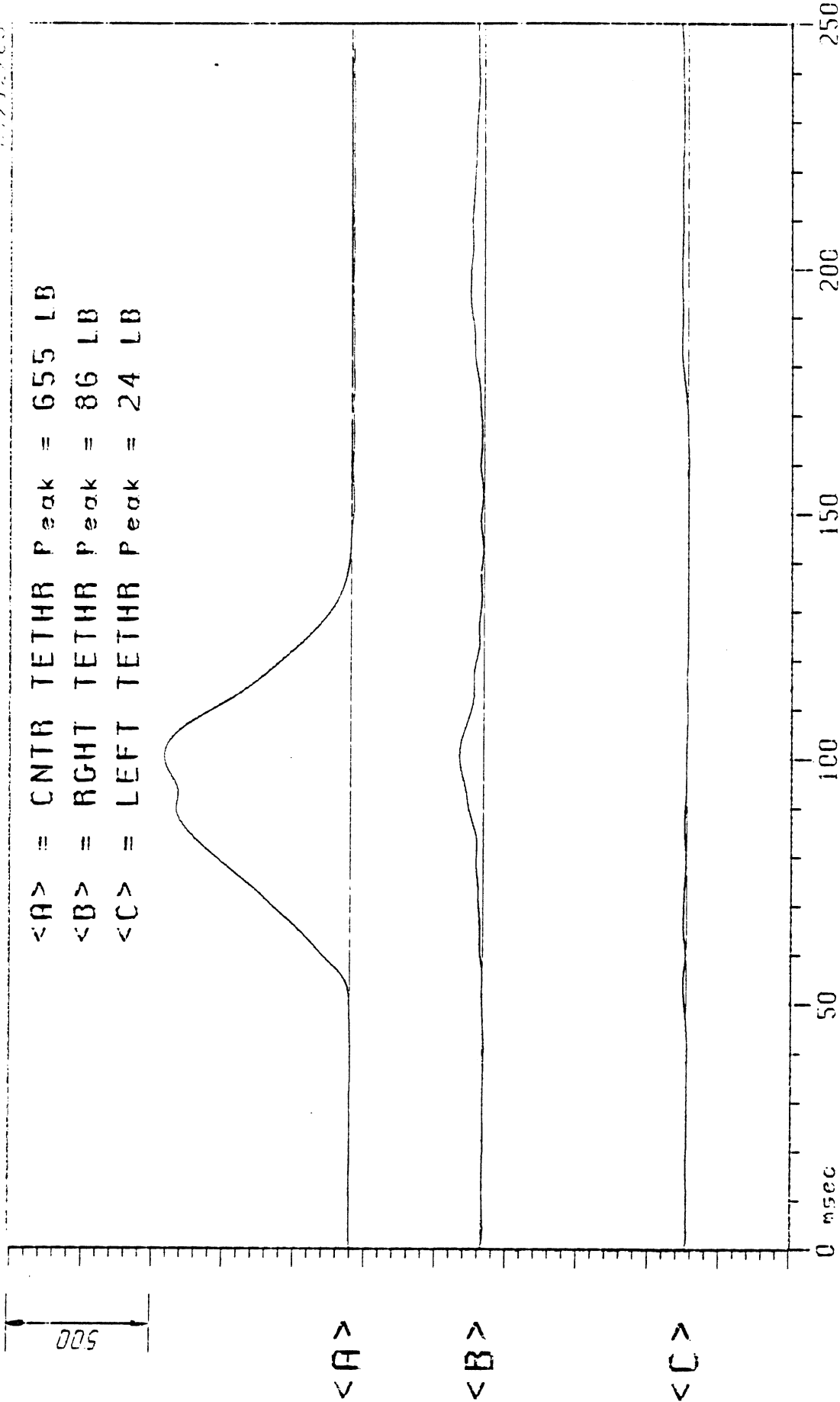
07711083



83D 018

CHEST ACCEL.

01/12/83



<A> = CNTR TETHR Peak = 655 LB

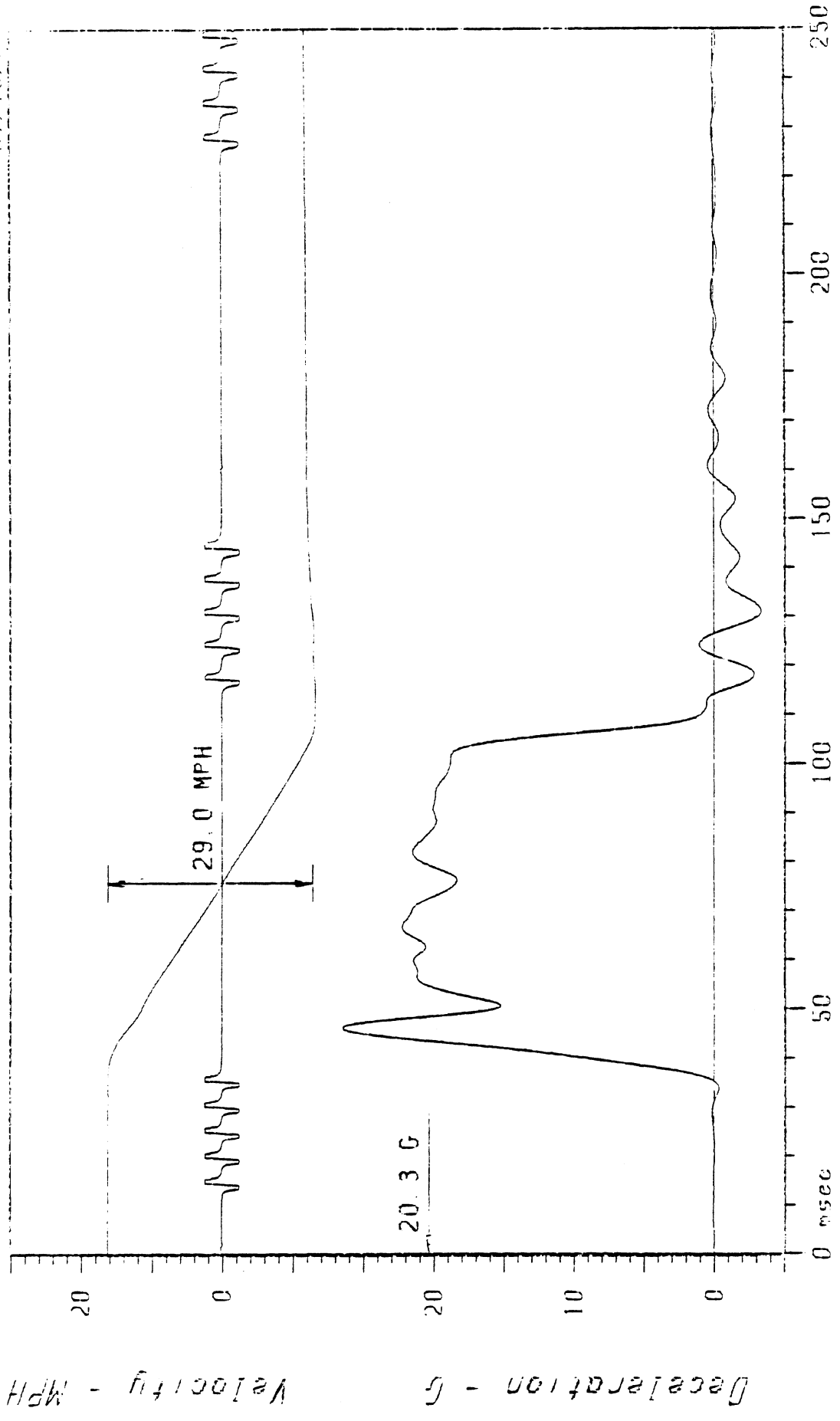
 = RIGHT TETHR Peak = 86 LB

<C> = LEFT TETHR Peak = 24 LB

BELT LOADS

83D 018

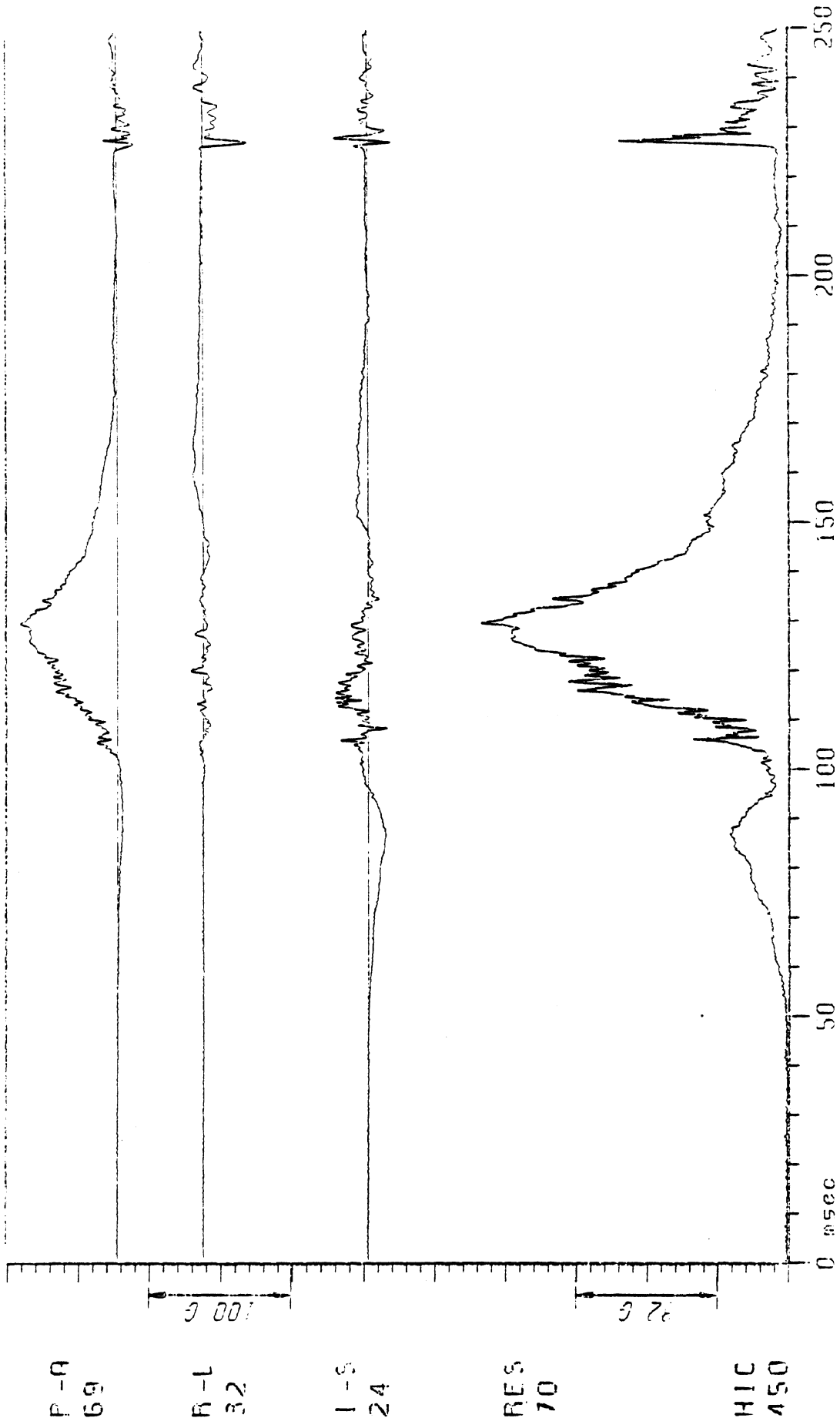
07713/8



83D 019

SLED PROFILE

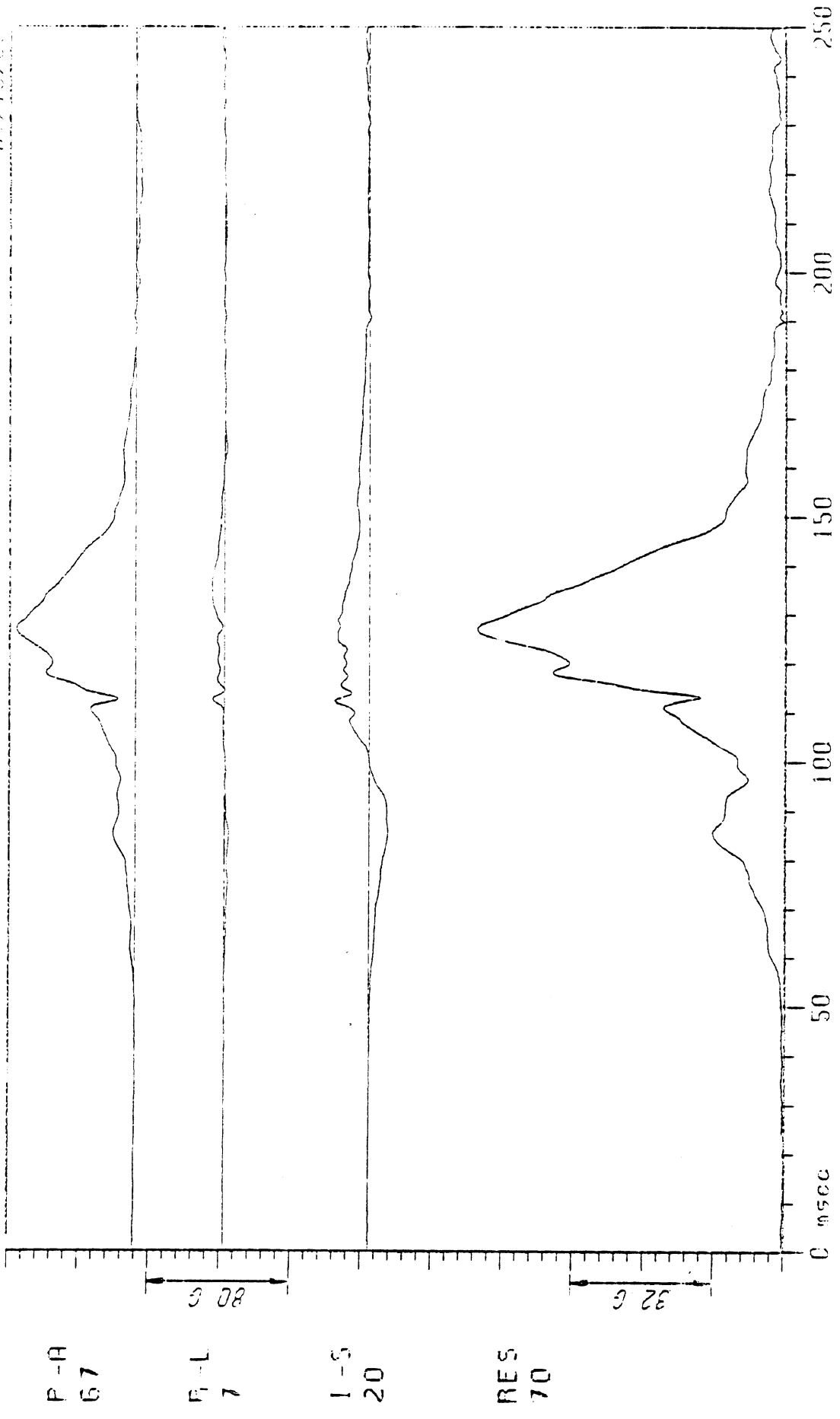
02/12/83



83D 019

HEAD ACCEL.

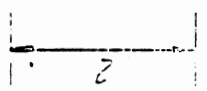
17, 13, 83



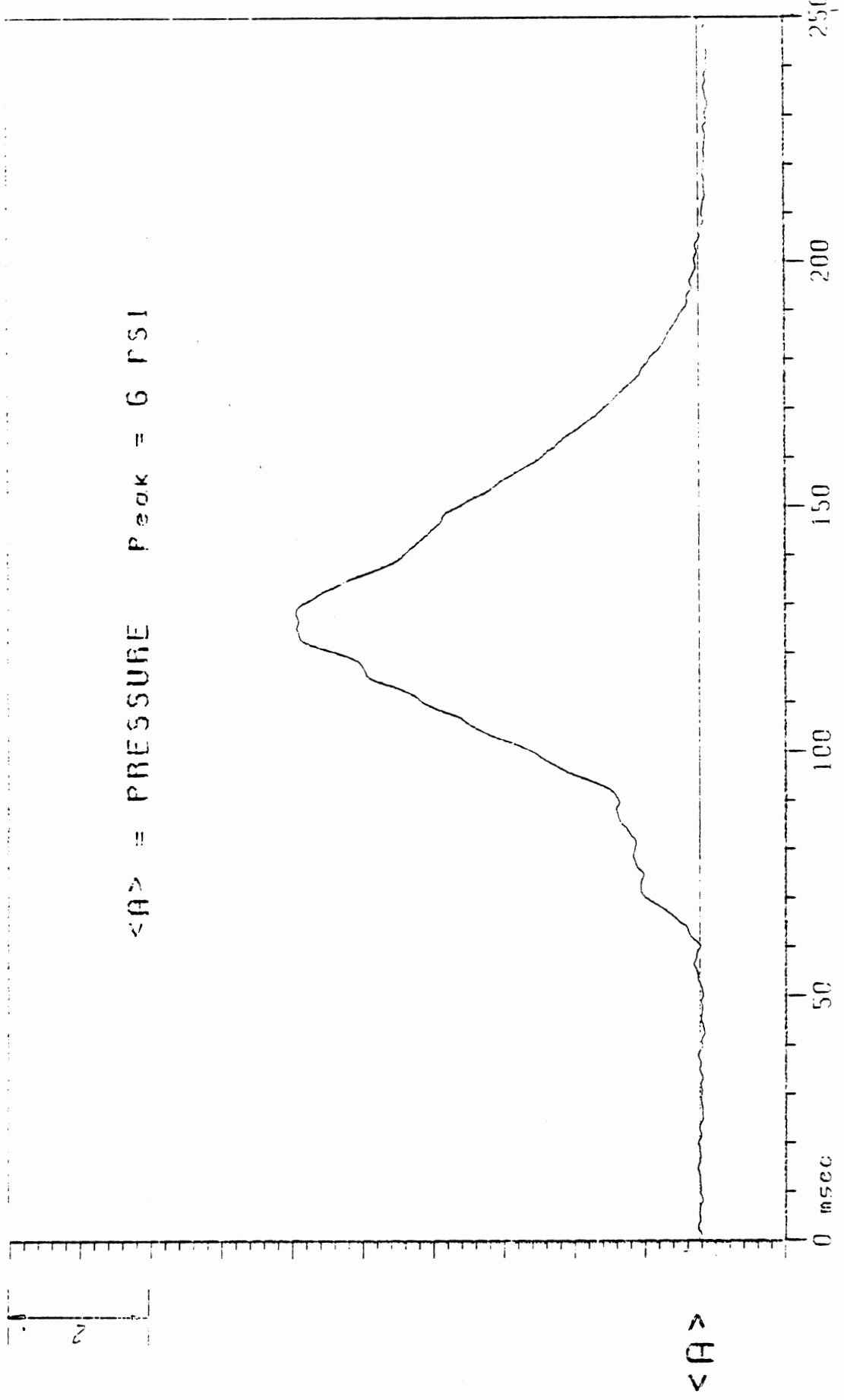
83D 019

CHEST ACCEL.

