EA03-014

FONSI 12/11/03

LETTER TO ODI

ATTACHMENT G

BOOK 4 OF 10

PART 1 OF 4

FINAL TEST REPORT

Global Test Operations
Advanced Vehicle Technology

		Test Order No.	T-A5624
		Work Task W. O. No.	J16
TO:	K. Arthurs	Test Date	11/25/97
		Data Reported	10/13/98
		Sheet	1 of 96

SUBJECT: Crash Test 10936 (90° Right Side Fixed Pole Impact at 15.8 ± 0.4 mph, 25.4 ± 0.6 km/h) - 1999 Lincoln Town Car (FN-145) 4-Door Sedan

REQUESTED BY: Vehicle Safety and CAE Department, Advanced Vehicle Technology - D. Purdy

OBJECT: To obtain development data relative to air bag system sensors.

SUMMARY OF TEST RESULTS: See Section 1.0 for air bag system sensor data.

L. Stockton
Test Development Engineer

Concur: E. Burns 10/14/98
Section Supervisor
Operations Engineering Section

VEHICLE DATA:

Make and Model	1999 Lincoln Town Car (FN-145) 4-Door Sedan (Confirmation Prototype)
ID Numbers	1LNLM82WXWY603836, 318-W-152, VC9409
Power Train	4.6L, EFI, Automatic (AODE) Transmission
Fuel Tank(s)	Usable Capacity: 19 gal. (71.9L) Test Condition: Empty
Front Seat(s)	Type: Bucket Cover: Leather Tracks/Position: 6-Way Power/Mechanical Mid and Down Seat Backs/Position: Adjustable/29.5° Rear of Vertical Head Restraints/Position: Adjustable/Up Lumbar Support/Position: Power/Deflated
Restraint System	RF: 3-Point Continuous Loop Active Belt and Seat Back Side Air Bag
Occupants	RF: BIO-SID Uninstrumented Dummy
Test Weight	Front: 2453 lb (1113 kg) Rear: 2168 lb (983 kg) Total: 4621 lb (2096 kg)
Tires	Front: P225/60R16 32 psi (221 kPa) Rear: P225/60R16 32 psi (221 kPa) Spare: Removed
Significant Content or Accessories:	Air Conditioning, Power Steering, Power Brakes, Tilt Steering Wheel

GENERAL TEST COMMENTS:

1. Test Procedure

The test was performed according to the following Corporate test procedure(s):

Fixed Barrier Collision, T657-ST-14 dated July 17, 1996.

1.1 Vehicle Alignment

The test vehicle impacted an 350 mm diameter steel pole structure, rigidly attached to the barrier face. The vertical steel pole was aligned so that the point of vehicle impact was centered on the test dummy's right front head center of gravity.

2. Remarks

Crash movies, pre- and post- crash still images of the test vehicle and copies of this report are available only through the Crash Test Operations Section after permission is obtained from the test requesting department. The crash still images are stored on CD ROMs. The file names of the still images are listed under crash number and a three digit sequence number which are 10936001 through 10936046.

TEST RESULTS:

1.0 Sensor Development

Time histories of the dummy dynamic displacements obtained from Film Analysis are included in this report.

Time histories of the air bag/sensor(s) are included in this report.

Time histories of any requested derived data (i.e. integrations, etc.) were given to the requesting activity and are not included in this report.

2.0 Vehicle Crush, Film Analysis and/or Instrumentation Data

Time histories of the vehicle accelerations and other instrumentation are included in this report.

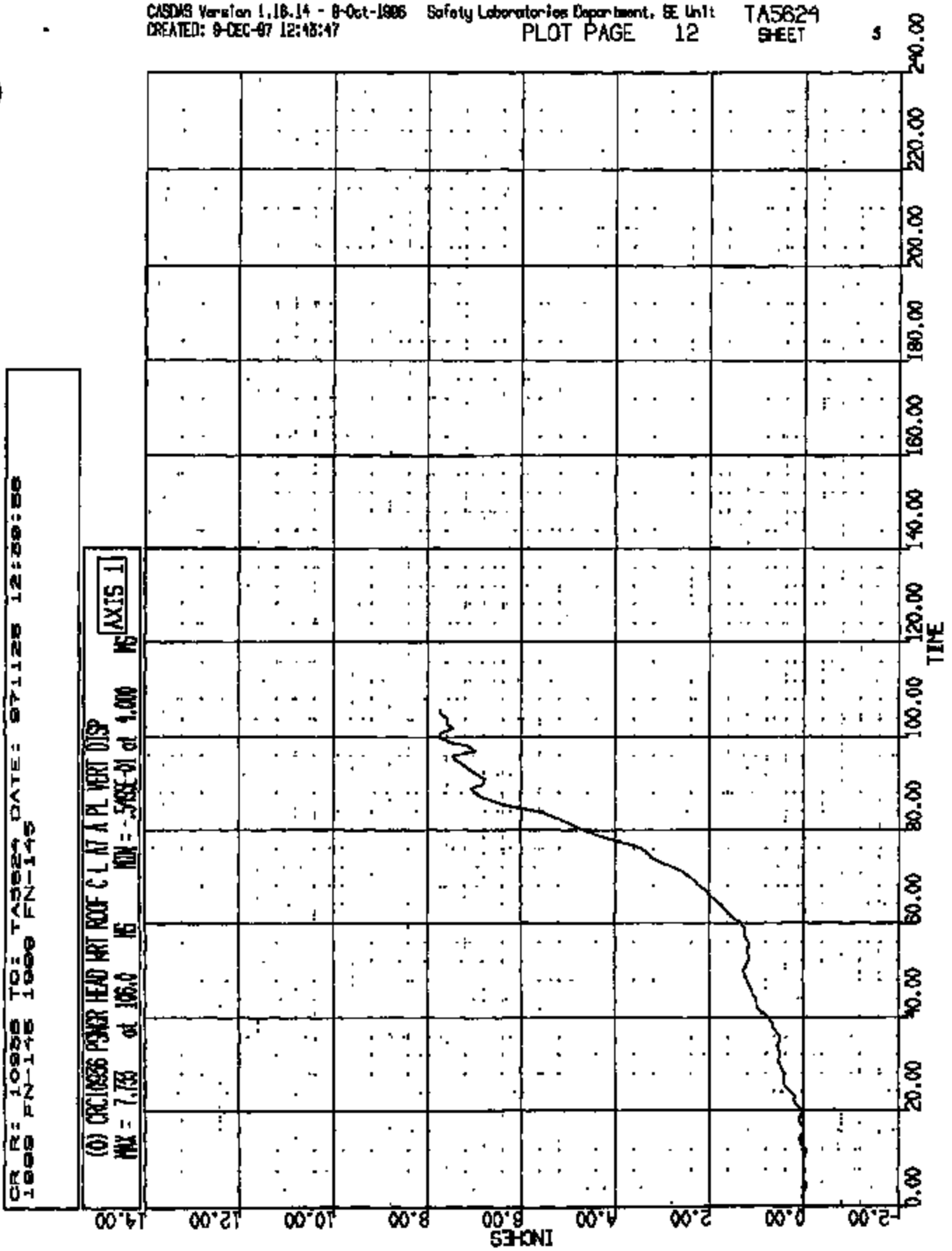
Time histories of vehicle dynamic displacements obtained from Film Analysis are included in this report.

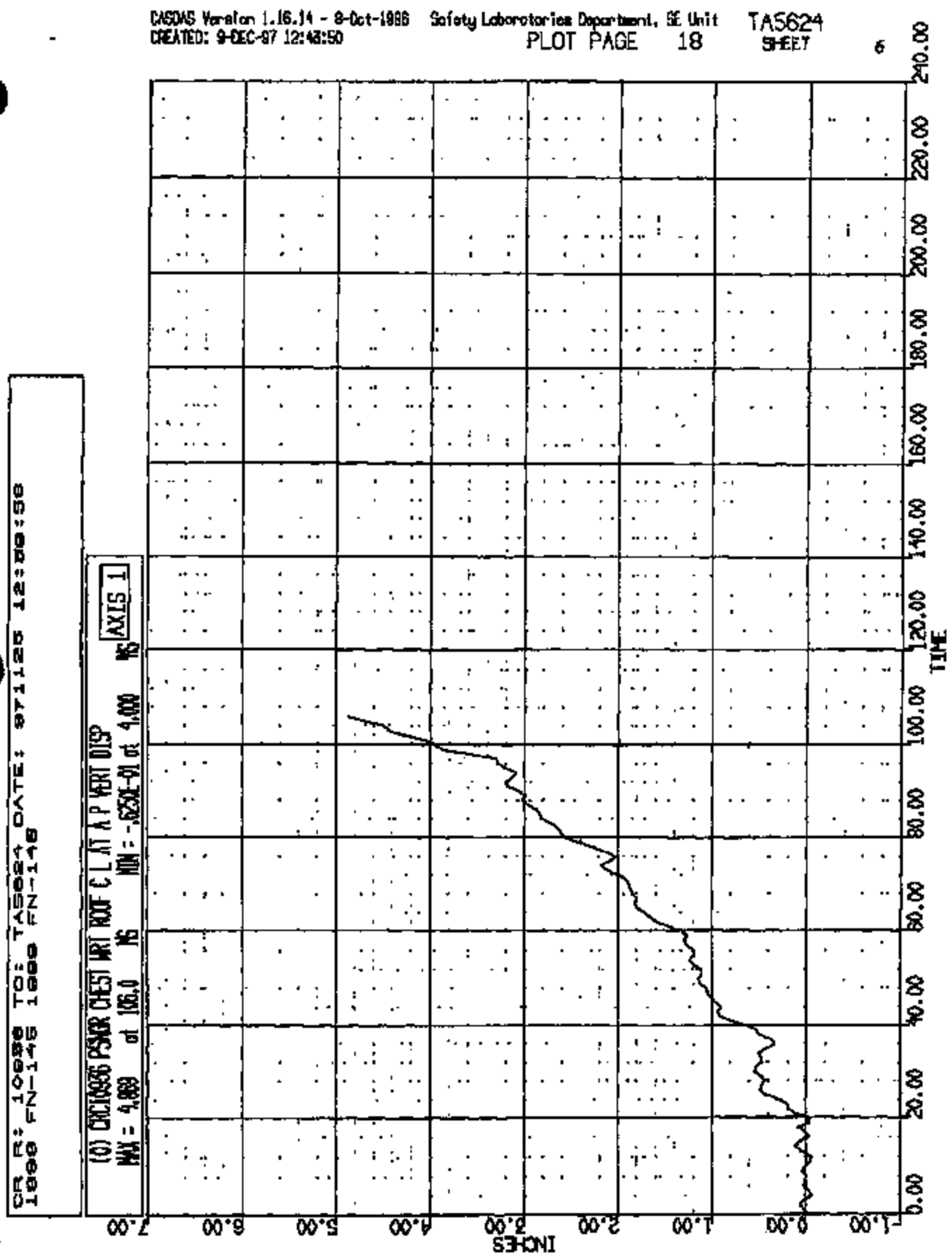
Static displacements of various body points obtained by Dimensional Analysis are included in this report.

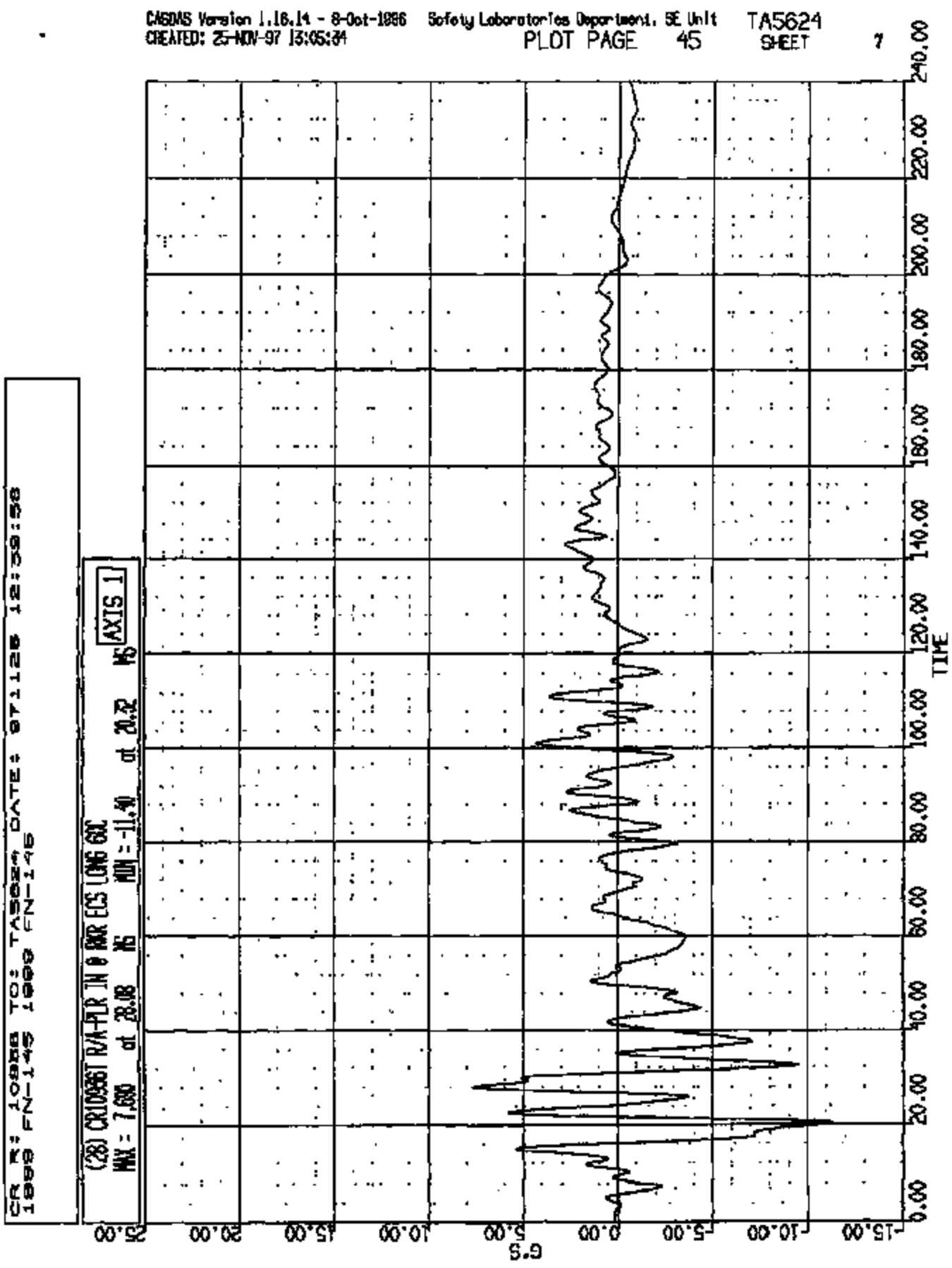
Time histories of any requested derived data (i.e. integrations, etc.) were given to the requesting activity and are not included in this report.

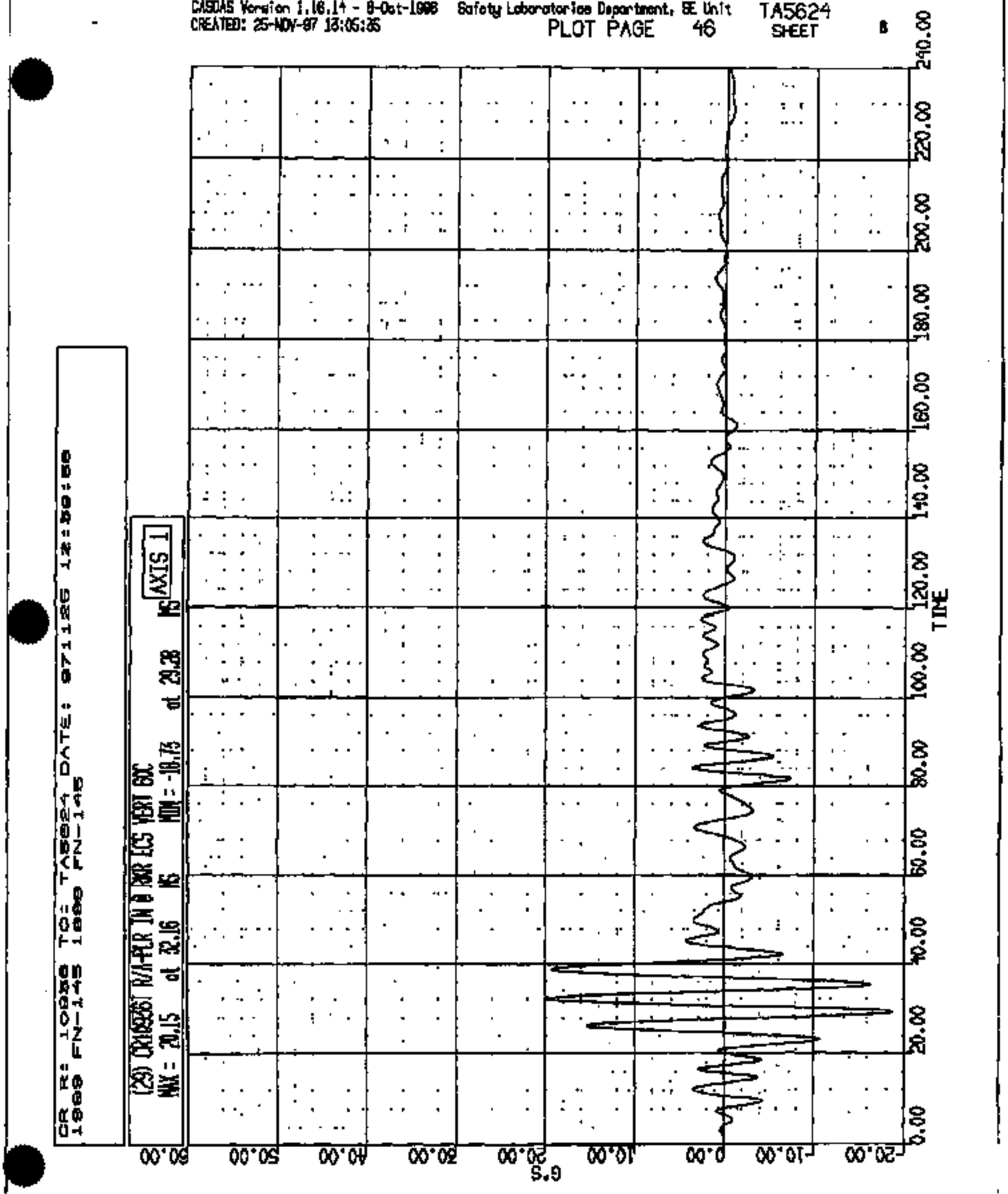
3.0 Vehicle Observations

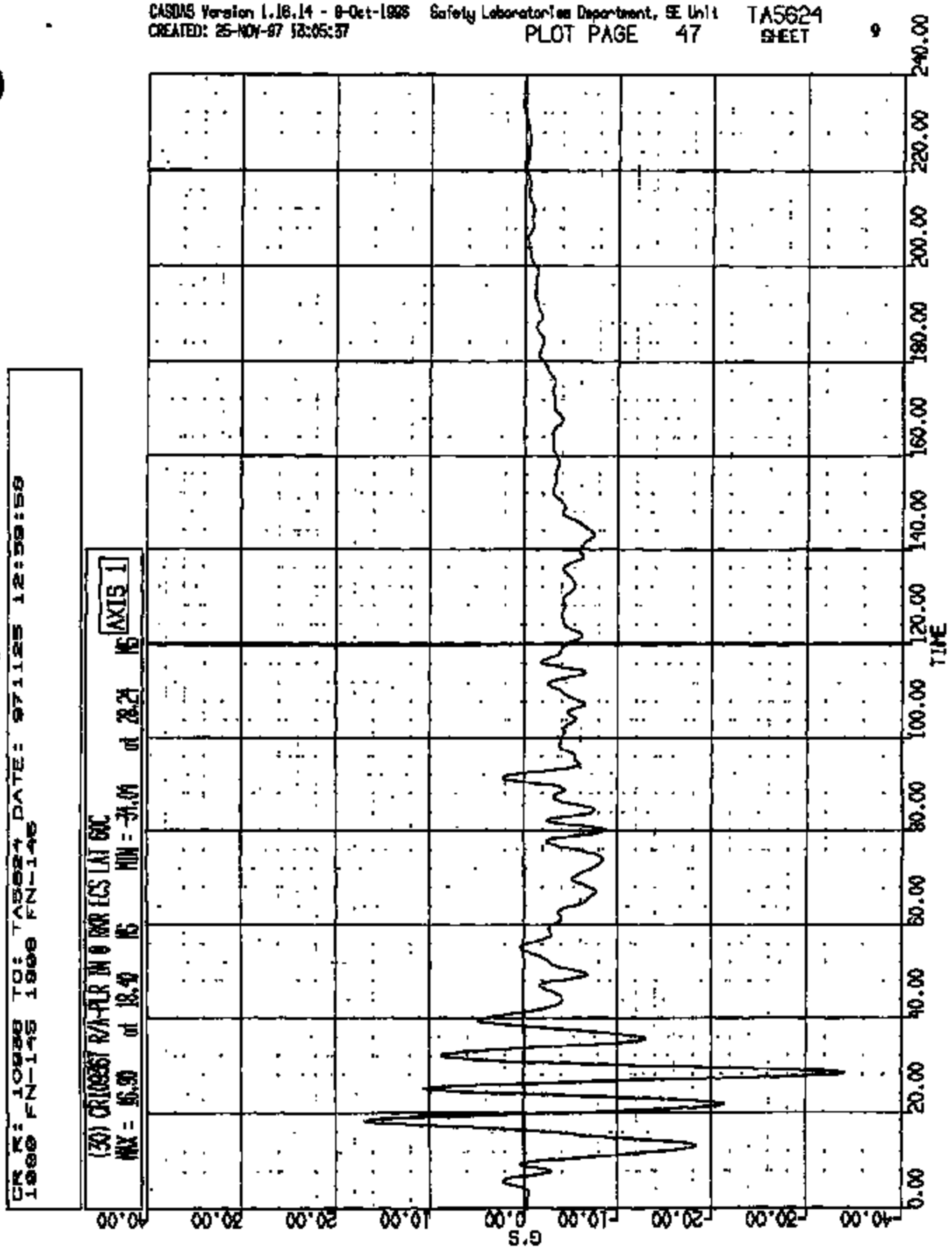
The right front dummy seat back side air bag did not deploy during impact.

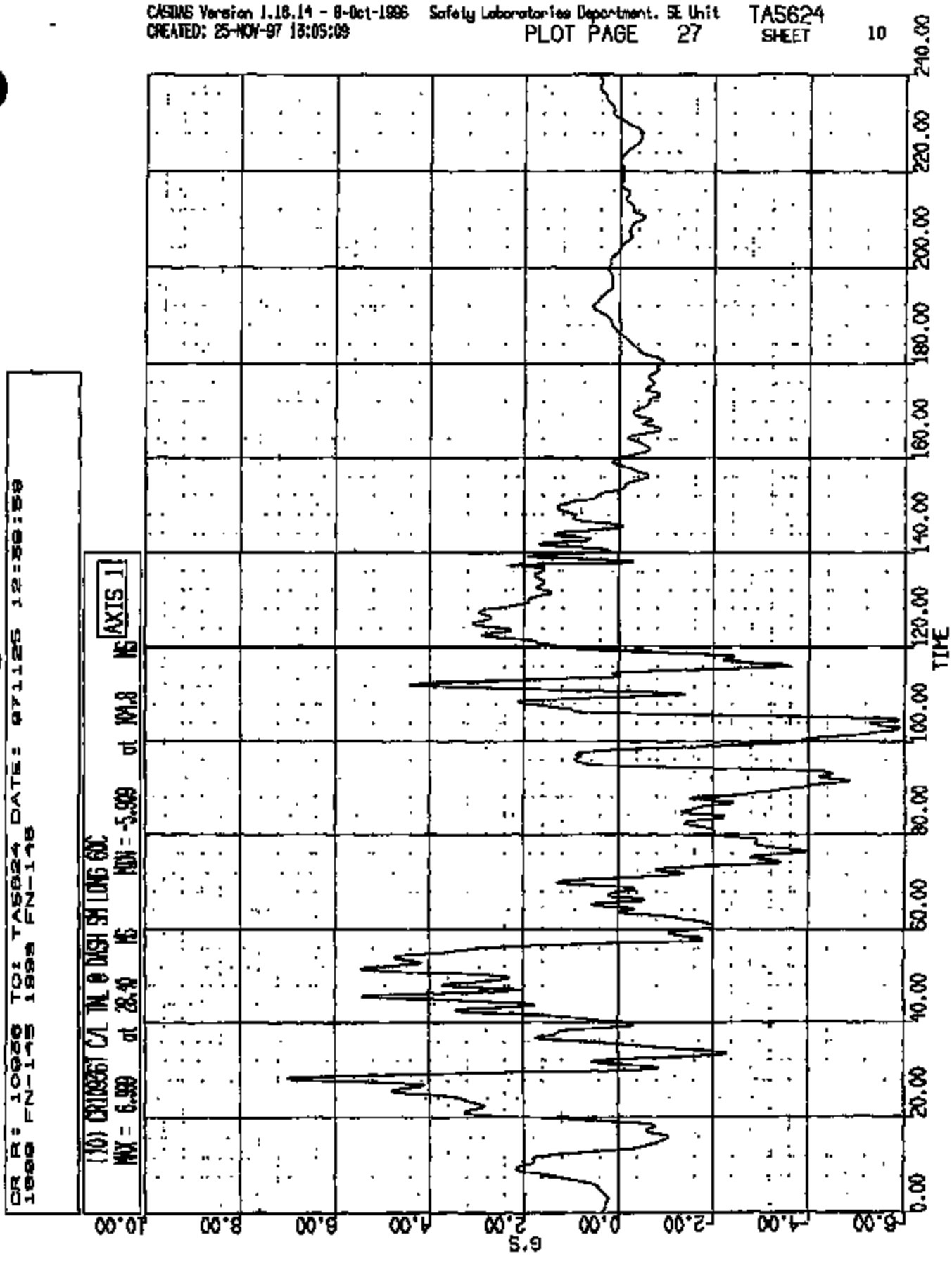


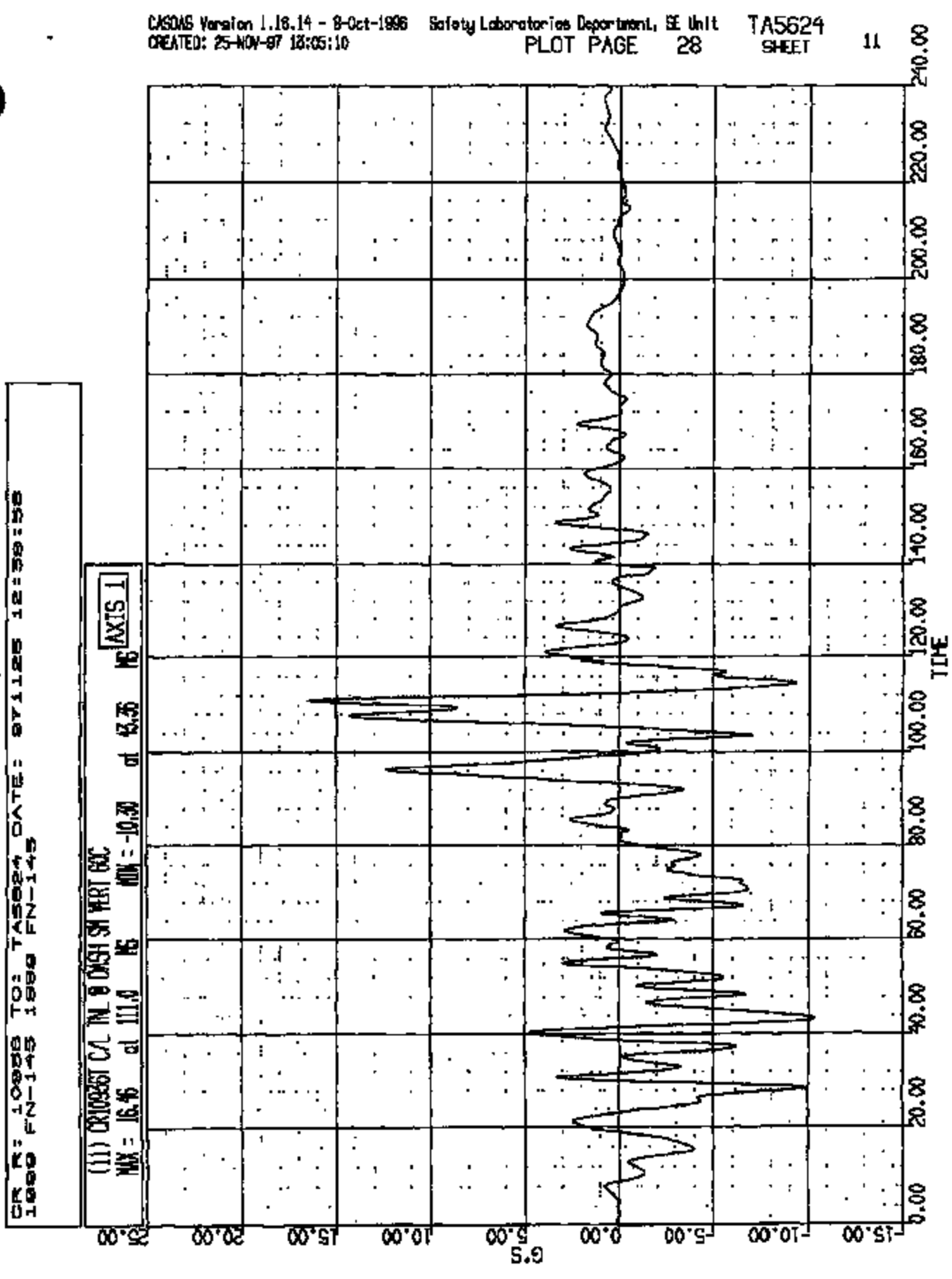








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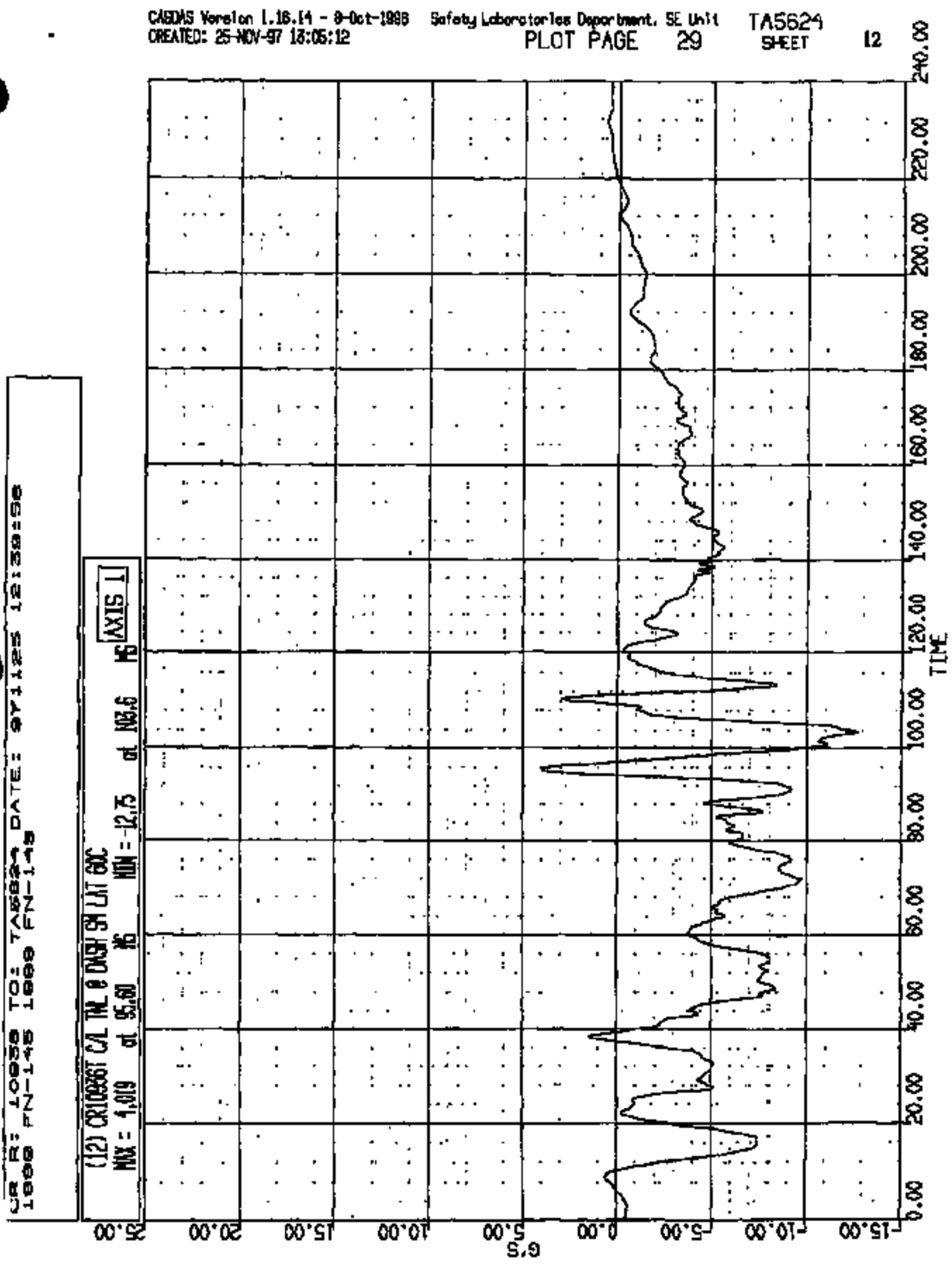
1989 FN-145 1989 FN-145
(11) CR10938T C/L TNL @ DASH SM VERT 60C
MAX = 16.46 at 111.0 MS MIN = -10.30 at 42.35 MS AXIS 1
G'S
TIME
25.00
20.00
15.00
10.00
5.00
0.00
-5.00
-10.00
-15.00
240.00
220.00
200.00
180.00
160.00
140.00
120.00
100.00
80.00
60.00
40.00
20.00
0.00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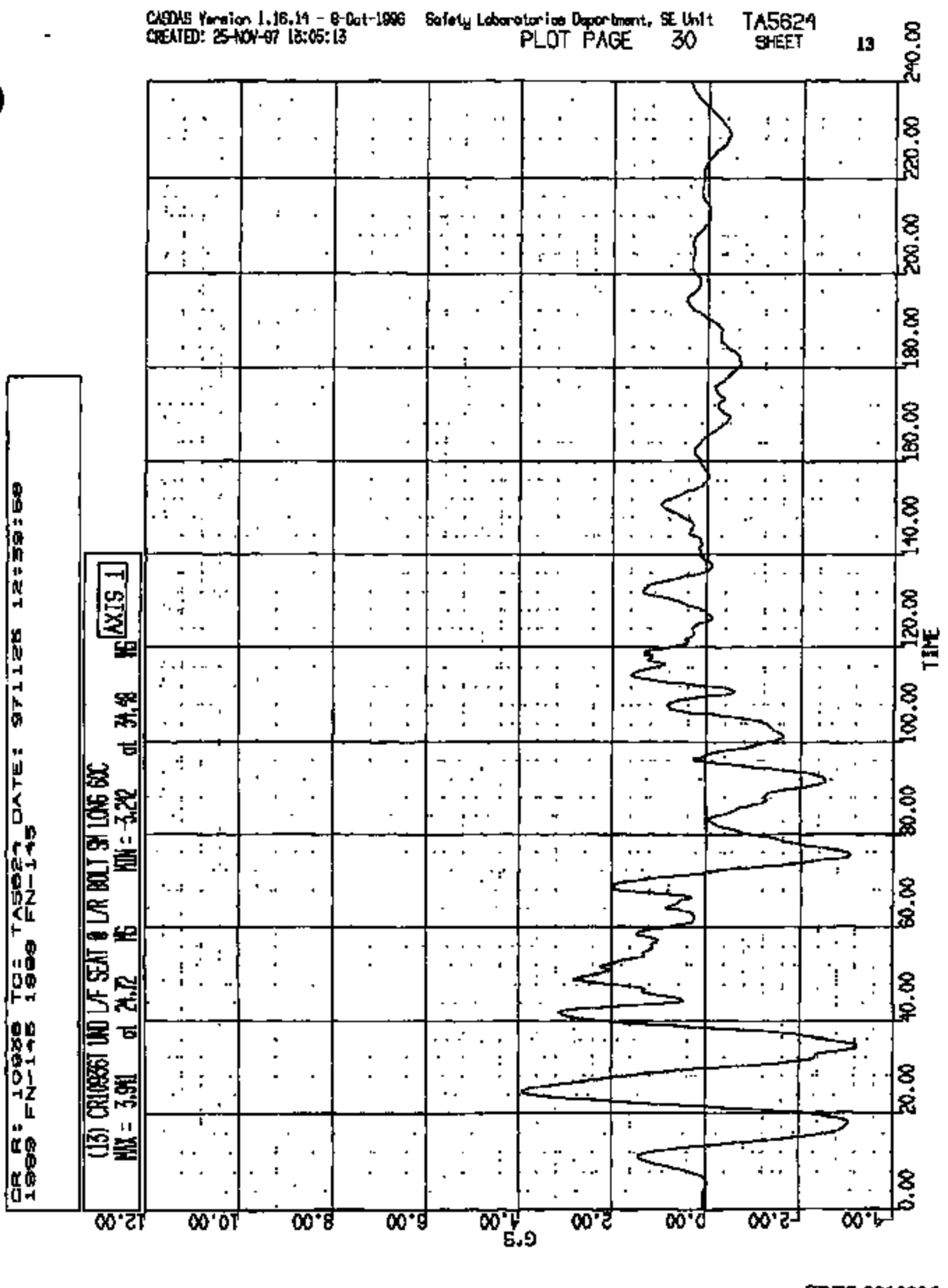
UR R: 10938 TO: TA5624 DATE: 971125 12:39:58
1998 FN-145 1998 FN-145
(12) CR10938T CAL TNL @ DASH SW LAT GOC
MAX = 1.019 at 95.80 MS MIN = -12.75 at 103.6 MS AXIS 1
6'S
TIME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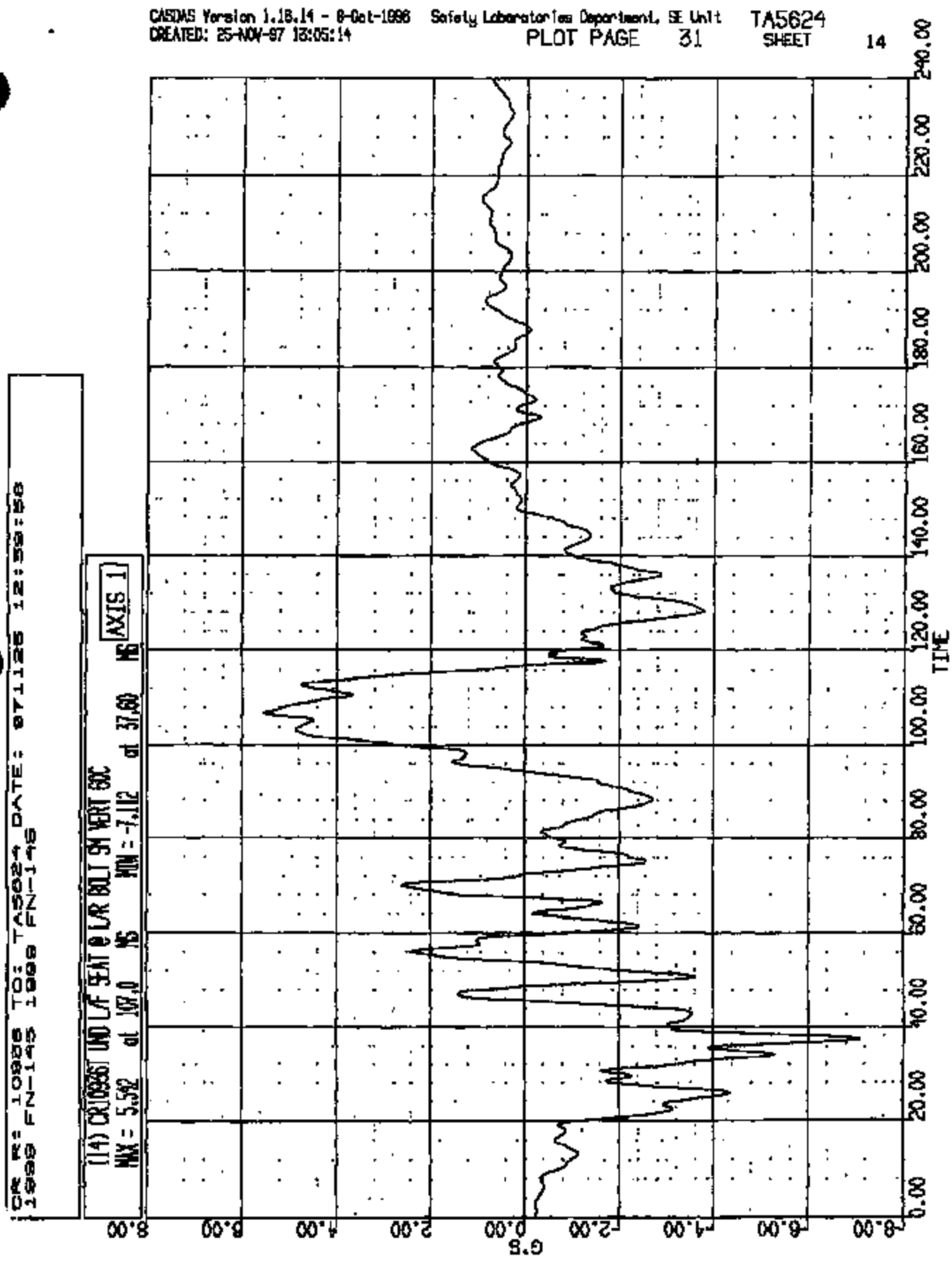
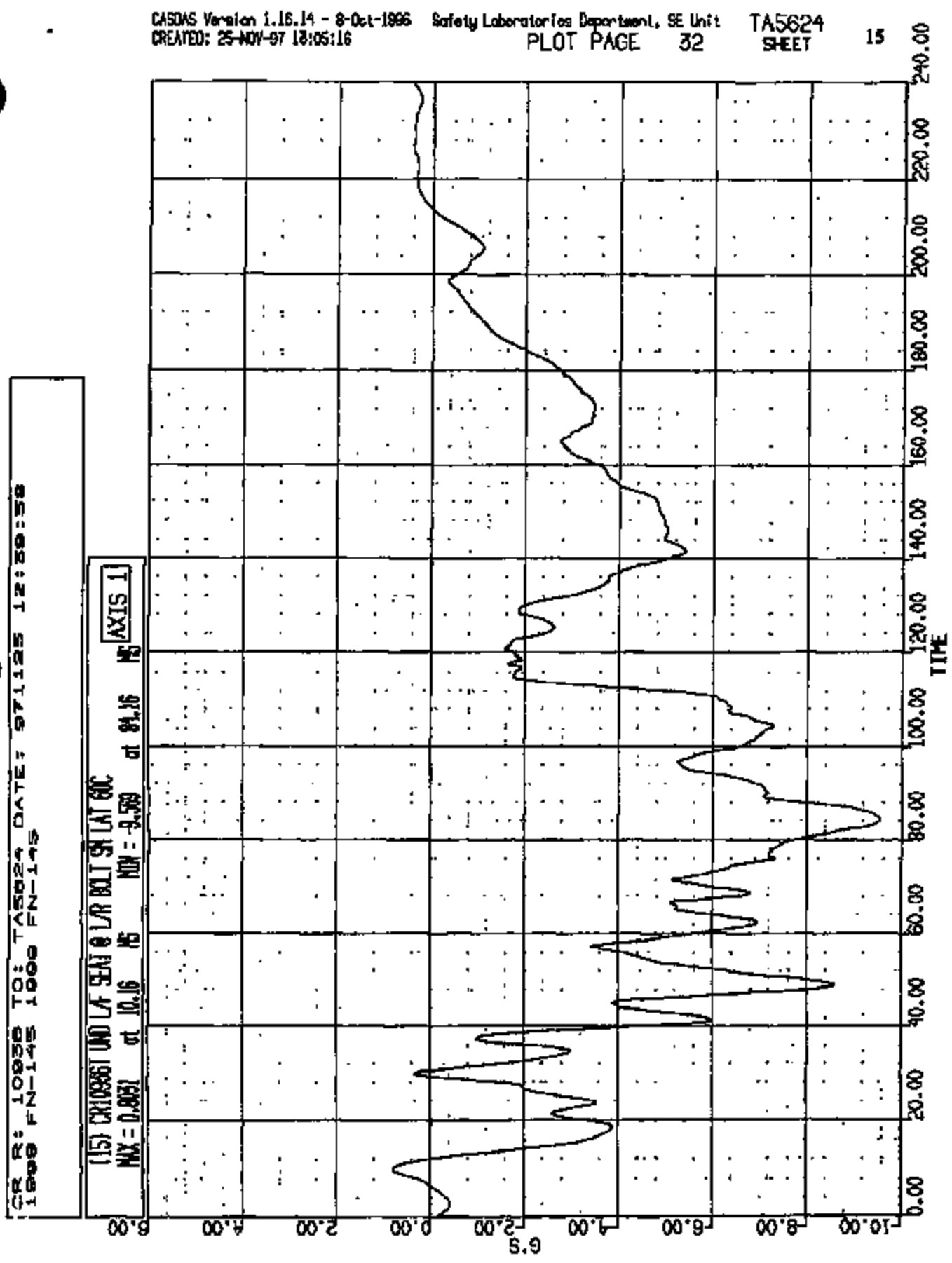
1999 FN-145 1999 FN-145
(15) CR10936T UNO L/F SEAT @ L/R BOLT 9M LONG 60C
MAX = 3.961 at 24.72 MS MIN = -3.292 at 34.48 MS
AXIS 1
TIME
G's
240.00
220.00
200.00
180.00
160.00
140.00
120.00
100.00
80.00
60.00
40.00
20.00
0.00
12.00
10.00
8.00
6.00
4.00
2.00
0.00
-2.00
-4.00

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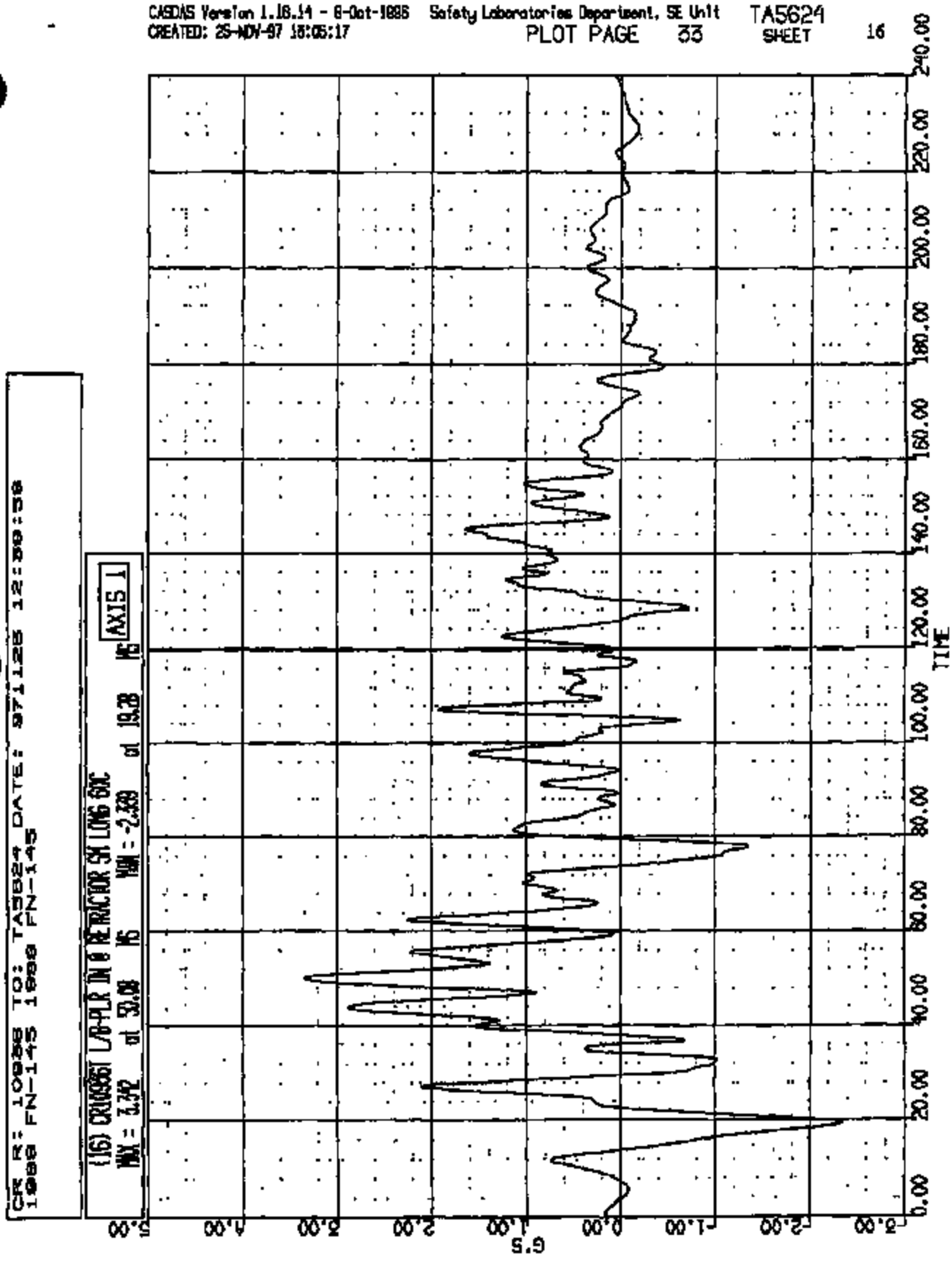
SHEET 15
CR R: 10936 TO: TA5624 DATE: 971125 12:59:58
1999 FN-145 1999 FN-145
(15) CRIS936T UWD L/A SEAT @ L/A BOLT SN LAT ACC
MAX = 0.0051 at 10.16 MS MIN = -3.589 at 84.16 MS AXIS 1
TIME
G's
0.00
20.00
40.00
60.00
80.00
100.00
120.00
140.00
160.00
180.00
200.00
220.00
240.00
-6.00
-4.00
-2.00
0.00
2.00
4.00
6.00
8.00
10.00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TA5624
SHEET 16
CR R: 10958 TO: TA5624 DATE: 971128 12:59:58
1988 FN-145 1988 FN-145
(16) CRUSHER L/R+FLR IN @ RETRACTOR SK LONG 60C
MAX = 3.342 at 53.08 MS MIN = -2.439 at 19.28 MS
AXIS 1
TIME
G'S
0.00
20.00
40.00
60.00
80.00
100.00
120.00
140.00
160.00
180.00
200.00
220.00
240.00
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00

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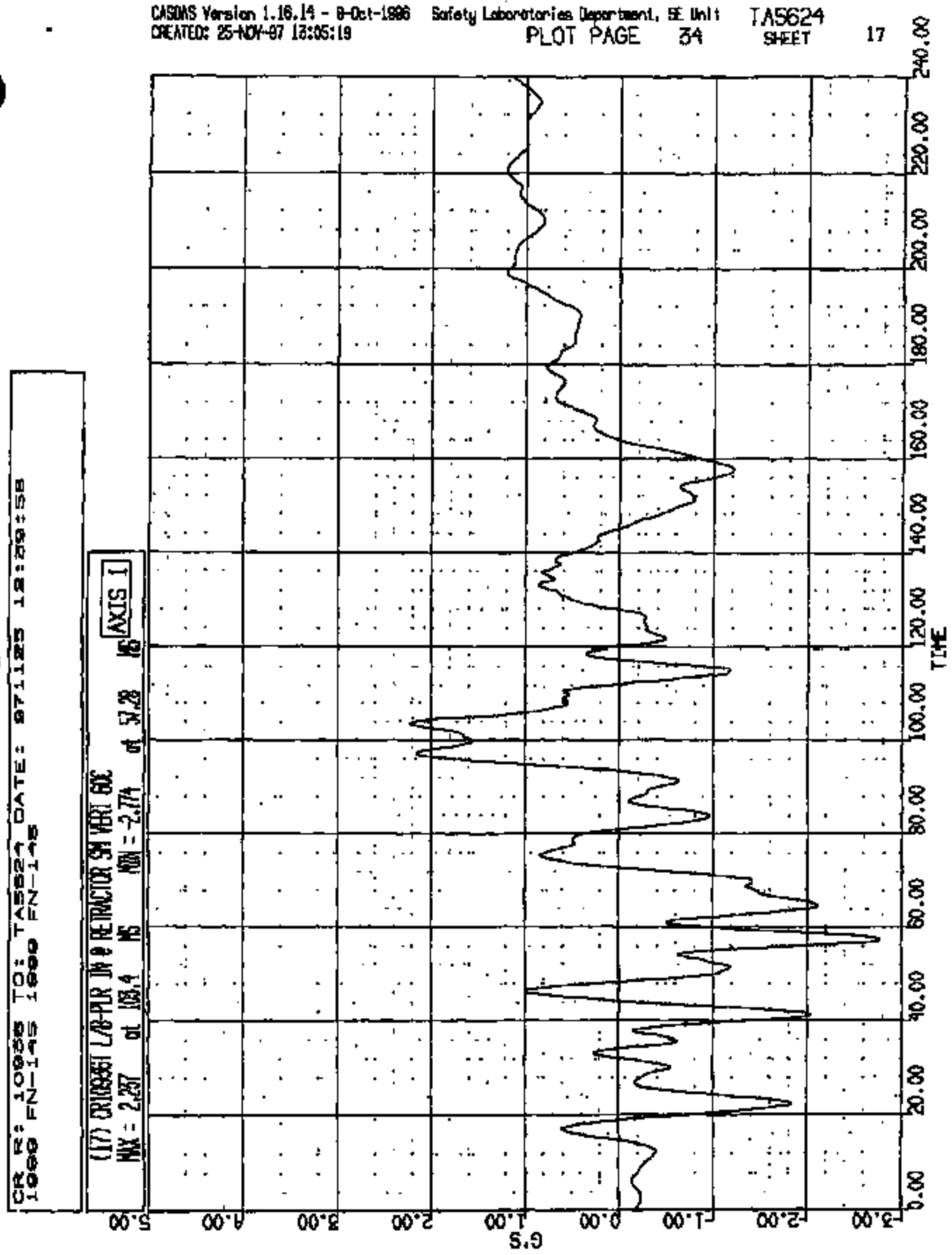

