

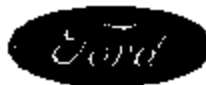
• EA03-010

Ford

10/22/03

Attachment F

• Book 13 of 24



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**FINAL TEST REPORT**

**Global Test Operations  
 Research and Vehicle Technology**

**TO:** L. Mialik

Test Order No.	T-B8728
Work Task W. O. No.	P09
Test Date	9/28/99
Date Reported	11/5/99
Sheet	1 of 86

**SUBJECT:** Crash Test 11611 (90° Front Fixed Barrier Impact at  $34.9 \pm 0.4$  mph,  $56.2 \pm 0.6$  km/h) - 2000 Taurus (D186) 4-Door Sedan - 2000 Certification Program

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

**OBJECT:** To provide occupant protection data relative to the front barrier impact test requirements of the current FMVSS No. 208 (U.S. CFR Docket 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.

R. Oda  
 Engineering Technologist

Concur: S. Lesh  
 Section Supervisor  
 Operations Engineering Section

**VEHICLE DATA:**

<b>Make and Model</b>	2000 Taurus (D186) 4-Door Sedan (LPP Prototype)	
<b>ID Numbers</b>	1FAPP55U9YA10013B, 306-W-255	
<b>Power Train</b>	3.0L, EFI, Automatic (AX4N) Transaxle	
<b>Fuel Tank(s)</b>	Usable Capacity: 16.0 gal. (60.6L) Test Condition: Filled with water for ballast.	
<b>Front Seat(s)</b>	Type: Bucket Cover: Cloth Tracks/Position: 6-Way Power/Mechanical Mid and Down Seat Backs/Position: Adjustable/27.8° 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 RP: None Used	
<b>Occupants</b>	LF: 50th Percentile Male, Hybrid III, Instrumented No. 328 RP: None Used	
<b>Test Weight</b>	Front: 2261 lb (1026 kg) Rear: 1607 lb (729 kg) Total: 3868 lb (1755 kg) The test weight includes: <ul style="list-style-type: none"> <li>- the "as received" unloaded vehicle curb weight</li> <li>- Minimum production options (simulated)</li> <li>- 2 occupants(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: Fascia/Beam 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 Crash Protection, T637-ST-25 dated March 3, 1998.

**2. Significant Deviations from T637-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 11611001 through 11611070.

## ATTACHMENT I

Occupant Injury Data (C/FMYSS 208)

	<u>L. F. Dummy</u>
Head Injury Criteria (HIC)	392
Interval	58 ms
t1	94 ms
t2	
Chest resultant acceleration level at 3 ms cumulative duration	43 g
Chest Deflection (Hybrid III)	1.2 in
Peak axial compression load:	
Left femur	297 lb
Right femur	381 lb
Peak axial tension load:	
Left femur	319 lb
Right femur	143 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 Crash Film Analysis and/or Instrumentation Data

	Maximum Dynamic Longitudinal Crush	
	in.	(mm)
Left Side	28.9	(734)
Right Side	29.2	(742)

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.

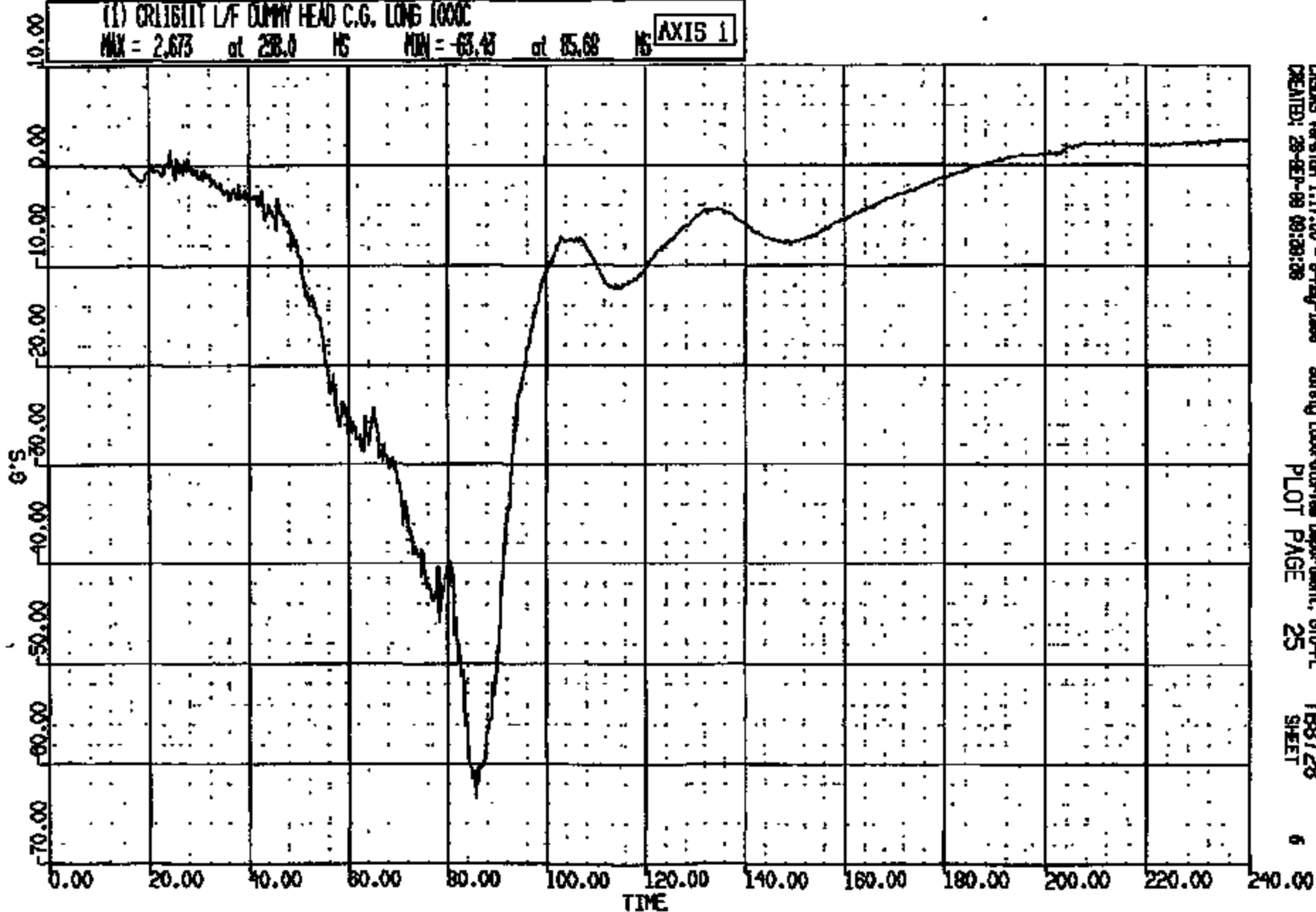
Time histories of vehicle dynamic displacements obtained from Film Analysis are included in this report.

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: 11811 TO: TB8728 DATE: 990928 08:55:55  
2000 D-188

(1) CR1611T L/F DUMMY HEAD C.G. LONG 1000C

MAX = 2.673 at 28.0 MS MIN = -63.43 at 85.68 MS **AXIS 1**



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Safety Laboratories Department, 610-PL  
PLOT PAGE 25

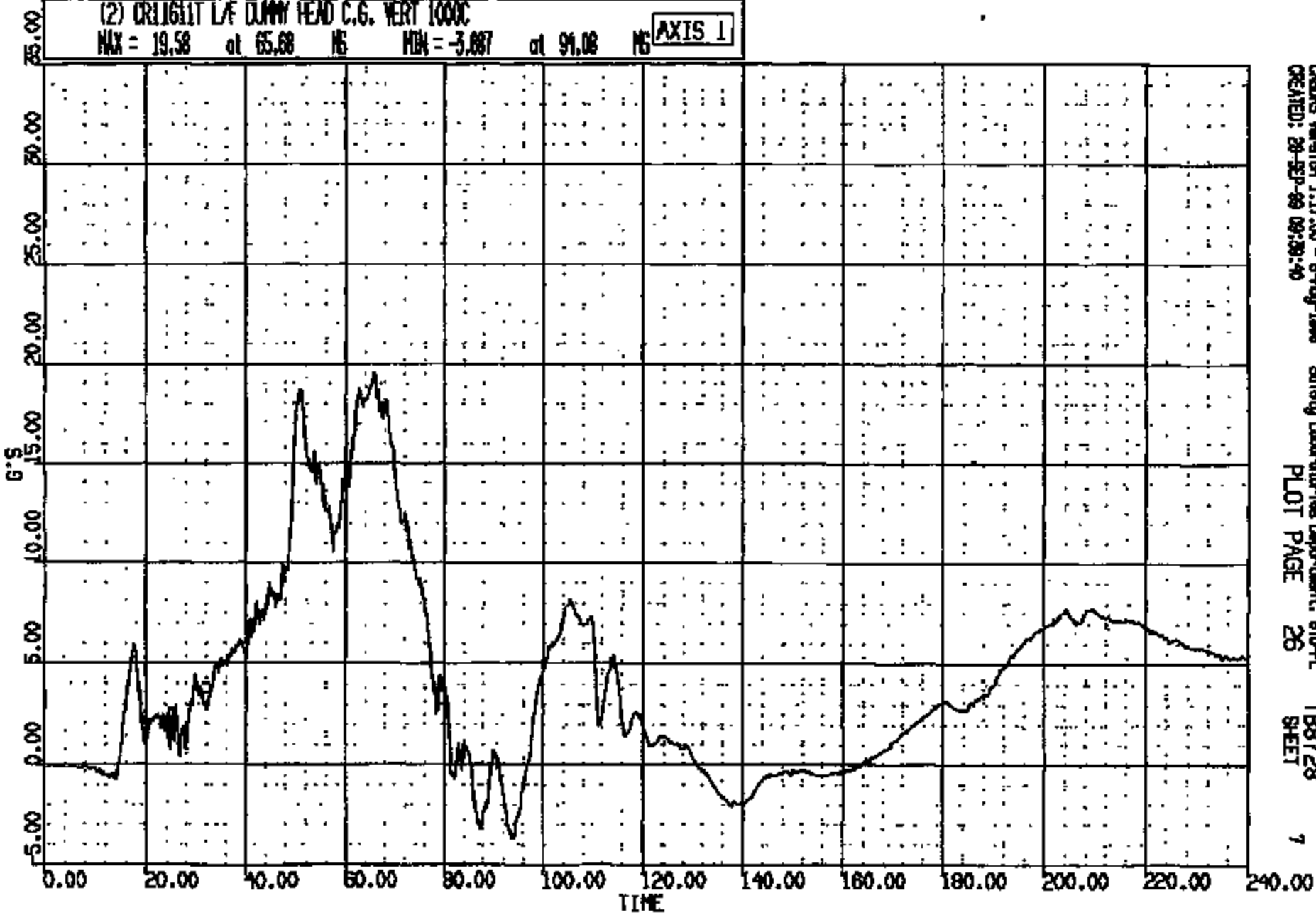
TB8728  
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6

CRTS 0011611

CR R: 11611 TO: T89728 DATE: 990928 08:55:55  
2000 D-180

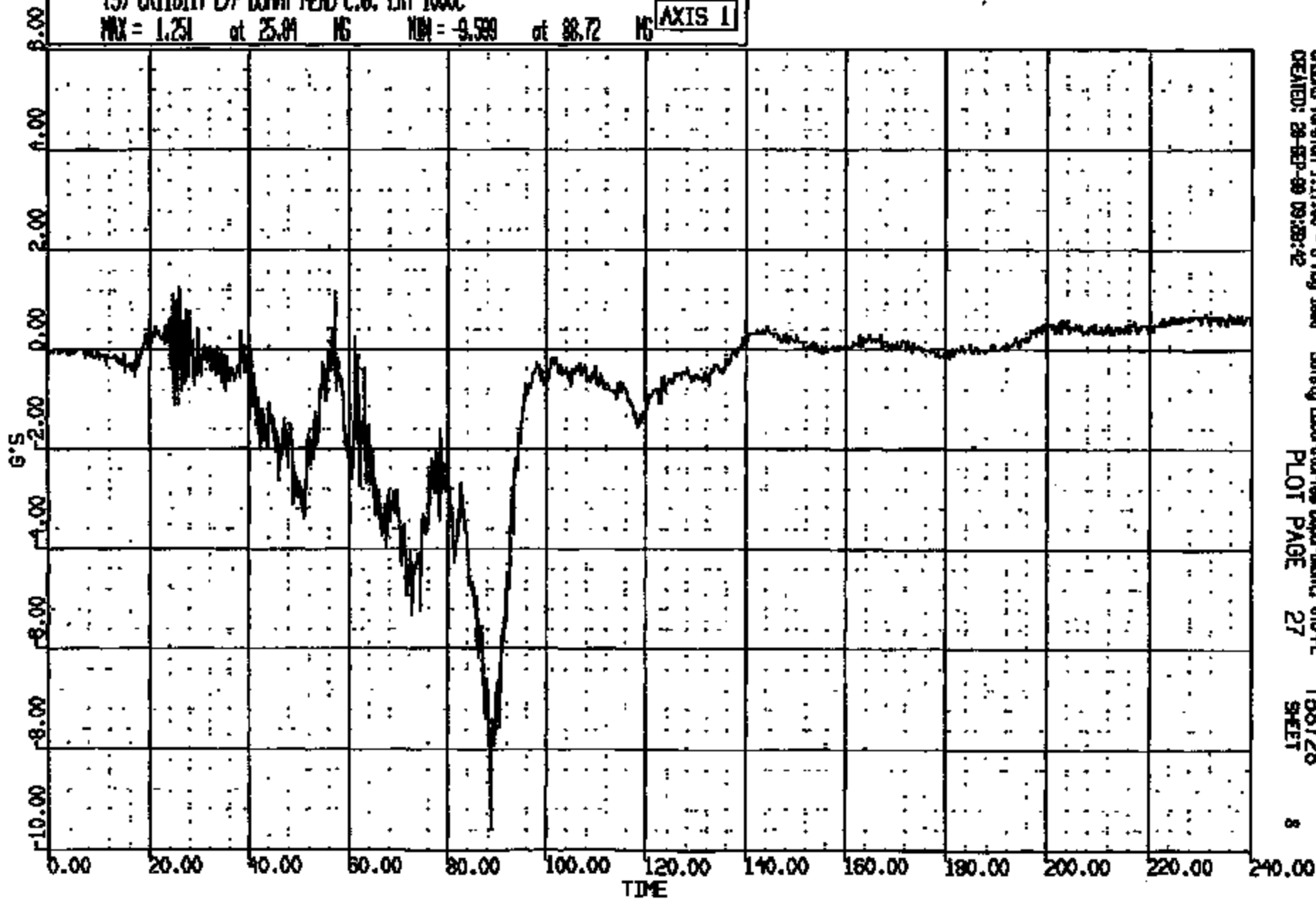
(2) CR11611 L/F DUNNY HEAD C.G. VERT 1000C  
MAX = 19.58 at 65.68 NS MIN = -3.087 at 91.08 NS **AXIS 1**





CR #: 11811 TO: TB8728 DATE: 990928 08:53:53  
2000 D-188

(3) CRISIS/LF DUMMY HEAD C.G. LAT 10000  
MAX = 1.251 at 25.04 MS MIN = -9.589 at 88.72 MS **AXIS 1**

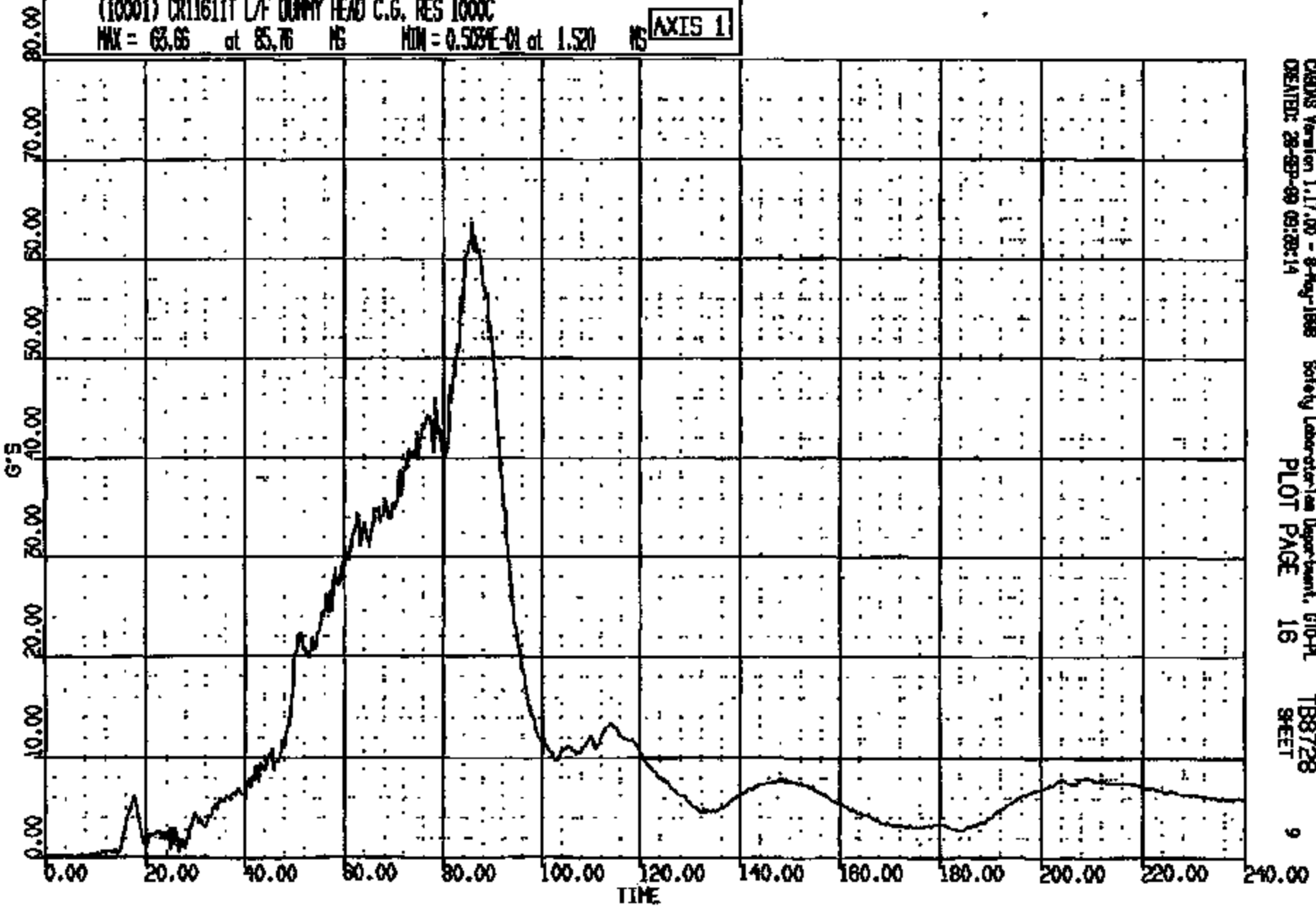


CRS Version 1.17.00 - 8-May-1999 Safety Laboratories Department, 610-PL  
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SHEET 8

CRIS 0011611

INCR R: 11611 TO: TB8728 DATE: 090828 08:55:55  
 IINC: 001000  
 IINC: 00000 DUR: 240.0 T1/TN: 55.4 // 1.000  
 IINC: 00000 DUR: 50.0 T1/TN: 87.0 // 1.000  
 IINC: 00000 DUR: 10.0 T1/TN: 75.0 // 1.000

(1000) CR11611 L/F DUMMY HEAD C.G. RES 1000C  
 MAX = 63.66 at 85.76 MS MIN = 0.5034E-01 at 1.520 MS **AXIS 1**

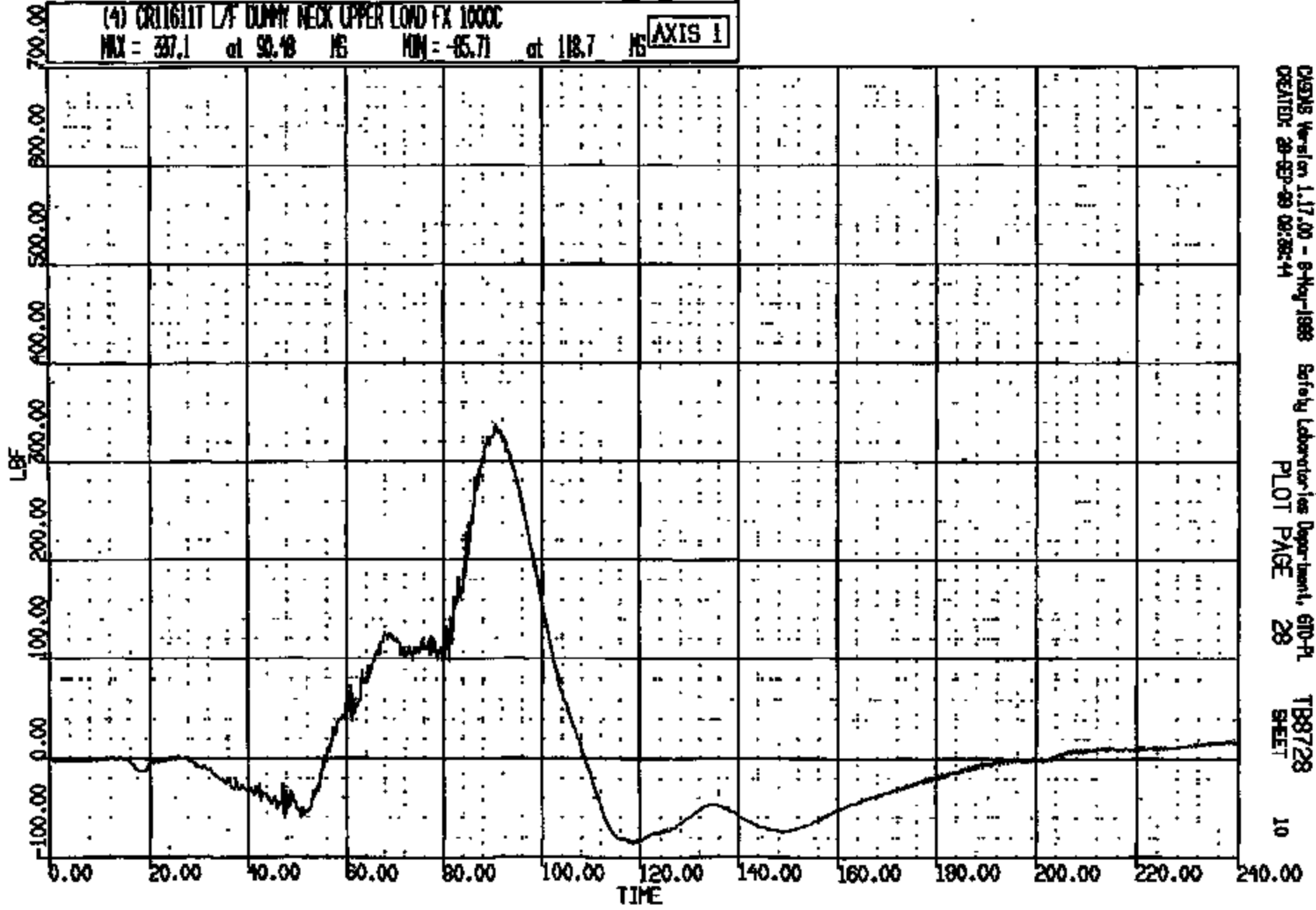


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 DATE: 28-SEP-89 09:29:14 PLOT PAGE 16 TB8728 SHEET 9

CRIS 0011611

RUN R: 11611 TO: T88728 DATE: 880928 08:53:57  
R000 D-186

(4) CR11611T L7 DUMMY NECK UPPER LOAD FX 1000C  
MAX = 337.1 at 93.48 MS MIN = -85.71 at 118.7 MS **AXIS 1**

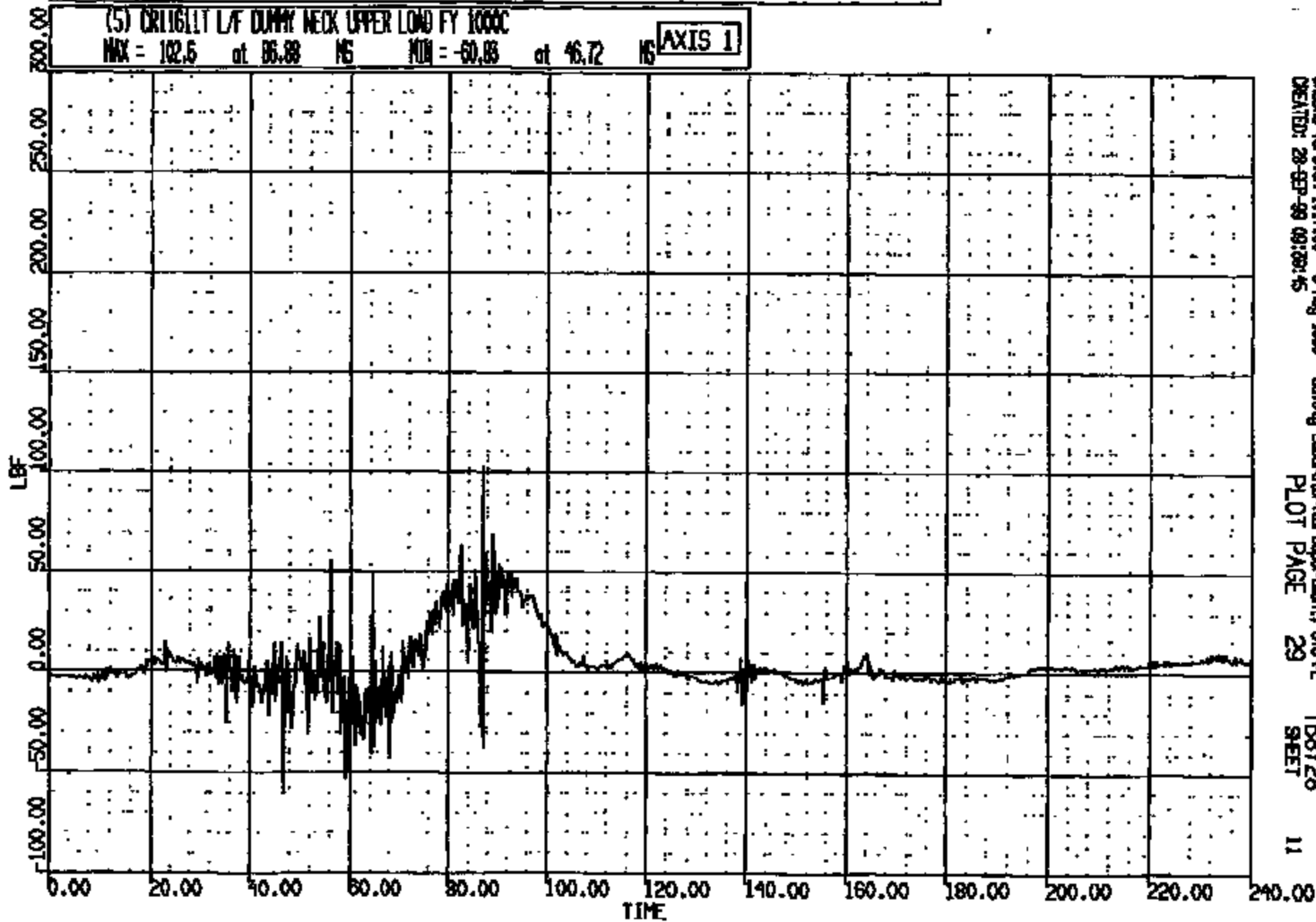


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CREATED: 28-SEP-88 08:58:44 PLOT PAGE 28 SHEET 10

CRIS 0011611

CR R: 11011 TO: T88728 DATE: 990928 08:53:53  
NOOO D-188

(5) CRT1611 L/F DUMMY NECK UPPER LOAD FY 1000C  
MAX = 102.5 at 85.88 NS MIN = -50.88 at 46.72 NS **AXIS 1**

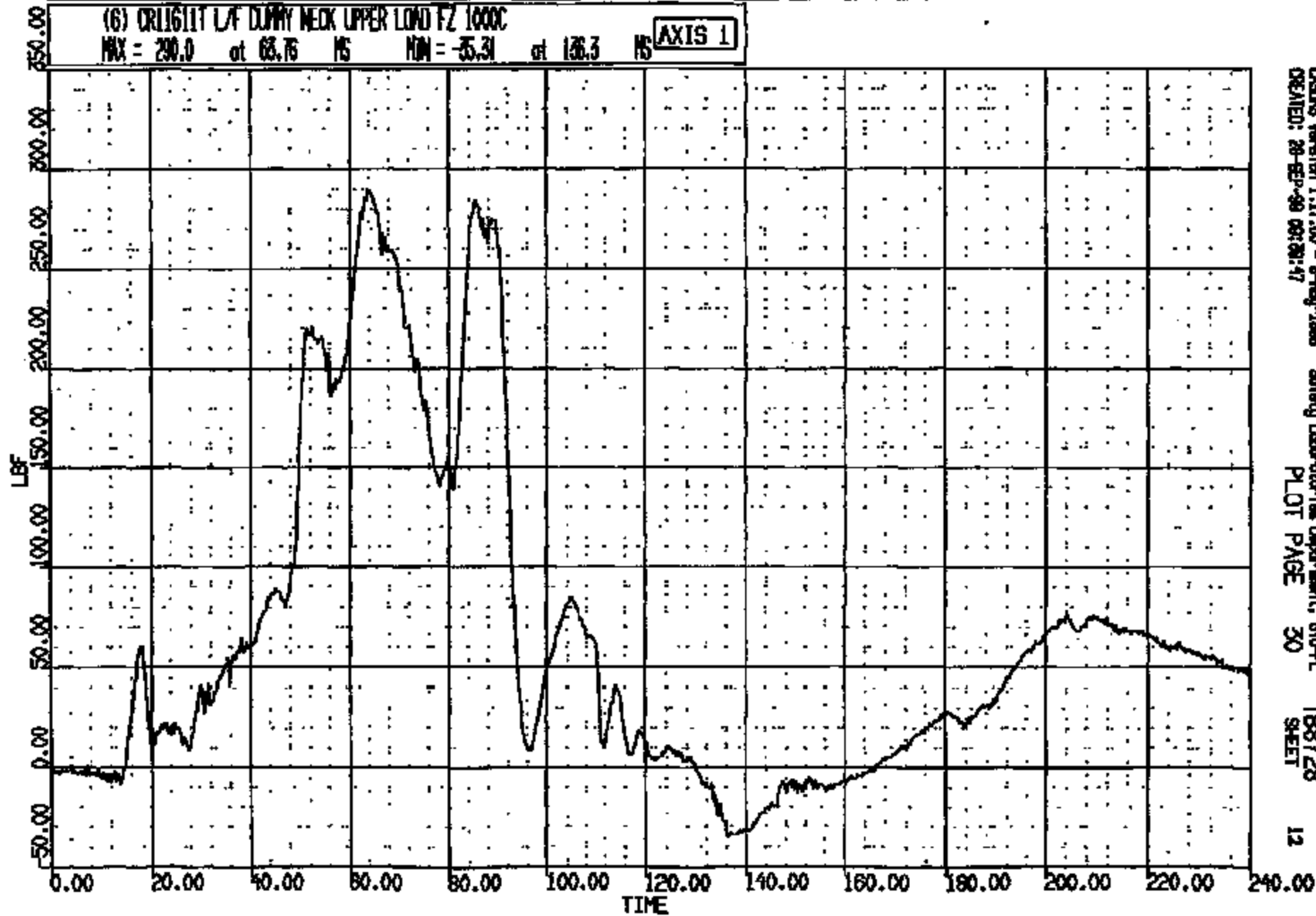


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CRTS 001611

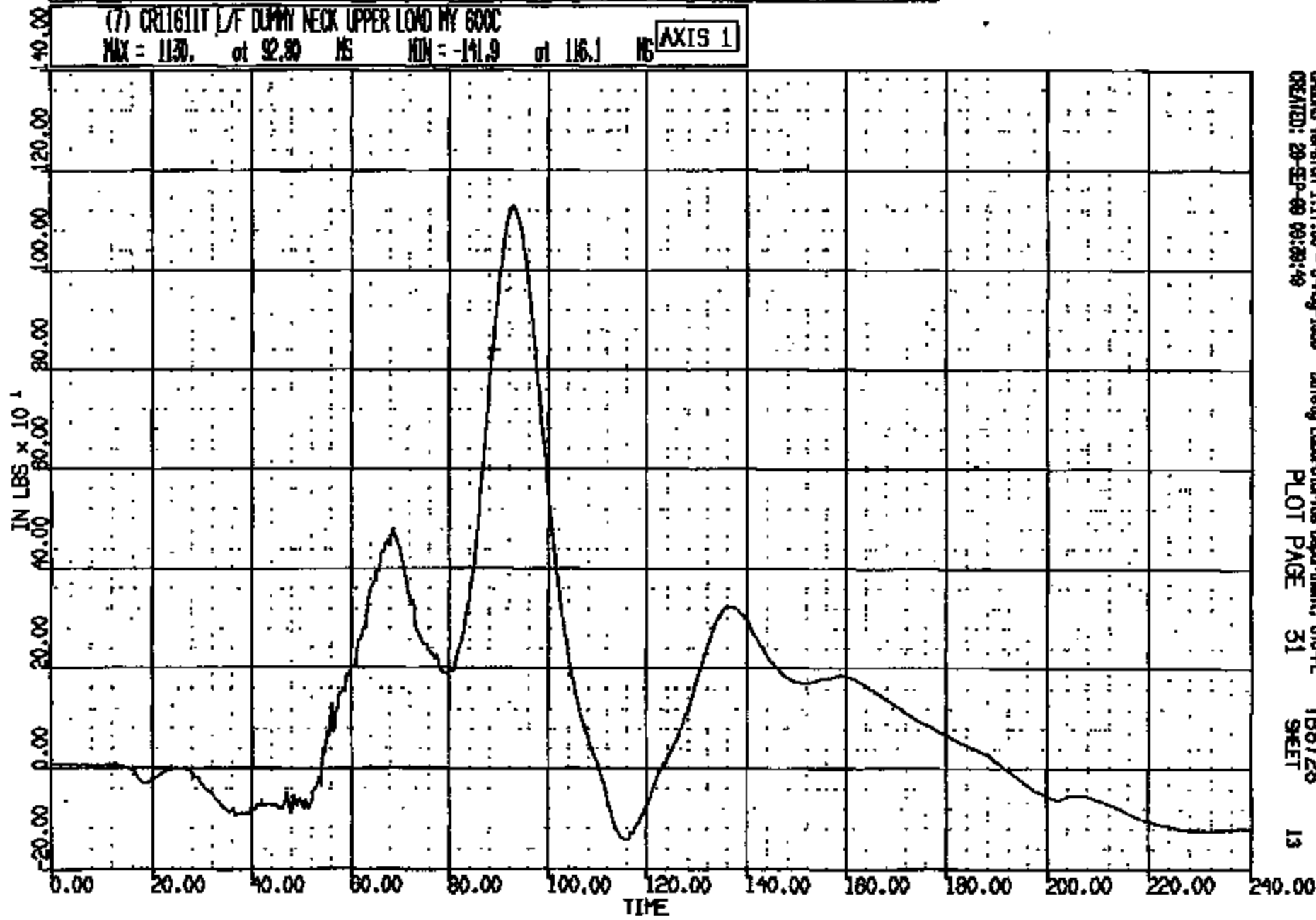
CR R: 11611 TO: T88728 DATE: 990928 08:55:53  
2000 D-198

(6) CR1611T L/F DUMMY NECK UPPER LOAD FZ 1000C  
MAX = 290.0 at 68.75 MS MIN = -35.31 at 136.3 MS **AXIS 1**



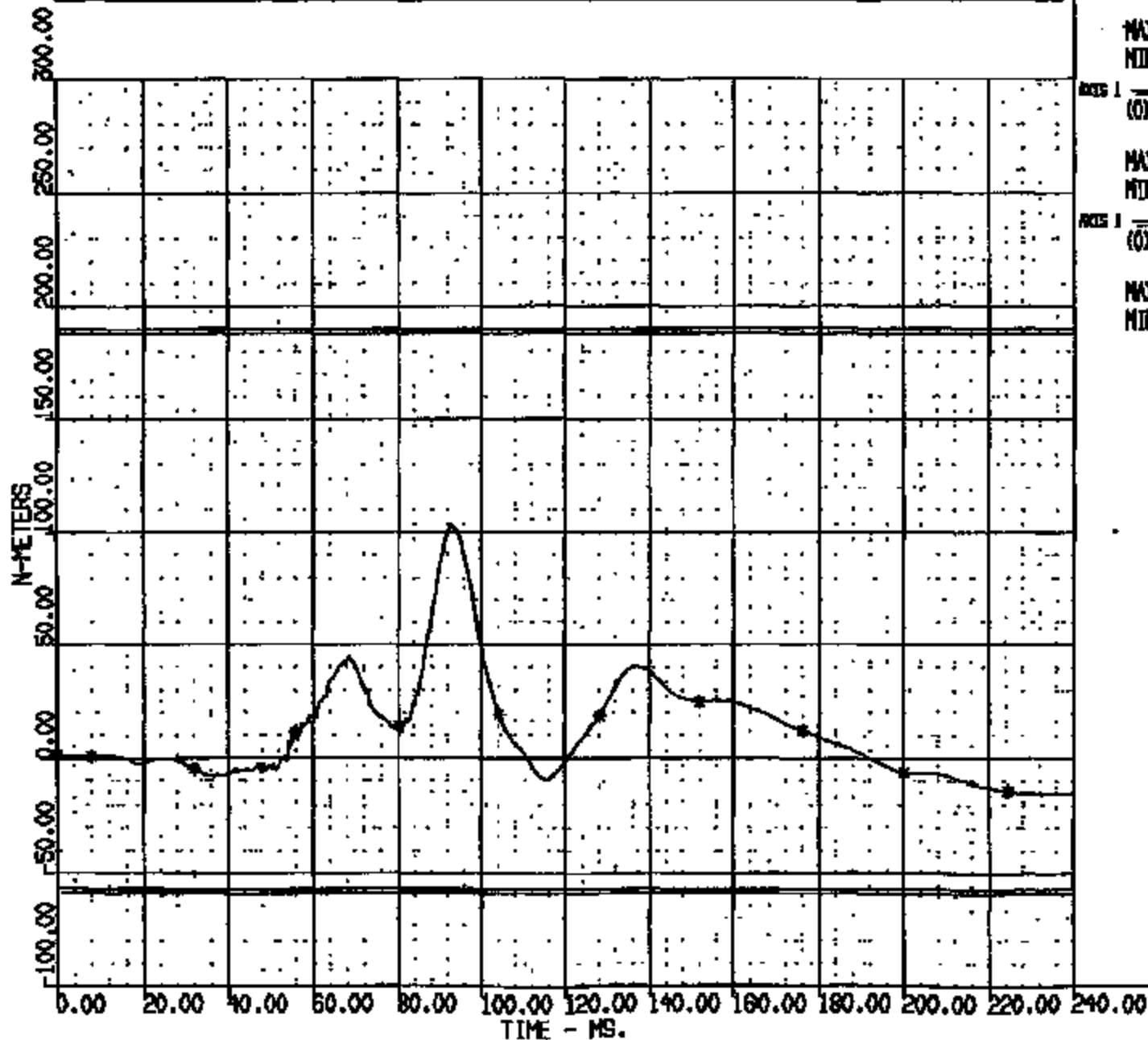
COR R: 11611 TO: T88728 DATE: 890828 08:55:35  
2000 D-188

(7) CRT1611T L/F DUMMY NECK UPPER LOAD BY 600C  
MAX = 113.0 at 92.80 MS MIN = -141.9 at 116.1 MS **AXIS 1**



CRTS 0011611

NECK BENDING MOMENT: FLEX & EXT  
 INFLUT  
 ORAZEL: CR11811T L/F DUMMY NECK UPPER LOAD MY 600  
 ORAZEL: CR11811T L/F DUMMY NECK UPPER LOAD FX 100  
 IYBRI: 11811 TO: T88728 DATE: 880828 08:58:58  
 IYBRI: THE CRITERIA PLOT - BOTH X DUMMY

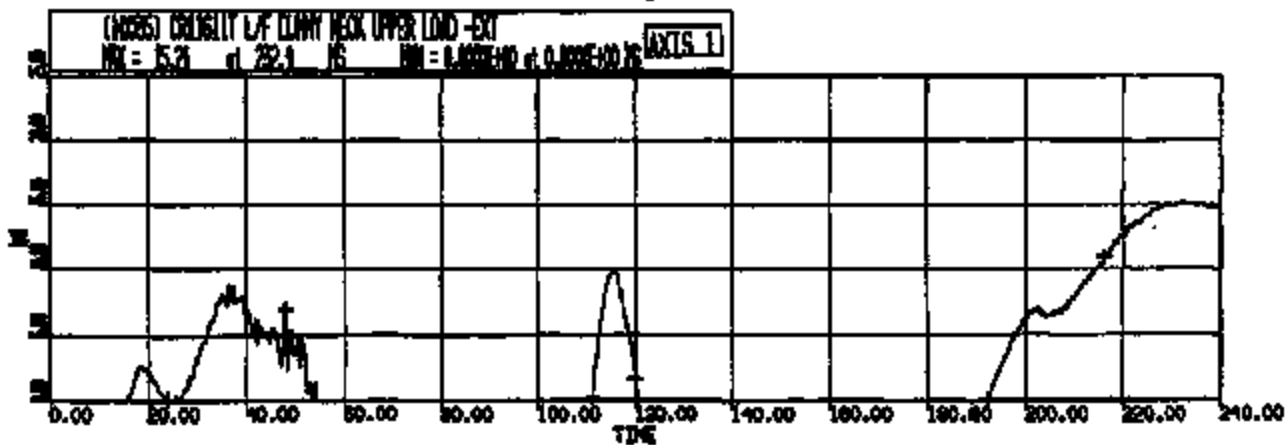
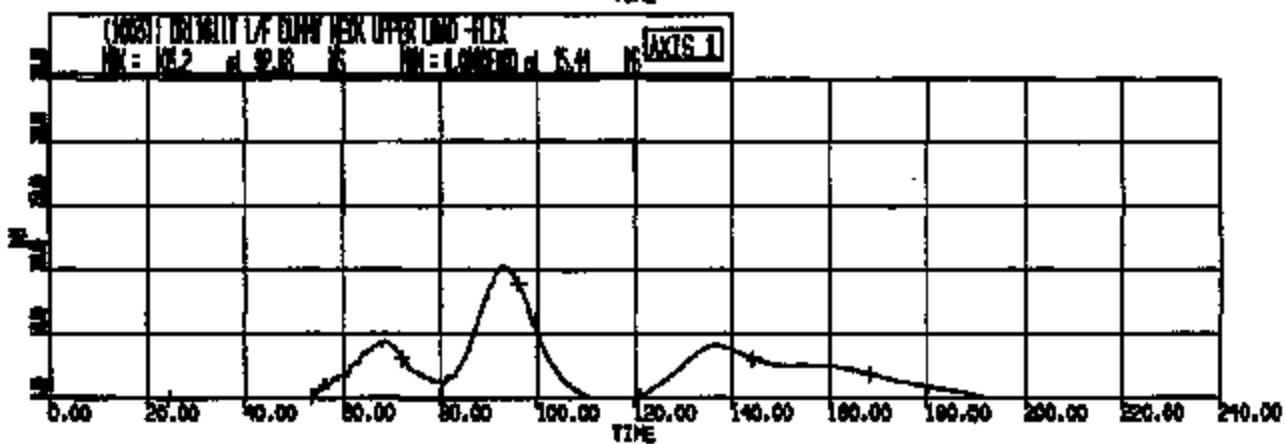
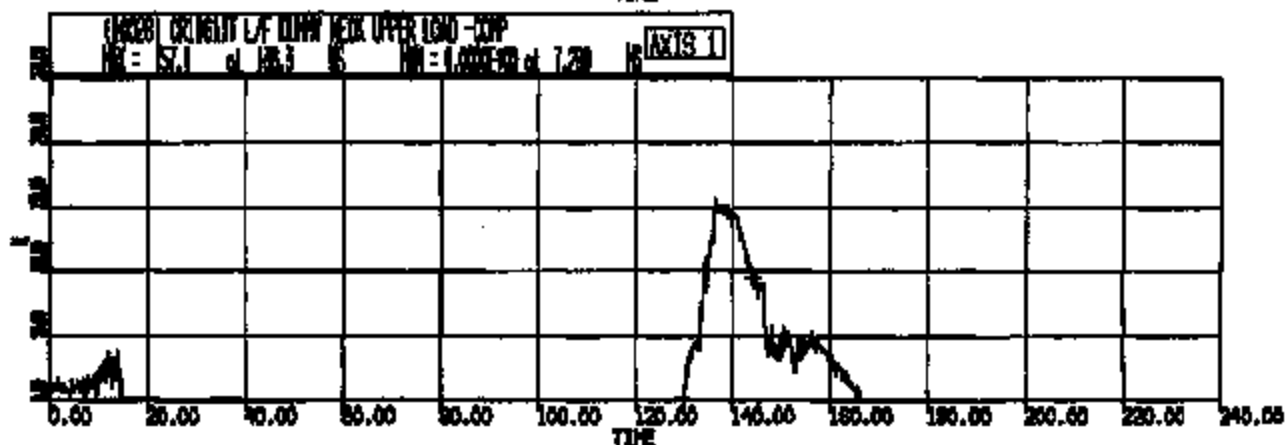
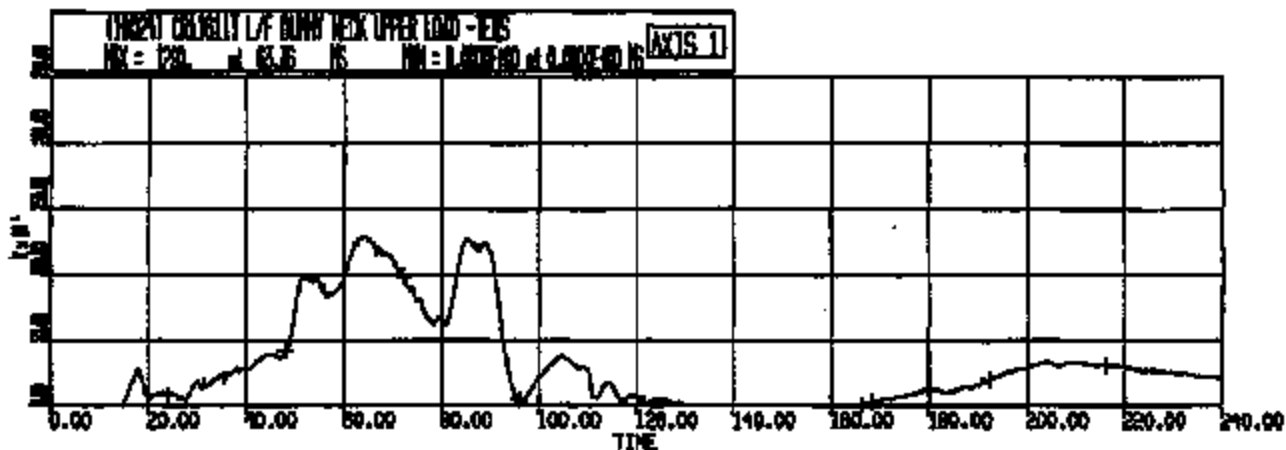


PLOT 1		
(00010) CORRECTED NECK MOMENT		
MAX = 103.2	at 82.88	MS
MIN = -15.21	at 282.4	MS
PLOT 2		
(0) MAXIMUM NECK EXTENSION		
MAX = -57.00	at 0.0000E+00	MS
MIN = -57.00	at 0.0000E+00	MS
PLOT 3		
(0) MAXIMUM NECK FLEXION		
MAX = 190.0	at 0.0000E+00	MS
MIN = 190.0	at 0.0000E+00	MS

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Safety Laboratories Department, 610-PL  
 PLOT PAGE 21

T88728  
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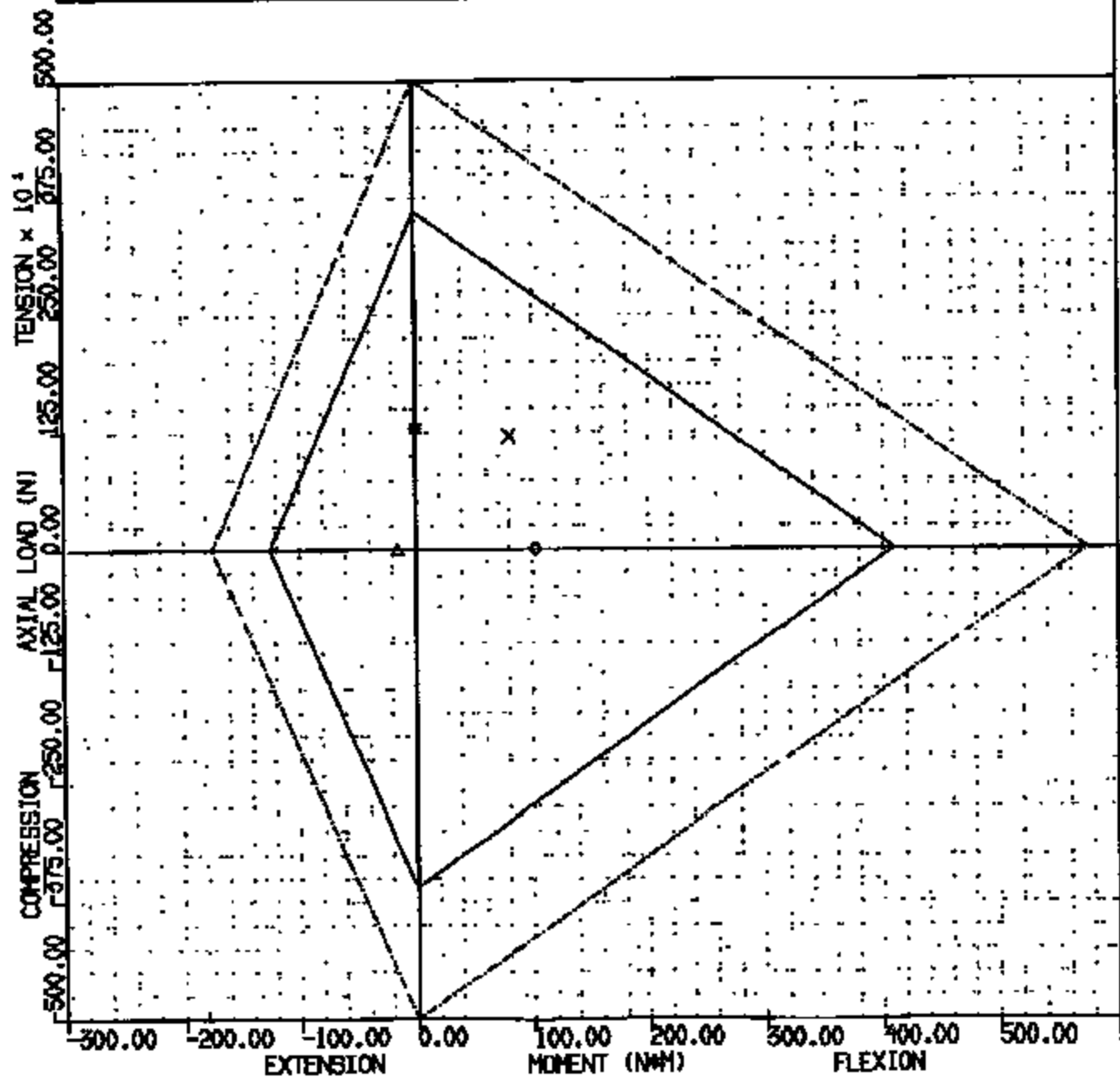


NIJ NECK INJURY CRITERIA (TENS/ COMP/ FLEX/ EXT)  
CR # 11811 TO: TB8728 DATE: 80028 08:55:55  
BOTH X DUMMY  
CR11811 L/F DUMMY\_NECK\_UPPER\_LOAD\_FZ\_1000C  
CR11811 L/F DUMMY\_NECK\_UPPER\_LOAD\_MY\_800C [CORR]



ZMIJ NECK INJURY CRITERIA CORRIDOR PLOT  
 0807 11811 TO: T88728 DATE: 890928 08:53:53  
 031110 X DUMMY  
 031111 T L/F DUMMY\_NECK\_UPPER\_LOAD\_FZ\_1000  
 031111 T L/F DUMMY\_NECK\_UPPER\_LOAD\_MY\_8000 [CORR]

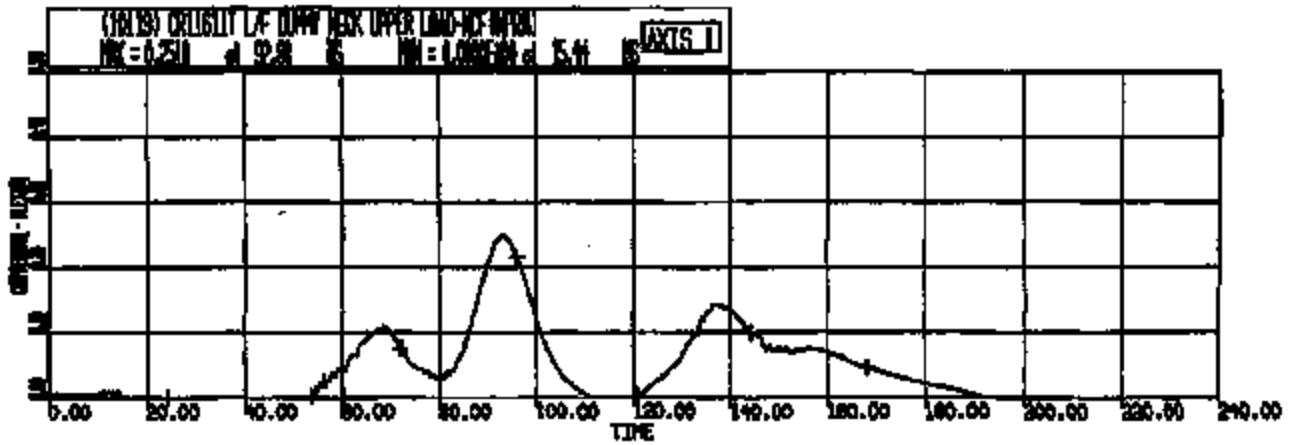
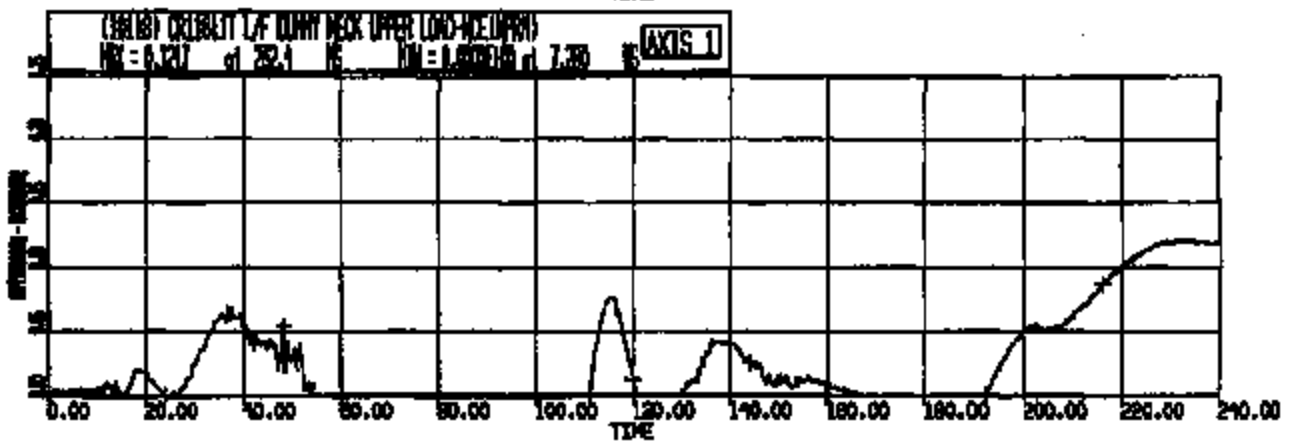
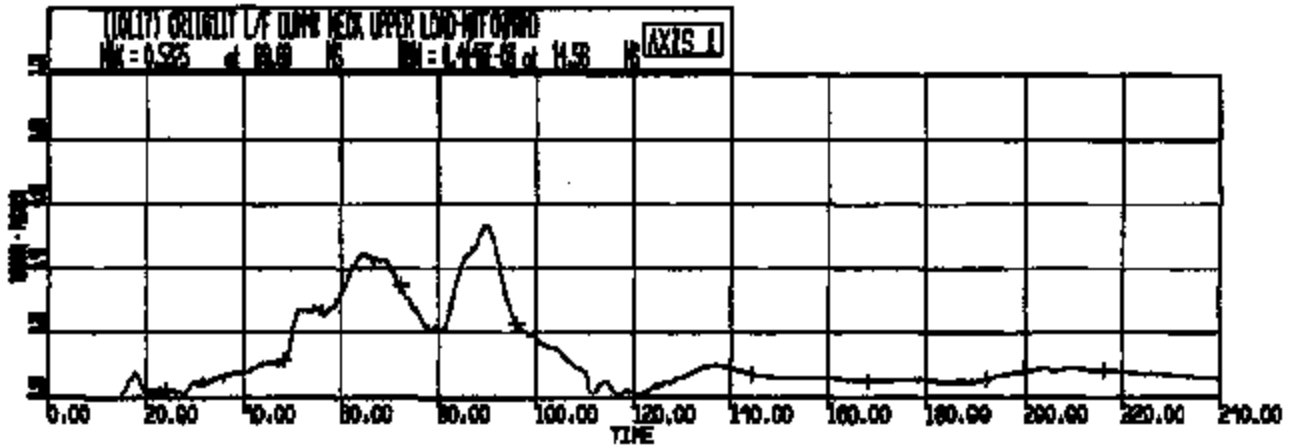
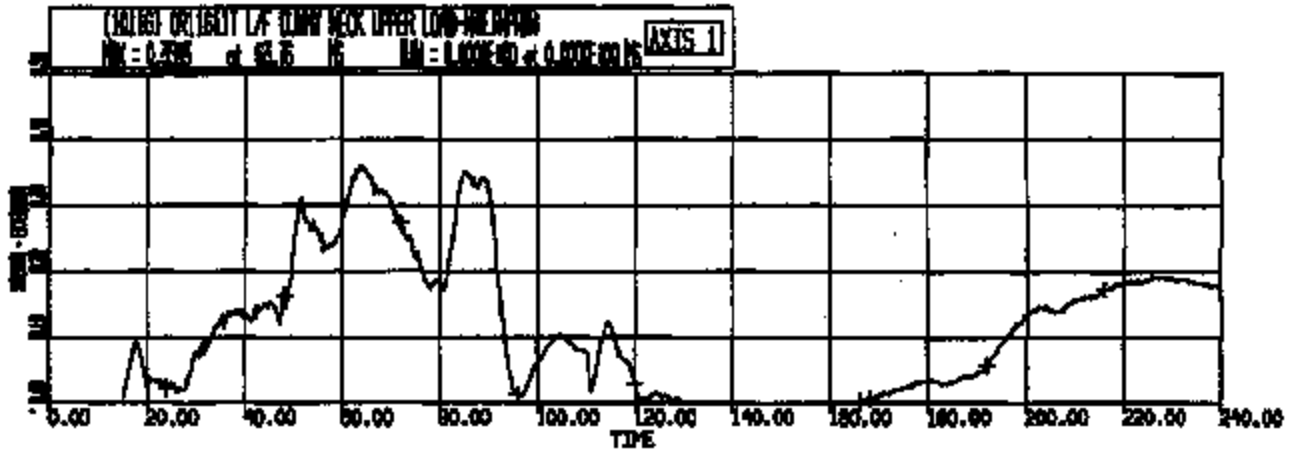
**FOREIGN**



AXIS 1	(1008, 1008) NECK TENSION EXTENSION @ TIME OF MAX NTC	MAX = 1290. at 0.0000E+00	MIN = 1290. at 0.0000E+00
AXIS 1	(1008, 1008) NECK TENSION FLEXION @ TIME OF MAX NTC	MAX = 1208. at 80.63	MIN = 1208. at 80.63
AXIS 1	(1002, 1002) NECK COMPRESSION EXTENSION @ TIME OF MAX NTC	MAX = 0.0000E+00 at -15.21	MIN = 0.0000E+00 at -15.21
AXIS 1	(1000, 1000) NECK COMPRESSION FLEXION @ TIME OF MAX NTC	MAX = 0.0000E+00 at 103.2	MIN = 0.0000E+00 at 103.2
AXIS 1	(0,0) NIJ CORRIDOR	MAX = 3600. at 0.0000E+00	MIN = -3600. at 0.0000E+00
AXIS 1	(1007, 1007) 1.4 * NIJ CORRIDOR	MAX = 5040. at 0.0000E+00	MIN = -5040. at 0.0000E+00
AXIS 1	(0,0) X AXIS	MAX = 0.0000E+00 at -5700.	MIN = 0.0000E+00 at -5700.
AXIS 1	(0,0) Y AXIS	MAX = 5685. at 0.0000E+00	MIN = -5700. at 0.0000E+00

CURS Version 1.17.00 - 8-May-1988 Safety Laboratory Department, 610-PL T88728  
 CREATED: 28-SEP-88 09:28:32 PLOT PAGE 23 SHEET 16

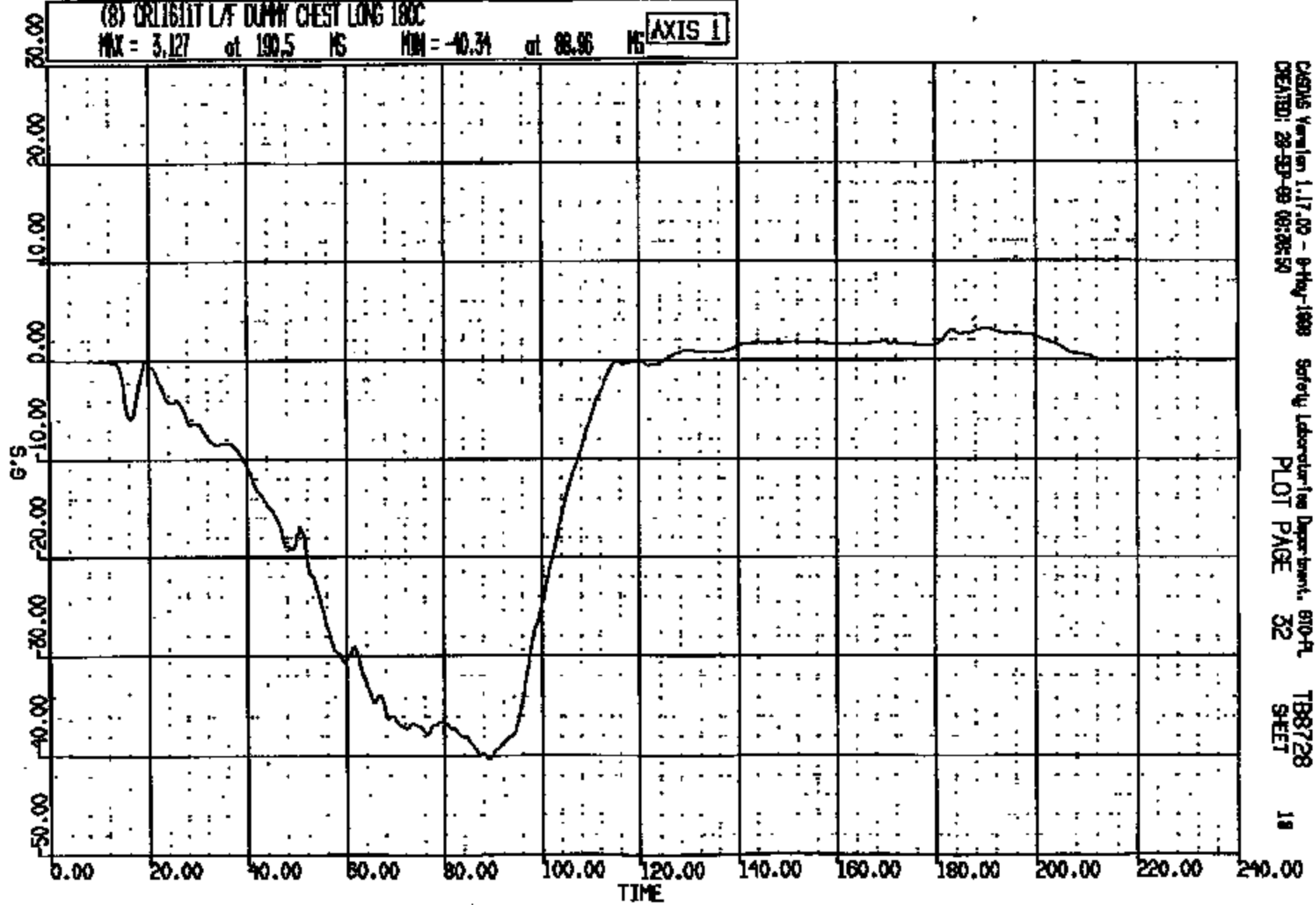
CRIS 0011611



NIJ NECK INJURY CRITERIA (DATA NORMALIZED)  
CR N: 11011 TO: TB8728 DATE: 090998 09:55:53  
BOTH x DUMMY  
CR11011 L/F - DUMMY\_NECK\_UPPER\_LOAD\_FZ\_1000C  
CR11011 L/E - DUMMY\_NECK\_UPPER\_LOAD\_MY\_800C C(CORR)

CR N: 11611 TO: TB8728 DATE: 890928 08:55:53  
2000 D-198

(8) CR11611T L/F DUMMY CHEST LONG 180C  
MAX = 3.127 at 190.5 MS MIN = -40.34 at 88.96 MS **AXIS 1**



CRSIS Version 1.17.00 - 8-May-1988 Safety Laboratories Department, 810-PL TB8728  
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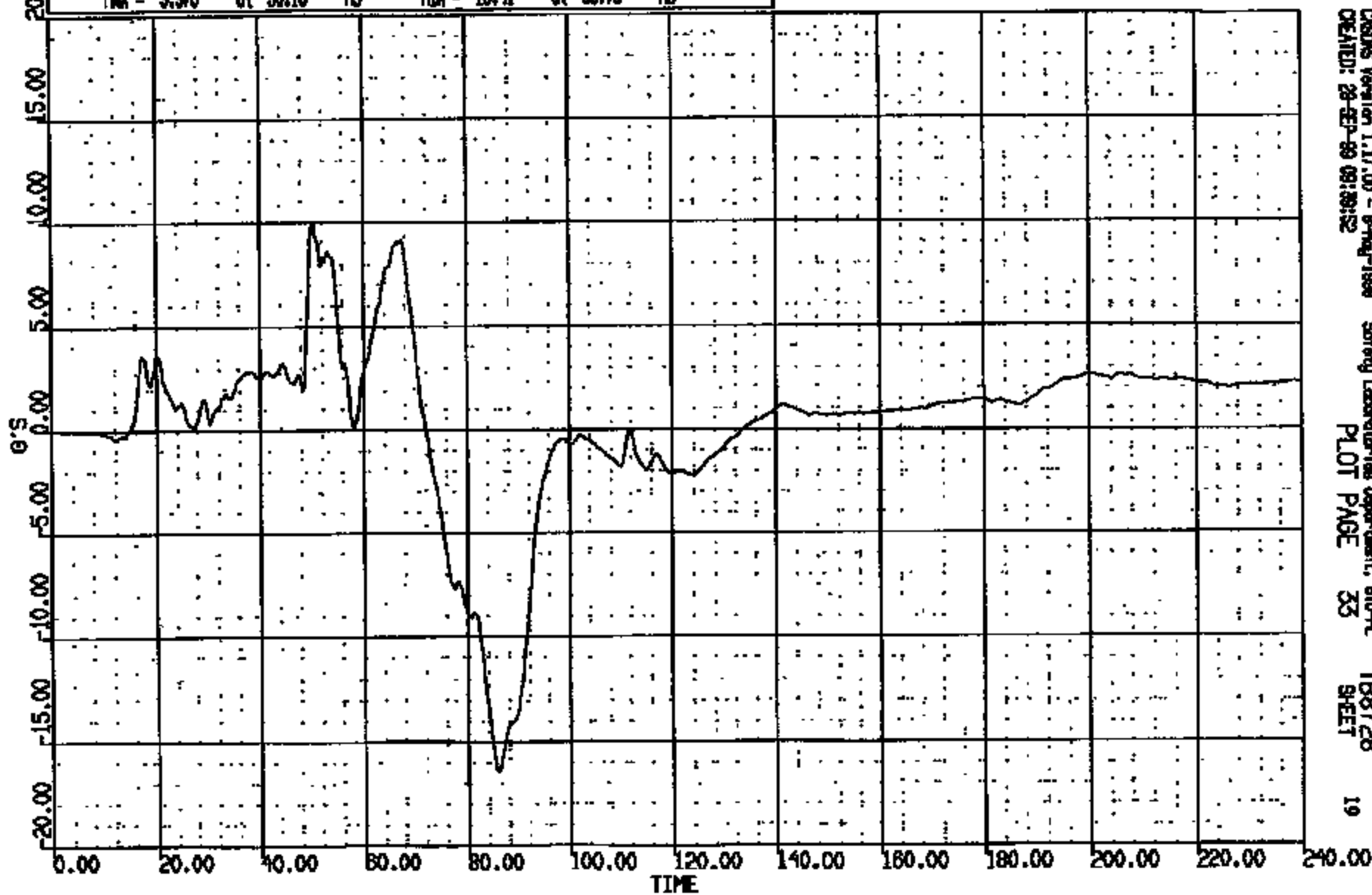
CRIS 0011611

CR R: 11611 TO: TB8728 DATE: 990928 08:53:55  
2000 D-198

(9) CR11611T L/F DUMMY CHEST VERT 180C

MAX = 9.976 at 50.16 MS MIN = -16.41 at 85.76 MS

AXIS 1



CRS Version 1.17.00 - 8-May-1999 Safety Laboratories Department, SIO-PL  
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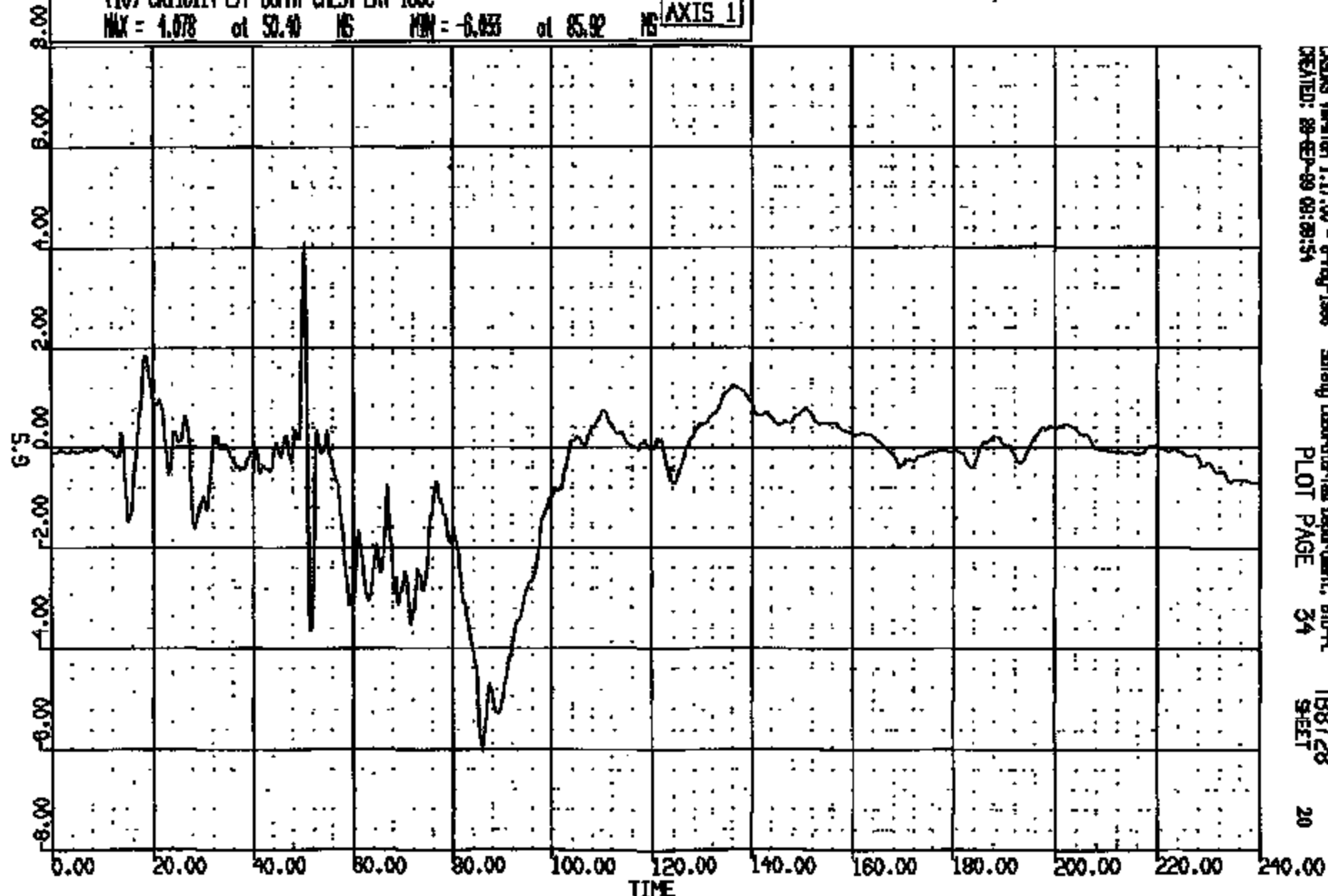
CRTS 0011611

NR R: 11811 TO: TB8728 DATE: 890928 08:55:53

NR00 0-188

(10) CRIBBILT L/F DUMMY CHEST LAT 180C

MAX = 4.078 at 50.40 NS MIN = -6.033 at 85.92 NS AXIS 1



CRS Version 1.17.00 - 8-Aug-1988  
CREATED: 89-09-28 08:59:54

Safety Laboratories Department, 610-A  
PLOT PAGE 24

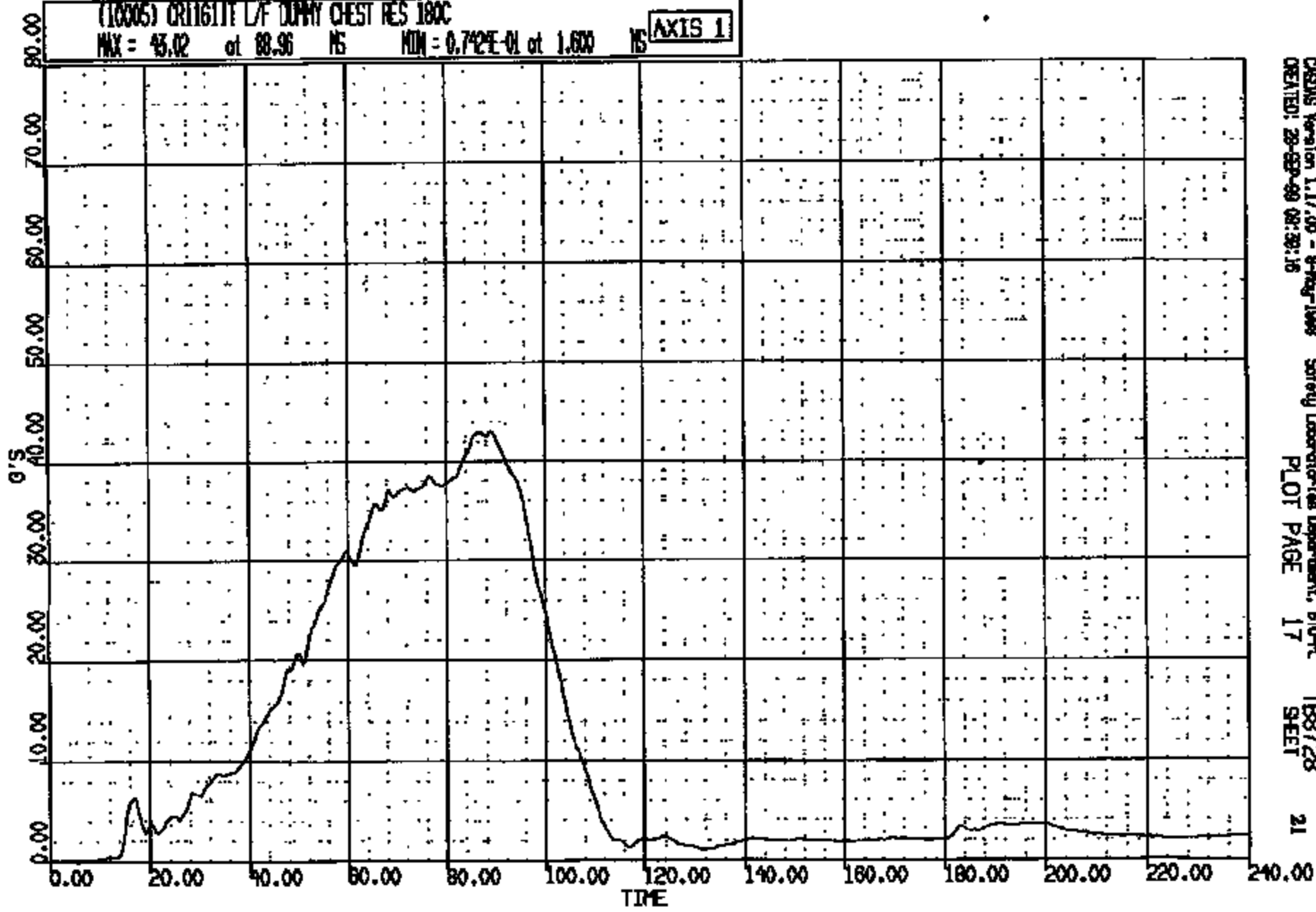
TB8728  
SHEET

20

CRIS 001611

CR R: 11011 TO: T88728 DATE: 890928 08:53:53  
2000 D-188  
CUMDUR = 42.881 Duration time = 2.8882

(10005) CR11611E L/F DUMMY CHEST RES 180C  
MAX = 43.02 at 88.96 MS MIN = 0.742E-01 at 1.600 MS **AXIS 1**

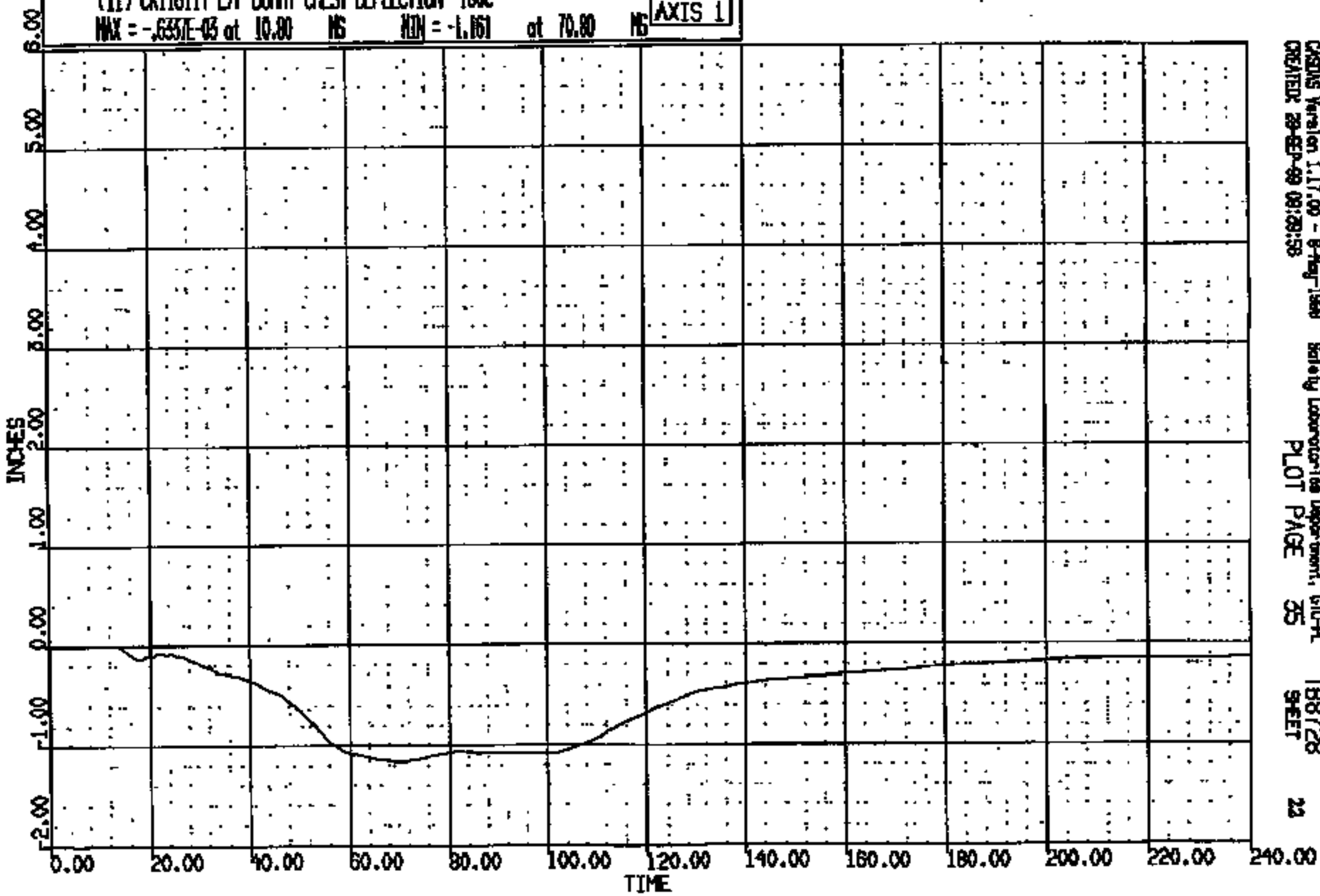


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CREATED: 28-SEP-89 08:59:16 PLOT PAGE 17 T88728 SHEET 21

CRTS 0011611

CR R: 11611 TO: TB8728 DATE: 990928 08:55:53  
R000 D-188

(1) CR11611T L/F DUMMY CHEST DEFLECTION 180C  
MAX = -.6357E-03 at 10.80 MS MIN = -1.161 at 70.80 MS **AXIS 1**

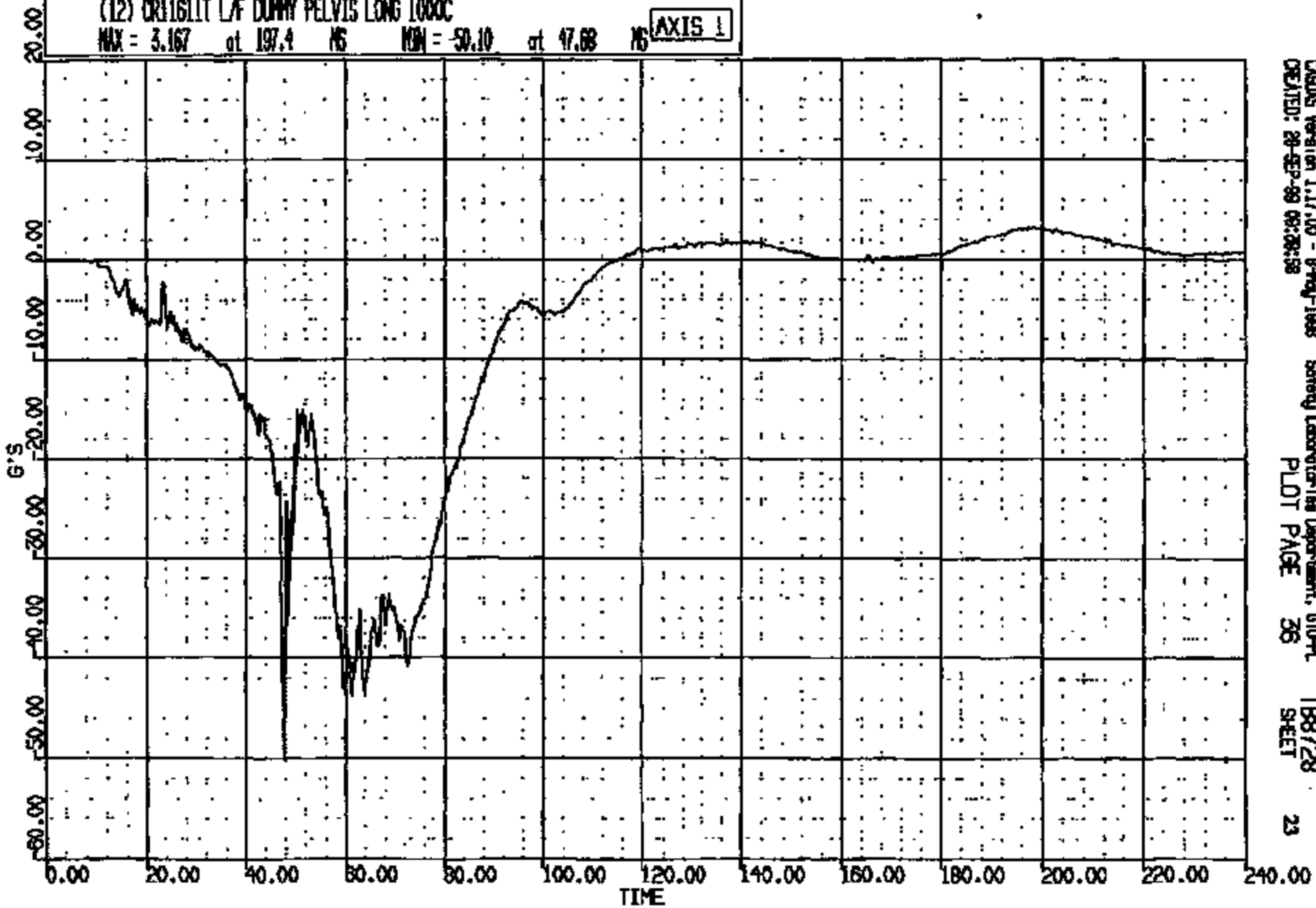


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CR R: 11011 TD: TB8728 DATE: 990928 08:53:53  
2000 0-188

(12) CR11611T L/F DUMMY PELVIS LONG LOGOC  
MAX = 3.167 at 197.4 MS MIN = -50.10 at 47.68 MS  AXIS 1



CASUS Version 1.17.00 - 8-May-1998 Safety Laboratories Department, GTO-PL TB8728  
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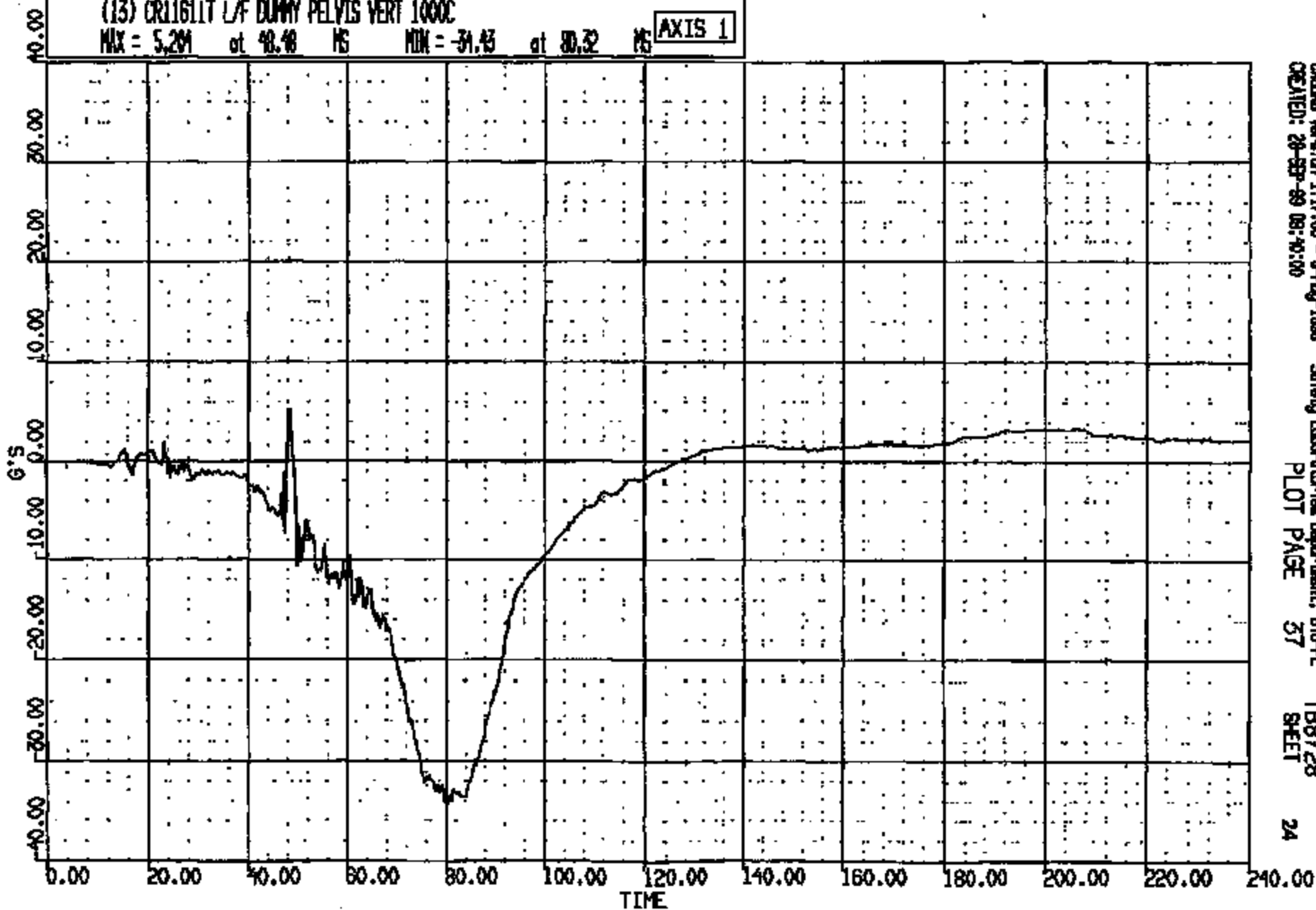
CRTS 0011611



CR R: 11611 TO: T88728 DATE: 990928 08:55:33  
2000 D-188

(13) CR11611T L/F DUMMY PELVIS VERT 1000C

MAX = 5.291 at 48.48 MS MIN = -31.43 at 80.32 MS AXIS 1



CASINS Version 1.17.00 - 8-May-1988  
CREATED: 28-SEP-99 08:40:00

Safety Laboratory Department, BTD-PL  
PLOT PAGE 37

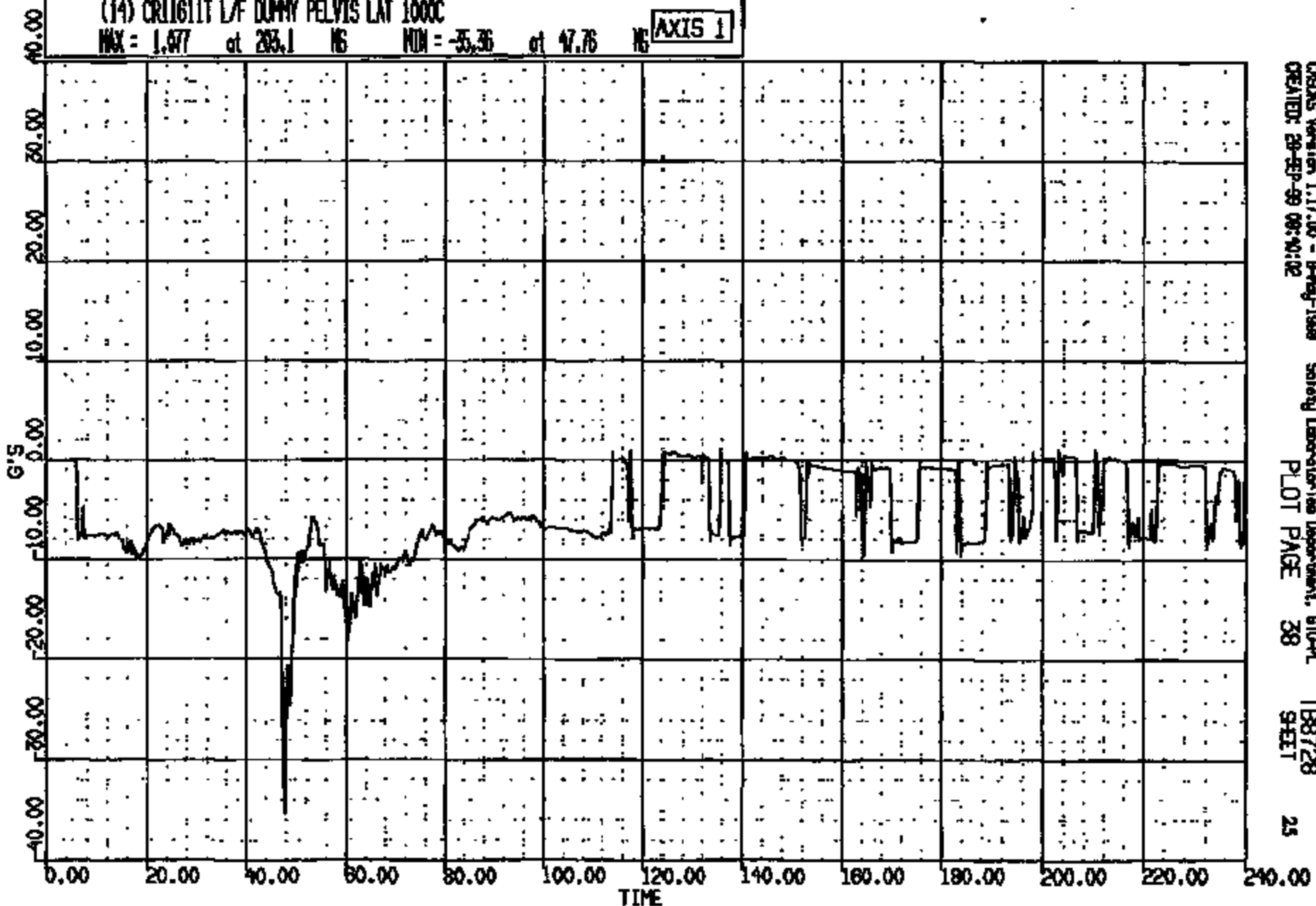
T88728  
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24

CRTS 0011611

CR R: 11611 TO: TB8728 DATE: 990928 08:53:53  
R000 D-188

(14) CR11611T L/F DUMMY PELVIS LAT 1000C  
MAX = 1.677 at 283.1 NS MIN = -35.36 at 47.76 NS **AXIS 1**



CNSAS Version 1.17.00 - 8-May-1999 Safety Laboratories Department, 610-9L  
CREATED: 28-SEP-99 08:40:02 PLOT PAGE 38 SHEET 25

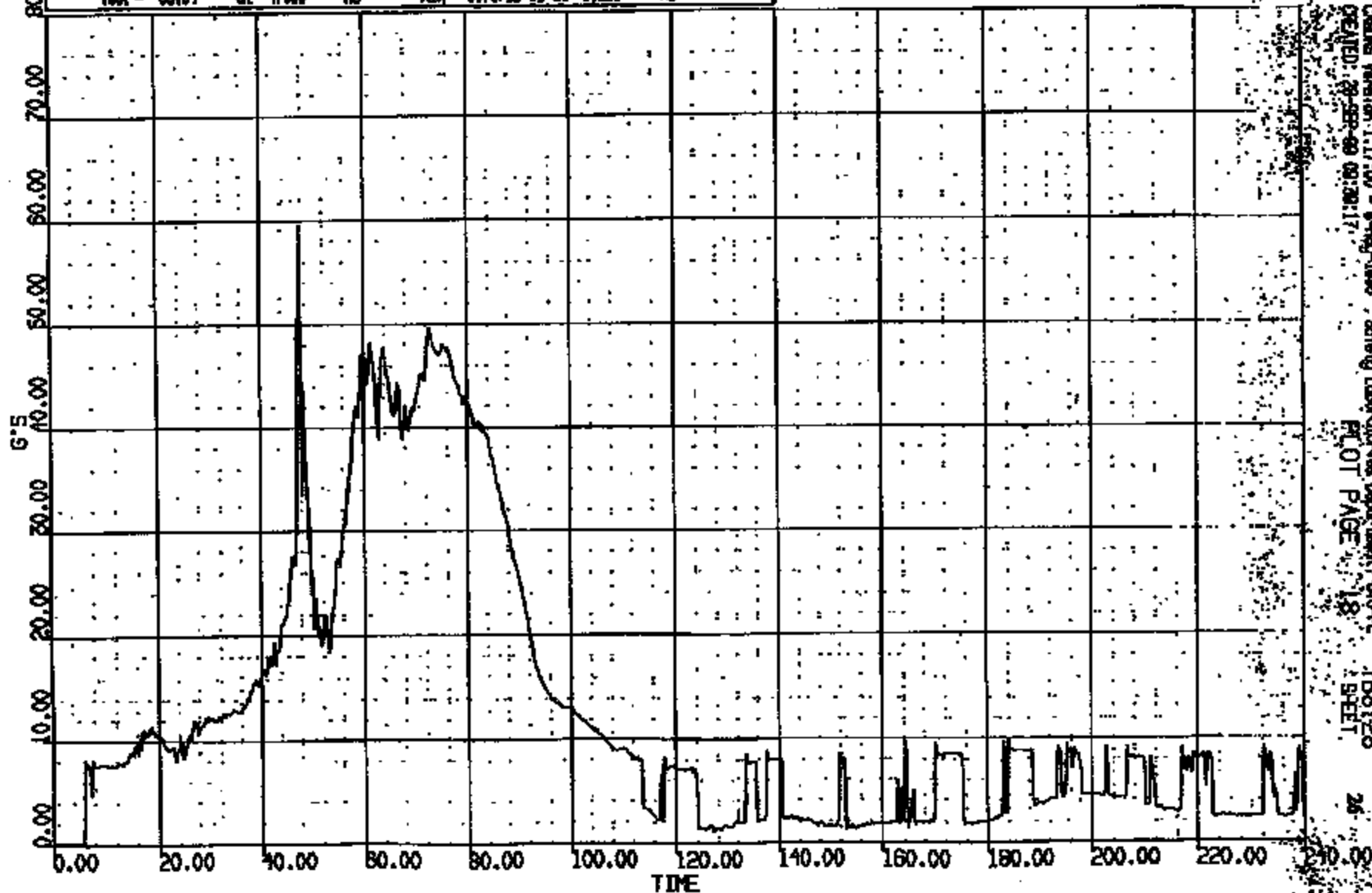
CRTS 0011611

CR #: 11611 TO: T88728 DATE: 990928 08:53:55  
8000 D-188

(1007) CR11611T L/F DUMMY PELVIS RES 1000C

MAX = 59.54 at 47.68 MS MIN = 0.7671E-01 at 5.280 MS

AXIS 1



CRMS Version: 1.17:00 - 9-4-99 - Safety Laboratories Department - 410-4  
CREATED: 99-09-28 09:20:17  
PLOT PAGE: 18  
SHEET

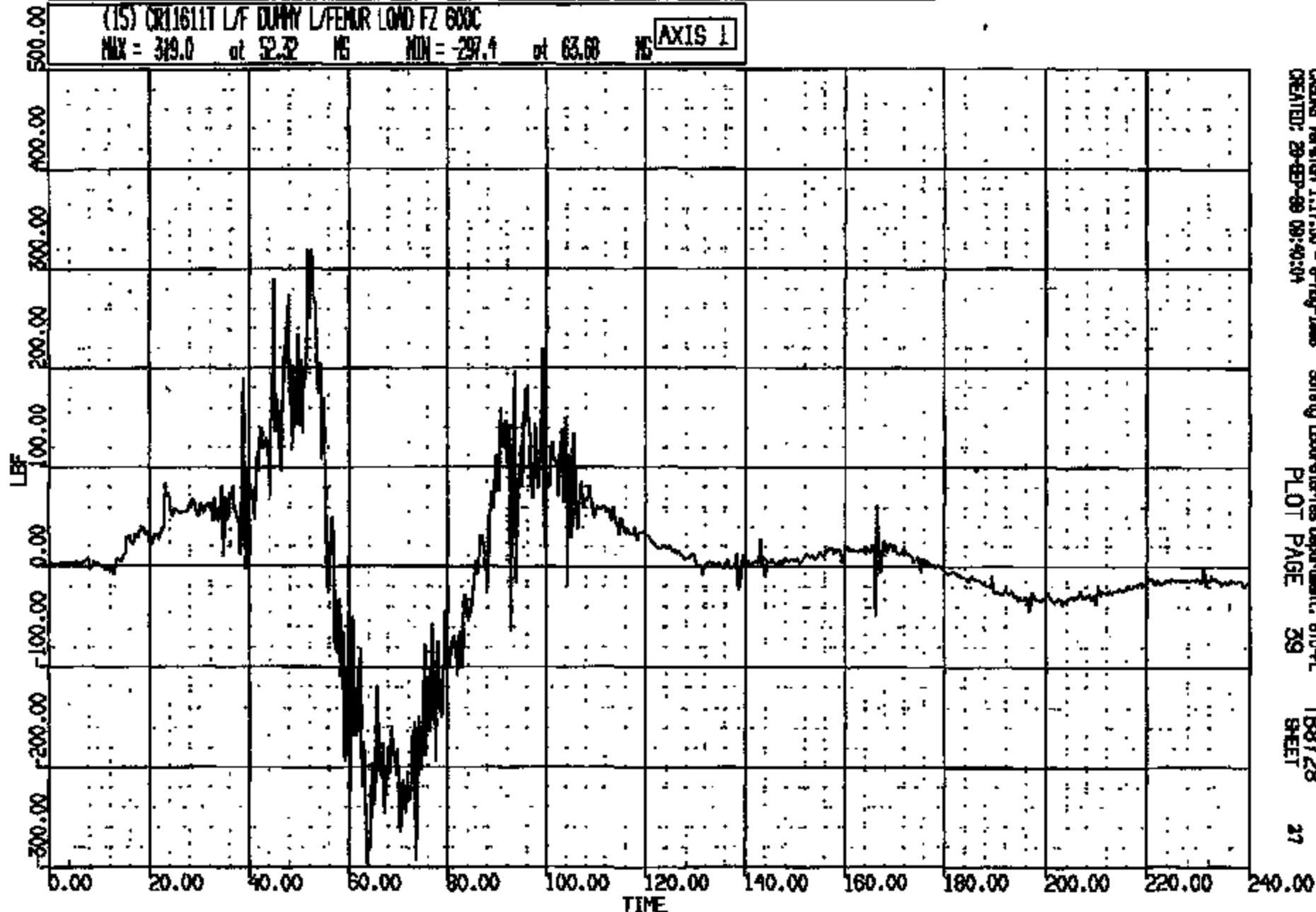
T88728

26

CRTS 0011611

CR: 11811 TO: TB8728 DATE: 090928 08:55:53  
2000 D-188

(15) CR11611T L/F DUMMY L/FEMUR LOAD FZ 600C  
MAX = 349.0 at 52.32 MS MIN = -297.4 at 63.68 MS **AXIS 1**

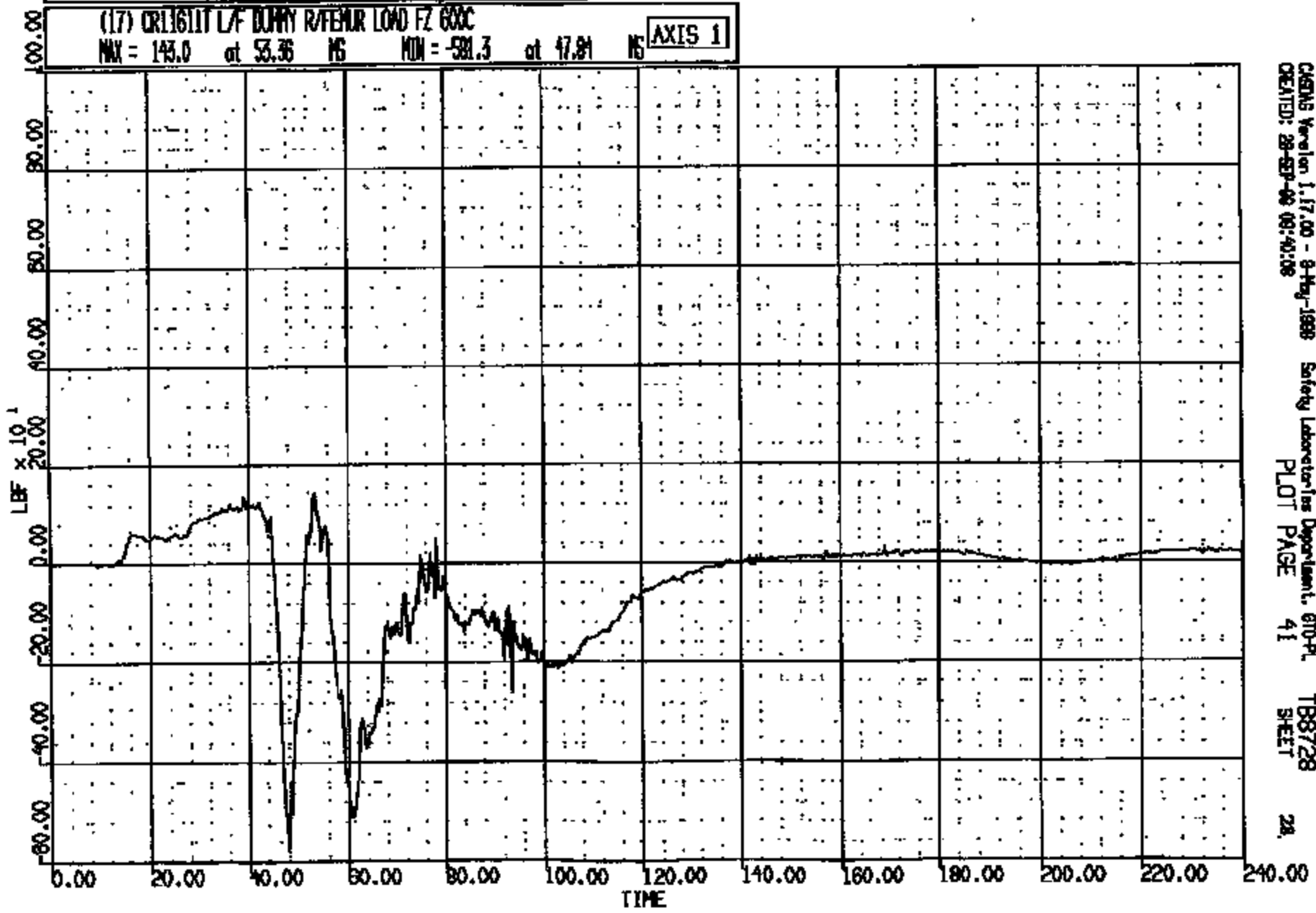


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CREATED: 28-SEP-88 09:40:04 PLOT PAGE 39 SHEET 27

CRTS 0011611

CR R: 11611 TO: TB8728 DATE: 990928 08:53:53  
2000 D-186

(17) CR116111 L/F DUMMY R/FEMUR LOAD FZ 600C  
MAX = 143.0 at 53.36 MS MIN = -581.3 at 47.84 MS **AXIS 1**

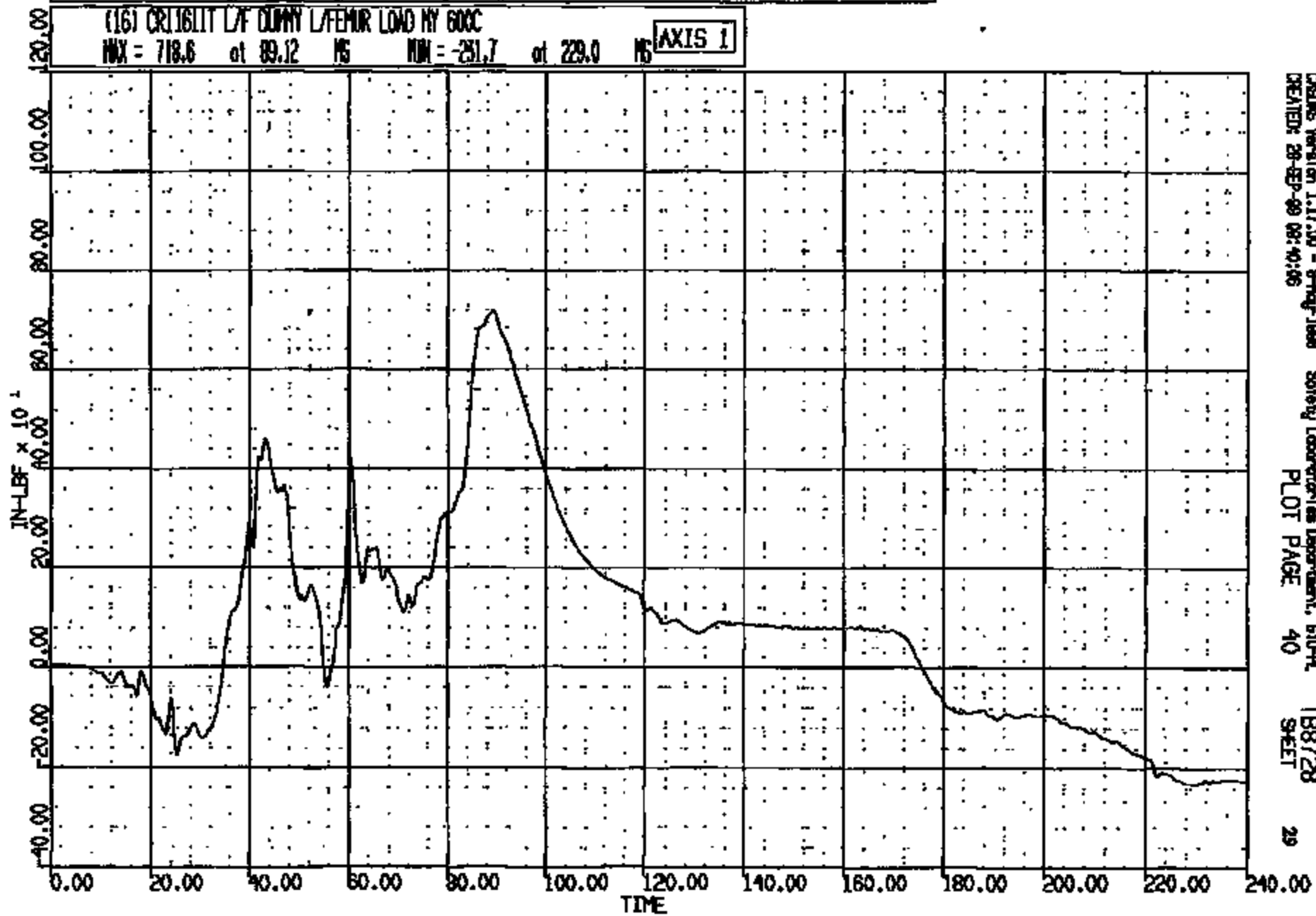


CR116111

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CREATED: 28-SEP-99 09:40:08 PLOT PAGE 41 SHEET 28.

CR R: 11811 TO: TB8728 DATE: 990928 08:53:53  
2000 D-198

(16) CR116LIT L/F CUMY L/FEMUR LOAD NY 600C  
MAX = 718.6 at 89.12 MS MIN = -231.7 at 229.0 MS **AXIS 1**

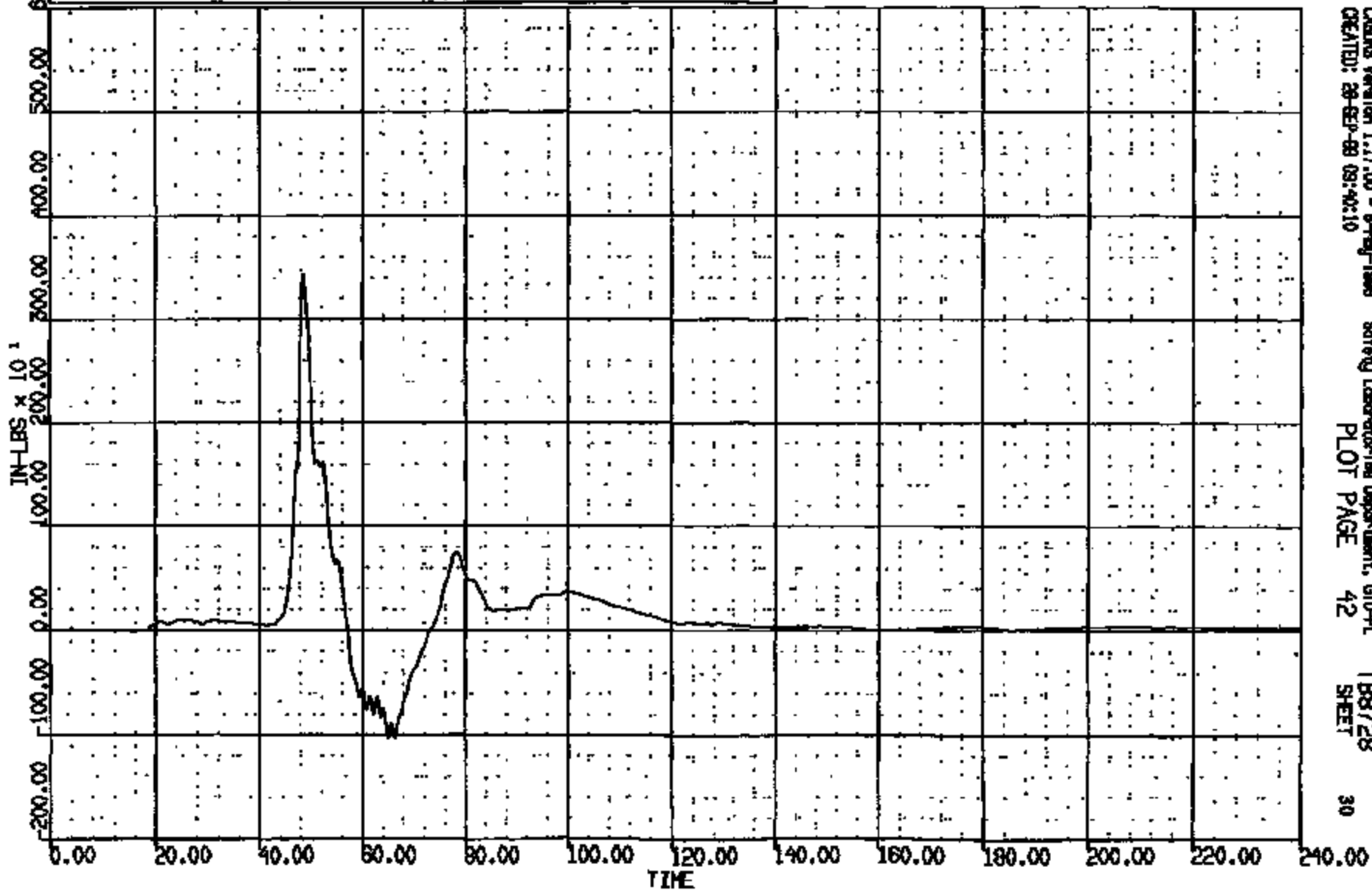


CRSING Version 1.17.00 - 8-Aug-1999 Safety Laboratories Department, 610-A  
CREATED: 28-SEP-99 08:40:06 PLOT PAGE 40 SHEET 29

CRIS 0011611

CR R: 11811 TO: T88728 DATE: 890928 08:53:53  
2000 D-188

(18) CR11611T L/F DUMMY REFER LOAD BY 600C  
MAX = 3428. at 49.56 MS MIN = -1037. at 64.88 MS **AXIS 1**



CRIDAS Version 1.17.00 - 8-May-1988 Safety Laboratories Department, G10-PL  
CREATED: 28-SEP-88 09:40:10 PLOT PAGE 42 TB8728 SHEET 30

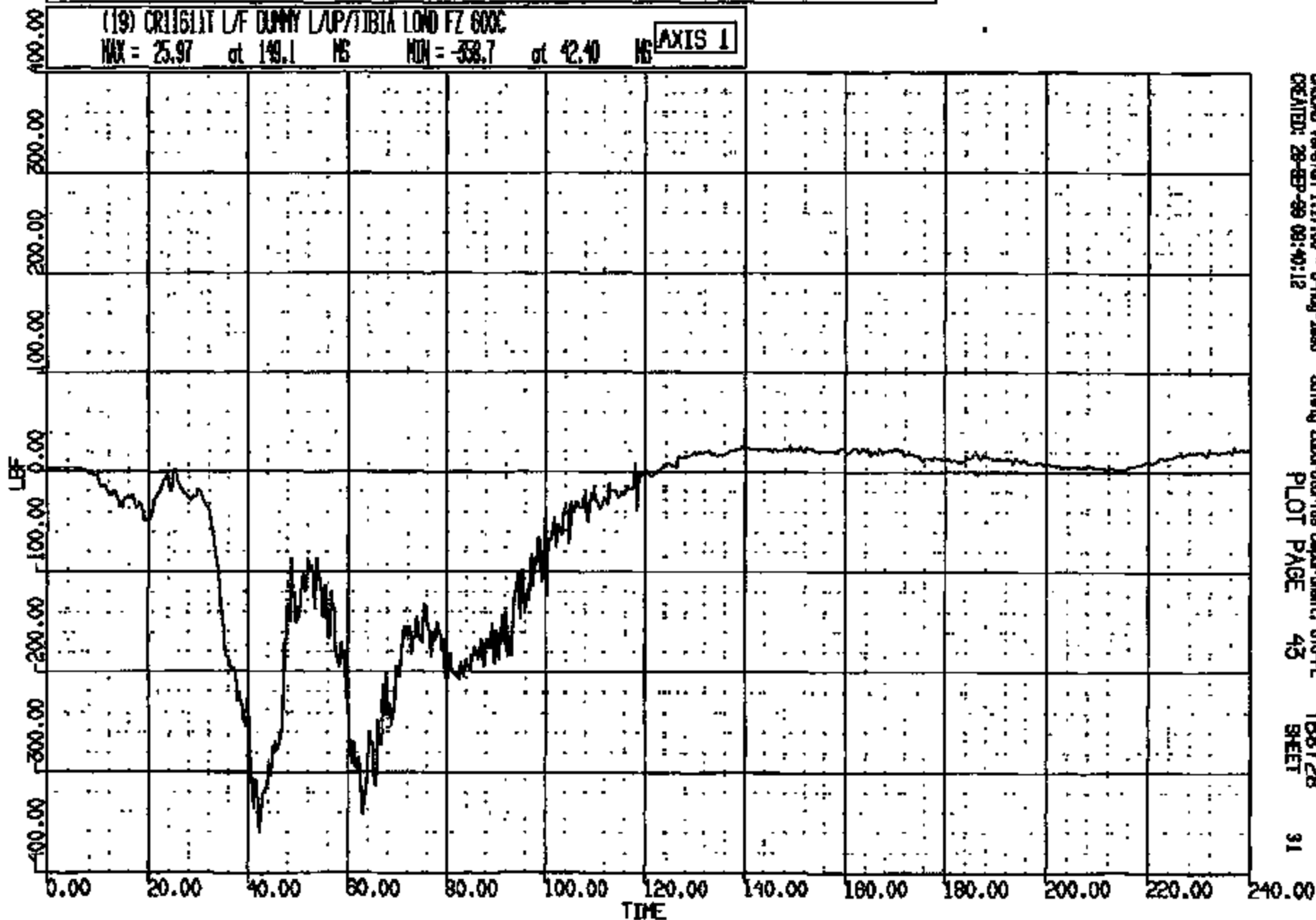
CR11611

OR R: 11011 TO: TB8728 DATE: 000928 08:53:53

0000 D-188

(19) CR11611T L/F DUMMY L/UP/TIBIA LOND FZ 600C

MAX = 25.97 at 149.1 MS MIN = -338.7 at 42.40 MS **AXIS 1**



ORION Version 1.17.00 - 8-May-1999 Safety Laboratories Department, GTO-PL TB8728  
CREATED: 28-SEP-99 08:40:12 PLOT PAGE 43 SHEET 31

CRTS 0011611

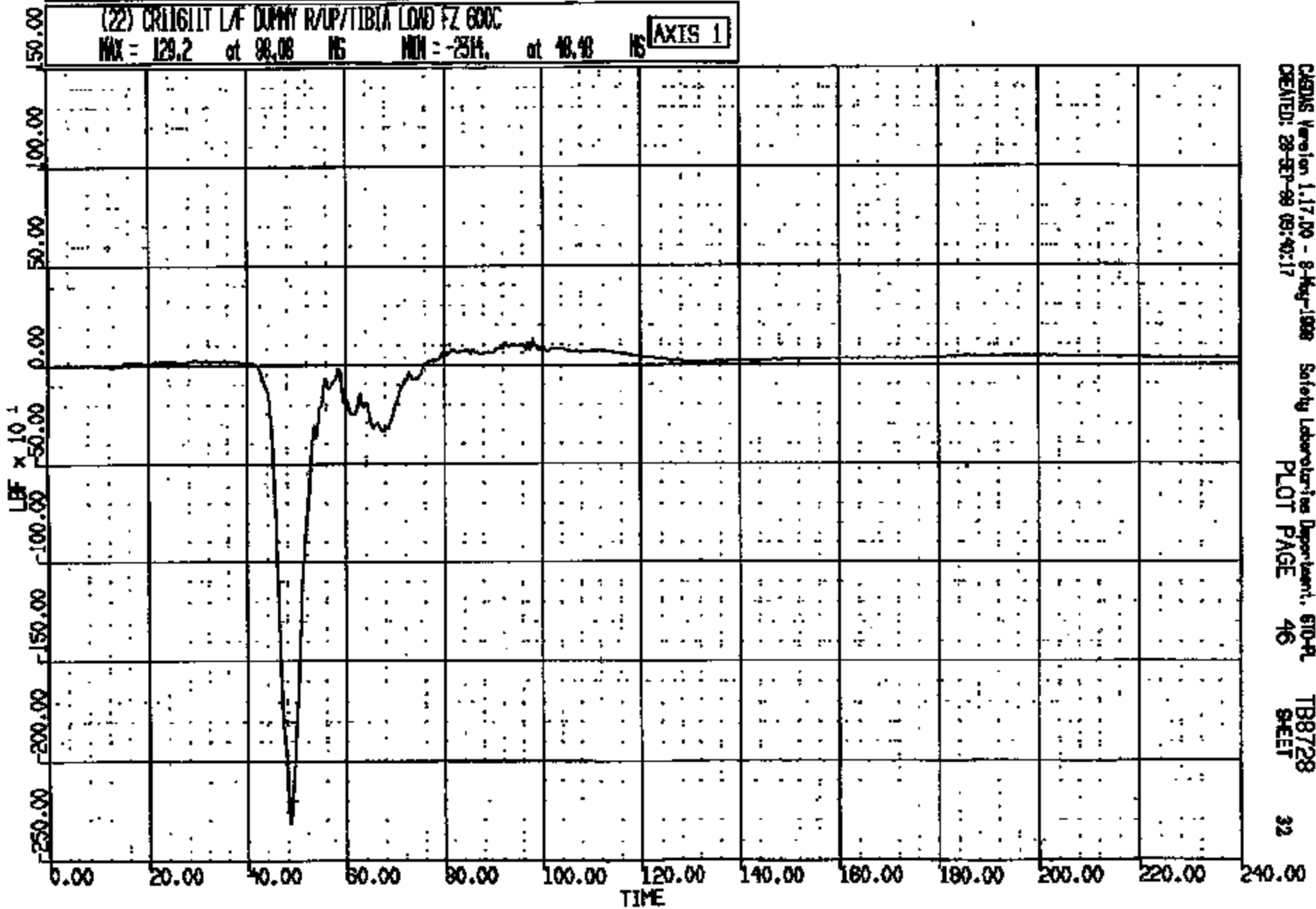


CR R: 11611 TO: TB8728 DATE: 990828 08:53:53  
R000 D-188

(22) CR11611 L/F DUMMY R/UP/TIBIA LOAD FZ 600C

MAX = 129.2 at 88.08 HS MIN = -234.4 at 48.48 HS

AXIS 1

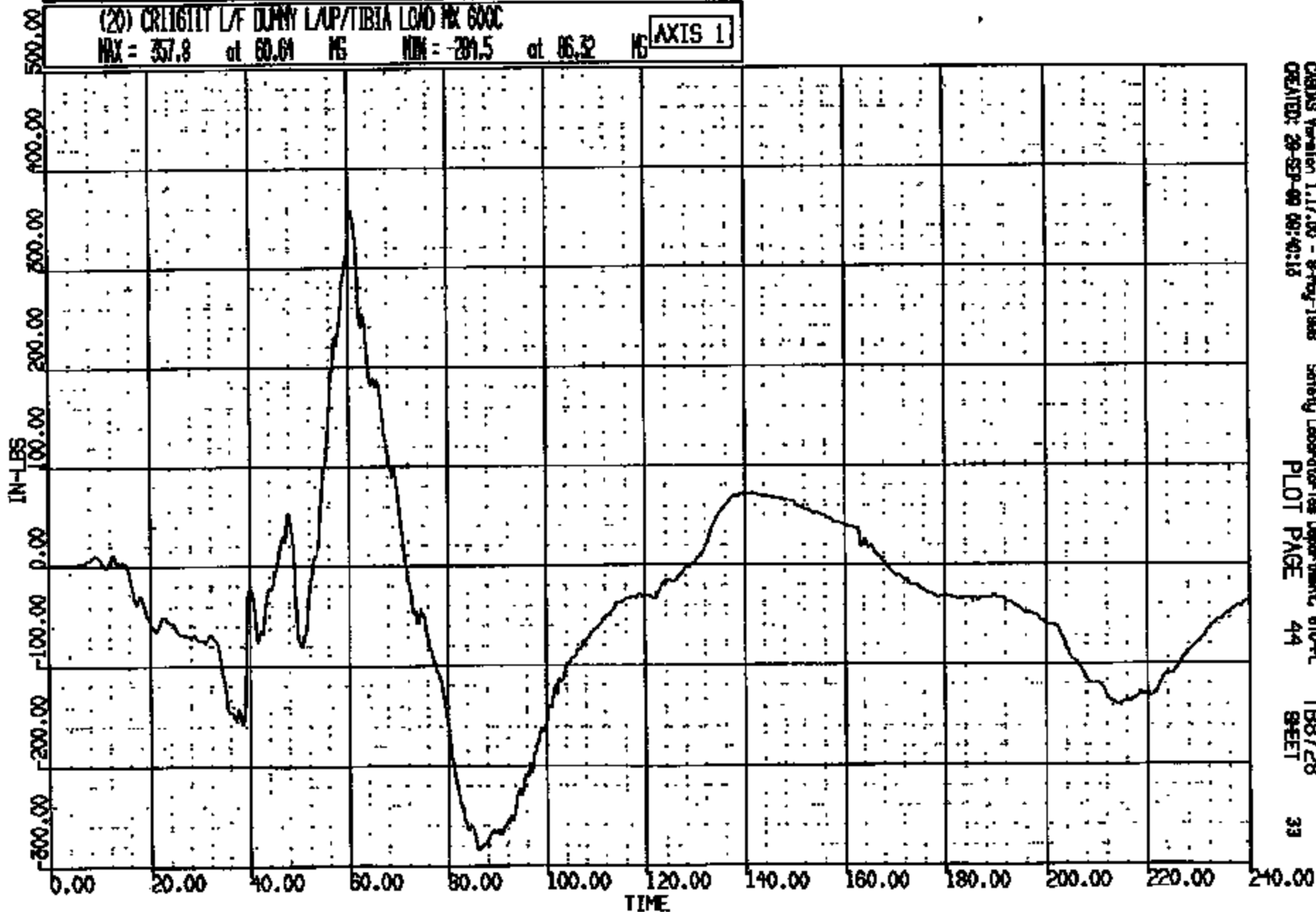


CR R: 11611 TO: TB8728 DATE: 880928 08:55:53  
2000 D-188

(20) CR11611 L/F DUMMY LAP/TIBIA LOAD PK 600C

MAX = 357.8 at 60.64 MS MIN = -281.5 at 86.32 MS

AXIS 1



CR11611 1.17.00 - 8-4-88  
CREATED: 28-SEP-88 09:40:18

Safety Laboratory Department, 610-PL  
PLOT PAGE 44

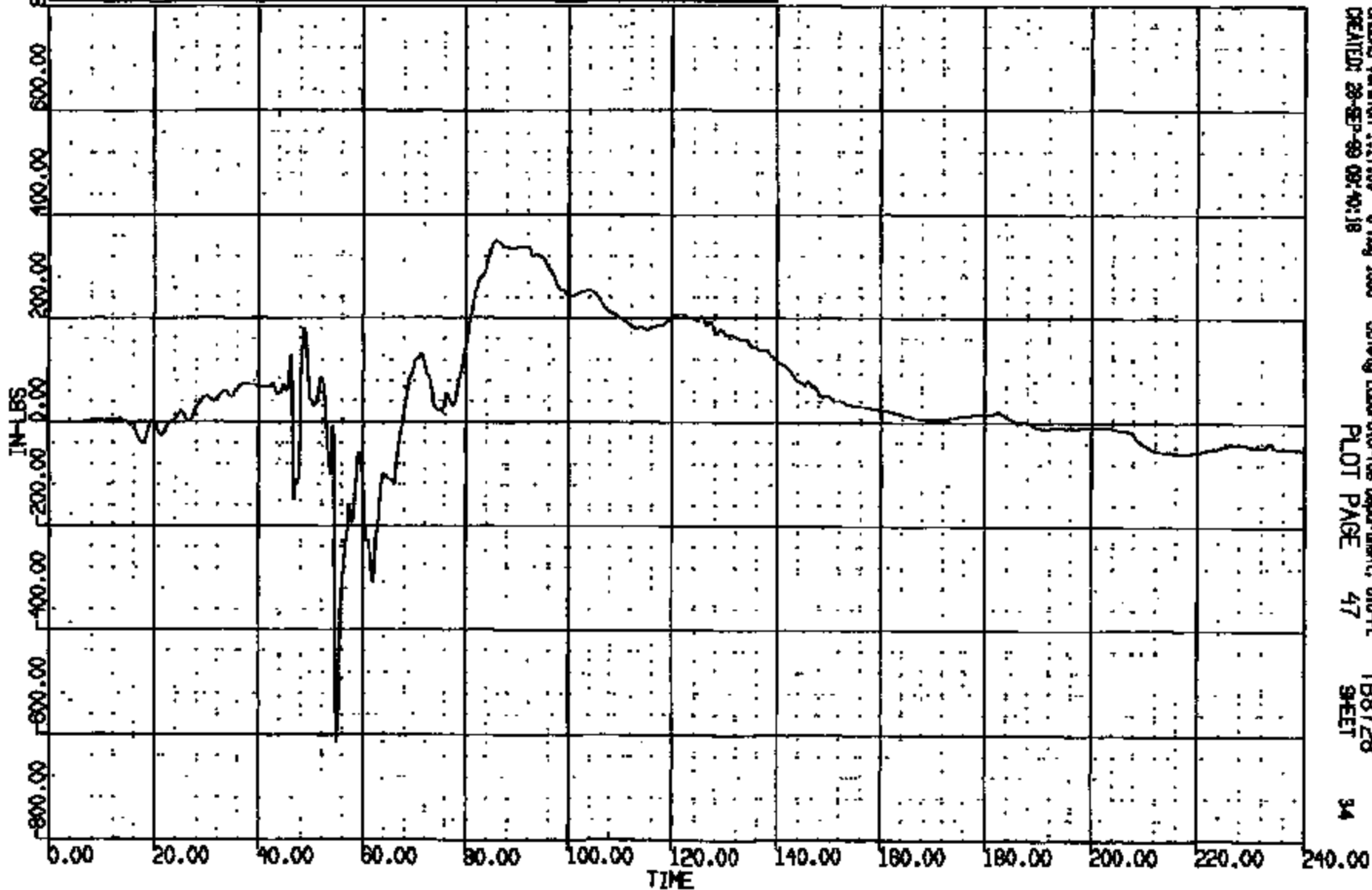
TB8728  
SHEET

33

CRTS 0011611

CR R: 11811 TO: TB8728 DATE: 990928 08:53:53  
2000 D-188

(28) CR11611T L/F DUMMY R/UP/TIBIA LOAD MX 600C  
MAX = 350.3 at 85.00 MS MIN = -612.9 at 55.04 MS **AXIS 1**



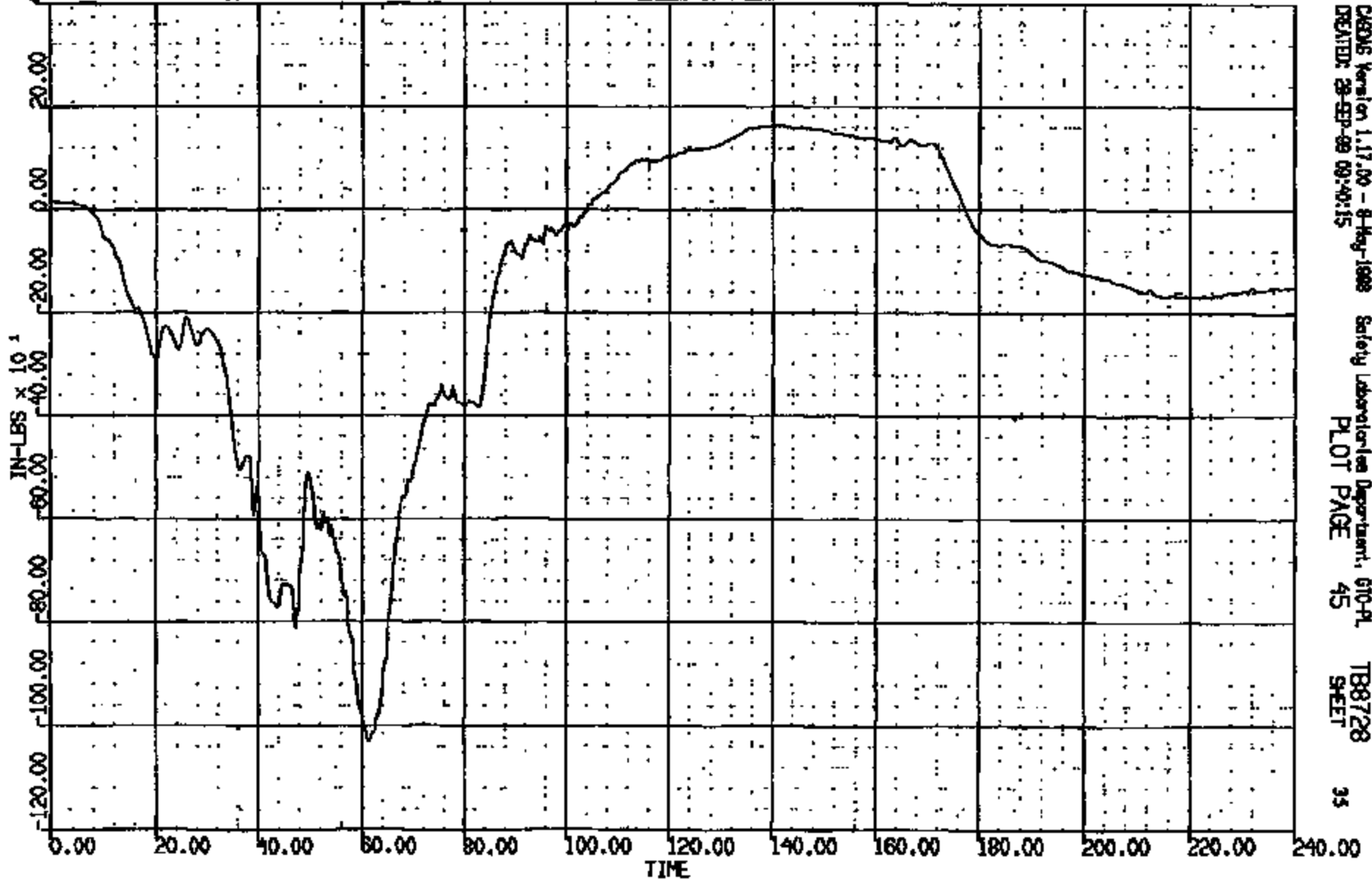
CADDS Version 1.17.00 - 8-May-1998 Safety Laboratories Department, 610-PL TB8728  
CREATED: 28-SEP-99 08:40:18 PLOT PAGE 47 SHEET 34