3 21 5000



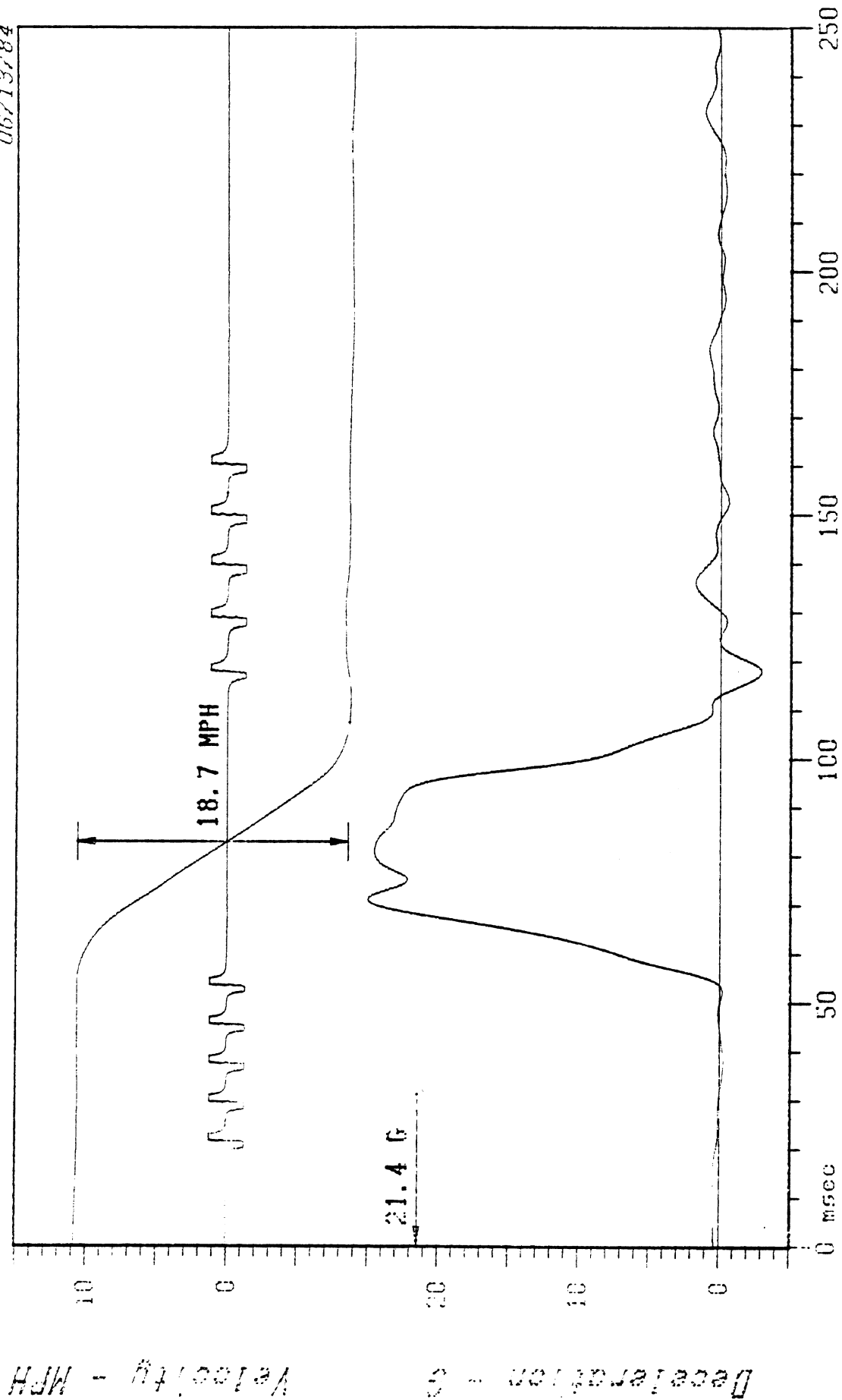
<A> = PRESSURE Peak = 6 PSI



83D 019

BELT LOADS

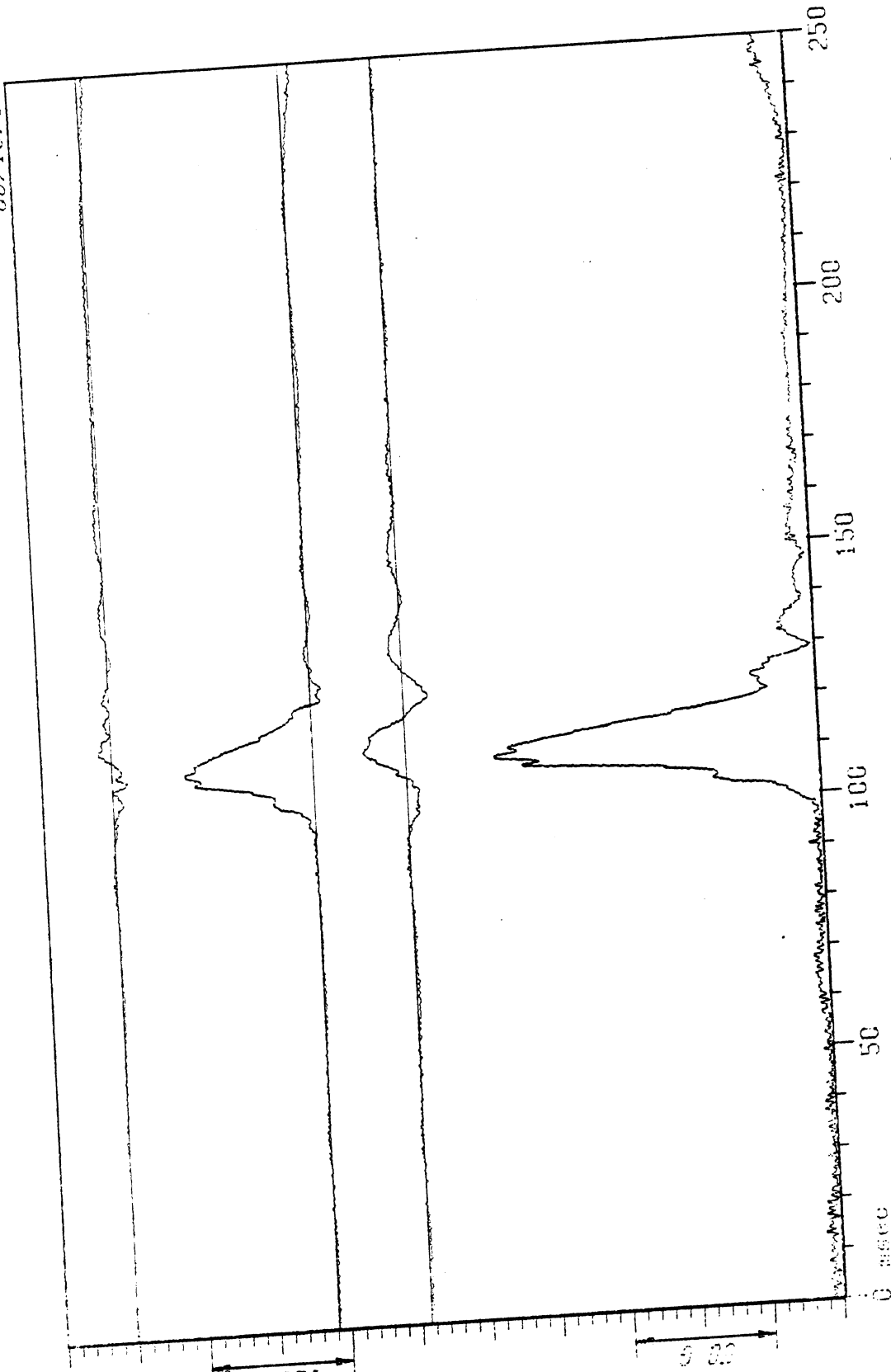
06/13/84



84D 021

SLED PROFILE

06/13/84



P-0
14

R-L
113

I-S
38

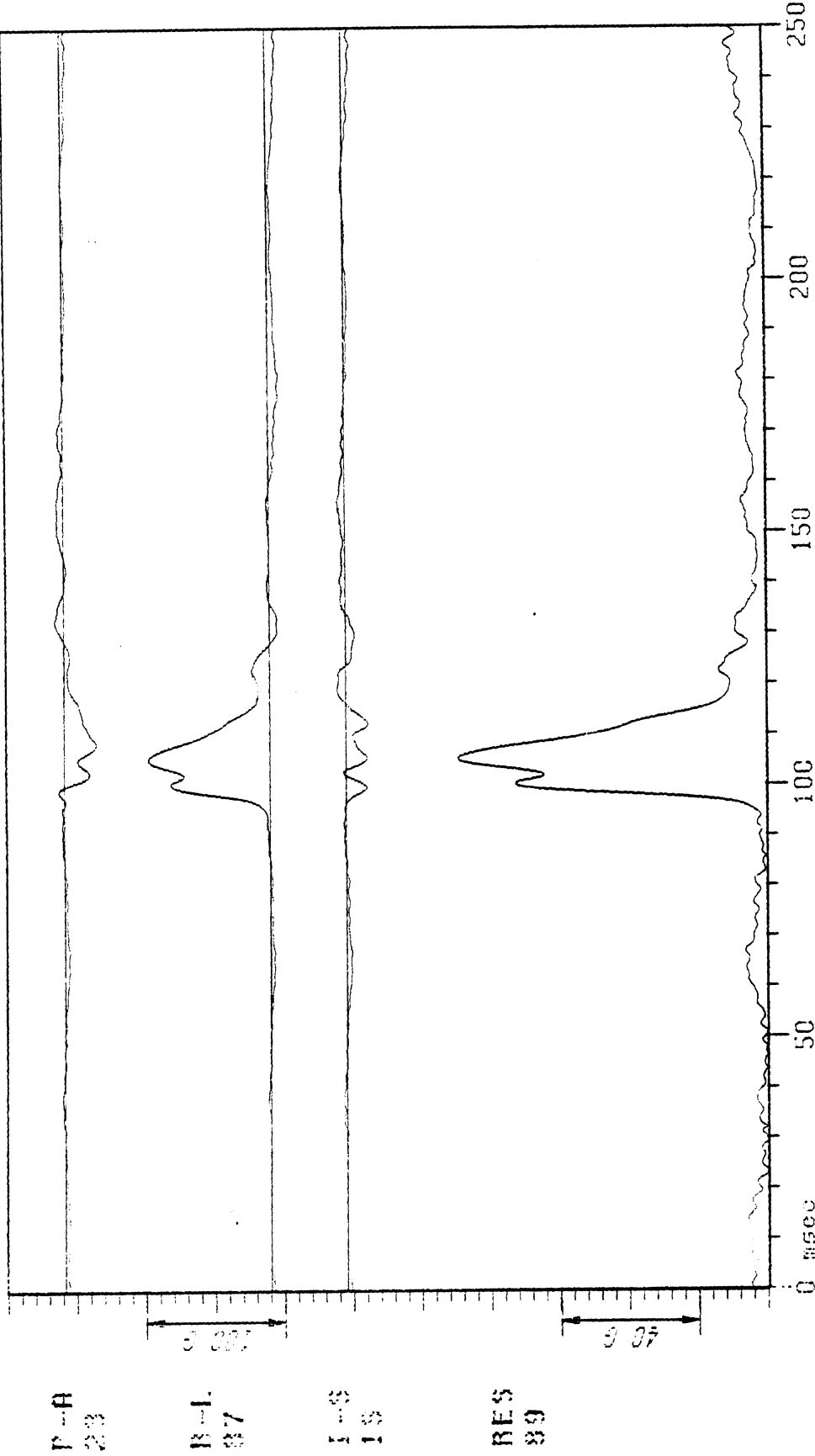
RES
113

RES
845

84D 021

HEAD ACCEL.

06/13/84



P-A
23

B-L
87

I-S
18

RES
89

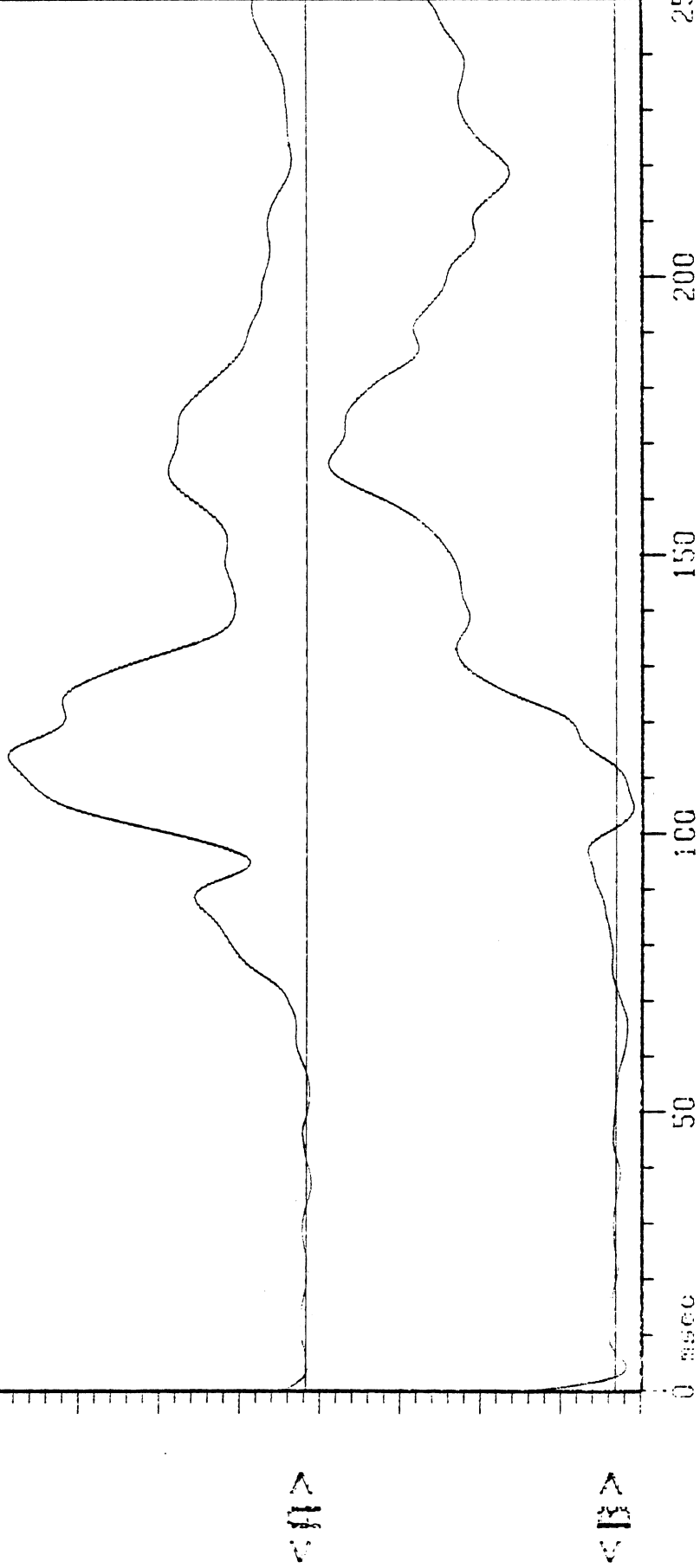
84D 021

CHEST ACCEL.