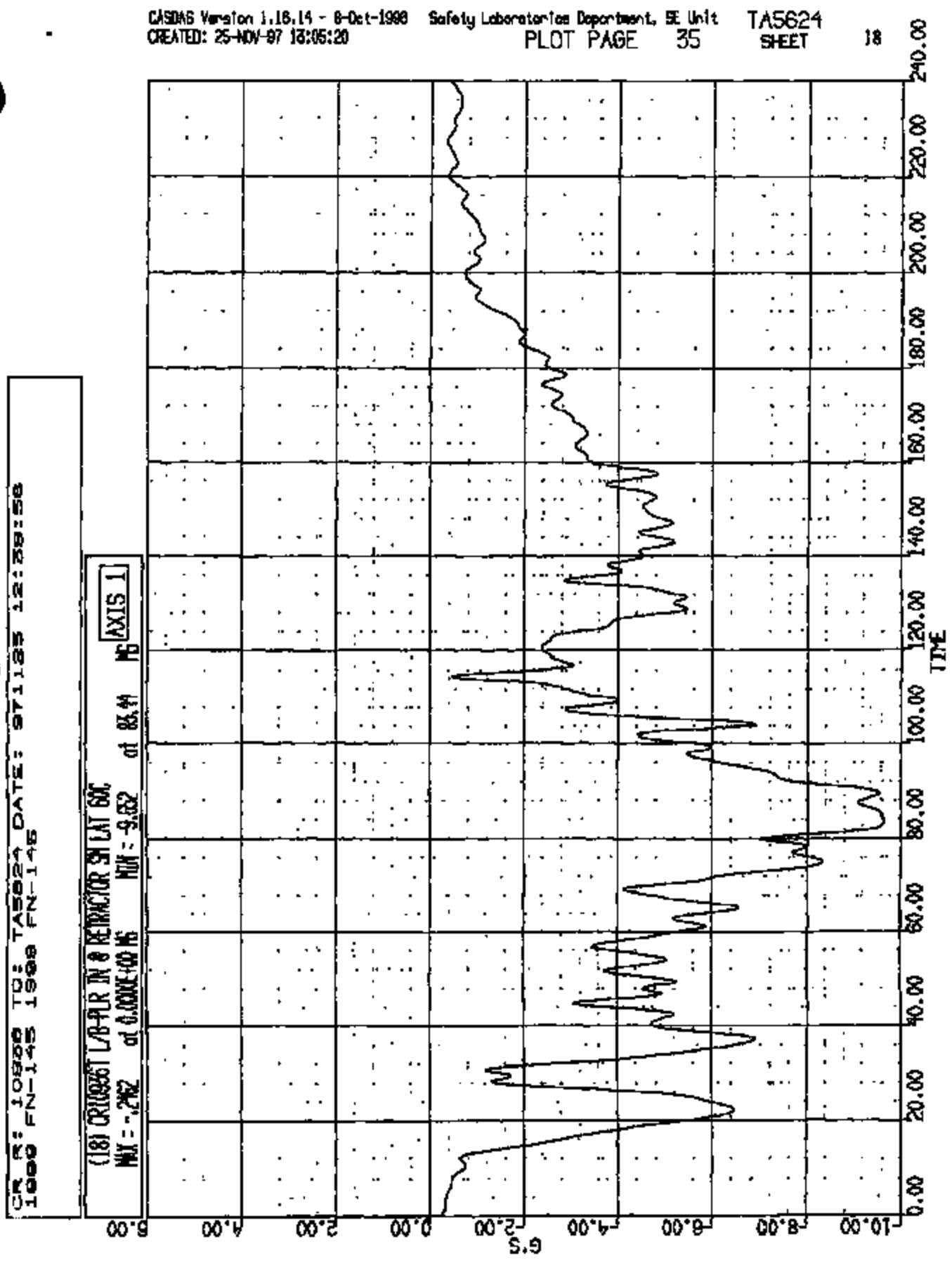
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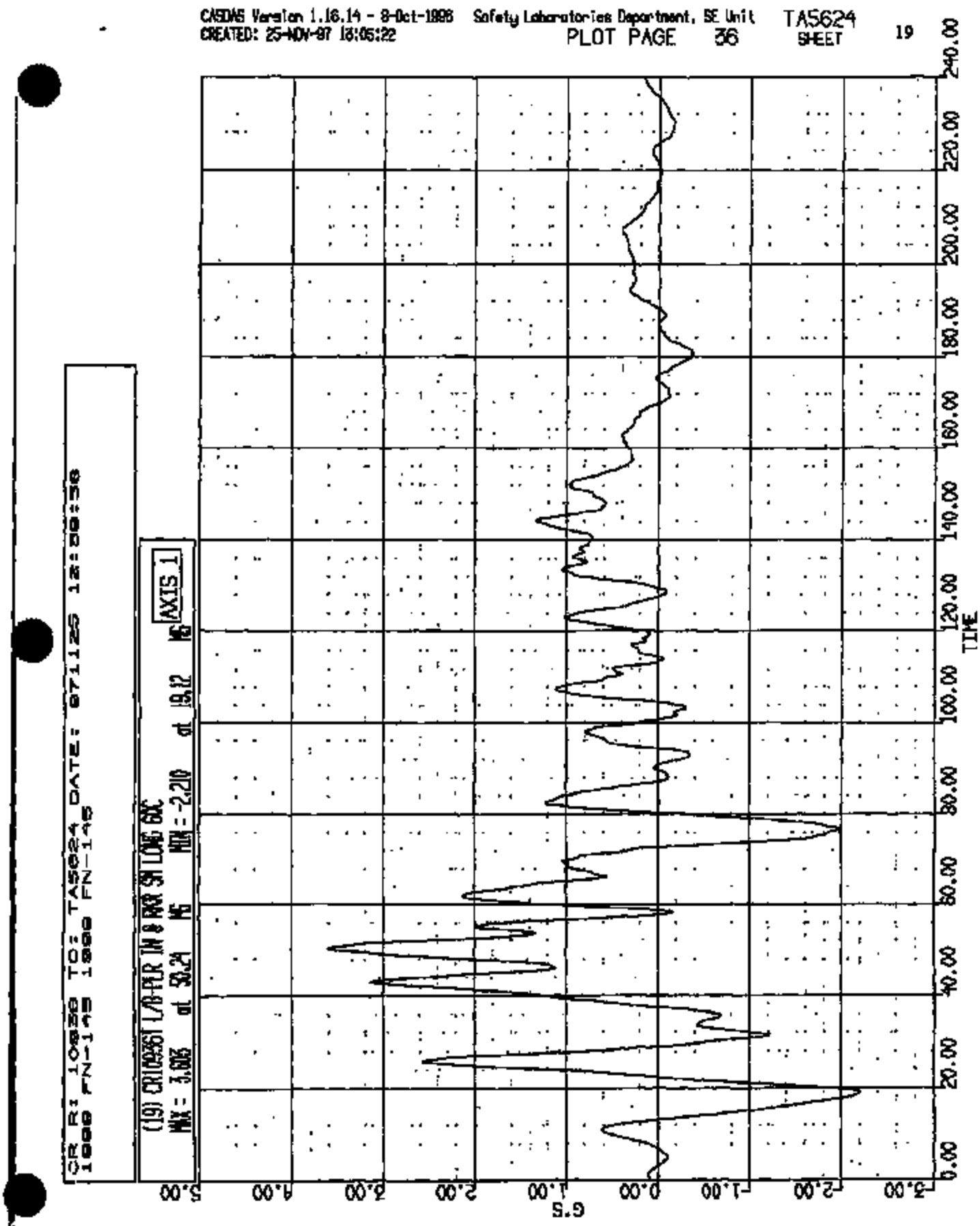
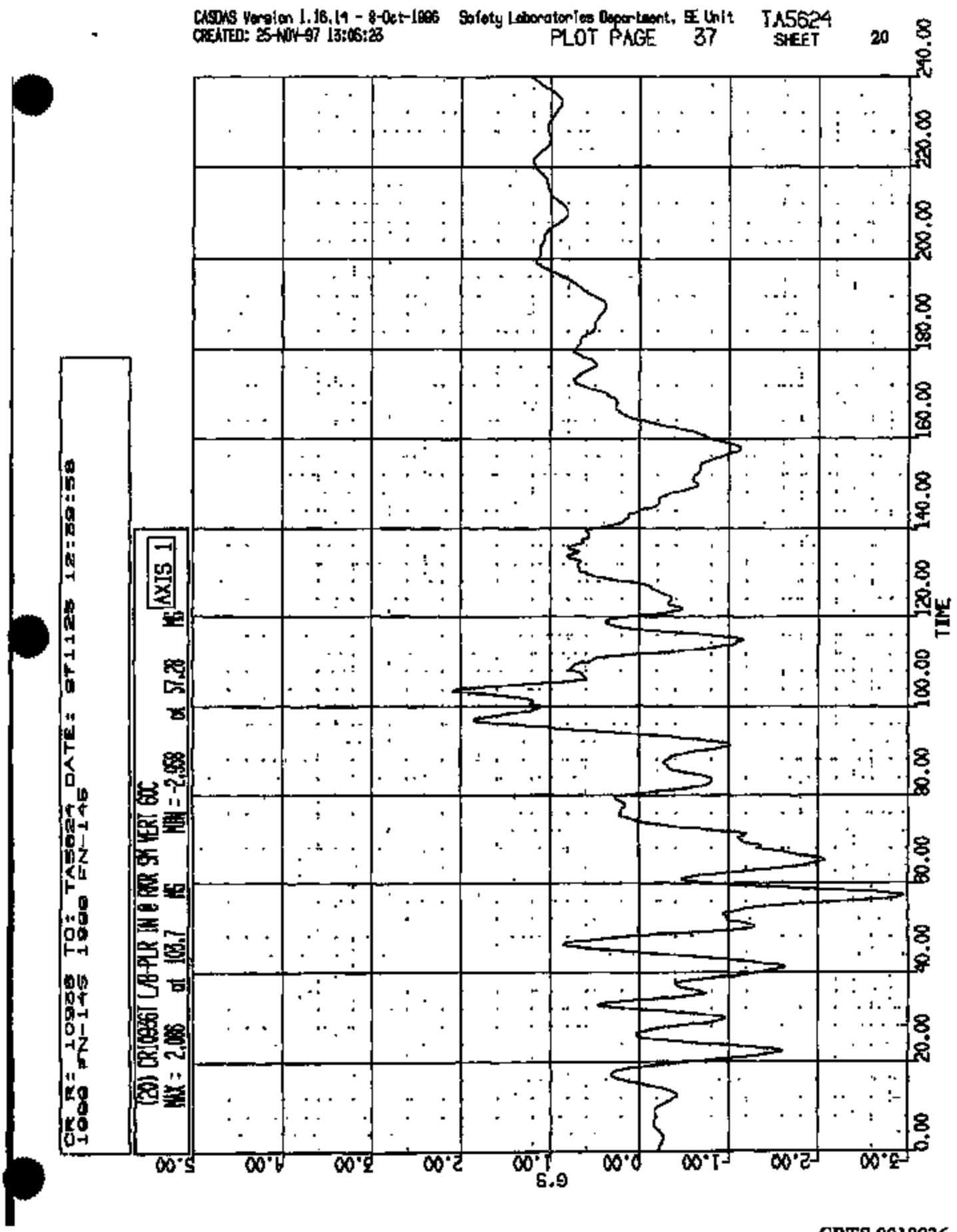
1000 FN-145 1998 FN-145
(18) CRUSHGRT L/B-AFLR IN @ REINFORCTOR SM LAT 60K
MAX = -.2762 at 0.000K+00 MS MIN = -9.632 at 85.44 MS
AXIS 1
TIME
G'S
240.00
220.00
200.00
180.00
160.00
140.00
120.00
100.00
80.00
60.00
40.00
20.00
0.00
6.00
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00

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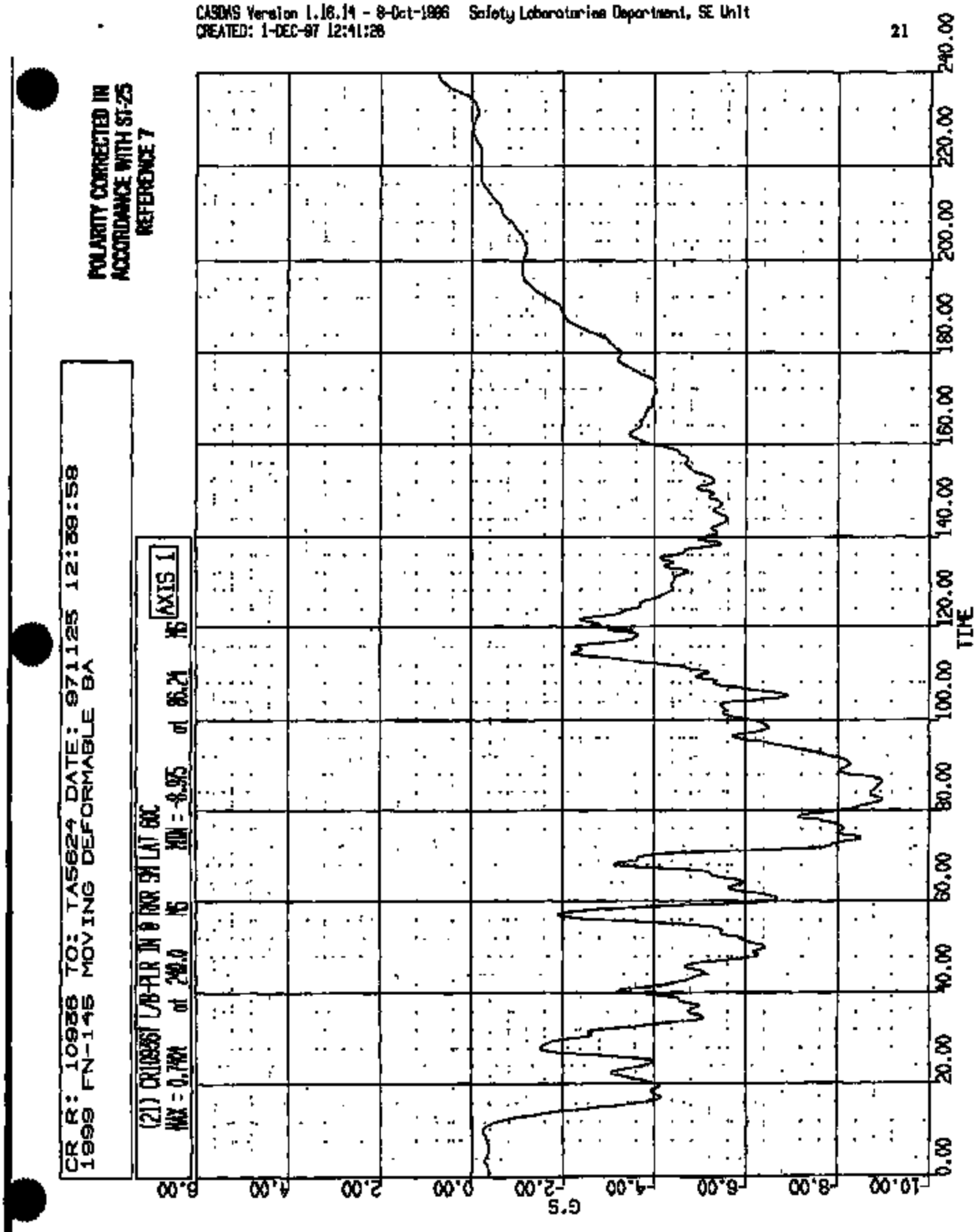
CR R= 10938 TO: TA5624 DATE: 971125 12:59:58
10938 FN-145 10939 FN-146
(20) CR10938T LAP-PLR IN @ ANKR SM VERT ACC
MAX = 2.086 at 103.7 MS MIN = -2.958 at 57.28 MS AXIS 1
240.00
220.00
200.00
180.00
160.00
140.00
120.00
100.00
80.00
60.00
40.00
20.00
0.00
TIME
5.00
4.00
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
G'S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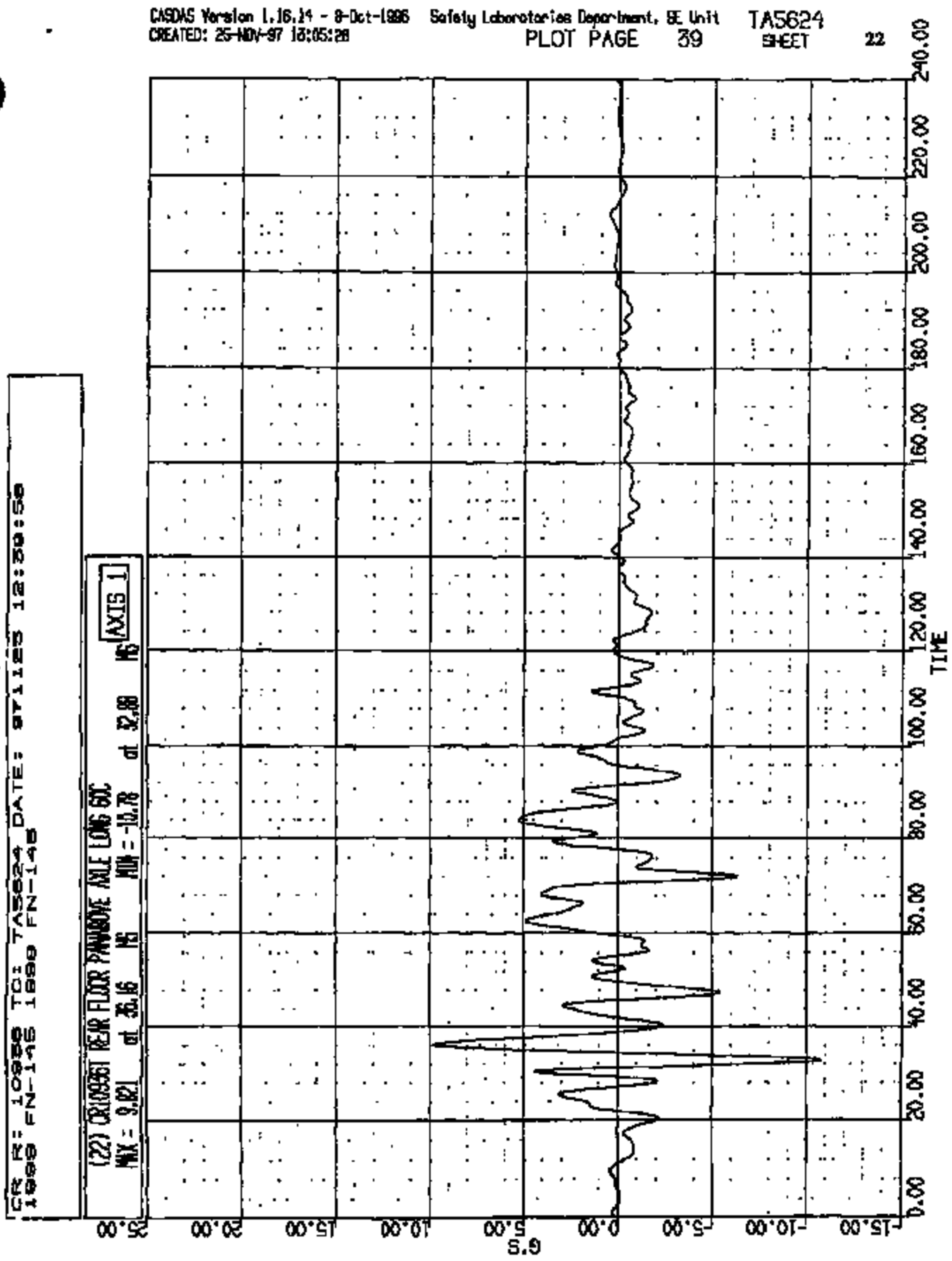
21
POLARITY CORRECTED IN ACCORDANCE WITH SY-25 REFERENCE 7
CR R: 10936 TO: TA5624 DATE: 971125 12:38:58
1999 FN-145 MOVING DEFORMABLE BA
(21) CRUISER/ LAT 60C
MAX = 0.7MM at 240.0 MS MIN = -8.975 at 86.21 MS
AXIS 1
G'S
TIME
6.00
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
20.00
40.00
60.00
80.00
100.00
120.00
140.00
160.00
180.00
200.00
220.00
240.00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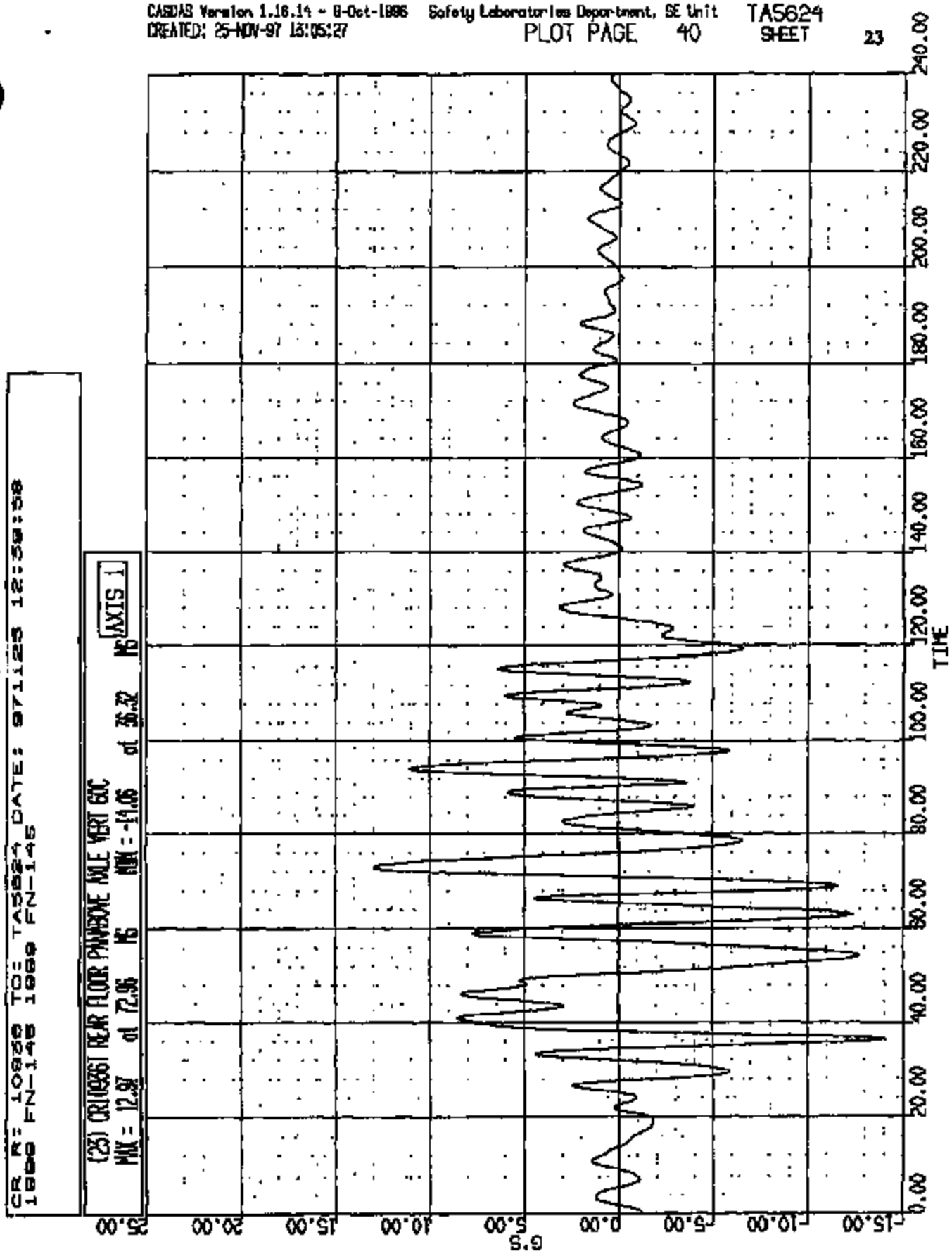
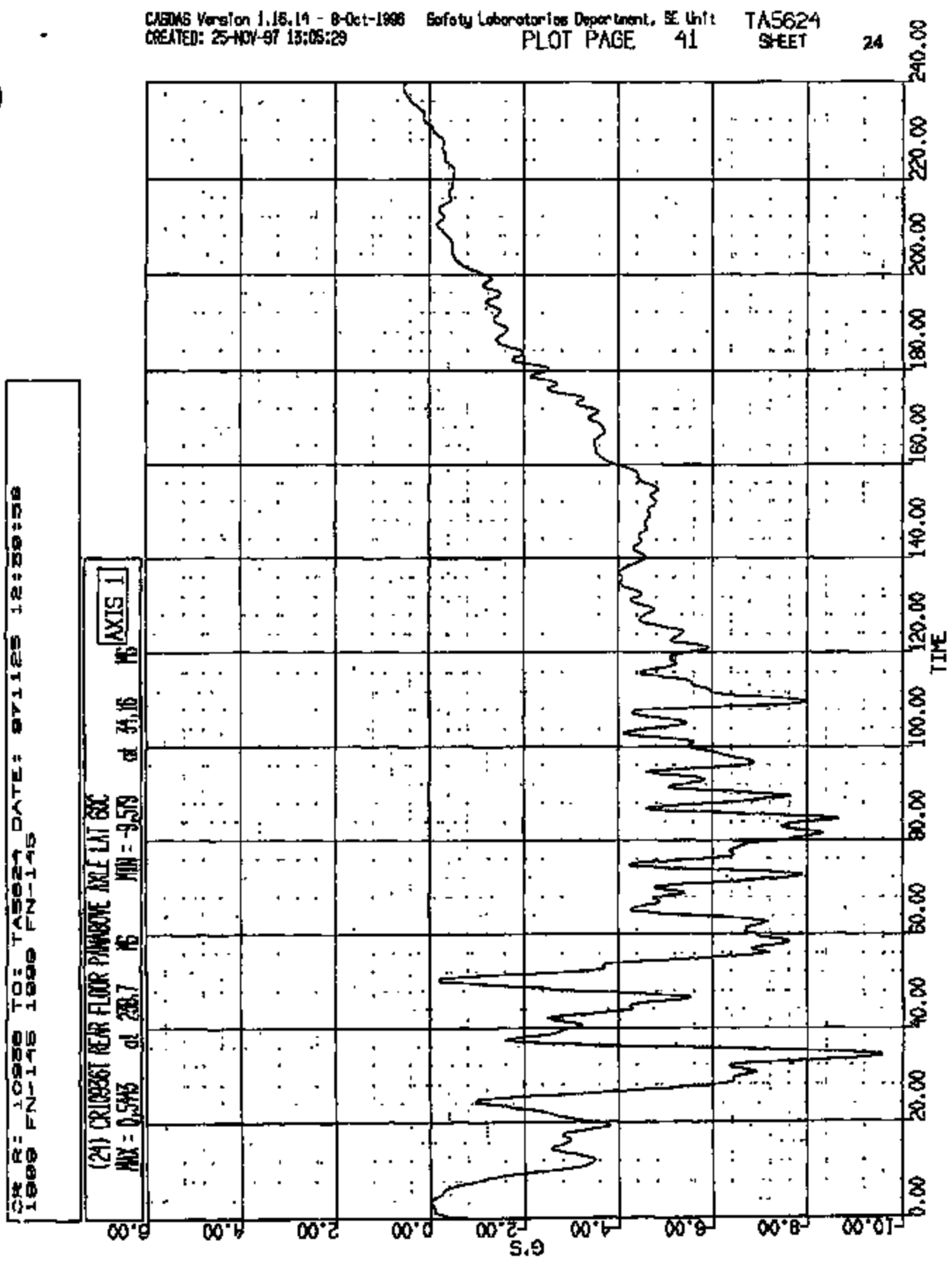
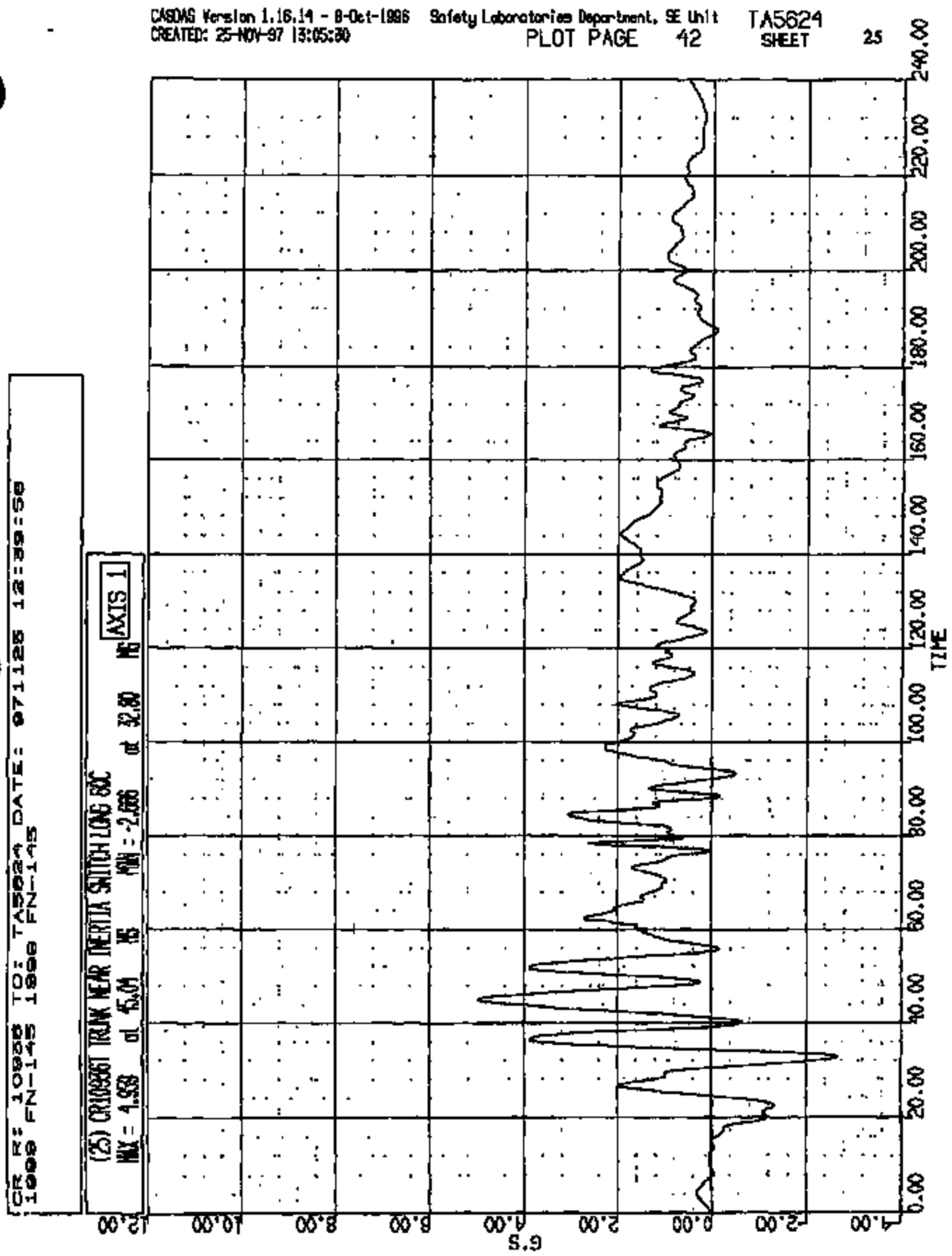
PLOT PAGE 39 SHEET 22
CR R= 10856 TO: TA5624 DATE: 971125 12:39:58
1999 FN-145 1999 FN-145
(22) CRIS936T REAR FLOOR PANWDOVE ANLE LONG 60C
MAX = 9.821 at 26.16 MS MIN = -10.76 at 32.88 MS AXIS 1
TIME
G's
240.00
220.00
200.00
180.00
160.00
140.00
120.00
100.00
80.00
60.00
40.00
20.00
0.00
25.00
20.00
15.00
10.00
5.00
0.00
-5.00
-10.00
-15.00



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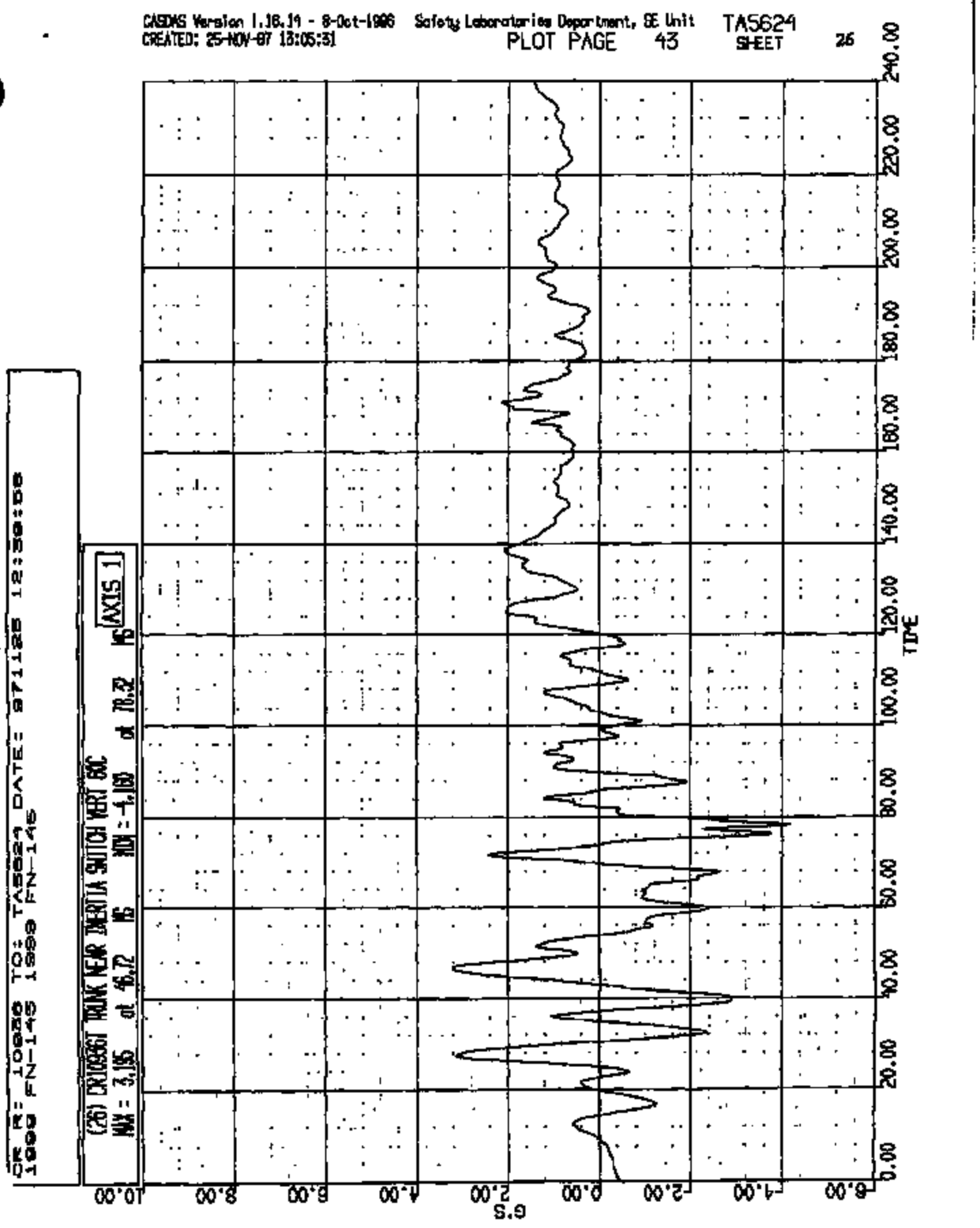
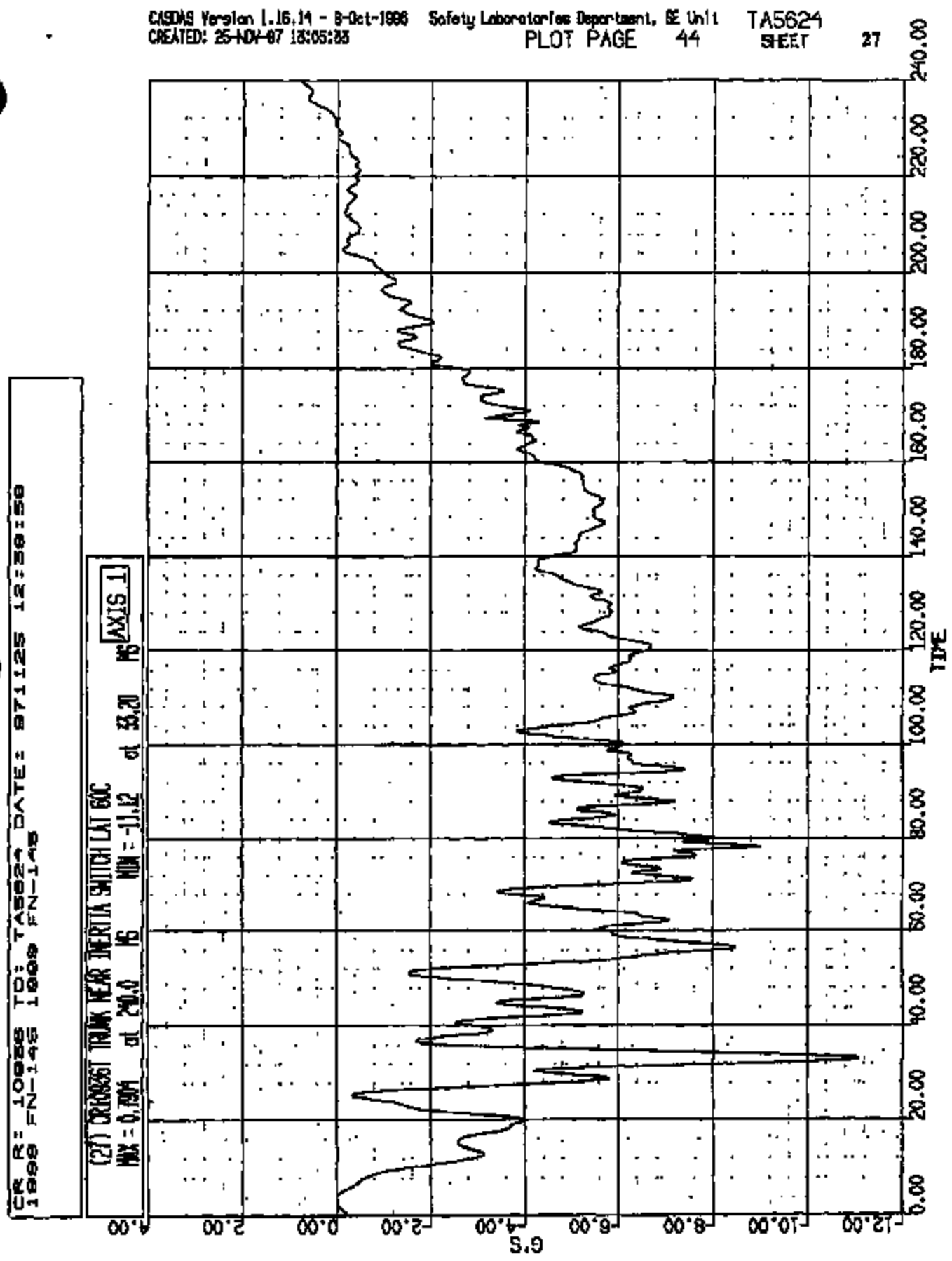
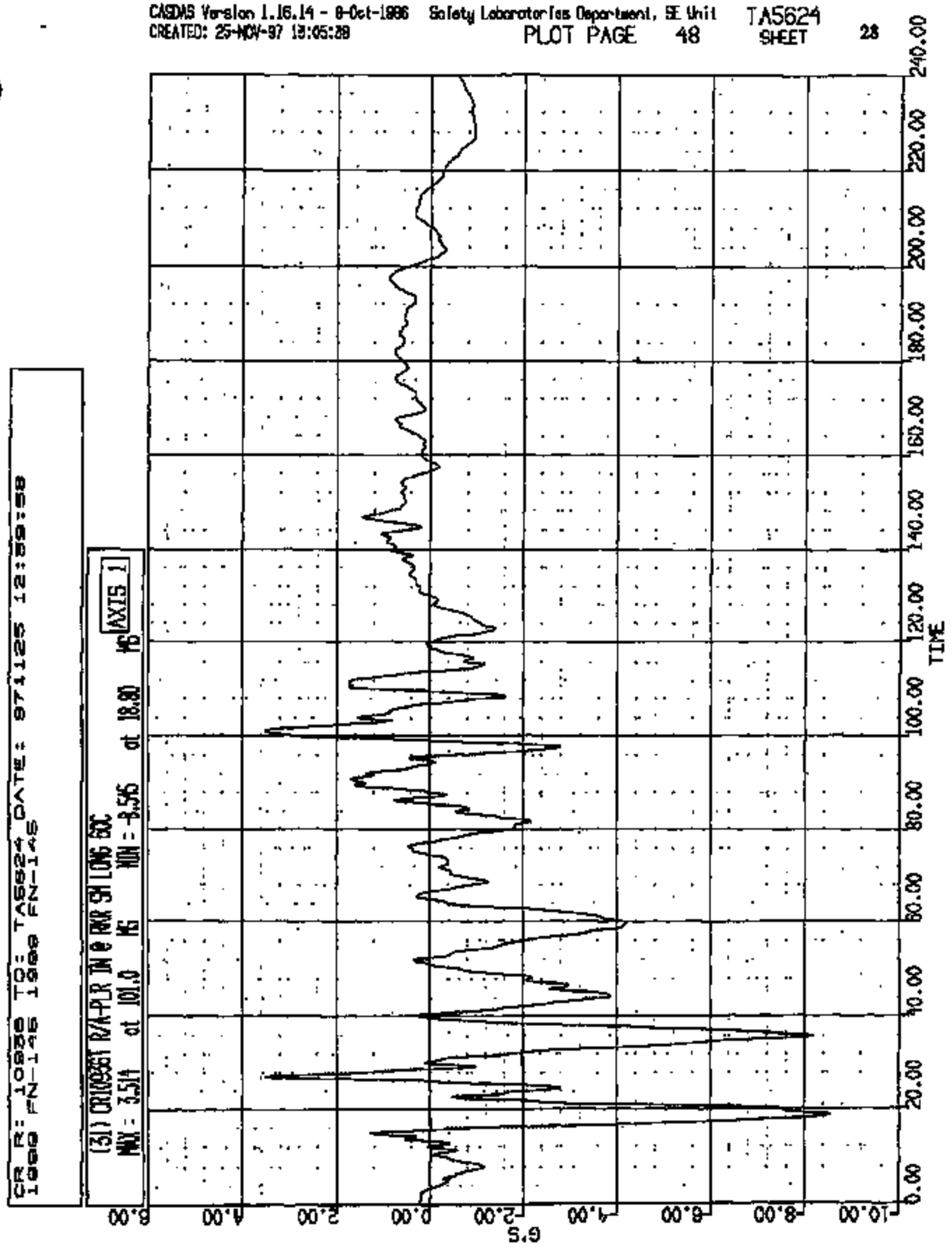
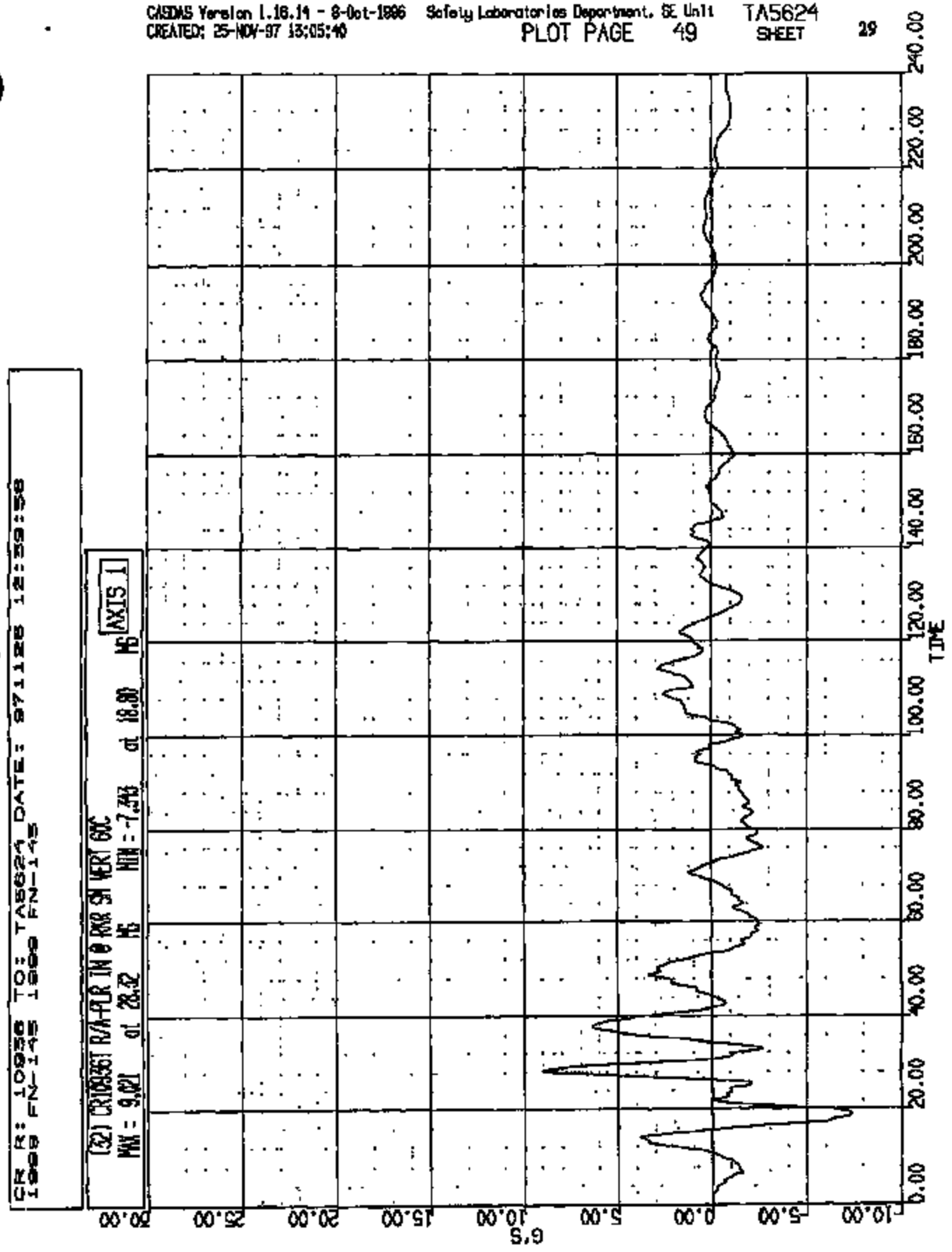
PLOT PAGE 42
TA5624
SHEET 25
CR R: 10935 TO: TA5624 DATE: 971125 12:39:58
1998 FN-145 1998 FN-145
(25) CRI0936T TRUNK NEAR INERTIA SWITCH LONG 80C
MAX = 4.958 at 45.04 MS MIN = -2.886 at 32.80 MS
AXIS 1
S.G
TIME
12.00
10.00
8.00
6.00
4.00
2.00
0.00
-2.00
0.00
20.00
40.00
60.00
80.00
100.00
120.00
140.00
160.00
180.00
200.00
220.00
240.00





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TA5624
SHEET 29
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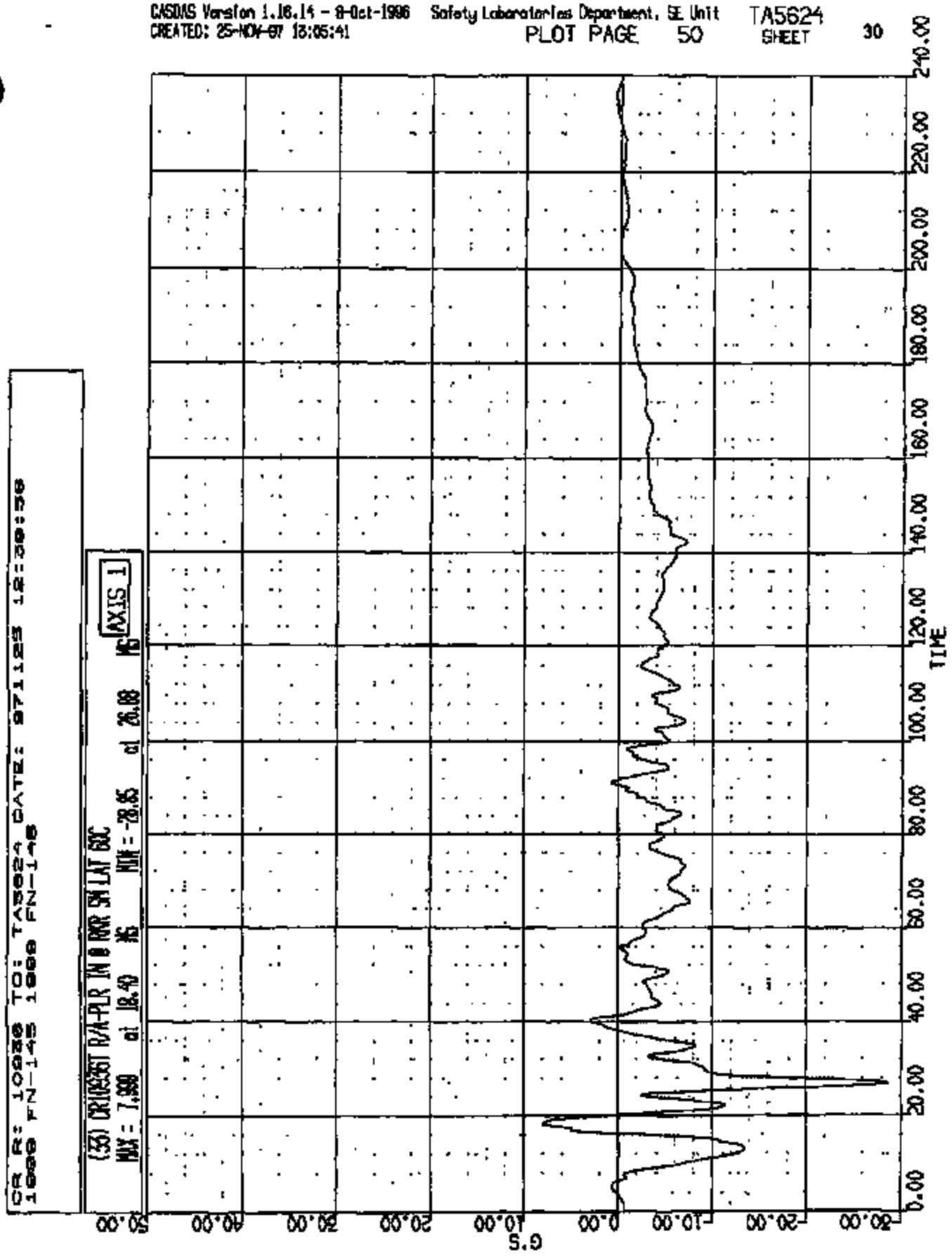
1988 FN-145 1988 FN-145
(32) CRITICAL RA-FLR IN @ RKR SM VERT ORC
MAX = 9.021 at 28.32 MS MIN = -7.246 at 18.80 MS
AXIS 1
G'S
TIME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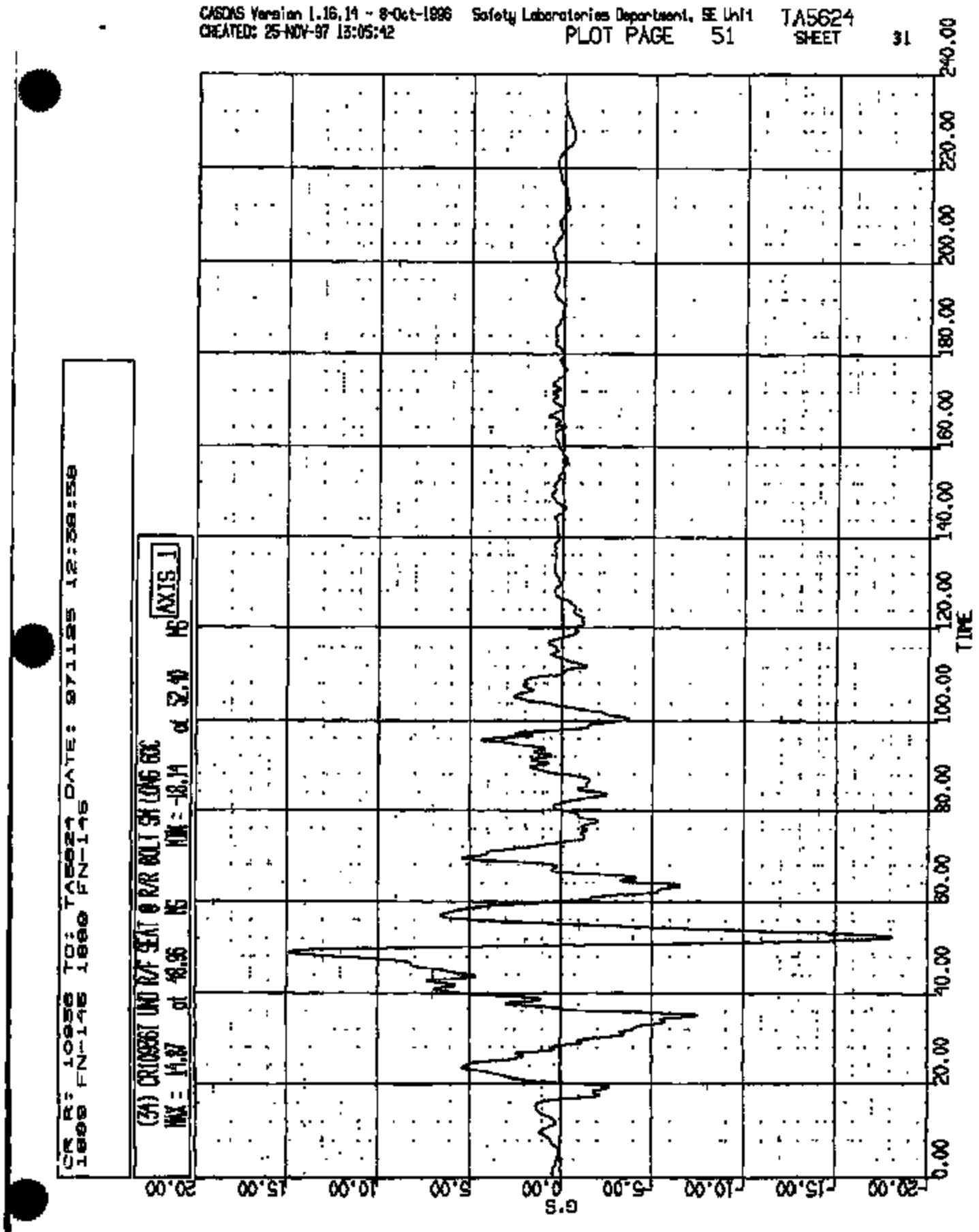
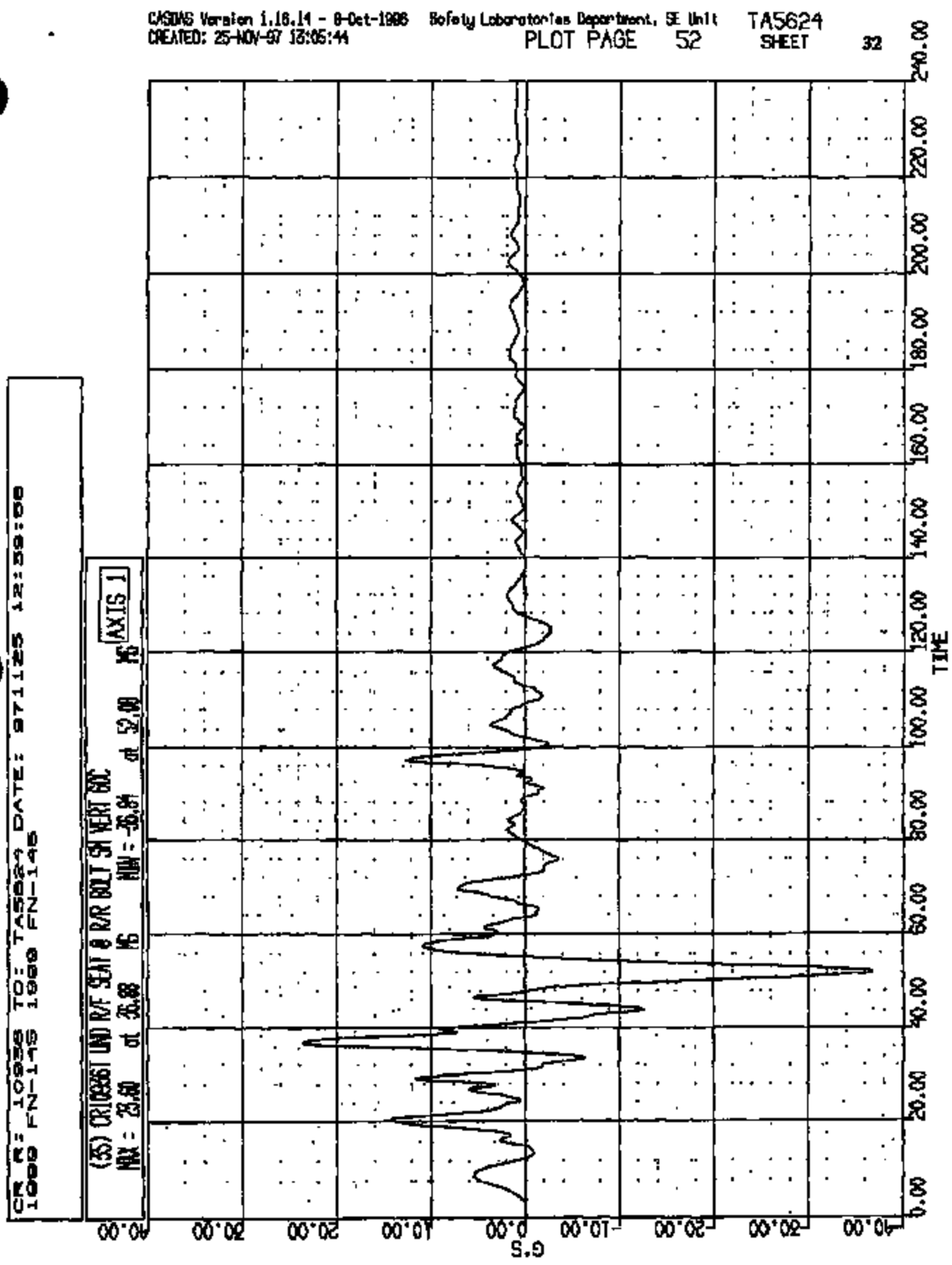
1936 FN-145 1936 FN-145
(33) CKR10936T R/A-PLR TAN @ ANKR SAG LAT ACC
MAX = 7.999 at 18.40 MG MIN = -28.65 at 26.88 MG AXIS 1
TIME
S.9