CRTS 0011611

DR #: 11611 TO: TB8728 DATE: 280928 08:53:53  
2000 D-188

(21) CR11611T L/R DUMMY LAP/TIBIA LOAD BY 600C

MAX = 163.1 at 142.1 MS MIN = -103.2 at 61.28 MS **AXIS 1**



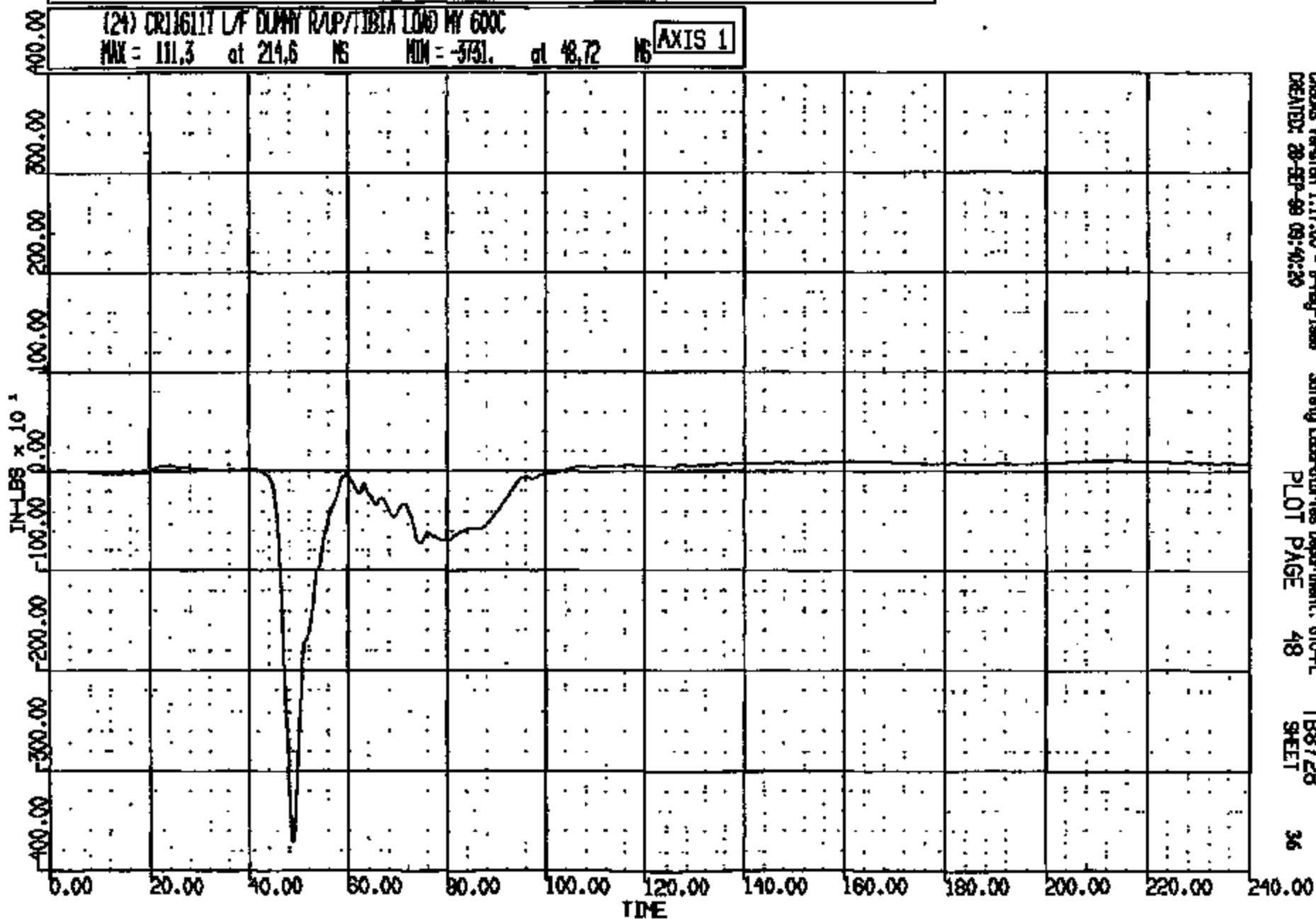
CADDS Version 1.17.00 - 8-Aug-1988 Safety Laboratories Department, 610-PL  
CREATED: 28-SEP-89 09:40:15 PLOT PAGE 45 TB8728  
SHEET 35

CRTS 0011611

CR R: 11611 TO: T88728 DATE: 200208 08:53:53  
2000 D-188

(24) CR116117 L/F DUMMY R/UP/TIBIA LOAD MY 600C

MAX = 111.3 at 214.6 MS MIN = -373.1 at 48.72 MS **AXIS 1**



CRONUS Version 1.17.00 - 8-May-1998  
CREATED: 20-SEP-99 09:40:20

Safety Laboratories Department, 810-PL  
PLOT PAGE 48

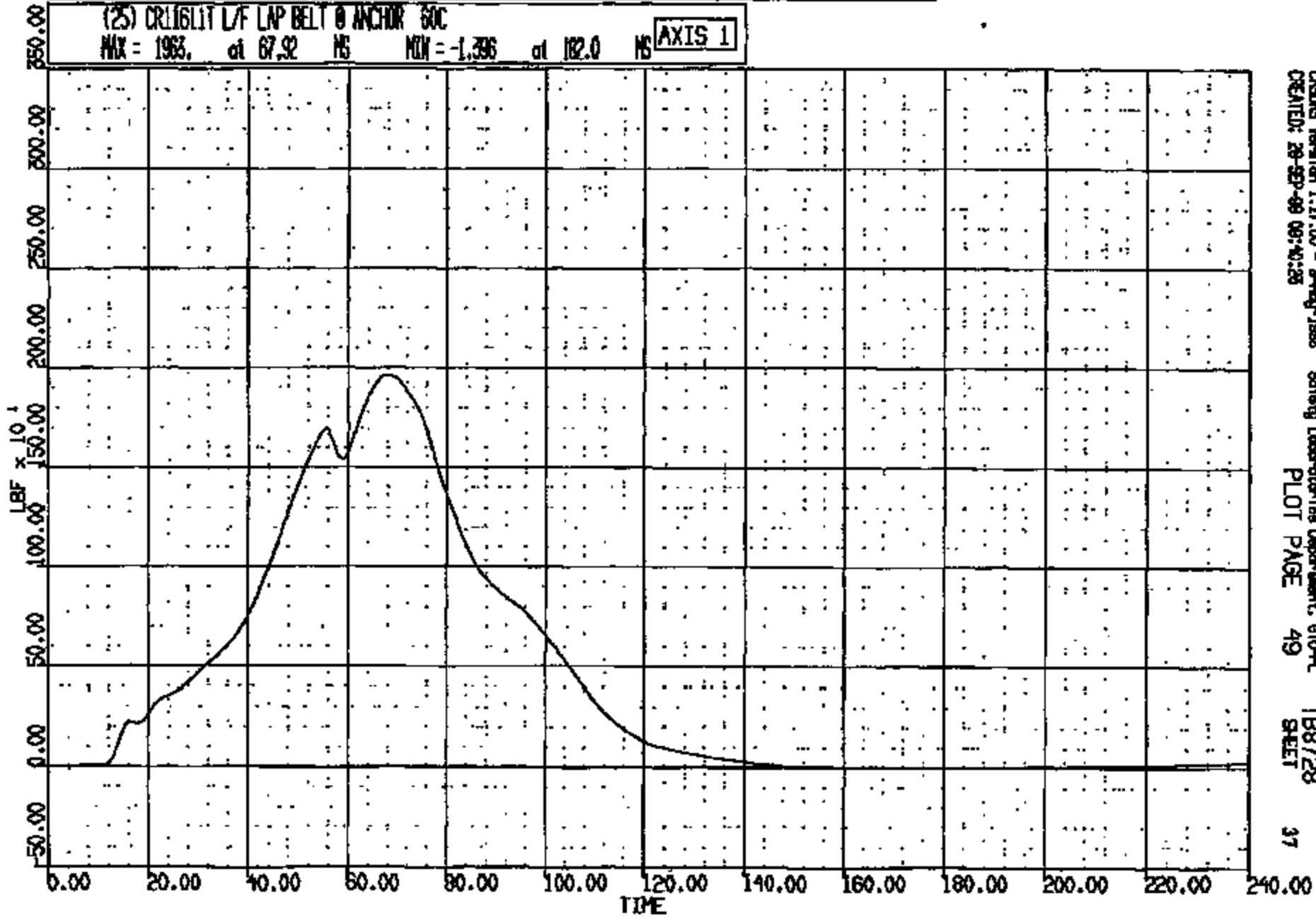
T88728  
SHEET

36

CRTS 0011611

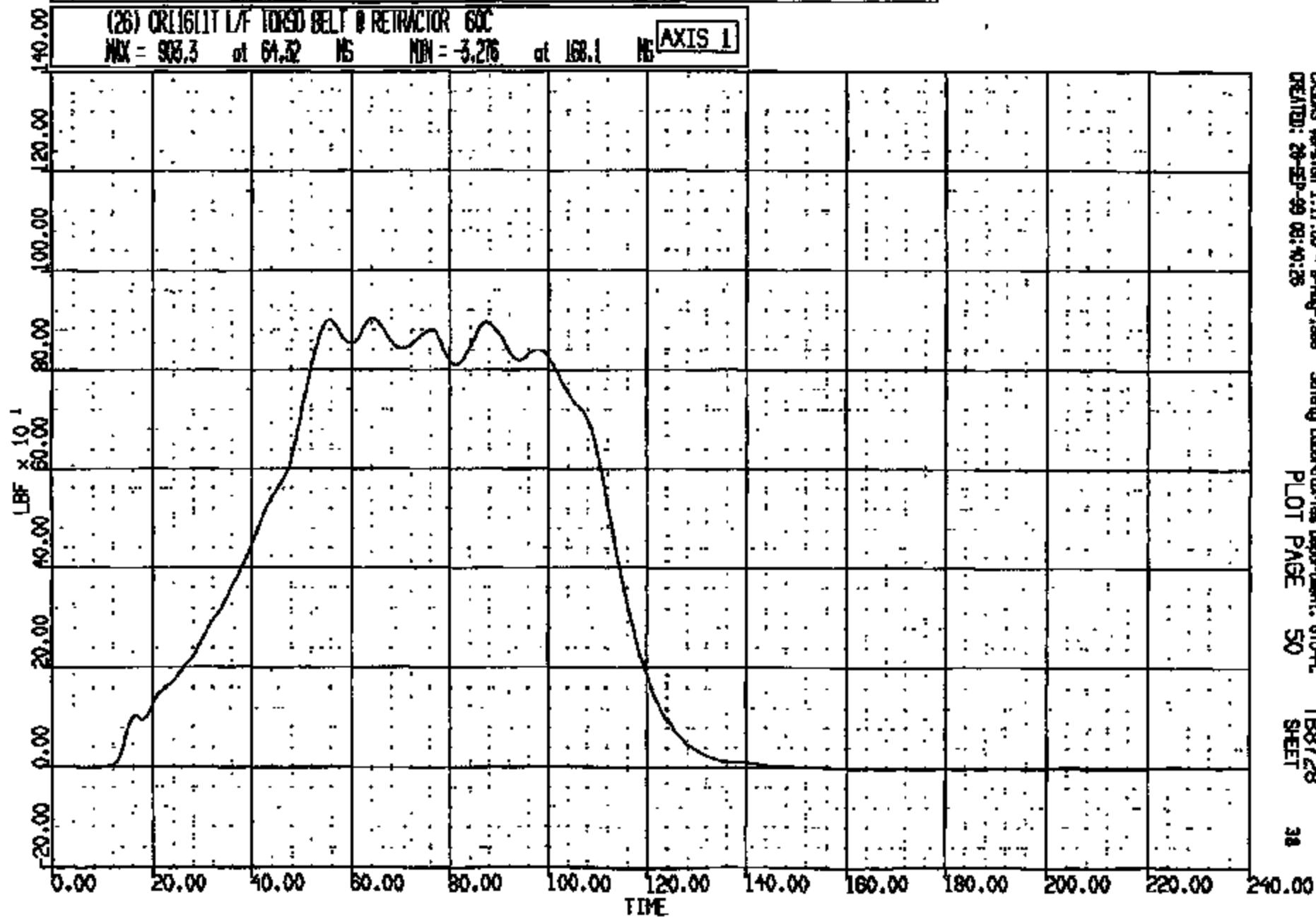
CR R: 11811 TO: TB8728 DATE: 090928 08:53:53  
2000 D-196

(25) CR11611T L/F LAP BELT @ ANCHOR SOC  
MAX = 196.6 at 67.92 MS MIN = -1.396 at 102.0 MS **AXIS 1**



CR R: 11611 TO: T88728 DATE: 990928 08:53:55  
2000 D-188

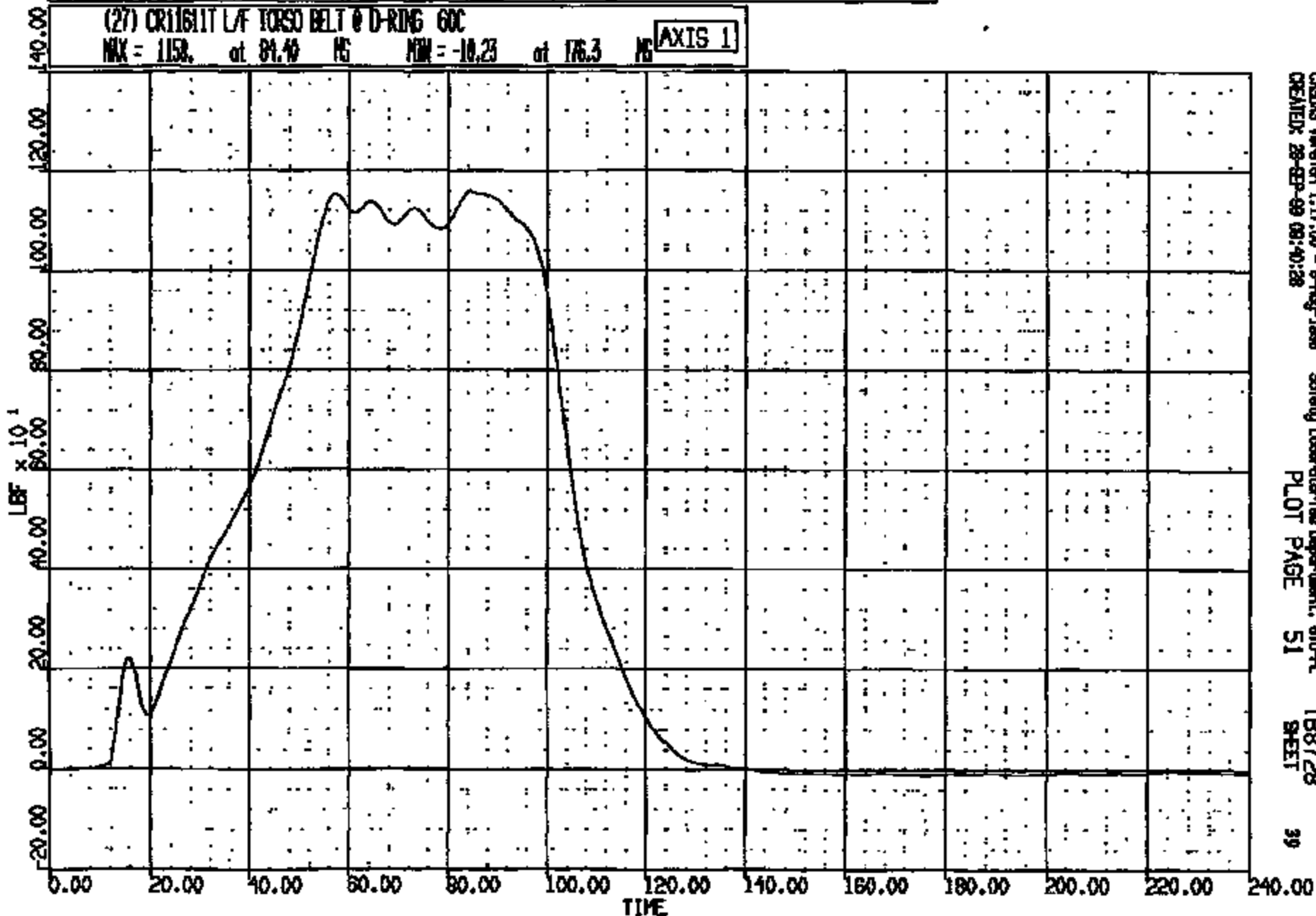
(26) CR11611 L/F TORSO BELT @ RETRACTOR 60C  
MAX = 933.3 at 64.32 MS MIN = -3.276 at 168.1 MS **AXIS 1**



CR R: 11811 TO: T88728 DATE: 990928 08:53:53  
2000 D-198

(27) CR11611T LF TORSO BELT @ D-RING 60C

MAX = 1158. at 84.49 MS MIN = -10.23 at 176.3 MS **AXIS 1**



CRSUS Version 1.17.00 - 8-Aug-1998  
CREATED: 28-SEP-99 08:40:28

Safety Laboratories Department, 610-R  
PLOT PAGE 51

T88728  
SHEET

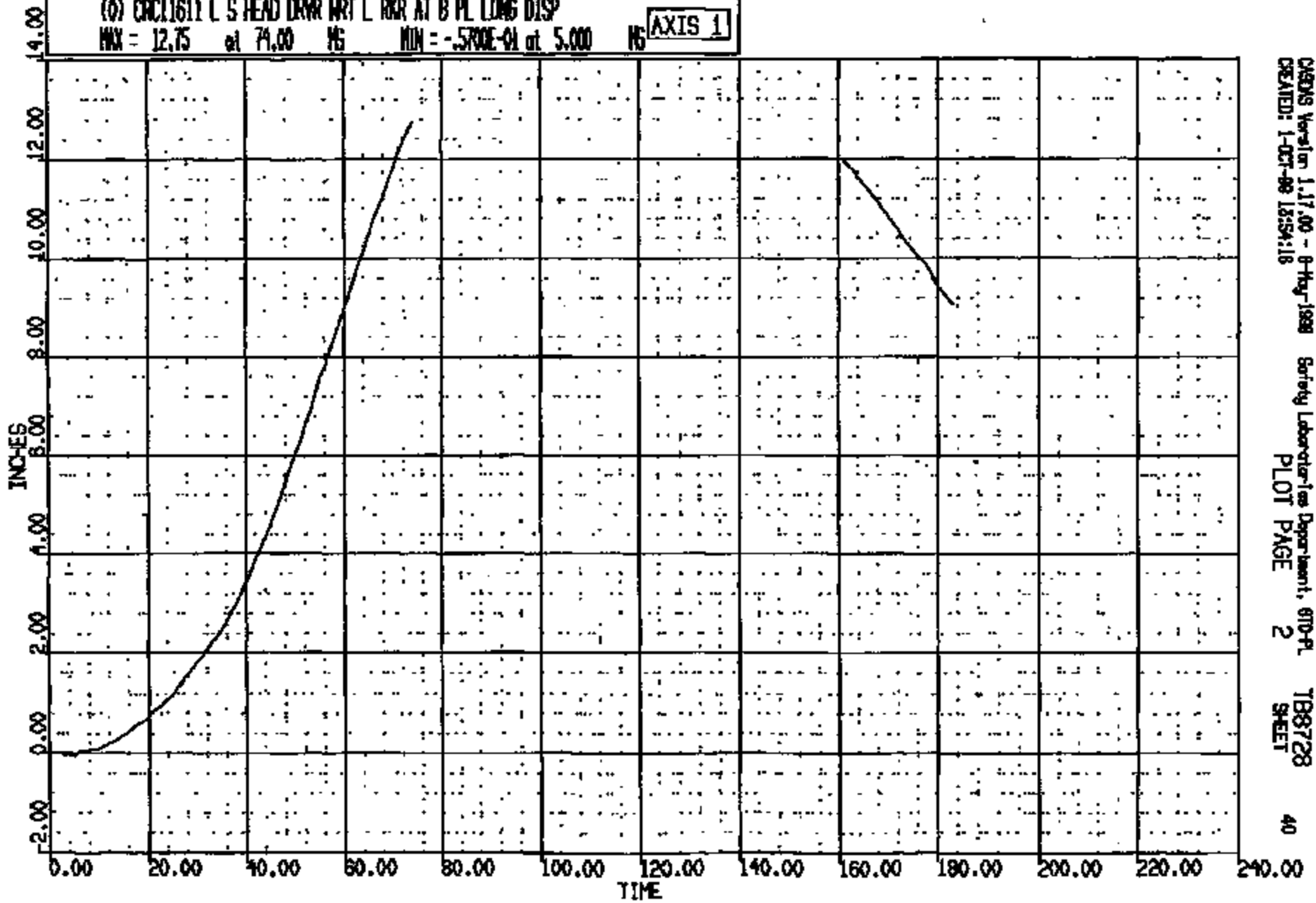
39

CRTS 0011611



CR R: 11611 TO: T86728 DATE: 890828 08:55:52  
2000 D-198

(0) CRCL1611 L S HEAD DRVR WRT L RKR AT B PL LONG DISP  
MAX = 12.75 at 71.00 MS MIN = -.5700E-01 at 5.000 MS **AXIS 1**



CRS Version 1.17.00 - 8-May-1988  
Scribble Laboratories Department, 610-PL  
CREATED: 1-OCT-88 18:54:18  
PLOT PAGE 2  
T86728  
SHEET 40

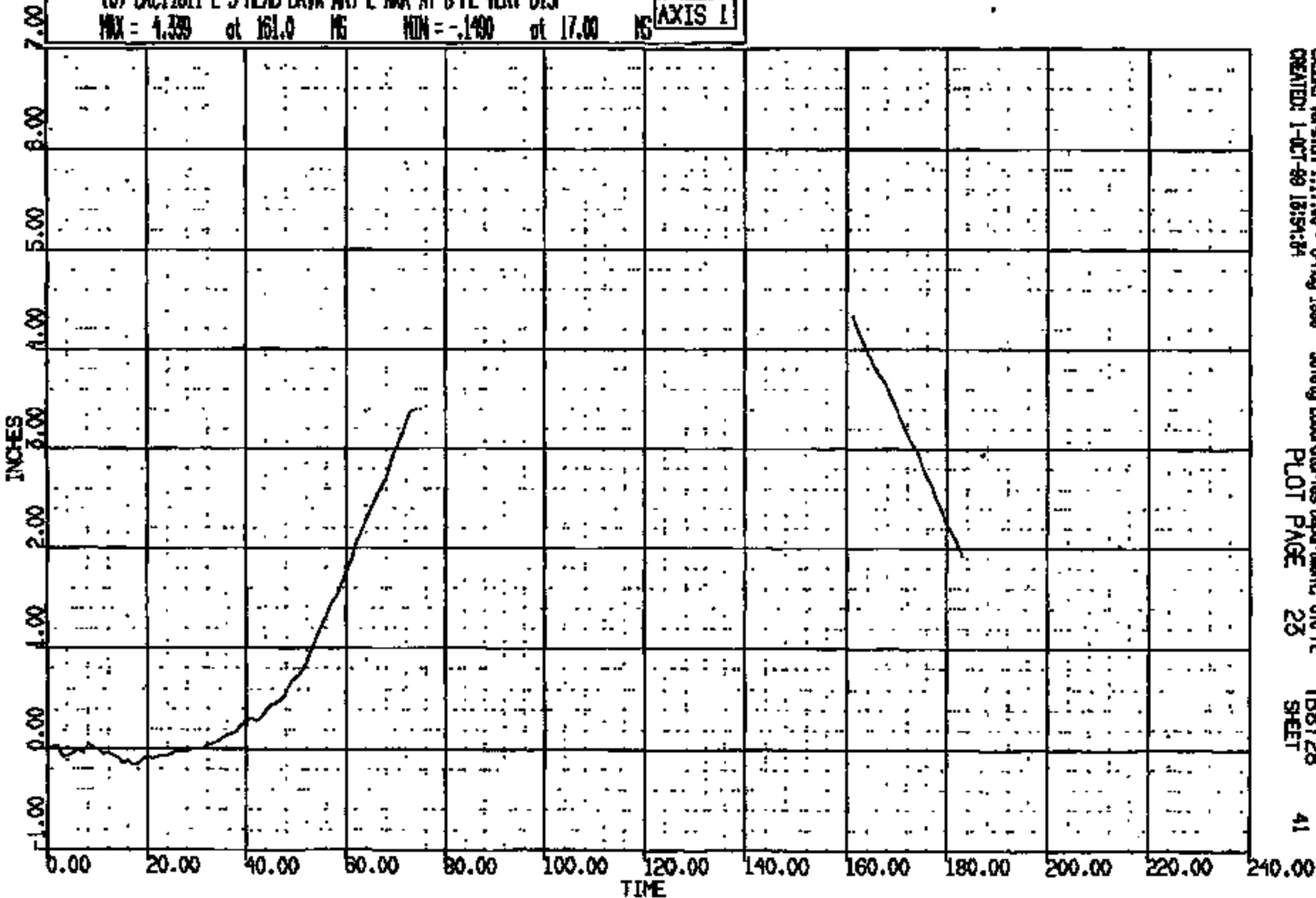
CRIS 0011611

CR R: 11811 TO: TB8728 DATE: 890828 08:55:55  
3000 D-189

(0) CRCL1611 L S HEAD DRVW WRT L INR AT B PL VERT DISP

MAX = 4.389 at 161.0 MS MIN = -.1490 at 17.00 MS

AXIS 1



CRAMS Version 1.17.00 - 8-Aug-1988  
CREATED: 1-OCT-89 18:54:04

Safety Laboratories Department, 610-PL  
PLOT PAGE 23

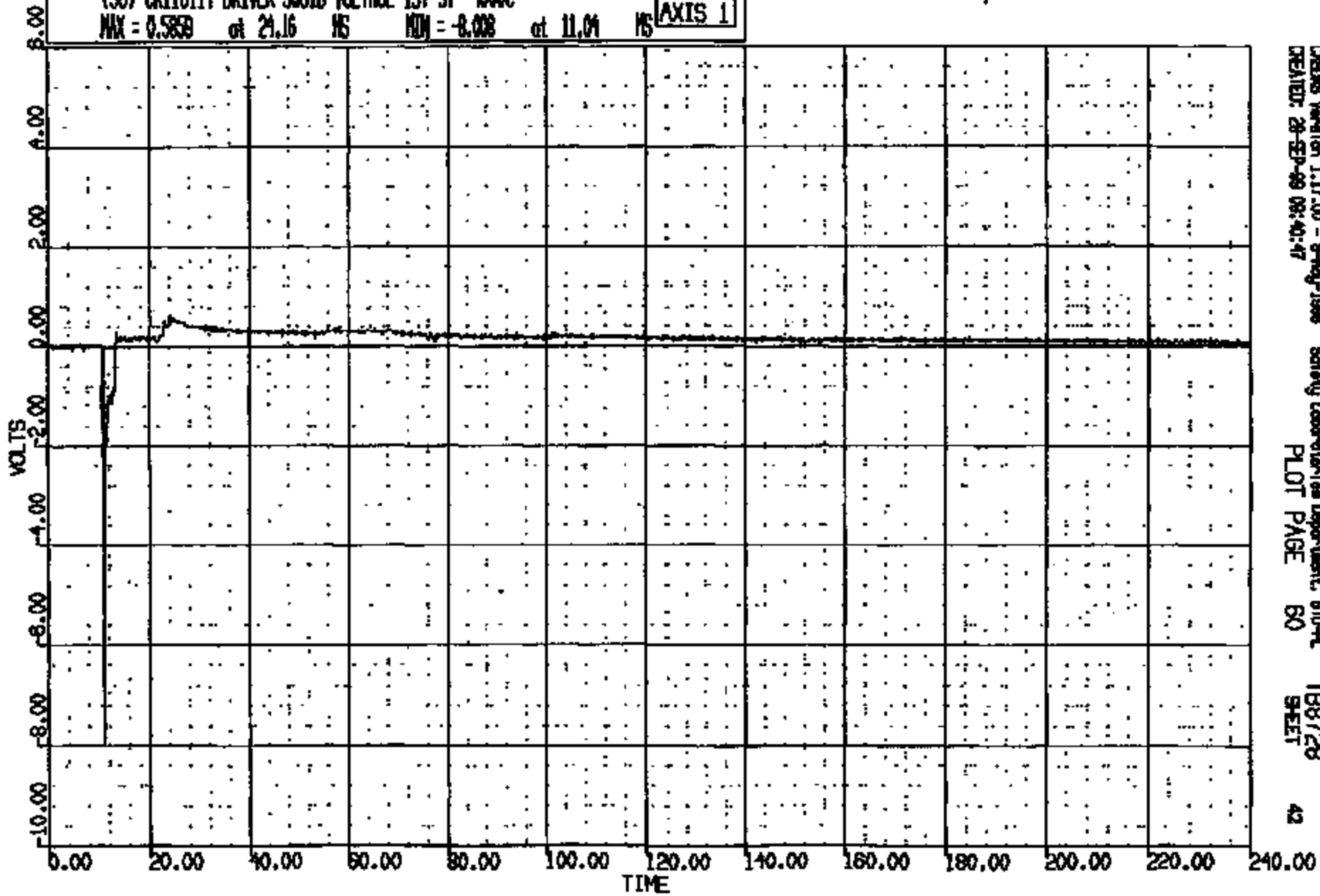
TB8728  
SHEET

41

CRTS 0011611

OR R: 11611 TO: TB8728 DATE: 990928 08:53:53  
2000 D-188

(36) CR11611T DRIVER SOLID VOLTAGE 1ST ST 4000C  
MAX = 0.5859 at 21.16 NS MIN = -8.008 at 11.04 NS **AXIS 1**

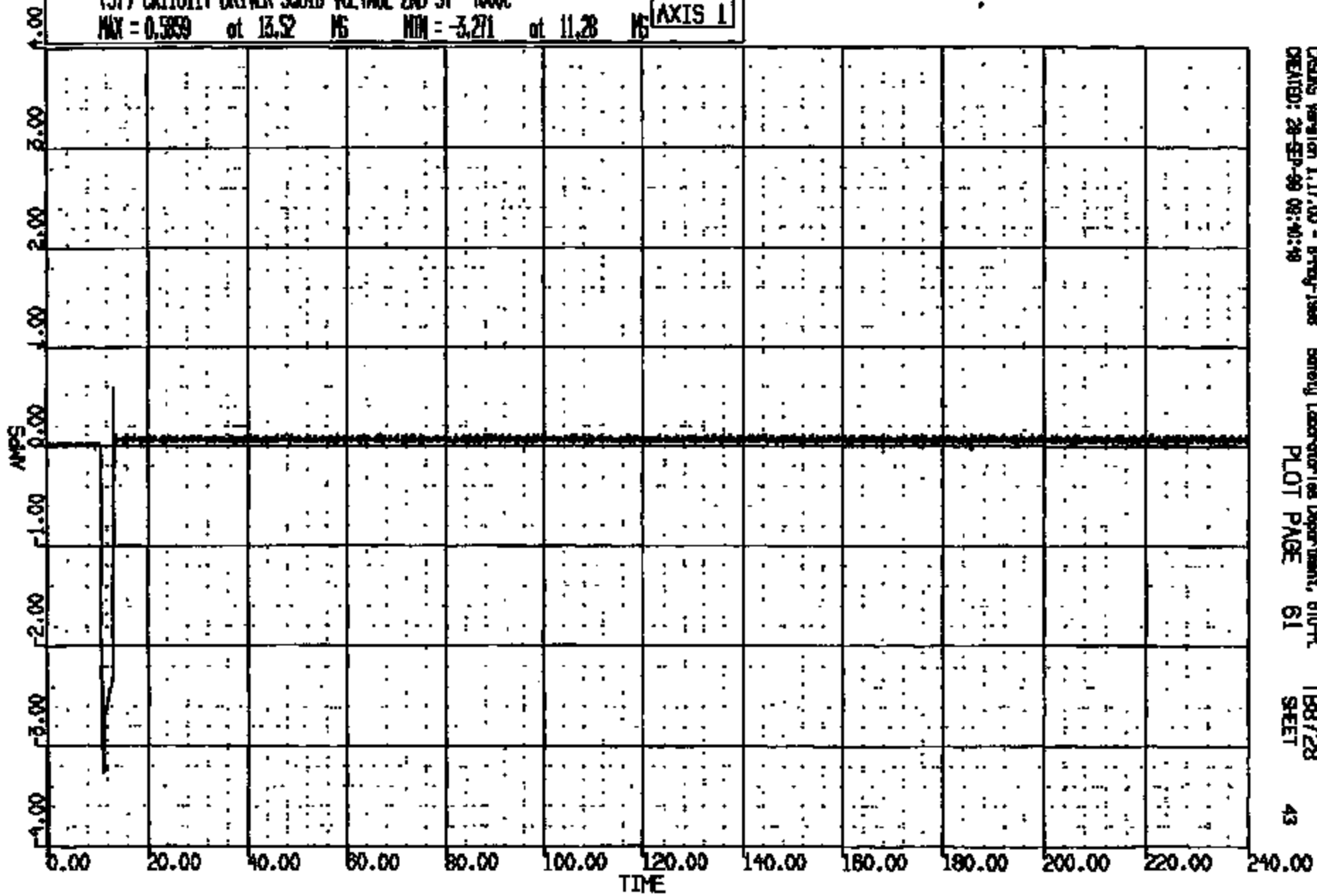


CRS Version 1.17.00 - 9-May-1998 Safety Laboratory Department, B10-4  
CREATED: 28-SEP-99 08:40:47 PLOT PAGE 60 SHEET 42

CRIS 0011611

CR R: 11611 TO: TB8728 DATE: 990928 08:55:55  
2000 D-188

(37) CR116111 DRIVER SCUB VOLTAGE 2ND ST 400C  
MAX = 0.5839 at 13.52 MS MIN = -3.271 at 11.28 MS **AXIS 1**

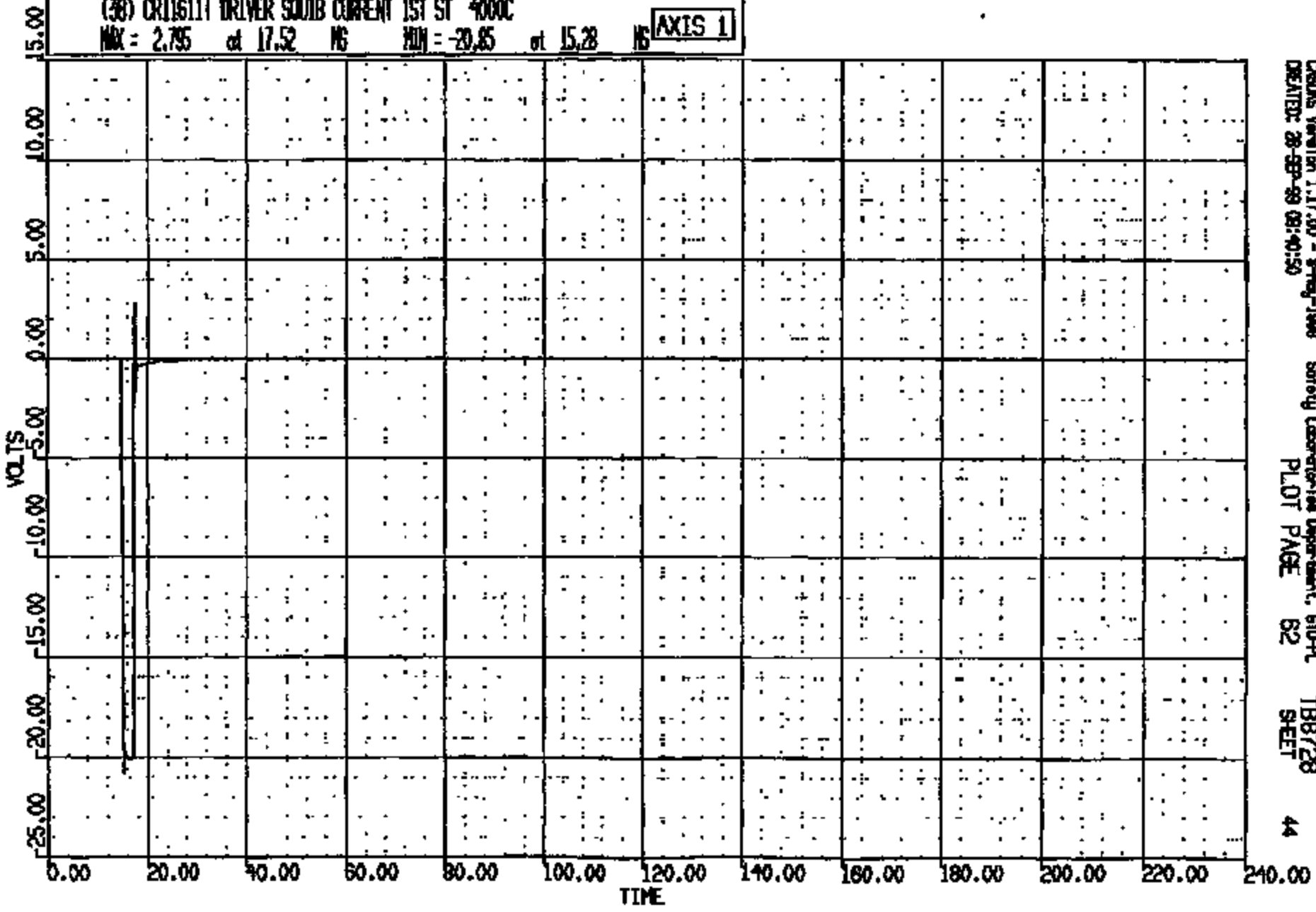


CRIMS Version 1.17.00 - 8-May-1998 Safety Laboratories Department, 810-PL TB8728  
CREATED: 28-SEP-99 08:41:49 PLOT PAGE 61 SHEET 43

CRIS 0011611

CR R: 11611 TO: TB8728 DATE: 880828 08:53:58  
2000 D-198

(38) CR11611T DRIVER SOLID CURRENT 1ST ST 400C  
MAX = 2.75 at 17.52 MS MIN = -20.85 at 15.28 MS **AXIS 1**

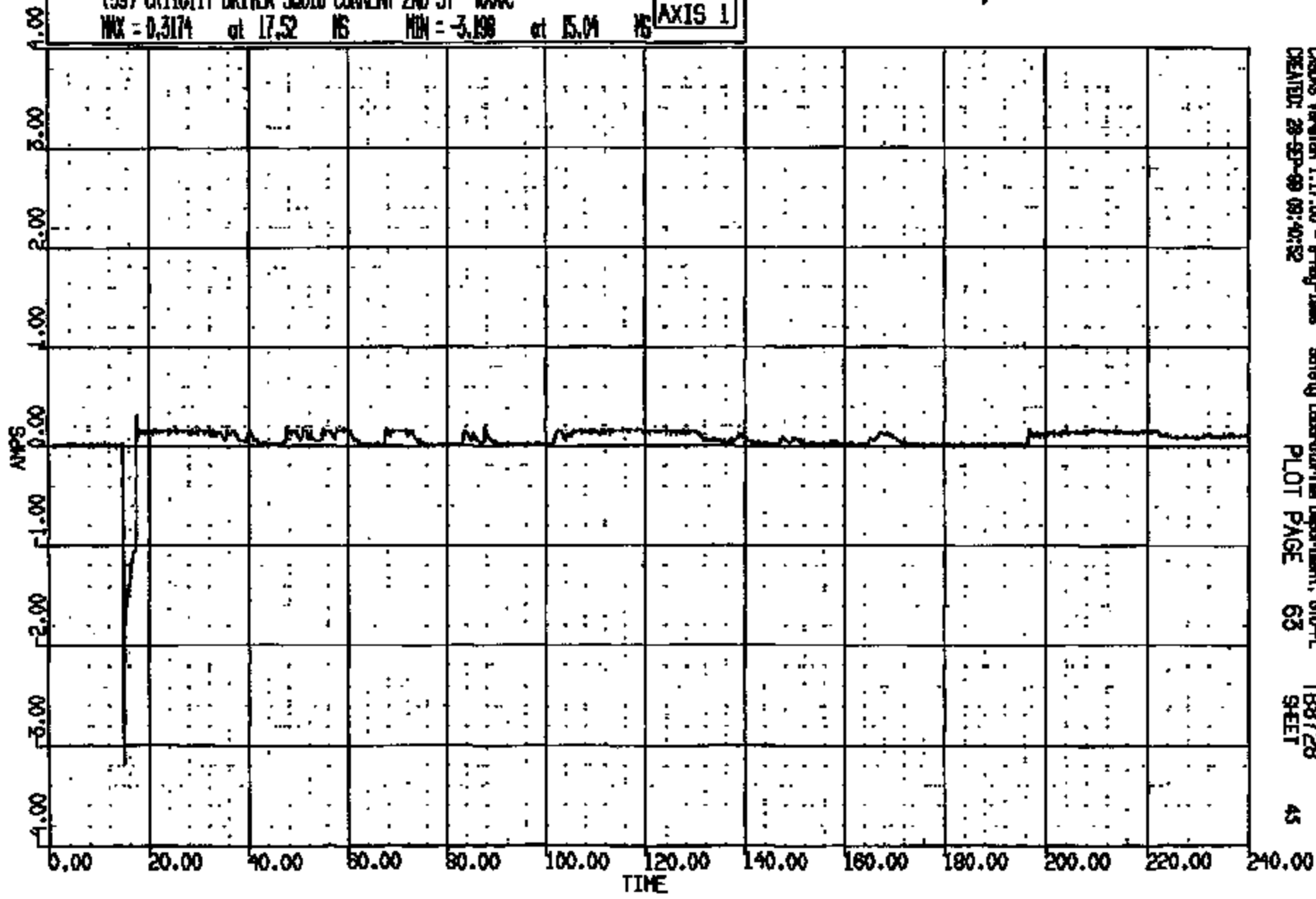


CRDIS VerJan 1.17.00 - 8-May-1988 Safety Laboratories Department, 610-PL TB8728  
CREATED: 28-SEP-88 08:40:50 PLOT PAGE 82 SHEET 44

CRTS 0011611

CR R: 11811 TO: T88728 DATE: 890928 09:53:53  
2000 0-188

(29) CR11611T DRIVER SOLID CURRENT 2ND ST 400C  
MAX = 0.3174 at 17.52 NS MIN = -3.198 at 15.04 NS **AXIS 1**



CR11611T Version 1.17.00 - 8-May-1988 Safety Laboratories Department, G10-PL  
CREATED: 28-SEP-89 09:40:52 PLOT PAGE 63 TB8728  
SHEET 45

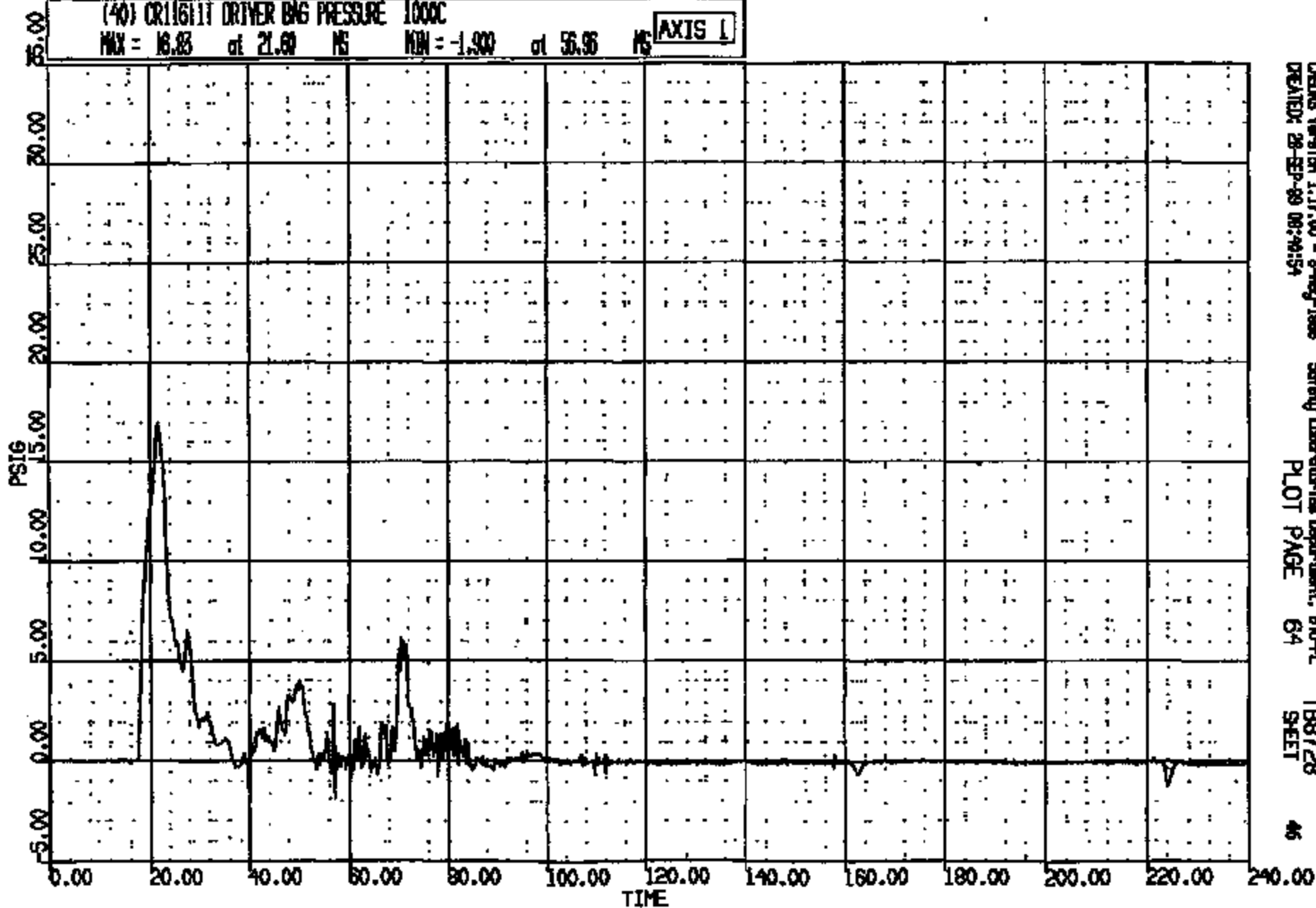
CR11611T

CR R: 11611 TO: TB8728 DATE: 890928 08:53:53  
2000 0-100

(40) CR116111 DRIVER BAG PRESSURE 1000C

MAX = 16.83 at 21.69 MS MIN = -1.900 at 56.96 MS

AXIS 1



CRS Version 1.17.00 - 8-May-1988  
CREATED: 28-SEP-89 08:46:54

Safety Laboratories Department, 870-PL  
PLOT PAGE 64

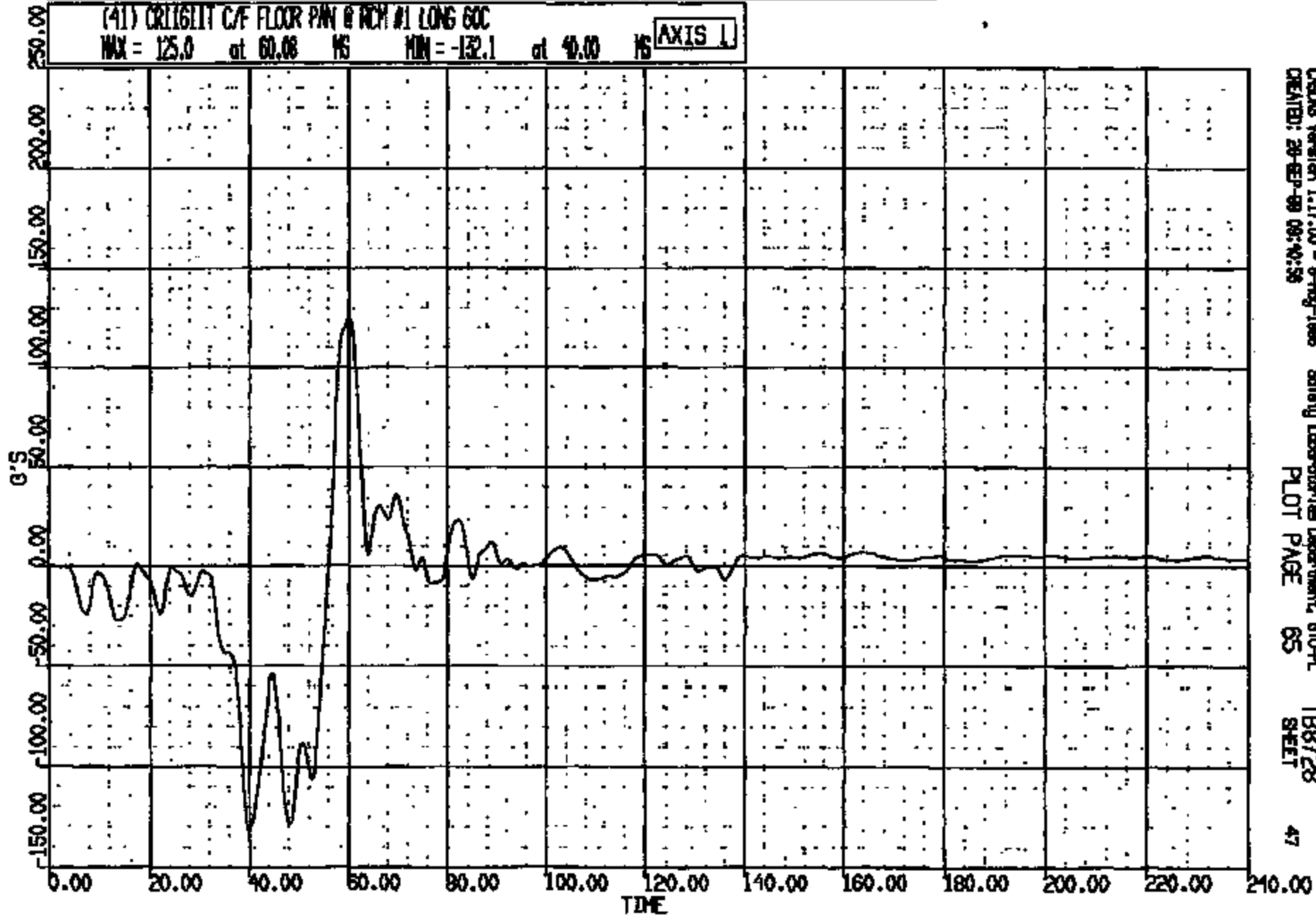
TB8728  
SHEET

46

CRTS 0011611

CR R: 11611 TO: TB8728 DATE: 20000928 08:53:53  
2000 D-190

(41) CR11611 C/F FLOOR PAN @ RCH #1 LONG 60C  
MAX = 125.0 at 60.08 MS MIN = -132.1 at 40.00 MS **AXIS L**



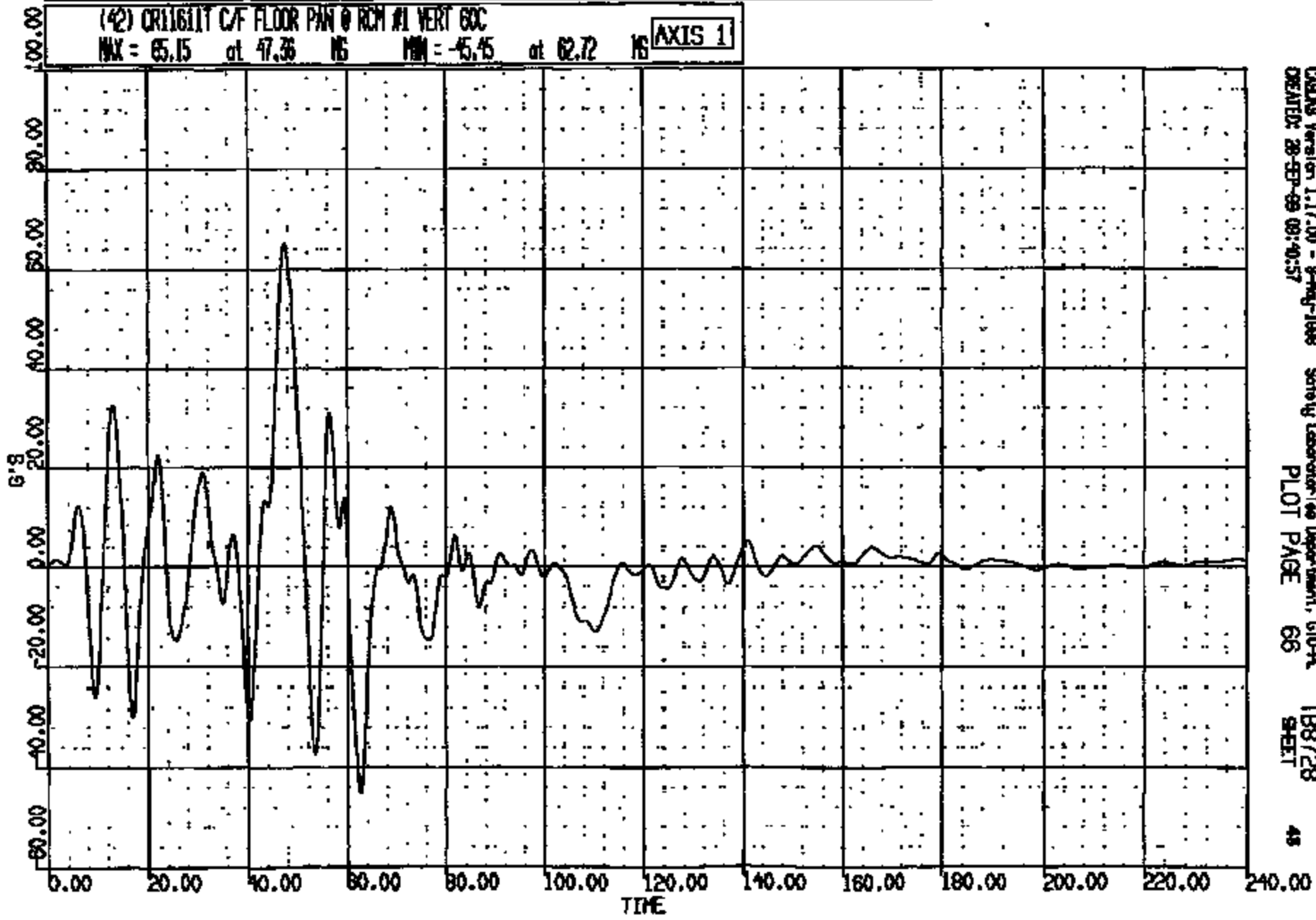
CADDS Version 1.17.00 - 8-May-1998 Safety Laboratories Department, 810-PL TB8728  
CREATED: 20-SEP-00 08:40:58 PLOT PAGE 65 SHEET 47

CRTS 0011611



CR R: 11611 TO: T88728 DATE: 890828 08:53:53  
2000 D-185

(42) CR11611T C/F FLOOR PAN @ RCH #1 VERT 60C  
MAX = 65.15 at 47.36 MS MIN = -45.45 at 62.72 MS **AXIS 1**

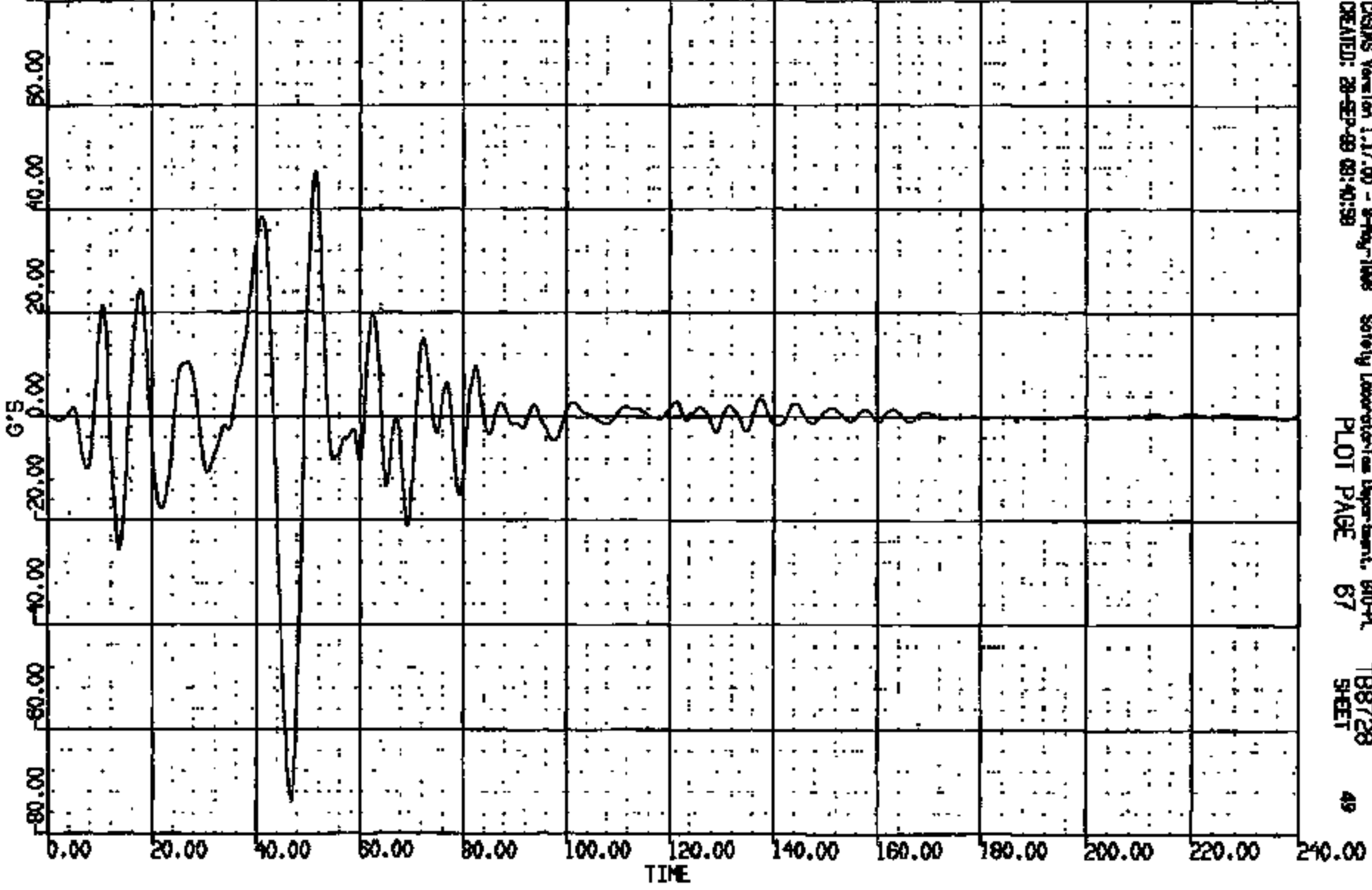


CADDS Version 1.17.00 - 9-May-1988 Safety Laboratory Department, GPO-PL  
CREATED: 28-SEP-89 09:40:57 PLOT PAGE 66 SHEET 48

CRTS 0011611

CR #: 11811 TO: T88728 DATE: 990928 08:53:53  
2000 D-188

(43) CR11611T C/F FLOOR PAN @ RCH #1 LAT 60C  
MAX = 47.24 at 51.35 MS MIN = -73.59 at 46.80 MS **AXIS 1**

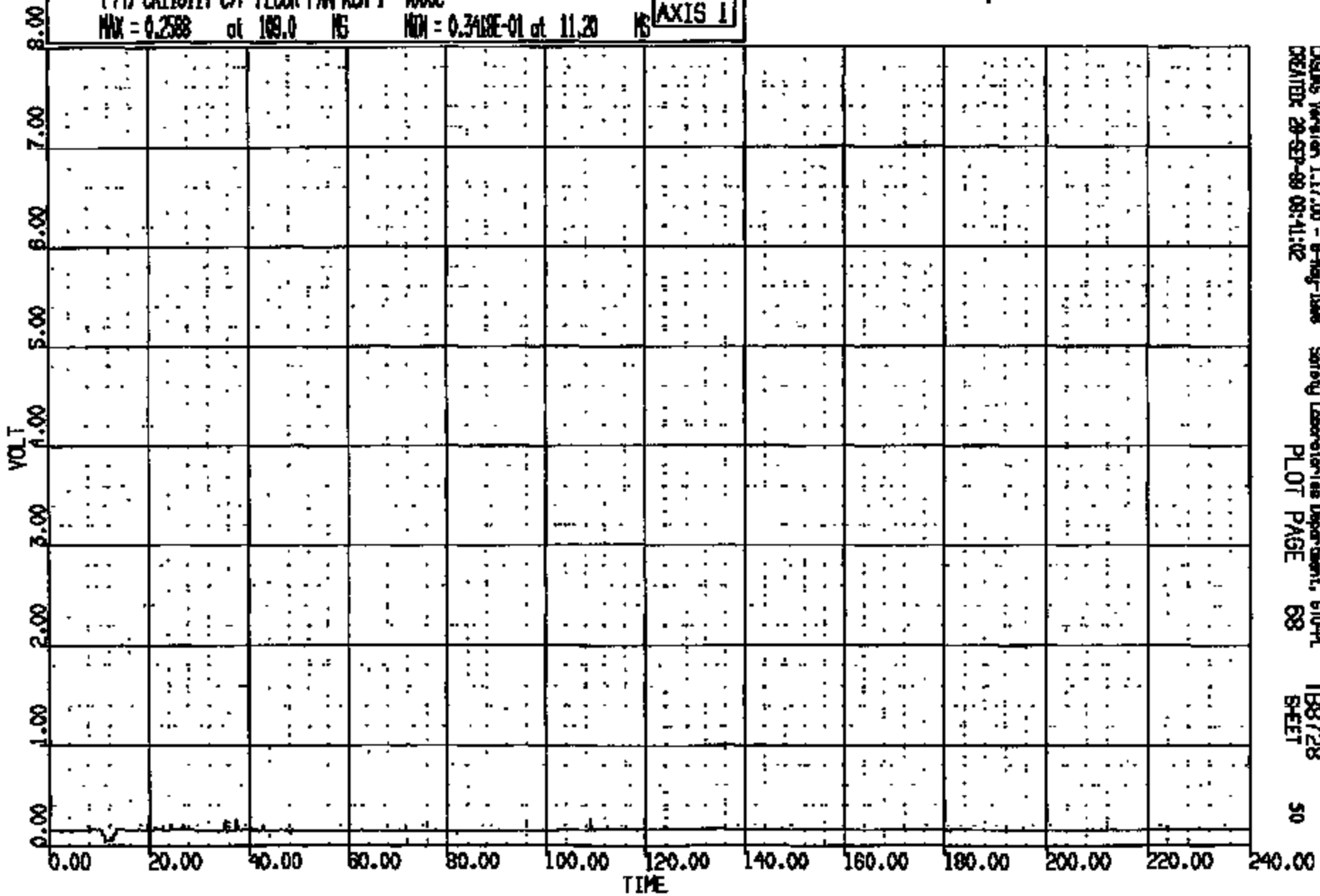


CISMS Version 1.17.00 - 9-May-1998 Safety Laboratories Department, 810-PL, TB8728 49  
CREATED: 28-SEP-99 08:40:39 PLOT PAGE 67 SHEET

CRTS 0011611

CR R: 11611 TO: TB8728 DATE: 990928 09:53:53  
2000 D-185

(44) CR11611T C/F FLOOR PWR RCH 1 4000C  
MAX = 0.2588 at 189.0 MS MIN = 0.3418E-01 at 11.20 MS **AXIS 1**

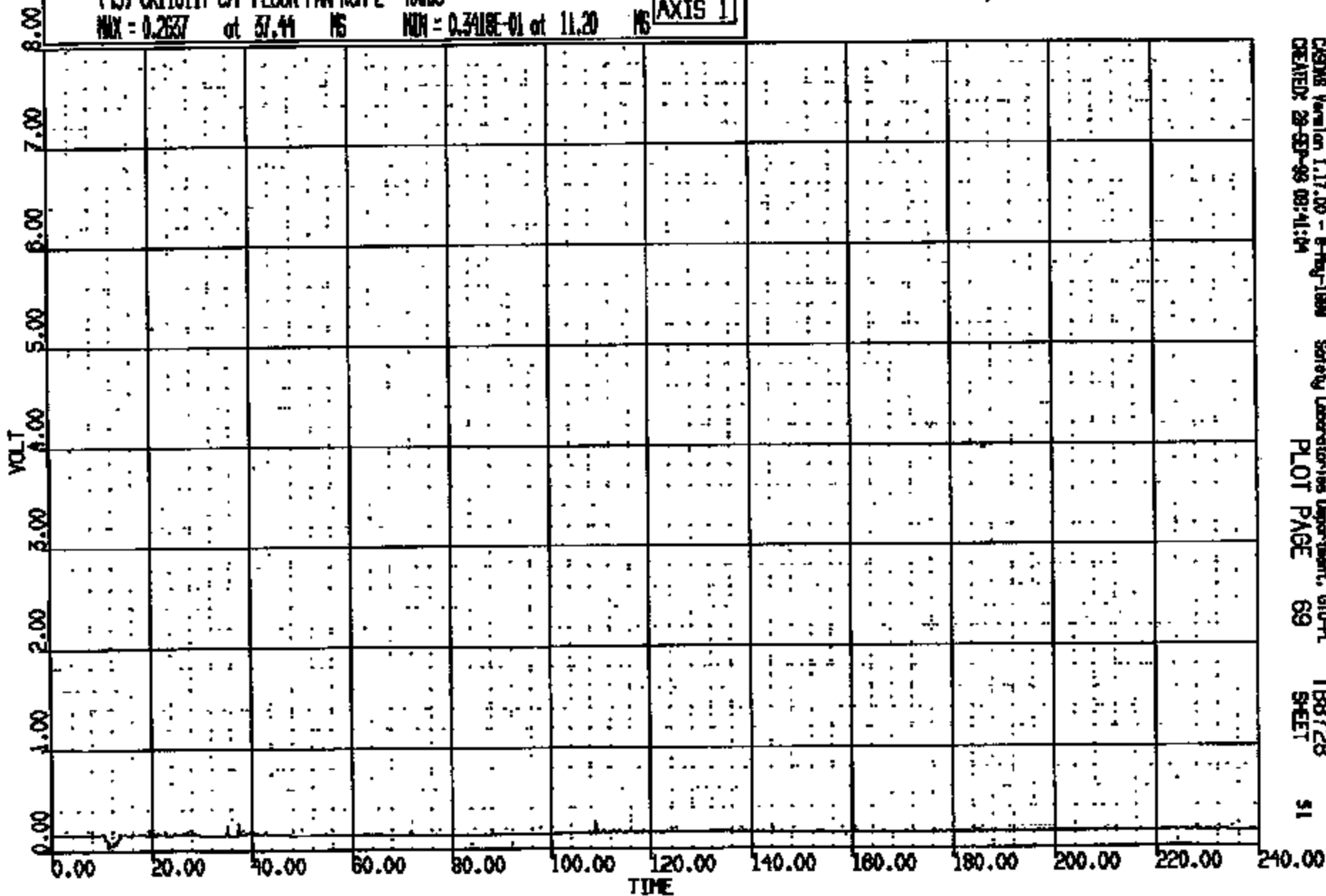


CASUS Version 1.17.00 - 8-Aug-1998 Safety Laboratories Department, 610-PL  
CREATED: 28-SEP-99 09:41:02 PLOT PAGE 68 TB8728 SHEET 50

CRTS 0011611

CR R: 11611 TO: TB8728 DATE: 990928 08:55:53  
2000 D-198

(45) CR11611T C/F FLOOR PAN RCH 2 400KC  
MAX = 0.2637 at 57.44 NS MIN = 0.3418E-01 at 11.20 NS **AXIS 1**



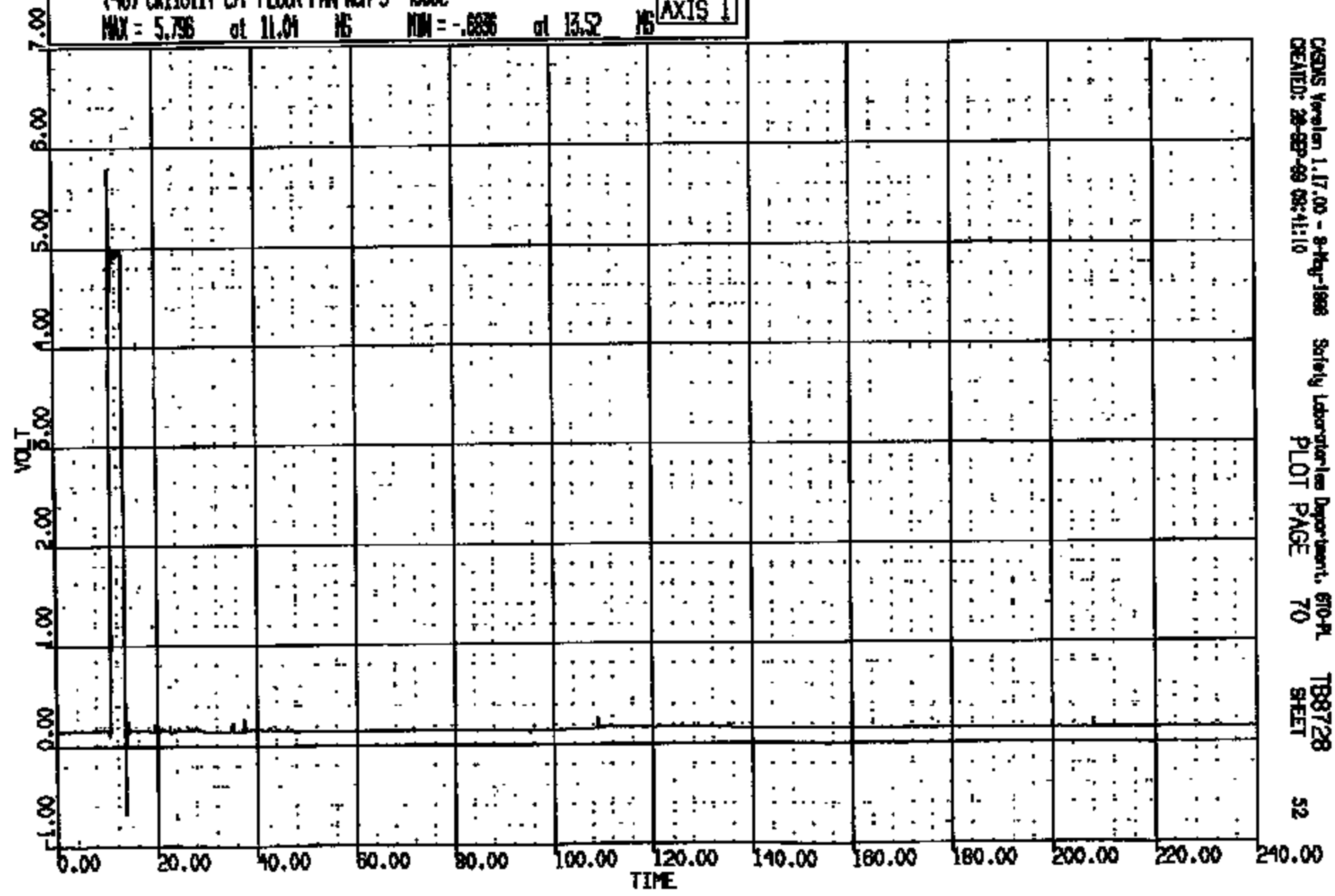
CRSMB Version 1.17.00 - 8-May-1999 Safety Laboratories Department, 610-PL TB8728  
CREATED: 28-SEP-98 08:41:14 PLOT PAGE 69 SHEET 51

CR11611

CR R: 11811 TO: T88728 DATE: 990828 08:53:53  
2000 D-188

(46) CR11611T C/F FLOOR PAN RCH 3 4000C  
MAX = 5.796 at 11.01 MS MIN = -.6836 at 13.52 MS

AXIS 1



CRIS 0011611

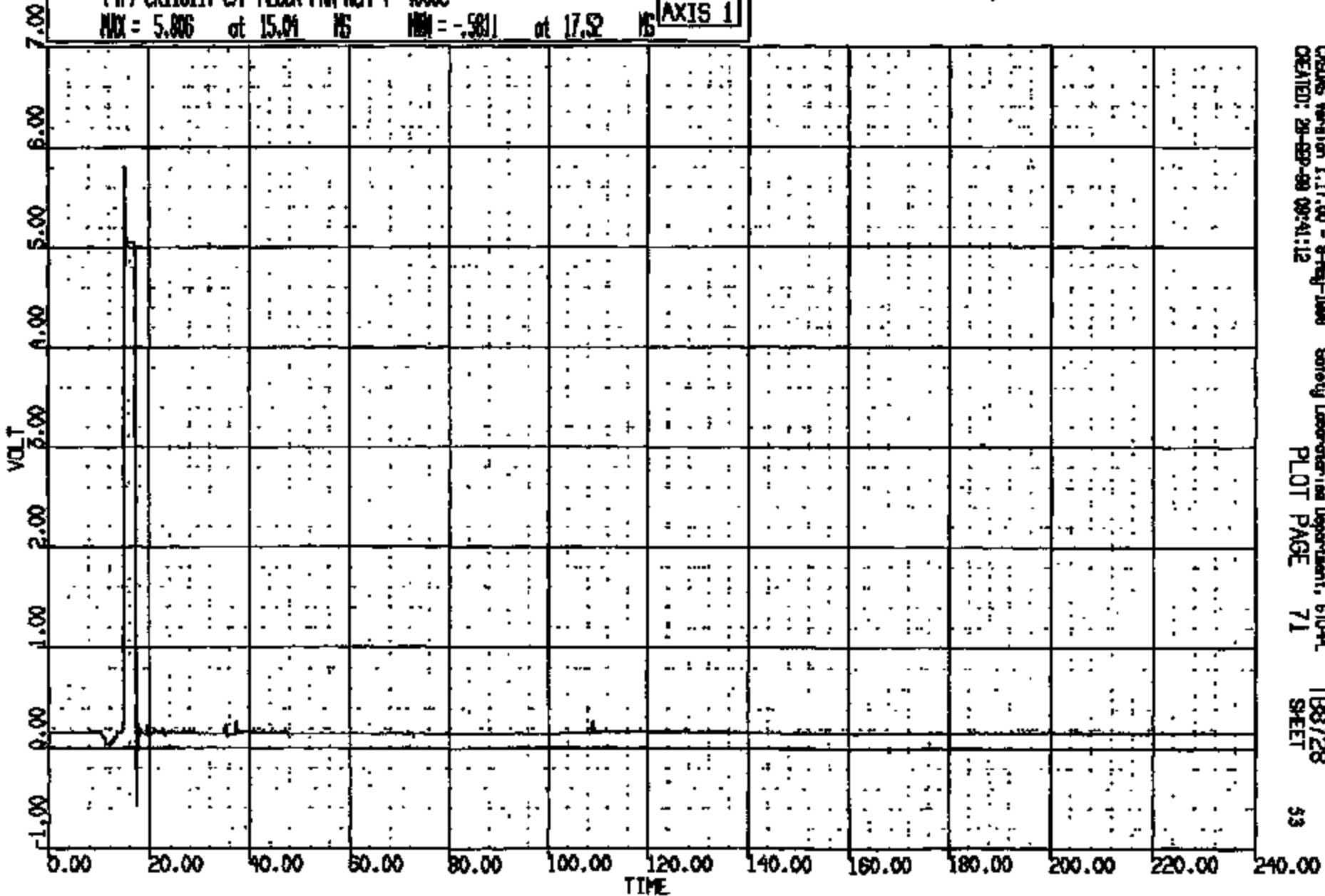
CRSIS Version 1.17.00 - 8-May-1998 Safety Laboratories Department, 610-PL T88728  
CREATED: 28-SEP-99 08:41:10 PLOT PAGE 70 SHEET 52

CR #: 11611 TO: TB8728 DATE: 000928 08:53:53  
2000 D-188

(47) CR11611T C/F FLOOR PWR RM 4 4000C

MAX = 5.806 at 15.09 MS MIN = -.5811 at 17.52 MS

AXIS 1



CASUS Version 1.17.00 - 8-May-1998  
CREATED: 29-SEP-99 09:41:12

Safety Laboratory Department, 610-PL  
PLOT PAGE 71

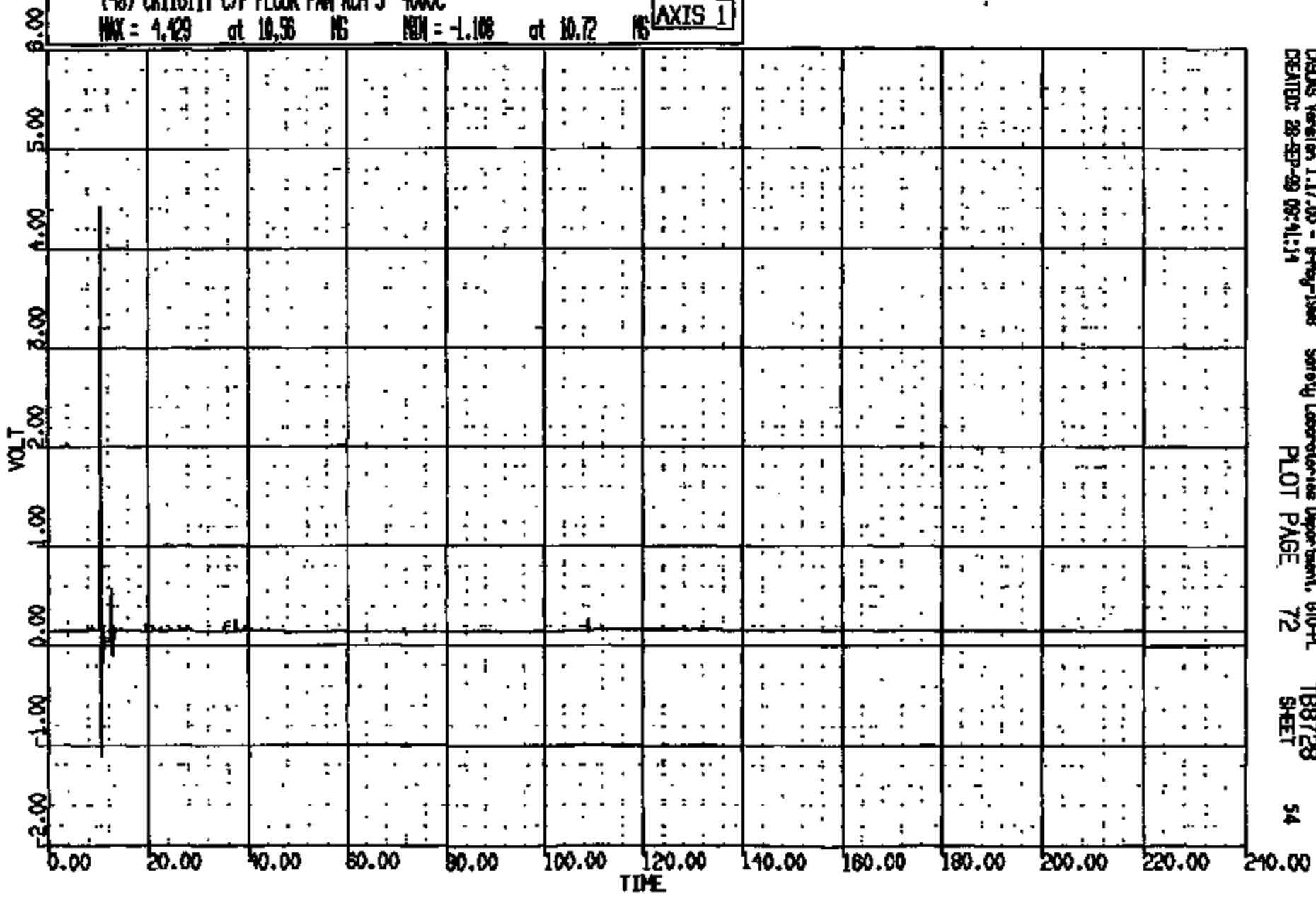
TB8728  
SHEET

53

CRTS 0011611

CR R: 11611 TO: TB8728 DATE: 980928 08:58:53  
2000 D-186

(48) CR11611T C/F FLOOR PMN RM 5 4000C  
MAX = 4.429 at 10.56 NS MIN = -1.108 at 10.72 NS **AXIS 1**



CRDS Version 1.17.00 - 8-May-1988 Safety Laboratory Department, 810-PL TB8728 54  
CREATOR: 28-SEP-98 08:41:14 PLOT PAGE 72 SHEET

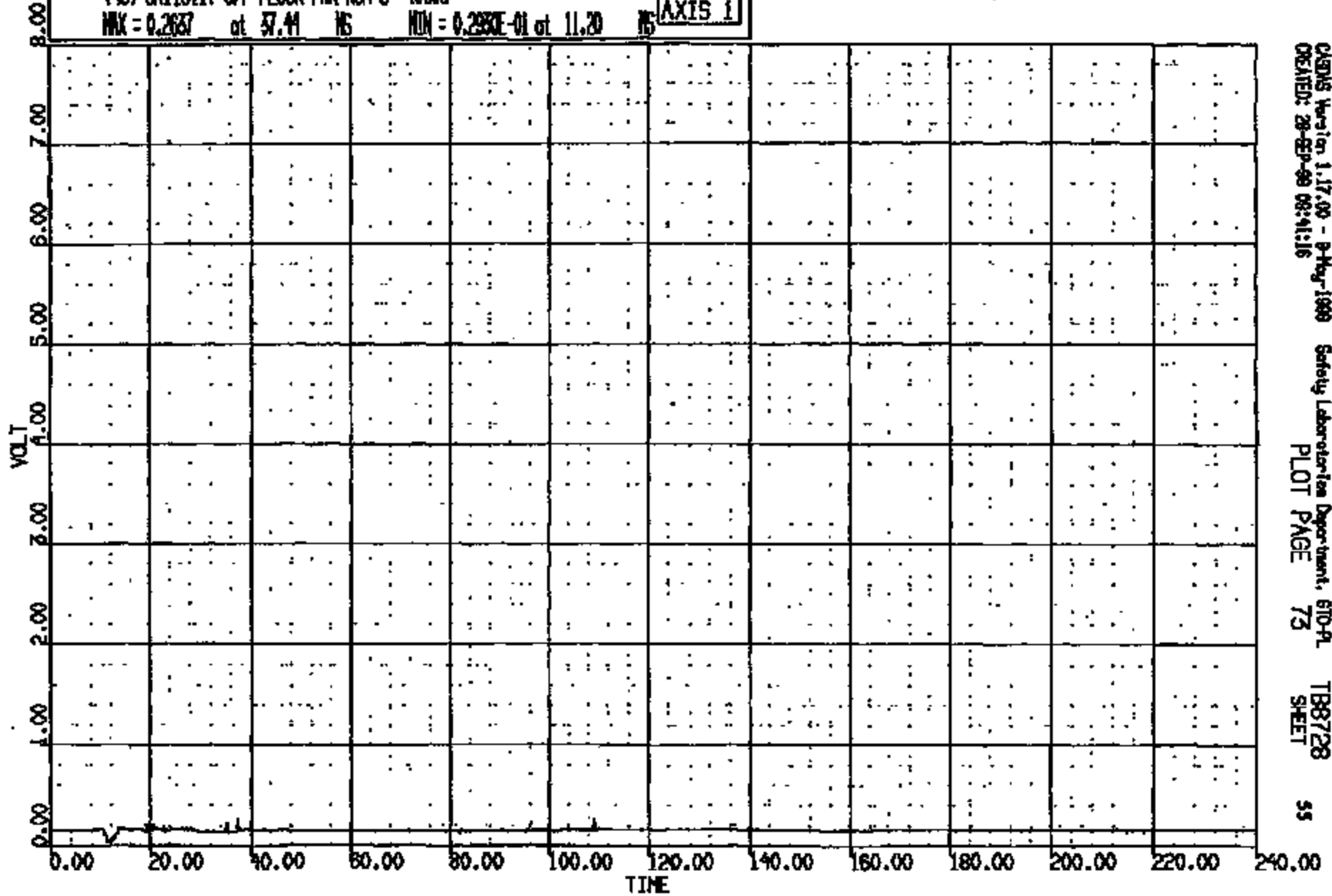
CRTS 0011611

CR R: 11611 TO: T88728 DATE: 990928 08:53:53  
2000 D-188

(49) CR11611 C/F FLOOR PAN ROM 6 4000C

MAX = 0.2637 at 57.41 MS MIN = 0.2830E-01 at 11.20 MS

AXIS 1



CRMS Version 1.17.00 - P-Mag-1999  
CREATED: 28-SEP-99 08:41:16

Safety Laboratory Department, 610-PL  
PLOT PAGE 73

T88728  
SHEET

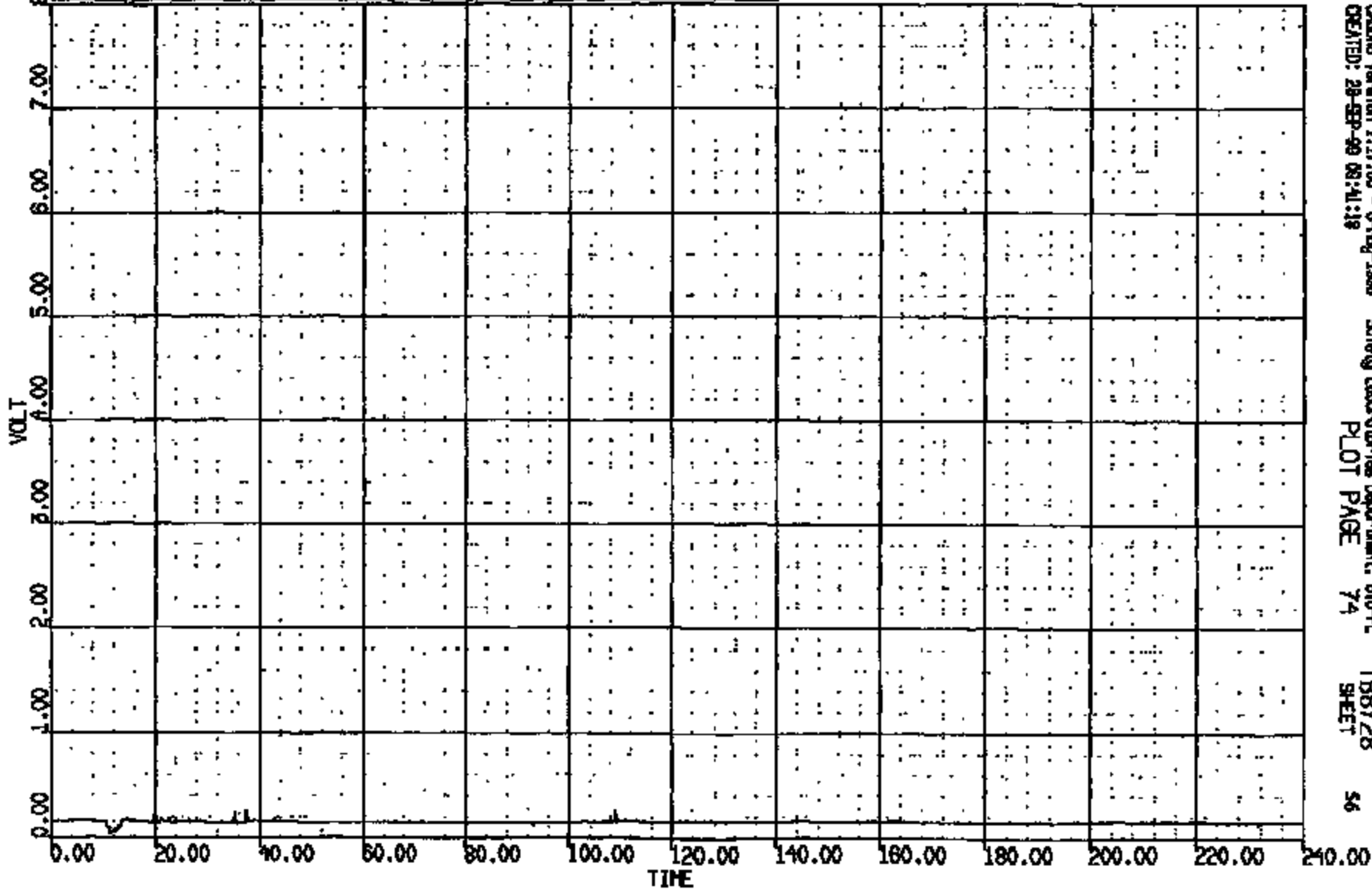
55

CRTS 0011611



CR R: 11611 TO: T88728 DATE: 990928 08:53:55  
2000 D-198

(50) CR116111 C/F FLOOR PIN RCH 7 4000C  
MAX = 0.2539 at 37.44 NS MIN = 0.2930E-01 at 11.20 NS **AXIS 1**



CADMS Version 1.17.00 - 8-May-1998 Safety Laboratories Department, 810-PL T88728 56  
CREATED: 28-SEP-99 08:41:18 PLOT PAGE 74 SHEET

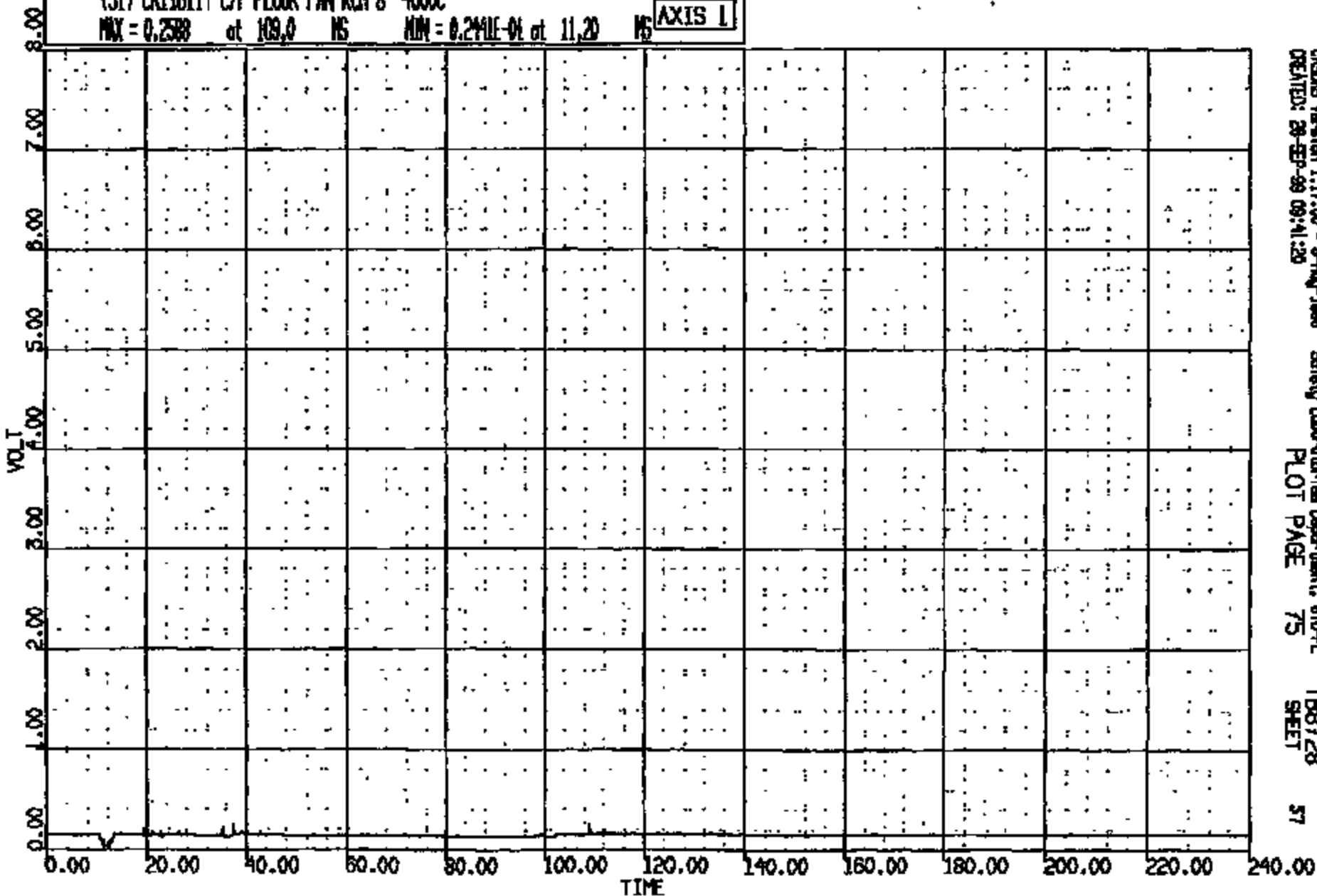
CRIS 0011611

CR R: 11611 TO: TB8728 DATE: 990928 08:55:53  
2000 D-100

(51) CR16111 C/F FLOOR PAN RCH 8 400C

MAX = 0.2588 at 109.0 NS MIN = 0.2411E-04 at 11.20 NS

AXIS 1



CRS015 Version 1.17.00 - 9-May-1998  
CREATED: 28-SEP-99 09:41:20

Safety Laboratory Department, 610-PL  
PLOT PAGE 75

TB8728  
SHEET

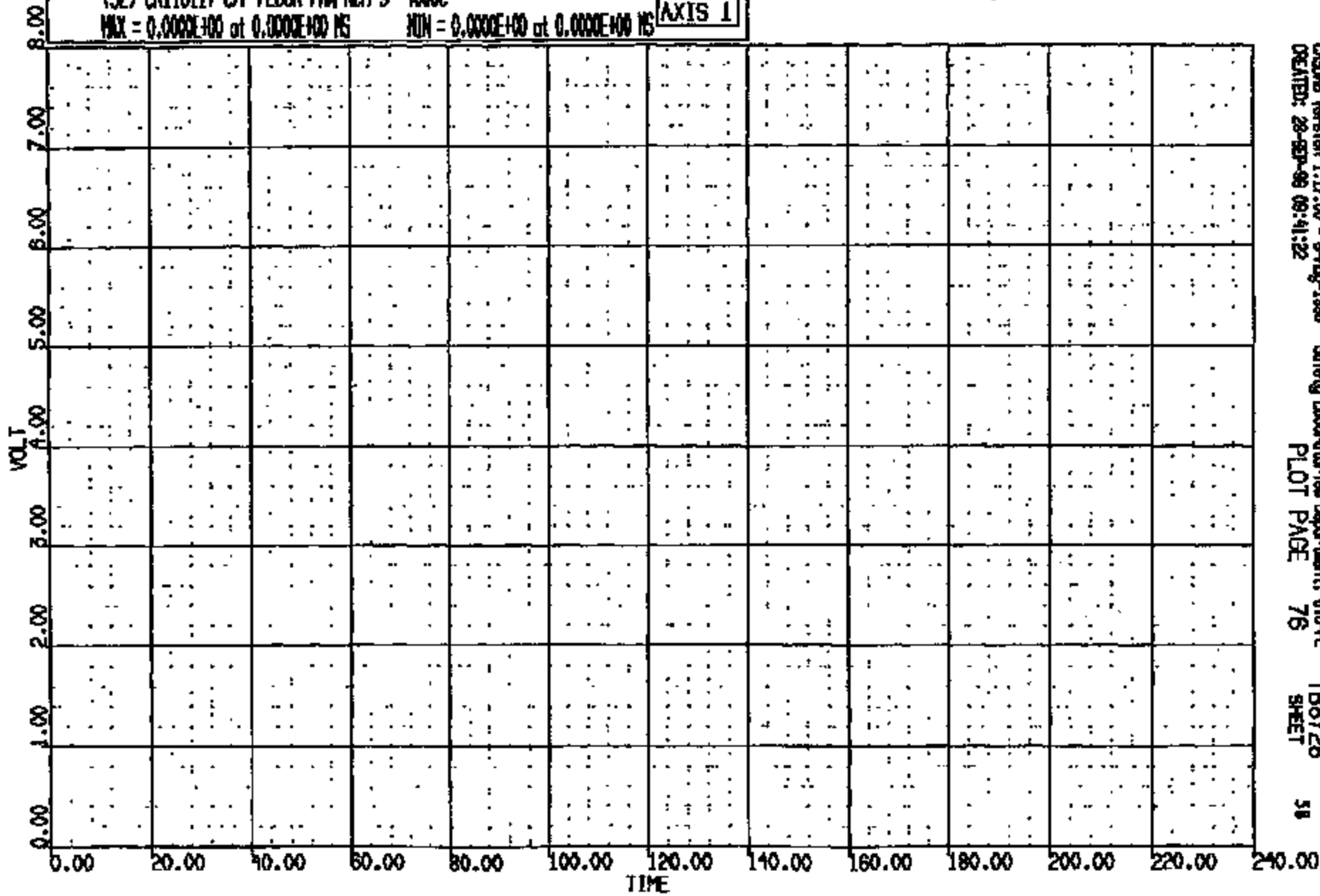
57

CRS015 0011611

CR R: 11511 TO: T88728 DATE: 990928 08:55:55  
R000 D-188

(S2) CR116(LIT C/F FLOOR PAN RCH 9) 4000C  
MAX = 0.0000E+00 at 0.0000E+00 NS MIN = 0.0000E+00 at 0.0000E+00 NS

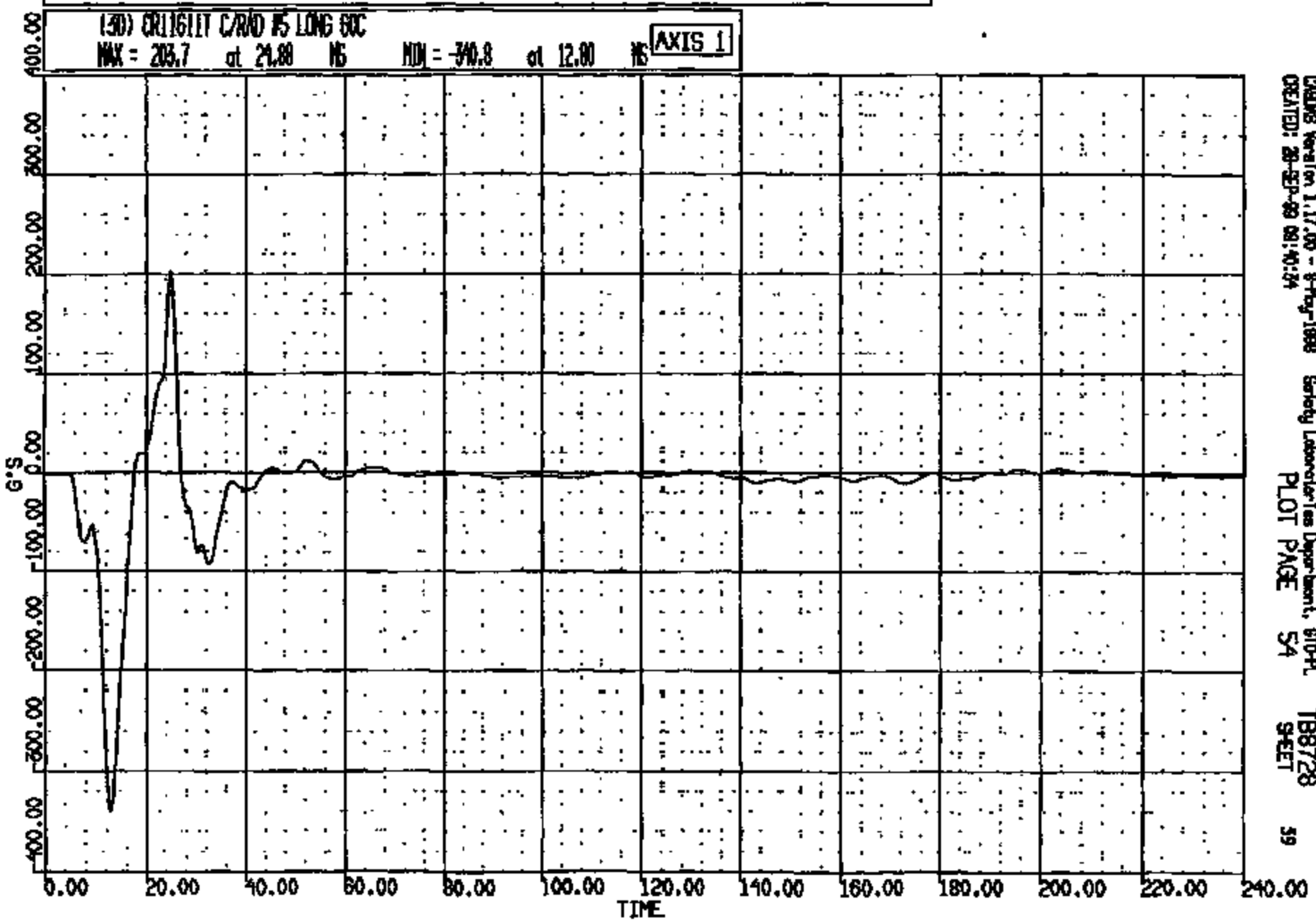
AXIS 1



CASMS Version 1.17.00 - 9-May-1998 Safety Laboratories Department, 610-FL T88728  
CREATED: 28-SEP-99 08:41:22 PLOT PAGE 76 SHEET 58

CRTS 0011611

CR R: 11611 TO: T88728 DATE: 900928 08:52:53  
2000 D-188

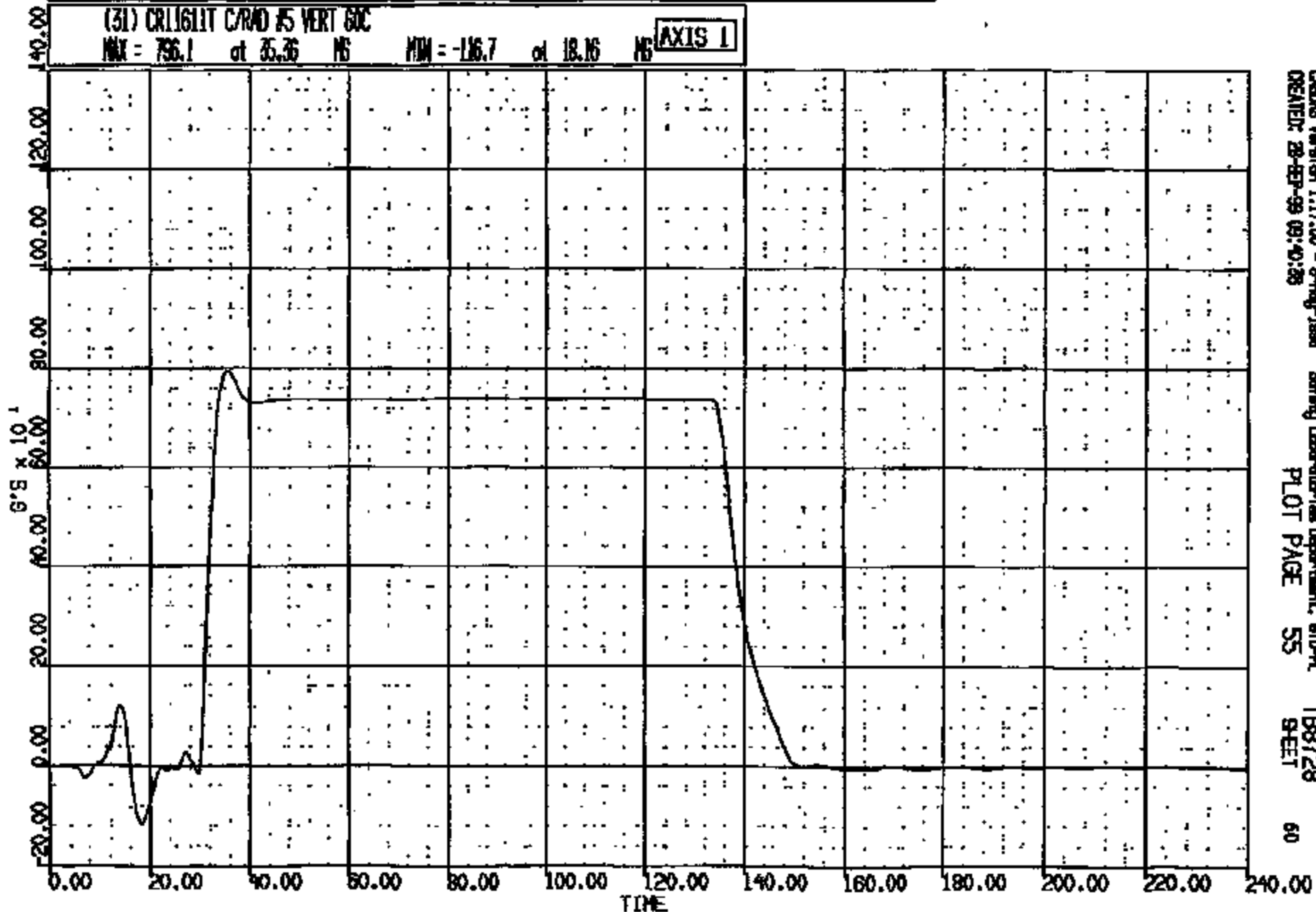


CRMS Version 1.17.00 - 8-May-1988 Safety Laboratories Department, STD-PL T88728  
CREATED: 28-SEP-89 08:40:24 PLOT PAGE 54 SHEET 59

CRTS 0011611

DR R: 11811 TO: T88728 DATE: 990928 09:53:53  
B000 D-189

(31) CR11611T C/RAD JS VERT GAC  
MAX = 736.1 at 35.36 MS MIN = -116.7 at 18.16 MS **AXIS 1**

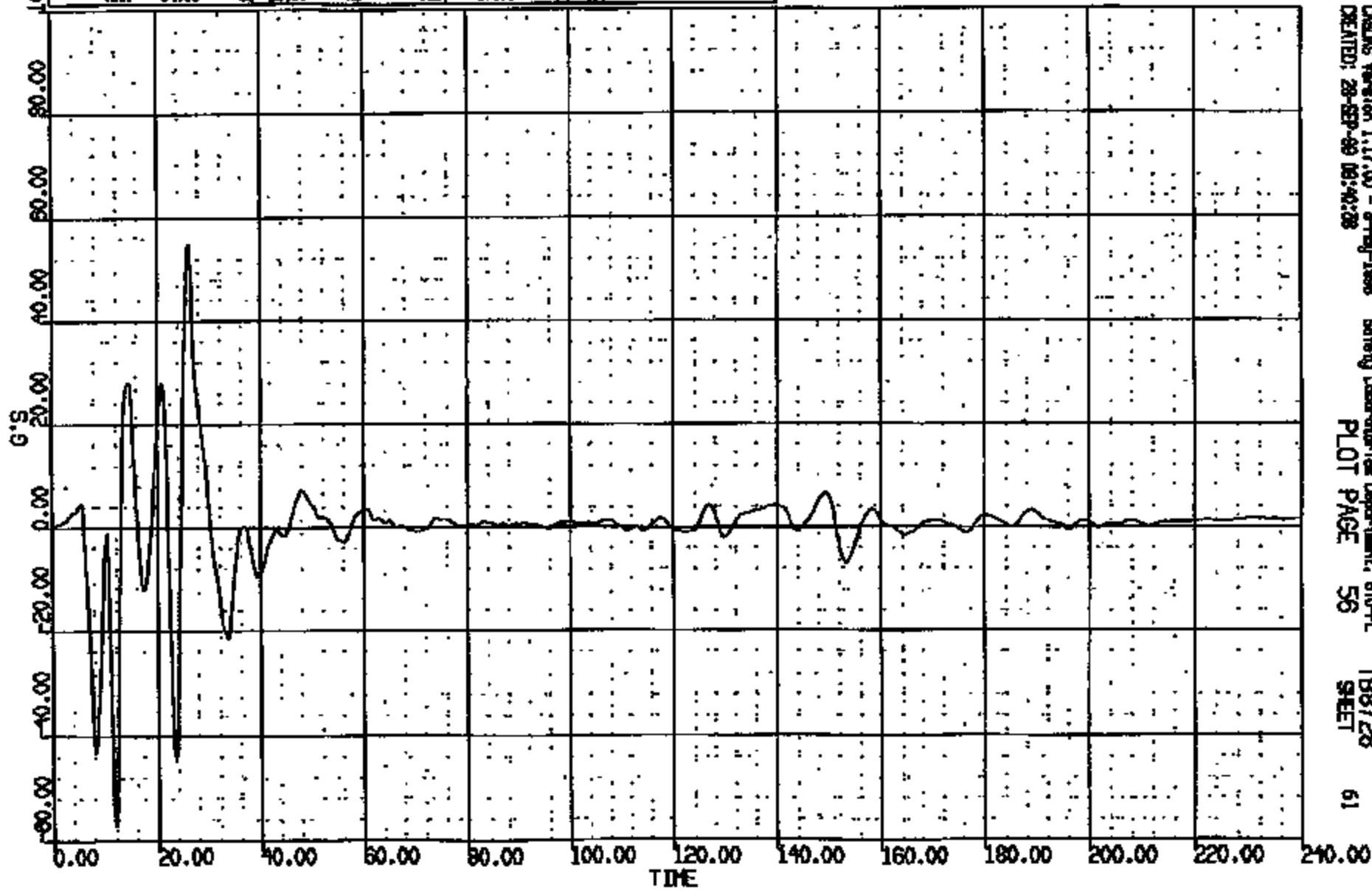


CRSIS Version 1.17.00 - 8-May-1998 Safety Laboratories Department, STD-PL  
CREATED: 28-SEP-99 09:40:28 PLOT PAGE 55 T88728 SHEET 60

CRIS 0011611

CR #: 11811 TC: TB8728 DATE: 090928 08:53:53  
E000 D-108

(32) CR11611T CARD IS LAT GOC  
MAX = 51.89 at 26.00 IS MIN = -57.71 at 11.76 IS AXIS 1

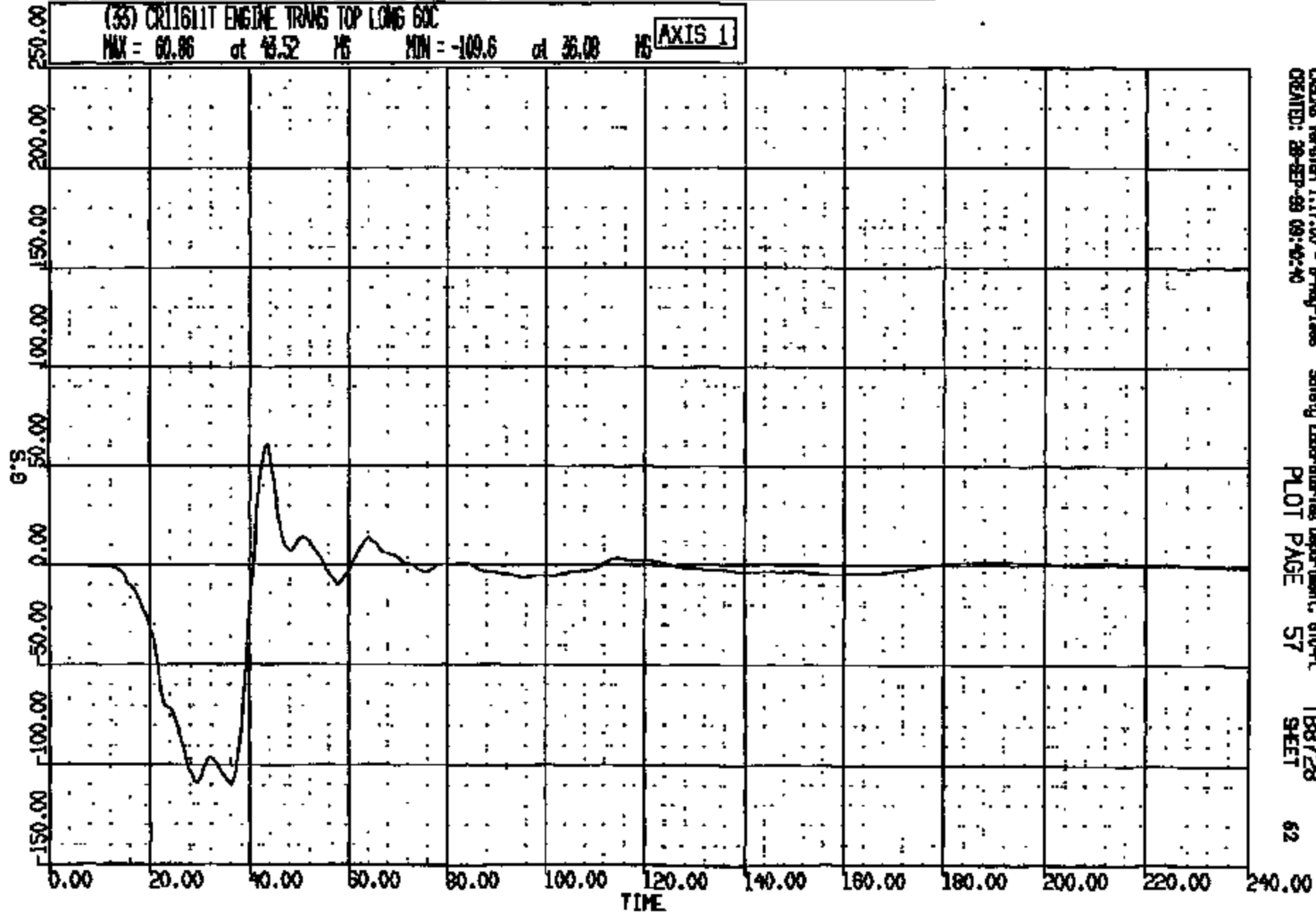


CRSNG Version 1.17.00 - 8-May-1998 Safety Laboratories Department, 610-PL TB8728  
CREATED: 28-SEP-99 08:40:28 PLOT PAGE 56 SHEET 61

CRTS 0011611

OR R: 11811 TO: TB8728 DATE: 880928 09:53:53  
8000 D-180

(33) CR11611T ENGINE TRANS TOP LONG GDC  
MAX = 60.86 at 43.52 PG MIN = -109.6 at 36.00 PG **AXIS 1**

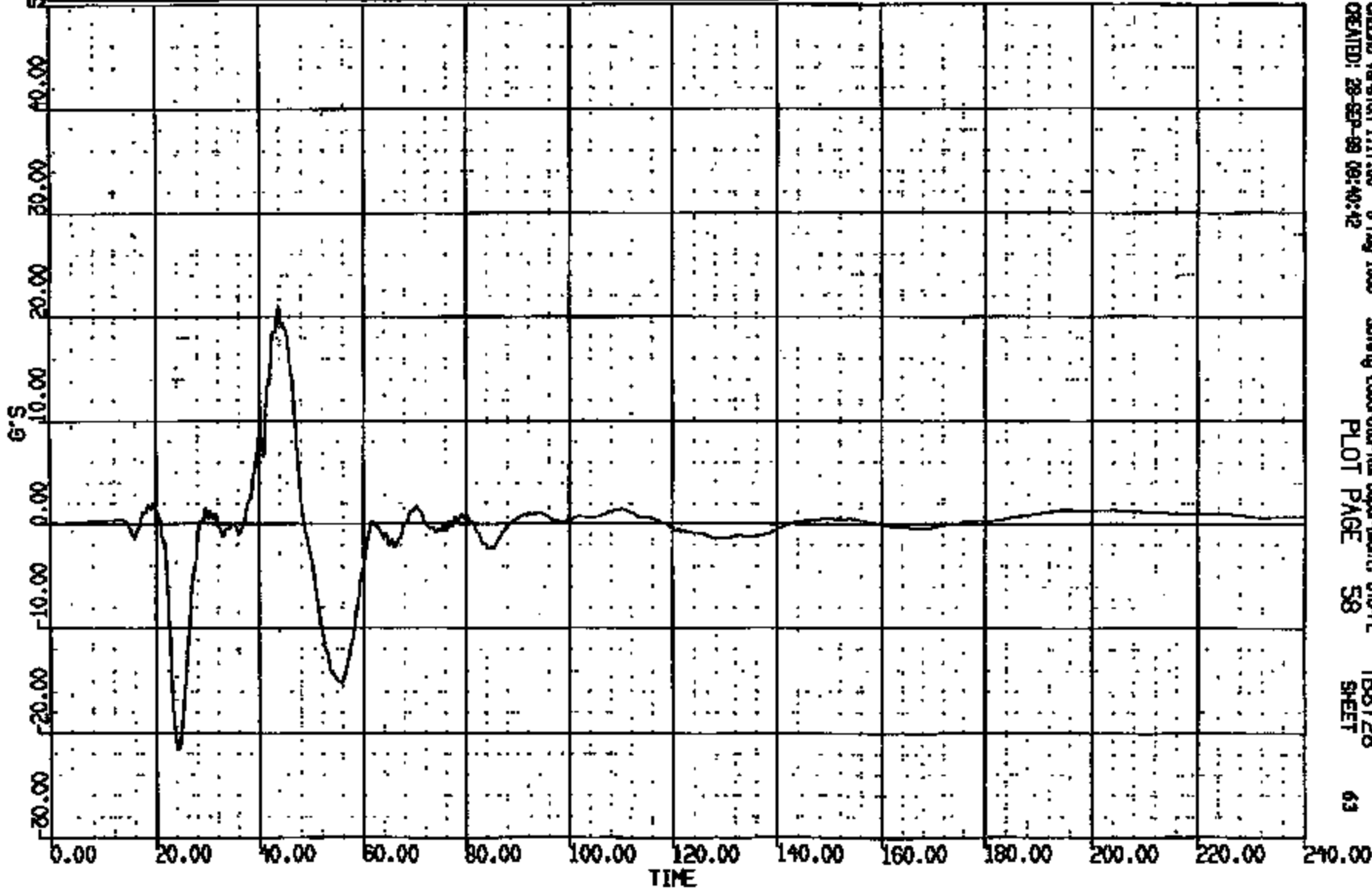


CRS Version 1.17.00 - 8-May-1988 Safety Laboratories Department, BNO-PL  
CREATED: 28-SEP-88 09:40:40 PLOT PAGE 57 TB8728 SHEET 62

CRTS 0011611

CR R: 11611 TO: TB8728 DATE: 990928 08:55:55  
2000 D-188

(34) CR11611T ENGINE TRANS TOP VERT 60C  
MAX = 20.96 at 43.75 MS MIN = -21.65 at 21.40 MS **AXIS 1**



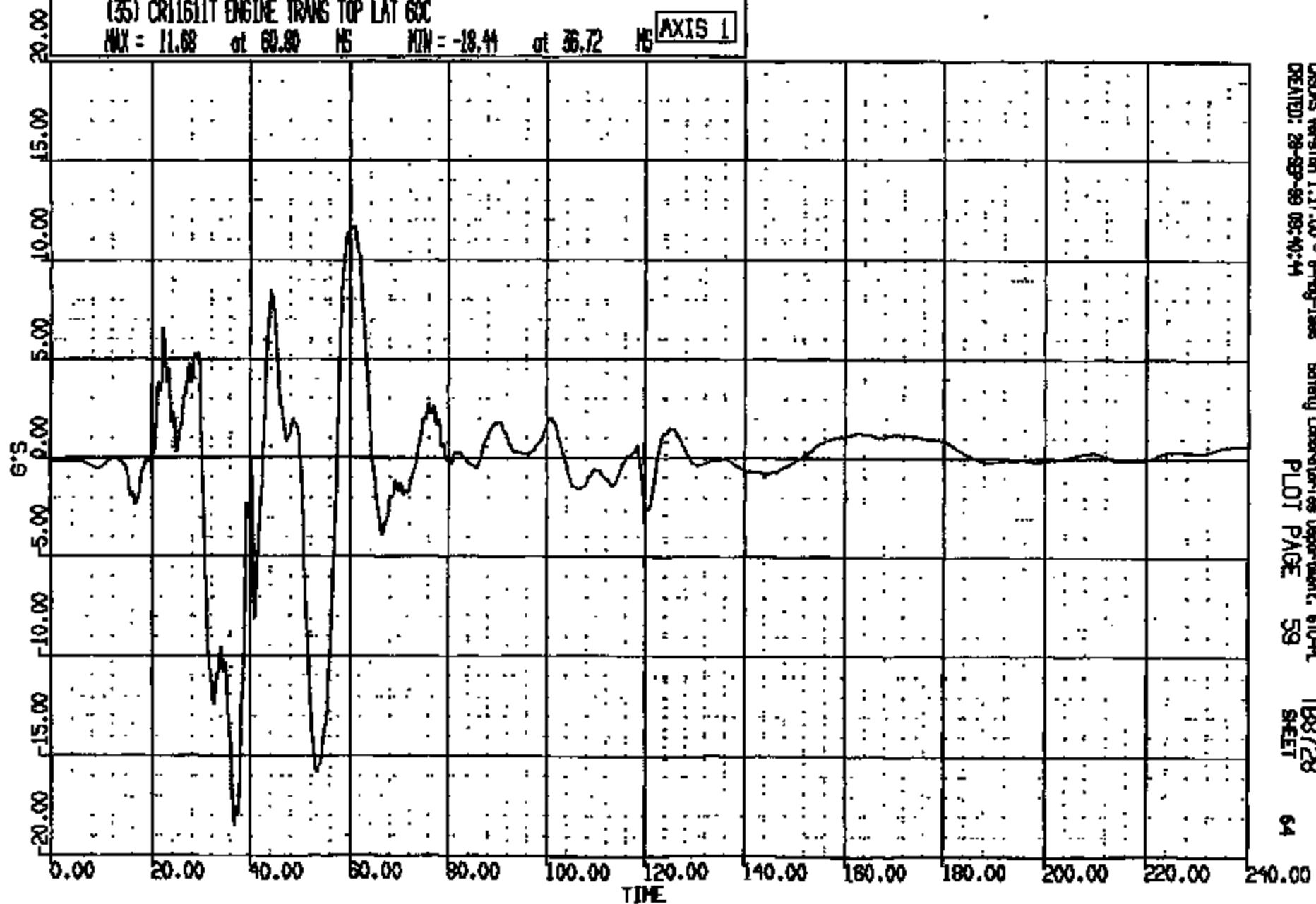
CRS Version 1.17.00 - 8-May-1999 Safety Laboratories Department, 610-PL TB8728  
CREATED: 28-SEP-99 09:40:42 PLOT PAGE 58 SHEET 63

CRIS 0011611



CR R: 11811 TO: TB8728 DATE: 990928 08:53:53  
2000 D-188

(35) CR11611T ENGINE TRANS TOP LAT 60C  
MAX = 11.68 at 60.80 MS MIN = -18.44 at 36.72 MS AXIS 1

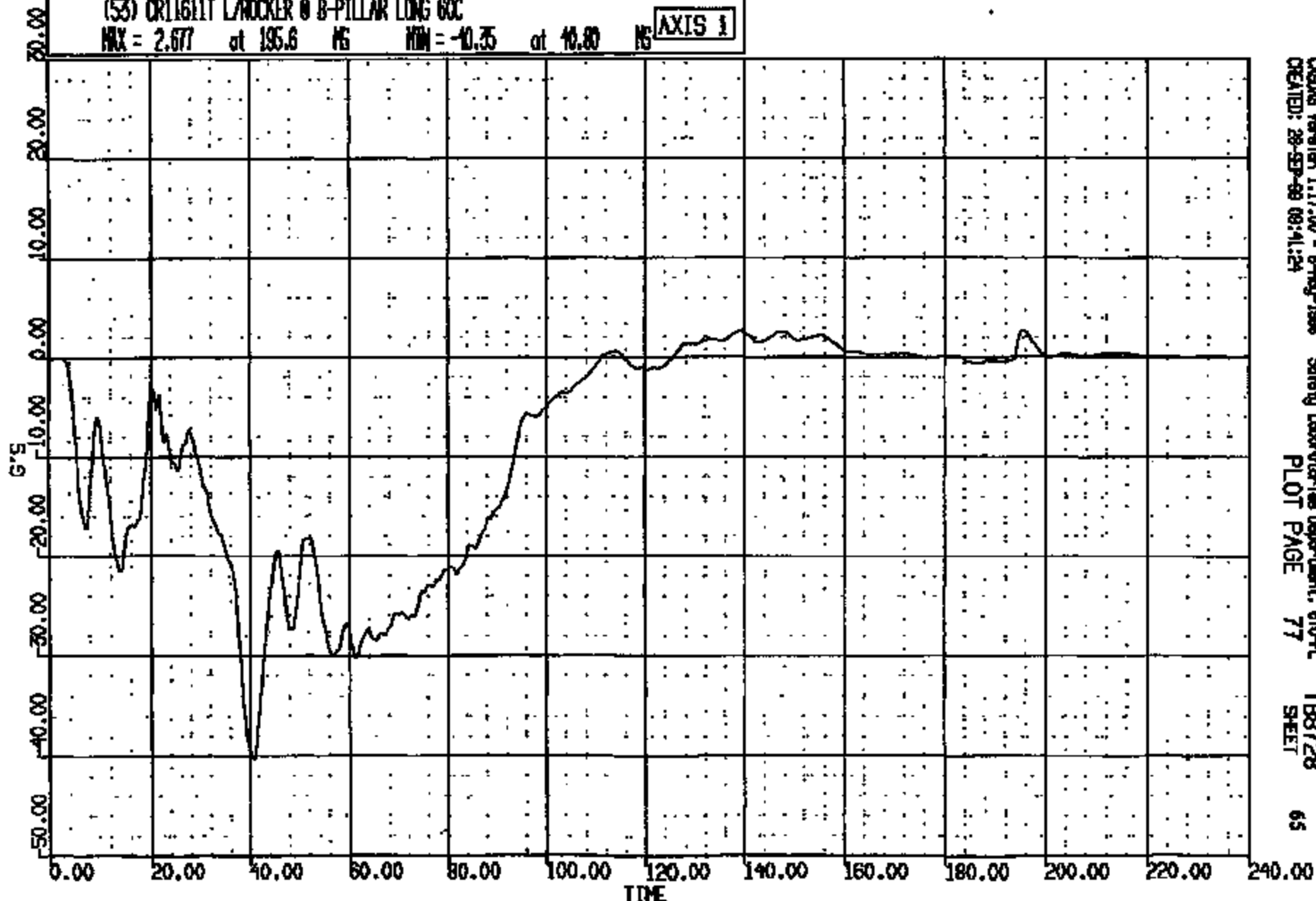


CASYS Version 1.17.00 - 8-May-1998 Safety Laboratories Department, 610-PL TB8728  
CREATED: 28-SEP-99 08:40:44 PLOT PAGE 59 SHEET 64

CRTS 0011611

CR R: 11811 TO: TB8728 DATE: 000028 08:58:53  
2000 D-168

(53) CR11611 L/ROCKER @ B-PILLAR LONG 60C  
MAX = 2.677 at 195.6 MS MIN = -10.35 at 40.80 MS **AXIS 1**



CADDS Version 1.17.00 - 8-Aug-1998 Safety Laboratories Department, 610-A  
CREATED: 28-SEP-99 08:41:24 PLOT PAGE 77 TB8728 SHEET 65

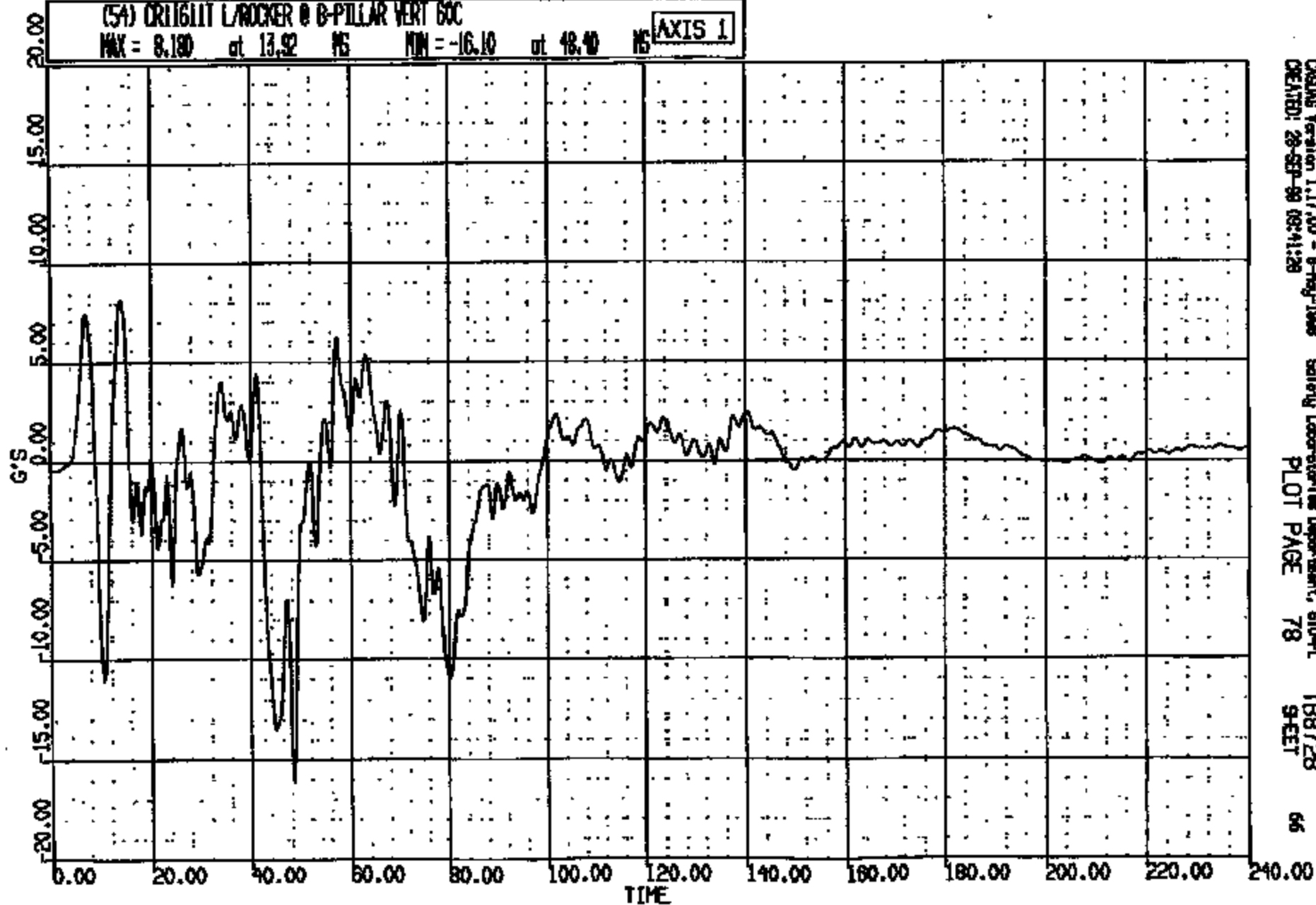
CRTS 0011611

CR R: 11811 TO: TB8728 DATE: 990928 08:58:55  
2000 D-188

(54) CRITLIGHT L/ROCKER @ B-PILLAR VERT 60C

MAX = 8.190 at 13.92 MS MIN = -16.10 at 48.40 MS

AXIS 1



CRONUS Version 1.17.00 - 8-May-1998 Safety Laboratory Department, SLD-PL  
CREATED: 28-SEP-99 08:41:28 PLOT PAGE 78 TB8728 66  
SHEET

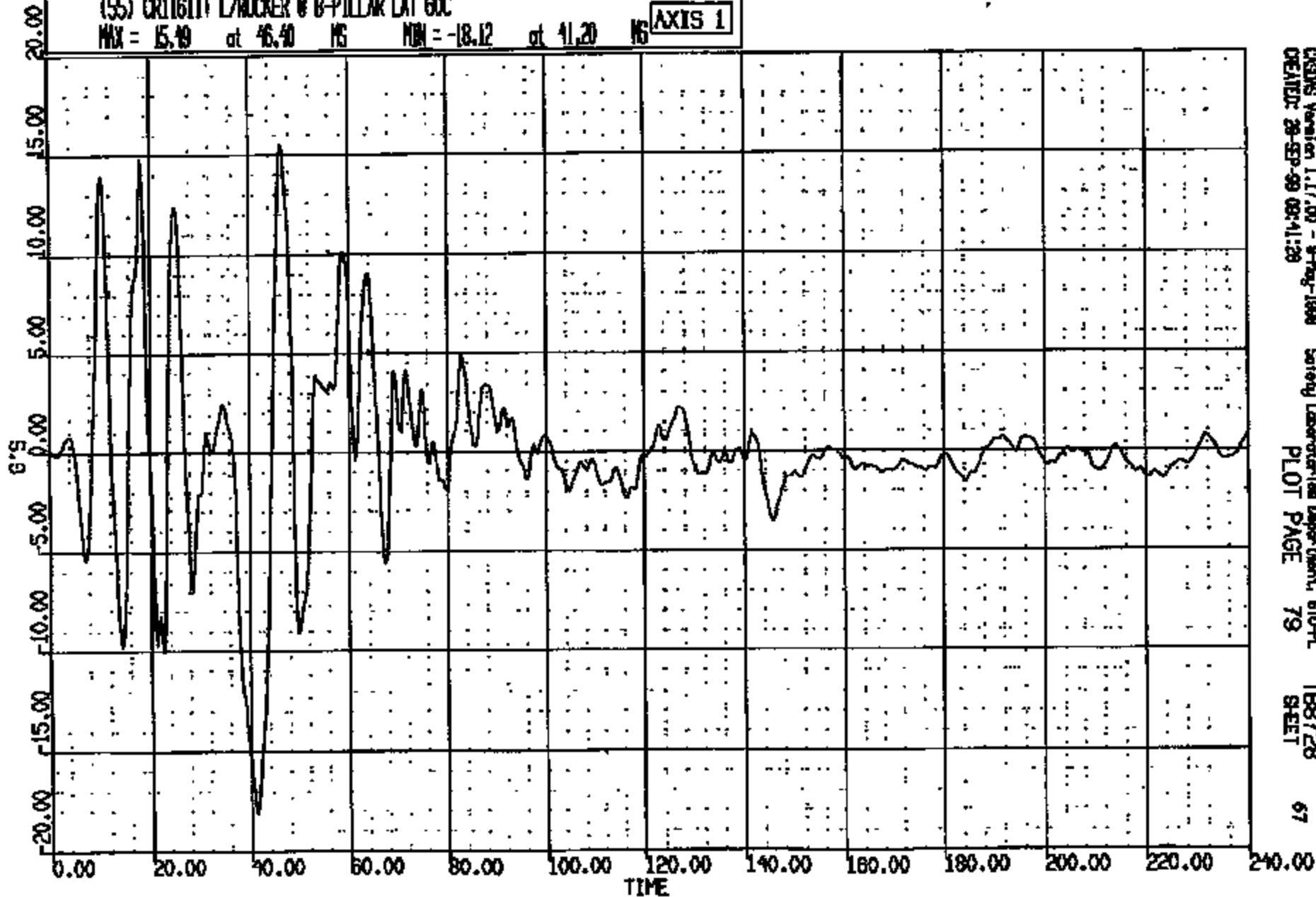
CRTS 0011611

CR #: 11811 TO: T88728 DATE: 990928 08:53:53  
2000 D-188

(35) CR11611T L/ROCKER @ B-PILLAR LAT 60C

MAX = 15.19 at 46.40 MS MIN = -18.12 at 41.20 MS

AXIS 1



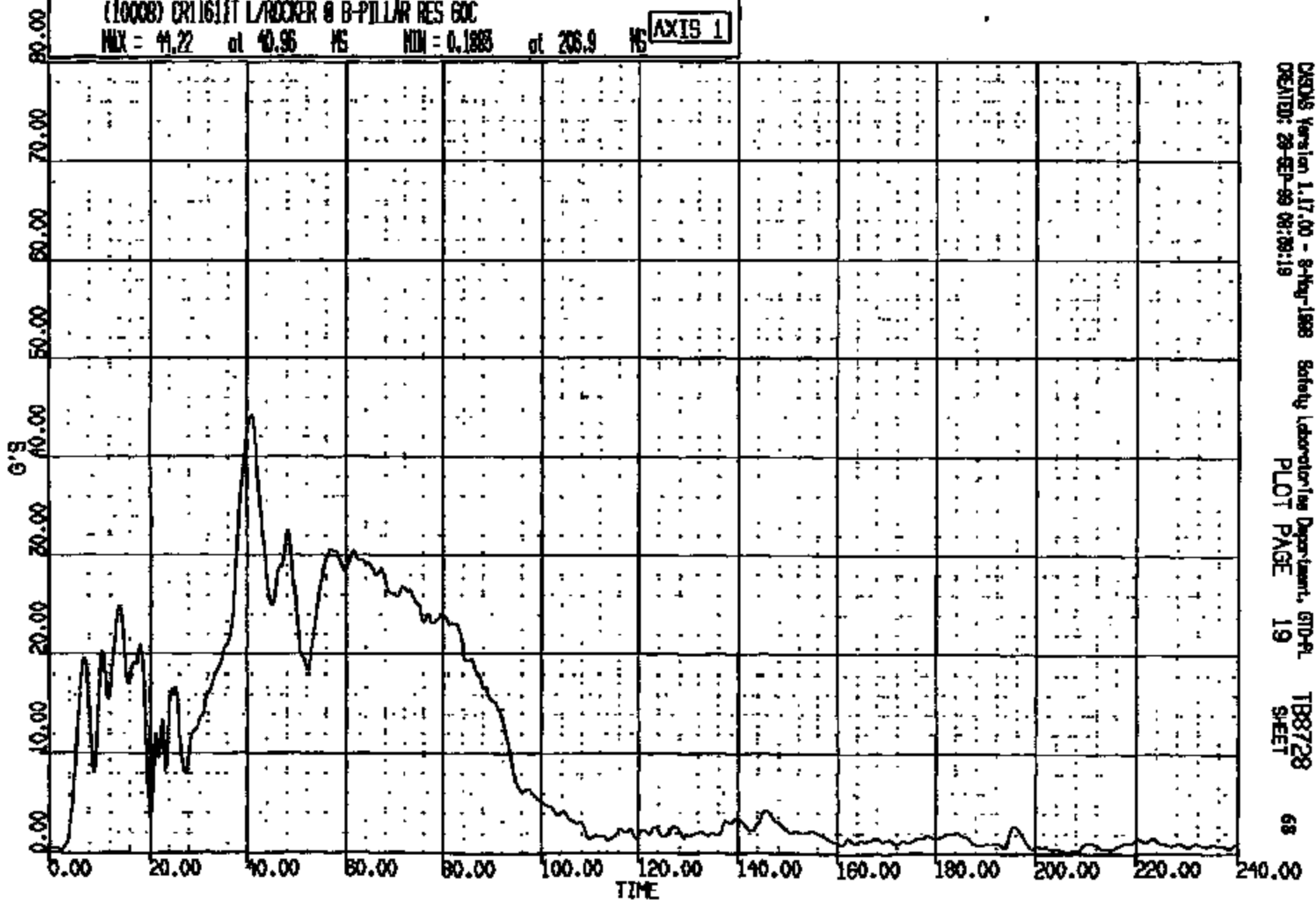
CADDS Version 1.17.00 - 9-May-1998 Safety Laboratory Department, 610-P  
CREATED: 28-SEP-99 08:41:28 PLOT PAGE 79 T88728 SHEET 67