06/13/84

79

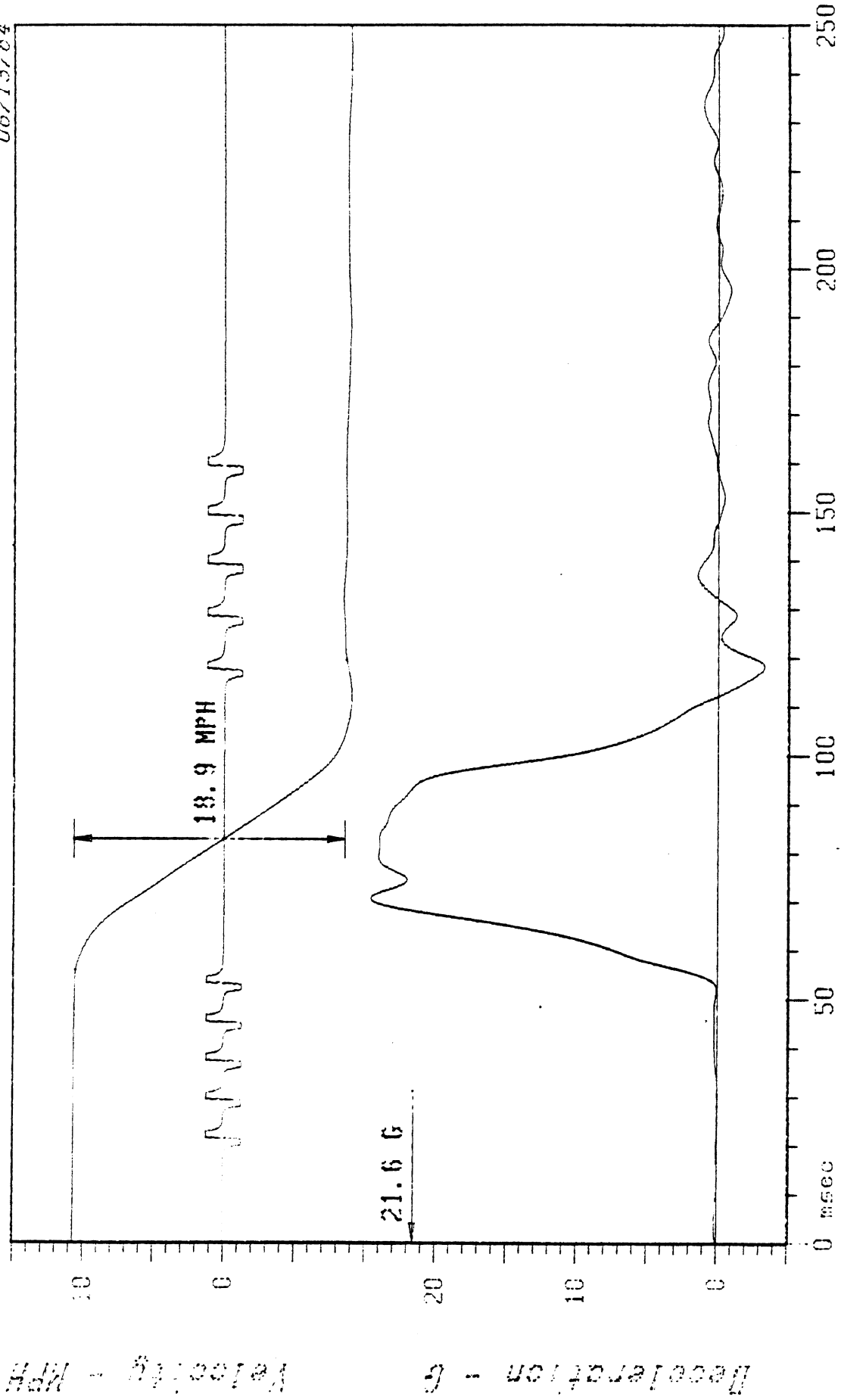
<A> = RIGHT LAP Peak = 118 LB
 = LEFT LAP Peak = 115 LB



84D 021

BELT LOADS

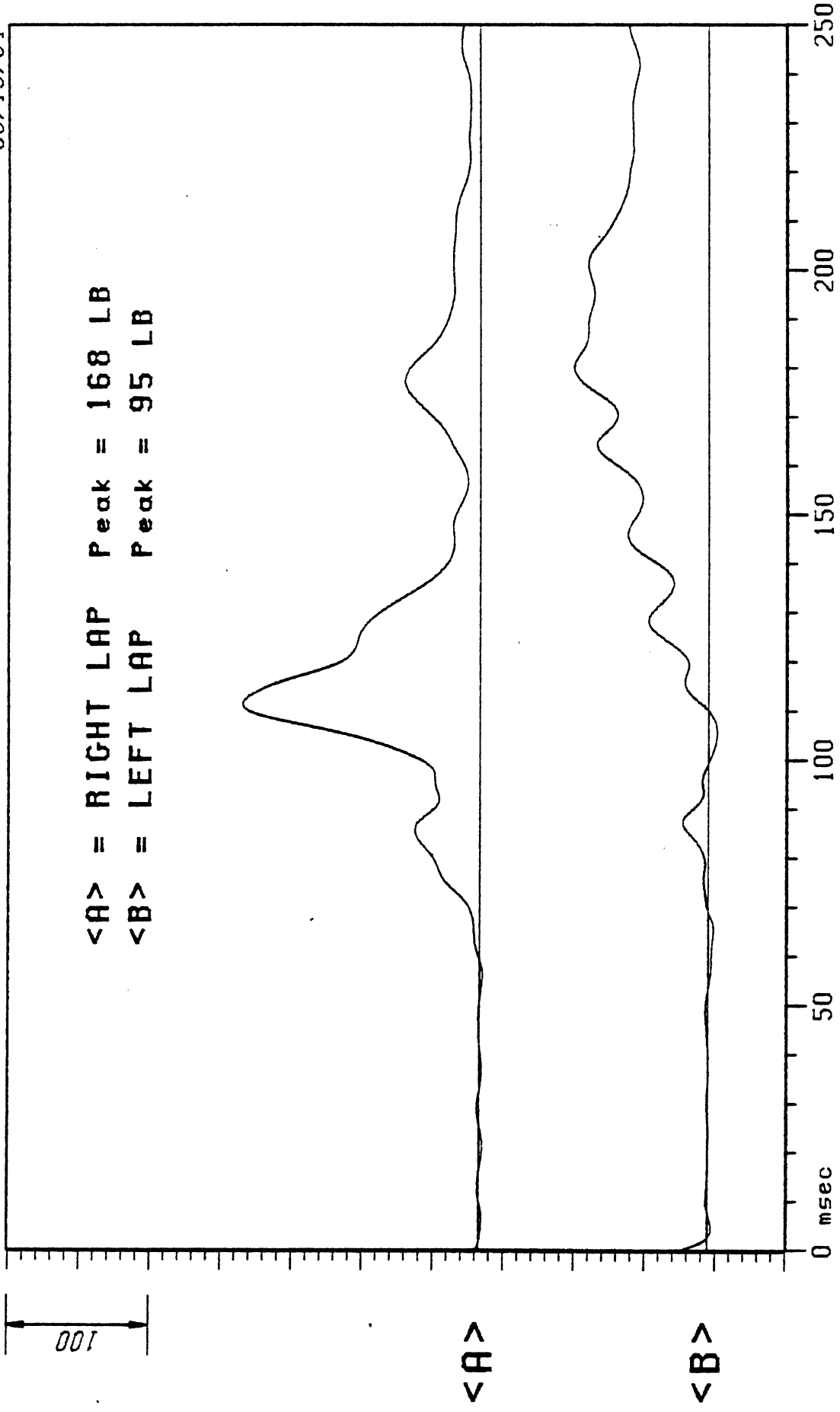
06/13/84



84D 022

SLED PROFILE

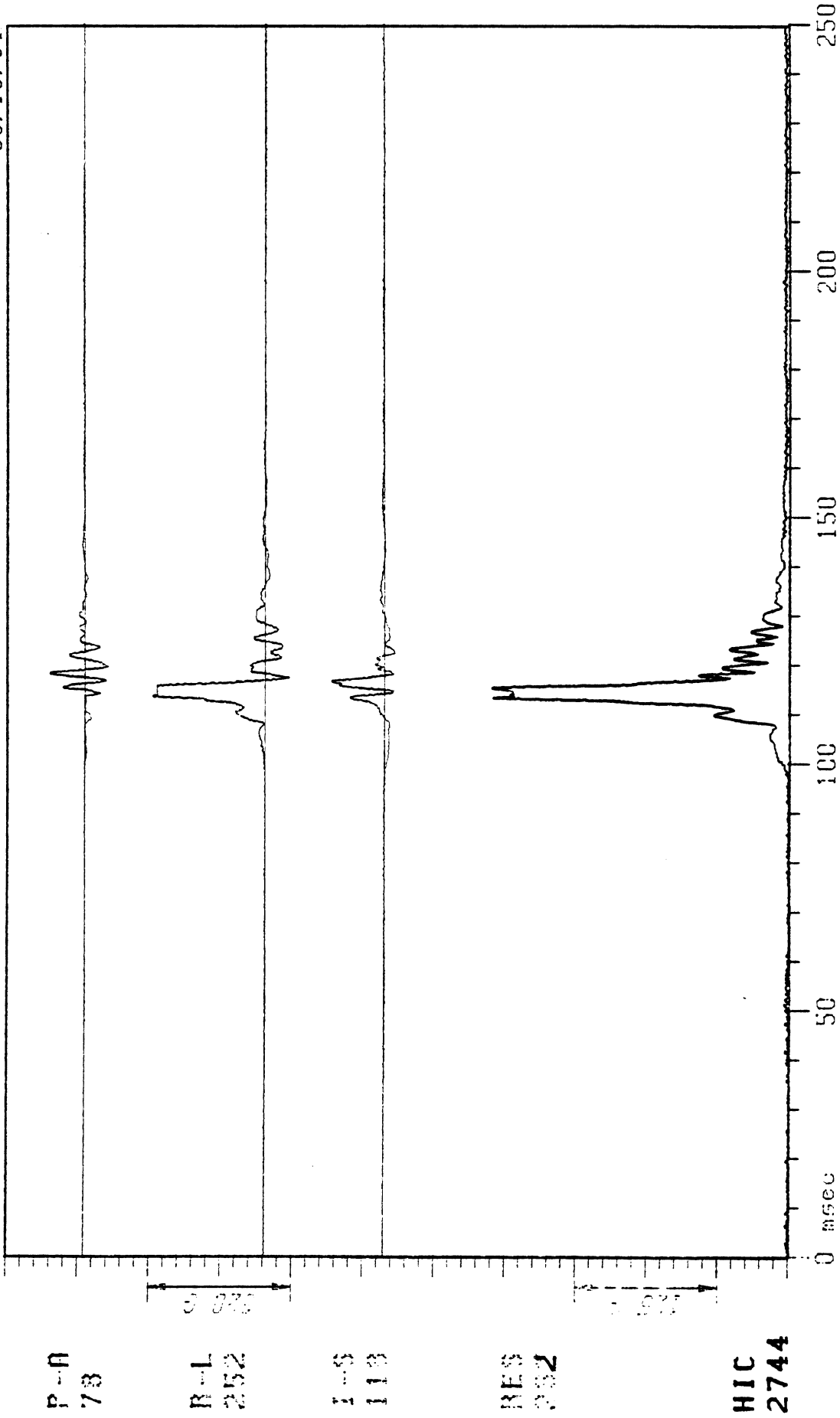
06/13/84



84D 022

BELT LOADS

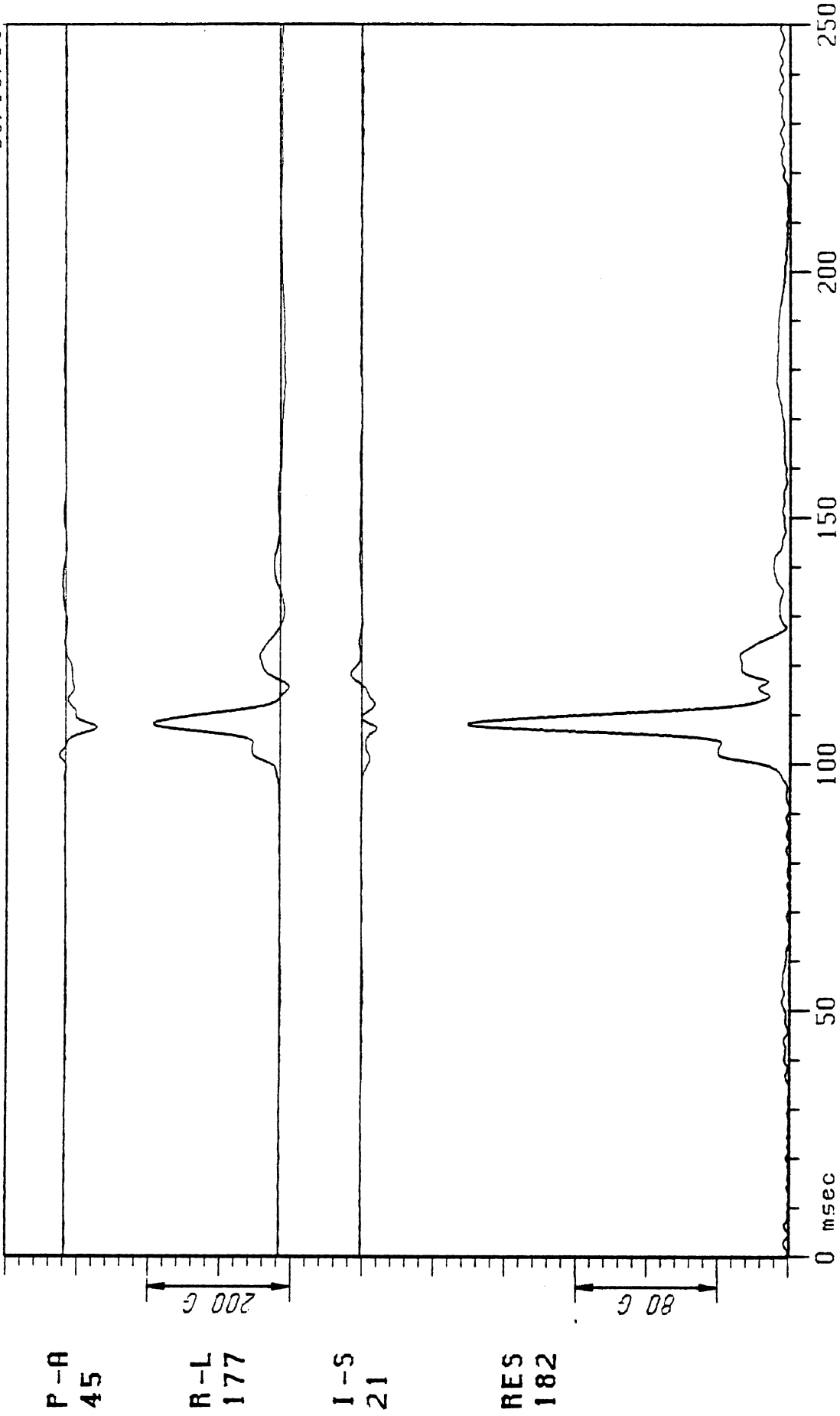
06/13/84



84D 022

HEAD ACCEL.

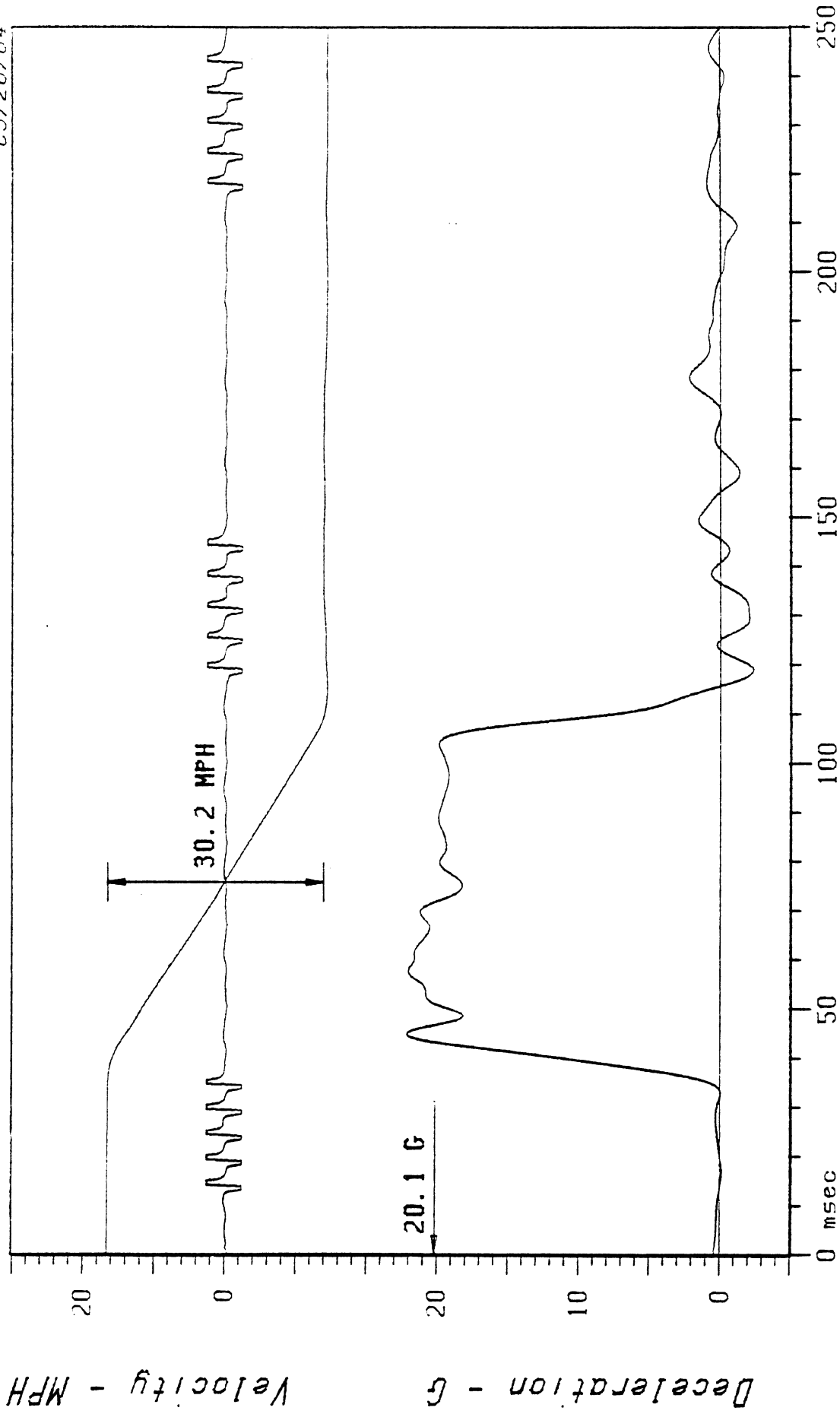
06/13/84



84D 022

CHEST ACCEL.

