

1992

PAGE NO.
SRDL TEST #C-5952
TEST DATE May 3, 1992

TEST REPORT

IMPACT OF NHTSA CRUSHABLE MOVING BARRIER TO PARKED
VEHICLE BARRIER - 0° FRONT

VEHICLE DESCRIPTION

TEST VEHICLE:

A 1000 lb weight moving barrier with load cells and a flat face fixture mounted to the front. The flat face was designed to contact the bumper and was made of sheet metal of a 1980 GM X-body. Four load cells were mounted to the back of the flat face, two on each end, positioned top and bottom. The flat face fixture was divided into two sections, each being 356 mm in height and 305 mm in length. These sections were mounted laterally across the front of the barrier with a 6.4 mm vertical separation between them. This allowed for separate readings of the upper and lower forces applied to the barrier from the ground to the bottom of the first load cell section was 280 mm. See Figures 55-56.

STRIKING VEHICLE:

NHTSA crushable moving barrier with developed energy absorbing face. The absorbing face is made of Hexcel and was developed to give the same characteristics as the crush of a 1980 GM X-body. Fisher Body modified the face by cutting sections out to allow for a closer simulation of the load pattern, see Page 2.

TEST CONDITIONS

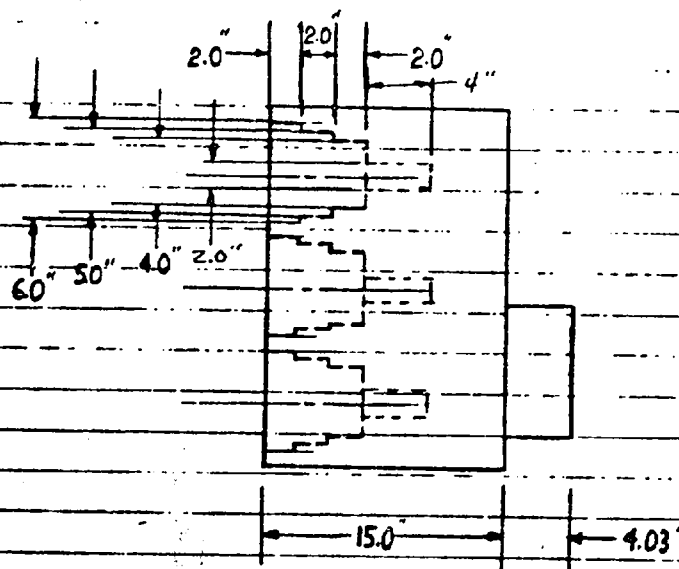
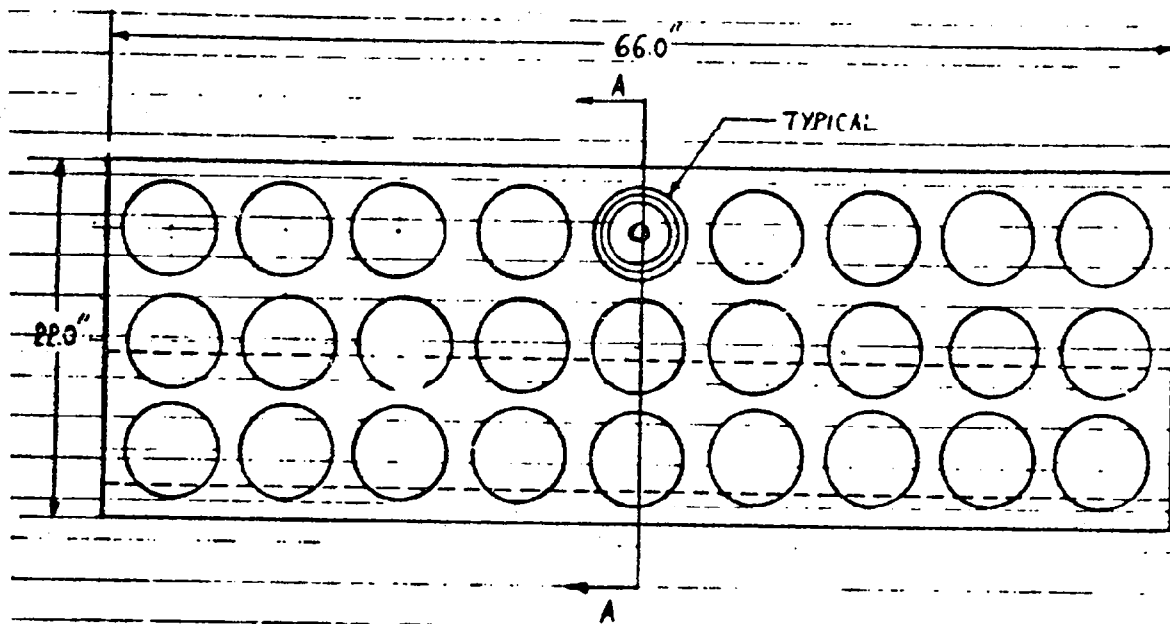
Striking velocity at impact 42.1 km/h.

STRIKING VEHICLE MASS	FRONT	1010 kg	REAR	350 kg	TOTAL	1360 kg
STRIKING VEHICLE MASS	FRONT	888 kg	REAR	458 kg	TOTAL	1346 kg

RECORDED DATA

<u>STRUCK VEHICLE</u>	<u>STRIKING VEHICLE</u>	<u>PHOTOGRAPHIC COVERAGE</u>
FRONT LONGITUDINAL ACCELERATIONS	FRONT LONGITUDINAL ACCELERATIONS	OVERHEAD
MID LONGITUDINAL ACCELERATIONS	MID LONGITUDINAL ACCELERATIONS	UNDERBODY
VEHICLE KINEMATICS	VEHICLE KINEMATICS	DRIVER SIDE CLOSEUP
VEHICLE KINEMATICS	VEHICLE KINEMATICS	PASSENGER SIDE CLOSEUP
FRONT BARRIER TRIAX LOADS		
LOWER BARRIER TRIAX LOADS		

HEXCELL FACE MODIFICATION DESCRIPTION - FACE B



SECTION A-A

MEASUREMENT IN INCHES

PAGE NO. 1
SRDL TEST #C-544
TEST DATE May 2, 1968

INSTRUMENTATION AND FILM ANALYSIS DATA INDEX

STRUCK VEHICLE:

1-1 BARRIER FRONT LONGITUDINAL ACCELERATION
1-2 COMPUTED AVERAGE BARRIER FRONT LONGITUDINAL VELOCITY
1-3 COMPUTED AVERAGE BARRIER FRONT LONGITUDINAL DISPLACEMENT
1-4
1-5 BARRIER MID LONGITUDINAL ACCELERATION
1-6 COMPUTED AVERAGE BARRIER MID LONGITUDINAL VELOCITY
1-7 COMPUTED AVERAGE BARRIER MID LONGITUDINAL DISPLACEMENT
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REPORT NO. 43

SRI TEST NO. C-5952

PHOTOGRAPH INDEX

FIGURE NUMBER	PRE TEST PHOTOGRAPHS
	OVERALL OF VEHICLE FROM DRIVER SIDE
	OVERALL OF VEHICLE FROM PASSENGER SIDE
	FRONT OF VEHICLE FROM DRIVER SIDE
	FRONT OF VEHICLE FROM PASSENGER SIDE
	INTERIOR FROM DRIVER SIDE
	INTERIOR FROM PASSENGER SIDE
	WINDSHIELD FROM DRIVER SIDE
	WINDSHIELD FROM PASSENGER SIDE
53-54	OVERALL OF TEST CONFIGURATION
55-56	CLOSEUP OF IMPACT AREA
57	OVERALL FRONT VIEW - STRIKING VEHICLE
	<u>POST TEST PHOTOGRAPHS</u>
	OVERALL OF VEHICLE FROM DRIVER SIDE
	OVERALL OF VEHICLE FROM PASSENGER SIDE
	FRONT OF VEHICLE FROM DRIVER SIDE
	FRONT OF VEHICLE FROM PASSENGER SIDE
	INTERIOR FROM DRIVER SIDE DOOR CLOSED
	INTERIOR FROM PASSENGER SIDE DOOR CLOSED
	INTERIOR FROM DRIVER SIDE DOOR OPEN
	INTERIOR FROM PASSENGER SIDE DOOR OPEN
	WINDSHIELD FROM DRIVER SIDE
	WINDSHIELD FROM PASSENGER SIDE
	FRONT

59528 BP-47 TO BARRIER

565-448

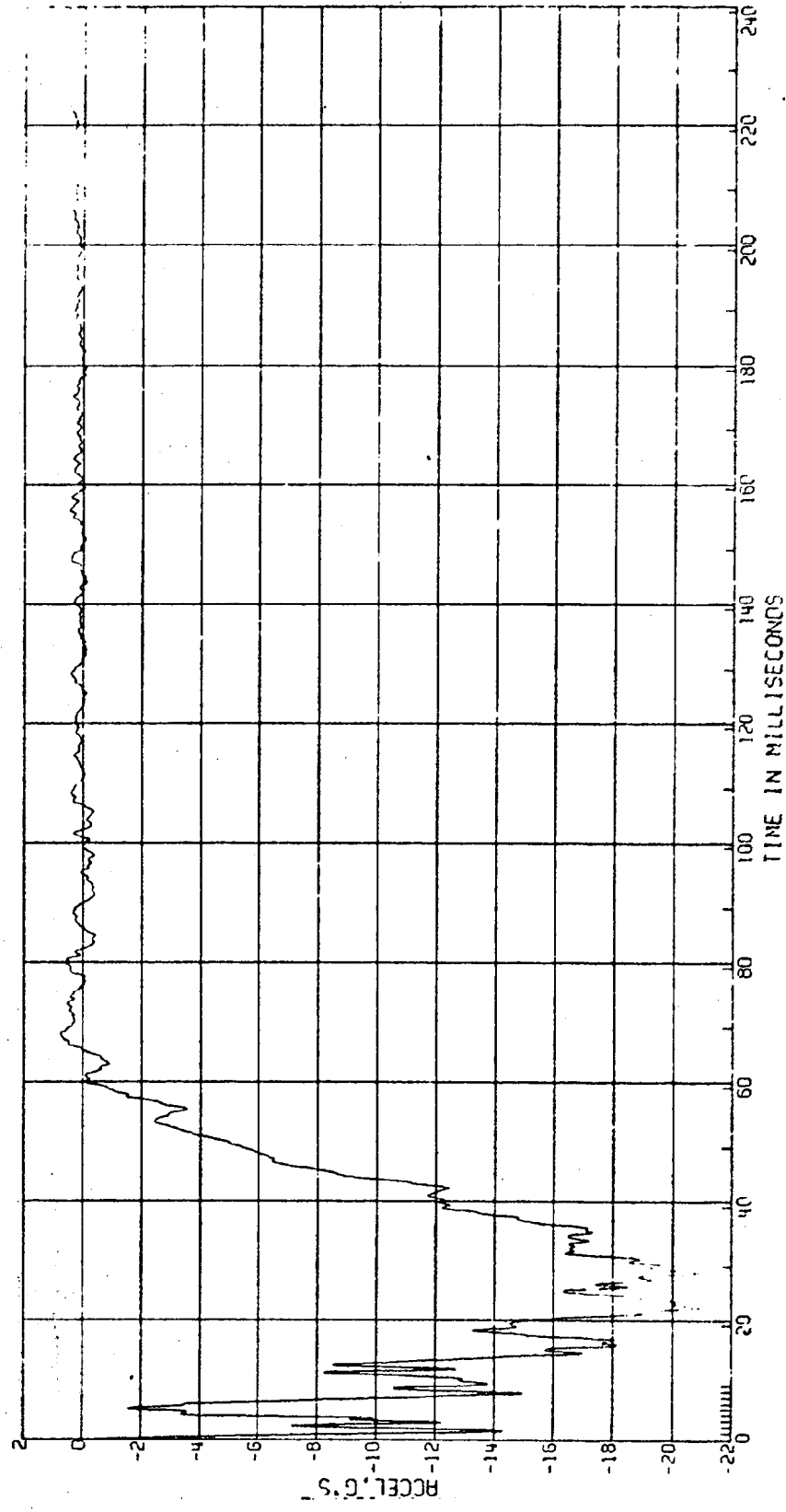
ISHER BODY FRAME B

-D DATA SPE CHSS 60

DEFORMABLE BARR TO LOAD CELL SUPER FWD 2.1 INCHES 1.000

ON-SIDE STRUCK BARRIER FWD 1.000

TEST DATE 05 10 1964



RELEASED BY: J. J.
1 PROCESSED 1 MT SW 8:29

59528 BARRIER TO BARRIER

DEFORMABLE BARR TO LOAD CELL BARRIER 42.1 KM/H FIGURE 2

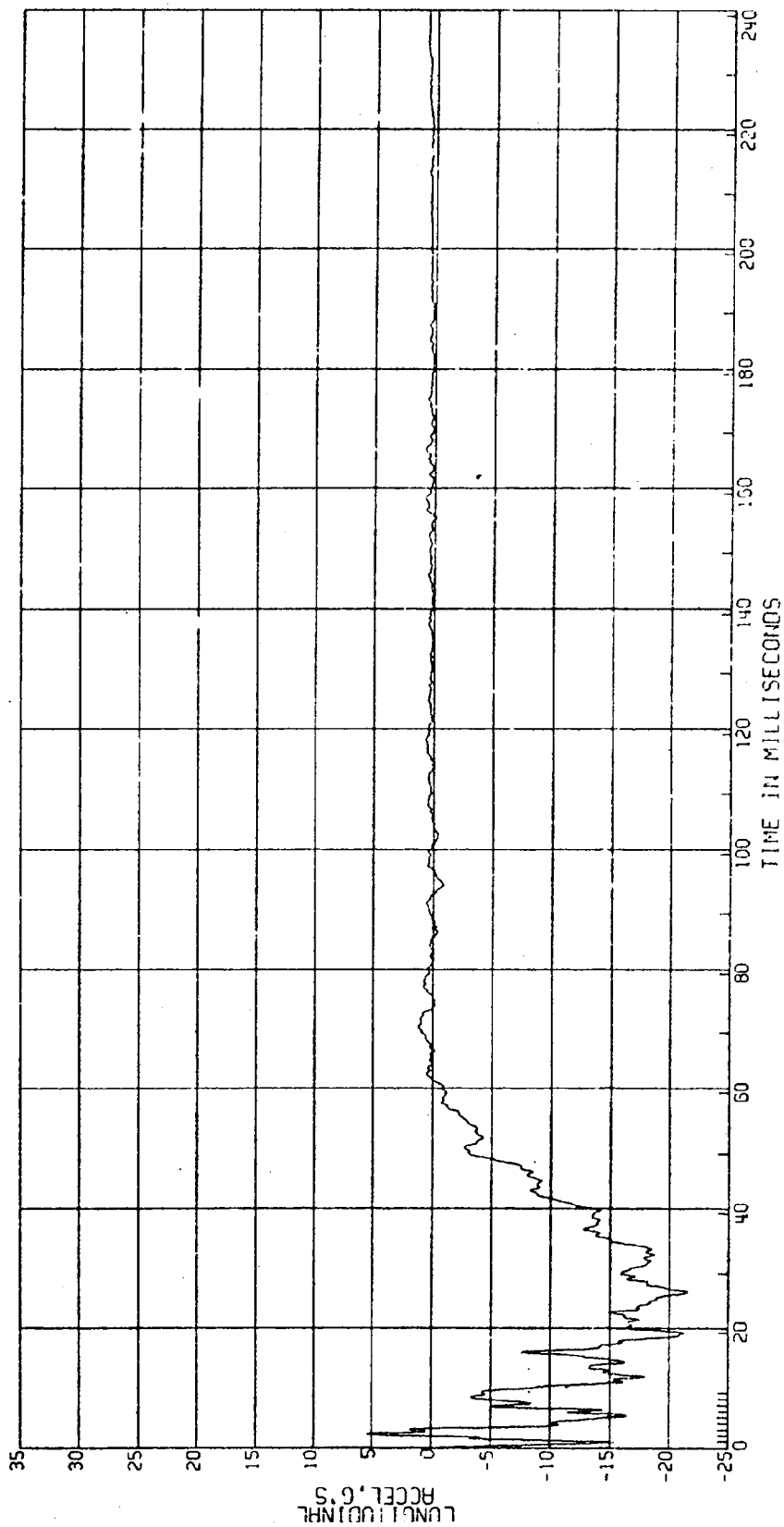
3865-448

1-SHER BODY FACE B

PASS-SIDE STRUCK BARRIER FRONT ACCEL.

TEST DATE: 05-03-84

1-D DATA SAE CLASS 60



RELEASED BY: 2
2 PROCESSED 4 MAY 84 15:28

59526 BARR. TO BARRIER

DEFORMABLE BARR TO LOAD CELL BARRIED 192 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000

865-448

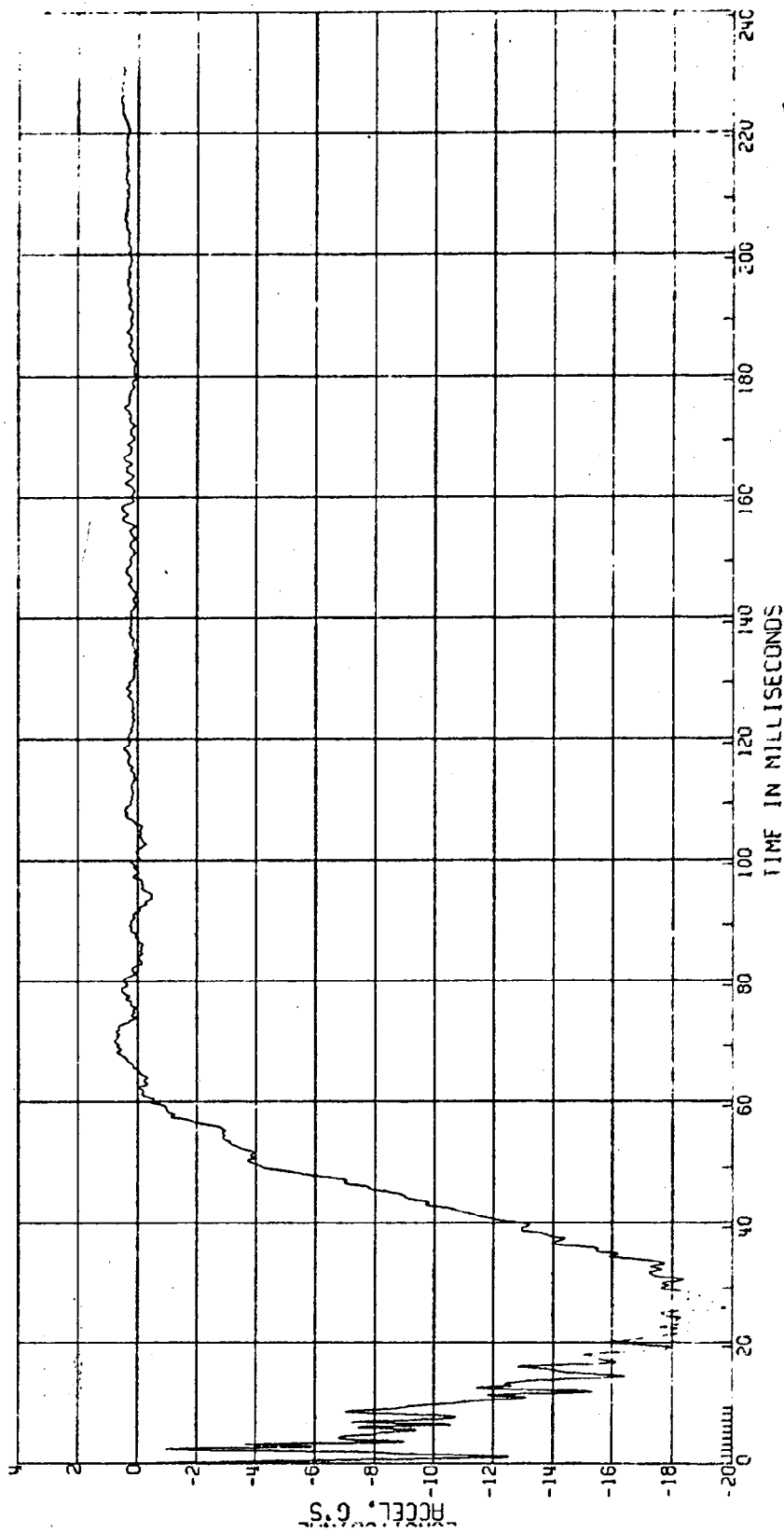
ISHER 8001 PAGE 8

-D DATA ARE CLASS 60

AVERAGED DR & PASS JOLTS

1931 04-15 13 34

AVERAGED STRUCK BARR 101 ACCLL



RELEASED BY: 3 1931 04-15 13 34

C59528 BARRIER TO BARRIER

3865-448

FISHER BODY FACE B

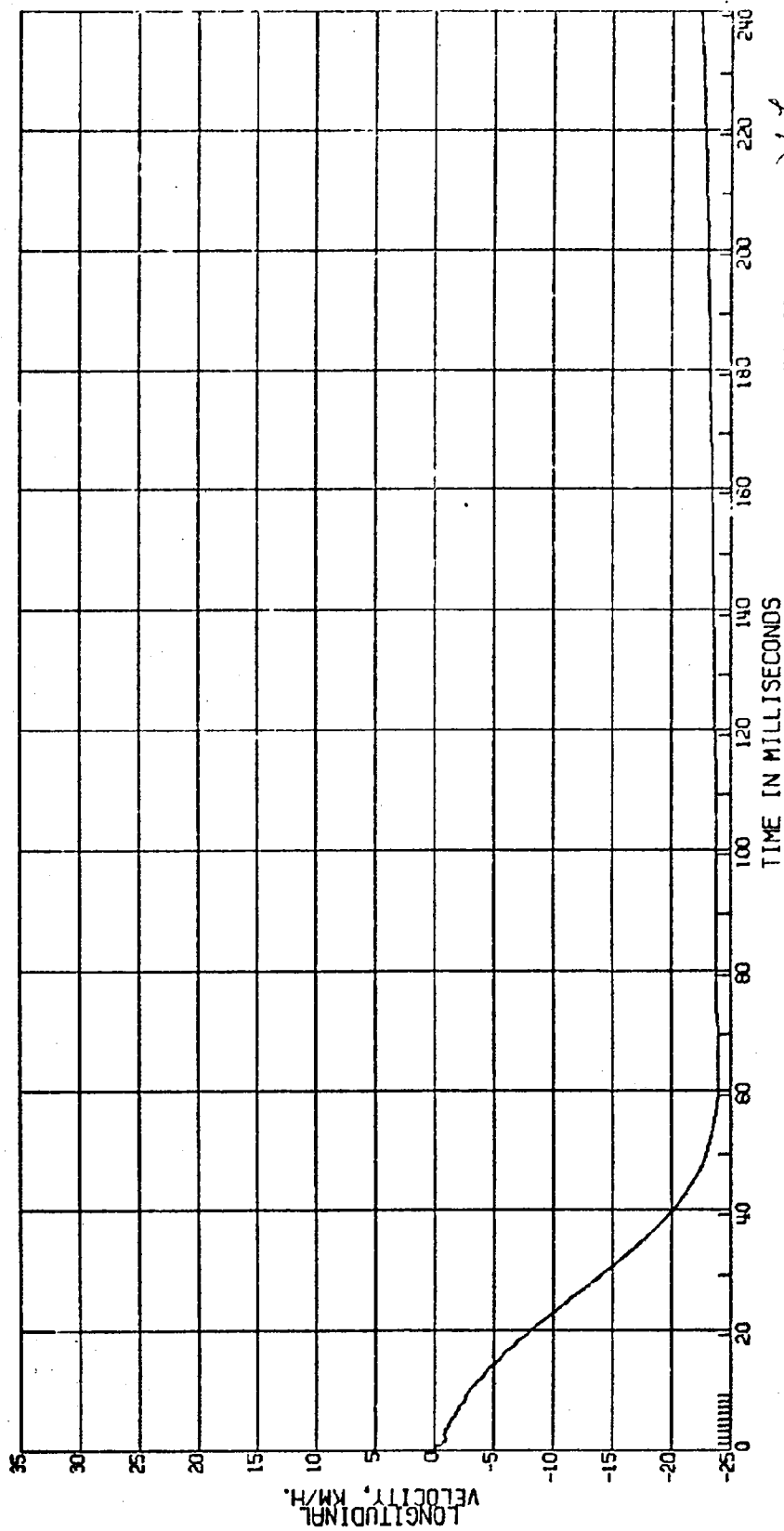
A-D DATA SAE CLASS 180

DEFORMABLE BARR TO LOAD CELL BARRIER 42.1 KM/H FIGURE 4

COMPUTED STRUCK BARR FRT VEL

TEST DATE: 05-03-84

(1ST INTEGRAL AVERAGED ACCELERATION)



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59528 APPROX TO BARRIER

3865-446

FISHER BODY PAGE B

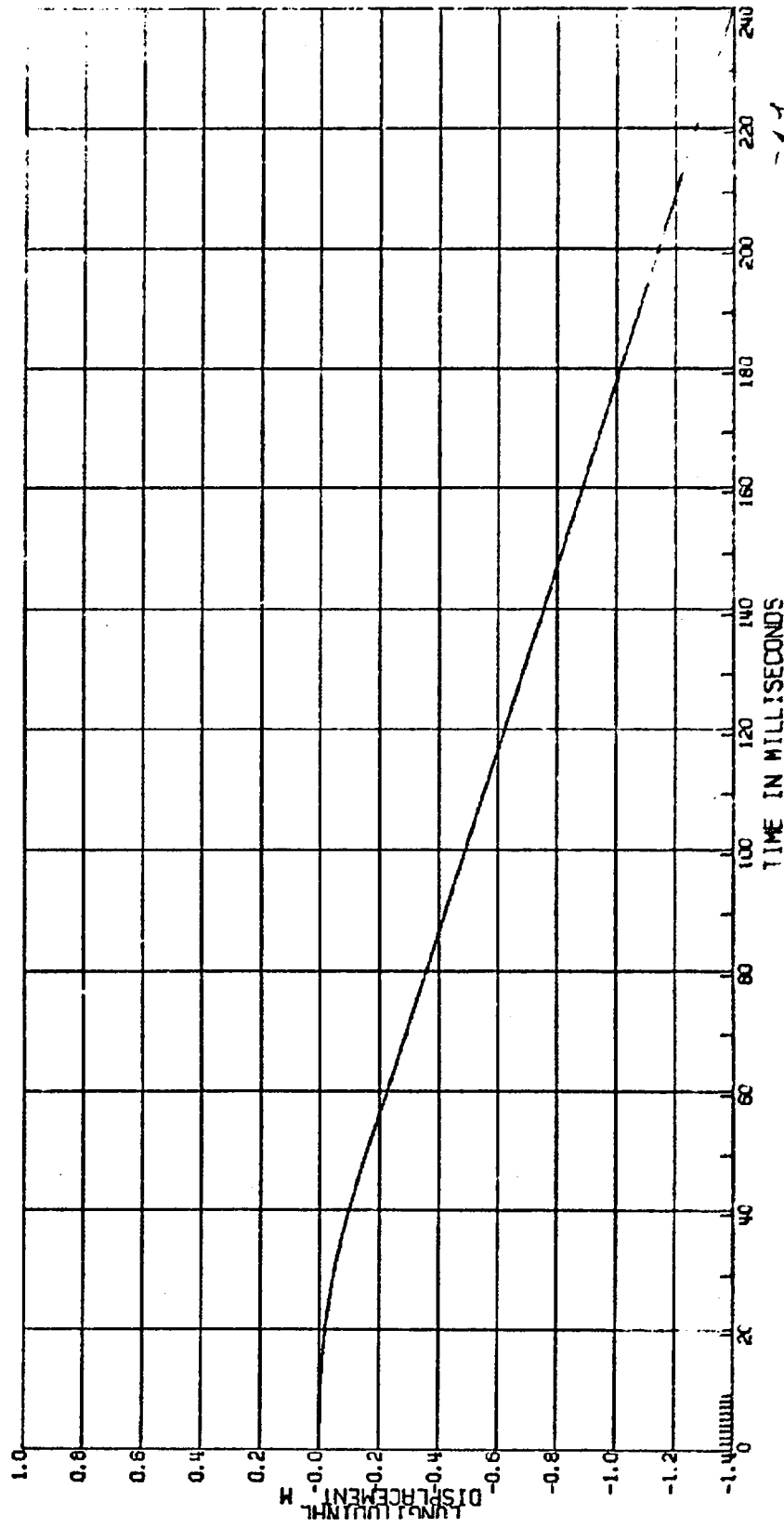
1-D DATA SHE CLASS 180

DEFORMABLE BARR TO LOAD CELL RESPONSE, 1 KM/H STOPS

COMPUTED STRUCK BARR FST DISP

TEST 1005-05 02 AM

(2ND INTEGRAL AVERAGED ACCELERATION)