CRTS 0011611

CR R: 11611 TO: TB8728 DATE: 890929 09:58:58  
2000 D-188

(10008) CR1611T L/ROCKER @ B-PILLAR RES 60C

MAX = 41.22 at 40.96 MS MIN = 0.1885 at 206.9 MS **AXIS 1**

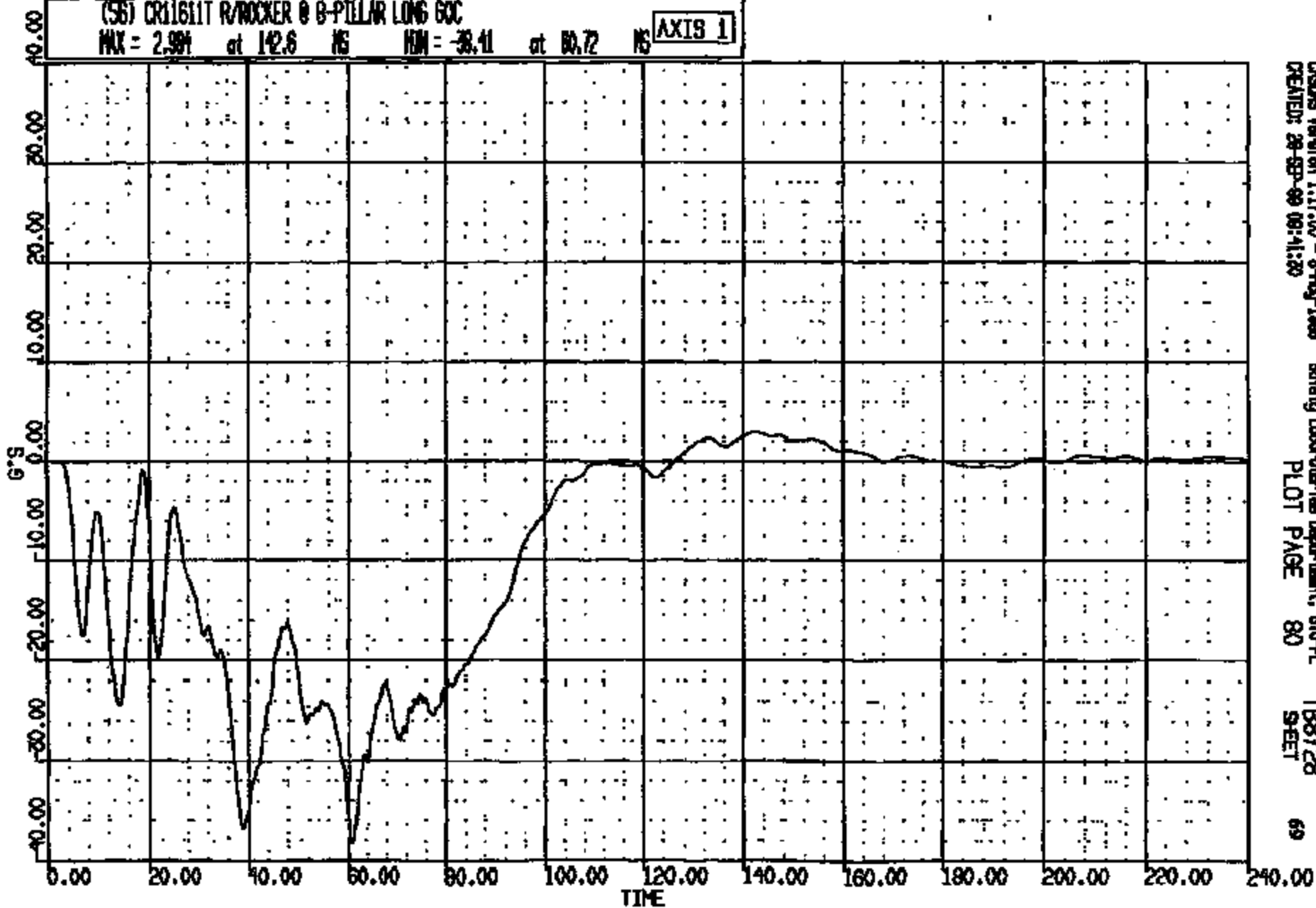


CRS Version 1.17.00 - 8-May-1988 Safety Laboratory Department, GFD-PL TB8728 68  
CREATOR: 28-SEP-89 08:30:19 PLOT PAGE 19 SHEET

CRIS 0011611

CR R: 11611 TO: T88728 DATE: 990928 08:55:55  
2000 0-190

(56) CR1611T R/ROCKER @ B-PILLAR LONG GOC  
MAX = 2.991 at 142.6 MS MIN = -38.41 at 80.72 MS **AXIS 1**

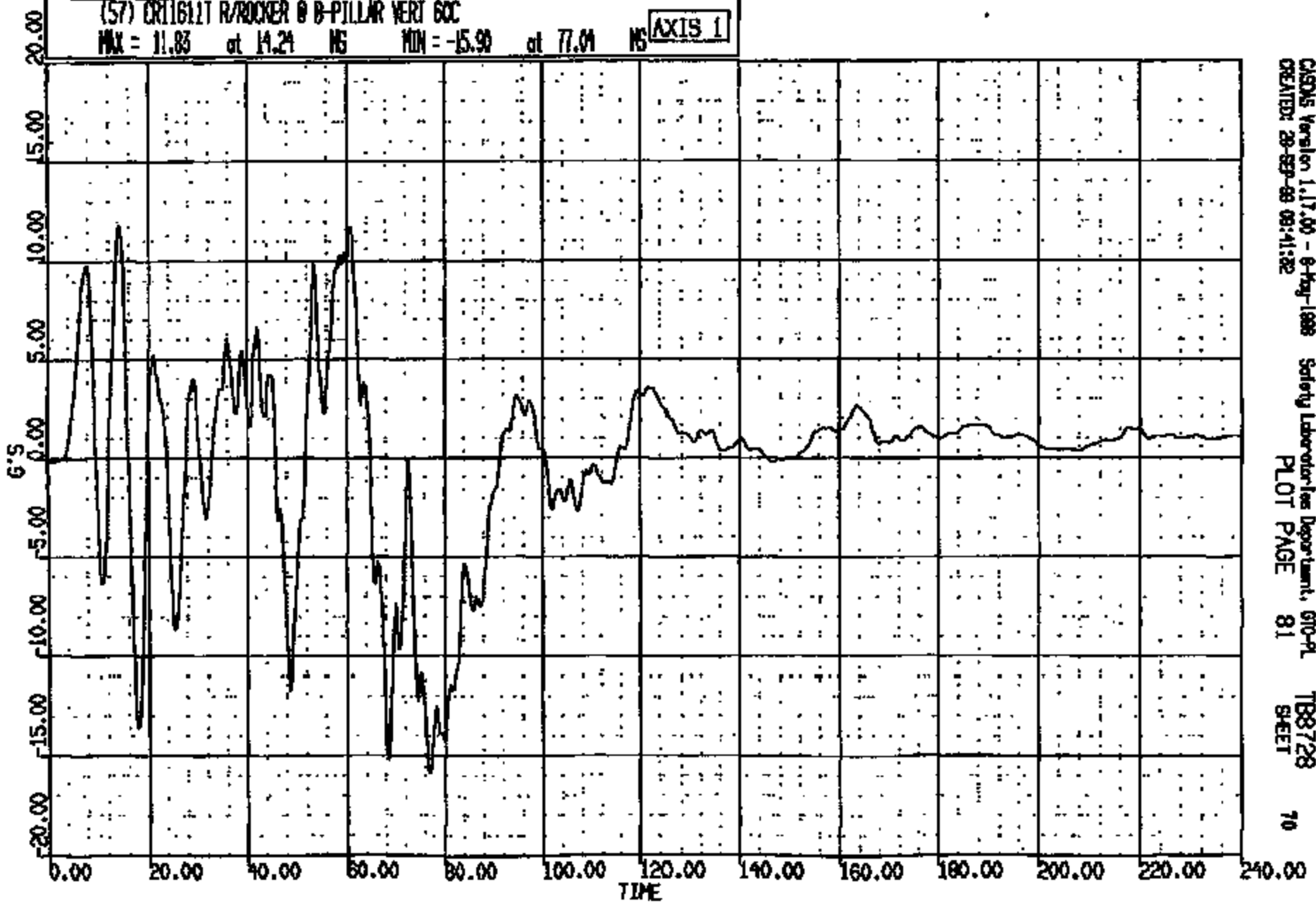


CHDS Version 1.17.00 - 8-May-1999 Safety Laboratories Department, SIO-PL  
CREATED: 28-SEP-99 09:41:20 PLOT PAGE 80 SHEET 69

CRTS 0011611

CR R: 11611 TO: TB8728 DATE: 990928 08:38:55  
2000 D-188

(57) CR11611T R/ROCKER @ B-PILLAR VERT 60C  
MAX = 11.83 at 14.24 NS MIN = -15.90 at 77.04 NS **AXIS 1**

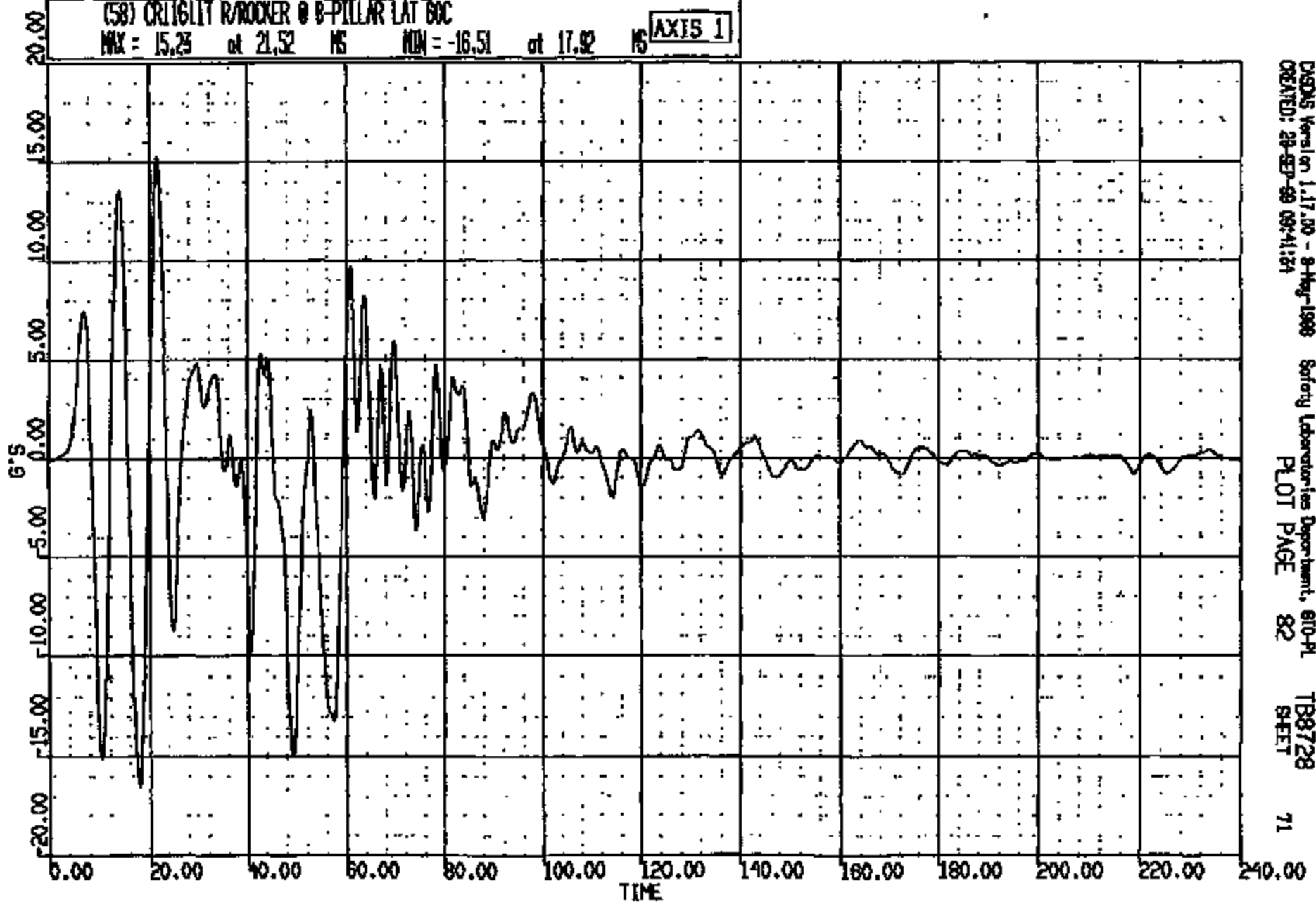


CASDS Version 1.17.00 - 8-May-1988 Safety Laboratories Department, 610-PL  
CREATED: 28-SEP-88 08:41:32 PLOT PAGE 81 TB8728 70  
SHEET

CRIS 0011611

CR R: 11811 TO: TB8728 DATE: 890928 08:55:53  
2000 D-198

(58) CRITICAL W/ROCKER @ B-PILLAR LAT 60C  
MAX = 15.25 at 21.52 MS MIN = -16.51 at 17.92 MS **AXIS 1**



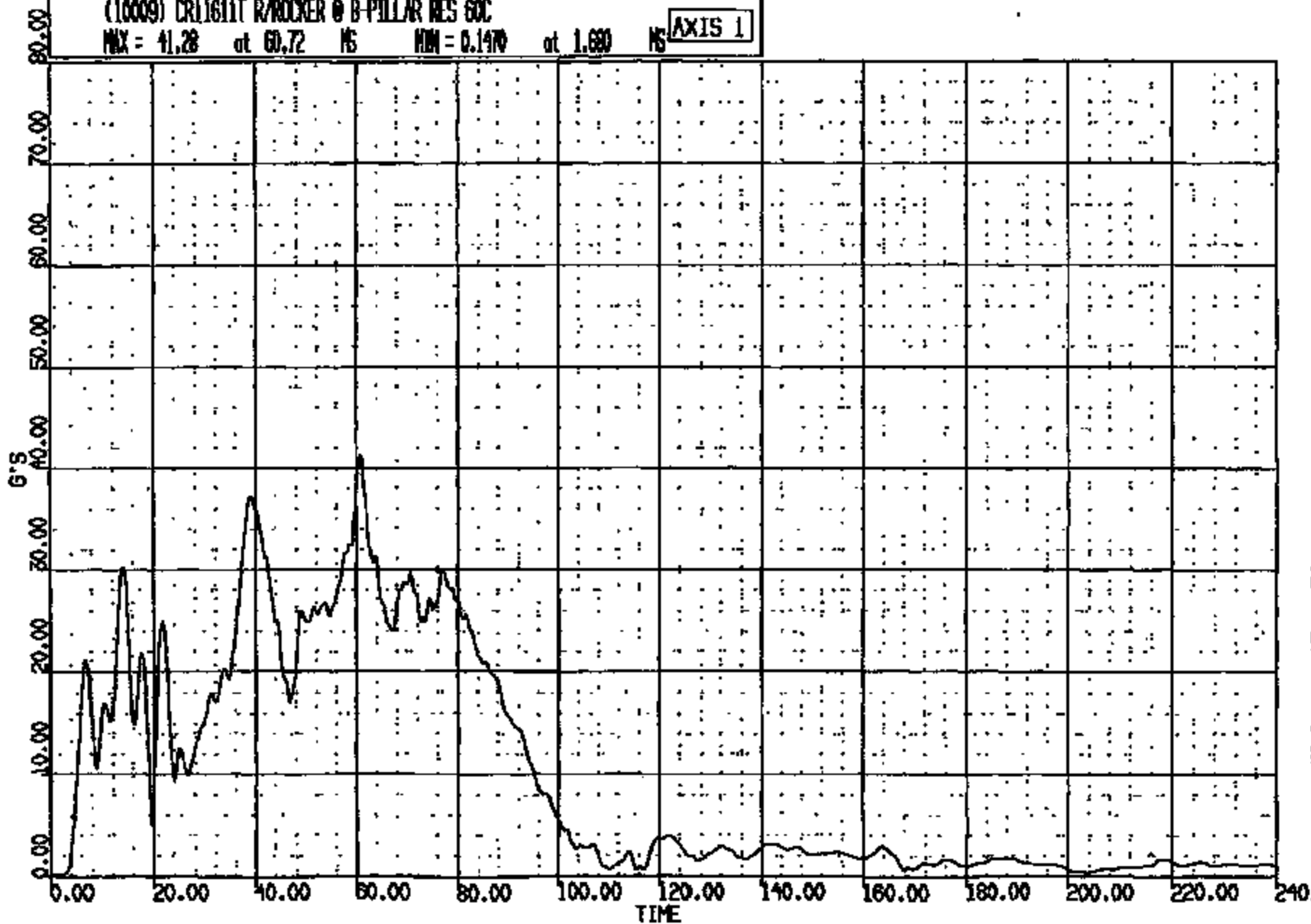
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CREATED: 28-SEP-89 08:41:54 PLOT PAGE 82 SHEET 71

CRIS 0011611



CR N: 11611 TO: TB8728 DATE: 990928 08:55:55  
2000 D-188

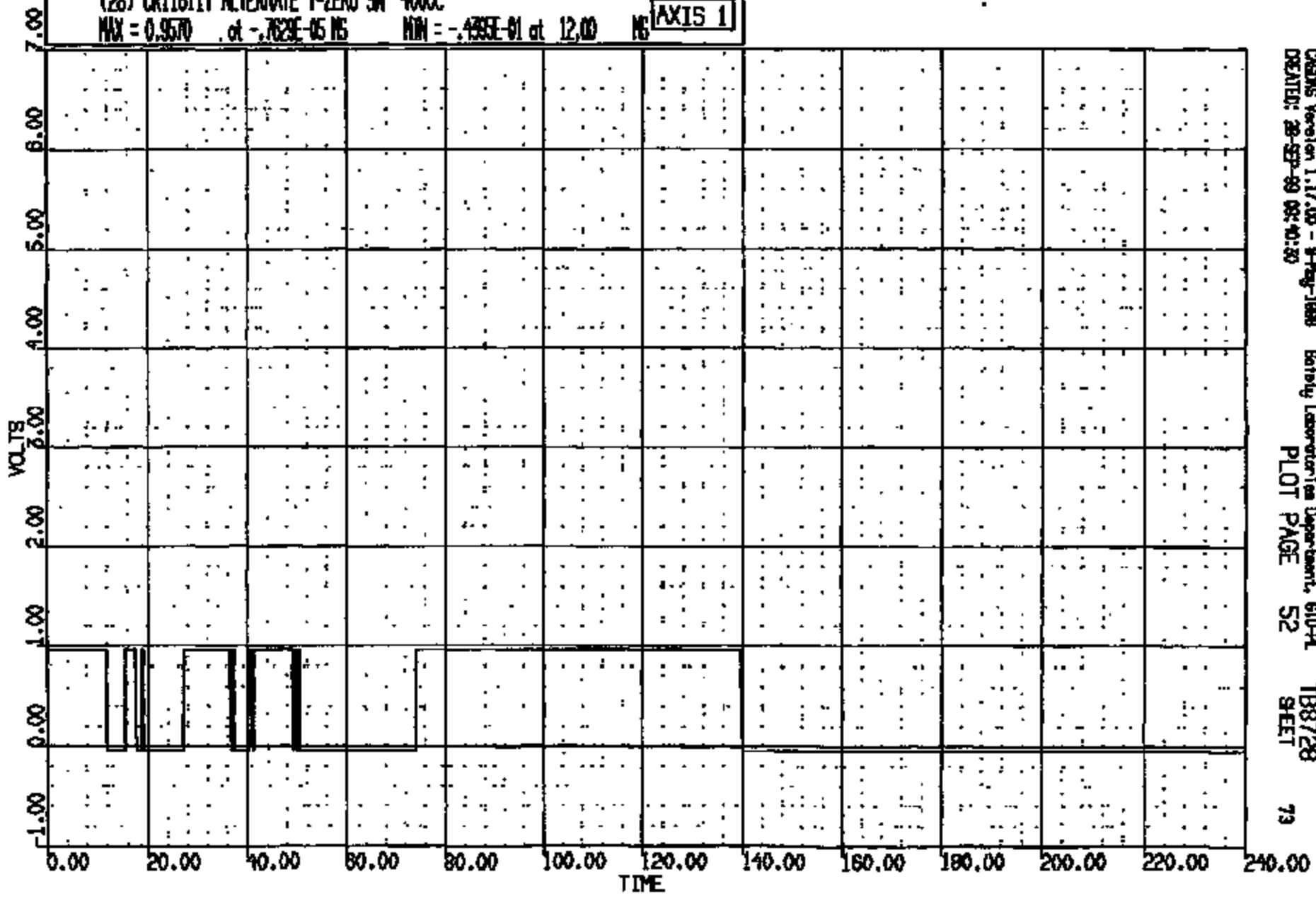
(10009) CR1611T R/ROCKER @ B-PILLAR RES 60C  
MAX = 41.28 at 60.72 MS MIN = 0.1470 at 1.680 MS **AXIS 1**



CRSING Version 1.17.00 - 9-May-1999 Safety Laboratories Department, 610-FL TB8728  
CREATED: 28-SEP-99 08:55:20 PLOT PAGE 20 SHEET 72

CR N: 11611 TO: TB8728 DATE: 990828 08:53:55  
2000 D-188

(28) CR11611T ALTERNATE T-ZERO SM 4000C  
MAX = 0.9570 at -.762E-05 NS MIN = -.433E-01 at 12.00 NS **AXIS 1**



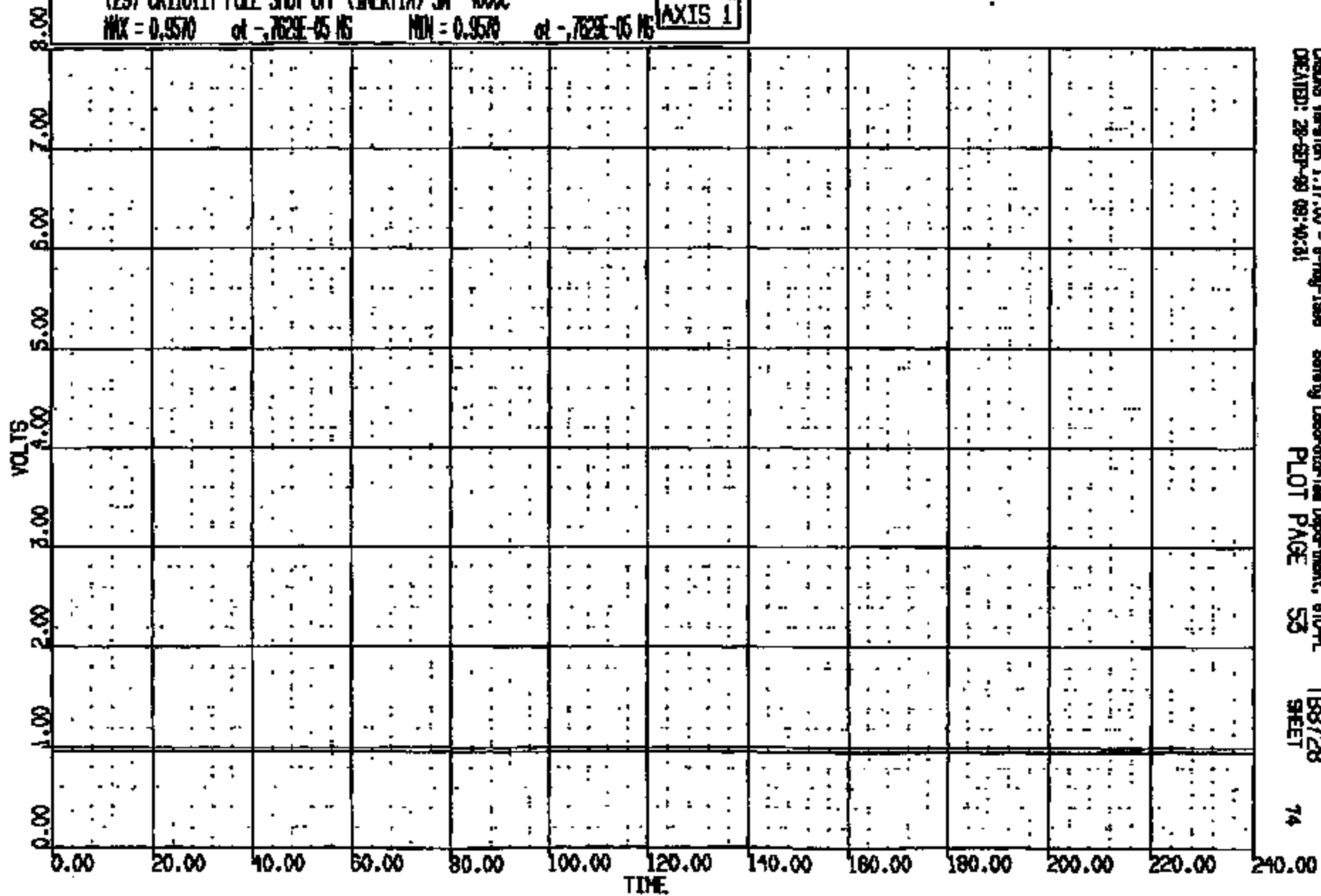
CRIMS Version 1.17.00 - 8-May-1998 Safety Laboratory Department, 610-PL TB8728  
DATE: 28-SEP-99 08:40:20 PLOT PAGE 52 SHEET 73

CRIS 0011611

CR R: 11811 TO: T88728 DATE: 80028 08:53:53  
2000 D-188

(29) CR11611 FUEL SHUT OFF (INERTIA) SA 4000  
MAX = 0.9570 at -.7629E-05 MS MIN = 0.9570 at -.7629E-05 MS

AXIS 1



CARDIS Version 1.17.00 - 8-May-1988 Safety Laboratory Department, 610-PL T88728  
CREATED: 28-SEP-88 09:40:31 PLOT PAGE 53 SHEET 74

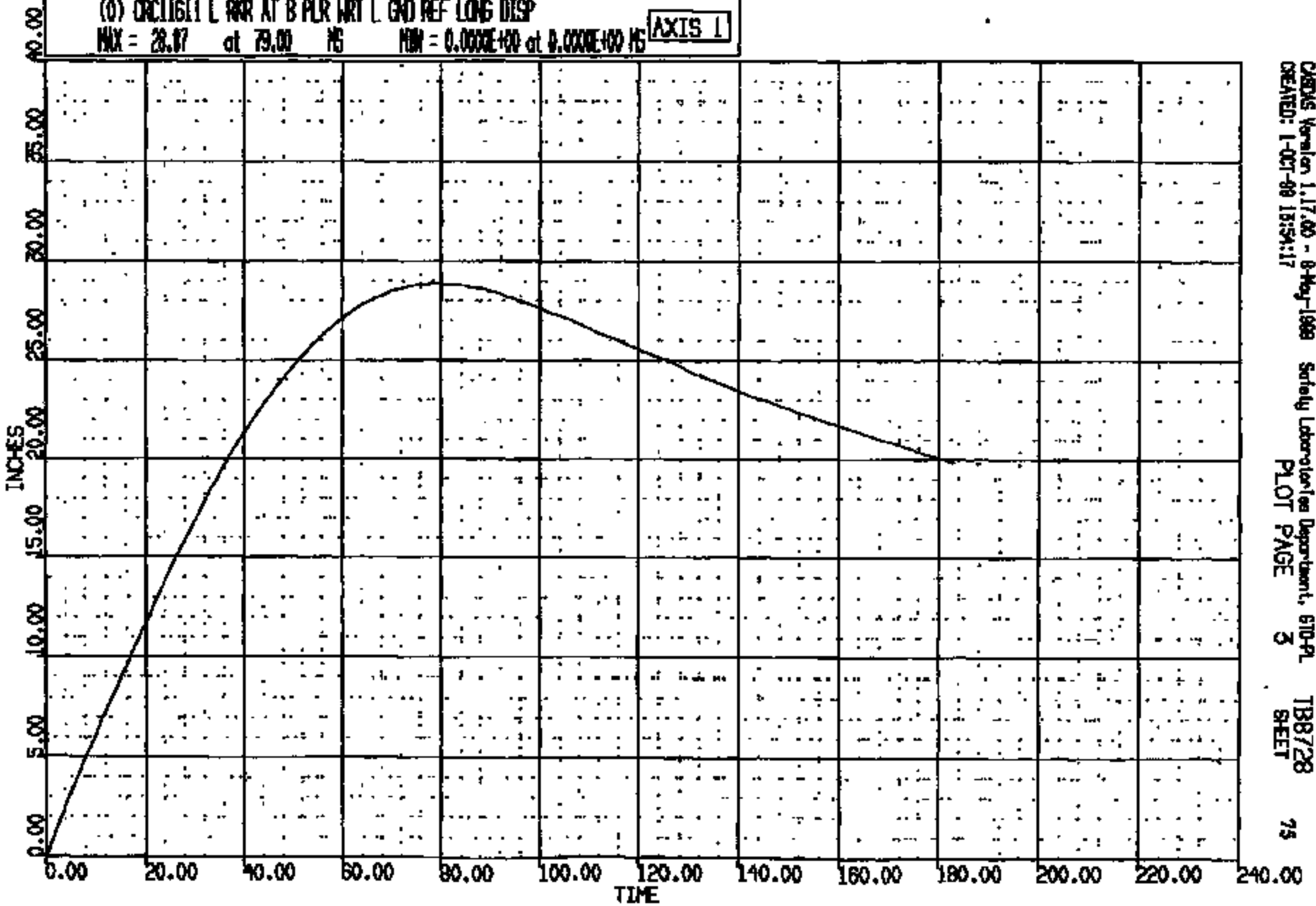
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CR R: 11611 TO: TB8728 DATE: 200826 08:32:55  
2000 0-100

(0) CR11611 L RWR AT B PLR WRT L GND REF LONG DISP

MAX = 28.07 at 79.00 MS MIN = 0.000E+00 at 0.000E+00 MS

AXIS 1



CR11611 Version 1.17.00 - 8-May-1989  
CREATED: 1-OCT-98 15:54:17

Safety Laboratories Department, STD-PL  
PLOT PAGE 3

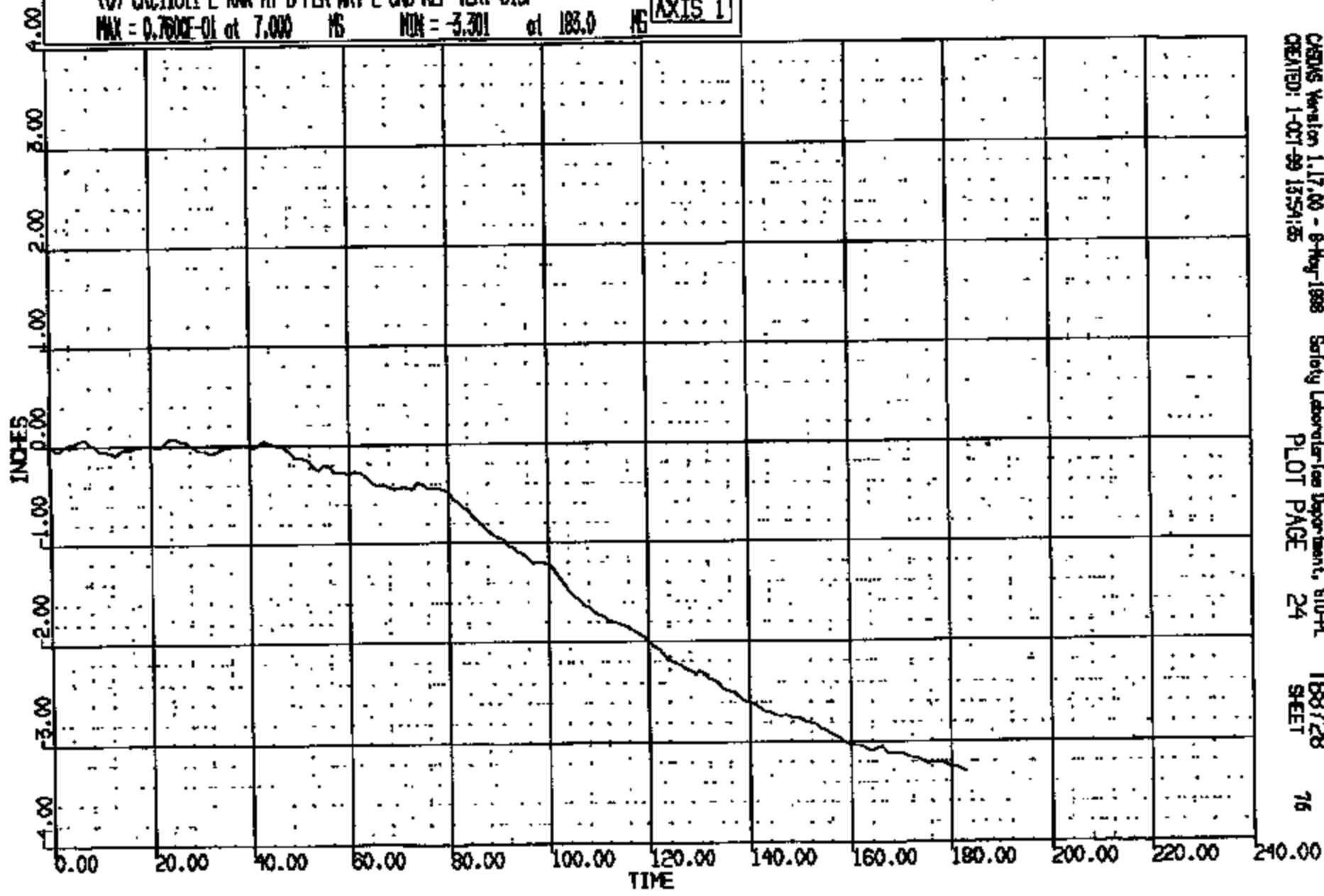
TB8728  
SHEET

75

CR11611

DR R: 11011 TO: T88728 DATE: 880928 08:55:53  
2000 0-188

(0) CXC11611 L ROR AT B PLR WRT L GND REF VERT DISP  
MAX = 0.7600E-01 at 7.000 MS MIN = -3.301 at 183.0 MS **AXIS 1**

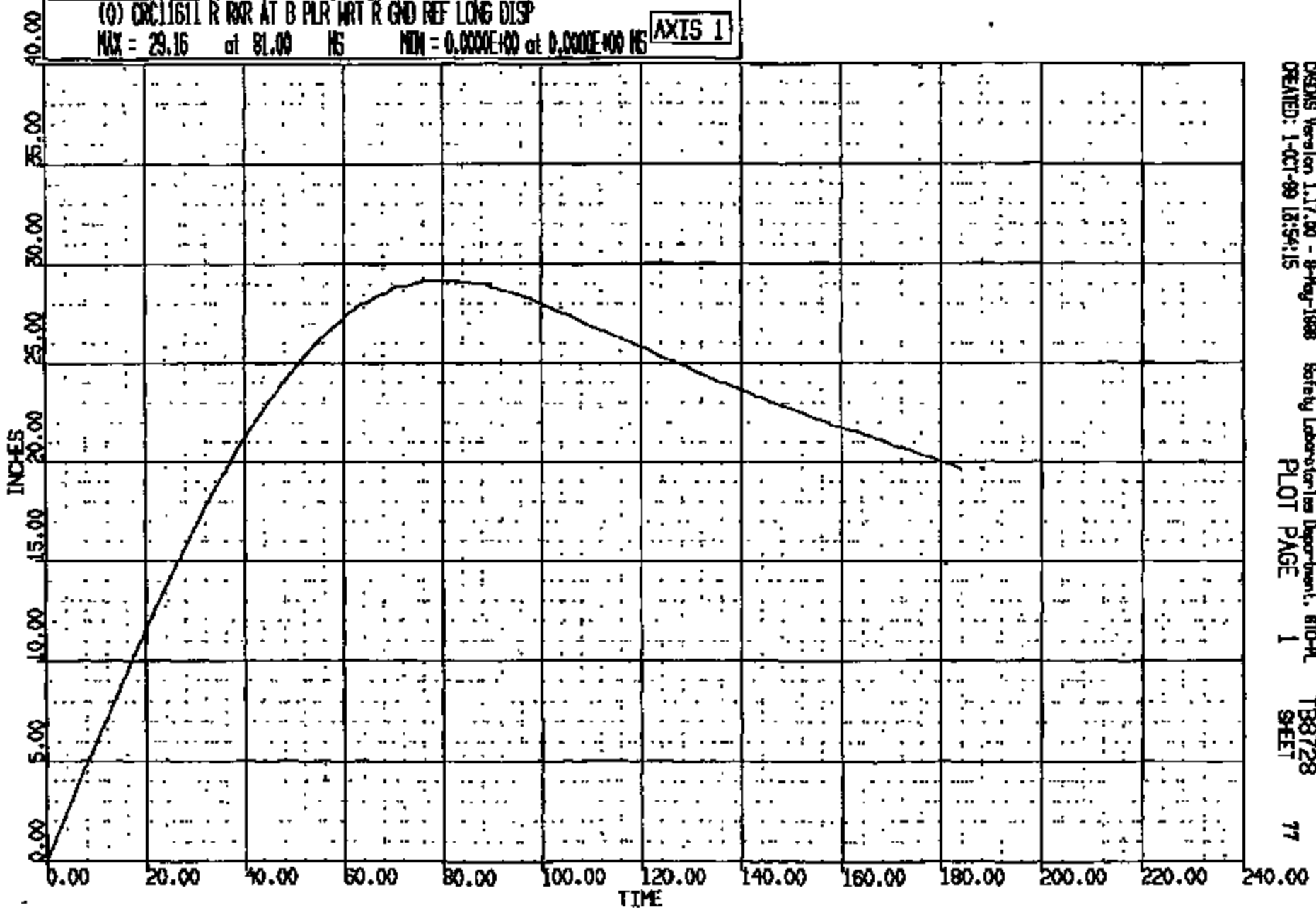


CADDS Version 1.17.00 - 8-May-1988 Safety Laboratories Department, 610-PL T88728  
CREATED: 1-OCT-88 13:54:25 PLOT PAGE 24 SHEET 76

CRTS 0011611

CIR R: 11611 TO: TB8728 DATE: 880828 08:53:53  
NOOO D-108

(0) CXC11611 R ROR AT B PLR WRT R GND REF LONG DISP  
MAX = 29.16 at 81.00 NS MIN = 0.000E+00 at 0.000E+00 NS **AXIS 1**



ORION Version 1.17.00 - 8-Aug-1988 Safety Laboratories Department, 610-PL TB8728 77  
CREATED: 1-OCT-89 18:54:15 PLOT PAGE 1 SHEET

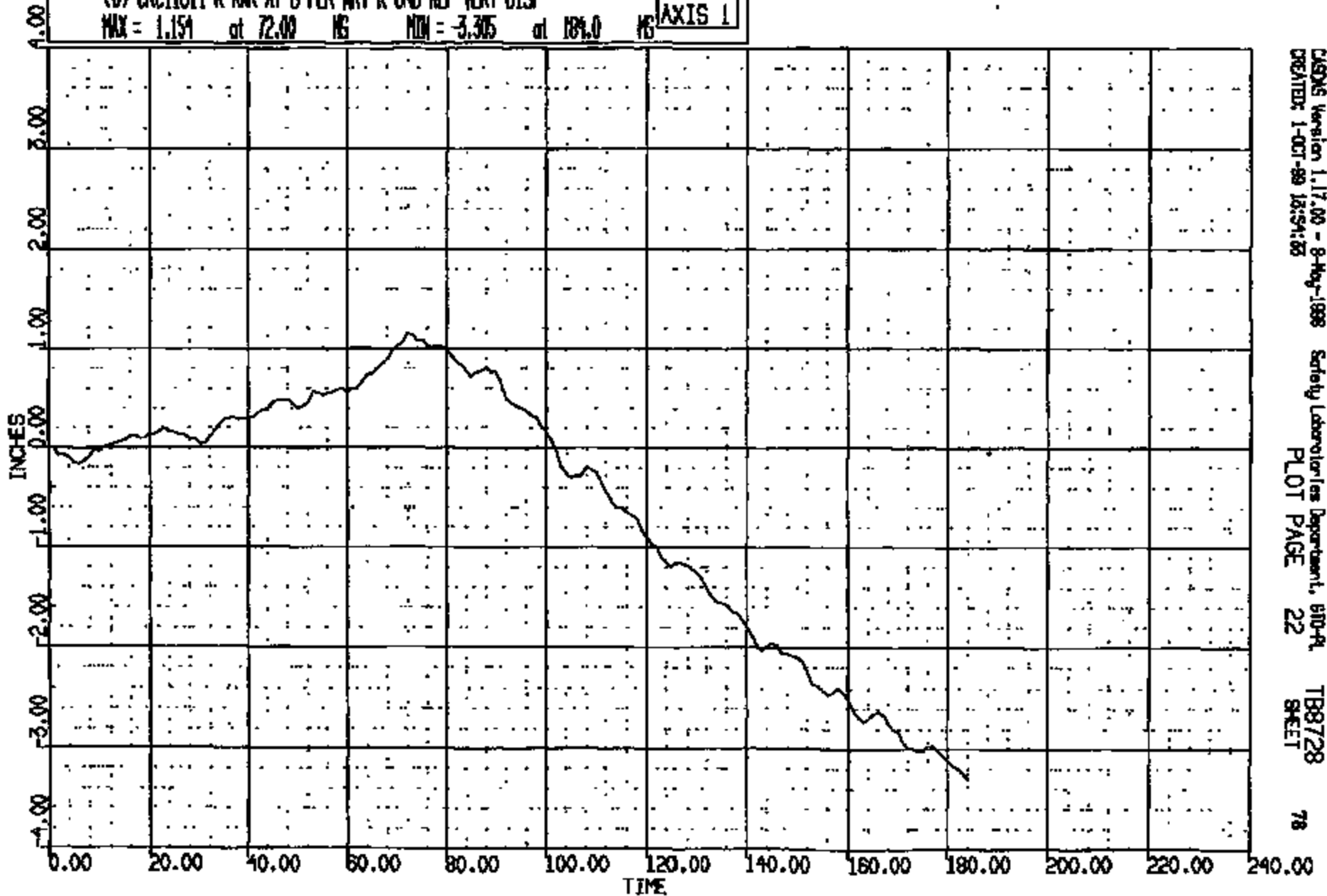
CRTS 0011611

CR N: 11811 TO: TB8728 DATE: 080828 09:58:53  
2000 D-189

(0) CR011611 R RRR AT B PLR WRT R GND REF VERT DISP

MAX = 1.154 at 72.00 HG MIN = -3.305 at 184.0 HG

AXIS 1



CRS05 Version 1.17.00 - 8-Aug-1998  
CREATED: 1-OCT-99 18:54:53

Safety Laboratories Department, 610-PA  
PLOT PAGE 22

TB8728  
SHEET

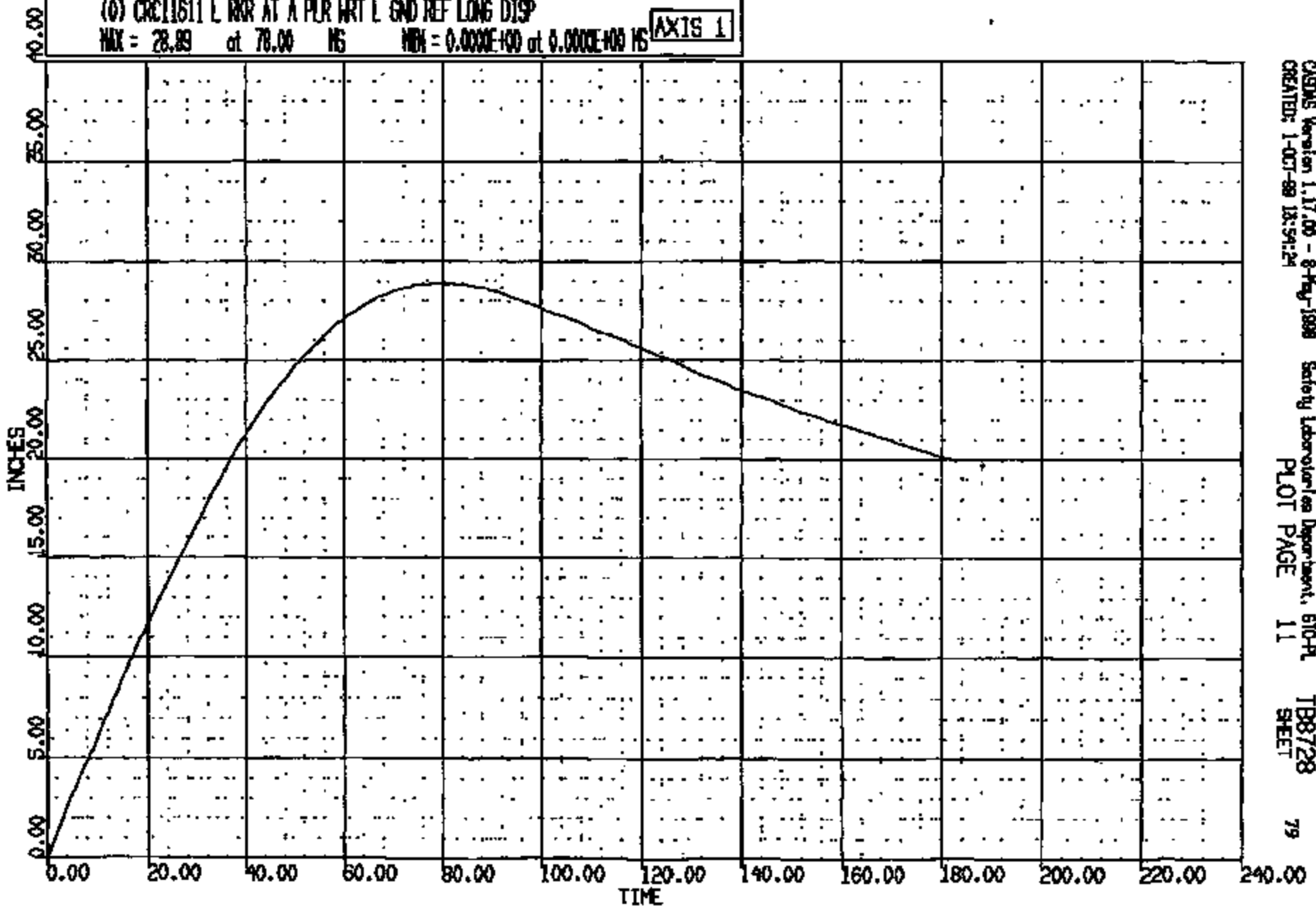
78

CRIS 0011611

DR R: 11811 TO: T88728 DATE: 880928 08:53:53  
2000 D-188

(0) CR011611 L ROR AT A PER WRT L GND REF LONG DISP  
MAX = 28.89 at 78.00 MS MIN = 0.000E+00 at 0.000E+00 MS

AXIS 1



CADDS Version 1.17.00 - 8-May-1988  
CREATED: 1-OCT-88 13:54:24

Safety Laboratory Department, 610-PL  
PLOT PAGE 11

T88728  
SHEET

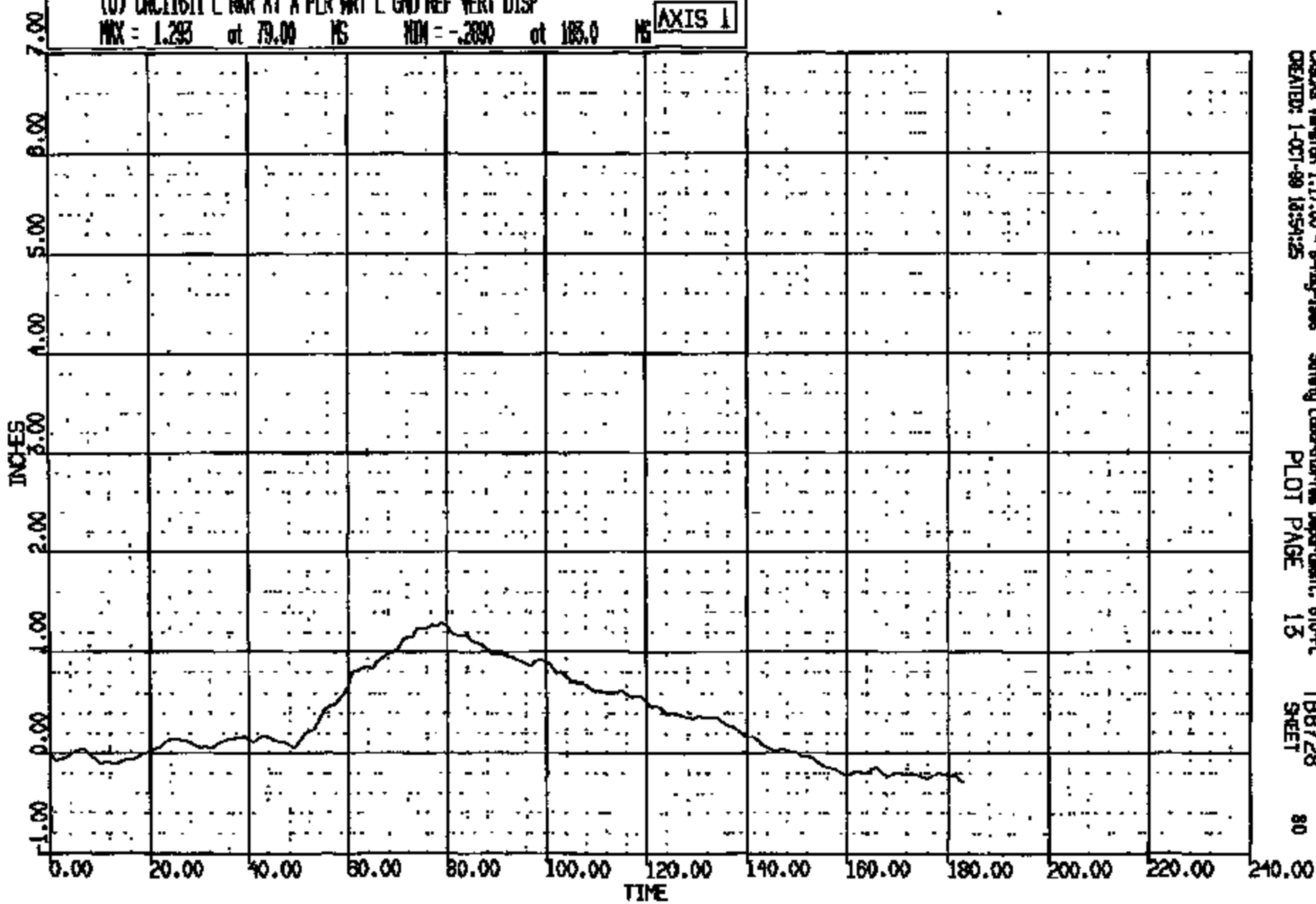
79

CRTS 0011611



CR R: 11611 TO: T98728 DATE: 800928 08:53:53  
2000 D-188

(0) CRCL1611 L ROR AT A PLR WRT L GND REF VERT DISP  
MAX = 1.293 at 79.00 MS MIN = -.2890 at 185.0 MS **AXIS 1**

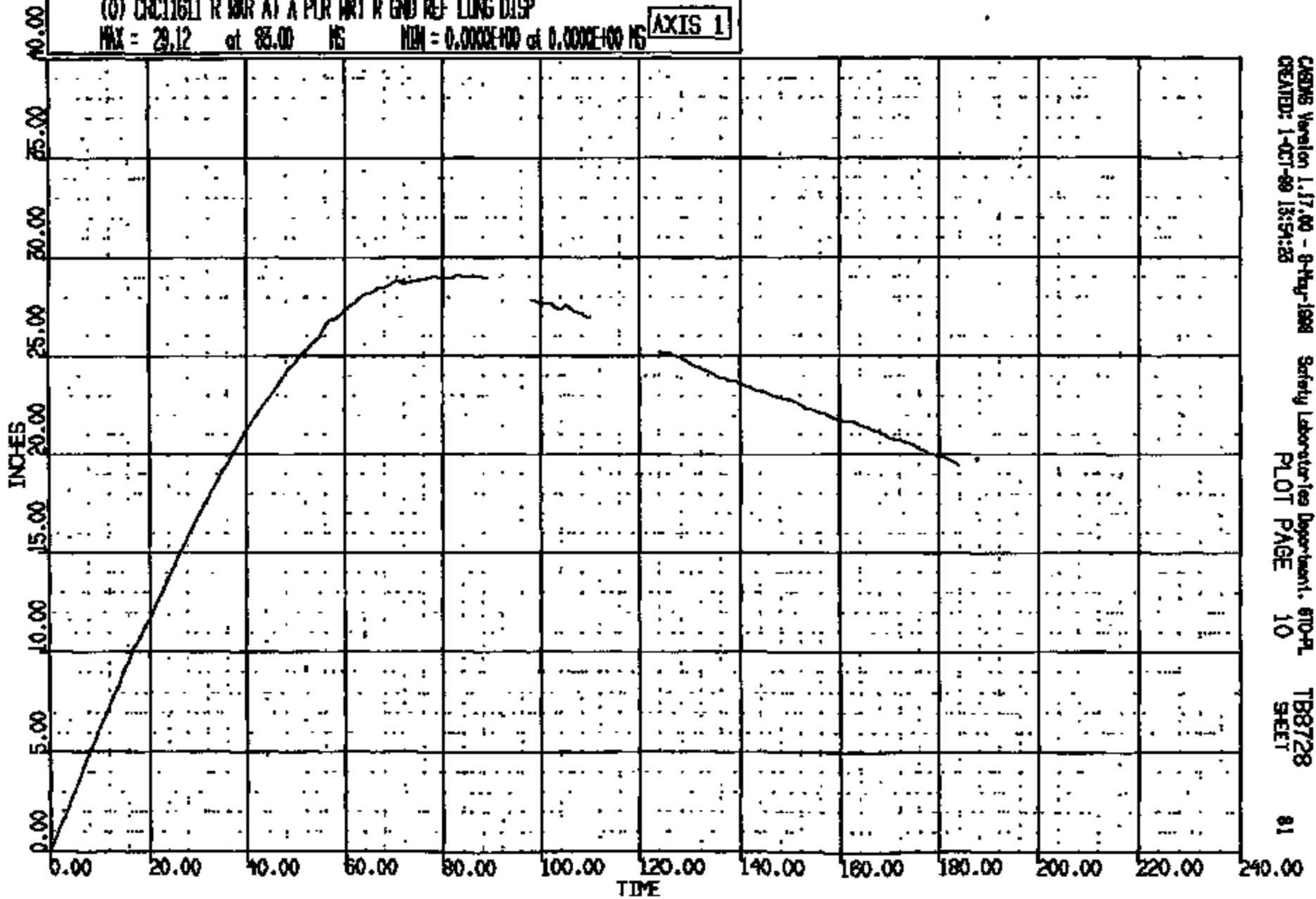


CASING Version 1.17.00 - 8-May-1998 Safety Laboratories Department, 810-PL TB8728  
CREATED: 1-OCT-80 18:54:25 PLOT PAGE 15 SHEET 80

CRTS 0011611

CR R: 11611 TC: TB8728 DATE: 89028 08:53:53  
2000 D-188

(0) CRCL1611 R BUR AT A PLR WRT R GND REF LONG DISP  
MAX = 29.12 at 85.00 MS MIN = 0.000E+00 at 0.000E+00 MS **AXIS 1**

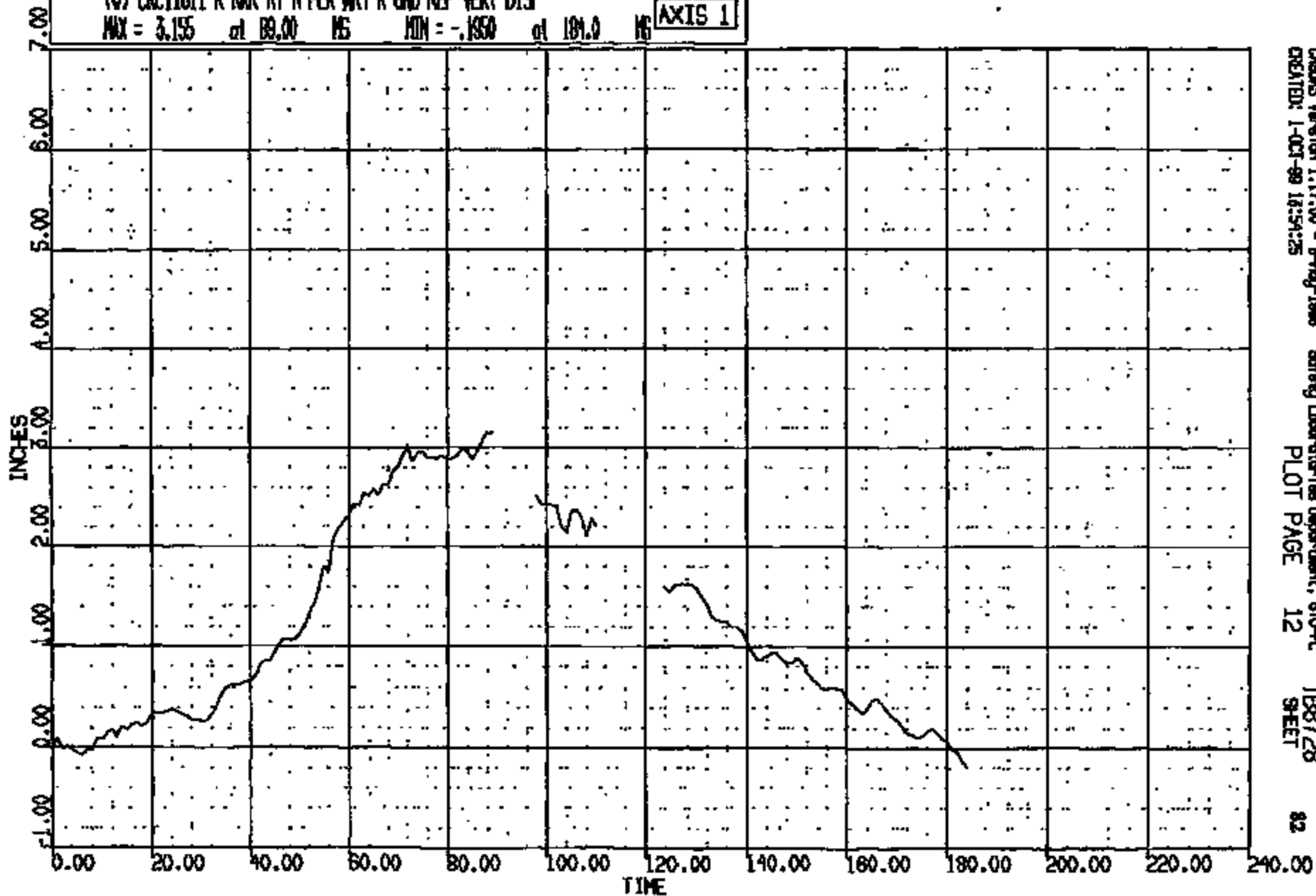


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CRTS 0011611

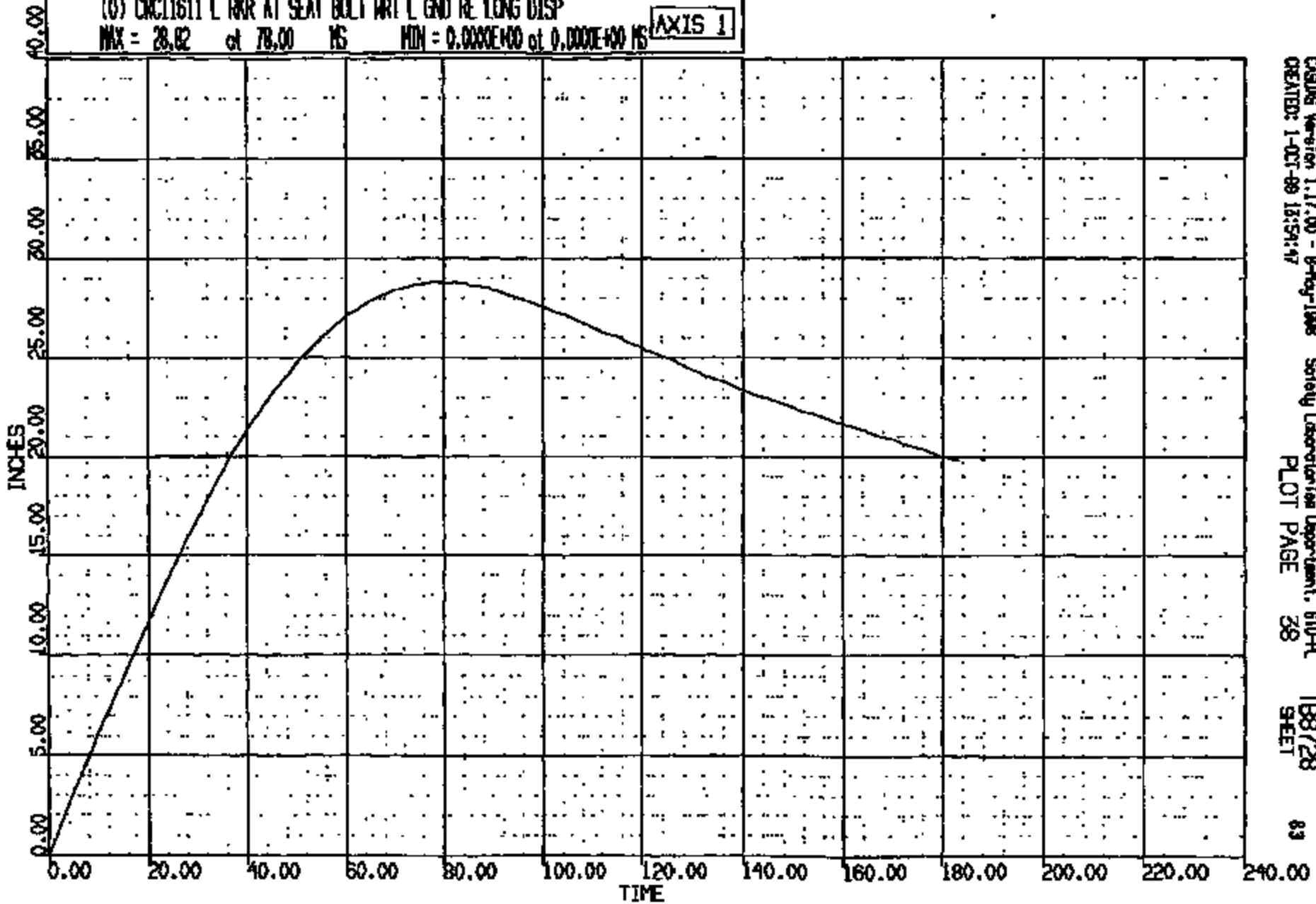
CR R: 11611 TO: T88728 DATE: 990928 08:58:55  
2000 D-198

(4) CRCT11611 R FOR AT A PLR WRT R GND REF VERT DISP  
MAX = 3.155 at 89.00 MS MIN = -.1850 at 181.0 MS **AXIS 1**



CR R: 11611 TO: TB8728 DATE: 990928 08:55:53  
2000 D-198

(0) CRCL1611 L RNR AT SEAT BOLT WRT L GND RE LONG DISP  
MAX = 28.62 of 78.00 MS MIN = 0.000E+00 of 0.000E+00 MS **AXIS 1**



CASING Version 1.17.00 - 8-May-1998  
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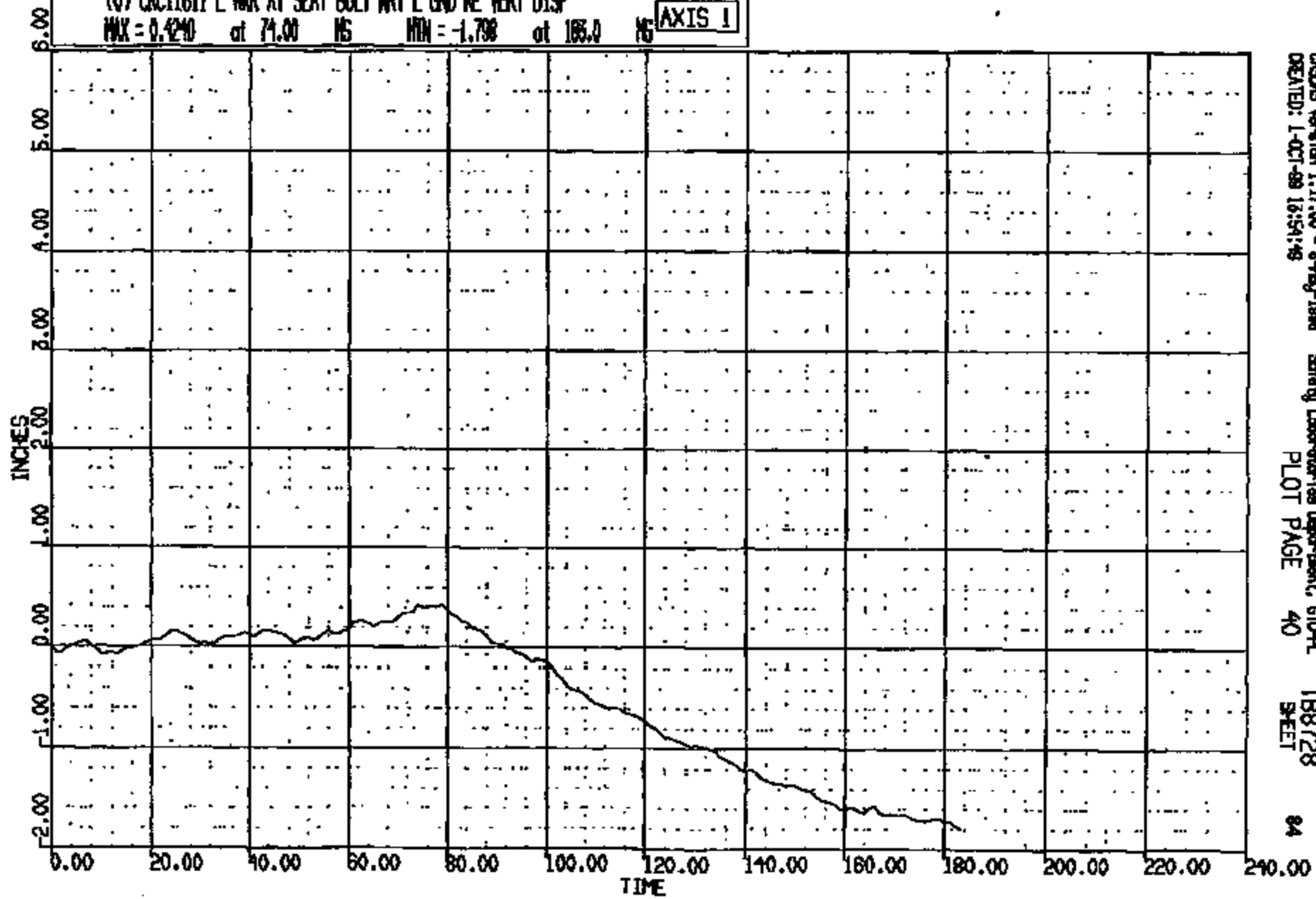
Safety Laboratories Department, 610-RL  
PLOT PAGE 28

TB8728  
SHEET

CR R: 11611 TO: TB8728 DATE: 990928 08:52:52  
2000 D-185

(0) CR011611 L RWR AT SEAT BOLT WRT L END RE VERT DISP  
MAX = 0.4240 at 71.00 NS MIN = -1.798 at 185.0 NS

AXIS 1

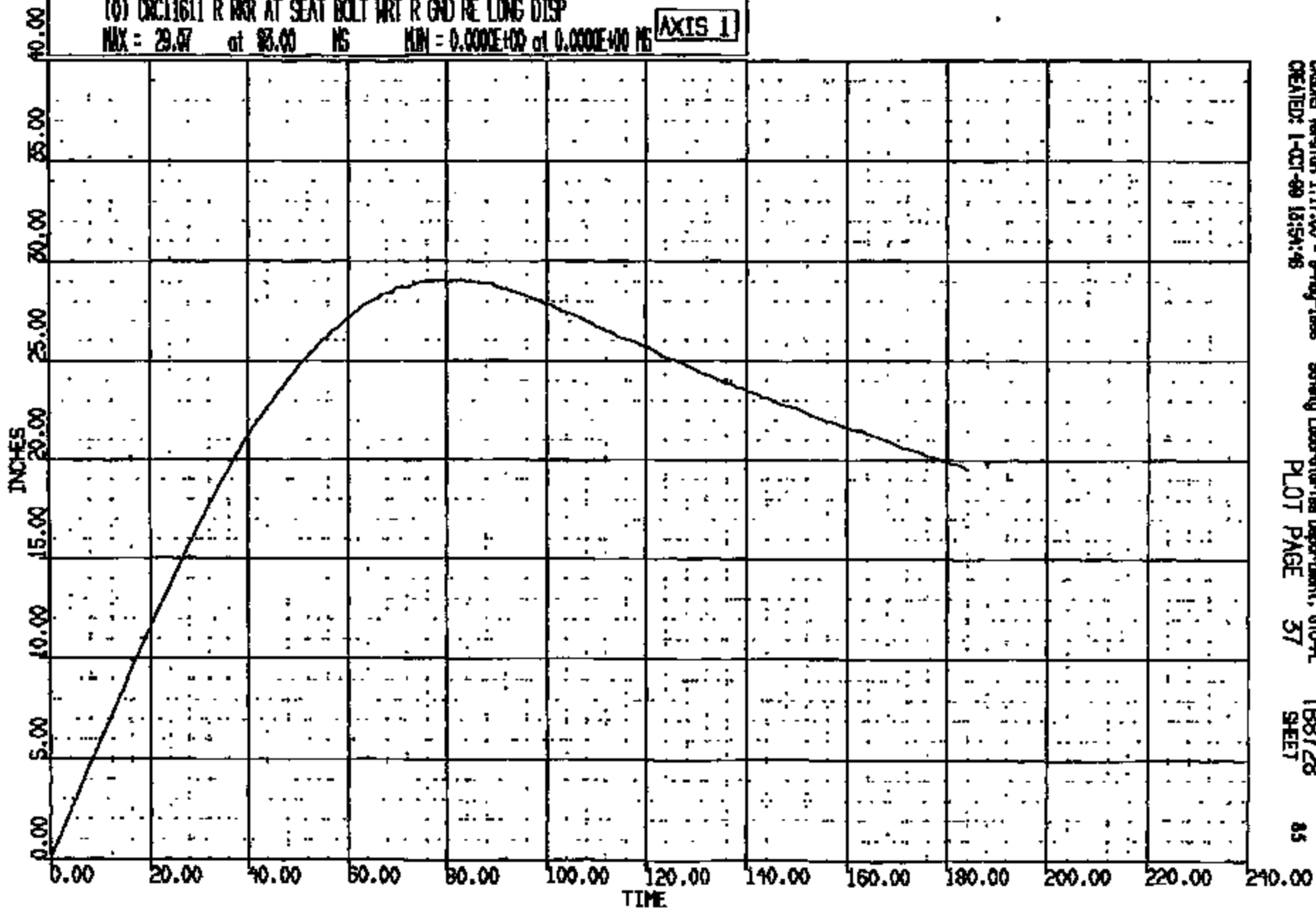


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CREATED: 1-OCT-99 16:54:49 PLOT PAGE 40 TB8728  
SHEET 84

CRIS 0011611

CR R: 11611 TO: TB8728 DATE: 990228 08:55:56  
2000 D-188

(0) CRCL1611 R WKR AT SEAT BOLT WRT R GND RE LONG DISP  
MAX = 29.67 at 83.00 MS MIN = 0.000E+00 at 0.000E+00 MS **AXIS 1**



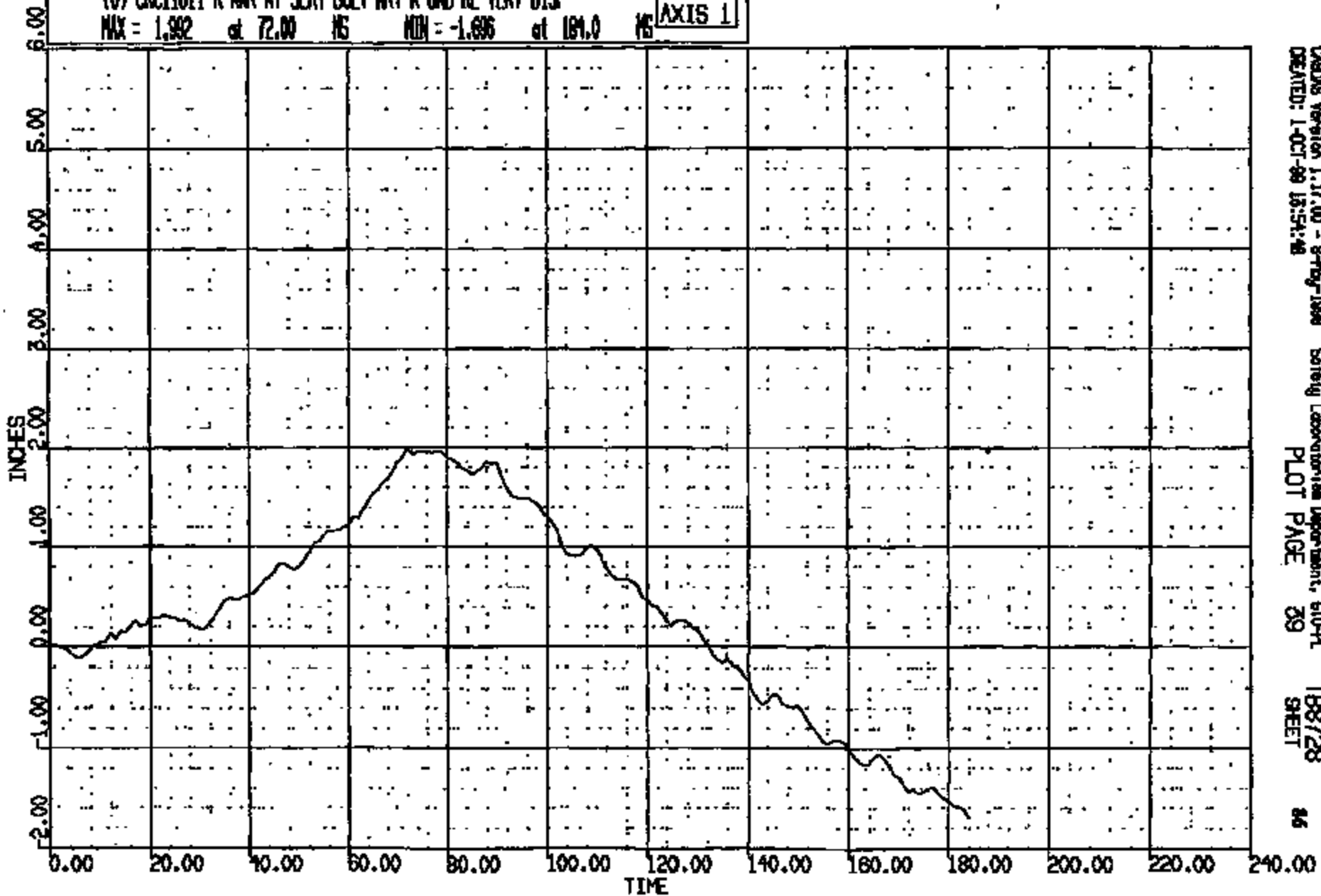
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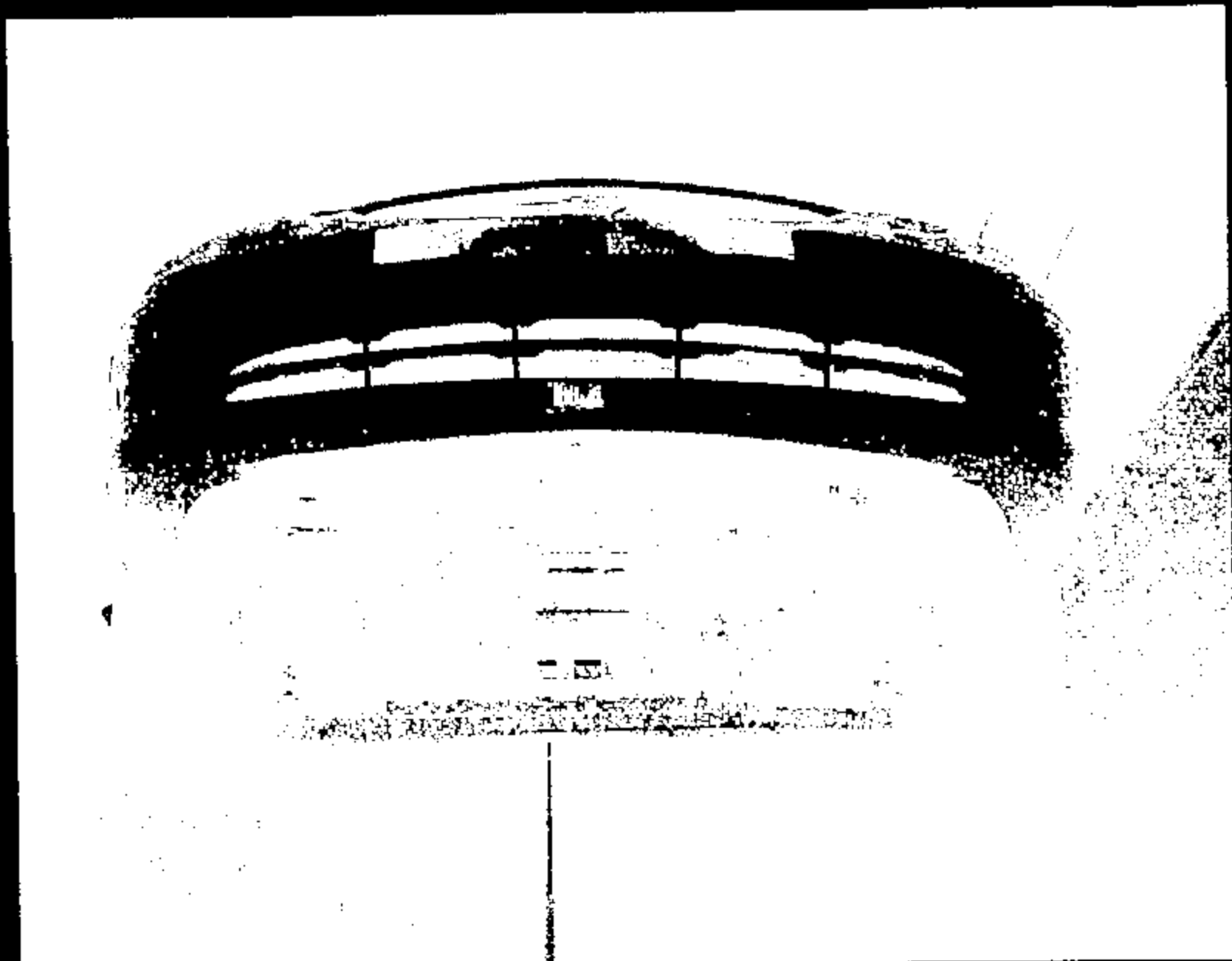
Safety Laboratories Department, GTO-FL  
PLOT PAGE 37

TB8728  
SHEET

CR R: 11611 TO: T88728 DATE: 980928 08:55:53  
2000 0-188

(0) CR011611 R NR AT SEAT BOLT WRT R GND RE VERT DISP  
MAX = 1.982 at 72.00 MS MIN = -1.696 at 181.0 MS **AXIS 1**



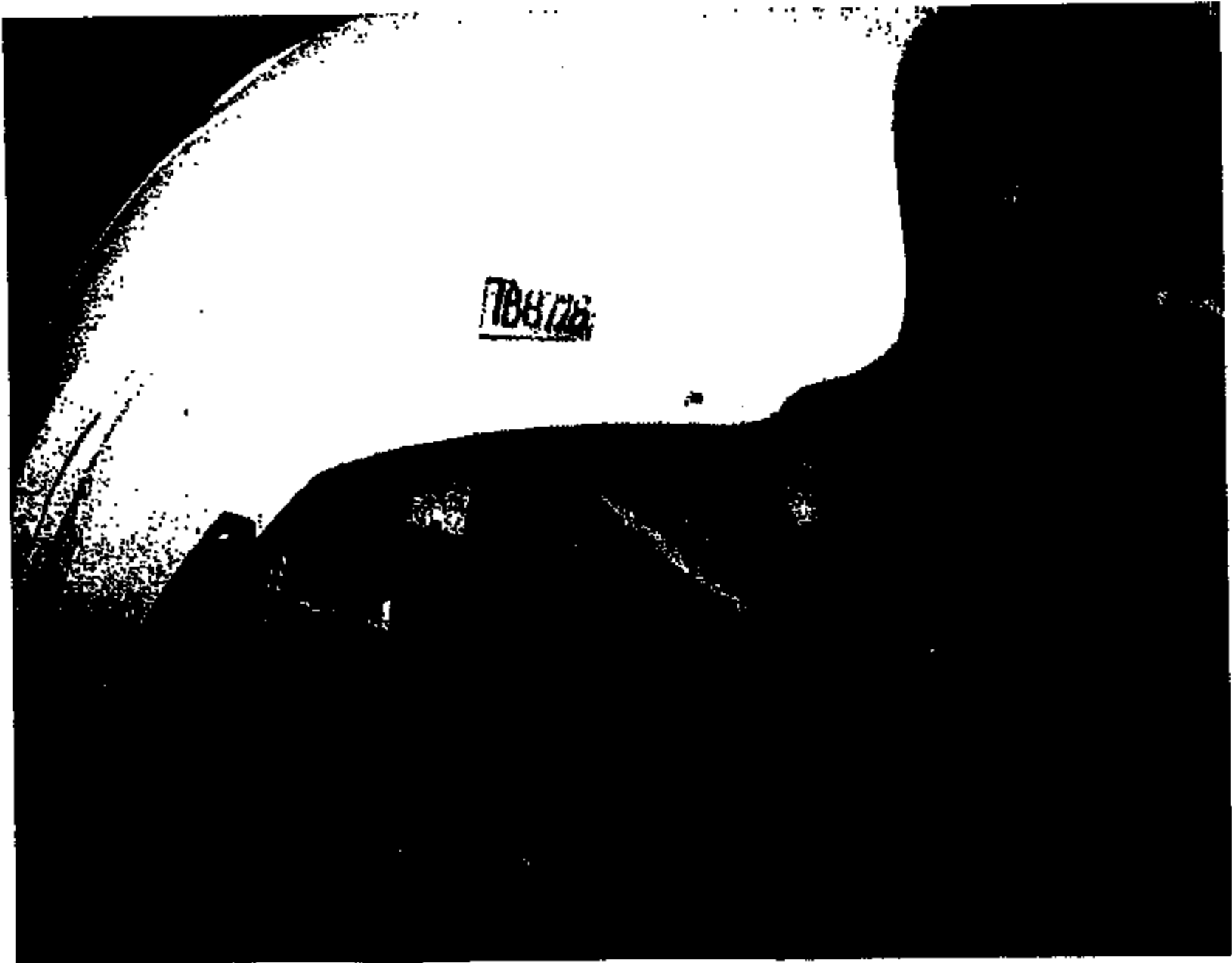


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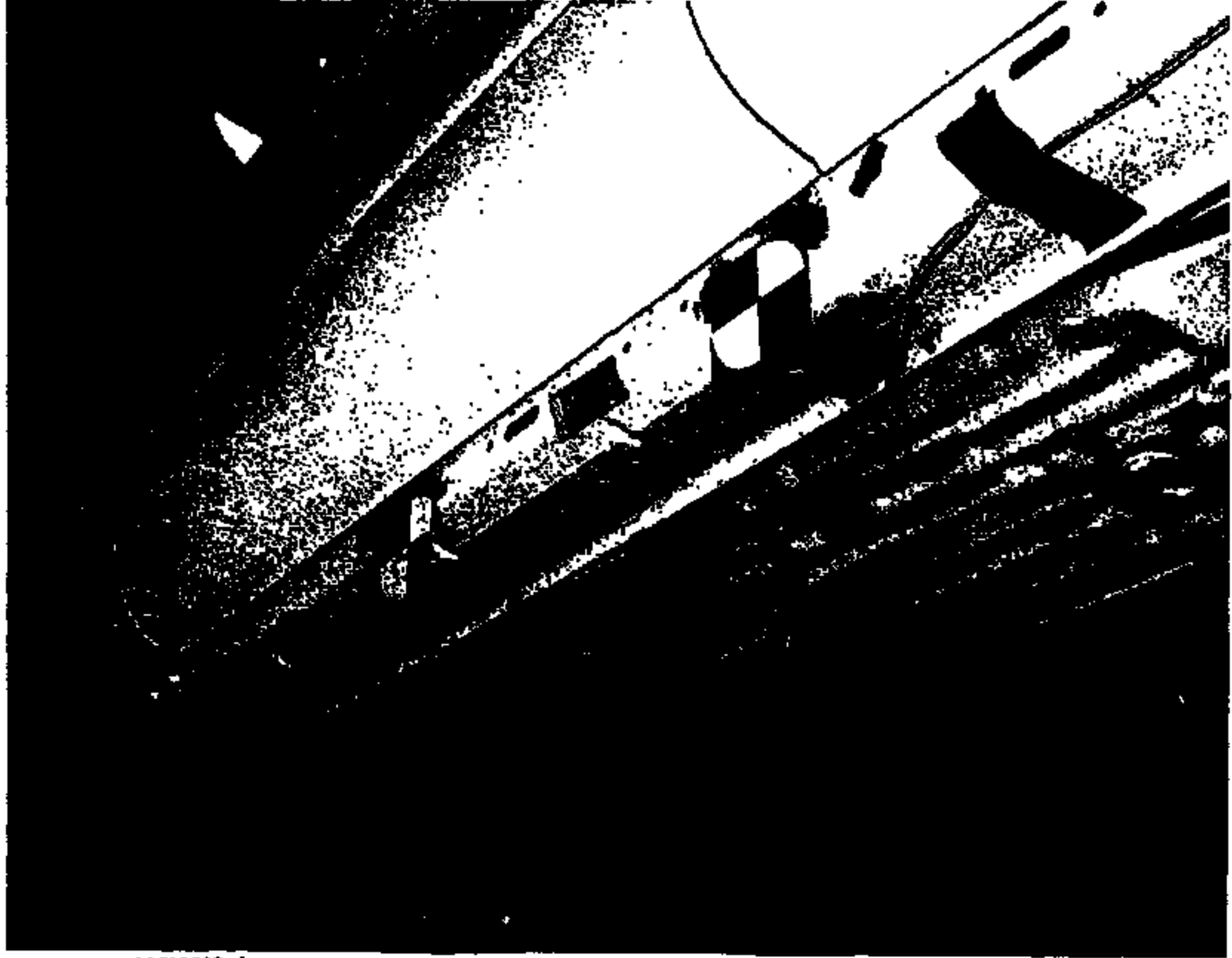




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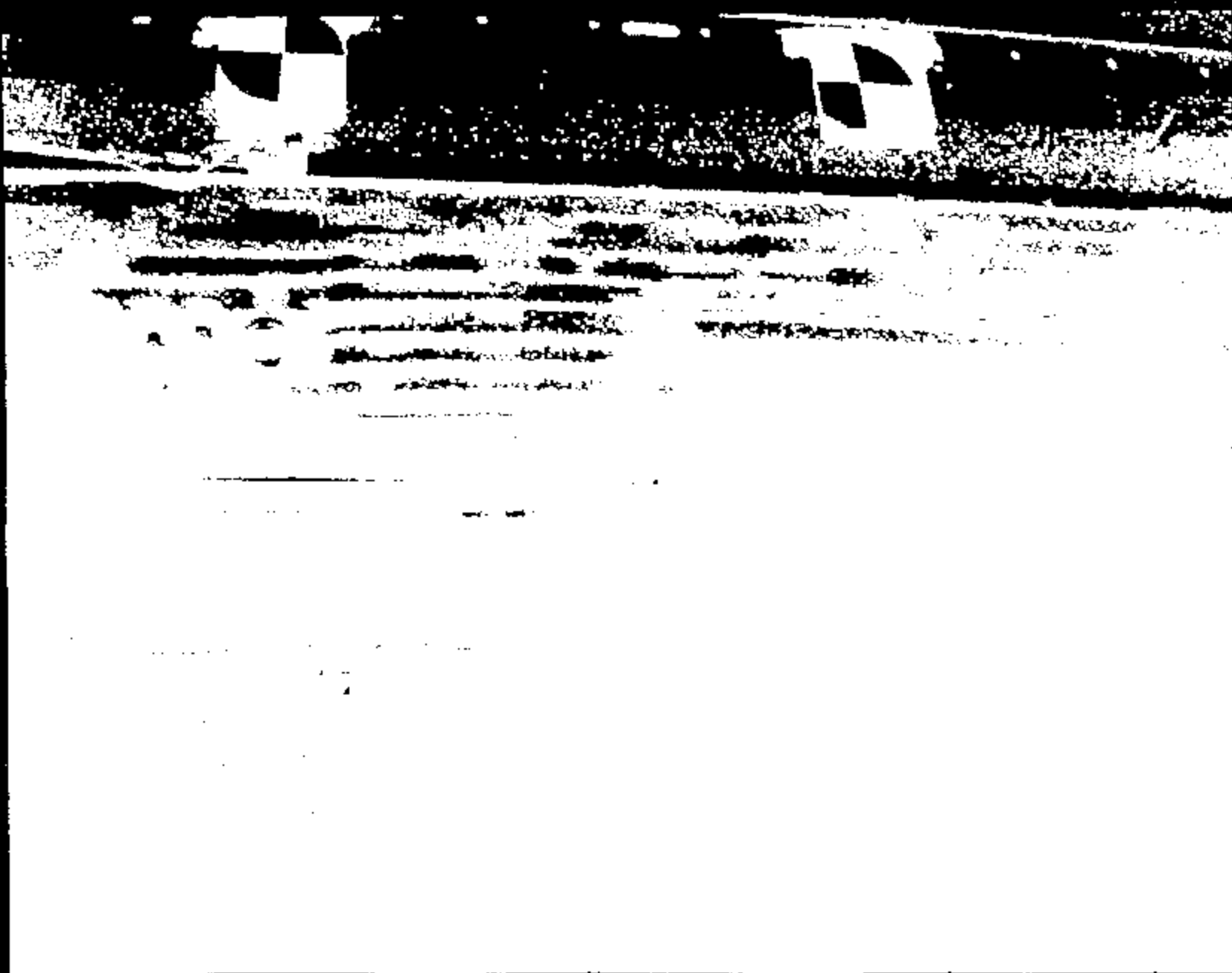
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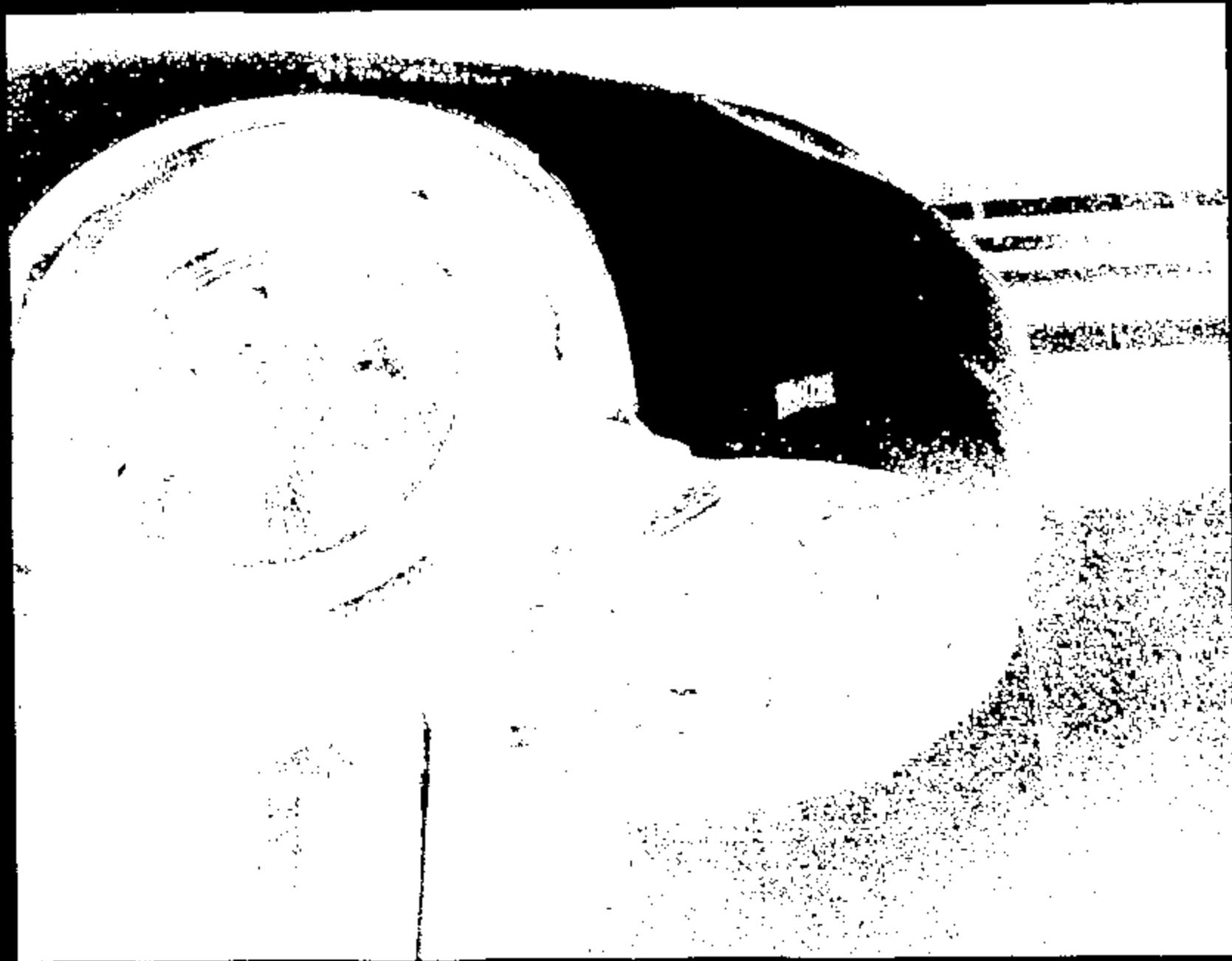
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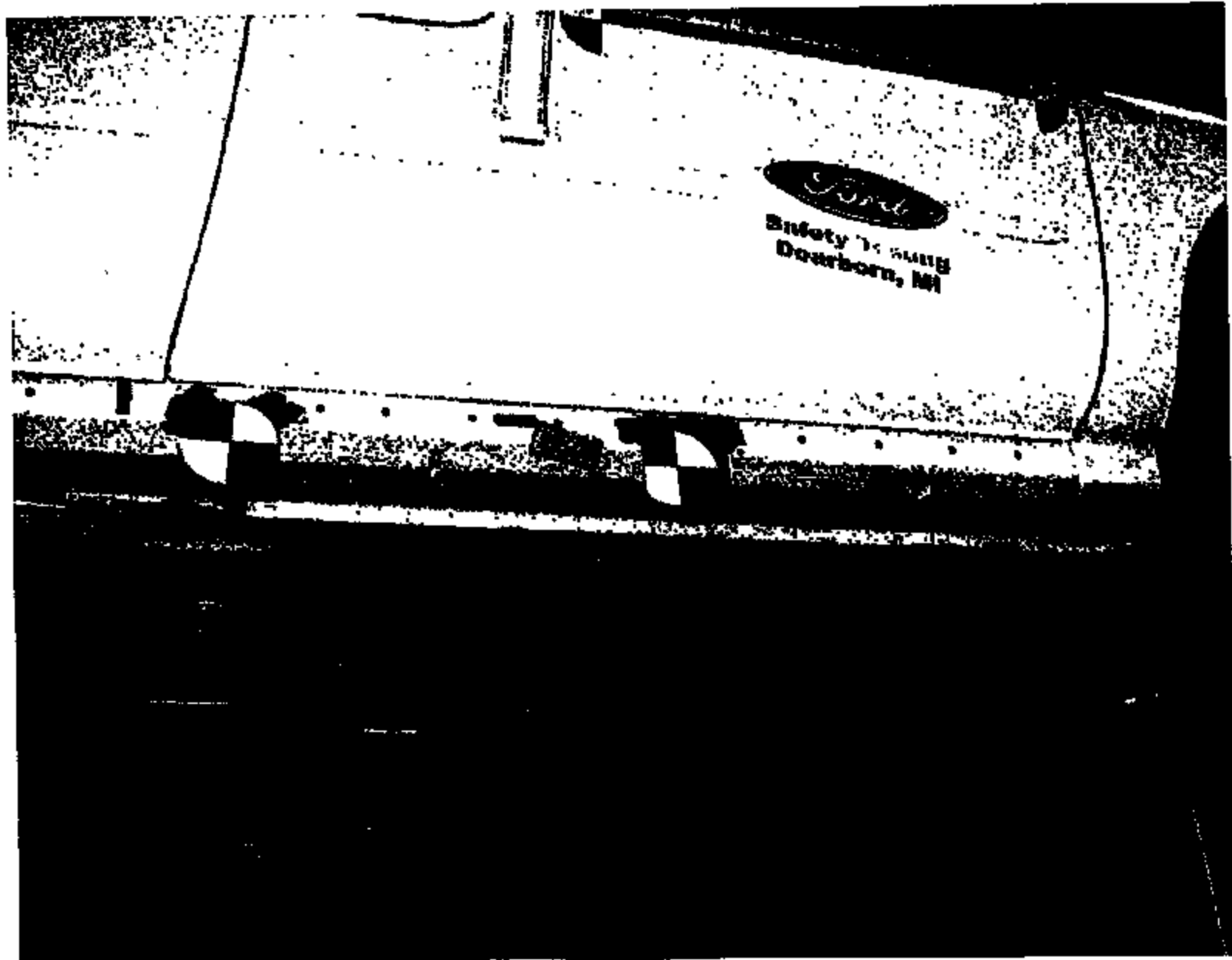
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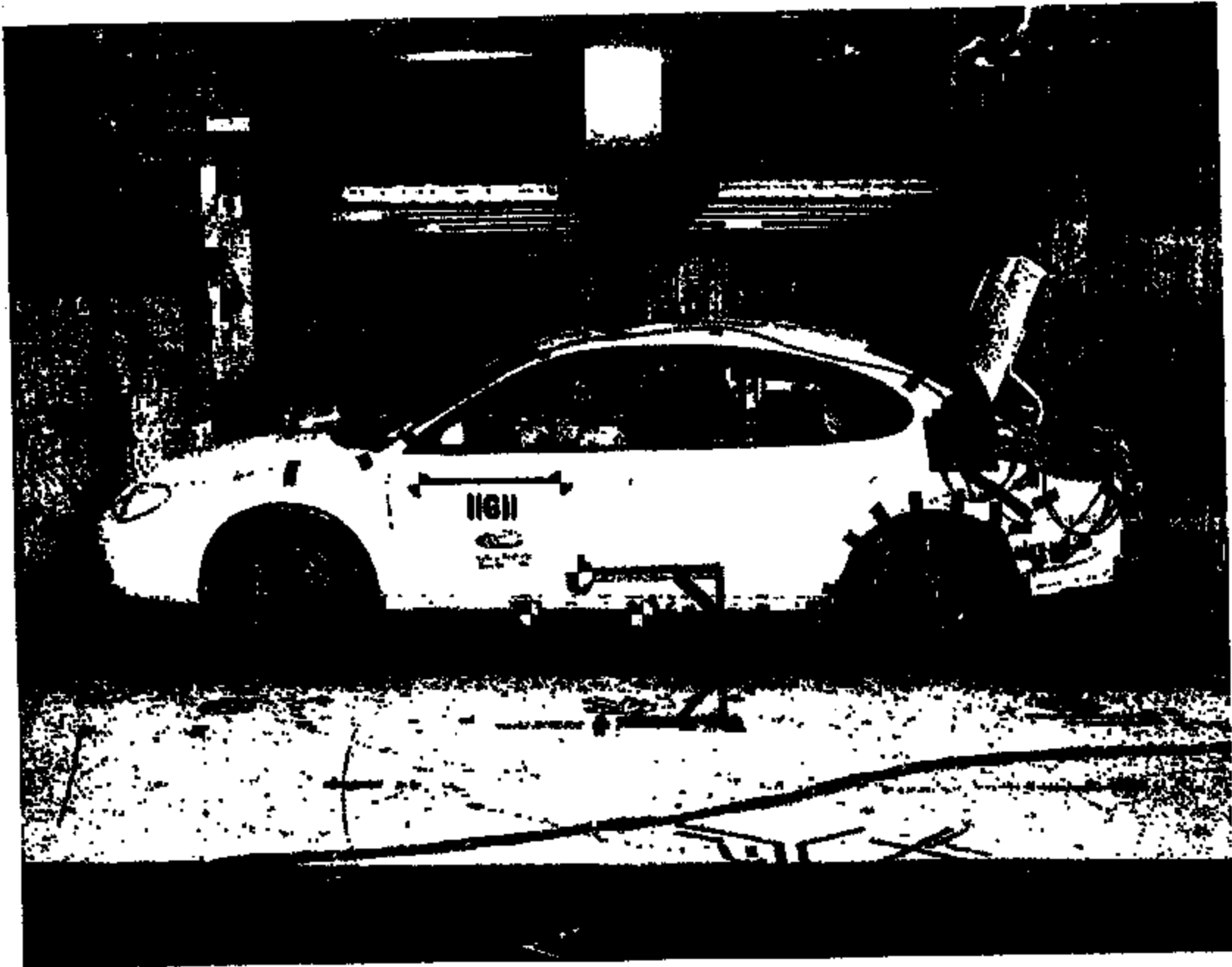
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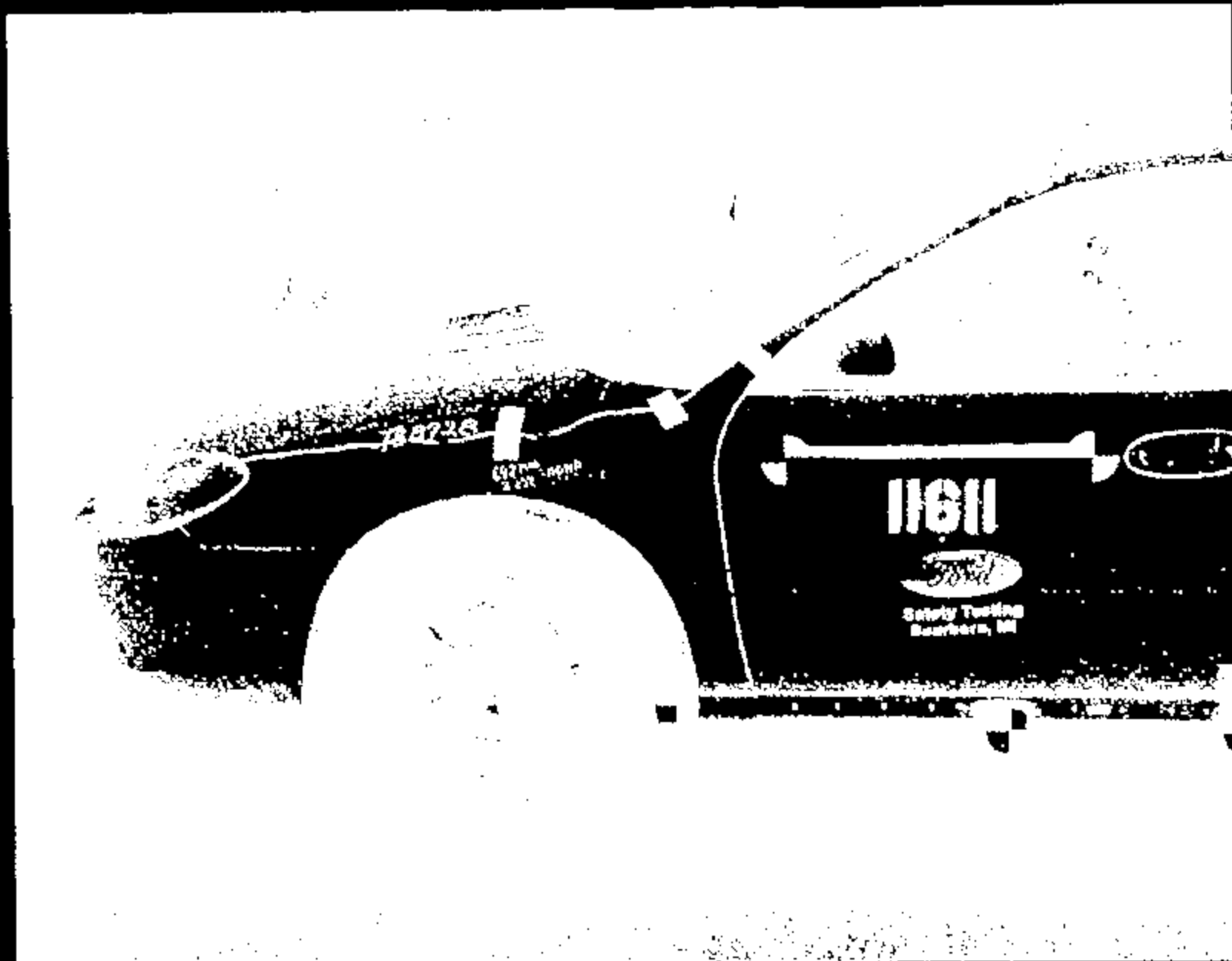
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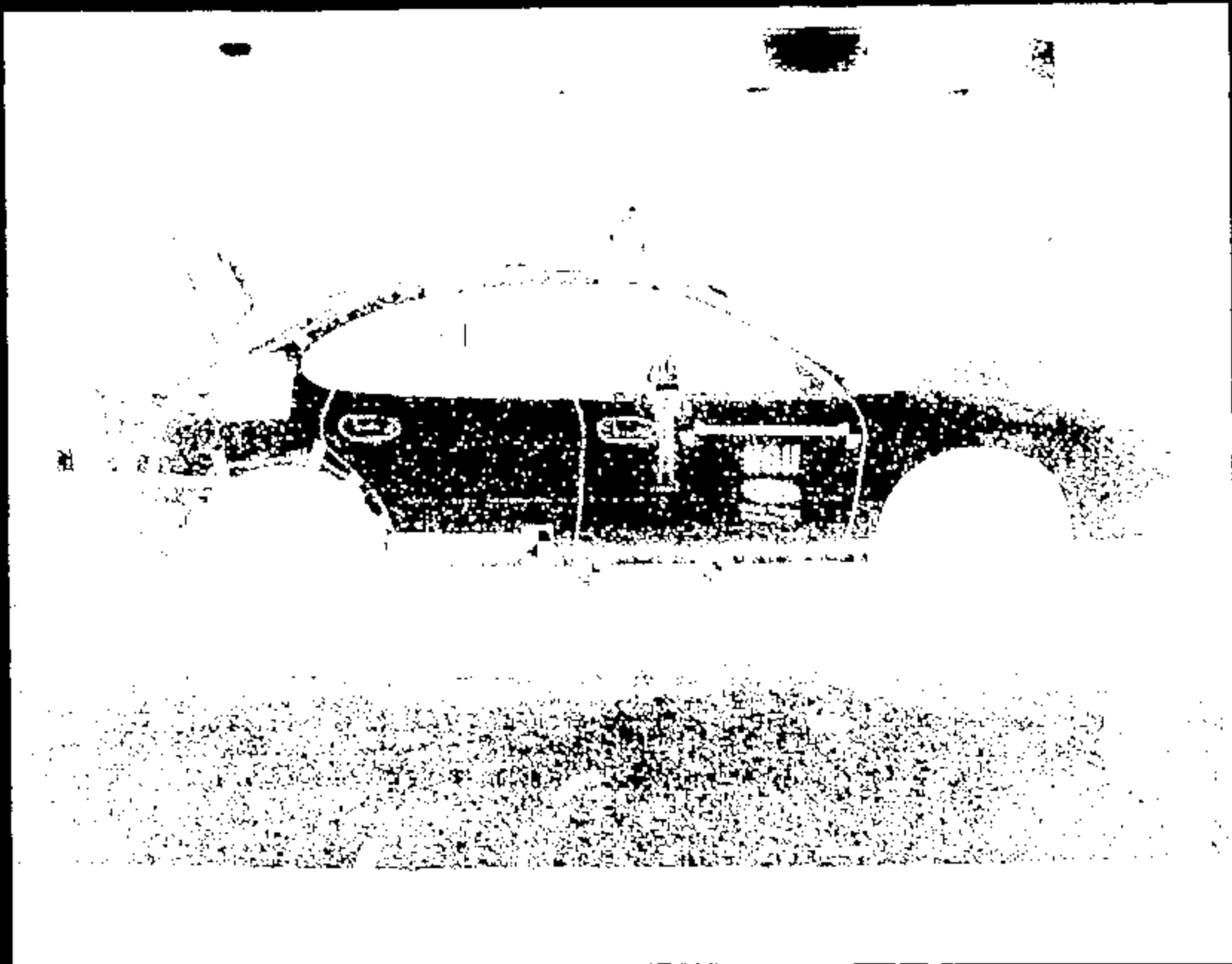
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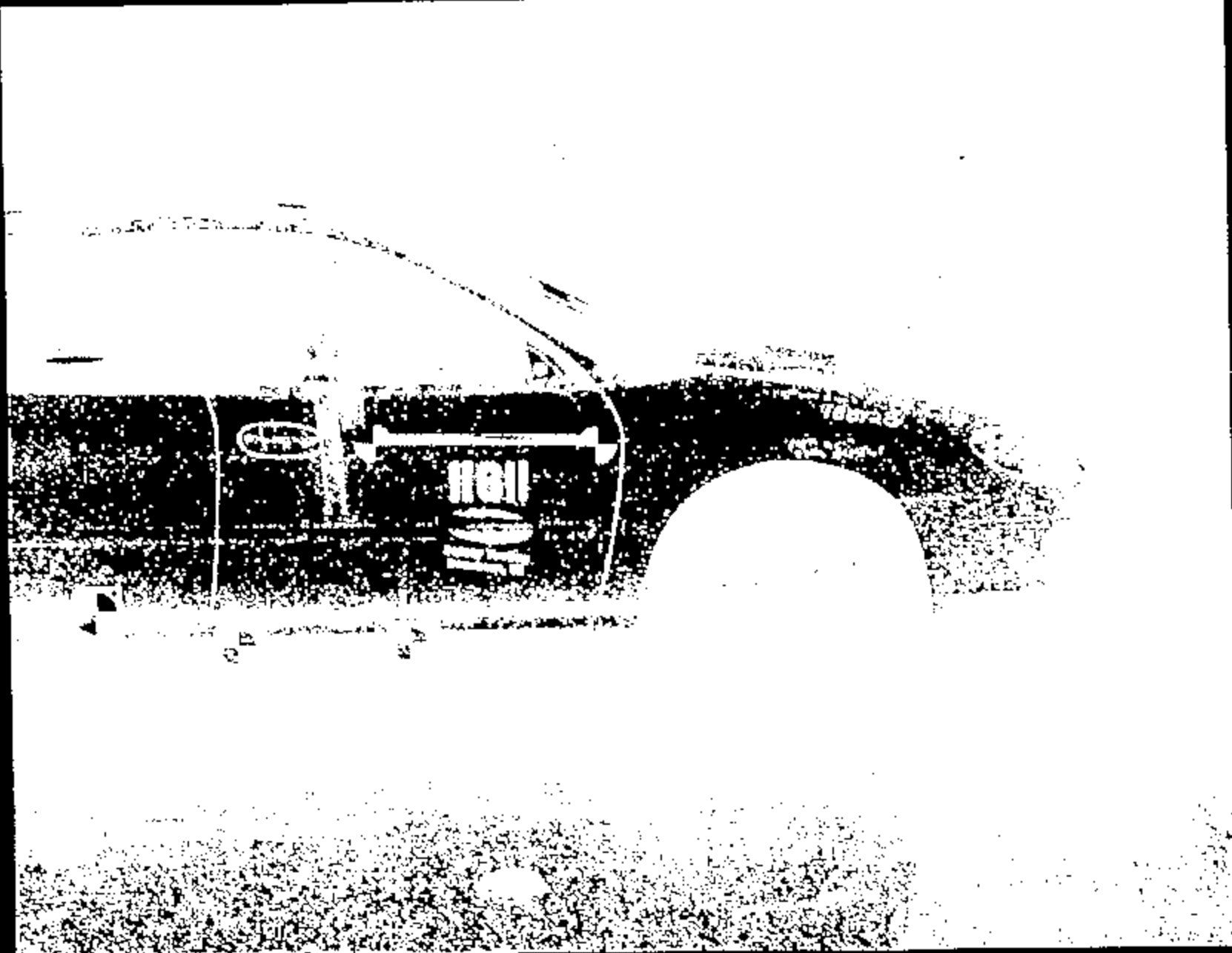
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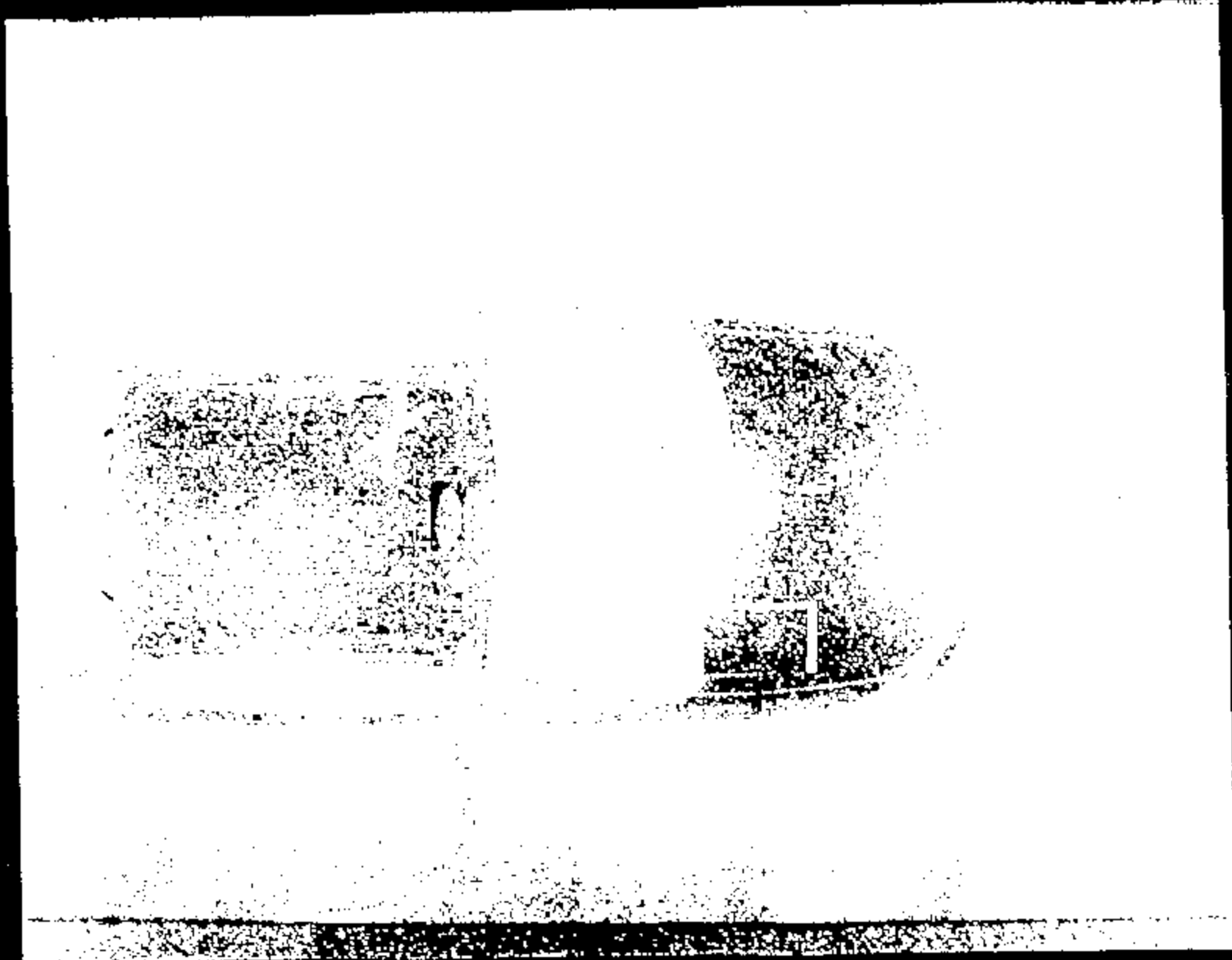


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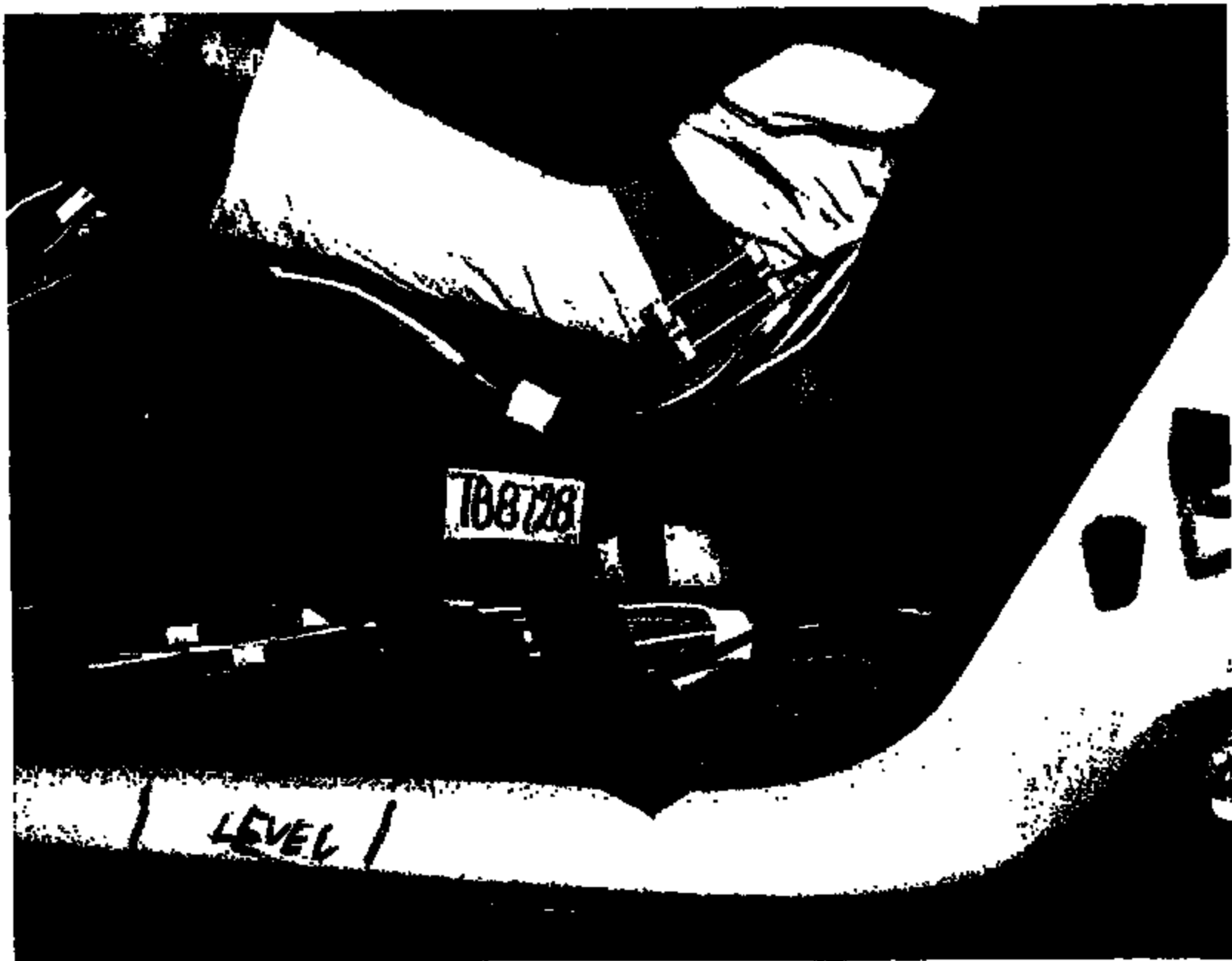
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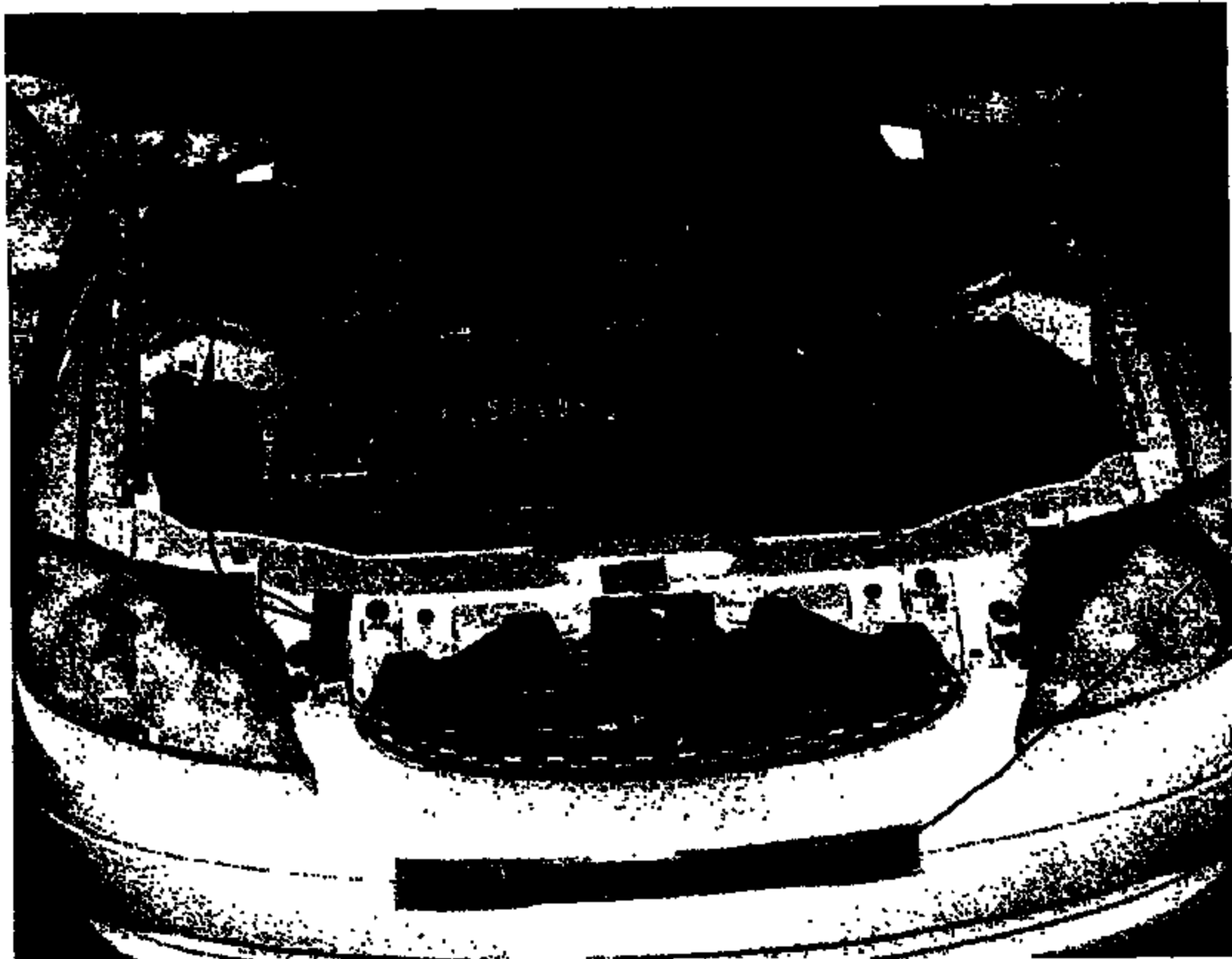


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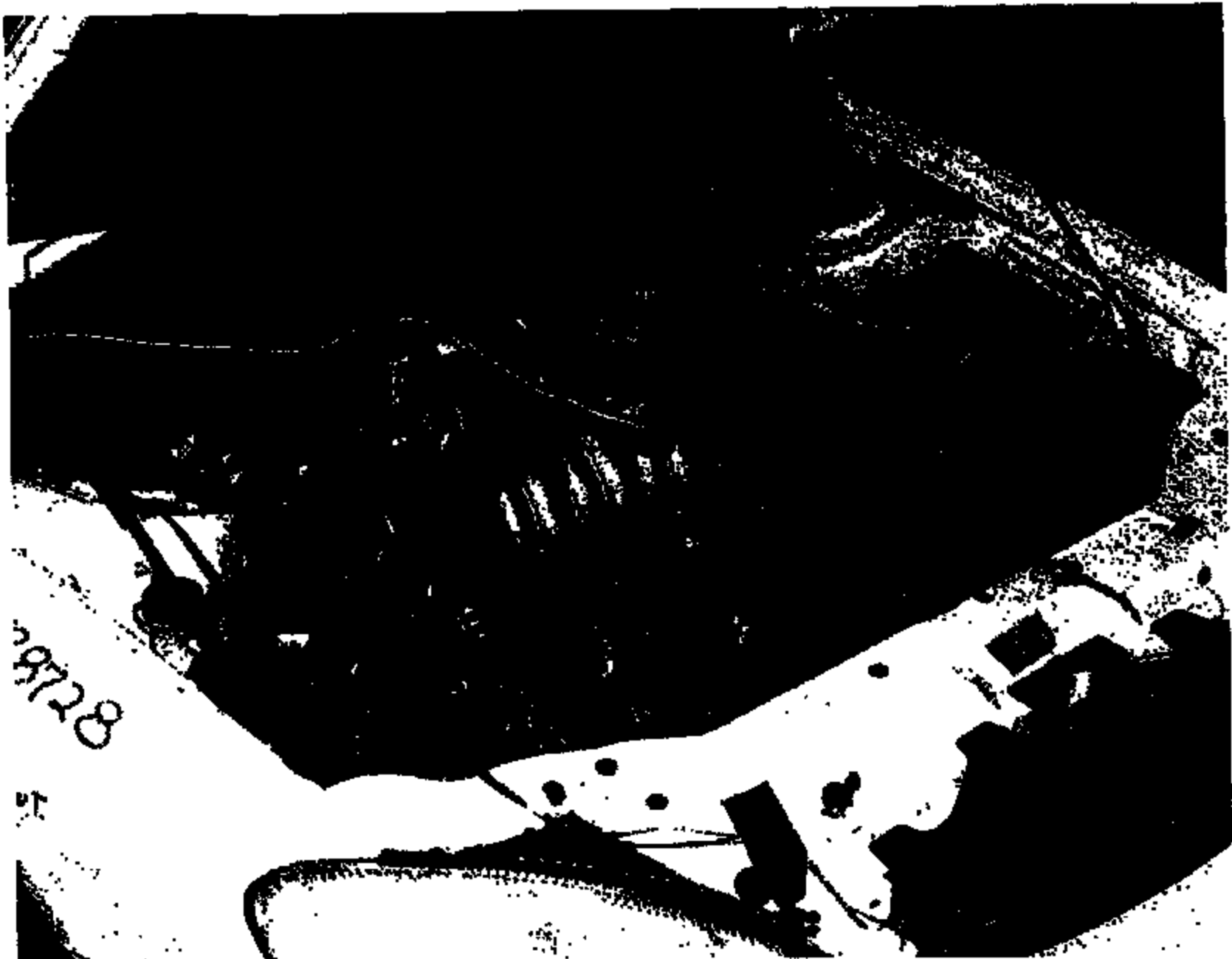
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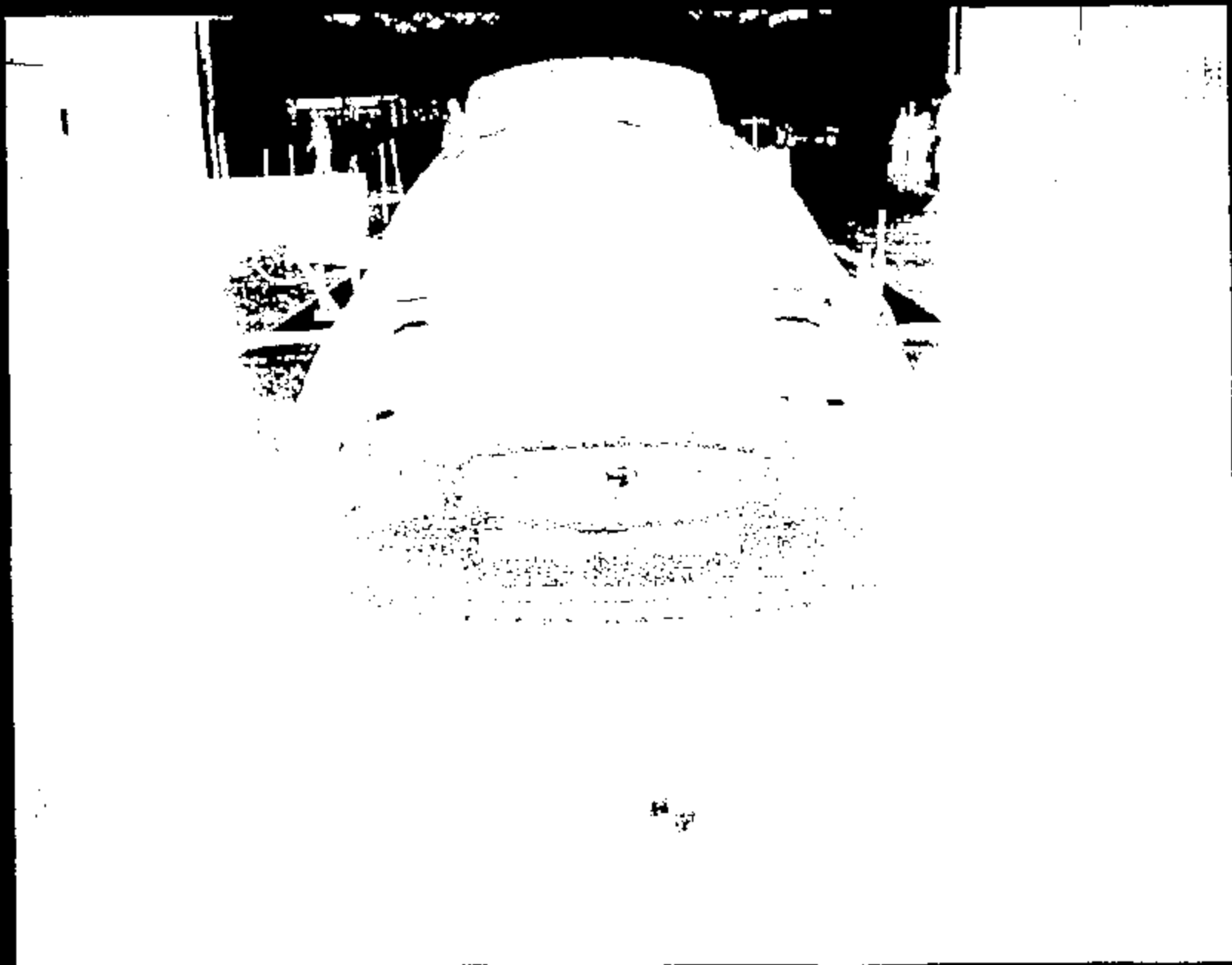
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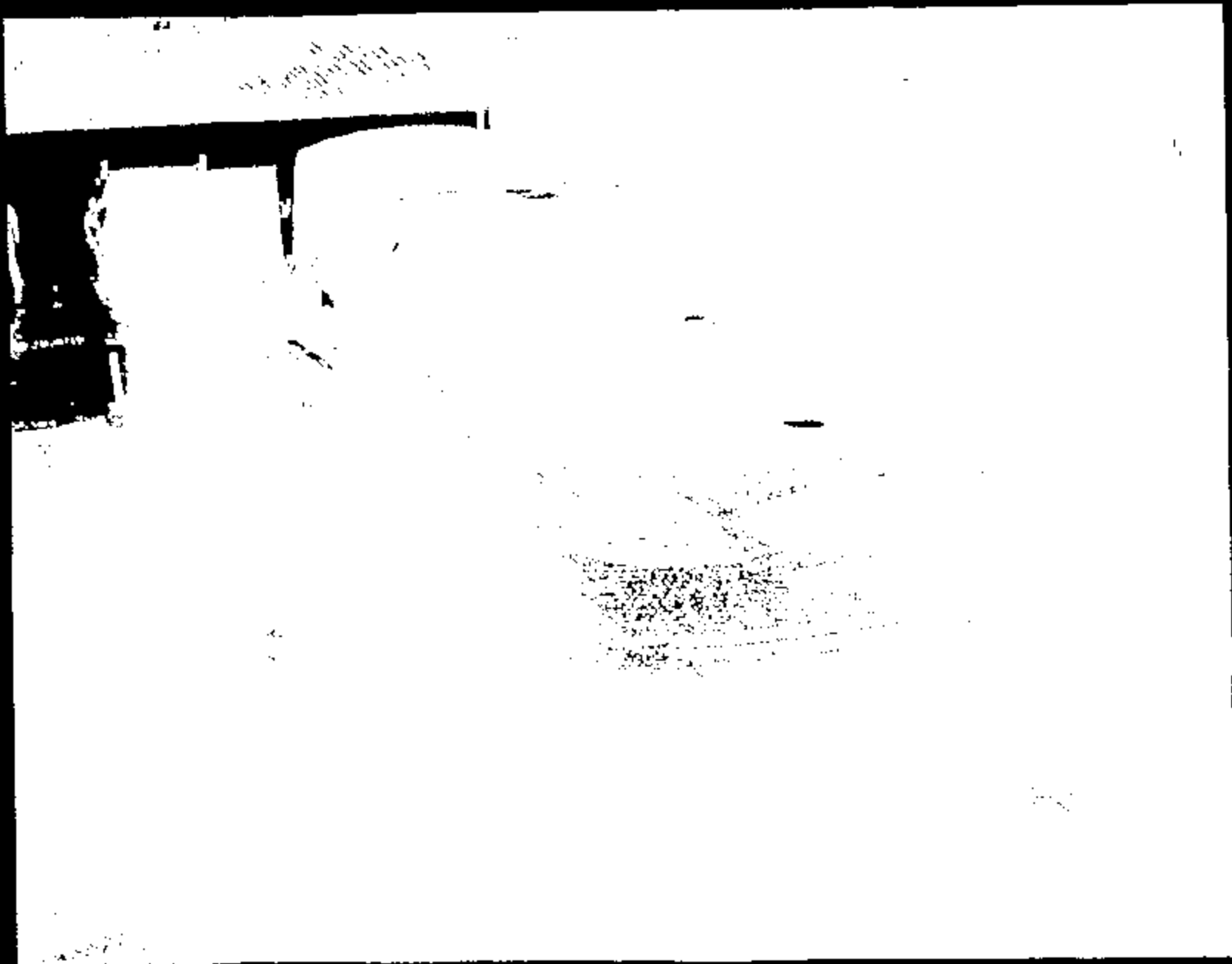


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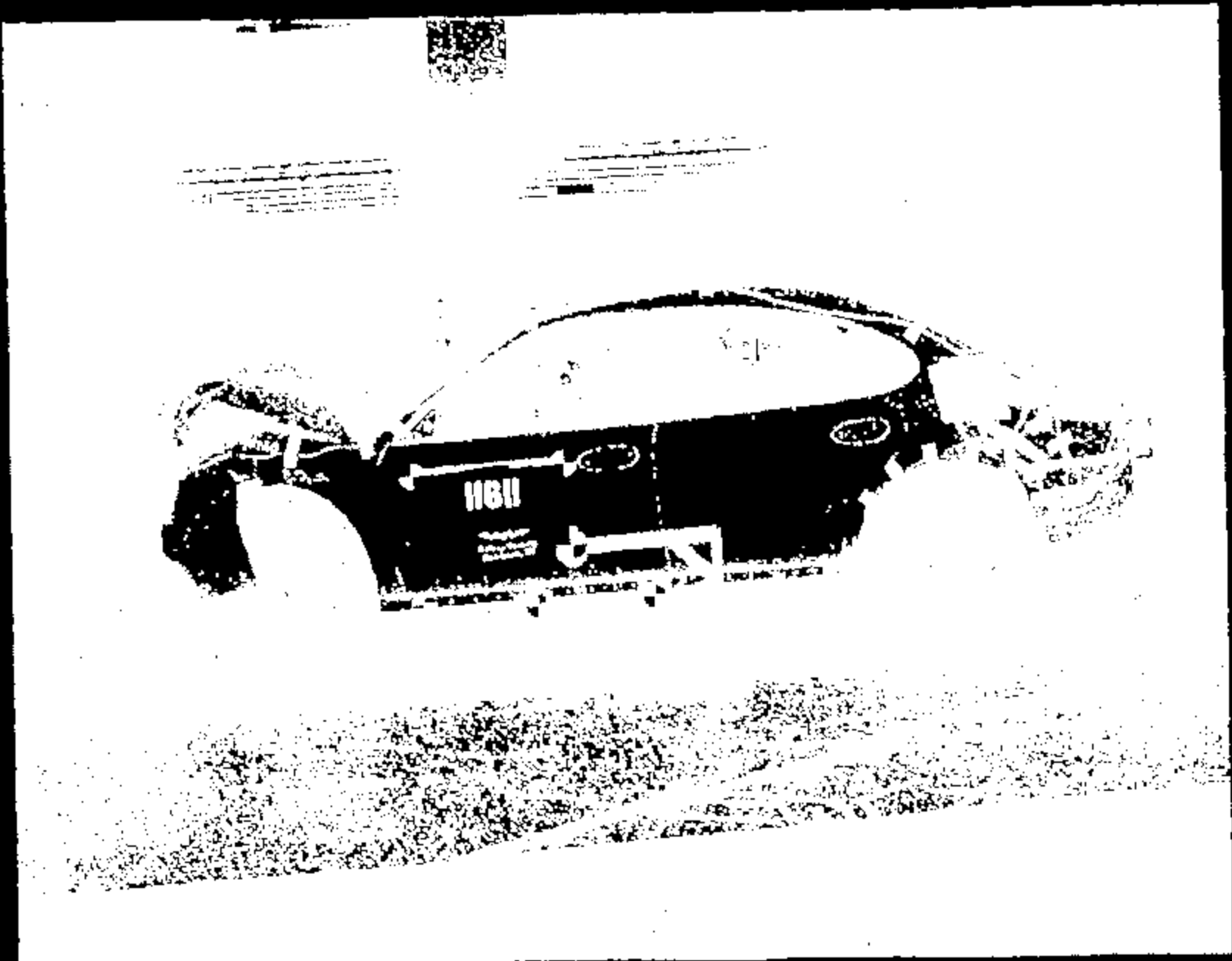




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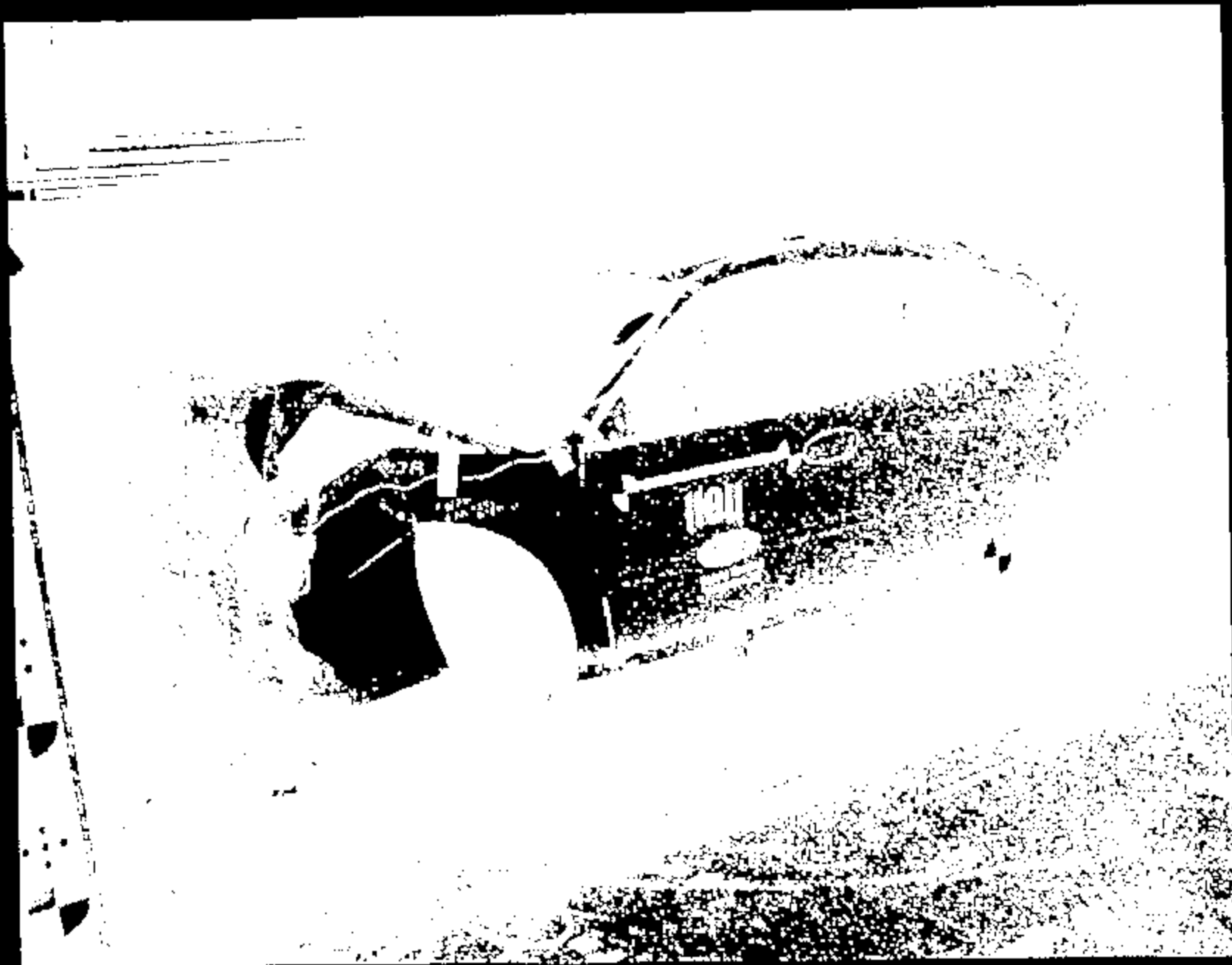
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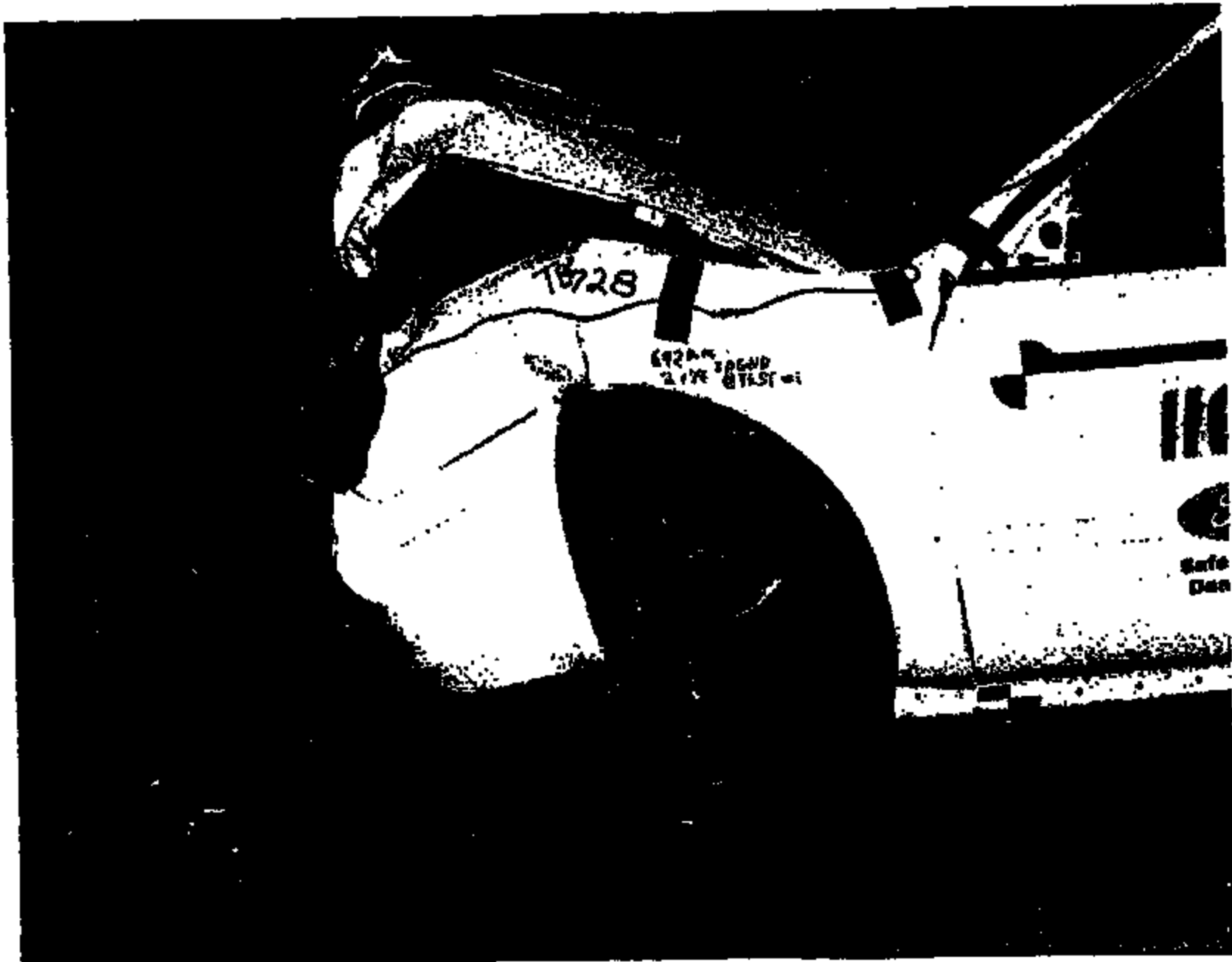
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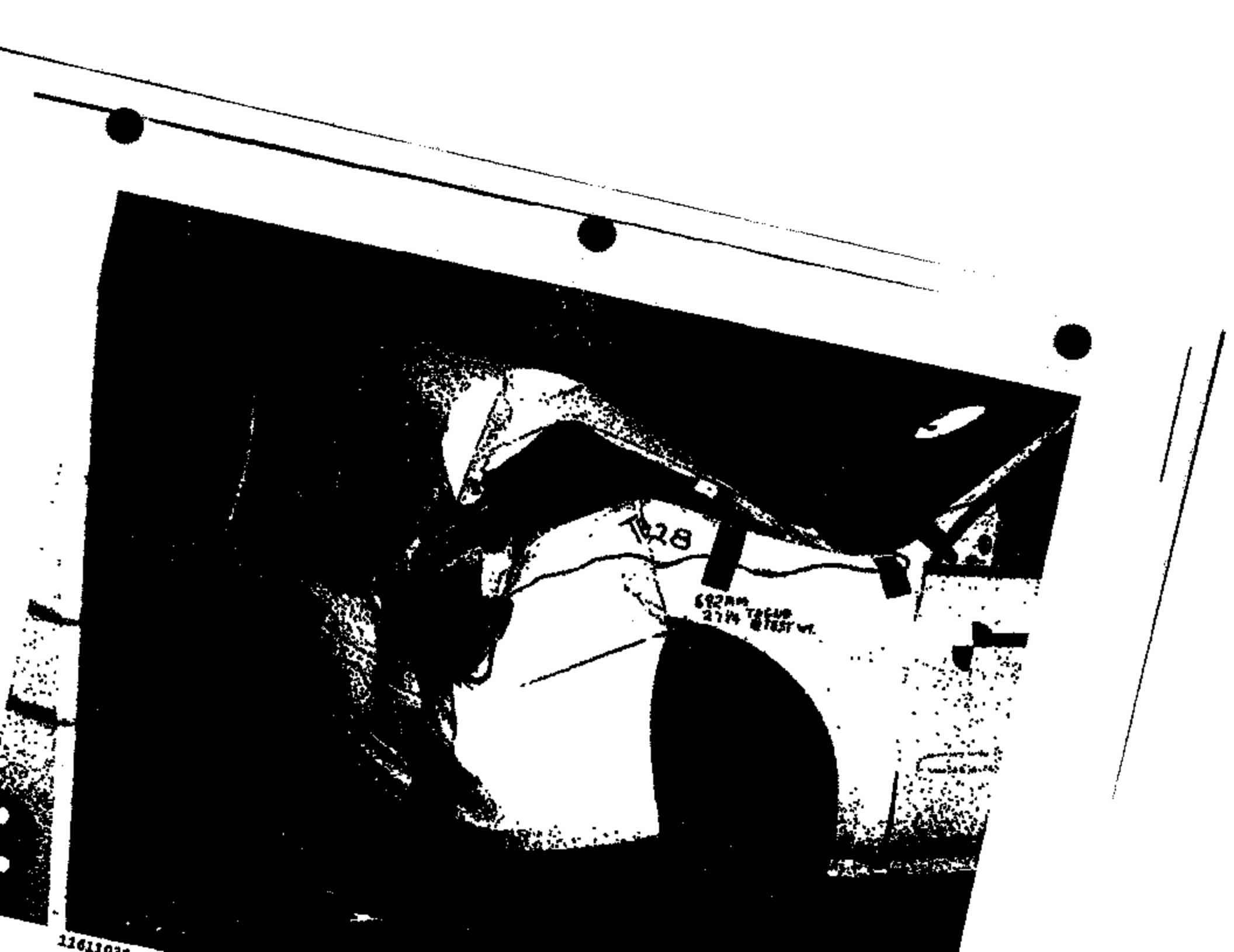
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1428

682MM T8400  
27% @ 155 WT.

