

EA03-010

Ford

10/22/03

Attachment F

Continuation

Book 12 of 24



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**FINAL TEST REPORT**

**Global Test Operations  
 Advanced Vehicle Technology**

**TO:** D. Ferrigo

Test Order No. T-B7925  
 Work Task W. O. No. F09  
 Test Date 8/26/99  
 Date Reported 10/29/99  
 Sheet 1 of 107

**SUBJECT:** Crash Test 11567 (90° Front Fixed Barrier Impact at 34.9 ± 0.4 mph, 56.2 ± 0.6 km/h) - 2000 Saab (D186) 4-Door Sedan - 2000 Certification Program

**REQUESTED BY:** Vehicle Crash Safety Department, Advanced Vehicle Technology - D. Ferrigo

**OBJECT:** To provide occupant protection data relative to the front barrier impact test requirements of the current FMVSS No. 208 (U.S. CFR Doc. No. 98-4358, Canadian Gazette SOR/97-447)

**SUMMARY OF TEST RESULTS:**

- See Attachment 1 for injury criteria data.
- See Attachment 2 for vehicle observations and non-FMVSS data.

The Test Authorization for this crash indicated that the vehicle is representative of a design level suitable for a certification test. To the best of my knowledge, the crash testing was performed on the same vehicle as identified in the Test Authorization; the results reported herein represent the performance of this specific vehicle, and the testing was performed in accordance with the listed procedures. Any procedure deviations significant to the test objectives above are identified in this report.

*M. L. Foster*  
 M. Foster  
 Test Development Engineer

*S. Lesh*  
 Concur: S. Lesh  
 Section Supervisor  
 Operations Engineering Section

**VEHICLE DATA:**

<b>Make and Model</b>	2000 Sable (D186) 4-Door Sedan (1PP Prototype)	
<b>ID Number</b>	1MEPMSQUSYA600001, 206-W-165, YA600001	
<b>Power Train</b>	3.0L, EFI, Automatic (AK4N) Transaxle	
<b>Fuel Tank(s)</b>	Usable Capacity: 16.0 gal. (60.6L) Test Condition: Empty	
<b>Front Seat(s)</b>	Type: Bucket  Cover: Cloth  Tracks/Position: LF: 6-Way Power/Mechanical Mid and Down RF: Manual/Mechanical Mid  Seat Backs/Position: Adjustable/LF: 27.5° Rear of Vertical, RF: 27.9° Rear of Vertical  Head Restraints/Position: Adjustable/Up	
<b>Restraint System</b>	LF: 3-Point Continuous Loop Active Belt with Pyrotechnic Buckle and Steering Wheel Air Bag  RF: 3-Point Continuous Loop Active Belt with Pyrotechnic Buckle and Instrument Panel Air Bag	
<b>Occupants</b>	LF: 50th Percentile Male, Hybrid III, Instrumented No. 324  RF: 50th Percentile Male, Hybrid III, Instrumented No. 323	
<b>Test Weight</b>	Front: 2334 lb (1059 kg) Rear: 1559 lb (707 kg) Total: 3893 lb (1766 kg)  The test weight includes: <ul style="list-style-type: none"> <li>• the "as received" unloaded vehicle weight</li> <li>• Minimum production options (simulated)</li> <li>• 2 occupant(s) (described above)</li> <li>• 200 lb (90.7 kg) luggage (simulated)</li> </ul>	
<b>Tires</b>	Front: P215/60R16 Rear: P215/60R16 Spare: Removed	30 psi (207 kPa) 30 psi (207 kPa)
<b>Bumpers</b>	Front: Steel Rear: Removed	
<b>Significant Content or Accessories:</b>	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):

Occupant Crush Protection, T657-ST-25 dated March 3, 1998.

**2. Significant Deviations from T657-ST-25**

None

- 3. Instrumentation:** The instrumentation equipment set up for this test was completed following approved procedures which require engineering sign-off after each major step. The instrumentation equipment and systems used meet the SAE J211 June 80 series of recommended practices (Instrumentation for Impact Tests J211, J211a, or J211b) and were calibrated using secondary standards that are traceable to the National Institute of Standards and Technology (NIST).

**4. Remarks**

Crash movies, pre- and post-crash still images of the test vehicle and copies of this report are available through the Operations Engineering Section, Safety Laboratories Department, CTO. The crash still images are stored and archived on CD ROMs. The file names of the still images are listed under crash number and a three digit sequence number which are 11567001 through 11567076.

## ATTACHMENT 1

Occupant Injury Data (CFR/VSS 208)

	<u>L. F. Dummy</u>	<u>R. F. Dummy</u>
Head Injury Criteria (HIC)	316	221
Interval 11	56 ms	62 ms
12	92 ms	98 ms
Chest resultant acceleration level at 3 ms cumulative duration	43 g	41 g
Chest Deflection (Hybrid III)	1.1 in	0.9 in
Peak axial compression load:		
Left femur	295 lb	934 lb
Right femur	356 lb	400 lb
Peak axial tension load:		
Left femur	224 lb	80 lb
Right femur	194 lb	178 lb
Dummy contained within the vehicle during the crash	Yes	Yes

The dummy temperature, immediately prior to the test, was within the specified test range of 69°F to 72°F.

Time histories of the dummy instrumentation are included in this report.

## ATTACHMENT 2

1.0 Vehicle Crush, Film Analysis and/or Instrumentation Data

	<u>Maximum Dynamic Longitudinal Crush</u>	
	<u>in.</u>	<u>(mm)</u>
Left Side	28.0	(711)
Right Side	27.7	(704)

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 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.

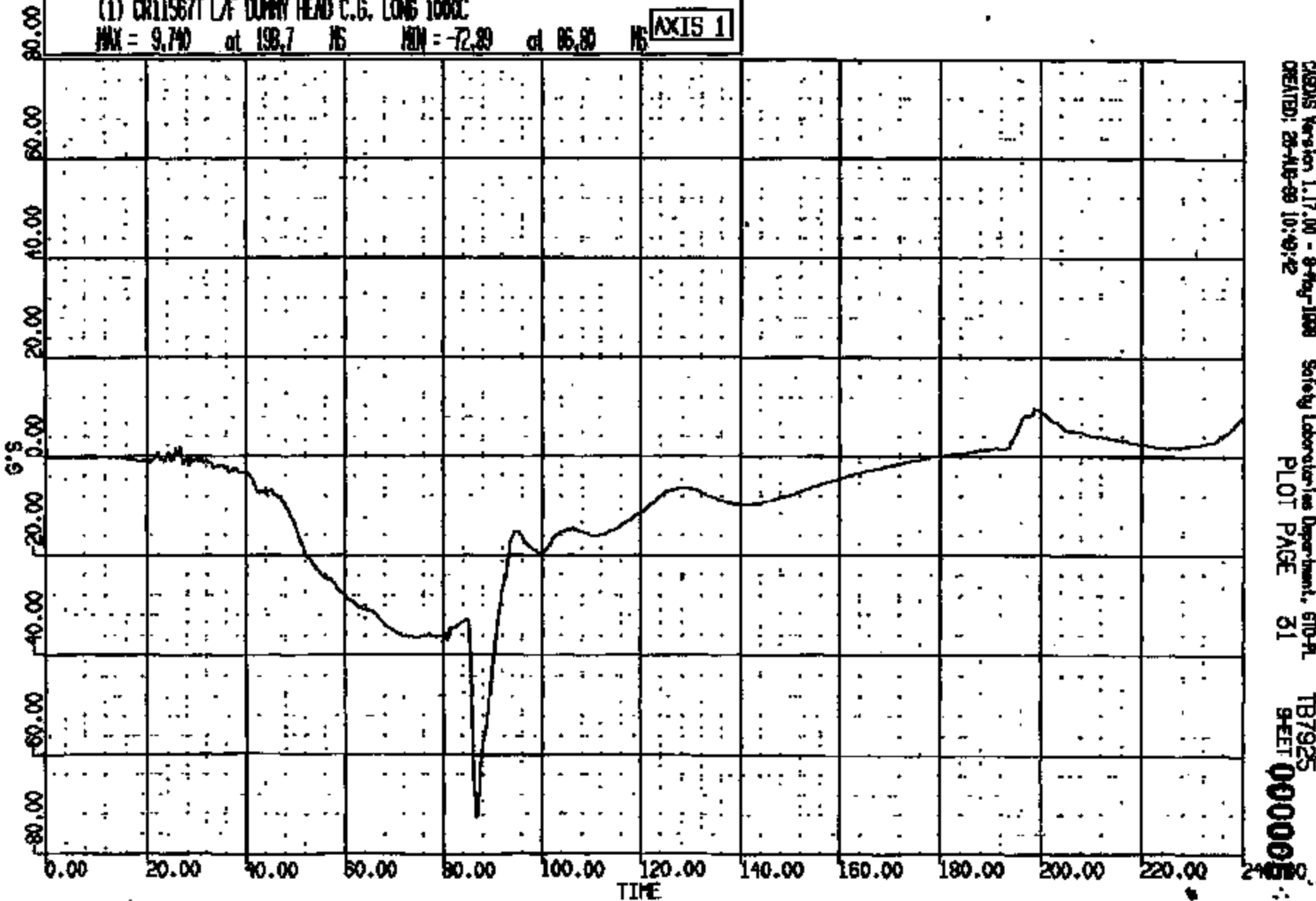
Time histories of any requested derived data (i.e. integrations, etc.) were given to the requesting activity and are not included in this report.

CR R: 11567 TO: TB7925 DATE: 990825 08:42:00  
2000 D-198

(1) CR11567T L/F DUNNY HEAD C.G. LONG 1000C

MAX = 9.740 at 198.7 MS MIN = -72.89 at 85.80 MS

AXIS 1



CRSIS Version 1.17.00 - 9-May-1999  
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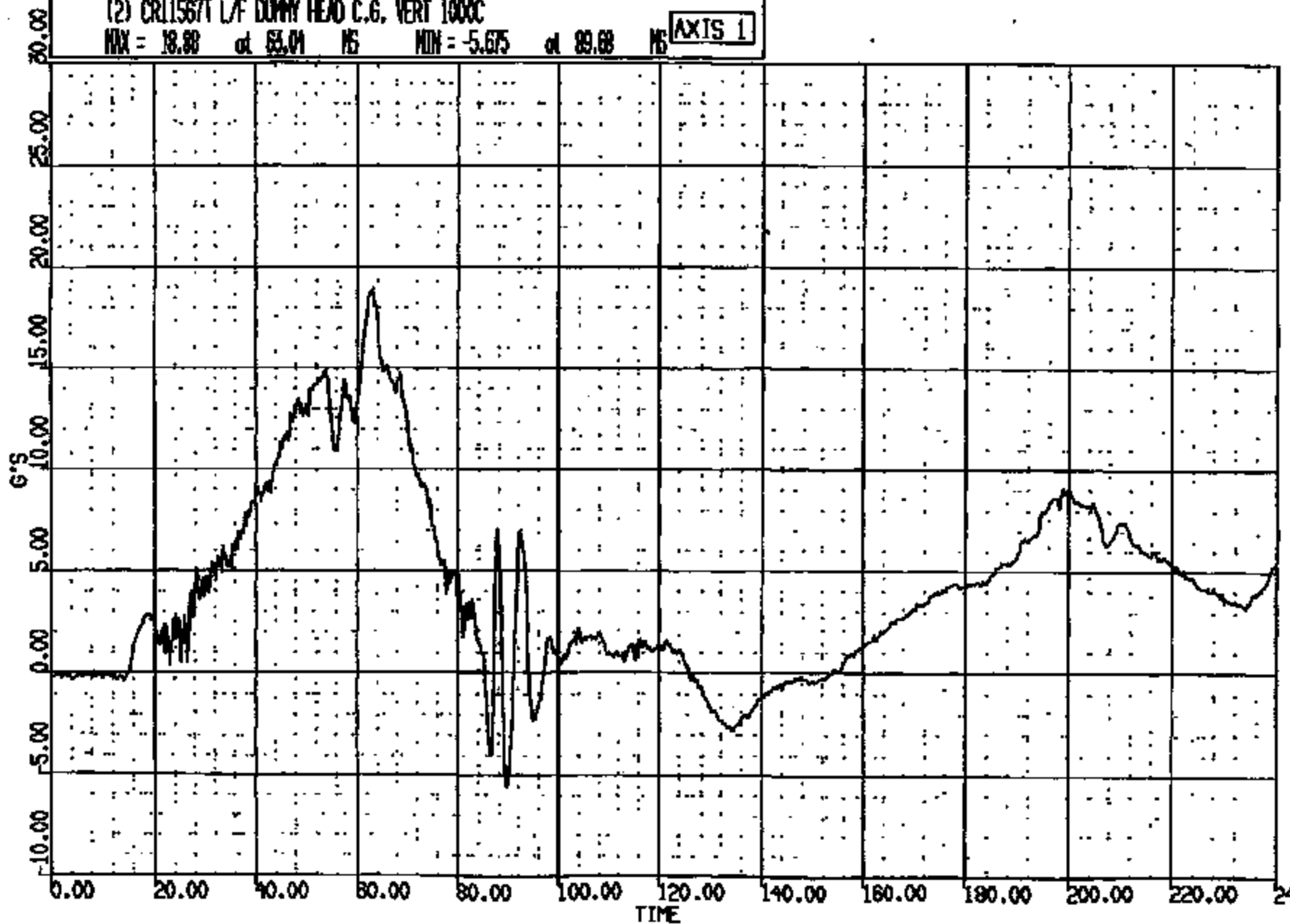
Safety Laboratories Department, STD-PL  
PLOT PAGE 01

TB7925  
SHEET 000008

CRTS 0011567

007 R: 11567 TO: TB7925 DATE: 890828 09:42:00  
R000 D-188

(2) CR11567/LF DUMMY HEAD C.G. VERT 1000C  
MAX = 18.88 at 65.01 MS MIN = -5.675 at 89.68 MS **AXIS 1**



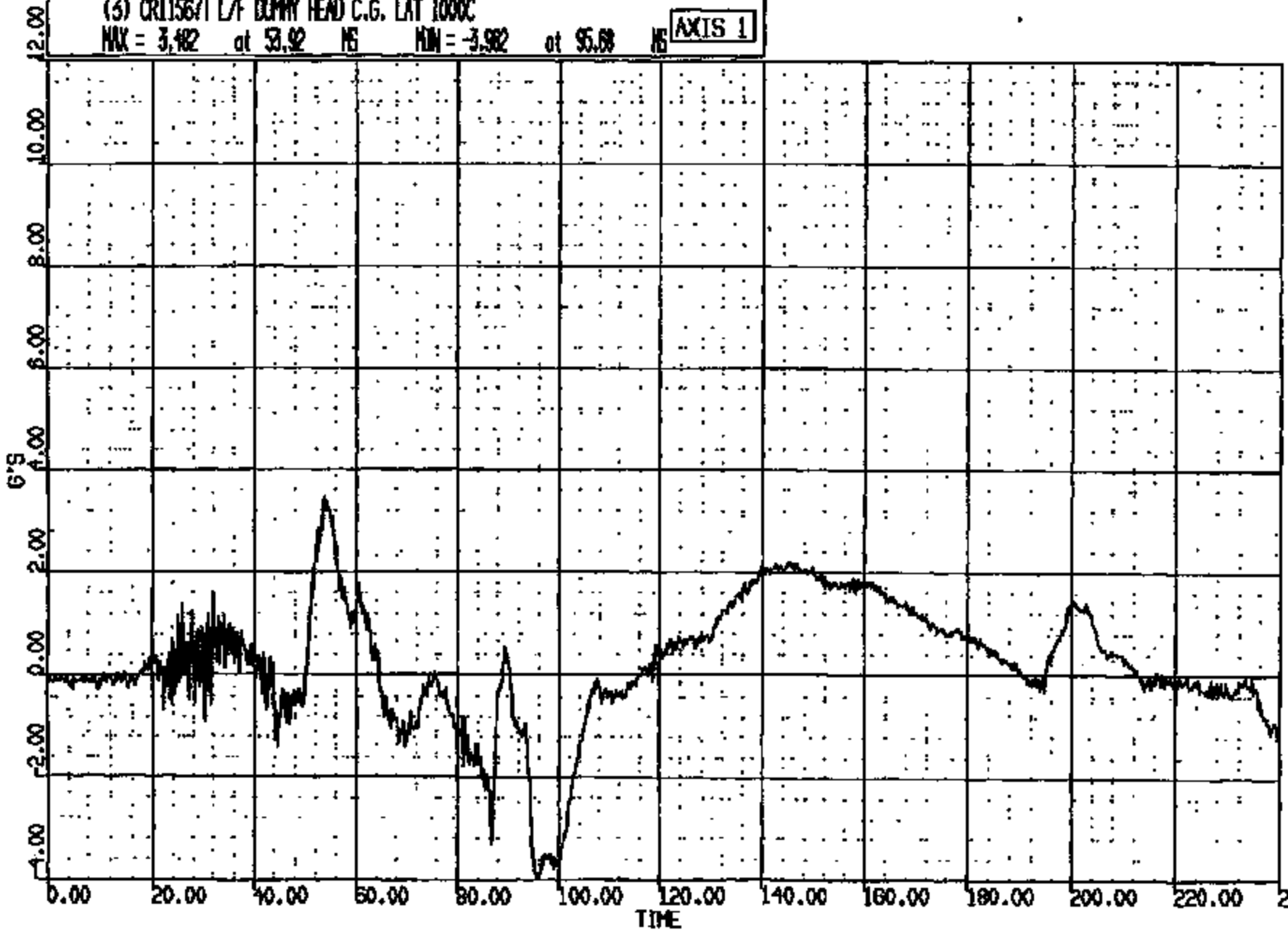
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CR11567



CR R: 11567 TO: T87925 DATE: 990826 09:42:00  
2000 D-199

(3) CR11567 L/F DUMMY HEAD C.G. LAT 1000C  
MAX = 3.482 at 53.92 MS MIN = -3.982 at 95.68 MS **AXIS 1**

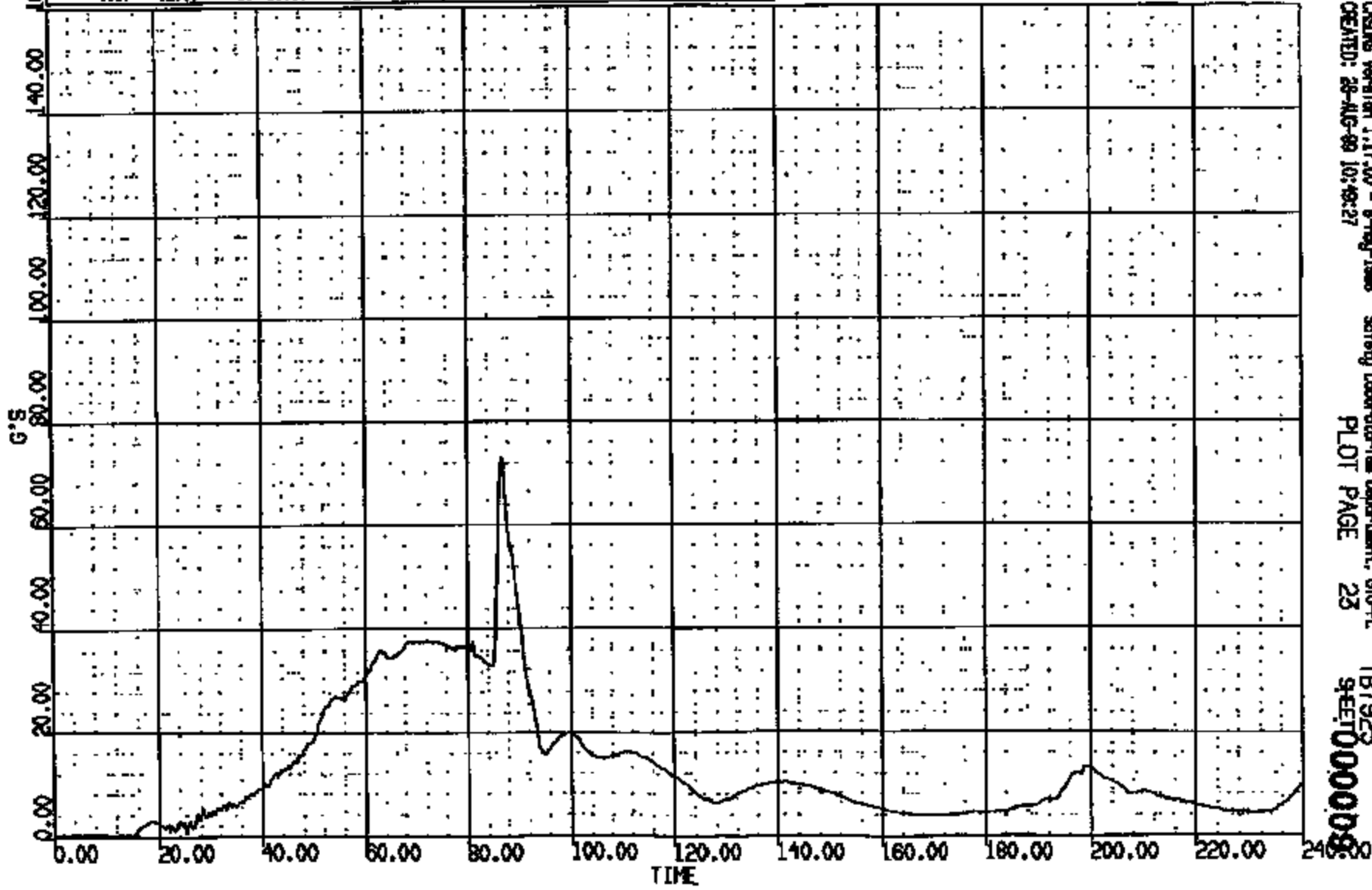


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SHEET 000009

CRTS 0011567

IIROR: 11567 TO: T87925 DATE: 880826 09:42:00  
 IIROR: 0-1188  
 IIROR: 010. DLR: 240.0 T1/T2: 80.8 // 88.8 RND  
 IIROR: 178. DLR: 85.0 T1/T2: 50.2 // 88.8 RND  
 IIROR: 178. DLR: 15.0 T1/T2: 73.7 // 88.8 RND

(1000) CRT1567 L/F DUMMY HEAD C.G. RES 1000C  
 MAX = 72.99 at 86.80 MS MIN = 0.1127E-01 at 10.85 MS AXIS 1

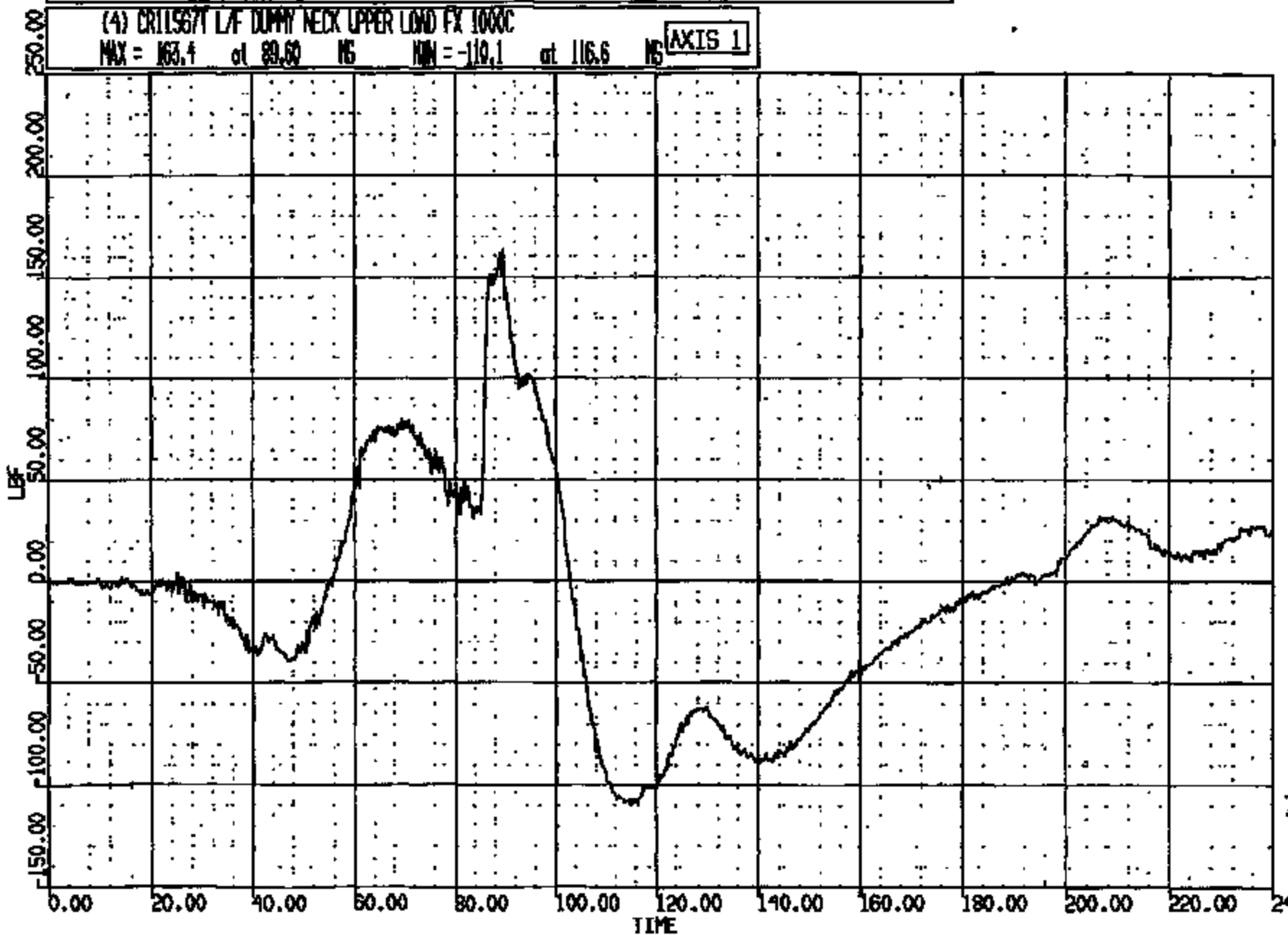


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CRTS 0011567

CR R: 11567 TO: T87925 DATE: 890825 09:42:00  
2000 D-188

(4) CR11567T L/F DUMMY NECK UPPER LOAD FX 1000C  
MAX = 163.4 at 89.60 MS MIN = -110.1 at 116.6 MS **AXIS 1**



CRSIS Version 1.17.00 - 8-Aug-1988  
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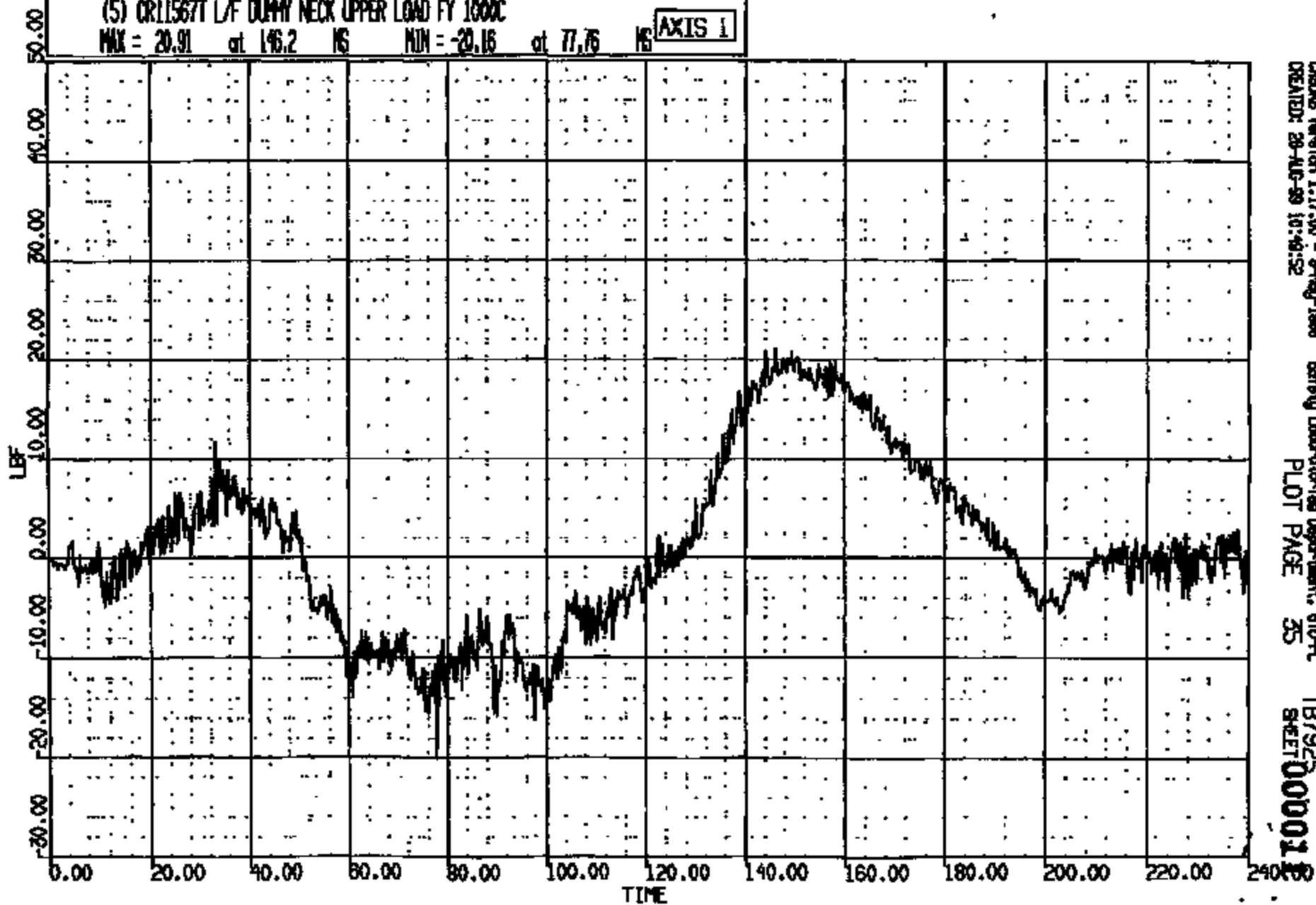
Safety Laboratory Department, 610-PL  
PLOT PAGE 34

T87925  
SHEET 000018

CRTS 0011567

CR R: 11567 TO: T87925 DATE: 920825 09:42:00  
2000 D-188

(5) CR11567T L/F DUMMY NECK UPPER LOAD FY 1000C  
MAX = 20.91 at 146.2 MS MIN = -20.16 at 77.76 MS **AXIS 1**

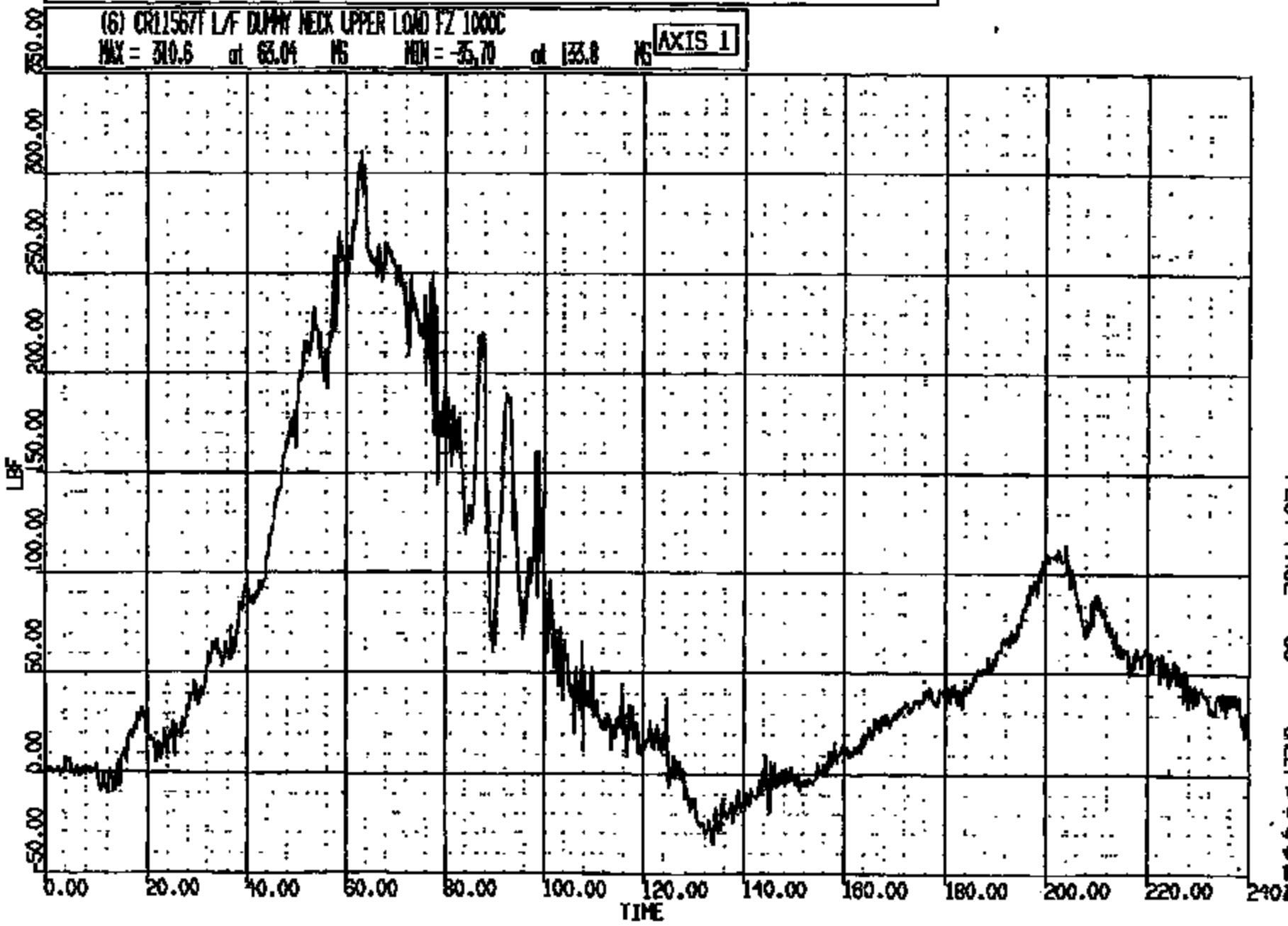


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SERIAL 00001

CRTS 0011567

CR R: 11567 TO: TB7925 DATE: 990826 09:42:00  
2000 D-198

(6) CR11567 L/F DUMMY NECK UPPER LOAD FZ 1000C  
MAX = 310.6 at 63.04 MS MIN = -35.70 at 133.8 MS **AXIS 1**

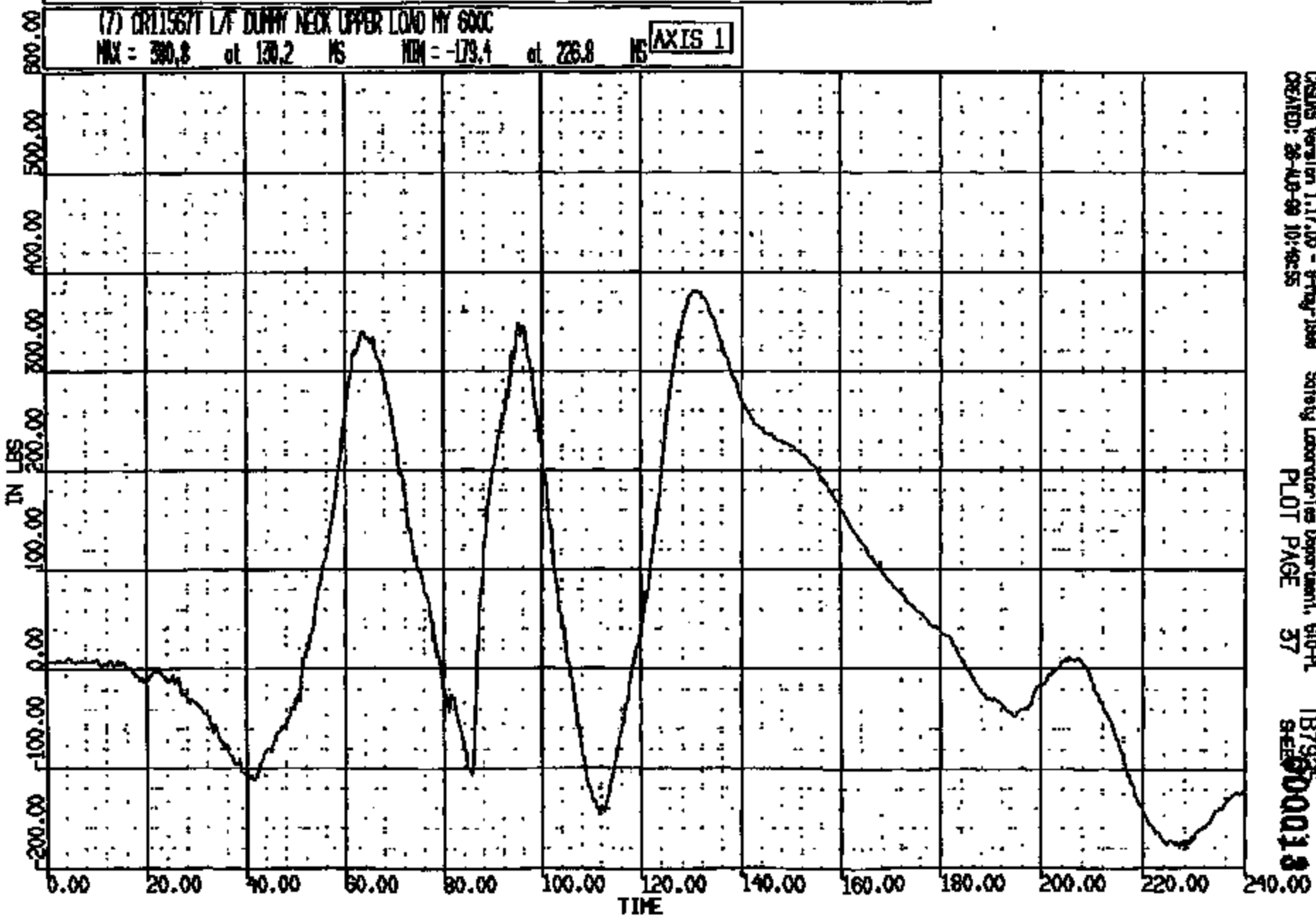


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SHEET 00001

CRIS 0011567

CR R: 11567 TO: TB7925 DATE: 200828 09:42:00  
2000 D-166

(7) CR11567 L/F DUMMY NECK UPPER LOAD MY 600C  
MAX = 300.8 at 130.2 MS MIN = -179.4 at 226.8 MS **AXIS 1**

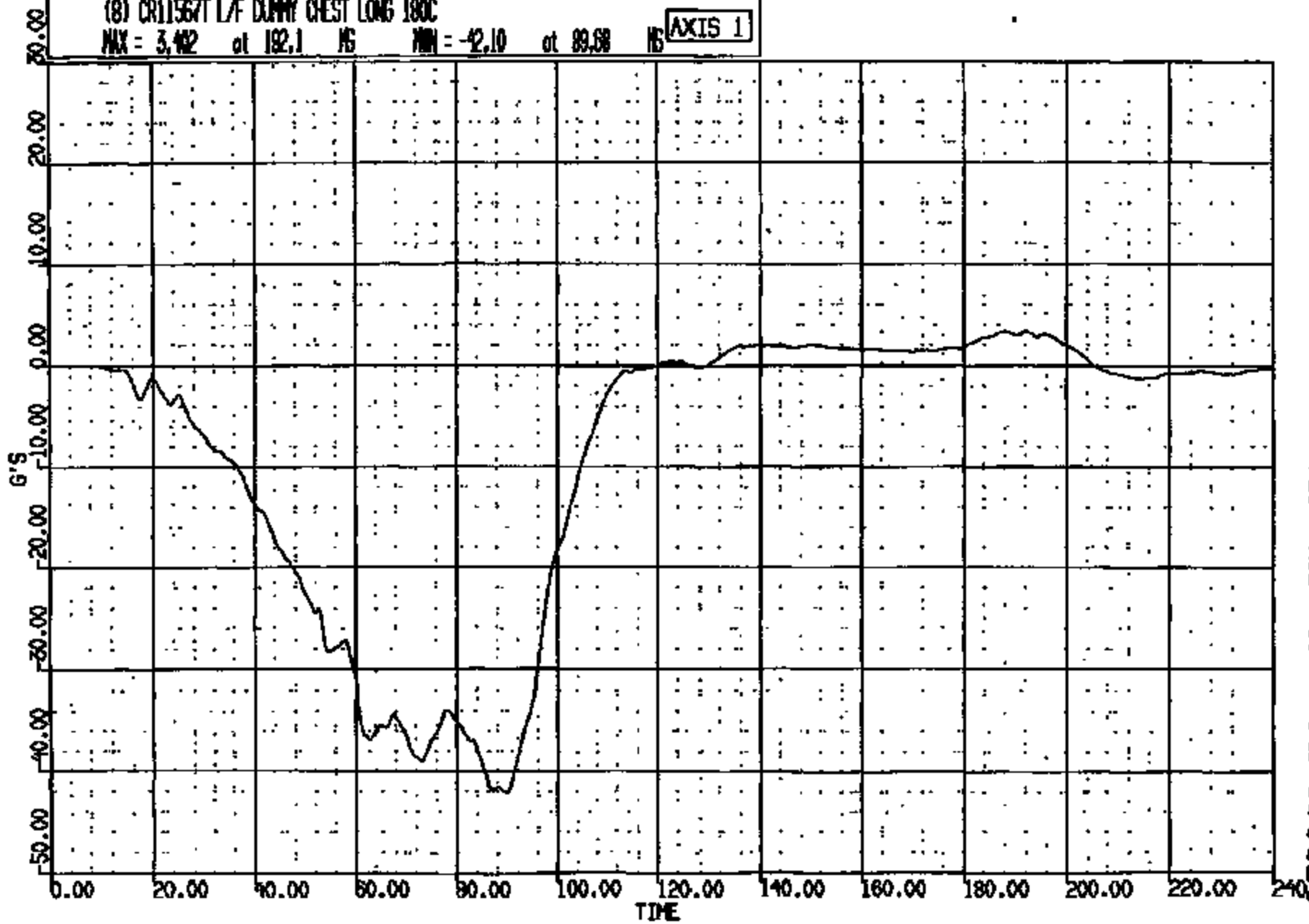


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PLOT PAGE 37  
TB7925  
SER# 000018

CRIS 0011567

CR R: 11567 TO: TB7925 DATE: 990825 09:42:00  
2000 D-188

(8) CR11567T L/F DUMMY CHEST LONG 180C  
MAX = 3.412 at 192.1 MS MIN = -42.10 at 89.68 MS **AXIS 1**

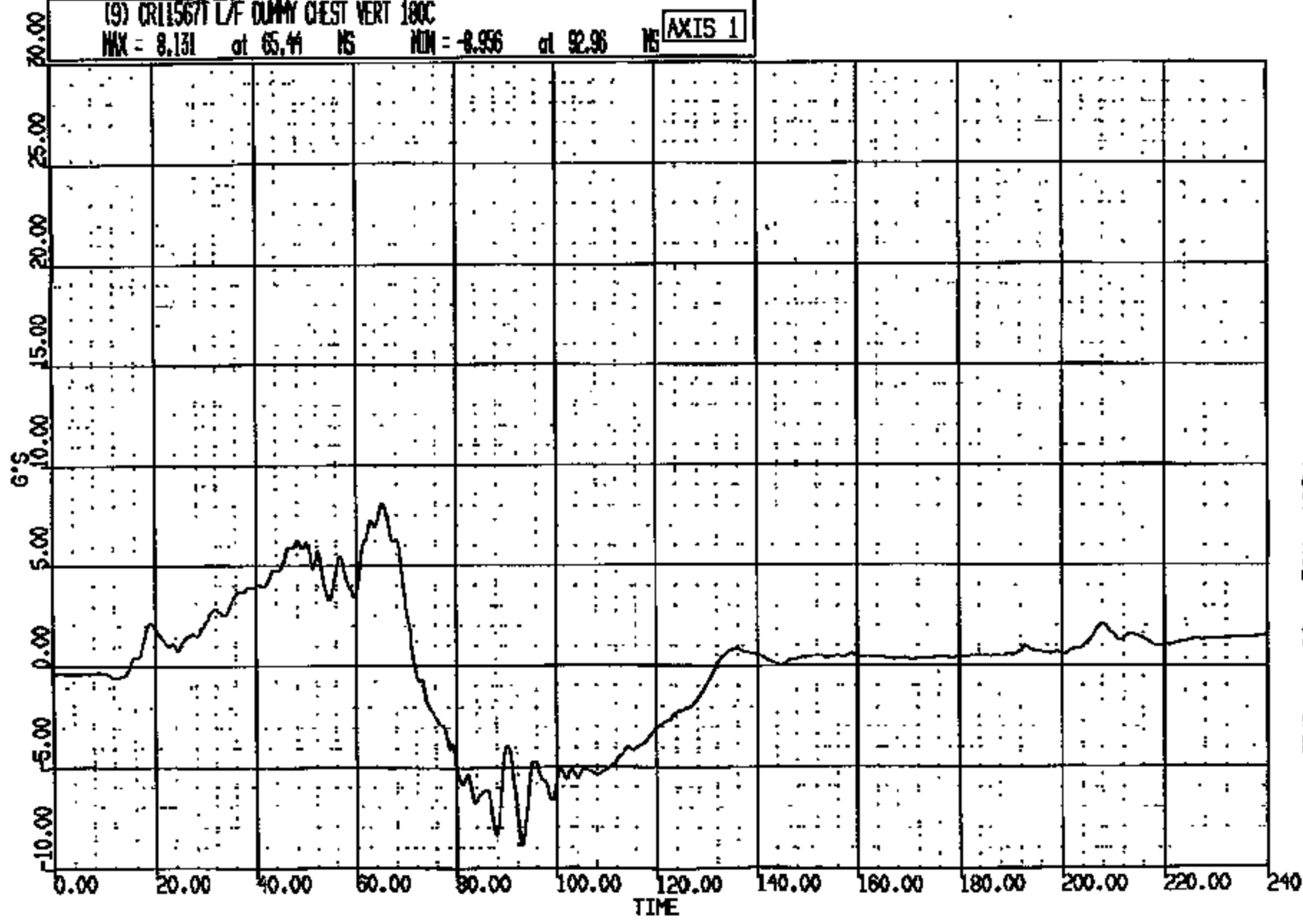


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SHEET 000019

CRTS 0011567

CR R: 11567 TO: T87925 DATE: 990825 08:42:00  
2000 D-188

(9) CR11567T L/F DUMMY CHEST VERT 180C  
MAX = 8.131 at 65.44 MS MIN = -8.956 at 92.96 MS **AXIS 1**



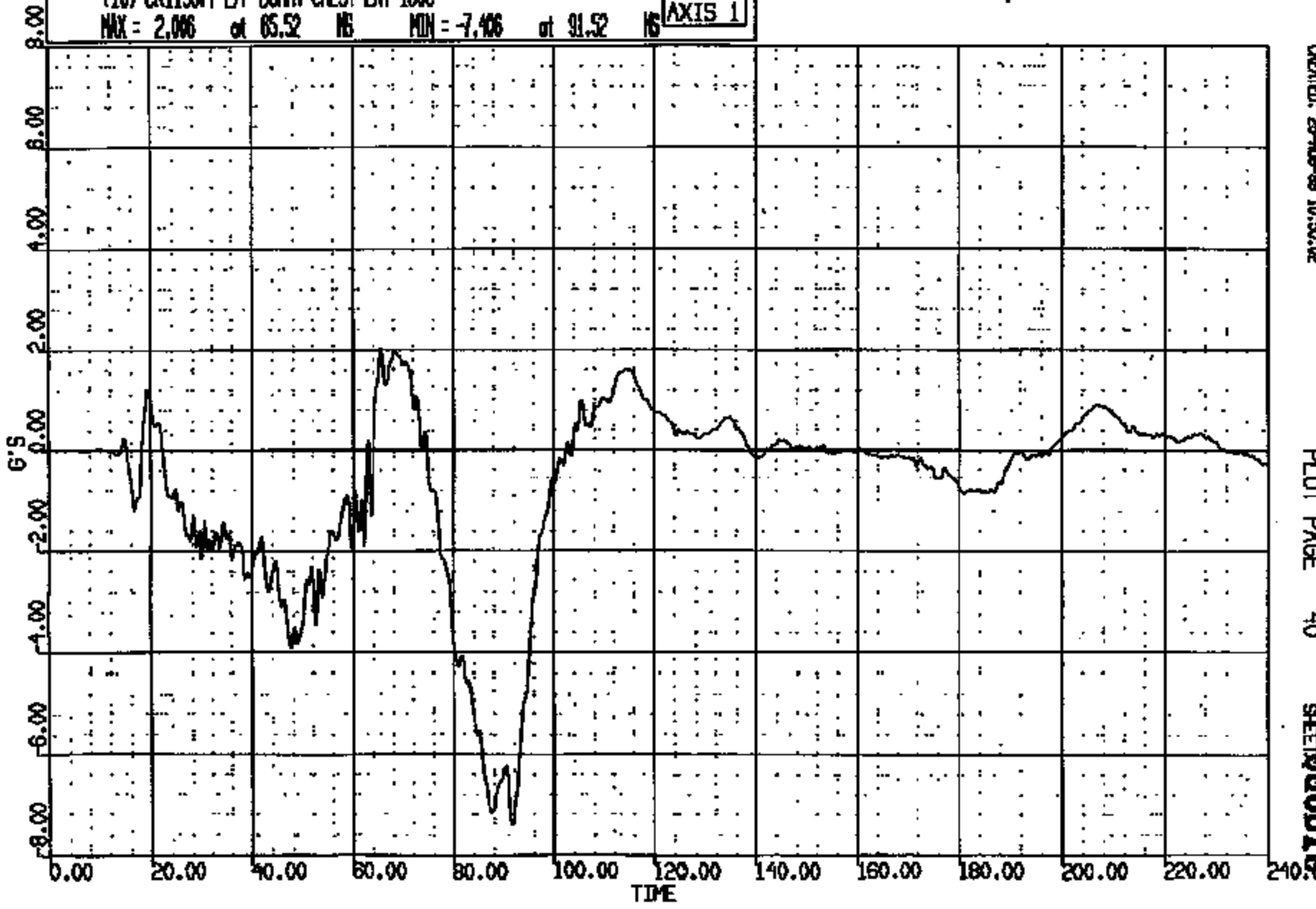
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SHEET

CRTS 0011567



CR R: 11567 TO: TB7925 DATE: 990828 09:42:00  
2000 D-195

(10) CR11567T L/F DUMMY CHEST LAT 190C  
MAX = 2.006 at 65.52 NS MIN = -7.406 at 91.52 NS **AXIS 1**

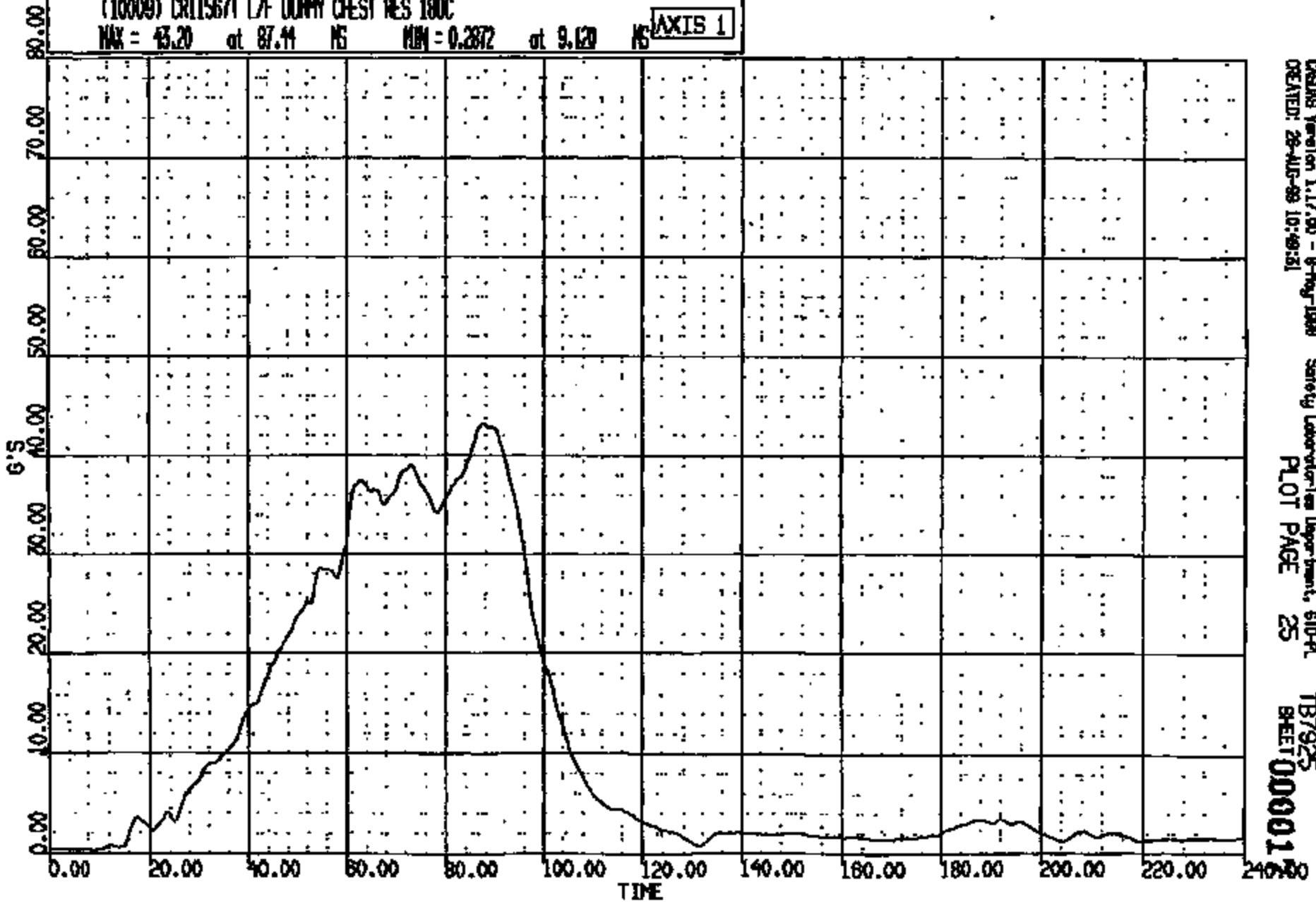


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CRTS 0011567

CR R: 11567 TO: TB7925 DATE: 980825 09:42:00  
MOOD 1488  
CLUMBUR 142.754 Duration time = 2.9833

(10000) CRT1567T L/F DUMMY CHEST RES 180C  
MAX = 43.20 at 87.44 MS MIN = 0.2872 at 9.120 MS **AXIS 1**

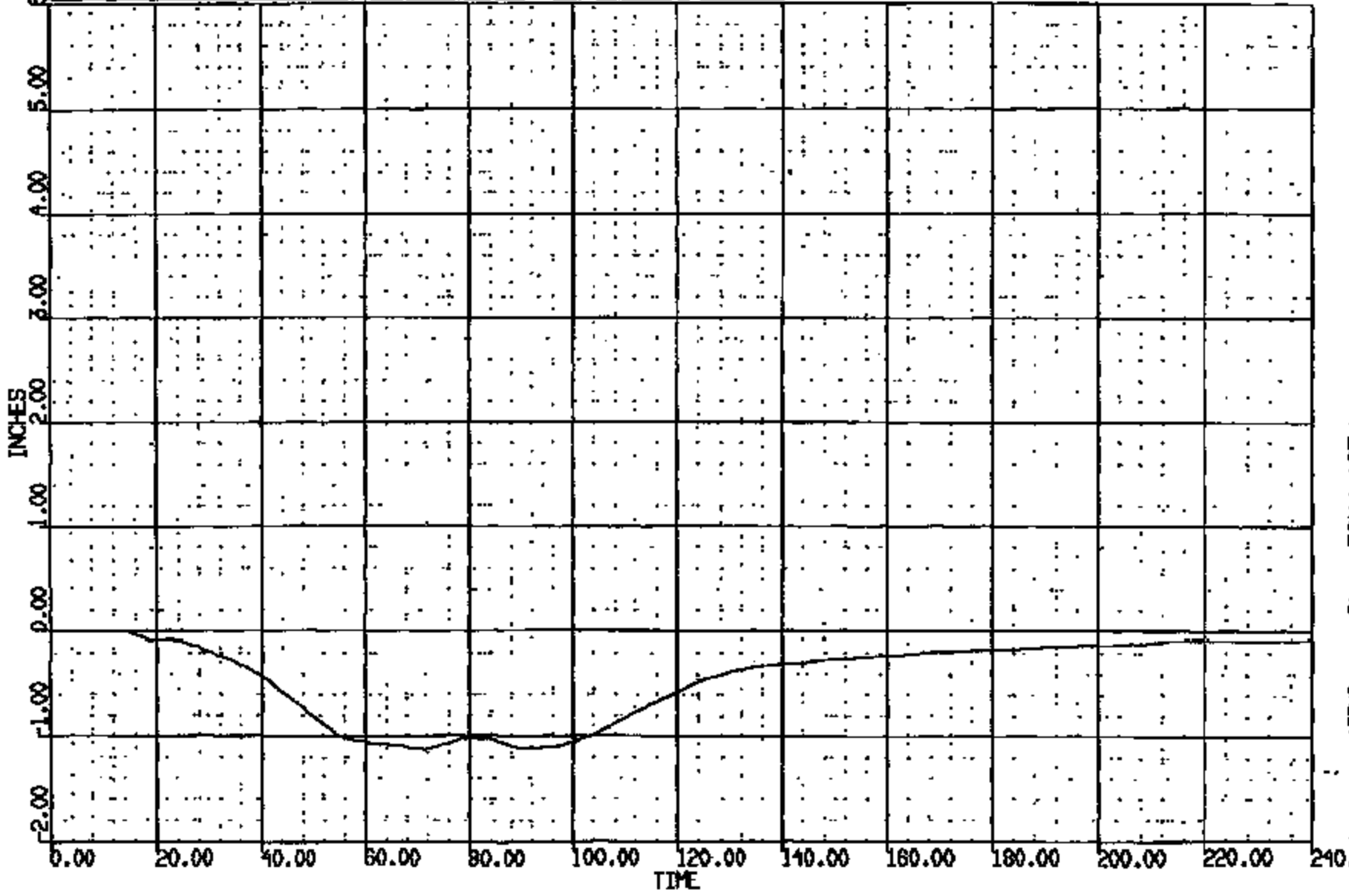


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CR R: 11567 TO: TB7925 DATE: 990528 09:42:00  
2000 D-186

(11) CR11567 L/F DUMMY CHEST DEFLECTION 180C  
MAX = -.1529E-02 at 9.120 MS MIN = -1.129 at 71.35 MS

AXIS 1

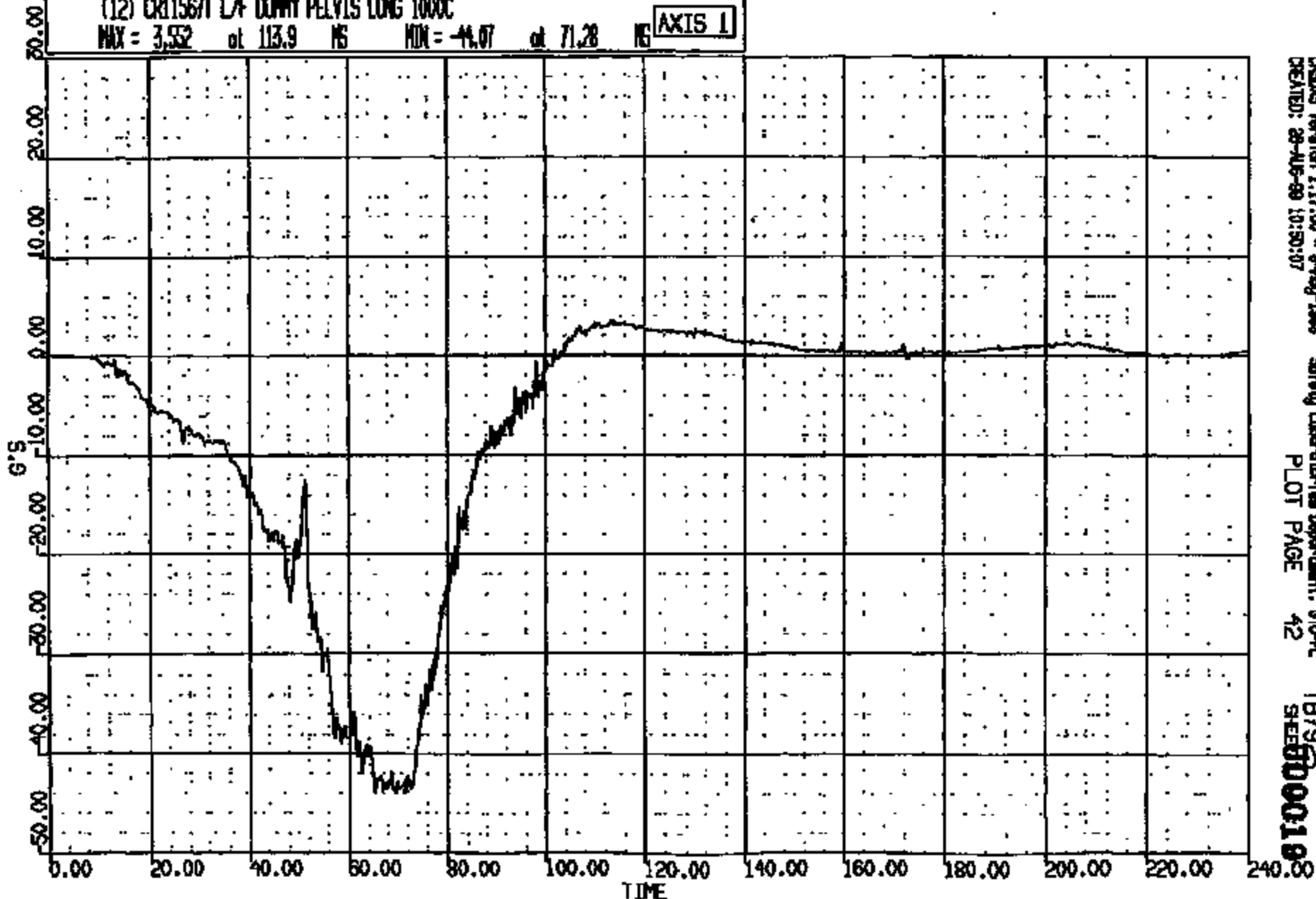


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CRIS 0011567

CR #: 11567 TO: T87925 DATE: 890826 09:42:00  
2000 D-180

(12) CR11567 L/F DUMMY PELVIS LONG 1000C  
MAX = 3.552 at 113.9 MS MIN = -44.07 at 71.28 MS **AXIS 1**



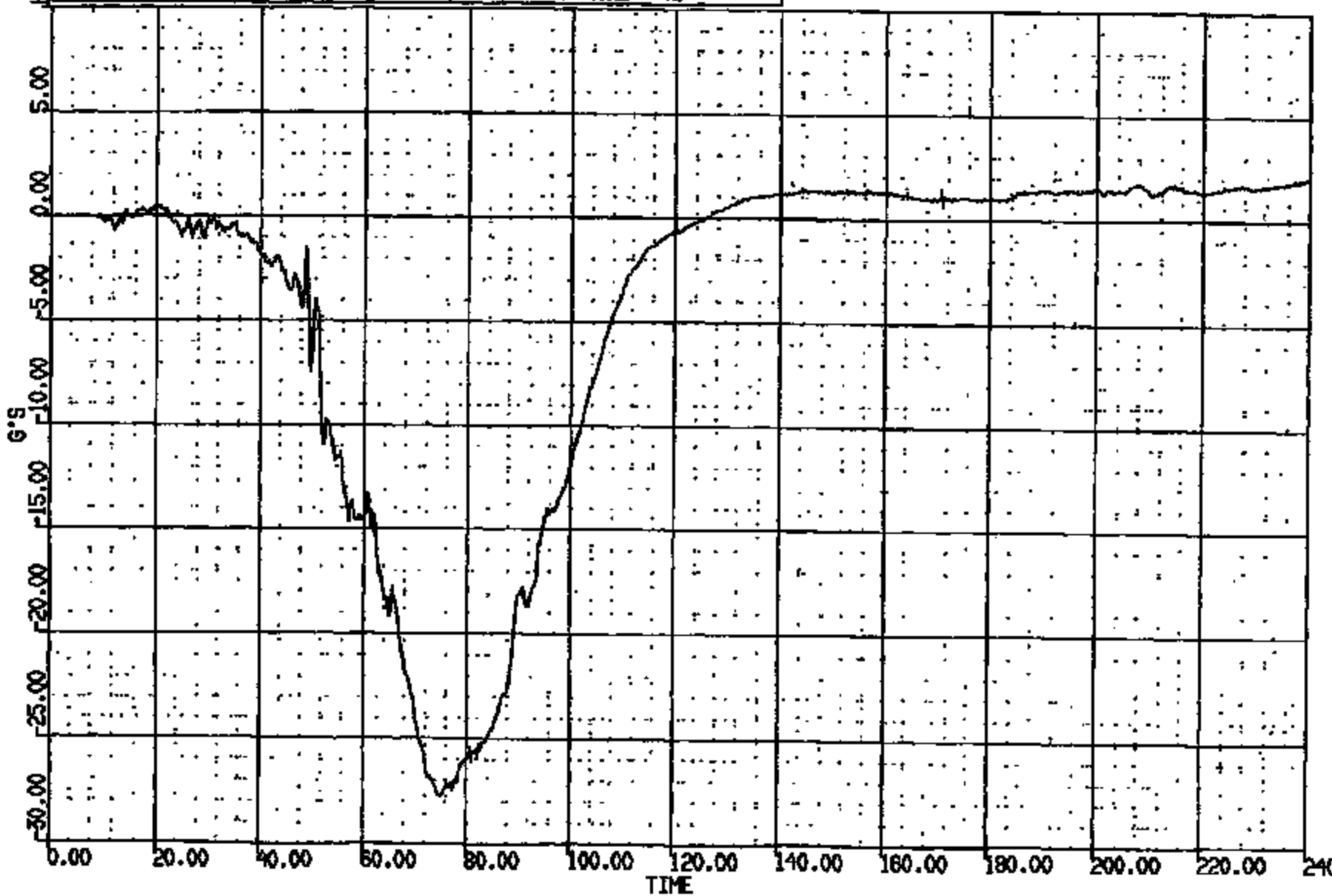
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CRTS 0011567

CR R: 11567 TO: T87925 DATE: 880828 09:42:00  
8000 D-188

(13) CRT1567T L/F DUMMY PELVIS VERT 1000C

MAX = 2.091 at 28.1 MS MIN = -27.78 at 75.12 MS **AXIS 1**



CASMS Version 1.17.00 - 8-Aug-1988 Safety Laboratories Department, 810-91  
CREATED: 28-AUG-88 10:50:00 PLOT PAGE 43 T87925  
SEE 000020

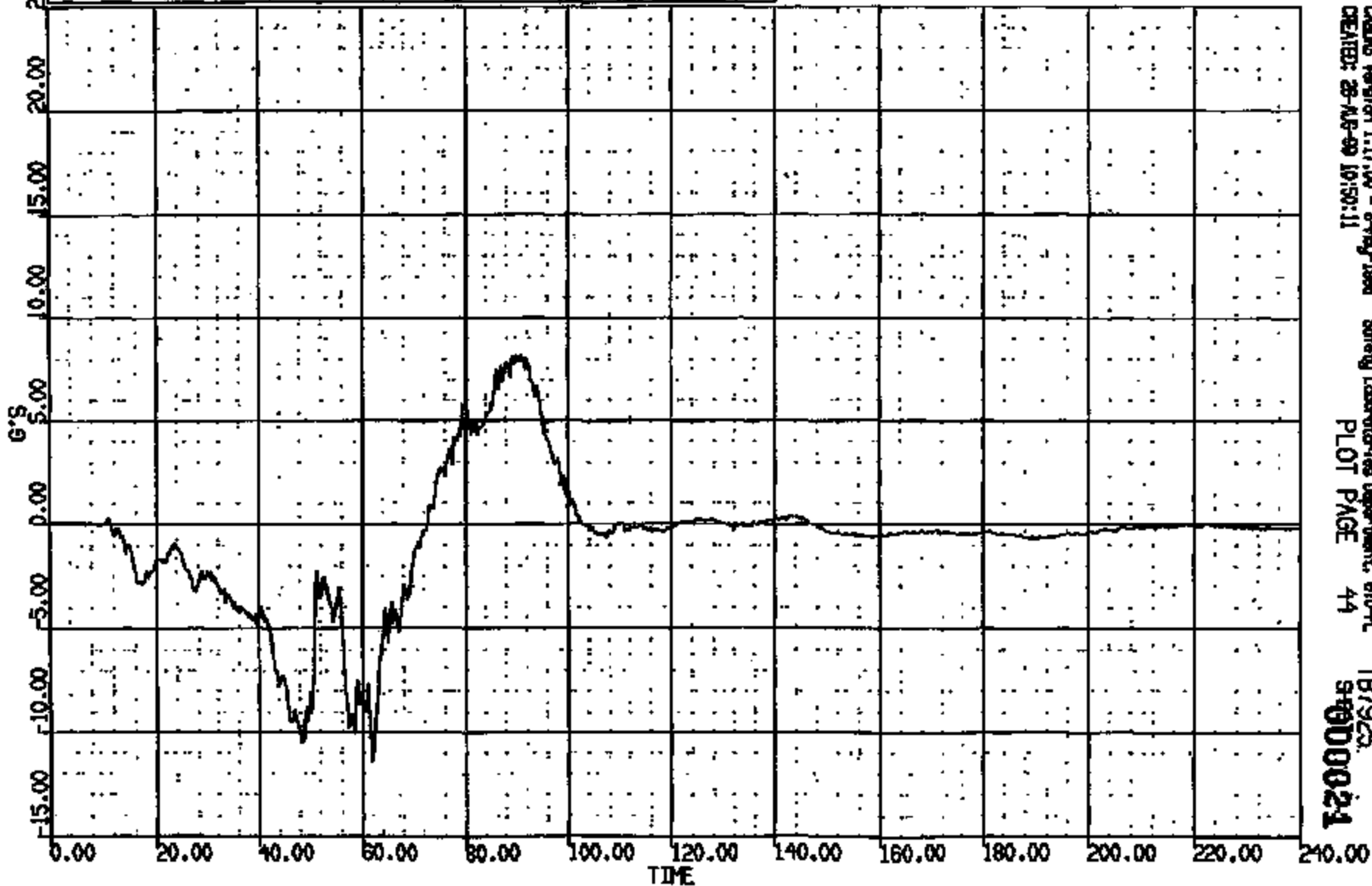
CRTS 0011567

CR R: 11567 TO: TB7925 DATE: 900826 08:42:00  
2000 D-186

(14) CR11567 L/F DUMMY PELVIS LAT 1000C

MAX = 8.191 at 90.95 NS MIN = -11.41 at 61.84 NS

AXIS 1



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Safety Laboratories Department, 610-PL  
PLOT PAGE 44

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9000024

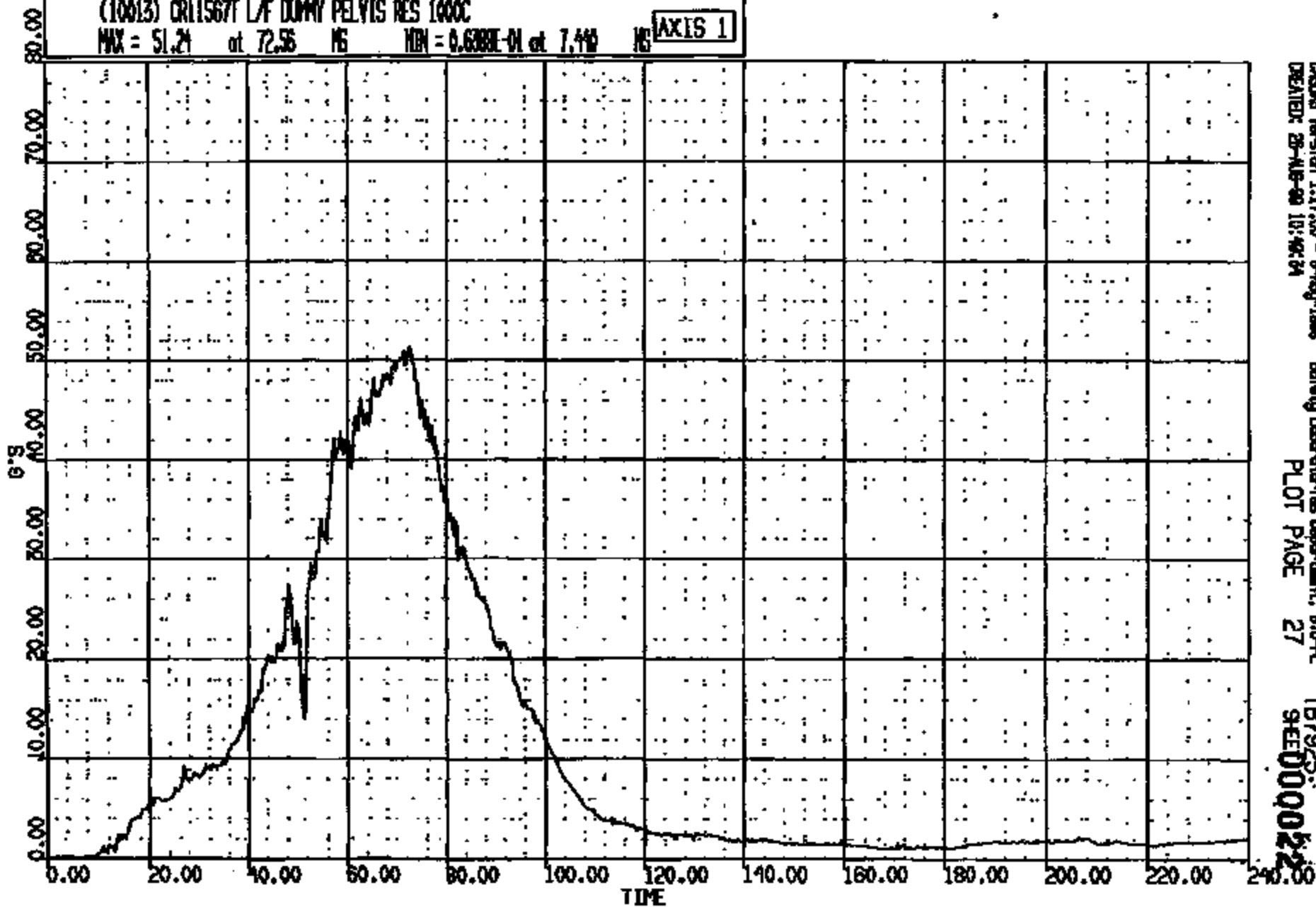
CR15 0011567

CR R: 11567 TO: TB7925 DATE: 880828 09:42:00  
2000 D-188

(10013) CRT1567 L/F DUMMY PELVIS RES 1000C

MAX = 51.24 at 72.56 MS MIN = 0.6300E-01 at 7.44 MS

AXIS 1



CRAMS Version 1.17.00 - 8-Aug-1988  
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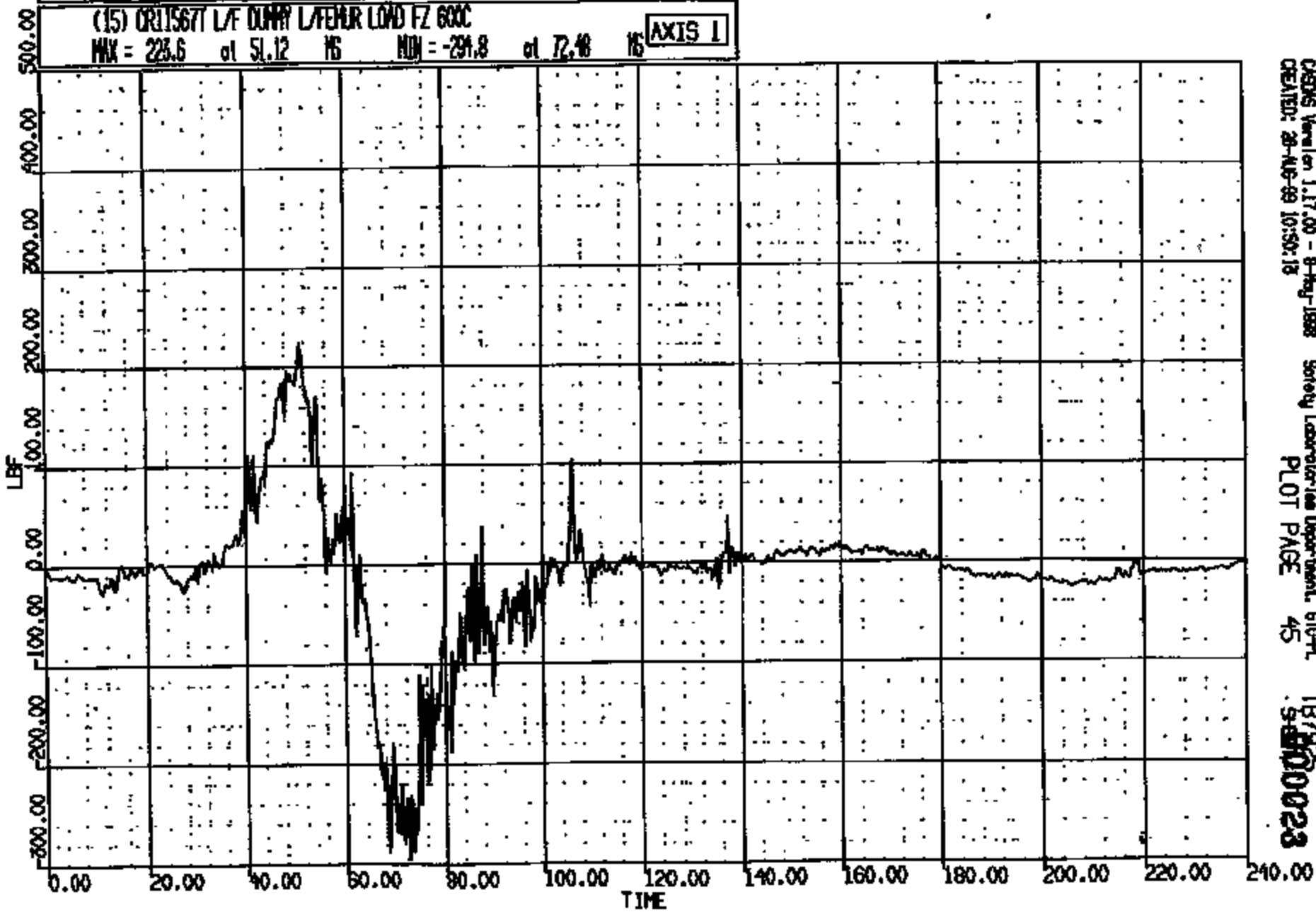
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PLOT PAGE 27

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CRTS 0011567

CR R: 11567 TO: TB7925 DATE: 090825 09:42:00  
2000 D-186

(15) CR11567 L/F DUMP L/FEHR LOAD FZ 600C  
MAX = 225.6 at 51.12 MS MIN = -291.8 at 72.48 MS **AXIS 1**



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TB7925  
5-8000023

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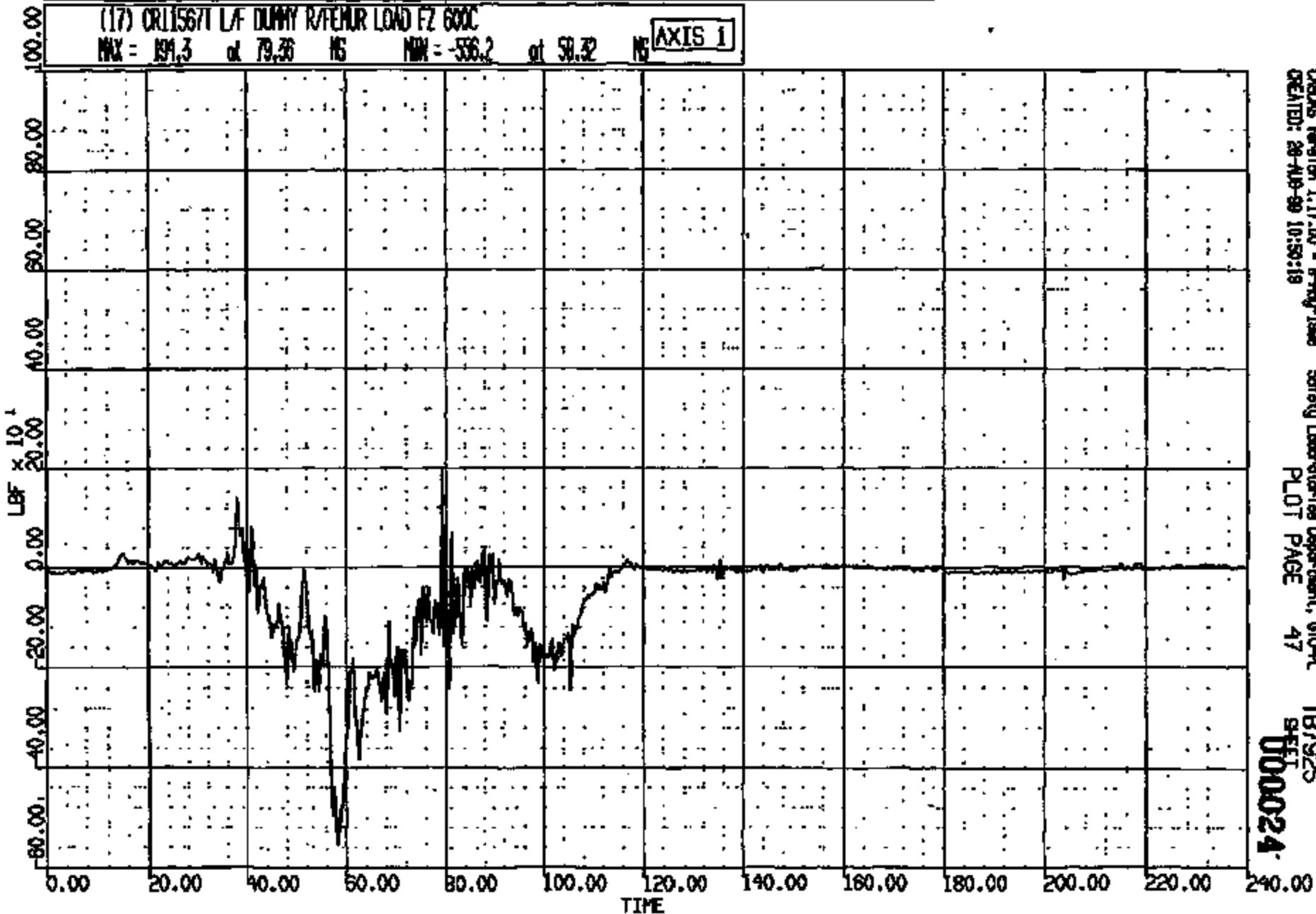


CR #: 11567 TO: T87925 DATE: 890825 09:42:00  
2000 D-188

(17) CR11567/LF DUMMY R/TEHR LOAD FZ 600C

MAX = 191.3 at 79.36 MS MIN = -536.2 at 50.32 MS

AXIS 1



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Safety Laboratories Department, GPO-PL  
PLOT PAGE 47

T87925  
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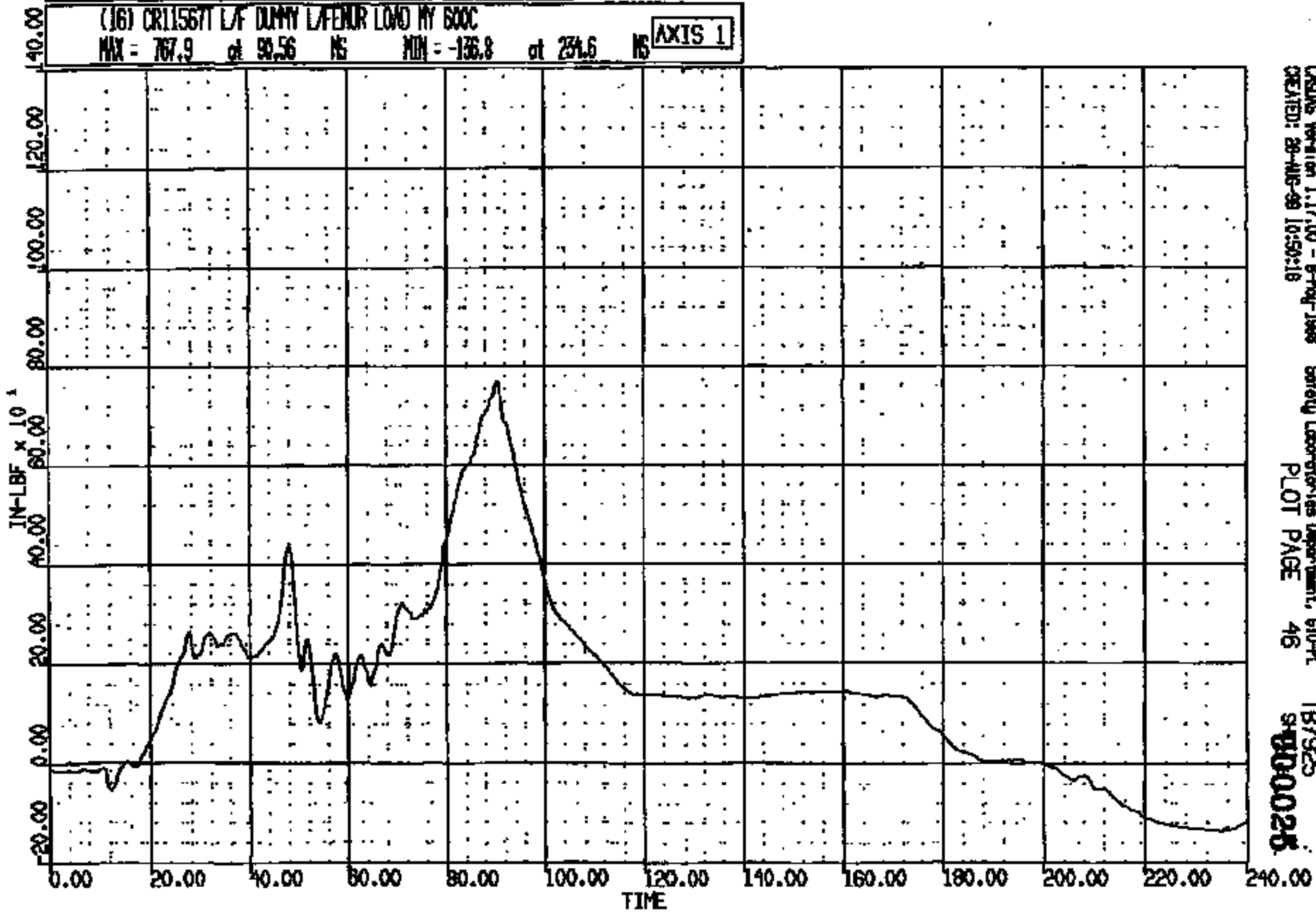
CRTS 0011567

CR R: 11567 TO: TB7925 DATE: 890825 09:42:00  
2000 D-188

(16) CR11567T L/F DUMMY LAPENUR LOAD NY 600C

MAX = 767.9 at 80.56 NS MIN = -136.8 at 234.6 NS

AXIS 1



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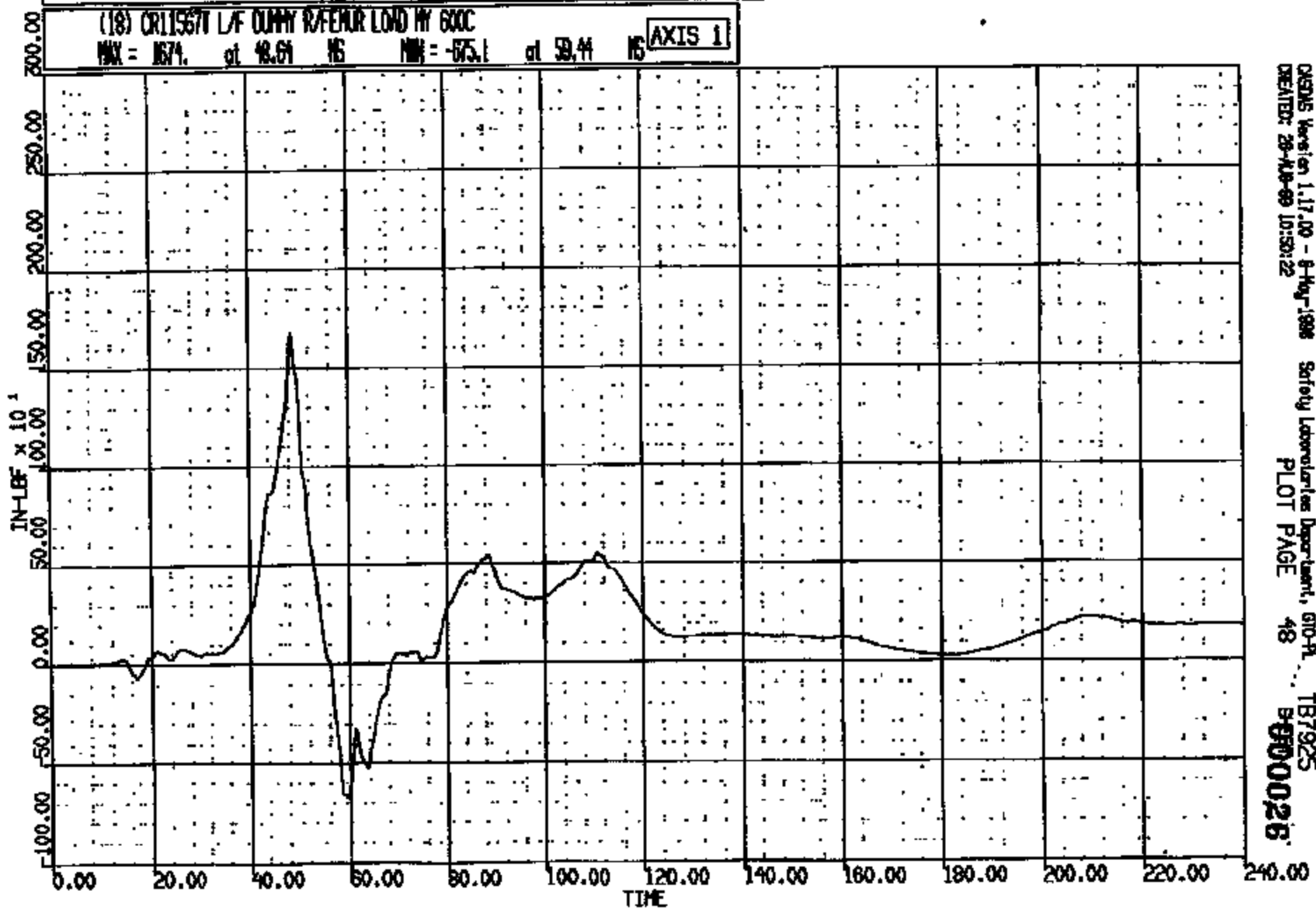
Safety Laboratories Department, 610-PL  
PLOT PAGE 46

TB7925  
S-8900025

CRIS 0011567

CR R: 11567 TO: TB7925 DATE: 890825 09:42:00  
8000 D-188

(18) CR11567T L/F DUMMY RAFFER LOAD NY 600C  
MAX = 167.1 at 48.61 MS MIN = -675.1 at 59.44 MS **AXIS 1**

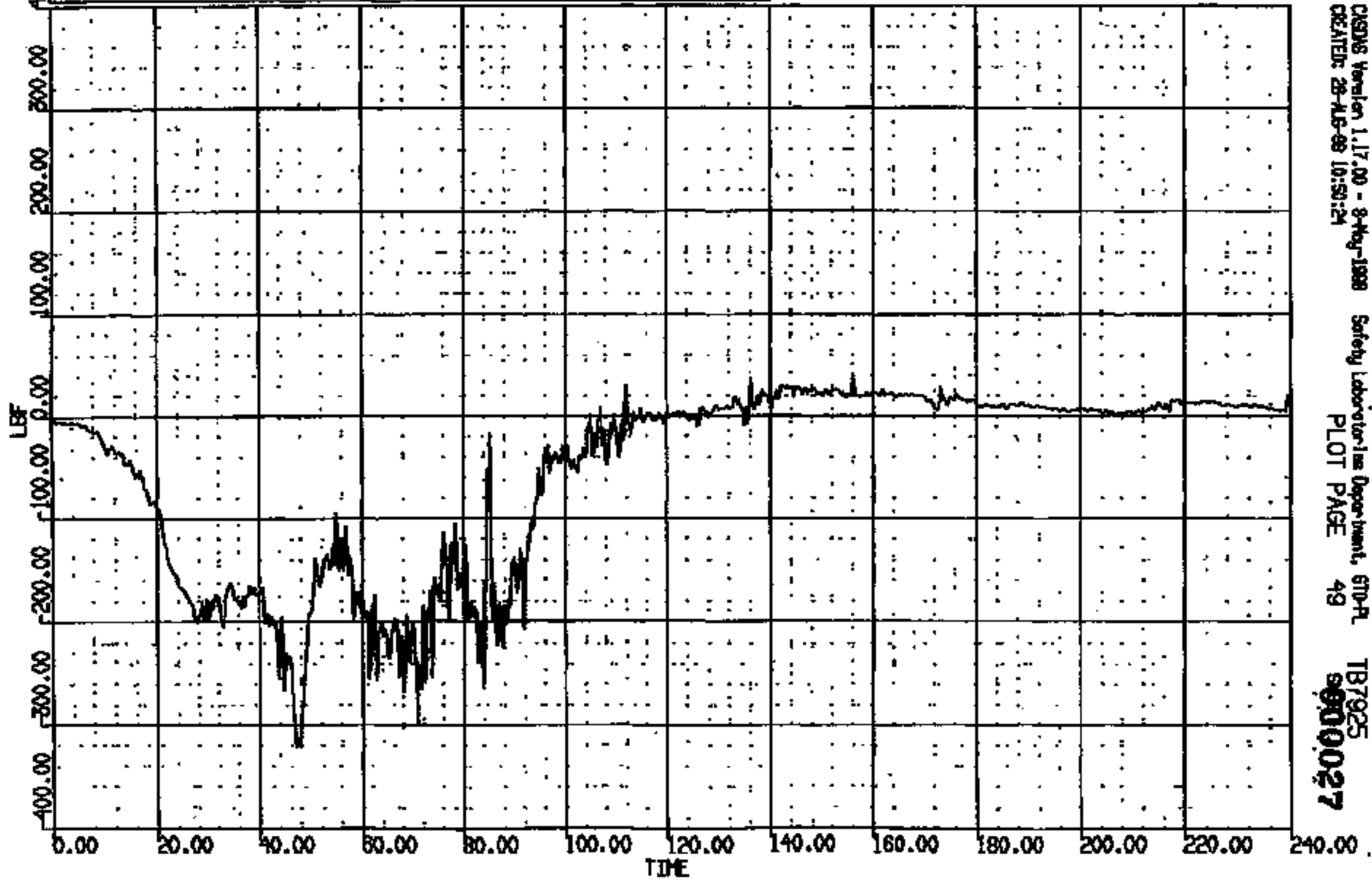


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CRIS 0011567

CR R: 11567 TO: TB7925 DATE: 890825 09:42:00  
2000 D-188

(19) CR11567 LAF DUMMY LAP/TIBIA LOAD FZ 600C  
MAX = 40.41 at 156.1 MS MIN = -20.9 at 47.12 MS **AXIS 1**

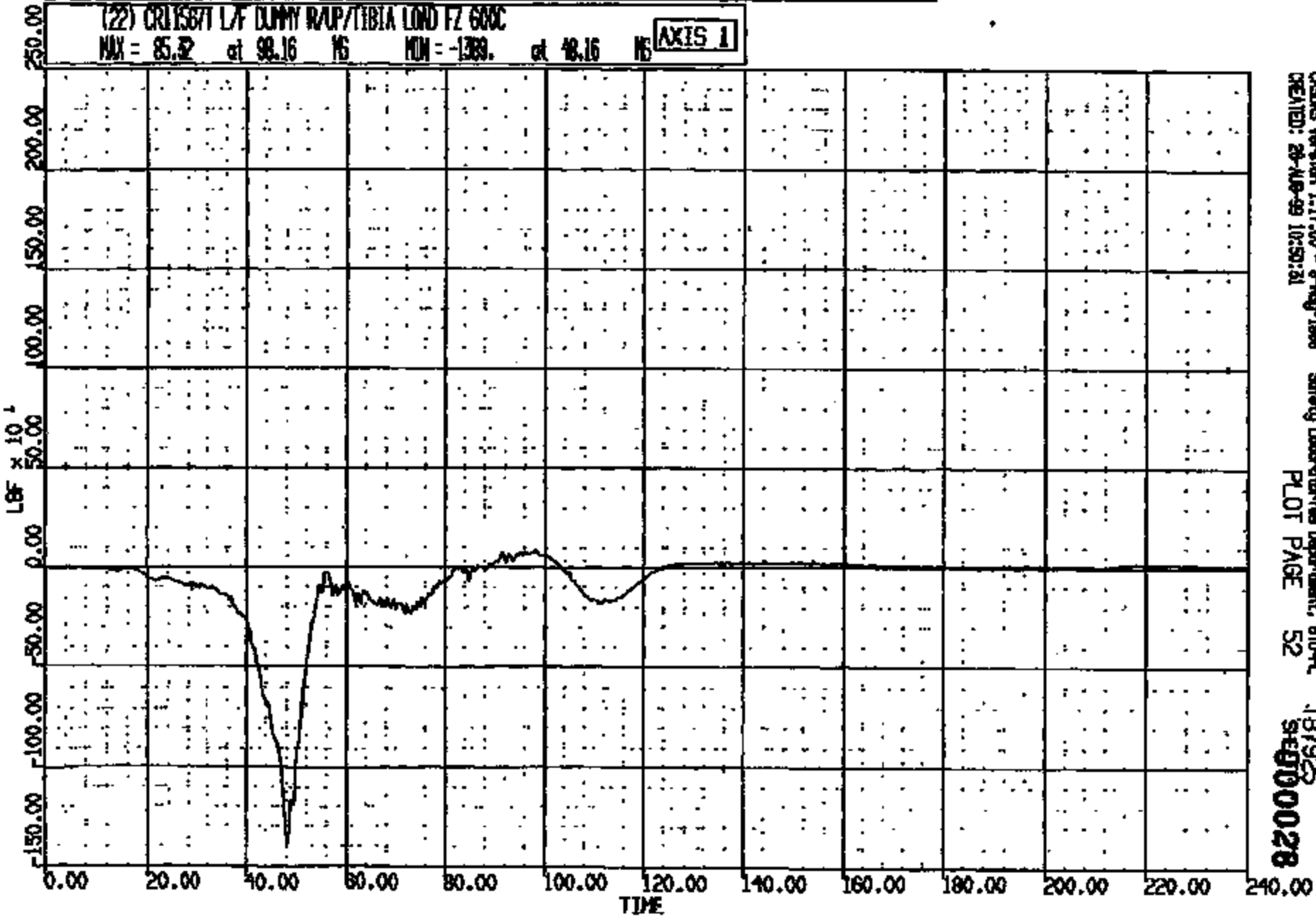


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CRTS 0011567

CR R: 11567 TO: T87925 DATE: 090825 09:42:00  
2000 D-188

(22) CRYSTL L/F DUMP W/P/TIBIA LOAD FZ 600C  
MAX = 85.32 at 98.16 MS MIN = -1389. at 48.16 MS **AXIS 1**



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T87925  
S0900028

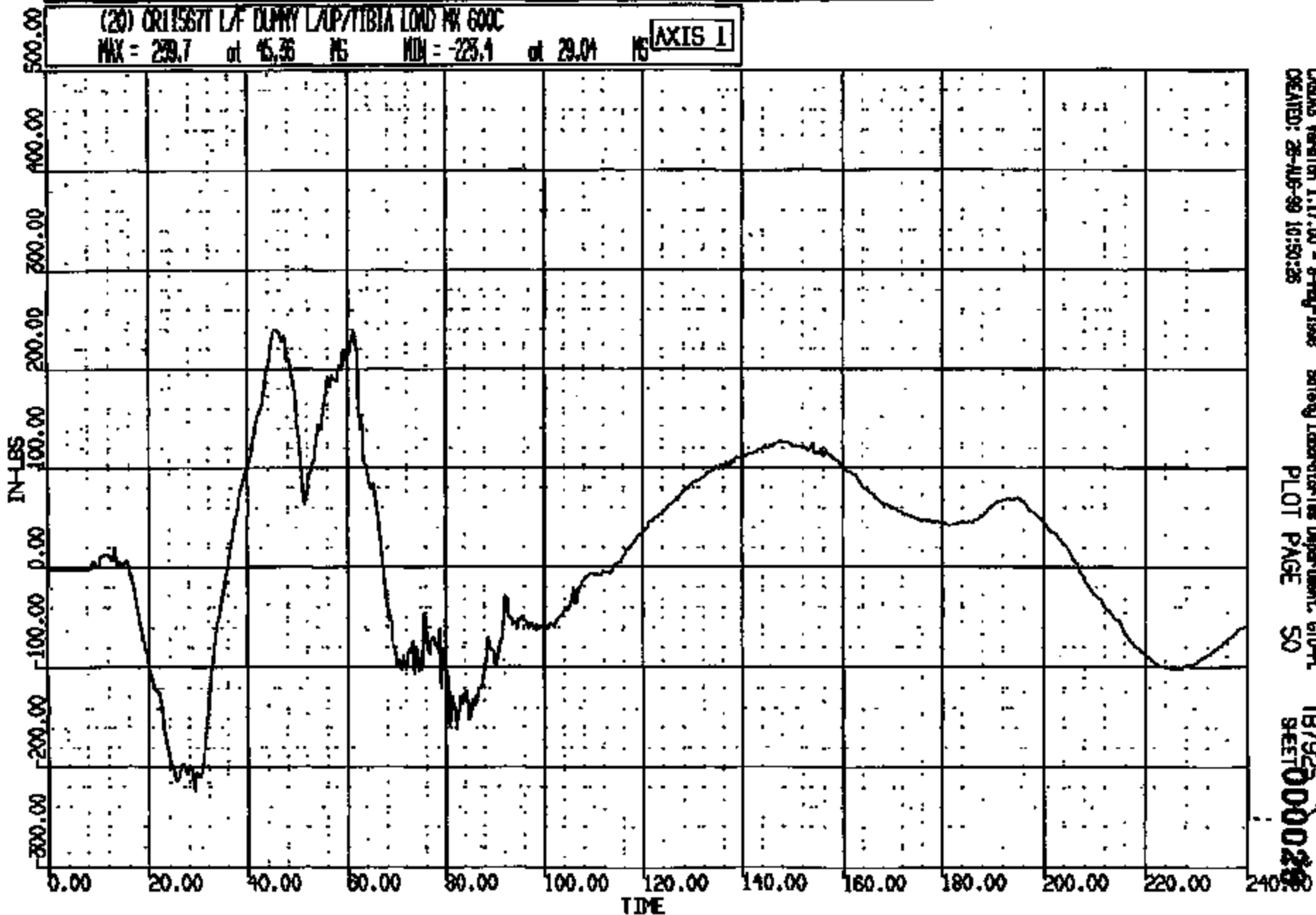
CRTS 0011567

CR R: 11567 TO: T87925 DATE: 990826 09:42:00  
2000 D-186

(20) CR11567T LAF DUMMY LAP/TIBIA LOAD MV 600C

MAX = 239.7 at 45.36 MS MIN = -223.1 at 29.04 MS

AXIS 1



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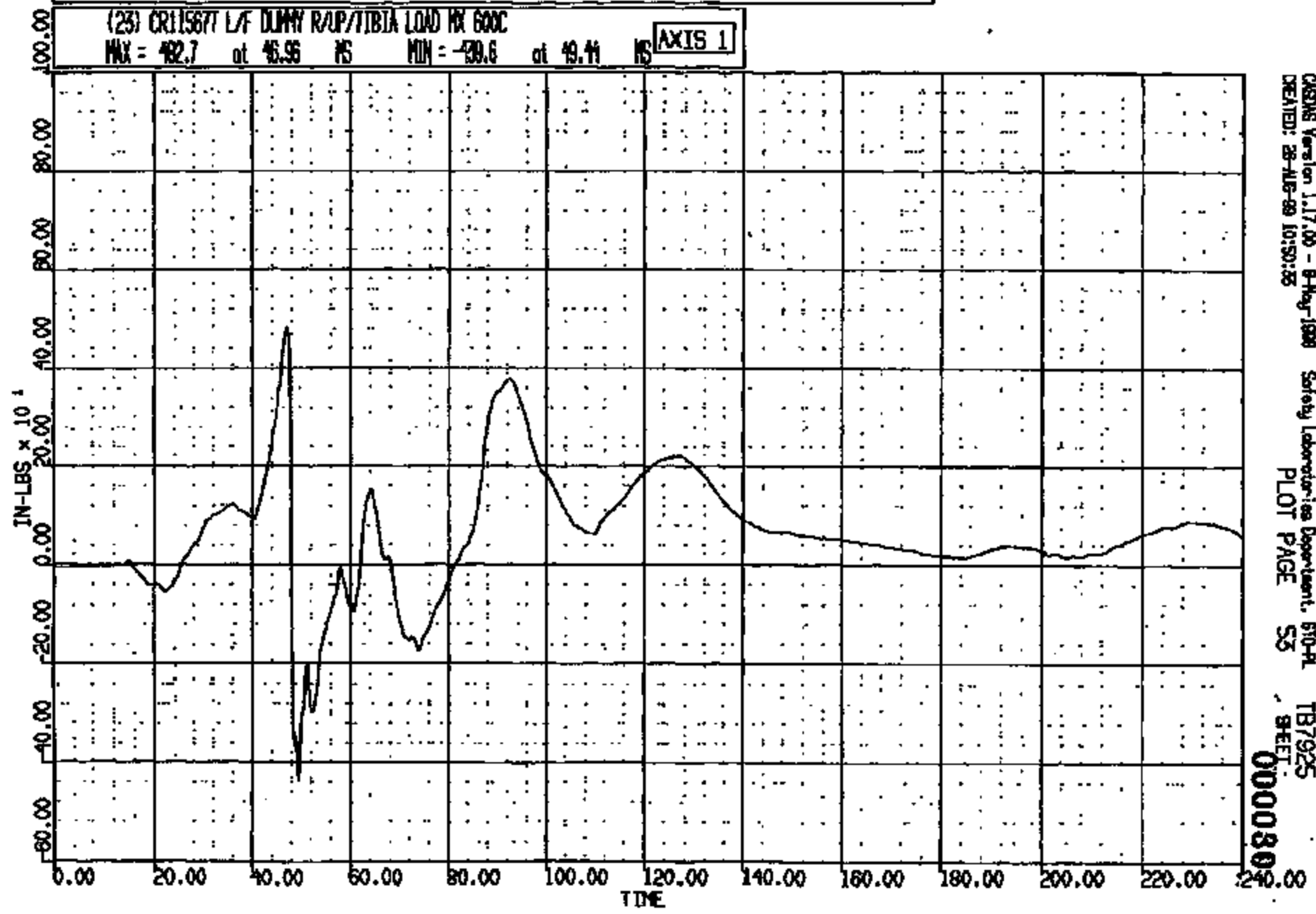
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PLOT PAGE 50

T87925  
SHEET 000028

CRTS 0011567

CR R: 11567 TO: TB7925 DATE: 980828 09:42:00  
2000 D-188

(23) CR11567 L/F DUMMY R/UP/TIBIA LOAD RX 600C  
MAX = 482.7 at 46.96 MS MIN = -439.6 at 49.44 MS **AXIS 1**

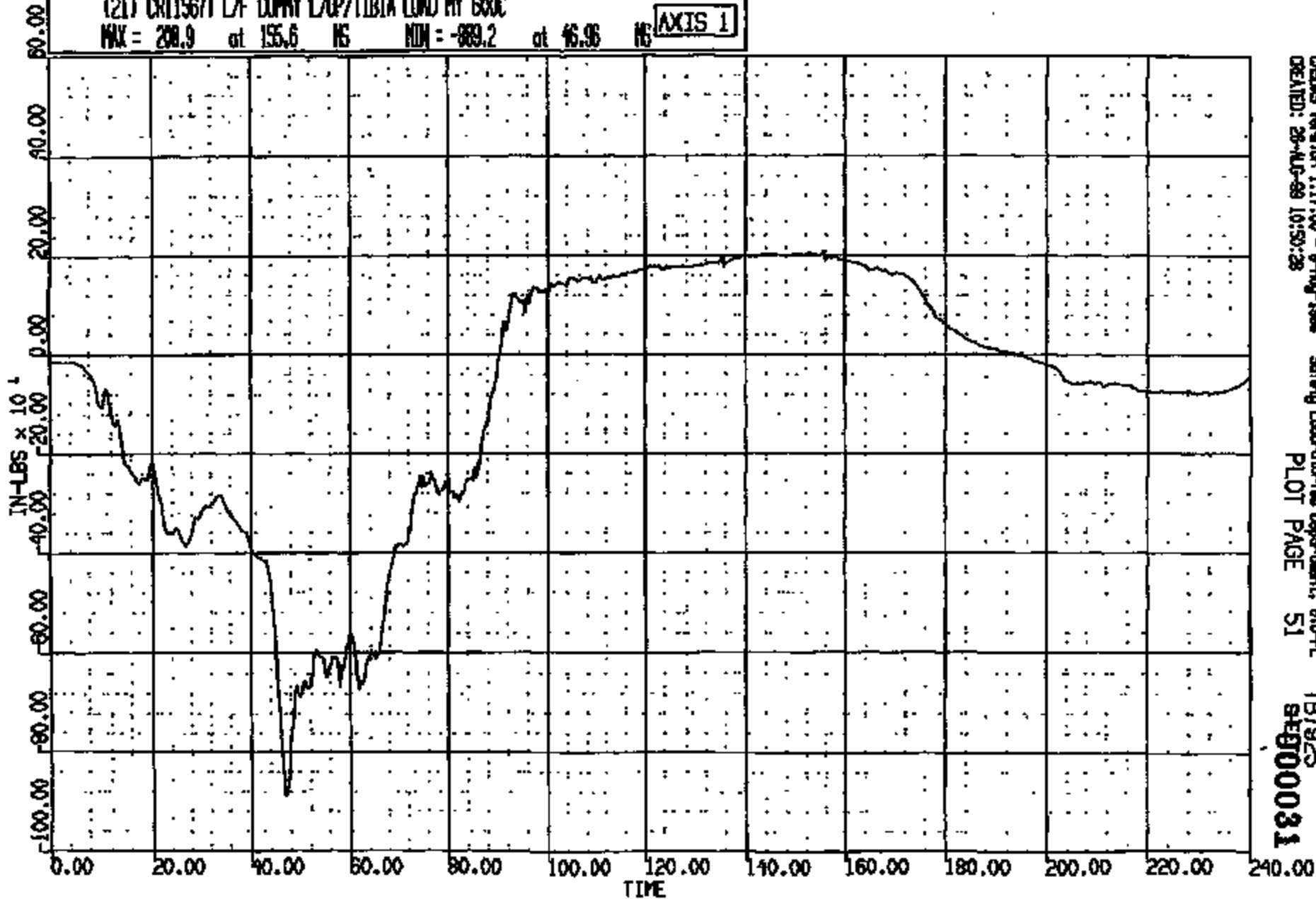


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CREATED: 28-AUG-99 10:50:25 PLOT PAGE 53 SHEET 000030

CRIS 0011567

RR R: 11587 TO: T87925 DATE: 890828 09:42:00  
R000 D-188

(21) CR115671 LF DUMPY LAP/TIBIA LOAD MY 600C  
MAX = 208.9 at 155.6 MS NOM = -889.2 at 45.96 MS **AXIS 1**



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Safety Laboratories Department, STD-PL  
PLOT PAGE 51

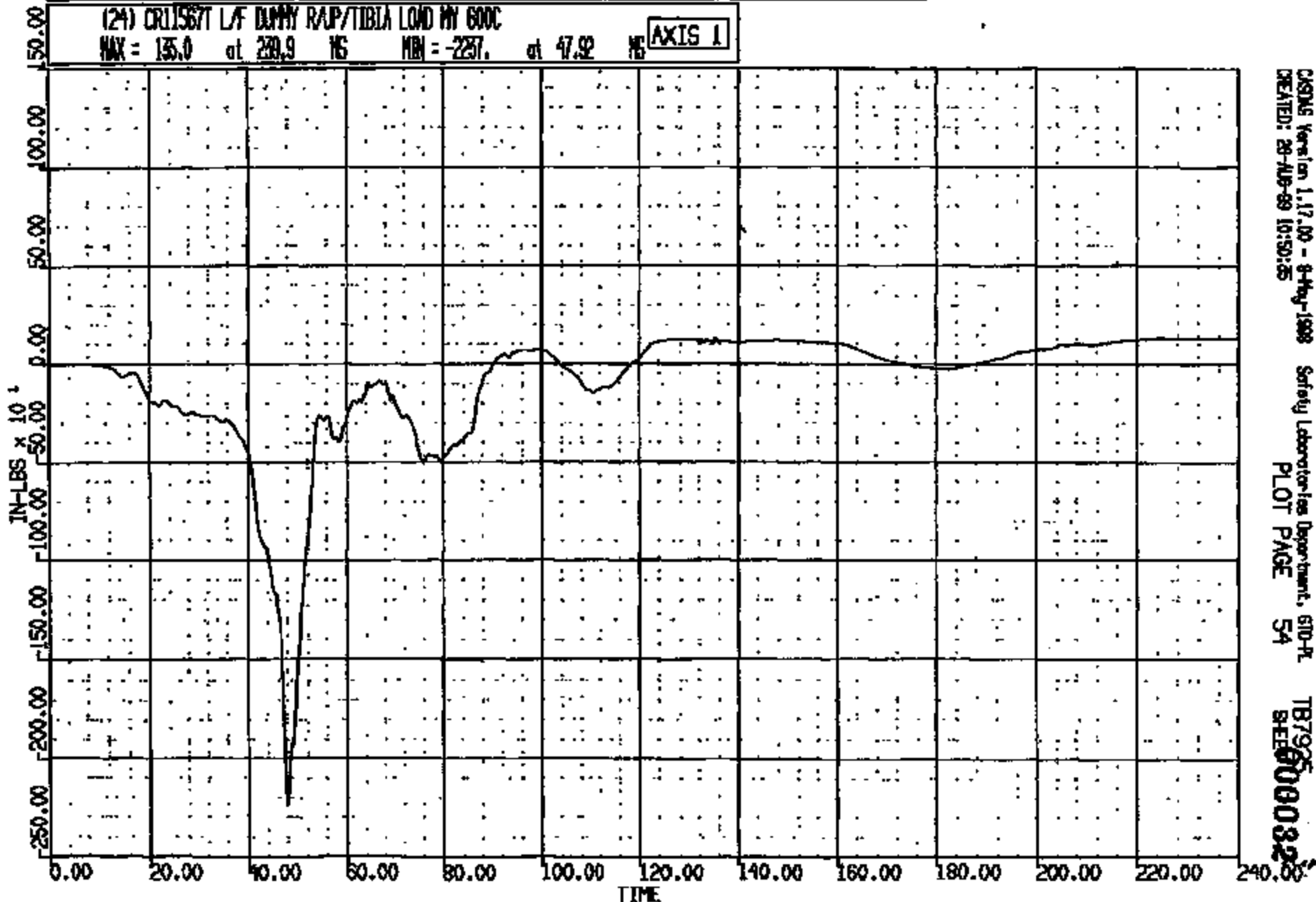
T87925  
SEB000031

CRIS 0011567



CR R: 11567 TO: TB7925 DATE: 890828 08:42:00  
R000 D-188

(24) CR11567 L/F DUMMY RAMP/TIBIA LOAD BY 600C  
MAX = 135.0 at 230.9 MS MIN = -2237. at 47.92 MS **AXIS 1**



CRS Version 1.17.00 - 8-Aug-1989  
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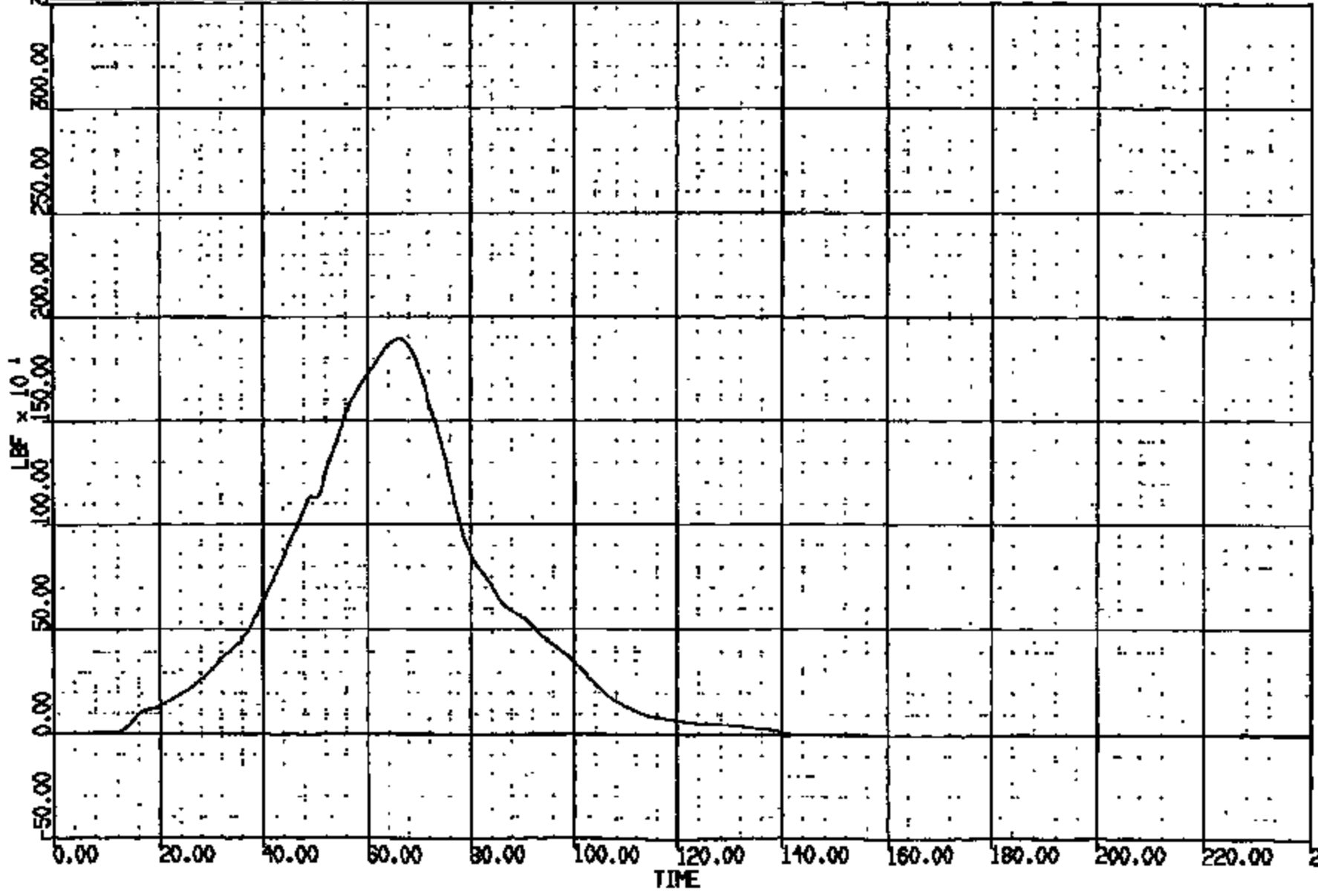
Safety Laboratories Department, 610-PL  
PLOT PAGE 54

TB7925  
SHEE 000032

CRIS 0011567

CR: 11567 TO: T87925 DATE: 990828 08:42:00  
2000 D-186

(49) CR1567 L/F LAP BELT @ ANCHOR 60C  
MAX = 189.1 at 68.16 NS MIN = -2.46 at 173.8 NS **AXIS 1**



CRS0NS Version 1.17.00 - 8-May-1998 Safety Laboratories Department, 610-PL T87925  
CREATED: 28-AUG-99 10:51:35 PLOT PAGE 79 SHEET 00003

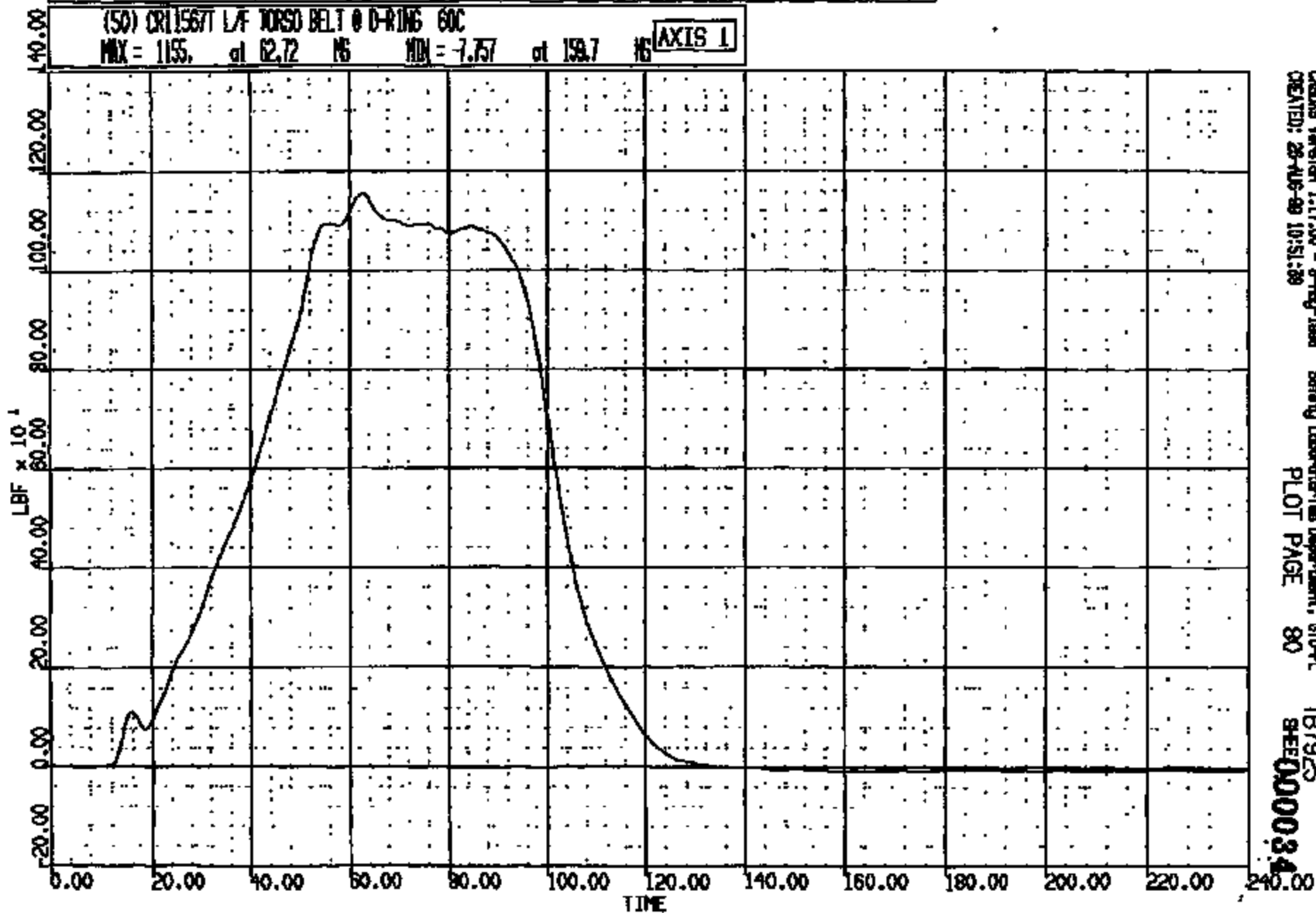
CRIS 0011567

CR R: 11567 TO: TB7925 DATE: 990828 09:42:00  
2000 0-189

(50) CRT1567 L/F WORSO BELT @ D-RING 60C

MAX = 115. at 62.72 MS MIN = -7.57 at 159.7 MS

AXIS 1



CADDS Version 1.17.00 - 8-Aug-1998  
CREATED: 28-AUG-99 10:51:28

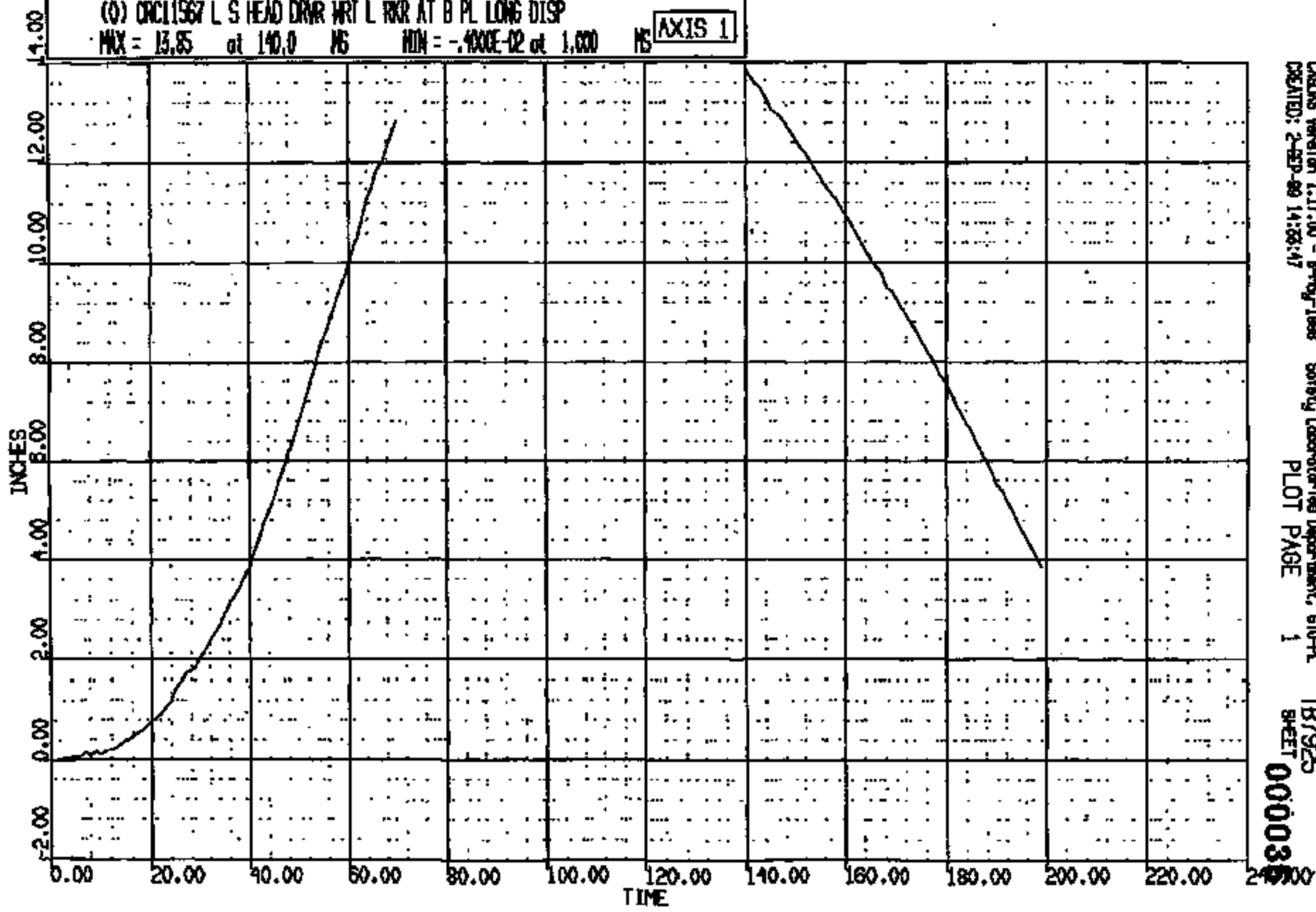
Safety Laboratory Department, STD-PL  
PLOT PAGE 80

TB7925  
SHEET 0000034

CRTS 0011567

CR R: 11567 TO: TB7925 DATE: 880825 09:42:00  
2000 D-188

(0) CR11567 L S HEAD DRVR WRT L RKR AT B PL LONG DISP  
MAX = 13.85 at 140.0 MS MIN = -.400E-02 at 1.000 MS **AXIS 1**



CASDAS Version 1.17.00 - 8449-1888 Safety Laboratories Department, 610-PL  
CREATED: 2-SEP-88 14:58:47 PLOT PAGE 1 TB7925  
SHEET 00003

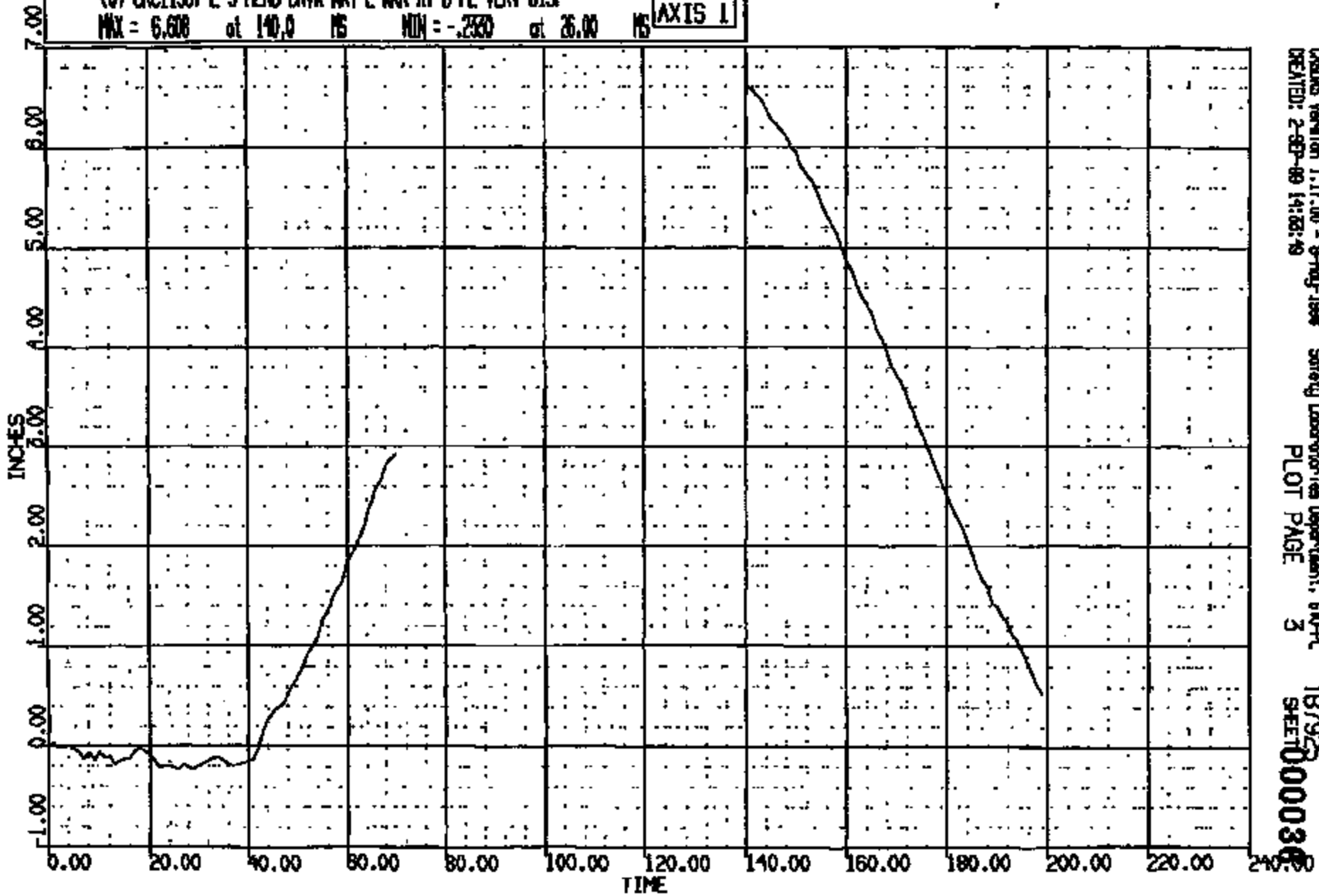
CR11567

CR R: 11567 TO: TB7825 DATE: 990826 08:42:00  
2000 D-188

(0) CR11567 L S HEAD DRV R RT L RGR AT B PL VERT DISP

MAX = 6.608 at 140.0 MS MIN = -.2360 at 26.00 MS

AXIS 1



CRS Version 1.17.00 - 9-Aug-1998  
CREATED: 2-SEP-99 14:53:49

Safety Laboratories Department, 610-PL  
PLOT PAGE 3

TB7825  
SHEET 00003

CRIS 0011567

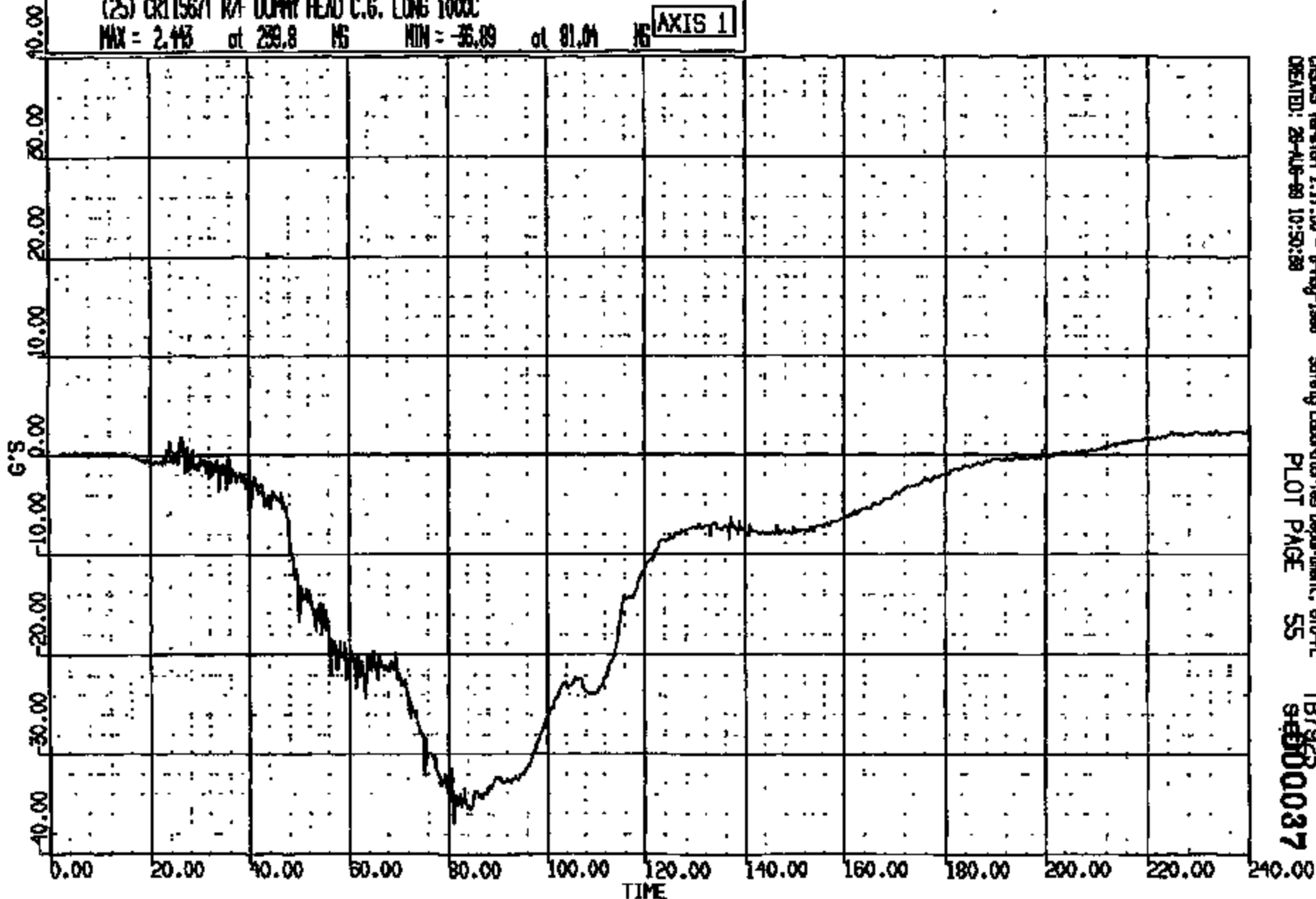
CR R: 11567 TO: TB7925 DATE: 990828 09:42:00

ROOO D-180

(25) CR1567 R/F DUMMY HEAD C.G. LONG 1000C

MAX = 2.43 at 299.8 MS MIN = -36.89 at 81.04 MS

AXIS 1



CASINS Version 1.17.00 - 8-Aug-99  
CREATED: 28-AUG-99 10:50:28

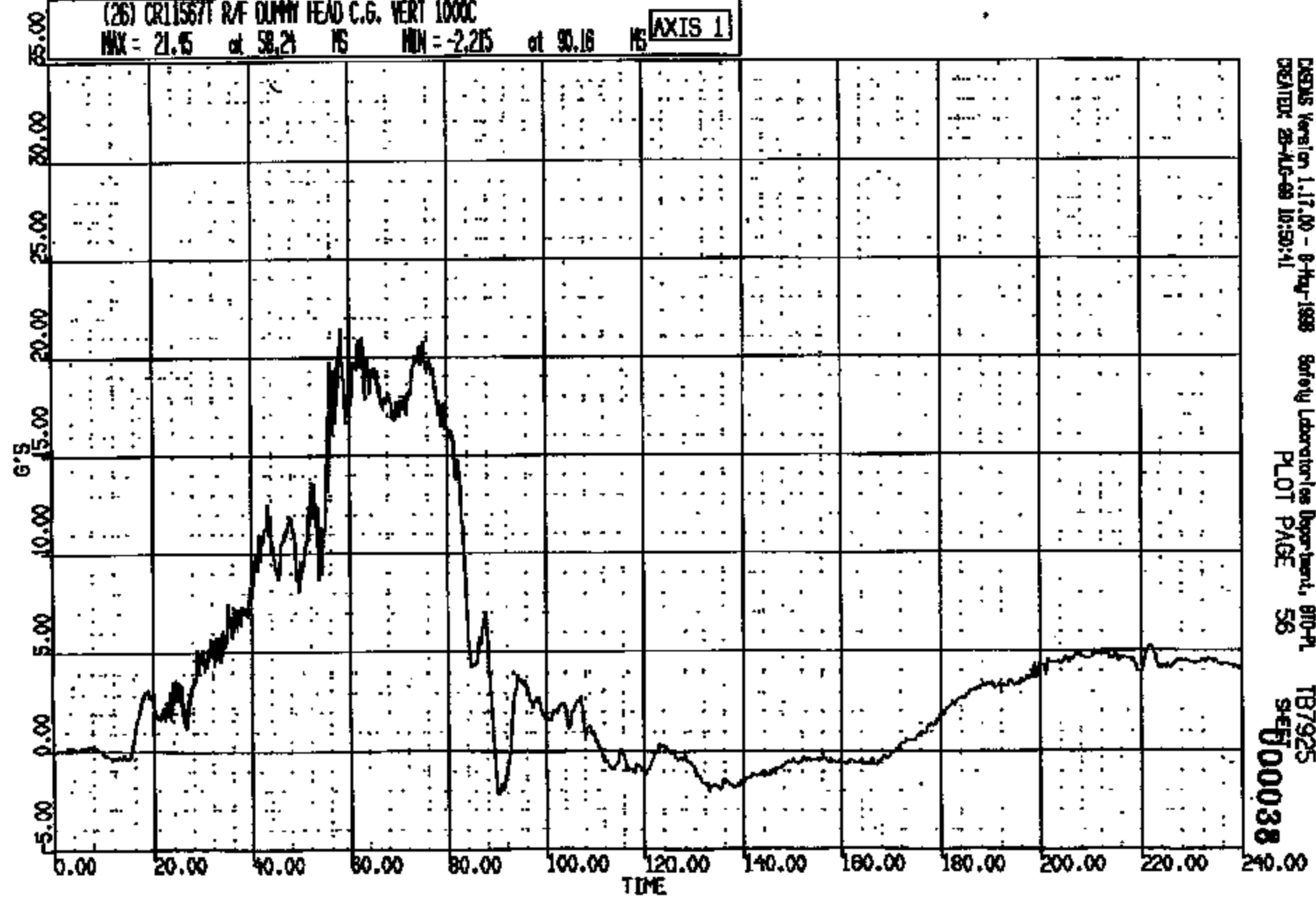
Safety Laboratories Department, 610-PL  
PLOT PAGE 55

TB7925  
SER000037

CRTS 0011567

CR R: 11567 TO: TB7925 DATE: 880828 08:42:00  
2000 D-188

(26) CR11567 R/F DUMMY HEAD C.G. VERT 1000  
MAX = 21.45 at 58.21 MS MIN = -2.215 at 90.16 MS **AXIS 1**



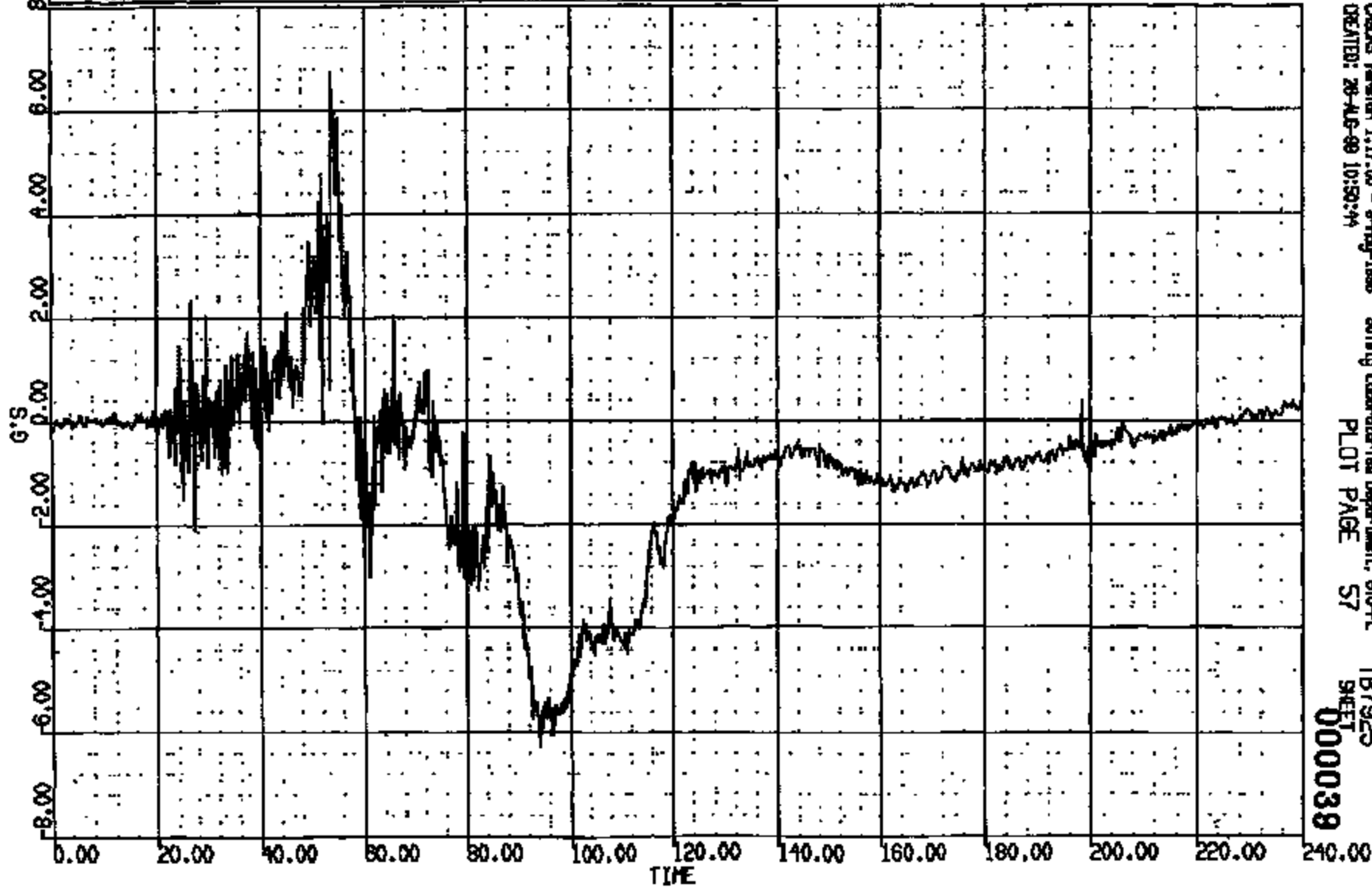
CRS Version 1.17.00 - 8-May-1988 Safety Laboratories Department, 810-PL  
CREATED: 28-AUG-88 10:50:41  
PLOT PAGE 56  
TB7925  
REF 000038

CRIS 0011567

CR R: 11587 TO: TB7925 DATE: 890828 09:42:00  
2000 0-188

(27) DRILLBIT R/F DUMMY HEAD C.G. LAT 1000  
MAX = 6.721 at 53.76 MS MIN = -6.267 at 91.16 MS

AXIS L



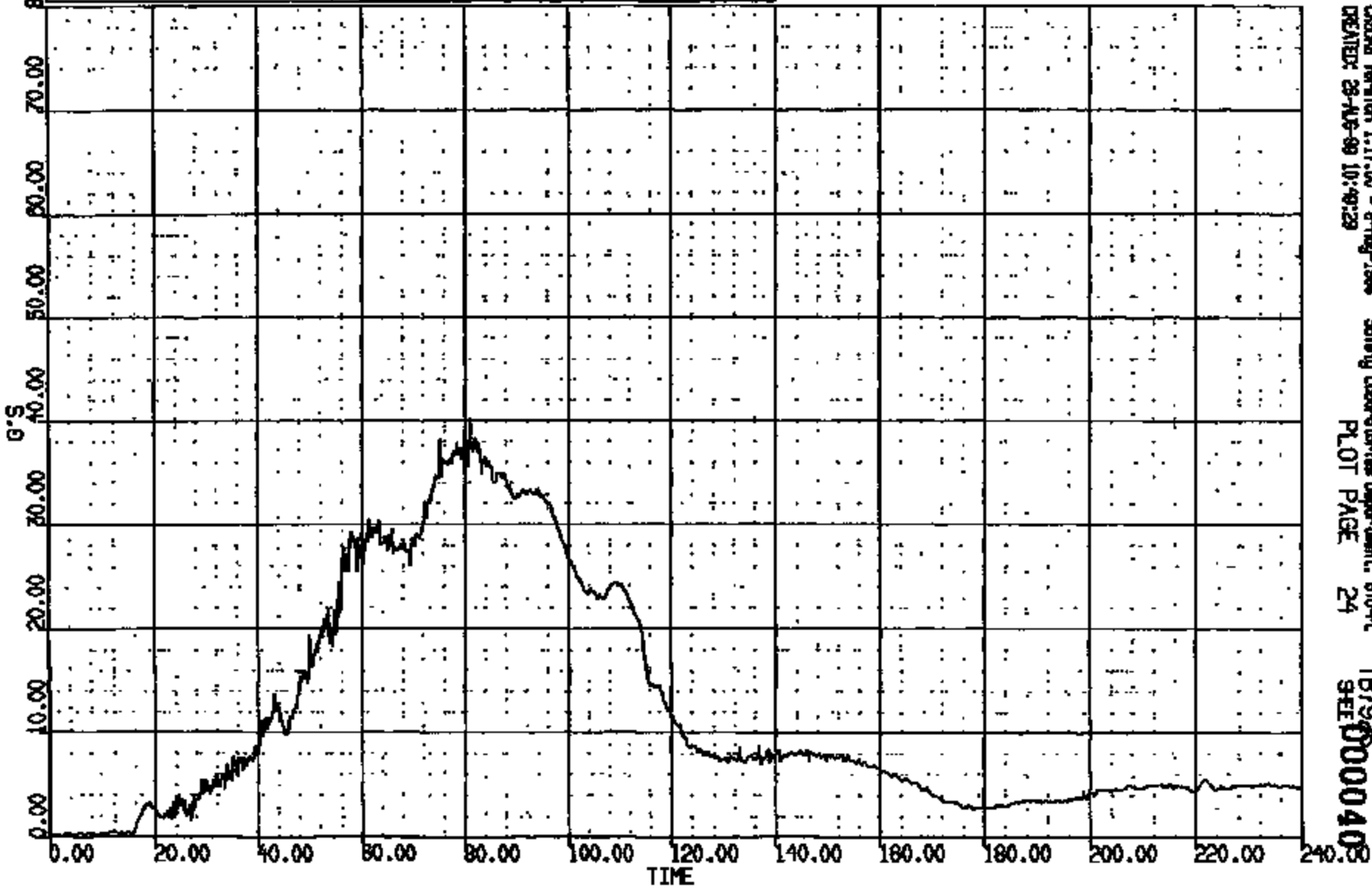
ORION Version 1.17.00 - 8-May-1998 Safety Laboratory/Ins Department, 610-PL  
CREATED: 28-AUG-89 10:50:44 PLOT PAGE 57 TB7925  
SHEET 000038

CRTS 0011567



INFO R: 11567 TO: T87925 DATE: 000828 09:42:00  
 INFO D: 11567  
 INFO: 221. DUR: 240.0 T1/T2: 48.8 // 118.  
 INFO: 118. DUR: 38.0 T1/T2: 38.0 // 38.0  
 INFO: 118. DUR: 18.0 T1/T2: 74.0 // 88.0

(10005) CR11567 R/F DUMP HEAD C.G. RES 1000C  
 MAX = 40.22 at 81.04 MS MIN = 0.454E-01 at 1.000 MS



CRMS Version 1.17.00 - 8-Aug-1988 Safety Laboratories Department, 610-PL  
 CREATED: 28-AUG-89 10:49:29 PLOT PAGE 24 T87925  
 SHEET 000040

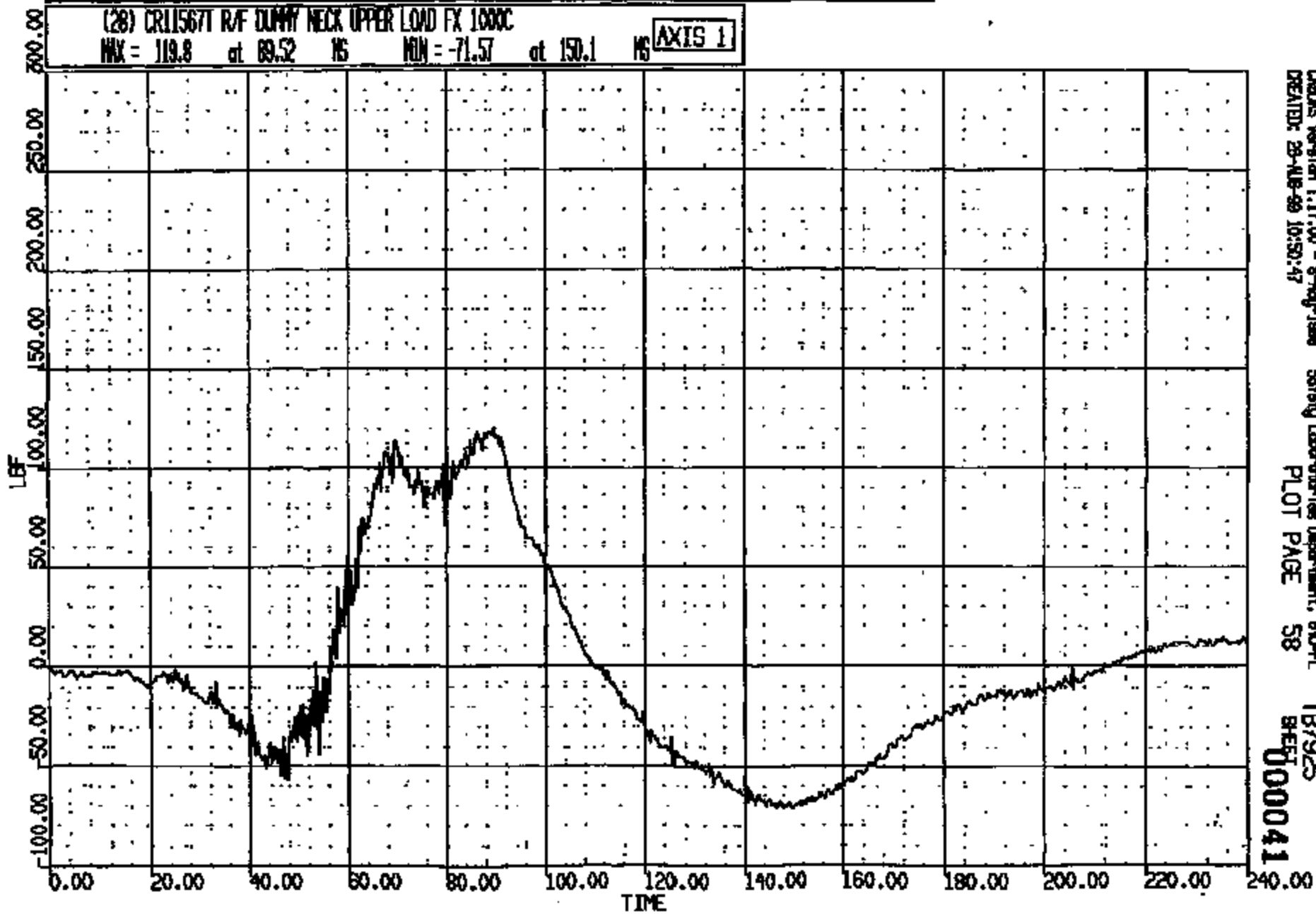
CRTS 0011567

CR #: 11567 TO: TB7925 DATE: 880828 09:42:00  
2000 D-188

(28) CRL1567I R/F DUMMY NECK UPPER LOAD FX 1000C

MAX = 119.8 at 69.52 MS MIN = -71.57 at 150.1 MS

AXIS 1



CRS Version 1.17.00 - 8-Aug-1988  
CREATED: 28-AUG-88 10:50:47

Safety Laboratories Department, 610-PL

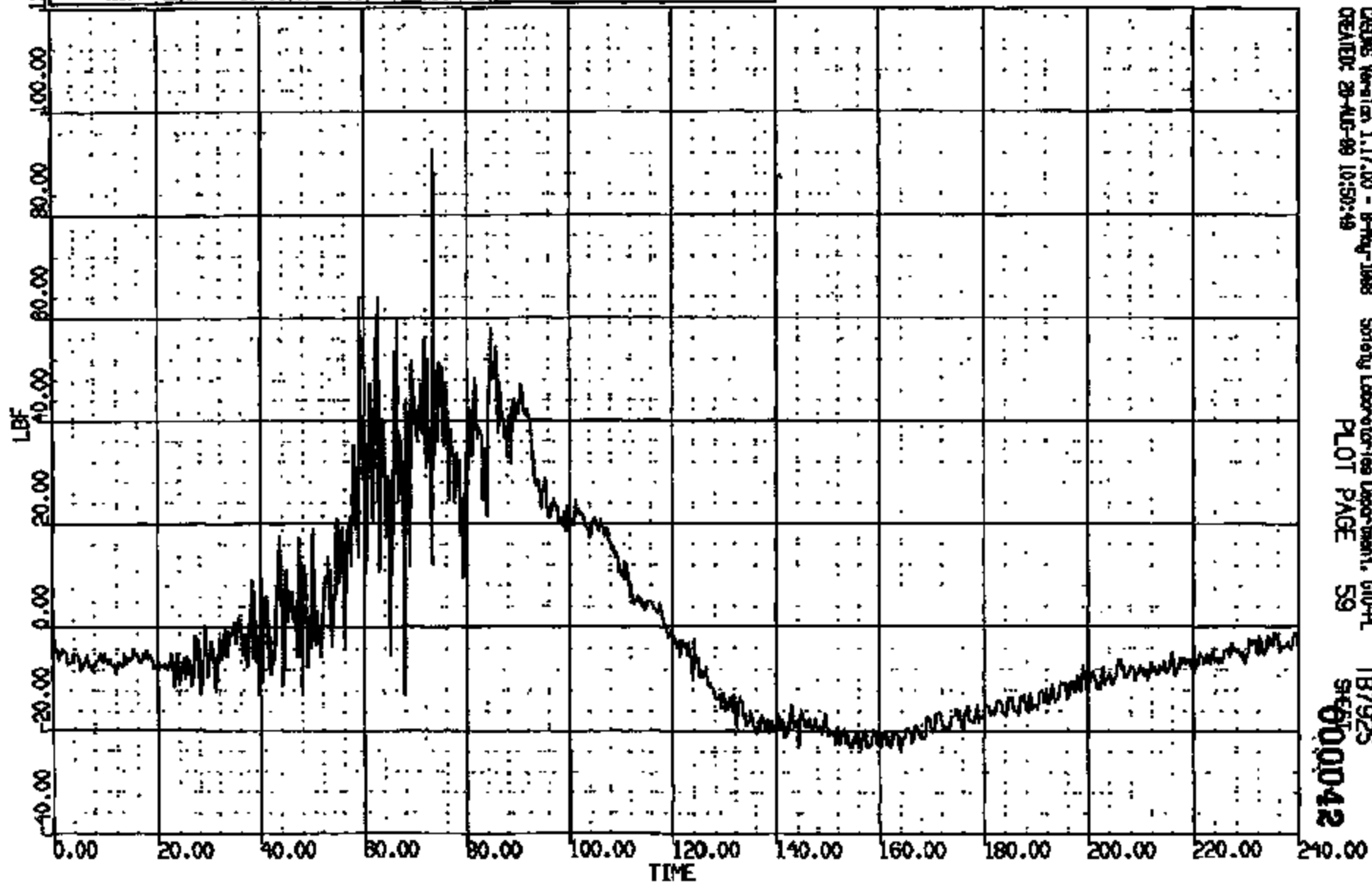
PLOT PAGE 58

TB7925

SHE# 000041

CR R: 11567 TO: TB7925 DATE: 890826 09:42:00  
R000 D-188

(29) CR11567T R/F DUMMY NECK UPPER LOAD FY 1000C  
MAX = 92.67 at 73.41 MS MIN = -23.69 at 163.9 MS **AXIS 1**

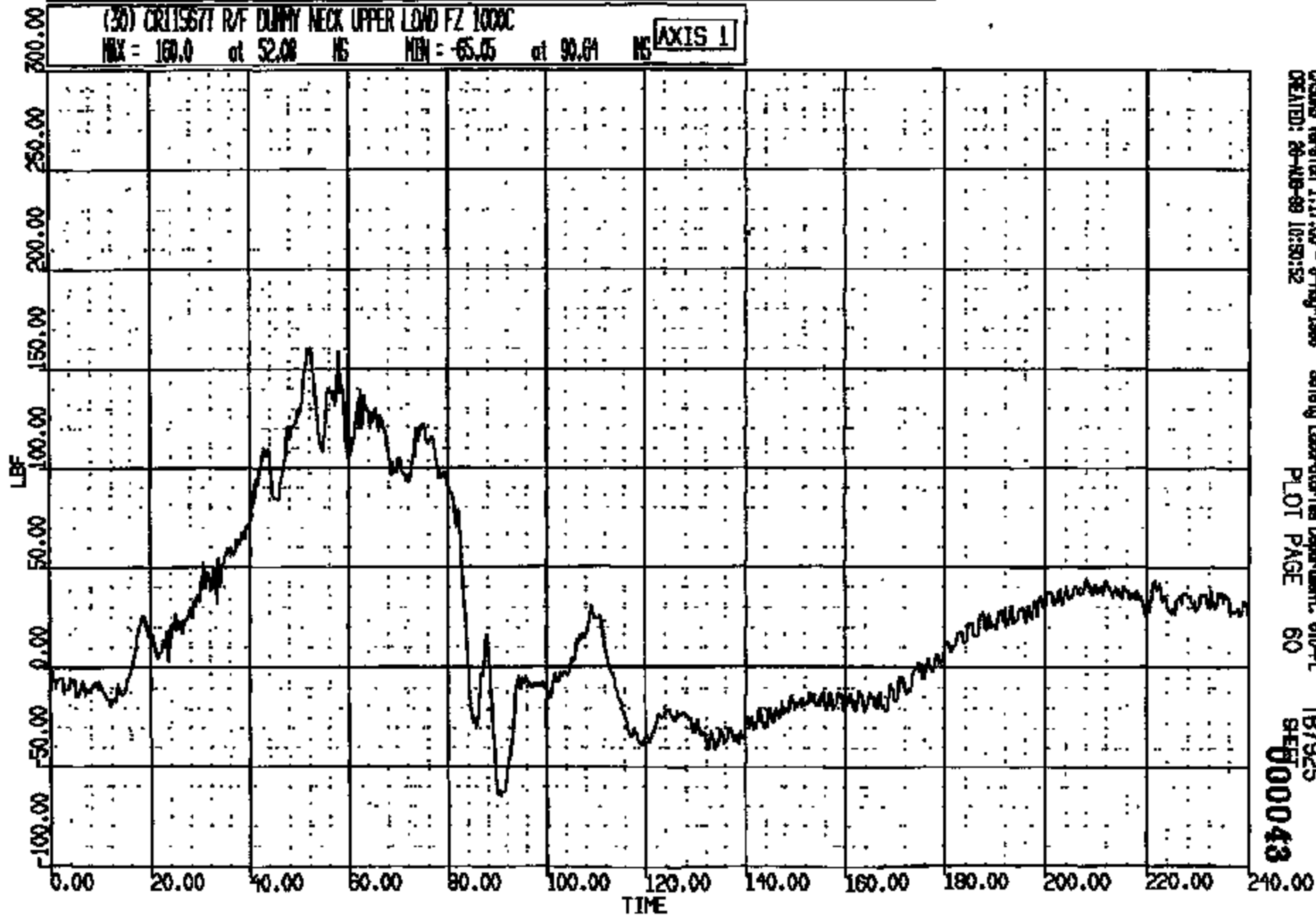


CADDS Version 1.17.00 - 8-May-1988 Safety Laboratories Department, 610-41  
CREATED: 29-AUG-89 10:50:49 PLOT PAGE 59 TB7925  
6000042 SHEET 001

CRTS 0011567

CR R: 11567 TO: TB7925 DATE: 990825 09:42:00  
2000 D-188

(30) CRT15677 R/F DUMMY NECK UPPER LOAD FZ 1000C  
MAX = 160.0 at 52.08 NS MIN = -65.05 at 90.64 NS **AXIS 1**

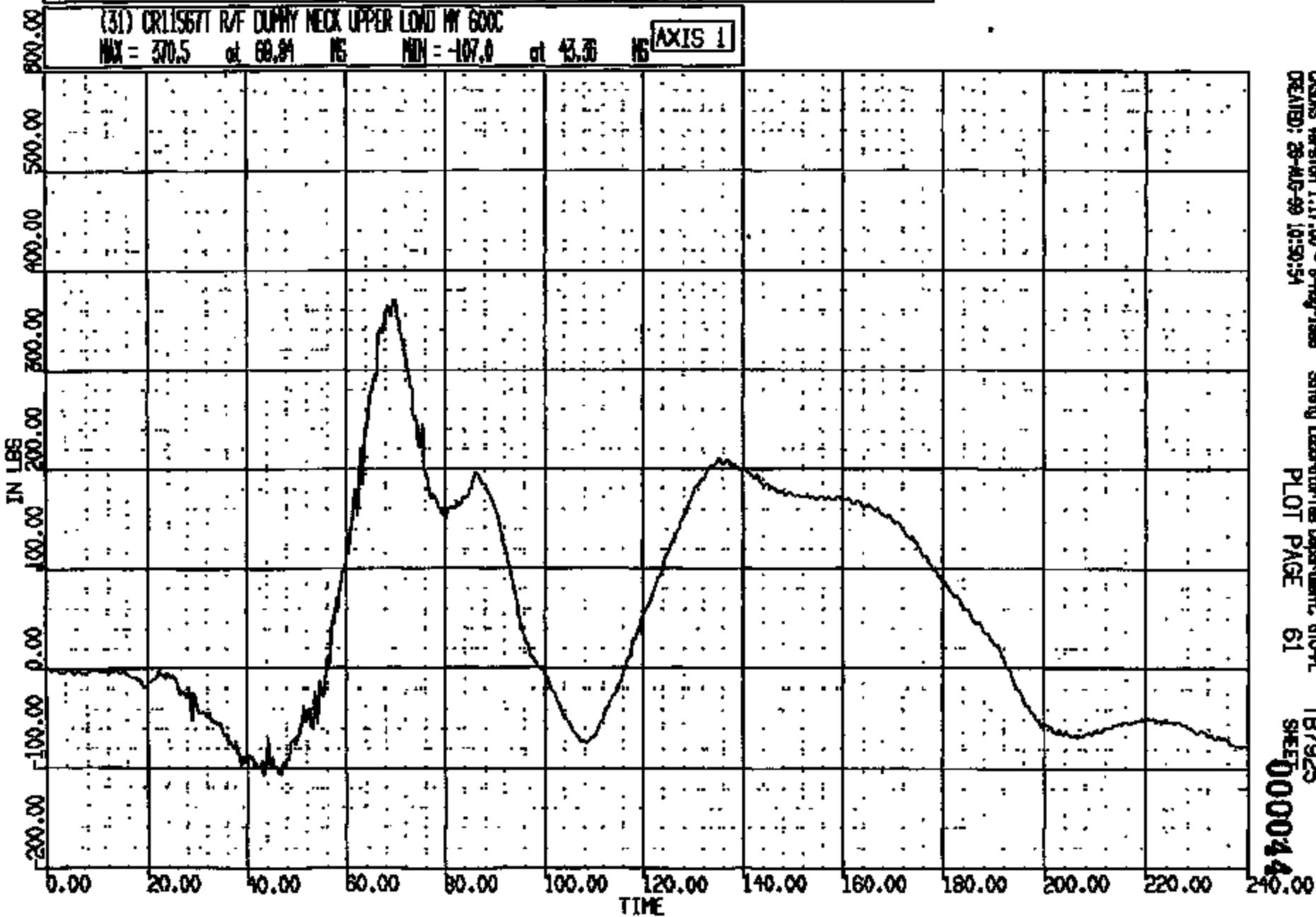


CASIMS Version 1.17.00 - 8-May-1998 Safety Laboratory/In Department, 610-PL  
CREATED: 20-MAR-99 10:50:52 PLOT PAGE 60

TB7925  
SER 000043

CRTS 0011567

CR R: 11567 TO: TB7925 DATE: 990626 09:42:00  
2000 D-188



CRSIS Version 1.17.00 - 8-May-1999  
CREATED: 26-AUG-99 10:50:54

Safety Laboratories Department, 610-PL  
PLOT PAGE 61

TB7925  
SHEET 000044

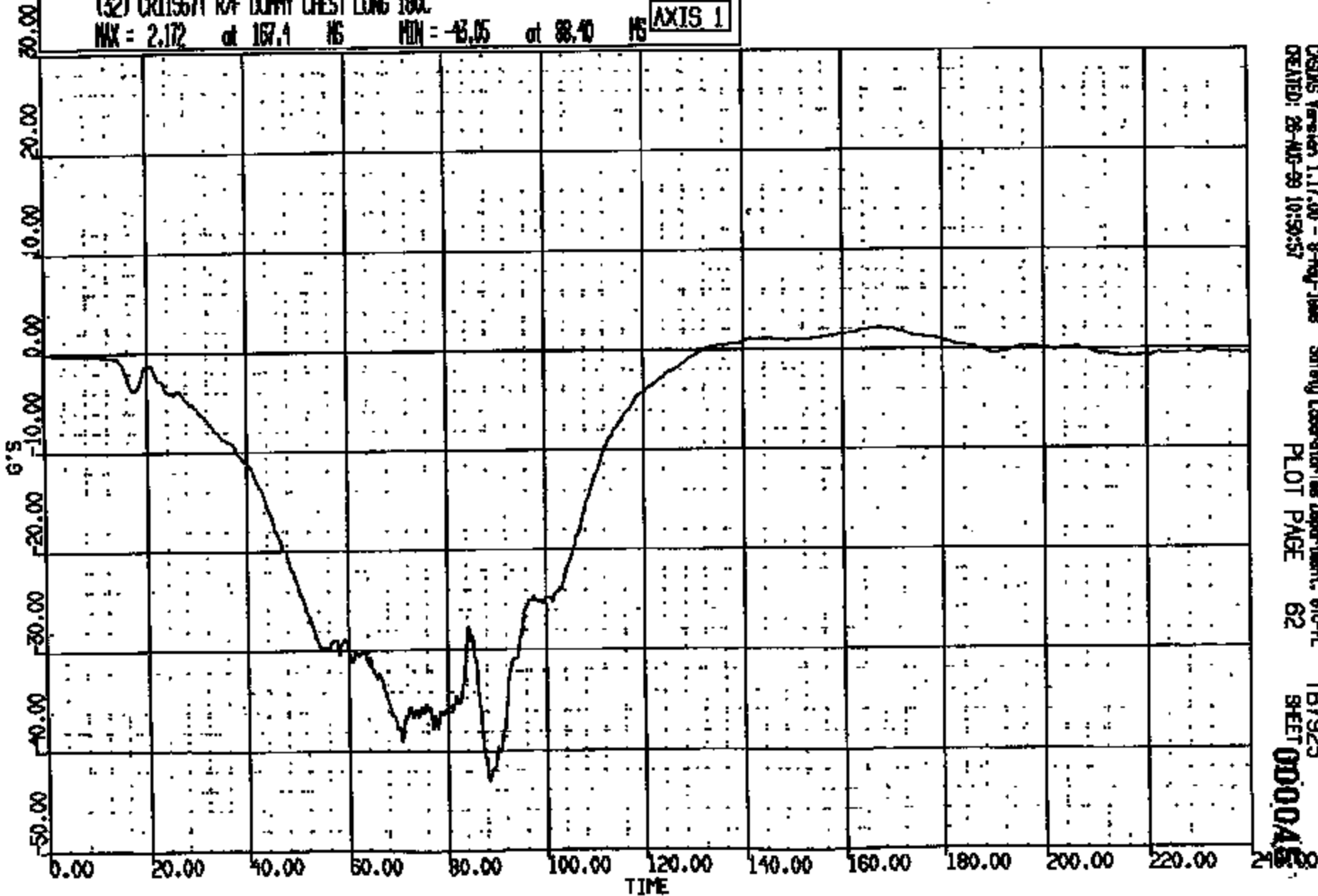
CRIS 0011567

CR R: 11567 TO: TB7925 DATE: 890826 08:42:00  
R000 0-188

(32) CR11567T RAF DUMMY CHEST LONG 180C

MAX = 2.172 at 167.4 MS MIN = -43.05 at 88.40 MS

AXIS 1



OSGMS Version 1.17.00 - 8-Aug-1989  
CREATED: 26-AUG-89 10:59:57

Safety Laboratories Department, 610-4L  
PLOT PAGE 62

TB7925  
SHEET 000045

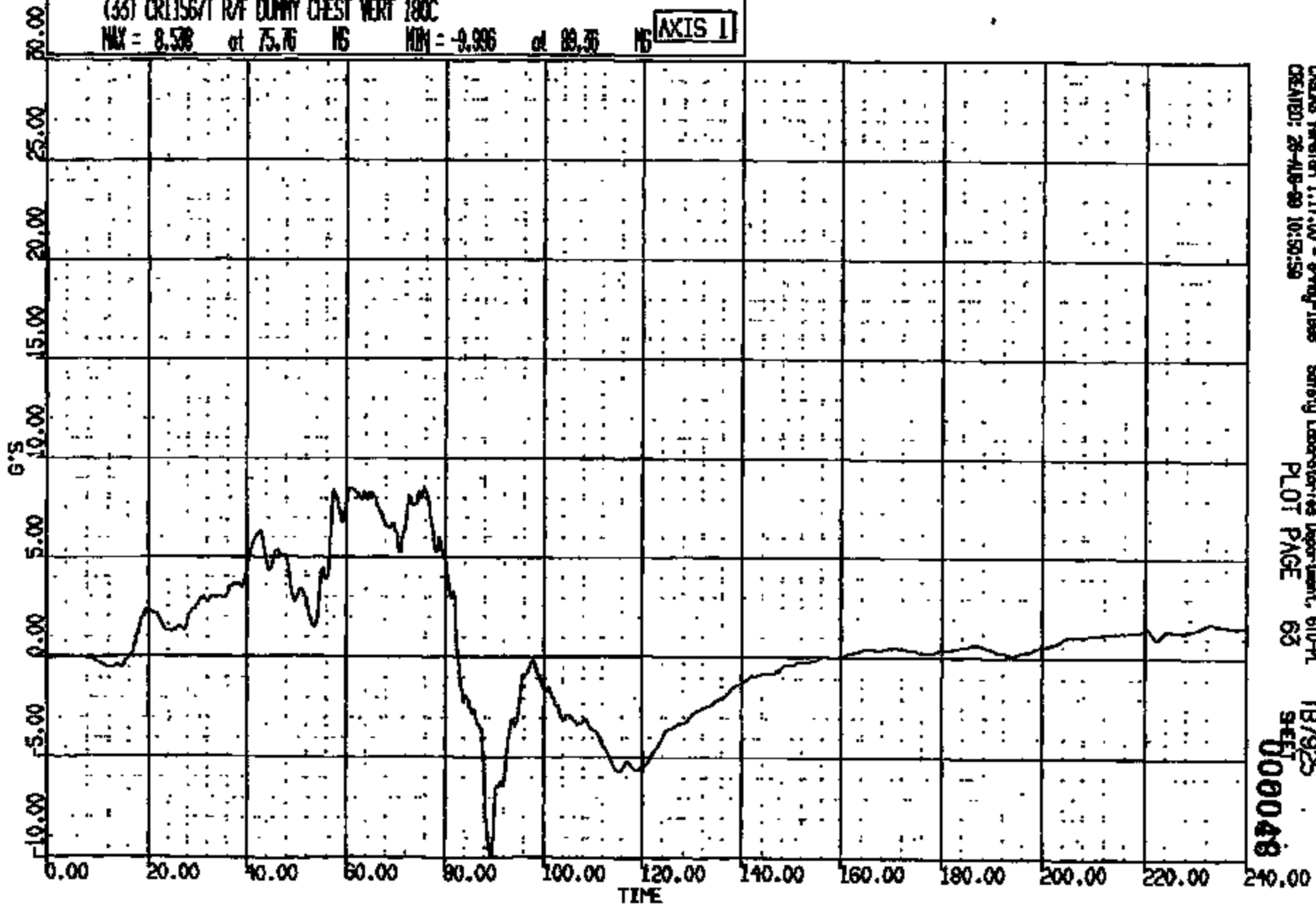
CR11567

CR R: 11567 TO: T87925 DATE: 990828 08:42:00  
2000 D-188

(33) CR11567 R/F DUMMY CHEST VERT 180C

MAX = 8.538 at 75.76 MS MIN = -9.996 at 89.36 MS

AXIS 1



CASAB Version 1.17.00 - 9-May-1998  
CREATED: 28-AUG-99 10:50:58

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PLOT PAGE 63

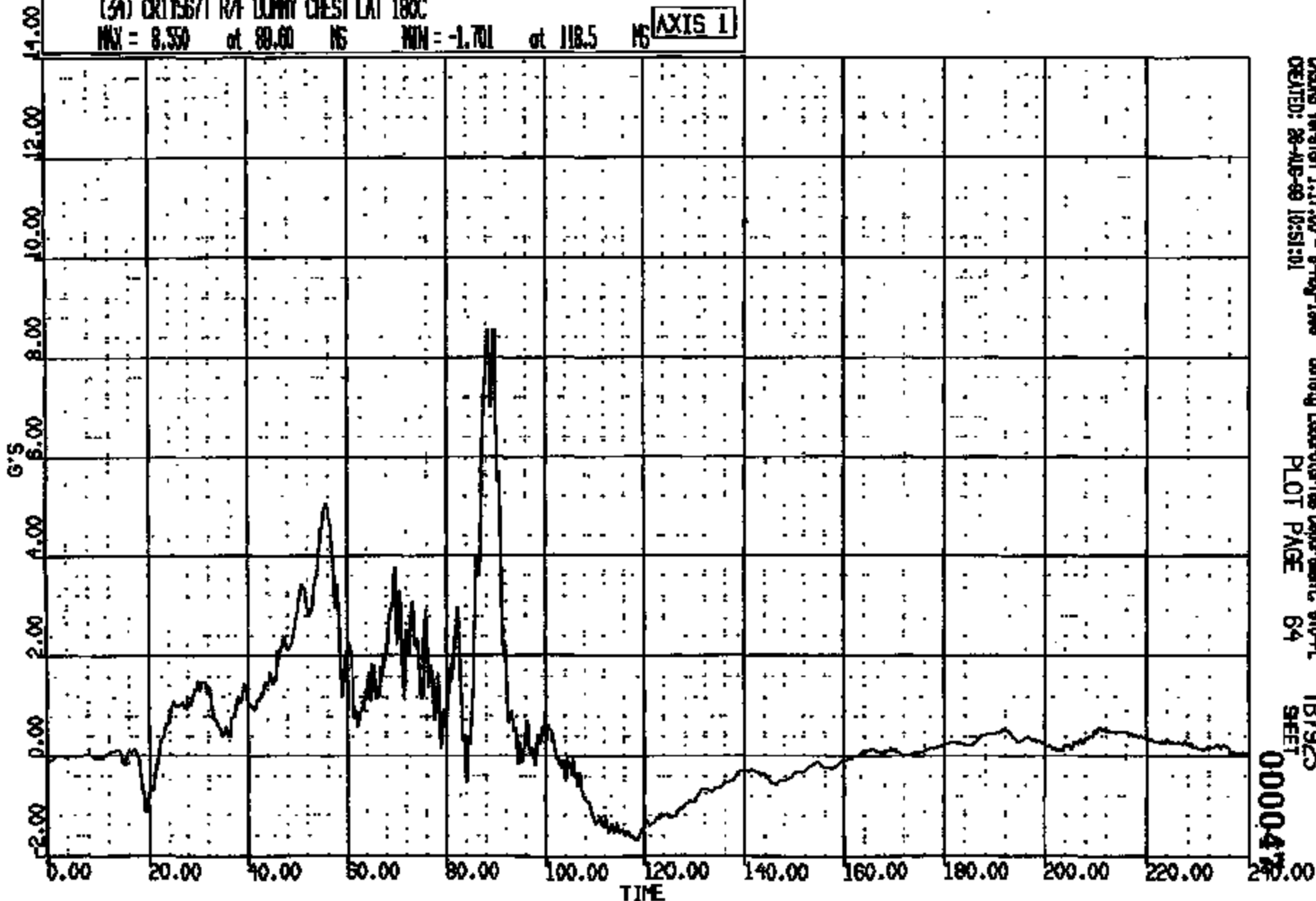
T87925  
SERI

000048

CRTS 0011567

CR R: 11567 TO: TB7925 DATE: 890826 08:42:00  
2000 D-180

(34) CR11567T R/F DUMMY CHEST LAT 180C  
MAX = 8.550 at 88.00 NS MIN = -1.701 at 118.5 NS **AXIS 1**



CRAMS Version 1.17.00 - 8-May-1998 Safety Laboratories Department, 610-PL TB7925  
CREATED: 26-AUG-89 16:51:01 PLOT PAGE 64 SHEET

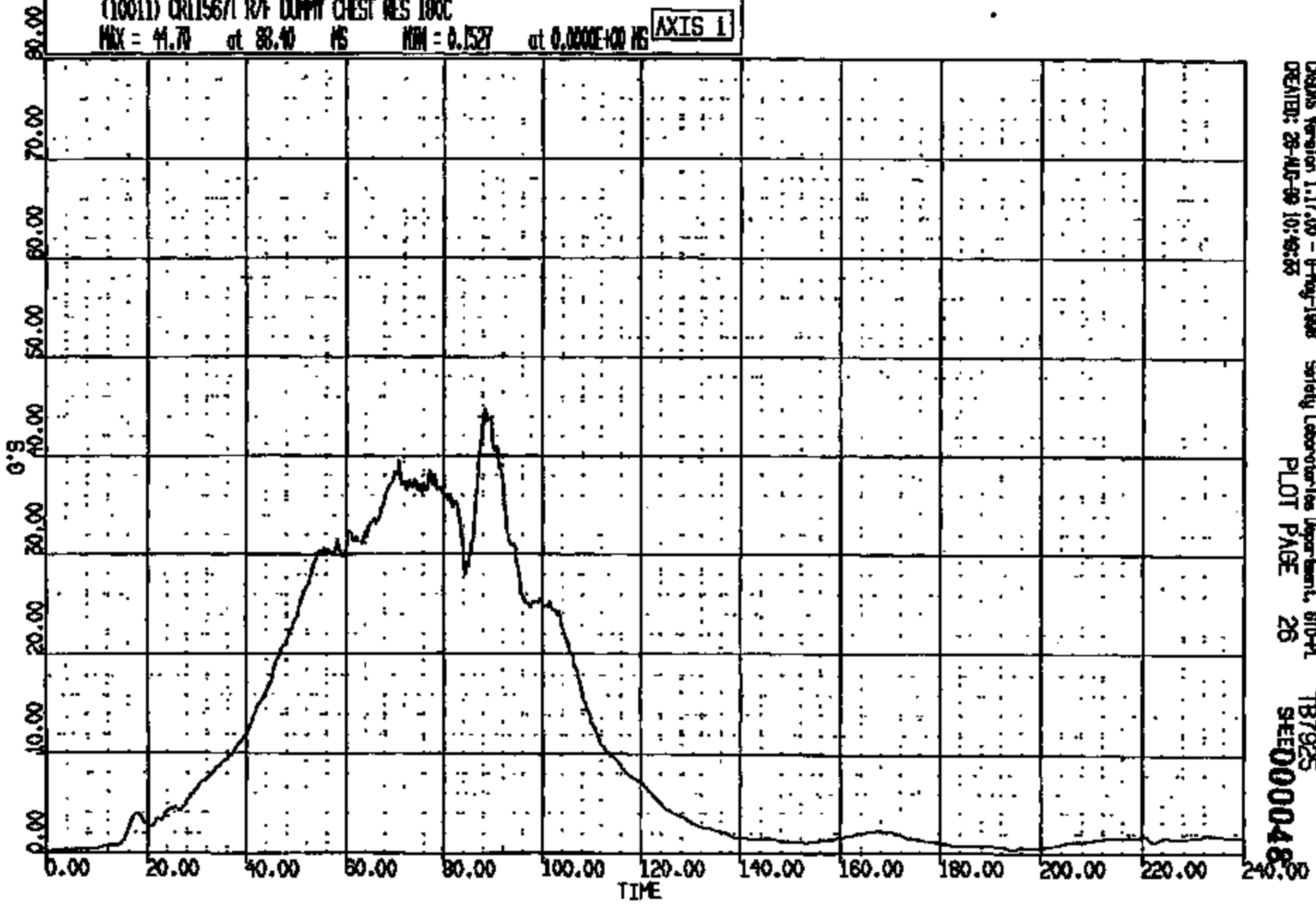
000047

CRTS 0011567



CR N: 11567 TO: TB7925 DATE: 890828 09:42:00  
2000 D-180  
CUMDUR = 40.848 Duration time = 2.0000

(10011) CR11567 R/F DUMPY CHEST RES 100C  
MAX = 41.79 at 88.40 MS MIN = 0.1527 at 0.0000E+00 MS **AXIS 1**



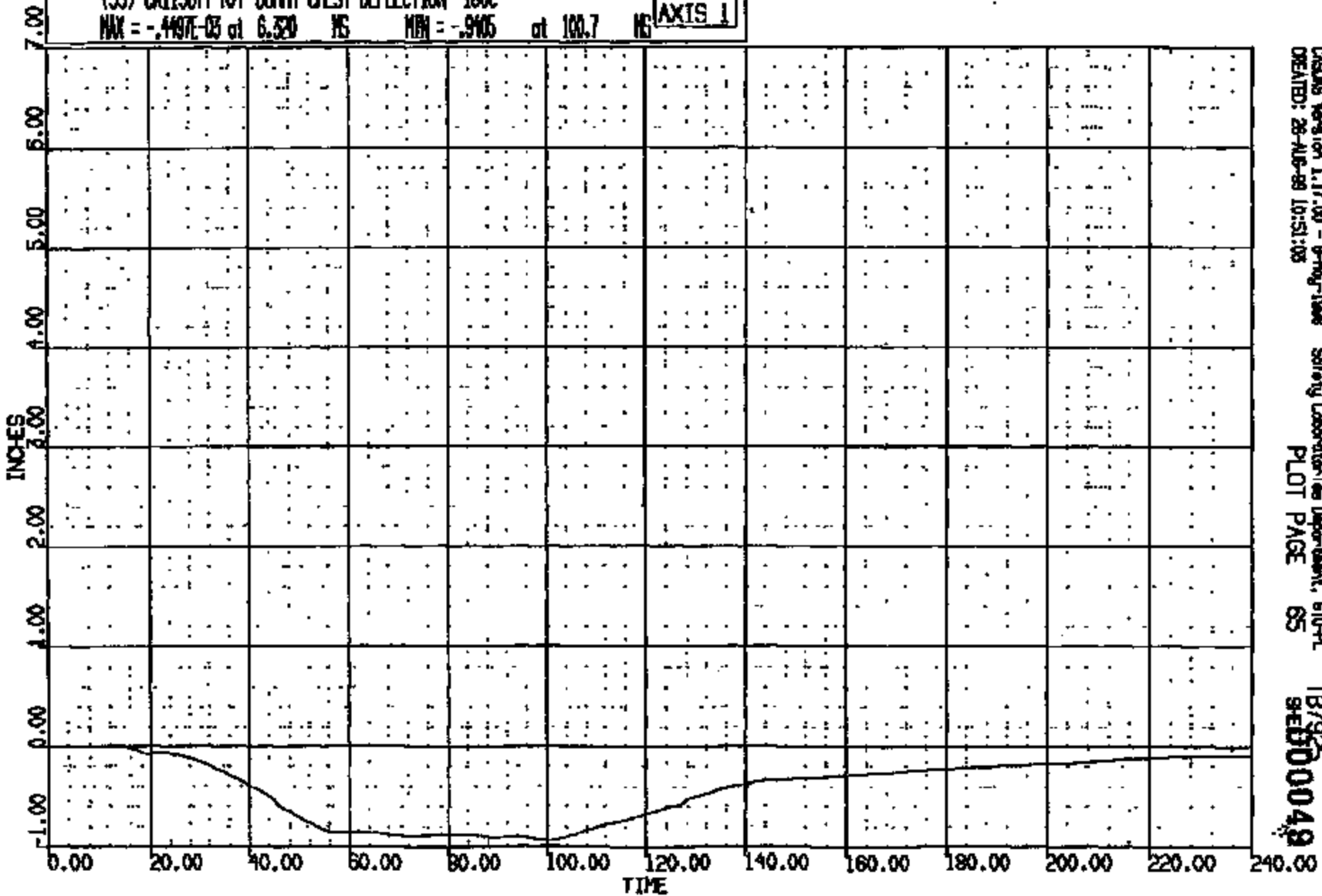
CRSIS Version 1.17.00 - 6-May-1988 Safety Laboratories Department, 610-PI  
CREATED: 28-AUG-89 10:48:55 PLOT PAGE 26 TB7925  
SEED000048