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DEFORMABLE BARR TO LOAD CELL BARRIER 42.1 KM/H FIGURE 4

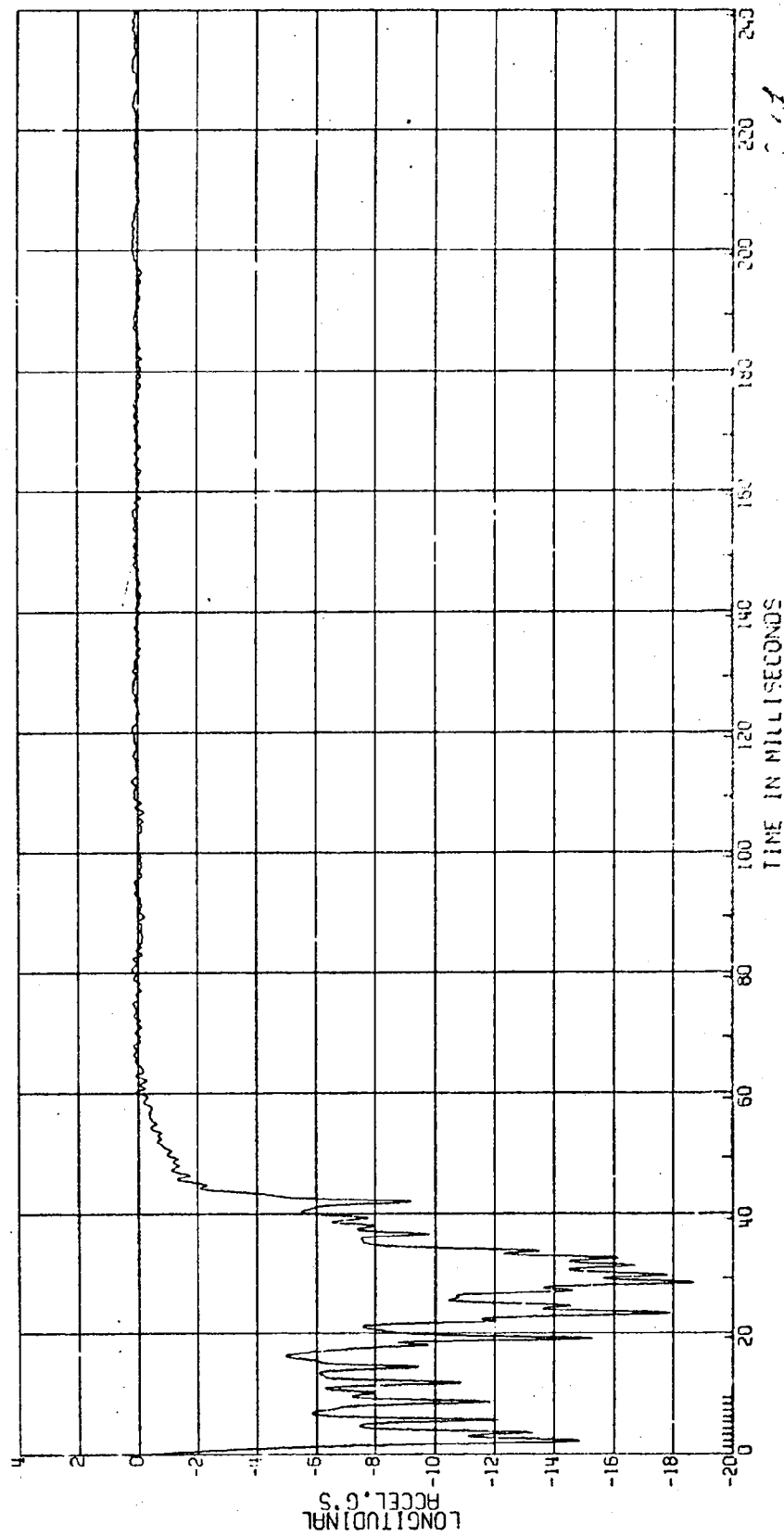
3865-448

FISHER BODY FACE B

DR-SIDE STRUCK BARRIER MID ACCEL. CM50SI

TEST DATE: 05-03-84

1-D DATA SAE CLASS 60



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59528 BODY TO BARRIER

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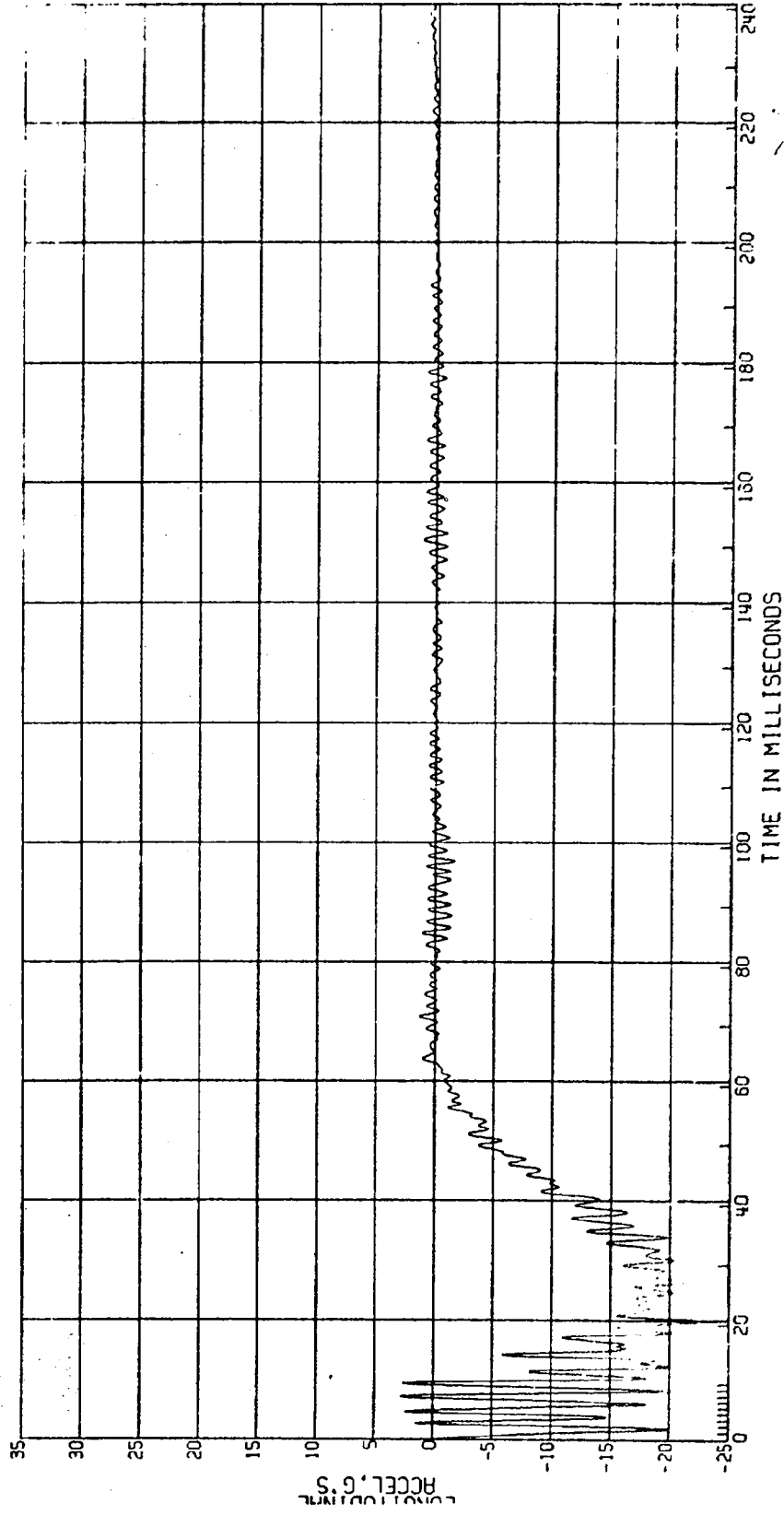
1865-448

IGNER BODY FACE B

PASS-SIDE STRUCK BARRIER MID POINT

TEST DATE 05-23-84

I-D DATA SAE CLASS 60



RELEASED BY: J
5 PROCESSED 11:29

C59528 BARRIER TO BARRIER

3865-448

FISHER BODY FACE B

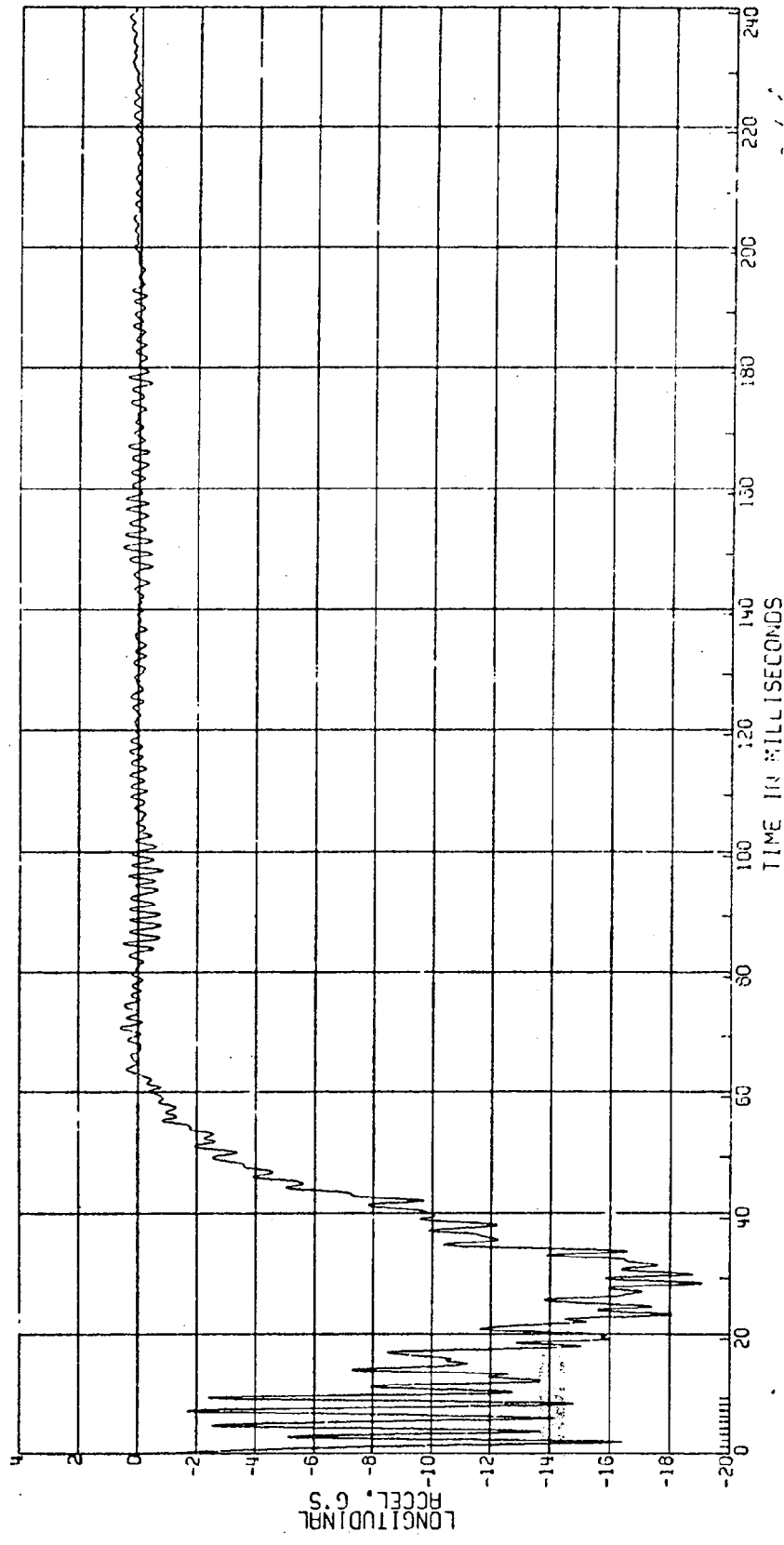
A-D DATA SAE CLASS 60

DEFORMABLE BARR TO LOAD CELL BARRIER42.1KM/H FIGURE 8

AVERAGED UR & PASS SIDES

TEST DATE:05-03-84

AVERAGED STRUCK BARR MID ACCEL



RELEASED BY: *214*
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9528 BARRIERS TO BARRIER

65-446

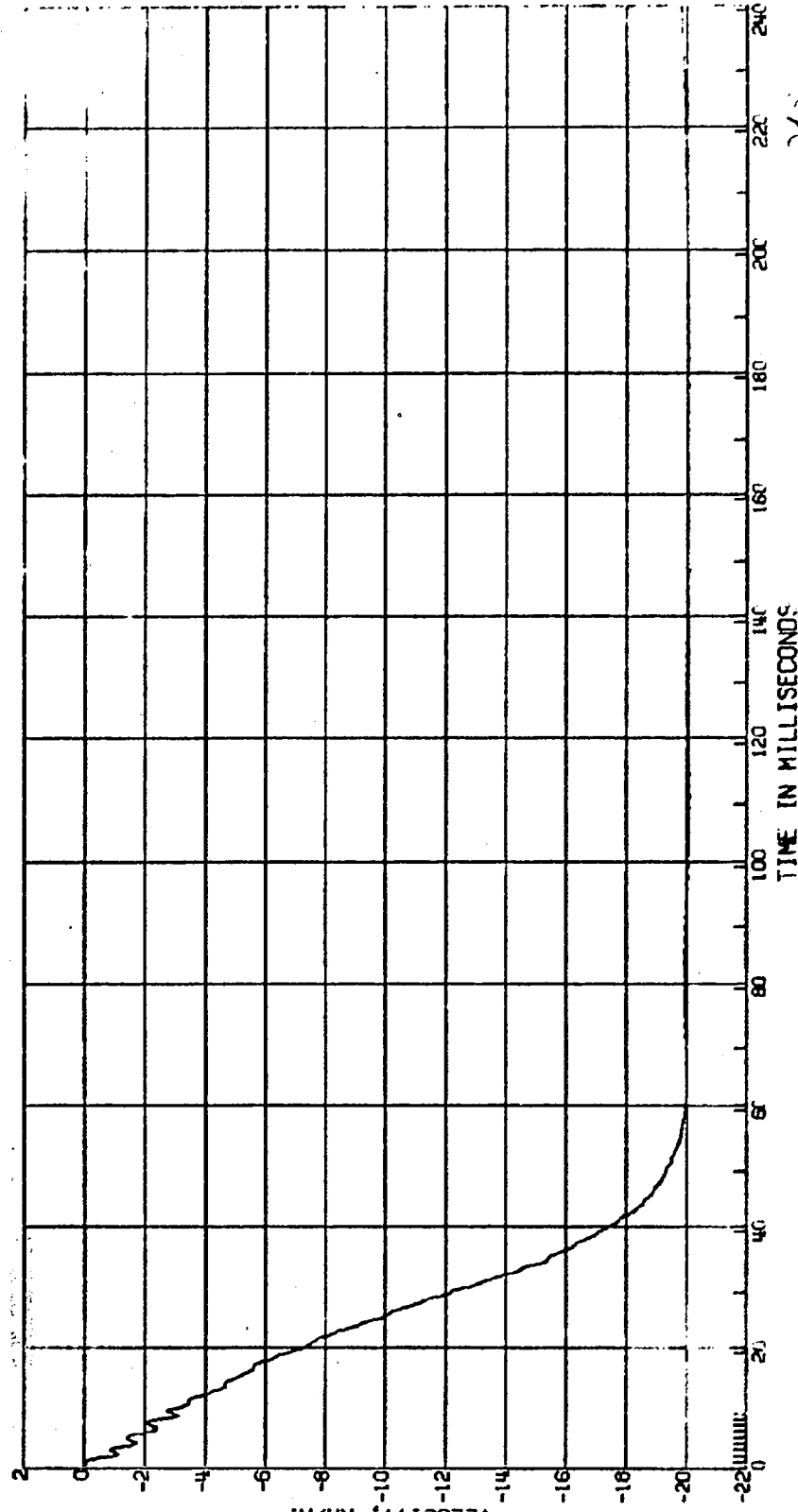
SHER BODY FACE B

D DATA SAE CLASS 180

DEFORMABLE BARR TO LOAD CELL RECORDING

COMPUTED STRUCK BARR MID V

(1ST INTEGRAL AVERAGED ACCELERATION)



RELEASED BY: 2/5
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59520 BARRIER TO BARRIER

DEFORMABLE BARR TO LOAD CELL BARRIER 2.1 KM/H FIGURE 10

835-448

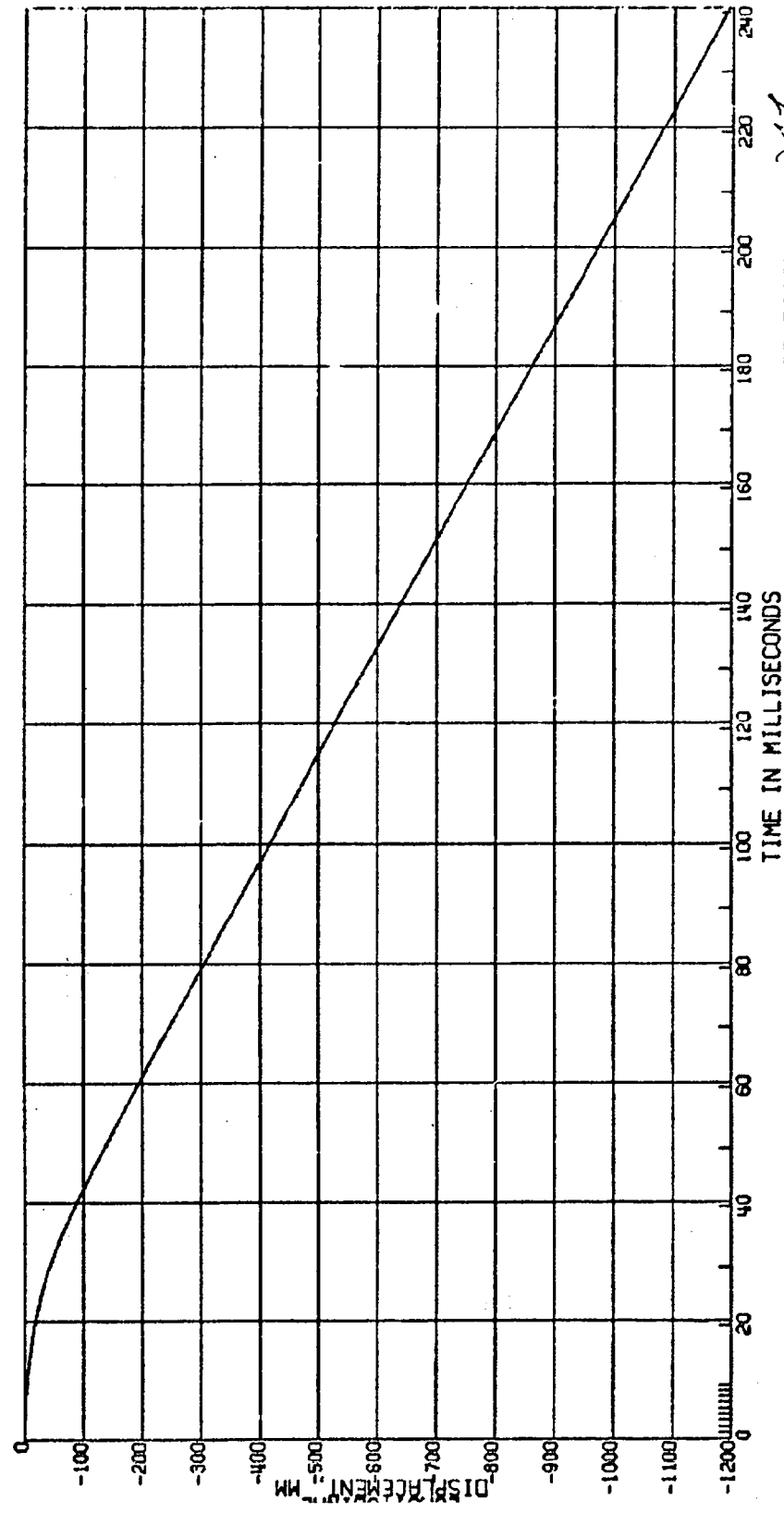
ISHER BODY FACE B

-D DATA SAE CLASS 180

COMPUTED STRUCK BARR MID DISP

TEST DATE: 05-03-84

(2ND INTEGRAL AVERAGED ACCELERATION)