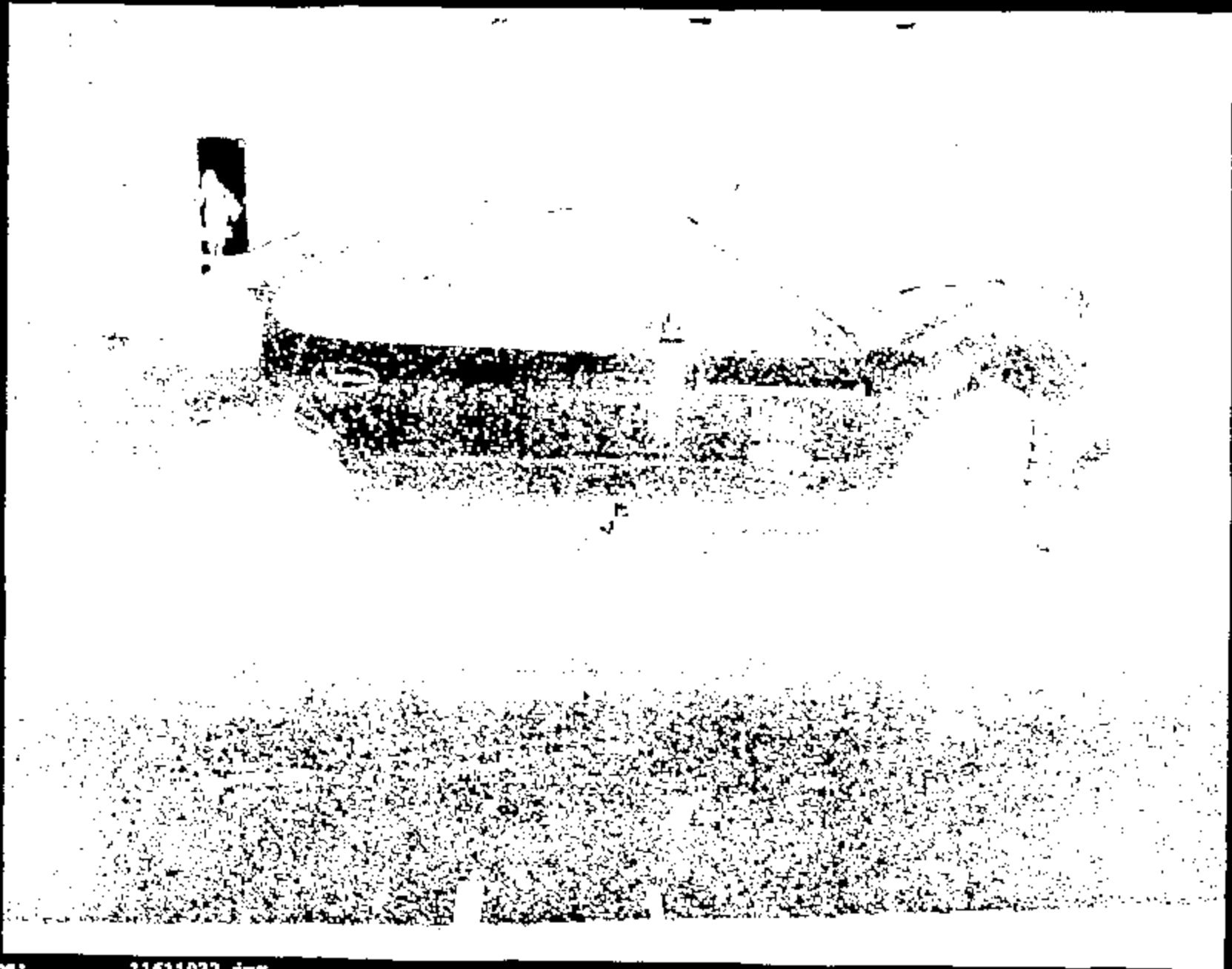
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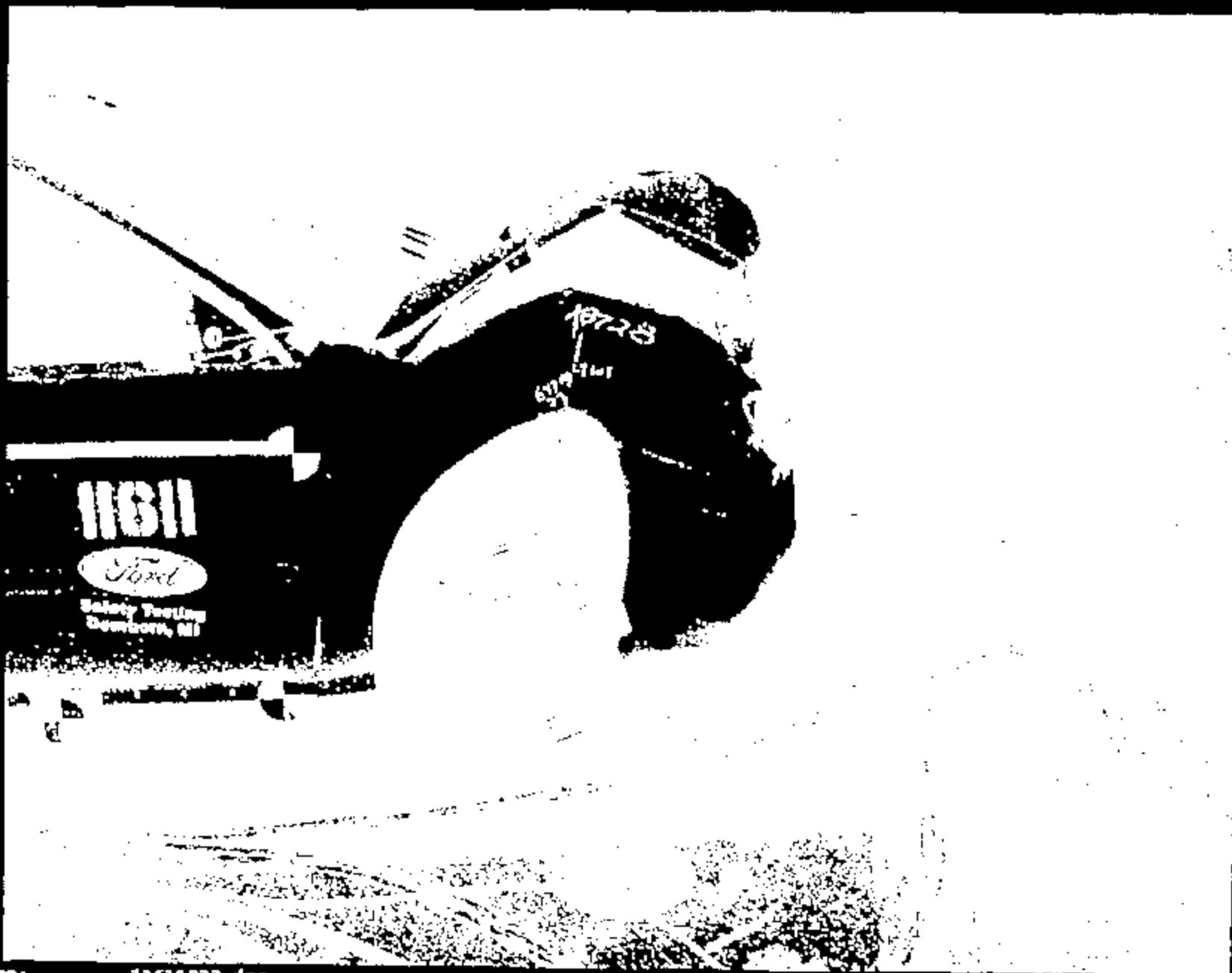
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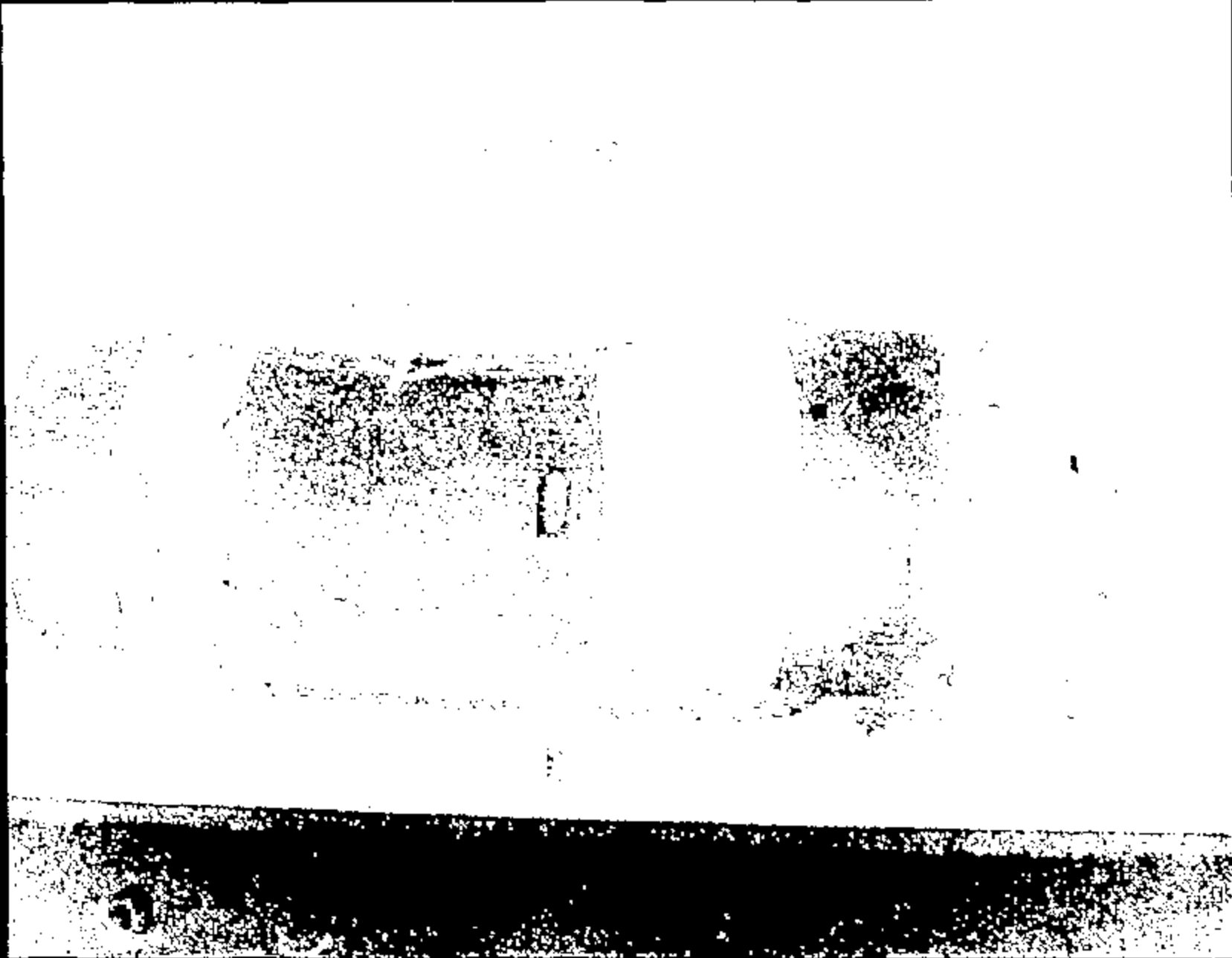
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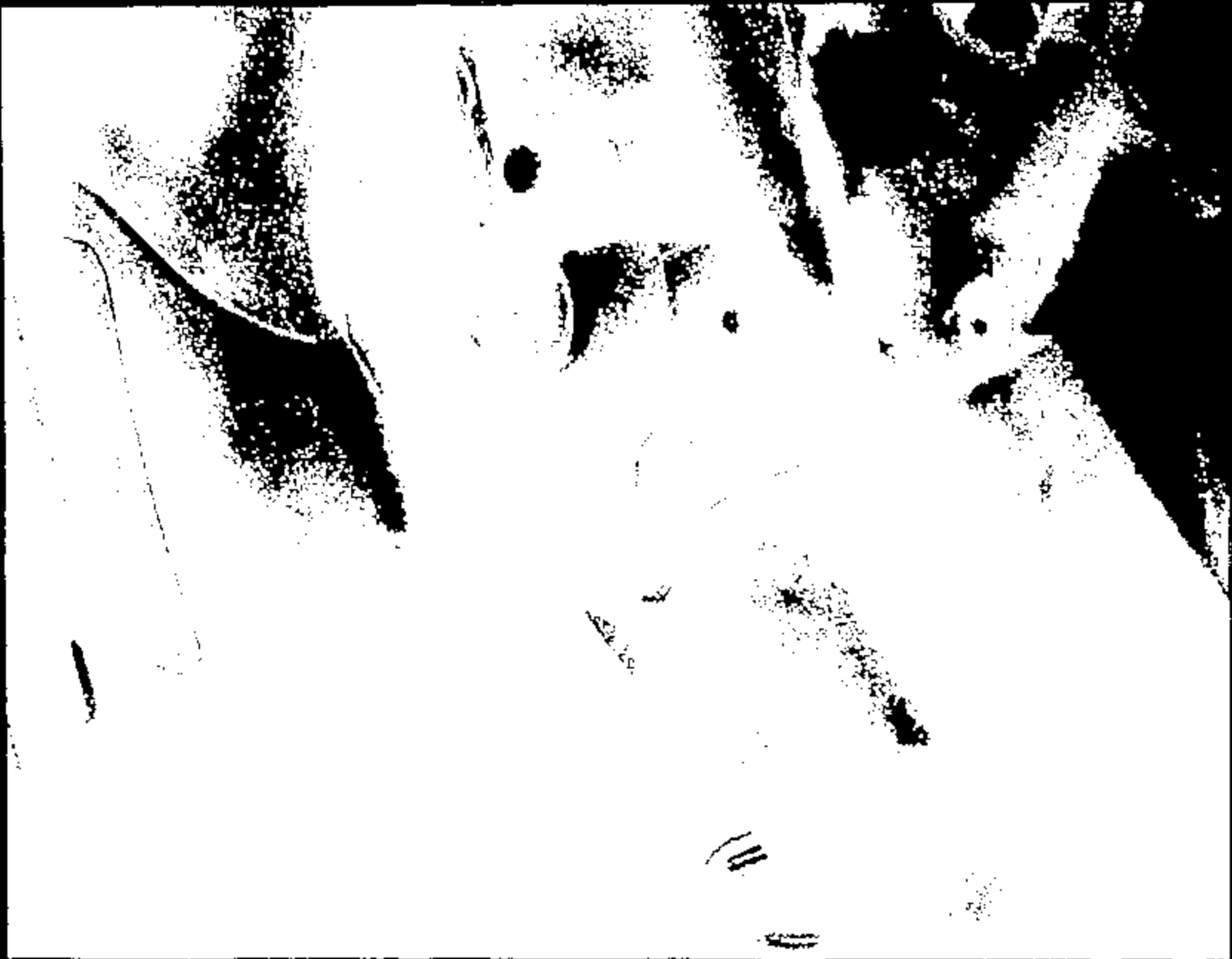
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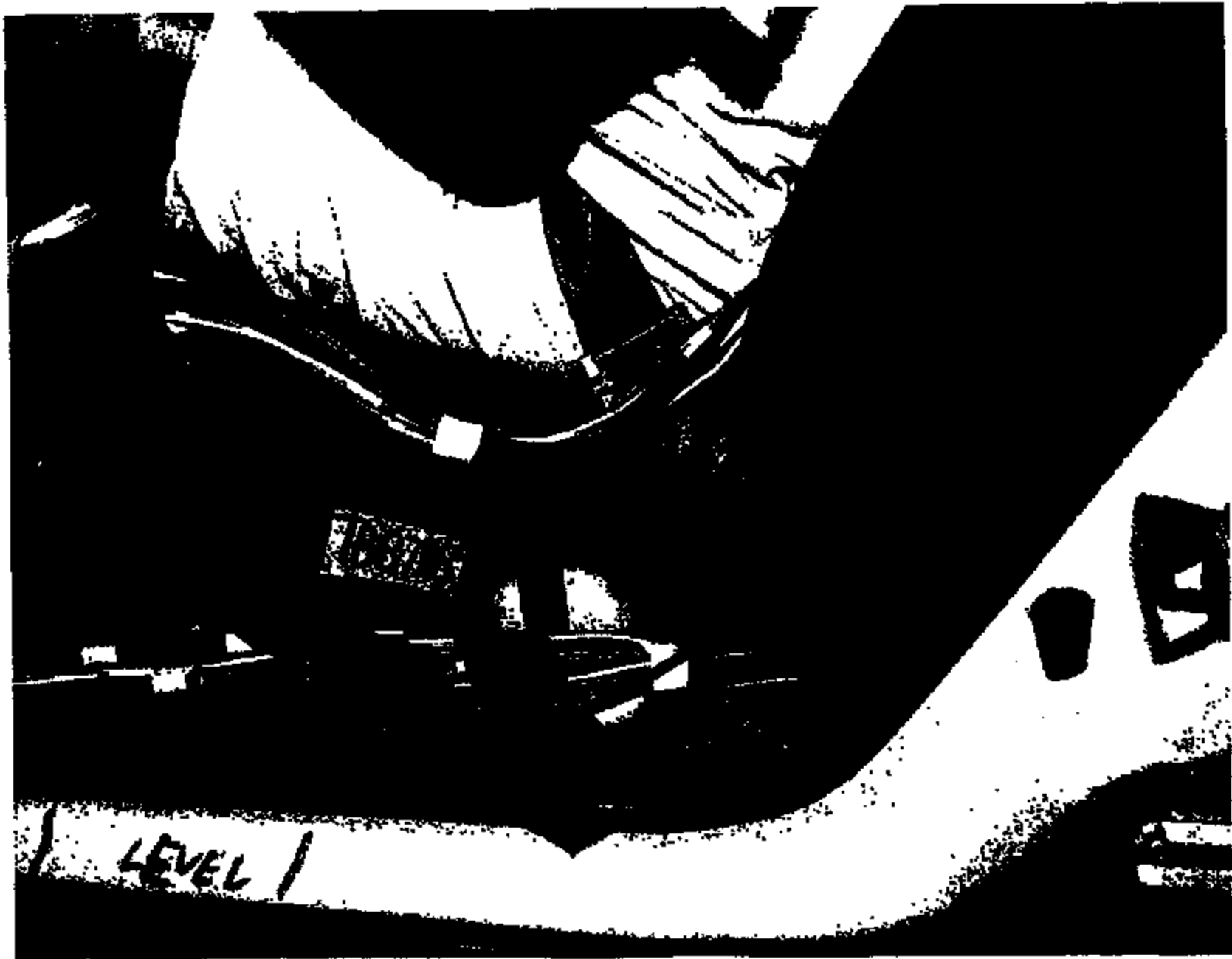
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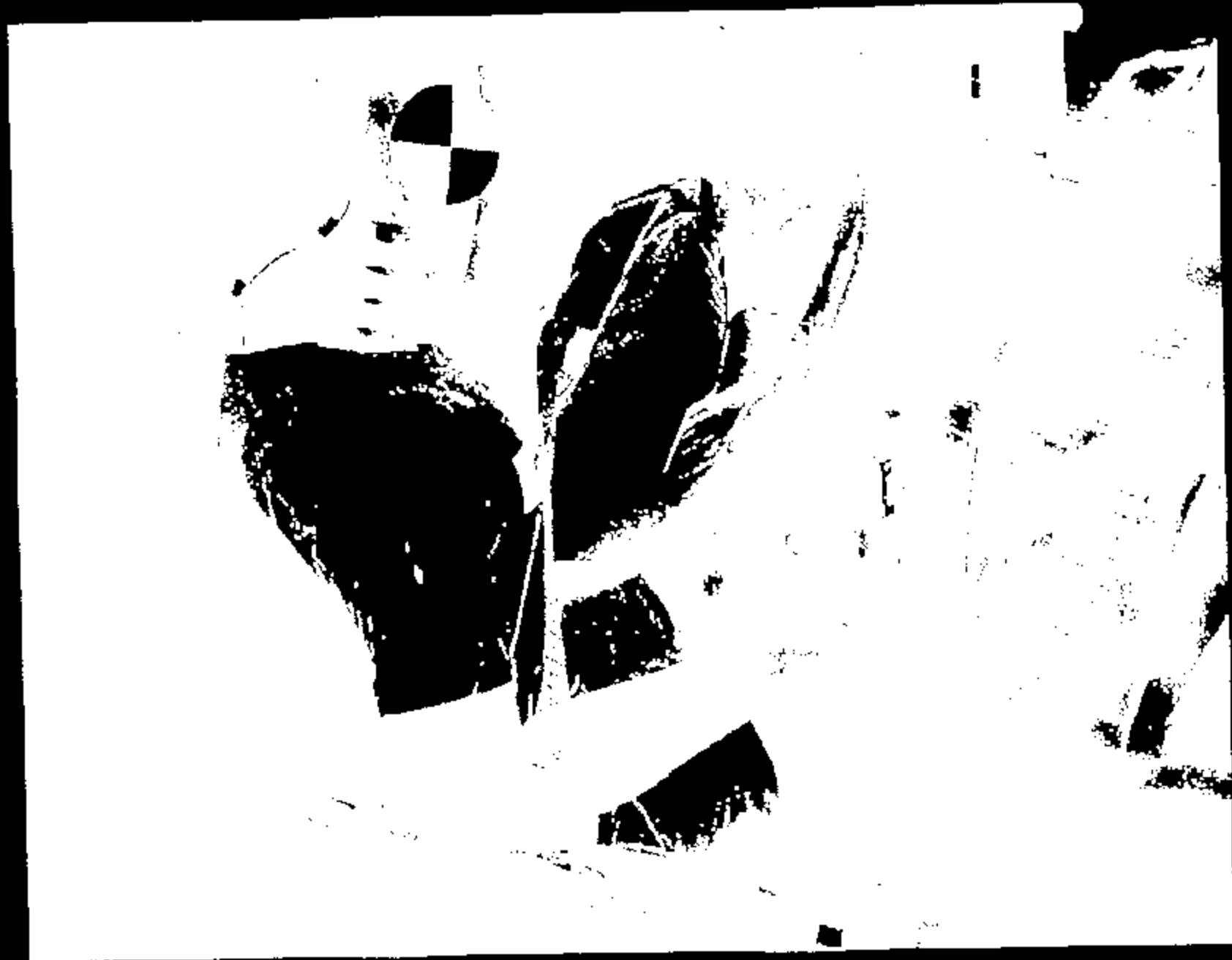
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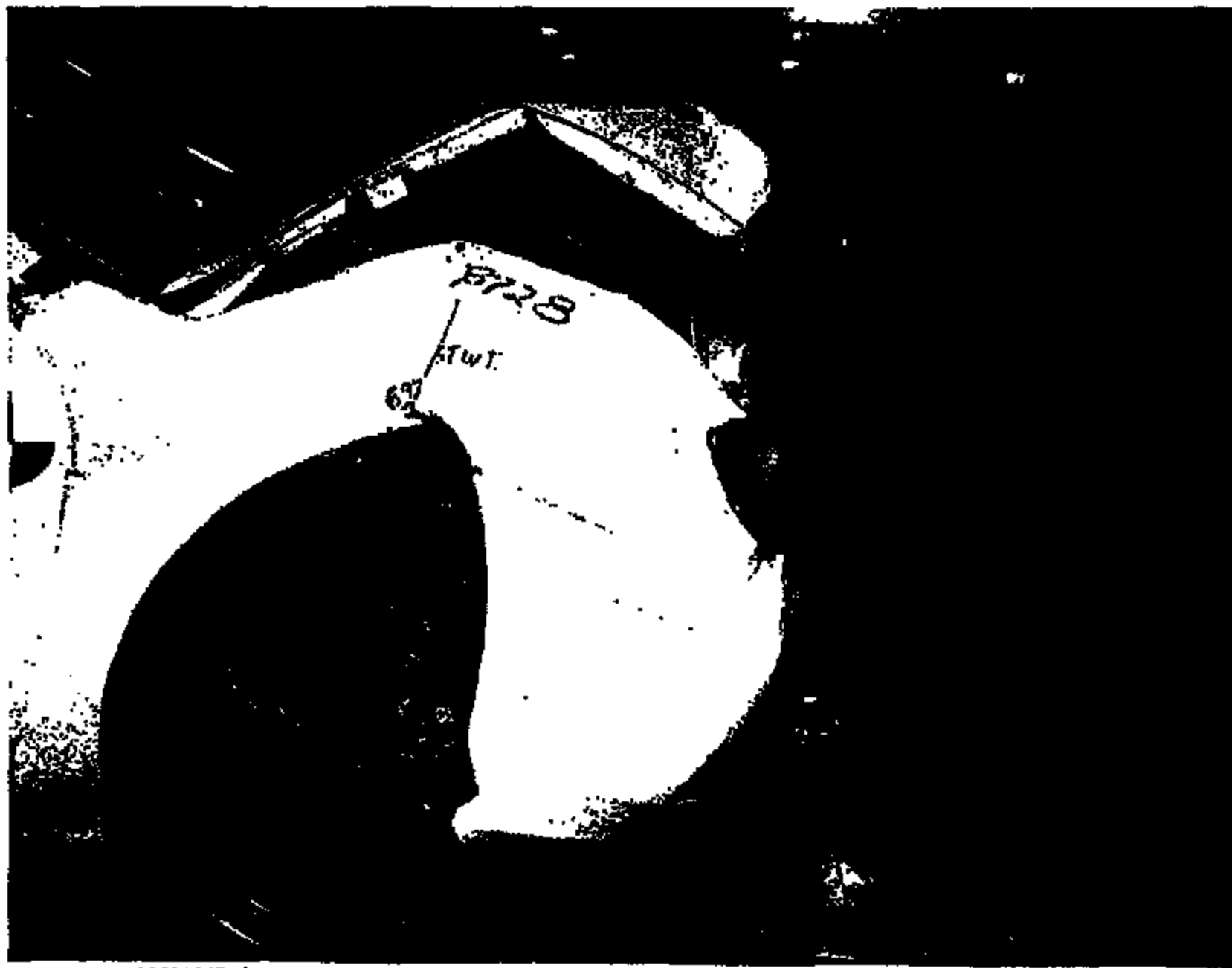
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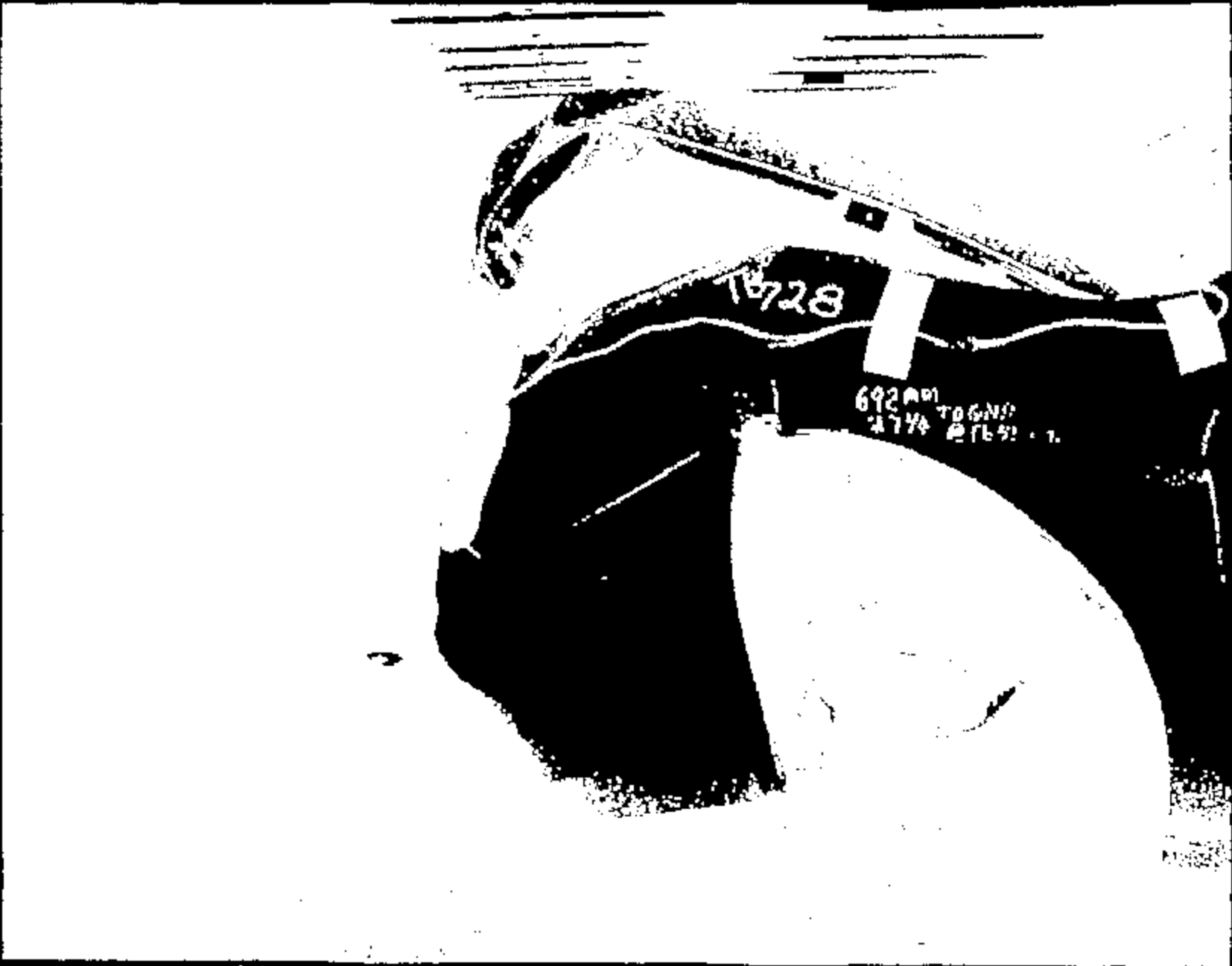
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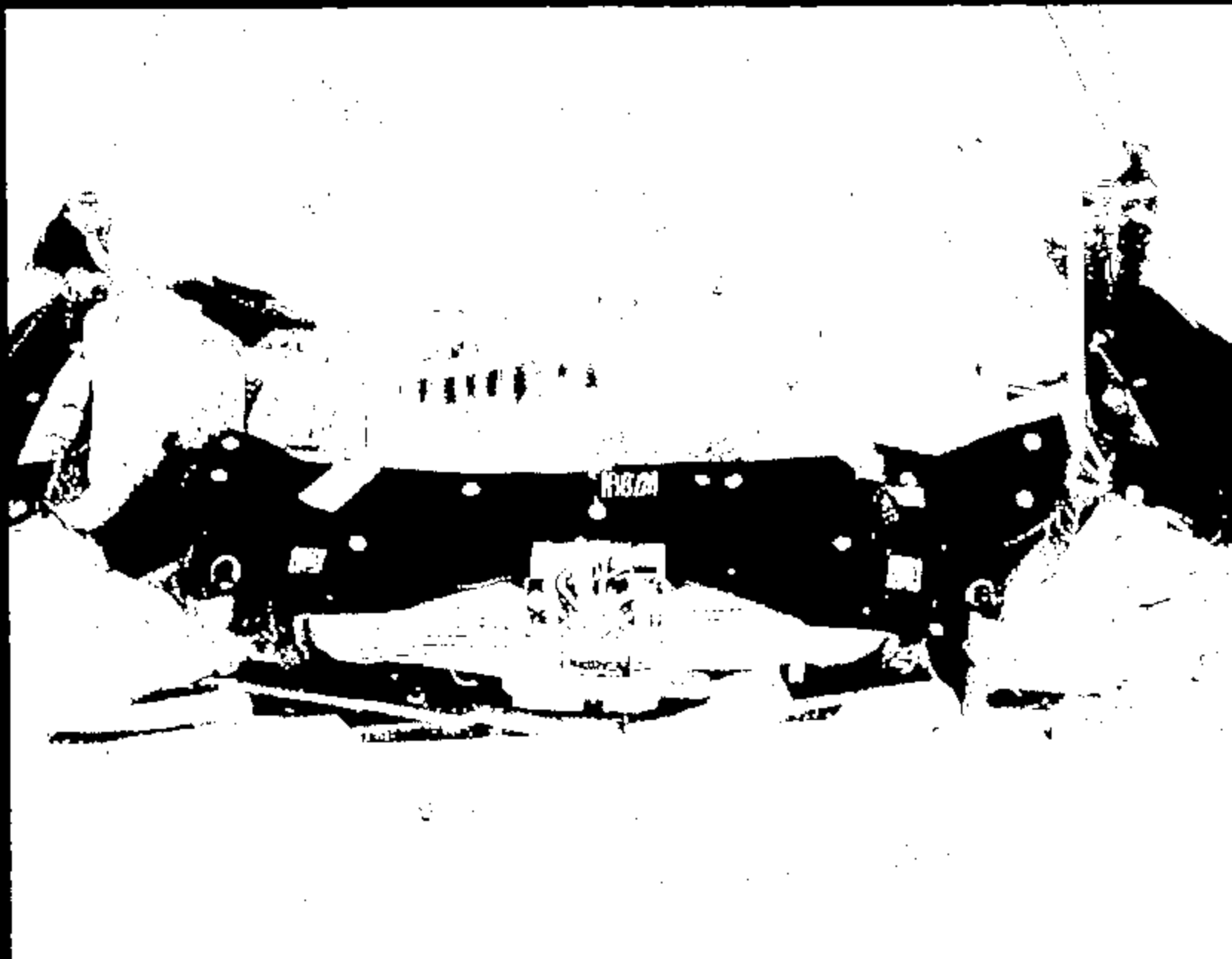




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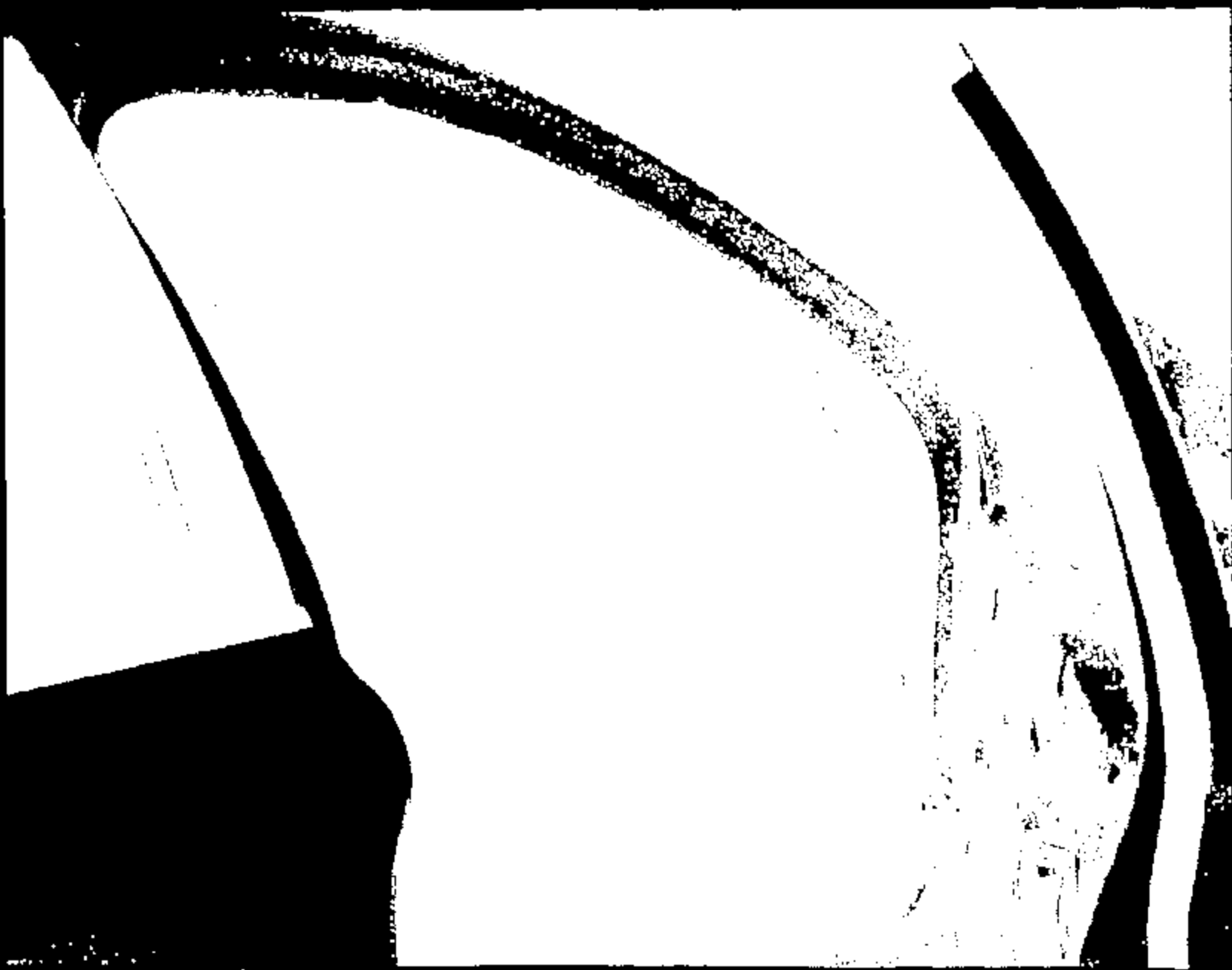
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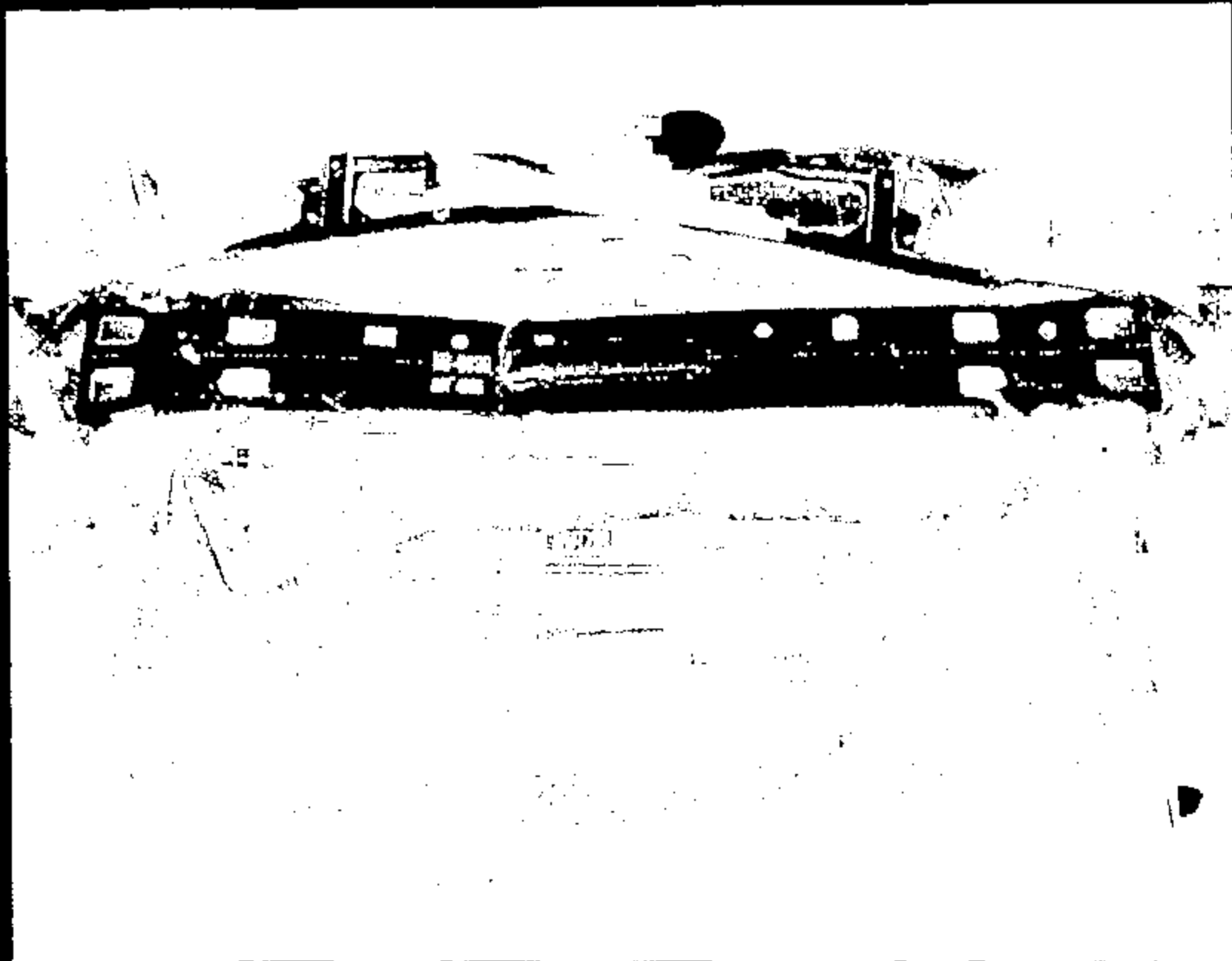
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Image 1

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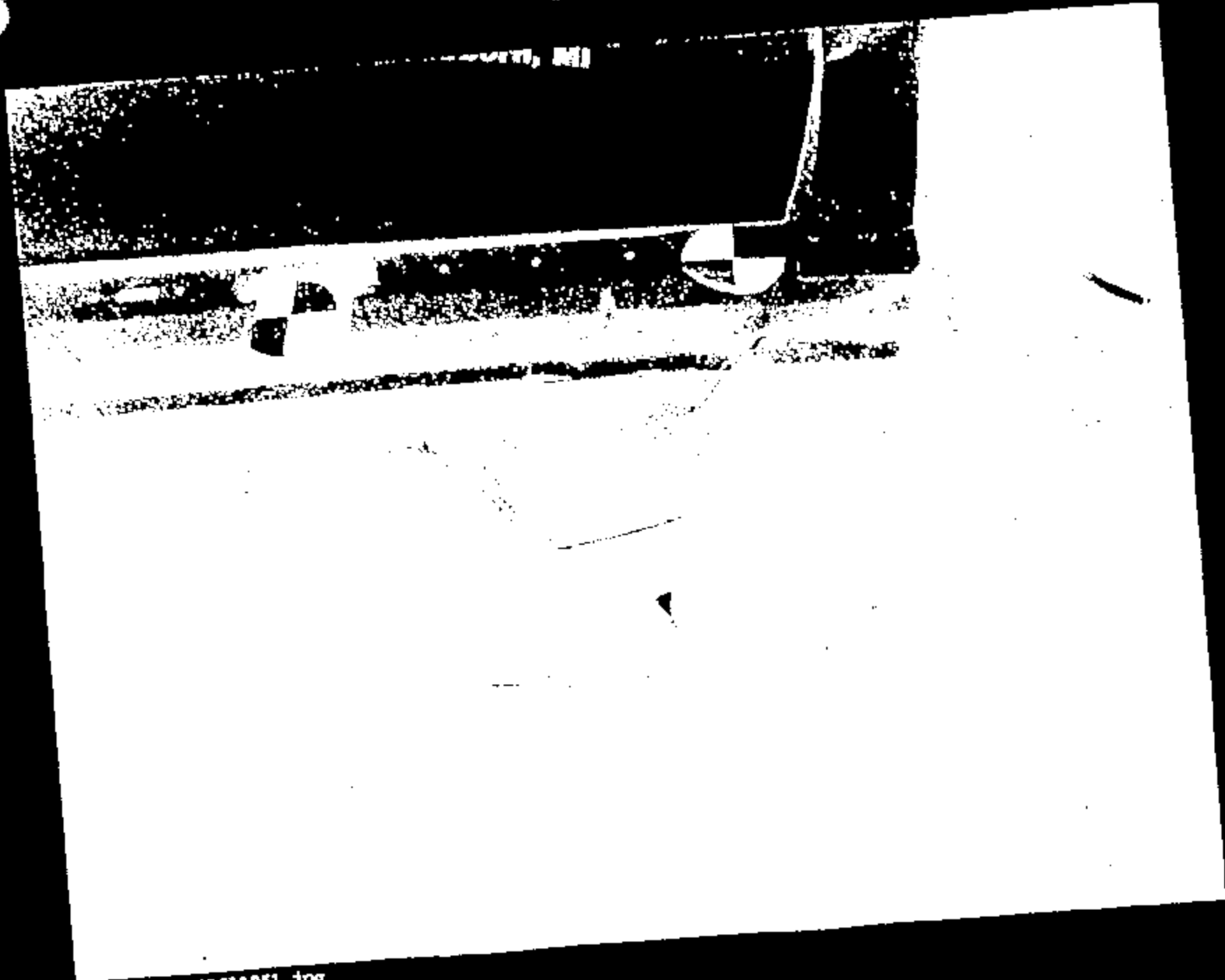
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CRTS 0011611



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11611060.jpg

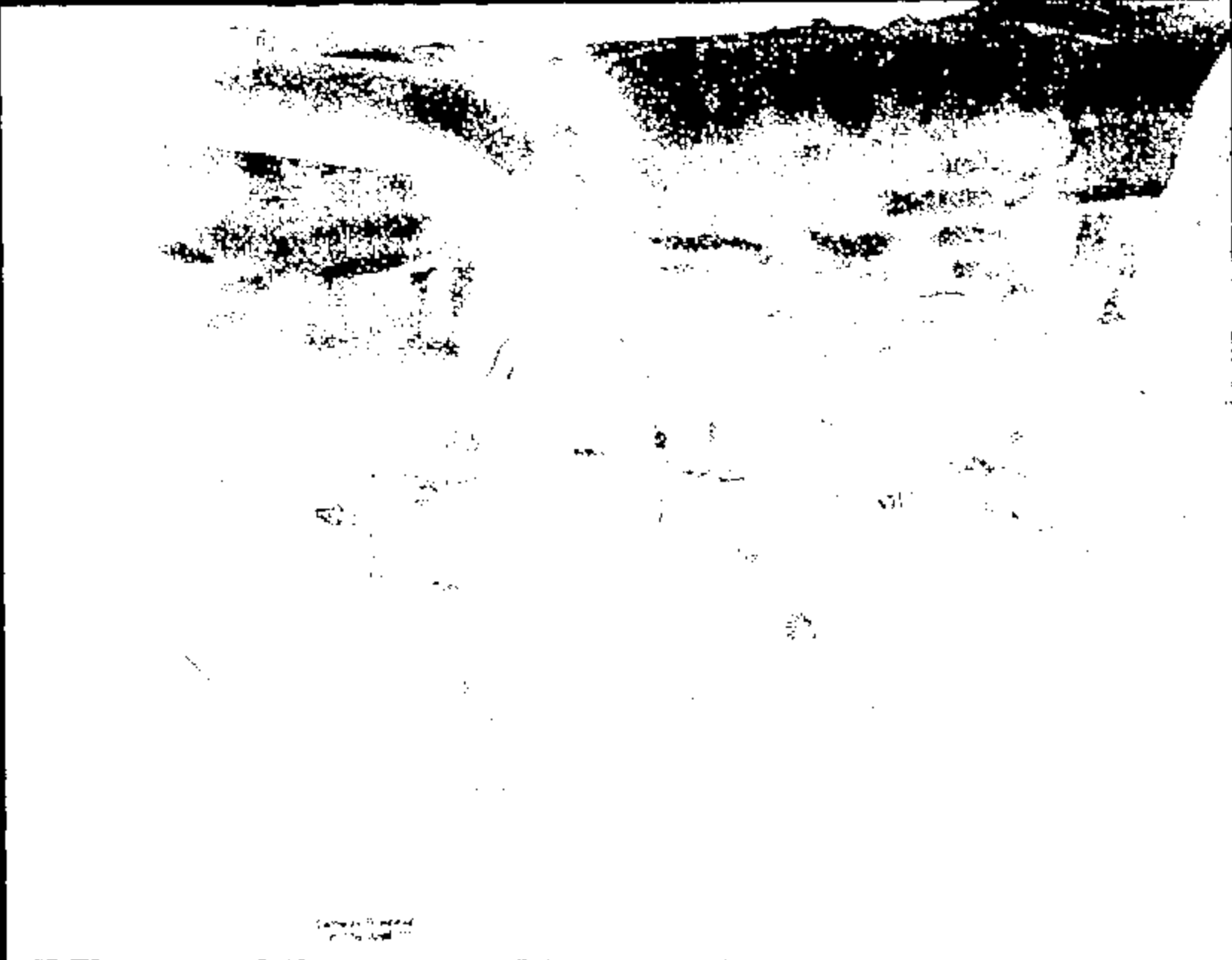


...PORT, MI

CRTS 0011

Frame 1

11611061.jpg



Name :

11611062.jpg

CRTS 0011611



Name: 11611063.jpg

CRTS 0011611



Image:

11611064.jpg

CRIS 0011611

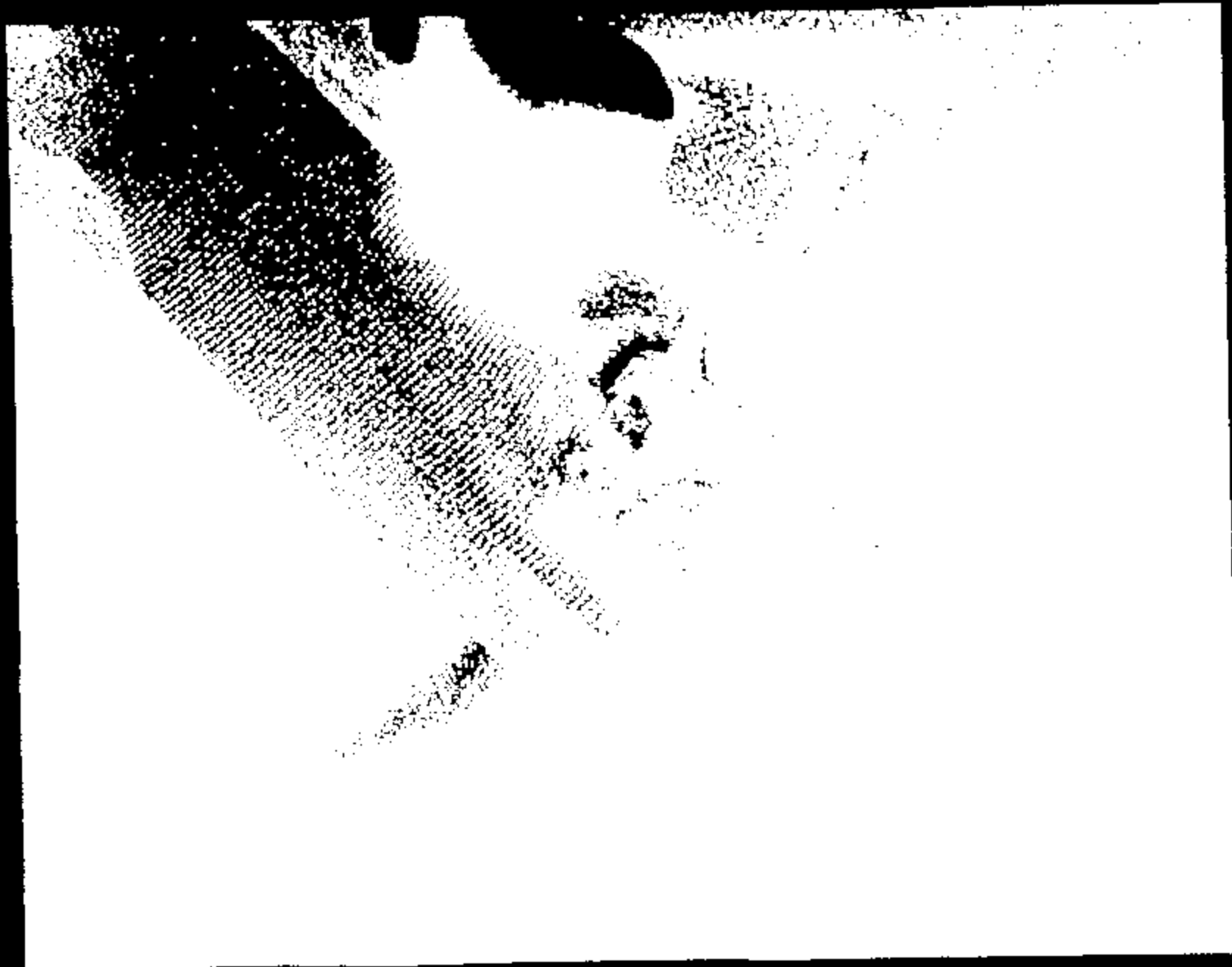


Name:

11611065.jpg

CRTS 0011611





Name:

11611066.jpg

CRIS 0011611



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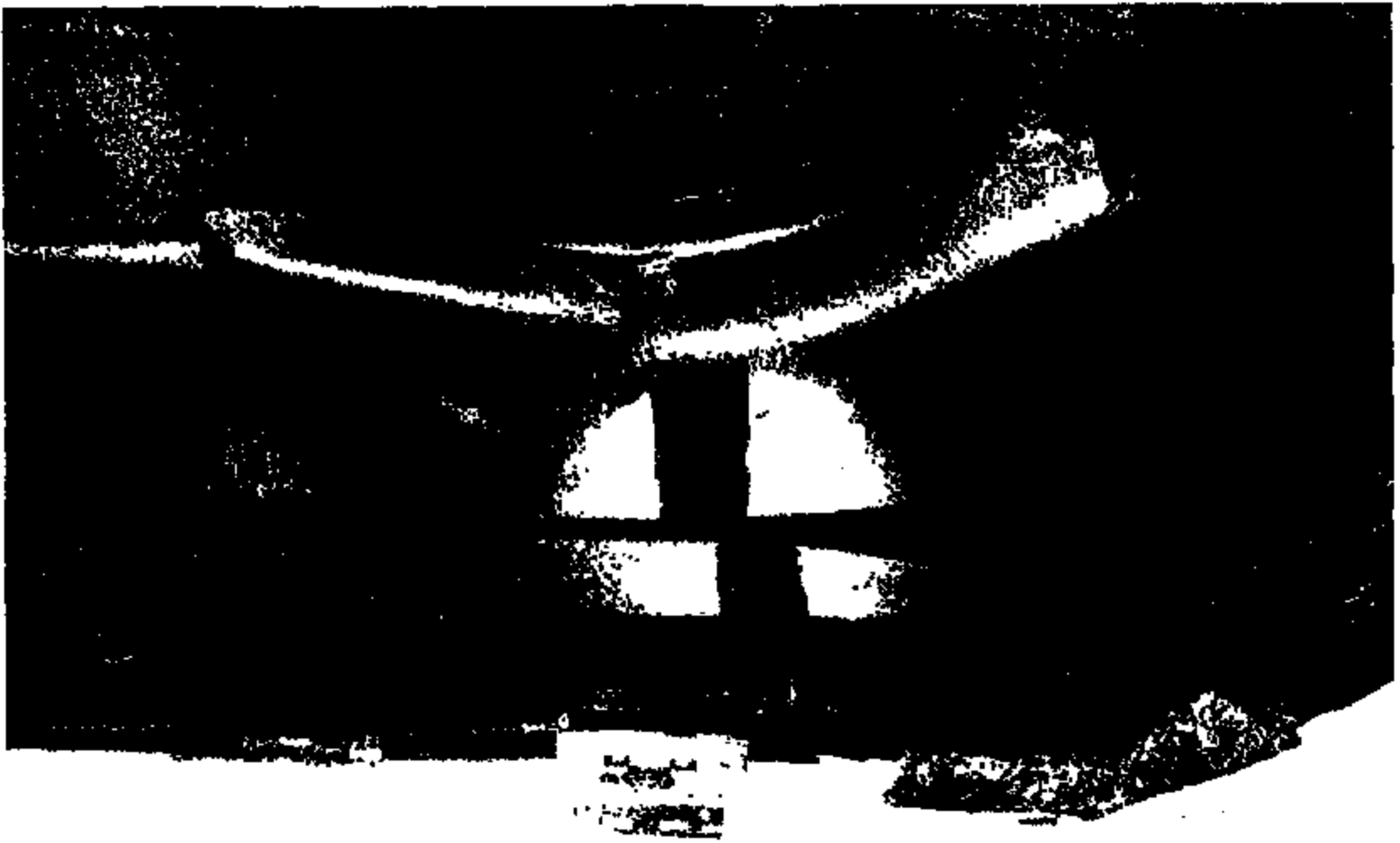
CRTS 0011611



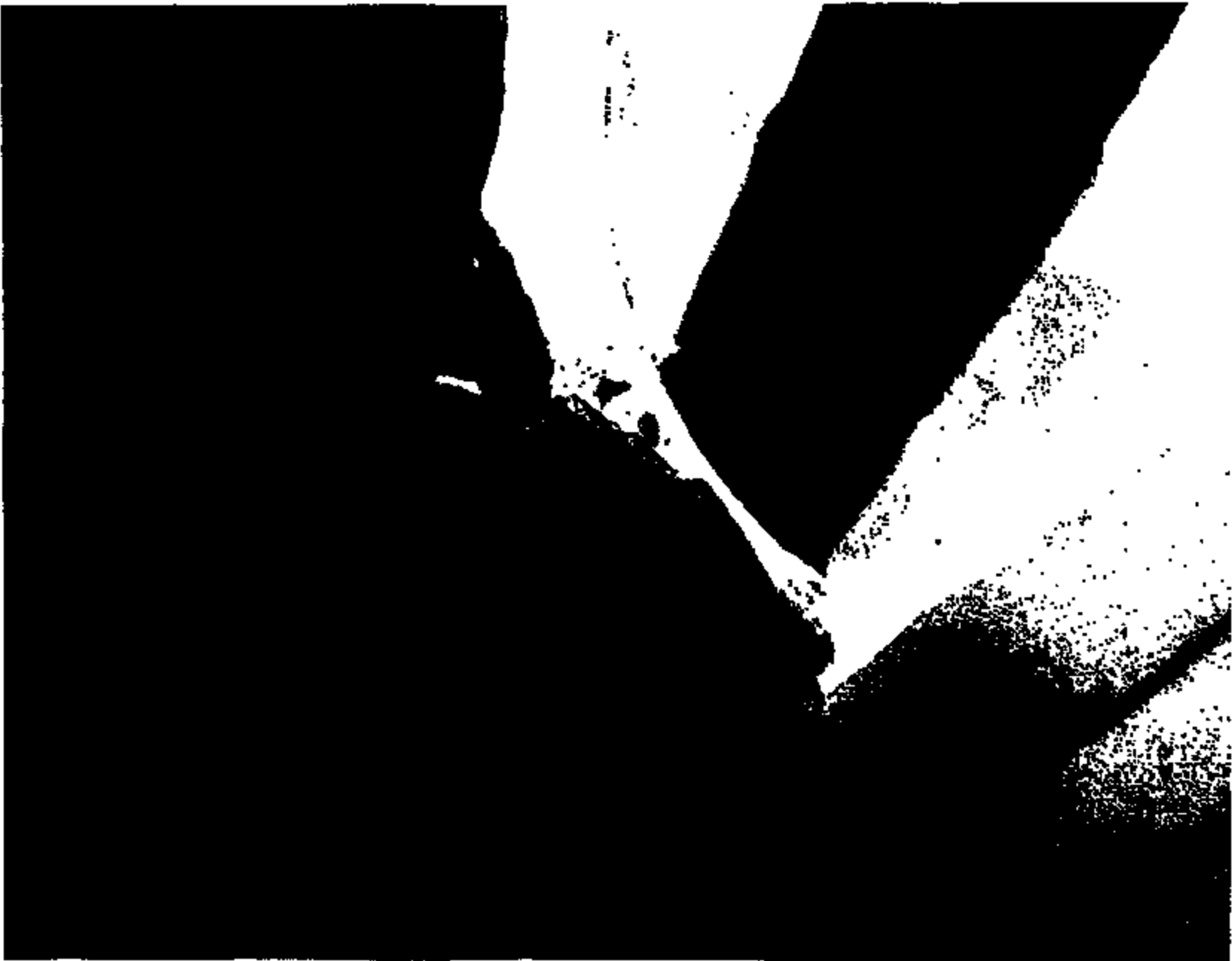
CRIS 0011611

Name r

11611069.jpg



Name:  11611069.jpg



Frame 1

11611070.jpg

CRTS 0011611

**TEST AUTHORIZATION** TEST AUTHORIZATION NUMBER: **TB8728**

TO: Safety Lab Department CC: K. Arthur	REQUEST DATE: <b>9/24/99</b>	REQUESTED COMPLETION DATE: <b>9/27/99</b>
	REQUEST NUMBER: <b>n/a</b>	PROBLEM NUMBER: <b>n/a</b>
	REQUESTING ACTIVITY: <b>Vehicle Crash Safety</b>	

TITLE OF TEST: (speed) (test description) <b>2000 D188 35 MPH 90 Degree Frontal Barrier</b>	PARTS DUE DATE: <b>n/a</b>
TYPE OF TEST: ( ) VEHICLE ( ) BENCH ( ) LABORATORY ( ) OTHER <b>[X] VEHICLE [ ] BENCH [ ] LABORATORY [ ] OTHER</b>	VIN # OR ID IDENTIFICATION <b>- 30PW88</b>
VEHICLE MODEL & YEAR: <b>2000 D188</b>	PROD. OR ENG. LETTER: <b>n/a</b>
ENGINE NO. DISPL. CARS: <b>6.0L/2V V6</b>	TRANS / DRIVE TRAIN: <b>AX4N</b>
AXLE RATIO: <b>n/a</b>	IGNITION TIMING: <b>n/a</b>
TYPE OF FUEL: <b>water if needed</b>	CONVERTER: <b>n/a</b>
CRANKCASE OIL AND CAPACITY (L): <b>n/a</b>	TIRE SIZE AND PLY RATING: <b>P215/60R18</b>
VEHICLE TEST WEIGHT: <b>FRONT 2278 BEAR 1887 TOTAL 3865</b>	TIRE PRESSURE (psi): <b>FRONT 30 BEAR 30</b>
REPORT CATEGORIES: <input checked="" type="checkbox"/> ENGINEERING <input checked="" type="checkbox"/> DATA <input checked="" type="checkbox"/> RAW DATA	DISPOSITION OF PARTS: <b>n/a</b>
	PROOUREMENT RESC ? <input type="checkbox"/> YES <input type="checkbox"/> NO IF YES, GIVE CODE
	MAIL REPORT TO:
	BLOG:
	MAIL DROP:
	ADDRESS:

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

1) Conduct	(speed) 35 MPH (mode) 90 Degree Frontal Barrier	(year) 2000 (vehicle) D188 (eval) # 1PP	Schedule No. <u>7-7-12</u> Retain Until <u>2019</u>
2) Velocity At Impact: Remote Fire Time: Positioning procedure:	35 MPH N/A ST-45	3) Vehicle Year: 2000 Vehicle Line: D188 Vehicle Level: 1PP	

Test Requester: (name) L. Mankler (phone) 24-84880 (paper number) LMS  
Build Coordinator: B. Pagano 32-30845 BPAG Estimated test cost = \$80,000.00  
Additional Contacts:  
Test Dev. Engineer *Luca Mankler*

REQUESTING SECT. NO:	WORK ORDER WORK TASK:	ISSUED/ REQUESTED BY:	PHONE:	APPROVAL:	TEST TYPE:	FISC:	SIGN OFF DATE:
TEST	F88	L. Mankler	24-84880	K. Arthur	n/a	n/a	n/a

COMPLETE THE FOLLOWING TWO QUESTIONS AS INDICATED:

(Check appropriate boxes)

<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 basic 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>2 - What is the expected Test Outcome:</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Results will meet DVPWCR 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>
--	--

Requester/Originator: L. Mankler  
Project: 88-016 Frontal Barrier  
Destroy Prev. Copies

*B. Pagano 9-24-99*  
The Authorization Page 1 of 17  
*o.k. Mankler 9-28-99*

328761.01  
Ver. 2.004 Issued: Sept 14, 1993  
Author: Charles/Pagano/Ode

# General Request Information

TAM: TB6728

## Test Mode

35 MPH  
90 Degree Frontal Barrier

## 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 216 - 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 94 Step II Frontal Offset - Occupant Performance  
 ECE 95 Step II 300mm Barrier Side Impact - Occupant Performance  
 95/79/EC - Frontal Offset  
 95/27/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:	BEDAN
Build Number:	
Tag Number:	308W258
VIN Number:	1FAPP68LBYA100198
Fuel System Rated Capacity(Gall):	18
Prototype Level:	1PP
Drive Side:	LH

**General Specifications  
Secondary Vehicle or Cart**

TA#: TB8728

**Page left blank intentionally**



# Special Prep/Build Instructions Primary Vehicle

TA#: TB9726

## 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 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:

- 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 (H022409C)

**Occupant / ATD Request  
Primary Vehicle**

TAB: TB8728

		<b>Occupant 1</b>	<b>Occupant 2</b>
<b>Type</b>		<u>BOTH HMI</u>	
<b>Instrumentation Level*</b>		<u>CERT</u>	
<b>In-Vehicle Location</b>		<u>LF</u>	
<b>Verify:</b>	<b>Seat Position Long</b>	<u>MID</u>	
	<b>Seat Position Vert</b>	<u>adjust H-point to normal pos. for worst case</u>	
	<b>Seat Back Angle</b>	<u>27.2 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>fn 01/23/99 <del>YES</del></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

TA#: TB8728

## Final Prep Contacts

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

Name: _____	Test Engineer	Request Engineer	Build Coordinator
Phone: _____	<u>L. Miller</u>	<u>24-84980</u>	<u>B. Pagano</u>
Pager: _____	<u>LMIB</u>	<u></u>	<u>BPAG</u>

## Test Weight

<input checked="" type="checkbox"/> Minimum Option Weight	GVWR: _____
____ 39% Option Weight	Wheelbase: _____
____ Maximum Option Weight	

## Tire Pressure

Front: 30. psi                      Rear: 30. psi

## Fuel System

Fuel Tank & System to Contain: water if needed

<u>15.2 gallons</u>	=	<u>85 %</u>	x	<u>16.0 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>2,138 lbs</u>	<u>2,278 lbs</u>	Front: <u>13 lbs</u>	<u>0 lbs</u>	Front: <u>2261</u>
Rear: <u>1,185 lbs</u>	<u>1,587 lbs</u>	Rear: <u>13 lbs</u>	<u>0 lbs</u>	Rear: <u>1607</u>
Total: <u>3,323 lbs</u>	<u>3,865 lbs</u>	Total: <u>26 lbs</u>	<u>0 lbs</u>	Total: <u>3868</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 Orange	<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 stoddard until weigh-up

# Dimensional Analysis Request Primary Vehicle

Frontal Impacts

TAR: TB6728

74		
81		
108	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	Unfized Standard Bottom (CAR)	Exterior
134	Drive Shaft Collapse	Exterior
136	Standard Body Relative	Exterior/Interior
138	Windshield (CAR)+R31]C	Exterior
140	SB & Pillar	Exterior
142	Shot-Guns	Exterior
148	Header	Interior
150	Steering Wheel Deformation/ Periphery (Just strg whl hub)	Interior
153	Steering Column Mounts	Interior
154	Steering Column Targets	Interior
155		
168	Seat Track to Floor Mounts (LHS front seat only)	Exterior
168	Seat to Track Mounts	Exterior
160	Cowl Rotation	Exterior
162	Floorman 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
800		
802		
846		
866		
884		
876		
486	Plot 8 Sectional Profiles	
606	Decoupling Column Collapse	Exterior
607	P.R. Steering Column Collapse	Exterior
608		
640		
641		
642		
647	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

TAF: TB8728

## Front Impact Film Analysis

- Head WRT Vehicle
- Shoulder WRT Vehicle
- Rooker (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 Kinematics
- Format

## High Speed Cameras for Front Impact

### On-Board Vehicle

- Onboard - LEFT Occupant Over Shoulder
- Onboard - RIGHT Occupant Over Shoulder
- Onboard - Driver "D" Ring
- Onboard - Driver Retractor (Lower)
- Onboard - Driver Lower Torso to I/P Contact, From Rear, Cross Car
- Onboard - Passenger Lower Torso to I/P Contact, From Rear, Cross Car
- Onboard - Passenger "D" Ring
- Onboard - Passenger Retractor (Lower)
- Onboard - Driver Door (Left Knee to Bolster)
- Onboard - Passenger Door (Knees to I/P)
- Onboard - Photo Sonic (Intermediate Shaft) - From Floor
- Onboard - Photo Sonic (Intermediate Shaft) - Side View From Tunnel
- Onboard - LEFT Occupant 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  
*for 07/20/99*  Overhead - A-Pillar Forward  
 Steering Column Displacement *Req/used in addition coverage.*  
 Scale  
 Resection

**Pit Coverage**

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

**All Other High Speed Photography**

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

# Instrumentation and Data Processing Request

TAF: TB8728

## 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 Rocker at A-Pillar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Right Rocker at A-Pillar	<input type="checkbox"/>	<input type="checkbox"/>	<input 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 checked="" type="checkbox"/> Center Floor Pan @ RCM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" 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 # 89	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Directly Below D.A. Point # 84	<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"/>

*on driver map* (with arrow pointing to Center Floor Pan @ RCM)

*1/28/99 Rev.* (written next to the checked box for Center Floor Pan @ RCM)

**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#: TB6726

## 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 1-st stage  
 Driver Squib Current 1-st stage  
 Driver Bag Pressure  
 Driver Squib Voltage 2-nd stage  
 Driver Squib Voltage 2-nd stage  
 Passenger Squib Voltage  
 Passenger Squib Current  
 Passenger Bag Pressure  
 Passenger Inflator Pressure

## STEERING COLUMN:

Stroke Break Wires  
 TR Mechanism Break Wires  
 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 Cut-Off Switch

## ANGULAR MOTION SENSORS

## VEHICLE STRING POTS

## OTHER VEHICLE SYSTEM INSTRUMENTATION

## 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



**Dummy Instrumentation - Internal**

50H3                      L/P

**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

**POTENTIOMETERS:**

Chest Deflection  
 Left Knee Slider                       Ball Bearing                       Std                       Dlap  
 Right Knee Slider                       Ball Bearing                       Std                       Dlap

**OTHER INTERNAL DUMMY INSTRUMENTATION:**

L/R Femur Accele                       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

Request/Originator: DPERMCO  
Process: S&S Facility: Buser  
Destroy Prev. Copies

Request #: 16-029-6468  
Instrumentation Attachment  
Page 13 of 17

Auto TA  
Validated: August 28, 2008  
Author: OliverNg/Pingtan/Dan

CRTS 0011611

# List of T-Contacta

TAF: TB5728

	Last name	Phone	Pager	Profs
Requestor	L. Miskr	24-84280	LMIS	LMISKR
Approving supervisor	K. Arthurs	39-05158	KART	KARTHURS
Build coordinator	B. Pagano	32-30645	BPAG	BPAGANO
Test engineer				
Senior Engineer	F. Bologna	31-73286	FBOLOGNA	FBOLOGNA
Other				

	Last name	Phone	Pager	Profs
Seats	M. Jessup	64-51891	MJESSUP1	MJESSUP1
Instrument panel	M. Keranen	33-74146	NONE	MKERANEN
Restraints	N. Desai	39-08146	NDESAI	NDESAI
Air bag (driver)	R. Ruthinowald	82-16978	RRUTHINO	RRUTHINO
Air bag (passenger)	R. Ruthinowald	82-16978	RRUTHINO	RRUTHINO
Steering column				

CRIS 0011611

# Revisions List

TAP:         TB6726        

DATE	AUTHORIZATION	DESCRIPTION	PAGE #'s

# VEHICLE SAFETY PACKAGE LAB WORK ORDER

TAG: TB8728

8/24/99	SEDAN	2000	D186	TB8728
L. Mielke		24-84280	T551	F09
B. Pagano		32-30645	90 Degree Frontal Barrier	
IFAFP55U9YA100138			306W255	
SORP				
		MID POINT	FULL REAR	
LH FRT		CENTER FRT		RH FRT
LH REAR		CENTER REAR		RH REAR
VEHICLE DELIVERED TO		D/A	BARRIER	BUILD SITE

**ANY QUESTIONS CONTACT:**

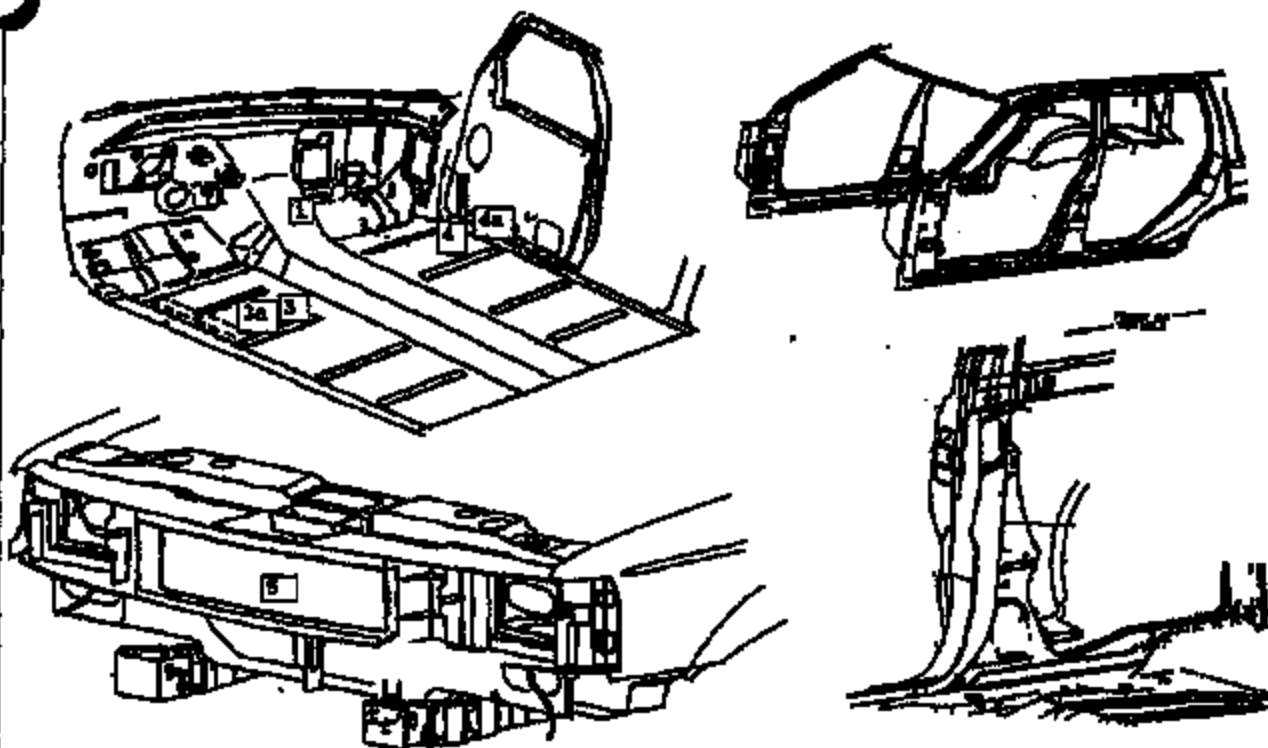
**PETER J. SIMONE**  
 PHONE: (313) 59-4800  
 PAGER: (313) 705-8853

**DESCRIPTION OF JOB TO BE PERFORMED:**


# SENSOR MAP

VIN # 1FAFP66U9YA100158  
Build level: 1PP

Program: D166  
Test Mode: 95/90 BARRIER  
TA No.: TB6726



Location Name		Supplier	Output	Nominal (+/-)	Max/Min	Serial #
1	C/S_FLOOR_PAN_R_PCM (2ND WAGON Location)	VISION-1	DATA_OUT	0	30	[REDACTED]
		VISION-2	DATA_OUT	0	30	
		VISION-3	PANEL_OUT	0	30	
		VISION-4	PANEL_OUT	0	30	
		VISION-5	C_FPS_OUT	0	30	
		VISION-6	P_FPS_OUT	0	30	
		VISION-7	D_PANEL_OUT	0	30	
		VISION-8	P_PANEL_OUT	0	30	
		VISION-9	Status	5	10	
1	C/S_FLOOR_PAN_R_PCM	none	TRIAL	On input		NA
5	C/RAD	PCB	VISION	PCB		NA
5	C/RAD	none	TRIAL	next to PCB		NA

Y zero required. Assumed system power from vehicle wiring and battery - use provided harness

### REVISION LOG

DESCRIPTION	DATE	PAGE AFFECT	NOTE

L. Mink 24-04880  
File: SMAP\_6726.xls, Tab: Sheet1  
AVT VCS

Page 2 of 2 *[Handwritten signature]*

Created: 8/1/99  
Revised: 8/1/99  
Printed: 8/24/99, 7:19 AM

CRTS 0011611

CRASH NUMBER 11611

PAGE 1 OF 1  
CREATED: 08/28/00 08:53

# BARRIER QUALITY ASSURANCE AND TRACKING FORM

**DATA ENGINEER:** Name not on list  
**TEST ORDER NUMBER:** TR0720  
**TEST ENGINEER:** R. O'DA  
**VEHICLE TYPE:** D-100  
**REQUESTED SPEED:** 35 MPH  
**CRASH DATE:** 08/28/00  
**CRASH TIME:** 08:53  
**TOTAL CHANNELS:** 68

**WB REVIEW ENGINEER:** Lee  
**SITE:** 68  
**TEST DESCRIPTION:** 90 DEG. FRONT FIXED BARRIER  
**IMPACT TYPE:** CAR  
**TEST TYPE:** CT  
**OK TO STRIP DATE:** 08/28/00  
**OK TO STRIP TIME:** 10:25  
**DUMMY CHANNELS:** 34

**TEST POINT INFORMATION**  
 POS NO. TYPE ALI BELTS PYRO OTHER  
 LF 308 BYDM Y Y

11611

CHANNEL IDENTIFICATION		EQUIPMENT					ANOMALIES										DESCRIPTION	RESOLUTION	CAT				
TEST CHANNEL	LOCATION	TYPE	TRANSDUCER	EXTENSION CABLES	CABLES	CABLE PACKAGING	CABLE CHANNEL	NO. WALK	WALKS DOWN	CONNECT PROBLEMS	LEAKY STRIP	EXCESSIVE POLY. FORCE	UNUSUAL EVENTS	INTERFERENCES	EXCESSIVE VIBRATION	DATA MESSAGE	DATA THROUGHPUT	IMPACT VELOCITY	LOAD VELOCITY	DATA ENGINEER REMARKS	TECHNICIAN REMARKS	DATE	TIME
14	LF DUMMY FILMS	LAT	48521		BAX-2	3208	14	X	X											Time to 540ms	ODPS 180ms	9	1
31	CRAD IN	VERT	48538		BFP-2	3226	26									X				to 600ms	Cable pinched by crash.	2	2
37	DRIVER SOUB VOLTAGE 2ND		44266		ALZ-2	3216	26									X				1st wire open current 1st of	Wrong location.	1	2
38	DRIVER SOUB CURRENT 1ST		44266		ALZ-3	3216	27									X				1st wire open voltage 2nd of	Wrong location.	1	2
43	GF FLOOR PAN @ BOM #1	LAT	44482		APT-4	3216	32											X		Time to 600ms	Wrong base direction.	1	1

CRITS 0011611

DUMMY MEASUREMENT REPORT  
CRASH BARRIER

TEST NUMBER 11611  
TEST ORDER NUMBER TBS728

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	4.20
ROCKER TARGETS TO GROUND FRONT	7.00
ROCKER TARGETS TO GROUND REAR	7.00
NOSE TO STEERING WHEEL	15.40
NOSE TO INSTRUMENT PANEL	
INSTRUMENT PANEL TO TORSO	
STEERING WHEEL TO TORSO	8.20
STEERING WHEEL TOP LEGS	1.30
KNEE SPREAD OS-OS (HYB II) / CL-CL (HYB III)	9.30
SEAT BACK ANGLE	27.80
PELVIC ANGLE	21.60
HEAD ANGLE	
ROCKER ANGLE	
NECK BRACKET ANGLE	
BUMPER TARGET TO GROUND	

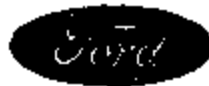
RELATIVE MEASUREMENTS (INCH)	WRT FRT RKR TGT
HEAD LAT	14.70
HEAD VERT	37.00
HEAD LONG	14.80

SHOULDER LAT  
SHOULDER VERT  
SHOULDER LONG

H-POINT LAT	9.80
H-POINT VERT	11.70
H-POINT LONG	8.50

O/S KNEE BOLT LAT	10.40
O/S KNEE BOLT VERT	17.50
O/S KNEE BOLT LONG	-4.40





**"RECORD COPY"**  
 Schedule No. 7-7-12  
 Retention Period 2019

**FINAL TEST REPORT**

**Global Test Operations  
 Research and Vehicle Technology**

**TO:** L. Miskir

Test Order No. T-B7750  
 Work Task W. O. No. F16  
 Test Date 10/13/99  
 Date Reported 11/10/99  
 Sheet 1 of 73

**SUBJECT:** Crash Test 11631 (90° Front Fixed Barrier Impact at 34.9 ± 0.4 mph, 56.2 ± 0.6 km/h) - 2001 Taurus (D186) 4-Door Sedan - 2001 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 Docket No. 98-4358, Canadian Gazette SOR/97-447) (Adult)

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 injury criteria data.
- See Attachment 2 for fuel spillage data.
- See Attachment 3 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. Lash  
 Section Supervisor  
 Operations Engineering Section

**VEHICLE DATA:**

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

**ID Numbers** 1FAPP52Z7YG100025, 306-W-994, DD140000

**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.

**Frost Seat(s)** Type: Bucket  
Cover: Cloth  
Tracks/Position: 6-Way Power/Mechanical Mid and Down  
Seat Backs/Position: Adjustable/27.5° Rear of Vertical  
Head Restraints/Position: Adjustable/Up

**Restraint System** LF: 3-Point Continuous Loop Active Belt with Pyrotechnic Buckle, Steering Wheel Air Bag and Seat Back Side Air Bag

**Occupants** LF: 50th Percentile Male, Hybrid III, Instrumented No. 321

**Test Weight** Front: 2280 lb (1034 kg)  
Rear: 1399 lb (725 kg)  
Total: 3879 lb (1760 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):

- Fired Barrier Collision, T657-ST-14 dated May 3, 1998.
- BFI Fuel Systems Studded Solvent Fill, ST-11 REF. 4.
- Fuel System Static Rollover, T657-ST-34 dated May 29, 1998.
- Occupant Crash Protection, T657-ST-25 dated May 3, 1998.

**2. Significant Deviations from T657-ST-14, T657-ST-25 and T657-ST-34**

Only the Left Front Dummy was used.

8. **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 11631001 through 11631086.

## ATTACHMENT I

Occupant Injury Data (FMVSS 208)

		<u>L. F. Dummy</u>
Head Injury Criteria (HIC)		420
Interval	t1	59 ms
	t2	95 ms
Chest resultant acceleration level at 3 ms cumulative duration		44 g
Chest Deflection (Hybrid III)		1.3 in
Peak axial compression load:		
	Left femur	437 lb
	Right femur	480 lb
Peak axial tension load:		
	Left femur	251 lb
	Right femur	104 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**

**Fuel System Integrity (C/FMVSS 301)**

- There was no fuel system spillage during or for thirty minutes following impact or during the post-crash static rollover test.
- The fuel system held pressure during a post-crash pressure check.

## ATTACHMENT 3

1.0 Vehicle Crush, Film Analysis and/or Instrumentation Data

	Maximum Dynamic Longitudinal Crush	
	in.	(mm)
Left Side	28.4	(721)
Right Side	28.3	(719)

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.

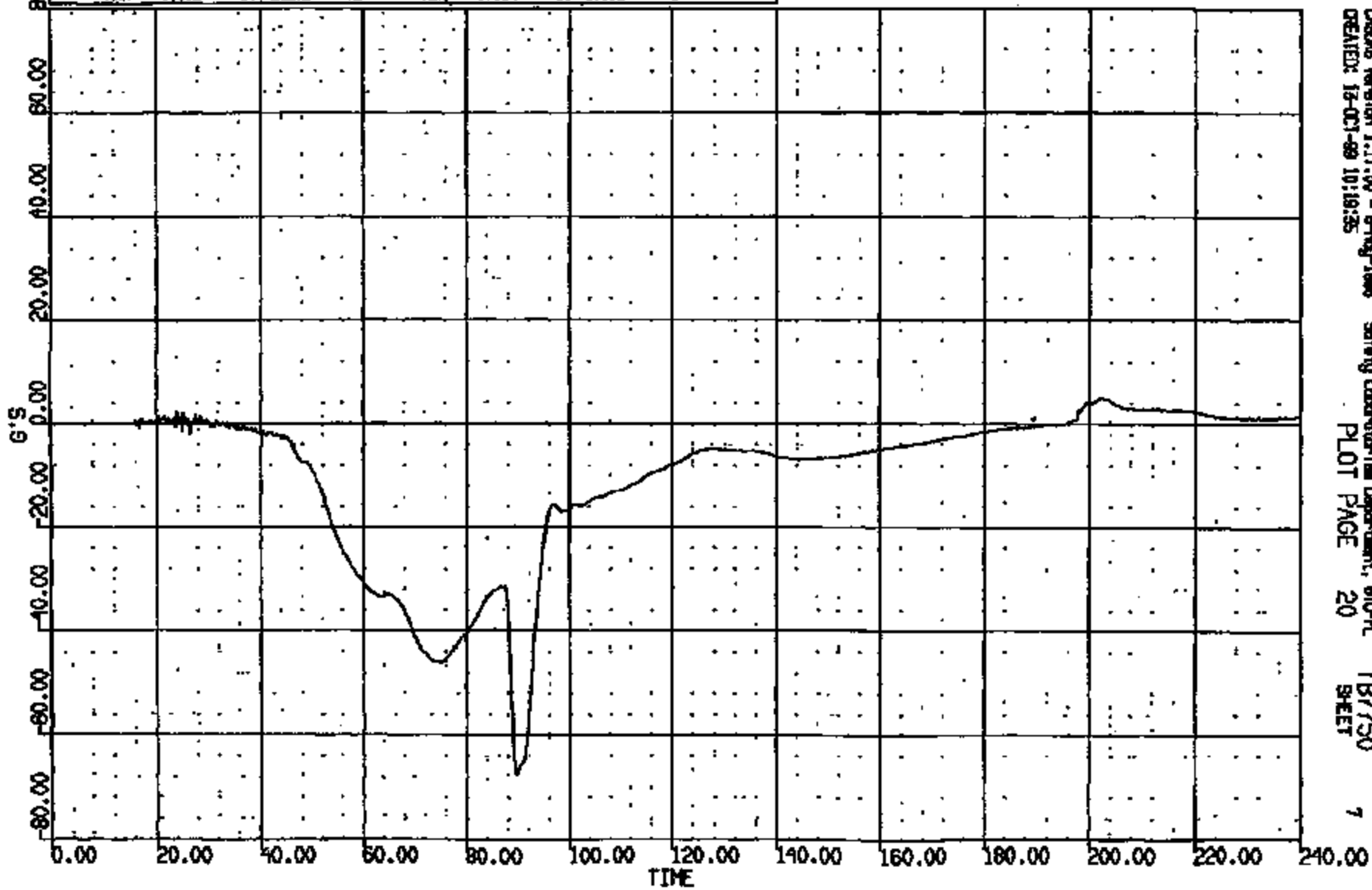
2.0 Vehicle Observations

The left front seat side air bag deployed due to miswiring.

CR R: 11821 TO: TB7750 DATE: 891013 08:44:55  
2001 D-188

(1) CR11831T L/F DUMMY HEAD C.G. LONG 1000C  
MAX = 5.172 at 202.2 NS MIN = -67.51 at 89.52 NS

AXIS 1

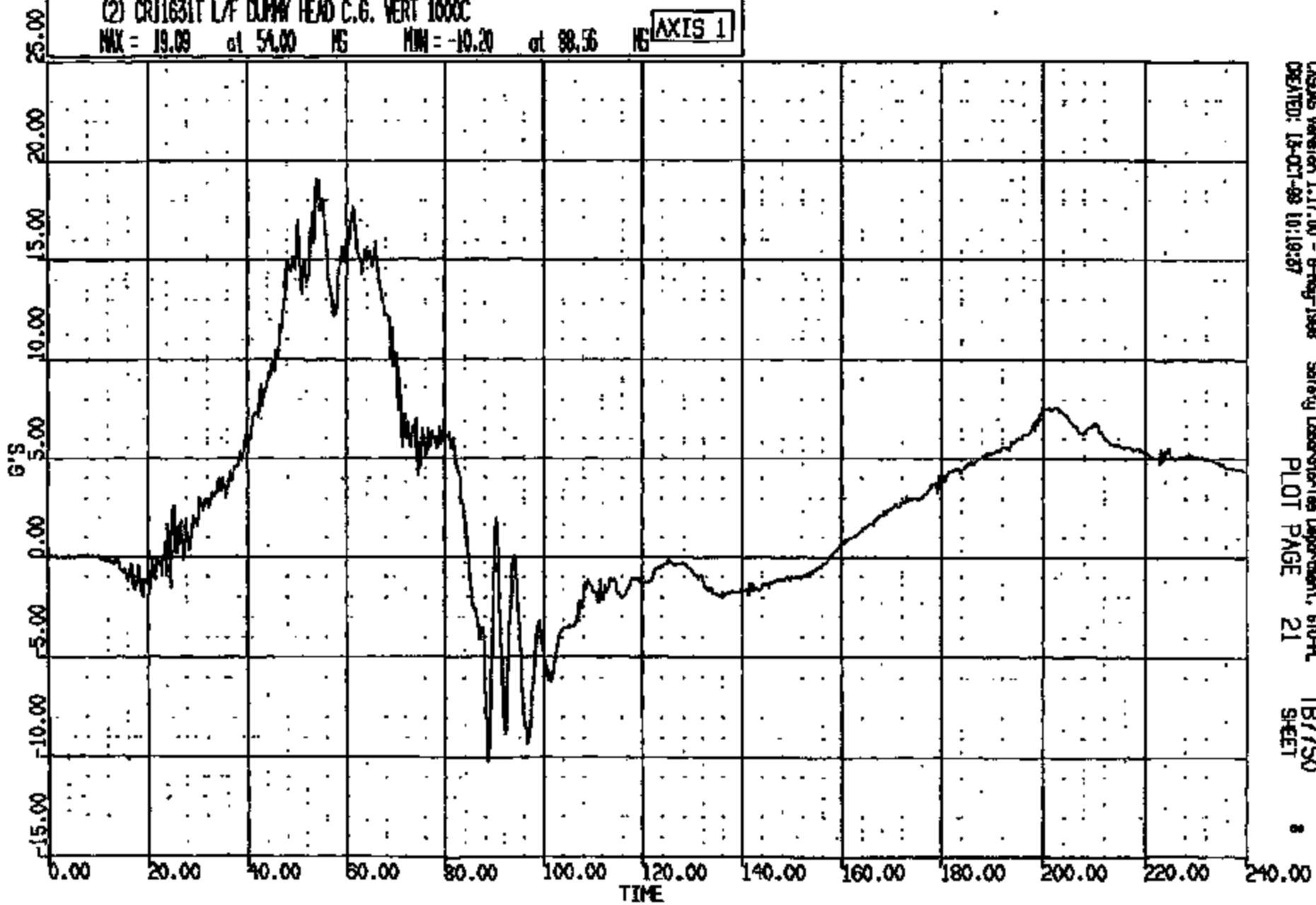


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CRTS 0011631

CR R: 11831 TO: T87750 DATE: 981013 09:44:25  
POOL D-188

(2) CR11631T L/F DUMMY HEAD C.G. VERT 1000C  
MAX = 19.09 at 54.00 HG MIN = -10.20 at 88.56 HG **AXIS 1**



CASUS Version 1.17.00 - 8-May-1998 Safety Laboratory/tes Department, 670-PL  
CREATED: 13-OCT-98 10:18:27 PLOT PAGE 21 T87750  
SHEET

CR15 0011631

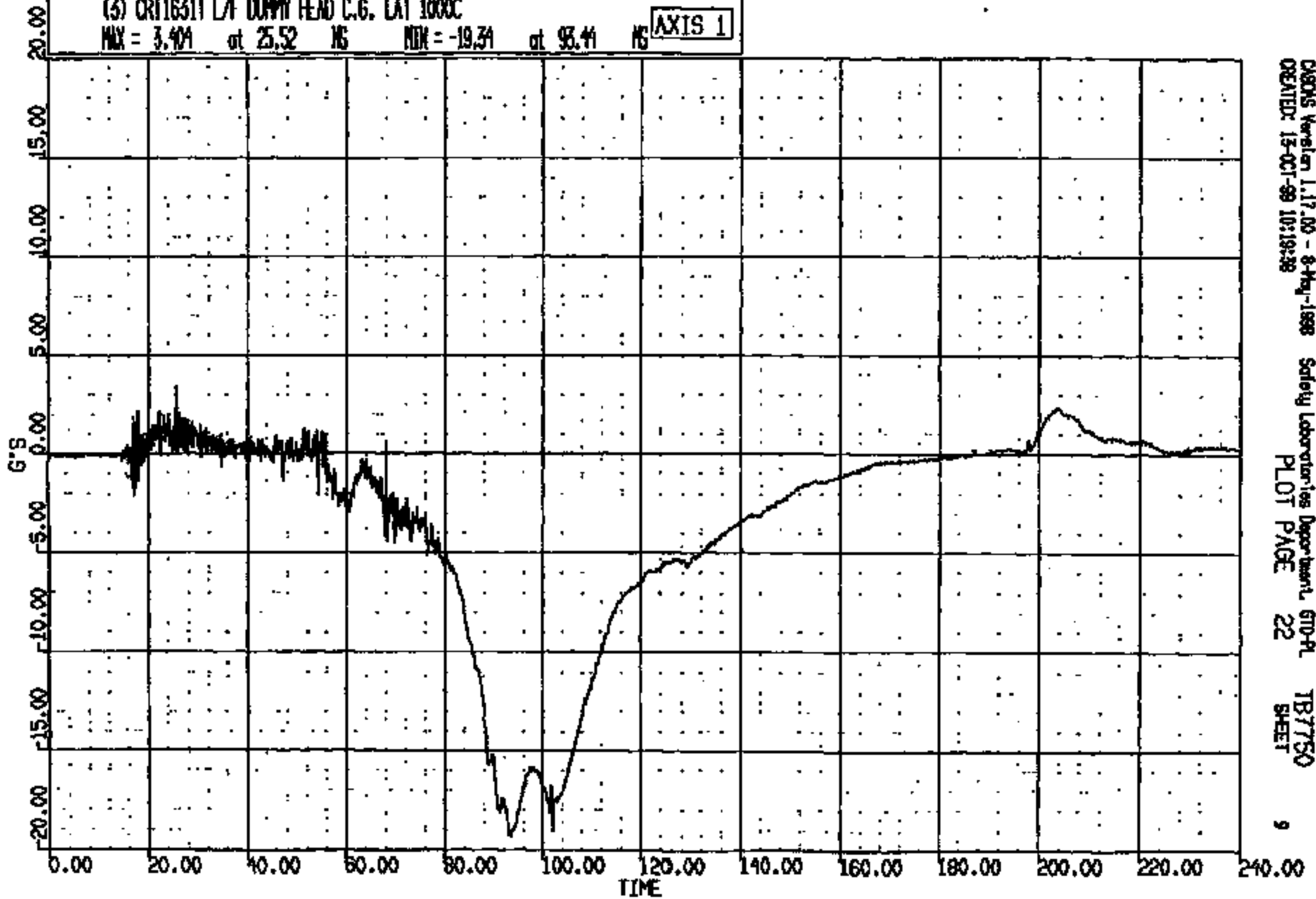


CR R: 11831 TO: TB7750 DATE: 991015 09:44:35  
2001 D-188

(3) CRT1631T L/F DUMMY HEAD C.G. LAT 1000C

MAX = 3.404 at 25.52 NS MIN = -19.34 at 93.44 NS

AXIS 1



CRSIS Version 1.17.00 - 8-May-1998  
CREATED: 13-OCT-99 10:19:38

Safety Laboratories Department, STD-PL  
PLOT PAGE 22

TB7750  
SHEET

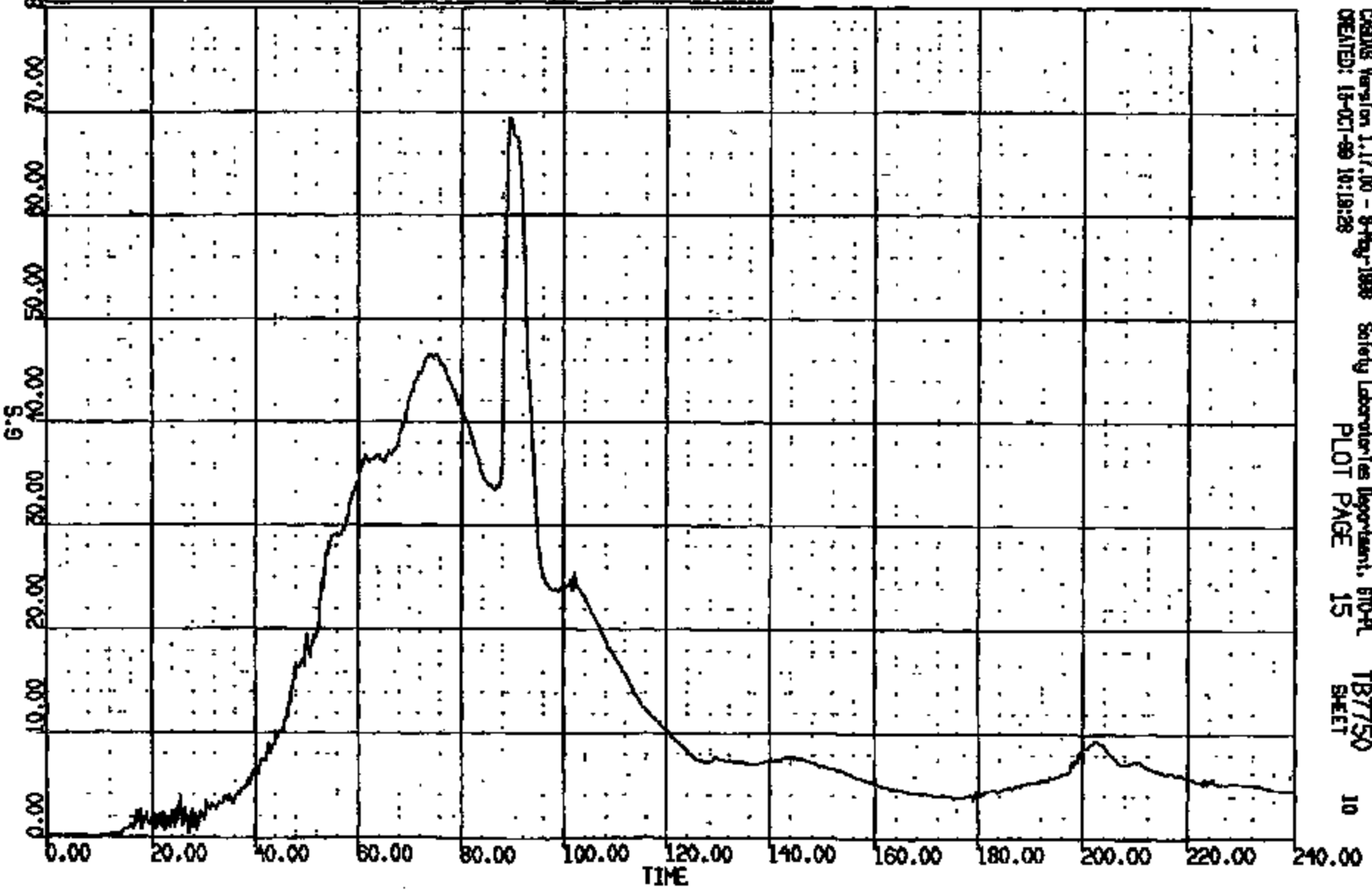
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INCR: 11631 TO: TB7750 DATE: 991015 09:44:55  
 IINCR: 01188  
 HINCR: 441.0 DUC: 240.0 T1/T2: 52.7 // 105.0  
 HOC: 208.0 DUR: 58.0 T1/T2: 58.5 // 94.0  
 HOC: 208.0 DUR: 15.0 T1/T2: 78.4 // 93.4

(10001) CR11631T L/F DUMMY HEAD C.G. NES 1000C  
 MAX = 69.42 at 89.52 NS MIN = 0.0894E-01 at 4.720 NS

AXIS 1

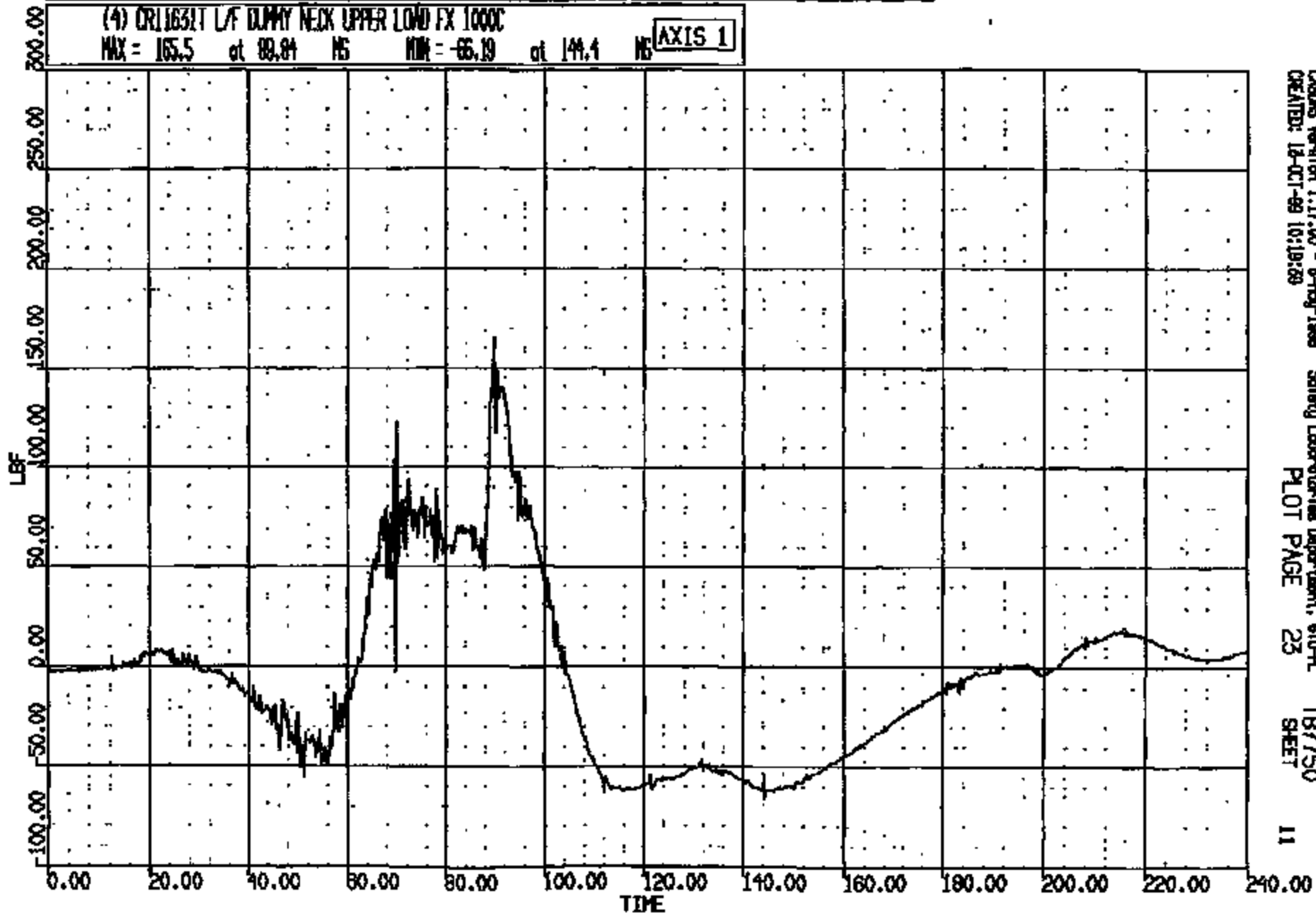


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CRTS 0011631

OR R: 11631 TO: TB7750 DATE: 891013 09:44:35  
2001 D-180

(4) CR116311 L/F DUMMY NECK UPPER LOAD FX 1000C  
MAX = 165.5 at 88.84 MS MIN = -66.19 at 144.4 MS **AXIS 1**

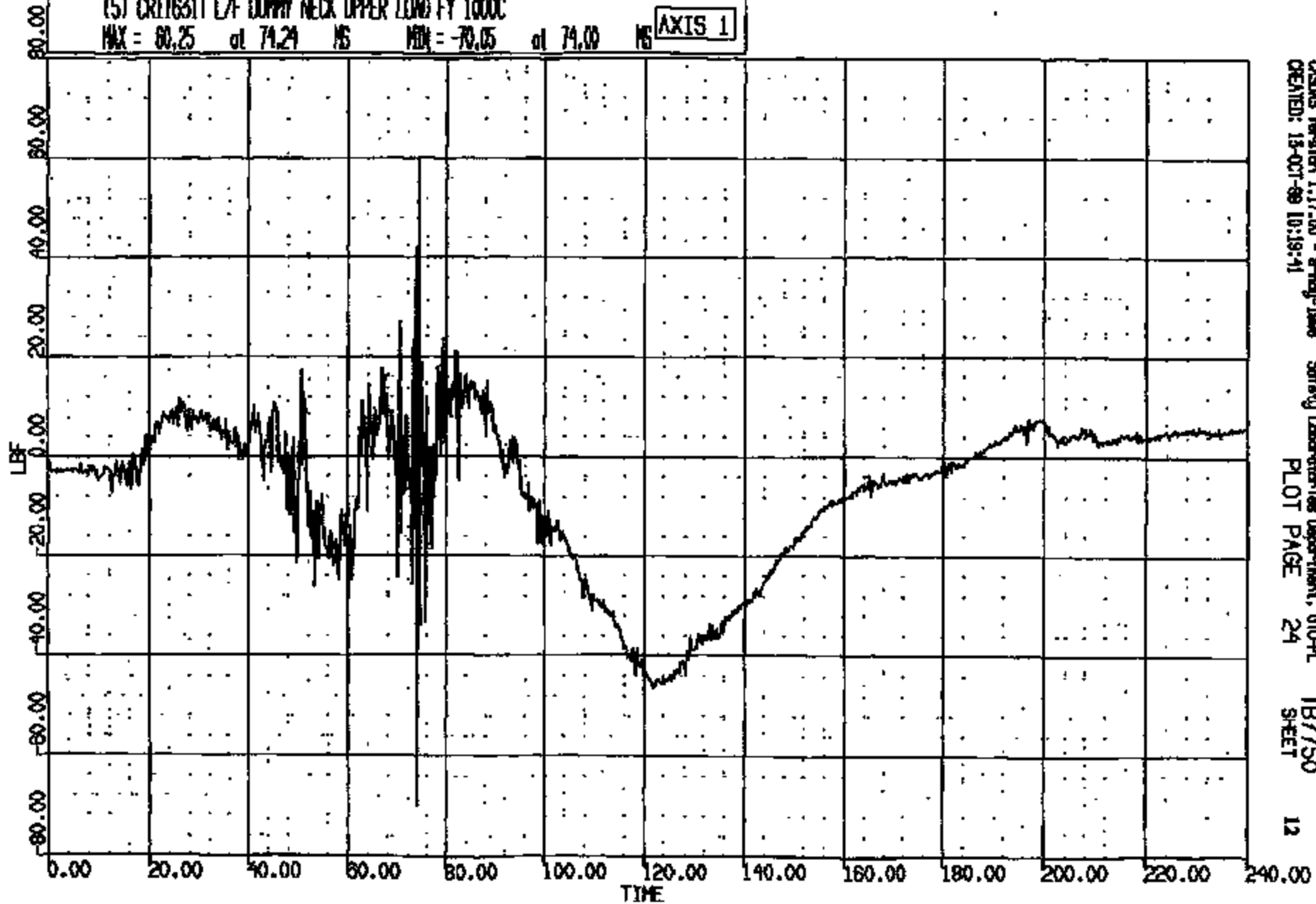


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CR11631

CR R: 11631 TD: T87750 DATE: 991018 09:44:25  
2001 D-198

(5) CR11631T L/F DUMMY NECK UPPER LOAD FY 1000  
MAX = 80.25 at 74.24 MS MIN = -70.05 at 74.00 MS **AXIS 1**



CASMS Version 1.17.00 - 8-May-1999  
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Safety Laboratories Department, G10-PL  
PLOT PAGE 24

T87750  
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12

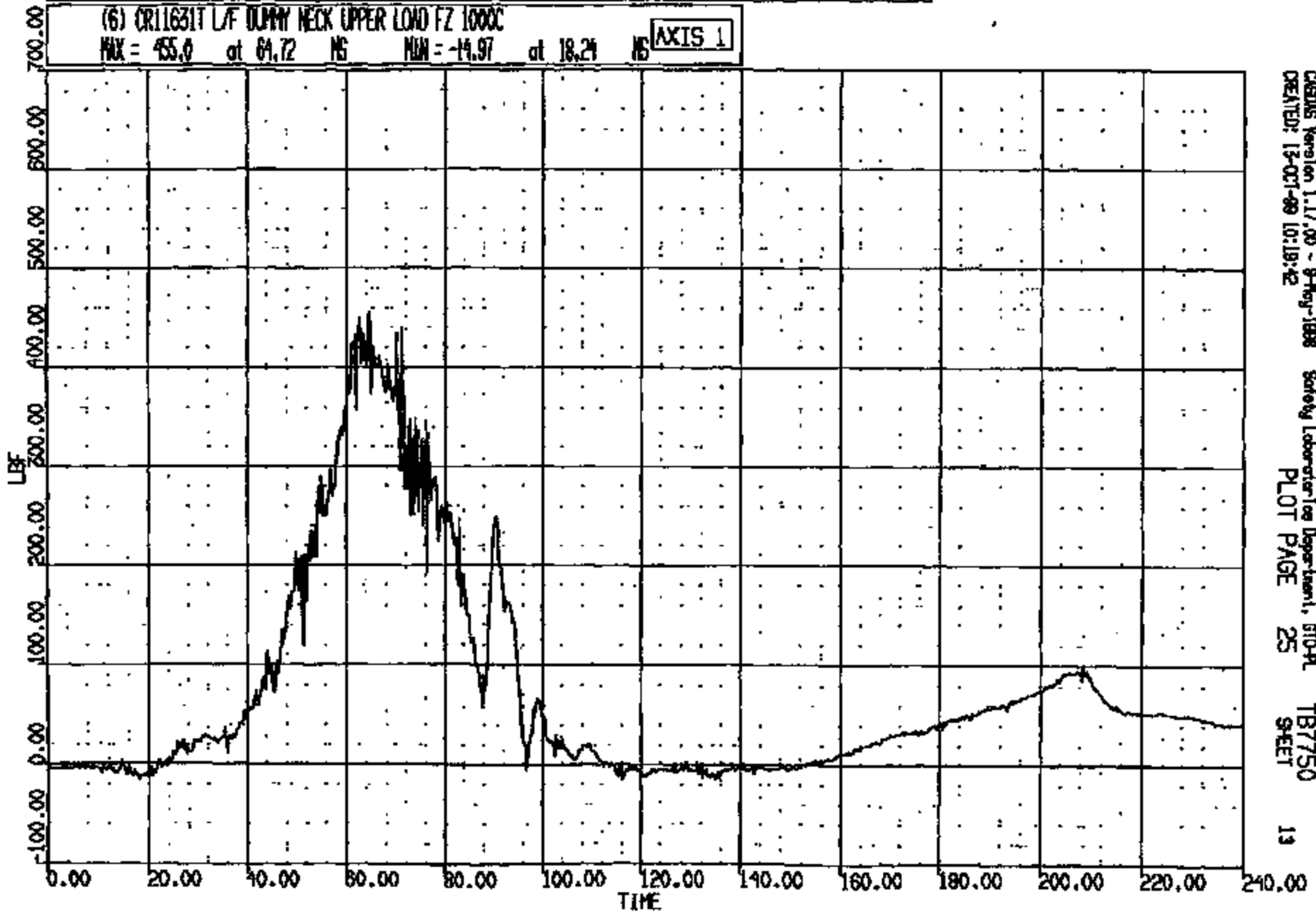
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CR R: 11851 TO: TB7750 DATE: 991015 08:44:55  
2001 D-188

(6) CR11631T L/F DUMMY NECK UPPER LOAD FZ 1000C

MAX = 455.0 at 64.72 MS MIN = -14.97 at 18.24 MS

AXIS 1



CRSIS Version 1.17.00 - 9-May-1998  
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Safety Laboratories Department, 610-A  
PLOT PAGE 25

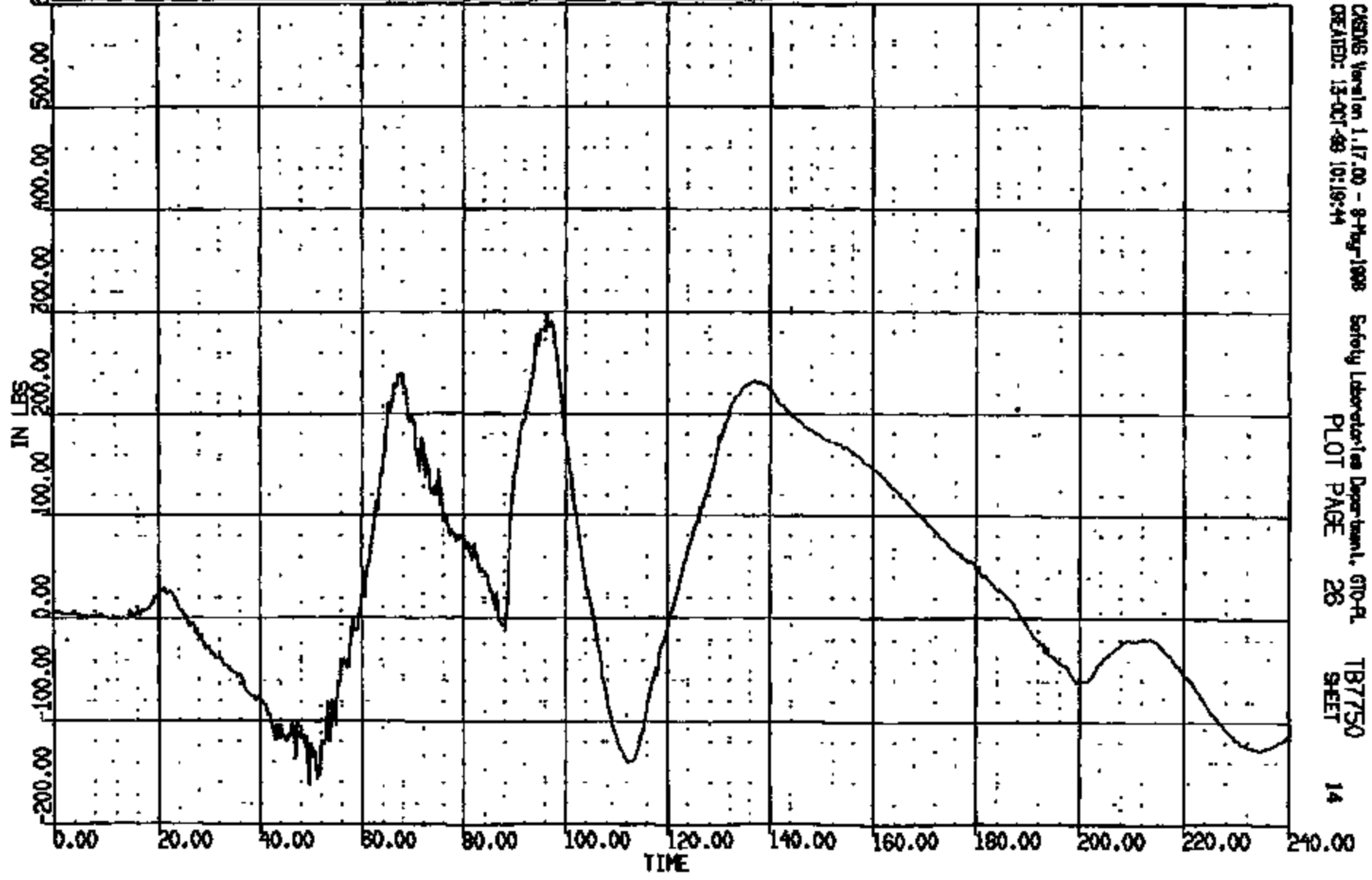
TB7750  
SHEET

19

CRIS 0011631

CR R: 11631 TO: T87750 DATE: 991015 09:44:55  
2001 D-188

(7) CR11631T L/F DUMMY NECK UPPER LOAD BY 600C  
MAX = 297.2 at 95.40 MS MIN = -161.6 at 49.60 MS **AXIS 1**

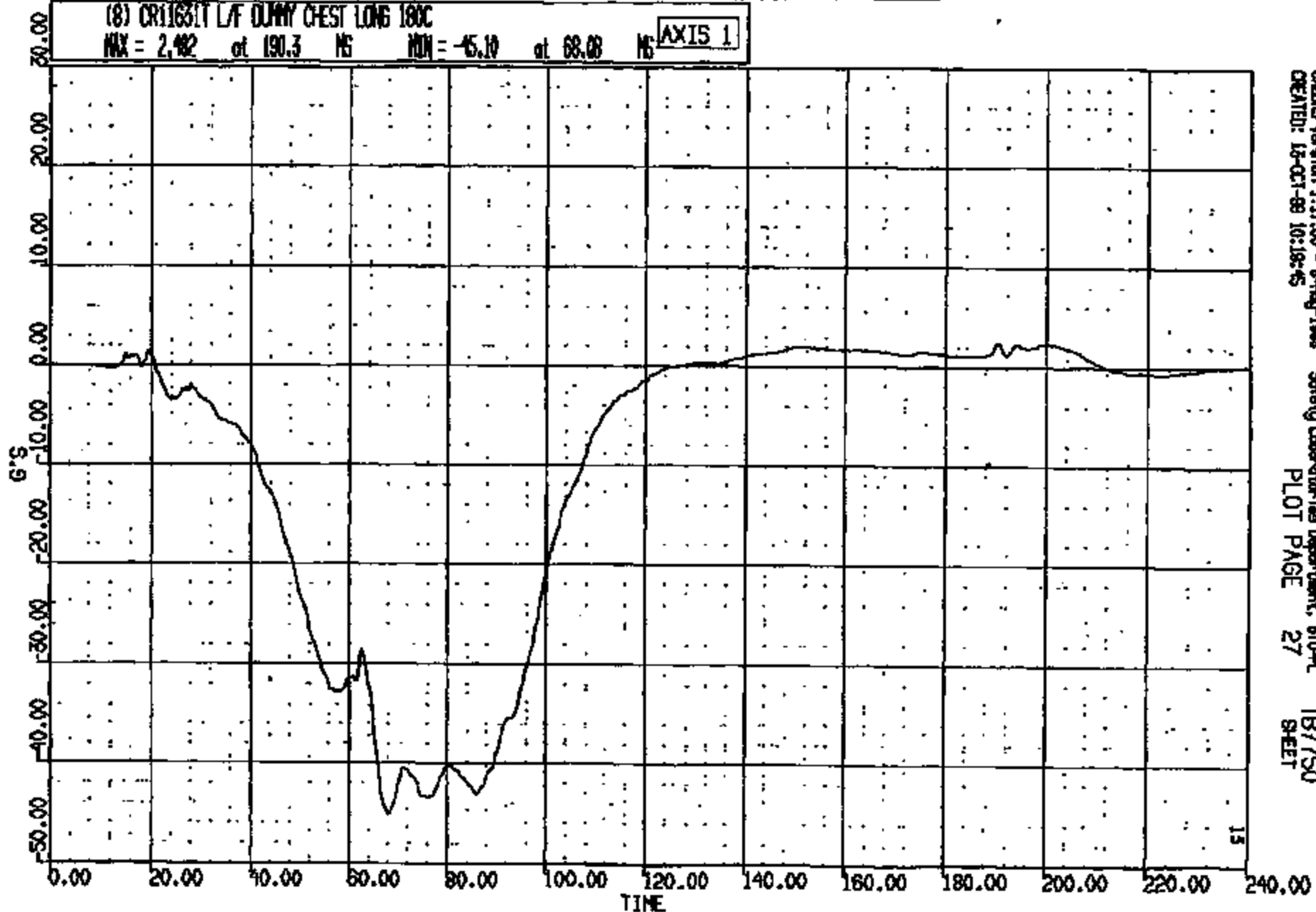


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CREATED: 13-OCT-99 10:19:44 PLOT PAGE 26 SHEET 14

CRTS 0011631

CR R: 11831 TO: TB7750 DATE: 891012 09:44:55  
2001 D-188

(8) CR11631T L/F DUMMY CHEST LONG 180C  
MAX = 2.482 at 190.3 MS MIN = -45.10 at 68.08 MS **AXIS 1**



CRSIS Version 1.17.00 - 8-May-1988 Safety Laboratories Department, B10-4L  
CREATED: 15-OCT-89 10:18:45 PLOT PAGE 27 TB7750  
SHEET

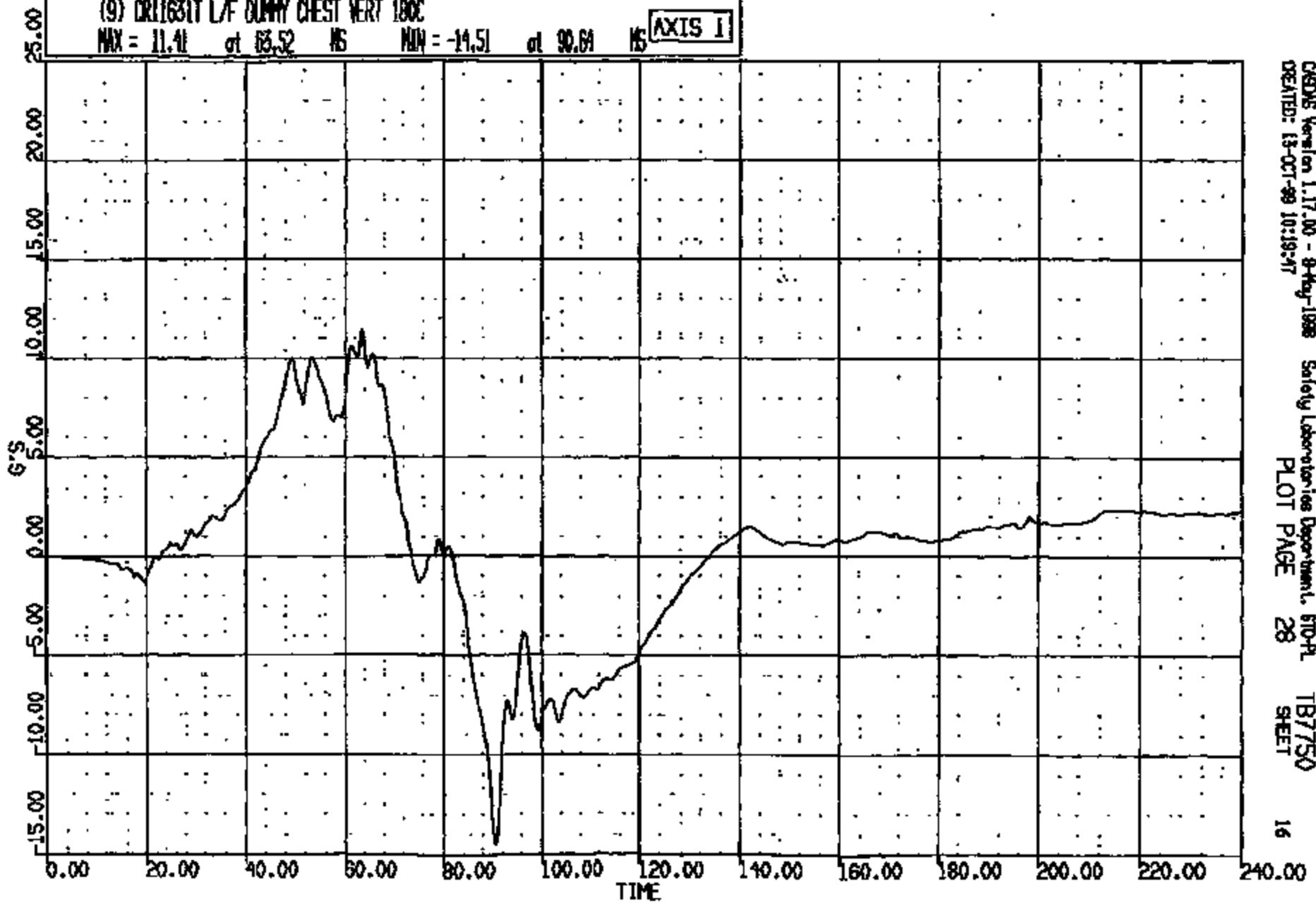
CRIS 0011631

CR R: 11631 TO: T87750 DATE: 991013 09:44:35  
2001 D-198

(9) CR11631T L/F DUMMY CHEST VERT 180C

MAX = 11.41 at 63.52 MS MIN = -14.51 at 90.61 MS

AXIS 1



CASDS Version 1.17.00 - 8-May-1998  
CREATED: 13-OCT-99 10:19:47

Safety Laboratories Department, 610-PL  
PLOT PAGE 28

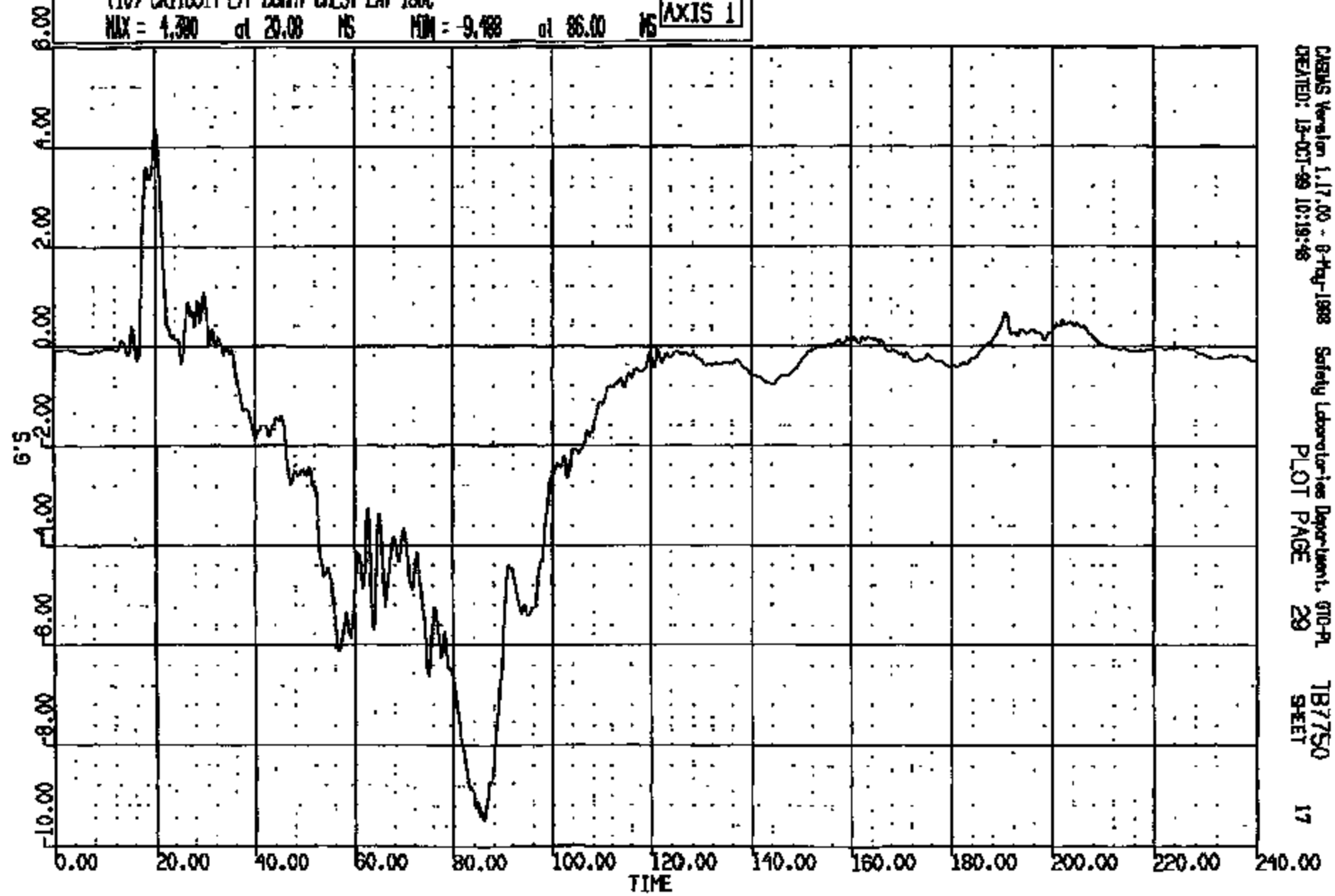
T87750  
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CR R: 11631 TO: TB7750 DATE: 991015 09:44:38  
0001 D-188