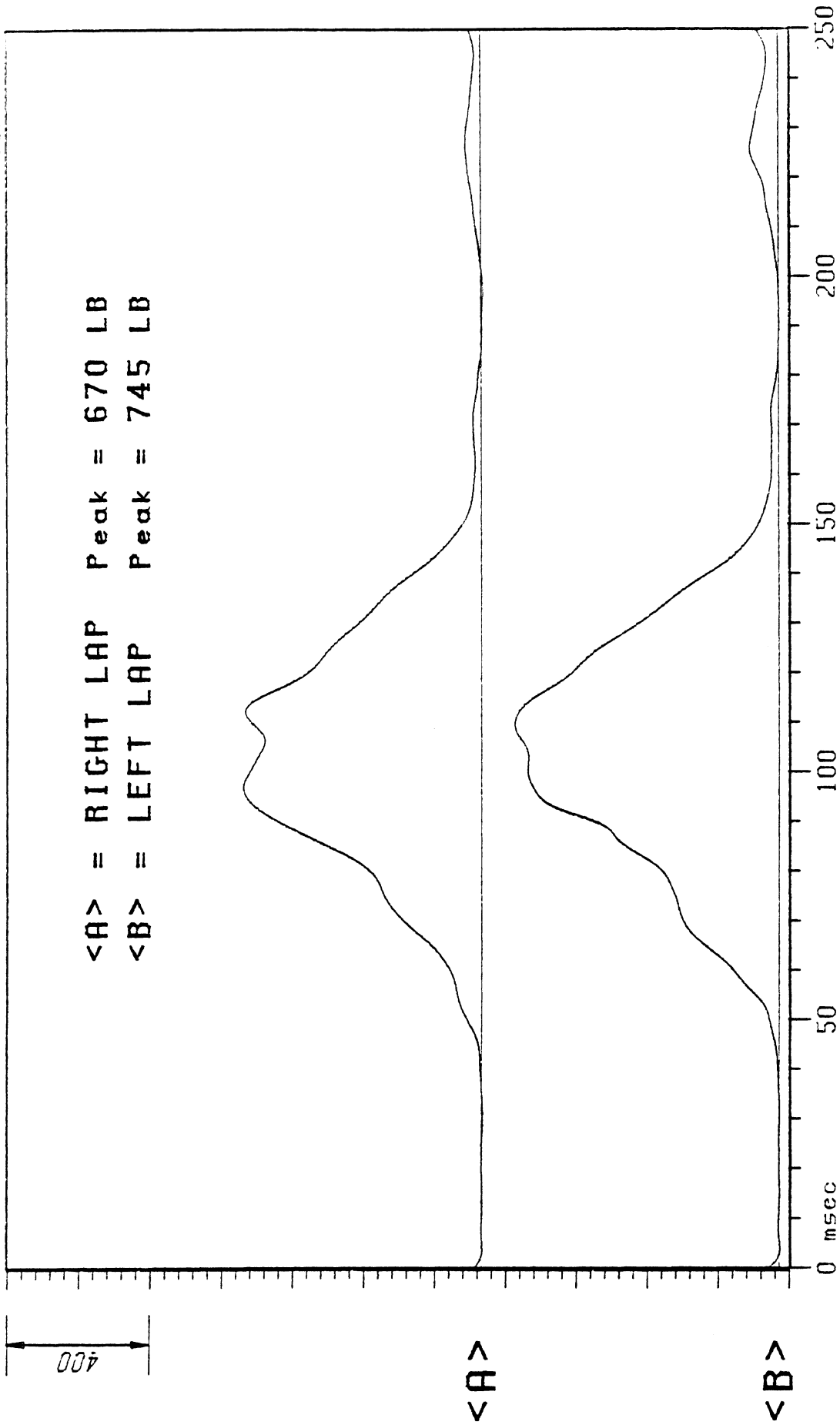
03/28/84



XP 8406

SLED PROFILE

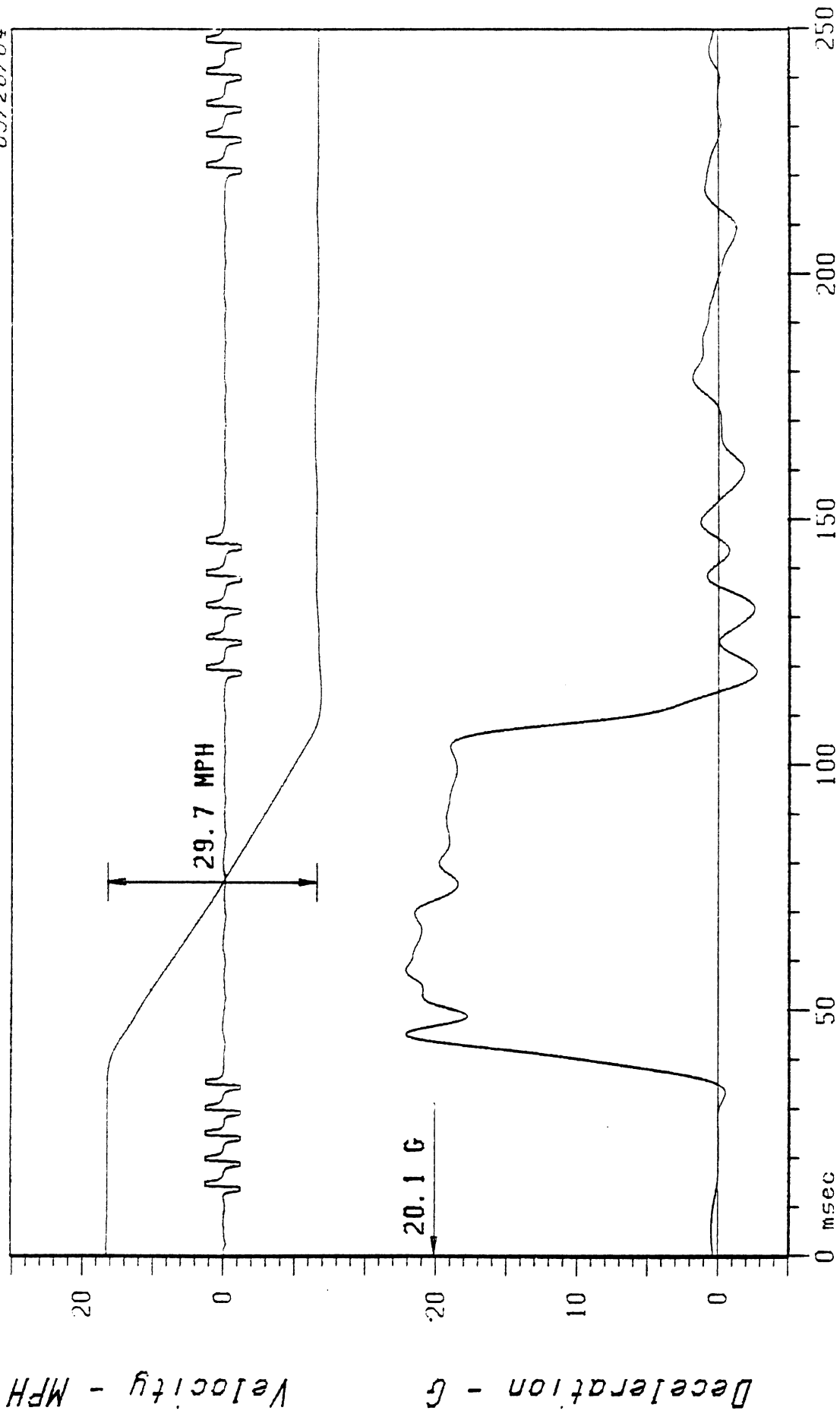
03/28/84



XP 8406

BELT LOADS

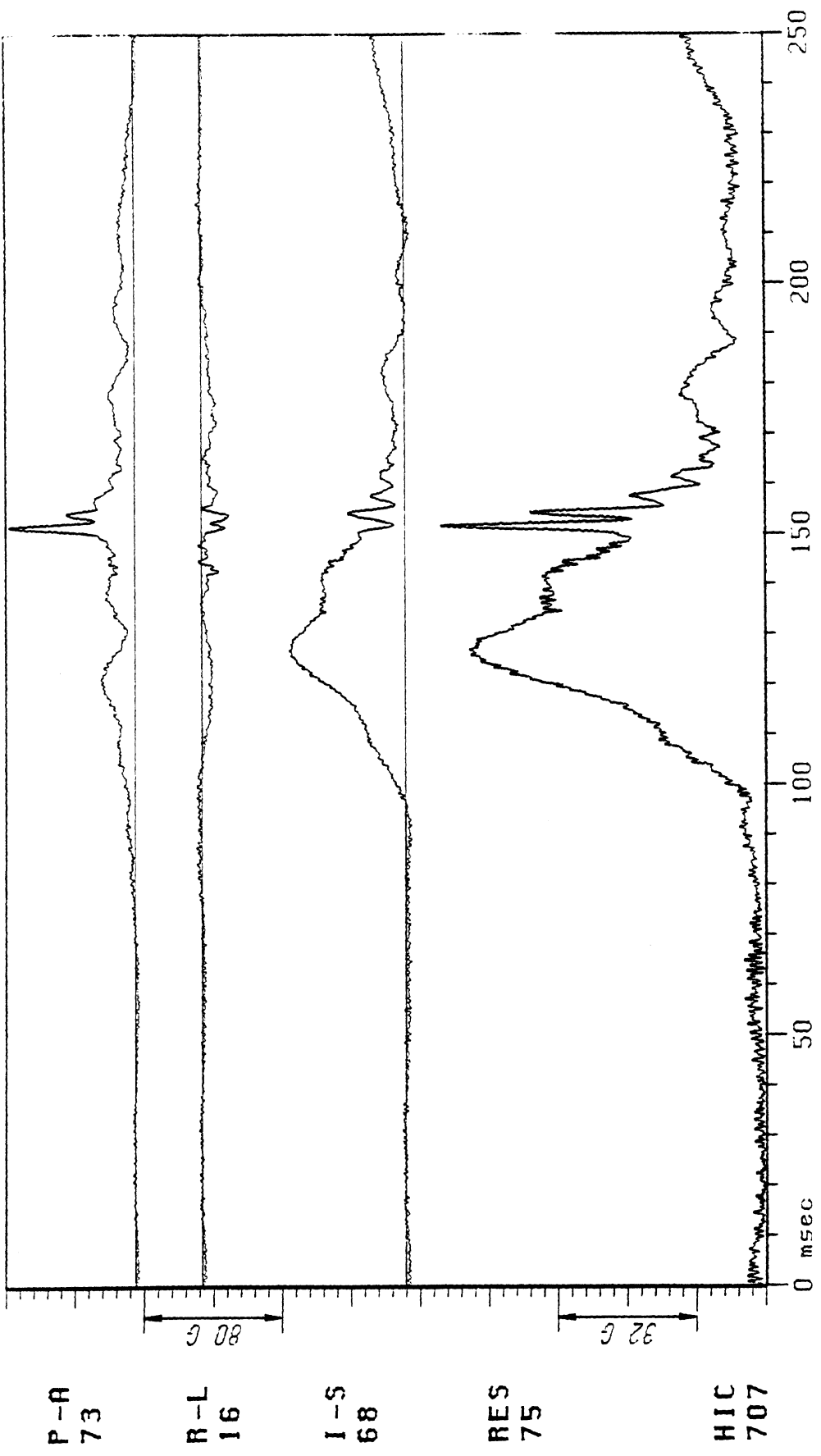
03/28/84



XP 8407

SLED PROFILE

03/28/84



P-A
73

R-L
16

I-S
68

RES
75

HIC
707

80 G

32 G

0 msec

50

100

150

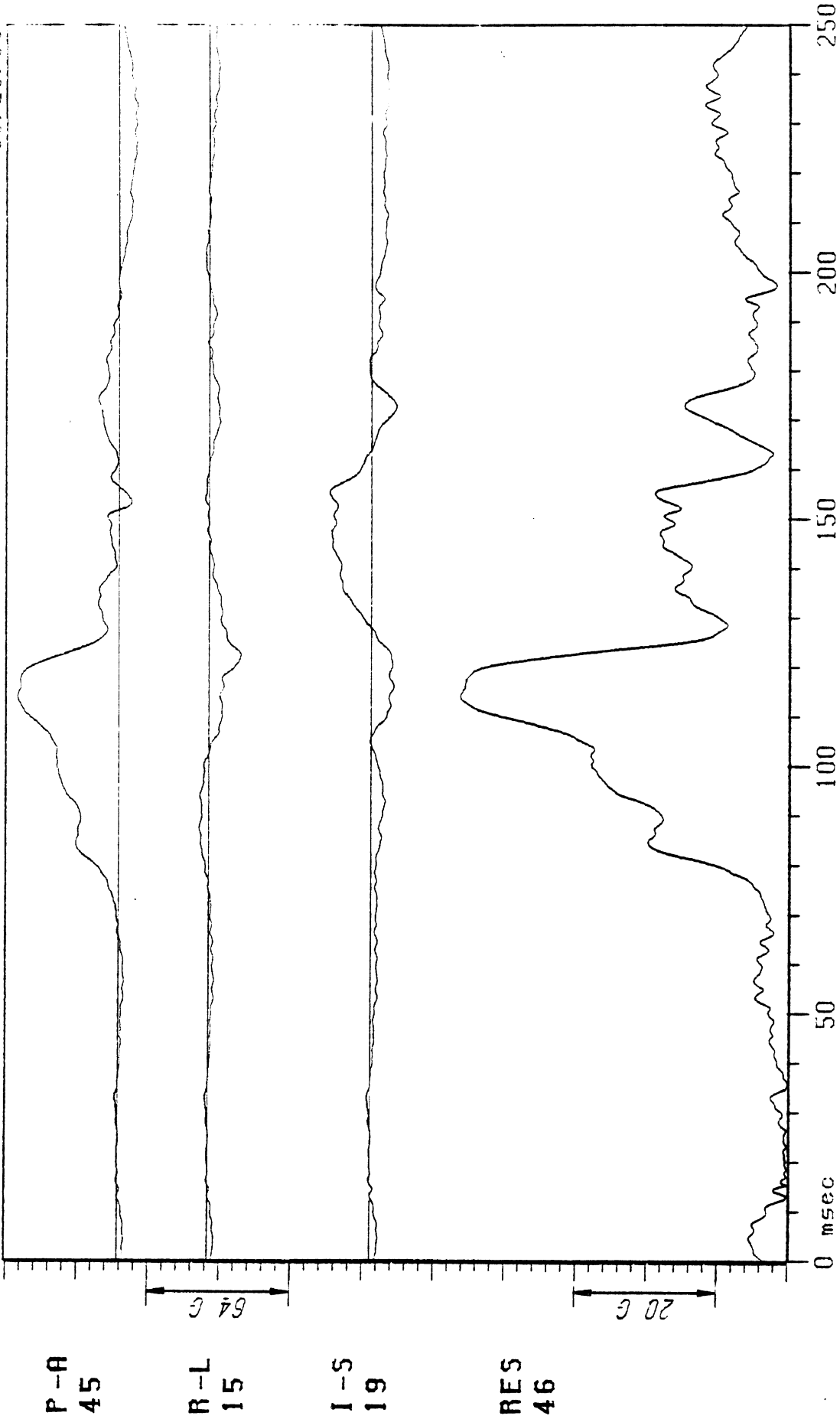
200

250

HEAD ACCEL.

XP 8407

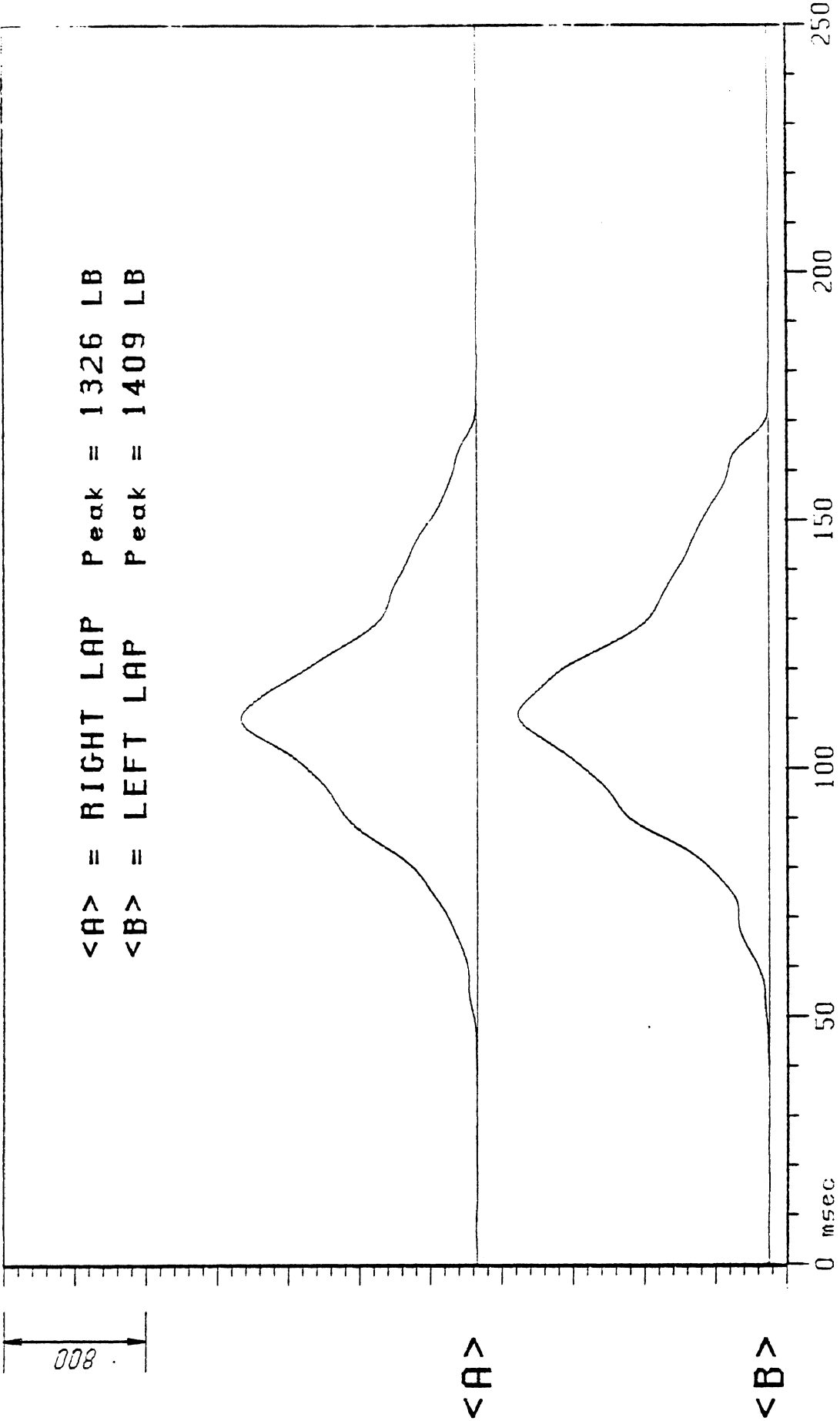
03/28/84



XP 8407

CHEST ACCEL.