CRIS 0011567

CR R: 11567 TC: TB7925 DATE: 880928 09:42:00  
P000 0-186

(35) CR11567I R/F DUMMY CHEST DEFLECTION 180C  
MAX = -.4497E-03 at 6.320 MS MIN = -.9405 at 100.7 MS

AXIS 1



CASAS Version 1.17.00 - 9-Aug-1988  
CREATED: 28-AUG-88 10:51:08

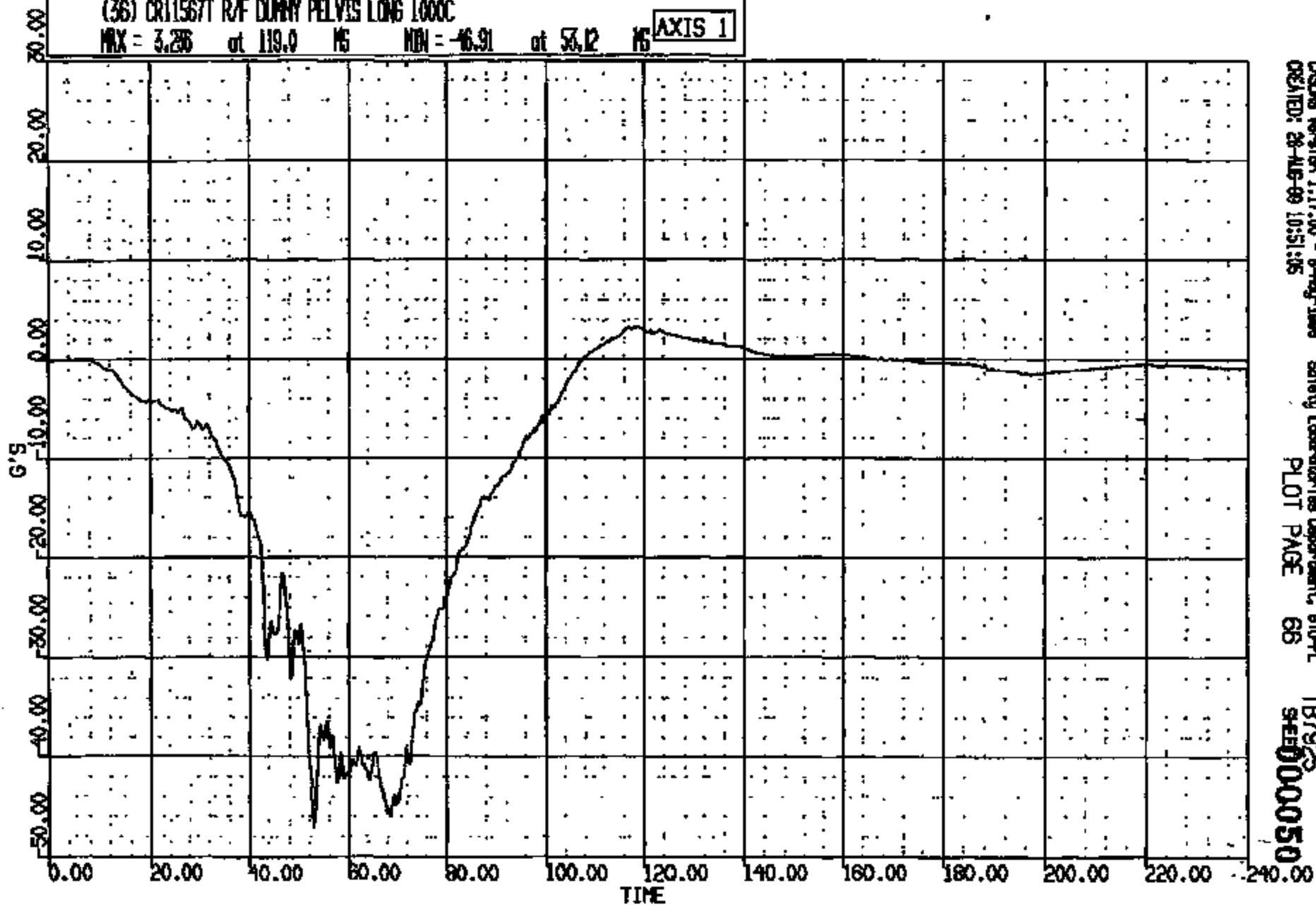
Safety Laboratories Department, 610-PL  
PLOT PAGE 65

TB7925  
SER000049

CRTS 0011567

CR R: 11567 TO: TB7925 DATE: 990825 09:42:00  
2000 D-188

(36) CR11567T R/F DUNNY PELVIS LONG LOGOC  
MAX = 3.286 at 119.0 MS MIN = -46.91 at 53.12 MS **AXIS 1**

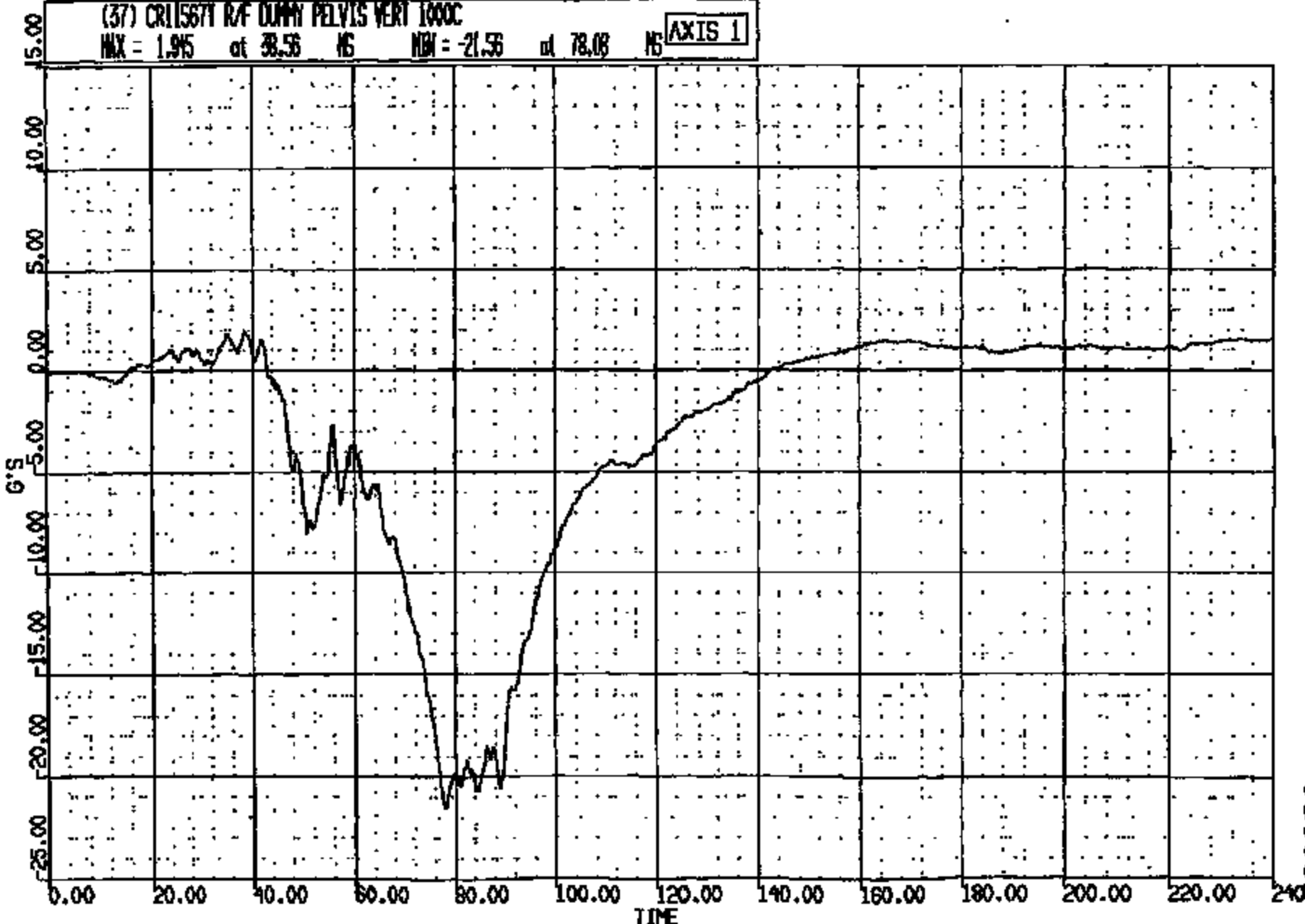


DIGAS Version 1.17.00 - 9-May-1999 Safety Laboratories Department, 610-PL  
CREATED: 26-AUG-99 10:51:05  
PLOT PAGE 66  
TB7925  
SER# 000050

CRTS 0011567

CR R: 11867 TO: TB7925 DATE: 990826 09:42:00  
2000 D-189

(37) CRT15671 R/F DUMMY PELVIS VERT 1000C  
MAX = 1.95 at 38.56 MS MIN = -21.56 at 78.08 MS **AXIS 1**



CIGS Version 1.17.00 - 8-Aug-99 Safety Laboratories Department, 670-PL  
CREATED: 26-AUG-99 10:51:07  
PLOT PAGE 67  
TB7925  
SHEET 00005

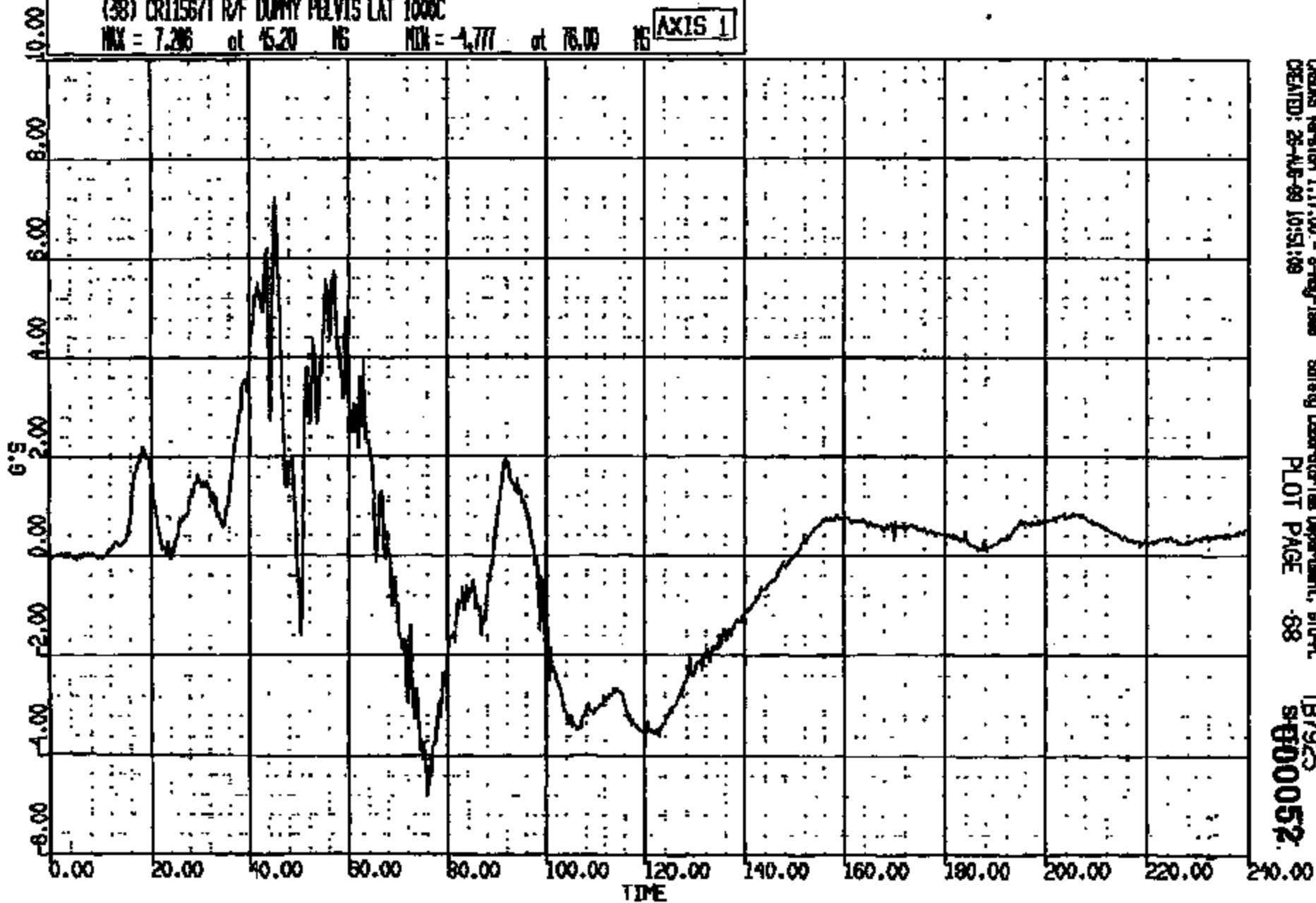
CRTS 0011567

CR R: 11567 TO: TB7925 DATE: 880828 09:42:00  
2000 D-188

(38) CR115671 R/F DUMMY PELVIS LAT 1000C

MAX = 7.286 at 45.20 NS MIN = -4.777 at 76.00 NS

AXIS 1



CADDS Version 1.17.00 - 8-May-1988  
CREATED: 28-AUG-88 10:51:08

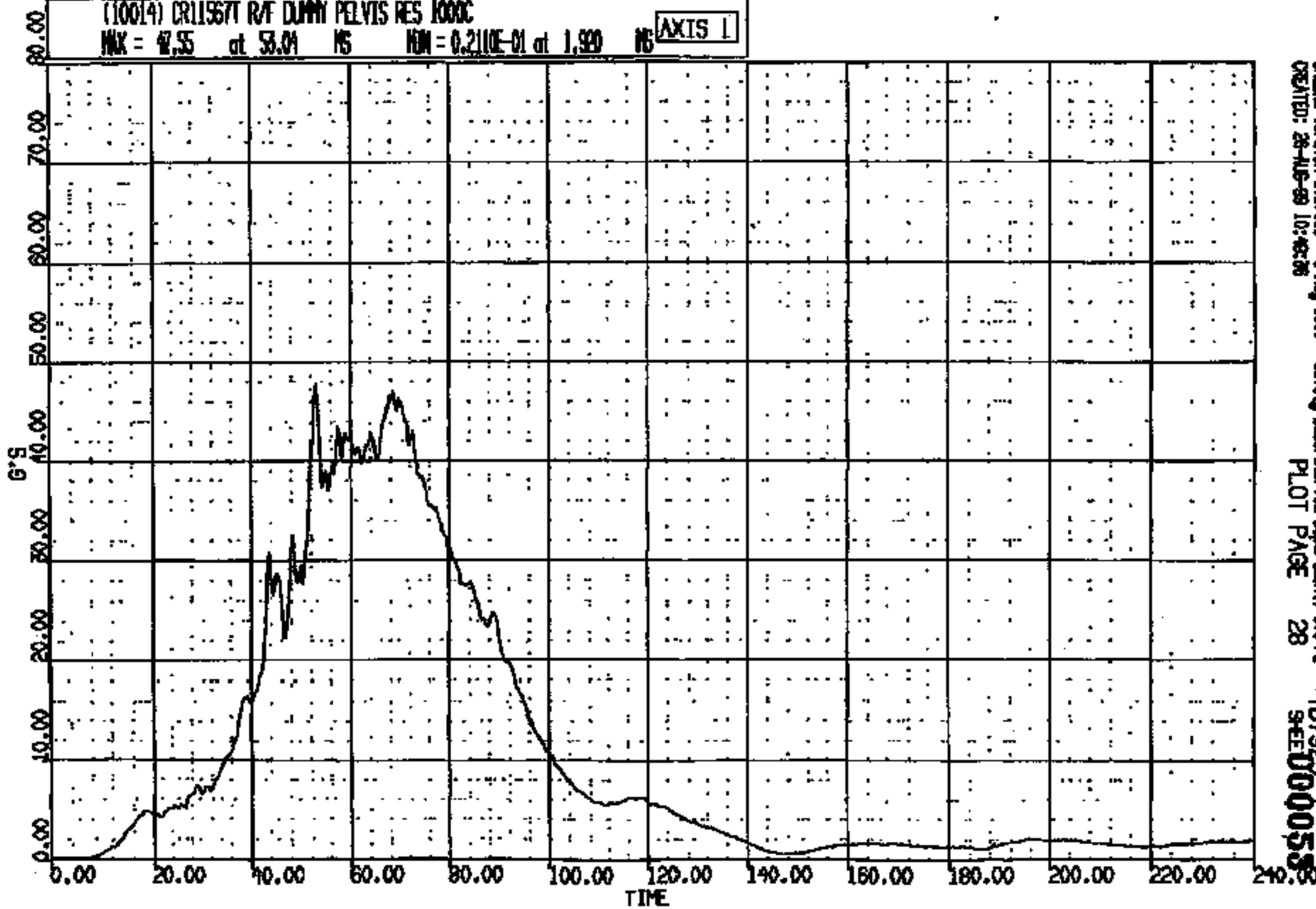
Safety Laboratories Department, 610-PL  
PLOT PAGE 68

TB7925  
S-000052

CR11567

CR R: 11567 TO: TB7925 DATE: 890828 09:42:00  
2000 D-198

(10014) CR11567T R/F DUMMY PELVIS RES 1000C  
MAX = 47.35 at 58.01 NS MIN = 0.2110E-01 at 1.920 NS **AXIS 1**

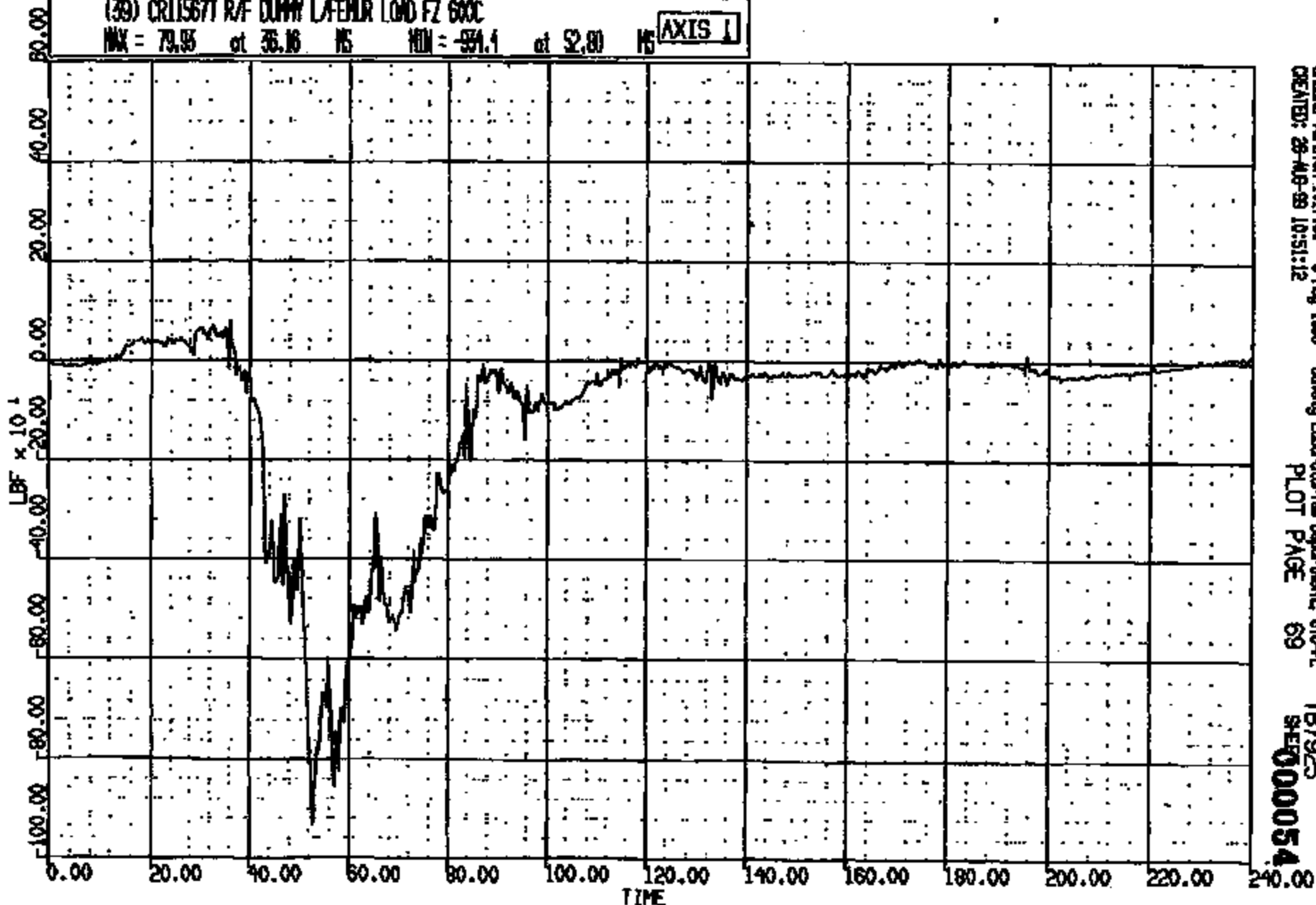


CRSIS Version 1.17.00 - 8-May-1989 Safety Laboratory Department, 600-PL  
CREATED: 28-AUG-89 10:46:38 PLOT PAGE 28 TB7925  
SHEET 000058

CRIS 0011567

CR #: 11567 TO: TB7925 DATE: 890826 09:42:00  
2000 D-188

(39) CR11567T R/F DUMMY LAUNCH LOAD FZ 600C  
MAX = 79.95 at 35.16 MS MIN = -99.1 at 52.80 MS **AXIS 1**



CASYS Version 1.17.00 - 8-Feb-1988  
CREATED: 26-AUG-89 10:51:12

Safety Laboratory Department, STD-PL  
PLOT PAGE 69

TB7925  
SER# 000054

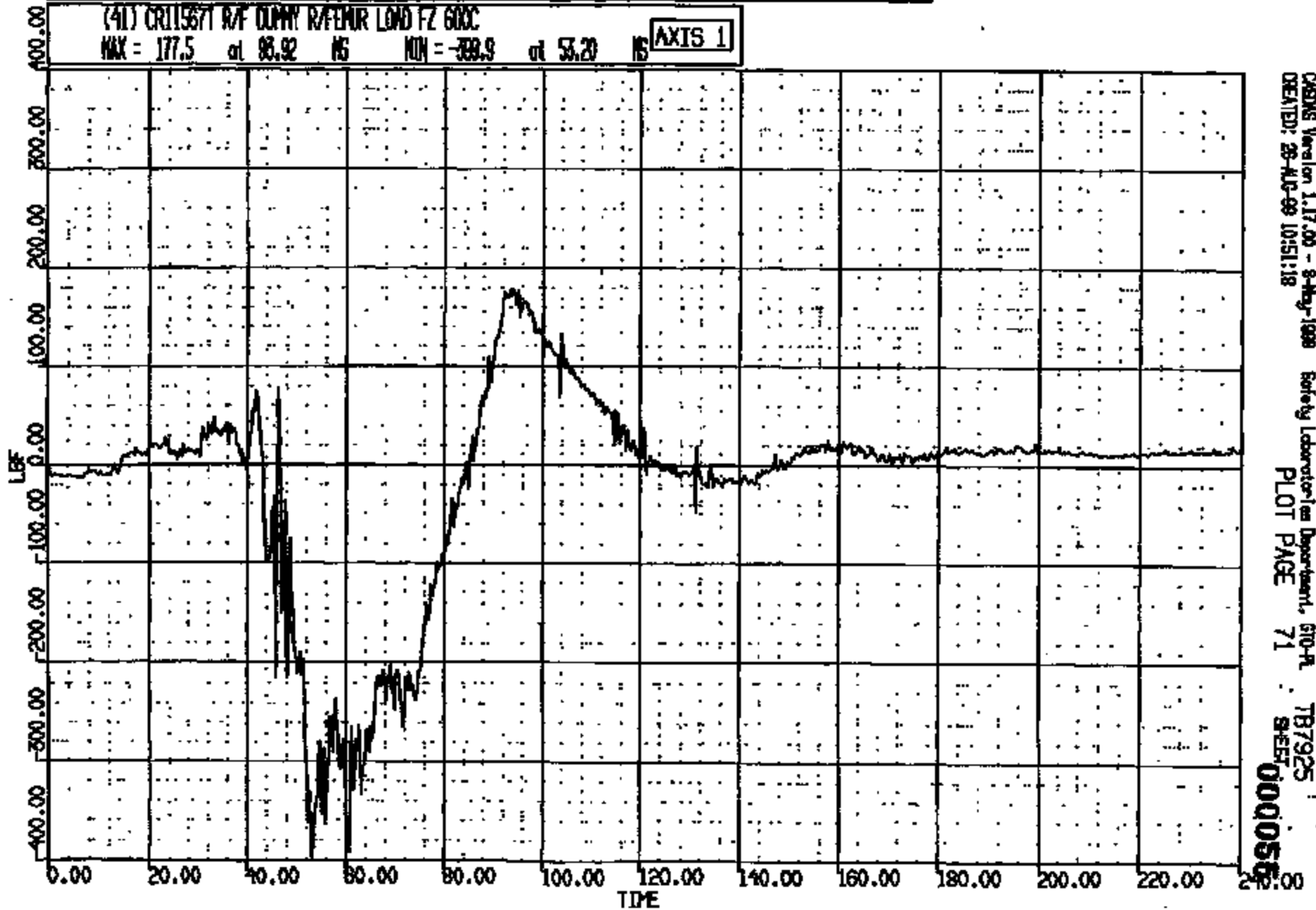
CRTS 0011567

CR #: 11567 TO: TB7925 DATE: 990825 09:42:00  
2000 D-188

(41) CR11567 R/F DUMMY R/FEMUR LOAD FZ 60XC

MAX = 177.5 at 88.92 MS MIN = -388.9 at 53.20 MS

AXIS 1



CRSNG Version 1.17.00 - 8-Aug-1999  
CREATED: 28-APR-99 10:51:18

Safety Laboratories Department, 610-A  
PLOT PAGE 71

TB7925  
SHEET 000056

CRIS 0011567

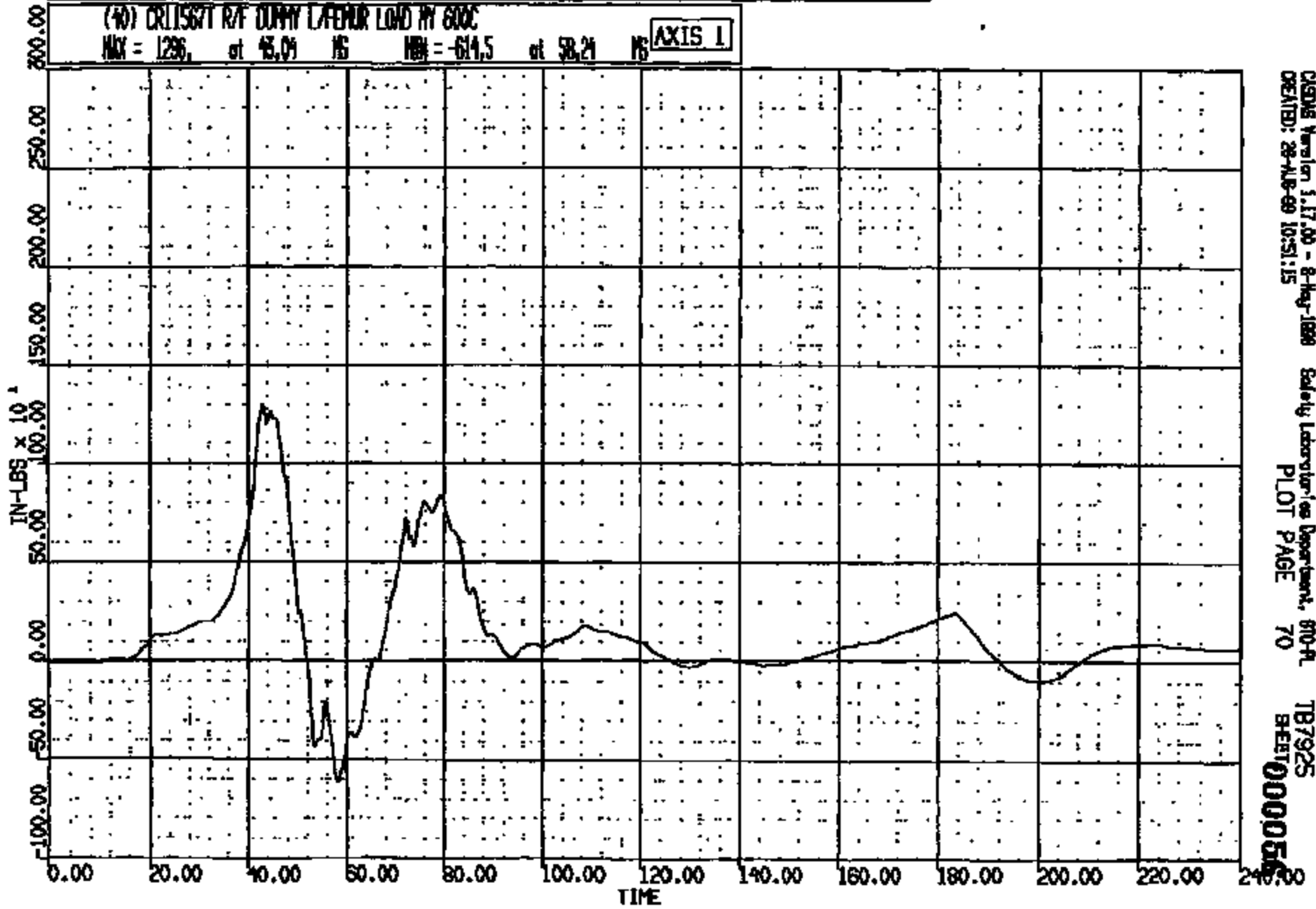


DR R: 11567 TO: TB7925 DATE: 890825 09:42:00  
2000 D-198

(40) CR11567T R/F DUFFY LAFOR LOAD BY 600C

MAX = 1286. at 45.09 MS MIN = -614.5 at 58.24 MS

AXIS 1



CRS Version 1.17.00 - 8-May-1989  
CREATED: 28-AUG-89 10:51:15

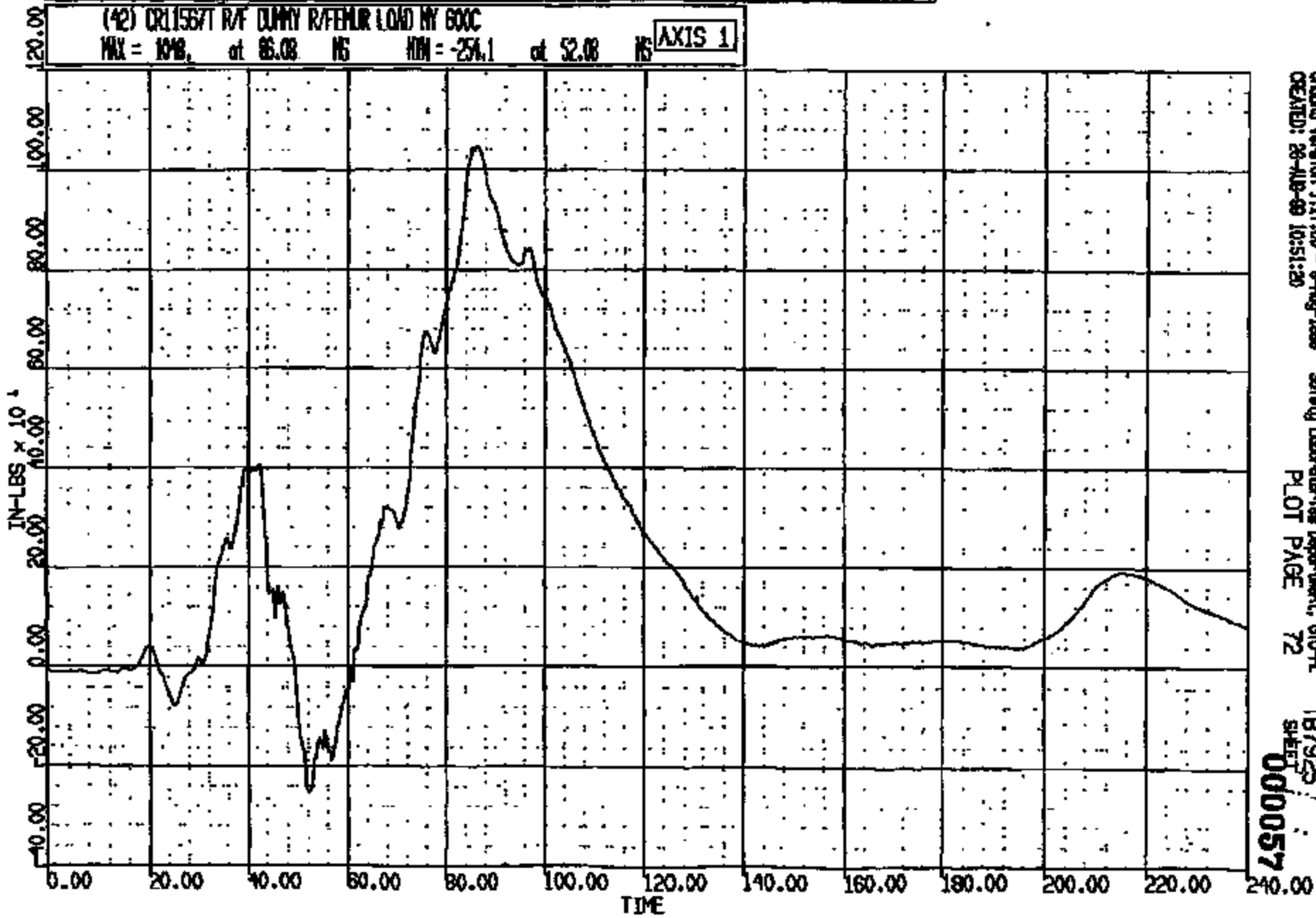
Safety Laboratories Department, 800-A  
PLOT PAGE 70

TB7925  
HEET 000054

CRIS 0011567

CR R: 11567 TO: T87925 DATE: 880825 08:42:00  
R000 D-188

(42) CR11567 R/F DUMMY R/F/FUR LOAD BY 600C  
MAX = 1018. at 86.08 NS MIN = -254.1 at 52.08 NS **AXIS 1**



CRS06 Version J.17.00 - 8-May-1988  
CREATED: 28-118-88 10:51:20

Safety Laboratories Department, 610-PL  
PLOT PAGE 72

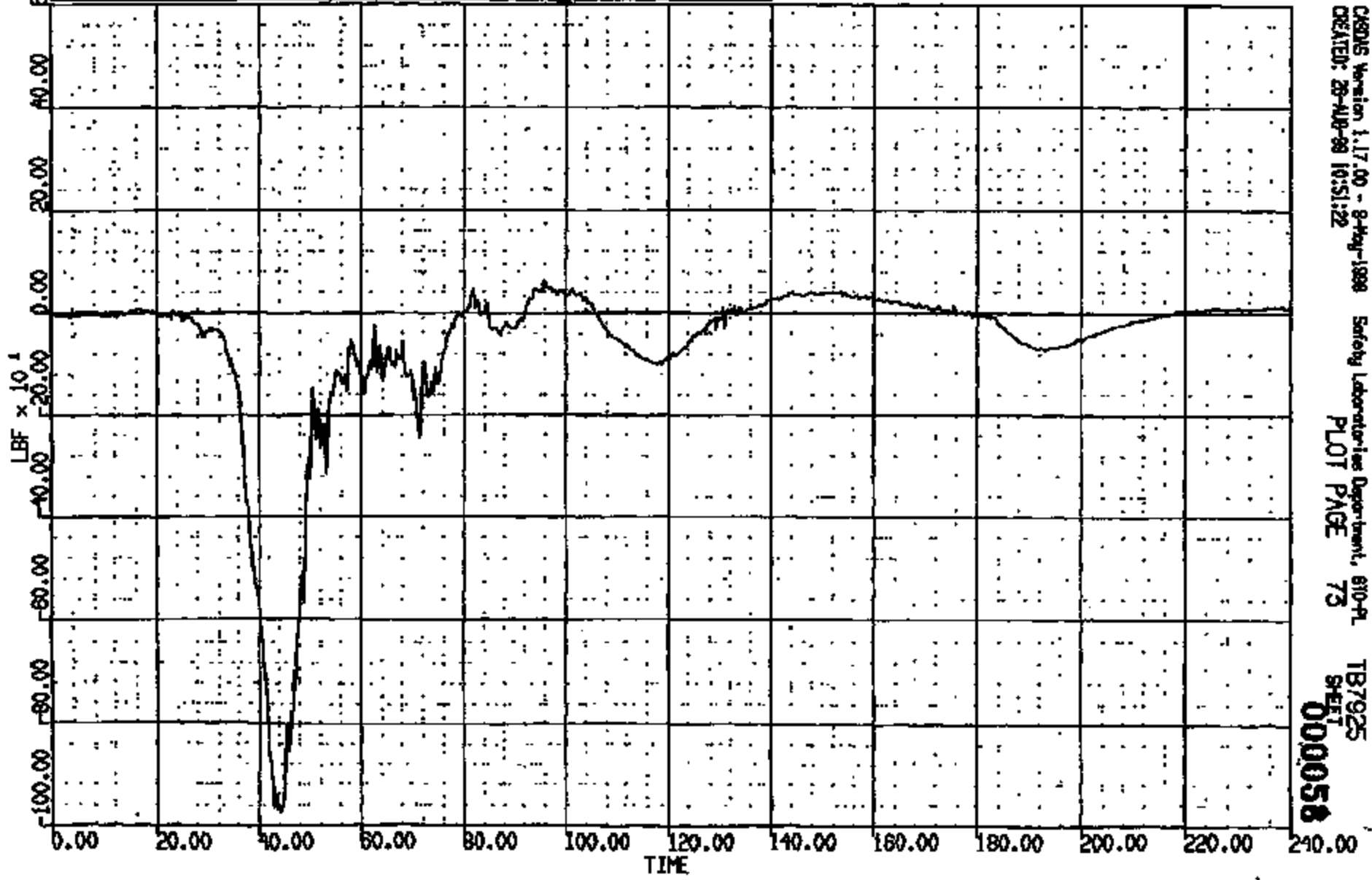
T87925  
SHEET

000057

CRIS 0011567

CR R: 11567 TO: T87925 DATE: 990828 09:42:00  
2000 D-186

(43) CR11567T R/F DUMMY LAP/TIBIA LOND FZ 600C  
MAX = 61.41 at 95.08 NS MIN = -976.5 at 41.40 NS **AXIS 1**



CRONUS Version 1.17.00 - 8-May-1998 Safety Laboratories Department, 810-PL T87925  
CREATED: 28-AUG-99 10:51:22 PLOT PAGE 73 SHEET 000058

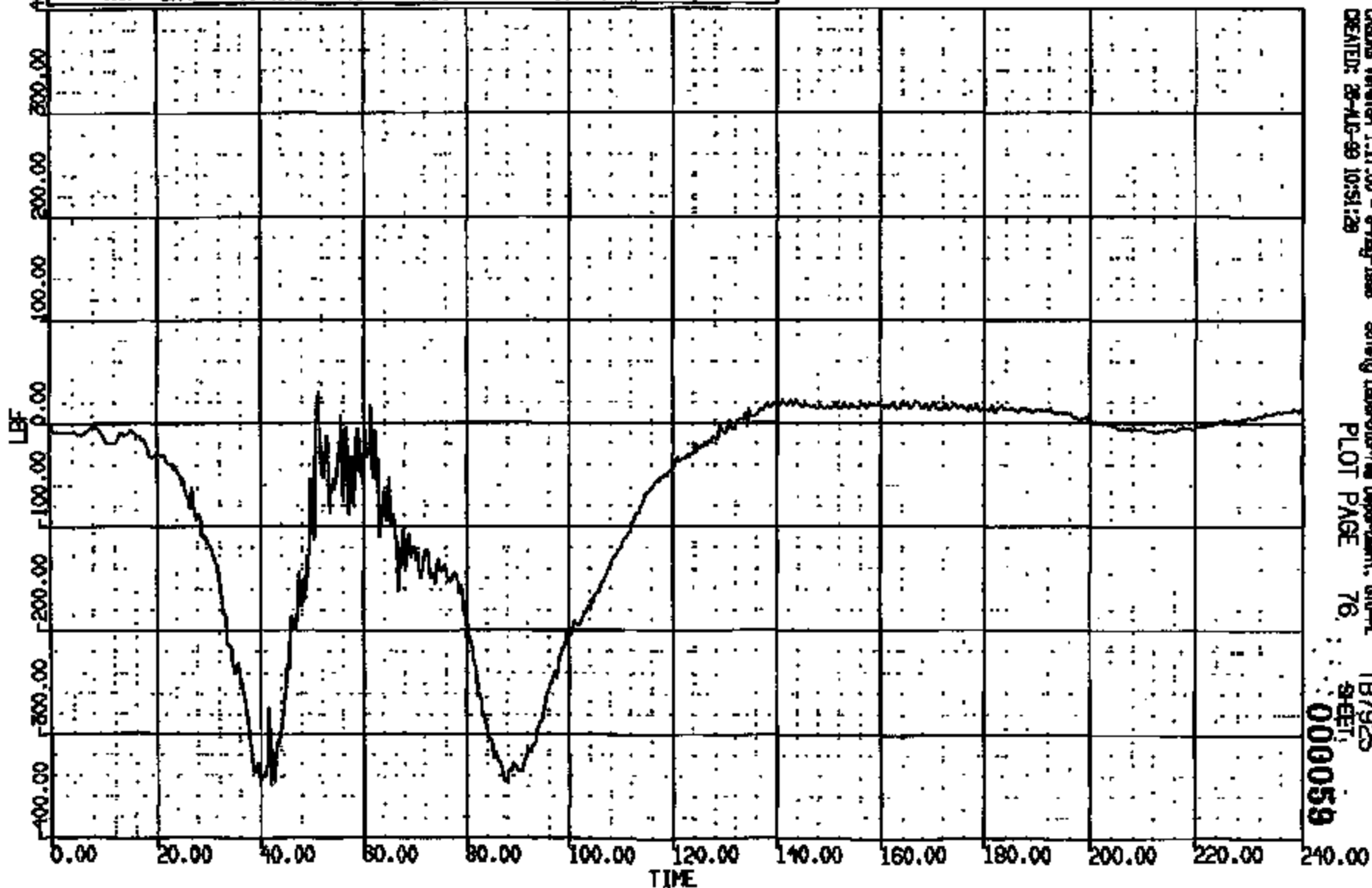
CRIS 0011567

CR R: 11567 TO: TB7925 DATE: 880828 08:42:00  
2000 D-188

(46) CR11567T R/F DUMMY R/PTIBIA LOAD FZ 600C

MAX = 28.47 at 51.28 MS MIN = -349.7 at 41.92 MS

AXIS 1



CASUS Version 1.17.00 - 8-May-1988  
CREATED: 28-AUG-88 10:51:28

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TB7925  
SHEET

000059

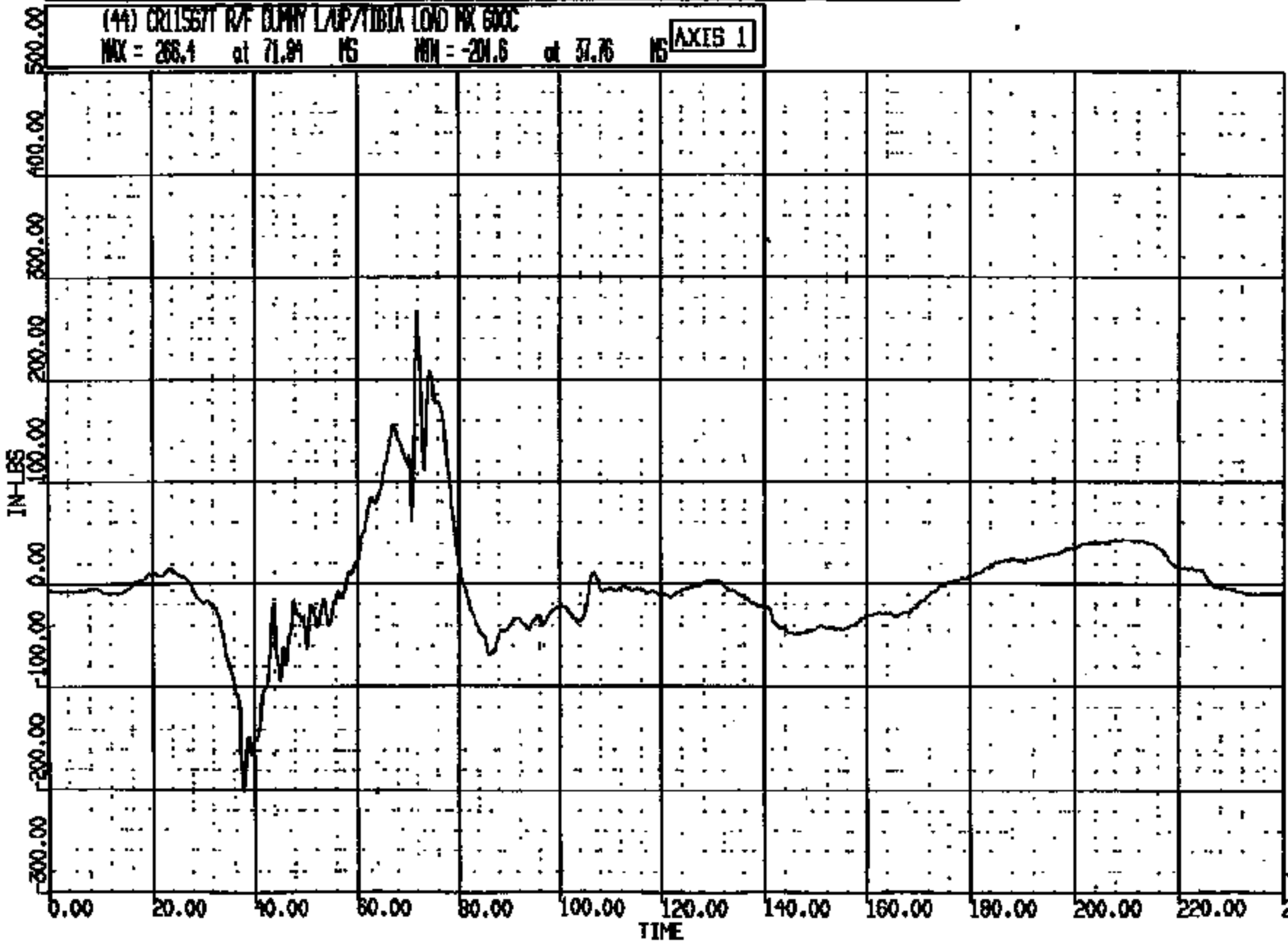
CRTS 0011567

CR R: 11567 TO: TBT925 DATE: 990828 09:42:00  
2000 D-188

(44) CR11567T R/F DUMMY L/OP/TIBIA LOAD PK 600C

MAX = 268.1 at 71.94 MS MIN = -201.6 at 37.76 MS

AXIS 1



CR11567 1.17.00 - 9-May-1998  
CREATED: 28-AUG-99 10:51:24

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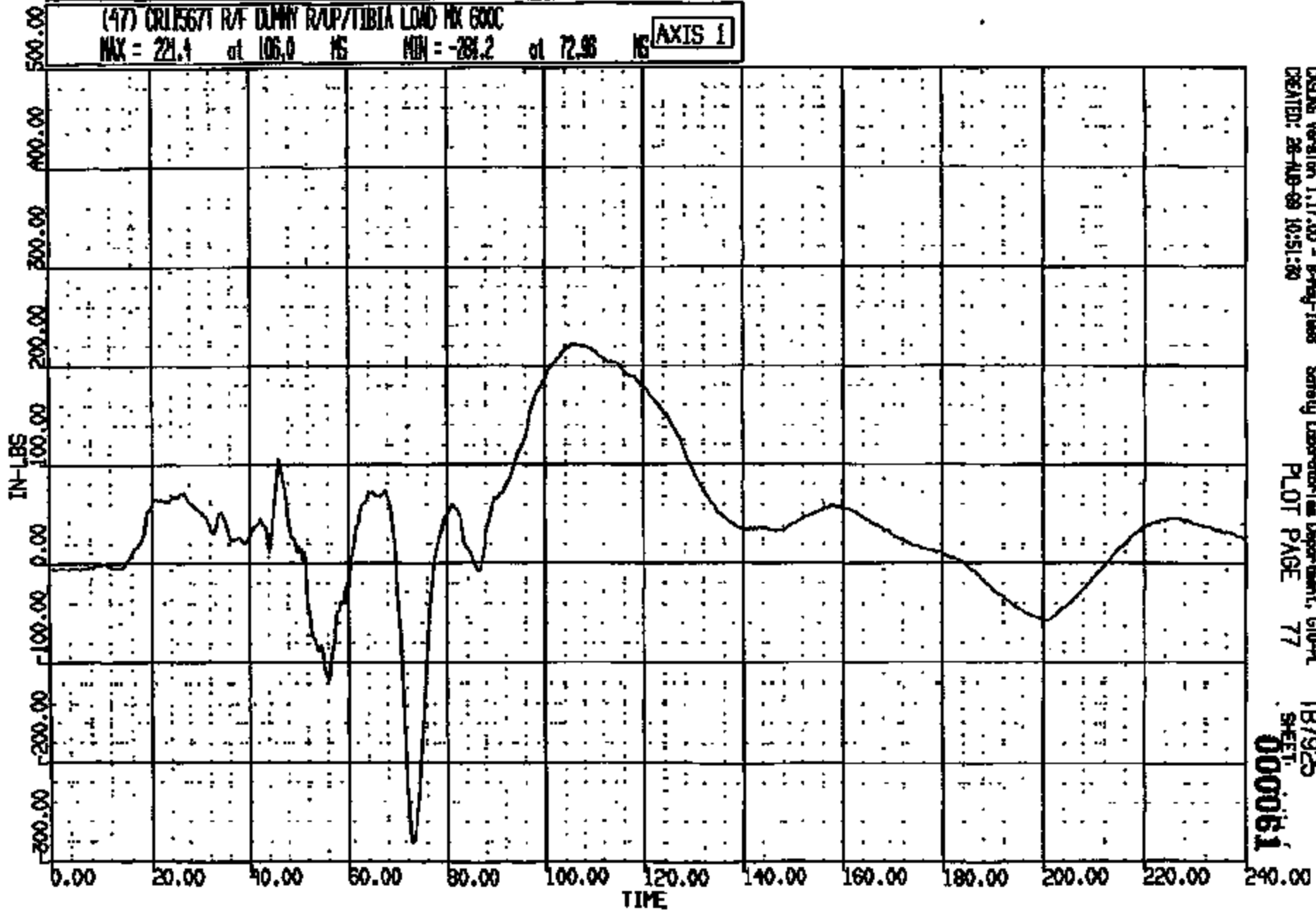
TBT925  
SHEET

000060

CR11567

CR R: 11567 TO: TB7925 DATE: 890825 09:42:00  
2000 D-198

(47) CR115671 R/F DUMMY R/UP/TIBIA LOAD MK 600C  
MAX = 221.4 at 106.0 MS MIN = -288.2 at 72.96 MS **AXIS 1**



CRSNG Version 1.17.00 - 8-May-1988  
CREATED: 28-AUG-89 10:51:30

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PLOT PAGE 77

TB7925  
SHEET  
000061

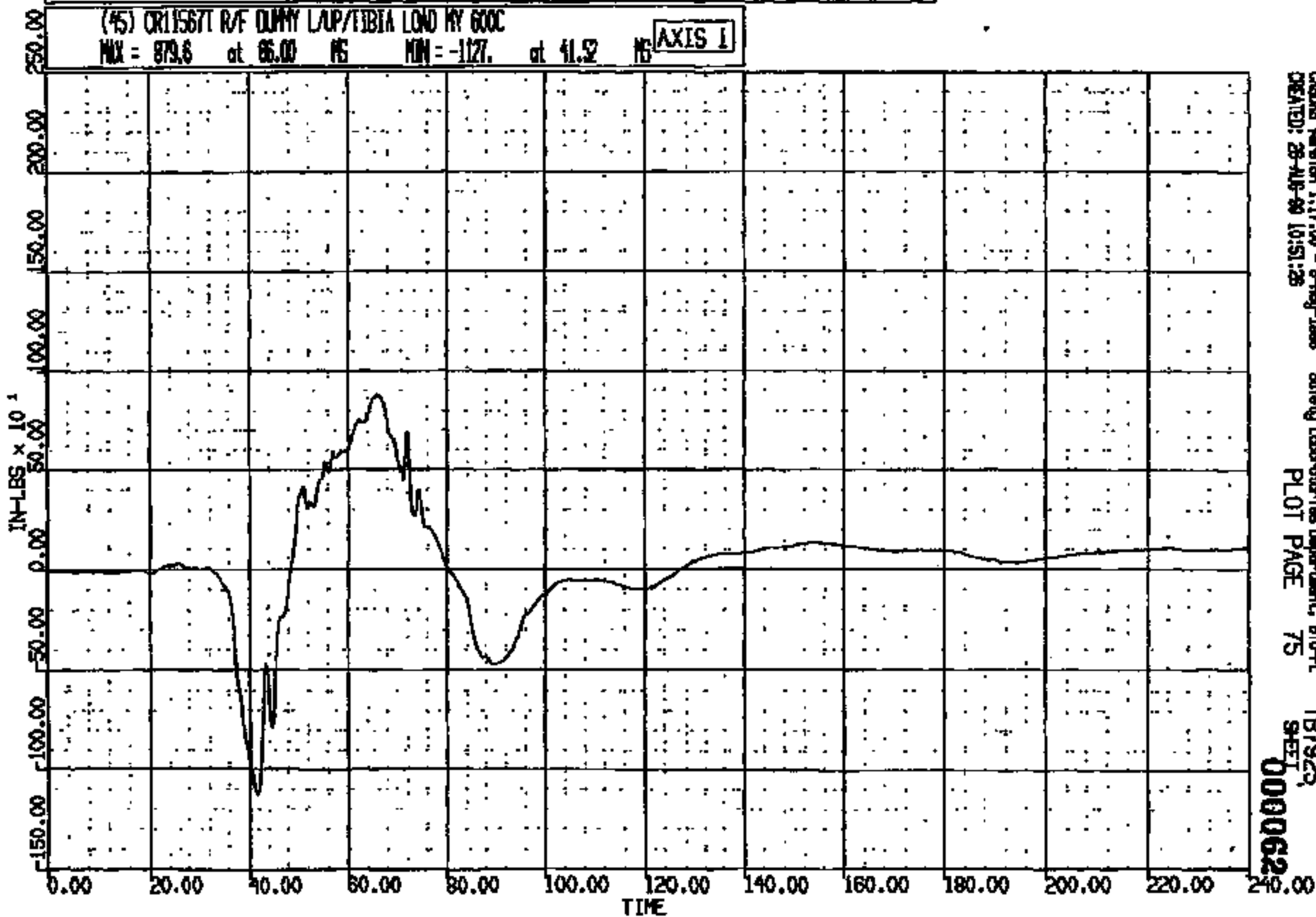
CRIS 0011567

CR R: 11567 TO: TB7925 DATE: 890826 09:42:00  
2000 D-188

(45) CR11567T R/F DUMMY LAP/TIBIA LOAD KY 600C

MAX = 879.6 at 66.00 MS MIN = -127. at 41.52 MS

AXIS 1



CASIMS Version 1.17.00 - 8-May-1988  
CREATED: 26-AUG-99 10:51:26

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PLOT PAGE 75

TB7925  
SHEET

000062

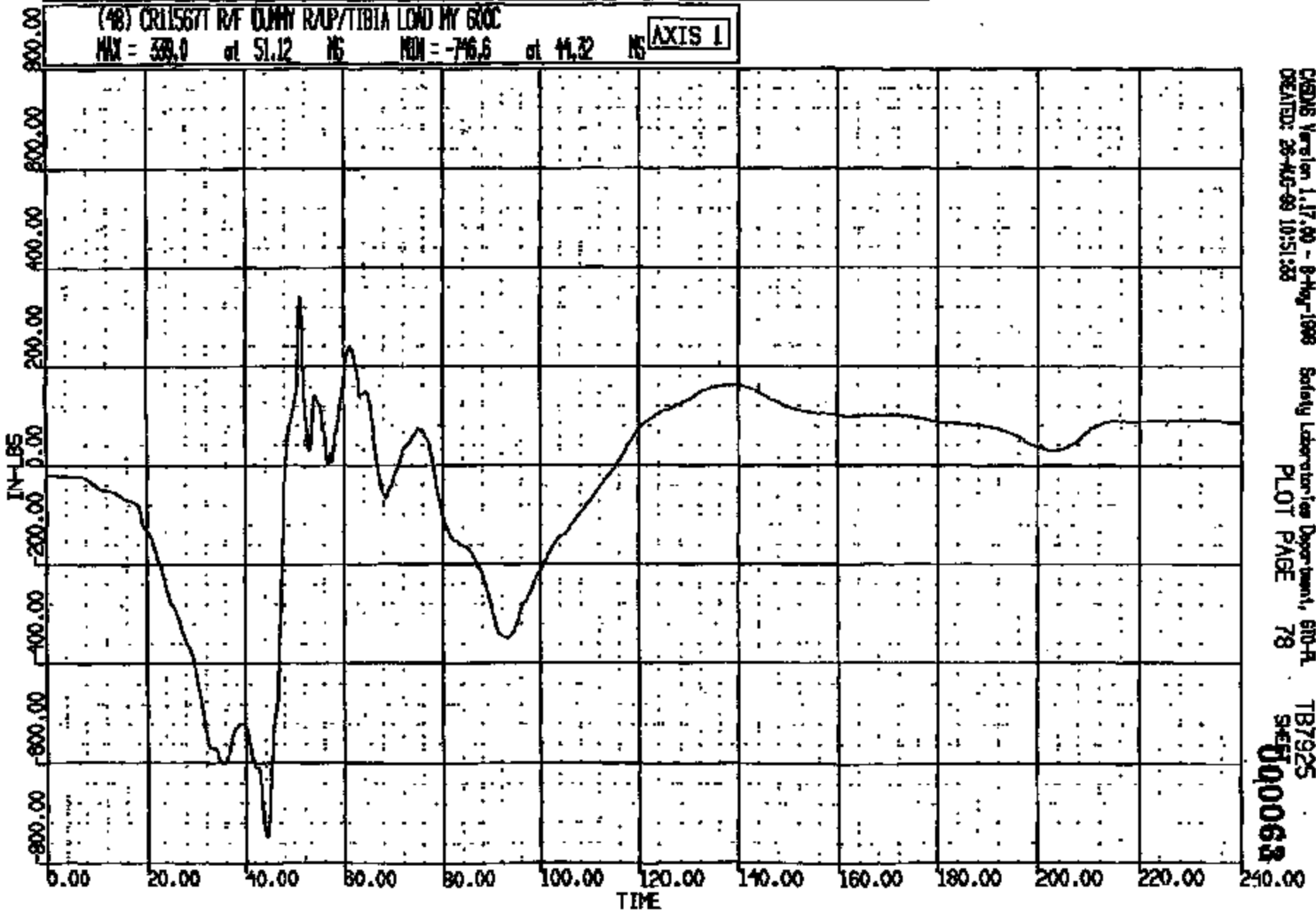
CRIS 0011567

CR R: 11567 TO: TB7925 DATE: 290826 09:42:00  
2000 D-198

(48) CR11567T R/F DUMM RAP/TIBIA LOAD BY 600C

MAX = 389.0 at 51.12 NS MIN = -746.6 at 44.32 NS

AXIS 1



CHRON Version 1.17.00 - 8-May-1998  
CREATED: 26-465-00 10:51:33

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PLOT PAGE 78

TB7925  
SERI 000063

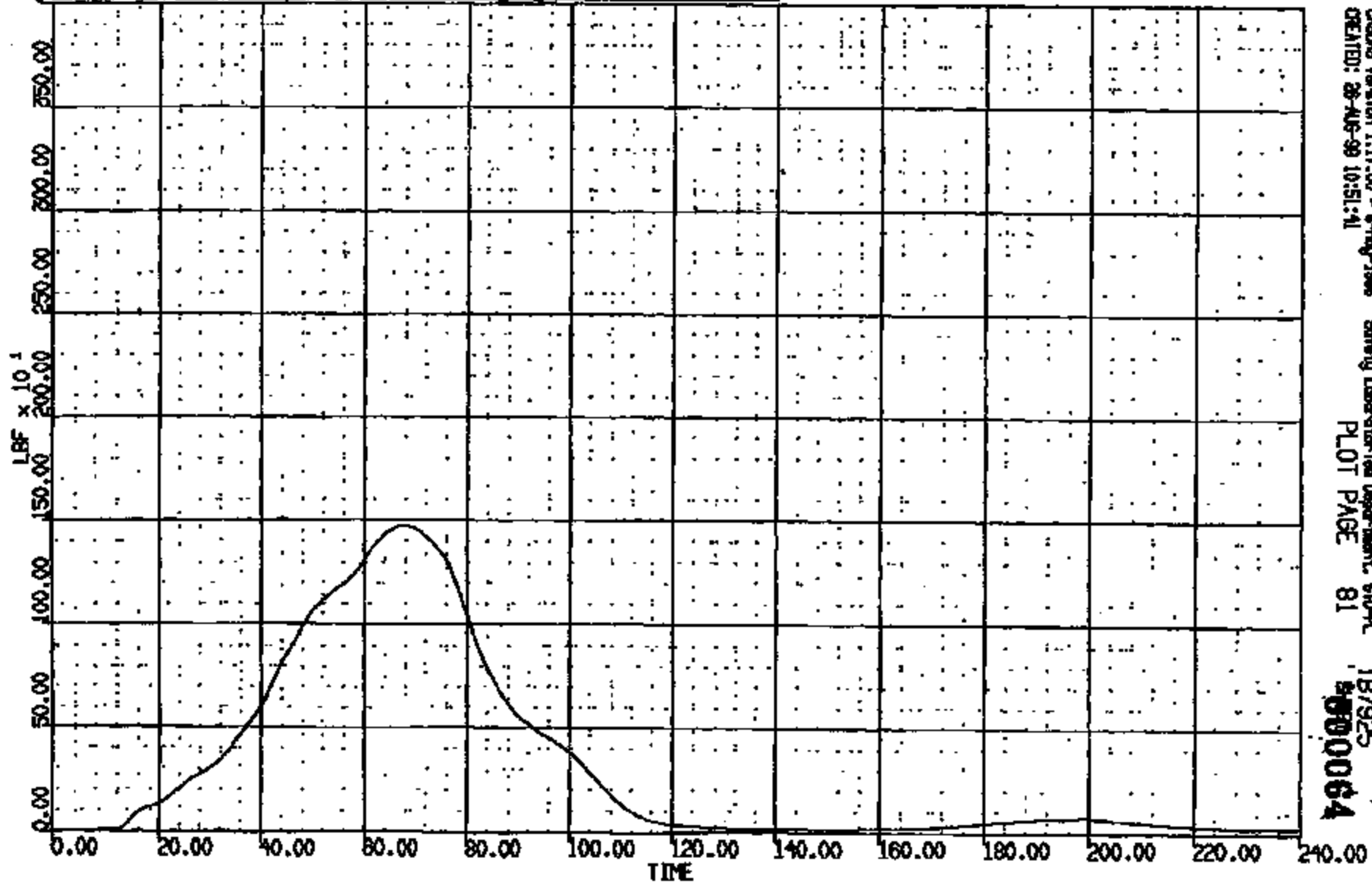
CRTS 0011567



CR R: 11567 TO: TB7925 DATE: 960825 09:42:00  
2000 0-188

(51) CR11567 R/F LAP BELT @ ANCHOR 60C  
MAX = 1471. at 67.76 MS MIN = 0.8750 at 3.440 MS

AXIS 1



CRAMS Version 1.17.00 - 8-May-1998  
CREATED: 28-AUG-99 10:51:41

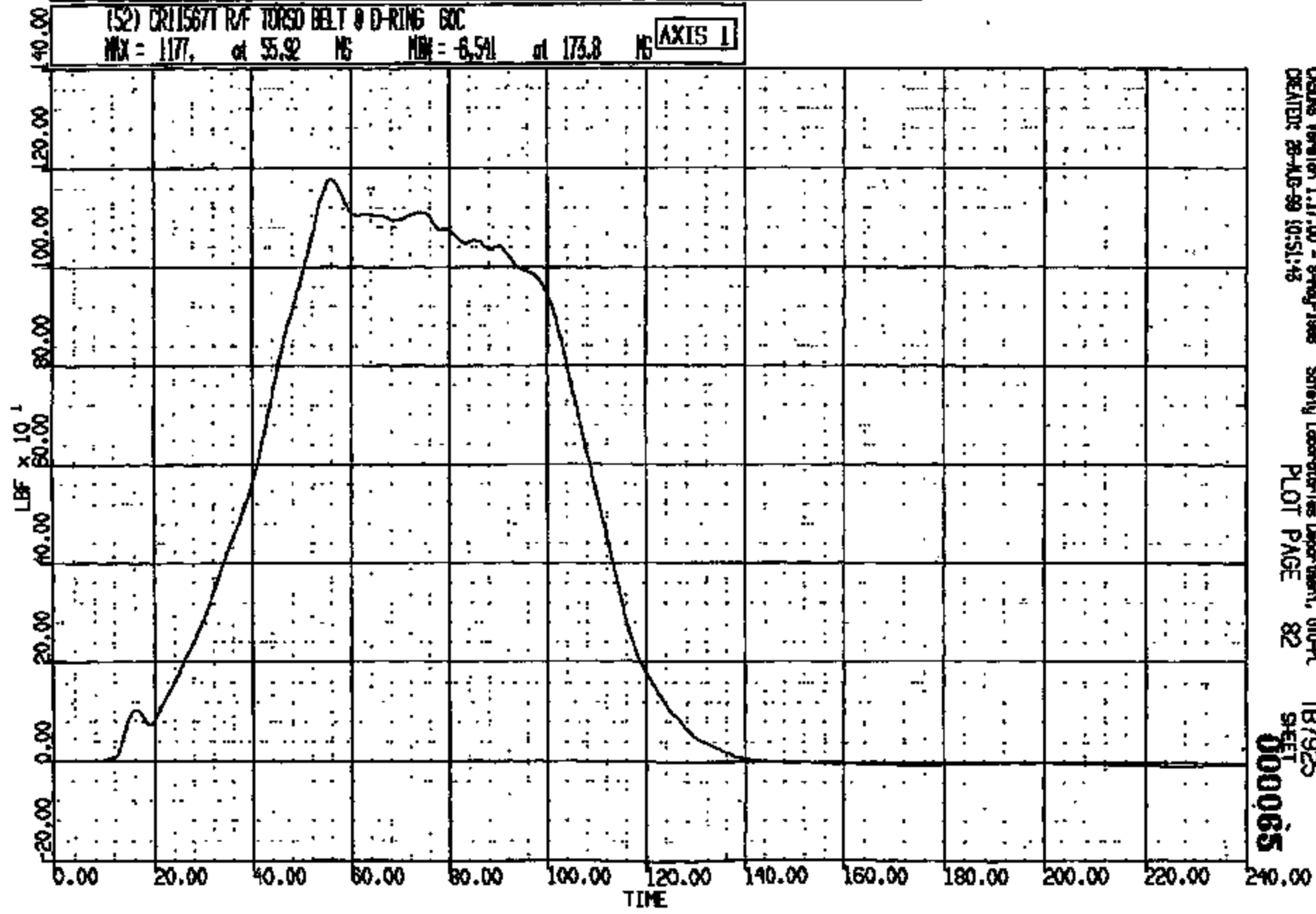
Safety Laboratory Department, STD-PL  
PLOT PAGE 81

TB7925  
#000064

CRIS 0011567

CR R: 11567 TO: TB7925 DATE: 990825 09:42:00  
2000 D-198

(52) CR11567T R/F TORSO BELT & D-RING 60C  
MAX = 1177, at 55.92 MS MIN = -6,541 at 173.8 MS **AXIS 1**

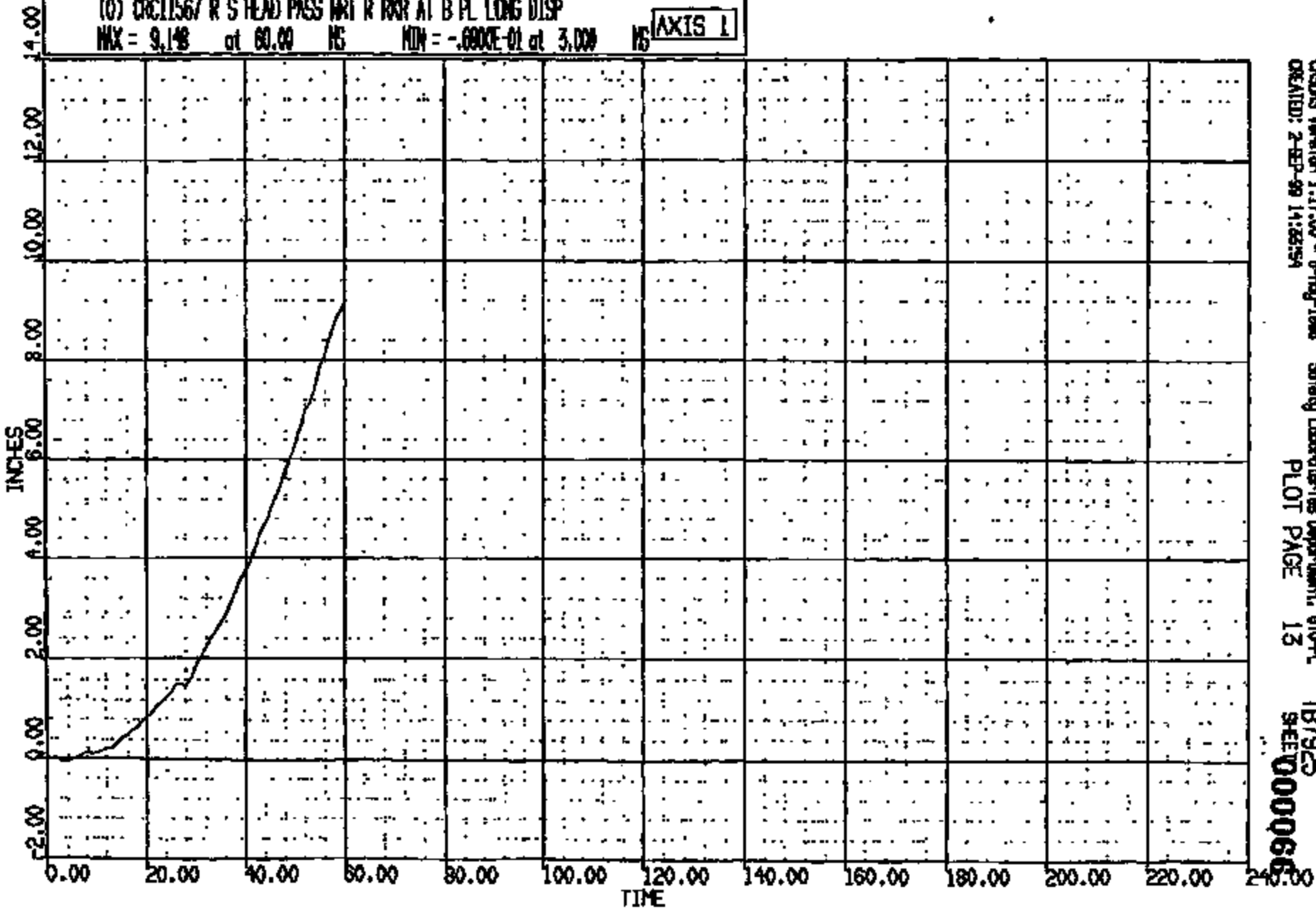


CHDS Version 1.17.00 - 8-May-1998 Safety Laboratories Department, 810-PL  
CREATOR: 28-MG-99 10:51:43  
PLOT PAGE 82  
TB7925  
SHEET  
000065

CRTS 0011567

CR R: 11567 TO: T87925 DATE: 880825 09:42:00  
2000 D-198

(0) CRCL1567 R S HEAD PASS WRT R ROR AT B PL LONG DISP  
MAX = 9.148 at 60.00 NS MIN = -.000E-01 at 3.000 NS **AXIS 1**



CIGDS Version 1.17.00 - 8-Aug-1988  
CREATED: 2-SEP-99 14:25:54

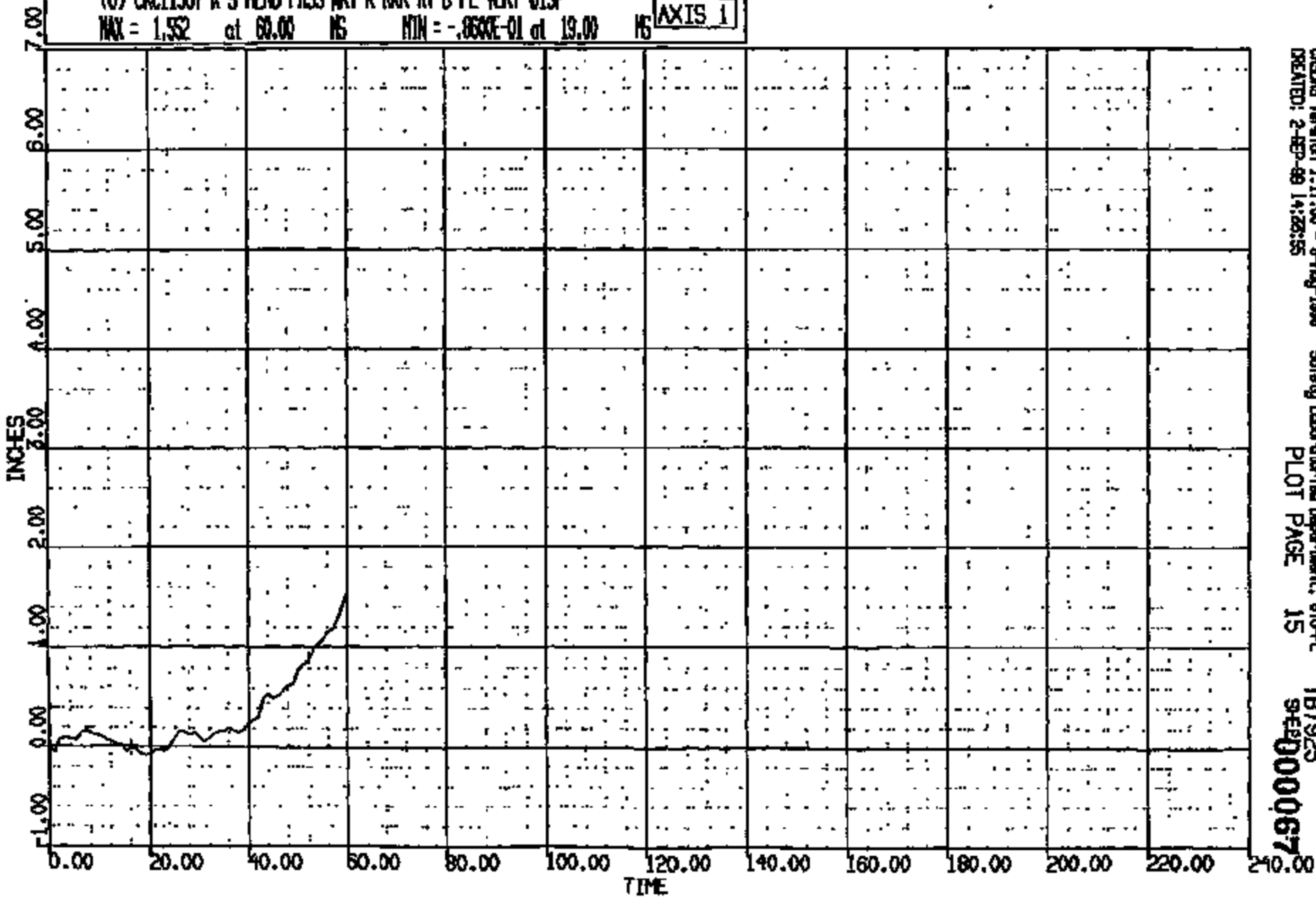
Safety Laboratories Department, 610-PL  
PLOT PAGE 13

T87925  
SHEET 000066

CRTS 0011567

CR # : 11567 TO: T87925 DATE: 990825 09:42:00  
BOOK D-188

(0) CRCL1567 R S HEAD PASS WRT R RKR AT B PL VERT DISP  
MAX = 1.532 at 60.00 NS MIN = -.850E-01 at 19.00 NS **AXIS 1**



CASINS Version 1.17.00 - 9-May-1998 Safety Laboratories Department, 610-PL  
CREATED: 2-SEP-99 14:28:55 PLOT PAGE 15

T87925  
SER#000067

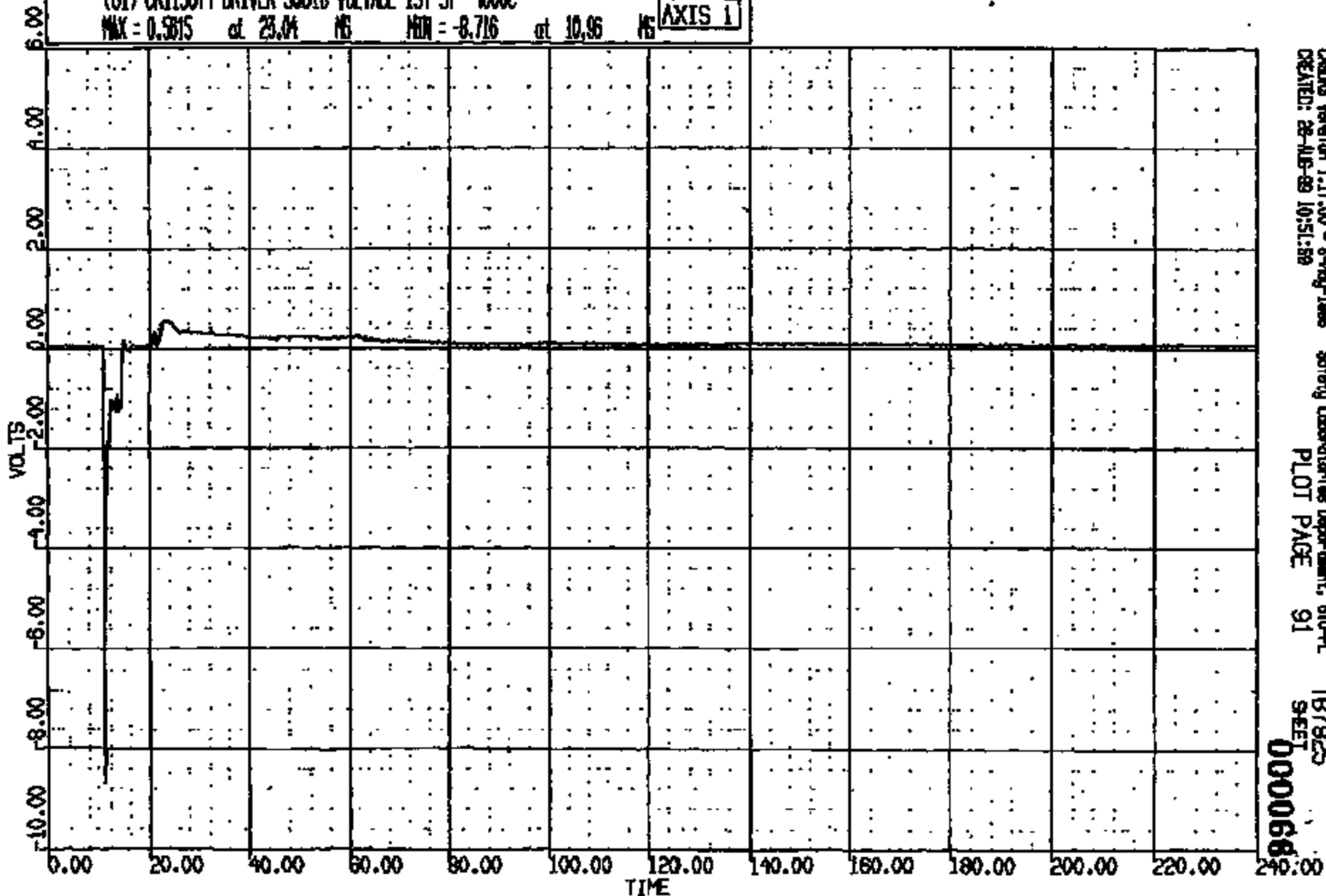
CRIS 0011567

CR R: 11567 TO: TB7925 DATE: 890828 09:42:00  
2000 D-188

(61) CR11567T DRIVER SOLID VOLTAGE 1ST ST 400C

MAX = 0.5815 at 23.04 NS MIN = -8.716 at 10.96 NS

AXIS 1



CHROMS Version 1.17.00 - 8-May-1988  
CREATED: 28-AUG-89 10:51:59

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TB7925  
SHEET

000068

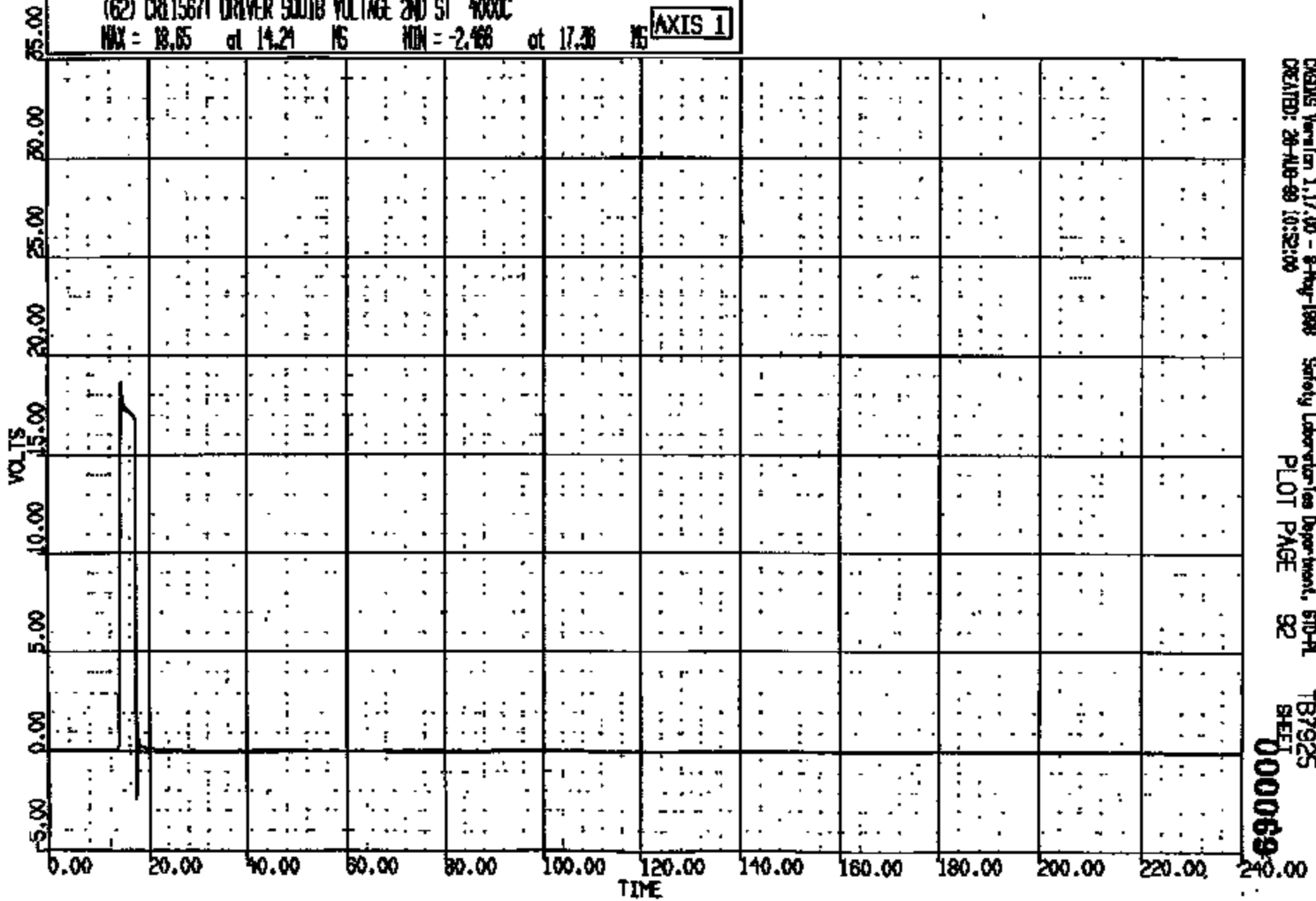
CRTS 0011567

CR R: 11567 TO: TB7925 DATE: 990826 09:42:00  
R000 D-188

(62) CR11567T DRIVER 50018 VOLTAGE 2ND ST 4000C

MAX = 18.65 at 14.21 MS MIN = -2.468 at 17.36 MS

AXIS 1



CRSING Version 1.17.00 - 8-May-1999  
CREATED: 26-AUG-99 10:52:00

Safety Laboratories Department, 610-4L  
PLOT PAGE 92

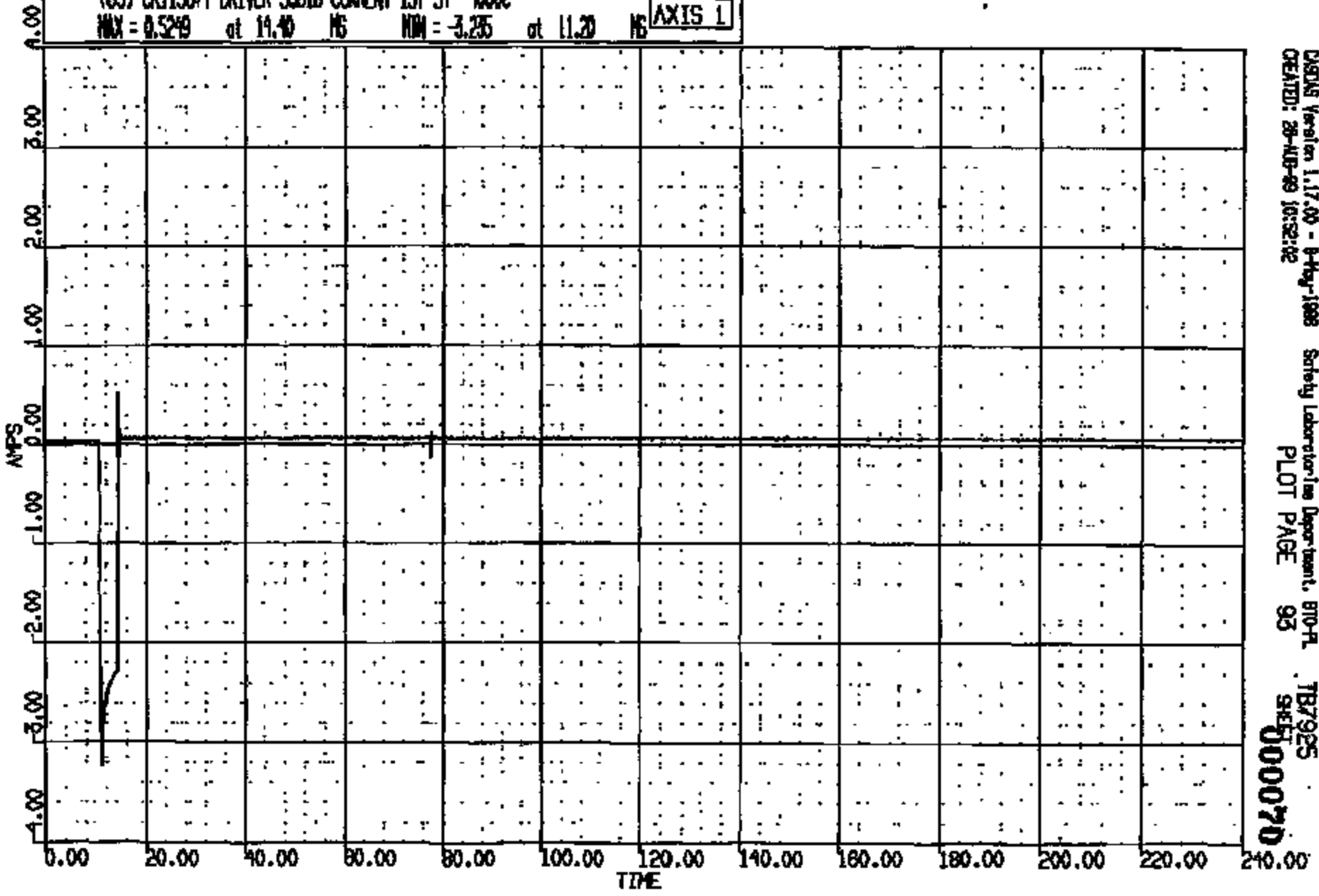
TB7925  
SHEET

000069

CRIS 0011567

CR R: 11567 TO: T87928 DATE: 890828 09:42:00  
2000 D-188

(63) CR11567T DRIVER SOLID CURRENT 1ST ST 400C  
MAX = 0.5249 at 14.40 MS MIN = -3.235 at 11.20 MS **AXIS 1**



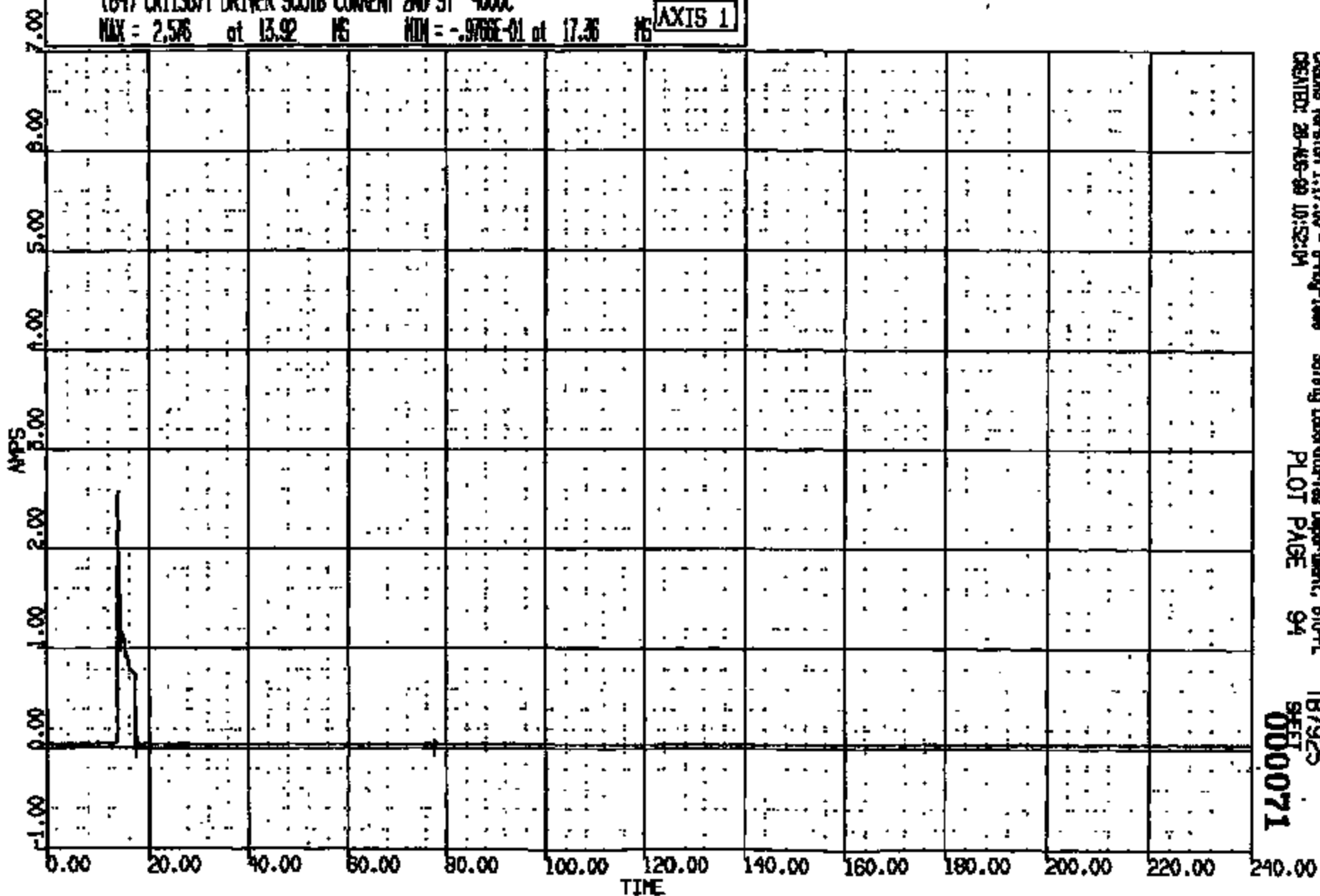
CARDAS Version 1.17.00 - 8-May-1988 Safety Laboratories Department, B10-FL  
CREATED: 28-AUG-89 10:52:02 PLOT PAGE 93 SHEET 000070

CR11567

CR R: 11567 TO: TB7925 DATE: 890828 09:42:00  
2000 D-188

(64) CR115671 DRIVER SCUB CURRENT 2ND ST 400C  
MAX = 2.576 at 13.92 MS MIN = -.9766E-01 at 17.36 MS

AXIS 1



CHROMS Version 1.17.00 - 8-May-1989 Safety Laboratories Department, 810-PL  
CREATED: 28-AUG-89 10:52:04 PLOT PAGE 94  
TB7925  
SHEET  
0000071

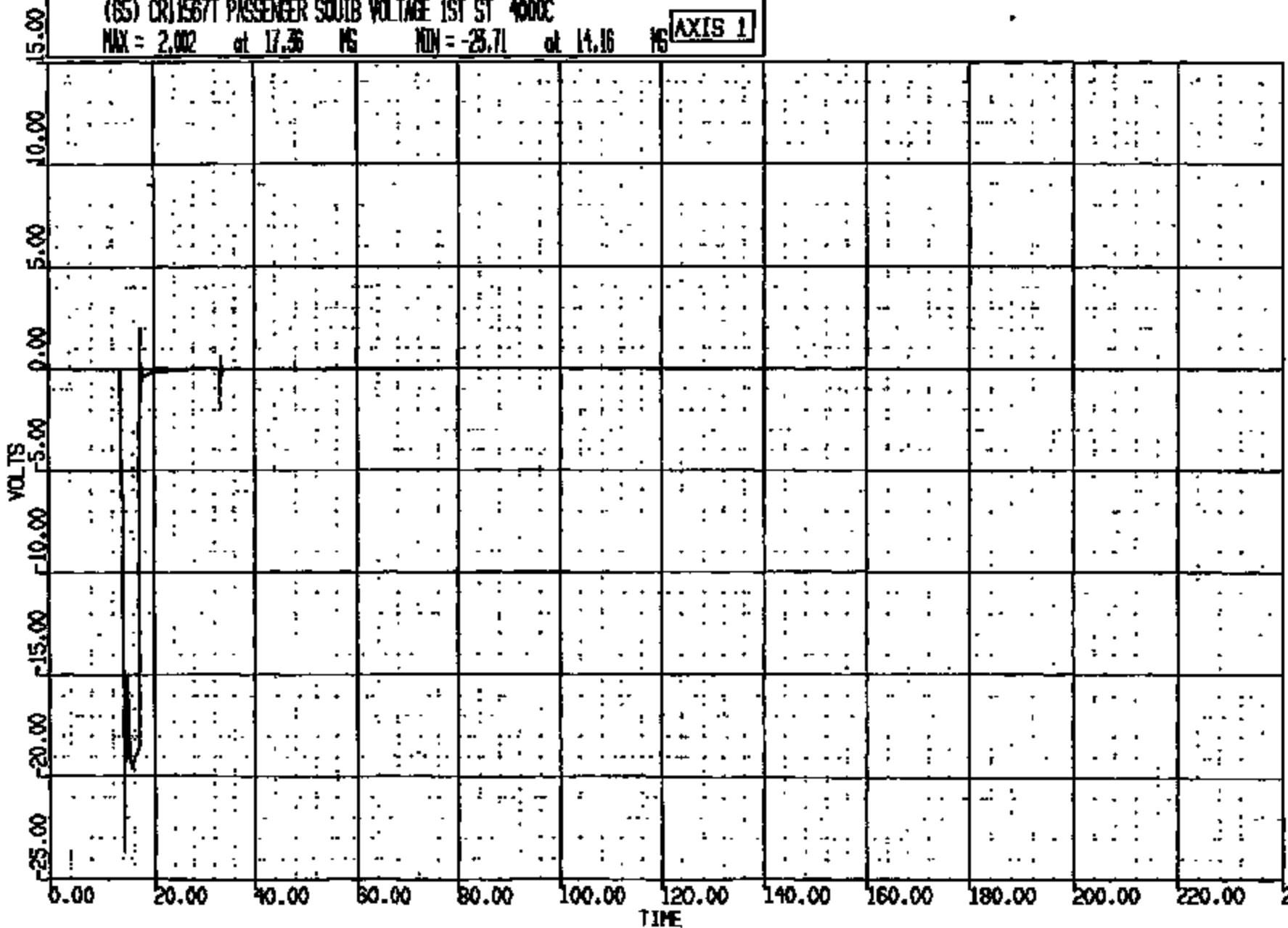
CRTS 0011567



CR R: 11567 TO: TB7925 DATE: 990828 09:42:00  
2000 D-180

(85) CR11567T PASSENGER SOUTH VOLTAGE 1ST ST 400C  
MAX = 2.002 at 17.36 MS MIN = -25.71 at 14.16 MS

AXIS 1

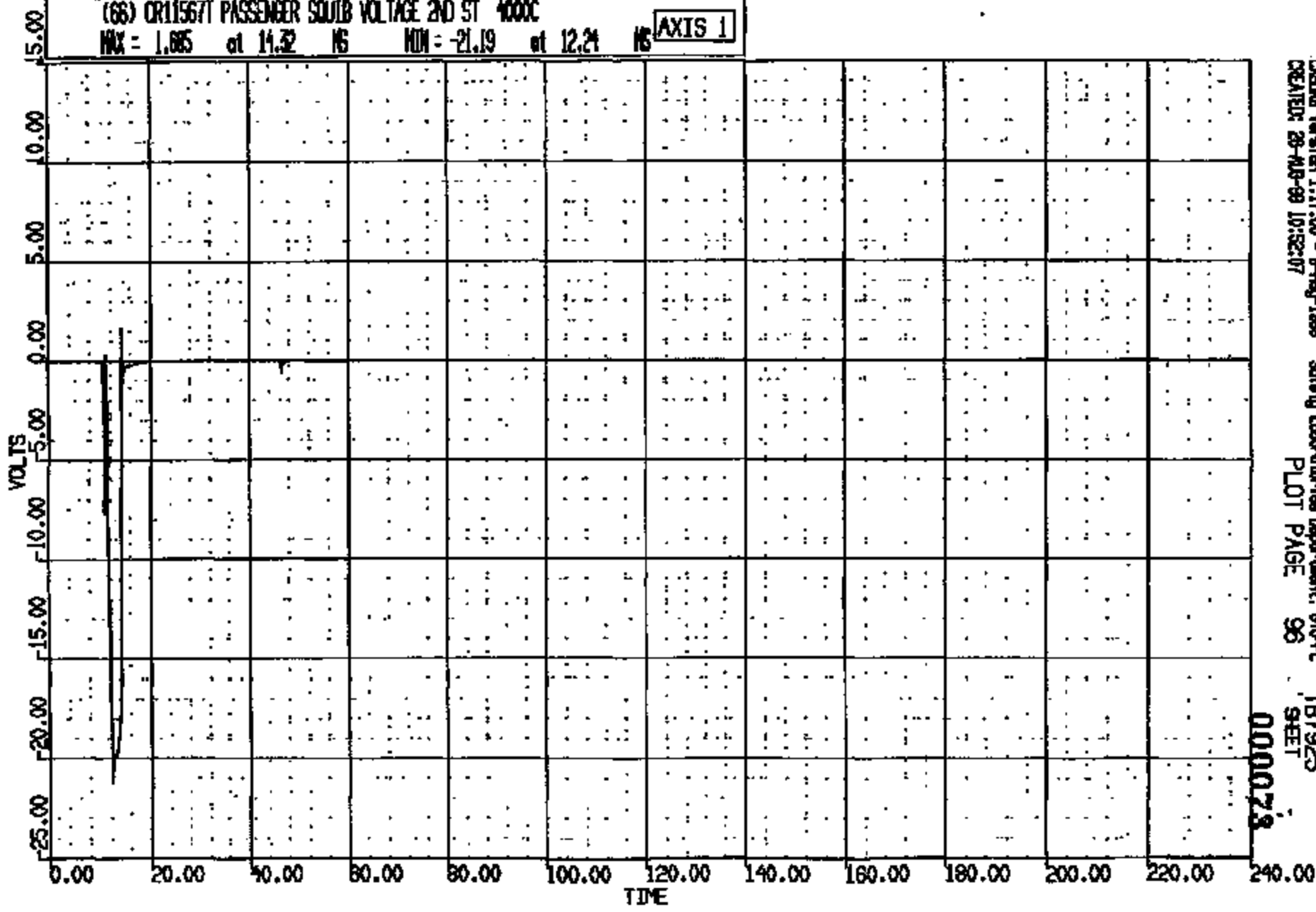


CISION Version 1.17.00 - 9-May-1998 Safety Laboratory, Inc Department, 610-A  
CREATED: 28-MAR-99 10:52:06 PLOT PAGE 95 TB7925  
SHEET 0000723

CRTS 0011567

CR R: 11567 TO: T87925 DATE: 880826 09:42:00  
2000 D-188

(66) CR11567T PASSENGER SQUB VOLTAGE 2ND ST 400C  
MAX = 1.85 at 11.32 NS MIN = -21.19 at 12.24 NS **AXIS 1**



CRS Version 1.17.00 - 8-Aug-88 Safety Laboratories Department, 610-PL  
CREATED: 28-AUG-88 10:52:17 PLOT PAGE 96 T87925

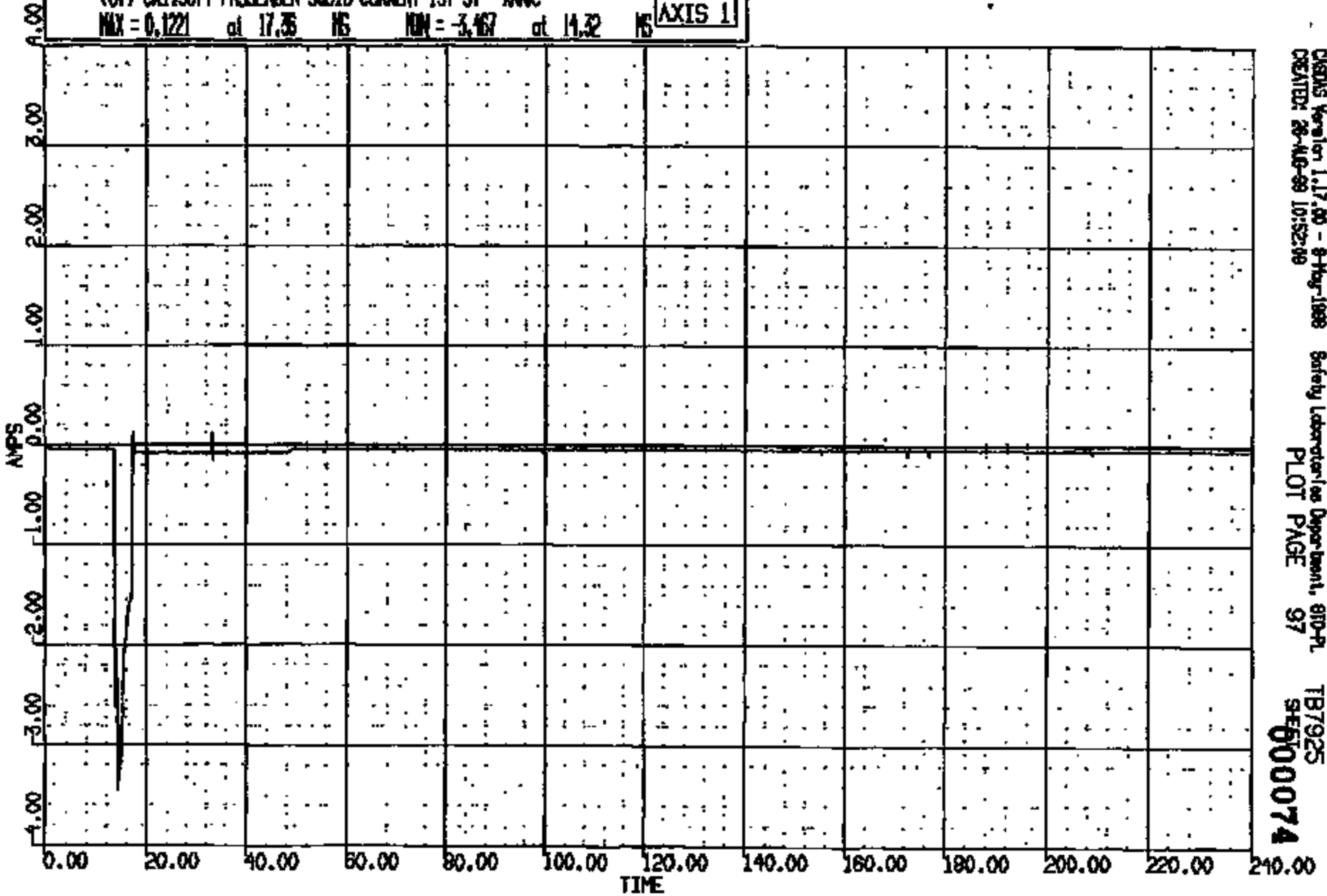
SHEET

000078

CRIS 0011567

CR #: 11567 TO: TB7925 DATE: 890826 08:42:00  
8000 D-188

(67) CR11567T PASSENGER SEAT CURRENT 1ST ST 400C  
MAX = 0.1221 at 17.35 MS MIN = -3.467 at 14.32 MS **AXIS 1**



CRAMS Version 1.17.00 - 8-May-1988 Safety Laboratories Department, 810-PL  
CREATED: 26-AUG-89 10:52:18 PLOT PAGE 97 TB7925  
5000074

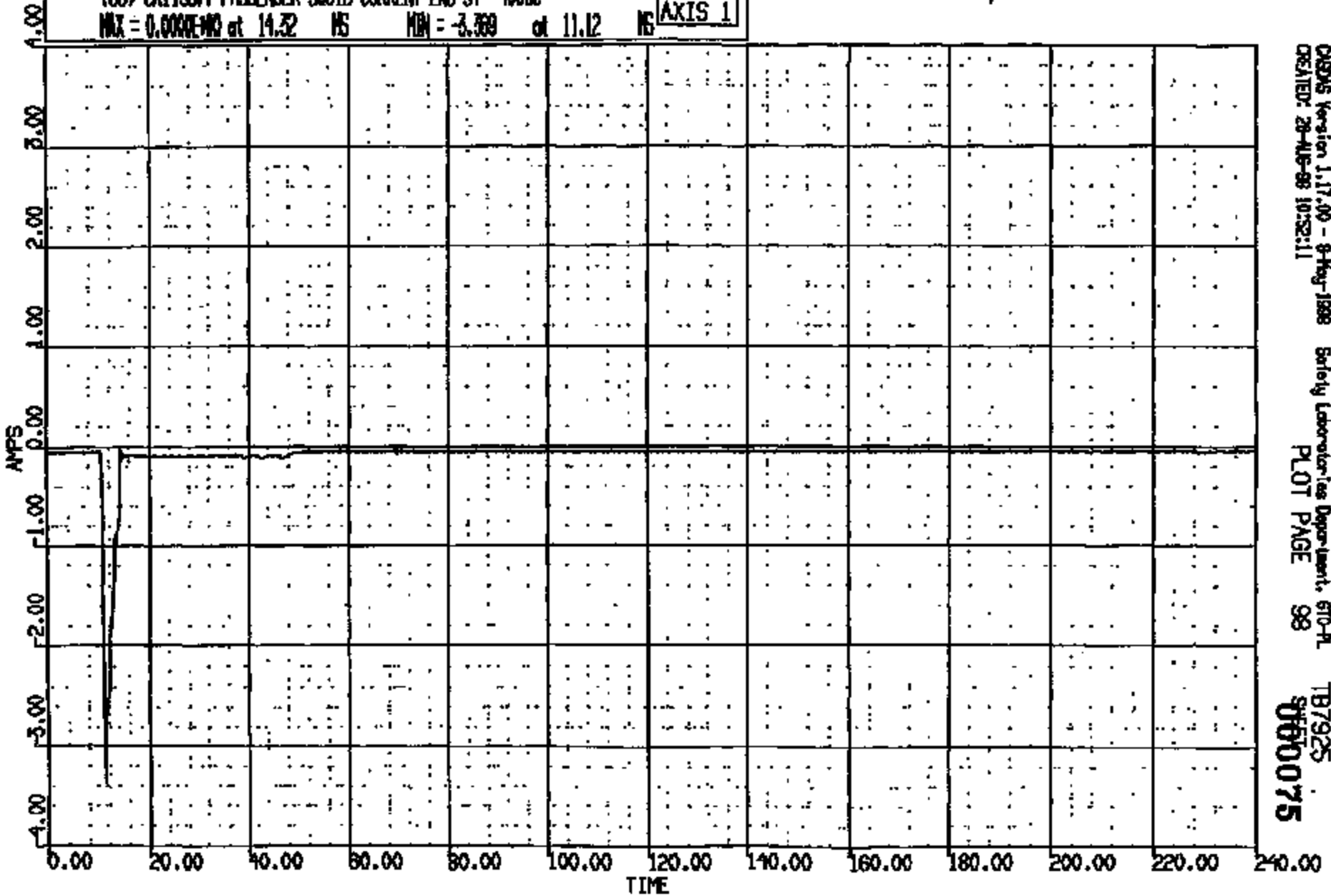
CRIS 0011567

CR R: 11567 TC: T87925 DATE: 990828 09:42:00  
2000 D-188

(68) CR11567 PASSENGER SOUTH CURRENT 2ND ST 4000C

MAX = 0.000E+00 at 14.32 MS MIN = -3.389 at 11.12 MS

AXIS 1



CRSAS Version 1.17.00 - 8-May-1998  
CREATED: 28-MAY-99 10:52:11

Safety Laboratories Department, 610-A  
PLOT PAGE 98

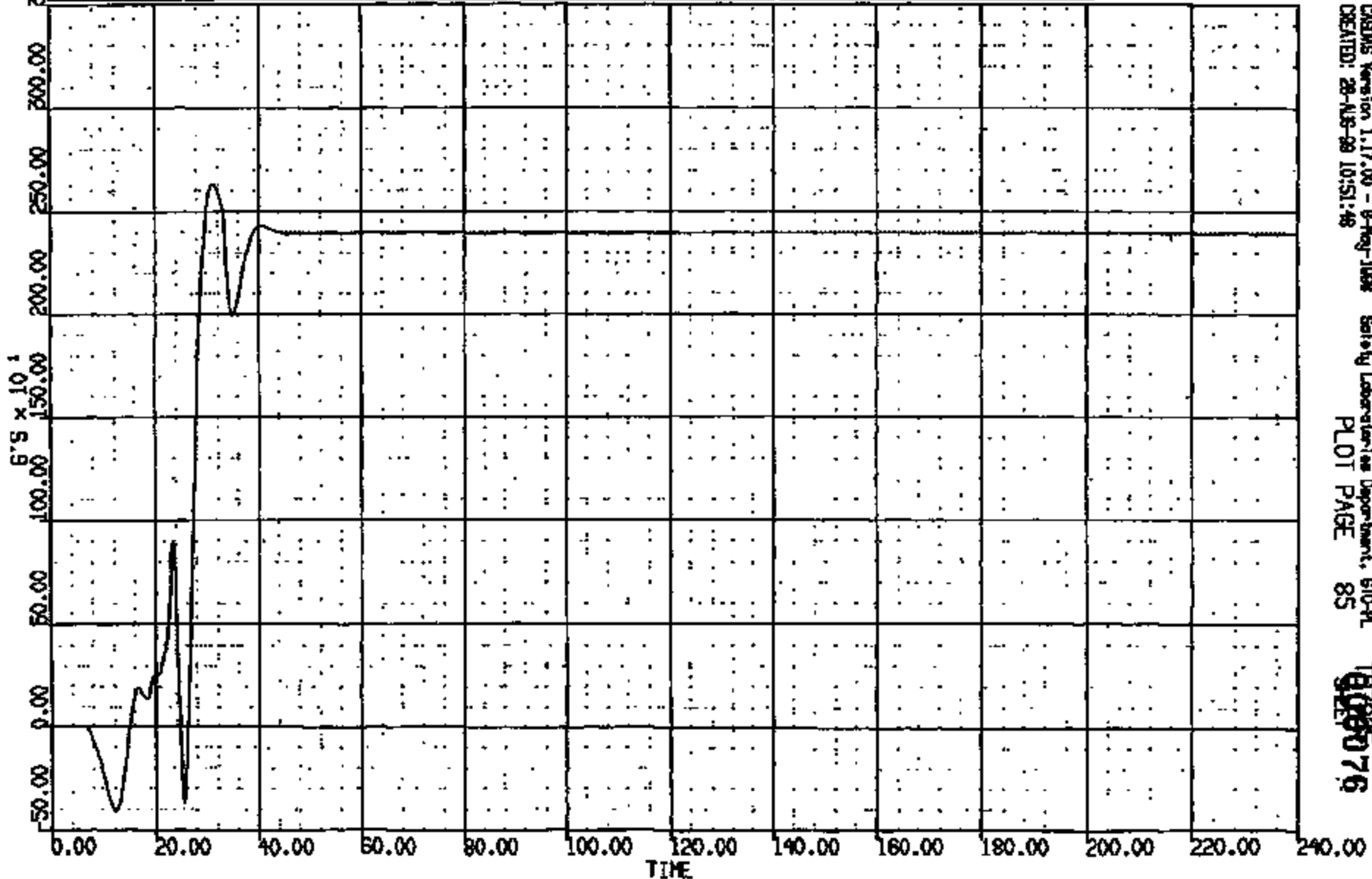
T87925  
0800075

CRTS 0011567

CR R: 11567 TO: TB7025 DATE: 990826 09:42:00  
2000 D-198

# (55) CR11567T C/RAD #5 LONG 60C  
MAX = 2630. at 31.04 MS MIN = -410.0 at 12.16 MS **AXIS 1**

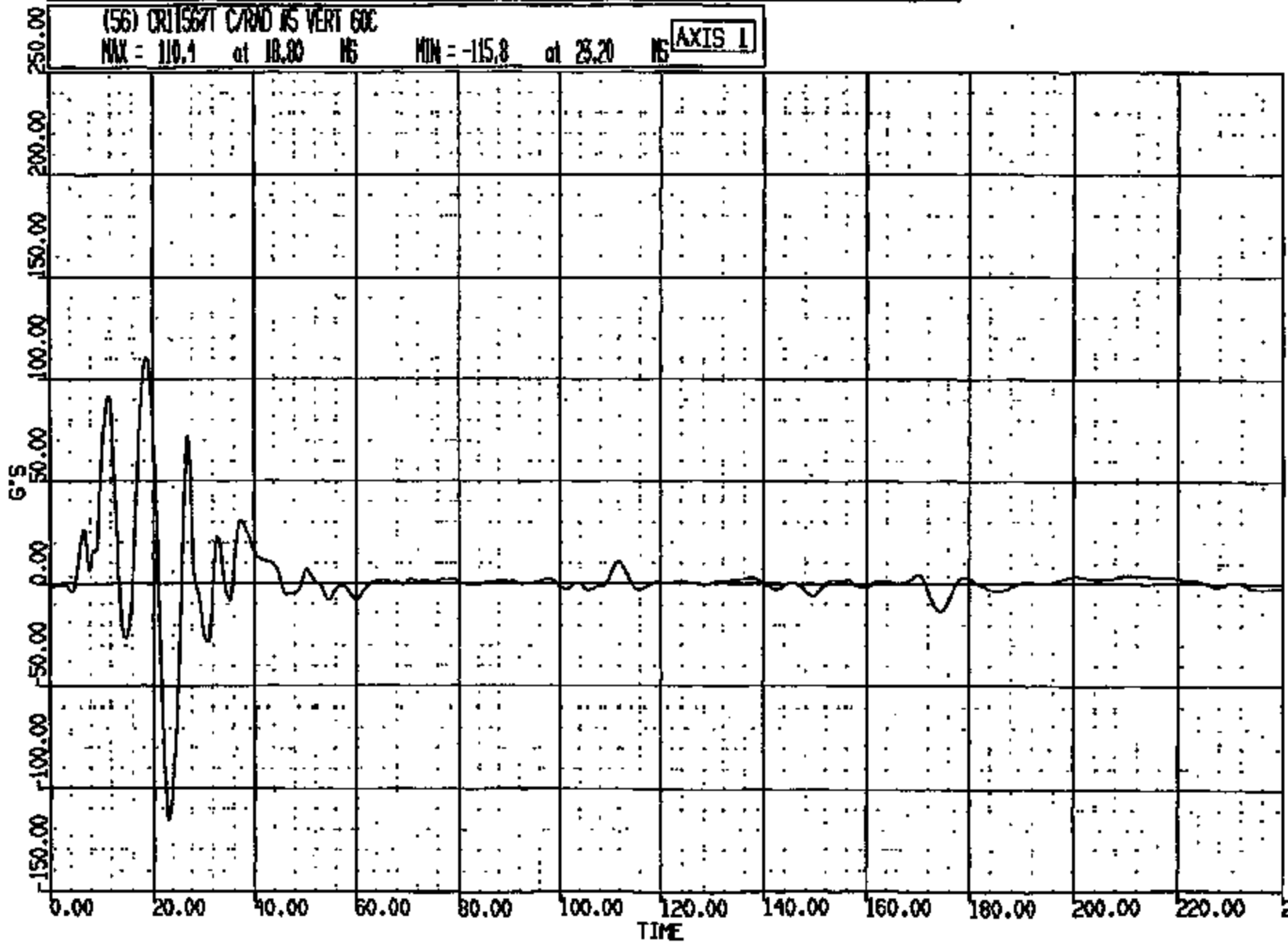
ANOMALY KEY:  
\* - Highboard data exceeded full scale  
# - Highboard data 500.0% of full scale  
@ - All data < 10.0% of full scale  
= - 21 percent offset at T-zero



CASMS Version 1.17.00 - 8-May-1998 Safety Laboratory Department, 610-PL  
CREATED: 28-AUG-99 10:51:48 PLOT PAGE 85 **809576**

CRIS 0011567

CR R: 11567 TO: TB7925 DATE: 980825 09:42:00  
2000 D-188



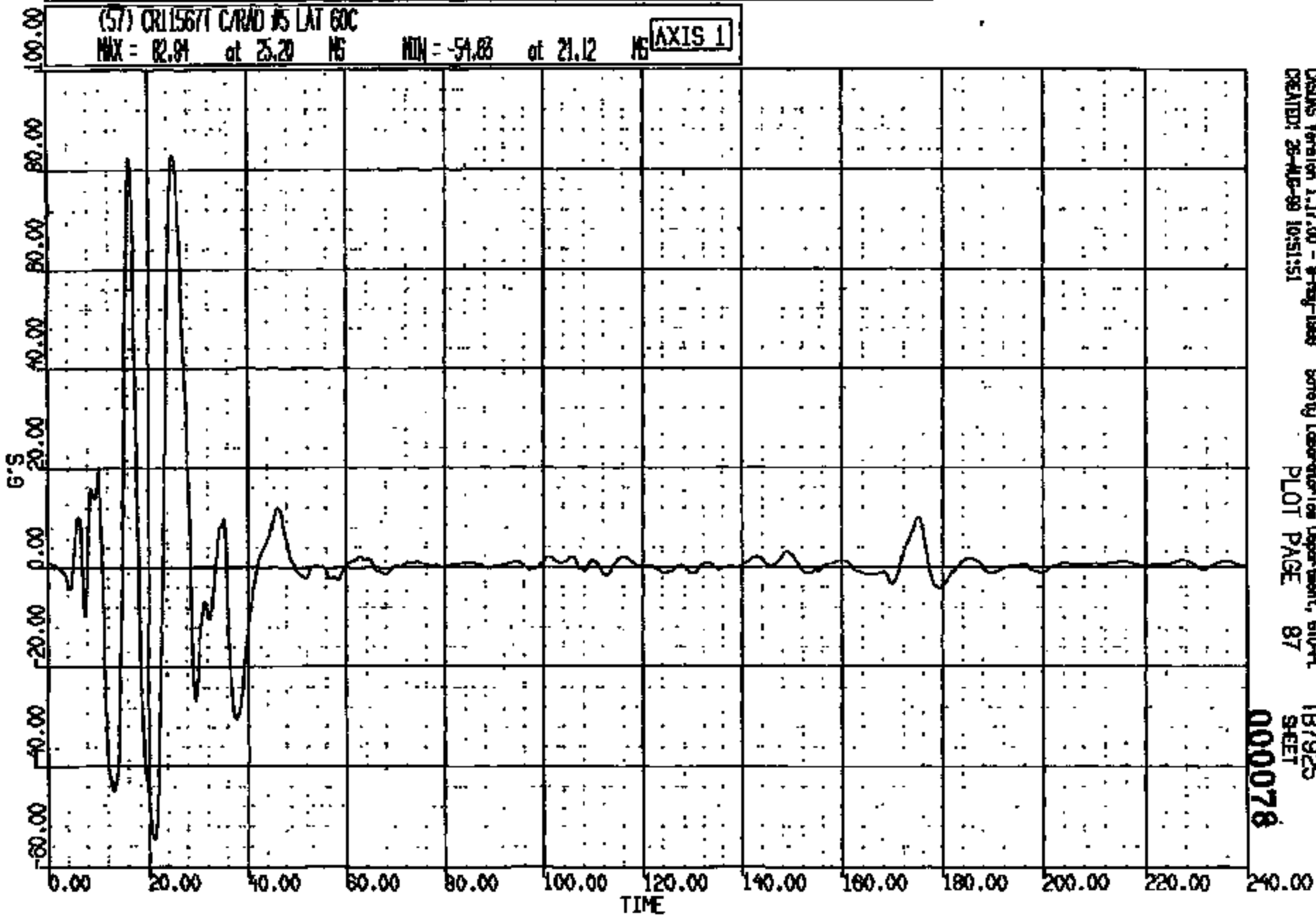
CRSNG Version 1.17.00 - 8-May-1998 Safety Laboratories Department, 810-PL  
CREATED: 28-AUG-99 10:51:49 PLOT PAGE 86  
TB7925  
SER# 000077

CRIS 0011567

CR R: 11567 TO: TB7925 DATE: 090826 09:42:00  
2000 D-168

(57) CR115671 C/RAD #5 LAT 60C

MAX = 82.84 at 25.20 MS MIN = -54.88 at 21.12 MS **AXIS 1**



CRAMS Version 1.17.00 - 8-May-1998  
CREATED: 26-MAY-99 10:51:51

Boeing Laboratories Department, 610-A  
PLOT PAGE 87

TB7925  
SHEET

000078

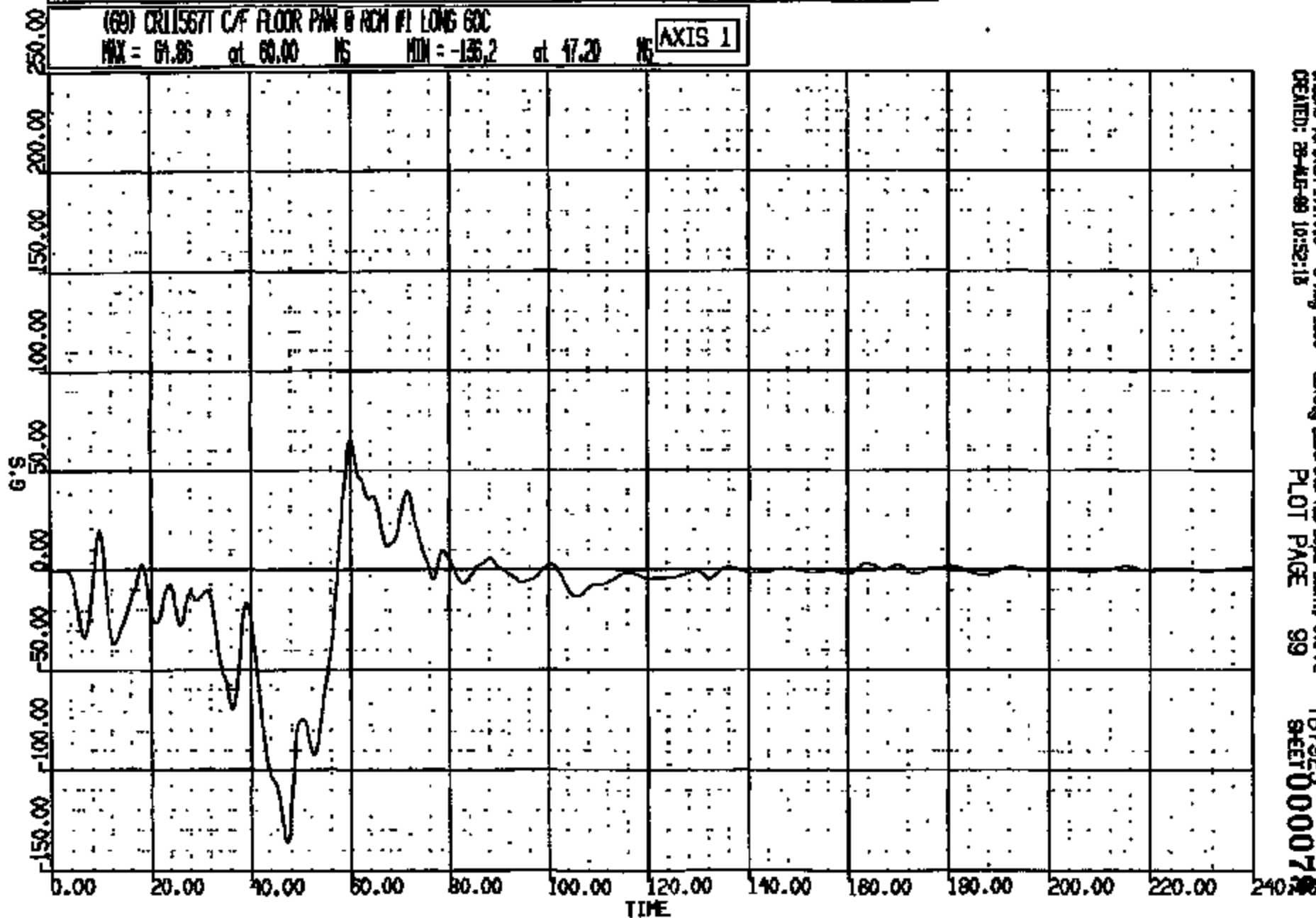
CRIS 0011567

CR R: 11567 TD: TB7925 DATE: 990825 09:42:00  
2000 D-188

(60) CRT11567 C/F FLOOR PAN @ RCH #1 LONG GDC

MAX = 61.86 at 60.00 NS MIN = -135.2 at 47.20 NS

AXIS 1



CRS Version 1.17.00 - 8-May-1998  
CREATED: 99-08-25 10:52:18

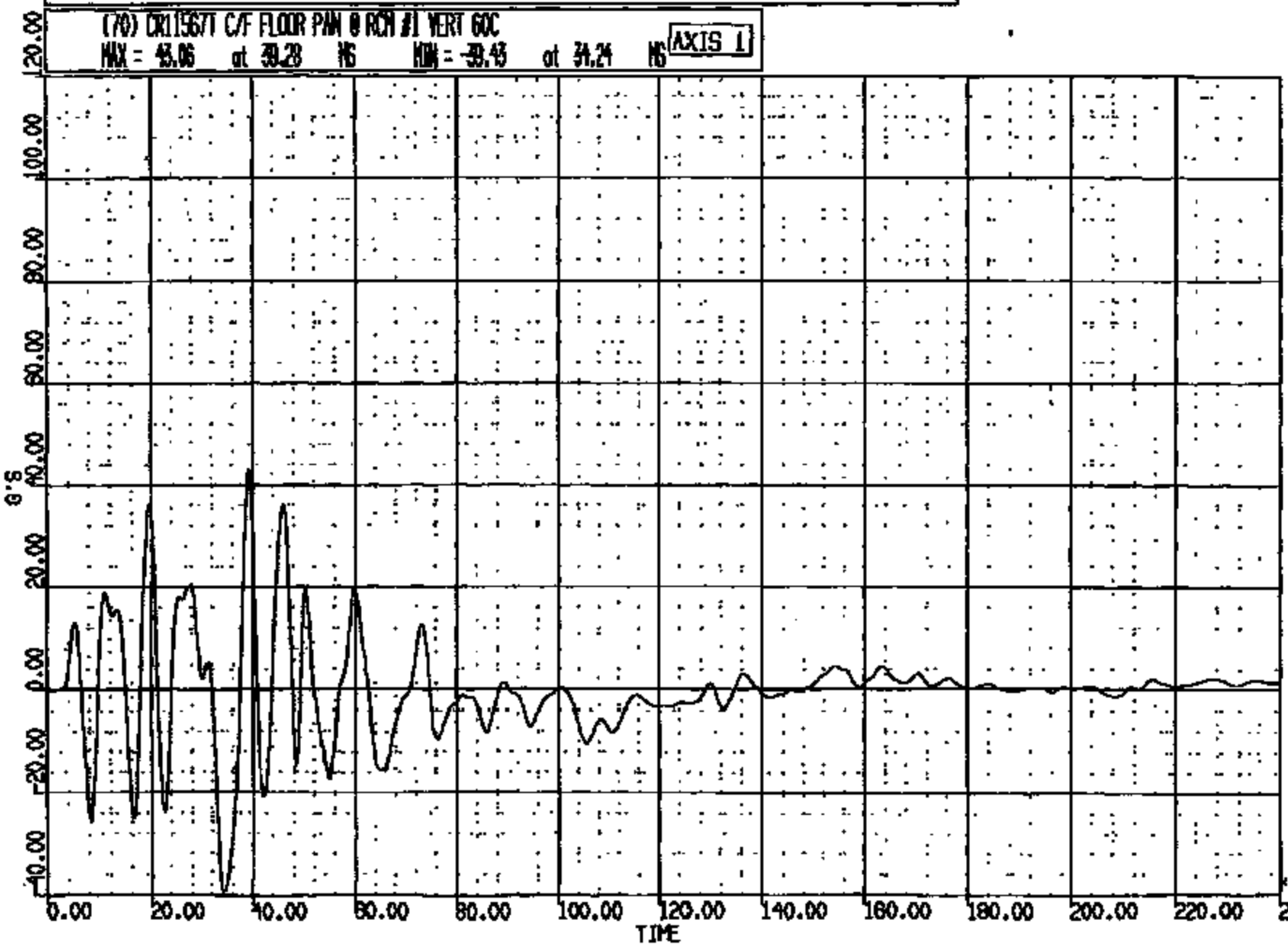
Safety Laboratories Department, 610-FL  
PLOT PAGE 99

TB7925  
SHEET 00007

CRTS 0011567



CR R: 11567 TO: TB7925 DATE: 990826 09:42:00  
2000 0-189



CRSMS Version 1.17.00 - 9-May-1998 Safety Laboratories Department, 870-A  
CREATED: 26-AUG-99 10:52:16 PLOT PAGE 100  
TB7925  
SHEET 000080

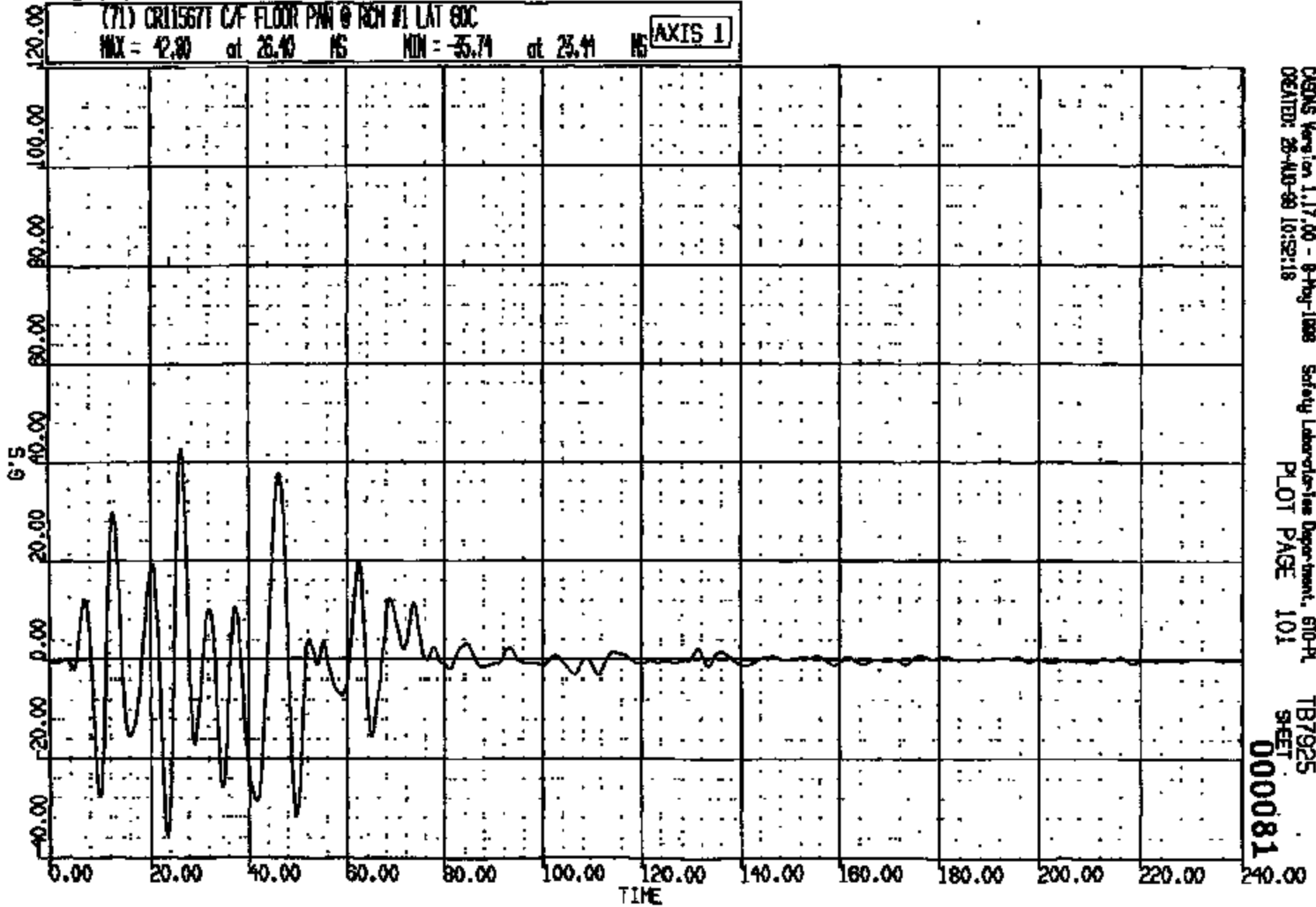
CRIS 0011567

CR R: 11567 TO: TB7925 DATE: 990828 08:42:00  
2000 D-188

(71) CR11567T C/F FLOOR P/W @ REN #1 LAT 80C

MAX = 42.80 at 28.40 MS MIN = -35.74 at 23.44 MS

AXIS 1



CRSING Version 1.17.00 - 8-May-1998  
CREATED: 28-AUG-99 10:52:18

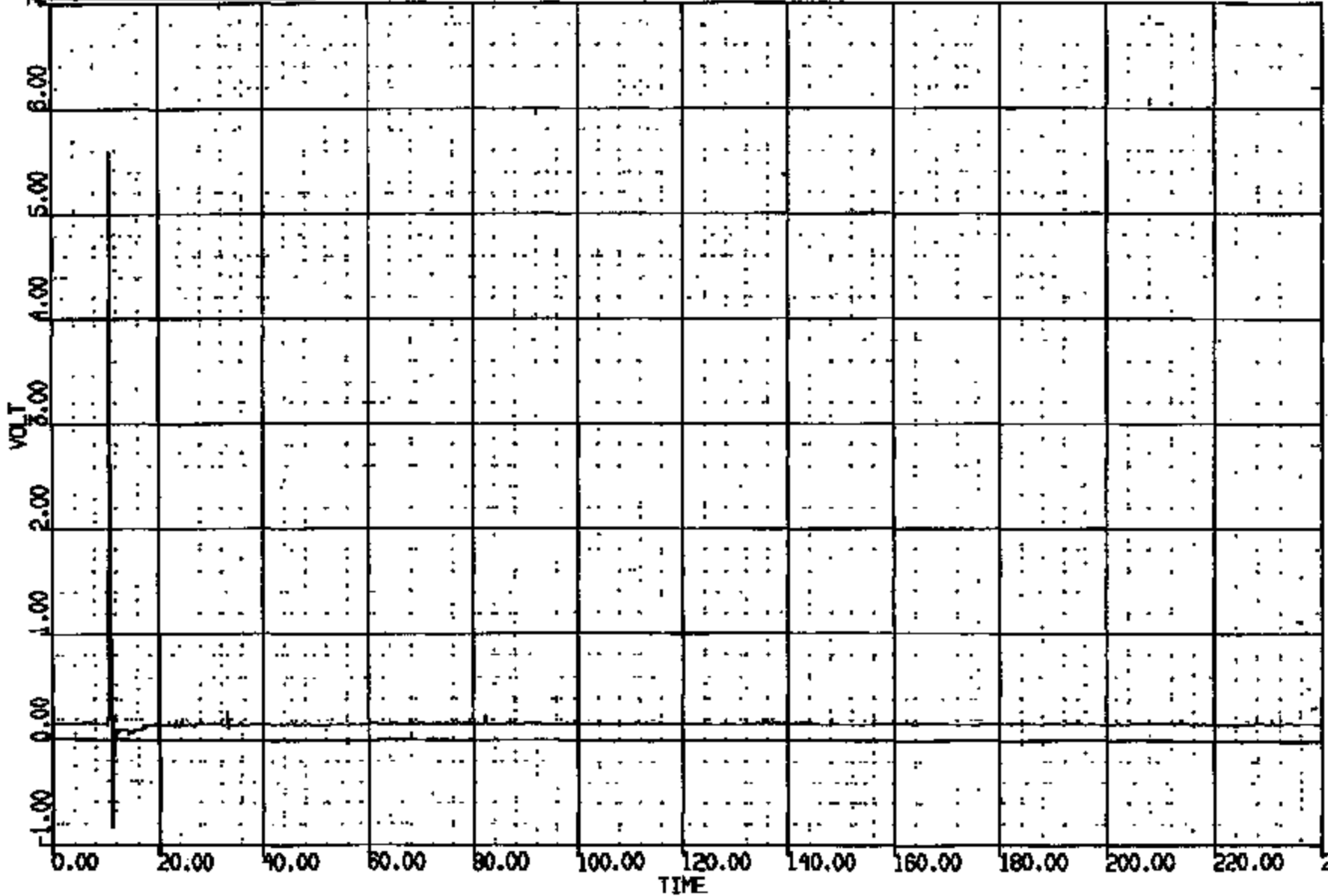
Safety Laboratory Department, 610-PL  
PLOT PAGE 101

TB7925  
SHEET  
000081

CRTS 0011567

CRT: 11567 TO: TB7925 DATE: 890826 09:42:00  
R000 0-186

(72) CRT11567T C/F FLOOR PAN RCH 1 4000C  
MAX = 5.591 at 10.96 NS MIN = -.8417 at 11.36 NS **AXIS 1**



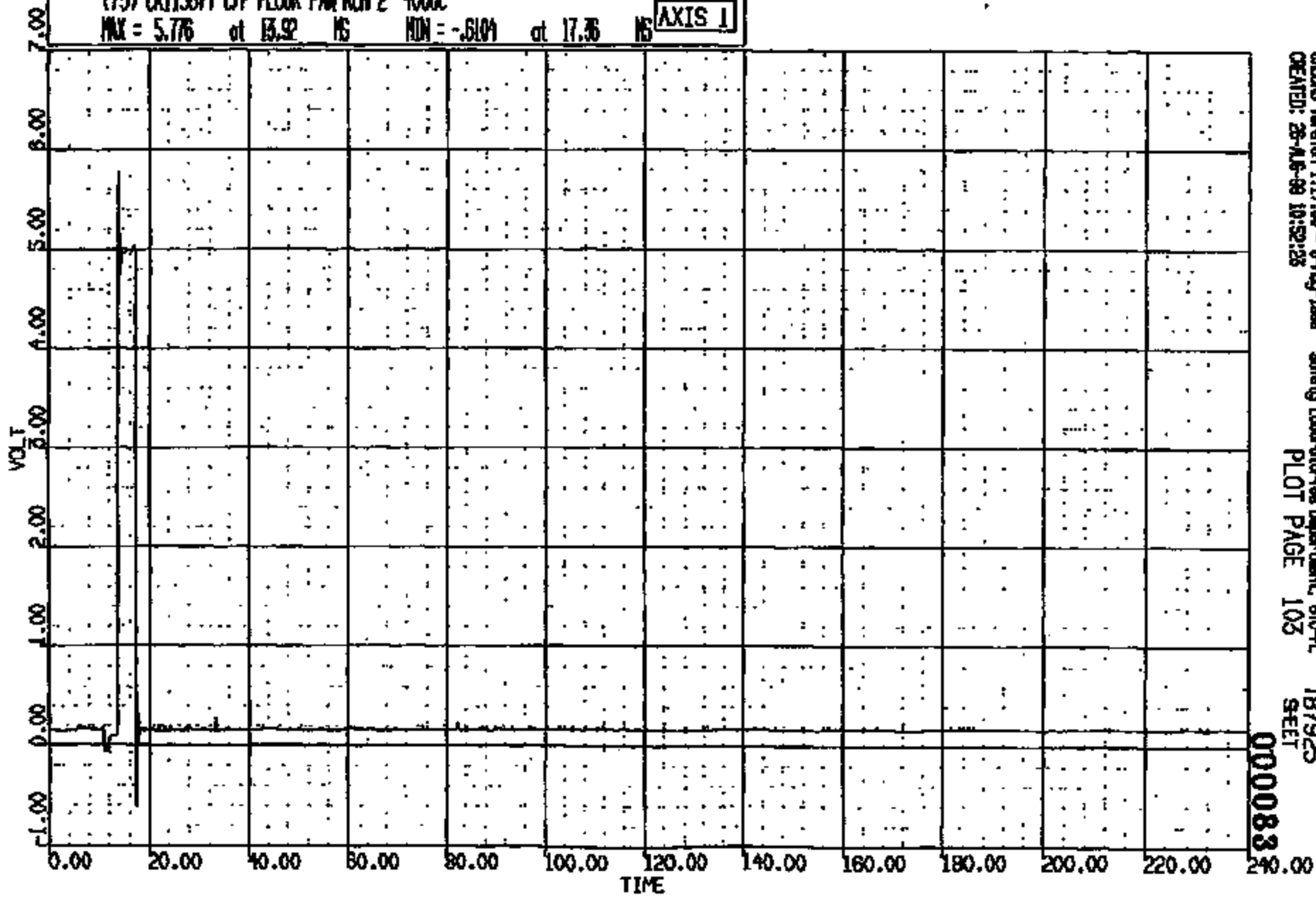
CGMS Version 1.17.00 - 8-May-1988 Safety Laboratories Department, 610-PL  
CREATED: 28-AUG-89 10:52:21 PLOT PAGE 102

TB7925  
SHEET  
000082

CRTS 0011567

CR R: 11567 TO: TB7925 DATE: 000825 09:42:00  
2000 D-188

(73) CR11567/C/FLOOR PWR RM 2 4000C  
MAX = 5.776 at 13.92 NS MIN = -.6104 at 17.36 NS **AXIS 1**



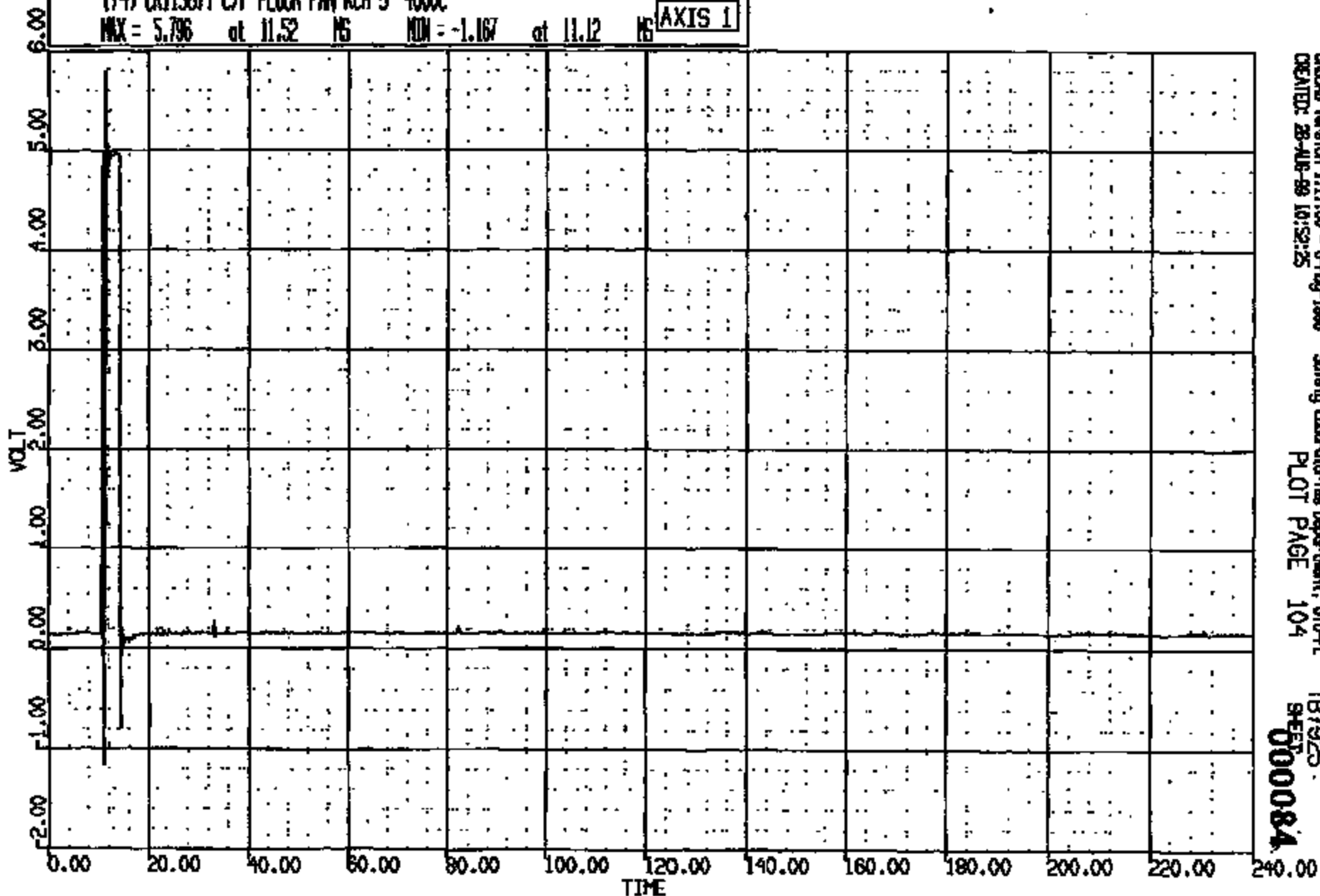
CRIMS Version 1.17.00 - 8-May-1999 Safety Laboratory Department, 610-PL TB7925  
CREATED: 28-AUG-99 10:52:23 PLOT PAGE 103 SHEET

000083

CRIS 0011567

CR R: 11567 TO: TB7925 DATE: 980825 09:42:00  
2000 D-188

(74) CR11567T C/F FLOOR PAN RCH 3 4000C  
MAX = 5.796 at 11.52 MS MIN = -1.167 at 11.12 MS **AXIS 1**



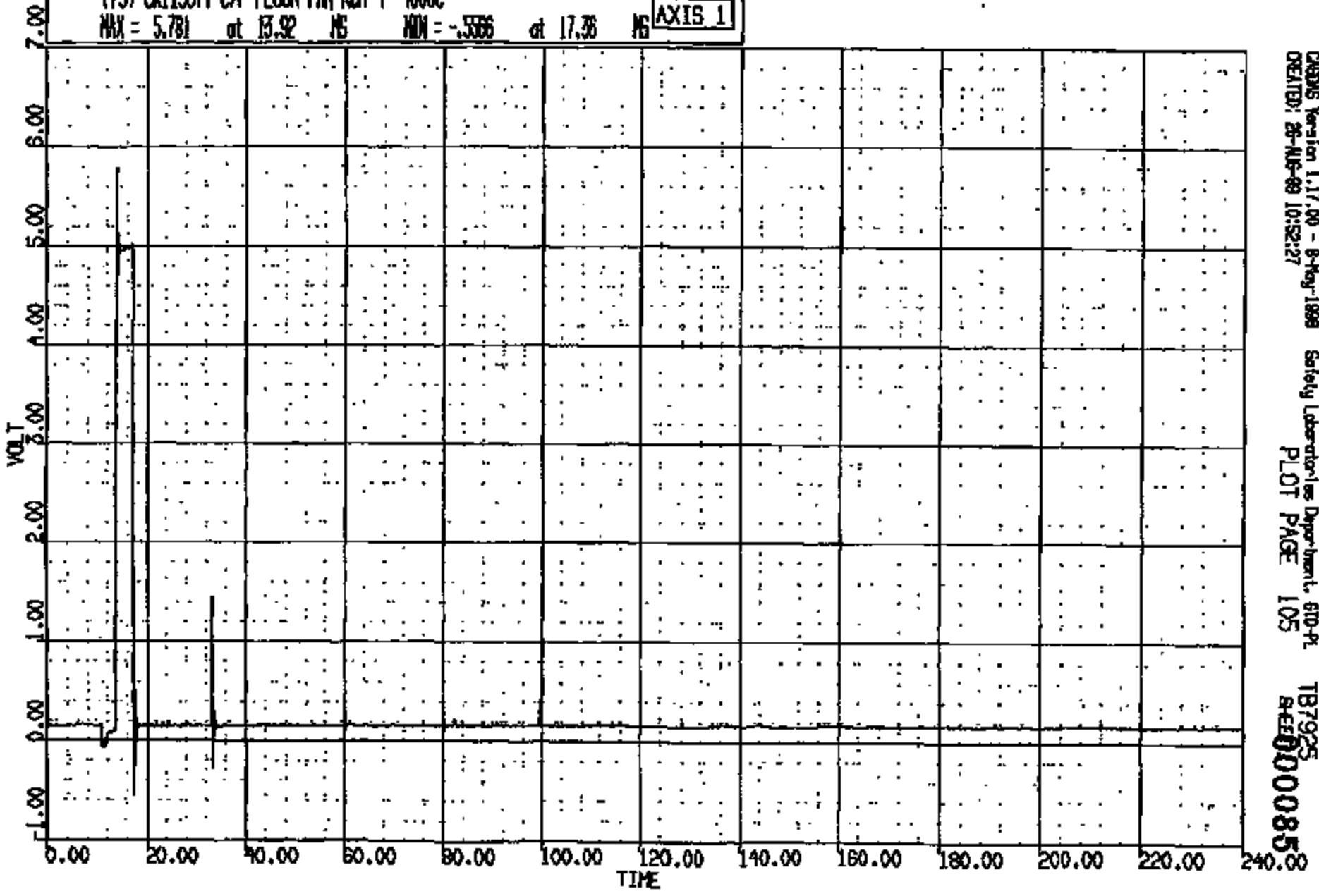
CARDAS Version 1.17.00 - 8-May-1998 Safety Laboratories Department, 610-PL  
CREATED: 28-AUG-98 10:52:25 PLOT PAGE 104

TB7925  
SHEET  
000084

CRTS 0011567

CR R: 11567 TC: T87925 DATE: 880826 09:42:00  
2000 D-186

(75) CR11567T C/F FLOOR PAN RM 4 400C  
MAX = 5.781 at 13.92 MS MIN = -.3366 at 17.36 MS **AXIS 1**



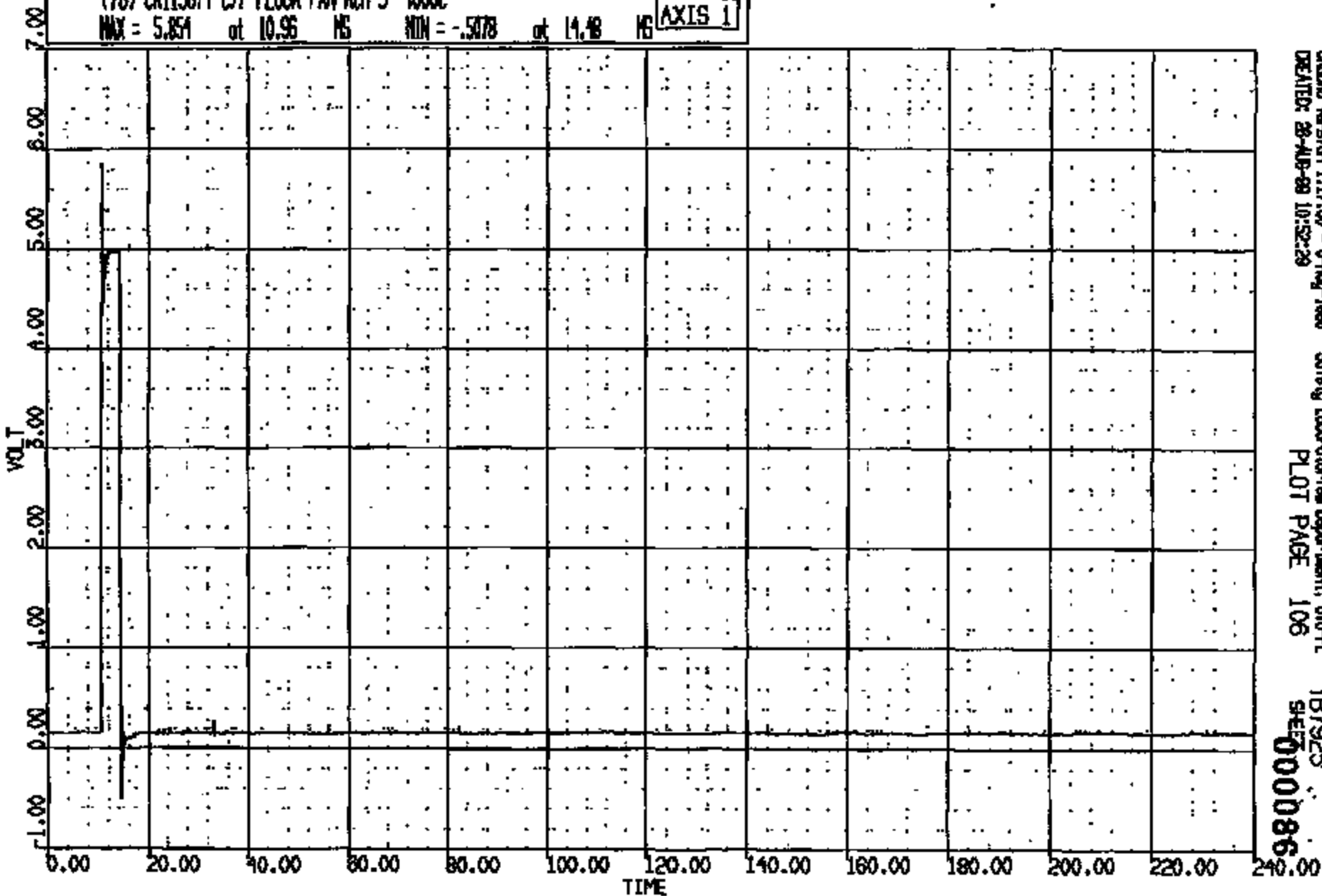
CRS015 Version 1.17.00 - 8-May-1998 Safety Laboratories Department, 610-91  
CREATED: 86-MS-88 10:52:27  
PLOT PAGE 105  
T87925  
REF: 000085

CRS01567

CR R: 11567 TO: TB7925 DATE: 090826 09:42:00  
2000 D-185

(76) CR11567T C/F FLOOR PAN RCH 5 4000C

MAX = 5.854 at 10.96 MS MIN = -.5078 at 14.48 MS **AXIS 1**



CRAMS Version 1.17.00 - 8-May-1999  
DELETED: 28-AUG-99 10:52:29

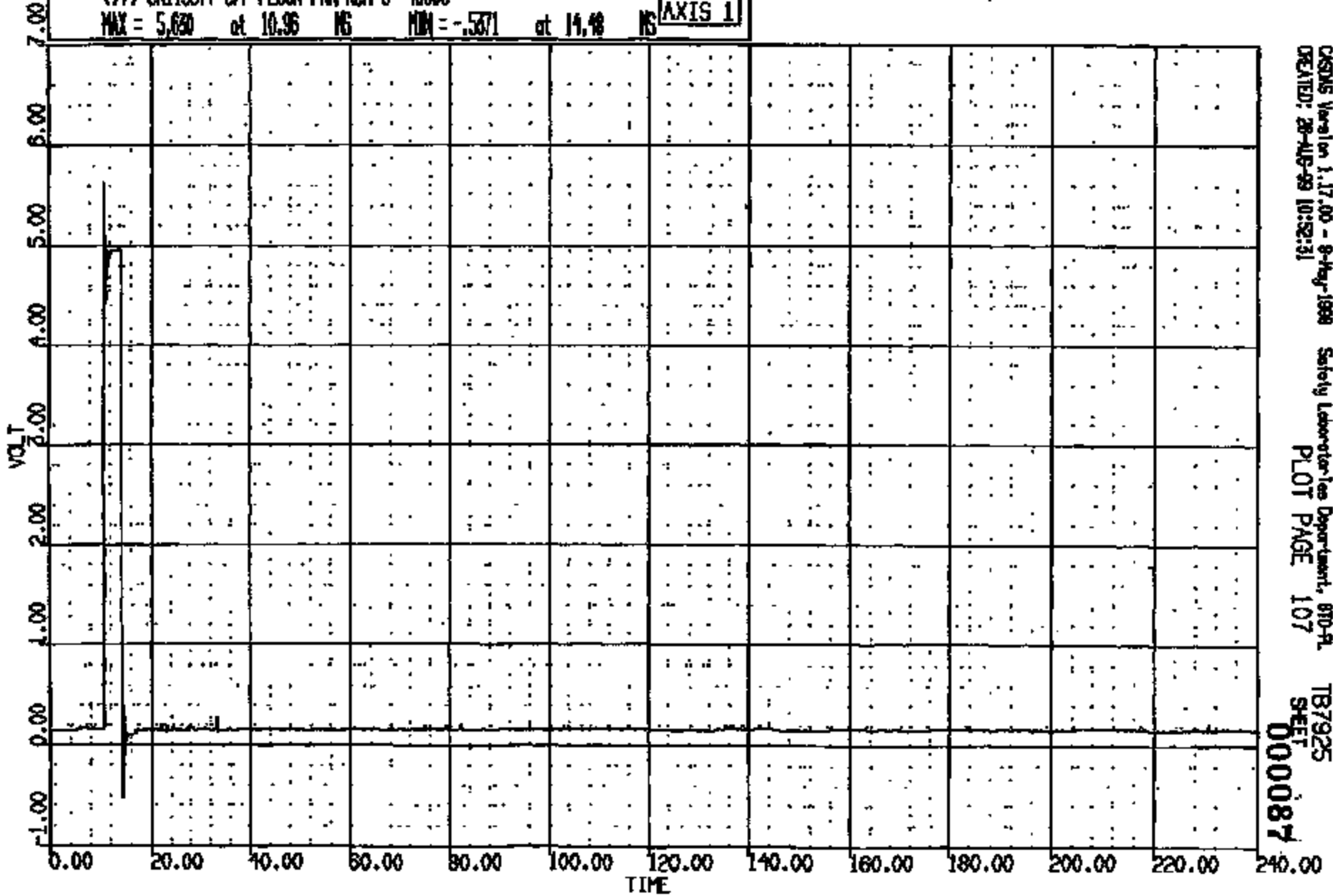
Safety Laboratories Department, 610 PL  
PLOT PAGE 106

TB7925  
SHEET 000086

CR11567

CR R: 11567 TO: TB7925 DATE: 990826 08:42:00  
2000 D-188

(77) CR11567/C/F FLOOR PAN RCH 6 4000C  
MAX = 5.630 at 10.96 NS MIN = -.5371 at 14.48 NS **AXIS 1**



CRSIS Version 1.17.00 - 8-May-1998  
CREATED: 20-APR-99 10:52:31

Safety Laboratories Department, 810-FL  
PLOT PAGE 107

TB7925  
SET  
000087

CRIS 0011567

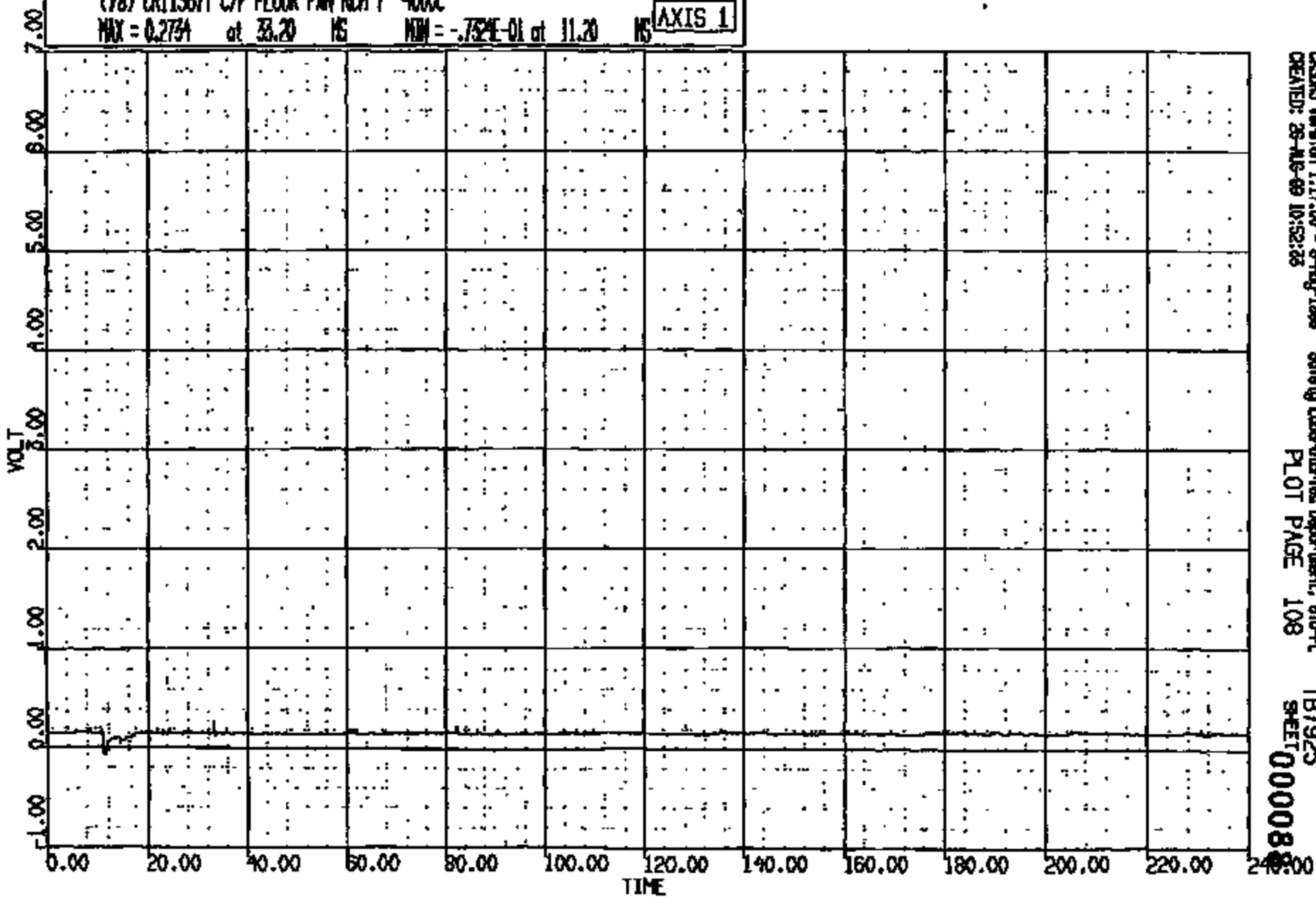


CR R: 11567 TO: TB7925 DATE: 990828 09:42:00  
E000 D-186

(78) CR11567T C/F FLOOR PAN ROOM 7 400C

MAX = 0.2754 at 33.20 MS MIN = -.752E-01 at 11.20 MS

AXIS 1



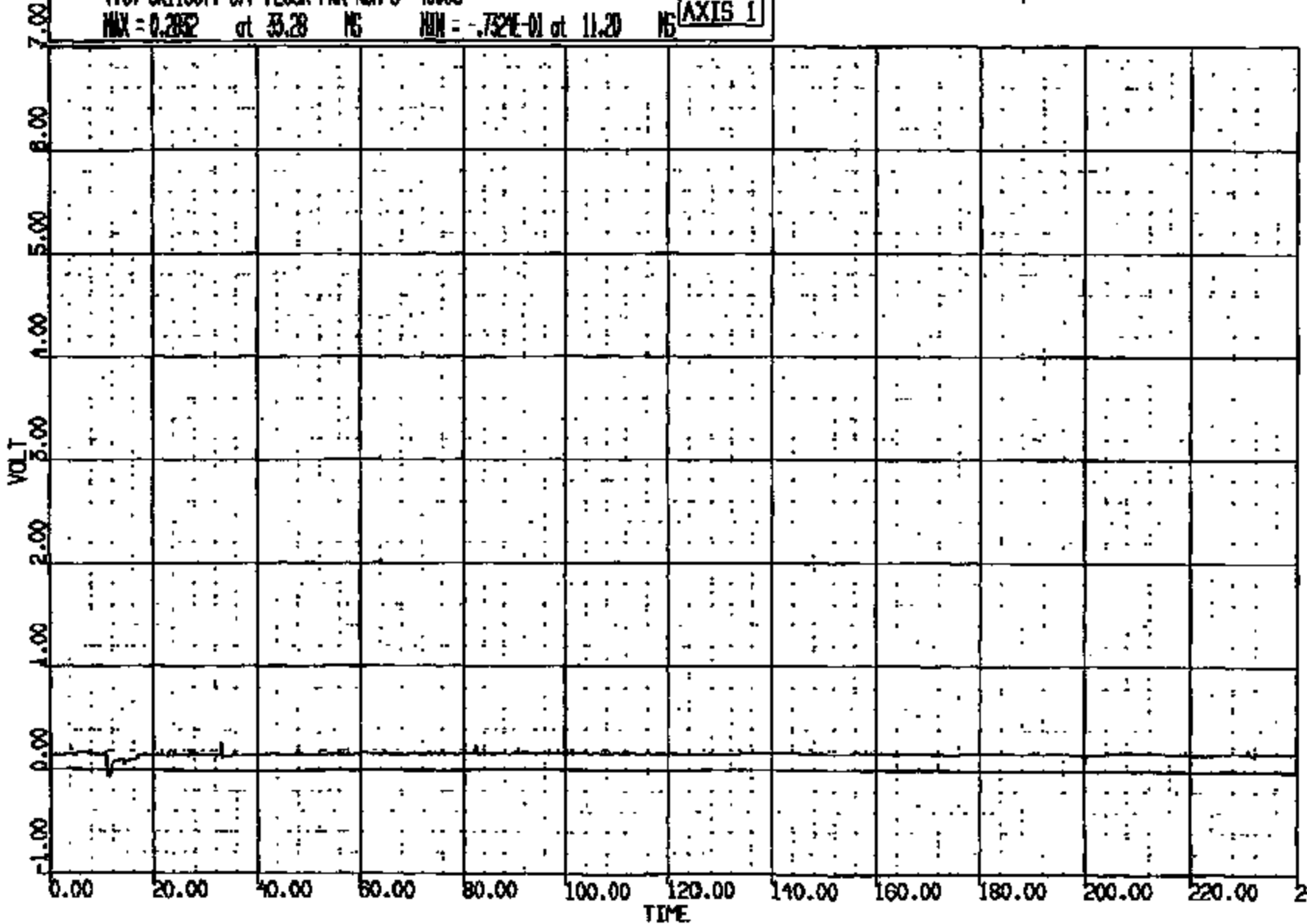
CASMS Version 1.17.00 - 8-May-1998 Safety Laboratories Department, 610-PL  
CREATED: 28-APR-99 10:52:25  
PLOT PAGE 108  
TB7925  
SHEET 00008

CR11567

CR R: 11567 TO: TB7925 DATE: 990825 09:42:00  
2000 D-189

(79) CR11567T C/F FLOOR PAN RCH 8 4000C  
MAX = 0.2852 at 33.28 NS MIN = -.7521E-01 at 11.20 NS

AXIS 1



CASAS Version 1.17.00 - 8-May-1998  
CREATED: 28-AUG-99 10:52:25

Safety Laboratories Department, 610-PL  
PLOT PAGE 109

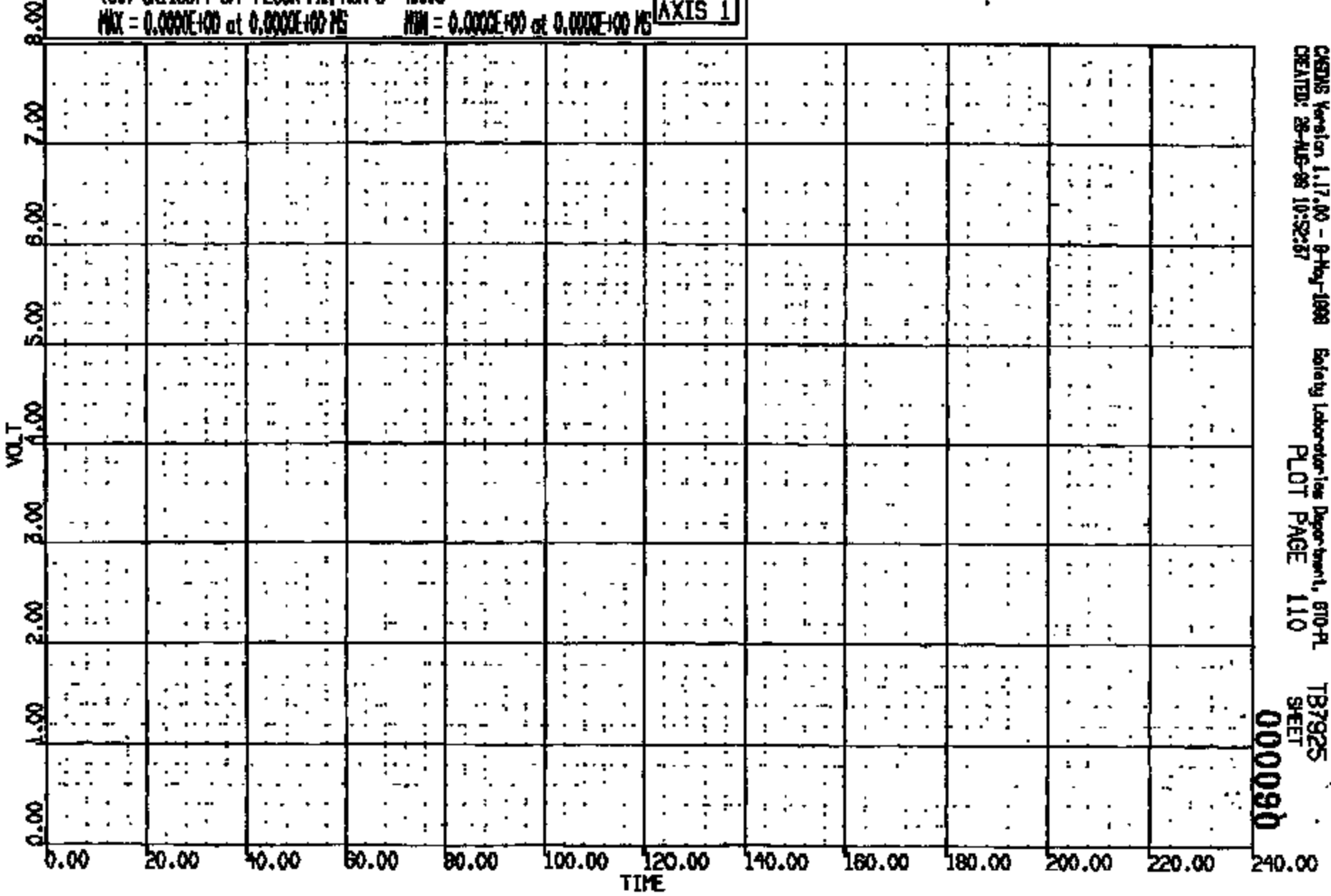
TB7925  
SHEET 000089

CRIS 0011567

CRN R: 11567 TO: TB7925 DATE: 890820 09:42:00  
2000 D-186

(80) CRT15671 C/F FLOOR PAN RCM 9 4000C  
MAX = 0.0000E+00 at 0.0000E+00 MS MIN = 0.0000E+00 at 0.0000E+00 MS

AXIS 1



CRMS Version 1.17.00 - 8-May-1988  
CREATED: 28-AUG-88 10:32:57

Safety Laboratories Department, 610-PL  
PLOT PAGE 110

TB7925  
SHEET

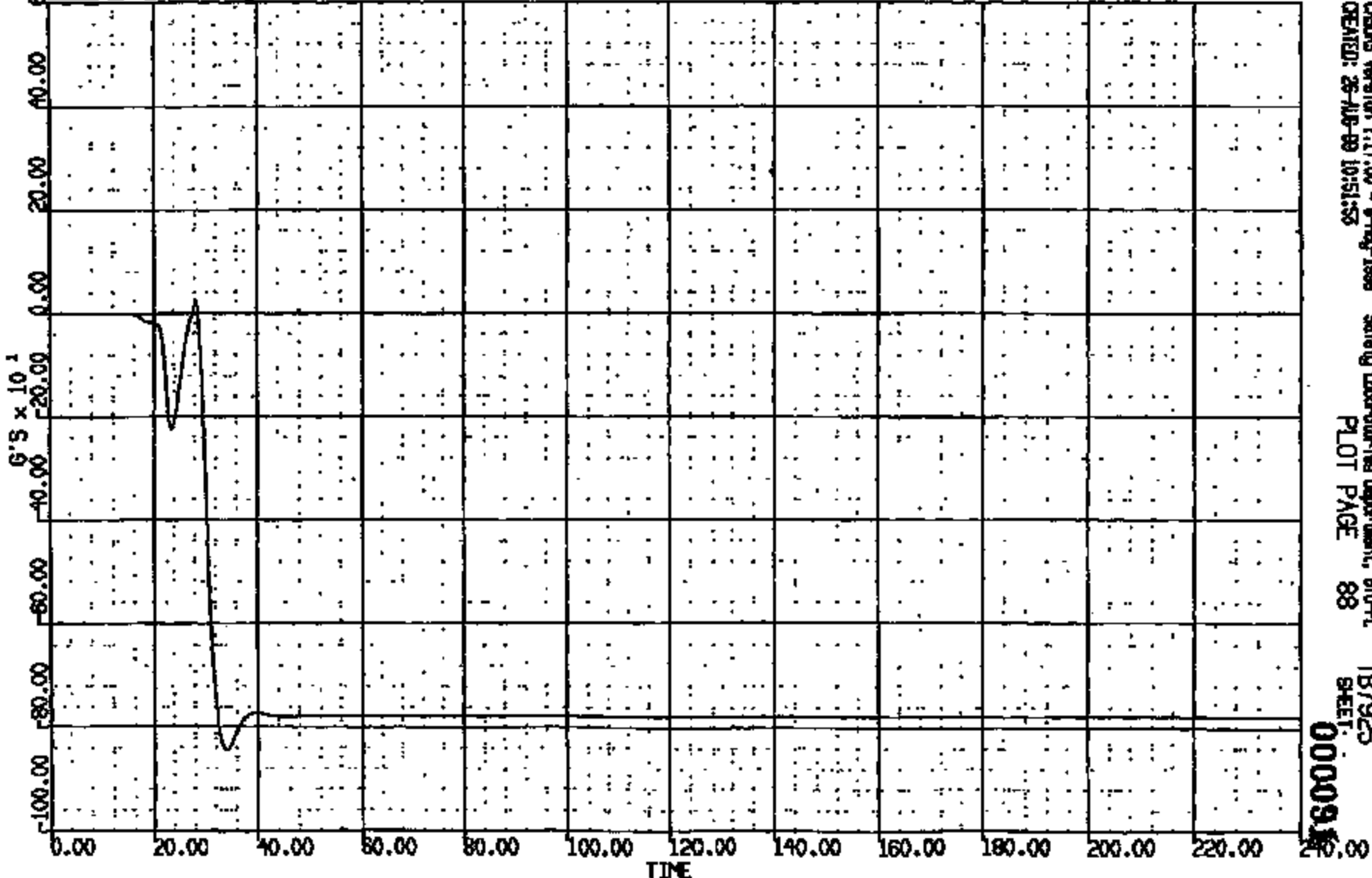
000090

CRTS 0011567

CR R: 11567 TO: TB7925 DATE: 880826 09:42:00  
8000 P-188

# (58) CR11567T ENGINE TRANS TOP LONG GOC  
MAX = 25.81 at 28.21 MS MIN = -044.9 at 34.00 MS **AXIS 1**

ANOMALY SET:  
\* = Missed data corrected full scale  
+ = Missed data >90.0% of full scale  
- = Missed data < 10.0% of full scale  
# = 5% percent of peak at T-zero



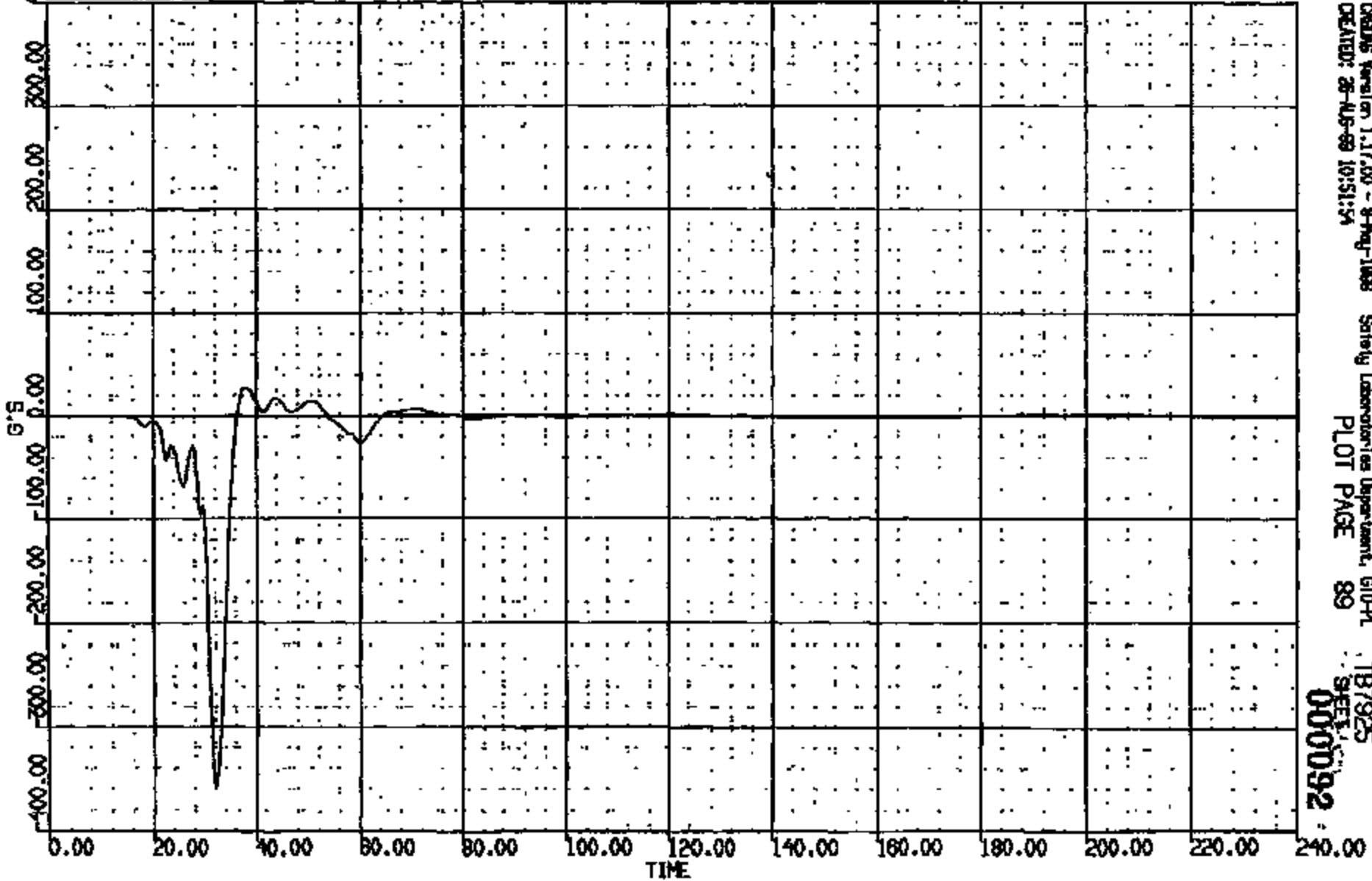
CR1016 Version 1.17.00 - 8-May-1988 Safety Laboratory Department, 610-11  
CREATED: 26-APR-88 10:51:53  
PLOT PAGE 88  
TB7925  
SHEET 000091

CR11567

CR R: 11567 TO: TB7925 DATE: 220826 09:42:00  
2000 D-186

# (59) CR11567 ENGINE TRANS TOP VERY GOC  
MAX = 27.57 at 37.94 16 MIN = -350.3 at 32.08 15 **AXIS 1**

ADDITIONAL KEY:  
\* - Missed data exceeds full scale  
\* - Missed data >50.0% of full scale  
\* - All data < 1% of full scale  
\* - El merge effect at T-zero



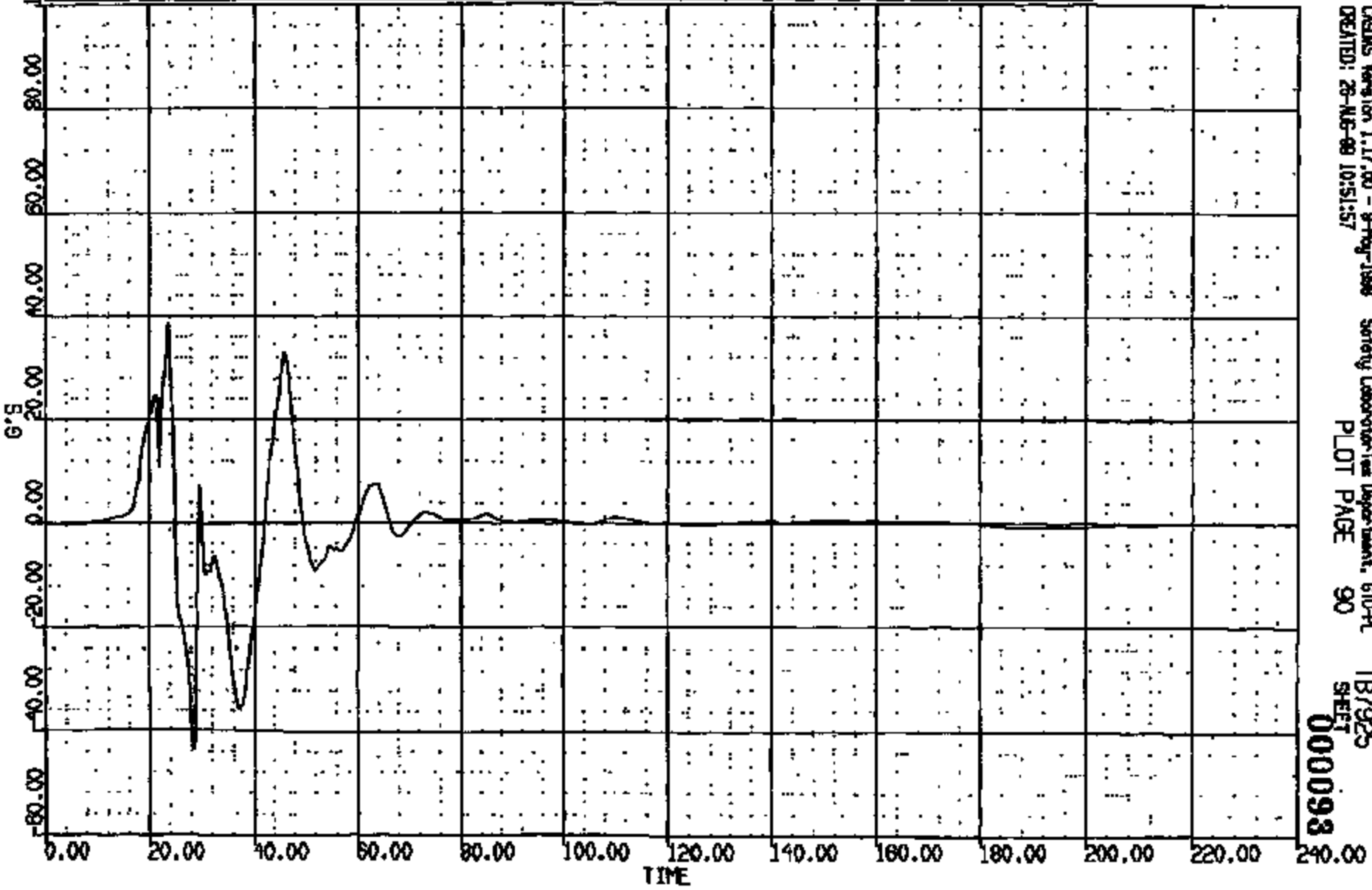
ORION Version 1.17.00 - 9-May-1998 Safety Laboratories Department, 610-PL  
CREATED: 26-AUG-99 10:51:54 PLOT PAGE 89 TB7925  
SHEET 000092

CRTS 0011567

CR R: 11567 TD: TB7925 DATE: 890820 09:42:00  
2000 D-188

# (60) CR115677 ENGINE TRANS TOP LAT 60C  
MAX = 38.52 at 23.88 MS MIN = -43.83 at 28.32 MS **AXIS 1**

ANNOY KEY:  
\* - Maximum data exceeded full scale  
@ - Maximum data 500.0% of full scale  
# - All data < 10.0% of full scale  
E - 21 percent offset on T-zero



CRS Version 1.17.00 - 8-May-1988 Safety Laboratory Department, 610-PL  
CREATED: 28-NOV-89 10:51:57 PLOT PAGE 90 TB7925  
000093 SHEET