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12 PROCESSED 11 MT 94 10:08

9528 FRONT END TO BARRIER

65-448

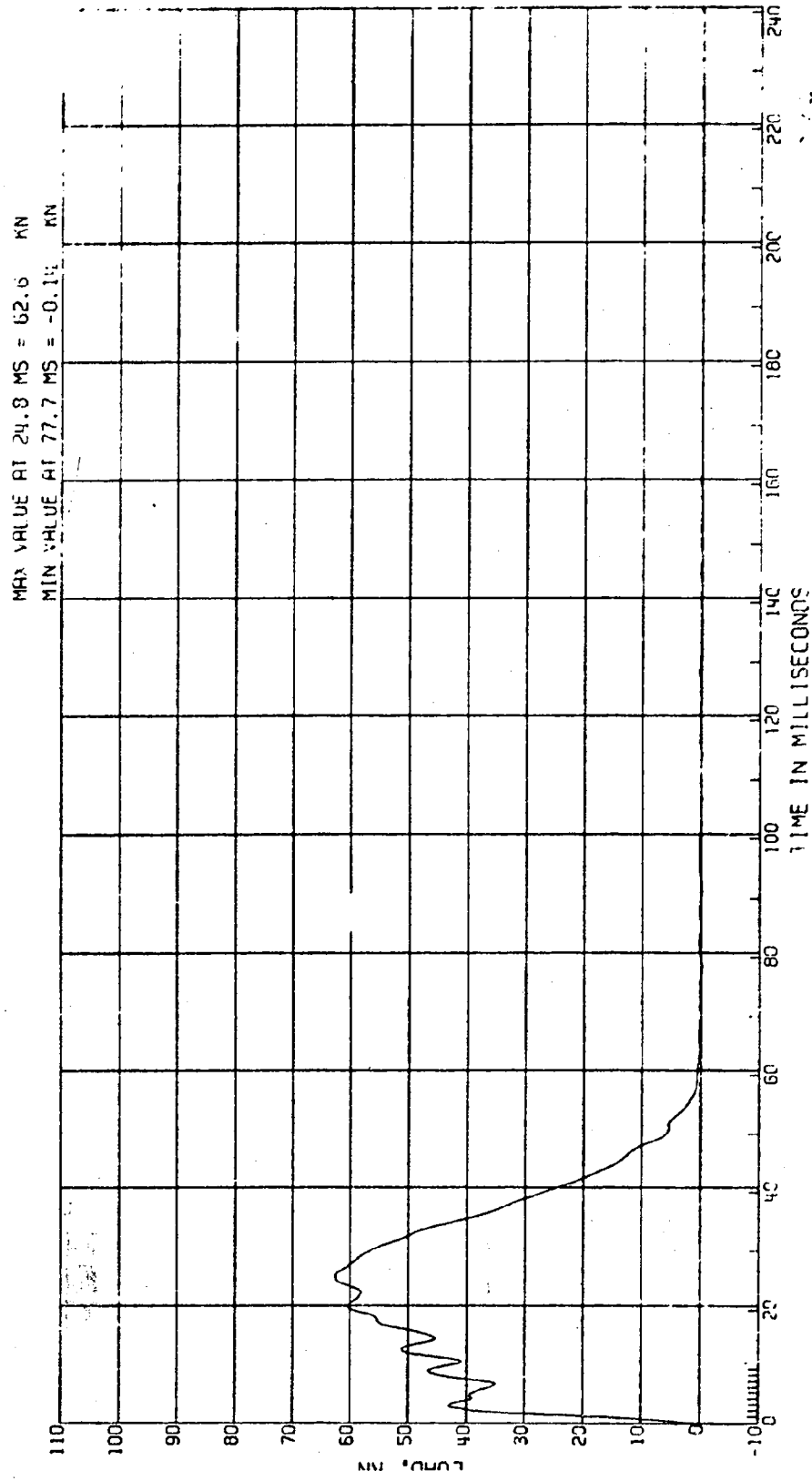
SHER BODY FOLD B

D DATA SAE CLASS 60

DEFORMABLE BARR TO LOAD CELL P79910012, 1MM H P7991001

DR-SIDE STRUCK BARRIER LOWER LOAD

TEST DATE 05 02 84



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13 PROCESSED 4 MAY 84 18:30

59526 BARRIER TO BARRIER

DEFORMABLE BARR TO LOAD CELL BARRIER42.1 KM/H FIGURE 2

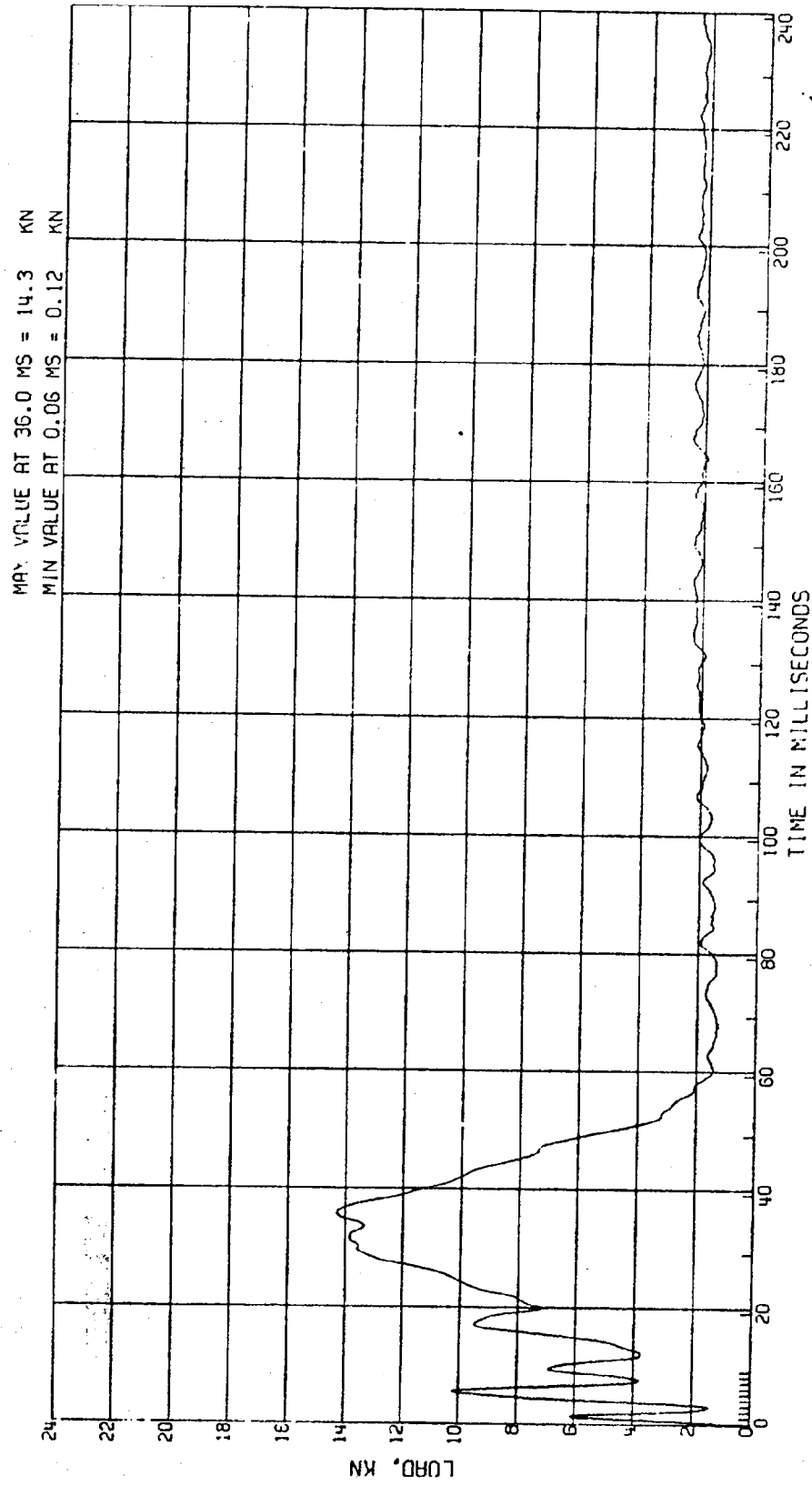
865-442

ISHER BODY FACE B

DR-SIDE STRUCK BARRIER LOWER LOAD

-D DATA SAE CLASS 60

TEST DATE:05-03-84



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19528 BARRIERS TO BARRIER

DEFORMABLE BARR TO LOAD CELL BARRIERS 2.1 KM H 11.000

165-448

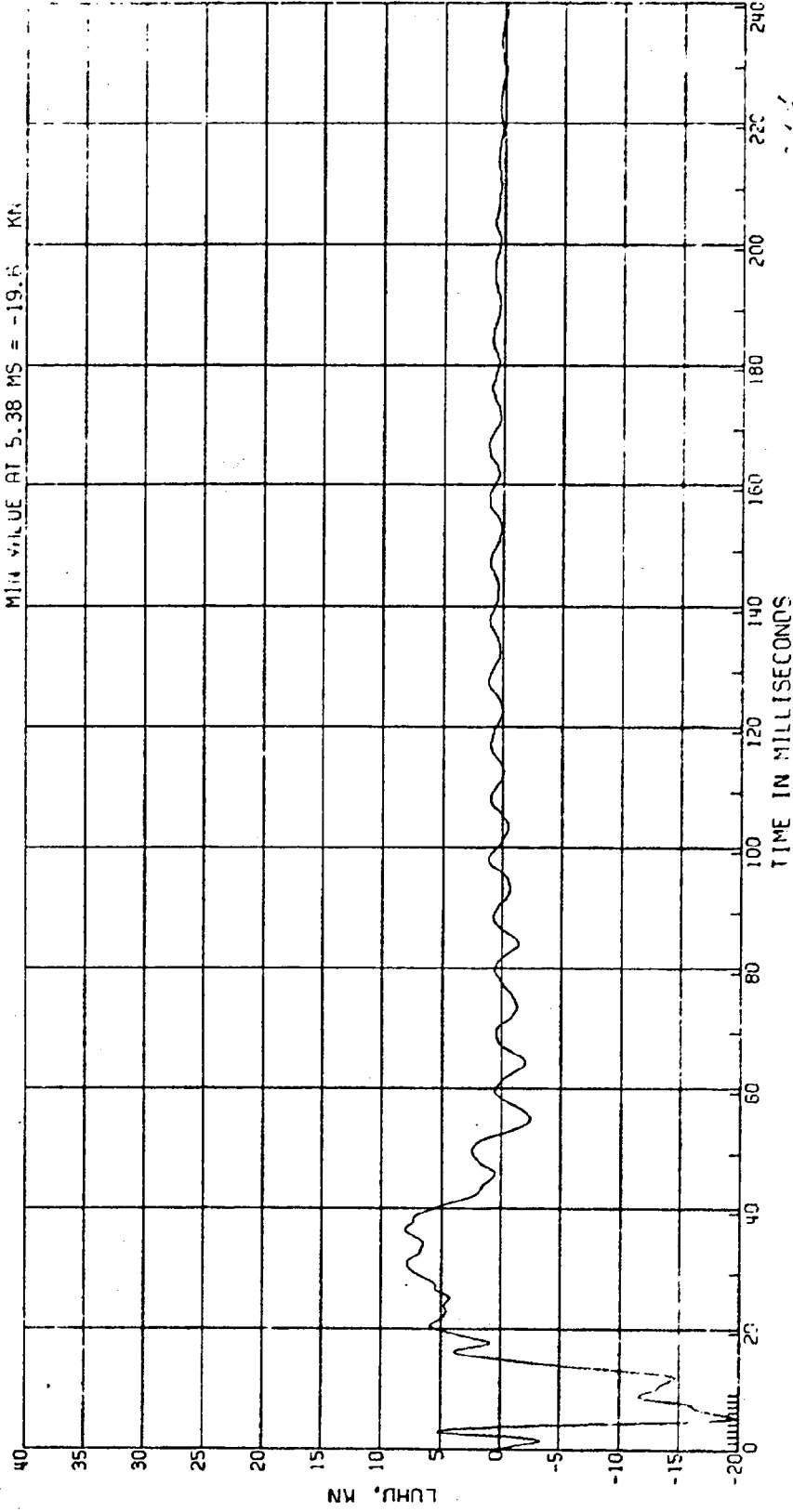
SHER BODY FACE B

DR-SIDE STRUCK BARRIER LOWER LOAD

TEST DATE 05-01-84

0 DATA SEE CLASS 60

MAX VALUE AT 36.5 MS = 8.02 KN
MIN VALUE AT 5.38 MS = -19.6 KN



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15 PROCESSED 4 MT 84 18:30

59528 BARRIER TO BARRIER

DEFORMABLE BARR TO LOAD CELL BARRIER 42.1 KM/H FIGURE 14

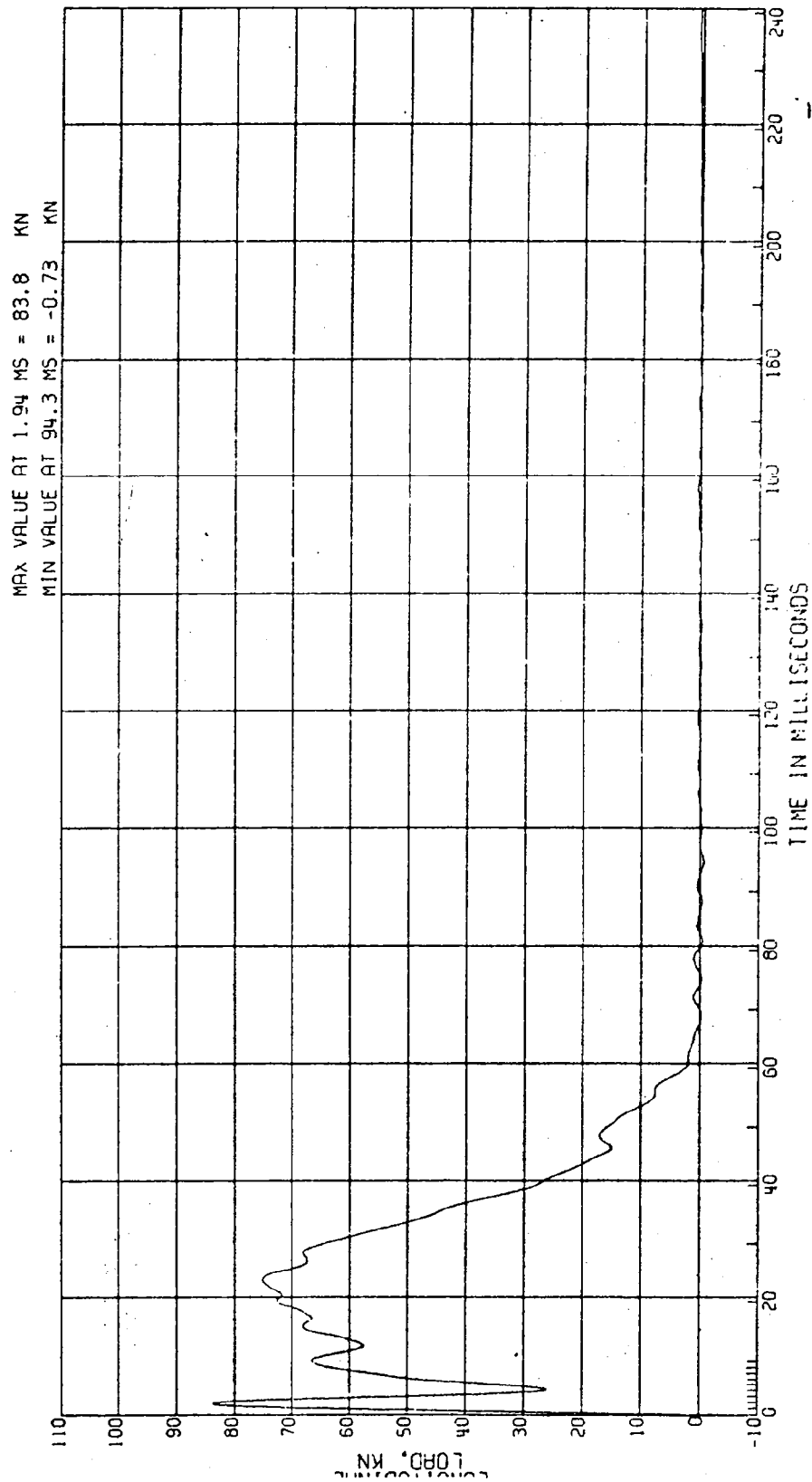
365-448

ISHER BODY FACE B

PASS-SIDE STRUCK BARRIER LOWER LOAD

TEST DATE: 05-03-84

-D DATA SAE CLASS 60



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16 PROCESSED 4 MY 84 18:30

39528 BARRIERS TO BARRIER

DEFORMABLE BARR TO LOAD CELL BARRIER 2.1 KM/H FIGURE

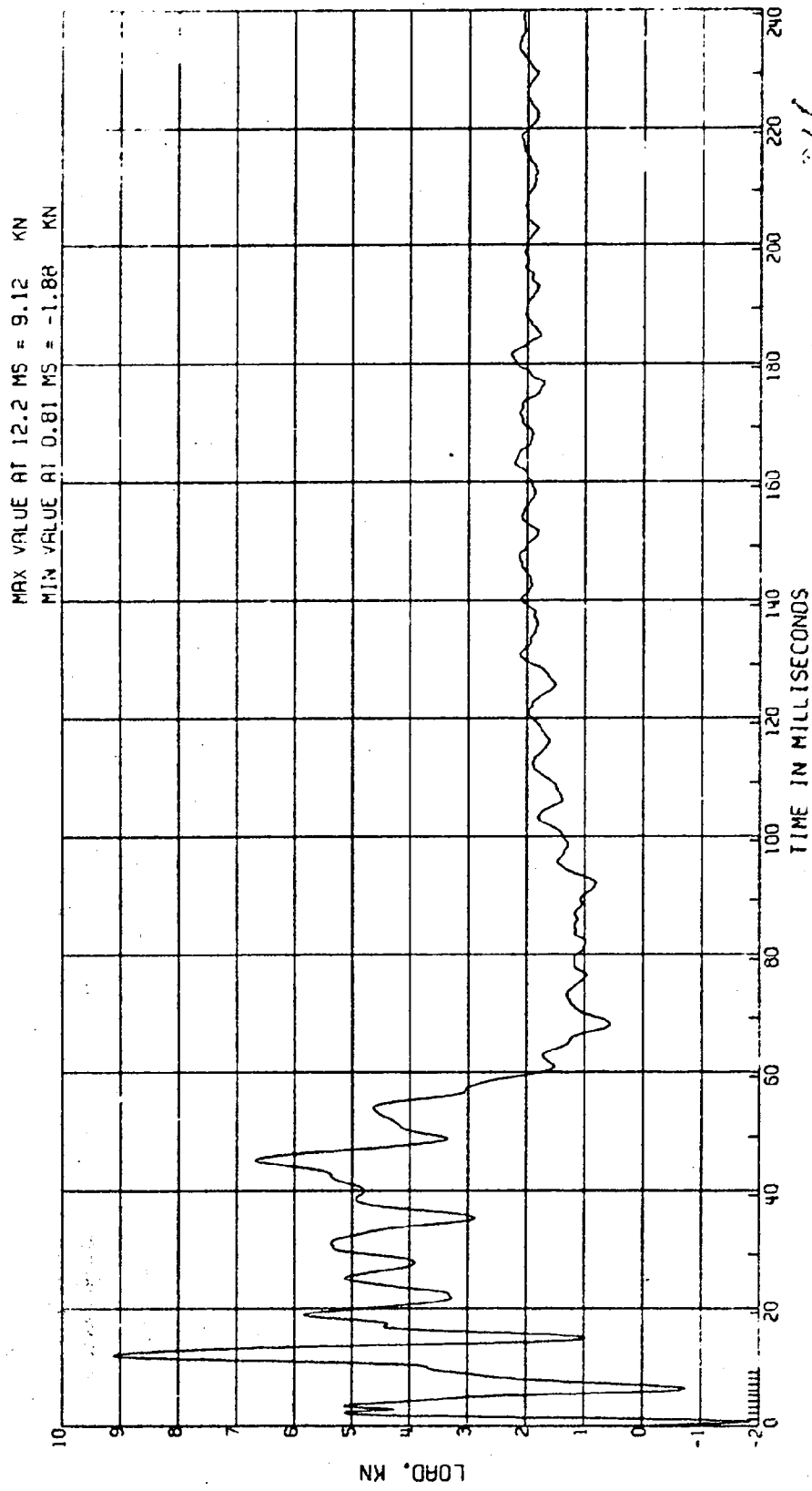
365-448

SHER BODY FACE B

PASS-SIDE STRUCK BARRIER LOWER LOAD

TEST DATE: 05-03-84

-D DATA SAE CLASS 60



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59528 BARRIER TO BARRIER

DEFORMABLE BARR TO LOAD CELL BARRIER 42.1 KM/H FIGURE 4

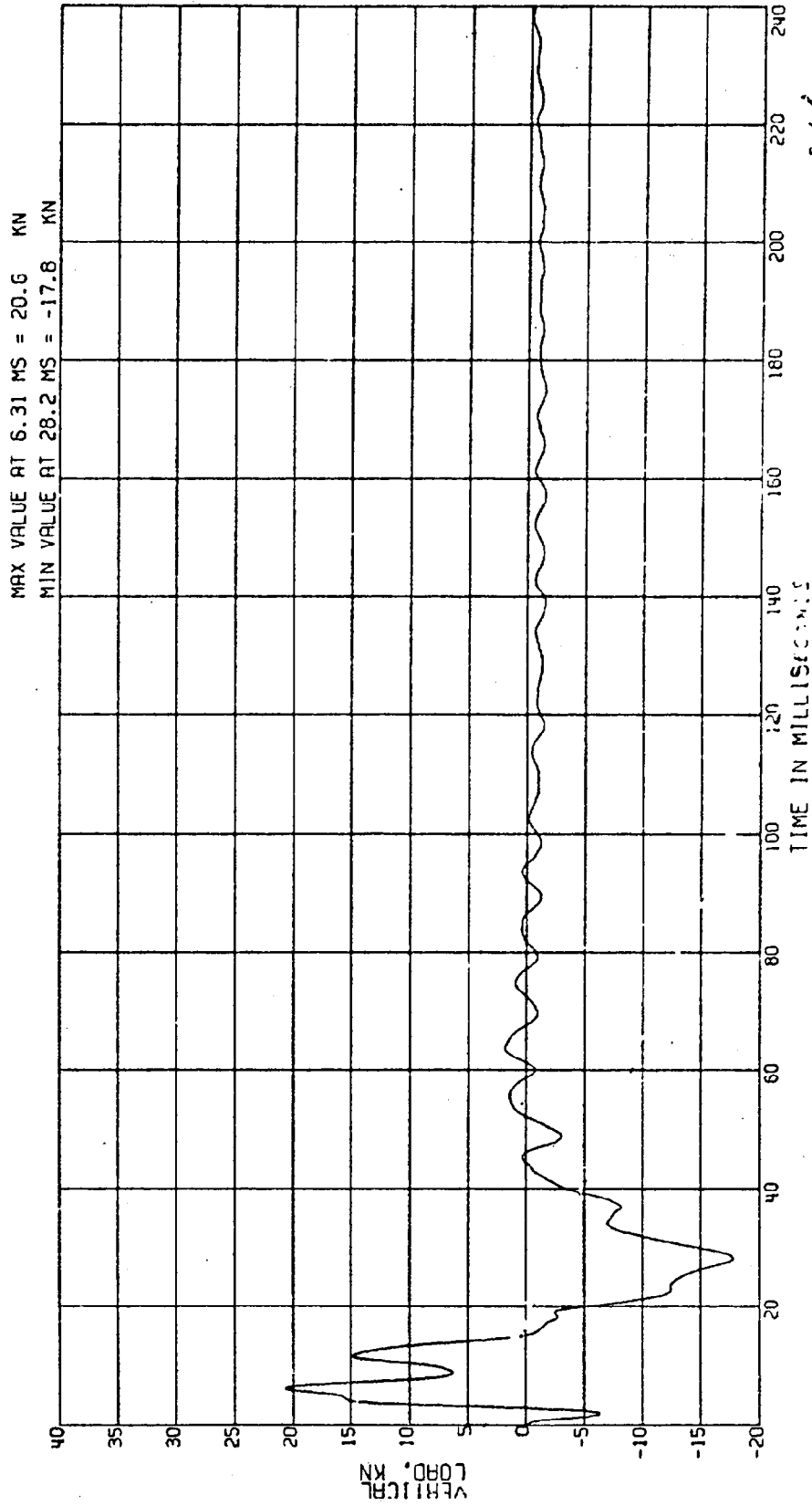
3865-448

FISHER BODY FACE B

1-D DATA SAE CLASS 60

PASS-SIDE STRUCK BARRIER LOWER LOAD

TEST DATE: 05-03-84



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59528 DATA TO BARRIER

865-448

ISHER 8001 FILE B

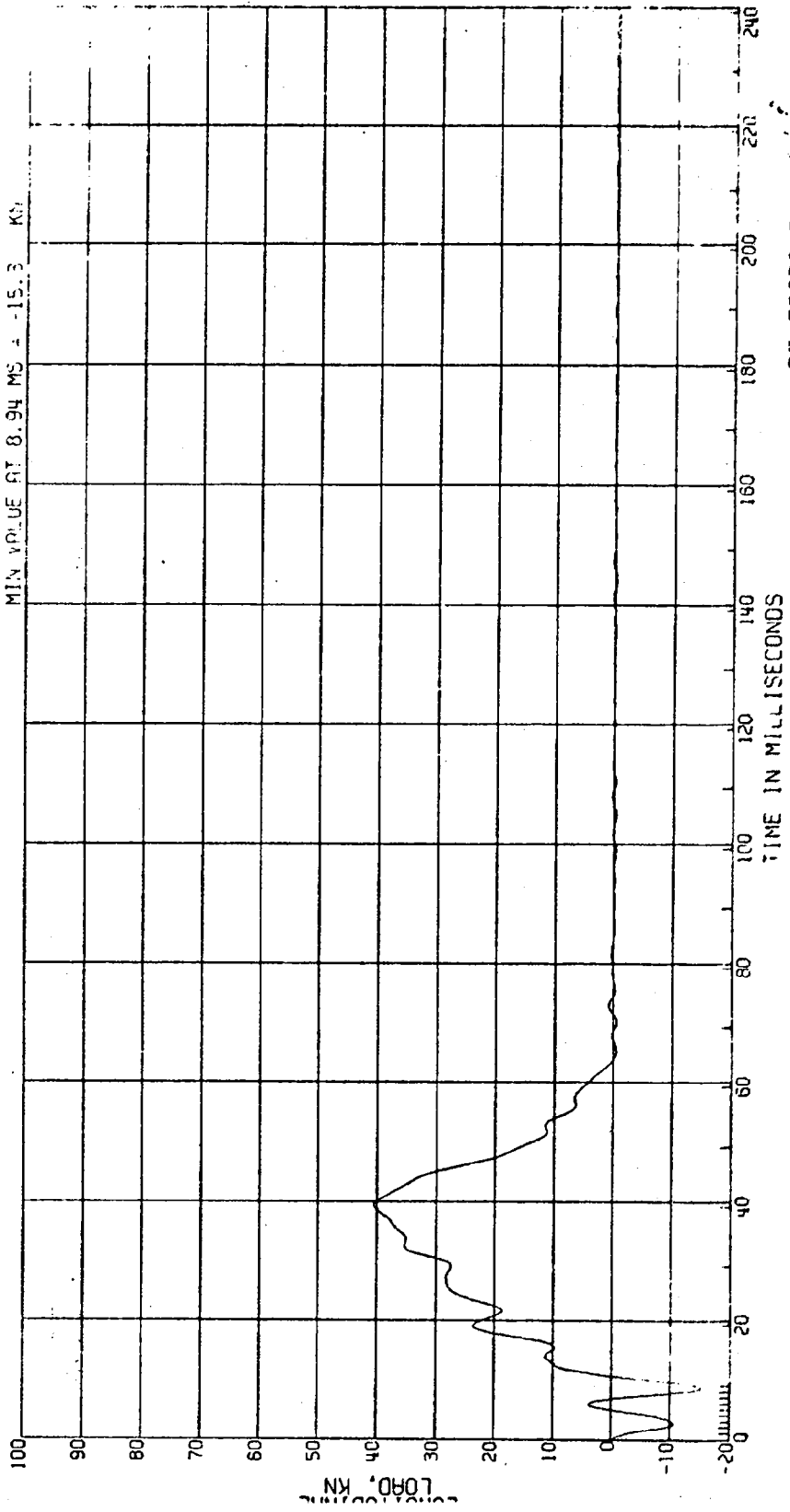
-D DATA SHE CLASS 60

DEFORMABLE BARR TO LOAD CELL BARRIER 642.1 MM IN FIGURE

OR-SIDE STRUCK BARRIER 11003 LONG

TEST DATE 05 02 84

MAX VALUE AT 39.5 MS = 40.6 KN
MIN VALUE AT 8.94 MS = -15.3 KN



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7 PROCESSED 4 MY 84 3:30

59528 BARRIER TO BARRIER

DEFORMABLE BARR TO LOAD CELL BARRIER 2.1 KM/H FIGURE 18

3865-448

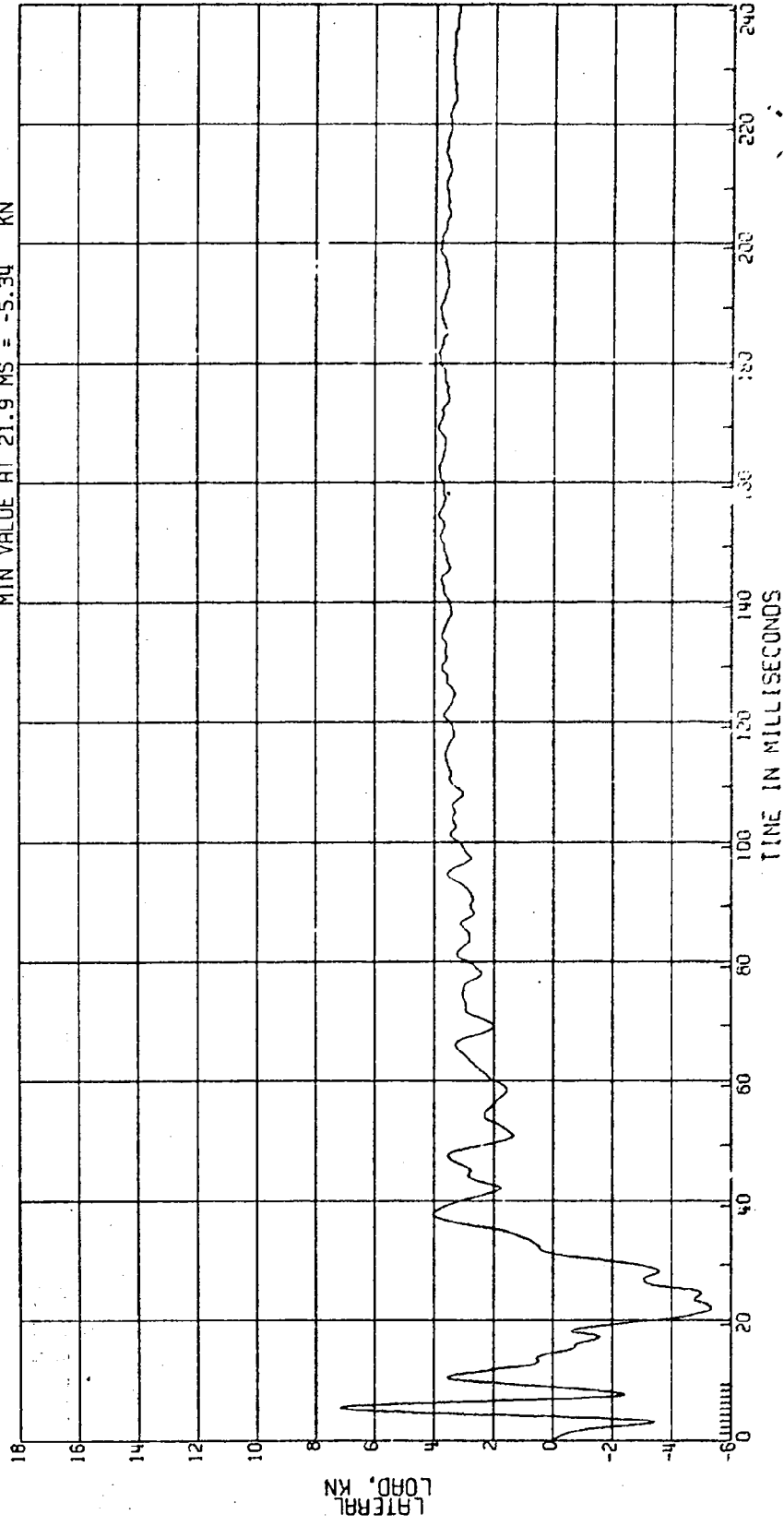
WISHER BODY FACE B

1-D DATA SAE CLASS 60

DR-SIDE STRUCK BARRIER UPPER LOAD

TEST DATE: 05-03-84

MAX VALUE AT 5.44 MS = 7.19 KN
MIN VALUE AT 21.9 MS = -5.34 KN



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8 PROCESSED 4 MT 84 15:30

59528 BARRIERS TO LOAD CELL SHARPER 2.1 AM 8.1000