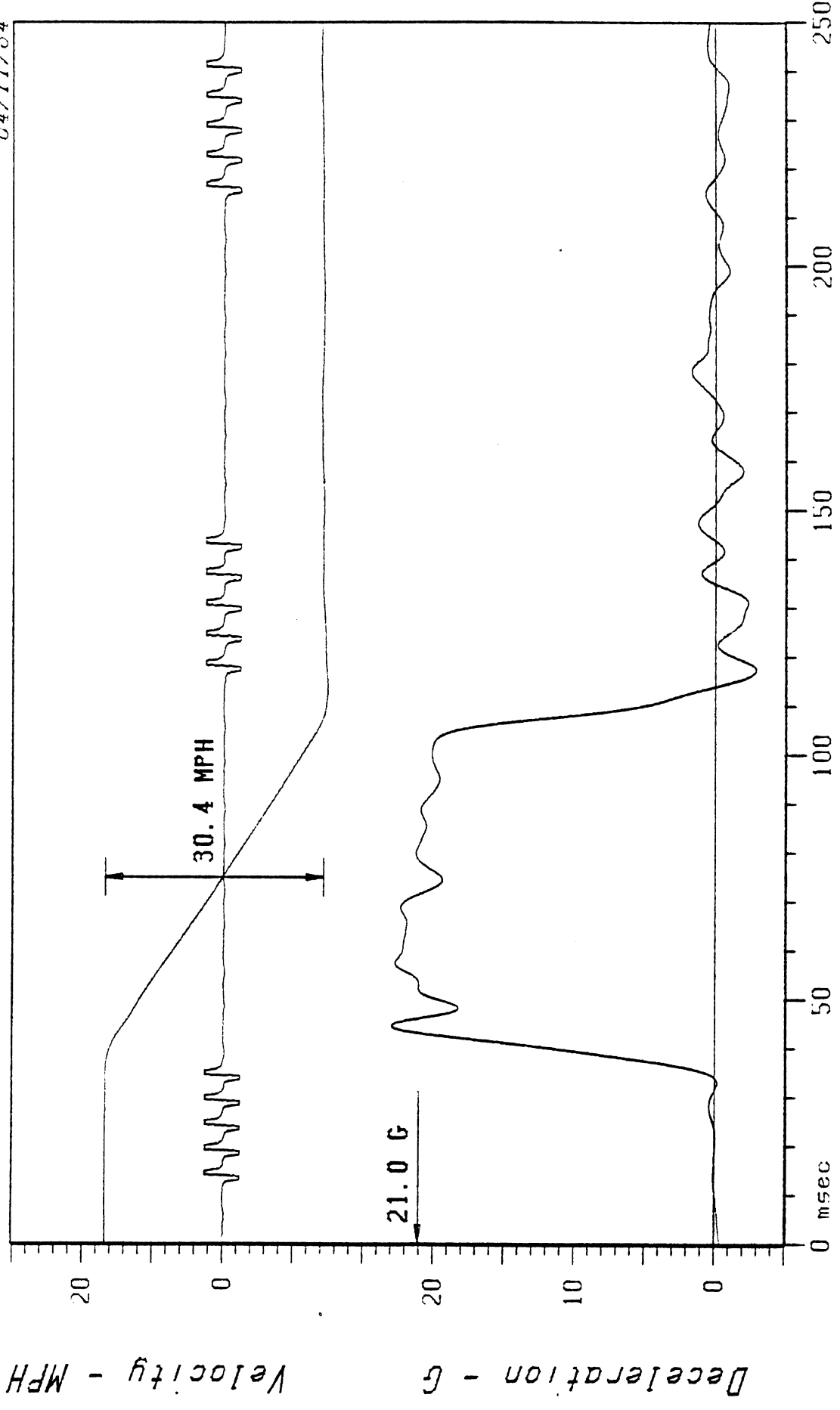
03/28/84



XP 8407

BELT LOADS

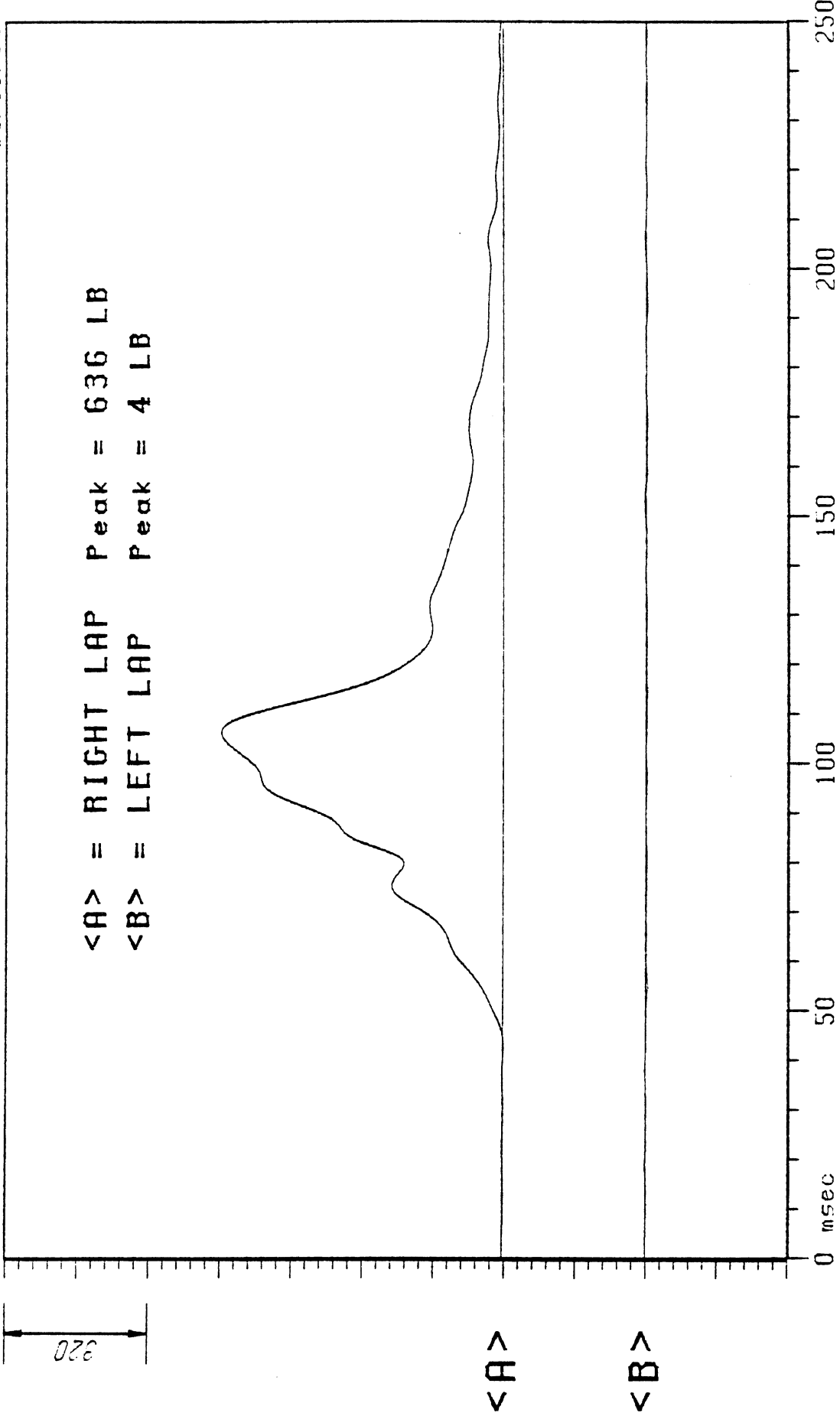
04-11-84



XP 8408

SLED PROFILE

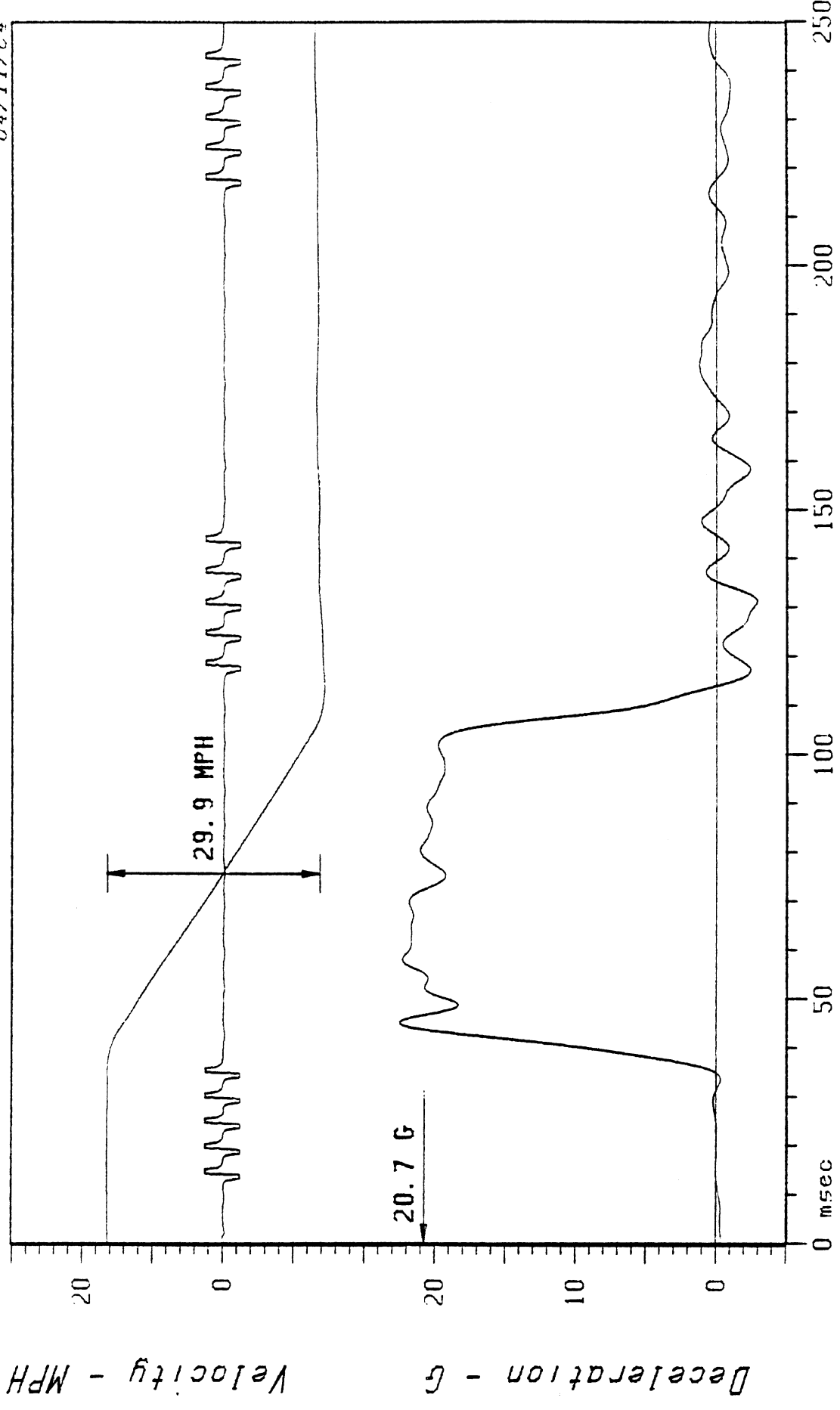
04/11/84



XP 8408

BELT LOADS

04/11/84



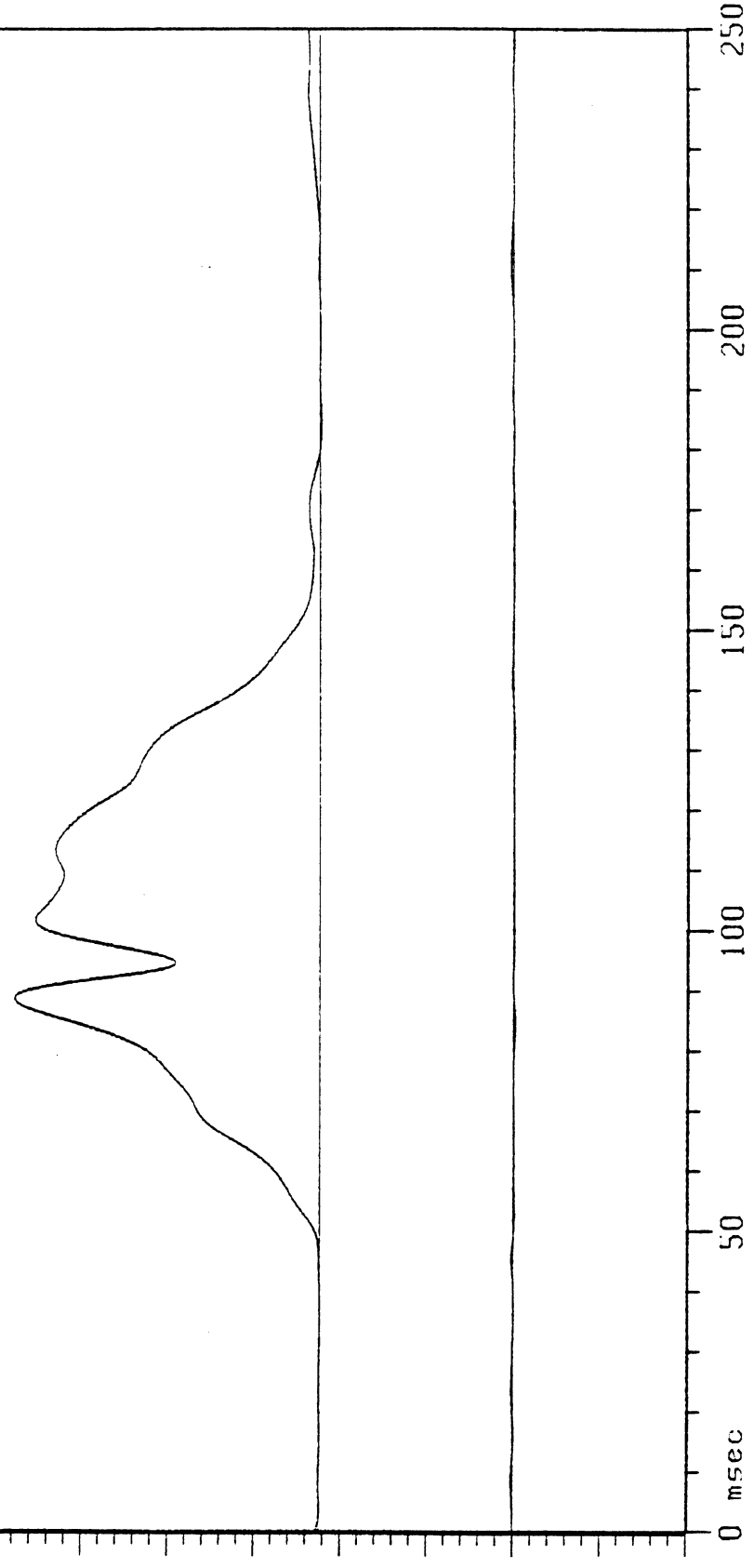
XP 8409

SLED PROFILE

04/11/84

400

<A> = RIGHT LAP Peak = 708 LB
 = LEFT LAP Peak = 6 LB