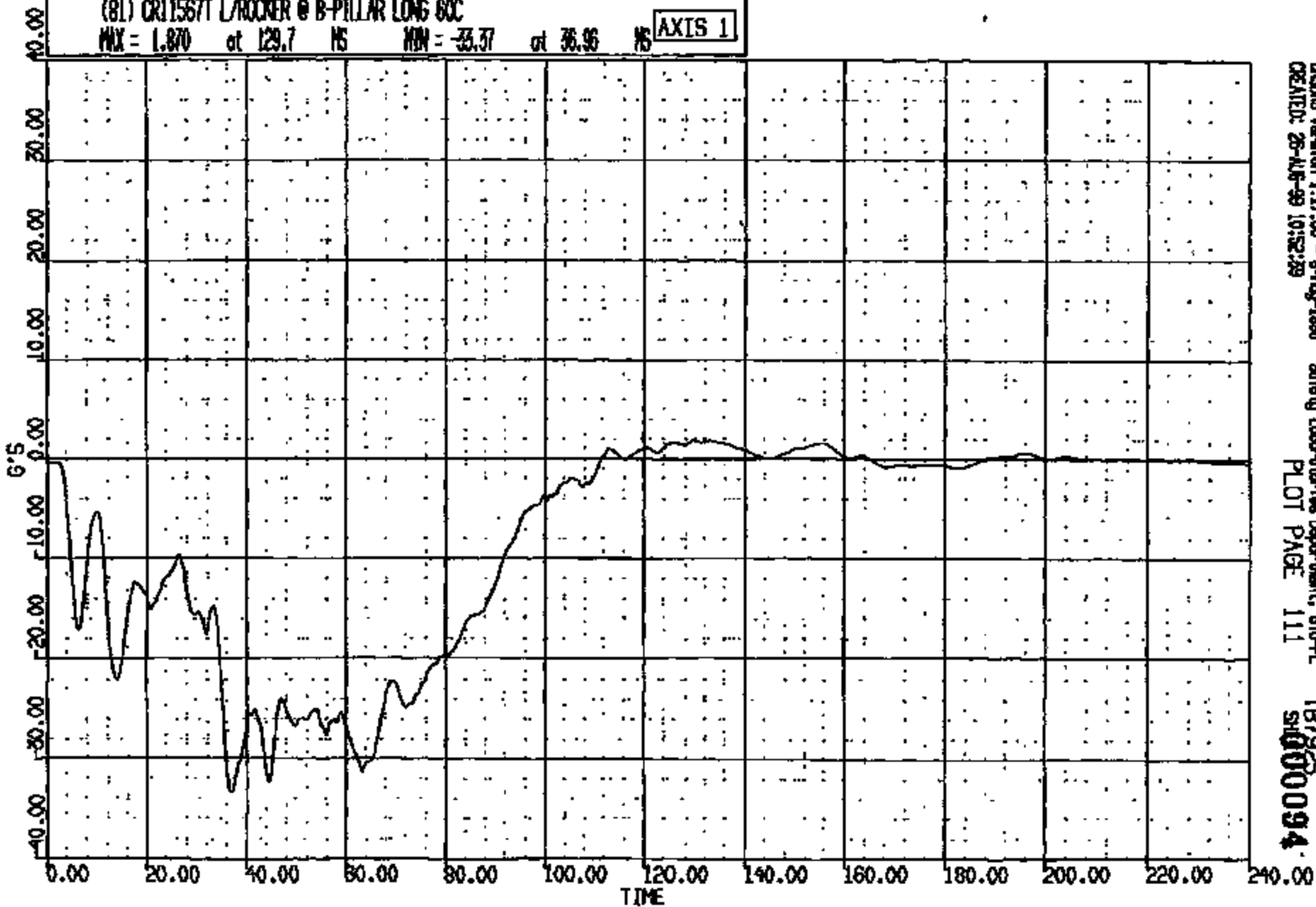
CRIS 0011567

CR R: 11567 TO: TB7925 DATE: 990825 09:42:00  
2000 D-198

(81) CR11567 L/ROCKER @ B-PILLAR LONG 60C

MAX = 1.870 at 129.7 MS MIN = -33.37 at 36.96 MS

AXIS 1



CRAMS Version 1.17.00 - 8-May-1998  
CREATED: 25-AUG-99 10:52:29

Safety Laboratories Department, 610-PL  
PLOT PAGE 111

TB7925  
S000094

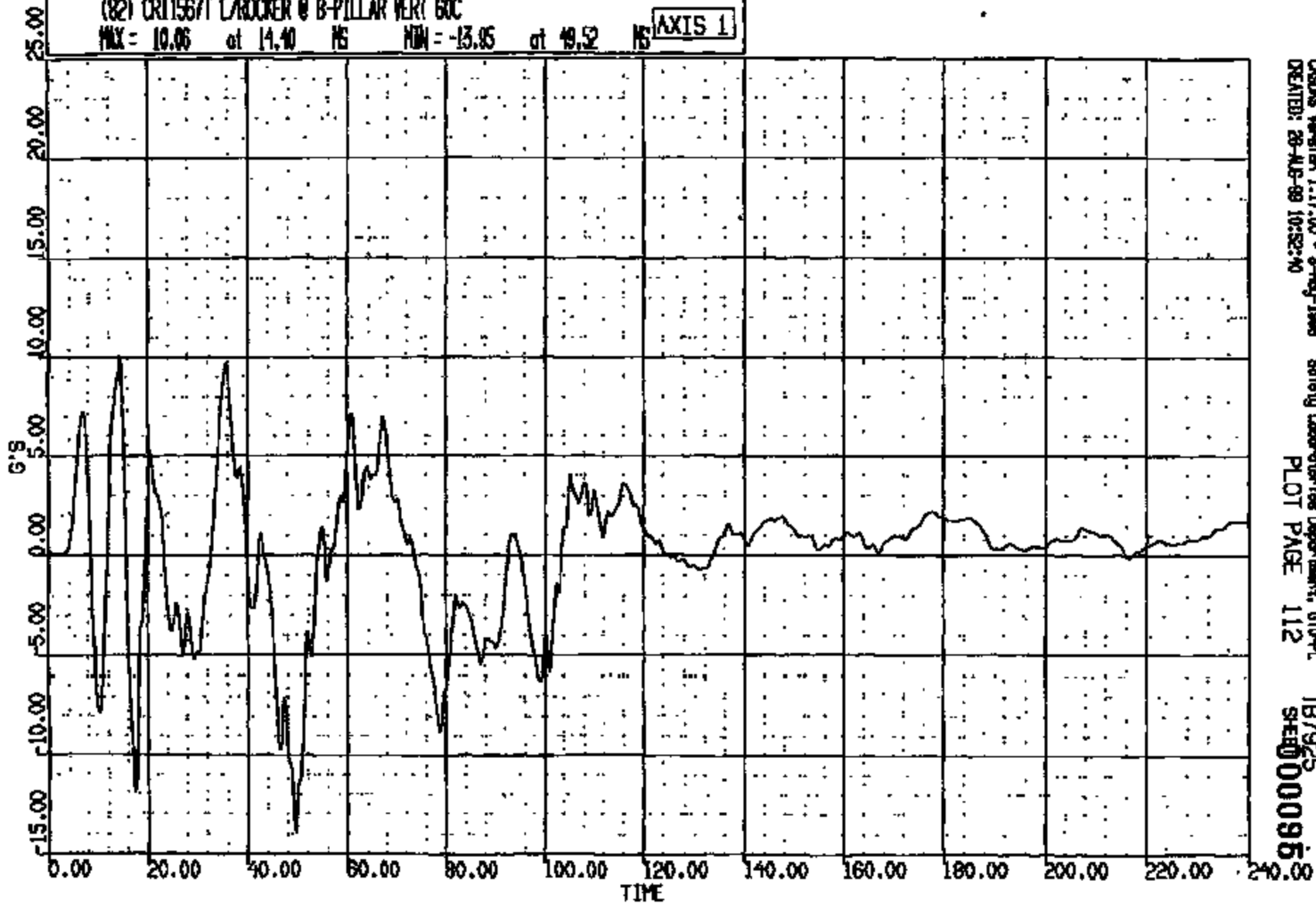
CRTS 0011567

CR R: 11567 TO: TB7925 DATE: 990825 09:42:00

2000 D-199

(82) CR11567 L/ROCKER @ B-PILLAR VERT 60C

MAX = 10.06 at 14.40 MS MIN = -13.95 at 49.52 MS **AXIS 1**



CASMS Version 1.17.00 - 8-May-1998  
CREATED: 29-AUG-99 10:52:40

Safety Laboratory Department, 610-PL  
PLOT PAGE 112

TB7925  
SER#00095

CRTS 0011567

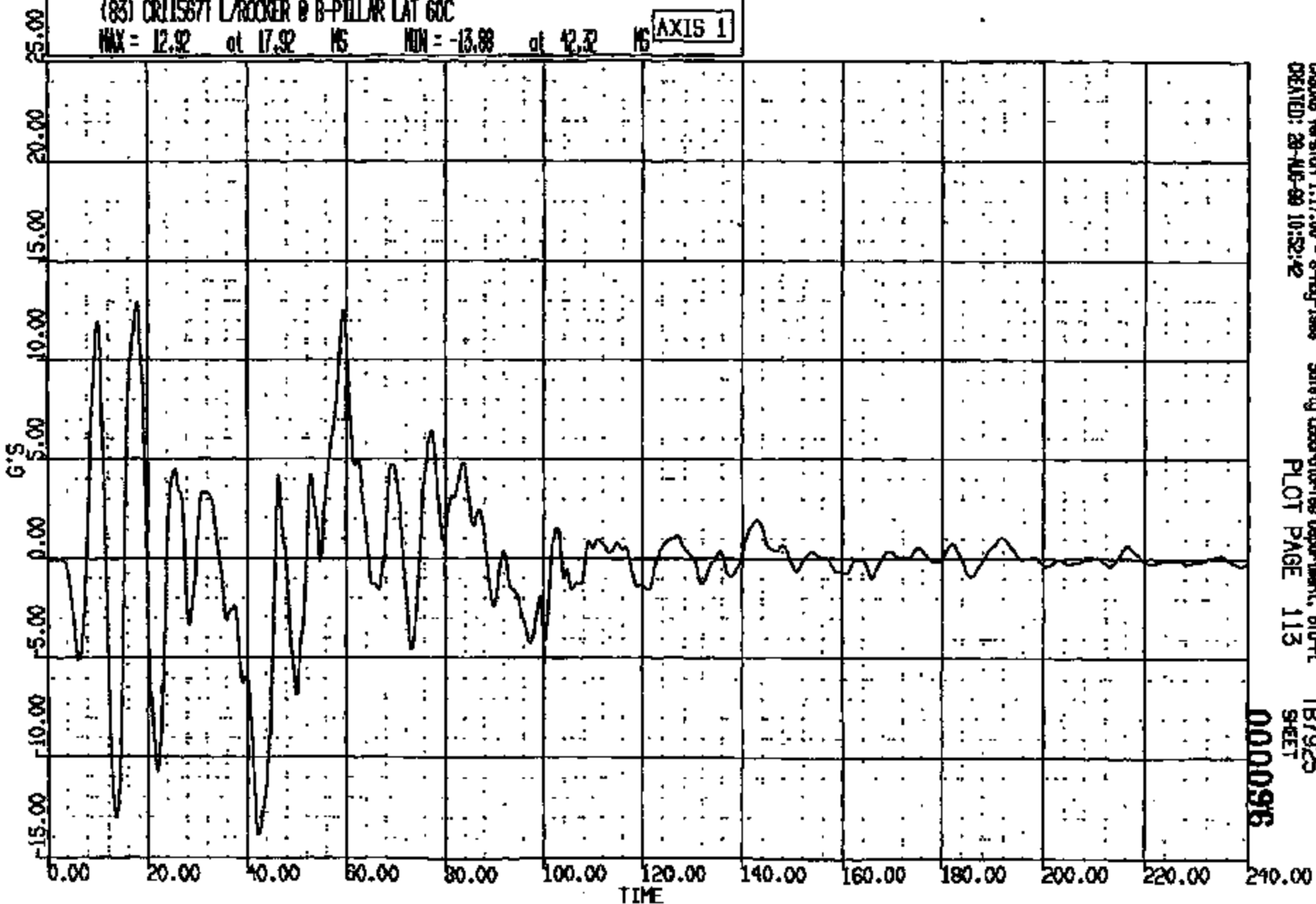


CR R: 11567 TO: TB7925 DATE: 880825 09:42:00  
2000 D-188

(83) CR115671 L/ROCKER @ B-PILLAR LAT 60C

MAX = 12.92 at 17.92 MS MIN = -13.88 at 42.32 MS

AXIS 1



CASIMS Version 1.17.00 - 8-Aug-1988  
CREATED: 28-APR-89 10:52:42

Safety Laboratories Department, 810-PL  
PLOT PAGE 113

TB7925  
SHEET

0000916

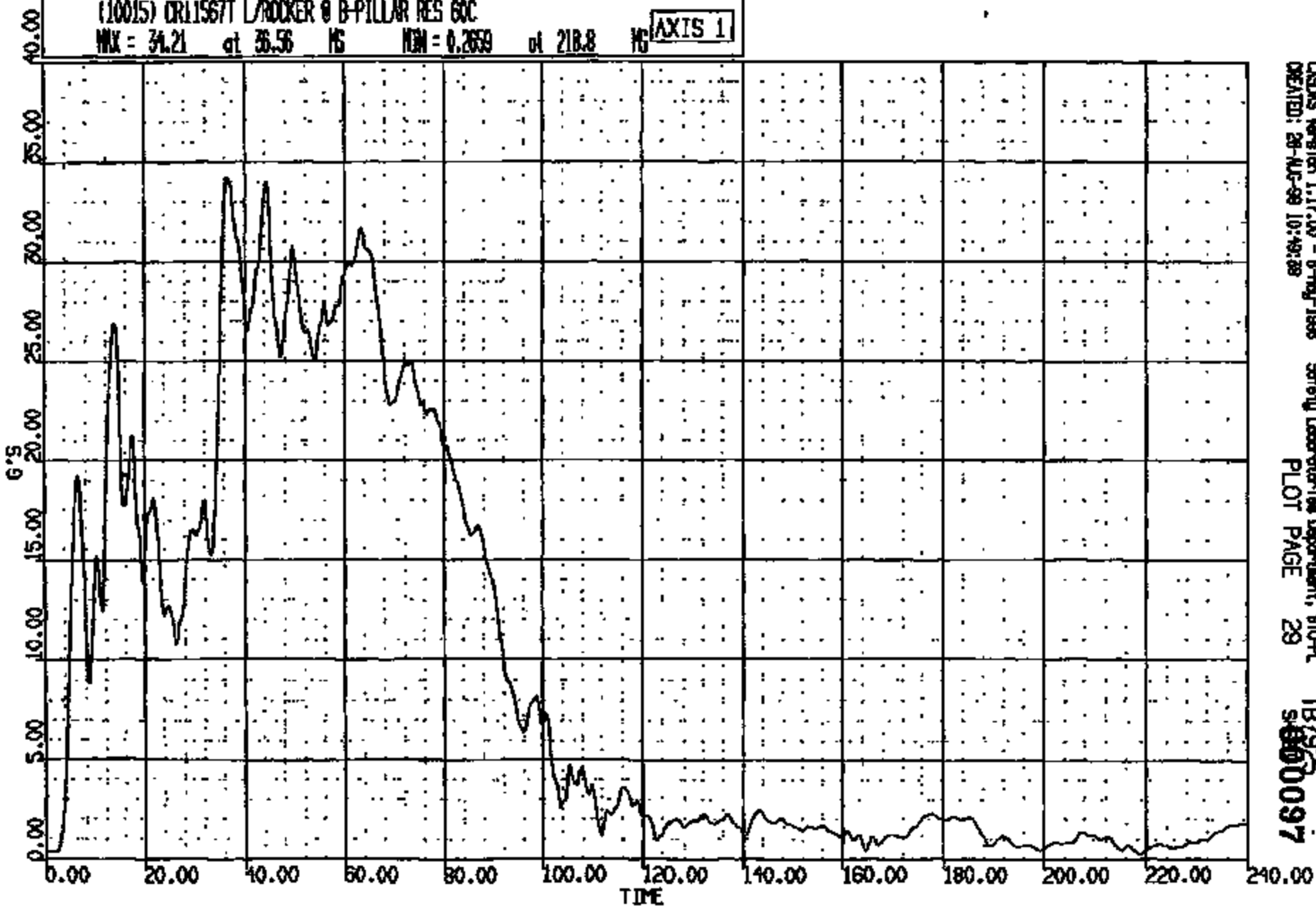
CRTS 0011567

CR R: 11567 TO: TB7925 DATE: 990828 09:42:00  
2000 D-168

(10015) CR11567T L/ROCKER @ B-PILLAR RES 60C

MAX = 34.21 at 36.56 MS MIN = 0.2659 at 218.8 MS

AXIS 1



CIGAS Version 1.17.00 - 8-May-1998  
CREATED: 28-AUG-99 10:49:28

Seisby Laboratory Department, STO-PL  
PLOT PAGE 29

TB7925  
5800097

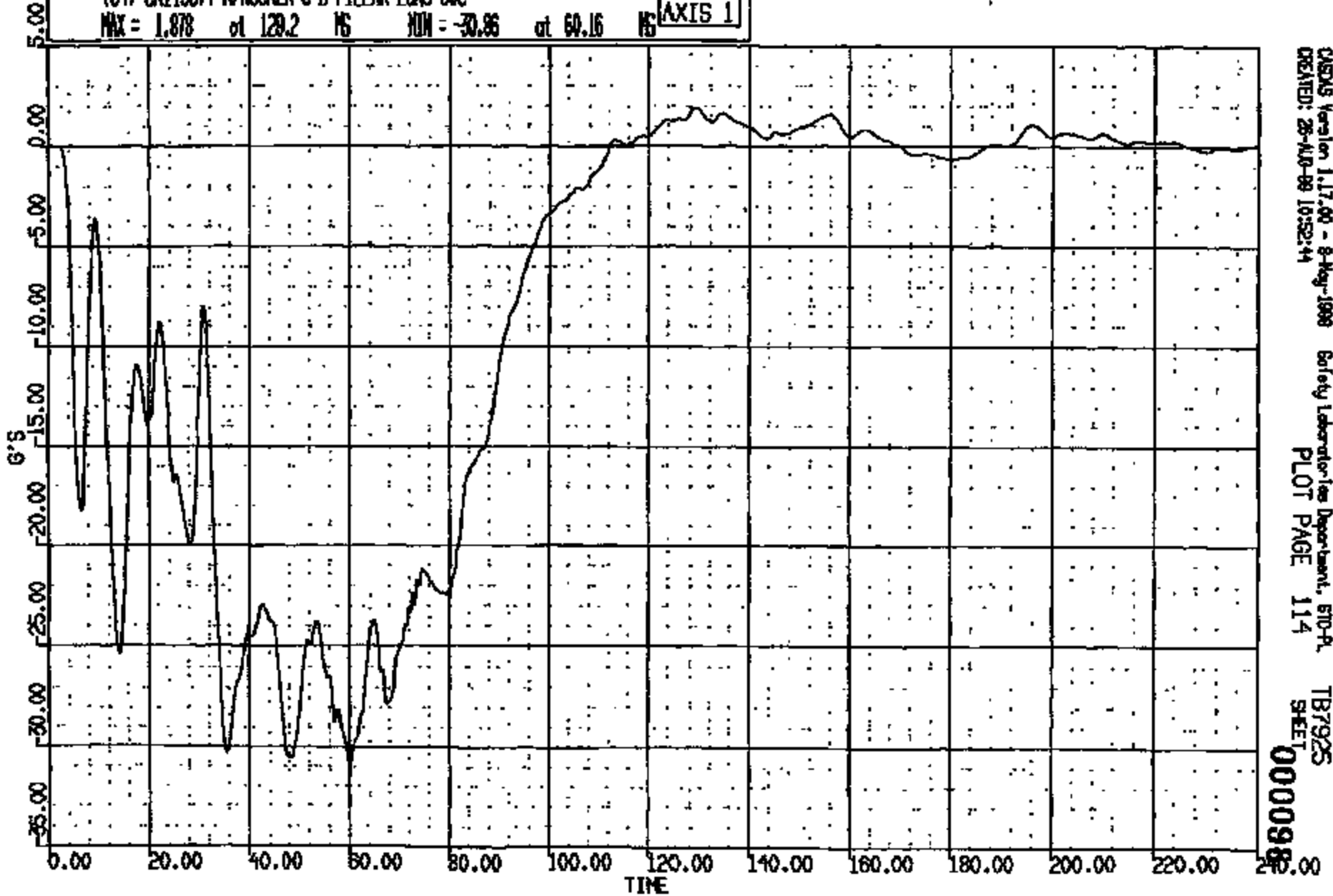
CRIS 0011567

CR R: 11567 TO: TB7925 DATE: 890825 09:42:00  
2000 D-188

(84) CR115671 R/ROCKER @ B-PILLAR LONG 60C

MAX = 1.878 at 129.2 MS MIN = -30.86 at 60.16 MS

AXIS 1



CASAS Version 1.17.00 - 8-Aug-1988  
CREATED: 25-AUG-89 10:52:44

Safety Laboratory/tes Department, 510-A,  
PLOT PAGE 114

TB7925  
SHEET

000098

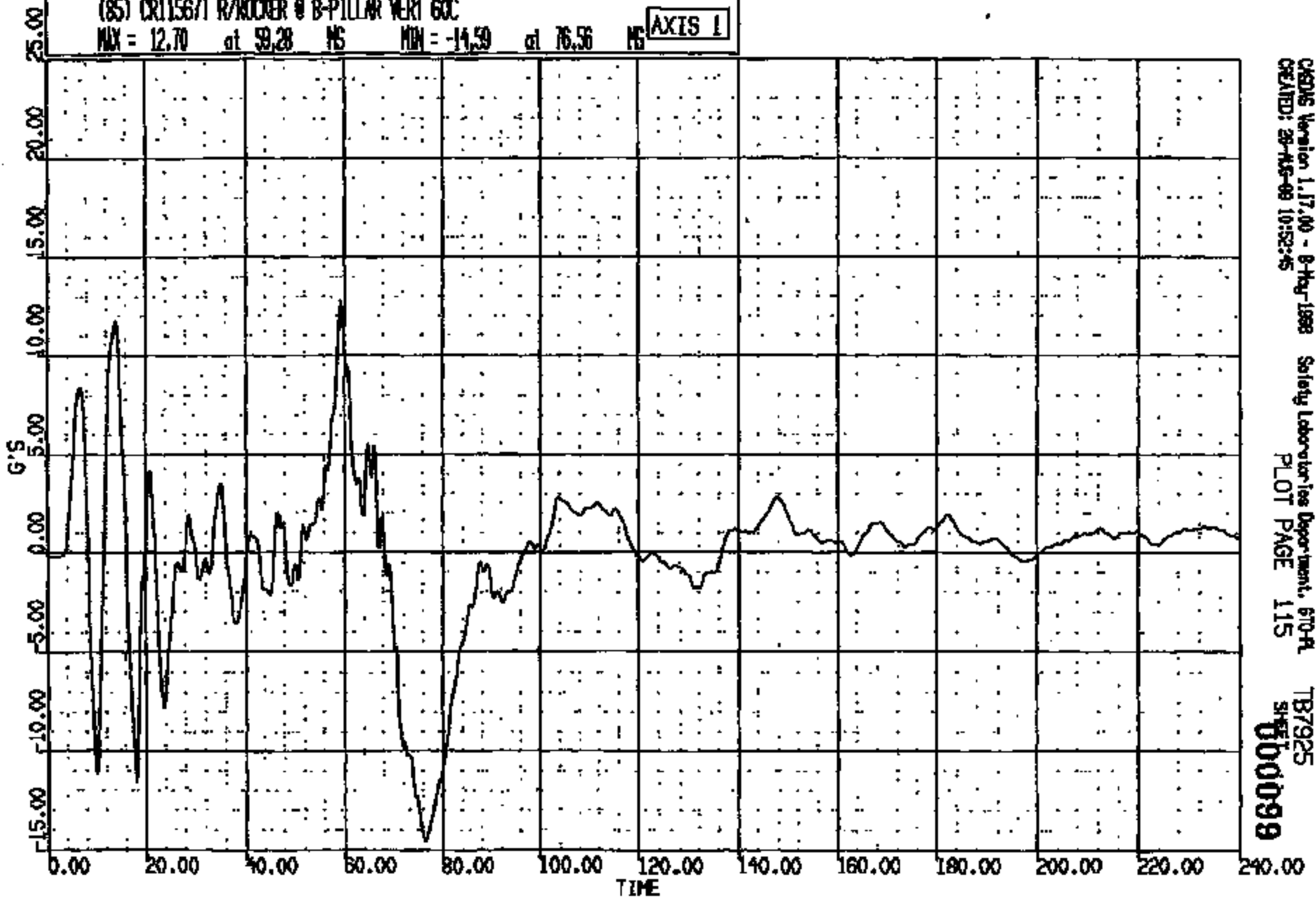
CR11567

CR R: 11867 TO: TB7925 DATE: 890828 08:42:00  
2000 D-188

(85) CR11567T R/ROCKER @ B-PILLAR VERT GOC

MAX = 12.70 at 59.28 MS MIN = -14.59 at 76.56 MS

AXIS 1



CRSIS Version 1.17.00 - 8-May-1988  
CREATED: 28-MAY-89 10:52:45

Safety Laboratories Department, 670-A  
PLOT PAGE 115

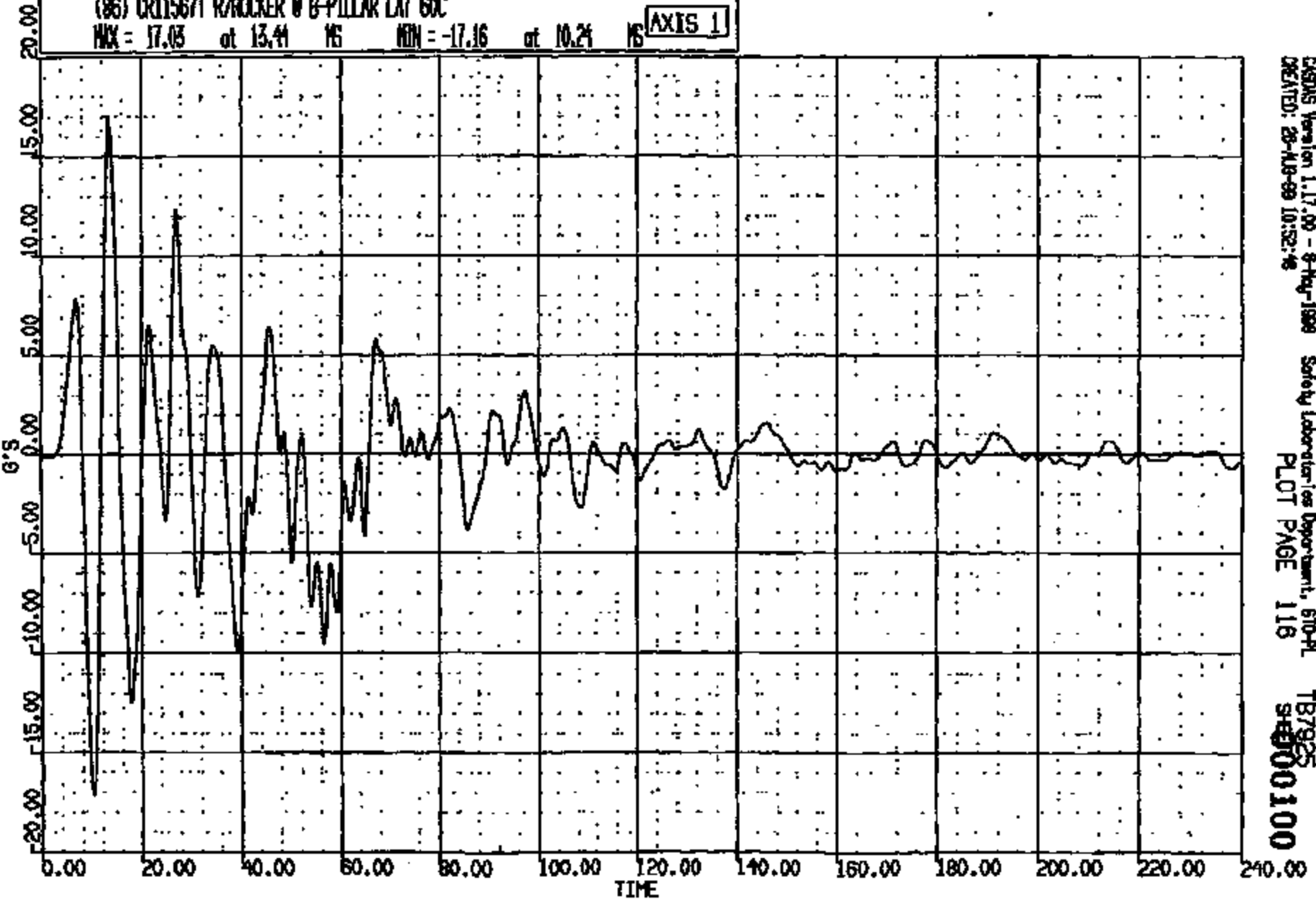
TB7925  
SHEET

000099

CRIS 0011567

CR R: 11567 TO: TB7925 DATE: 890825 09:42:00  
R000 D-108

(86) CR115671 R/ROCKER @ B-PILLAR LAT 60C  
MAX = 17.03 at 13.44 MS MIN = -17.16 at 10.24 MS **AXIS 1**

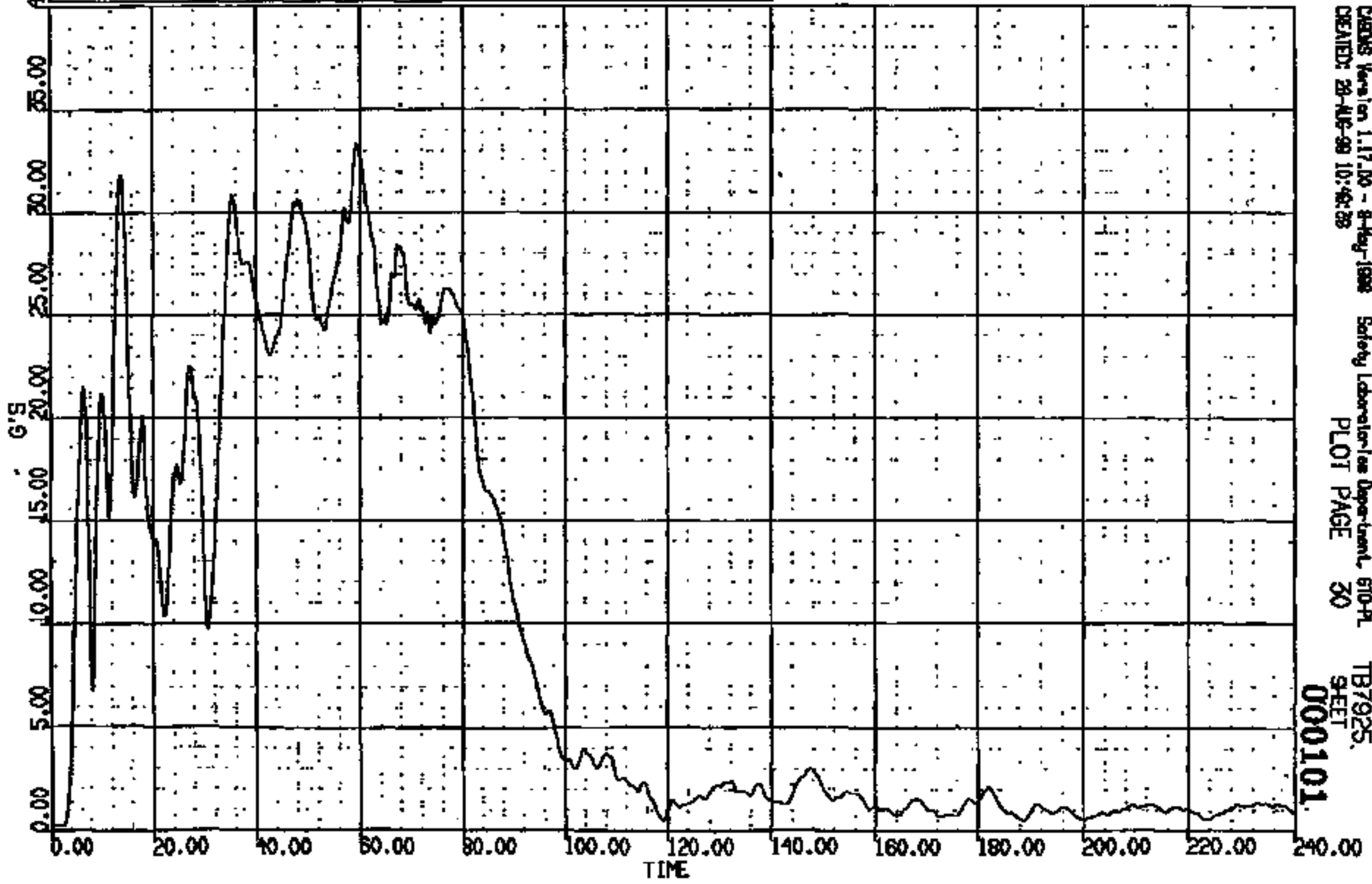


CASMS Version 1.17.00 - 8-Aug-1989 Safety Laboratories Department, 610-PL  
CREATED: 25-AUG-89 10:52:46  
PLOT PAGE 116  
TB7925  
S000100

CRTS 0011567

CR RI 11567 TO: TB7925 DATE: 990925 08:42:00  
2000 D-188

(10016) CR11567 R/ROCKER @ B-PILLAR RES 60C  
MAX = 33.34 at 59.36 MS MIN = 0.2192 at 0.000E+00 MS **AXIS 1**



CRS Version 1.17.00 - 8-May-1998 Safety Laboratory Department, 610-PL  
CREATED: 29-AUG-99 10:46:28 PLOT PAGE 30 TB7925  
000101 SHEET

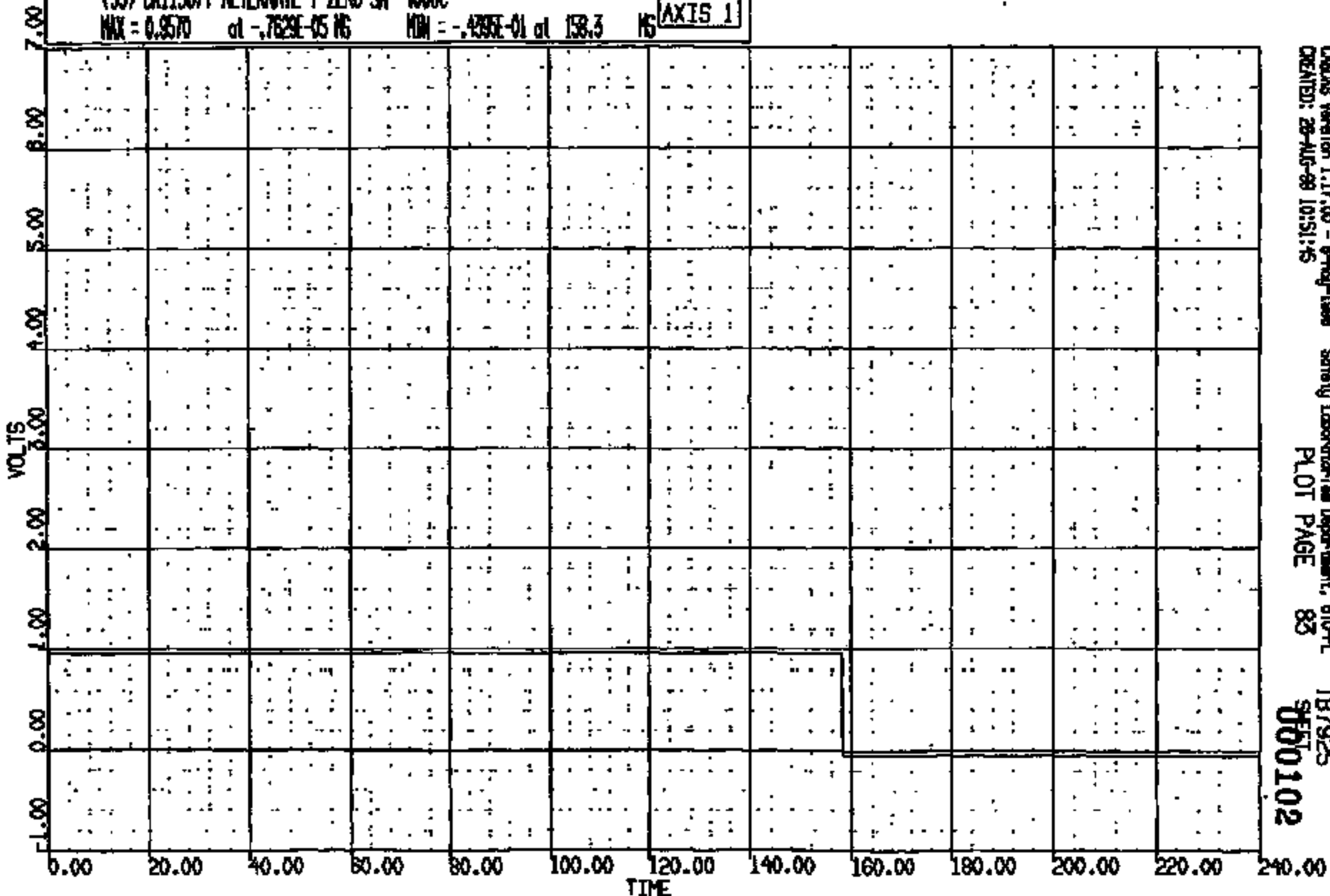
CRIS 0011567

CR R: 11567 TO: T87925 DATE: 890825 09:42:00  
2000 D-188

(53) CR11567/1 ALTERNATE T-ZERO SH 4000C

MAX = 0.9570 at -7629E-05 MS MIN = -.4395E-01 at 158.3 MS

AXIS 1



CARDIS Version 1.17.00 - 8-May-1988  
CREATED: 28-AUG-88 10:51:45

Safety Laboratories Department, 810-PL  
PLOT PAGE 83

T87925  
SF0102  
000102

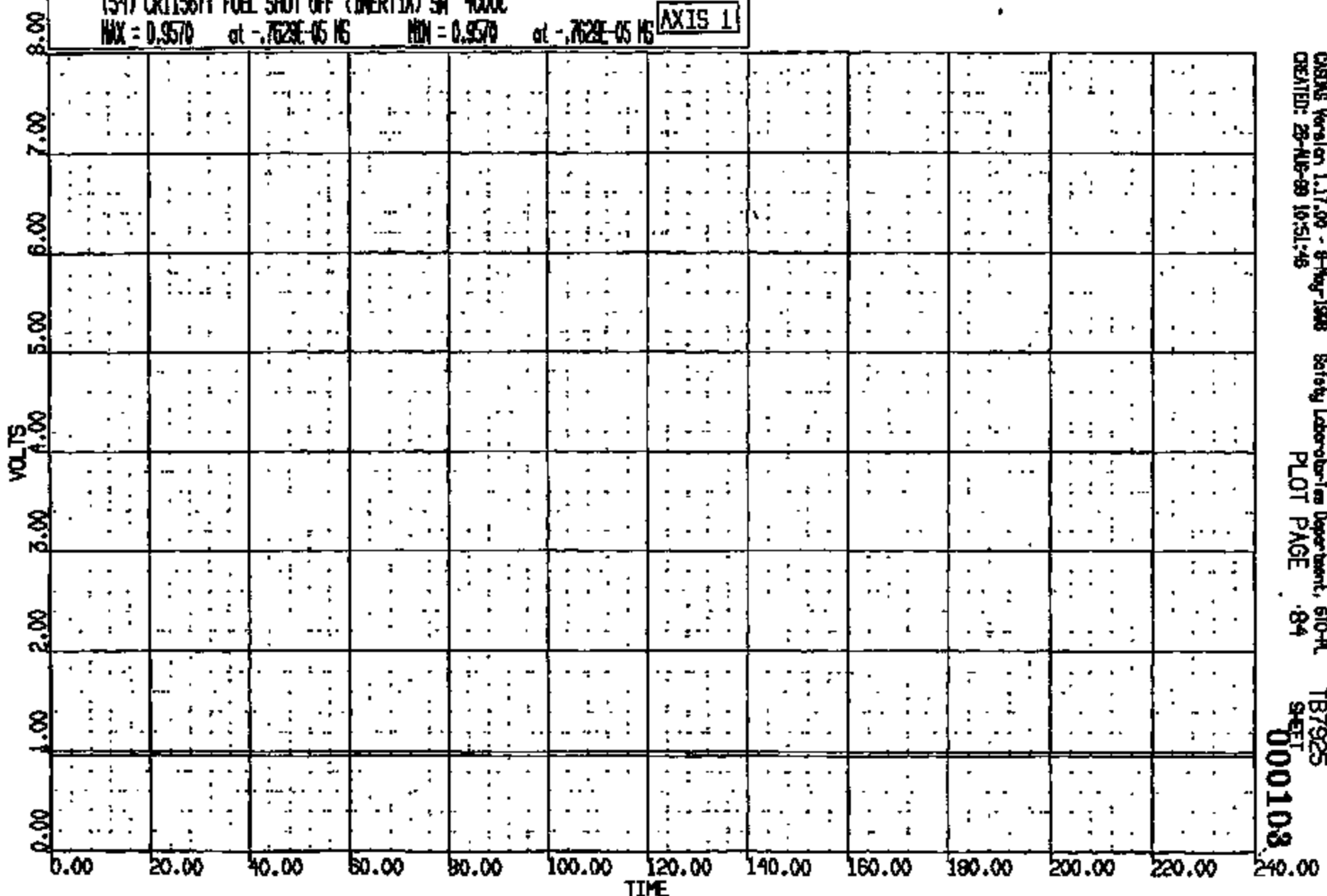
CR11567

CR R: 11567 TO: TB7925 DATE: 090825 09:42:00  
2000 0-195

(54) CR11567T FUEL SHUT OFF (INERTIA) SH 4000C

MAX = 0.9570 at -.7629E-05 MS MIN = 0.9570 at -.7629E-05 MS

AXIS 1



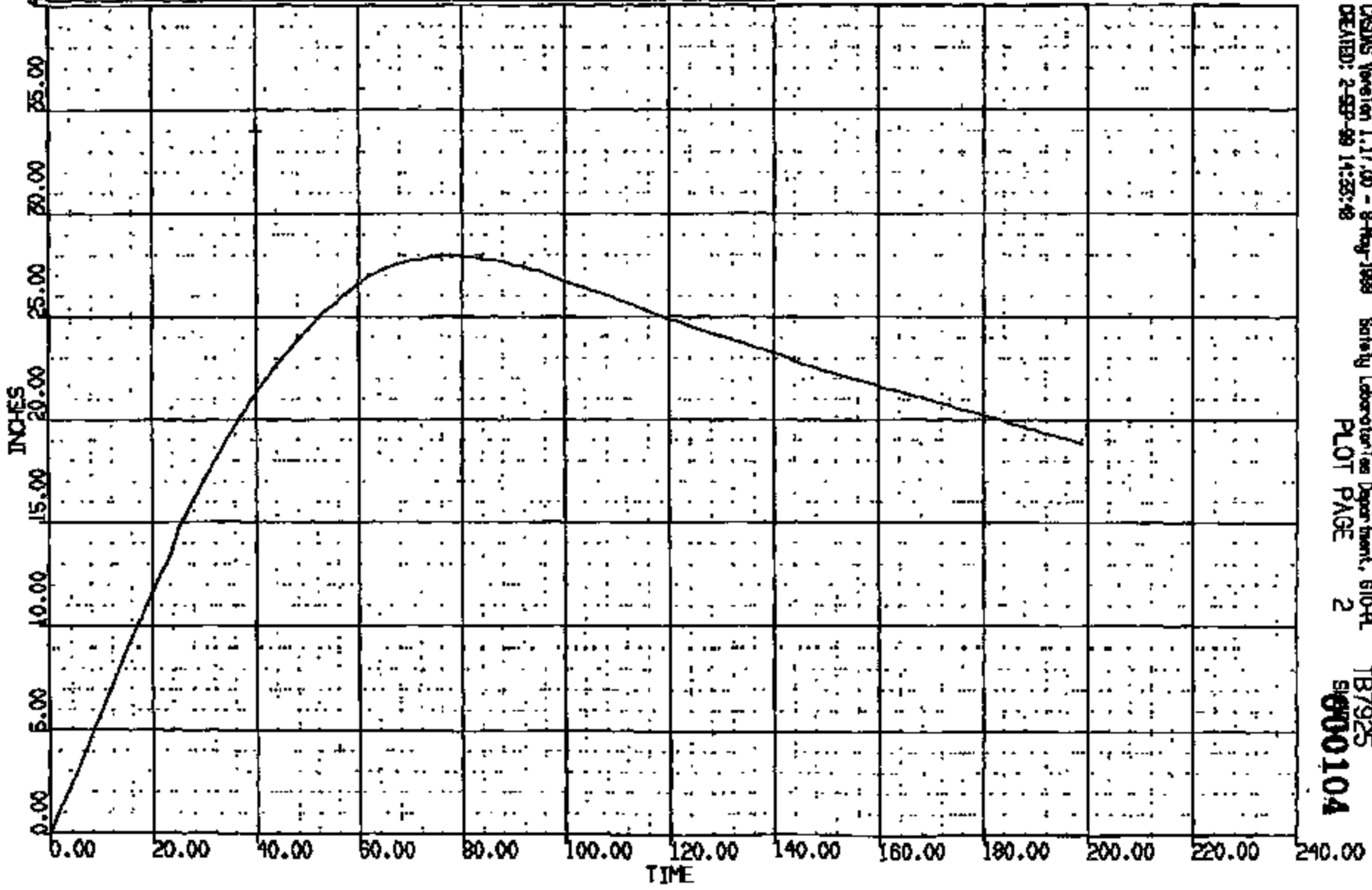
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CREATED: 28-AUG-89 10:51:46  
PLOT PAGE 84  
TB7925  
SHEET  
000108

CRIS 0011567



CR R: 11567 TO: T87925 DATE: 990826 08:42:00  
2000 0-186

(0) CRC11567 L RNR AT B PLR ART L GND REF LONG DISP  
MAX = 27.99 at 79.00 MS MIN = 0.000E+00 at 0.000E+00 MS **AXIS 1**

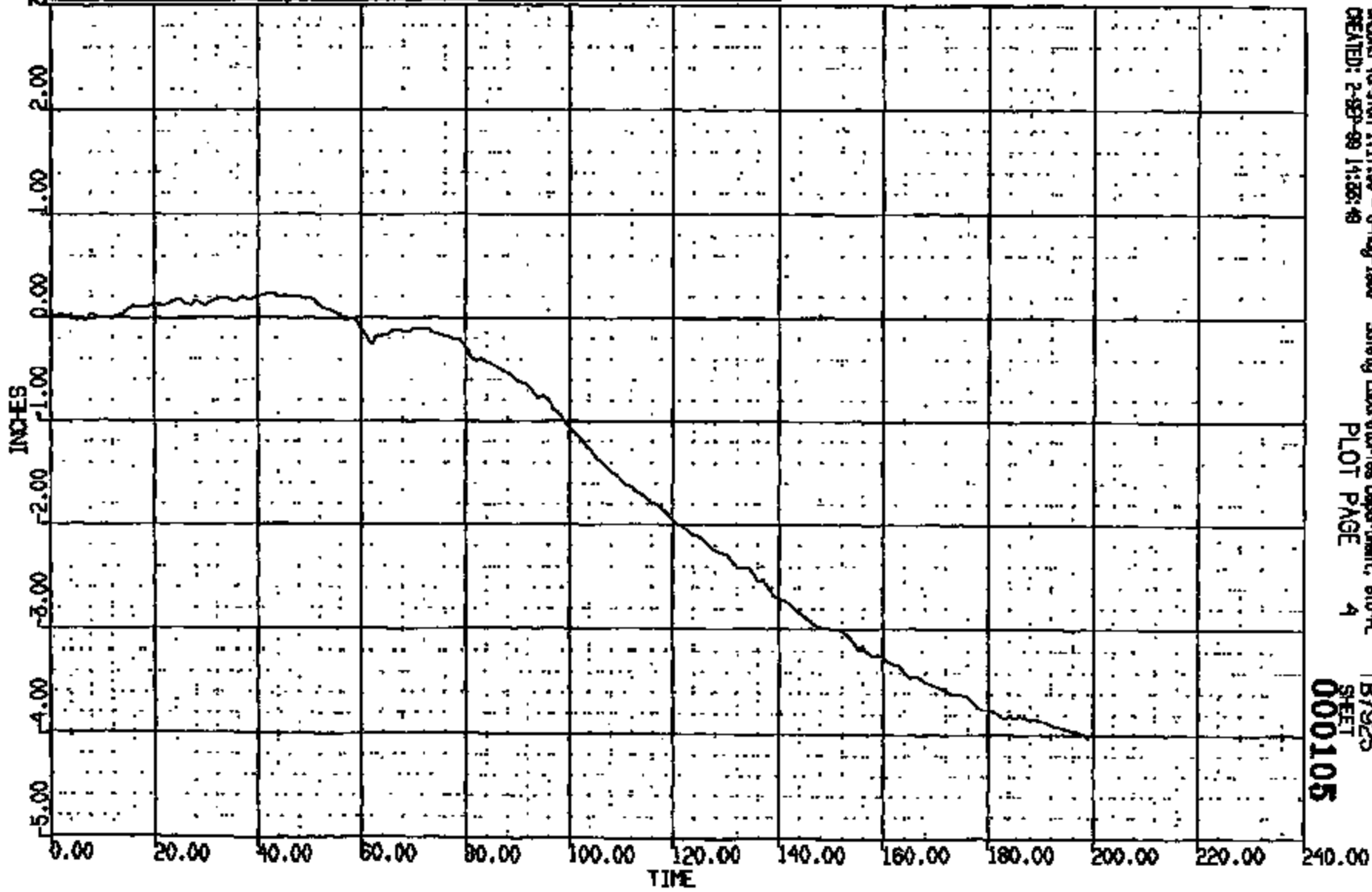


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CREATED: 2-SEP-99 14:33:48 PLOT PAGE 2 9900104

CRTS 0011567

CR R: 11567 TO: TB7925 DATE: 990825 09:42:00  
2000 D-188

(0) CRC11567 L RWR AT B PLR WRT L GND REF VERT DISP  
MAX = 0.2400 at 43.00 MS MIN = -1.034 at 198.0 MS **AXIS 1**



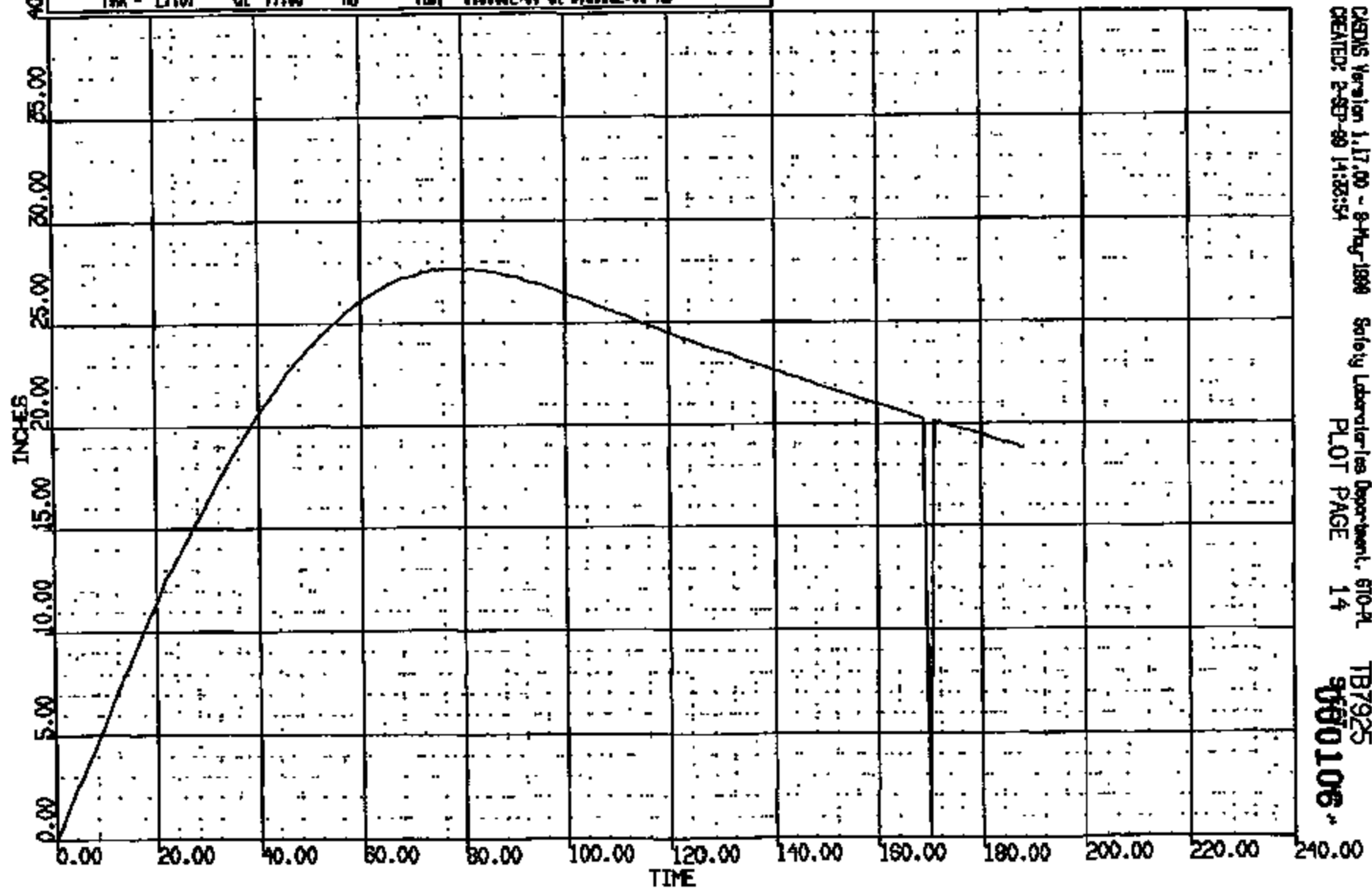
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SHEET  
000105

CRTS 0011567

CR R: 11567 TO: TB7925 DATE: 980826 09:42:00  
2000 D-188

(0) CRCL1567 R RWR AT 0 PLR WRT R GND REF LONG DISP  
MAX = 27.67 at 77.00 MS MIN = 0.000E+00 at 0.000E+00 MS

AXIS 1



CADDS Version 1.17.00 - 8-May-1998 Safety Laboratories Department, 610-A  
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980106

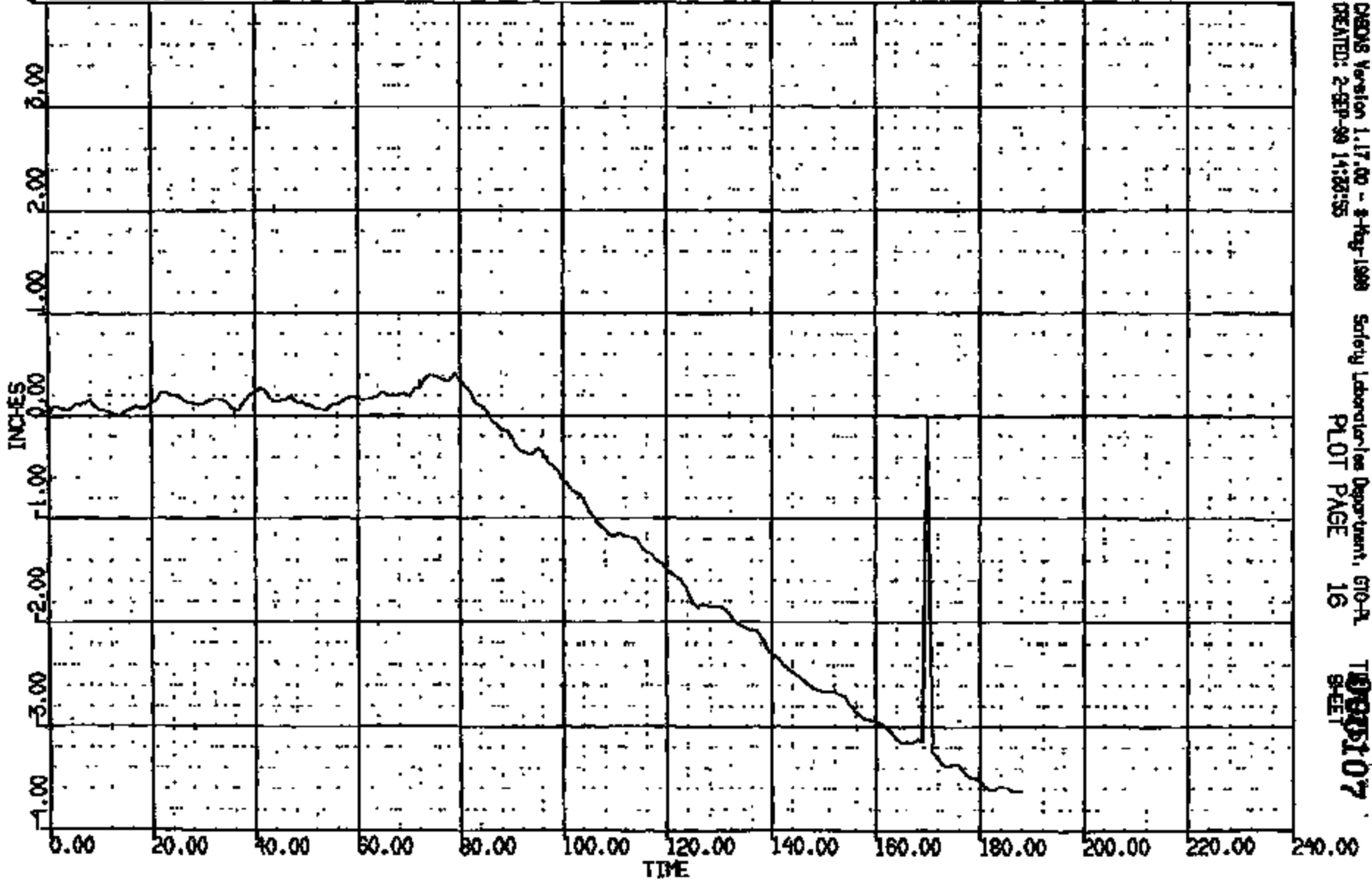
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CR R: 11567 TO: TB7925 DATE: 890825 08:42:00  
2000 D-188

(0) CRC11567 R ROR AT B PLR NRY R GND REF VERT DISP

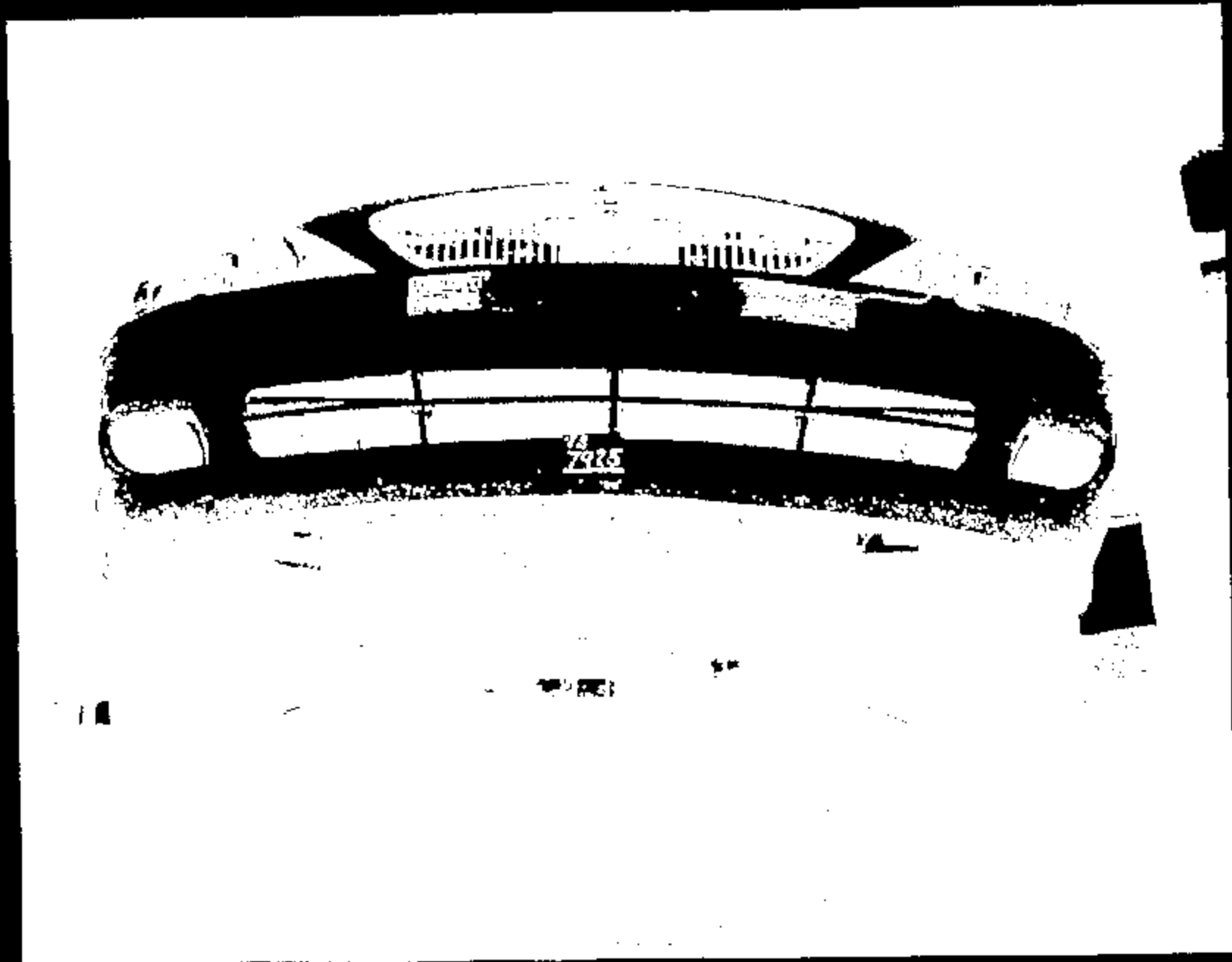
MAX = 0.4110 at 79.00 NS MIN = -3.625 at 187.0 NS

AXIS 1



CHEOS Version 1.17.00 - 8-Feb-1988 Safety Laboratories Department, G10-A  
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SHEET

CRTS 0011567



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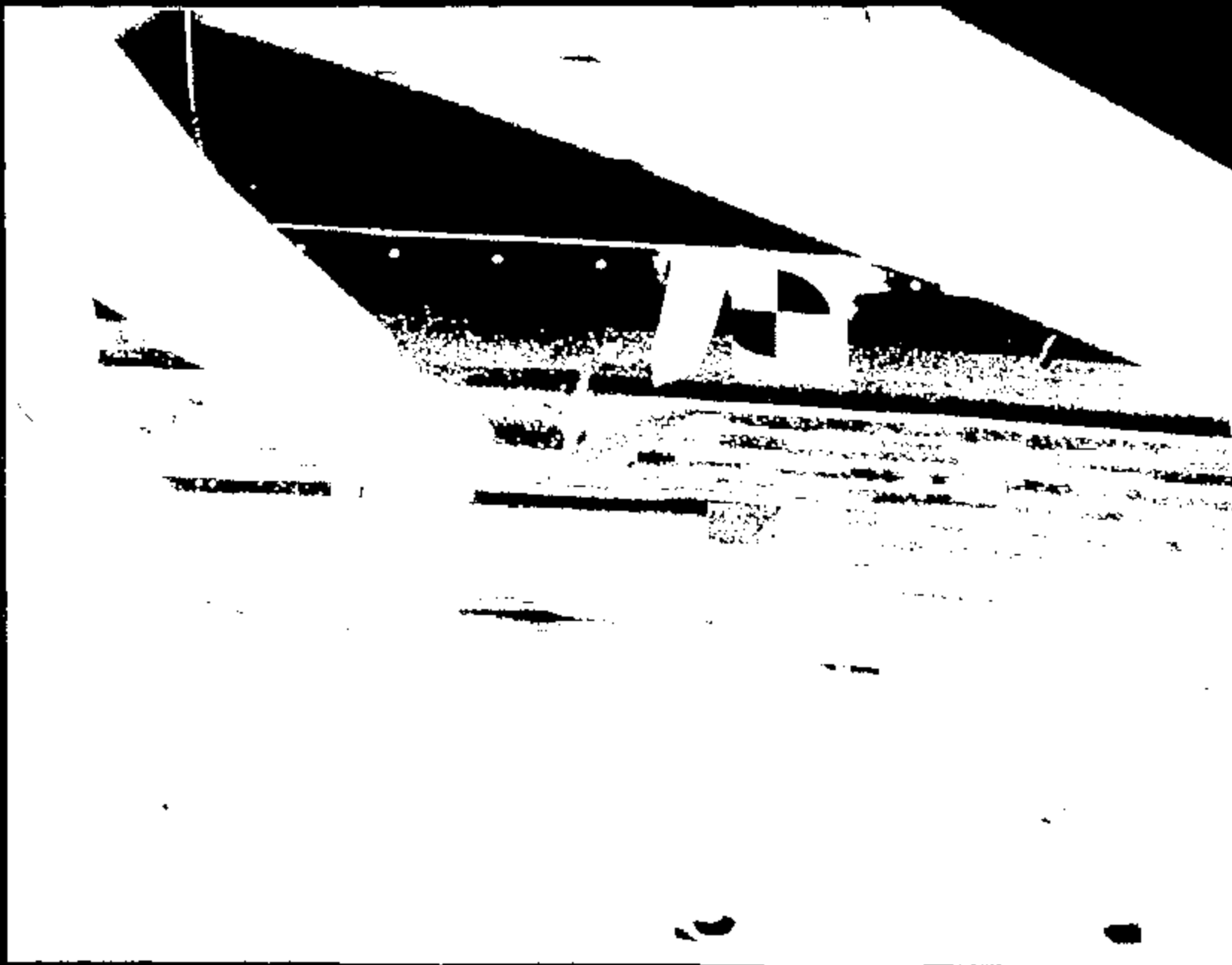
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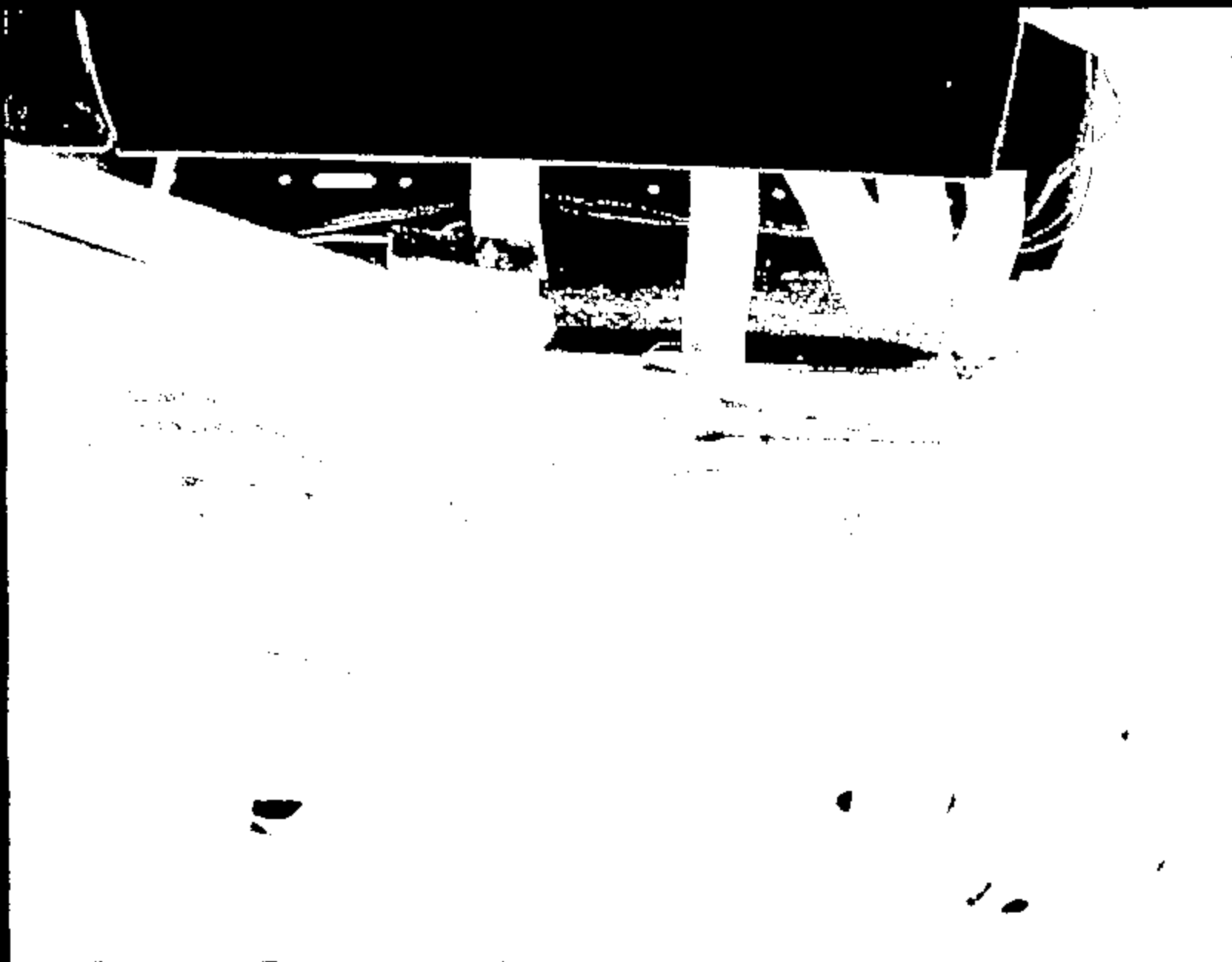
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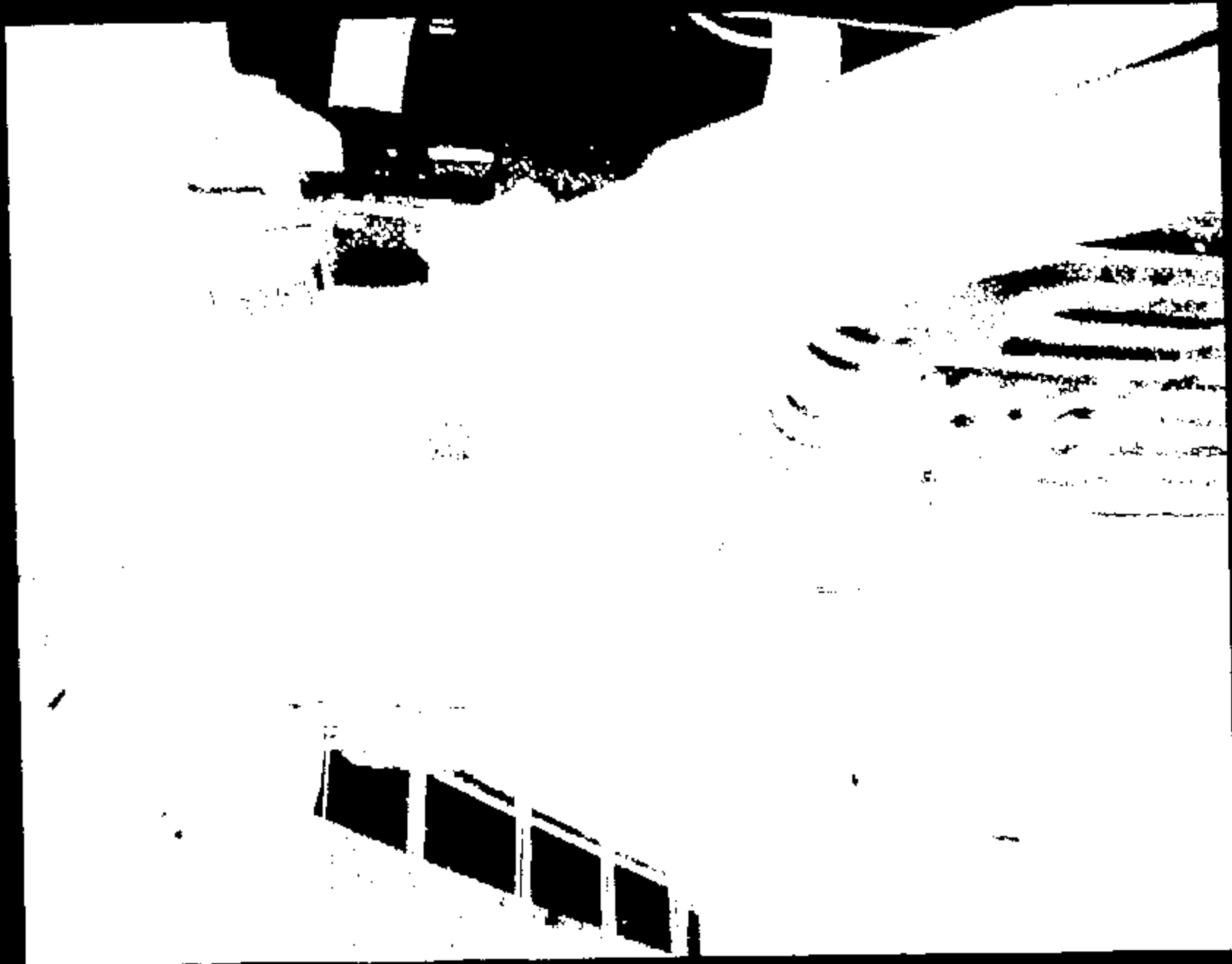
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Method 1

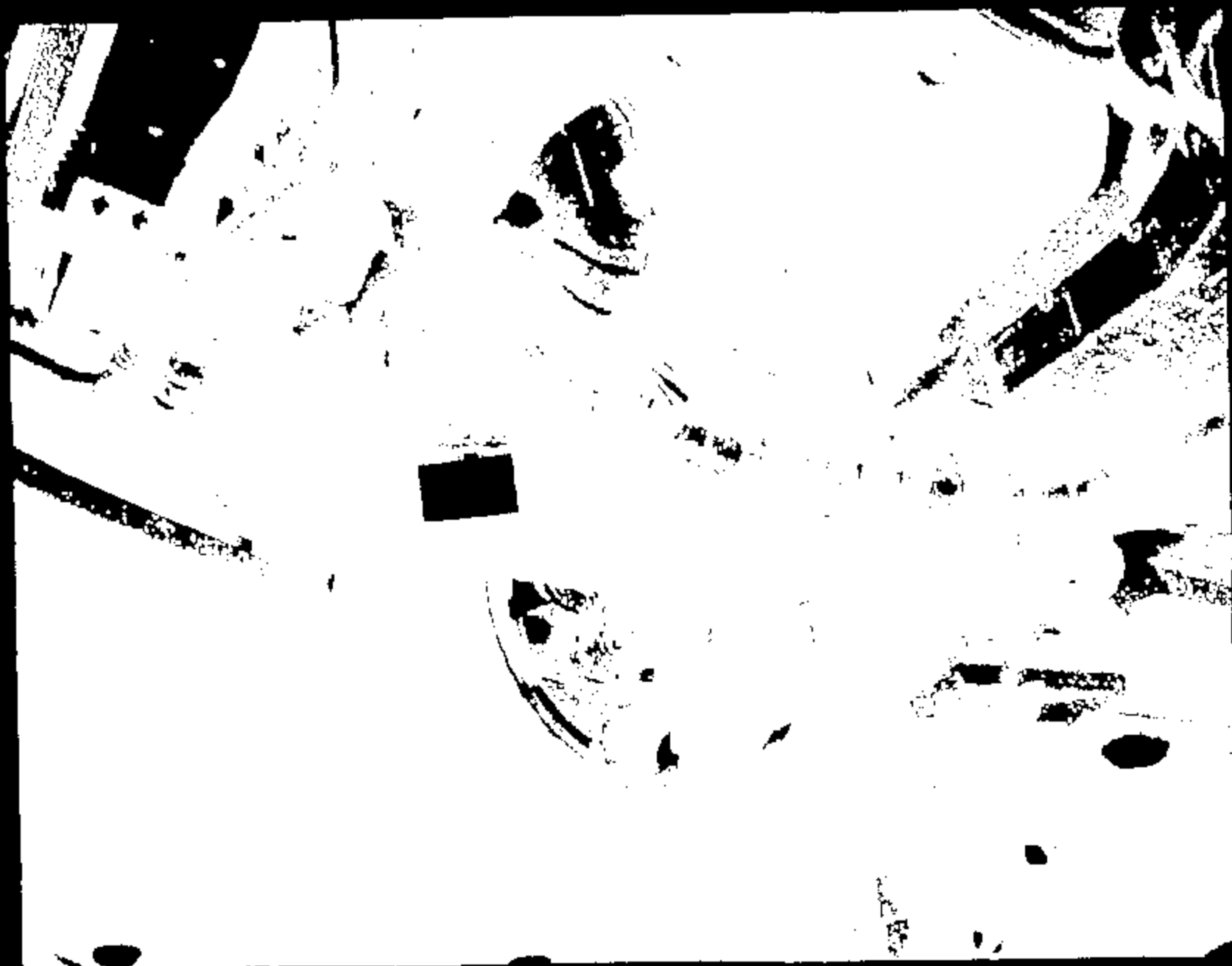
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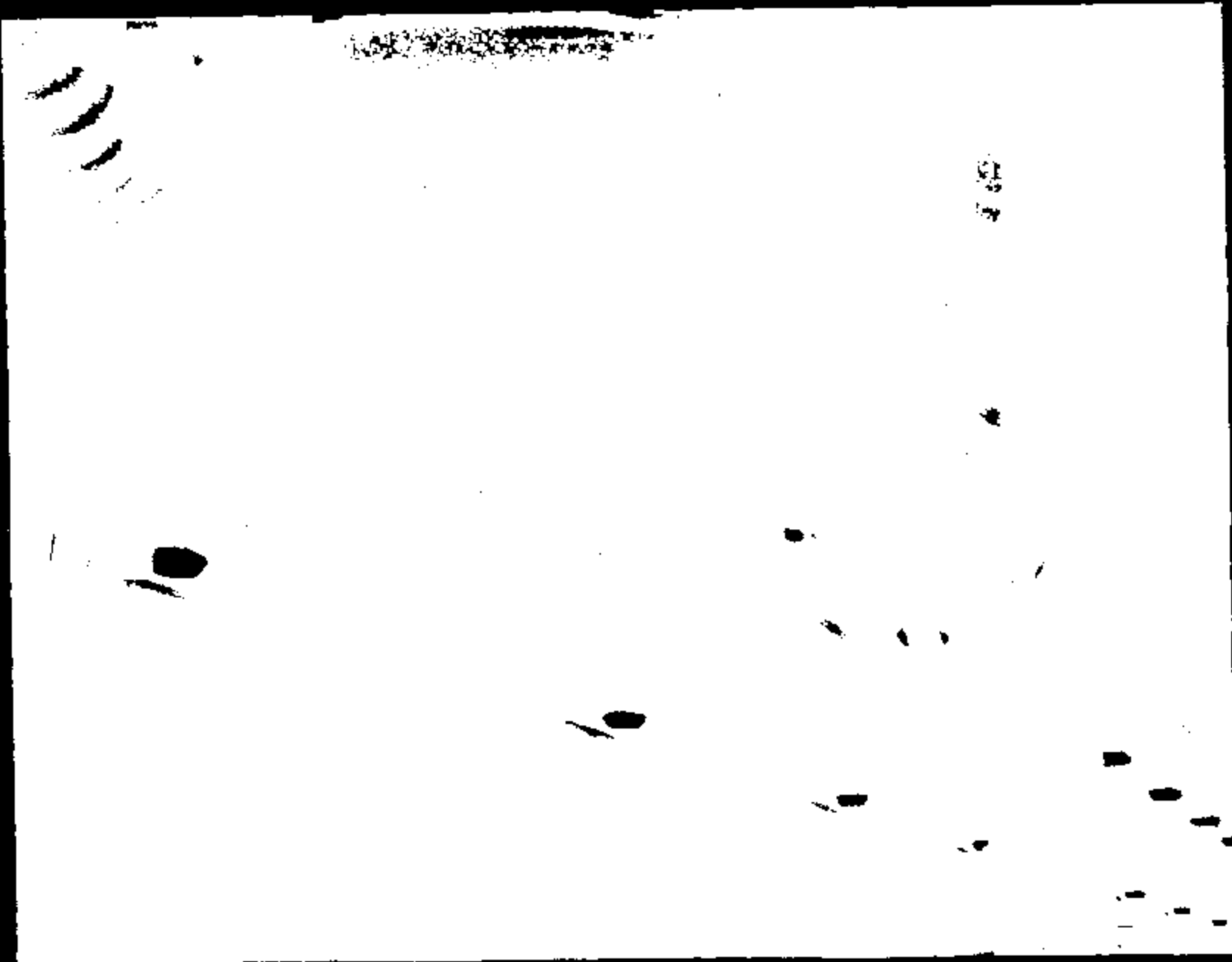


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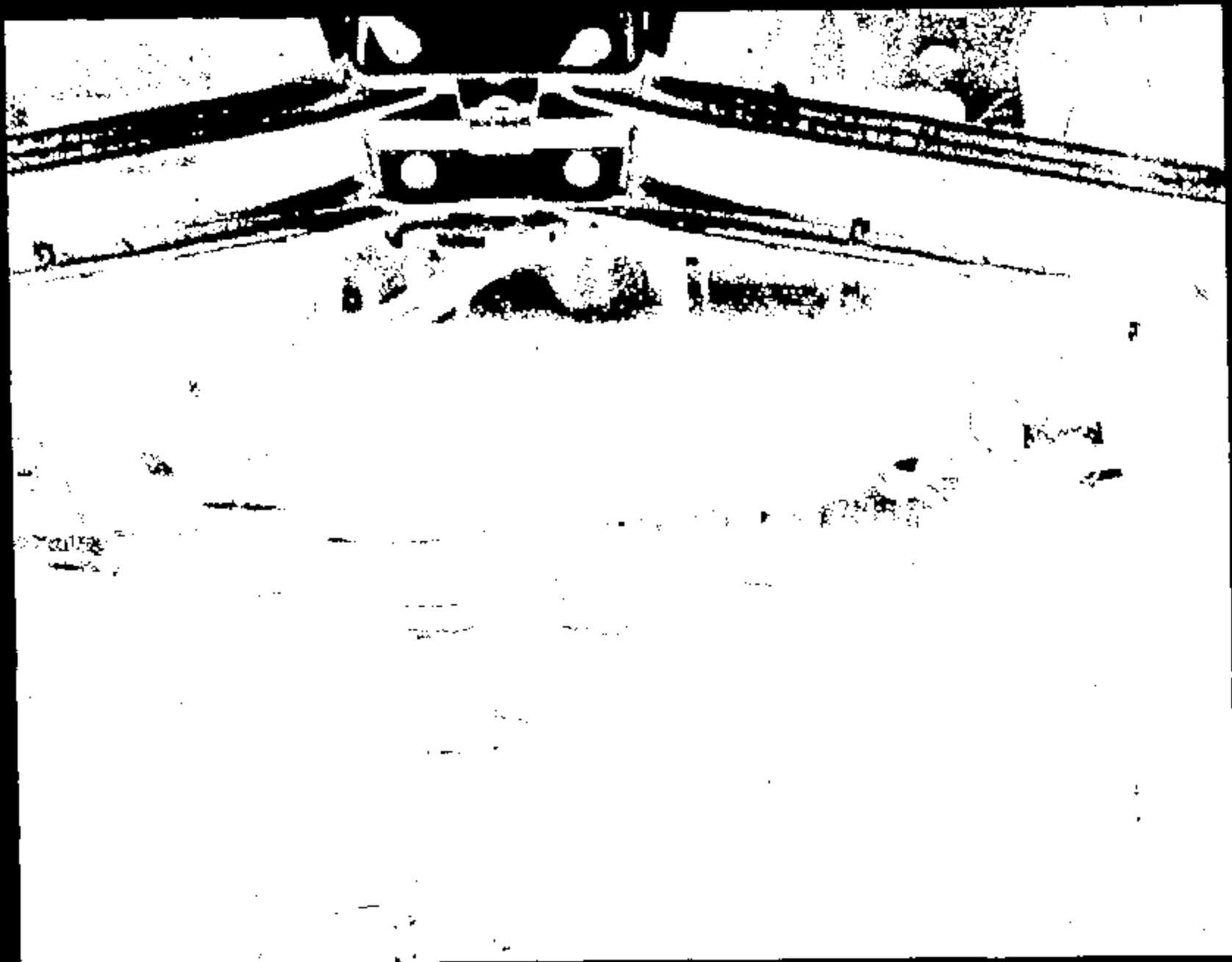




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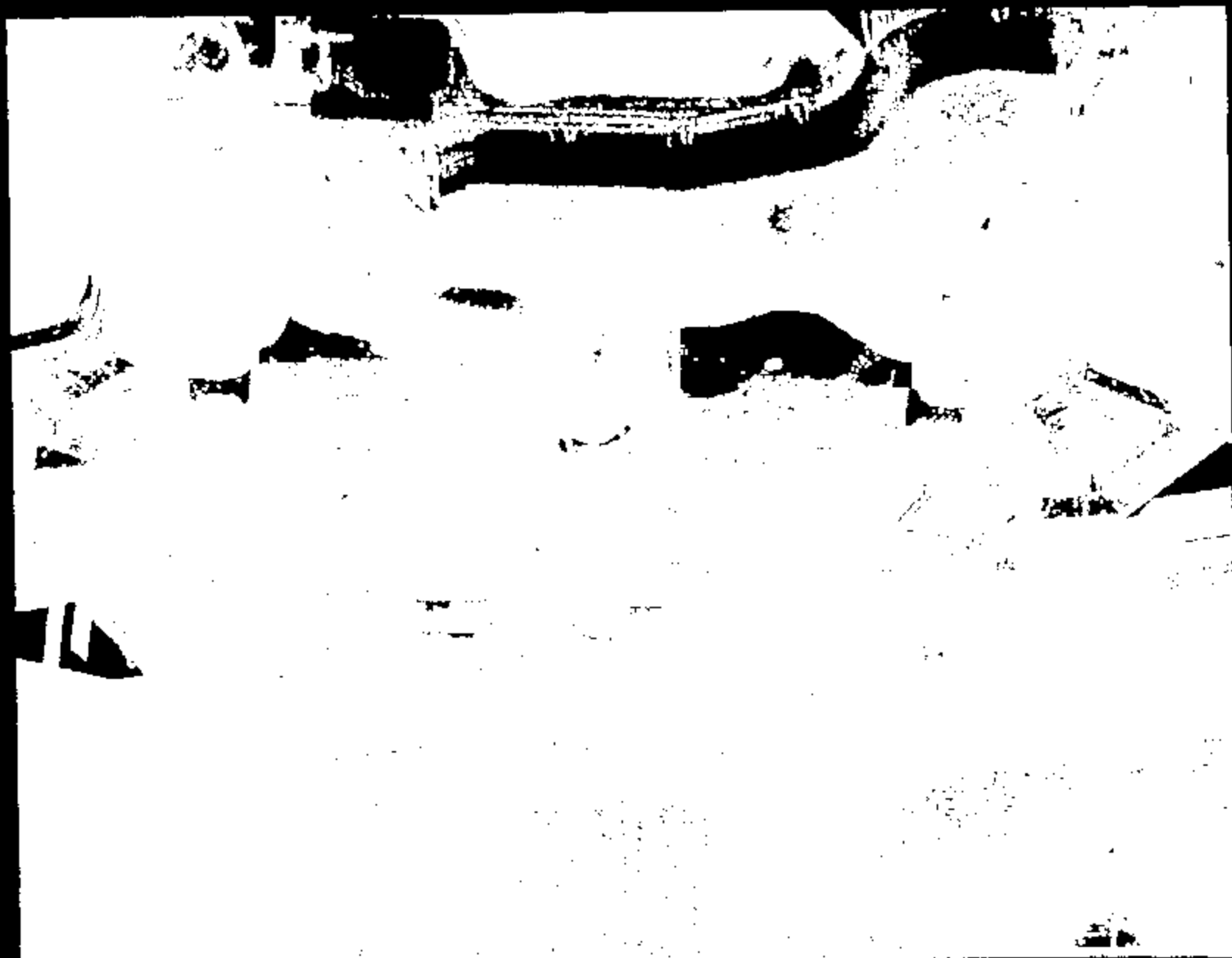
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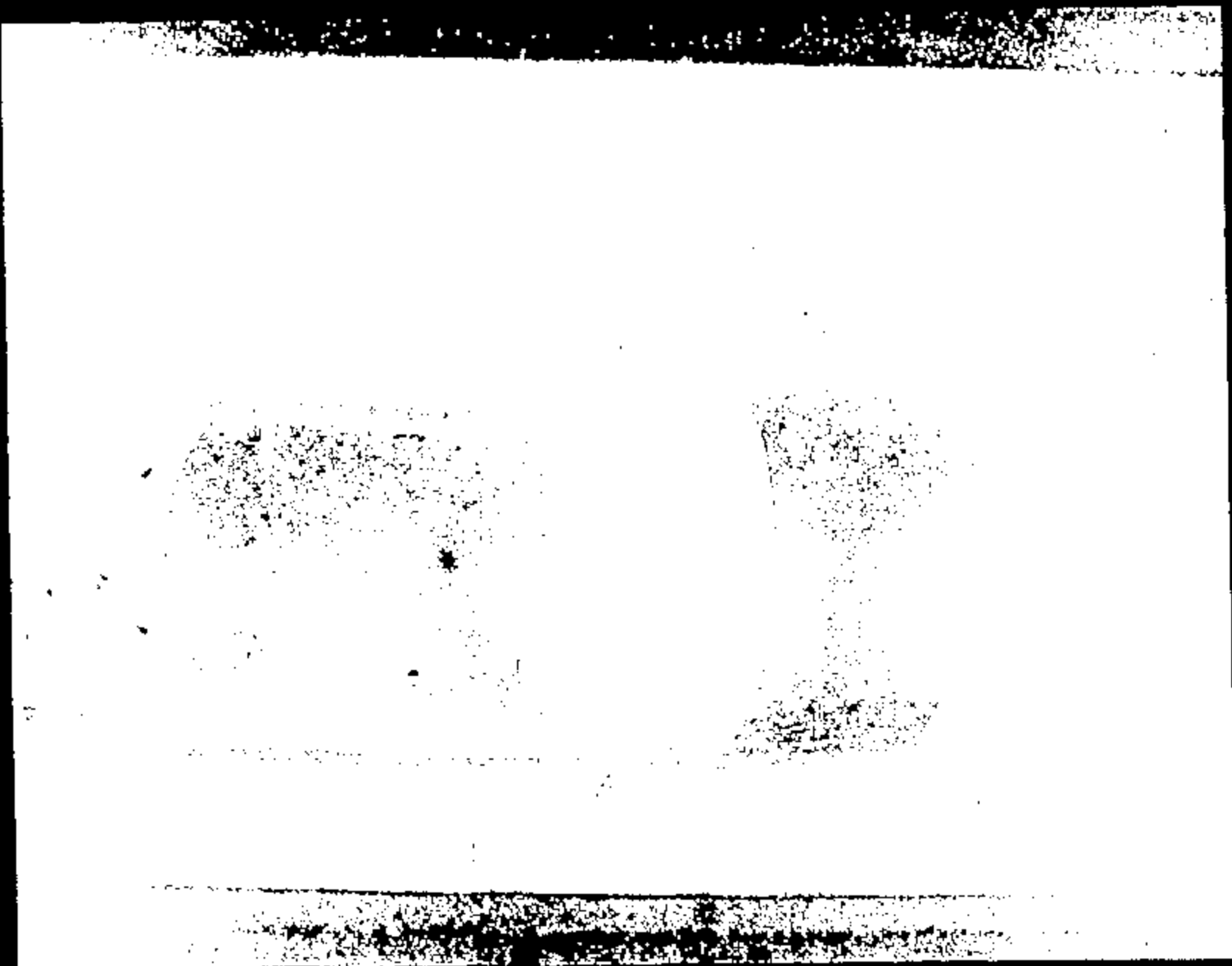


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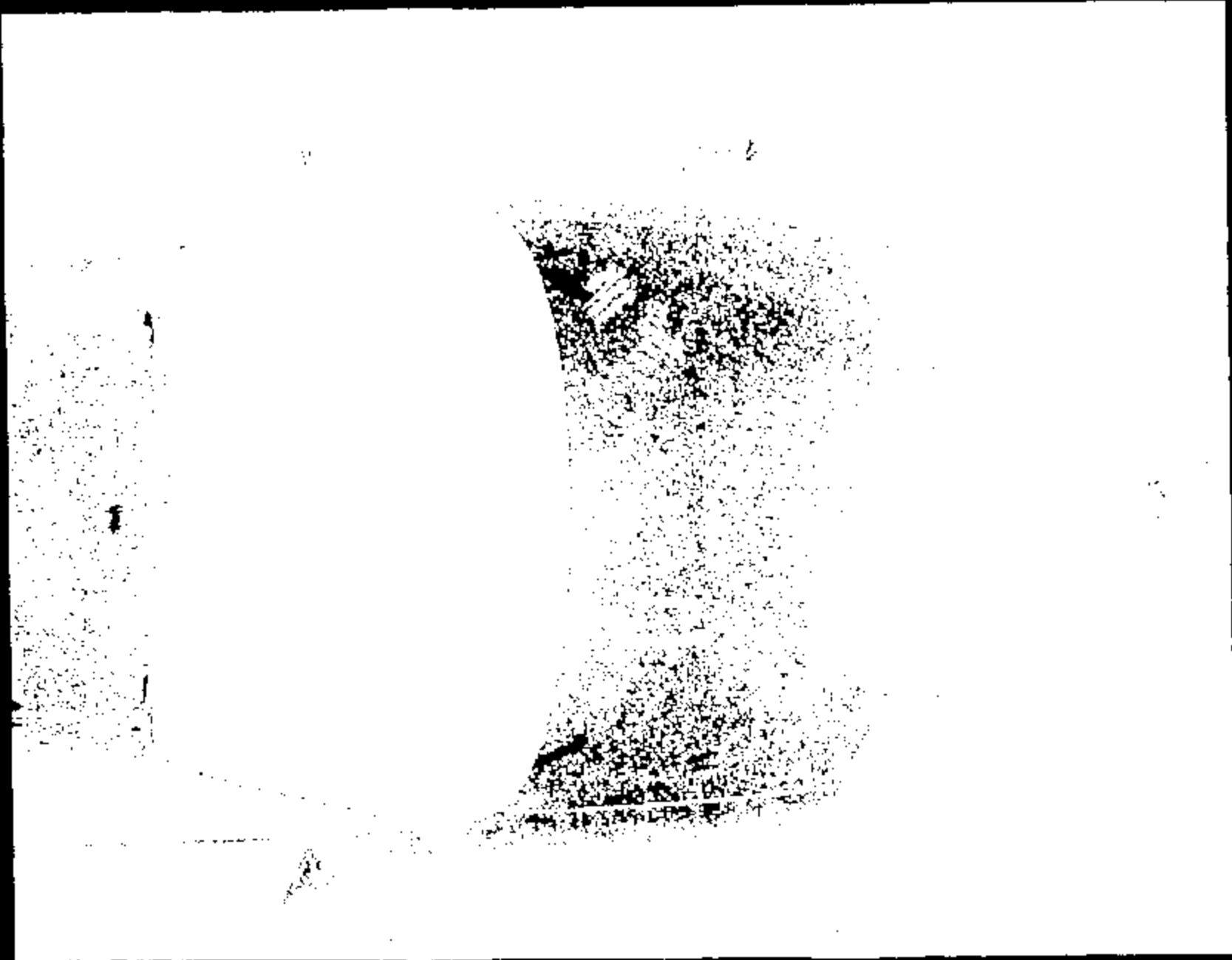
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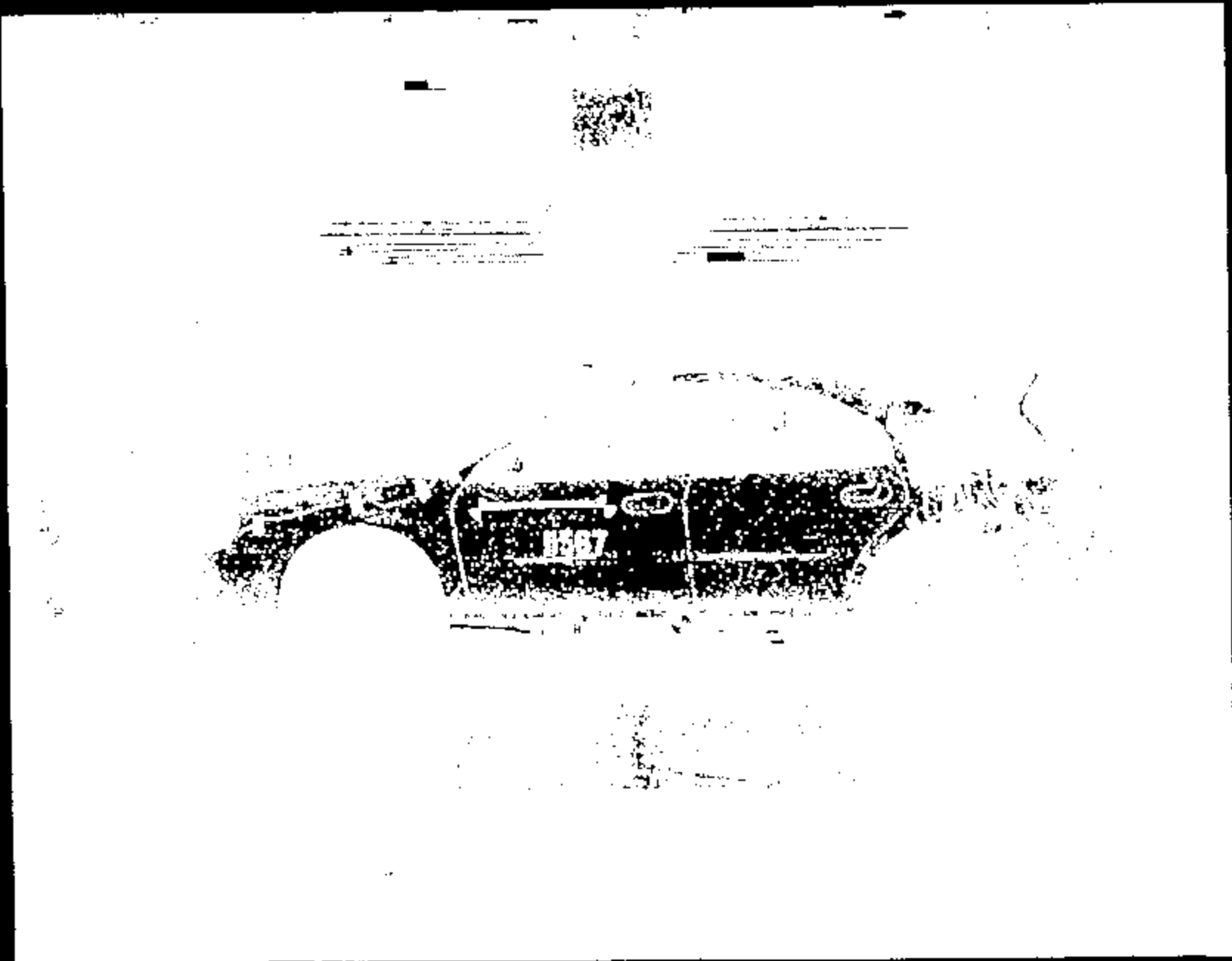
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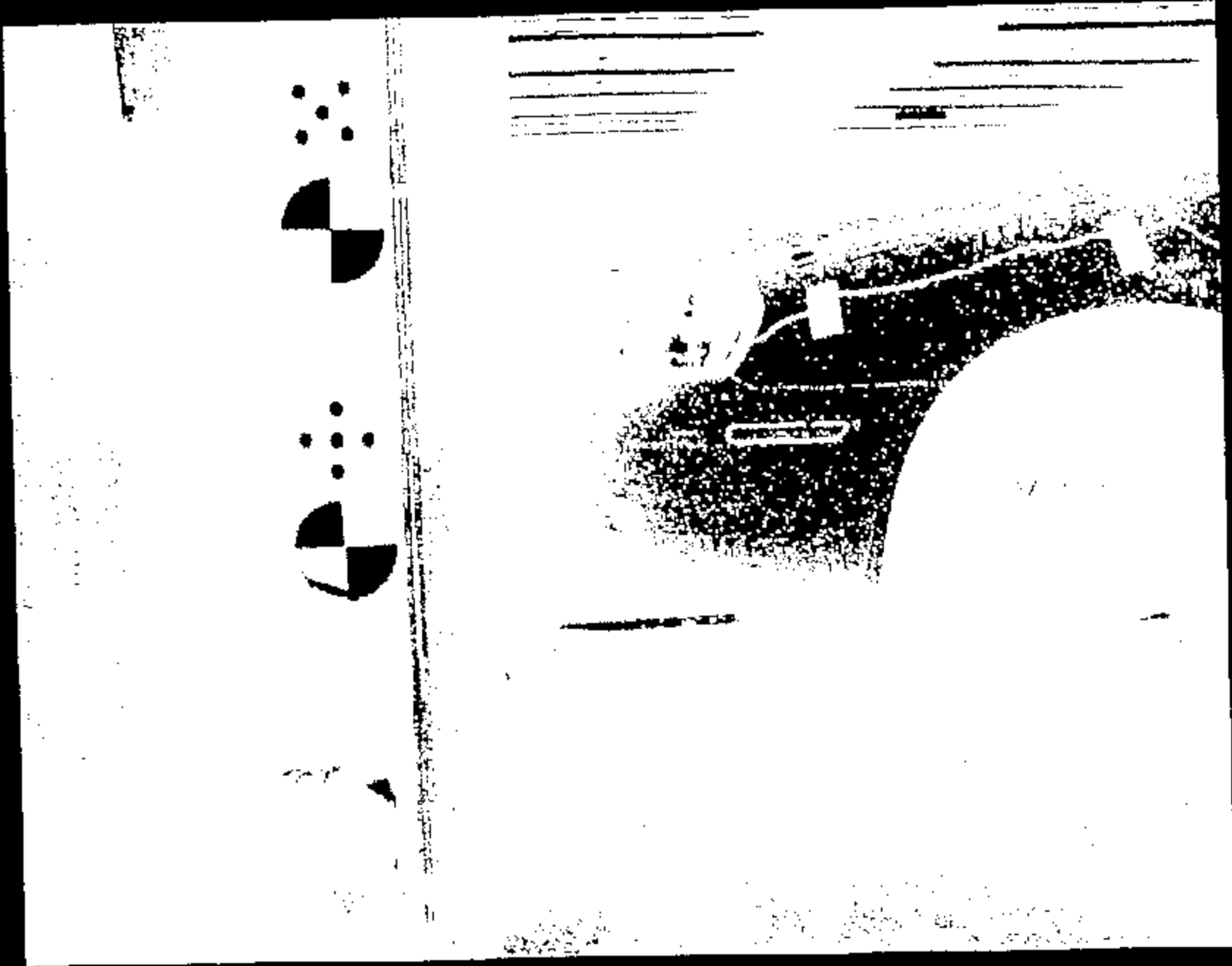
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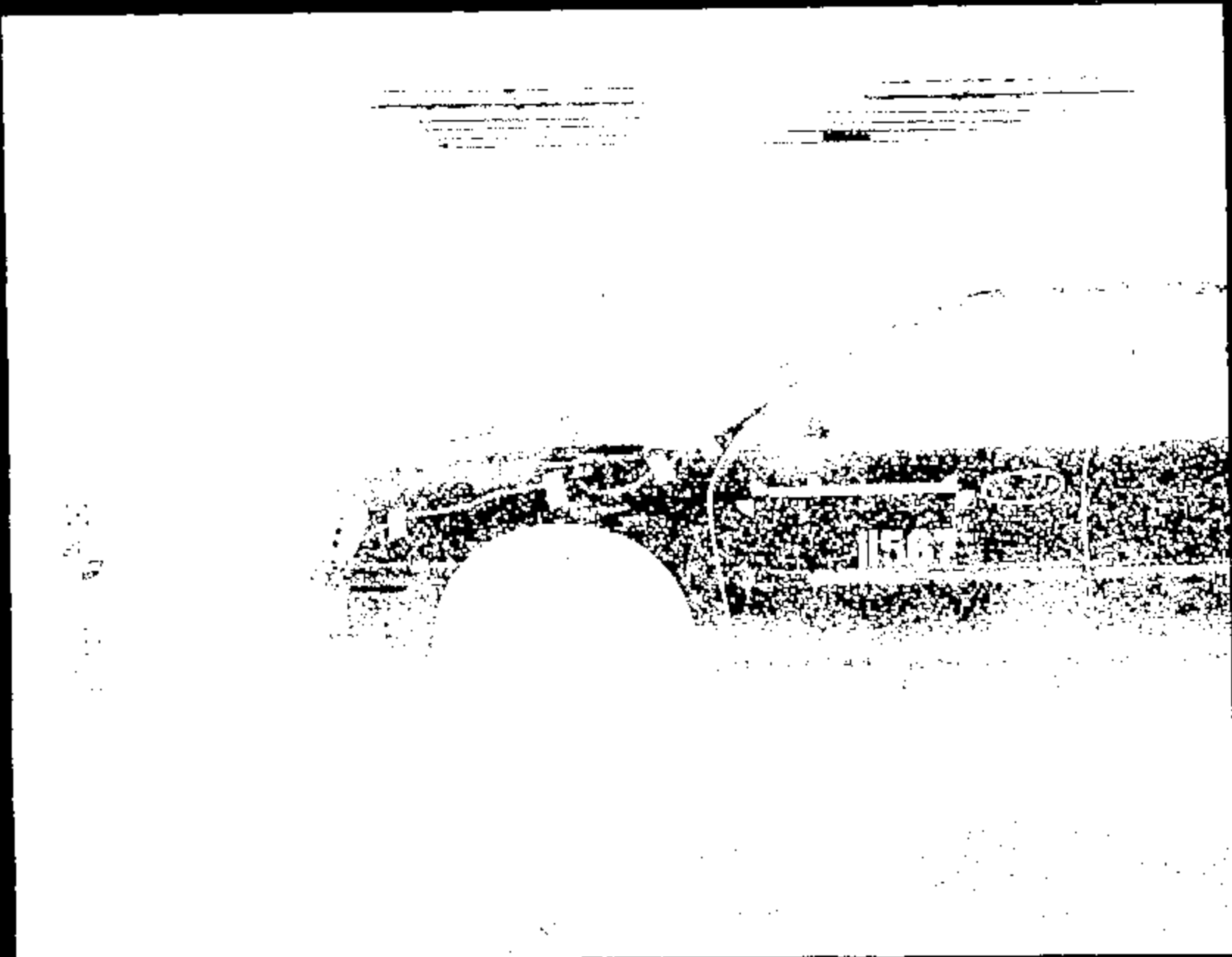


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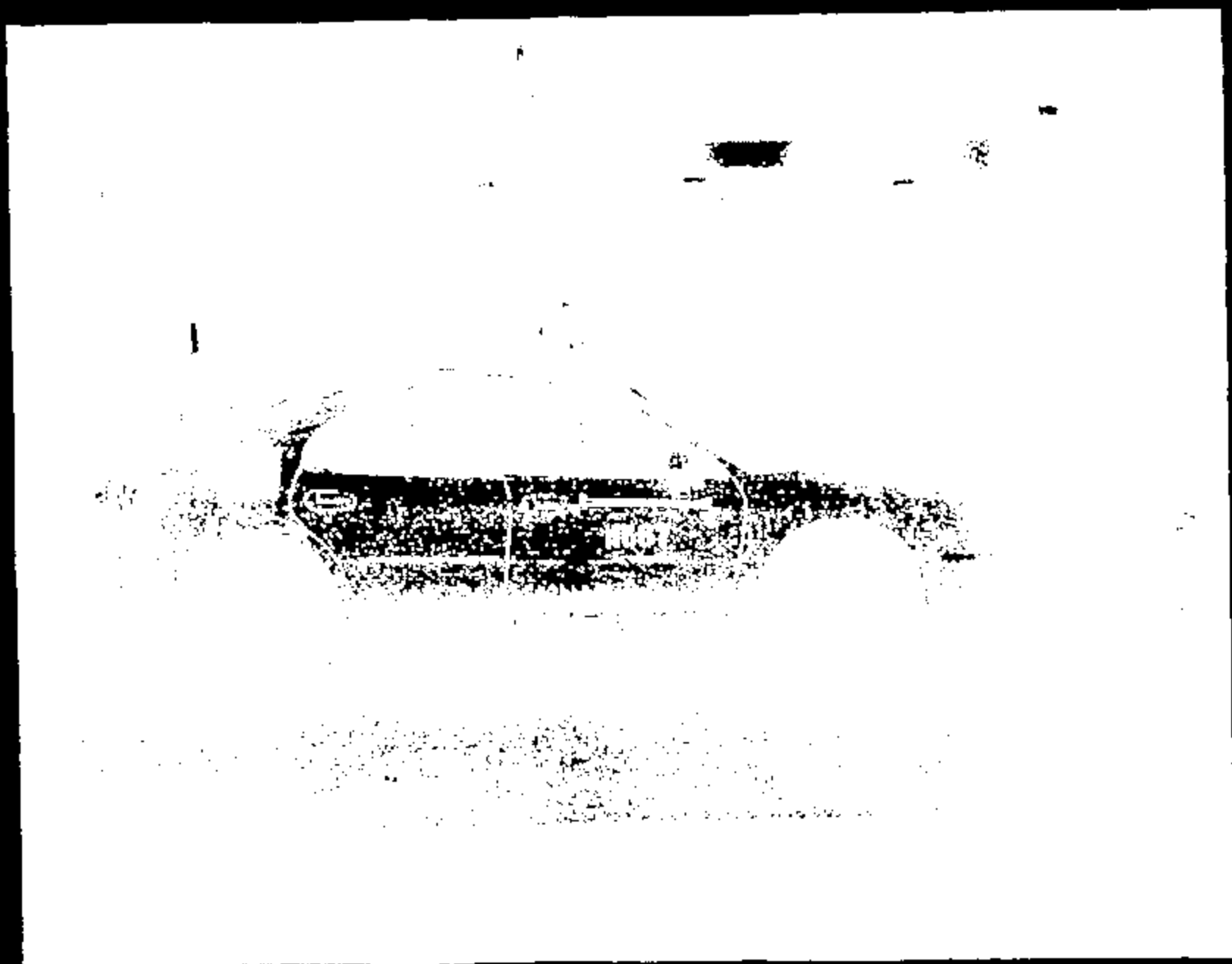
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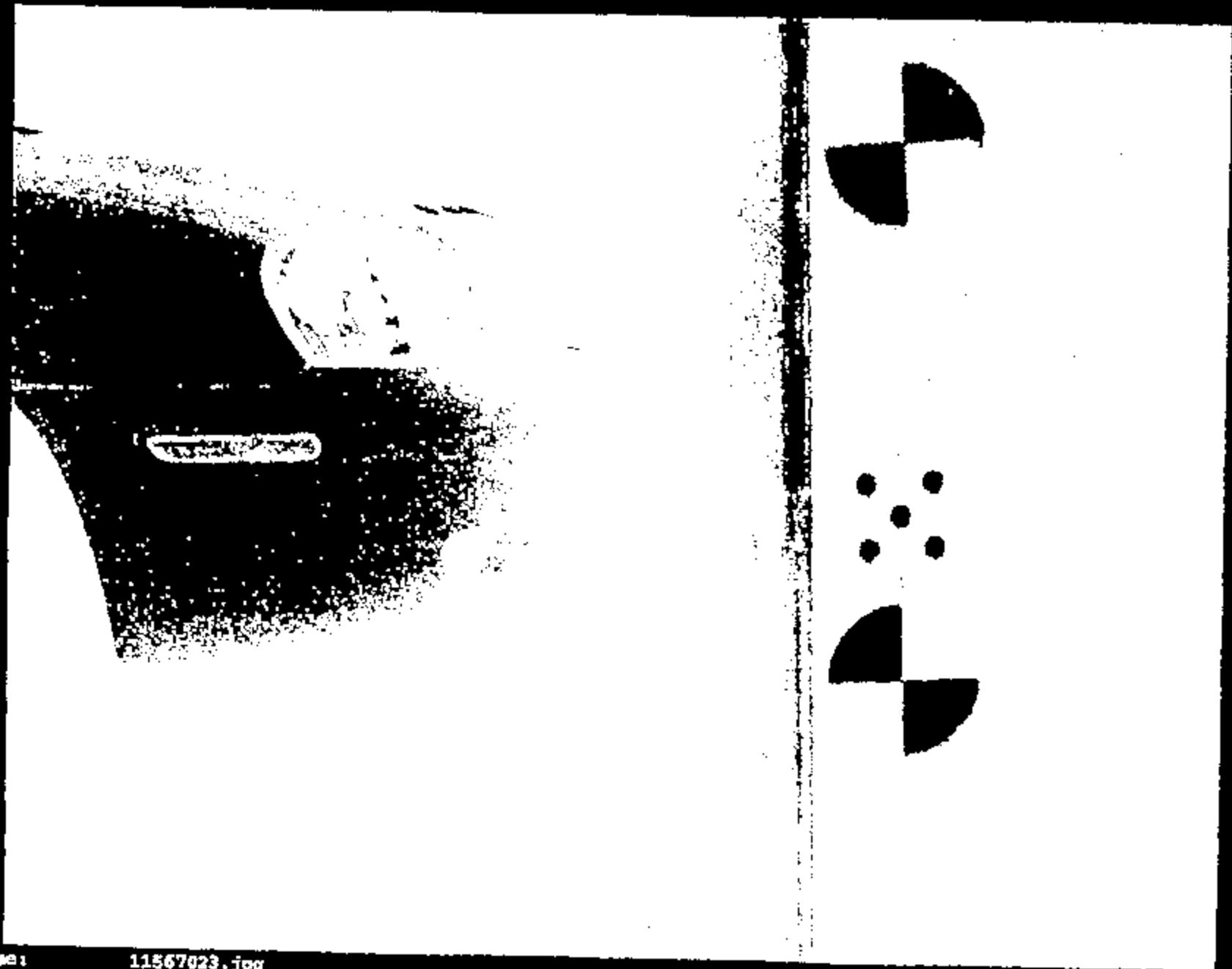
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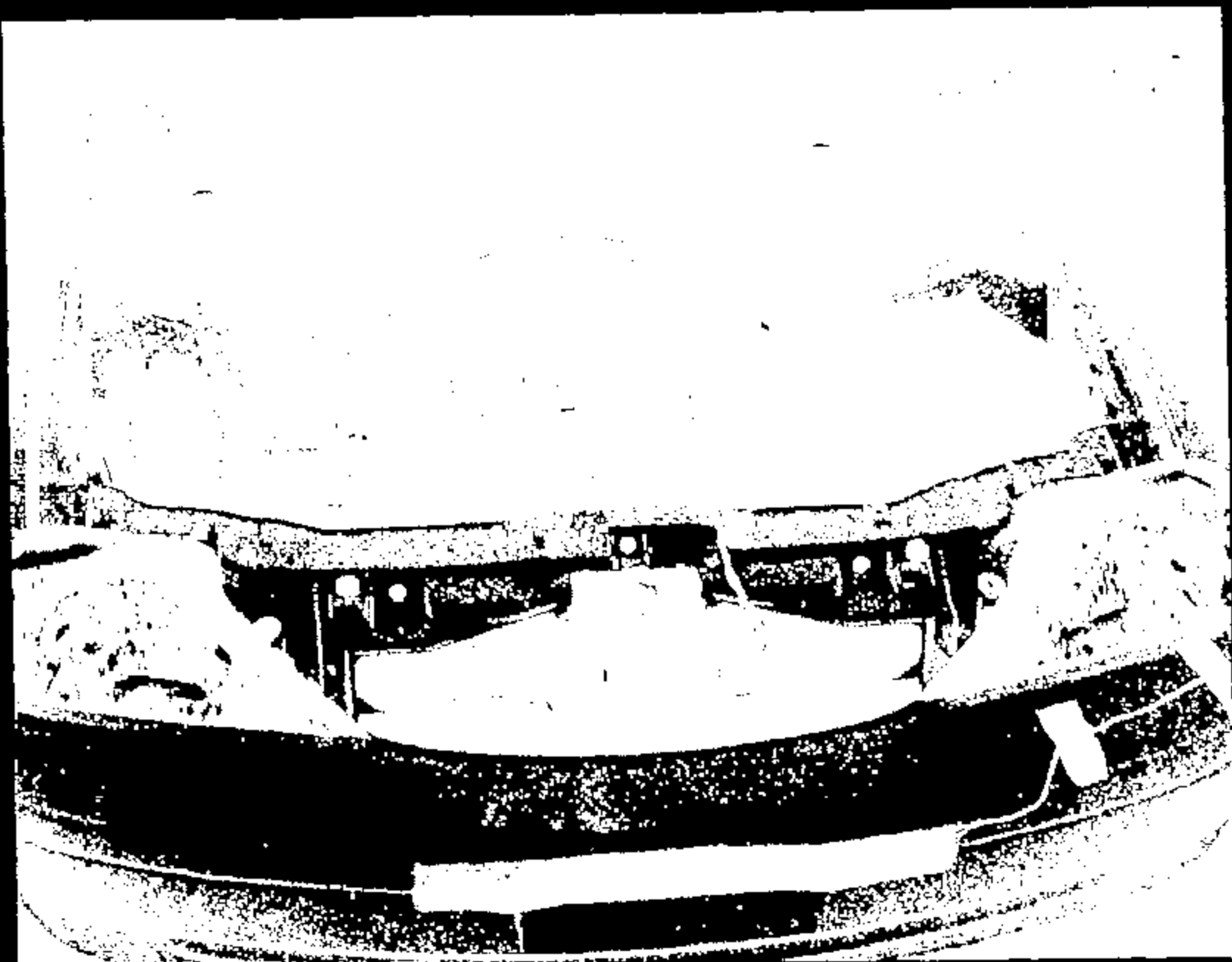
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TB9925

706-40

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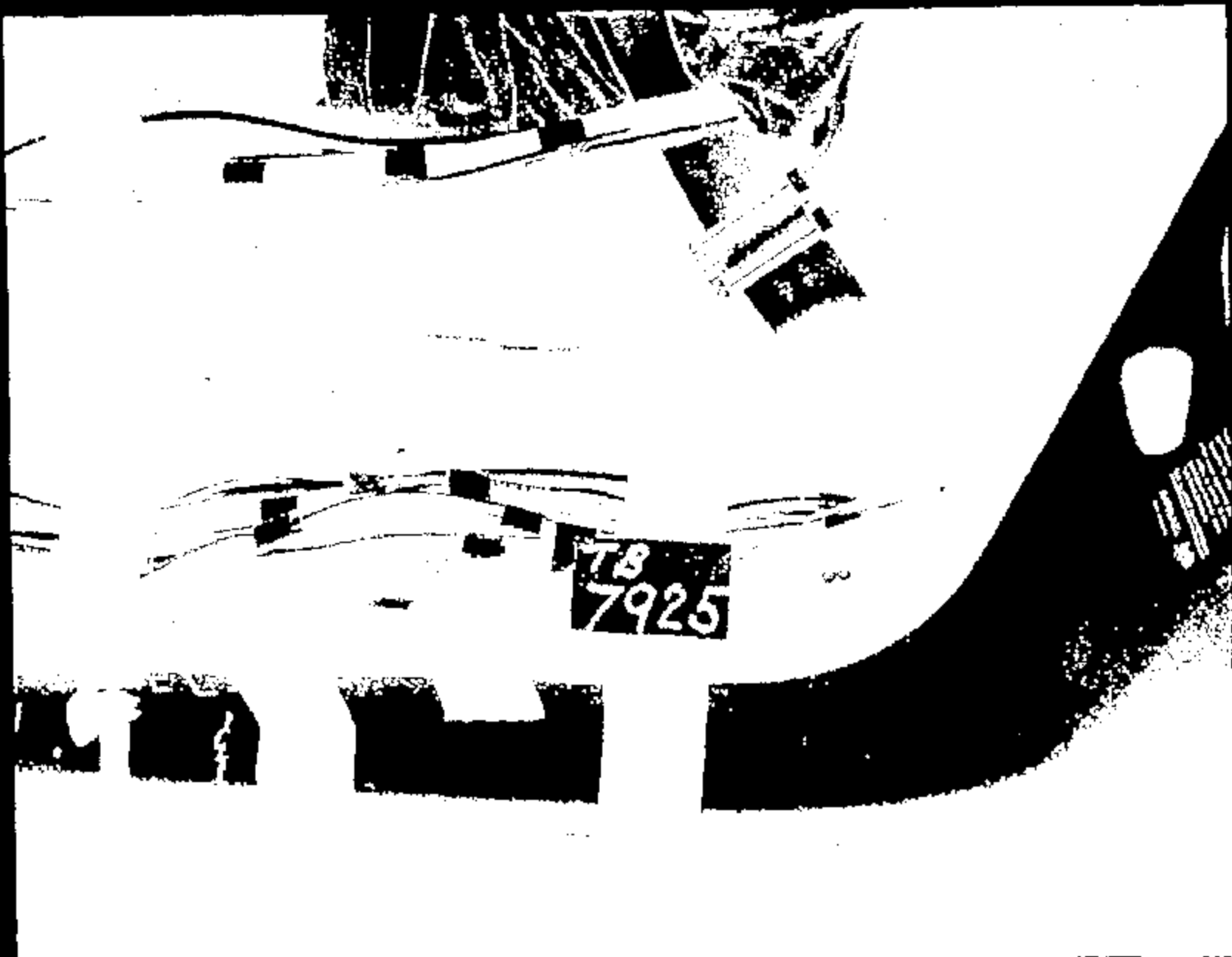
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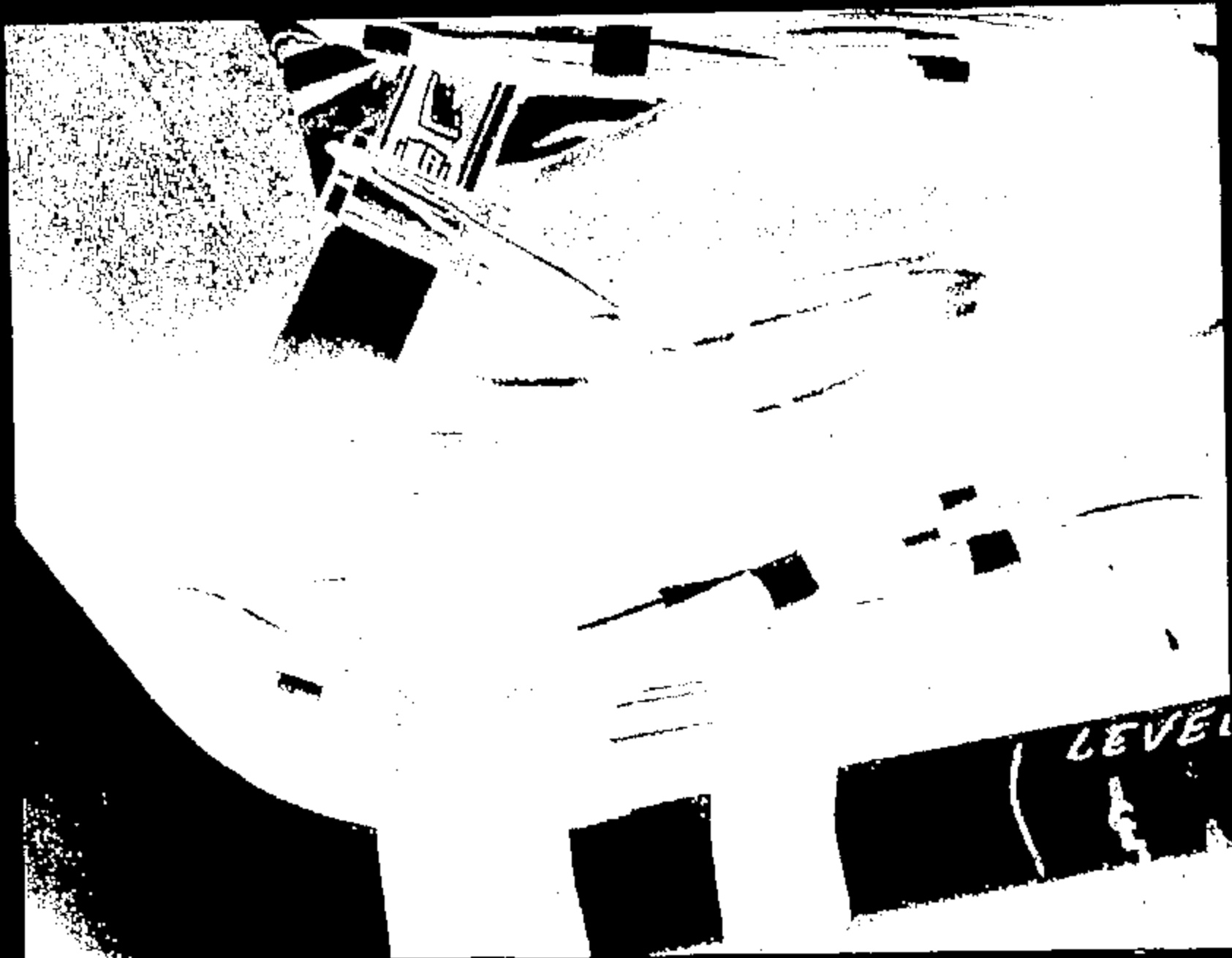


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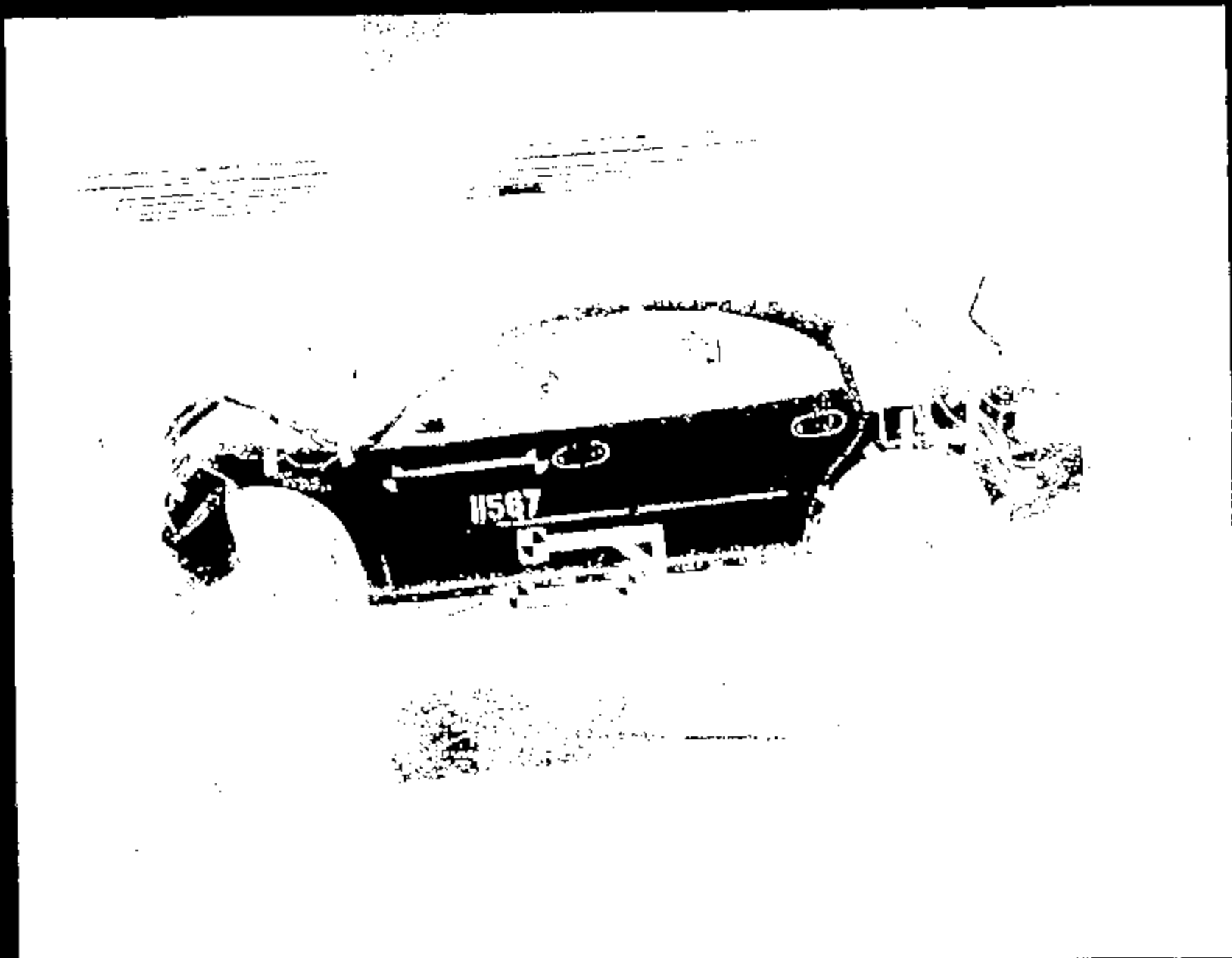
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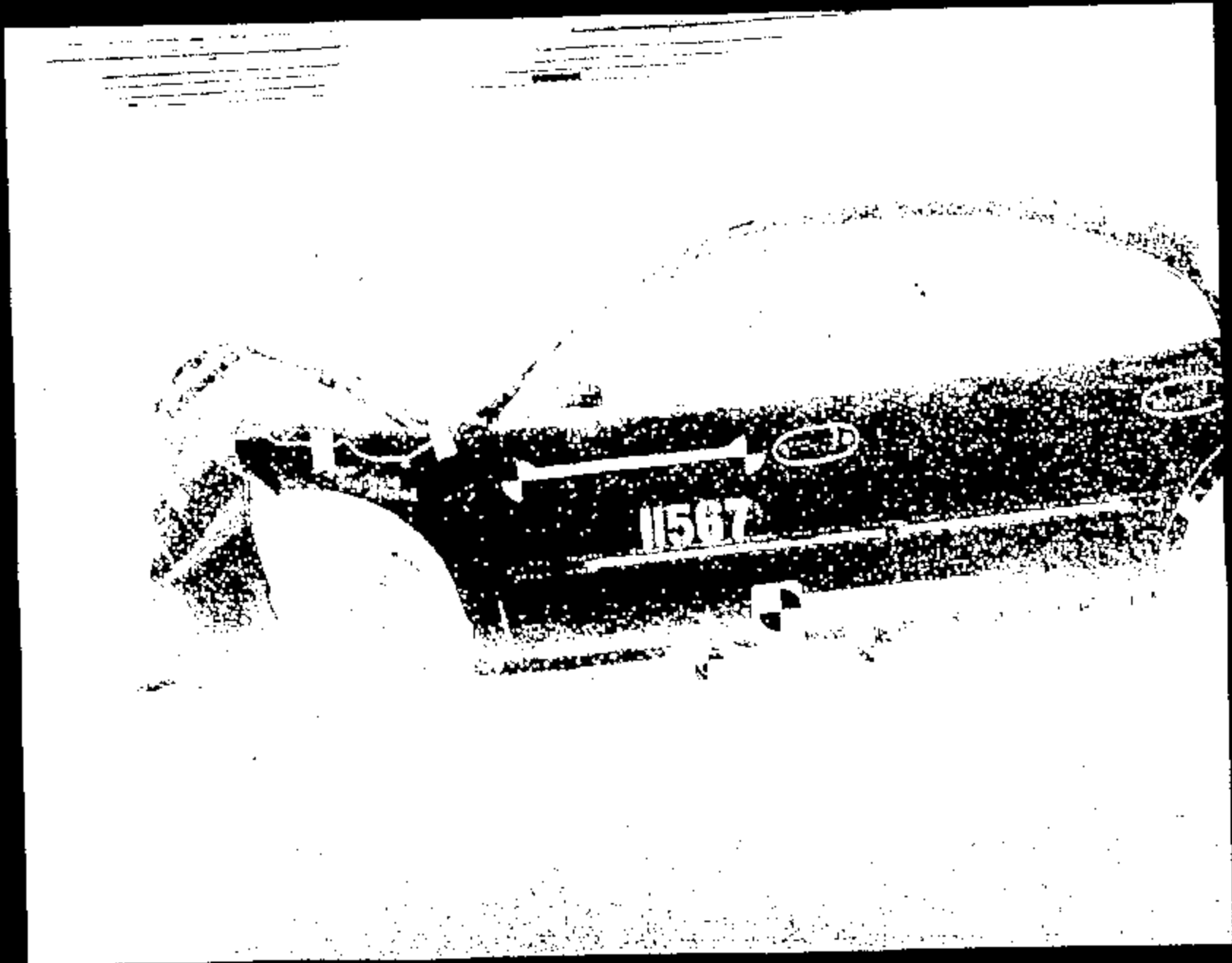


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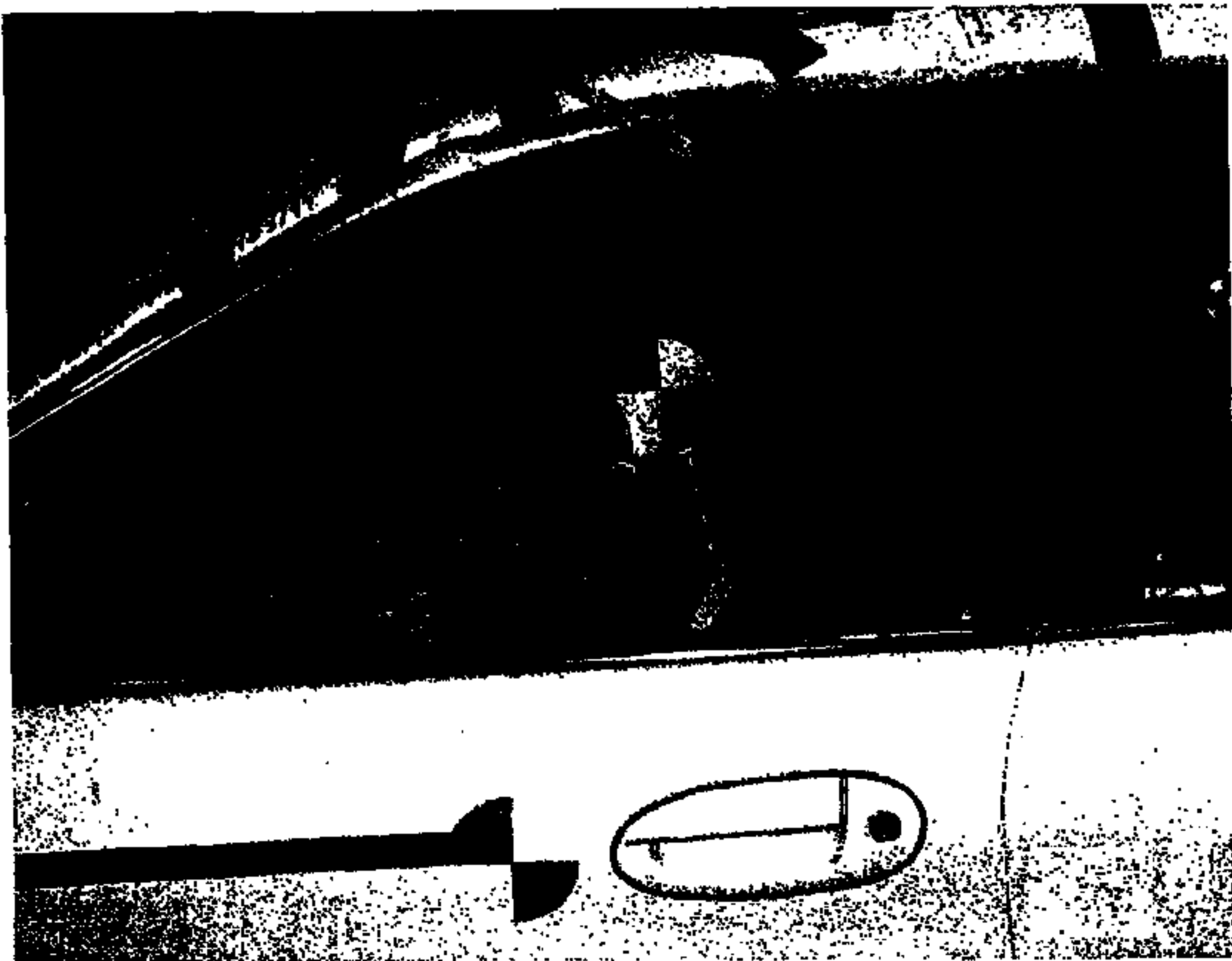




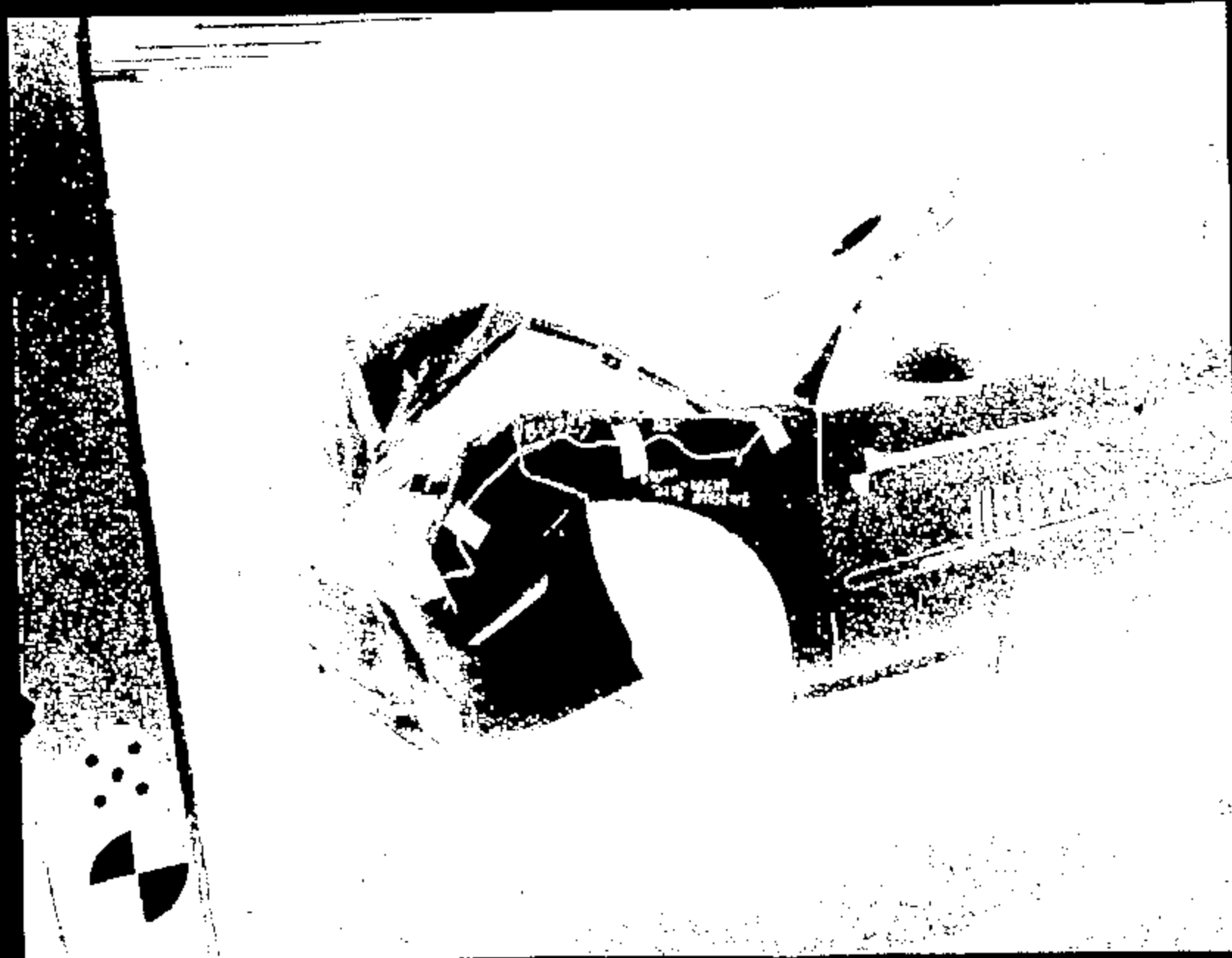
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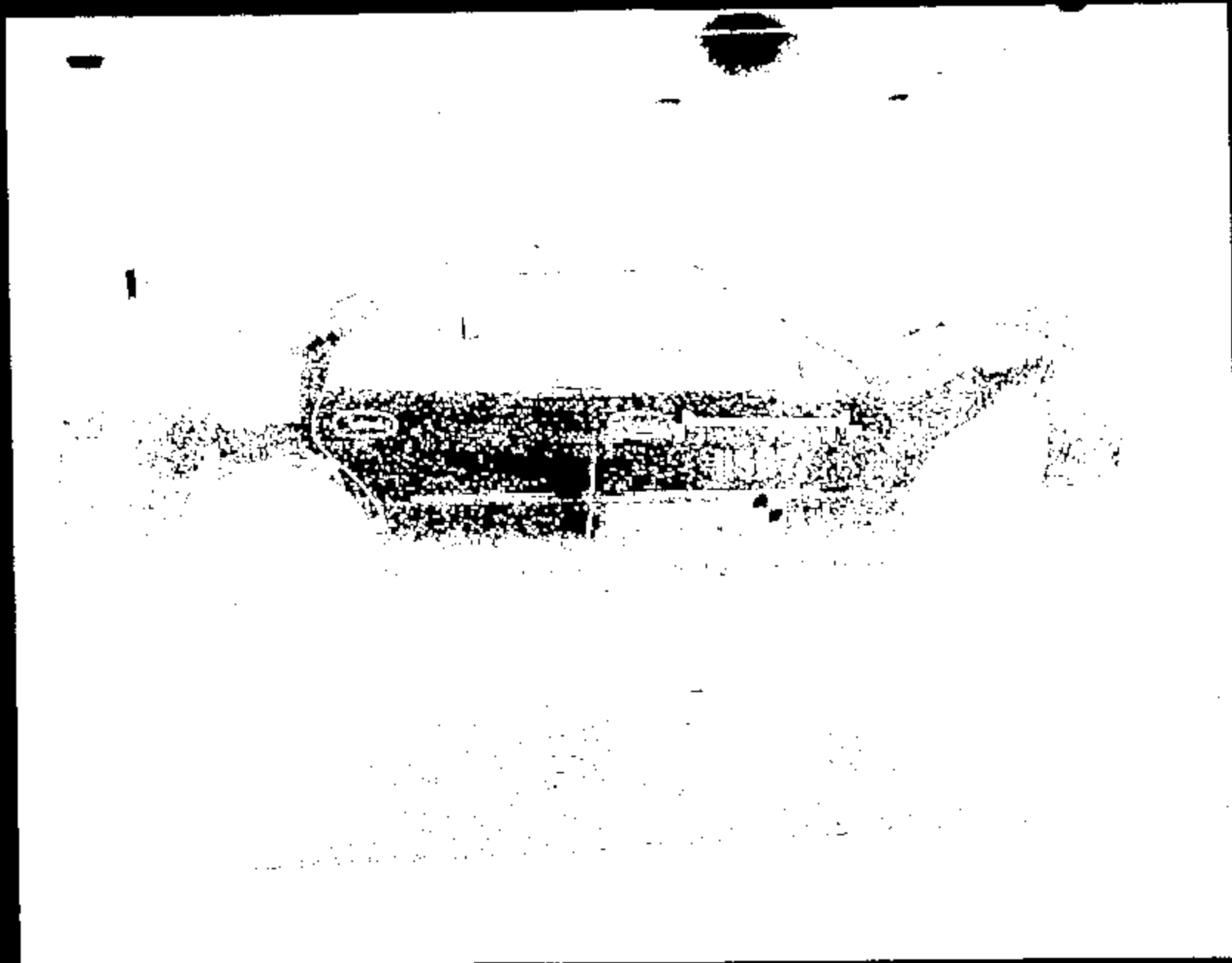


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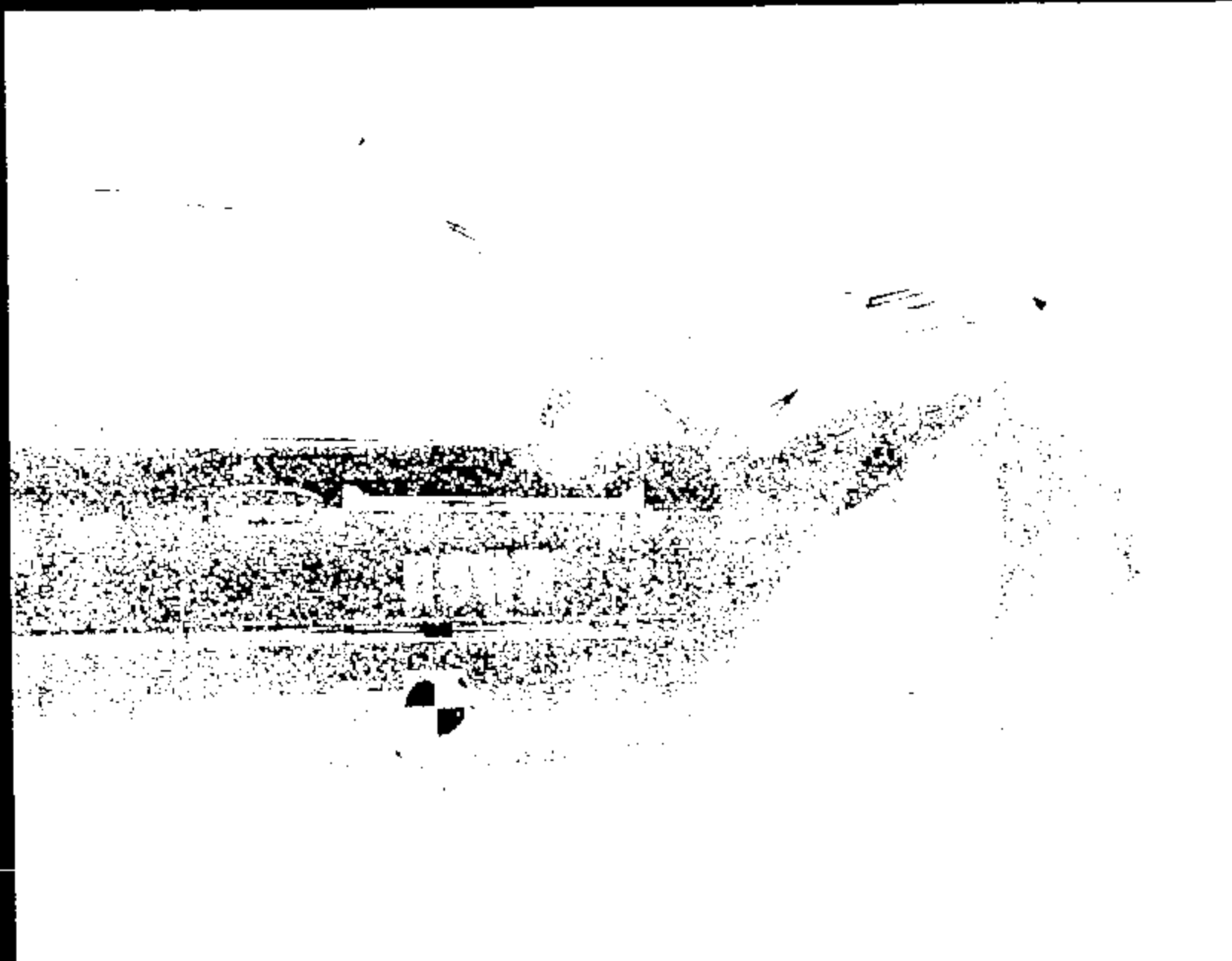
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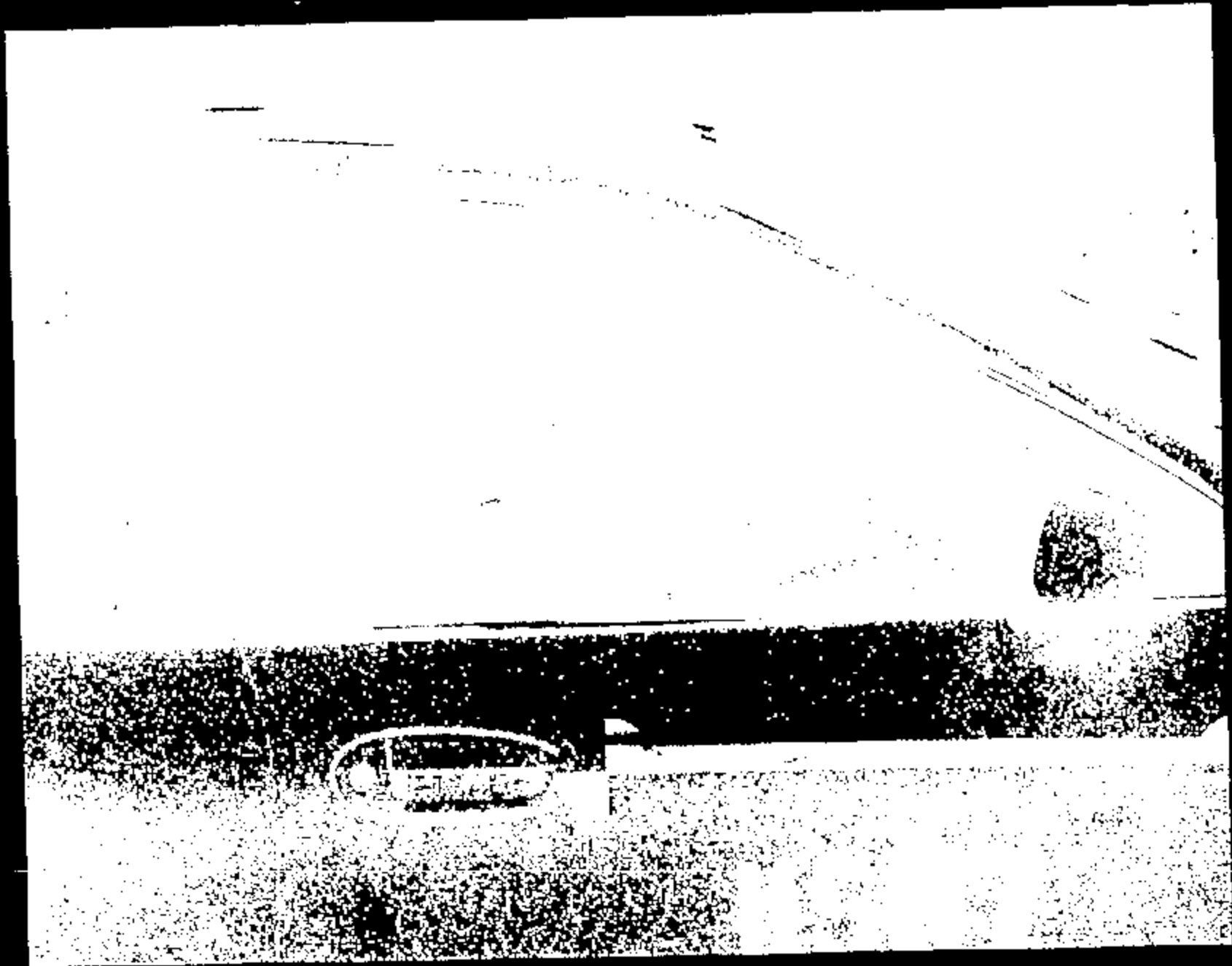
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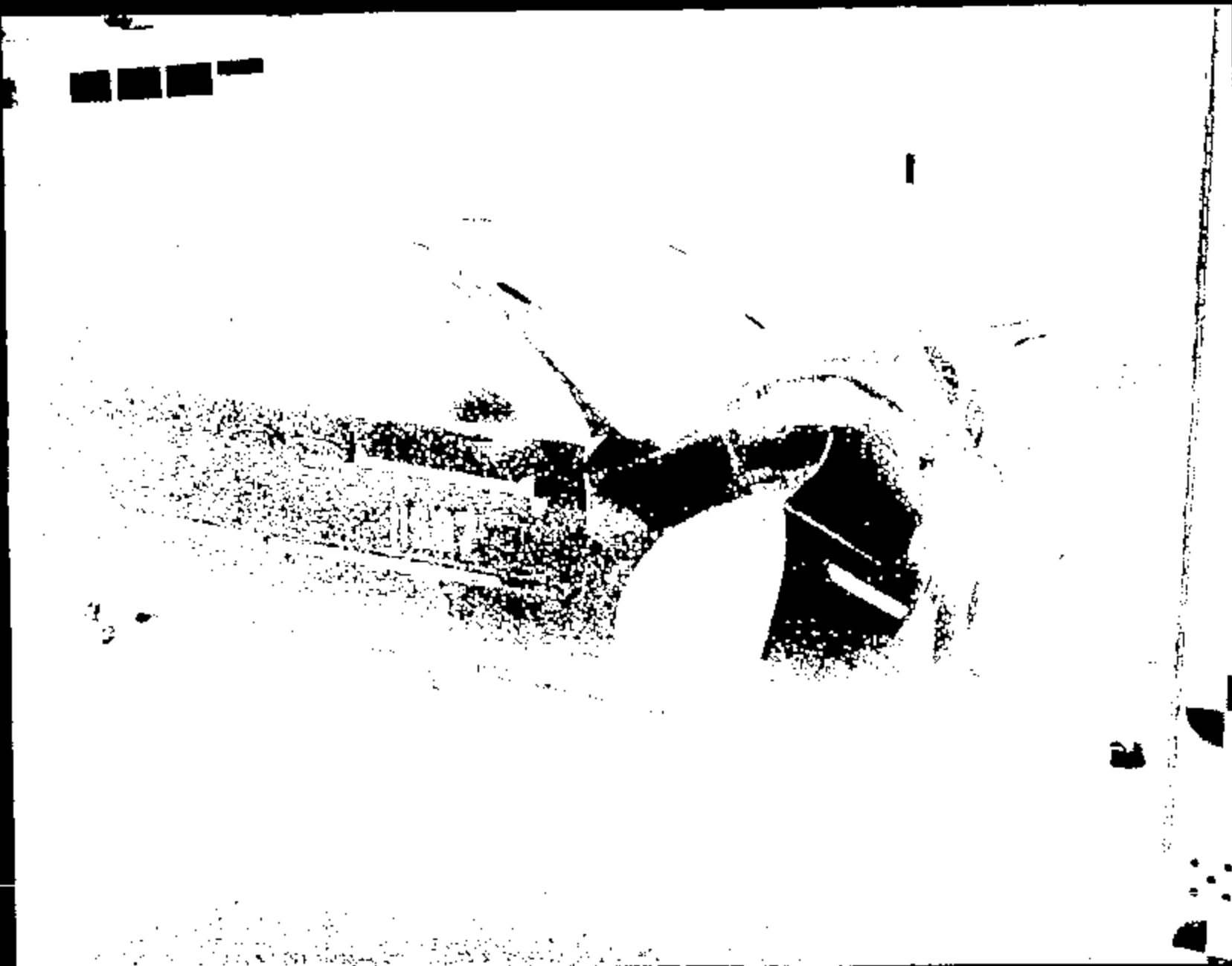
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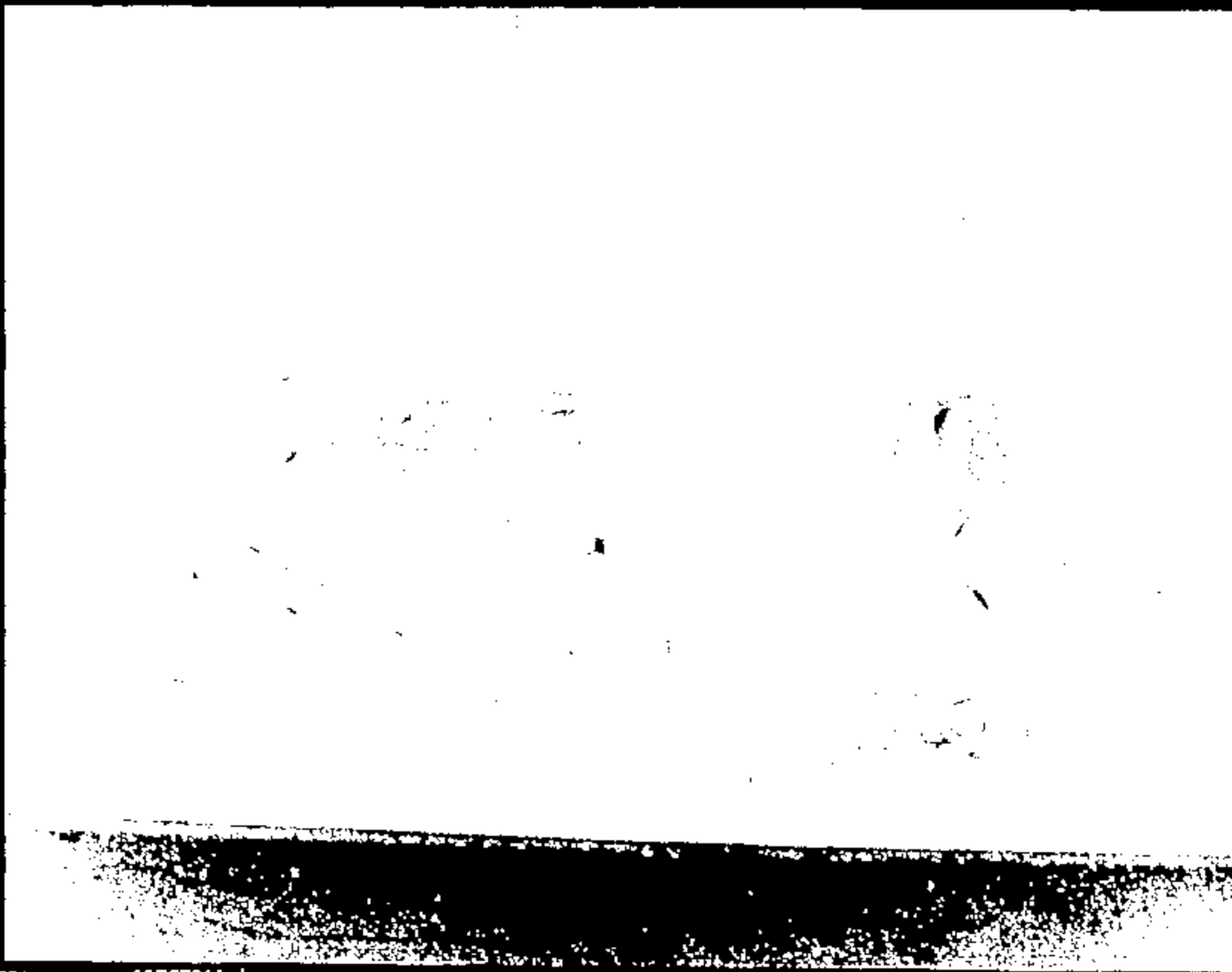
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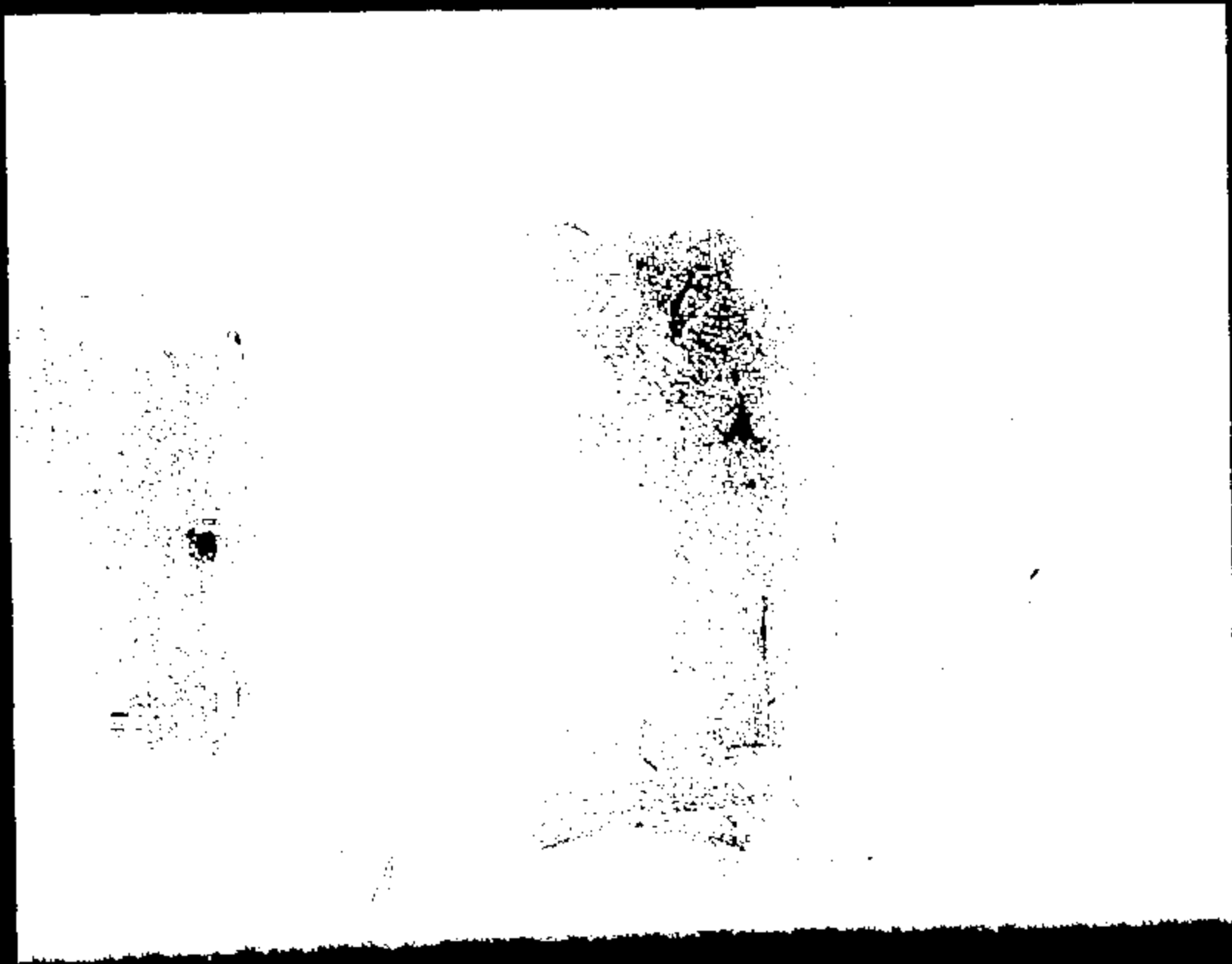


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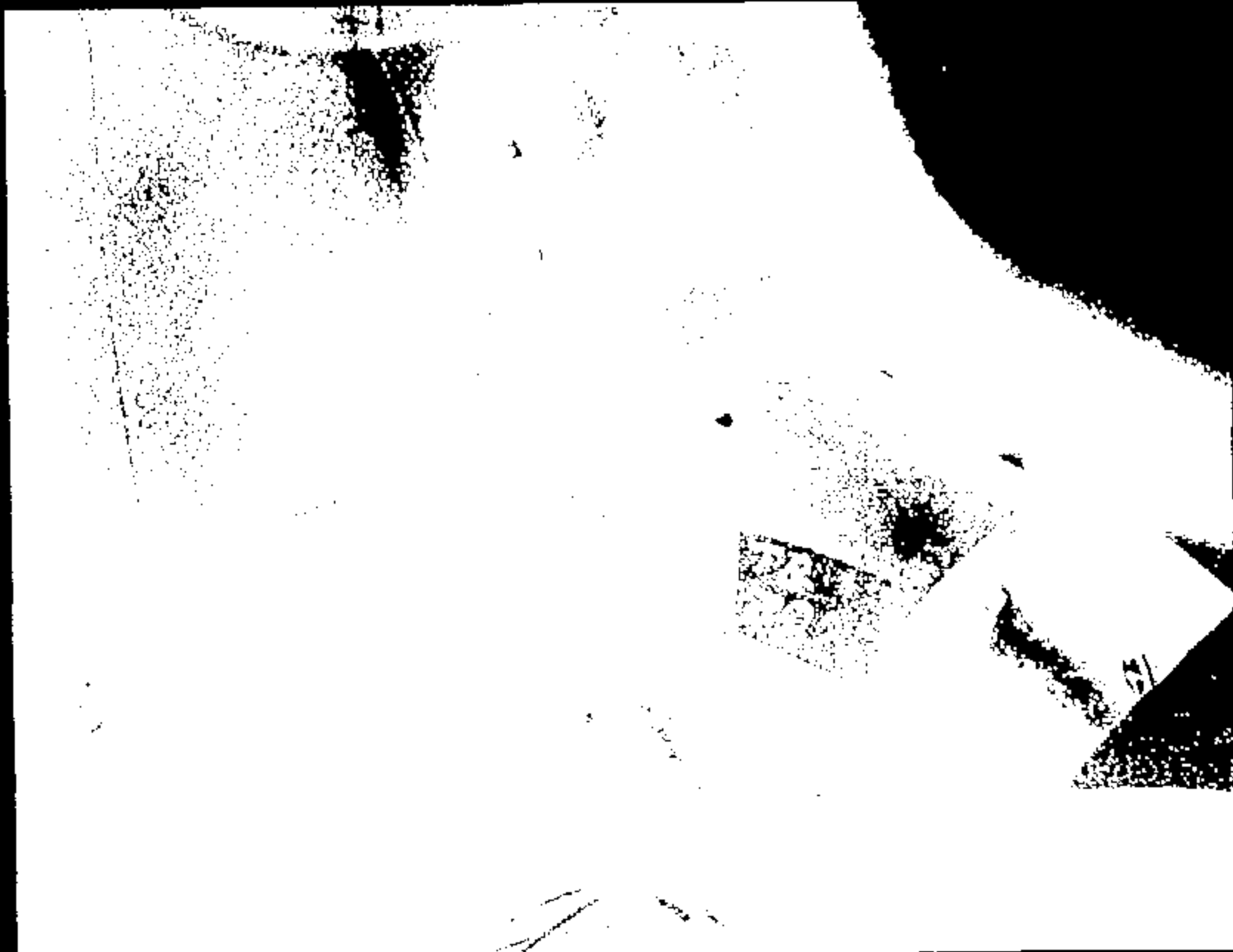




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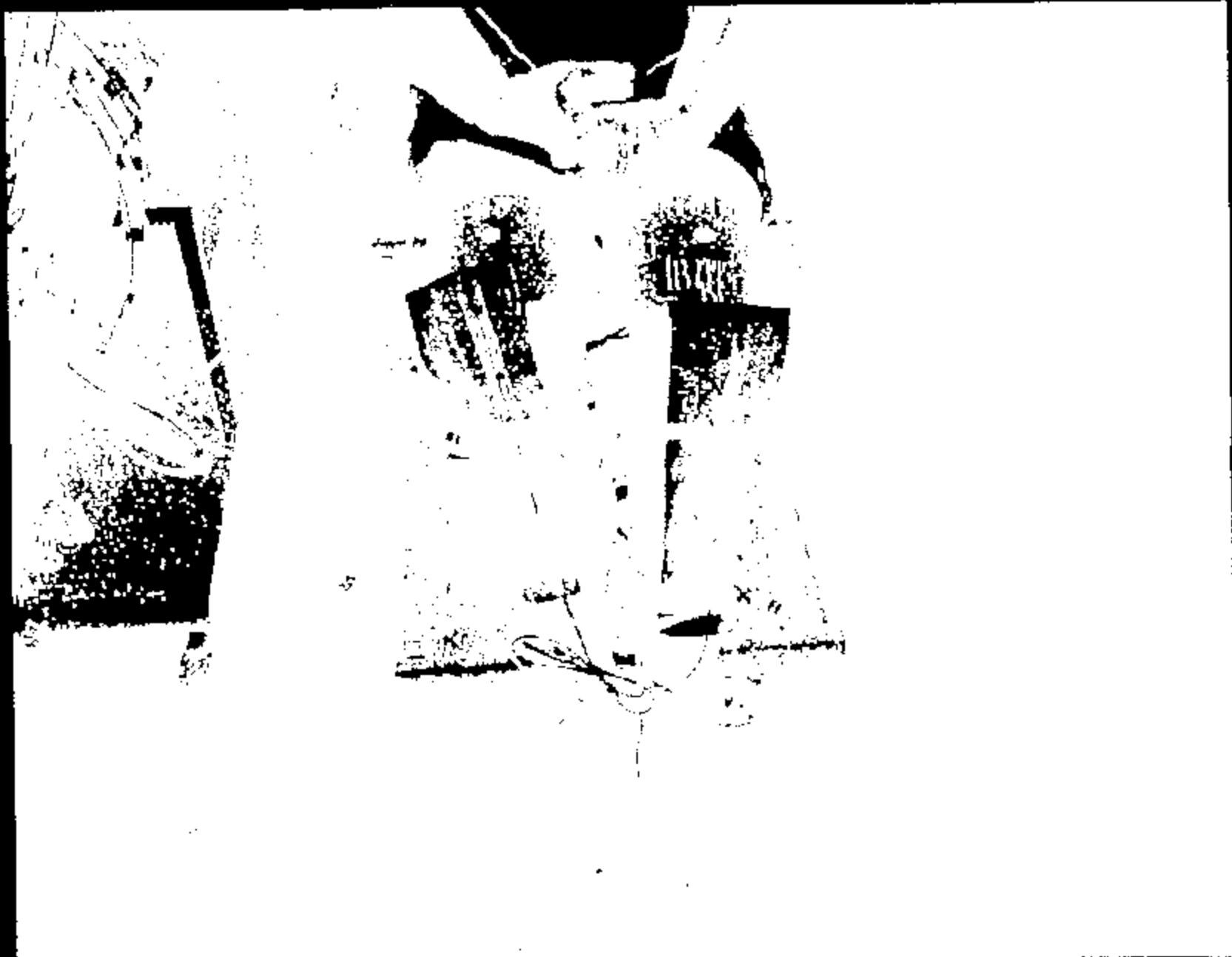
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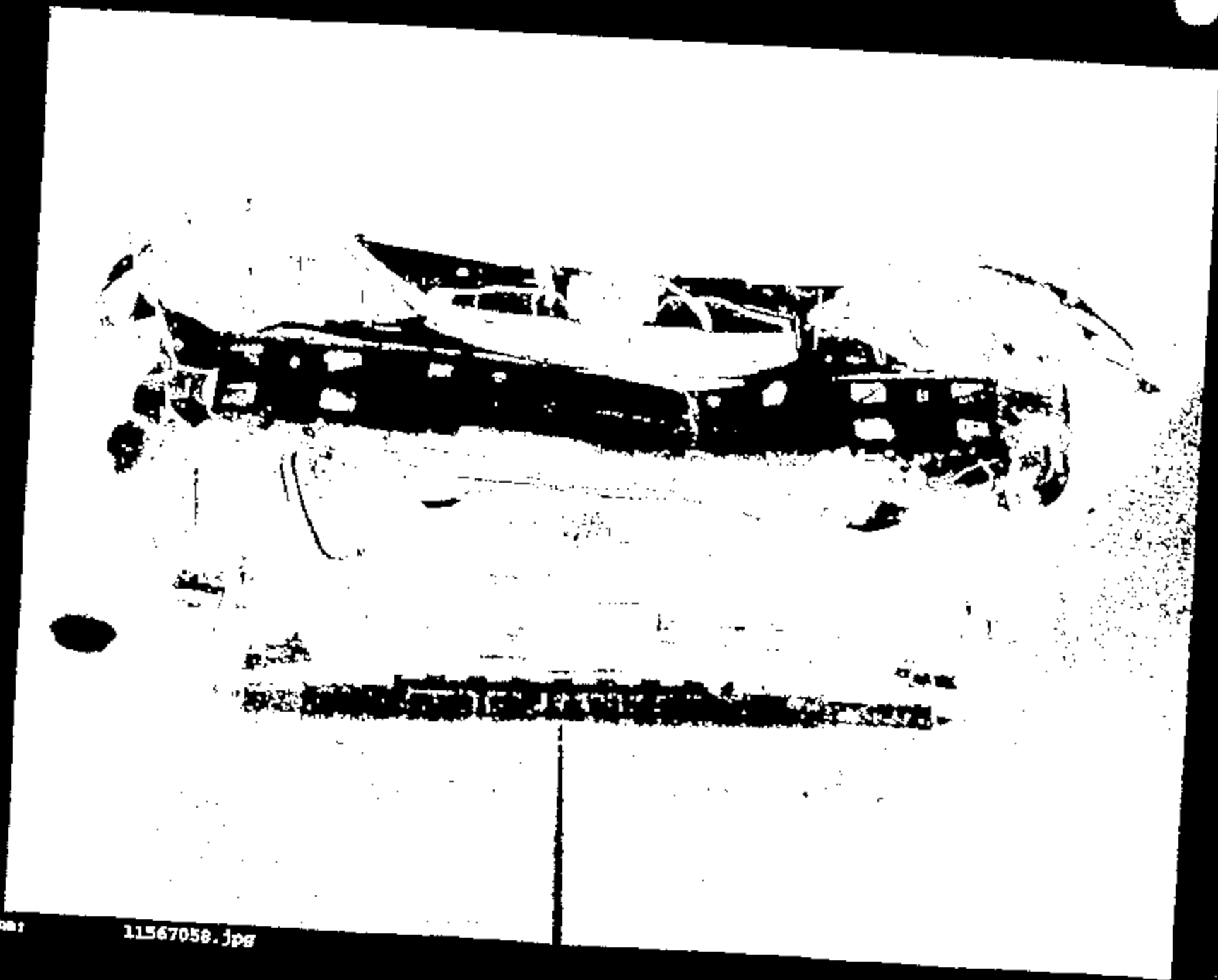
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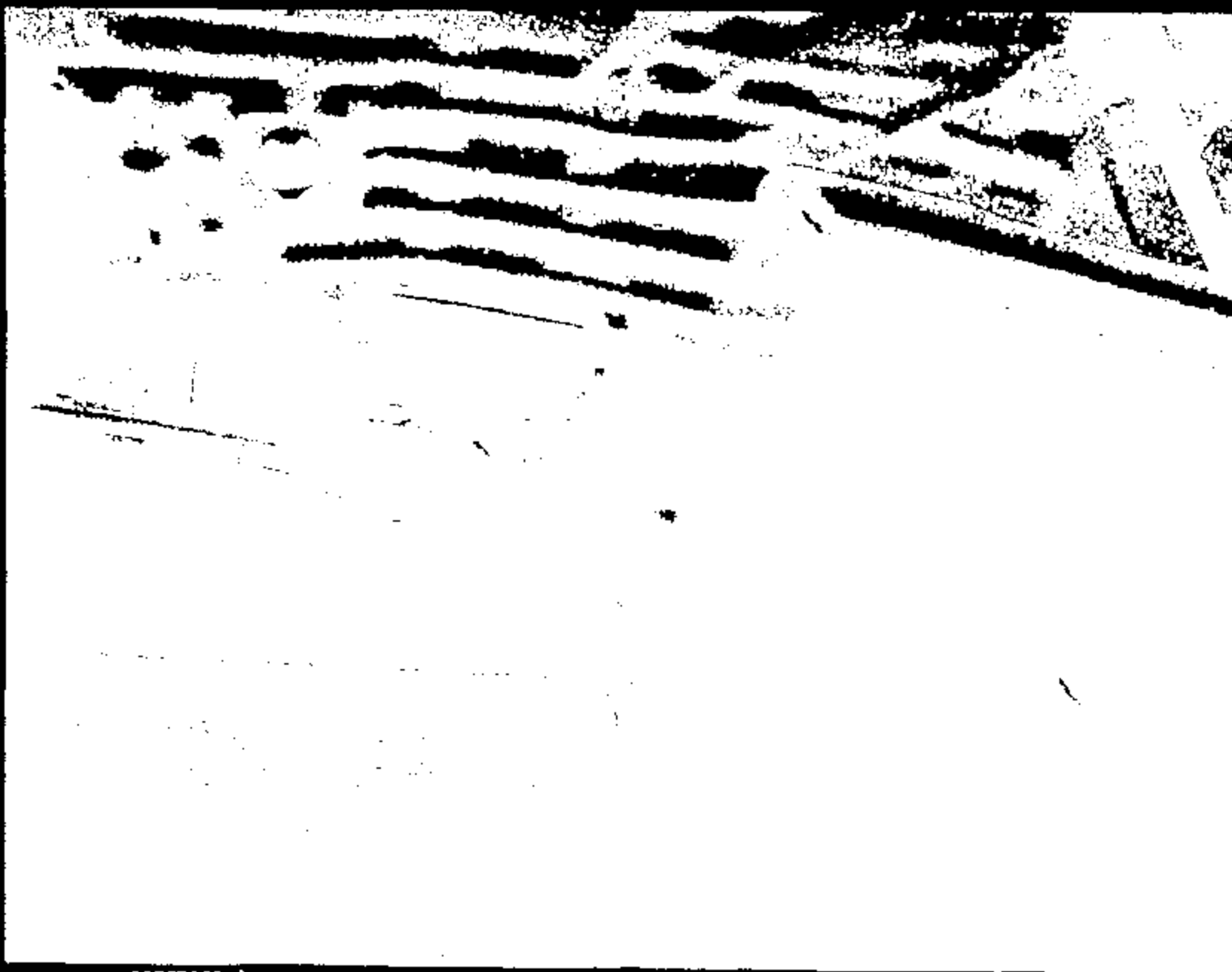
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Name: 11567062.jpg



Person 1

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Name:

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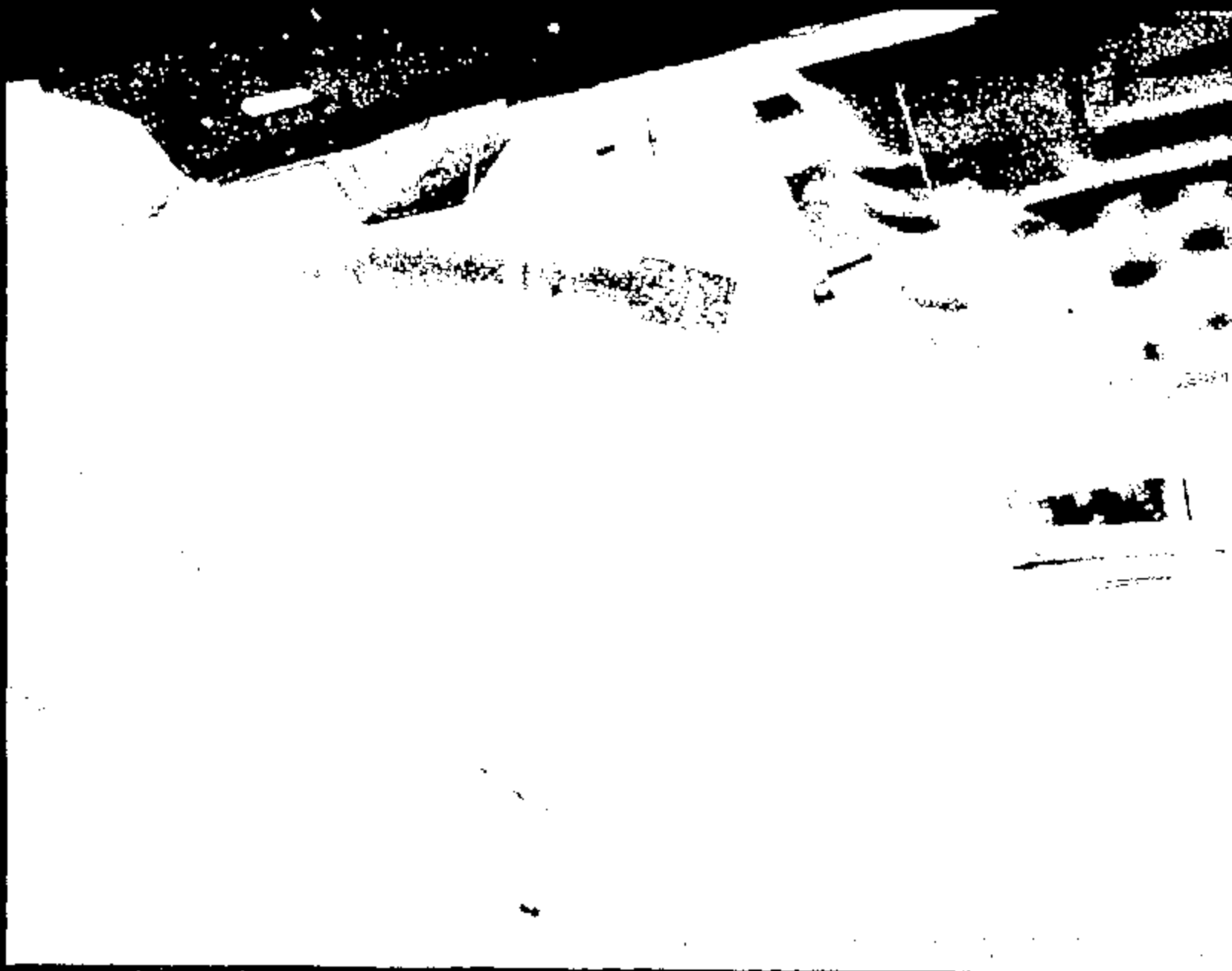
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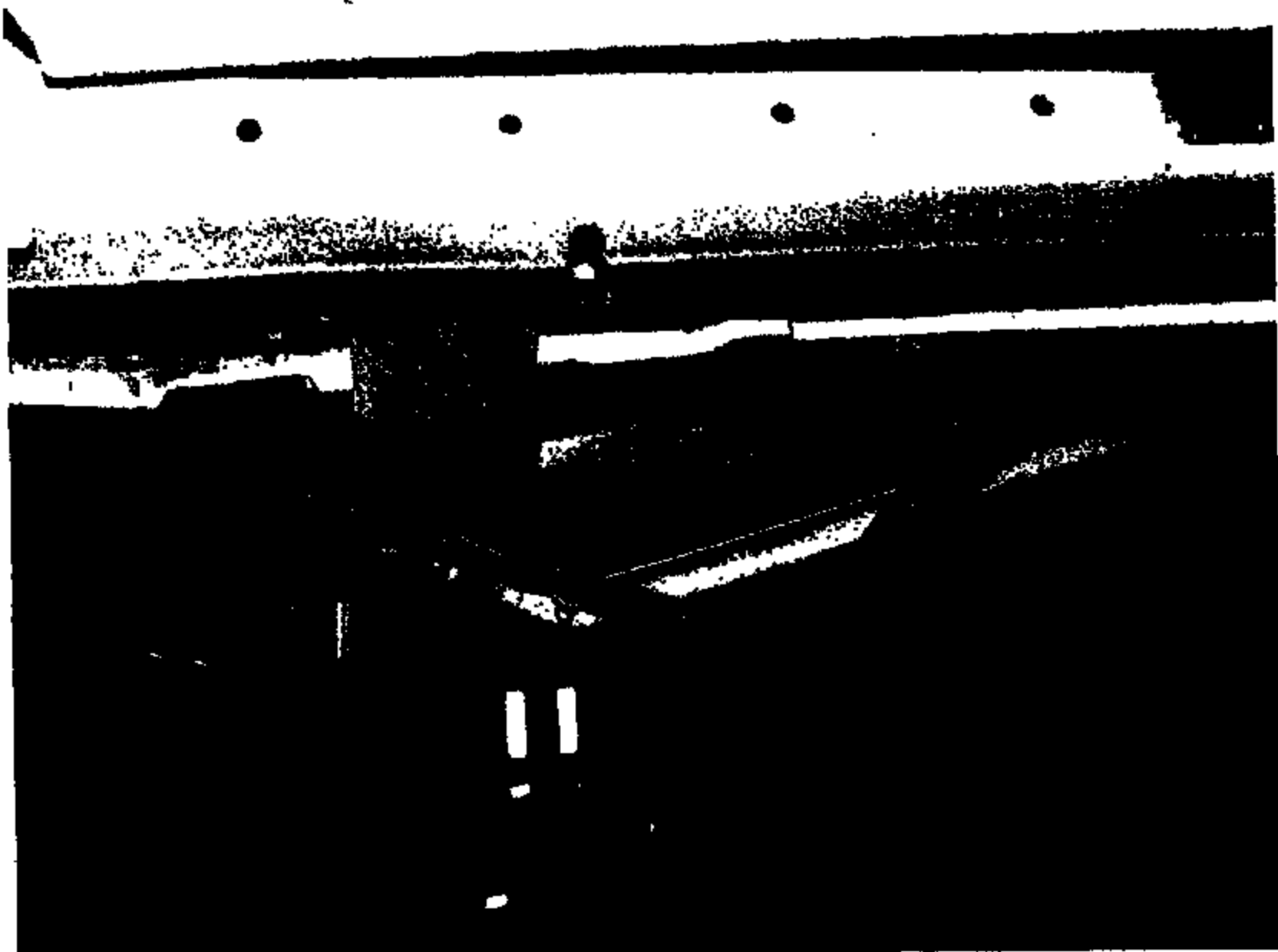
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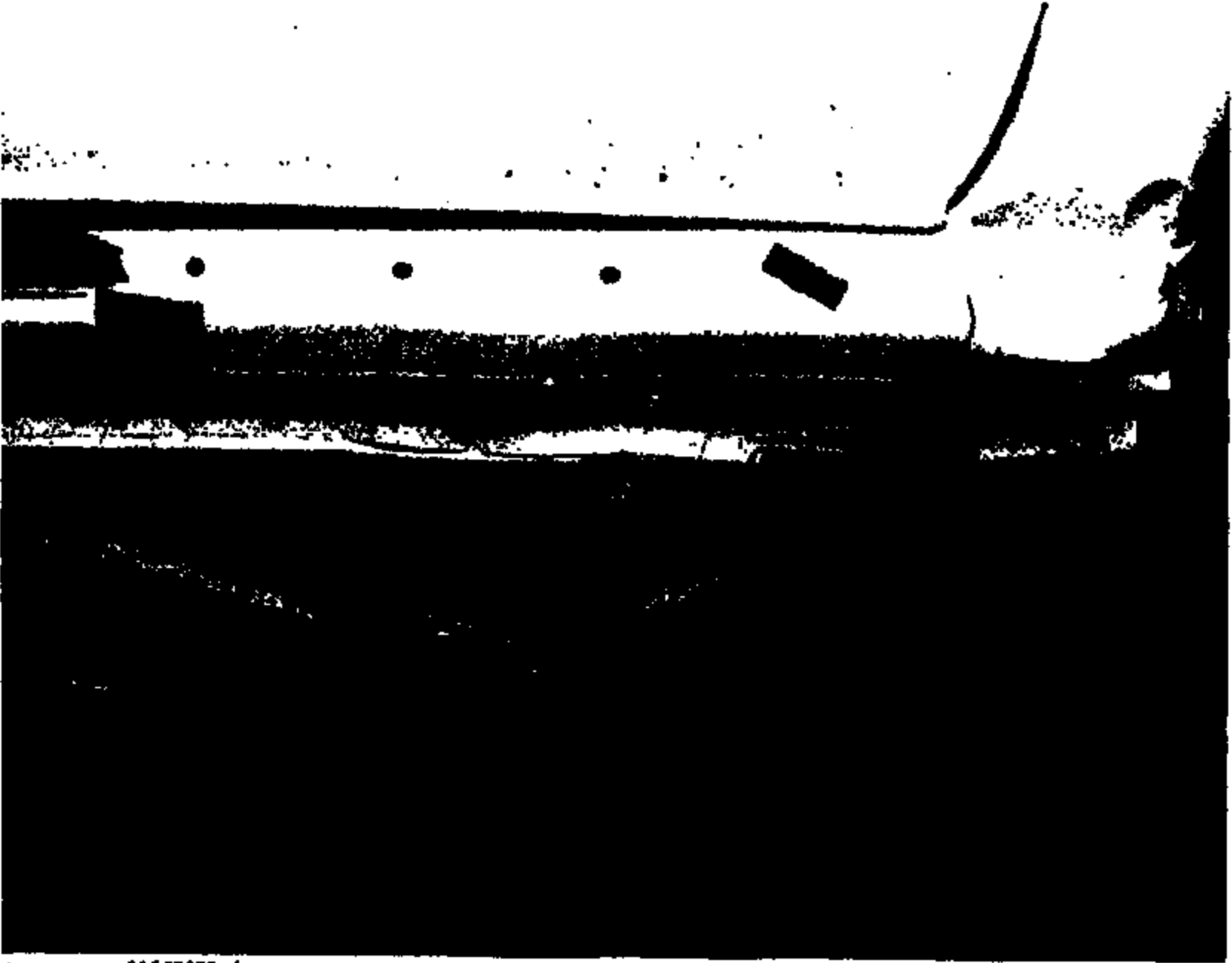
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7925



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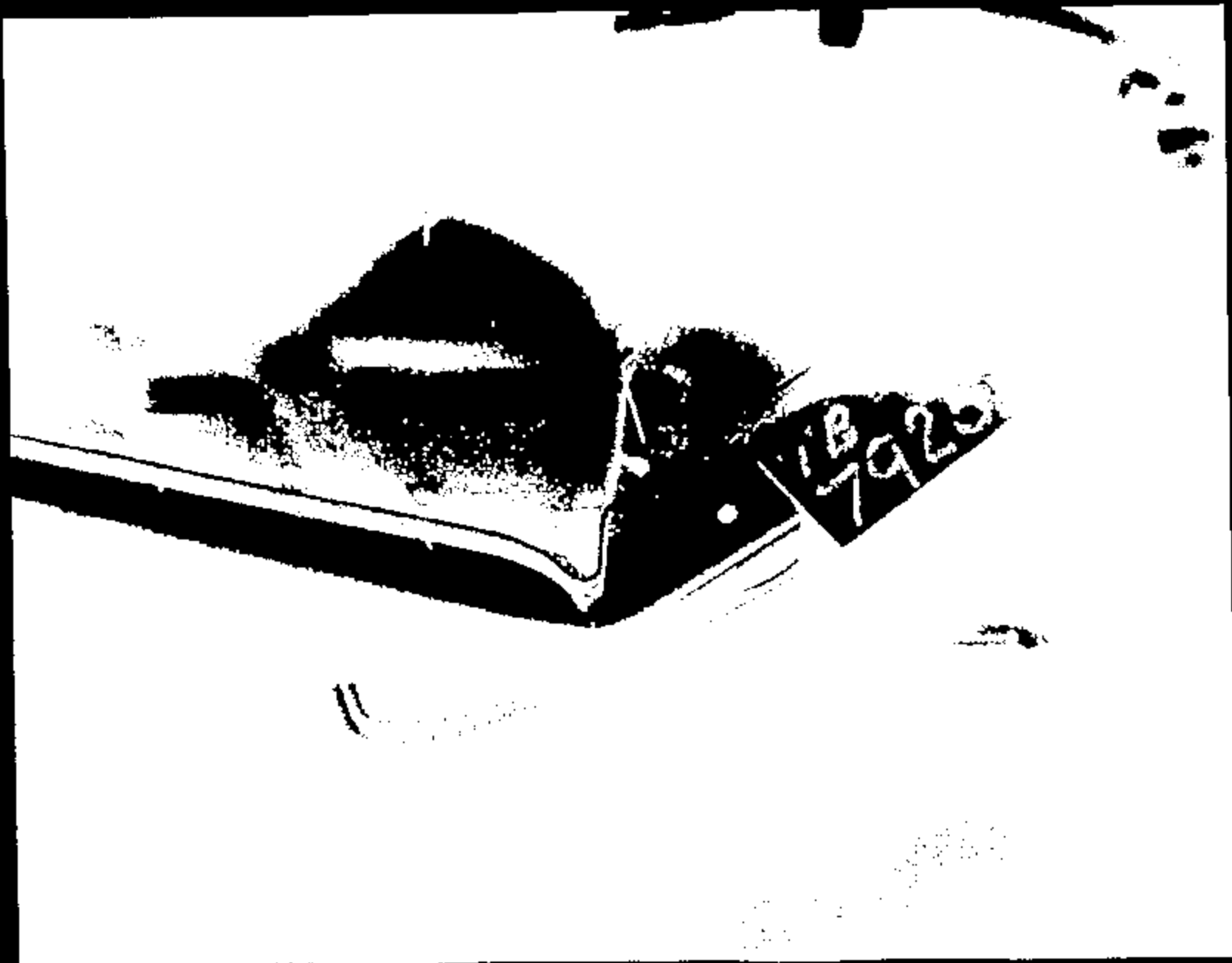
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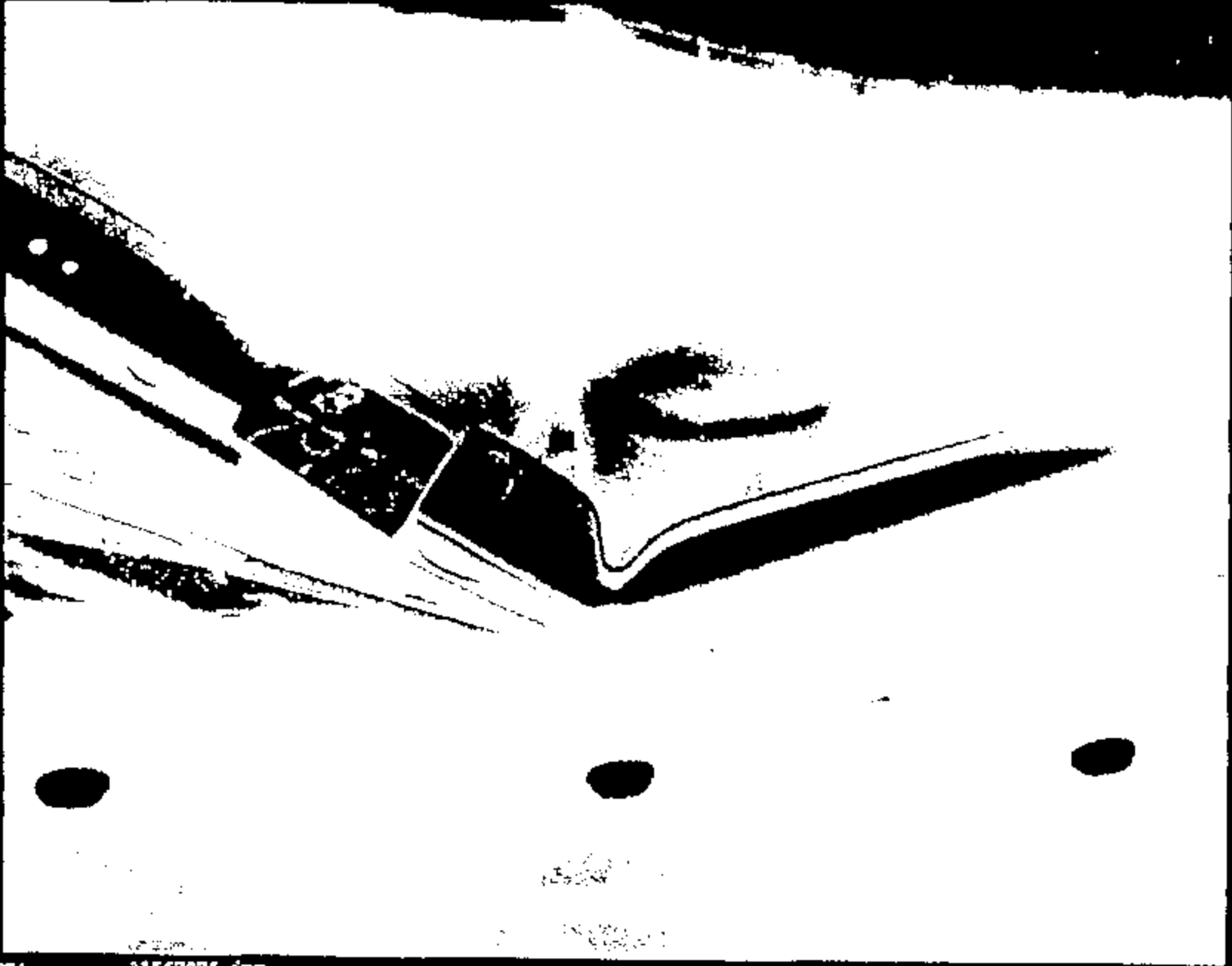
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**TEST AUTHORIZATION**

TEST AUTHORIZATION NUMBER: **TB7925**

TO: Safety Lab Department CO: K. Arturs	REQUEST DATE: <b>08/11/1999</b>	REQUESTED COMPLETION DATE: <b>08/25/1999</b>
	REQUEST NUMBER: <b>n/a</b>	PROBLEM NUMBER: <b>n/a</b>
	REQUESTING ACTIVITY: <b>Vehicle Crash Safety</b>	

TITLE OF TEST: <b>2000 D186 35 MPH 90 Degree Frontal Barrier</b>	(speed)	(test description)	PARTS DUE DATE: <b>n/a</b>
TYPE OF TEST: <input checked="" type="checkbox"/> VEHICLE <input type="checkbox"/> LABORATORY	<input type="checkbox"/> BENCH <input type="checkbox"/> OTHER	VIN # or IDENTIFICATION: <b>YAB0001 -- 200W188 1M1EPMB024YAB0001</b>	VEHICLE MODEL & YEAR: <b>2000 D186</b>
ENGINE NO. DISPL. CARB: <b>5.0L/175</b>	TRANS / DRIVETRAIN: <b>4D 42199 AXIN</b>	AXLE RATIO: <b>n/a</b>	PROD. OR ENG. LETTER: <b>n/a</b>
TYPE OF FUEL: <b>Standard ADAP</b>	CONVERTER: <b>n/a</b>	IGNITION TIMING: <b>n/a</b>	DISPOSITION OF PARTS: <b>n/a</b>
CRANKCASE OIL AND CAPACITY (L): <b>n/a</b>	TIRE SIZE AND PLY RATING: <b>P215/60R16</b>	REPORT CATEGORIES: <input checked="" type="checkbox"/> ENGINEERING <input checked="" type="checkbox"/> DATA <input checked="" type="checkbox"/> RAWDATA	PROCUREMENT REQ ? <input type="checkbox"/> YES <input type="checkbox"/> NO IF YES, GIVE CODE
VEHICLE TEST WEIGHT: <b>FRONT 2278 REAR 1597 TOTAL 3895</b>	TIRE PRESSURE (psi): <b>FRONT 30 REAR 30</b>	MAIL REPORT TO:	FIELD: MAIL DROP: ADDRESS:

1. OBJECT OF TEST	2. TEST PROCEDURE	3. ITEMS TO BE TESTED (NAME, NUMBER, QUANTITY)
1)	Conduct: <b>35 MPH</b> (speed) <b>90 Degree Frontal Barrier</b> (mode)	<b>2000</b> (year) <b>D186</b> (vehicle) <b># 1PP</b> (level)

**"RECORD COPY"**  
Schedule No. **1-7-12**  
Fictain Until **2019**

2)	Velocity At Impact: <b>35 MPH</b> Remote Fire Time: <b>N/A</b> Positioning procedure: <b>BT-25</b>	3)	Vehicle Year: <b>2000</b> Vehicle Line: <b>D186</b> Vehicle Level: <b>1PP</b>
----	--	----	---

Test Requester:	(name) <b>D. Parrigo</b>	(phone) <b>94-59018</b>	(paper number) <b>DPER</b>	Estimated test cost = <b>\$50,000.00</b>
Build Coordinator:	<b>B. Pagano</b>	<b>32-90848</b>	<b>BPAG</b>	
Additional Contacts:				

**COMPLETE THE FOLLOWING TWO QUESTIONS AS INDICATED:**

<p>1 - Rational for not replacing this test by CAE analysis:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> No CAE Methodology or process available</li> <li><input type="checkbox"/> No CAE Correlation</li> <li><input type="checkbox"/> Insufficient confidence in CAE</li> <li><input type="checkbox"/> To obtain base data for CAE</li> <li><input type="checkbox"/> Replacement or improvement of existing Test.</li> <li><input type="checkbox"/> Testing is Outlier.</li> <li><input type="checkbox"/> Mandatory or Regulatory</li> <li><input checked="" type="checkbox"/> Certification</li> <li><input type="checkbox"/> Development test for FSS</li> <li><input type="checkbox"/> Not applicable.</li> <li><input type="checkbox"/> Other</li> </ul>	<p>2 - What is the expected Test Outcome:</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Results will meet DVP/WOR requirements.</li> <li><input type="checkbox"/> System Component will not meet Test specification.</li> <li><input type="checkbox"/> Unknown.</li> <li><input type="checkbox"/> Above is Based on CAET</li> <li><input type="checkbox"/> Other: _____</li> </ul>
--	---

**UPDATED TO REFLECT CHANGES - 081199 BTP**

# General Request Information

TAR: TB7925

## Test Mode

35 MPH  
90 Degree Frontal Barrier

## Test Objectives: Cert (C) Verif (V) Dev (D) Audit (A)

### REGULATORY:

FMVSS 204 - Steering Wheel Displacement  
 **R C** FMVSS 208 - Frontal Occupant Protection  
 FMVSS 212 - Wind Shield Retention  
 FMVSS 214 - Side Impact Protection  
 FMVSS 219 - Windshield Zone Intrusion  
 Film Analysis  
 Template  
 FMVSS 301 - Fuel System Integrity  
 Rollover  
 Pressure Check  
 FMVSS 303 - NGV Fuel System Integrity  
 ECE 12 (74/287/EEC) - Protection of the Driver Against Steering Mechanism  
 ECE 32 Rear Impact - Structural Performance  
 ECE 39 Frontal Impact - Structural Performance  
 ECE 34 Fuel System Integrity  
 ECE 84 Step II Frontal Offset - Occupant Performance  
 ECE 95 Step II 300mm Barrier Side Impact - Occupant Performance  
 08/79/EC - Frontal Offset  
 06/27/EC - Side Impact

### FORD AUTOMOTIVE OPERATIONS SAFETY DESIGN GUIDELINES:

Front Impact FAO Safety Design Guidelines  
 Offset Frontal FAO Safety Design Guidelines  
 Side Impact Protection FAO Safety Design Guidelines  
 Rear Impact Fuel System Performance FAO Safety Design Guidelines

### OTHER:

Sensor Development  
 Other, Specify: \_\_\_\_\_

## Primary Test Vehicle Information

Use (Target/Bullet):	BULLET
Model Year:	2000
Vehicle Program:	D188
Vehicle Name:	TAURUS
Body / Cab Style:	SEDAN
Build Number:	YA600001
Tag Number:	206W165
VIN Number:	1MEFM80U5YA600001
Fuel System Rated Capacity (Gal):	18
Prototype Level:	1PP
Drive Side:	LH

# General Specifications Secondary Vehicle or Cart

TA#: TB7925

## Hardware (Vehicle or Cart)

Use (Target/Bullet):	
Type (Vehicle/Cart):	
Model Year:	
Vehicle Line:	
Model:	
Tag Number:	
VIN Number:	
Prototype Level:	
Drive Side:	

## Occupants

	Occupant 1	Occupant 2
Type	_____	_____
In-Vehicle Location	_____	_____
Verify:    Seat Position Long	_____	_____
Seat Position Vert	_____	_____
Seat Back Angle	_____	_____
Occupant Belted	_____	_____

## Target Conditions

Weight	Target	Acceptable Variance	
		(+)	(-)
Front	_____	_____	_____
Rear	_____	_____	_____
Total	_____	_____	_____

Ride Height @ Test Weight	Measured
Front: _____	From: _____
Rear: _____	To: _____

## Special Instructions

\_\_\_\_\_  
\_\_\_\_\_

# Special Prep/Build Instructions Primary Vehicle

TA#: TB7925

## Special Build Instructions

- Remove Side View Mirrors
- Remove Headrests
- Remove Hood *NA 08/16/99 JST*
- Remove Arm rest
- Remove Bottom of Bumper Cover
- Cut Off Brake & Clutch Pedal
- Color Contrast Under Hood Components

### Other, Specify:

- May remove trim from B-Filler rearward, if needed
- Ensure proper flex fuel sensor level
- Add new level Driver Airbag

## Pyro Restraints Usage

- Left Front Air Bag
- Right Front Air Bag
- Left Front Side Air Bag
- Right Front Side Air Bag
- Left Rear Side Air Bag
- Right Rear 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)
- Remote back-up Fire Time:

## Special Pre-Test Preparation

### Other, Specify:

- Ensure PCM is updated

**Occupant / ATD Request  
Primary Vehicle**

TAB:     TB7925    

		<u>Occupant 1</u>	<u>Occupant 2</u>
<b>Type</b>		<u>80th Hill</u>	<u>80th Hill</u>
<b>Instrumentation Level*</b>		<u>CERT</u>	<u>CERT</u>
<b>In-Vehicle Location</b>		<u>LF</u>	<u>RF</u>
<b>Verify:</b>	<b>Seat Position Long</b>	<u>MID</u>	<u>MID</u>
	<b>Seat Position Vert</b>	<u>FULL DOWN</u>	<u>FULL DOWN</u>
	<b>Seat Back Angle</b>	<u>27.5 22.7 degree</u>	<u>27.5 22.7 degree</u>
<b>Positioning Procedure</b>		<u>ST-25</u>	<u>ST-25</u>
	<b>Use Foot Rest</b>	<u>YES</u>	<u>N/A</u>
	<b>Take Seat Track Video</b>	<u>NO</u>	<u>YES <del>NO</del></u>
	<b>Special Positioning Instructions</b>		<u>DBP 8/20/99</u>
<b>Dummy Adjustment</b>	(arm angle)	<u>                    </u>	<u>                    </u>
<b>Occupant Belted</b>		<u>YES</u>	<u>YES</u>

*DBP 8/20/99*

*DBP 8/20/99*

\*See instrumentation request for detailed instrumentation information.