(10) CR1631T L/F DUMMY CREST LAT 180C  
MAX = 4.300 at 20.00 MS MIN = -9.488 at 86.00 MS

AXIS 1



CREWS Version 1.17.00 - 8-May-1998 Safety Laboratories Department, 610-PL TB7750 17  
CREATED: 13-OCT-99 10:19:46 PLOT PAGE 29 SHEET

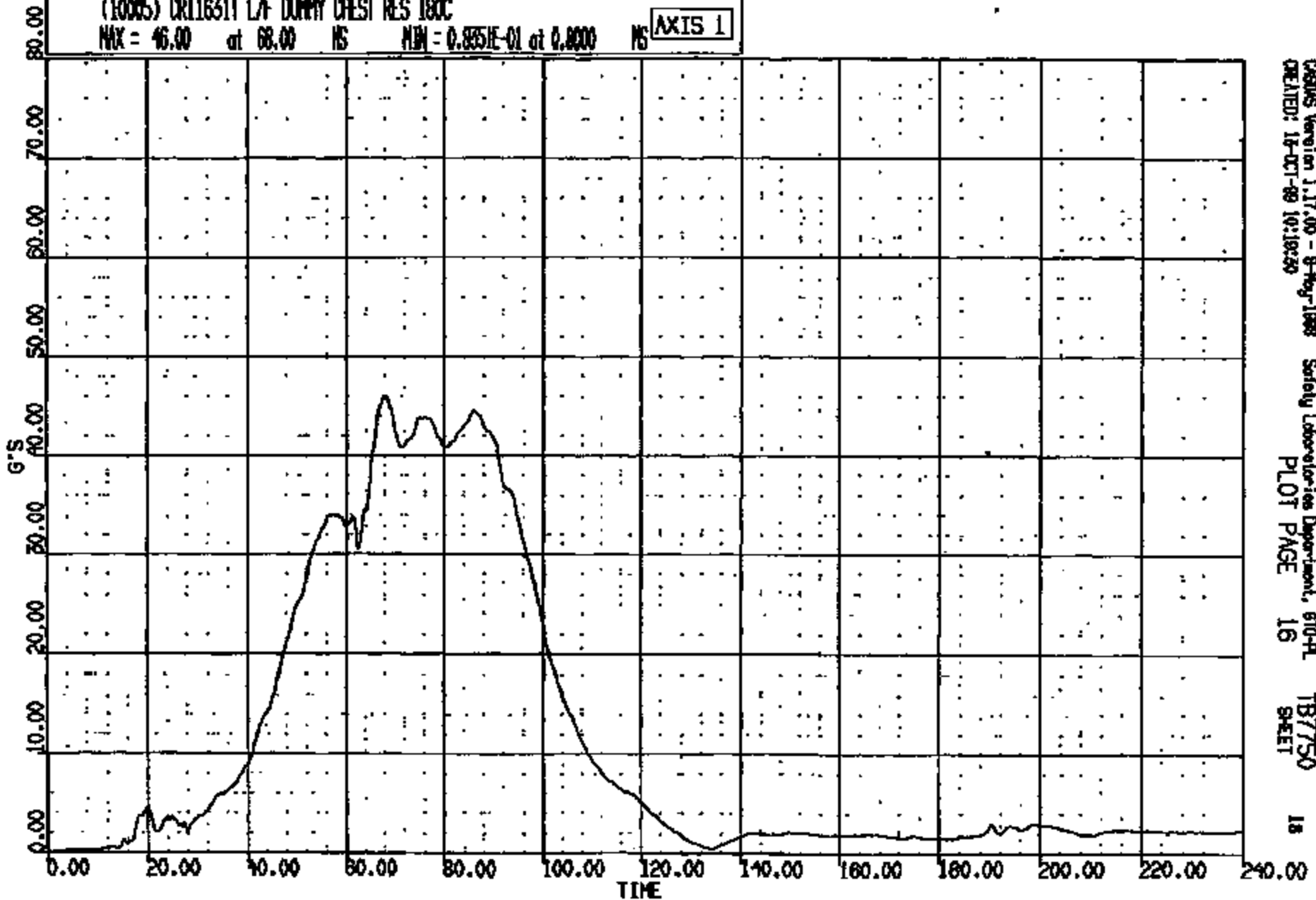
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CR #: 11851 TO: TB7750 DATE: 991015 09:44:55  
2001 0-100  
CUMDUR = 44.488 Duration time = 2.0006

(10005) CR11631T L/F DUMMY CHEST RES 180C

MAX = 46.00 at 68.00 MS MIN = 0.8351E-01 at 0.0000 MS

AXIS 1



CASUS Version 1.17.00 - 8-May-1998  
CREATED: 18-OCT-99 10:18:20

Safety Laboratories Department, 610-PL  
PLOT PAGE 16

TB7750  
SHEET

18

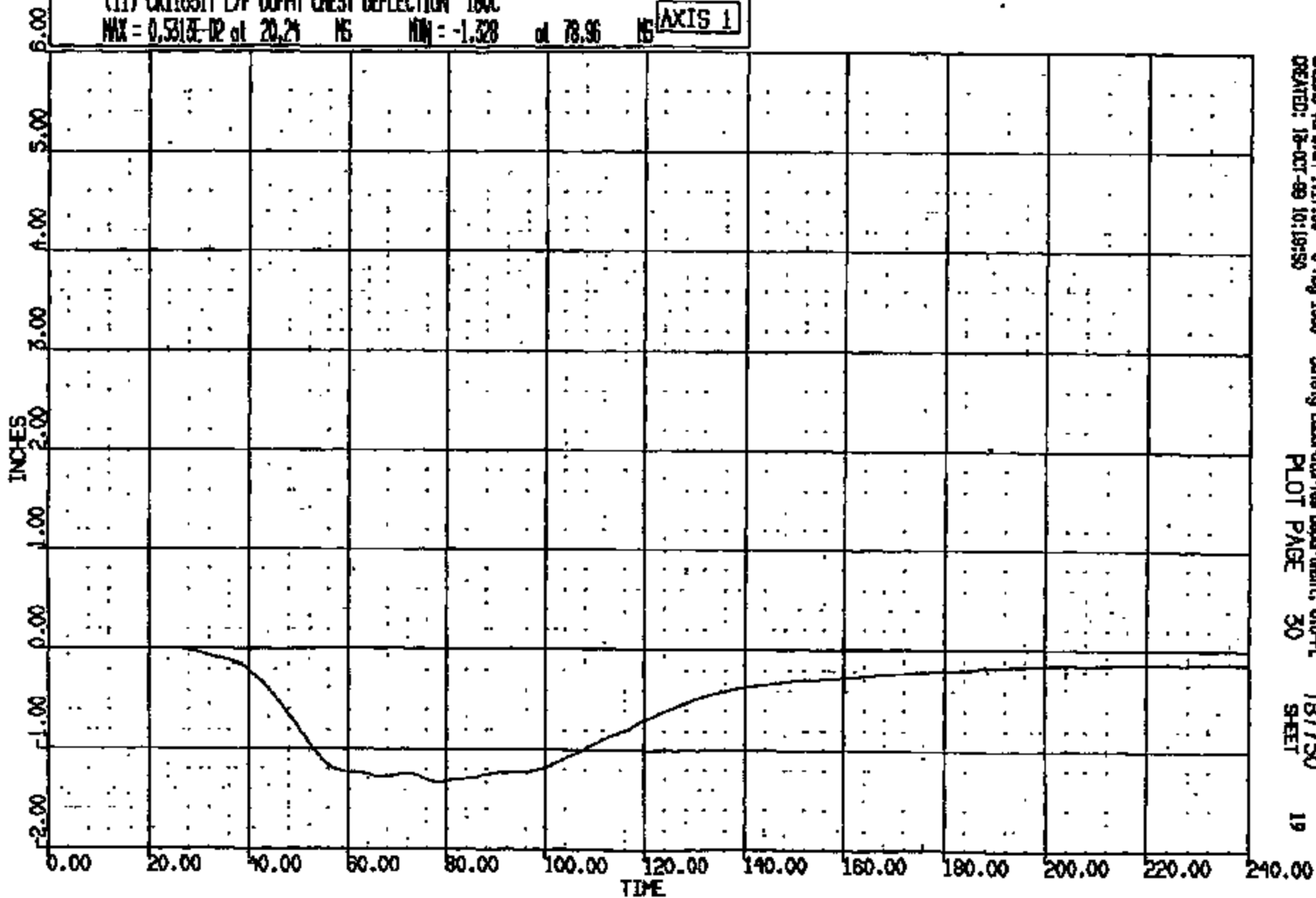
CRIS 0011631

CR R: 11831 TO: TB7750 DATE: 991018 08:44:55  
2001 D-188

(11) CR11631T L/F DUMMY CHEST DEFLECTION 180C

MAX = 0.531E-12 at 20.24 MS MIN = -1.328 at 78.96 MS

AXIS 1



CADDS Version 1.17.00 - 8-May-1998  
CREATED: 18-OCT-99 10:19:50

Safety Laboratories Department, 610-PL  
PLOT PAGE 30

TB7750  
SHEET

19

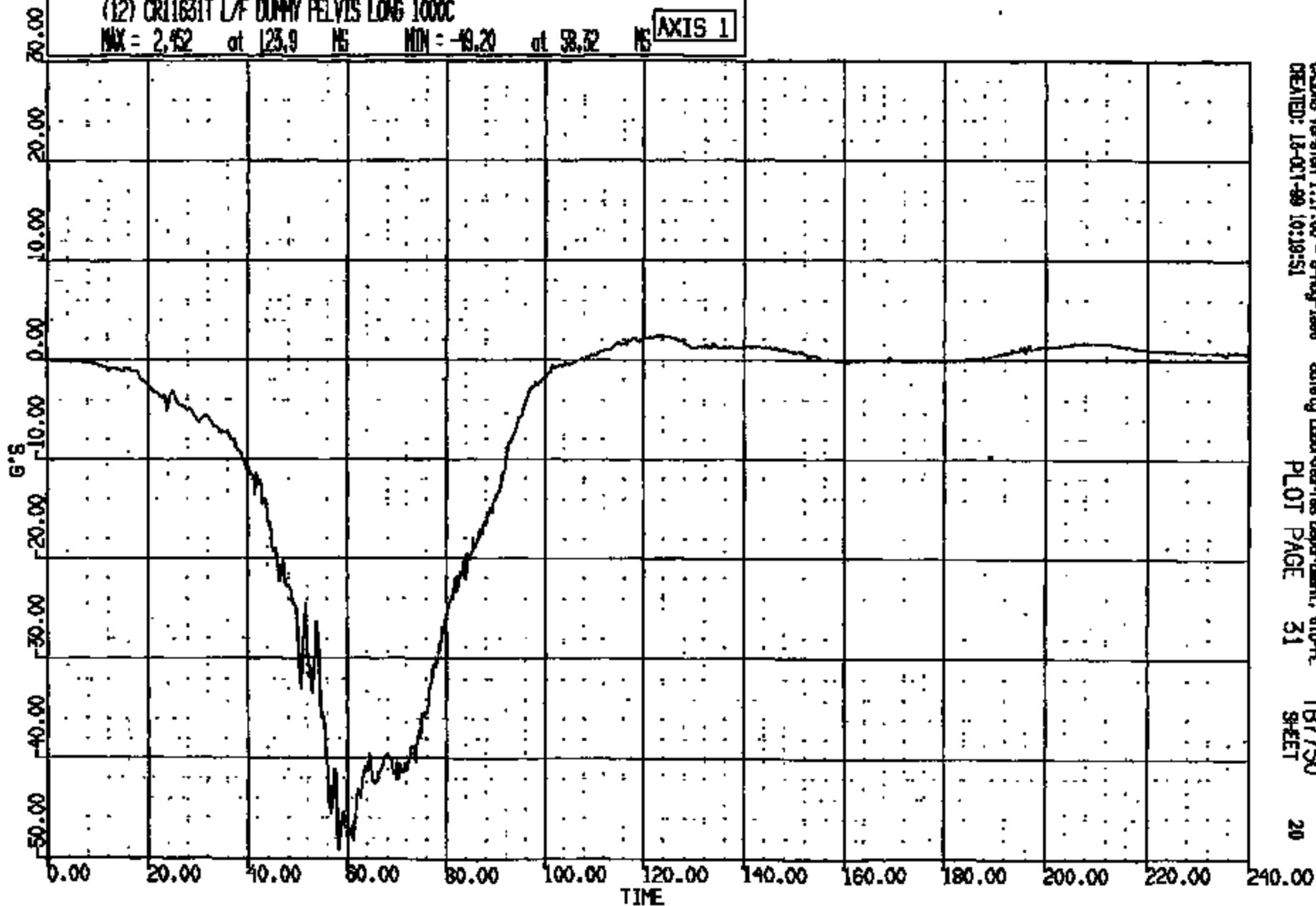
CR11631

CR #: 11881 TO: T87750 DATE: 991013 08:44:25  
2001 D-100

(12) CR11631T L/F DUMMY PELVIS LONG 1000C

MAX = 2.452 at 125.9 MS MIN = -49.20 at 58.32 MS

AXIS 1



QASAS Version 1.17.00 - 8-Aug-1998  
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Safety Laboratories Department, 610-PL  
PLOT PAGE 31

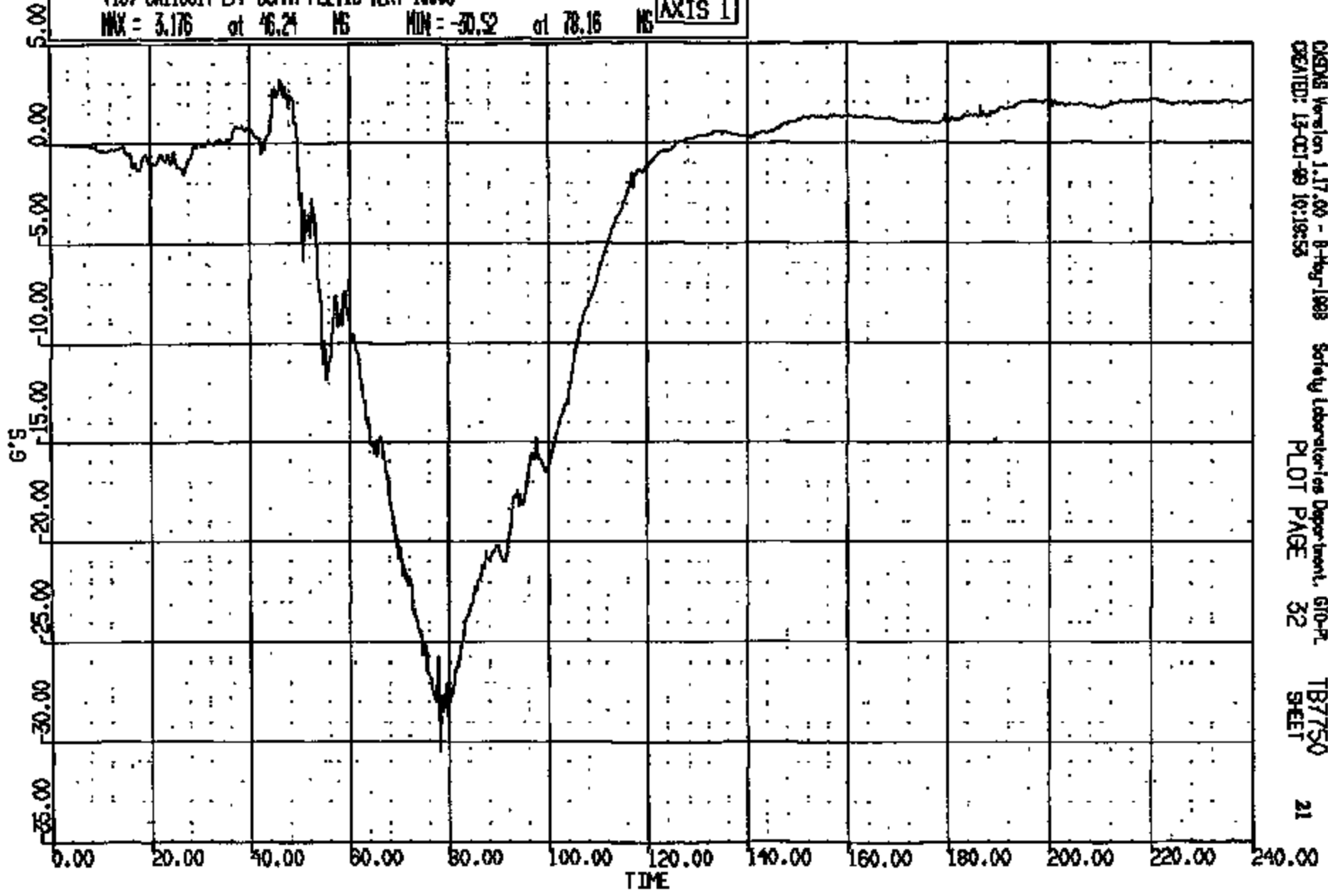
T87750  
SHEET

20

CRTS 0011631

CR R: 11631 TO: TB7750 DATE: 991013 09:44:35  
8001 D-188

(13) CR11631T L/F DUMMY PELVIS VERT 1000C  
MAX = 3.176 at 46.24 MS MIN = -30.52 at 78.16 MS **AXIS 1**



OSDAS Version 1.17.00 - 8-Aug-1999 Safety Laboratories Department, 610-P. TB7750  
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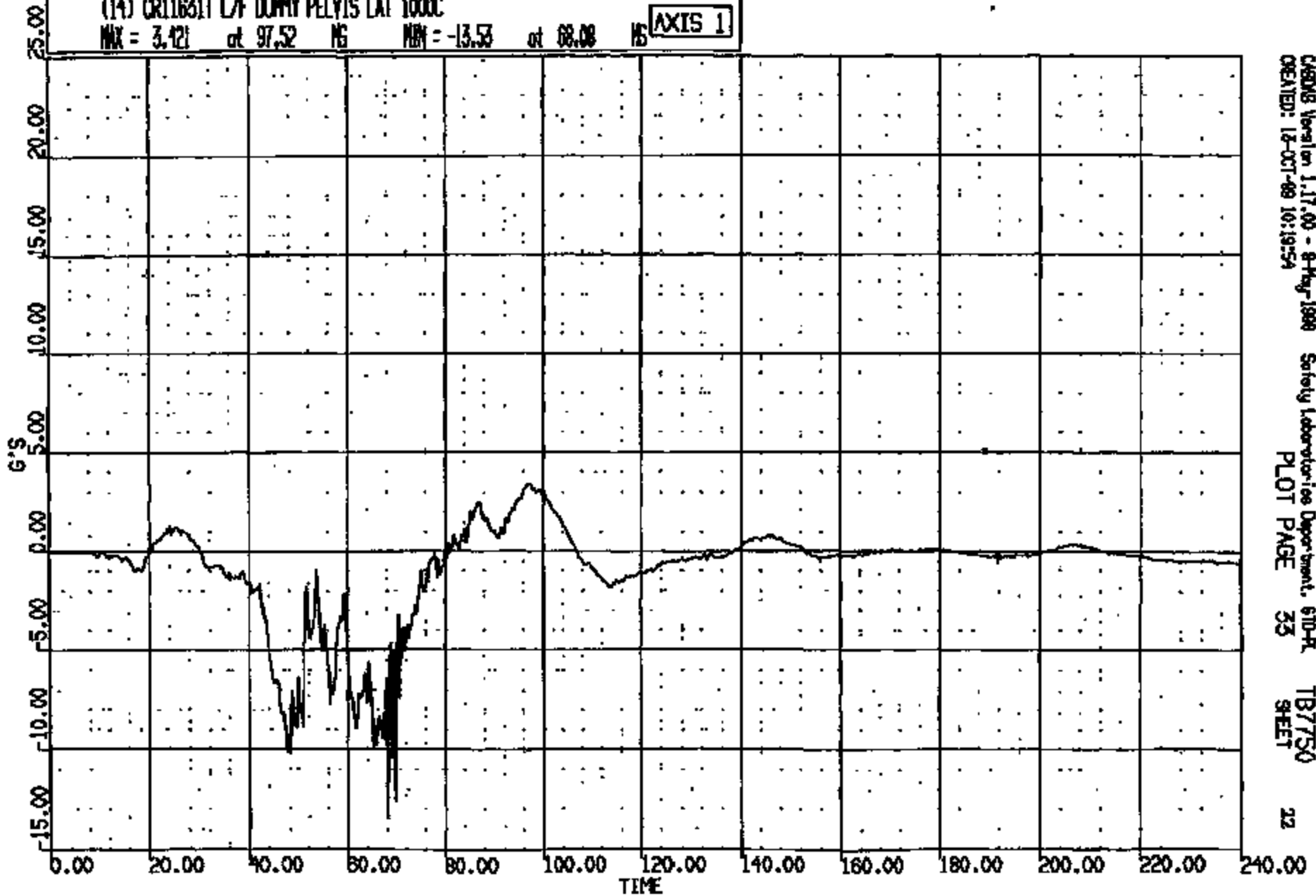
CRTS 0011631

CR #: 11851 TO: TB7750 DATE: 091013 09:44:25  
2001 D-100

(14) CR11631T L/F DUMMY PELVIS LAT 1000C

MAX = 3.421 at 97.52 MS MIN = -13.53 at 68.08 MS

AXIS 1



CARDIG Version 1.17.00 - 8-May-1990 Safety Laboratories Department, 610-PL TB7750  
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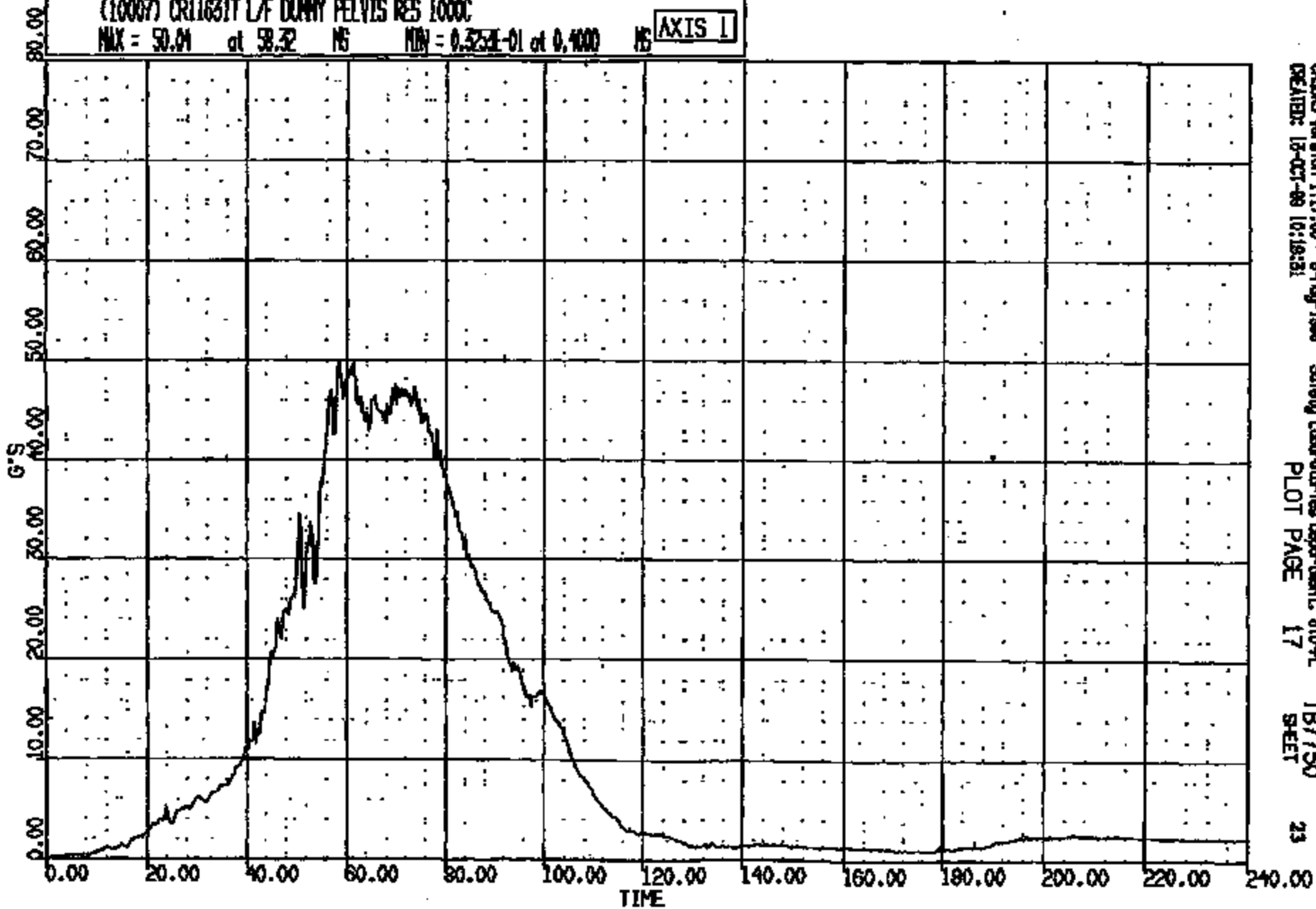
CRIS 0011631

CR R: 11631 TO: TB7750 DATE: 991018 09:44:53  
2001 0-169

(10007) CR11631T L/F DUMMY PELVIS RES 1000C

MAX = 50.01 at 58.32 MS MIN = 0.52E-01 at 0.4000 MS

AXIS 1



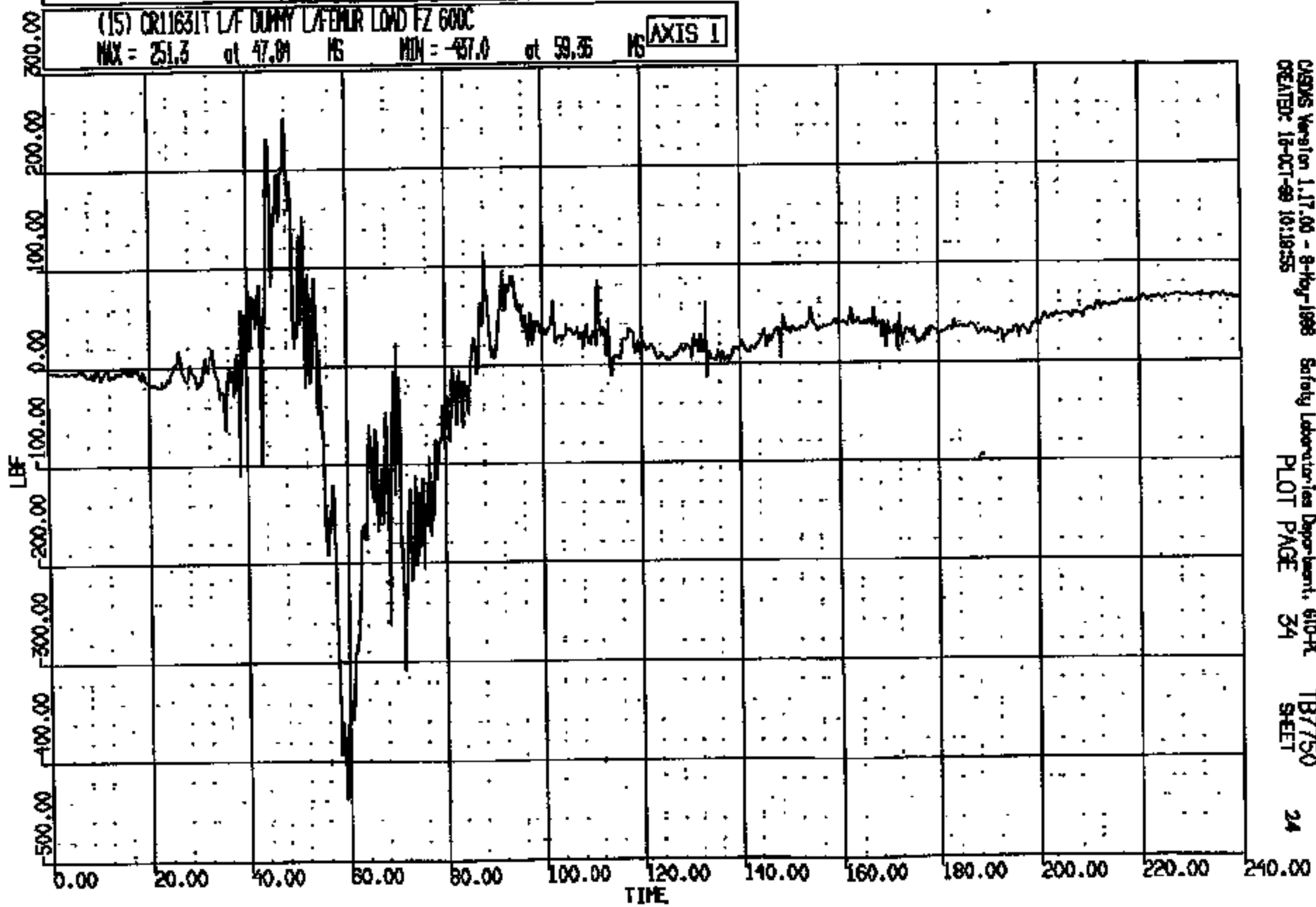
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Safety Laboratories Department, 610-91  
PLOT PAGE 17

TB7750  
SHEET

CR R: 11631 TO: TB7750 DATE: 991013 09:44:35  
2001 D-198

(15) CR11631T L/F DUMMY L/FEMUR LOAD FZ 600C  
MAX = 251.3 at 47.04 MS MIN = -437.0 at 59.35 MS **AXIS 1**



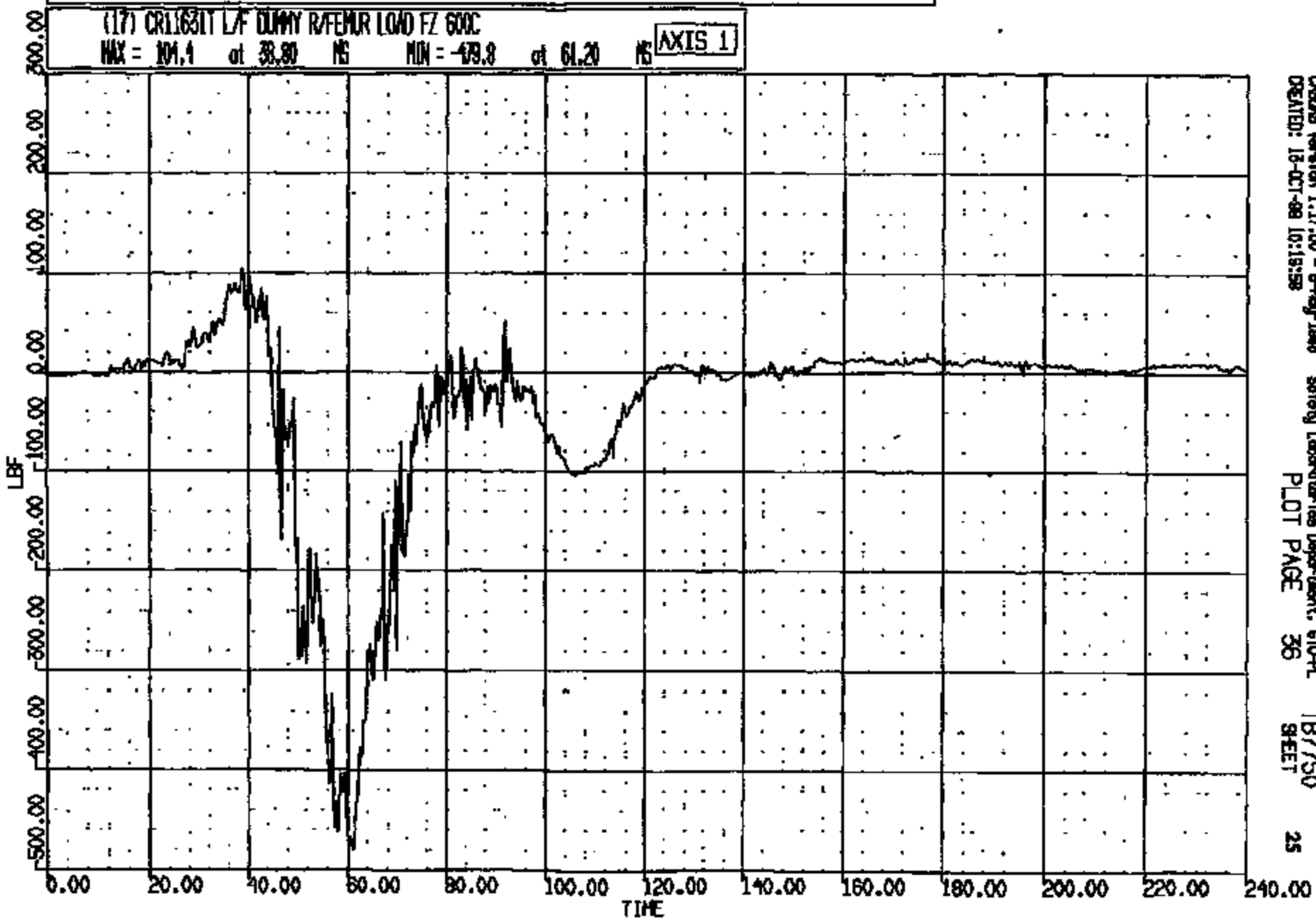
CRS Version 1.17.00 - 8-May-1998 Safety Laboratories Department, 610-PL  
CREATED: 12-OCT-99 10:19:55 PLOT PAGE 34 TB7750  
SECT 24

CRIS 0011631



CR R: 11631 TO: T87750 DATE: 891015 09:44:55  
2001 D-186

(17) CR11631T LAF DUMMY REFER LOAD FZ 600C  
MAX = 104.1 at 38.90 MS MIN = -479.8 at 61.20 MS **AXIS 1**



CRS015 Version 1.17.00 - 8-May-1988 Safety Laboratories Department, 610-PL T87750  
CREATED: 18-OCT-89 10:15:58 PLOT PAGE 36 SHEET 25

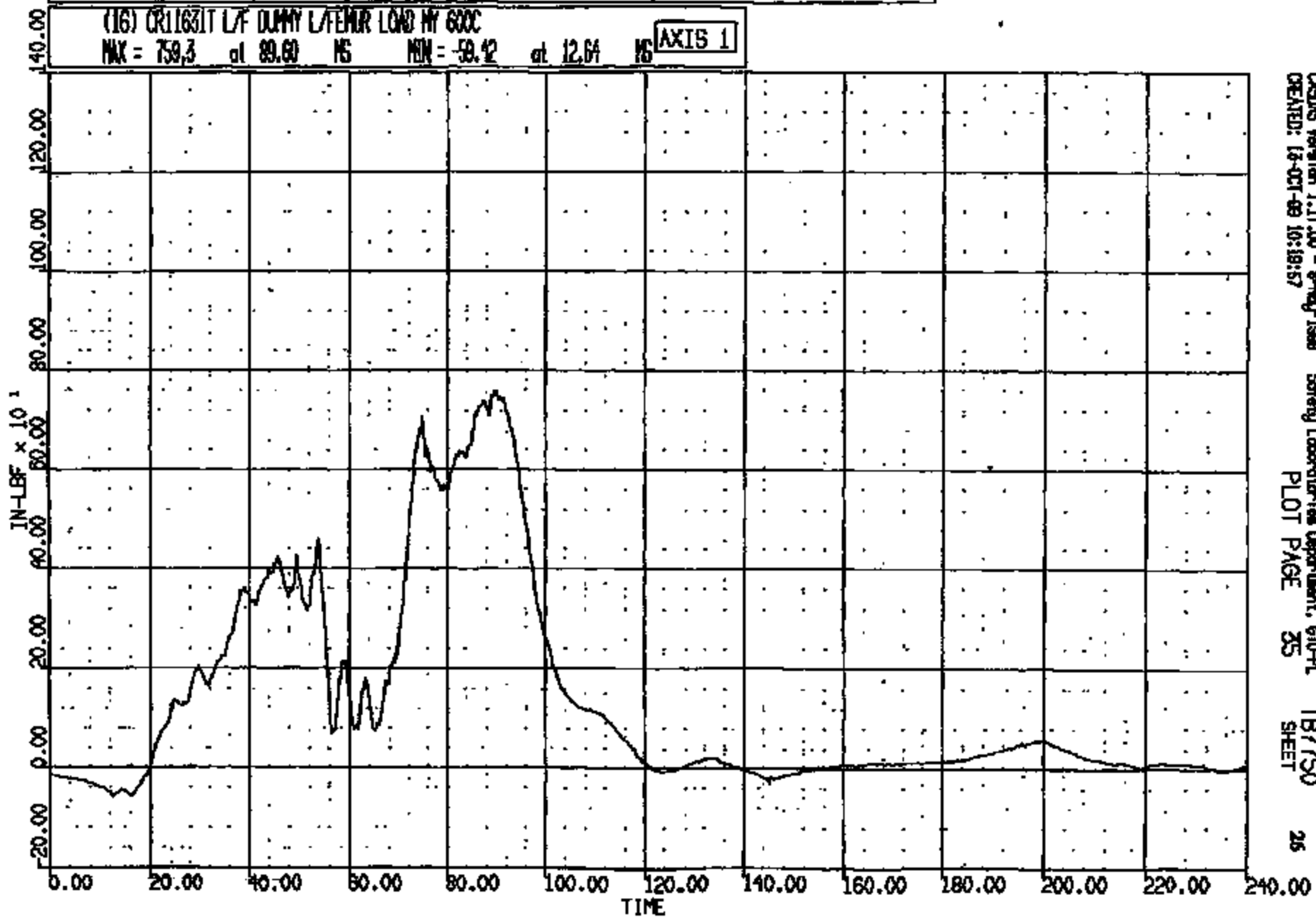
CRTS 0011631

CR R: 11631 TO: TB7750 DATE: 881013 09:44:55  
2001 0-186

(16) CR11631T L/F DUMMY L/FEMUR LOAD NY 600C

MAX = 759.3 at 89.60 MS MIN = -58.12 at 12.64 MS

AXIS 1



CASUS Version 1.17.00 - 8-May-1988  
CREATED: 18-OCT-88 10:19:17

Safety Laboratories Department, 610-PL  
PLOT PAGE 25

TB7750  
SHEET

26

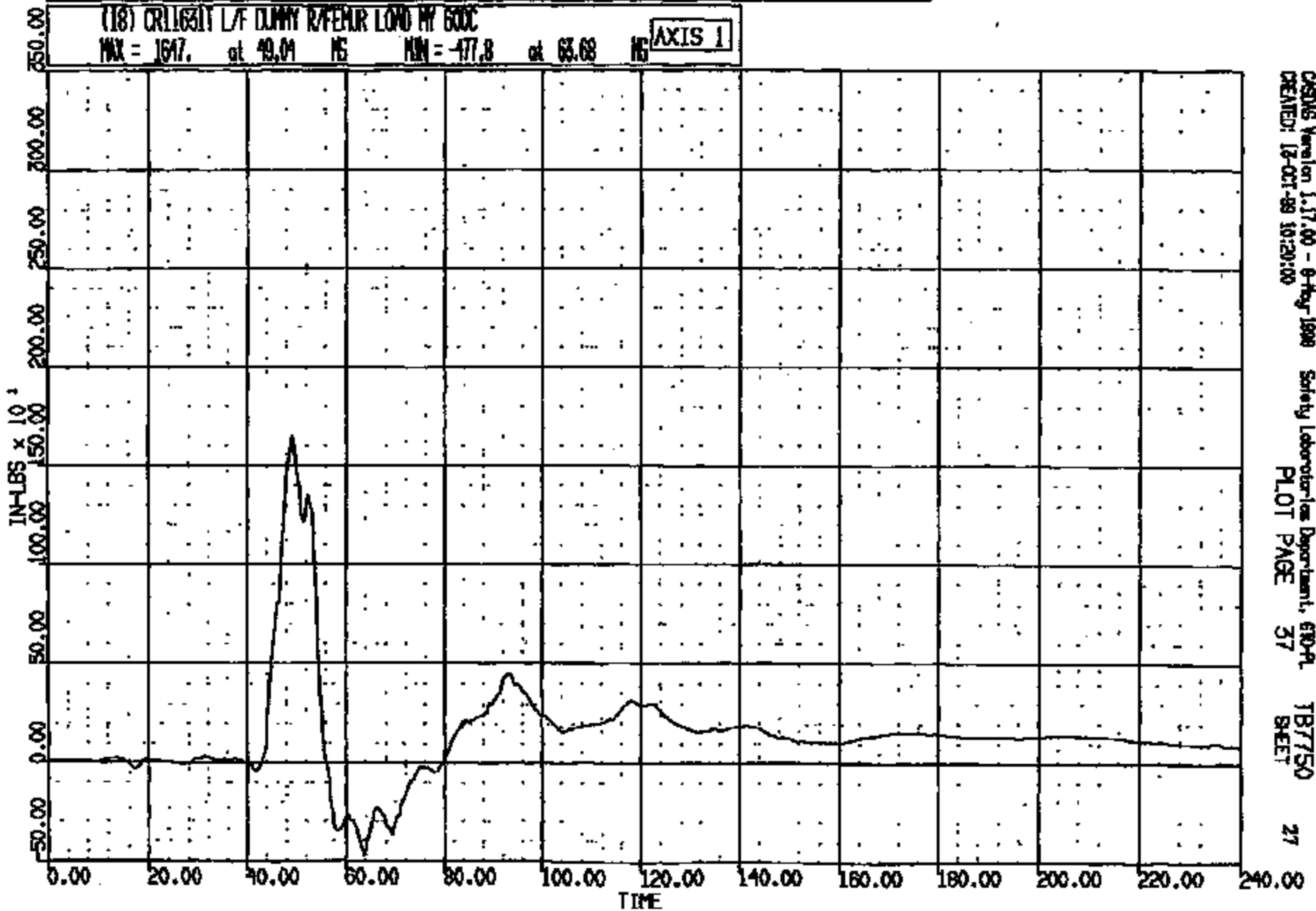
CR15 0011631

CR R: 11831 TO: TB7750 DATE: 991013 08:44:35  
2001 D-188

(18) CR11631T L/F DUMMY R/FEMR LOAD BY 600C

MAX = 1617. at 49.01 MS MIN = -477.8 at 63.68 MS

AXIS 1



CASINS Version 1.17.00 - 9-May-1999  
CREATED: 13-OCT-99 10:20:00

Safety Laboratories Department, 610-A  
PLOT PAGE 37

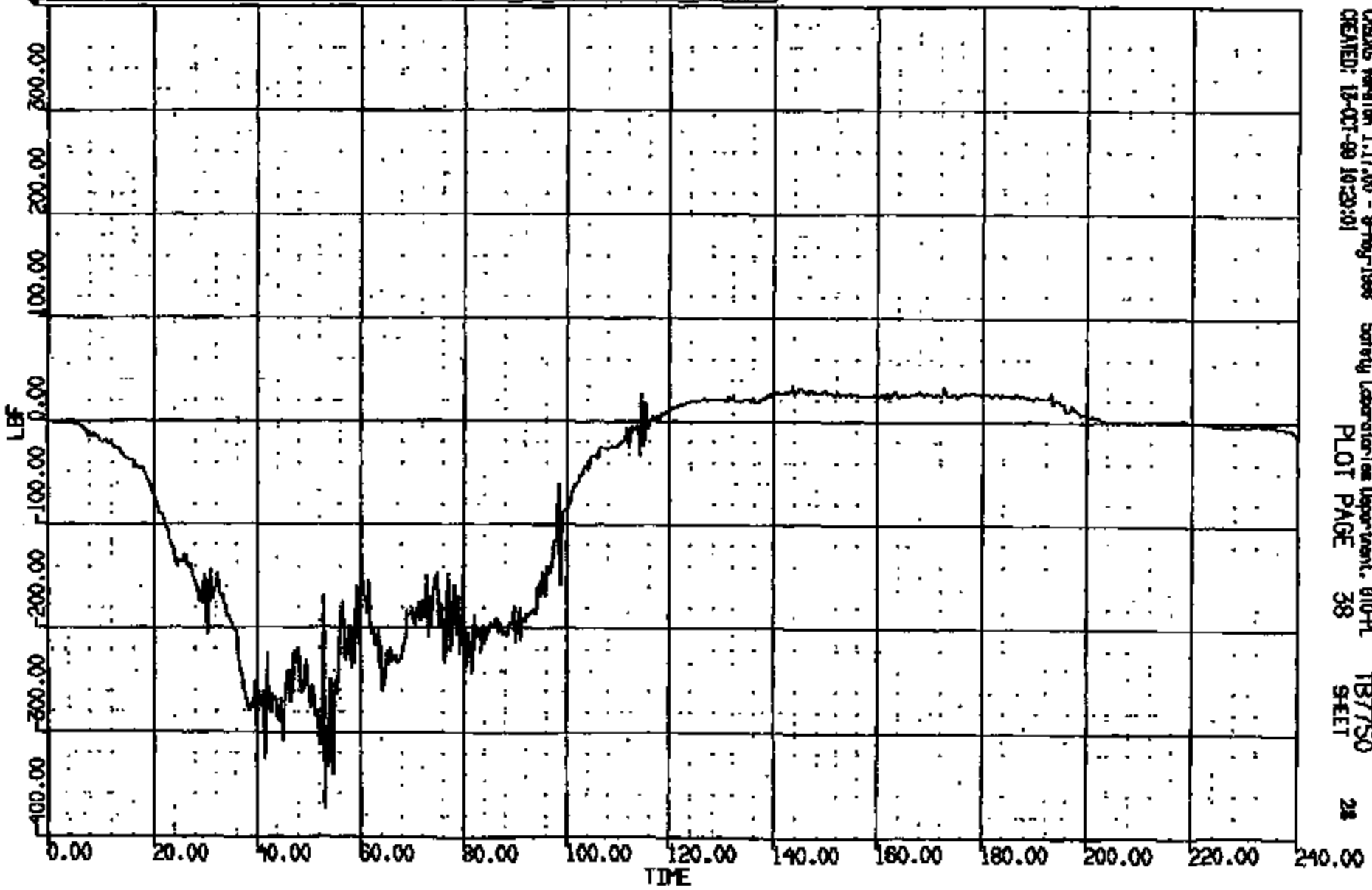
TB7750  
SHEET

27

CRTS 0011631

CR R: 11031 TO: TB7750 DATE: 991015 09:44:55  
2001 D-188

(19) CR1631T L/F DUMMY LAP/TIBIA LOAD FZ 600C  
MAX = 34.29 at 14.7 MS MIN = -373.3 at 53.20 MS **AXIS 1**

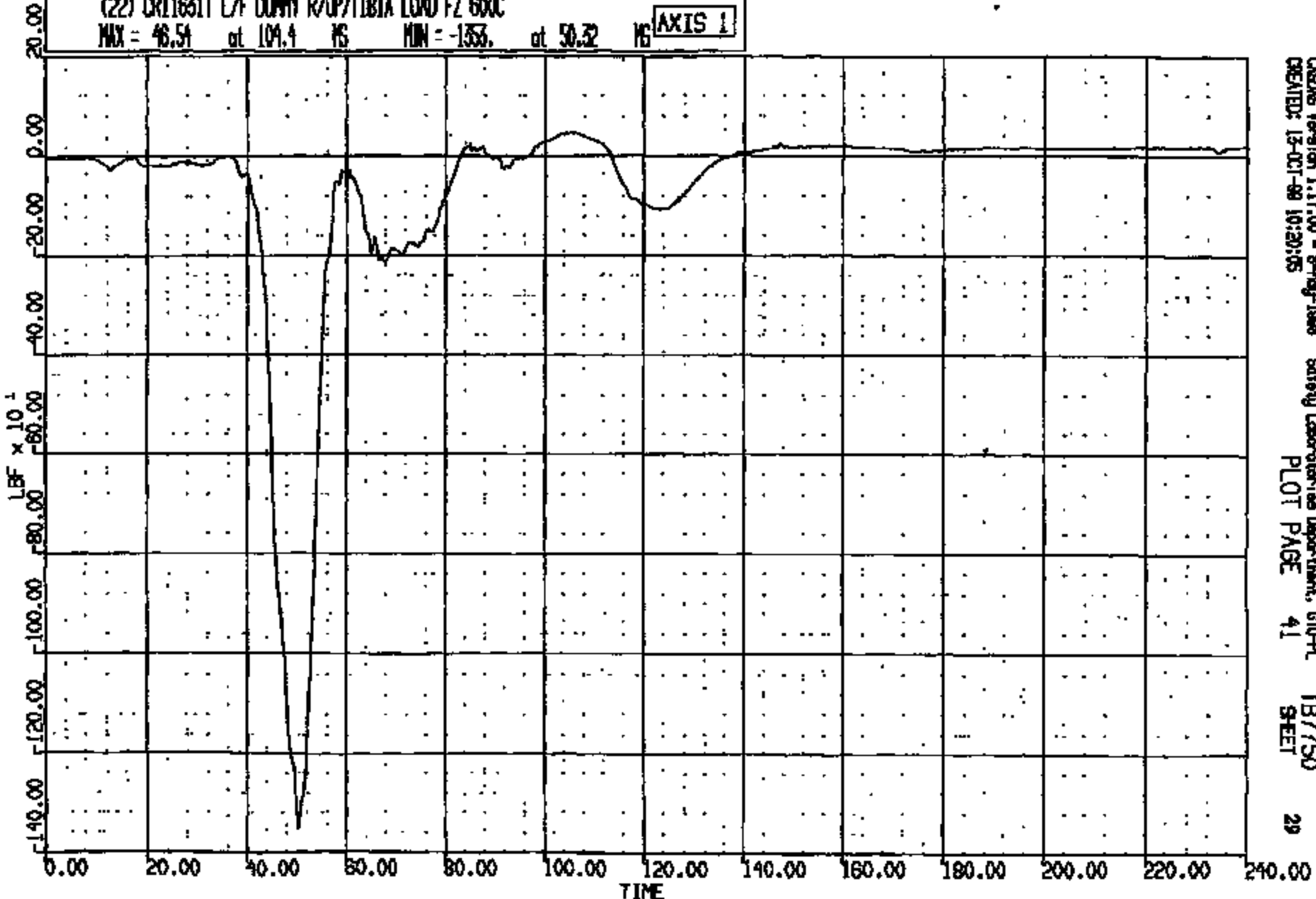


CRSAS Version 1.17.00 - 9-May-1998 Safety Laboratories Department, 670-PL  
CREATED: 15-OCT-99 10:23:01 PLOT PAGE 38 TB7750  
28 SHEET

CR1631T

CR R: 11831 TO: T87750 DATE: 991018 09:44:55  
2001 D-198

(22) CR11631T L/F DUMMY R/UP/TIBIA LOAD FZ 600C  
MAX = 46.54 at 109.4 MS MIN = -135.6 at 50.32 MS **AXIS 1**



CADDS Version 1.17.00 - 8-Aug-1998 Safety Laboratories Department, 610-PL T87750  
CREATED: 13-01-99 10:20:05 PLOT PAGE 41 SHEET 29

CRTS 0011631

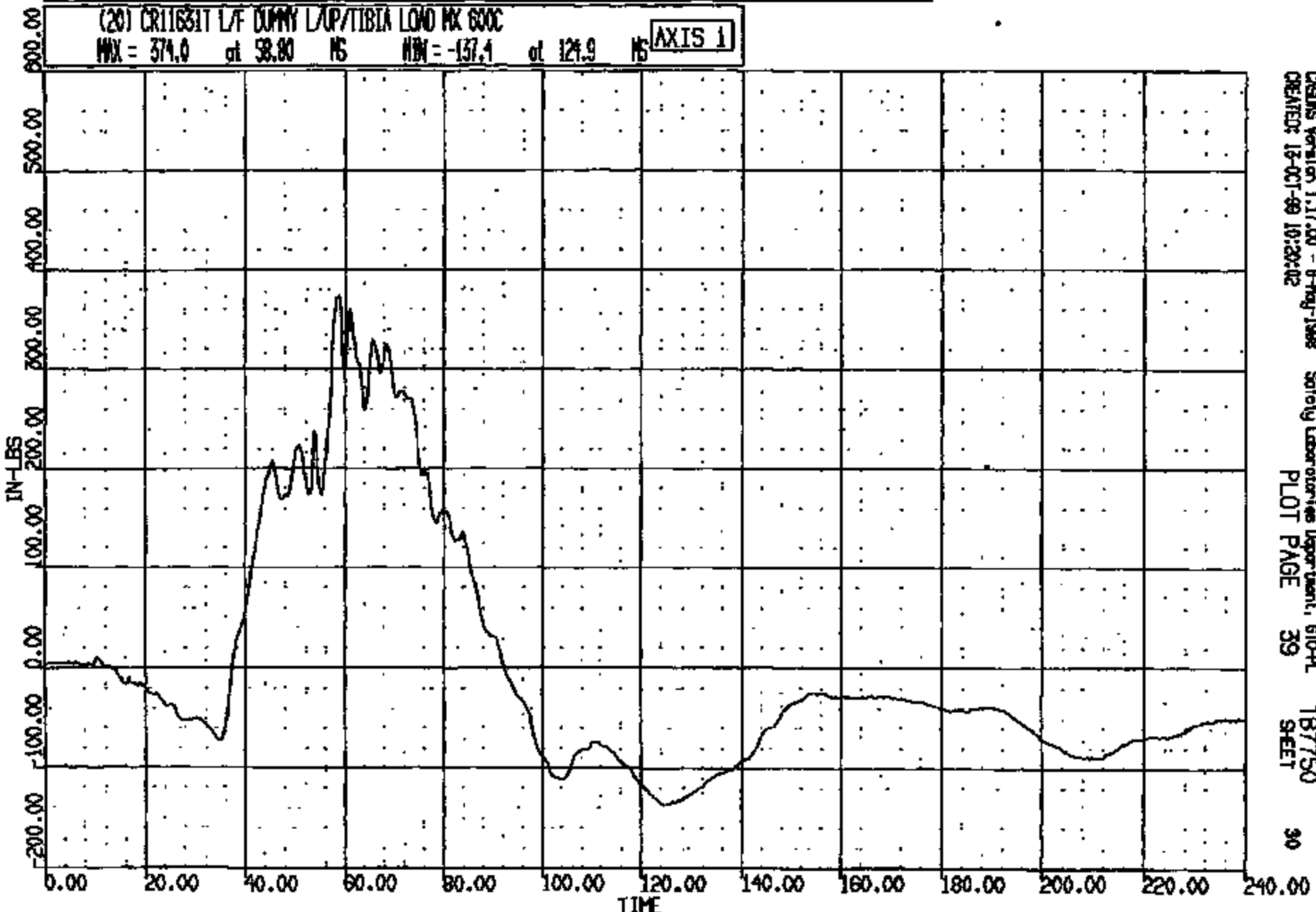
CR R: 11631 TO: TB7750 DATE: 991018 09:44:35

2001 D-189

(20) CR11631T L/F DUMMY L/UP/TIBIA LOAD MX 600C

MAX = 374.0 at 58.00 MS MIN = -157.4 at 121.9 MS

AXIS 1



CRIMS Version 1.17.00 - 8-May-1998  
CREATED: 13-OCT-99 10:20:02

Safety Laboratories Department, 610-PL  
PLOT PAGE 39

TB7750  
SHEET

30

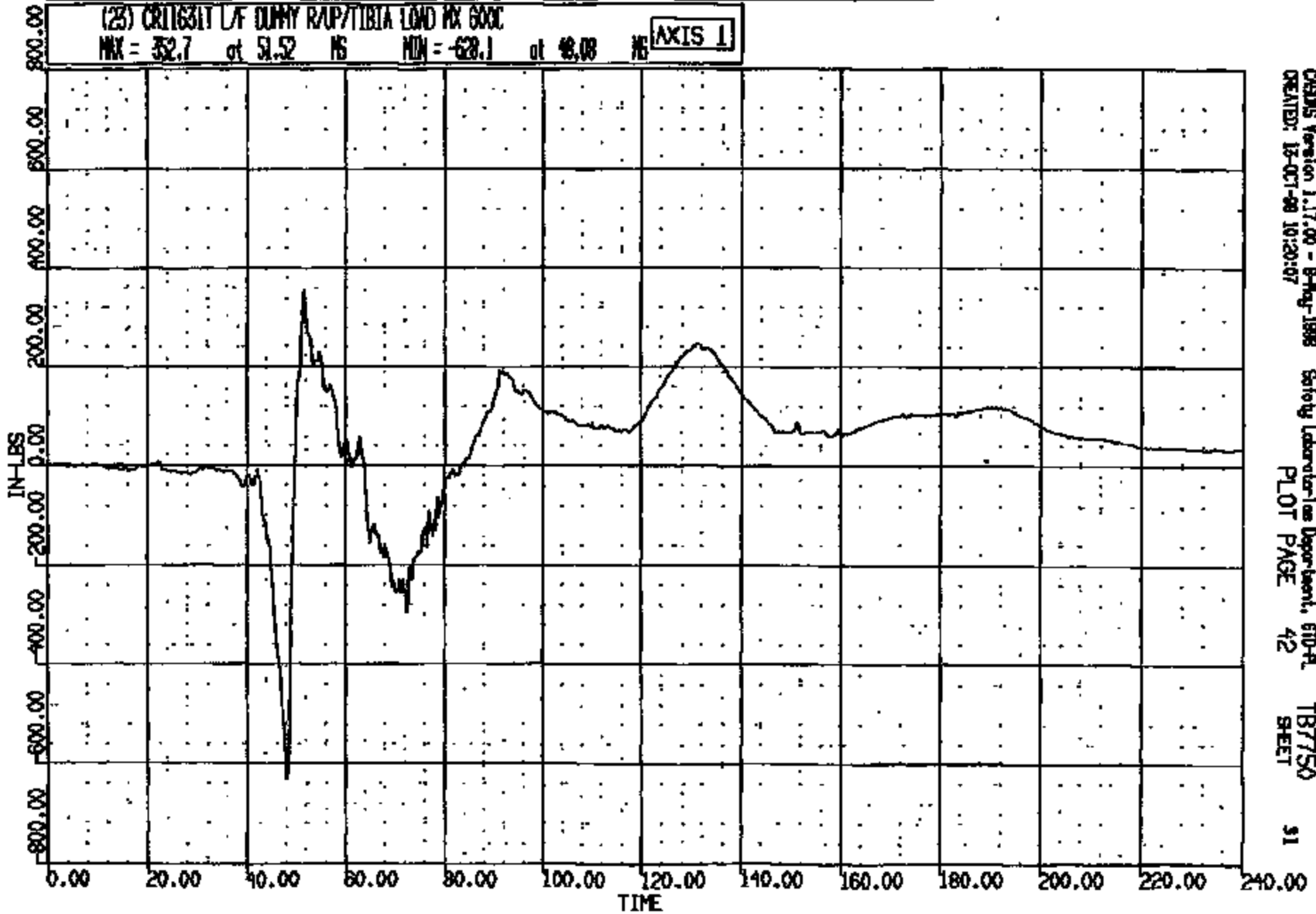
CRIS 0011631

CR R: 11031 TO: T87750 DATE: 991013 09:44:35  
3001 D-198

(23) CRT1631T L/F DUMMY R/UP/TIBIA LOAD MX 600C

MAX = 352.7 at 51.52 MS MIN = -628.1 at 48.08 MS

AXIS 1



CRS05 Version 1.17.00 - 8-Aug-1998  
CREATED: 13-OCT-98 10:20:07

Safety Laboratory Department, 610-A  
PLOT PAGE 42

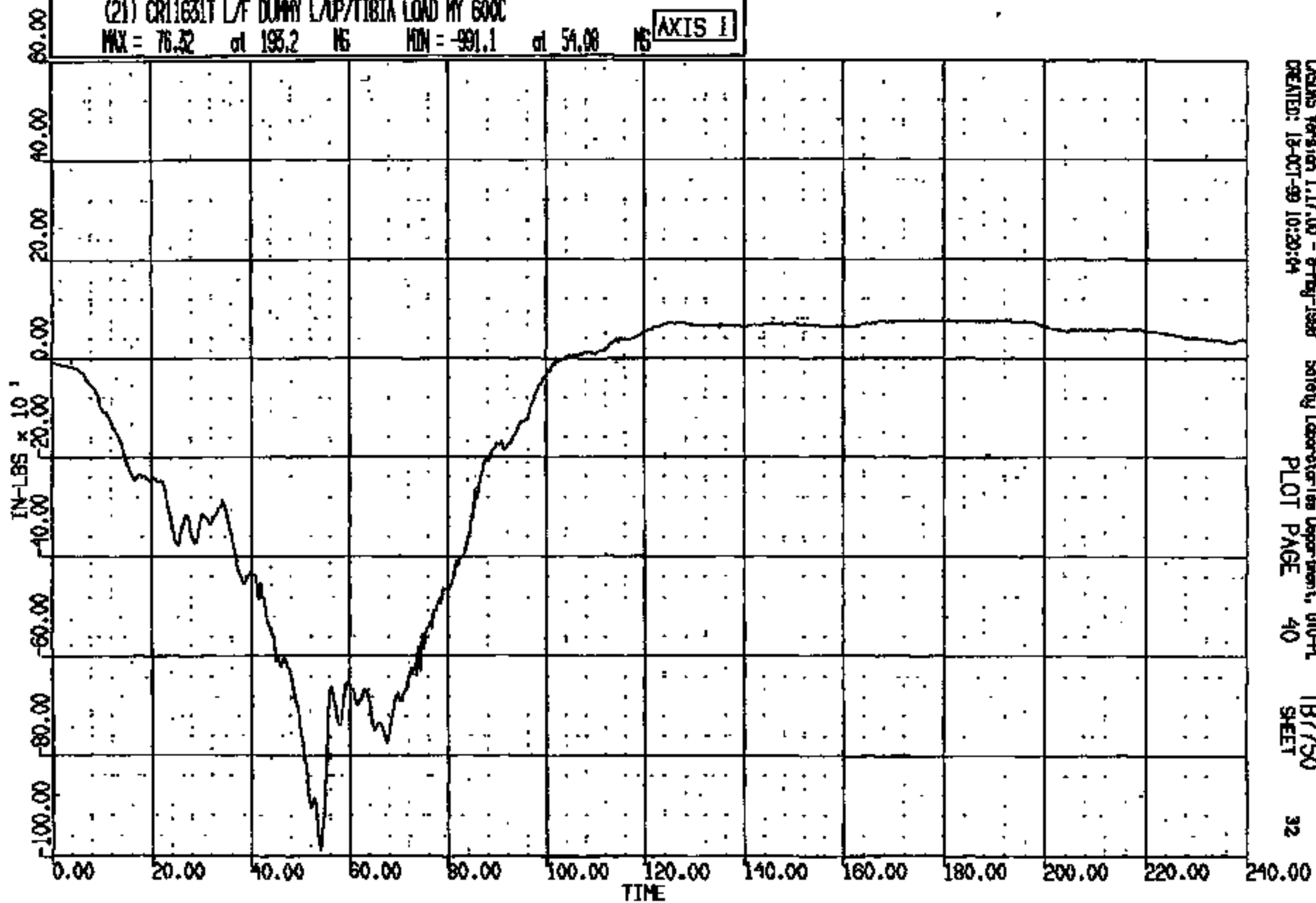
T87750  
SHEET

31

CRTS 0011631

CR R: 11031 TO: TB7750 DATE: 991013 09:44:35  
2001 D-189

(21) CR11631T L/F DUMMY L/UP/TIBIA LOAD BY 600C  
MAX = 76.32 at 135.2 NS MIN = -991.1 at 51.08 NS **AXIS 1**



CHSAS Version 1.17.00 - 8-Feb-1998 Safety Laboratories Department, 010-PL  
CREATED: 13-OCT-99 10:30:04 PLOT PAGE 40 TB7750 SHEET 32

CRTS 0011631

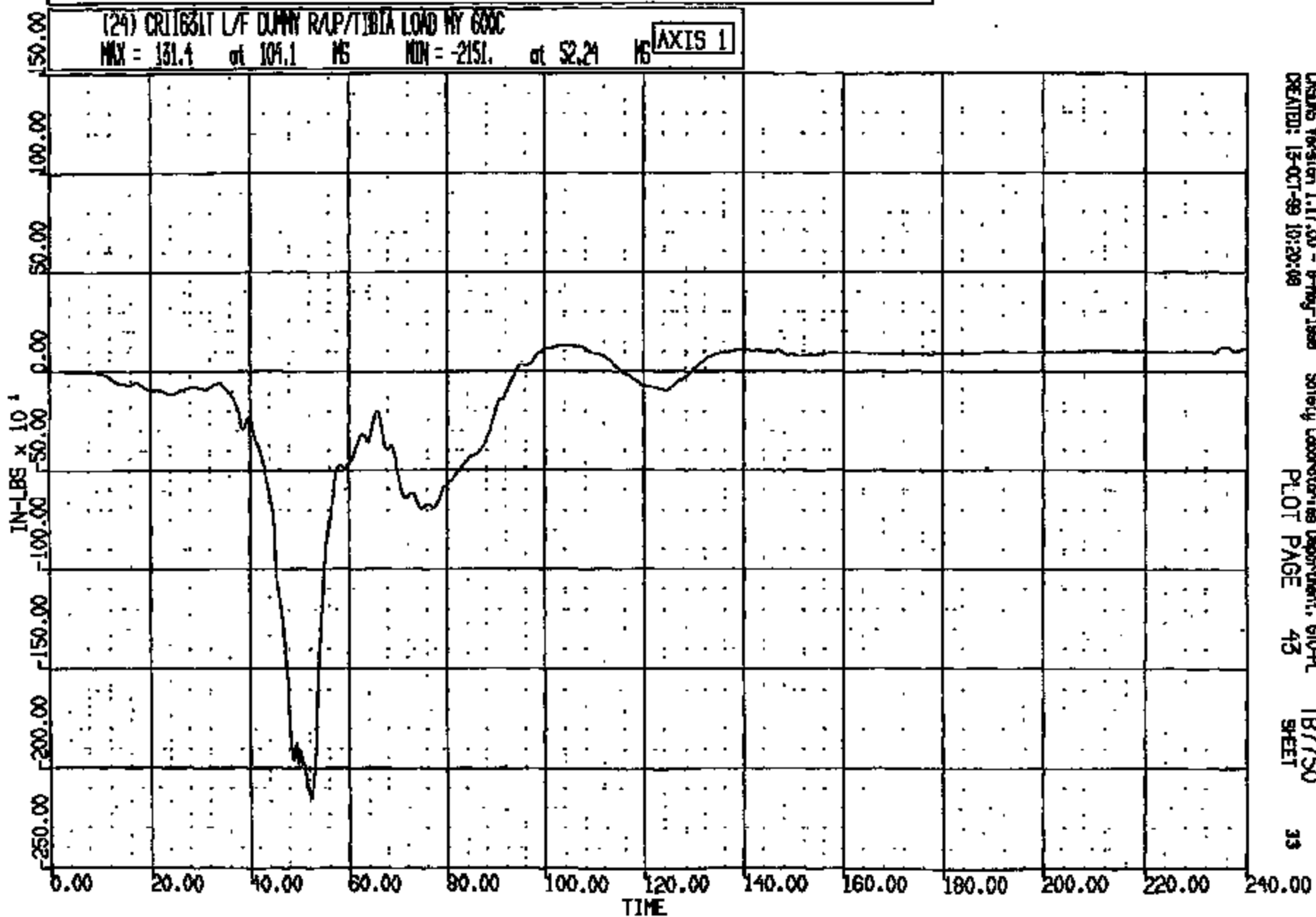


CR R: 11631 TO: T87750 DATE: 891013 08:44:55  
R001 D-186

(29) CRUTISIT L/F DUMMY R/UP/TIBIA LOAD NY 600C

MAX = 131.4 at 109.1 MS MIN = -215.1 at 52.24 MS

AXIS 1



CRSAS Version 1.17.00 - 8-May-1989  
CREATED: 13-OCT-89 10:20:08

Safety Laboratories Department, 610-PL  
PLOT PAGE 43

T87750  
SHEET

33

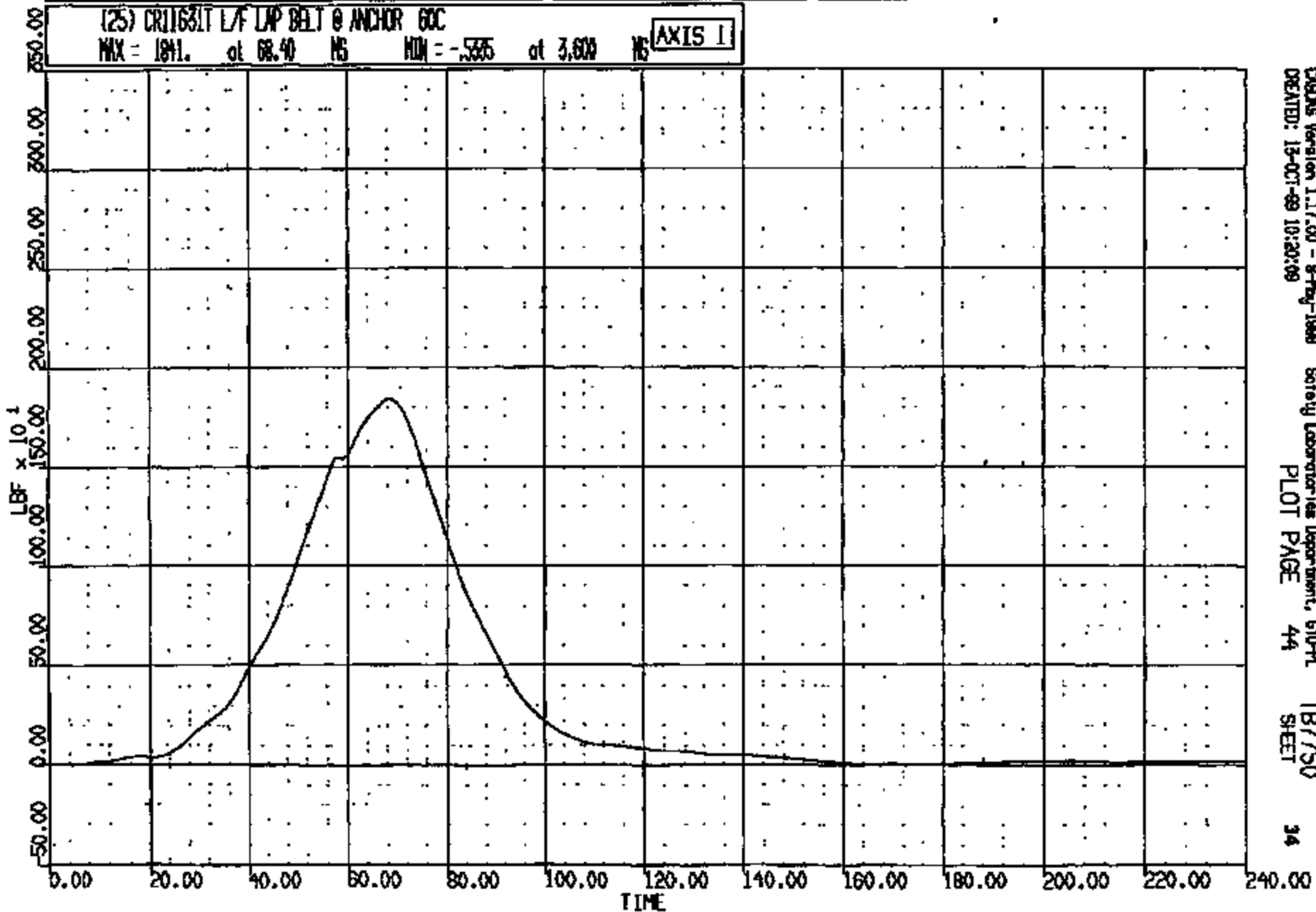
CRIS 0011631

CR R: 11031 TO: T87750 DATE: 891015 09:44:53  
2001 D-188

(25) CR11631T L/F LAP BELT @ ANCHOR 60C

MAX = 1841. at 68.40 NS MIN = -5335 at 3.600 NS

AXIS 1



CRSNG Version 1.17.00 - 8-May-1988  
CREATED: 13-OCT-89 10:20:09

Safety Laboratories Department, 610-PL  
PLOT PAGE 44

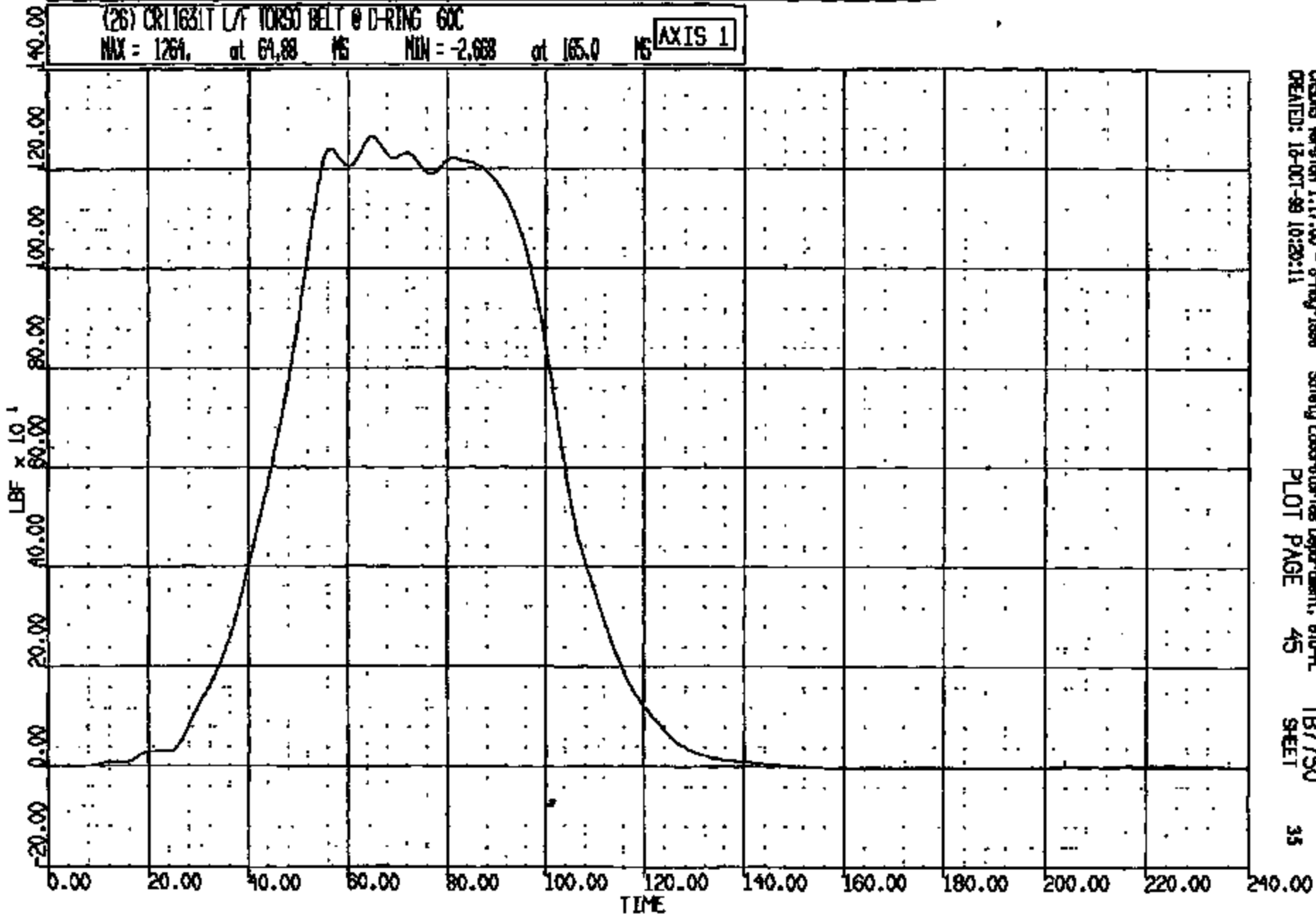
T87750  
SHEET

DR R: 11631 TO: TB7750 DATE: 991013 08:44:35  
2001 D-198

(26) CRT11631T L/F TORSO BELT @ D-RING 60C

MAX = 1264. at 64.88 MS MIN = -2.688 at 165.0 MS

AXIS 1



CADDS Version 1.17.00 - 8-May-1999  
CREATED: 12-OCT-99 10:20:11

Safety Laboratories Department, 610-PL  
PLOT PAGE 45

TB7750  
SHEET

35

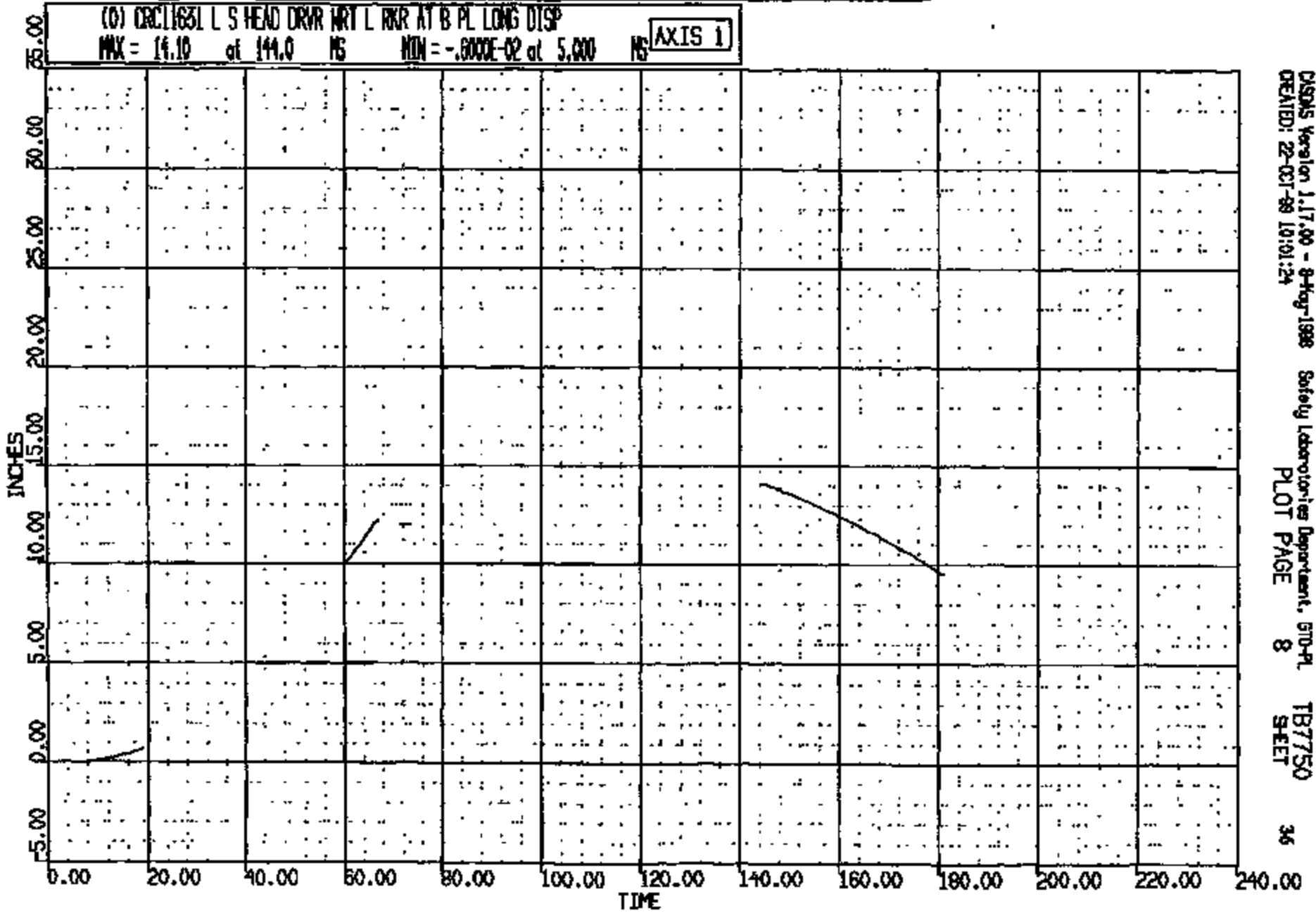
CRTS 0011631

CR R: 11631 TO: TB7750 DATE: 991013 09:44:33  
2001 D-188

(0) CRCL1631 L S HEAD DRVR WRT L RWR AT B PL LONG DISP

MAX = 14.10 at 144.0 MS MIN = -.0000E-02 at 5.000 MS

AXIS 1



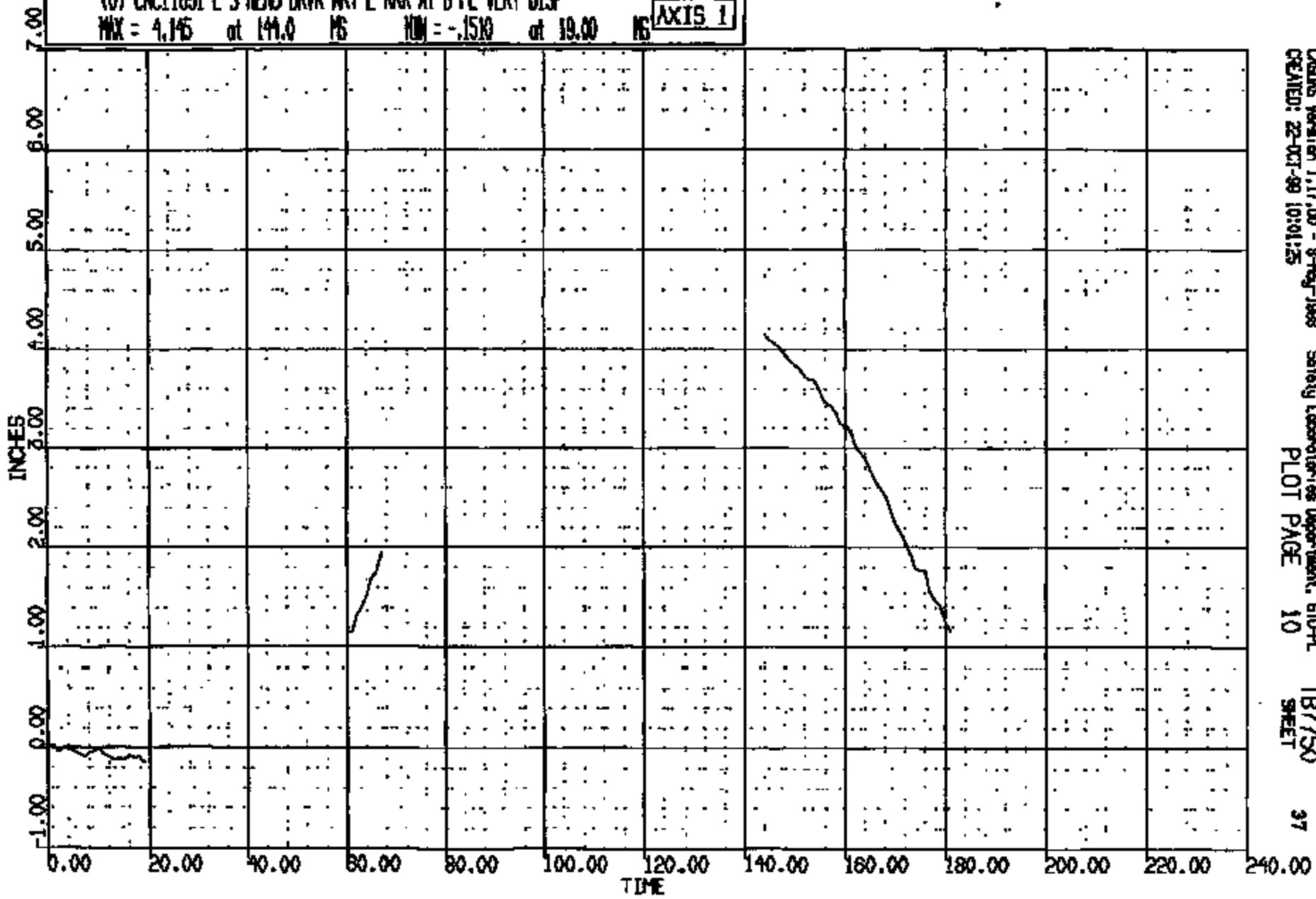
DISKS Version 1.17.00 - 9-Aug-1988  
CREATED: 22-OCT-89 10:01:24

Safety Laboratories Department, 670-PL  
PLOT PAGE 8

TB7750  
SHEET

CR R: 11831 TC: TB7750 DATE: 991015 09:44:35  
2001 D-186

(0) CACL1631 L S HEAD DRVR WRT L RKR AT B PL VERT DISP  
MAX = 4.145 at 144.0 MS MIN = -.1510 at 179.00 MS **AXIS 1**

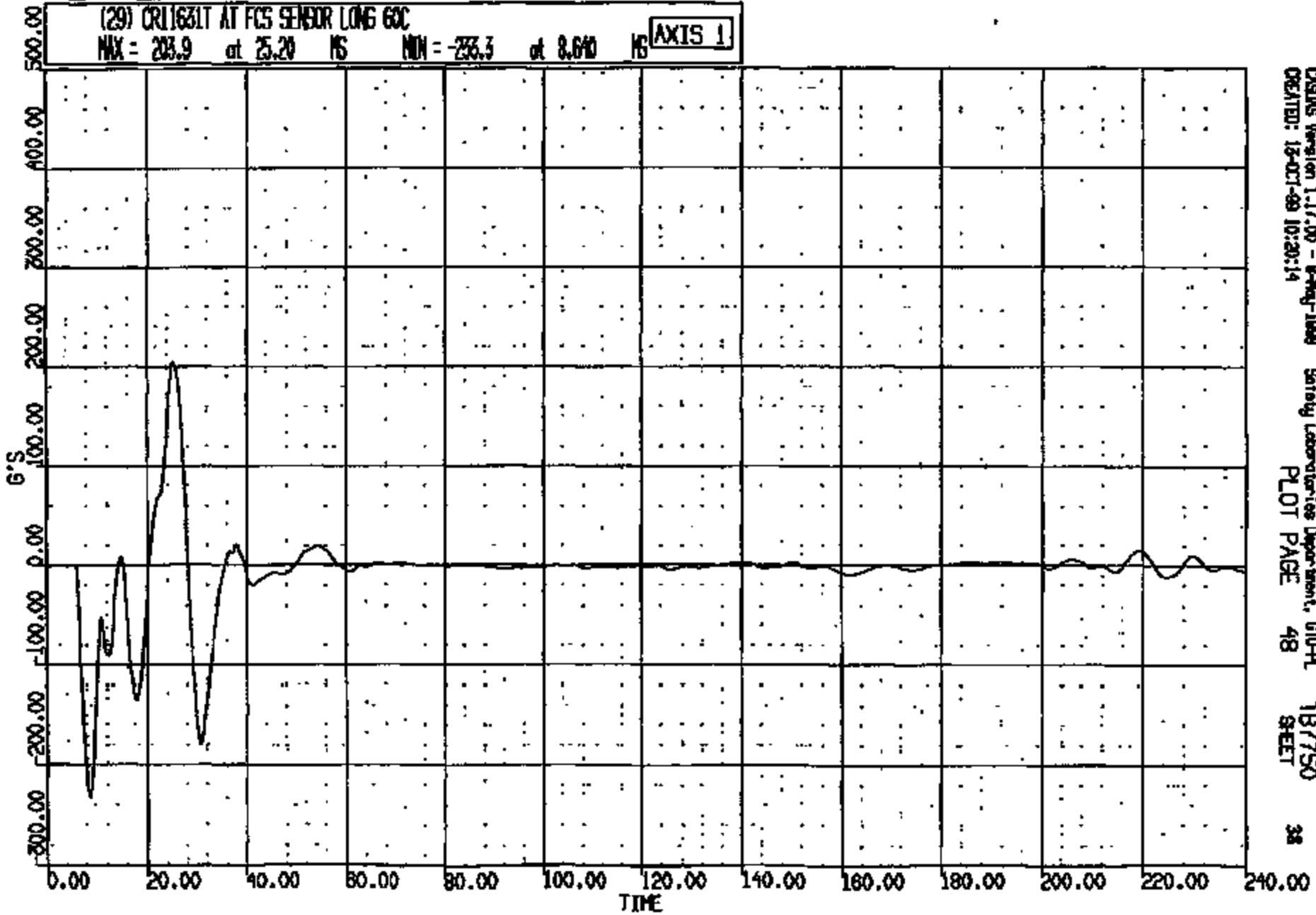


CASINS Version 1.17.00 - 8-May-1998 Safety Laboratories Department, 610-PL TB7750 37  
CREATED: 22-OCT-99 10:01:25 PLOT PAGE 10 SHEET

CRTS 0011631

CR R: 1185; TO: TB7750 DATE: 991015 08:44:55  
2001 D-188

(29) CR11631T AT FCS SENSOR LONG 60C  
MAX = 283.9 at 25.20 MS MIN = -236.3 at 8.640 MS **AXIS 1**

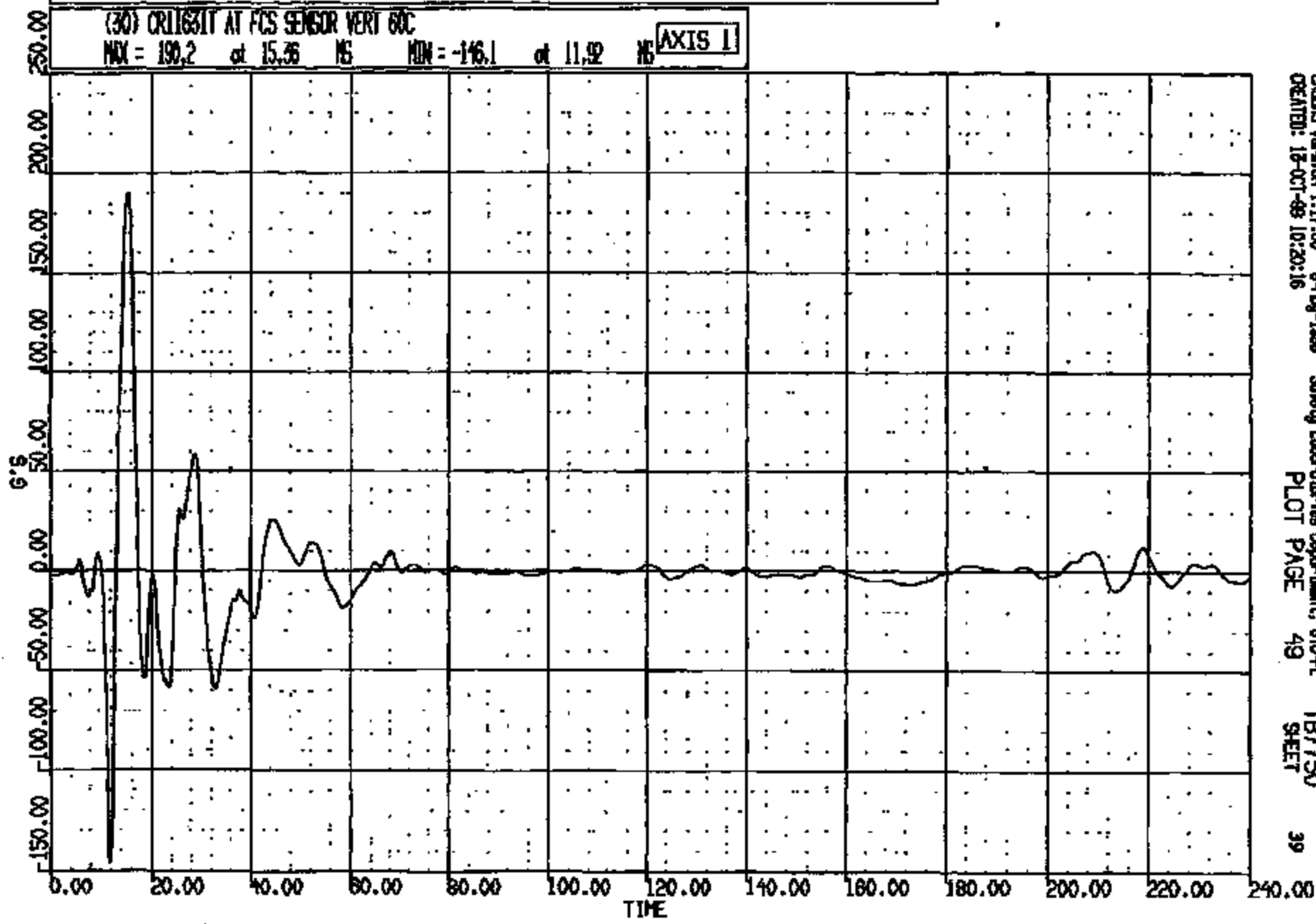


CASMG Version 1.17.00 - 8-May-1999 Safety Laboratories Department, 610-PL TB7750 38  
CREATED: 15-OCT-99 10:20:14 PLOT PAGE 48 SHEET

CR11631

CR R: 11031 TO: TB7750 DATE: 091015 08:44:35  
2001 D-186

(30) CR11631T AT FCS SENSOR VERT 60C  
MAX = 190.2 at 15.36 NS MIN = -146.1 at 11.92 NS **AXIS 1**



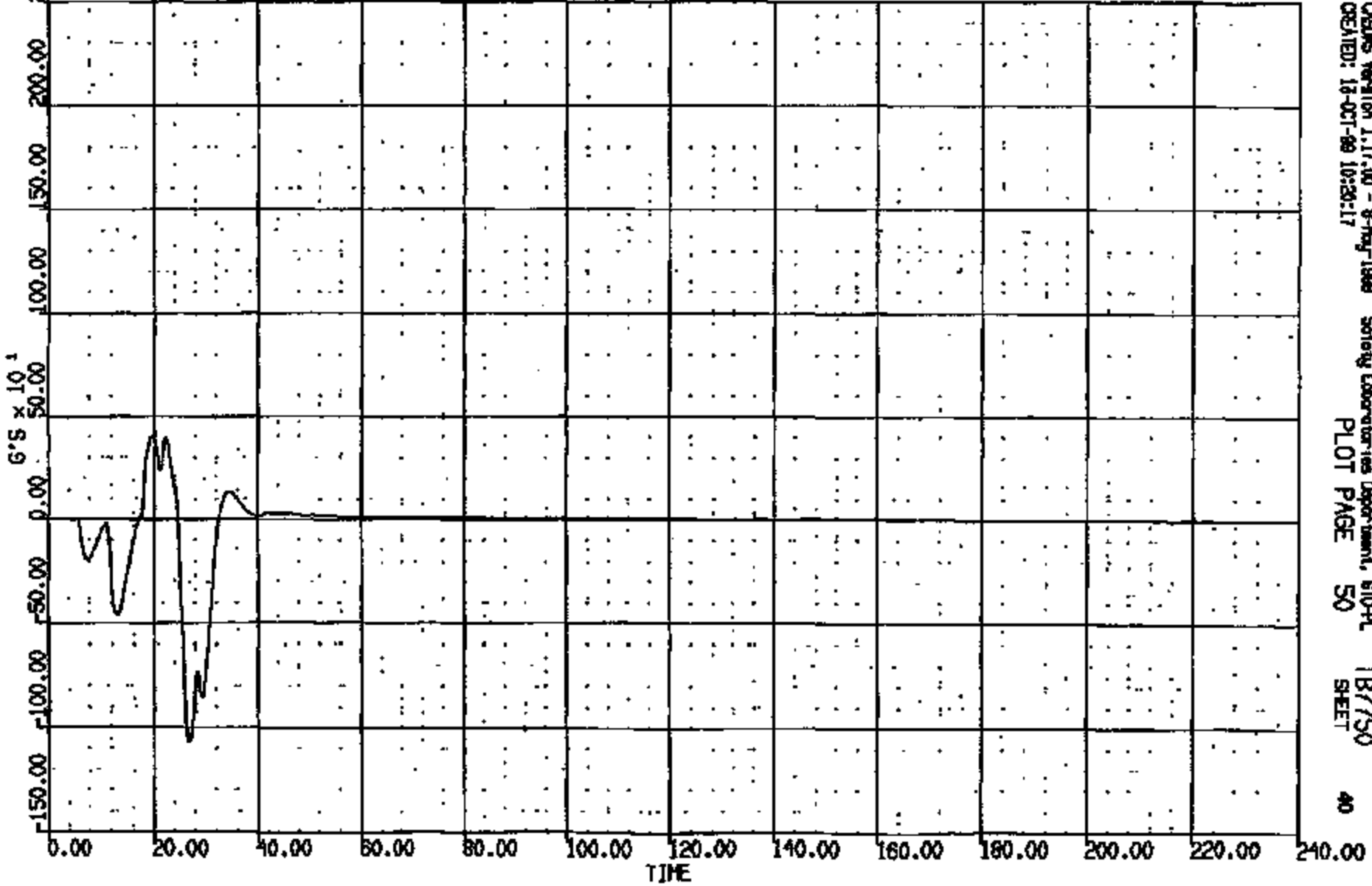
CRIMS Version 1.17.00 - 8-May-1998 Safety Laboratories Department, G10-PL TB7750  
CREATED: 15-OCT-09 10:20:16 PLOT PAGE 49 SHEET 39

CRIS 0011631

CR #: 11631 TO: T87750 DATE: 881013 09:44:55  
2001 D-188

# (31) CR11631T AT FCS SENSOR LAT 60C  
MAX = 401.9 at 19.60 NS MIN = -1076. at 26.80 NS **AXIS 1**

ANOMALY KEY:  
\* - Missed data exceeded full scale  
# - Missed data 200.0% of full scale  
+ - All data < 10.0% of full scale  
@ - >1 percent offset of T-zero



CRS Version 1.17.00 - 8-May-1989 Safety Laboratories Department, SIO-PL T87750  
CREATED: 12-OCT-88 10:20:17 PLOT PAGE 50 SHEET 40

CRIS 0011631

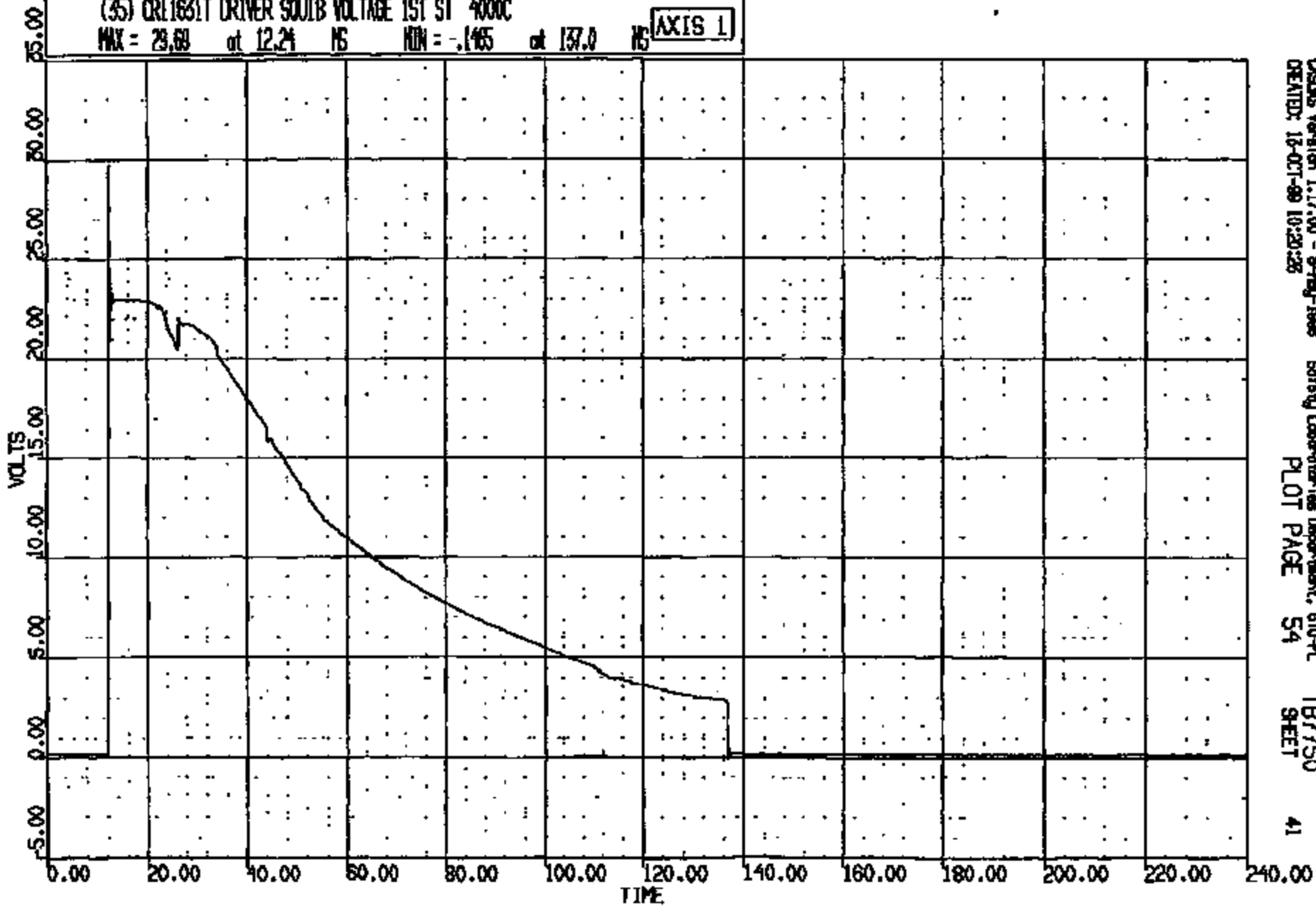


CR R: 11631 TO: TB7750 DATE: 991013 09:44:55  
2001 D-188

(35) CR11631T DRIVER SOLID VOLTAGE 1ST ST 4000C

MAX = 23.68 at 12.24 NS MIN = -.1465 at 137.0 NS

AXIS 1



CRS Version 1.17.00 - 9-May-1998  
CREATED: 18-OCT-99 10:20:25

Safety Laboratory/Ins Department, 810-PL  
PLOT PAGE 54

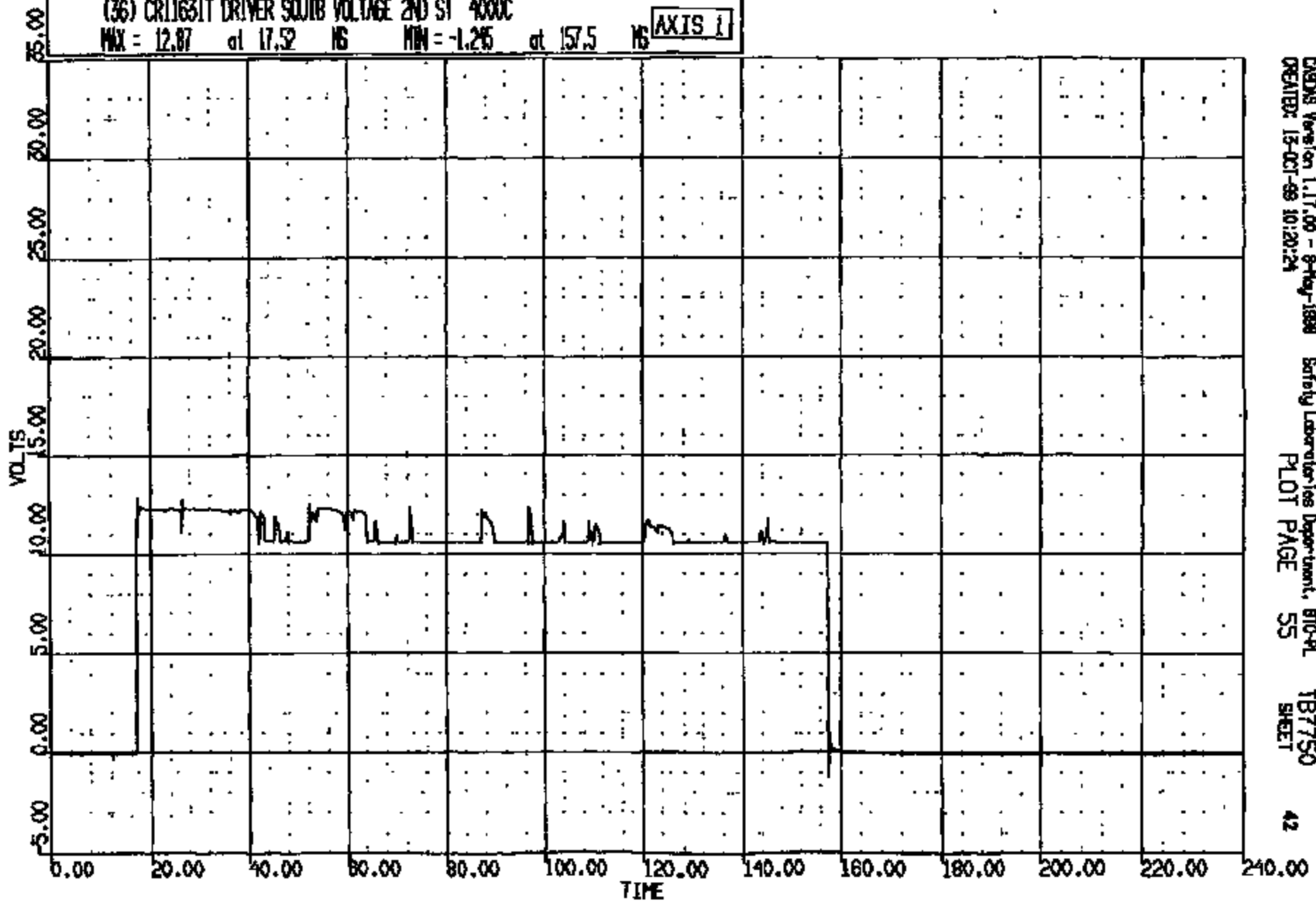
TB7750  
SHEET

41

CRIS 0011631

CR R: 11631 TO: TB7750 DATE: 891018 08:44:58  
2001 D-188

(36) CR11631T DRIVER SOLUB VOLTAGE 2ND ST 400C  
MAX = 12.87 at 17.5 NS MIN = -1.26 at 157.5 NS **AXIS 1**



CRS Version 1.17.00 - 8-May-1998 Safety Laboratories Department, 810-9L TB7750 42  
CREATED: 15-OCT-89 10:20:24 PLOT PAGE 55 SHEET

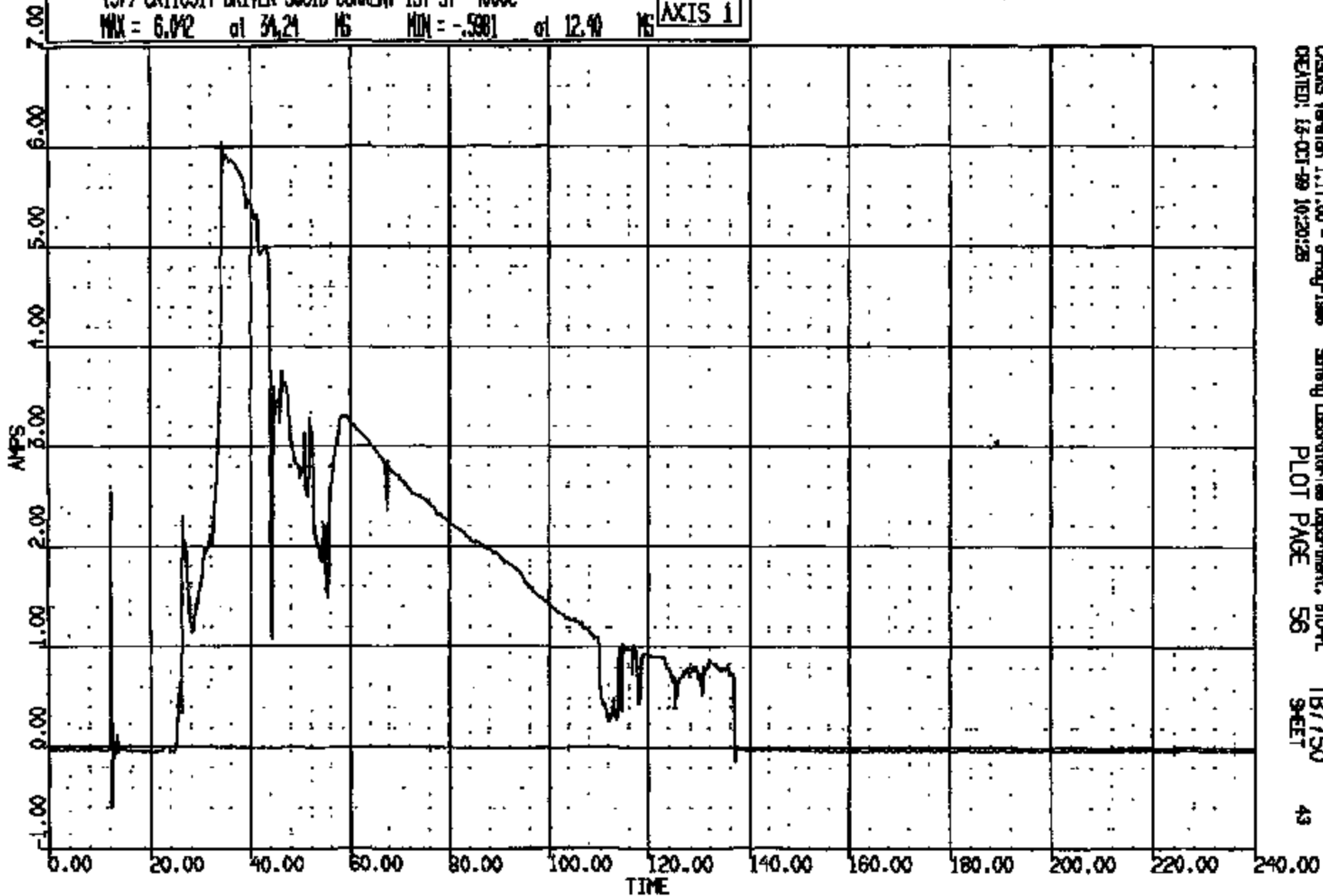
CRIS 0011631

CR R: 11631 TO: TB7750 DATE: 881015 08:44:55  
2001 D-188

(37) CRTS011631 DRIVER SOUTH CURRENT 1ST ST 4000C

MAX = 6.042 at 34.24 MS MIN = -.5381 at 12.40 MS

AXIS 1



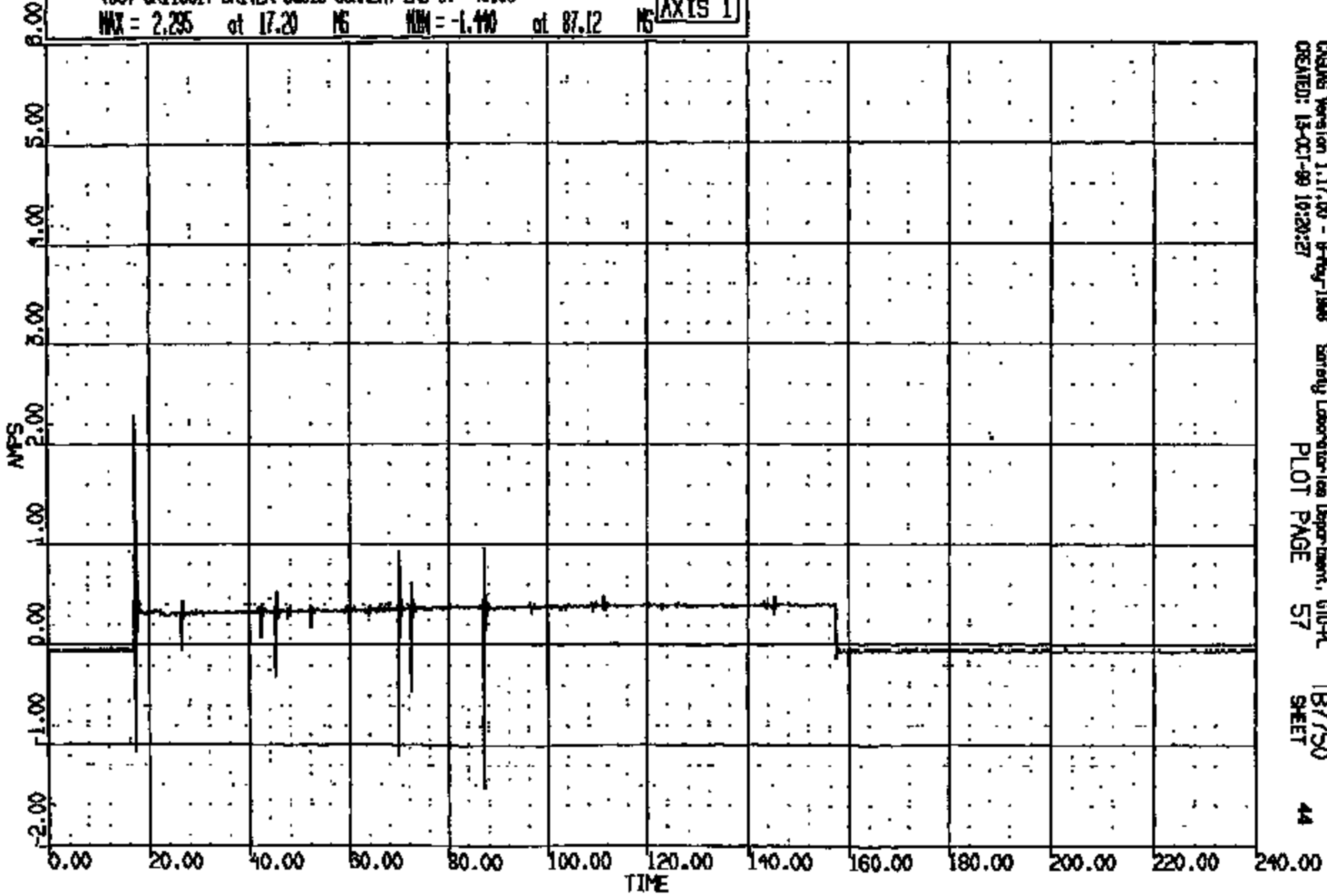
CASMS Version 1.17.00 - 8-May-1988  
CREATED: 18-OCT-89 10:20:28

Safety Laboratory/see Department, 610-PL  
PLOT PAGE 56

TB7750  
SHEET

CR R: 11831 TO: T87750 DATE: 991018 09:44:25  
2001 D-188

(38) CR11631T DRIVER SOLUB CURRENT 2ND ST 4000C  
MAX = 2.235 at 17.20 MS MIN = -1.440 at 87.12 MS **AXIS 1**



CRIMS Version 1.17.00 - 8-May-1998 Safety Laboratories Department, GTO-PL T87750  
CREATED: 13-OCT-99 16:28:27 PLOT PAGE 57 SHEET 44

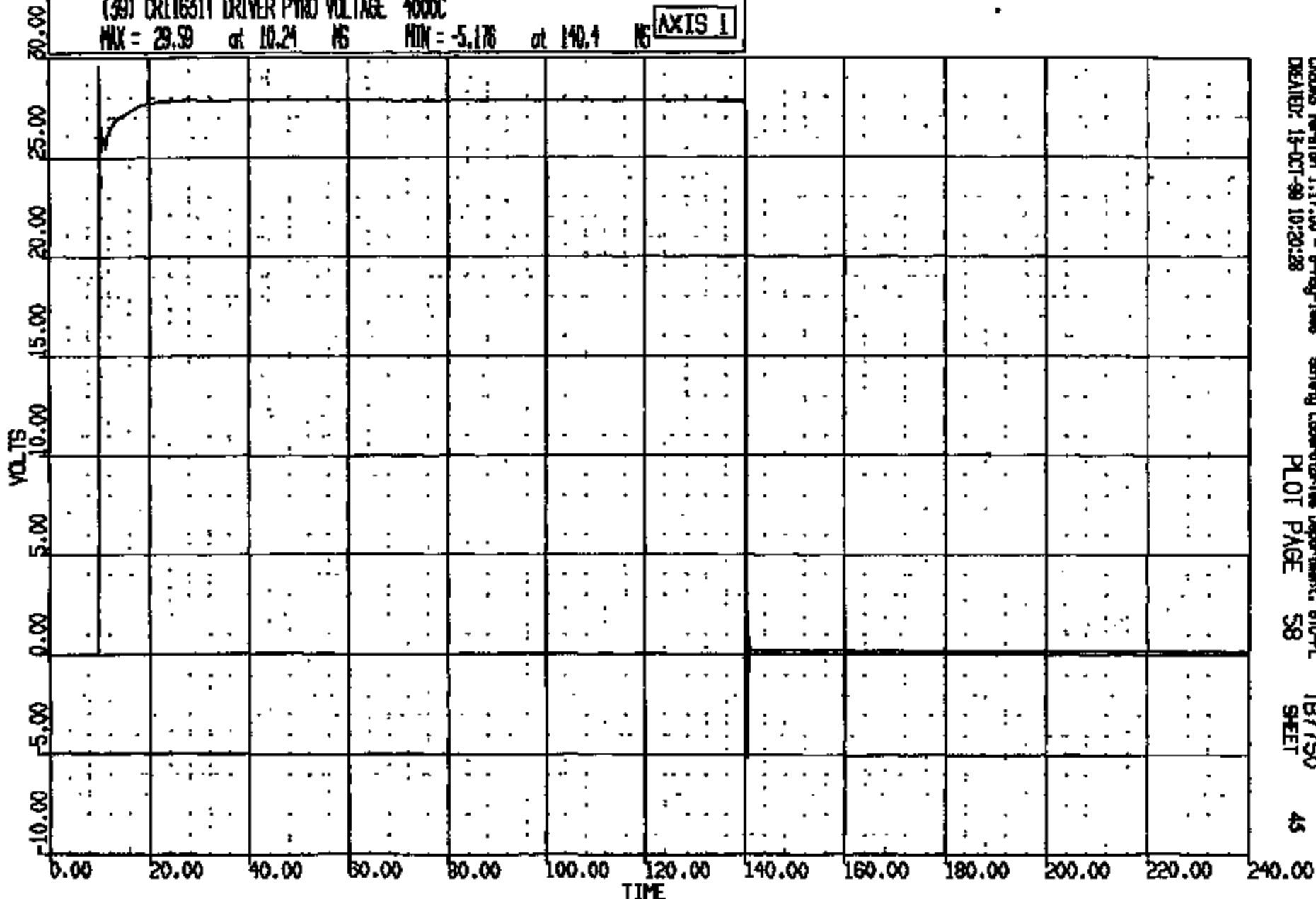
CRIS 0011631

CR R: 11831 TO: TB7750 DATE: 991018 09:44:55

8001 D-188

(39) CR11631T DRIVER PYRO VOLTAGE 4000C  
MAX = 29.59 at 10.24 MS MIN = -5.176 at 140.4 MS

AXIS 1



CRMS Version 1.17.00 - 8-May-1998  
DATE: 13-OCT-99 10:20:28

Safety Laboratory Department, 610-PL  
PLOT PAGE 58

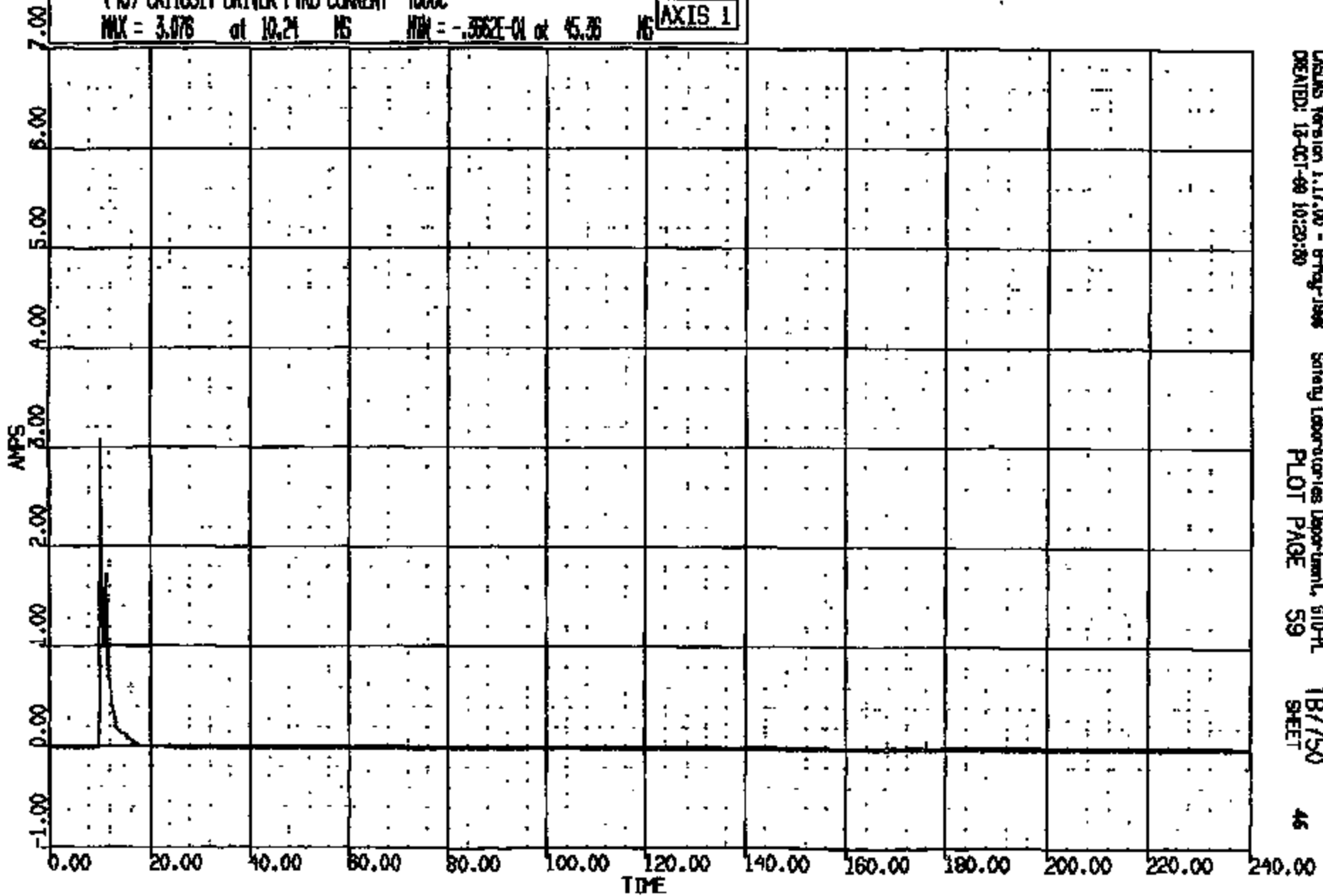
TB7750  
SHEET

CR11631

CR R: 11881 TO: T87750 DATE: 991013 08:44:58  
2001 D-198

(40) CR1631T DRIVER PYRO CURRENT 4000C  
MAX = 3.076 at 10.24 MS MIN = -.3582E-01 at 45.36 MS

AXIS 1

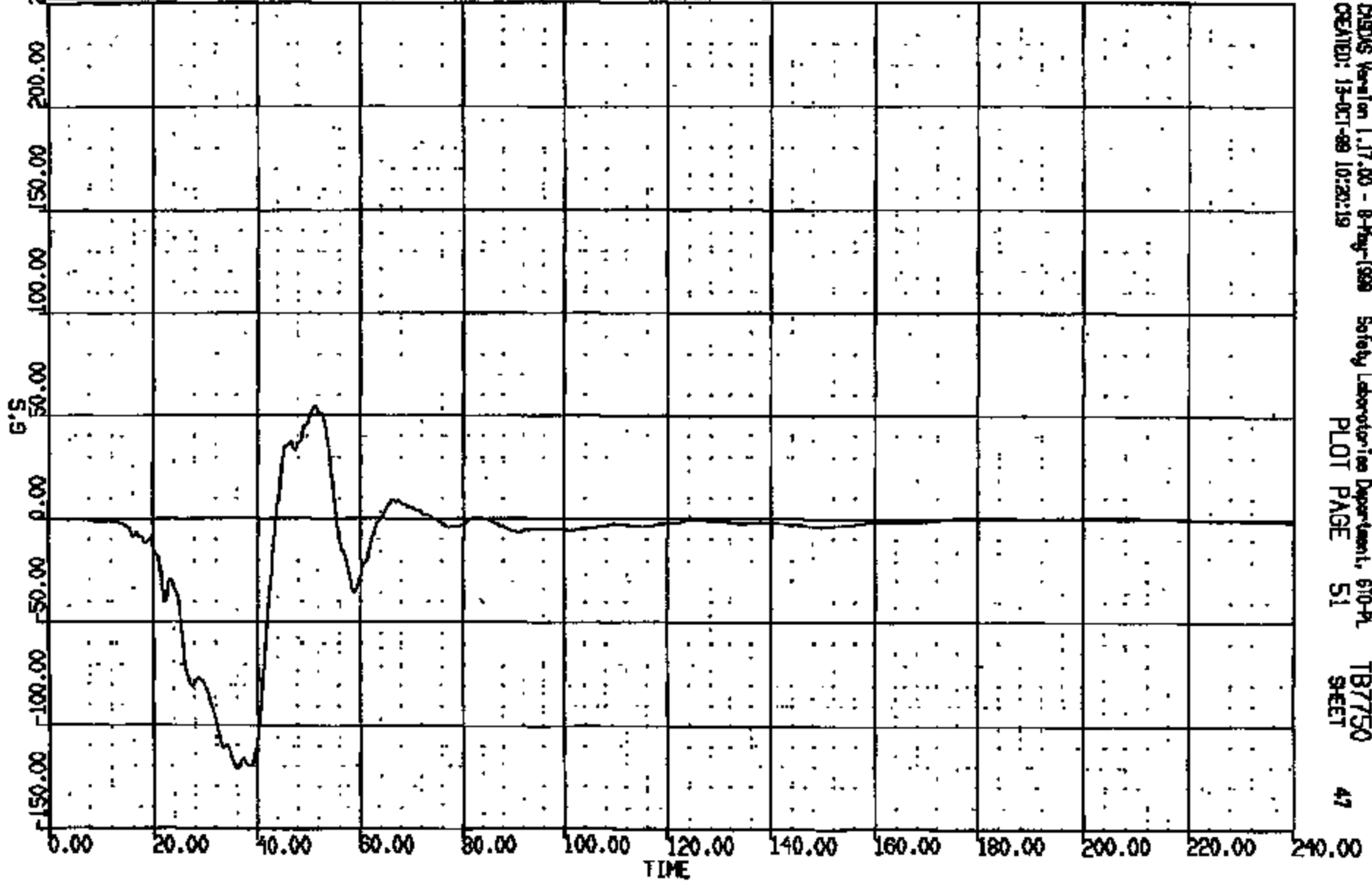


CASDS Version 1.17.00 - 8-Aug-1998 Safety Laboratories Department, 610-PL T87750  
CREATED: 18-OCT-99 10:23:50 PLOT PAGE 59 SHEET 46

CRTS 0011631

CR R: 11631 TO: TB7750 DATE: 991015 09:44:55  
2001 D-189

(32) CR11631T ENGINE TRNS TOP LONG 60C  
MAX = 51.61 at 51.28 MS MIN = -121.8 at 36.00 MS AXIS 1



CRSIS Version 1.17.00 - 8-Aug-1998 Safety Laboratories Department, 610-PL TB7750 47  
CREATED: 13-OCT-99 10:20:19 PLOT PAGE 51 SHEET

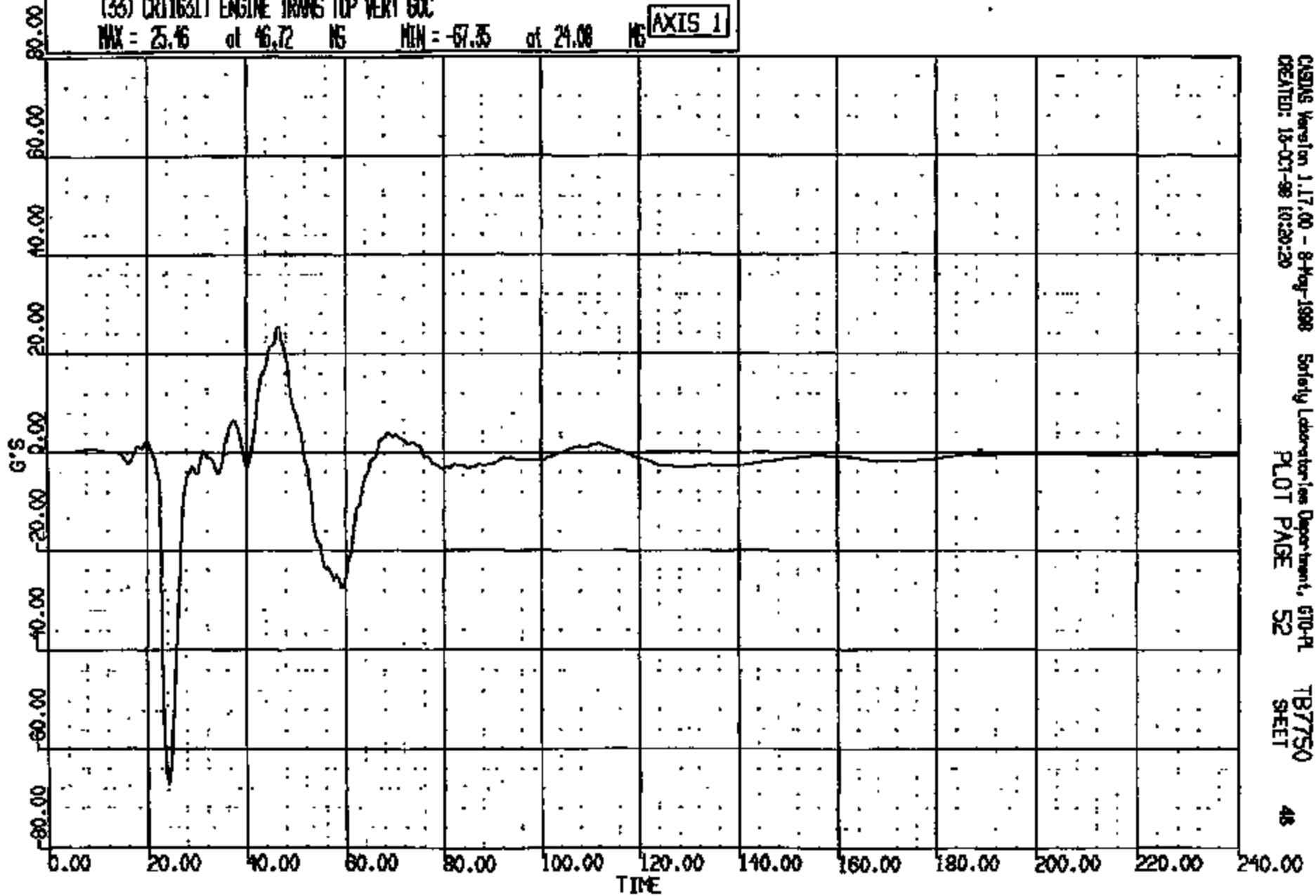
CRIS 0011631

CR R: 11831 TO: TB7750 DATE: 881018 09:44:35  
2001 D-188

(33) CR11631T ENGINE TRANS TOP VERT GOC

MAX = 25.46 at 46.72 MS MIN = -57.35 at 24.08 MS

AXIS 1



CASINS Version 1.17.00 - 8-May-1998  
CREATED: 18-OCT-98 10:20:20

Safety Laboratories Department, G10-PL  
PLOT PAGE 52

TB7750  
SHEET

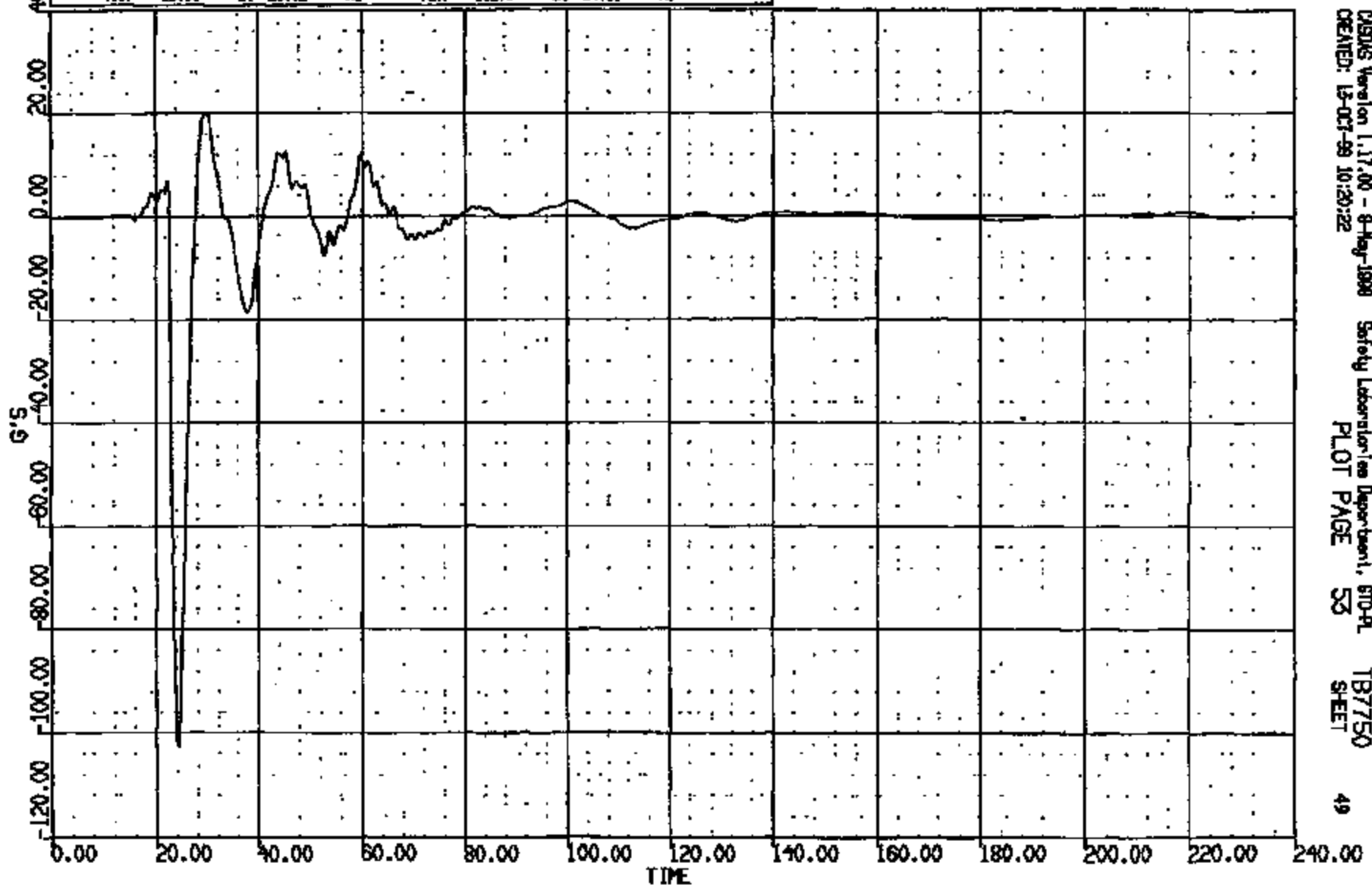
48

CRTS 0011631



CR R: 11631 TO: TB7750 DATE: 921013 09:44:35  
N001 D-198

(34) CR11631T ENGINE TRANS TOP LAT 60C  
MAX = 19.95 at 23.92 MS MIN = -102.9 at 21.16 MS **AXIS 1**



CA90S Version 1.17.00 - 8-May-1998 Safety Laboratories Department, STD-PL  
CREATED: 13-OCT-99 10:20:22 PLOT PAGE 53 SHEET 49