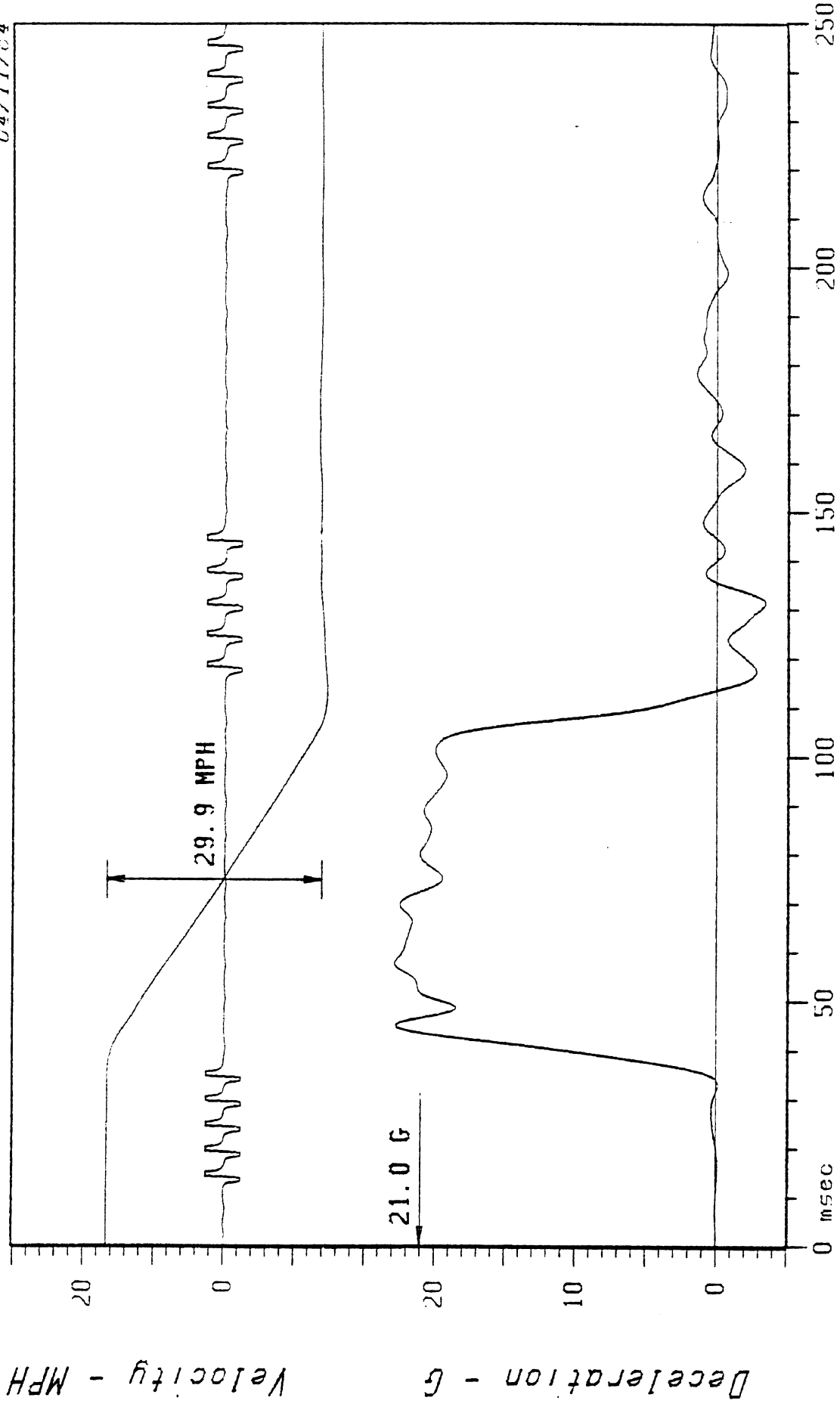


<A>

XP 8409

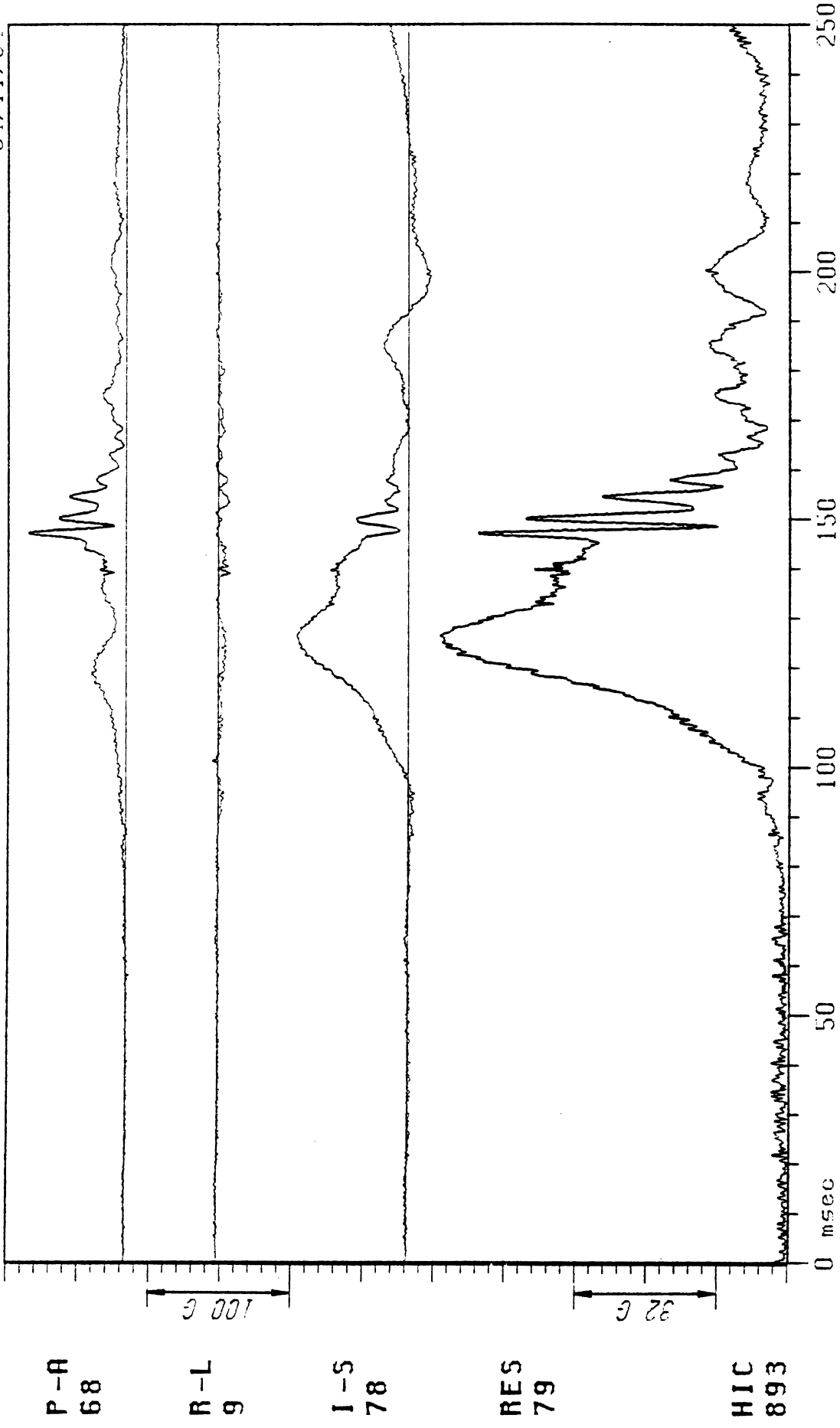
BELT LOADS

04/11/84



SLED PROFILE XP 8410.

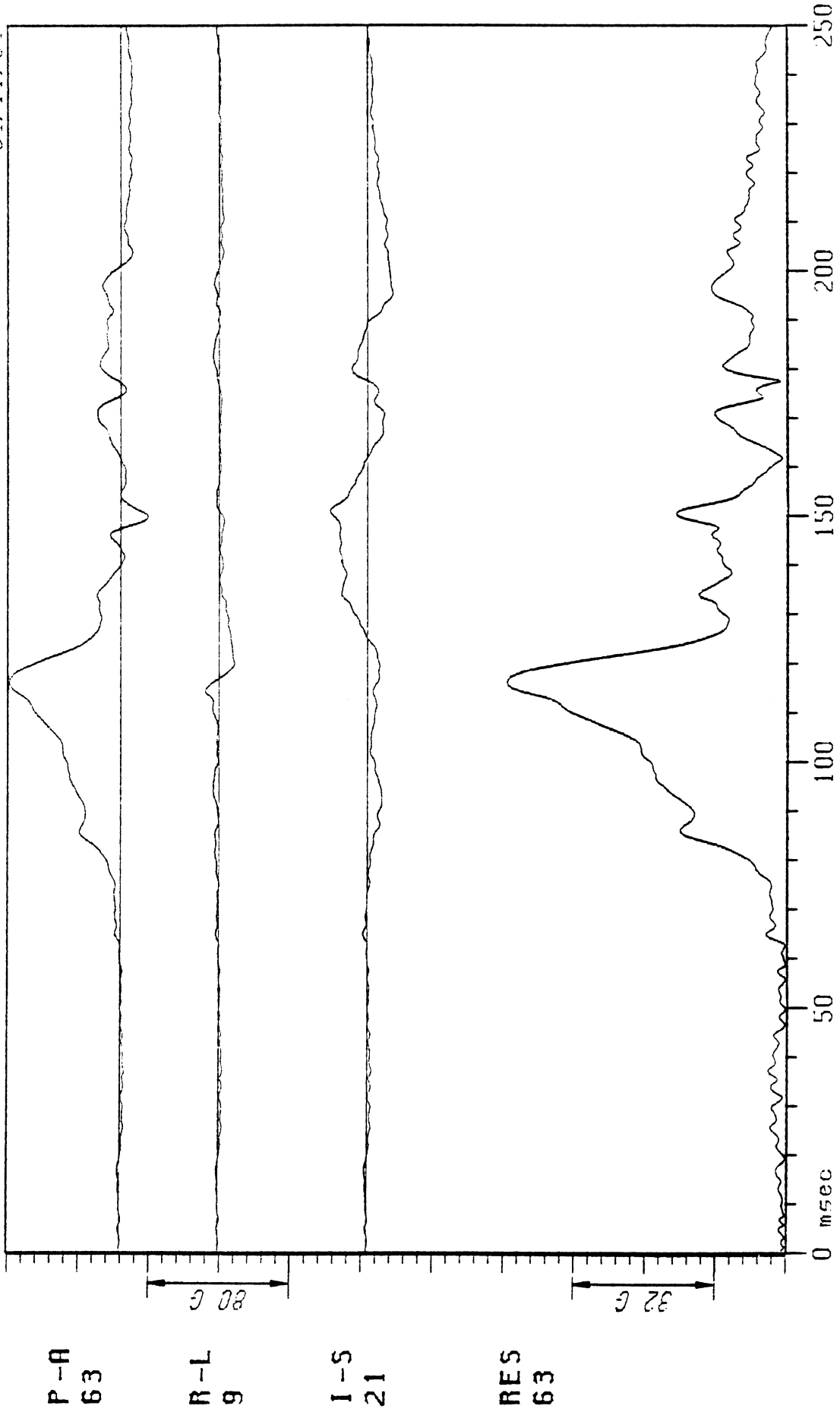
04/11/84



XP 8410.

HEAD ACCEL.

C4/11/84



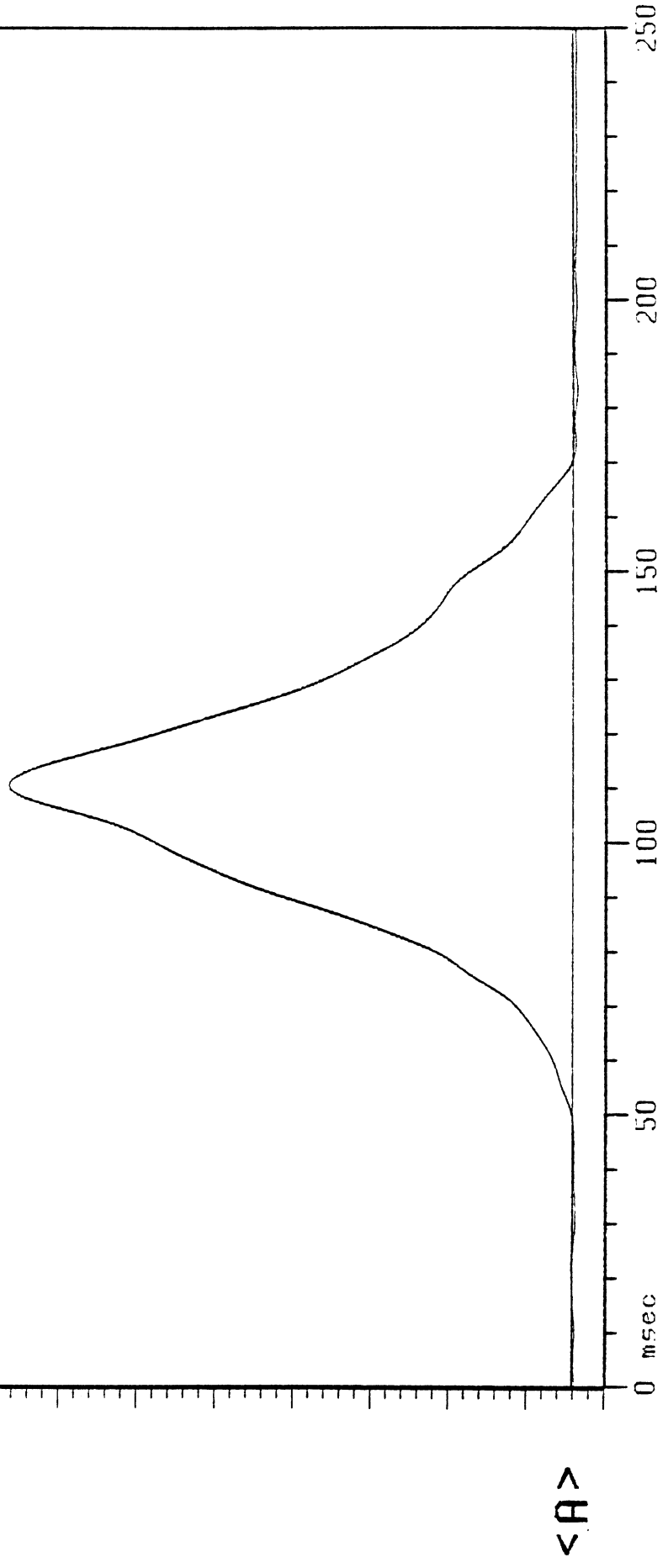
XP 8410.

CHEST ACCEL.

04/11/84

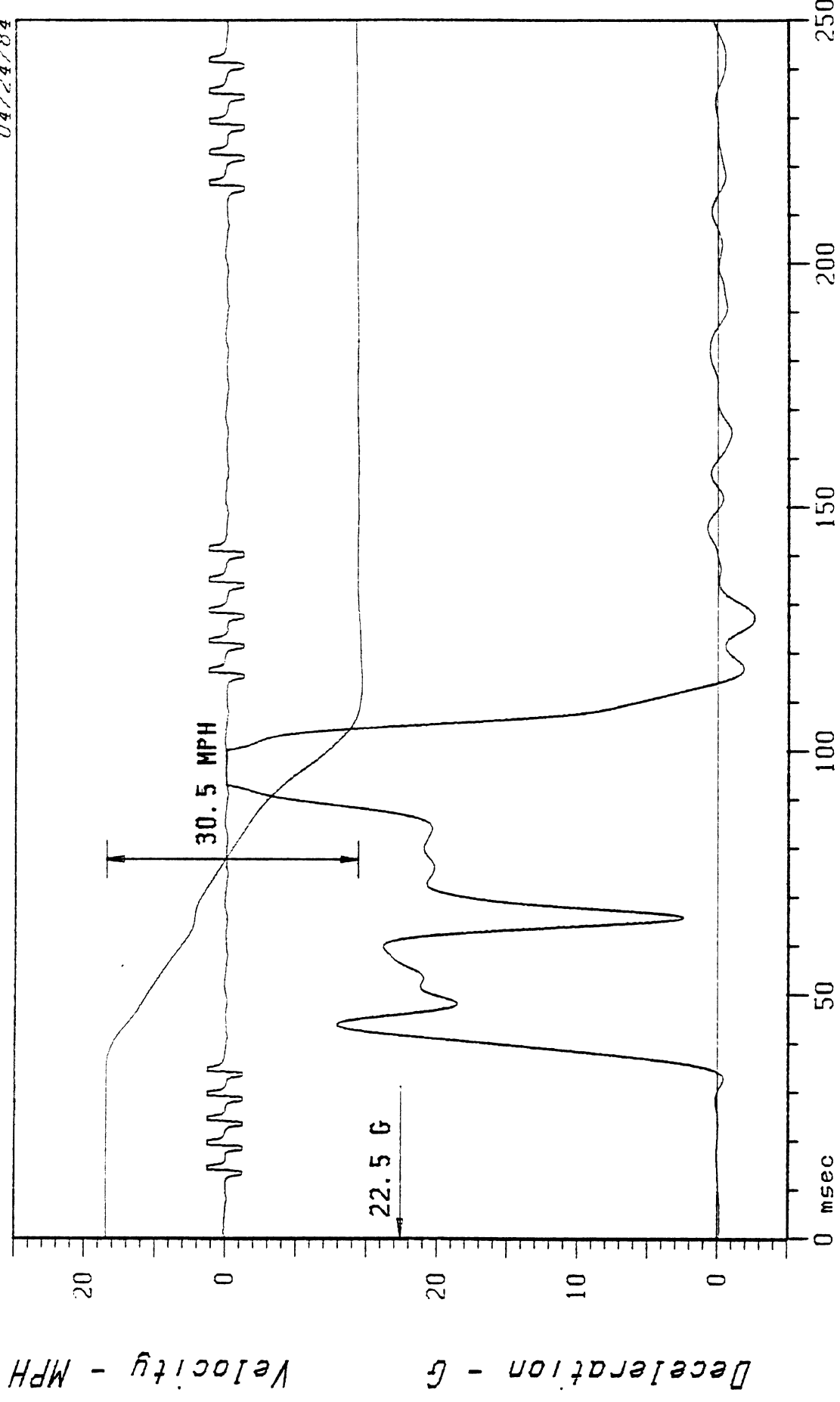
400

<A> = RIGHT LAP Peak = 1448 LB



BELT LOADS XP 8410.