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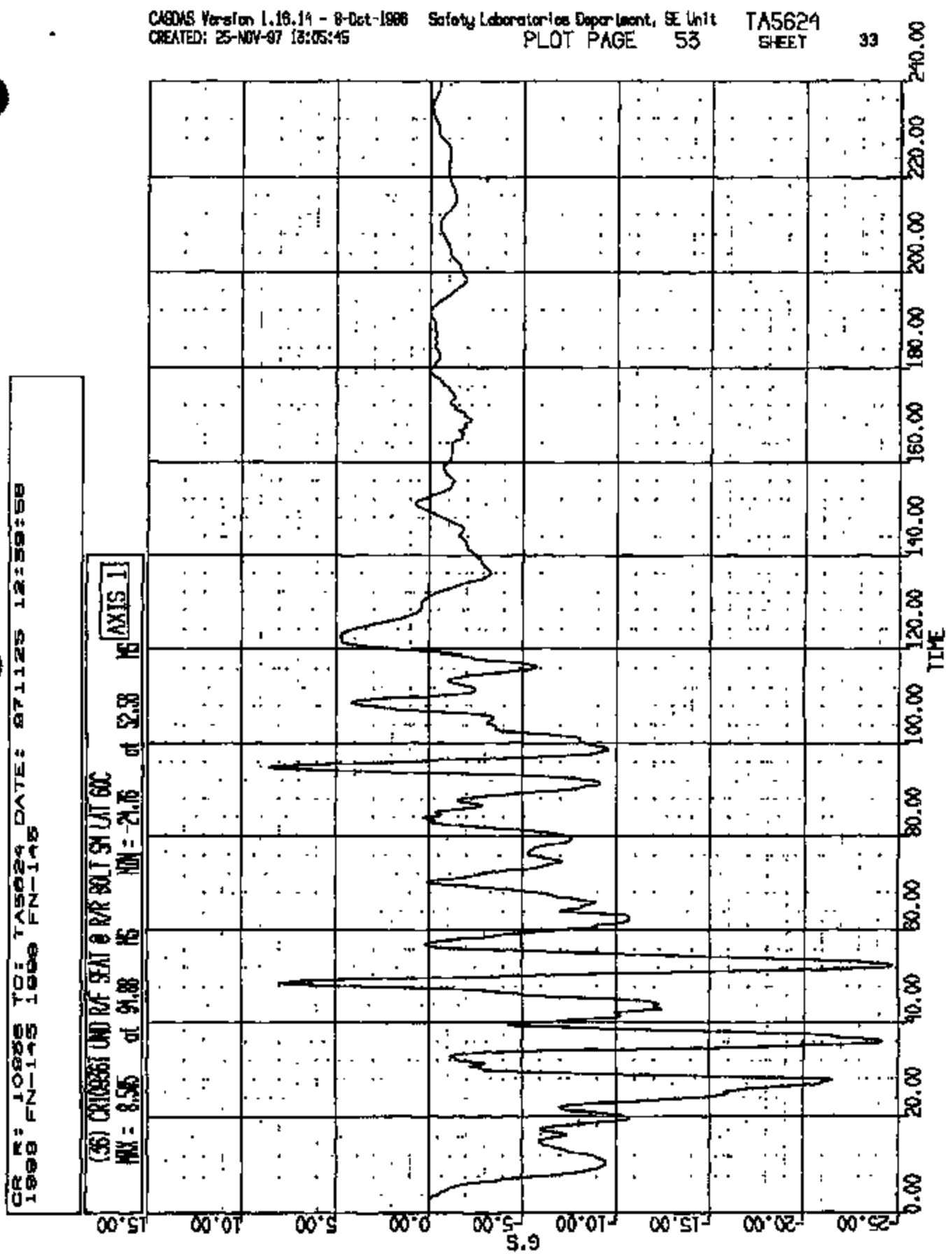
1999 FN-145 1998 FN-145
(35) CRIDB86T LWD R/F SEAT @ R/R BOLT SM VERT ACC
MAX = 23.40 at 26.88 MS MIN = -36.84 at 52.00 MS AXIS 1
40.00
20.00
10.00
0.00
-10.00
-20.00
-40.00
G'S
240.00
220.00
200.00
180.00
160.00
140.00
120.00
100.00
80.00
60.00
40.00
20.00
0.00
TIME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PLOT PAGE 53
TA5624
SHEET 33
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1988 FN-145 1988 FN-145
(36) CRH0956[UMD R/F SEAT @ R/R BOLT SM UNIT 60C
MAX = 8.565 at 91.88 MS MIN = -21.76 at 52.38 MS AXIS 1
TIME
G'S
0.00
20.00
40.00
60.00
80.00
100.00
120.00
140.00
160.00
180.00
200.00
220.00
240.00
-25.00
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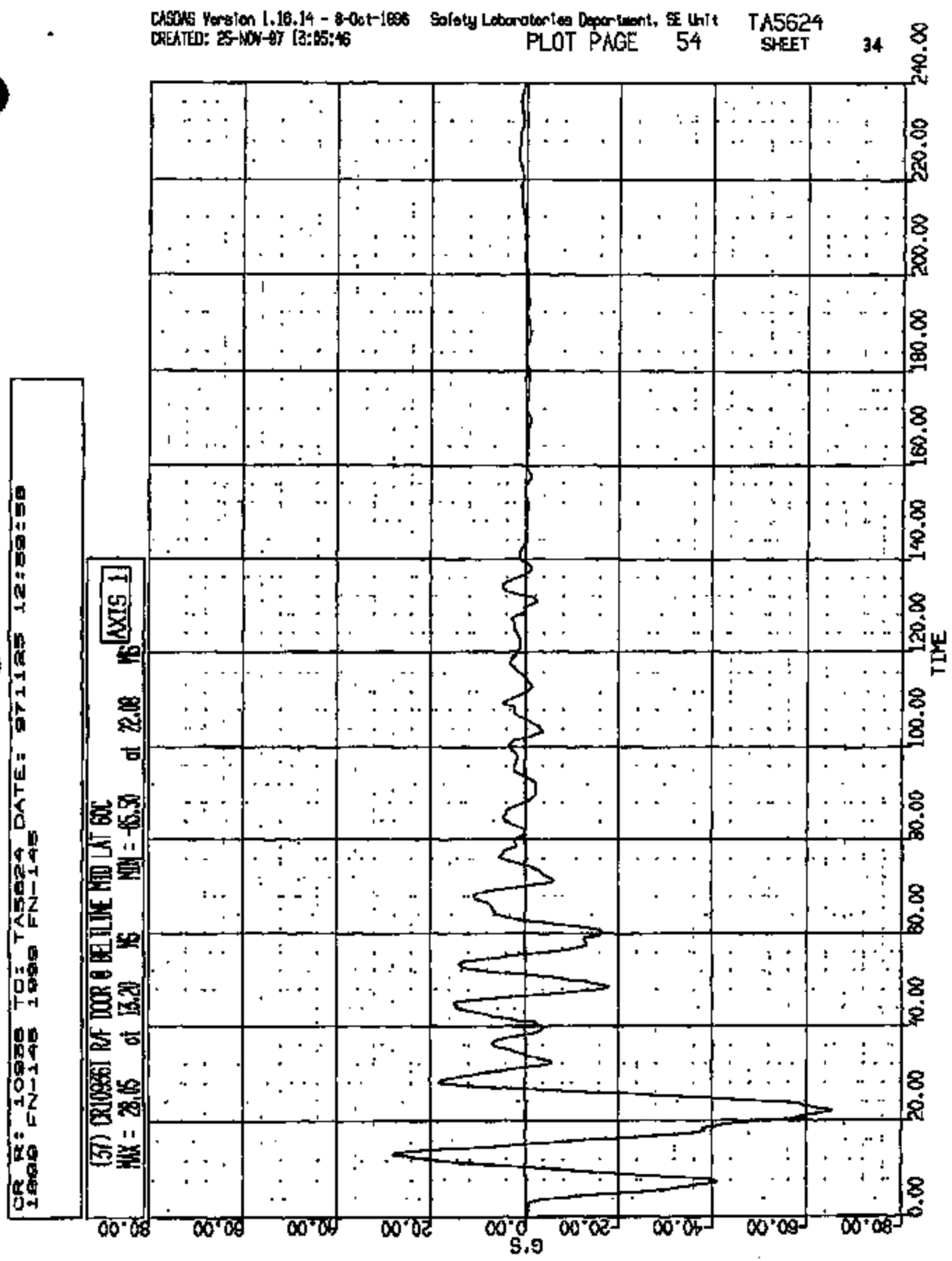
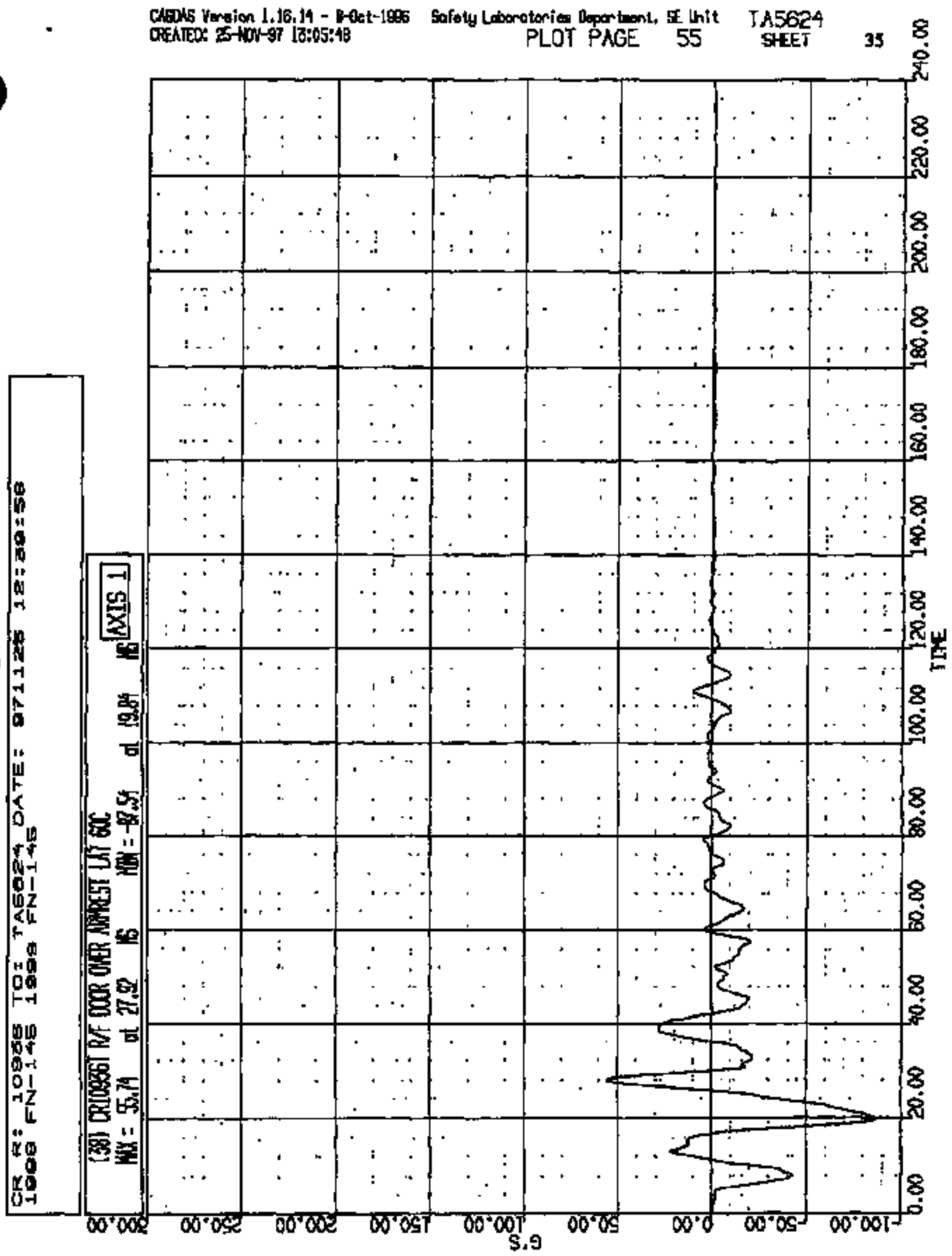
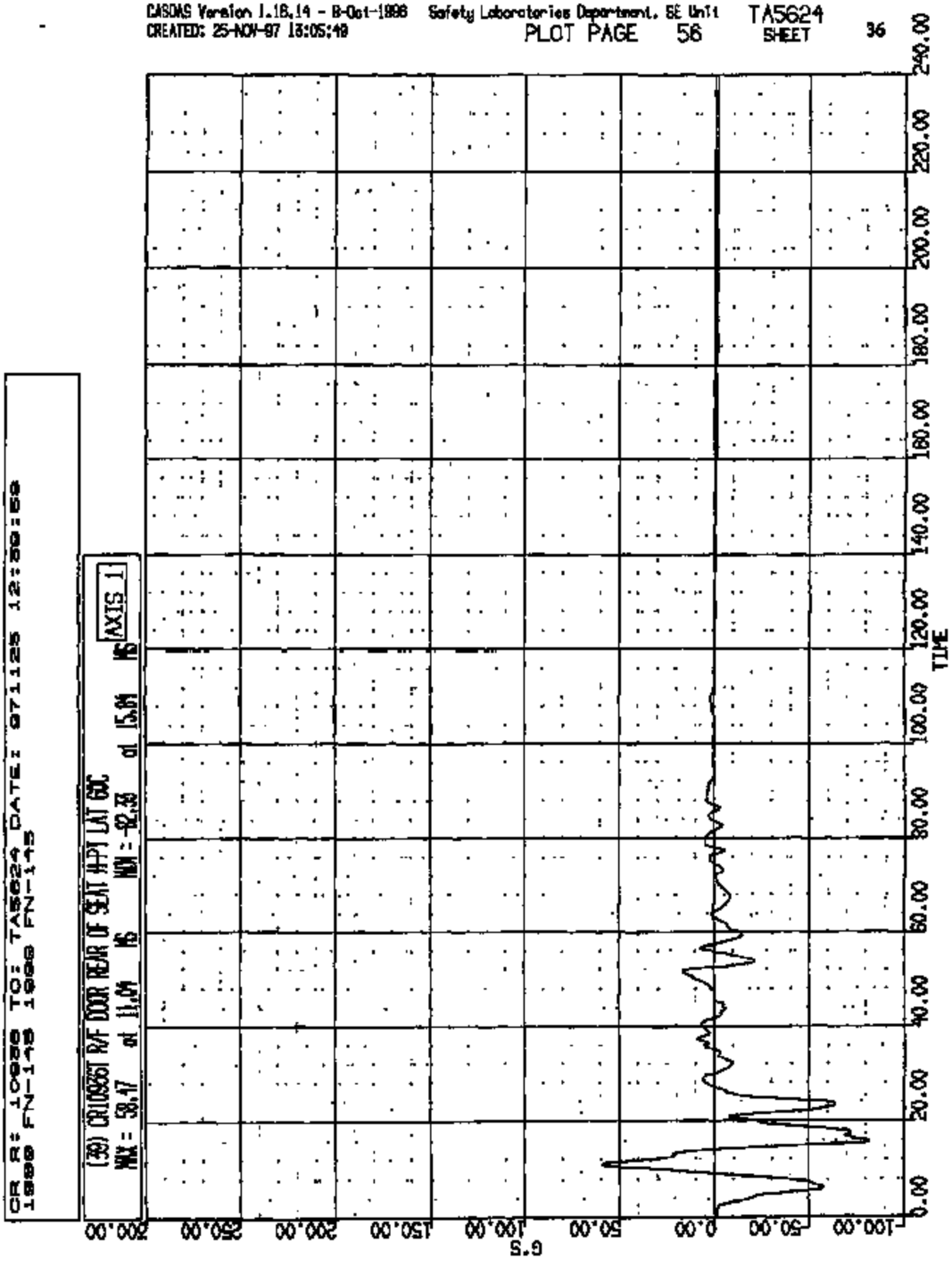
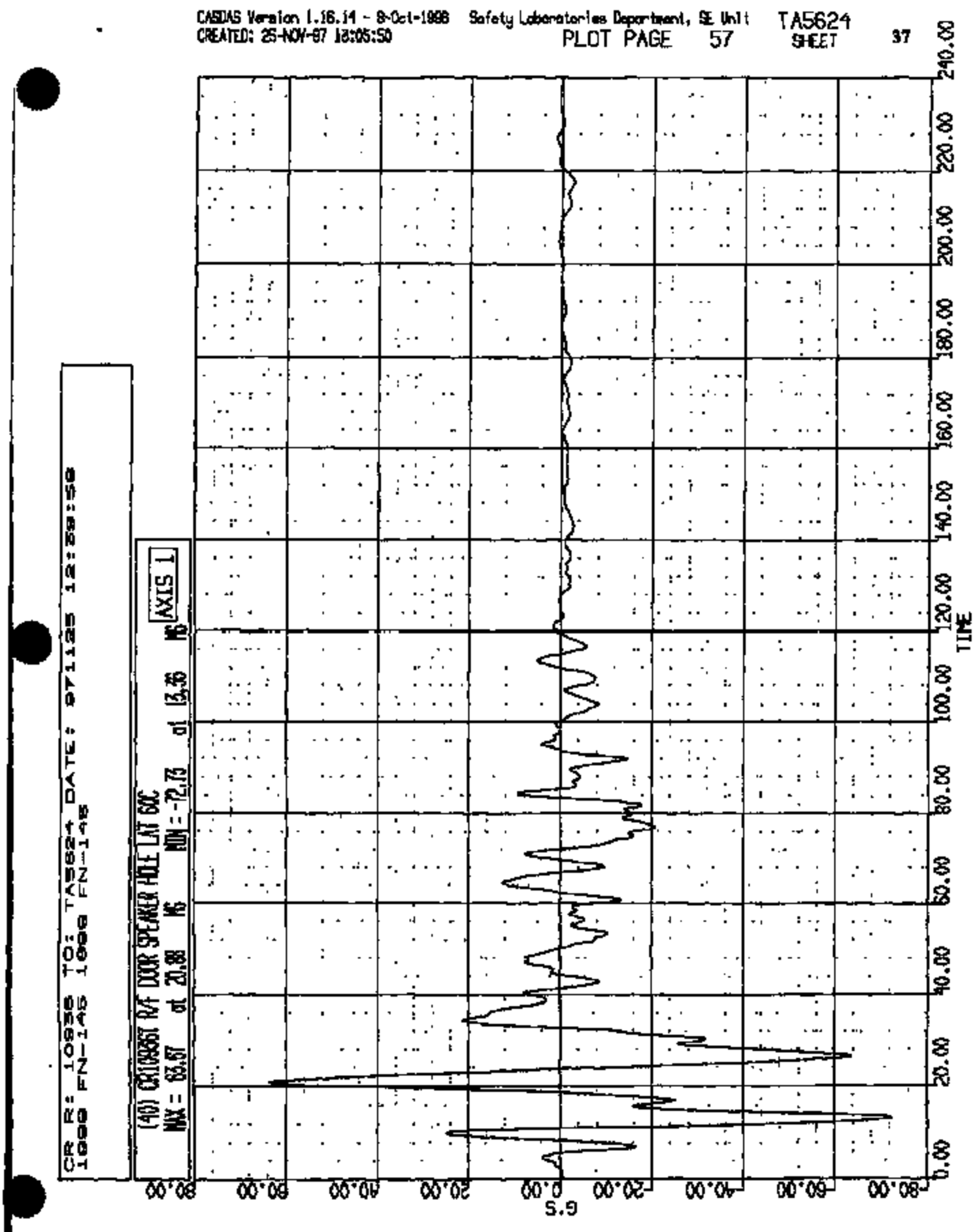
-10.00
-5.00
0.00
5.00
10.00
15.00

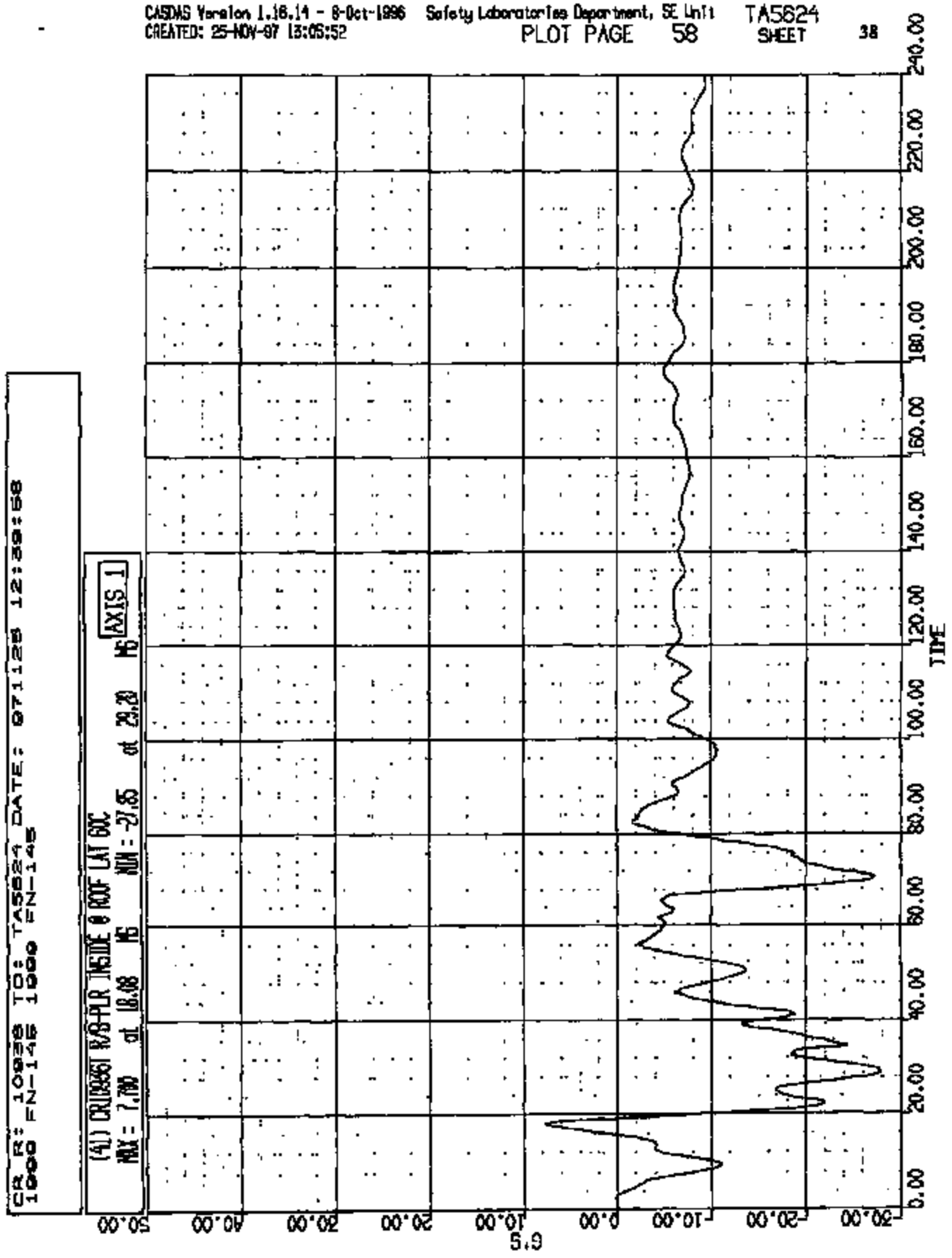

CASDAS Version 1.16.14 - 8-Oct-1996 Safety Laboratories Department, SE Unit
CREATED: 25-NOV-97 13:05:46
TA5624
PLOT PAGE 54
SHEET 34
CR R: 10936 TO: TA5624 DATE: 971125 12:59:58
1998 FN-145 1998 FN-145
(57) CRV10936T R/F DOOR @ BELTLINE MID LAT 60C
MAX = 28.05 at 13.20 MS MIN = -65.30 at 22.08 MS
AXIS 1
240.00
220.00
200.00
180.00
160.00
140.00
120.00
100.00
80.00
60.00
40.00
20.00
0.00
TIME
80.00
60.00
40.00
20.00
0.0
20.00
40.00
60.00
80.00
G's

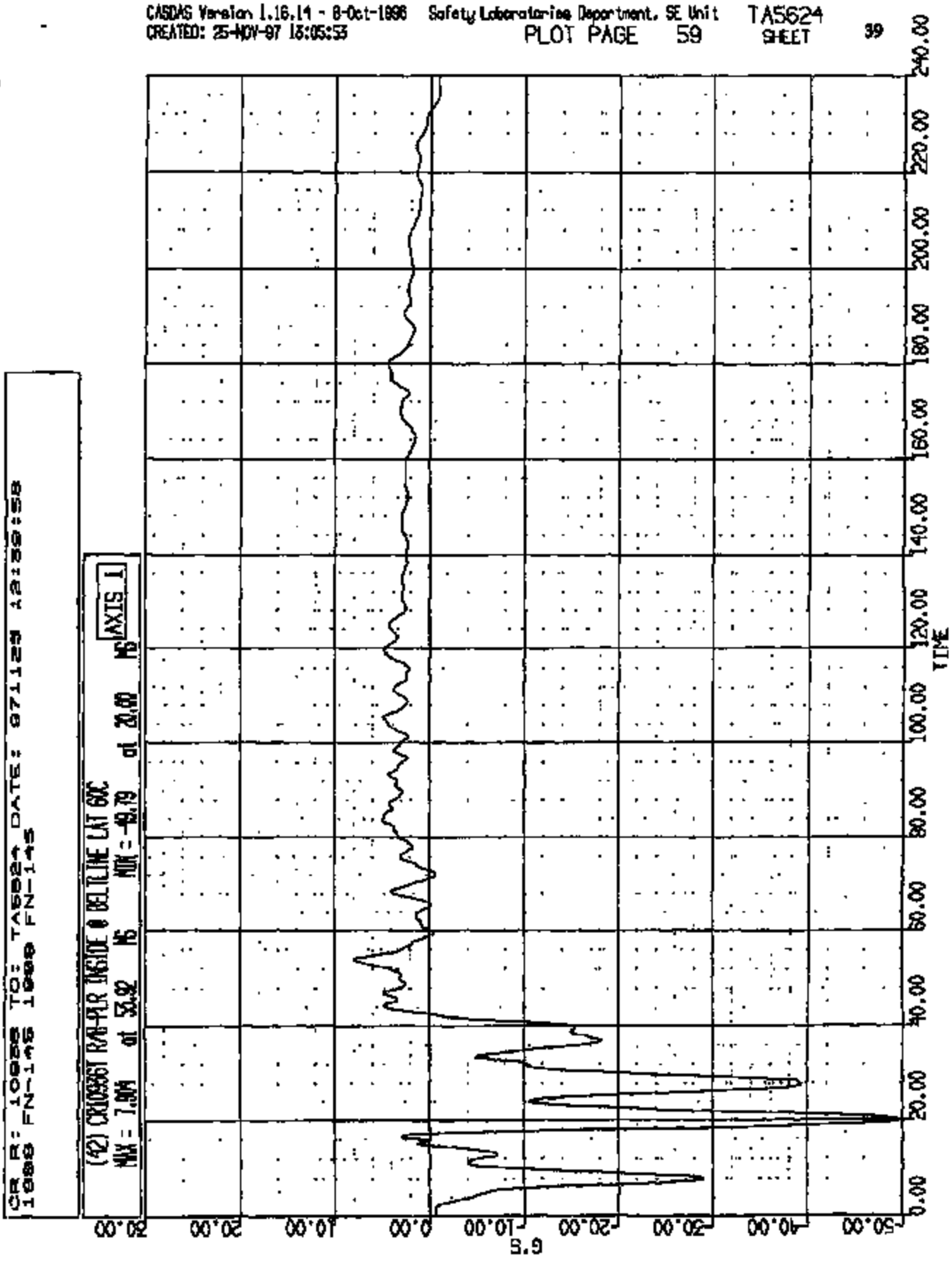

CASDAS Version 1.16.14 - 9-Oct-1995 Safety Laboratories Department, SE Unit TA5624
CREATED: 25-NOV-97 13:05:48
PLOT PAGE 55 SHEET 35
CR R: 10936 TO: TA5624 DATE: 971125 12:29:58
1998 FN-145 1998 FN-145
(30) CRIO0936T R/F DOOR OVER NEAREST LAT GOC
MAX = 55.79 at 27.92 MS MIN = -87.54 at 19.84 MS AXIS 1
240.00
220.00
200.00
180.00
160.00
140.00
120.00
100.00
80.00
60.00
40.00
20.00
0.00
TIME
-100.00
-50.00
0.00
50.00
100.00
150.00
200.00
250.00
300.00
G'S

CASDAS Version 1.18.14 - 8-Oct-1998 Safety Laboratories Department, SE Unit TA5624
CREATED: 25-NOV-97 18:05:49 PLOT PAGE 56 SHEET 36

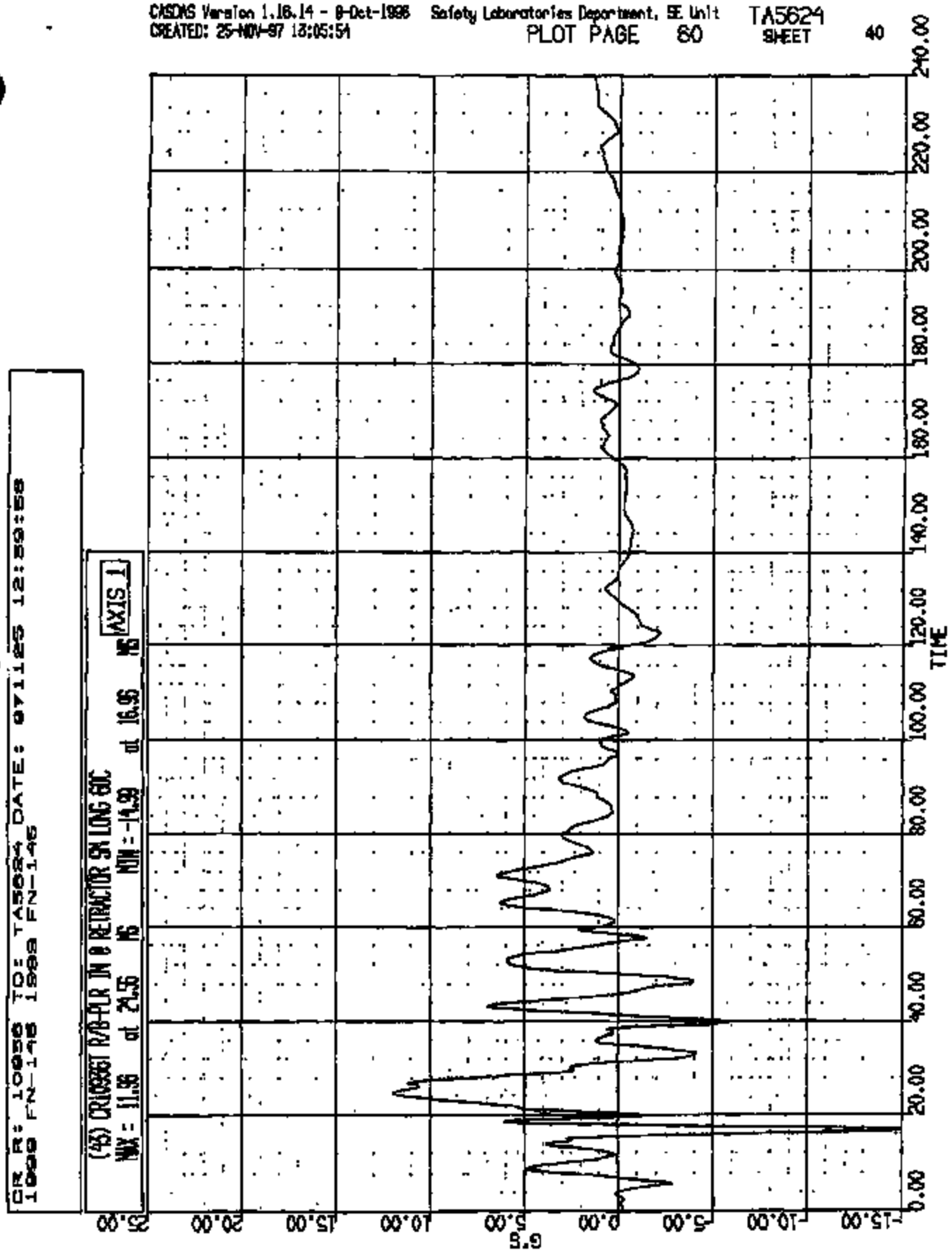


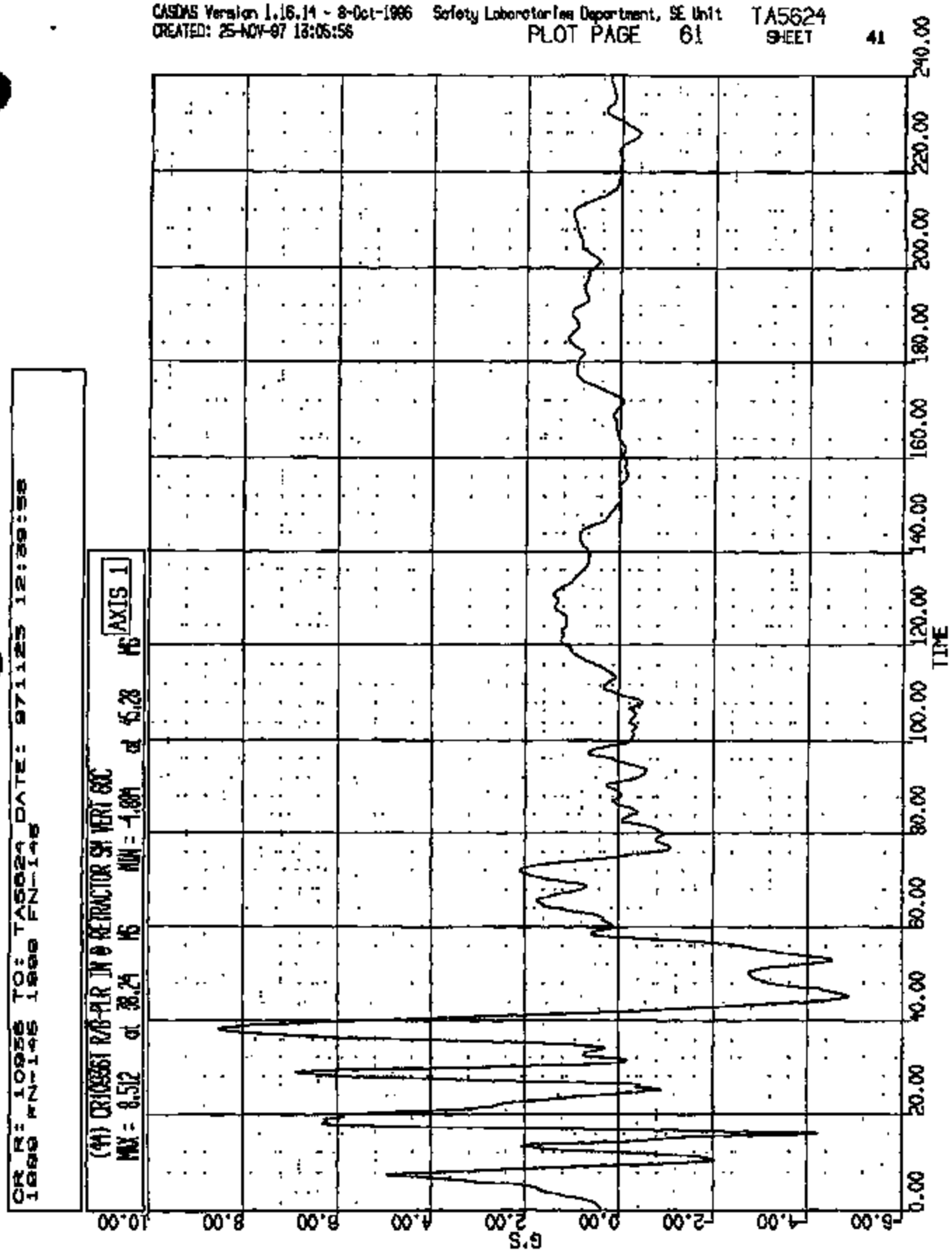


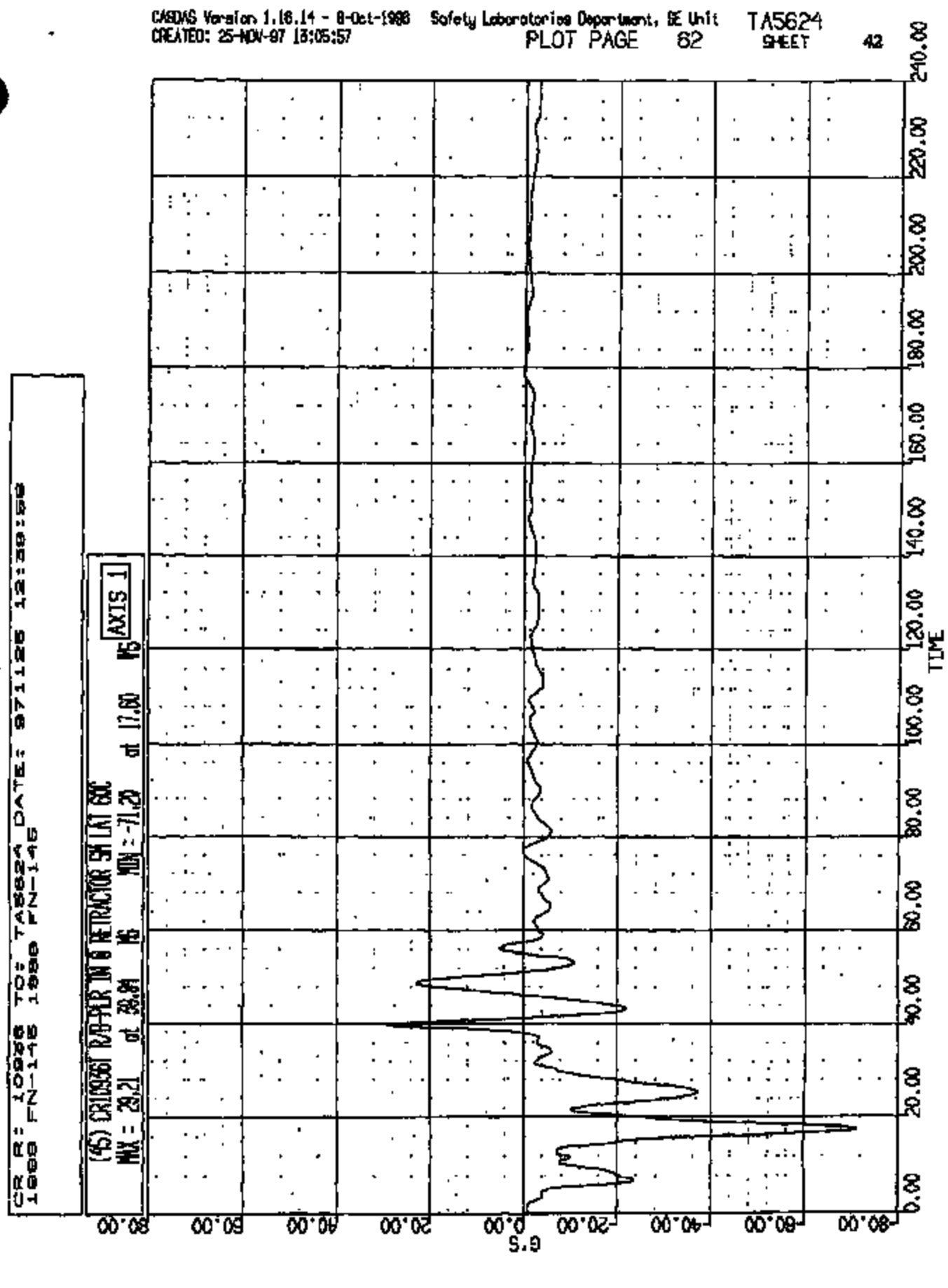


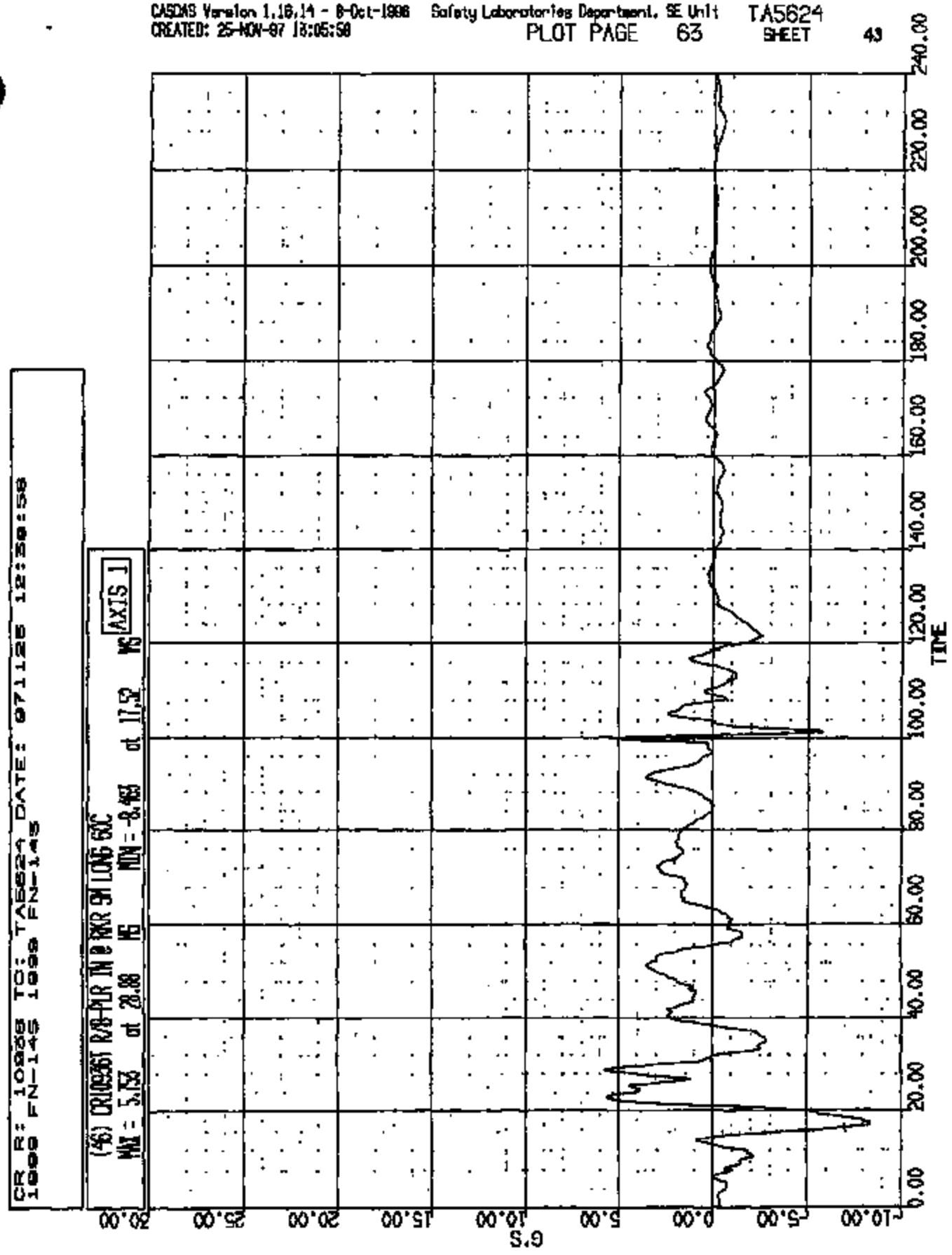


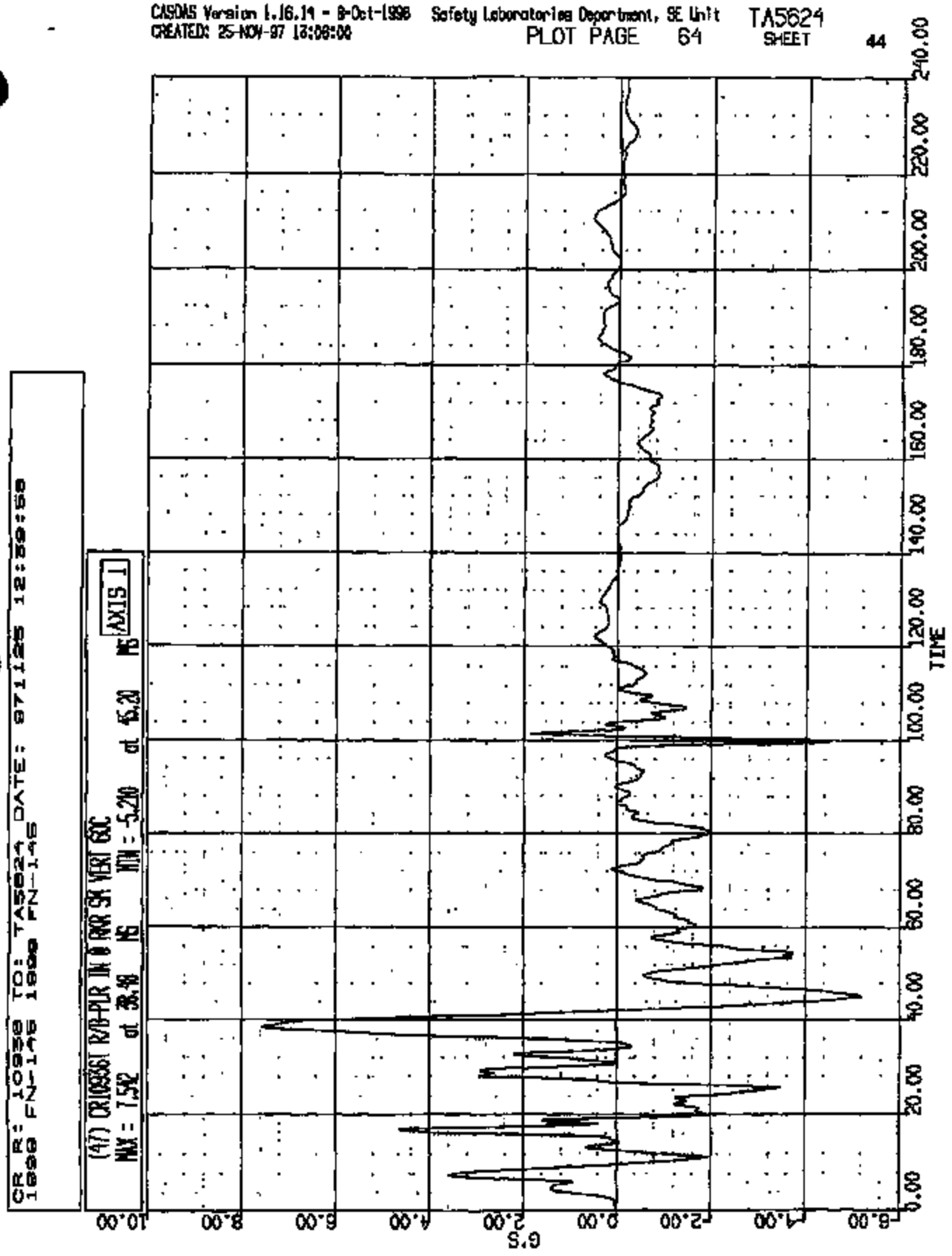
CASDAS Version 1.16.14 - 8-Oct-1996 Safety Laboratories Department, SE Unit TA5624
CREATED: 25-NOV-97 13:05:51 PLOT PAGE 80 SHEET 40

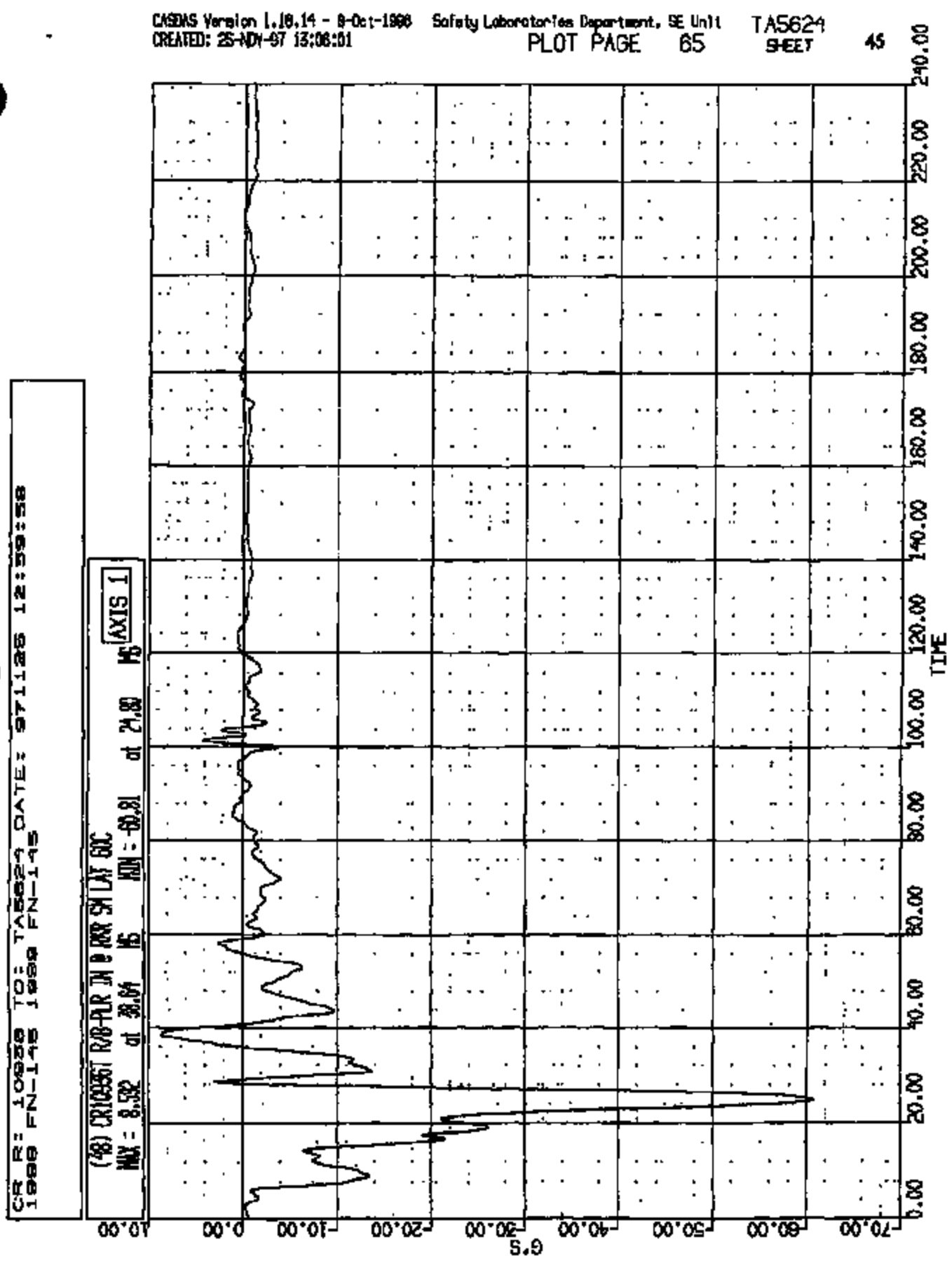


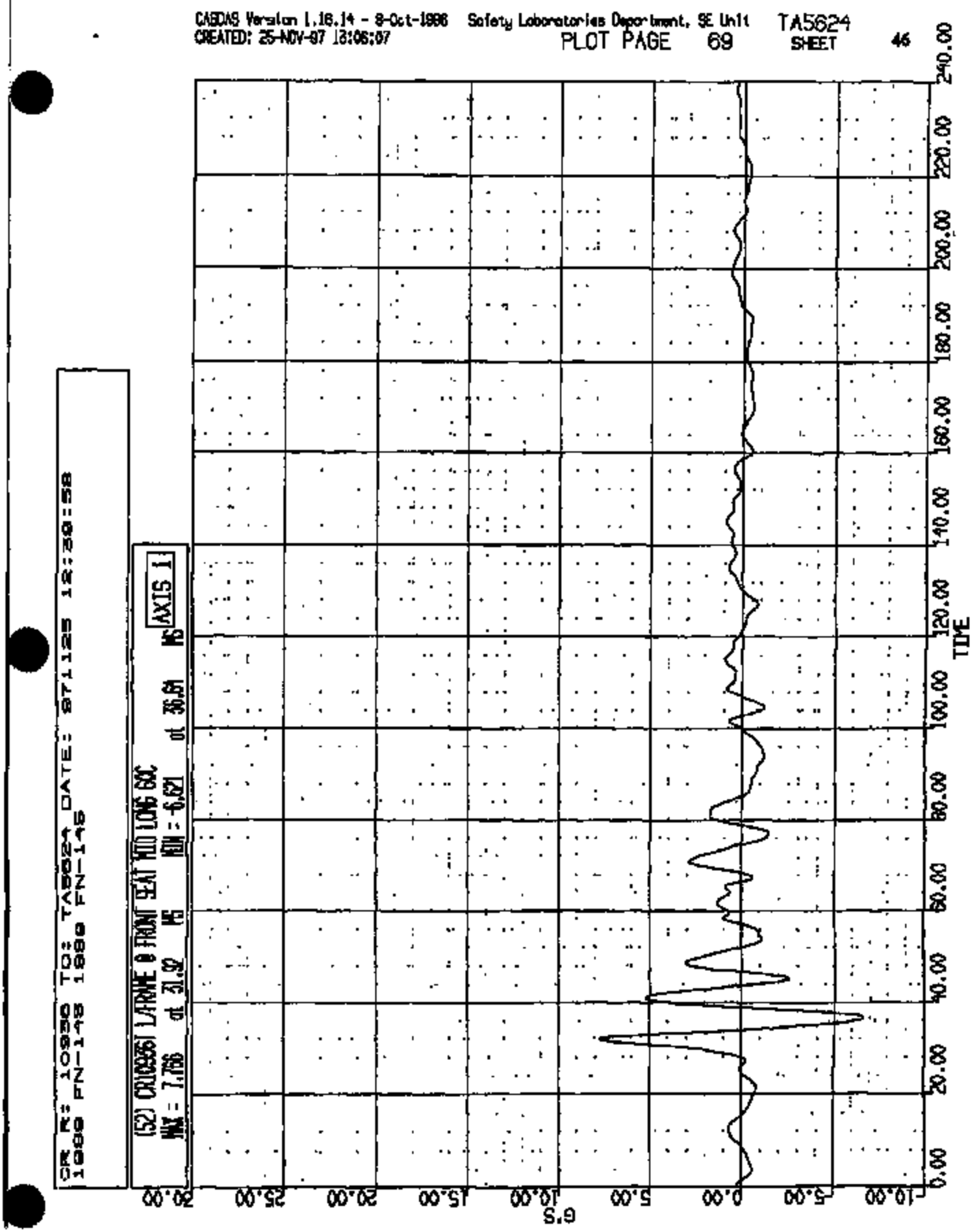



CASDAS Version 1.16.14 - 8-Oct-1998 Safety Laboratories Department, BE Unit
CREATED: 25-NOV-97 13:05:57
TA5624
PLOT PAGE 62
SHEET 42
CR R: 10936 TO: TA5624 DATE: 971126 12:39:58
1998 FN-146 1998 FN-146
(45) CR10936T RAPTOR TM 6 RETRACTOR SW LAT 60MC
MAX = 29.21 at 29.84 MS MIN = -71.29 at 17.80 MS
AXIS 1
G'S
TIME
240.00
220.00
200.00
180.00
160.00
140.00
120.00
100.00
80.00
60.00
40.00
20.00
0.00
80.00
60.00
40.00
20.00
0.00
-20.00
-40.00
-60.00
-80.00

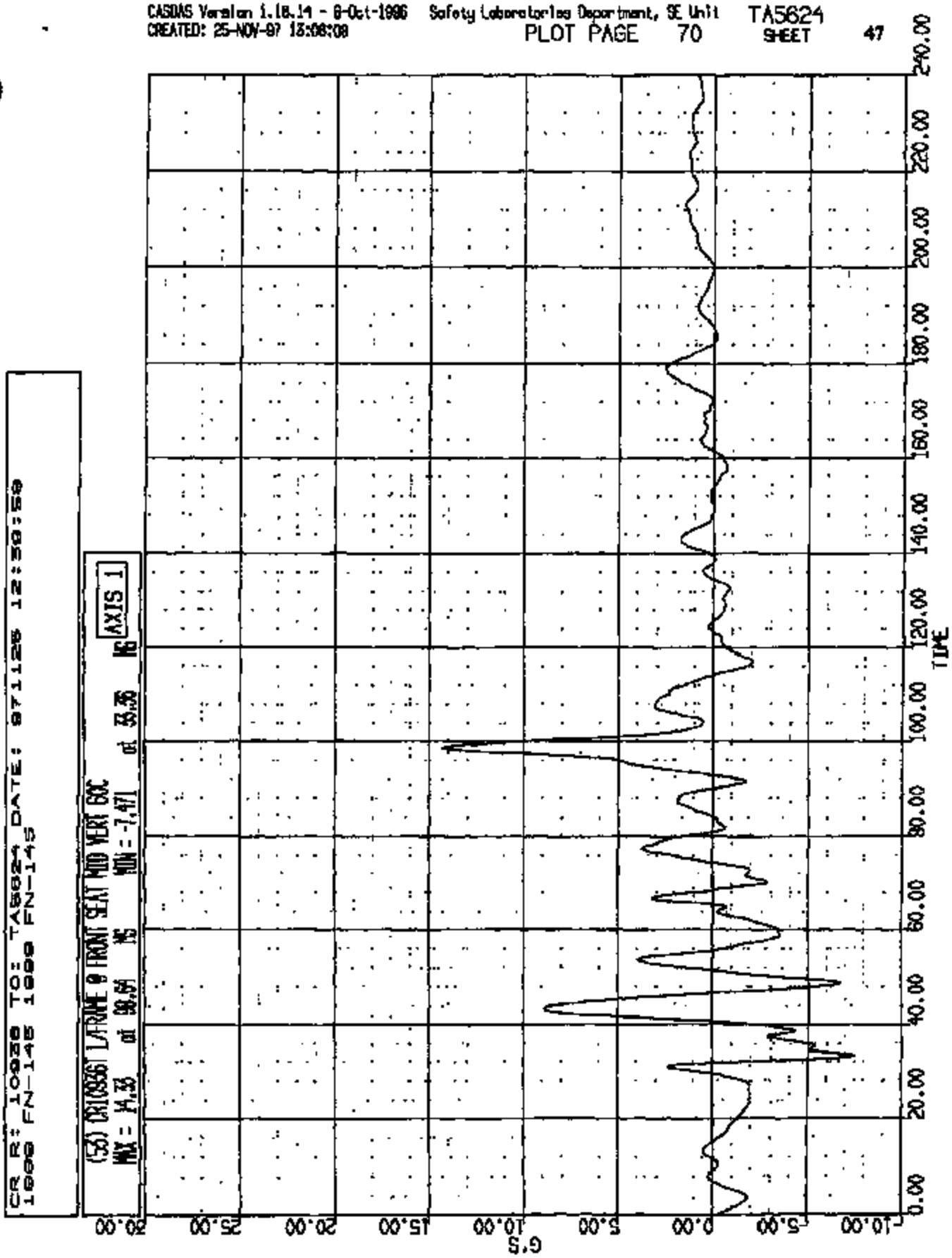


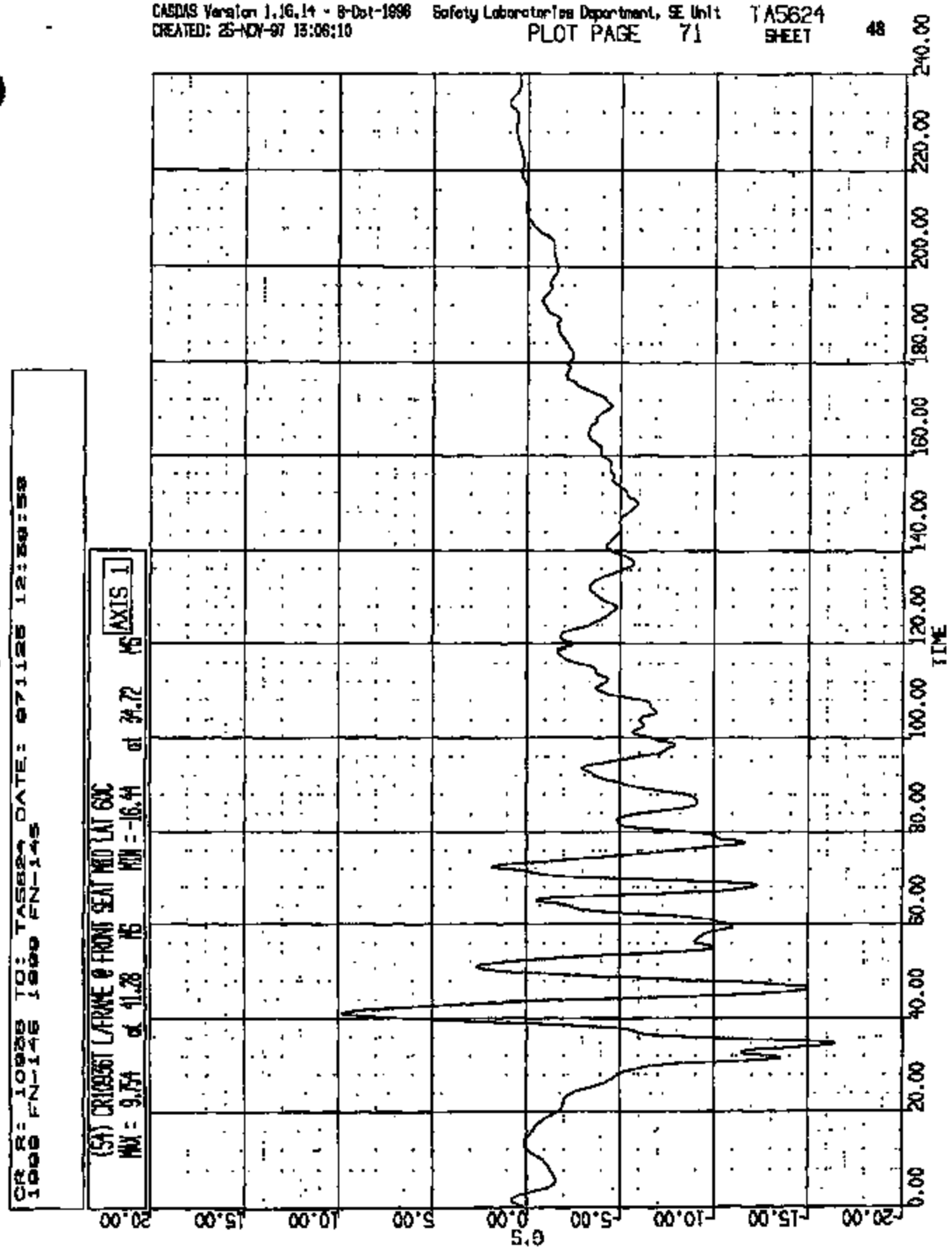

CASDAS Version 1.16.14 - 8-Oct-1998 Safety Laboratories Department, SE Unit
CREATED: 25-NOV-97 13:08:00
PLOT PAGE 64
TA5624
SHEET 44
CR R: 10936 TO: TA5624 DATE: 971125 12:39:58
1858 FN-146 1858 FN-146
(47) CRIO9936T R/B-PLR TIM @ RWR SW VERT 60C
MAX = 7.592 at 38.48 MS MIN = -5.220 at 45.20 MS
AXIS 1
240.00
220.00
200.00
180.00
160.00
140.00
120.00
100.00
80.00
60.00
40.00
20.00
0.00
TIME
10.00
8.00
6.00
4.00
2.00
0.00
-2.00
-4.00
-6.00
G'S