665-448

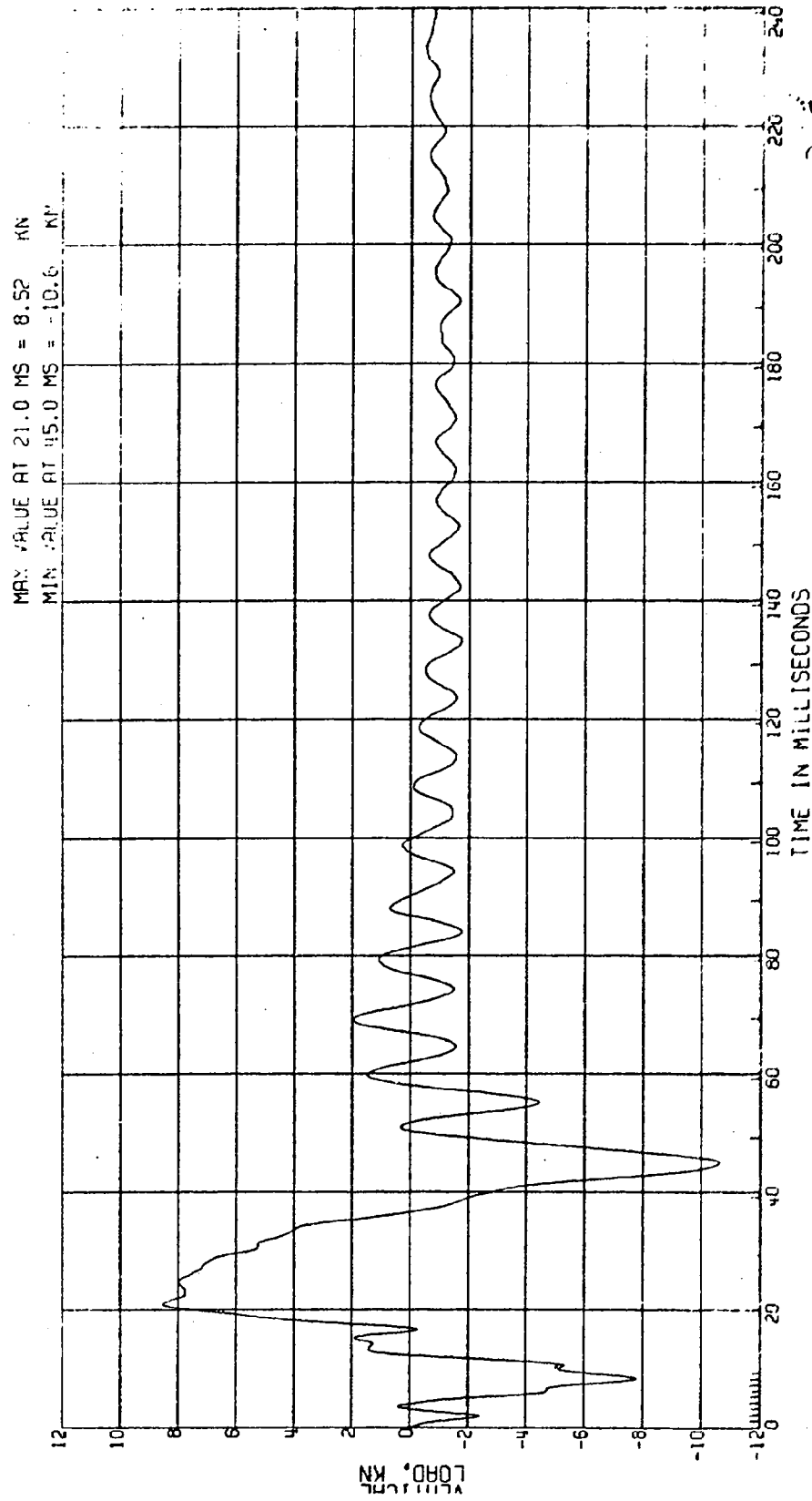
ISHER BODY FILE B

-O DATA SPE CLASS 60

DEFORMABLE BARR TO LOAD CELL SHARPER 2.1 AM 8.1000

DR-SIDE STRUCK BARRIER WATER LOAD

EST 000000000000000000



RELEASED BY: 247
9 PROCESSED 4 MT 84 15:30

59528 BARRIER TO BARRIER

3865-448

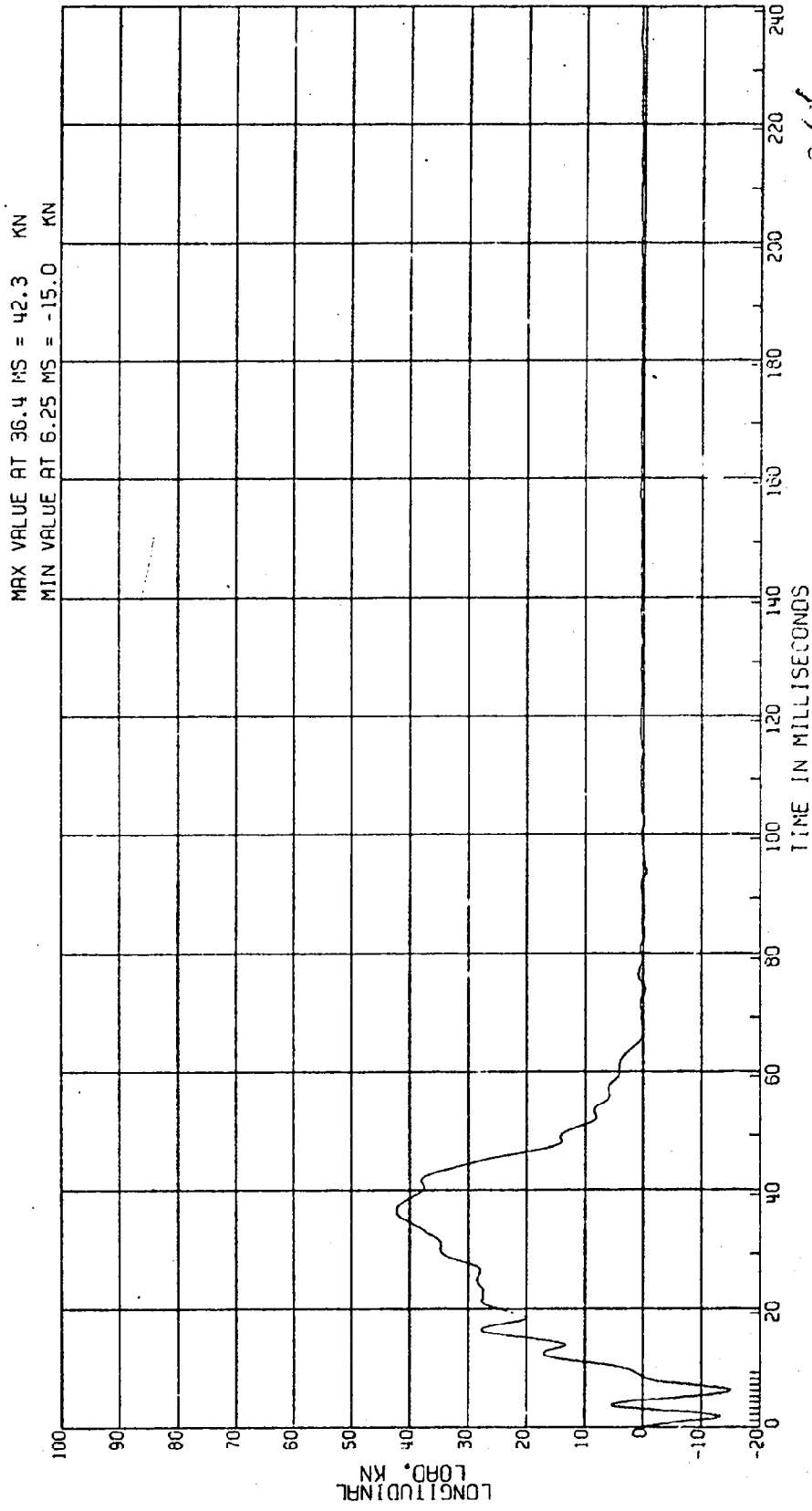
FISHER BODY FACE B

1-D DATA SAE CLASS 60

DEFORMABLE BARR TO LOAD CELL BARRIER 42.1 KM/H FIGURE 20

PASS-SIDE STRUCK BARRIER UPPER LOAD

TEST DATE: 05-03-84



RELEASED BY: *DLF*
10 PROCESSED 4 MY 84 16:30

259528 PASSED TO BARRIER

3865-448

FISHER BODY FACE B

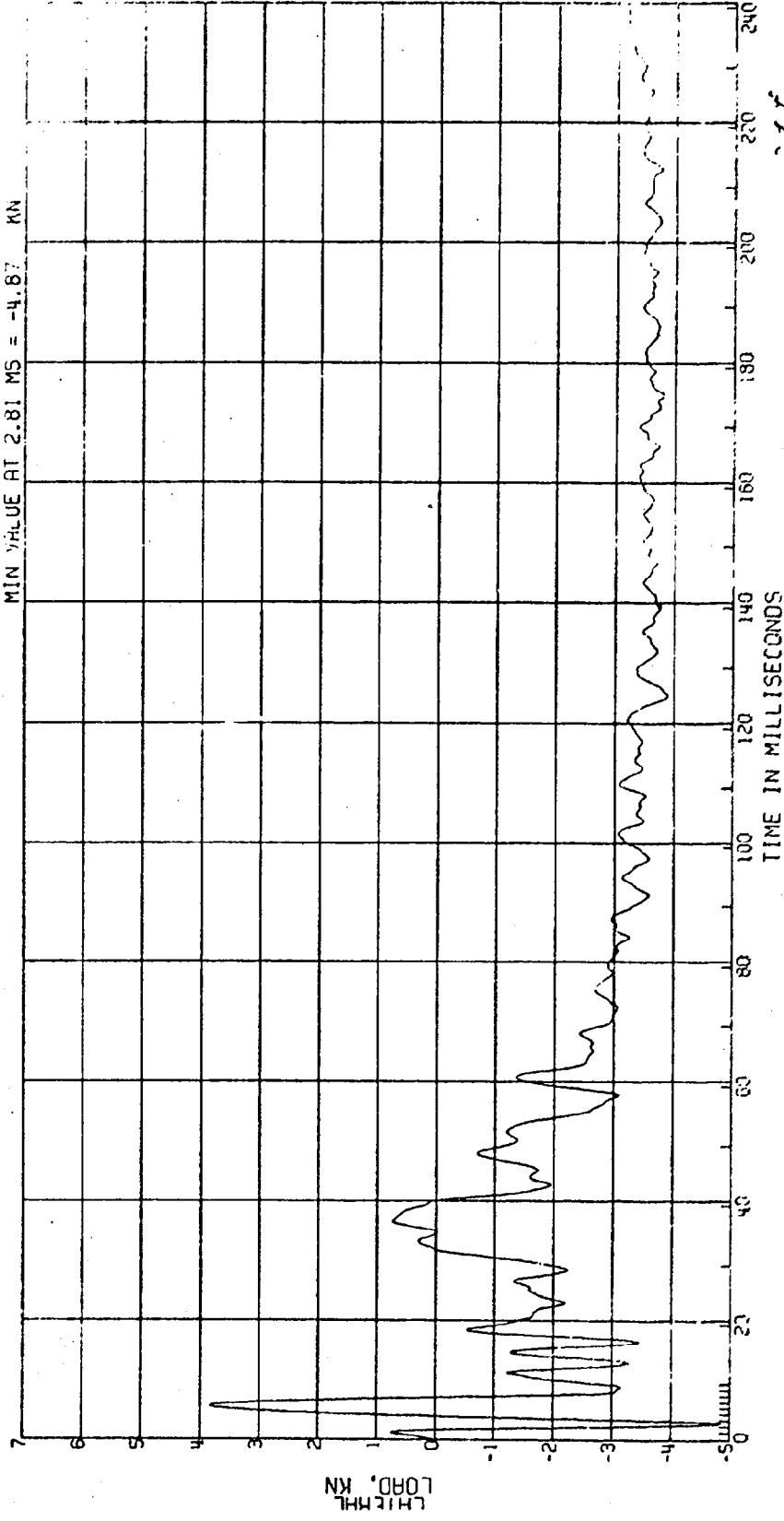
1-D DATA SAE CLASS 60

DEFORMABLE BARR TO LOAD CELL BARRIER 42.1 KM/H FIGURE 2

PASS-SIDE STRUCK BARRIER UPPER LOAD

TEST DATE 05-03-84

MAX VALUE AT 5.56 MS = 3.85 KN
MIN VALUE AT 2.81 MS = -4.87 KN



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11 PROCESSED 4 MAY 84 18:30

C59528 BARRIER TO BARRIER

3865-448

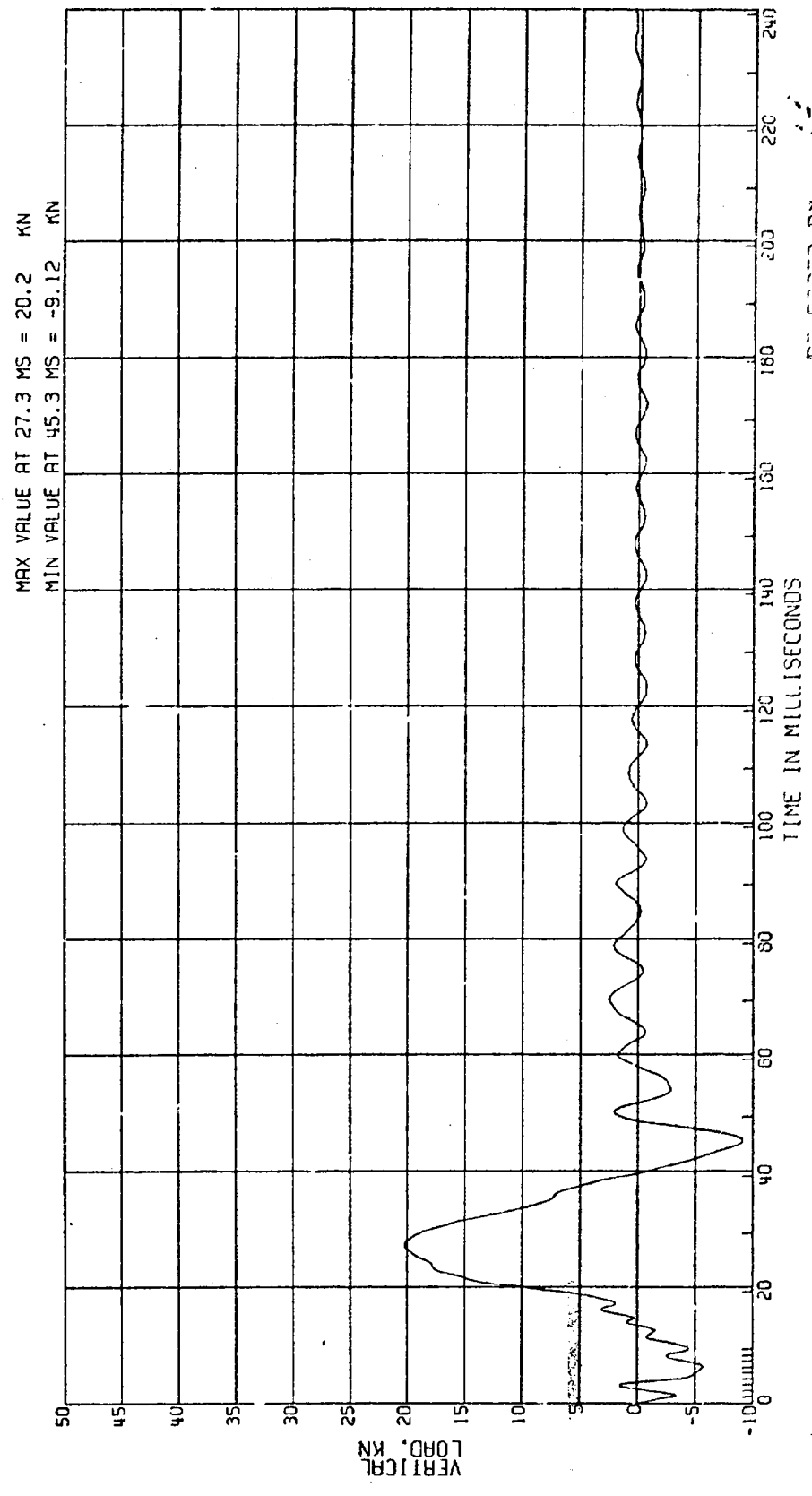
FISHER BODY FACE B

A-D DATA SAE CLASS 60

DEFORMABLE BARR TO LOAD CELL BARRIER 42.1 KM/H FIGURE 22

PASS-SIDE STRUCK BARRIER UPPER LOAD

TEST DATE: 05-03-84



RELEASED BY: J. J. J.
12 JANUARY 1984 15:30

352R BARRI... TO BARRIER

DEFORMABLE BARR TO LOAD CELL 40RRA 2342.1 KM P 2100R

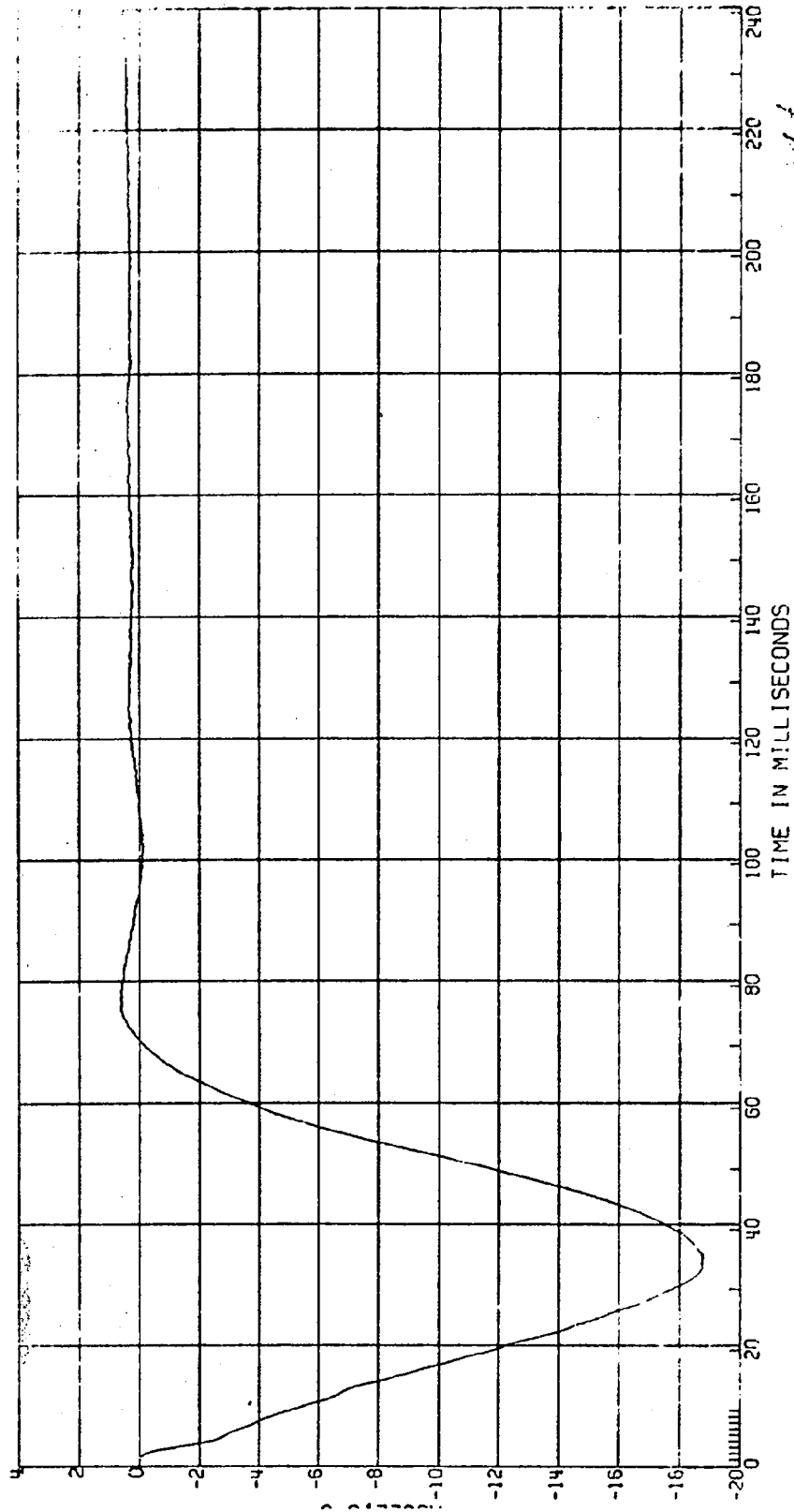
35-448

35R BODY FACE B

DATA SPE CLASS 180

STRUCK VEH KINEMATICS-AXO ACCCEL.

TEST CASE 10-00A-201



RELEASED BY: 8/1/7

19 PROCESSED 4 MT 94 19:31

1952B BARRIER TO BARRIER

DEFORMABLE BARR TO LOAD CELL BARRIER 42.1 KM/H FIGURE 24

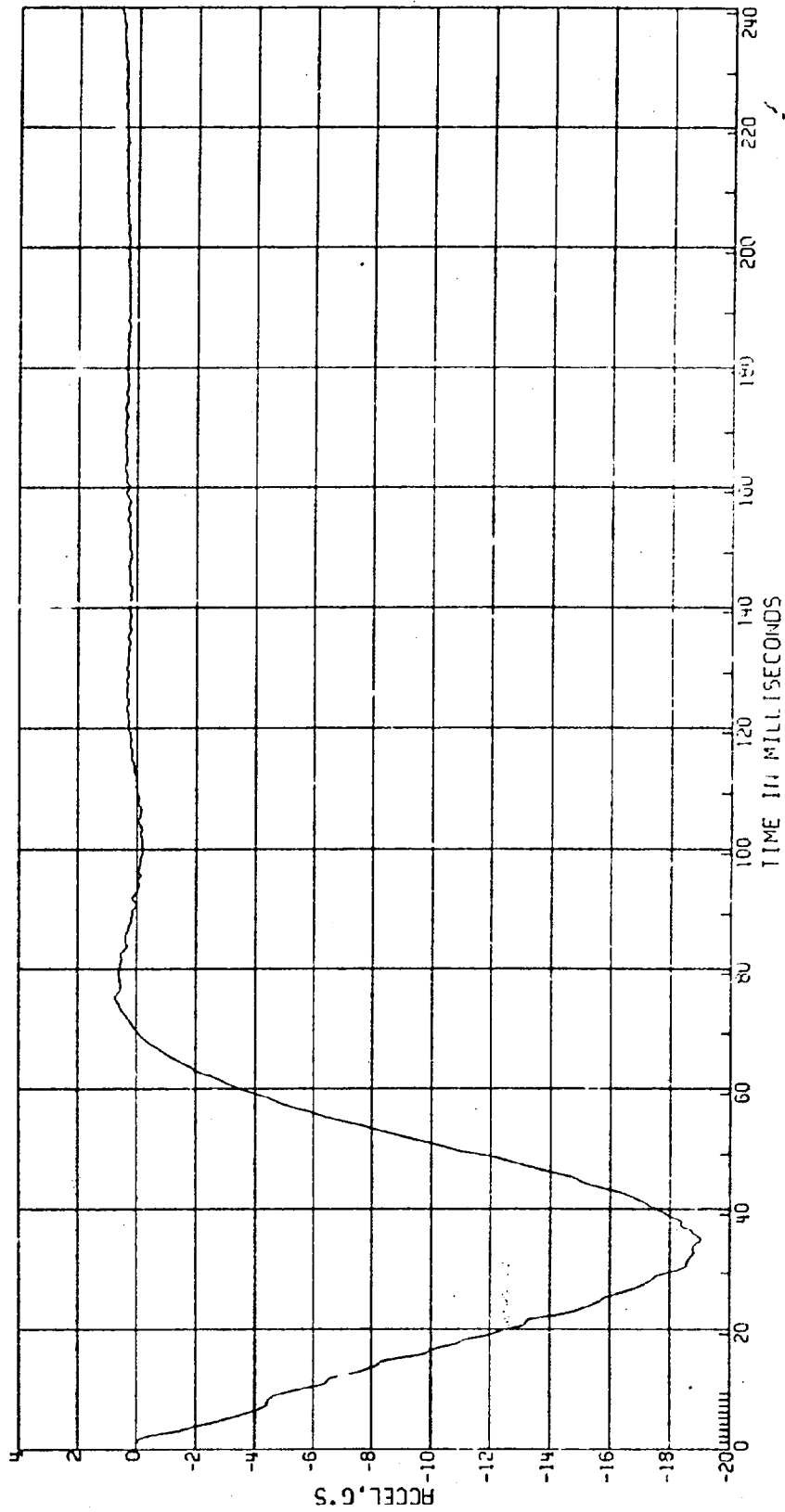
165-448

SHER BODY FACE B

STRUCK VEH KINEMATICS-AX1 ACCEL.

TEST DATE: 05-03-84

0 DATA SAE CLASS 180



RELEASED BY: 20
PROCESSED 4 MT 84 18:31

3528 BARRIERS TO BARRIER

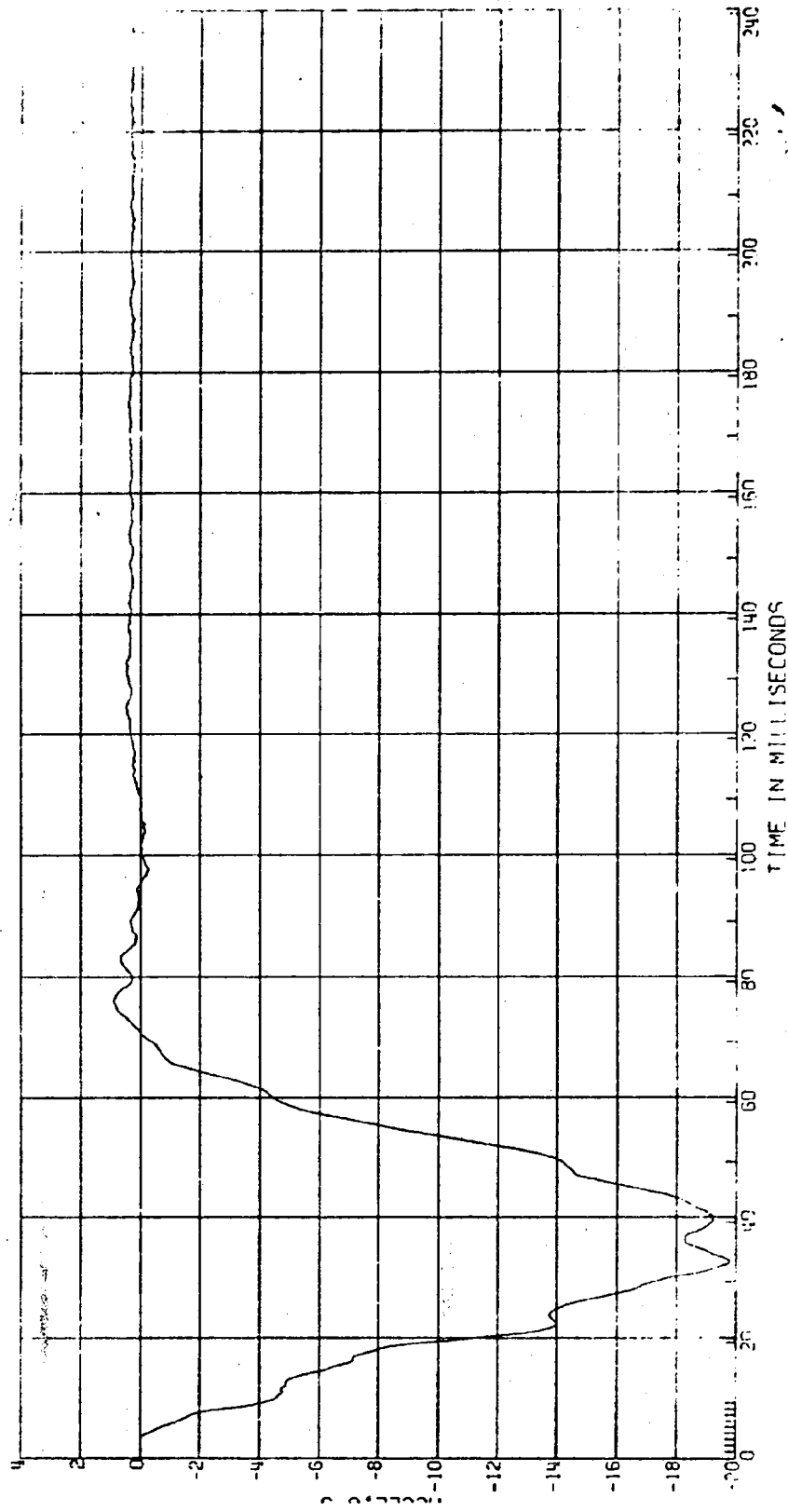
35-448

SHER BODY PART B

3 DATA SET CLASS 180

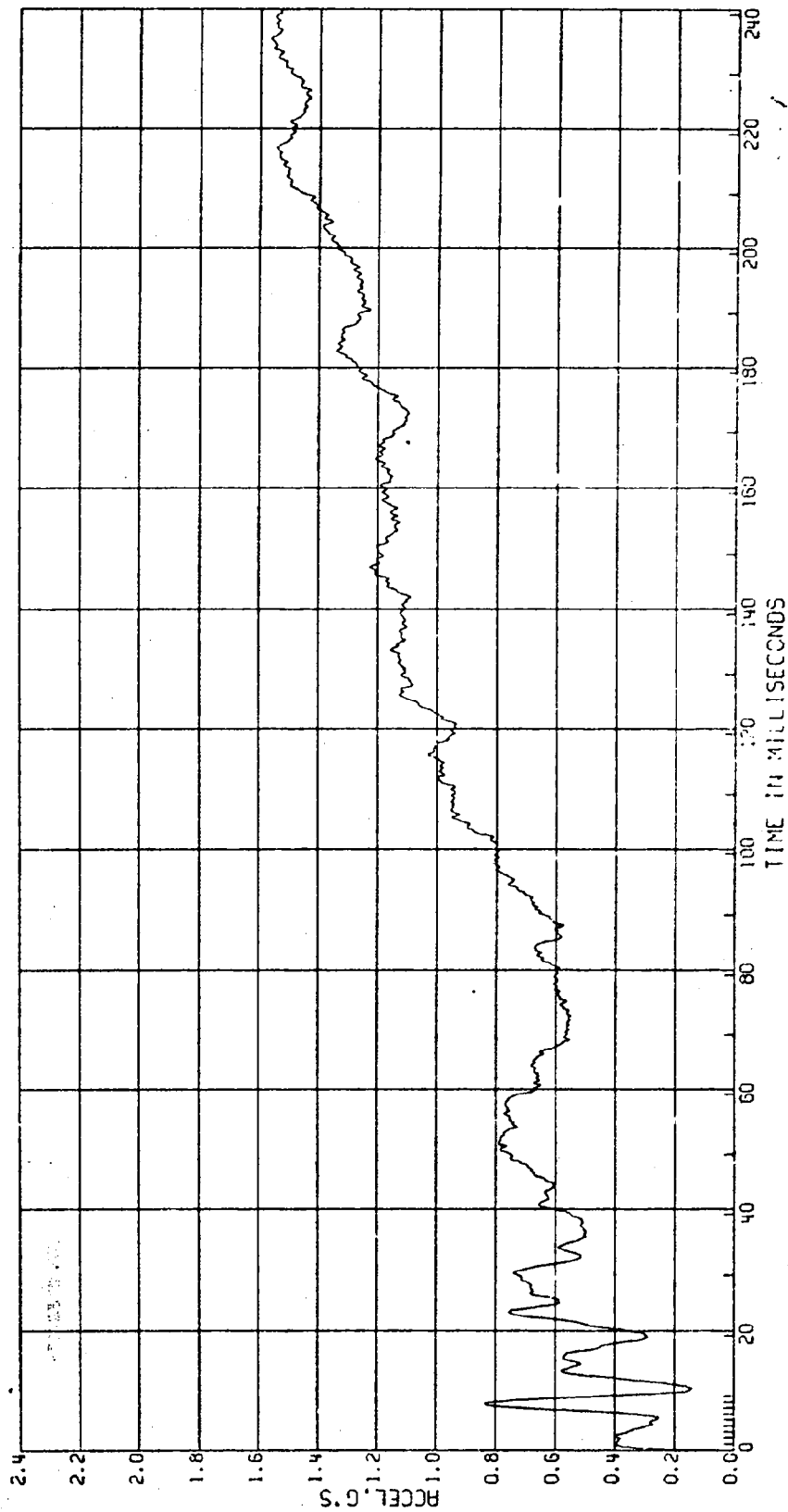
DEFINABLE BARR TO LOAD CE

STRUCK VEH KINEMATICS-177



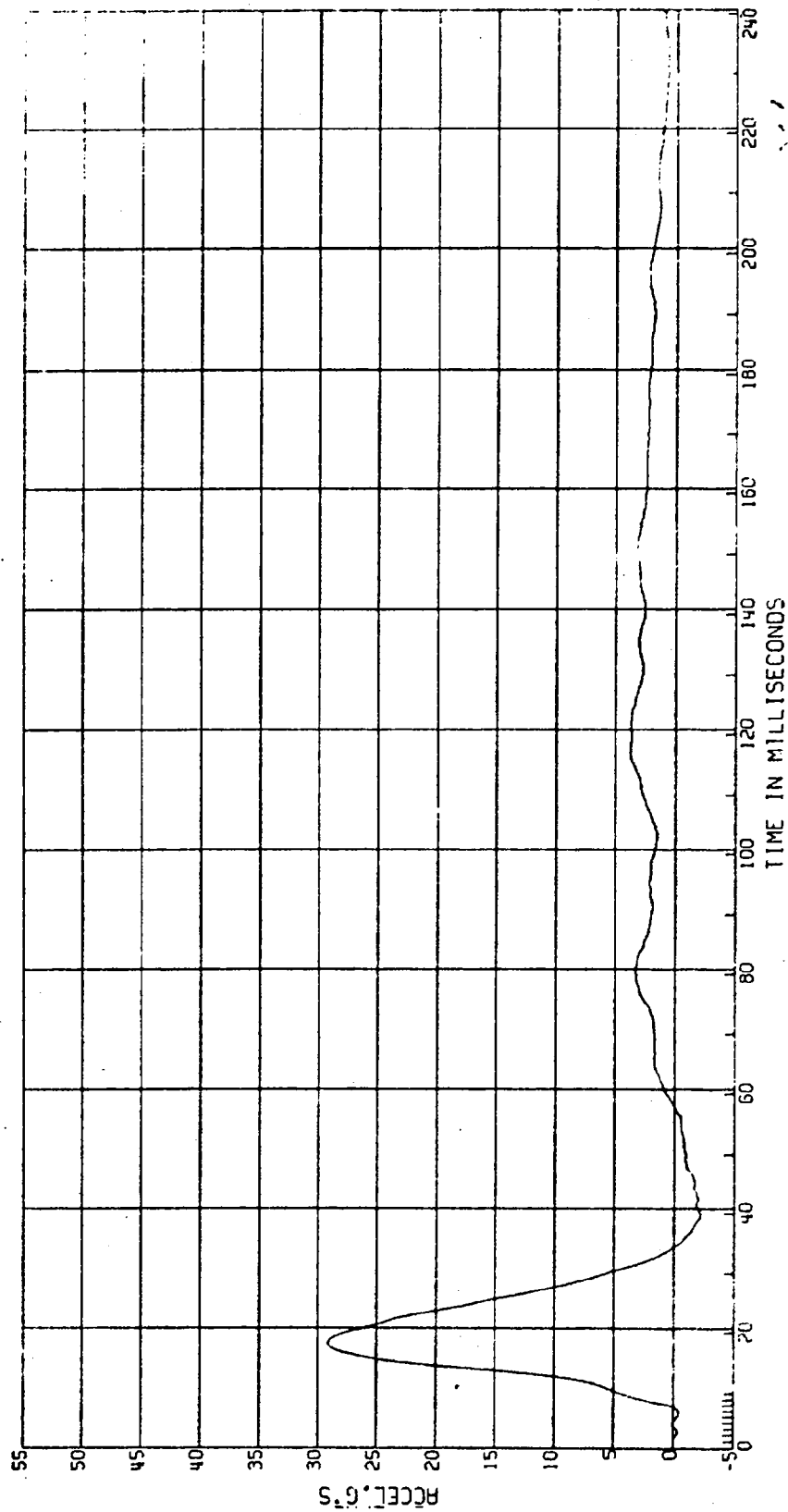
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21 PROCESSED 4 MY 84 9:31

39528 BARRIER TO BARRIER DEFORMABLE BARR TO LOAD CELL BARRIER 42.1 KM/H FIGURE 24
 365-448
 SHER BODY FACE B
 -D DATA SAE CLASS 180
 STRUCK VEH KINEMATICS-AYO ACCEL.
 TEST DATE: 05-03-84



RELEASED BY: 22
 22 PROCESSED 4 MT 84 18:31

59528 BARRIER TO BARRIER DEFORMABLE BARR TO LOAD CELL BARRIER 42.1 KM/H FIGURE 1
 365-448 STRUCK VEH KINEMATICS-R12 ACCEL.
 ISHER BODY FACE B
 -D DATA SAE CLASS 180 TEST DATE: 05-03-84



RELEASED BY: JAL
 23 PROCESSED 4 MT 84 18:31

39528 BARRIER TO BARRIER

DEFORMABLE BARR TO LOAD CELL BARRIER42.1KM/H FIGURE 7

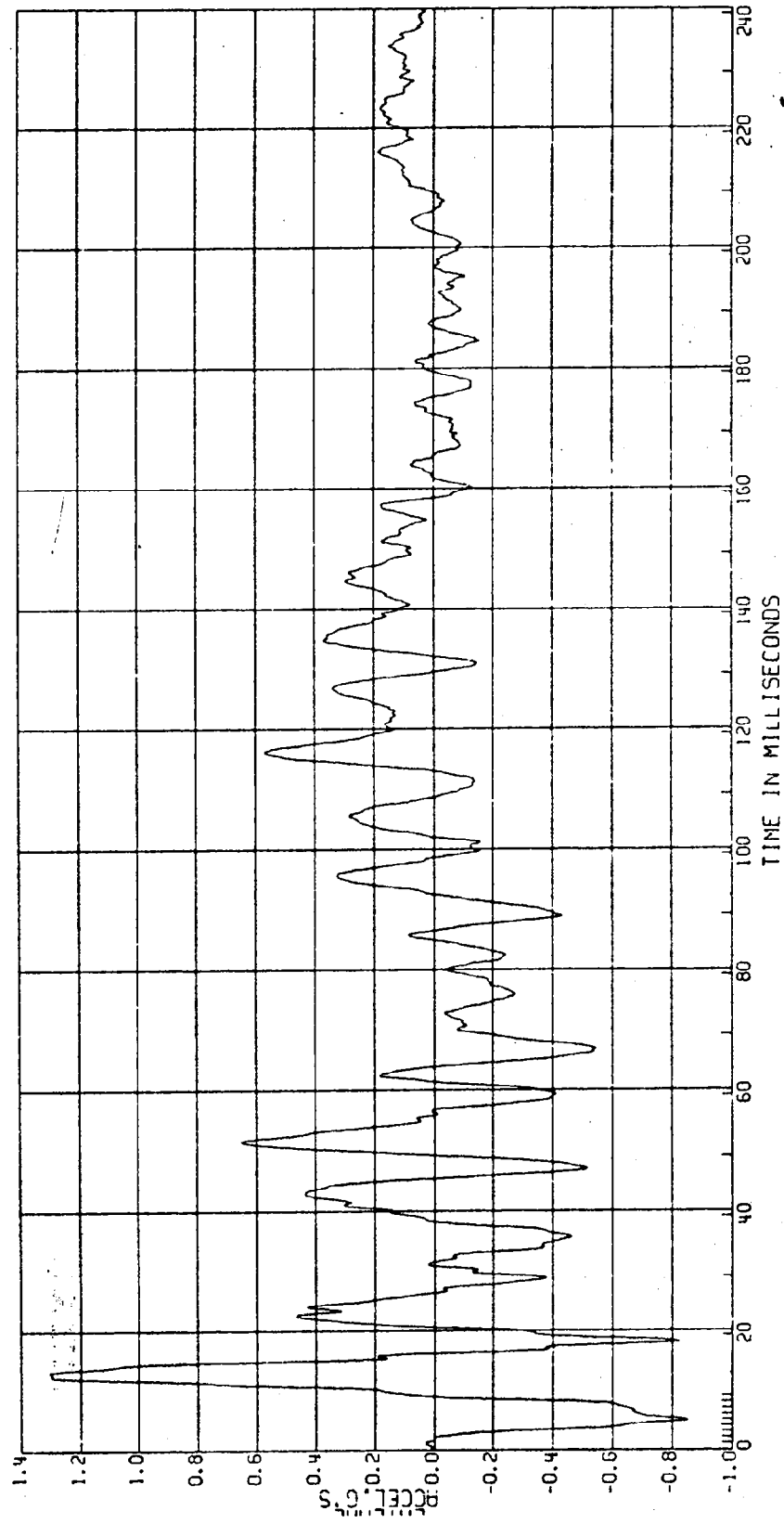
365-448

ISHER BODY FACE B

STRUCK VEH KINEMATICS-AY3 ACCEL.