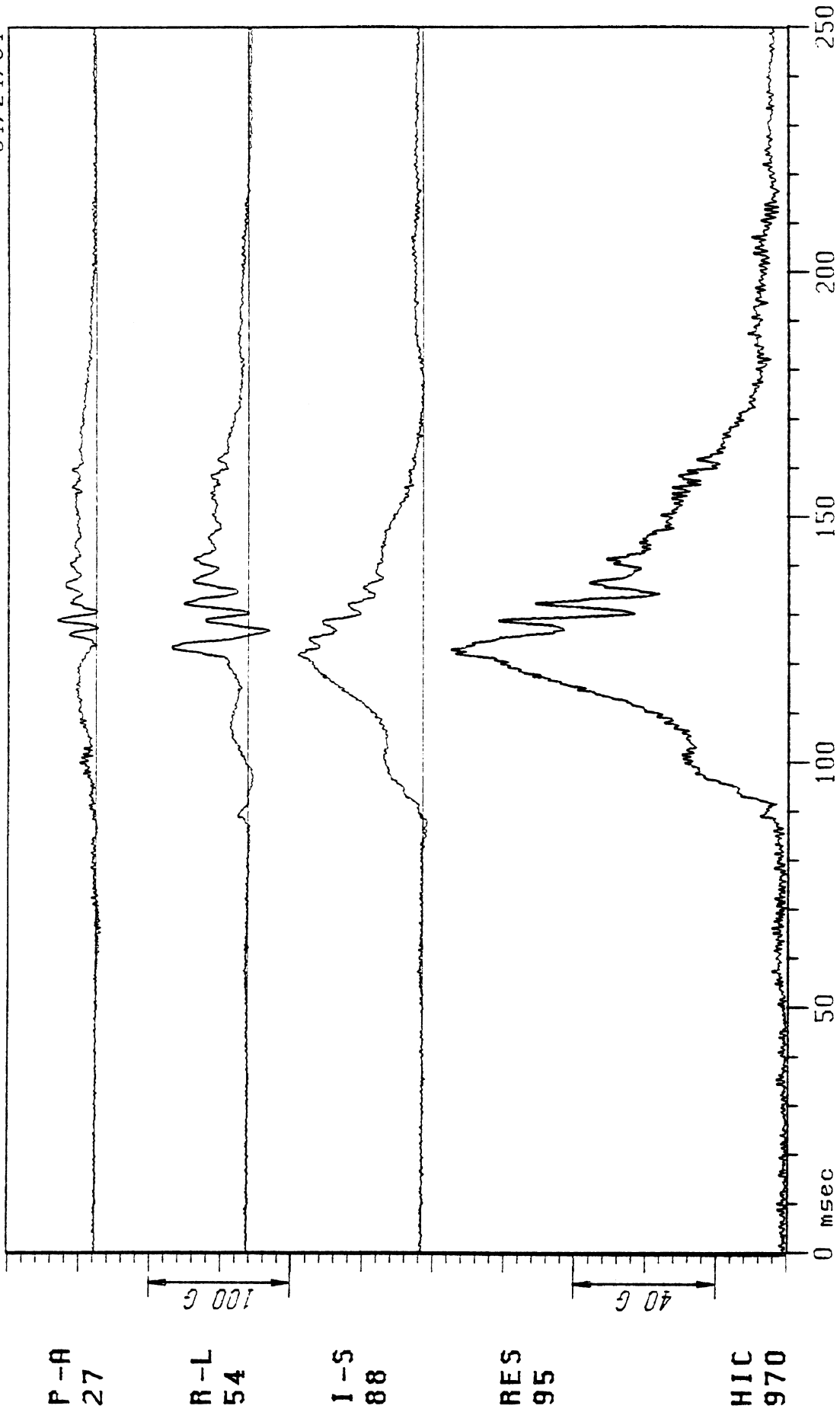
04/24/84



XP 8411

SLED PROFILE

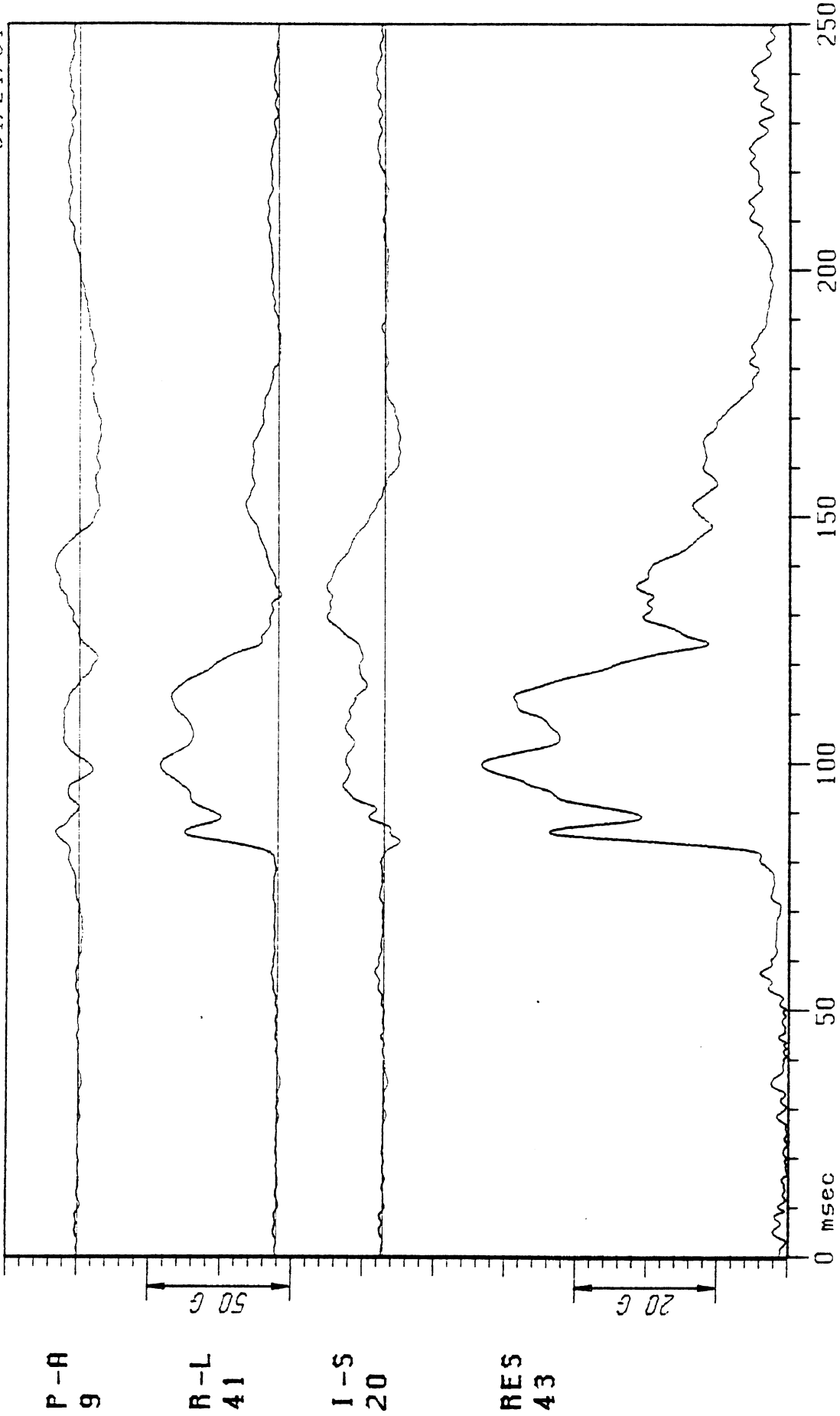
04/24/84



XP 8411

HEAD ACCEL.

04/24/84



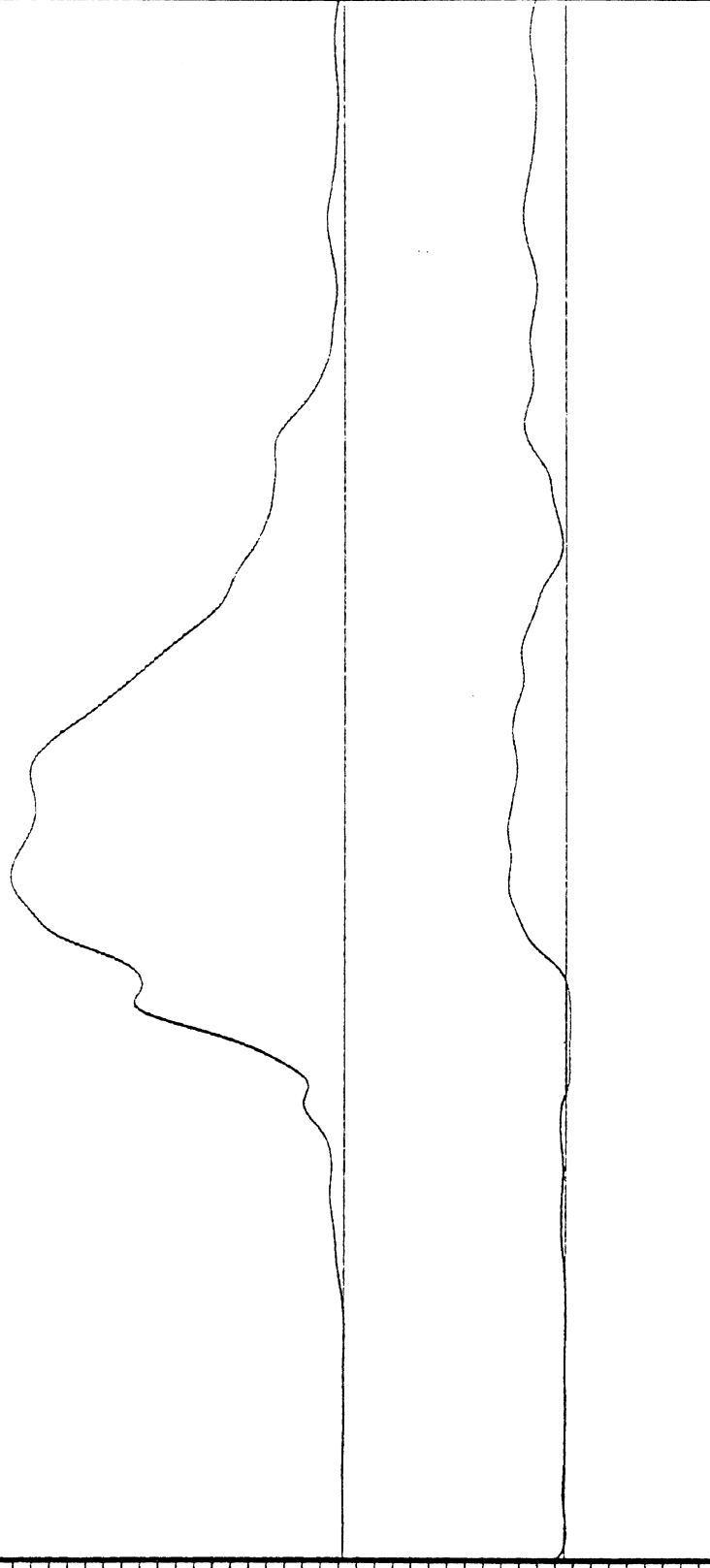
XP 8411

CHEST ACCEL.

04/24/84

500

<A> = RIGHT LAP Peak = 924 LB
 = LEFT LAP Peak = 163 LB

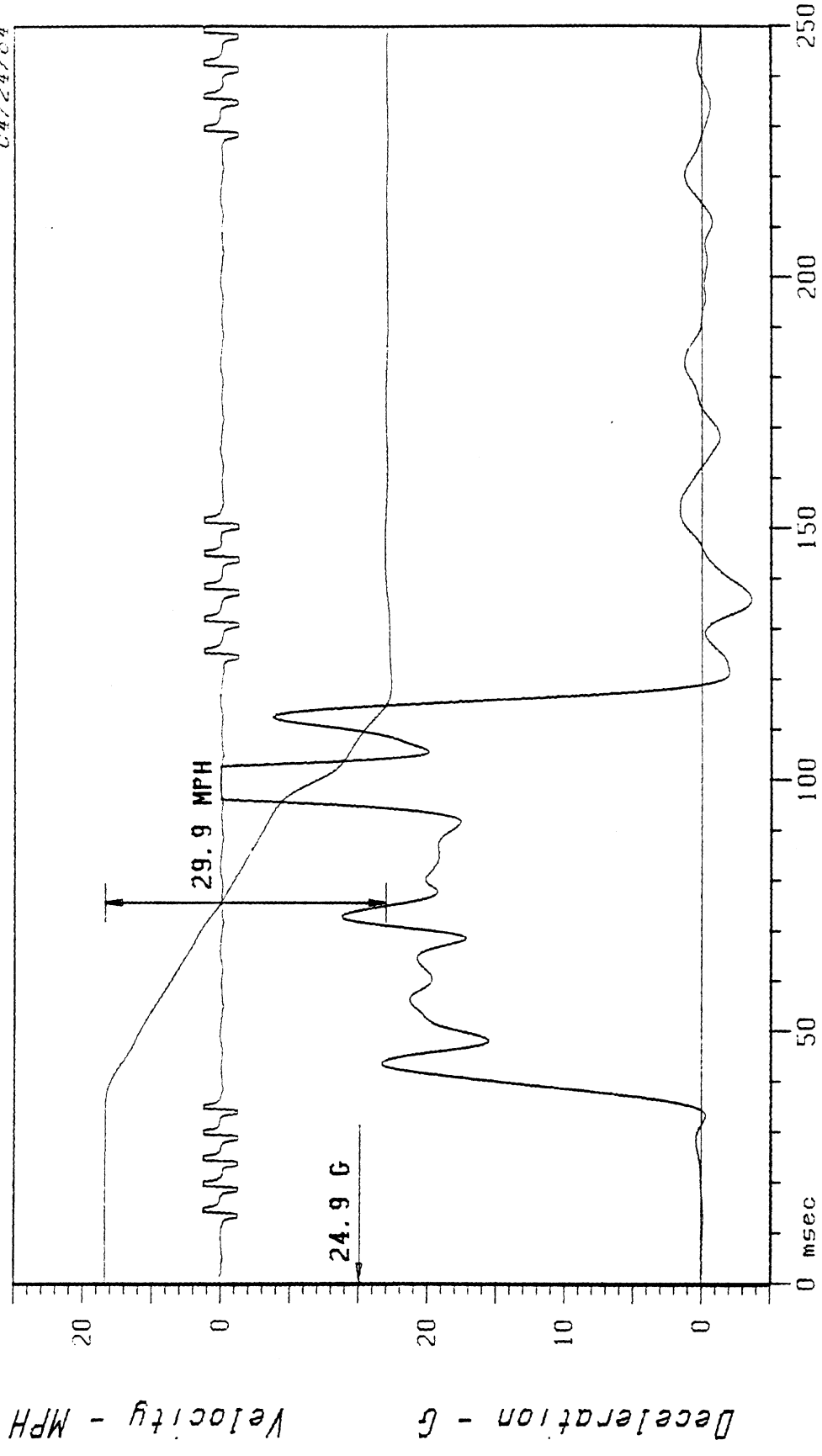


0 msec 50 100 150 200 250

BELT LOADS

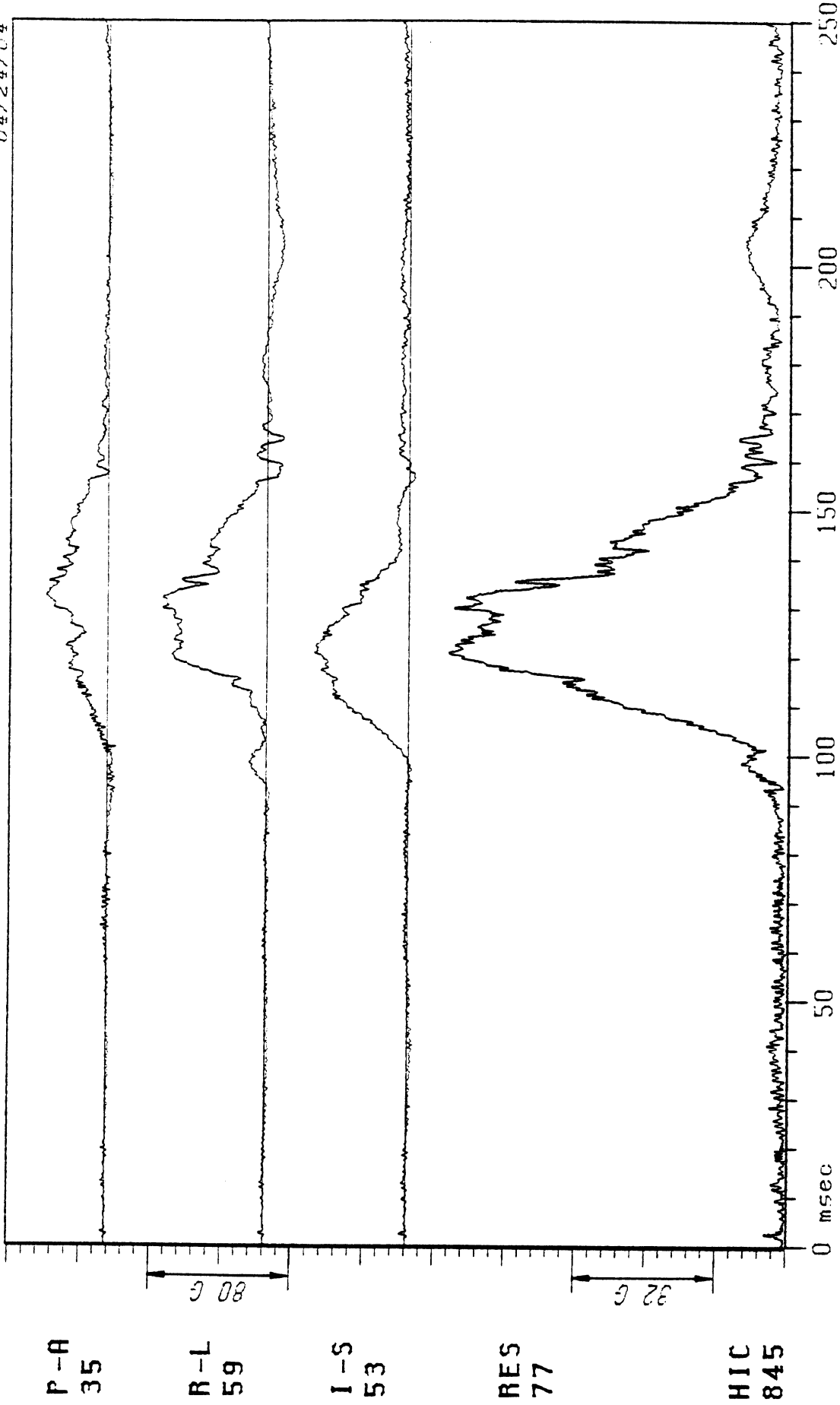
XP 8411

CA/24/84



SLED PROFILE XP 8412

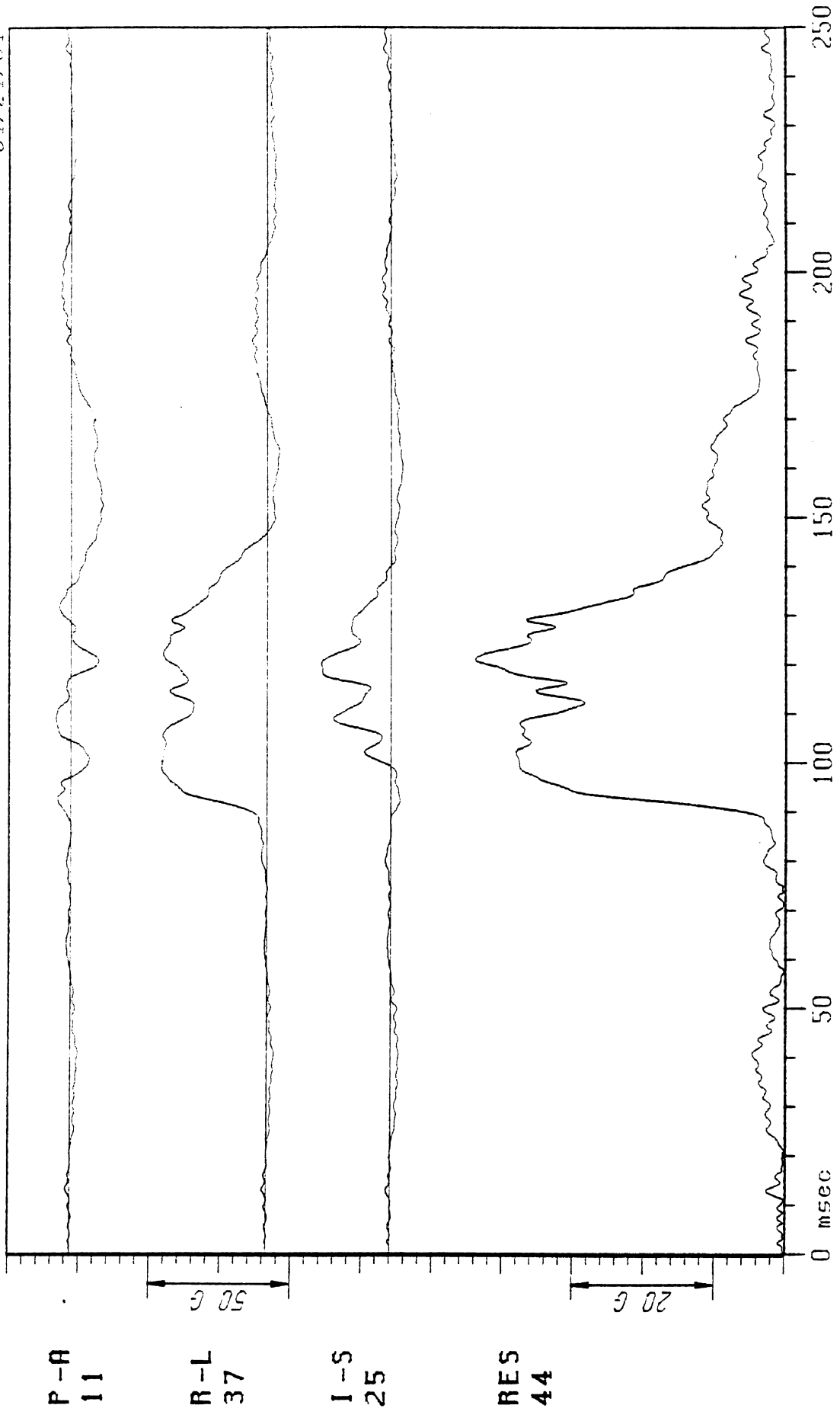
04/24/84



XP 8412

HEAD ACCEL.