# Test Conditions - Final Prep

TAP: TE7825

## Final Prep Contacts

ONE of these MUST be present during weigh-up & final prep

	<b>Test Engineer</b>	<b>Request Engineer</b>	<b>Build Coordinator</b>
Name:	_____	<u>D. Parigo</u>	<u>B. Pagano</u>
Phone:	_____	<u>84-58018</u>	<u>82-30846</u>
Pager:	_____	<u>DPER</u>	<u>BPAG</u>

## Test Weight

Minimum Option Weight  
 33% Option Weight  
 Maximum Option Weight

GVWR: \_\_\_\_\_  
 Wheelbase: \_\_\_\_\_

## Tire Pressure

Front: 30. psi

Rear: 30. psi

## Fuel System

Fuel Tank & System to Contain: STANDARD ABNC

$\frac{0 \text{ gallons}}{\text{Fill Level}} = \frac{85 \%}{\%} \times \frac{x}{\text{Capacity}}$

## Weight Targets

If required weight distribution is UNACHIEVABLE, please note allowable variances.

	Requested Test Weight	Acceptable Test Weight Variance		Actual Test Weight
		High (+)	Low (-)	
Front: <u>2,199 lbs</u>	<u>2,278 lbs</u>	Front: <u>13 lbs</u>	<u>0 lbs</u>	Front: <u>2,354</u>
Rear: <u>1,195 lbs</u>	<u>1,567 lbs</u>	Rear: <u>13 lbs</u>	<u>0 lbs</u>	Rear: <u>1,937</u>
Total: <u>3,394 lbs</u>	<u>3,845 lbs</u>	Total: <u>26 lbs</u>	<u>0 lbs</u>	Total: <u>5,093</u>

Rated Luggage Load: 200 lbs

Simulate/Verify at Weigh-Up  
 Dummy Weight

On Board Camera Count

## Weight Addition (Restrictions)

Do NOT place any weight in the following locations:

<input type="checkbox"/> Air Cleaner	<input type="checkbox"/> Engine	<input type="checkbox"/> Doors
<input type="checkbox"/> Battery	<input type="checkbox"/> Fan Box/Shroud	<input type="checkbox"/> Foot Wells - Front
<input type="checkbox"/> Bottle - Coolant	<input type="checkbox"/> Headlamp Overage	<input type="checkbox"/> Foot Wells - Rear
<input type="checkbox"/> Bottle - Washer	<input type="checkbox"/> Radiator	<input type="checkbox"/> Quarter Panels
		<input type="checkbox"/> Trunk Floor

Other: \_\_\_\_\_

## Ride Heights

Measure @ Test Weight

Front: \_\_\_\_\_

Rear: \_\_\_\_\_

Measure

From: ROCKER LEVEL TO GROUND

To: ROCKER LEVEL TO GROUND

## Additional Remarks

DO NOT fill tank with standard until weigh-up

F  
2278

R  
1587

I  
3865

1)

2313

1553

3867

GRANDAS of Battanix adder

2)

2331

1636

3967

OK.  
Date

## Dimensional Analysis Request Primary Vehicle

Frontal Impacts

TA#: TB7925

74		
81		
100	Control Points (CAR)	Exterior
107		
128	Collapse Distance Points	Exterior
129	Frame/St. Col/ Eng. for Graphs (CAR)	Exterior
130	Frame Standard Bottom (CAR)	Exterior
132	Utilized Standard Bottom (CAR)	Exterior
134	Drive Shaft Collapse	Exterior
136	Standard Body Relative	Exterior/Interior
138	Windshield (CAR)+R(B)C	Exterior
140	Sill & Pillar	Exterior
142	Shot-Guns	Exterior
146	Header	Interior
150	Steering Wheel Deformation/ Periphery (Just strg whl hub)	Interior
153	Steering Column Mounts	Interior
154	Steering Column Targets	Interior
155		
156	Seat Track to Floor Mounts (LHS front seat only)	Exterior
158	Seat to Track Mounts	Exterior
160	Cowl Rotation	Exterior
162	Floorpan Points	Exterior
164	Knee Bolster	Interior
166	Seat Belt Mounts	Interior
168	Diagonal Strut	Interior
170	Tunnel Hinge Pillar	Exterior
172	Brake Bracket	Interior
174	Instrument Panel Mounts	Exterior
176	T-N-T Targets	Exterior/Interior
177	Top Non-Skidd & Body Sided	Exterior/Interior
300		
302		
346		
358		
384		
376		
465	Pict 9 Sectional Profiles	
509	Decoupling Column Collapse	Exterior
507	P.F. Steering Column Collapse	Exterior
508		
540		
541		
542		
547	Footwell Reduction--Geometric center of footrest, brake pedal, accel pedal. Section through floor at center of brake pedal and +/- 150 mm y from there. Vert. Section through IP lower at +/- 150mm y from strg whl hub, plus Horiz. section at 450mm above floor.	



# Film Analysis & Photographic Services Request

TA#: TB7925

## Front Impact Film Analysis

- Head (Both Occupants) WRT Vehicle
- Shoulder WRT Vehicle
- Rocker (Both sides) WRT Ground

Other, Specify:

\_\_\_\_\_  
\_\_\_\_\_

## Still Photography

- \_\_\_\_\_  
Copies of Still Photo Proof Sheets Required
- \_\_\_\_\_  
Copies of Still Photos (4X5) Required
- Pre Test Documentation Photographs
- Post Test Documentation Photographs (standard)
- Pre and Post Test close ups of Flex Fuel Sensor

## High Speed Photographic Requirements

- 2 Copies of High Speed Film Required
- \_\_\_\_\_  
Copies of High Speed Film Required in VHS Format
- \_\_\_\_\_  
Digitization of Driver/ Passenger Kinematic  
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 IP Contact, From Rear, Cross Car
- \_\_\_\_\_  
Onboard - Passenger Lower Torso to IP 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 IP)
- \_\_\_\_\_  
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

Prepared by: DP/RSB  
Released 09/11/2009 Forney Barler  
Desktop Print, Doyle

Request #: 19-028-448  
Film and Photo Attachment  
Page 2 of 17

Auto TA  
Ver 3.0a2d Issued Sept 18, 1999  
Autobase: C:\auto\TA\Programs\Auto

CRTS 0011567

<input checked="" type="checkbox"/>	Overall Left
<input checked="" type="checkbox"/>	Left Dummy Kinematics
	Dummy Kinematics & Velocity Left
<input checked="" type="checkbox"/>	Overall Right
<input checked="" type="checkbox"/>	Right Dummy Kinematics
	Dummy Kinematics & Velocity Right
	Top of Barrier - Overall View of Windshield
	Top of Barrier - Driver
	Top of Barrier - Passenger
	Top of Barrier - Close-up of Flex Fuel Sensor from Right
	Top of Barrier - Close-up of Flex Fuel Sensor from Left
	Top of Barrier - Close-up of Engine
	Left Front Rail Extension Bumper Close-up
	Right Front Rail Extension Bumper Close-up

**Overhead Coverage**

<input checked="" type="checkbox"/>	Overhead - Overall
<input checked="" type="checkbox"/>	Overhead - A-Pillar Forward
	Steering Column Displacement
	Scale
	Reaction

**Pit Coverage**

	Pit - Overall
<input checked="" type="checkbox"/>	Pit - A-Pillar Forward
	Pit - L/R Frame Horns (Criscross)
	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.

**All Other High Speed Photography**

\_\_\_\_\_  
 \_\_\_\_\_

# Instrumentation and Data Processing Request

TA#: TB7826

## Primary Vehicle Structural Instrumentation - Frontal Impact

**ACCELEROMETERS:**

	Long	Vert	Lat
<input checked="" type="checkbox"/> Engine/Trans Upper	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Engine/Trans Lower	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Left Focder at A-Pillar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Right Focder at A-Pillar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Left Focder at B-Pillar	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Right Focder at B-Pillar	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Left Focder at C-Pillar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Right Focder at C-Pillar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Left Frame at A-Pillar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Right Frame at A-Pillar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Left Frame at B-Pillar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Right Frame at B-Pillar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Left A-Pillar Inside	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Right A-Pillar Inside	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Centerline Tunnel @ Dash	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Centerline Tunnel Middle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Centerline Tunnel @ Seat Long Centerline	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Left Floor Pan Under Seat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Left Door Inside Top	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Left Shock Tower	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Right Floor Pan Under Seat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Right Door Inside Top	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Right Shock Tower	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Rad Support Top - Center	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> #1 Crossmember Bottom	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> #2 Crossmember Bottom	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Left Front Rail Forward of Sledrunners.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Left Front Rail Forward of Shock Tower	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Right Front Rail Forward of Sledrunners.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Right Front Rail Forward of Shock Tower	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Directly Below D.A. Point # 60	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Directly Below D.A. Point # 64	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Next to Fuel Inertia Switch	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Top of Battery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Near ACS Bypass Switch	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**OTHER STRUCTURAL ACCELS:**

	Long	Vert	Lat
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

# Primary Vehicle Systems Instrumentation

TA# TE7825

## SENSOR ACCELS:

See Sensor Map

## MONITOR AIR BAG SENSORS:

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

## MONITOR AIR BAGS STATUS:

Driver Squib Voltage  
 Driver Squib Current  
 Driver Bag Pressure  
 Passenger Squib Voltage  
 Passenger Squib Current  
 Passenger Bag Pressure  
 Passenger Inflator Pressure

## STEERING COLUMN:

Stroke Break Wires  
 Tilt Mechanism Break Wires  
 String Pot (Stroke)  
 Load Cell (5 Axle)  
 String Pot (Telescopes)

## SWITCHES:

Engine to Rad Support left  
 Engine to Rad Support center  
 Engine to Rad Support right  
 Brake booster to shock tower  
 Other \_\_\_\_\_

## FUEL SYSTEM:

Inertia Fuel System Cut-Off Switch

## ANGULAR MOTION SENSORS

## VEHICLE STRING POTS

## OTHER VEHICLE SYSTEM INSTRUMENTATION

## RESTRAINT LOADS:

Left Belt Tongue - Strain Gaged  
 Left Pyro-Tech™ Buckle Squib Voltage  
 Left Pyro-Tech™ Buckle Squib Current  
 Right Belt Tongue - Strain Gaged  
 Right Pyro-Tech™ Buckle Squib Voltage  
 Right Pyro-Tech™ 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  
 Lightweight Left Lap Belt at Anchor Load  
 Lightweight Left Torso Belt at Retr. Load  
 Lightweight Left Torso Belt at D-ring Load  
 Lightweight Right Lap Belt at Anchor Load  
 Lightweight Right Torso Belt at Retr. Load  
 Lightweight Right Torso Belt at D-ring Load  
 Lightweight Left Torso Belt at Buckle Load  
 Lightweight Right Torso Belt at Buckle Load

ATP  
07-1997

**Dummy Instrumentation - Internal**

50HS

L/F

**ACCELS:**

<input checked="" type="checkbox"/> Head C.G.	<input checked="" type="checkbox"/> Long	<input checked="" type="checkbox"/> Vert	<input checked="" type="checkbox"/> Lat
<input checked="" type="checkbox"/> Chest	<input checked="" type="checkbox"/> Long	<input checked="" type="checkbox"/> Vert	<input checked="" type="checkbox"/> Lat
<input checked="" type="checkbox"/> Pelvis	<input checked="" type="checkbox"/> Long	<input checked="" type="checkbox"/> Vert	<input checked="" type="checkbox"/> Lat

**LOAD CELLS:**

<input checked="" type="checkbox"/> Neck Upper Load	<input checked="" type="checkbox"/> Fx	<input checked="" type="checkbox"/> Fy	<input checked="" type="checkbox"/> Fz
<input checked="" type="checkbox"/> Neck Upper Moment	<input type="checkbox"/> Mx	<input checked="" type="checkbox"/> My	<input type="checkbox"/> Mz
<input type="checkbox"/> Neck Lower Load	<input type="checkbox"/> Fx	<input type="checkbox"/> Fy	<input type="checkbox"/> Fz
<input type="checkbox"/> Neck Lower Moment	<input type="checkbox"/> Mx	<input type="checkbox"/> My	<input type="checkbox"/> Mz
<input type="checkbox"/> Thoracic Load	<input type="checkbox"/> Fx	<input type="checkbox"/> Fy	<input type="checkbox"/> Fz
<input type="checkbox"/> Thoracic Moment	<input type="checkbox"/> Mx	<input type="checkbox"/> My	<input type="checkbox"/> Mz
<input type="checkbox"/> Lower Lumbar Load	<input type="checkbox"/> Fx	<input type="checkbox"/> Fy	<input type="checkbox"/> Fz
<input type="checkbox"/> Lower Lumbar Moment	<input type="checkbox"/> Mx	<input type="checkbox"/> My	<input type="checkbox"/> Mz
<input checked="" type="checkbox"/> L/Femur Load	<input type="checkbox"/> Mx	<input checked="" type="checkbox"/> My	<input checked="" type="checkbox"/> Fz
<input checked="" type="checkbox"/> L/Femur Moment	<input type="checkbox"/> Mx	<input checked="" type="checkbox"/> My	<input type="checkbox"/> Mz
<input checked="" type="checkbox"/> R/Femur Load	<input type="checkbox"/> Mx	<input checked="" type="checkbox"/> My	<input checked="" type="checkbox"/> Fz
<input checked="" type="checkbox"/> R/Femur Moment	<input type="checkbox"/> Mx	<input checked="" type="checkbox"/> My	<input type="checkbox"/> Mz
<input checked="" type="checkbox"/> L/Up/Tibia Load	<input type="checkbox"/> Fx	<input type="checkbox"/> Fy	<input checked="" type="checkbox"/> Fz
<input checked="" type="checkbox"/> L/Up/Tibia Moment	<input checked="" type="checkbox"/> Mx	<input checked="" type="checkbox"/> My	<input type="checkbox"/> Mz
<input checked="" type="checkbox"/> R/Up/Tibia Load	<input type="checkbox"/> Fx	<input type="checkbox"/> Fy	<input checked="" type="checkbox"/> Fz
<input checked="" type="checkbox"/> R/Up/Tibia Moment	<input checked="" type="checkbox"/> Mx	<input checked="" type="checkbox"/> My	<input type="checkbox"/> Mz
<input type="checkbox"/> L/Low/Tibia Load	<input type="checkbox"/> Fx	<input type="checkbox"/> Fy	<input type="checkbox"/> Fz
<input type="checkbox"/> L/Low/Tibia Moment	<input type="checkbox"/> Mx	<input type="checkbox"/> My	<input type="checkbox"/> Mz
<input type="checkbox"/> R/Low/Tibia Load	<input type="checkbox"/> Fx	<input type="checkbox"/> Fy	<input type="checkbox"/> Fz
<input type="checkbox"/> R/Low/Tibia Moment	<input type="checkbox"/> Mx	<input type="checkbox"/> My	<input type="checkbox"/> Mz

**POTENTIOMETERS:**

<input checked="" type="checkbox"/> Chest Deflection	<input type="checkbox"/> Ball Bearing	<input type="checkbox"/> Std	<input type="checkbox"/> Diap
<input type="checkbox"/> Left Knee Slider	<input type="checkbox"/> Ball Bearing	<input type="checkbox"/> Std	<input type="checkbox"/> Diap
<input type="checkbox"/> Right Knee Slider	<input type="checkbox"/> Ball Bearing	<input type="checkbox"/> Std	<input type="checkbox"/> Diap

**OTHER INTERNAL DUMMY INSTRUMENTATION:**

<input type="checkbox"/> L/R Femur Accels	<input type="checkbox"/> Long	<input type="checkbox"/> Vert	<input type="checkbox"/> Lat
<input type="checkbox"/> L/R Ankle soft bumper to fool stem			

**Dummy Instrumentation - External****CONTACT SWITCHES:**

<input type="checkbox"/> L / Knee Contact
<input type="checkbox"/> R / Knee Contact
<input type="checkbox"/> Header

**STRING POTS:**

<input type="checkbox"/> Pelvis
<input type="checkbox"/> L / Knee
<input type="checkbox"/> R / Knee

**OTHER EXTERNAL DUMMY INSTRUMENTATION:**

<input type="checkbox"/> Please color contrast Driver left and right shoes
--

**Dummy Instrumentation - Internal**

50H9

R/F

**ACCELS:**

Head C.G.  
 Chest  
 Pelvis

<input checked="" type="checkbox"/> Long	<input checked="" type="checkbox"/> Vert	<input checked="" type="checkbox"/> Lat
<input checked="" type="checkbox"/> Long	<input checked="" type="checkbox"/> Vert	<input checked="" type="checkbox"/> Lat
<input checked="" type="checkbox"/> Long	<input checked="" type="checkbox"/> Vert	<input checked="" type="checkbox"/> Lat

**LOAD CELLS:**

Neck Upper Load  
 Neck Upper Moment  
 Neck Lower Load  
 Neck Lower Moment  
 Thoracic Load  
 Thoracic Moment  
 Lower Lumbar Load  
 Lower Lumbar Moment  
 L/Femur Load  
 L/Femur Moment  
 R/Femur Load  
 R/Femur Moment  
 L/Up/Tibia Load  
 L/Up/Tibia Moment  
 R/Up/Tibia Load  
 R/Up/Tibia Moment  
 L/Low/Tibia Load  
 L/Low/Tibia Moment  
 R/Low/Tibia Load  
 R/Low/Tibia Moment

<input checked="" type="checkbox"/> Fx	<input checked="" type="checkbox"/> Fy	<input checked="" type="checkbox"/> Fz
<input type="checkbox"/> Mx	<input checked="" type="checkbox"/> My	<input type="checkbox"/> Mz
<input type="checkbox"/> Fx	<input type="checkbox"/> Fy	<input type="checkbox"/> Fz
<input type="checkbox"/> Mx	<input type="checkbox"/> My	<input type="checkbox"/> Mz
<input type="checkbox"/> Fx	<input type="checkbox"/> Fy	<input type="checkbox"/> Fz
<input type="checkbox"/> Mx	<input type="checkbox"/> My	<input type="checkbox"/> Mz
<input type="checkbox"/> Fx	<input type="checkbox"/> Fy	<input type="checkbox"/> Fz
<input type="checkbox"/> Mx	<input type="checkbox"/> My	<input type="checkbox"/> Mz
<input type="checkbox"/> Mx	<input checked="" type="checkbox"/> My	<input type="checkbox"/> Mz
<input type="checkbox"/> Mx	<input checked="" type="checkbox"/> My	<input type="checkbox"/> Mz
<input type="checkbox"/> Fx	<input type="checkbox"/> Fy	<input checked="" type="checkbox"/> Fz
<input checked="" type="checkbox"/> Mx	<input checked="" type="checkbox"/> My	<input type="checkbox"/> Mz
<input type="checkbox"/> Fx	<input type="checkbox"/> Fy	<input checked="" type="checkbox"/> Fz
<input checked="" type="checkbox"/> Mx	<input checked="" type="checkbox"/> My	<input type="checkbox"/> Mz
<input type="checkbox"/> Fx	<input type="checkbox"/> Fy	<input type="checkbox"/> Fz
<input type="checkbox"/> Mx	<input type="checkbox"/> My	<input type="checkbox"/> Mz
<input type="checkbox"/> Fx	<input type="checkbox"/> Fy	<input type="checkbox"/> Fz
<input type="checkbox"/> Mx	<input type="checkbox"/> My	<input type="checkbox"/> Mz

**POTENTIOMETERS:**

<input checked="" type="checkbox"/> Chest Deflection		<input type="checkbox"/> Ball Bearing	<input type="checkbox"/> Std	<input type="checkbox"/> Disp
<input type="checkbox"/> Left Knee Slider	<input type="checkbox"/> Ball Bearing	<input type="checkbox"/> Std	<input type="checkbox"/> Std	<input type="checkbox"/> Disp
<input type="checkbox"/> Right Knee Slider	<input type="checkbox"/> Ball Bearing	<input type="checkbox"/> Std	<input type="checkbox"/> Std	<input type="checkbox"/> Disp

**OTHER INTERNAL DUMMY INSTRUMENTATION:**

L/R Femur Accels  Long  Vert  Lat  
 L/R Ankle soft bumper to foot stem

**Dummy Instrumentation - External**

**CONTACT SWITCHES:**

L / Knee Contact  
 R / Knee Contact  
 Header

**STRING POTS:**

Pelvis  
 L / Knee  
 R / Knee

**OTHER EXTERNAL DUMMY INSTRUMENTATION:**

Please color contrast Driver left and right shoes

# List of Contacts

TA#: TB7925

	Last name	Phone	Pager	Profs
Requestor	D. Perrigo	84-50018	DPER	DPERRIGO
Approving supervisor	K. Arturs	39-06156	KART	KARTHURS
Build coordinator	E. Pagano	32-30645	BPAG	BPAGANO
Test engineer				
Sensor Engineer	M. Rucker	31-78160	MRUCKER	MRUCKER
Other				

	Last name	Phone	Pager	Profs
Seats	M. Jessup	84-51601	MJESSUP1	MJESSUP1
Instrument panel	M. Keranen	33-74146	NONE	MKERANEN
Restraints	N. Desai	39-03145	NDESAI	NDESAI
Air bag (driver)	R. Ruzhinkovsk	82-16978	RRUTHINO	RRUTHINO
Air bag (passenger)	R. Ruzhinkovsk	82-16978	RRUTHINO	RRUTHINO
Steering column				

CRIS 0011567

# Revisions List

TA#: TB7025

DATE	AUTHORIZATION	DESCRIPTION	PAGE #s



# VEHICLE SAFETY PACKAGE LAB WORK ORDER

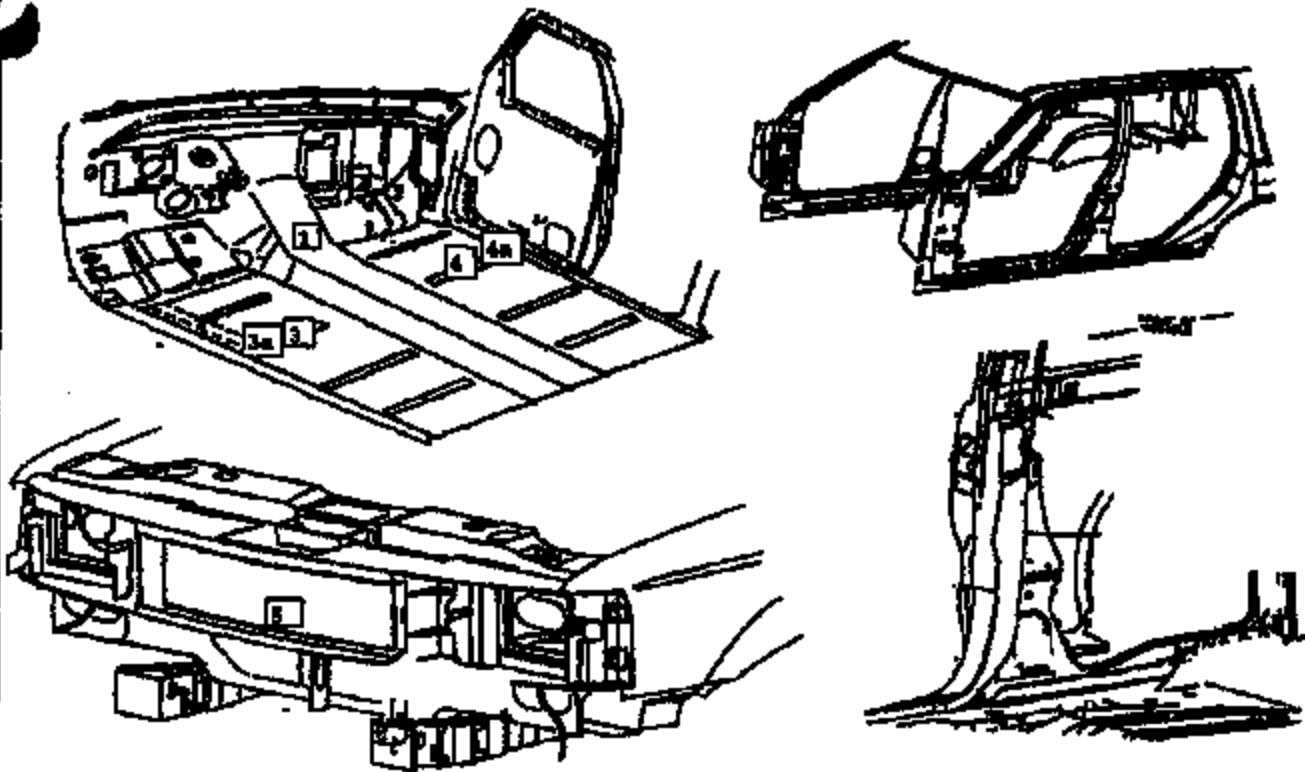
TAB:     TB7925    

DATE	MODEL	YEAR	CABINE		WORK ORDER NO.
08/11/1999	SEDAN	2000	D186		TB7925
		PHONE			
D. Perrigo		84-56018	T551		F09
		PHONE			TEST MODEL
B. Pagano		32-30645		90 Degree Frontal Barrier	
VIN		YEAR	TAG	TAG NUMBER	
0		YA800001		0	
<b>SEMI HOBBY</b>					
SGRP		MID POINT		FULL REAR	
<b>SEMI HOBBY</b>					
LH FRT		CENTER FRT		RH FRT	
LH REAR		CENTER REAR		RH REAR	
VEHICLE DELIVERED TO		D/A	BARRIER	BUILD SITE	
<b>ANY QUESTIONS CONTACT:</b>					
PETER J. SIMONE					
PHONE: (319) 59-4990					
PAGER: (319) 705-9983					
<b>DESCRIPTION OF JOB TO BE PERFORMED:</b>					

# SENSOR MAP

Vehicle ID:  
Build level: 1PP

Program: D188  
Test Mode: 86/90 BARRIER  
TA No.: TB7825



**Sensor Channels only**

Location Name	Supplier	Output	Nominal (+/-)	Max/Min	Serial #	
1 O/T_FLOOR_PAN_RCM (L&D HUBCf Location)	88009-1	VISTEON	DAB1_OUT	0	10	
	88009-2		DAB2_OUT	0	10	
	88009-3		PAB1_OUT	0	10	
	88009-4		PAB2_OUT	0	10	
	88009-5		D_PSP_OUT	0	10	
	88009-6		P_PSP_OUT	0	10	
	88009-7		D_SAB1_OUT	0	10	
	88009-8		P_SAB1_OUT	0	10	
	88009-9		Status	8	10	
1 C/F_FLOOR_PAN_L_RCM	88001	TRAX	On negon		NA	
5 C/RAD	VCS	VISTEON	VCS			
5 C/RAD	88001	TRAX	Next to VCS		NA	

T zero required; Assumed system power from vehicle wiring and battery - use provided harness

**REVISION LOG**

DESCRIPTION	DATE	PAGE AFFECT	APPR
Deleted then readded RCM channels	8/23/99	17	DRP

# BARRIER QUALITY ASSURANCE AND TRACKING FORM

**DATA ENGINEER:** Name not on list  
**TEST ORDER NUMBER:** TB7925  
**TEST ENGINEER:** M. Foster  
**VEHICLE TYPE:** D-100  
**REQUESTED SPEED:** 35 MPH  
**CRASH DATE:** 08/28/99  
**CRASH TIME:** 08:42  
**TOTAL CHANNELS:** 88

**WB REVIEW ENGINEER:** Lee  
**SITE:** 80 DEQ. FRONT FIBED BARRIER  
**TEST DESCRIPTION:** CAR  
**IMPACT TYPE:** CT  
**TEST TYPE:** CT  
**OK TO STRIP DATE:** 08/28/99  
**OK TO STRIP TIME:** 11:10  
**DUMMY CHANNELS:** 48

TEST DUMMY INFORMATION

FOR	NO.	TYPE	A.S.	DELTS	PMO	OTHER
L7	24	RYDM	Y	Y		
R7	22	RYDM	Y	Y		

11557

CHANNEL IDENTIFICATION			EQUIPMENT					ANOMALIES										DESCRIPTION	RESOLUTION	CAT						
TEST CHANNEL	LOCATION	ALT	TRANSDUCER	EXTENSION CABLE	CABLE	CONN PACKAGE	CONN CHANNEL	NO DATA	NOISED DATA	UNRECORDED DATA	LEVEL SHIFT	EXCESSIVE FULL SCALE	UNUSUAL PHASE	UNUSUAL FREQ	NOISE	IMPULSIVE PEAKING	NOISE	DATA OVERRANGE	DATA UNDERRANGE	EXCESSIVE VOLTAGE	DATA UNDERRANGE	DATA OVERRANGE	DATA ENGINEER REMARKS	TECHNICIAN REMARKS	CORR	REMARKS
56	CRASH 80	LONG	40284		GGR-4	3249	20	X			X												18-04ms	Cable cut by crush.	2	2
58	ENGINE TRANS TOP	LONG	43109		GGR-1	3249	17	X			X												21-04ms	Cable cut by crush.	2	2
59	ENGINE TRANS TOP	VERT	42420		CEV-3	3249	31				X												23-08ms	Block was hit.	2	2
60	ENGINE TRANS TOP	LAT	37628		GGR-2	3249	18				X												24-08ms	Block was hit.	2	2
63	DRIVER BQMS CURRENT 16T		44235		ALA-1	3249	5											X					44235, not 44232; no effect	Data in Class 1.	1	2
65	PASSENGER BQMS VOLTAGE		44222		AQU-1	3218	9											X					1st stage, not 1st stage			
66	PASSENGER BQMS VOLTAGE		44280		ADF-1	3218	8											X					1st stage, not 2nd stage			
67	PASSENGER BQMS CURRENT		44223		AQU-4	3218	12											X					2nd stage, not 1st stage			
68	PASSENGER BQMS CURRENT		44281		ADF-4	3218	8											X					1st stage, not 2nd stage			

CRITS 0011567

DUMMY MEASUREMENT REPORT  
CRASH BARRIER

V NUMBER 11567  
TEST ORDER NUMBER TB7925

DUMMY POSITION LEFT  
DUMMY ABBREV 50H3

FRONT

ABSOLUTE MEASUREMENTS (INCH)	MEASUREMENT
LEG (HYB II) / KNEE (HYB III) TO INST PANEL LEFT	3.80
LEG (HYB II) / KNEE (HYB III) TO INST PANEL RIGHT	3.40
ROCKER TARGETS TO GROUND FRONT	7.10
ROCKER TARGETS TO GROUND REAR	7.40
NOSE TO STEERING WHEEL	16.40
NOSE TO INSTRUMENT PANEL	
INSTRUMENT PANEL TO TORSO	
STEERING WHEEL TO TORSO	7.90
STEERING WHEEL TOP LEGS	2.30
KNEE SPREAD OS-OS (HYB II) / CL-CL (HYB III)	9.30
SEAT BACK ANGLE	27.60
PELVIC ANGLE	23.80
HEAD ANGLE	0.20
ROCKER ANGLE	0.70
NECK BRACKET ANGLE	0.00
BUMPER TARGET TO GROUND	

RELATIVE MEASUREMENTS (INCH)	WRT FRT RKR TGT
HEAD LAT	15.20
HEAD VERT	37.10
HEAD LONG	13.80

SHOULDER LAT  
SHOULDER VERT  
SHOULDER LONG

H-POINT LAT	11.20
H-POINT VERT	11.30
H-POINT LONG	9.30

O/S KNEE BOLT LAT	12.20
O/S KNEE BOLT VERT	15.60
O/S KNEE BOLT LONG	-6.70

DUMMY MEASUREMENT REPORT  
CRASH BARRIER

RUN NUMBER 11567  
JT ORDER NUMBER TB7925

DUMMY POSITION RIGHT FRONT  
DUMMY ABBREV 50H3

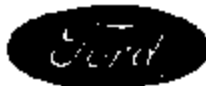
ABSOLUTE MEASUREMENTS (INCH)	MEASUREMENT
LEG (HYB II) / KNEE (HYB III) TO INST PANEL LEFT	3.60
LEG (HYB II) / KNEE (HYB III) TO INST PANEL RIGHT	3.50
ROCKER TARGETS TO GROUND FRONT	7.40
ROCKER TARGETS TO GROUND REAR	7.50
NOSE TO STEERING WHEEL	
NOSE TO INSTRUMENT PANEL	20.40
INSTRUMENT PANEL TO TORSO	16.90
STEERING WHEEL TO TORSO	
STEERING WHEEL TOP LEGS	
KNEE SPREAD OS-OS (HYB II) / CL-CL (HYB III)	7.80
SEAT BACK ANGLE	27.30
PELVIC ANGLE	22.30
HEAD ANGLE	0.40
ROCKER ANGLE	0.40
NECK BRACKET ANGLE	0.00
BUMPER TARGET TO GROUND	

RELATIVE MEASUREMENTS (INCH)	WRT FRT RKR TGT
HEAD LAT	13.80
HEAD VERT	37.80
HEAD LONG	12.90

SHOULDER LAT  
SHOULDER VERT  
SHOULDER LONG

H-POINT LAT	11.10
H-POINT VERT	12.60
H-POINT LONG	8.20

O/S KNEE BOLT LAT	12.20
O/S KNEE BOLT VERT	16.60
O/S KNEE BOLT LONG	-6.60



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**FINAL TEST REPORT**

**Global Test Operations  
Advanced Vehicle Technology**

**TO:** D. Parrigo

Test Order No.	T-B7752
Work Task W. O. No.	F16
Test Date	8/27/99
Date Reported	10/29/99
Sheet	1 of 18

**SUBJECT:** Crash Test 11569 (90° Front Fixed Barrier Impact at 35.0 ± 0.4 mph, 56.3 ± 0.6 km/h) - 2001 Tacoma (D186) 4-Door Wagon - 2001 Certification Program

**REQUESTED BY:** Vehicle Crash Safety Department, Advanced Vehicle Technology - D. Parrigo

**OBJECT:** To provide fuel system integrity data relative to the barrier crash test requirements of the current FMVSS No. 301 (U.S. CFR Docket No. 96-44, Notice 01, Canadian Gazette SOR/97-421)

**SUMMARY OF TEST RESULTS:**

- See Attachment 1 for fuel spillage data.
- See Attachment 2 for vehicle observations and non-FMVSS data.

The Test Authorization for this crash indicated that the vehicle is representative of a design level suitable for a certification test. To the best of my knowledge, the crash testing was performed on the same vehicle as identified in the Test Authorization; the results reported herein represent the performance of this specific vehicle, and the testing was performed in accordance with the listed procedures. Any procedure deviations significant to the test objectives above are identified in this report.

Concur: S. Leah  
Section Supervisor  
Operations Engineering Section

M. Foster  
Test Development Engineer

**VEHICLE DATA:**

**Make and Model** 2001 Taurus (D186) 4-Door Wagon (Confirmation Prototype)

**ID Numbers** IFAPP5983YG1000Z7, 306-W-997, DD140002

**Power Train** 3.0L, EFI, Automatic Transaxle

**Fuel Tank(s)** Usable Capacity: 18.0 gal. (68.1L)  
Test Condition: The "run dry" tank was filled with red-dyed Standard solvent to 95% of its rated usable capacity.

**Front Seat(s)** Type: Bucket  
Cover: Cloth  
Tracks/Position: LF: 6-Way Power/Mechanical Mid and Down  
RF: Manual/Mechanical Mid  
Seat Backs/Position: Adjustable/Not Measured  
Head Restraints/Position: Adjustable/Down  
Lumber Support/Position: LF: Power/Deflated

**Restraint System** LF: 3-Point Continuous Loop Active Belt and Steering Wheel Air Bag  
RF: 3-Point Continuous Loop Active Belt and Instrument Panel Air Bag

**Occupants** LF & RF: Water-Filled Containers (Simulating 50th Percentile Male, Hybrid II, Uninstrumented Dummies)

**Test Weight** Front: 2356 lb (1069 kg)  
Rear: 1919 lb (870 kg)  
Total: 4275 lb (1939 kg)  
The test weight includes:  

- the "as received" unloaded vehicle curb weight
- Maximum production options (simulated)
- 2 occupant(s) (described above)

**Tires** Front: P215/60R16 30 psi (207 kPa)  
Rear: P215/60R16 30 psi (207 kPa)  
Spare: Removed

**Bumpers** Front: Plastic Fascia/Bumper  
Rear: 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 March 3, 1998.
- EFT Fuel Systems Stoddard Solvent PHL, ST-11 REF. 4.

**2. Significant Deviations from T657-ST-14**

None

3. **Instrumentation:** The instrumentation equipment set up for this test was completed following approved procedures which require engineering sign-off after each major step. The instrumentation equipment and systems used meet the SAE J211 June 80 series of recommended practices (Instrumentation for Impact Tests J211, J211a, or J211b) and were calibrated using secondary standards that are traceable to the National Institute of Standards and Technology (NIST).

**4. Remarks**

Crash movies, pre- and post-crash still images of the test vehicle and copies of this report are available through the Operations Engineering Section, Safety Laboratories Department, GTO. The crash still images are stored and archived on CD ROMs. The file names of the still images are listed under crash number and a three digit sequence number which are 11569001 through 11569075.



ATTACHMENT 1

Fuel System Integrity (CFMVSS 301)

- There was no fuel system spillage during or for thirty minutes following impact.
- There was fuel system spillage from the fuel tank during the post-crash static rollover test, estimated to be 0.1 ounces.
- The fuel system held pressure during a post-crash pressure check.

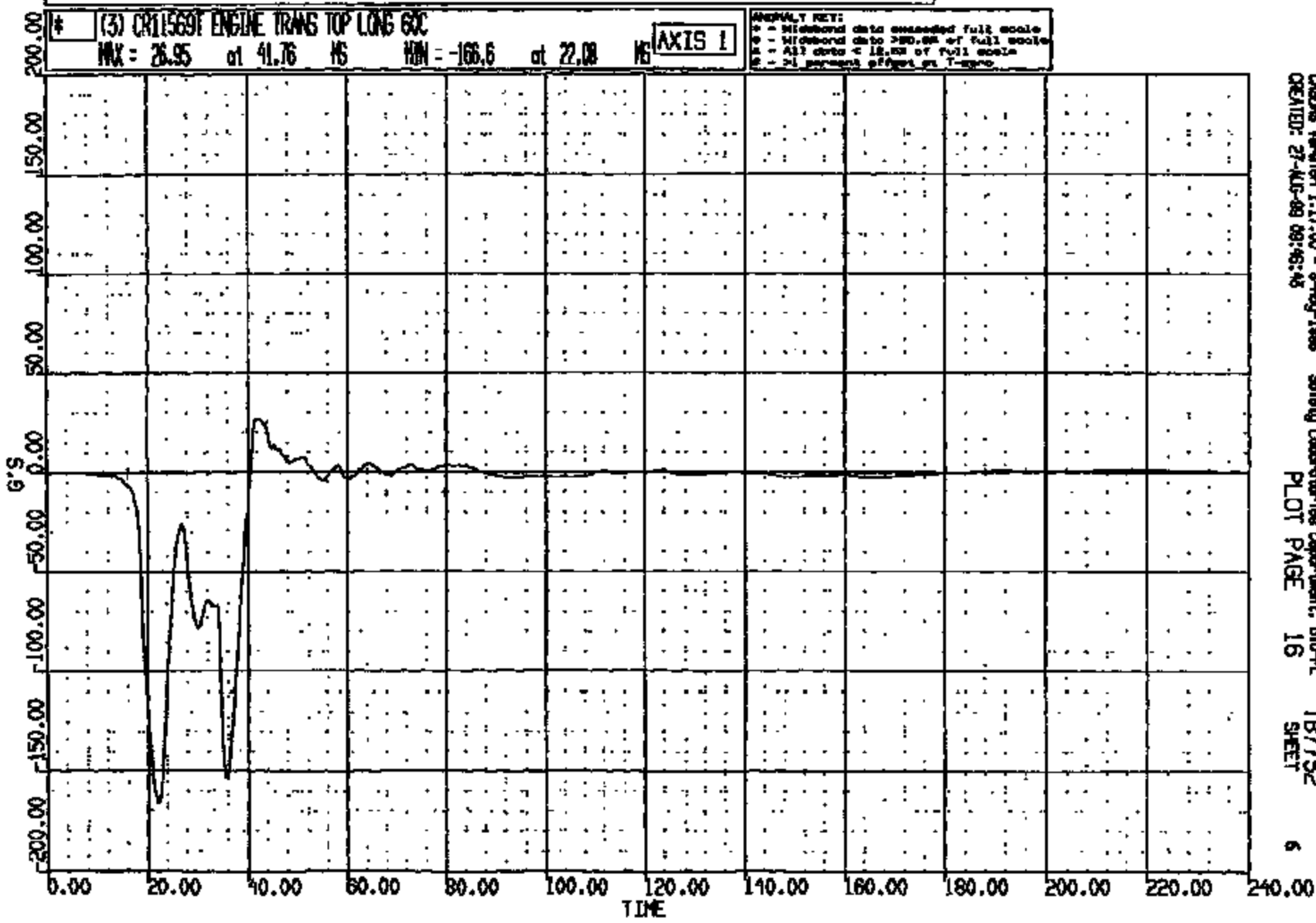
**ATTACHMENT 2**

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

CR R: 11569 TO: T87752 DATE: 990827 09:28:17  
2001 D-198



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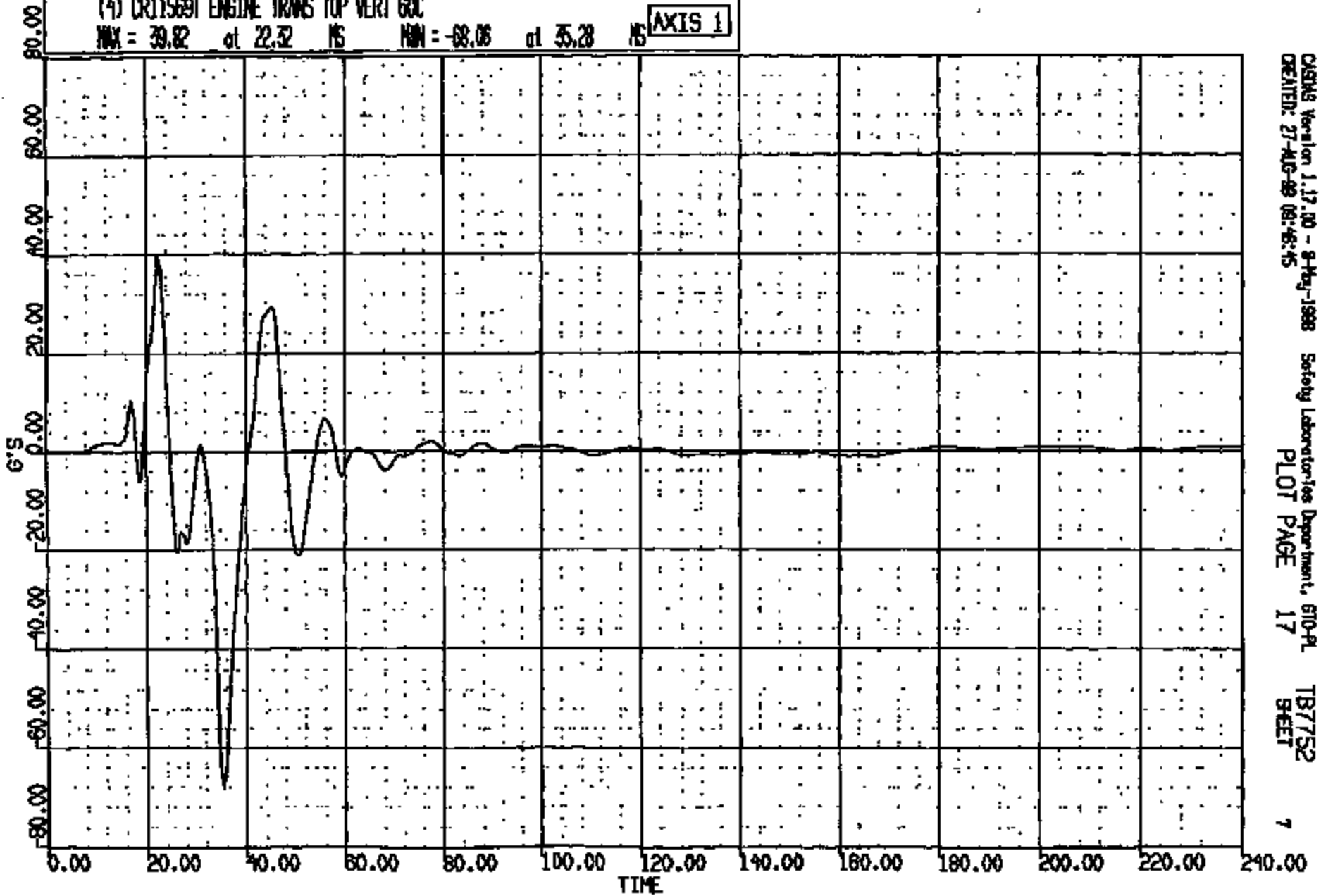
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2001 D-186

(4) CR11569T ENGINE TRIMS TOP VERT GOC

MAX = 39.82 at 22.52 MS MIN = -68.06 at 35.28 MS

AXIS 1



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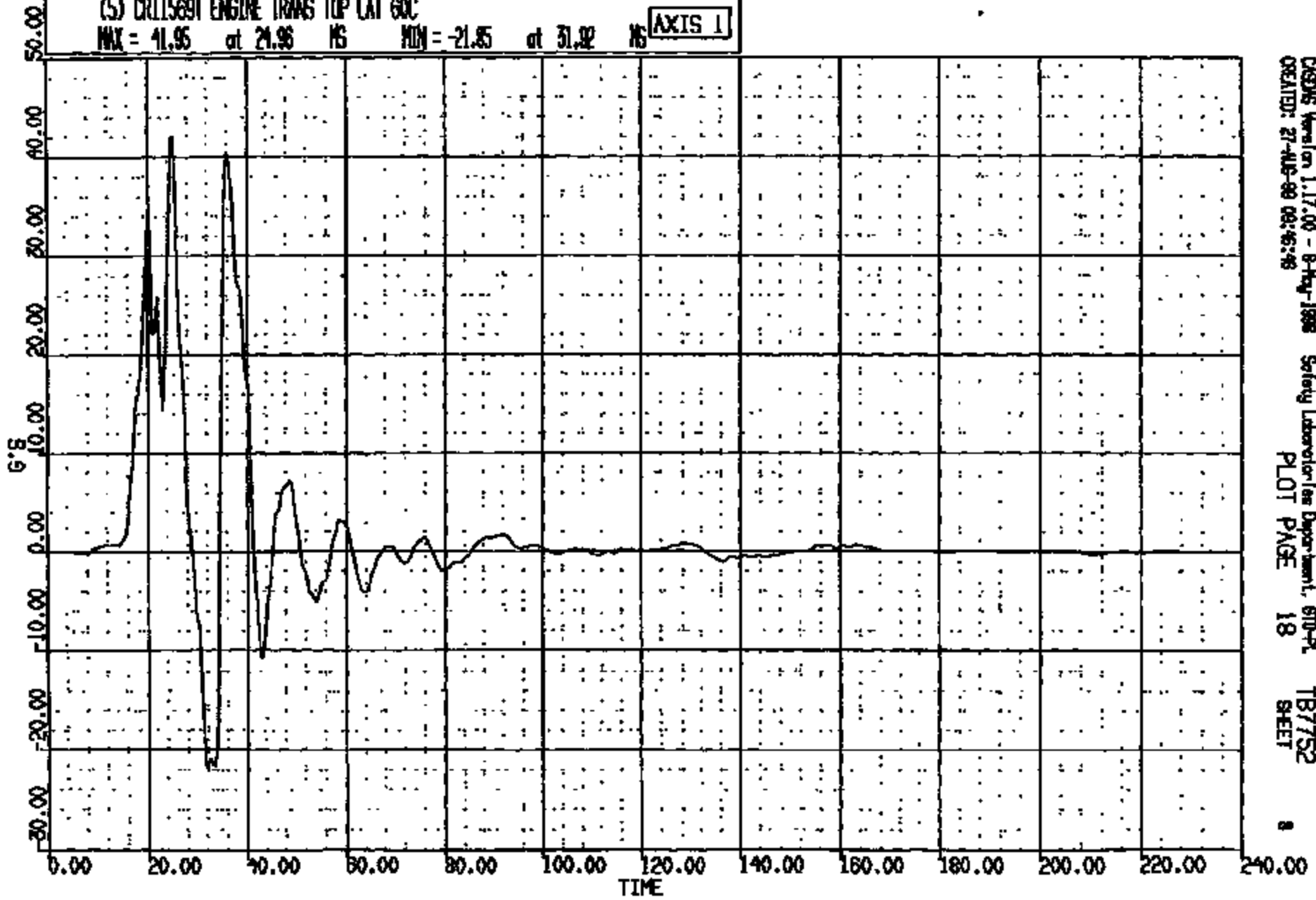
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TB7752  
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R001 0-100

(5) CR11569T ENGINE TRANS TOP LAT GOC  
MAX = 41.95 at 21.95 MS MIN = -21.85 at 31.92 MS

AXIS 1



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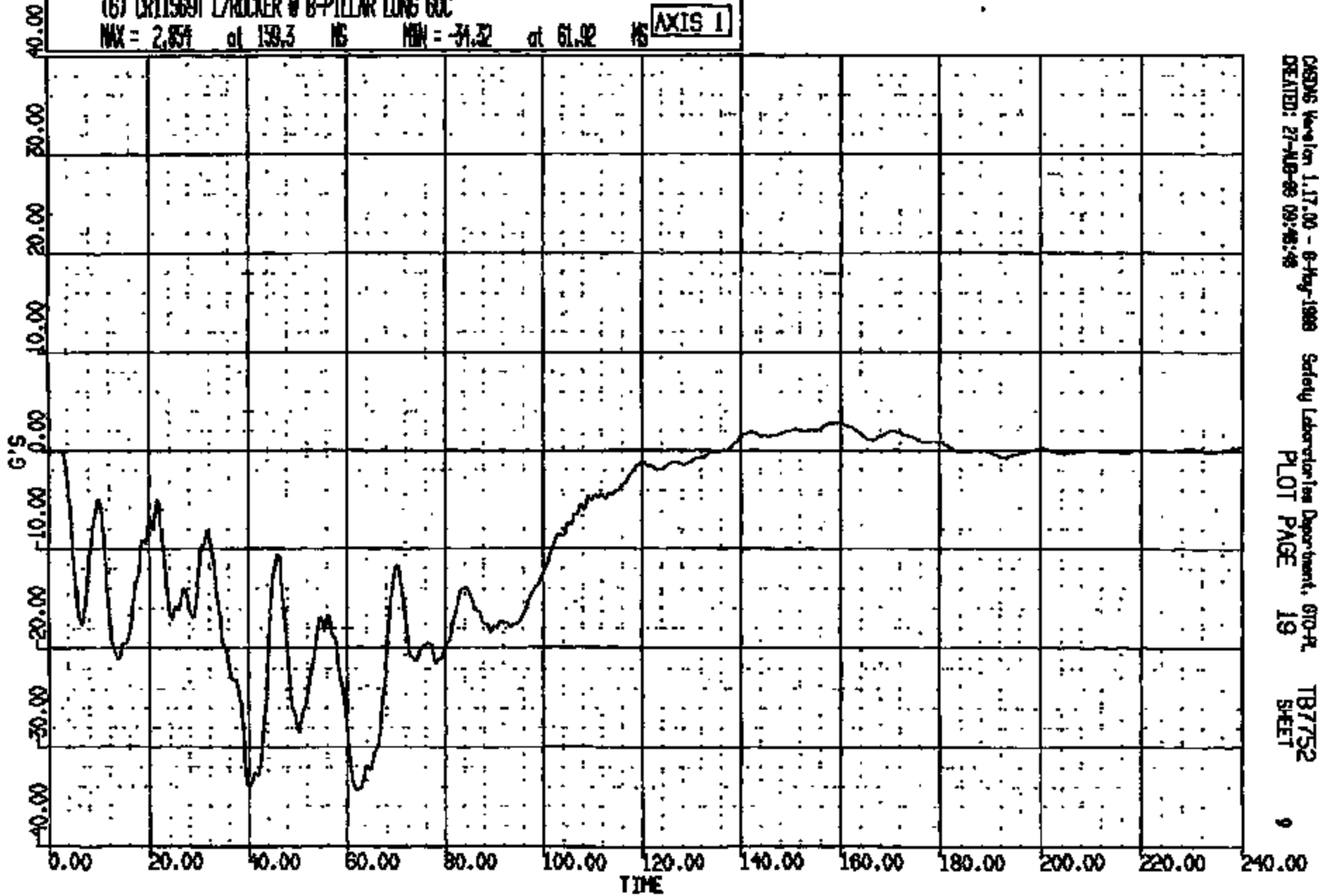
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2001 D-188

(6) CR11569T L/ROCKER @ B-PILLAR LONG GOC

MAX = 2.854 at 138.3 MS MIN = -34.32 at 61.92 MS

AXIS 1



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Safety Laboratories Department, 610-Ft.  
PLOT PAGE 19

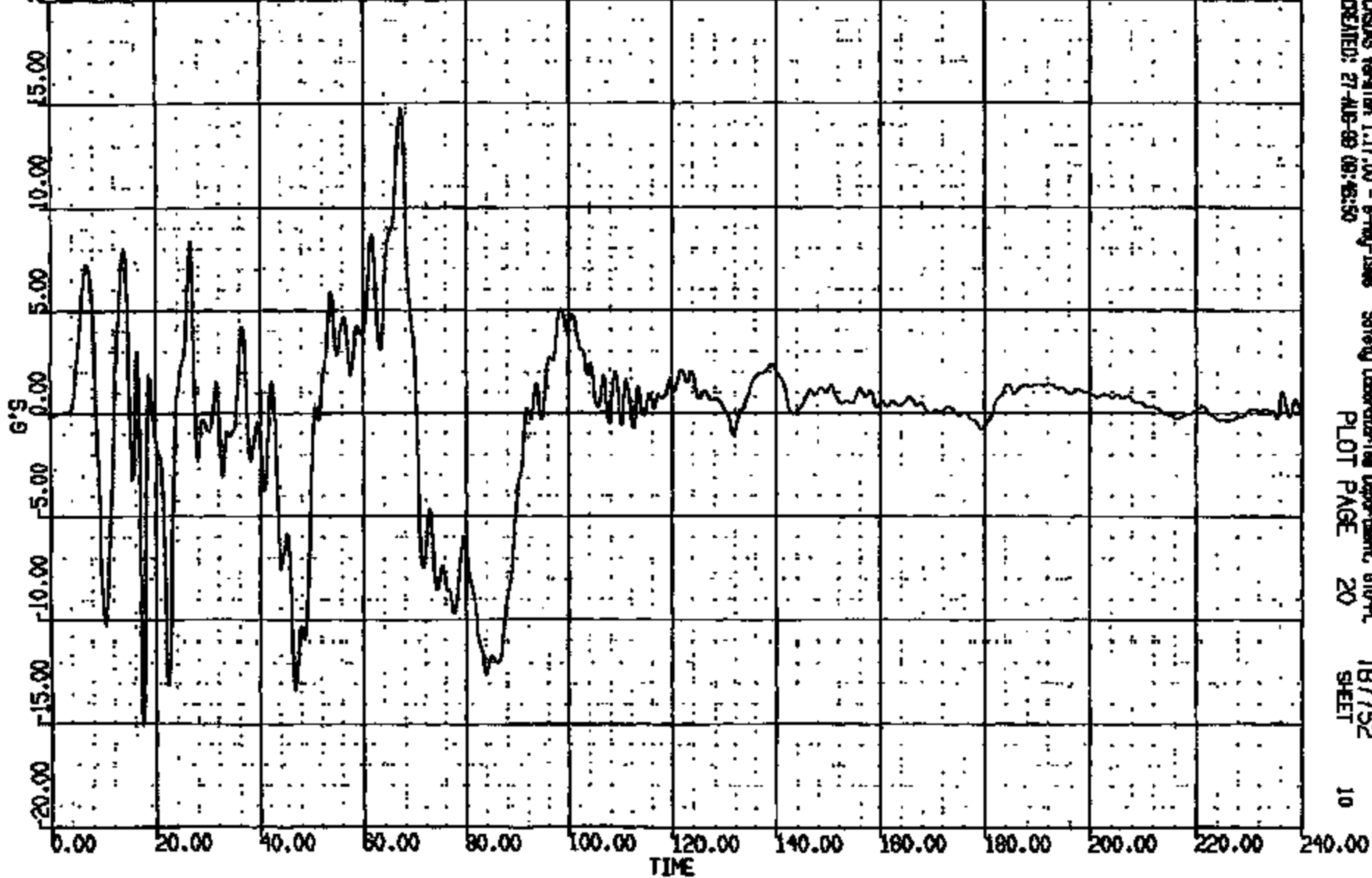
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CRIS 0011569

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(7) CR11569T L/ROCKER @ B-PILLAR VERT GOC  
MAX = 14.75 at 67.12 MS MIN = -15.06 at 17.32 MS AXIS 1

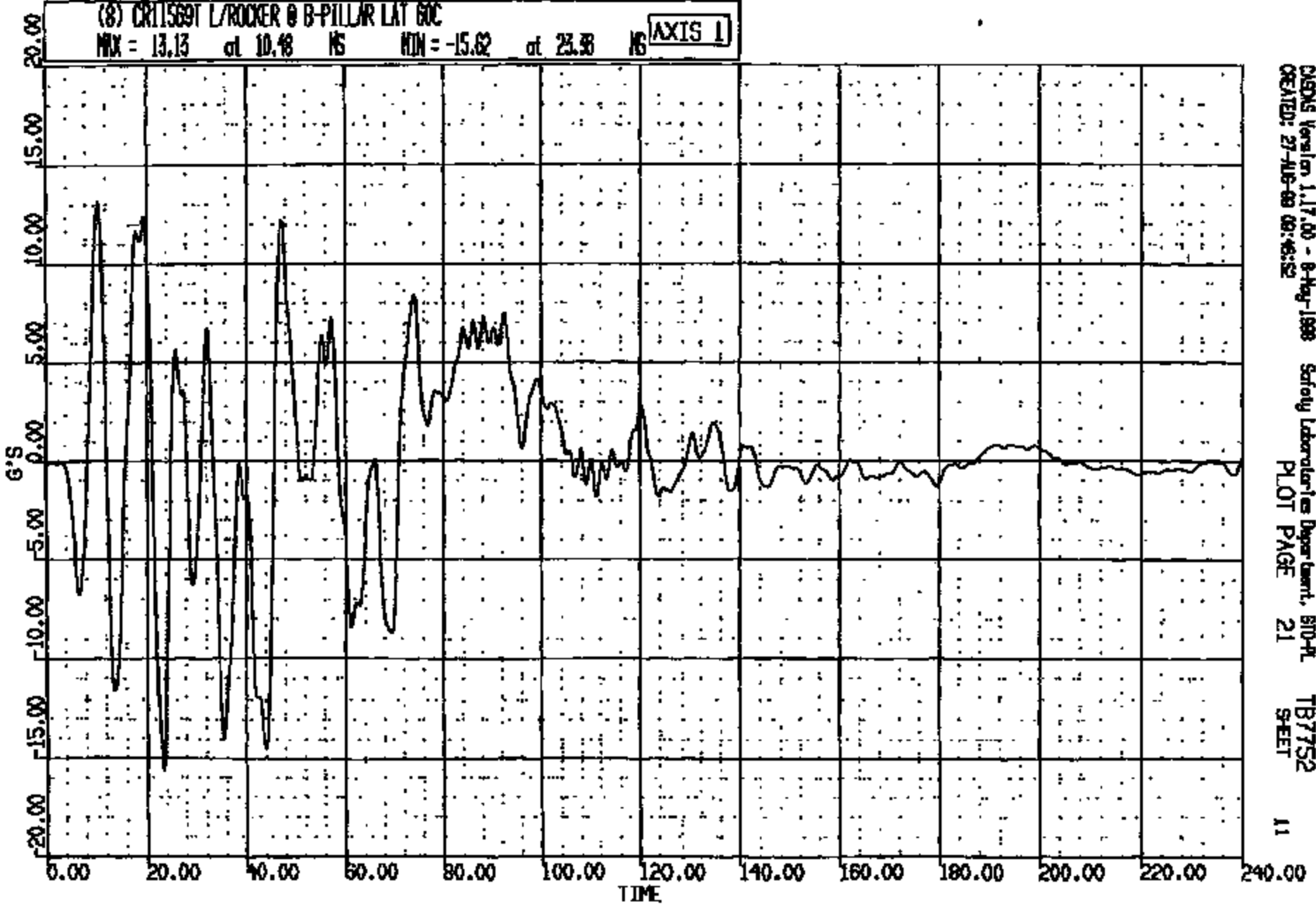


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CRIS 0011569

NO. R: 11569 TO: TB7752 DATE: 090827 09:26:17  
NO. 1 D-160

(8) CR11569T L/ROCKER @ B-PILLAR LAT 60C  
MAX = 13.13 at 10.48 NS MIN = -15.62 at 23.38 NS **AXIS 1**



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SHEET 11

CRIS 0011569

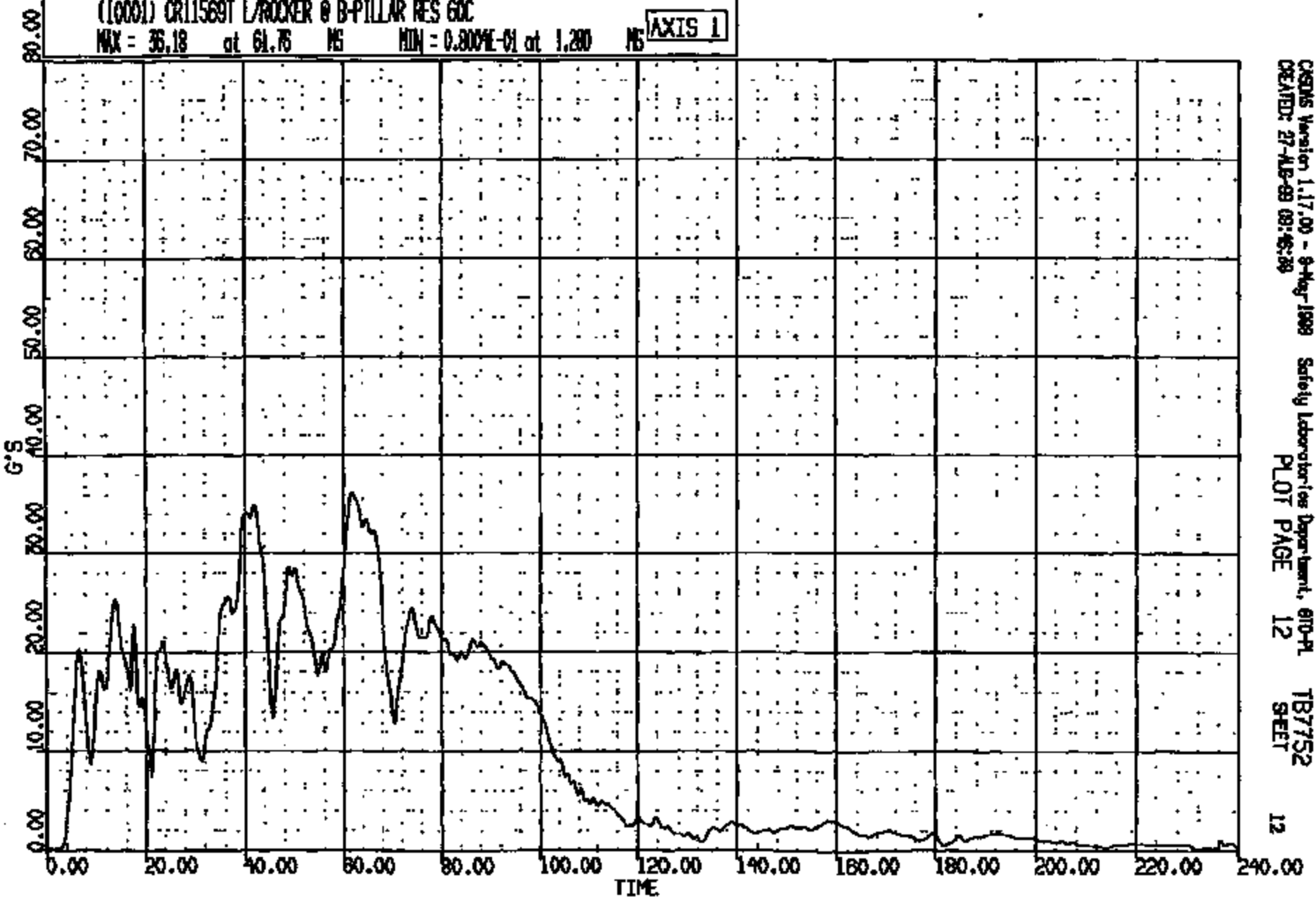


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(1000) CR11569T L/ROCKER @ B-PILLAR RES GOC

MAX = 36.18 at 61.75 MS MIN = 0.000E-01 at 1.200 MS

AXIS 1

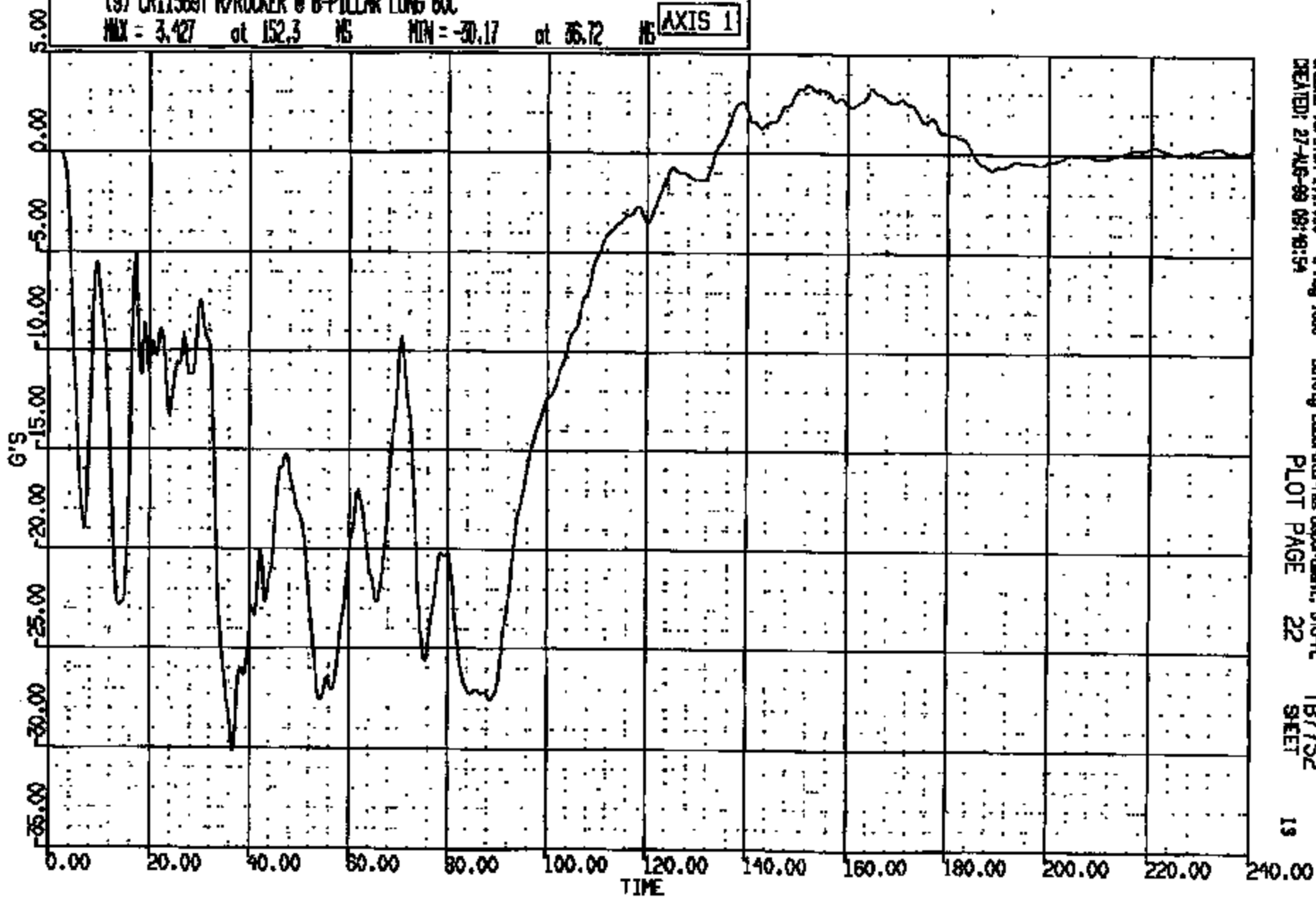


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SHEET 12

CRIS 0011569

CR R: 11569 TO: TB7752 DATE: 090927 09:28:17  
2001 0-188

(9) CR11569T R/ROCKER @ B-PILLAR LONG 60C  
MAX = 3.427 at 152.3 MS MIN = -20.17 at 36.72 MS **AXIS 1**



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Safety Laboratories Department, 610-R  
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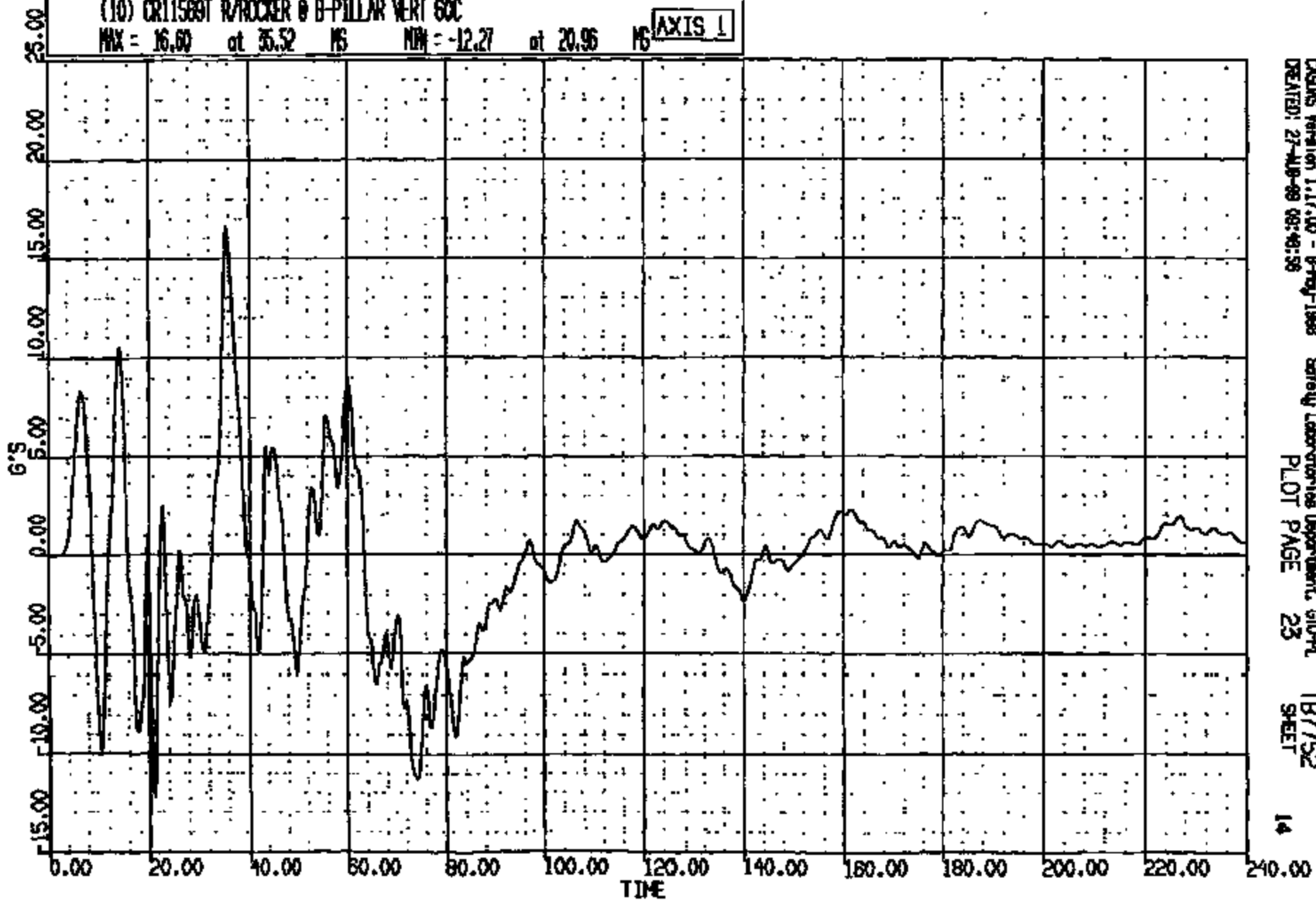
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CRIS 0011569

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2001 D-188

(10) CR11589T R/ROCKER @ B-PILLAR VERT 60C  
MAX = 16.00 at 35.52 MS MIN = -12.27 at 20.96 MS AXIS 1



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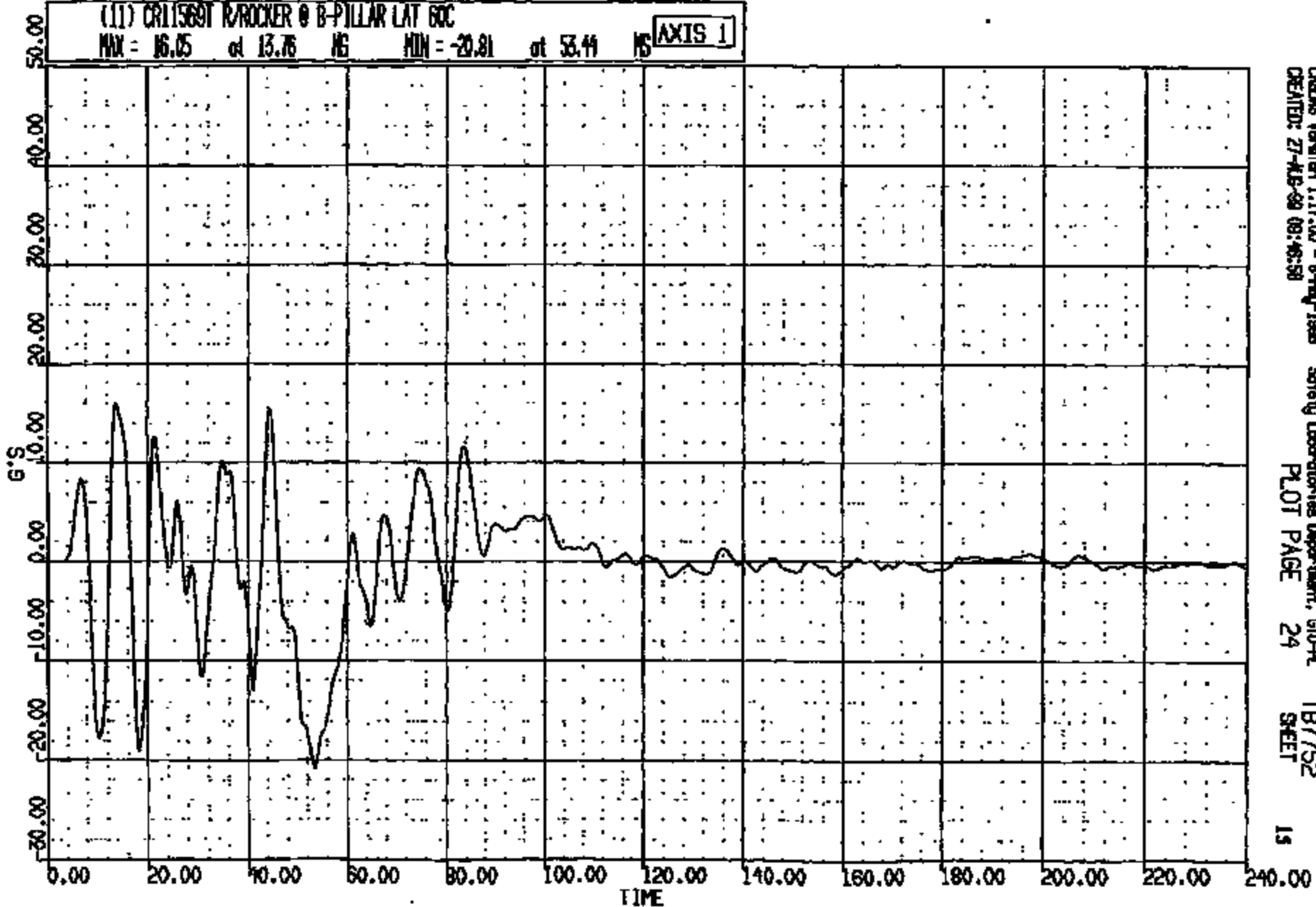
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(11) CR11569T R/ROCKER @ B-PILLAR LAT 60C

MAX = 16.05 at 13.76 MS MIN = -20.81 at 53.44 MS

AXIS 1



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Safety Laboratories Department, STD-PL

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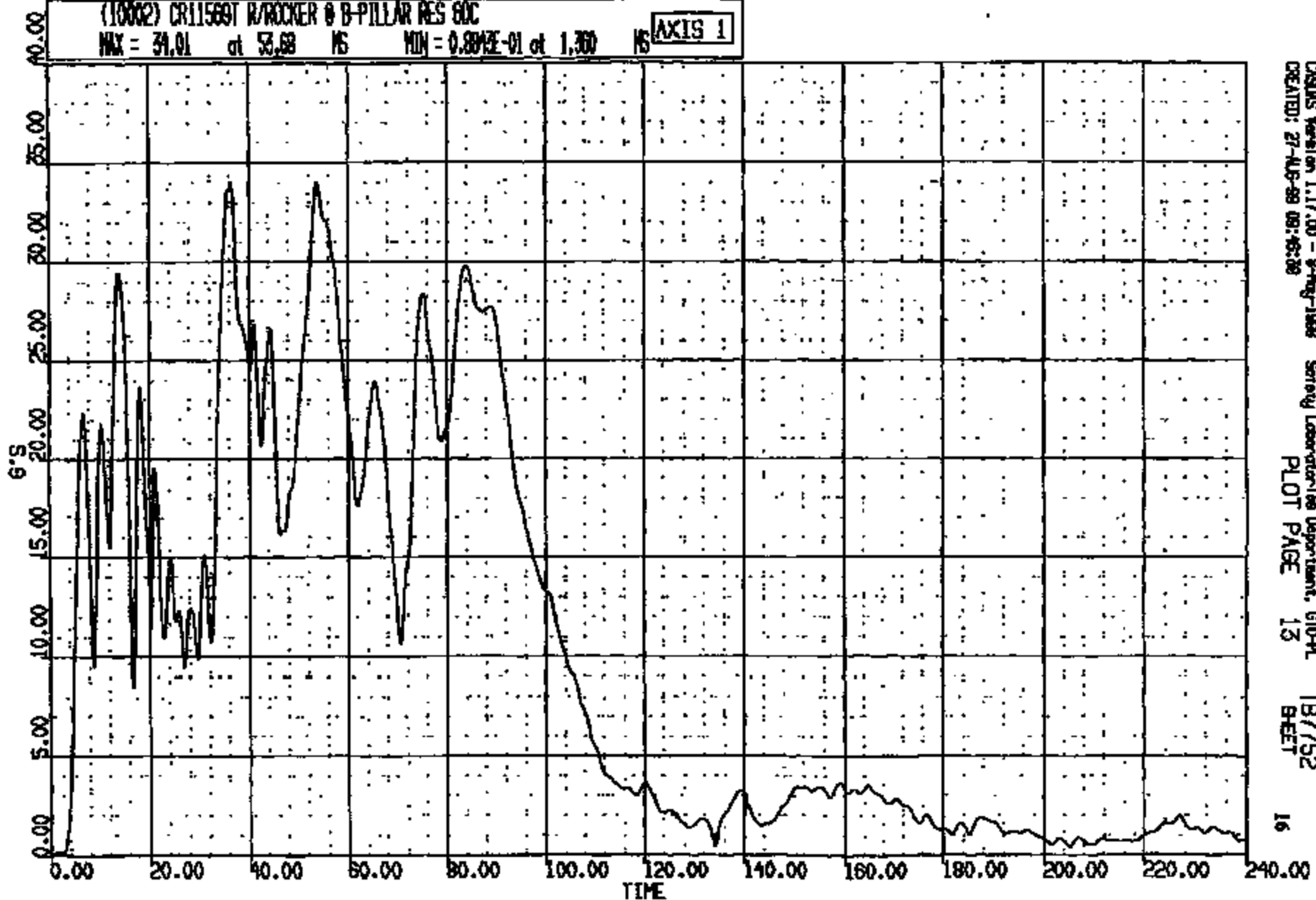
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(10002) CR11569T W/ROCKER @ B-PILLAR RES 80C

MAX = 31.01 at 53.88 MS MIN = 0.804E-01 at 1.300 MS

AXIS 1



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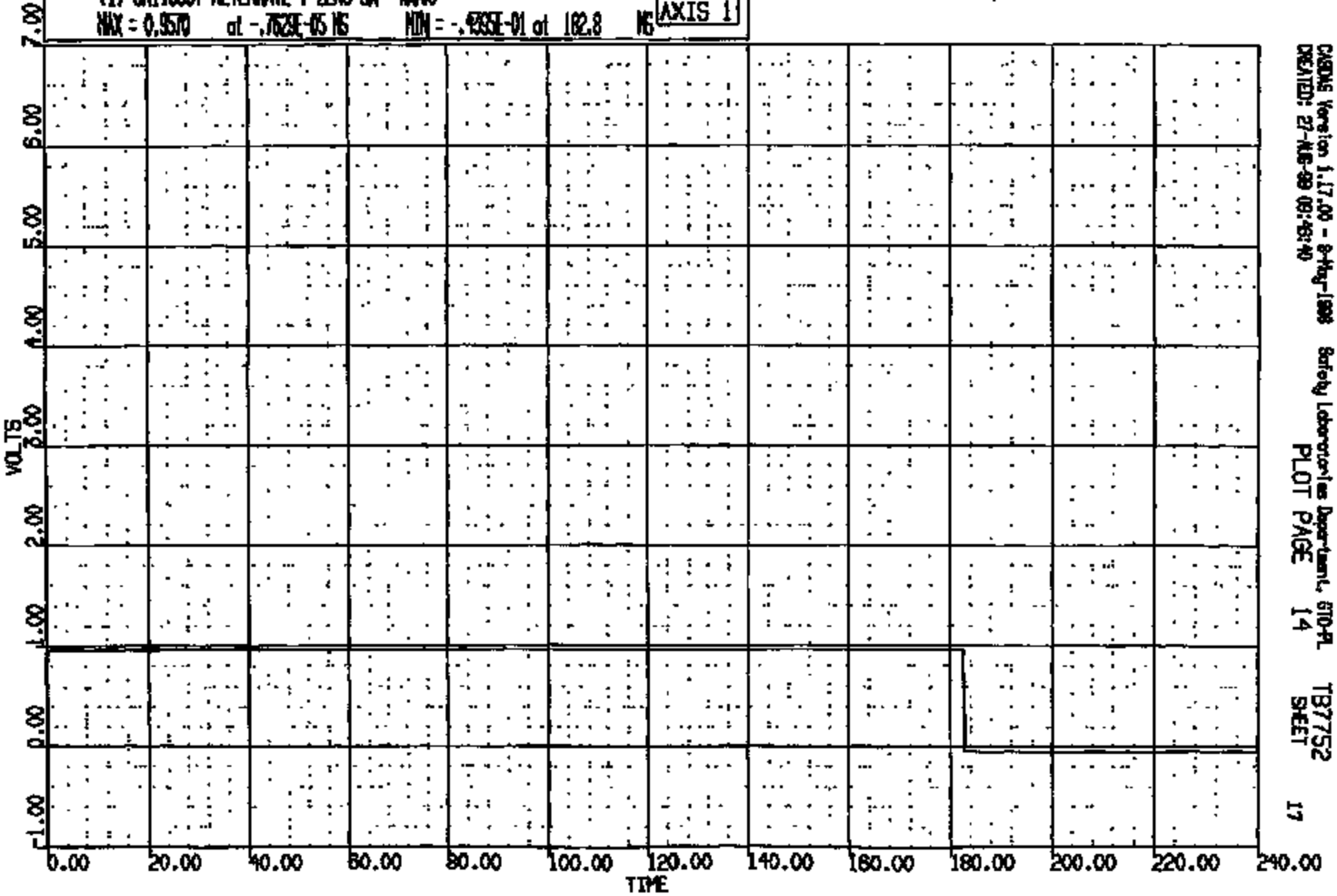
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CR R: 11569 TO: T87752 DATE: 820827 09:28:17  
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(1) CRUISEBT ALTERNATE T-ZERO SW 4000

MAX = 0.9570 at -.753E-05 NS MIN = -.433E-01 at 182.8 NS

AXIS 1



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PLOT PAGE 14

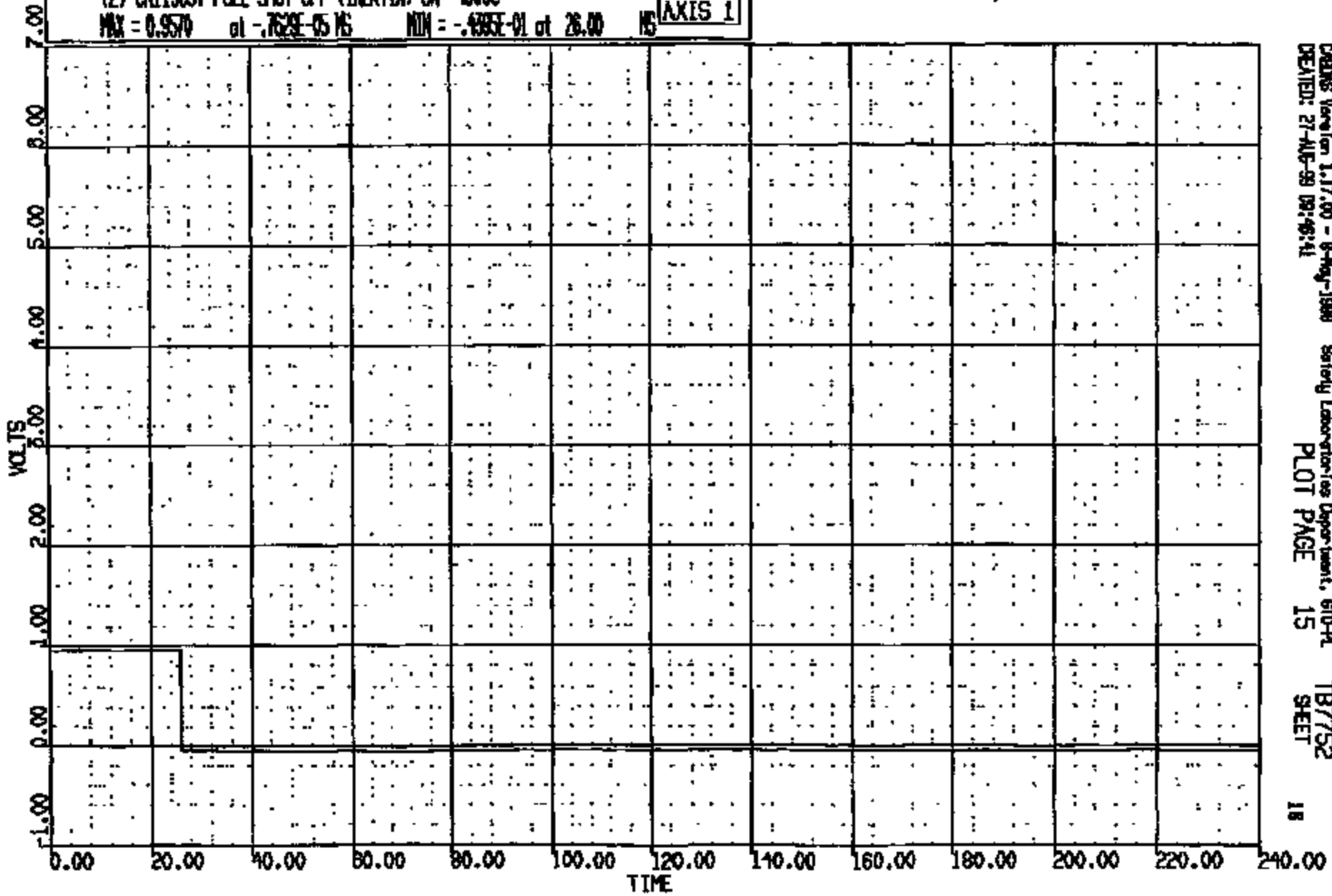
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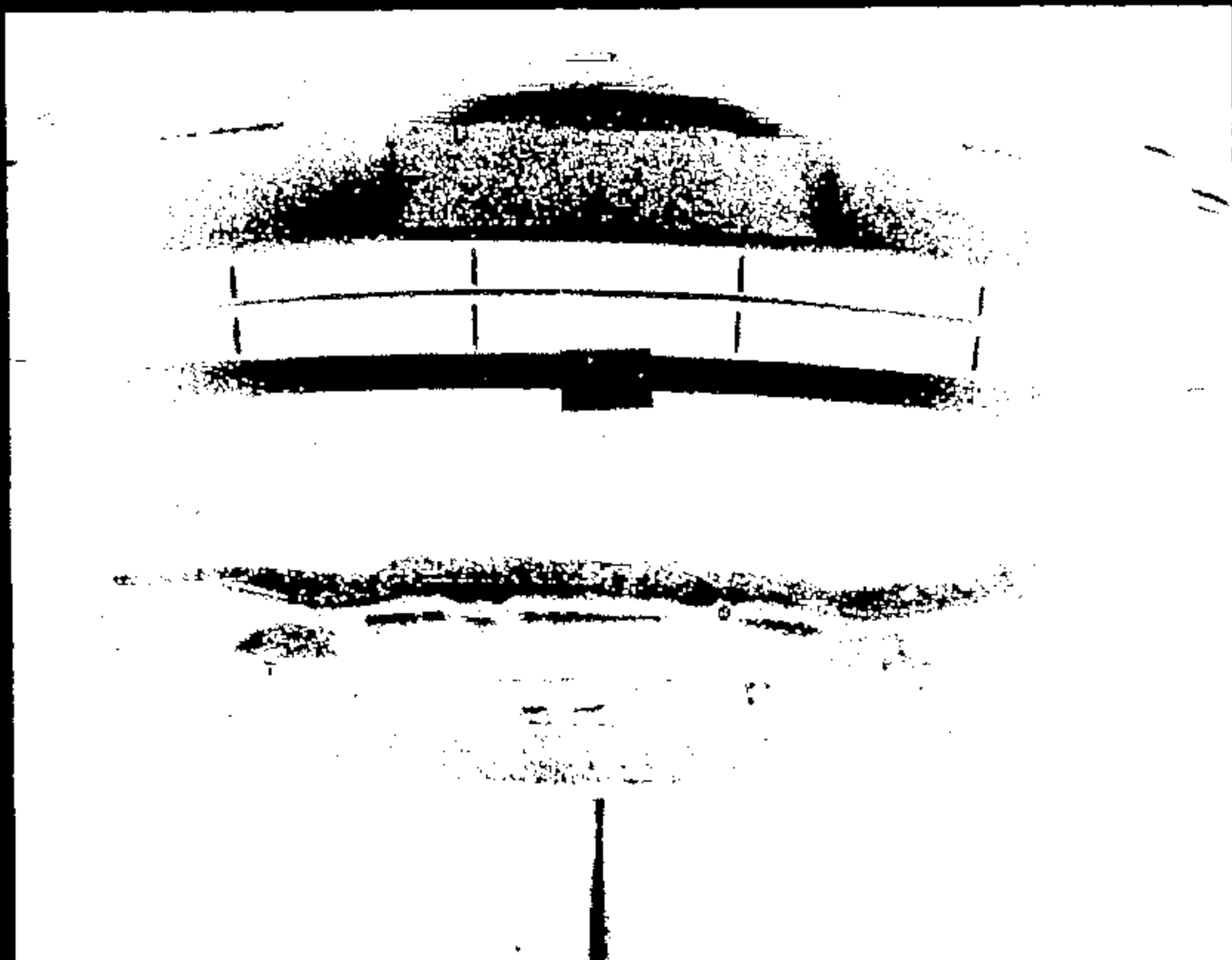
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R001 D-188

(2) CR11569 FUEL SHUT OFF (INERTIA) SW 400C  
MAX = 0.9570 at -7.62E-05 MS MIN = -.493E-01 at 26.00 MS **AXIS 1**



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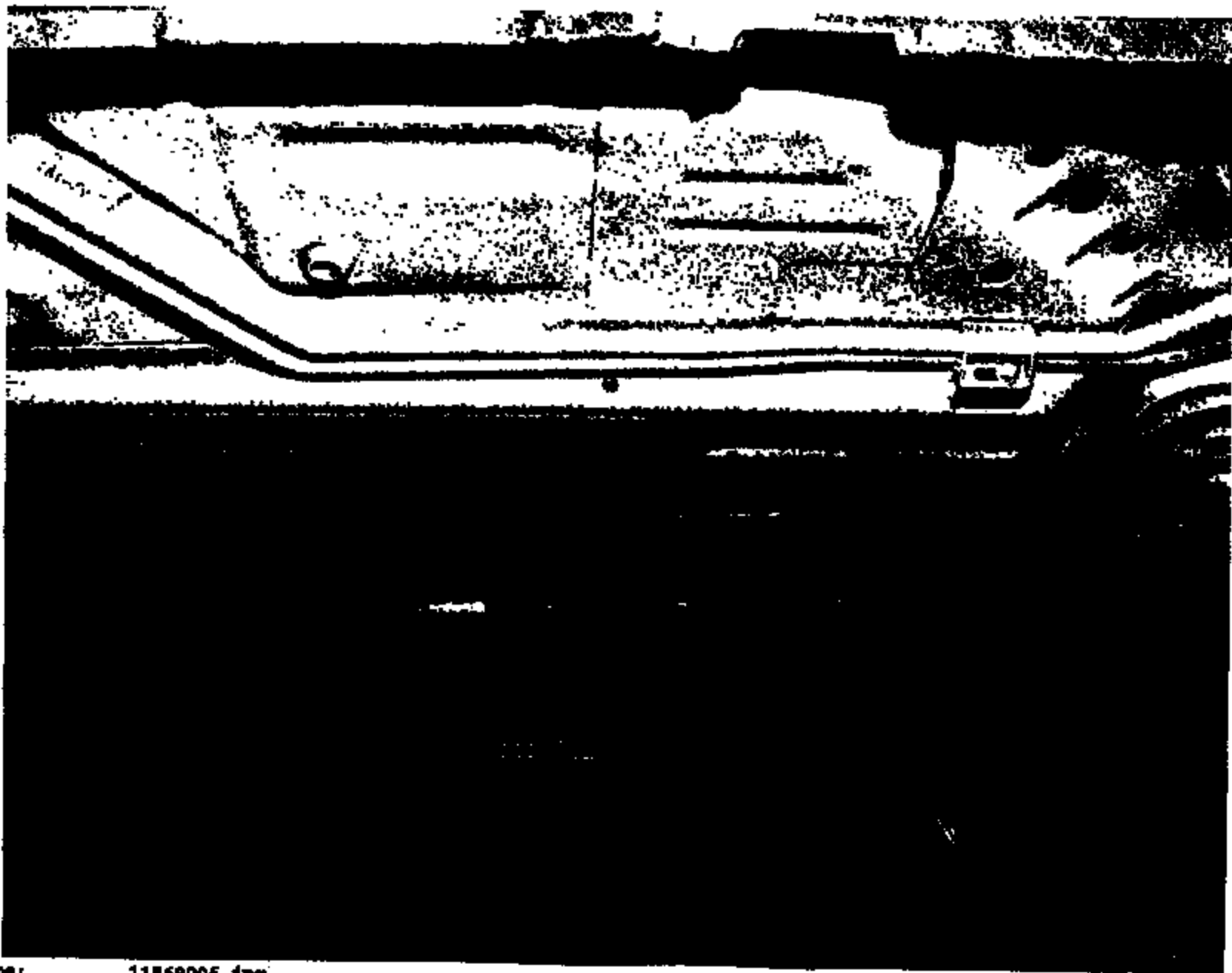
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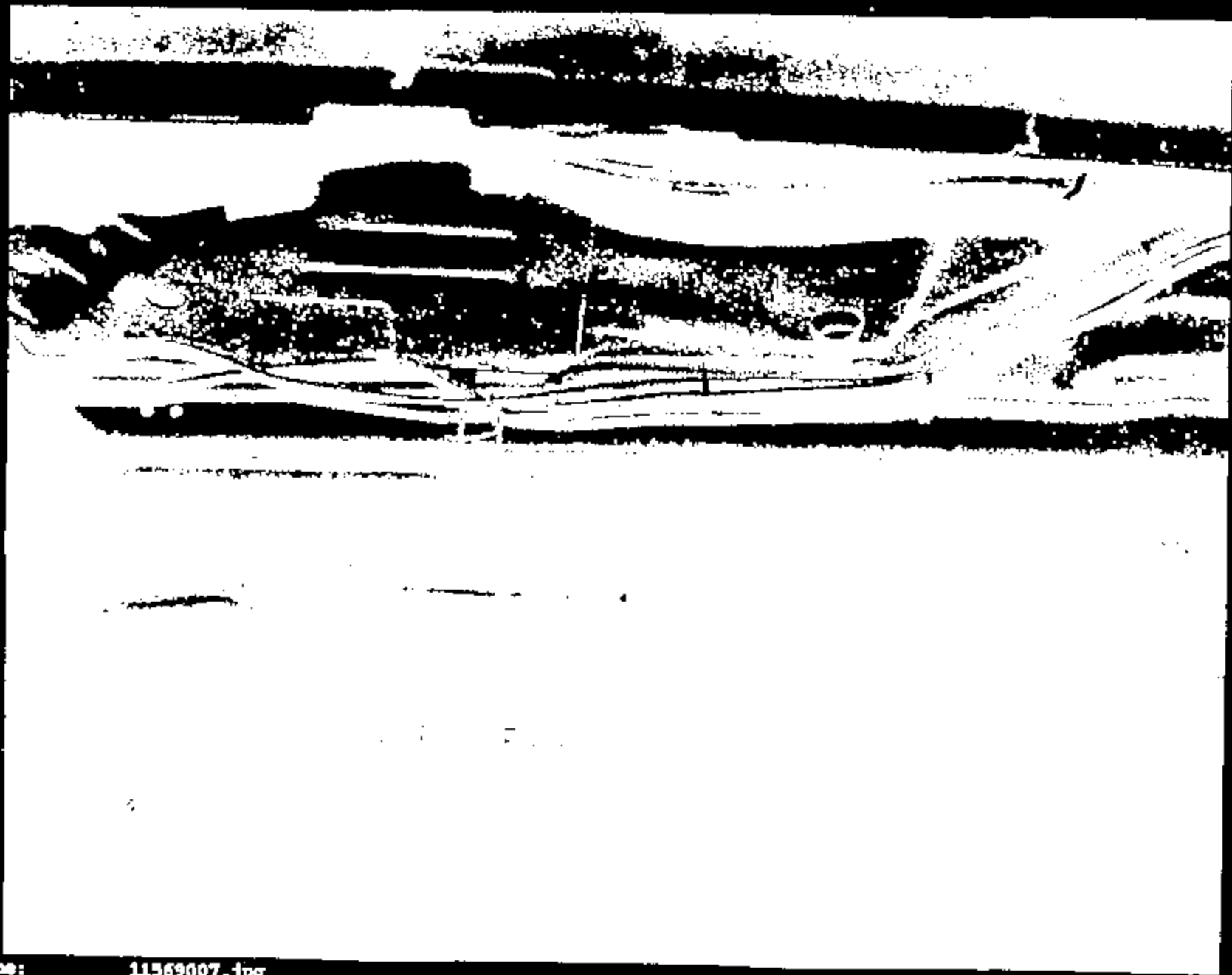
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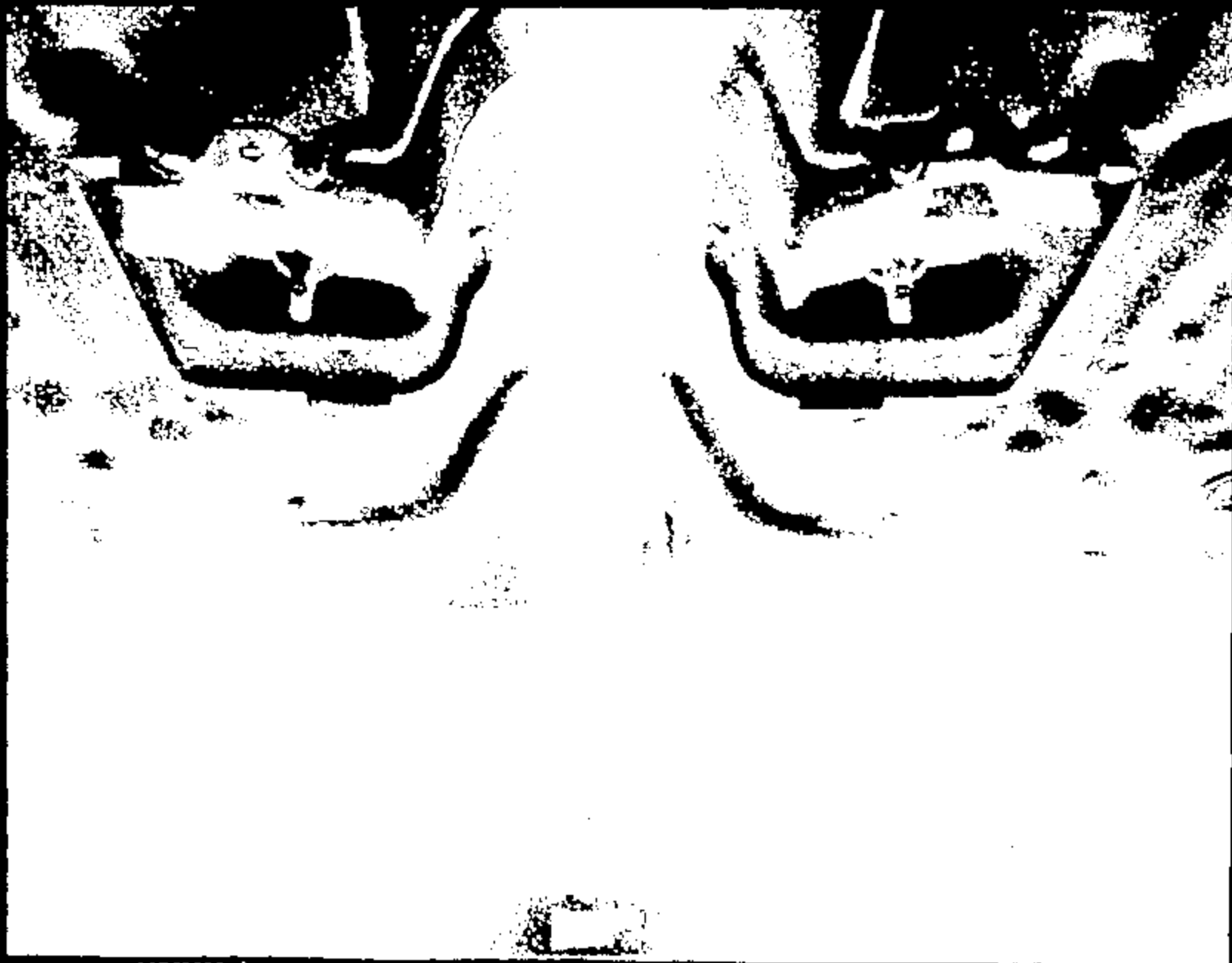
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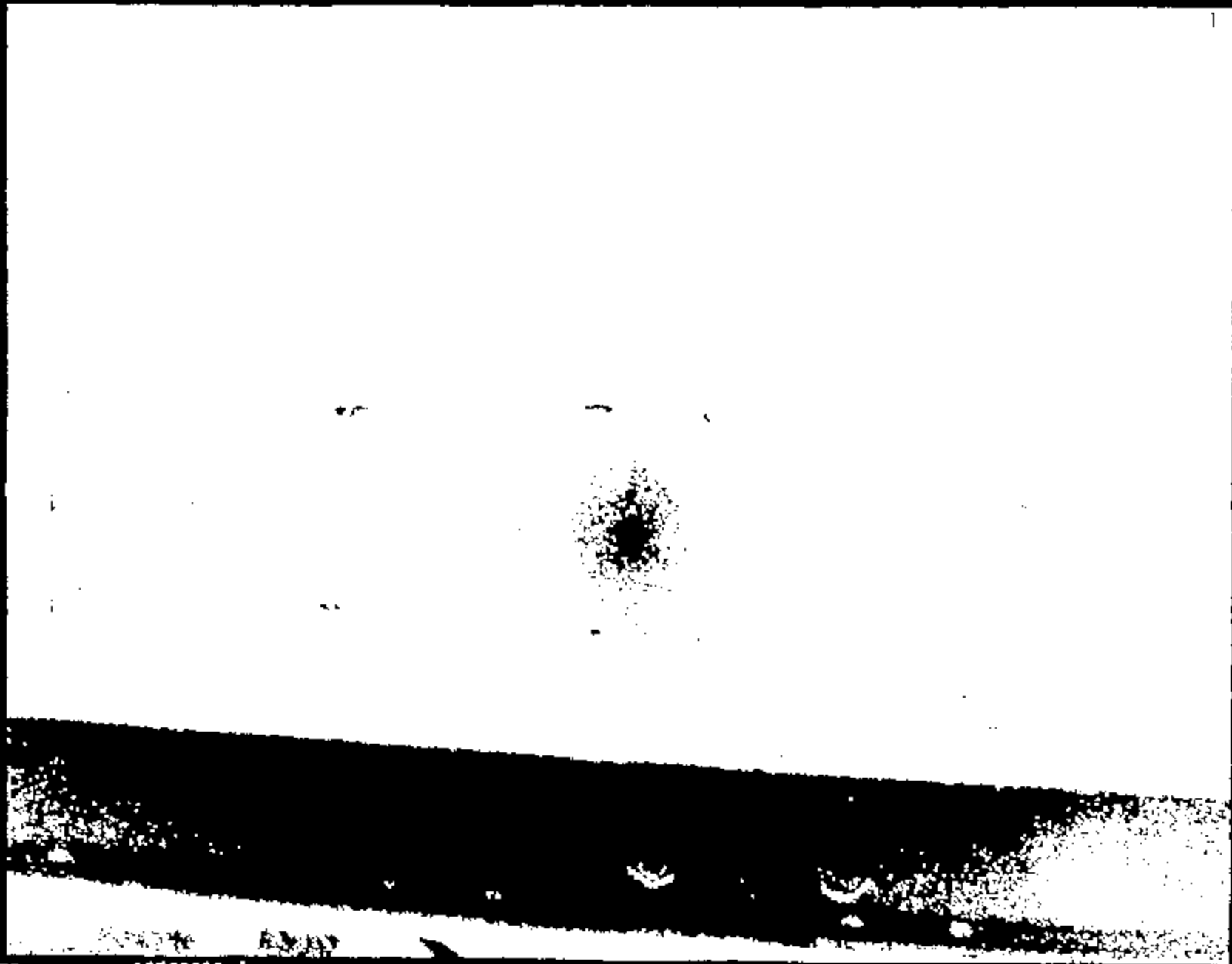
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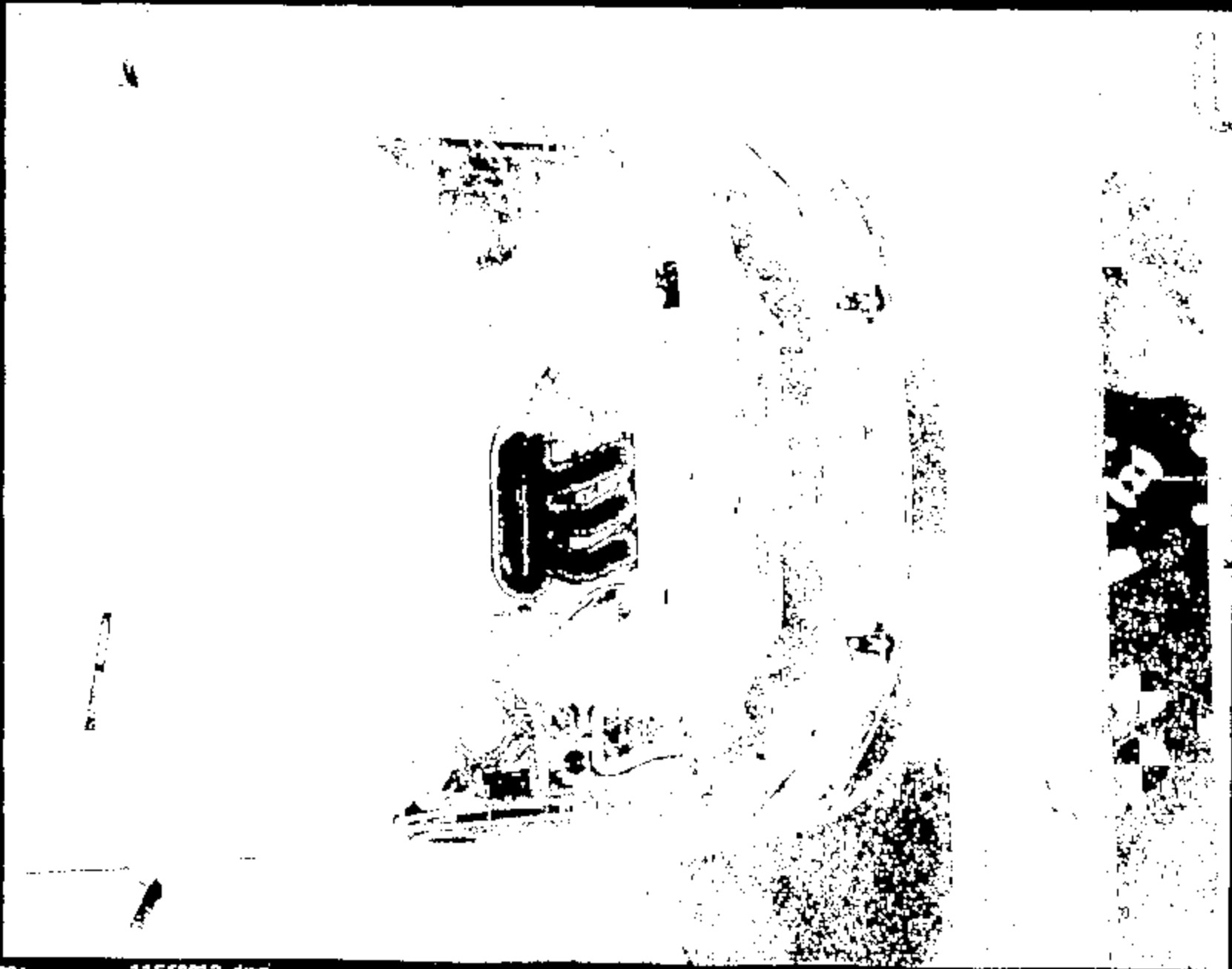
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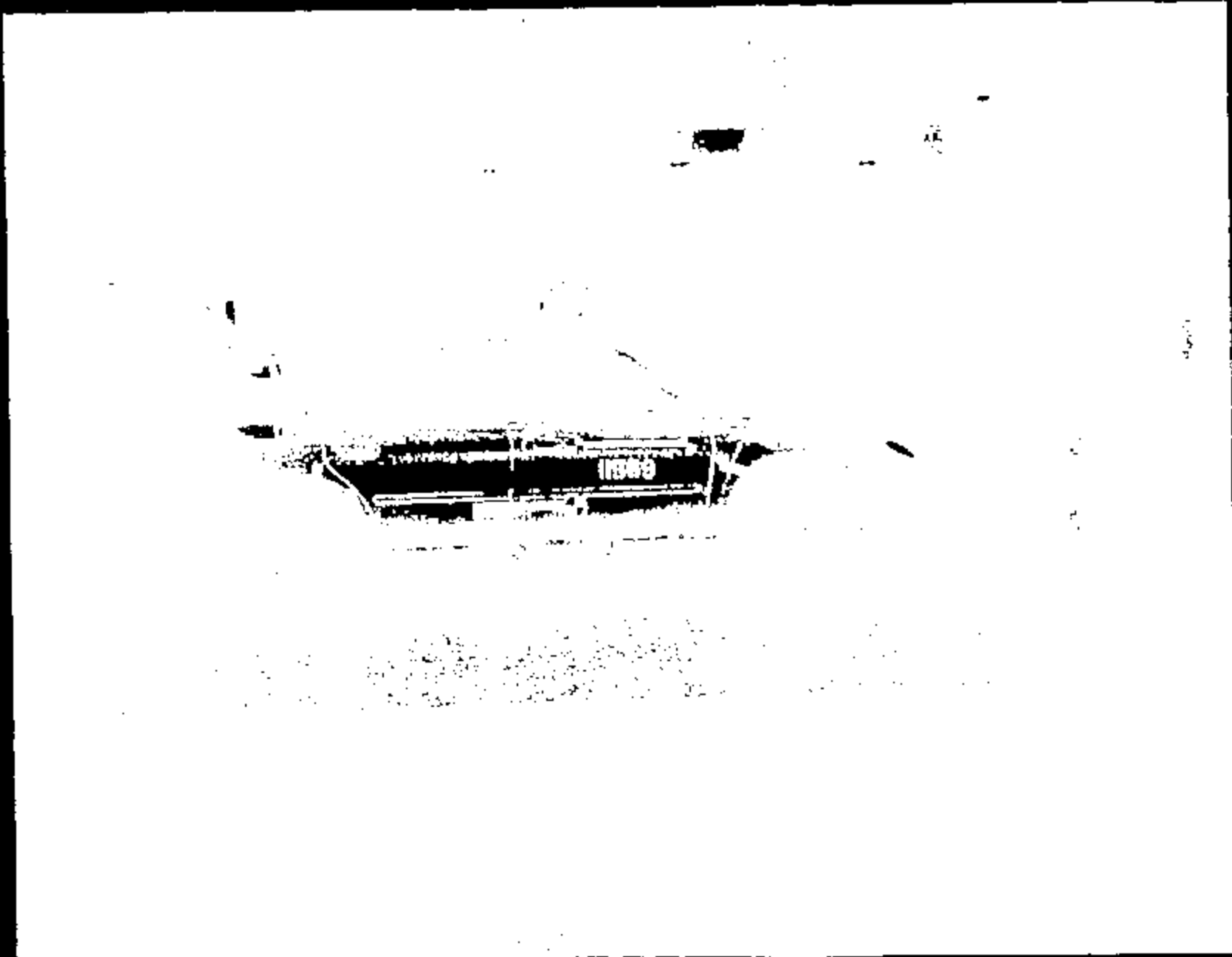
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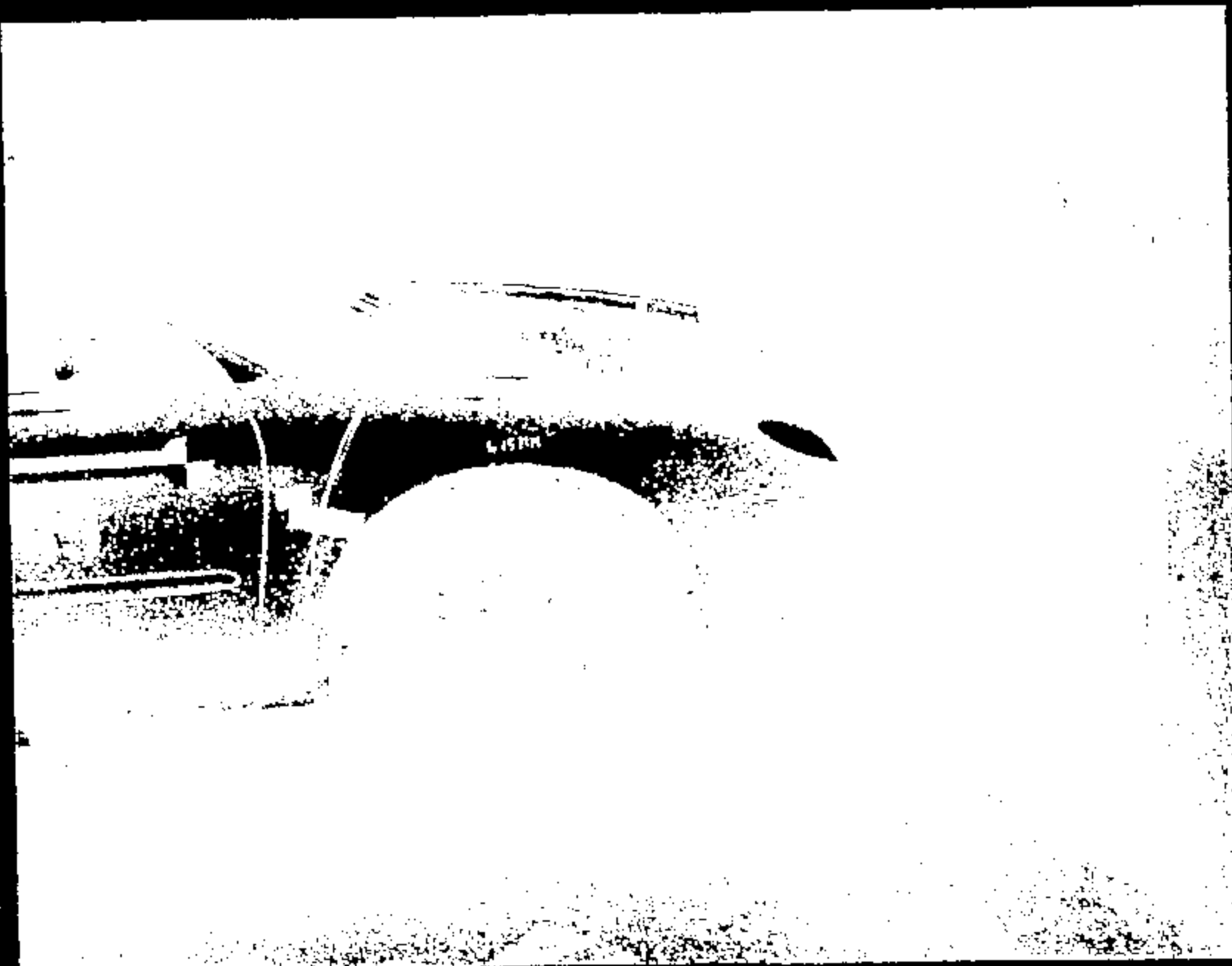
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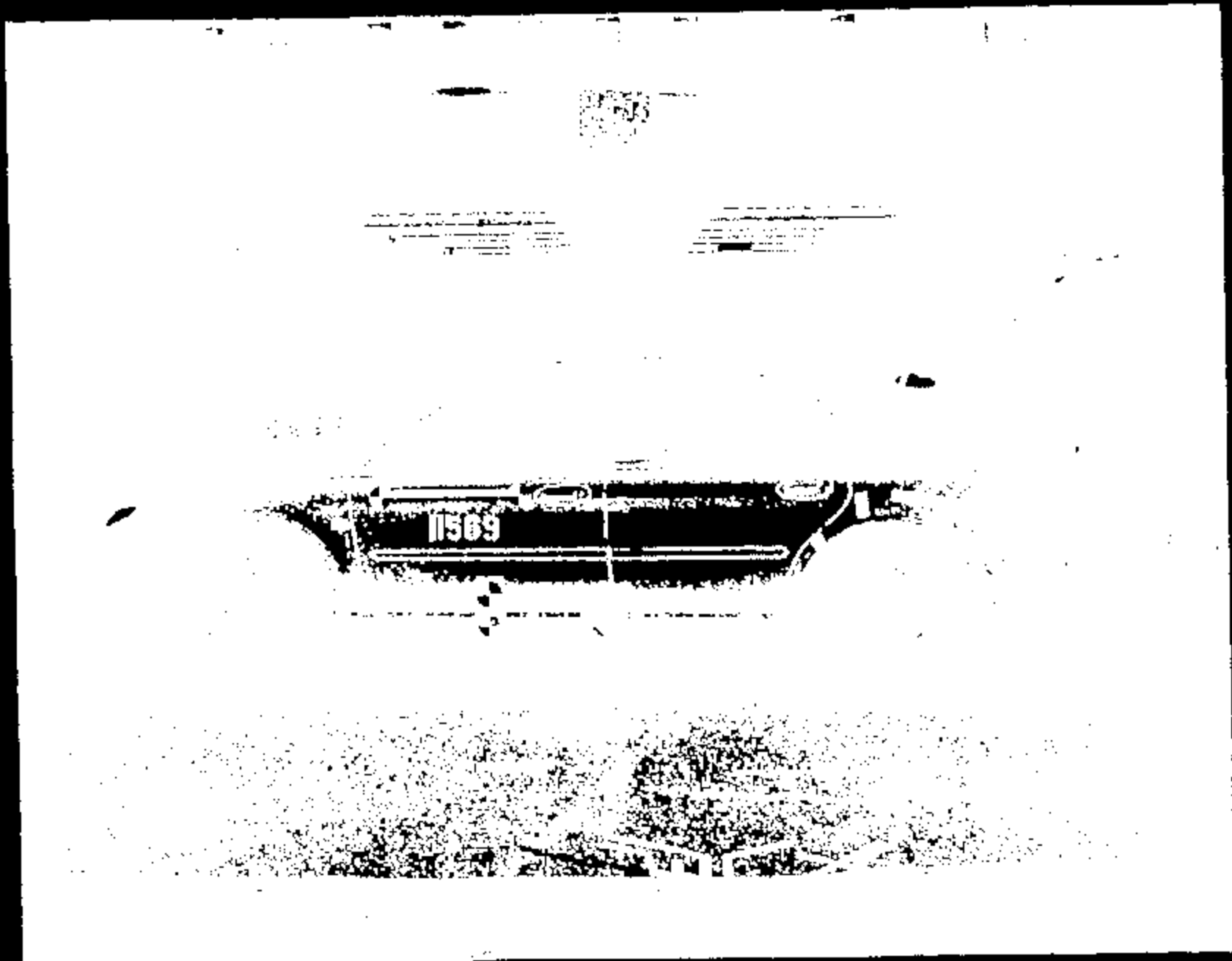
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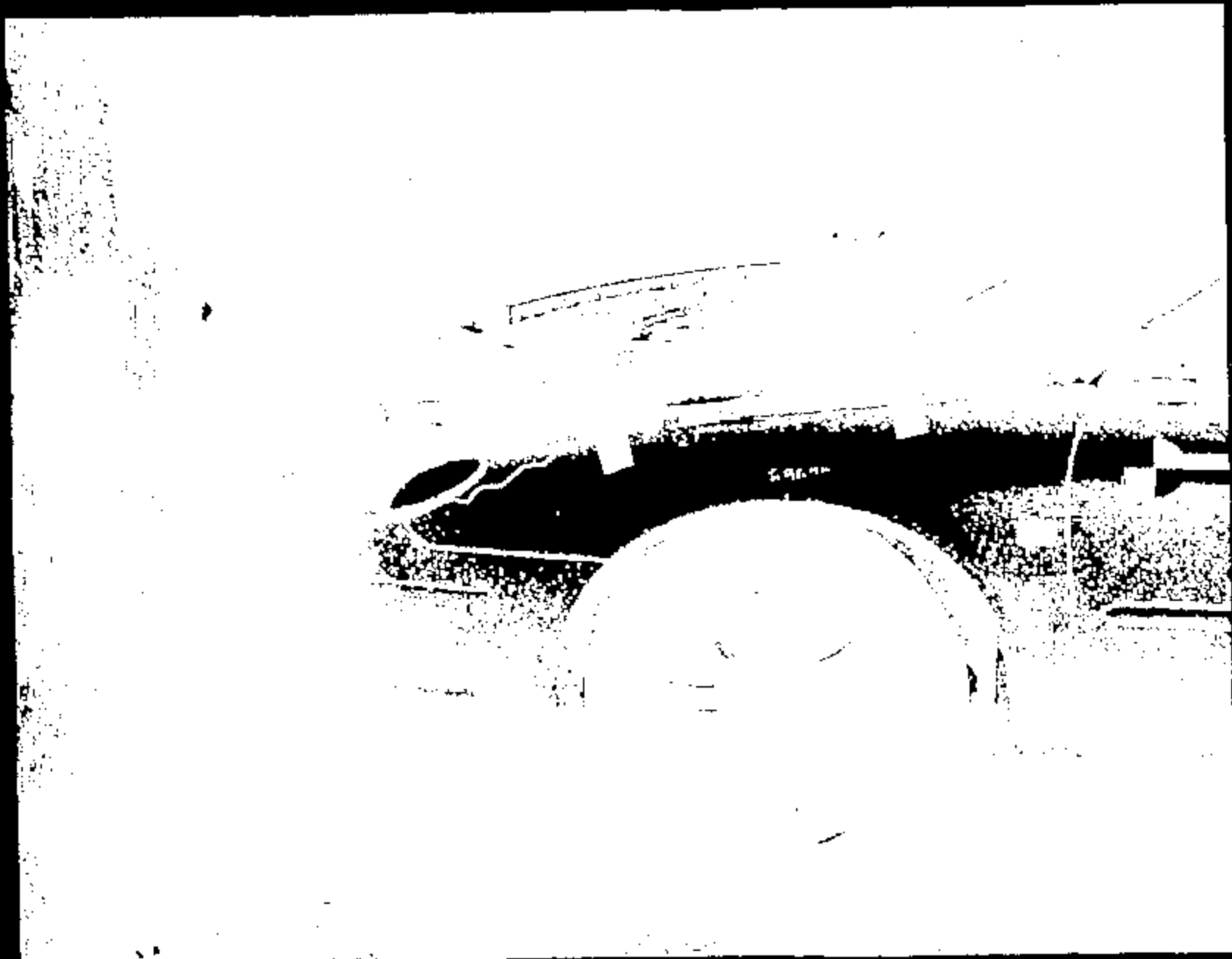
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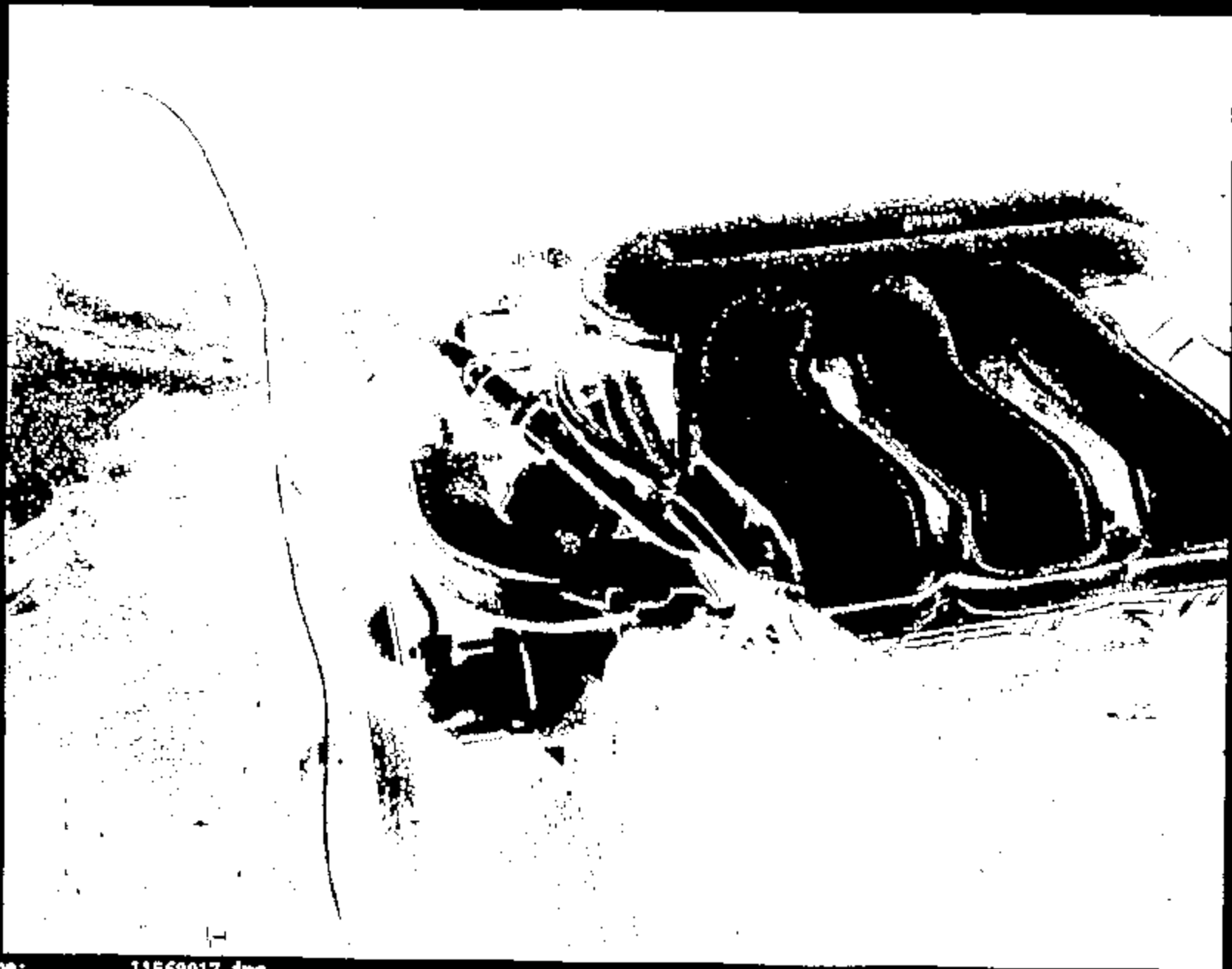


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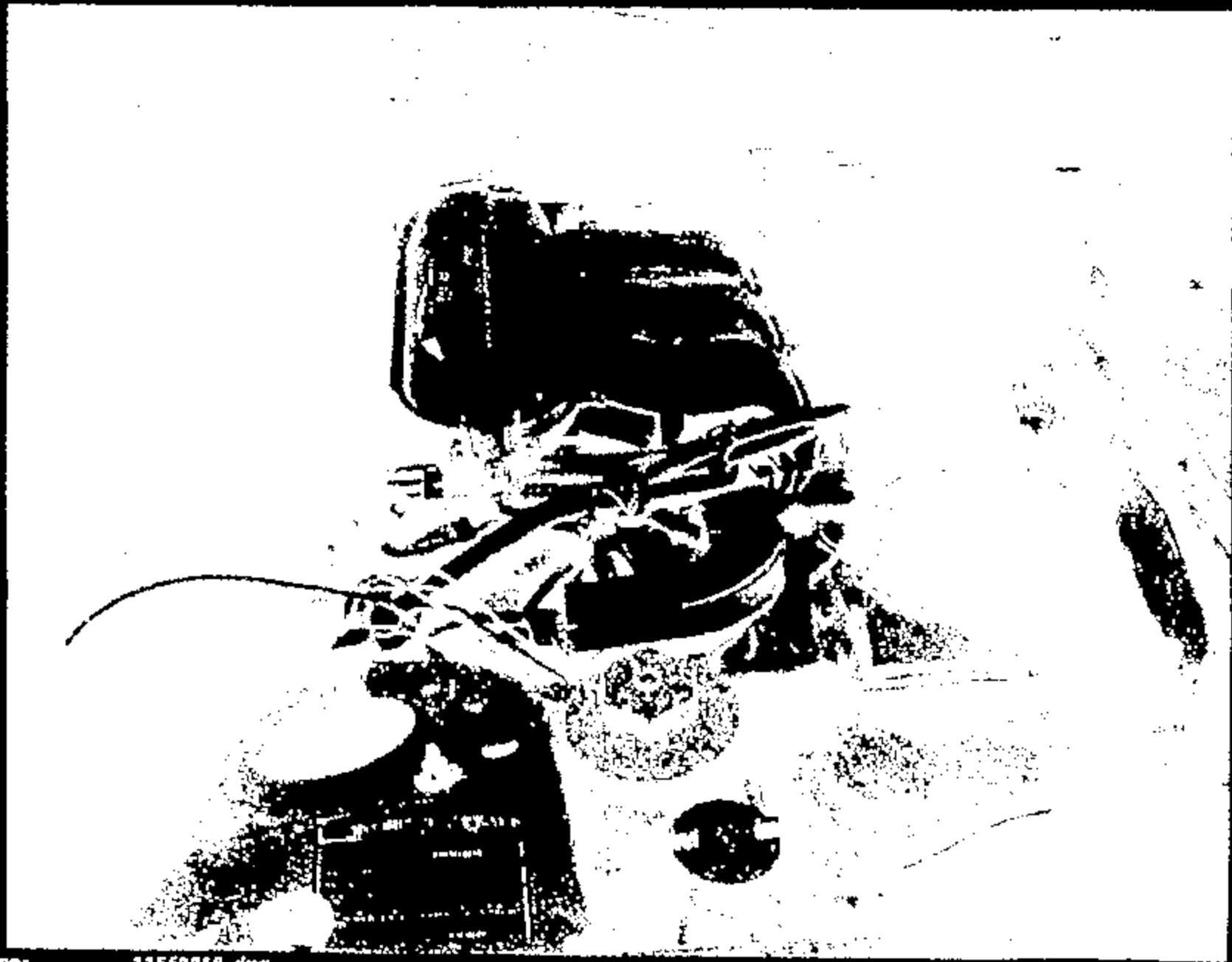
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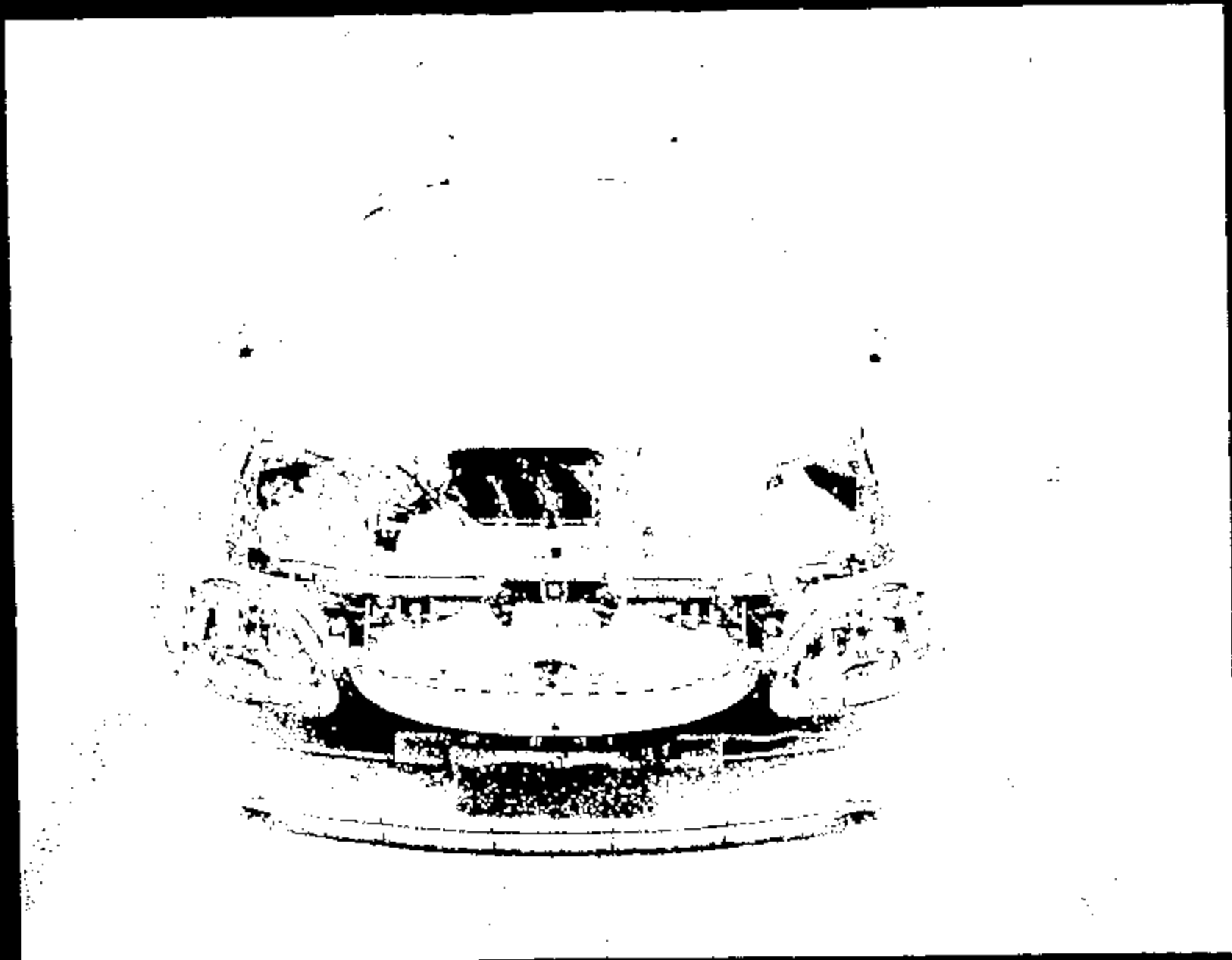


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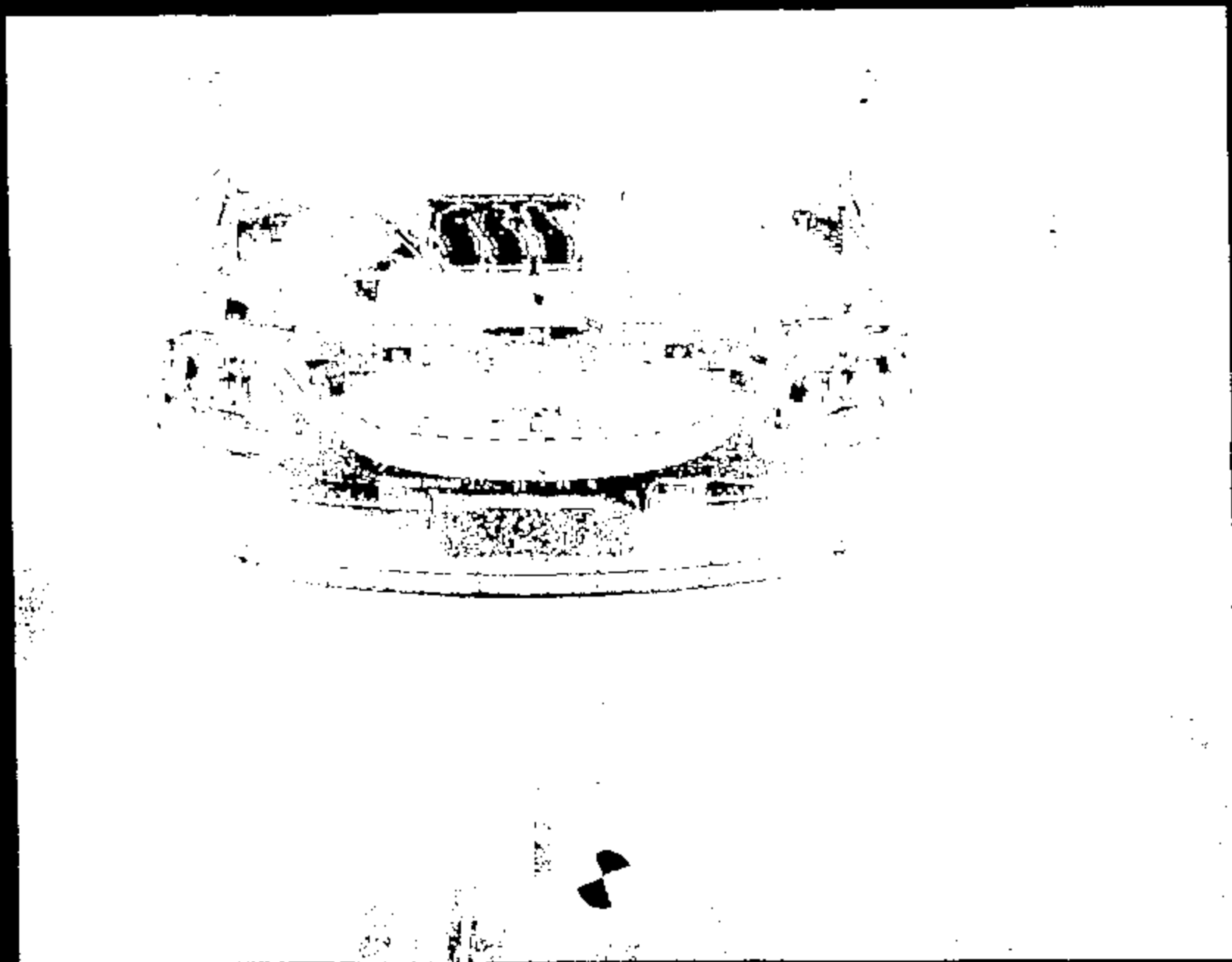
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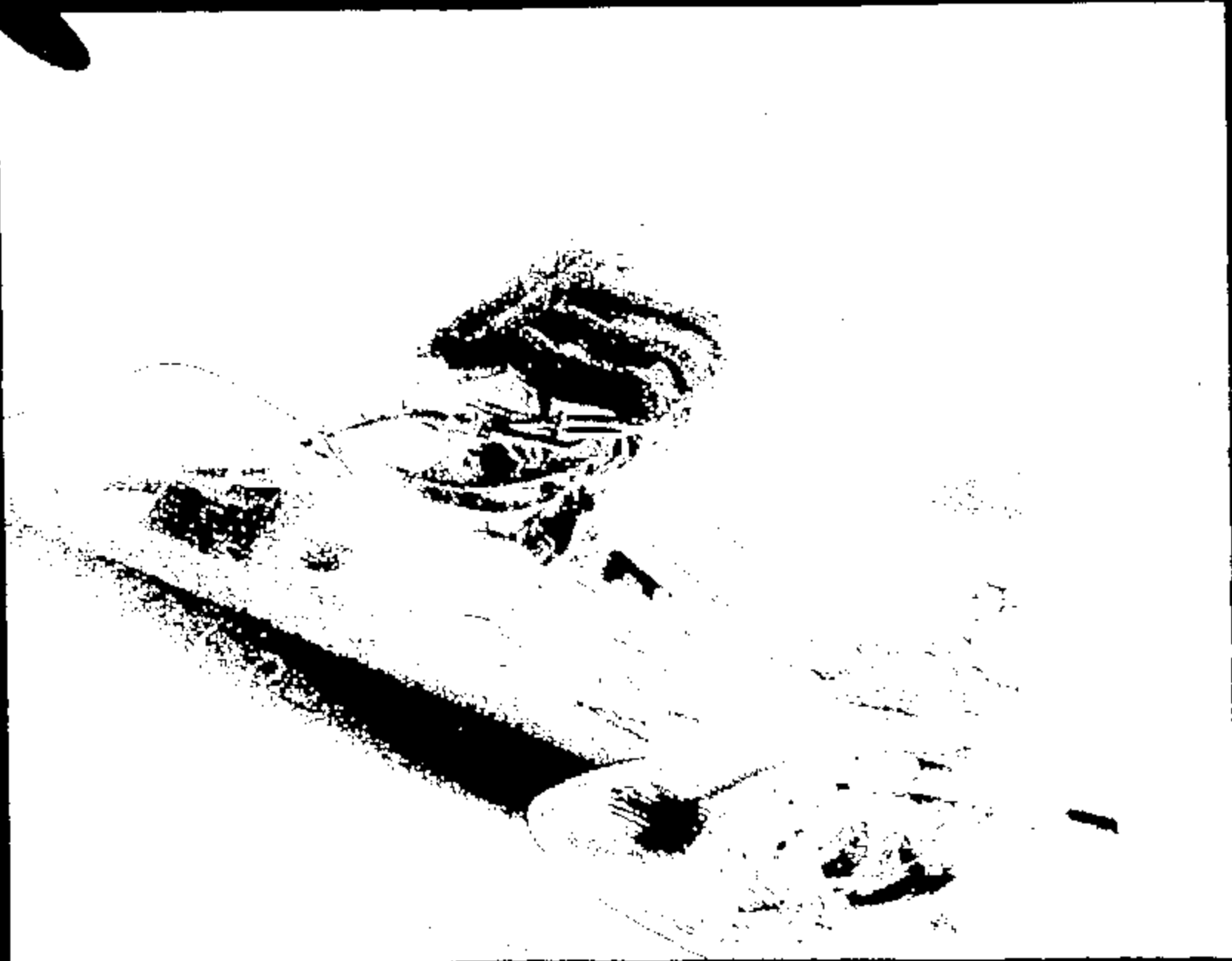


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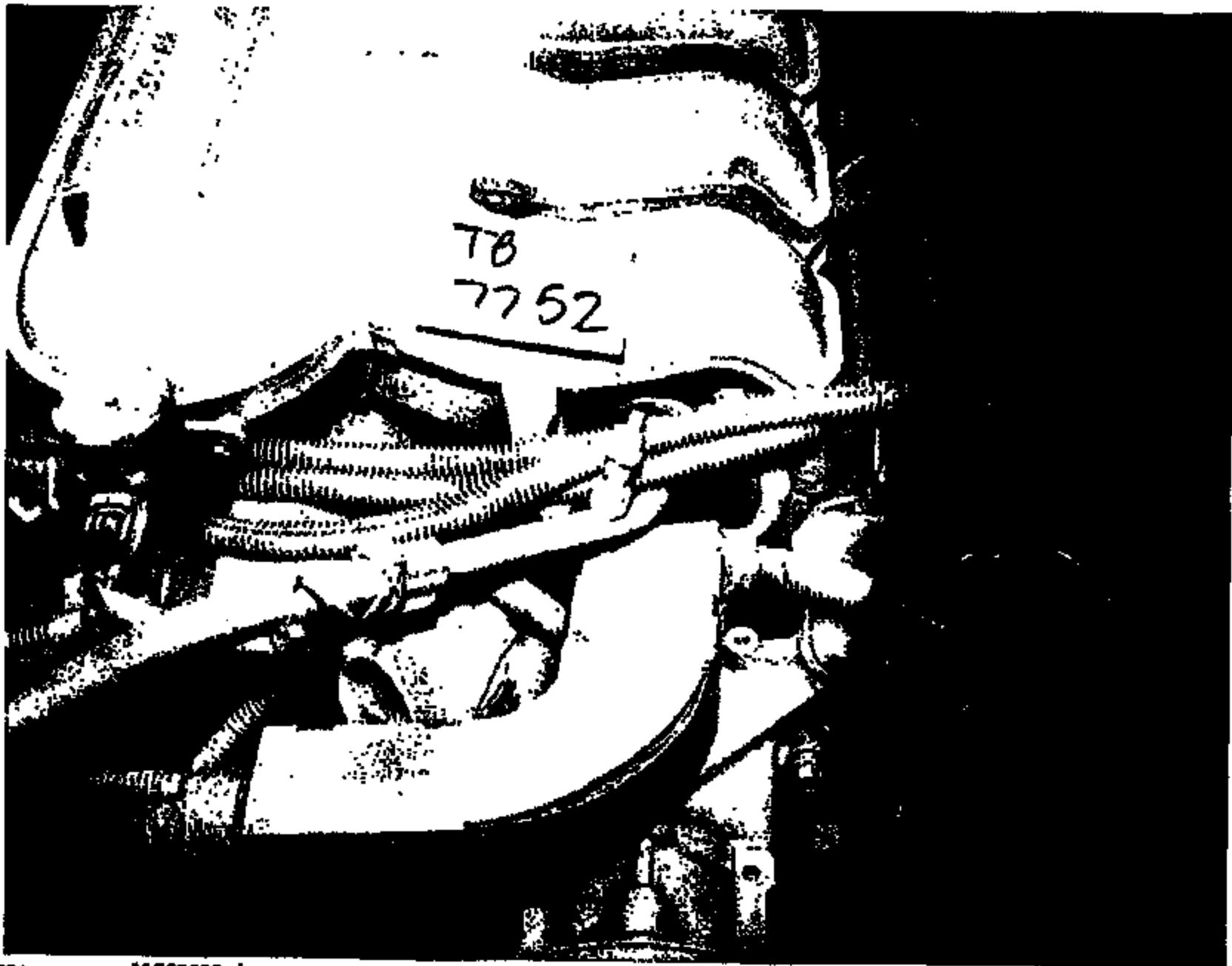
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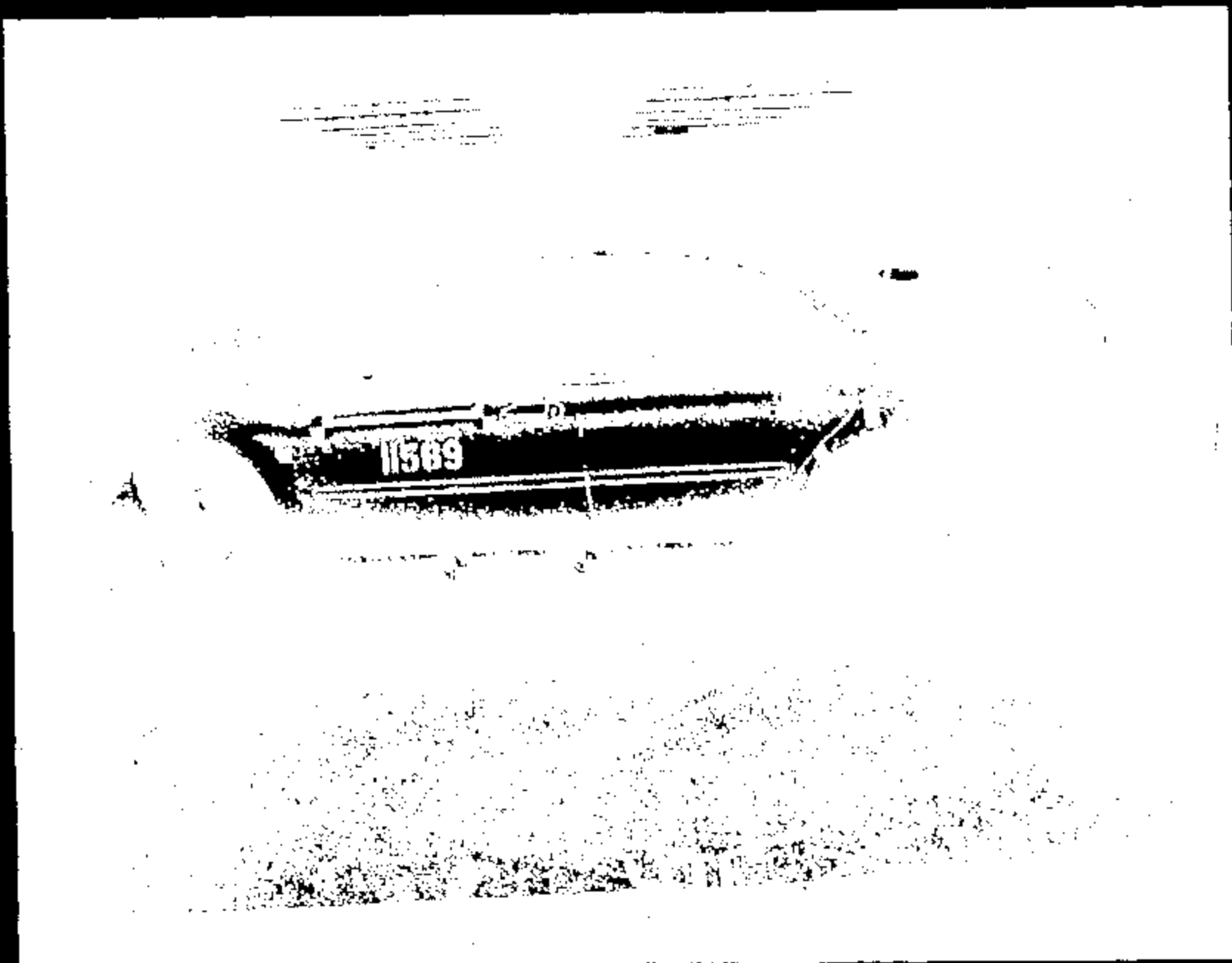


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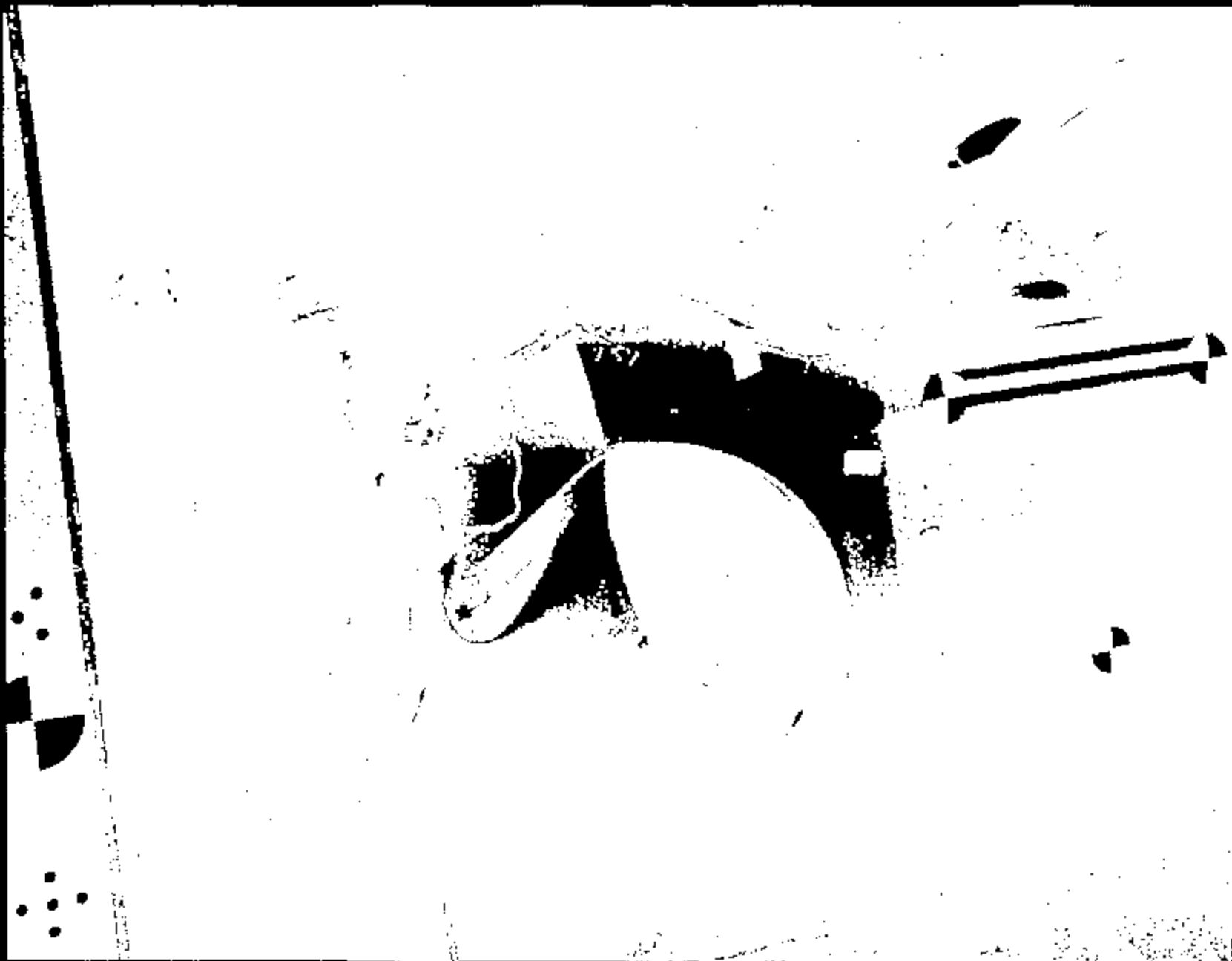


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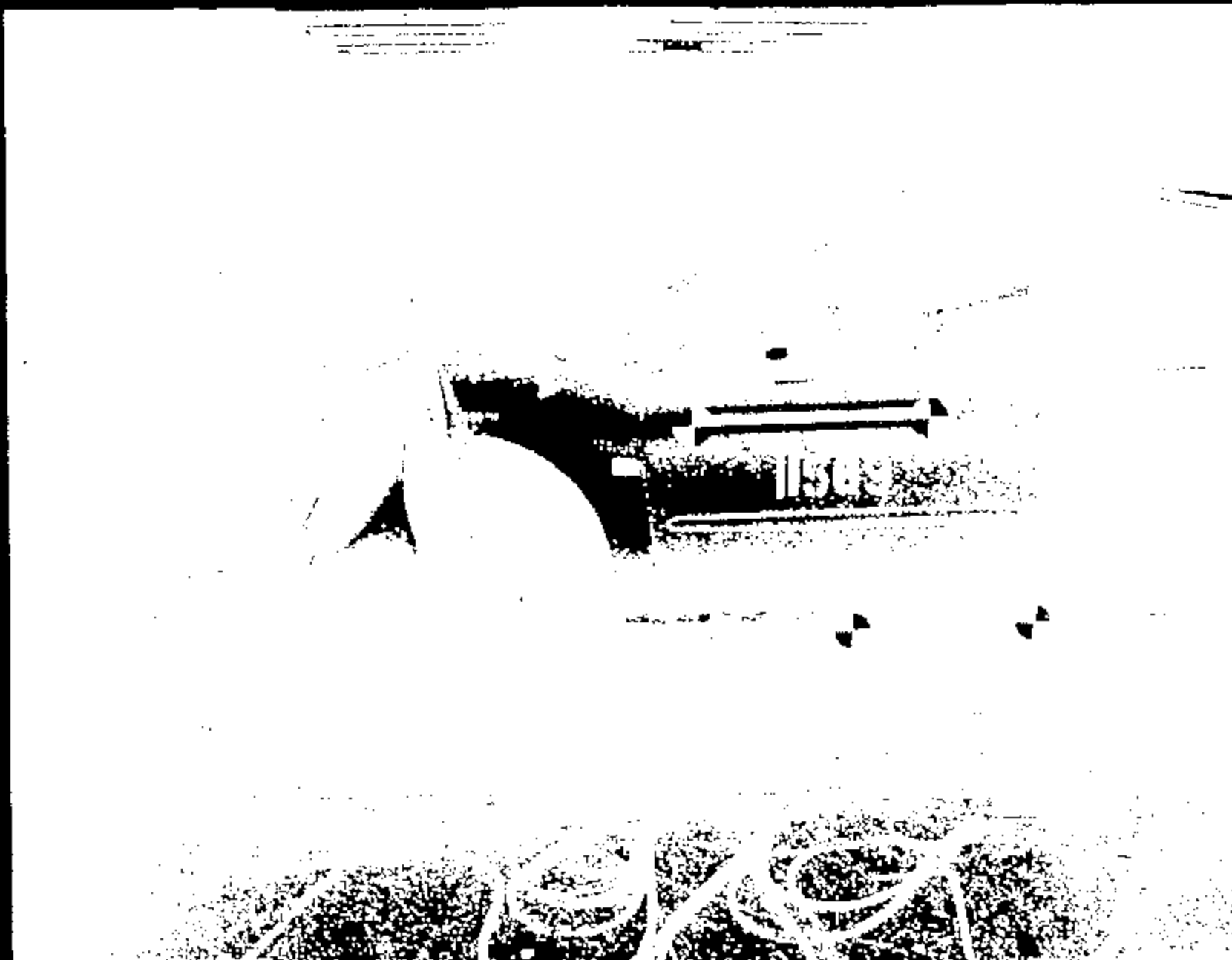




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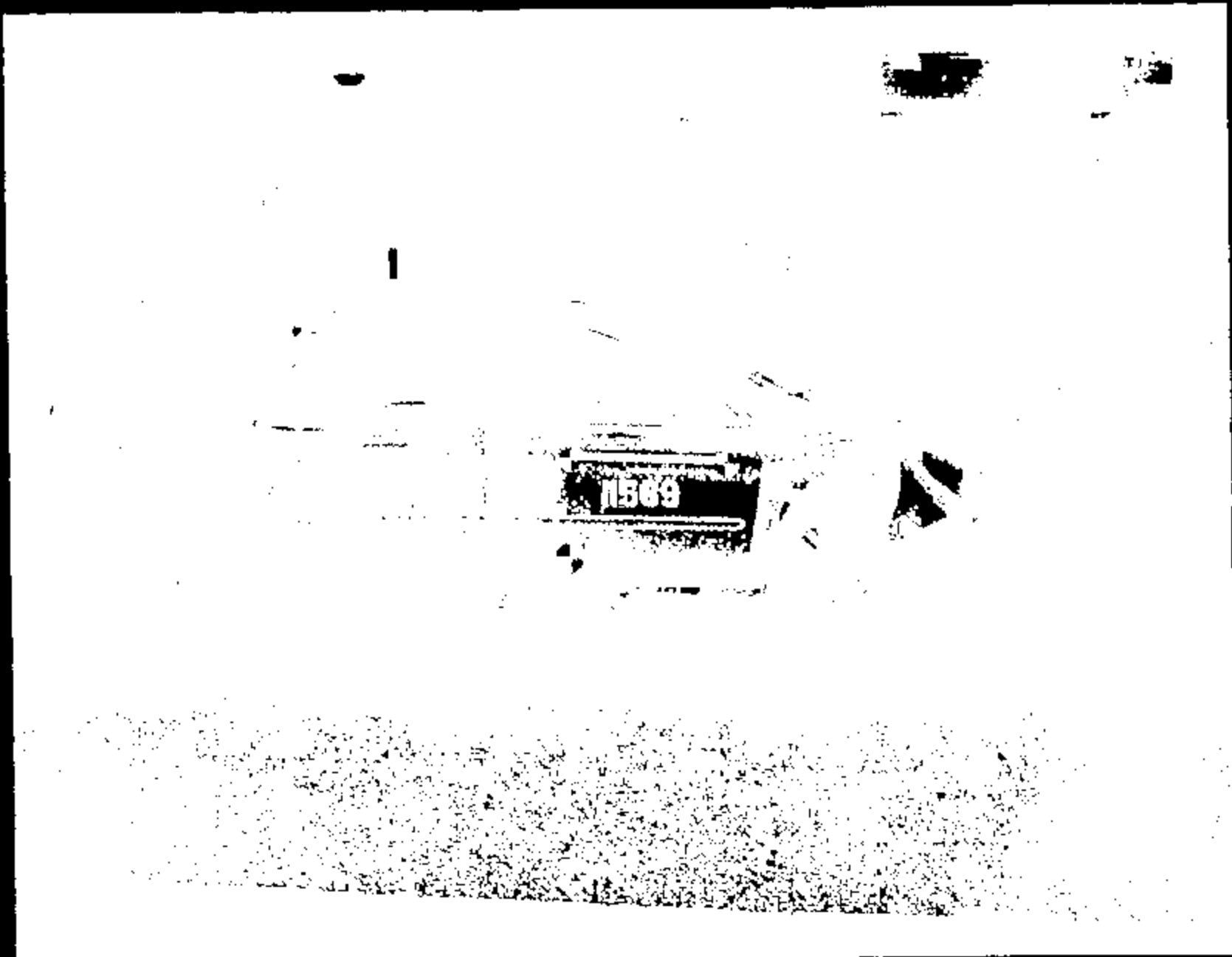


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CRTS 0011569



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CRTS 0011569



TO  
1752

CKTS 0011569

Image 1

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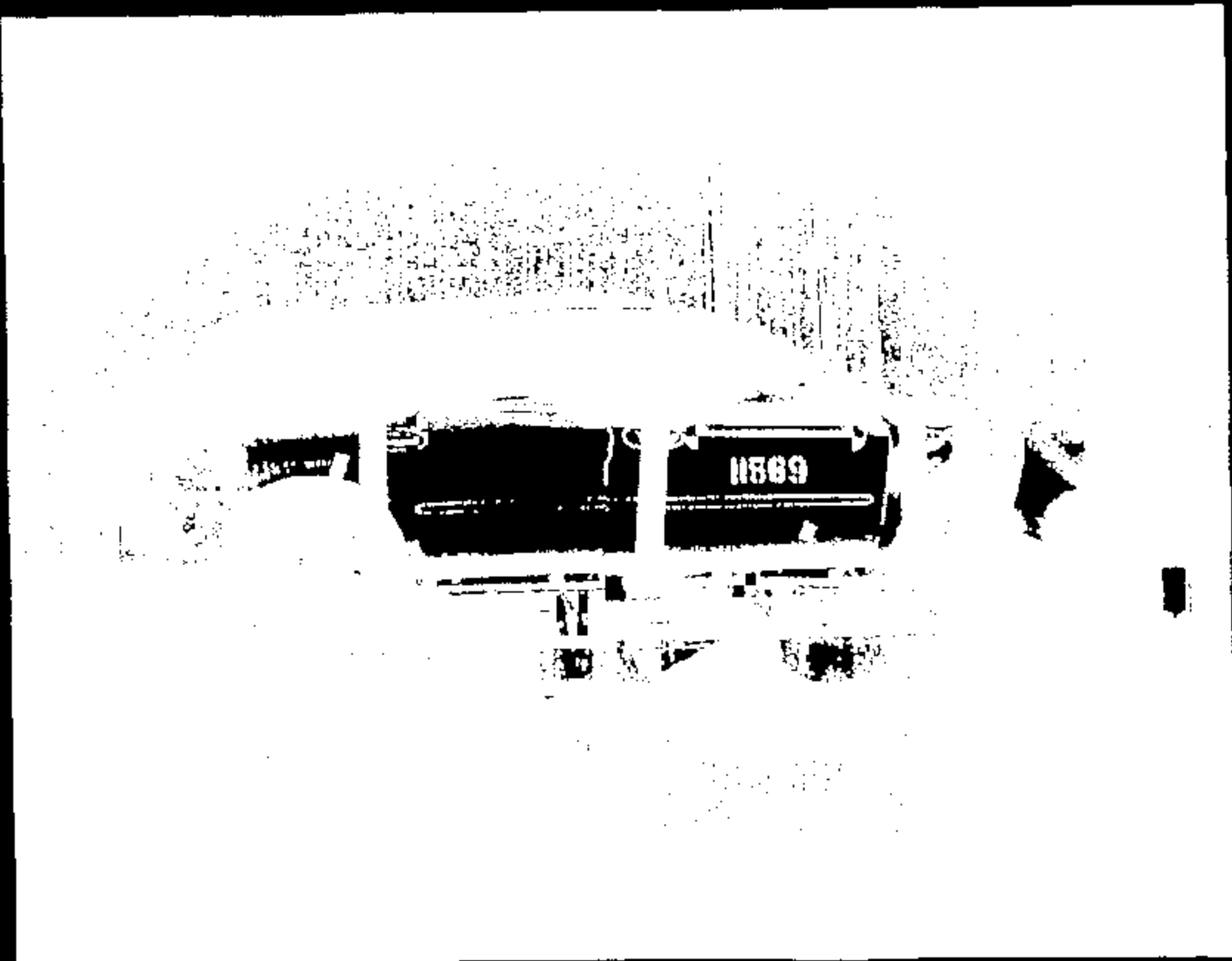
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TB 11/11  
7752