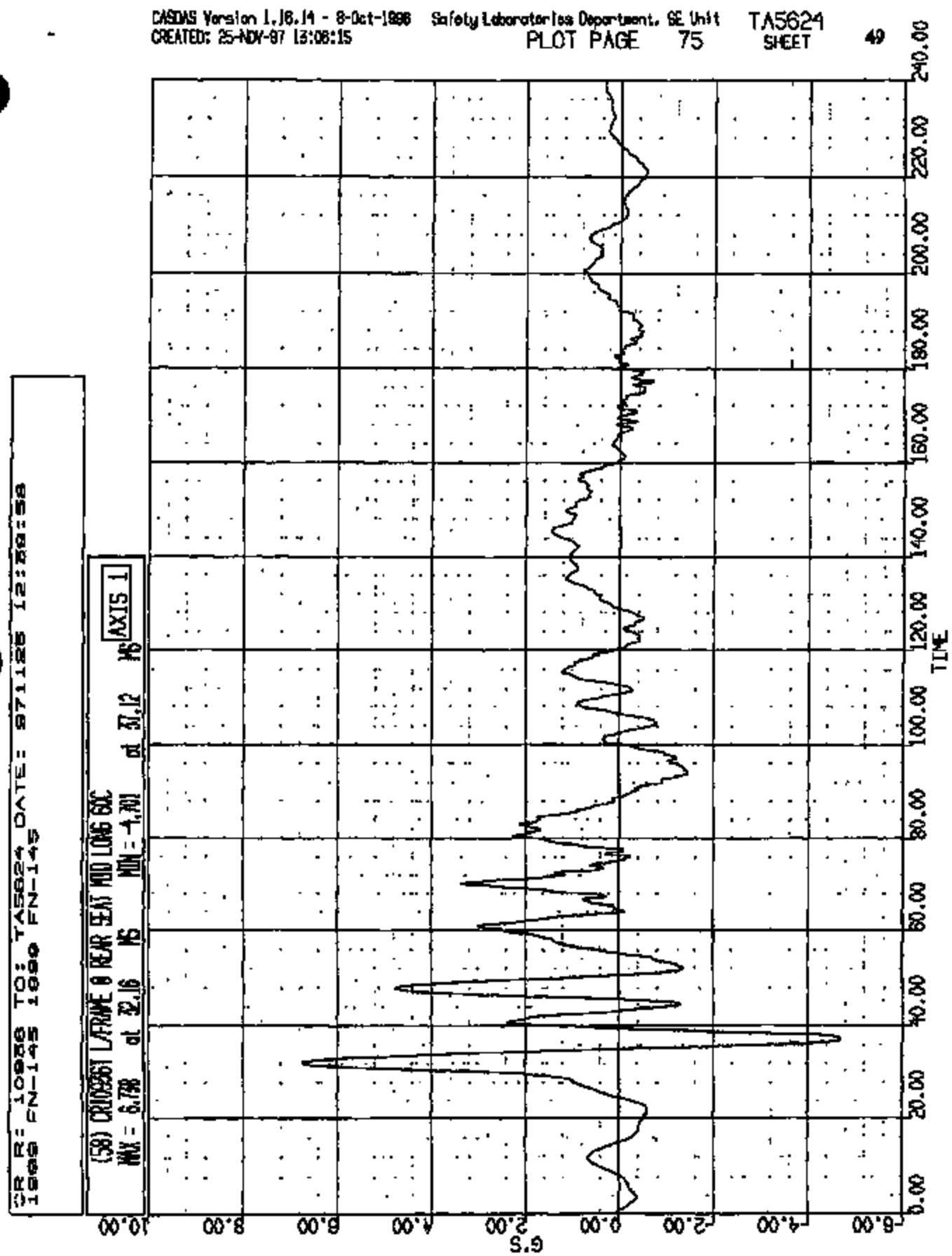

CASDAS Version 1.18.14 - 8-Oct-1998 Safety Laboratories Department, SE Unit TA5624
CREATED: 25-NOV-97 13:06:01
PLOT PAGE 65 SHEET 45
CR R: 10936 TO: TA5624 DATE: 971126 12:59:58
1998 FN-145 1998 FN-145
(98) CR10936T R/B-PLR IN @ ANR SM LAT GUC
MAX = 8.582 at 30.64 MS MIN = -60.81 at 21.80 MS AXIS 1
240.00
220.00
200.00
180.00
160.00
140.00
120.00
100.00
80.00
60.00
40.00
20.00
0.00
TIME
10.00
0.00
-10.00
-20.00
-30.00
-40.00
-50.00
-60.00
-70.00
G's

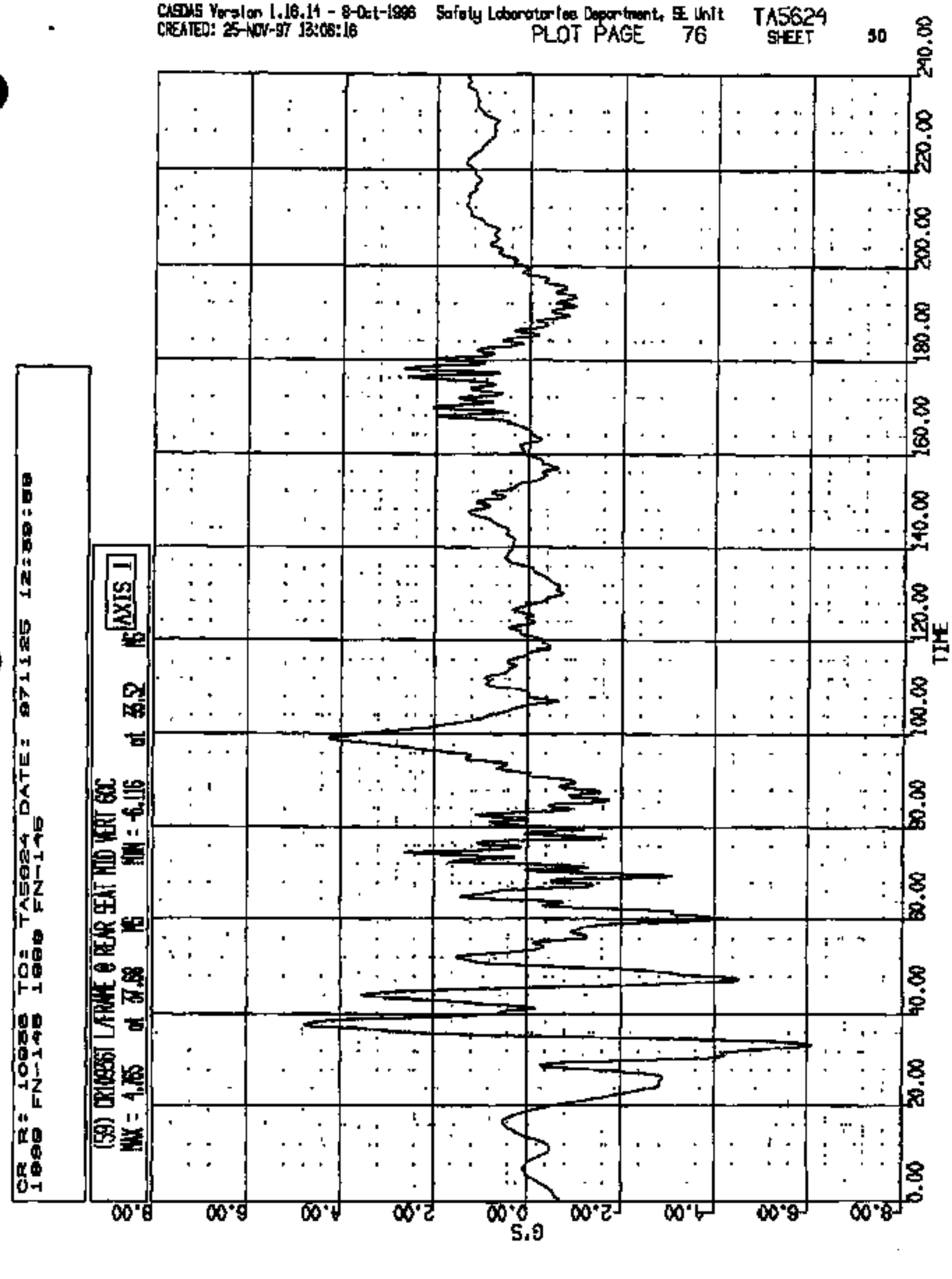


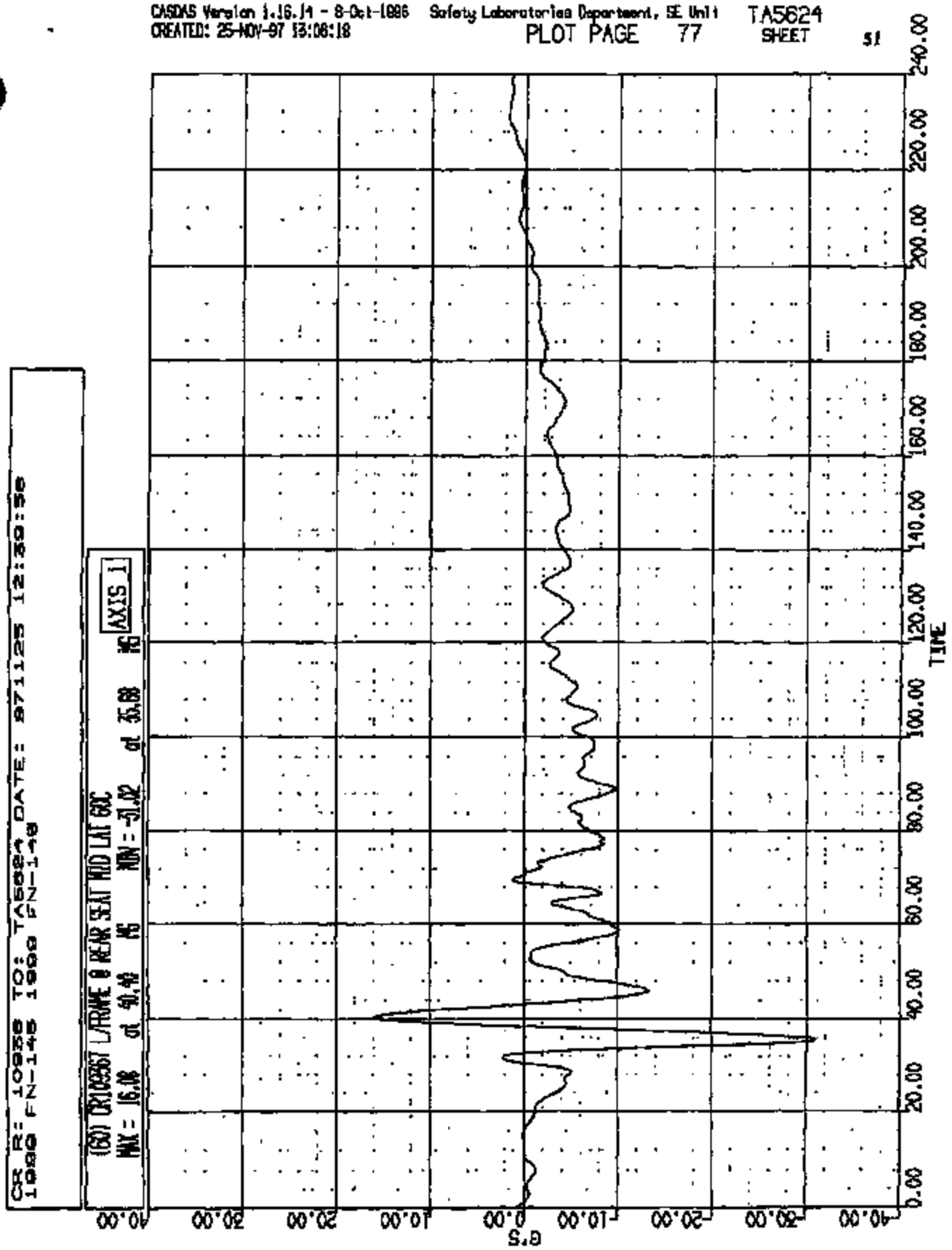
CASDAS Version 1.18.14 - 8-Oct-1996 Safety Laboratories Department, SE Unit TA5624
CREATED: 25-NOV-97 15:08:08 PLOT PAGE 70 SHEET 47

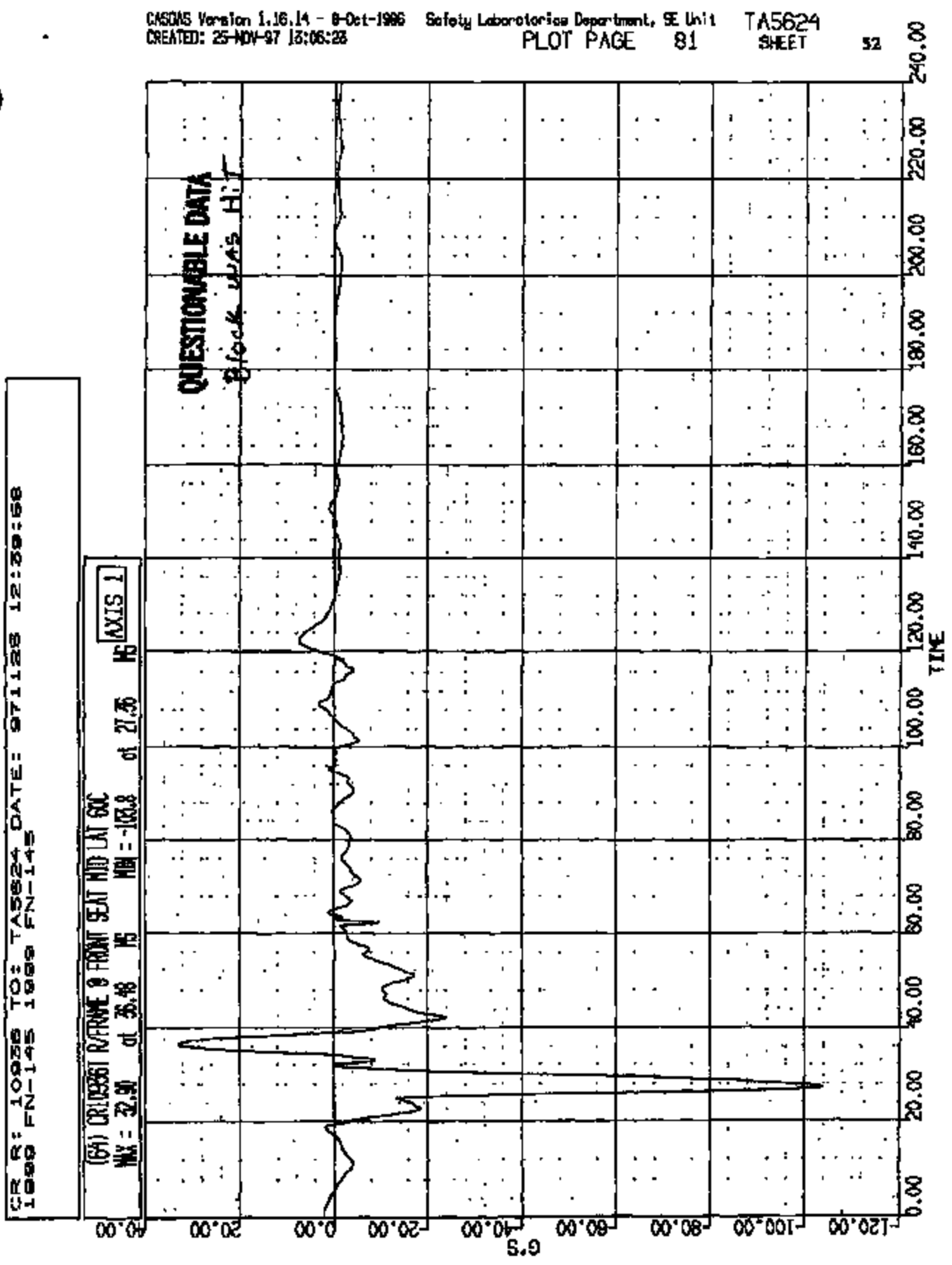


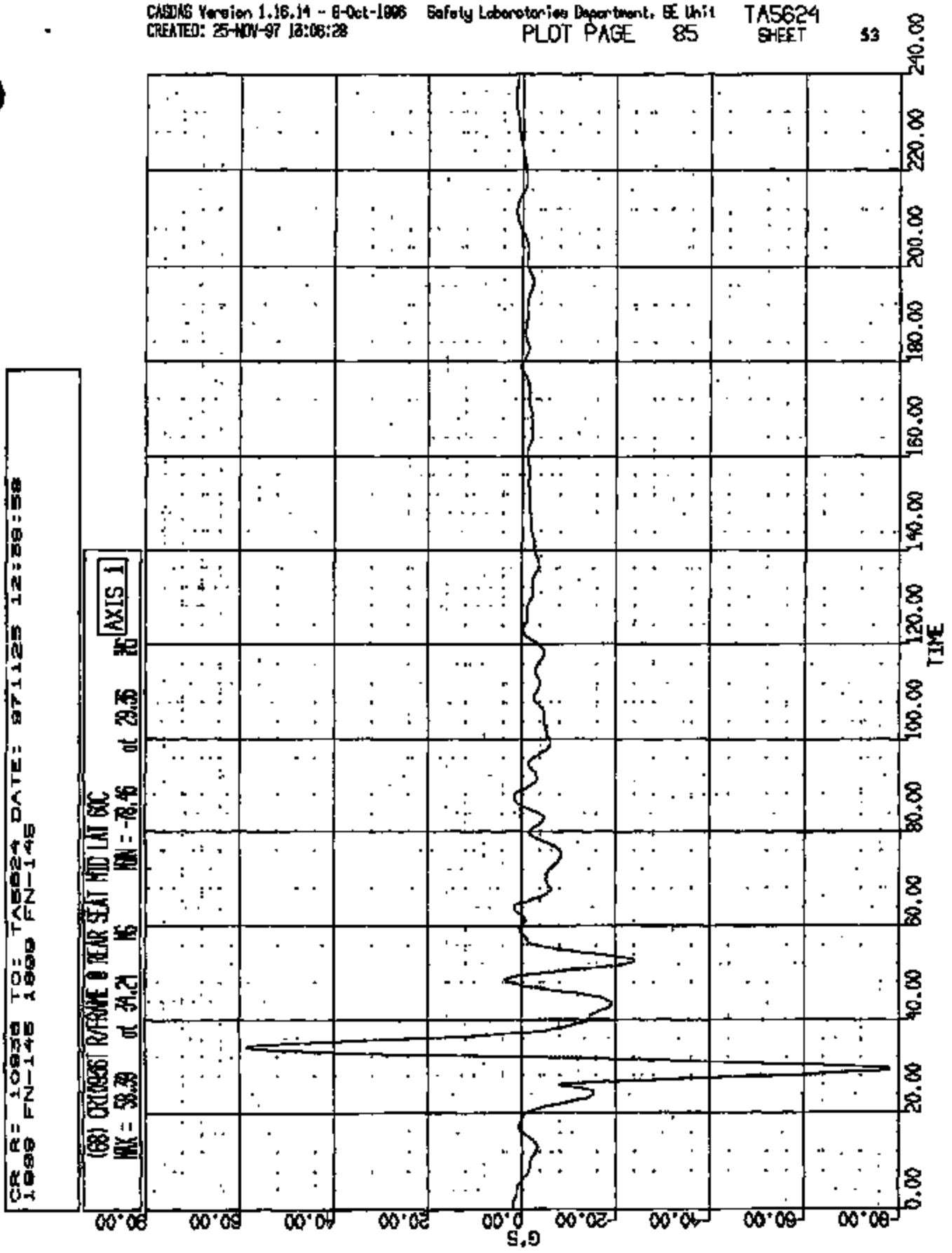


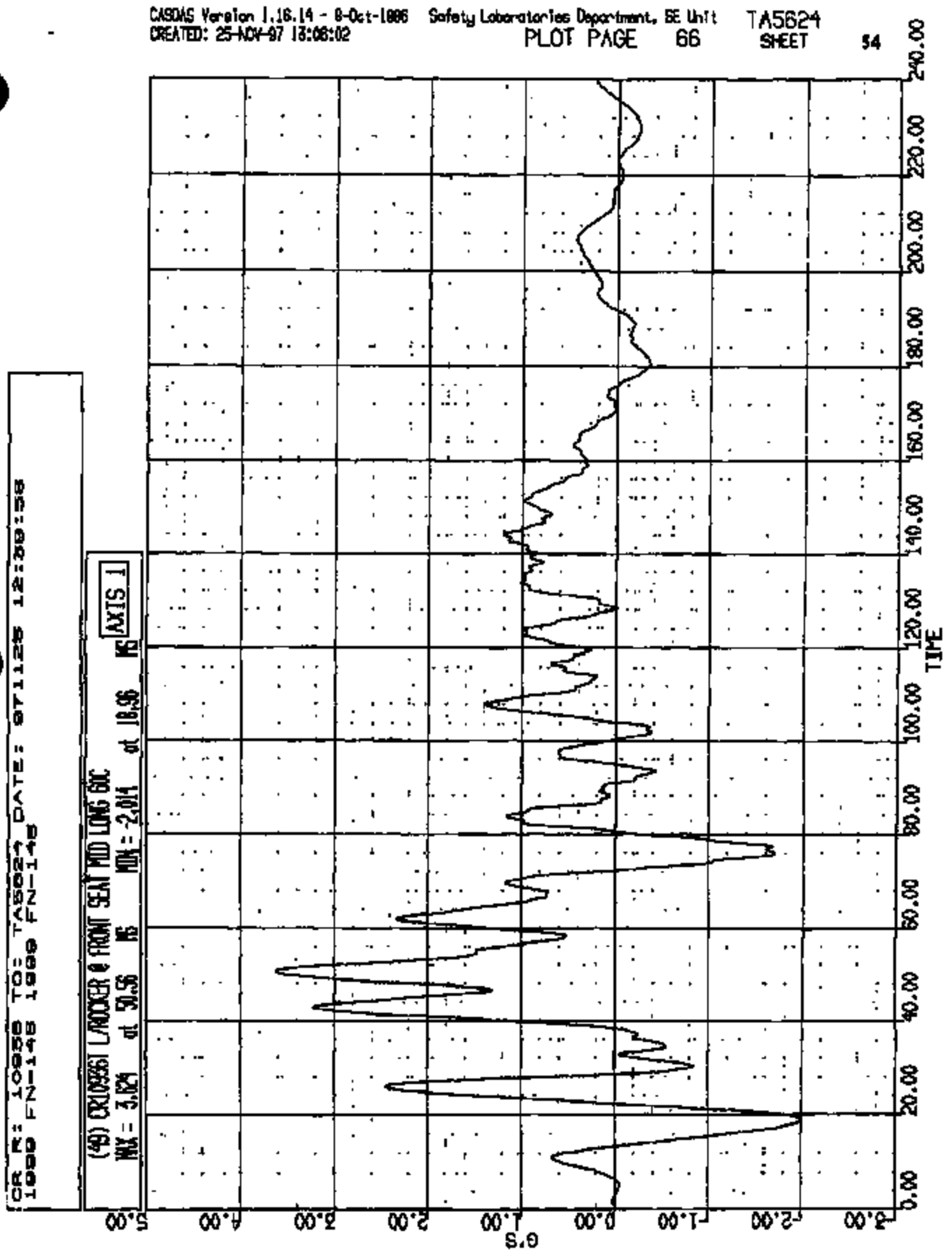


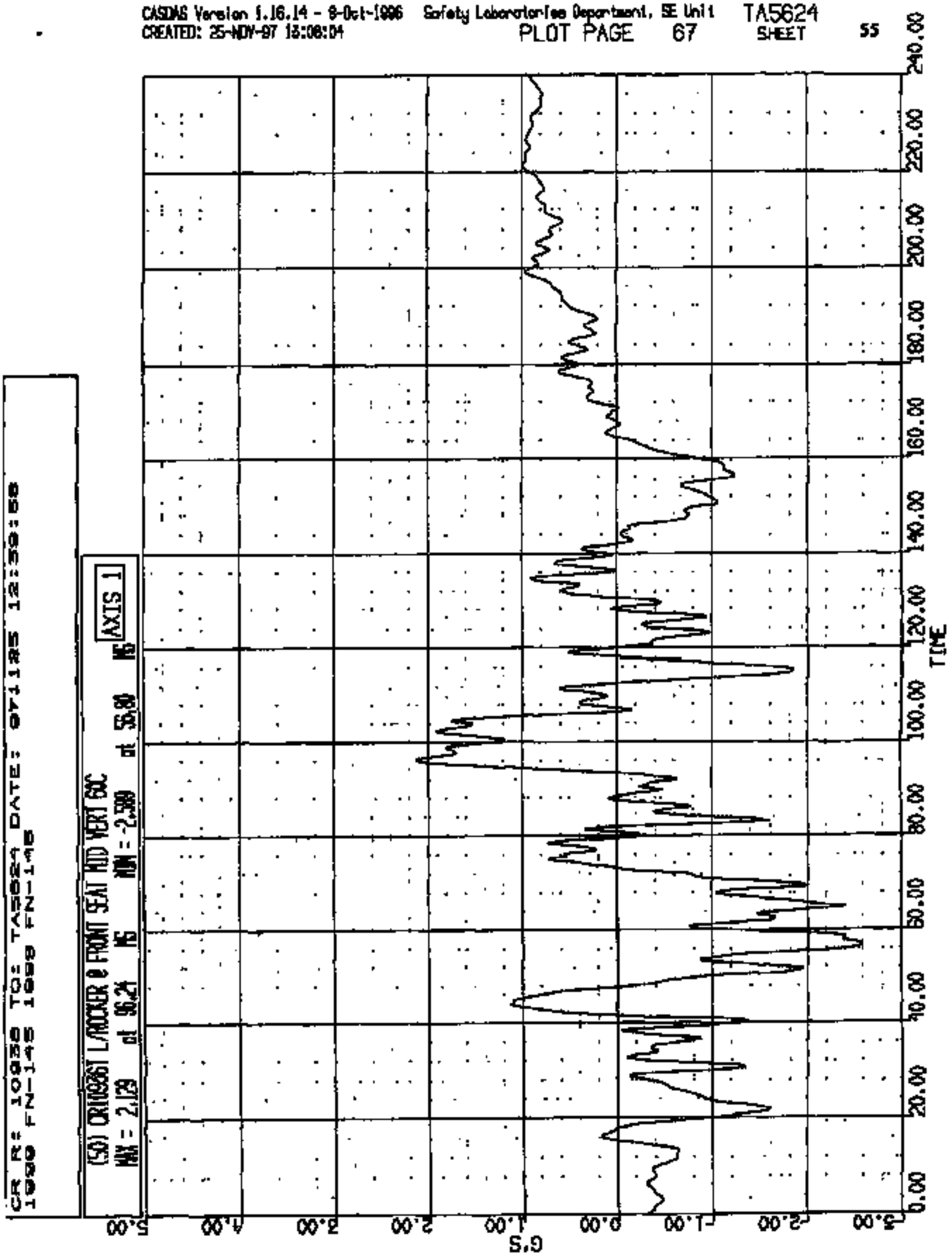


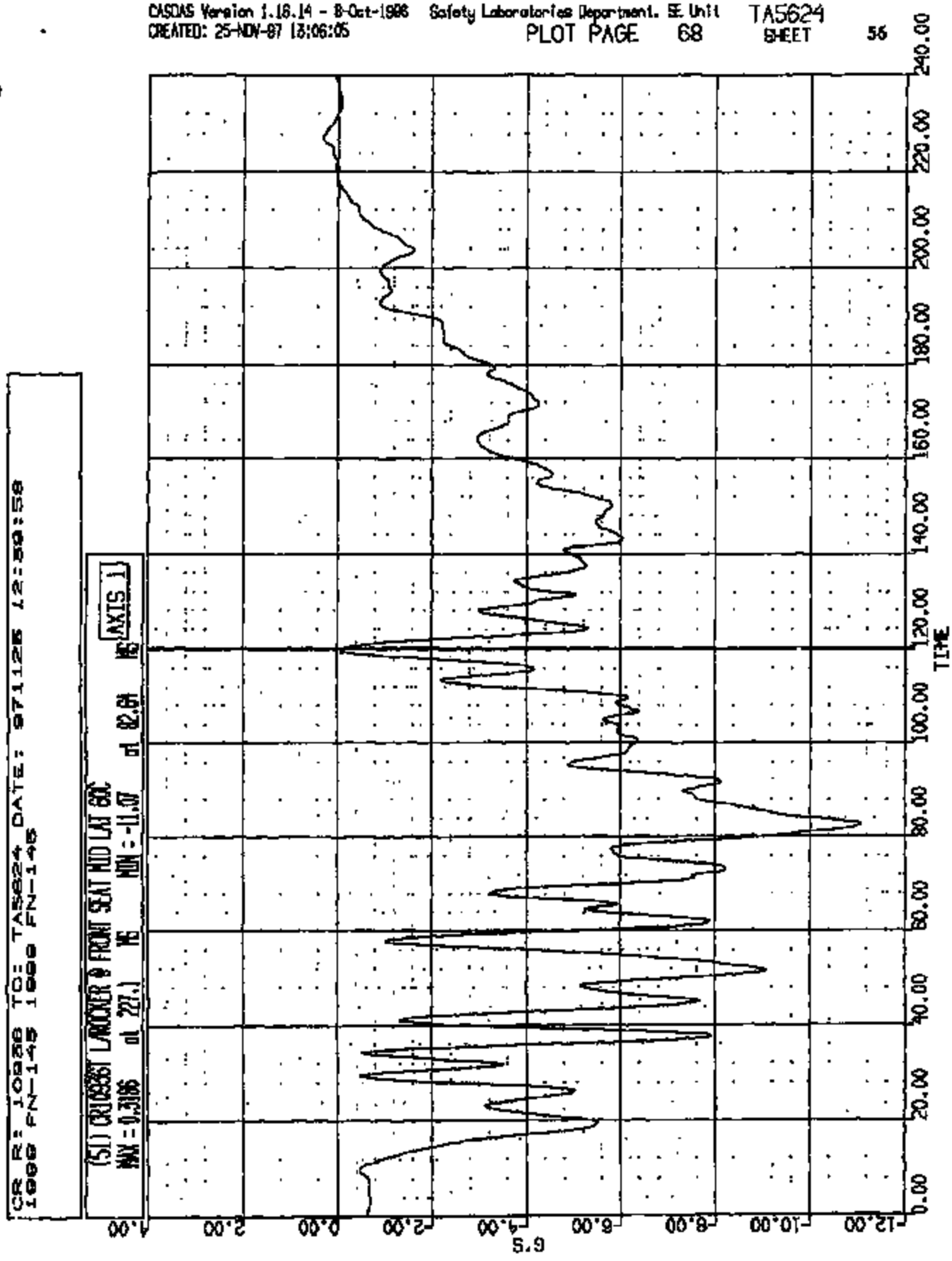


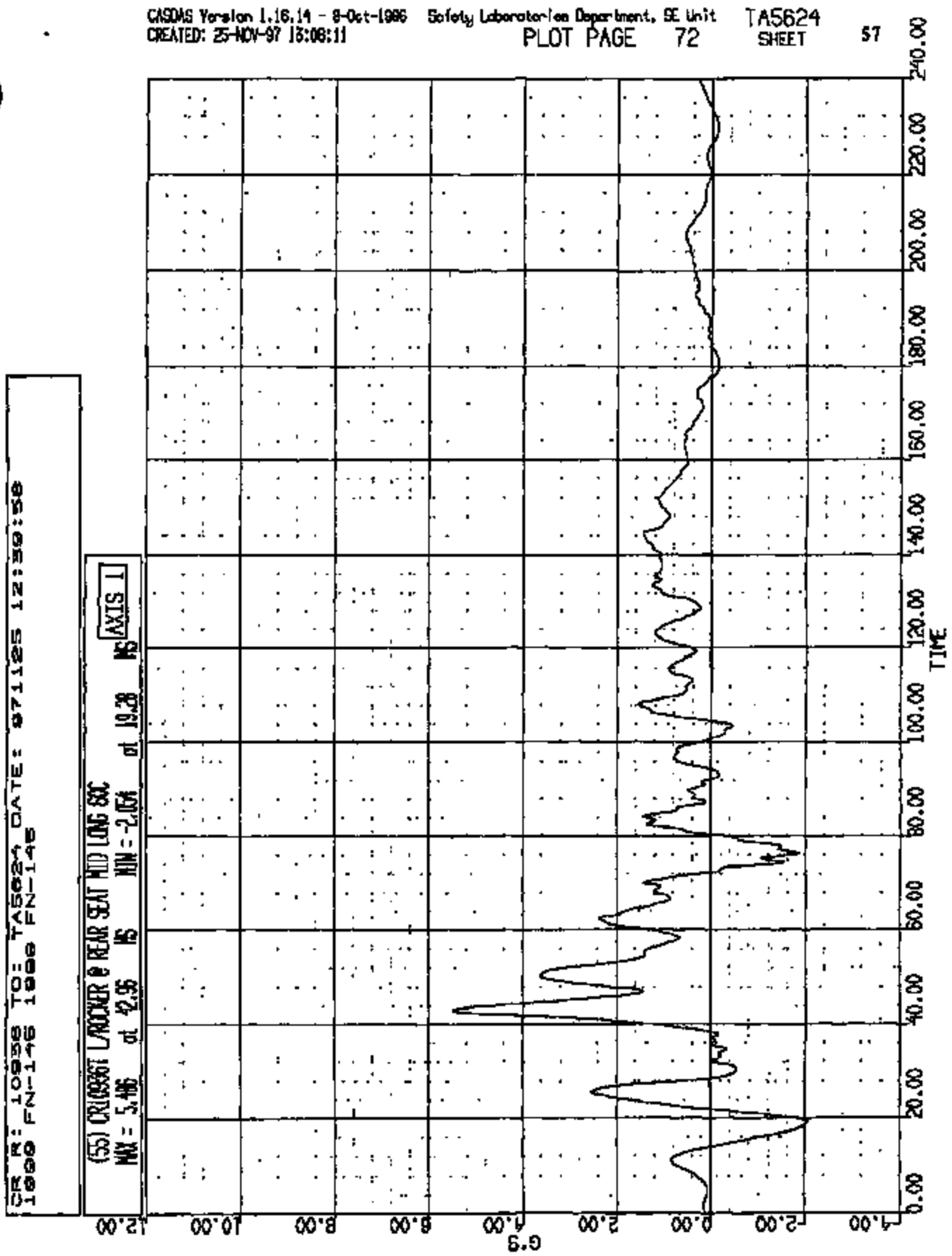

CASDAS Version 1.16.14 - 8-Oct-1996 Safety Laboratories Department, SE Unit TA5624
CREATED: 25-NOV-97 15:06:28
PLOT PAGE 81 SHEET 52
QUESTIONABLE DATA
Block was HIT
CR R: 10936 TO: TA5624 DATE: 971128 12:39:58
1999 FN-145 1999 FN-145
(64) CR10936I R/FRAME @ FRONT SEAT MID LAT GAC
MAX = 32.90 at 36.48 MS MIN = -103.8 at 27.36 MS AXIS 1
240.00
220.00
200.00
180.00
160.00
140.00
120.00
100.00
80.00
60.00
40.00
20.00
0.00
TIME
40.00
20.00
0.00
20.00
40.00
60.00
80.00
100.00
120.00
G'S

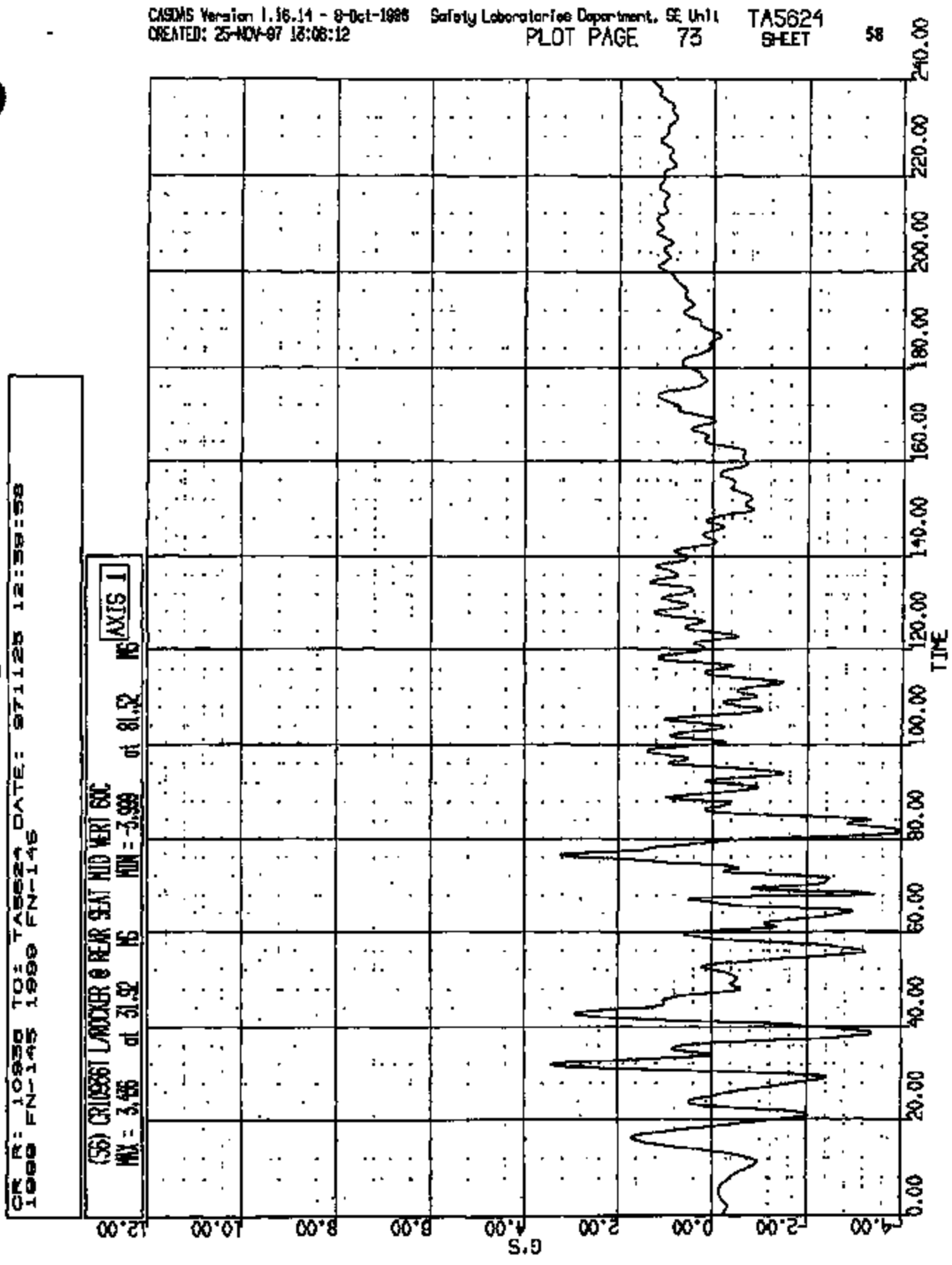


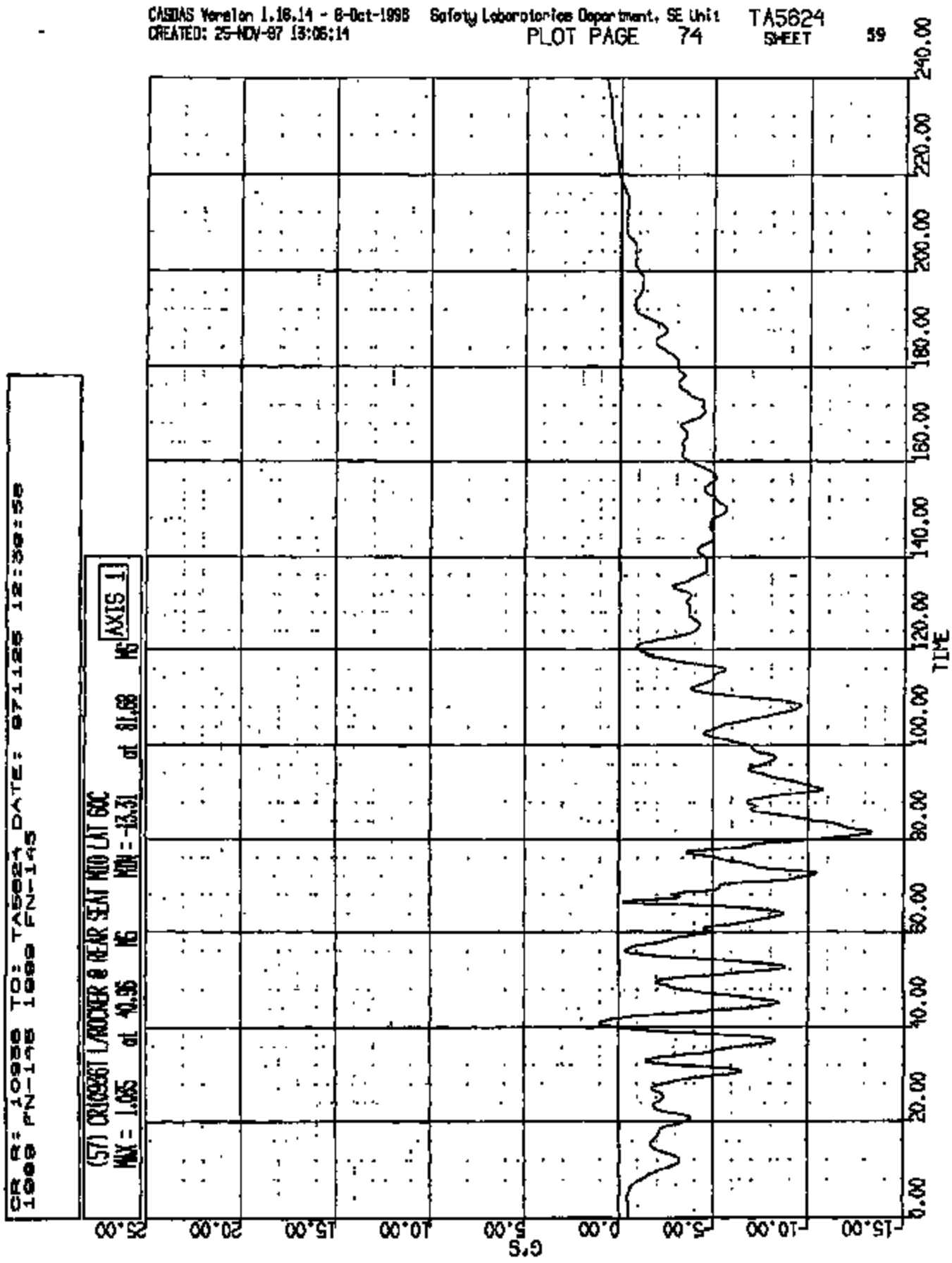


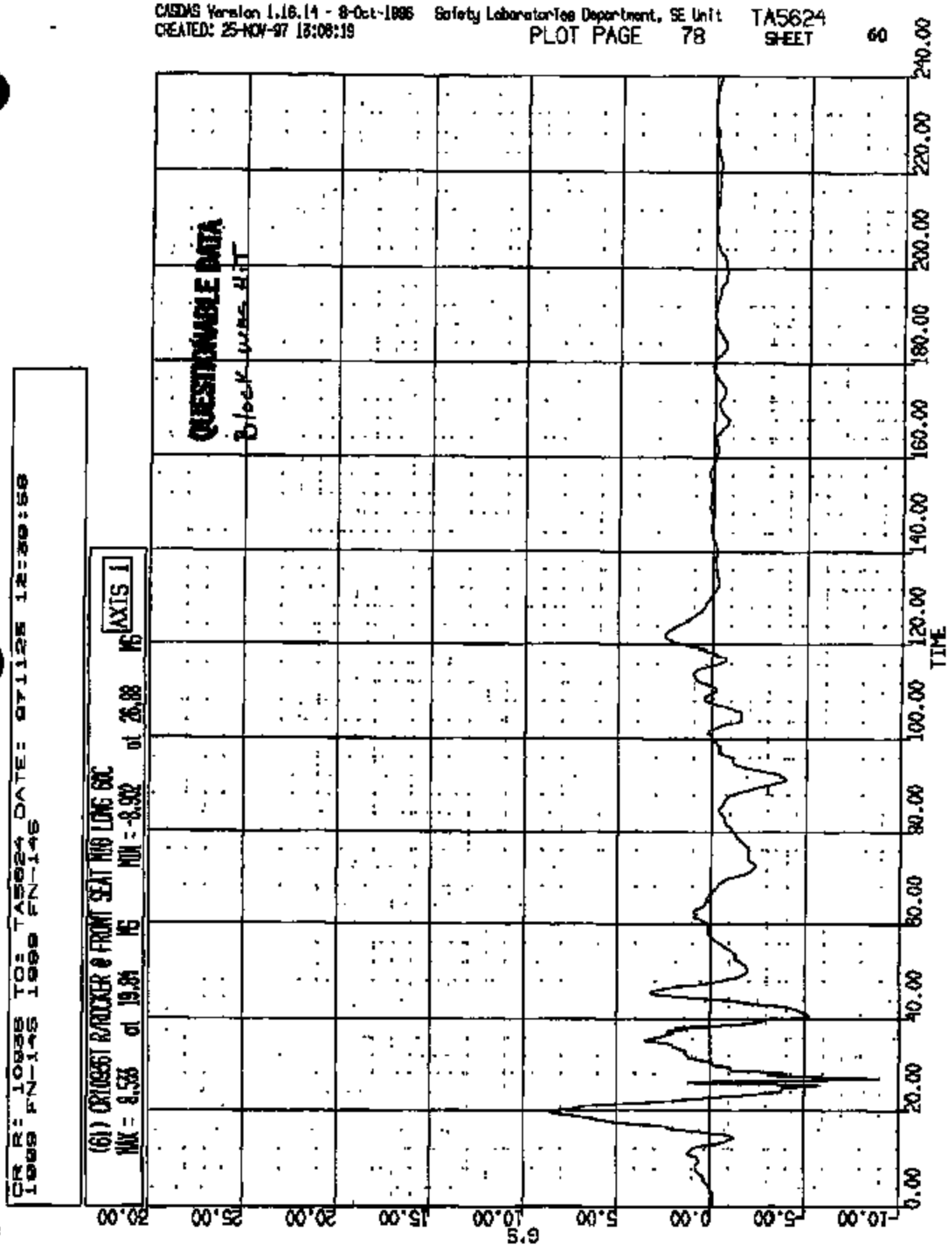




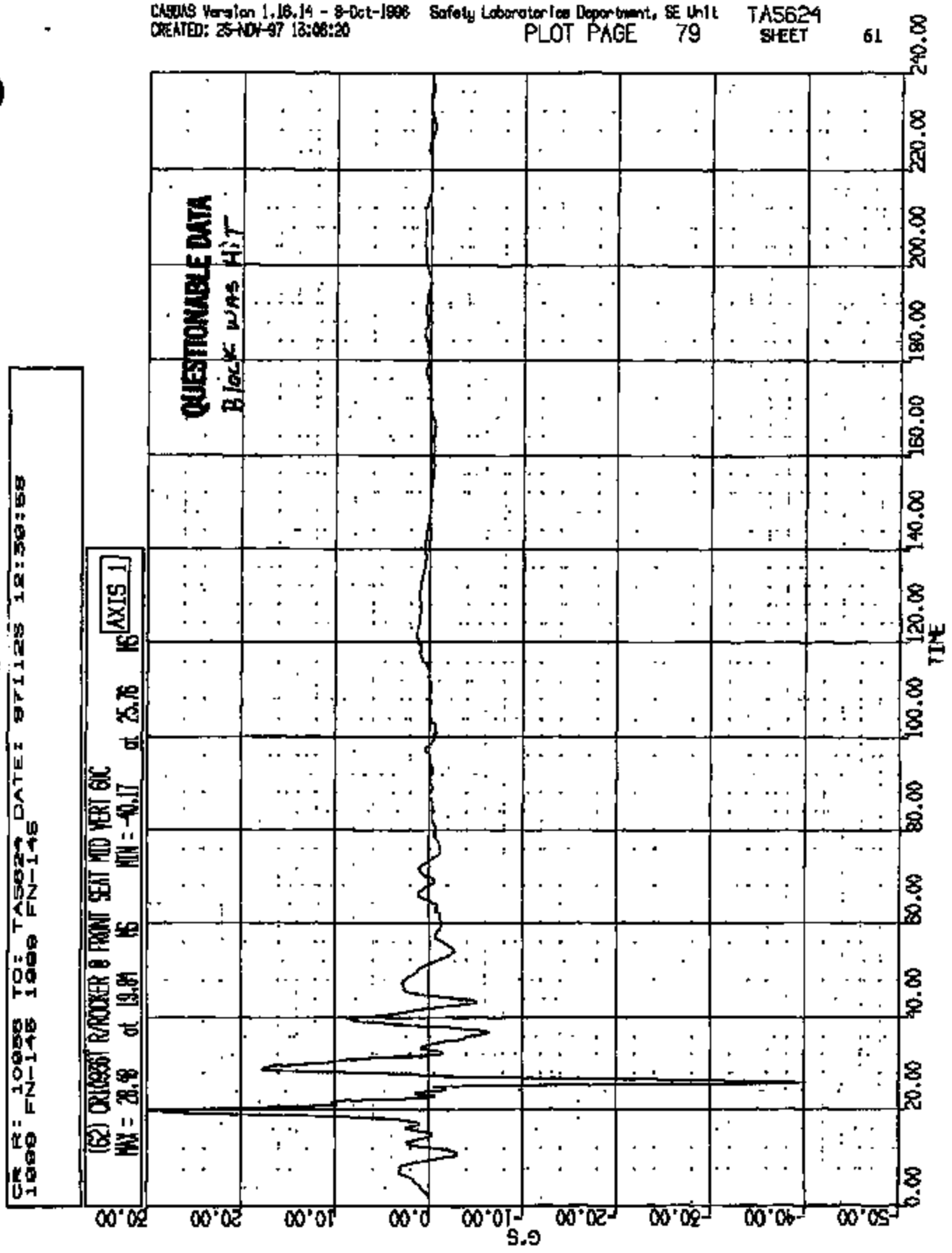

CASDAS Version 1.16.14 - 8-Oct-1996 Safety Laboratories Department, SE Unit TA5624
CREATED: 25-NOV-97 13:08:11 PLOT PAGE 72 SHEET 57
CR R: 10958 TO: TA5624 DATE: 971125 12:39:58
1998 FN-146 1998 FN-146
(55) CRI0936T LAUCHER @ REAR SEAT MID LONG SOC
MAX = 5.486 at 42.95 MS MIN = -2.054 at 19.28 MS AXIS 1
12.00
10.00
8.00
6.00
4.00
2.00
0.00
-2.00
-4.00
G'S
240.00
220.00
200.00
180.00
160.00
140.00
120.00
100.00
80.00
60.00
40.00
20.00
0.00
TIME

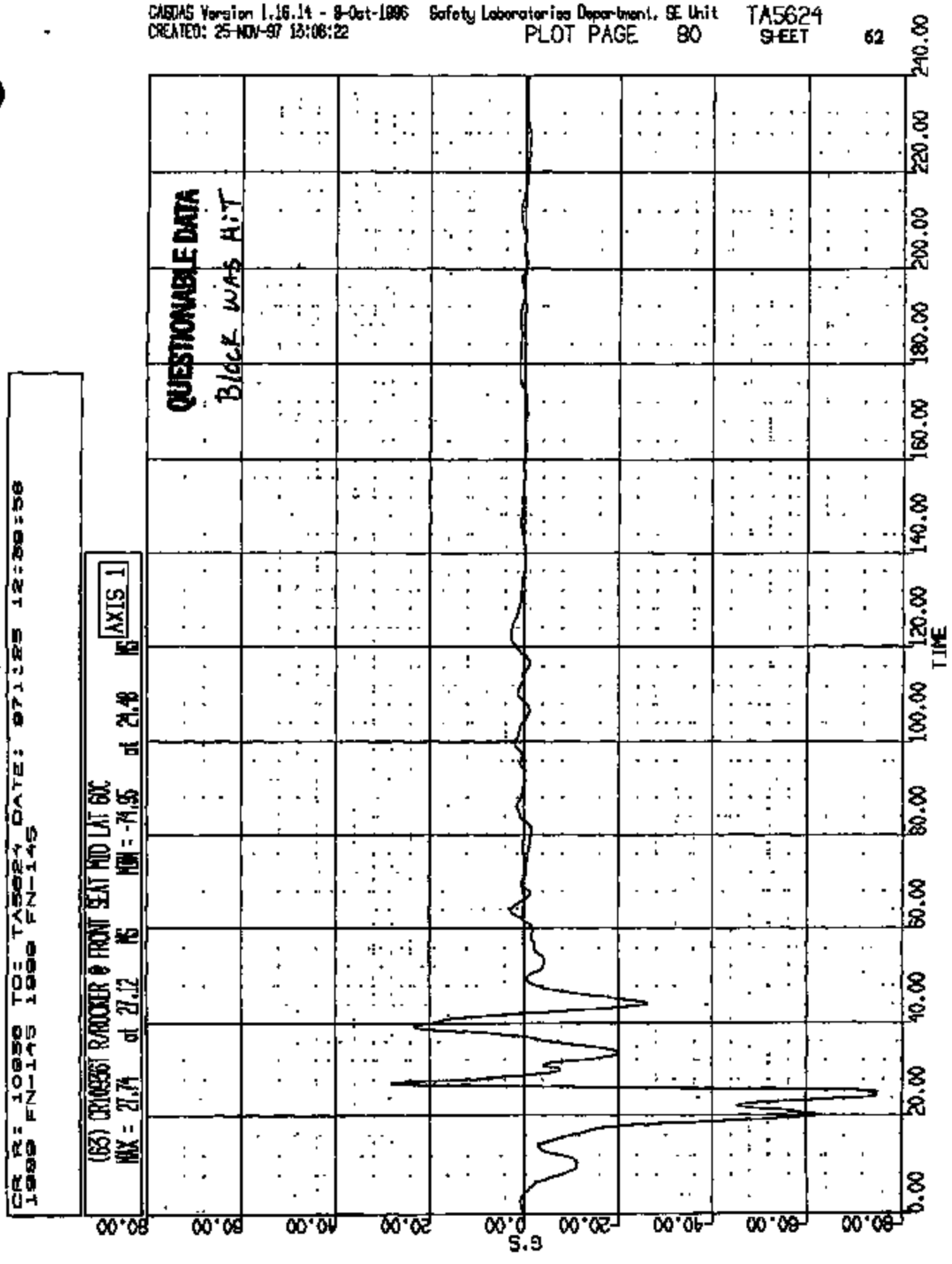


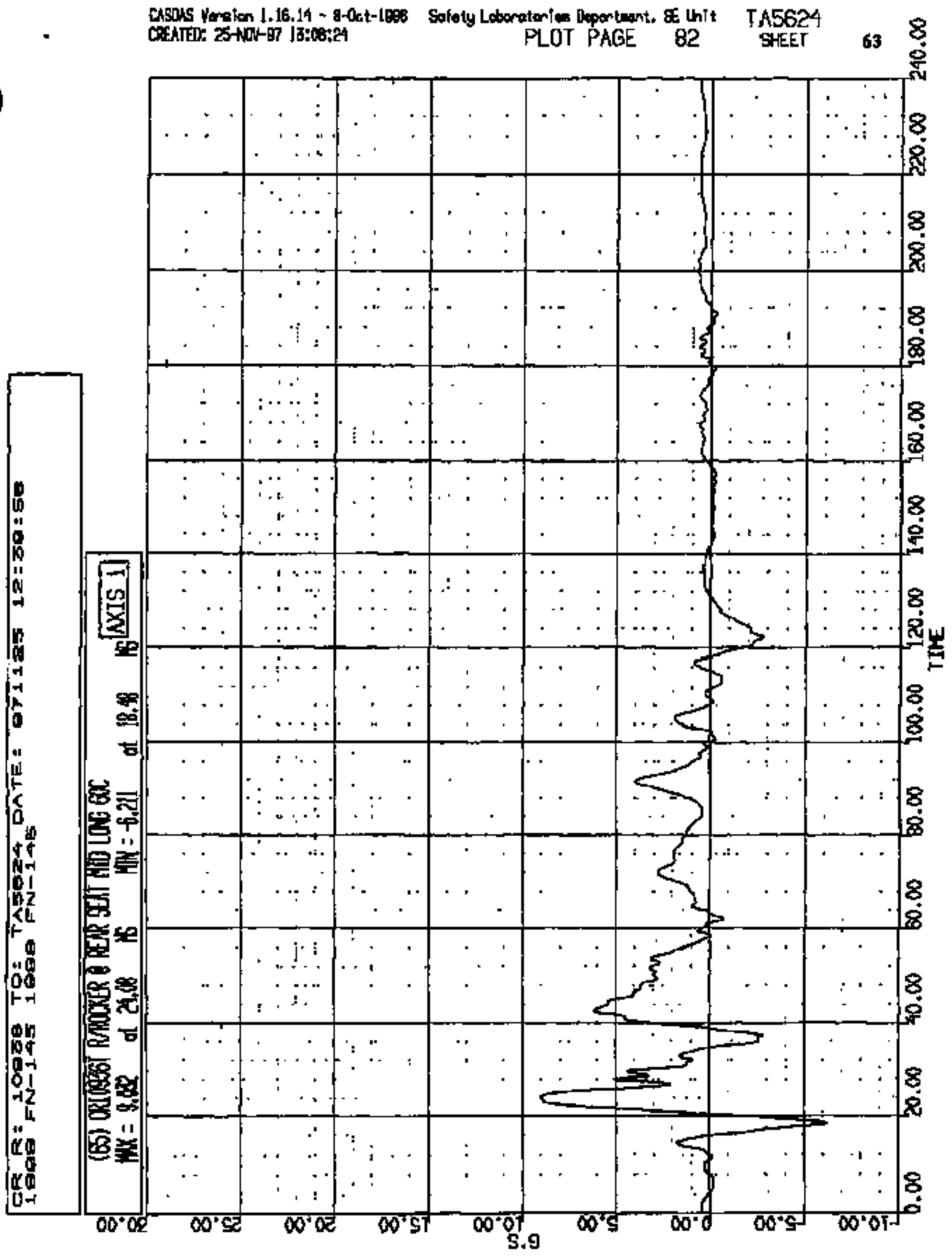

CASDAS Version 1.16.14 - 6-Oct-1998 Safety Laboratories Department, SE Unit
CREATED: 25-NOV-97 13:05:14
TA5624
PLOT PAGE 74
SHEET 59
CR R: 10936 TO: TA5624 DATE: 971125 12:38:58
1998 FN-145 1998 FN-145
(57) CRIS96T LAUNCHER @ REAR SEAT MID LAT 60C
MAX = 1.065 at 40.95 MG MIN = -13.31 at 81.88 MG
AXIS 1
G'S
TIME
25.00
20.00
15.00
10.00
5.00
0.00
-5.00
-10.00
-15.00
0.00
20.00
40.00
60.00
80.00
100.00
120.00
140.00
160.00
180.00
200.00
220.00
240.00