04/24/84



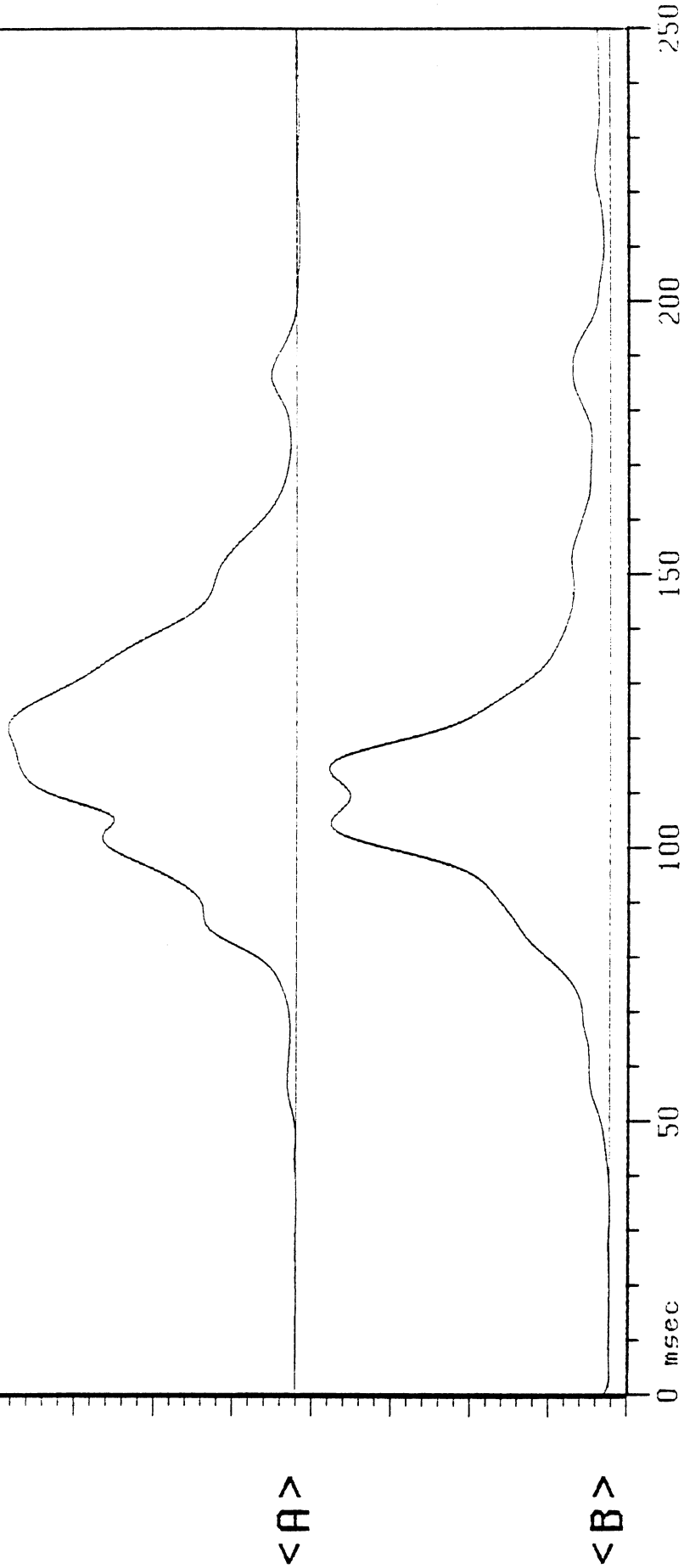
CHEST ACCEL.

XP 8412

04/24/84

500

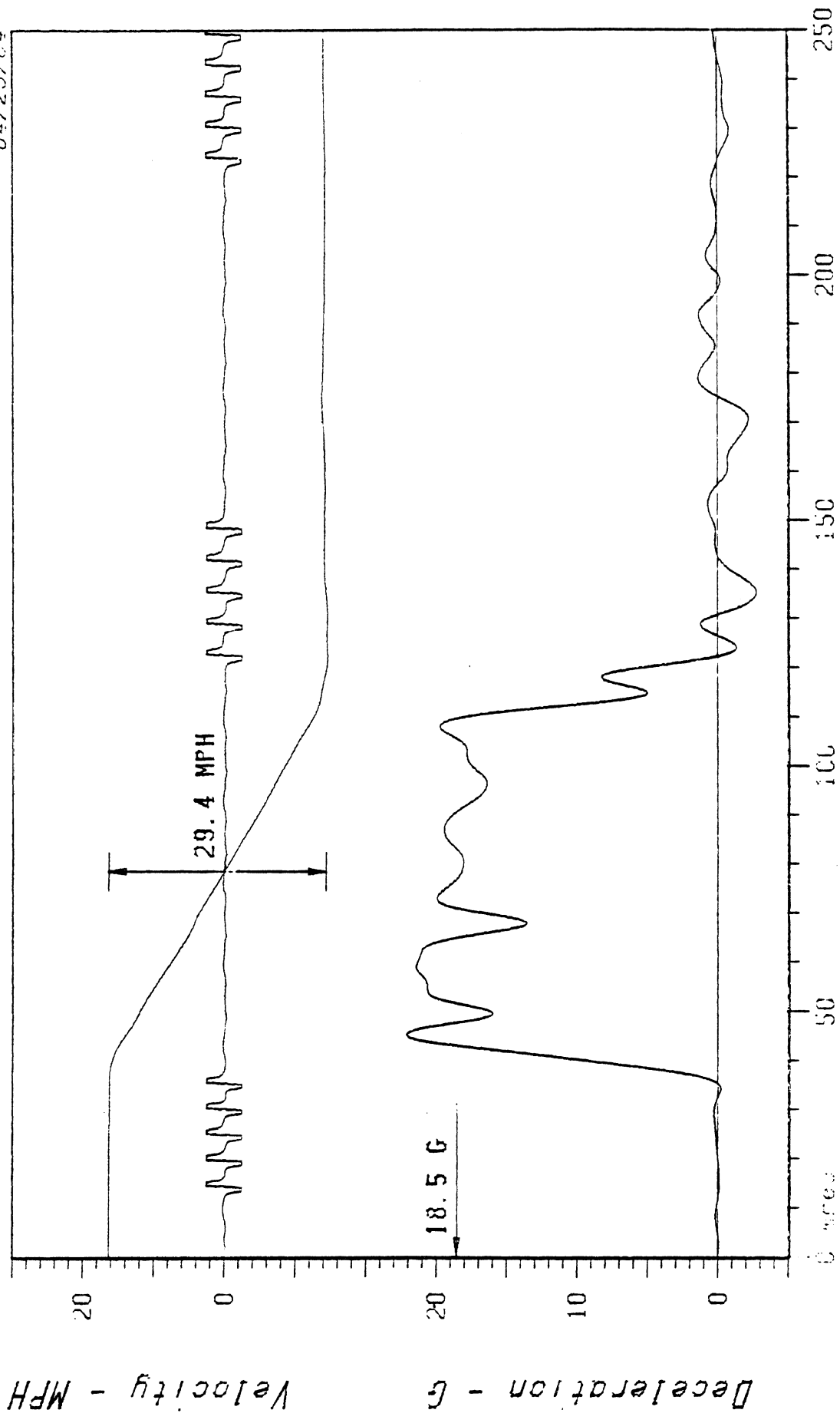
<A> = RIGHT LAP Peak = 911 LB
 = LEFT LAP Peak = 891 LB



XP 8412

BELT LOADS

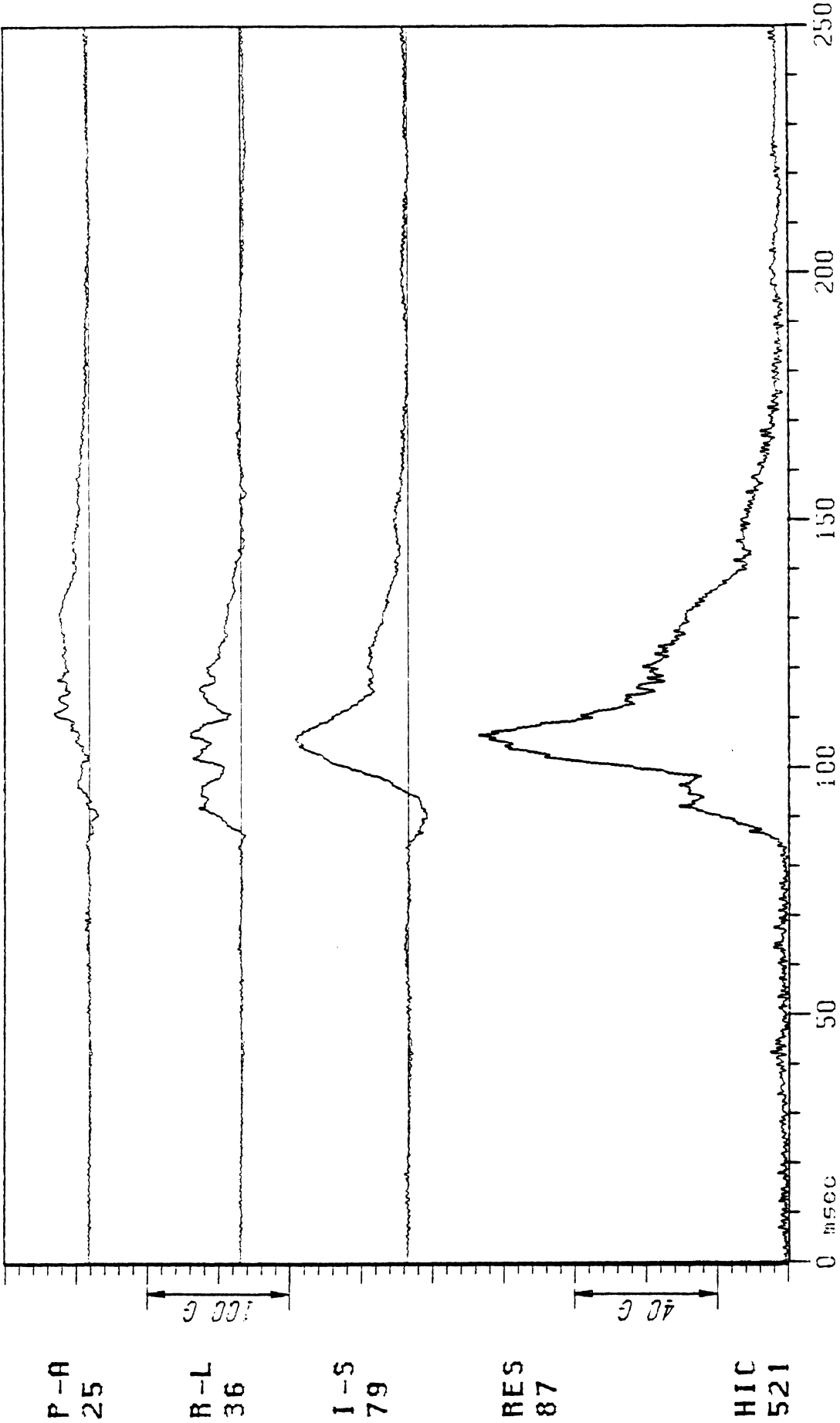
04/25/84



XP 8414

SLED PROFILE

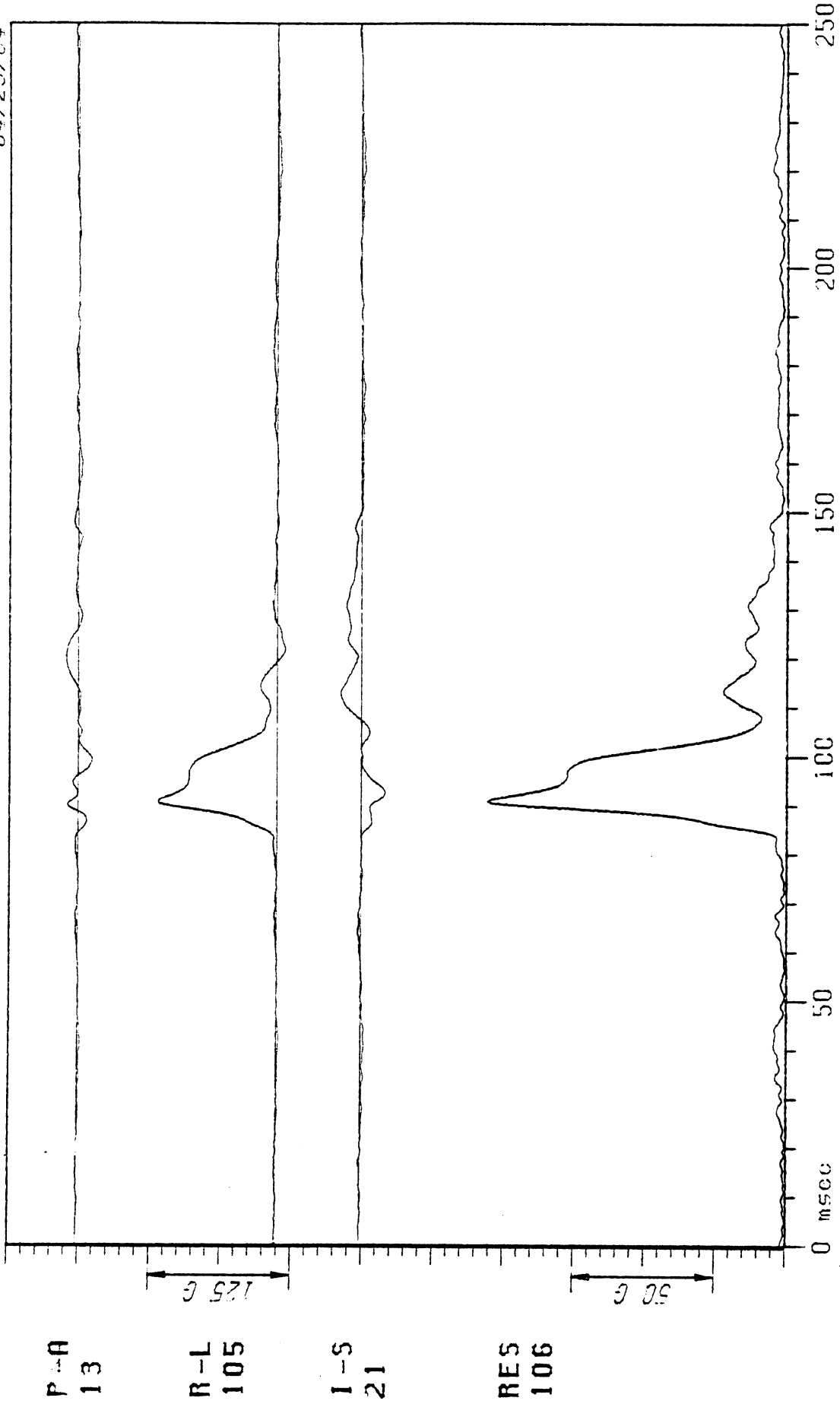
04/25/84



XP 8414

HEAD ACCEL.

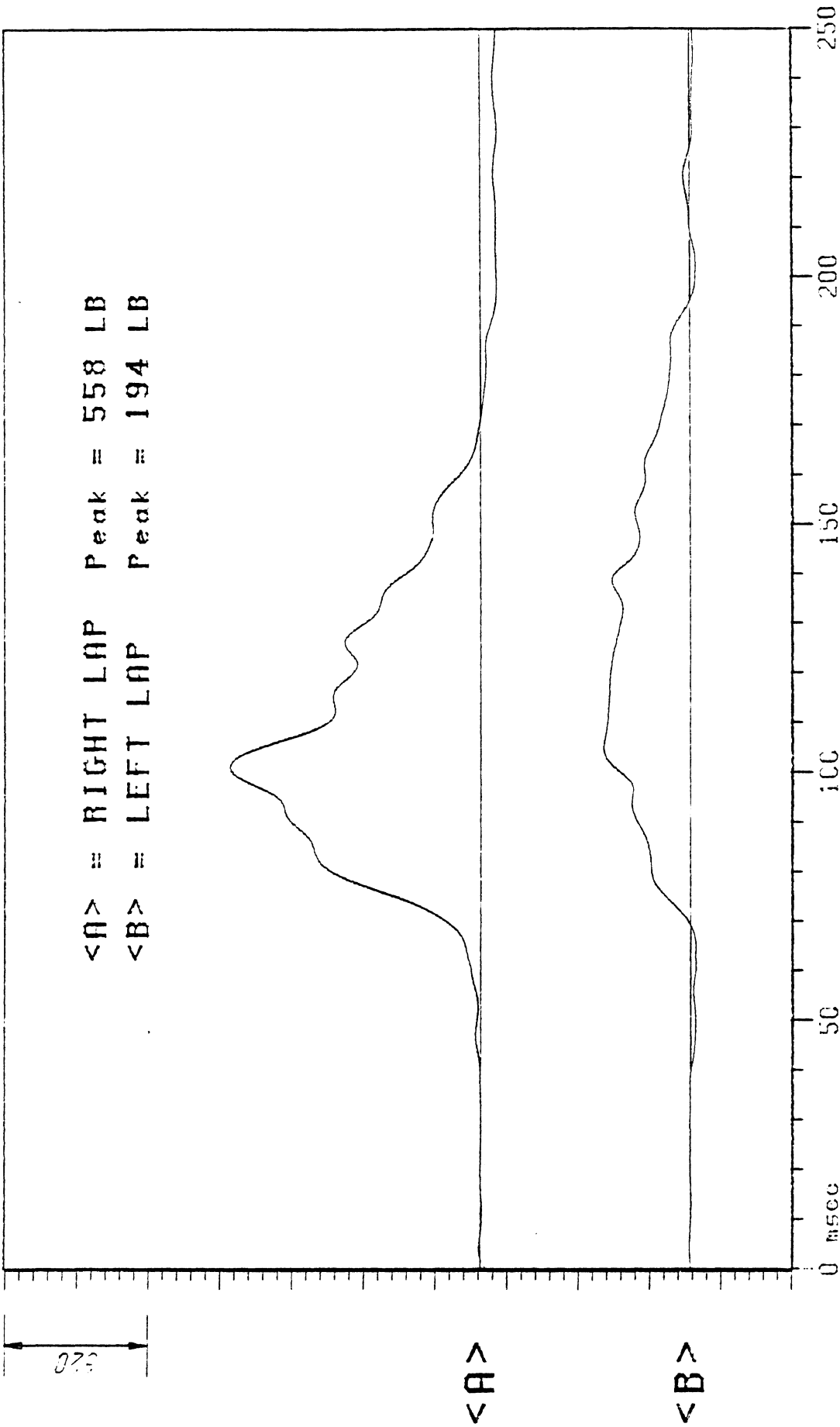
04/25/84



XP 8414

CHEST ACCEL.

04/25/84



XP 8414

BELT LOADS