CRTS 0011569

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Memorandum

11569042.JPR



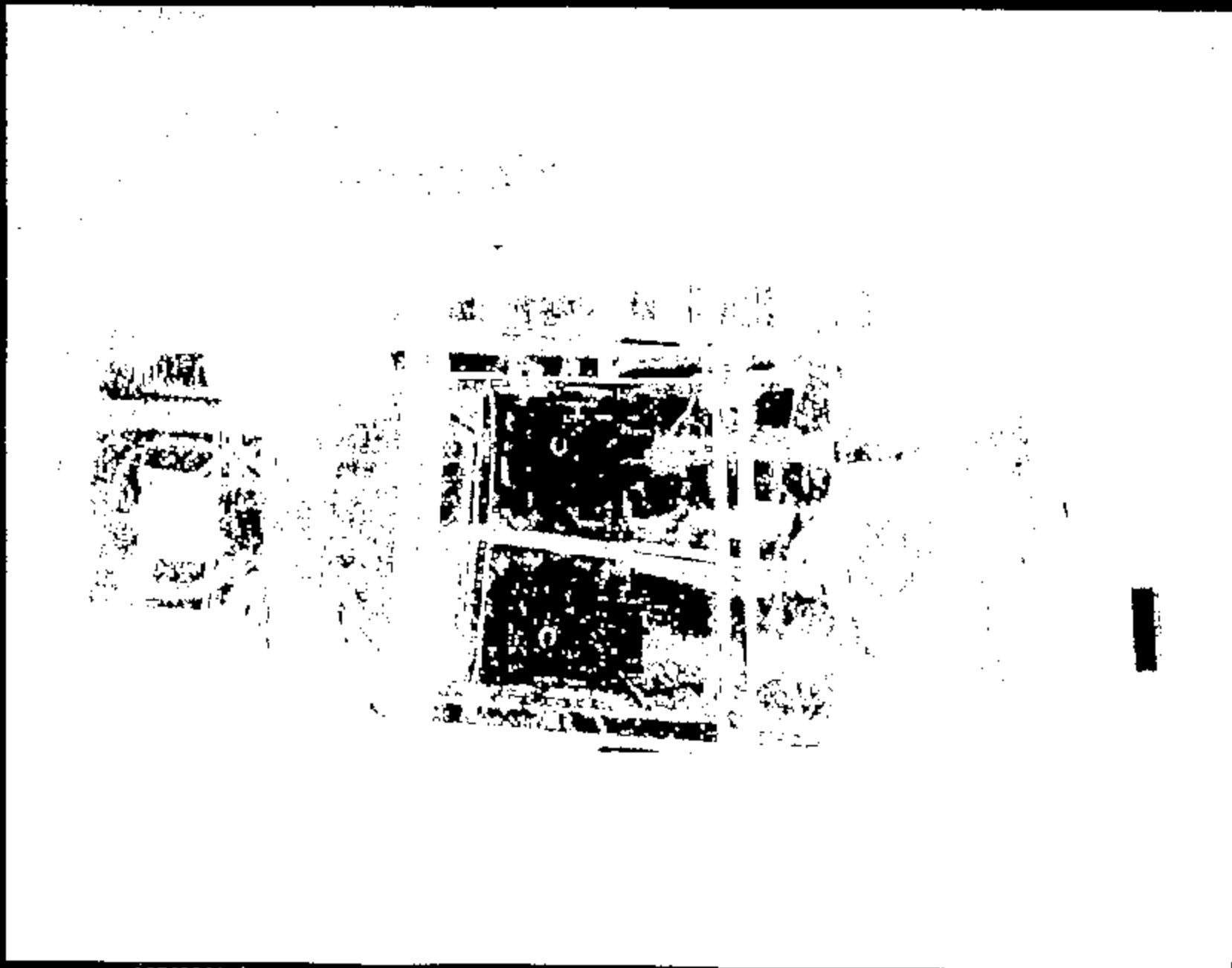
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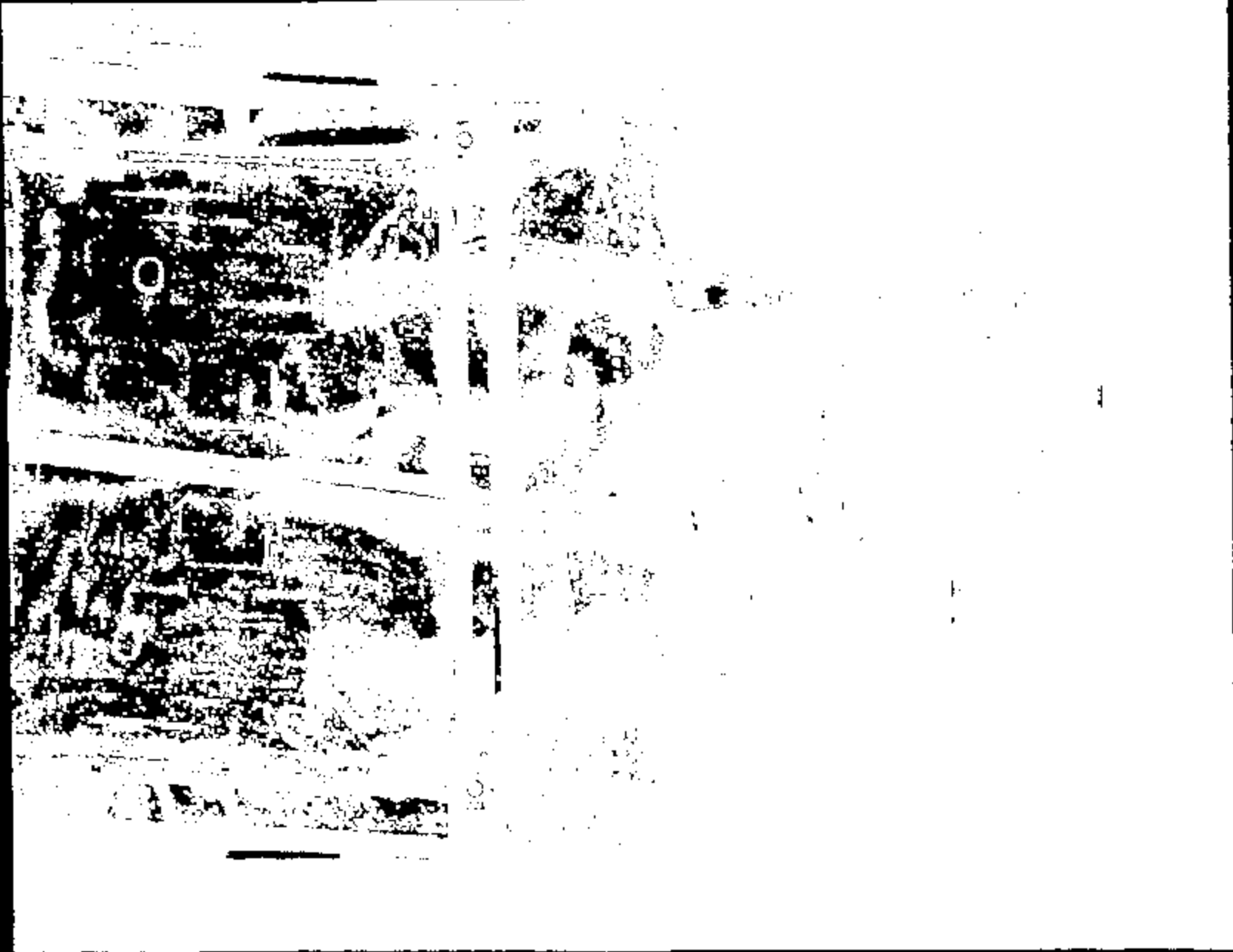
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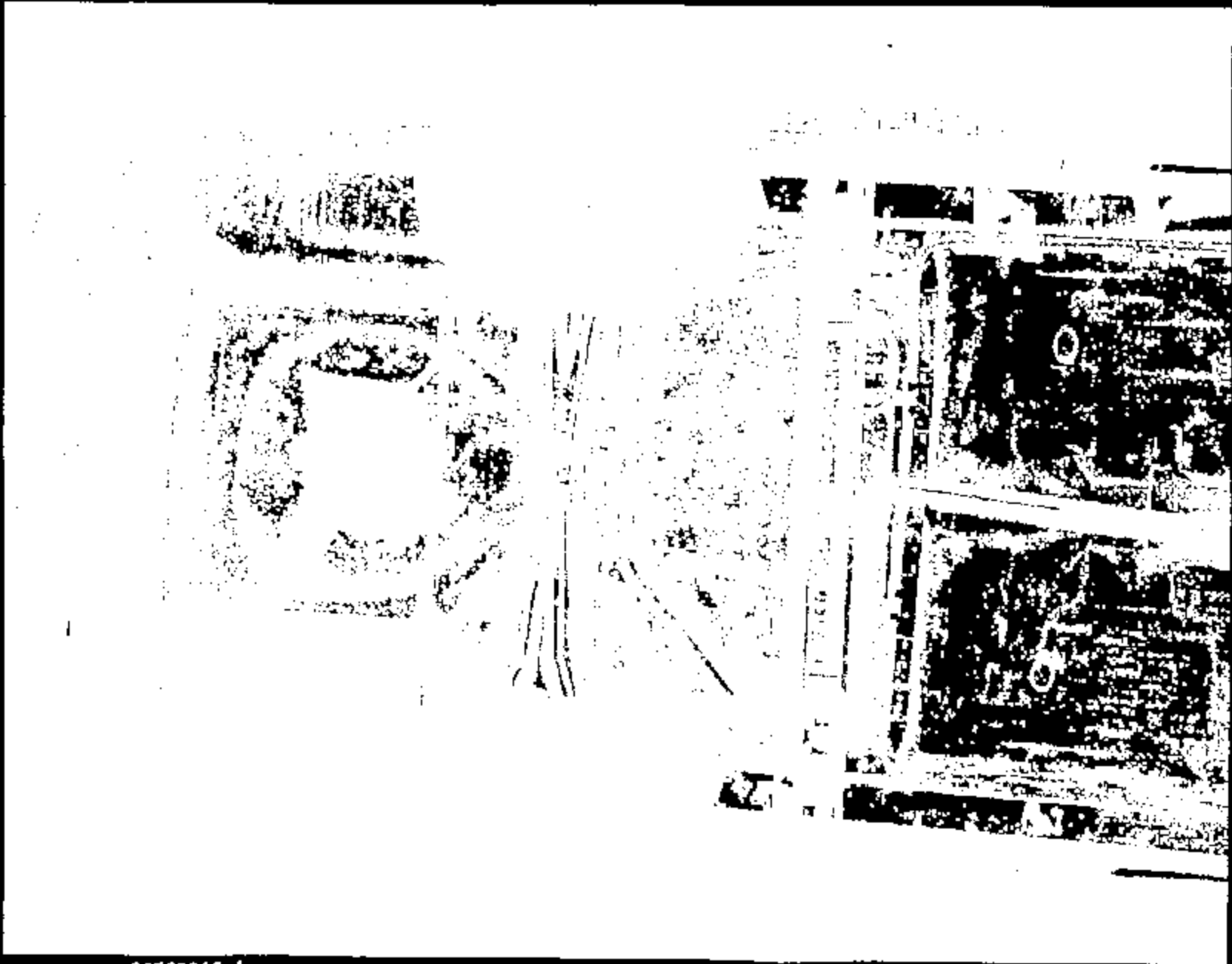
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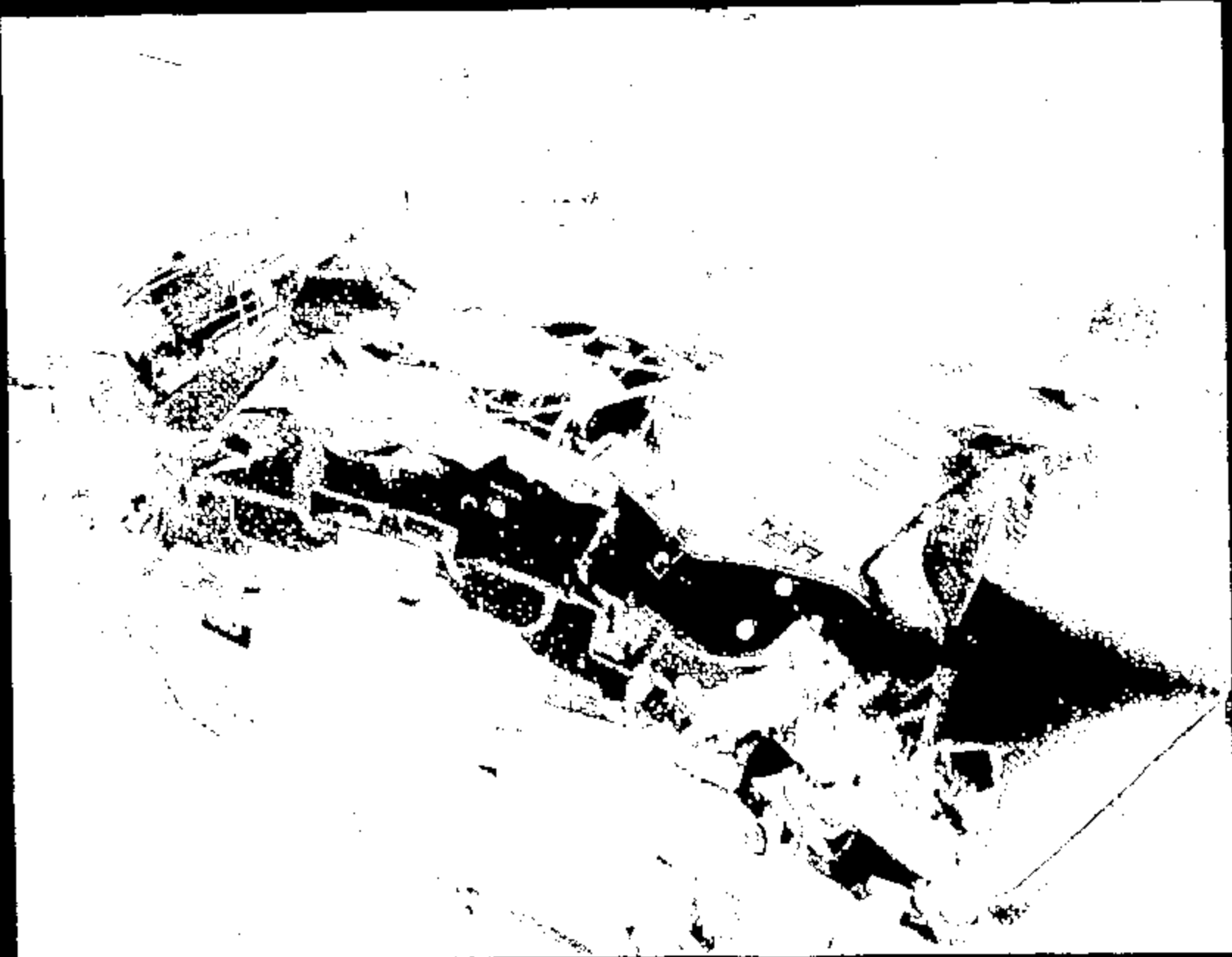
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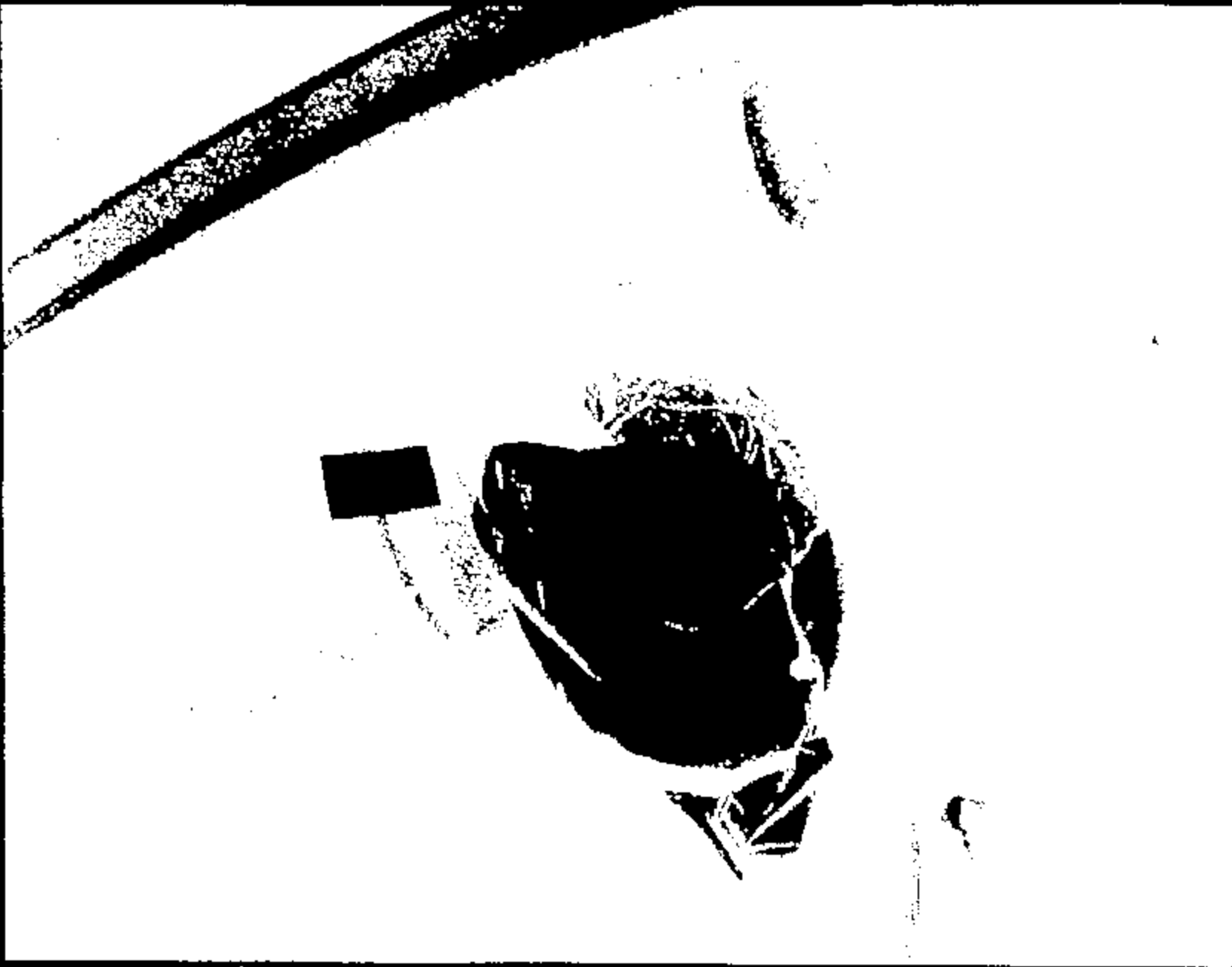


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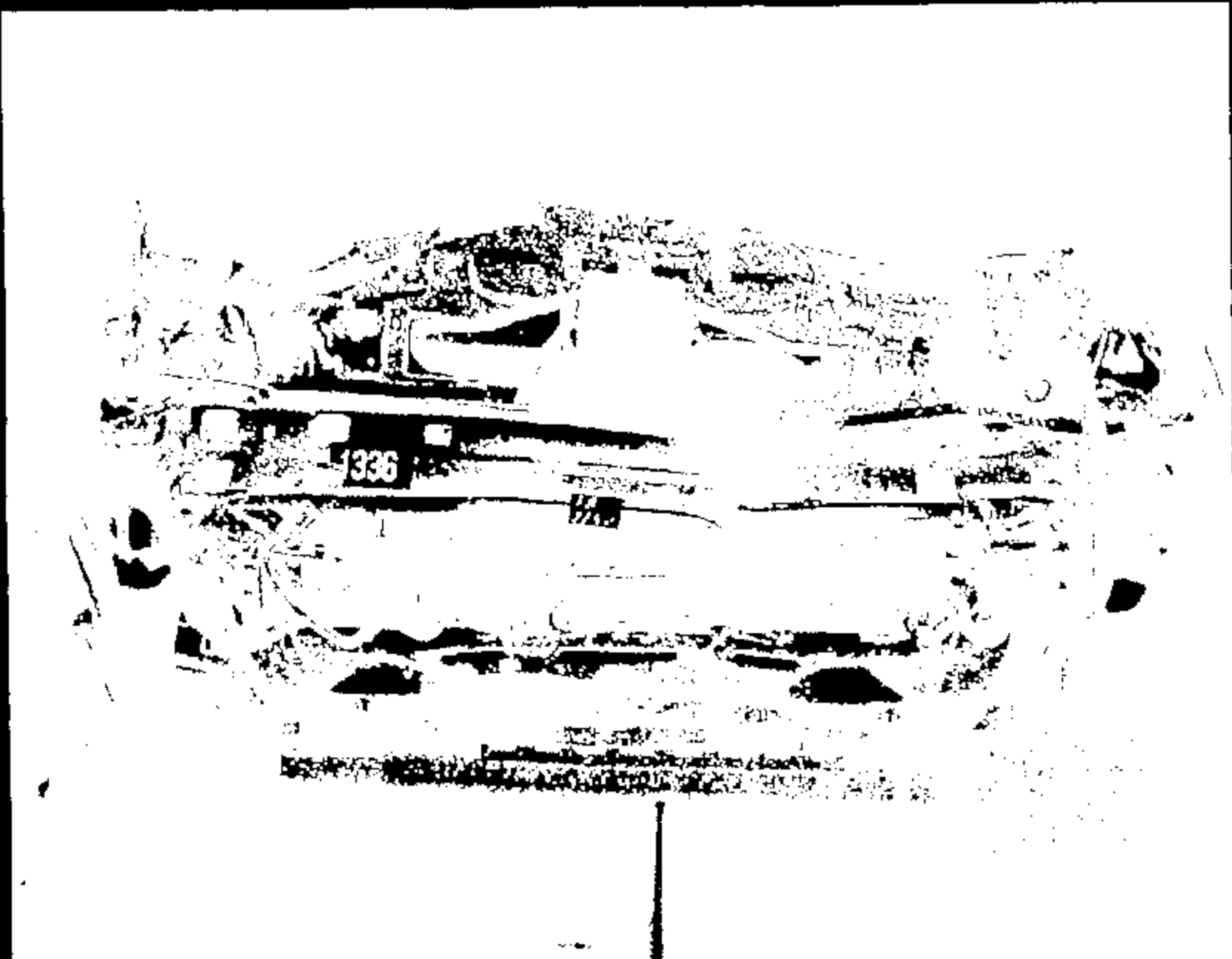
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Name:

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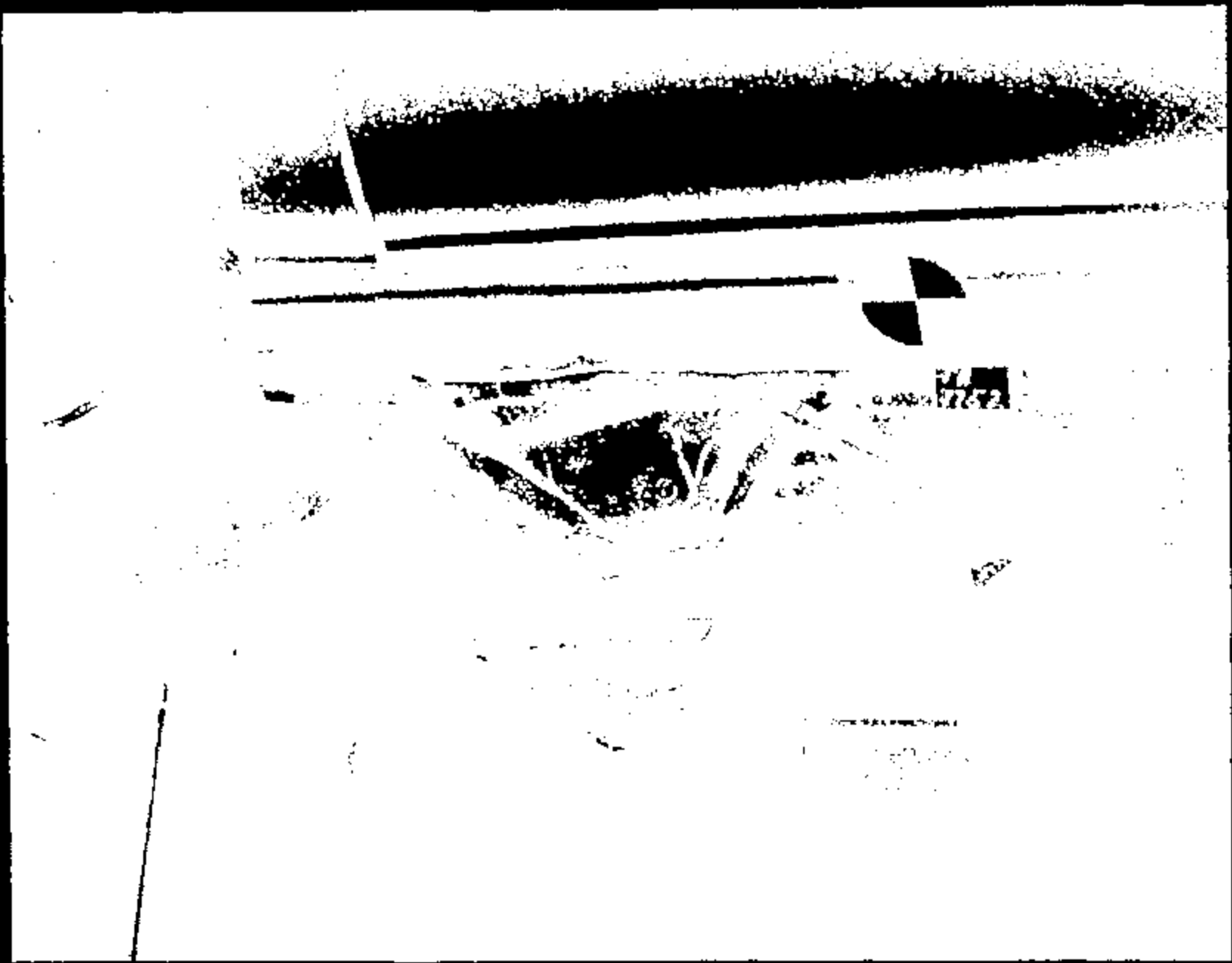
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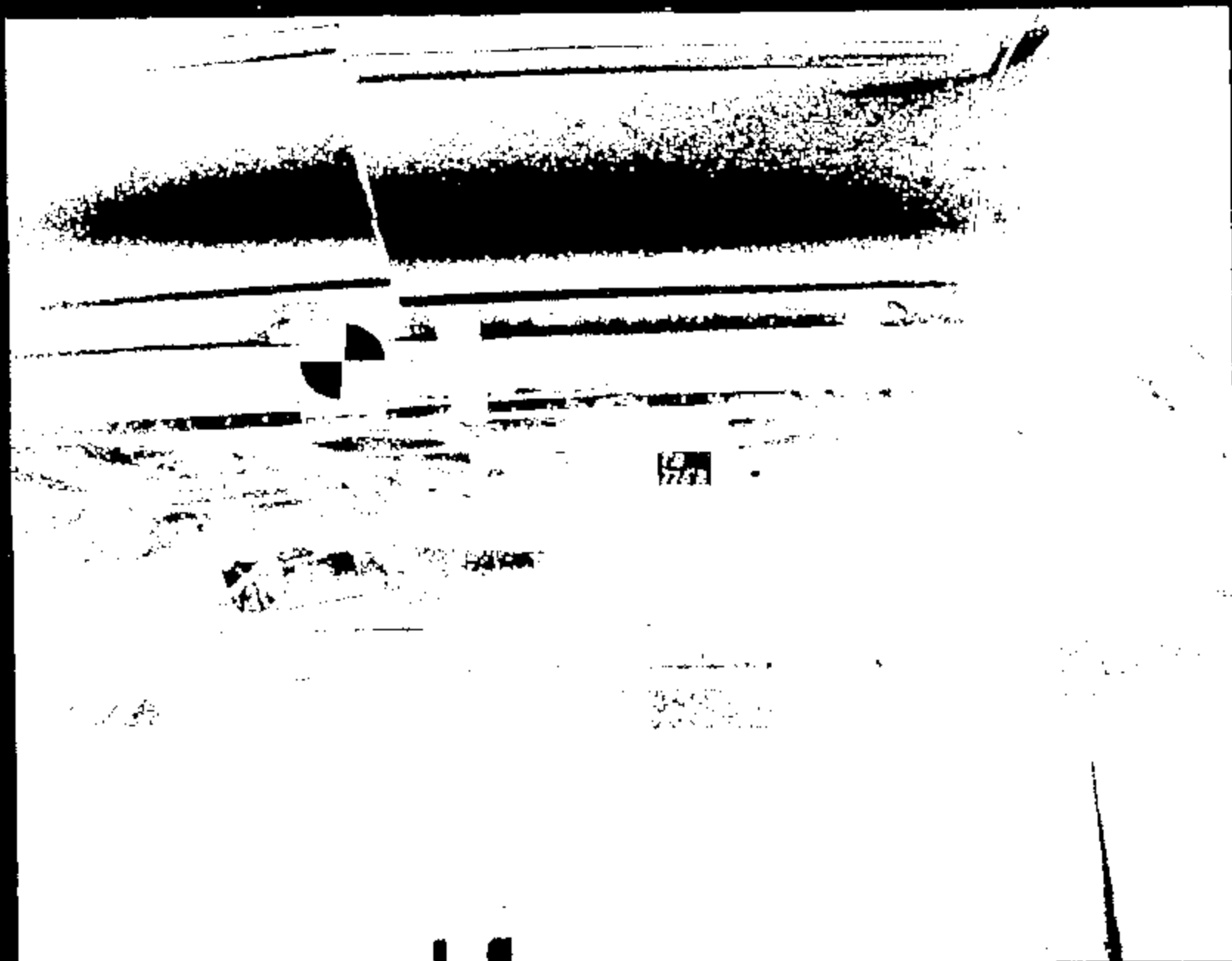
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Name: 11569055.jpg

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Name :

11569056.jpg



Name :

11569057.jpg





Name :

11569058.jpg

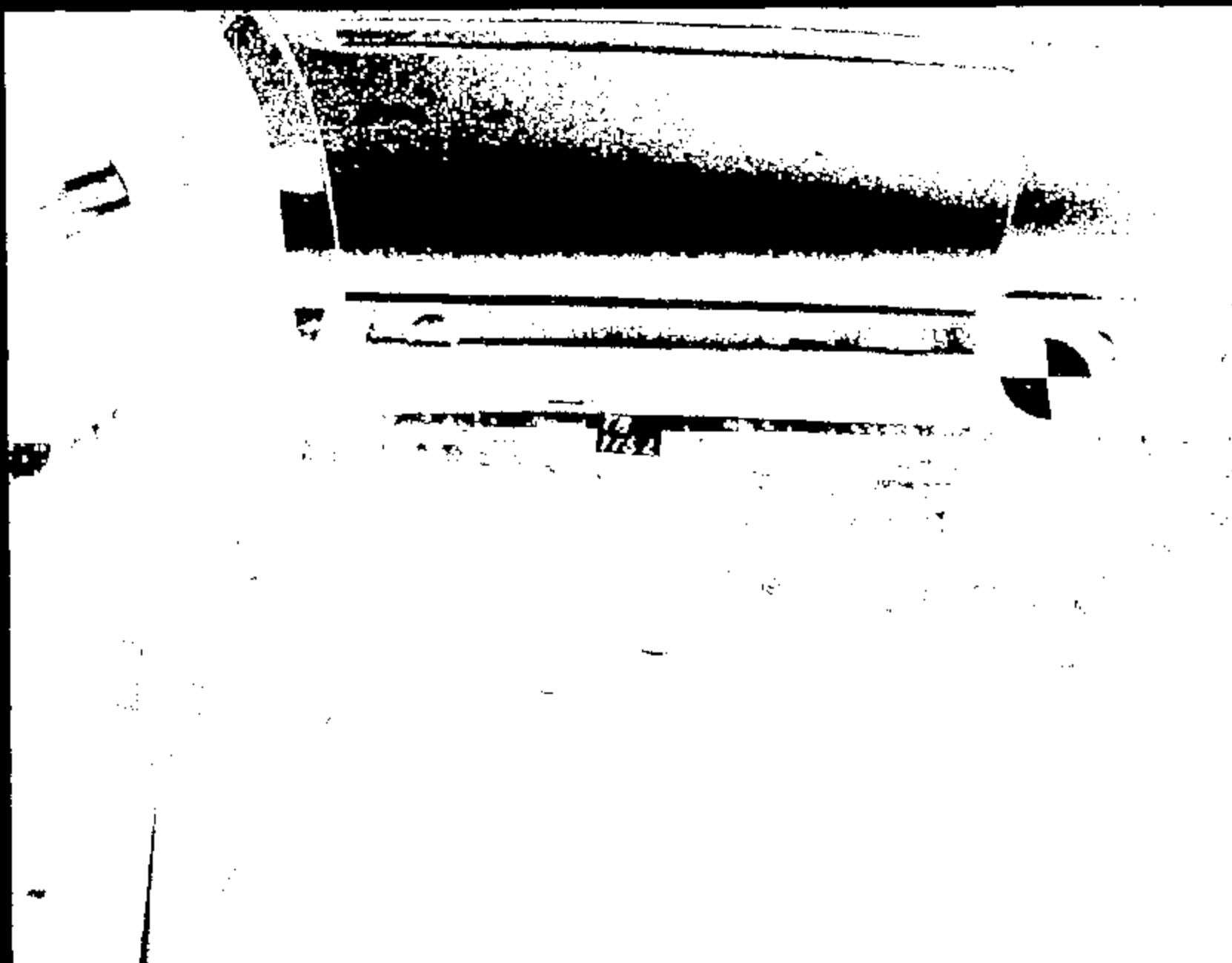


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11569063.jpg



11569064.jpg

Blanca

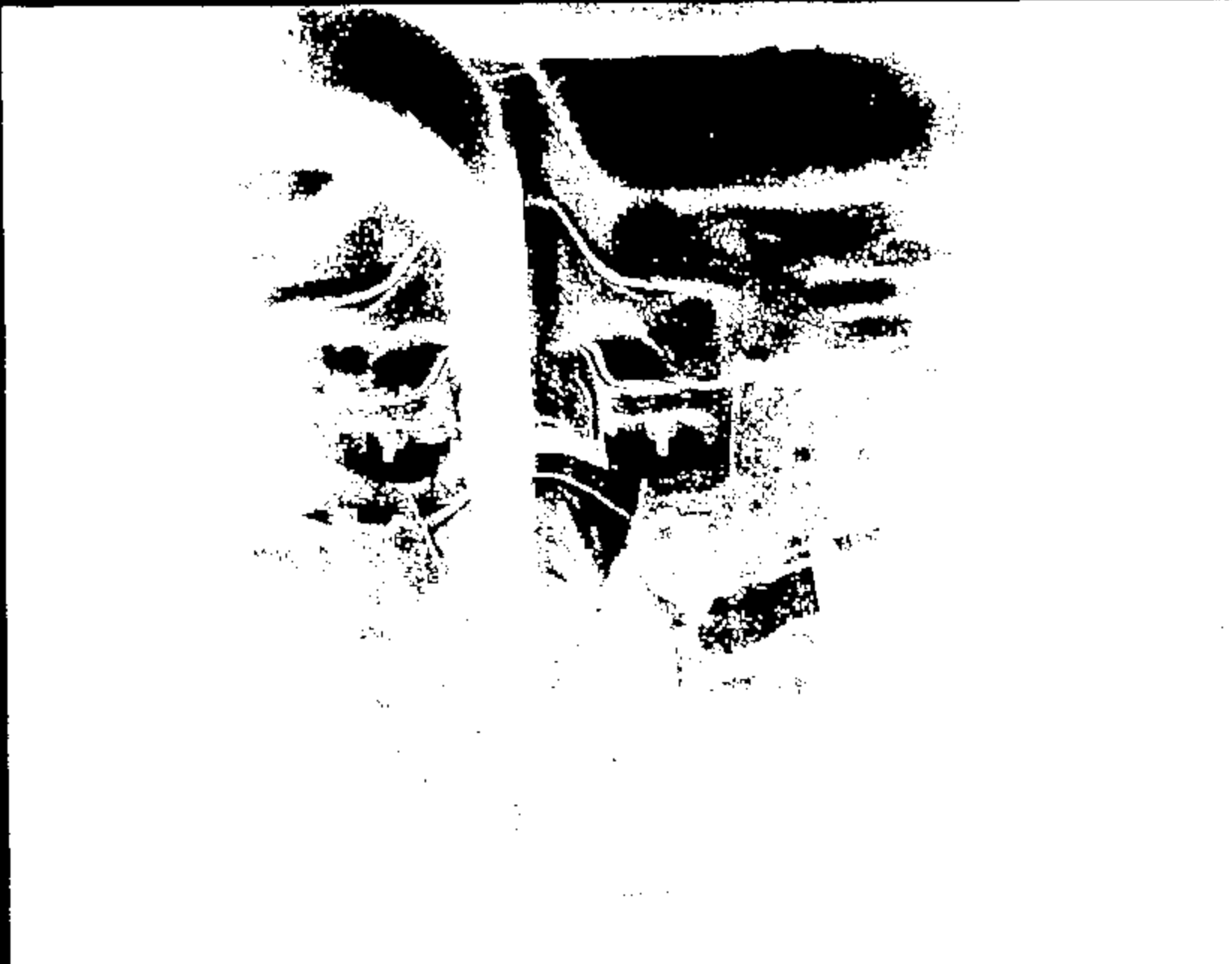






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11569067.jpg

CRTS 0011569



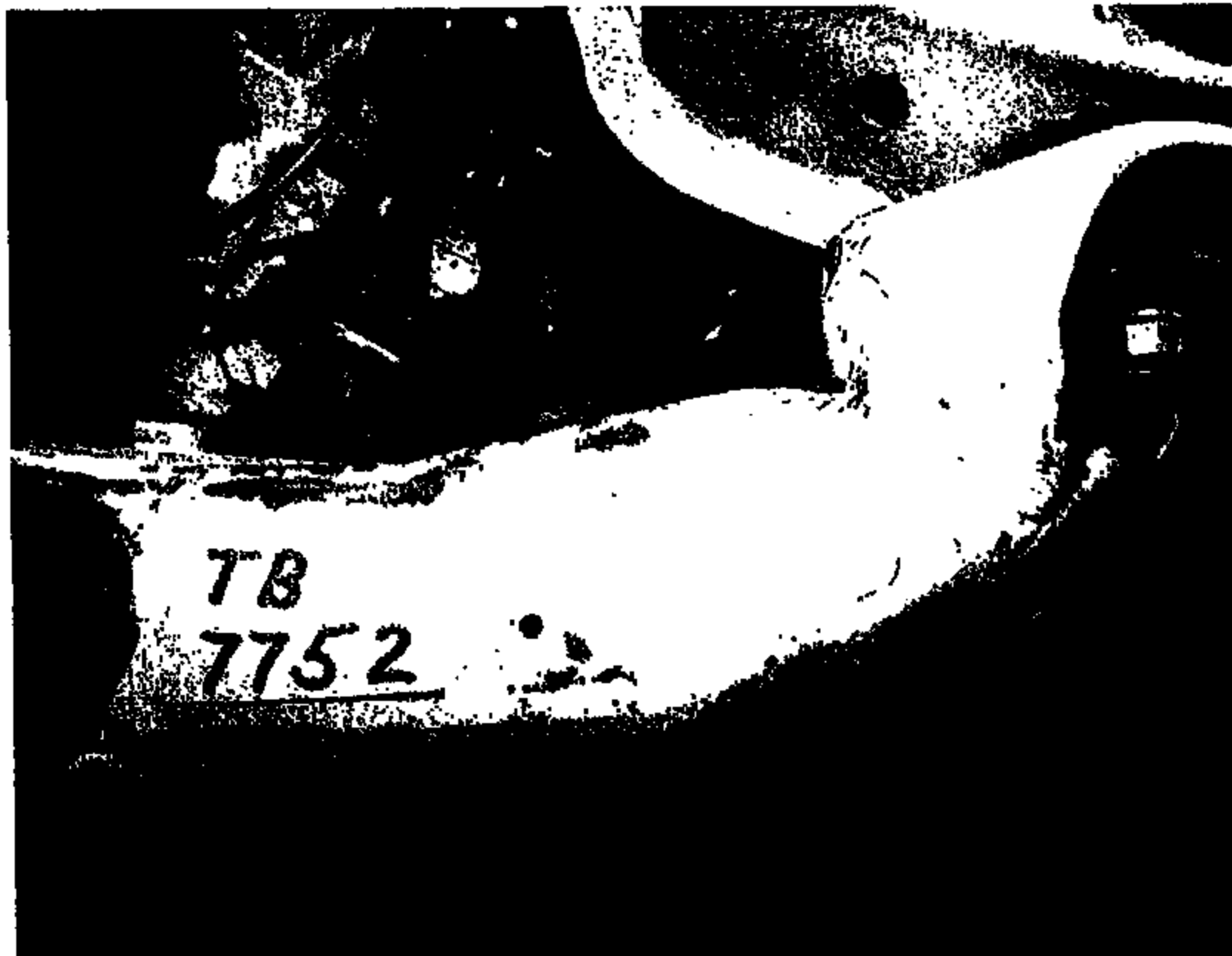
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7752

Name: 11569069.jpg



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7752

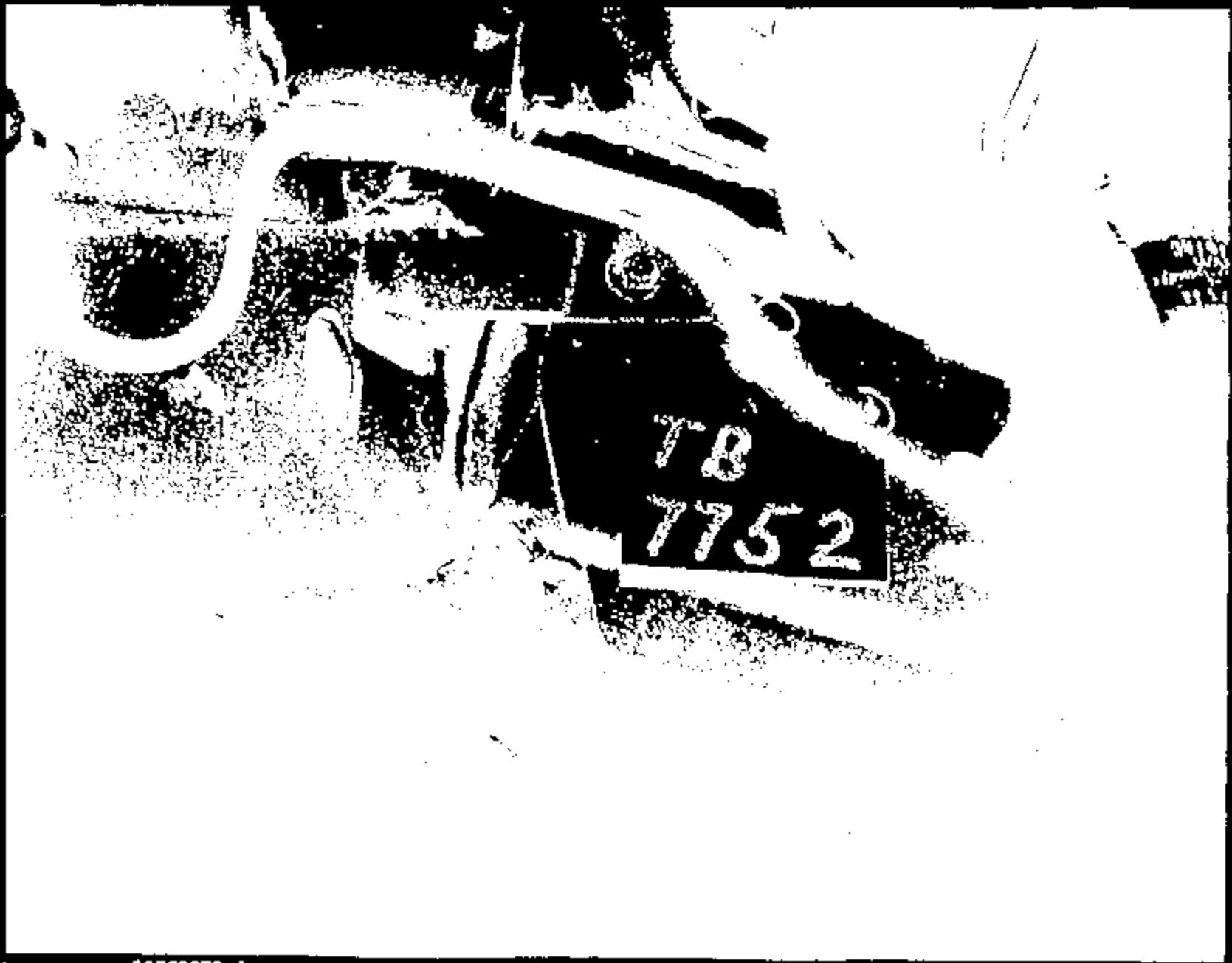
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CRTS 0011569

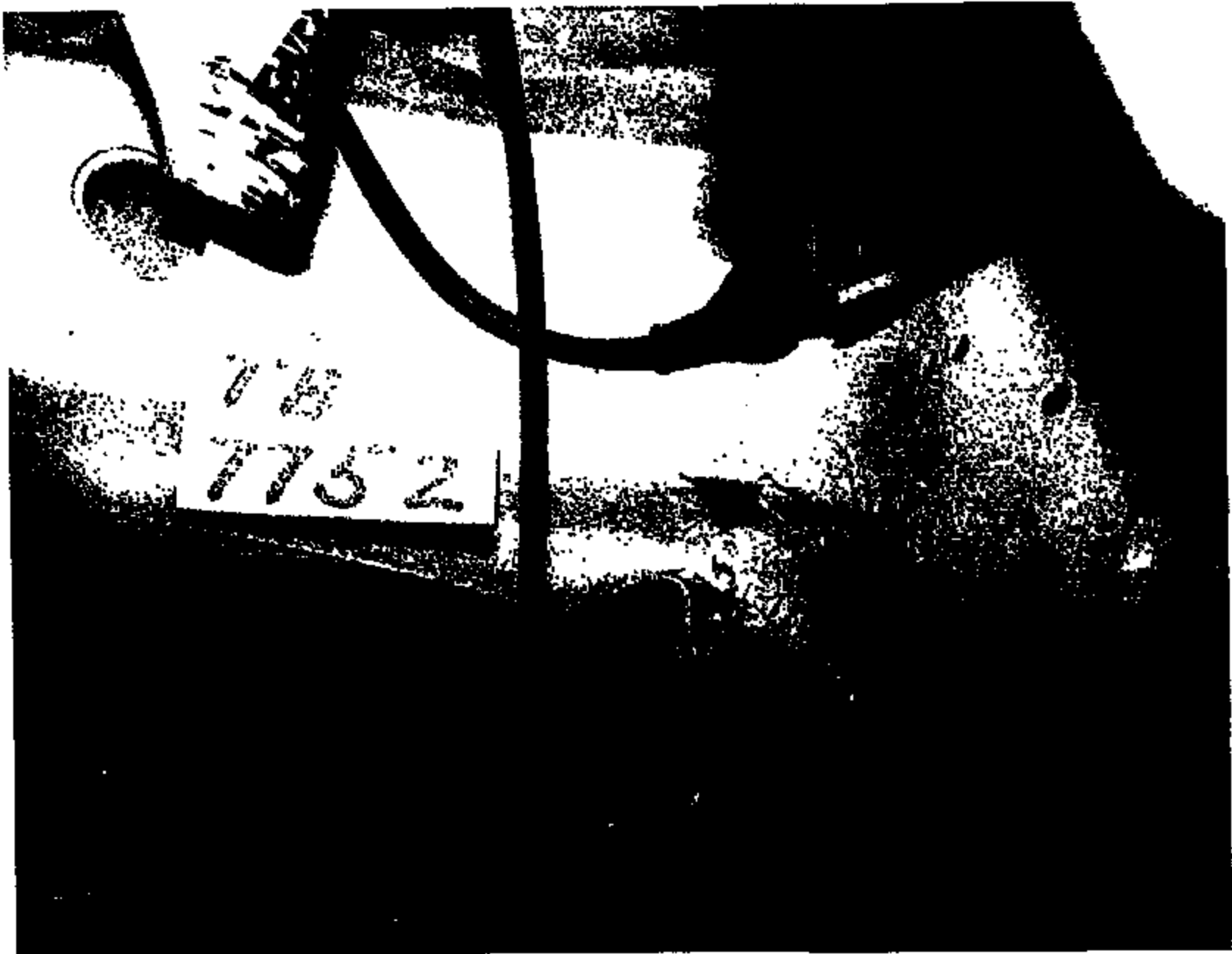
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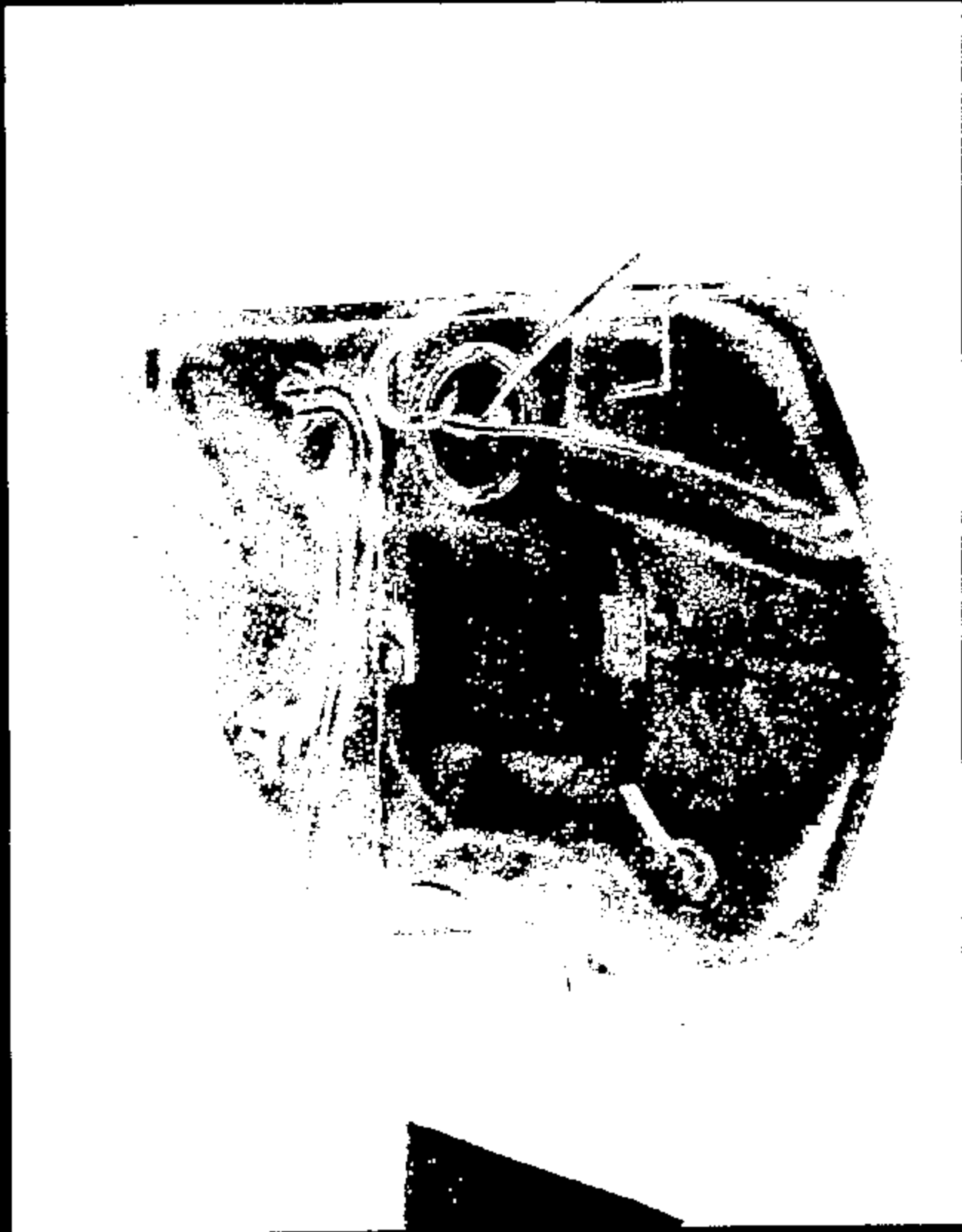
Name:

11569072.jpg



Name: 11569073.jpg





11569074.jpg

Image 1



11569075.jpg

Mano i

**TEST AUTHORIZATION** **TEST AUTHORIZATION NUMBER: TB7782**

<b>TO:</b> Safety Lab Department  <b>CC:</b> K. Arturs	<b>REQUEST DATE:</b> 08/01/1999	<b>REQUESTED COMPLETION DATE:</b> 08/23/1999
	<b>REQUEST NUMBER:</b> n/a	<b>PROBLEM NUMBER:</b> n/a
<b>REQUESTING ACTIVITY:</b> Vehicle Crash Safety		

<b>TITLE OF TEST:</b> 3001 D188 35 MPH 90 degree Frontal Barrier		<b>PARTS DUE DATE:</b> n/a	
<b>TYPE OF TEST:</b> <input checked="" type="checkbox"/> VEHICLE <input type="checkbox"/> BENCH <input type="checkbox"/> LABORATORY <input type="checkbox"/> OTHER		<b>PROD. OR ENB. LETTER:</b> n/a	
<b>VIN # or IDENTIFICATION:</b> 0D140002 - 3089087 1FAFP0000000100827		<b>VEHICLE MODEL &amp; YEAR:</b> 2001 D188	
<b>ENGINE NO. DISPL. CAPS:</b> 3.0L I4 V8 FFV		<b>TEST CONDUCTED TO CERTIFY CONTROL ITEM COMPLIANCE WITH GOV. REGULATIONS:</b> Yes X No	
<b>TRANS / DRIVETRAIN:</b> n/a		<b>DISPOSITION OF PARTS:</b> n/a	
<b>AXLE RATIO:</b> n/a		<b>PROCUREMENT REQ ?</b> <input type="checkbox"/> YES <input type="checkbox"/> NO IF YES, GIVE CODE	
<b>TYPE OF FUEL:</b> Stoddard		<b>IGNITION TIMING:</b> n/a	
<b>CONVERTER:</b> n/a		<b>MAIL REPORT TO:</b>	
<b>ORANGE OIL AND CAPACITY (L):</b> n/a		<b>TIRE SIZE AND PLY RATING:</b>	
<b>VEHICLE TEST WEIGHT:</b>		<b>TIRE PRESSURE (psi):</b>	
<b>FRONT:</b> 2392	<b>REAR:</b> 1890	<b>TOTAL:</b> 4282	<b>FRONT:</b> 30 <b>REAR:</b> 30
<b>REPORT CATEGORIES:</b>		<b>BLDG:</b>	
<input checked="" type="checkbox"/> ENGINEERING		<b>MAIL DROP:</b>	
<input checked="" type="checkbox"/> DATA		<b>ADDRESS:</b>	
<input checked="" type="checkbox"/> RAW DATA			

<b>1. OBJECT OF TEST</b>	<b>2. TEST PROCEDURE</b>	<b>3. ITEMS TO BE TESTED (NAME, NUMBER, QUANTITY)</b>	<b>RECORD COPY</b>
1)	Conduct (speed) 35 MPH (year) 2001 (vehicle) D188 (rev) # CP (roads) 90 degree Frontal Barrier		Schedule No. <u>7-7-12</u> Retain Until <u>2019</u>
2)	Velocity At Impact: 35 MPH Remote Fire Time: <del>300</del> <b>LIVE SENSORS</b> Positioning procedure: N/A	Vehicle Year: 2001 Vehicle Line: D188 Vehicle Level: CP	
<b>Test Requester:</b>	(name) D. Perrigo (phone) 84-59018	(page number) DPER	<b>Estimated test cost =</b> <u>830,000.00</u>
<b>Build Coordinator:</b>	E. Pagano (phone) 82-30948	SPAG	
<b>Additional Contacts:</b>			
<b>Test Dev. Engineer:</b>			

<b>REQUESTING SEGT. NO:</b> TEST	<b>WORK ORDER WORK TASK:</b> F15	<b>ISSUED/ REQUESTED BY:</b> D. Perrigo	<b>PHONE:</b> 84-59018	<b>APPROVAL:</b> K. Arturs	<b>TEST TYPE:</b> n/a	<b>RISK:</b> n/a	<b>SIGN OFF DATE:</b> n/a
-------------------------------------	-------------------------------------	--	---------------------------	-------------------------------	--------------------------	---------------------	------------------------------

**COMPLETE THE FOLLOWING TWO QUESTIONS AS INDICATED:**  
(Check appropriate boxes)

<b>1 - Rational for not replacing this test by CAE analysis:</b> <input type="checkbox"/> No CAE Methodology or process available <input type="checkbox"/> No CAE Completion <input type="checkbox"/> Insufficient confidence in CAE <input type="checkbox"/> To obtain basic data for CAE <input type="checkbox"/> Replacement or improvement of existing Test <input type="checkbox"/> Testing is Quicker <input type="checkbox"/> Mandatory or Regulatory <input checked="" type="checkbox"/> Certification <input type="checkbox"/> Development test for P88 <input type="checkbox"/> Not applicable <input type="checkbox"/> Other	<b>2 - What is the expected Test Outcome:</b> <input checked="" type="checkbox"/> Results will meet DVPWCR requirements. <input type="checkbox"/> System Component will not meet Test specification. <input type="checkbox"/> Unknown <input type="checkbox"/> Above is Based on CAE? <input type="checkbox"/> Other:
--	--

Requester/Originator: SPER/SPC  
Printed On: 08/01/99 Pathway: Saver  
Density Print: Duplex

Test Authorization  
Page 1 of 1

BSP 080499  
OK 08/04/99  
12/2/99

Form 1.001, Revised Sept 18, 1998  
Vehicle Design/Program/Gen

# General Request Information

TA# TB7732

## Test Mode

35 MPH  
90 degree Frontal Barrier

Test Objectives: *Cart (C) Verif (V) Dev (D) Audit (A)*

### REGULATORY:

FMVSS 204 - Steering Wheel Displacement  
 FMVSS 208 - Frontal Occupant Protection  
 FMVSS 212 - Wind Shield Retention  
 FMVSS 214 - Side Impact Protection  
 FMVSS 219 - Windshield Zone Intrusion  
 Film Analysis  
 Template  
 **C** FMVSS 301 - Fuel System Integrity  
 **X** Rollover  
 **X** Pressure Check  
 FMVSS 308 - NGV Fuel System Integrity  
 ECE 12 (74/297/EEC) - Protection of the Driver Against Steering Mechanism  
 ECE 32 Rear Impact - Structural Performance  
 ECE 33 Frontal Impact - Structural Performance  
 ECE 34 Fuel System Integrity  
 ECE 94 Step II Frontal Offset - Occupant Performance  
 ECE 95 Step II 300mm Barrier Side Impact - Occupant Performance  
 98/79/EC - Frontal Offset  
 98/27/EC - Side Impact

### FORD AUTOMOTIVE OPERATIONS SAFETY DESIGN GUIDELINES:

Front Impact FAO Safety Design Guidelines  
 Offset Frontal FAO Safety Design Guidelines  
 Side Impact Protection FAO Safety Design Guidelines  
 Rear Impact Fuel System Performance FAO Safety Design Guidelines

### OTHER:

Sensor Development  
 Other, Specify: \_\_\_\_\_

## Primary Test Vehicle Information

Use (Target/Bullet):	BULLET
Model Year:	2001
Vehicle Program:	D100
Vehicle Name:	TAUNUS
Body / Cab Style:	WAGON
Build Number:	DD140002
Tag Number:	308/1997
VIN Number:	1FAFP8683YG100027
Fuel System Rated Capacity (Gal):	18
Prototype Level:	CP
Drive Side:	LH

# Special Prep/Build Instructions Primary Vehicle

TA# TB7762

## 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:

- May remove decklid, door glass, interior trim

## Pyro Restraints Usage

- Left Front Air Bag
- Right Front Air Bag
- Left Front Side Air Bag
- Right Front Side Air Bag
- Left Rear Side Air Bag
- Right Rear Side Air Bag
- Left Pyro Retractor
- Left Pyro Buckle
- Right Pyro Retractor
- Right Pyro Buckle

Other, Specify:

- N/A Remote Fire Time:  
(No fire time listed if sensor fired OR if no pyro restraints are used)
- Remote back-up Fire Time:

## Special Pre-Test Preparation

Other, Specify:

# Occupant / ATD Request Primary Vehicle

TAF: TS7782

	Occupant 1	Occupant 2
<b>Type</b>	<u>Water Bottle</u>	<u>Water Bottle</u>
<b>Instrumentation Level*</b>	_____	_____
<b>In-Vehicle Location</b>	<u>LF</u>	<u>RF</u>
<b>Verify:</b>		
<b>Seat Position Long</b>	_____	_____
<b>Seat Position Vert**</b>	<u>FULL DOWN</u>	<u>FULL DOWN</u>
<b>Seat Back Angle</b>	_____	_____
<b>Positioning Procedure</b>	<u>N/A</u>	<u>N/A</u>
<b>Use Foot Rest</b>	<u>N/A</u>	<u>N/A</u>
<b>Take Seat Track Video</b>	_____	_____
<b>Special Positioning Instructions</b>	_____	_____
<b>Dummy Adjustment</b> (arm angle)	_____	_____
<b>Occupant Belted</b>	<u>YES</u>	<u>YES</u>

*MMY*  
*8-27-99*

\*See instrumentation request for detailed instrumentation information.

# Test Conditions - Final Prep

TAB: TB7782

## Final Prep Contacts

ONE of these MUST be present during weigh-up & final prep

<b>Test Engineer</b>	<b>Request Engineer</b>	<b>Build Coordinator</b>
Name: _____	D. Perrigo	B. Pagano
Phone: _____	64-50016	32-30546
Pager: _____	DFER	BPAG

## Test Weight

Minimum Option Weight  
 33% Option Weight  
 Medium Option Weight

GVWR: \_\_\_\_\_  
 Wheelbase: \_\_\_\_\_

## Tire Pressure

Front: 30 psi                      Rear: 30 psi

## Fuel System

Fuel Tank & System to Contain: Standard

$\frac{17.1 \text{ gallons}}{\text{Fill Level}} = \frac{85 \%}{\%} \times \frac{18.0 \text{ gallons}}{\text{Capacity}}$

## Weight Targets

If required weight distribution is UNACHIEVABLE, please note allowable variances.

	Requested Test Weight	Acceptable Test Weight Variance		Actual Test Weight
		High (+)	Low (-)	
Front: _____	<u>2,382 lbs</u>	Front: <u>13 lbs</u>	<u>0 lbs</u>	Front: <u>2356</u>
Rear: _____	<u>1,890 lbs</u>	Rear: <u>13 lbs</u>	<u>0 lbs</u>	Rear: <u>1919</u>
Total: _____	<u>4,272 lbs</u>	Total: <u>26 lbs</u>	<u>0 lbs</u>	Total: <u>4275</u>

Rated Luggage Load: 0 lbs ?

## Simulate/Verify at Weigh-Up

Dummy Weight

On Board Camera Count

## Weight Addition (Restrictions)

Do NOT place any weight in the following locations:

<input type="checkbox"/> Air Cleaner	<input type="checkbox"/> Engine	<input type="checkbox"/> Doors
<input type="checkbox"/> Battery	<input type="checkbox"/> Fan Box/Shroud	<input type="checkbox"/> Foot Wells - Front
<input checked="" type="checkbox"/> Bottle - Coolant	<input checked="" type="checkbox"/> Headlamp Opnng	<input type="checkbox"/> Foot Wells - Rear
<input checked="" type="checkbox"/> Bottle - Washer	<input checked="" type="checkbox"/> Radiator	<input type="checkbox"/> Quarter Panels
		<input type="checkbox"/> Trunk Floor

Other: \_\_\_\_\_

## Ride Heights

Measure @ Test Weight

Front: \_\_\_\_\_

Rear: \_\_\_\_\_

Measure

From: Footwell Level to Ground

To: Footwell Level to Ground

## Additional Remarks

DO NOT fill tank with standard until weigh-up

# Dimensional Analysis Request Primary Vehicle

TAF: 187788

**Frontal Impacts**

74		
81		
108	Control Points (CAR)	Exterior
107		
109	Collapse Distance Points	Exterior
128	Frame/ St. Col/ Ling. for Graphs (CAR)	Exterior
130	Frame Standard Bottom (CAR)	Exterior
138	Unified Standard Bottom (CAR)	Exterior
154	Drive Shaft Collapses	Exterior
155	Standard Body Relative	Exterior/Interior
139	Undertail (CAR+R9) IC	Exterior
140	SB & Piler	Exterior
142	Shock Abs.	Exterior
146	Header	Interior
180	Steering Wheel Deformation/ Periphery	Interior
183	Steering Column Mounts	Interior
164	Steering Column Targets	Interior
156		
158	Seat Track to Floor Mounts	Exterior
159	Seat to Track Mounts	Exterior
160	Owl Rotation	Exterior
162	Floorpan Points	Exterior
164	Knee Bolster	Interior
165	Seat Belt Mounts	Interior
168	Chassis Side	Interior
170	Tunnel Hinge Piler	Exterior
172	Brake Indicator (ONLY if you can reach it)	Interior
174	Instrument Panel Mounts	Exterior
176	T4-T Targets	Exterior/Interior
177	Top Non-Sided & Body Sided	Exterior/Interior
285	Rear Door Aperture Reduction	
300		
302		
348		
380		
384		
378		
408	Fig 9 Sectional Profiles	
609	Decelerating Column Collapses	Exterior
607	P.B. Steering Column Collapses	Exterior
608		
609	IC Steering Column Collapses & Intermediate Shaft	Interior
640	Dash Profile @ Driver Centerline	Interior
641	Dash Profile @ Vehicle Centerline	Interior
642	Dash Profile @ Passenger Centerline	Interior
647	Footwell Reduction	Interior
650	1) Driver/Passenger - A & B-Point points 100mm above the sill and 100mm below the window aperture. (NOTE: all points should be as close as possible to the rubber sealing strip around the door aperture) 2) Dash Panel Point which is longitudinally in line with the center of the brake pedal 3) Dash Panel Points 200mm inboard/outboard of brake pedal center point (NOTE: Carpet will either have to be folded back or two small diagonal intersecting slots may be made in the carpet)	



# Film Analysis & Photographic Services Request

## Front Impact Film Analysis

TA#: TB7752

Head WRT Vehicle  
 Shoulder WRT Vehicle  
 Rocker WRT Ground

Other, Specify:

## Still Photography

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

### 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  
 Top of Barrier - Engine Close-up  
 In lights - Close-up of Engine/Fuel Rail from left side  
 In lights - Close-up of Engine/Fuel Rail from right side  
 Left Front Rail Extension Bumper Close-up  
 Right Front Rail Extension Bumper Close-up

R 12/1/97

**Overhead Coverage**

\_\_\_\_ Overhead - Overall  
  X   Overhead - A-Pillar Forward  
\_\_\_\_ Steering Column Displacement  
\_\_\_\_ Scale  
\_\_\_\_ Resolution

**PR Coverage**

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

**All Other High Speed Photography**

\_\_\_\_  
\_\_\_\_

9/10/99

# Instrumentation and Data Processing Request

TAB: TB7782

## Primary Vehicle Structural Instrumentation - Frontal Impact

ACCELEROMETERS:	Long	Vert	Lat
<input checked="" type="checkbox"/> Engine/Trans Upper	<u>  X  </u>	<u>  X  </u>	<u>  X  </u>
<input type="checkbox"/> Engine/Trans Lower	<u>      </u>	<u>      </u>	<u>      </u>
<input type="checkbox"/> Left Rooker at A-Pillar	<u>      </u>	<u>      </u>	<u>      </u>
<input type="checkbox"/> Right Rooker at A-Pillar	<u>      </u>	<u>      </u>	<u>      </u>
<input checked="" type="checkbox"/> Left Rooker at B-Pillar	<u>  X  </u>	<u>  X  </u>	<u>  X  </u>
<input checked="" type="checkbox"/> Right Rooker at B-Pillar	<u>  X  </u>	<u>  X  </u>	<u>  X  </u>
<input type="checkbox"/> Left Rooker at C-Pillar	<u>      </u>	<u>      </u>	<u>      </u>
<input type="checkbox"/> Right Rooker at C-Pillar	<u>      </u>	<u>      </u>	<u>      </u>
<input type="checkbox"/> Left Frame at A-Pillar	<u>      </u>	<u>      </u>	<u>      </u>
<input type="checkbox"/> Right Frame at A-Pillar	<u>      </u>	<u>      </u>	<u>      </u>
<input type="checkbox"/> Left Frame at B-Pillar	<u>      </u>	<u>      </u>	<u>      </u>
<input type="checkbox"/> Right Frame at B-Pillar	<u>      </u>	<u>      </u>	<u>      </u>
<input type="checkbox"/> Left A-Pillar Inside	<u>      </u>	<u>      </u>	<u>      </u>
<input type="checkbox"/> Right A-Pillar Inside	<u>      </u>	<u>      </u>	<u>      </u>
<input type="checkbox"/> Centerline Tunnel @ Dash	<u>      </u>	<u>      </u>	<u>      </u>
<input type="checkbox"/> Centerline Tunnel Middle	<u>      </u>	<u>      </u>	<u>      </u>
<input type="checkbox"/> Centerline Tunnel @ Seat Long Centerline	<u>      </u>	<u>      </u>	<u>      </u>
<input type="checkbox"/> Left Floor Pan Under Seat	<u>      </u>	<u>      </u>	<u>      </u>
<input type="checkbox"/> Left Door Inside Top	<u>      </u>	<u>      </u>	<u>      </u>
<input type="checkbox"/> Left Shock Tower	<u>      </u>	<u>      </u>	<u>      </u>
<input type="checkbox"/> Right Floor Pan Under Seat	<u>      </u>	<u>      </u>	<u>      </u>
<input type="checkbox"/> Right Door Inside Top	<u>      </u>	<u>      </u>	<u>      </u>
<input type="checkbox"/> Right Shock Tower	<u>      </u>	<u>      </u>	<u>      </u>
<input type="checkbox"/> Rad Support Top - Center	<u>      </u>	<u>      </u>	<u>      </u>
<input type="checkbox"/> #1 Crossmember Bottom	<u>      </u>	<u>      </u>	<u>      </u>
<input type="checkbox"/> #2 Crossmember Bottom	<u>      </u>	<u>      </u>	<u>      </u>
<input type="checkbox"/> Left Front Rail Forward of Sledrunners	<u>      </u>	<u>      </u>	<u>      </u>
<input type="checkbox"/> Left Front Rail Forward of Shock Tower	<u>      </u>	<u>      </u>	<u>      </u>
<input type="checkbox"/> Right Front Rail Forward of Sledrunners	<u>      </u>	<u>      </u>	<u>      </u>
<input type="checkbox"/> Right Front Rail Forward of Shock Tower	<u>      </u>	<u>      </u>	<u>      </u>
<input type="checkbox"/> Directly Below D.A. Point # 89	<u>      </u>	<u>      </u>	<u>      </u>
<input type="checkbox"/> Directly Below D.A. Point # 84	<u>      </u>	<u>      </u>	<u>      </u>
<input type="checkbox"/> Next to Fuel Inertia Switch	<u>      </u>	<u>      </u>	<u>      </u>
<input type="checkbox"/> Top of Battery	<u>      </u>	<u>      </u>	<u>      </u>
<input type="checkbox"/> Near ACS Bypass Switch	<u>      </u>	<u>      </u>	<u>      </u>

OTHER STRUCTURAL ACCELS:	Long	Vert	Lat
<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>
<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>

# Primary Vehicle Systems Instrumentation

TA#: TB7752

## SENSOR ACCELS:

See Sensor Map

## MONITOR AIR BAG SENSORS:

See Sensor Map  
 Monitor Closure of Each Specified Sensor  
 Monitor Closure of Single Pt Elect Sensor

## MONITOR AIR BAGS STATUS:

Driver Squib Voltage  
 Driver Squib Current  
 Driver Bag Pressure  
 Passenger Squib Voltage  
 Passenger Squib Current  
 Passenger Bag Pressure  
 Passenger Initiator Pressure

## STEERING COLUMN:

Stroke Break Wires  
 Tilt Mechanism Break Wires  
 String Pot  
 Load Cell (5 Axle)

## SWITCHES:

Engine to Rad Support left  
 Engine to Rad Support center  
 Engine to Rad Support right  
 Brake booster to shock tower  
 Other \_\_\_\_\_

## FUEL SYSTEM:

Inertia Fuel System Cut-Off Switch ✓

## ANGULAR MOTION SENSORS:

## VEHICLE STRING POTS:

## OTHER VEHICLE SYSTEM INSTRUMENTATION:

A/B Bypass Driver (acc) Switch  
 A/B Bypass Passenger (acc) Switch  
 A/B Bypass Loop (acc) Switch

## 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  
 Lightweight Left Lap Belt at Anchor Load  
 Lightweight Left Torso Belt at Retr. Load  
 Lightweight Left Torso Belt at D-ring Load  
 Lightweight Right Lap Belt at Anchor Load  
 Lightweight Right Torso Belt at Retr. Load  
 Lightweight Right Torso Belt at D-ring Load

# Barrier Load Cell Request

TA#: TB7752

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## 90 Degree Full Frontal Impact

- All Barrier Load Cells (see diagram left)
- X Channels Only
- X,Y Channels Only
- X, Z Channels Only
- All X,Y,Z Channels

## X Partial Barrier Load Cells (see bolded diagram left)

- X Channels Only
- X,Y Channels Only
- X, Z Channels Only
- All X,Y,Z Channels

*DBP 8/2/17*

## 90 Degree Left Full Frontal Impact

- All Barrier Load Cells (see diagram left)
- X Channels Only
- X,Y Channels Only
- X, Z Channels Only
- All X,Y,Z Channels

## Partial Barrier Load Cells (see bolded diagram left)

- X Channels Only
- X,Y Channels Only
- X, Z Channels Only
- All X,Y,Z Channels

## 90 Degree Right Full Frontal Impact

- All Barrier Load Cells (see diagram left)
- X Channels Only
- X,Y Channels Only
- X, Z Channels Only
- All X,Y,Z Channels

## Partial Barrier Load Cells (see bolded diagram left)

- X Channels Only
- X,Y Channels Only
- X, Z Channels Only
- All X,Y,Z Channels

CRTS 0011569

*8/2/17*

# List of T Contacts

TA#: TB7752

	Last name	Phone	Pager	Profs
Requestor	D. Perrigo	84-56018	DPER	DPERRIGO
Approving supervisor	K. Arthurs	39-05168	KART	KARTHURS
Build coordinator	E. Pagano	33-38045	BPAG	BPAGANO
Test engineer				
Senior Engineer	M. Rucker	31-79180	MRUCKER	MRUCKER
Other				

	Last name	Phone	Pager	Profs
Seats	M. Jessup	84-51891	MJESSUP1	MJESSUP1
Instrument panel	M. Karanen	33-74148	NONE	MKARANEN
Restraints	N. Desai	39-05145	NDESAI	NDESAI
Air bag (driver)	R. Ruthnowski	82-18978	RRUTHNO	RRUTHNO
Air bag (passenger)	R. Ruthnowski	82-18978	RRUTHNO	RRUTHNO
Steering column				

CRIS 0011569

Requestor/Originator: DPER/MSD  
 Printer: DPER/MSD Facility: Bldg  
 Destroy From: Caplin

Contact List Attachment  
 Page 18 of 17

11/7/98  
 Ver. 3.0001 Rev. 01-Sept 98, 1998  
 Author: Chas/MS/Pagano/CDs

# Revisions List

TAF: TB7752

DATE	AUTHORIZATION	DESCRIPTION	PAGE #s

CRASH NUMBER 11669

# BARRIER QUALITY ASSURANCE AND TRACKING FORM

DATA ENGINEER: Name not on list      WB REVIEW ENGINEER: Ode  
 TEST ORDER NUMBER: TB7752      SITE: 88  
 TEST ENGINEER: M. Foster      TEST DESCRIPTION: 90 DEG. FRONT FIXED BARRIER  
 VEHICLE TYPE: D-186      IMPACT TYPE: SINGLE VEHICLE TEST  
 REQUESTED SPEED: 36 MPH      TEST TYPE: DV  
 CRASH DATE: 08/27/99      OK TO STRIP DATE: 08/27/99  
 CRASH TIME: 09:28      OK TO STRIP TIME: 09:48  
 TOTAL CHANNELS: 42      DUMMY CHANNELS: 0

TEST DUMMY INFORMATION

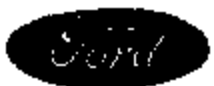
POS	NO	TYPE	AM	WELT	FTED	OTHER
						Y
						Y

11669

CHANNEL IDENTIFICATION			EQUIPMENT					ANOMALIES										DESCRIPTION	RESOLUTION	GAT					
TEST CHANNEL	LOCATION	AGE	TRANSducer	EXTENSION CABLE	CABLE	CRASH PACKAGE	CRASH CHANNEL	NO DATA	INVALID DATA	UNSAT PROTECTORS	LONG TEST	EXCESSIVE FULL SCALE	UNUSUAL SIGNAL	INTERMITTENT	NOISE	EXCESSIVE RESOLVING	REBOUND	DATA DISRUPTION	DATA DEVIATION	BARREL VIBRILITY	LOST DATA	DATA MISSING/RECORDED	TECHNICIAN SIGNATURE	CLASS	TIME
3	ENGINE TRANS TOP	LONG	40000	KAY-		819	1					X										30 to 50 ms	RECR 1000 TEL	1	1

CRIS 0011569





**"RECORD COPY"**  
 Schedule No. 12-1-12  
 Retrosubmitted 2019

**FINAL TEST REPORT**

**Global Test Operations  
 Research and Vehicle Technology**

**TO:** L. Miskir

Test Order No. T-B8558  
 Work Task W. O. No. F09  
 Test Date 9/16/99  
 Date Reported 11/5/99  
 Sheet 1 of 73

**SUBJECT:** Crash Test 11593 (90° Front Fixed Barrier Impact at 35.0 ± 0.4 mph, 56.3 ± 0.6 km/h) - 2000 Taurus (D186) 4-Door Sedan - 2000 Certification Program

**REQUESTED BY:** Vehicle Crash Safety Department, Research and Vehicle Technology - L. Miskir

**OBJECT:** To provide occupant protection data relative to the front barrier impact test requirements of the current FMVSS No. 208 (U.S. CFR Doctet No. 94-4358, Canadian Gazette *SOR/97-447*)

**SUMMARY OF TEST RESULTS:**

- See Attachment 1 for injury criteria data.
- See Attachment 2 for vehicle observations and non-FMVSS data.

The Test Authorization for this crash indicated that the vehicle is representative of a design level suitable for a certification test. To the best of my knowledge, the crash testing was performed on the same vehicle as identified in the Test Authorization; the results reported herein represent the performance of this specific vehicle, and the testing was performed in accordance with the listed procedures. Any procedure deviations significant to the test objectives above are identified in this report.

R. Oda  
 Engineering Technologist

Concur: S. Leah  
 Section Supervisor  
 Operations Engineering Section

**VEHICLE DATA:**

**Make and Model** 2000 Taurus (D186) 4-Door Sedan (IPP Prototype)

**ID Number** 1FAPP52U9YG100030, 589-W-702, DD0K0000

**Power Train** 3.0L, EFI, Automatic (AX4N) Transaxle

**Fuel Tank(s)** Usable Capacity: 16.0 gal. (60.6L)  
Test Condition: Empty

**Front Seat(s)** Type: Bucket  
Cover: Cloth  
Tracks/Position: Manual/Mechanical Mid  
Seat Backs/Position: Adjustable/27.6° Rear of Vertical  
Head Restraints/Position: Adjustable/Up

**Restraint System** LF: 3-Point Continuous Loop Active Belt with  
Pyrotechnic Buckle and Steering Wheel Air Bag  
RF: None Used

**Occupants** LF: 50th Percentile Male, Hybrid III,  
Instrumented No. 334  
RF: None Used

**Test Weight** Front: 2236 lb (1014 kg)  
Rear: 1642 lb (745 kg)  
Total: 3878 lb (1759 kg)  
The test weight includes:  

- the "as received" unloaded vehicle curb weight
- Minimum production options (simulated)
- 2 occupant(s) (described above)
- 200 lb (90.7 kg) luggage (simulated)

**Tires** Front: P215/60R16 30 psi (207 kPa)  
Rear: P215/60R16 30 psi (207 kPa)  
Spare: Removed

**Bumpers** Front: Fascia/Beam  
Rear: 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):

Occupant Crash Protection, T657-ST-25 dated March 3, 1998.

**2. Significant Deviations from T657-ST-25**

Only one dummy was used.

The fuel system did not contain stoddard.

**3. Instrumentation:** The instrumentation equipment set up for this test was completed following approved procedures which require engineering sign-off after each major step. The instrumentation equipment and systems used meet the SAE J211 June 80 series of recommended practices (Instrumentation for Impact Tests J211, J211a, or J211b) and were calibrated using secondary standards that are traceable to the National Institute of Standards and Technology (NIST).**4. Remarks**

Crash movies, pre- and post- crash still images of the test vehicle and copies of this report are available through the Operations Engineering Section, Safety Laboratories Department, GTO. The crash still images are stored and archived on CD ROMs. The file names of the still images are listed under crash number and a three digit sequence number which are 11593001 through 11593062.

## ATTACHMENT 1

Occupant Injury Data (CFR/VSS 208)

	<u>L.E. Dummy</u>
Head Injury Criteria (HIC)	505
Interval	
t1	32 ms
t2	87 ms
Chest resultant acceleration level at 3 ms cumulative duration	40 g
Chest Deflection (Hybrid III)	1.2 in
Peak axial compression load:	
Left femur	480 lb
Right femur	680 lb
Peak axial tension load:	
Left femur	162 lb
Right femur	68 lb
Dummy contained within the vehicle during the crash	Yes

The dummy temperature, immediately prior to the test, was within the specified test range of 69°F to 72°F.

Time histories of the dummy instrumentation are included in this report.

## ATTACHMENT 2

1.0 Vehicle Crush, Film Analysis and/or Instrumentation Data

	Maximum Dynamic Longitudinal Crush	
	in.	(mm)
Left Side	29.6	(752)
Right Side	29.4	(747)

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 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.

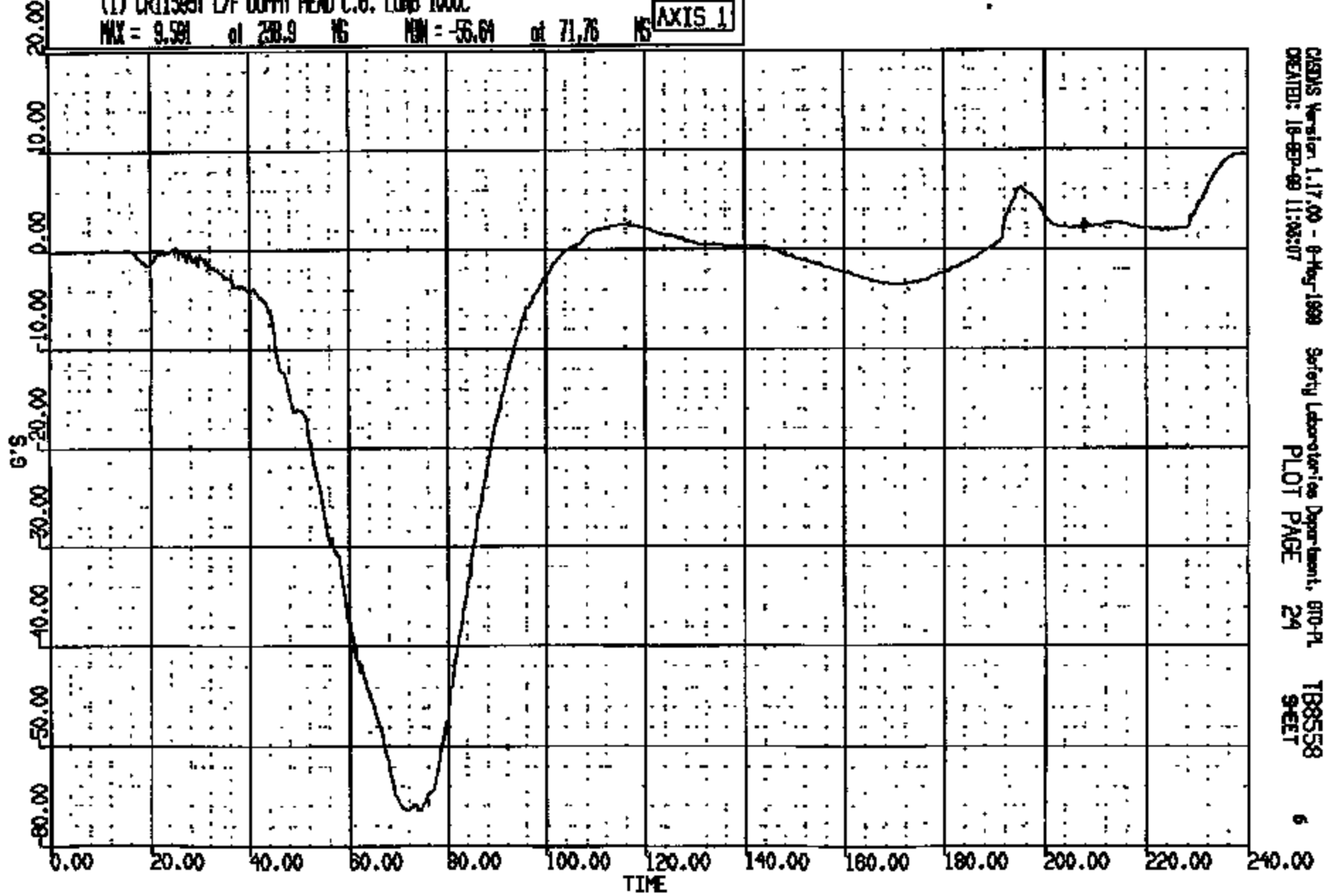
Time histories of any requested derived data (i.e. integrations, etc.) were given to the requesting activity and are not included in this report.

CR R: 11593 TO: TB8558 DATE: 900918 10:24:34  
2000 D-188

(1) CR11593T L/F DUMMY HEAD C.G. LONG 1000C

MAX = 9.591 of 238.9 MS MIN = -56.64 of 71.76 MS

AXIS 1

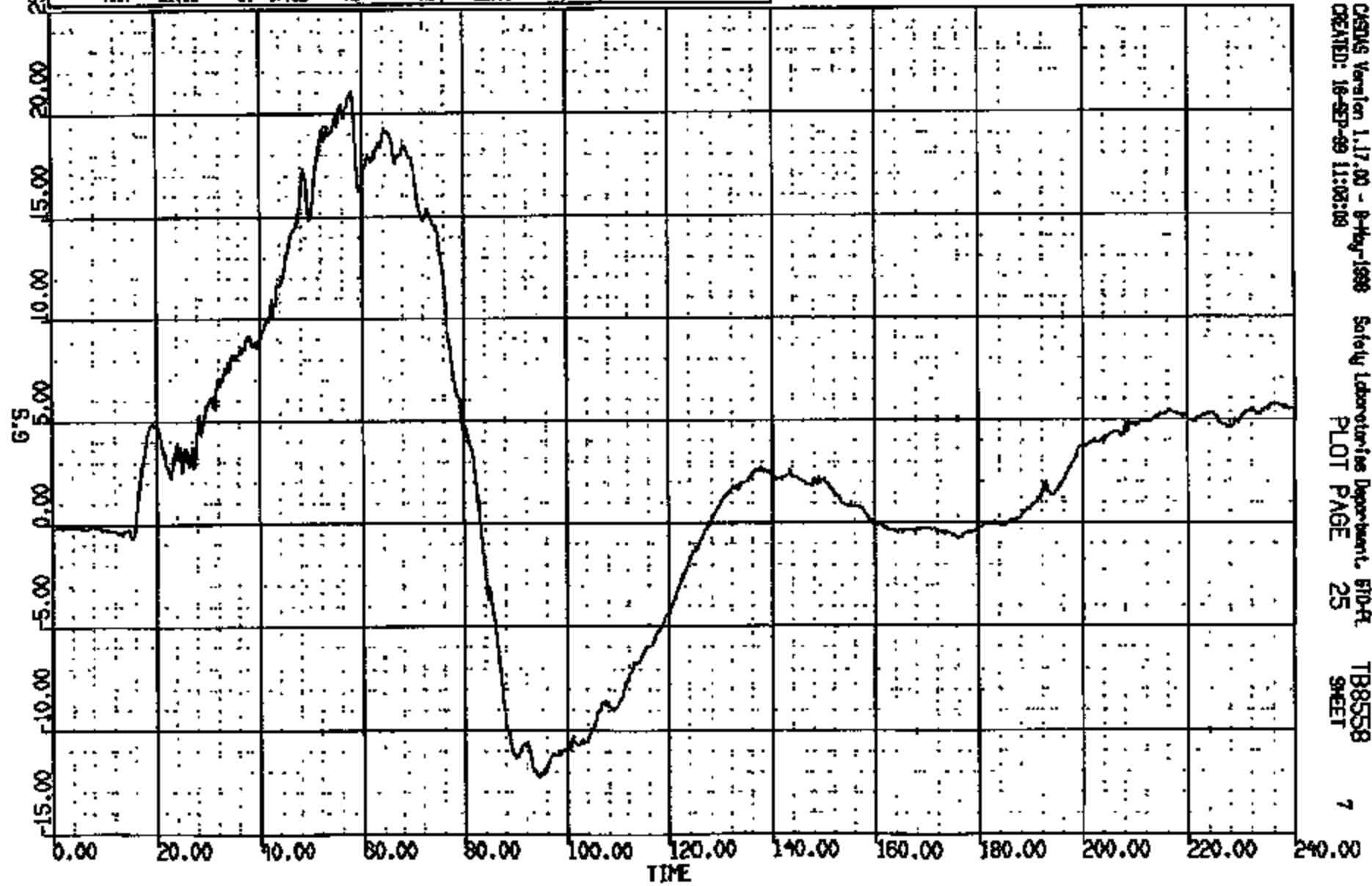


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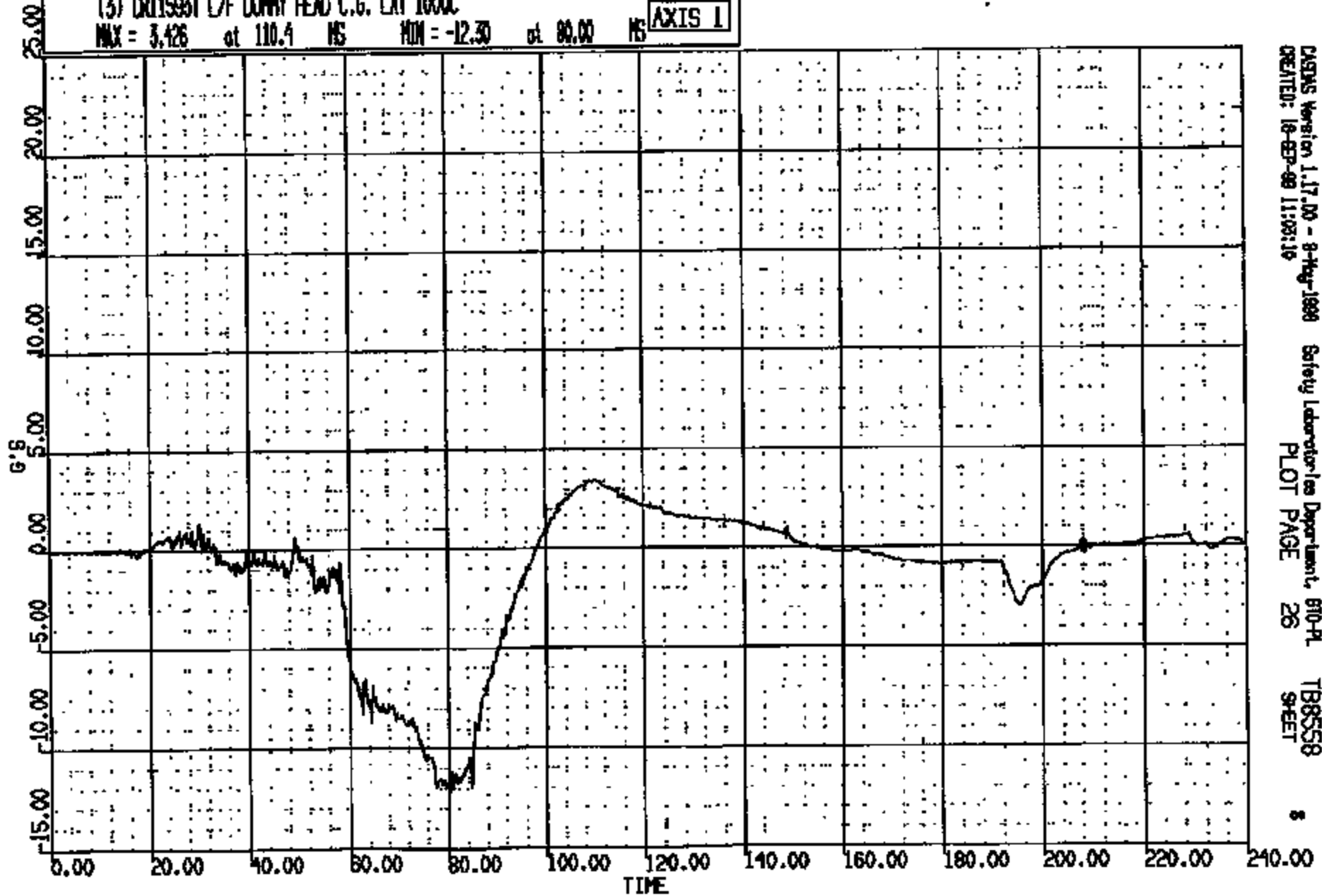
NO. R: 11593 TO: TB8558 DATE: 090910 10:24:34  
W000 D-100

(2) CRT1593T L/F DUMMY HEAD C.G. VERT 1000C  
MAX = 21.02 at 57.92 MS MIN = -12.31 at 94.48 MS **AXIS 1**



CR R: 11593 TO: T8558 DATE: 890916 10:24:34  
2000 0-188

(3) DRU1593T L/F DUNNY HEAD C.G. LAT 1000C  
MAX = 3.426 at 110.4 MS MIN = -12.30 at 80.00 MS **AXIS 1**



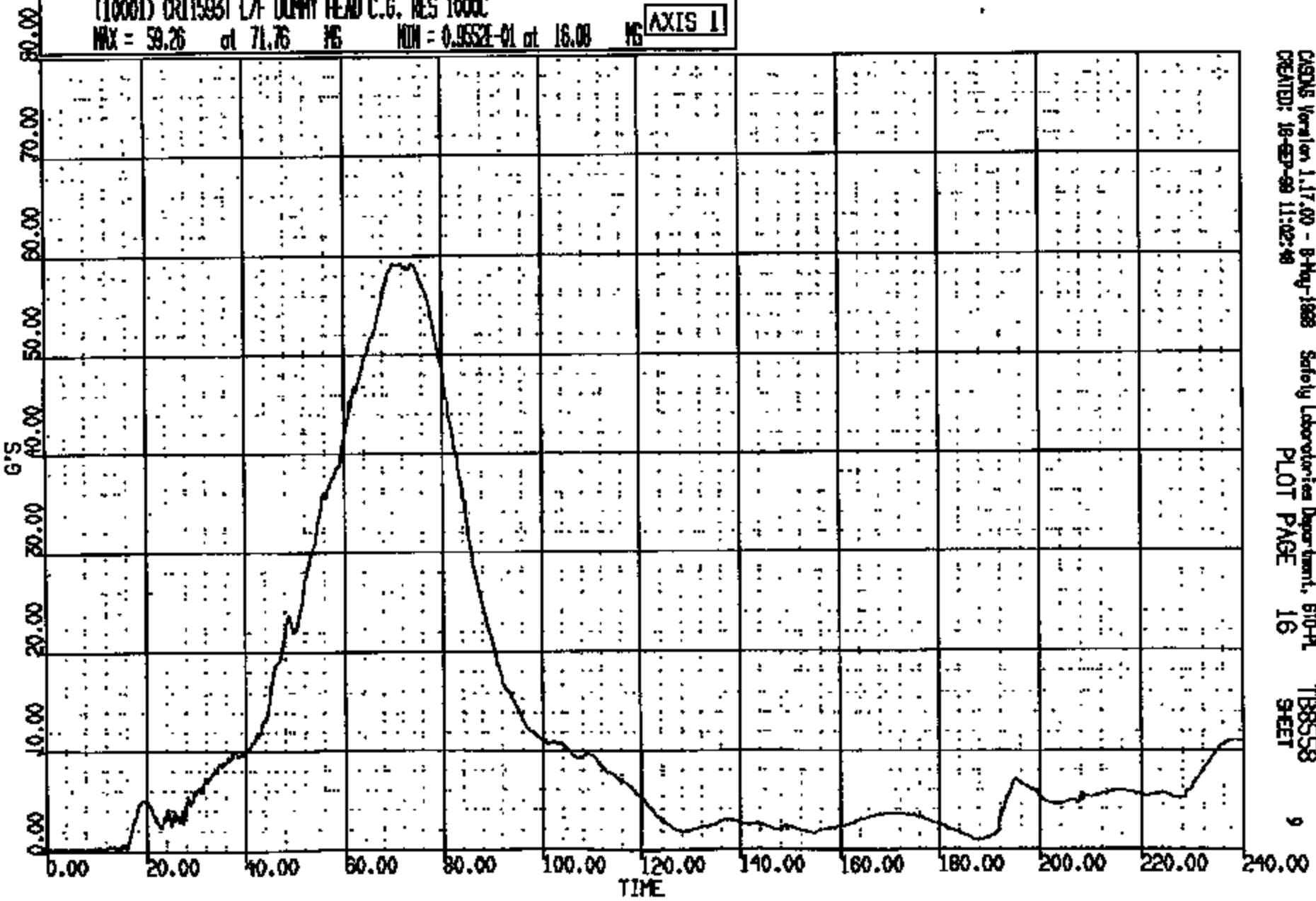
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SHEET

CRTS 0011593



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11	11555	11555	1	880816	10:24:34
TIME	FROM	TO	TRACES	DATE	TIME
11	11555	11555	1	880816	10:24:34
TIME	FROM	TO	TRACES	DATE	TIME
11	11555	11555	1	880816	10:24:34

(10001) CR11535T L/F DUMMY HEAD C.G. RES 1000C  
 MAX = 59.26 at 71.76 MS MIN = 0.9352E-01 at 16.00 MS **AXIS 1**

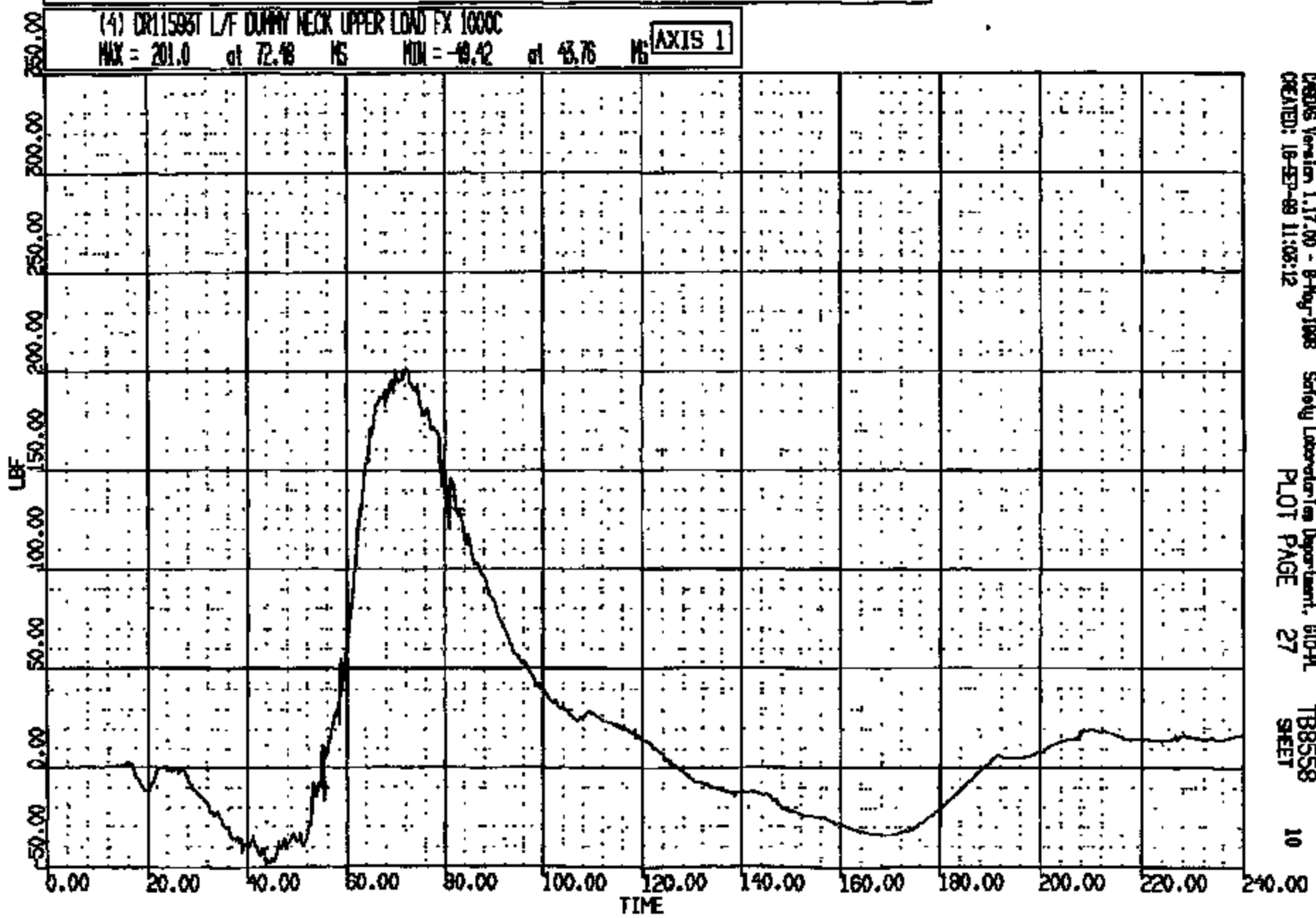


CR11535T L/F DUMMY HEAD C.G. RES 1000C  
 Safety Laboratories Department, 610-PL  
 TR8558  
 9  
 PLOT PAGE 16  
 SHEET  
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CR11535T

CR R: 11593 TO: TB8558 DATE: 20010 10:24:34  
2000 D-198

(4) CR11593T L/F DUMMY NECK UPPER LOAD FX 1000C  
MAX = 201.0 at 72.48 MS MIN = -49.42 at 43.76 MS **AXIS 1**



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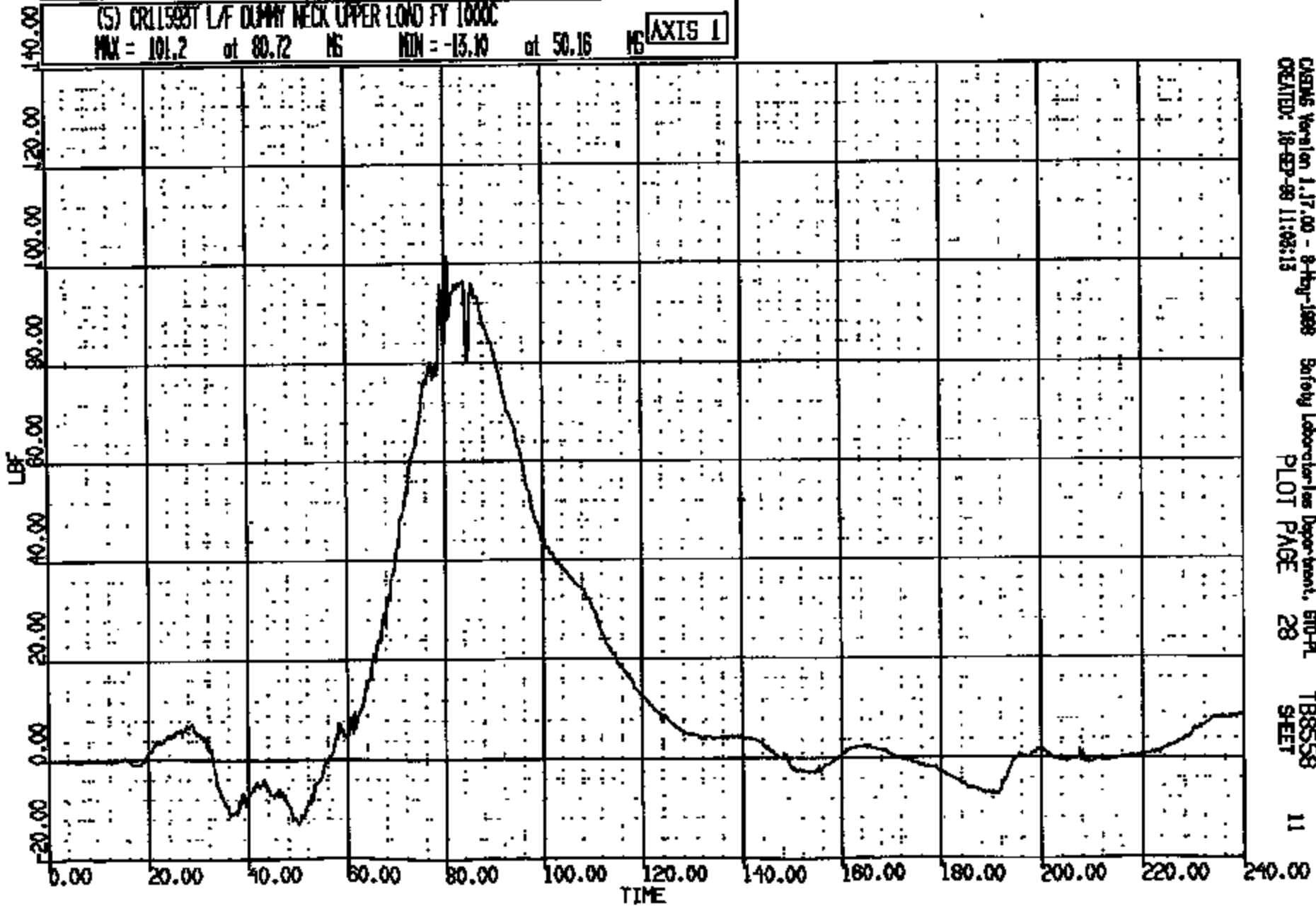
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OR: 11593 TO: T88558 DATE: 880818 10:24:34  
2000 D-188

(S) CR11593T L/F DUMMY NECK UPPER LOAD FY 1000C

MAX = 101.2 at 80.72 MS MIN = -13.10 at 50.16 MS

AXIS 1

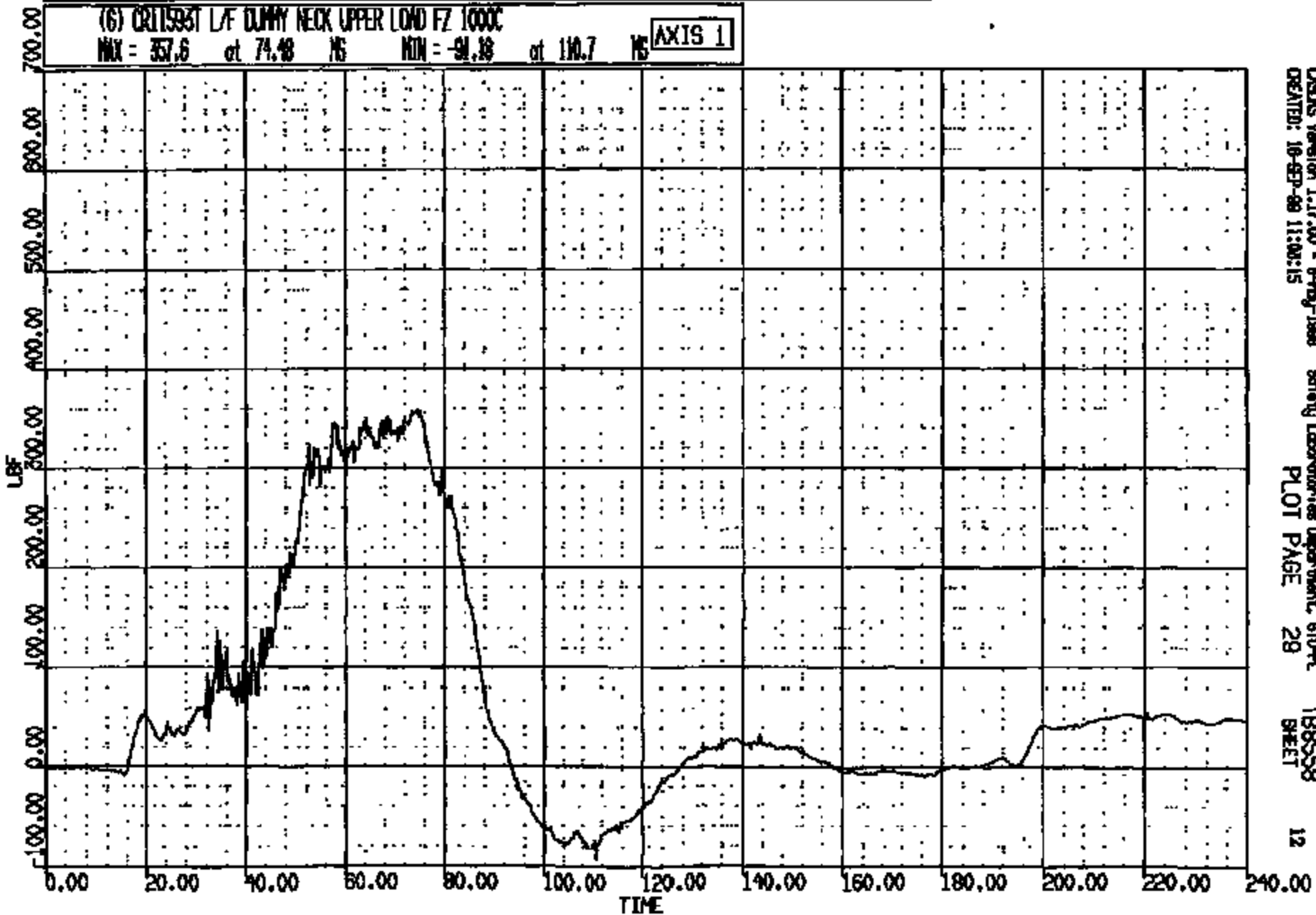


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CRTS 0011593

CR R: 11593 TO: T8558 DATE: 990910 10:24:54  
2000 0-188

(6) CR11593T L/F DUMMY NECK UPPER LOAD FZ 1000C  
MAX = 357.6 at 74.48 MS MIN = -91.18 at 110.7 MS **AXIS 1**



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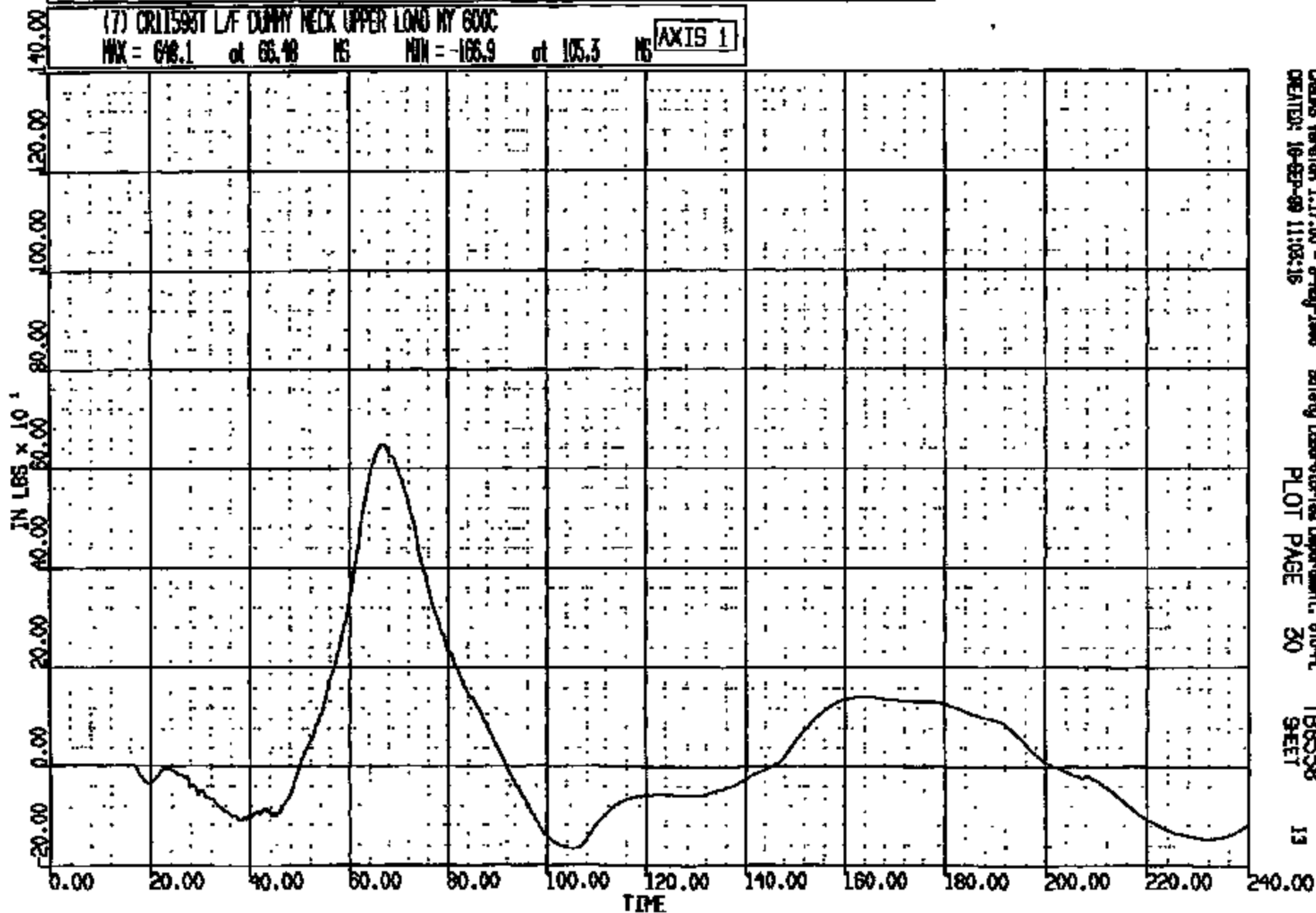
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CR R: 11593 TO: TB8558 DATE: 990818 10:24:24  
2000 D-188

(7) CR11593T L/F DUMMY NECK UPPER LONG NY 600C

MAX = 648.1 at 65.48 MS MIN = -166.9 at 105.3 MS

AXIS 1



CASIMS Version 1.17.00 - 8-May-1998  
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Safety Laboratory Department, 610-PL  
PLOT PAGE 30

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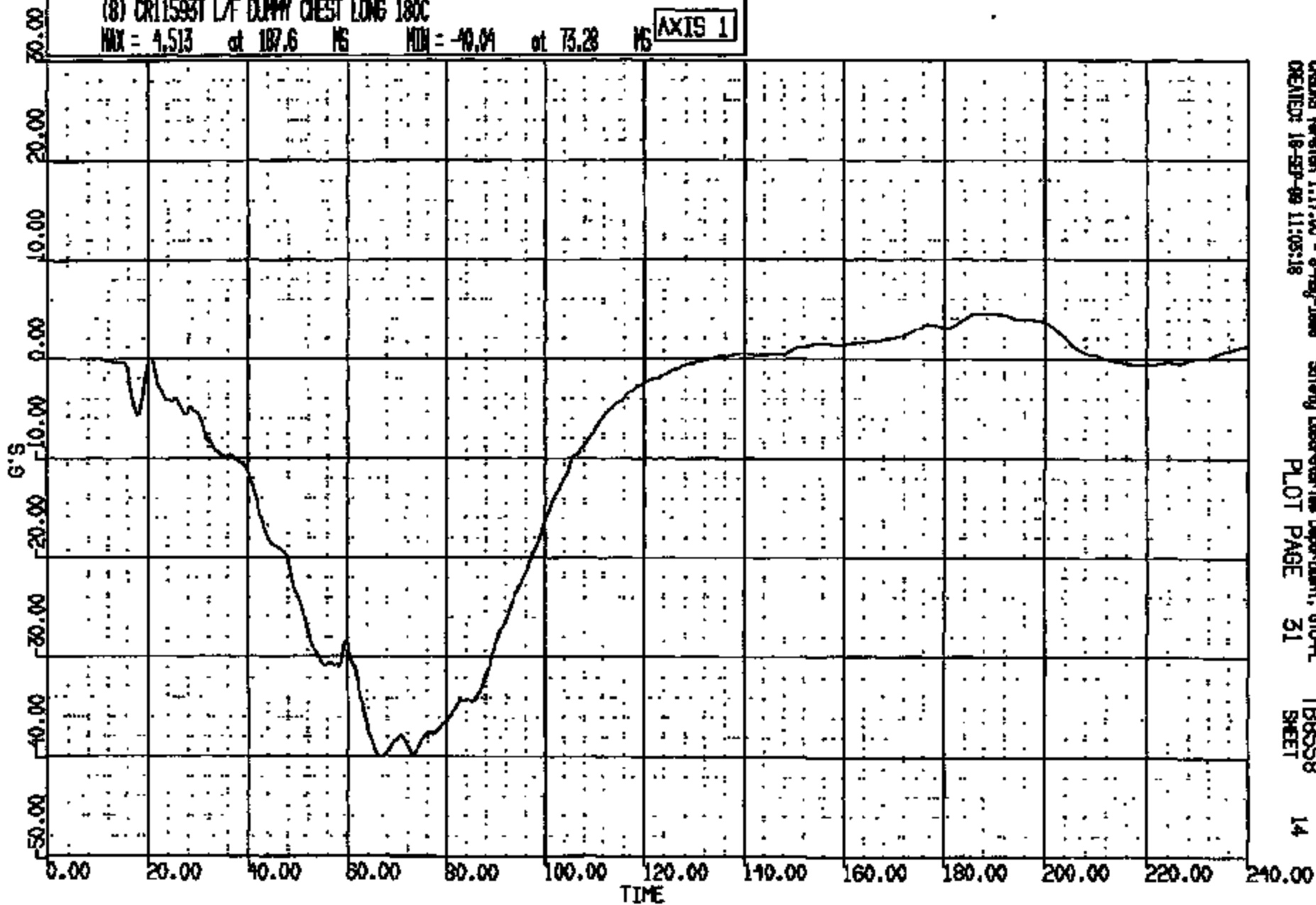
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CR R: 11593 TO: T8858 DATE: 990918 10:24:34  
2000 0-188

(8) CR11593T L/F DUMMY CHEST LONG 180C

MAX = 4.513 at 187.6 MS MIN = -49.04 at 73.28 MS

AXIS 1



CRS05 Version 1.17.00 - 8-May-1998  
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Safety Laboratories Department, G10-PL  
PLOT PAGE 31

T8858  
SHEET

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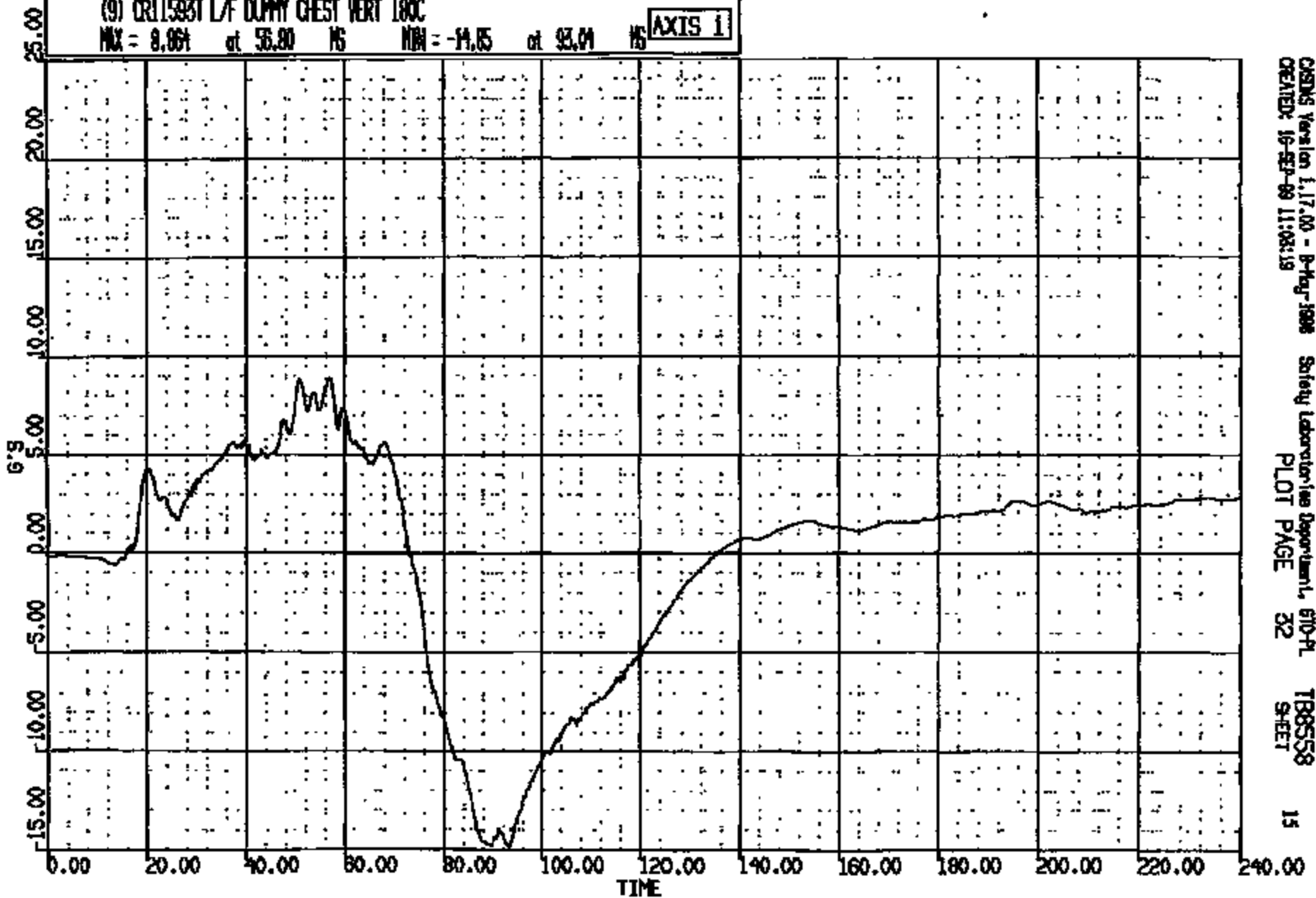
CR11593

CR R: 11593 TO: TB8558 DATE: 200818 10:24:34  
2000 D-188

(9) CRT15931 L/F DUMMY CHEST VERT 180C

MAX = 8.861 at 56.80 MS MIN = -14.85 at 93.04 MS

AXIS 1



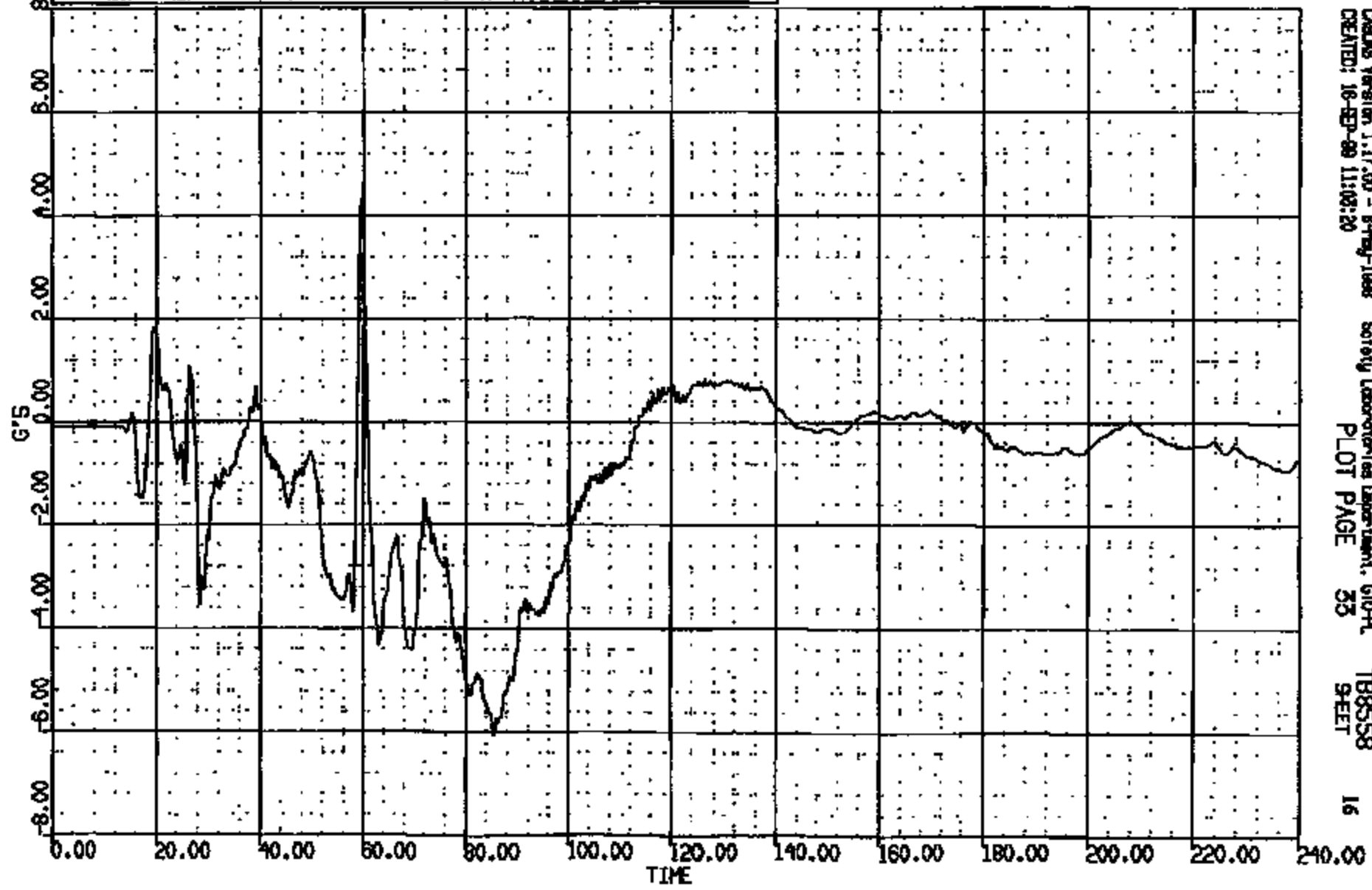
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CRTS 0011593

CR R: 11593 TO: TB8558 DATE: 880818 10:24:34  
2000 0-188

(10) CR11593T L/F DUMMY CHEST LAT 180C  
MAX = 4.281 at 59.68 MS MIN = -6.061 at 85.36 MS

AXIS 1



CRS05 Version 1.17.00 - 8-Aug-1988  
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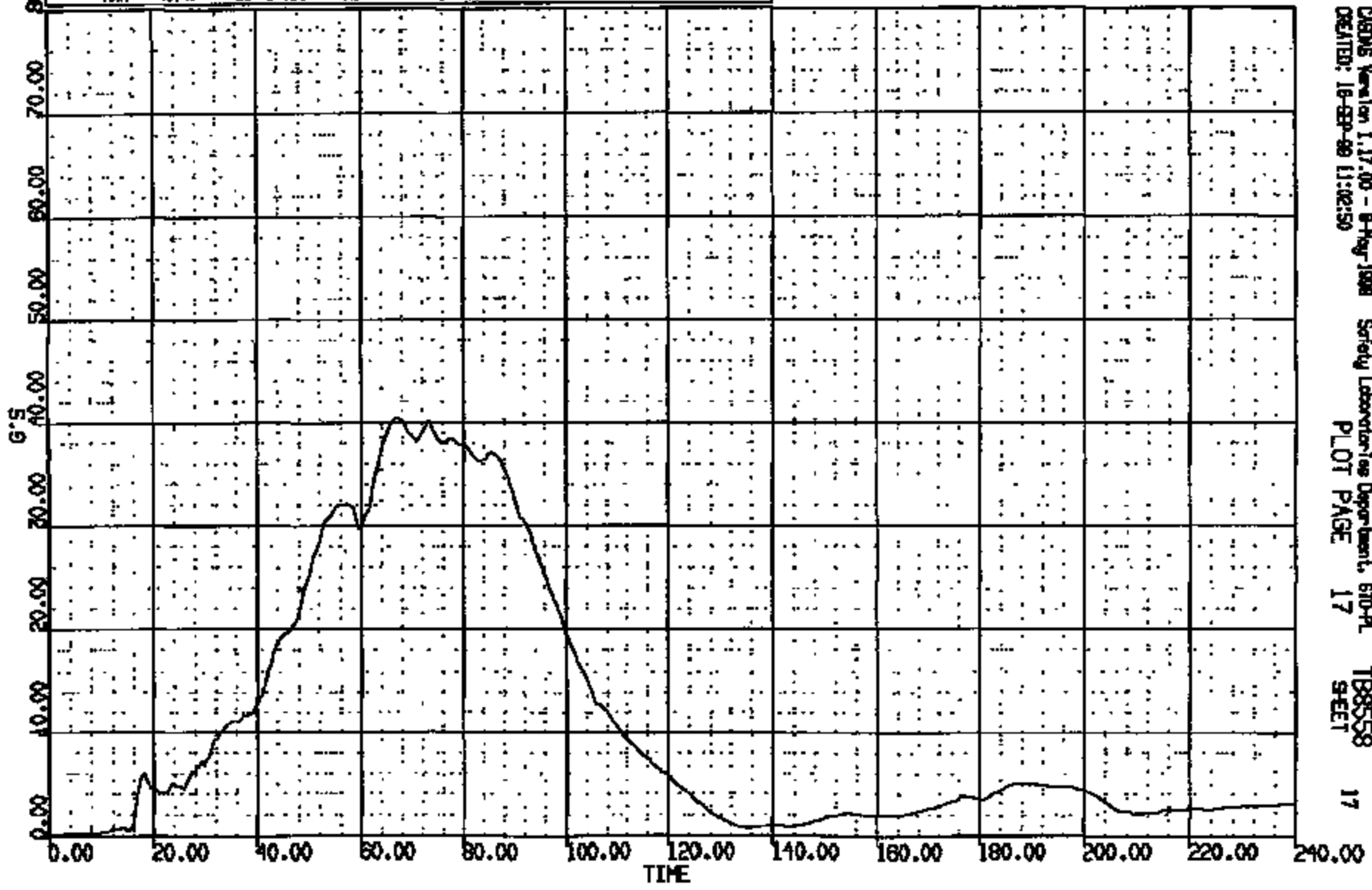
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PLOT PAGE 35

TB8558  
SHEET 16



CR R: 11593 TO: TB8558 DATE: 890918 10:24:34  
2000 D-188  
CUMDUR = 39.924 Duration time = 2.9961

(10005) CR11593T L/F DUMMY CHEST RES 180C  
MAX = 40.47 at 67.09 MS MIN = 0.1941 at 2.720 MS **AXIS 1**

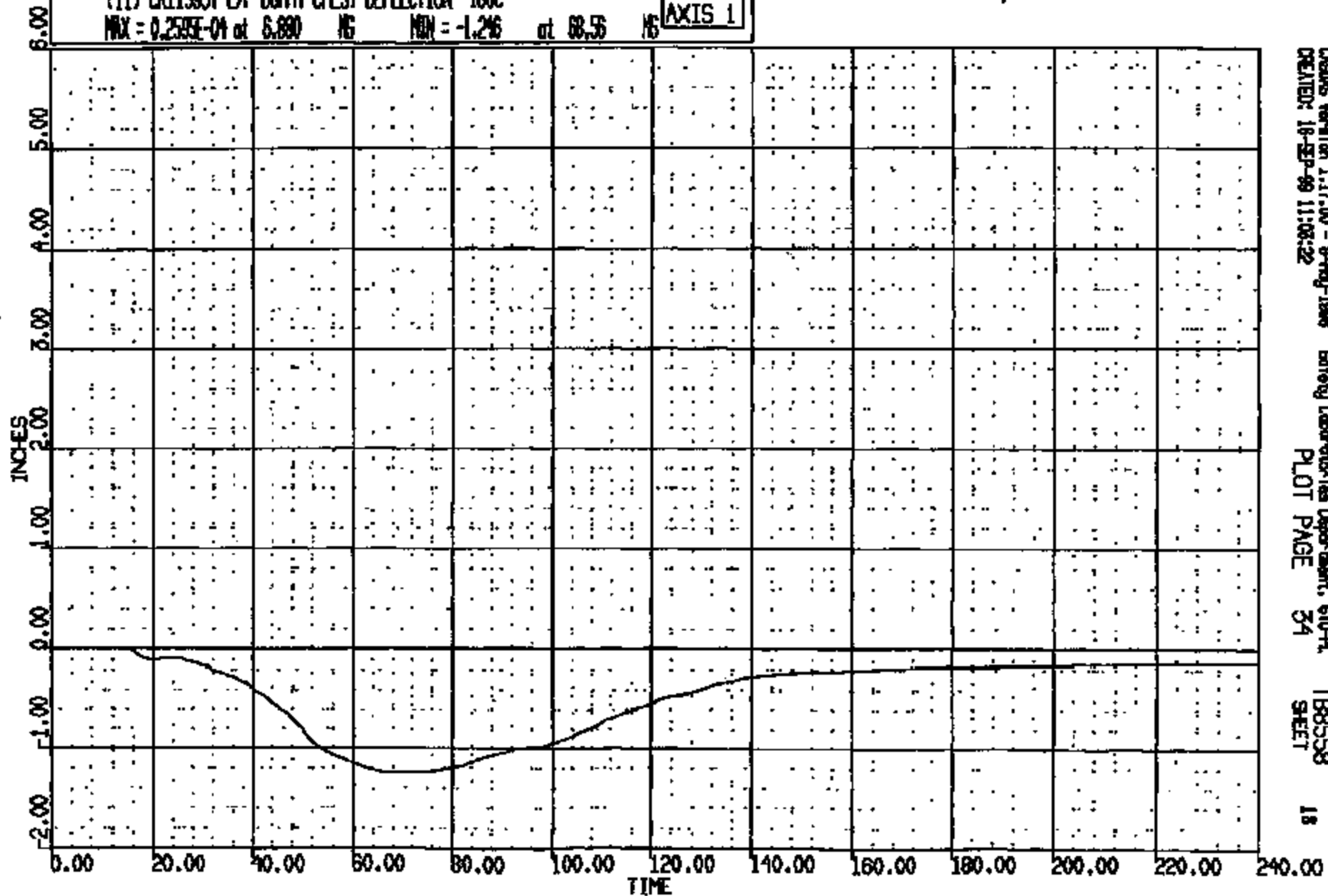


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9-LET

CRIS 0011593

CR R: 11595 TO: T8558 DATE: 00010 10:24:34  
2000 D-100

(11) CR11595T L/F DUMMY CHEST DEFLECTION 180C  
MAX = 0.2505E-04 at 6.890 MS MIN = -1.246 at 68.56 MS **AXIS 1**



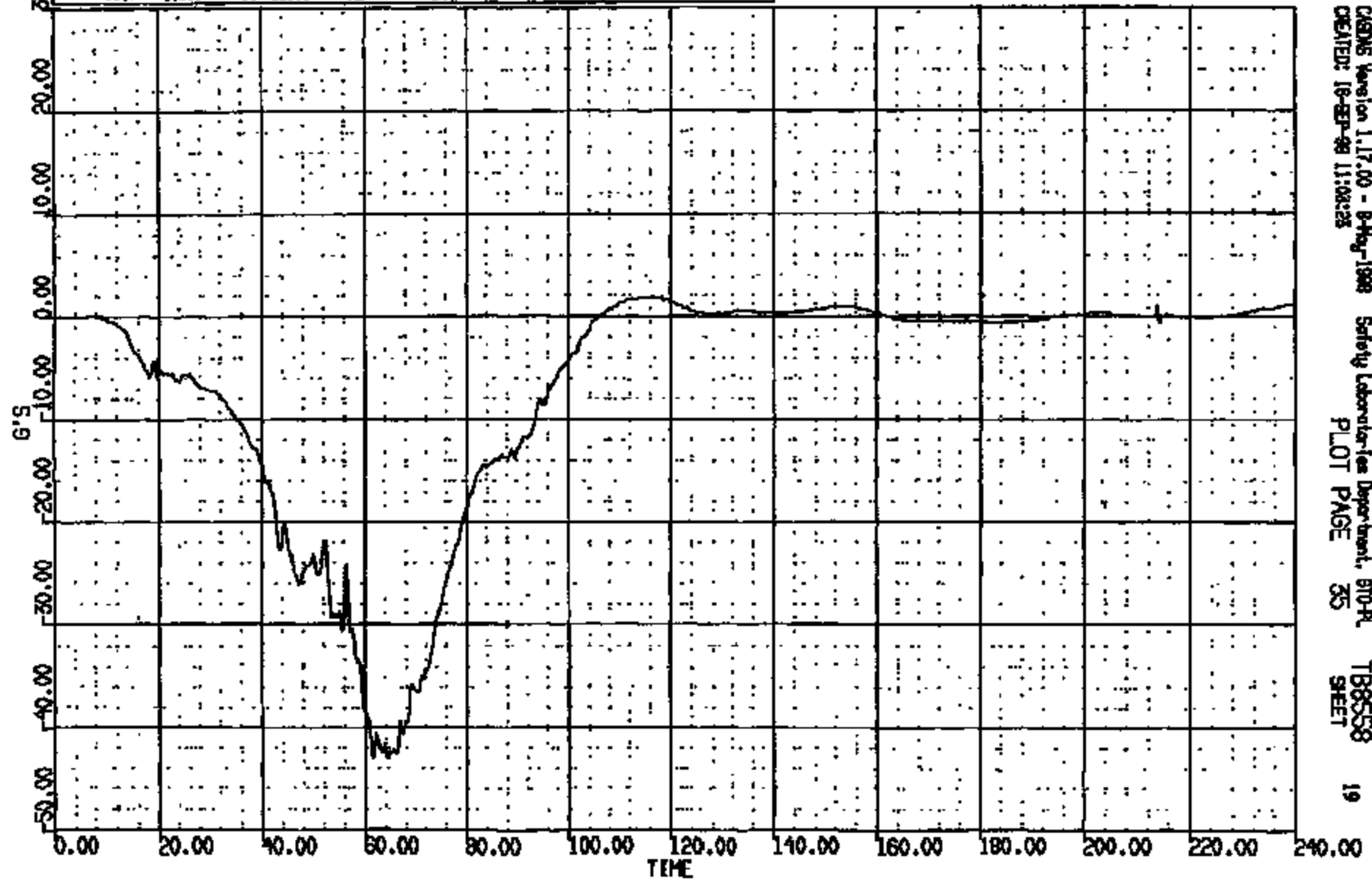
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CRIS 0011593

CR R: 11593 TO: TB8558 DATE: 990918 10:24:34  
2000 D-198

(12) CR11593T L/F DUMMY PELVIS LONG 1000C  
MAX = 1.917 at 118.3 MS MIN = -43.04 at 61.41 MS

AXIS 1



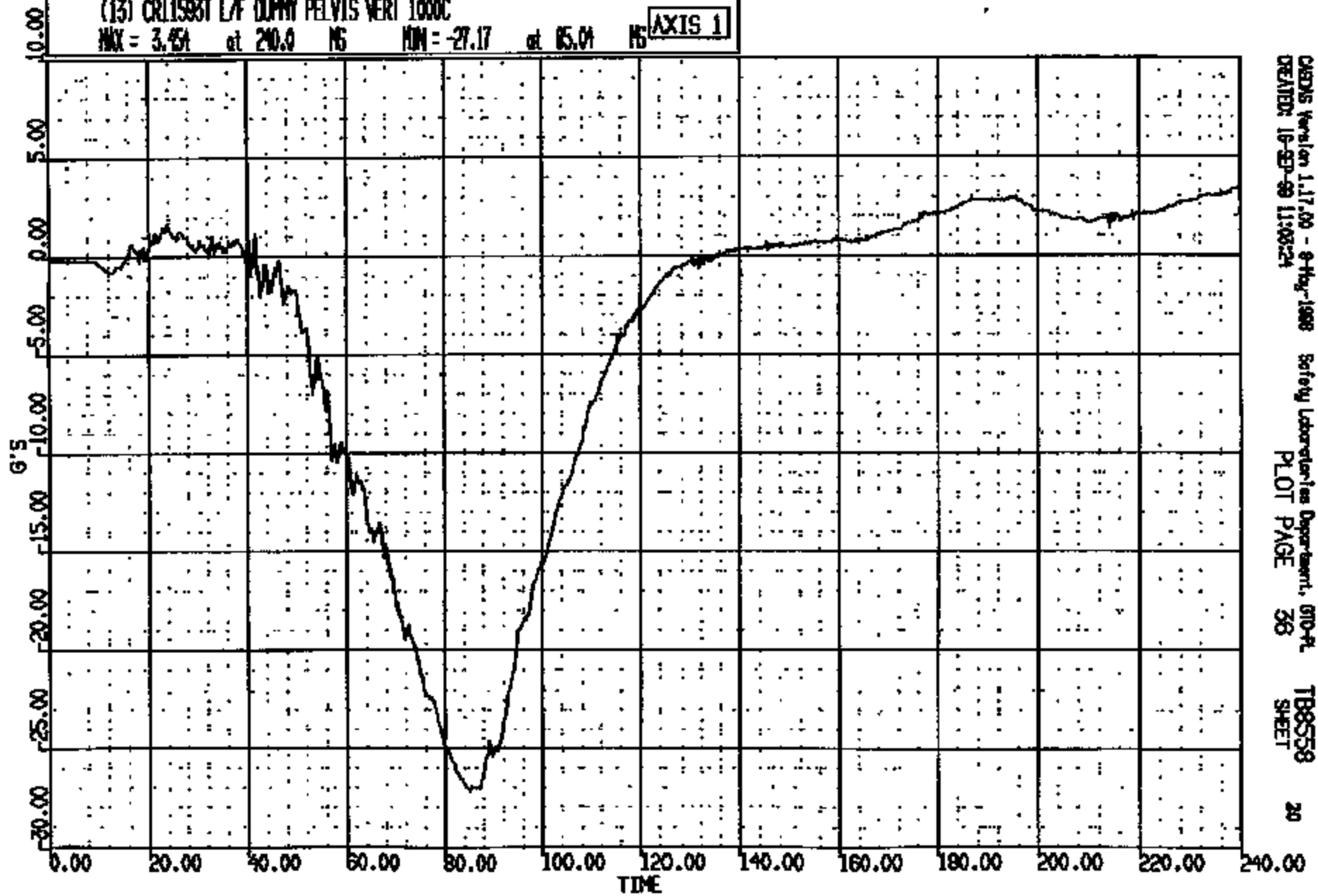
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SHEET

CRIS 0011593

CR R: 11595 TO: T86558 DATE: 890918 10:24:54  
2000 D-188

(13) CR11595T L/F DUMMY PELVIS VERT 1000C

MAX = 3.451 at 240.0 MS MIN = -27.17 at 85.04 MS AXIS 1



CRSIS Version 1.17.00 - 8-May-1988  
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Safety Laboratories Department, 610-PL  
PLOT PAGE 36

T86558  
SHEET

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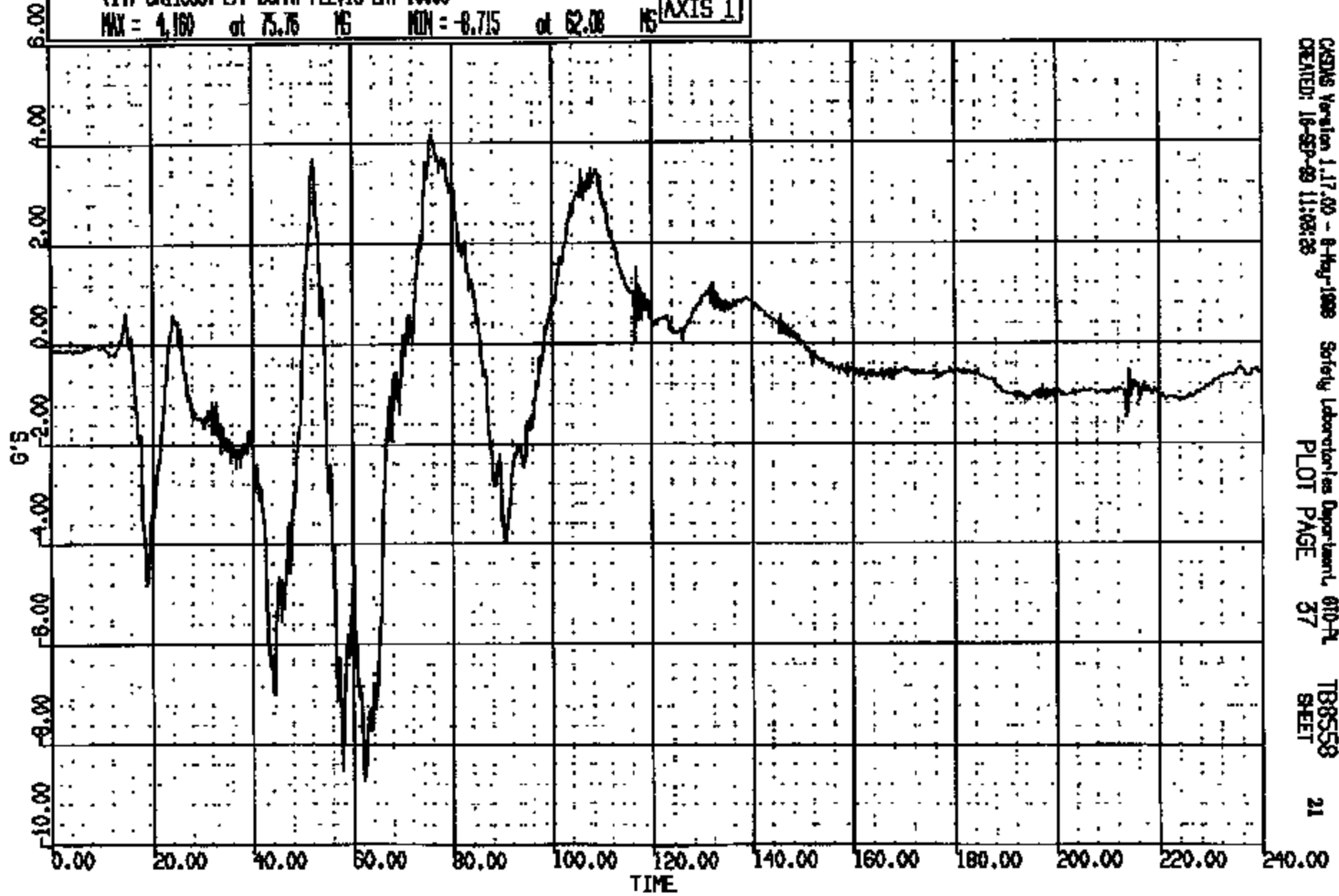
CRIS 0011593

CR R: 11593 TD: TB8558 DATE: 990816 10:24:54  
2000 D-188

(14) CR11593T L/F DUMMY PELVIS LAT 1000C

MAX = 4.160 at 75.76 MS MIN = -8.715 at 62.08 MS

AXIS 1



CRSIS Version 1.17.00 - 8-May-1999  
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Safety Laboratories Department, 610-PL  
PLOT PAGE 37

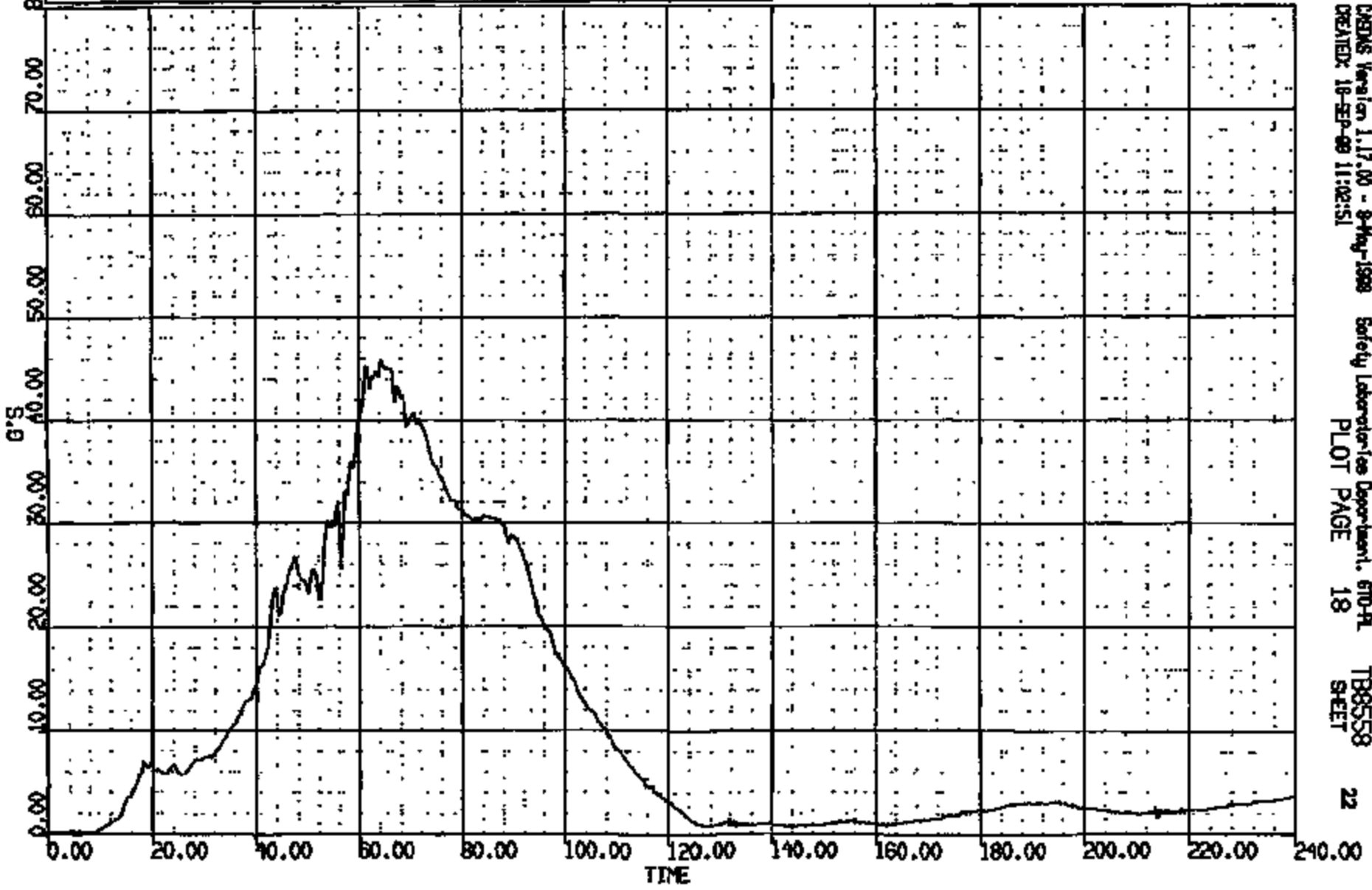
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CRTS 0011593

CR 15 11:14 03 1885-08 1A 1 490010 103415 41  
2000 0-183

(10007) CRI1593T L/F DUMMY PELVIS RES 1000C  
MAX = 45.76 at 61.48 NS MIN = 0.1927 at 7.200 NS **AXIS 1**



CREMS Version 1.17.00 - 9-May-1998 Safety Laboratory Department, 670-PL TR8558 22  
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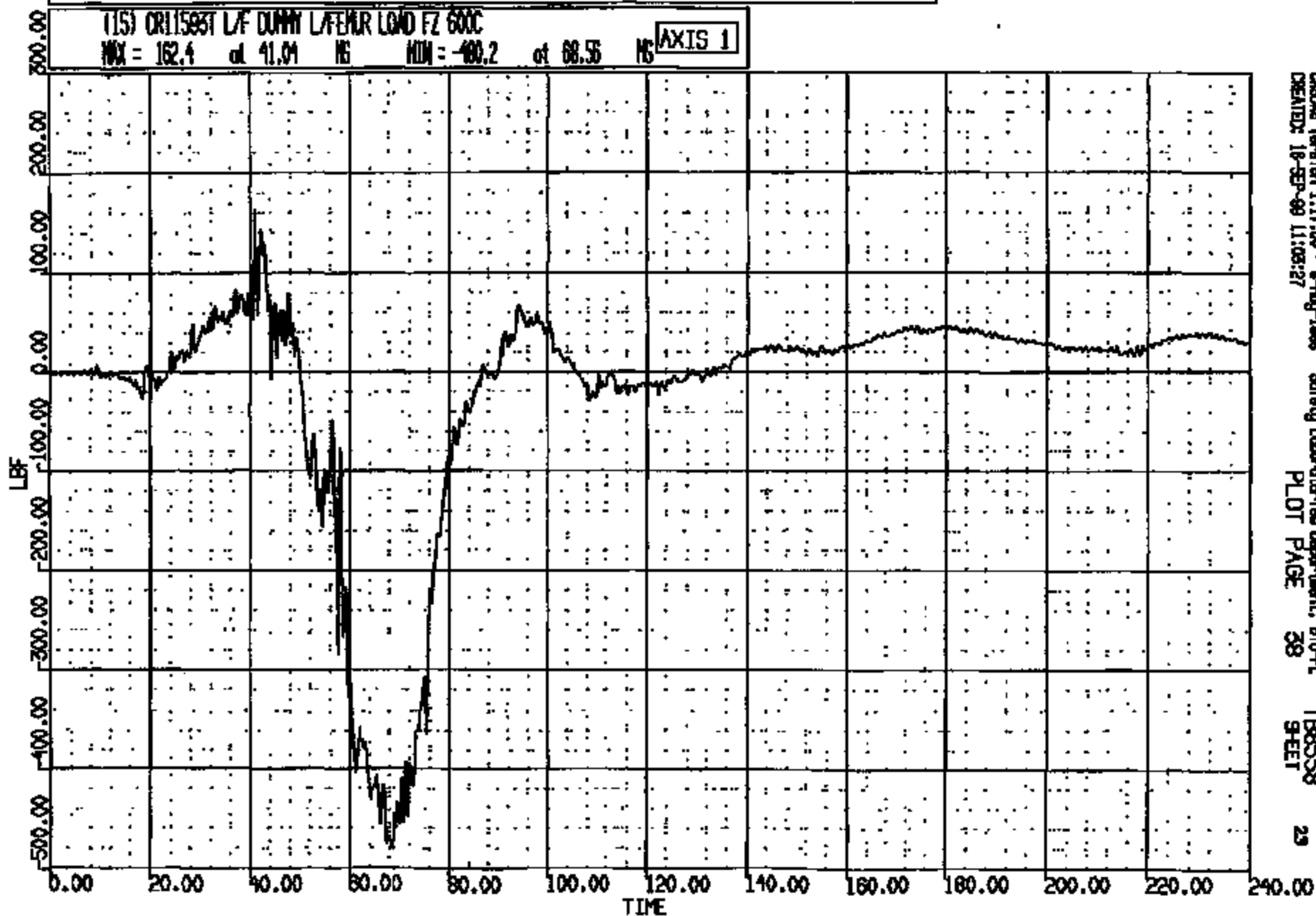
CRTS 0011593

CR R: 11593 TO: T8858 DATE: 890818 10:24:54  
2000 D-198

(15) CR11593T L/F DUMMY L/F AIR LOAD FZ 600C

MAX = 182.4 at 41.04 MS MIN = -400.2 at 68.55 MS

AXIS 1



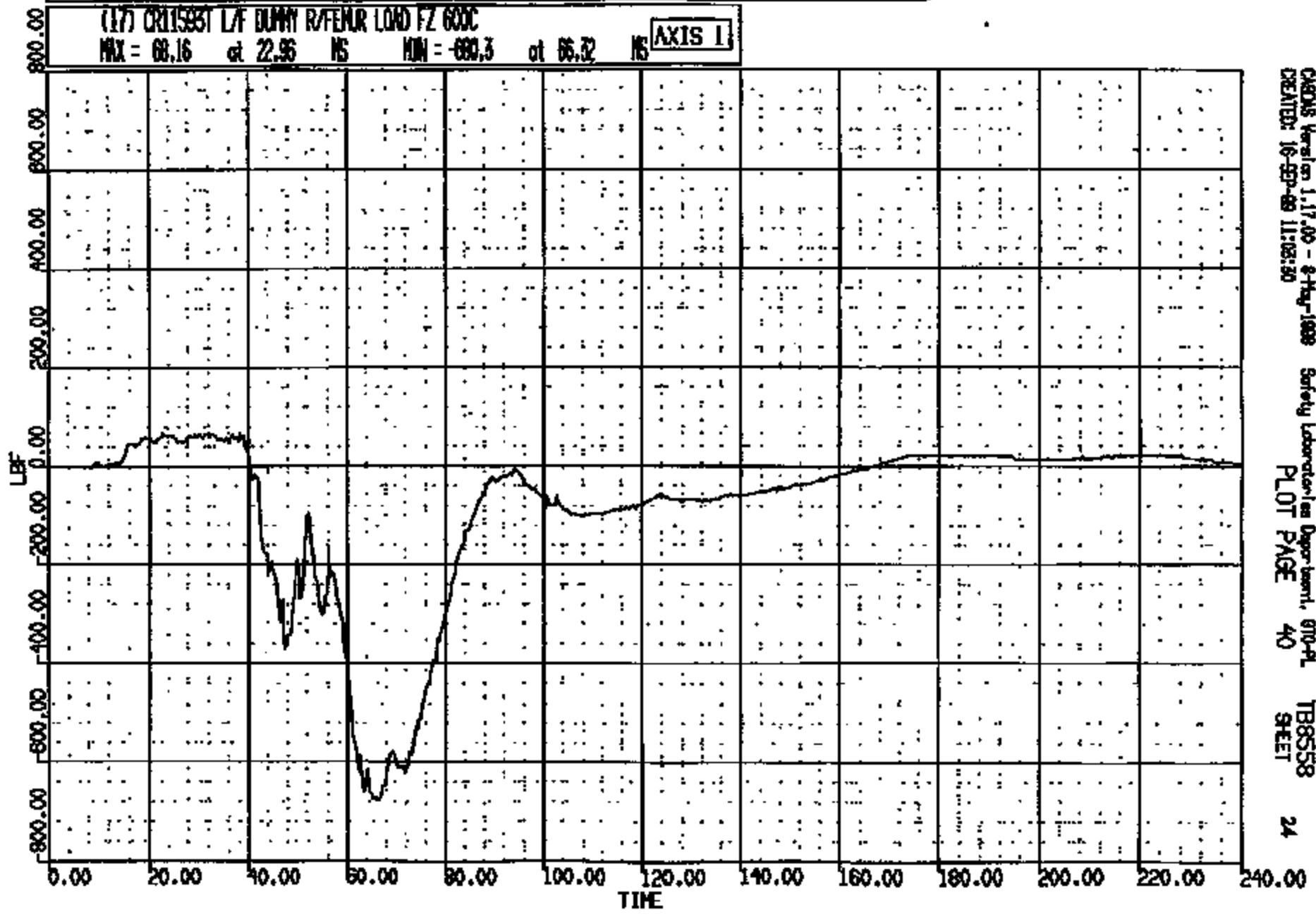
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Safety Laboratory/Res Department, BTU-PL  
PLOT PAGE 38

T88558  
SHEET 29

CR R: 17595 TO: T8658 DATE: 5-20-18 10:24:54  
2000 0-100

(17) CR115931 L/F DUMMY R/FENR LOAD FZ 600C  
MAX = 68.16 at 22.96 IS MIN = -680.3 at 66.32 IS **AXIS 1**



CHAS Version 1.17.00 - 8-May-1988 Safety Laboratories Department, 810-PL TB6558 24  
CREATED: 16-SEP-88 11:02:30 PLOT PAGE 40 SHEET

CRTS 0011593

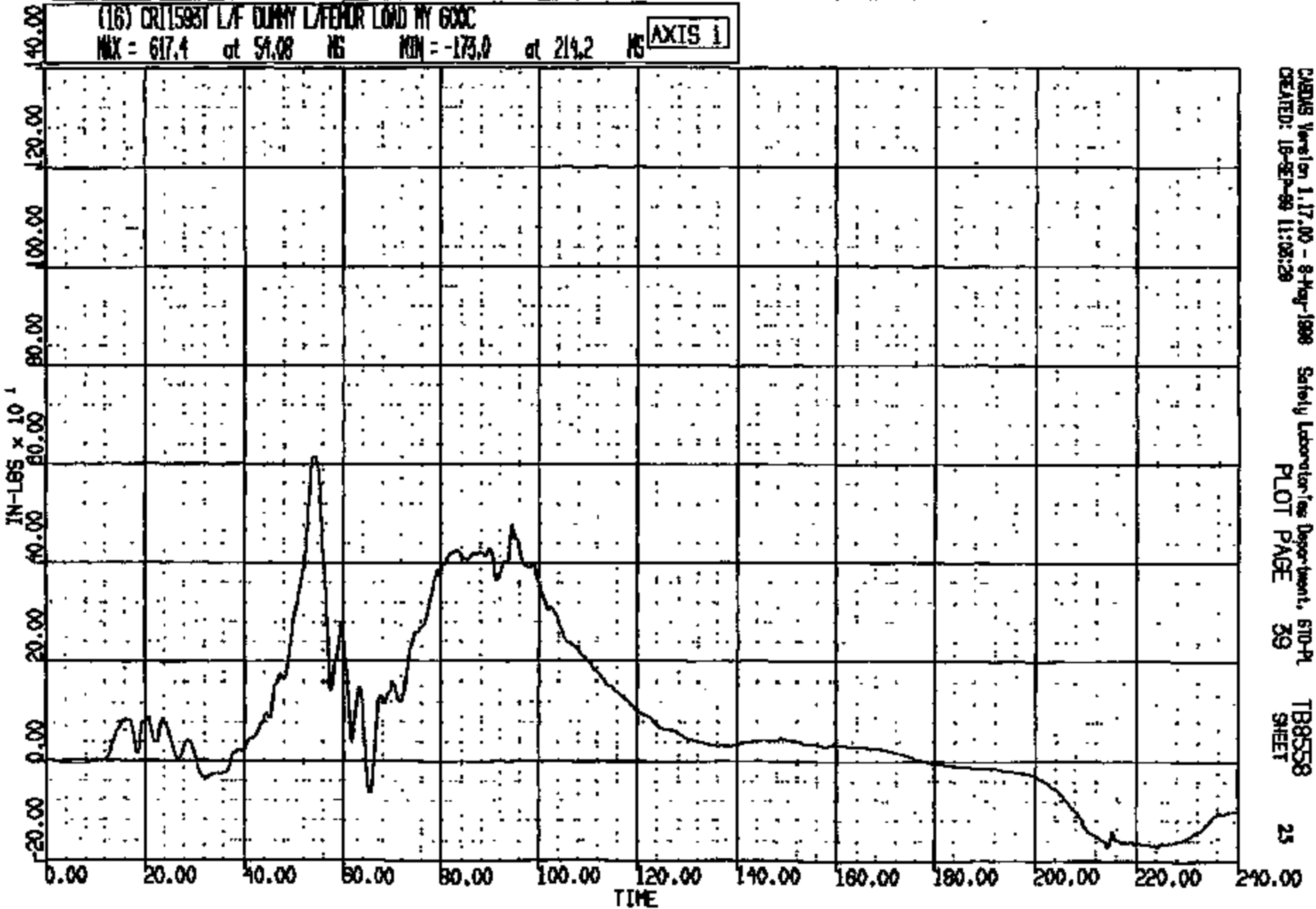


CR R: 11593 TO: TB8558 DATE: 990910 10:24:34  
2000 D-188

(16) CR11593T L/F DUMMY LAFEMOR LOAD BY 60XC

MAX = 617.4 at 51.08 MS MIN = -173.0 at 219.2 MS

AXIS 1



CAEDAS Version 1.17.00 - 8-May-1998  
CREATED: 18-SEP-99 11:03:29

Safety Laboratories Department, 610-PL  
PLOT PAGE 39

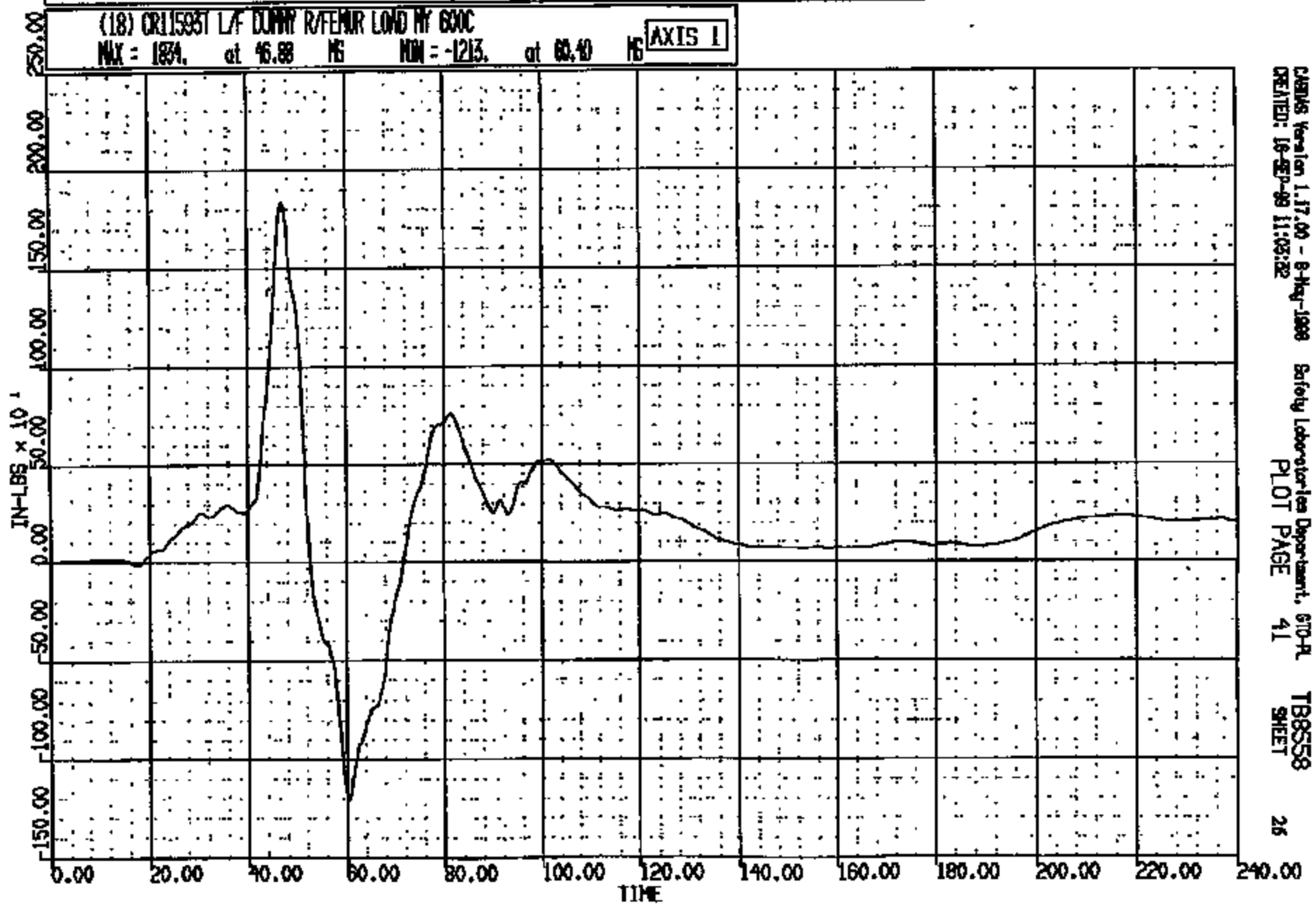
TB8558  
SHEET

25

CR11593

CR R: 11593 TO: T8858 DATE: 990916 10:24:34  
2000 D-169

(18) CR11593T L/F DUMP R/FEMR LOND HY 600C  
MAX = 1834. at 46.88 MS MIN = -1213. at 60.40 MS **AXIS 1**

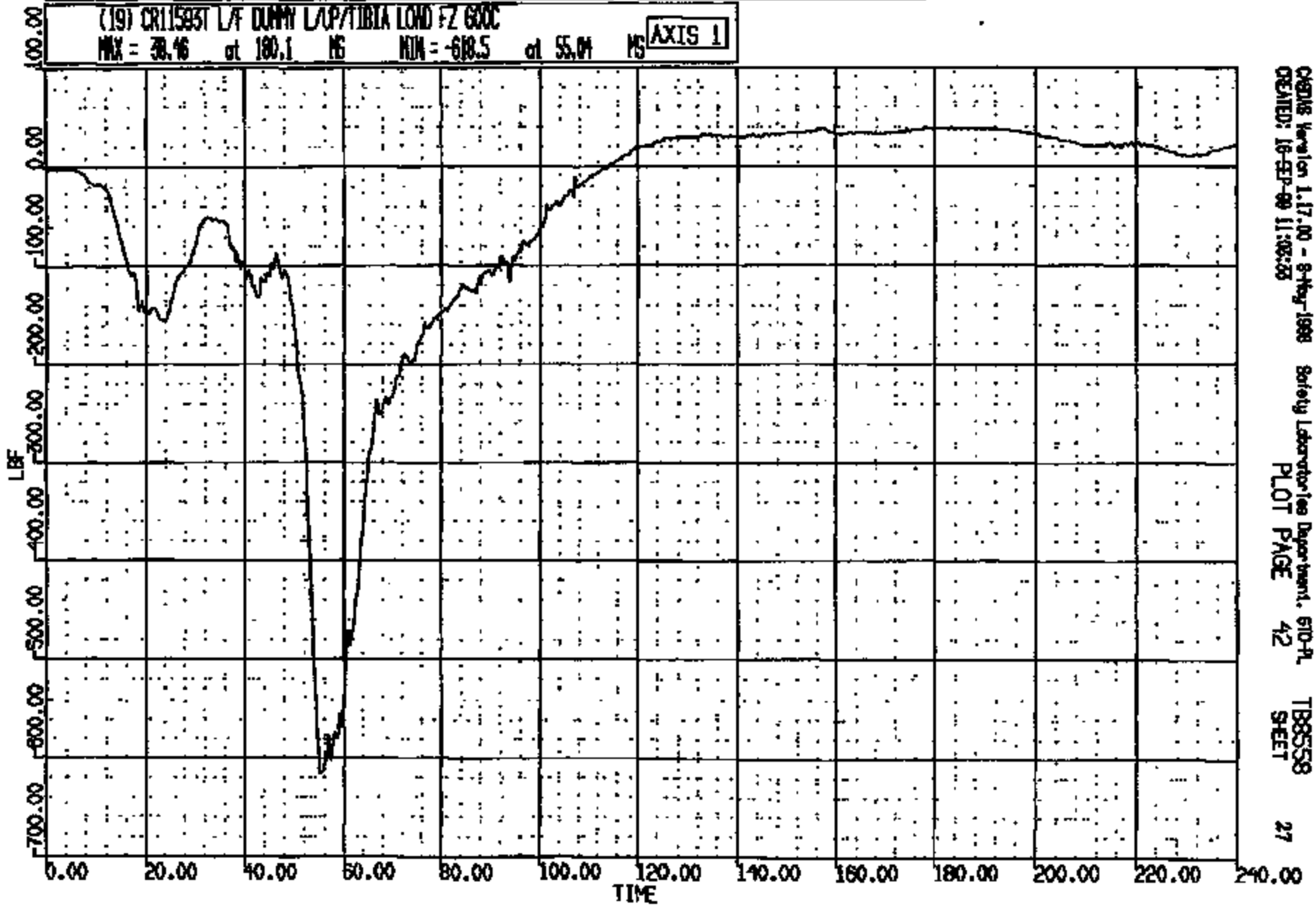


CASIMS Version 1.17.00 - 8-May-1999 Safety Laboratories Department, SIO-PL T8858  
CREATED: 16-SEP-99 11:03:32 PLOT PAGE 41 SHEET 26

CRTS 0011593

CR #: 11593 TO: T88558 DATE: 890818 10:24:34  
2000 D-188

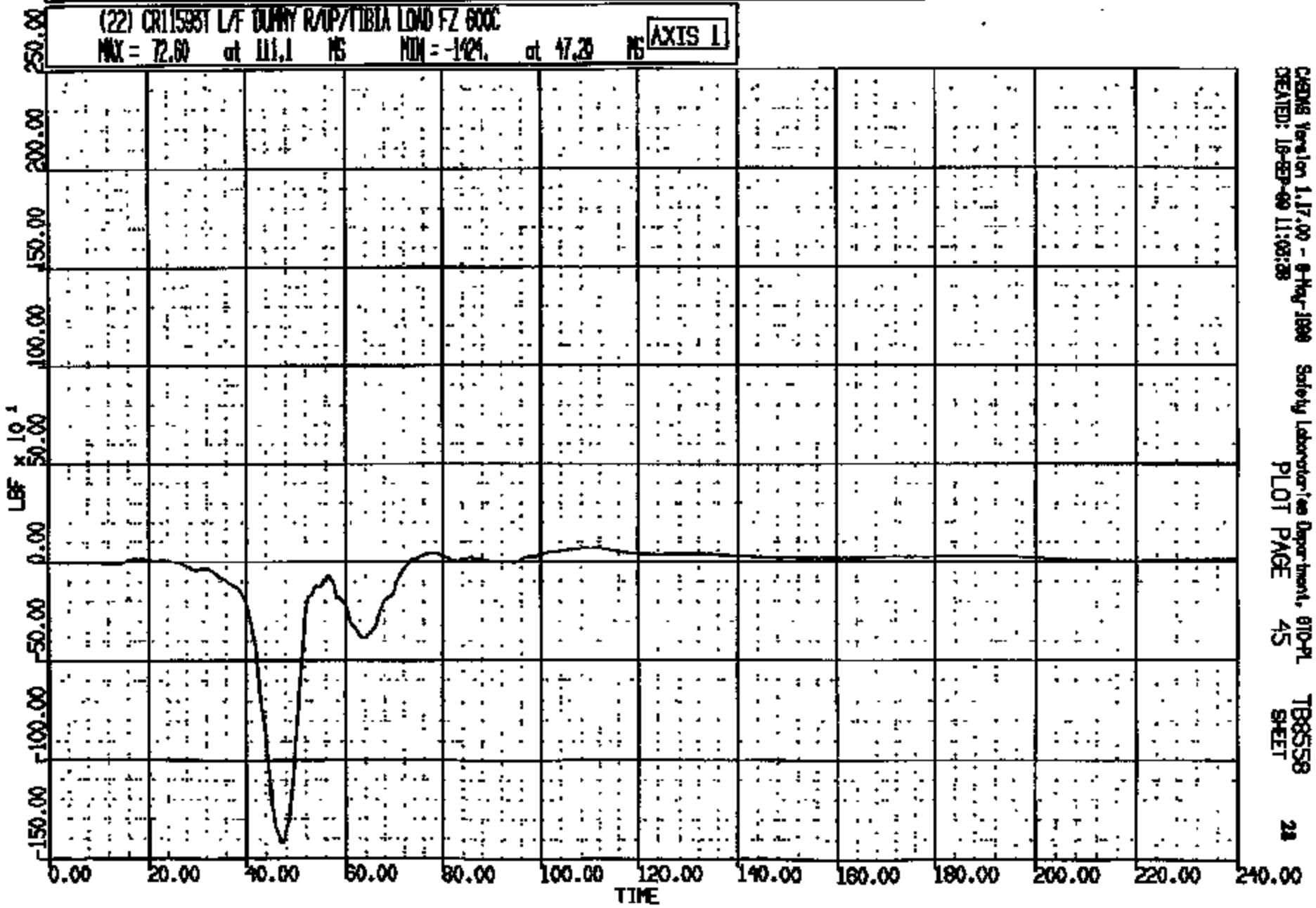
(19) CR11593T L/F DUMMY L/OP/TIBIA LOAD FZ 600C  
MAX = 38.16 at 180.1 MS MIN = -618.5 at 55.04 MS **AXIS 1**



CRSIS Version 1.17.00 - 8-May-1988 Safety Laboratories Department, 610-PL T88558  
CREATED: 18-SEP-89 11:02:25 PLOT PAGE 42 SHEET

DR R: 11595 TO: TB8558 DATE: 990918 10:24:34  
2000 0-188

(22) CR11595T L/F DUMMY R/OP/TIBIA LOAD FZ 600C  
MAX = 72.00 at 111.1 MS MIN = -142.1 at 47.25 MS **AXIS 1**



CRSING Version 1.17.00 - 8-May-1999 Safety Laboratories Department, 610-PL  
CREATED: 18-SEP-99 11:03:28 PLOT PAGE 45 SHEET 21

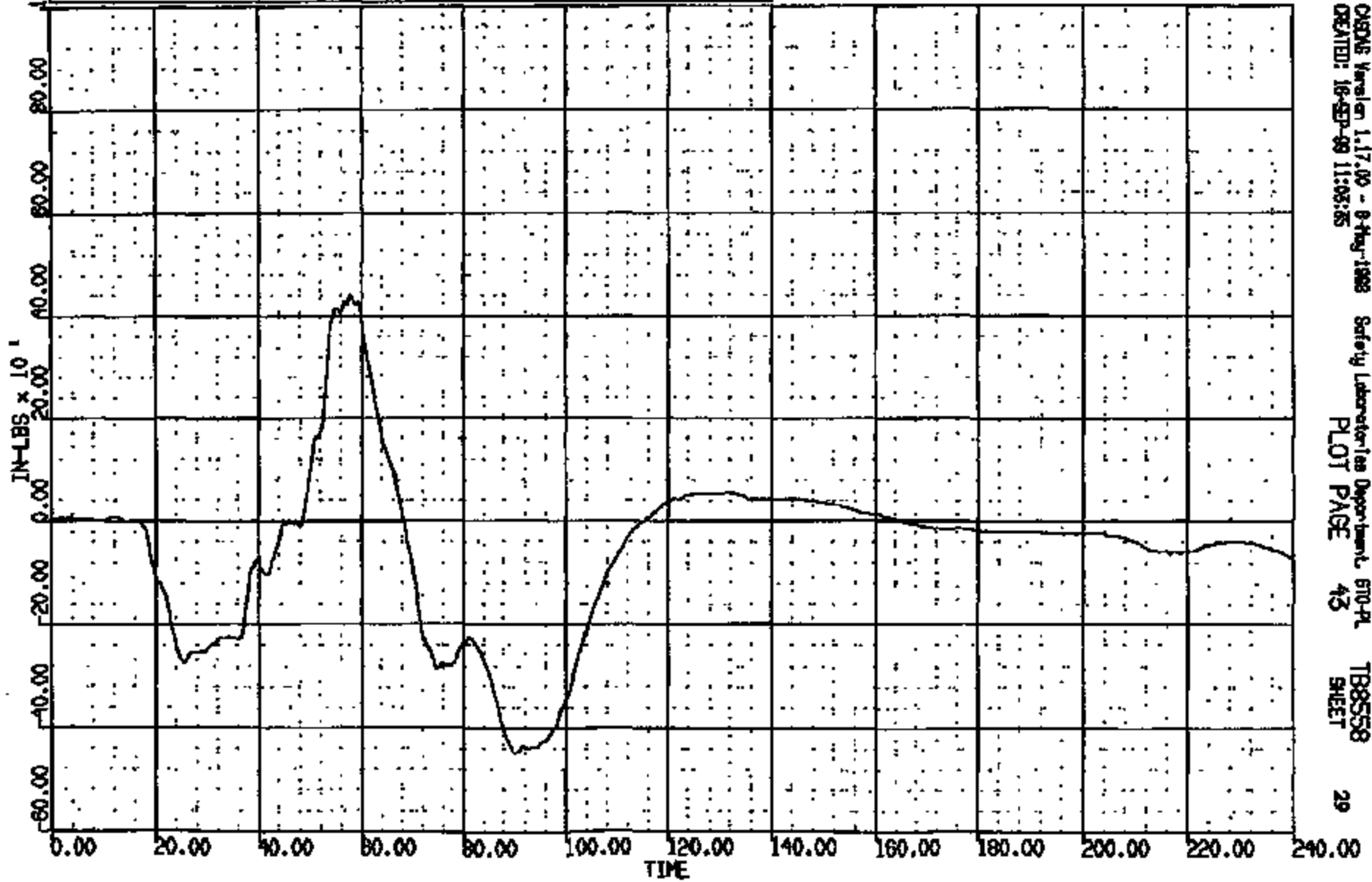
CRIS 0011593

CR R: 11593 TO: TB8558 DATE: 990916 10:24:34  
2000 D-188

(20) CRT15931 L/R DUMMY LAP/TIBIA LOAD NX 600C

MAX = 440.8 at 57.76 MS MIN = -148.7 at 88.92 MS

AXIS 1



ORION Version 1.17.00 - 8-Aug-1998 Safety Laboratory Department 610-PL TB8558  
CREATED: 16-SEP-99 11:06:55 PLOT PAGE 43 SHEET 29

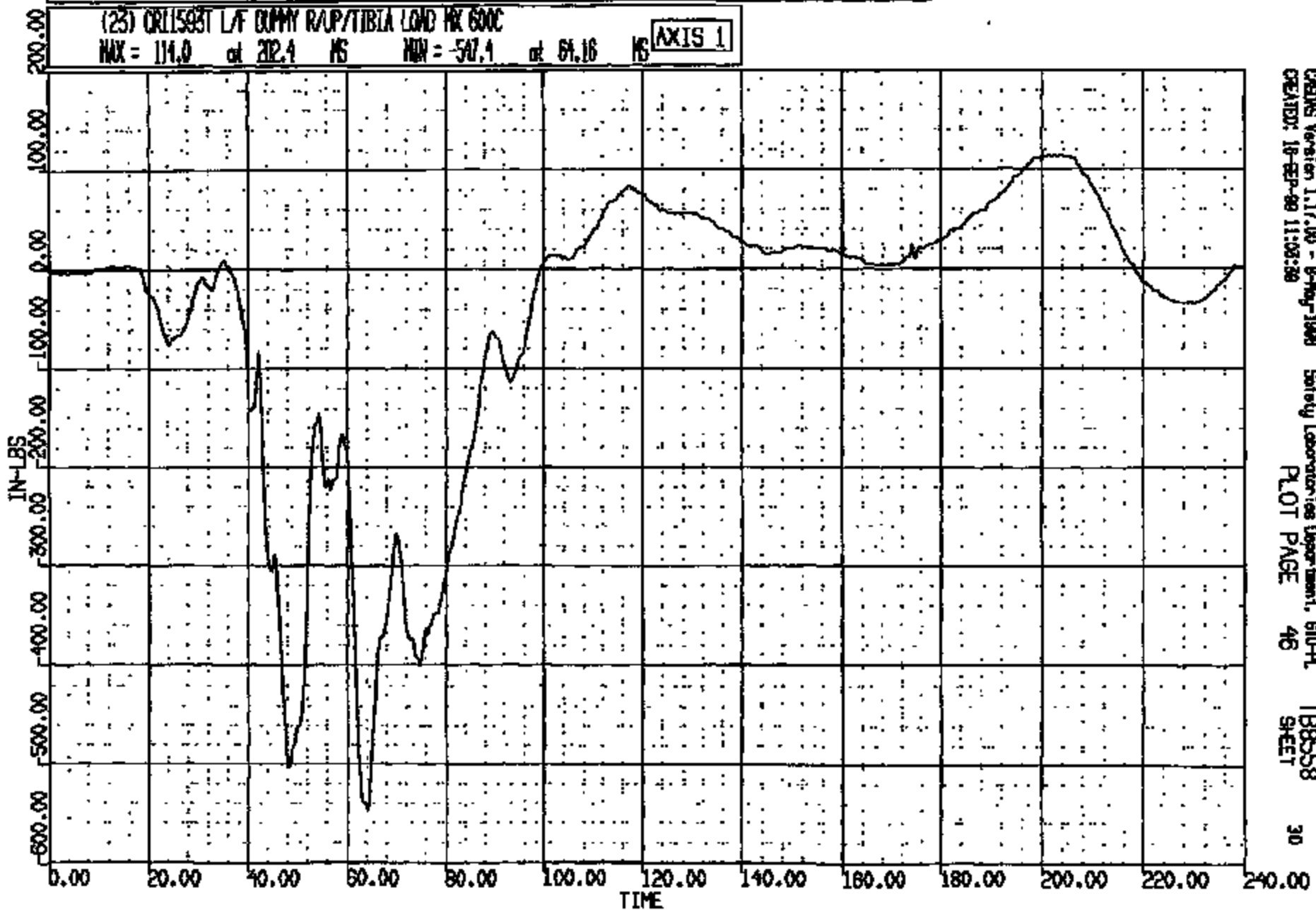
CRTS 0011593

CR R: 11593 TO: TB8558 DATE: 990918 10:24:34  
2000 0-188

(23) CR11593T L/F DUMMY R/UP/TIBIA LOAD HK 600C

MAX = 114.0 at 212.4 MS MIN = -547.4 at 64.16 MS

AXIS 1



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PLOT PAGE 46

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SHEET

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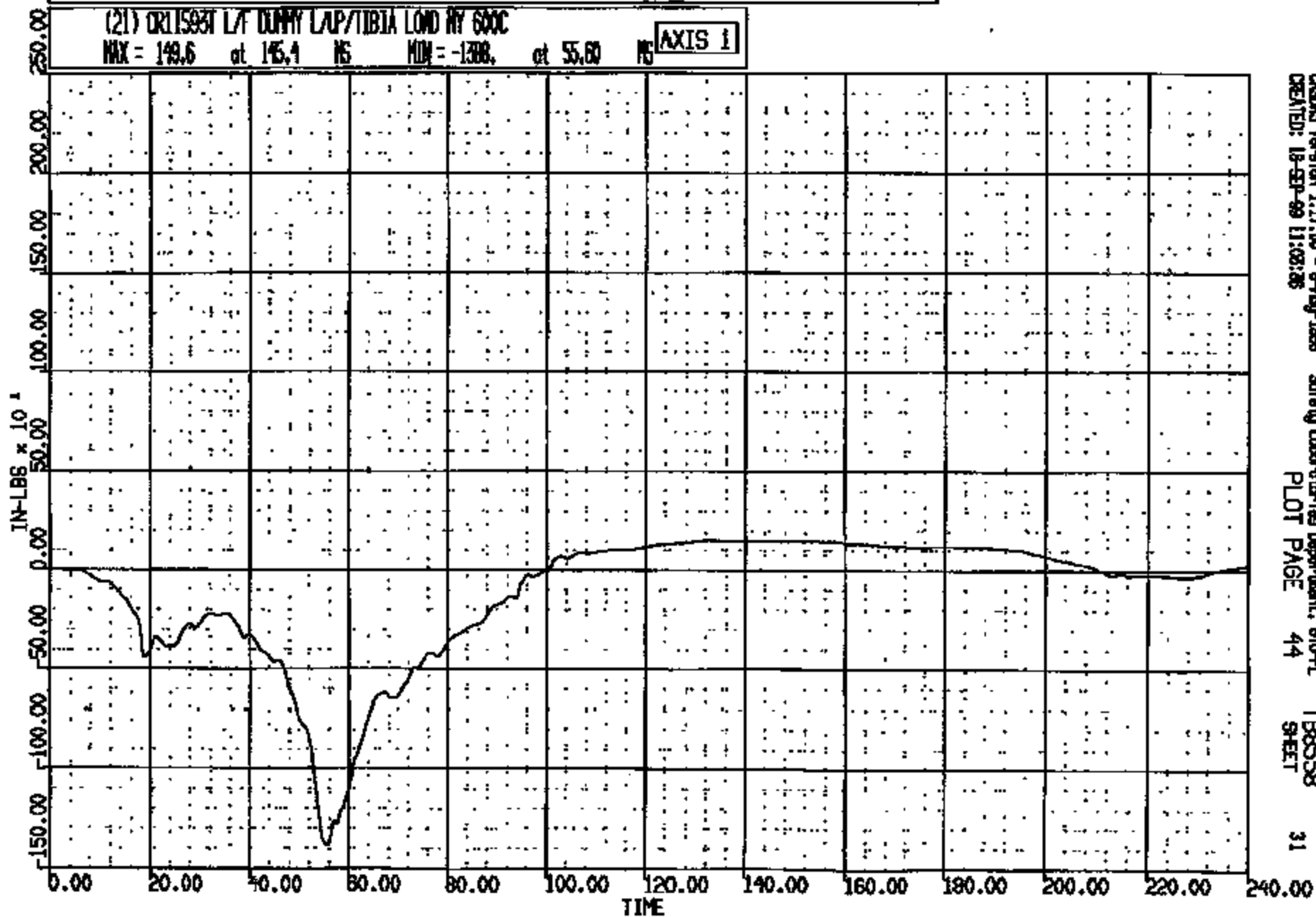
CRTS 0011593

CR R: 1159X TO: T88558 DATE: 880918 10:24:54  
R000 D-188

(21) CRT1593T L/T DUFFY LAP/TIBIA LOAD BY 600C

MAX = 149.6 at 145.4 MS MIN = -138.8 at 55.60 MS

AXIS 1



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CREATED: 18-SEP-89 11:03:26

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T88558  
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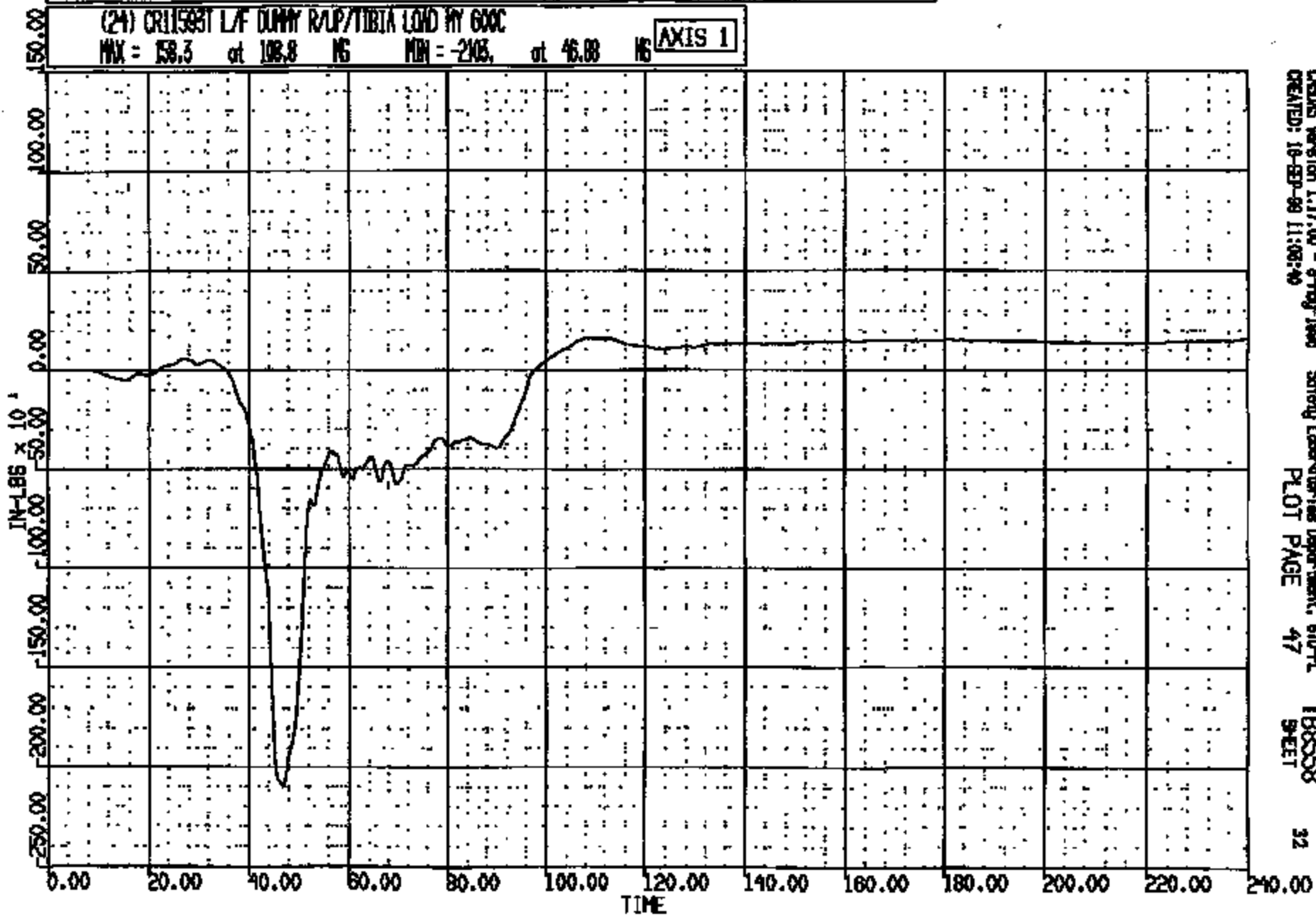
CRTS 0011593

CR #: 11593 TO: TB8558 DATE: 990918 10:24:34  
2000 D-188

(24) CR11593T L/F DUMMY R/UP/TIBIA LOAD BY 600C

MAX = 158.3 at 108.8 MS MIN = -210.8 at 46.88 MS

AXIS 1



CADIS Version 1.17.00 - 8-May-1999  
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CRIS 0011593

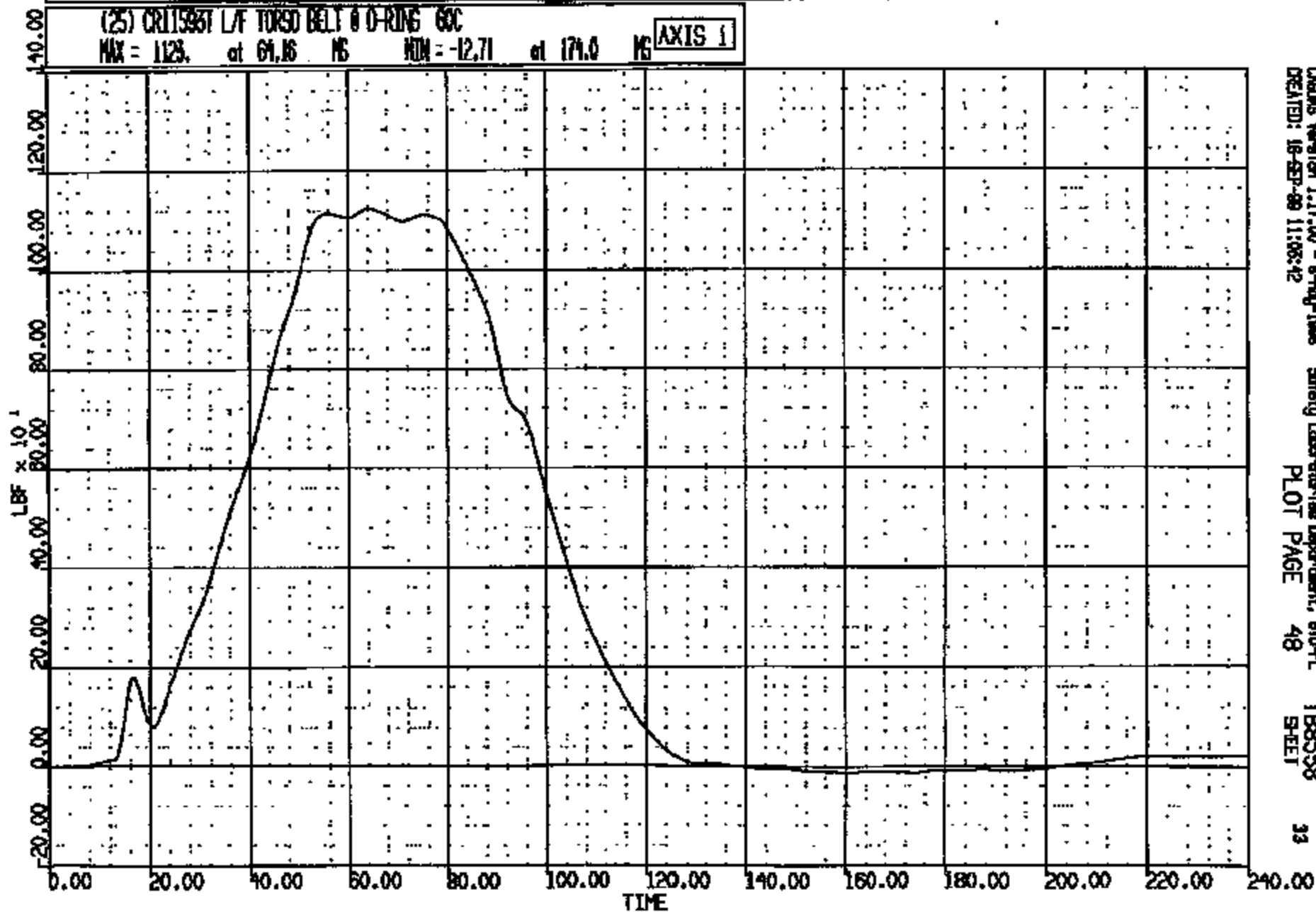


CR R: 11593 TO: T88558 DATE: 890918 10:24:34  
R000 D-198

(25) CRT1593T L/F TORSO BELT @ O-RING GC

MAX = 1123. at 61.16 MS MIN = -12.71 at 174.0 MS

AXIS 1



CRAMS Version 1.17.00 - 8-Aug-1988  
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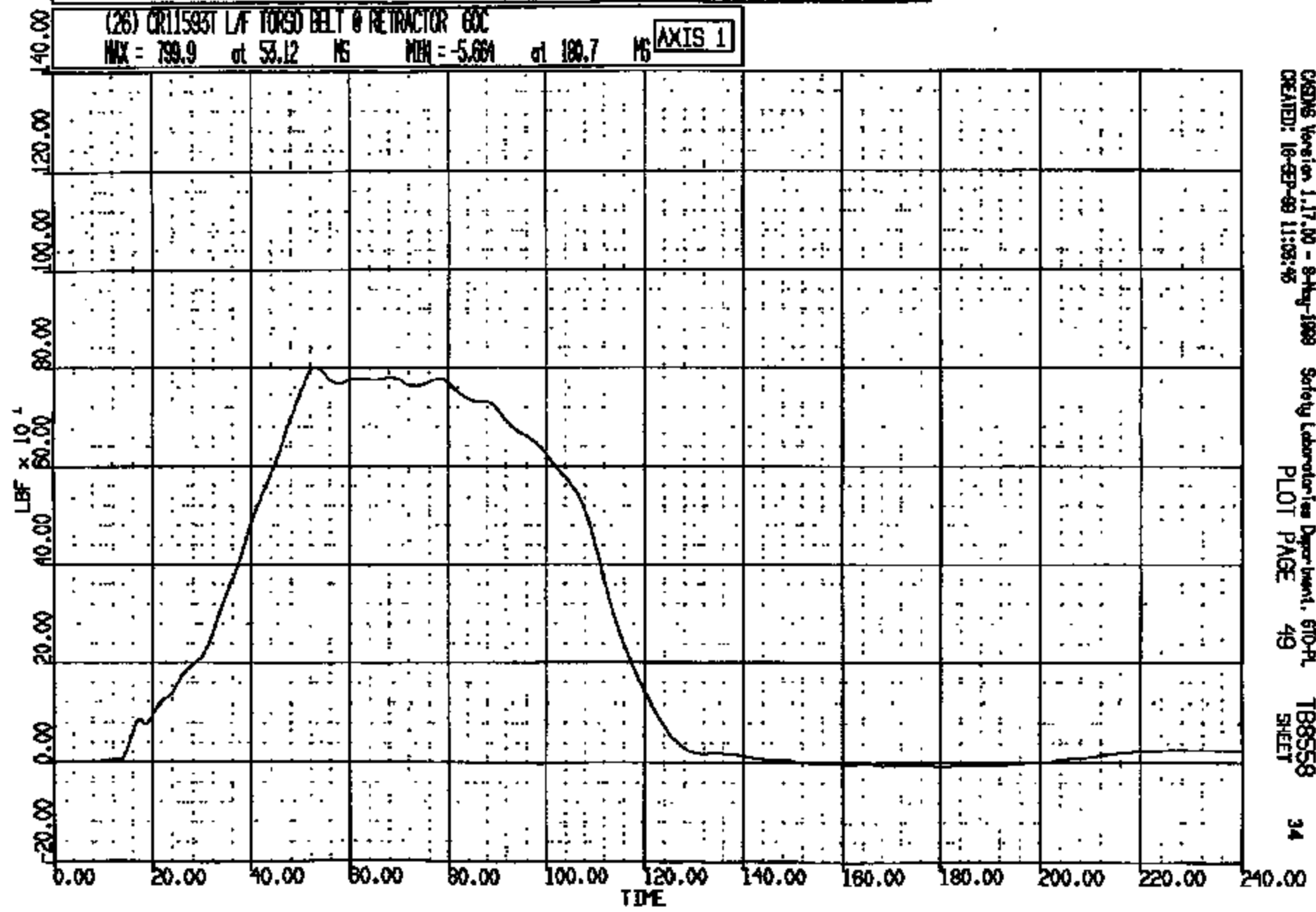
T88558  
SHEET