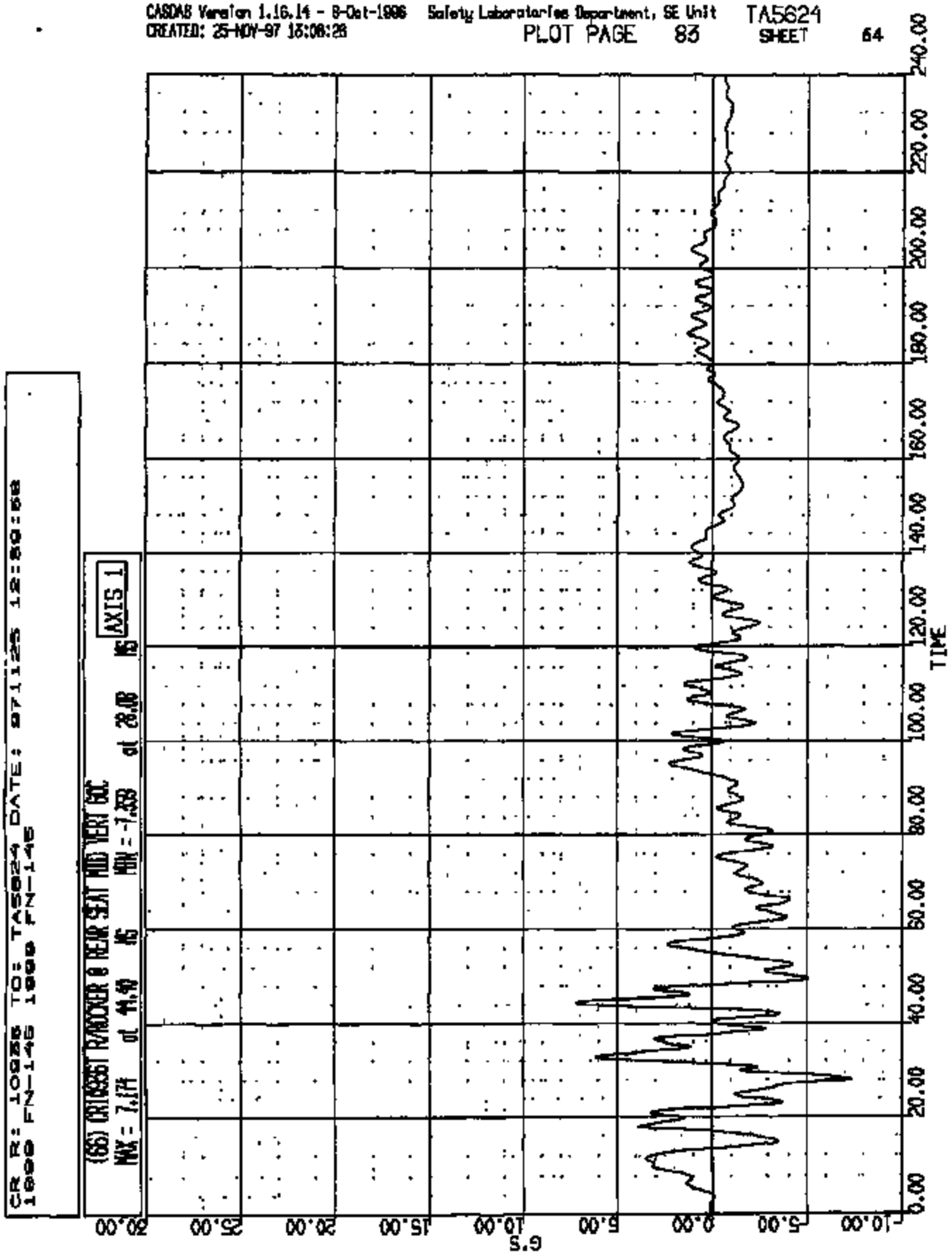


CASDAS Version 1.16.14 - 9-Oct-1996 Safety Laboratories Department, SE Unit TA5624
CREATED: 25-NOV-97 13:08:20 PLOT PAGE 79 SHEET 61

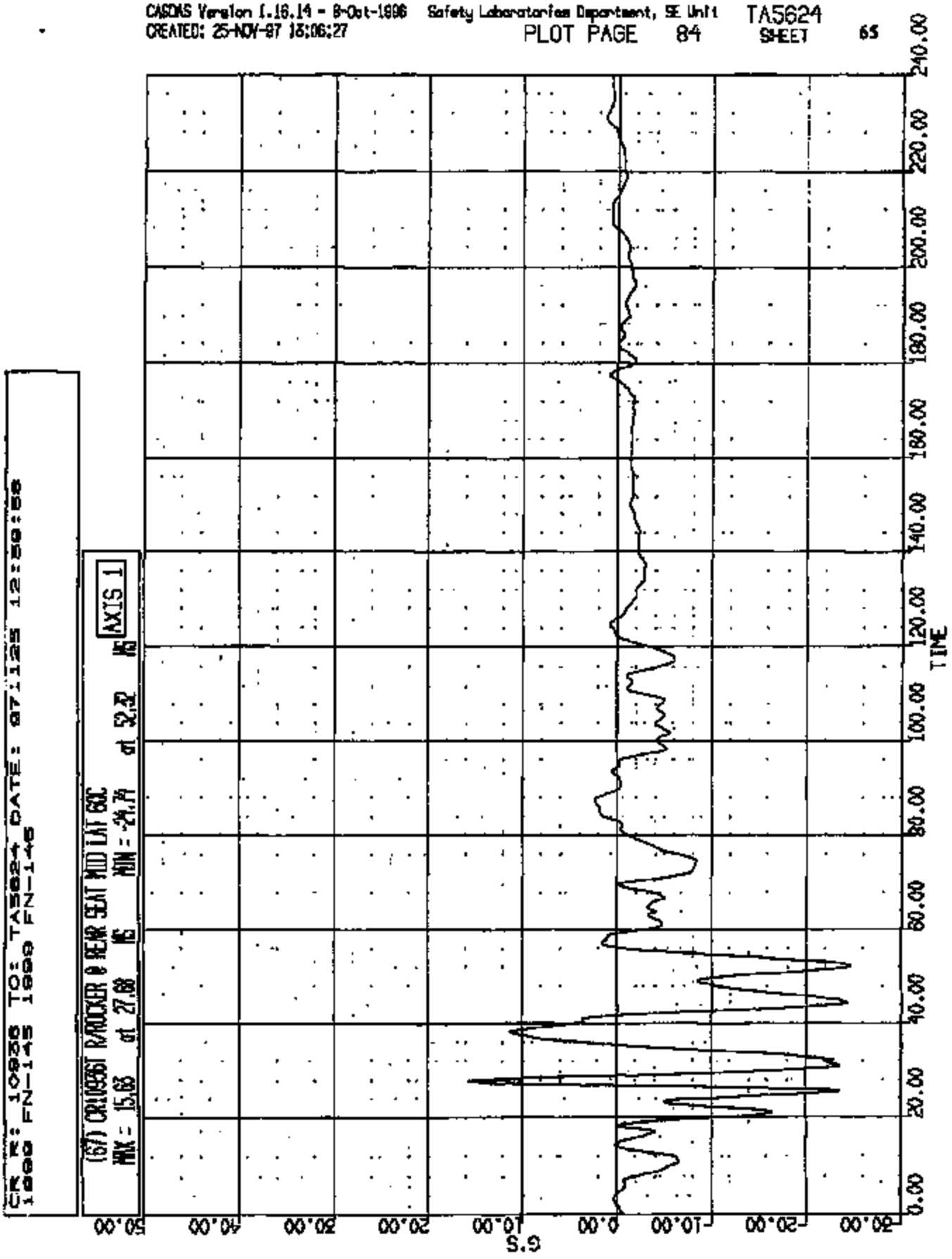



CADDAS Version 1.16.14 - 8-Oct-1996 Safety Laboratories Department, SE Unit TA5624
CREATED: 25-NOV-97 13:08:22 PLOT PAGE 80 SHEET 62
QUESTIONABLE DATA
Black was HIT
CR R: 10850 TO: TA5624 DATE: 97:325 12:39:58
1999 FN-145 1999 FN-145
(65) CH1@250T R/ROCKER @ FRONT SEAT MID LAT GUC
MAX = 27.74 at 27.12 MS MIN = -74.55 at 24.48 MS AXIS 1
240.00
220.00
200.00
180.00
160.00
140.00
120.00
100.00
80.00
60.00
40.00
20.00
0.00
TIME
80.00
60.00
40.00
20.00
0.00
20.00
40.00
60.00
80.00
G's

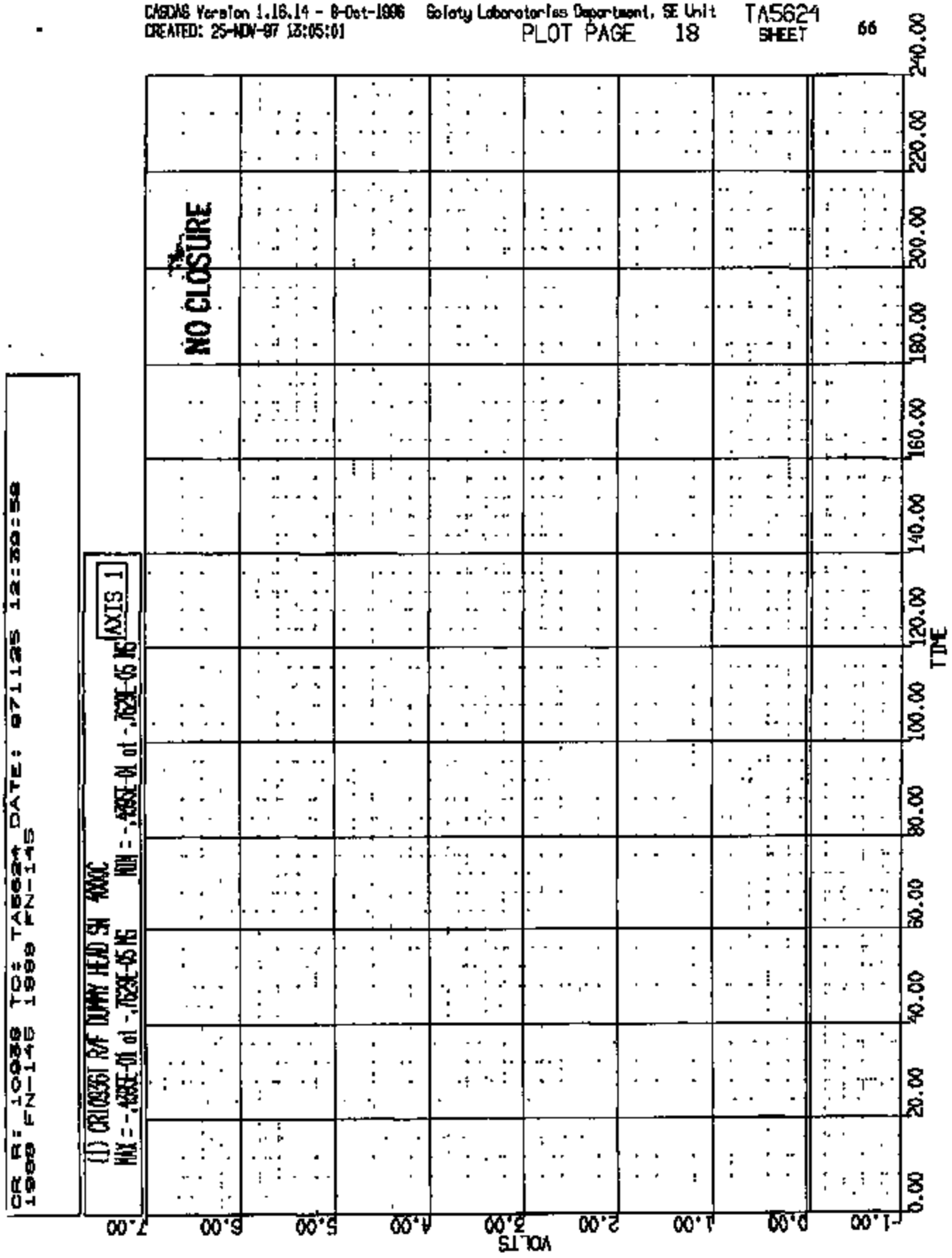

CASDAS Version 1.16.14 - 8-Oct-1998 Safety Laboratories Department, SE Unit TA5624
CREATED: 25-NOV-97 13:08:24
PLOT PAGE 82 SHEET 63
CR R: 10938 TO: TA5624 DATE: 971125 12:39:58
10938 FN-145 10938 FN-145
(65) CKL10R06T R/MOUNTER @ REAR SEAT MID LONG CGC
MAX = 9.882 at 24.08 MS MIN = -6.211 at 18.98 MS [AXIS 1]
240.00
220.00
200.00
180.00
160.00
140.00
120.00
100.00
80.00
60.00
40.00
20.00
0.00
TIME
-10.00
-5.00
0.00
5.00
10.00
15.00
20.00
25.00
30.00
G'S


CASDAS Version 1.16.14 - 8-Oct-1998 Safety Laboratories Department, SE Unit TA5624
CREATED: 25-NOV-97 15:06:28 PLOT PAGE 83 SHEET 64
CR R: 10936 TO: TA5624 DATE: 971125 12:50:58
1998 FN-146 1998 FN-146
(66) CRITERION1 P/MACHINE 0 REAR SEAT MID VERT ACC
MAX = 7.174 at 41.40 MS MIN = -7.458 at 28.08 MS AXIS 1
20.00
25.00
20.00
15.00
10.00
5.00
0.00
-5.00
-10.00
G'S
0.00
20.00
40.00
60.00
80.00
100.00
120.00
140.00
160.00
180.00
200.00
220.00
240.00
TIME

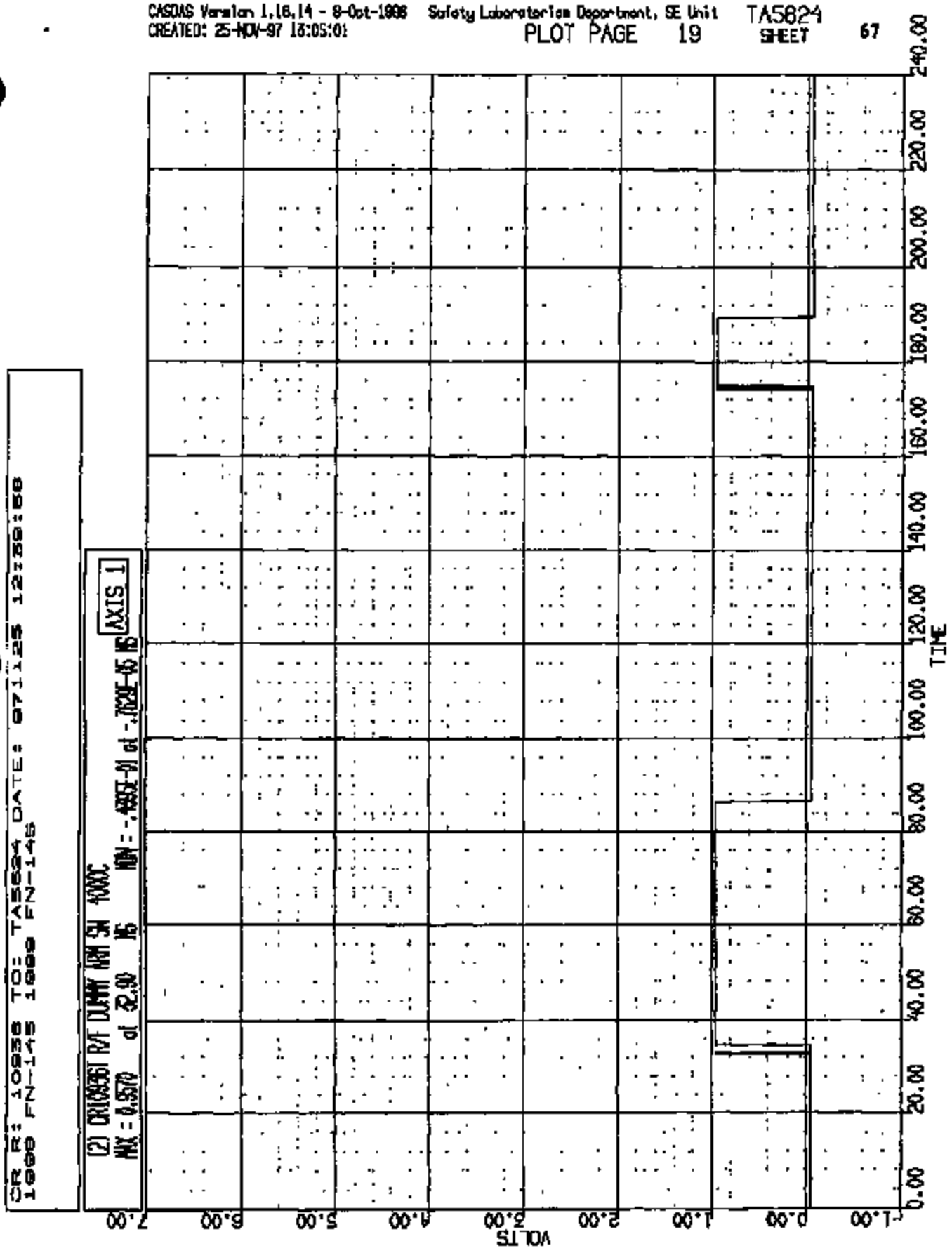
CASDAS Version 1.16.14 - 8-Oct-1996 Safety Laboratories Department, SE Unit TA5624
CREATED: 25-NOV-97 15:06:27 PLOT PAGE 84 SHEET 65



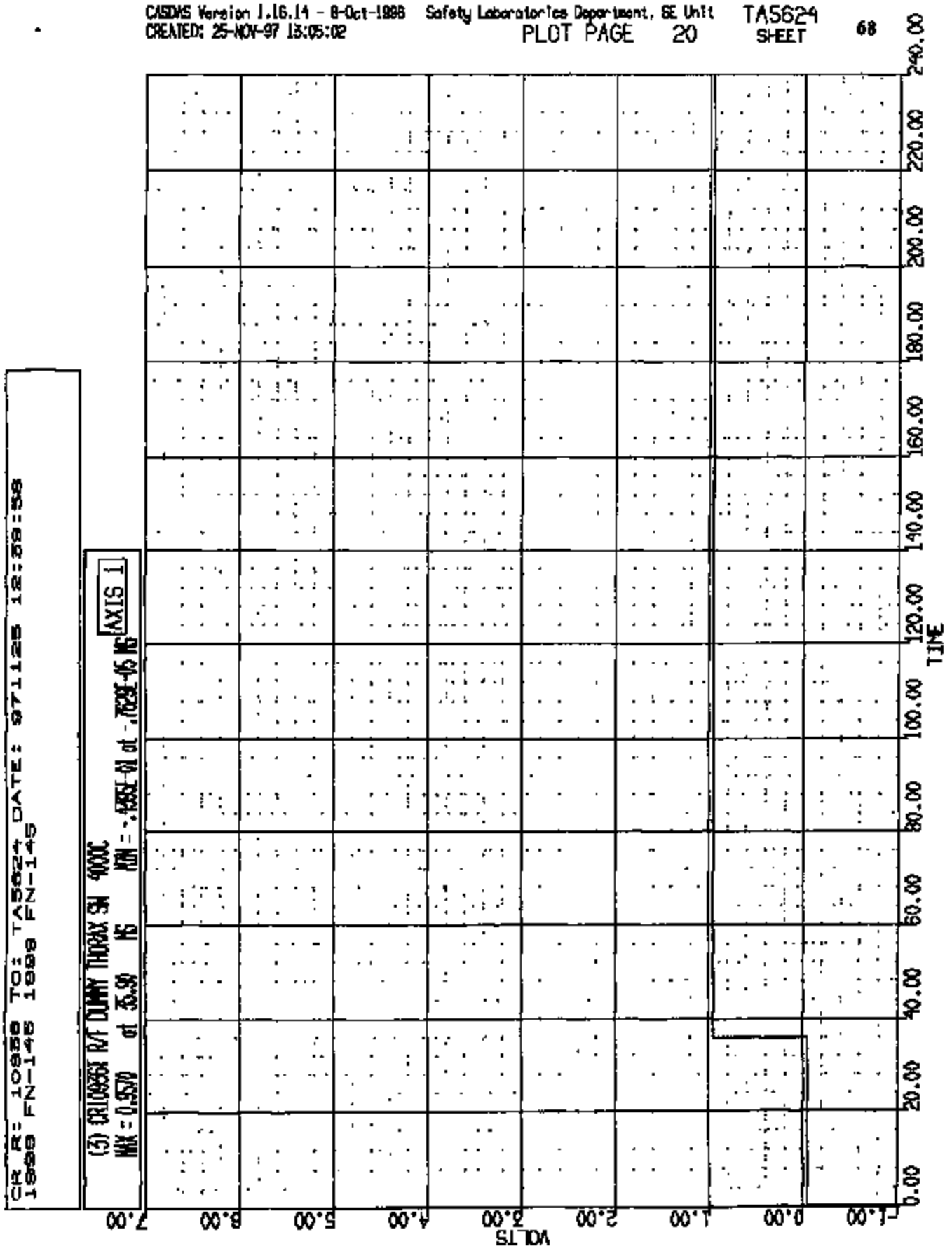
CASDAS Version 1.16.14 - 8-Oct-1996 Safety Laboratories Department, SE Unit TA5624
CREATED: 25-NOV-97 13:05:01 PLOT PAGE 18 SHEET 66



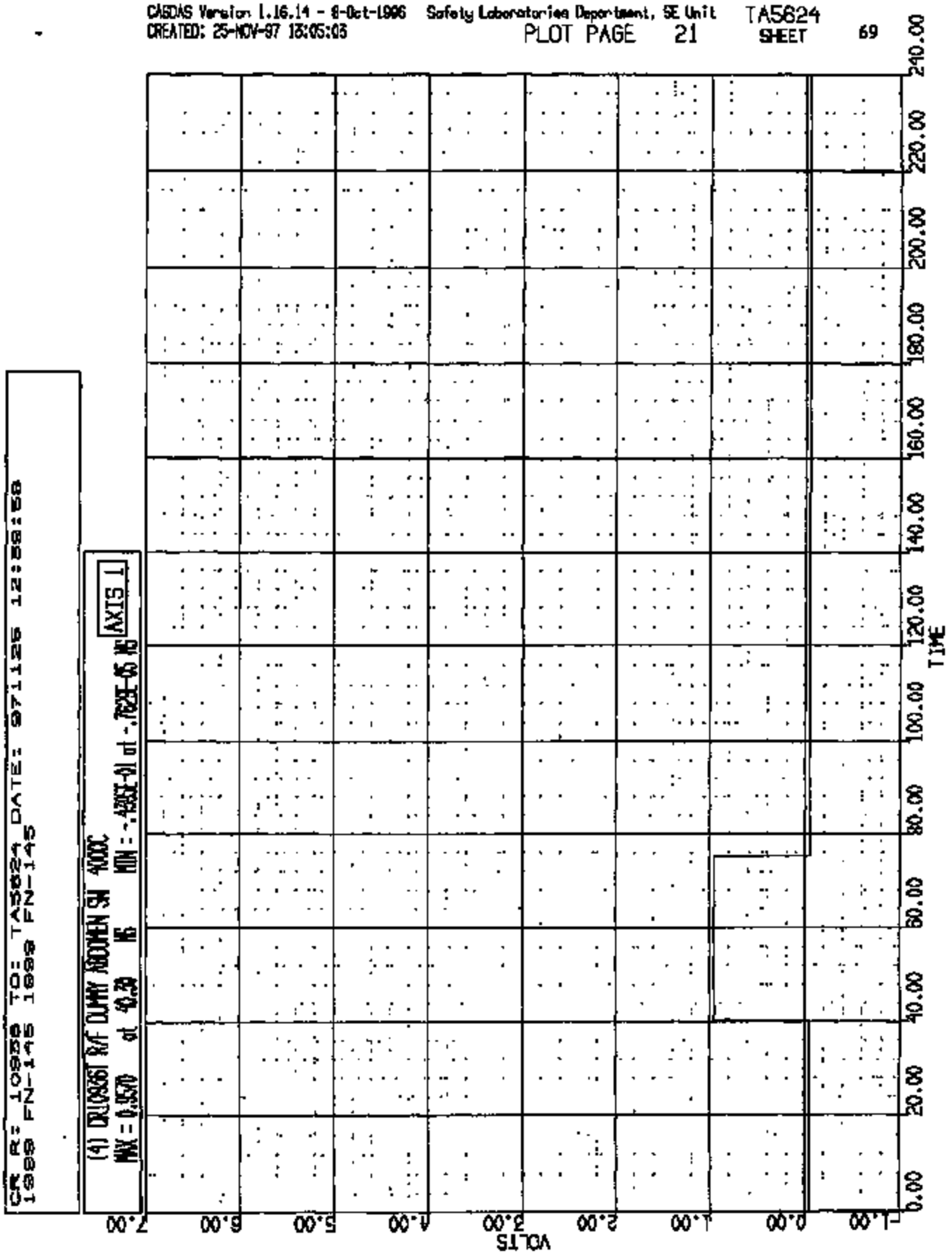
CASDAS Version 1.16.14 - 8-Oct-1998 Safety Laboratories Department, SE Unit TA5824
CREATED: 25-NOV-97 16:05:01 PLOT PAGE 19 SHEET 67



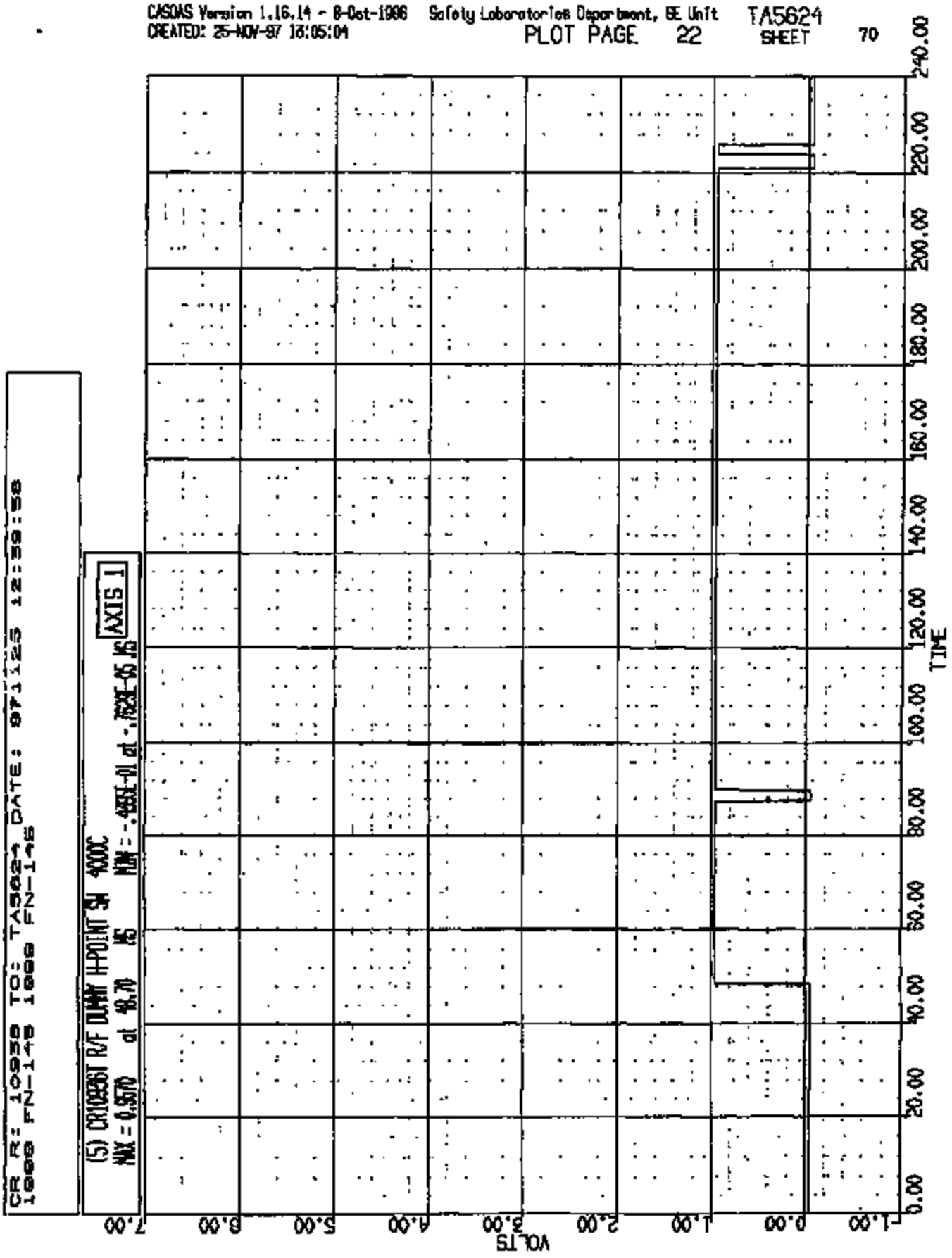
CASDAS Version 1.16.14 - 8-Oct-1998 Safety Laboratories Department, SE Unit TA5624
CREATED: 25-NOV-97 13:05:02 PLOT PAGE 20 SHEET 68



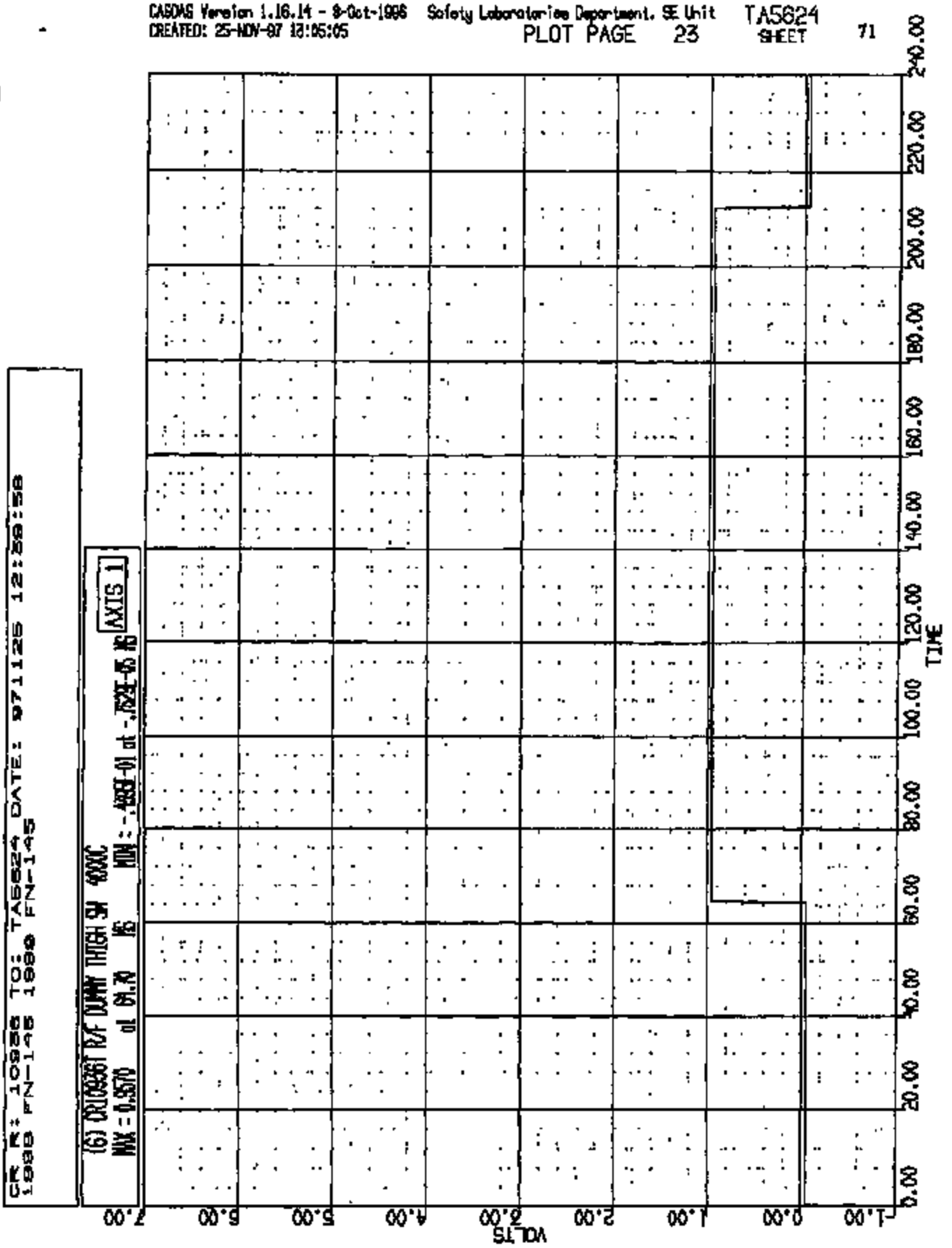
CASDAS Version 1.16.14 - 8-Oct-1996 Safety Laboratories Department, SE Unit TA5824
CREATED: 25-NOV-97 13:05:03 PLOT PAGE 21 SHEET 69

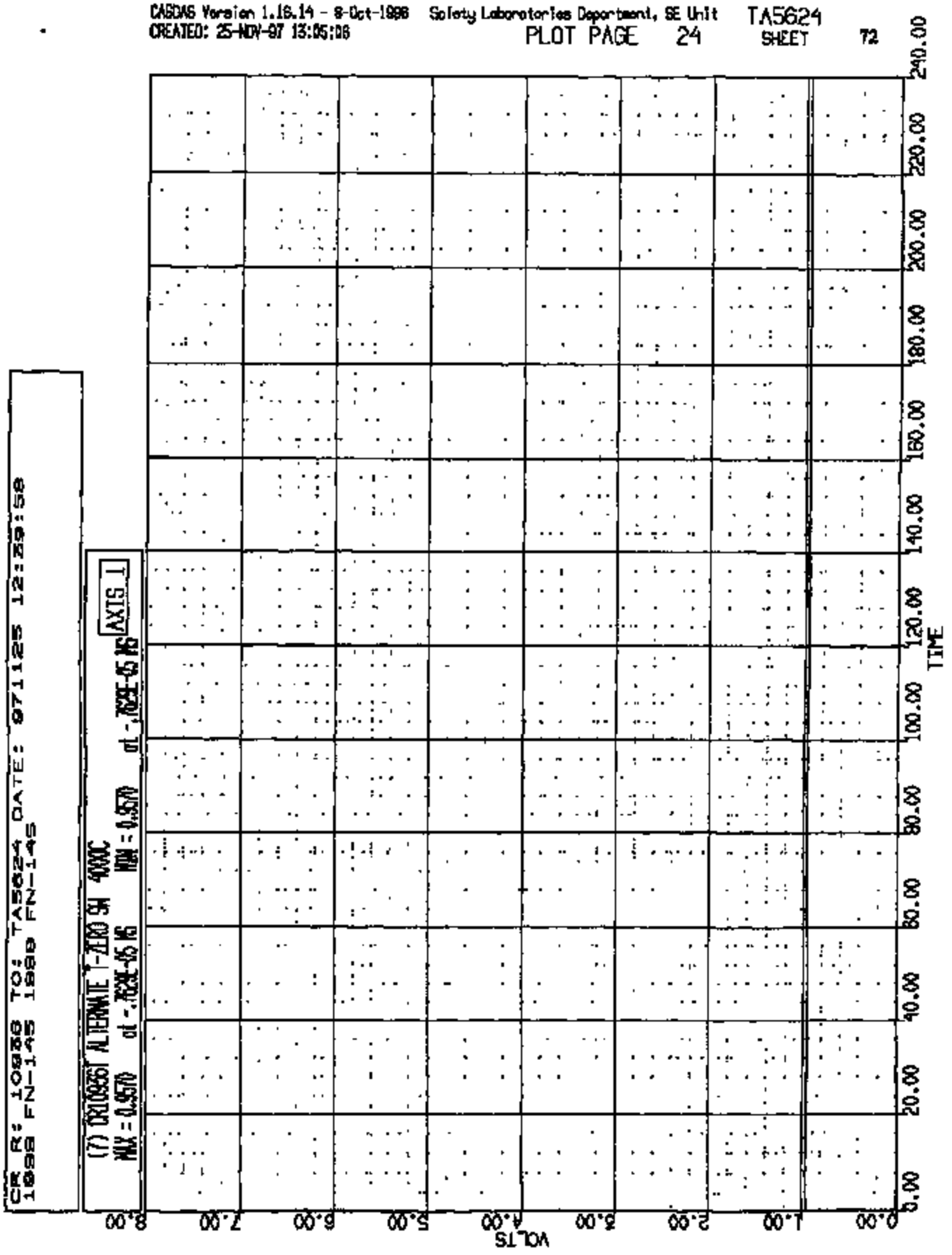


CASDAS Version 1.16.14 - 8-Oct-1996 Safety Laboratories Department, SE Unit TA5624
CREATED: 25-NOV-97 16:05:04 PLOT PAGE 22 SHEET 70



CASDAS Version 1.16.14 - 9-Oct-1996 Safety Laboratories Department, SE Unit TA5624
CREATED: 25-NOV-97 13:05:05 PLOT PAGE 23 SHEET 71

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VOLTS
TIME
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1.00
2.00
3.00
4.00
5.00
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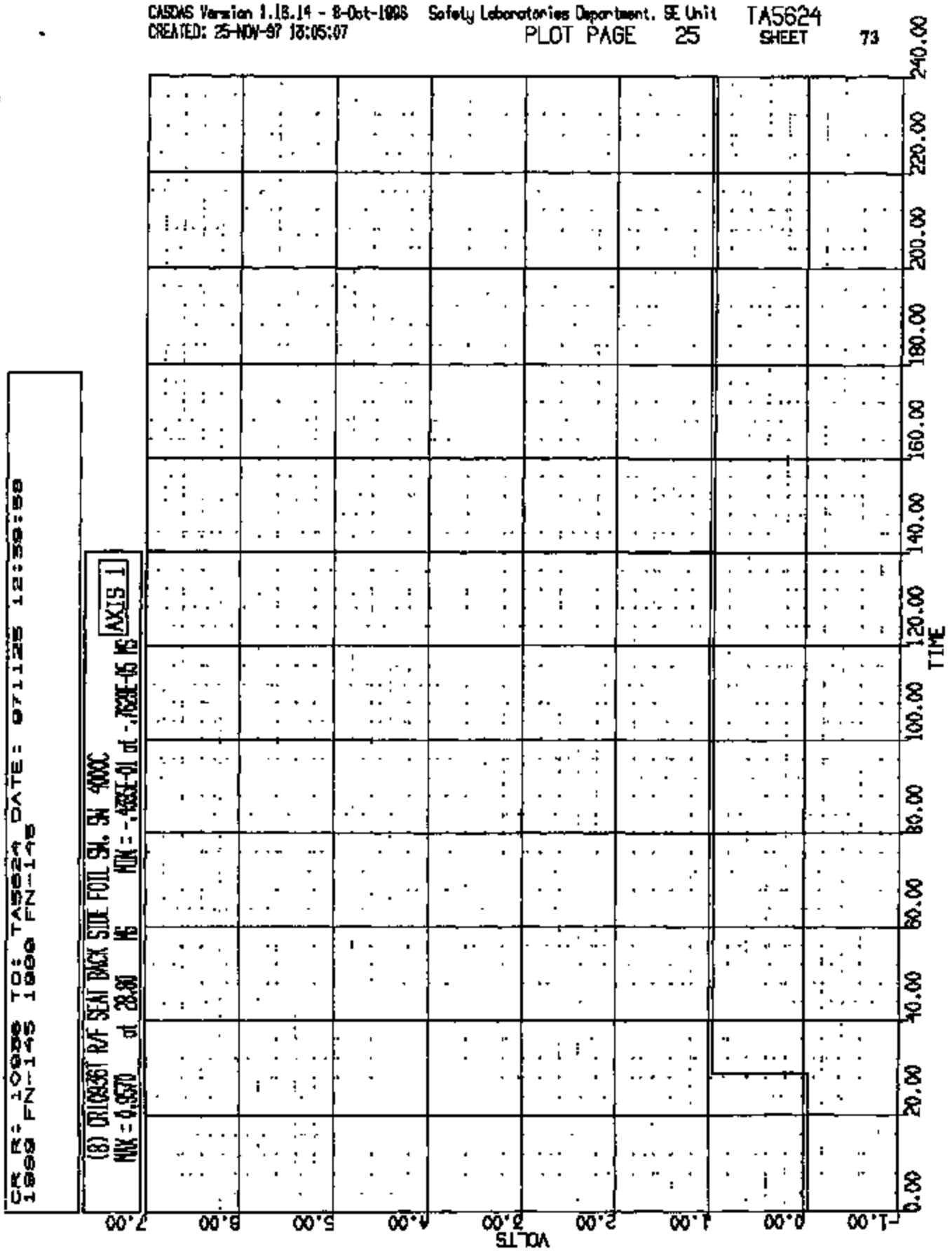

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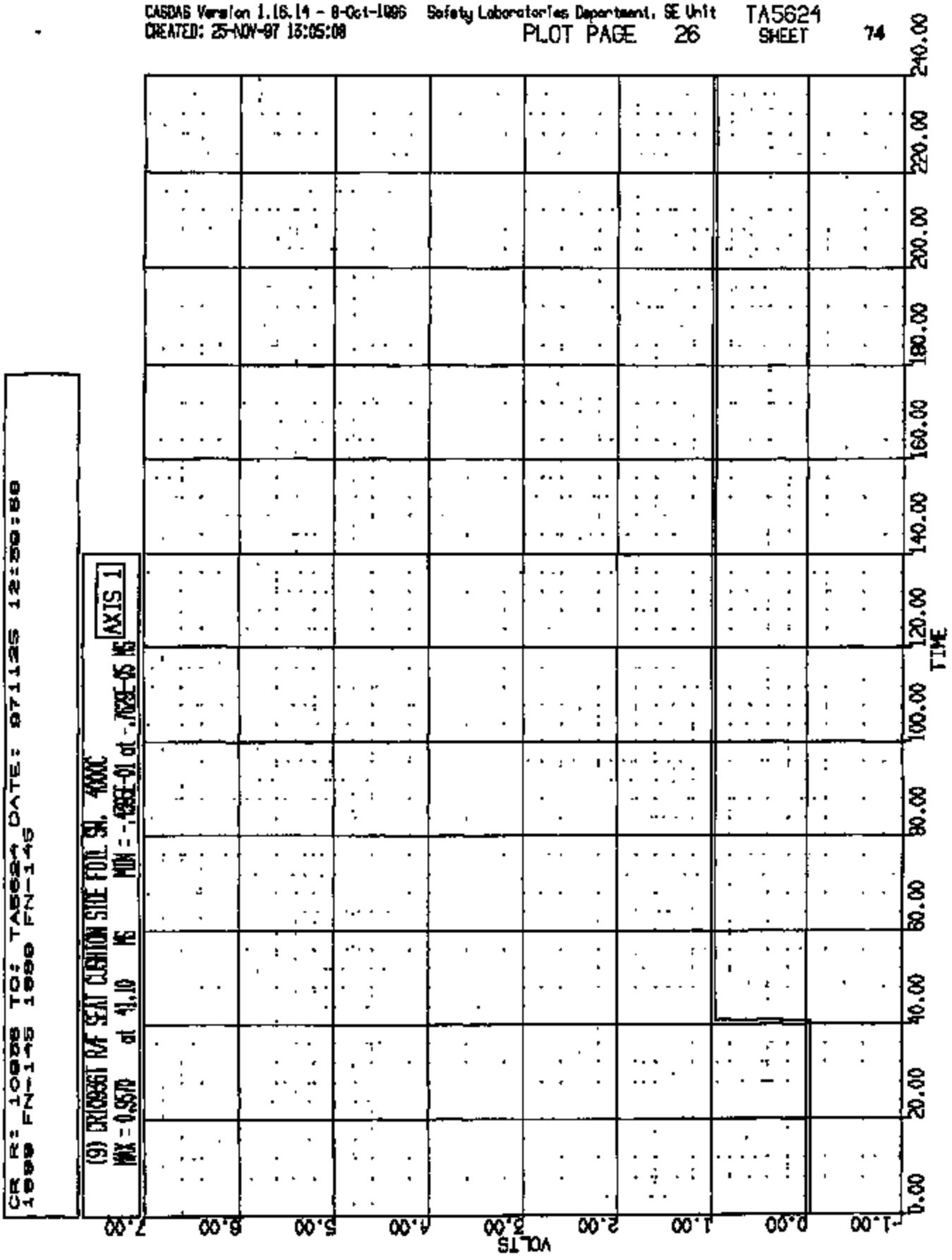
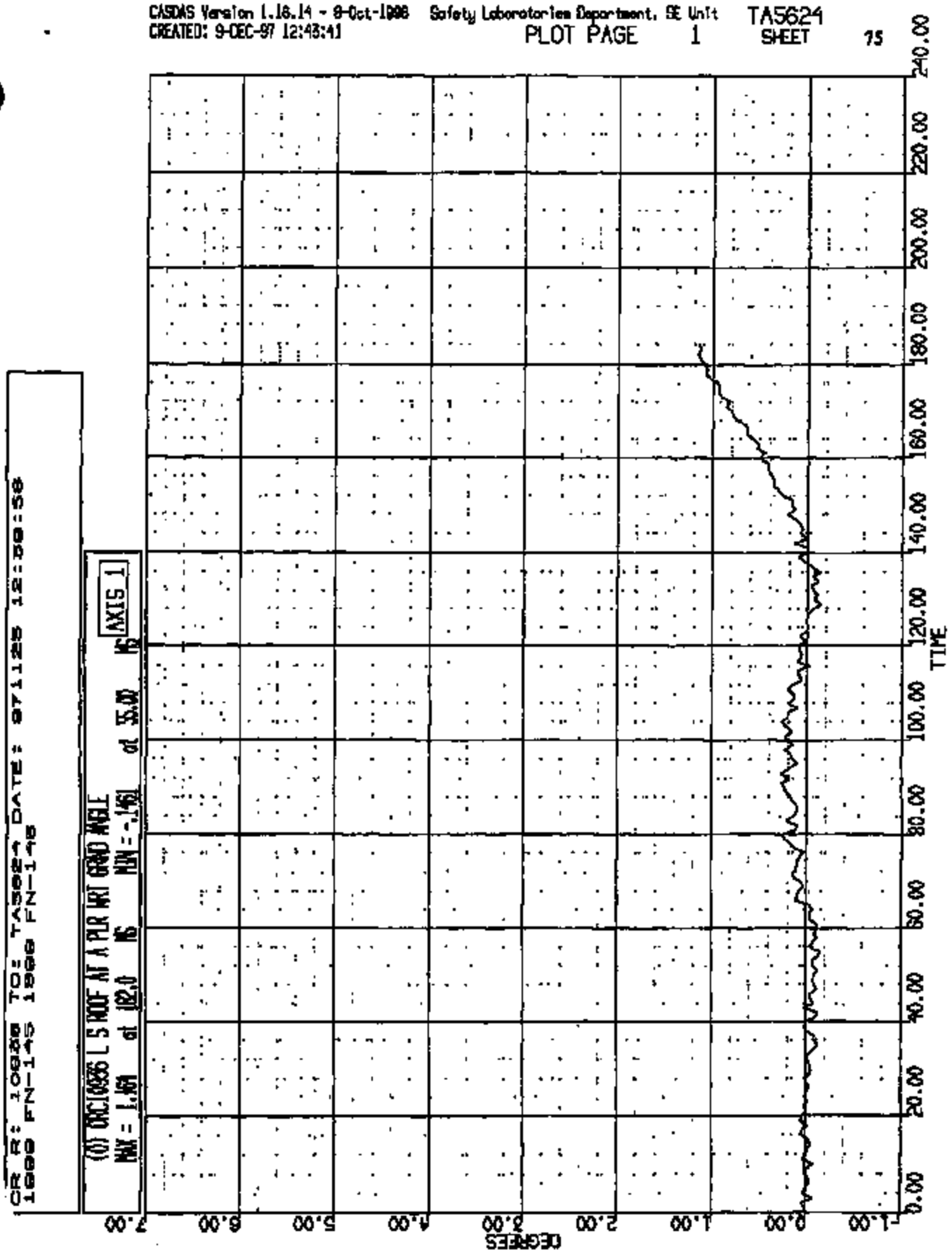
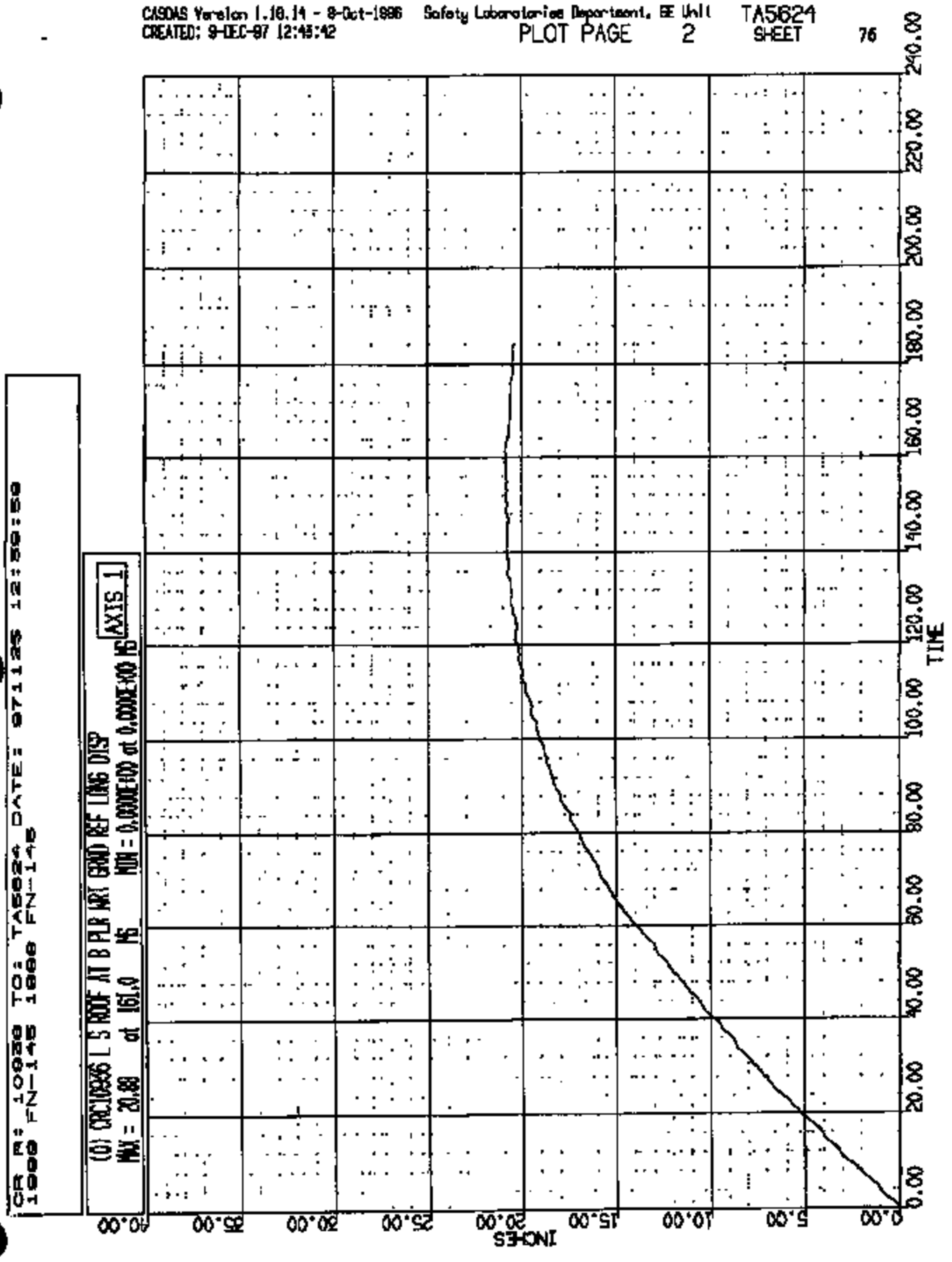
CREATED: 25-NOV-97 15:05:08 PLOT PAGE 26 SHEET 74







VEHICLE INFORMATION

TEST DESCRIPTION:	90 DEG. RIGHT SIDE FIXED POLE
VEHICLE PROGRAM YEAR:	1999
VEHICLE MODEL NAME:	PW-145
VEHICLE PROGRAM NAME:	PW-145
VEHICLE ID NUMBER:	318W152
CERTIFICATION VEHICLE CODE:	DV
REQUESTOR NAME:	D. R. DURDY
TEST ENGINEER NAME:	L. STOCKTON

TIME AND DATE OF REPORT: 22-DEC-97 14:26:08

ASC TO #: T- TA5624 DIMENSIONAL ANALYSIS REPORT CRASH #: 10936

** POINT COORDINATES **

UNIT NO	SIDE	PNT NO	DESCRIPTION		INCHES LONG X	LAT Y	VERT Z	INCHES CHANGED X	Y	Z	D
411			TOP (BODY) NON SIDED								
		01	EXTRA SET UP POINT (LEFT FOREMOST FRAME)	BEF	36.90	-21.69	22.28				
				AFT	37.07	-20.50	22.59	0.17	1.19	0.31	1.24
		02	EXTRA SET UP POINT (RIGHT FOREMOST FRAME)	BEF	36.81	21.89	22.28				
				AFT	38.35	23.17	22.60	1.54	1.28	0.32	2.03
		03	EXTRA SET UP POINT (LEFT REARMOST FRAME)	BEF	225.08	-23.65	21.33				
				AFT	225.04	-21.97	21.65	-0.04	1.68	0.32	1.71
		04	EXTRA SET UP POINT (RIGHT REARMOST FRAME)	BEF	224.23	23.68	21.27				
				AFT	223.55	24.89	21.58	-0.68	1.21	0.31	1.42
		26	"H" POINT LOCATION ON OUTER FRT/OCCUPANT DOO	BEF	120.63	35.05	27.60				
				AFT							
		38	TOP OF ROCKER SILL IN LINE W/FRONT "H" PT.	BEF	120.63	33.46	15.14				
				AFT							
		84	"H.R.T." ON ROCKER SIDE OPPOSITE OF IMPAC	BEF	129.26	-34.13	15.97				
				AFT	129.26	-34.13	15.97	0.00	0.00	0.00	0.00
412			TOP (BODY) SIDED POINTS								
	L	09	END OF FRONT SPINDLE @ CENTERLINE (WHEELBASE	BEF	63.15	-33.36	18.44				
				AFT	63.21	-32.84	17.54	0.06	0.52	-0.90	1.04
	R	09	END OF FRONT SPINDLE @ CENTERLINE (WHEELBASE	BEF	62.93	33.15	18.62				
				AFT	64.33	32.39	17.35	1.40	0.24	-1.27	1.91
	L	16	LATCH/STRIKER BOLT @C/L OR U-BOLT@TOP @B PILLA	BEF	128.74	-33.50	31.57				
				AFT	128.75	-34.07	31.42	0.01	-0.57	-0.15	0.59
	R	16	LATCH/STRIKER BOLT @C/L OR U-BOLT@TOP @B PILLA	BEF	128.80	33.40	31.68				
				AFT							
	L	18	LATCH/STRIKER BOLT @C/L OR U-BOLT@TOP @C PILLA	BEF	169.14	-33.79	38.76				
				AFT	169.34	-34.30	38.50	0.20	-0.51	-0.26	0.61