TEST DATE:05-03-84

-D DATA SAE CLASS 180



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24 PROCESSED 4 MT 84 18:31

59528 644-10 BARRIER

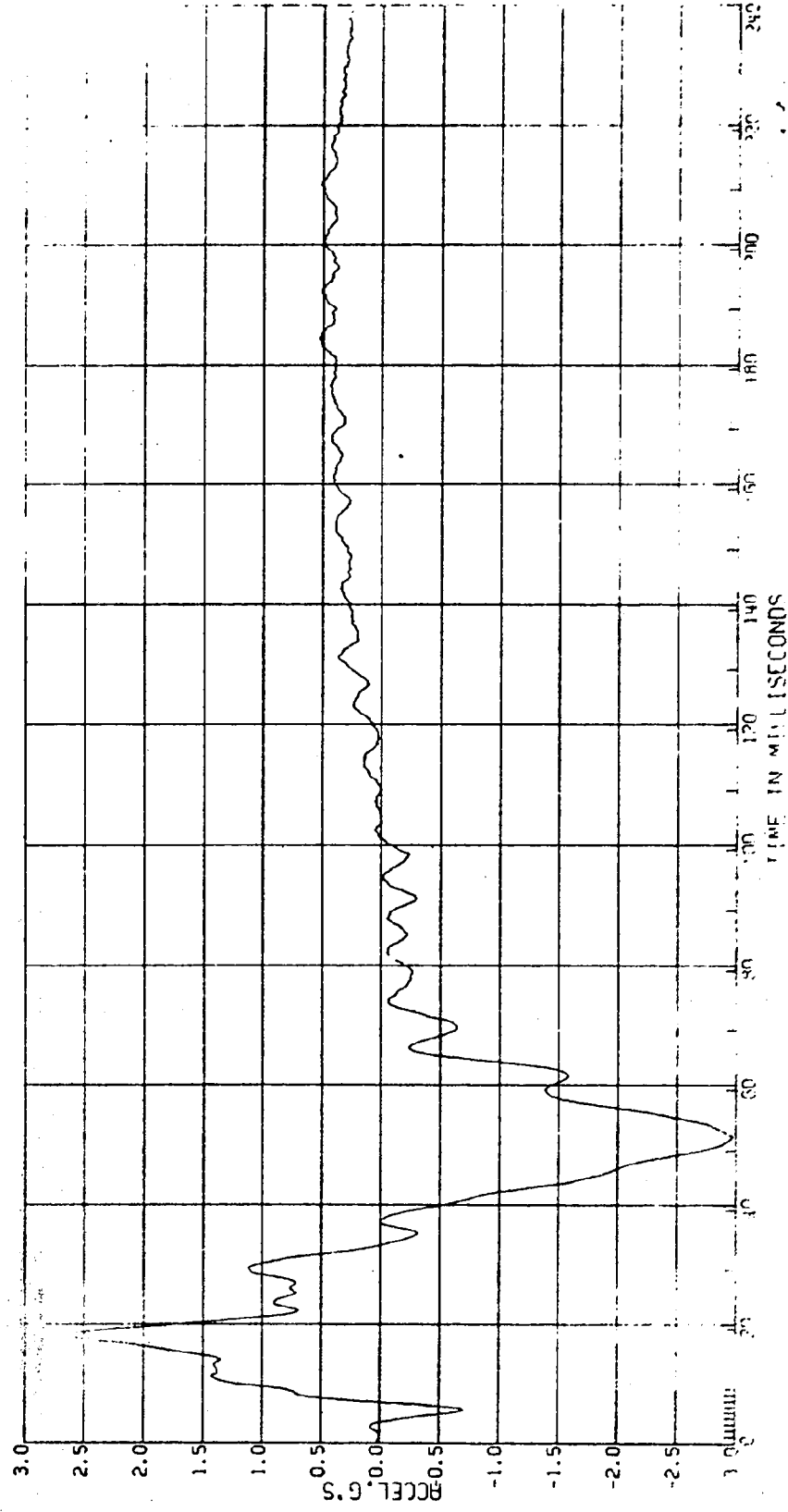
365-448

ISHER 800

-O DATA SPE ASS 180

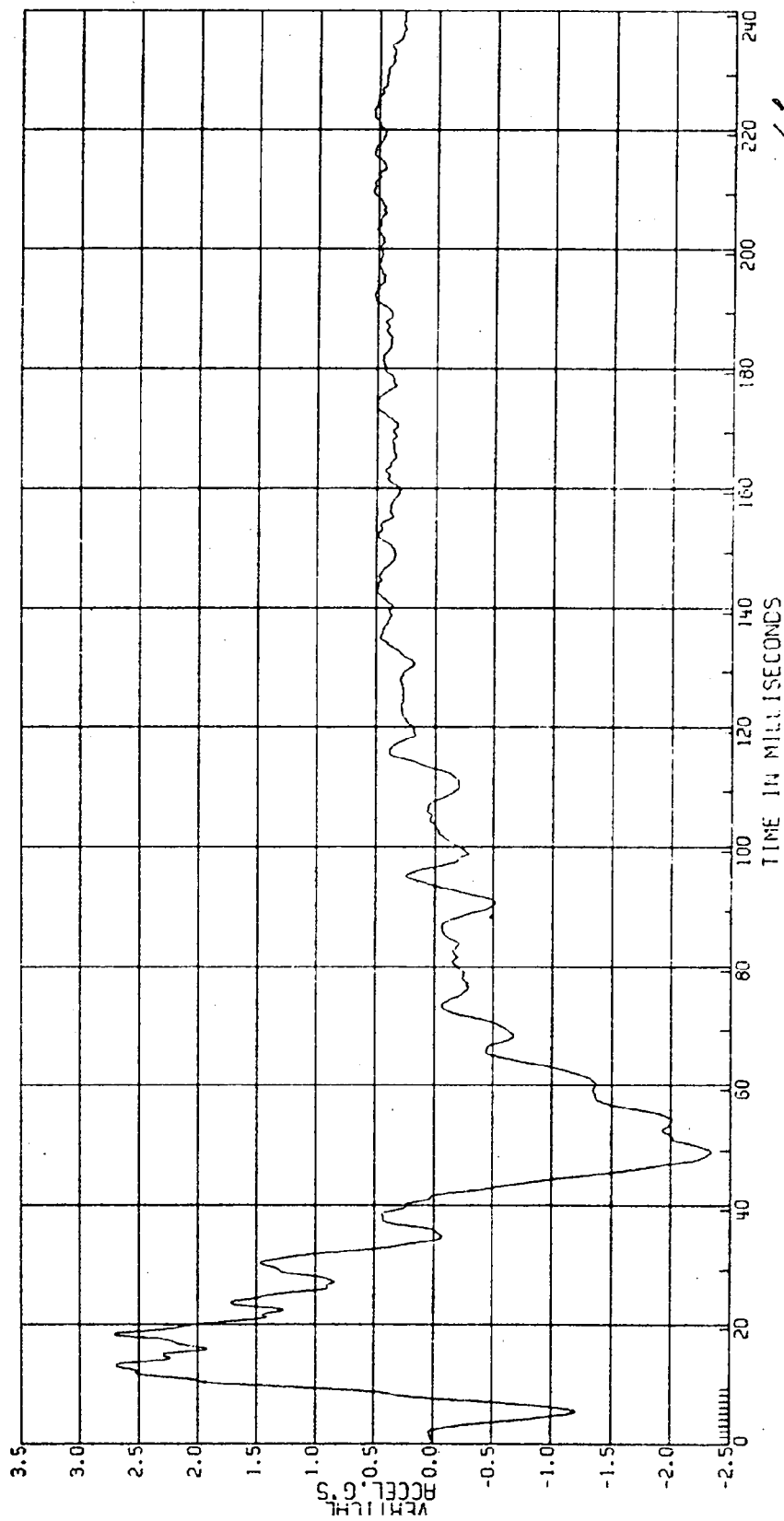
DEFORMABLE BARR TO LOAD CEL SUPPLY 142.1 KN B 100R

STRUCK VEH KINEMATICS-0000 H.C.P.L.



RELEASED BY: J. J.
25 PROCESSED 4-11-80 3.31

5952B BARRIER TO BARRIER DEFORMABLE BARR TO LOAD CELL BARRIER 42.1 KM/H FIGURE 3
1865-448
FISHER BODY FACE B
1-D DATA SAE CLASS 180
STRUCK VEH KINEMATICS-AZ1 ACCEL.
TEST DATE: 05-03-84



RELEASED BY: JJS
26 PROCESSED 4 MT 84 18:31

5952A BARRIER TO BARRIER

DEFORMABLE BARR TO LOAD CELL BARRIER 2.1 KM/H FIGURE 2

3865-448

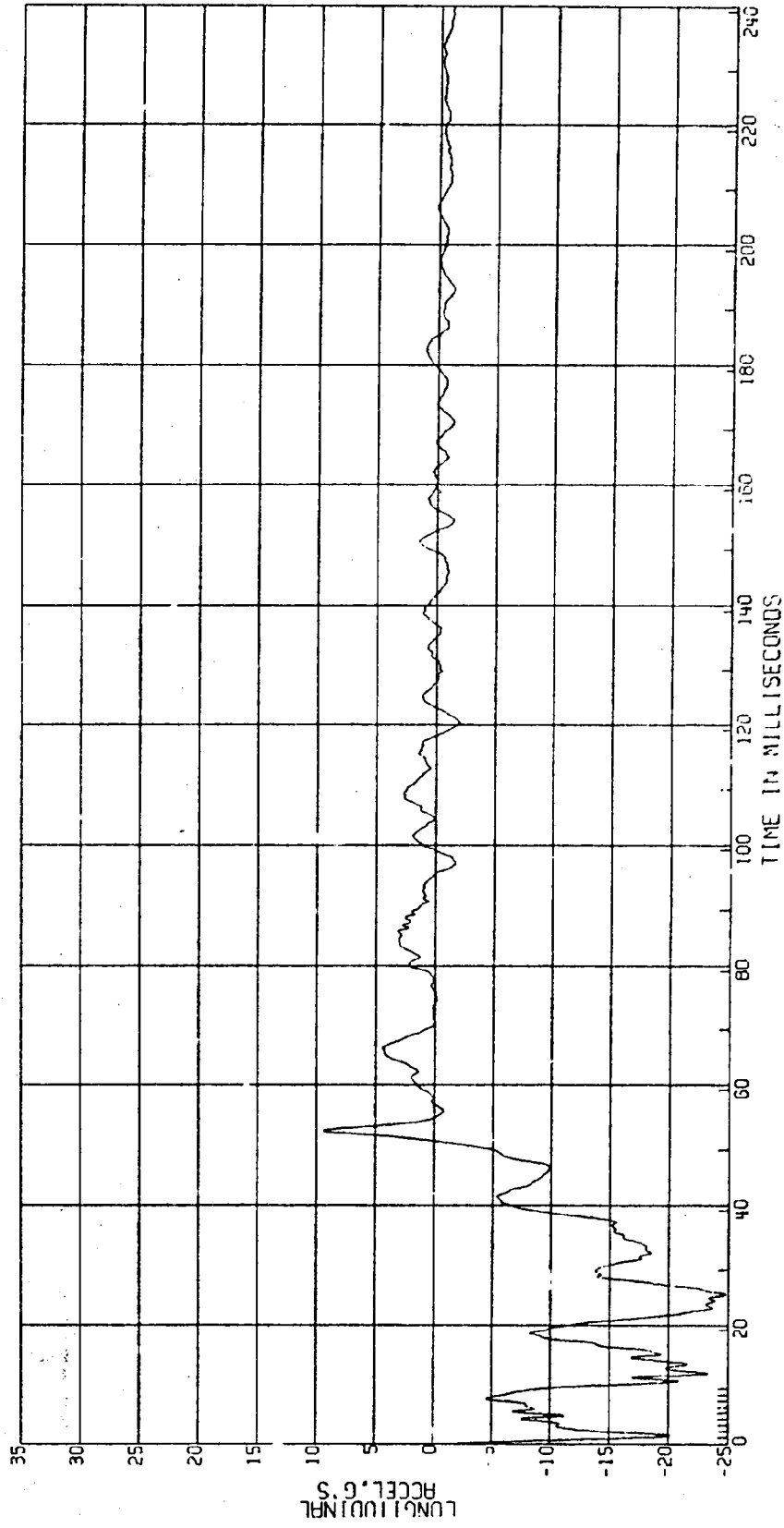
FISHER BODY FACE B

3-D DATA SAE CLASS 60

DR-SIDE STRIKING BARRIER FRONT ACCEL.

TEST DATE: 05-03-84

- 1 -



RELEASED BY: J
1 PROCESSED 4 MT 84 18:09

35952A BARRIER TO BARRIER

DEFORMABLE BARR TO LOAD CELL BARRIER 42.1 KM H FIGURE 3

3865-448

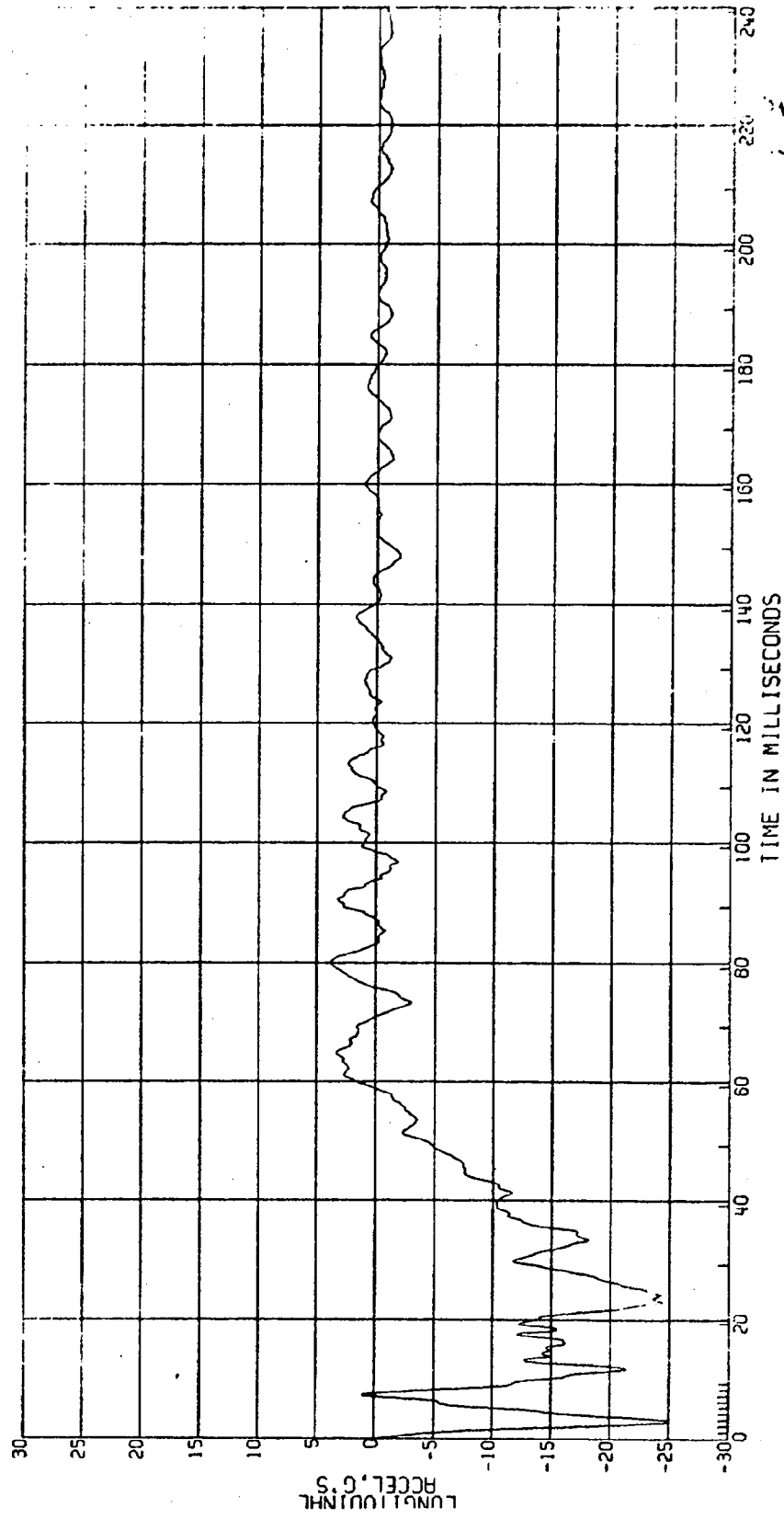
FISHER BODY FACE B

PASS-SIDE STRIKING BARRIER FRONT ACCEL.

TEST DATE: 04-15-64

1-D DATA SHE CLASS 60

- 2 -



RELEASED BY: J. A. S.
2 PROCESSED 4 MY 64 18:10

C5952A BARRIER TO BARRIER

DEFORMABLE BARR TO LOAD CELL BARRIER 2.1 KM/H FIGURE 74

3865-448

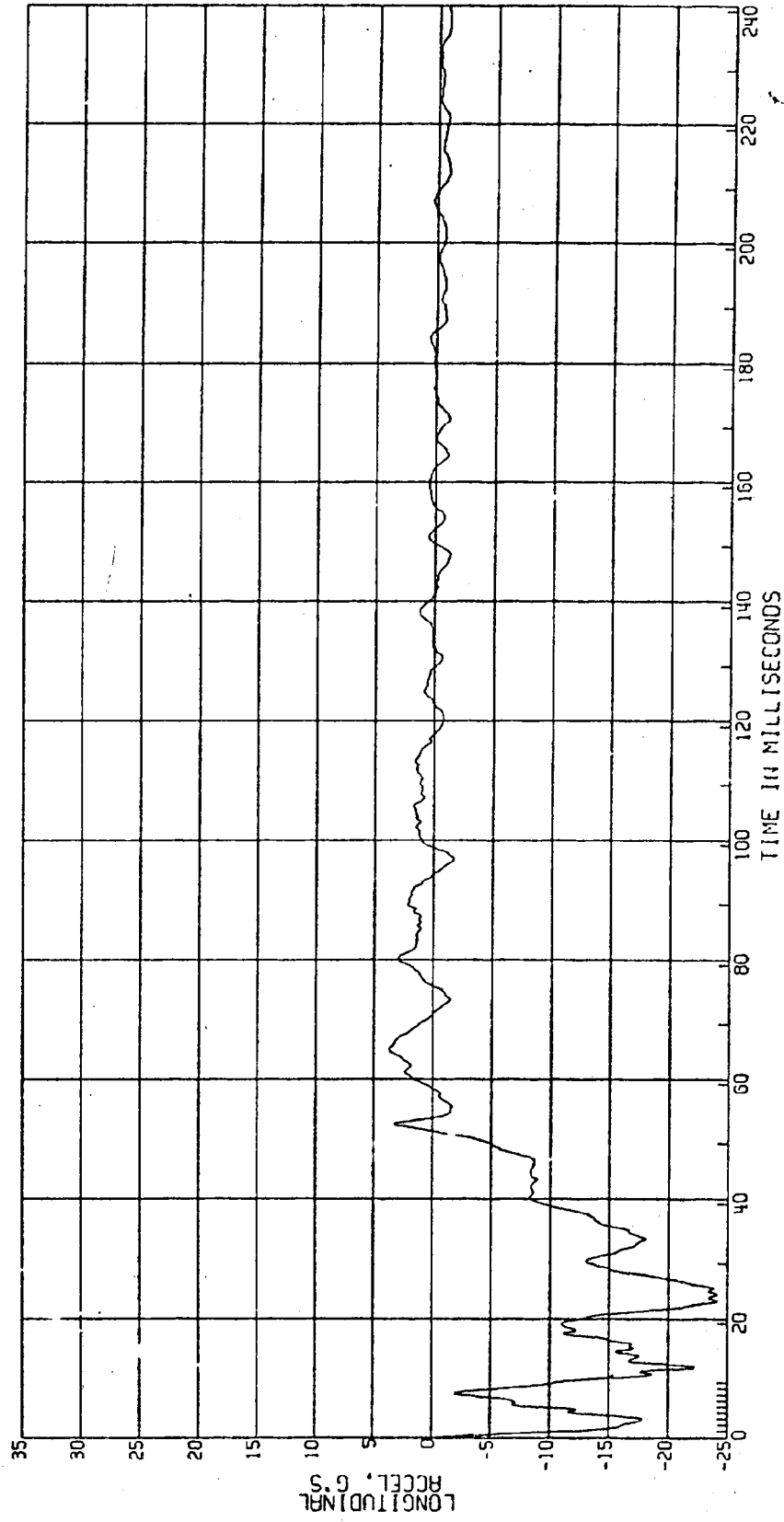
FISHER BODY FACE B

A-D DATA SAE CLASS 60

AVERAGED DR & PASS SIDES

TEST DATE: 05-03-84

AVERAGED STRIKING BARR FRT ACCEL



RELEASED BY: J. J.
3 PROCESSED 4 MY 84 18:10

C5952A BARRIERS TO BARRIER

3865-448

FISHER BODY FRAME B

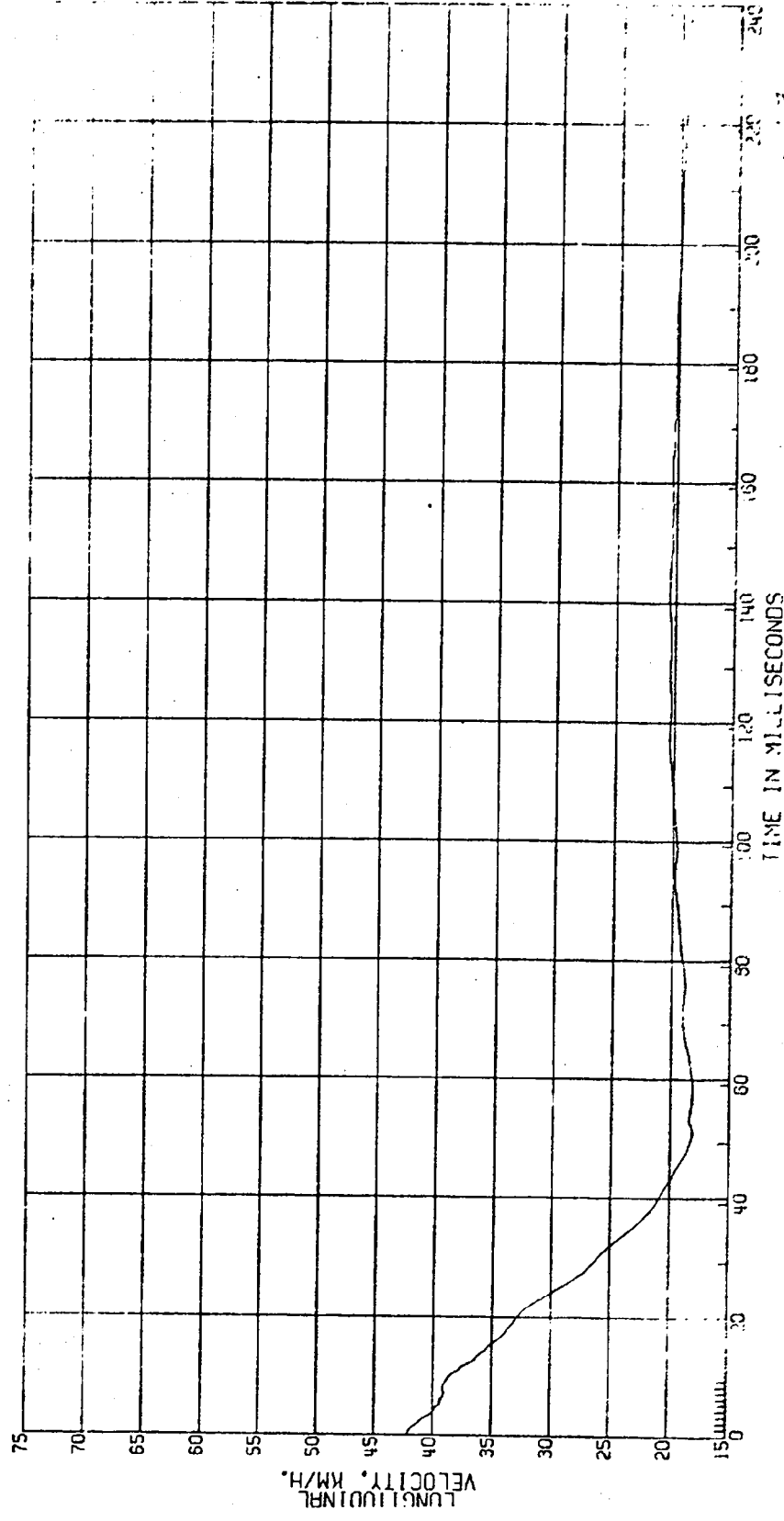
A-D DATA SAC CLASS 180

DEFORMABLE BARR TO LOAD CELL BARRIER 2.1 KM/H FIGURE

COMPUTED STRIKING BARR (RT VEL

(1ST INTEGRAL AVERAGED ACCELERATION)