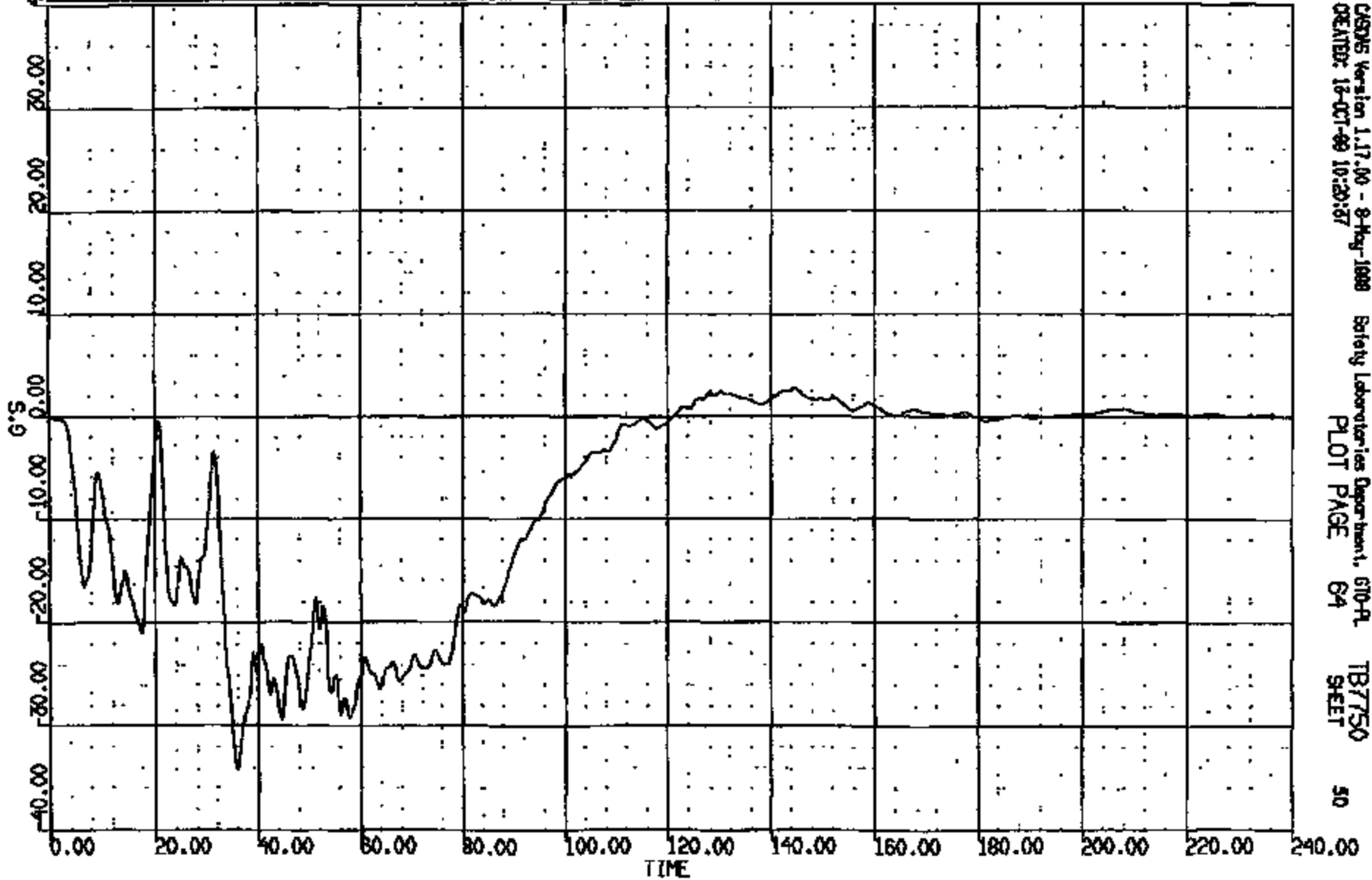
CR11631

CR R: 11921 TO: TB7750 DATE: 991015 09:44:55  
2001 D-198

(45) CRT1631T L/ROCKER @ A-PILLAR LONG GOC

MAX = 2.904 of 141.7 MS MIN = -34.26 of 35.92 MS

AXIS 1



CASYS Version 1.17.00 - 9-May-1999  
CREATED: 12-OCT-99 10:20:57

Safety Laboratories Department, 610-PL  
PLOT PAGE 64

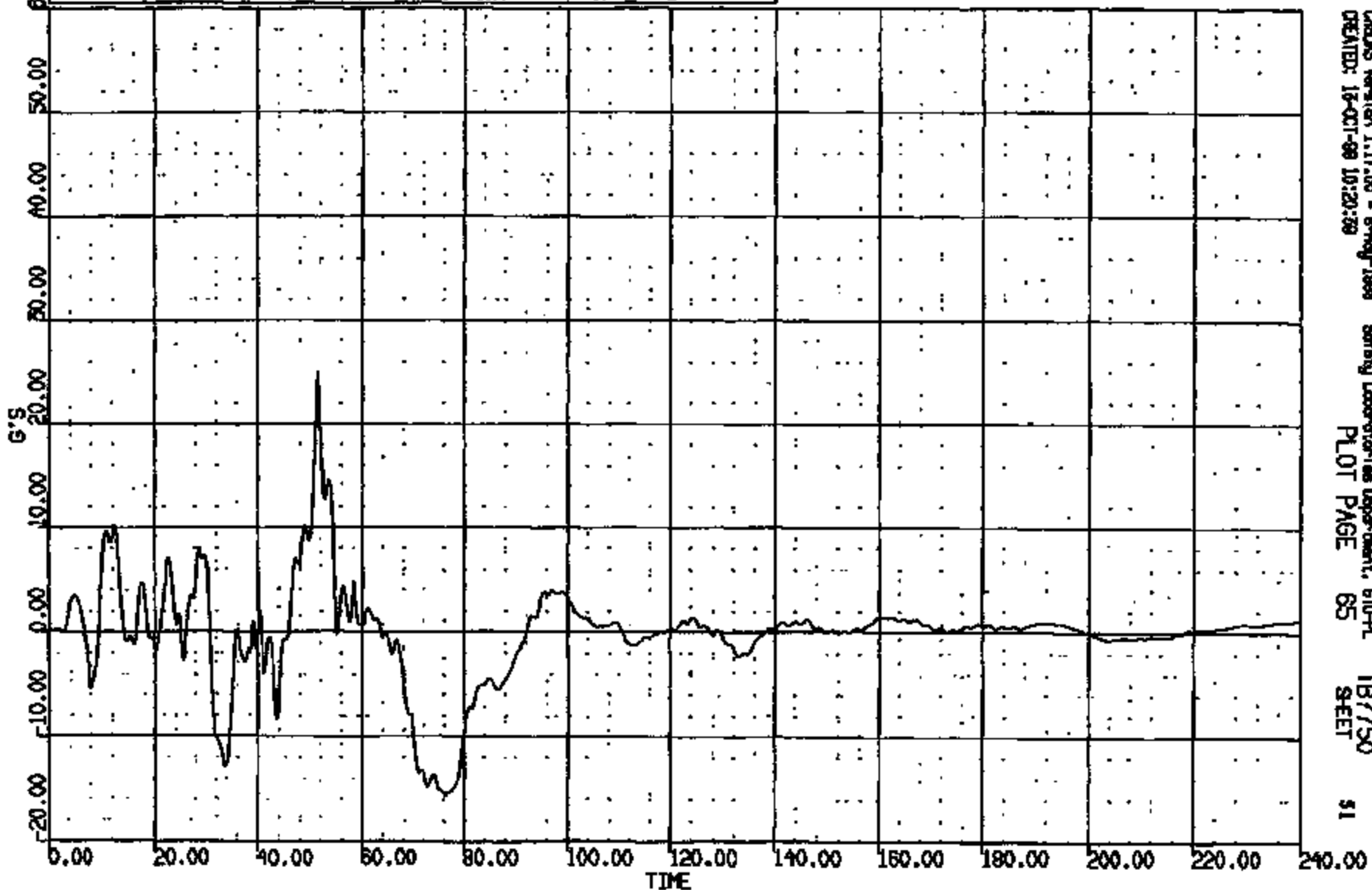
TB7750  
SHEET

50

CRTS 0011631

CR R: 11631 TO: TB7750 DATE: 891015 09:44:35  
NOO1 0-198

(46) CR11631 L/ROCKER @ A-PILLAR VERT 60C  
MAX = 24.99 at 51.44 MS MIN = -15.64 at 76.32 MS AXIS 1



CRSIS Version 1.17.00 - 8-Aug-1989 Barby Laboratory Department, 610-PL  
CREATED: 18-OCT-89 10:20:29 PLOT PAGE 65 TB7750  
51

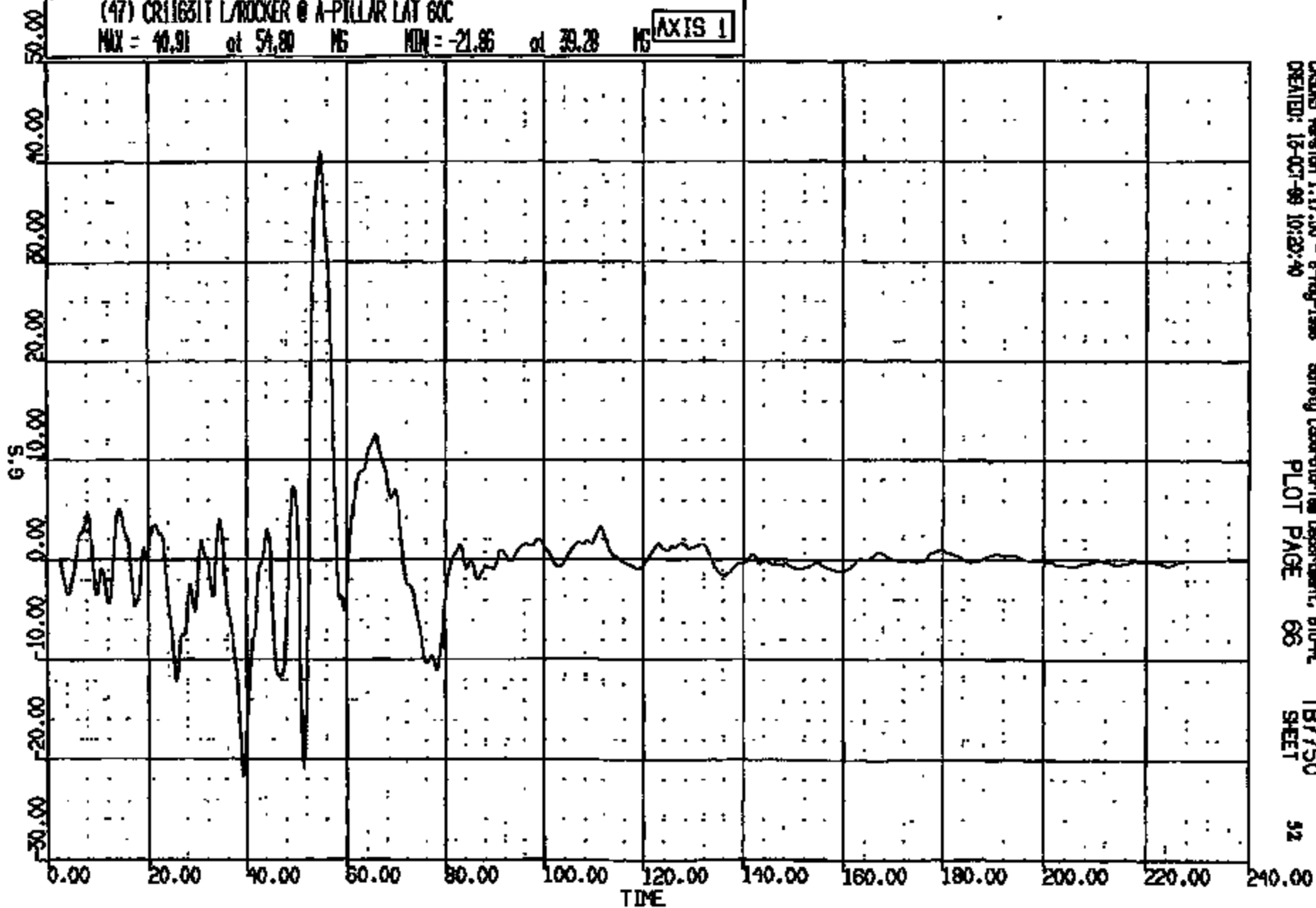
CRIS 0011631

CR R: 11631 TO: TB7750 DATE: 991013 09:44:55  
2001 D-188

(47) CR11631T L/ROCKER @ A-PILLAR LAT 60C

MAX = 40.91 at 54.80 MS MIN = -21.86 at 39.28 MS

AXIS 1



CADDS Version 1.17.00 - 8-Aug-1998  
CREATED: 15-OCT-99 10:23:40

Safety Laboratories Department, LTD-PL  
PLOT PAGE 66

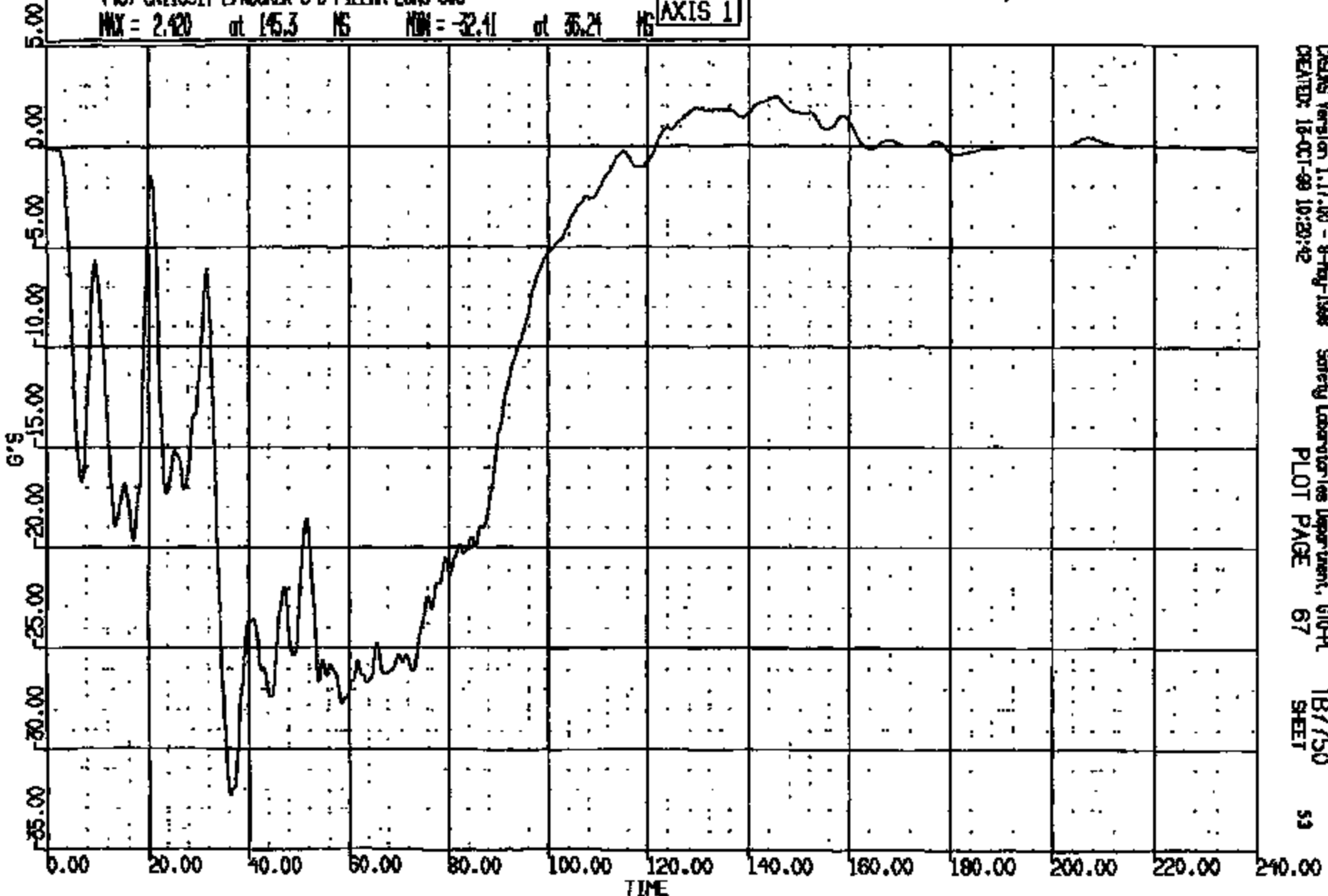
TB7750  
SHEET

52

CRIS 0011631

CR R: 11831 TO: TB7750 DATE: 991013 09:44:55  
2001 D-188

(48) CR11631T L/ROCKER @ B-PILLAR LONG 60C  
MAX = 2.420 at 145.3 MS MIN = -32.41 at 35.24 MS **AXIS 1**



CASMS Version 1.17.00 - 9-May-1998 Safety Laboratories Department, 610-PL  
CREATED: 18-OCT-99 10:23:42 PLOT PAGE 67 TB7750  
SHEET 53

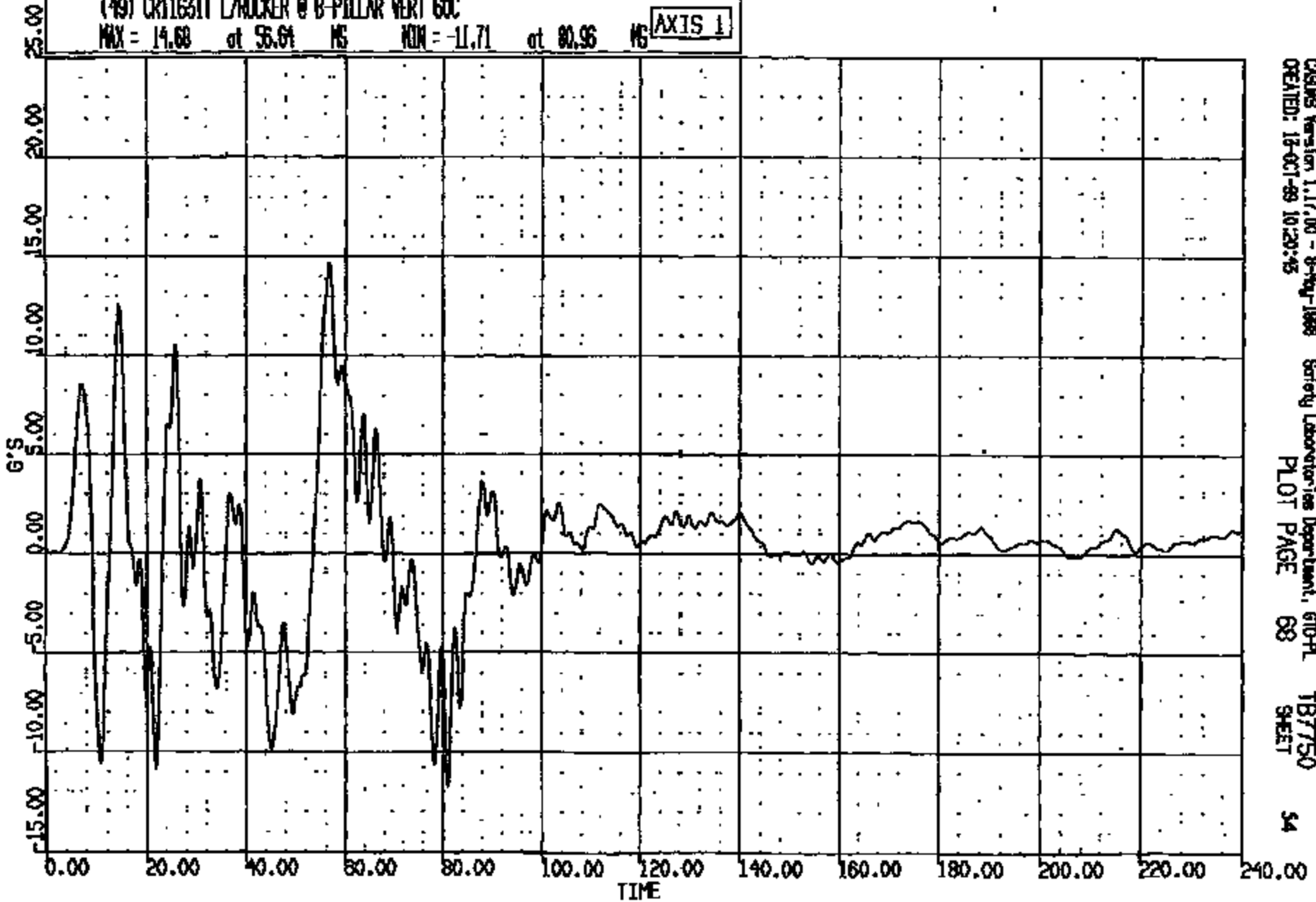
CRTS 0011631

CR R: 11851 TO: TB7750 DATE: 001013 09:44:55  
2001 D-188

(49) CRITISIT L/ROCKER @ B-PILLAR VERT 60C

MAX = 14.68 at 56.61 MS MIN = -11.71 at 80.96 MS

AXIS 1



CASIMS Version 1.17.00 - 8-May-1999  
CREATED: 15-OCT-89 10:20:45

Safety Laboratories Department, 610-PL  
PLOT PAGE 68

TB7750  
SHEET

54

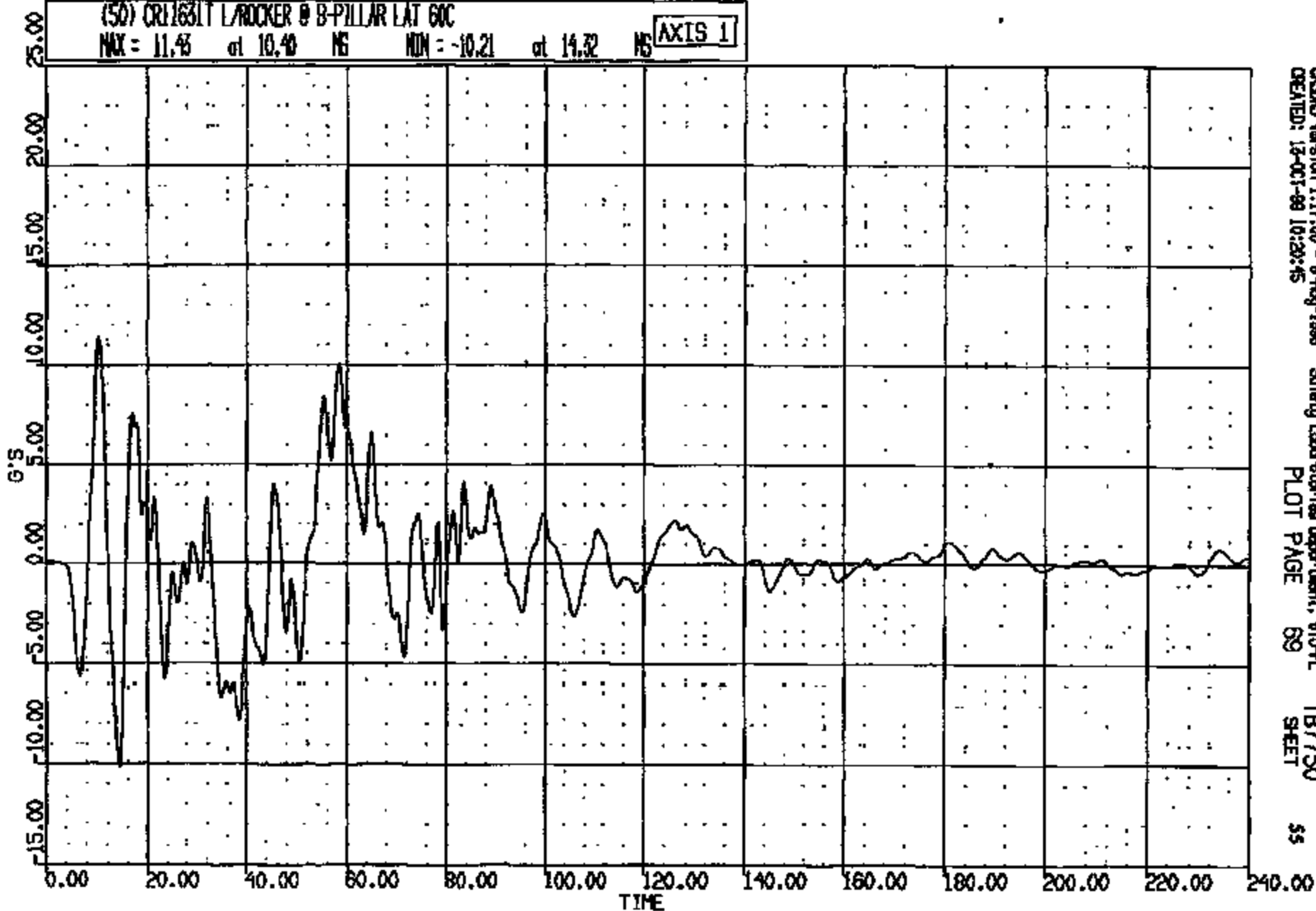
CRIS 0011631

CR R: 11631 TO: T87750 DATE: 991018 09:44:55  
2001 D-188

(50) CR11631T L/ROCKER @ B-PILLAR LAT 60C

MAX = 11.45 at 10.40 MS MIN = -10.21 at 14.32 MS

AXIS 1



CRS Version 1.17.00 - 8-May-1998  
CREATED: 12-OCT-99 10:20:45

Safety Laboratories Department, 810-PL  
PLOT PAGE 69

T87750  
SHEET

55

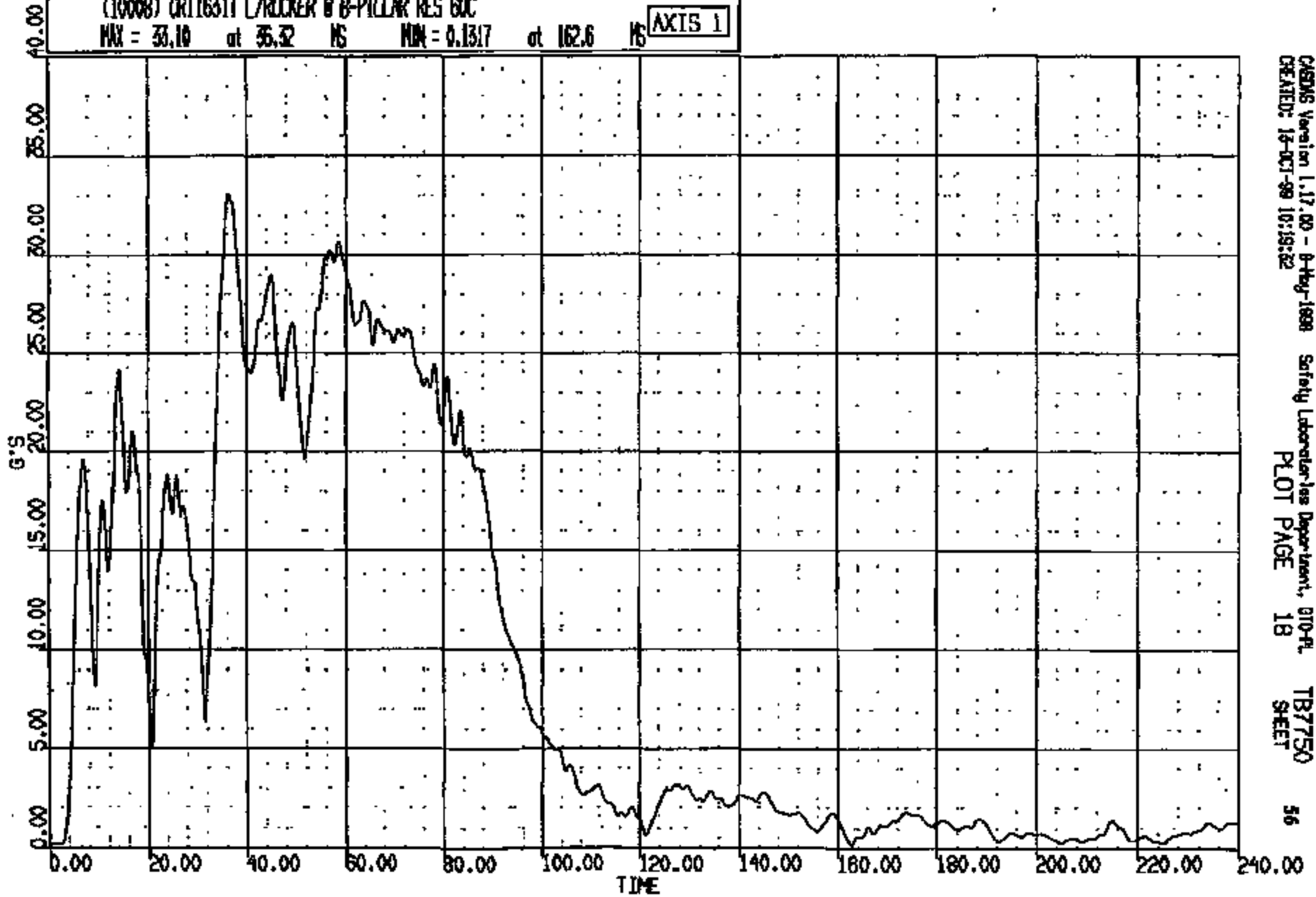
CRIS 0011631

CR R: 11631 TO: TB7750 DATE: 991018 09:44:35  
2001 P-198

(10008) CR11631T L/ROCKER @ B-PILLAR RES 60C

MAX = 33.10 at 35.32 MS MIN = 0.1317 at 162.6 MS

AXIS 1



CASMG Version 1.17.00 - 8-May-1998  
CREATED: 18-OCT-99 10:19:32

Safety Laboratories Department, 810-PL  
PLOT PAGE 18

TB7750  
SHEET

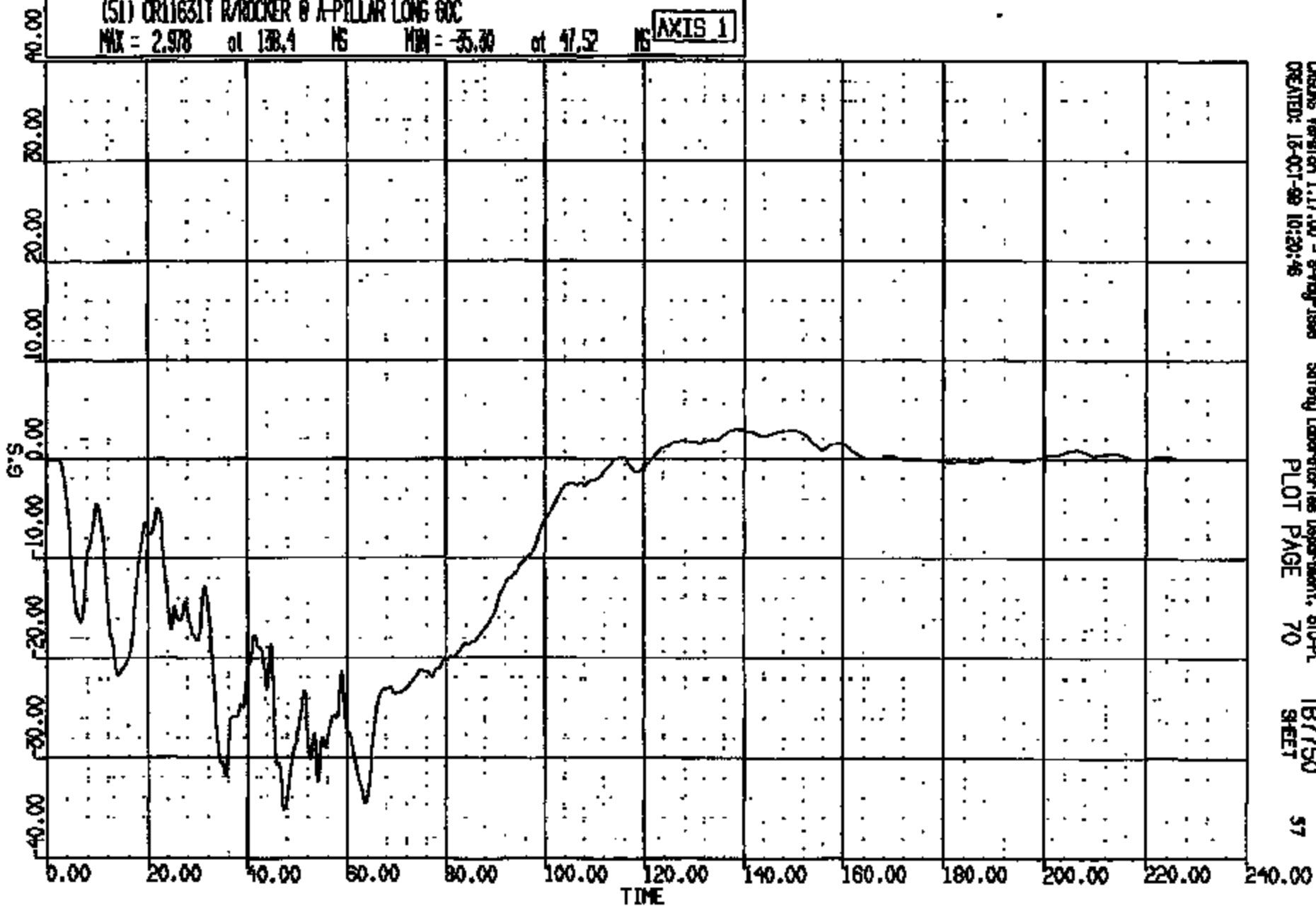
56

CRTS 0011631



CR R: 11631 TO: T87750 DATE: 881015 09:44:35  
2001 D-188

(S1) CR11631T R/ROCKER @ A-PILLAR LONG 60C  
MAX = 2.978 at 138.4 NS MIN = -35.30 at 47.52 NS **AXIS 1**



CRS Version 1.17.00 - 8-4-Aug-1988 Safety Laboratories Department, 810-Pl  
CREATED: 12-OCT-88 10:30:46 PLOT PAGE 70 T87750 SHEET 57

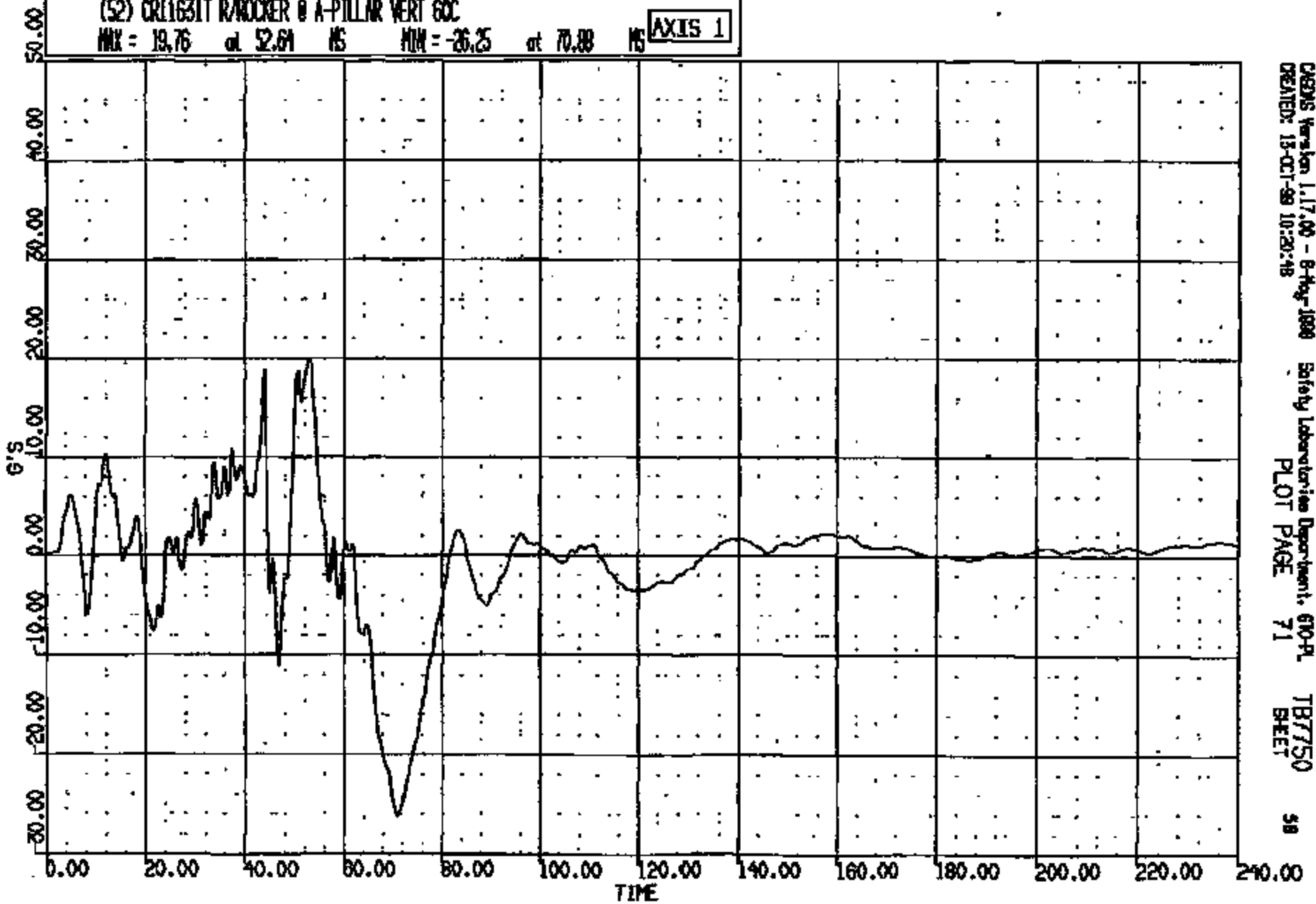
CRTS 0011631

CR R: 11551 TO: TB7750 DATE: 991015 00:44:35  
2001 D-198

(52) CR11631T W/ROCKER @ A-PILLAR VERT 60C

MAX = 19.76 at 52.61 MS MIN = -26.25 at 70.88 MS

AXIS 1



CREWS Version 1.17.00 - 8-Aug-1999 Safety Laboratories Department, 610-PL  
CREATED: 15-OCT-99 10:20:48 PLOT PAGE 71 TB7750 58  
SHEET

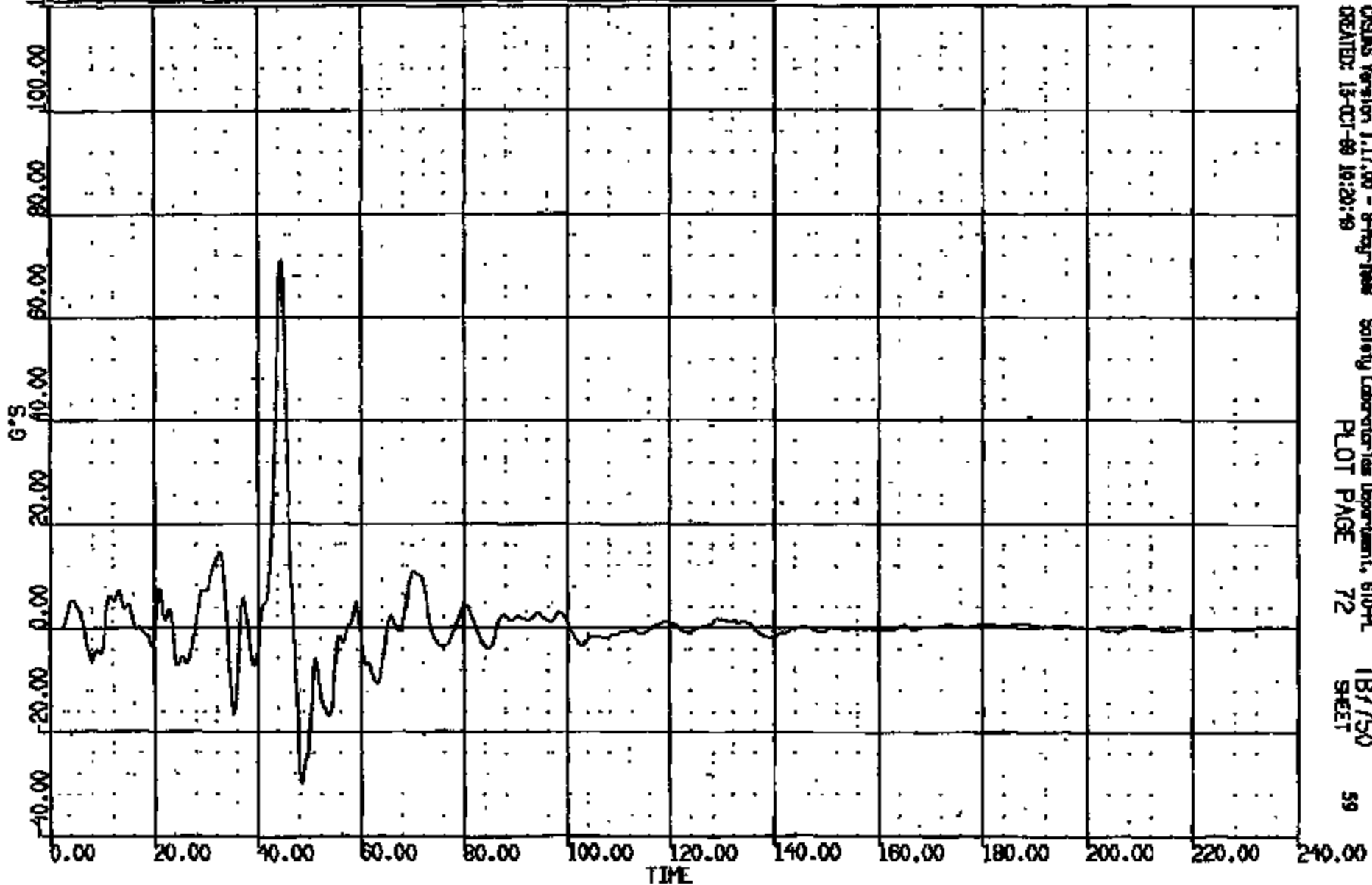
CRTS 0011631

CR R: 11631 TO: TB7750 DATE: 991013 09:44:35  
2001 0-189

(53) CR11631T R/ROCKER @ A-PILLAR LAT 60C

MAX = 71.05 at 41.56 NS MIN = -29.93 at 48.40 NS

AXIS 1



CASINS Version 1.17.00 - 9-May-1999  
CREATED: 13-OCT-99 16:20:49

Safety Laboratories Department, 610-PL  
PLOT PAGE 72

TB7750  
SHEET

59

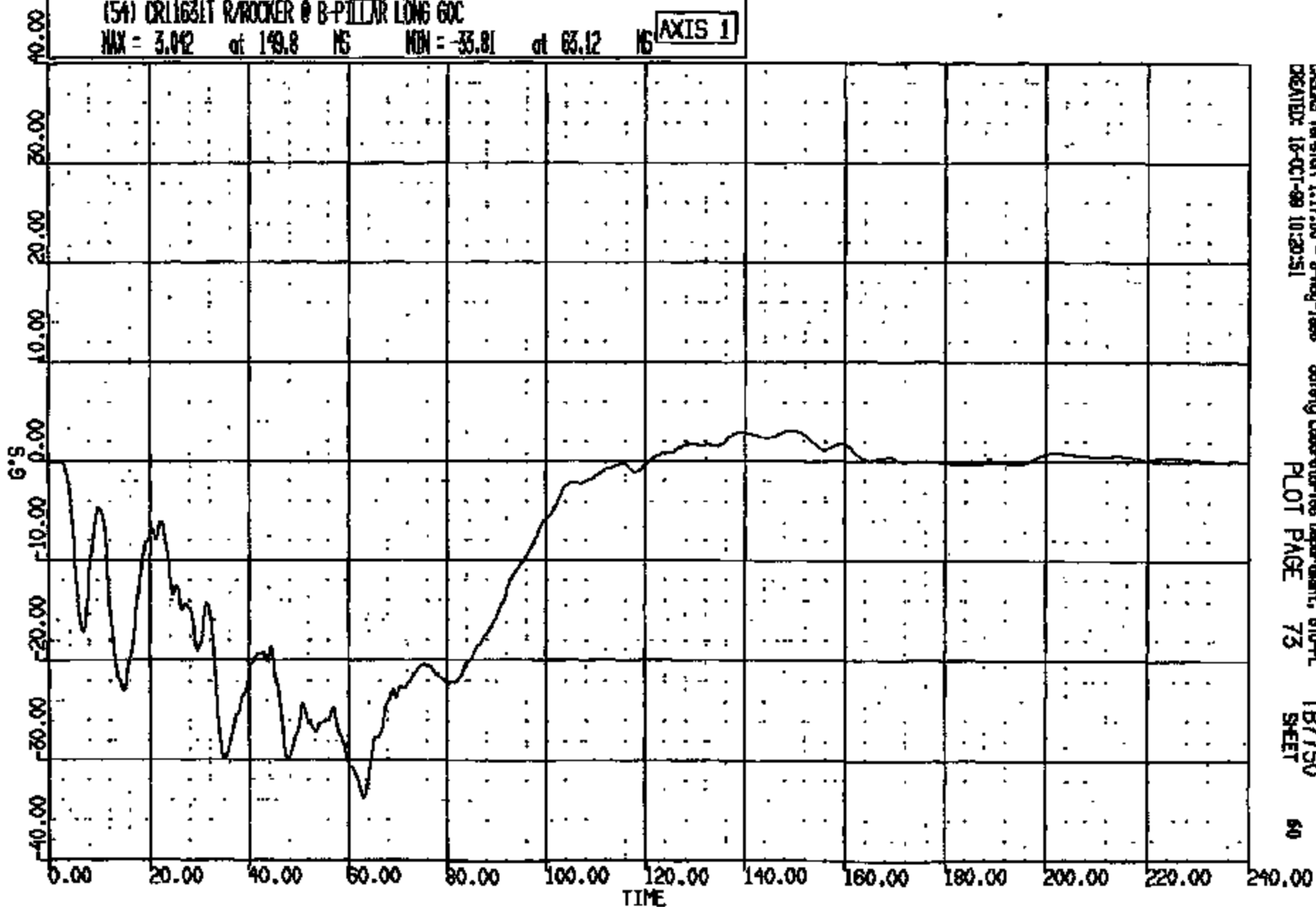
CRIS 0011631

CR #: 11881 TO: TB7750 DATE: 081018 08:44:33  
R001 0-188

(54) CR11631T R/ROCKER @ B-PILLAR LONG GOC

MAX = 3.02 at 19.8 MS MIN = -35.81 at 63.12 MS

AXIS 1



CRSIS Version 1.17.00 - 8-May-1988  
CREATED: 18-OCT-99 10:20:51

Safety Laboratories Department, 610-PL  
PLOT PAGE 73

TB7750  
SHEET

50

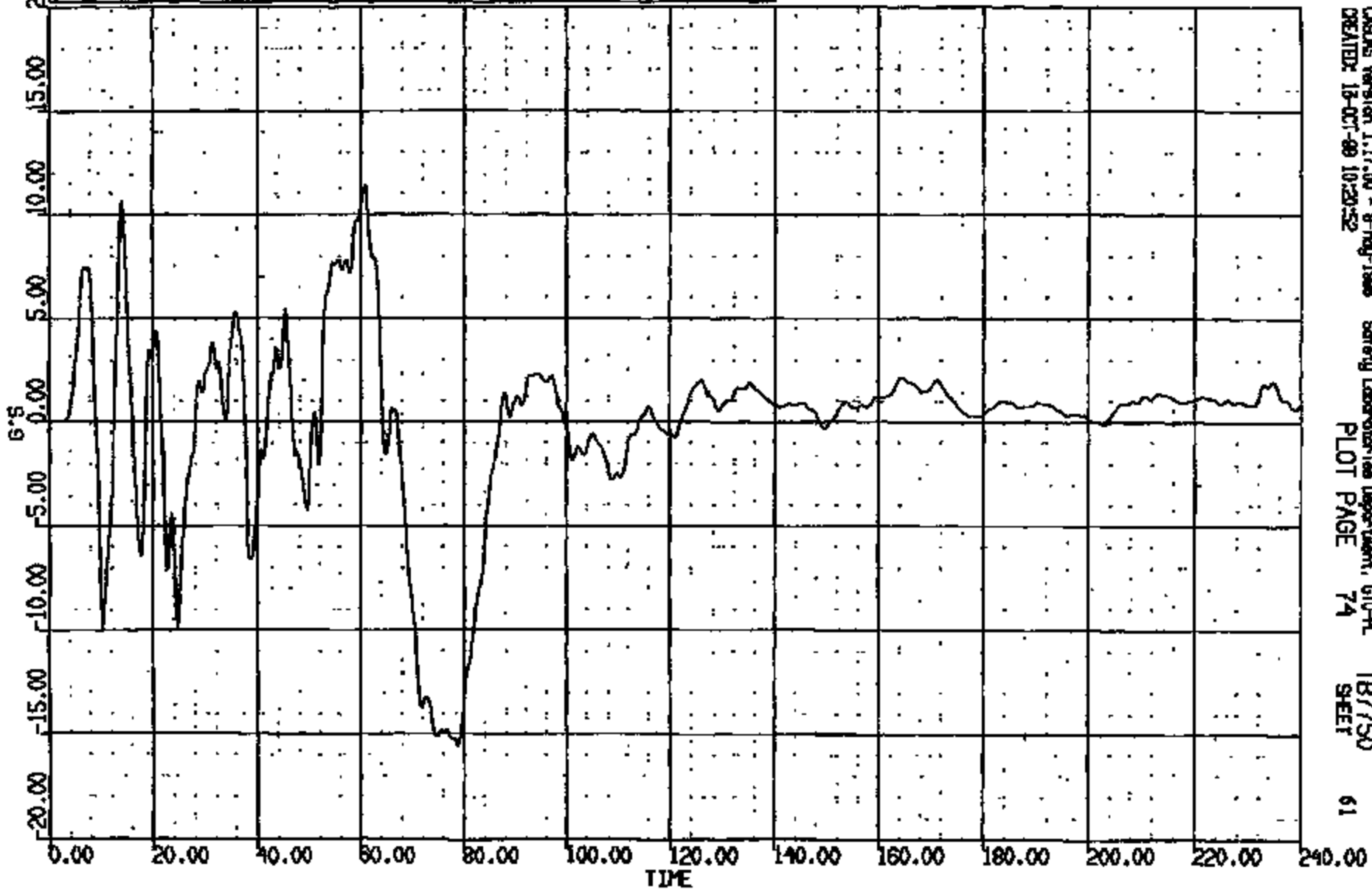
CRIS 0011631

CR R: 11631 TO: TB7750 DATE: 991015 09:44:35  
2001 D-188

(55) CR11631T R/ROCKER @ B-PILLAR VERT 60C

MAX = 11.35 at 60.89 MS MIN = -15.61 at 78.72 MS

AXIS 1



CASAS Version 1.17.00 - 8 May 1998  
CREATED: 18-OCT-99 10:20:52

Safety Laboratories Department, 610-PL  
PLOT PAGE 74

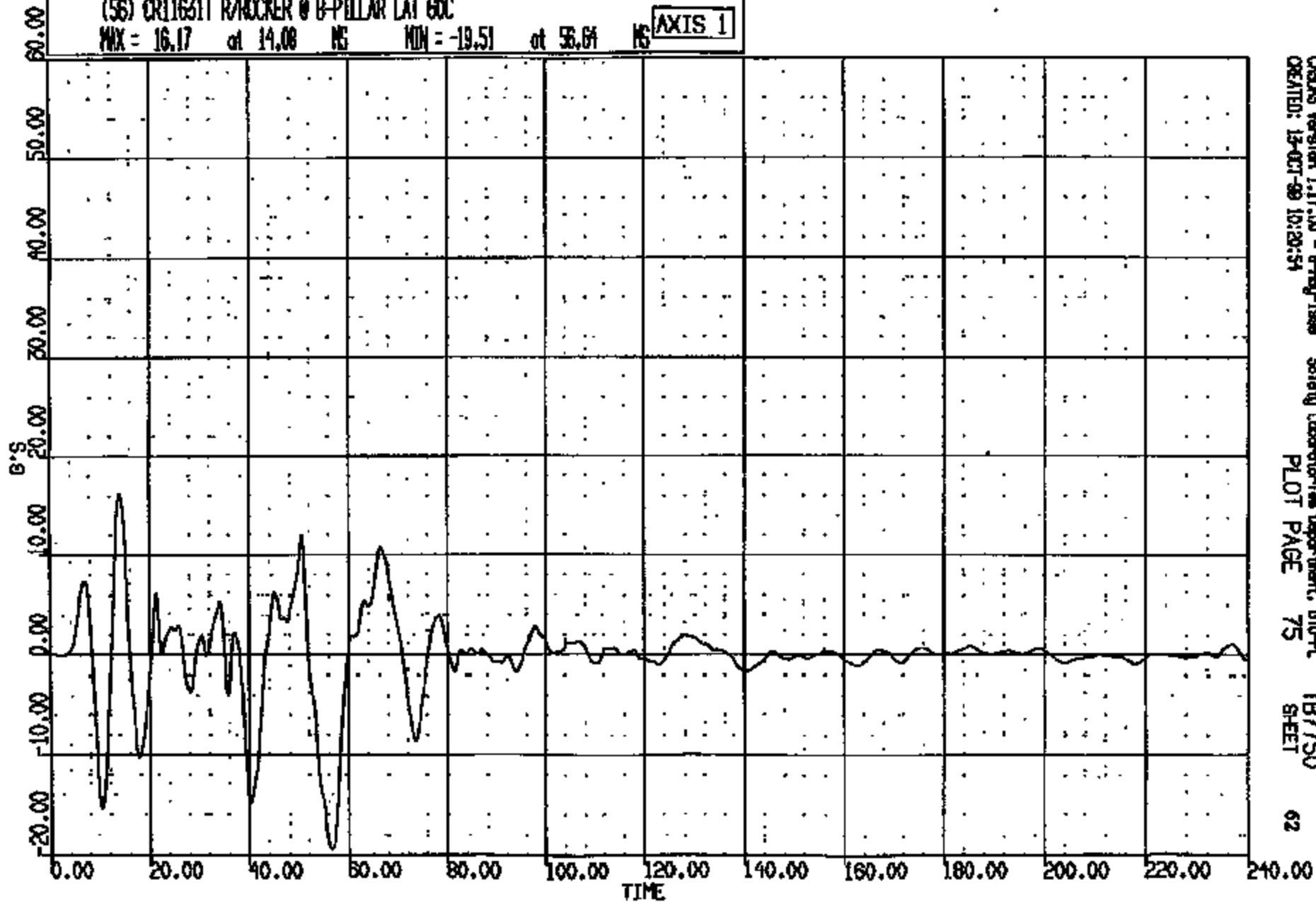
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SHEET

61

CRTS 0011631

CR R: 11551 TC: TB7750 DATE: 891015 09:44:35  
2001 D-188

(56) CR11631T R/ROCKER @ B-PILLAR LAT 60C  
MAX = 16.17 at 14.08 NS MIN = -19.51 at 56.64 NS **AXIS 1**

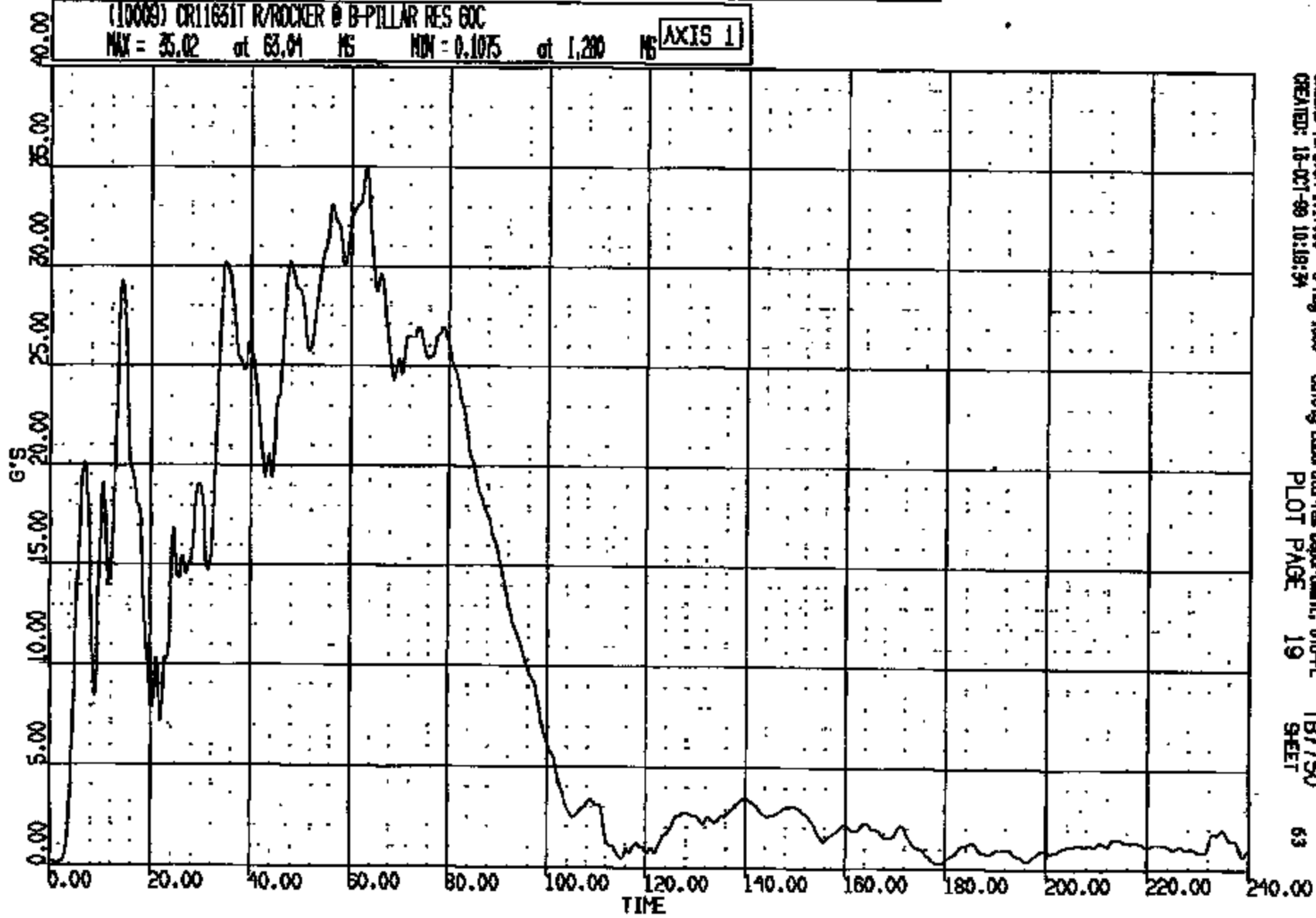


CRS05 Version 1.17.00 - B-Hug-1889 Safety Laboratories Department, 610-PL TB7750  
CREATED: 15-OCT-99 10:20:54 PLOT PAGE 75 SHEET 62

CR11631

CR R: 11631 TO: TB7750 DATE: 991018 08:44:55  
R001 D-188

(10009) CR11631T R/ROCKER @ B-PILLAR RES 60C  
MAX = 35.02 at 63.04 MS MIN = 0.1075 at 1.200 MS **AXIS 1**



CASDS Version 1.17.00 - 8-Aug-1988 Safety Laboratories Department, 610-PL  
CREATED: 18-01-99 10:18:34 PLOT PAGE 19 TB7750  
SHEET 63

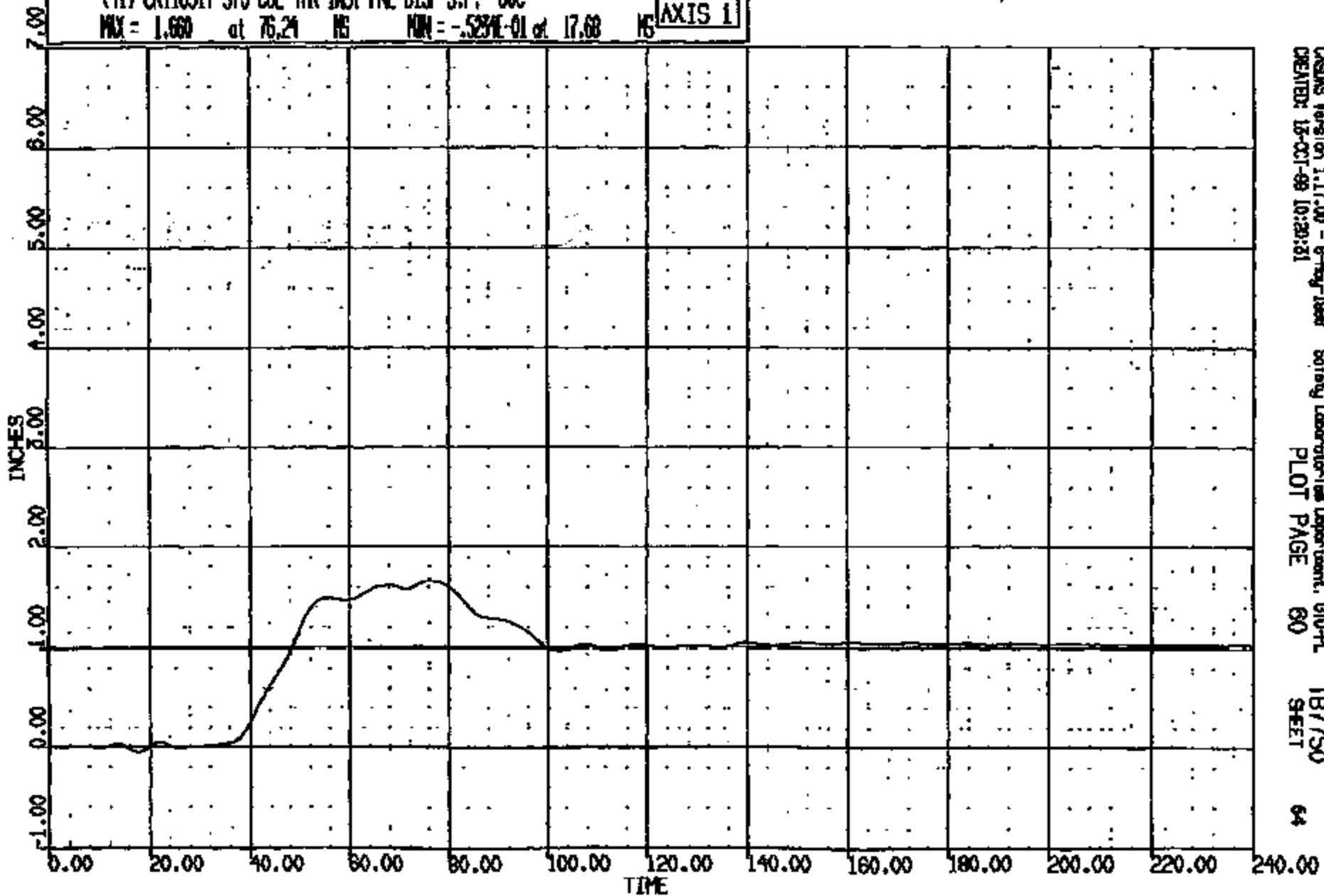
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CR R: 11631 TO: TB7750 DATE: 991018 09:44:25  
2001 D-168

(41) CR11631T STG COL THR INST PNL DISP S.P. 60C

MAX = 1.660 at 76.24 MS MIN = -.5291E-01 at 17.68 MS

AXIS 1



CASMS Version 1.17.00 - 6-May-1998  
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Safety Laboratories Department, 610-PL  
PLOT PAGE 60

TB7750  
SHEET

64

CRIS 0011631

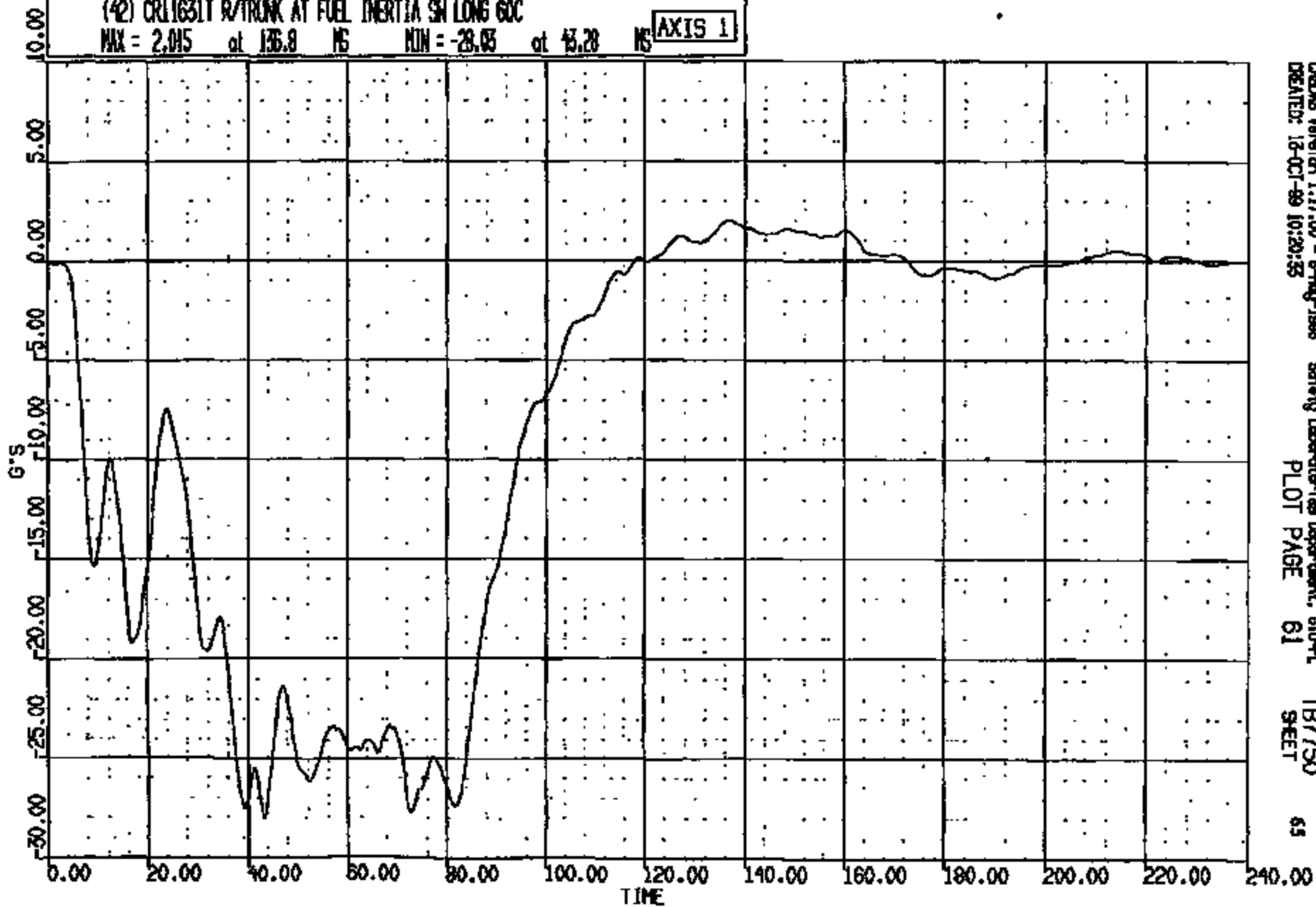


CR R: 11831 TO: TB7750 DATE: 991018 09:44:35  
R001 D-188

(42) CR11631T R/TRUNK AT FUEL INERTIA SN LONG 60C

MAX = 2.015 at 136.8 MS MIN = -28.06 at 43.28 MS

AXIS 1



CASMS Version 1.17.00 - 8-Aug-1988  
CREATED: 18-OCT-89 10:20:35

Safety Laboratories Department, 610-PL  
PLOT PAGE 61

TB7750  
SHEET

65

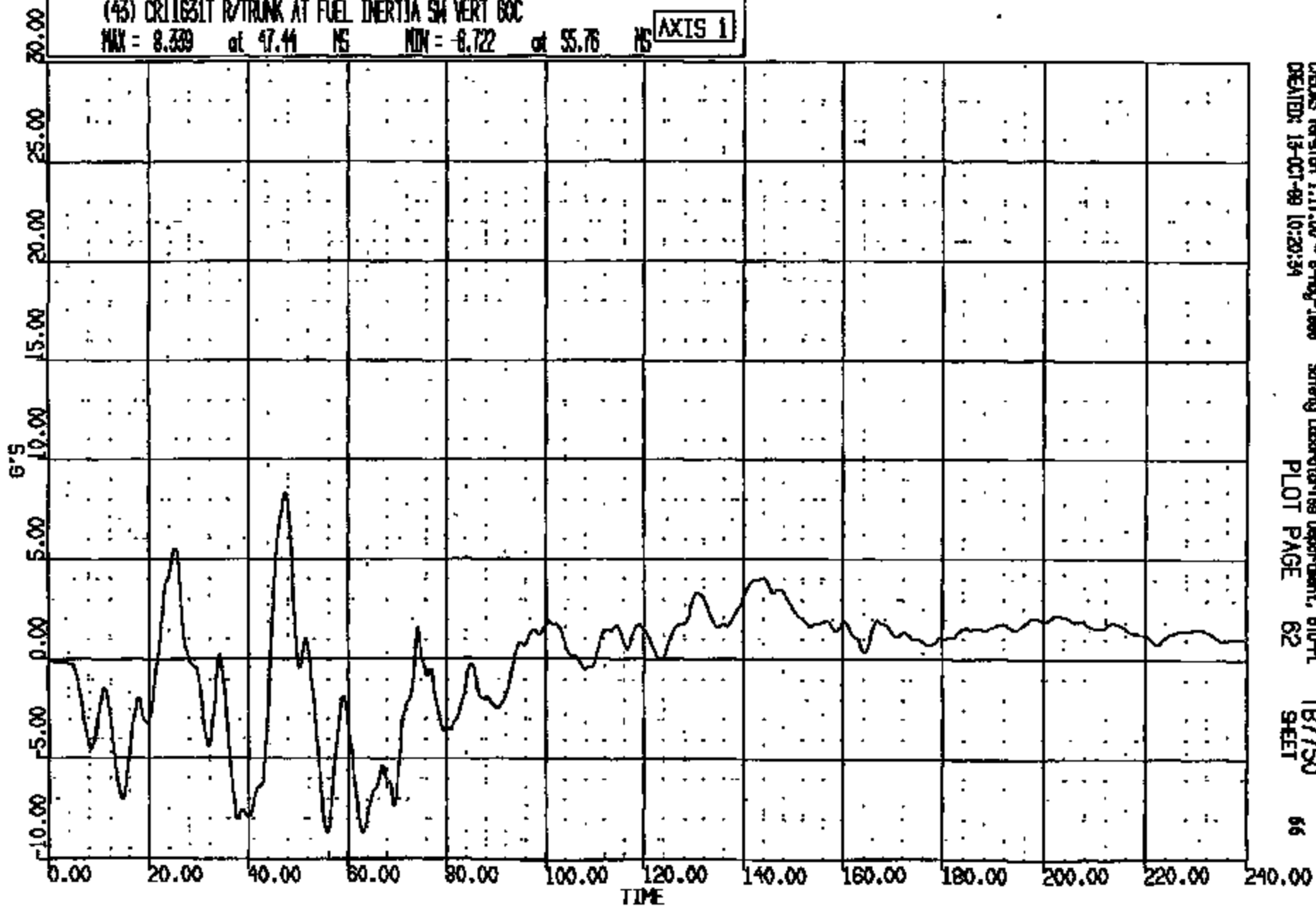
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CR R: 11881 TC: TB7750 DATE: 881013 09:44:55  
2001 D-188

(45) CR11631T R/TRUNK AT FUEL INERTIA SW VERT 60C

MAX = 8.339 at 47.44 MS MIN = -8.722 at 55.76 MS

AXIS 1



CARDAS Version 1.17.00 ~ 8-Aug-1988  
CREATED: 13-OCT-89 10:23:34

Safety Laboratories Department, 810-PL  
PLOT PAGE 62

TB7750  
SHEET

66

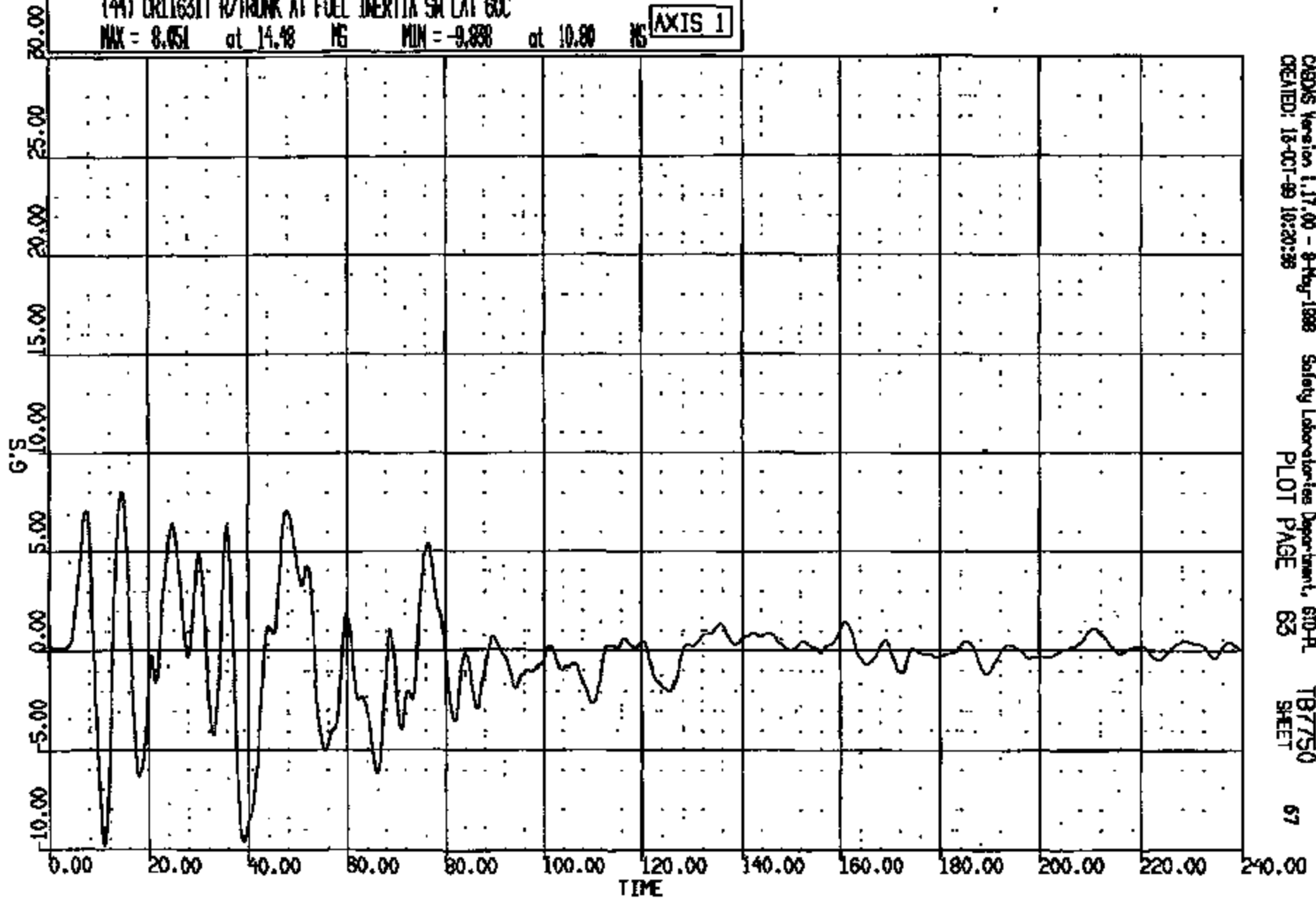
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CR R: 11631 TO: TB7750 DATE: 991013 09:44:53  
R001 D-188

(44) CR11631T R/TRUNK AT FUEL INERTIA SM LAT 60C

MAX = 8.051 at 14.48 MS MIN = -9.888 at 10.80 MS

AXIS 1

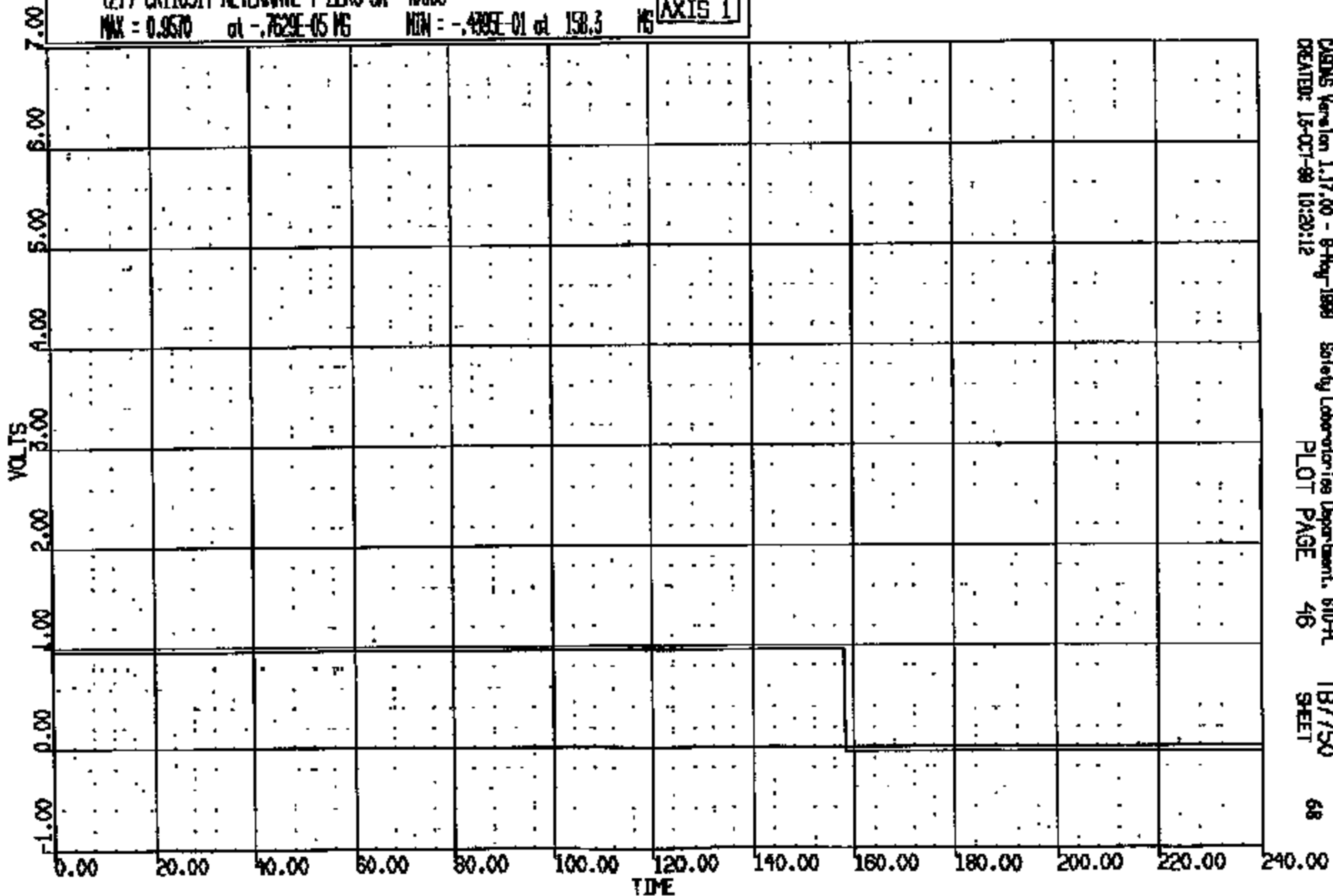


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CREATED: 18-OCT-99 10:20:38 PLOT PAGE 63 SHEET 67

CRTS 0011631

CR R: 11851 TO: TB7750 DATE: 881018 09:44:35  
2001 D-188

(27) CR11631T ALTERNATE T-ZERO SM 4000  
MAX = 0.9570 at -.7629E-05 MS MIN = -.439E-01 at 158.3 MS **AXIS 1**



CRS05 Version 1.17.00 - 8-May-1999 Safety Laboratories Department, STD-FL TB7750 68  
CREATED: 18-OCT-88 10:20:12 PLOT PAGE 48 SHEET

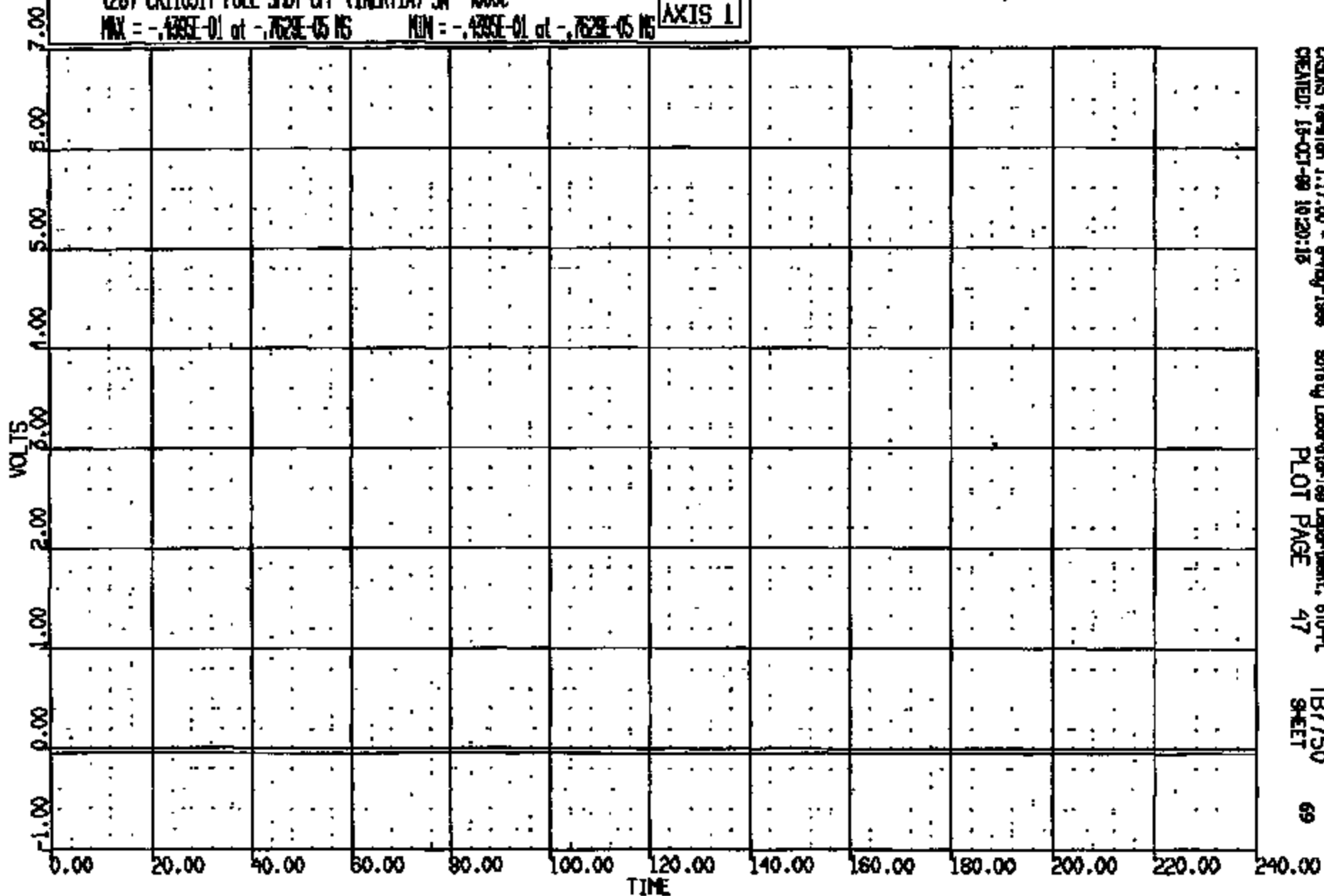
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CR R: 11831 TO: TB7750 DATE: 991013 08:44:25  
2001 D-188

(28) CR11631Y FUEL SHUT OFF (INERTIA) SW 4000C

MAX = -.4995E-01 at -.7629E-05 MS MIN = -.4995E-01 at -.7629E-05 MS

AXIS 1



GENS Version 1.17.00 - 8-Aug-1998  
CREATED: 18-OCT-99 10:20:18

Safety Laboratory Department, 610-PL  
PLOT PAGE 47

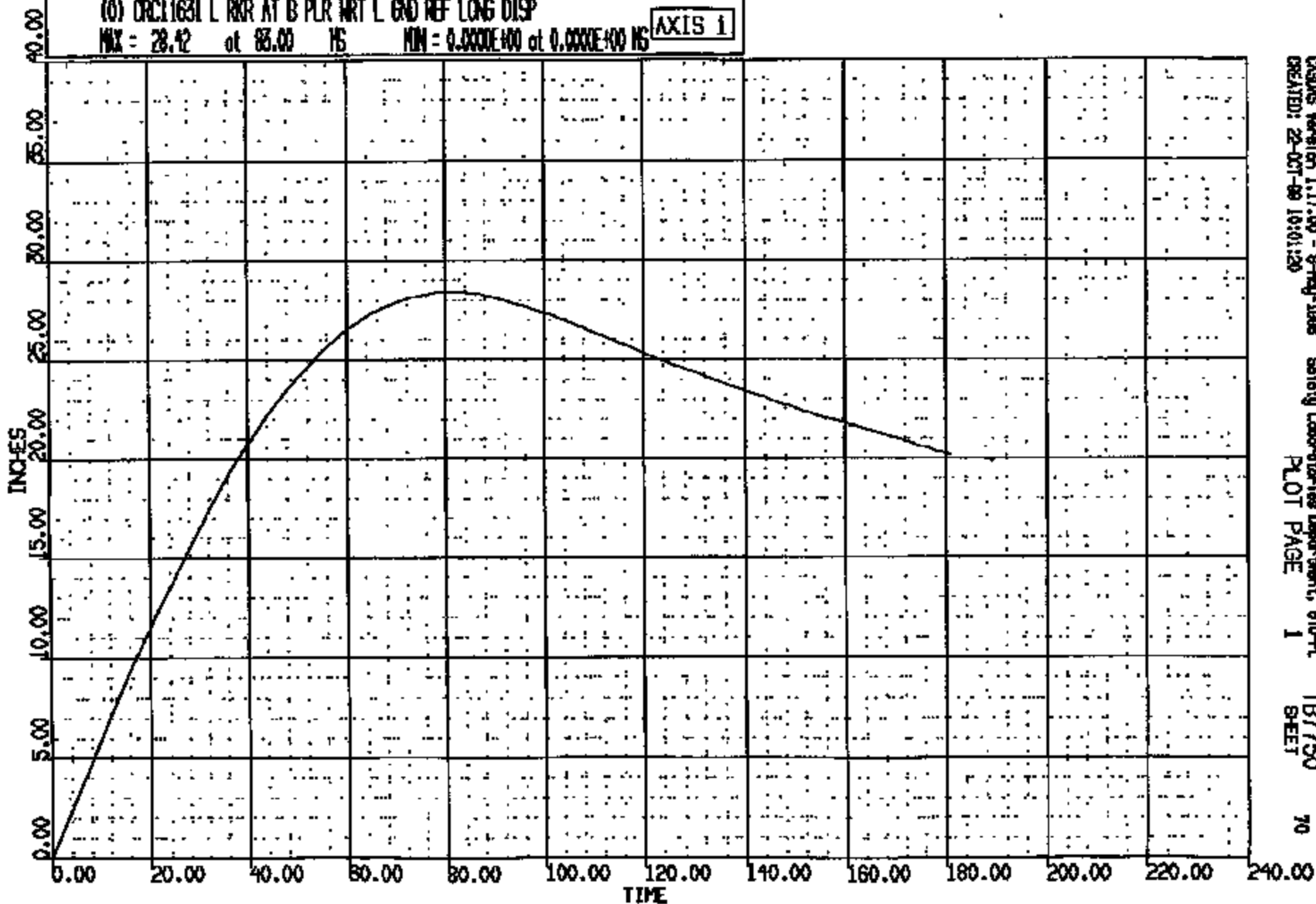
TB7750  
SHEET

CR R: 11881 TO: TB7750 DATE: 881013 08:44:35  
2001 D-188

(0) CRCL1631 L RKR AT B PLR WRT L END REF LONG DISP

MAX = 28.42 at 83.00 MS MIN = 0.000E+00 at 0.000E+00 MS

AXIS 1



CASIMS Version 1.17.00 - 8-May-1988  
CREATED: 22-OCT-88 18:01:20

Safety Laboratories Department, 610-PL  
PLOT PAGE 1

TB7750  
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70

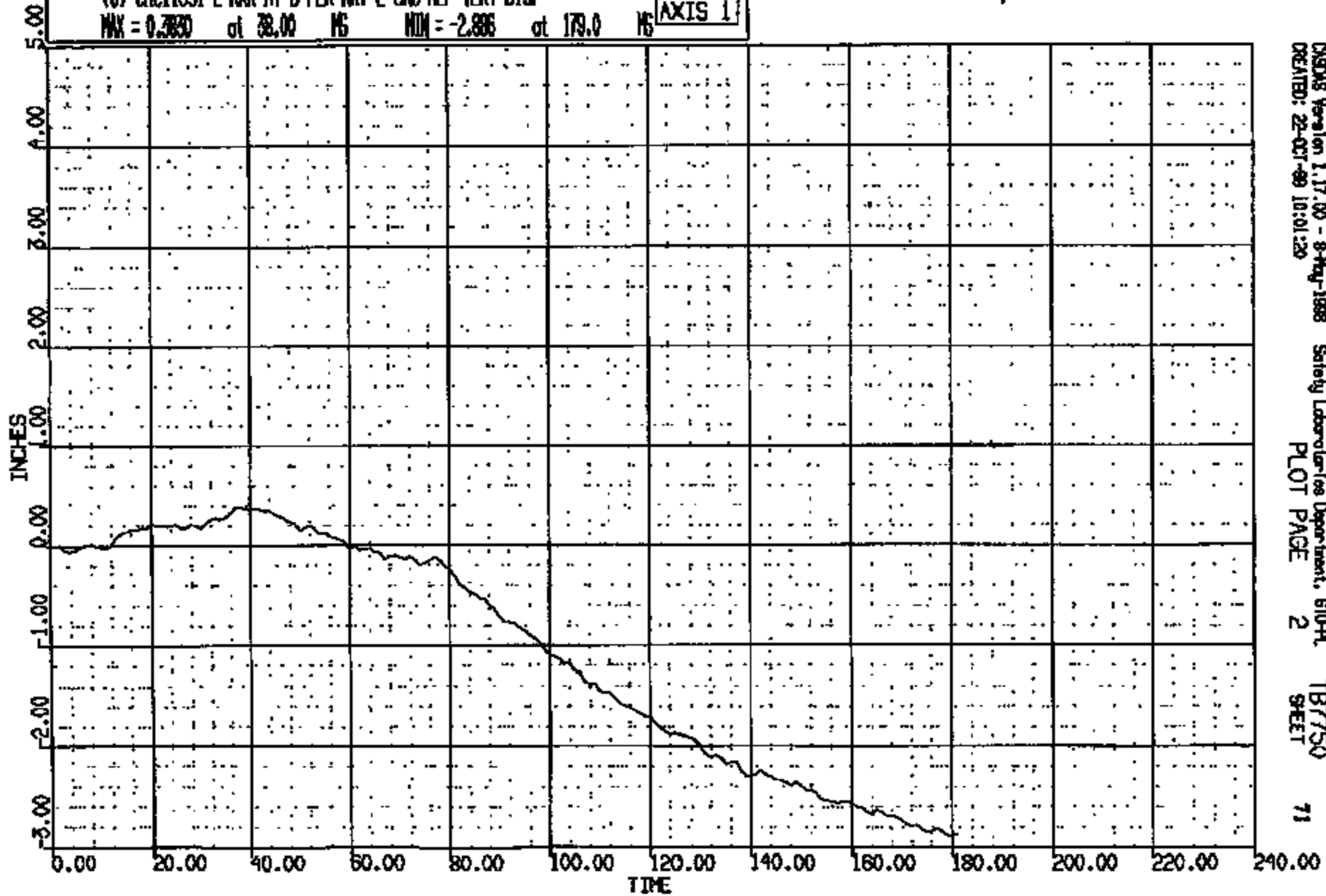
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CR R: 11651 TO: T87750 DATE: 981015 09:44:25  
2001 D-186

(0) CR011631 L RR AT B PLR WRT L END REF VERT DISP

MAX = 0.3830 at 38.00 MS MIN = -2.886 at 179.0 MS

AXIS 1



DISMAS Version 1.17.00 - 8-May-1988  
CREATED: 22-OCT-99 10:01:20

Safety Laboratories Department, 610-PL  
PLOT PAGE 2

T87750  
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71

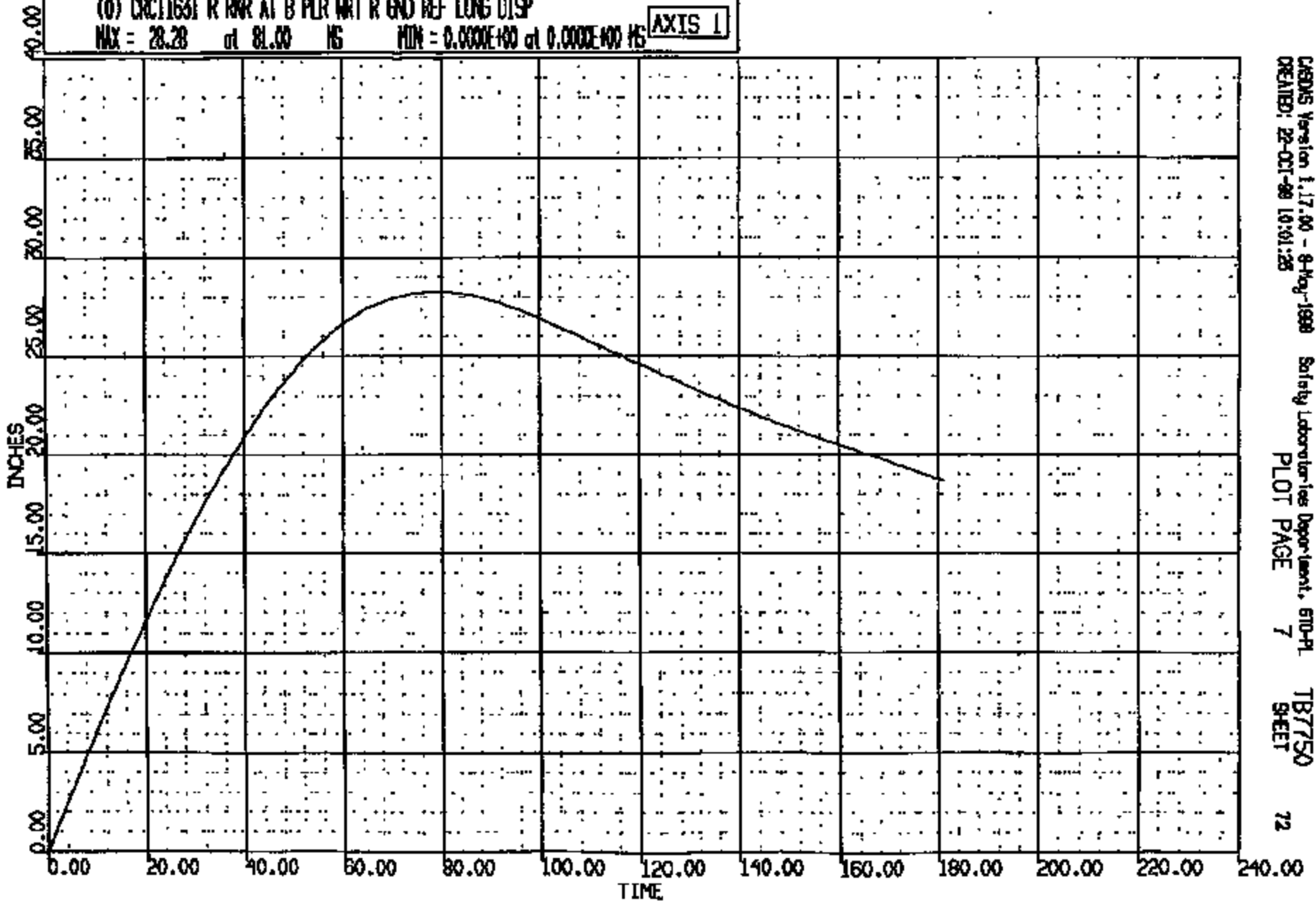
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CR R: 11551 TO: TB7750 DATE: 221015 09:44:35  
R001 D-188

(0) CR011631 R RNR AT B PLR WRT R END REF LONG DISP

MAX = 28.28 at 81.00 MS MIN = 0.000E+00 at 0.000E+00 MS

AXIS 1



CRS011631 Version 1.17.00 - 9-May-1998  
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Safety Laboratories Department, 610-PL  
PLOT PAGE 7

TB7750  
SHEET

72

CRIS 0011631

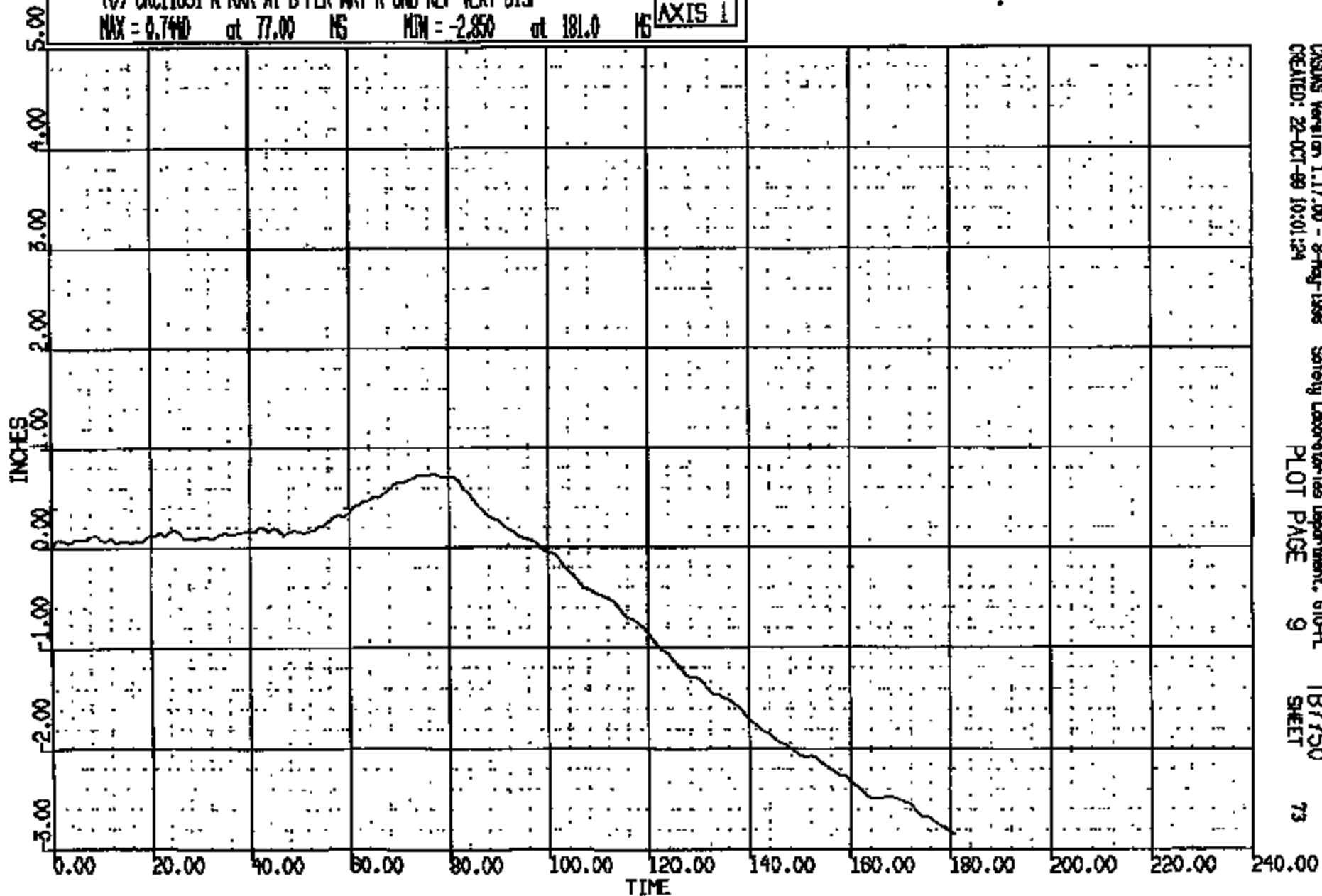


CR R: 11831 TO: TB7750 DATE: 881015 09:44:53  
NOO1 D-188

(0) CRCL1631 R RKR AT B PLR MRT R GND REF VERT DISP

MAX = 0.7440 at 77.00 MS MIN = -2.850 at 181.0 MS

AXIS 1



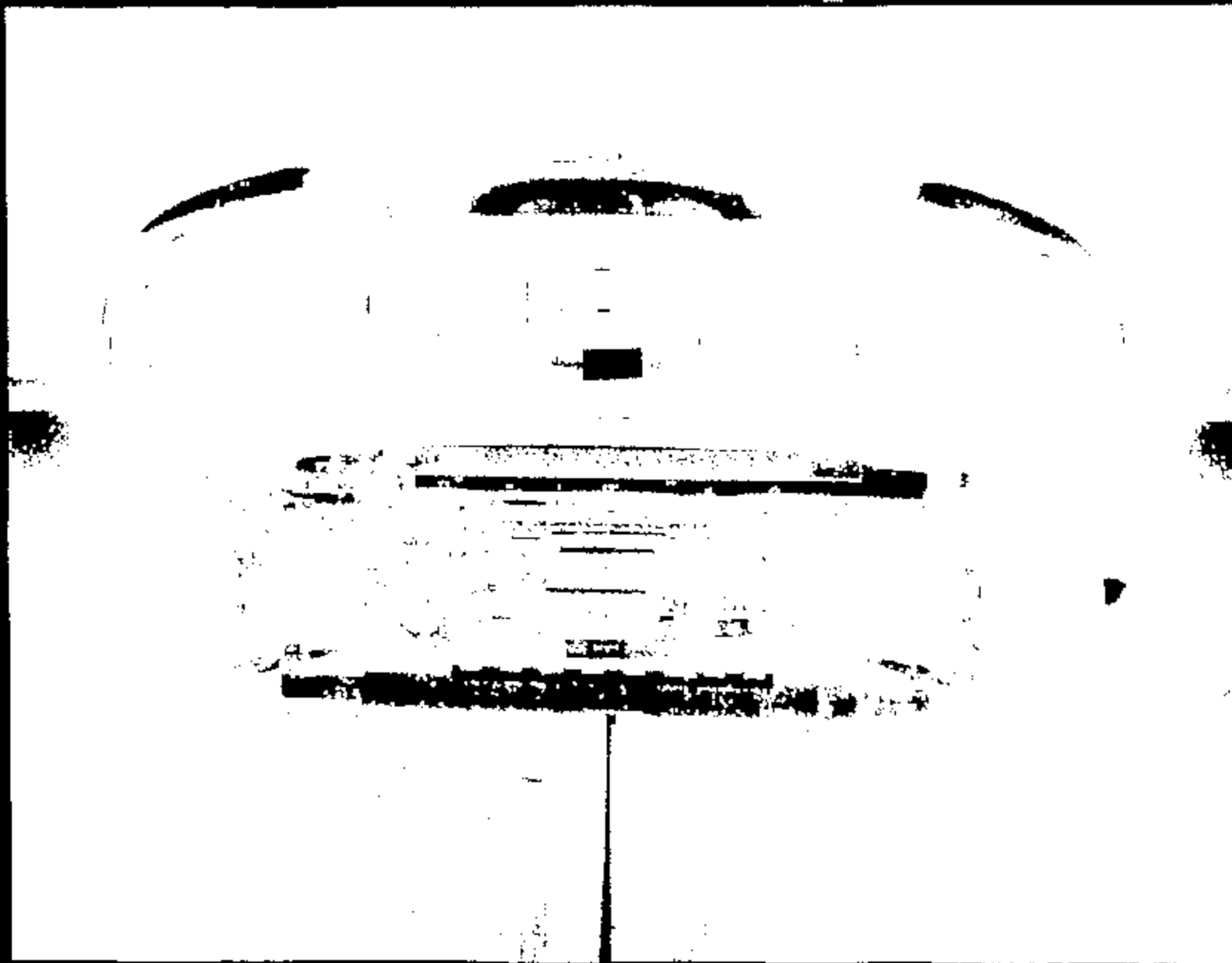
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Safety Laboratories Department, 610-FL  
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73

CRTS 0011631



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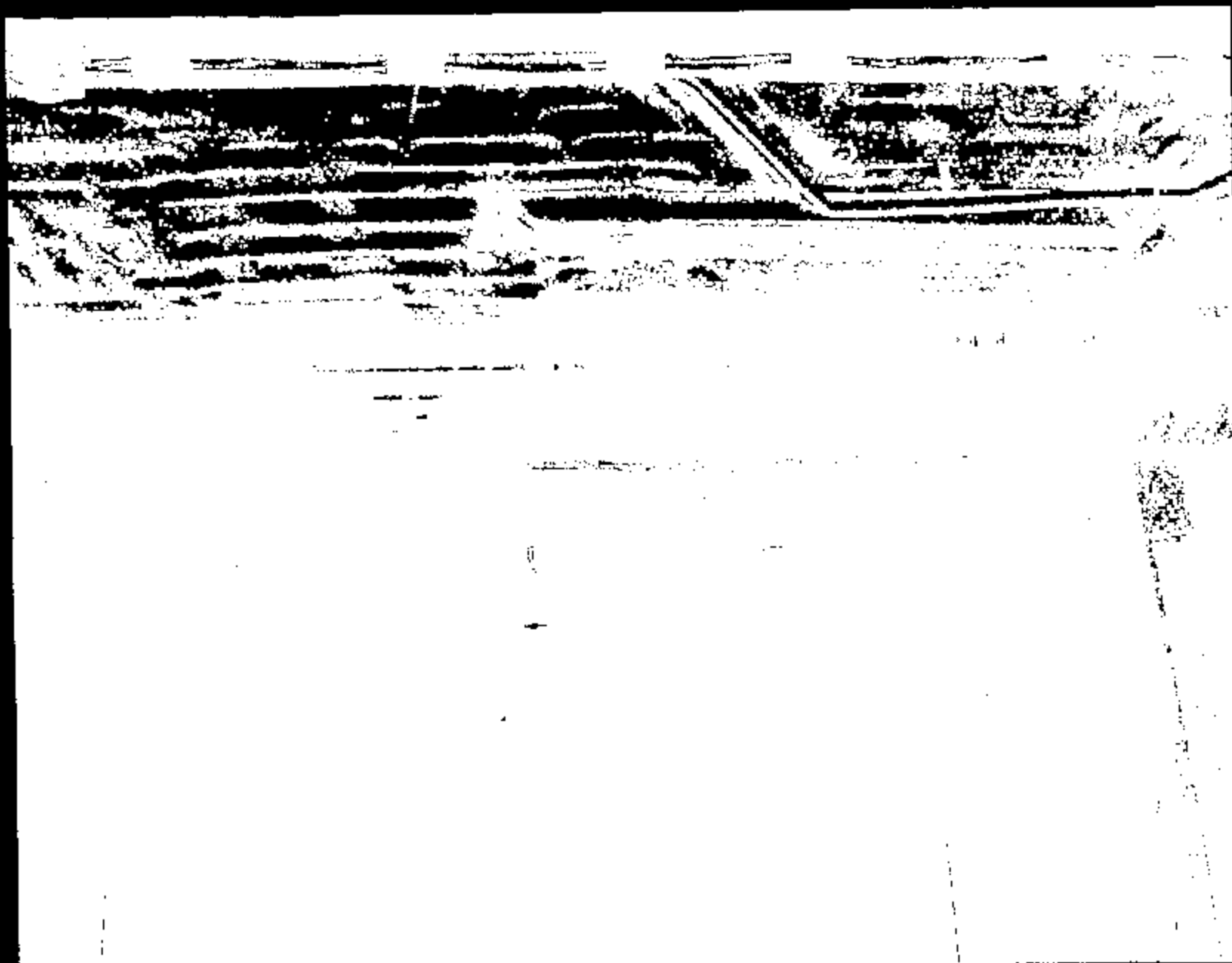
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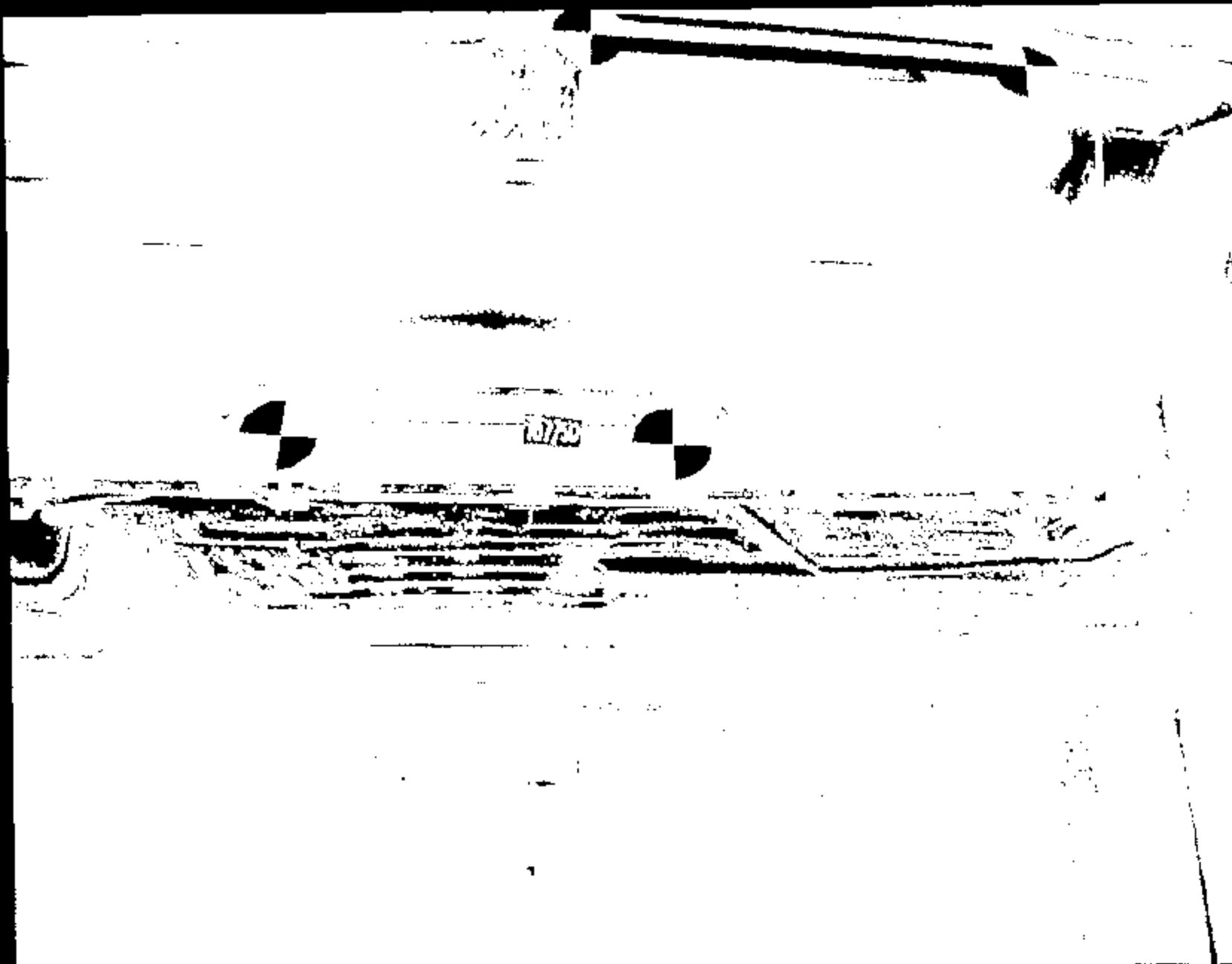
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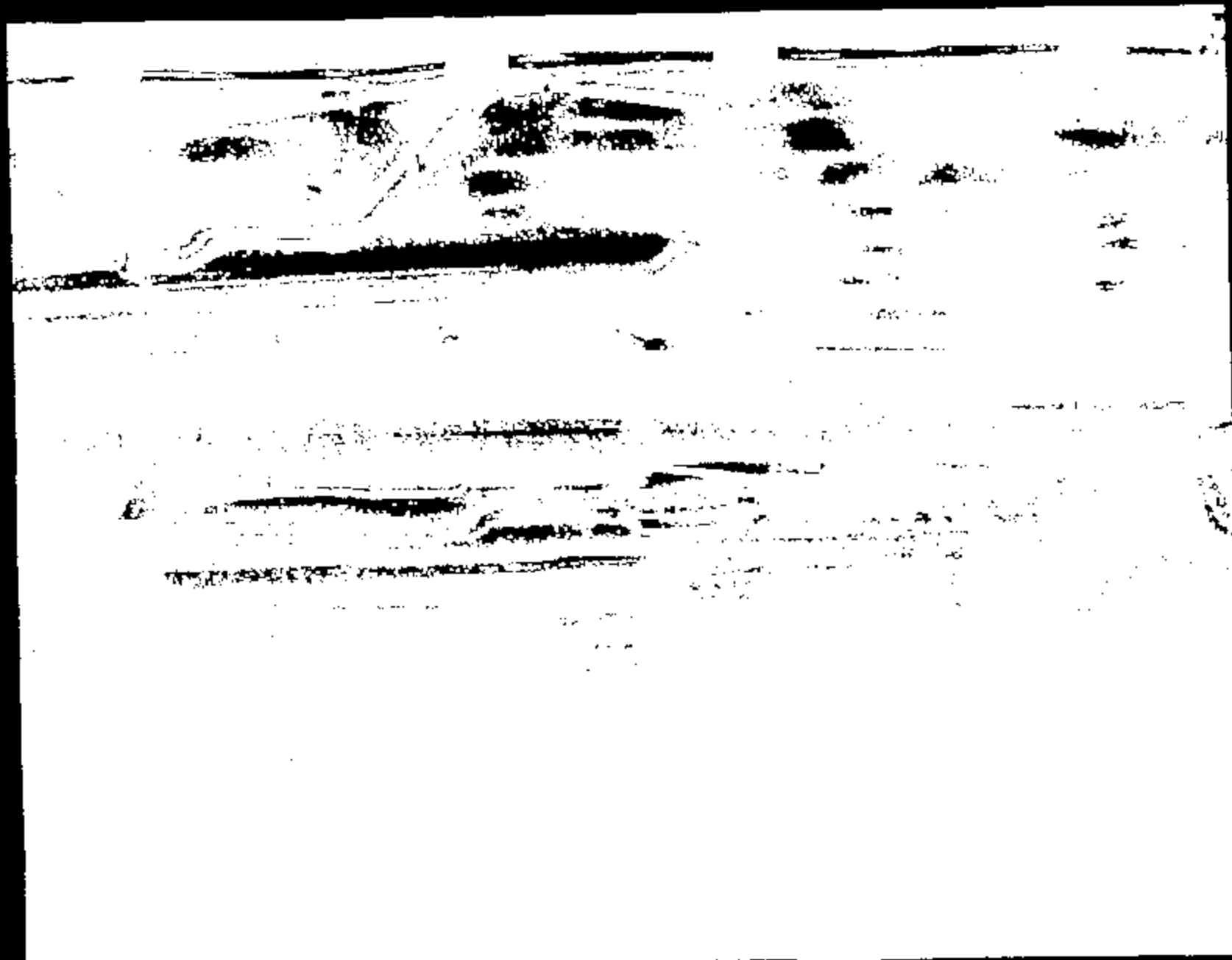
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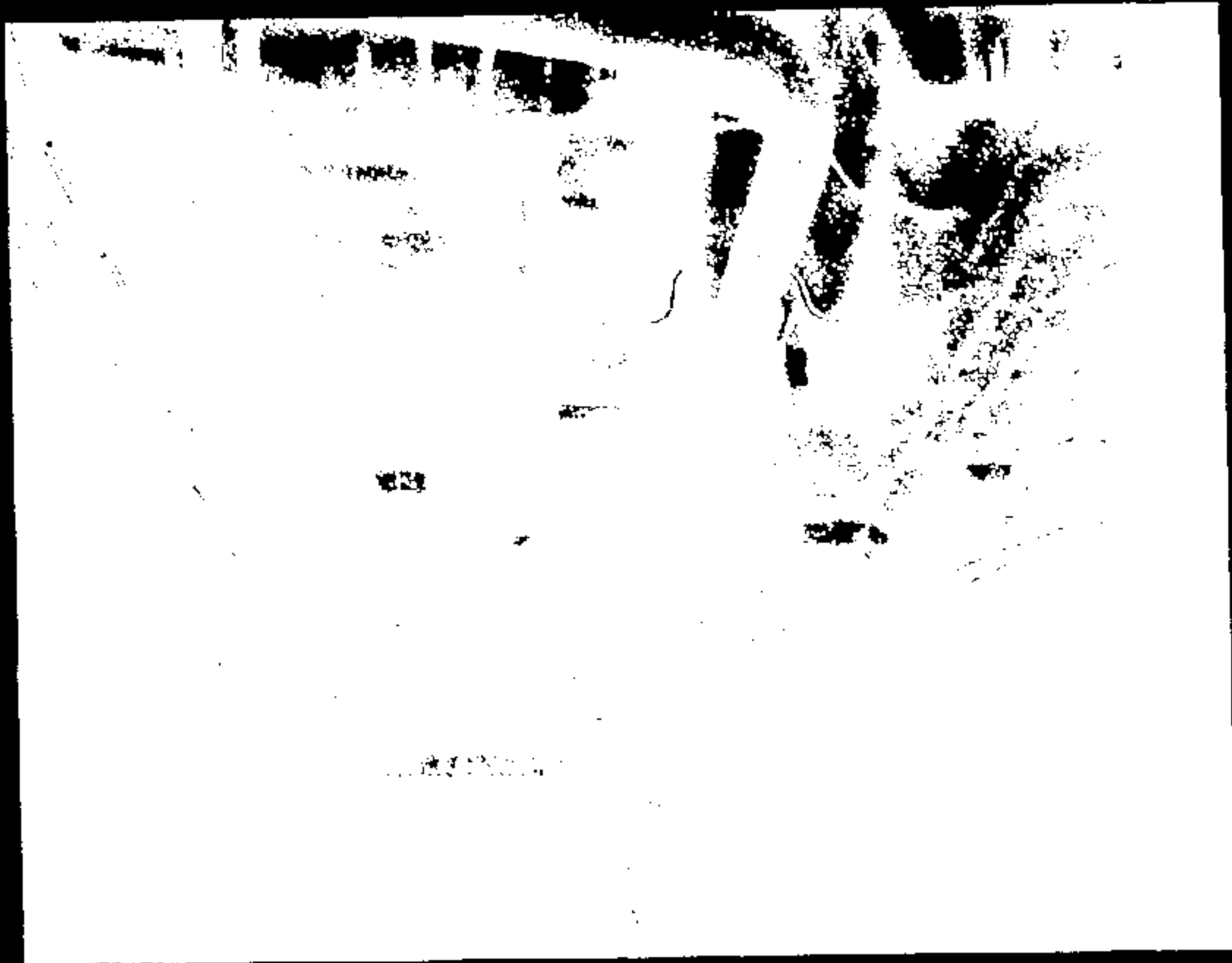


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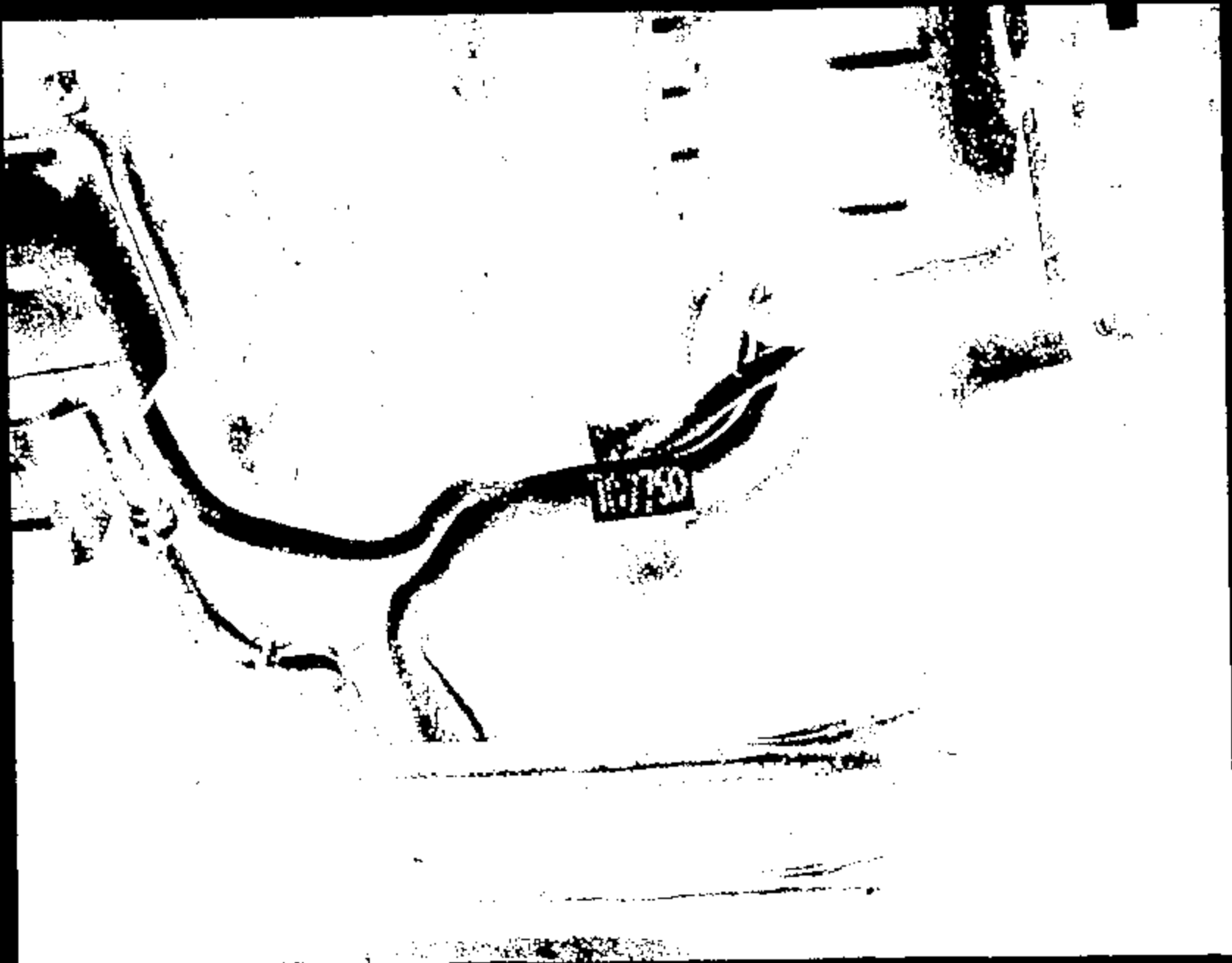
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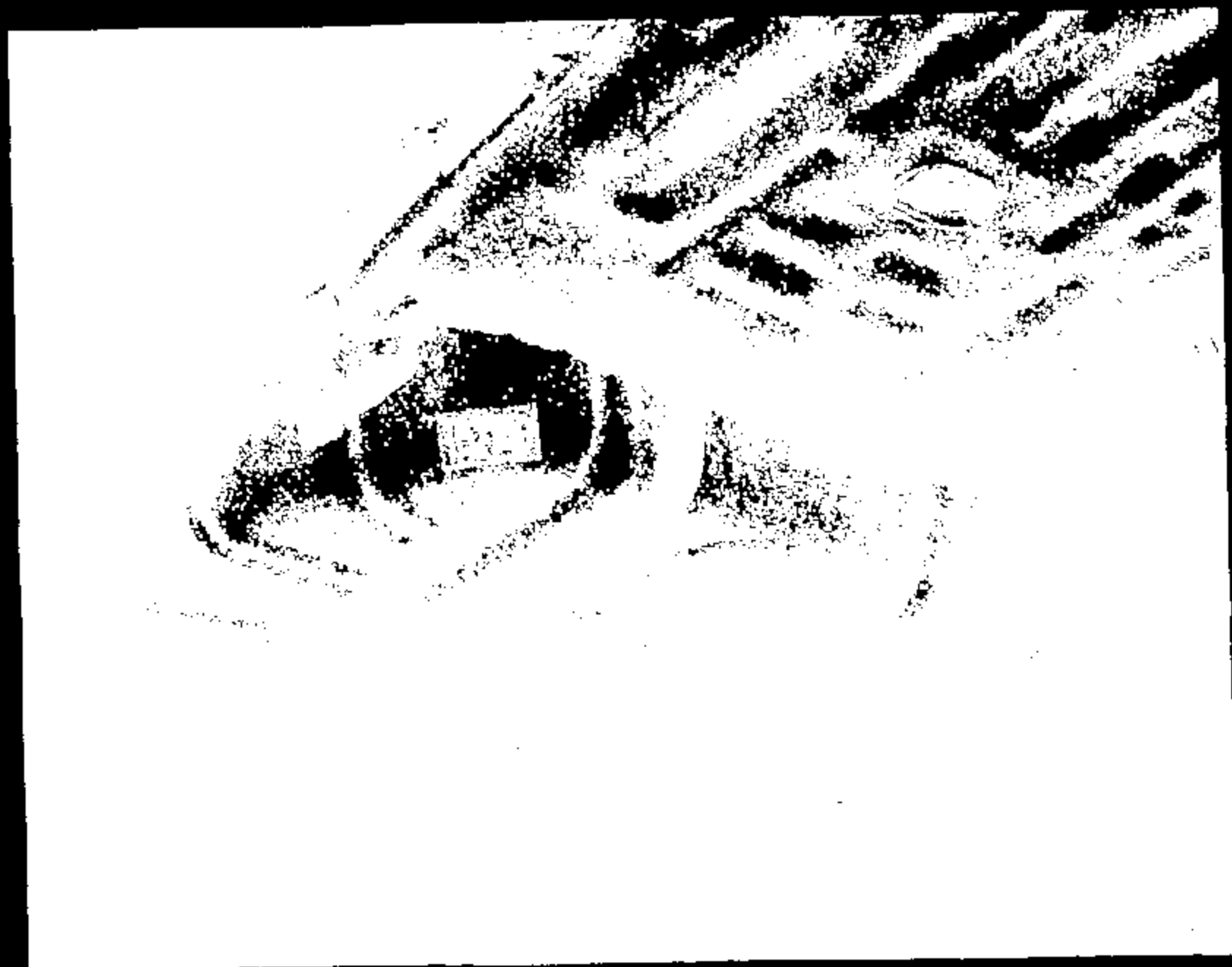


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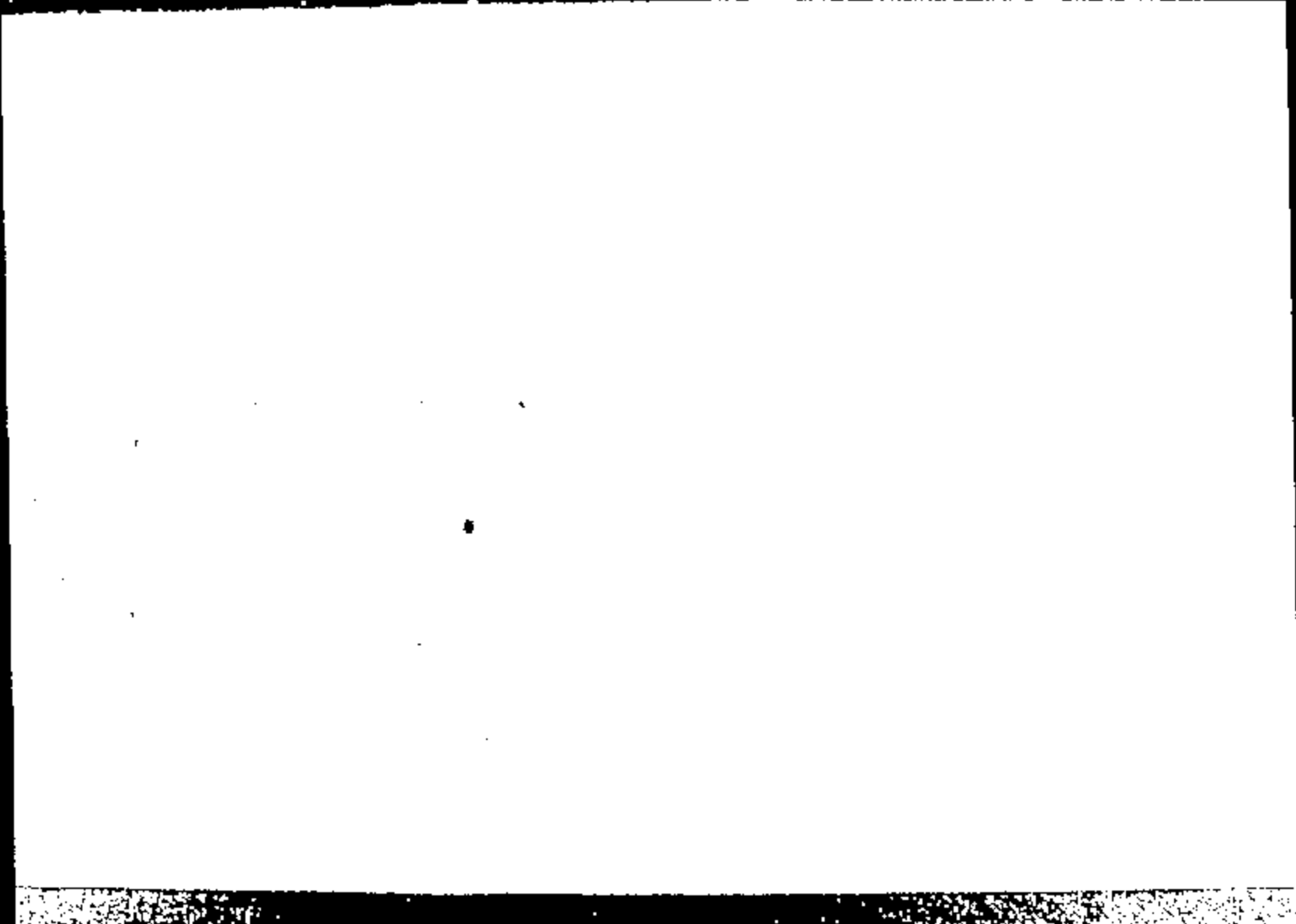
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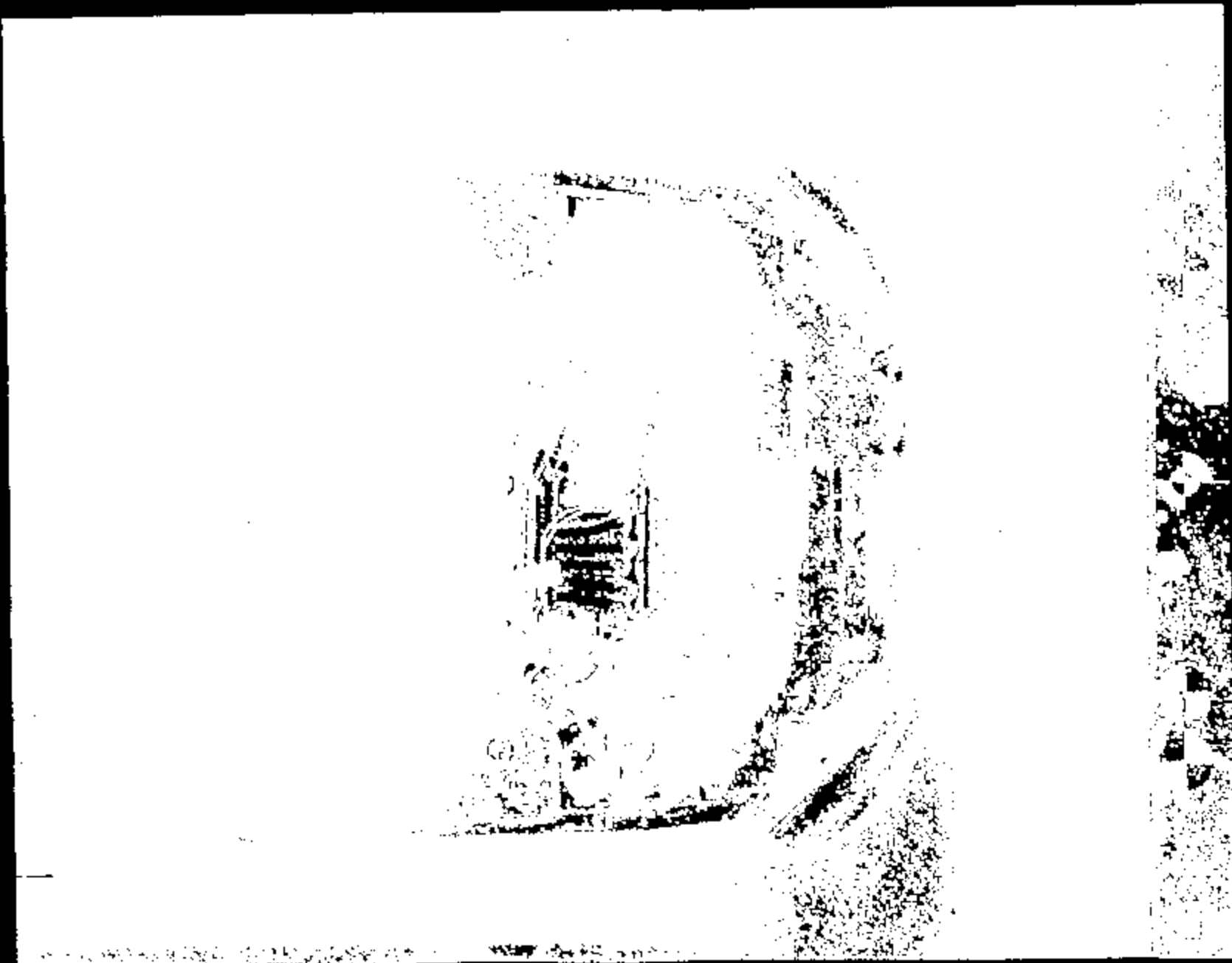
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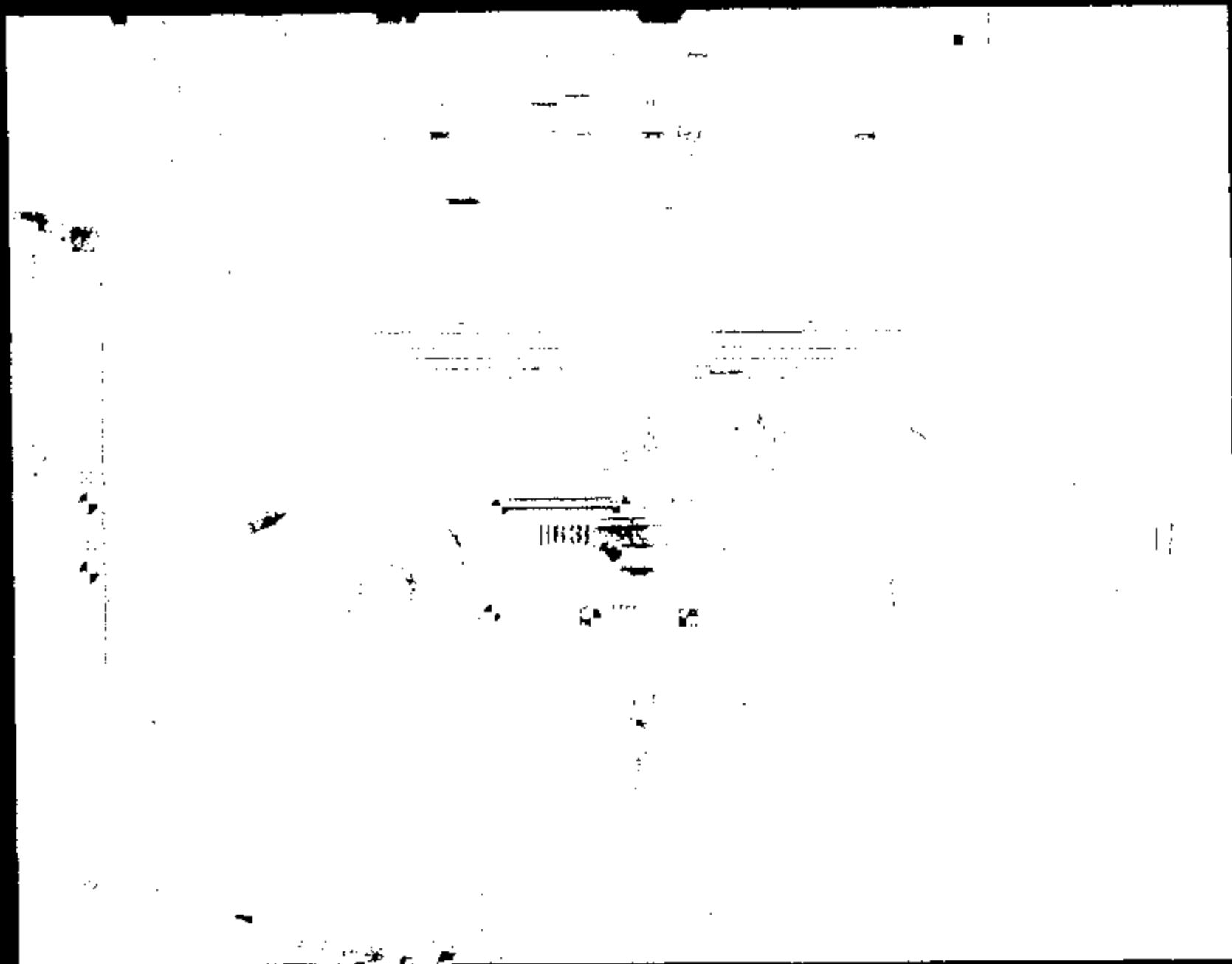
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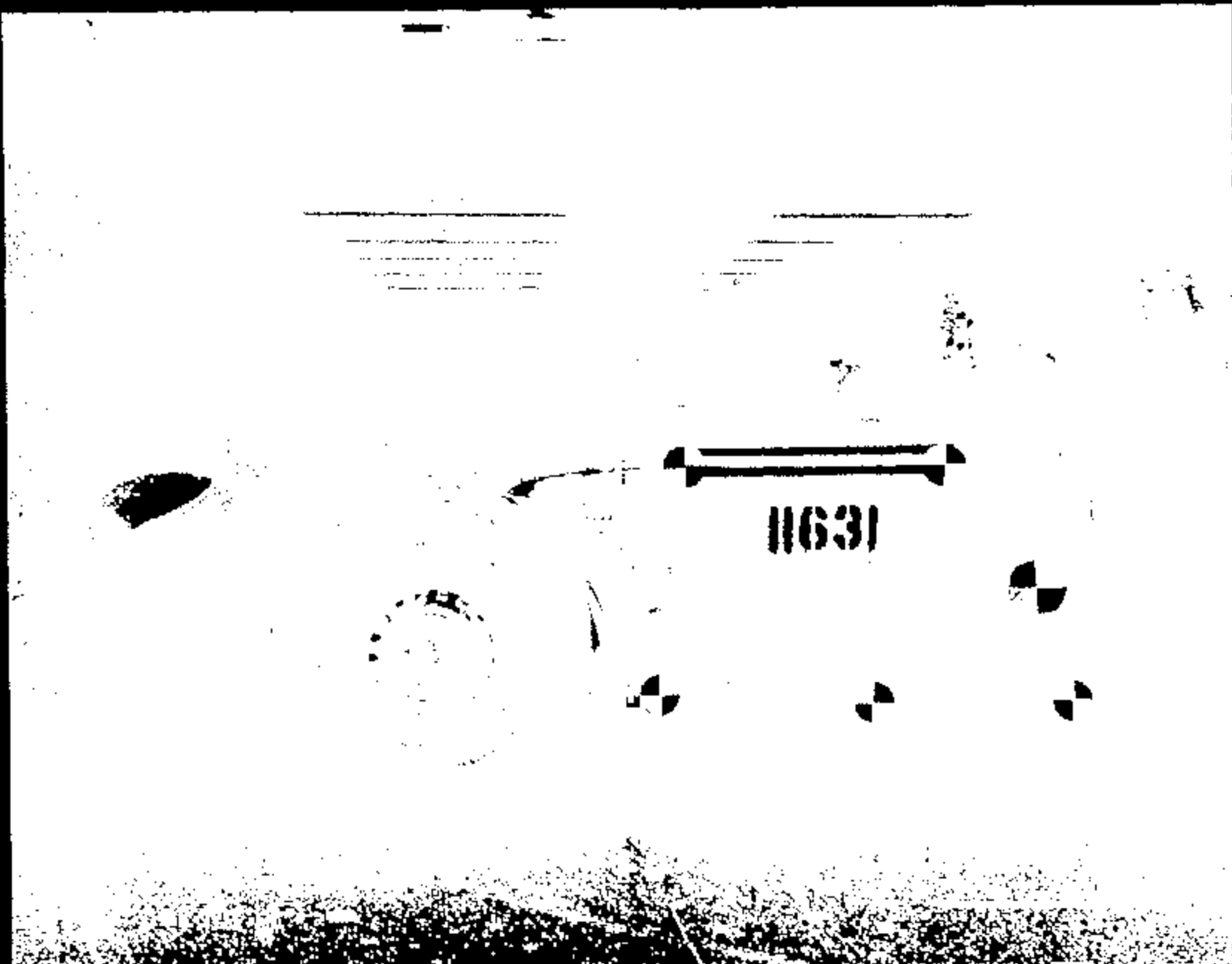
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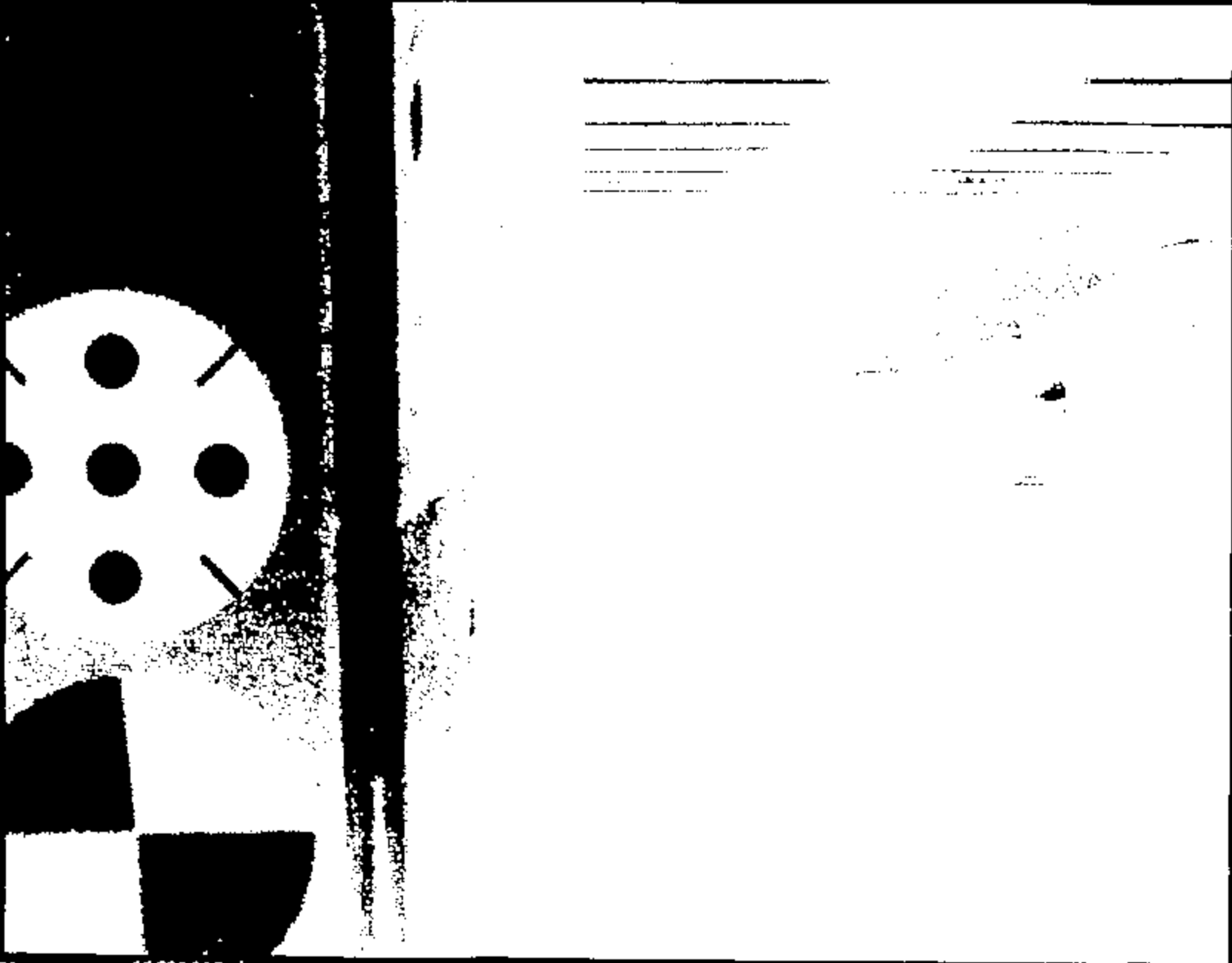