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UNT NO	SIDE	PNT NO	DESCRIPTION		** POINT COORDINATES ** INCHES LONG X	LAT Y	VERT Z	INCHES CHANGED X	Y	Z	D
	R	18	LATCH/STRIKER BOLT @C/L OR U-BOLT@TOP @C PILLA	REF AFT	169.25	33.73	38.76				
	L	89	END OF REAR SPINDLE @ CENTERLINE(WHEELBASE	REF AFT	180.58 180.82	-31.85 -31.86	14.32 15.54	0.24	-0.01	1.22	1.24
	R	89	END OF REAR SPINDLE @ CENTERLINE(WHEELBASE	REF AFT	180.87 180.00	32.17 32.03	15.23 15.15	-0.87	-0.14	-0.08	0.88
650			BLANK UNIT POINTS								
		01	1 SEE COMMENTS PAGE	REF AFT	115.64	31.89	41.29				
		02	2 SEE COMMENTS PAGE	REF AFT	114.89	32.09	35.03				
		03	3 SEE COMMENTS PAGE	REF AFT	106.07	31.97	27.66				
		04	4 SEE COMMENTS PAGE	REF AFT	125.43	31.78	25.46				
		05	5 SEE COMMENTS PAGE	REF AFT	128.00	19.14	16.61				
		06	6 SEE COMMENTS PAGE	REF AFT	136.69	22.31	58.90				
		07	7 SEE COMMENTS PAGE	REF AFT	133.66	25.99	44.52				
		08	8 SEE COMMENTS PAGE	REF AFT	129.44	30.52	31.05				
		09	9 SEE COMMENTS PAGE	REF AFT	134.46	30.58	22.18				
		10	10 SEE COMMENTS PAGE	REF AFT	126.34	32.35	15.22				

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UNT NO	SIDE	PNT NO	DESCRIPTION	** POINT COORDINATES ** INCHES LONG X	LAT Y	VERT Z	INCHES CHANGED X	Y	Z	D
		11	11 SEE COMMENTS PAGE	BEF AFT 154.98	31.84	14.99				
		12	12 SEE COMMENTS PAGE	BEF AFT 125.60	28.23	13.88				
		13	13 SEE COMMENTS PAGE	BEF AFT		42.68				
		14	14 SEE COMMENTS PAGE	BEF AFT		35.24				
		15	15 SEE COMMENTS PAGE	BEF AFT		27.68				
		16	16 SEE COMMENTS PAGE	BEF AFT 99.56	-30.43	15.25				
		17	17 SEE COMMENTS PAGE	BEF AFT 147.02	-30.27	14.95				
		18	18 SEE COMMENTS PAGE	BEF AFT 99.64	30.22	15.20				
		19	19 SEE COMMENTS PAGE	BEF AFT 147.29	30.34	15.00				
		20	20 SEE COMMENTS PAGE	BEF AFT 89.85	26.98	27.35				
		21	21 SEE COMMENTS PAGE	BEF AFT 92.86	28.77	21.95				
		22	22 SEE COMMENTS PAGE	BEF AFT 154.51	24.67	13.28				
		23	23 SEE COMMENTS PAGE	BEF AFT 96.73	0.13	24.96				
		24	24 SEE COMMENTS PAGE	BEF AFT 125.57	-31.72	15.16				

* VALUE WAS TRANSLATED

ASC TO #: T- TA5624 DIMENSIONAL ANALYSIS REPORT CRASH #: 10936

CNT NO	SIDE	PNT NO	DESCRIPTION	** POINT COORDINATES ** INCHES LONG X	LAT Y	VERT Z	INCHES CHANGED X	Y	Z	D
		25	25 SEE COMMENTS PAGE	BRF AFT 154.86	-31.58	15.01				
		26	26 SEE COMMENTS PAGE	BRF AFT 125.63	-28.05	13.74				
		27	27 SEE COMMENTS PAGE	BRF AFT 154.09	-24.73	13.17				

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** SECTIONALS **

UNT NO	SCTN NO	SIDE	SEQ NO	NAME AND CRASH STATUS	X	Y	Z
423	S1			BELTLINE EXTERIOR SECT			
			1	BEFORE	71.20	34.31	41.35
			1	AFTER	73.20	34.43	41.10
			2	BEFORE	82.33	35.14	41.35
			2	AFTER	79.69	34.71	41.05
			3	BEFORE	88.82	35.48	41.35
			3	AFTER	91.71	35.07	40.92
			4	BEFORE	89.87	35.53	41.35
			4	AFTER	92.80	35.27	40.81
			5	BEFORE	103.19	36.09	41.35
			5	AFTER	98.94	34.22	40.87
			6	BEFORE	113.11	36.47	41.35
			6	AFTER	102.25	32.93	40.79
			7	BEFORE	122.57	36.73	41.35
			7	AFTER	109.51	28.39	40.61
			8	BEFORE	132.40	36.83	41.35
			8	AFTER	117.95	22.42	40.44
			9	BEFORE	133.15	36.84	41.35
			9	AFTER	120.05	20.92	40.41
			10	BEFORE	145.43	36.82	41.35
			10	AFTER	121.68	20.19	40.38
			11	BEFORE	160.96	36.68	41.35
			11	AFTER	123.54	19.91	40.35
			12	BEFORE	172.23	36.29	41.35
			13	AFTER	125.07	20.02	40.39
			13	BEFORE	174.79	36.26	41.35
			13	AFTER	126.91	20.72	40.50

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** SECTIONBAR **

UNIT NO	SCTN NO	SIDE	SEQ NO	NAME AND CRASH STATUS	X	Y	INCHES Z
			14	BEFORE	178.13	36.26	41.35
			14	AFTER	128.47	22.10	40.56
425	S1			MIDLINE EXTERIOR SECT			
			1	BEFORE	75.51	37.34	31.50
			1	AFTER	77.81	37.32	31.61
			2	BEFORE	83.22	37.67	31.50
			2	AFTER	85.45	37.47	30.99
			3	BEFORE	87.02	37.83	31.50
			3	AFTER	89.82	37.57	30.99
			4	BEFORE	87.68	37.82	31.50
			4	AFTER	91.52	37.67	30.68
			5	BEFORE	101.55	38.36	31.50
			5	AFTER	96.52	36.39	30.67
			6	BEFORE	119.82	39.79	31.50
			6	AFTER	96.61	36.04	30.67
			7	BEFORE	131.14	38.92	31.50
			7	AFTER	98.81	34.97	30.75
			8	BEFORE	132.11	38.86	31.50
			8	AFTER	102.17	33.15	30.74
			9	BEFORE	147.32	38.88	31.50
			9	AFTER	109.45	29.16	30.72
			10	BEFORE	166.54	38.63	31.50
			10	AFTER	113.02	27.21	30.69
			11	BEFORE	170.41	38.69	31.50
			11	AFTER	114.33	26.40	30.67
427	S1			CHARACTER LINE EXT SECT			

ABC TO #: T- TA5624 DIMENSIONAL ANALYSIS REPORT CRASH #: 10936

** SECTIONALS **

UNT NO	SCTN NO	SIDE	SEQ NO	NAME AND CRASH STATUS	INCHES X	Y	Z
			1	BEFORE	79.02	37.00	23.60
			1	AFTER	81.66	37.07	23.18
			2	BEFORE	87.19	37.23	23.60
			2	AFTER	85.78	37.11	23.12
			3	BEFORE	89.33	37.31	23.60
			3	AFTER	90.16	37.15	23.12
			4	BEFORE	102.62	37.77	23.60
			4	AFTER	91.54	36.61	22.79
			5	BEFORE	122.24	38.12	23.60
			5	AFTER	102.85	33.09	22.98
			6	BEFORE	130.97	38.07	23.60
			6	AFTER	109.32	30.63	22.96
			7	BEFORE	131.82	38.07	23.60
			7	AFTER	113.92	28.09	22.95
			8	BEFORE	140.93	37.98	23.60
			8	AFTER	115.86	26.24	22.84
			9	BEFORE	162.65	37.81	23.60
			9	AFTER	117.26	24.76	22.73
			10	BEFORE	165.29	37.73	23.60
			10	AFTER	118.42	23.52	22.62
429	61			BOTTOM OF DOOR EXT SECT			
			1	BEFORE	89.21	35.70	16.14
			1	AFTER	91.91	34.31	15.60
			2	BEFORE	108.24	36.26	16.41
			2	AFTER	110.45	29.56	15.43
			3	BEFORE	131.68	36.03	16.17
			3	AFTER	114.69	28.29	15.12

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** SECTIONALS **

UNT NO	SCTN NO	SIDE	SEQ NO	NAME AND CRASH STATUS	INCHES X	Y	Z
			4	BEFORE	132.46	36.04	16.18
			4	AFTER	115.86	27.76	15.06
			5	BEFORE	145.62	35.57	16.25
			5	AFTER	117.17	26.08	15.06
			6	BEFORE	161.29	35.64	16.30
			6	AFTER	119.71	22.80	15.05
431	81			ROCKER PANEL EXT SECT			
			1	BEFORE	91.74	33.88	16.90
			1	AFTER	93.41	32.77	16.29
			2	BEFORE	96.42	33.89	16.90
			2	AFTER	110.04	29.21	16.07
			3	BEFORE	105.46	33.92	16.90
			3	AFTER	115.31	25.63	15.52
			4	BEFORE	129.82	34.00	16.90
			4	AFTER	117.54	23.31	14.82
			5	BEFORE	145.78	33.93	16.90
			5	AFTER	120.99	21.71	14.46
			6	BEFORE	161.65	33.85	16.90
			6	AFTER	131.67	23.76	15.87
433	81			ROOF LINE INTERIOR SECT			
			1	BEFORE	96.04	29.06	46.45
			1	AFTER	98.18	27.90	46.11
			2	BEFORE	112.79	23.02	57.16
			2	AFTER	113.77	20.02	57.81
			3	BEFORE	116.26	22.33	58.70
			3	AFTER	118.11	18.08	59.08

** SECTIONALS **

UNT NO	SCTN NO	SIDE	SEQ NO	NAME AND CRASH STATUS	INCHES X	Y	Z
			4	BEFORE	120.27	22.09	59.12
			4	AFTER	123.68	15.82	59.26
			5	BEFORE	130.37	22.10	59.21
			5	AFTER	135.11	13.87	59.47
			6	BEFORE	136.75	21.91	59.62
			6	AFTER	0.00	0.00	0.00
435	81			BELT LINE INTERIOR SECT			
			1	BEFORE	99.24	31.94	41.90
			1	AFTER	100.29	30.31	41.20
			2	BEFORE	104.49	31.93	42.02
			2	AFTER	106.13	27.33	41.59
			3	BEFORE	111.93	31.84	42.13
			3	AFTER	112.43	23.28	41.71
			4	BEFORE	125.88	31.92	42.43
			4	AFTER	120.31	19.15	41.51
			5	BEFORE	126.50	32.26	42.48
			5	AFTER	124.92	17.86	41.44
			6	BEFORE	129.84	32.41	42.49
			6	AFTER	125.72	18.03	41.36
			7	BEFORE	131.56	30.43	42.38
			7	AFTER	129.03	19.42	40.69
			8	BEFORE	135.34	30.42	42.34
			8	AFTER	131.15	18.00	41.30
437	81			HIP INTERIOR SECTION			
			1	BEFORE	99.21	31.97	27.60
			1	AFTER	97.74	30.00	29.98

** SECTIONALS **

UNT NO	SCTN NO	SIDE	SEQ NO	NAME AND CRASH STATUS	X	Y	INCHES Z
			3	BEFORE	106.99	31.92	27.60
			2	AFTER	101.29	28.78	27.50
			3	BEFORE	114.99	31.75	27.60
			3	AFTER	108.24	26.31	27.25
			4	BEFORE	126.77	31.86	27.60
			4	AFTER	116.93	21.98	27.12
			5	BEFORE	128.88	30.64	27.60
			5	AFTER	125.62	18.44	26.13
438	51			1ST 50 FWD/ETNGH PLANE			
			1	BEFORE	90.55	36.73	17.90
			1	AFTER	93.61	34.67	16.58
			2	BEFORE	90.55	37.08	22.03
			2	AFTER	93.81	35.22	18.69
			3	BEFORE	90.55	37.58	24.90
			3	AFTER	93.82	35.16	18.91
			4	BEFORE	90.55	37.98	27.83
			4	AFTER	93.87	35.58	21.20
			5	BEFORE	90.55	37.88	29.79
			5	AFTER	94.13	36.20	24.21
			6	BEFORE	90.55	37.97	32.37
			6	AFTER	94.21	36.76	27.11
			7	BEFORE	90.55	36.88	38.65
			7	AFTER	94.30	36.62	28.72
			8	BEFORE	90.55	34.80	42.69
			8	AFTER	94.28	36.01	32.64
439	51			SECT @ 2500 BODY LINE			

** SECTIONALS **

UNIT NO	SCIN NO	SIDE	SEQ NO	NAME AND CRASH STATUS	INCHES X	Y	Z
			1	BEFORE	98.42	36.70	17.20
			1	AFTER	101.08	32.51	16.26
			2	BEFORE	98.42	37.30	20.49
			2	AFTER	101.28	33.12	18.75
			3	BEFORE	98.42	38.14	26.46
			3	AFTER	101.33	33.21	19.31
			4	BEFORE	98.42	38.17	29.81
			4	AFTER	101.40	33.63	23.35
			5	BEFORE	98.42	38.12	34.89
			5	AFTER	101.60	34.03	27.42
			6	BEFORE	98.42	35.77	39.79
			6	AFTER	101.65	33.79	28.95
			7	BEFORE	98.42	34.99	42.77
			7	AFTER	101.49	33.48	30.83
439	82			SECT @ 2500 BODY LINE			
			1	BEFORE	98.42	31.47	21.32
			1	AFTER	99.39	28.00	20.39
			2	BEFORE	98.42	32.36	30.06
			2	AFTER	99.73	28.64	23.42
			3	BEFORE	98.42	32.16	42.14
			3	AFTER	99.96	29.15	26.29
440	81			VERT SECT. 20" FWD I/CL			
			1	BEFORE	121.65	36.80	16.90
			1	AFTER	120.66	22.29	15.93
			2	BEFORE	121.65	37.62	19.60
			2	AFTER	120.68	22.14	18.66

** SECTIONALS **

UNT NO	SCTN NO	SIDE	SEQ NO	NAME AND CRASH STATUS	INCHES X	Y	Z
			3	BEFORE	121.65	38.06	23.25
			3	AFTER	120.75	21.86	23.01
			4	BEFORE	121.65	38.73	26.92
			4	AFTER	120.84	21.73	27.46
			5	BEFORE	121.65	38.78	30.69
			5	AFTER	120.84	21.27	29.00
			6	BEFORE	121.65	38.57	35.85
			6	AFTER	120.89	20.97	34.17
			7	BEFORE	121.65	38.08	37.94
			7	AFTER	120.98	21.10	35.53
			8	BEFORE	121.65	36.81	41.18
			8	AFTER	120.94	20.78	36.27
			9	BEFORE	121.65	34.97	43.90
			9	AFTER	120.82	20.54	37.25
			10	BEFORE	121.65	24.70	60.73
			10	AFTER	120.80	20.50	39.90
			11	BEFORE	121.65	23.18	61.85
			11	AFTER	120.90	20.52	42.05
			12	BEFORE	121.65	18.89	62.58
			12	AFTER	120.86	20.56	42.79
440	S2			VERT SECT. 20' FWD I/CL			
			1	BEFORE	121.65	31.82	24.11
			1	AFTER	121.61	20.72	19.74
			2	BEFORE	121.65	32.13	40.93
			2	AFTER	121.45	20.40	31.26
			3	BEFORE	121.65	32.20	42.77
			3	AFTER	121.14	19.80	37.48

** SECTIONALS **

UNIT NO	SECTN NO	SIDE	SEQ NO	NAME AND CRASH STATUS	INCHES X	Y	Z
441	S1			VERT SECT. @ IMPACT C/L			
			1	BEFORE	129.90	36.83	16.82
			1	AFTER	130.68	23.56	15.73
			2	BEFORE	129.90	37.64	19.32
			2	AFTER	128.63	23.47	18.69
			3	BEFORE	129.90	37.97	22.76
			3	AFTER	128.62	23.49	19.30
			4	BEFORE	129.90	38.72	26.78
			4	AFTER	128.58	23.17	25.79
			5	BEFORE	129.90	38.53	28.37
			5	AFTER	128.46	21.09	27.72
			6	BEFORE	129.90	38.91	33.60
			6	AFTER	128.42	22.78	31.77
			7	BEFORE	129.90	37.84	39.08
			7	AFTER	128.39	22.74	33.64
			8	BEFORE	129.90	35.85	43.02
			8	AFTER	128.44	22.59	34.88
			9	BEFORE	129.90	34.84	44.35
			9	AFTER	128.22	22.56	36.34
			10	BEFORE	129.90	24.39	61.27
			10	AFTER	128.28	22.45	37.38
			11	BEFORE	129.90	23.12	62.35
			11	AFTER	128.28	22.27	38.40
			12	BEFORE	129.90	19.25	63.16
			12	AFTER	128.23	22.28	39.37
441	S2			VERT SECT. @ IMPACT C/L			

** SECTIONALS **

UNIT NO	SCTN NO	SIDE	SEQ NO	NAME AND CRASH STATUS	X	Y	INCHES Z
			1	AFTER	131.02	18.65	33.44
			2	AFTER	132.69	18.20	42.18
			3	AFTER	132.60	16.88	46.83
			4	AFTER	133.84	15.84	51.80
			5	AFTER	134.75	14.90	55.51
			6	AFTER	135.25	14.29	58.20
			7	AFTER	134.84	13.86	59.63
			8	AFTER	0.00	0.00	0.00
			9	AFTER	0.00	0.00	0.00
			10	AFTER	0.00	0.00	0.00
			11	AFTER	0.00	0.00	0.00
			12	AFTER	0.00	0.00	0.00

ASC TO #: T- TA5624 DIMENSIONAL ANALYSIS REPORT CRASH #: 10936

** COMMENTS **

TIME AND DATE OF REPORT: 22-DEC-97 14:26:02 PAGE 1

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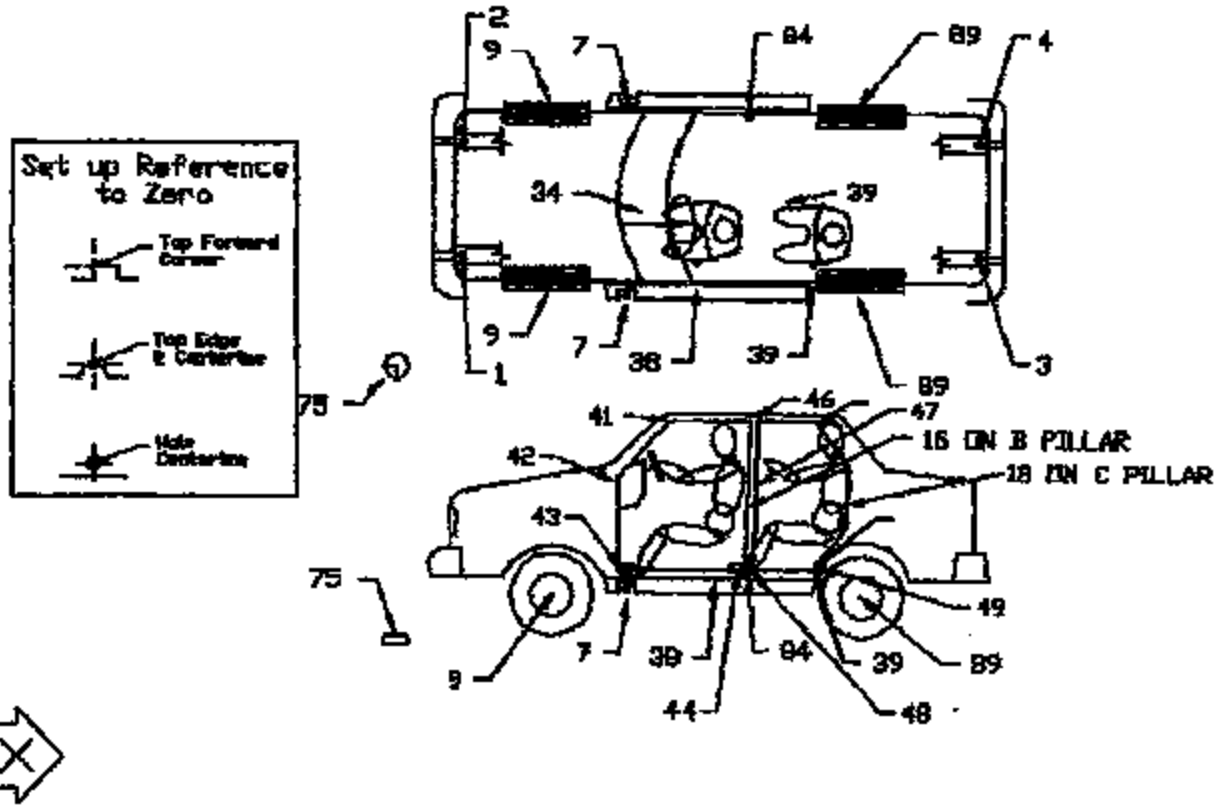
CONTROL POINTS (SIDE IMPACT CAR) REQUEST 404
UNIT 70 POINT 75
UNIT 71 POINTS 7 LEFT & RIGHT
UNIT 74 POINTS 41-44,46-49 ON SIDE OF IMPACT
UNIT 74 POINTS 53,54 ON SIDE OPPOSITE OF IMPACT
UNIT 411 POINTS 1-4,38,39,84
UNIT 412 POINTS 9,16,18,89 LEFT & RIGHT
(LEFT SIDE IMPACT SHOWN)



REQUEST 404 UPTC 960 12/96

CONTACT:

CRTS 0010936

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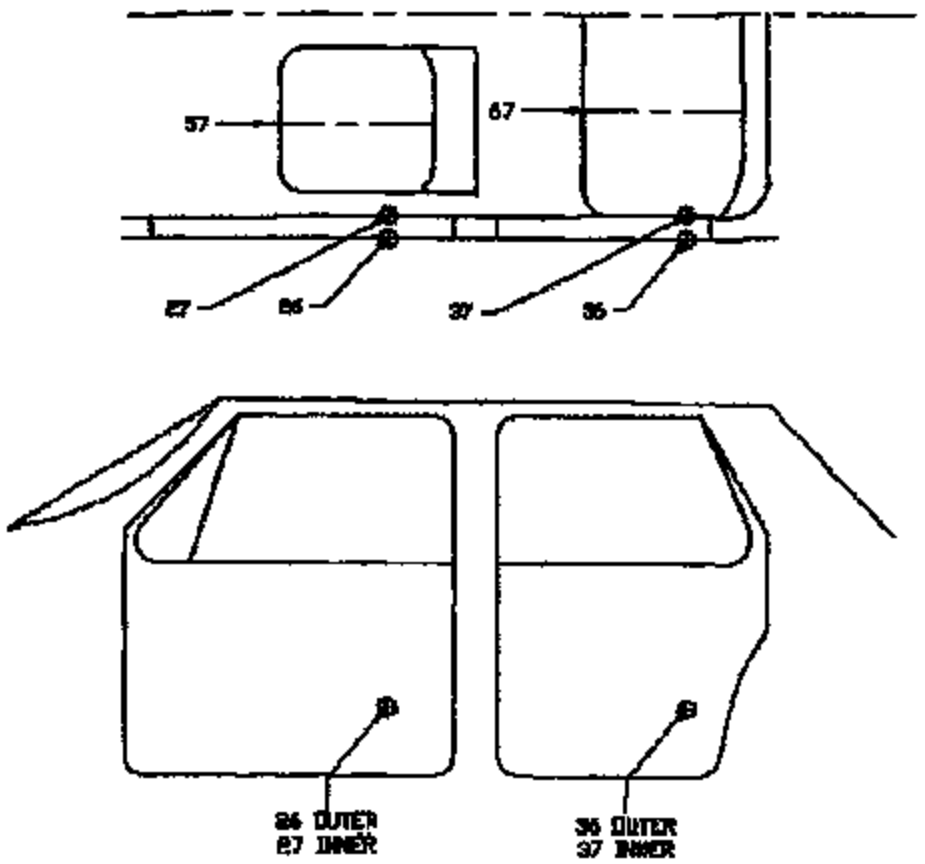
12/06/97 16:09:0

PRE-CRASH LATERAL C/L'S "H" POINTS + REQUEST 417
UNIT 411 POINTS 26,27,36,37,57,67



REQUEST 417 UPIC 964 10/96

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CRTS 0010936

1 of 1

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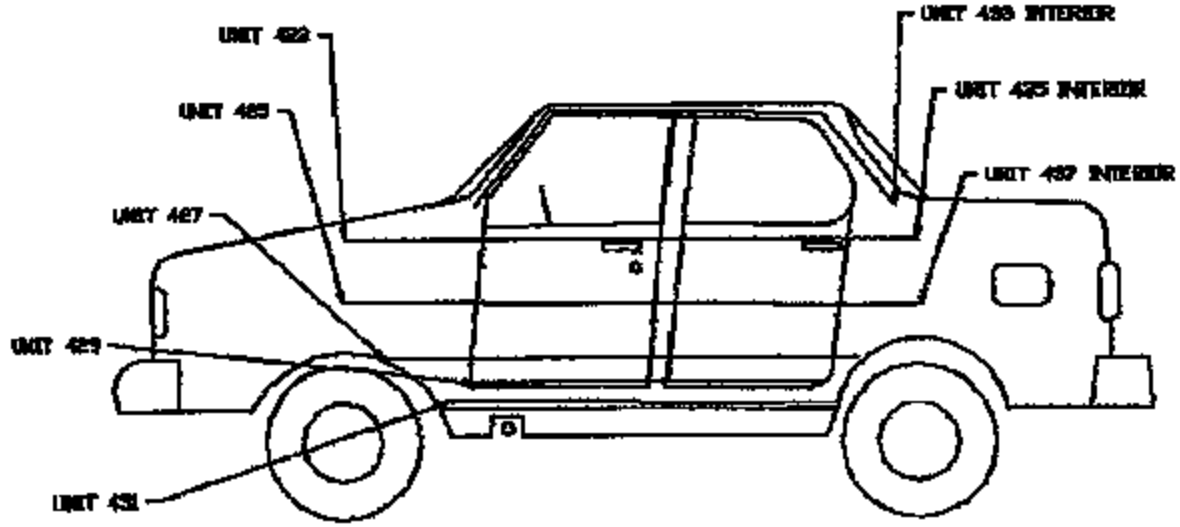
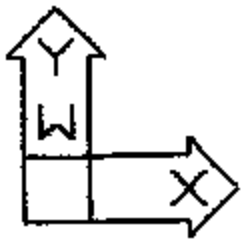
EXTERIOR & INTERIOR HORZ. SECTIONALS SIDE IMPACT
REQUEST 423,425,427,429,431,433,435,437





REQUEST 423,425,427,429,431,433,435,437 UPIC 977 10/96

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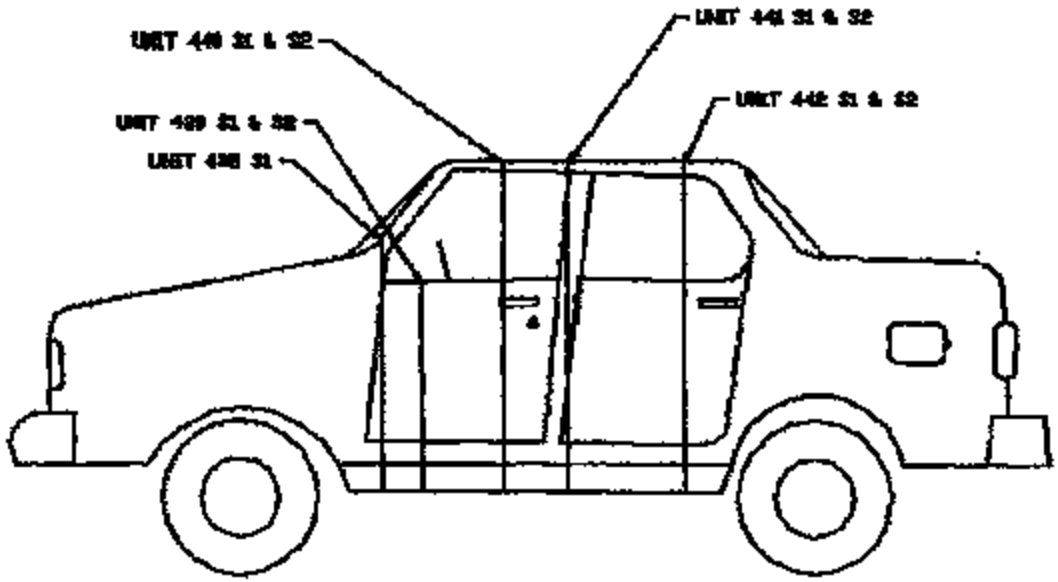
12/06/97 16:10:40

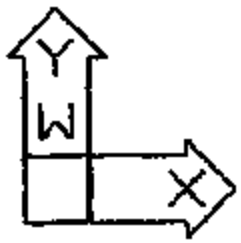
CRTS 0010936

REQUEST 438 - 442 VERT. SECTION: SIDE IMPACT

UNITS 438 S1, 439 - 442 S1 & S2

S1 SECTIONS ARE EXTERIOR, S2 SECTIONS ARE INTERIOR





REQUEST 438 - 442 UPIC 179 10/96

DRAWN:

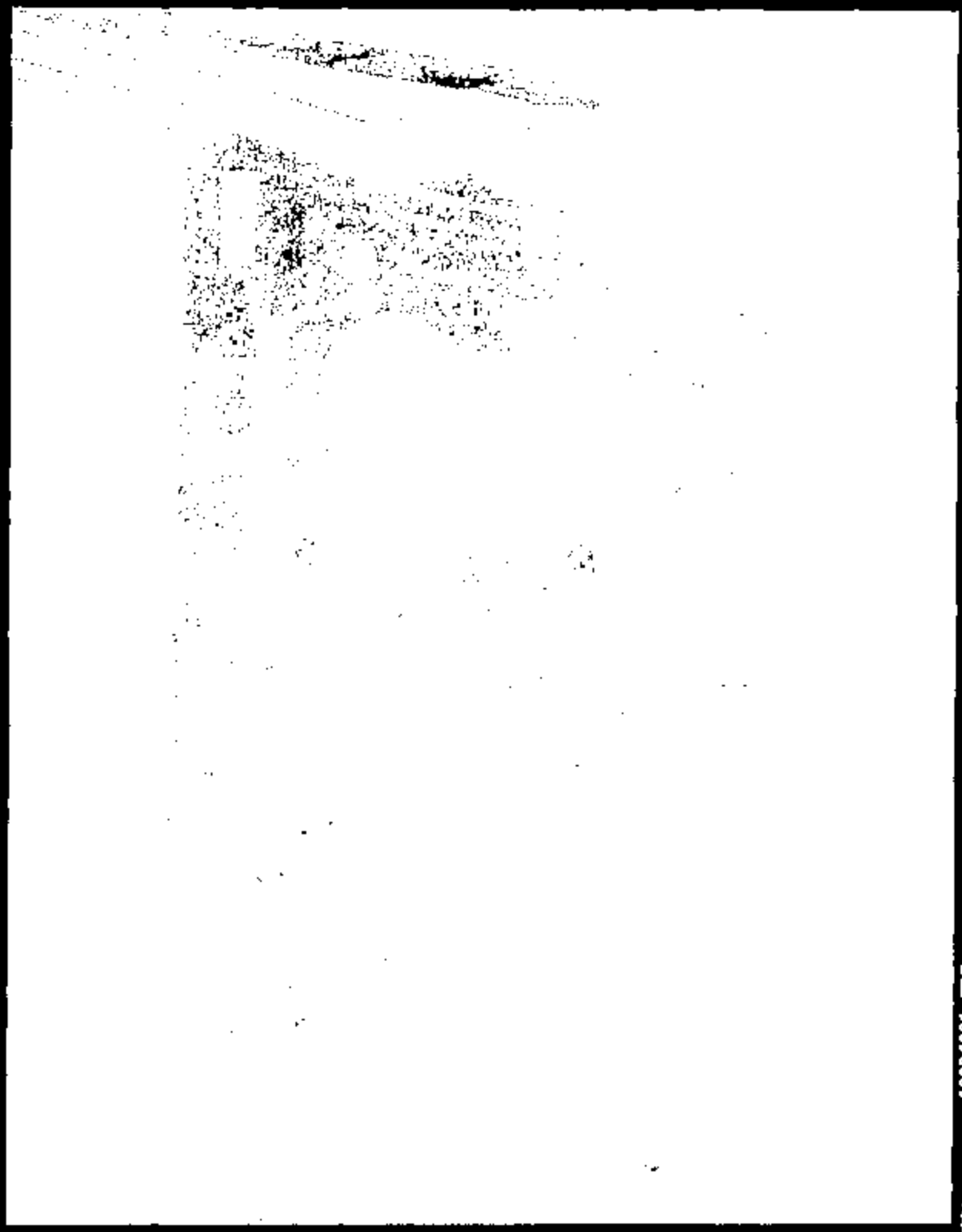
CRTS 0010936

1 of 1

12/06/97 16:12:3...

96

T-A5624



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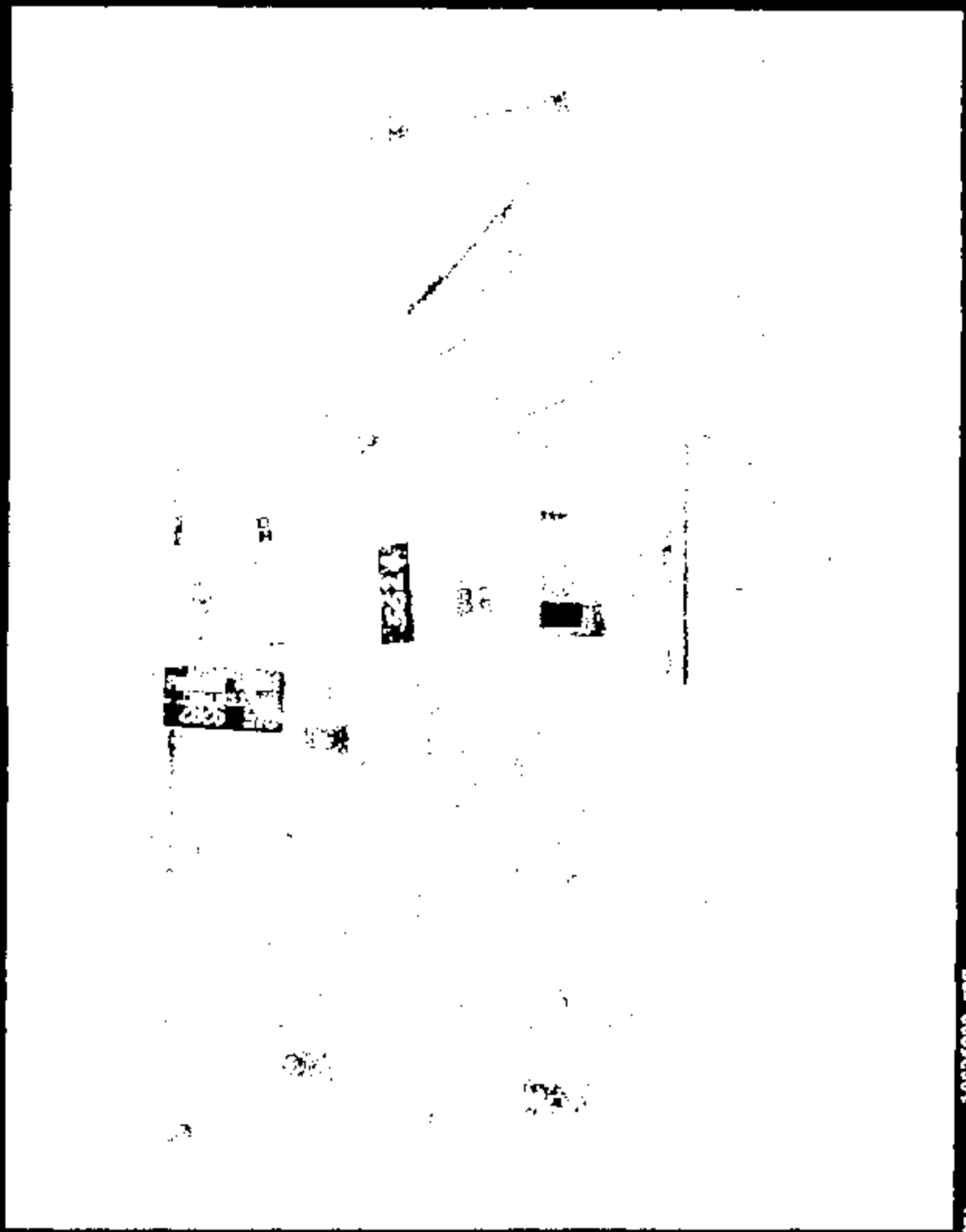

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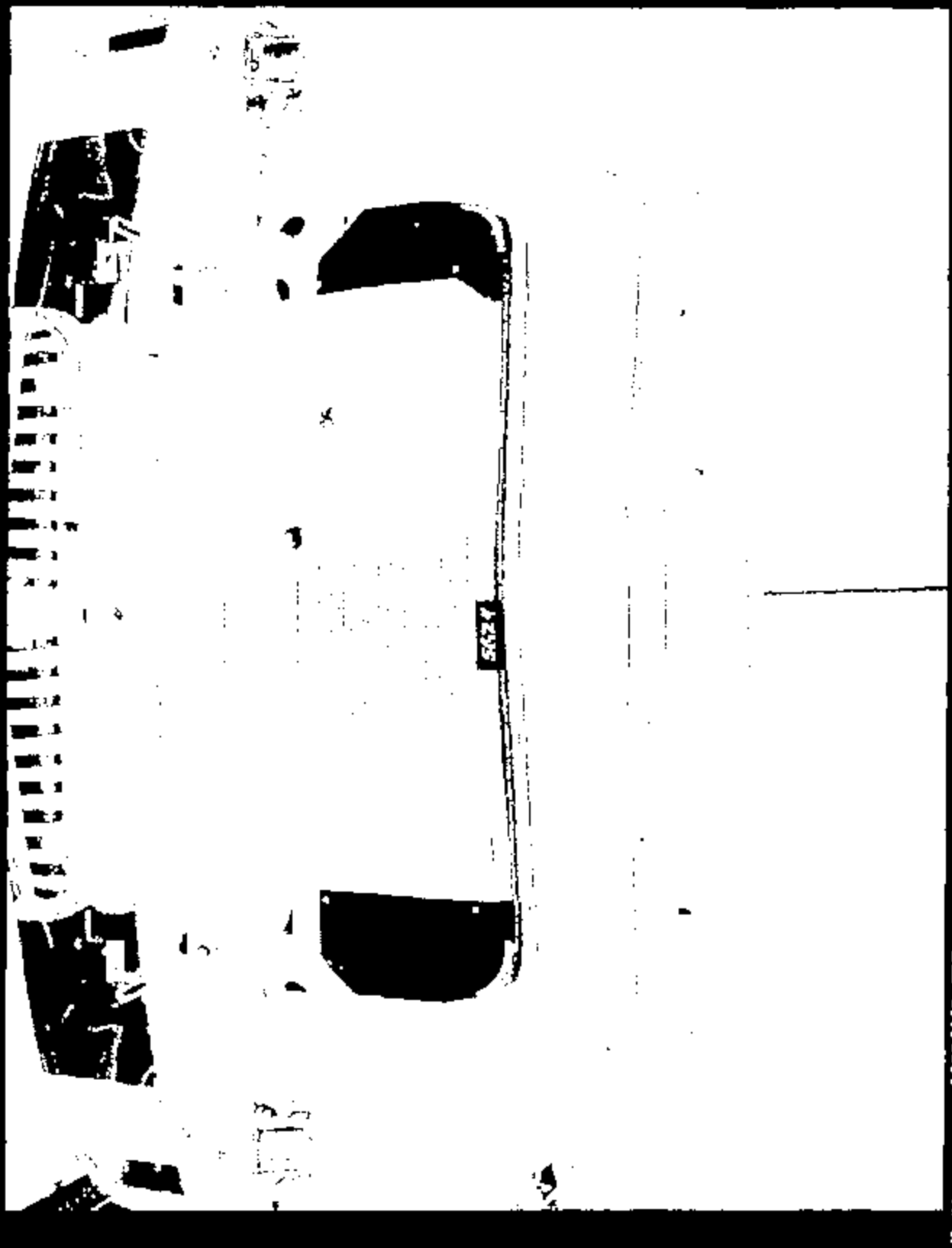
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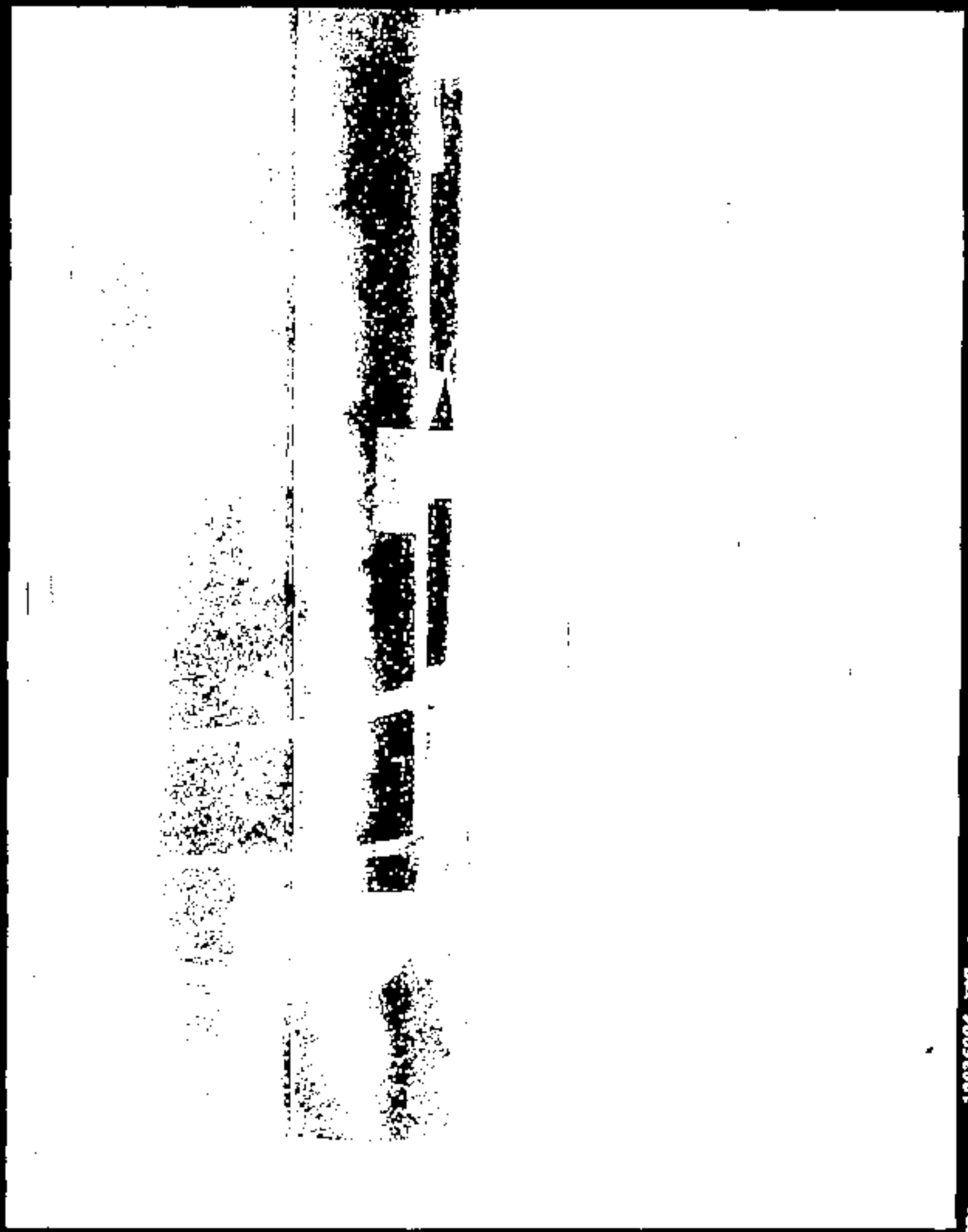

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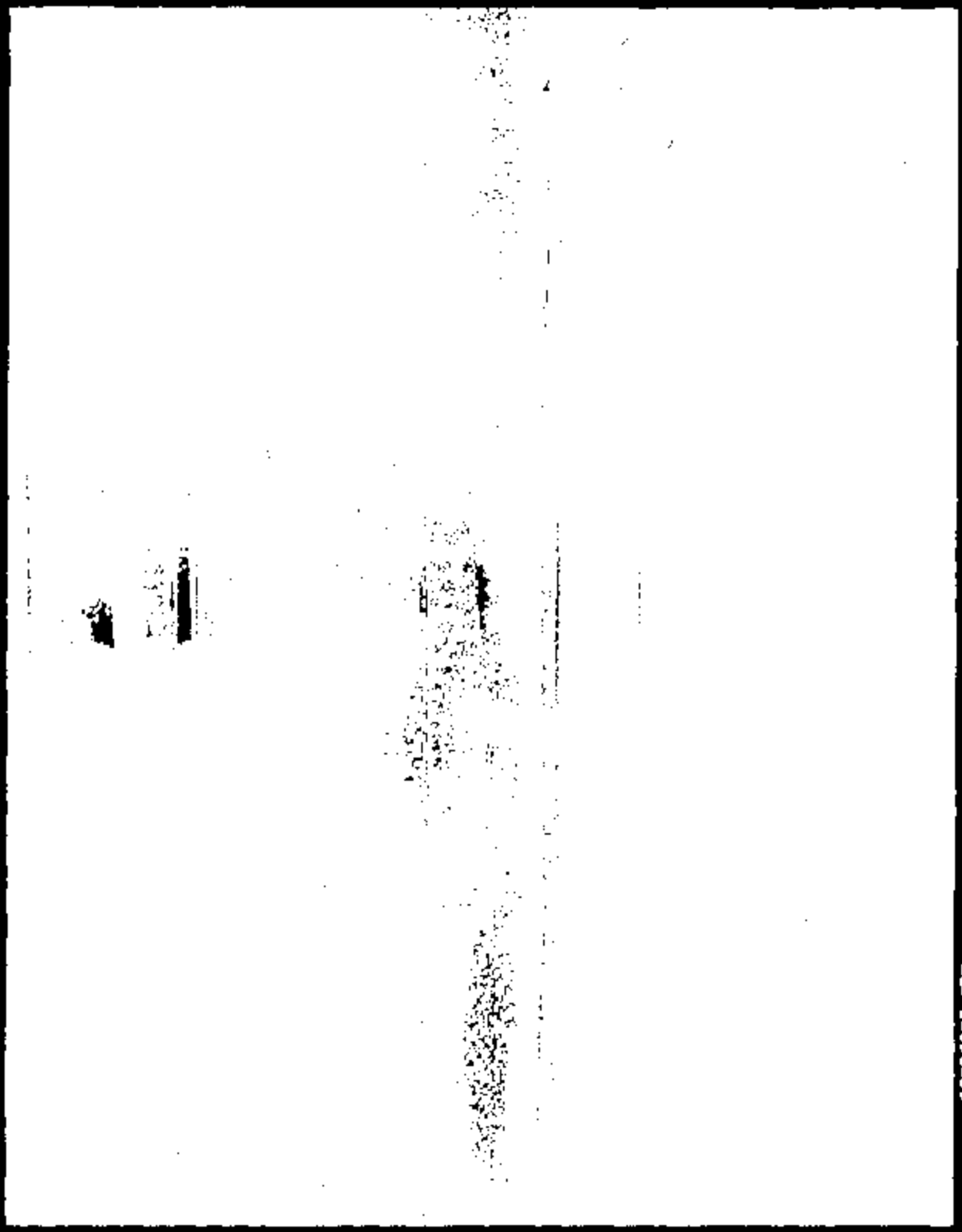

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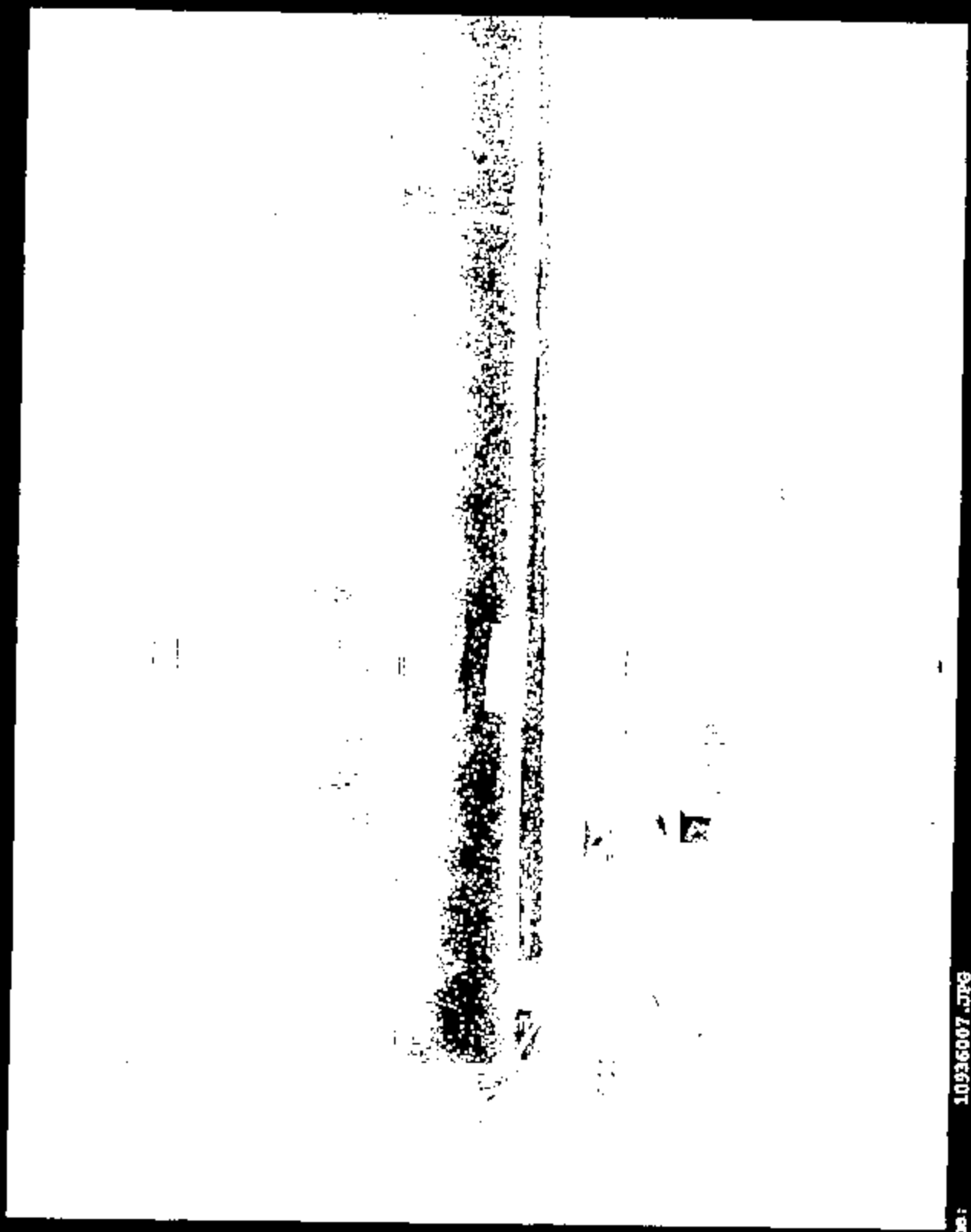

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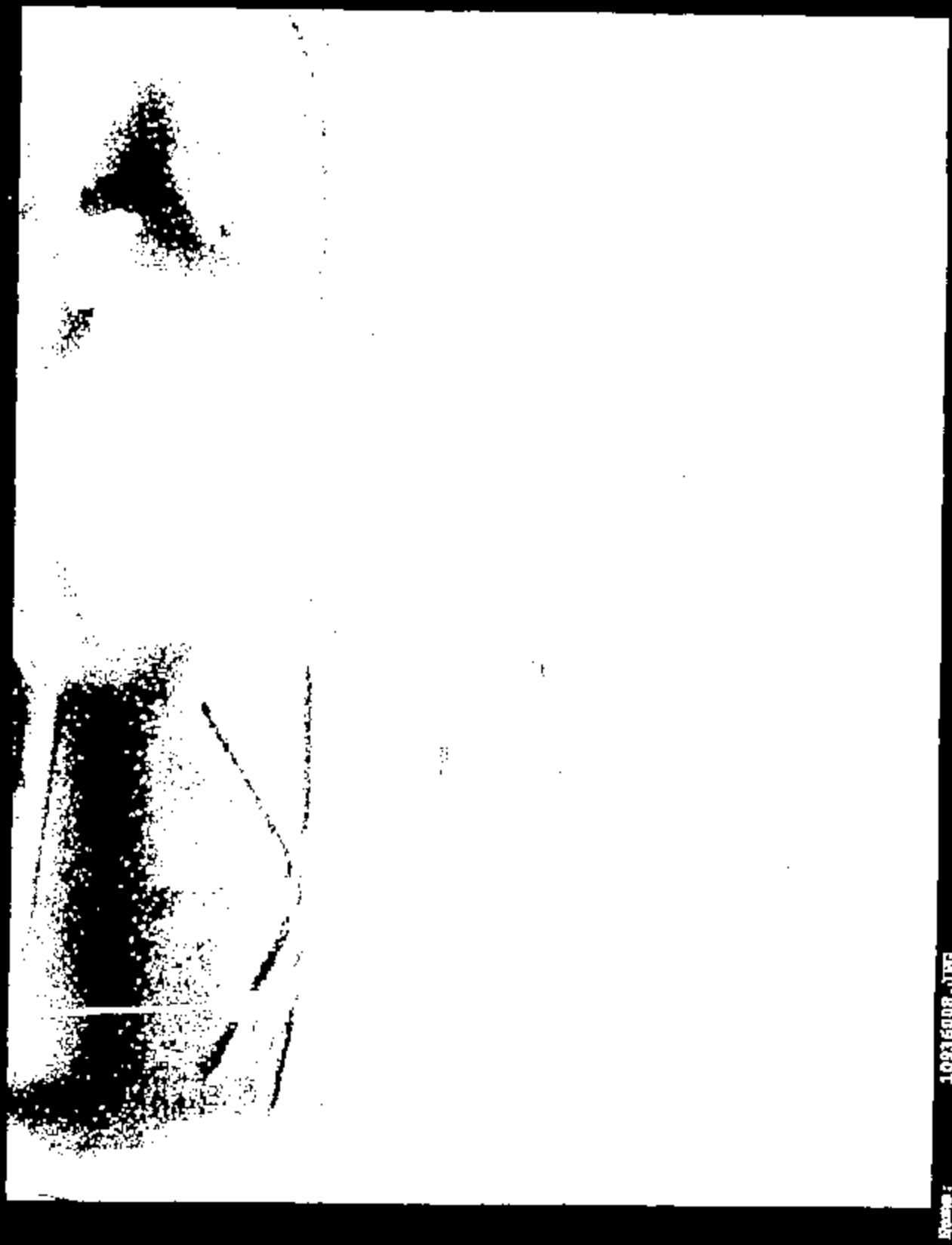

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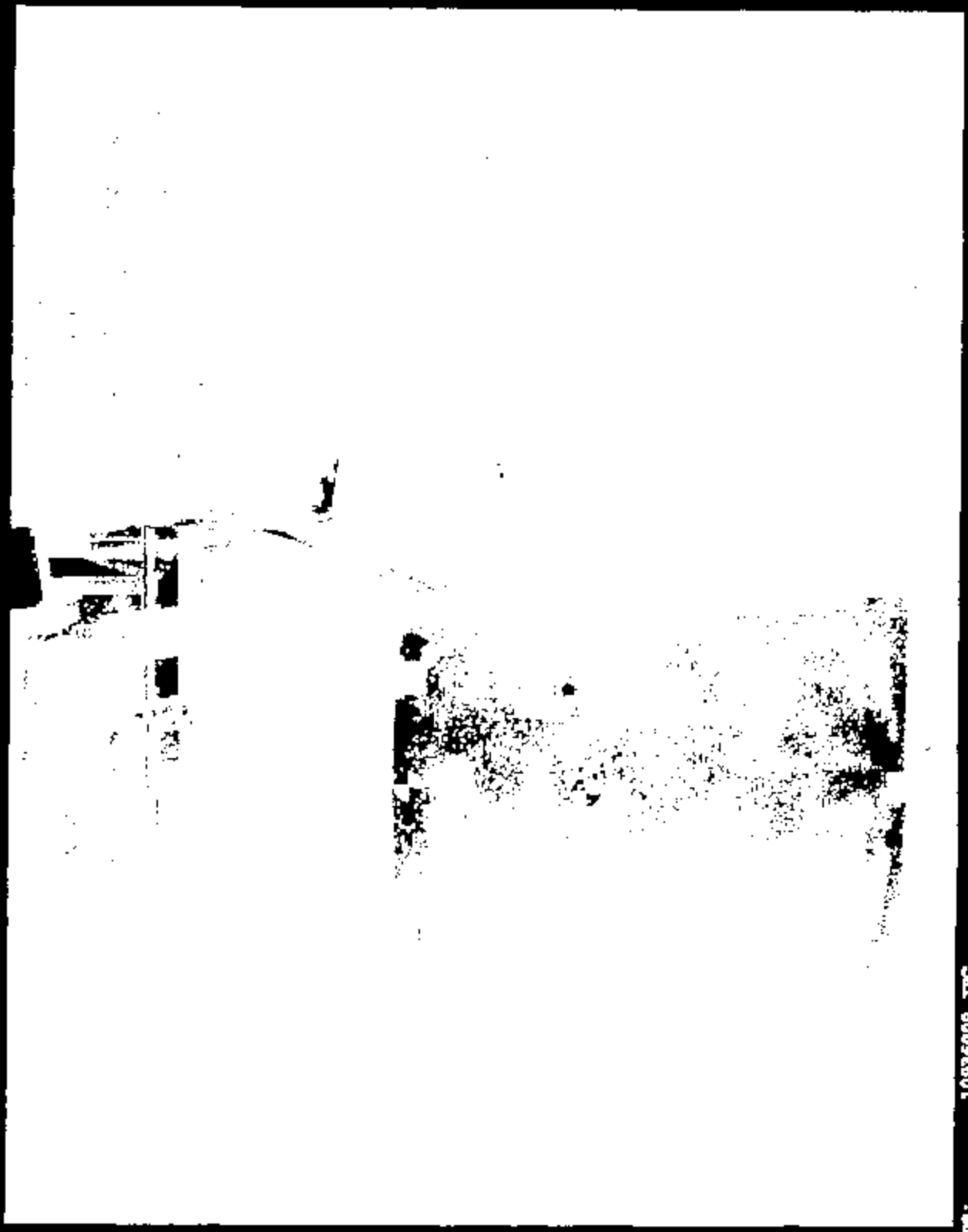