TEST DATE: 10-24



RELEASED BY: 2.4.7
5 PROCESSED 5 APR 84 10.1

C5952A BARRIER TO BARRIER

3865-448

FISHER BODY FACE B

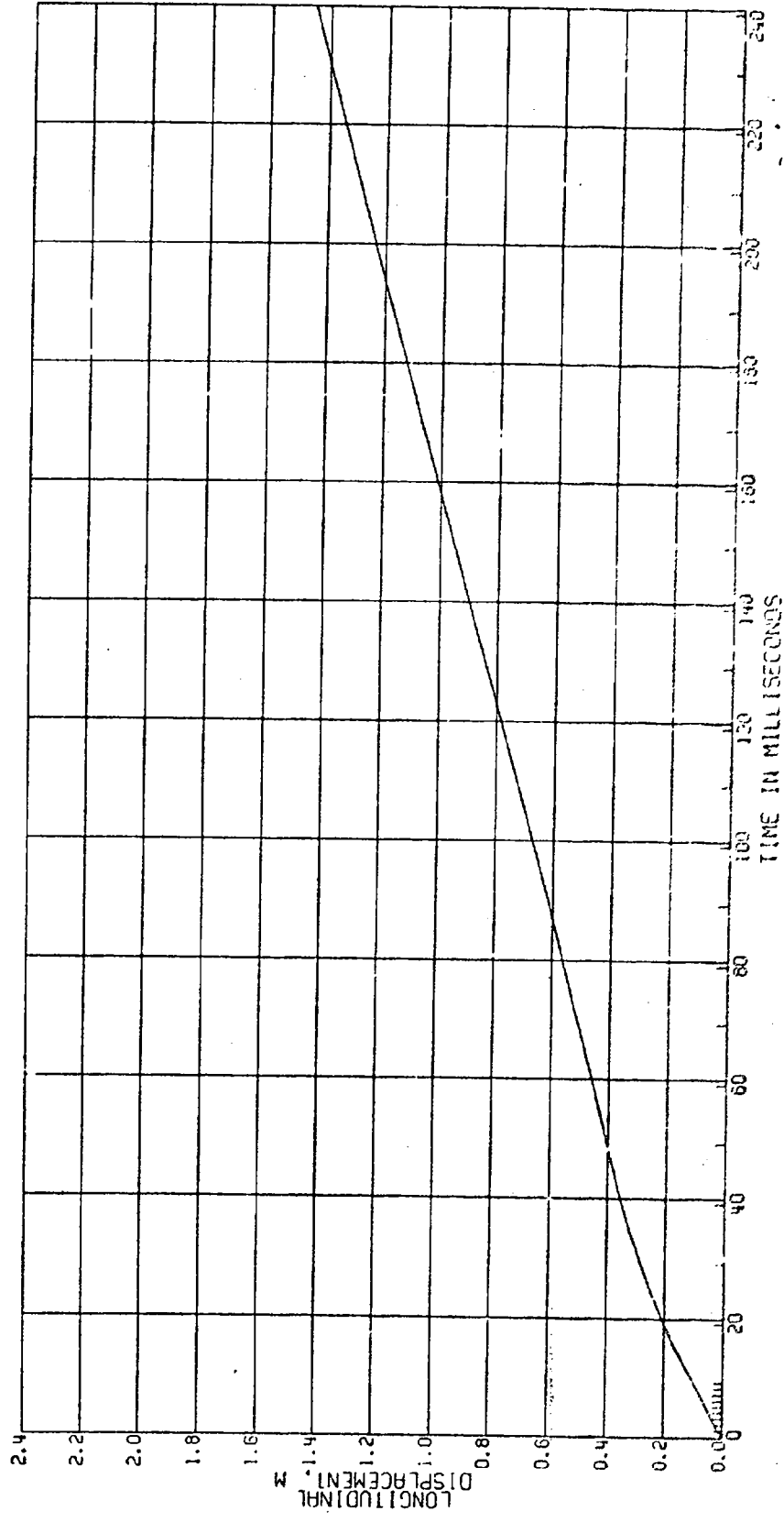
A-D DATA SAE CLASS 180

DEFORMABLE BARR TO LOAD CELL BARRIER 42.1 KM/H FIGURE 3

COMPUTED STRIKING BARR FRT DISP

TEST DATE: 05-03-84

(2ND INTEGRAL AVERAGED ACCELERATION)



RELEASED BY: J. J. J.
5 PROCESSED 5 MT 54 22:11

952A BARRIERS TO BARRIER

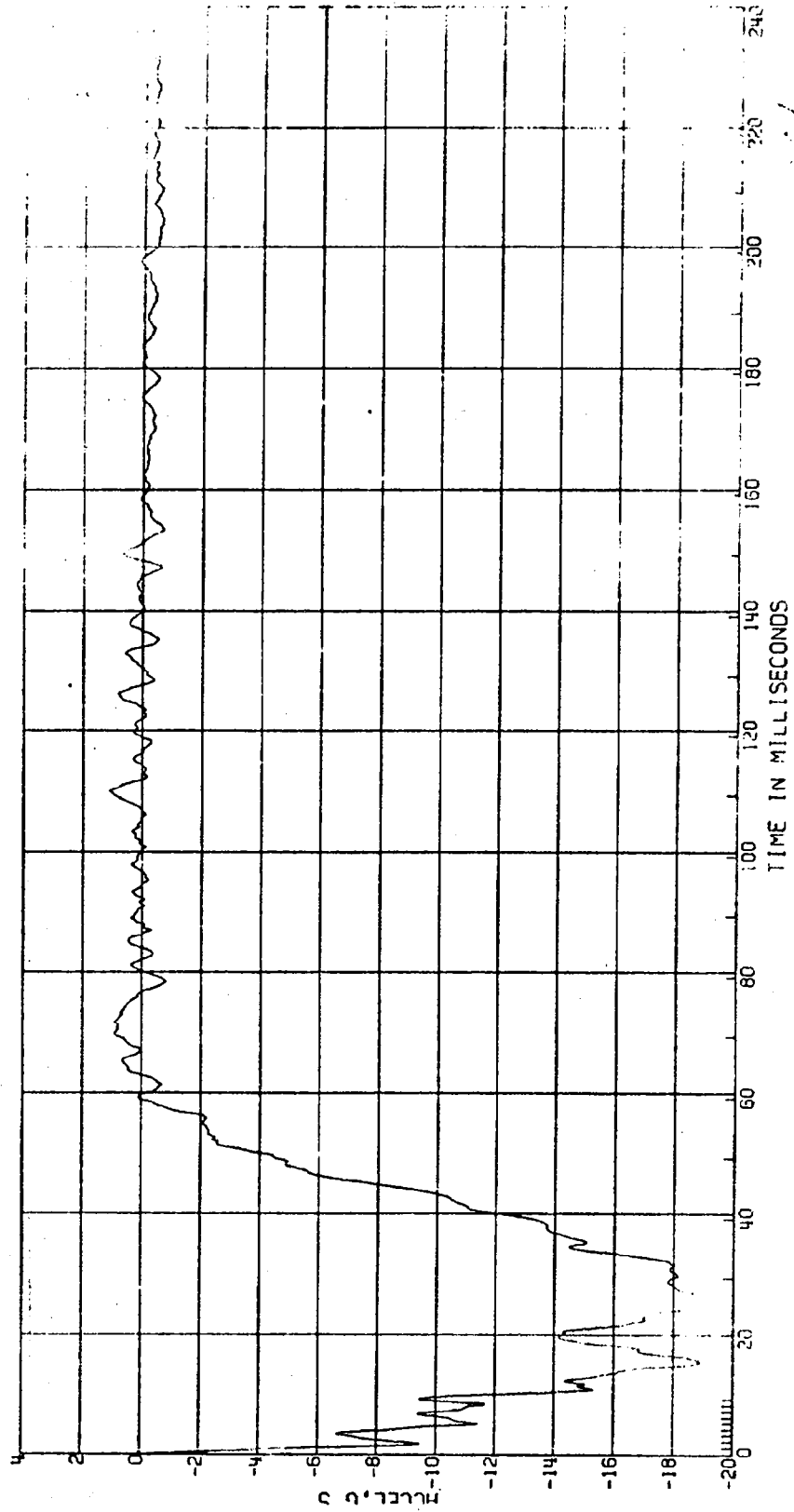
65-448

SHER 900 PAGE 8

D DATA SHE CLASS 60

DEFORMABLE BARR TO LOAD CELL BARRIERS

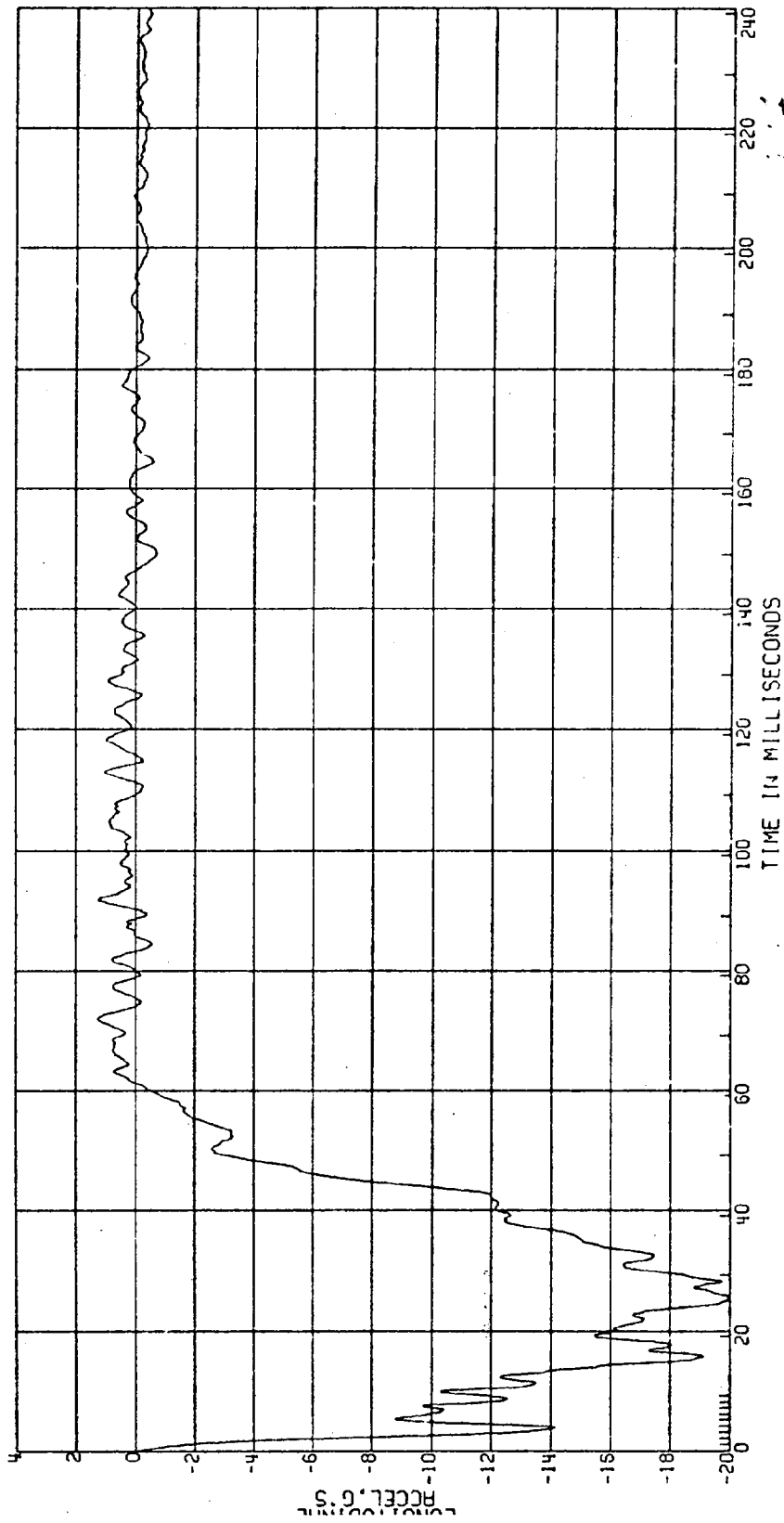
OR-SIDE STRIKING BARRIER AND MODEL.



RELEASED BY: J. J.

4 PROCESSED 4 M 84 3:10

5952A BARRIER TO BARRIER DEFORMABLE BARR TO LOAD CELL BARRIER 42.1 KM/H FIGURE 38
 86S-448
 ISHER BODY FACE B
 -D DATA SAE CLASS 60
 PASS-SIDE STRIKING BARRIER MID ACCEL.
 TEST DATE: 05-03-84



RELEASED BY: J. J. J.
 5 PROCESSED 4 MT 84 18:10

5952A BARRIER TO BARRIER

DEFORMABLE BARR TO LOAD CELL BARRIER 42.1 KM/H FIGURE 2

365-448

ISHER BODY FACE B

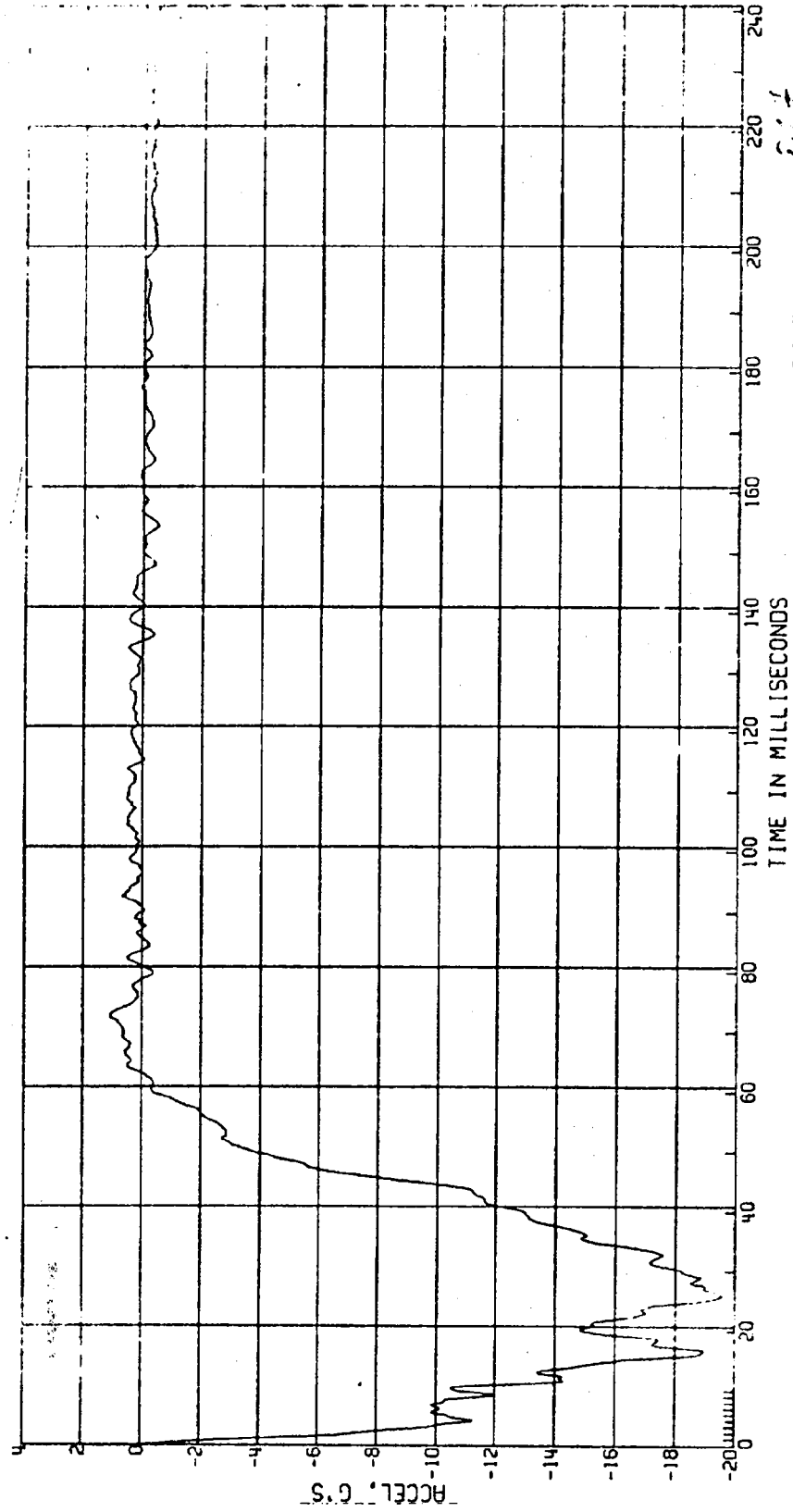
-D DATA SAE CLASS 60

TEST DATE: 01-03-84

TEST DATE: 01-03-84

AVERAGED OR & PASS SIDES

AVERAGED STRIKING BARR MID ACCEL



RELEASED BY: *dit*
6 PROCESSED 4 MT 84 18:10

5952A BARRIER TO BARRIER

3865-448

FISHER BODY FACE B

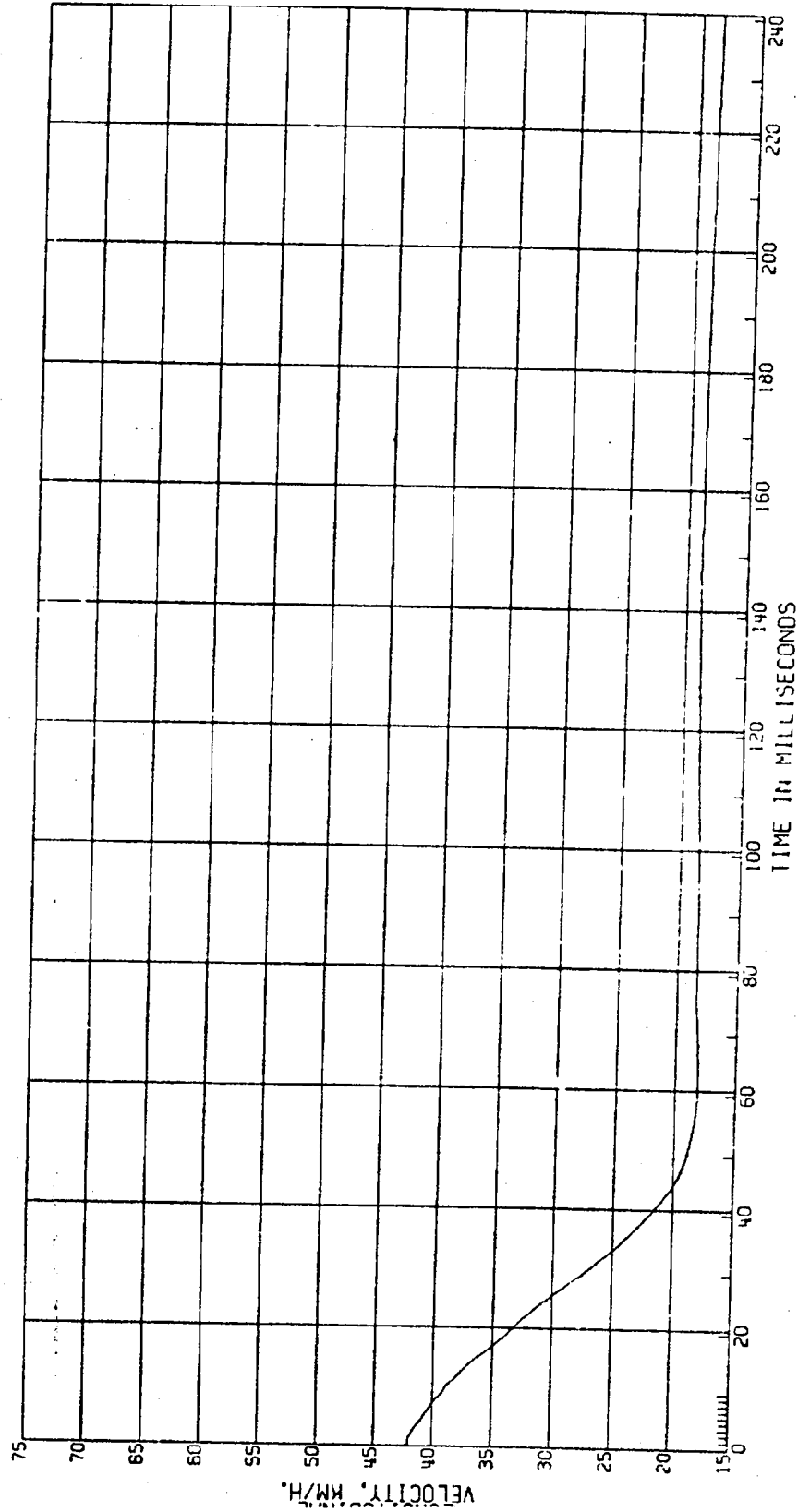
1-D DATA SAE CLASS 180

DEFORMABLE BARR TO LOAD CELL BARRIER 42.1 KM/H FIGURE 40

COMPUTED STRIKING BARR MID VEL

(1ST INTEGRAL AVERAGED ACCELERATION)

TEST DATE: 05-03-84



RELEASED BY: J. J. J.
11 PROCESSED 8 MT 84 22:12

5952A BARRIERS TO BARRIER

865-448

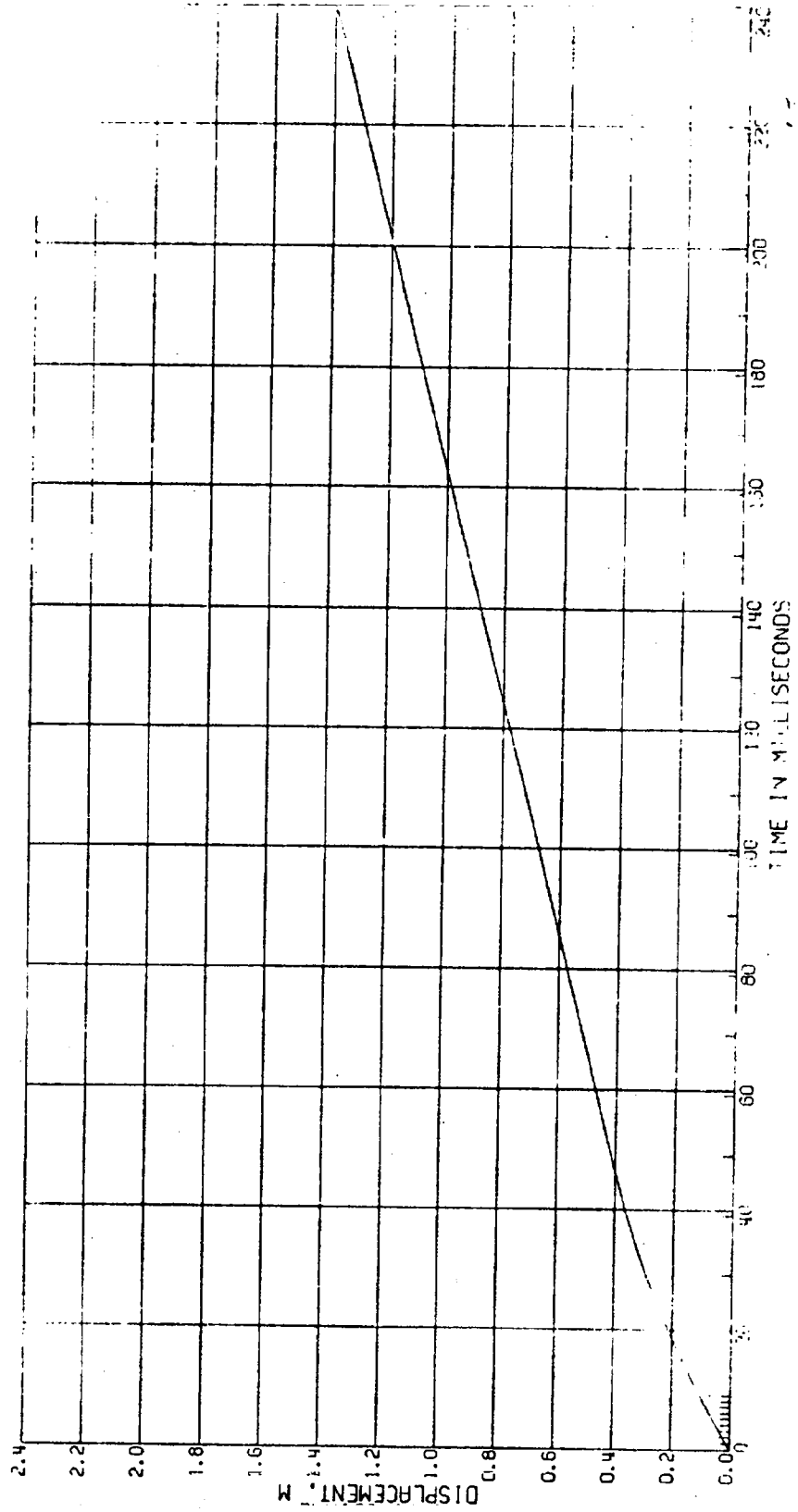
ISHER BODY PAGE B

-D DATA SHEET CLASS 180

DEFORMABLE BARR TO LOAD CELL BARRIER (1.1MM-H FLOW)

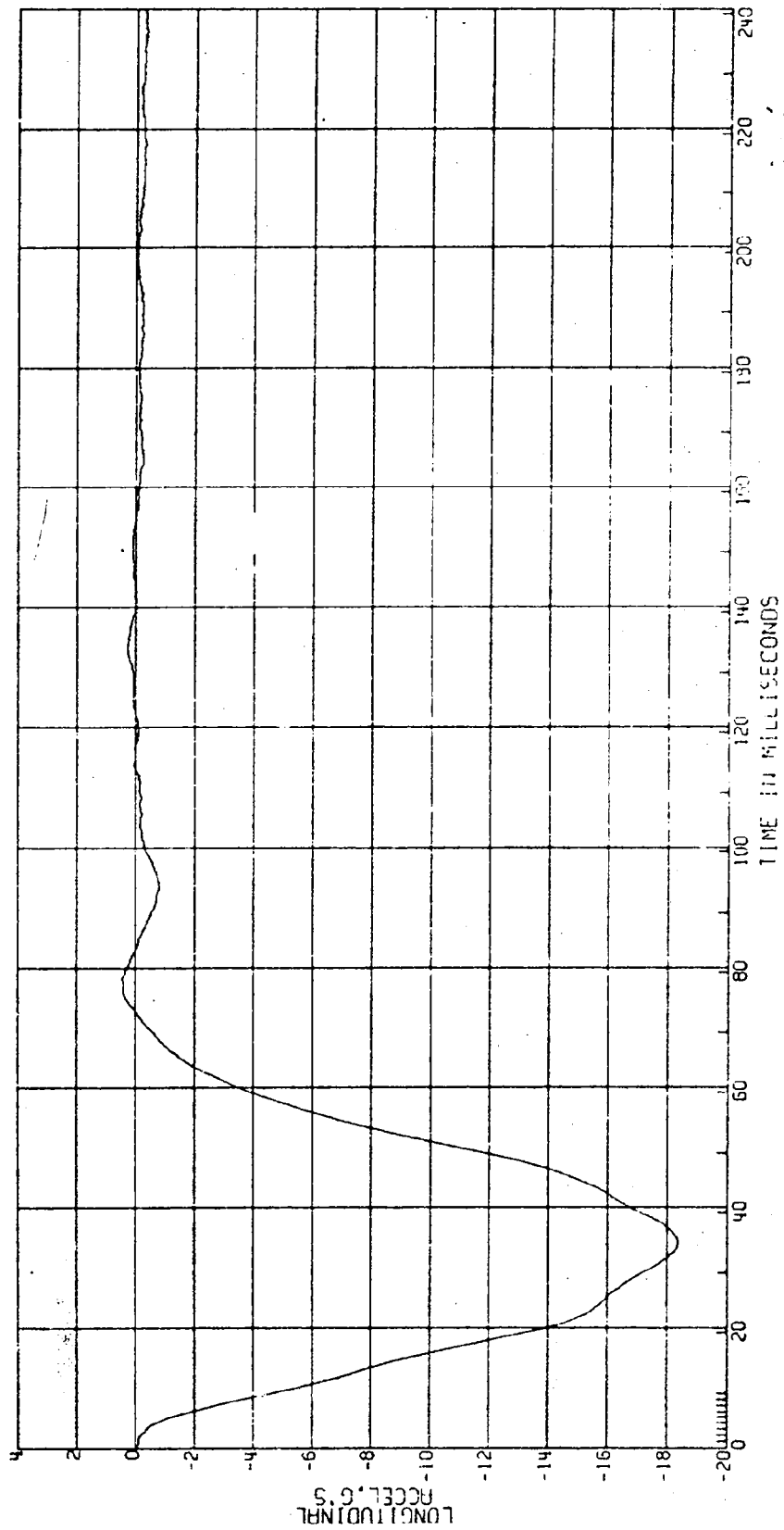
COMPUTED STRIKING BARR AND DISP

(2ND INTEGRAL AVERAGED ACCELERATION)



RELEASED BY: 371
12 PROCESSED 8 11 24 121.2

5952A BARRIER TO BARRIER DEFORMABLE BARR TO LOAD CELL BARRIER 2.1 KM/H FIGURE 4-
3865-448 STRIKING VEH KINEMATICS-AXO ACCEL. TEST DATE: 05-03-84
1-SHFR BODY FACE B
1-D DATA SAE CLASS 180