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CRTS 0011593

NO. R: 11593 TO: T8858 DATE: 890916 10:24:34  
NO. 0-188

(26) CR11593T L/F TORSO BELT @ RETRACTOR 60C  
MAX = 799.9 at 53.12 MS MIN = -5.664 at 180.7 MS **AXIS 1**

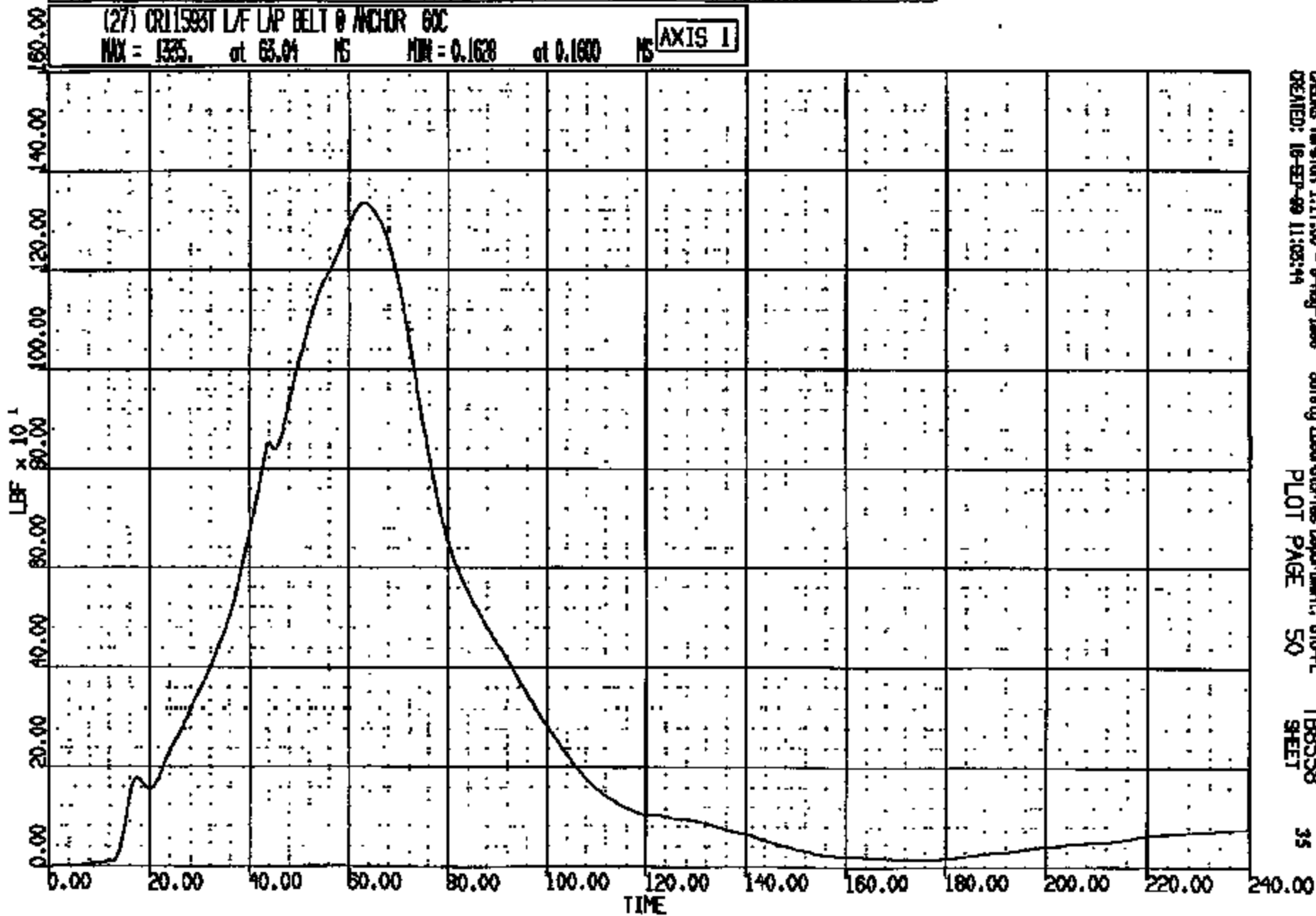


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CREATED: 18-SEP-89 11:05:45 PLOT PAGE 49 SHEET

CRIS 0011593

CR R: 11593 TO: TB8558 DATE: 980918 10:24:34  
R000 D-188

(27) CR11593T L/F LAP BELT @ ANCHOR 6XC  
MAX = 1335. at 63.04 MS MIN = 0.1628 at 0.1600 MS **AXIS 1**



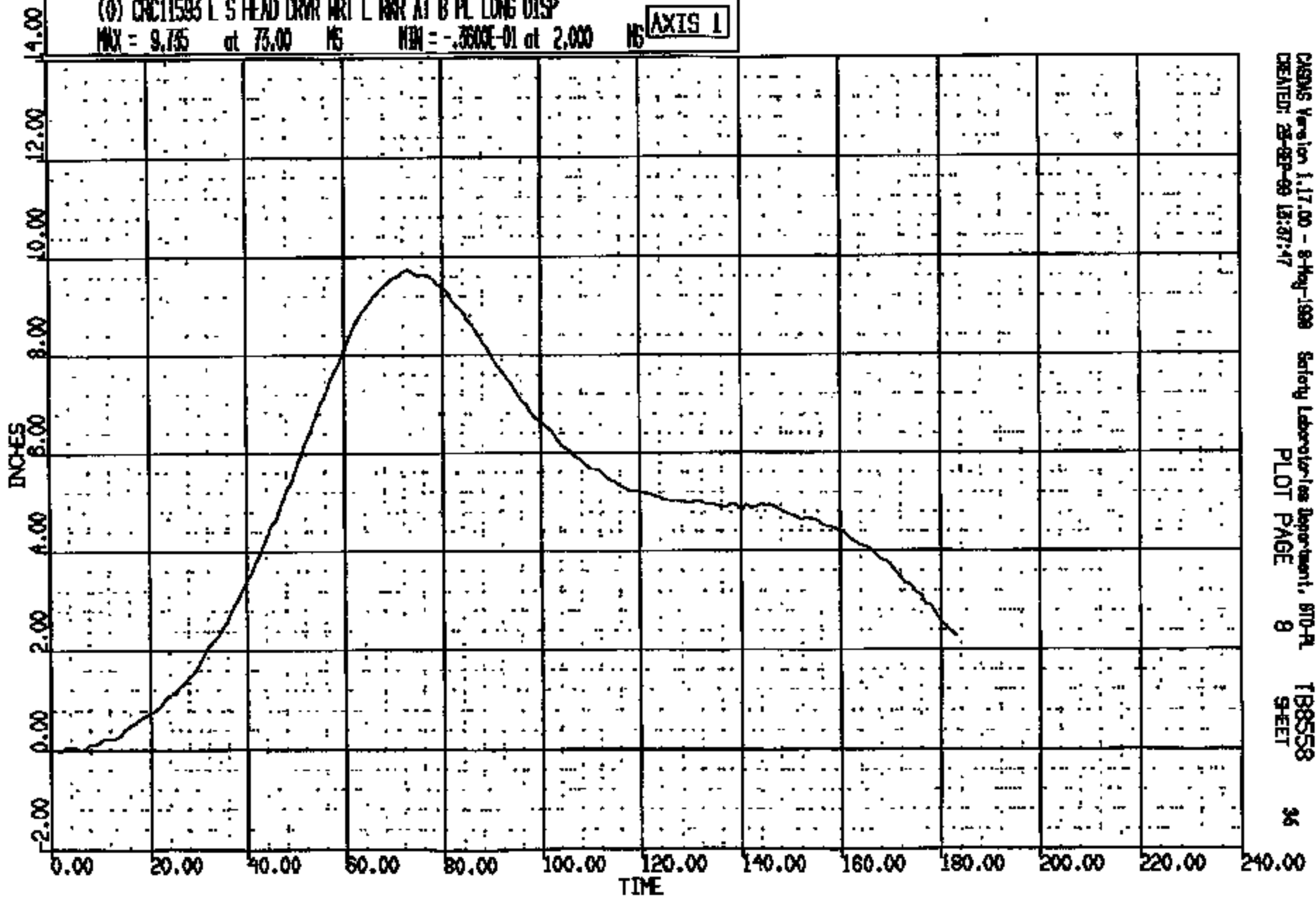
CRS Version 1.17.00 - 8-May-1998  
CREATED: 18-SEP-99 11:03:14

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SHEET

CR R: 11593 TO: T88558 DATE: 880916 10:24:34  
8000 0-188

(0) CRIC11593 L S HEAD CRWR WRT L RWR AT B PL LONG DISP  
MAX = 9.735 at 73.00 MS MIN = -.3600E-01 at 2.000 MS **AXIS 1**

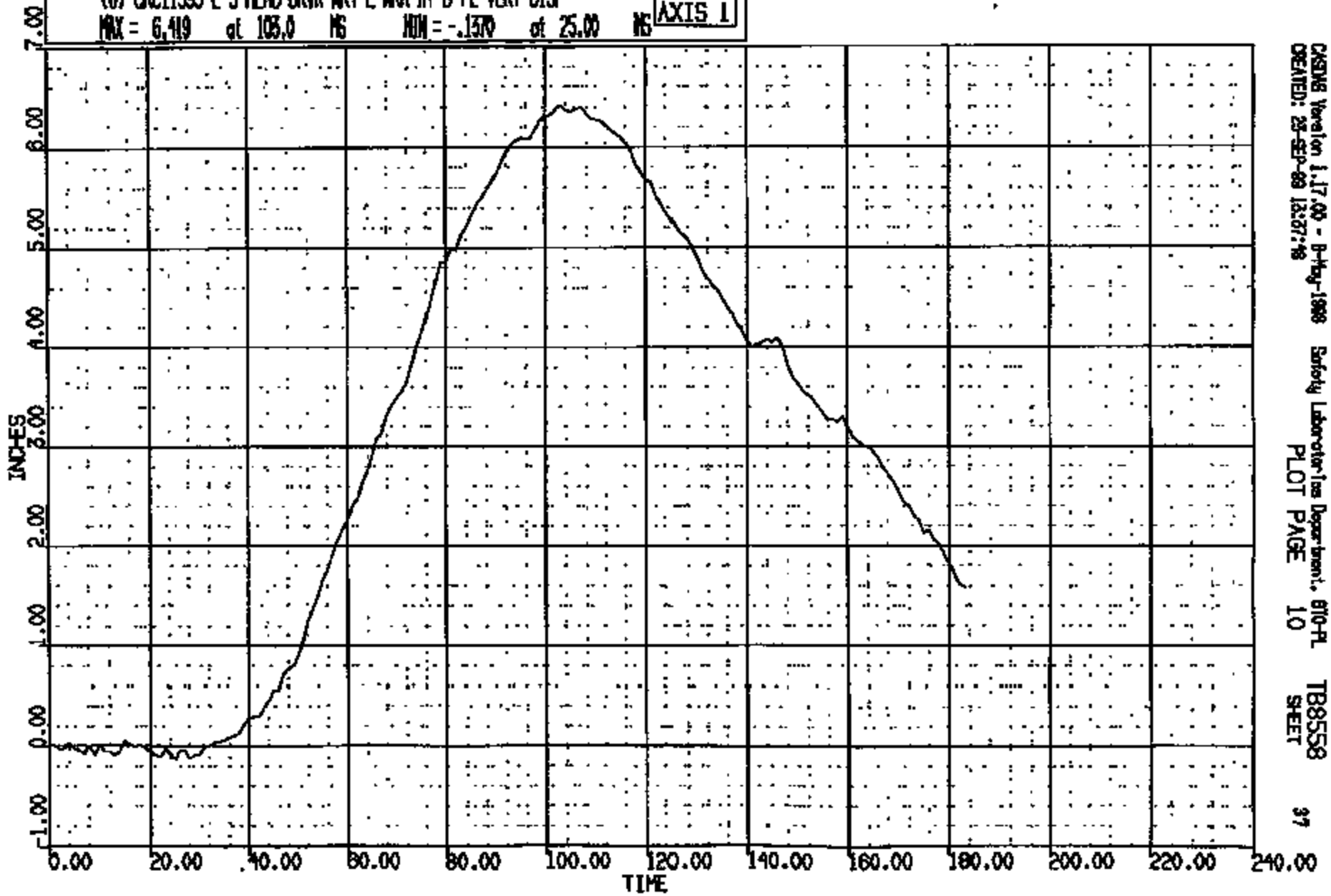


CRS Version 1.17.00 - 8-May-1988 Safety Laboratories Department, BTL-PL T88558 36  
CREATED: 25-SEP-88 13:37:47 PLOT PAGE 8 SHEET

CRIS 0011593

CR R: 11593 TO: T8858 DATE: 880916 10:24:34  
2000 D-186

(0) CR11593 L S HEAD ORVR WRT L WVR AT B PL VERT DISP  
MAX = 6.419 at 103.0 MS MIN = -.1370 at 25.00 MS **AXIS 1**



CASING Variation 1.17.00 - P-Hy-1988 Sanford Laboratories Department, 810-PL T8858  
CREATED: 28-SEP-88 13:27:46 PLOT PAGE 10 SHEET 37

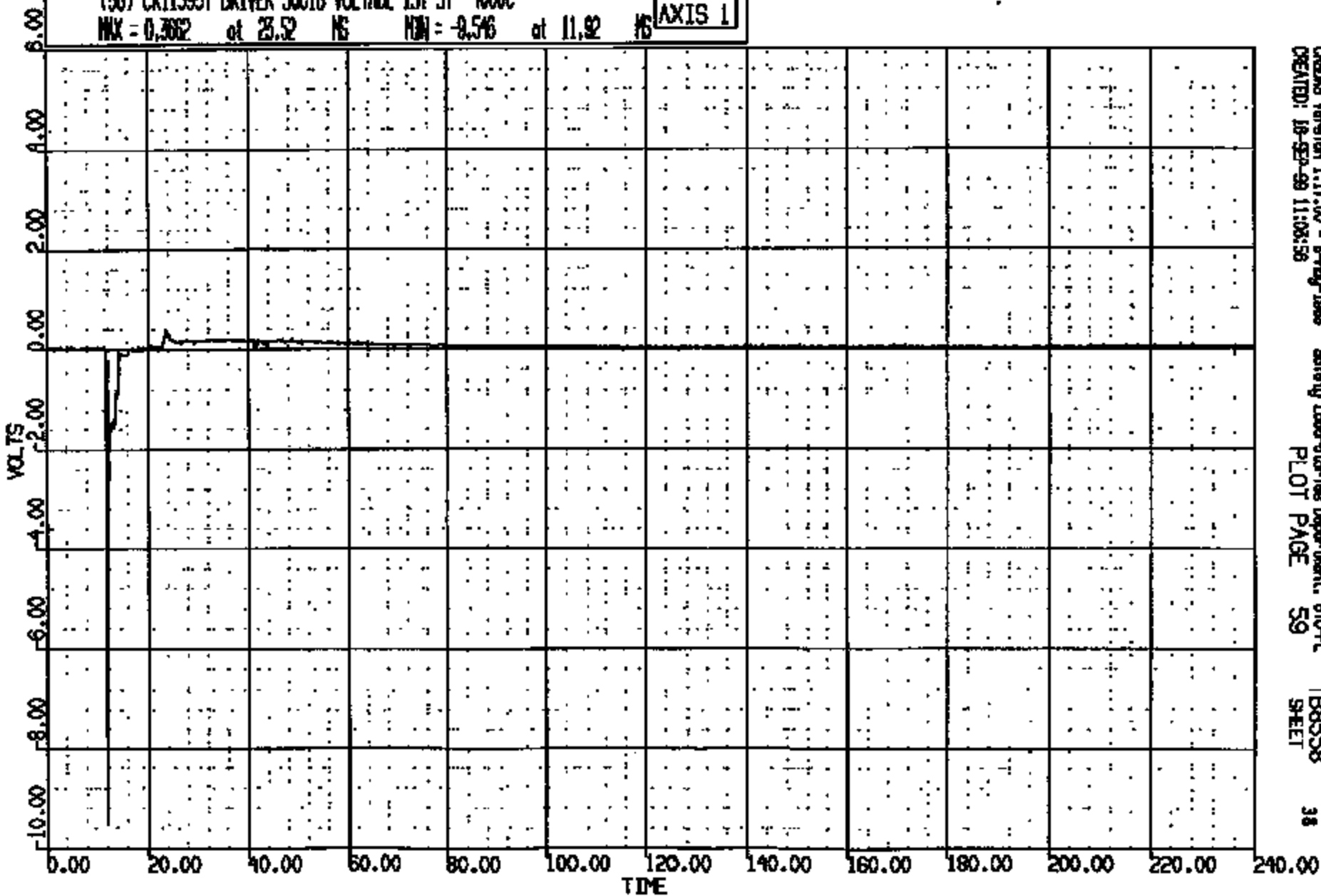
CRTS 0011593

CR R: 11593 TO: TB8558 DATE: 990918 10:24:34  
2000 D-160

(36) CR11593T DRIVER SOUTB VOLTAGE 1ST ST 4000C

MAX = 0.302 at 23.52 NS MIN = -9.546 at 11.92 NS

AXIS 1



CRSWS Version 1.17.00 - 8-Aug-1998  
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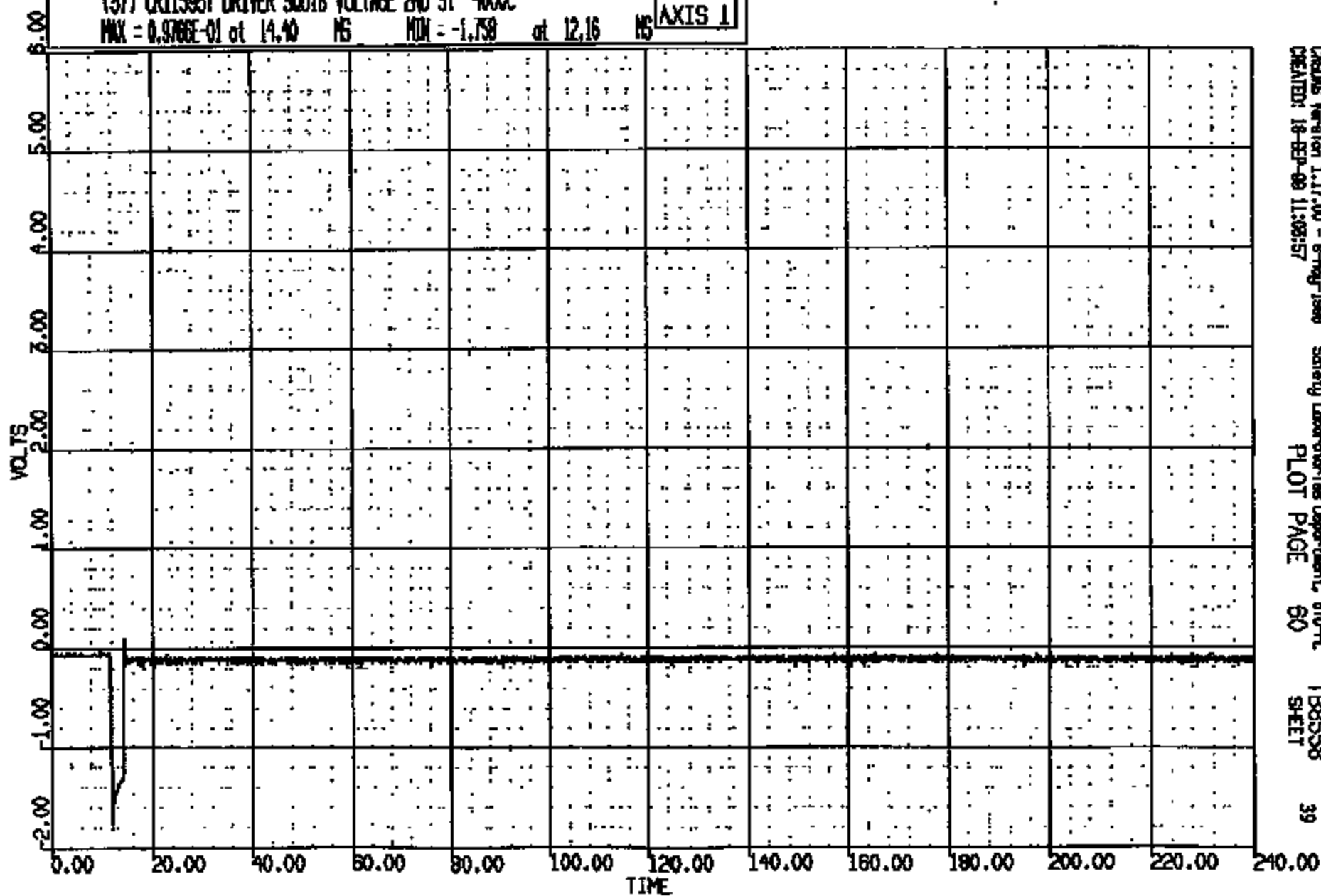
CRTS 0011593

CR R: 11593 TO: TB8558 DATE: 990818 10:24:34  
2000 D-186

(37) CR11593T DRIVER SOUTH VOLTAGE 2ND ST 400C

MAX = 0.9760E-01 at 14.40 NS MIN = -1.758 at 12.16 NS

AXIS 1



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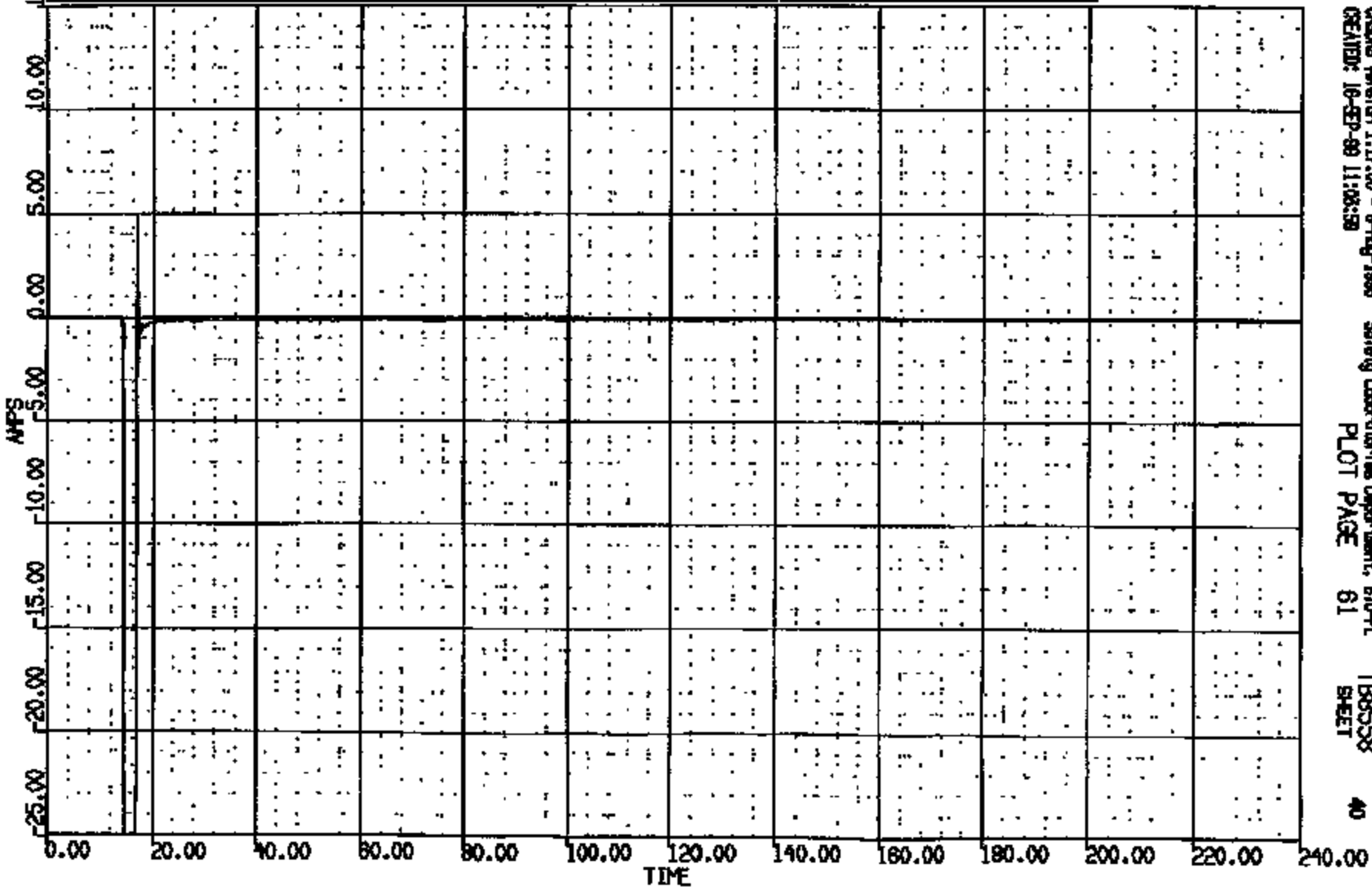
39

CR11593

CR R: 11595 TO: T8858 DATE: 890918 10:24:54  
 2000 D-188

\* (38) CRT1588T DRIVER SCUBA CURRENT NST ST 4000C  
 MAX = 4.888 at 16.88 MS MIN = -21.99 at 14.48 MS **AXIS 1**

ANOMALY KEY:  
 \* - Midband data exceeded full scale  
 \* - Midband data >90.0% of full scale  
 \* - All data < 12.0% of full scale  
 \* - >1 percent offset at T-zero



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CRTS 0011593

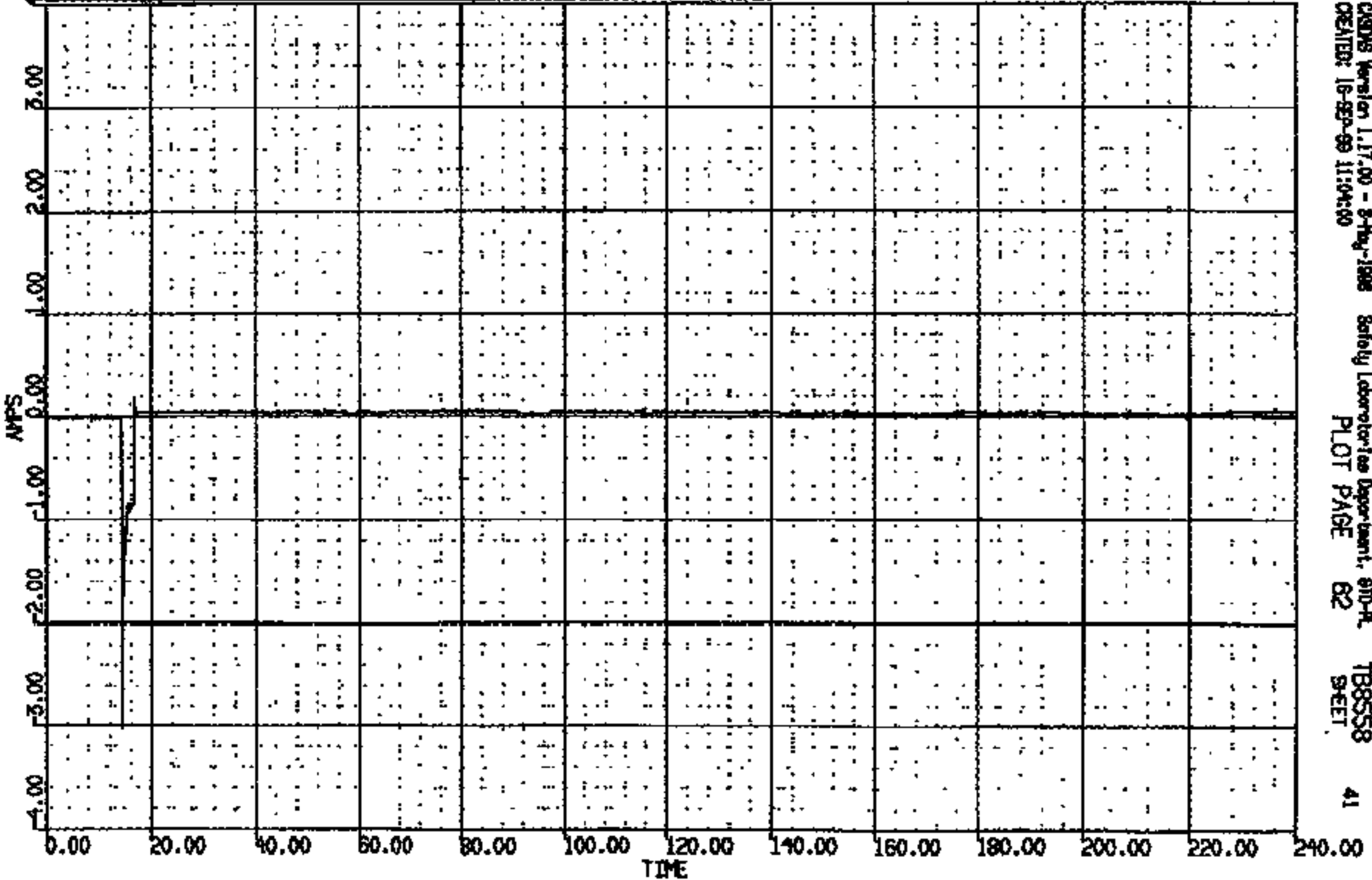


CR R: 11593 TO: TB8558 DATE: 990918 10:24:34  
2000 D-199

(39) CRT1593T DRIVER SOLID CURRENT 2ND ST 400C

MAX = 0.1651 at 16.40 MS MIN = -3.027 at 14.40 MS

AXIS 1



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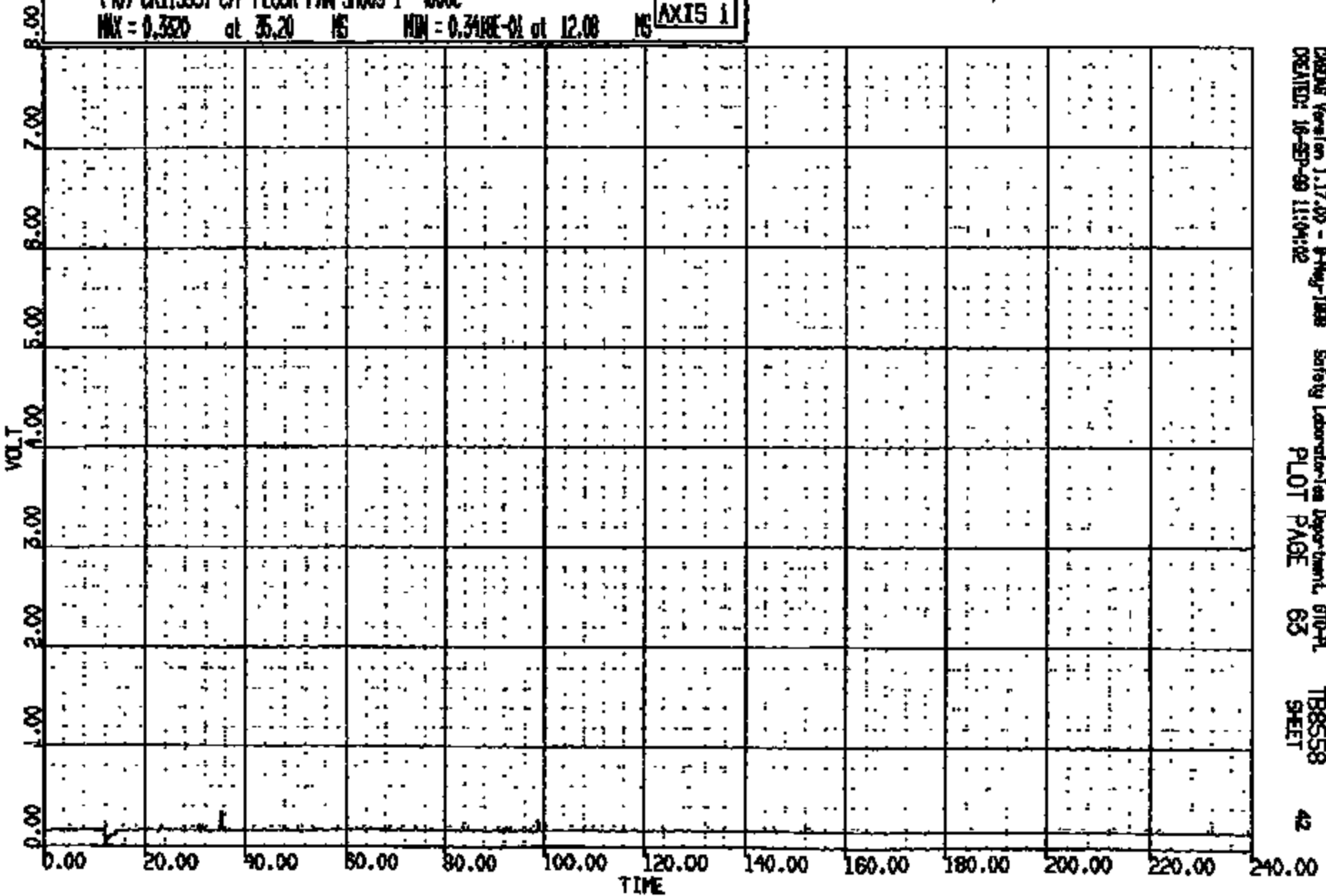
TB8558  
SHEET

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CRTS 0011593

CR R: 11593 TO: T86558 DATE: 990918 10:24:34  
2000 D-186

(40) CRT1593T C/F FLOOR PAN SMOG-1 4000C  
MAX = 0.3520 at 35.20 NS MIN = 0.3418E-01 at 12.00 NS **AXIS 1**

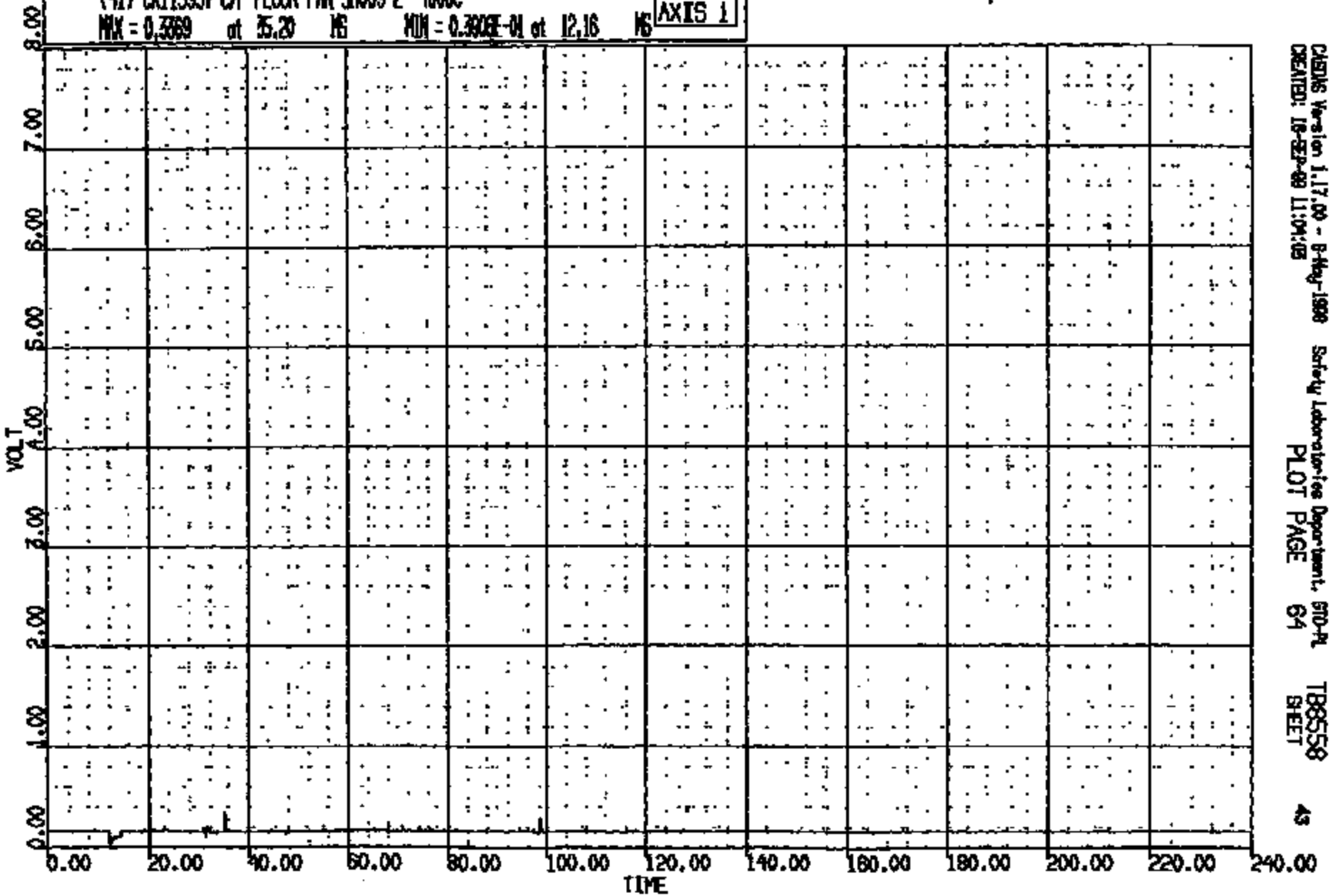


CADLAB Version 1.17.00 - 9-May-1998 Safety Laboratories Department, 610-PL T86558 42  
CREATED: 18-SEP-99 11:04:32 PLOT PAGE 63 SHEET

CRTS 0011593

CR R: 11593 TO: T88558 DATE: 890816 10:24:34  
2000 D-188

(41) CR11593T C/F FLOOR PAN SMO09-2 1000C  
MAX = 0.3369 at 25.20 MS MIN = 0.300E-01 at 12.16 MS **AXIS 1**



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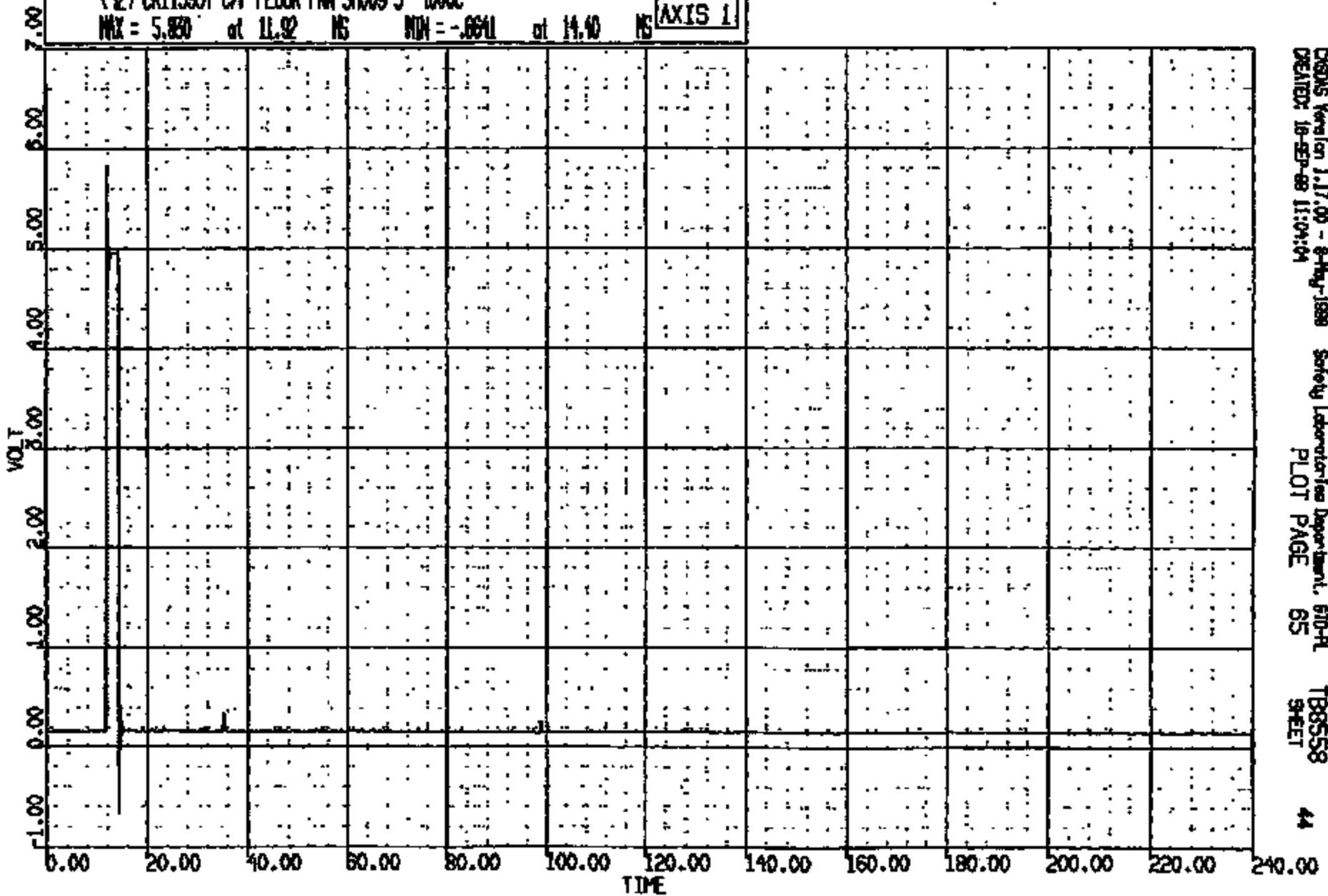
CR R: 11593 TO: TB8558 DATE: 880918 10:24:34

2000 D-198

(42) CR11593T C/F FLOOR P/W S1009-3 4000C

MAX = 5.850 at 11.92 NS MIN = -.0641 at 14.40 NS

AXIS 1



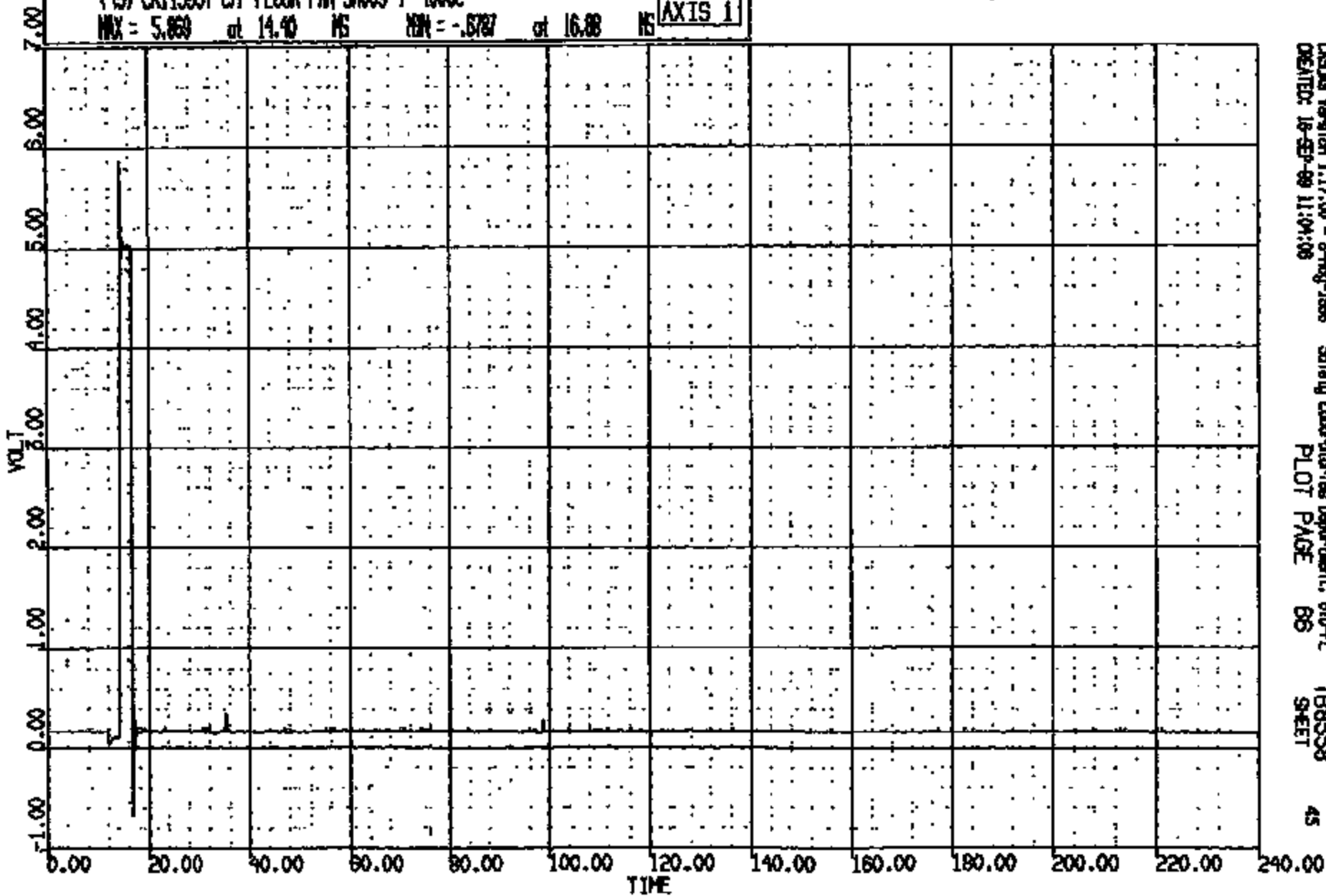
CRSIS Version 1.17.00 - 8-May-1988  
CREATED: 18-SEP-88 11:04:04

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CR R: 11595 TO: T88558 DATE: 990818 10:24:24  
2000 D-186

(43) CRT1508T C/F FLOOR PAN SMOOD-1 4000C  
MAX = 5.860 at 14.40 MS MIN = -.5787 at 16.88 MS **AXIS 1**



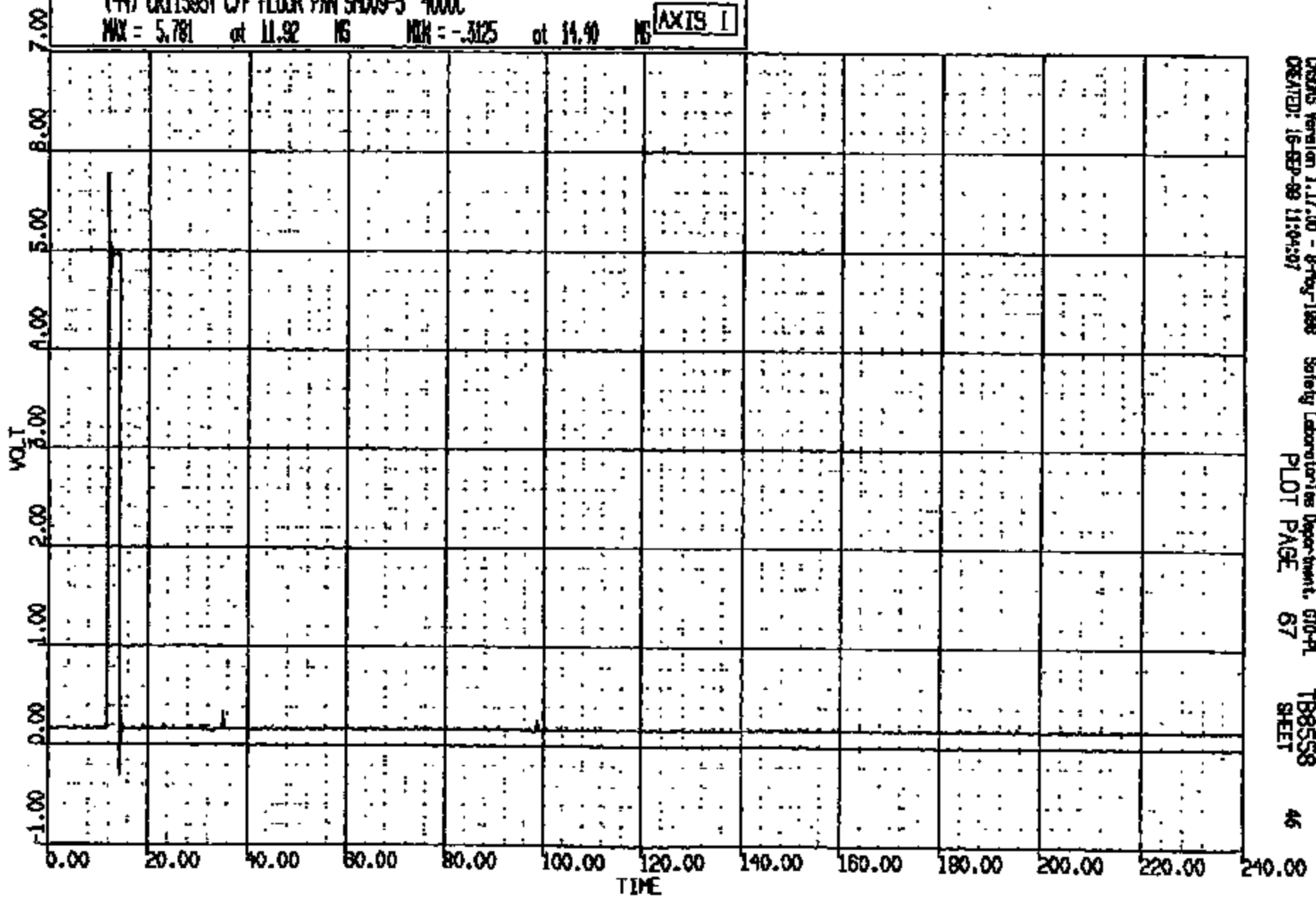
CASDS Version 1.17.00 - 8-Aug-1988 Safety Laboratories Department, 610-A  
CREATED: 18-SEP-89 11:04:08  
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CRTS 0011593

CR: 11593 TO: TB8558 DATE: 880818 10:24:34  
R000 0-188

(44) CR115931 C/F FLOOR PIN 9409-5 4000  
MAX = 5.781 at 11.92 MS MIN = -.3125 at 14.40 MS

AXIS 1



CRSIS Version 1.17.00 - 8-May-1988 Safety Laboratories Department, 610-PL  
CREATED: 16-SEP-88 11:04:07  
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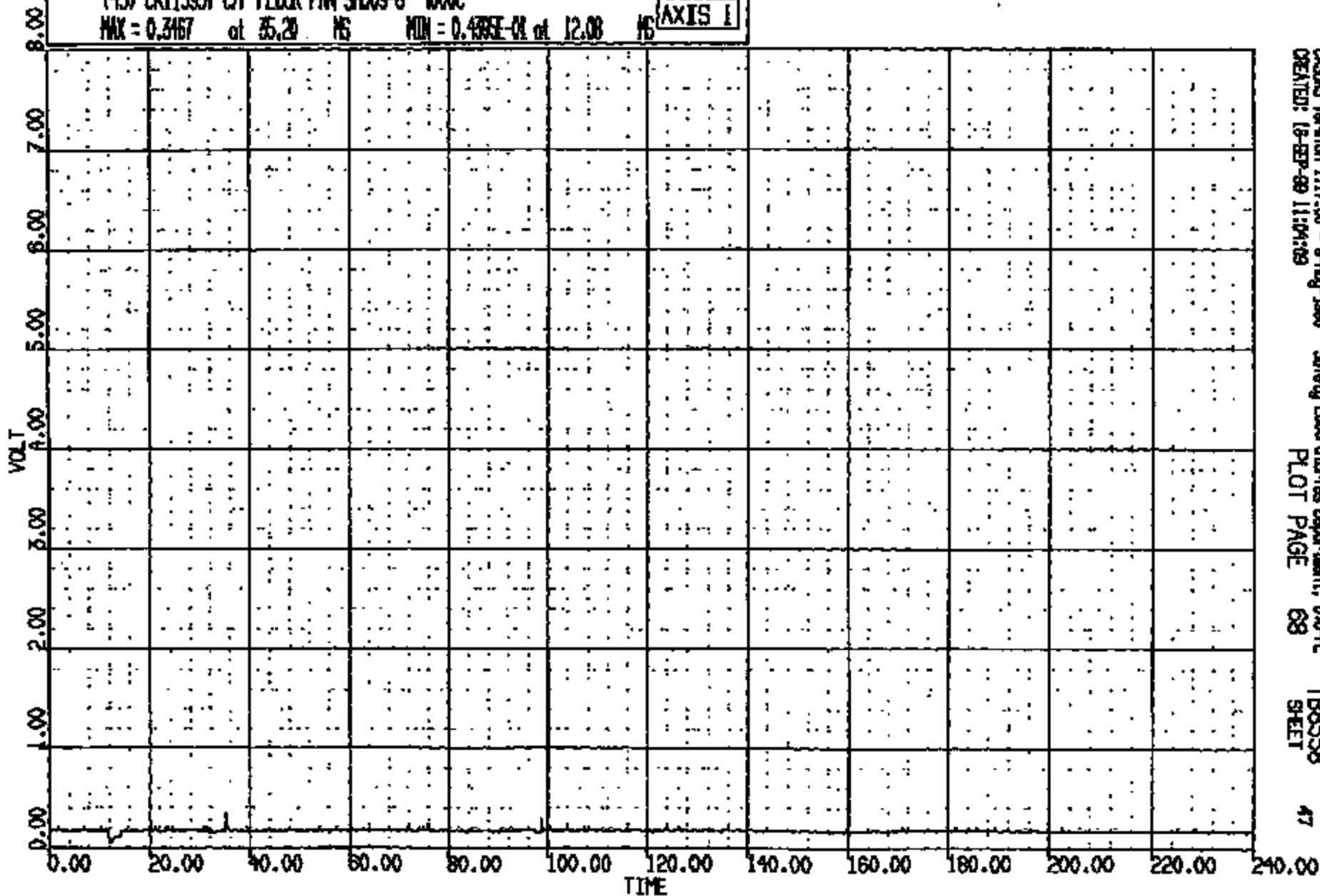
CRIS 0011593

DR R: 11893 TO: T88558 DATE: 990918 10:24:34  
N000 D-188

(45) CRT15931 C/F FLOOR PIN SMD09-6 4000C

MAX = 0.3167 at 35.20 NS MIN = 0.493E-01 at 12.00 NS

AXIS 1



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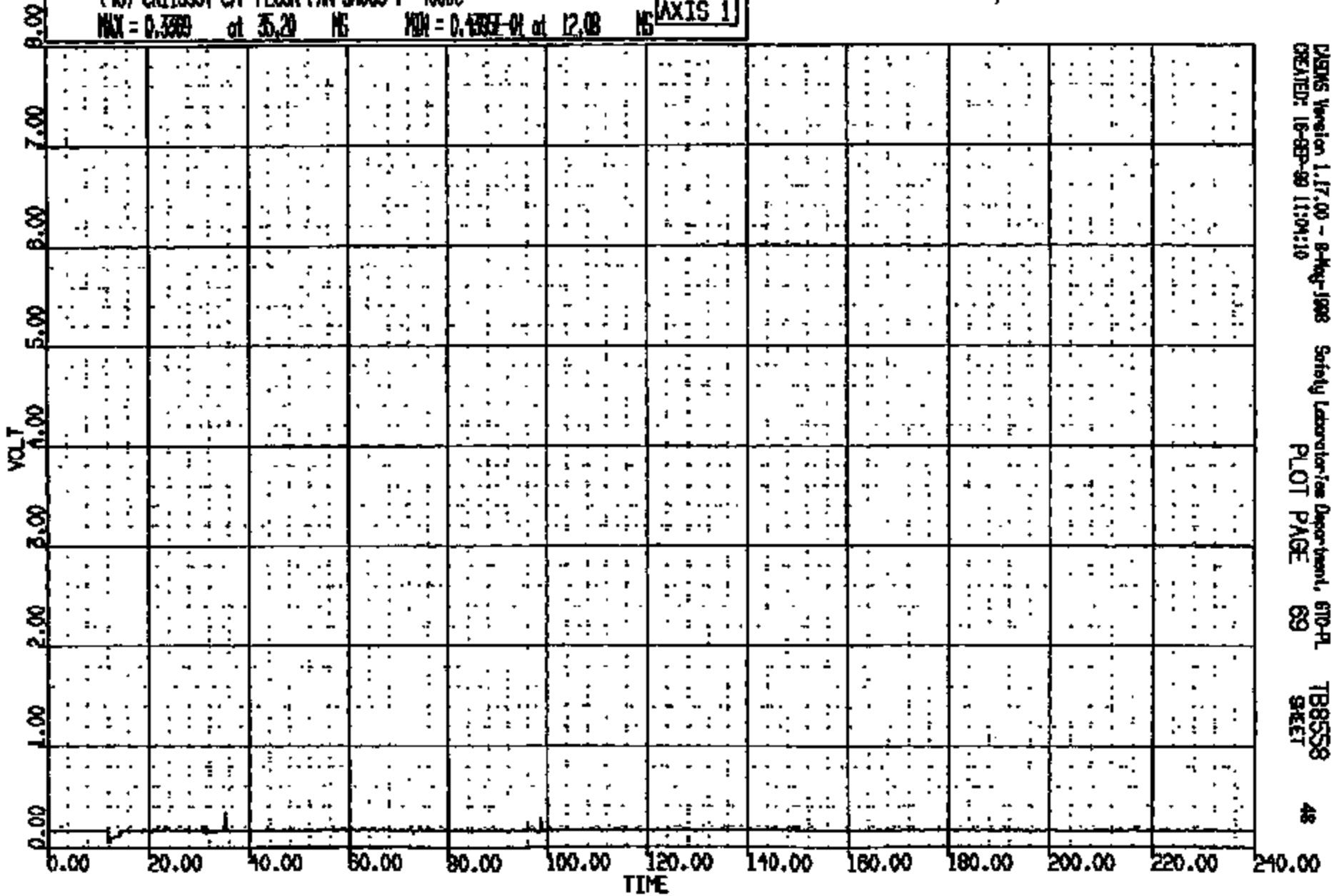
CRTS 0011593

CR R: 11593 TO: TB8558 DATE: 890816 10:24:24  
2000 D-188

(46) CR11593T C/F FLOOR PAN SMOOR-7 4000C

MAX = 0.3589 at 35.20 MS MIN = 0.4387-01 at 12.08 MS

AXIS 1



DIAGMS Version 1.17.00 - 8-May-1988  
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CRTS 0011593

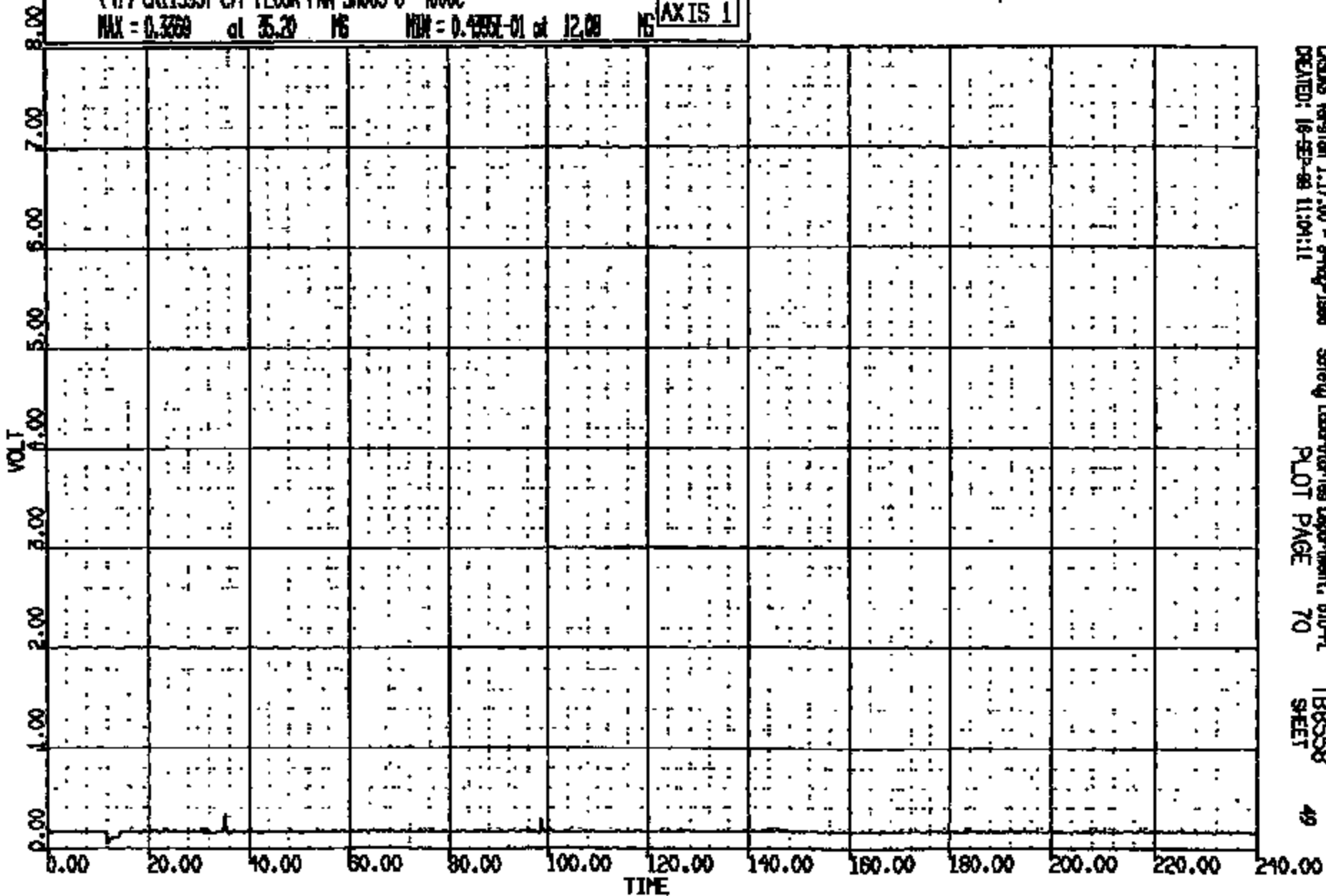


CR R: 11593 TO: T8858 DATE: 890818 10:24:34  
2000 D-189

(47) CRUISEST C/F FLOOR PAN 50009-8 4000C

MAX = 0.3369 at 35.20 MS MIN = 0.495E-01 at 12.00 MS

AXIS 1



CRS Version 1.17.00 - 8-Aug-1990  
CREATED: 18-SEP-89 11:04:11

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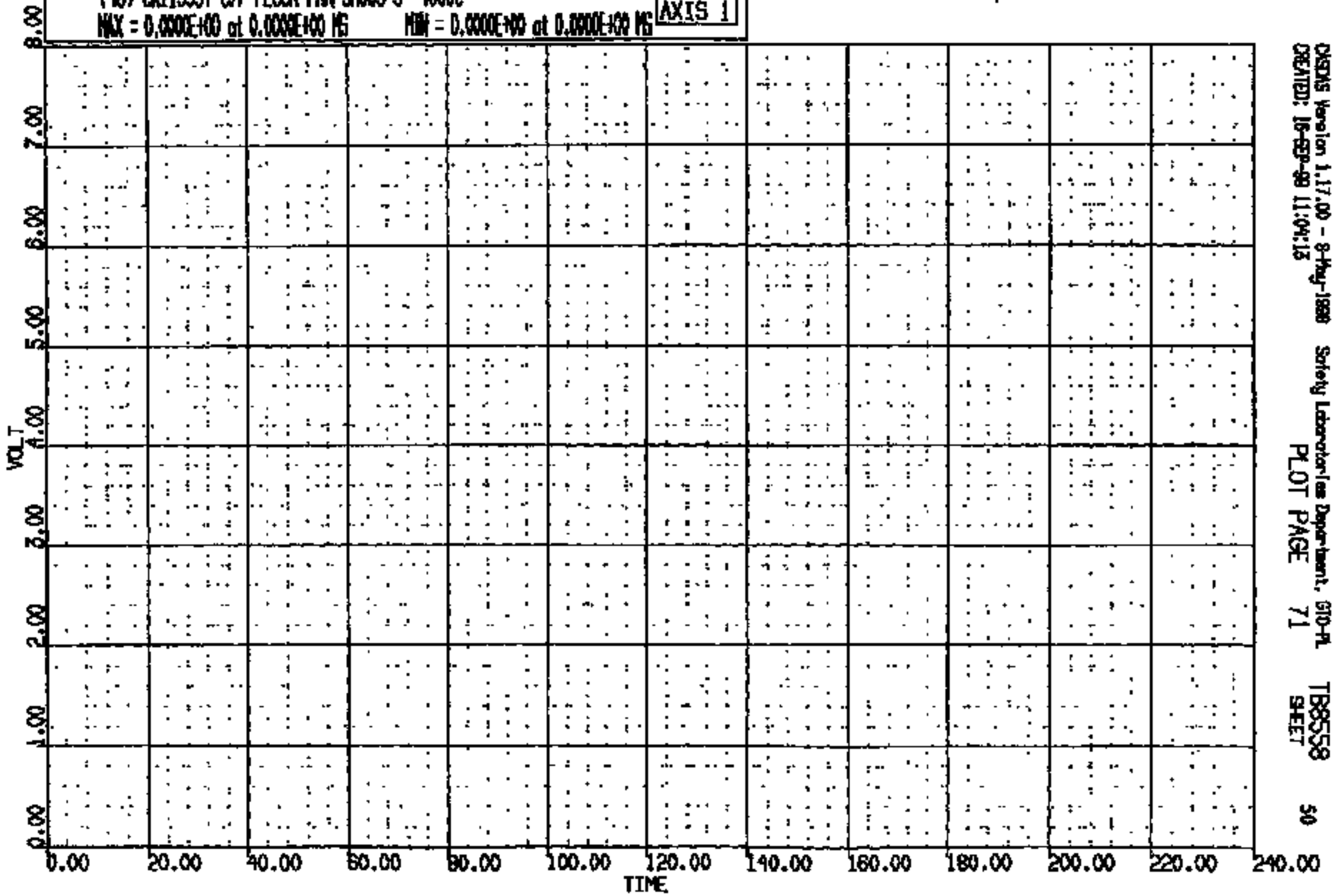
49

CR R: 11593 TO: TB8558 DATE: 990816 10:24:34  
2000 D-188

(48) CR11593T C/F FLOOR PAN SMO09-9 400C

MAX = 0.000E+00 at 0.000E+00 MS MIN = 0.000E+00 at 0.000E+00 MS

AXIS 1



ORION Version 1.17.00 - 8-May-1998  
CREATED: 16-SEP-99 11:04:15

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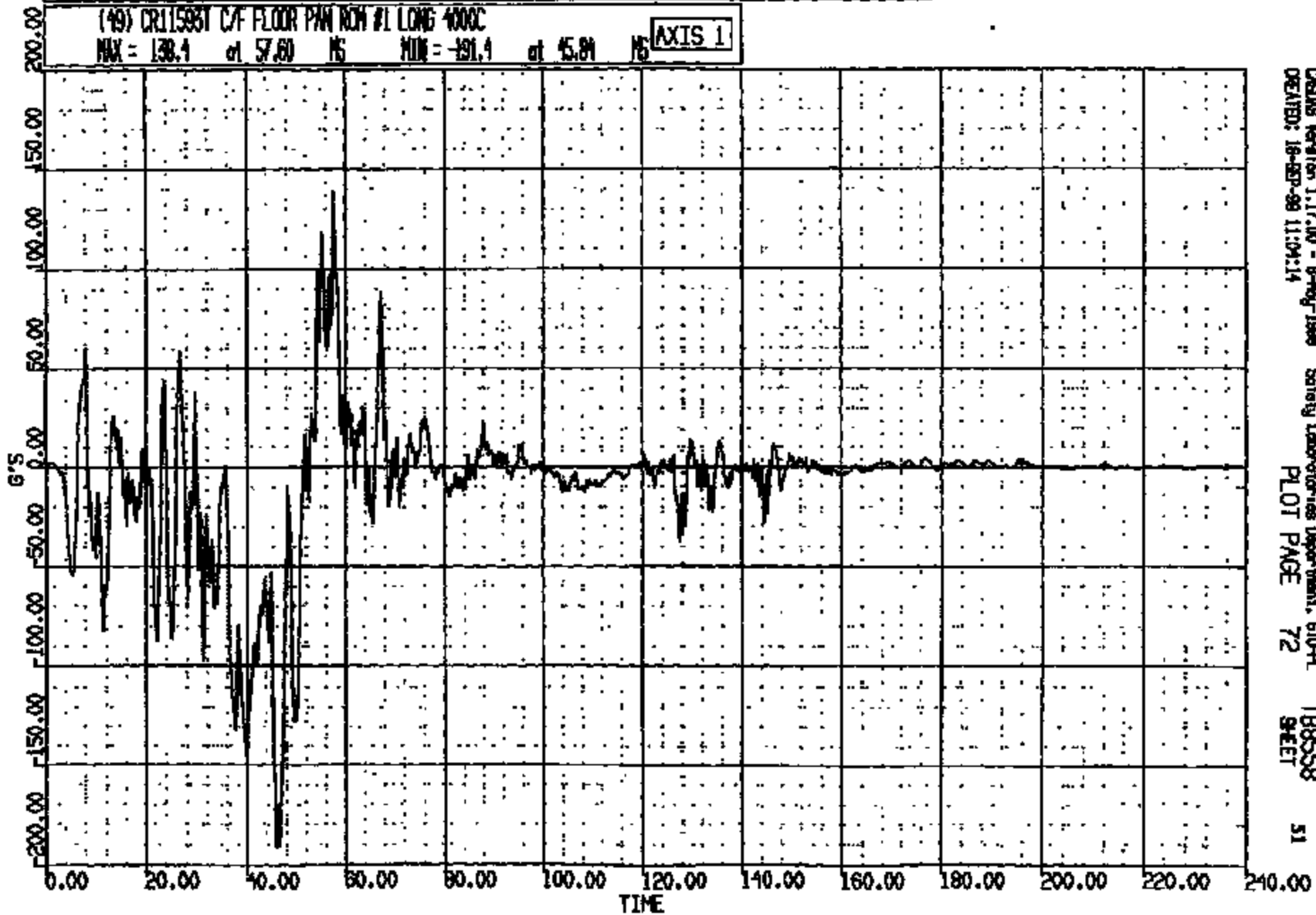
CR 2: 11593 TO: TB8558 DATE: 890918 10:24:34

2000 0-188

(49) CRT1593T C/F FLOOR PAN ROW #1 LONG 4000

MAX = 138.4 at 57.60 MS MIN = -191.4 at 45.84 MS

AXIS 1



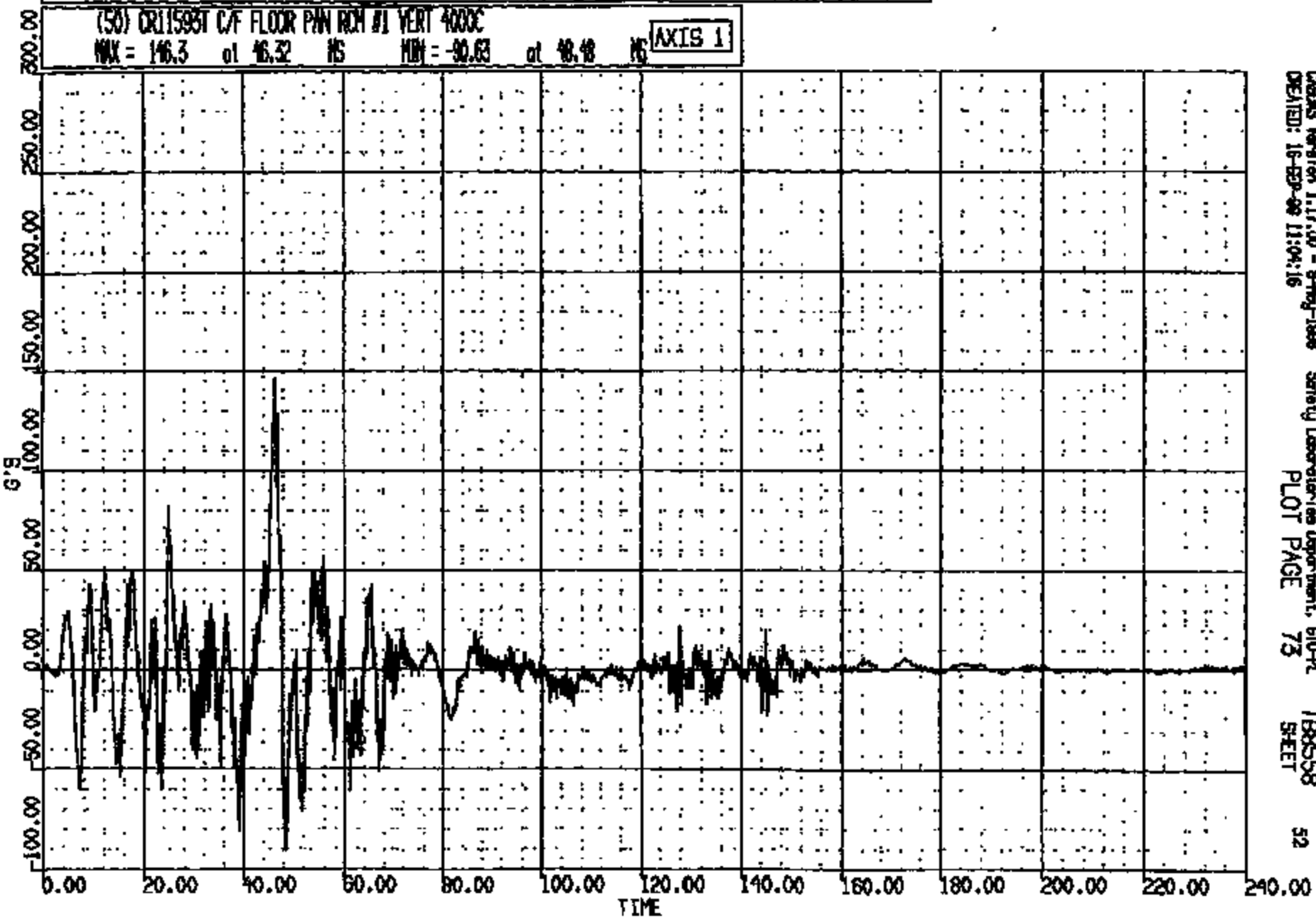
CRSIS Version 1.17.00 - 8-May-1989

CREATED: 18-SEP-89 11:04:14

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CR R: 11593 TO: T88558 DATE: 890918 10:24:34  
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PLOT PAGE 73

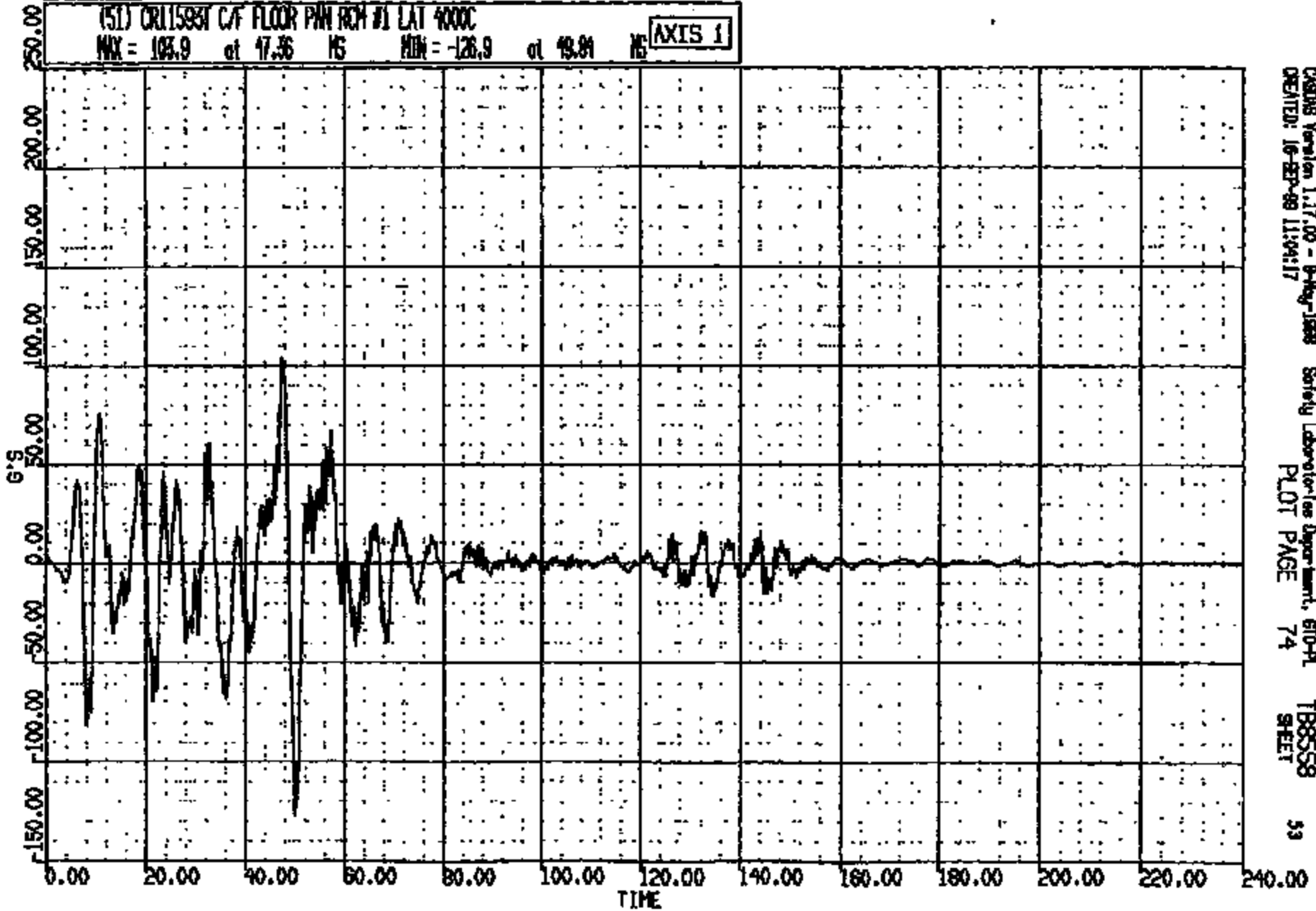
T88558  
SHEET

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CRTS 0011593

CR #: 11593 TO: T8858 DATE: 880918 10:24:34  
2000 D-188

(51) CR115931 C/F FLOOR PIN ROOM #1 LAT 4000  
MAX = 103.9 at 17.36 MS MIN = -126.9 at 49.04 MS **AXIS 1**



CARDAS Version 1.17.00 - 8-May-1988 Safety Laboratory Department, 610-PL  
CREATED: 16-SEP-88 11:04:17 PLOT PAGE 74 T88558  
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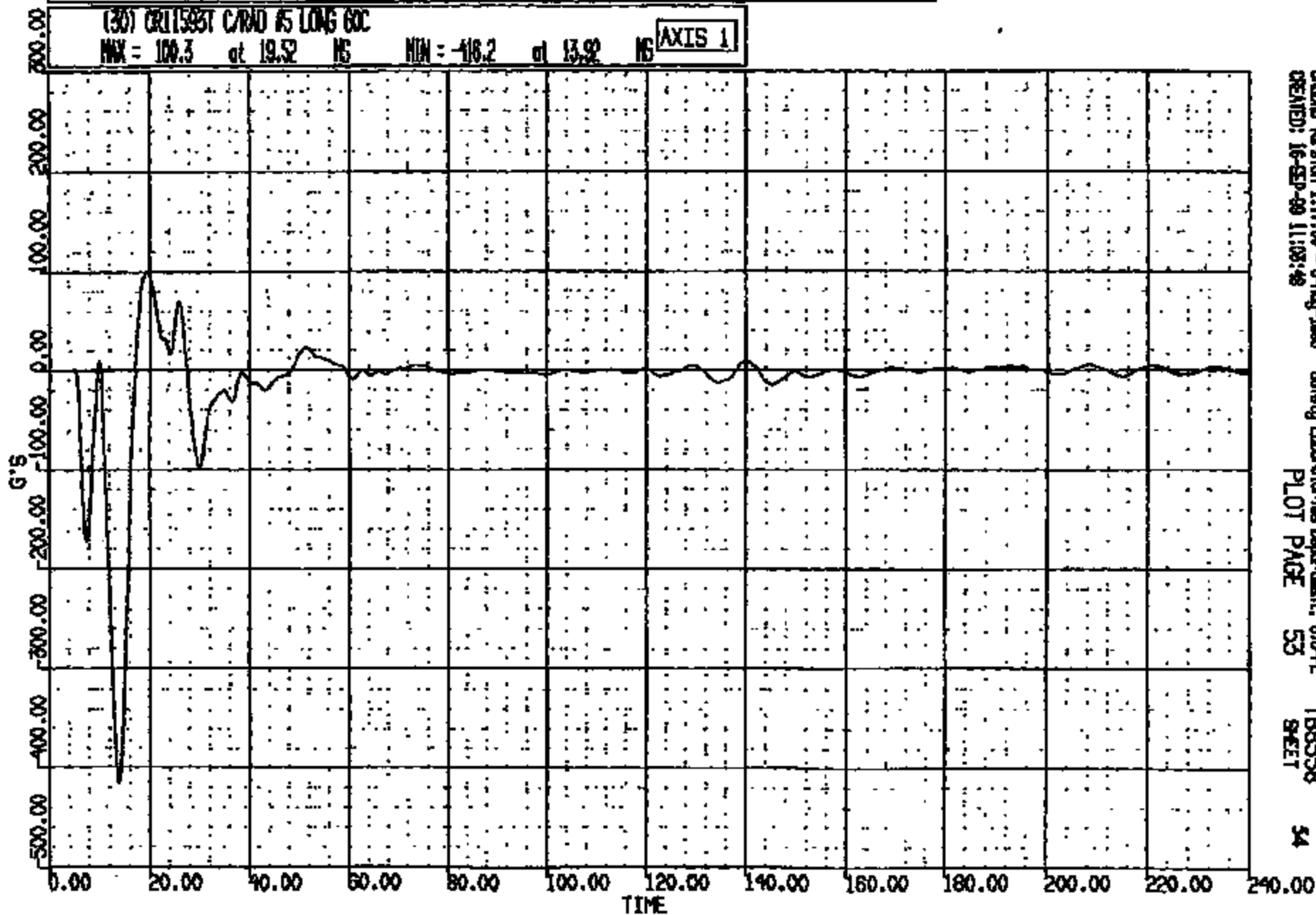
CR11593

CR R: 11593 TO: T88558 DATE: 990918 10:24:34  
#000 D-188

(30) CR11593T C/RAD AS LONG GOC

MAX = 100.3 at 19.52 MS MIN = -416.2 at 13.92 MS

AXIS 1



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CREATED: 16-SEP-99 11:03:48

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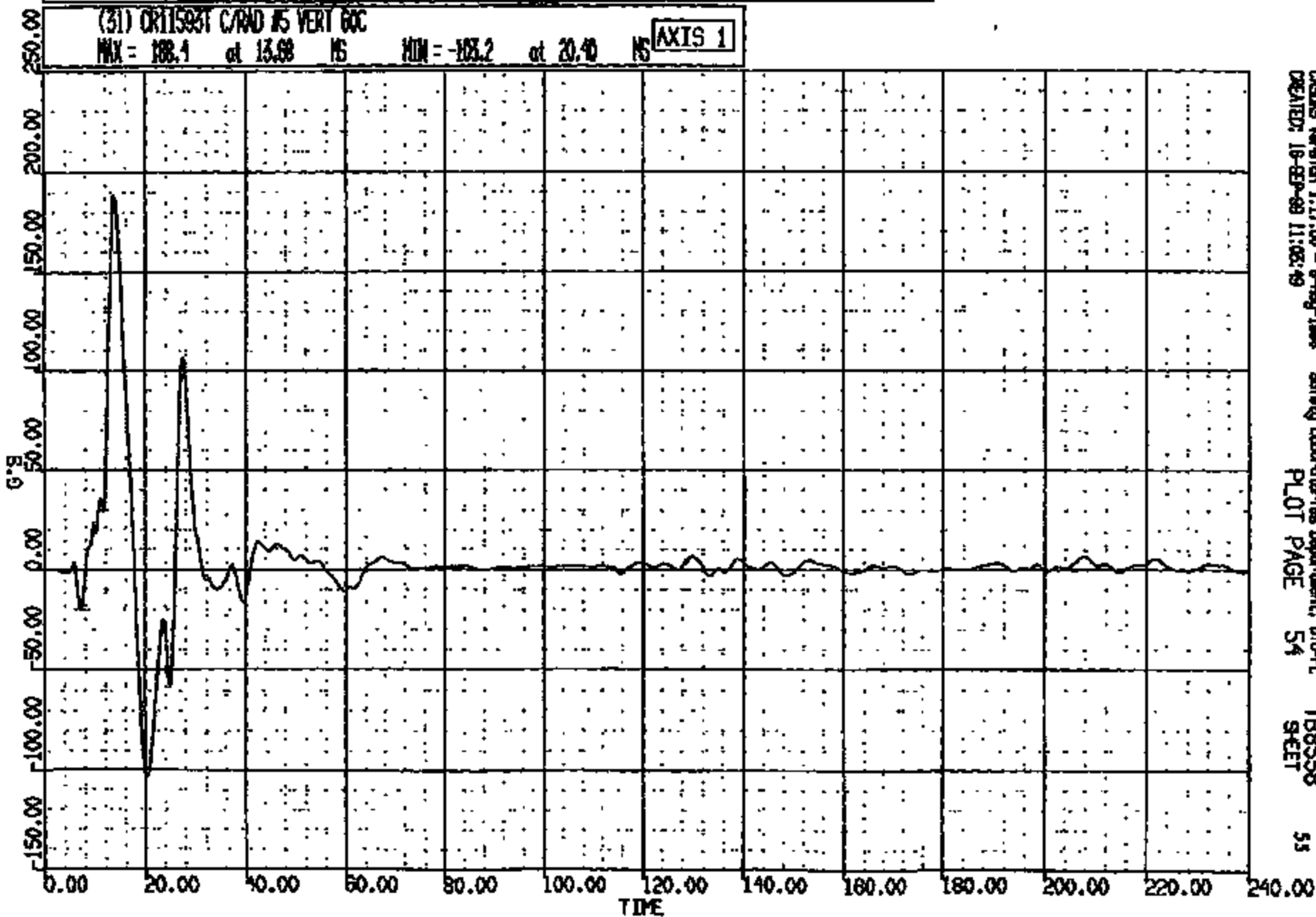
CR #: 11593 TO: TB8558 DATE: 990818 10:24:34

2000 0-198

(31) CR11593T C/RAD #5 VERT 60C

MAX = 188.1 at 13.68 NS MIN = -188.2 at 20.40 NS

AXIS 1



CRSIS Version 1.17.00 - 8-May-1998  
CREATED: 18-SEP-99 11:03:49

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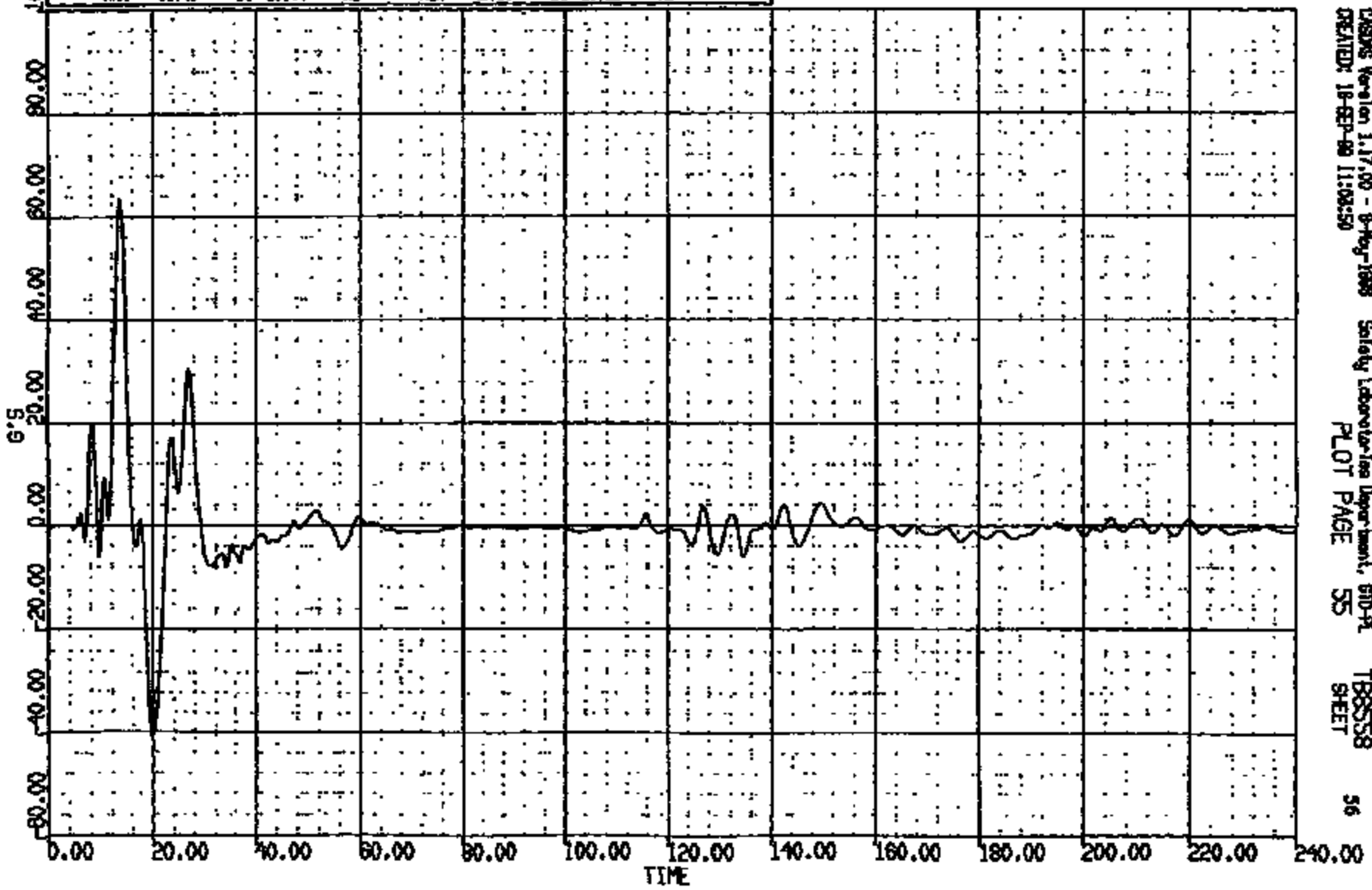
CRTS 0011593

CR #: 11593 TO: T88558 DATE: 200810 10:24:54  
P000 D-108

(32) CR11593T CARD #5 LAT 60C

MAX = 63.45 at 13.44 MS MIN = -40.95 at 19.92 MS

AXIS 1



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CRIS 0011593



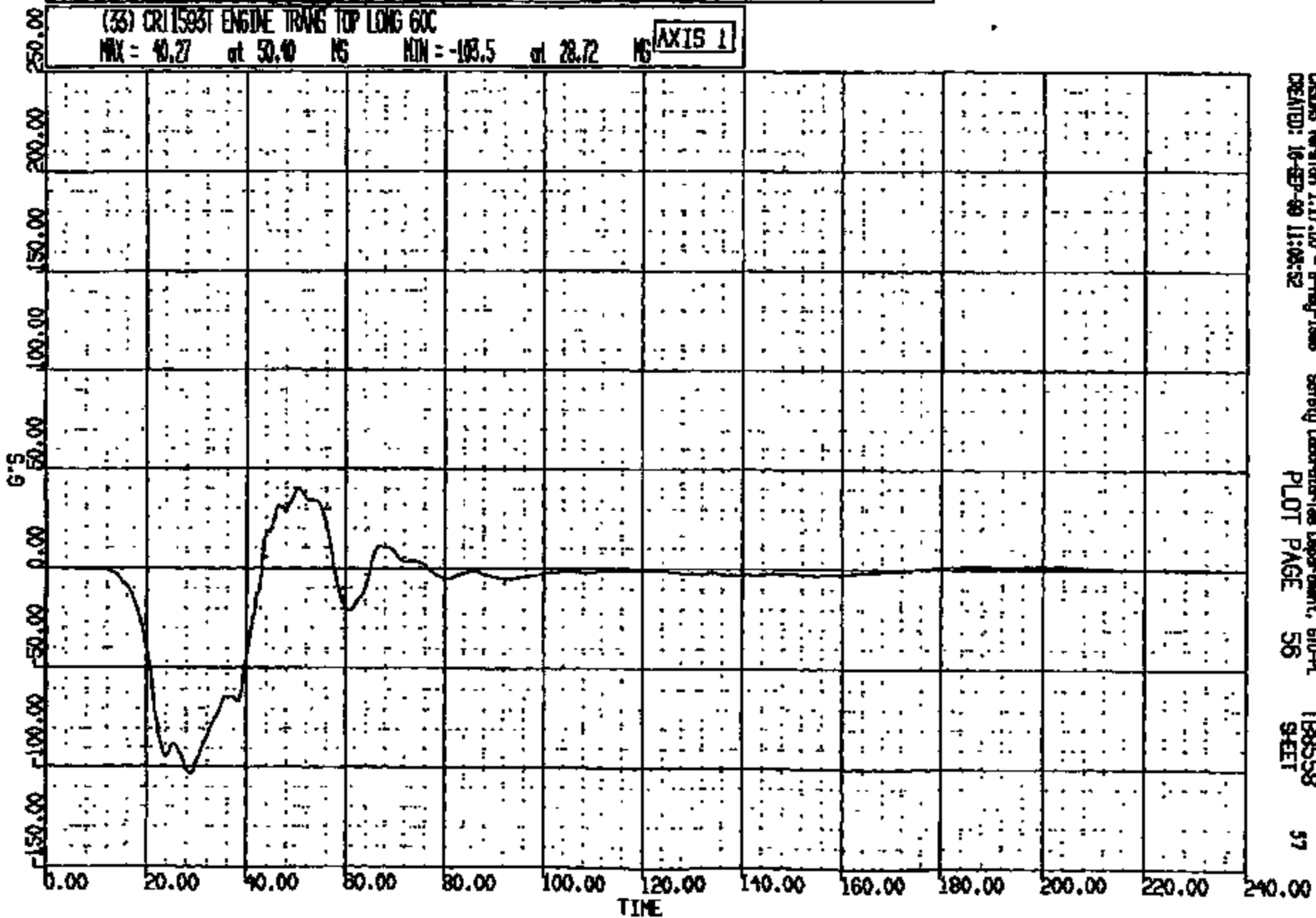
OR R: 11893 TO: T88559 DATE: 900918 10:24:34

2000 D-188

(33) CR11593T ENGINE TRANS TOP LONG 60C

MAX = 40.27 at 50.40 MS MIN = -103.5 at 28.72 MS

AXIS 1



CRSIS Version 1.17.00 - 8-May-1988  
CREATED: 16-SEP-88 11:08:52

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CRIS 0011593

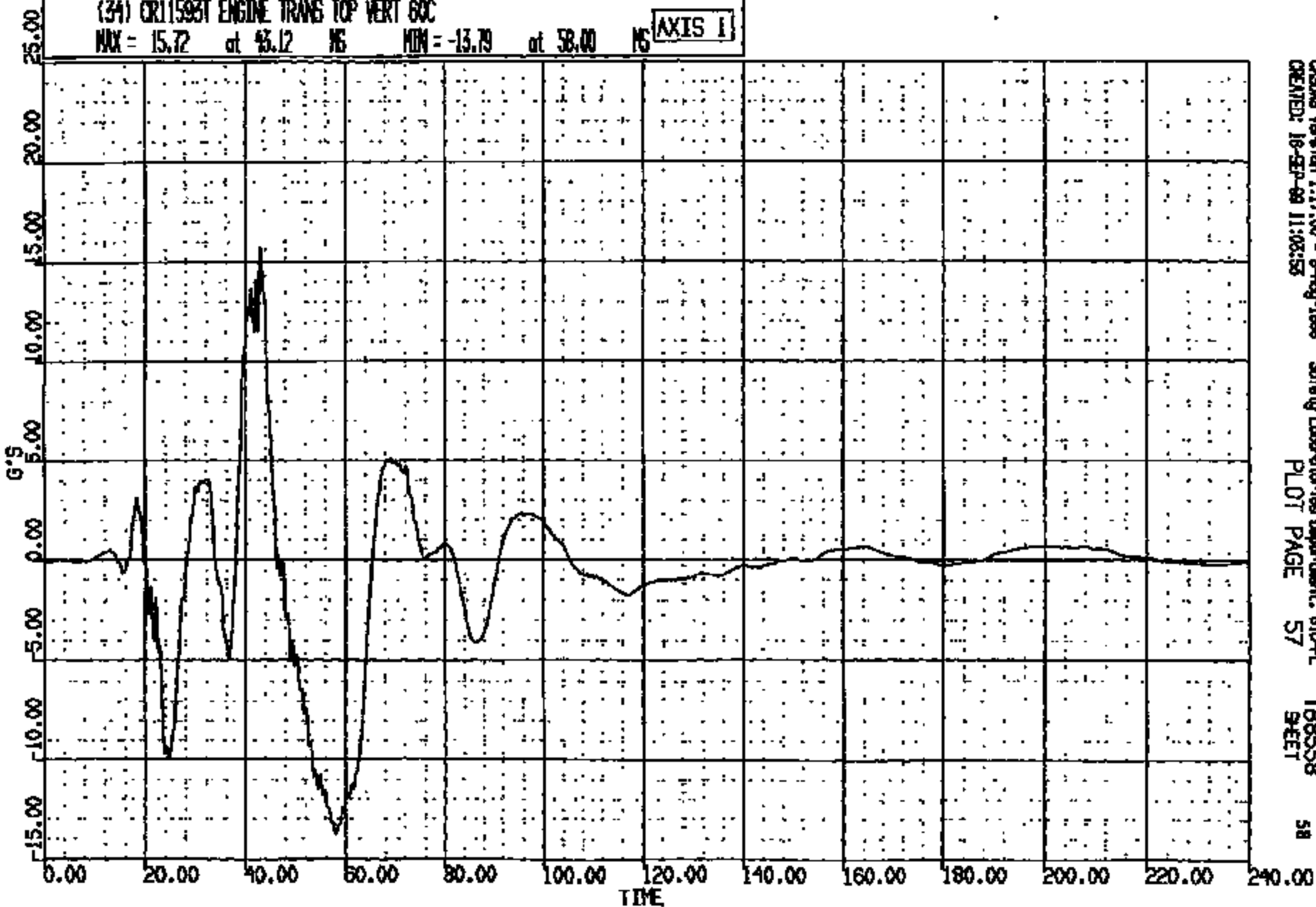
CR R: 11593 TO: T88558 DATE: 880818 10:24:34

POOD D-168

(34) CR11593T ENGINE TRANS TOP VERT 60C

MAX = 15.72 at 43.12 NS MIN = -13.79 at 58.00 NS

AXIS 1



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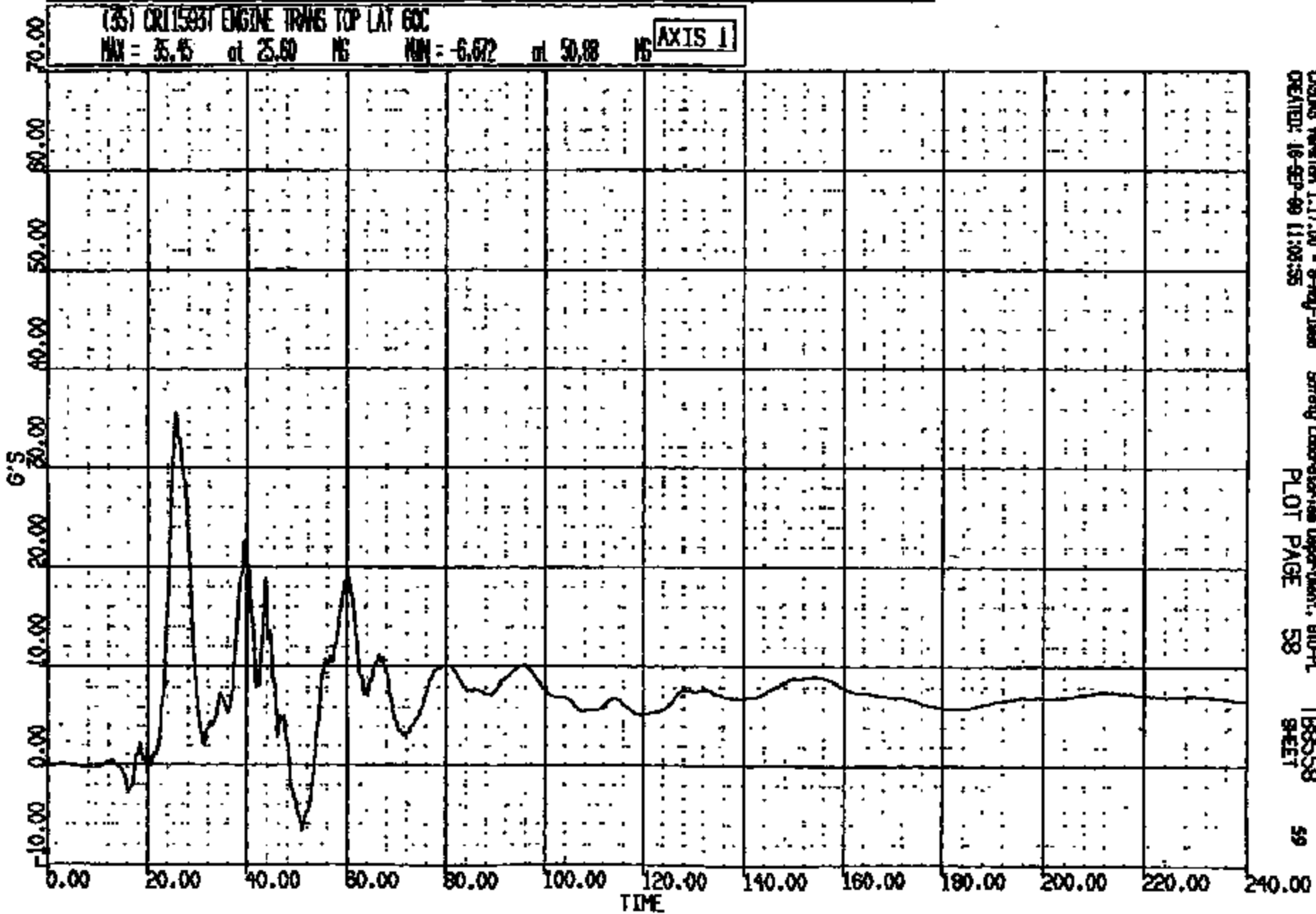
CRTS 0011593

CR R: 11593 TO: TB8558 DATE: 200918 10:24:34  
2000 0-100

(35) CRT1593T ENGINE TRANS TOP LAT 60C

MAX = 35.45 at 25.60 MS MIN = -6.672 at 50.88 MS

AXIS 1



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CREATED: 16-SEP-99 11:03:55

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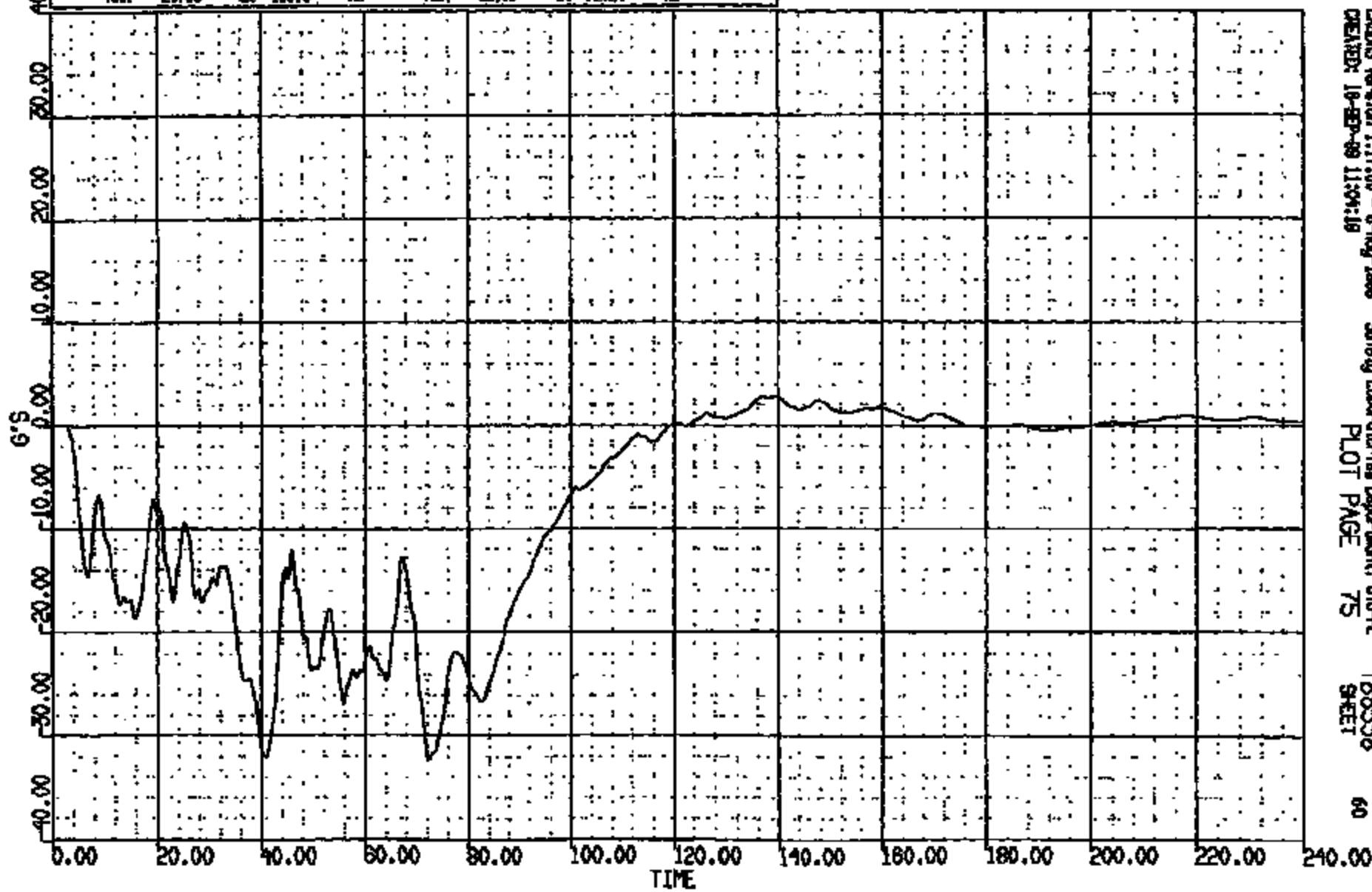
CRTS 0011593

CR R: 11593 TO: T88558 DATE: 880918 10:24:54  
2000 D-198

(52) CR11593T L/ROCKER @ B-PILLAR LONG GOC

MAX = 2.766 at 136.9 NS MIN = -32.36 at 72.21 NS

AXIS 1



CRMS Version 1.17.00 - 8-May-1998  
CREATED: 18-SEP-89 11:04:19

Safety Laboratories Department, G10-41  
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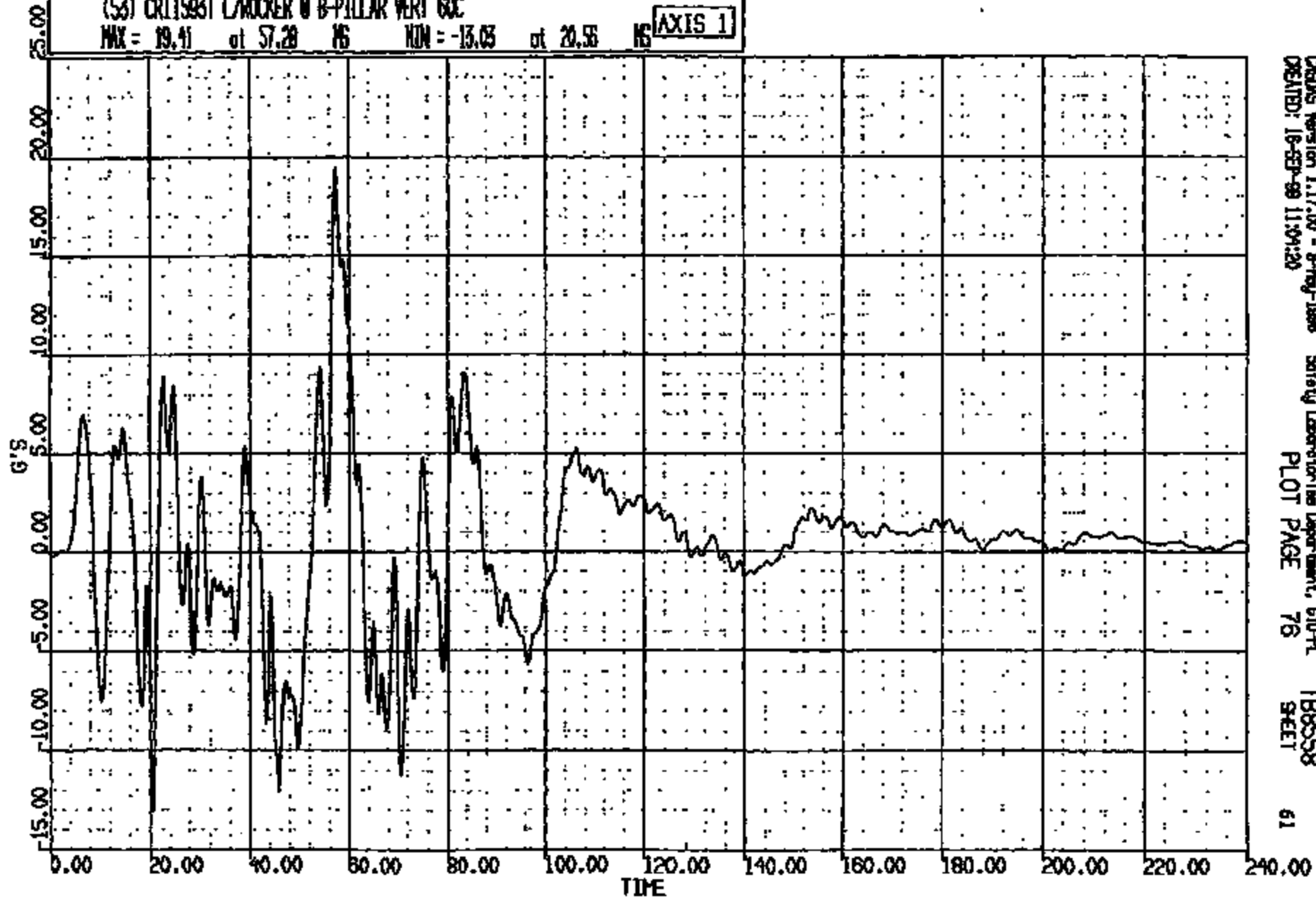
CR R: 11585 TO: T88558 DATE: 880816 10:24:34

2000 D-188

(53) CRT1583T L/ROCKER @ B-PILLAR VERT GXC

MAX = 19.41 at 57.28 76 MIN = -13.03 at 20.55 76

AXIS 1



CRS015 Version 1.17.00 - 8-May-1988  
CREATED: 16-SEP-89 11:04:20

Safety Laboratories Department, 670-PL  
PLOT PAGE 76

T88558  
SHEET

61

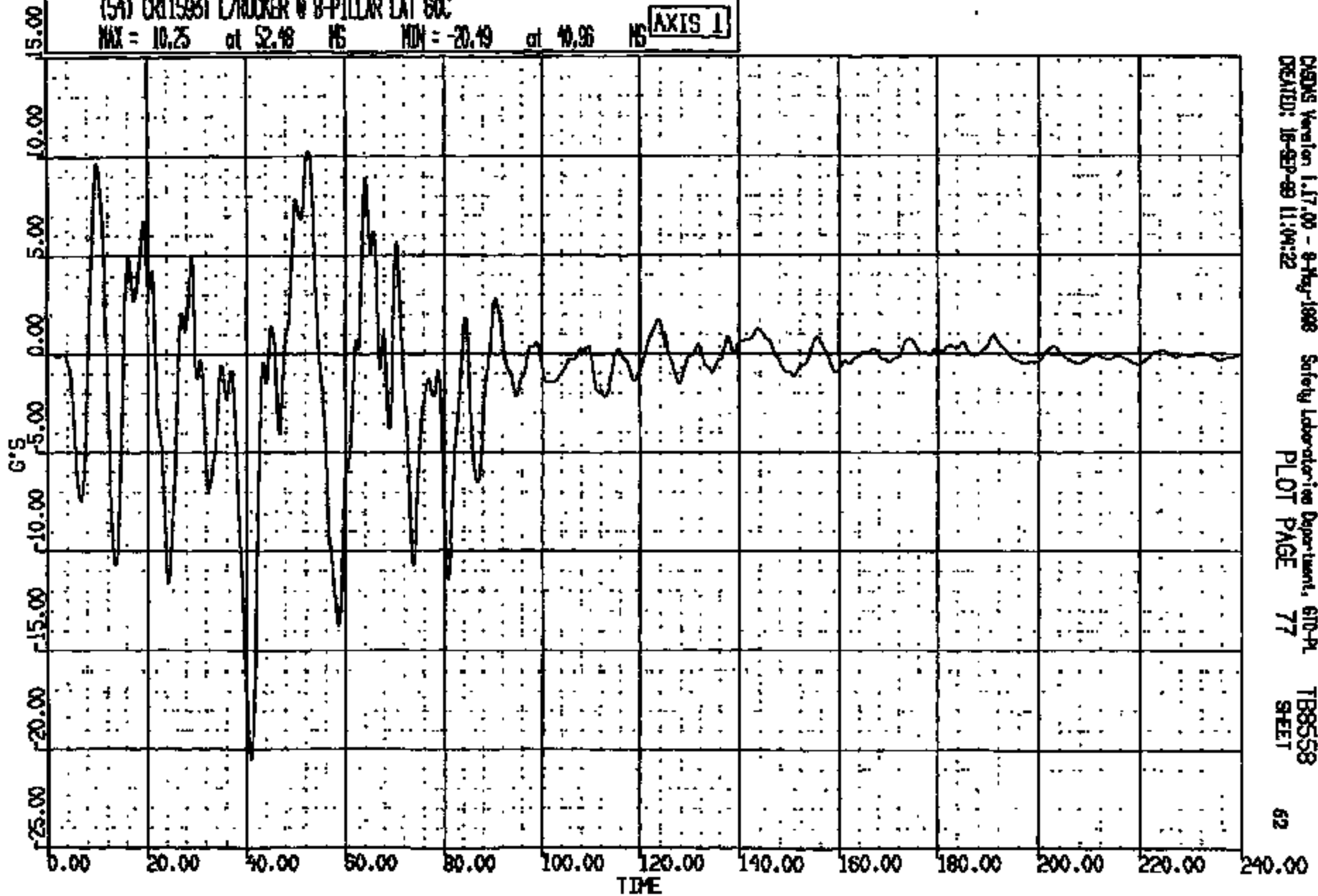
CRTS 0011593

CR R: 11595 TO: TB8558 DATE: 990918 10:24:34  
2000 D-188

(54) CR115951 L/ROCKER @ 8-PILLAR LAT SOC

MAX = 10.25 at 52.48 MS MIN = -20.49 at 40.96 MS

AXIS 1



CHONS Version 1.17.00 - 9-May-1998  
CREATED: 18-SEP-99 11:04:22

Safety Laboratories Department, 610-PL  
PLOT PAGE 77

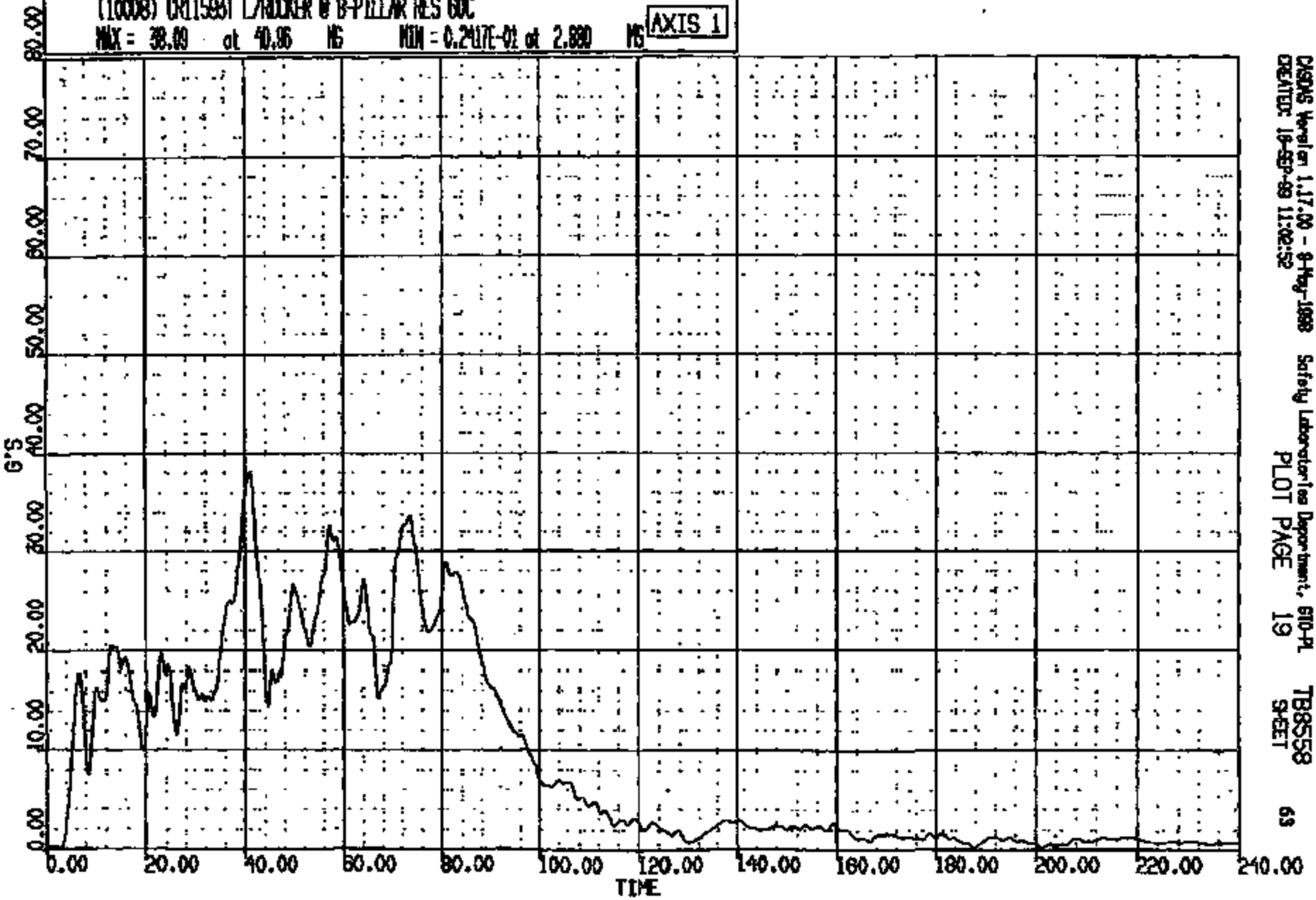
TB8558  
SHEET

CR N: 11593 TO: TB8558 DATE: 990918 10:24:54  
2000 D-198

(10008) CR11593 L/ROCKER @ B-PILLAR RES 60C

MAX = 38.09 at 40.96 MS MIN = 0.2417E-01 at 2.880 MS

AXIS 1

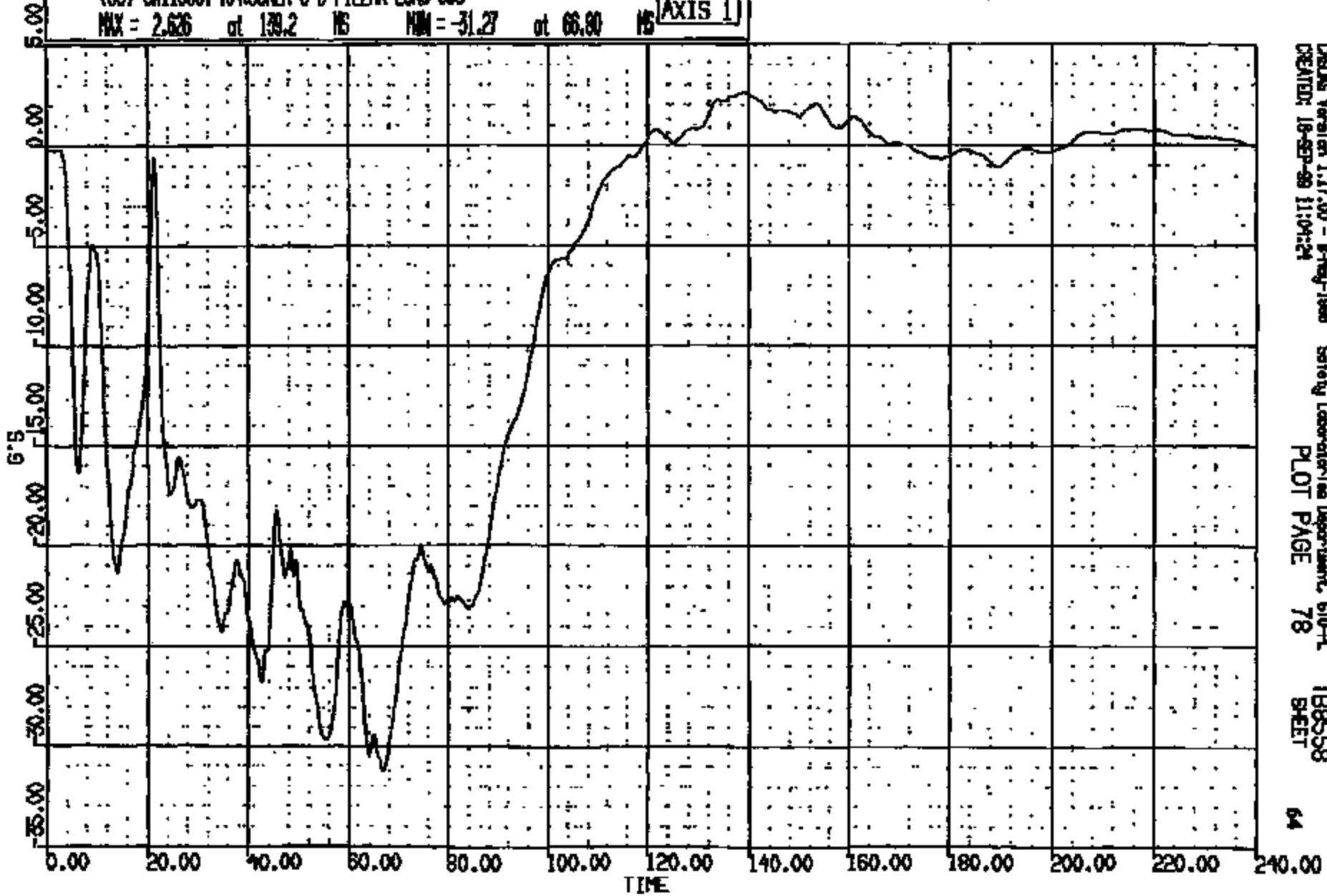


CRS0011593 Verlen 1,17.00 - 9-May-1998 Safety Laboratories Department, 610-PL TB8558  
CREATOR: 18-SEP-89 11:02:52 PLOT PAGE 19 SHEET 63

CRS0011593

CR R: 11593 TO: 78558 DATE: 990918 10:24:54  
2000 D-188

(55) CR11593T R/ROCKER @ B-PILLAR LONG 60C  
MAX = 2.626 at 139.2 MS MIN = -31.27 at 66.80 MS **AXIS 1**

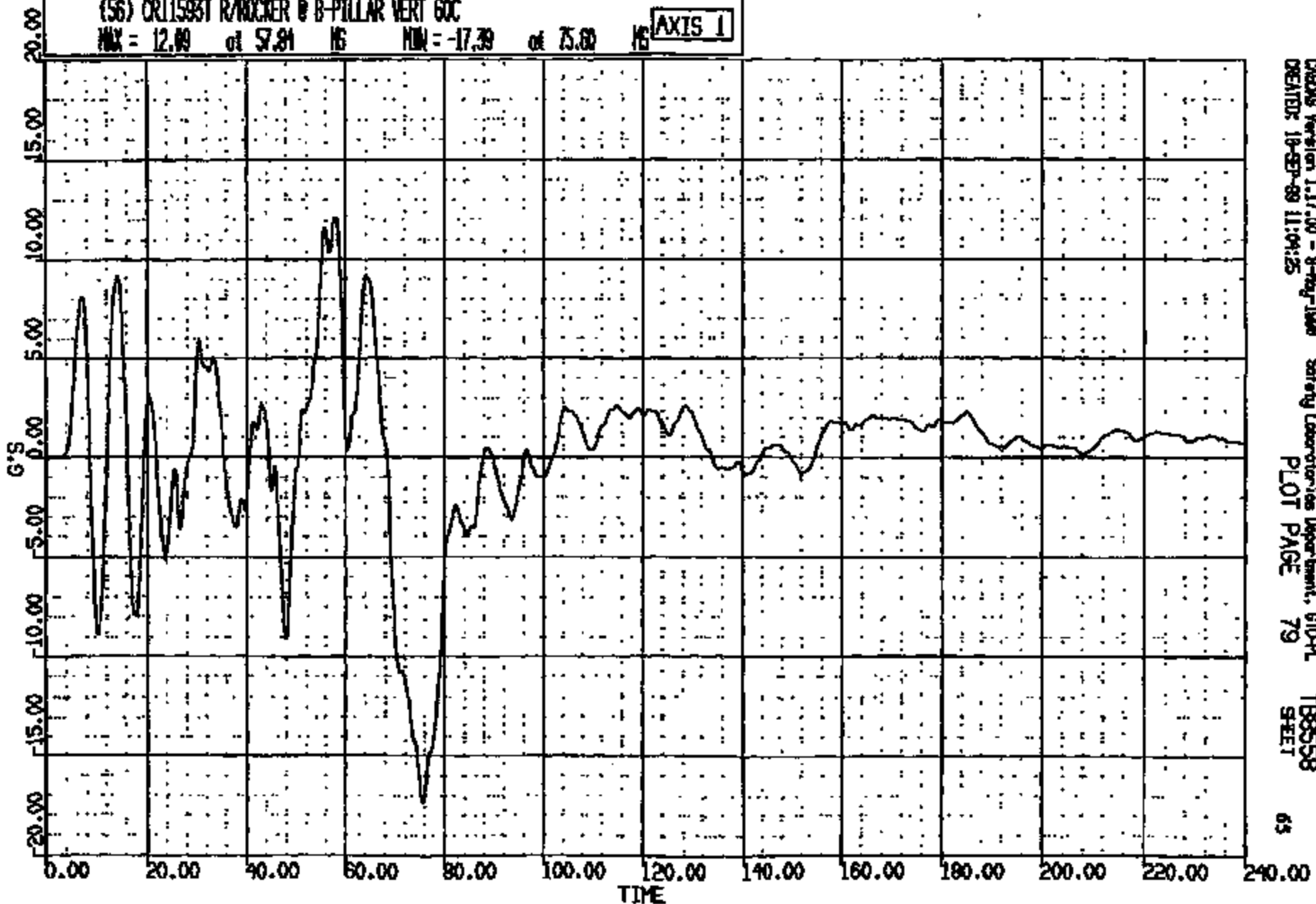


CRSNG Version 1.17.00 - 8-May-1998 Safety Laboratories Department, 610-P  
CREATED: 18-SEP-99 11:04:24 PLOT PAGE 78 TB8558



CR R: 11593 TO: TB8558 DATE: 890918 10:24:54  
2000 D-198

(56) CR11593T R/ROCKER @ B-PILLAR VERT GOC  
MAX = 12.09 of 57.81 MS MIN = -17.39 of 75.60 MS **AXIS 1**



CRSAS Version 1.17.00 - 8-May-1988 Safety Laboratories Department, 610-PL  
CREATED: 18-SEP-89 11:04:25  
PLOT PAGE 79 TB8558  
SHEET 65

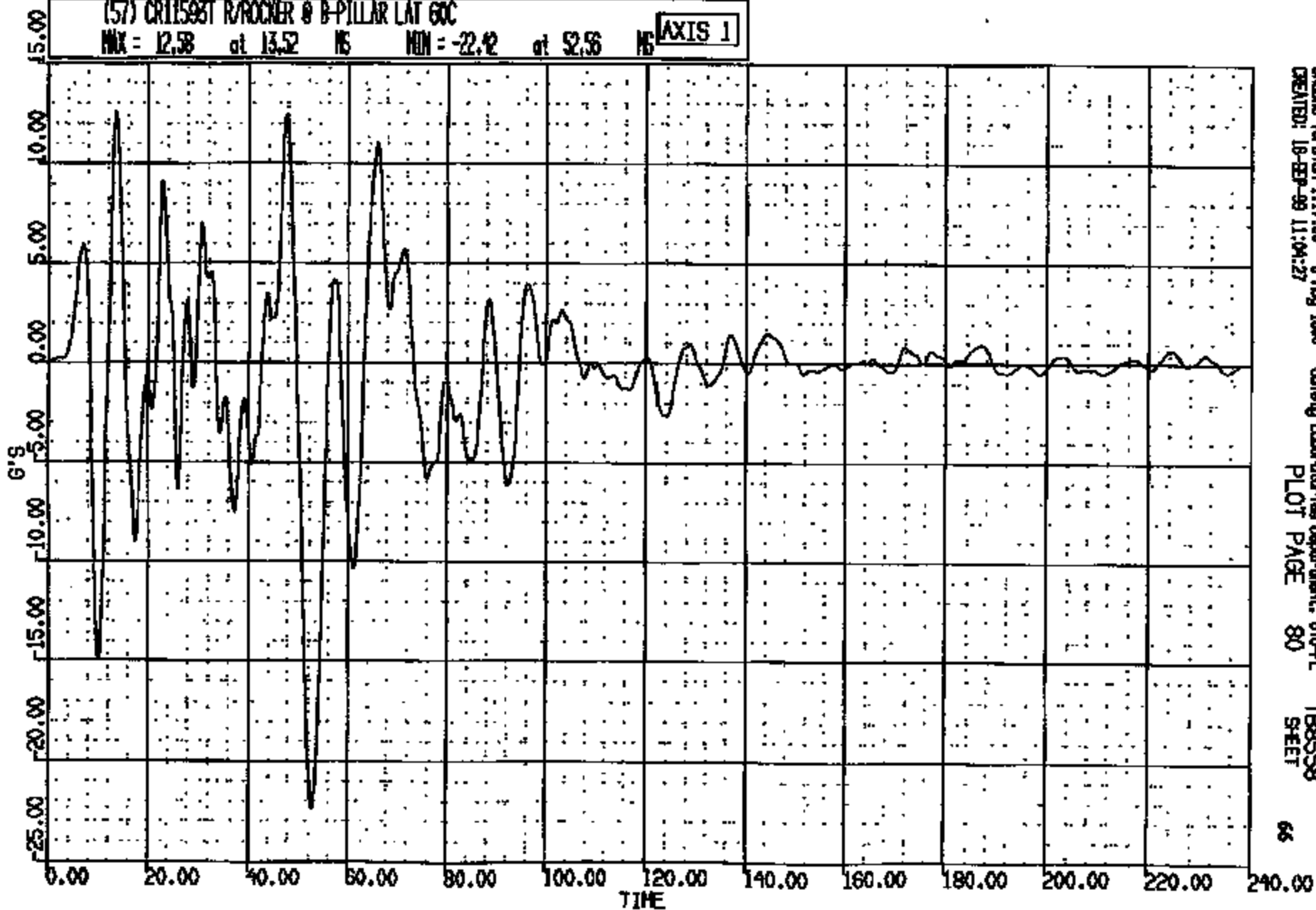
CRTS 0011593

CR R: 11593 TO: T8858 DATE: 990816 10:24:34  
2000 D-188

(57) CR11593T R/ROCKER @ B-PILLAR LAT 60C

MAX = 12.58 at 13.52 NS MIN = -22.42 at 52.56 NS

AXIS 1



CADMS Version 1.17.00 - 8-May-1998  
CREATED: 18-SEP-99 11:04:27

Safety Laboratories Department, 610-PL  
PLOT PAGE 80

T8858  
SHEET

66

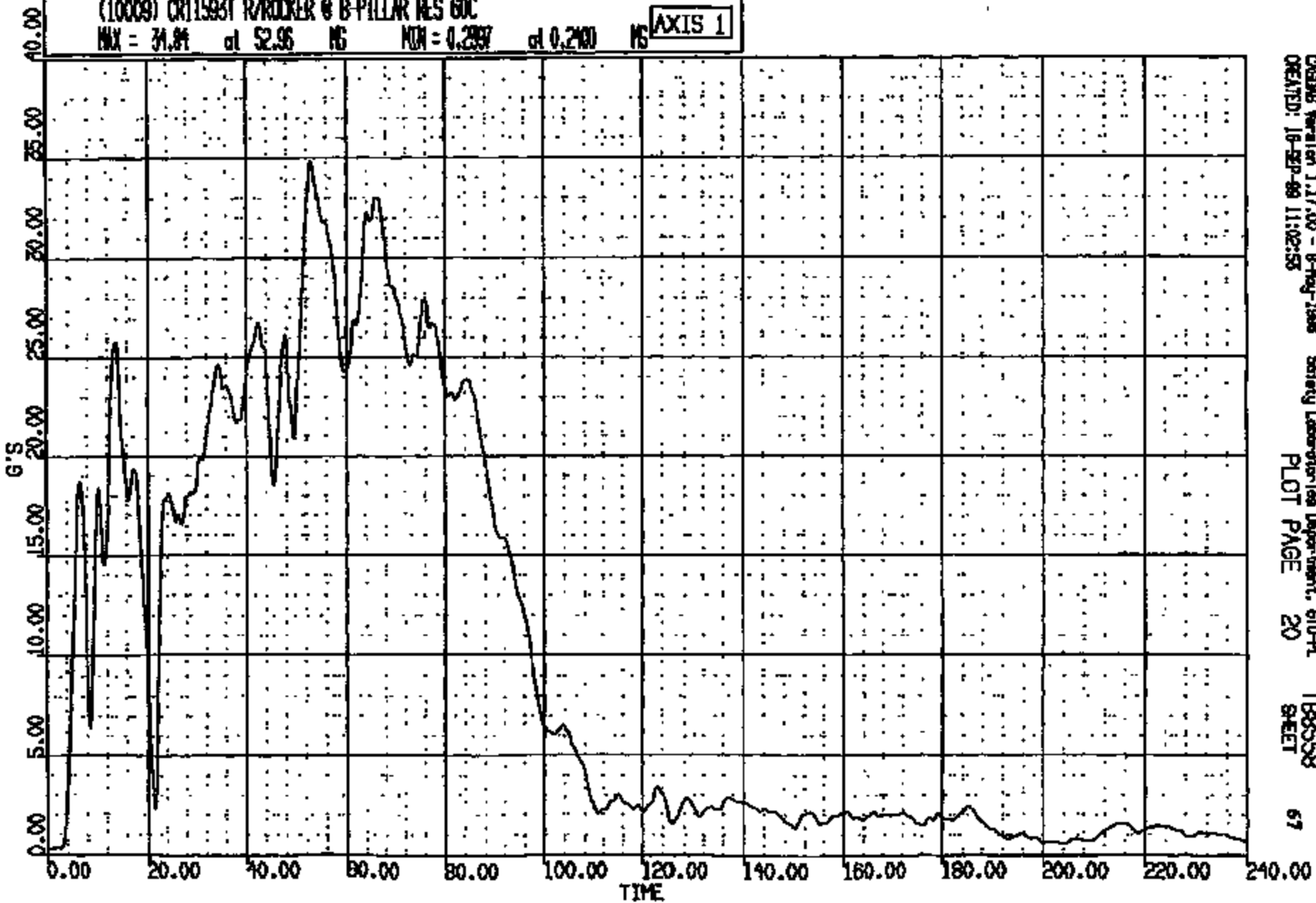
CRIS 0011593

CR R: 11593 TO: TB8558 DATE: 990918 10:24:34  
8000 0-198

(10009) CR11593T R/ROCKER @ B-PILLAR RES 60C

MAX = 31.84 at 52.95 NS MIN = 0.2897 at 0.2100 NS

AXIS 1



CMSB Version 1.17.00 - 8-May-1998  
CREATED: 18-SEP-99 11:02:55

Safety Laboratory Department, 610-PL  
PLOT PAGE 20

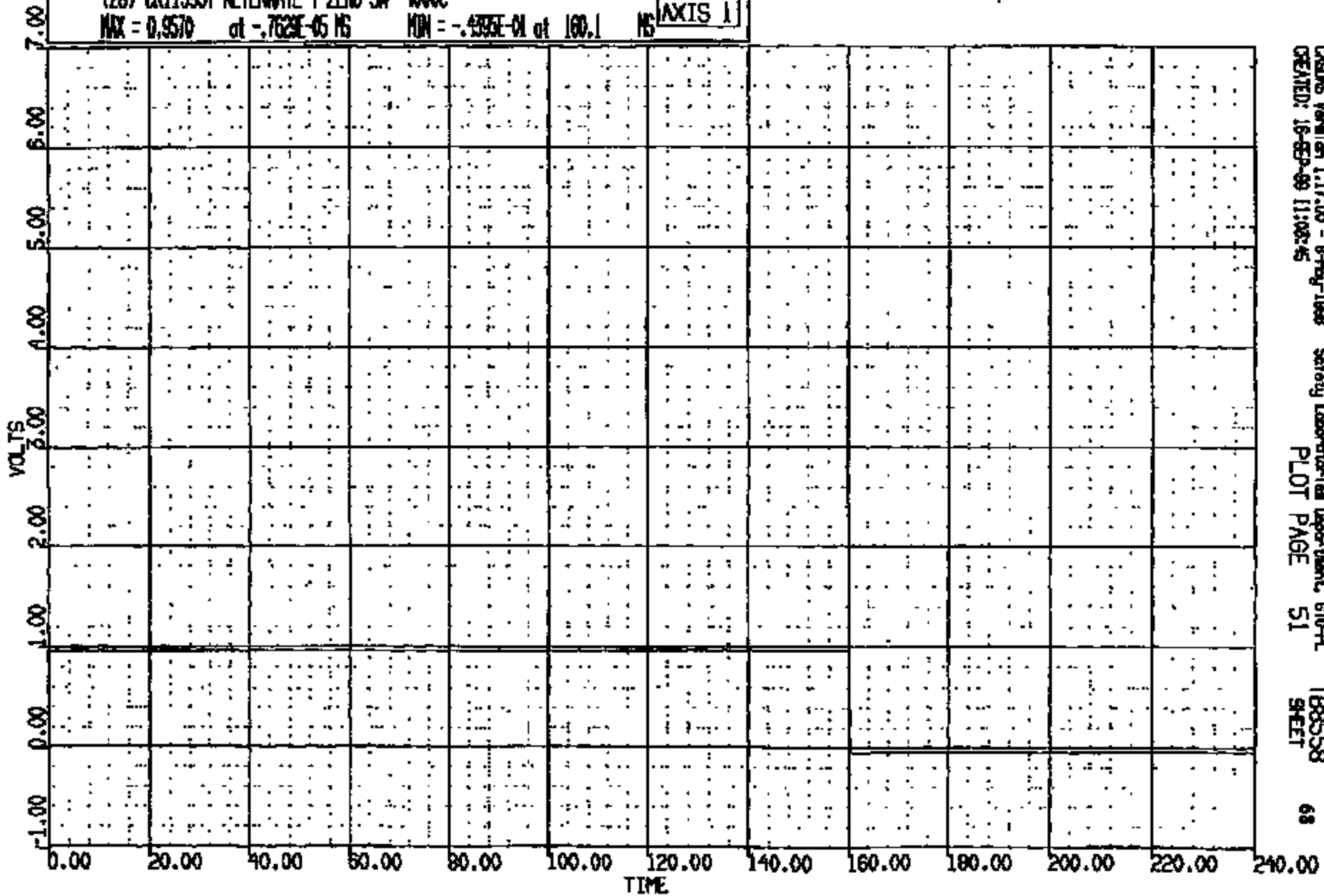
TB8558  
SHEET

67

CRTS 0011593

CR R: 11595 TO: T88558 DATE: 990918 10:24:54  
2000 D-188

(28) CRT1593T ALTERNATE T-ZERO SW 4000C  
MAX = 0.9570 at -.7629E-05 NS MIN = -.4393E-01 at 160.1 NS **AXIS 1**



CRAMS Version 1.17.00 - 8-May-1998  
CREATED: 18-SEP-99 11:02:45

Safety Laboratories Department, 610-PL  
PLOT PAGE 51

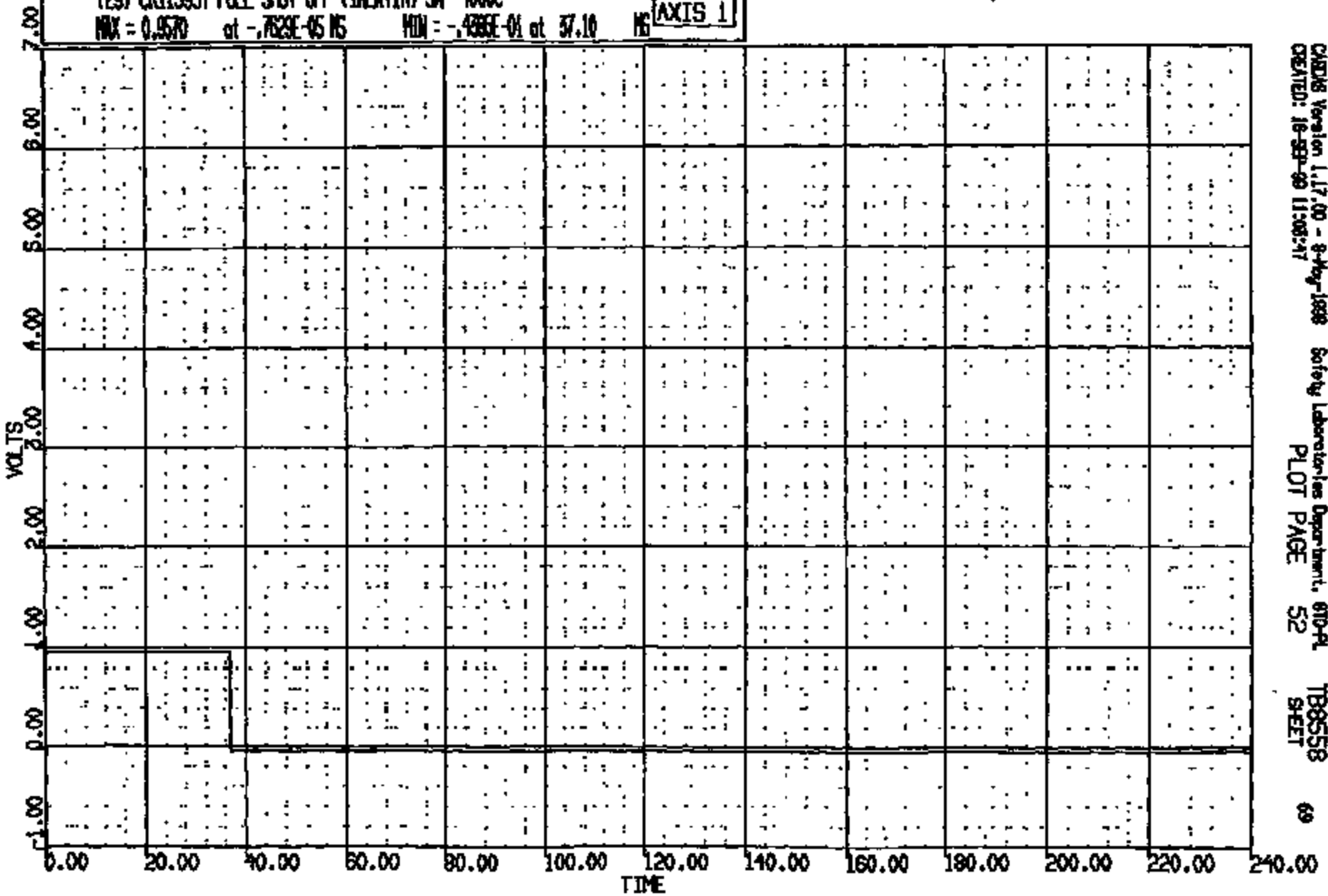
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SHEET

CRTS 0011593

CR R: 11805 TO: T88558 DATE: 990919 10:24:54  
2000 D-188

(29) CR11593T FUEL SHUT OFF (INERTIA) SN 4000C  
MAX = 0.9570 at -.7629E-05 MS MIN = -.4386E-01 at 37.10 MS

AXIS 1

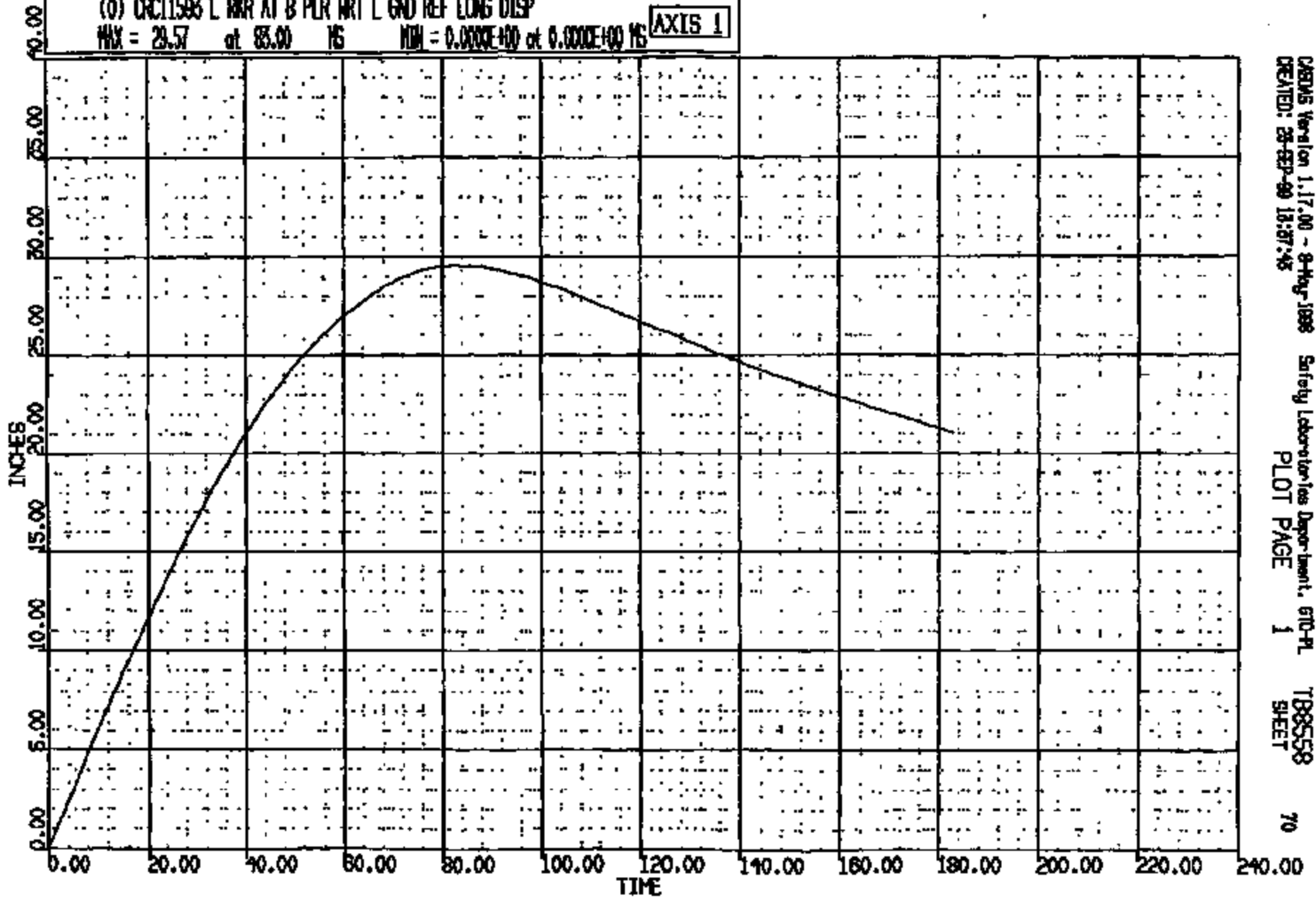


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CREATED: 18-SEP-99 11:06:47 PLOT PAGE 52 SHEET

CRTS 0011593

CR R: 11593 TO: TB8558 DATE: 220015 10:24:54  
2000 D-100

(0) CRCL1593 L RRR AT B PLR MRT L GND REF LONG DISP  
MAX = 29.57 at 85.00 MS MIN = 0.0000E+00 at 0.0000E+00 MS **AXIS 1**



CADWIS Version 1.17.00 - 9-May-1998  
CREATED: 28-SEP-99 15:07:45

Safety Laboratories Department, 610-PL  
PLOT PAGE 1

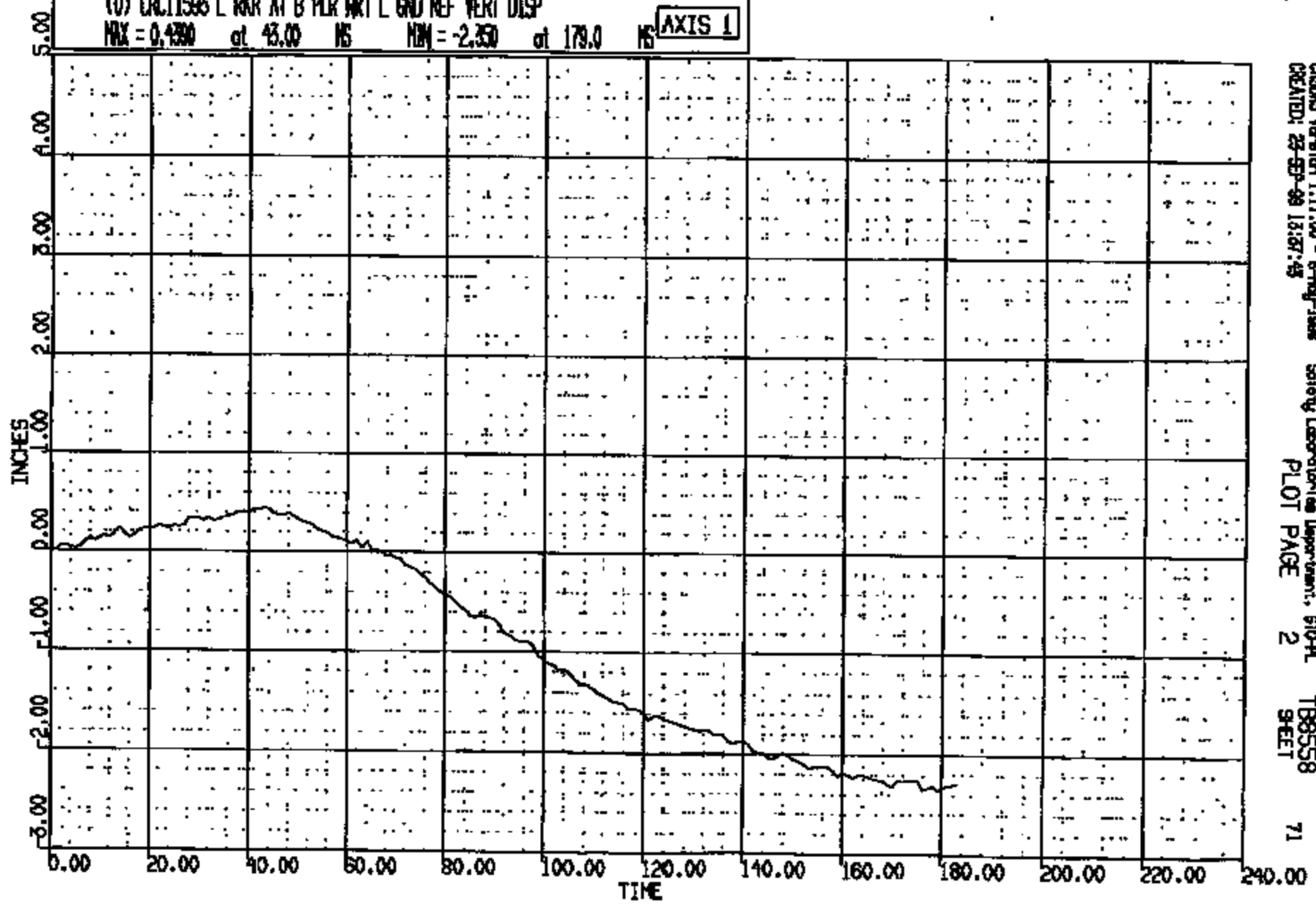
TB8558  
SHEET

70

CRIS 0011593

CR R: 11593 TD: TB8558 DATE: 890918 10:24:54  
2000 0-188

(0) CRCL1593 L RKR AT B PLR WRT L GND REF VERT DISP  
MAX = 0.4300 at 43.00 MS MIN = -2.350 at 179.0 MS **AXIS 1**



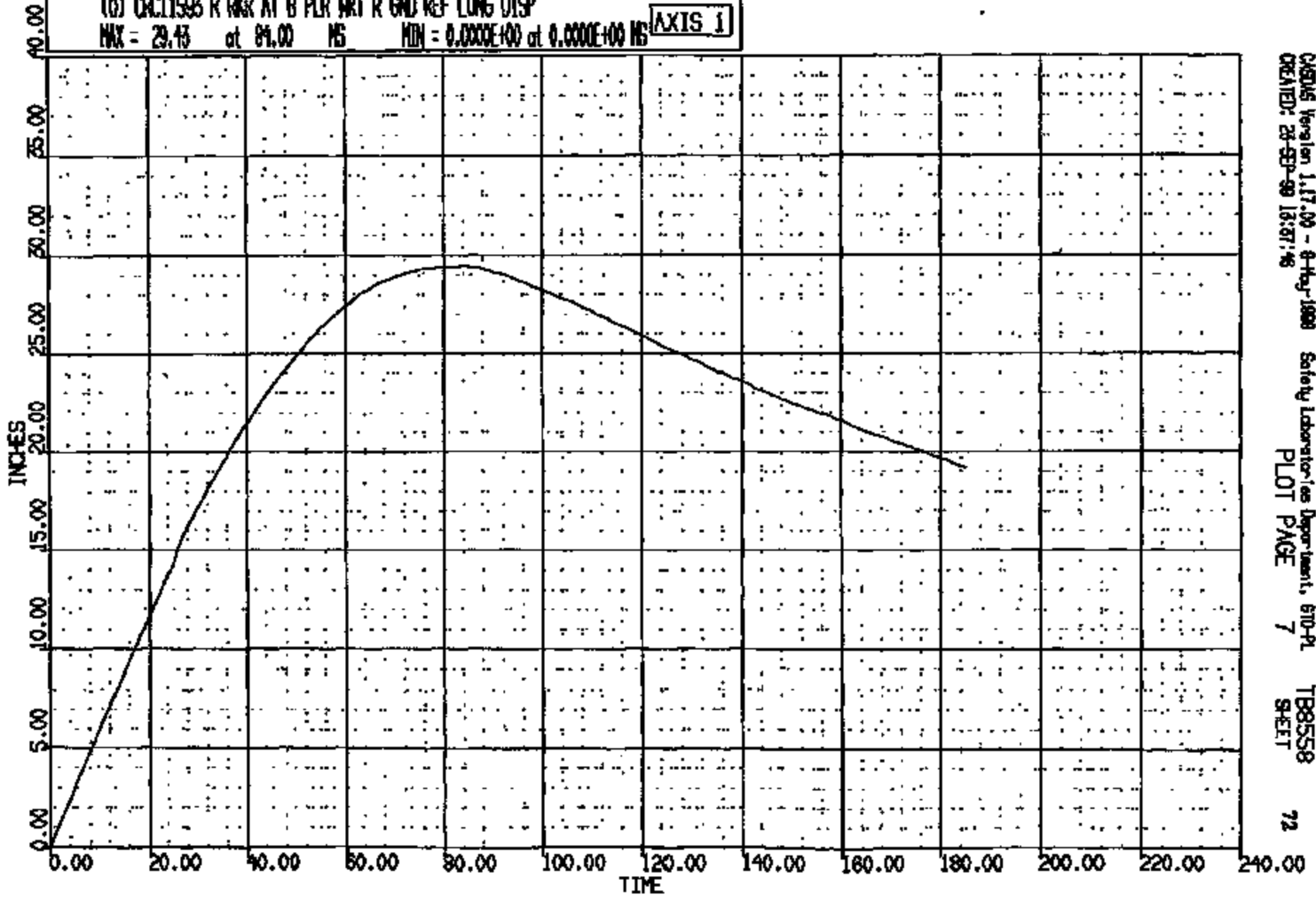
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CREATED: 23-SEP-89 13:37:45 PLOT PAGE 2 TB8558 71  
SHEET

CRITS 0011593

CR R: 11593 TO: TB8558 DATE: 880818 10:24:54  
2000 D-188

(1) CRCL1593 R RGR AT B PLR MRT R GND REF LONG DISP  
MAX = 29.43 at 84.00 MS MIN = 0.0000E+00 at 0.0000E+00 MS

AXIS 1



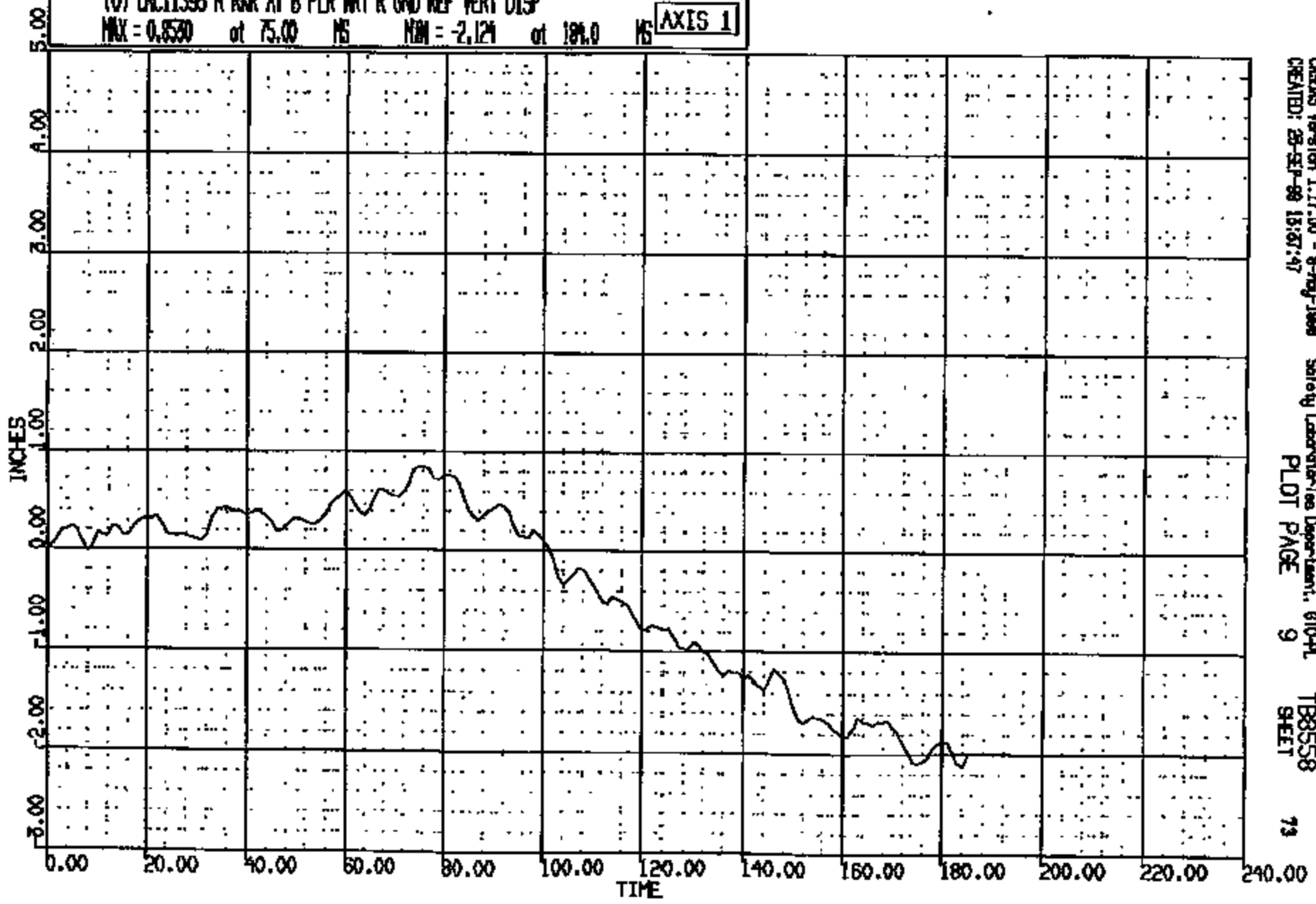
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CRIS 0011593



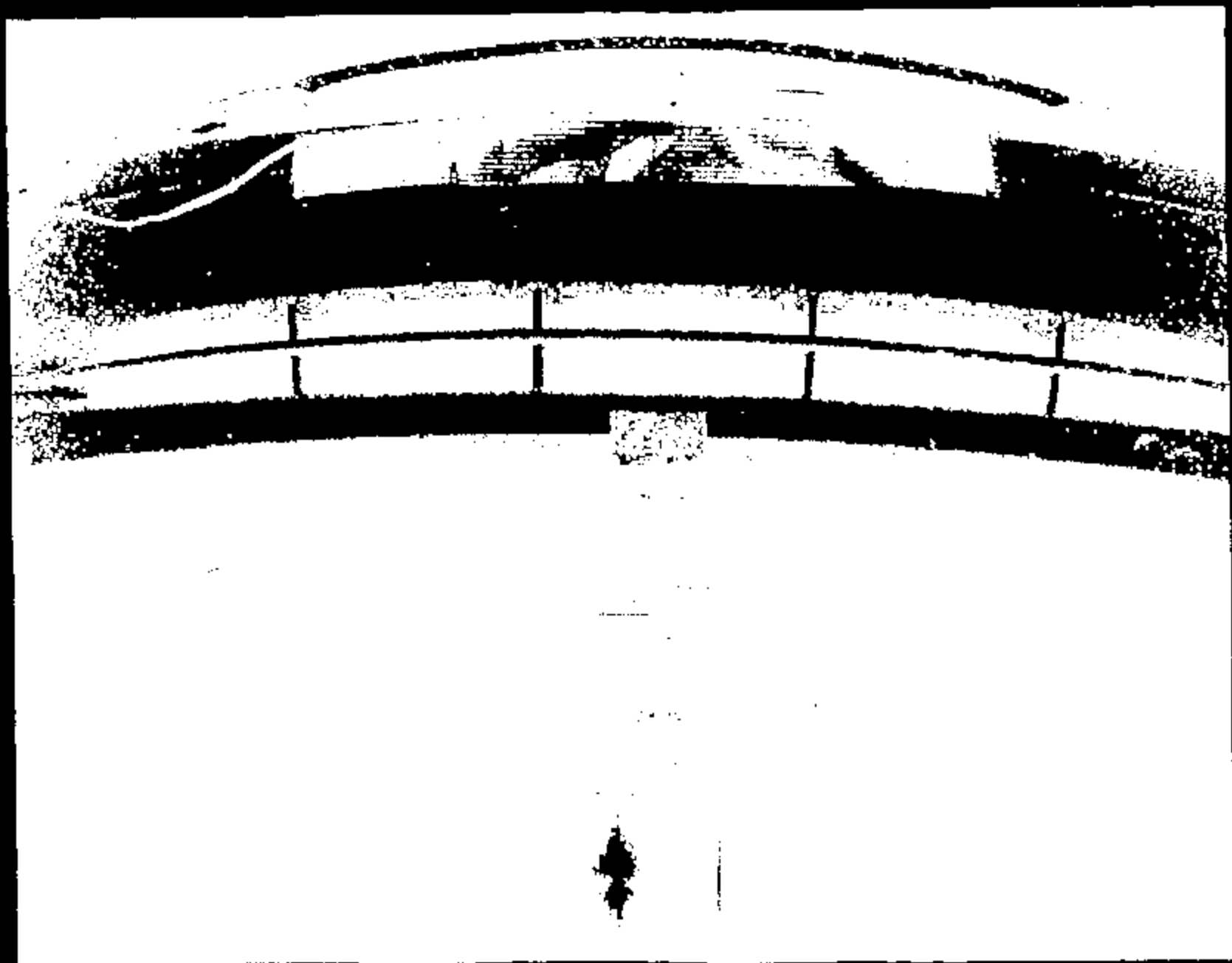
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2000 D-180

(0) CRCL1593 R RGR AT B PLR WRT R GND REF VERT DISP  
MAX = 0.8500 at 75.00 MS MIN = -2.124 at 181.0 MS **AXIS 1**



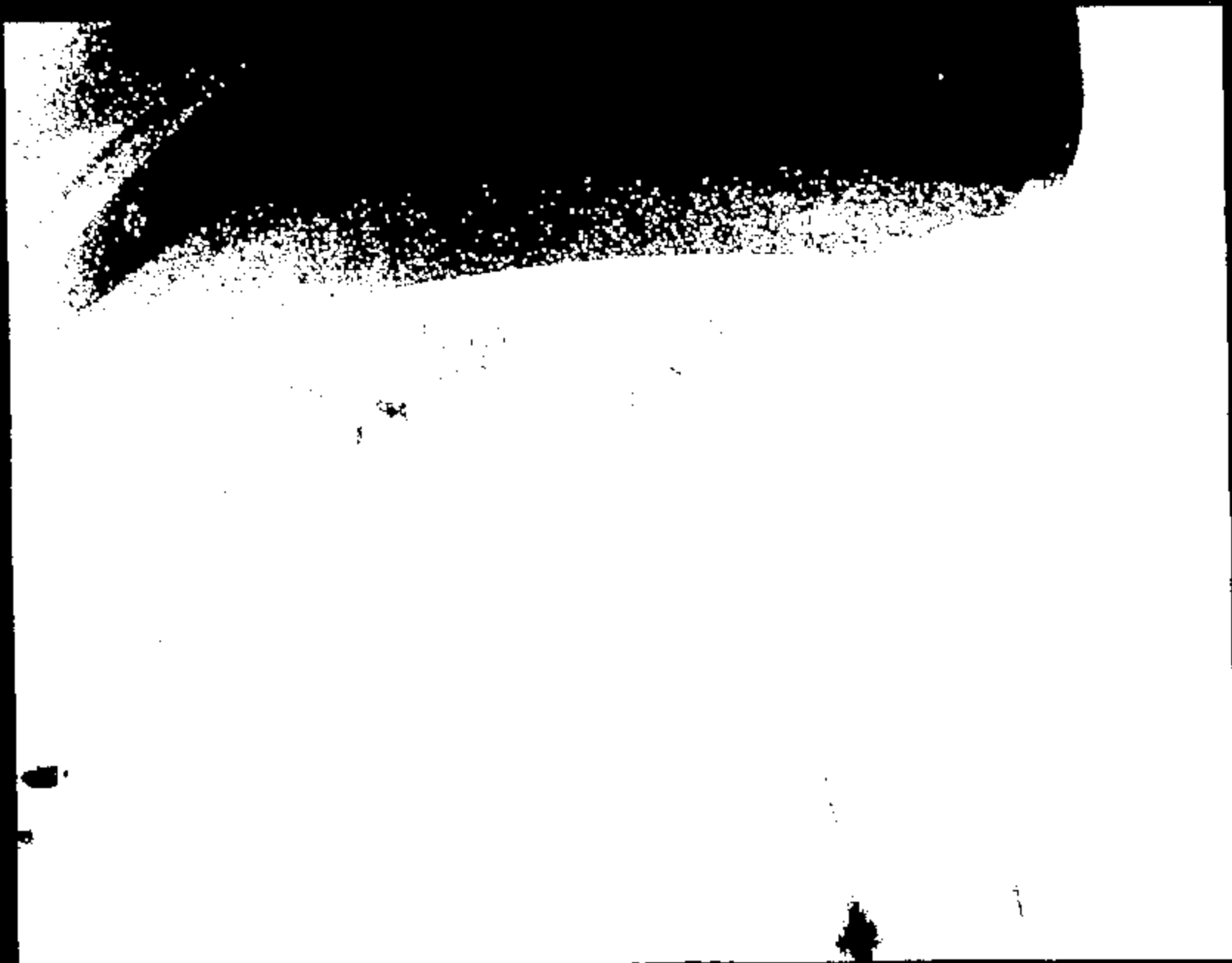
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CRIS 0011593



CRTS 0011593

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CRTS 0011593



Name :

11593003.jpg

CRTS 0011593



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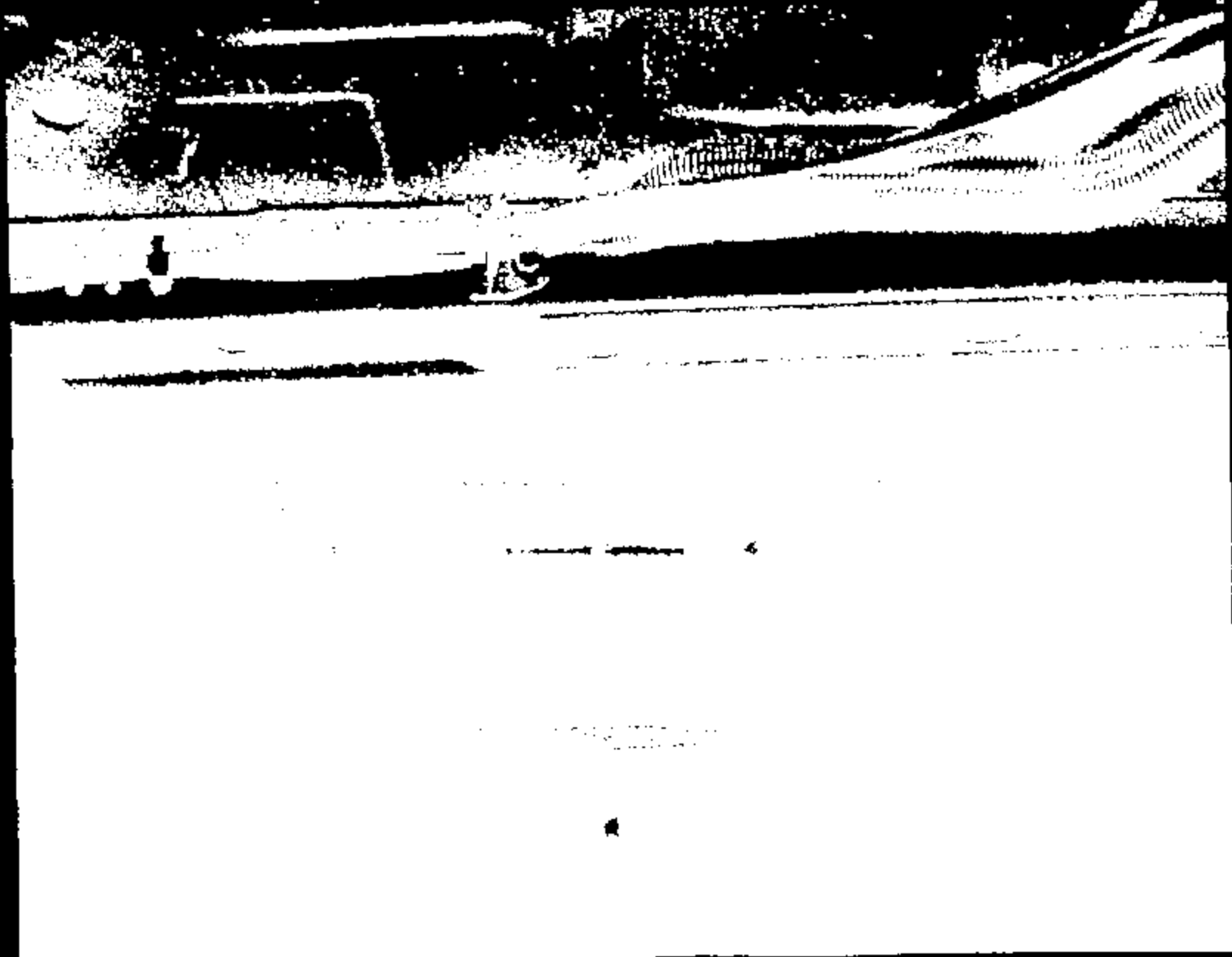
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Image 7

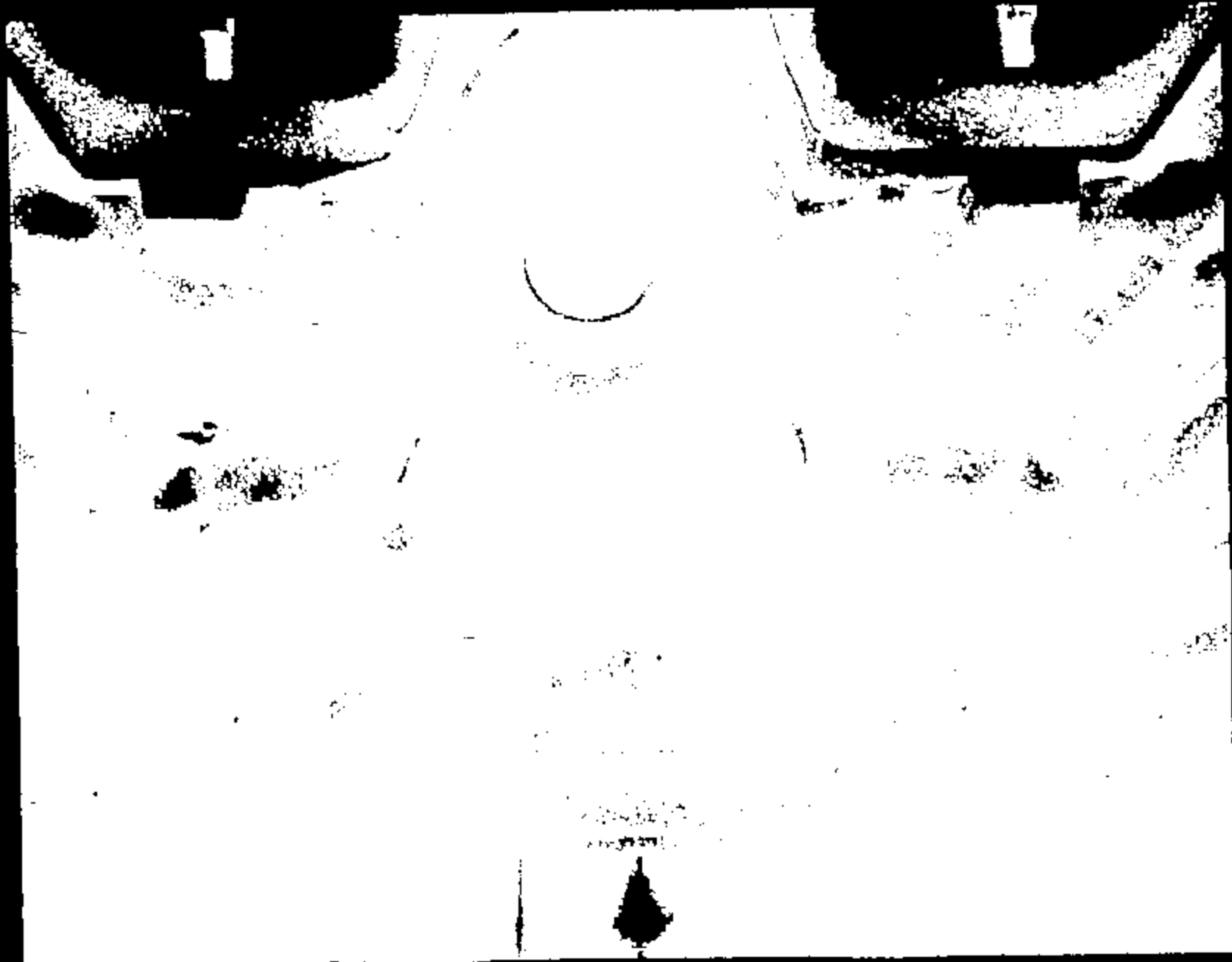
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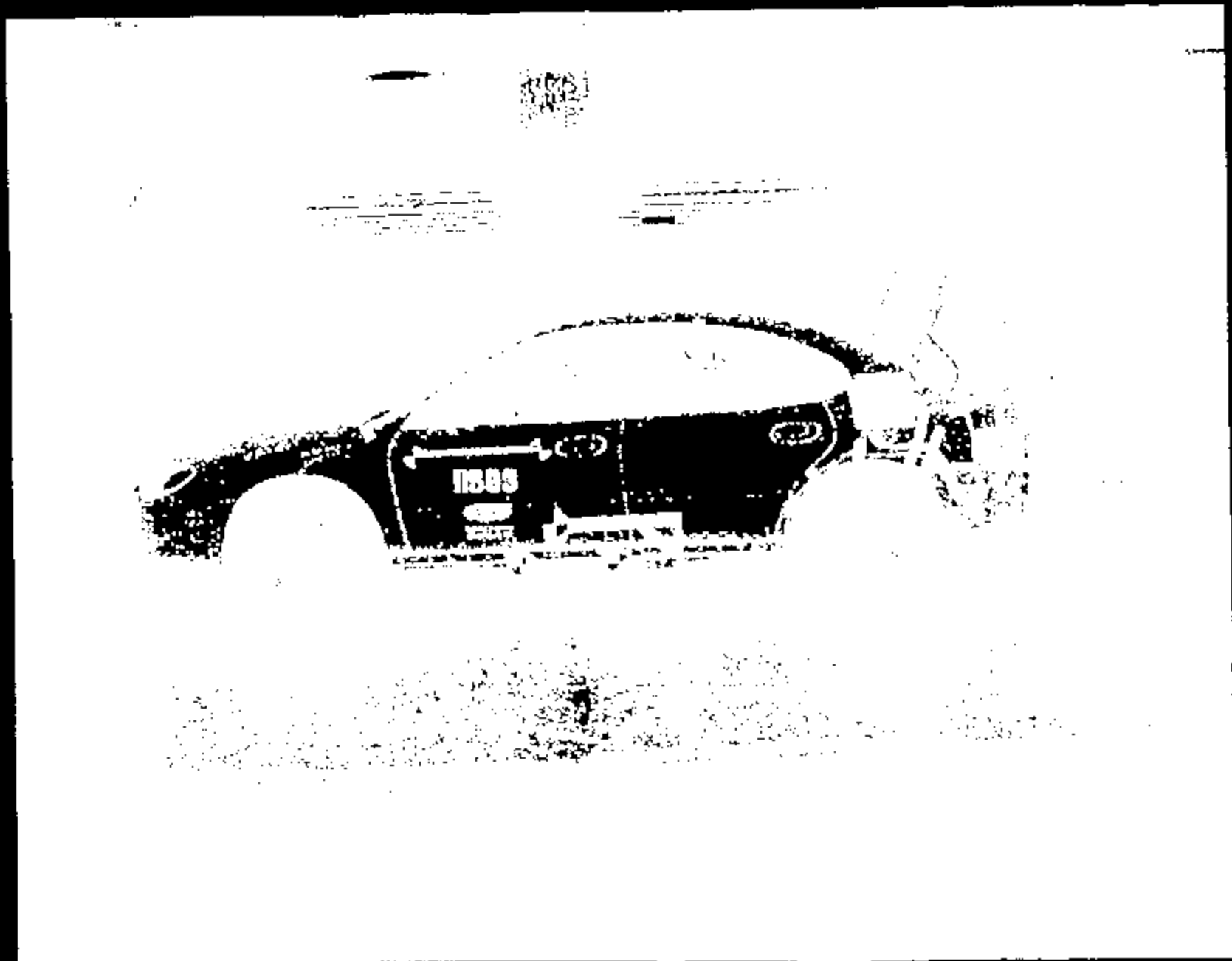


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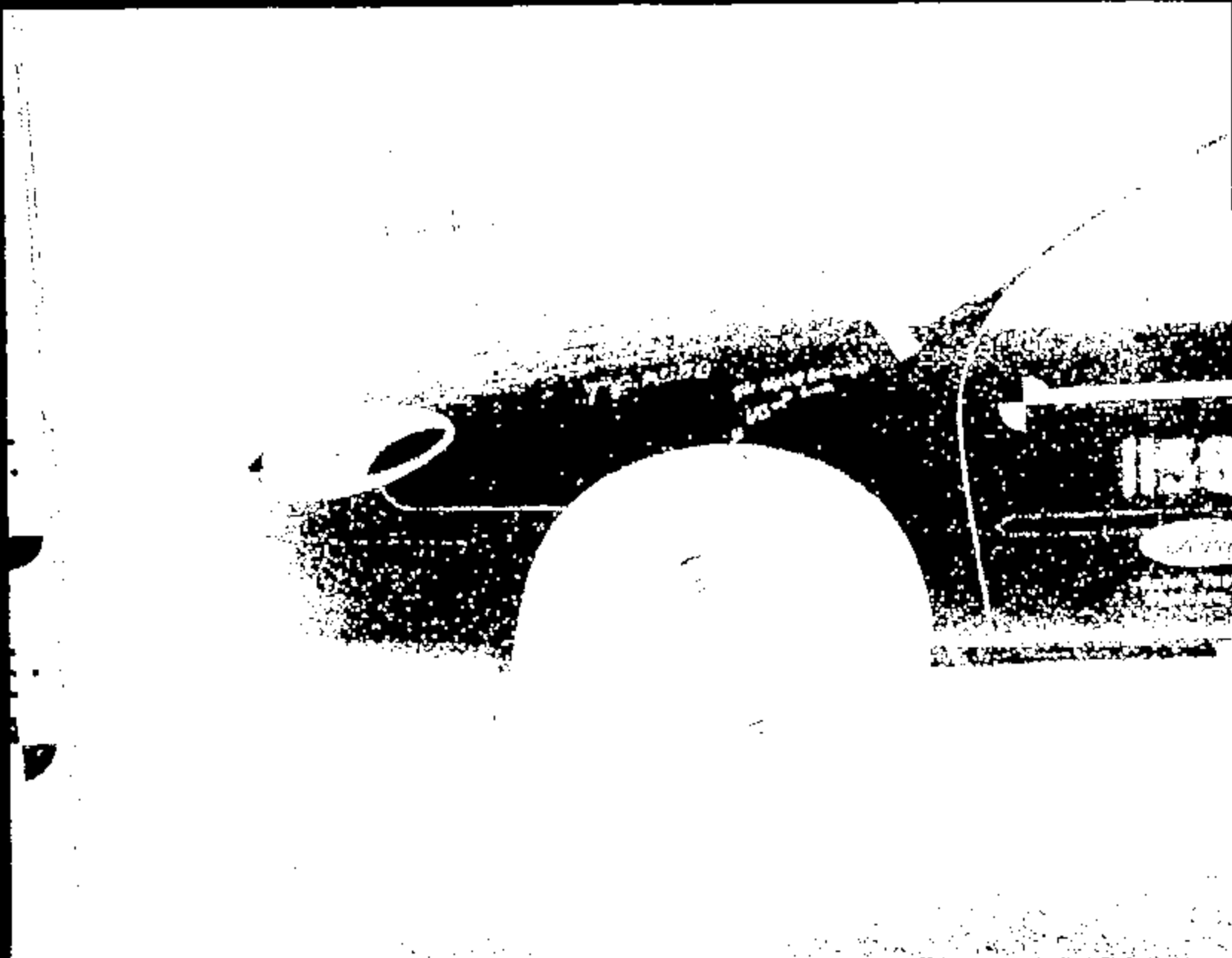