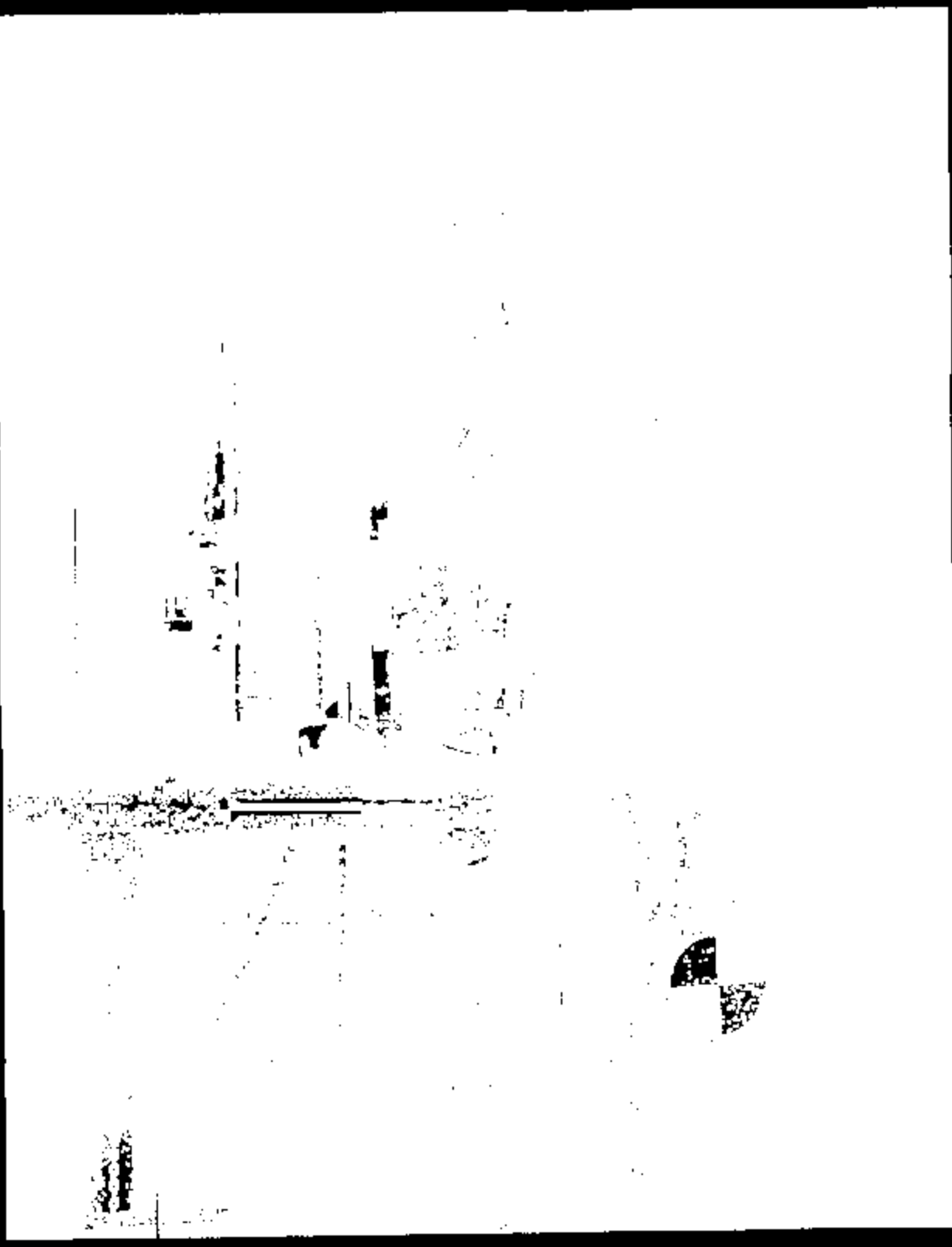

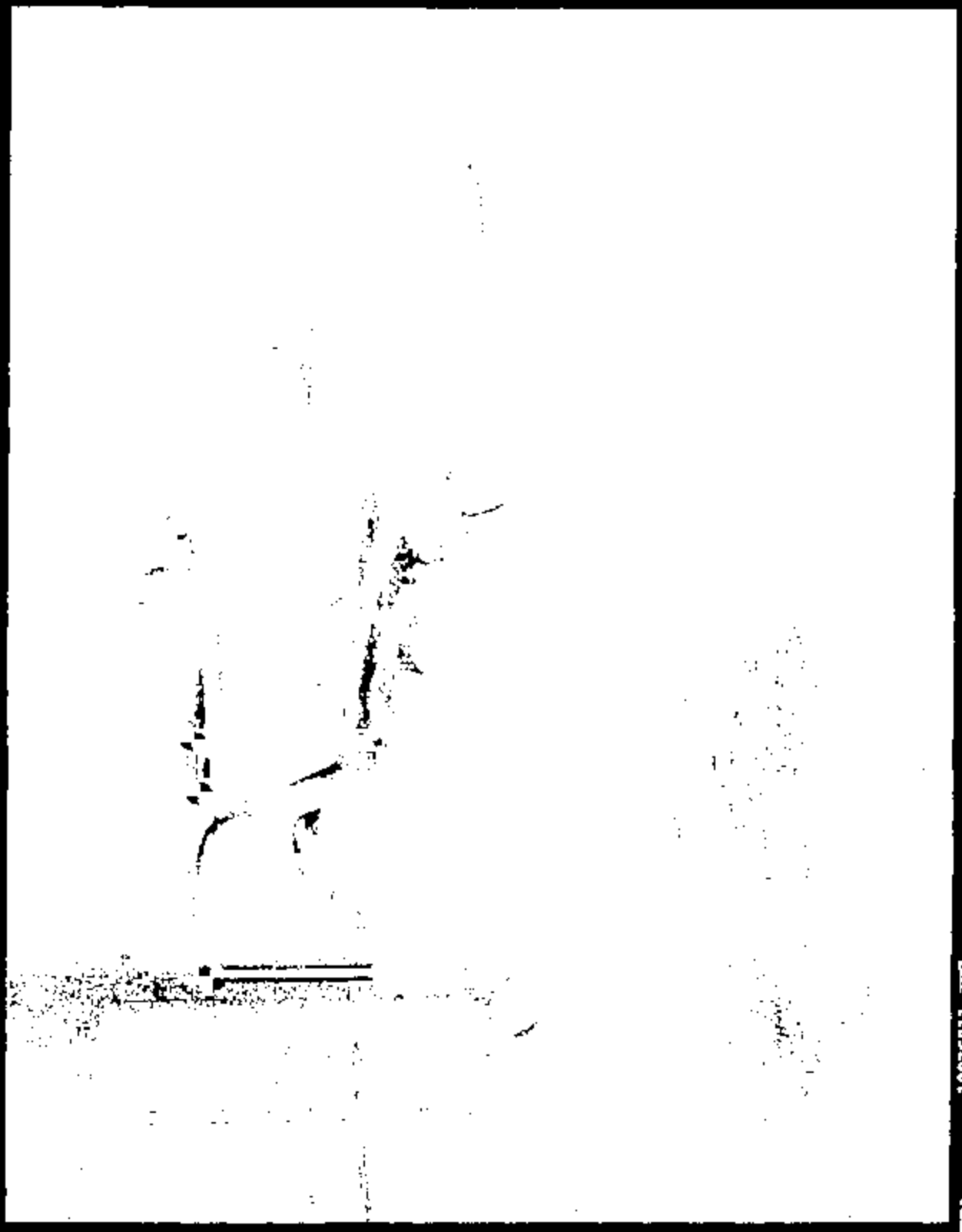
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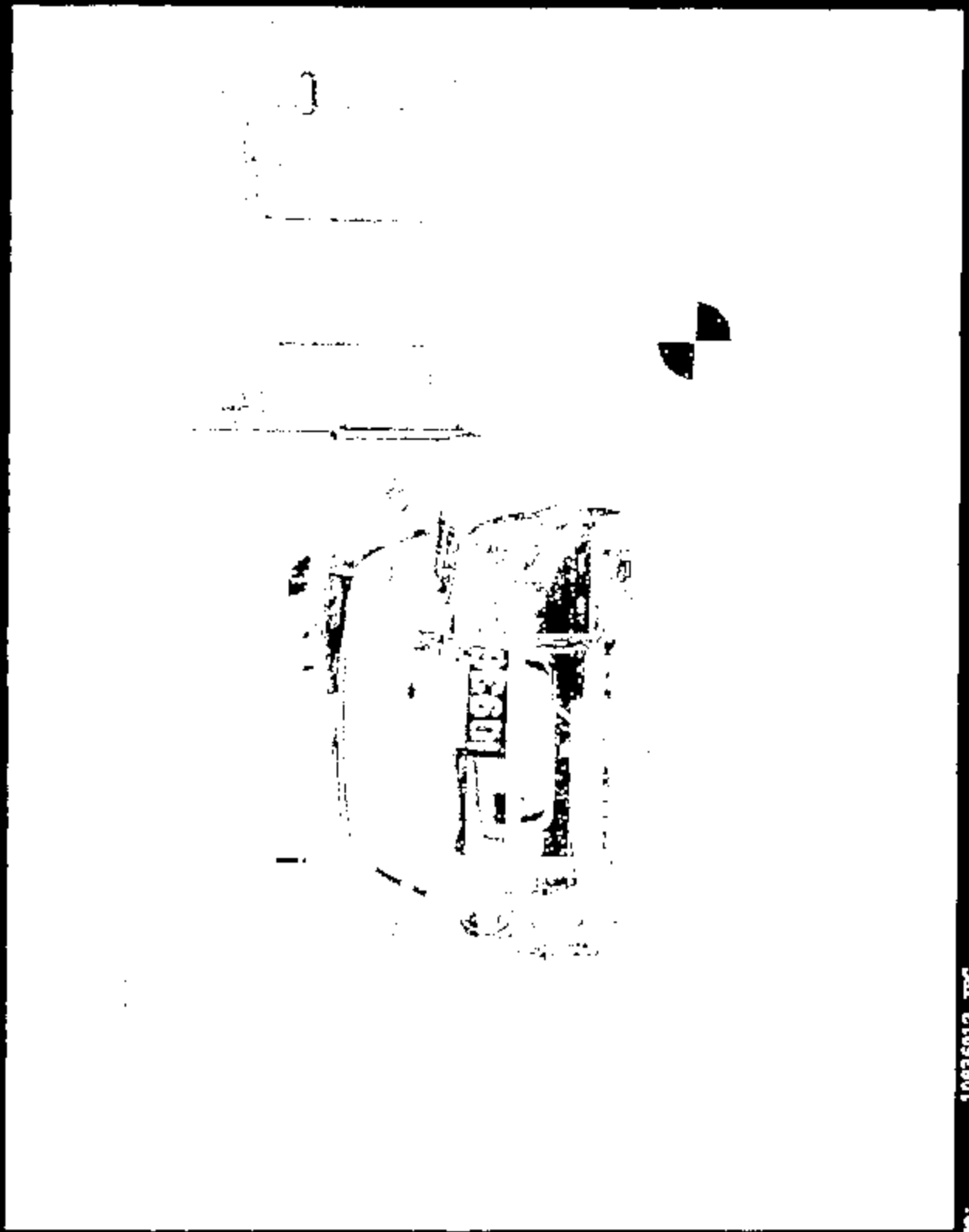

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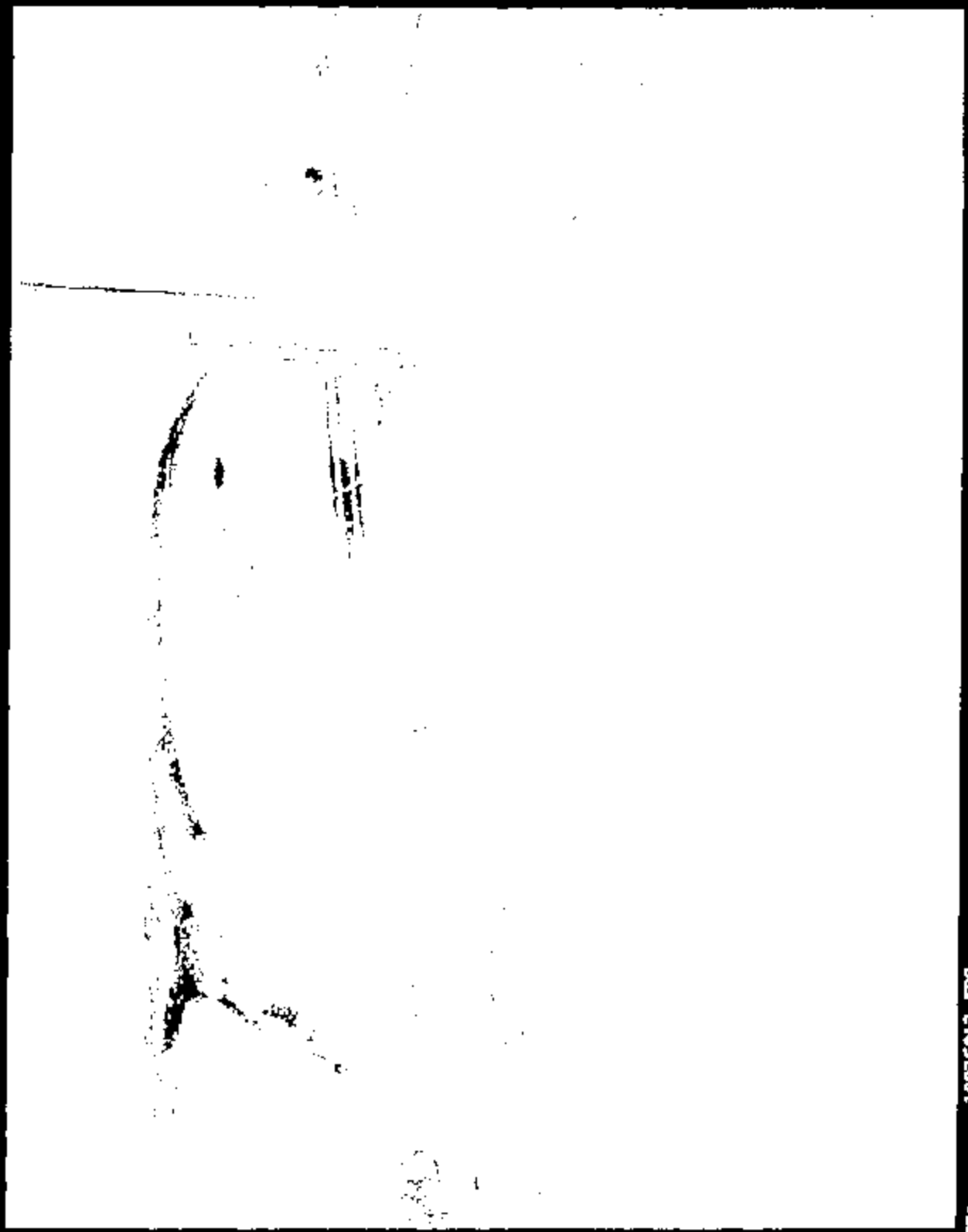

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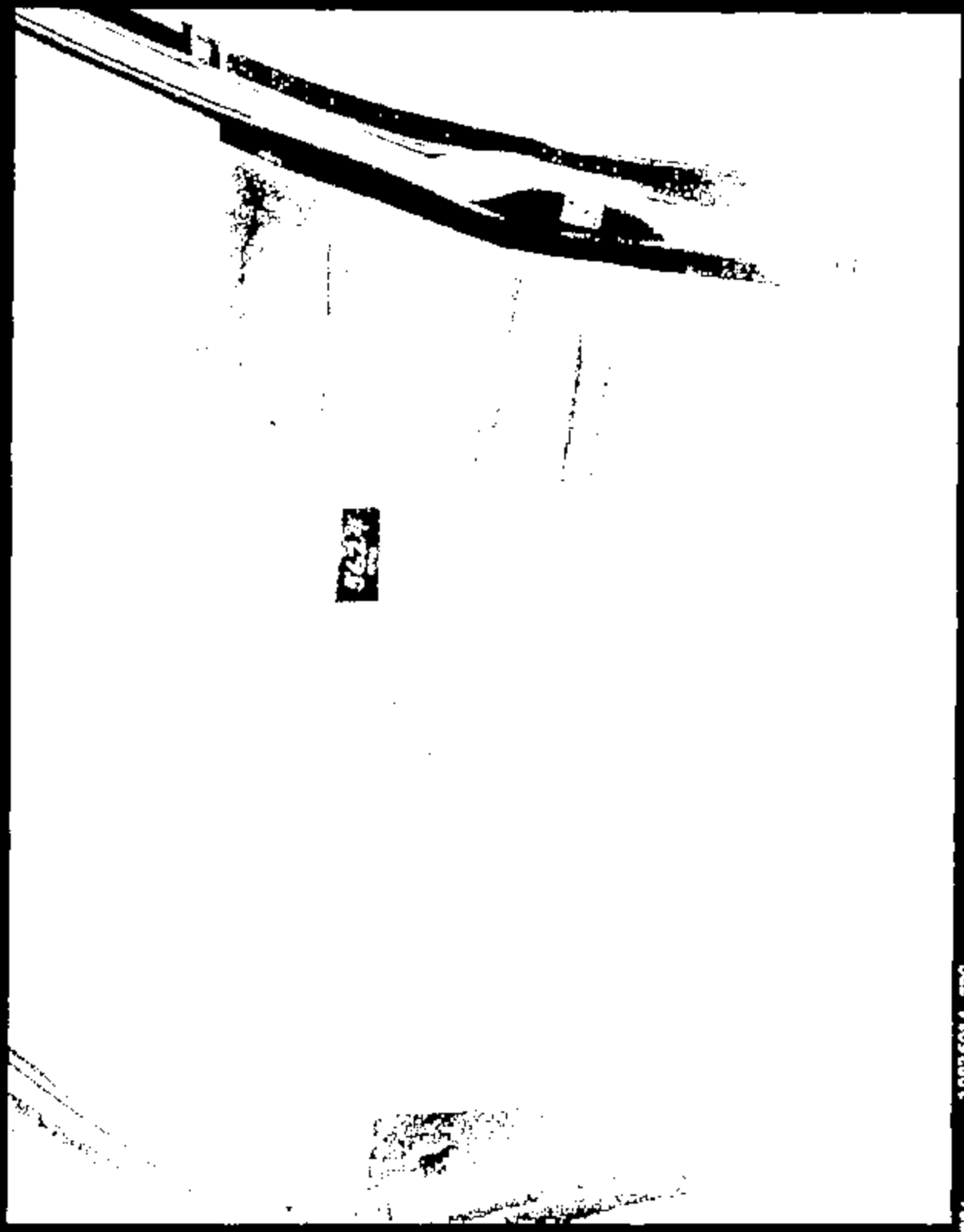

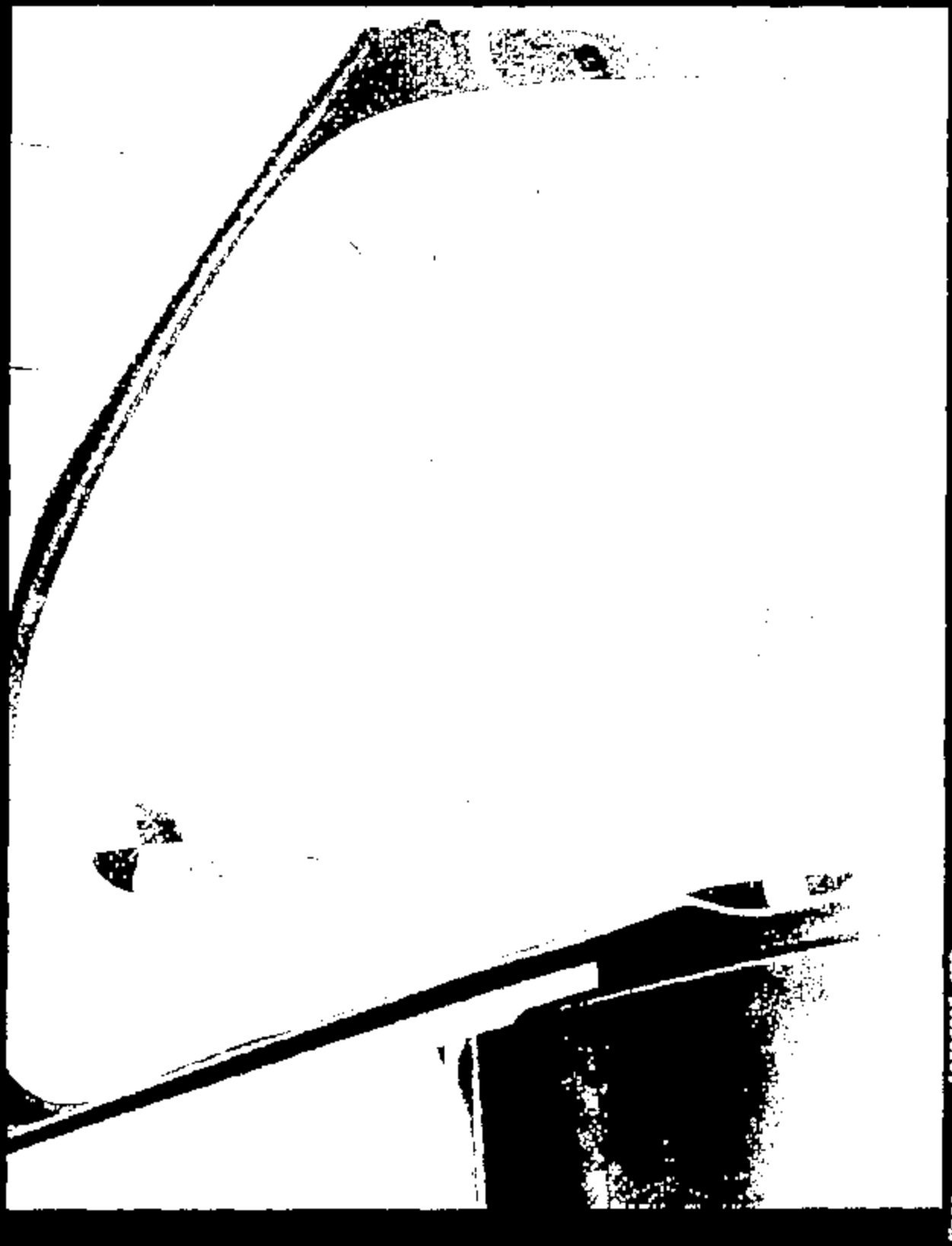
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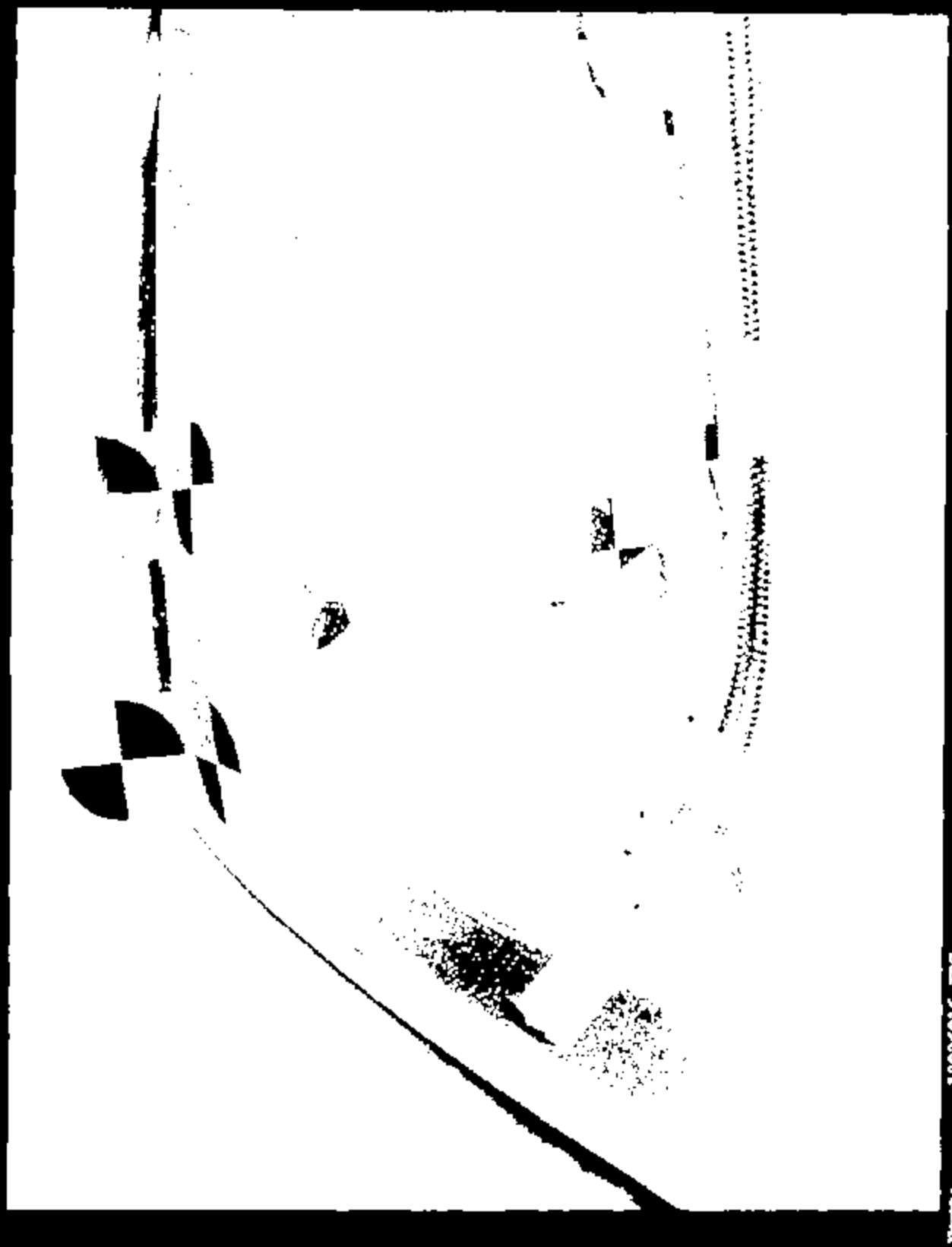

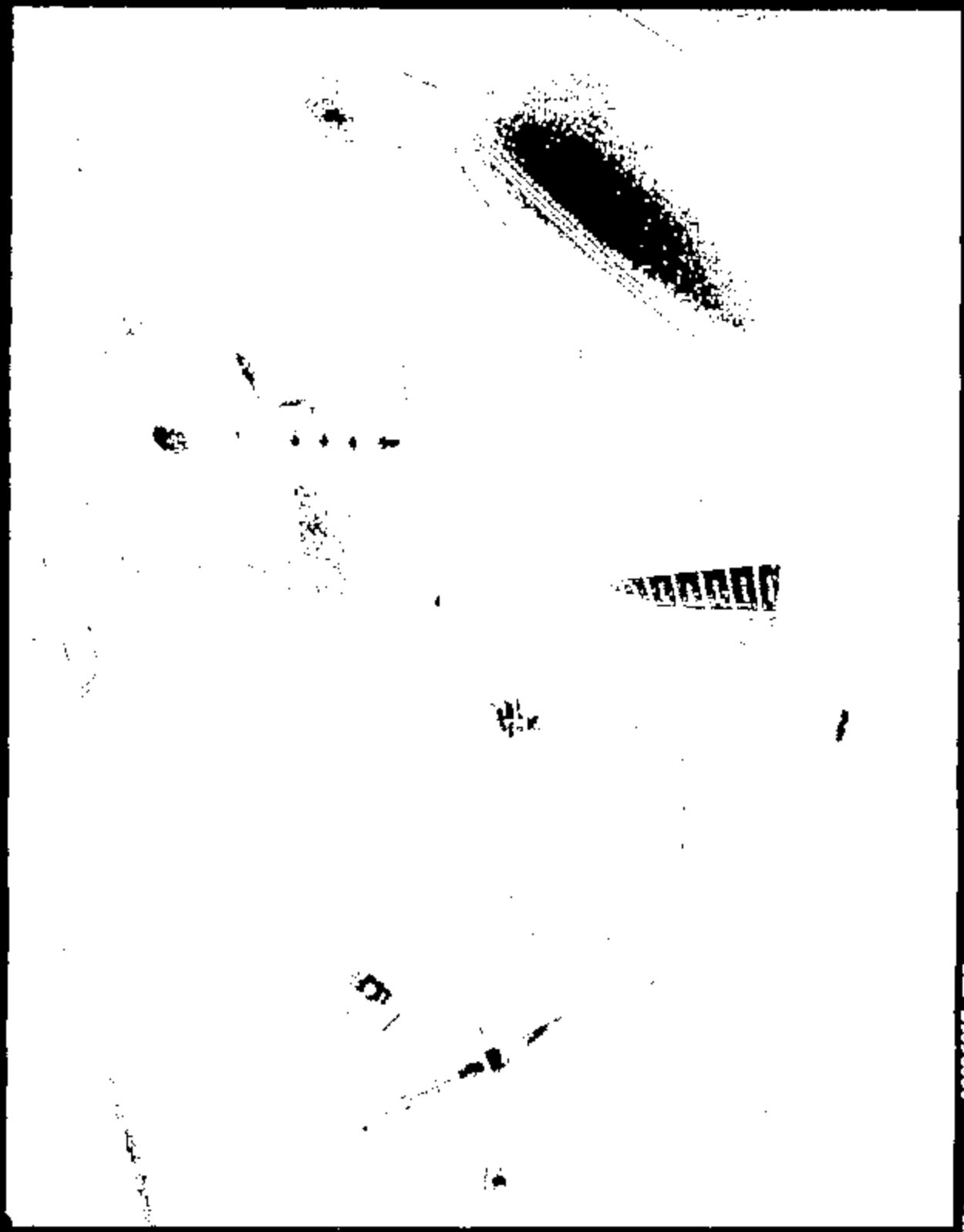

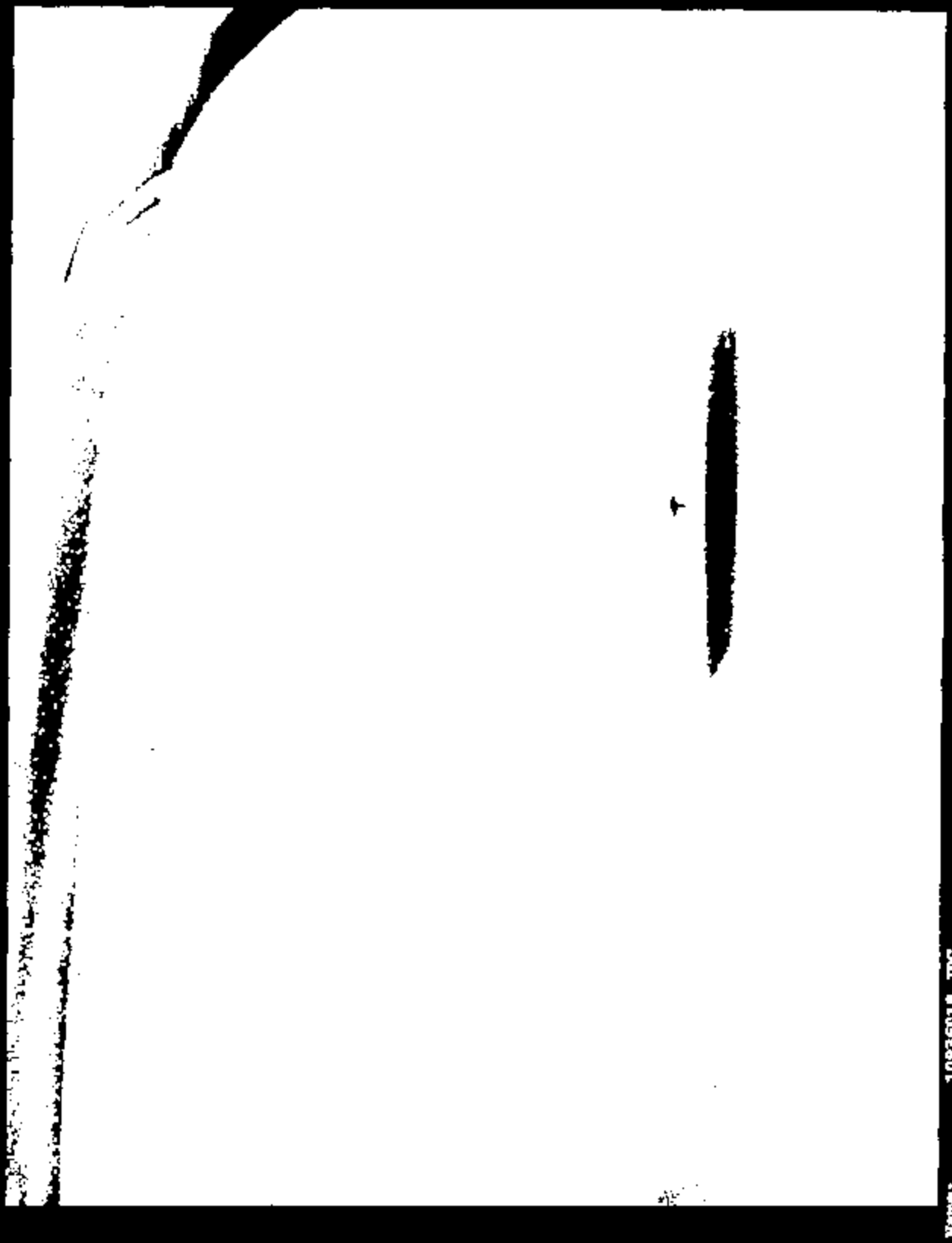
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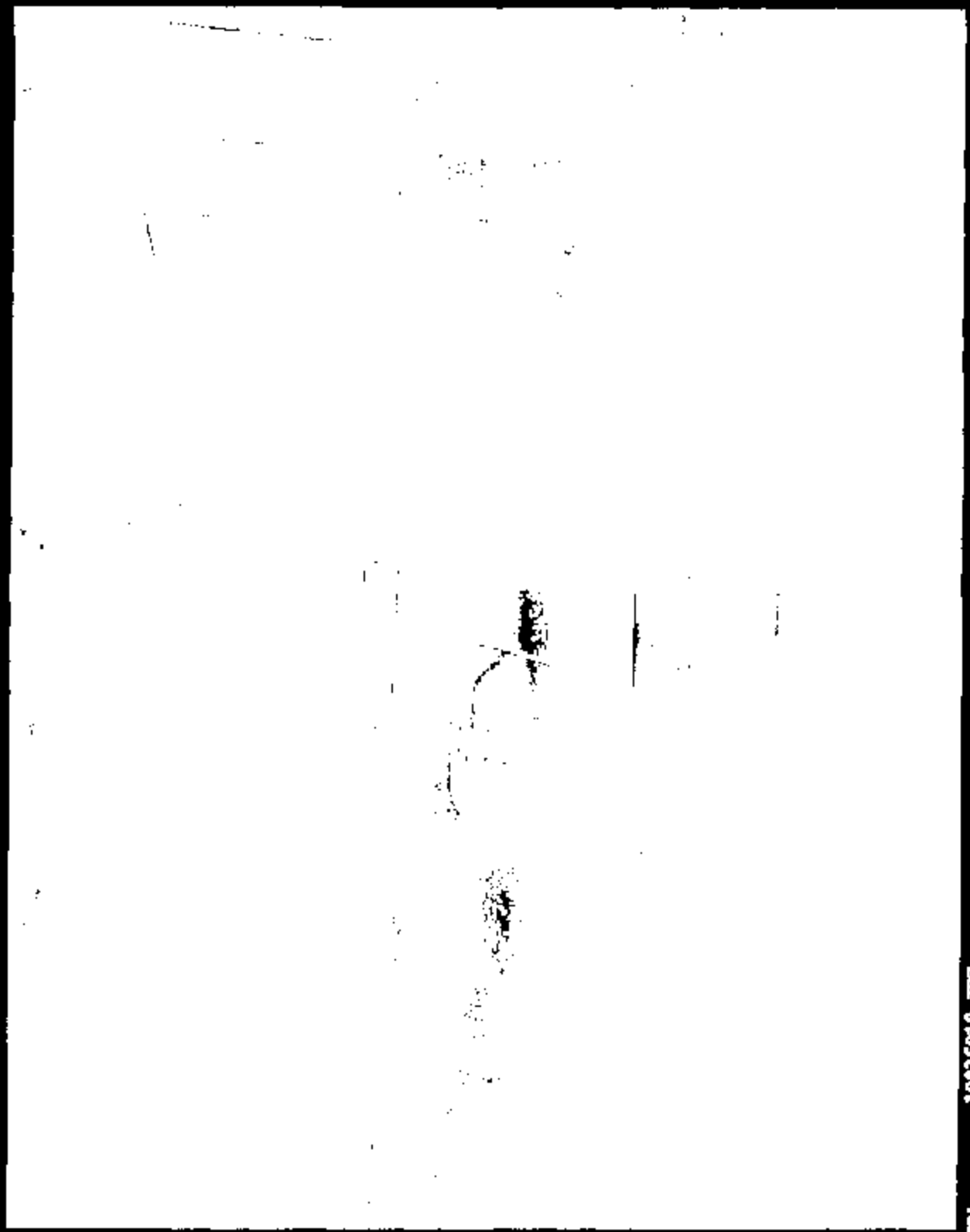

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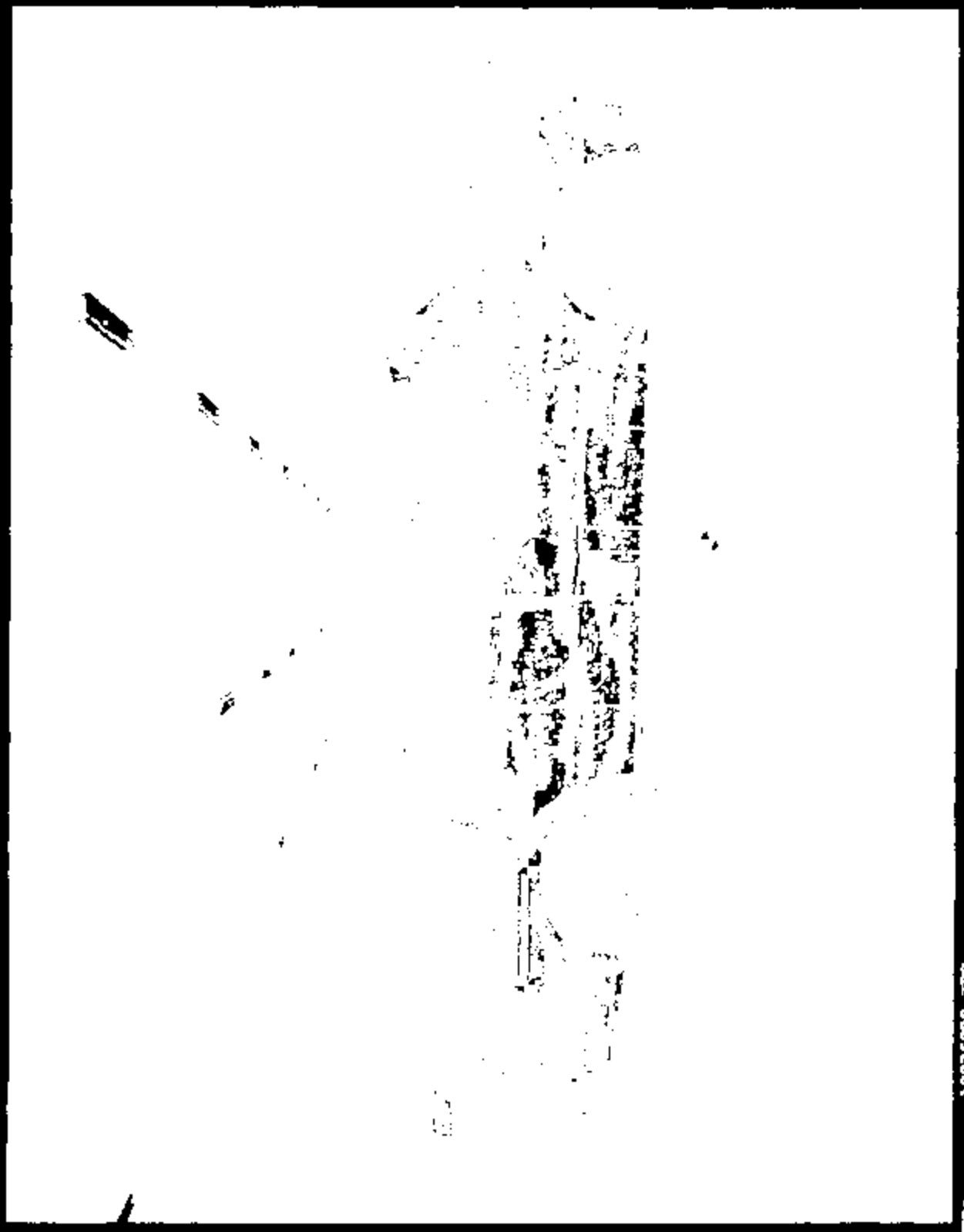

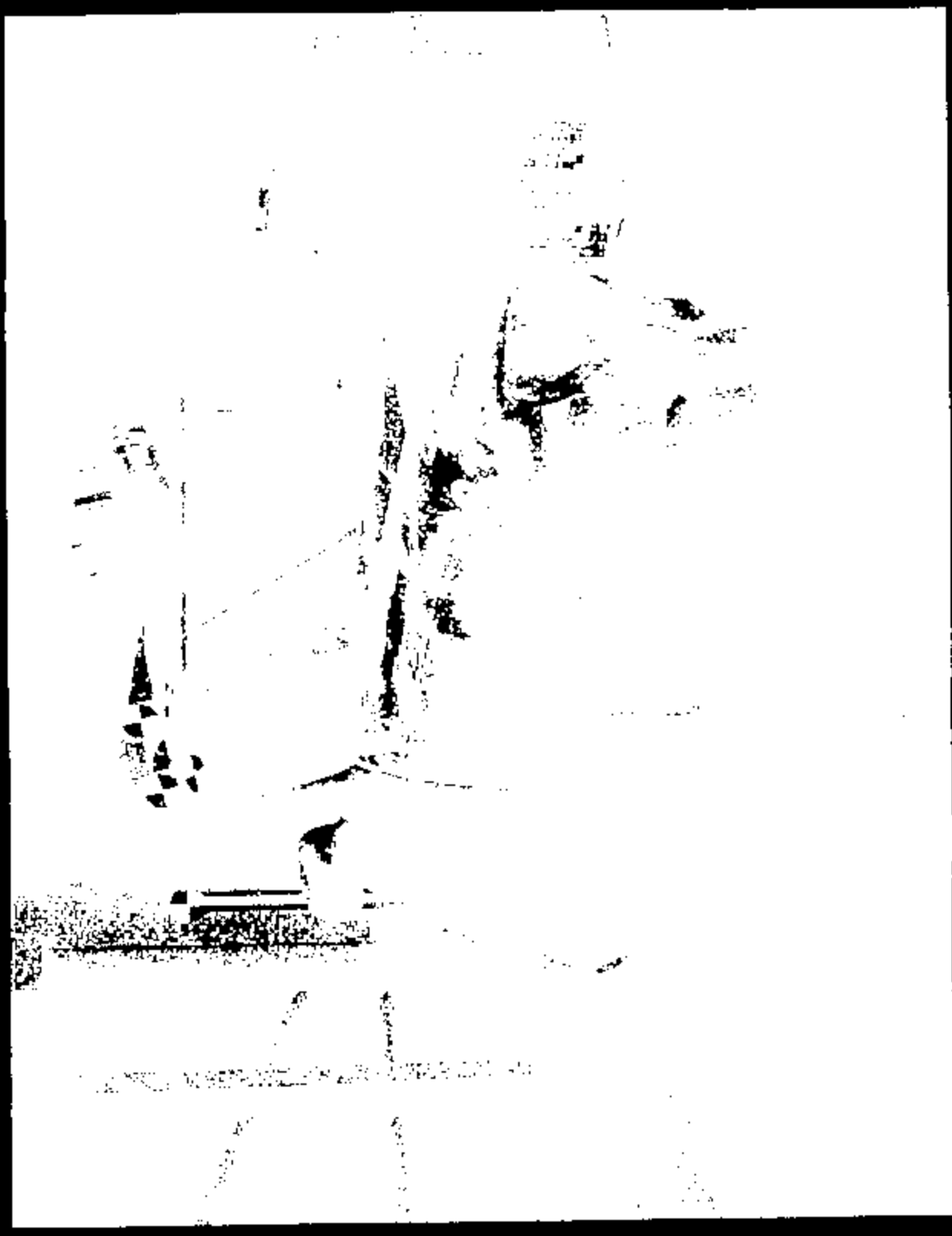

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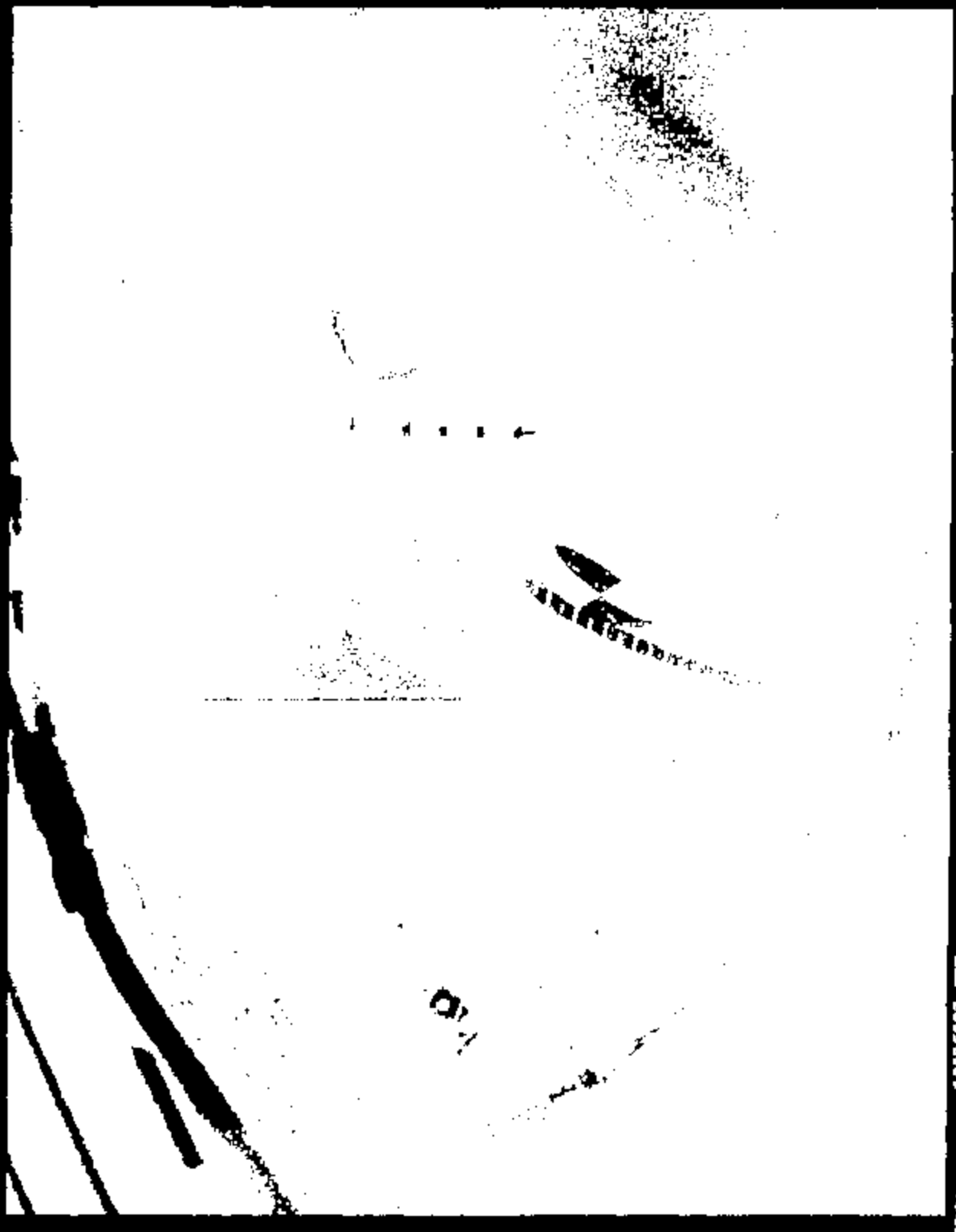

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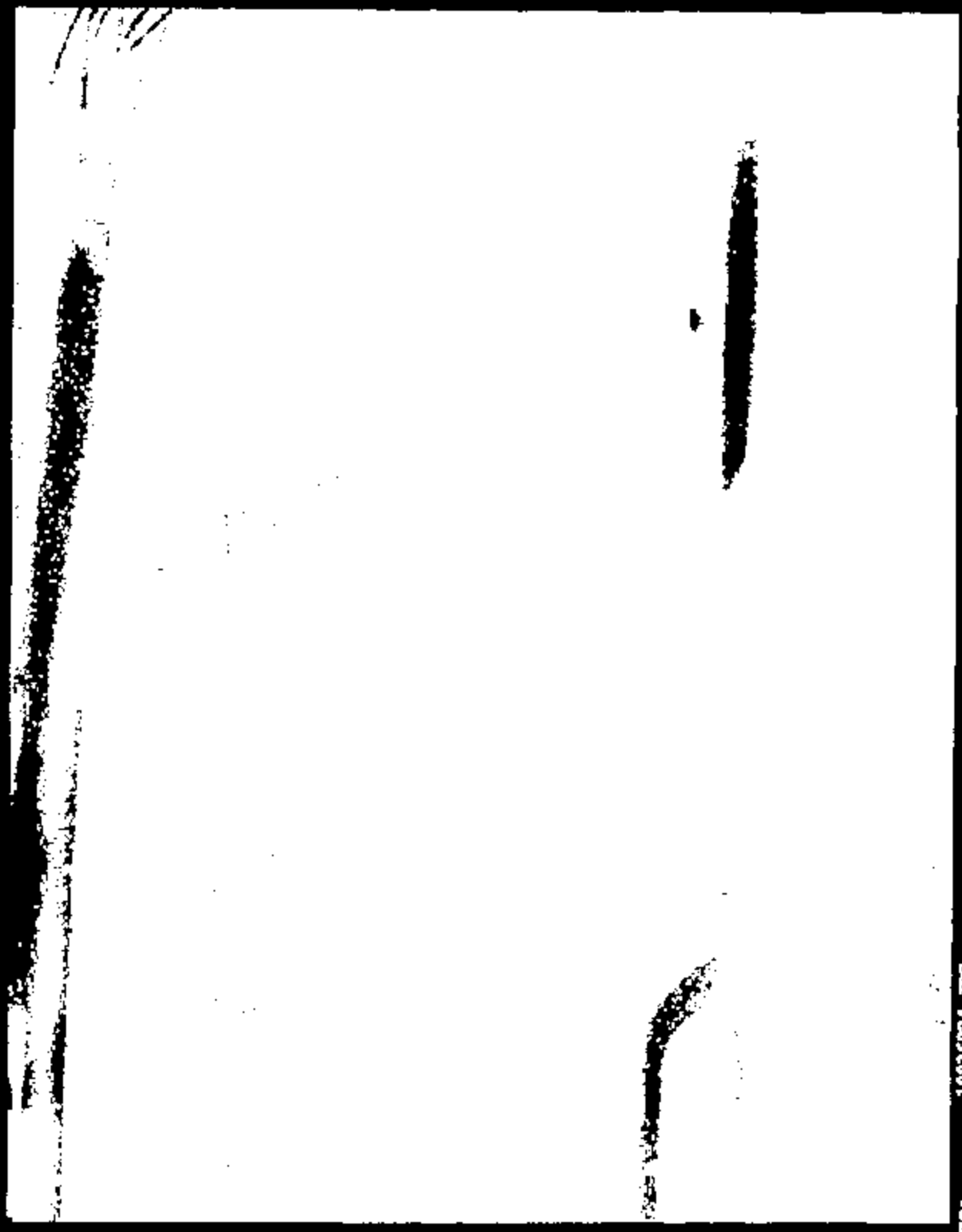

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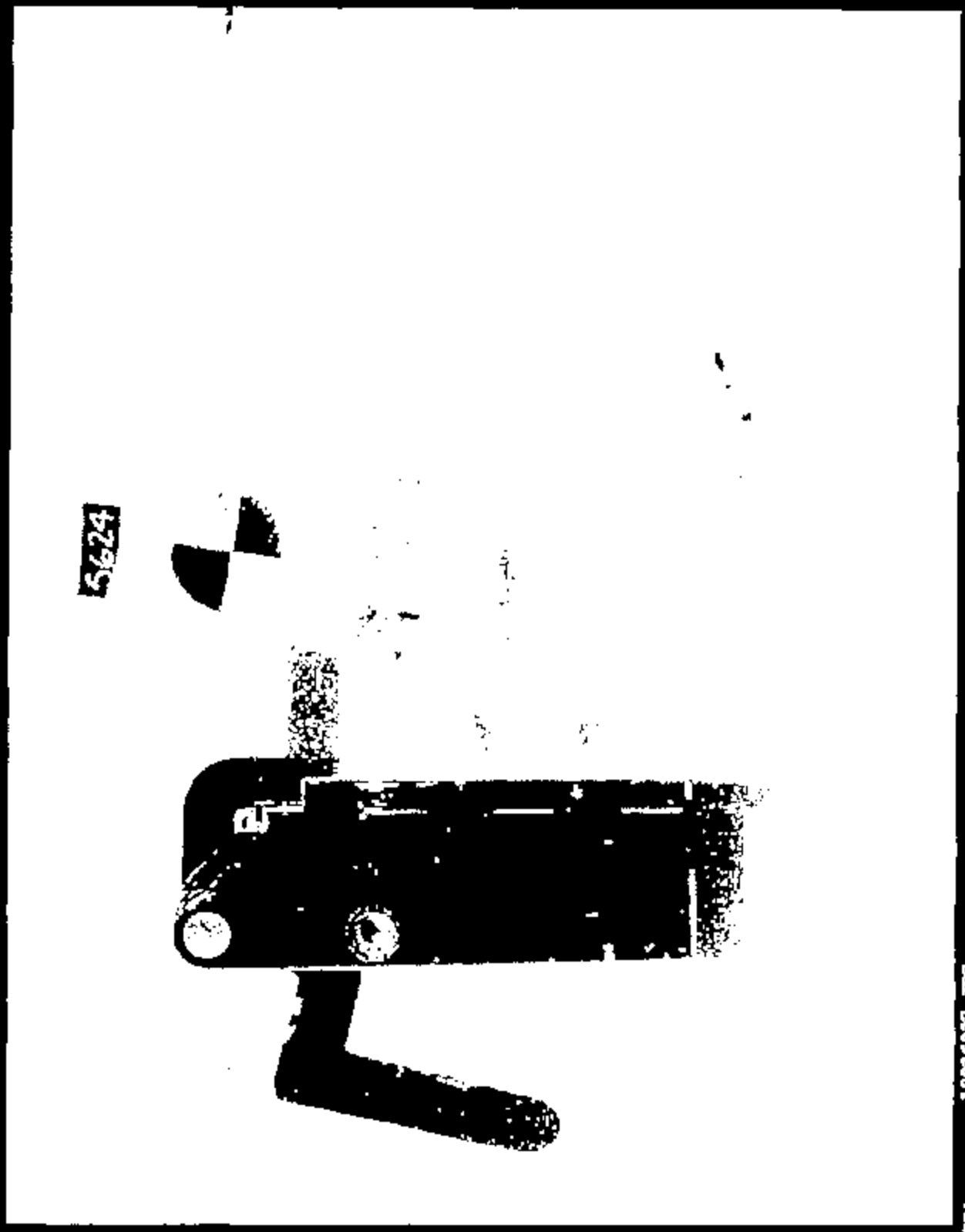
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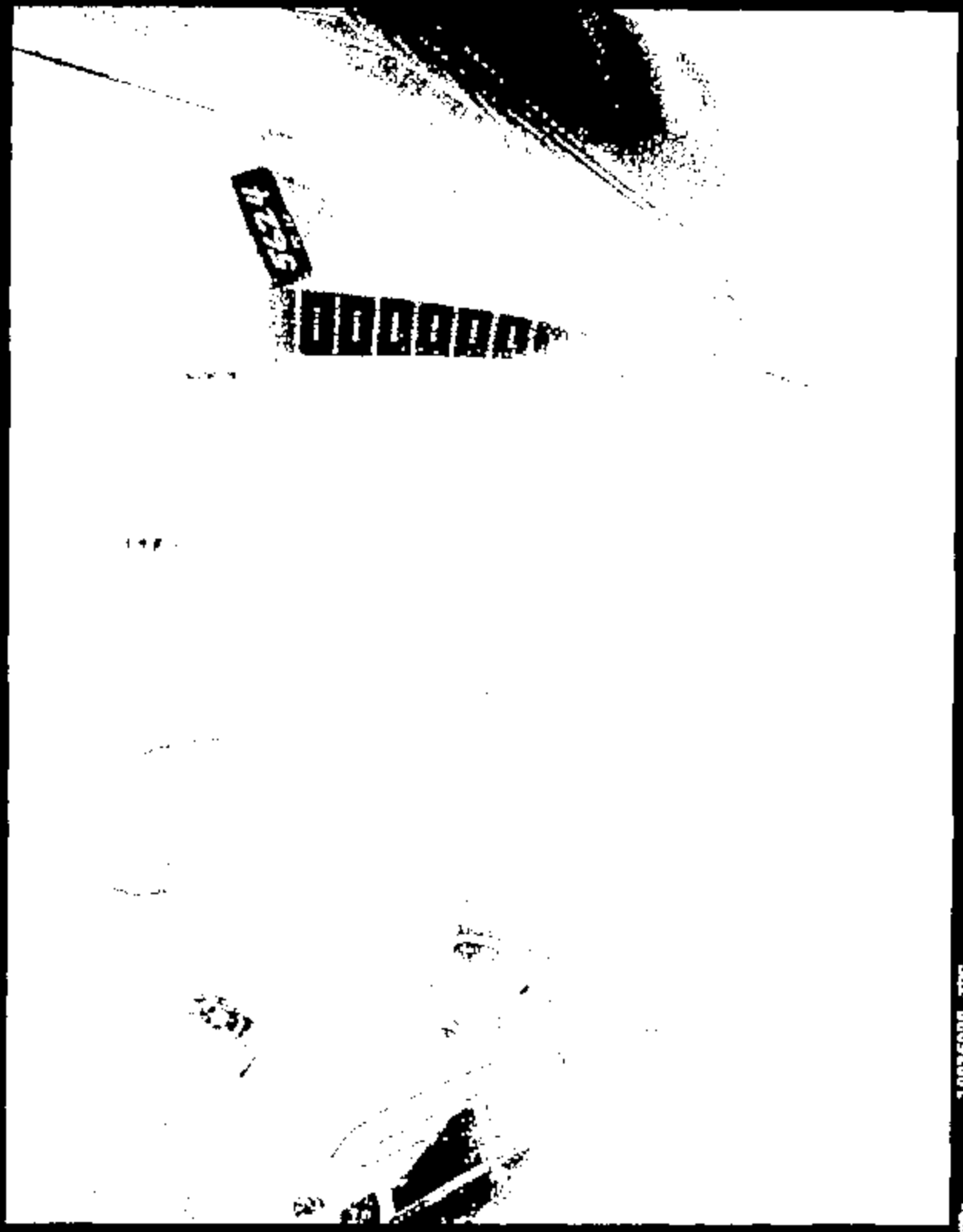