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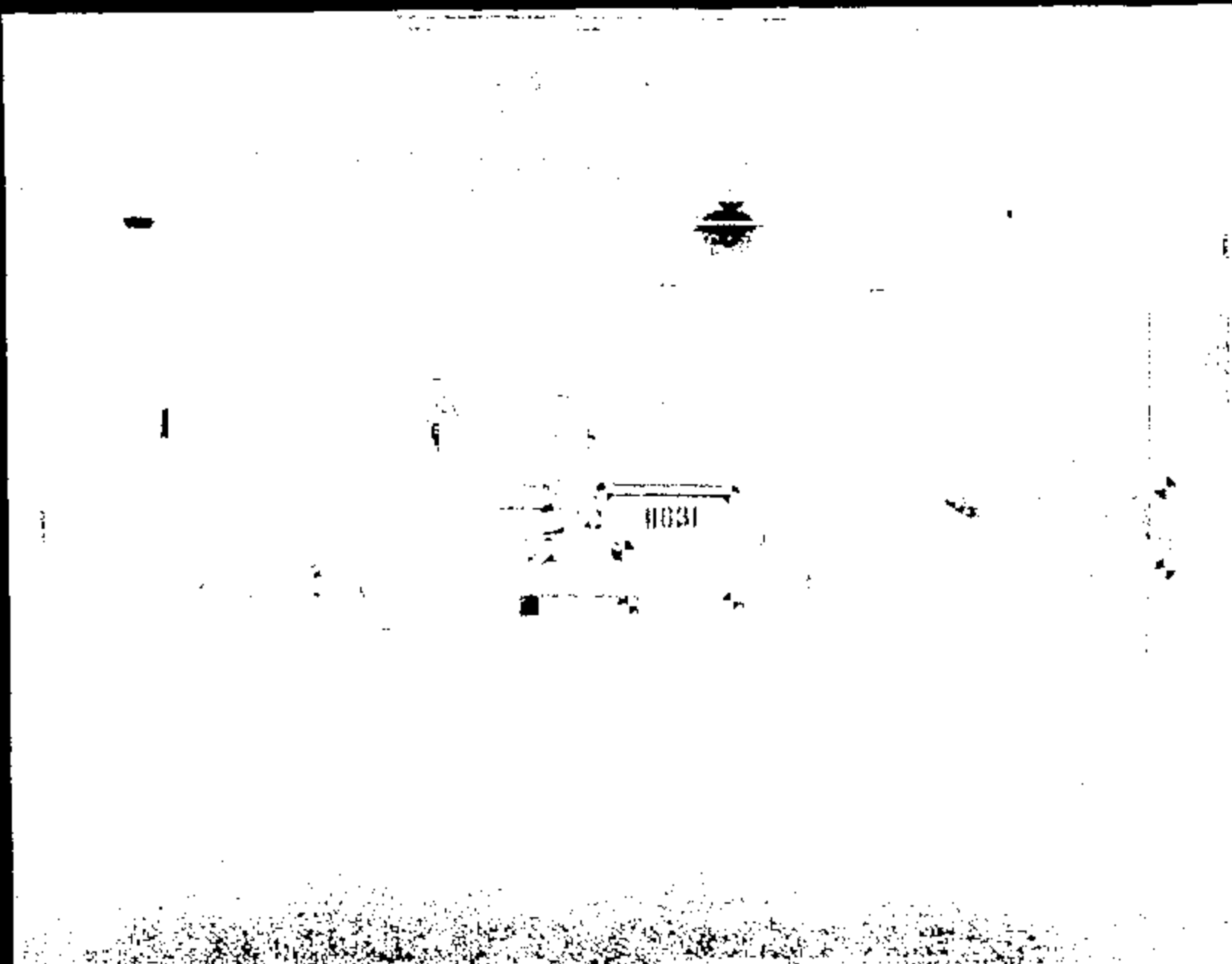
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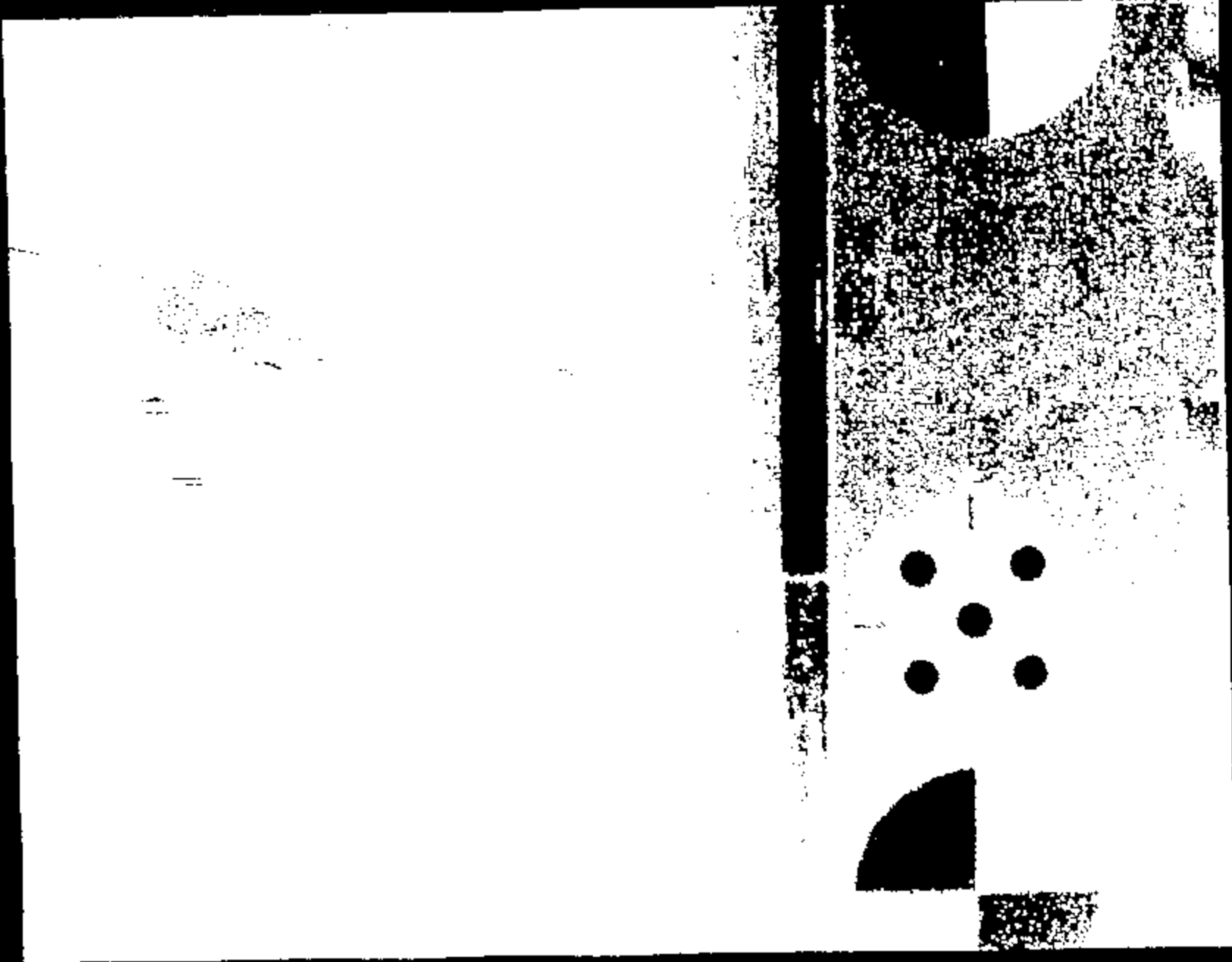
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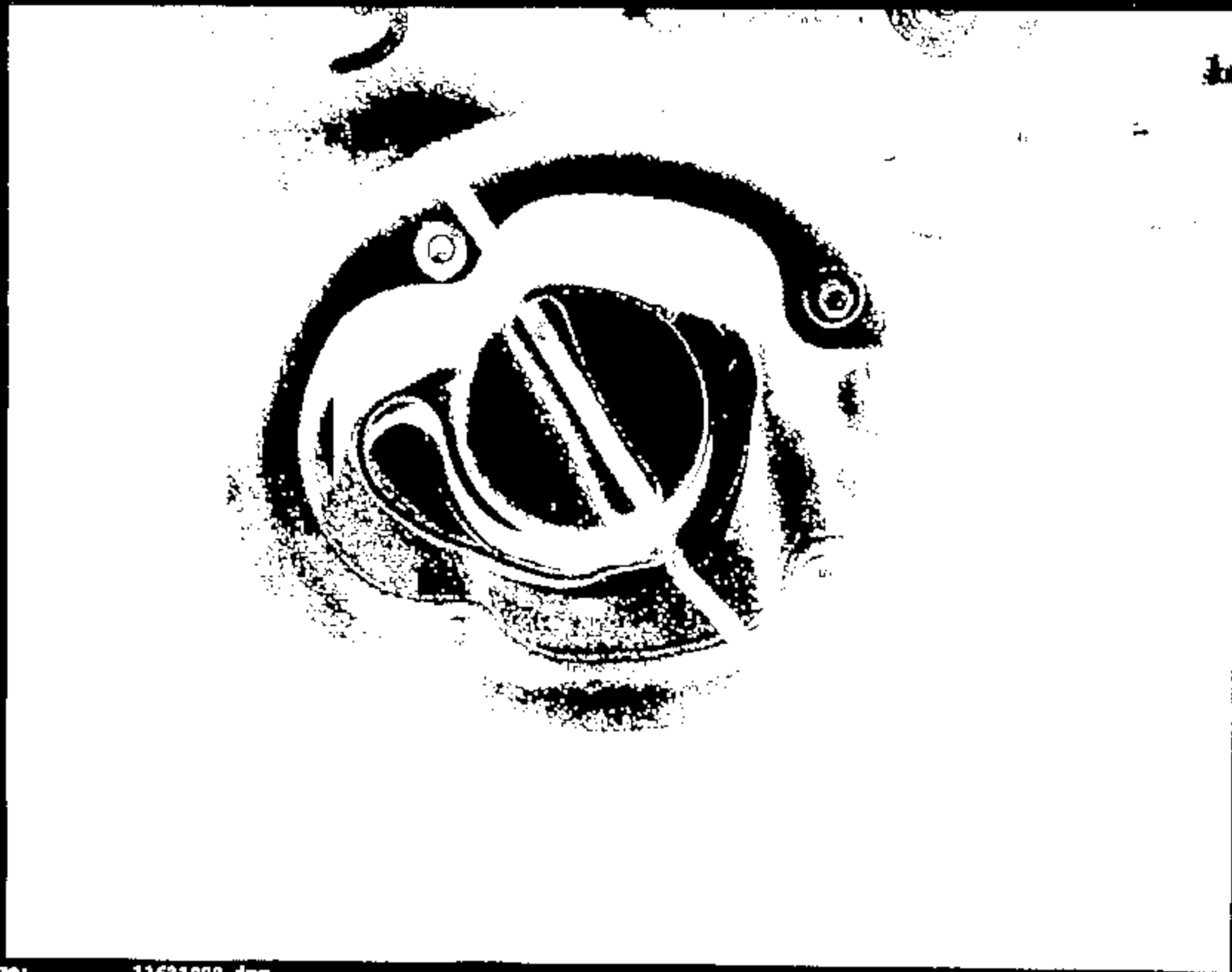
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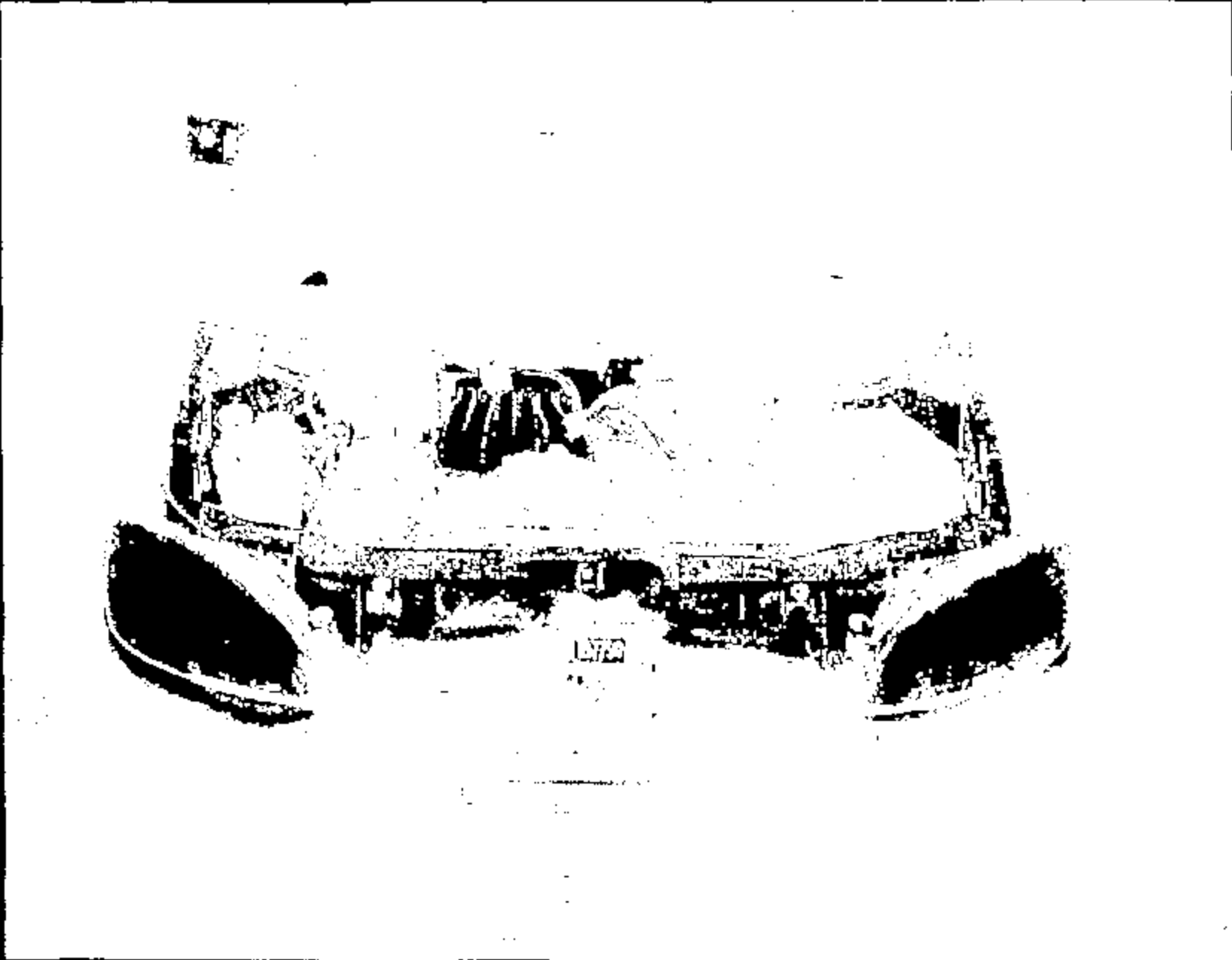
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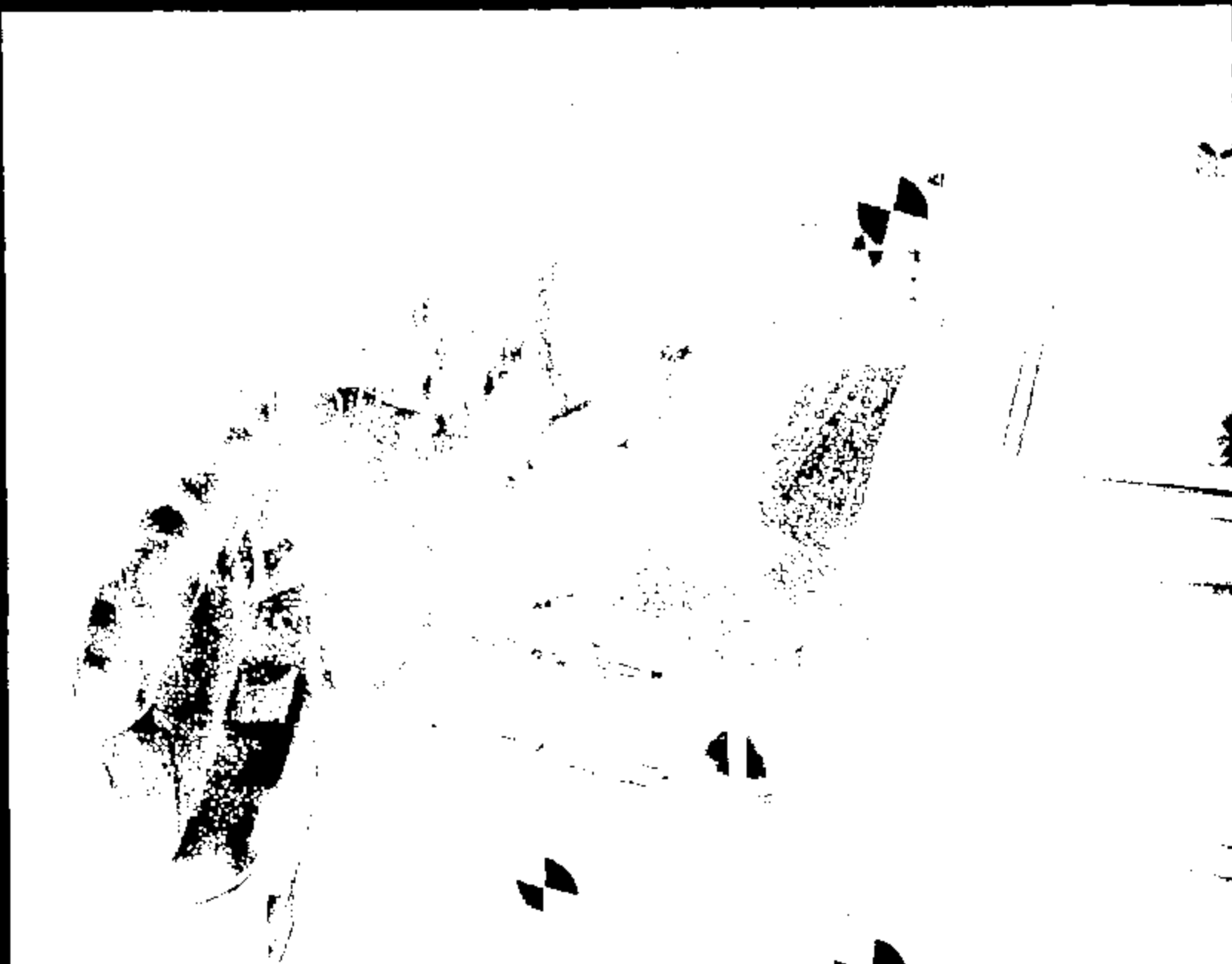
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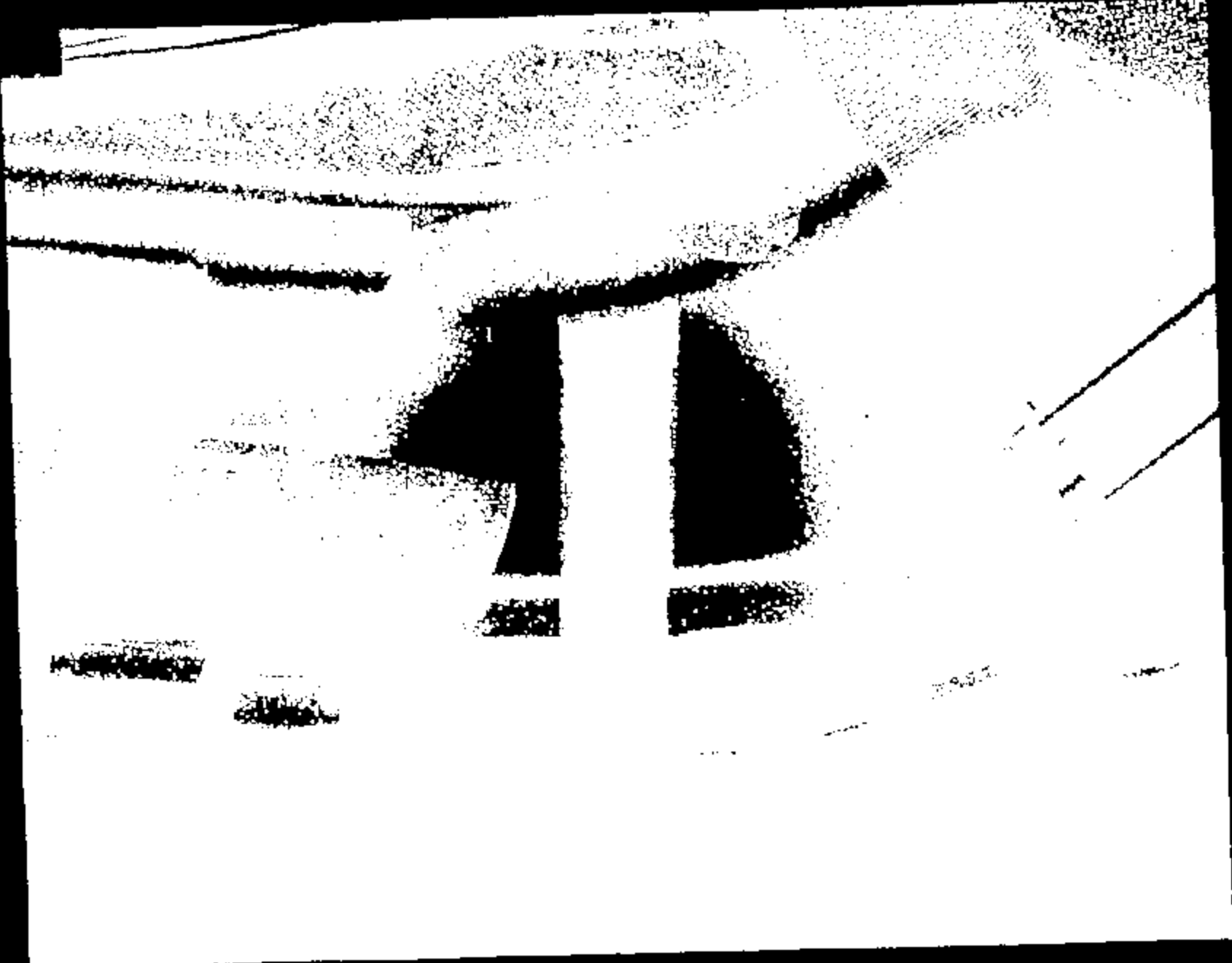
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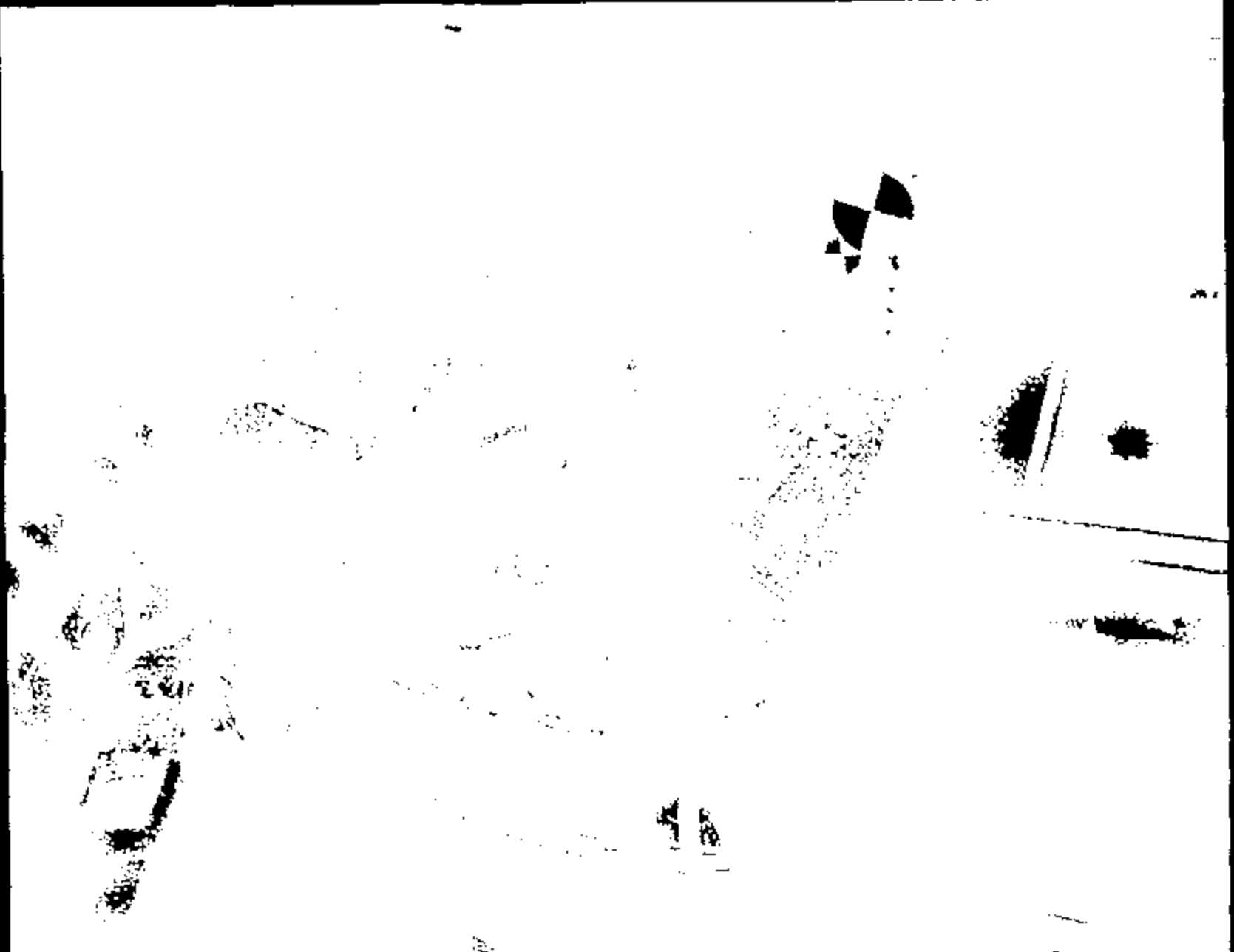
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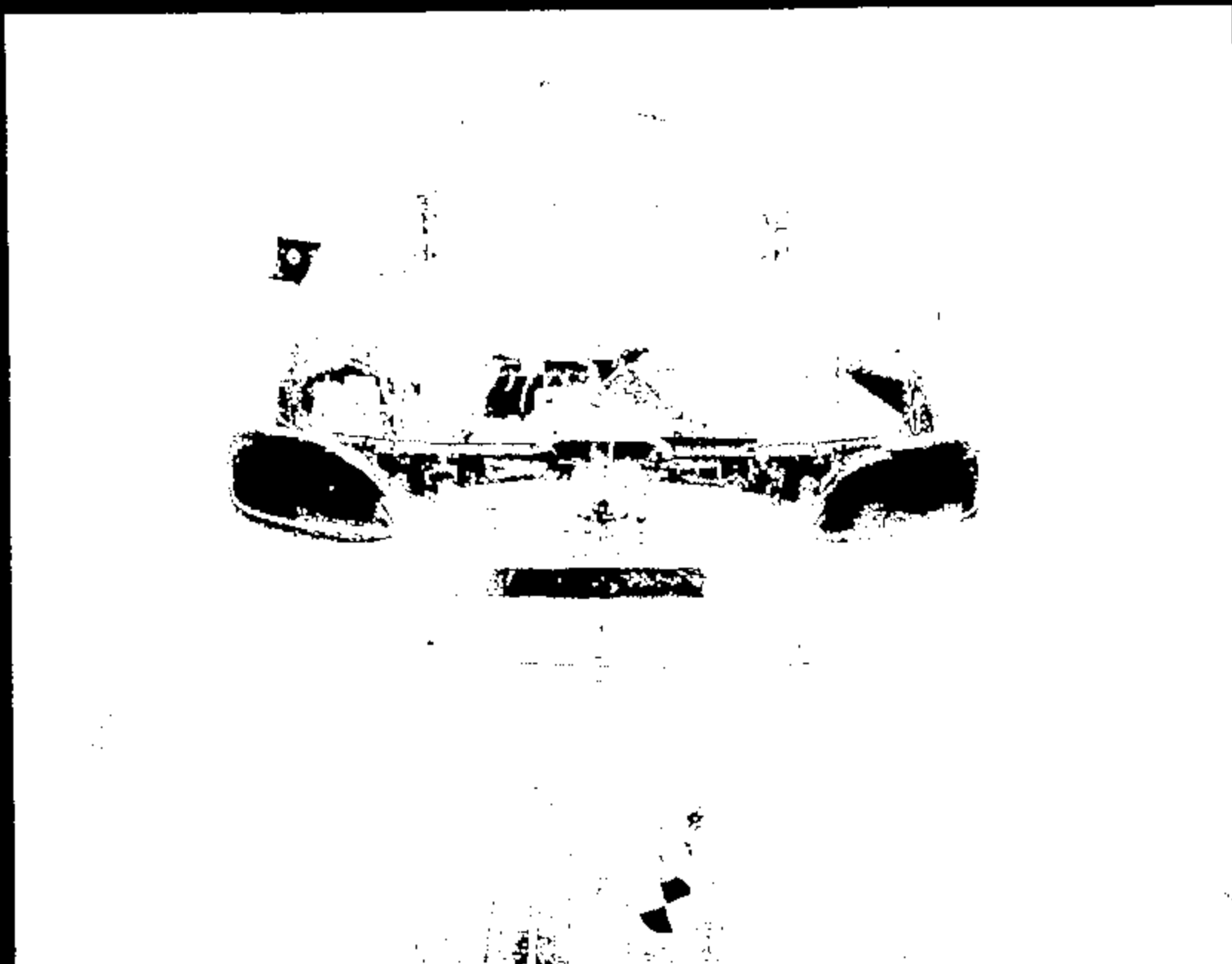
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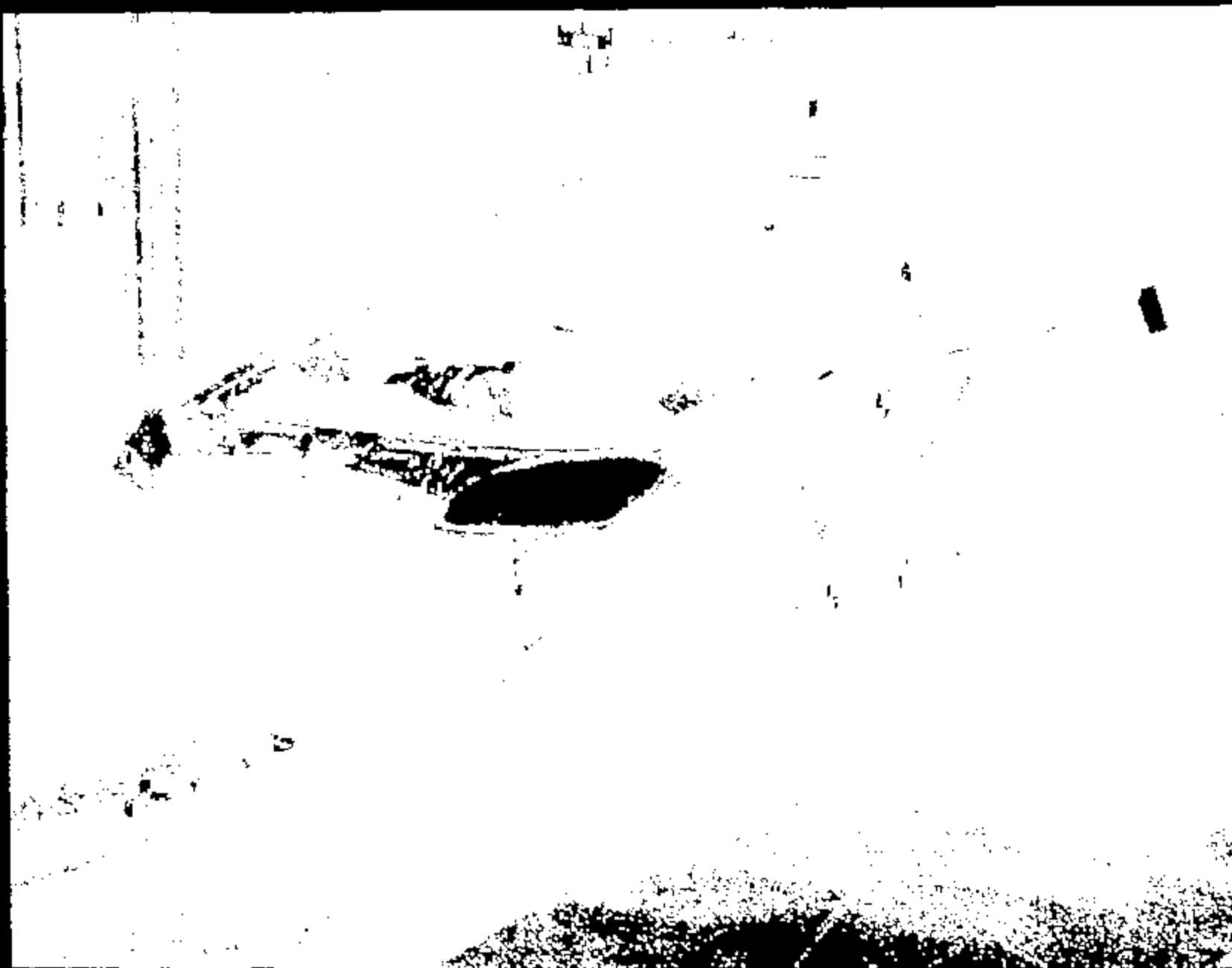
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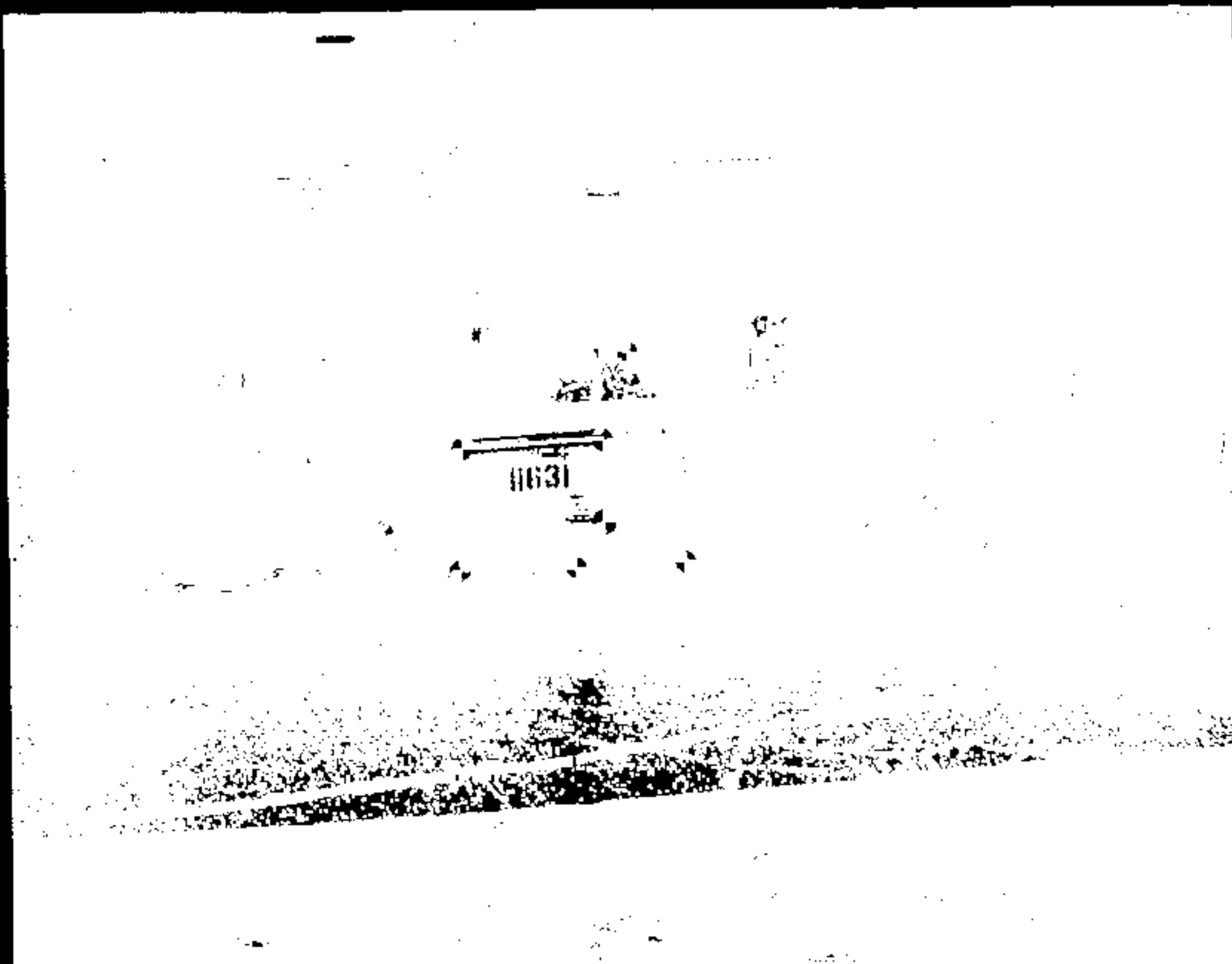
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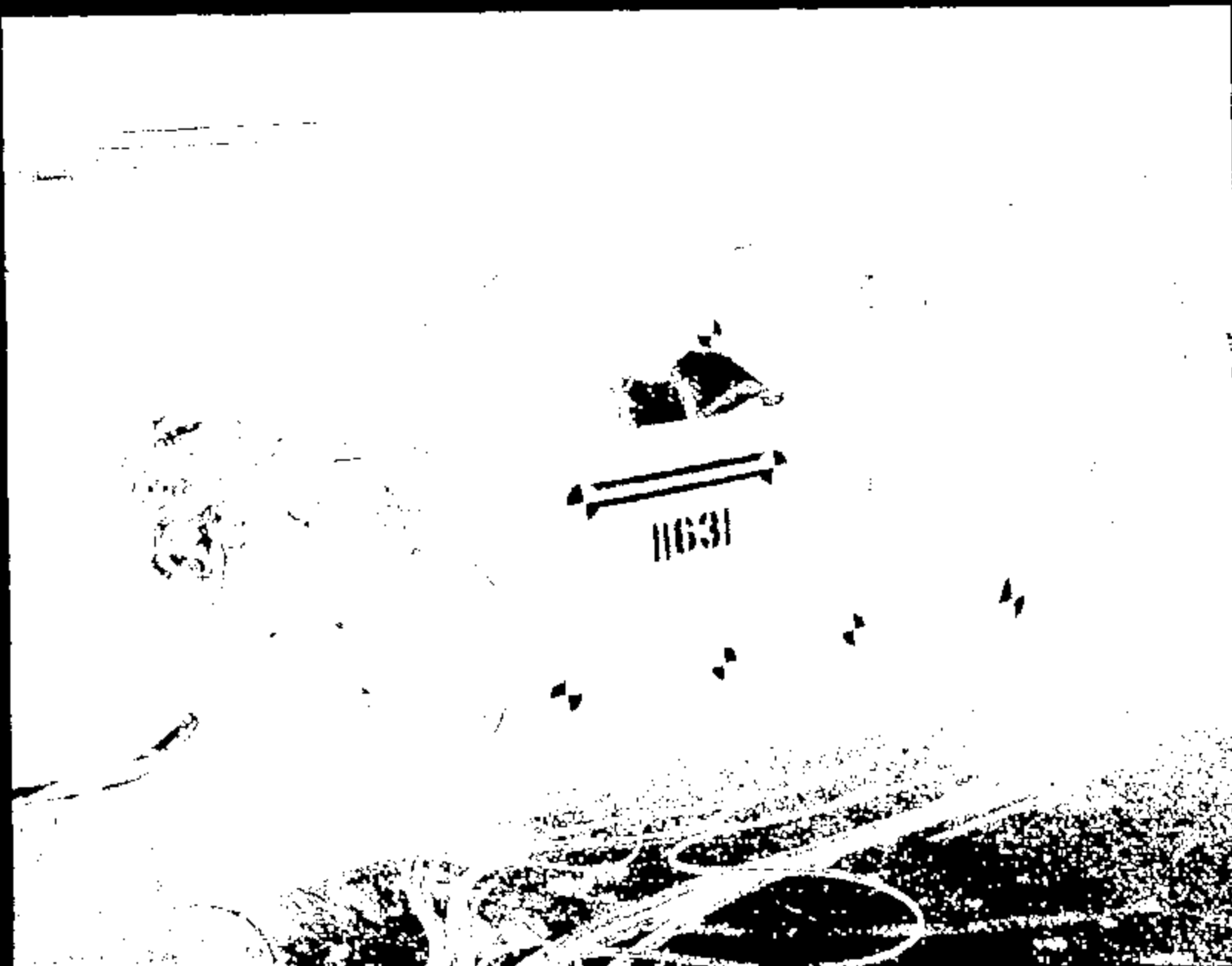
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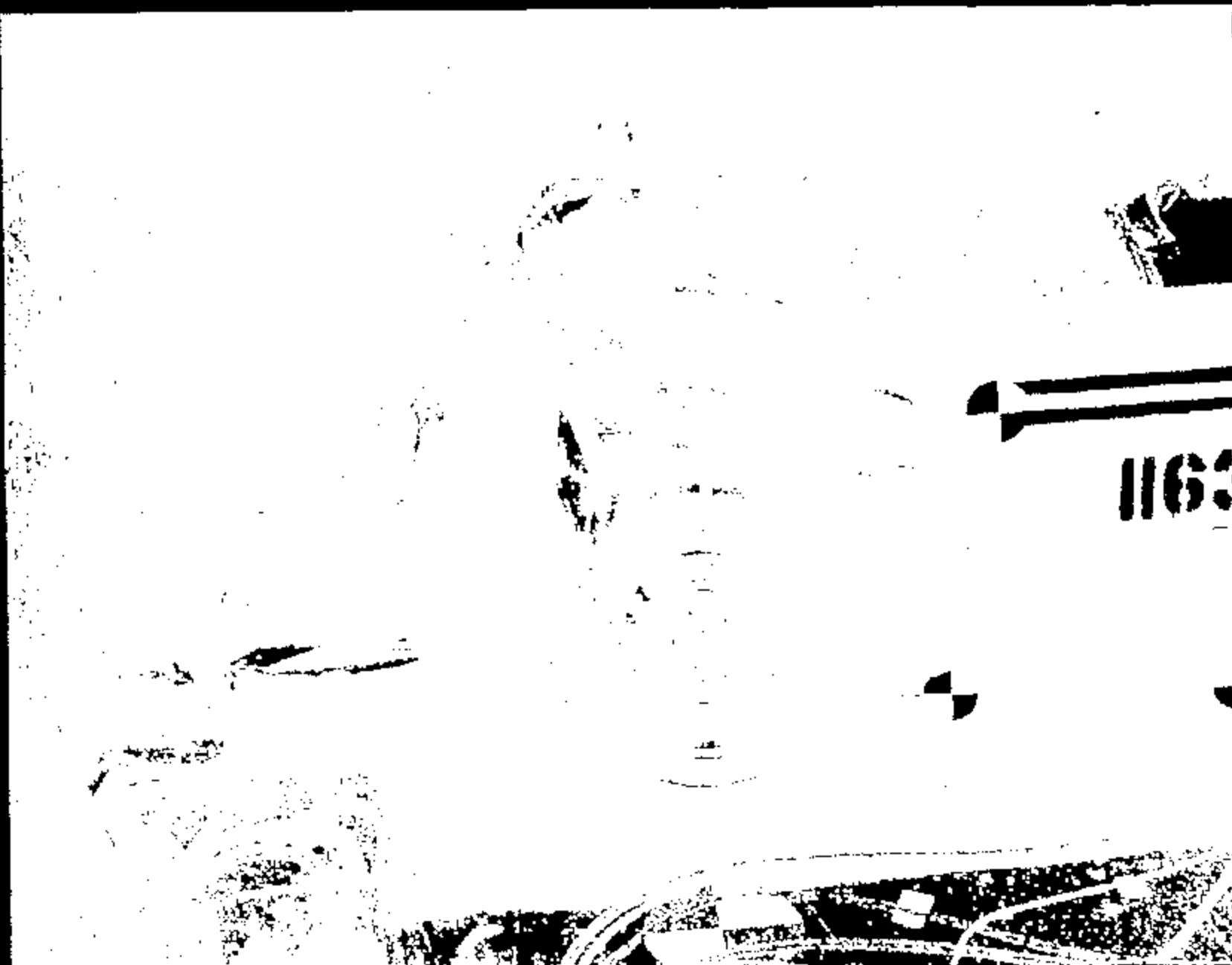
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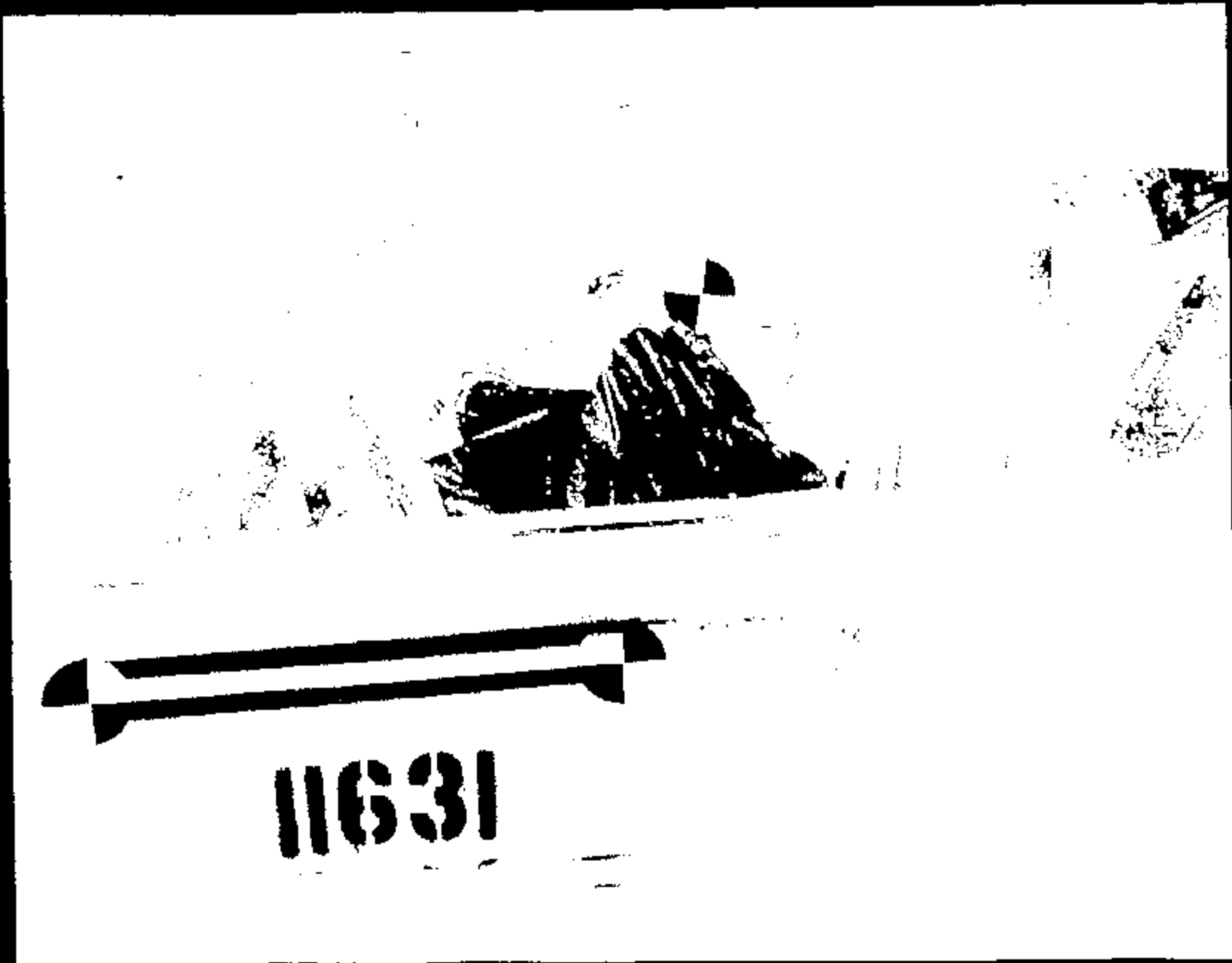


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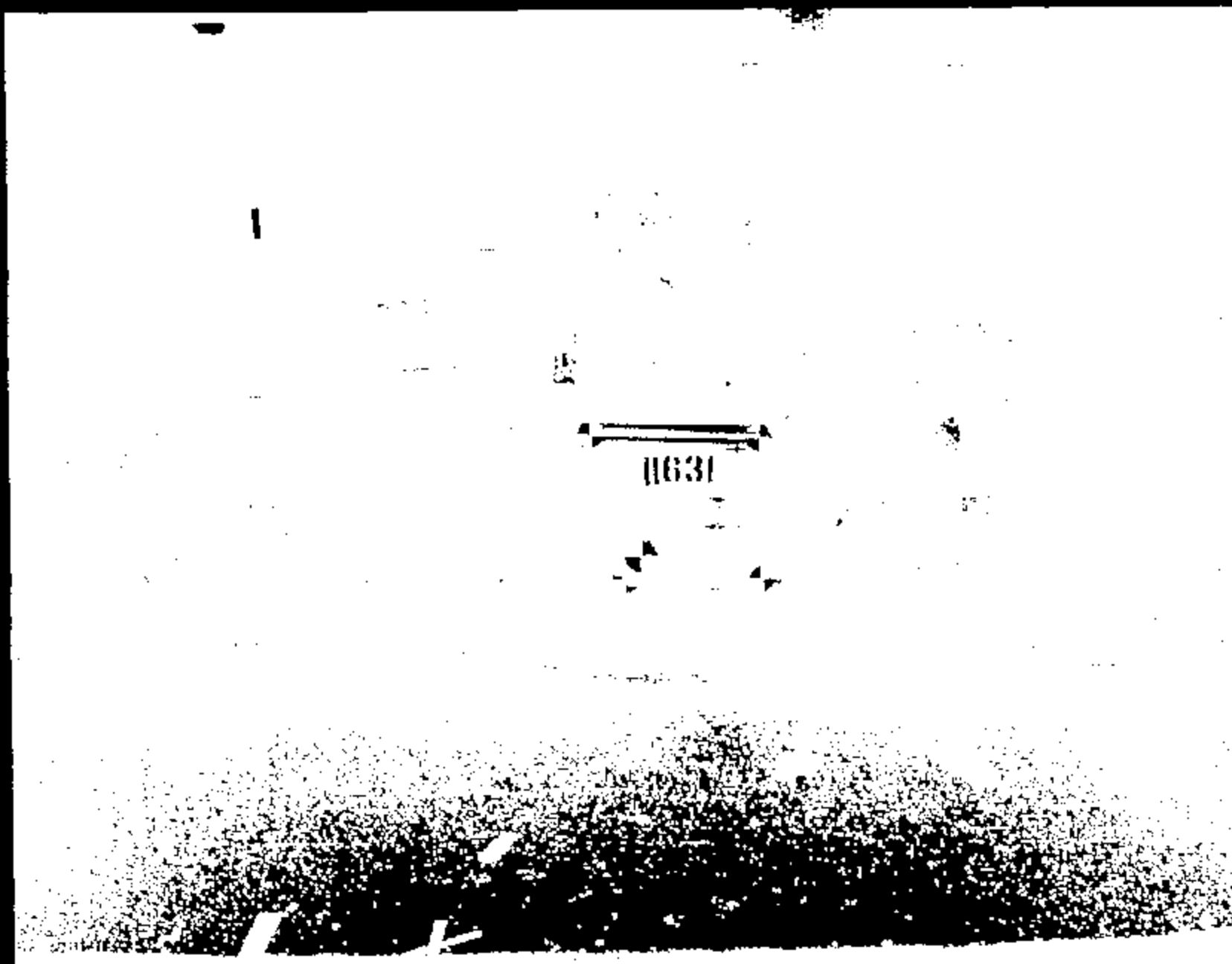
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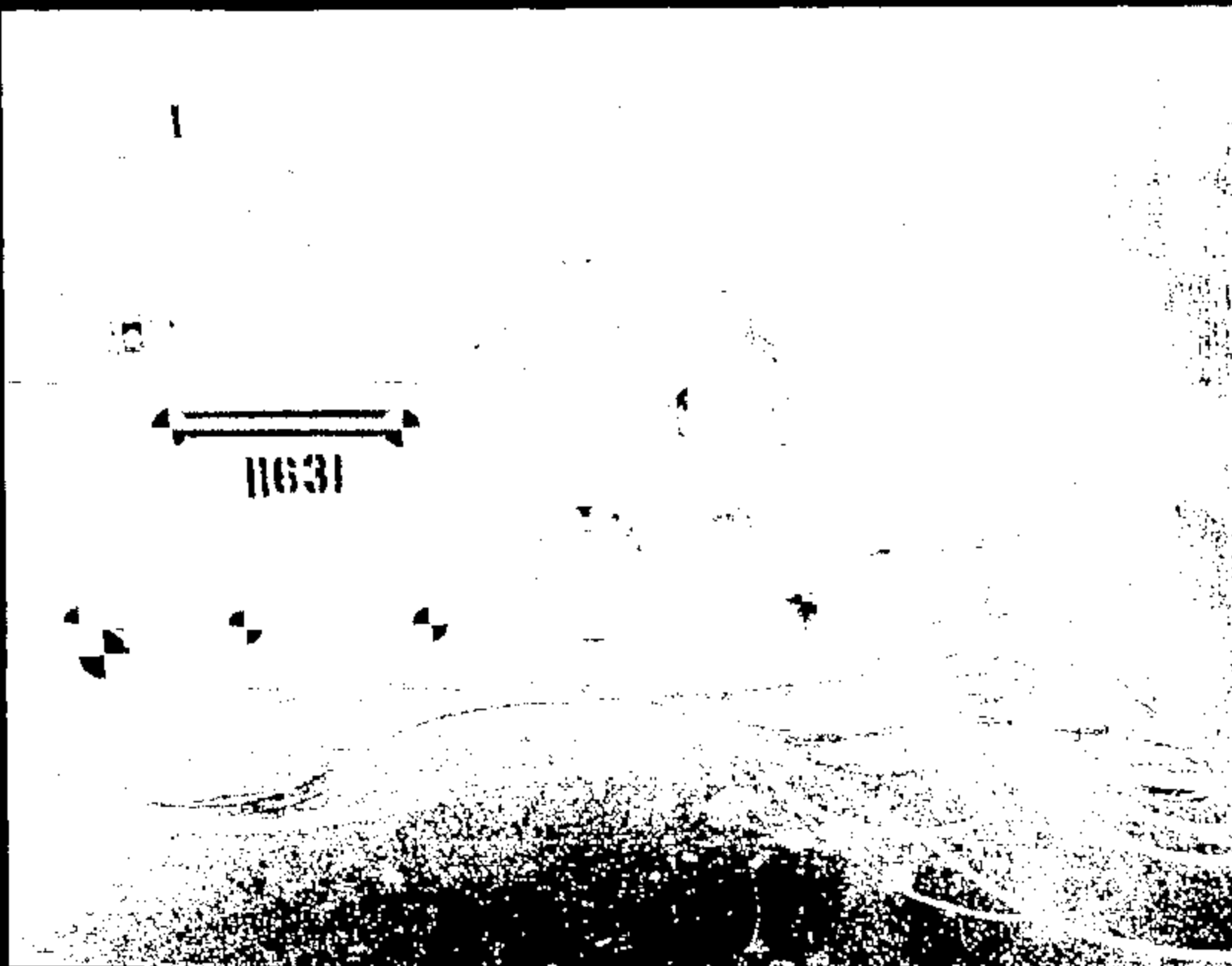
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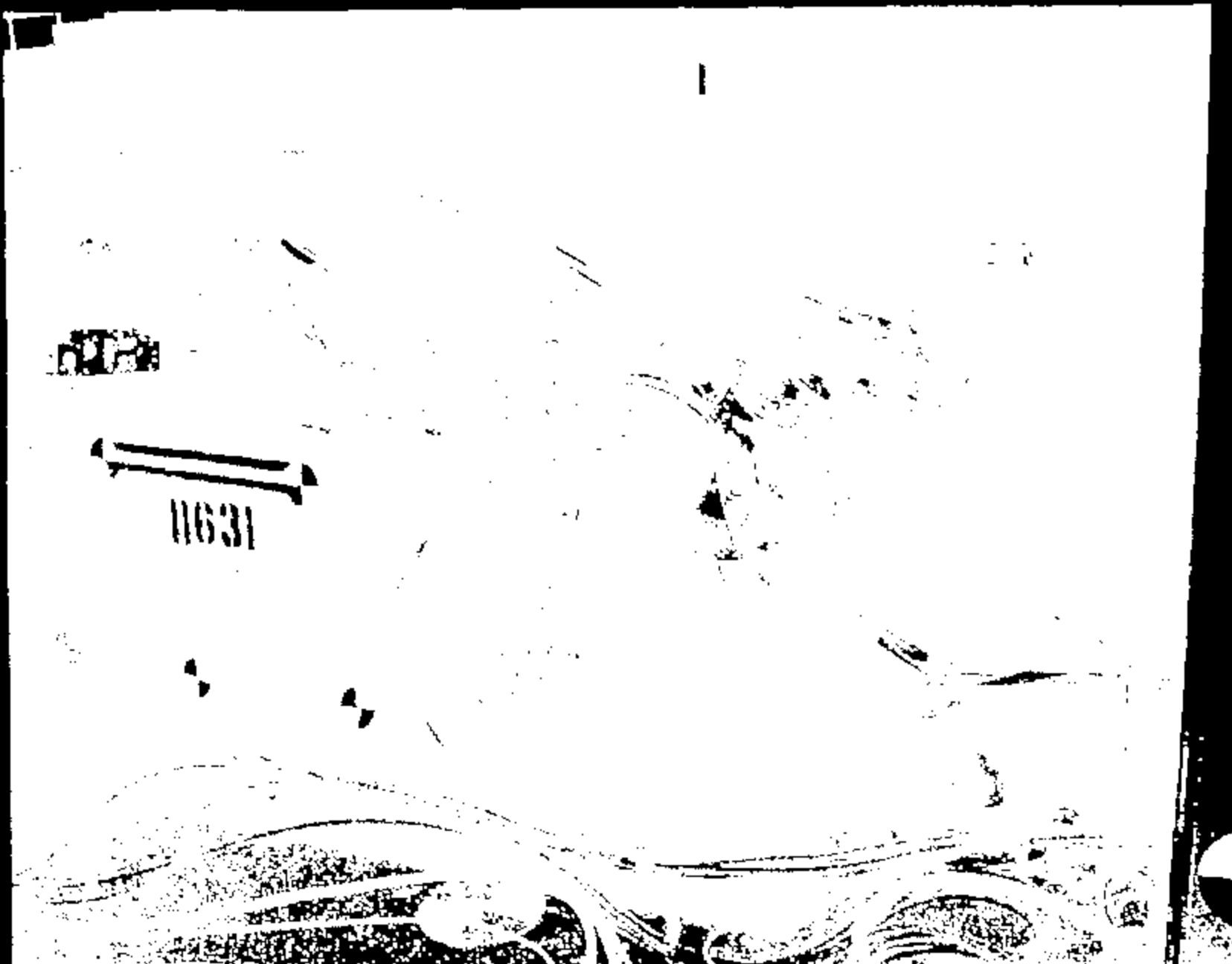
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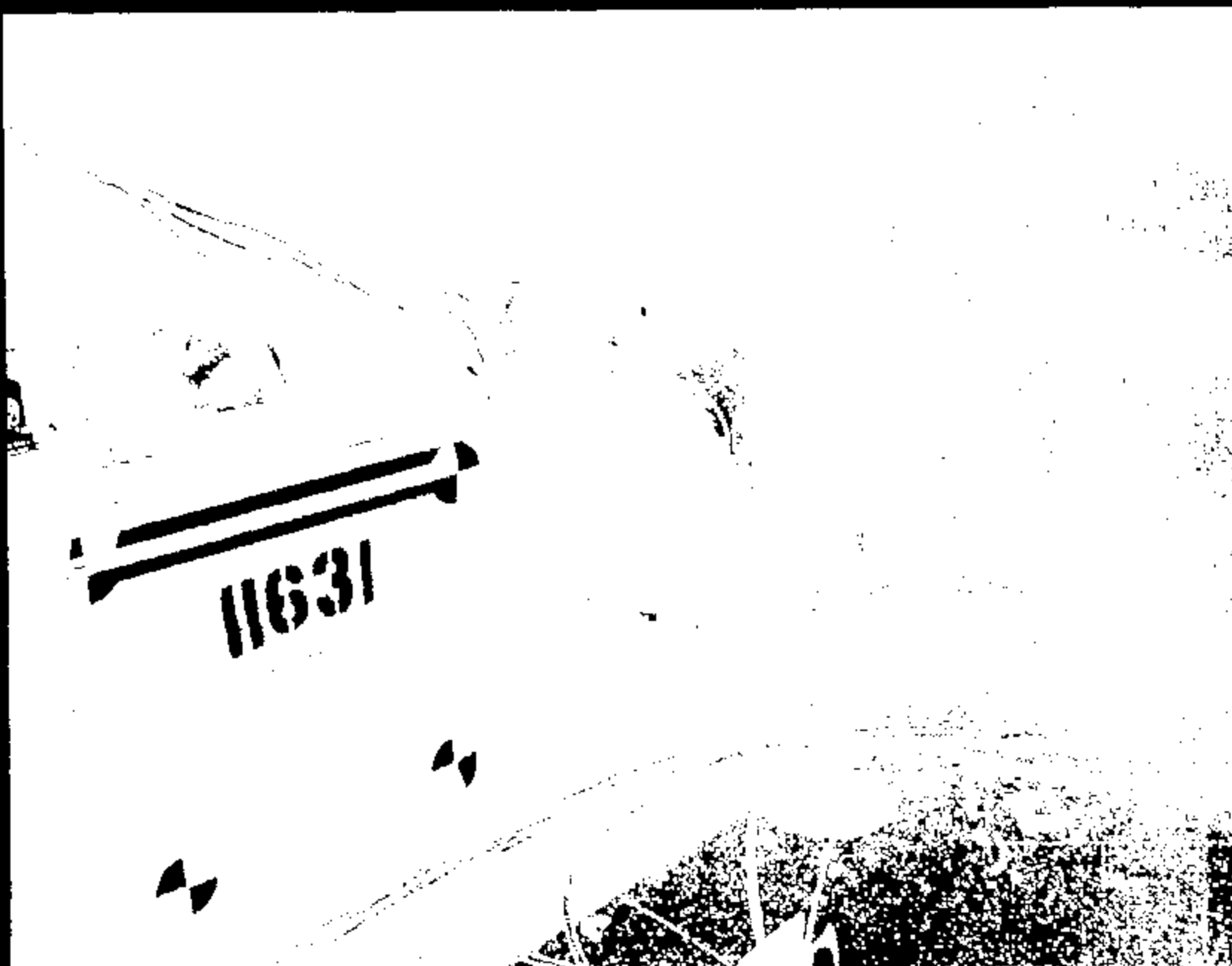


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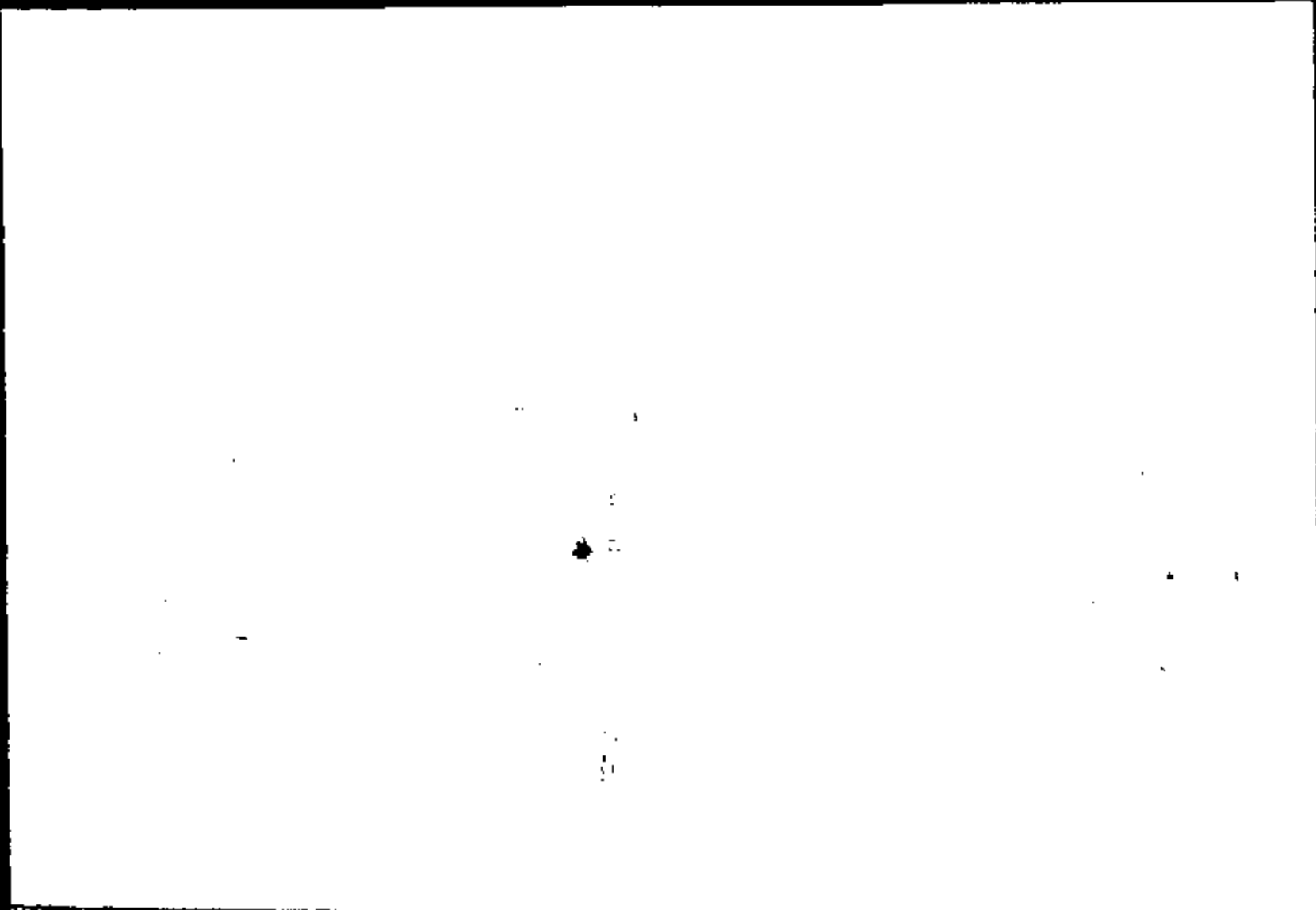


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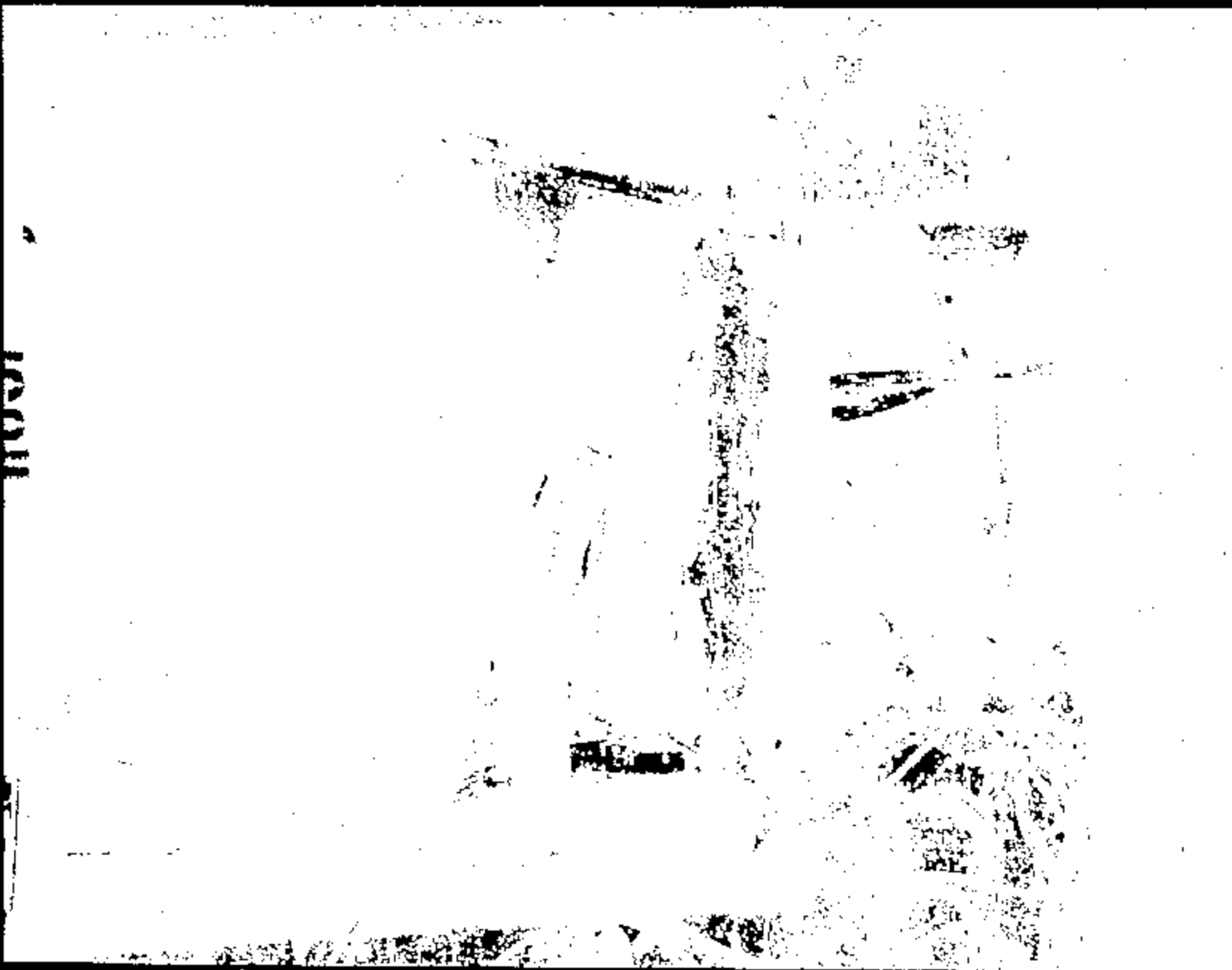
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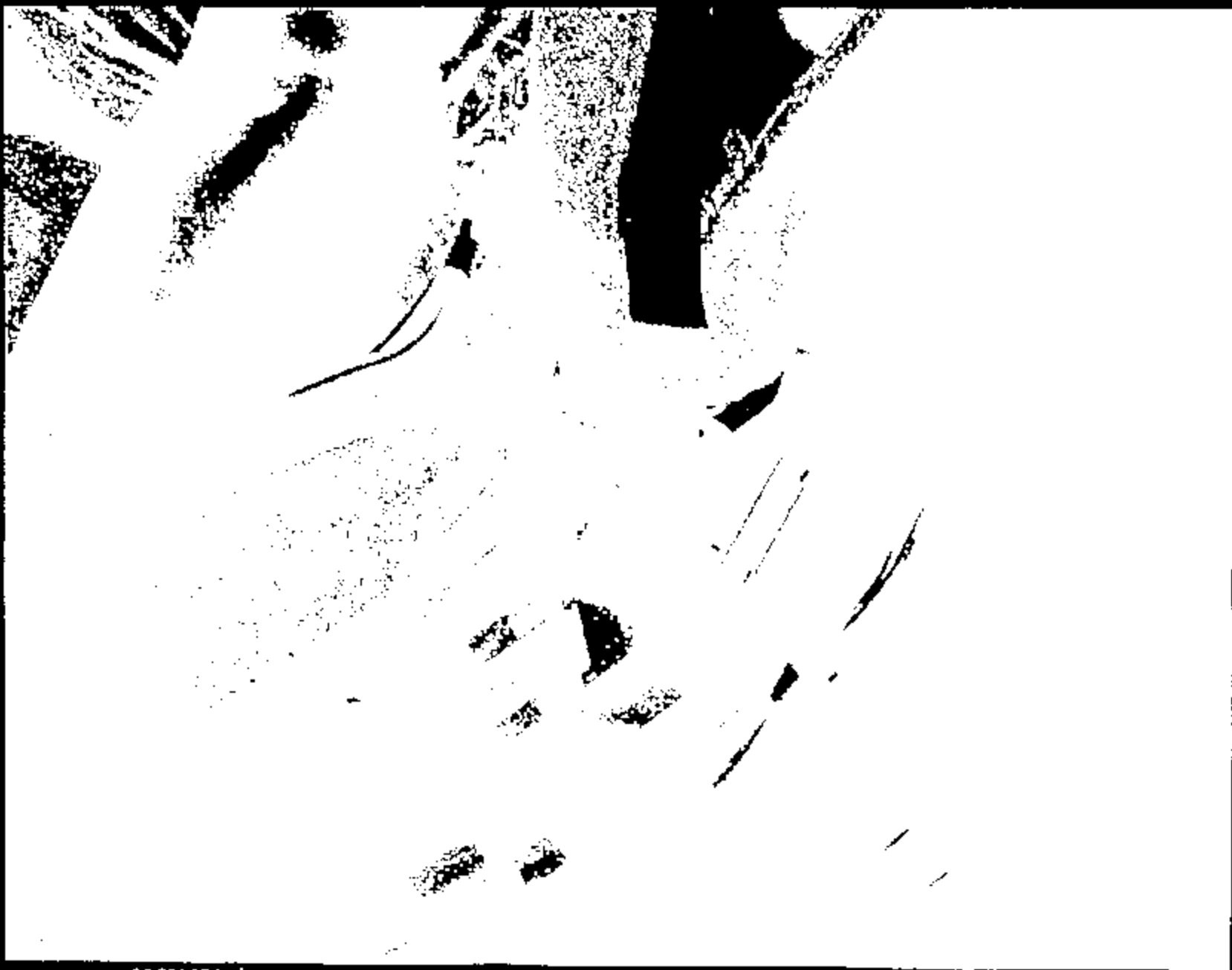
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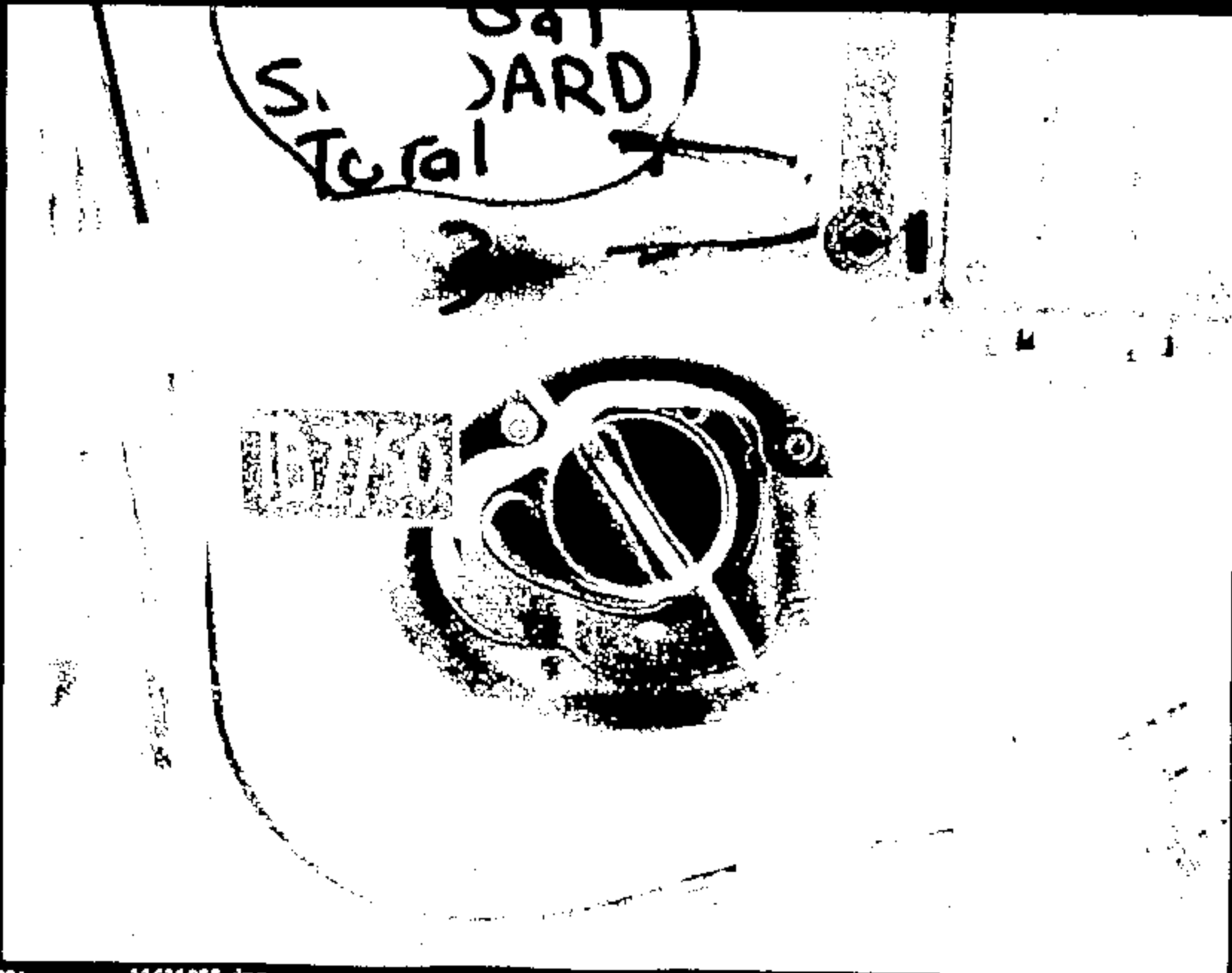
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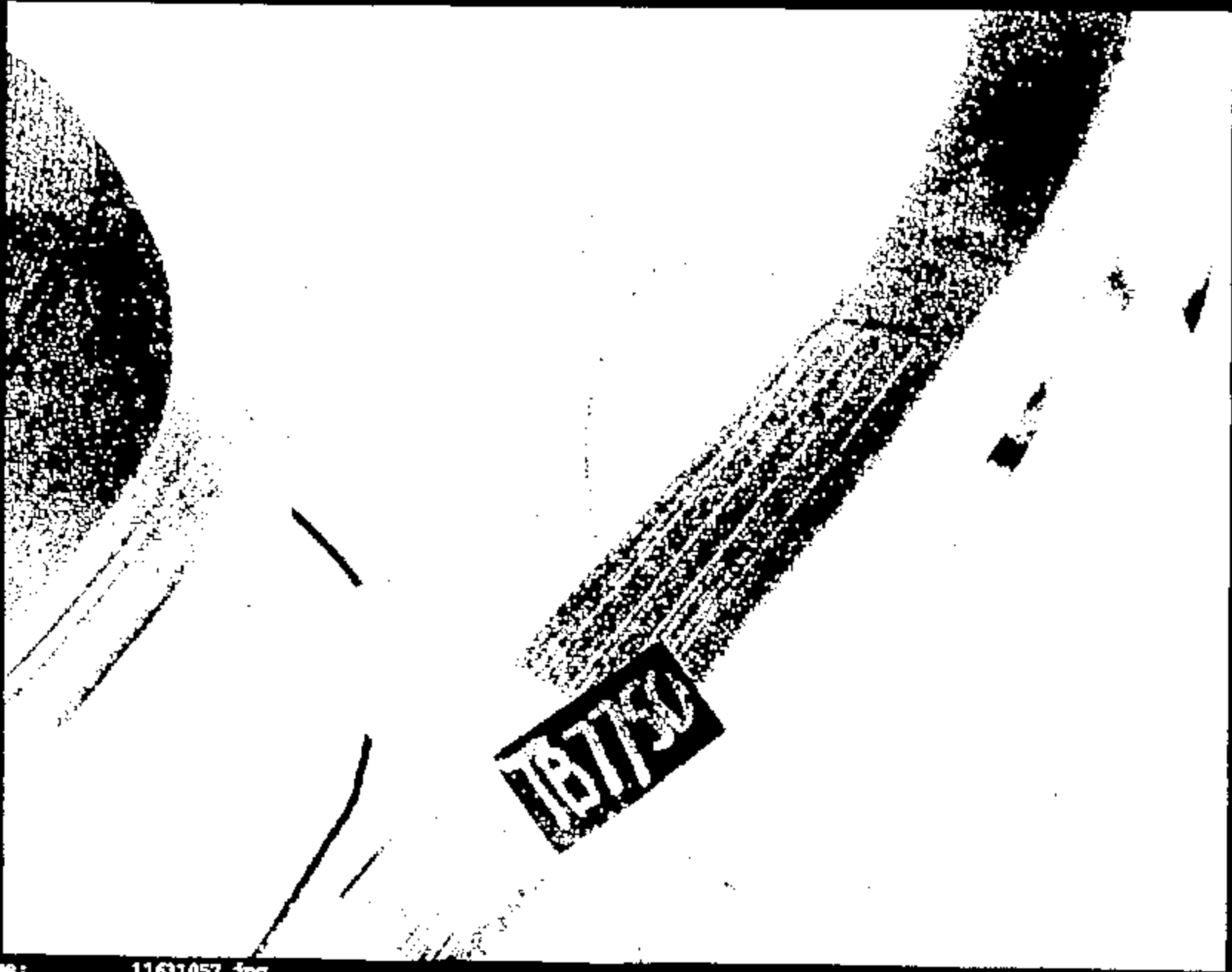




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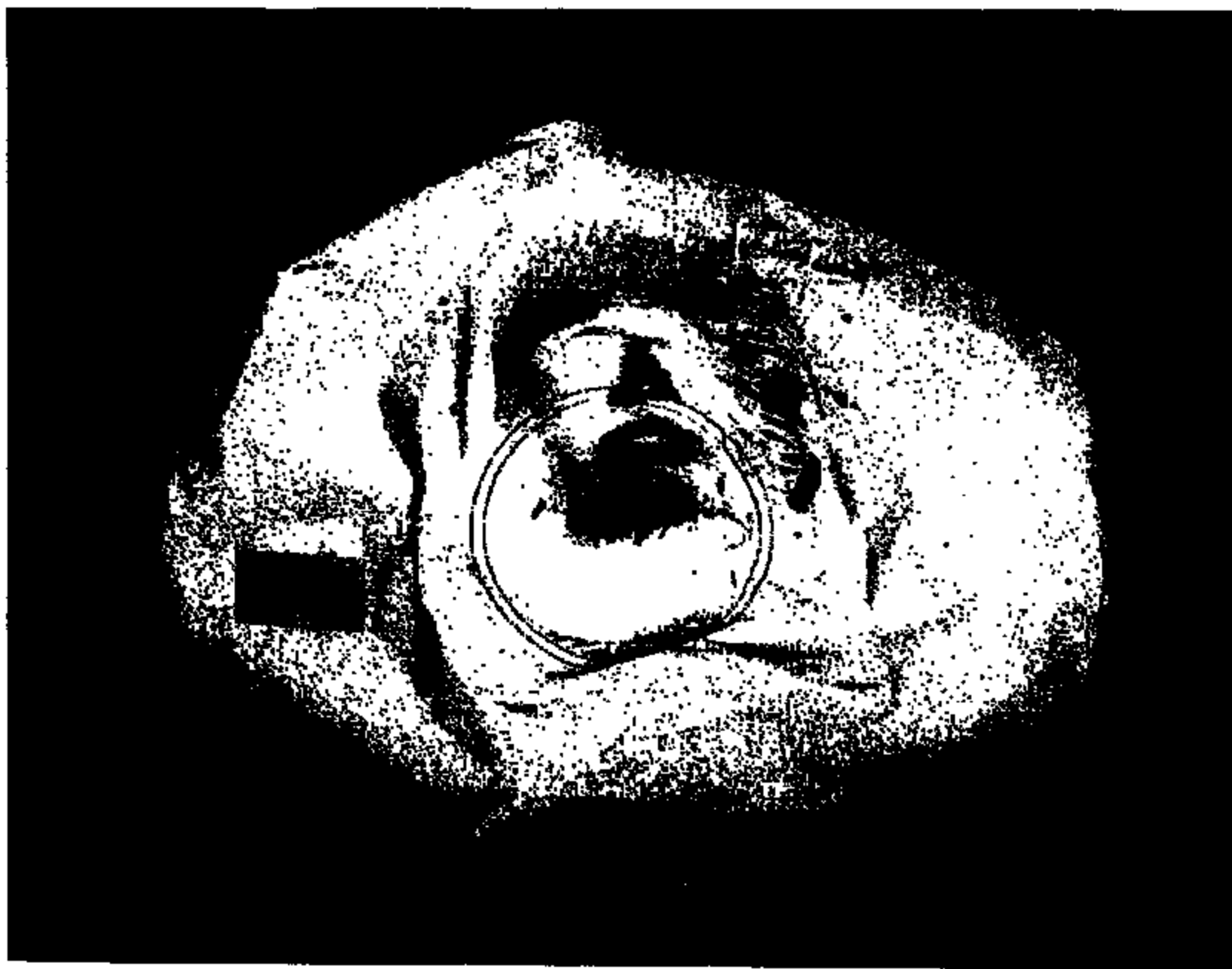
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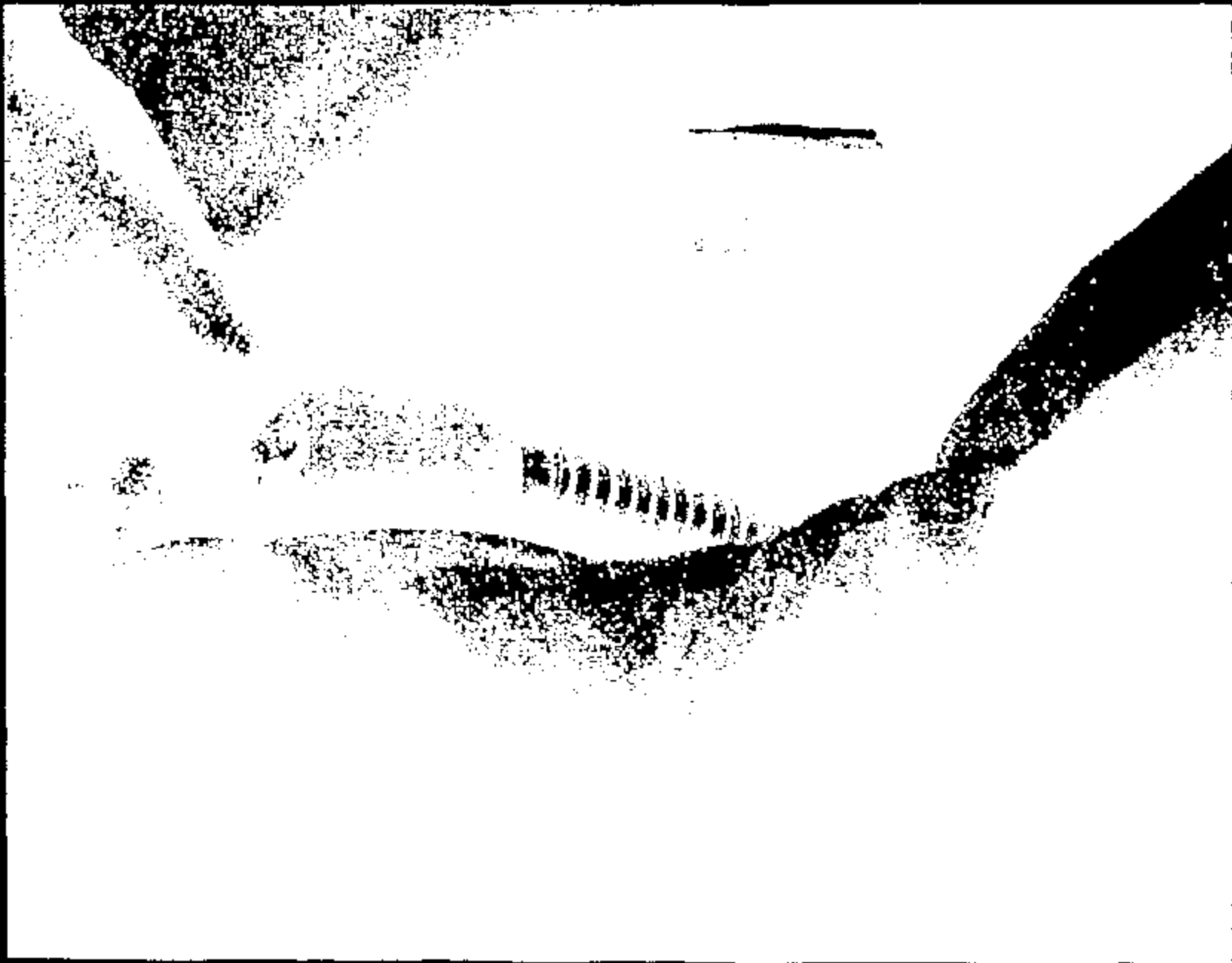


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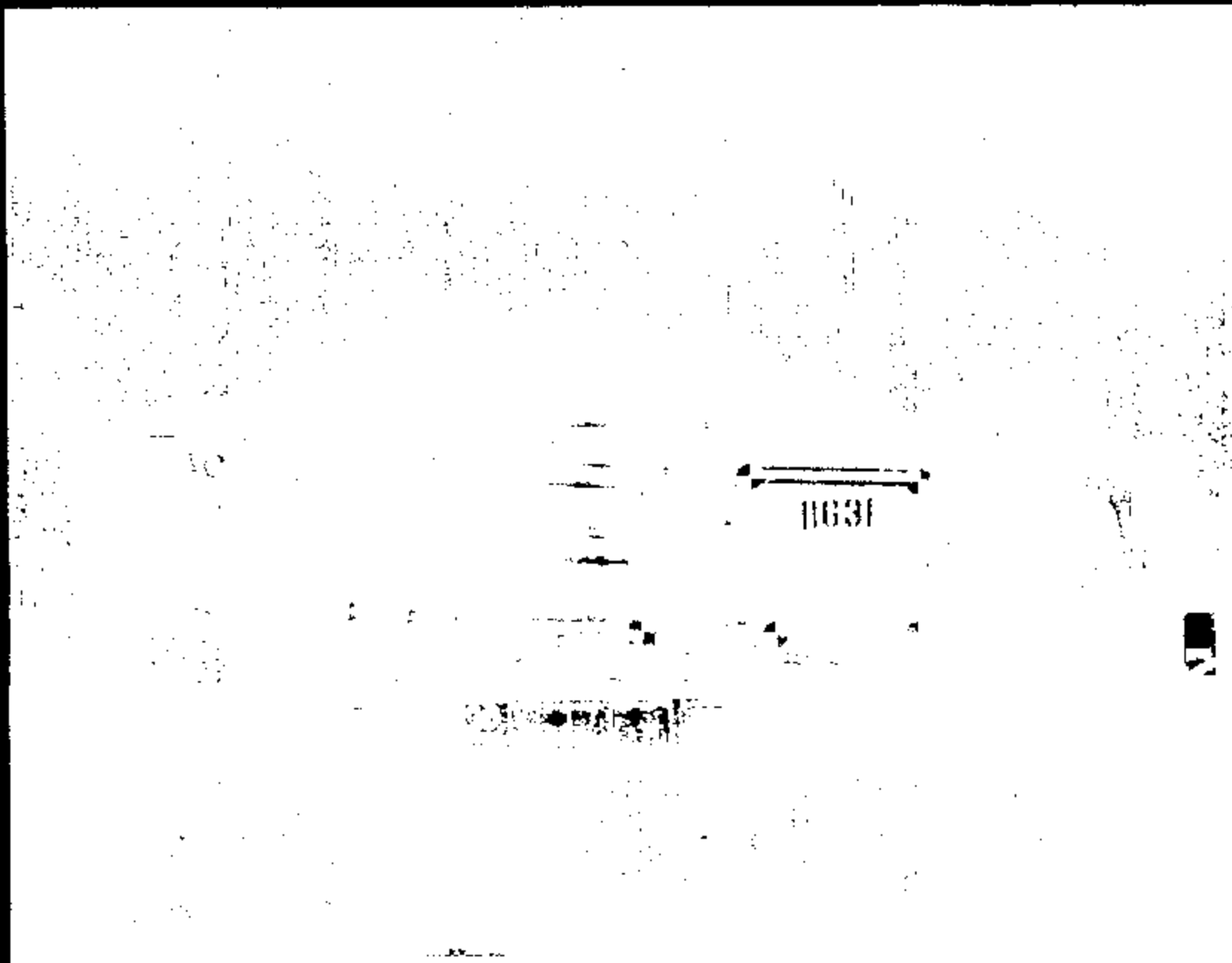
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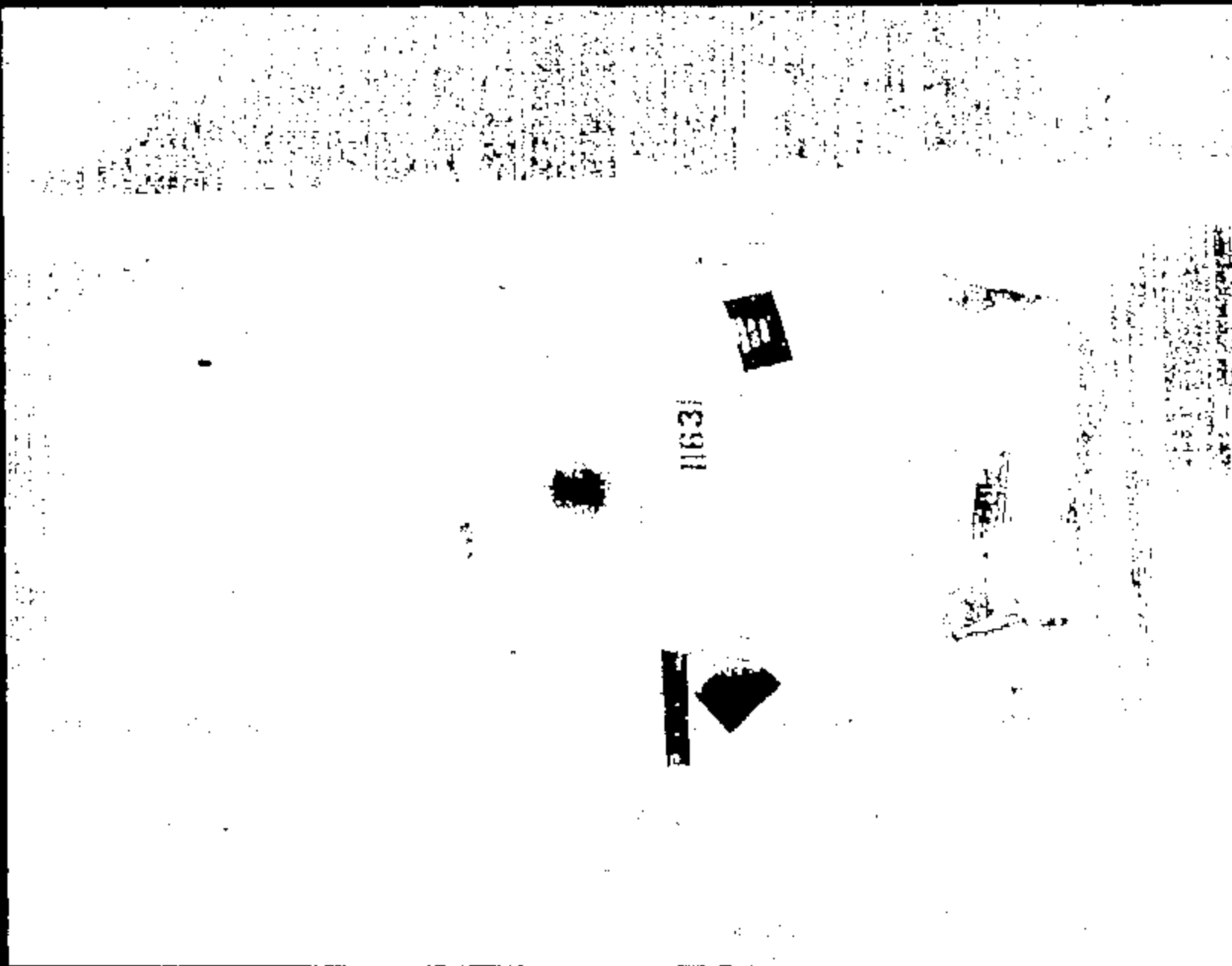




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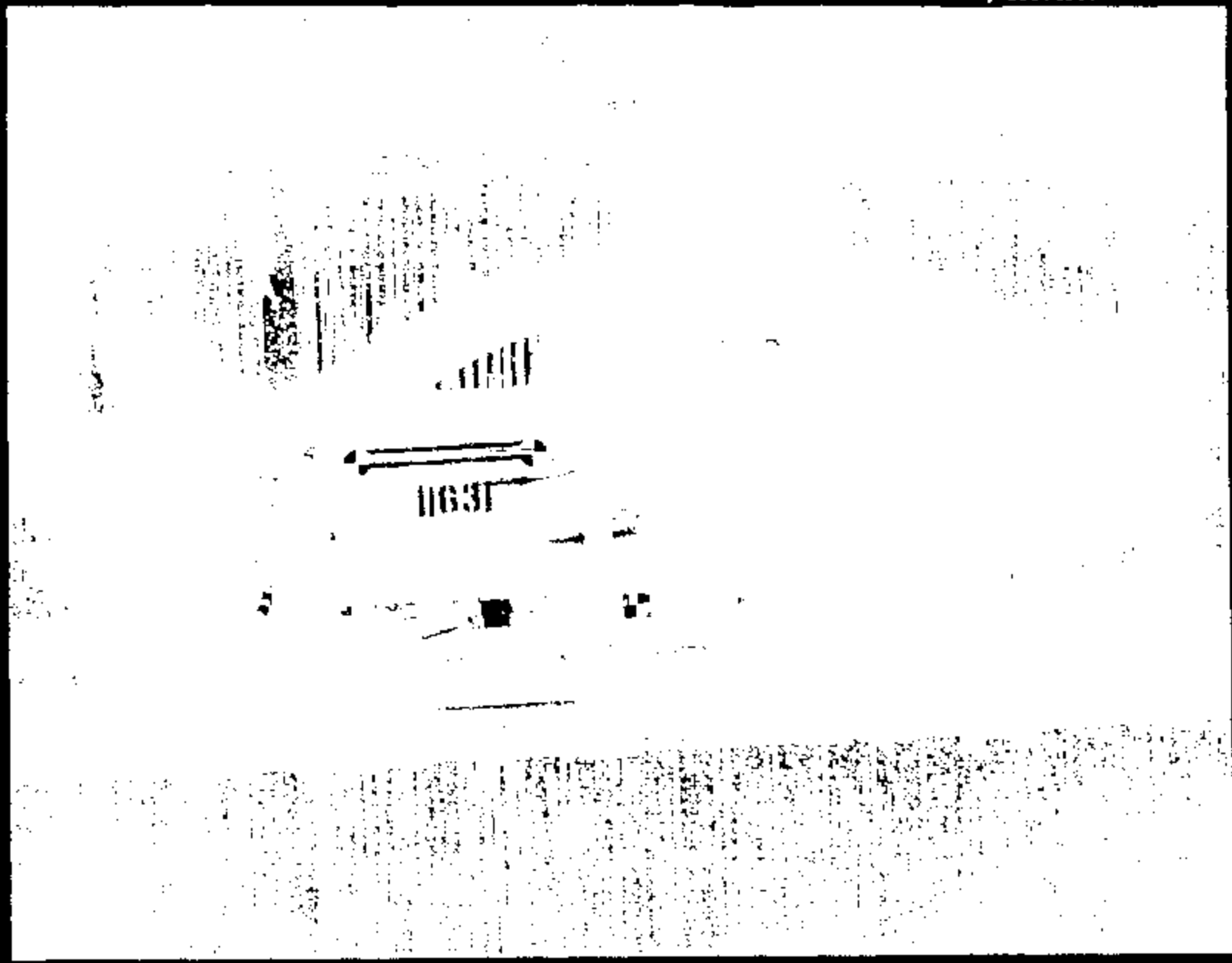


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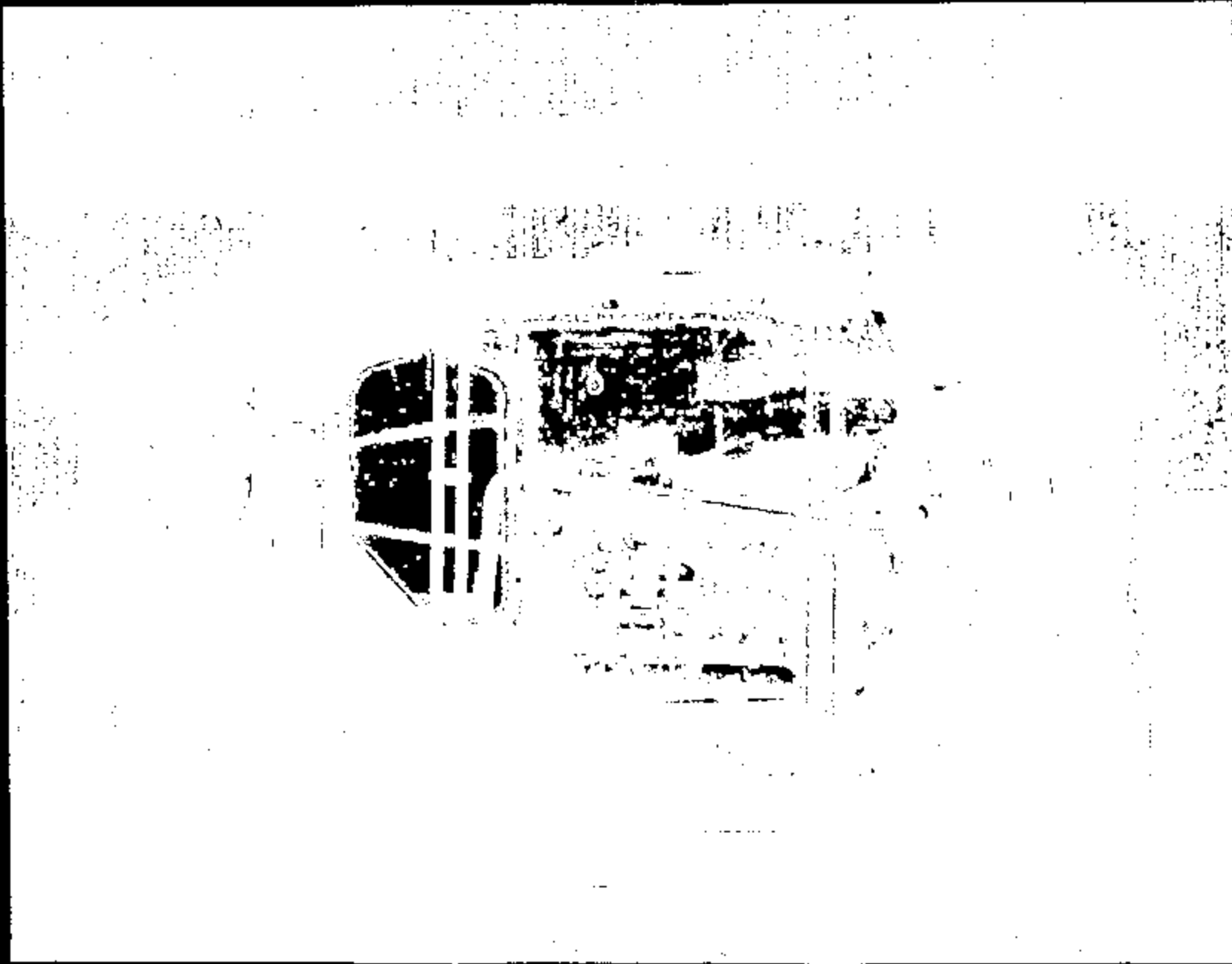
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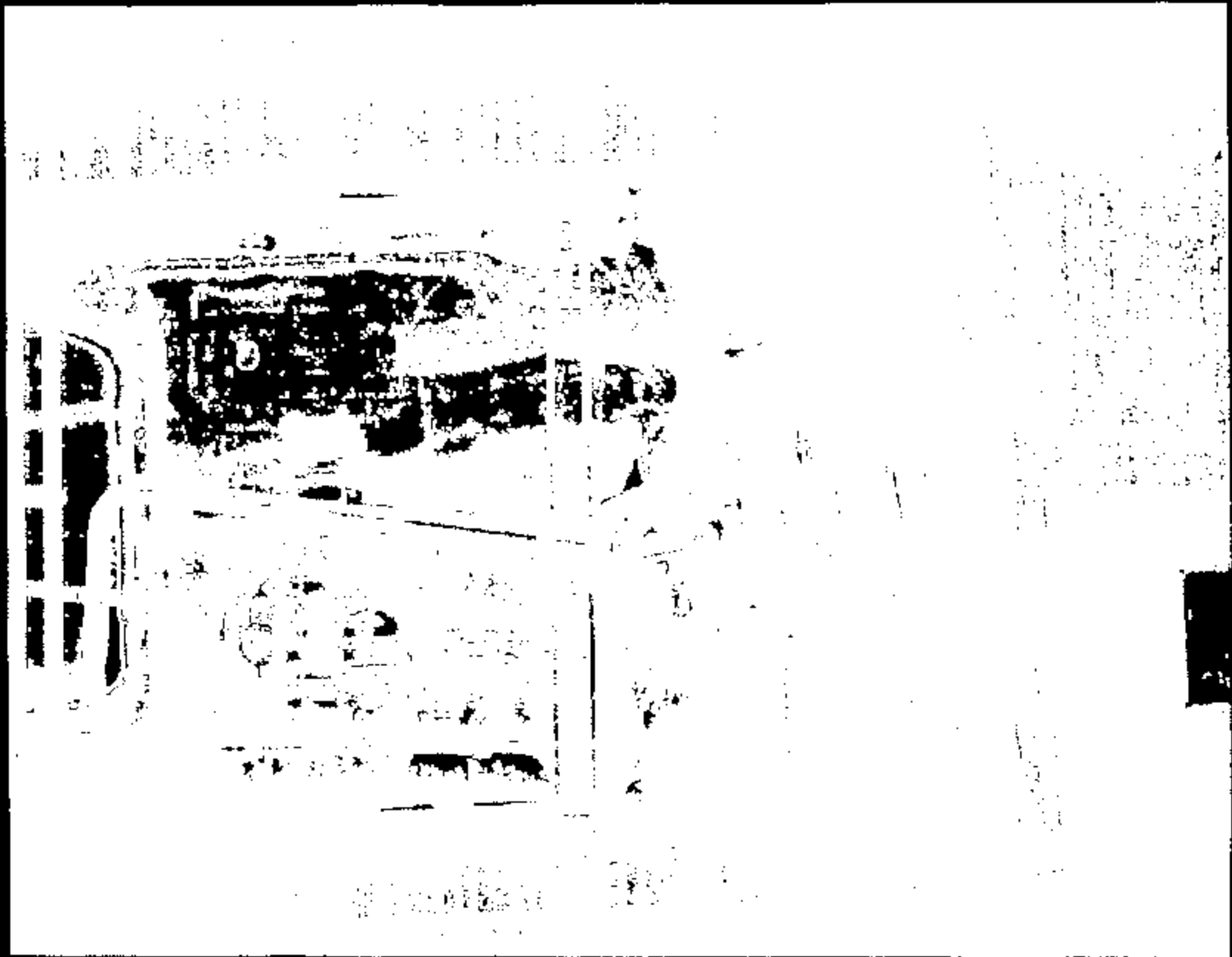
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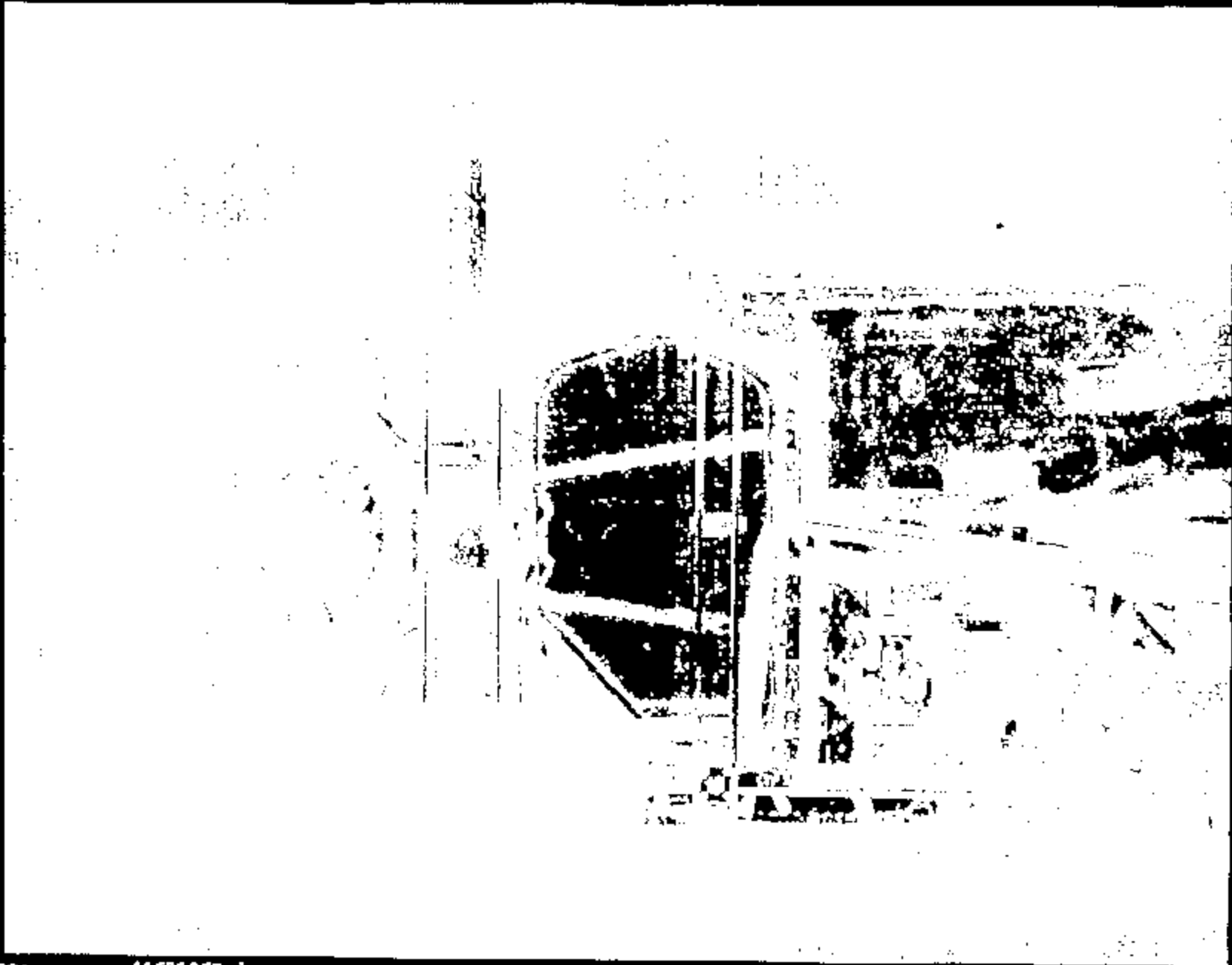
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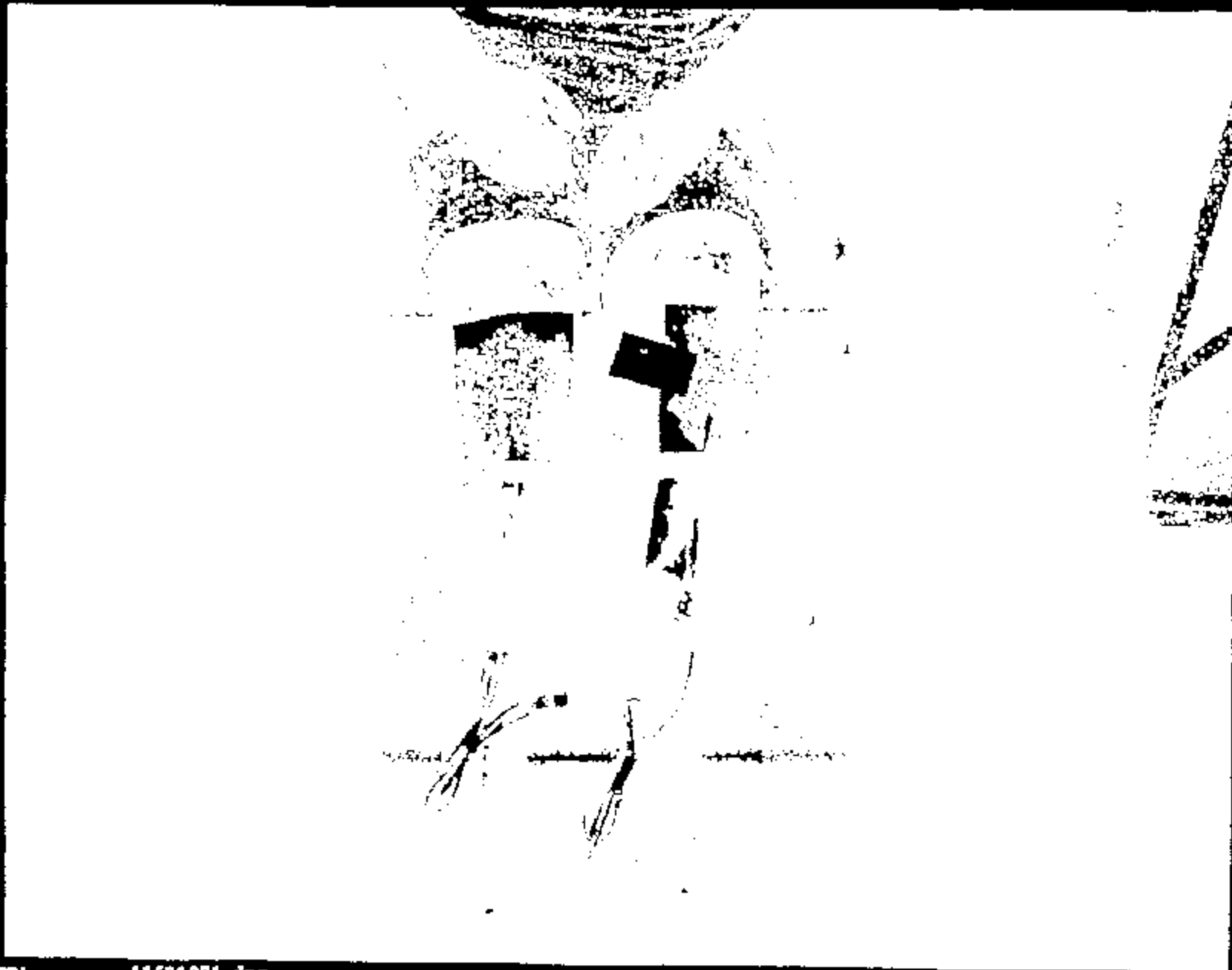
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CRTS 0011631





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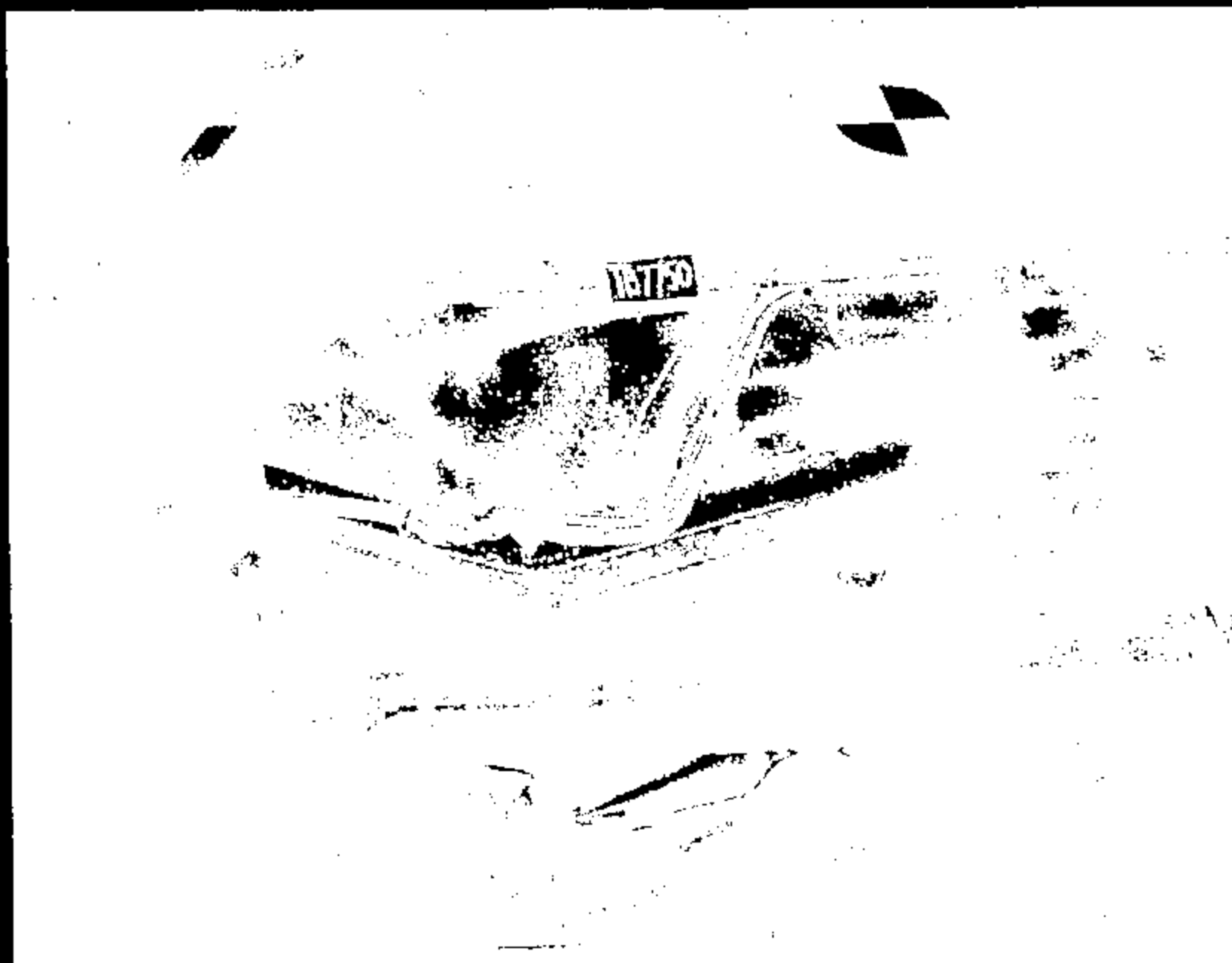


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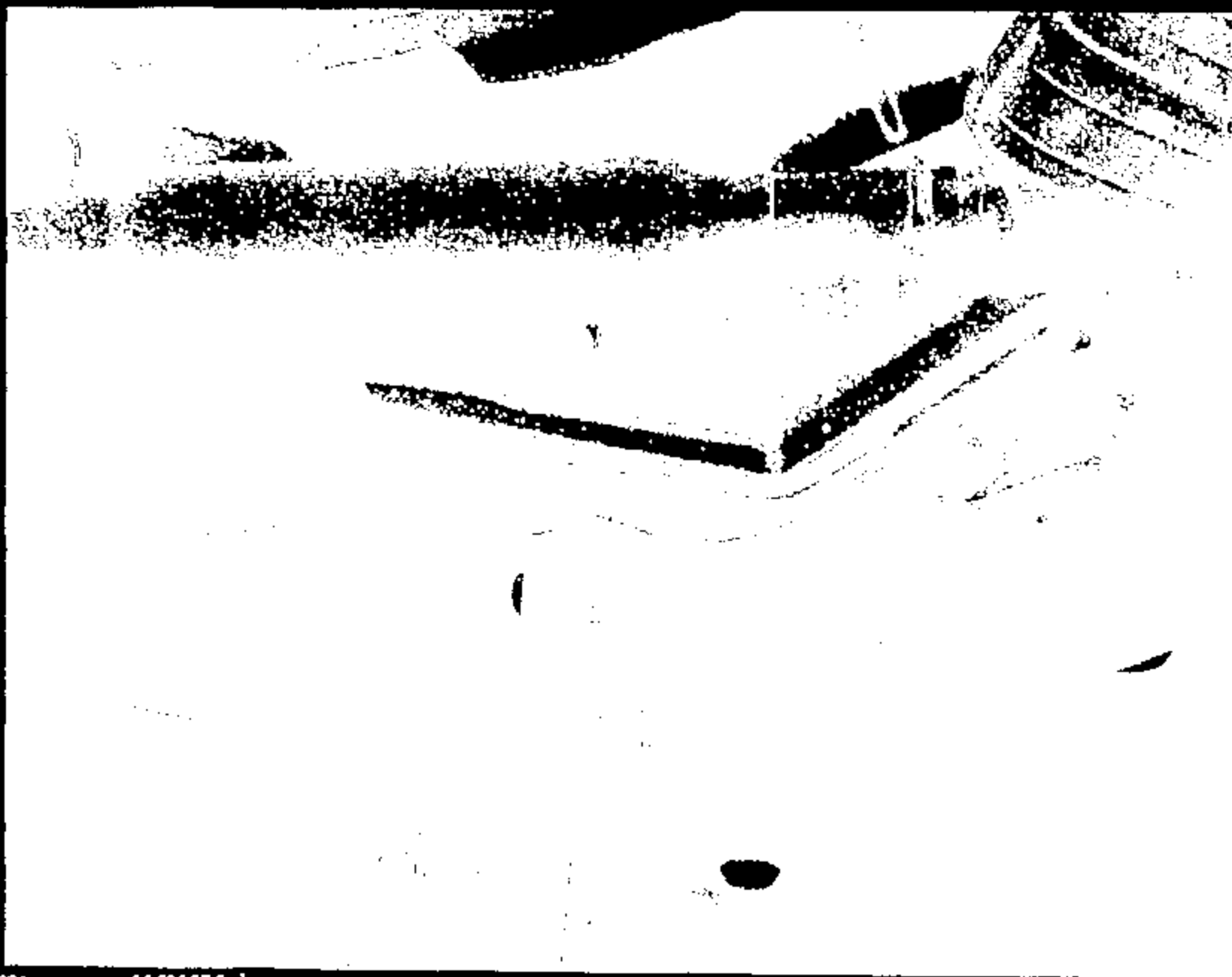


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11631074.jpg



Name: 11631075.jpg



Name:

11631076.jpg

CRTS 0011631



Name :

11631077.jpg



Name:

11631078.jpg

CRTS 0011631



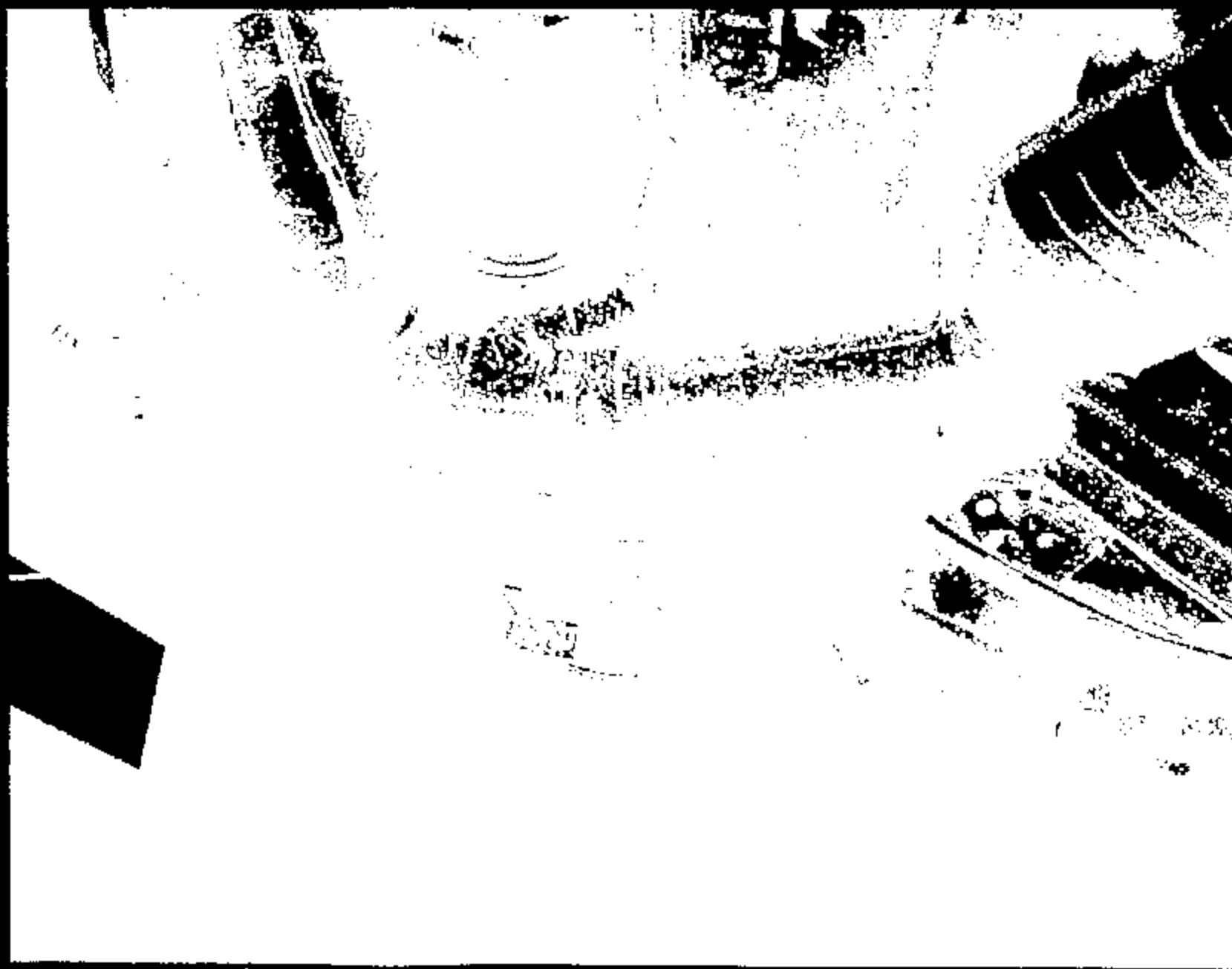
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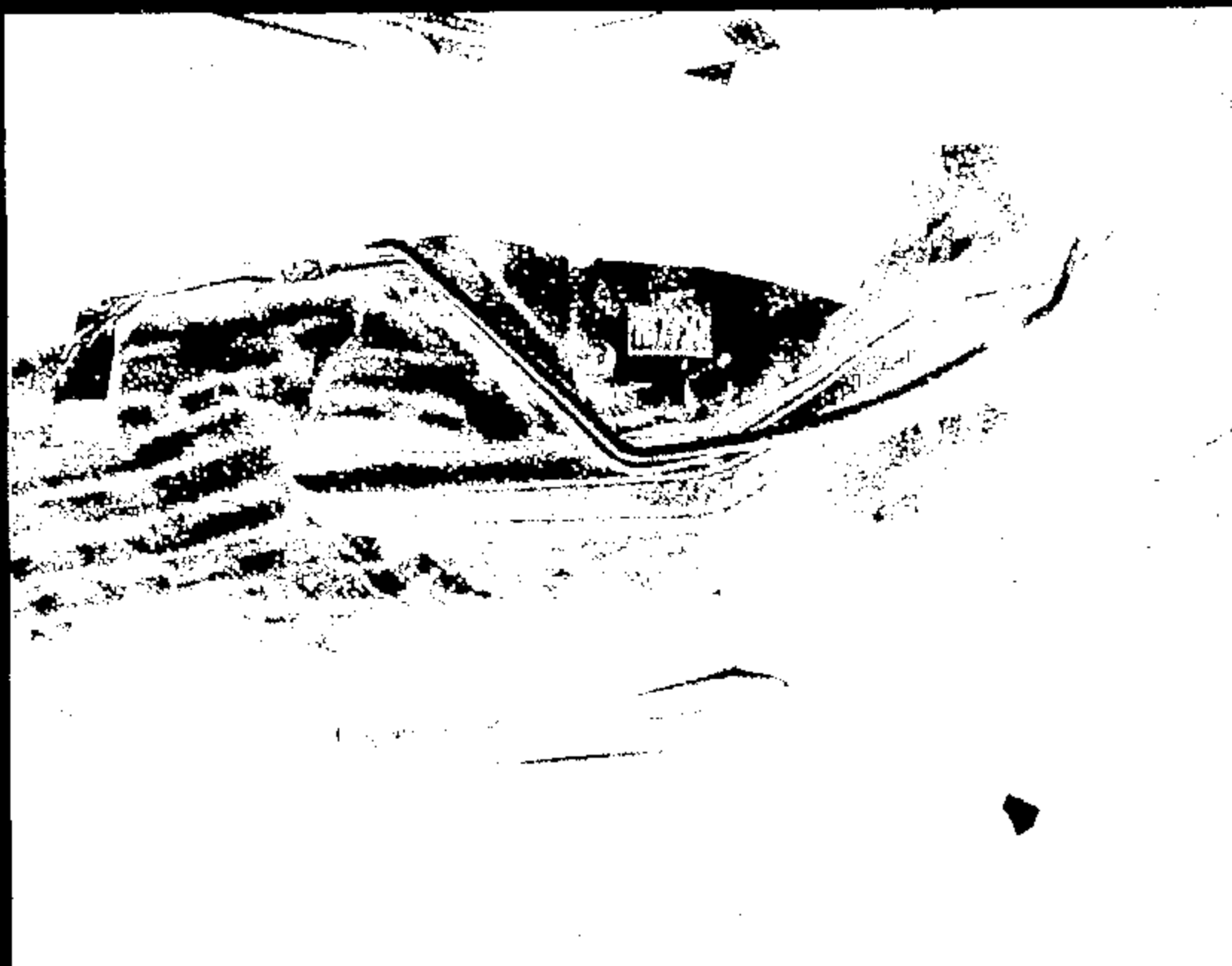




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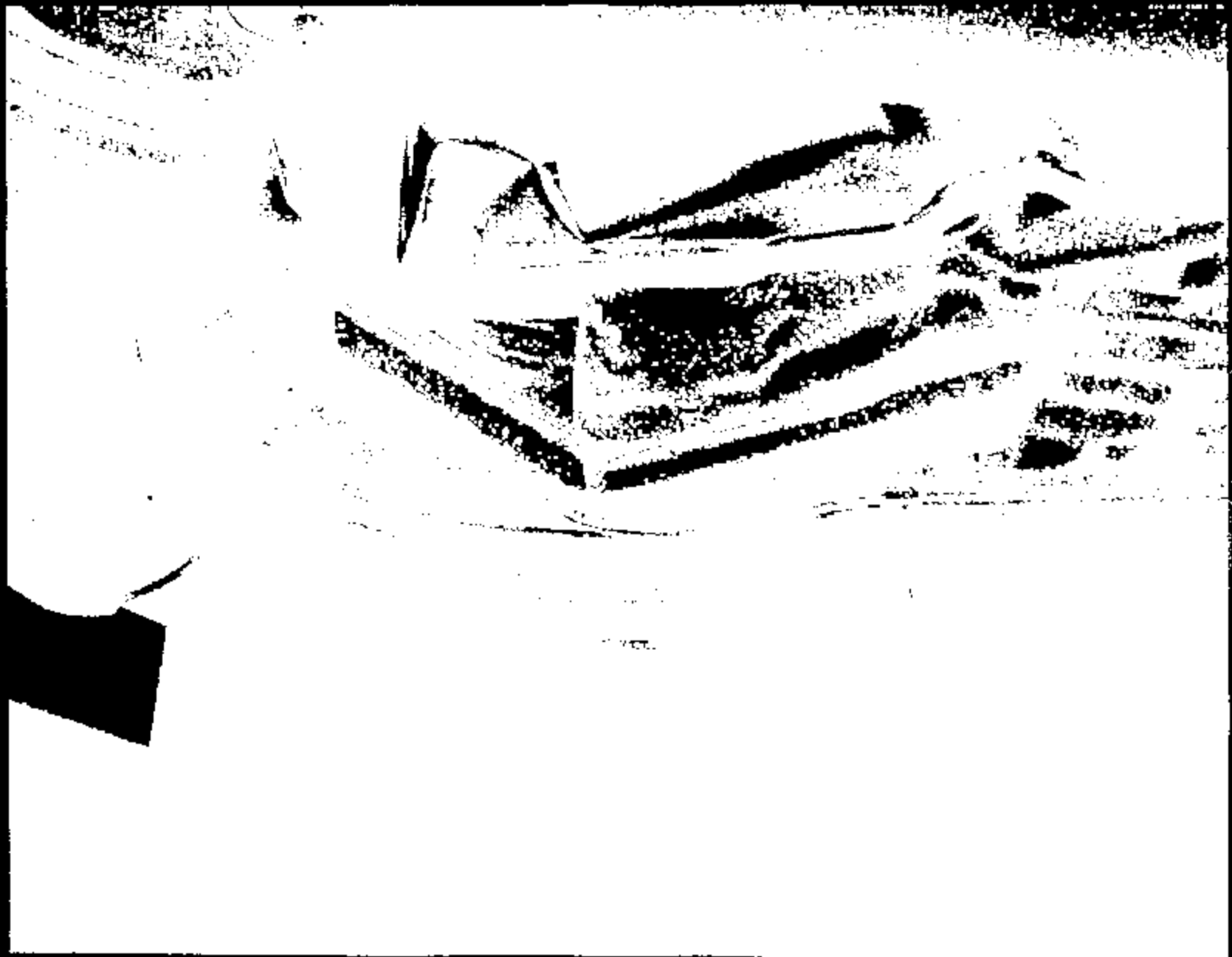
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Name :

11631082.jpg

CRTS 0011631



Home: 11631089.jpg

CRTS 0011631

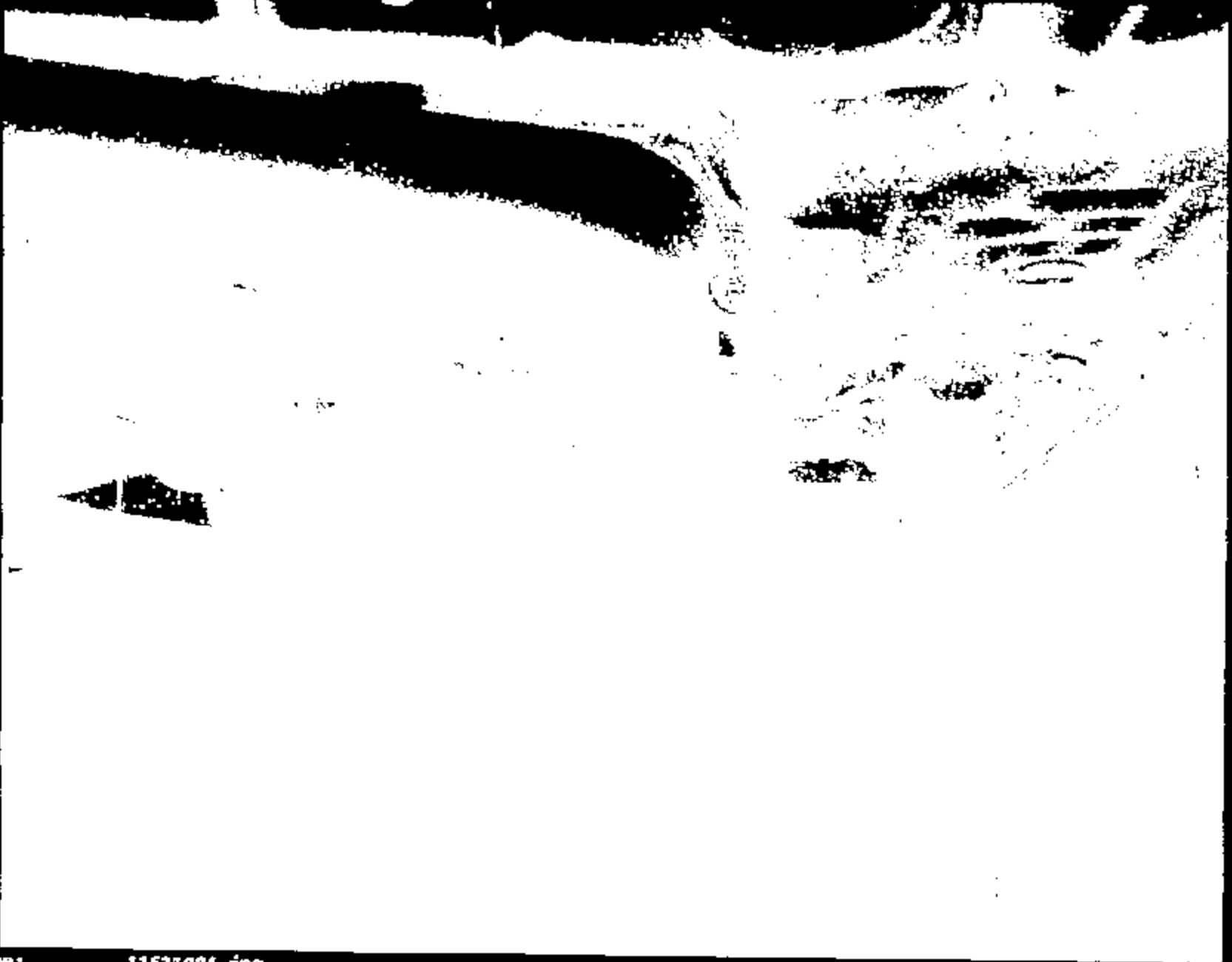
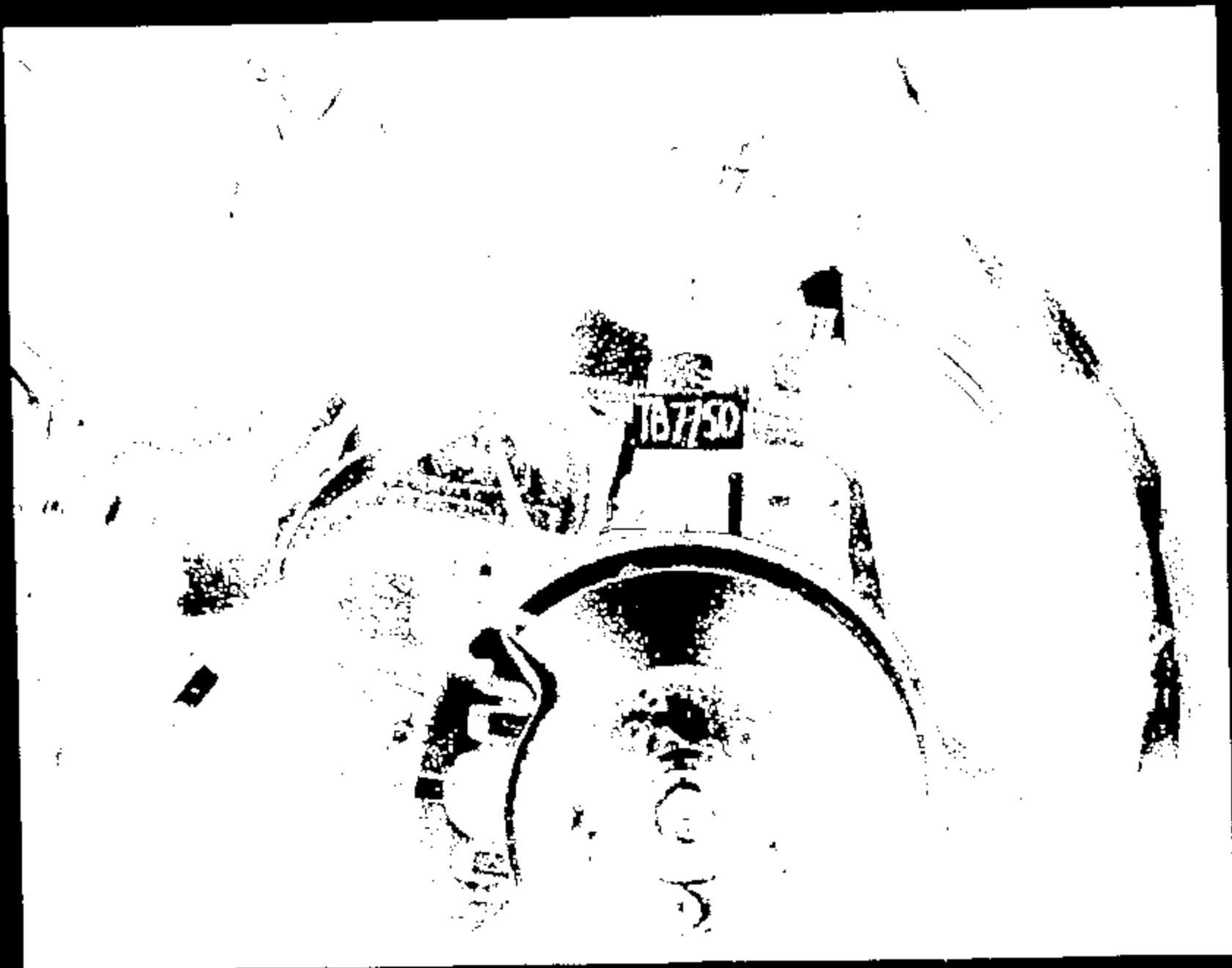


Image:

11631084.jpg

CRTS 0011631



Name :

11631085.jpg



Name : 11631086.jpg

CRTS 0011631

**TEST AUTHORIZATION**

TEST AUTHORIZATION NUMBER: **TB7750**

TO: Safety Lab Department  CC: K. Arthur	REQUEST DATE: <b>8/23/99</b>	REQUESTED COMPLETION DATE: <b>9/7/99</b>
	REQUEST NUMBER: <b>n/a</b>	PROBLEM NUMBER: <b>n/a</b>
	REQUESTING ACTIVITY: <b>Vehicle Crash Safety</b>	

TITLE OF TEST: <b>2001 D188 35 MPH 90 degree</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>DD140000 - 368N004 1FAFP80279G160008</b>	VEHICLE MODEL & YEAR: <b>2001 D188</b>
ENGINE NO. DIEPL. CARE: <b>3.0L/2V V6 FLEX FUEL</b>	TRANS / DRIVETRAIN: <b>AX4N</b>	AXLE RATIO: <b>n/a</b>	PROD. OR ENCL. LETTER: <b>n/a</b>
TYPE OF FUEL: <b>Stockard</b>	CONVERTER: <b>n/a</b>	IGNITION TIMING: <b>n/a</b>	TEST CONDUCTED TO CERTIFY CONTROL ITEM COMPLIANCE WITH SOV. REGULATIONS: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
CRANKCASE OIL AND CAPACITY (L): <b>n/a</b>	TIRE SIZE AND FLY RATING: <b>P21580R18</b>	REPORT CATEGORIES: <input checked="" type="checkbox"/> ENGINEERING <input checked="" type="checkbox"/> DATA <input checked="" type="checkbox"/> RAWDATA	DISPOSITION OF PARTS: <b>n/a</b>
VEHICLE TEST WEIGHT: <b>FRONT 3865 REAR 4054 TOTAL 7919</b>	TIRE PRESSURE (psi): <b>FRONT 30 REAR 30</b>	MAIL REPORT TO: BLDG: MAIL DROP: ADDRESS:	PROCUREMENT REQ ? <input type="checkbox"/> YES <input type="checkbox"/> NO IF YES, GIVE CODE

1. OBJECT OF TEST	2. TEST PROCEDURE	3. ITEMS TO BE TESTED (NAME, NUMBER, QUANTITY)	<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>
1) Conduct	35 MPH (mode) 90 degree	2001 (year) D188 (vehicle) # CP (amt)	
2) Velocity At Impact:	85 MPH	3) Vehicle Year: 2001	
Remote Fire Time:	100 1st. 12ms	Vehicle Line: D188	
Positioning procedure:	ST-25 2nd. 17ms PYRO .10 ms, 10-00-99	Vehicle Level: CP	
Test Requester:	(name) L. Miskor	(phone) 24-64280	(page number) LMS
Build Coordinator:	B. Pagano	32-30645	BPAG
Additional Contacts:			Estimated test cost = \$30,000.00
Test Dev. Engineer	<i>L. Miskor</i>		

REQUESTING SECT. NO: <b>TB1</b>	WORK ORDER/ WORK TASK: <b>F16</b>	ISSUED/ REQUESTED BY: <b>L. Miskor</b>	PHONE: <b>24-64280</b>	APPROVAL: <b>K. Arthur</b>	TEST TYPE: <b>n/a</b>	F88K: <b>n/a</b>	SIGN OFF DATE: <b>n/a</b>
------------------------------------	--------------------------------------	---	---------------------------	-------------------------------	--------------------------	---------------------	------------------------------

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

1 - Rational for not replacing this test by GAE analysis: <input type="checkbox"/> No GAE Methodology or process available <input type="checkbox"/> No GAE Correlation <input type="checkbox"/> Insufficient confidence in GAE. <input type="checkbox"/> To obtain basic data for GAE <input type="checkbox"/> Replacement or improvement of existing Test. <input type="checkbox"/> Testing is Outdoor. <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 DVP/WOR requirements. <input type="checkbox"/> System Component will not meet Test specification. <input type="checkbox"/> Unknown. <input type="checkbox"/> Above is Based on GAE? <input type="checkbox"/> Other: _____
--	---

*0-K 9-29-99*

*BSP 092959*



# General Request Information

TAR: TB7780

## Test Mode

35 MPH  
90 degree

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

### REGULATORY:

- FMVSS 204 - Steering Wheel Displacement
- D** FMVSS 206 - 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 (Pre Test) *done 10-18-99 fm.*
- FMVSS 303 - NGV Fuel System Integrity
- ECE 12 (74/297/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 34 Step II Frontal Offset - Occupant Performance
- ECE 39 Step II 300mm Barrier Side Impact - Occupant Performance
- 96/78/EC - Frontal Offset
- 96/27/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:	D188
Vehicle Name:	TAURUS
Body / Cab Style:	SEDAN
Build Number:	DD140000
Tag Number:	306W984
VIN Number:	1FAPP8227YG100025
Fuel System Rated Capacity(Gal):	18
Prototype Level:	OP
Drive Side:	LH

# Special Prep/Build Instructions Primary Vehicle

TAB: IB7750

## 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

1006 99  
738  
fm  
10-06-99  
fm

- 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: 1st. 12MS. 2ndst 17MS PYRO 10MS. fm 10-06-99
- (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: TB7760

	Occupant 1	Occupant 2
Type	50- th HMI	Water Bottle
Instrumentation Level*		
In-Vehicle Location	LF	RF
Verify: Seat Position Long	MID	
Seat Position Vert	FULL DOWN	FULL DOWN
Seat Back Angle	22.7 degree	
Positioning Procedure	ST-25	ST-25
Use Foot Rest	YES	N/A
Take Seat Track Video	NO	
Special Positioning Instructions	* ST-25 Procedure applies only for the Dummy.	
Dummy Adjustment (arm angle)		<del>NO</del> BTP 0422999
Occupant Belted	YES	YES

\*See instrumentation request for detailed instrumentation information.