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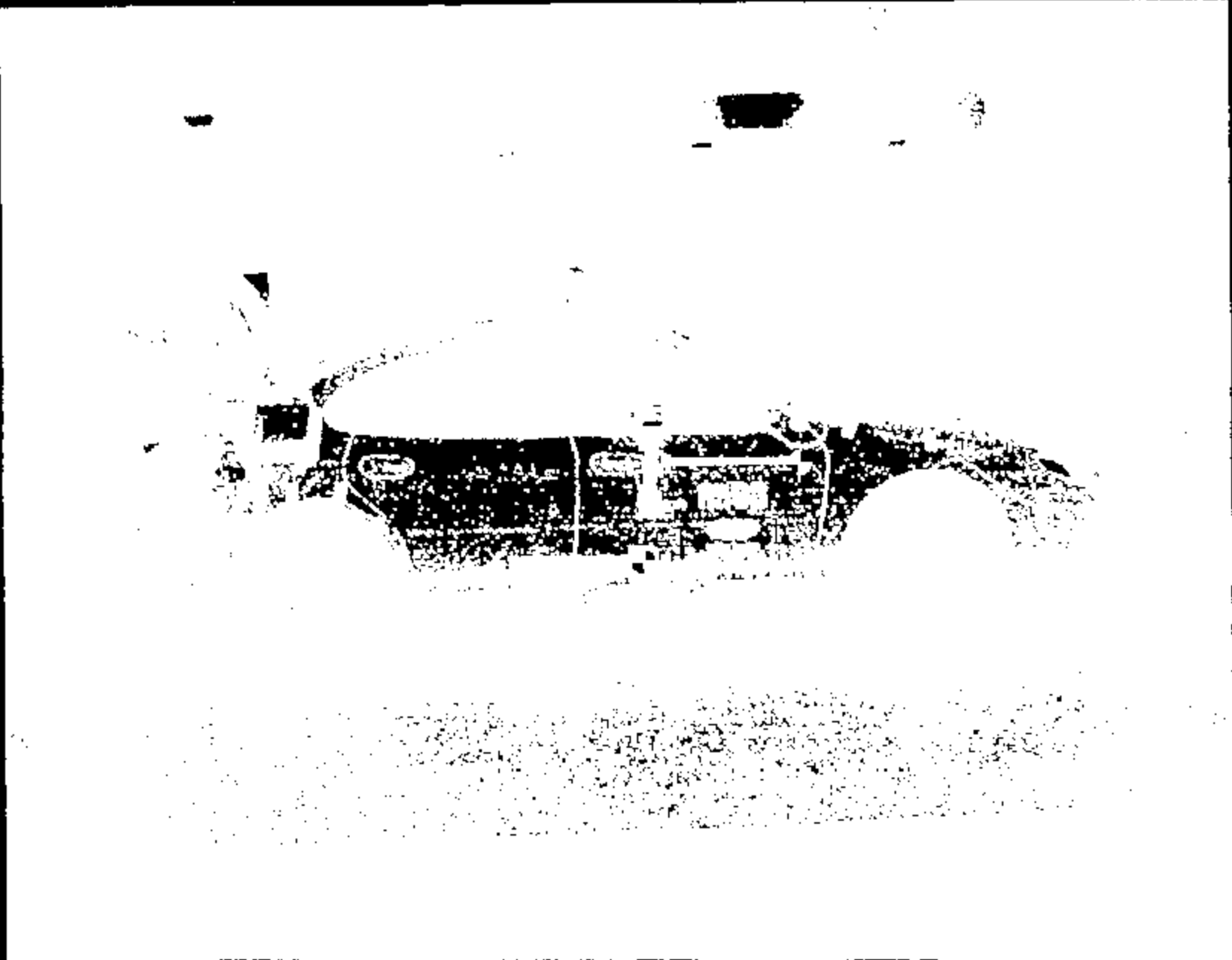
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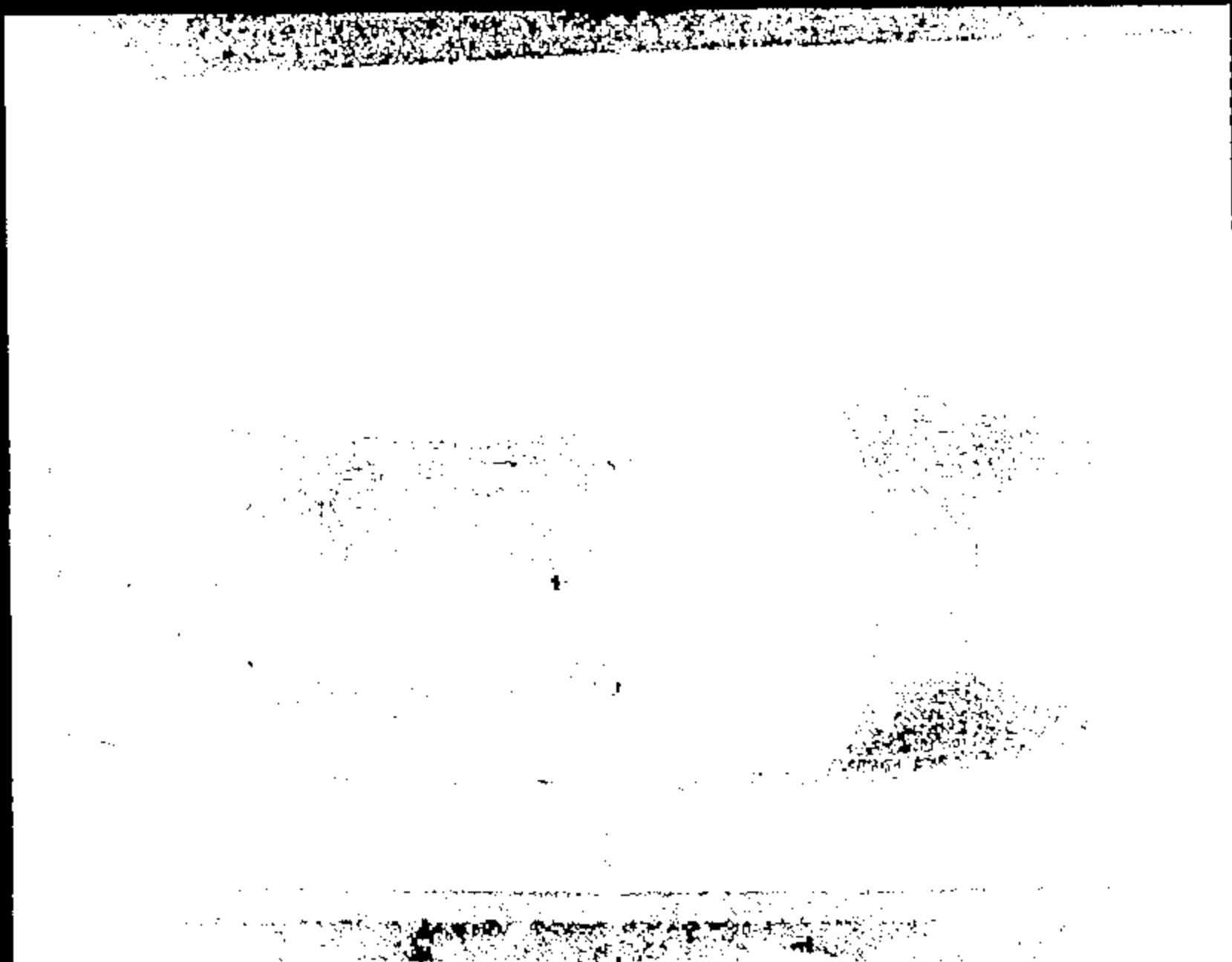
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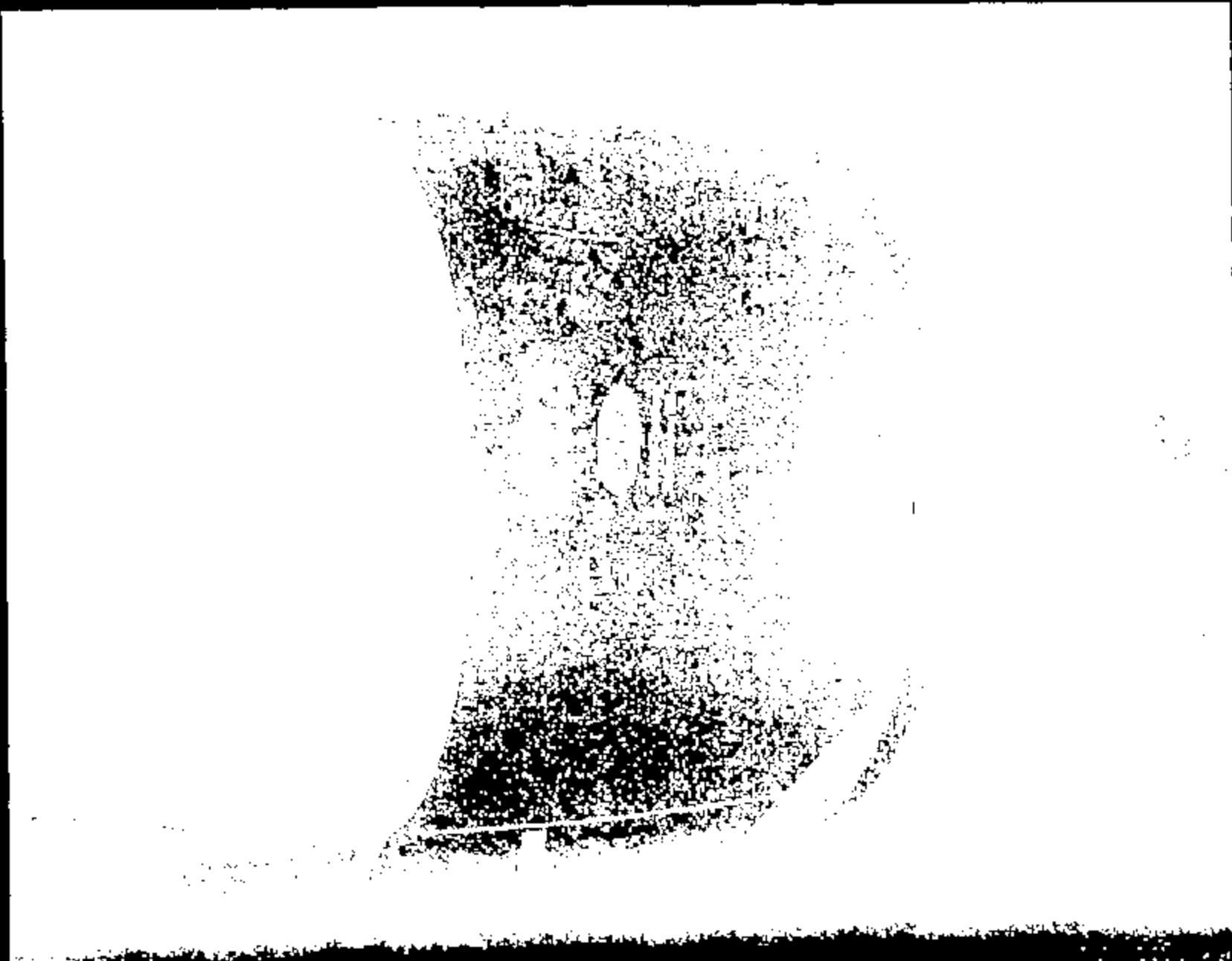
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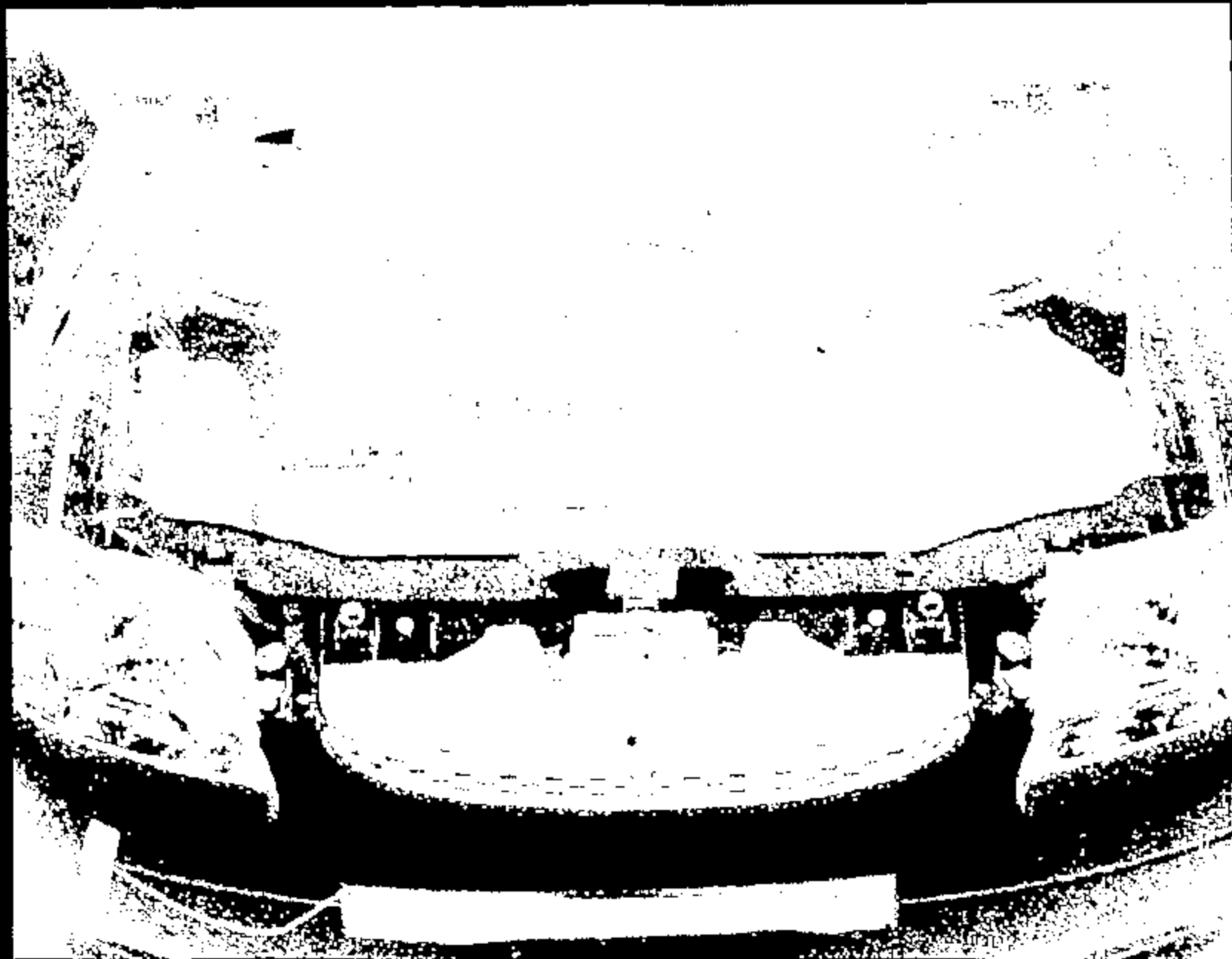
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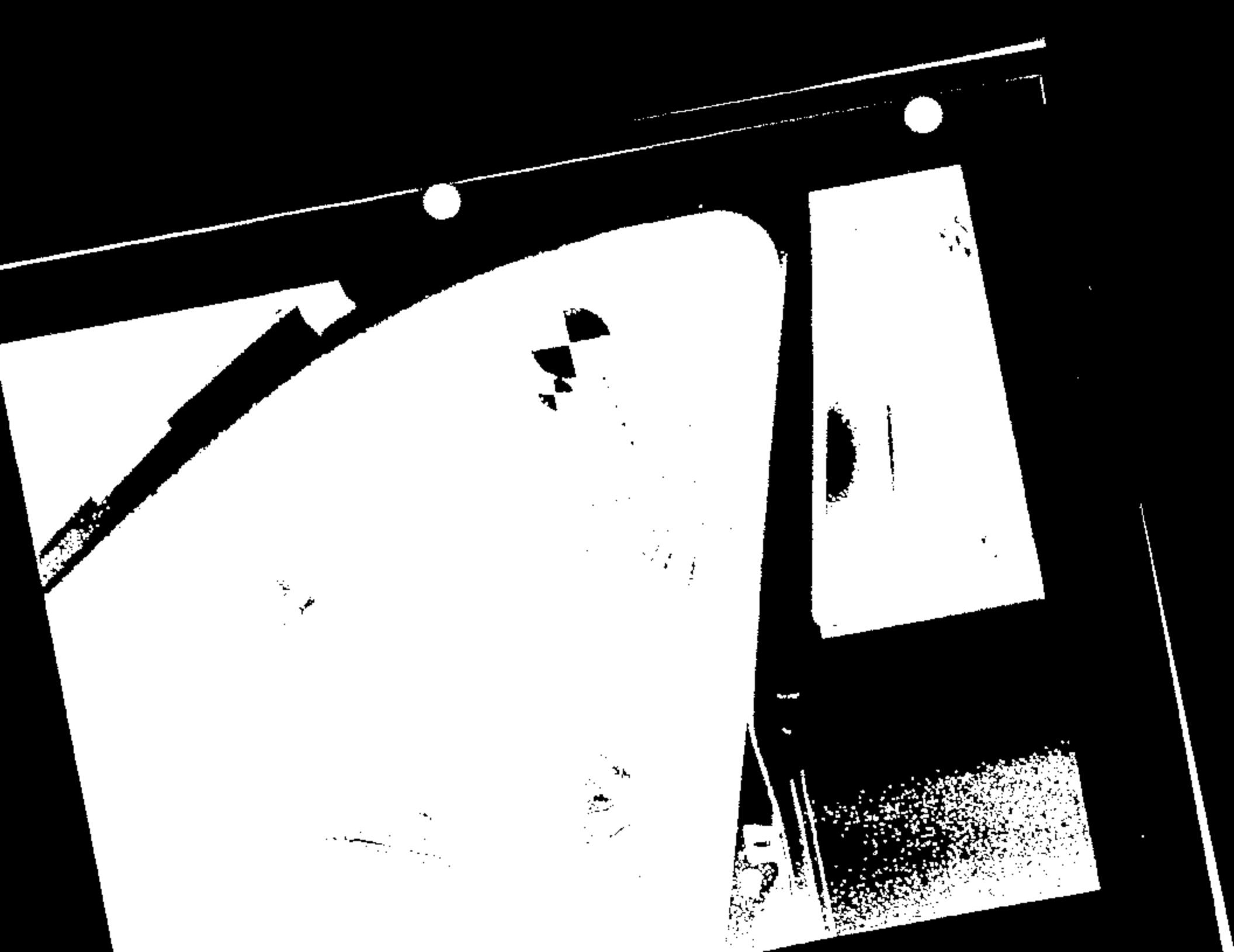


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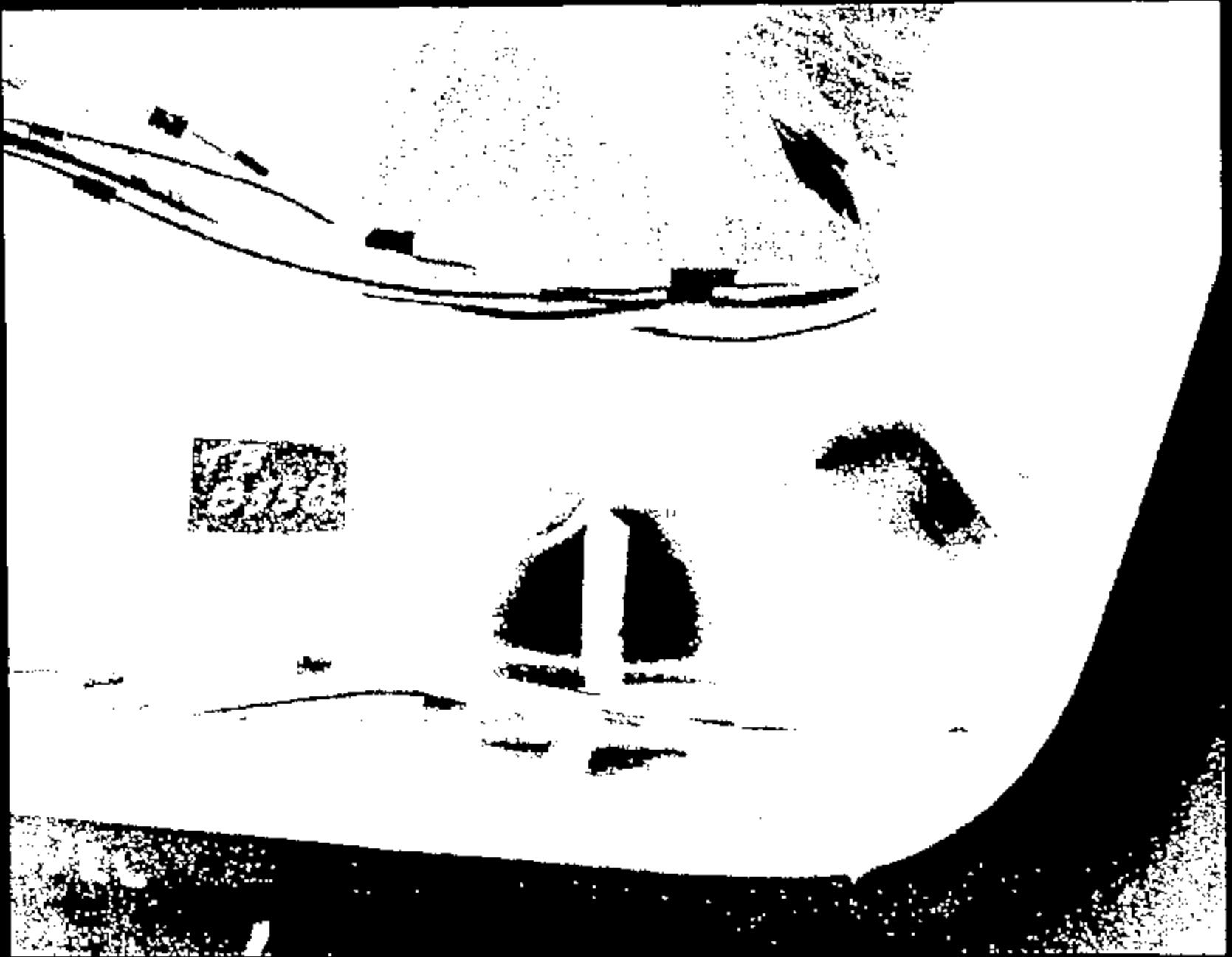




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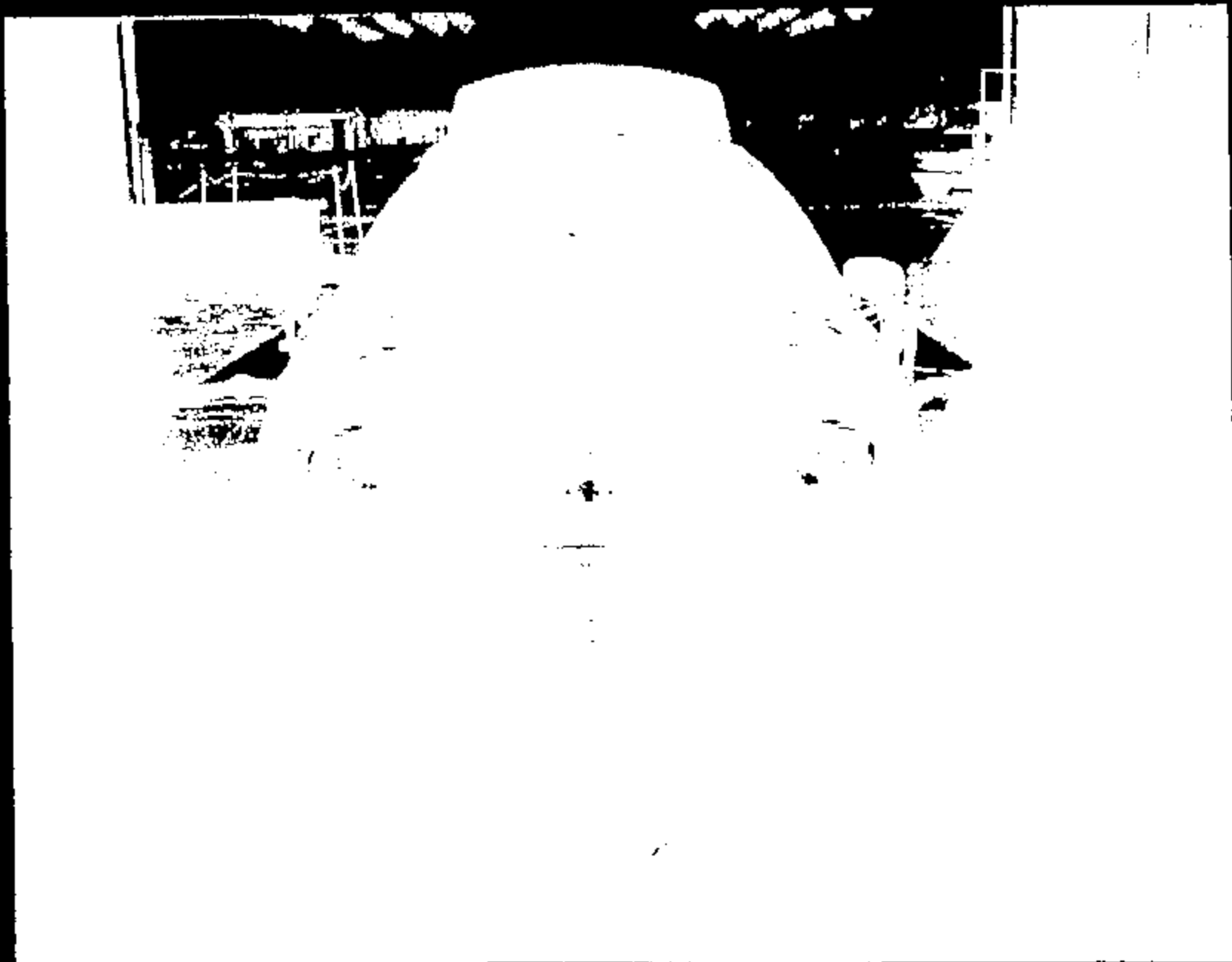
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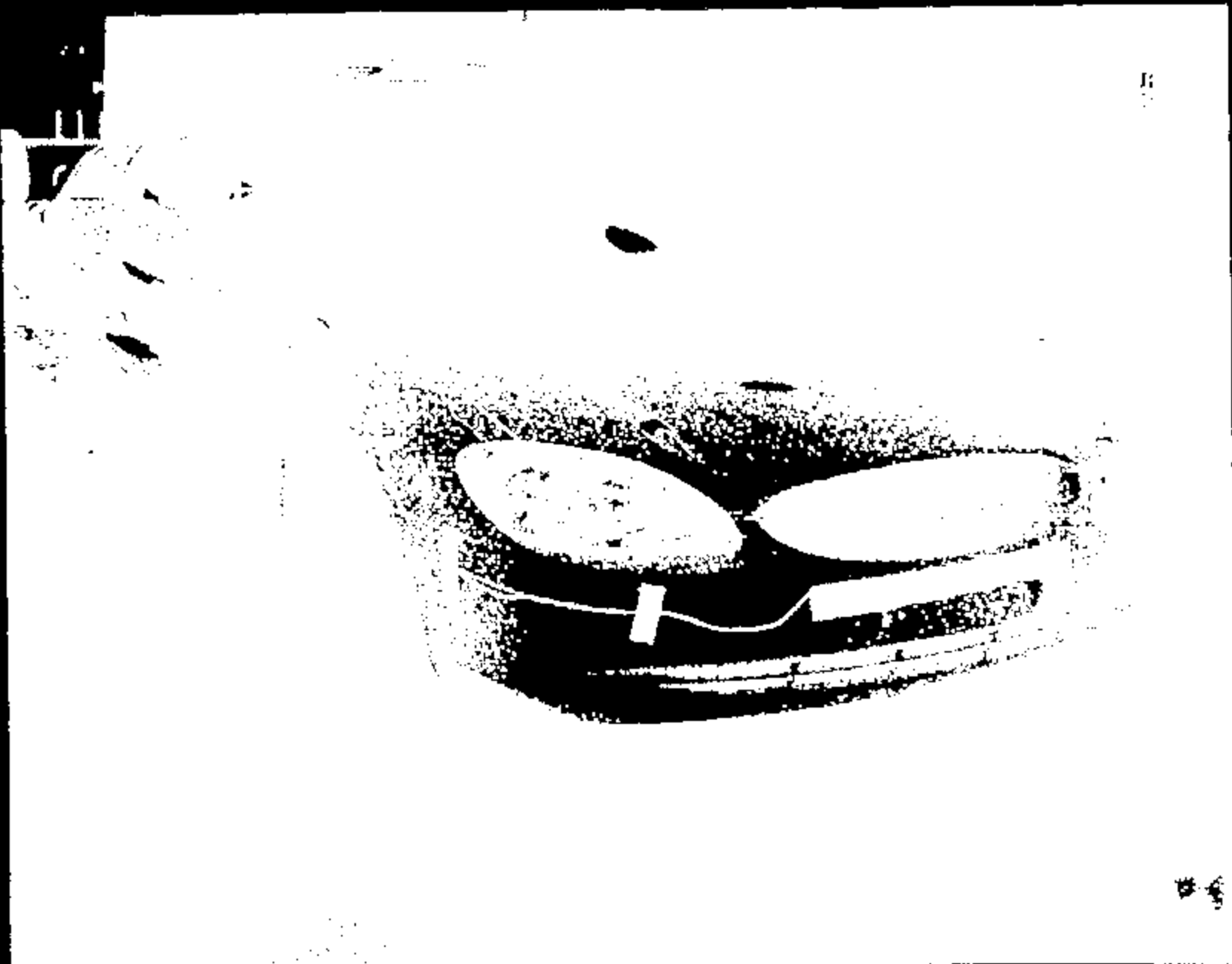
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Image 1

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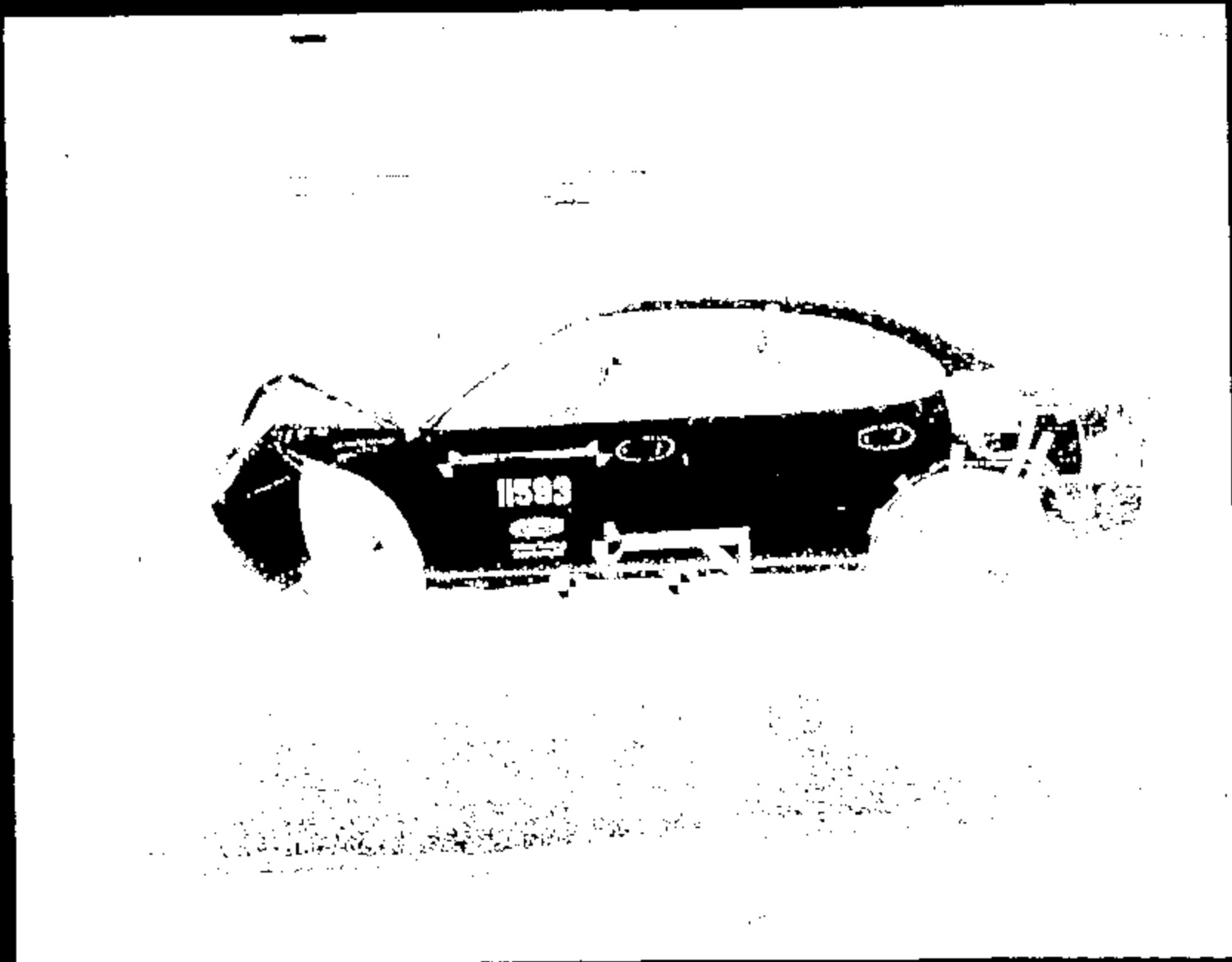


11

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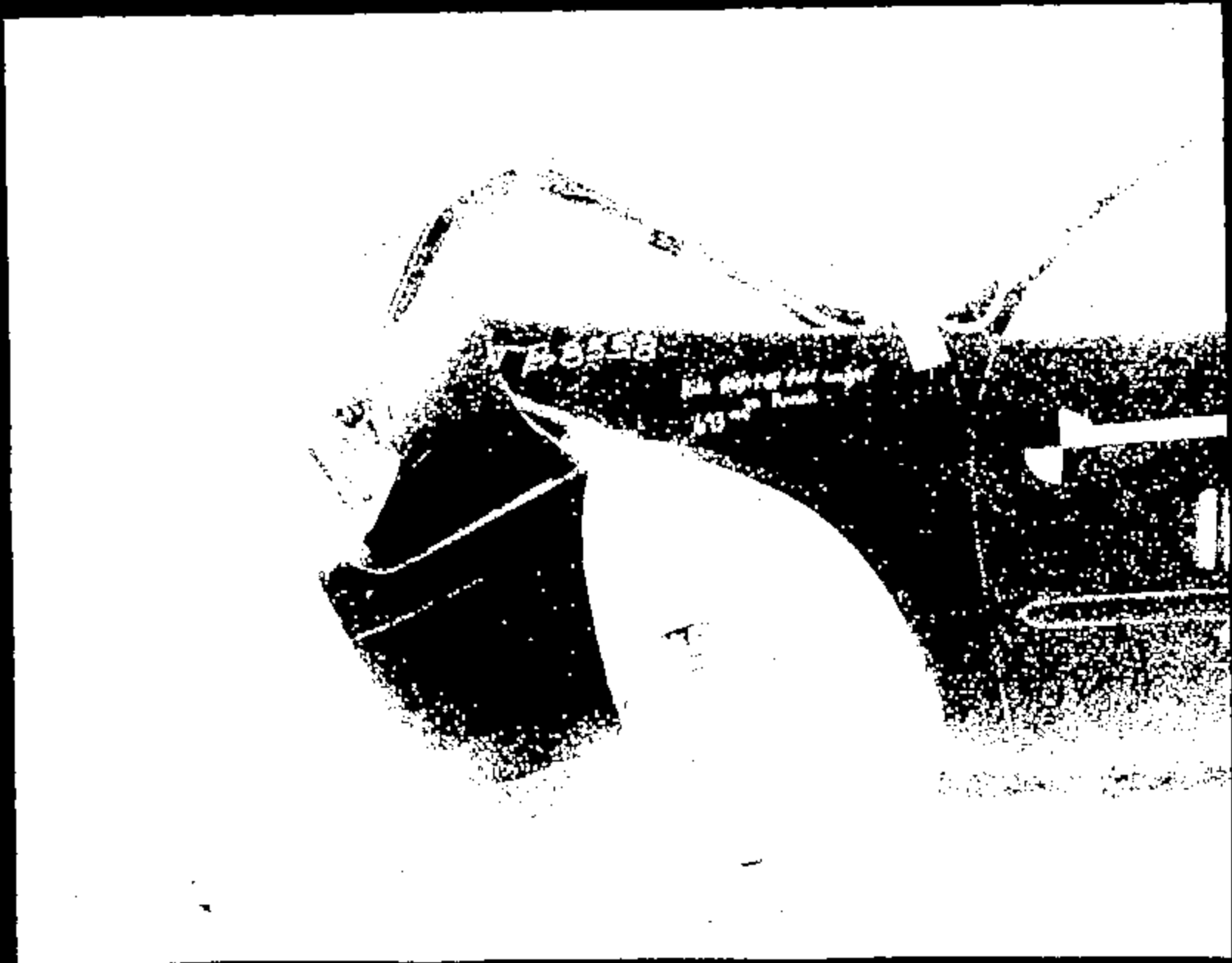
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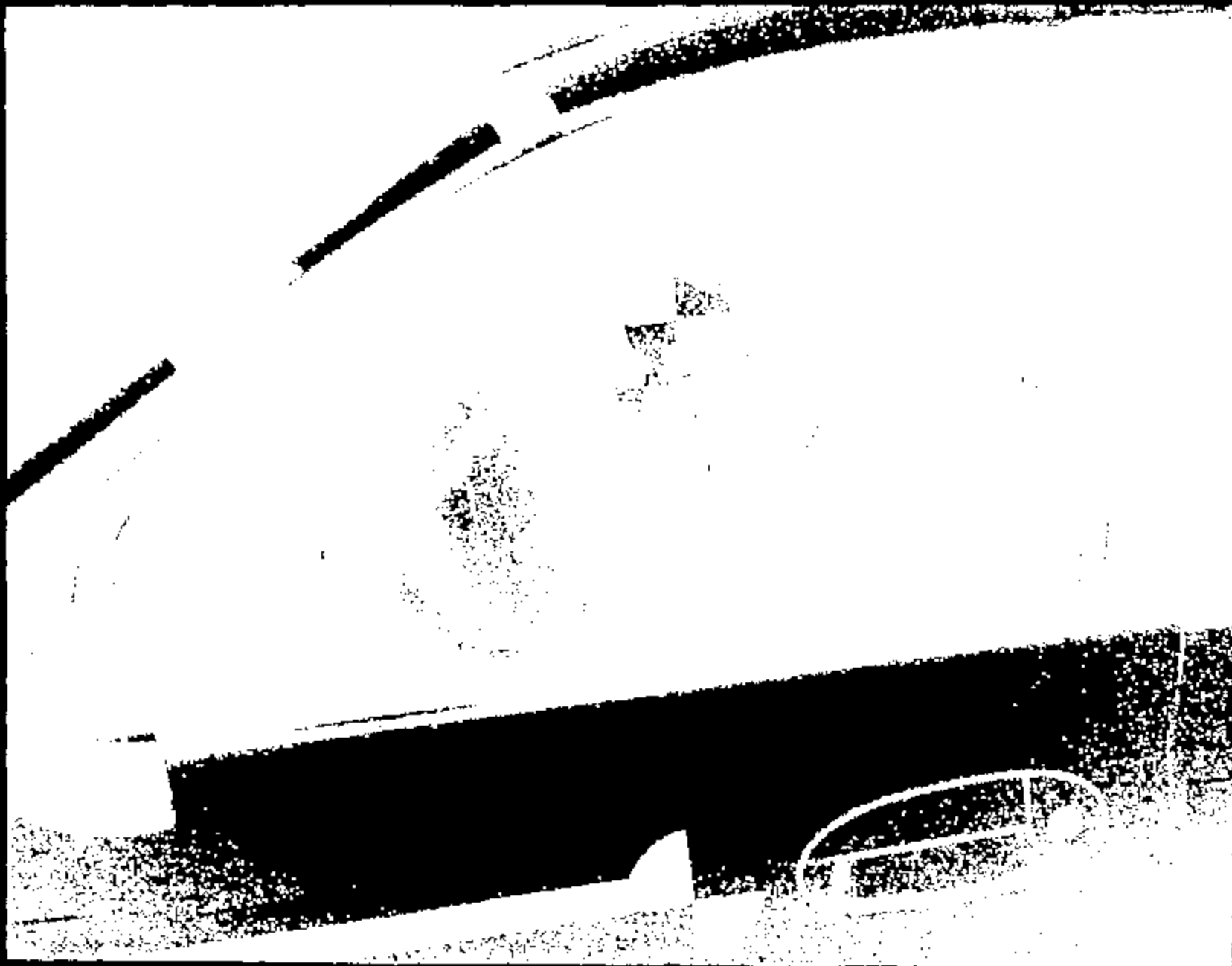


8558

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6/13/58

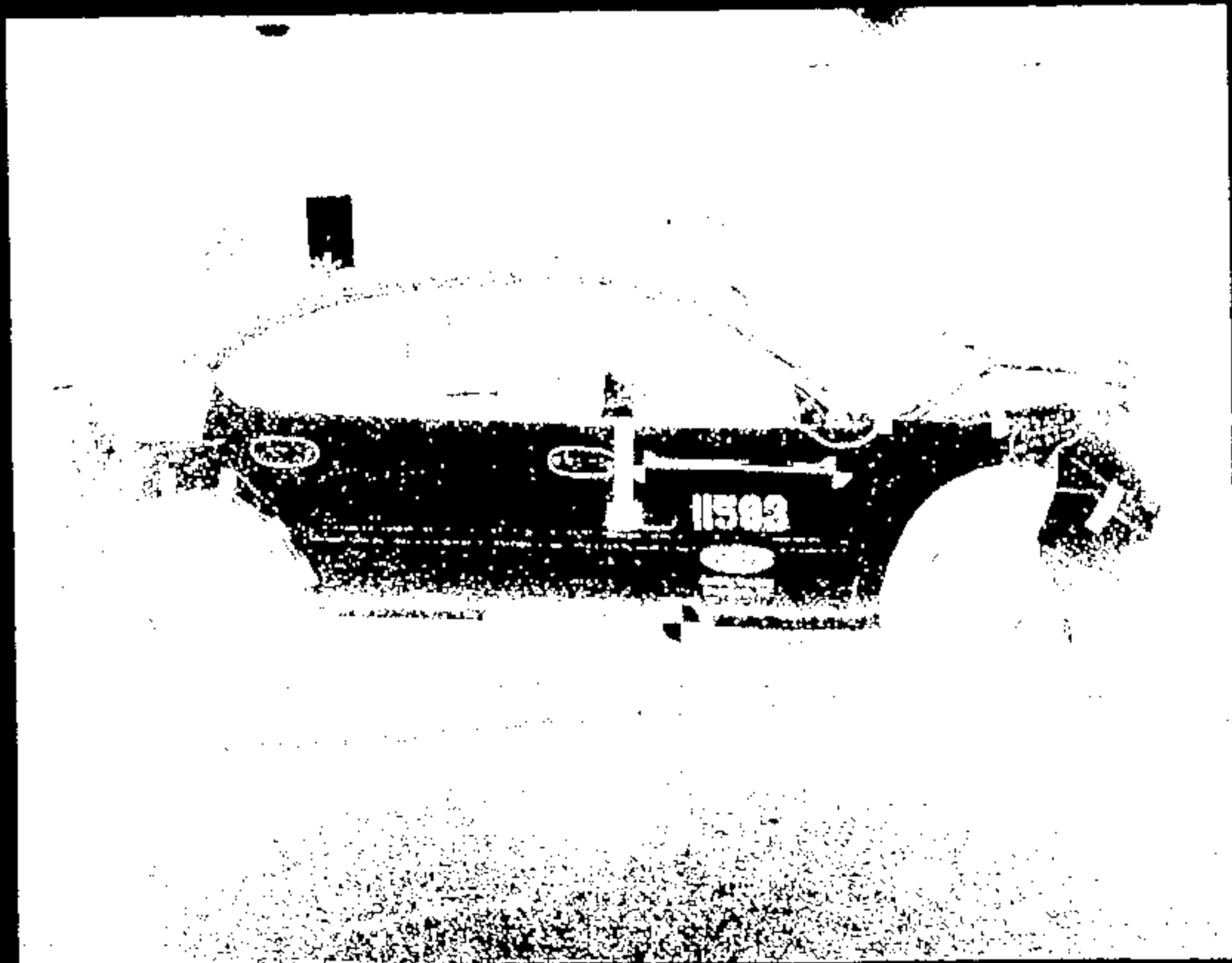
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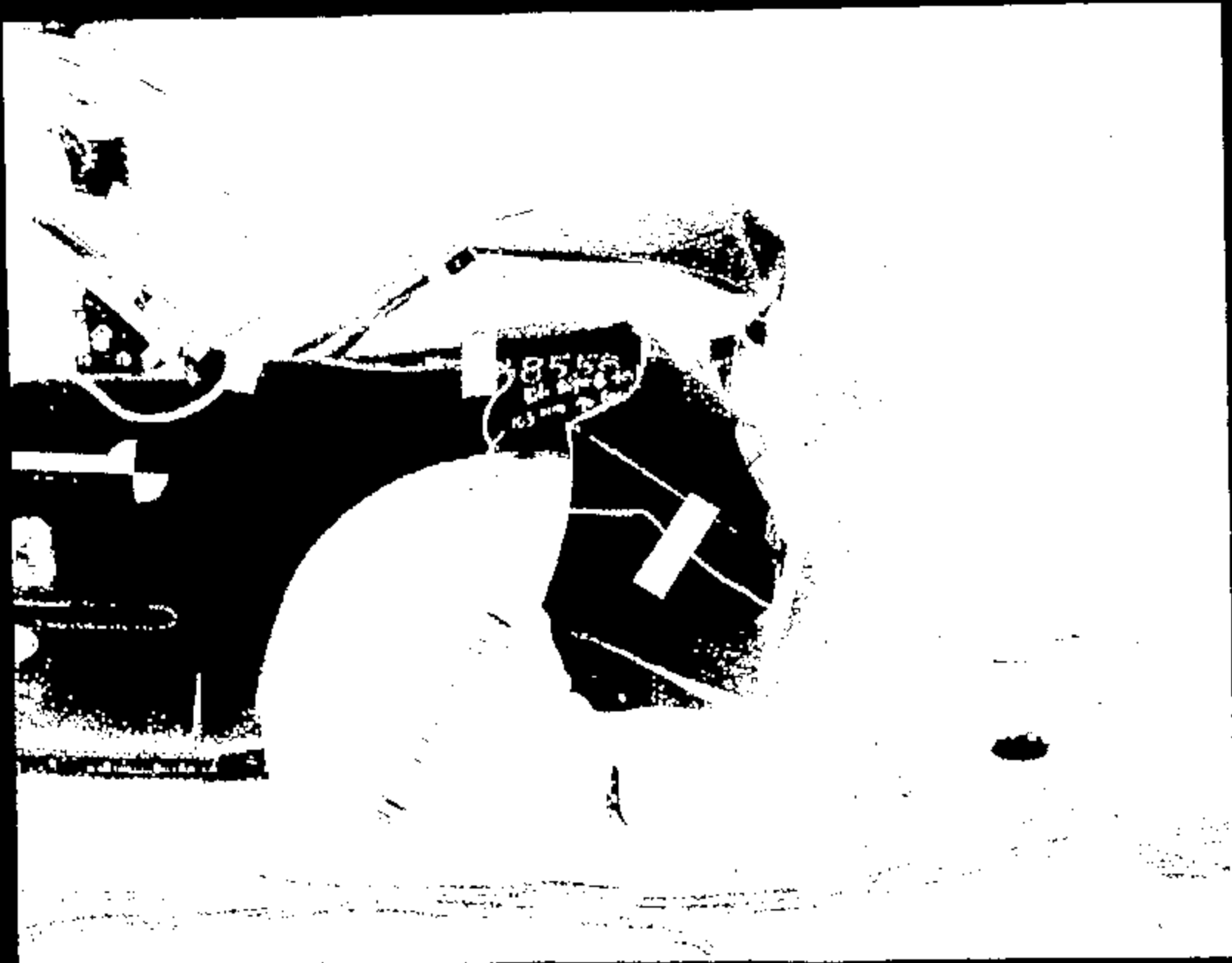
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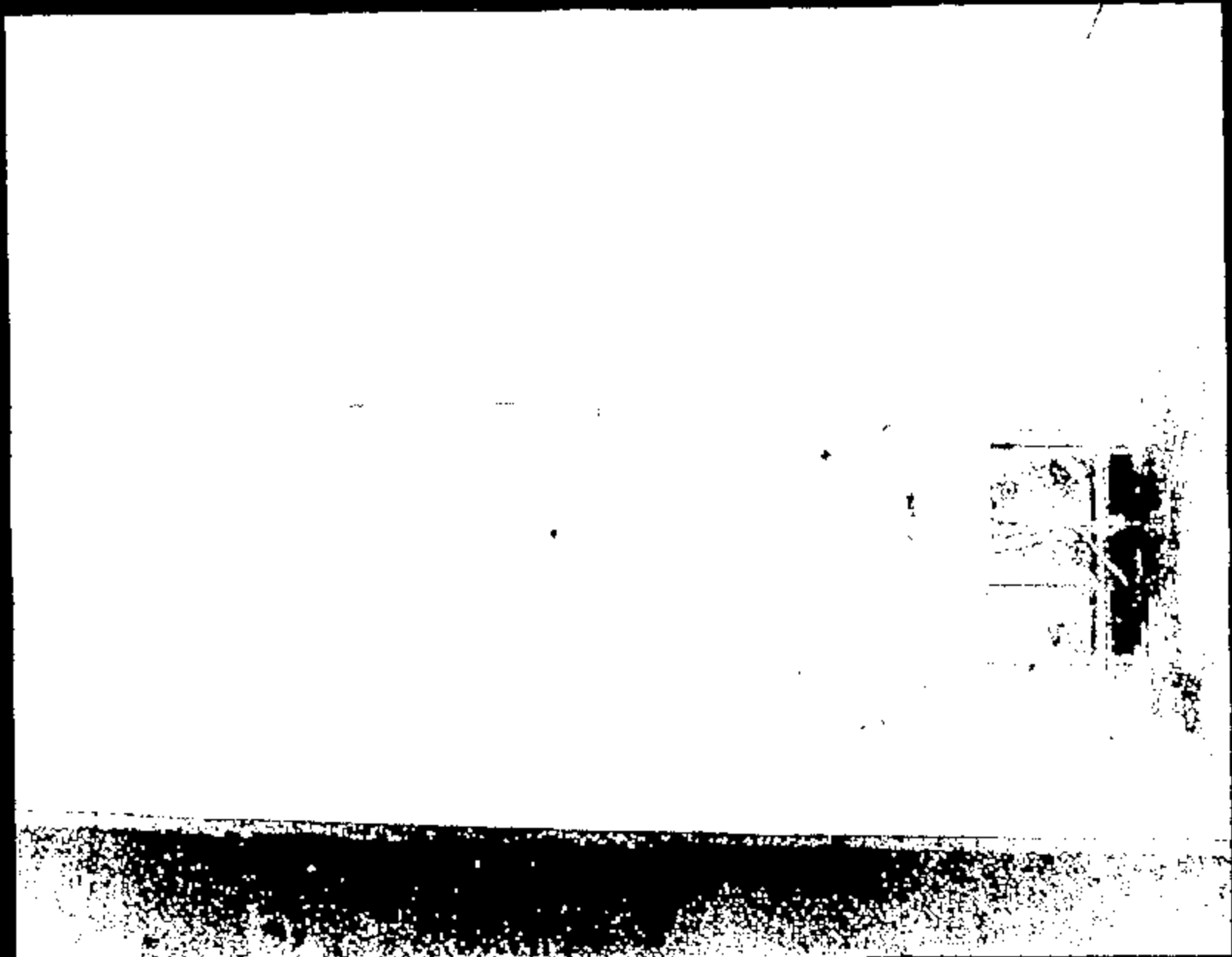
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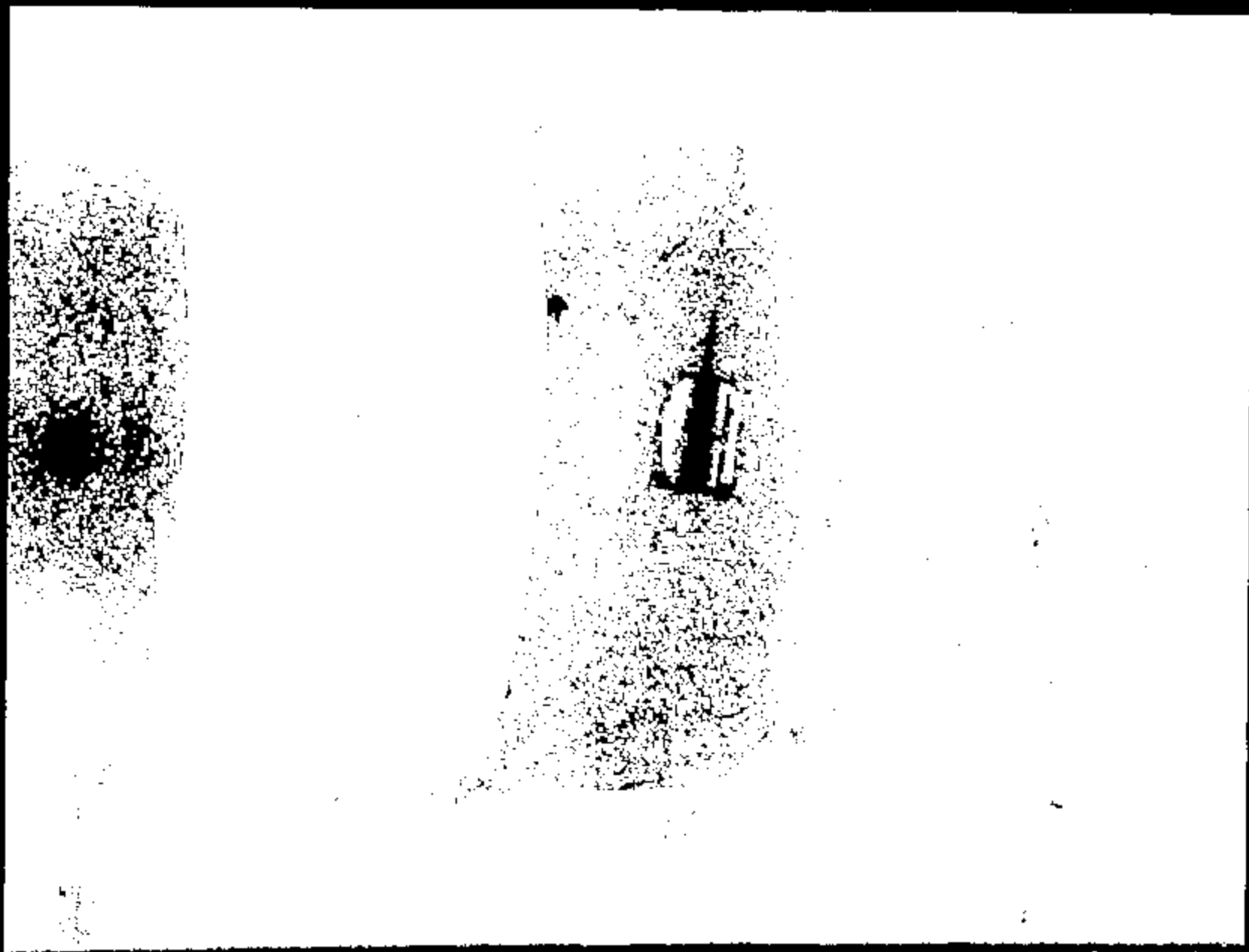
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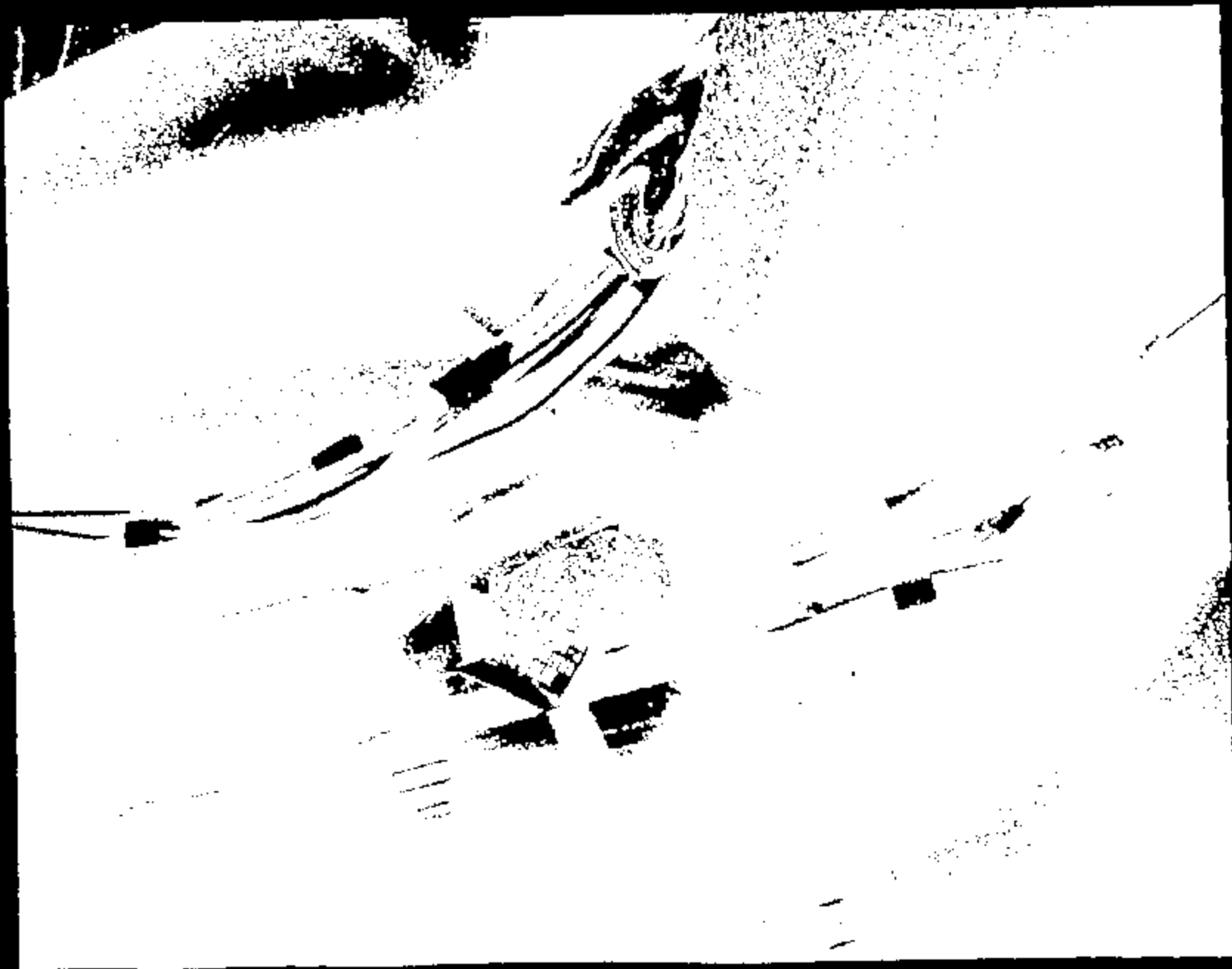
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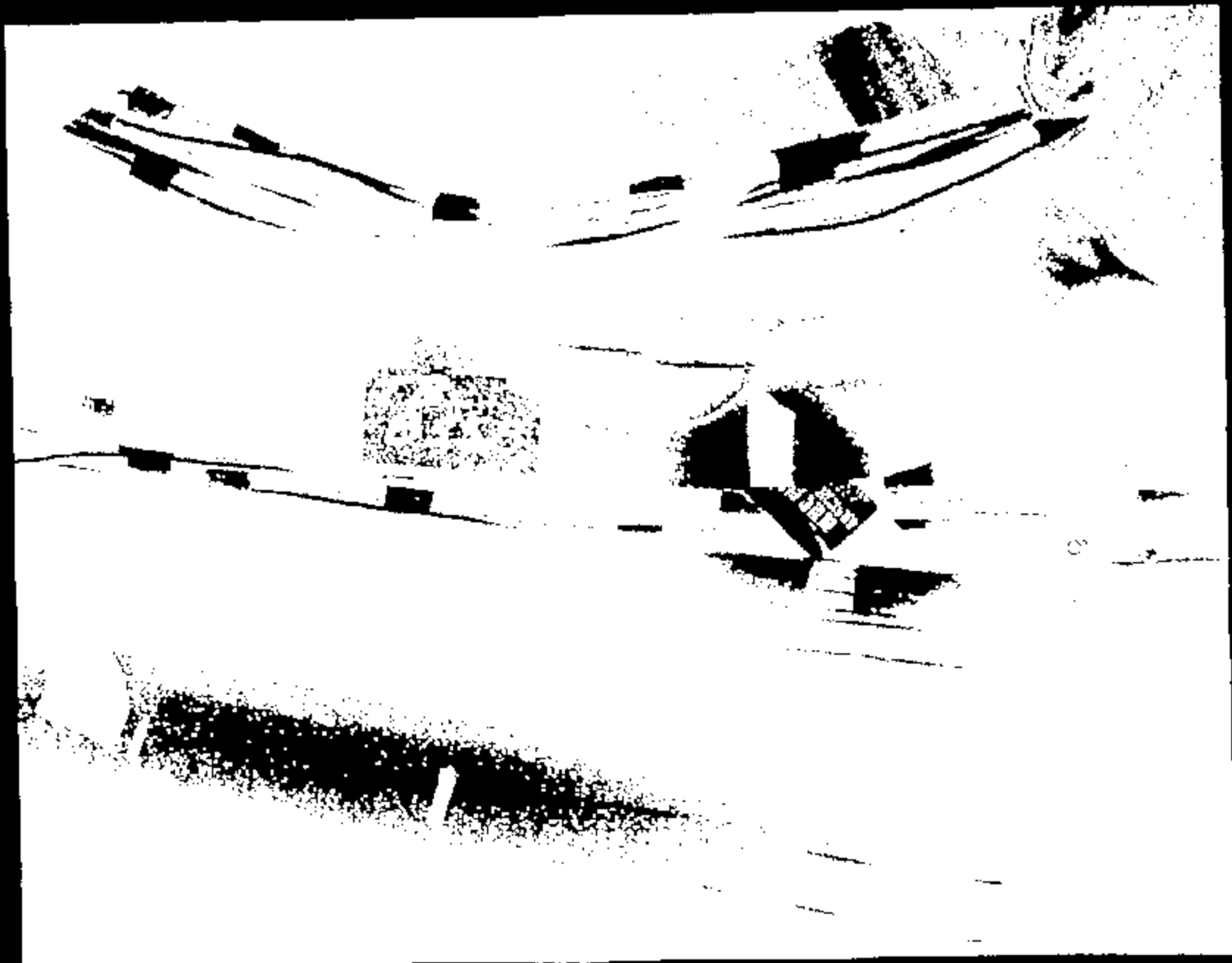
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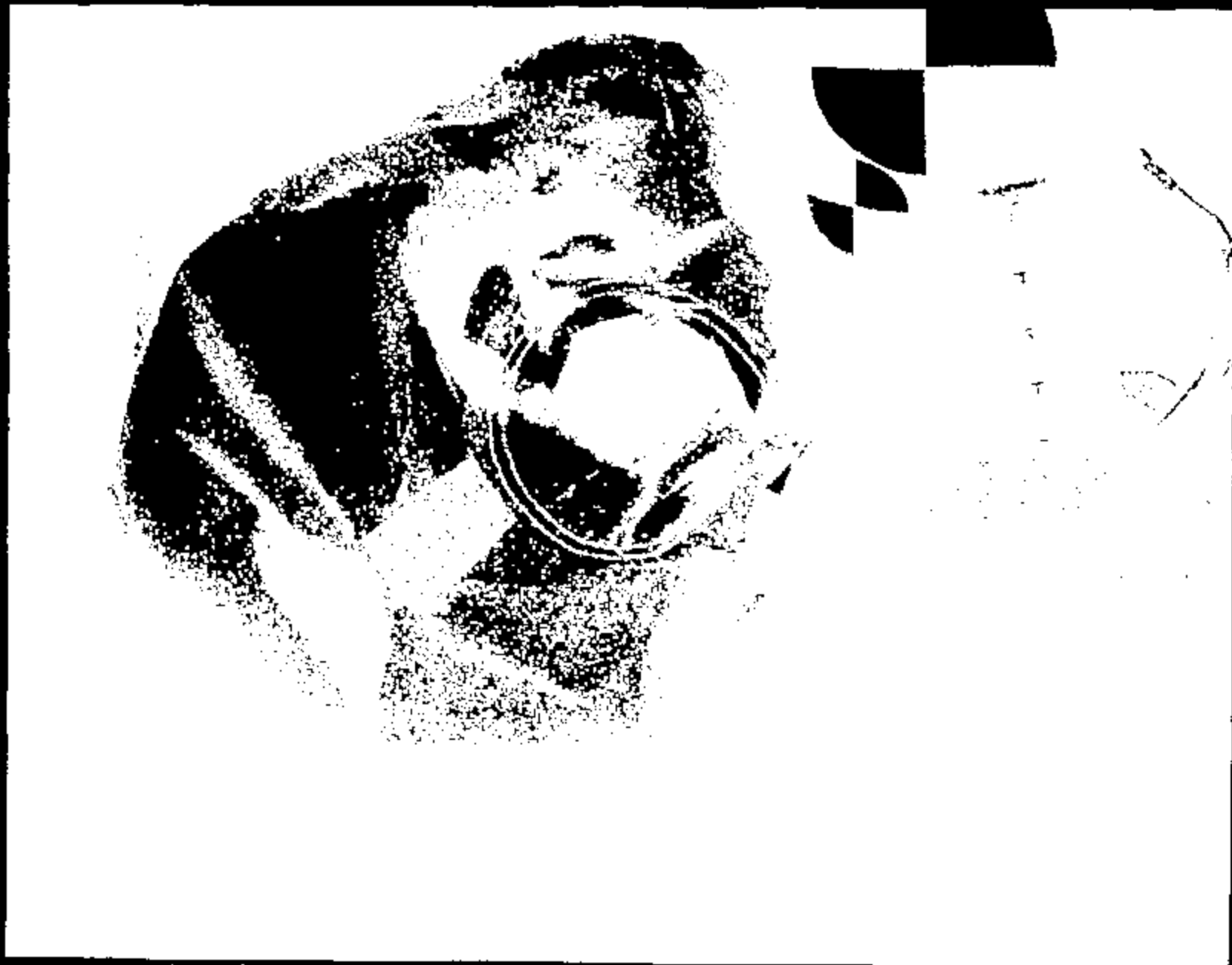
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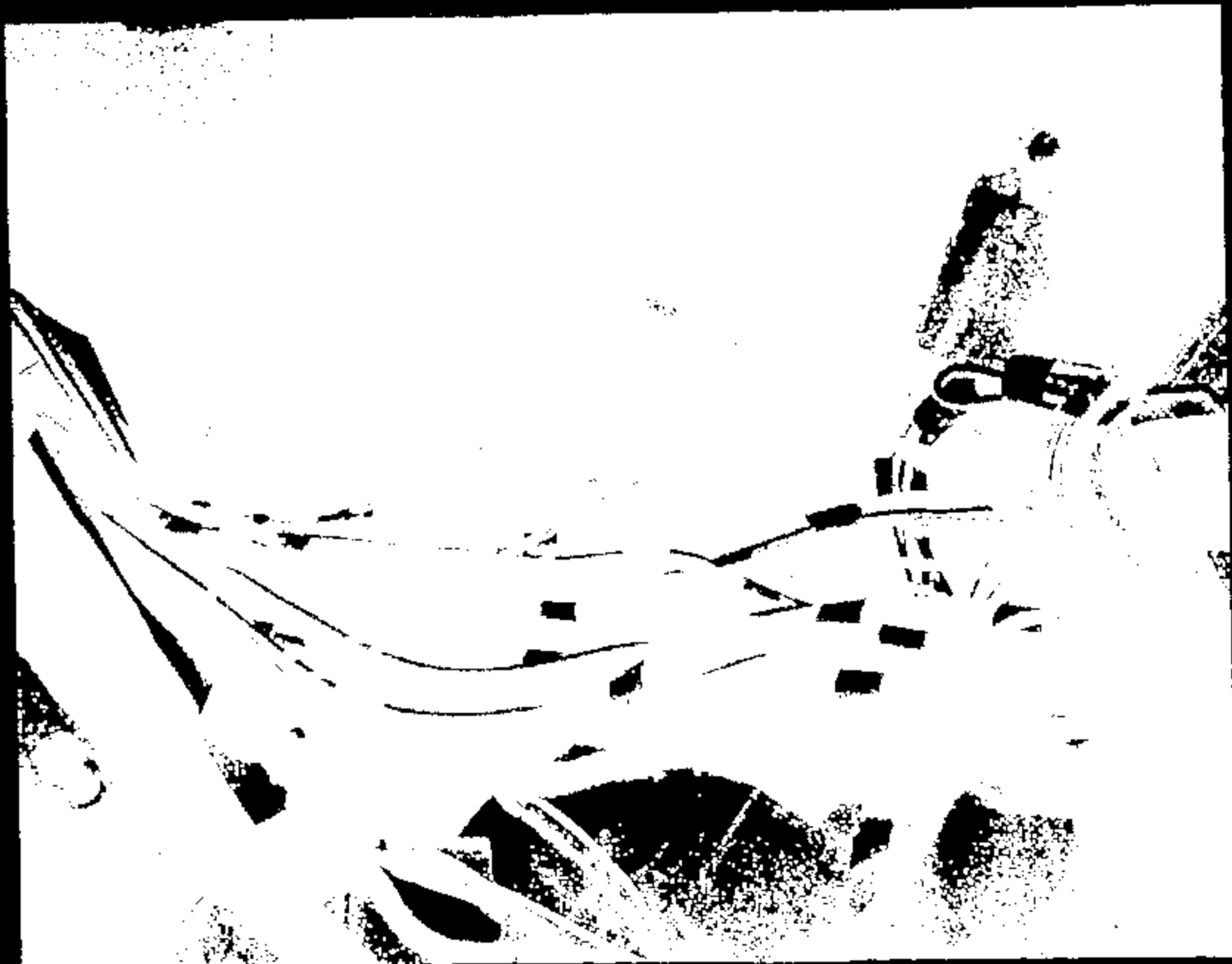
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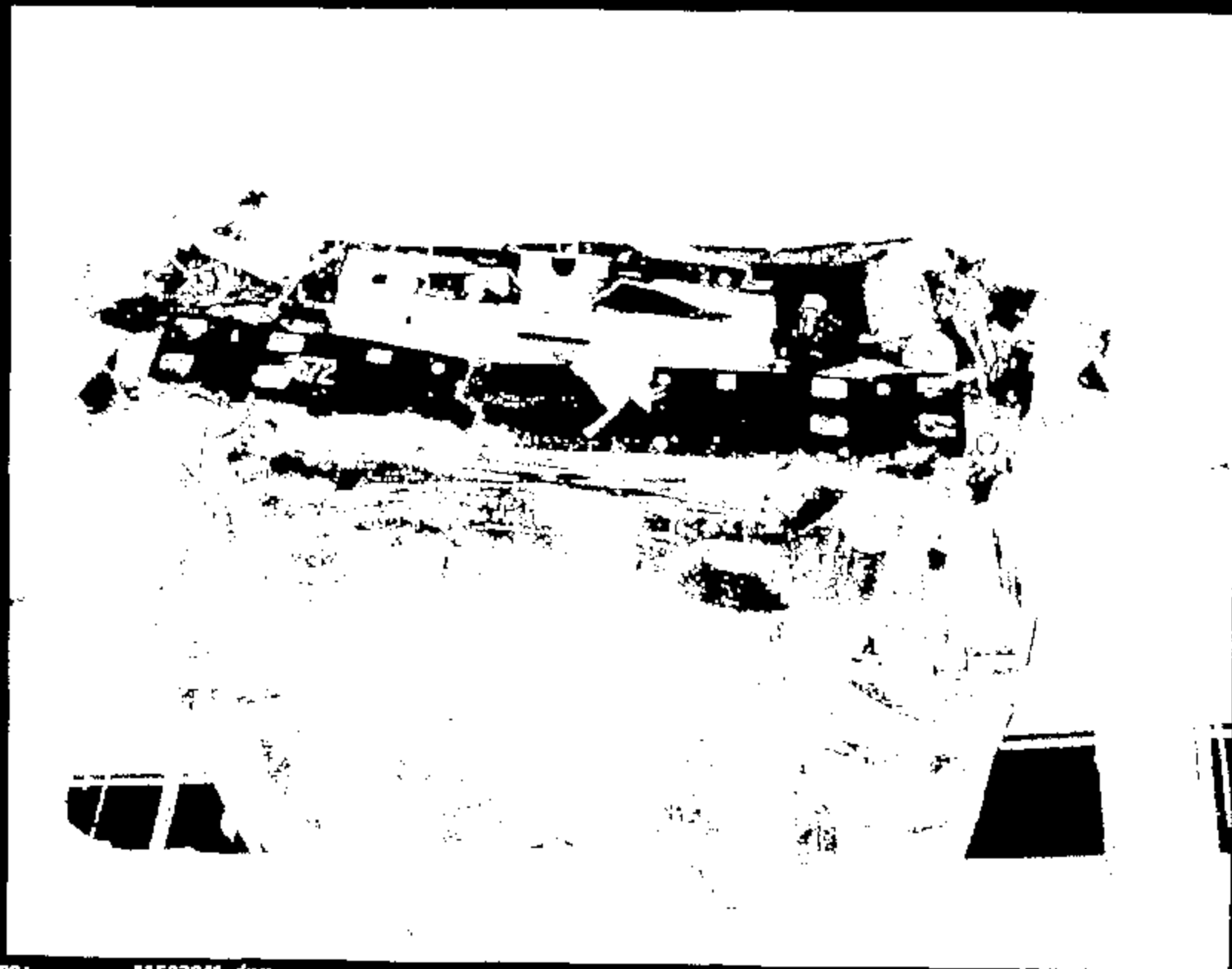
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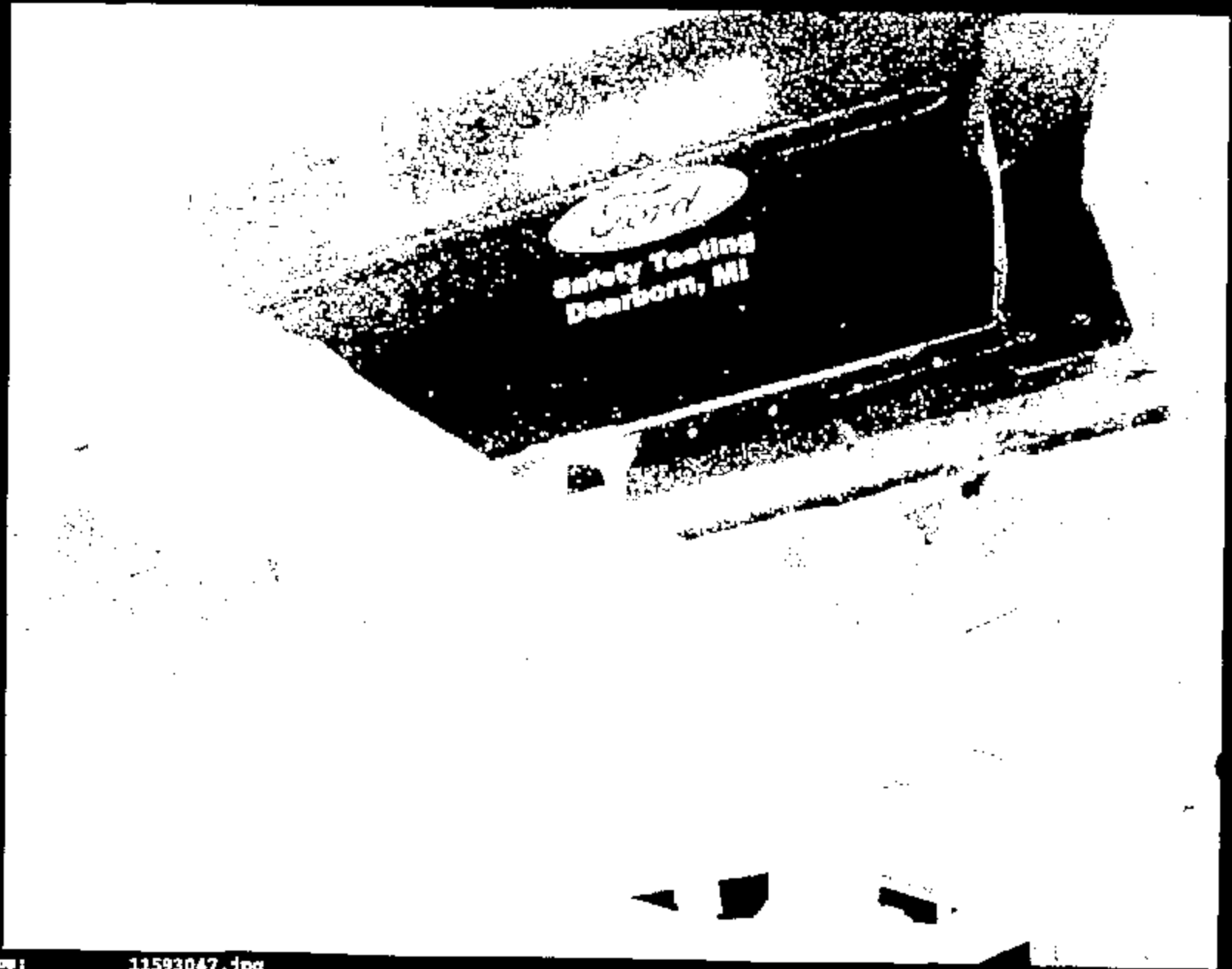


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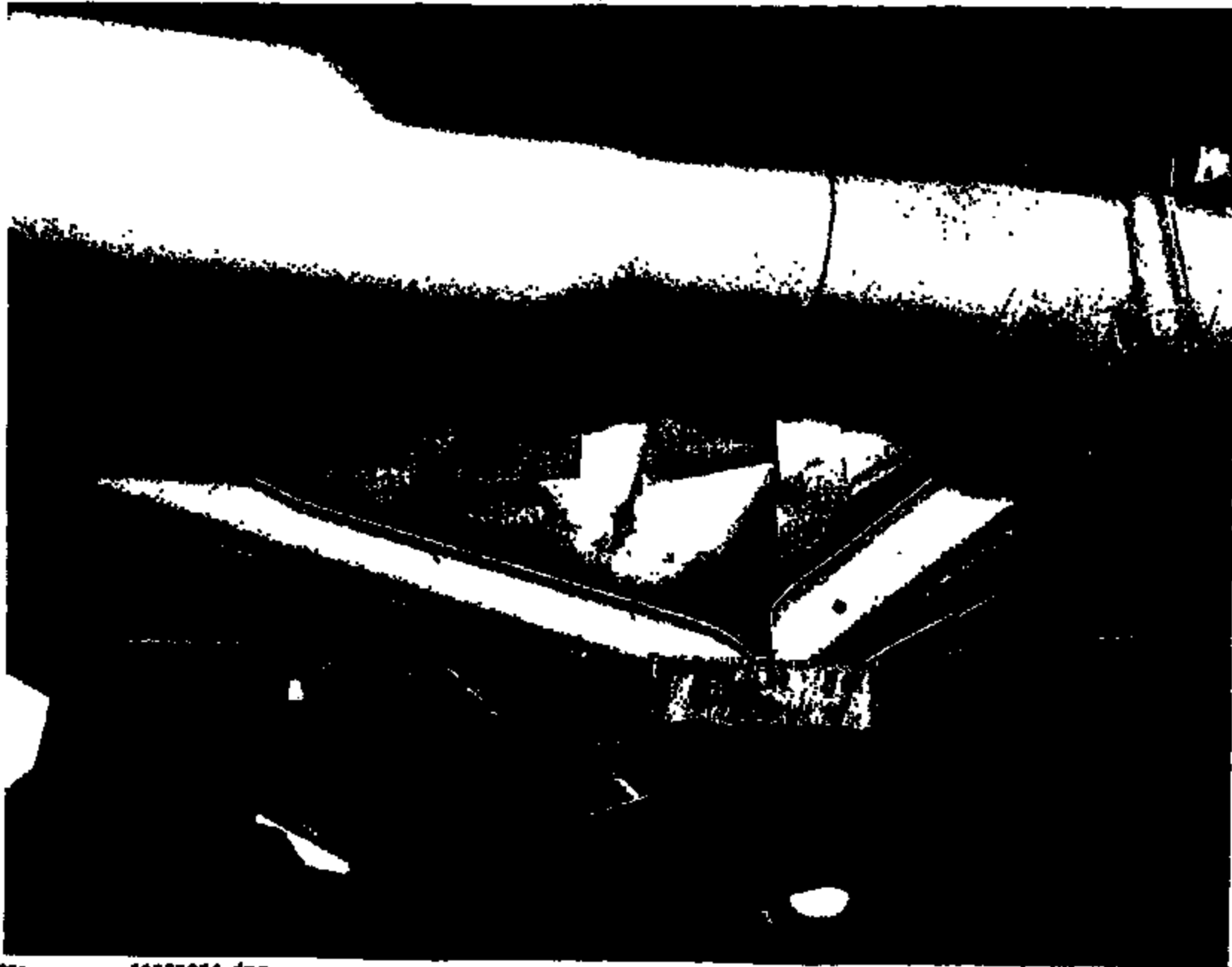
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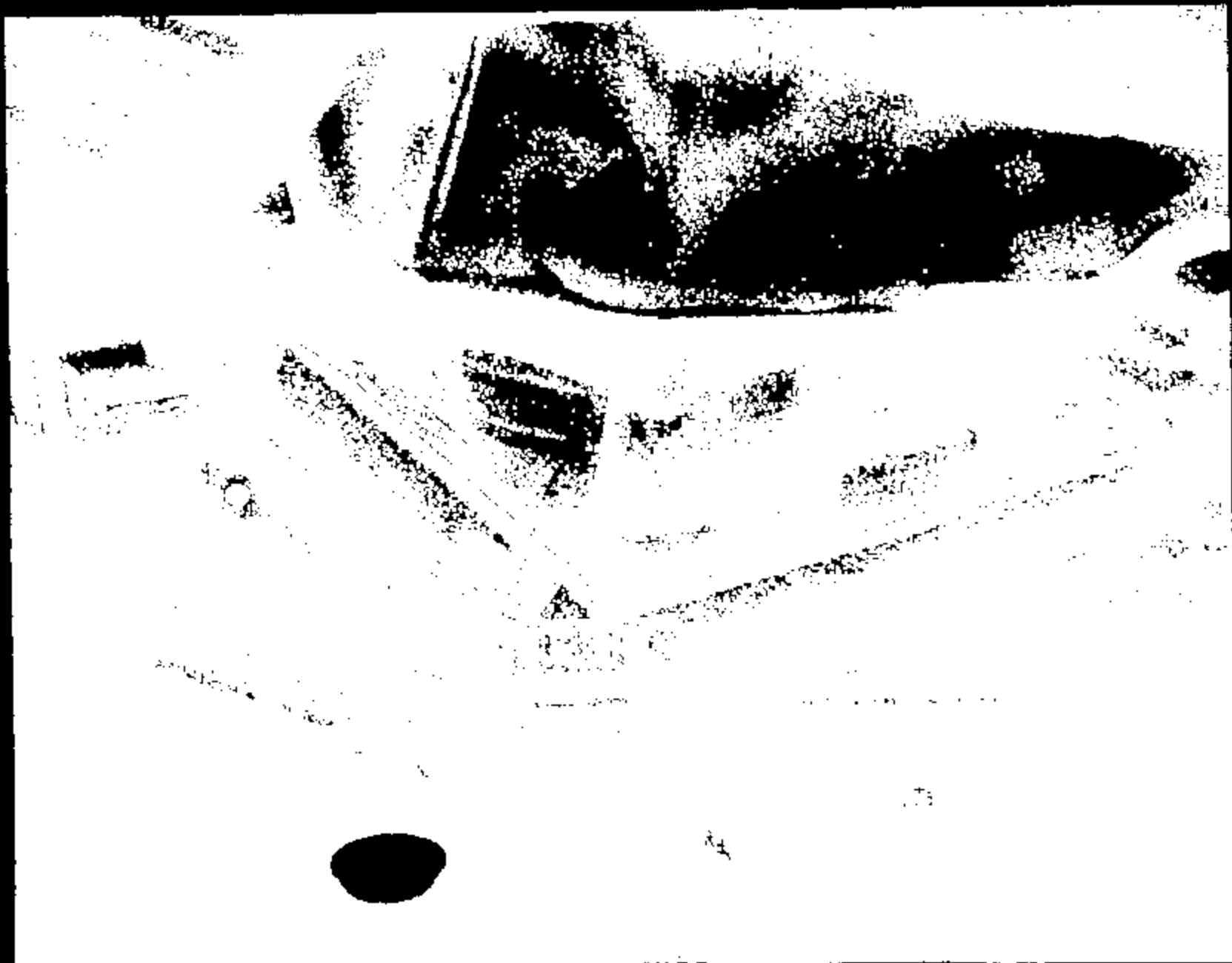
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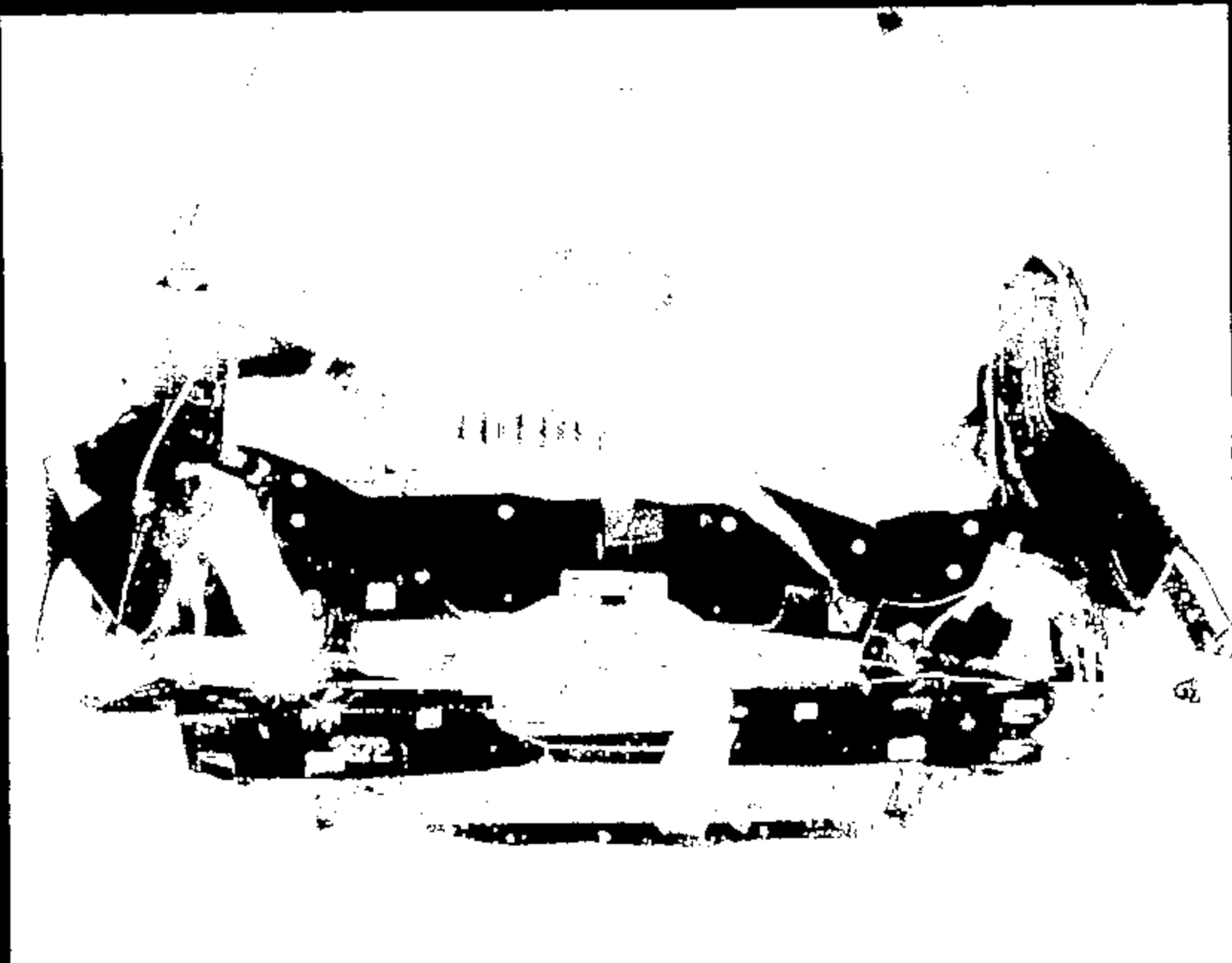
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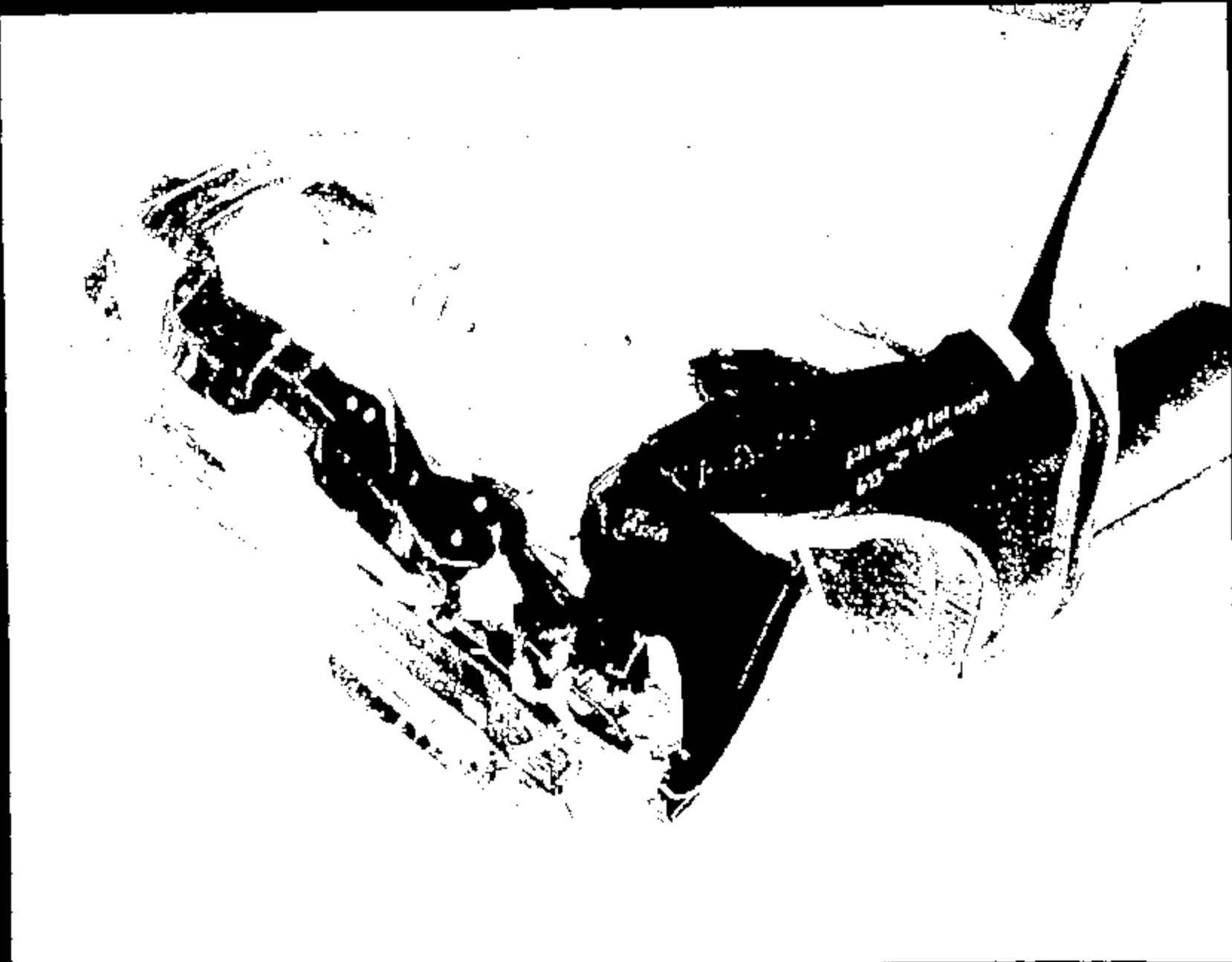


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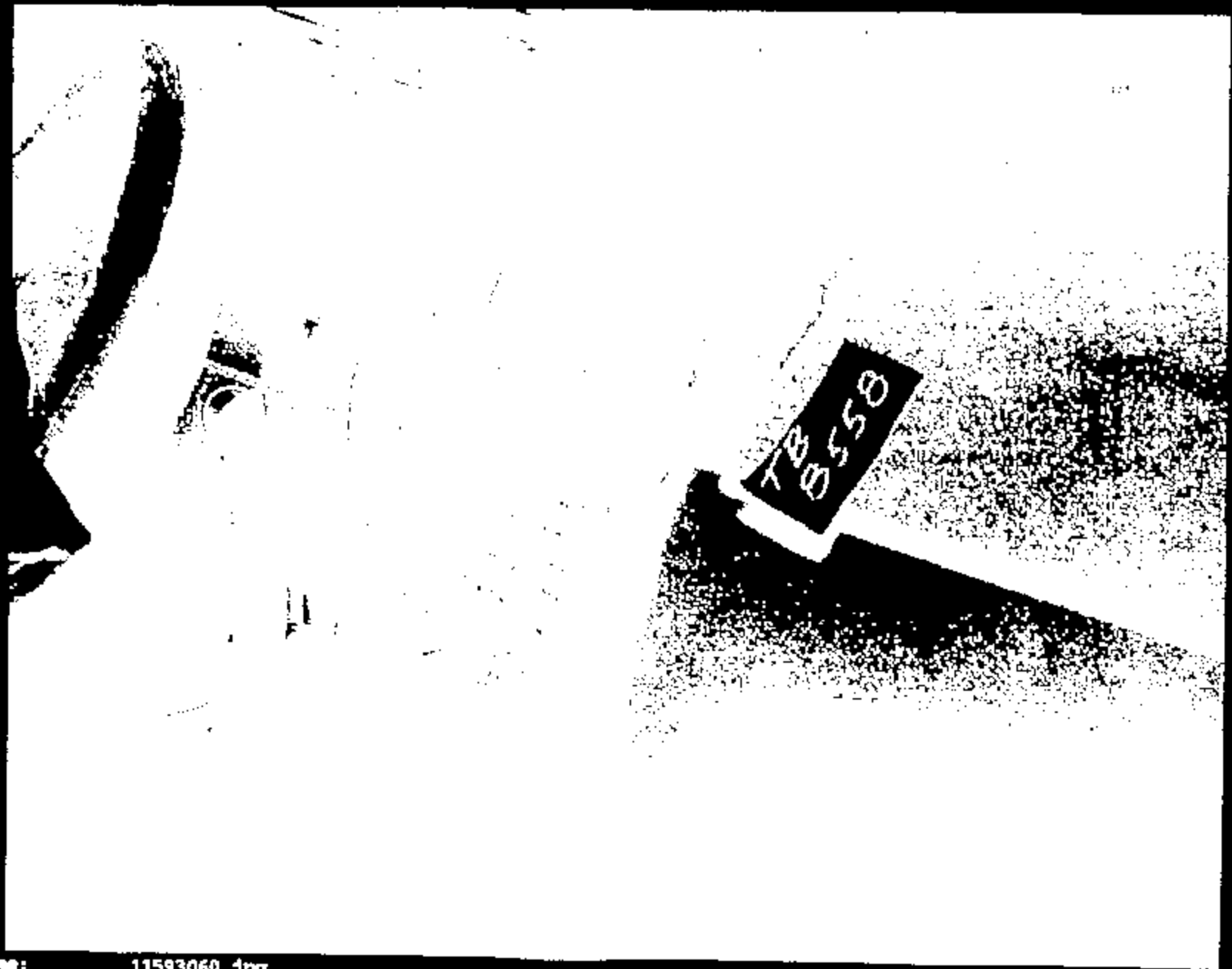
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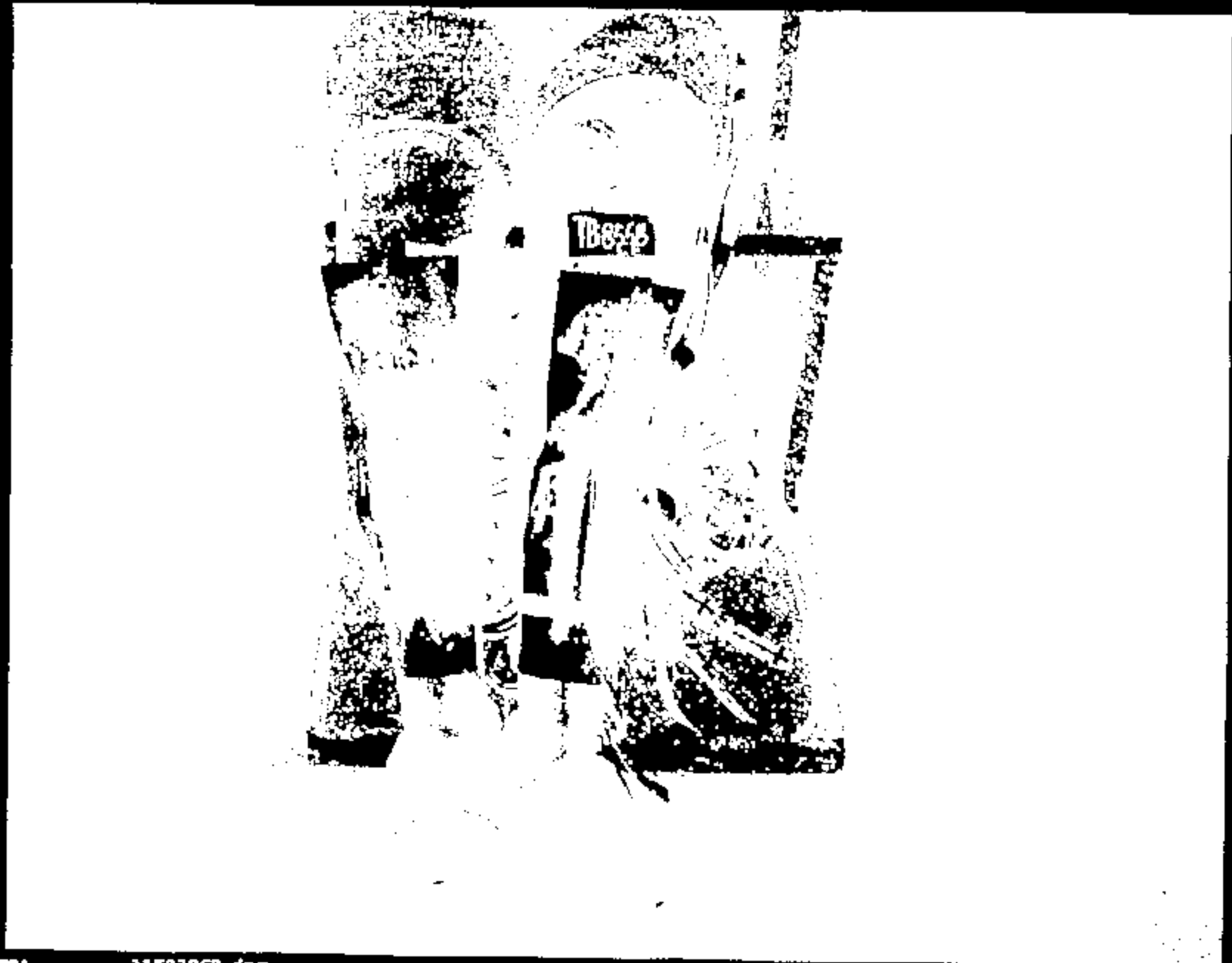
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CRIS 0011593



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TEST AUTHORIZATION				TEST AUTHORIZATION NUMBER: T8888			
TO: Safety Lab Department		REQUEST DATE: 8/6/99		REQUESTED COMPLETION DATE: 8/17/99			
CC: K. Arlano		REQUEST NUMBER: n/a		PROBLEM NUMBER: n/a			
REQUESTING ACTIVITY: Vehicle Crash Safety							
TITLE OF TEST: (speed) (test description) 2000 D188 35 MPH 90 Degree Frontal Barrier				PARTS DUE DATE: n/a			
TYPE OF TEST: <input checked="" type="checkbox"/> VEHICLE <input type="checkbox"/> LABORATORY		VIN # or IDENTIFICATION 0000000 - 000070E VIN #1FAFP2EL9Y0100890		VEHICLE MODEL & YEAR: 2000 D188		PROD. OR ENG. LETTER: n/a	
ENGINE NO. DISPL. CARB: 3.0L V6		TRANS / DRIVETRAIN: AX4N		AXLE RATIO: n/a		DISPOSITION OF PARTS: n/a	
TYPE OF FUEL: Standard Motor Oil		CONVERTER: n/a		IGNITION TIMING: n/a		CERTIFY CONTROL ITEM COMPLIANCE WITH GOV. REGULATIONS: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
CRANKCASE OIL AND CAPACITY (L): n/a		TIRE SIZE AND PLY RATING: 9215/60R16		REPORT CATEGORIES: <input checked="" type="checkbox"/> ENGINEERING <input checked="" type="checkbox"/> DATA <input checked="" type="checkbox"/> RAWDATA		PROCUREMENT REQ ? <input type="checkbox"/> YES <input type="checkbox"/> NO IF YES, GIVE CODE	
VEHICLE TEST WEIGHT: FRONT 2278 BEAR 1557 TOTAL 3835		TIRE PRESSURE (psi): FRONT 30 REAR 30				MAIL REPORT TO: BLDG: _____ MAIL DROP: _____ ADDRESS: _____	
1. OBJECT OF TEST 2. TEST PROCEDURE 3. ITEMS TO BE TESTED (NAME, NUMBER, QUANTITY)							
1) Conduct:		(speed) 35 MPH	(year) 2000	(vehicle) D188	(level) # 1PP	<div style="border: 1px solid black; padding: 5px; display: inline-block;"> <b>"RECORD COPY"</b>            Schedule No. <u>7-7-12</u>            Retain Until <u>2019</u> </div>	
		(mode) 90 Degree Frontal Barrier					
2) Velocity At Impact:		35 MPH		3) Vehicle Year:		2000	
Remote Fire Time:		N/A		Vehicle Line:		D188	
Positioning procedure:		8T-25		Vehicle Level:		1PP	
Test Requester:		(name) L. Mielke	(phone) 24-04280	(page number) LMS		Estimated test cost =	
Build Coordinator:		B. Pagano	38-30845	BPAG		\$30,000.00	
Additional Contacts:							
Test Dev. Engineer:		<i>Louis Mielke</i>					
REQUESTING SECT. NO: T881	WORK ORDER/ WORK TASK F88	ISSUED/ REQUESTED BY: L. Mielke	PHONE: 24-04280	APPROVAL: K. Arlano	TEST TYPE: n/a	RISK: n/a	SIGN OFF DATE: n/a
COMPLETE THE FOLLOWING TWO QUESTIONS AS INDICATED:							
(Check appropriate boxes)				(Check appropriate boxes)			
1 - Rational for not replacing this test by CAE analysis: <input type="checkbox"/> No CAE Methodology or process available <input type="checkbox"/> No CAE Conclusion <input type="checkbox"/> Insufficient confidence in CAE. <input type="checkbox"/> To obtain basic data for CAE <input type="checkbox"/> Replacement or Improvement of existing Test. <input type="checkbox"/> Testing in Other. <input type="checkbox"/> Mandatory or Regulatory <input checked="" type="checkbox"/> Certification <input type="checkbox"/> Development test for F88 <input type="checkbox"/> Not applicable. <input type="checkbox"/> Other _____				2 - What is the expected Test Outcome: <input checked="" type="checkbox"/> Results will meet DVPWCF requirements. <input type="checkbox"/> System Component will not meet Test specification. <input type="checkbox"/> Unknown. <input type="checkbox"/> Above is Based on CAE? <input type="checkbox"/> Other: _____			
				<i>O.K. Mielke</i> <i>9-11-99</i>			



# General Request Information

TAF: TB8556

## Test Mode

35 MPH  
90 Degree Frontal Barrier

Test Objectives: *Cart (C) Vari (V) Dev (D) Audit (A)*

### REGULATORY:

*Rn 07/15/77* EX

- FMVSS 204 - Steering Wheel Displacement
- FMVSS 208 - Frontal Occupant Protection
- FMVSS 212 - Wind Shield Retention
- FMVSS 214 - Side Impact Protection
- FMVSS 218 - Windshield Zone Intrusion
- Film Analysis
- Template
- FMVSS 301 - Fuel System Integrity
- Rollover
- Pressure Check
- FMVSS 308 - NGV Fuel System Integrity
- ECE 12 (74/297/EEC) - Protection of the Driver Against Steering Mechanism
- ECE 32 Rear Impact - Structural Performance
- ECE 38 Frontal Impact - Structural Performance
- ECE 34 Fuel System Integrity
- ECE 84 Step II Frontal Offset - Occupant Performance
- ECE 85 Step II 300mm Barrier Side Impact - Occupant Performance
- 98/79/EC - Frontal Offset
- 98/27/EC - Side Impact

### FORD AUTOMOTIVE OPERATIONS SAFETY DESIGN GUIDELINES:

- Front Impact FAO Safety Design Guidelines
- Offset Frontal FAO Safety Design Guidelines
- Side Impact Protection FAO Safety Design Guidelines
- Rear Impact Fuel System Performance FAO Safety Design Guidelines

### OTHER:

- Sensor Development
- Other, Specify: \_\_\_\_\_

## Primary Test Vehicle Information

Use (Target/Bullet):	BULLET
Model Year:	2000
Vehicle Program:	D186
Vehicle Name:	TAURUS
Body / Cab Style:	SEDAN
Build Number:	D00K000
Tag Number:	58W702
VIN Number:	VIN #1FAPP2L5YG10080
Fuel System Rated Capacity(Gal):	16
Prototype Level:	1PP
Drive Side:	LH

# General Specifications Secondary Vehicle or Cart

TA#: TB9558

## Hardware (Vehicle or Cart)

Use (Target/Bullet):	
Type (Vehicle/Cart):	
Model Year:	
Vehicle Line:	
Model:	
Tag Number:	
VIN Number:	
Prototype Level:	
Drive Side:	

## Occupants

	Occupant 1	Occupant 2
Type	_____	_____
In-Vehicle Location	_____	_____
Verify:    Seat Position Long	_____	_____
Seat Position Vert	_____	_____
Seat Back Angle	_____	_____
Occupant Belted	_____	_____

## Target Conditions

Weight	Target	Acceptable Variance (+)	Acceptable Variance (-)
Front	_____	_____	_____
Rear	_____	_____	_____
Total	_____	_____	_____

Ride Height @ Test Weight	Measured
Front: _____	From: _____
Rear: _____	To: _____

## Special Instructions

\_\_\_\_\_  
\_\_\_\_\_

**Special Prep/Build Instructions  
Primary Vehicle**

TA#: TB8558

**Special Build Instructions**

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

**Other, Specify:**

- May remove trim from B-Pillar rearward, if needed
- Ensure proper flex fuel sensor level
- Add new level Driver Airbag

**Pyro Restraints Usage**

- Left Front Air Bag
- Right Front Air Bag
- Left Front Side Air Bag
- Right Front Side Air Bag
- Left Rear Side Air Bag
- Right Rear Side Air Bag
- Left Pyro Retractor
- Left Pyro Buckle
- Right Pyro Retractor
- Right Pyro Buckle

**Other, Specify:**

\_\_\_\_\_  
\_\_\_\_\_

- N/A Remote Fire Time:  
(No fire time listed if sensor fired OR if no pyro restraints are used)
- Remote back-up Fire Time:

**Special Pre-Test Preparation**

**Other, Specify:**

- Ensure RCM is updated
- Install new Fuel Inertia Switch

**Occupant / ATD Request  
Primary Vehicle**

TA#: TE6558

	<i>Occupant 1</i>	<i>Occupant 2</i>
<b>Type</b>	<u>BOTH HIN</u>	
<b>Instrumentation Level*</b>	<u>LEFT <sup>for</sup> 02-15-99</u>	
<b>In-Vehicle Location</b>	<u>LF</u>	
<b>Verify: Seat Position Long</b>	<u>MID</u>	
<b>Seat Position Vert</b>	<u>FULL DOWN</u>	
<b>Seat Back Angle</b>	<u>for 09/15/99 27.2 - 28 degrees</u>	
<b>Positioning Procedure</b>	<u>ST-25</u>	
<b>Use Foot Rest</b>	<u>YES</u>	
<b>Take Seat Track Video</b>	<u>for 09/15/99 YES NO</u>	
<b>Special Positioning Instructions</b>		
<b>Dummy Adjustment</b> (arm angle)		
<b>Occupant Belted</b>	<u>YES</u>	

\*See instrumentation request for detailed instrumentation information.

# Test Conditions - Final Prep

TAF: TB858

## Final Prep Contacts

ONE of these MUST be present during weigh-up & final prep

	<b>Test Engineer</b>	<b>Request Engineer</b>	<b>Build Coordinator</b>
Name:	_____	<u>L. Mador</u>	<u>B. Pagano</u>
Phone:	_____	<u>24-84280</u>	<u>32-30846</u>
Pager:	_____	<u>LMIS</u>	<u>BPAG</u>

## Test Weight

Minimum Option Weight  
 85% Option Weight  
 Maximum Option Weight

GVWR: \_\_\_\_\_  
 Wheelbase: \_\_\_\_\_

## Tire Pressure

Front: 30. psi                      Rear: 30. psi

## Fuel System

Fuel Tank & System to Contain: N/A *for 09-11-99.*  
~~07050455~~

<u>16.2 gallons</u>	=	<u>85 %</u>	x	<u>18.0 gallons</u>
Fill Level	=	%	x	Capacity

## Weight Targets

If required weight distribution is UNACHIEVABLE, please note allowable variances.

	Curb Weight	Requested Test Weight	Acceptable Test Weight Variance		Actual Test Weight
			High (+)	Low (-)	
Front:	<u>2,136 lbs</u>	<u>2,278 lbs</u>	Front: <u>13 lbs</u>	<u>0 lbs</u>	Front: <u>2,230</u>
Rear:	<u>1,195 lbs</u>	<u>1,587 lbs</u>	Rear: <u>13 lbs</u>	<u>0 lbs</u>	Rear: <u>1,192</u>
Total:	<u>3,331 lbs</u>	<u>3,865 lbs</u>	Total: <u>26 lbs</u>	<u>0 lbs</u>	Total: <u>3,422</u>

Rated Luggage Load: 200 lbs

## Simulate/Verify at Weigh-Up

Demmy Weight

On Board Camera Count

## Weight Addition (Restrictions)

Do NOT place any weight in the following locations:

<input type="checkbox"/> Air Cleaner	<input type="checkbox"/> Engine	<input type="checkbox"/> Doors
<input type="checkbox"/> Battery	<input type="checkbox"/> Fan Box/Shroud	<input type="checkbox"/> Foot Wells - Front
<input type="checkbox"/> Bottle - Coolant	<input type="checkbox"/> Headlamp Opnrg	<input type="checkbox"/> Foot Wells - Rear
<input type="checkbox"/> Bottle - Washer	<input type="checkbox"/> Radiator	<input type="checkbox"/> Quarter Panels
		<input type="checkbox"/> Trunk Floor

Other: \_\_\_\_\_

## Ride Heights

Measure @ Test Weight

Front: \_\_\_\_\_

Rear: \_\_\_\_\_

Measure

Front: ROCKER LEVEL TO GROUND

To: ROCKER LEVEL TO GROUND

## Additional Remarks

DO NOT fill tank with standard until weigh-up

## Dimensional Analysis Request Primary Vehicle

Frontal Impacts

TAF: TB8658

74		
81		
106	Control Points (CAR)	Exterior
107		
126	Collapse Distance Points	Exterior
128	Frame St. Col/ Eng. for Graphs (CAR)	Exterior
130	Frame Standard Bottom (CAR)	Exterior
132	Unstized Standard Bottom (CAR)	Exterior
134	Drive Shaft Collapse	Exterior
136	Standard Body Relative	Exterior/Interior
138	Windshield (CAR)-R(3)C	Exterior
140	Seat & Pillar	Exterior
142	Shot-Guns	Exterior
146	Headler	Interior
150	Steering Wheel Deformation/ Periphery (Just strg whl hub)	Interior
153	Steering Column Mounts	Interior
154	Steering Column Targets	Interior
155		
156	Seat Track to Floor Mounts (LHS front seat only)	Exterior
158	Seat to Track Mounts	Exterior
160	Cowl Rotation	Exterior
162	Floorpan Points	Exterior
164	Knee Bolster	Interior
166	Seat Belt Mounts	Interior
168	Diagonal Strut	Interior
170	Tunnel Hinge Pillar	Exterior
172	Brake Bracket	Interior
174	Instrument Panel Mounts	Exterior
176	T-N-T Targets	Exterior/Interior
177	Top Non-Sided & Body Sided	Exterior/Interior
300		
302		
348		
356		
364		
376		
466	Plot 9 Sectional Profiles	
506	Decoupling Column Collapse	Exterior
507	P.R. Steering Column Collapse	Exterior
509		
840		
841		
842		
847	Footwell Reduction--Geometric center of footrest, brake pedal, accel pedal. Section through floor at center of brake pedal and +/- 150 mm y from there. Vert. Section through IP lower at +/- 150mm y from strg whl hub, plus Horiz. section at 450mm above floor.	

# Film Analysis & Photographic Services Request

TA#: TB8558

## Front Impact Film Analysis

- Head WRT Vehicle
- Shoulder WRT Vehicle
- Rocker (Both sides) WRT Ground

Other, Specify:

\_\_\_\_\_  
\_\_\_\_\_

## Still Photography

- \_\_\_\_\_ Copies of Still Photo Proof Sheets Required
- \_\_\_\_\_ Copies of Still Photos (4X6) Required
- Pre Test Documentation Photographs
- Post Test Documentation Photographs (standard)
- 09/10/92*  Pre and Post Test close ups of Flex Fuel Sensor

## 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 (Knee to I/P)
- Onboard - Photo Sonic (Intermediate Shaft) - From Floor
- Onboard - Photo Sonic (Intermediate Shaft) - Side View From Tunnel
- for 09/10/92*  Onboard - LEFT Occupant ~~from~~ from Passenger Door
- 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  
 Left Dummy Kinematics  
Dummy Kinematics & Velocity Left  
 Overall Right  
Right Dummy Kinematics  
Dummy Kinematics & Velocity Right  
Top of Barrier - Overall View of Windshield  
Top of Barrier - Driver  
Top of Barrier - Passenger  
Top of Barrier - Close-up of Flex Fuel Sensor from Right  
Top of Barrier - Close-up of Flex Fuel Sensor from Left  
Top of Barrier - Close-up of Engine  
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  
Reaction

**Pit Coverage**

Pit - Overall  
 Pit - A-Pillar Forward  
Pit - L/R Frame Horns (Creecross)  
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.

**All Other High Speed Photography**

\_\_\_\_\_  
\_\_\_\_\_



# Instrumentation and Data Processing Request

TA#: TB8568

## Primary Vehicle Structural Instrumentation - Frontal Impact

**ACCELEROMETERS:**

	Long	Vert	Lat
<input checked="" type="checkbox"/> Engine/Trans Upper ✓	<u>X</u>	<u>X</u>	<u>X</u>
<input type="checkbox"/> Engine/Trans Lower	<u>    </u>	<u>    </u>	<u>    </u>
<input type="checkbox"/> Left Rocker at A-Pillar	<u>    </u>	<u>    </u>	<u>    </u>
<input type="checkbox"/> Right Rocker at A-Pillar	<u>    </u>	<u>    </u>	<u>    </u>
<input checked="" type="checkbox"/> Left Rocker at B-Pillar	<u>X</u>	<u>X</u>	<u>X</u>
<input checked="" type="checkbox"/> Right Rocker at B-Pillar	<u>X</u>	<u>X</u>	<u>X</u>
<input type="checkbox"/> Left Rocker at C-Pillar	<u>    </u>	<u>    </u>	<u>    </u>
<input type="checkbox"/> Right Rocker at C-Pillar	<u>    </u>	<u>    </u>	<u>    </u>
<input type="checkbox"/> Left Frame at A-Pillar	<u>    </u>	<u>    </u>	<u>    </u>
<input type="checkbox"/> Right Frame at A-Pillar	<u>    </u>	<u>    </u>	<u>    </u>
<input type="checkbox"/> Left Frame at B-Pillar	<u>    </u>	<u>    </u>	<u>    </u>
<input type="checkbox"/> Right Frame at B-Pillar	<u>    </u>	<u>    </u>	<u>    </u>
<input type="checkbox"/> Left A-Pillar Inside	<u>    </u>	<u>    </u>	<u>    </u>
<input type="checkbox"/> Right A-Pillar Inside	<u>    </u>	<u>    </u>	<u>    </u>
<input type="checkbox"/> Centerline Tunnel @ Dash	<u>    </u>	<u>    </u>	<u>    </u>
<input type="checkbox"/> Centerline Tunnel Middle	<u>    </u>	<u>    </u>	<u>    </u>
<input type="checkbox"/> Centerline Tunnel @ Seat Long Centerline	<u>    </u>	<u>    </u>	<u>    </u>
<input type="checkbox"/> Left Floor Pan Under Seat	<u>    </u>	<u>    </u>	<u>    </u>
<input type="checkbox"/> Left Door Inside Top	<u>    </u>	<u>    </u>	<u>    </u>
<input type="checkbox"/> Left Shock Tower	<u>    </u>	<u>    </u>	<u>    </u>
<input type="checkbox"/> Right Floor Pan Under Seat	<u>    </u>	<u>    </u>	<u>    </u>
<input type="checkbox"/> Right Door Inside Top	<u>    </u>	<u>    </u>	<u>    </u>
<input type="checkbox"/> Right Shock Tower	<u>    </u>	<u>    </u>	<u>    </u>
<input type="checkbox"/> Rad Support Top - Center	<u>    </u>	<u>    </u>	<u>    </u>
<input type="checkbox"/> #1 Crossmember Bottom	<u>    </u>	<u>    </u>	<u>    </u>
<input type="checkbox"/> #2 Crossmember Bottom	<u>    </u>	<u>    </u>	<u>    </u>
<input type="checkbox"/> Left Front Rail Forward of Sledrunners.	<u>    </u>	<u>    </u>	<u>    </u>
<input type="checkbox"/> Left Front Rail Forward of Shock Tower	<u>    </u>	<u>    </u>	<u>    </u>
<input type="checkbox"/> Right Front Rail Forward of Sledrunners.	<u>    </u>	<u>    </u>	<u>    </u>
<input type="checkbox"/> Right Front Rail Forward of Shock Tower	<u>    </u>	<u>    </u>	<u>    </u>
<input type="checkbox"/> Directly Below D.A. Point # 69	<u>    </u>	<u>    </u>	<u>    </u>
<input type="checkbox"/> Directly Below D.A. Point # 64	<u>    </u>	<u>    </u>	<u>    </u>
<input type="checkbox"/> Next to Fuel Inertia Switch	<u>    </u>	<u>    </u>	<u>    </u>
<input type="checkbox"/> Top of Battery	<u>    </u>	<u>    </u>	<u>    </u>
<input type="checkbox"/> Near ACS Bypass Switch	<u>    </u>	<u>    </u>	<u>    </u>

**OTHER STRUCTURAL ACCELS:**

	Long	Vert	Lat
<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>

Primary Vehicle Systems Instrumentation

TA#: TB0568

SENSOR ACCELS:

See Sensor Map

MONITOR AIR BAG SENSORS:

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

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
- Lightweight Left Lap Belt at Anchor Load
- Lightweight Left Torso Belt at Retr. Load
- Lightweight Left Torso Belt at D-ring Load
- Lightweight Right Lap Belt at Anchor Load
- Lightweight Right Torso Belt at Retr. Load
- Lightweight Right Torso Belt at D-ring Load
- Lightweight Left Torso Belt at Buckle Load
- Lightweight Right Torso Belt at Buckle Load

MONITOR AIR BAGS STATUS:

- Driver Squib Voltage *1st STAGE*
- Driver Squib Current *1st STAGE*
- Driver Bag Pressure
- Passenger Squib Voltage
- Passenger Squib Current
- Passenger Bag Pressure
- Passenger Inflation Pressure

*for analysis*  
*for analysis*  
 DEV. SQUIB VOLT. SECOND STAGE  
 DEV. SQUIB CURRENT " " "

STEERING COLUMN:

- Stroke Break Wire
- Tilt Mechanism Break Wire
- String Pot (Stroke)
- Load Cell (5 Axis)
- String Pot (Telescope)

SWITCHES:

- Engine to Rad Support left
- Engine to Rad Support center
- Engine to Rad Support right
- Brake booster to shock tower
- Other \_\_\_\_\_

FUEL SYSTEM:

Inertia Fuel System Out-Off Switch

ANGULAR MOTION SENSORS

VEHICLE STRING POTS

OTHER VEHICLE SYSTEM INSTRUMENTATION

**Dummy Instrumentation - Internal**60HSL/F**ACCELS:**

Head C.G.  
 Chest  
 Pelvis

Long  Vert  Lat  
 Long  Vert  Lat  
 Long  Vert  Lat

**LOAD CELLS:**

Neck Upper Load  
 Neck Upper Moment  
 Neck Lower Load  
 Neck Lower Moment  
 Thoracic Load  
 Thoracic Moment  
 Lower Lumbar Load  
 Lower Lumbar Moment  
 L/Femur Load  
 L/Femur Moment  
 R/Femur Load  
 R/Femur Moment  
 L/Up/Tibia Load  
 L/Up/Tibia Moment  
 R/Up/Tibia Load  
 R/Up/Tibia Moment  
 L/Low/Tibia Load  
 L/Low/Tibia Moment  
 R/Low/Tibia Load  
 R/Low/Tibia Moment

Fx  Fy  Fz  
 Mx  My  Mz  
 Fx  Fy  Fz  
 Mx  My  Mz  
 Fx  Fy  Fz  
 Mx  My  Mz  
 Fx  Fy  Fz  
 Mx  My  Mz  
 Fx  Fy  Fz  
 Mx  My  Mz  
 Fx  Fy  Fz  
 Mx  My  Mz  
 Fx  Fy  Fz  
 Mx  My  Mz  
 Fx  Fy  Fz  
 Mx  My  Mz  
 Fx  Fy  Fz  
 Mx  My  Mz  
 Fx  Fy  Fz  
 Mx  My  Mz

**POTENTIOMETERS:**

Chest Deflection  
 Left Knee Slider  Ball Bearing  Sid  Diap  
 Right Knee Slider  Ball Bearing  Sid  Diap

**OTHER INTERNAL DUMMY INSTRUMENTATION:**

L/R Femur Accels  Long  Vert  Lat  
 L/R Ankle soft bumper to foot stem

**Dummy Instrumentation - External****CONTACT SWITCHES:**

L / Knee Contact  
 R / Knee Contact  
 Header

**STRING POTS:**

Pelvis  
 L / Knee  
 R / Knee

**OTHER EXTERNAL DUMMY INSTRUMENTATION:**

Please color contrast Driver left and right shoes

NO PASSENGER DATA REQUIRED:  
THIS PAGE LEFT BLANK!! *hm.*

# List of Contacts

TA#: TB8558

	Last name	Phone	Pager	Profs
Requestor	L. Miskir	24-84280	LMIS	LMISKIR
Aproving supervisor	K. Arthurs	39-05158	KART	KARTHURS
Build coordinator	B. Pagano	32-30845	BPAG	BPAGANO
Test engineer				
Sensor Engineer	M. Rucker	31-79180	MRUCKER	MRUCKER
Other				

	Last name	Phone	Pager	Profs
Seats	M. Jessup	84-51891	MJESSUP1	MJESSUP1
Instrument panel	M. Keranen	33-74146	NONE	MKERANEN
Restraints	N. Desai	99-08145	NDESAI	NDESAI
Air bag (driver)	R. Ruthinowski	82-18878	RRUTHINO	RRUTHINO
Air bag (passenger)	R. Ruthinowski	82-18878	RRUTHINO	RRUTHINO
Steering column				

CRTS 0011593

Requestor/Originator: SP2RPHNO  
 Release: 9/1/88 Facility: Bsnlyr  
 Display Print: Copyes

Contact List Attachment  
 Page 14 of 17

TB8558-26  
 Ver: 2.0/67 Issue: 08/13, 1988  
 Author: Clancy/Proposed/Dak

# Revisions List

TA#: TR8558

DATE	AUTHORIZATION	DESCRIPTION	PAGE #'s

# VEHICLE SAFETY PACKAGE LAB WORK ORDER

TA#: TB8558

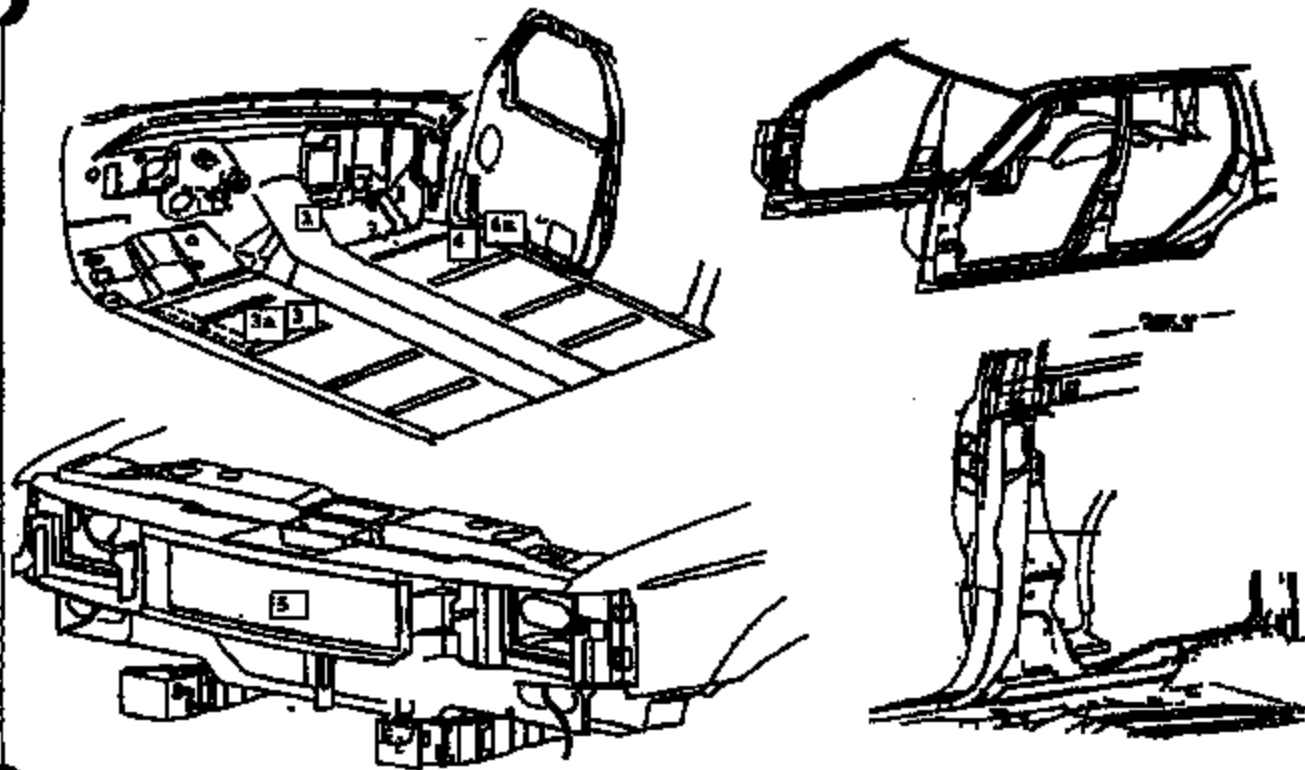
DATE	TYPE	YEAR	CABINE	TEST NUMBER
9/9/99	SEDAN	2000	D186	TB8558
TESTER	PHONE	PHONE	DEFIN	TESTING
L. Mialdr		24-84280	T551	F09
B. Pagano		32-30645		90 Degree Frontal Barrier
VIN #1FAFP52U6YG100030		D00K0000		589W702
SGRP		MID POINT		FULL REAR
LH FRT		CENTER FRT		RH FRT
LH REAR		CENTER REAR		RH REAR
VEHICLE DELIVERED TO	DVA	BARRIER		BUILD SITE
<b>ANY QUESTIONS CONTACT:</b>				
PETER J. SIMONIE				
PHONE: (313) 59-48009				
PAGER: (313) 705-8883				
<b>DESCRIPTION OF JOB TO BE PERFORMED:</b>				

CRTS 0011593

# SENSOR MAP

Vech. No: 1FAPP52UJ  
 YG100030  
 Build level: 1PP

Program: D186  
 Test Mode: 35/00 BARRIER  
 TA No.: TB8558



Location Name	Supplier	Output	Sensor Channels only			
			Nominal (+/-)	Max/Min	Serial #	
1. C/P_FLOOR_PAN_RCM (LED MIPCM Location)	82009-1	VISION	IR1_OUT	0	1.0	[REDACTED]
	82009-2		IR2_OUT	0	1.0	
	82009-3		IR3_OUT	0	1.0	
	82009-4		IR4_OUT	0	1.0	
	82009-5		D_PDP_OUT	0	1.0	
	82009-6		P_PDP_OUT	0	1.0	
	82009-7		D_SAR1_OUT	0	1.0	
	82009-8		P_SAR1_OUT	0	1.0	
	82009-9		Status	5	1.0	
2. C/P_FLOOR_PAN_R_RCM	asoc1		TRIAK	On input		NA
5. C/RAD	FCH	VISION	FCB	<i>NO OUTPUT</i>		NA
5. C/RAD	asoc1		TRIAK	<i>Next to FCB</i>		NA

T-zero required. Assumed system power from vehicle wiring and battery - use provided harness

### REVISION LOG

DESCRIPTION	DATE	PAGE AFFECT	NOTE



CRASH NUMBER 11593

PAGE 1 OF 1  
CREATED 08/11/99 AMBYT

# BARRIER QUALITY ASSURANCE AND TRACKING FORM

DATA ENGINEER: Name not on file  
TEST ORDER NUMBER: Y18000  
TEST ENGINEER: R. ODA  
VEHICLE TYPE: D-185  
REQUESTED SPEED: 35 MPH  
CRASH DATE: 08/18/99  
CRASH TIME: 18:24  
TOTAL CHANNELS: 67

WB REVIEW ENGINEER: Lee  
SITE: 99  
TEST DESCRIPTION: 90 DEG. FRONT FOGGED BARRIER  
IMPACT TYPE: CAR  
TEST TYPE: CT  
OK TO STRIP DATE: 08/18/99  
OK TO STRIP TIME: 11:55  
DUMMY CHANNELS: 24

TEST DUMMY INFORMATION  
FOG NO. TYPE AA. BELTS FTRG OTHER  
LF 24 NONE Y Y

11593

TEST CHANNEL	CHANNEL IDENTIFICATION		EQUIPMENT					ANOMALIES										DESCRIPTION	RESOLUTION	CAT						
	LOCATION	AZ03	TRANSDUCER	EXTENSION CABLE	CABLE	CRASH PACKAGE	CRASH CHANNEL	30100V	30100V/24V	30100V/24V	30100V/24V	30100V/24V	30100V/24V	30100V/24V	30100V/24V	30100V/24V	30100V/24V	30100V/24V	DATA MISSING	DATA DROPOUT	DATA POLARITY	LATE TO BE RECD	DATA ENGINEER REMARKS	TECHNICIAN REMARKS	1	2
37	DRIVER SOLID VOLTAGE 2ND		44240		AFJ-3	3208	10												X				1st stage current, xdsocor-44201	Wrong xdsocor no.	1	2
38	DRIVER SOLID CURRENT 1ST		44231		AFJ-2	3209	11												X				1st stage voltage, xdsocor-44240	Wrong xdsocor no.	1	2

CRTS 0011593

DUMMY MEASUREMENT REPORT  
CRASH BARRIER

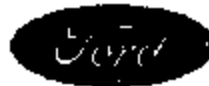
W NUMBER 11593  
TEST ORDER NUMBER TB8558

DUMMY POSITION LEFT  
DUMMY ABBREV 50H3

FRONT

ABSOLUTE MEASUREMENTS (INCH)	MEASUREMENT
LEG (HYB II) / KNEE (HYB III) TO INST PANEL LEFT	4.00
LEG (HYB II) / KNEE (HYB III) TO INST PANEL RIGHT	3.00
ROCKER TARGETS TO GROUND FRONT	7.20
ROCKER TARGETS TO GROUND REAR	7.20
NOSE TO STEERING WHEEL	15.00
NOSE TO INSTRUMENT PANEL	7.20
INSTRUMENT PANEL TO TORSO	15.00
STEERING WHEEL TO TORSO	7.20
STEERING WHEEL TOP LEGS	0.60
KNEE SPREAD OS-OS (HYB II) / CL-CL (HYB III)	9.30
SEAT BACK ANGLE	27.60
PELVIC ANGLE	21.30
HEAD ANGLE	0.40
ROCKER ANGLE	0.60
NECK BRACKET ANGLE	
BUMPER TARGET TO GROUND	

RELATIVE MEASUREMENTS (INCH)	WRT FRN RKR TGT
HEAD LAT	15.30
HEAD VERT	37.60
AD LONG	13.20
SHOULDER LAT	
SHOULDER VERT	
SHOULDER LONG	
H-POINT LAT	11.20
H-POINT VERT	12.50
H-POINT LONG	8.20
O/S KNEE BOLT LAT	12.30
O/S KNEE BOLT VERT	17.10
O/S KNEE BOLT LONG	-6.10



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**FINAL TEST REPORT**

**Global Test Operations  
 Research and Vehicle Technology**

**TO:** L. Mialkir

Test Order No. T-B7751  
 Work Task W. O. No. F16  
 Test Date 9/22/99  
 Date Reported 11/5/99  
 Sheet 1 of 27

**SUBJECT:** Crash Test 11604 (30° Right Front Fixed Barrier Impact at 30.8 ± 0.4 mph, 49.6 ± 0.6 km/h) - 2001 Taurus (D186) 4-Door Sedan - 2001 Certification Program

**REQUESTED BY:** Vehicle Crash Safety Department, Research and Vehicle Technology - L. Mialkir

**OBJECT:** To provide fuel system integrity data relative to the barrier crash test requirements of the current FMVSS No. 301 (U.S. CFR Docket No. 96-44, Notice 01, Canadian Oesette SCRU97-421)

**SUMMARY OF TEST RESULTS:**

- See Attachment 1 for fuel spillage data.
- See Attachment 2 for vehicle observations and non-FMVSS data.

The Test Authorization for this crash indicated that the vehicle is representative of a design level suitable for a certification test. To the best of my knowledge, the crash testing was performed on the same vehicle as identified in the Test Authorization; the results reported herein represent the performance of this specific vehicle, and the testing was performed in accordance with the listed procedures. Any procedure deviations significant to the test objectives above are identified in this report.

R. Olin  
 Engineering Data Control Analysis

Concur: S. Lash  
 Section Supervisor  
 Operations Engineering Section

**VEHICLE DATA:**

**Make and Model** 2001 Taurus (D186) 4-Door Sedan (Confirmation Prototype)

**ID Numbers** 1FAFP52Z9YG100026, 306-W-996, DDI40001

**Power Train** 3.0L, EFI, Automatic (AX4N) Transaxle

**Fuel Tank(s)** Usable Capacity: 18.0 gal. (68.1L)  
Test Condition: The "run dry" tank was filled with red-dyed Stoddard solvent to 95% of its rated usable capacity.

**Front Seat(s)** Type: Bucket  
Cover: Cloth  
Tracks/Position: LF: 6-Way Power/Mechanical Mid and Down  
RF: Manual/Mechanical Mid  
Seat Backs/Position: Adjustable/Not Measured  
Head Restraints/Position: Adjustable/Down

**Restraint System** LF: 3-Point Continuous Loop Active Belt and Steering Wheel Air Bag  
RF: 3-Point Continuous Loop Active Belt and Instrument Panel Air Bag

**Occupants** LF & RF: Water-Filled Containers (Simulating 50th Percentile Male, Hybrid II, Uninstrumented Dummies)

**Test Weight** Front: 2361 lb (1071 kg)  
Rear: 1706 lb (774 kg)  
Total: 4067 lb (1845 kg)  
The test weight includes:  

- the "as received" unloaded vehicle curb weight
- Maximum production options (simulated)
- 2 occupant(s) (described above)
- 200 lb (90.7 kg) luggage (simulated)

**Tires** Front: P215/60R16 30 psi (207 kPa)  
Rear: P215/60R16 30 psi (207 kPa)  
Spare: Removed

**Bumpers** Front: Fascia/Beam  
Rear: 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 March 3, 1998.
- EFI Fuel Systems Stoddard Solvent Fill, ST-11 REF. 4.
- Fuel System Static Rollover, T657-ST-34 dated May 29, 1998.

**2. Significant Deviations from T657-ST-14**

No dummies were used for this test.

3. **Instrumentation:** The instrumentation equipment set up for this test was completed following approved procedures which require engineering sign-off after each major step. The instrumentation equipment and systems used meet the SAE J211 June 80 series of recommended practices (Instrumentation for Impact Tests J211, J211a, or J211b) and were calibrated using secondary standards that are traceable to the National Institute of Standards and Technology (NIST).

**4. Remarks**

Crash movies, pre- and post-crash still images of the test vehicle and copies of this report are available through the Operations Engineering Section, Safety Laboratories Department, GTO. The crash still images are stored and archived on CD ROMs. The file names of the still images are listed under crash number and a three digit sequence number which are 11604001 through 11604087.

ATTACHMENT 1

**Fuel System Integrity (CFMVSS 301)**

- There was fuel system spillage from the pressure relief valve during impact estimated to be 0.06 ounces.
- There was no fuel system spillage during the post-crash static rollover test.
- The fuel system held pressure during a pre-test pressure check.

**ATTACHMENT 2**

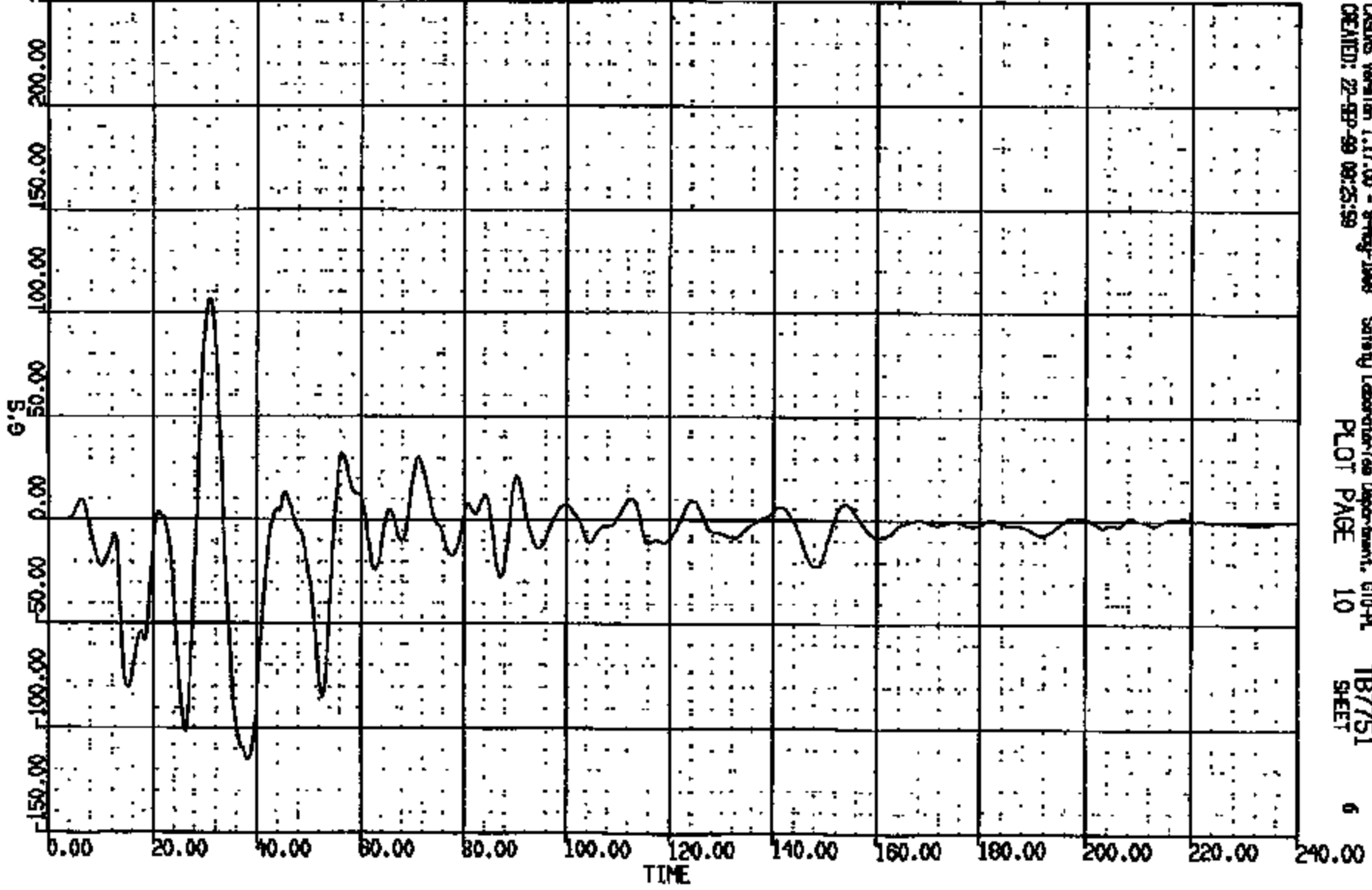
**1.0 Vehicle Crush, Film Analysis and/or Instrumentation Data**

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

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

CR R: 11604 TO: TB751 DATE: 99022 09:18:30  
R001 D-188

(3) CR11604T C/RND #5 LONG 60C  
MAX = 106.4 at 30.80 MS MIN = -115.3 at 38.21 MS AXIS 1

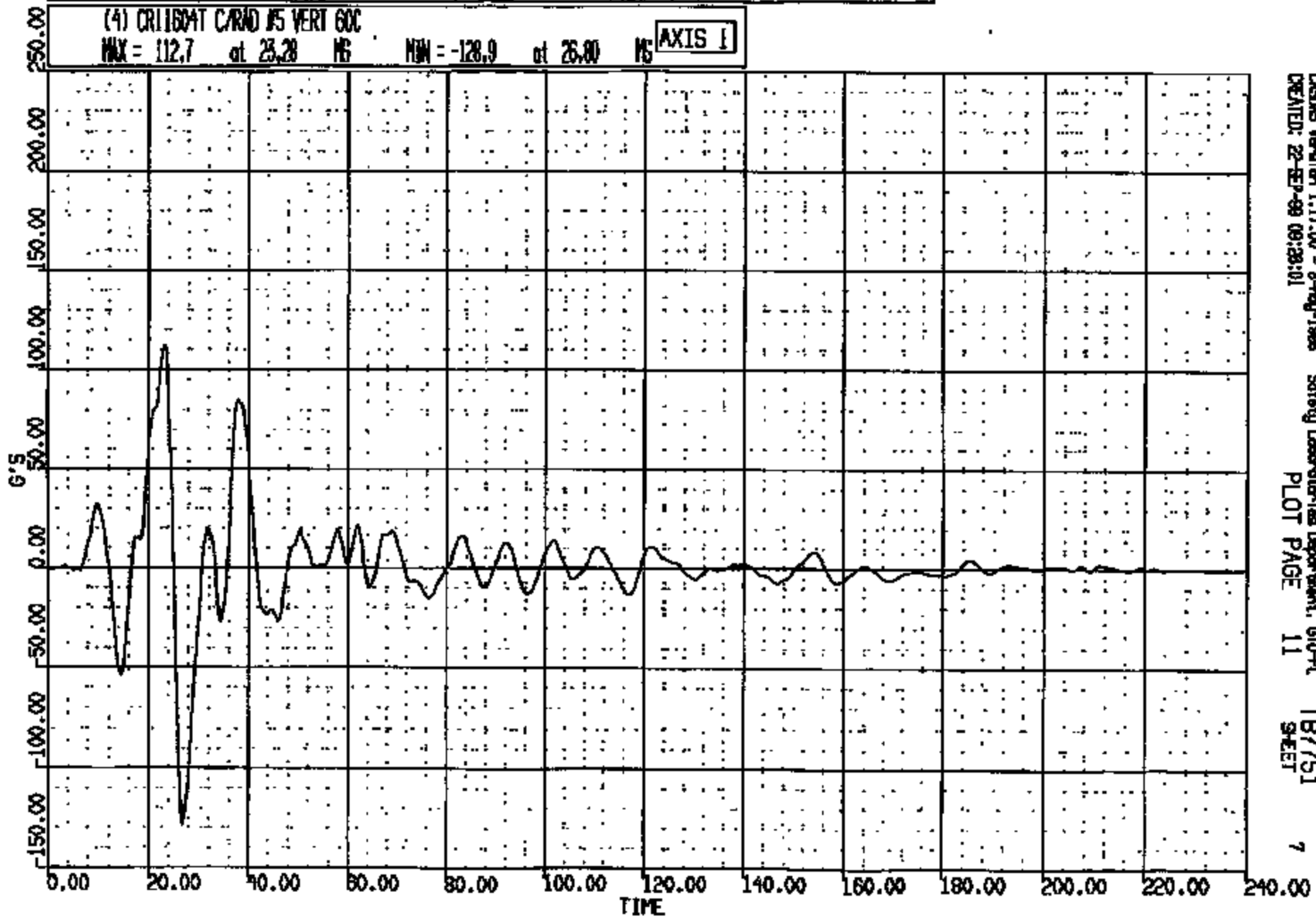


CRTS 0011604



CR R: 11604 TO: TB7751 DATE: 890922 09:13:39  
2001 D-188

(4) CR11604T CARNO #5 VERT 60C  
MAX = 112.7 at 23.28 MS MIN = -128.9 at 26.80 MS **AXIS 1**



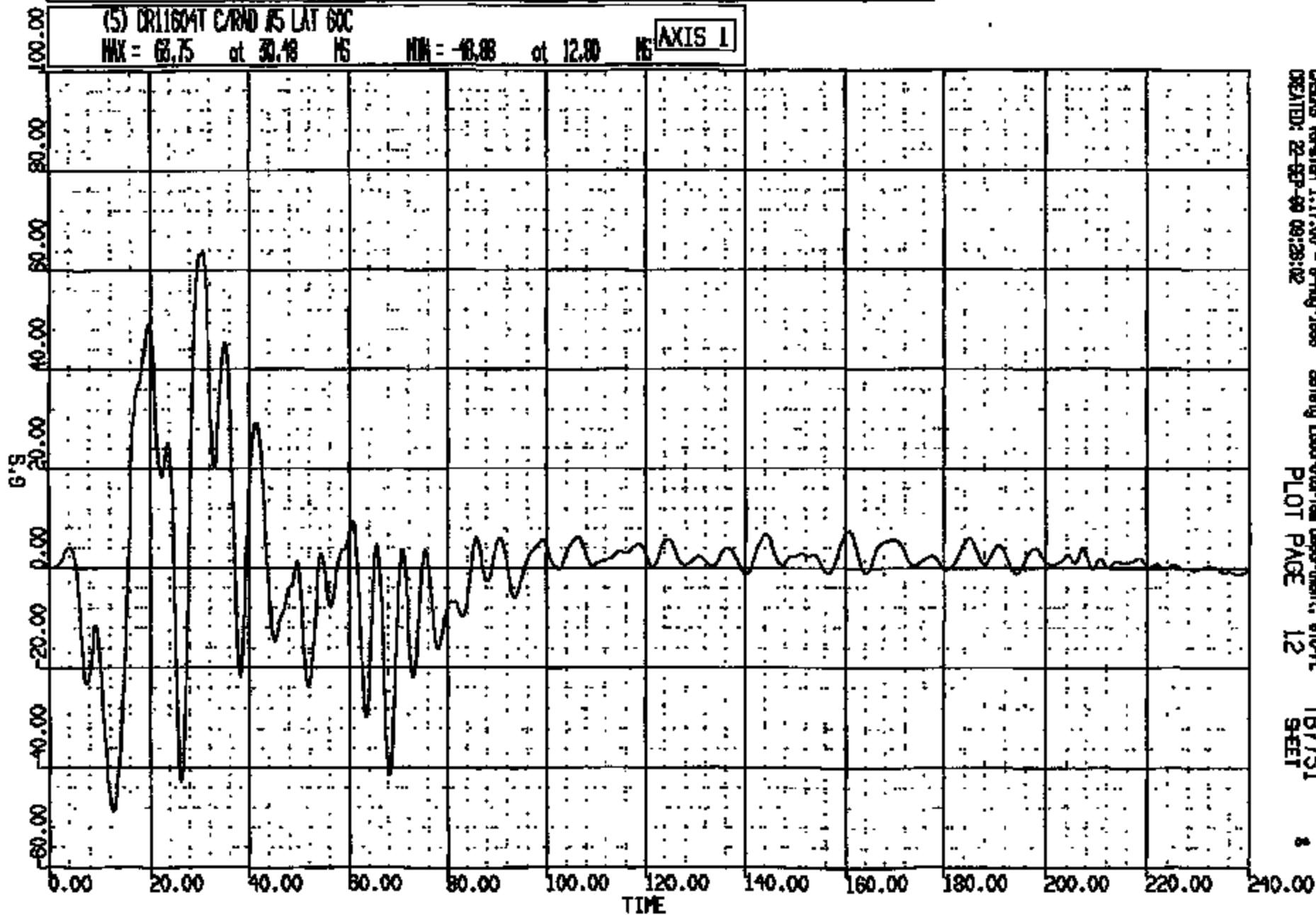
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CR R: 11604 TO: T87751 DATE: 890222 09:13:39  
2001 D-188

(5) CR11604T CARD #5 LAT 60C

MAX = 68.75 at 30.48 MS MIN = -48.88 at 12.80 MS

AXIS 1



CRSIS Version 1.17.00 - 8-May-1988  
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PLOT PAGE 12

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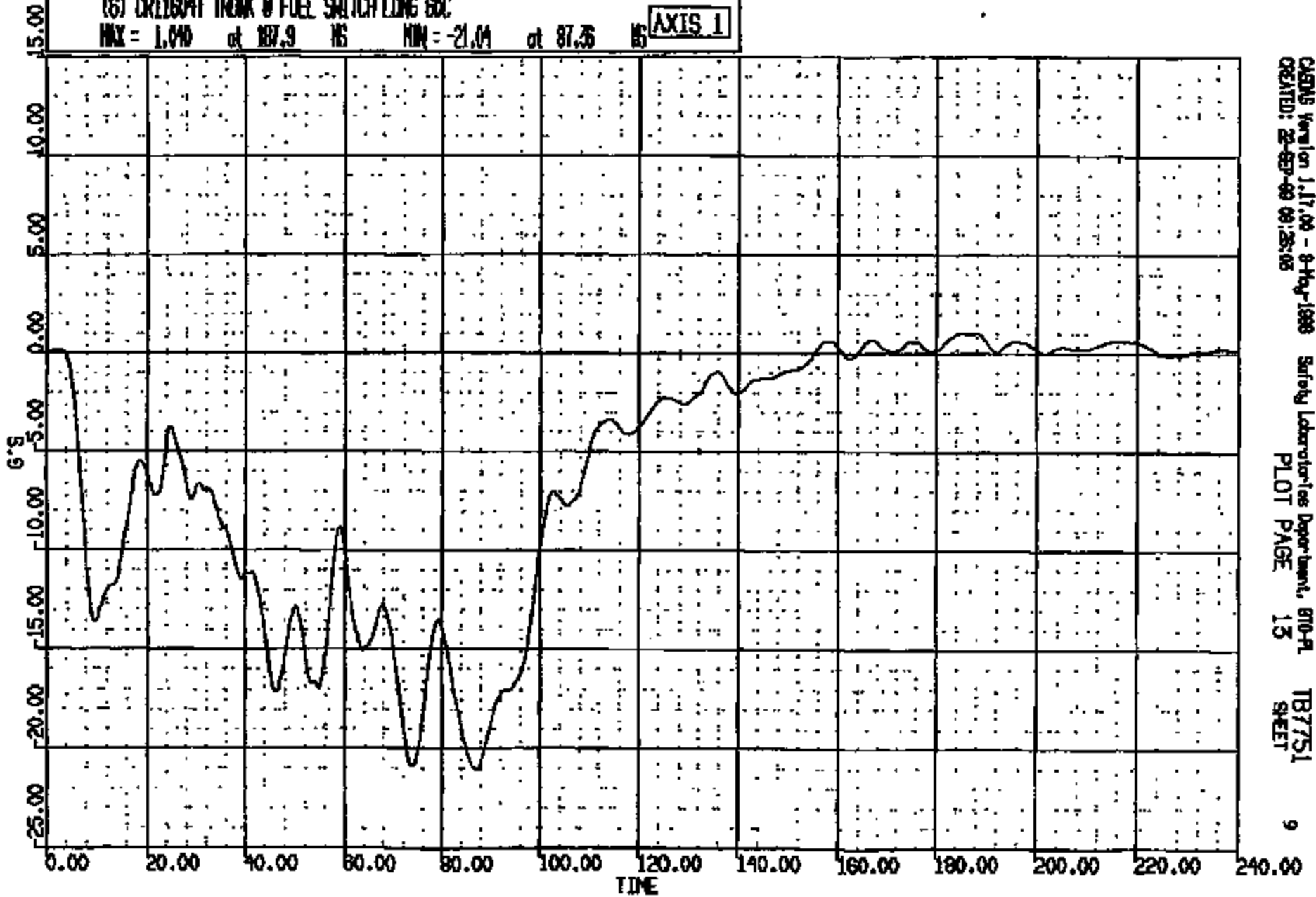
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CR R: 11604 TO: TB7751 DATE: 990922 09:15:59  
2001 D-189

(6) CR11604T TRAK @ FUEL SWITCH LONG 60C

MAX = 1.00 at 197.9 MS MIN = -21.04 at 87.36 MS

AXIS 1



CASDS Version 1.17.00 - 9-May-1998  
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Safety Laboratories Department, 810-PL

PLOT PAGE 13

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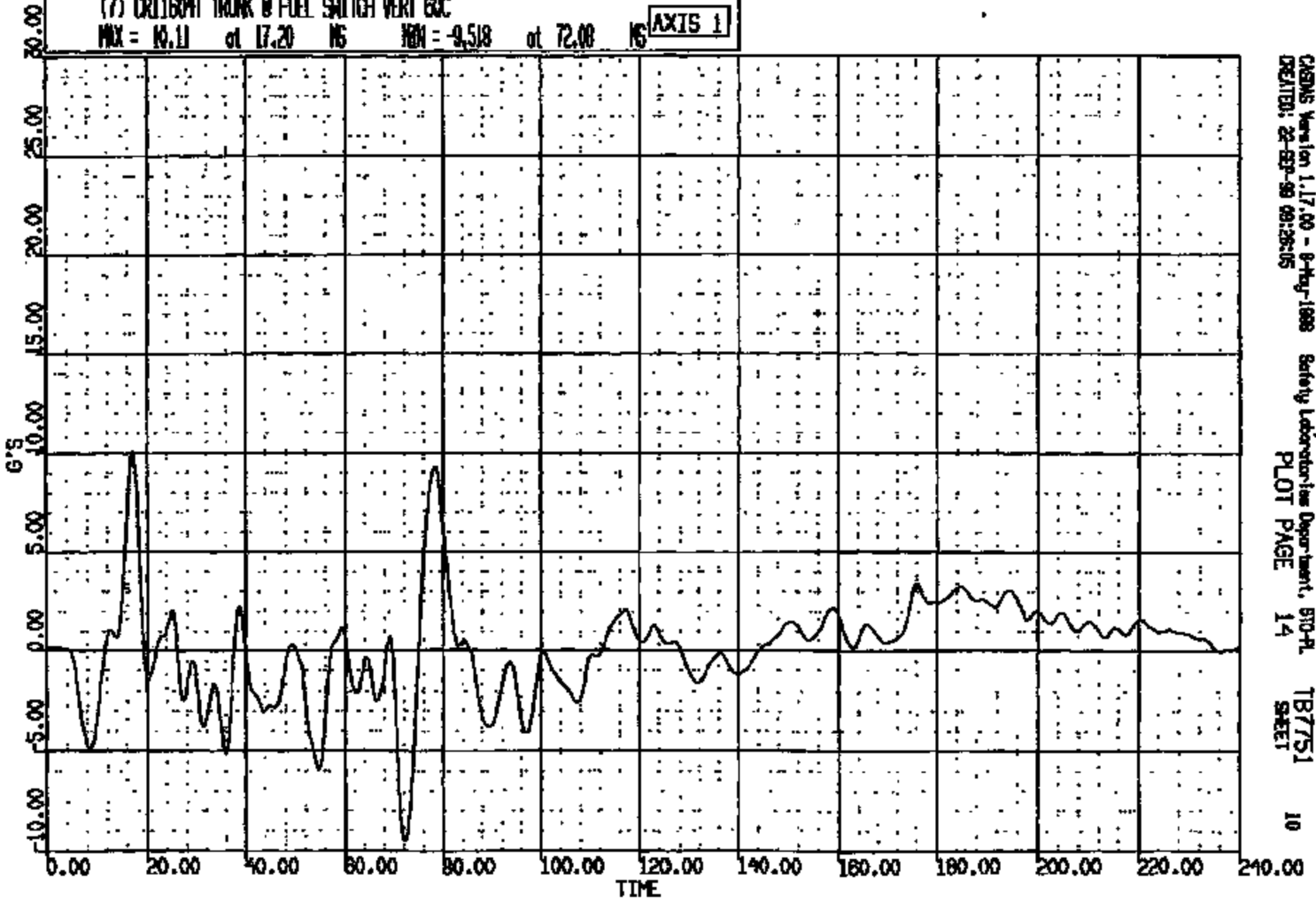
CRTS 0011604

CR R: 11804 TO: TB7751 DATE: 990922 09:15:59  
2001 D-188

(7) CR11604T TRUNK @ FUEL SWITCH VERT GOC

MAX = 10.11 at 17.20 MS MIN = -9.518 at 72.00 MS

AXIS 1



CASIMS Version 1.17.00 - 8-May-1999  
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Safety Laboratories Department, BIT-PL  
PLOT PAGE 14

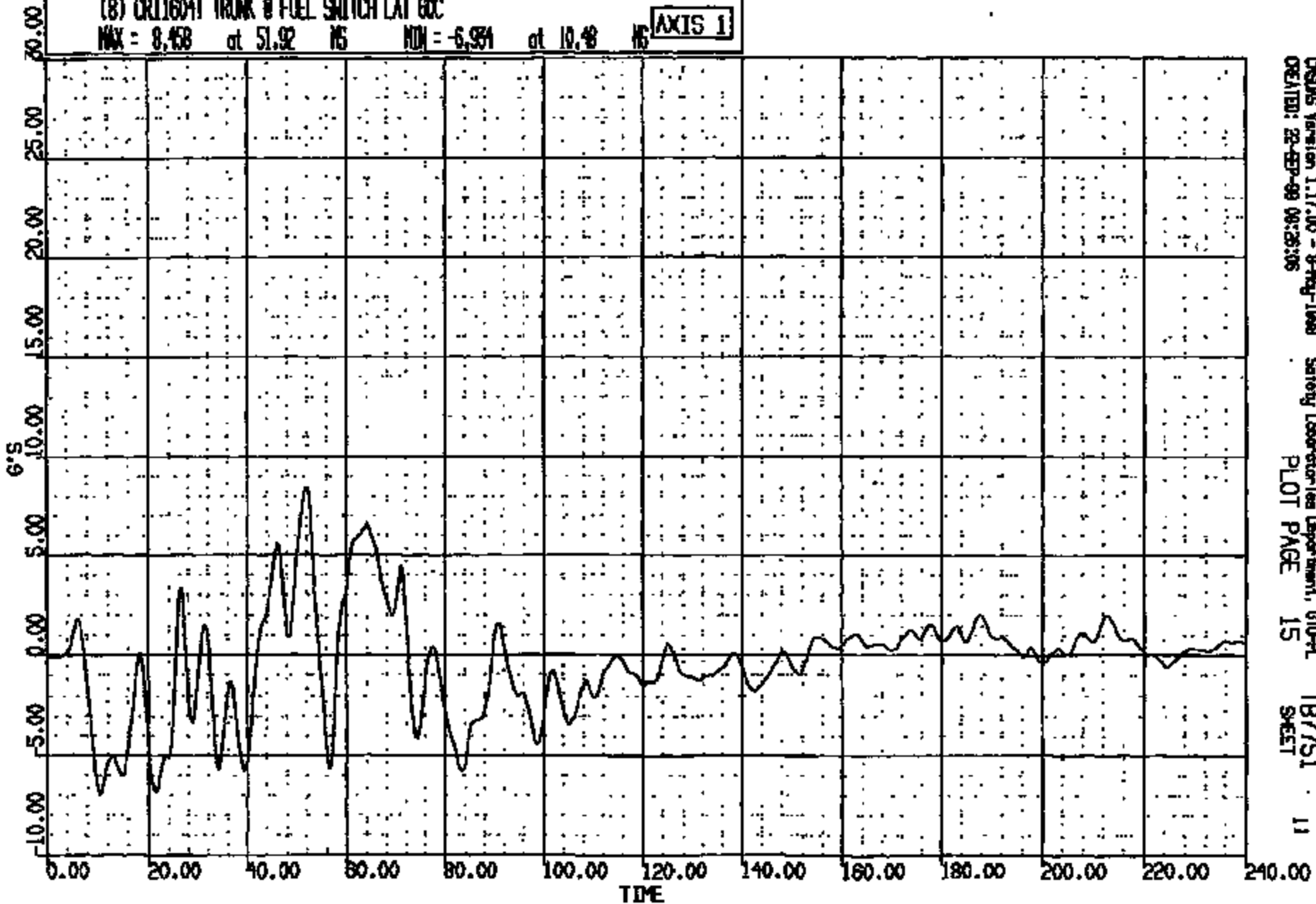
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CRTS 0011604

CR R: 11604 TO: TB7751 DATE: 990922 09:15:59  
2001 D-198

(8) CR11604T TRUNK @ FUEL SWITCH LAT 60C  
MAX = 8.458 at 51.92 MS MIN = -6.934 at 10.48 MS **AXIS 1**



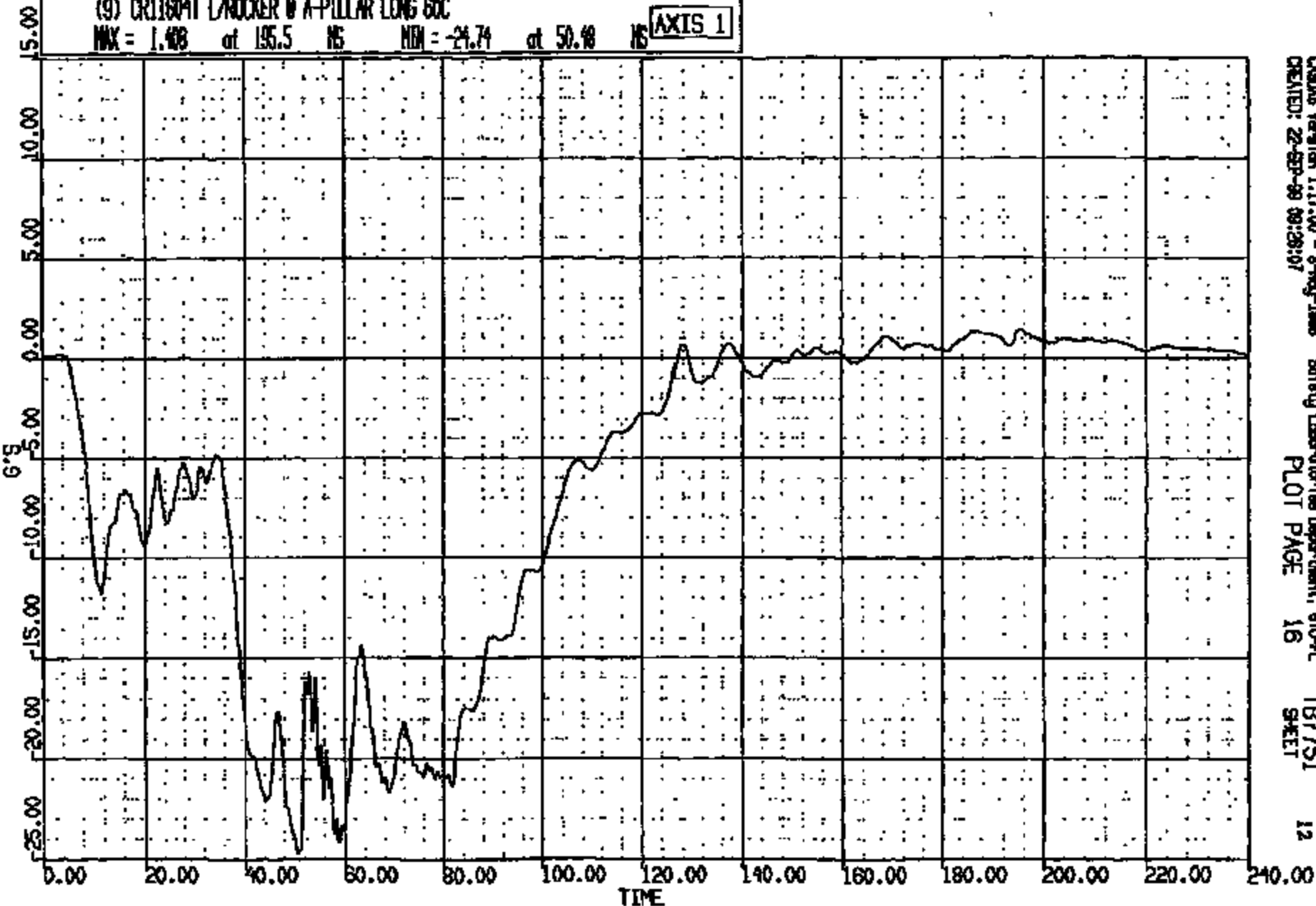
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CR R: 11604 TO: TB7751 DATE: 990922 09:13:39  
2001 D-188

(9) CR11604T L/ROCKER @ A-PILLAR LONG 60C  
MAX = 1.408 at 135.5 NS MIN = -24.74 at 50.40 NS

AXIS 1



CASDS Version 1.17.00 - 8-May-1998 Safety Laboratory Department, 610-9L  
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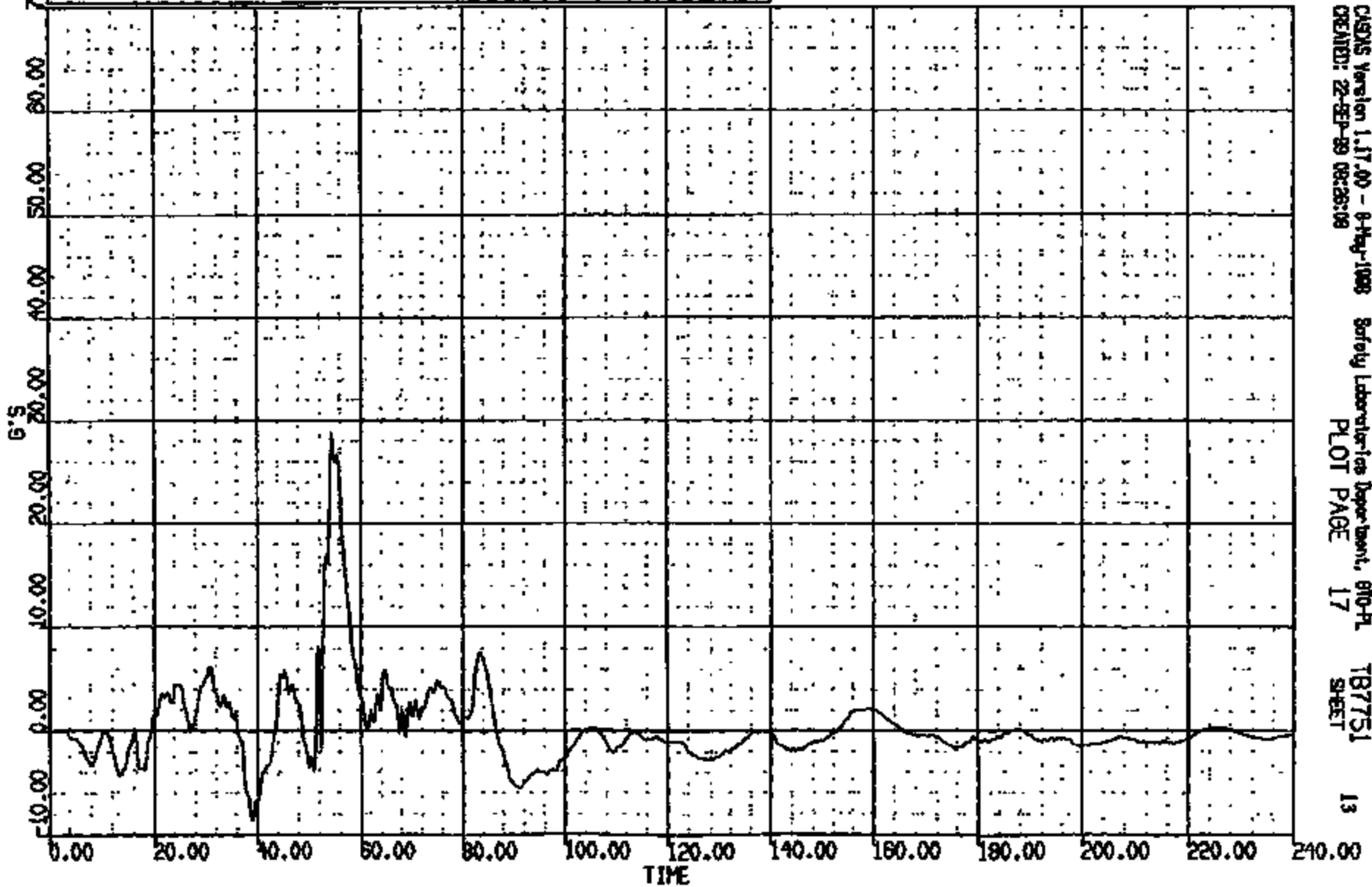
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CR R: 11604 TO: T87751 DATE: 990922 09:13:59  
2001 D-188

(10) CRT1604 / HOCKER @ A-PILLAR VERT 60C

MAX = 28.61 at 54.56 MS MIN = -0.061 at 38.96 MS

AXIS 1



CHSIS Version 1.17.00 - 8-May-1998  
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Safety Laboratories Department, 610-PL  
PLOT PAGE 17

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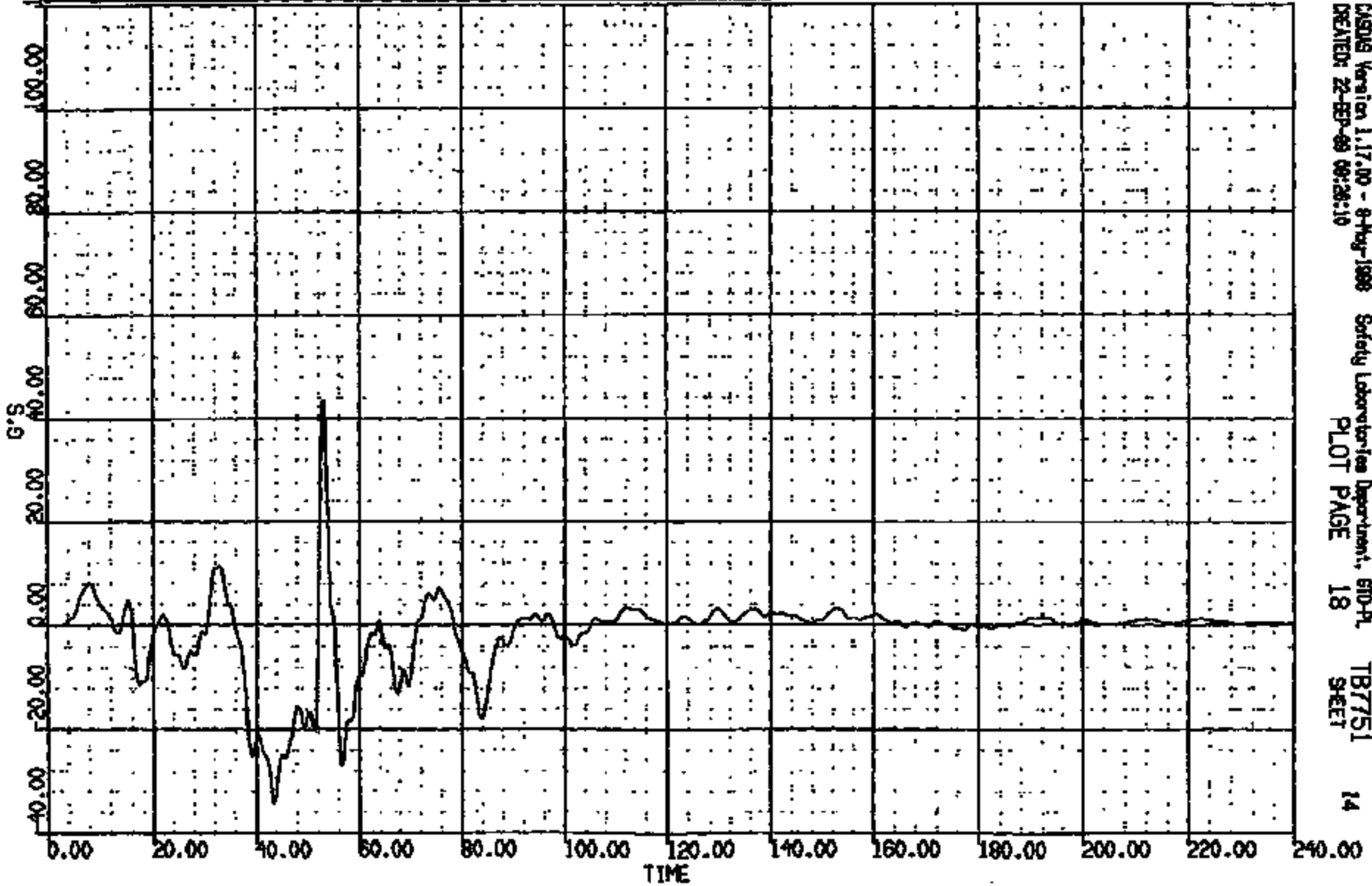
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CR R: 11804 TO: TB7751 DATE: 890922 09:15:30  
2001 D-188

(11) COLLISAT L/ROCKER @ A-PILLAR LAT 60C

MAX = 43.59 at 53.04 NS MIN = -34.72 at 43.52 NS

AXIS 1



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Safety Laboratories Department, SLD-PL  
PLOT PAGE 18

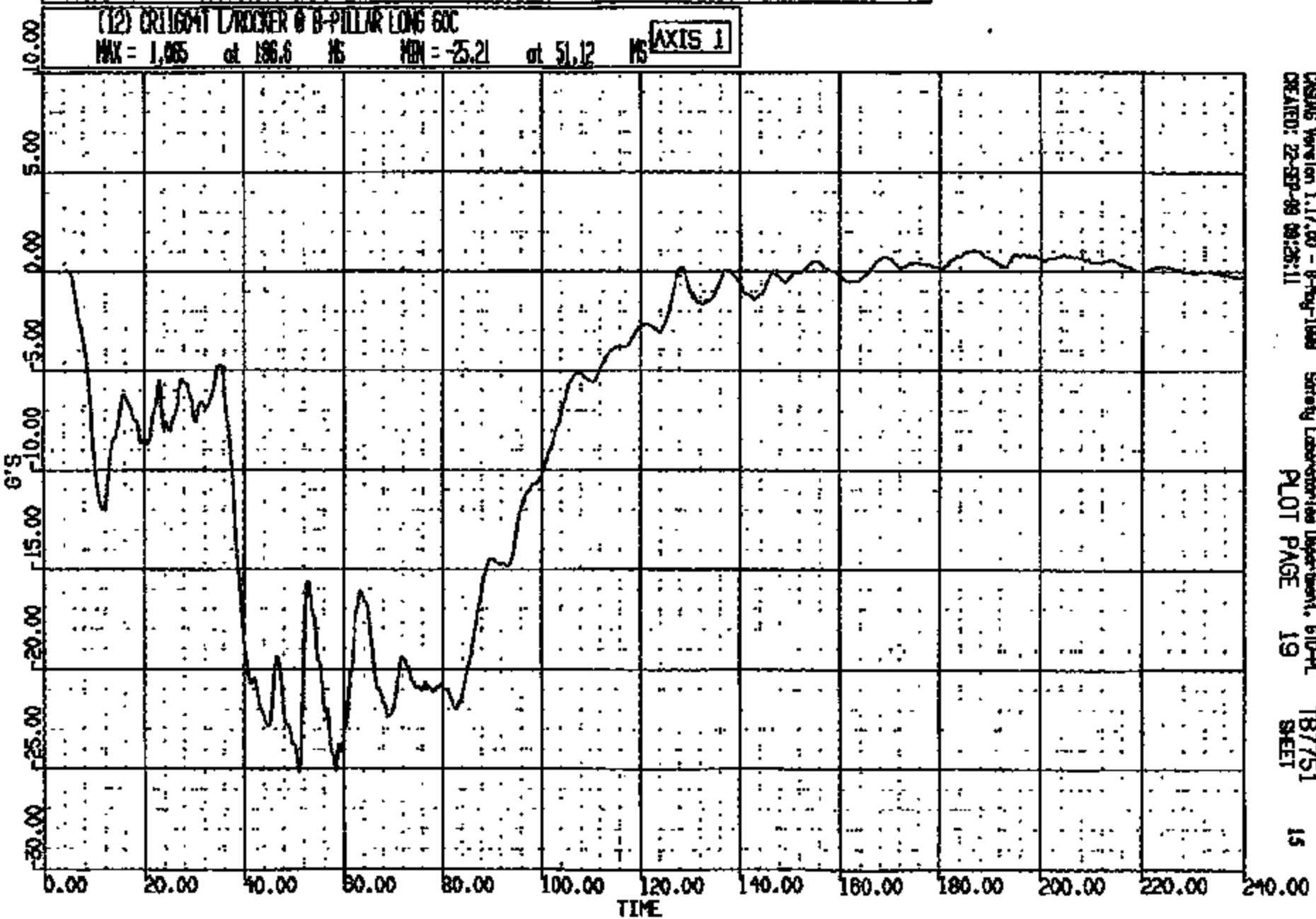
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2001 D-188



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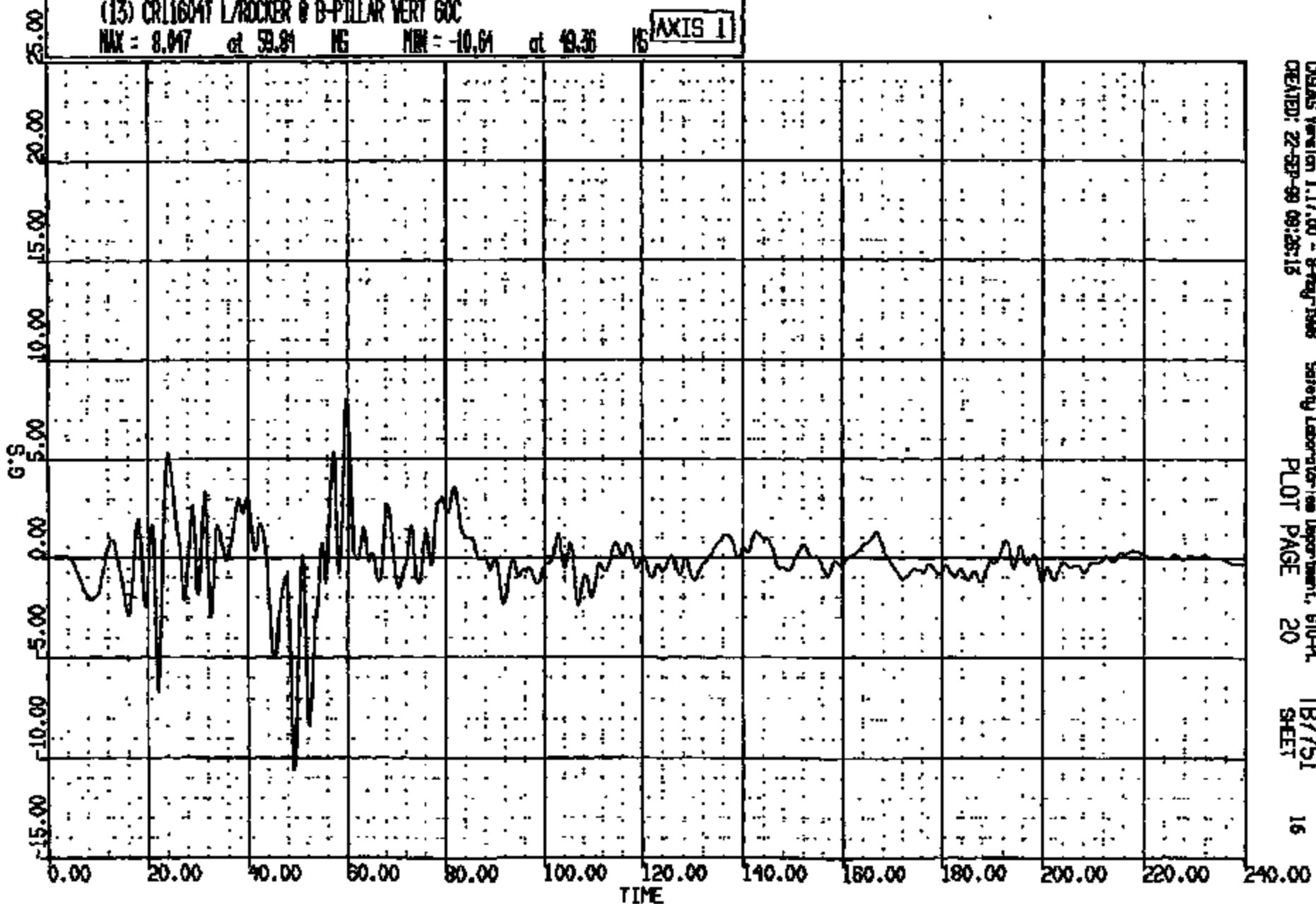
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NO01 D-198

(13) CR11604 L/ROCKER @ B-PILLAR VERT GOC

MAX = 8.017 at 59.81 MS MIN = -10.64 at 49.36 MS

AXIS 1



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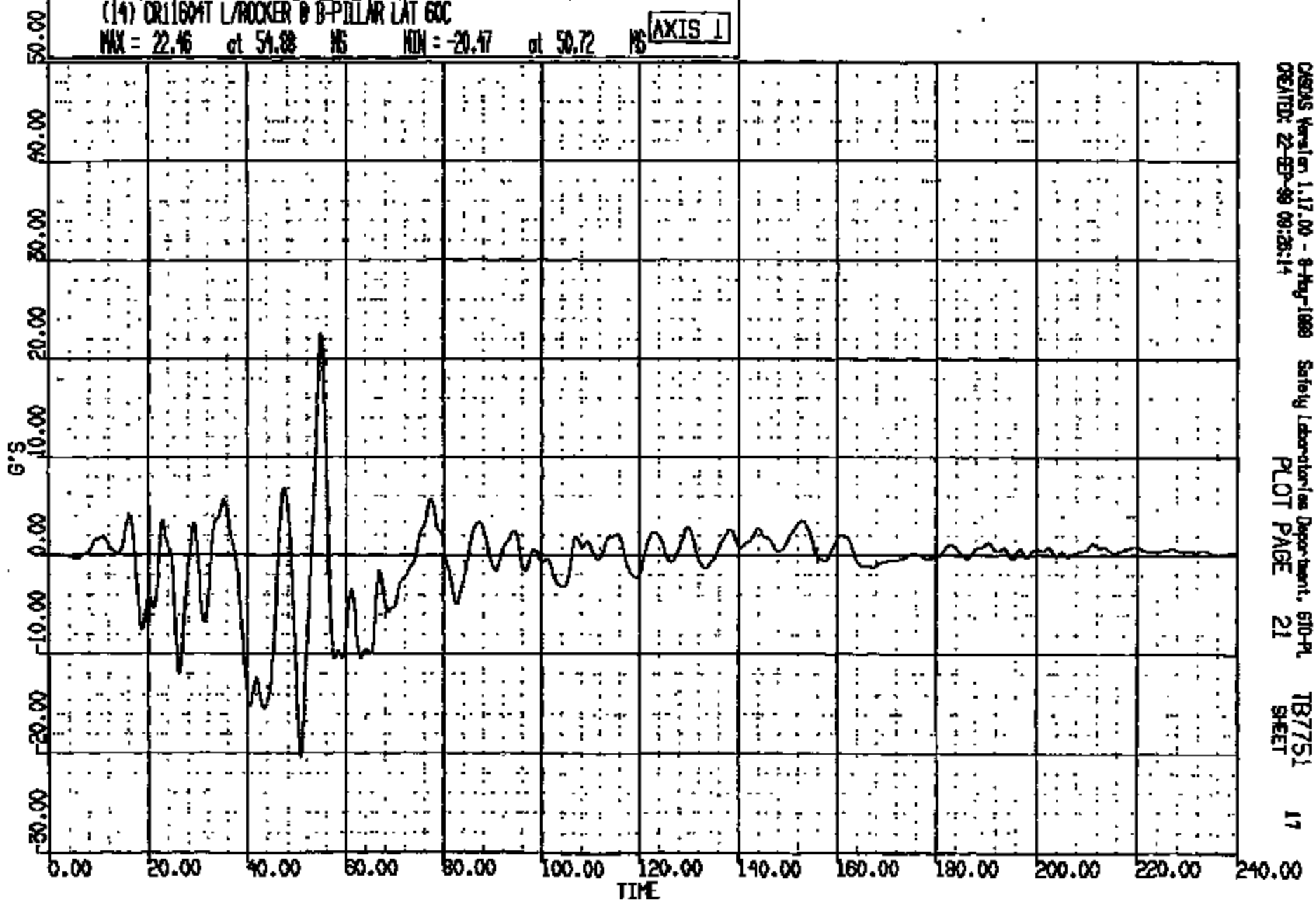
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CR R: 11804 TO: TB7751 DATE: 890922 09:13:59  
2001 D-188