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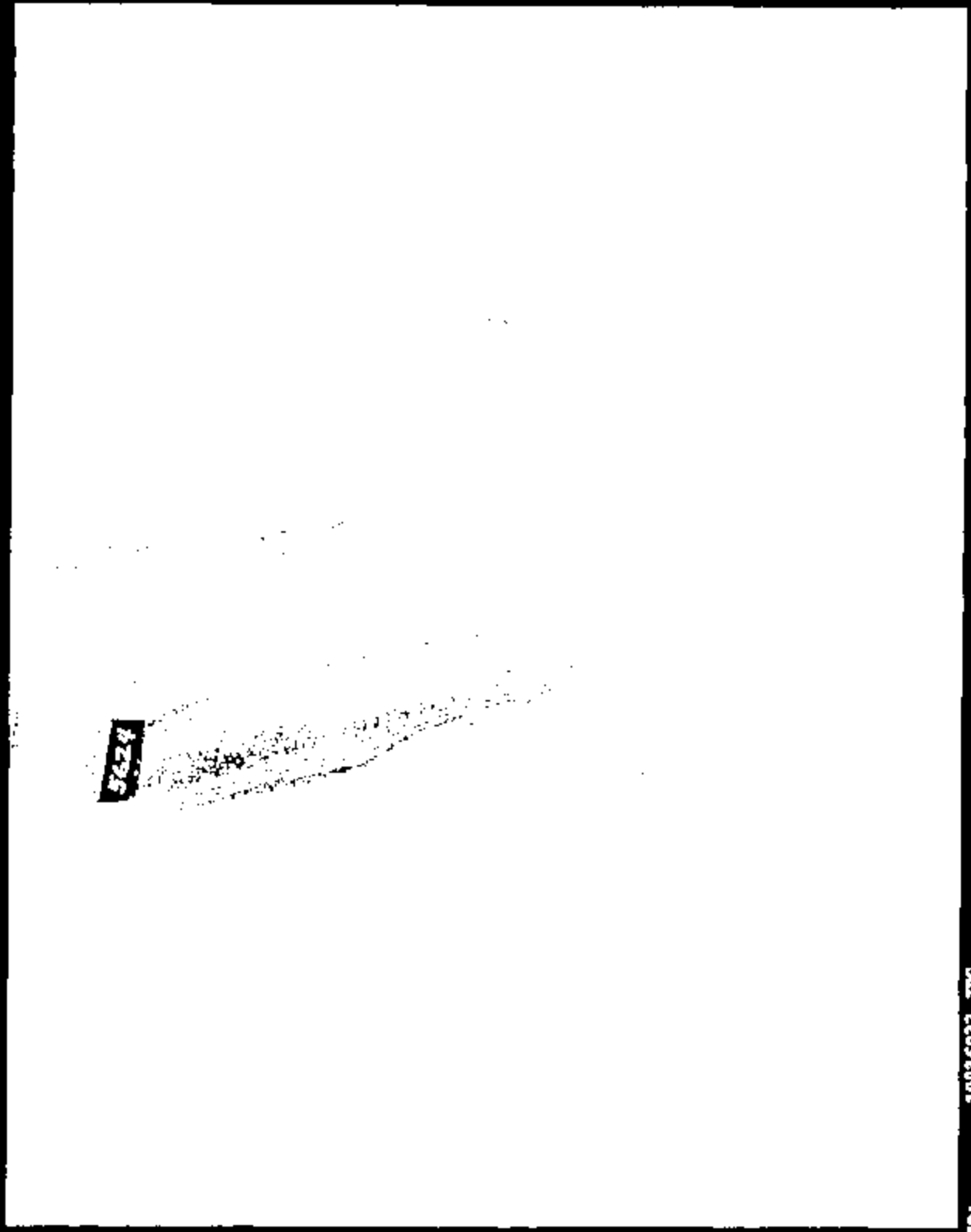

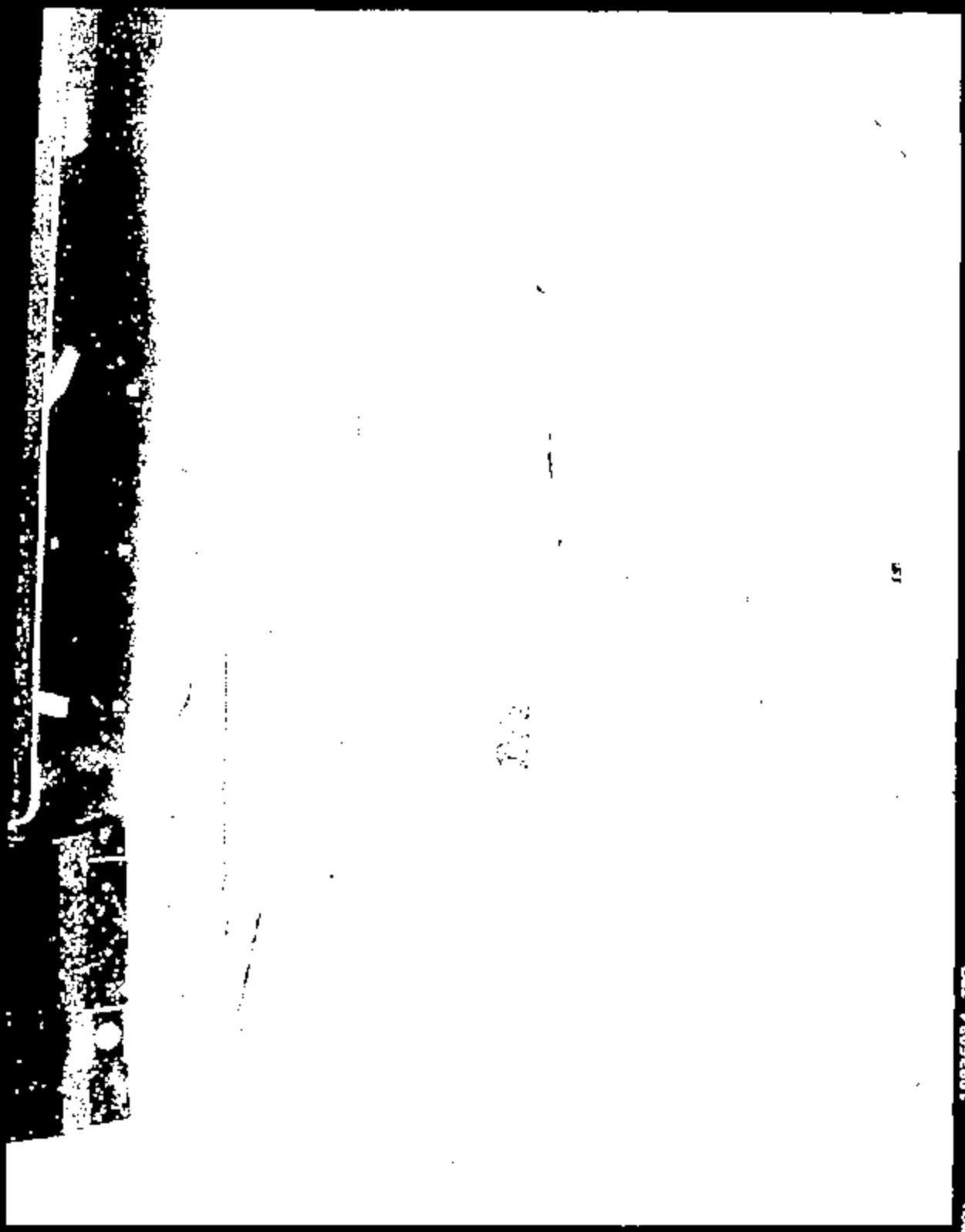

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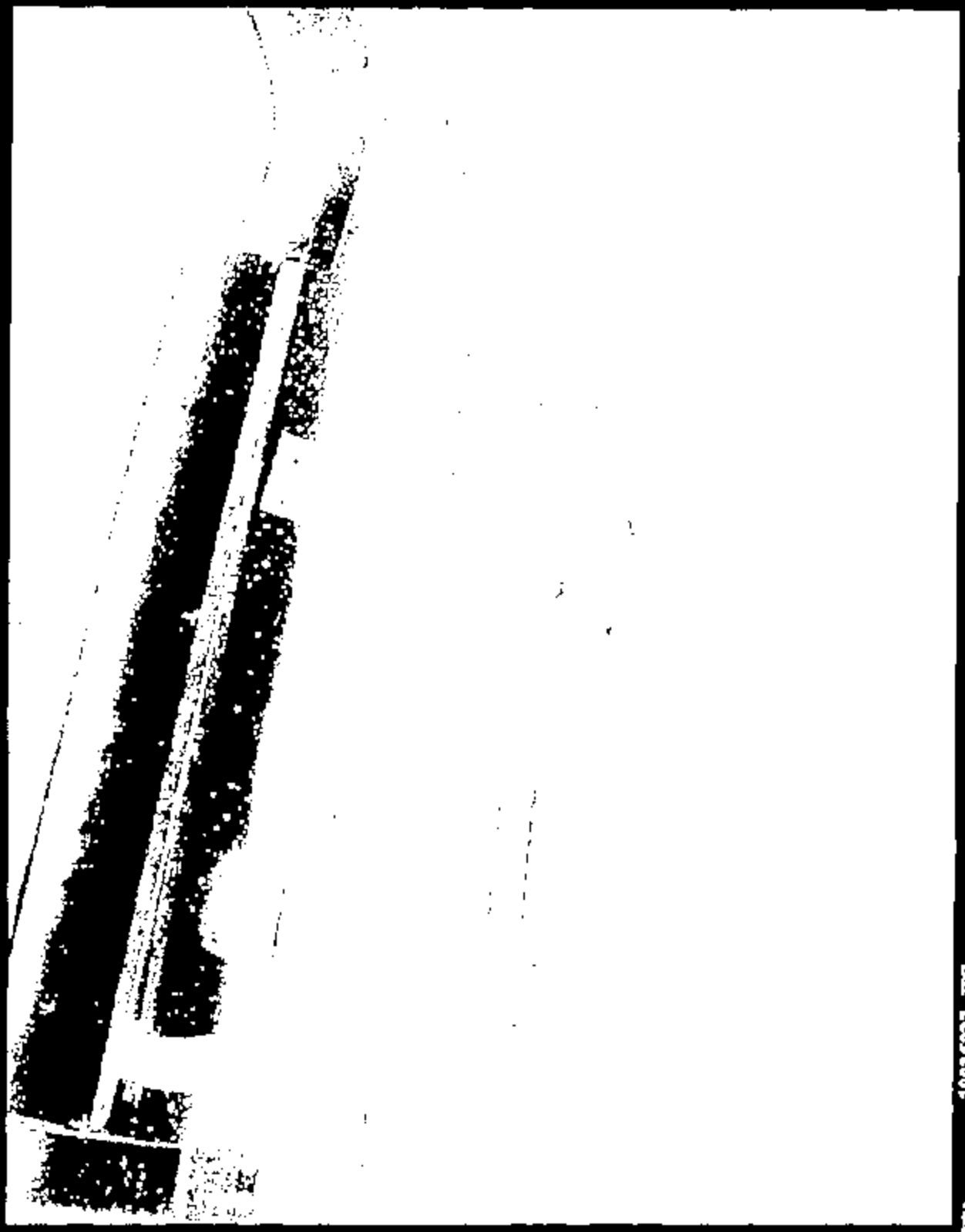
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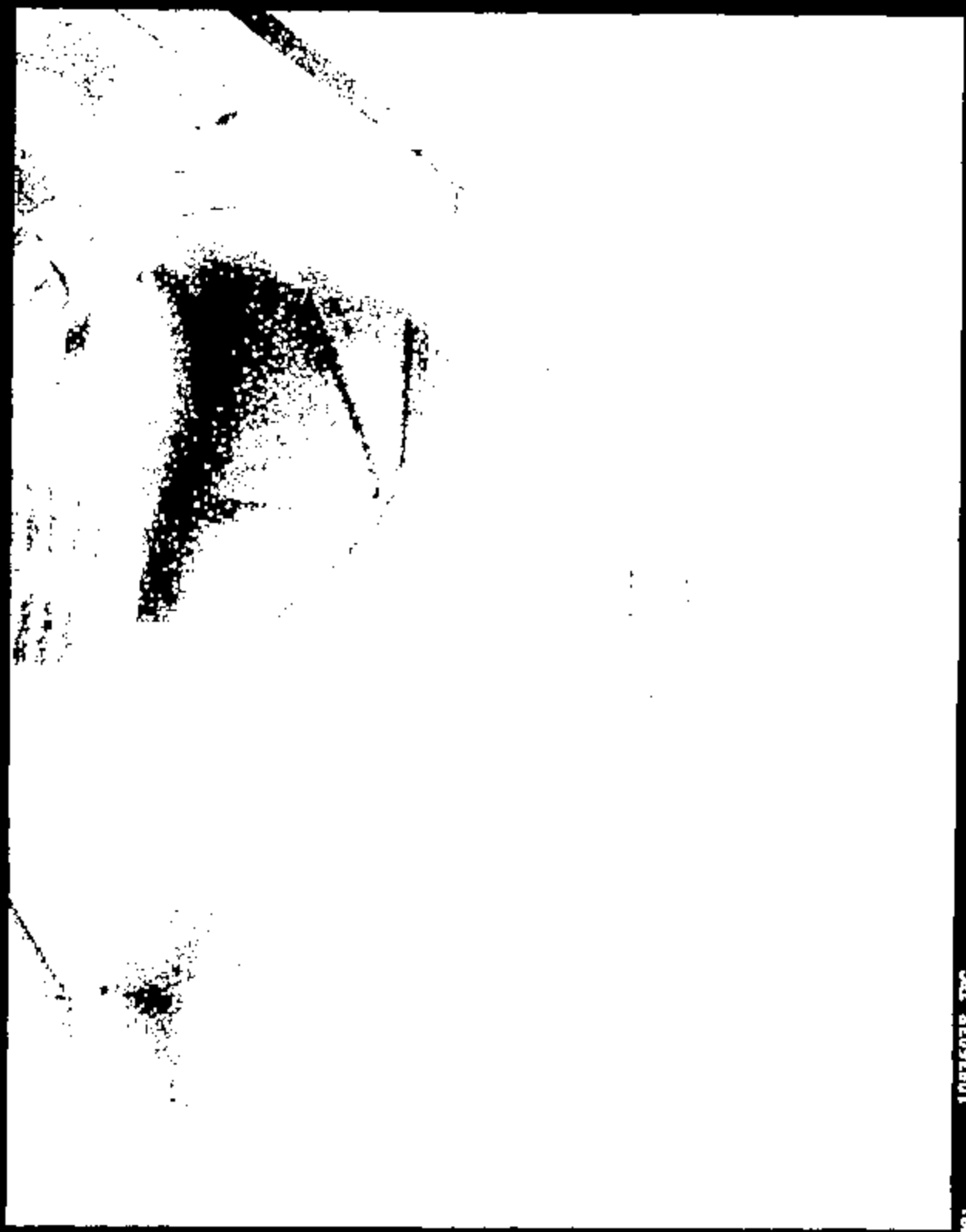

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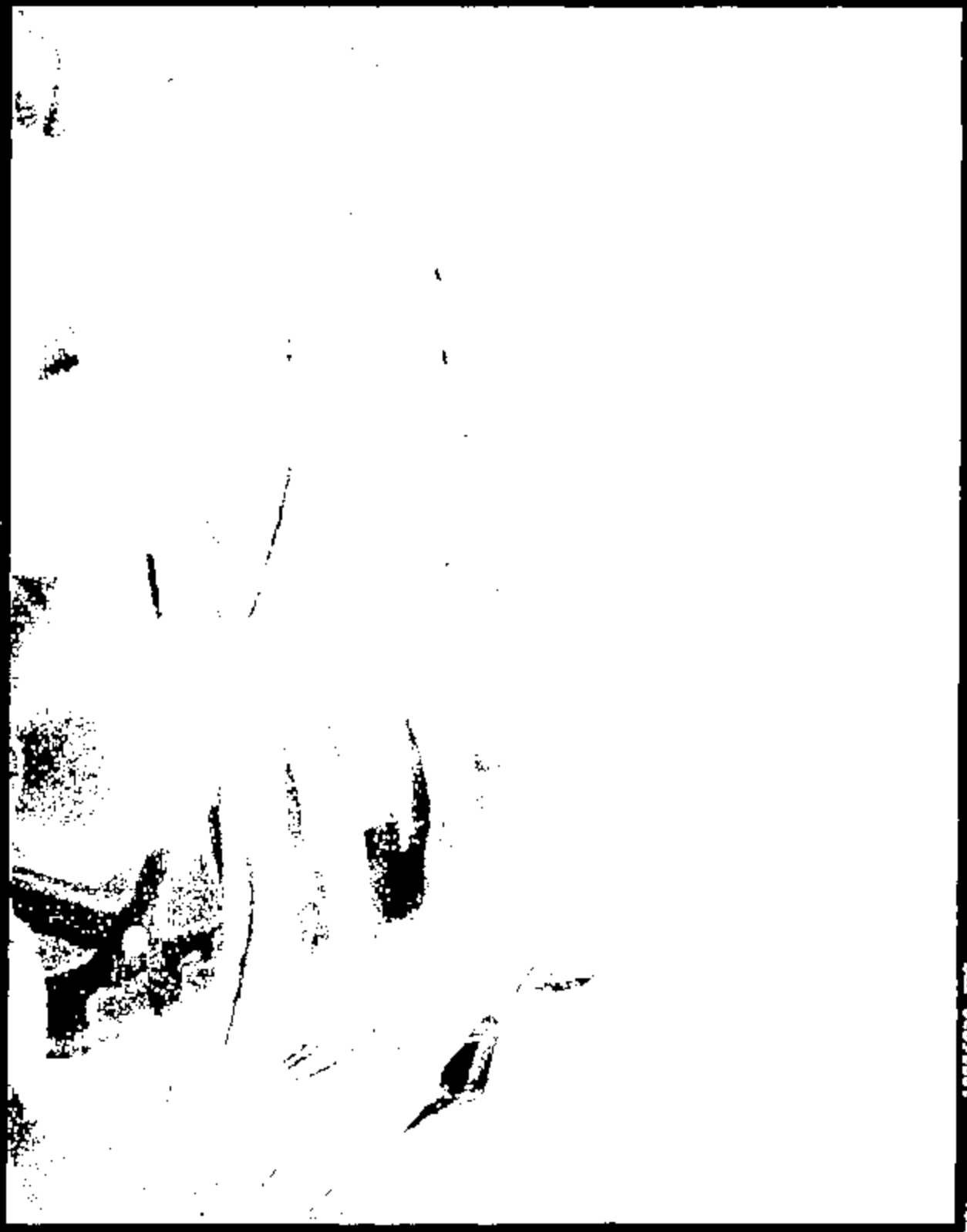

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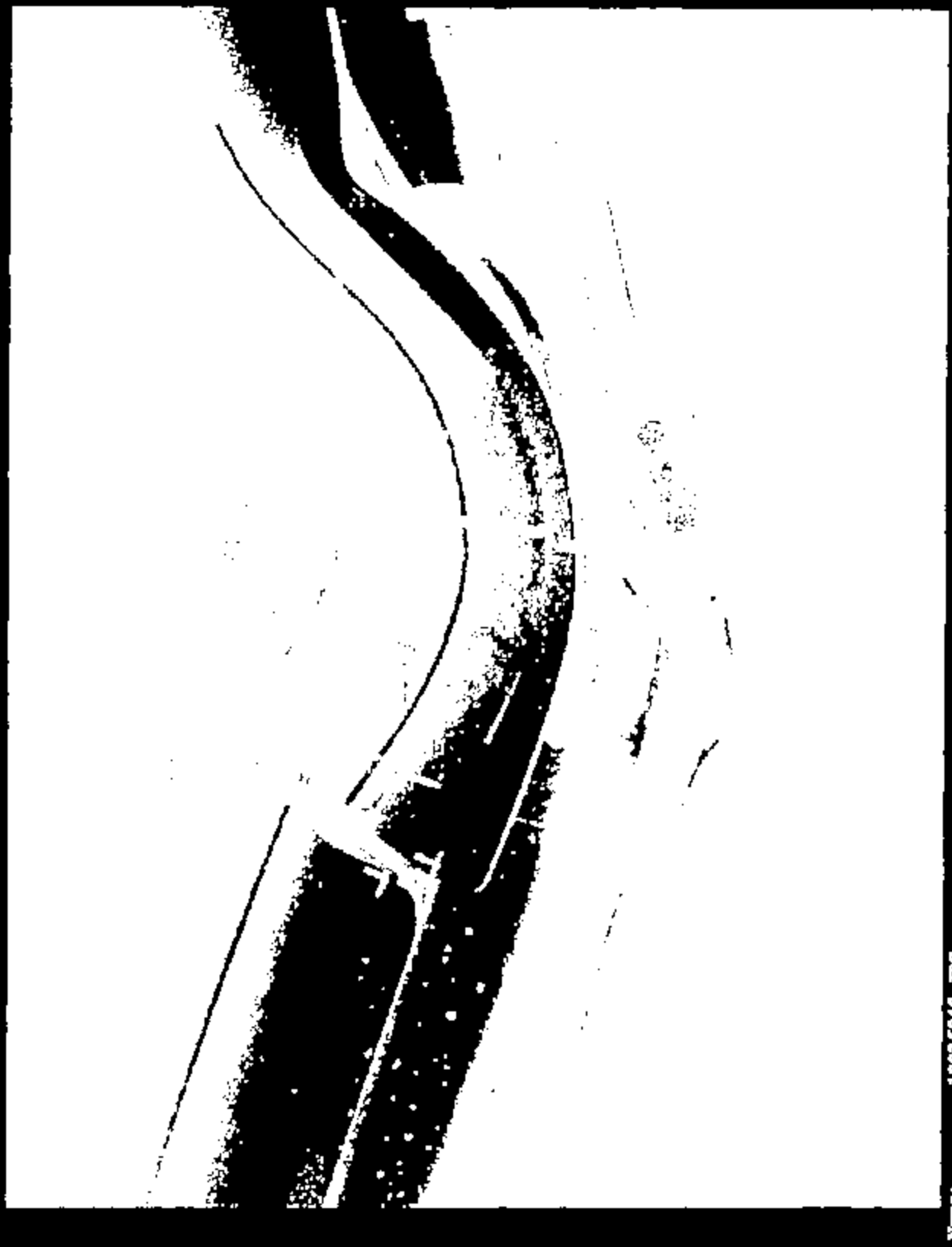
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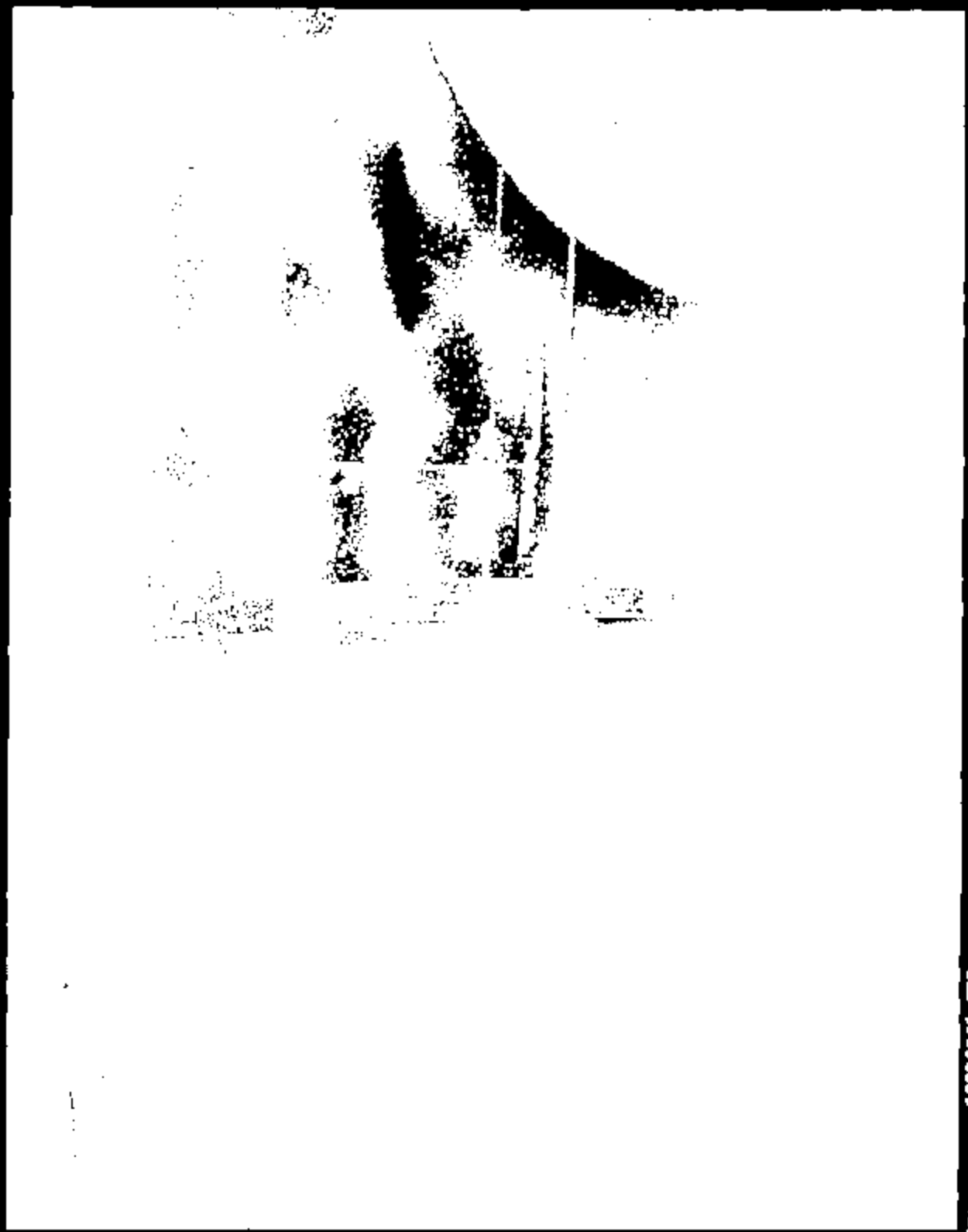

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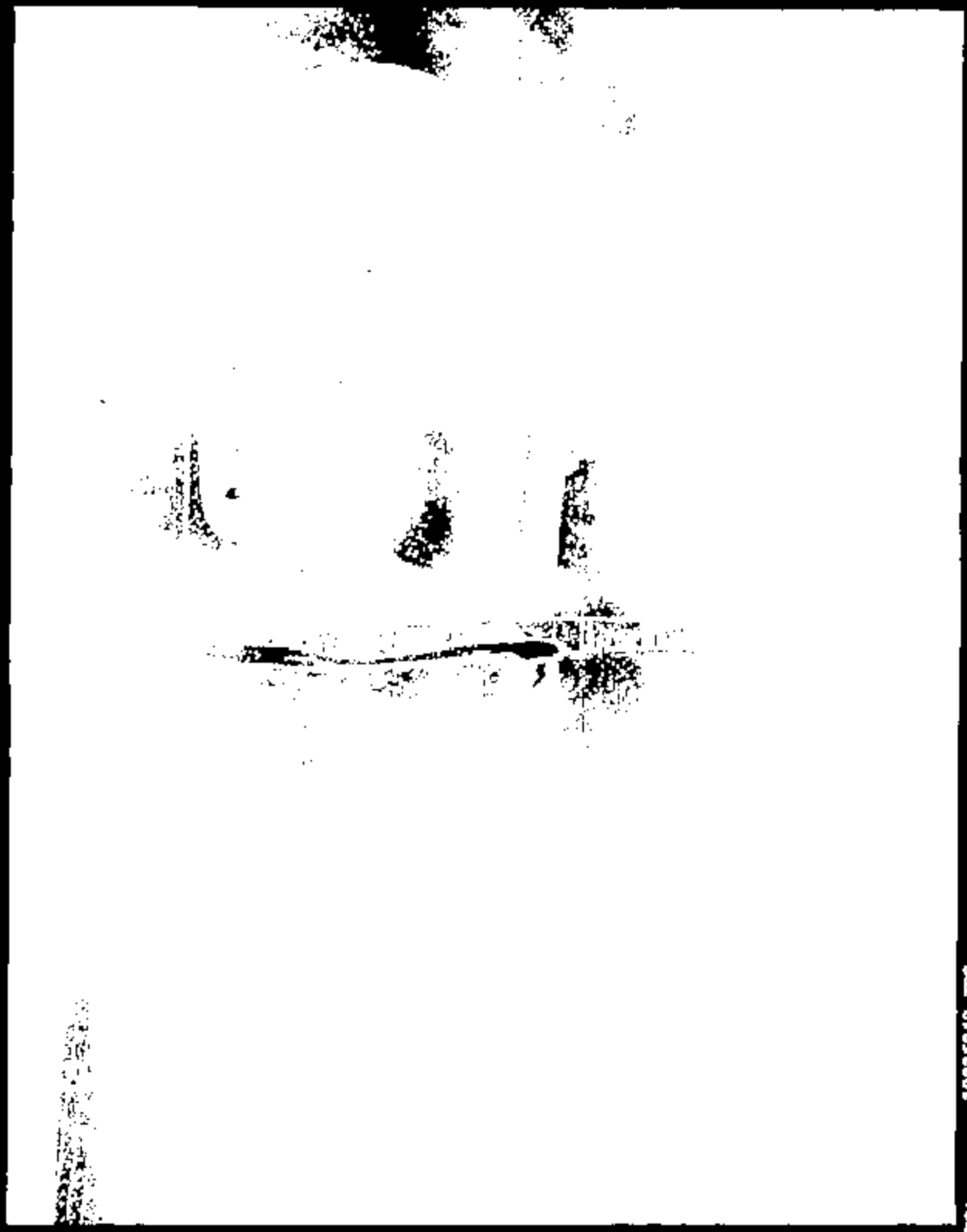

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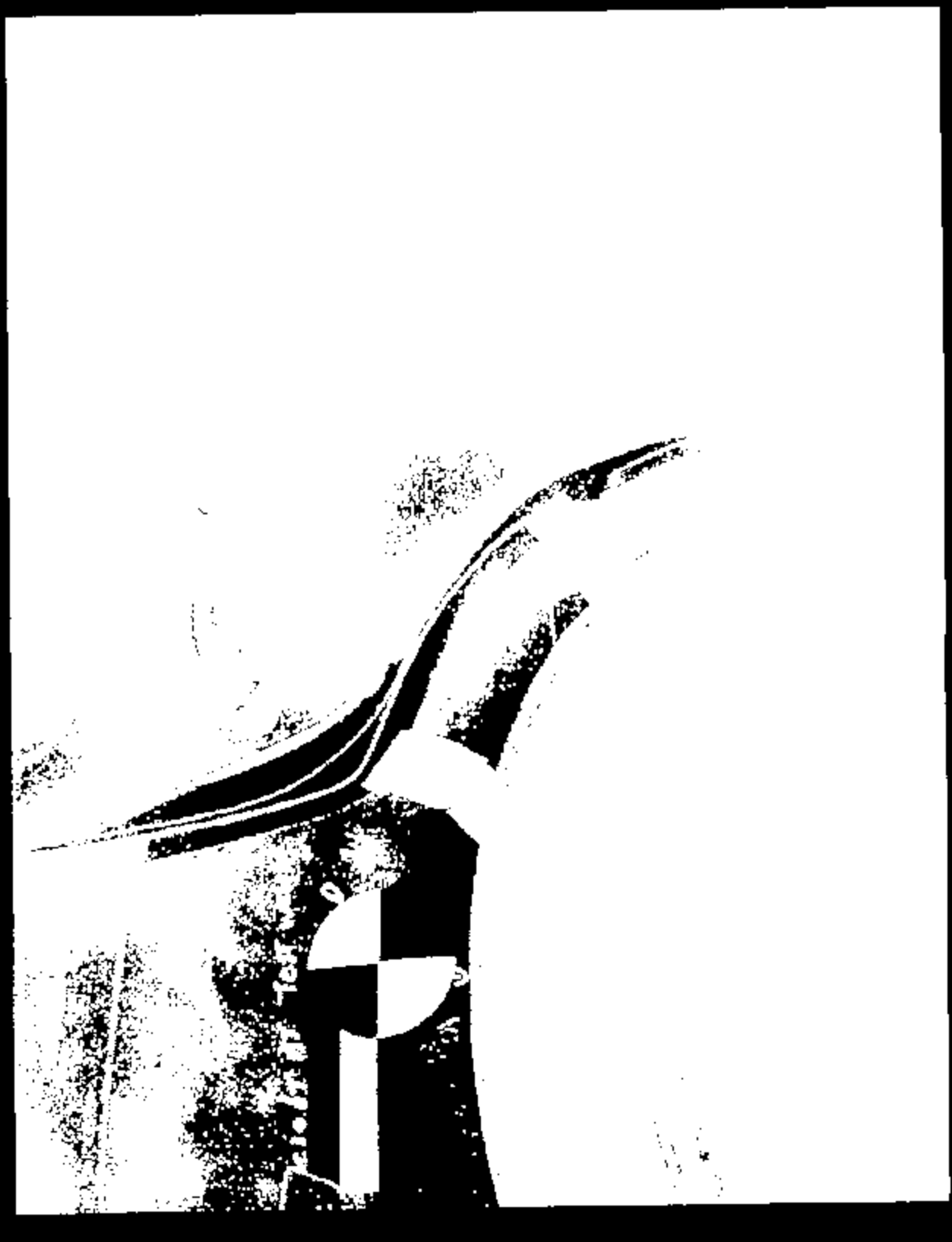


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10936046.JPG

TEST AUTHORIZATION

TEST ORDER NUMBER: TA5624

TO: D. Fouselnee cc: K. D. Arthurs

REQUEST DATE: 10/14/97	REQUESTED COMPLETION DATE: 11/12/97
REQUEST NUMBER: 16-J16-4331	PROBLEM NUMBER: n/a
REQUESTING ACTIVITY: Vehicle Safety & CAE	

TITLE OF TEST: 1999 FN145	(speed) 15 mph	(test description) Right Side Impact Pole		PARTS DUE DATE: n/a
TYPE OF TEST: [X] VEHICLE [ ] BENCH [ ] LABORATORY [ ] OTHER	VIN # or IDENTIFICATION VC9439 – 816W152 1LNLM82W0WY603696		VEHICLE MODEL & YEAR: 1999 FN145	PROD. OR ENG. LETTER: n/a
ENGINE NO. DISPL. CARB: 4.6L	TRANSMISSION: AODE	AXLE RATIO: n/a	TEST CONDUCTED TO CERTIFY CONTROL ITEM COMPLIANCE WITH GOV. REGULATIONS: Yes X No	DISPOSITION OF PARTS: n/a
TYPE OF FUEL: none	CONVERTER: n/a	IGNITION TIMING: n/a		PROCUREMENT REQ.? [ ] YES [X] NO IF YES, GIVE CODE
CRANKCASE OIL AND CAPACITY (L): n/a	TIRE SIZE AND PLY RATING: P225/60R-16 97S		REPORT CATEGORIES: [X] ENGINEERING [X] DATA [X] RAWDATA	MAIL REPORT TO: BLDG: Bld. 83 MAIL DROP: MD 3016 ADDRESS: 16-119
VEHICLE TEST WEIGHT: FRONT 2314 REAR 2305 TOTAL 4619	TIRE PRESSURE (psi): FRONT 32 REAR 32			

1. OBJECT OF TEST 2. TEST PROCEDURE 3. ITEMS TO BE TESTED (NAME, NUMBER, QUANTITY)

1) Conduct: (speed) 15 mph (year) 1999 (vehicle) FN145 (level) CP (mode) Right Side Impact Pole

"RECORD COPY" Destroy No. 2-2-12 2017

2) Velocity At Impact: 15 mph
Remote Fire Time: N/A
Positioning procedure: ST-14

3) Vehicle Year: 1999
Vehicle Line: FN145
Vehicle Level: CP

Additional Contacts:	(name)	(phone)	(pager number)
	D. R. Purdy	32-60496	DPUR
	E. Meier	84-57642	EMEI

Estimated test cost = $30,000.00

Test Dev. Engineer D.R.P. K.D.A.

REQUESTING SECT. NO:	WORK ORDER/ WORK TASK:	ISSUED/ REQUESTED BY:	PHONE:	APPROVAL:	TEST TYPE:	RISK:	SIGN OFF DATE:
T-851	J16	D. R. Purdy	32-60496	32-05159 K. D. Arthurs	n/a	n/a	n/a

REQUESTER: DO NOT WRITE BELOW THIS LINE

WORK STANDARDS NUMBER: TEST DESCRIPTION:

MANDATORY					OPTIONAL				
TEST ORDER NO:	CATEGORY	RESP. SECTION:	EST. COMP. DATE:	PEO	TEST ENG. INITIALS:	UNIT CODE:	TEST ORDER DATE:	USER CODE	PROD. CODE:

PERFORMING SECTION	HOURS	MATERIAL COST	COMP. COST	PARTS DUE DATE	EST. START DATE	EST. COMP DATE	STATUS	PERCENT COMPLETE
		$	$					
TOTAL		$						

General Request Information

Test Mode

15 mph
Right Side Impact Pole

Test Objectives: Cert (C) Verif (V) Dev (D) Audit (A) Safety Guideline (SG)

_____ FMVSS 204 - Steering Wheel Displacement
_____ FMVSS 208 - Frontal Occupant Protection
_____ FMVSS 212 - Wind Shield Retention
_____ FMVSS 214 - Side Impact Protection
_____ FMVSS 216 - Windshield Zone Intrusion
_____ Film Analysis
_____ Template
_____ FMVSS 301 - Fuel Saytem Integrity
_____ Rollover
_____ Pressure Check
_____ FMVSS 303 - NGV Fuel System Integrity
___D___ Sensor Development
_____ Door Openability
_____ ECE 32 Occupant Survival Space - Rear Impact
_____ ECE 33 Occupant Survival Space - Frontal Impact
_____ ECE 34 Fuel System Integrity
_____ ECE 94 Step II - Frontal Offset
_____ ECE / M / 193 STEP II - 300mm Barrier Side Impact
_____
_____
_____

Primary Test Vehicle Information

Use (Target/Bullet):	Bullet
Model Year:	1999
Vehicle Program:	FN145
Vehicle Name:	Town Car
Body Style:	sedan
Build Number:	VC9409
Tag Number:	318W152
VIN Number:	1LNLM82WXWY609636
Fuel System Rated Capacity:	19 Gal.
Prototype Level:	CP
Drive Side:	Left Hand Drive

<<< <<< END OF SHEET >>> >>>

Special Prep/Build Instructions
Primary Vehicle

Special Build Instructions

_____ Remove Side View Mirrors
_____ Remove Headrests
_____ Remove Hood
_____ Remove Arm rest
_____ Remove Bottom of Bumper Cover
_____ Cut Off Brake & Clutch Pedal
_____ Color Contrast Under Hood Components

Other, Specify:
__X__ Color Contrast Under Body Components
_____

Pryo Restraints Usage

_____ Left Front Air Bag
_____ Right Front Air Bag
_____ Left Side Air Bag
__X__ Right Side Air Bag
_____ Left Pyro Retractor
_____ Left Pyro Buckle
_____ Right Pyro Retractor
_____ Right Pyro Buckle

Other, Specify:

_____
_____

_____ Remote Fire Time:
(No fire time listed if sensor fired OR if no pyro restraints are used)

Special Pre-Test Preparation

Other, Specify:

_____
_____

<<< <<< END OF SHEET >>> >>>

Occupant / ATD Request
Primary Vehicle

		Occupant 1	Occupant 2
Type		BIOSID	None
*Instrumentation Level**		Development	Development
In-Vehicle Location		RF	RR
Verify:	*Seat Position Long*	mid track travel	
	Seat Position Vert	Full Down	
	Seat Back Angle	30.0 degrees	
Positioning Procdure		ST-14	ST-14
	Use Foot Rest	X	
	Take Seat Track Video		
	Special Positioning Instructions		
Dummy Adjustment	(arm angle)	0 deg (BioSID)	
Occupant Belted		NO	NO

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*See instrumentation request for detailed instrumentation information.

<<< <<< END OF SHEET >>> >>>

Dimensional Analysis Request
Primary Vehicle

Frontal Impacts

	74		
	65		
	[illegible]	Control Points (CAB)	Exterior
	1[illegible]		
	[illegible]	Collapse Distance Points	Exterior
	1[illegible]	[illegible] (CAB)	Exterior
	[illegible]	Frame Standard Bottom (CAB)	Exterior
	[illegible]	[illegible] Standard Bottom (CAB)	Exterior
	1[illegible]	[illegible] Collapse	Exterior
	[illegible]	[illegible]	Exterior/Interior
	[illegible]	Windshield [illegible]	Interior
	14[illegible]	[illegible] A-Pillar	Interior
	[illegible]	[illegible]	Exterior
	[illegible]	Header	Interior
	[illegible]	Steering Wheel Deformation/ Position	Interior
	[illegible]	Steering Column Mounts	Interior
	1[illegible]	Steering Column Targets	Interior
	[illegible]		
	1[illegible]	Seat Track to Floor Mounts	Exterior
	1[illegible]	Seat to Track Mounts	Exterior
	1[illegible]	Seat Position	Exterior
	[illegible]	[illegible] Points	Exterior
	1[illegible]	Knee Bolster	Interior
	1[illegible]	Seat Belt Mounts	Interior
	1[illegible]	[illegible]	Interior
	17[illegible]	Tunnel Hinge Pillar	Interior
	17[illegible]	Brake Bracket	Interior
	17[illegible]	Instrument Panel Mounts	Interior
	17[illegible]	H-Pt Targets	Exterior/Interior
	177	Toe Pan [illegible] & Seat [illegible]	Exterior/Interior
	[illegible]		
	[illegible]		
	[illegible]		
	[illegible]		
	[illegible]		
	[illegible]		
	4[illegible]	Full [illegible] Profile	
	5[illegible]	[illegible] Collapse	Exterior
	5[illegible]	[illegible] Steering Column Collapse	Exterior
	[illegible]		
	[illegible]		
	[illegible]		
	[illegible]		
	[illegible]	Lateral [illegible]	
		0	
		0	

Side Impacts

X	40[illegible]	Control Points (CAB)	Exterior
	40[illegible]	Control Points (TRUCK)	Exterior
	40[illegible]	[illegible] Targets & [illegible] Points (Wheel Lock)	Exterior
	41[illegible]	[illegible] Pillar	Interior
	41[illegible]	[illegible] Lateral [illegible] (B/A, H-Pt, etc.	Exterior/Interior
	41[illegible]	[illegible]	Exterior
	41[illegible]	[illegible]	Exterior
X	42[illegible]	[illegible] exterior section	Exterior
X	4[illegible]	[illegible] exterior section [illegible]	Exterior
X	4[illegible]	[illegible] exterior section [illegible]	Exterior
X	4[illegible]	[illegible] exterior section [illegible]	Exterior
X	4[illegible]	[illegible] exterior section	Exterior
X	4[illegible]	[illegible] exterior section [illegible]	Exterior
X	4[illegible]	[illegible] interior section	Interior
X	4[illegible]	[illegible] interior section	Interior
X	457	[illegible] interior section	Interior
X	4[illegible]	[illegible] exterior section [illegible]	Exterior
X	4[illegible]	[illegible] exterior section	Exterior/Interior
X	4[illegible]	[illegible] interior and exterior sections [illegible]	Exterior/Interior
X	4[illegible]	[illegible] interior and exterior sections [illegible]	Exterior/Interior
	4[illegible]	[illegible] interior and exterior sections [illegible]	Exterior/Interior
X		Lateral Distance [illegible]	Interior
		0	

Rear Impacts

	[illegible]	Control Points Rear	Exterior
	[illegible]	[illegible]	Exterior
	[illegible]	[illegible]	Exterior
	[illegible]	Rear Impact Standard Bottom	Exterior
	[illegible]	[illegible] (Unibody)	Exterior
	[illegible]	[illegible] (Frame)	Exterior
	[illegible]	[illegible] Mounts	Exterior
	[illegible]	[illegible]	Exterior
	[illegible]	[illegible]	Exterior
		0	
		0	

<<< <<< END OF SHEET >>> >>>

[illegible]

[illegible]

[illegible]

CRTS 0010936

Film Analysis & Photographic Services Request

Front Impact Film Analysis

_____ Head WRT Vehicle
_____ Shoulder WRT Vehicle
_____ Rocker WRT Ground

Other, Specify:

_____
_____

Side Impact Film Analysis

X Impact Speed
X Impact Angle
X Dummy Head wrt Vehicle Lateral
X Dummy Head wrt Vehicle Vertical
X Dummy Head wrt Vehicle Resultant
_____ Cart wrt Vehicle Impact Point
X Dummy Chest wrt Vehicle
_____ Cart wrt Vehicle Intrusion (overhead)
X Vehicle wrt Pole Intrusion (overhead)
X Dummy Head wrt Pole

Other, Specify:

_____
_____

Rear Impact Film Analysis

Other, Specify:

_____
_____

Still Photography

_____ Copies of Still Photo Proof Sheets Required
_____ Copies of Still Photos (4X5) Required
X Pre Test Documentation Photographs
X Post Test Documentation Photographs

High Speed Photographic Requirements

2 Copies of High Speed Film Required
_____ Copies of High Speed Film Required in VHS Format
_____ Digitization of Driver/ Passenger Kinematics
_____ Format

High Speed Cameras for Front Impact

On-Board Vehicle

_____ Onboard - LEFT Occupant Over Shoulder
_____ Onboard - RIGHT Occupant Over Shoulder
_____ Onboard - Driver "D" Ring
_____ Onboard - Driver Retractor (Lower)
_____ Onboard - Driver Lower Torso to I/P Contact, From Rear, Cross Car
_____ Onboard - Passenger Lower Torso to I/P Contact, From Rear, Cross Car
_____ Onboard - Passenger "D" Ring
_____ Onboard - Passenger Retractor (Lower)
_____ Onboard - Driver Door (Left Knee to Bolster)
_____ Onboard - Passenger Door (Knees to I/P)
_____ Onboard - Photo Sonic (Intermediate Shaft) - From Floor
_____ Onboard - Photo Sonic (Intermediate Shaft) - Side View From Tunnel
_____ Onboard - Fiber Optics (Intermediate Shaft) - From Floor
_____ Onboard - Fiber Optics (Intermediate Shaft) - Side View From Tunnel

Floor Coverage

_____ Left Occupant Over Shoulder, On tripod, from rear, cross car
_____ Right Occupant Over Shoulder, On tripod, from rear, cross car
_____ Left Occupant Over Shoulder, In lights
_____ Right Occupant Over Shoulder, In lights
_____ Overall Left
_____ Barrier to B-Pillar Left
_____ Dummy Kinematics & Velocity Left
_____ Overall Right
_____ Barrier to B-Pillar Right
_____ Dummy Kinematics & Velocity Right
_____ Top of Barrier - Overall View of Windshield
_____ Top of Barrier - Driver
_____ Top of Barrier - Passenger
_____ Left Front Rail Extension Bumper Close-up
_____ Right Front Rail Extension Bumper Close-up

Overhead Coverage

_____ Overhead - Overall
_____ Overhead - A-Pillar Forward
_____ Steering Column Displacement
_____ Scale
_____ Resection

Pit Coverage

_____ Pit - Overall
_____ Pit - A-Pillar Forward
_____ Pit - L/R Frame Horns (Crisscross)
_____ Pit - L/R Front Rails #1 X/M Rearward
_____ Pit - Steering Gear Close-up
_____ Pit - Fuel Tank
_____ Pieces of Plex-Glass to be removed from pit.

High Speed Cameras for Side Impact

On-Board Vehicle

_____ Front Dummy from Vehicle Hood
__X__ Front Dummy from Opposite Window Opening
_____ Rear Dummy from Opposite Window Opening
__X__ Rear Dummy from Vehicle Trunk
__X__ View of Front Seat to Show Dummy Interaction with Trim from Front (Fiber Optic)
__X__ View of Front Seat to Show Dummy Interaction with Trim from Right Front Hood - Replace 2.
__X__ View of Front Seat to Show Dummy Interaction with Trim from Center Front Hood
__X__ View of Front Seat to Show Dummy Interaction with Trim from rear seat

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Secondary Vehicle Coverage

_____ ON BOARD CART, Cart Centerline - View of Impact

Floor Coverage

__X__ Full Left View of Impact
__X__ Full Right View of Impact
__X__ Front 3/4 View of Impact
__X__ Rear 3/4 View of Impact
__X__ View of Cart for Velocity determination

Pit Coverage

__X__ Pole Contact - View of Impacted Side of Vehicle with Pole contact
__X__ Pole Contact - Overlap View of Impacted Side of Vehicle with Pole Contact

Overhead Coverage

__X__ Overall View of Impacted Vehicle Side Including Pole
__X__ view of impacted vehicle side focus on front door opening area

High Speed Cameras for Rear Impact

Floor Coverage

_____ Overall Left
_____ Velocity Left
_____ Overall Right
_____ Velocity Right
_____ A-Pillar Forward Left
_____ A-Pillar Forward Right
_____ Left B-Pillar Rearward (Target)
_____ Right B-Pillar Rearward (Target)
_____ Left Side 45 Degree Angle of Contact Area (from rear)
_____ Right Side 45 Degree Angle of Contact Area (from front)

Overhead Coverage

_____ Overhead - Overall
_____ Overhead - A-Pillar Forward
_____ Overhead - B-Pillar Rearward

Pit Coverage

_____ Pit - Fuel Tank
_____ Pit - Overlap of Fuel Tank
_____ Pit - Filler Pipe

All Other High Speed Photography

<<< <<< END OF SHEET >>> >>>

Instrumentation and Data Processing Request

Primary Vehicle Structural Instrumentation - Frontal Impact

	ACCELEROMETERS:	Long	Vert	Lat
___	Engine/Trans Upper	___	___	___
___	Engine/Trans Lower	___	___	___
___	Left Rocker at B-Pillar	___	___	___
___	Right Rocker at B-Pillar	___	___	___
___	Left Frame at B-Pillar	___	___	___
___	Right Frame at B-Pillar	___	___	___
___	Left A-Pillar Inside	___	___	___
___	Right A-Pillar Inside	___	___	___
___	Centerline Tunnel @ Dash	___	___	___
___	Centerline Tunnel Middle	___	___	___
___	Centerline Tunnel @ Seat Long Centerline	___	___	___
___	Left Floor Pan Under Seat	___	___	___
___	Left Door Inside Top	___	___	___
___	Left Shock Tower	___	___	___
___	Right Floor Pan Under Seat	___	___	___
___	Right Door Inside Top	___	___	___
___	Right Shock Tower	___	___	___
___	Rad Support Top - Center	___	___	___
___	#1 Crossmember Bottom	___	___	___
___	#2 Crossmember Bottom	___	___	___
___	Left Front Rail Forward of Sledrunners.	___	___	___
___	Left Front Rail Forward of Shock Tower	___	___	___
___	Right Front Rail Forward of Sledrunners.	___	___	___
___	Right Front Rail Forward of Shock Tower	___	___	___
___	Directly Below D.A. Point # 69	___	___	___
___	Directly Below D.A. Point # 64	___	___	___

Primary Vehicle Structural Instrumentation - Side Impact

	ACCELEROMETERS:	Long	Vert	Lat
___	L/ A-PILLAR_INSIDE_@_ROCKER	___	___	___
___	L/ A-PILLAR_INSIDE_@_HINGE	___	___	___
___	R/ A-PILLAR_INSIDE_@_HINGE	___	___	___
X	R/ F_DOOR_@_BELTLINE_MID	___	___	X
X	R/ F_DOOR_OVER_ARMREST	___	___	X
X	R/ F_DOOR_REAR_OF_SEAT_H-PT	___	___	X
X	R/ F_DOOR_SPEAKER_HOLE	___	___	X
X	R/ B-PILLAR_INSIDE_@_ROOF	___	___	X
X	R/ B-PILLAR_INSIDE_@_BELTLINE	___	___	X
___	L/ B-PILLAR_INSIDE_@_ROCKER	___	___	___
___	L/ R_DOOR_@_BELTLINE_MID	___	___	___
___	L/ R_DOOR_OVER_ARMREST	___	___	___
X	L/ ROCKER_@_FRONT_SEAT_MID	X	X	X
X	L/ ROCKER_@_REAR_SEAT_MID	X	X	X
X	R/ ROCKER_@_FRONT_SEAT_MID	X	X	X
X	R/ ROCKER_@_REAR_SEAT_MID	X	X	X
___	FRONT_FLOOR_PAN_@_C/L	___	___	___
___	FLOOR_X/MBR_@_L/F_SEAT_C/L	___	___	___
___	FLOOR_X/MBR_@_R/F_SEAT_C/L	___	___	___
___	C/L_TUNNEL_@_FRONT_SEAT	___	___	___
X	REAR_FLOOR_PAN_ABOVE_AXLE	X	X	X

Primary Vehicle Structural Instrumentation - Rear Impact

ACCELEROMETERS:	Long	Vert	Lat
____ Left Rocker Panel at "B" Pillar	____	____	____
____ Right Rocker Panel at "B" Pillar	____	____	____
____ Left Frame Rail at "B" Pillar	____	____	____
____ Right Frame Rail at "B" Pillar	____	____	____

OTHER STRUCTURAL ACCELS:	Long	Vert	Lat
X Near Fuel Inertia Switch (in trunk)	X	X	X
X L/Frame @ Front Seat Mid	X	X	X
X L/Frame @ Rear Seat Mid	X	X	X
X R/Frame @ Front Seat Mid	____	____	X
X R/Frame @ Rear Seat Mid	____	____	X

Secondary Vehicle Structural Instrumentation

ACCELS:		Long	Vert	Lat
____	MDB_CENTER_OF_GRAVITY	____	____	____
____	MDB_LEFT_FRAME_RAIL	____	____	____
____	MDB_RIGHT_FRAME_RAIL	____	____	____
____	MDB_REAR_HONEYCOMB_@_C-L	____	____	____
____	MDB_BUMPER_FACE_@_C-L	____	____	____
____	MDB_BUMPER_FACE_@_L-S	____	____	____
____	MDB_BUMPER_FACE_@_R-S	____	____	____

	Long	Vert	Lat
____ Left Rocker Panel at "A" Pillar	____	____	____
____ Right Rocker Panel at "A" Pillar	____	____	____
____ Left Rocker Panel at "B" Pillar	____	____	____
____ Right Rocker Panel at "B" Pillar	____	____	____

OTHER SECONDARY VEHICLE ACCELS:	Long	Vert	Lat
_____	____	____	____
_____	____	____	____

Primary Vehicle Systems Instrumentation

SENSOR ACCELS:	Long	Vert	Lat
____ L/Rad Upper Front	____	____	____
____ C/Rad Upper Front	____	____	____
____ R/Rad Upper Front	____	____	____
____ C/L Tunnel Forward	____	____	____
____ C/L Tunnel Between Seats	____	____	____
____	____	____	0
____	____	____	0

MONITOR AIR BAG SENSORS:

- X See Sensor Map
- X Monitor Closure of Each Specified Sensor
- X Monitor Closures of Single Pt Elect Sensor

MONITOR AIR BAGS STATUS:

- ____ Driver Squib Voltage
- ____ Driver Squib Current
- ____ Driver Bag Pressure
- X RH Side Impact Air Bag Squib Voltage
- X RH Side Impact Air Bag Squib Current
- ____ Passenger Bag Pressure
- ____ Passenger Inflator Pressure

Delete

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RESTRAINT LOADS:

- ____ Left Belt Tongue - Strain Gaged
- ____ Left Pyro-Technic Buckle Squib Voltage
- ____ Left Pyro-Technic Buckle Squib Current
- ____ Right Belt Tongue - Strain Gaged
- ____ Right Pyro-Technic Buckle Squib Voltage
- ____ Right Pyro-Technic Buckle Squib Current
- ____ Left Lap Belt at Anchor Load
- ____ Left Torso Belt at Retractor Load
- ____ Left Torso Belt at D-ring Load
- ____ Right Lap Belt at Anchor Load
- ____ Right Torso Belt at Retractor Load
- ____ Right Torso Belt at D-ring Load

STEERING COLUMN:

- ____ Stroke Break Wires
- ____ Tilt Mechanism Break Wires
- ____ String Pot
- ____ Load Cell (5 Axis)
- ____
- ____

SWITCHES:

- ____ Engine to Rad Support left
- ____ Engine to Rad Support center
- ____ Engine to Rad Support right
- ____ Brake booster to shock tower
- X Foil Contact Switch - R Front Seat Back Side
- X Foil Contact Switch - R Front Seat Cushion Side

FUEL SYSTEM:

- X Inertia Fuel System Cut-Off Switch

Delete

ANGULAR MOTION SENSORS

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- ____
- ____

VEHICLE STRING POTS

- ____
- ____