RELEASED BY: 7
7 PROCESSED 4 MT 84 18:11

5952A 8P-11 TO BARRIER

865-448

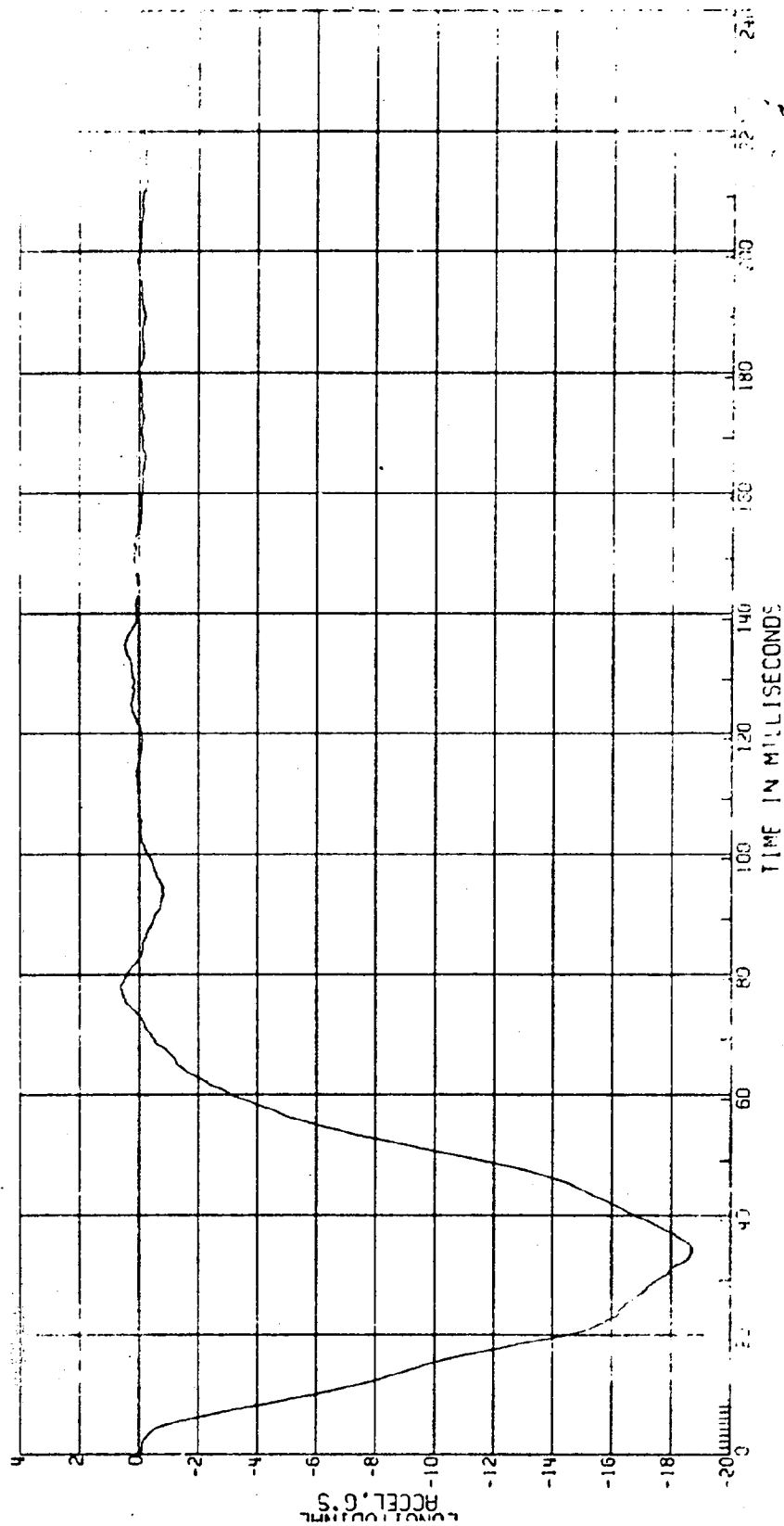
ISHER BODY 111 B

-D DATA SITE MASS 180

DEFORMABLE BARR TO LOAD CELL IMPACT NO. 1 KM H 11000

STRIKING VEH KINEMATIC NO. 111111

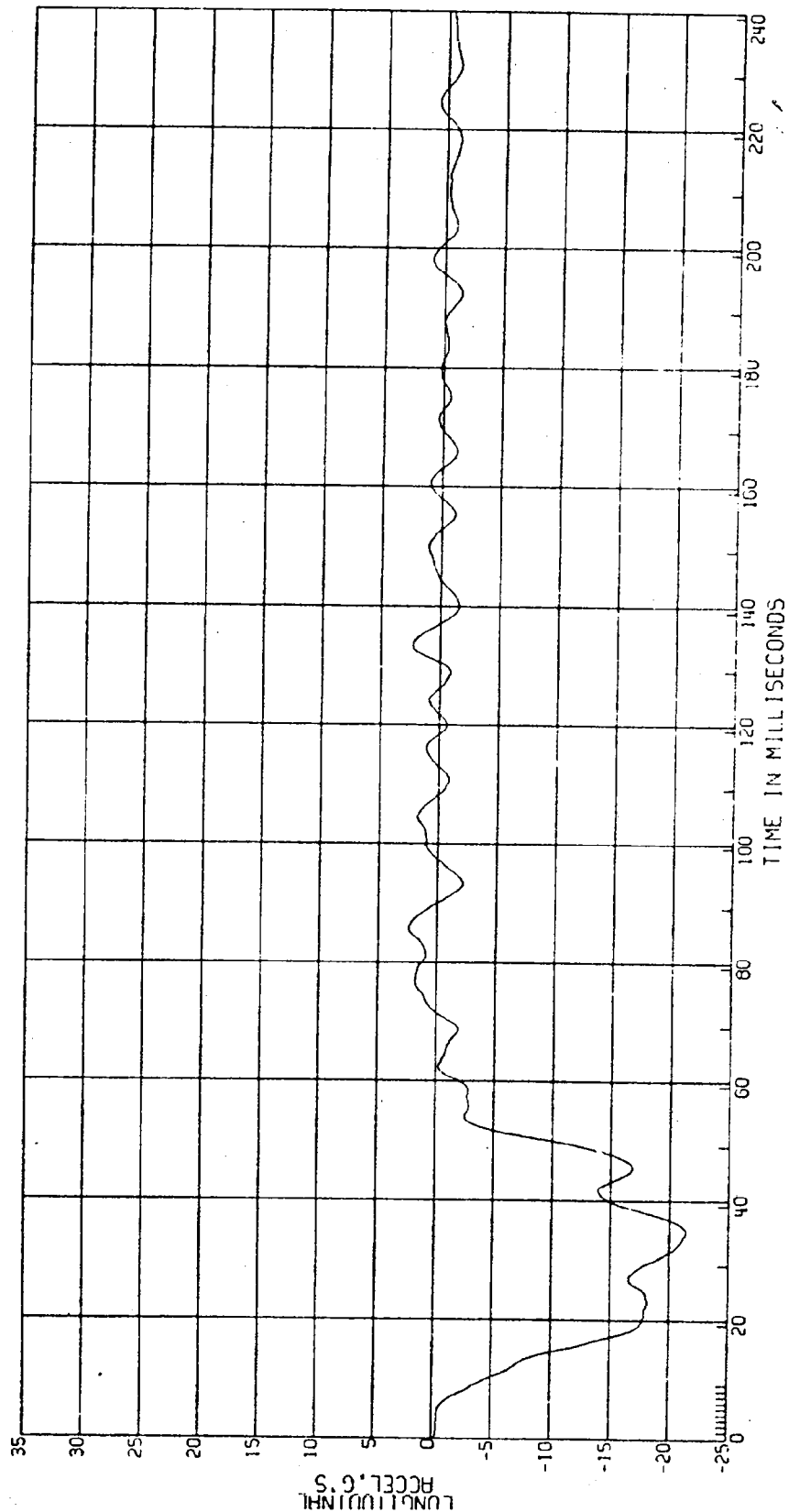
TEST NO. 111111



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8 PROCESSED 4 M 54 18:11

5952A BARRIER TO BARRIER
 3865-448
 FISHER BODY FACE B
 1-D DATA SAE CLASS 180

DEFORMABLE BARR TO LOAD CELL BARRIER 2.1 KM/H FIGURE 44
 STRIKING VEH KINEMATICS-AX3 ACCEL.
 TEST DATE: 05-03-84



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 9 PROCESSED 4 MY 84 18:11

5952A 2441.5 TO BARRIER

3865-448

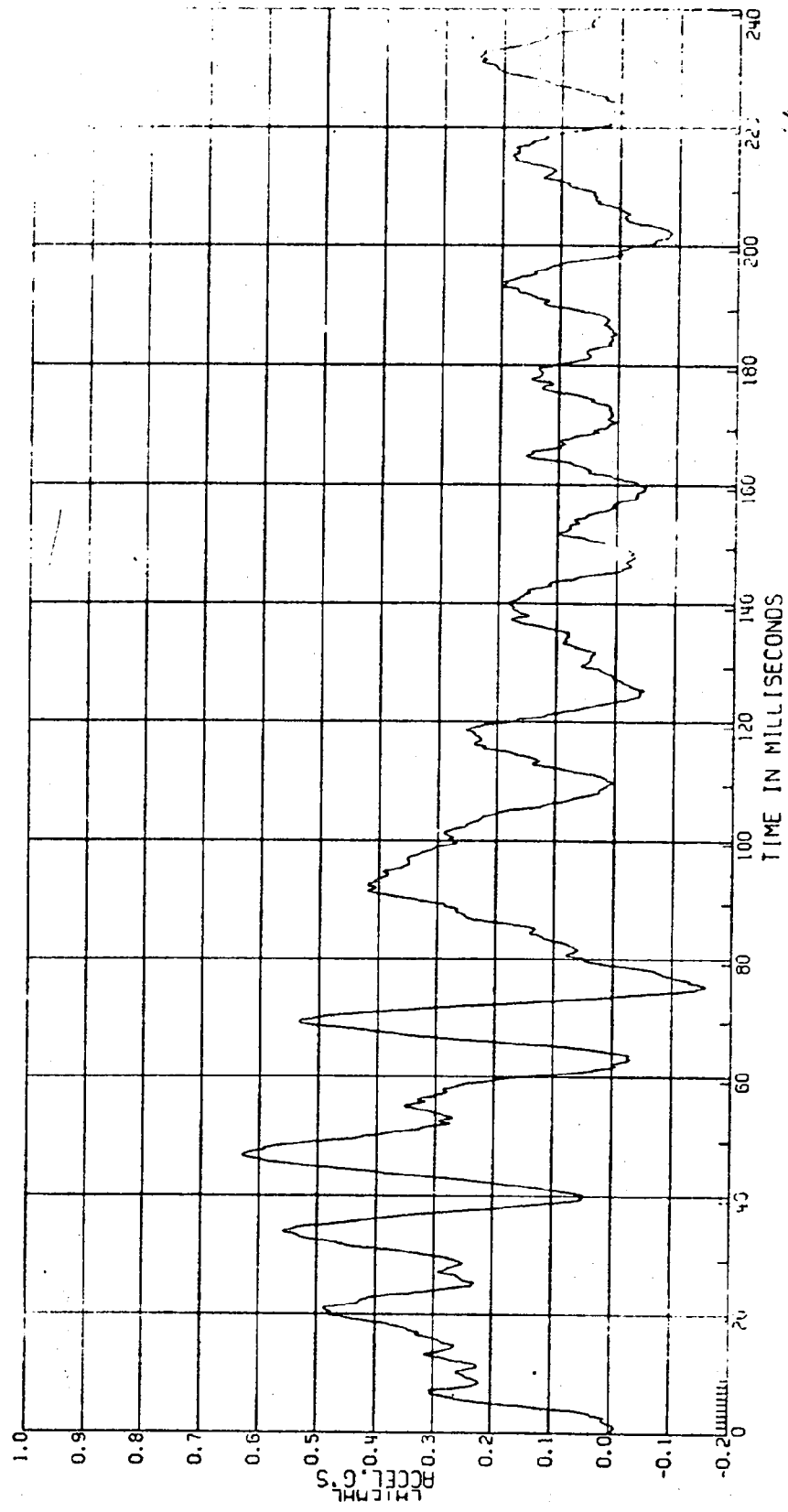
FISHER BODY FACE B

3-D DATA SET CLASS 180

DEFORMABLE BARR TO LOAD CELL BARRIER 42.1 KM/H FIGURE 4

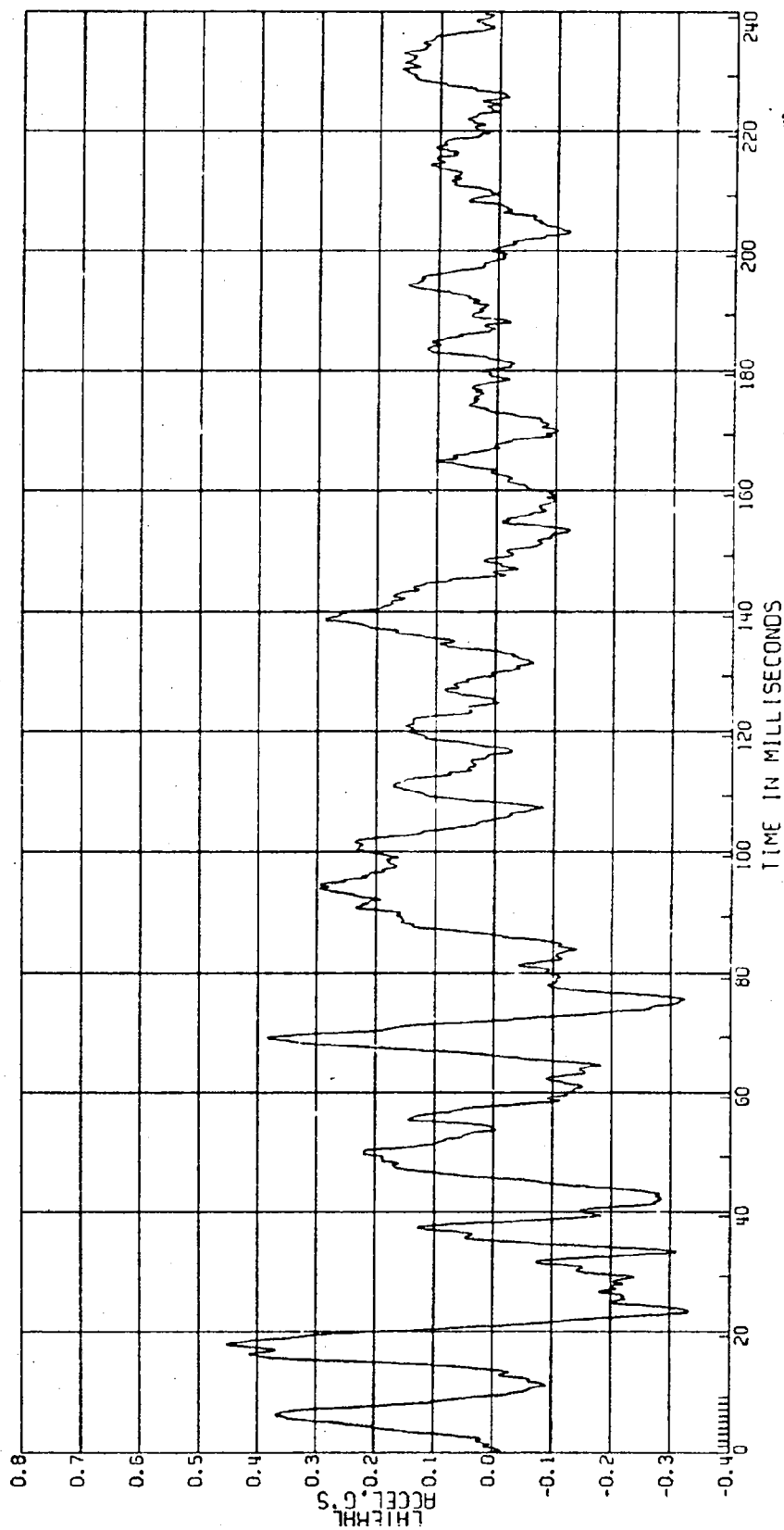
STRIKING VEH KINEMATICS HYD HOCEL.

TEST DATE: 1-10-84



RELEASED BY: J. J. J.
10 PROCESSED 4 MT 84 18:11

5952A BARRIER TO BARRIER DEFORMABLE BARR TO LOAD CELL BARRIER 42.1 KM/H FIGURE 4/6
 1865-448
 FISHER BODY FACE B STRIKING VEH KINEMATICS-AY2 ACCEL. TEST DATE: 05-03-84
 1-D DATA SAE CLASS 180



RELEASED BY:
 11 PROCESSED 4 M1 84 18:11

5952A BARRIERS TO BARRIER

3865-448

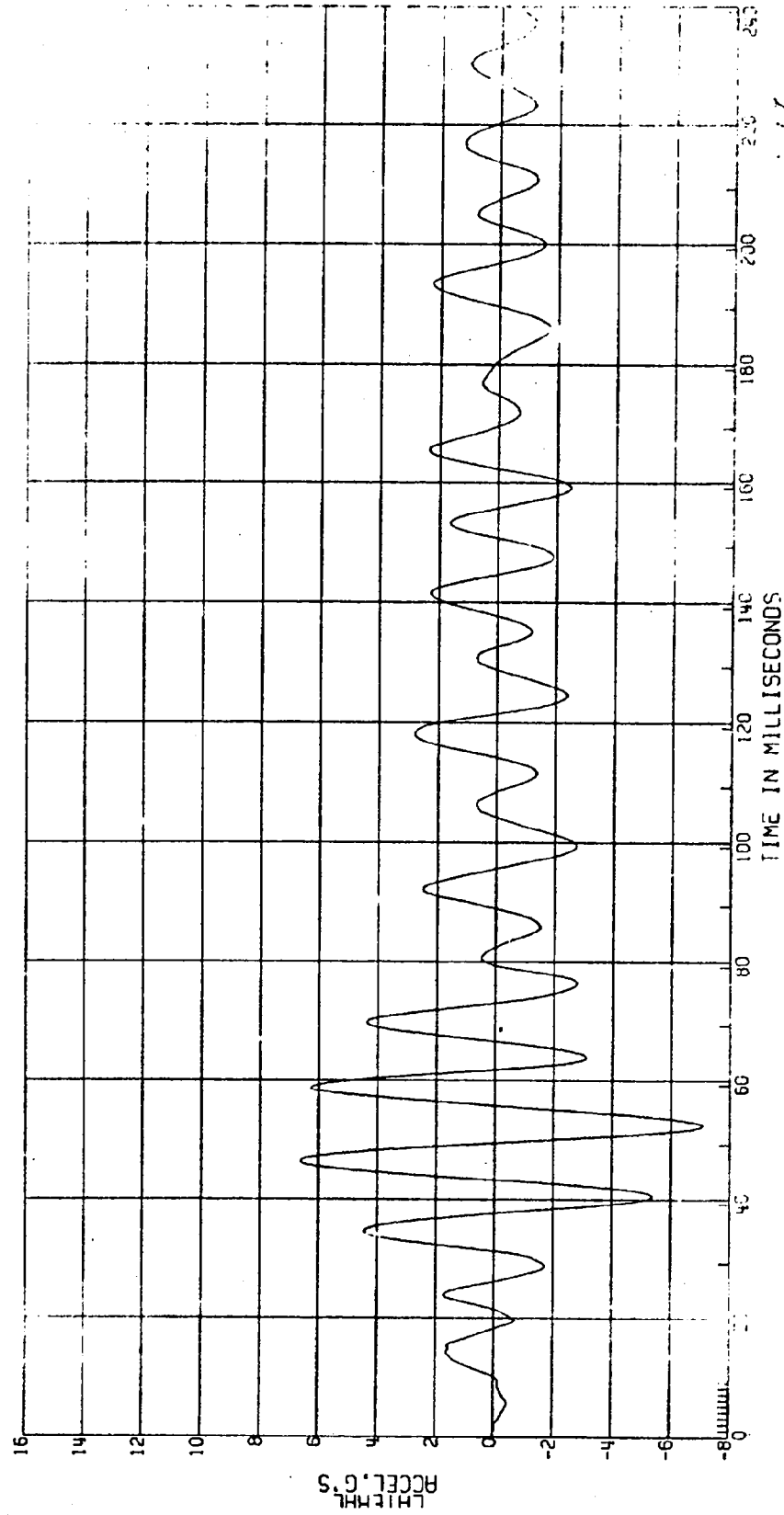
FISHER BODY NO. B

1-D DATA SPE CROSS 180

DEFORMABLE BARR TO LOAD CELL. SHAPED 12.1 IN H FIGURE

STRIKING VEH KINEMATICS 103 ACCEL.

TEST DATE 10/1/84



RELEASED BY: JF

12 PROCESSED 4 MT 84 18:11

C5952A BARRIER TO BARRIER

3865-448

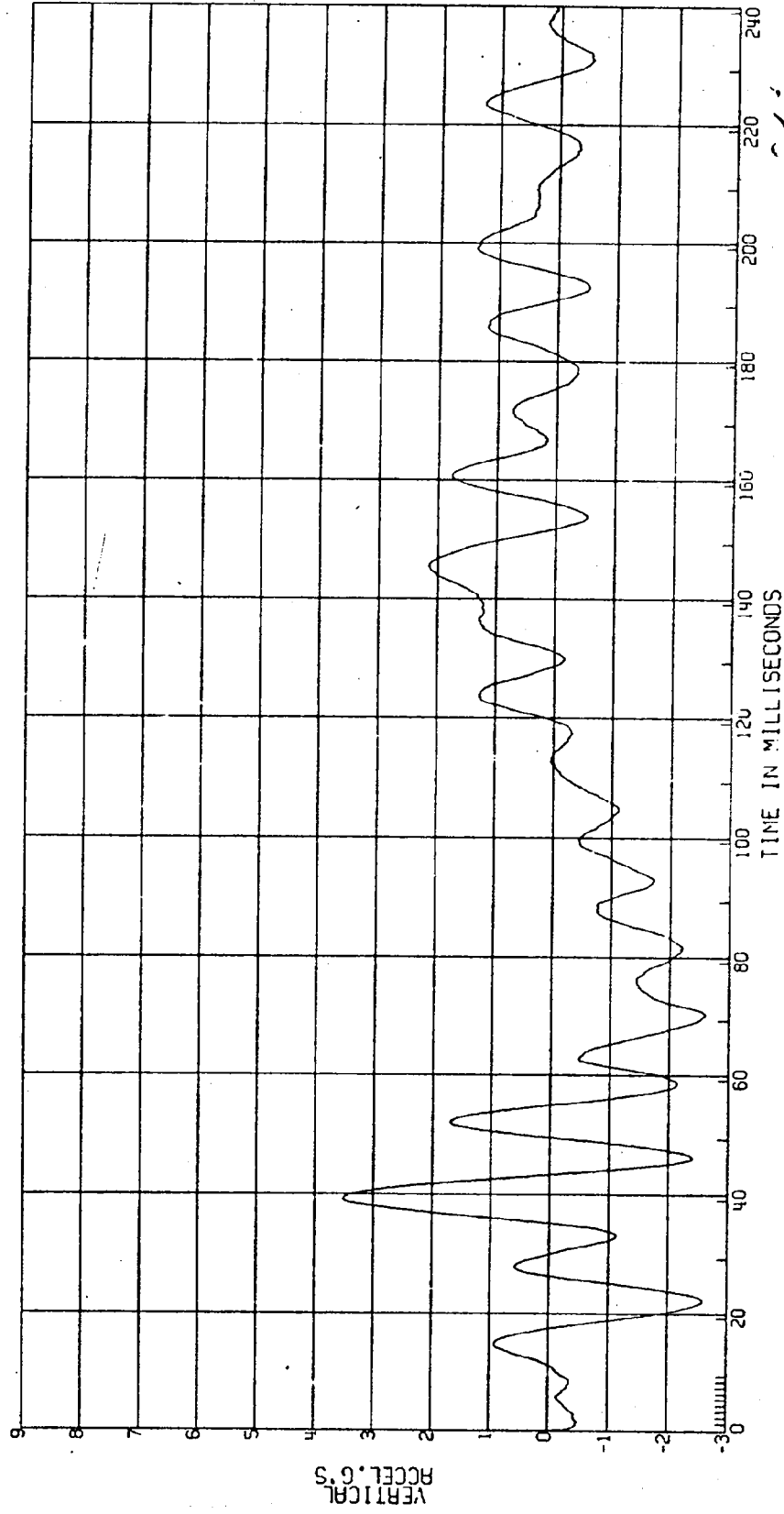
FISHER BODY FACE B

A-D DATA SAE CLASS 180

DEFORMABLE BARR TO LOAD CELL BARRIER 4.1 KM/H FIGURE 48

STRIKING VEH KINEMATICS-AZO ACCEL.

TEST DATE: 05-03-84



RELEASED BY: *[Signature]*
13 PROCESSED 4 MY 84 18:11

35952A IMPACTOR TO BARRIER

DEFORMABLE BARR TO LOAD CELL IMPACTER 42.1 KM/H FIGURE 4

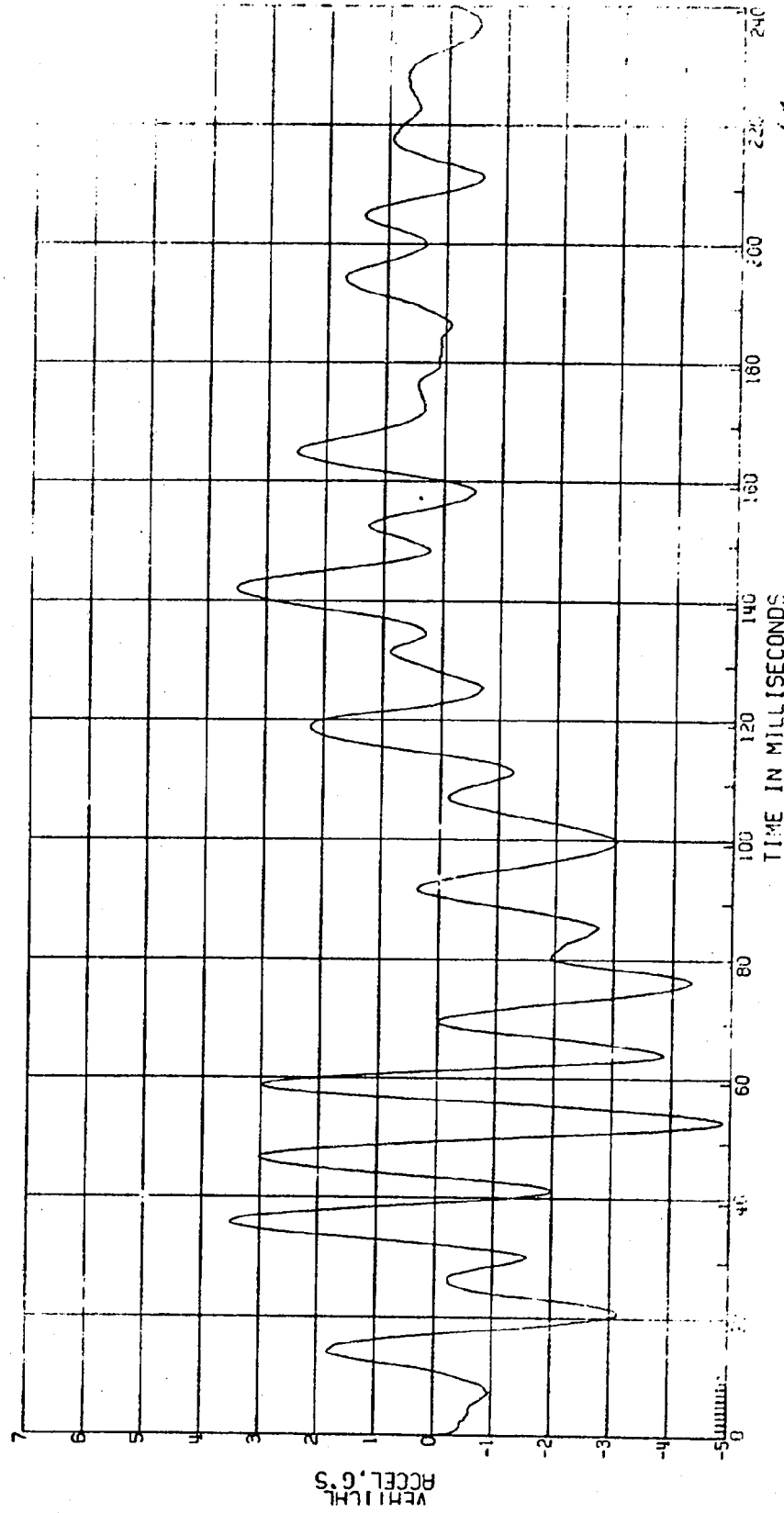
3865-448

FISHER BODY FICE B

STRIKING VEH KINEMATICS--DEL ACCEL.

TEST DATE:

3-D DATA SEE CLASS 180



RELEASED BY: J. J. J.
IN PROCESSED 4 PM 24 19:12

C5952A BARRIER TO BARRIER

DEFORMABLE BARR TO LOAD CELL BARRIER 2.1 KM/H FIGURE 50

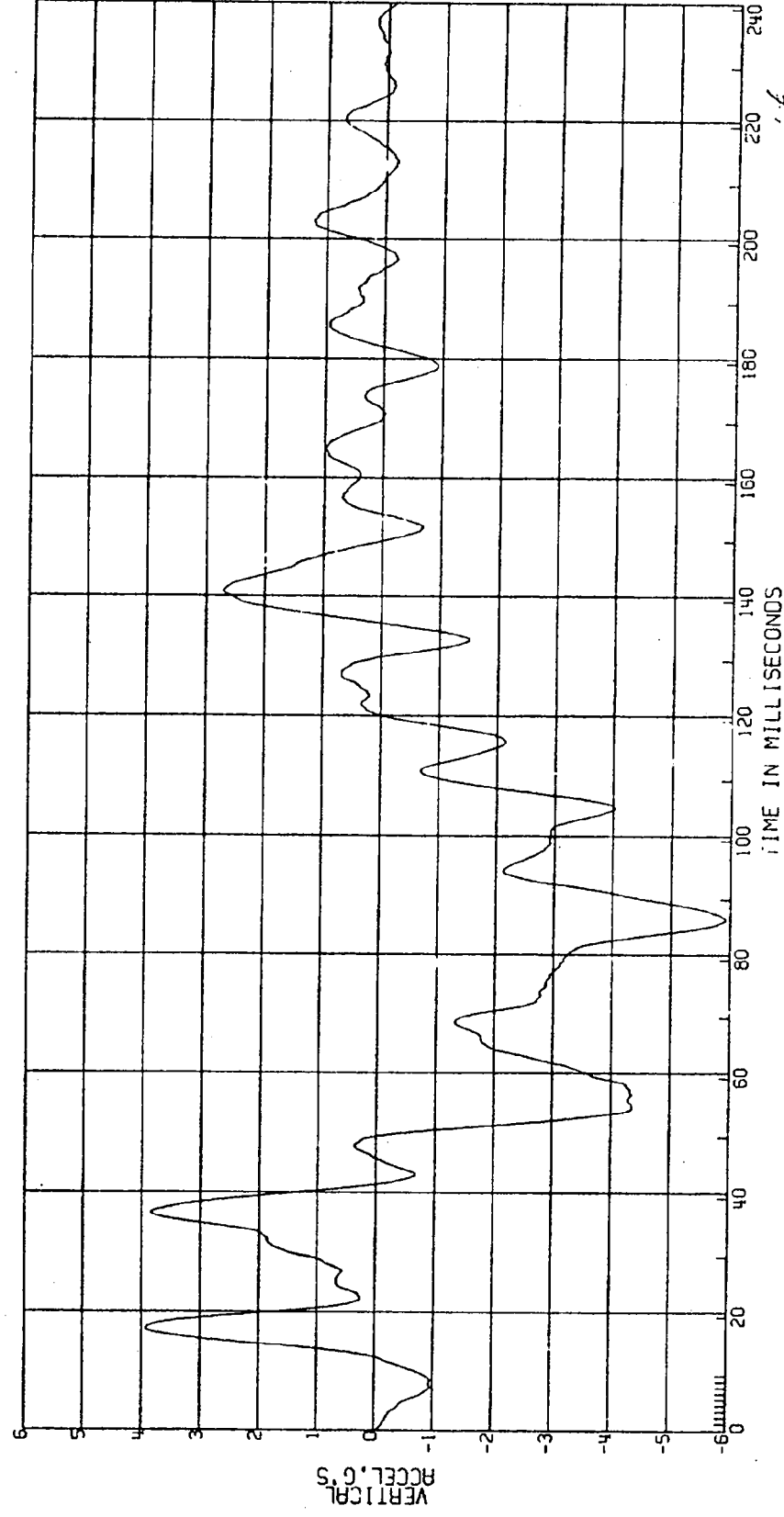
3865-448

FISHER BODY FACE B

STRIKING VEH KINEMATICS-AZ2 ACCEL.