(14) CR11604T L/ROCKER @ B-PILLAR LAT 60C

MAX = 22.46 at 51.88 MS MIN = -20.47 at 50.72 MS

AXIS 1

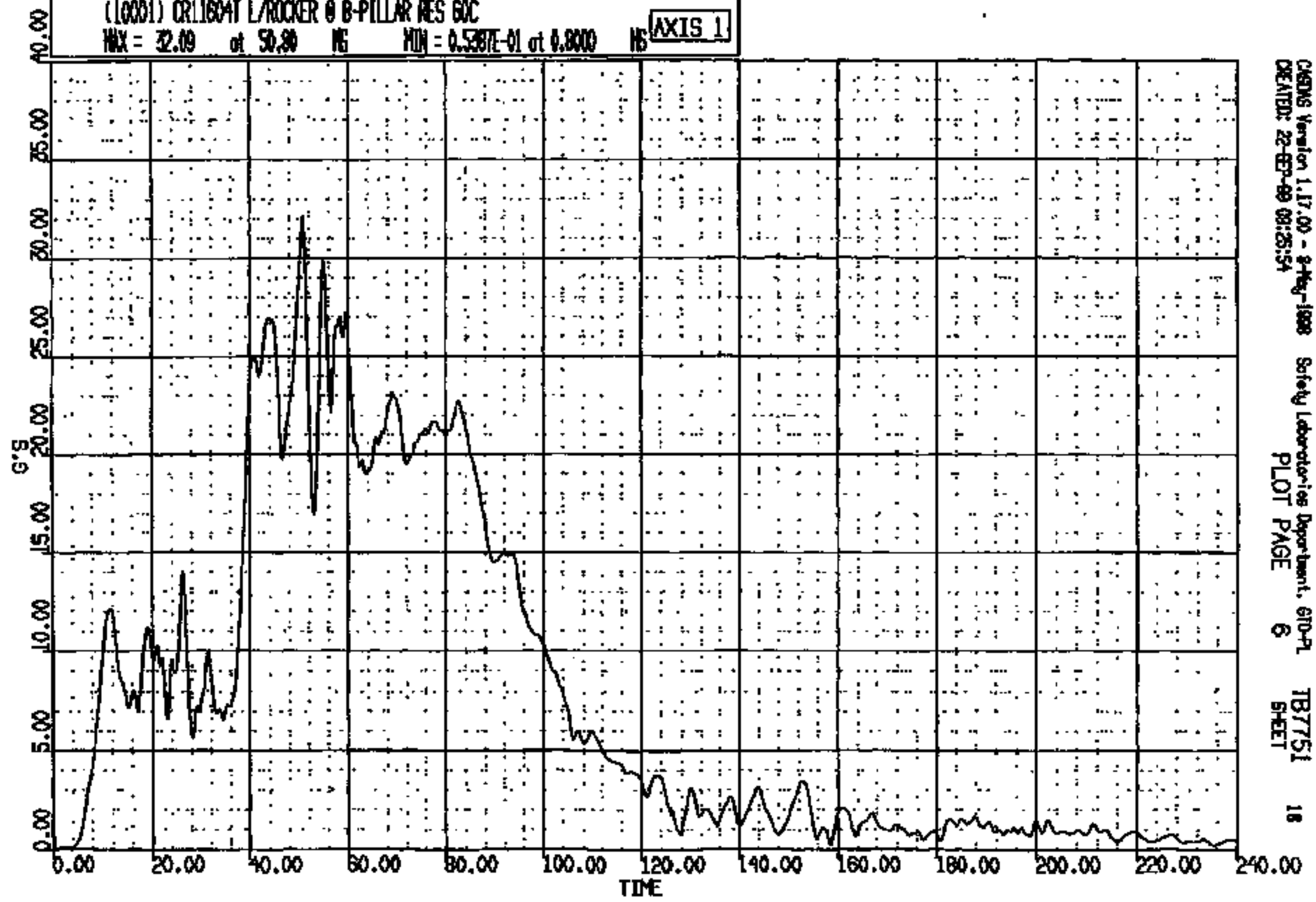


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CRIS 0011604

CR R: 11804 TO: T87751 DATE: 890922 09:13:39  
2001 D-198

(1000) CR11804T L/ROCKER @ B-PILLAR RES 60C  
MAX = 32.09 at 50.80 NS MIN = 0.5387E-01 at 0.0000 NS **AXIS 1**



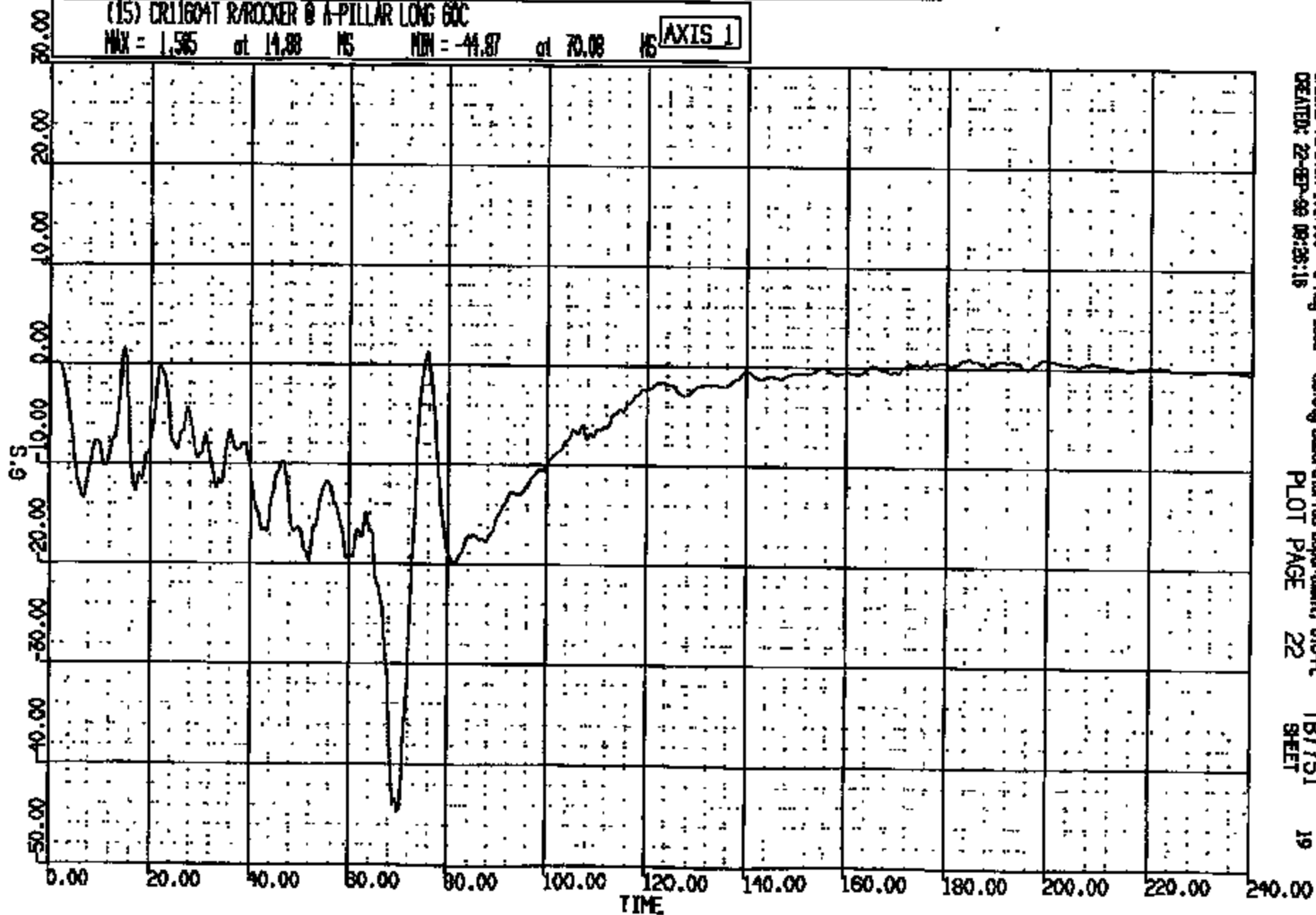
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CRTS 0011604

CR R: 11604 TO: TB7751 DATE: 990922 09:13:39  
2001 D-166

(15) CR11604T R/ROCKER @ A-PILLAR LONG 60C

MAX = 1.565 at 14.88 MS MIN = -44.87 at 70.08 MS **AXIS 1**

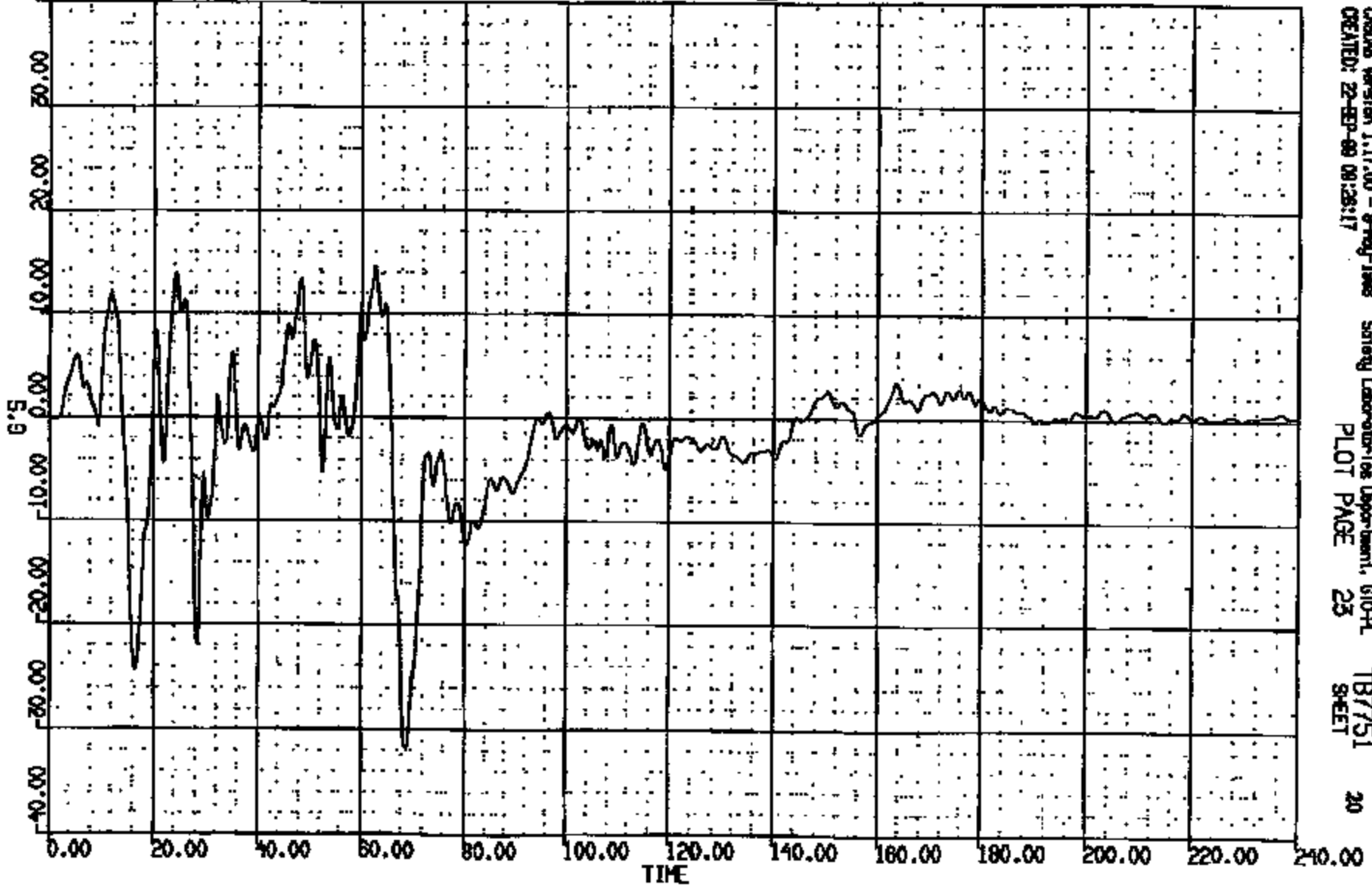


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CR R: 11604 TO: TB7751 DATE: 890922 08:15:59  
MOO1 D-186

(16) CR116041 R/ROCKER @ A-PILAR VERT GOC

MAX = 11.53 at 02.80 NS MIN = -31.91 at 09.01 NS AXIS 1



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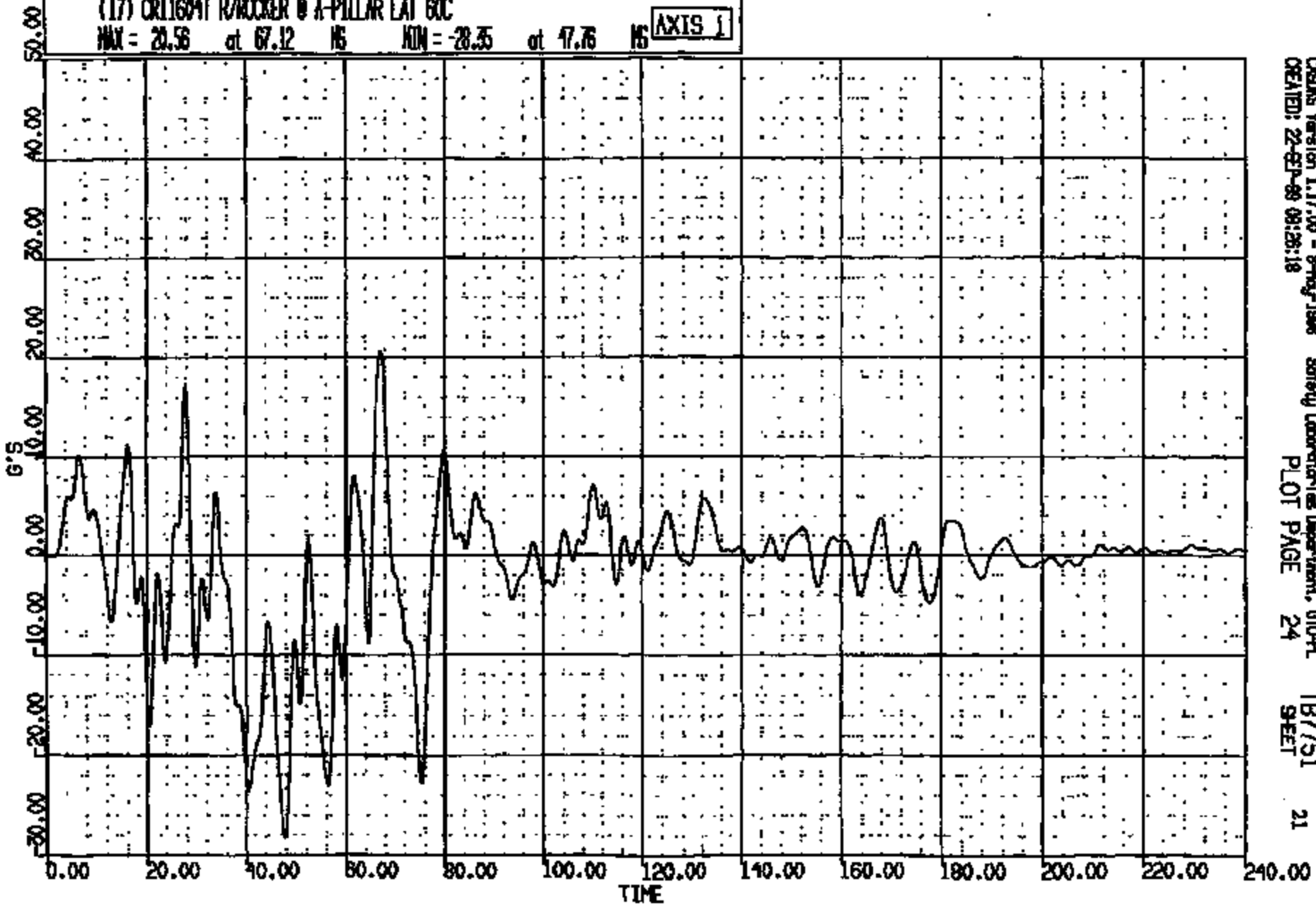
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(17) CR11604T R/ROCKER @ A-PILLAR LAT 60C

MAX = 20.56 at 67.12 NS MIN = -28.35 at 47.76 NS

AXIS 1



CRSMS Version 1.17.00 - 8-Aug-1988  
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Safety Laboratories Department, 610-PL  
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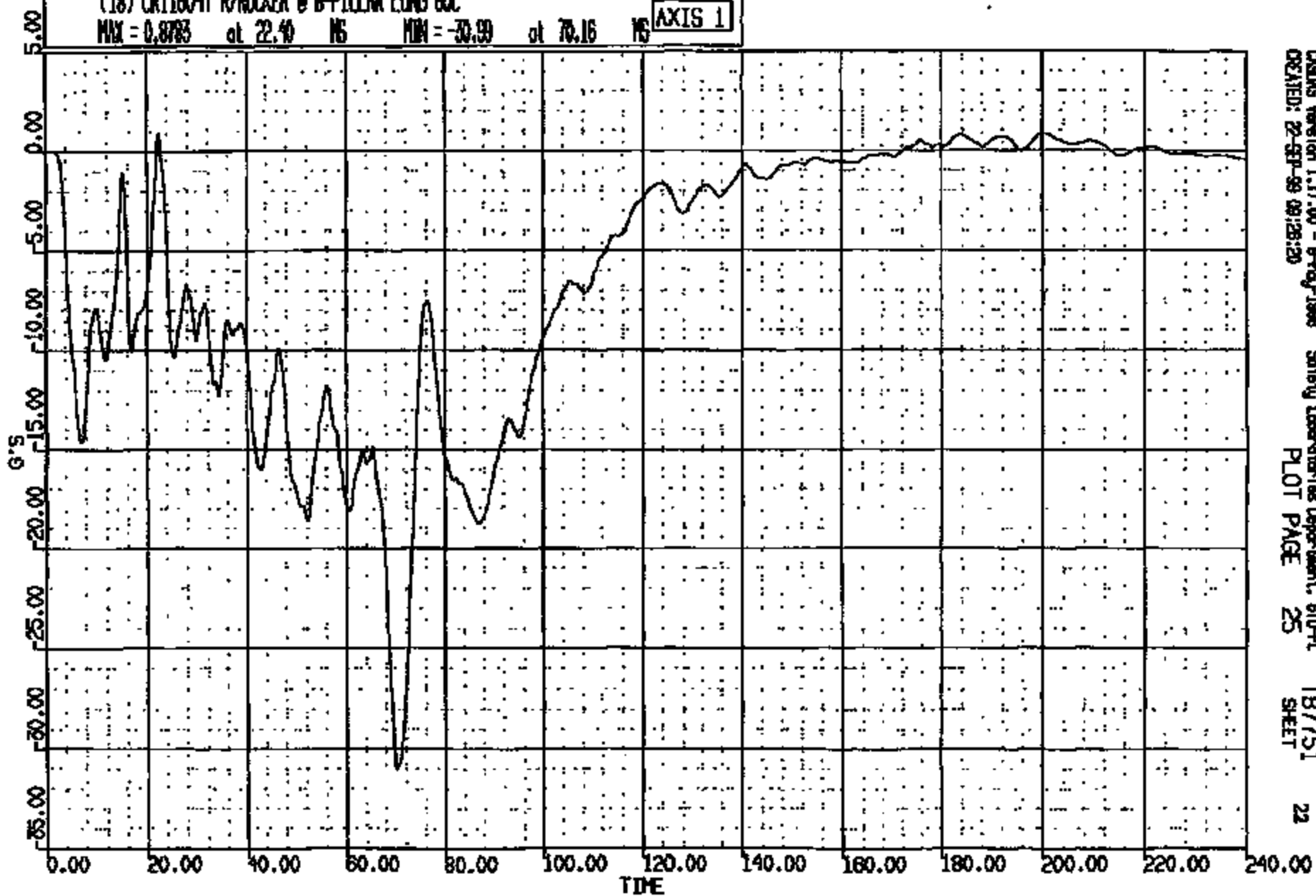
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CR #: 11804 TO: TB7751 DATE: 990922 09:15:59  
2001 D-188

(18) CR11604T R/ROCKER @ B-PILLAR LONG 60C

MAX = 0.8783 at 22.40 NS MIN = -30.99 at 70.16 NS

AXIS 1



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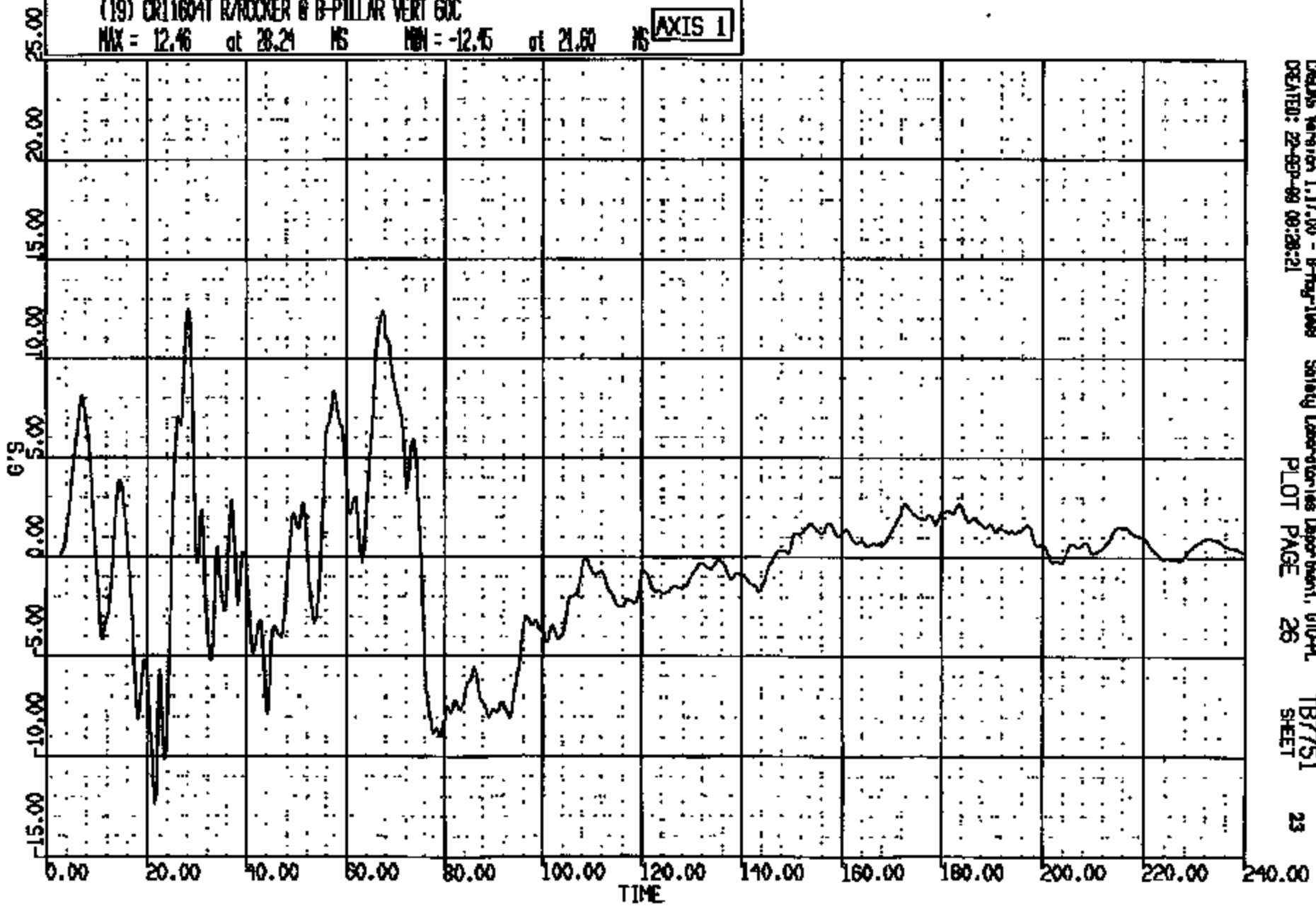
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CRIS 0011604



CR #: 11804 TO: TB7751 DATE: 990822 09:13:39  
2001 D-198

(19) CR11604T R/ROCKER @ B-PILLAR VERT GDC  
MAX = 12.46 at 28.24 MS MIN = -12.45 at 21.60 MS **AXIS 1**

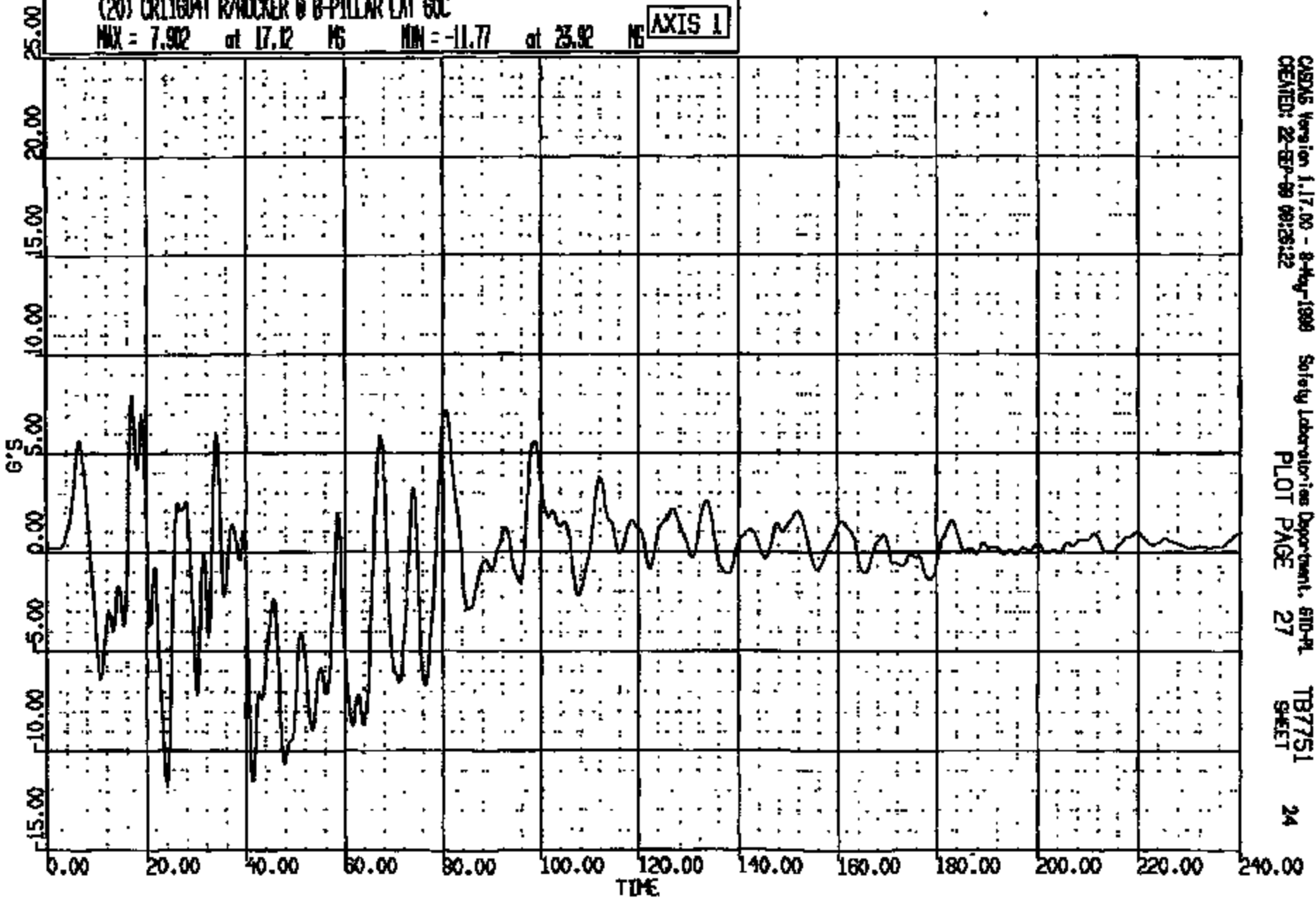


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CRTS 0011604

CR R: 11604 TO: TB7751 DATE: 990822 09:15:59  
2001 D-188

(20) CR11604T R/ROCKER @ B-PILLAR LAT 60C  
MAX = 7.902 at 17.12 MS MIN = -11.77 at 23.92 MS **AXIS 1**

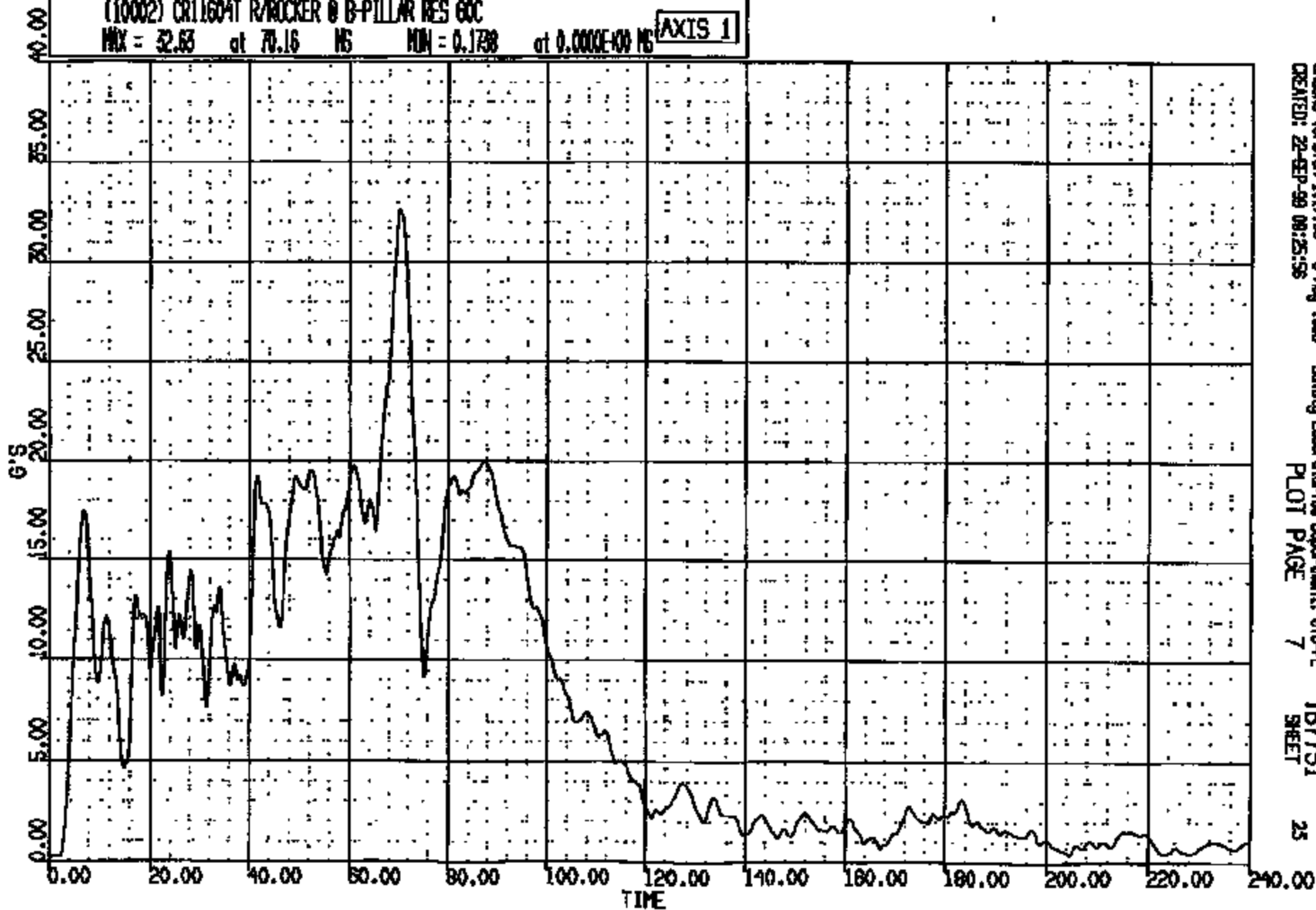


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CRIS 0011604

CR R: 11804 TO: T87751 DATE: 890822 08:15:59  
2001 0-188

(10002) CR11604T R/ROCKER @ B-PILLAR RES 60C  
MAX = 32.63 at 70.16 MS MIN = 0.1738 at 0.000E+00 MS **AXIS 1**

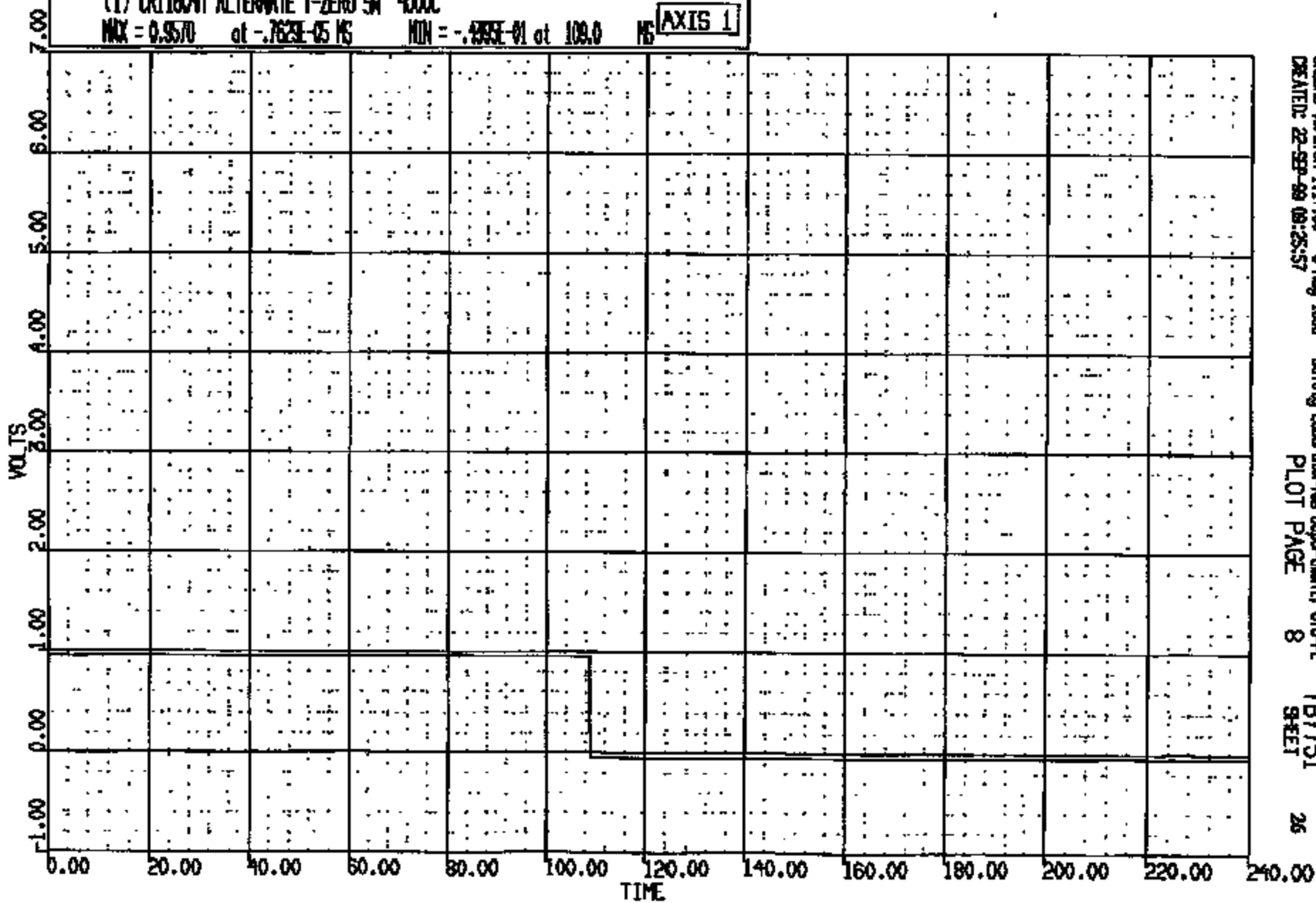


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CR11604

CR R: 11604 TD: TB7751 DATE: 890922 09:15:59  
2001 D-188

(1) CR11604T ALTERNATE T-ZERO SM 4000C  
MAX = 0.9570 at -7623E-05 MS MIN = -.4353E-01 at 109.0 MS **AXIS 1**

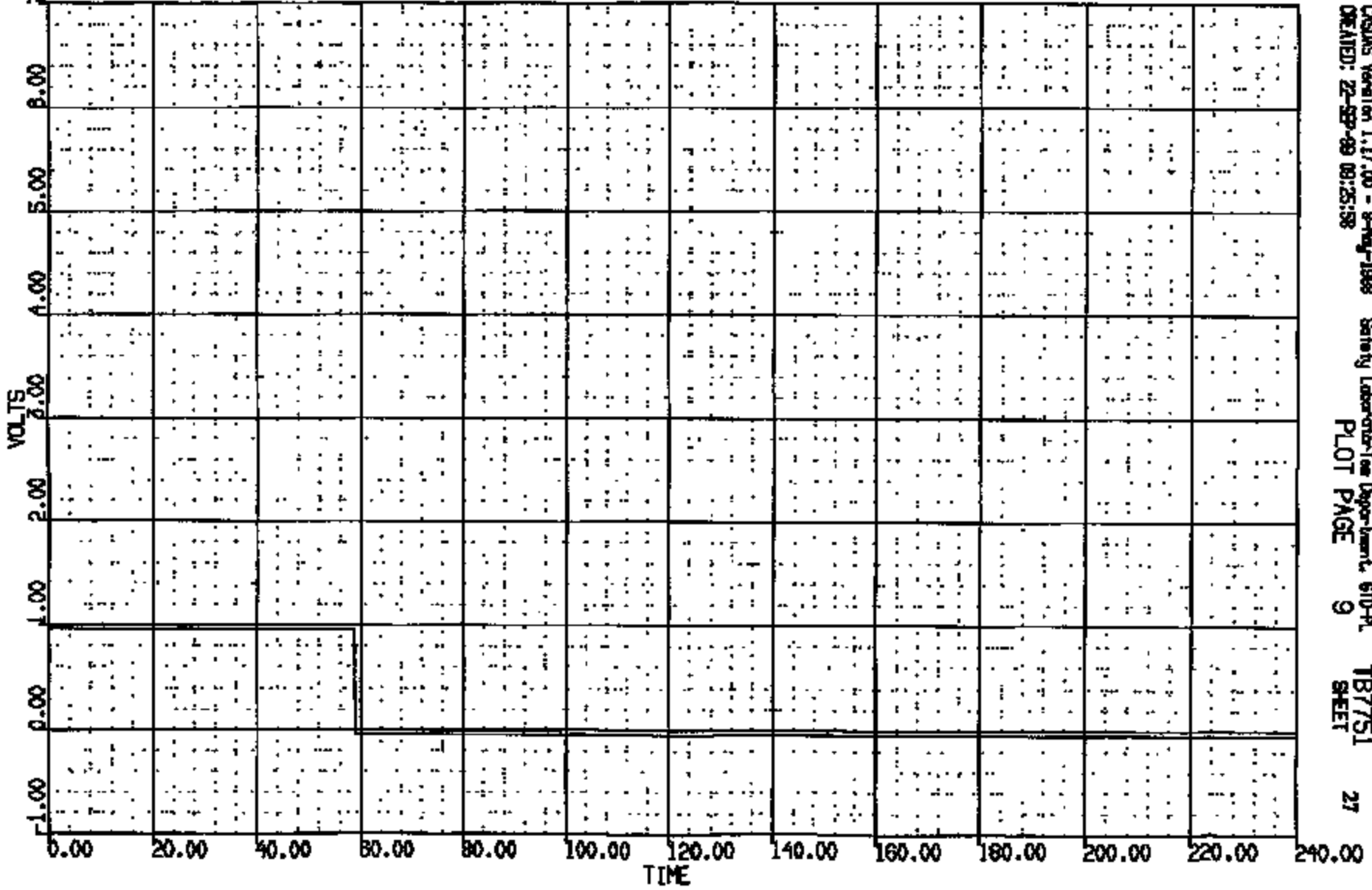


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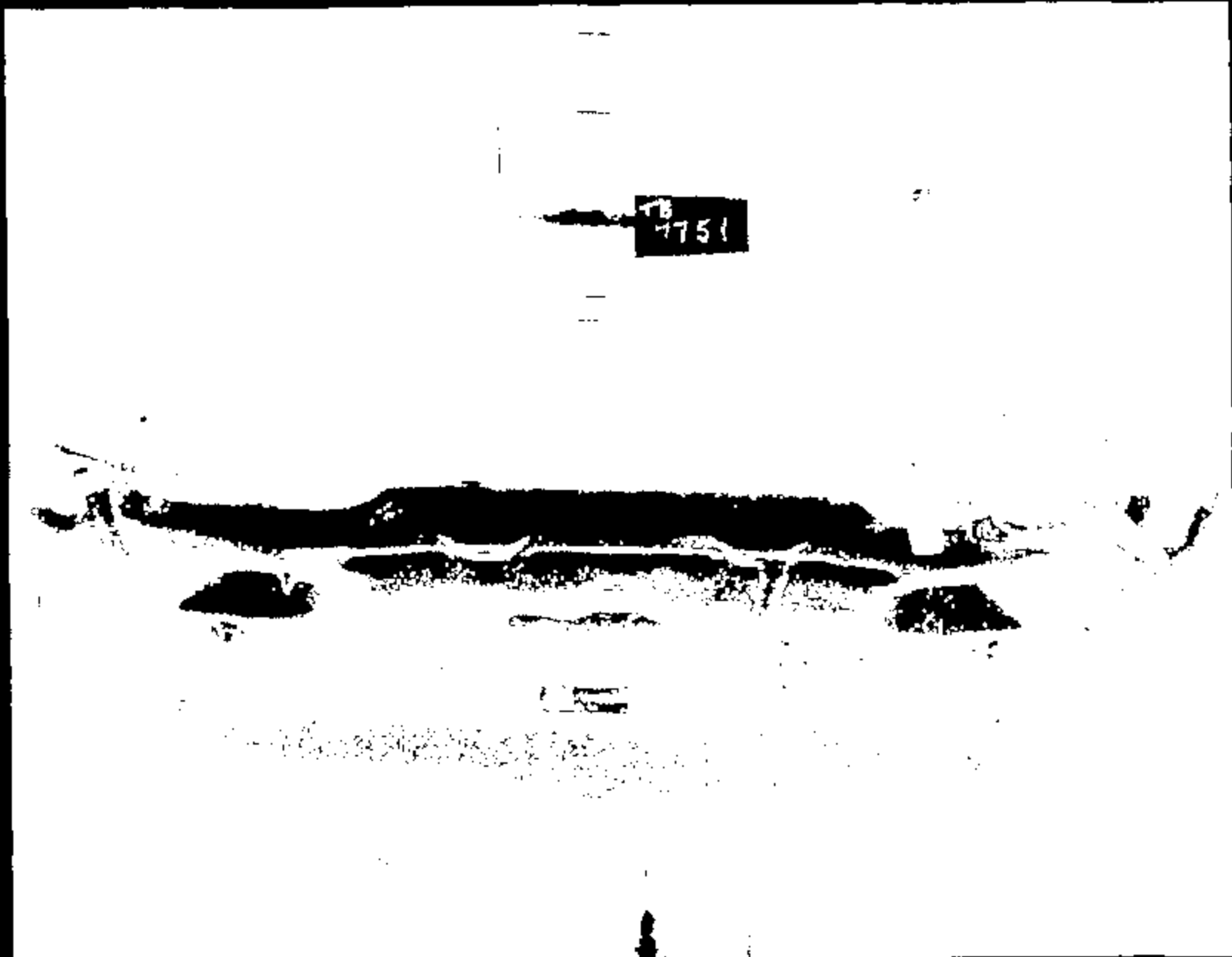
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2001 D-186

(2) CR11604 FUEL SHUT OFF (INERTIA) SW 400C  
MAX = 0.9570 at -.762E-05 NS MIN = -.493E-01 at 59.00 NS **AXIS 1**



CASYS Version 1.17.00 - 8-May-1998 Safety Laboratory Department, 610-PL TB7751 27  
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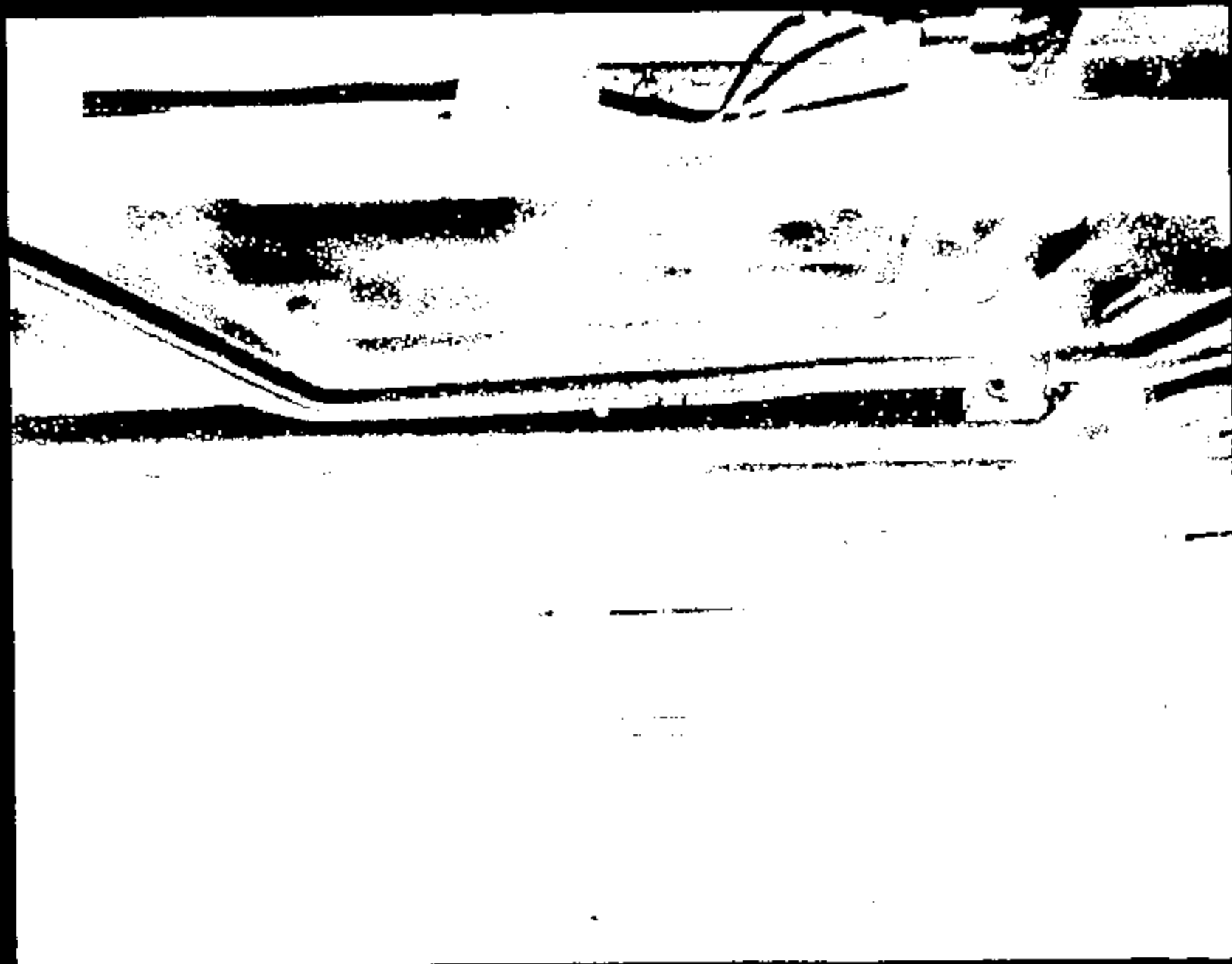
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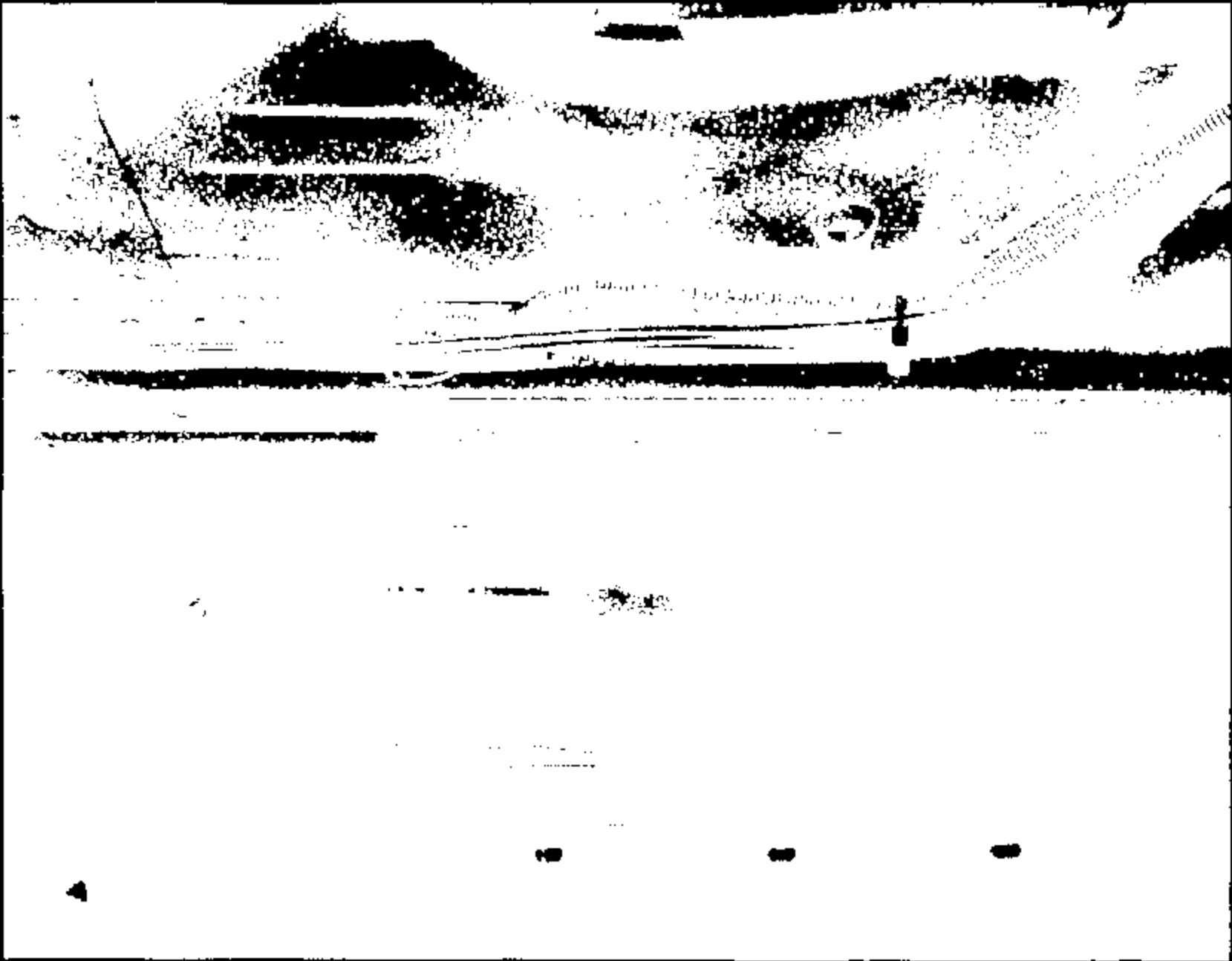
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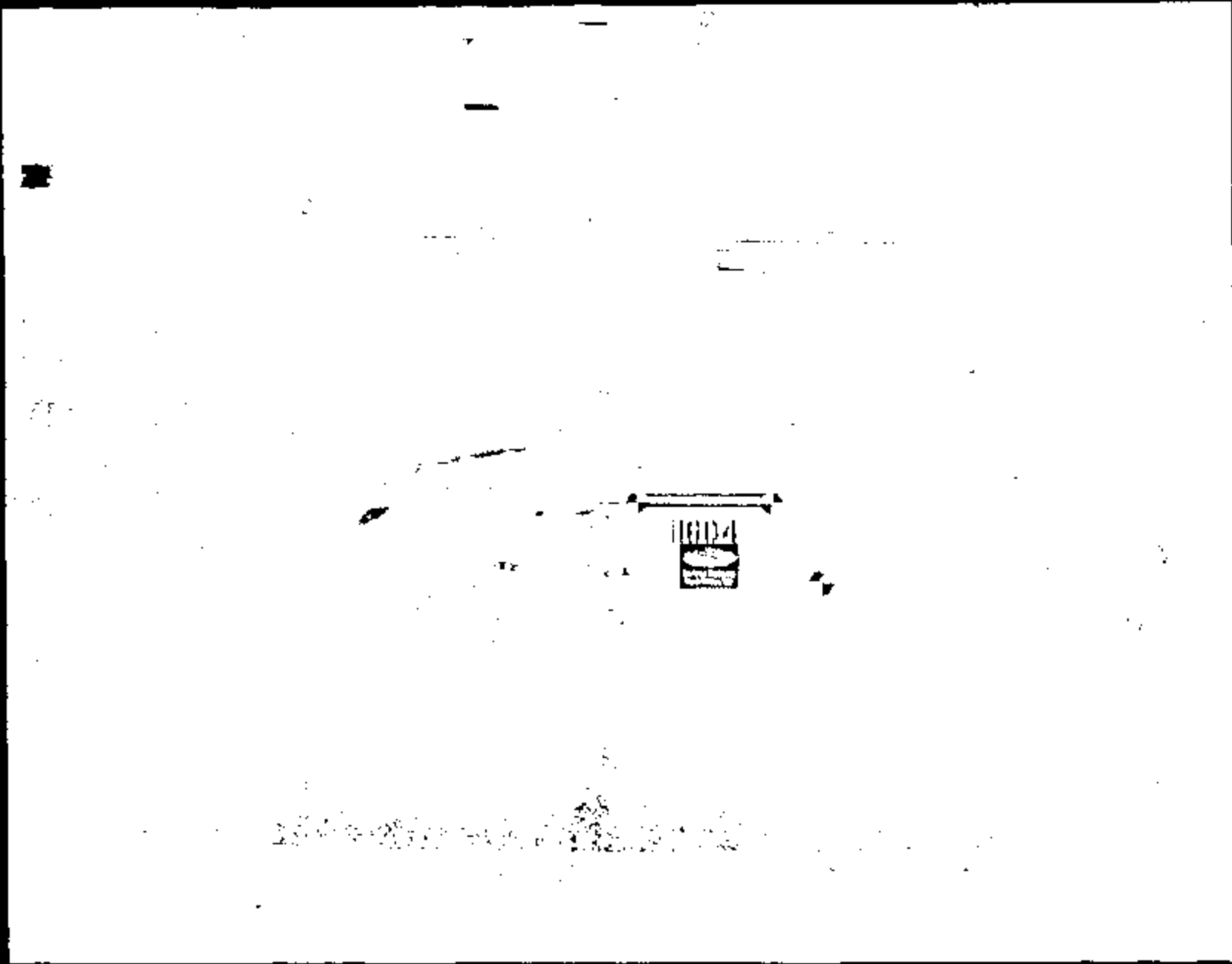
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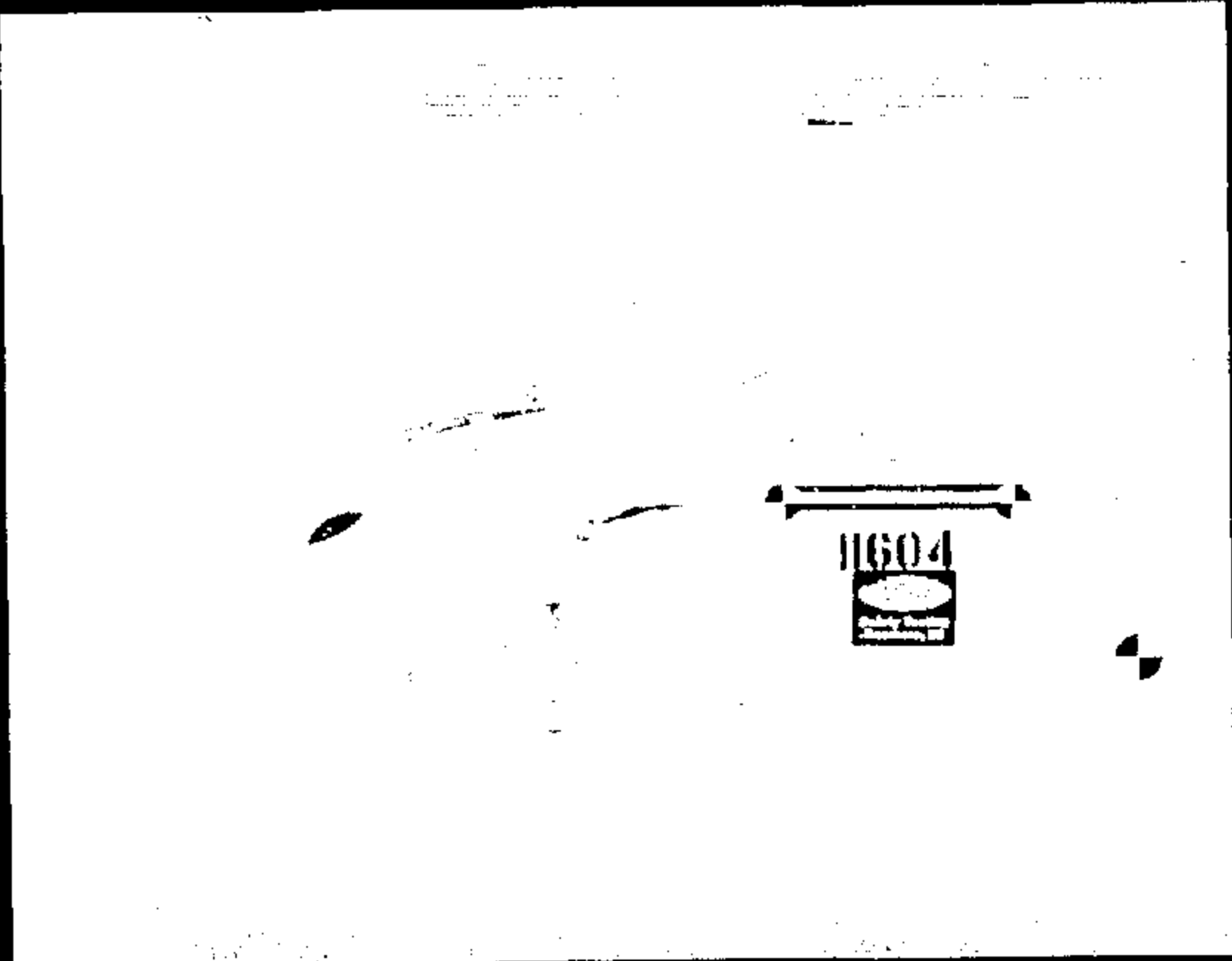
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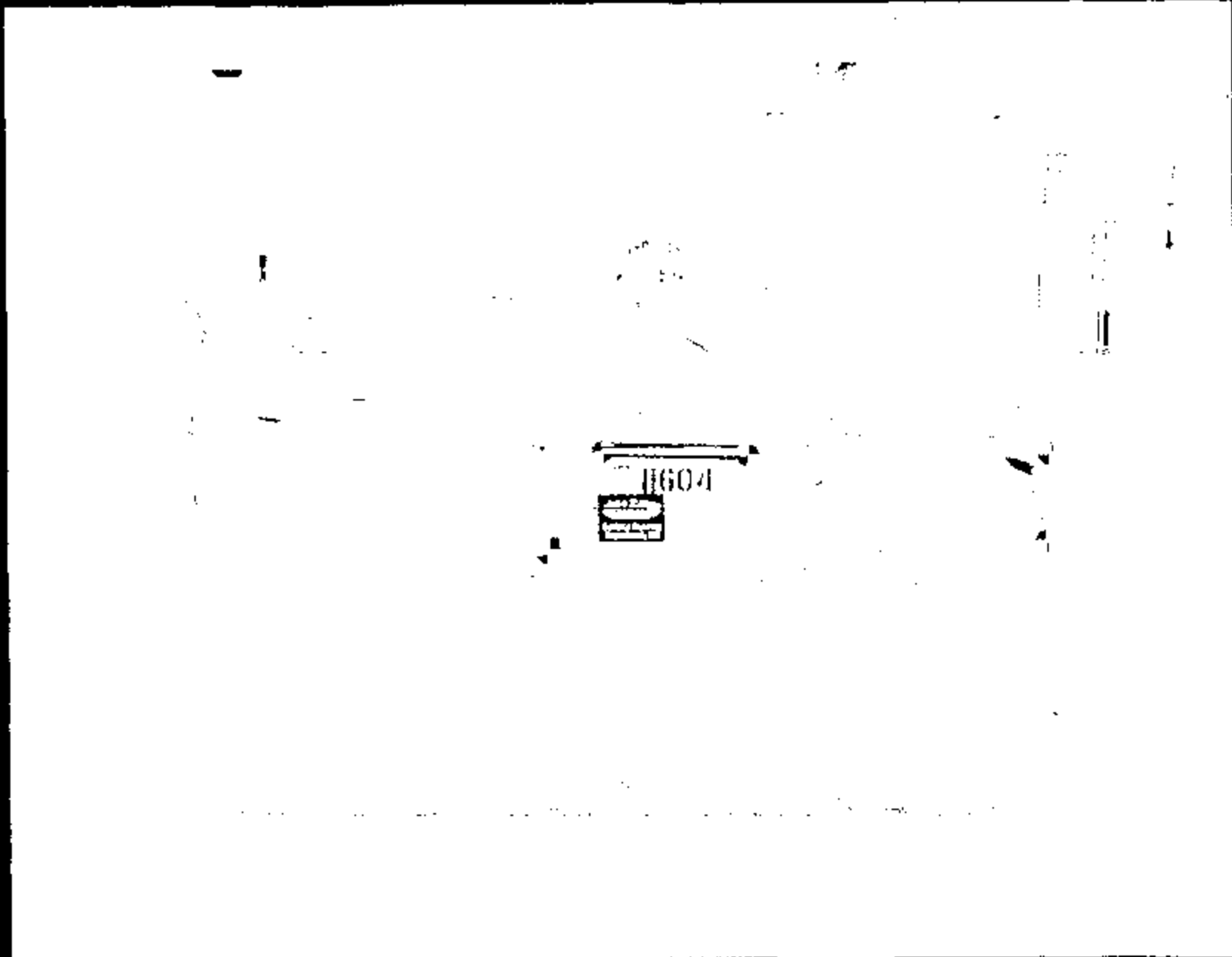
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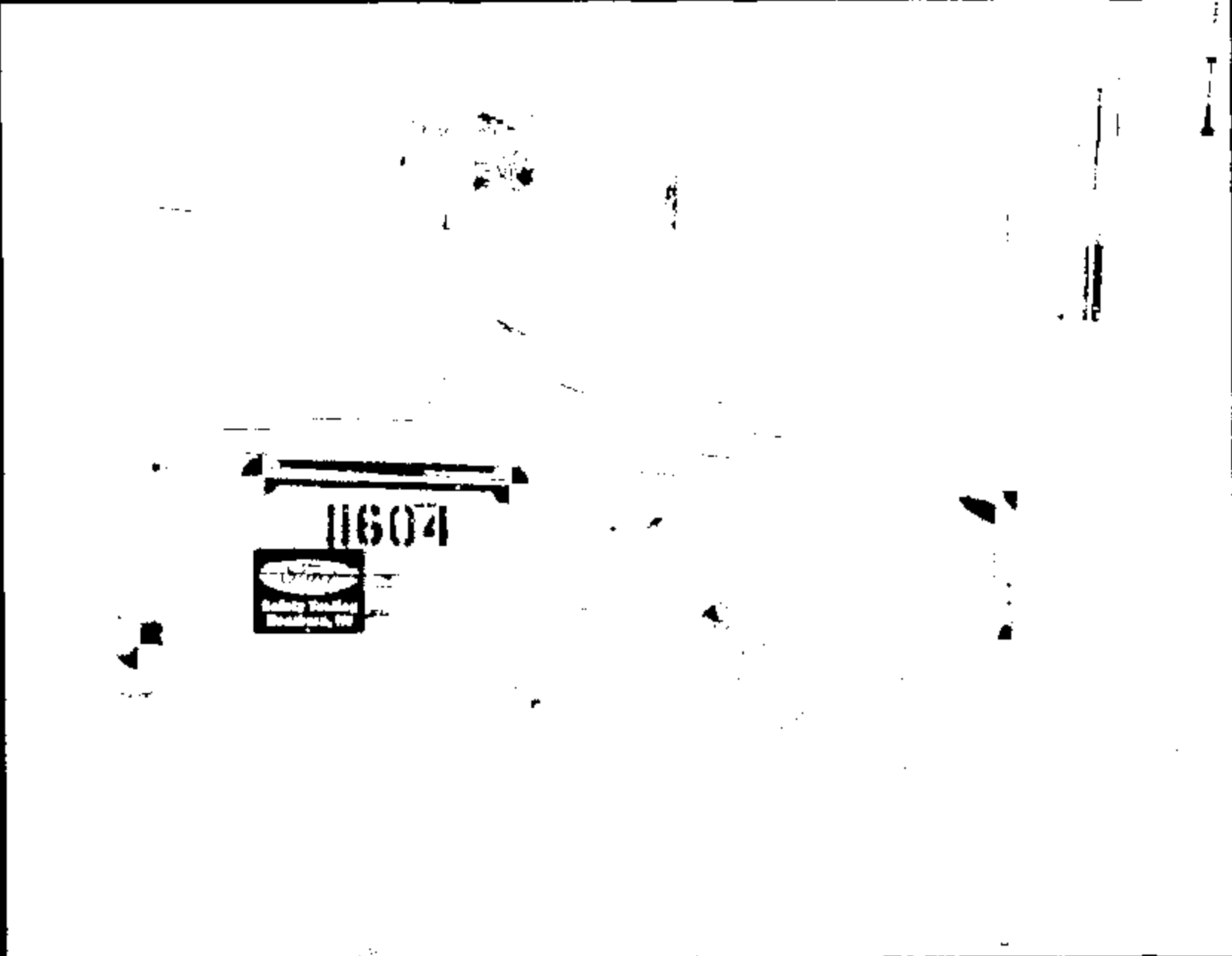


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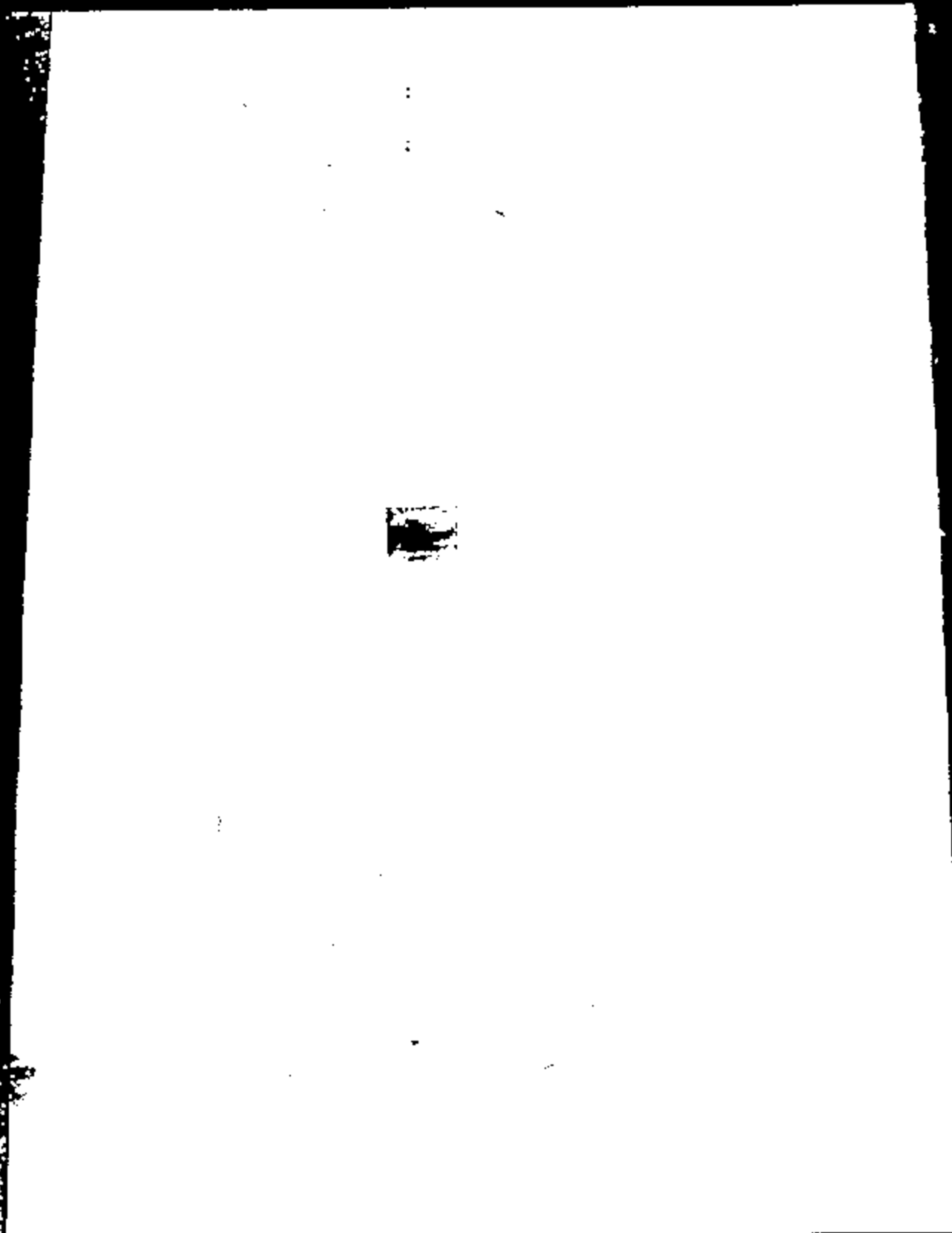


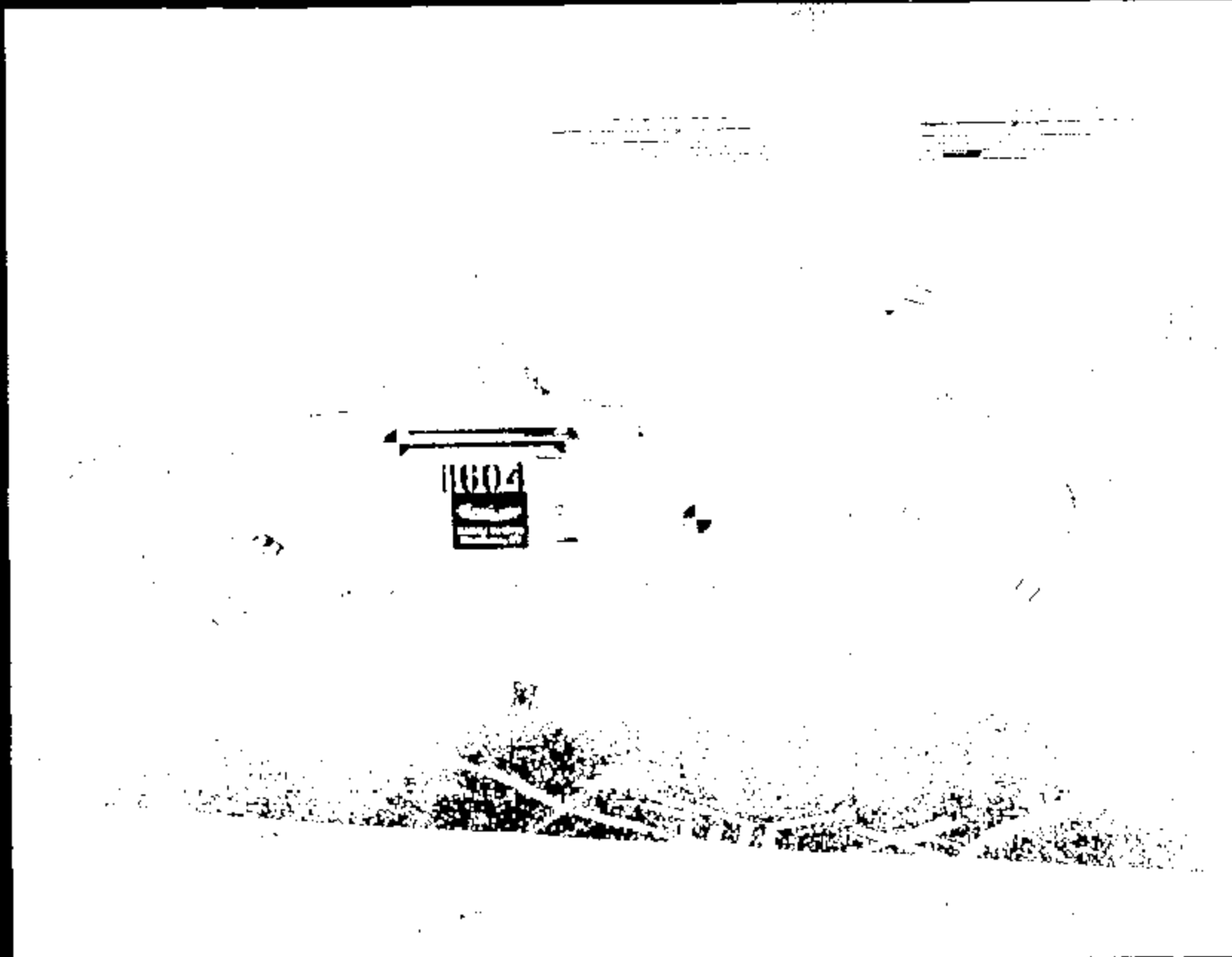
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CRIS 0011604

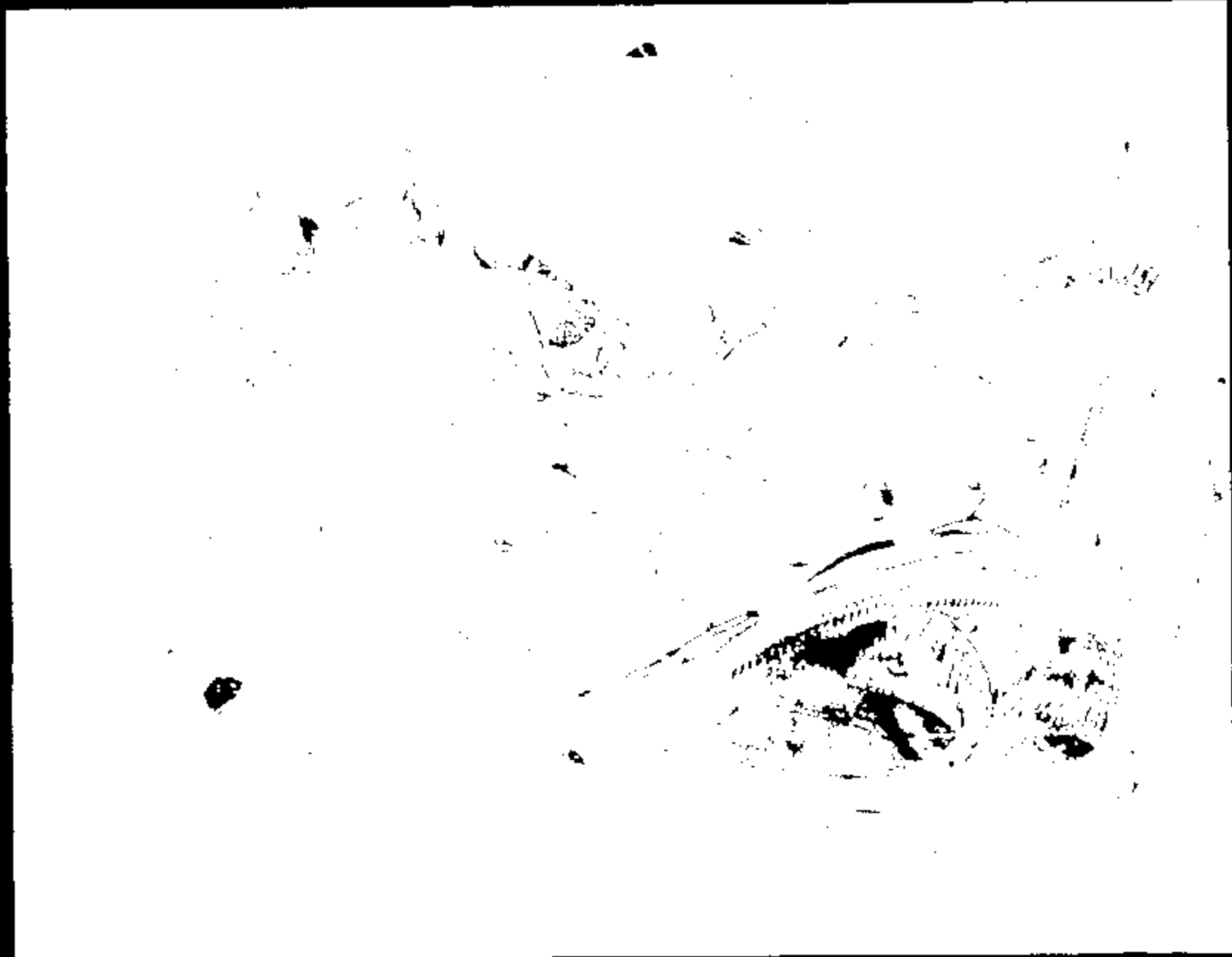
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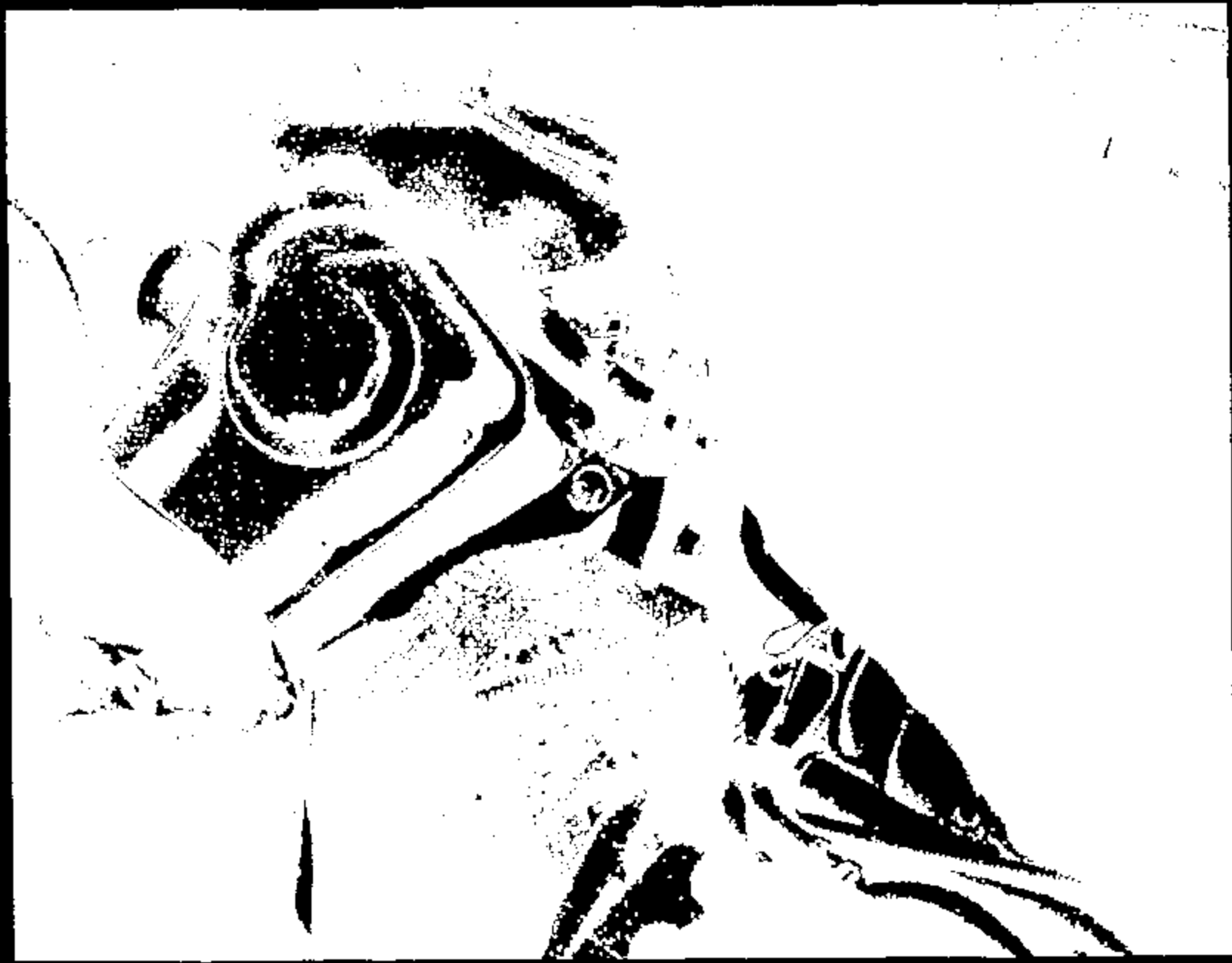


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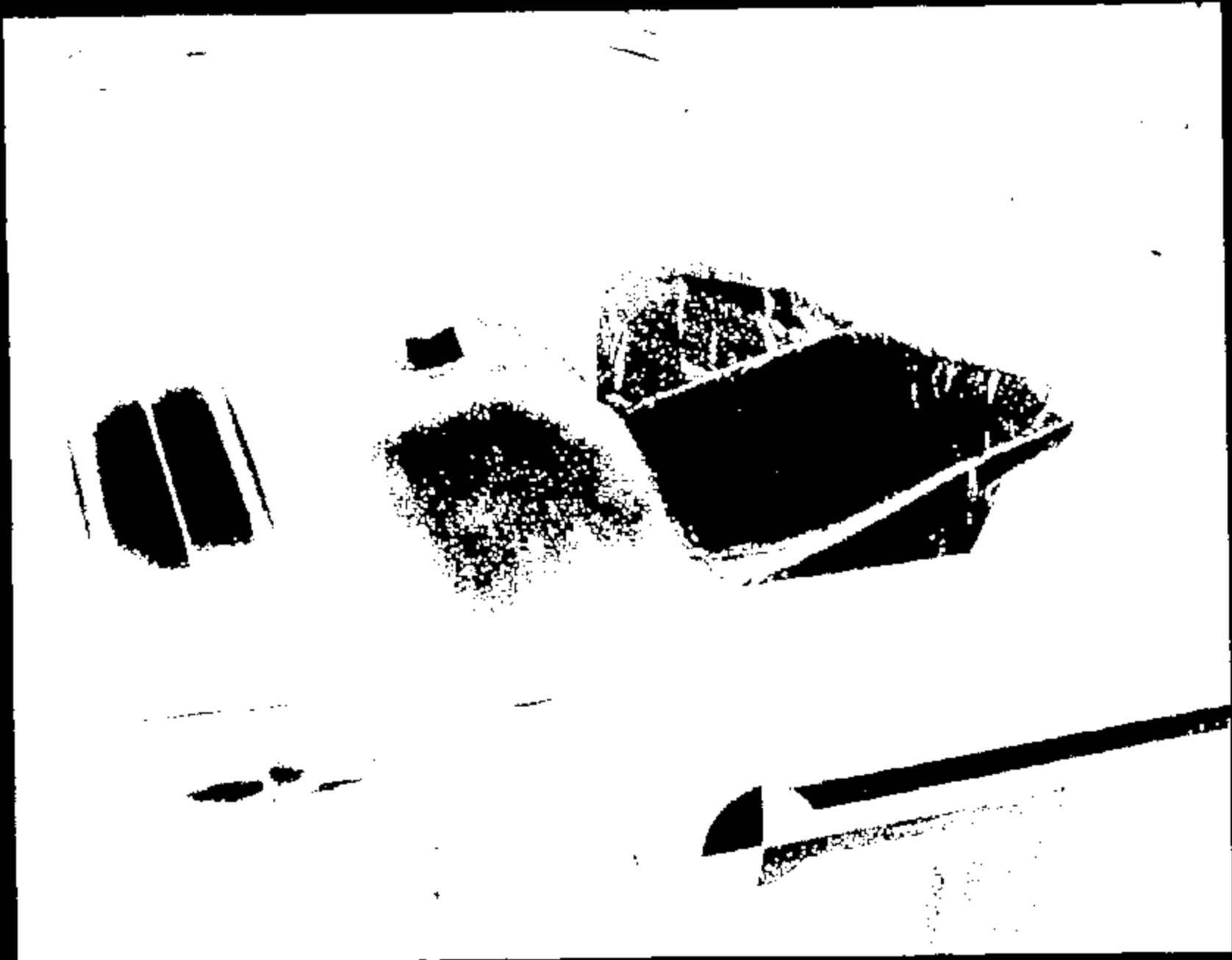
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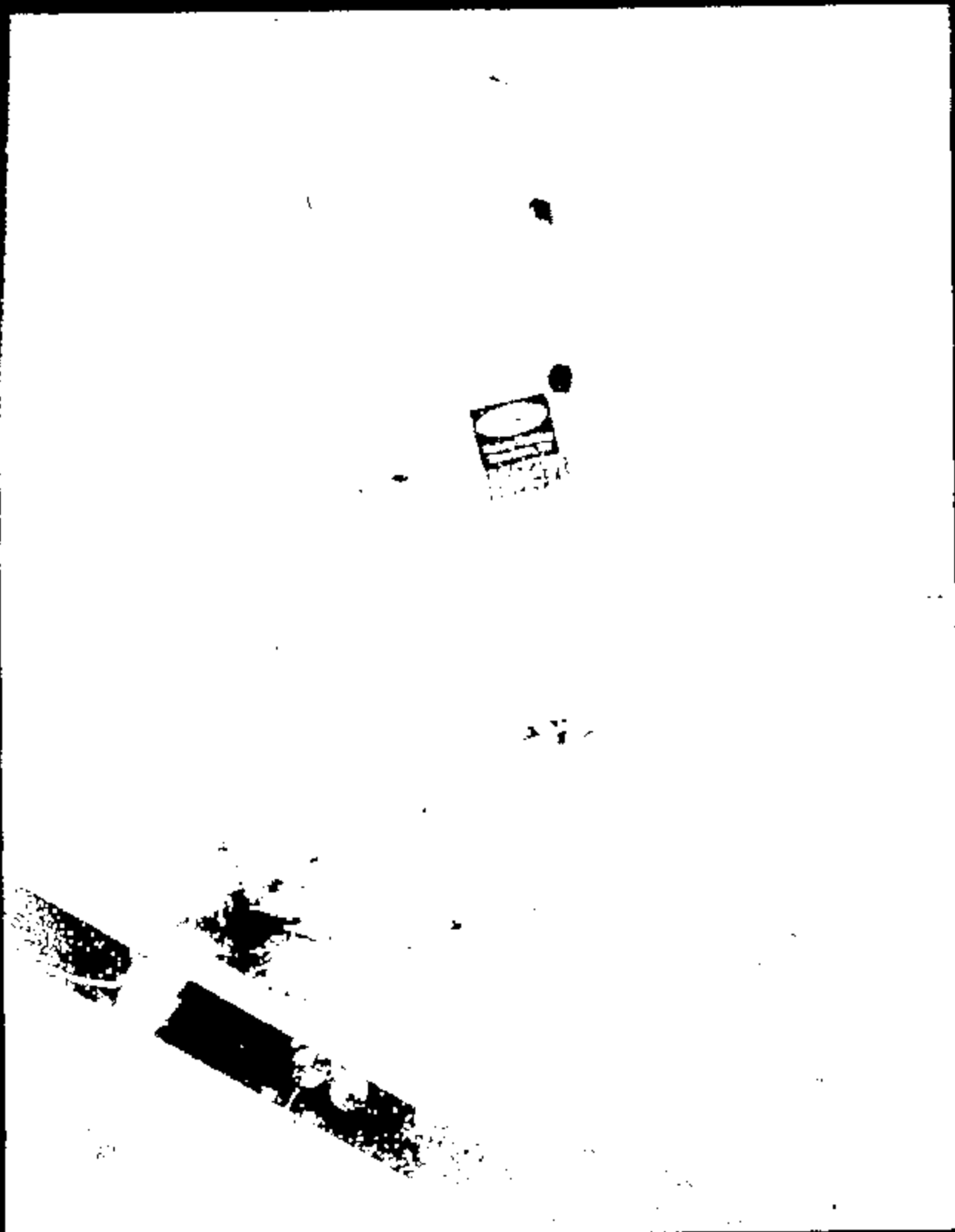


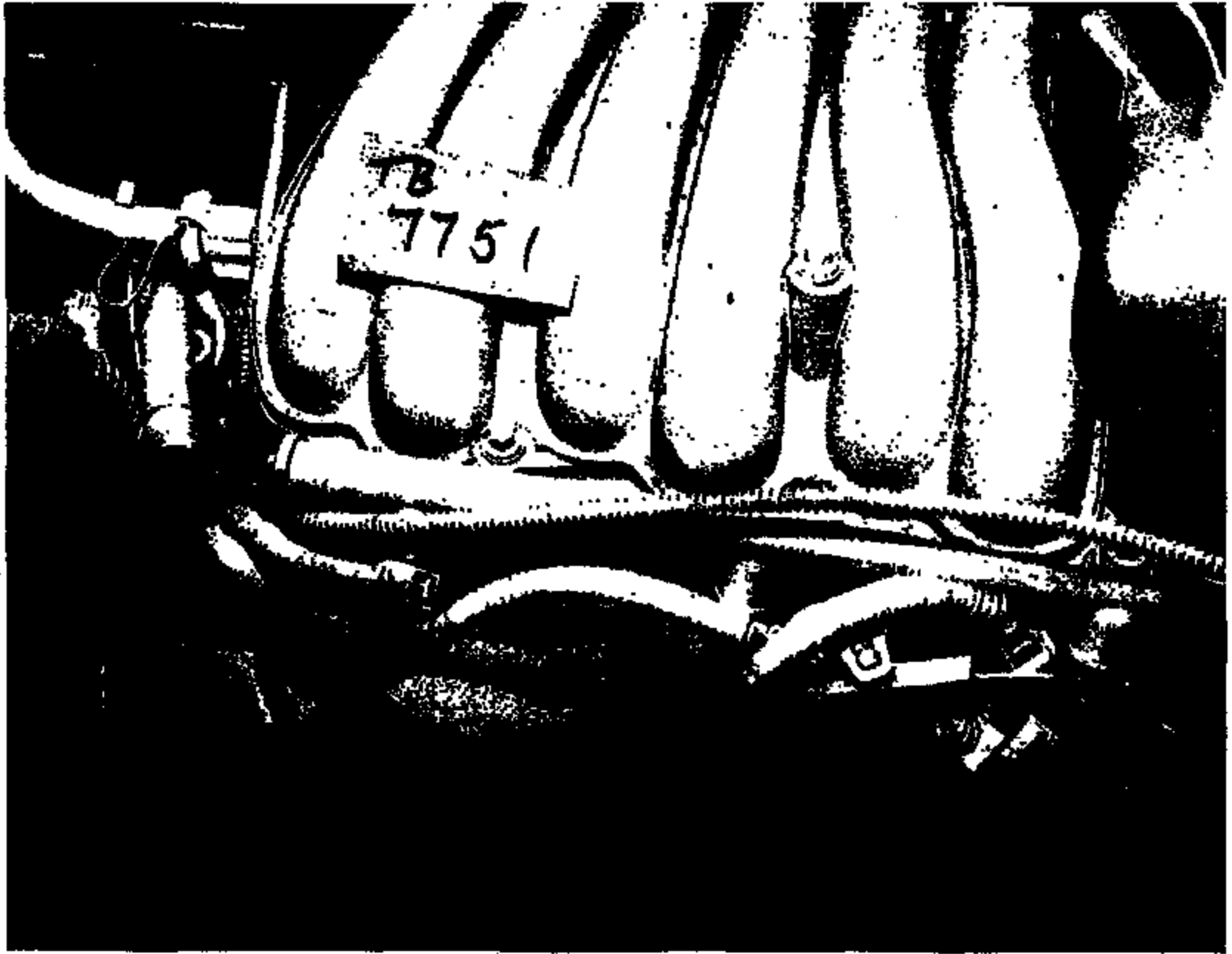
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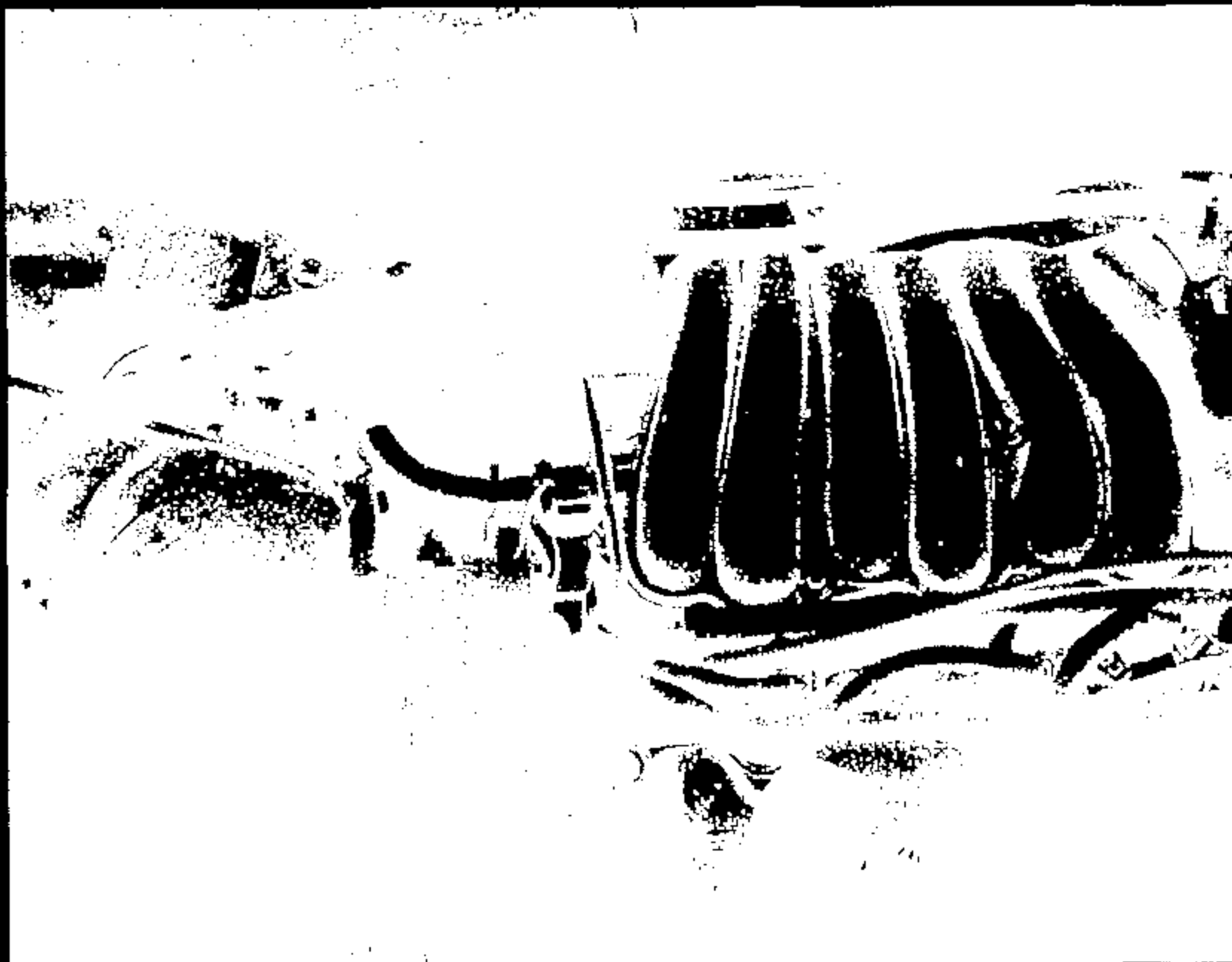


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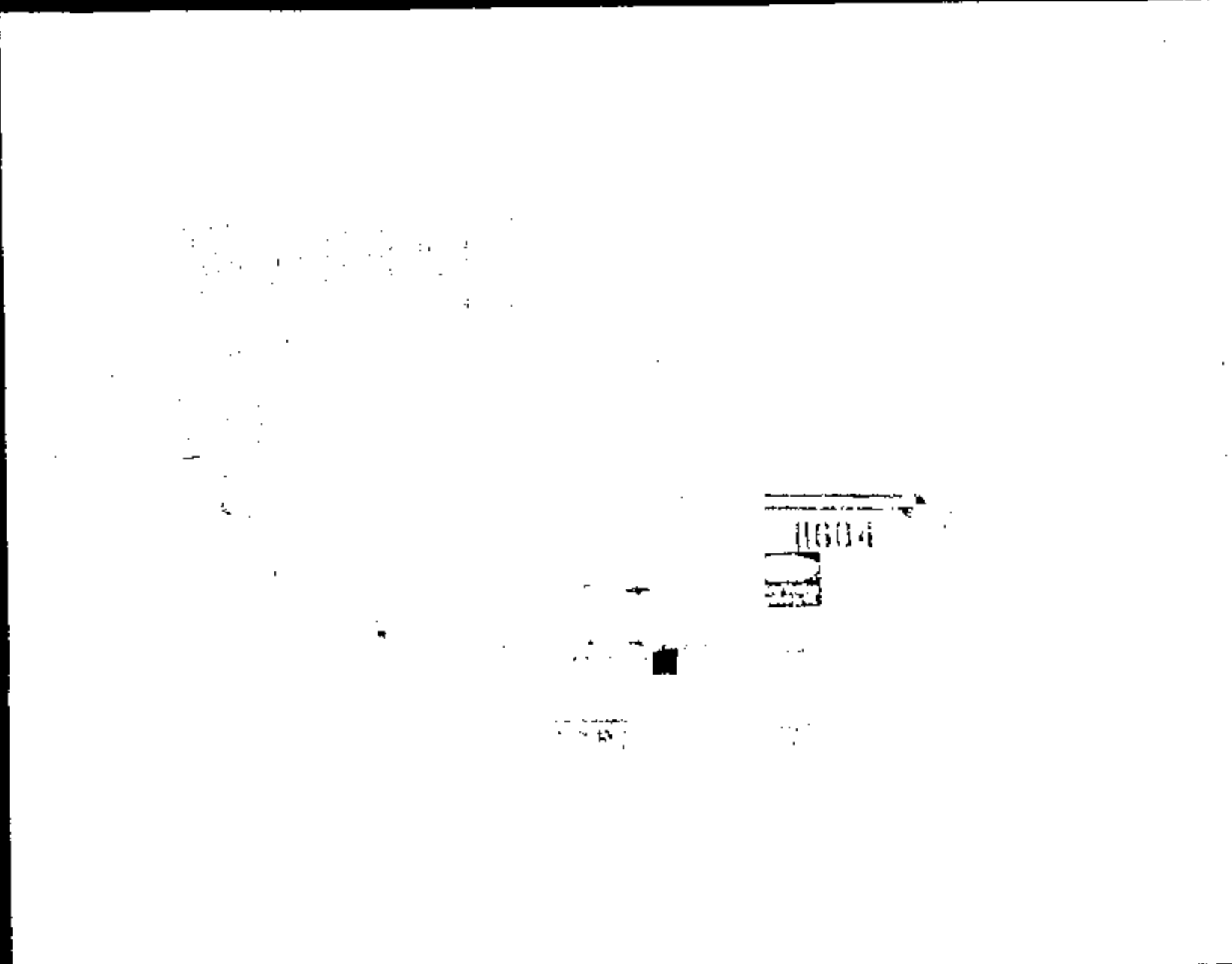
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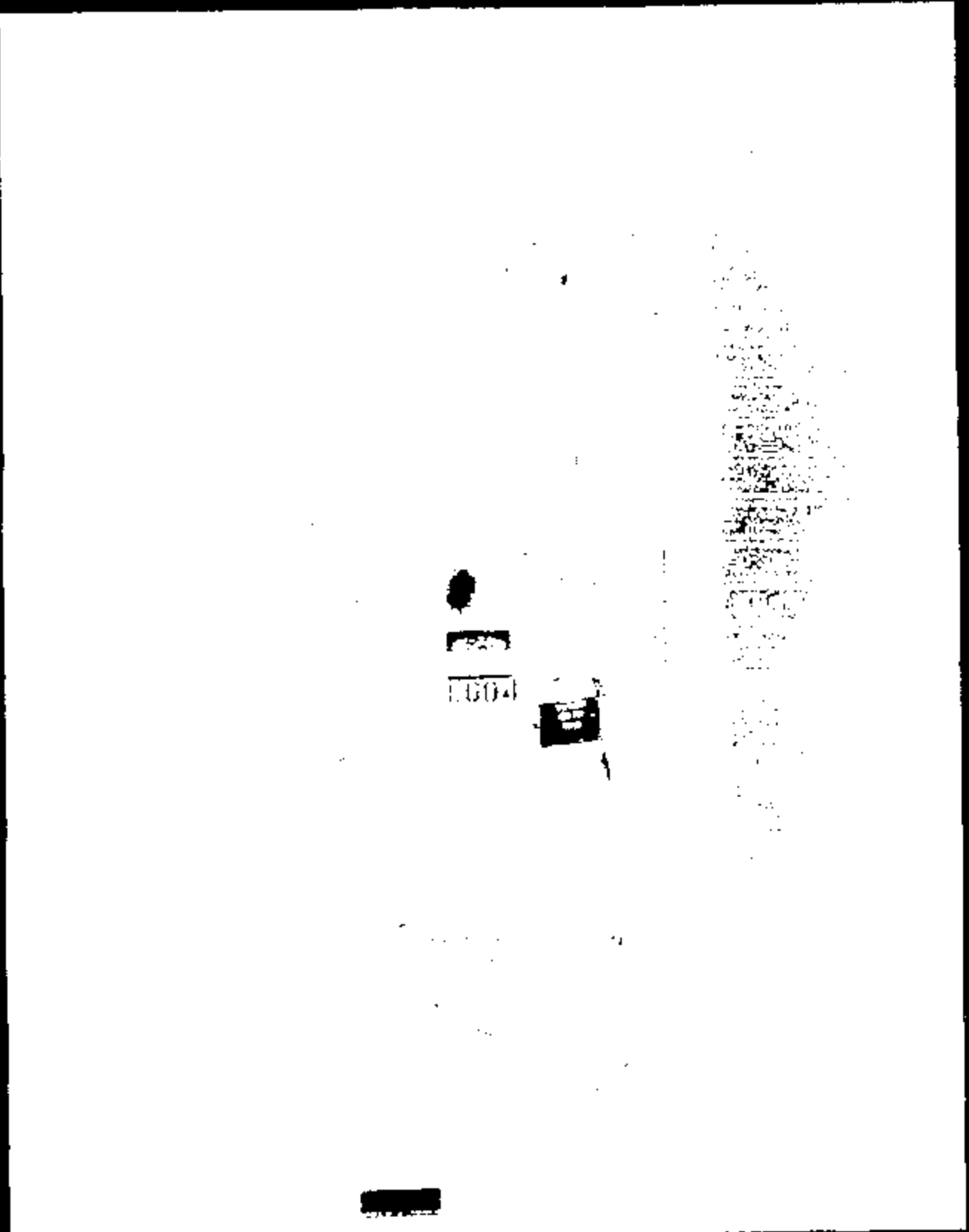


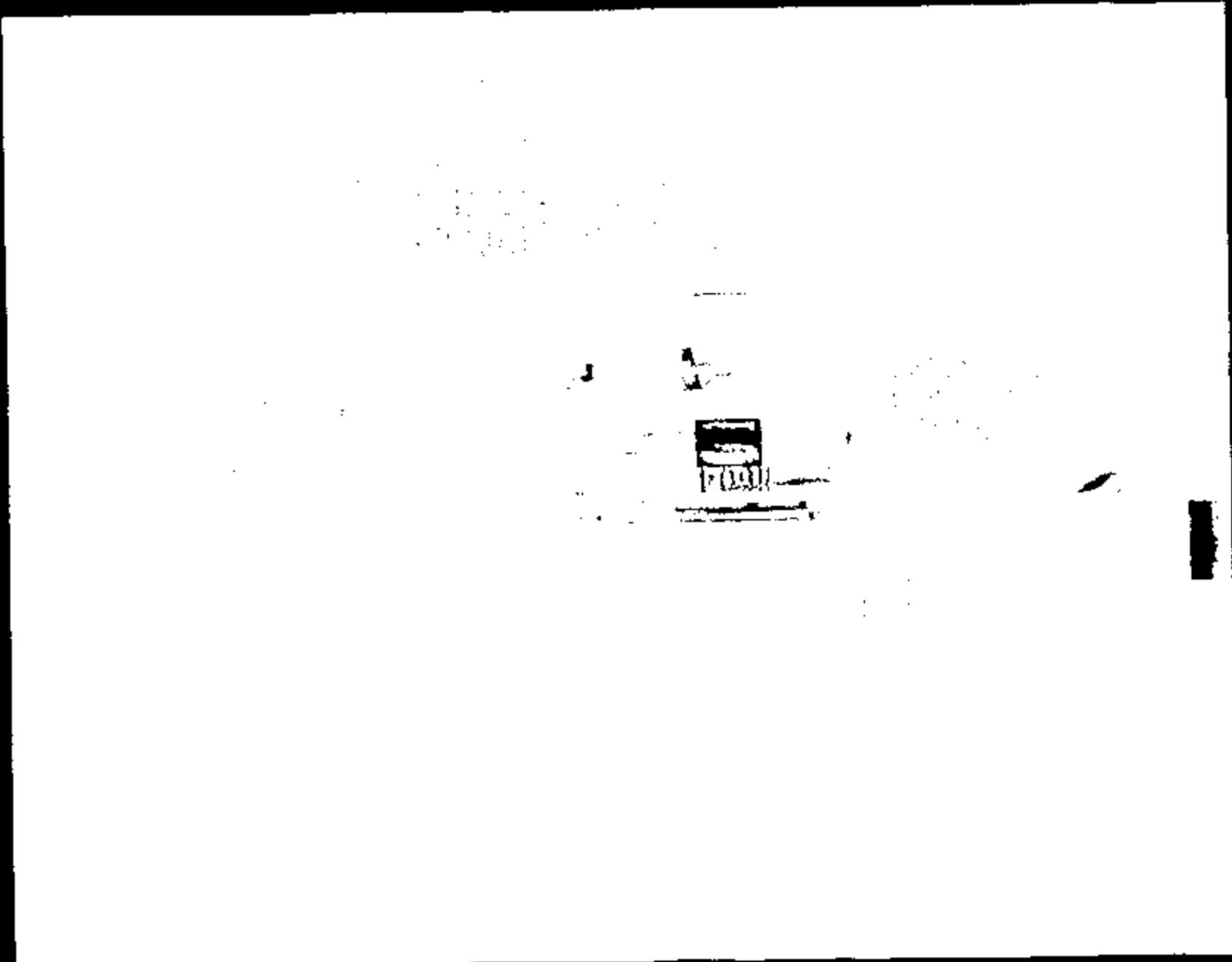
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116313-4

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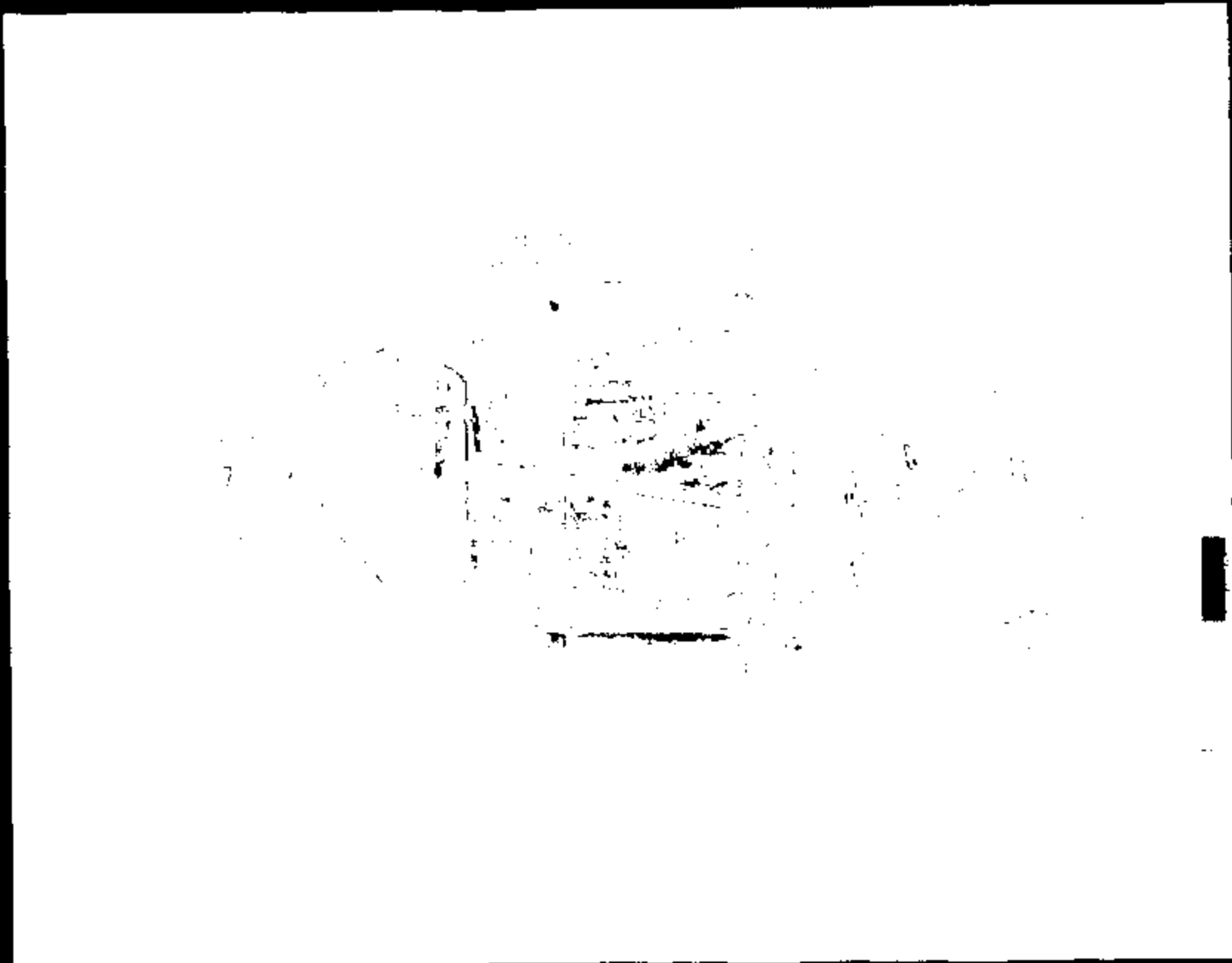




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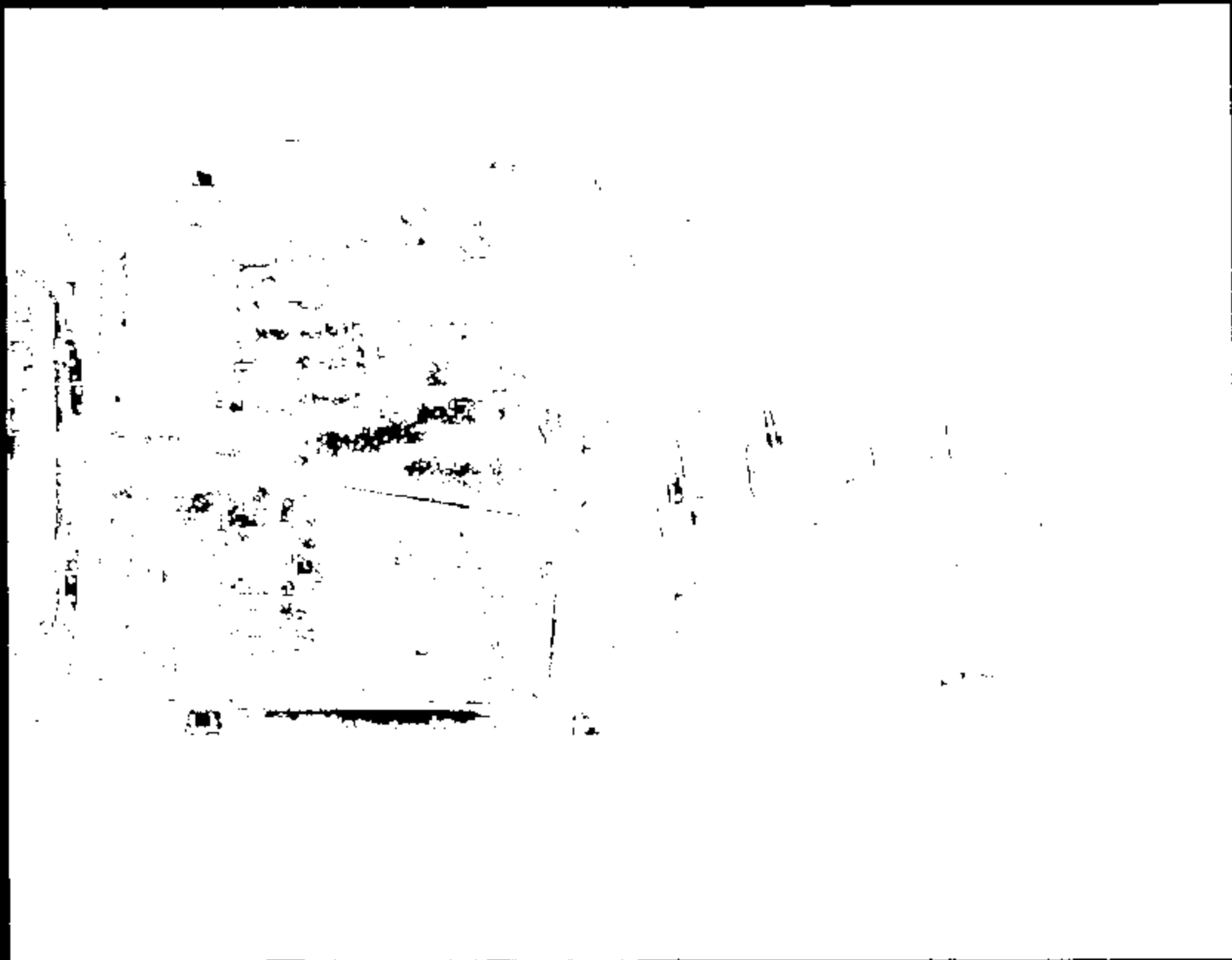
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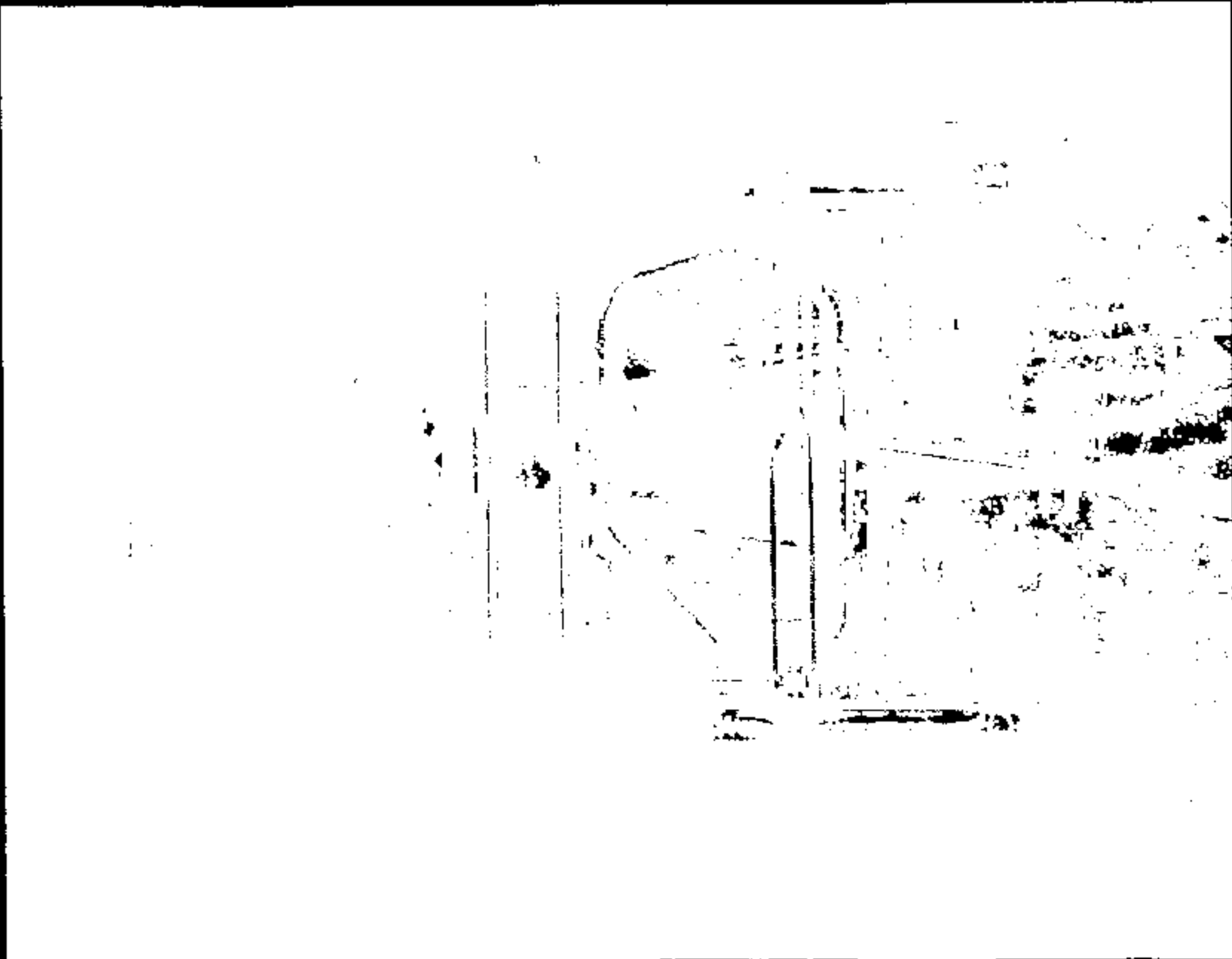


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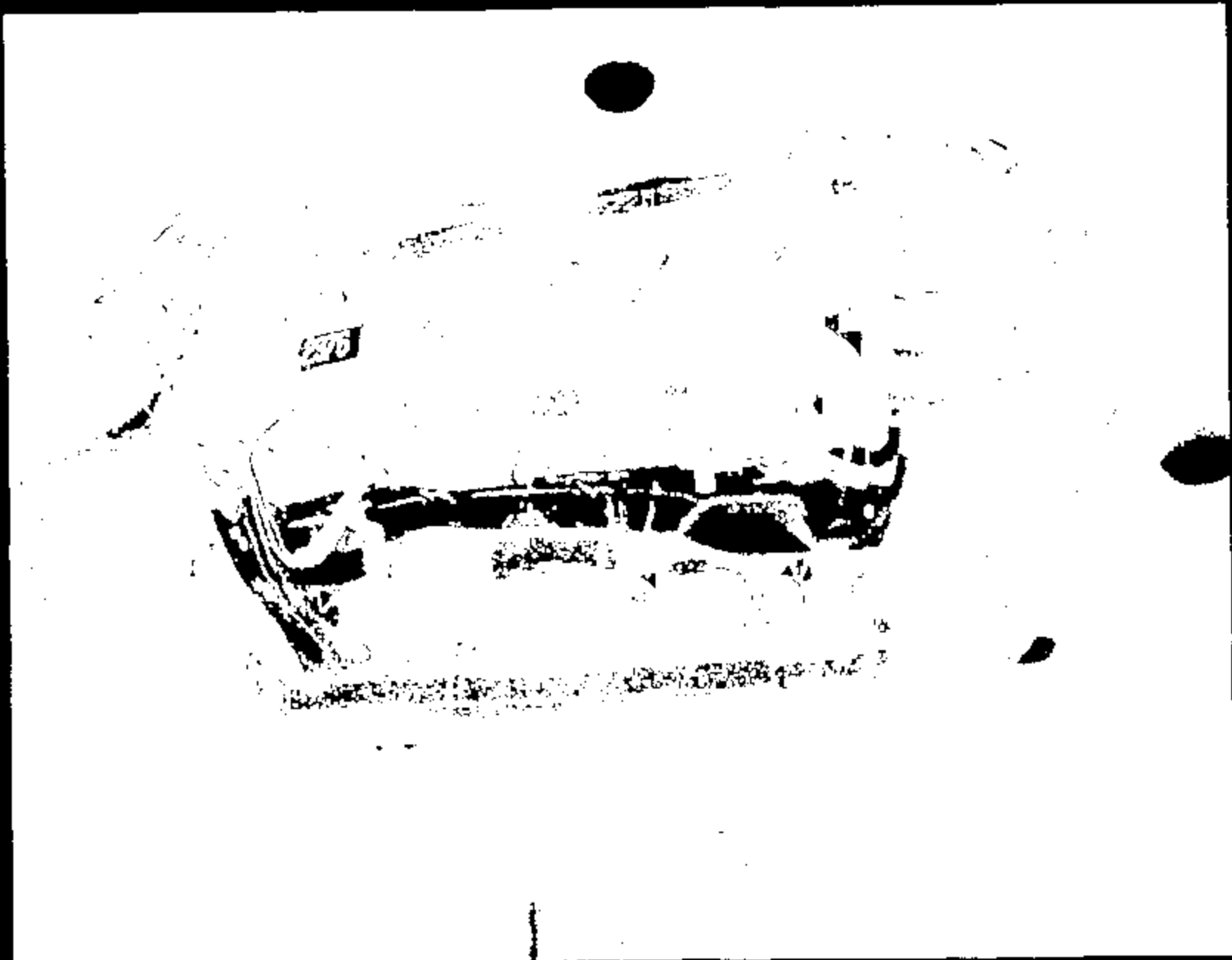




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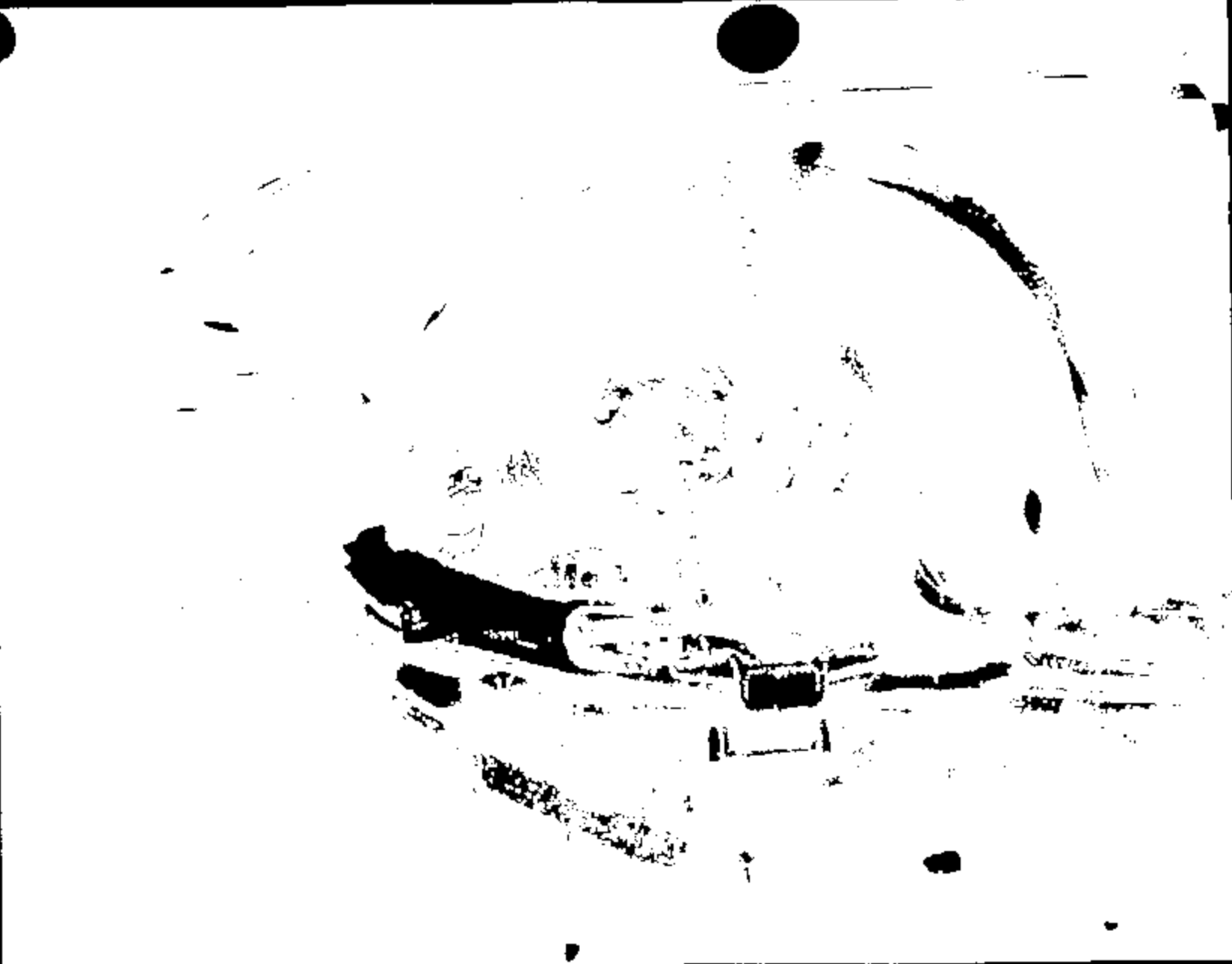
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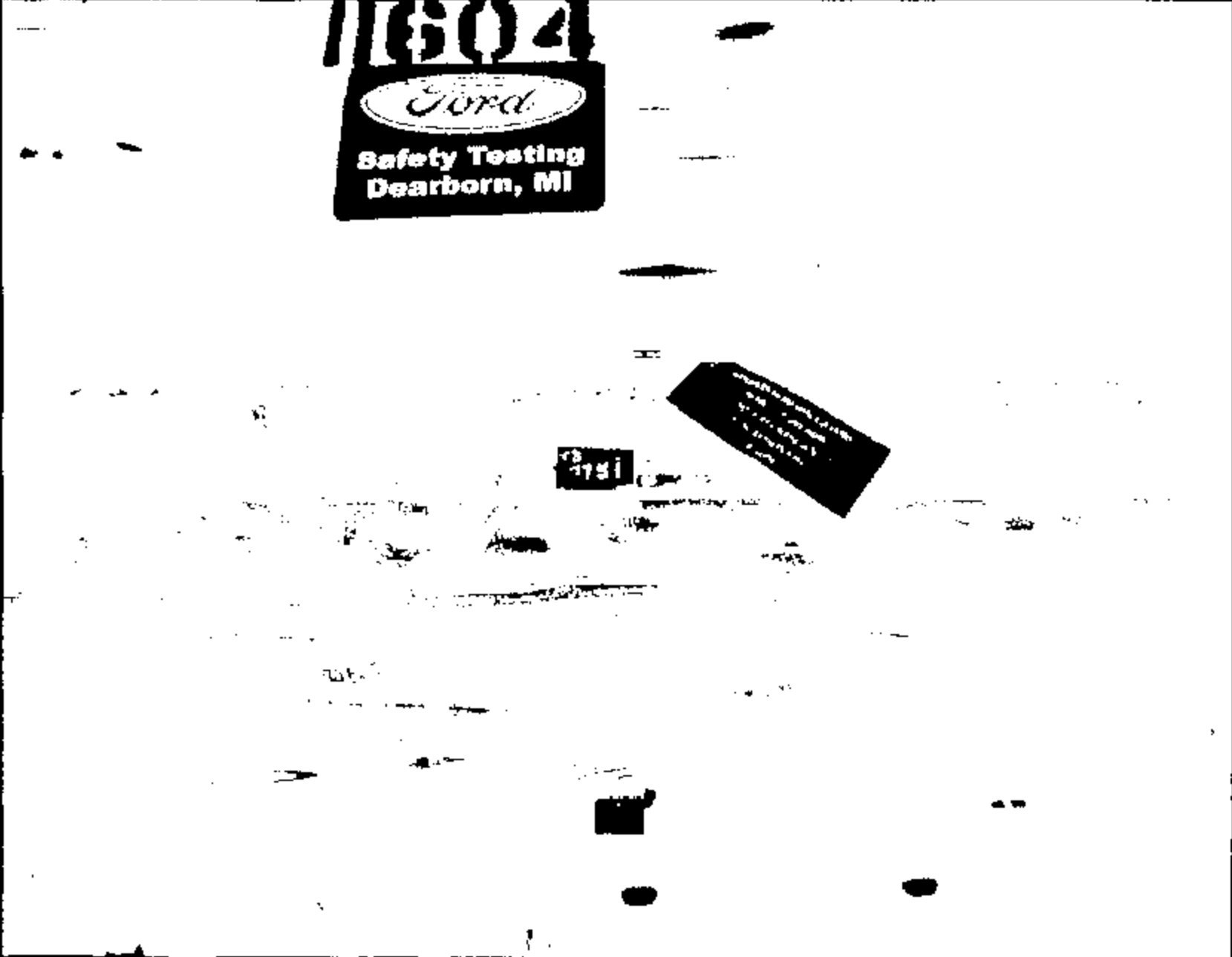
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CRTS 0011604



1604  
Ford  
Safety Testing  
Dearborn, MI

SAFETY TESTING  
DEARBORN, MI

1751

Name: 11604039.jpg

CRTS 0011604



Name:

11604040.jpg

CRTS 0011604



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CRTS 0011604

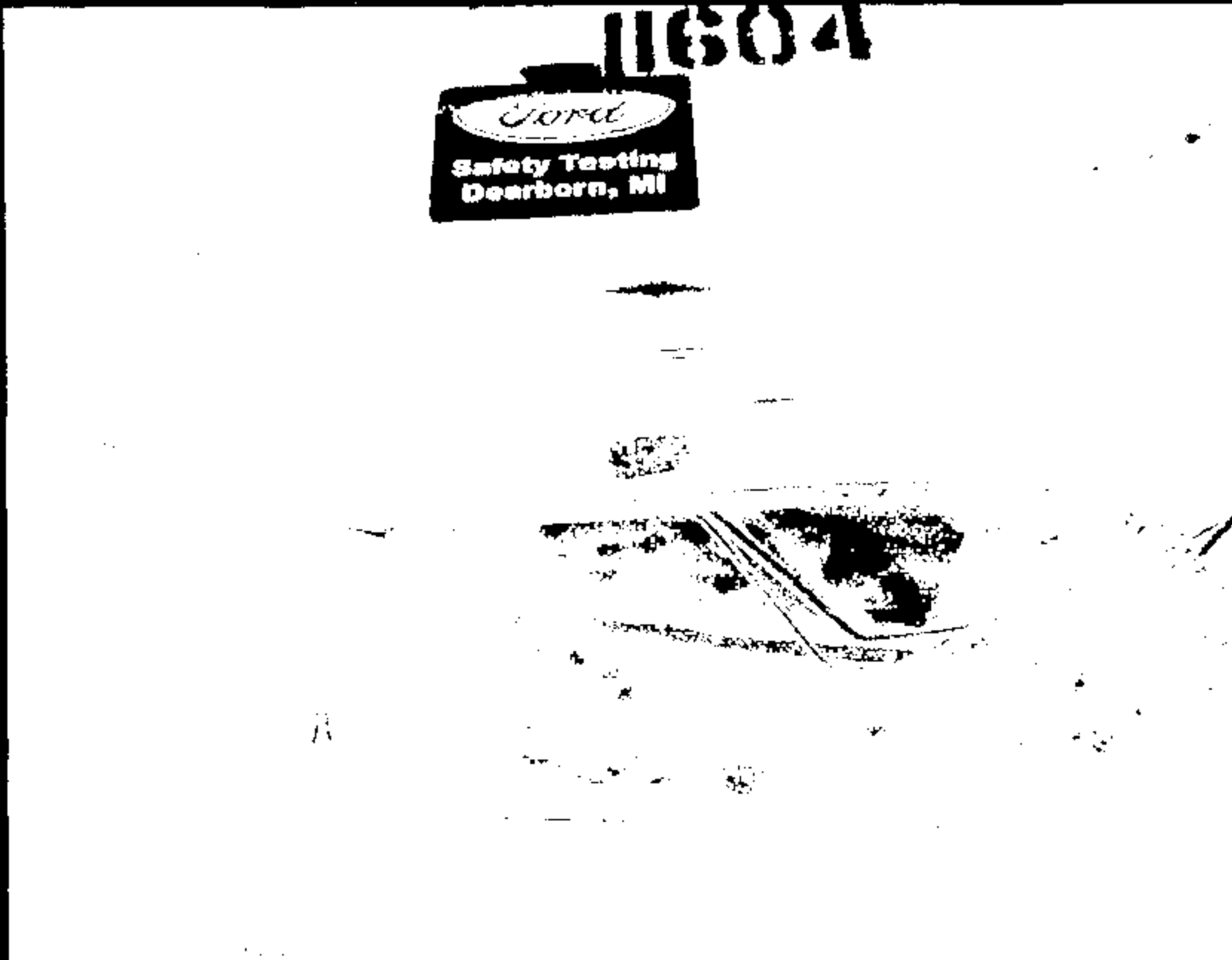


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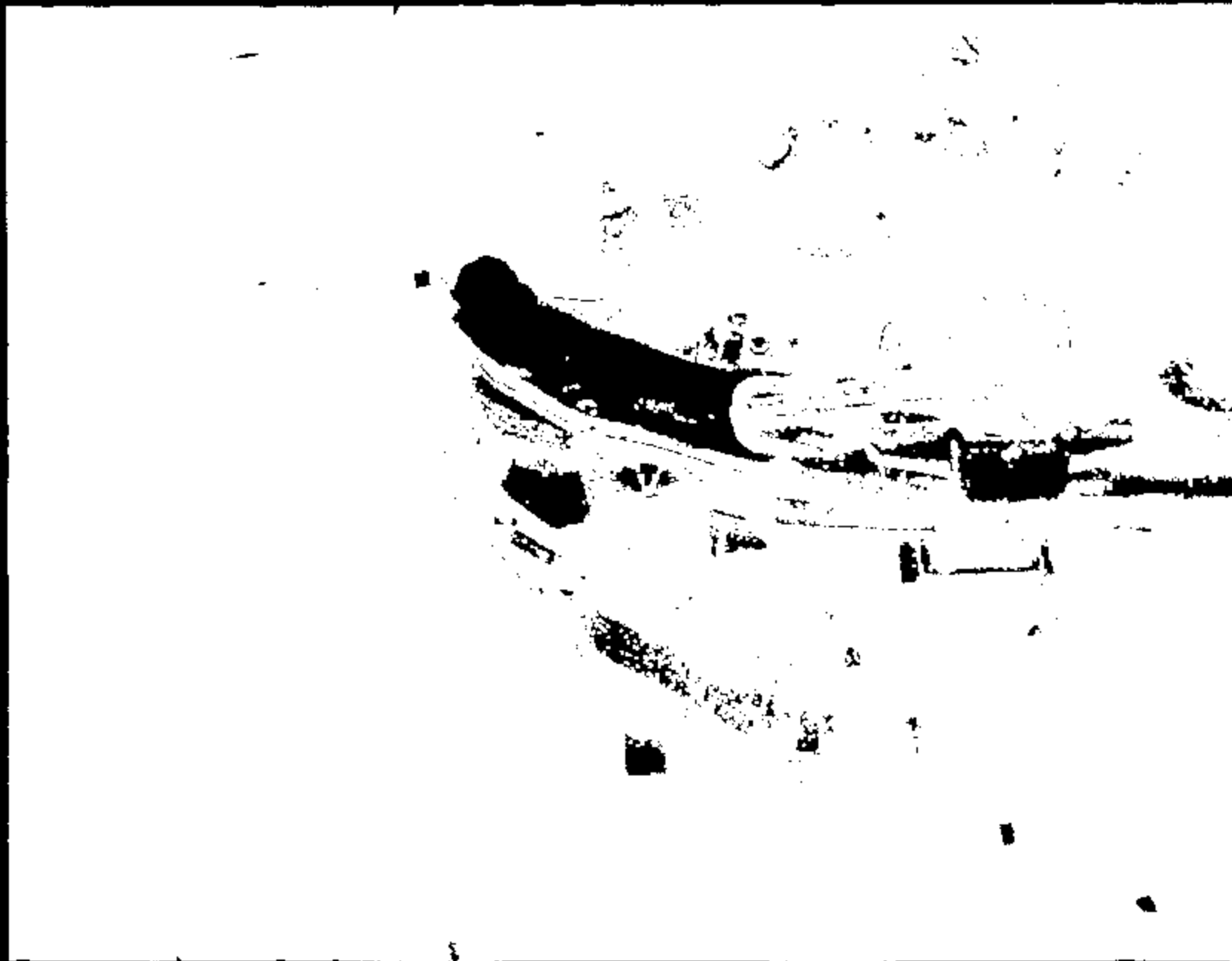
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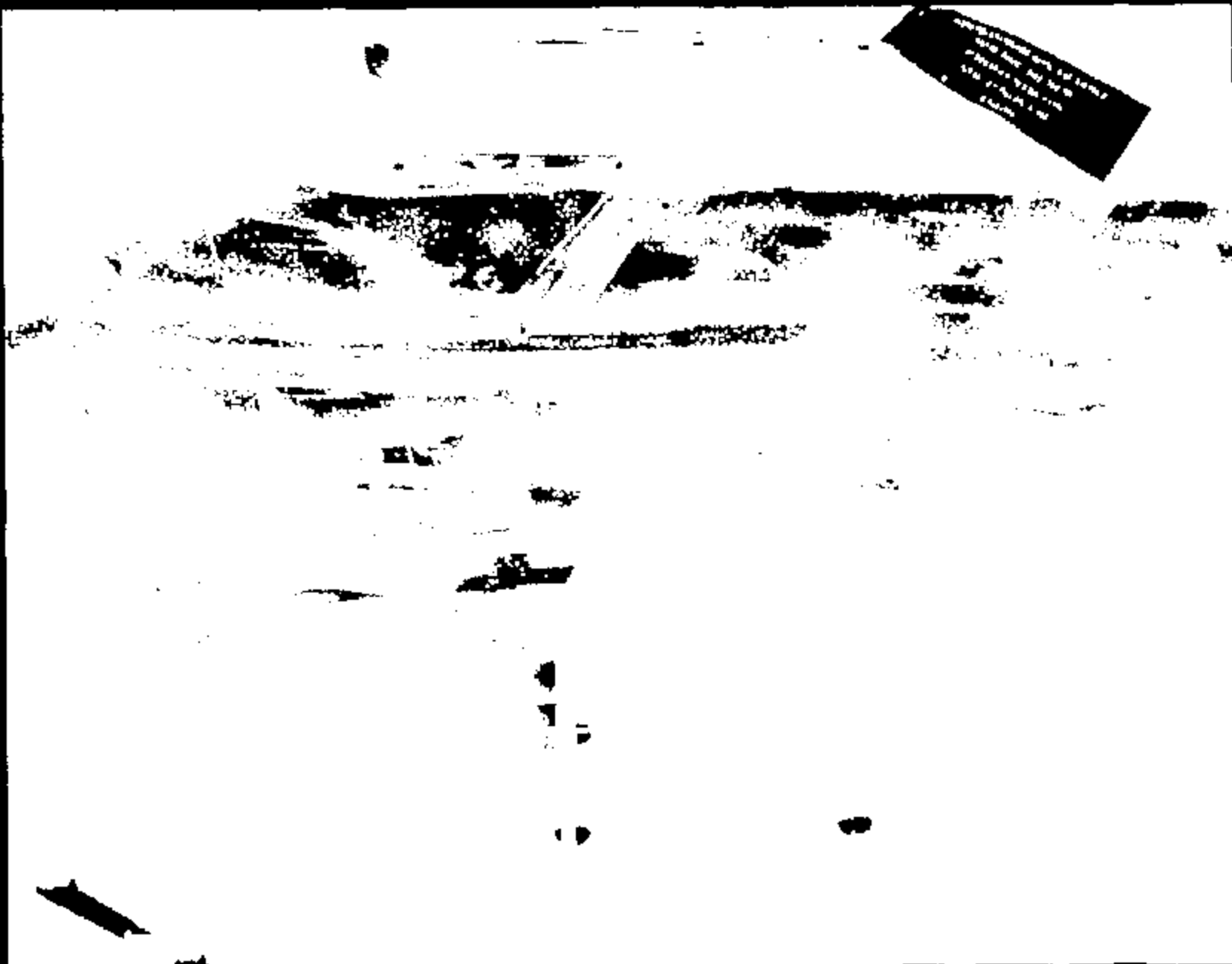




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Name: 11604045-1.jpg

CRTS 0011604



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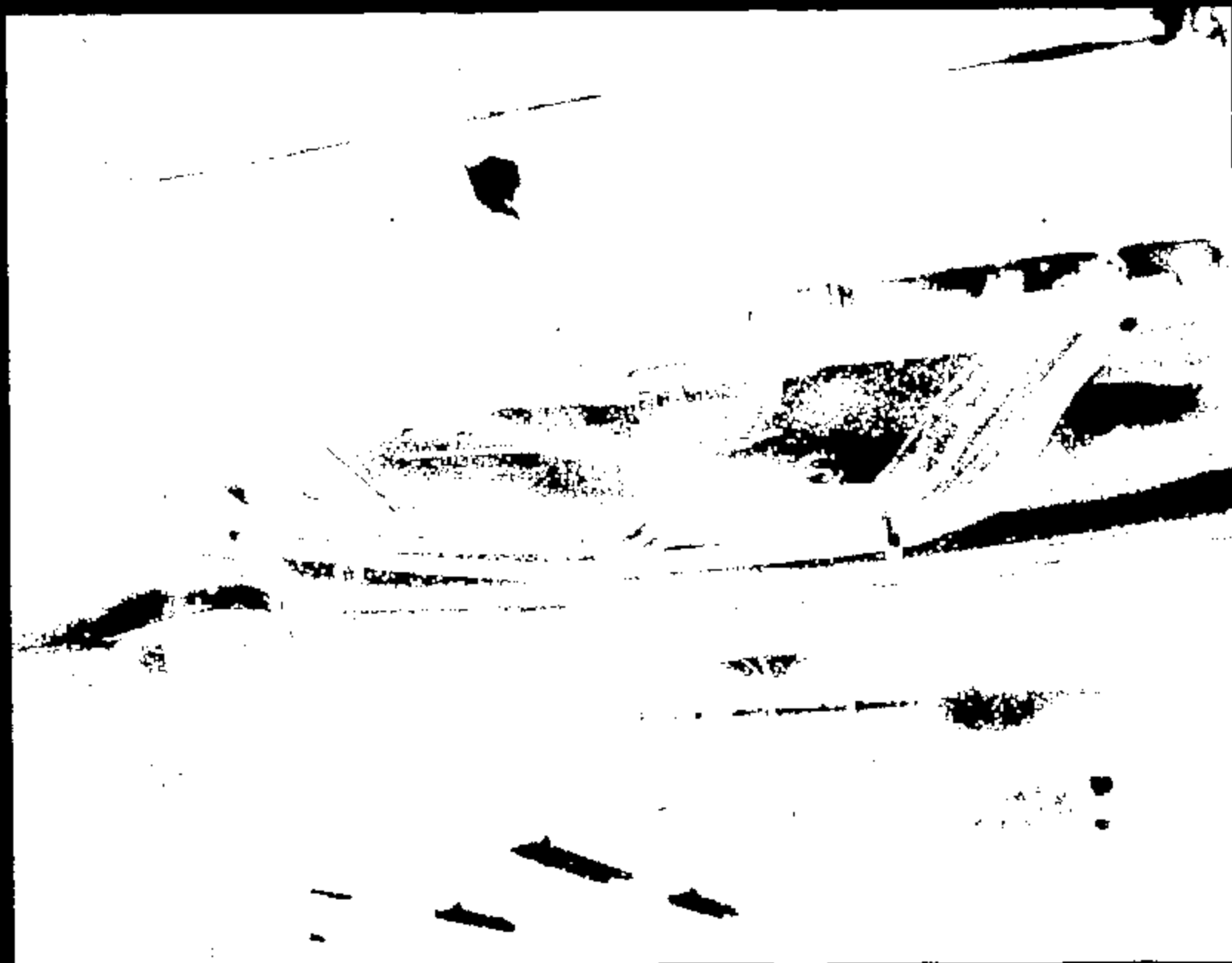
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11604047 . JDU

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11604049.jpg

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11604050.jpg

CRTS 0011604



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Name :

11604052.jpg

CRTS 0011604



Name:

11604053.jpg

CRTS 0011604



Name: 11604054.jpg

CRIS 0011604



2

T8  
7751

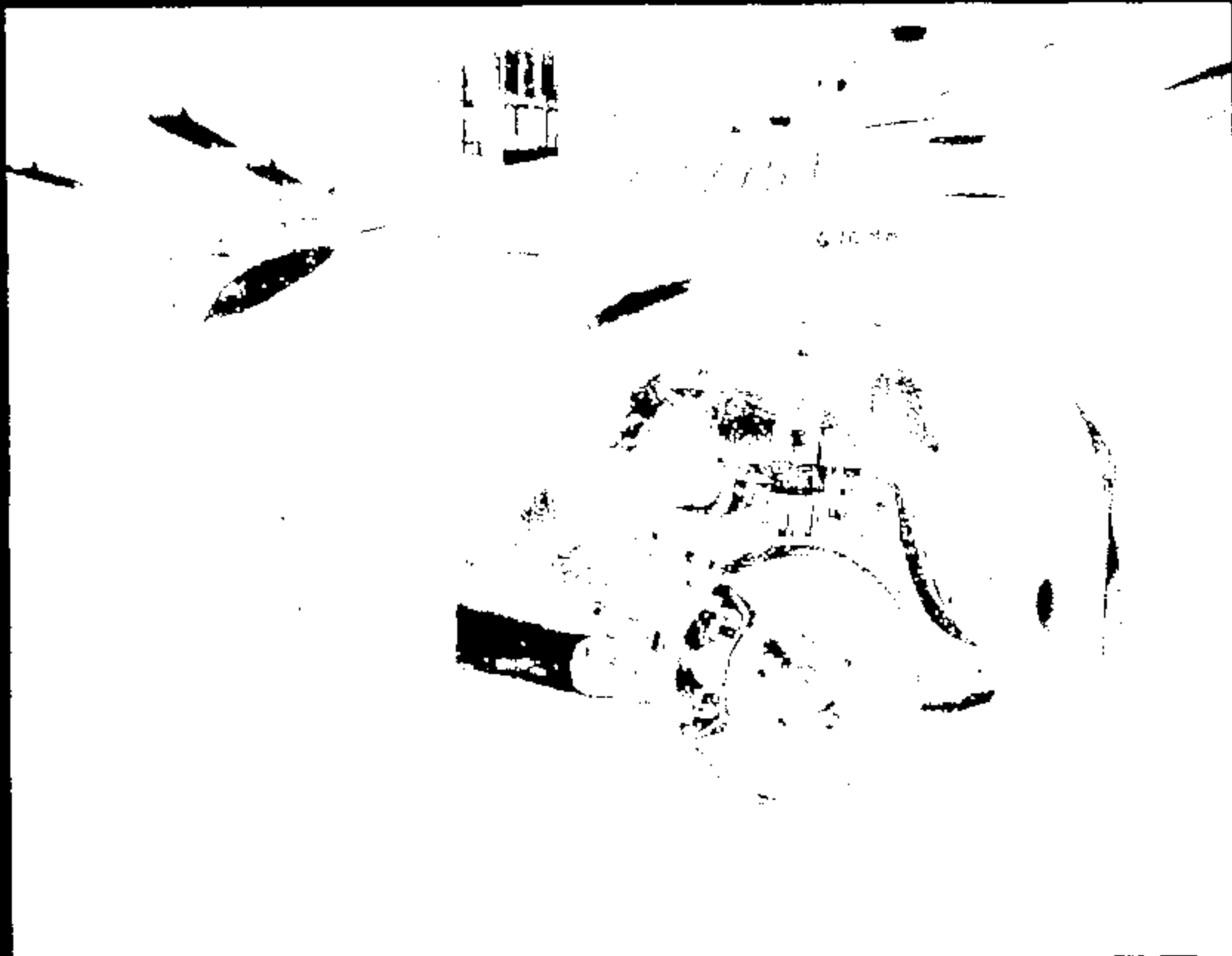
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CRTS 0011604



Name:

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CRTS 0011604



Name:

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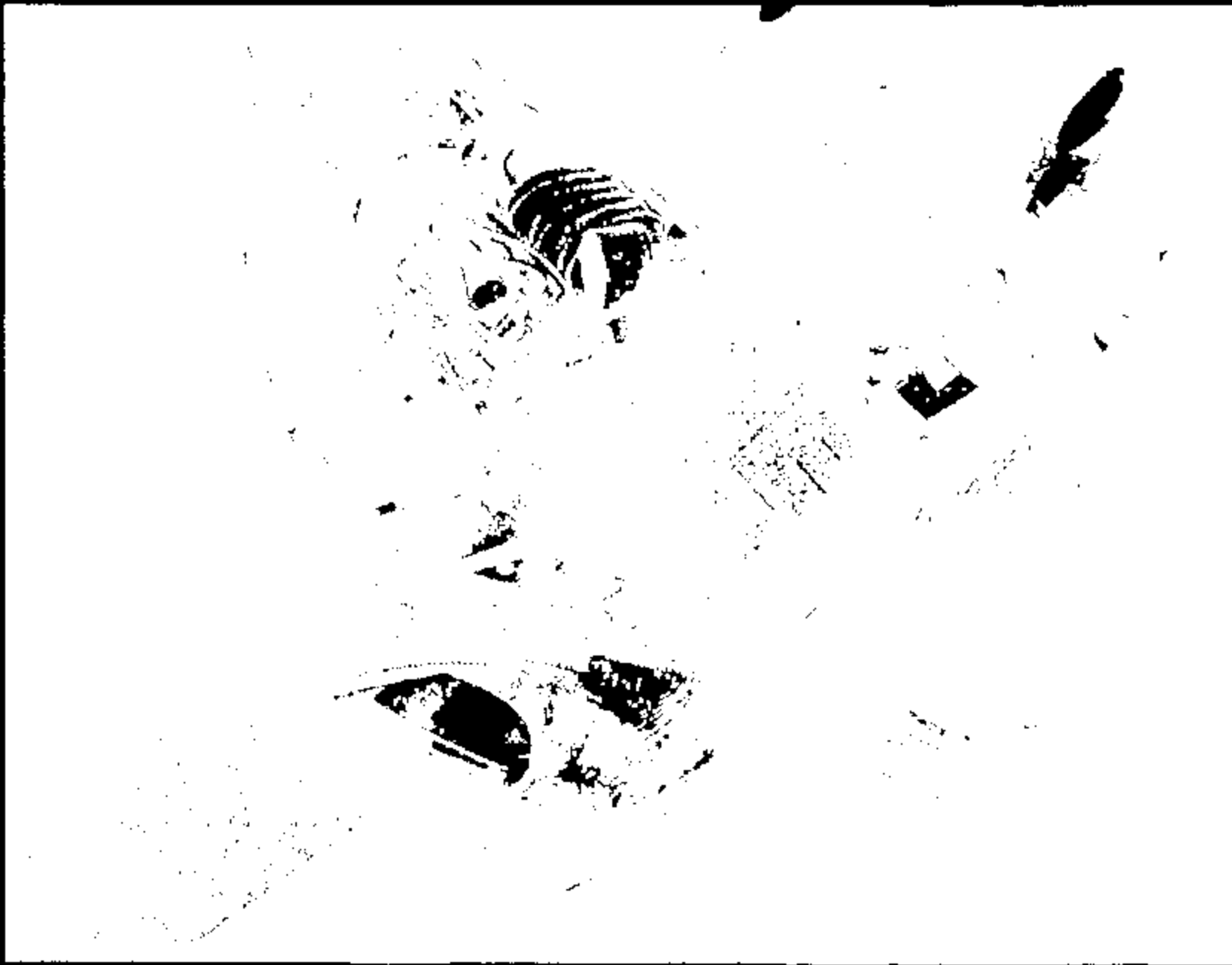
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CRTS 0011604





Name :

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CRIS 0011604



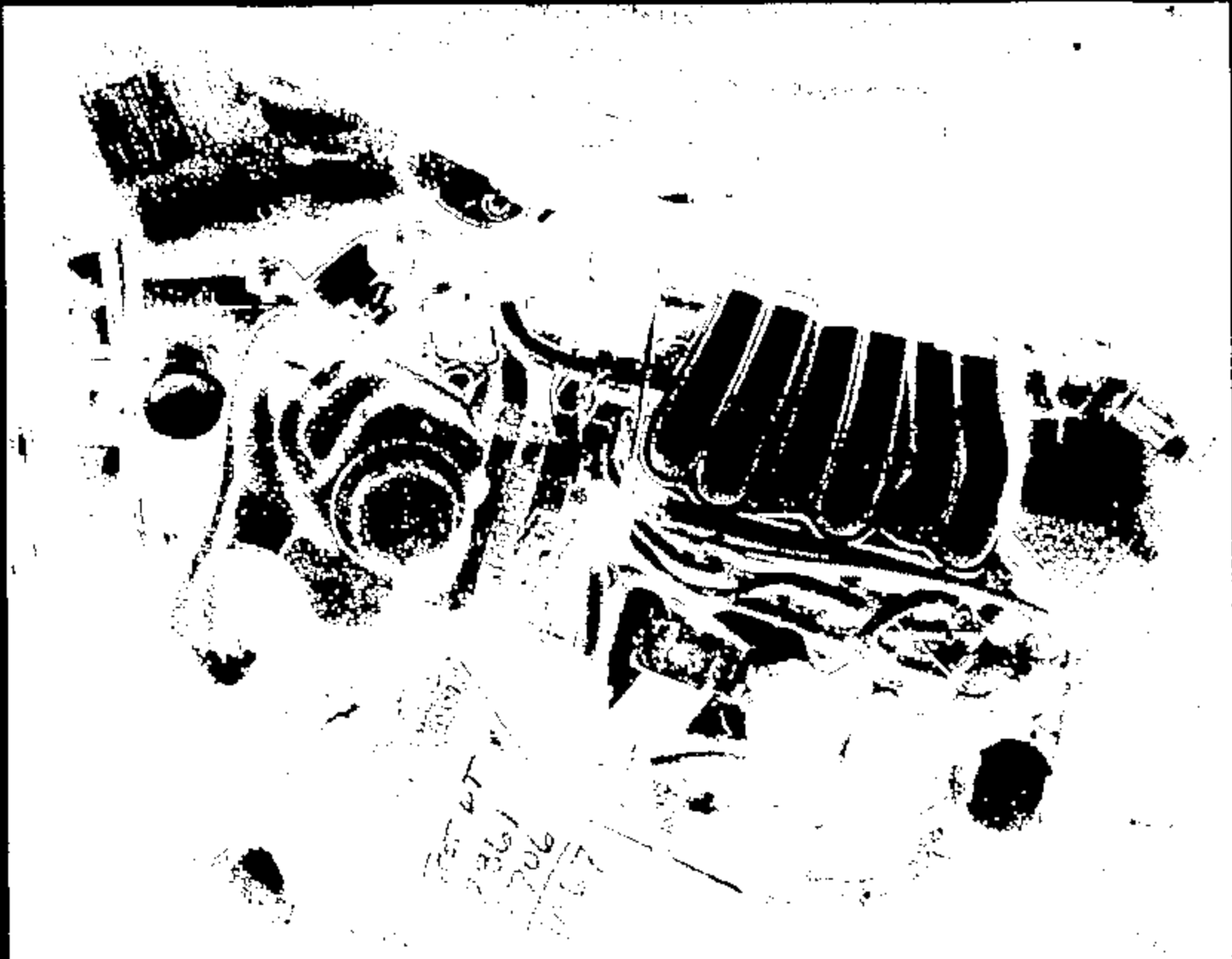
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Name :

11604062 .jpg

CRTS 0011604



Name:

11604063.jpg



Name:

11604064.jpg

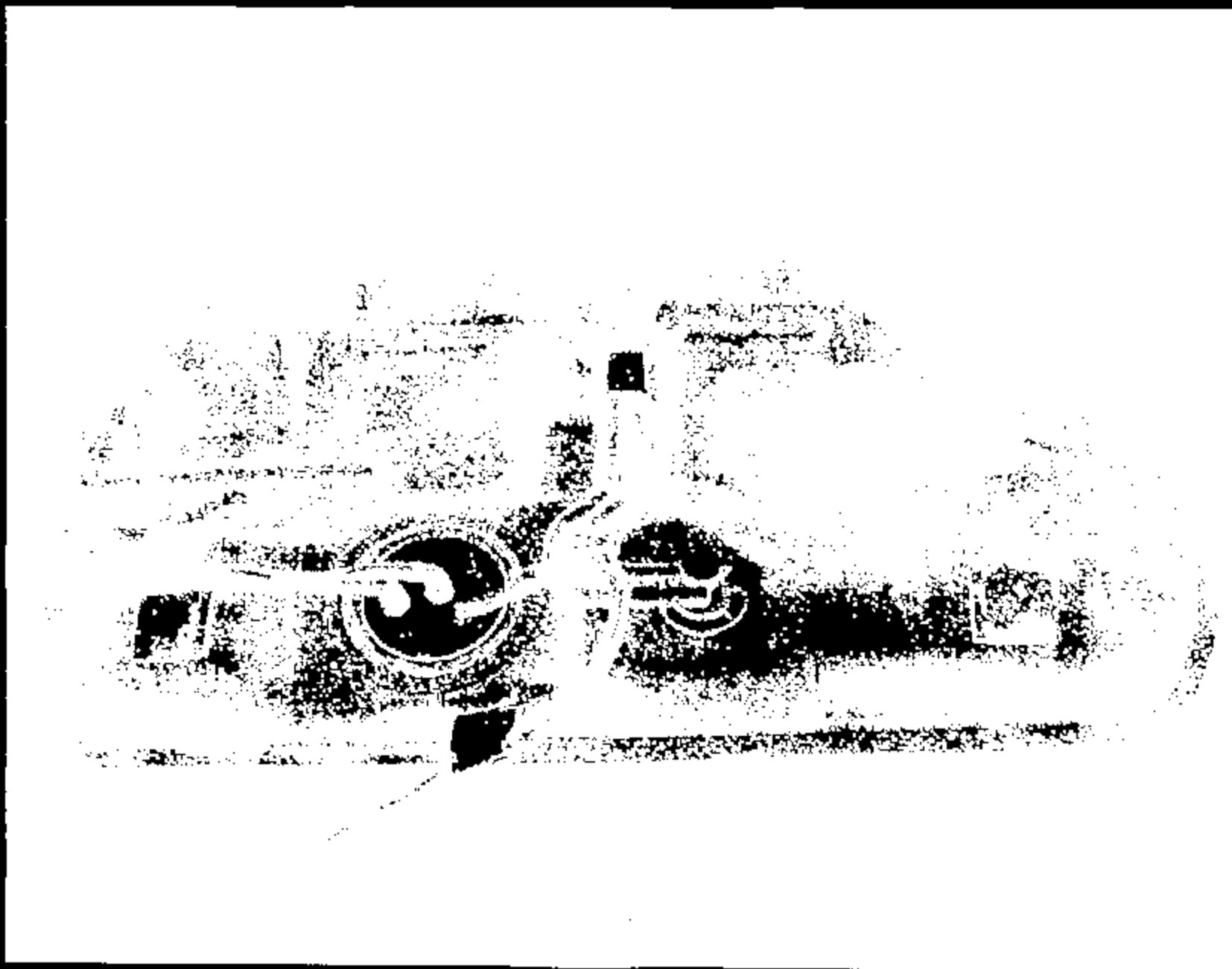
CRIS 0011604



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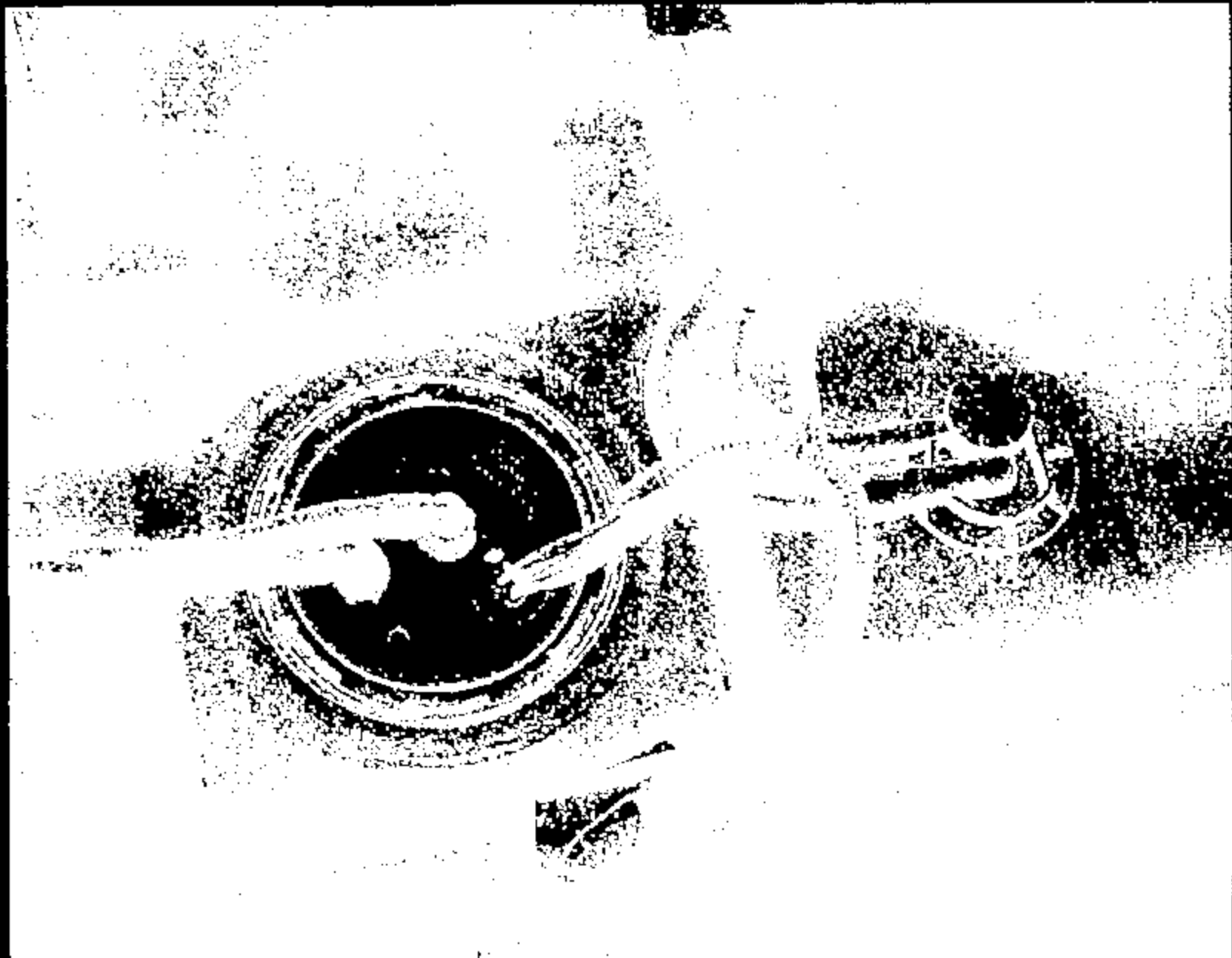
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11604066.jpg

CRTS 0011604



Name:

11604067.jpg

CRTS 0011604



**TEST AUTHORIZATION** **TEST AUTHORIZATION NUMBER: TB7761**

<b>TO:</b> Safety Lab Department	<b>REQUEST DATE:</b> 8/23/99	<b>REQUESTED COMPLETION DATE:</b> 9/7/99
<b>CC:</b> K. Arthur	<b>REQUEST NUMBER:</b> n/a	<b>PROBLEM NUMBER:</b> n/a
<b>REQUESTING ACTIVITY:</b> Vehicle Crash Safety		

<b>TITLE OF TEST:</b> 8801 D188 31 MPH 30 degree Right Angular		<b>PARTS DUE DATE:</b> n/a	
<b>TYPE OF TEST:</b> <input checked="" type="checkbox"/> VEHICLE <input type="checkbox"/> BENCH <input type="checkbox"/> LABORATORY <input type="checkbox"/> OTHER		<b>VIN # or IDENTIFICATION:</b> DD148801 500W385 15AEP-000000000000	<b>VEHICLE MODEL &amp; YEAR:</b> 2001 D188
<b>ENGINE NO. DISPL. CARB:</b> 8.0L/IV V8 F415		<b>TRANS / DRIVETRAIN:</b> AX4N	<b>AXLE RATIO:</b> n/a
<b>TYPE OF FUEL:</b> Standard		<b>IGNITION TIMING:</b> n/a	<b>TEST CONDUCTED TO CERTIFY CONTROL ITEM COMPLIANCE WITH GOV. REGULATIONS:</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>CRANKCASE OIL AND CAPACITY (L):</b> n/a		<b>TIRE SIZE AND PLY RATING:</b> P215 60R16	<b>REPORT CATEGORIES:</b> <input checked="" type="checkbox"/> ENGINEERING <input checked="" type="checkbox"/> DATA <input checked="" type="checkbox"/> RAWDATA
<b>VEHICLE TEST WEIGHT:</b>		<b>TIRE PRESSURE (psi):</b>	<b>DISPOSITION OF PARTS:</b> n/a
<b>FRONT:</b> 2261	<b>REAR:</b> 1703	<b>TOTAL:</b> 4064	<b>PROCUREMENT REQ? [ ] YES [ ] NO</b>
<b>FRONT:</b> 30	<b>REAR:</b> 30		<b>IF YES, GIVE CODE</b>
			<b>MAIL REPORT TO:</b>
			<b>BLDG:</b>
			<b>MAIL DROP:</b>
			<b>ADDRESS:</b>

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

<b>1)</b>	<b>Conduct:</b>	(speed) 31 MPH	(year) 2001	(vehicle) D188	(level) # CP	
		(mode) 30 degree Right Angular				<b>RECORD COPY</b> Schedule No. <u>D-7-12</u> Retain Until <u>2019</u>
<b>2)</b>	<b>Velocity At Impact:</b>	31 MPH				
	<b>Remote Fire Time:</b>	N/A				
	<b>Positioning procedure:</b>	N/A				
<b>3)</b>	<b>Vehicle Year:</b>	2001				
	<b>Vehicle Line:</b>	D188				
	<b>Vehicle Level:</b>	CP				

<b>Test Requestor:</b> L. Miller (name)	<b>Build Coordinator:</b> E. Pagano (name)	<b>Additional Contacts:</b>	<b>(phone)</b> 24-84280	<b>(phone)</b> 32-30645	<b>(pager number)</b> LMS BPAG	<b>Estimated test cost =</b> <u>\$30,000.00</u>
<b>Test Dev. Engineer</b> <i>L. Miller</i> <i>K. Arthur</i>						

<b>REQUESTING SECT. NO:</b> T881	<b>WORK ORDER/WORK TASK:</b> F18	<b>ISSUED/REQUESTED BY:</b> L. Miller	<b>PHONE:</b> 24-84280	<b>APPROVAL:</b> K. Arthur	<b>TEST TYPE:</b> n/a	<b>FSBK:</b> n/a	<b>SIGN OFF DATE:</b> n/a
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**COMPLETE THE FOLLOWING TWO QUESTIONS AS INDICATED:**

*(Check appropriate boxes)*

<p><b>1 - Rational for not replacing this test by CAE analysis:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> No CAE Methodology or process available</li> <li><input type="checkbox"/> No CAE Correlation</li> <li><input type="checkbox"/> Insufficient confidence in CAE</li> <li><input type="checkbox"/> To obtain basis data for CAE</li> <li><input type="checkbox"/> Replacement or improvement of existing Test</li> <li><input type="checkbox"/> Testing is Quicker</li> <li><input type="checkbox"/> Mandatory or Regulatory</li> <li><input checked="" type="checkbox"/> Certification</li> <li><input type="checkbox"/> Development test for F88</li> <li><input type="checkbox"/> Not applicable</li> <li><input type="checkbox"/> Other _____</li> </ul>	<p><b>2 - What is the expected Test Outcome:</b></p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Results will meet DVP/DCR requirements.</li> <li><input type="checkbox"/> System Component will not meet Test specification.</li> <li><input type="checkbox"/> Unknown</li> <li><input type="checkbox"/> Above is Based on CAE?</li> <li><input type="checkbox"/> Other: _____</li> </ul>
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Request/Original: DPB/880  
 Printed: 8/23/99 Facility: Sewer  
 Destroy Prev. Copies

Test Authorization  
 Page 1 of 18

*O.K. Miller 9/7/99*

TS776 Lab  
 Ver 3.001 Issues Sept 15, 1999  
 Author: Charles P. Pagano/Ed

*2/2/99*

# General Request Information

TA#: TB7751

## Test Mode

31 MPH  
30 degree Right Angular

## Test Objectives: Cert (C) Verif (V) Dev (D) Audit (A)

### REGULATORY:

- FMVSS 204 - Steering Wheel Displacement
- FMVSS 208 - Frontal Occupant Protection
- FMVSS 212 - Wind Shield Retention
- FMVSS 214 - Side Impact Protection
- FMVSS 219 - Windshield Zone Intrusion
- Film Analysis
- Template
- C FMVSS 301 - Fuel System Integrity
  - X Rollover
  - X Pressure Check (P/N: FST) 07/15/97 Jhm.
- FMVSS 303 - NGV Fuel System Integrity
- ECE 12 (74/287/EEC) - Protection of the Driver Against Steering Mechanism
- ECE 32 Rear Impact - Structural Performance
- ECE 39 Frontal Impact - Structural Performance
- ECE 34 Fuel System Integrity
- ECE 94 Step II Frontal Offset - Occupant Performance
- ECE 95 Step II 300mm Barrier Side Impact - Occupant Performance
- 98/79/EC - Frontal Offset
- 98/27/EC - Side Impact

### FORD AUTOMOTIVE OPERATIONS SAFETY DESIGN GUIDELINES:

- Front Impact FAO Safety Design Guidelines
- Offset Frontal FAO Safety Design Guidelines
- Side Impact Protection FAO Safety Design Guidelines
- Rear Impact Fuel System Performance FAO Safety Design Guidelines

### OTHER:

- Sensor Development
- Other, Specify: \_\_\_\_\_

## Primary Test Vehicle Information

Use (Target/Bullet):	BULLET
Model Year:	2001
Vehicle Program:	D185
Vehicle Name:	TAURUS
Body / Cab Style:	SEDAN
Build Number:	DD140001
Tag Number:	308W566
VIN Number:	1FAPP889YG100026 <i>For 07/15/97</i>
Fuel System Rated Capacity (Gal):	18
Prototype Level:	CP
Drive Side:	LH

# Special Prep/Build Instructions Primary Vehicle

TA#: TB7761

## 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
- Color Contrast Underbody Components

Other, Specify:

- May remove decklid, door glass, interior trim

## Pyro Restraints Usage

- for 09/15/99*  <sup>10/11/99</sup> Left Front Air Bag
- for 09/15/99*  Right Front Air Bag
- Left Front Side Air Bag
- Right Front Side Air Bag
- Left Rear Side Air Bag
- Right Rear Side Air Bag
- Left Pyro Retractor
- Left Pyro Buckle
- for 09/15/99*  Right Pyro Retractor
- for 09/15/99*  Right Pyro Buckle <sub>(10/11/99)</sub>

Other, Specify:

- N/A Remote Fire Time:  
(No fire time listed if sensor fired OR if no pyro restraints are used)
- Remote back-up Fire Time:

## Special Pre-Test Preparation

Other, Specify:

# Occupant / ATD Request Primary Vehicle

TAB: TB7751

	<i>Occupant 1</i>	<i>Occupant 2</i>
<b>Type</b>	<u>Water Bottle</u>	<u>Water Bottle</u>
<b>Instrumentation Level*</b>	<u></u>	<u></u>
<b>In-Vehicle Location</b>	<u>LF</u>	<u>RF</u>
<b>Verify:</b> <b>Seat Position Long</b>	<u></u>	<u></u>
<b>Seat Position Vert</b>	<u>FULL DOWN</u>	<u>FULL DOWN</u>
<b>Seat Back Angle</b>	<u></u>	<u></u>
<b>Positioning Procedure</b>	<u>N/A</u>	<u>N/A</u>
<b>Use Foot Rest</b>	<u>N/A</u>	<u>N/A</u>
<b>Take Seat Track Video</b>	<u></u>	<u></u>
<b>Special Positioning Instructions</b>	<u></u>	<u></u>
<b>Dummy Adjustment</b> (arm angle)	<u></u>	<u></u>
<b>Occupant Belted</b>	<u>Pm 09/15/99 YES</u>	<u>Pm 09/15/99 YES</u>

\*See instrumentation request for detailed instrumentation information.

# Test Conditions - Final Prep

TAF: TB7781

## Final Prep Contacts

ONE of these MUST be present during weigh-up & final prep

	<b>Test Engineer</b>	<b>Request Engineer</b>	<b>Build Coordinator</b>
Name:	_____	<u>L. Mallor</u>	<u>E. Pagano</u>
Phone:	_____	<u>24-84280</u>	<u>32-00645</u>
Pager:	_____	<u>LMS</u>	<u>BPAG</u>

## Test Weight

_____	Minimum Option Weight	GVWR: _____
_____	95% Option Weight	Wheelbase: _____
<u>X</u>	Maximum Option Weight	

## Tire Pressure

Front: 30. psi                      Rear: 30. psi

## Fuel System

Fuel Tank & System to Contain: Stoddard

<u>17.1</u> gallons	=	<u>95</u> %	x	<u>18.0</u> gallons
Fill Level		%	x	Capacity

## Weight Targets

If required weight distribution is UNACHIEVABLE, please note allowable variances.

Curb Weight	Requested Test Weight	Acceptable Test Weight Variance		Actual Test Weight
		High (+)	Low (-)	
Front: _____	<u>2,881 lbs</u>	Front: <u>18 lbs</u>	<u>0 lbs</u>	Front: <u>2861</u>
Rear: _____	<u>1,708 lbs</u>	Rear: <u>18 lbs</u>	<u>0 lbs</u>	Rear: <u>1706</u>
Total: _____	<u>4,084 lbs</u>	Total: <u>26 lbs</u>	<u>0 lbs</u>	Total: <u>4067</u>

Rated Luggage Load: 0 lbs

## Simulate/Verify at Weigh-Up

Dummy Weight \_\_\_\_\_

On Board Camera Count \_\_\_\_\_

## Weight Addition (Restrictions)

Do NOT place any weight in the following locations:

_____ Air Cleaner	_____ Engine	_____ Doors
_____ Battery	_____ Fan Box/Shroud	_____ Foot Wells - Front
<u>X</u> Bottle - Coolant	<u>X</u> Headlamp Opnrs	_____ Foot Wells - Rear
<u>X</u> Bottle - Washer	<u>X</u> Radiator	_____ Quarter Panels
		_____ Trunk Floor

Other: \_\_\_\_\_

## Ride Heights

Measure @ Test Weight

Front: \_\_\_\_\_

Rear: \_\_\_\_\_

Measure

Front: Rocker Level to Ground

To: Rocker Level to Ground

## Additional Remarks

DO NOT fill tank with stoddard until weigh-up

**Dimensional Analysis Request  
Primary Vehicle**

TAF: TS7701

**Frontal Inspects**

74		
81		
105	Control Points (GAR)	Exterior
107		
125	Collapsible Distance Points	Exterior
128	Frame/SL Col/ Bns. for Seats (GAR)	Exterior
130	Frame Standard Bottom (GAR)	Exterior
132	Unified Standard Bottom (GAR)	Exterior
134	Drive Shaft Collapses	Exterior
138	Standard Body Relative	Exterior/Interior
138	Windshield (GAR/R/S)C	Exterior
140	Sill & Pillar	Exterior
142	Shot-Guns	Exterior
148	Header	Interior
150	Steering Wheel Deformation/ Periphery	Interior
152	Steering Column Mounts	Interior
154	Steering Column Targets	Interior
155		
158	Seat Track to Floor Mounts	Exterior
158	Seat to Track Mounts	Exterior
160	Coat Relation	Exterior
162	Floorpan Points	Exterior
164	Knee Bolster	Interior
166	Seat Belt Mounts	Interior
168	Diagonal Strut	Interior
170	Tunnel Hinge Pillar	Exterior
172	Brake Bracket (ONLY if you can reach it)	Interior
174	Instrument Panel Mounts	Exterior
176	T-H-T Targets	Exterior/Interior
177	Toe Non-Slides & Body Slides	Exterior/Interior
225	Rear Door Aperture Reduction	
300		
302		
340		
388		
384		
378		
485	Pict 9 Sectional Profiles	
505	Decoupling Column Collapses	Exterior
507	P. R. Steering Column Collapses	Exterior
508		
509	I/Z Steering Column Collapses & Intermediate Strut	Interior
540	Dash Profile @ Driver Centerline	Interior
541	Dash Profile @ Vehicle Centerline	Interior
542	Dash Profile @ Passenger Centerline	Interior
547	Footwell Reduction	Interior
600	1) Driver/Passenger - A & B-Pillar points 100mm above the sill and 100mm below the window apertures. (NOTE: all points should be as close as possible to the rubber sealing strip around the door aperture) 2) Dash Panel Point which is longitudinally in line with the center of the brake pedal 3) Dash Panel Points 200mm inboard/outboard of brake pedal center point (NOTE: Carpet will allow holes to be folded back or two small diagonal intersecting slots may be made in the carpet)	

# Film Analysis & Photographic Services Request

## Front Impact Film Analysis

TAF: TB7751

Head WRT Vehicle  
 Shoulder WRT Vehicle  
 Rocker WRT Ground

Other, Specify:  
\_\_\_\_\_  
\_\_\_\_\_

## Still Photography

Copies of Still Photo Proof Sheets Required  
 Copies of Still Photos (4/5) Required  
 Pre Test Documentation Photographs  
 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

### 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  
 Top of Barrier - Engine Close-up  
 In lights - Close-up of Engine/Fuel Rail from left side  
 In lights - Close-up of Engine/Fuel Rail from right side  
 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

Requestor/Operator: DFB/MSD  
Printed 08/00 Priority: Normal  
Destroy Prev. Copies

Film and Photo Attachment  
Page 7 of 10

TB7751.xls  
Validated: August 12, 1998  
Author: Cline/Hg/Pugliese/Dob

CRTS 0011604

\_\_\_\_\_ Reaction

**PR Coverage**

\_\_\_\_\_ Pit - Overall  
\_\_\_\_\_ X Pit - A-Pillar Forward  
\_\_\_\_\_ Pit - L/R Frame Home (Crisecross)  
\_\_\_\_\_ 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.

**All Other High Speed Photography**

\_\_\_\_\_  
\_\_\_\_\_



# Instrumentation and Data Processing Request

TA#: TB7751

## Primary Vehicle Structural Instrumentation - Frontal Impact

ACCELEROMETERS:	Long	Vert	Lat
<input type="checkbox"/> Engine/Trans Upper	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Engine/Trans Lower	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Left Rocker at A-Pillar	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Right Rocker at A-Pillar	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Left Rocker at B-Pillar	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Right Rocker at B-Pillar	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Left Rocker at C-Pillar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Right Rocker at C-Pillar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Left Frame at A-Pillar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Right Frame at A-Pillar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Left Frame at B-Pillar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Right Frame at B-Pillar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Left A-Pillar Inside	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Right A-Pillar Inside	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Centerline Tunnel @ Dash	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Centerline Tunnel Middle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Centerline Tunnel @ Seat Long Centerline	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Left Floor Pan Under Seat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Left Door Inside Top	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Left Shock Tower	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Right Floor Pan Under Seat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Right Door Inside Top	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Right Shock Tower	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Rad Support Top - Center	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> #1 Crossmember Bottom	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> #2 Crossmember Bottom	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Left Front Rail Forward of Slidrunners.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Left Front Rail Forward of Shock Tower	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Right Front Rail Forward of Slidrunners.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Right Front Rail Forward of Shock Tower	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Directly Below D.A. Point # 60	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Directly Below D.A. Point # 64	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Next to Fuel Inertia Switch	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Top of Battery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Near ACS Bypass Switch	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Trunk near Fuel Inertia Switch	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

OTHER STRUCTURAL ACCELS:	Long	Vert	Lat
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Primary Vehicle Systems Instrumentation**

TAD: TB7751

**SENSOR ACCEL:**

See Sensor Map

**MONITOR AIR BAG SENSORS:**

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

**MONITOR AIR BAGS STATUS:**

- Driver Squib Voltage
- Driver Squib Current
- Driver Bag Pressure
- Passenger Squib Voltage
- Passenger Squib Current
- Passenger Bag Pressure
- Passenger Initiator Pressure

**STEERING COLUMN:**

- Strokes 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
- Other \_\_\_\_\_

**FUEL SYSTEM:**

Inertia Fuel System Cut-Off Switch

**ANGULAR MOTION SENSORS:**

\_\_\_\_\_

**VEHICLE STRING POTS:**

\_\_\_\_\_

**OTHER VEHICLE SYSTEM INSTRUMENTATION:**

- A/B Bypass Driver (acc) Switch
- A/B Bypass Passenger (acc) Switch
- A/B Bypass Loop (acc) Switch

**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
- Lightweight Left Lap Belt at Anchor Load
- Lightweight Left Torso Belt at Retr. Load
- Lightweight Left Torso Belt at D-ring Load
- Lightweight Right Lap Belt at Anchor Load
- Lightweight Right Torso Belt at Retr. Load
- Lightweight Right Torso Belt at D-ring Load

# Barrier Load Cell Request

TAF: TB7761

0800	0800	0900	0800	0900	1000	1000	1400
0900	0900	0800	0800	0900	0900	0900	1000
0900	0900	0800	0800	0900	0900	0900	1000
0900	0900	0800	0800	0900	0900	0900	1000

## 90 Degree Full Frontal Impact

- All Barrier Load Cells (see diagram left)
- X Channels Only
- X,Y Channels Only
- X, Z Channels Only
- All X,Y,Z Channels

### Partial Barrier Load Cells (see bolded diagram left)

- X Channels Only
- X,Y Channels Only
- X, Z Channels Only
- All X,Y,Z Channels

0800	0800	0900	0800	0900	1000	1000	1400
0900	0900	0800	0800	0900	0900	0900	1000
0900	0900	0800	0800	0900	0900	0900	1000
0900	0900	0800	0800	0900	0900	0900	1000

## 90 Degree Left Full Frontal Impact

- All Barrier Load Cells (see diagram left)
- X Channels Only
- X,Y Channels Only
- X, Z Channels Only
- All X,Y,Z Channels

### Partial Barrier Load Cells (see bolded diagram left)

- X Channels Only
- X,Y Channels Only
- X, Z Channels Only
- All X,Y,Z Channels

0800	0800	0900	0800	0900	1000	1000	1400
0900	0900	0800	0800	0900	0900	0900	1000
0900	0900	0800	0800	0900	0900	0900	1000
0900	0900	0800	0800	0900	0900	0900	1000

## 90 Degree Right Full Frontal Impact

- All Barrier Load Cells (see diagram left)
- X Channels Only
- X,Y Channels Only
- X, Z Channels Only
- All X,Y,Z Channels

### Partial Barrier Load Cells (see bolded diagram left)

- X Channels Only
- X,Y Channels Only
- X, Z Channels Only
- All X,Y,Z Channels

CRIS 0011604

# List of Contacts

TAF: TB7751

	Last name	Phone	Pager	Profs
Requestor	L. Misior	24-84280	LMIS	LMISGKR
Approving supervisor	K. Arthur	38-05155	KART	KARTHURB
Build coordinator	B. Pagano	32-38045	BPAG	BPAGANO
Test engineer				
Sensor Engineer	M. Rucker	31-78180	MRUCKER	MRUCKER
Other				

	Last name	Phone	Pager	Profs
Seats	M. Jessup	84-51801	MJESSUP1	MJESSUP1
Instrument panel	M. Keranen	88-74148	NONE	MKERANEN
Restraints	N. Desai	88-05145	NDESAI	NDESAI
Air bag (driver)	R. Ruzhinski	82-18978	RRUTHINO	RRUTHINO
Air bag (passenger)	R. Ruzhinski	82-18978	RRUTHINO	RRUTHINO
Steering column				

CRTS 0011604

# Revisions List

TAB: TB7761

DATE	AUTHORIZATION	DESCRIPTION	PAGE #s
8/2/99	L. Mielitz K. Arthurs	vin #, build#, Tag#, Number of Valves, Total weight, Front weight, Rear weight.	1,2,14(17)

# VEHICLE SAFETY PACKAGE LAB WORK ORDER

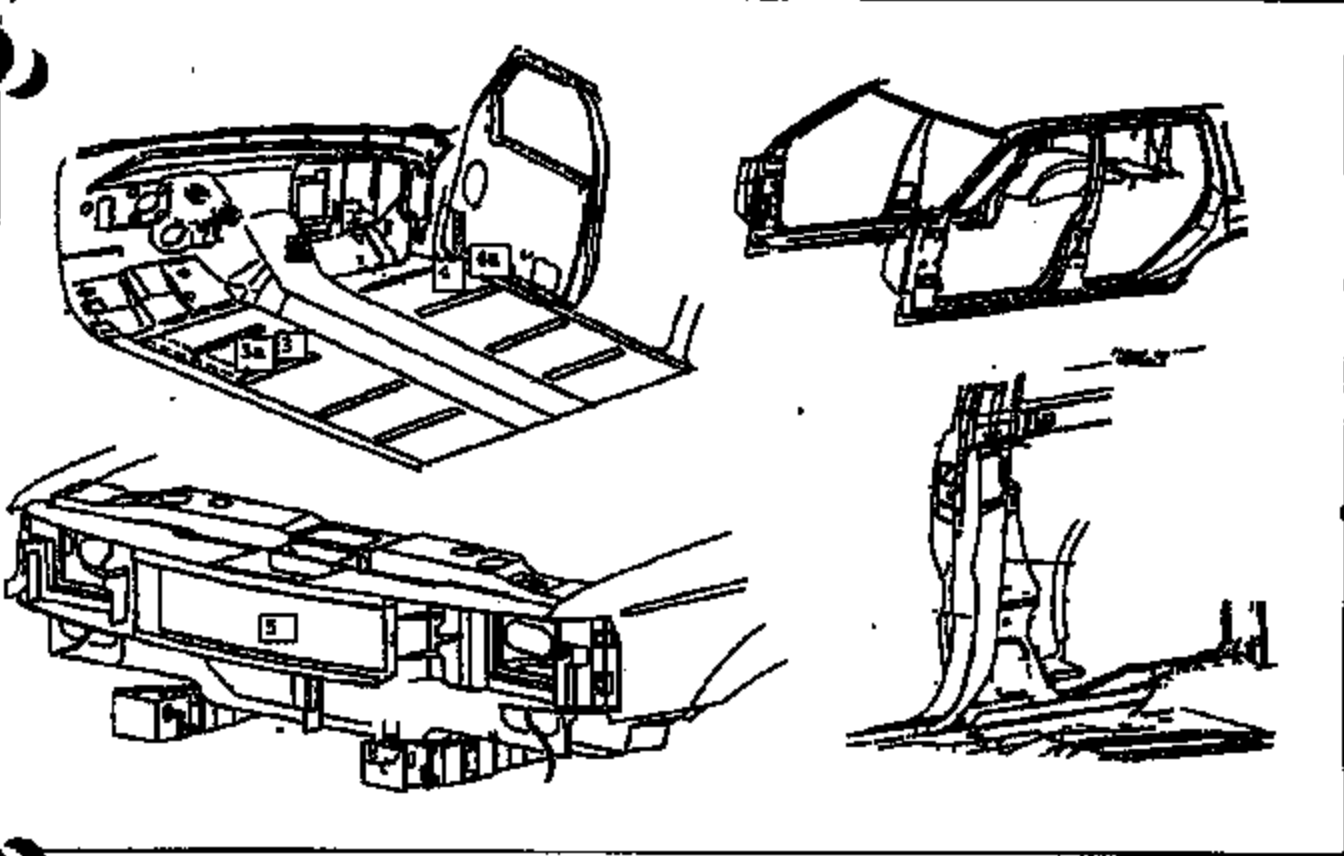
TA#: TB7751

DATE	MODEL	YEAR	CABIN#	JOB NUMBER
8/23/99	DD140001	2001	D188	TB7751
CONTACT NAME		PHONE	TYPE	REFERENCE
L. Mielke		24-84280	T551	F18
CONTACT NAME		PHONE	TEST CODE	
B. Pagano		32-80845	30 degree Right Angular	
VIN		MODEL	TEST CODE	
1FAPP59S5YG100026		DD140001	306W998	
STATION INFORMATION				
SGRP		MID POINT		PULL REAR
STATION INFORMATION				
LH FRT		CENTER FRT		RH FRT
LH REAR		CENTER REAR		RH REAR
VEHICLE DELIVERED TO	D/A	BARRIER		BUILD SITE
ANY QUESTIONS CONTACT:				
PETER J. SIMONIE				
PHONE: (313) 59-48309				
PAGER: (313) 705-6963				
DESCRIPTION OF JOB TO BE PERFORMED:				

# SENSOR MAP

ID: 906W936  
Level: 1PP  
Ad # DD14001

Program: D168  
Test Mode: 31/00 BARRIER  
TA No.: TB7751



Location Name	Supplier	Output	Nominal (+/-)	Sensor Character only		Serial #
				Max/Min		
<del>1-4/Floor_Pickup</del> (1st Floor Location)	VEV32-1	DATA_OUT	0	10		
	VEV32-2	DATA_OUT	0	10		
	VEV32-3	DATA_OUT	0	10		
	VEV32-4	DATA_OUT	0	10		
	VEV32-5	D_PSP_OUT	0	18		
	VEV32-6	R_PSP_OUT	0	18		
	VEV32-7	D_BARL_OUT	0	18		
	VEV32-8	R_BARL_OUT	0	18		
	VEV32-9	Status	5	10		
1-4/Floor_Pickup	3001	TRIAZ	On Ngron			NA
2-4/Floor_Pickup	VEV32	SENSOR				NA
3-4/Floor_Pickup	3002	TRIAZ				NA
4-4/Floor_Pickup	VEV32	SENSOR				NA
5-4/Floor_Pickup	3001	TRIAZ	Next to ICE			NA

*9/15/1998  
VH CAC/SLK*

Tzars required: Assumed system power from vehicle wiring and battery - use provided harness

### REVISION LOG

DESCRIPTION	DATE	PAGE AFFECT	AUTH

L. Mahr 24-84280  
File: SMAP\_3004.xls, Tab: Sheet  
AVT VCS

*187-15  
Page 2 of 2  
for  
[signature]*

Created: 2/1/98  
Revised: 2/1/98  
Printed: 2/2/98, 1:18 PM

# BARRIER QUALITY ASSURANCE AND TRACKING FORM

**DATA ENGINEER:** Name not on list  
**TEST ORDER NUMBER:** T87791  
**TEST ENGINEER:** R. ODA  
**VEHICLE TYPE:** D-188  
**REQUESTED SPEED:** 31 MPH  
**CRASH DATE:** 08/22/99  
**CRASH TIME:** 08:13  
**TOTAL CHANNELS:** 20

**WB REVIEW ENGINEER:** Lee  
**SITE:** SB  
**TEST DESCRIPTION:** 30 DEG. RIGHT FRONT FOXED BARRIER  
**IMPACT TYPE:** CAR  
**TEST TYPE:** CT  
**OK TO STRIP DATE:** 09/22/99  
**OK TO STRIP TIME:** 08:30  
**DUMMY CHANNELS:** 0

TEST DUMMY INFORMATION						
POS	NO.	TYPE	A/E	BELT	PSAD	OTHER
LF		OTHER	Y	Y		
RF		OTHER	Y	Y		

11604

CHANNEL IDENTIFICATION			EQUIPMENT					ANOMALIES										DESCRIPTION	RESOLUTION	CAT					
TEST CHANNEL	LOCATION	AW	TRANSCEIVER	RECEIVER CHANNEL	CABLE	COAX PROLONG	COAX CHANNEL	NO DATA	INVALID DATA	DEFECT FROM LEND	LOOSE BERT	RECORDED ONLY RESULTS	TRUNCATED RECORD	INTERFERED	NOISE	RECORDING EQUIPMENT	RECORDING	DATA INTERRUPT	DATA DISAPPEAR	RECORDING EQUIPMENT	LATE RECORDING	DATA ENGINEER REMARKS	TECHNICAL REMARKS	CLASS	TYPE
No Problems																									