TEST DATE: 05-03-84

A-D DATA SAE CLASS 18C



RELEASED BY: *[Signature]*
15 PROCESSED 4 MAY 84 18:12

5952 BARRIER TO BARRIER

3865-448

FISHER BODY FACE B

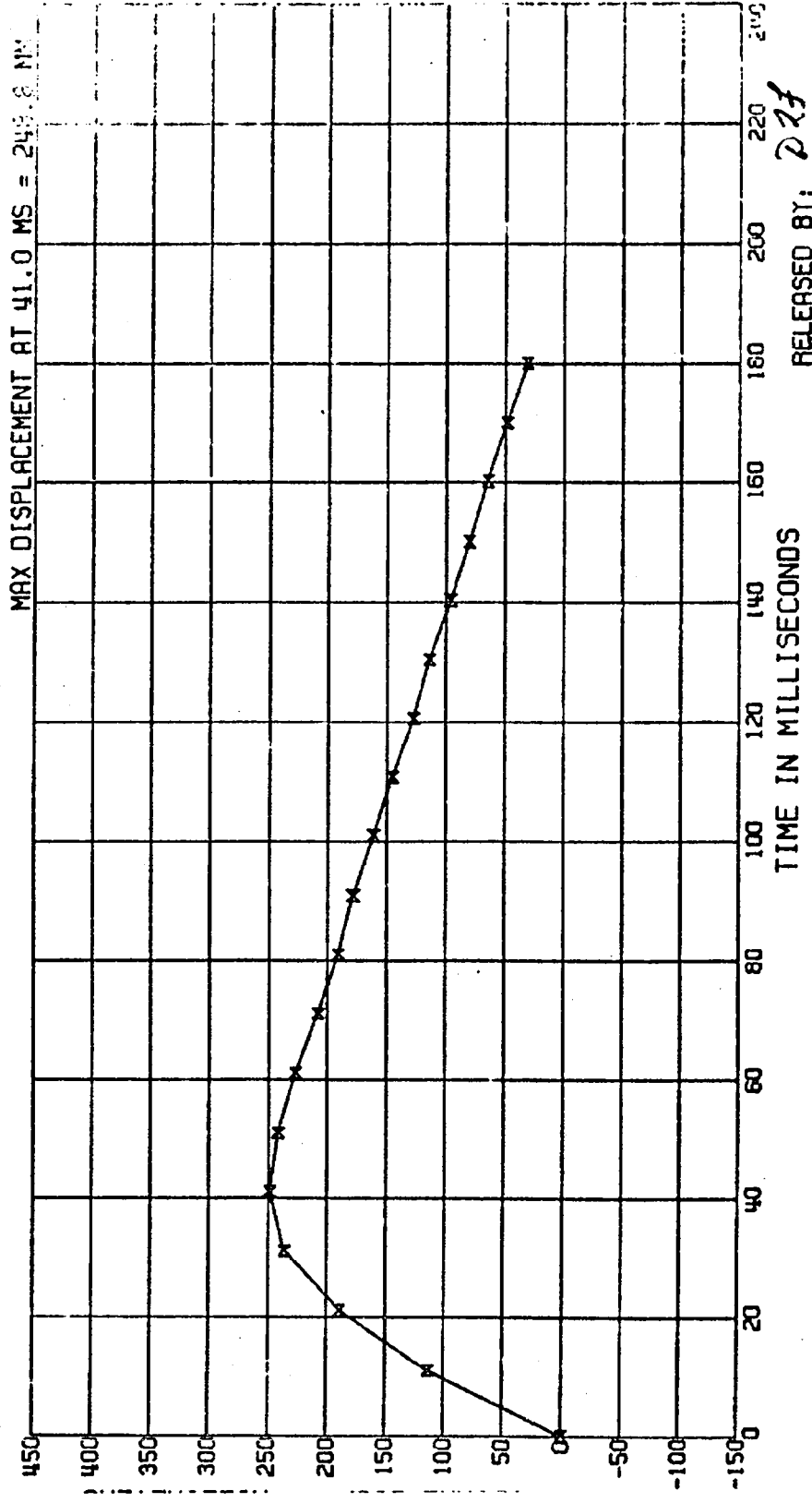
FILM DATA

DEFORMABLE BARR TO LOAD CELL BARR 42.1KM/H FIGURE 51

DRIVERS SIDE

TEST DATE: 05-03-84

NHTSA BARRIER RELATIVE TO LOAD CELL BARRIER



RELEASED BY: *22f*
1 PROCESSED 14 MAR 84 13:01

C5952 BARRIER TO BARRIER DEFORMABLE BARR TO LOAD CELL BARR 42.1 KM/H/FIGURE 52

3865-448

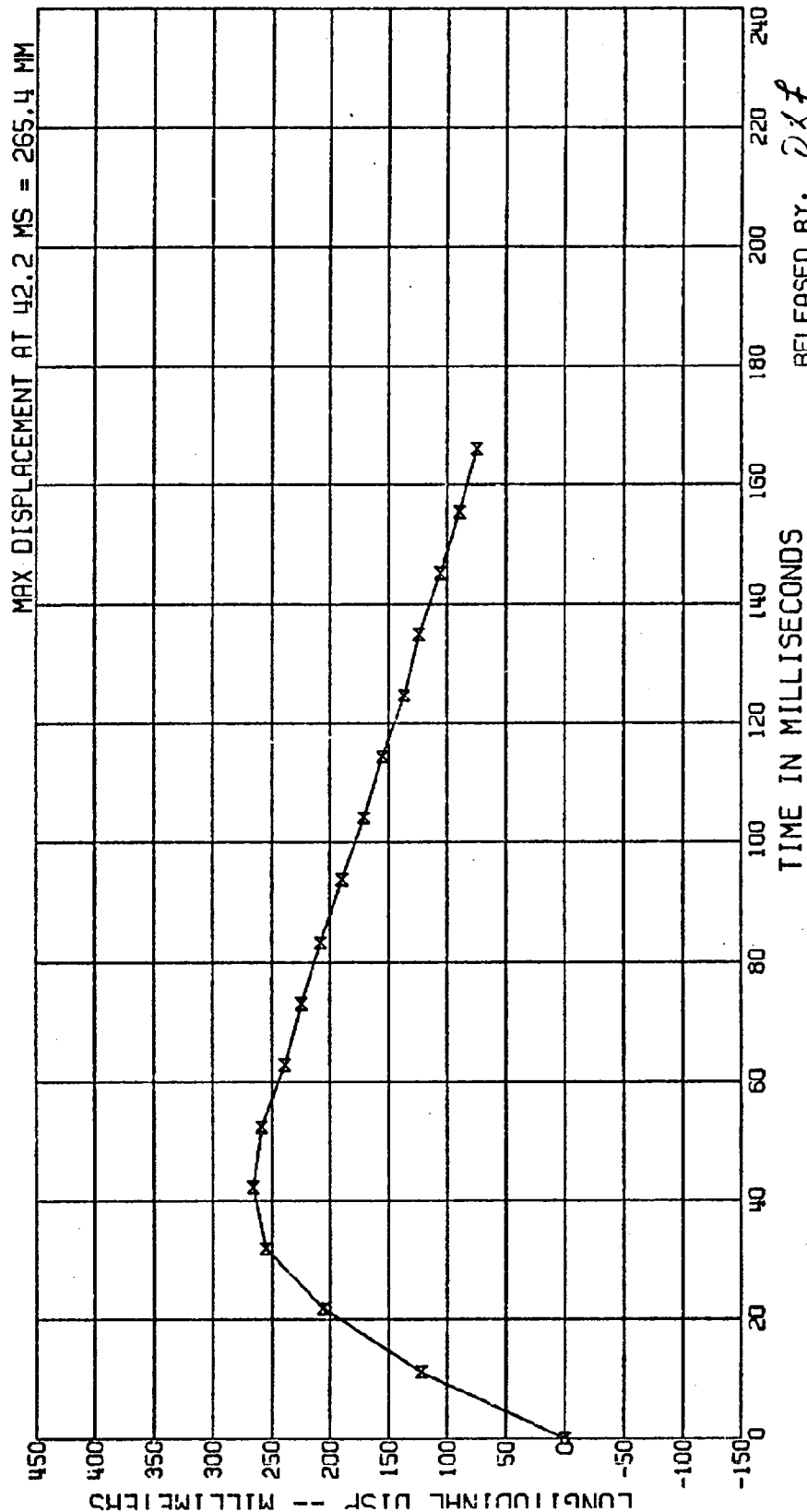
FISHER BODY FACE B

FILM DATA

PASSENGER SIDE

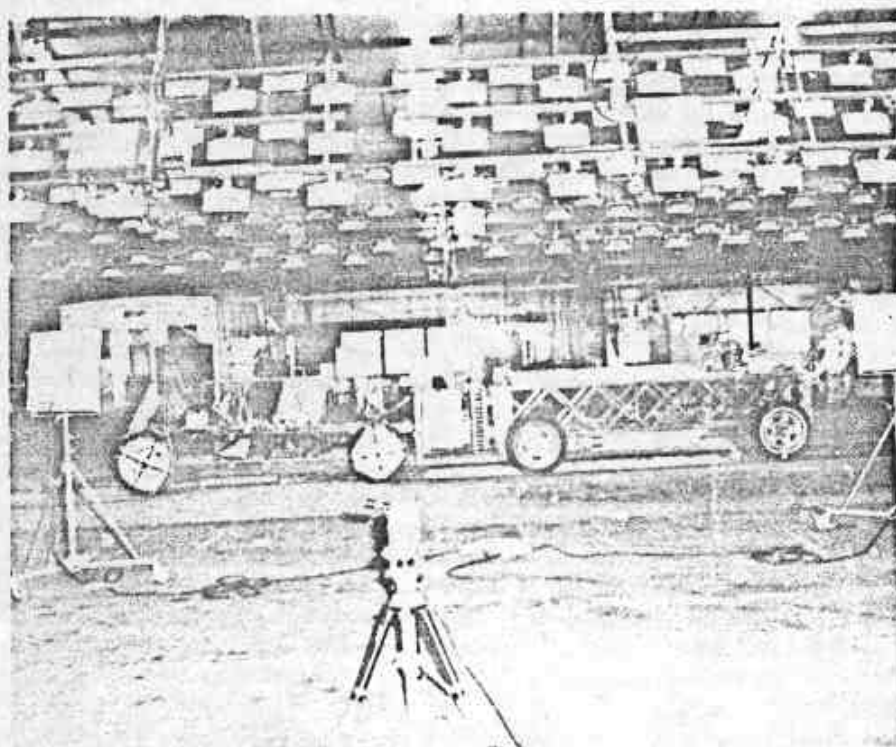
TEST DATE: 05-03-84

NHTSA BARRIER RELATIVE TO LOAD CELL BARRIER

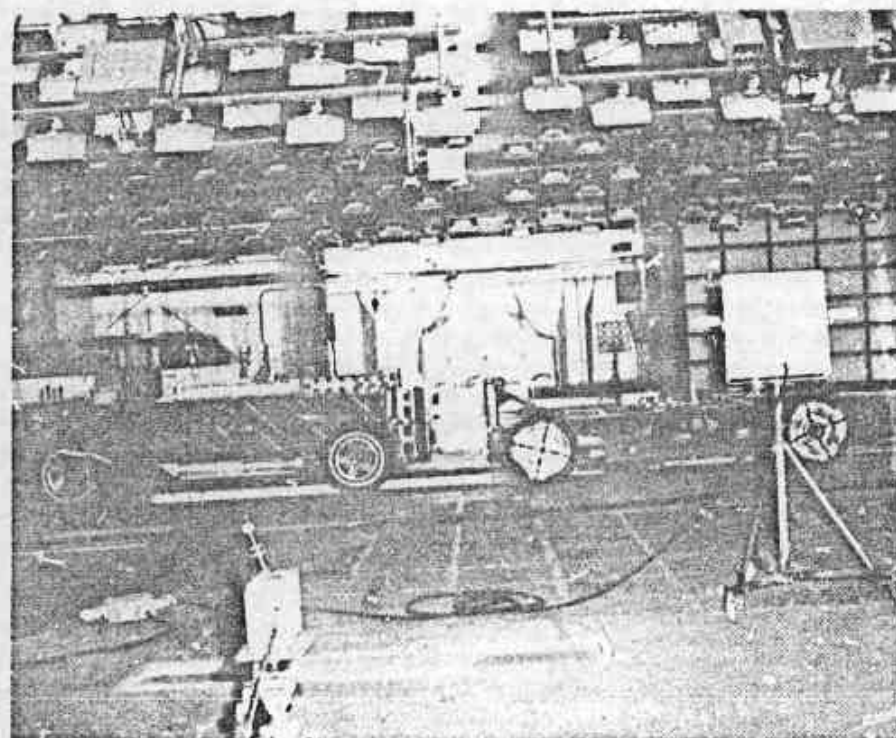


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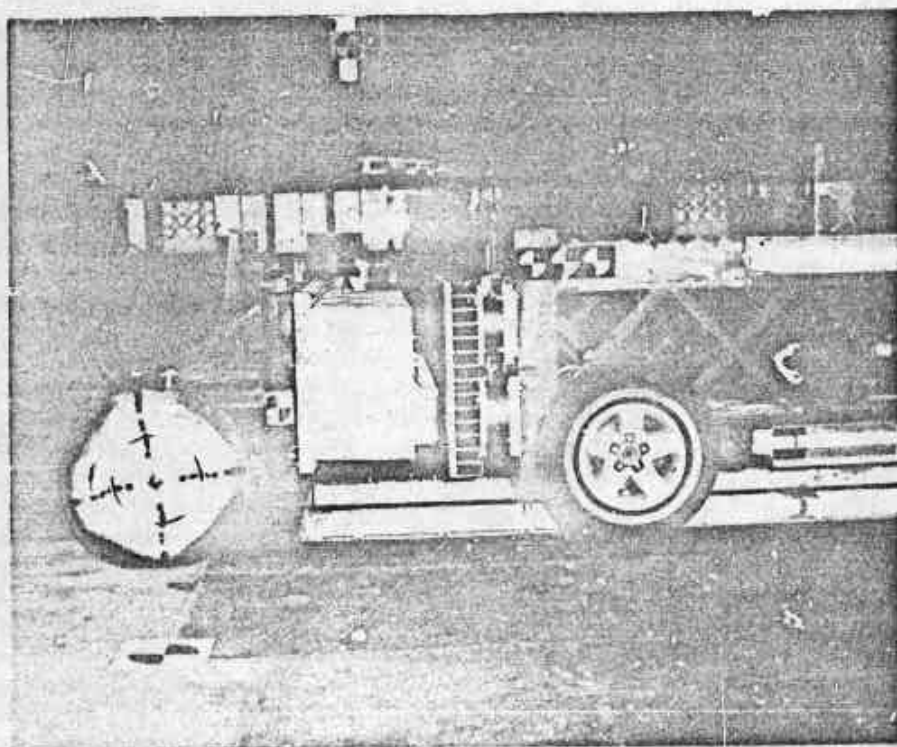
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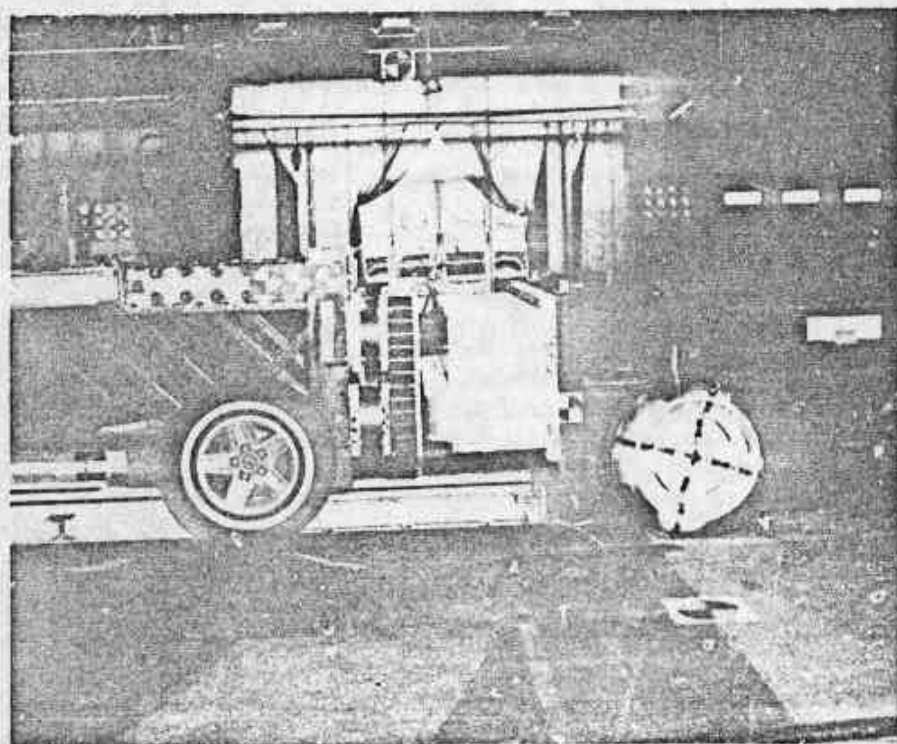
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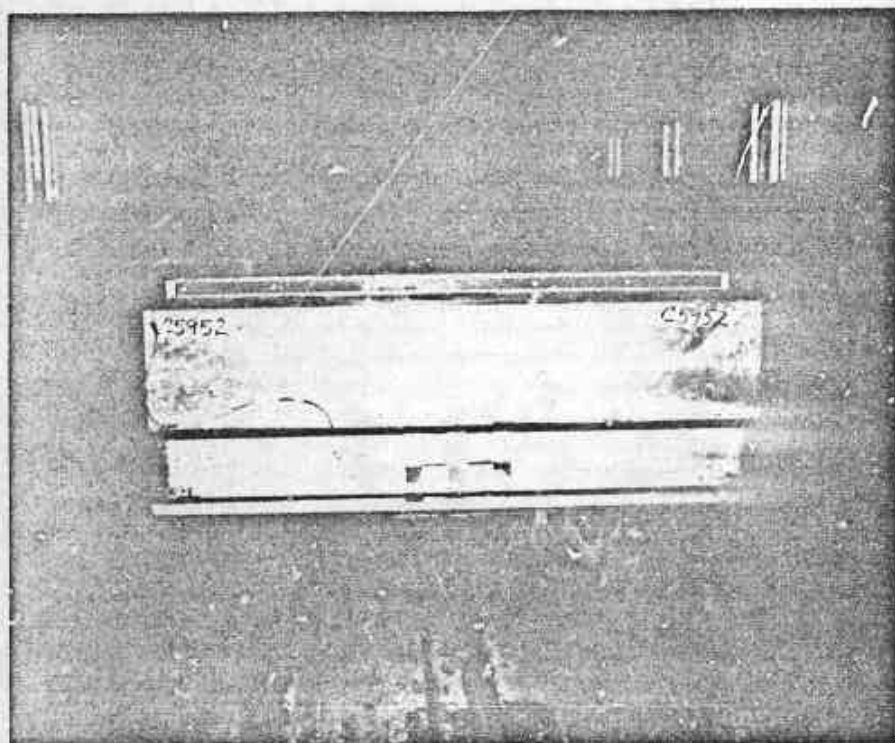


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47117	55

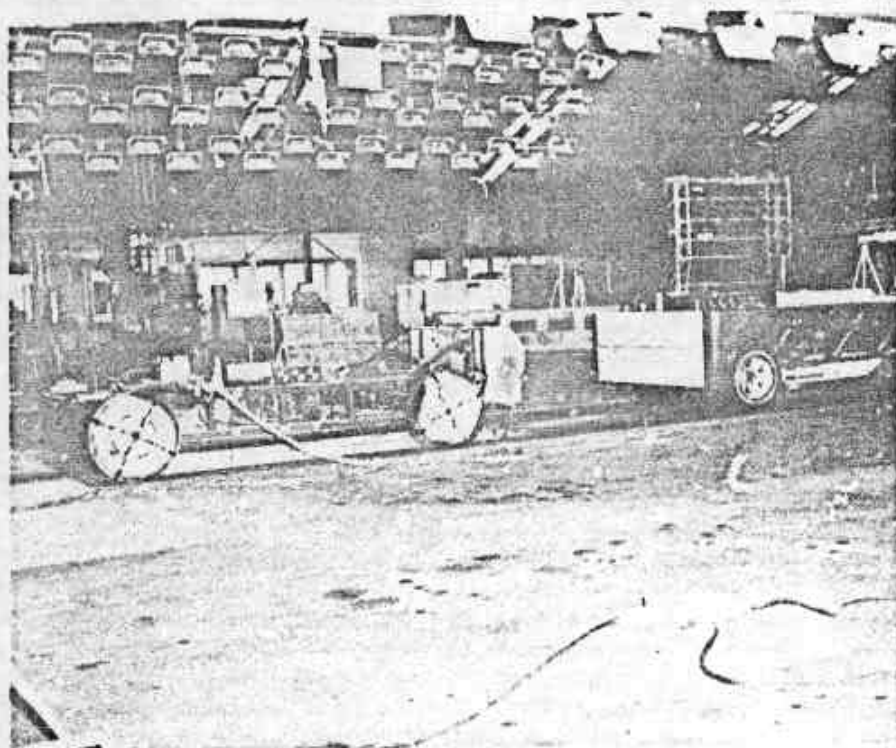


Document No.	Fig No.
47117	56



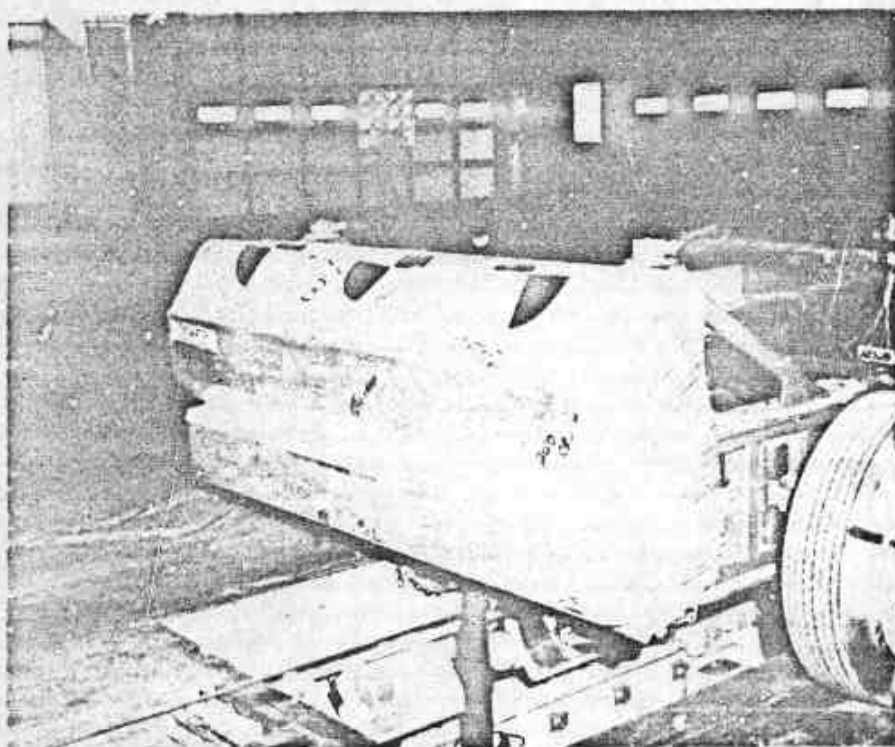


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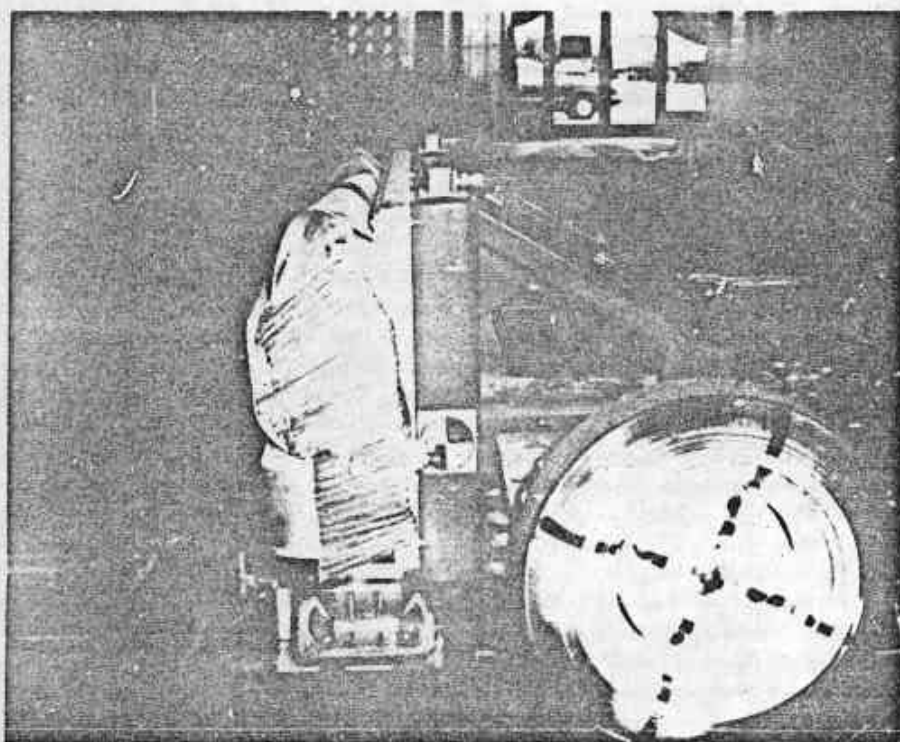


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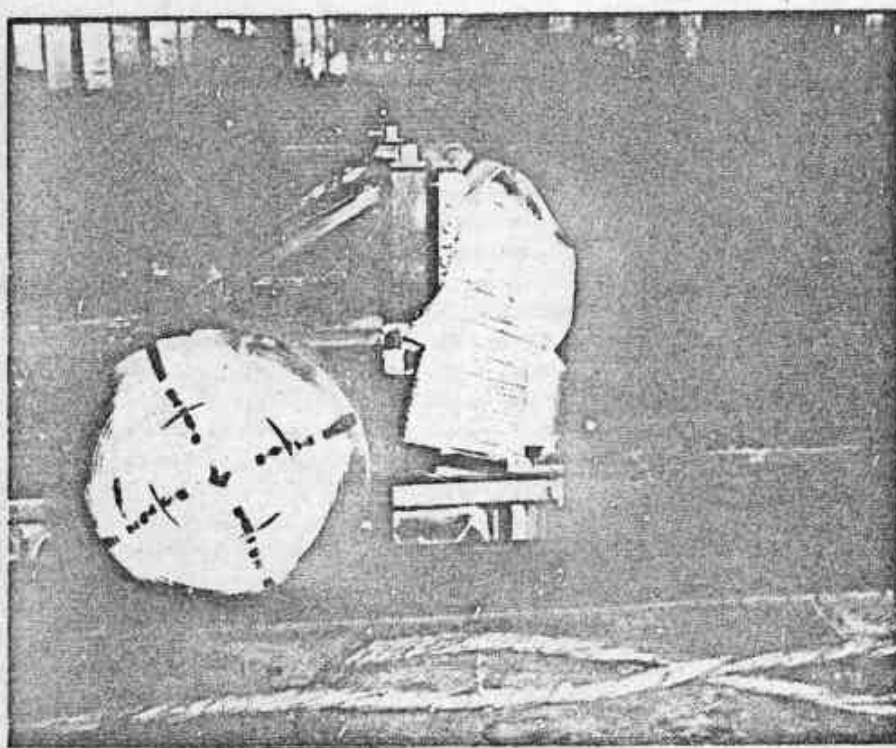


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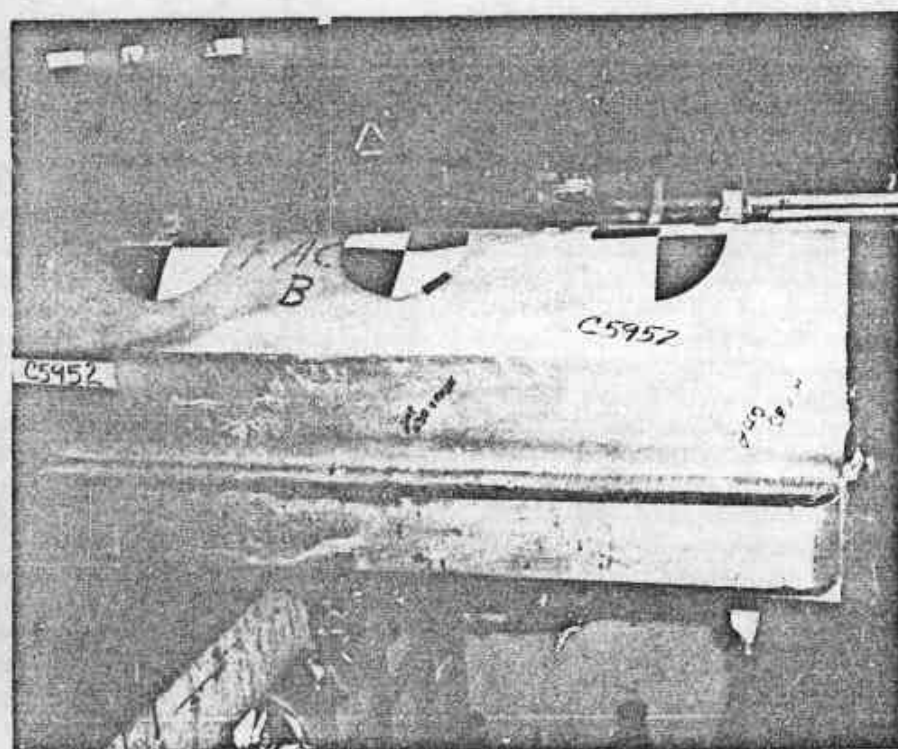




Document No	Fig No
17117	6



Document No	Fig No
17117	62



Document No	Fig No
17147	13