# Test Conditions - Final Prep

TA#: TB760

## 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. Mielor</u>	<u>B. Peano</u>
Phone: _____	<u>24-84280</u>	<u>38-80845</u>
Pager: _____	<u>LMS</u>	<u>BPAG</u>

## Test Weight

_____ Minimum Option Weight	GVWR: _____
_____ 33% Option Weight	Wheelbase: _____
<u>X</u> _____ Maximum Option Weight	

## Tire Pressure

Front: 30. psi                      Rear: 30. psi

## Fuel System

Fuel Tank & Systems to Contain: Stocked

<u>17.1 gallons</u>	=	<u>95 %</u>	x	<u>18.0 gallons</u>
<u>FIR Level</u>	=	<u>%</u>	x	<u>Capacity</u>

## 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>2578</u>	<u>2884 lbs</u>	Front: <u>13 lbs</u>	<u>0 lbs</u>	Front: <u>2280</u>	<u>+2</u>
Rear: <u>1587</u>	<u>1884 lbs</u>	Rear: <u>13 lbs</u>	<u>0 lbs</u>	Rear: <u>1599</u>	<u>+12</u>
Total: <u>4165</u>	<u>4768 lbs</u>	Total: <u>26 lbs</u>	<u>0 lbs</u>	Total: <u>3879</u>	<u>+14</u>

*10-15 gm*  
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:

_____ Air Cleaner	_____ Engine	_____ Doors
_____ Battery	_____ Fan Box/Shroud	_____ Foot Wells - Front
<u>X</u> _____ Bottle - Coolant	<u>X</u> _____ Headlamp Optrgs	_____ 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

From: Hooker Level to Ground  
To: Hooker Level to Ground

## Additional Remarks

\_\_\_\_\_ DO NOT fill tank with stocked until weigh-up

# Dimensional Analysis Request Primary Vehicle

TA#        TB7780

**Frontal Impacts**

74		
81		
106	Control Points (CAR)	Exterior
107		
122	Collaps Distance Point	Exterior
128	Frame/ B. Col/ Line for Seats (CAR)	Exterior
130	Frame Standard Bottom (CAR)	Exterior
132	Unified Standard Bottom (GAR)	Exterior
184	Drive Shaft Collaps	Exterior
X 188	Standard Body Relative	Exterior/Interior
238	Windshield (GAR+RBT1)	Exterior
140	A & B Pillar	Exterior
142	Shot-Gun	Exterior
148	Header	Interior
160	Steering Wheel Deformation/ Posture	Interior
153	Steering Column Mounts	Interior
164	Steering Column Targets	Interior
168		
188	Seat Track to Floor Mounts	Exterior
169	Seat to Track Mounts	Exterior
180	Coil Protection	Exterior
182	Floorpan Points	Exterior
184	Knee Bolster	Interior
186	Seat Belt Mounts	Interior
188	Ceased Seat	Interior
170	Tunnel Hinge Piler	Exterior
172	Brake Bracket (ONLY if you can reach it)	Interior
X 174	Instrument Panel Mounts	Exterior
178	T-N-T Targets	Exterior/Interior
177	Top Non-Slided & Body Slided	Exterior/Interior
208	Rear Door Accessibility Reduction	
300		
302		
348		
388		
384		
378		
X 488	Pict B Sectional Profiles	
508	Decoupling Column Collapse	Exterior
577	P.R. Steering Column Collapse	Exterior
508		
509	TB Steering Column Collapse & Intermediate Seat	Interior
X 640	Dash Profile @ Driver Centerline	Interior
X 641	Dash Profile @ Vehicle Centerline	Interior
642	Dash Profile @ Passenger Centerline	Interior
X 647	Footrest Reduction	Interior
X 690	1) Driver/Passenger - A & B-Pillar 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)	

NO

fm  
10-07-99

# Film Analysis & Photographic Services Request

## Front Impact Film Analysis

TA#: TB7780

- Left Front Dummy Head WRT Vehicle  
 Shoulder WRT Vehicle  
 Rooker (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  
 Pre and Post Close up of Fire Fuel Sensor  
 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

- ①  Onboard-Left Occupant Over Shoulder.  
②  Onboard- Driver "D" ring  
③  On board - Driver retractor (Lower).  
 Right Occupant Over Shoulder, in lights  
 Overall Left  
 Barrier to B-Pillar Left  
 Left Dummy Kinematics & Velocity Left  
 Overall Right  
 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  
④  *OPPOSITE (RH) WINDOW - ⑤ 10 00/99*  
Overhead Coverage  
 Overhead - Overall  
 Overhead - A-Pillar Forward

Steering Column Displacement  
 Scale  
 Resection

**Pit Coverage**

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

**All Other High Speed Photography**

# Instrumentation and Data Processing Request

TAB: TB7750

## 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>
Engine/Trans Lower	<u>  </u>	<u>  </u>	<u>  </u>
<input checked="" type="checkbox"/> Left Rocker at A-Pillar	<u>X</u>	<u>X</u>	<u>X</u>
<input checked="" type="checkbox"/> Right Rocker at A-Pillar	<u>X</u>	<u>X</u>	<u>X</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>
Left Rocker at C-Pillar	<u>  </u>	<u>  </u>	<u>  </u>
Right Rocker at C-Pillar	<u>  </u>	<u>  </u>	<u>  </u>
Left Frame at A-Pillar	<u>  </u>	<u>  </u>	<u>  </u>
Right Frame at A-Pillar	<u>  </u>	<u>  </u>	<u>  </u>
Left Frame at B-Pillar	<u>  </u>	<u>  </u>	<u>  </u>
Right Frame at B-Pillar	<u>  </u>	<u>  </u>	<u>  </u>
Left A-Pillar inside	<u>  </u>	<u>  </u>	<u>  </u>
Right A-Pillar inside	<u>  </u>	<u>  </u>	<u>  </u>
Centerline Tunnel @ Dash	<u>  </u>	<u>  </u>	<u>  </u>
Centerline Tunnel Middle	<u>  </u>	<u>  </u>	<u>  </u>
Centerline Tunnel @ Seat Long Centerline	<u>  </u>	<u>  </u>	<u>  </u>
Left Floor Pan Under Seat	<u>  </u>	<u>  </u>	<u>  </u>
Left Door inside Top	<u>  </u>	<u>  </u>	<u>  </u>
Left Shock Tower	<u>  </u>	<u>  </u>	<u>  </u>
Right Floor Pan Under Seat	<u>  </u>	<u>  </u>	<u>  </u>
Right Door inside Top	<u>  </u>	<u>  </u>	<u>  </u>
Right Shock Tower	<u>  </u>	<u>  </u>	<u>  </u>
Rad Support Top - Center	<u>  </u>	<u>  </u>	<u>  </u>
#1 Crossmember Bottom	<u>  </u>	<u>  </u>	<u>  </u>
#2 Crossmember Bottom	<u>  </u>	<u>  </u>	<u>  </u>
Left Front Rail Forward of Sledrunners	<u>  </u>	<u>  </u>	<u>  </u>
Left Front Rail Forward of Shock Tower	<u>  </u>	<u>  </u>	<u>  </u>
Right Front Rail Forward of Sledrunners	<u>  </u>	<u>  </u>	<u>  </u>
Right Front Rail Forward of Shock Tower	<u>  </u>	<u>  </u>	<u>  </u>
Directly Below D.A. Point # 89	<u>  </u>	<u>  </u>	<u>  </u>
Directly Below D.A. Point # 64	<u>  </u>	<u>  </u>	<u>  </u>
Next to Fuel Inertia Switch	<u>  </u>	<u>  </u>	<u>  </u>
Top of Battery	<u>  </u>	<u>  </u>	<u>  </u>
Near ACS Bypass Switch	<u>  </u>	<u>  </u>	<u>  </u>
<input checked="" type="checkbox"/> Trunk near Fuel Inertia Switch	<u>X</u>	<u>X</u>	<u>X</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#: TB7750

## 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

## 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

## 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

*Both STAGES  
100%  
100%  
100%  
100%*

## STEERING COLUMN:

Stroke Break Wire  
 Tilt Mechanism Break Wire  
 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

**Dummy Instrumentation - Internal**

50-th Hill

LF

**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"/> 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 checked="" 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

*10-06-99  
for*

*for  
10-06-99*

**POTENTIOMETERS:**

Chest Deflection  
 Left Knee Slider  Ball Bearing  
 Right Knee Slider  Ball Bearing

Disp  
 Disp  
 Disp

*for  
10-06-99*

*for  
10-06-99*

**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

TA# TE7750

**Dummy Instrumentation - Internal**

Water Bottle

RF

**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  
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\_\_\_\_ Mx \_\_\_\_ My \_\_\_\_ Mz  
\_\_\_\_ Fx \_\_\_\_ Fy \_\_\_\_ Fz  
\_\_\_\_ Mx \_\_\_\_ My \_\_\_\_ Mz  
\_\_\_\_ Fx \_\_\_\_ Fy \_\_\_\_ Fz  
\_\_\_\_ Mx \_\_\_\_ My \_\_\_\_ Mz

**POTENTIOMETERS:**

\_\_\_\_ Chest Deflection  
\_\_\_\_ Left Knee Slider  
\_\_\_\_ Right Knee Slider  
\_\_\_\_ Ball Bearing  
\_\_\_\_ Ball Bearing

\_\_\_\_ Std \_\_\_\_ Disp  
\_\_\_\_ Std \_\_\_\_ Disp  
\_\_\_\_ Std \_\_\_\_ Disp

**OTHER INTERNAL DUMMY INSTRUMENTATION:**

\_\_\_\_ L/R Femur Accels  
\_\_\_\_ L/R Ankle soft bumper to foot stem

\_\_\_\_ Long \_\_\_\_ Vert \_\_\_\_ Lat

**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

# Barrier Load Cell Request

TAB: TB7750

0000	0000	0000	0000		0000	0000	0000	0000	0000	0000	0000
0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
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0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000

## 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

## 30 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

## 30 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 0011631

# List of T<sub>1</sub> Contacts

TA#: TB7760

	Last name	Phone	Pager	Profs
Requestor	L. Misicki	24-84260	LMIS	LMISICKI
Approving supervisor	K. Arthur	88-05166	KART	KARTHURS
Build coordinator	B. Pagano	82-96046	BPAG	BPAGANO
Test engineer				
Sensor Engineer	F. Bologna	81-78268	1-888-210-7558	FBOLOGONA
Other				

	Last name	Phone	Pager	Profs
Seats	M. Jessup	84-61891	MJESSUP1	MJESSUP1
Instrument panel	M. Keranen	33-74146	NONE	MKERANEN
Restraints	N. Desai	89-05145	NDESAI	NDESAI
Air bag (driver)	R. Ruzhinkowski	82-18978	RRUTHINO	RRUTHINO
Air bag (passenger)	R. Ruzhinkowski	82-18978	RRUTHINO	RRUTHINO
Steering column				

CRTS 0011631



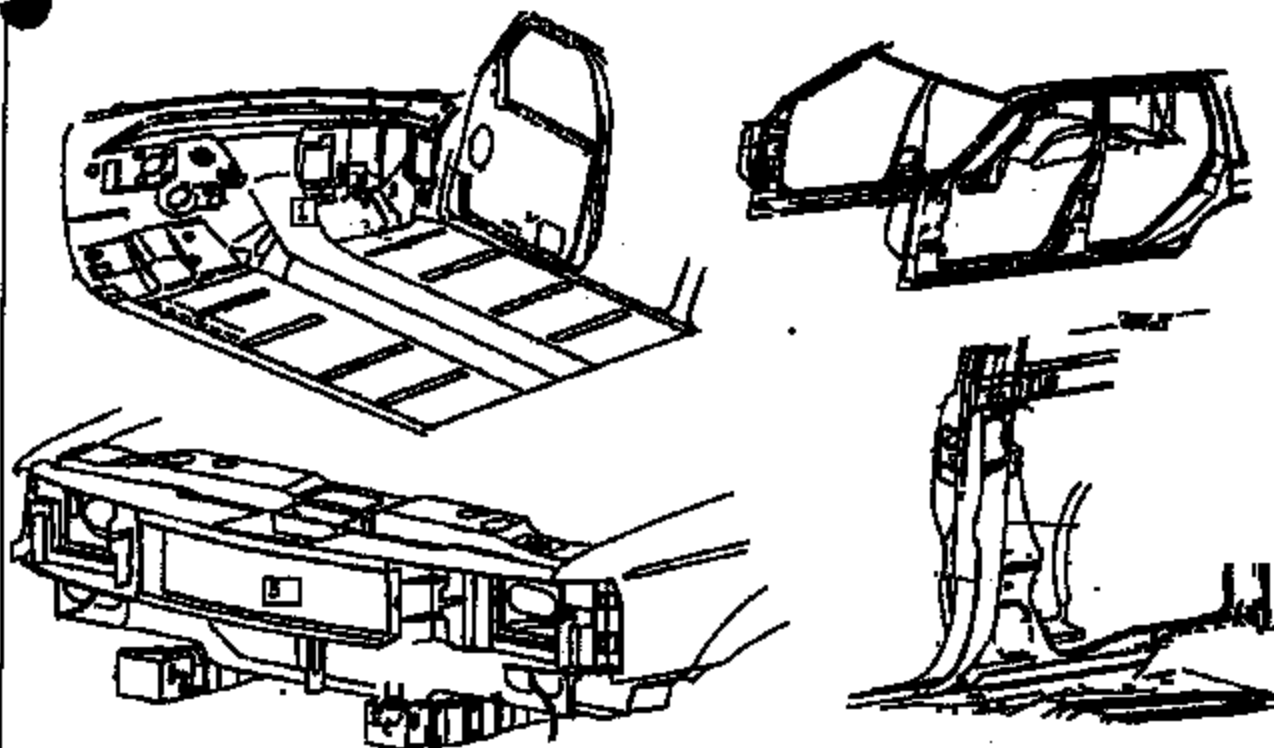




# SENSOR MAP

Vehicle ID: 1FAFP5227YG100026  
 TAG 306W884  
 Build level: 1PP

Program: D186  
 Test Mode: 35/90 BARRIER  
 TA No.: TB7760



**Sensor Channels only**

Location Name	Supplier	Output	Nominal (±)	Max/Min	Serial #
1 G/F_FLOOR_PAN_RCK (and SENSOR Location)	SENS-1	TRAX_OUT	0	10	[REDACTED]
	SENS-2	TRAX_OUT	0	10	
	SENS-3	TRAX_OUT	0	10	
	SENS-4	TRAX_OUT	0	10	
	SENS-5	D_TRAX_OUT	0	10	
	SENS-6	F_TRAX_OUT	0	10	
	SENS-7	D_TRAX_OUT	0	10	
	SENS-8	F_TRAX_OUT	0	10	
	SENS-9	TRAX	5	10	
G/F_FLOOR_PAN_L_RCK	ACC	TRAX	On negon		NA
2 PCB	ACC	TRAX	Next, to <sup>306W</sup> Vehicle		NA

*10-06-99*

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

**REVISION LOG**

DESCRIPTION	DATE	NAME AFFECT	AUTH

L. M. 24-6480  
 PCB: SMAP\_7760.xls, Tab: Sheet1  
 AVT VOB

*10-06-99*

Created: 2/1/99  
 Revised: 2/1/99  
 Printed: 08/09, 7:23 PM



DUMMY MEASUREMENT REPORT  
CRASH BARRIER

N NUMBER 11631  
TEST ORDER NUMBER TB7750

DUMMY POSITION LEFT  
DUMMY ABBREV 50H3

FRONT

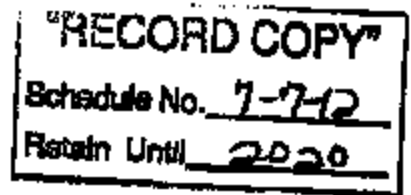
ABSOLUTE MEASUREMENTS (INCH)	MEASUREMENT
LEG (HYB II) / KNEE (HYB III) TO INST PANEL, LEFT	4.90
LEG (HYB II) / KNEE (HYB III) TO INST PANEL, RIGHT	4.50
ROCKER TARGETS TO GROUND, FRONT	7.00
ROCKER TARGETS TO GROUND, REAR	7.40
NOSE TO STEERING WHEEL	15.80
NOSE TO INSTRUMENT PANEL	
INSTRUMENT PANEL TO TORSO	
STEERING WHEEL TO TORSO	8.20
STEERING WHEEL TOP LEGS	1.30
KNEE SPREAD OS-OS (HYB II) / CL-CL (HYB III)	9.30
SEAT BACK ANGLE	27.50
PELVIC ANGLE	23.70
HEAD ANGLE	0.20
ROCKER ANGLE	0.10
NECK BRACKET ANGLE	7.00
BUMPER TARGET TO GROUND	

RELATIVE MEASUREMENTS (INCH)	WRT FRT RKR TGT
HEAD LAT	14.70
AD VERT	37.10
AD LONG	14.60

SHOULDER LAT  
SHOULDER VERT  
SHOULDER LONG

H-POINT LAT	11.40
H-POINT VERT	11.60
H-POINT LONG	8.90

O/S KNEE BOLT LAT	11.10
O/S KNEE BOLT VERT	16.60
O/S KNEE BOLT LONG	-5.80



Inter Office

Research and Vehicle Technology

July 13, 2000

To: Manager

Subject: Crash Test No. 11638, T-87749 Test Report Corrections, R/1

The final report of the subject crash test was corrected as follows:

Sheet 1 Date Reported - 10/17/99 was changed to "11/17/99".

*M. A. DeShong*

M. A. DeShong  
Operations Engineering Section  
Safety Laboratories Department

*E. Lash*

Concur: E. Lash  
Section Supervisor  
Operations Engineering Section

corr.11638

CRTS 0011638



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**FINAL TEST REPORT**

**Global Test Operations  
 Research and Vehicle Technology**

**TO:** L. Miskir

Test Order No. T-B7749  
 Work Task W. O. No. F16  
 Test Date 10/18/99  
 Date Reported 11/17/99  
 Sheet 1 of 31

**SUBJECT:** Crash Test 11638 (30° Right Front Fixed Barrier Impact at 30.9 ± 0.4 mph, 49.7 ± 0.6 km/h) - 2001 Tacoma (D186) 4-Door Wagon - 2001 Certification Program

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

**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.

*S. Lash*

Concur: S. Lash  
 Section Supervisor  
 Operations Engineering Section

*R. Oda*

R. Oda  
 Engineering Technologist

**VEHICLE DATA:**

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

**ID Numbers** 1FAFP99S5YG100028, 306-W-998, DD140003

**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  
Lumber Support/Position: LF: Power/Deflated

**Restraint System** LF: 3-Point Continuous Loop Active Belt with Pyrotechnic Retractor and Buckle 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: 2367 lb (1074 kg)  
Rear: 1902 lb (863 kg)  
Total: 4269 lb (1936 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: Plastic 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, T637-ST-14 dated March 3, 1998.
- EFI Fuel Systems Stoddard Solvent FMI, ST-11 REF. 4.
- Fuel System Static Rollover, T637-ST-34 dated May 29, 1998.

**2. Significant Deviations from T637-ST-14 and ST-34**

Water containers were used to simulate dummies for ballast.

- 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 movie, 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, GM. 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 11638001 through 11638071.

ATTACHMENT 1

Fuel System Integrity (C/EMVSS 301)

- There was fuel system spillage from the pressure relief valve during impact, estimated to be 0.033 ounces.
- There was no fuel system spillage during the post-crash static rollover test



**ATTACHMENT 2**

**1.0 Vehicle Crush, Film Analysis and/or Instrumentation Data**

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

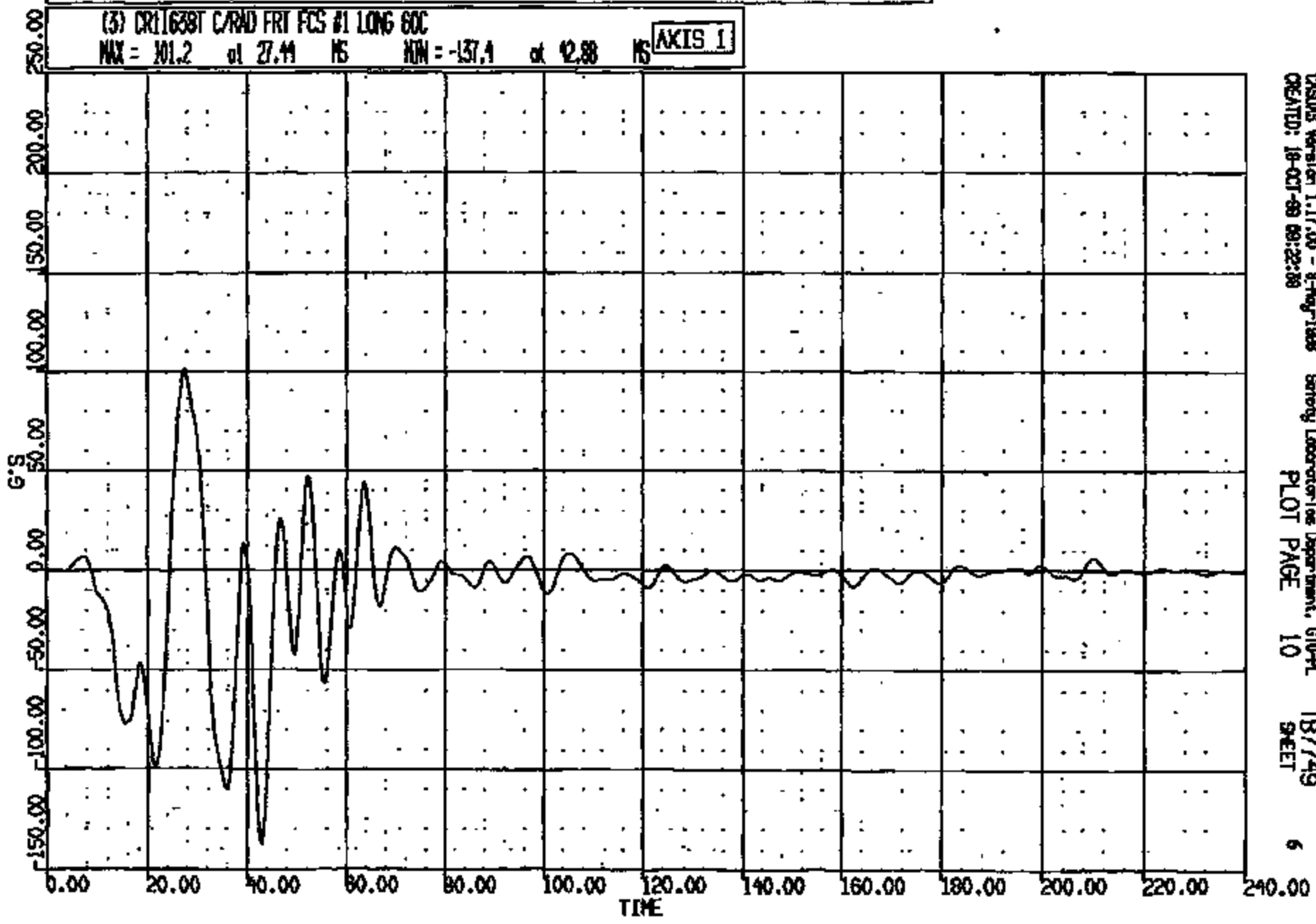
Time histories of the vehicle accelerations and other instrumentation are included in this report.

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: 11638 TO: TB7749 DATE: 991018 09:07:22  
2001 D-198

(3) CR11638T C/RAD FRT FCS #1 LONG 60C  
MAX = 101.2 at 27.44 MS MIN = -137.1 at 42.88 MS **AXIS 1**

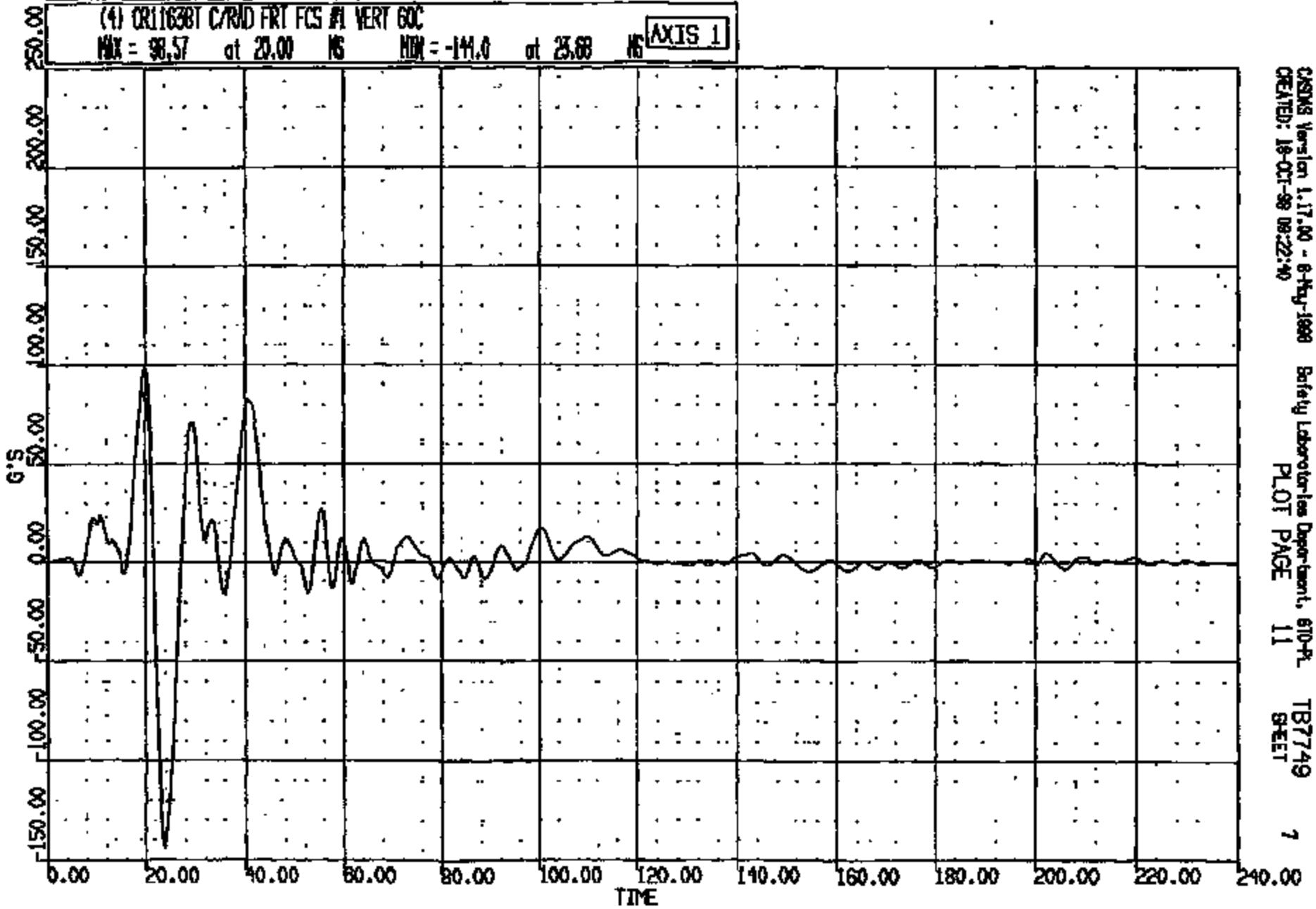


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CREATED: 18-OCT-99 09:22:38 PLOT PAGE 10 SHEET 6

CRTS 0011638

CR R: 11638 TD: TB7749 DATE: 091018 09:07:22  
2001 D-188

(4) CR11638T C/RND FRT FCS #1 VERT GOC  
MAX = 98.57 at 20.00 MS MIN = -144.0 at 23.68 MS **AXIS 1**



CASIMS Version 1.17.00 - 8-May-1999 Safety Laboratories Department, 610-PL  
CREATED: 18-Oct-99 09:22:40 PLOT PAGE 11 TB7749 SHEET 7

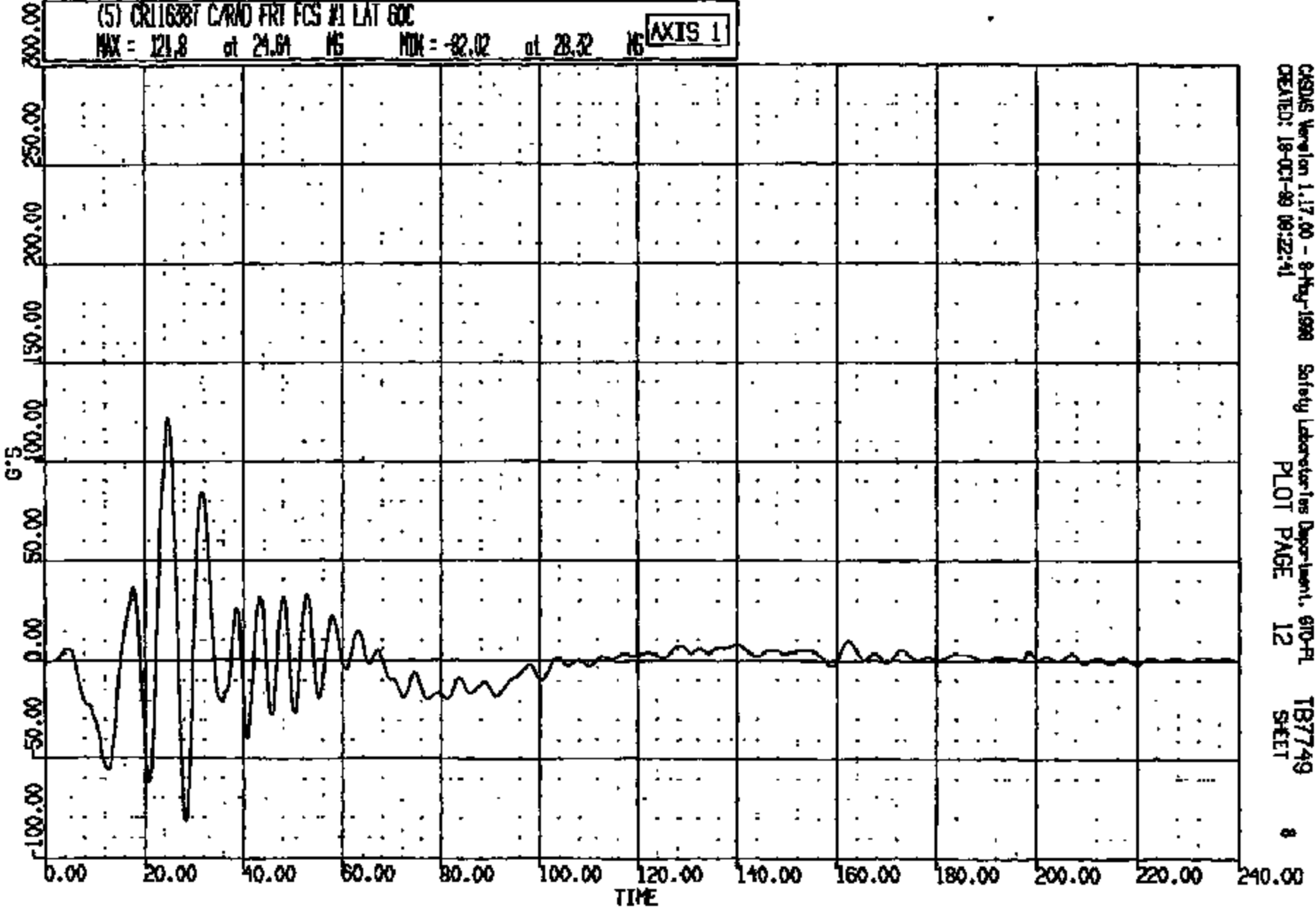
CRTS 0011638

CR R: 11838 TO: TB7749 DATE: 991018 09:07:22  
2001 D-198

(5) CR116387 C/RND FRT FCS #1 LAT 60C

MAX = 121.8 at 21.61 MS MIN = -92.02 at 28.32 MS

AXIS 1



CASUS Version 1.17.00 - 8-May-1998 Safety Laboratories Department, 610-PL TB7749  
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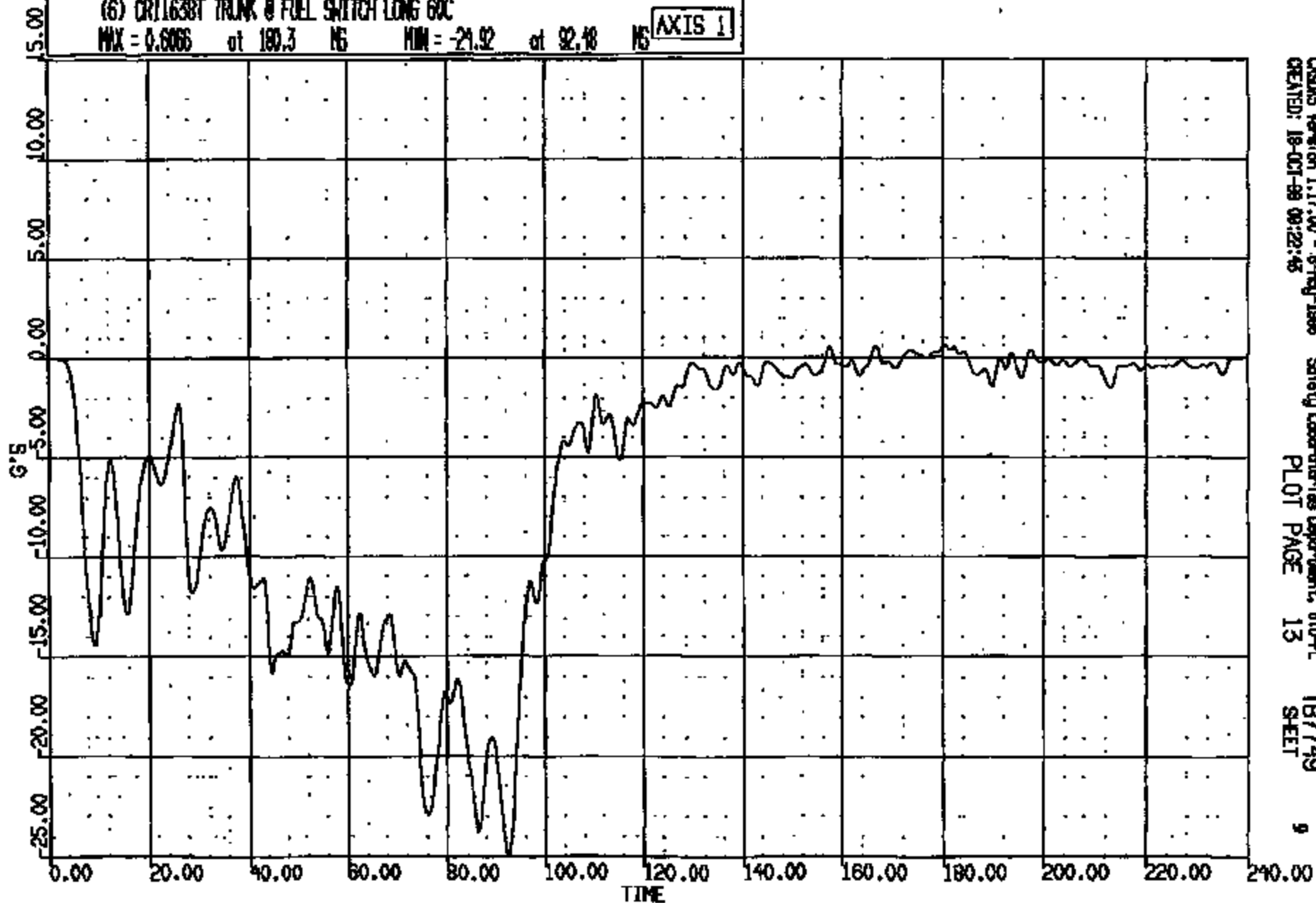
CRIS 0011638

CR R: 11638 TO: TB7749 DATE: 991018 09:07:22  
R001 D-188

(6) CR11638T TRUNK @ FUEL SWITCH LONG 60C

MAX = 0.6066 at 180.3 MS MIN = -29.92 at 92.48 MS

AXIS 1



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CREATED: 18-OCT-99 09:22:46

Safety Laboratories Department, 810-PL  
PLOT PAGE 13

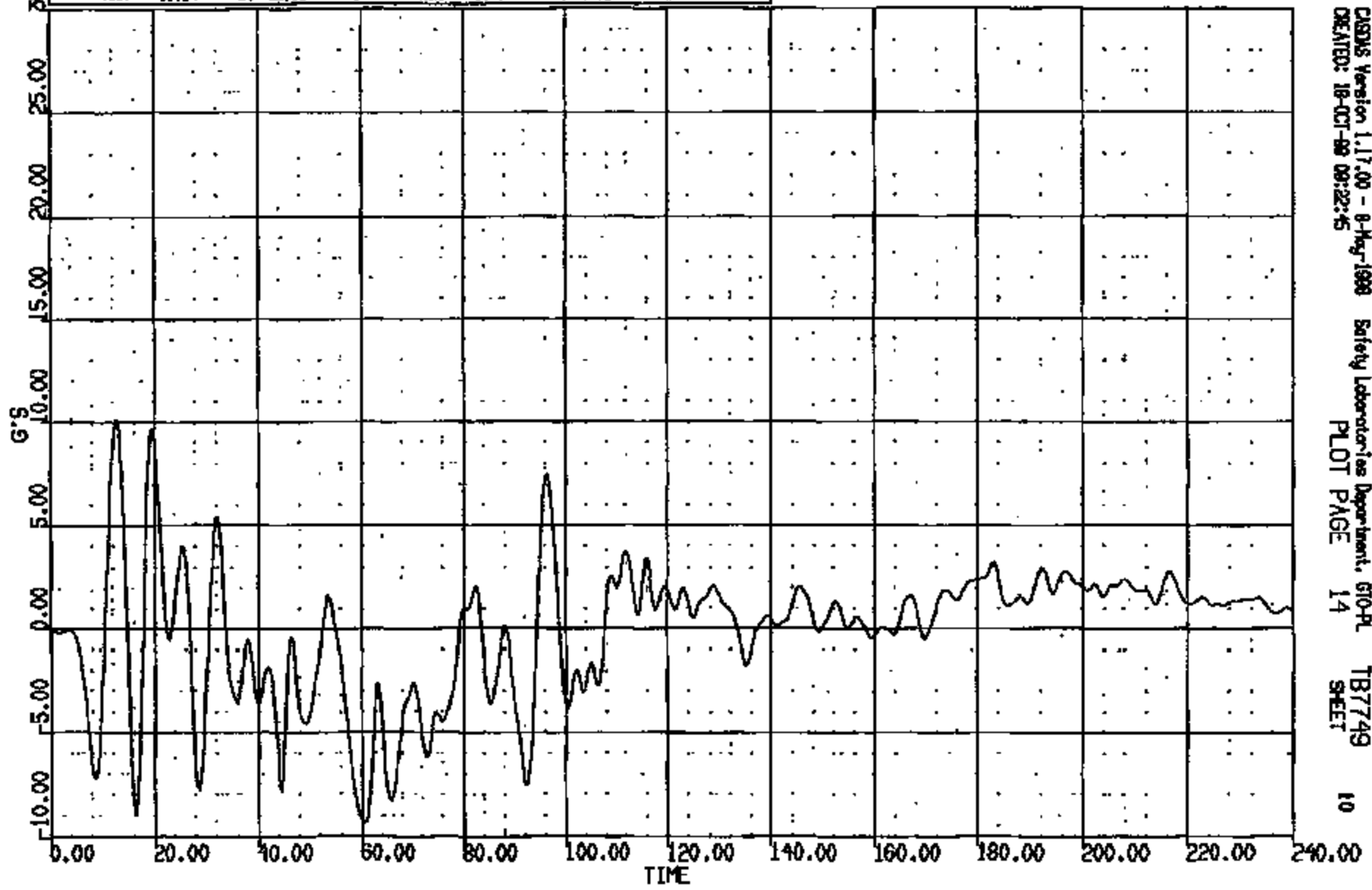
TB7749  
SECT

9

CRIS 0011638

CR R: 11658 TD: TB7748 DATE: 991018 09:07:22  
2001 D-188

(7) CRL1638T TRUNK @ FUEL SWITCH VERT 60C  
MAX = 10.14 at 12.88 MS MIN = -9.404 at 60.21 MS **AXIS 1**



CASDS Version 1.17.00 - 8-May-1998 Safety Laboratories Department, 610-PL TB7749  
CREATED: 18-OCT-99 09:22:55 PLOT PAGE 14 SHEET 10

CRTS 0011638

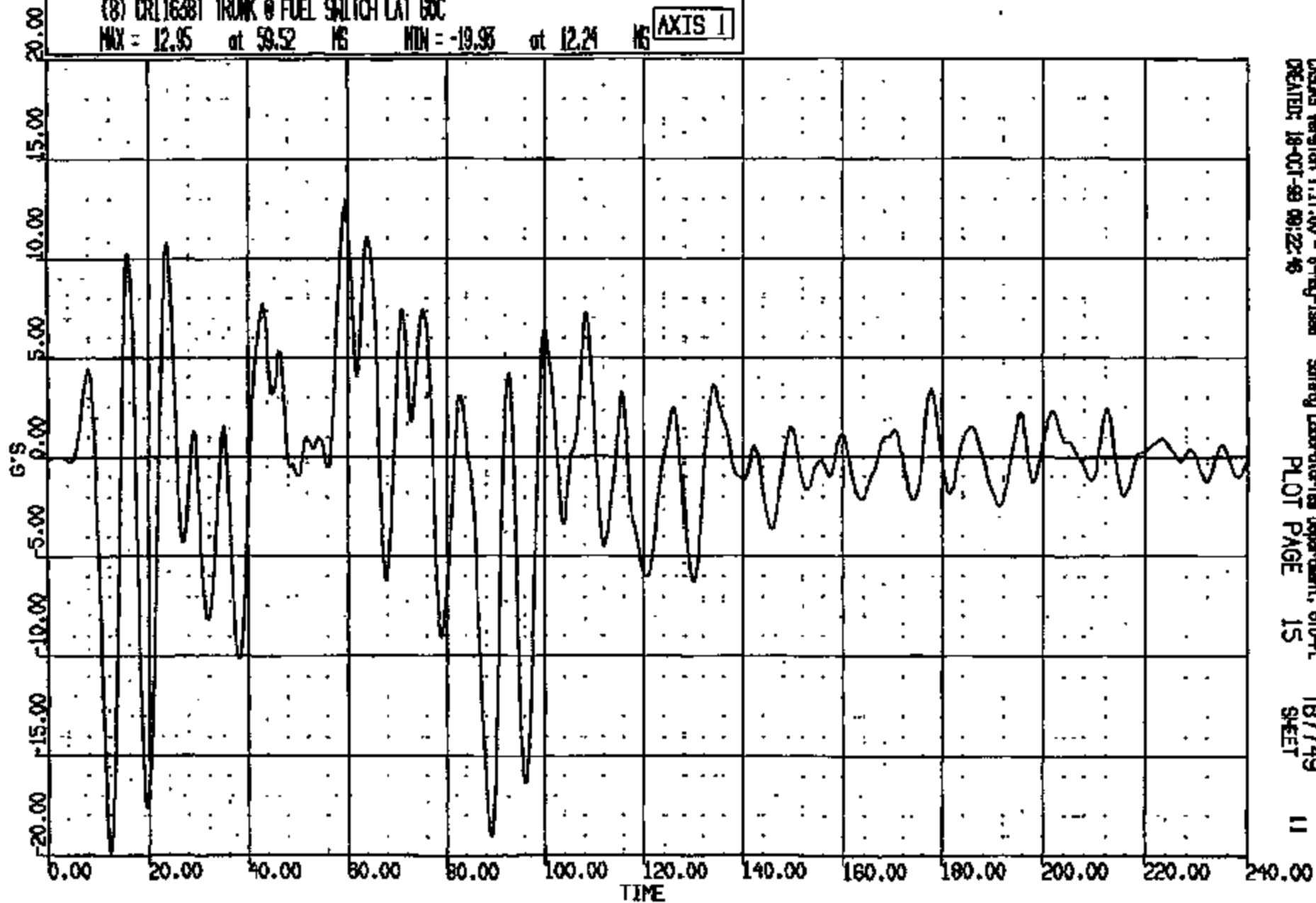
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2001 0-168

(8) CR11638T TRUNK @ FUEL SWITCH LAT 60C

MAX = 12.95 at 59.52 MS MIN = -19.98 at 12.24 MS

AXIS 1



CRS Version 1.17.00 - 8-May-1999  
CREATED: 18-OCT-99 09:22:46

Safety Laboratories Department, 610-PL  
PLOT PAGE 15

TB7749  
SHEET

11

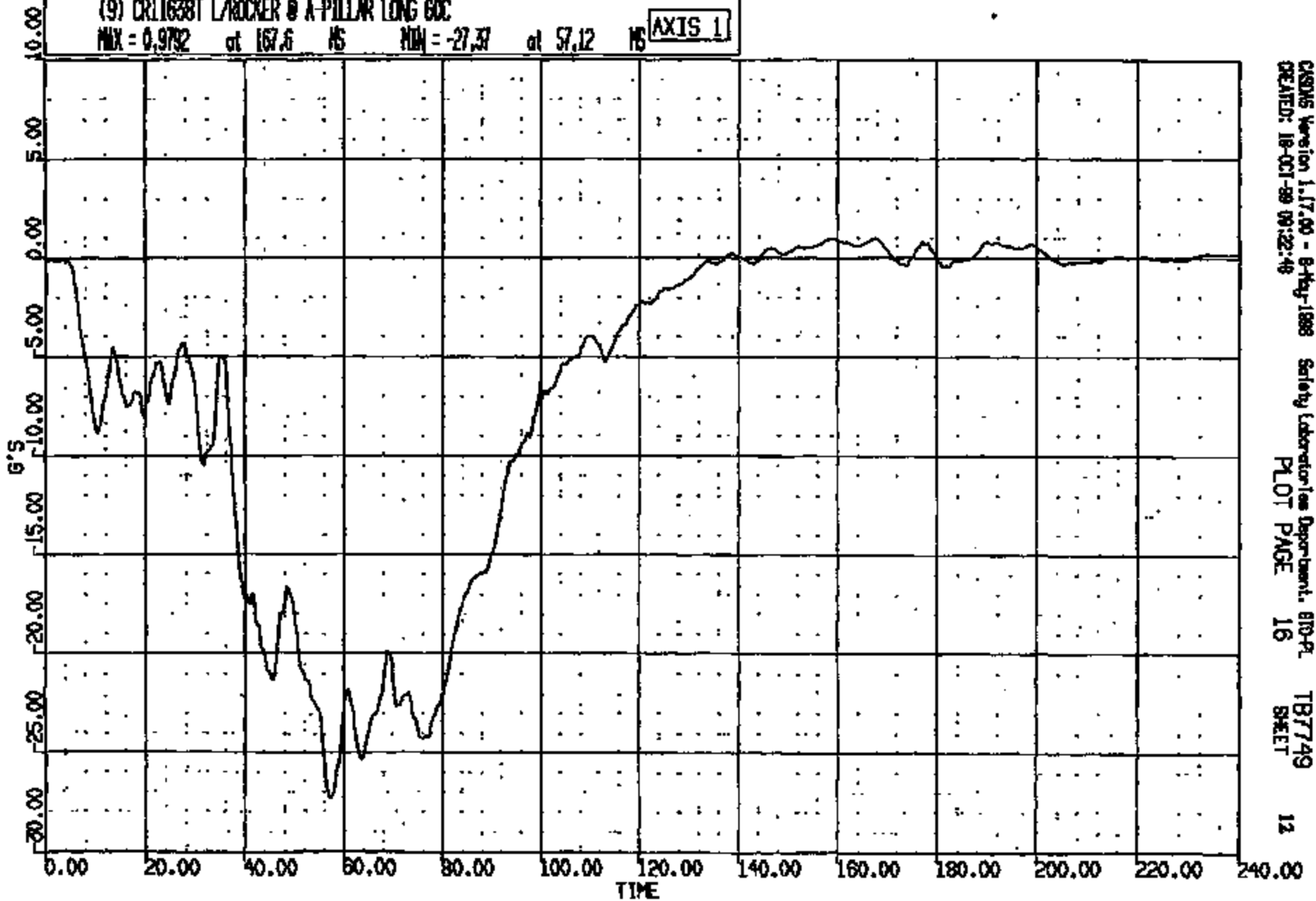
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2001 D-186

(9) CRT1638T L/ROCKER @ A-PILLAR LONG GOC

MAX = 0.9792 at 157.6 MS MIN = -27.37 at 57.12 MS

AXIS 1



CRS015 Version 1.17.00 - 8-May-1989  
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Safety Laboratories Department, BTD-PL  
PLOT PAGE 16

TB7749  
SHEET

12

CRTS 0011638

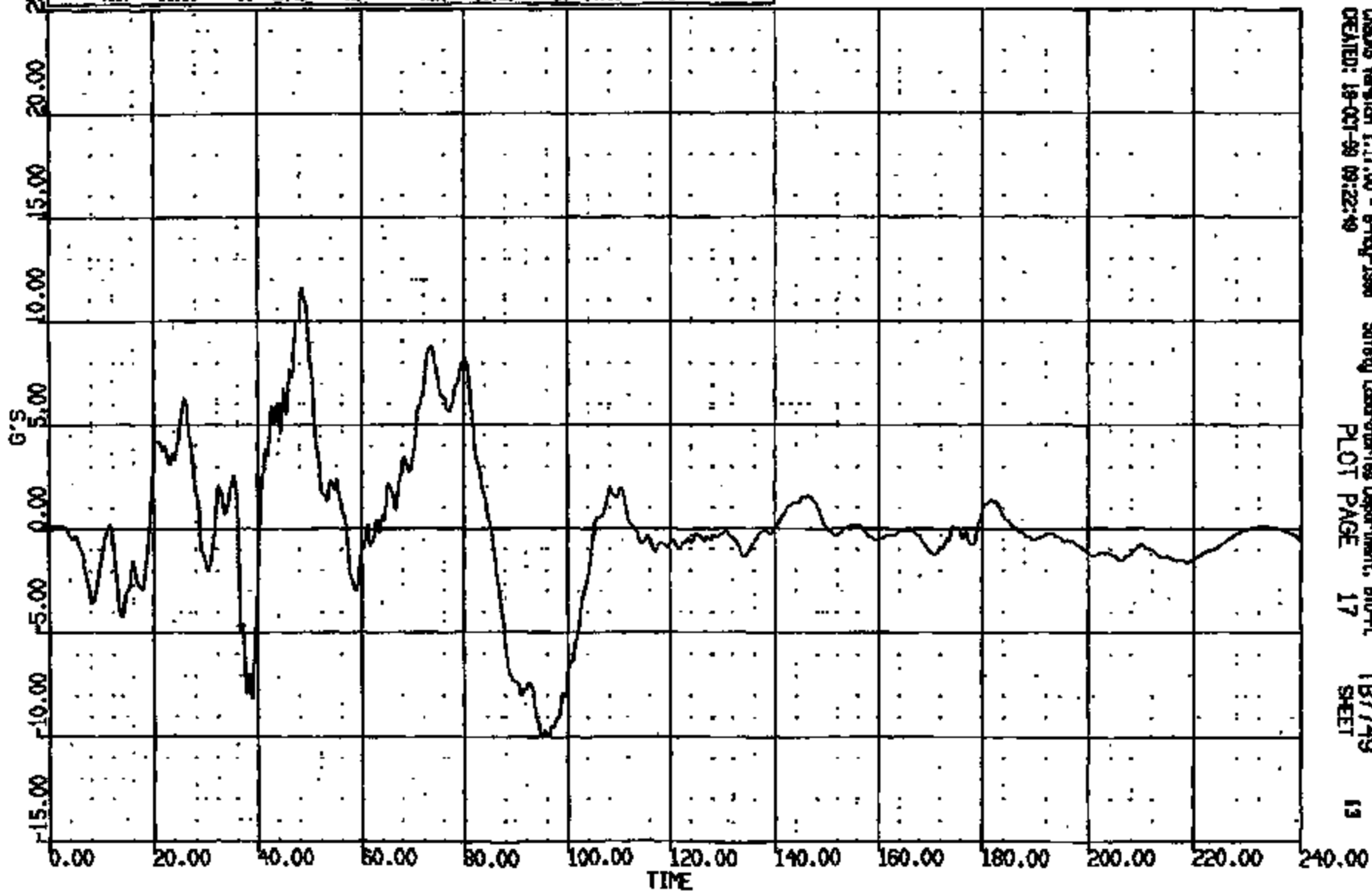


CR R: 11638 TO: TB7749 DATE: 09/01/80 09:07:22  
2001 0-188

(10) CRT1638T L/ROCKER @ A-PILLAR VERT GOC

MAX = 11.60 at 48.48 MS MIN = -10.02 at 91.96 MS

AXIS 1



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Safety Laboratories Department, 610-PL  
PLOT PAGE 17

TB7749  
SHEET

13

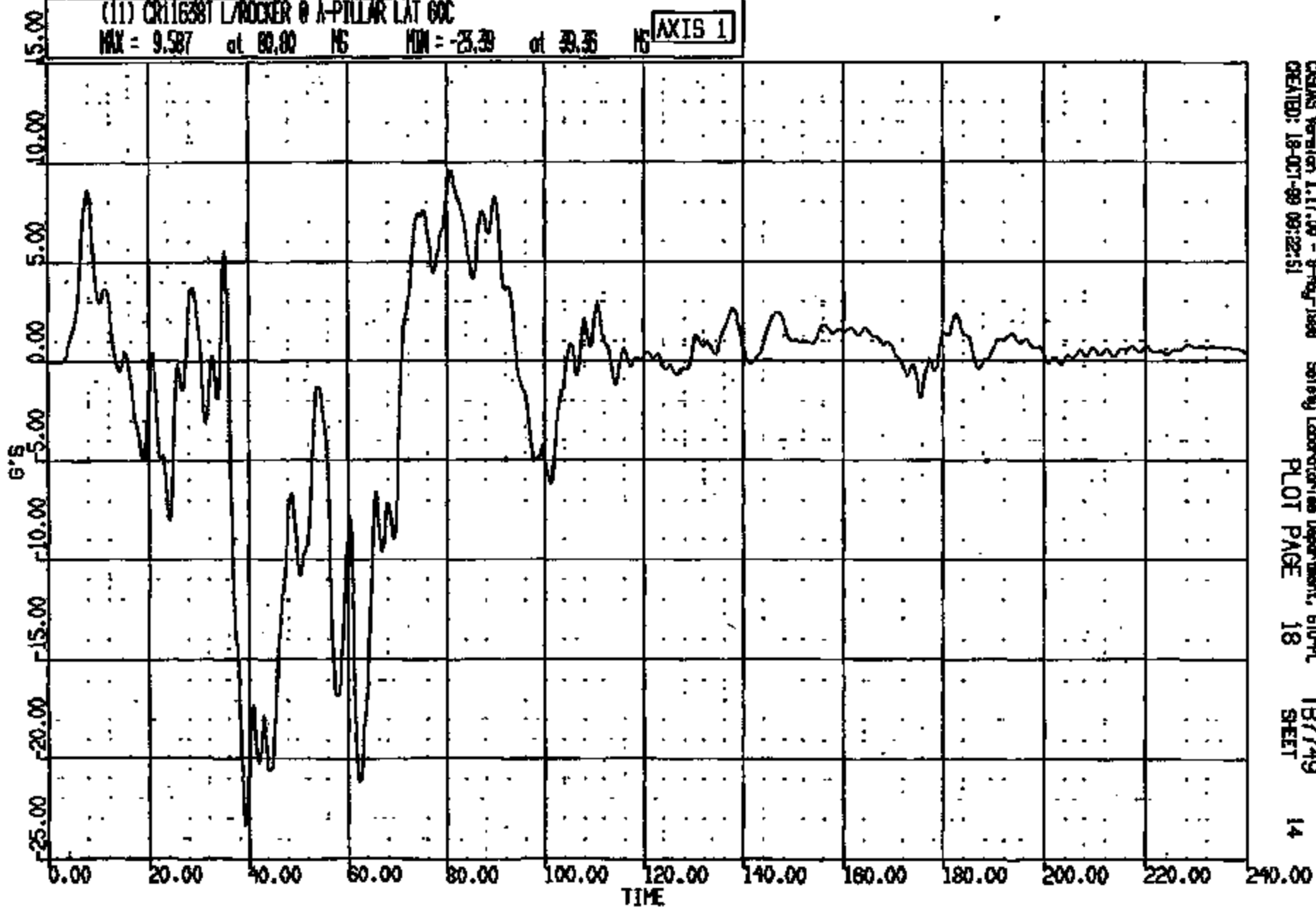
CRTS 0011638

CR R: 11838 TO: TB7749 DATE: 881018 09:07:22  
R001 D-188

(11) CR116381 L/ROCKER @ A-PILLAR LAT 60C

MAX = 9.587 at 80.00 MS MIN = -23.39 at 39.35 MS

AXIS 1



CRS Version 1.17.00 - 9-May-1988  
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PLOT PAGE 18

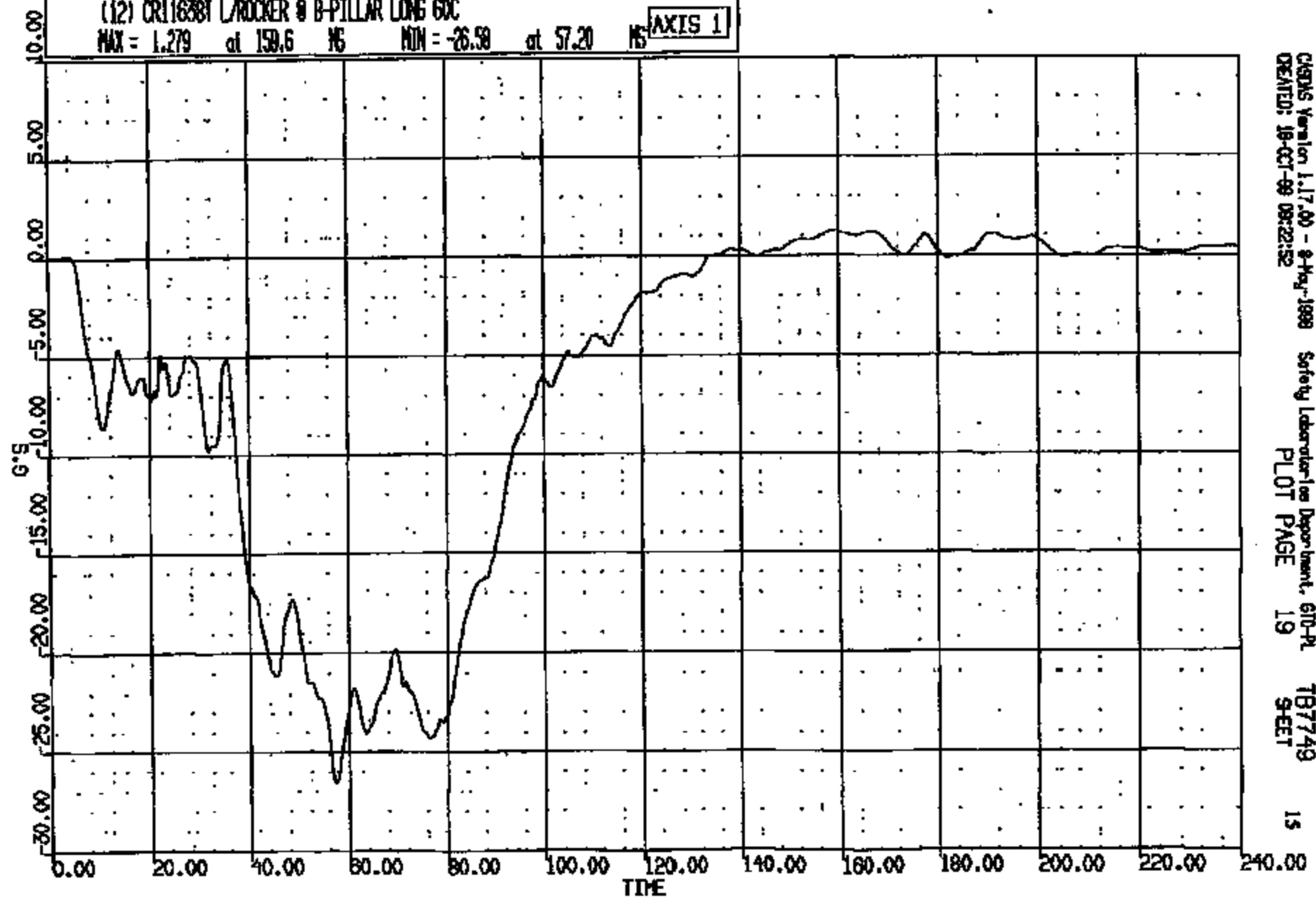
TB7749  
SHEET

14

CRTS 0011638

CR R: 11638 TD: TB7748 DATE: 201018 09:07:22  
2001 D-188

(12) CR116381 L/ROCKER @ B-PILLAR LONG 60C  
MAX = 1.279 at 150.6 MS MIN = -26.58 at 57.20 MS **AXIS 1**

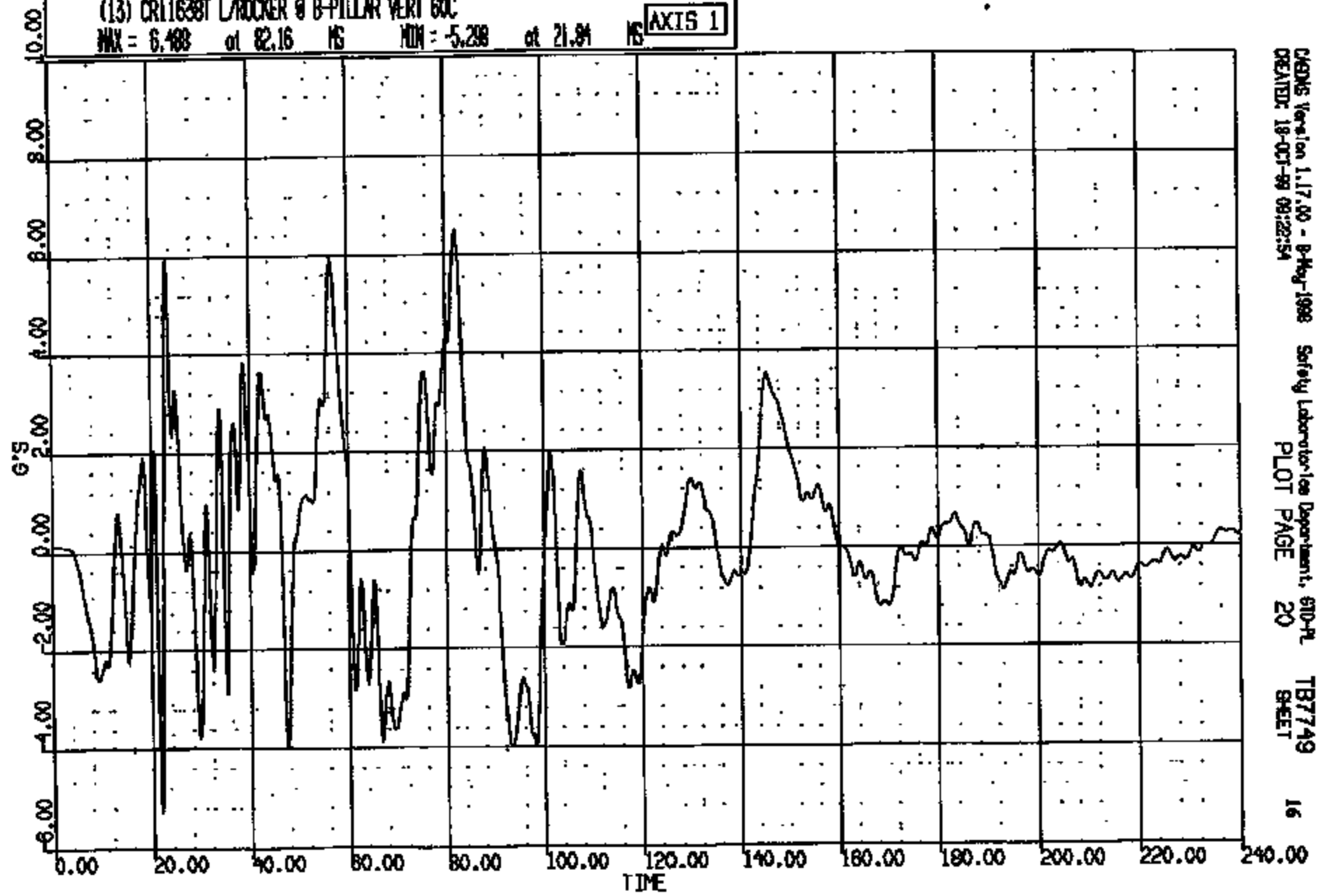


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CREATED: 18-OCT-99 09:22:52 PLOT PAGE 19 9-SET TB7749 15

CRIS 0011638

CR R: 11638 TO: TB7749 DATE: 991018 08:07:22  
2001 D-188

(13) CRT16381 L/ROCKER @ B-PILLAR VERT 60C  
MAX = 6.488 at 82.16 MS MIN = -5.288 at 21.84 MS **AXIS 1**



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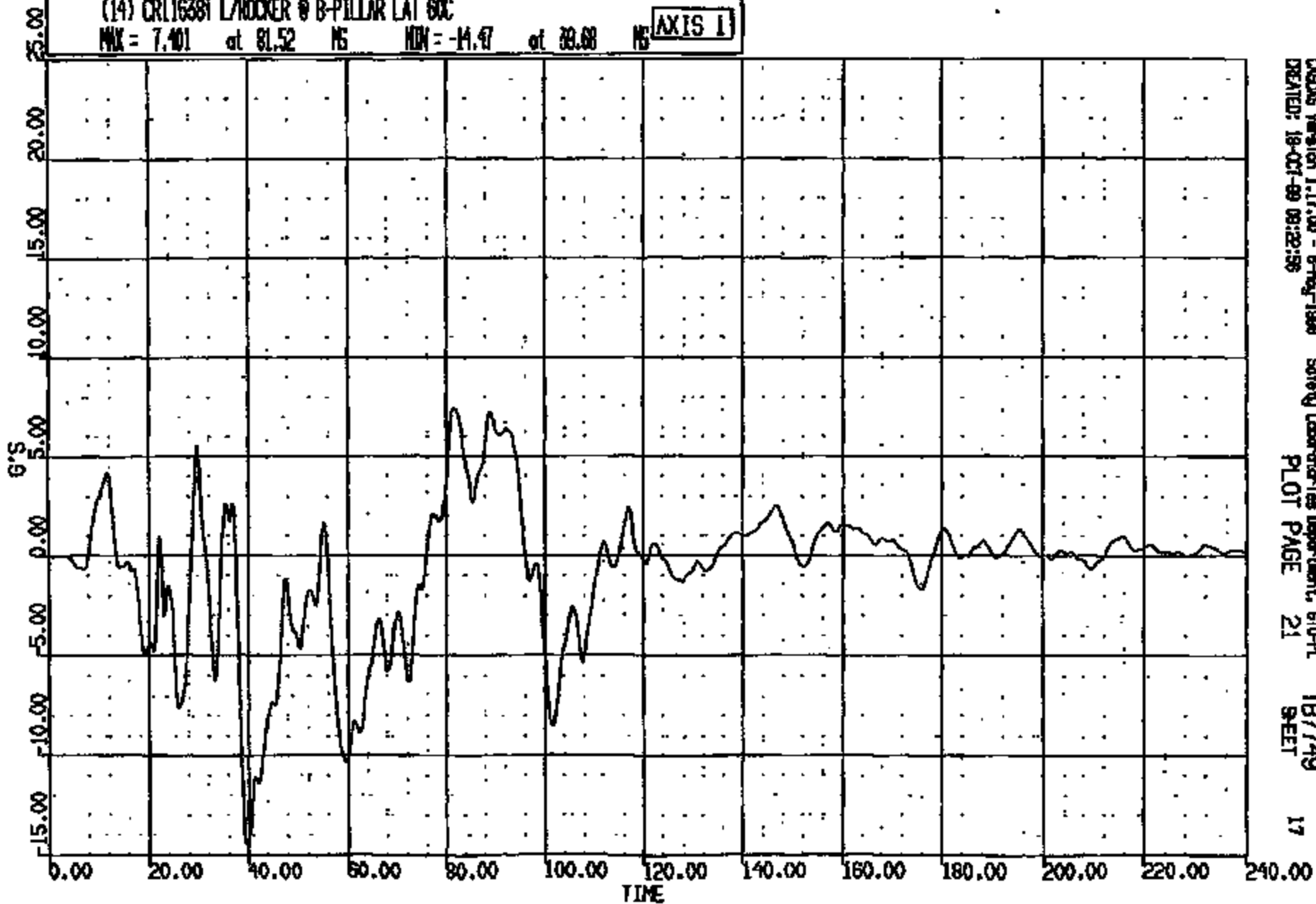
CRTS 0011638

CR R: 11889 TO: TB7749 DATE: 881018 09:07:22  
2001 D-188

(14) CR116381 L/ROCKER @ B-PILLAR LAT 60C

MAX = 7.401 at 81.52 MS MIN = -14.47 at 39.68 MS

AXIS 1



CRS Version 1.17.00 - 8-Aug-1989  
CREATED: 18-OCT-89 09:22:58

Safety Laboratories Department, ETO-PL  
PLOT PAGE 21

TB7749  
SHEET

17

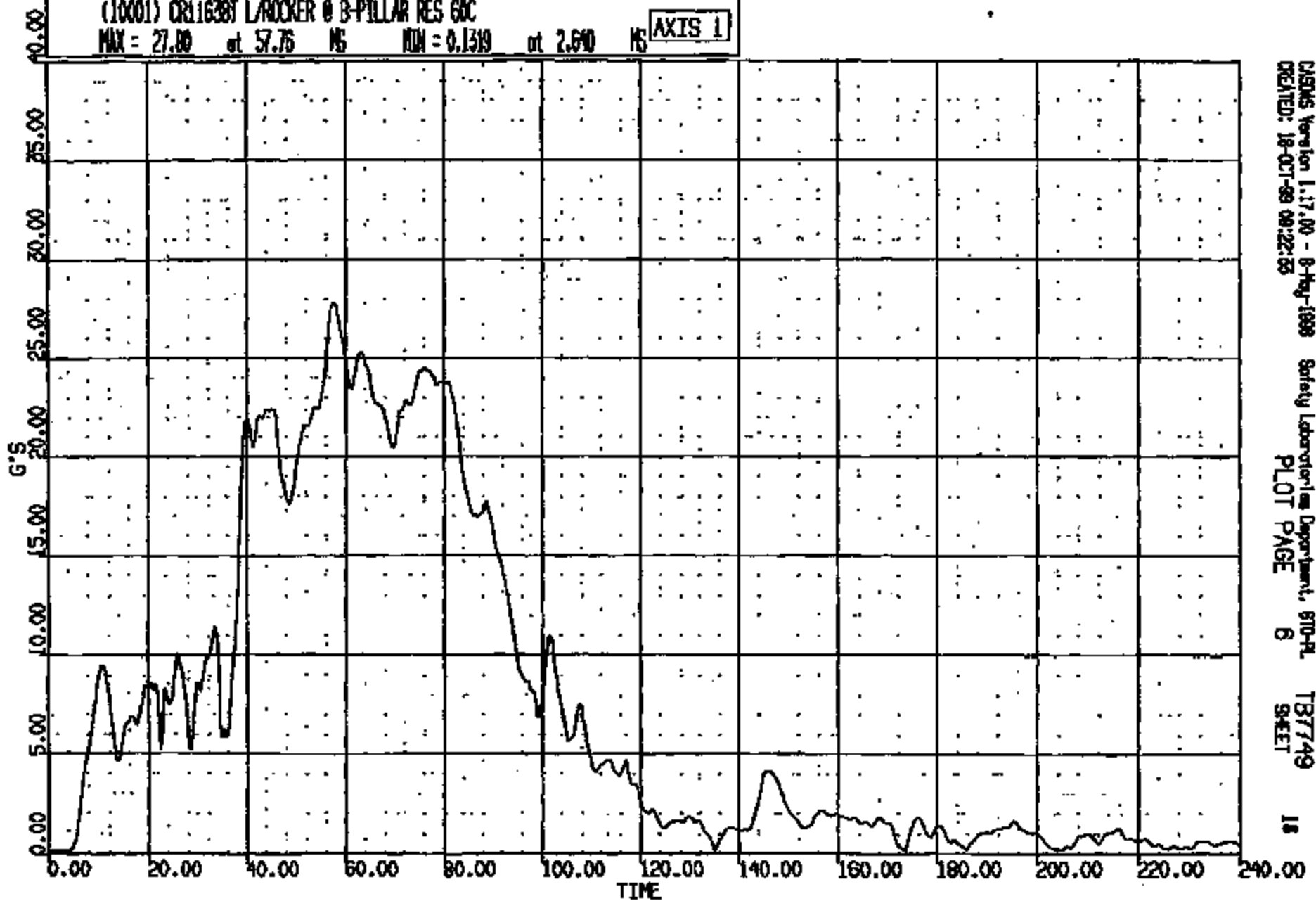
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CR R: 11838 TO: TB7749 DATE: 991018 09:07:22  
R001 D-188

(10001) CR11638 L/ROCKER @ B-PILLAR RES 60C

MAX = 27.00 at 57.75 MS MIN = 0.1319 at 2.640 MS

AXIS 1



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Safety Laboratory Department, 610-PL  
PLOT PAGE 6

TB7749  
SHEET

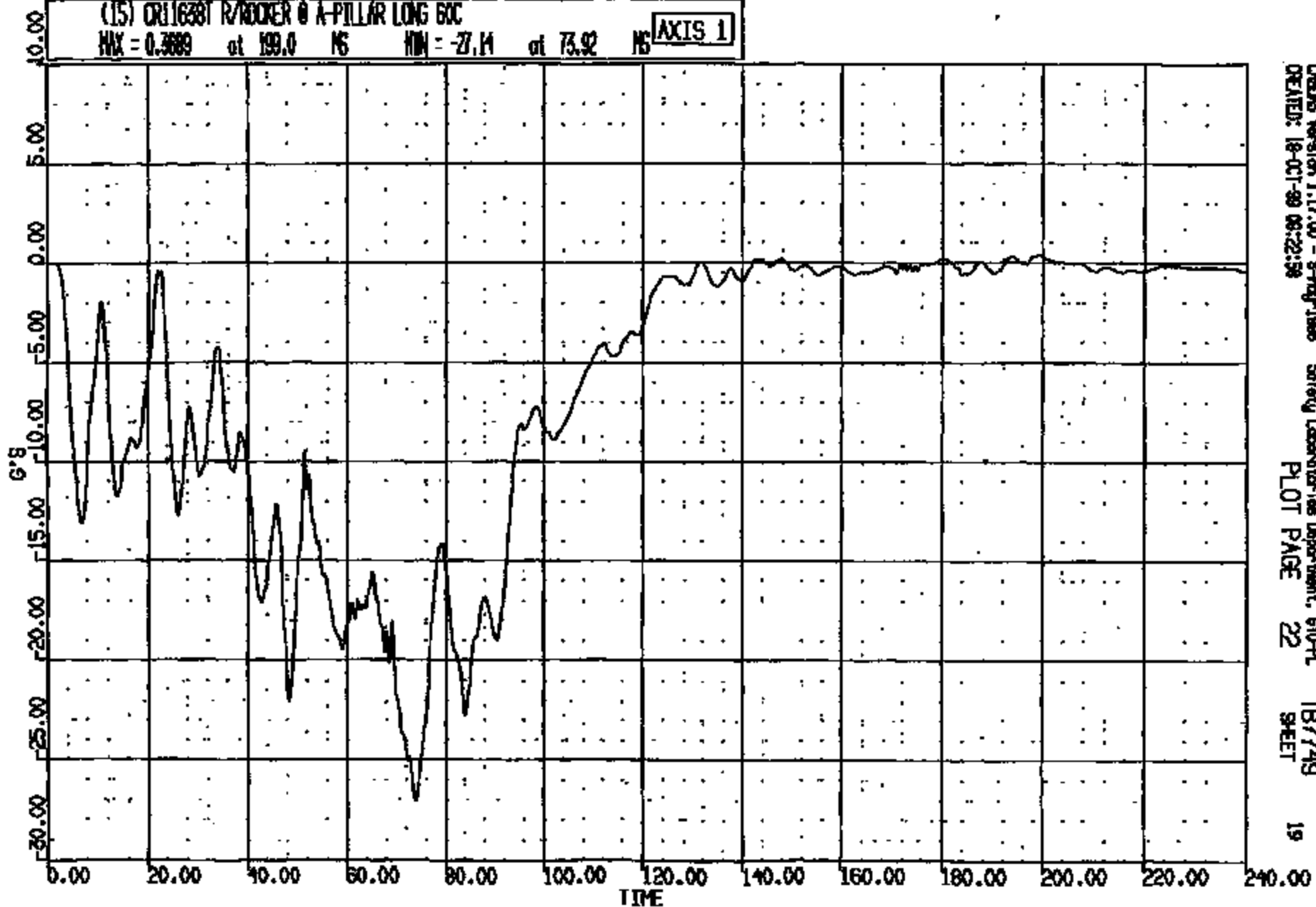
18

CRIS 0011638

CR R: 11658 TO: T87749 DATE: 991016 09:07:22  
2001 D-189

(15) CR116381 R/ROCKER @ A-PILLAR LONG 60C  
MAX = 0.3689 at 199.0 NS MIN = -27.14 at 73.92 NS

AXIS 1



CRS05 Version 1.17.00 - 8-May-1998  
CREATED: 18-OCT-99 09:22:59

Safety Laboratories Department, 610-PL  
PLOT PAGE 22

T87749  
SHEET

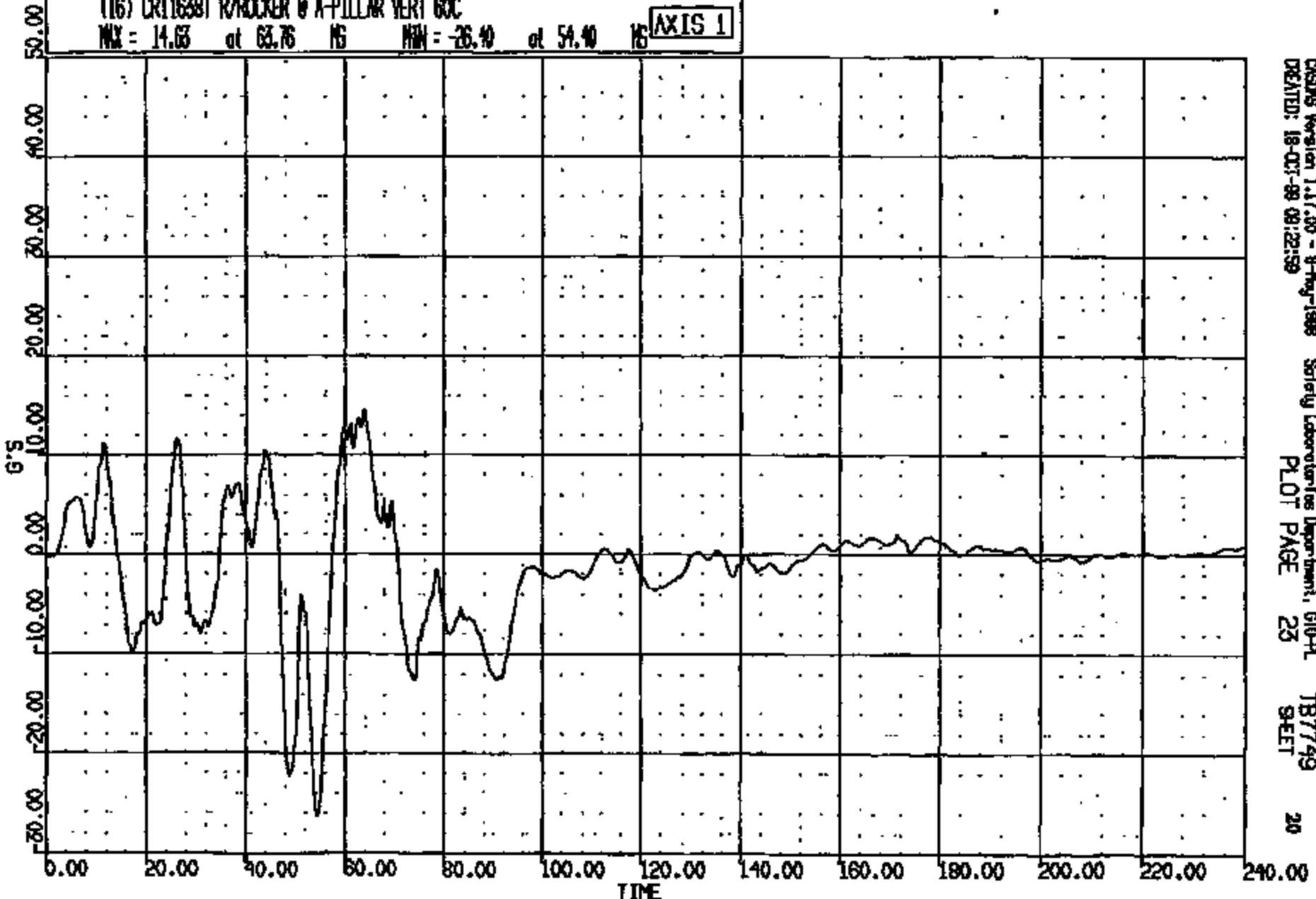
CR R: 11638 TO: T87749 DATE: 001018 09:07:22

MOO1 D-186

(16) CR11638T R/ROCKER @ A-PILLAR VERT GOC

MAX = 14.66 at 63.76 MS MIN = -26.40 at 54.40 MS

AXIS 1



CRSIS Version 1.17.00 - 9-May-1998  
DEATED: 18-OCT-99 09:22:59

Safety Laboratories Department, 610-PL  
PLOT PAGE 25

T87749  
SHEET

20

CRTS 0011638

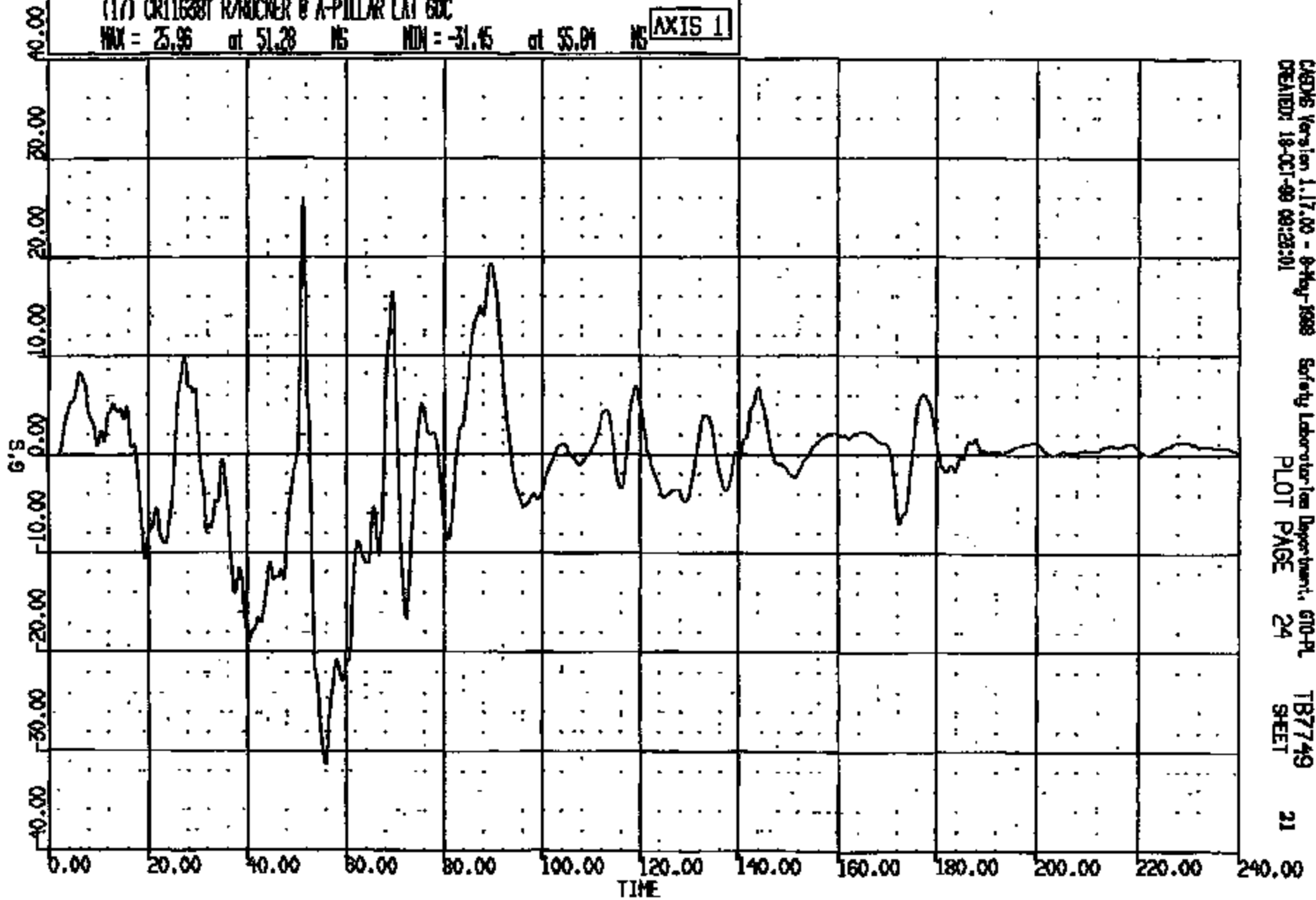


CR R: 11638 TO: TB7749 DATE: 991018 09:07:22  
2001 D-188

(17) CR11638T R/ROCKER @ A-PILLAR LAT 60C

MAX = 25.96 at 51.28 NS MIN = -31.45 at 55.01 NS

AXIS 1



CADMS Version 1.17.00 - 8-May-1998  
CREATED: 18-OCT-99 09:28:01

Safety Laboratory Department: 610-PL  
PLOT PAGE 24

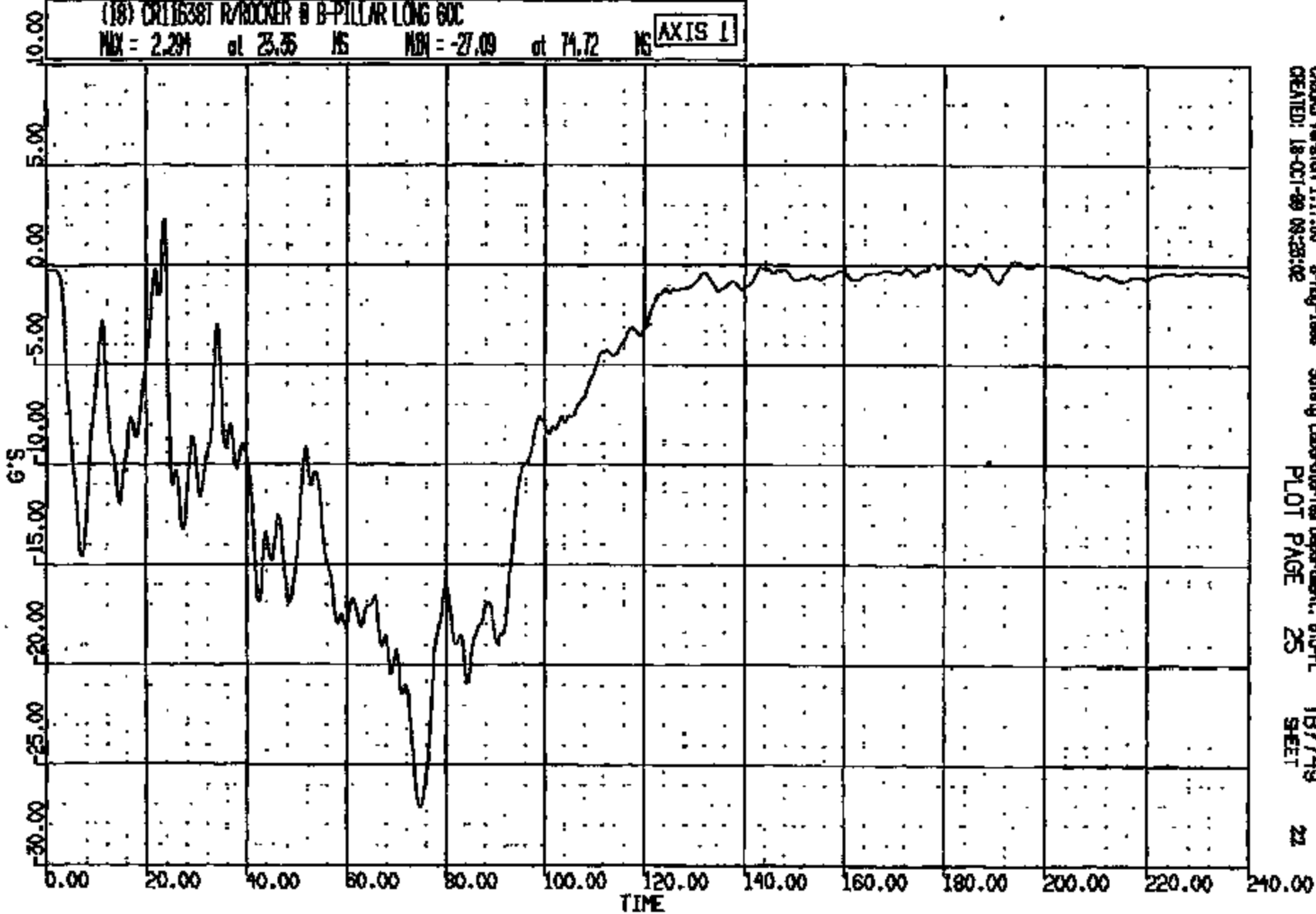
TB7749  
SHEET

21

CRIS 0011638

CR R: 11638 TO: TB7749 DATE: 991019 09:07:22  
2001 0-188

(18) CRT1638T R/ROCKER # B-PILLAR LONG 60C  
MAX = 2.294 at 23.35 MS MIN = -27.09 at 74.72 MS **AXIS 1**



CASUS Version 1.17.00 - 8-Aug-1998 Safety Laboratories Department, 610-PL TB7749  
CREATED: 18-Oct-99 09:23:02 PLOT PAGE 25 SHEET 22

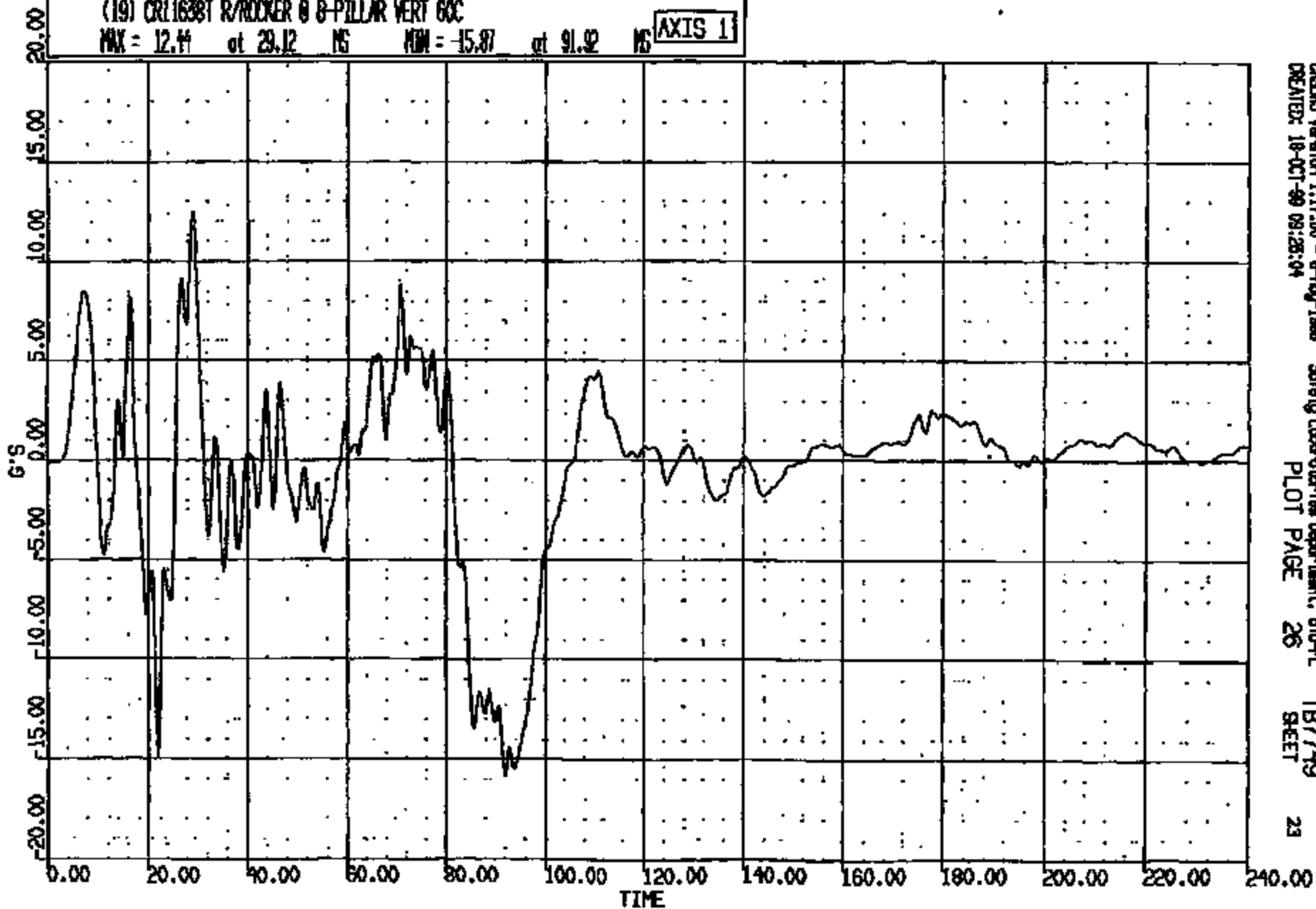
CRTS 0011638

CR R: 11638 TD: TB7749 DATE: 081018 09:07:22  
2001 D-188

(19) CR11638T R/ROCKER @ B-PILLAR VERT GOC

MAX = 12.44 at 29.12 MS MIN = -15.87 at 91.92 MS

AXIS 1



CRSIS Version 1.17.00 - 8-May-1998  
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Safety Laboratories Department, 610-PL  
PLOT PAGE 26

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23

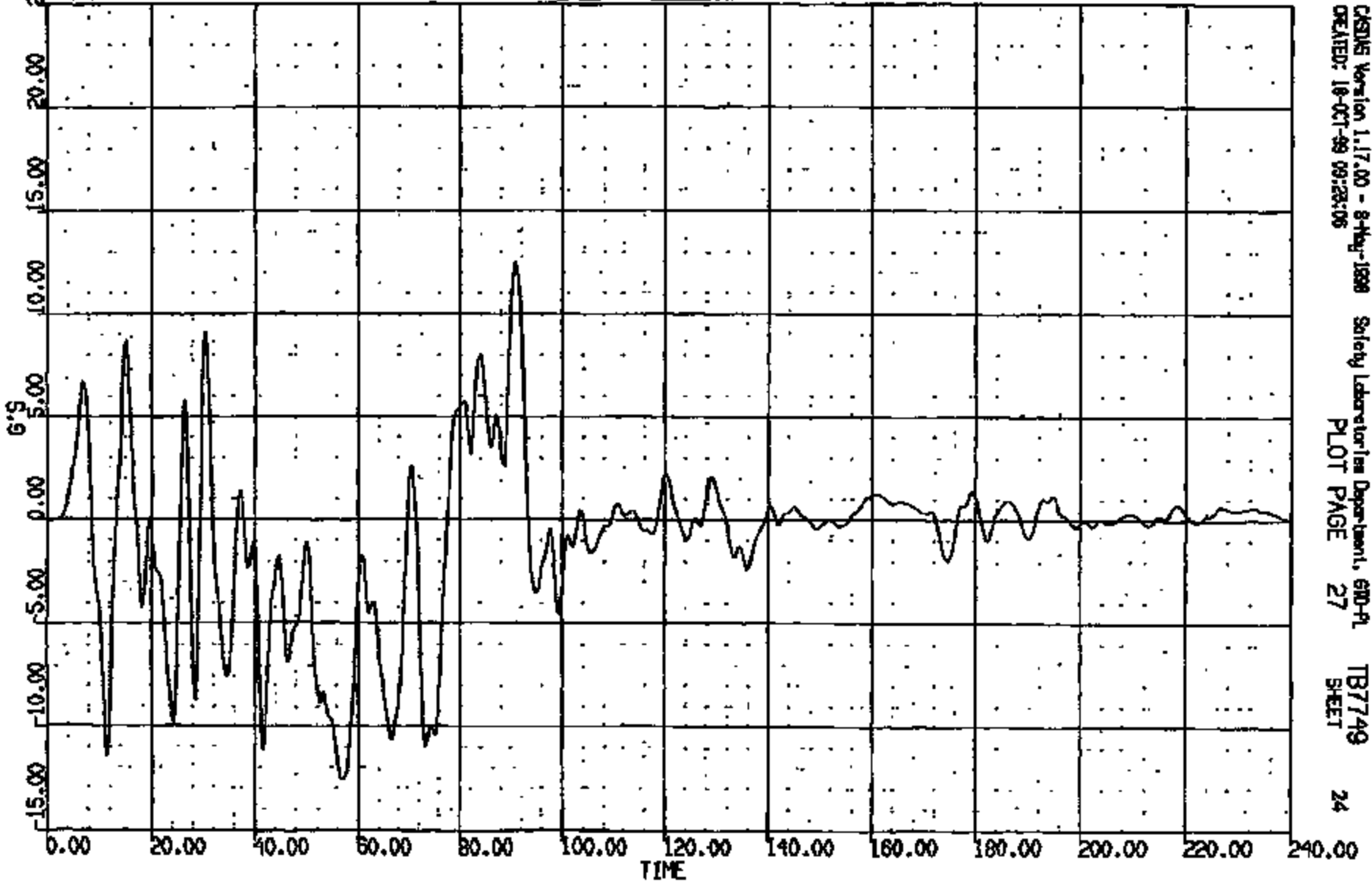
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CR R: 11658 TO: TB7749 DATE: 891018 09:07:22  
2001 D-186

(20) CR11638T R/ROCKER @ B-PILLAR LAT 60C

MAX = 12.51 at 90.80 MS MIN = -12.58 at 56.80 MS

AXIS 1



CRS016 Version 1.17.00 - 8-May-1989  
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Safety Laboratories Department, 610-PL  
PLOT PAGE 27

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24

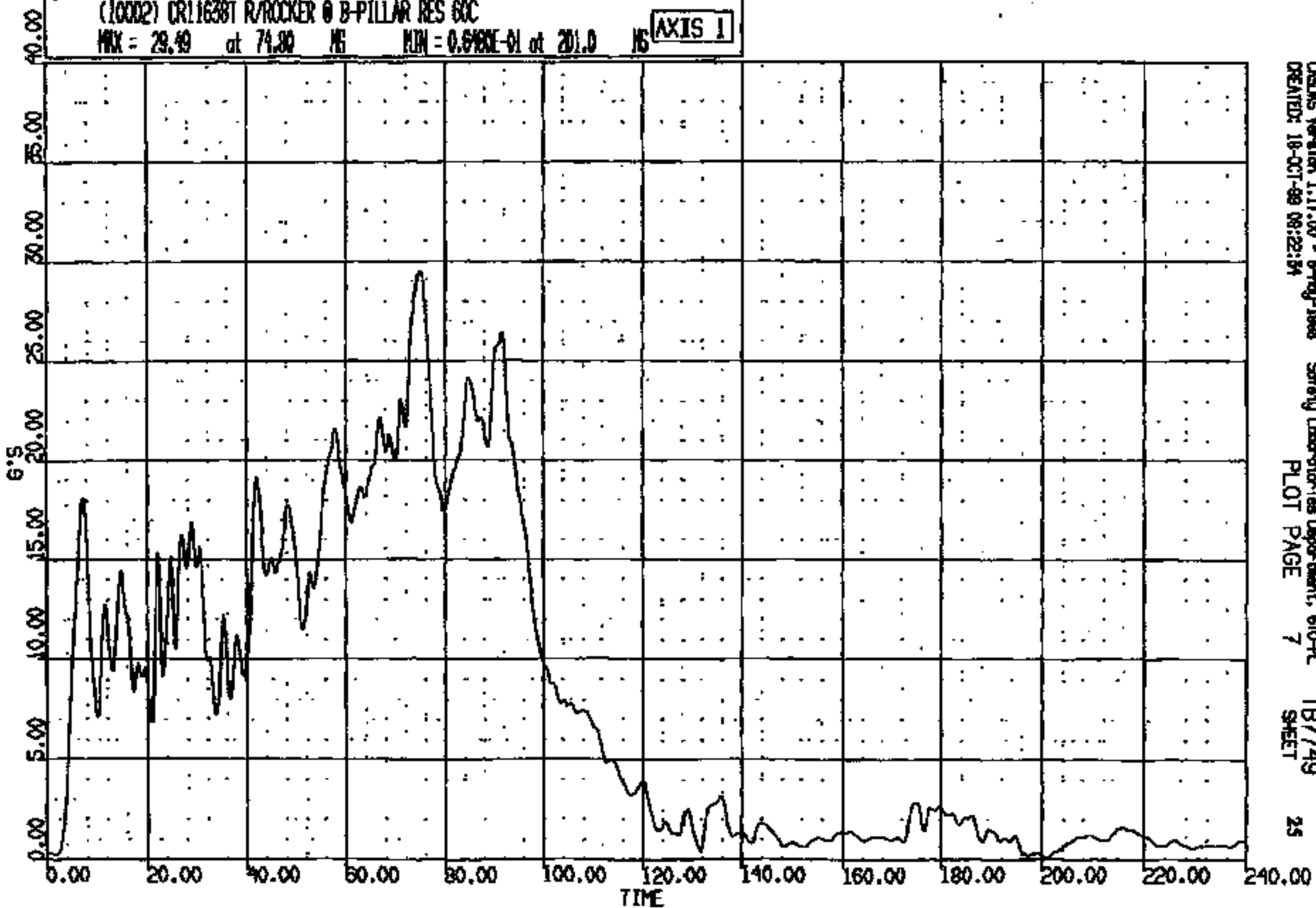
CR11638

CR R: 11638 TO: TB7749 DATE: 991018 09:07:22  
2001 D-198

(10002) CR11638T R/ROCKER @ B-PILLAR RES 60C

MAX = 29.49 at 74.80 MG MIN = 0.5490E-01 at 201.0 MG

AXIS 1



ORION Version 1.17.00 - 9-May-1998  
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Safety Laboratories Department, 610-PL  
PLOT PAGE 7

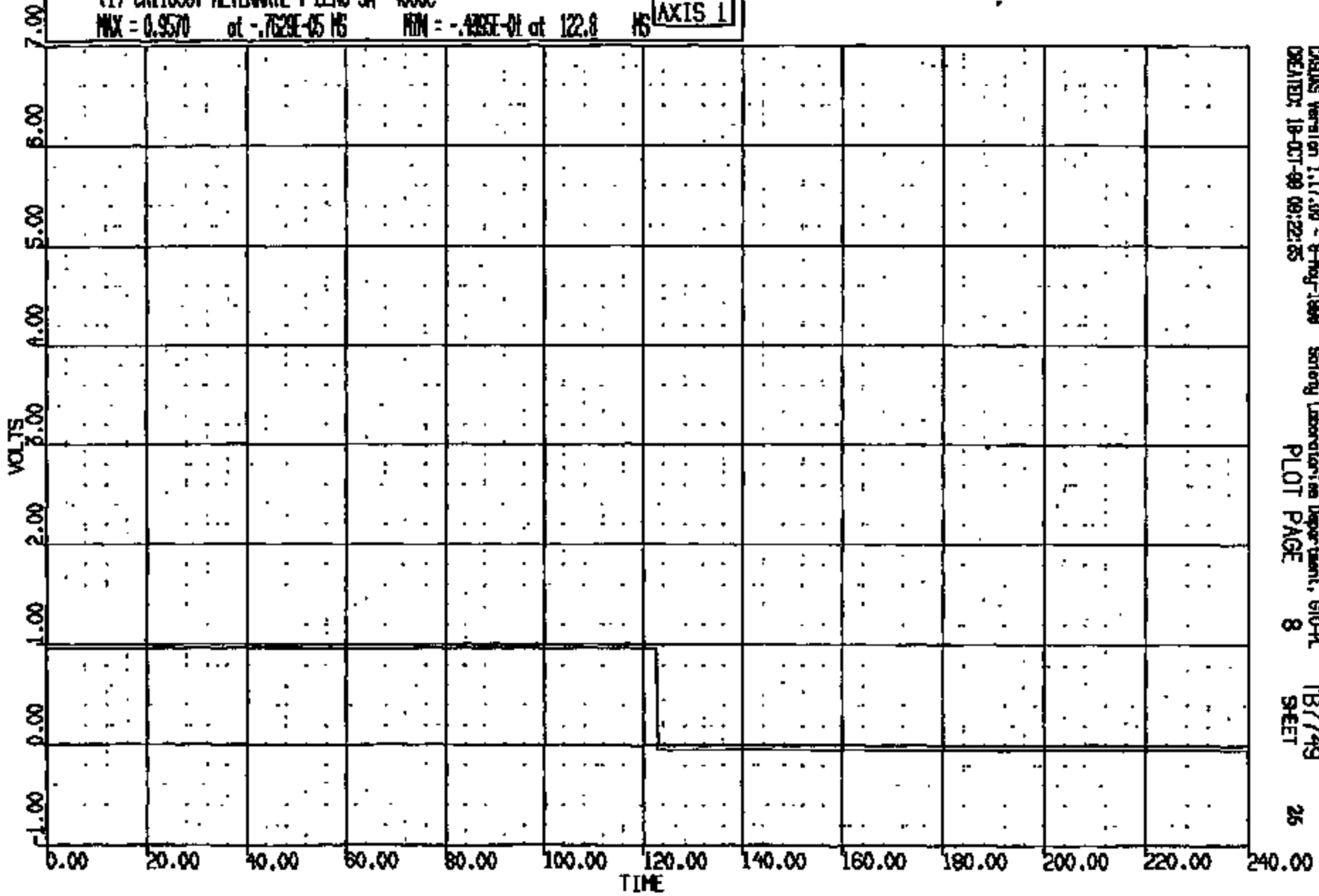
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SHEET

25

CR R: 11638 TO: TB7749 DATE: 891018 09:07:22  
2001 D-189

(1) CR11638T ALTERNATE T-ZERO SH 4000C  
MAX = 0.9570 at -.7629E-05 MS MIN = -.4935E-01 at 122.8 MS

AXIS 1



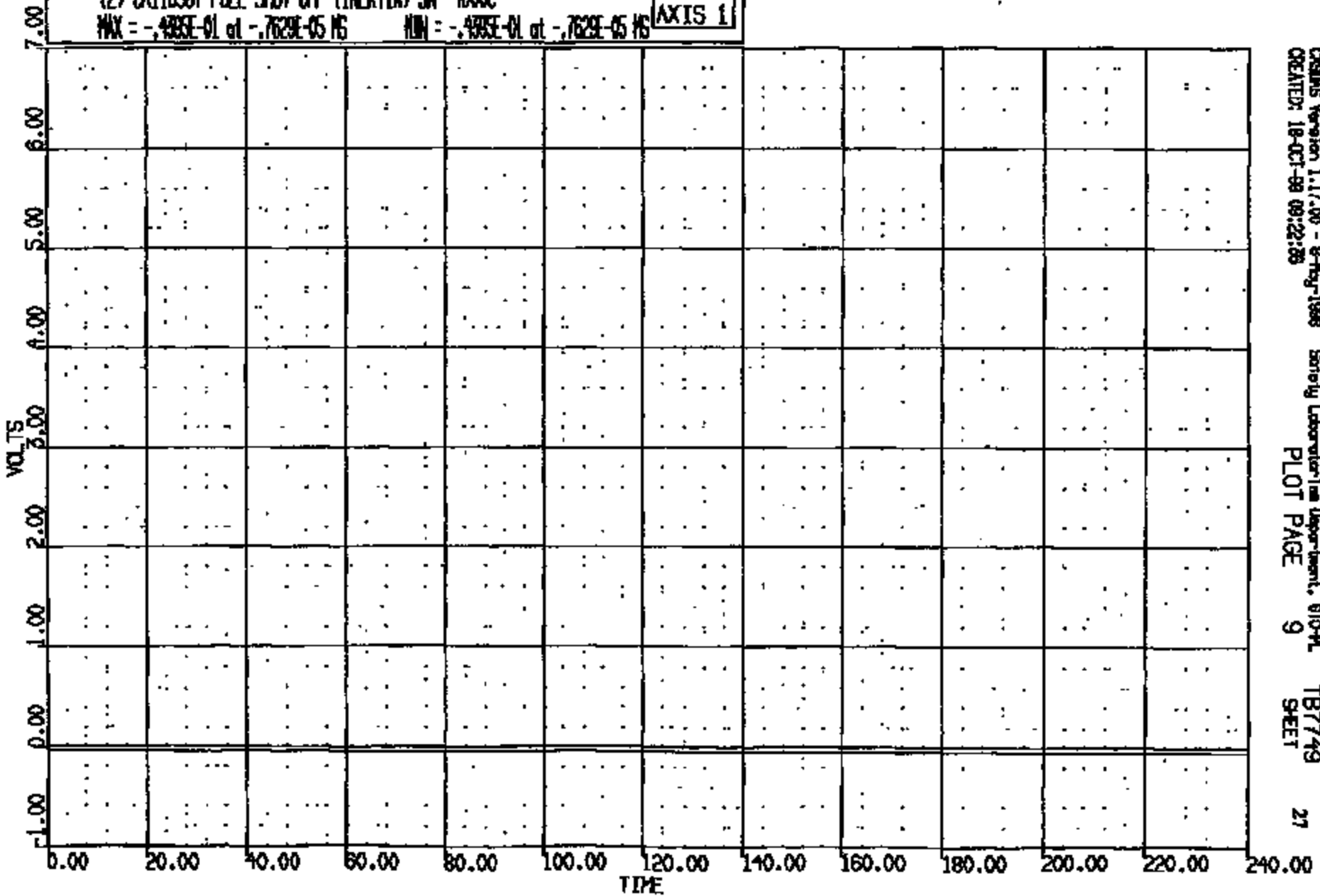
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CREATED: 18-OCT-89 09:22:25 PLOT PAGE 8 SHEET 25

CRTS 0011638

CR R: 11638 TO: TB7749 DATE: 991018 09:07:22  
2001 D-166

(2) DR11638T FUEL SHUT OFF (INERTIA) SN 4000C  
MAX = -.4935E-01 at -.7629E-05 MS MIN = -.4935E-01 at -.7629E-05 MS

AXIS 1



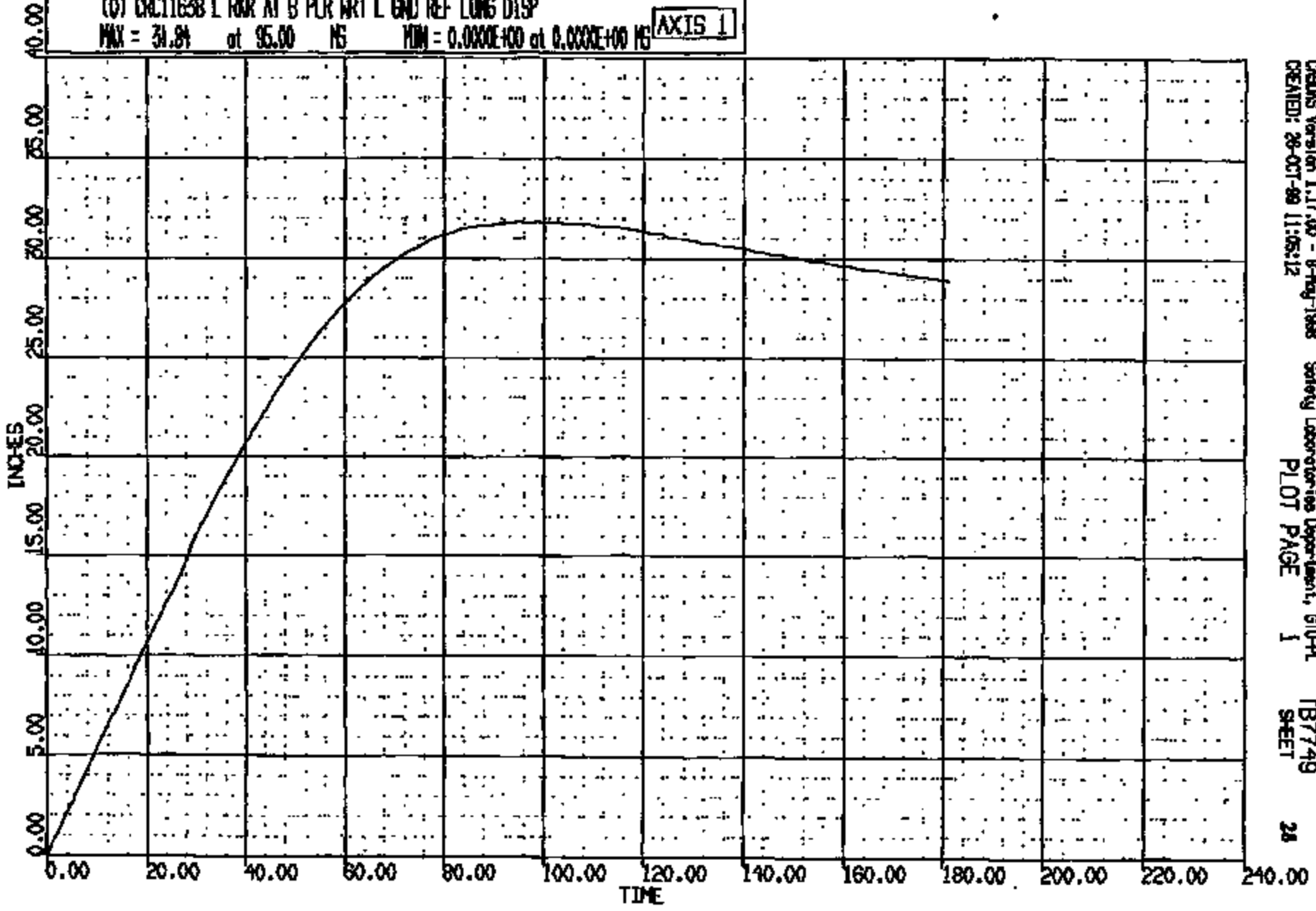
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CRIS 0011638

CR R: 11858 TO: TB7749 DATE: 991018 08:07:22  
R001 D-186

(0) CRCT1638 L ROD AT B PLR WRT L END REF LONG DISP  
MAX = 31.84 at 95.00 MS MIN = 0.0000E+00 at 0.0000E+00 MS

AXIS 1



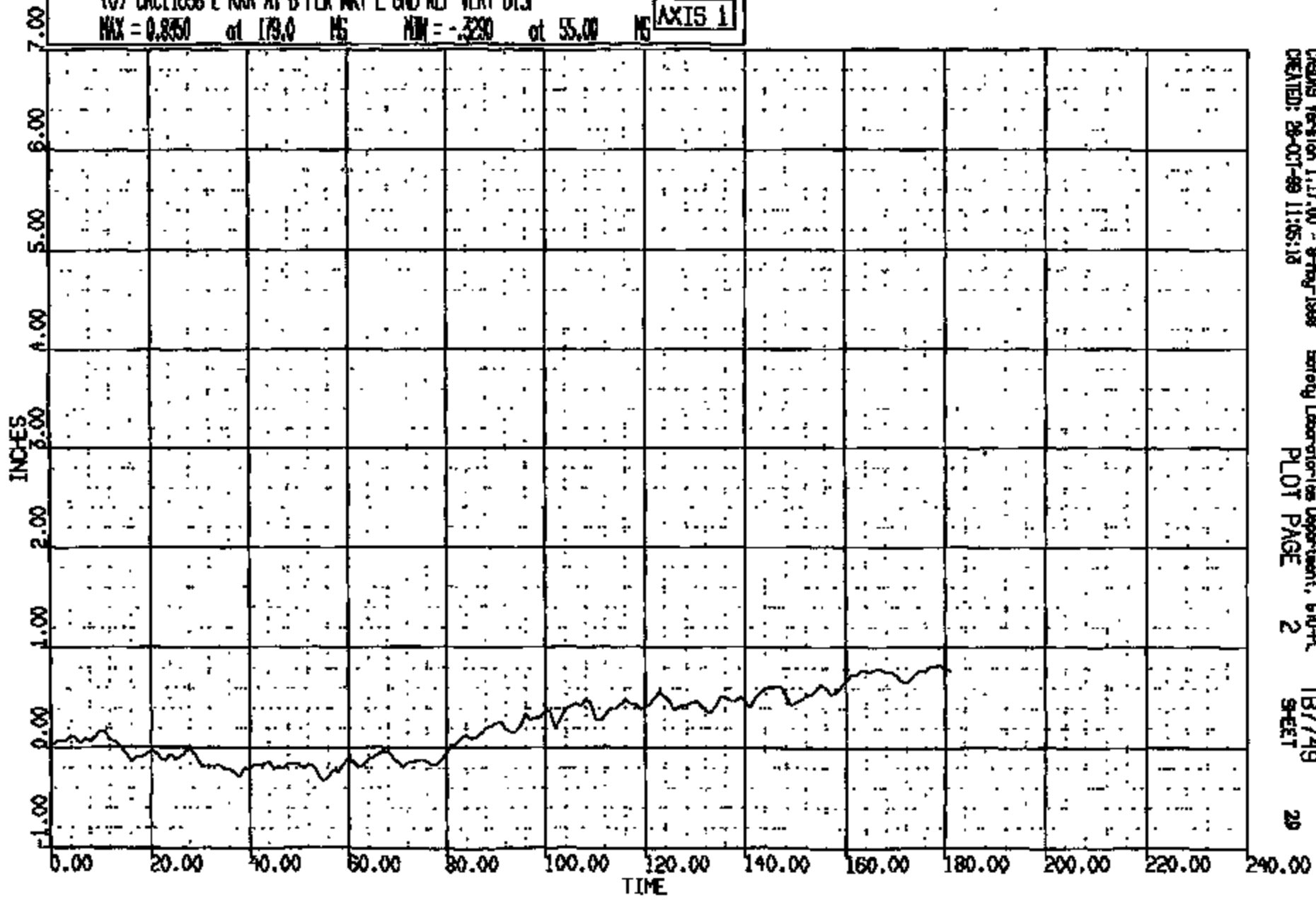
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SHEET 2A

CRCS 0011638



CR #: 11638 TO: TB7749 DATE: 091018 09:07:22  
2001 D-166

(0) CRCL1638 L RGR AT B PLR WRT L END REF VERT DISP  
MAX = 0.8450 at 179.0 MS MIN = -.3290 at 55.00 MS AXIS 1



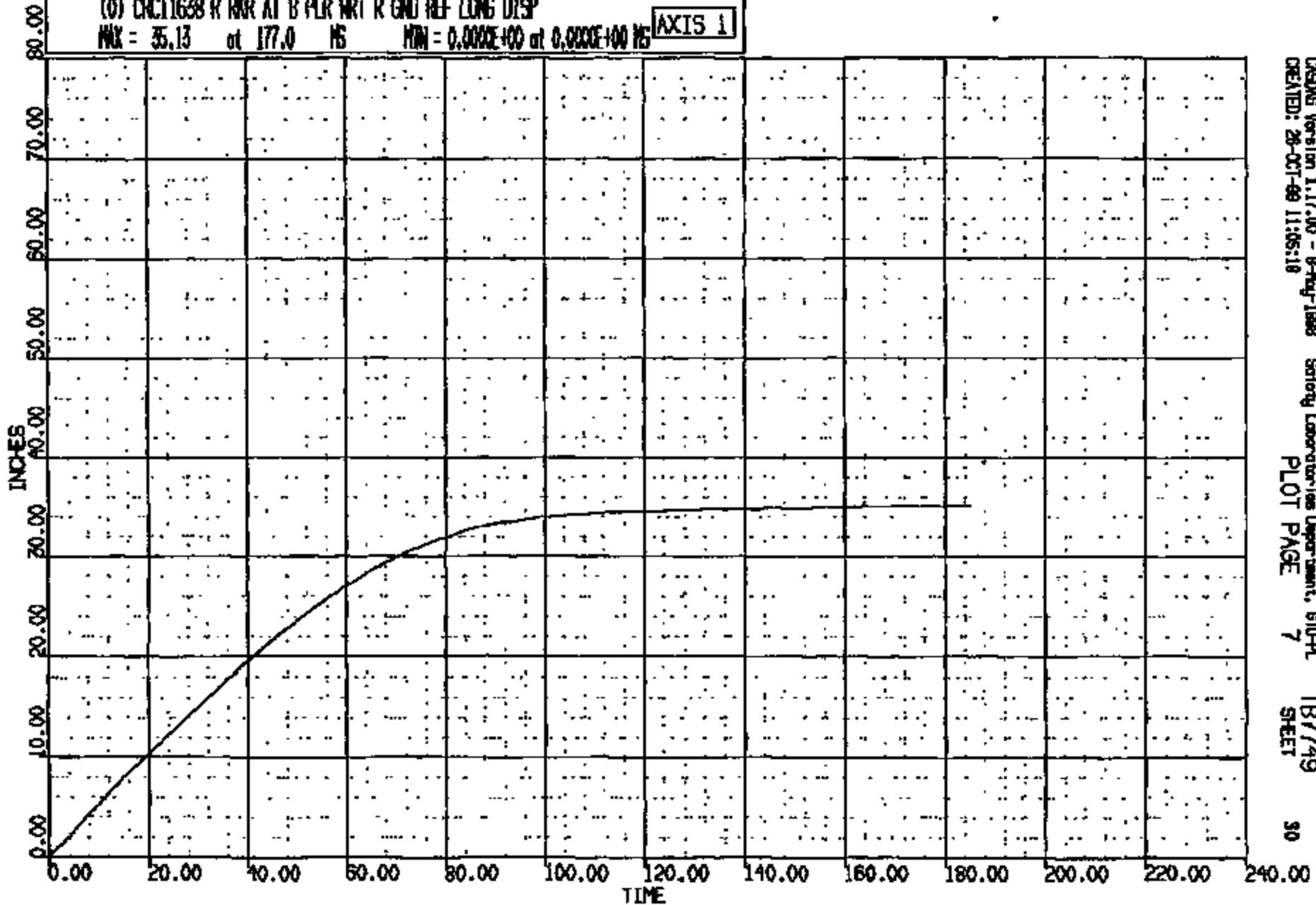
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CREATED: 29-OCT-99 11:05:18 PLOT PAGE 2 SHEET 29

CRS01638

CR R: 11638 TO: TB7749 DATE: 991019 09:07:22  
2001 D-188

(0) CRCL1638 R RNR AT B PLR MRT R END REF LONG DISP  
MAX = 35.13 at 177.0 MS MIN = 0.000E+00 at 0.000E+00 MS

AXIS 1

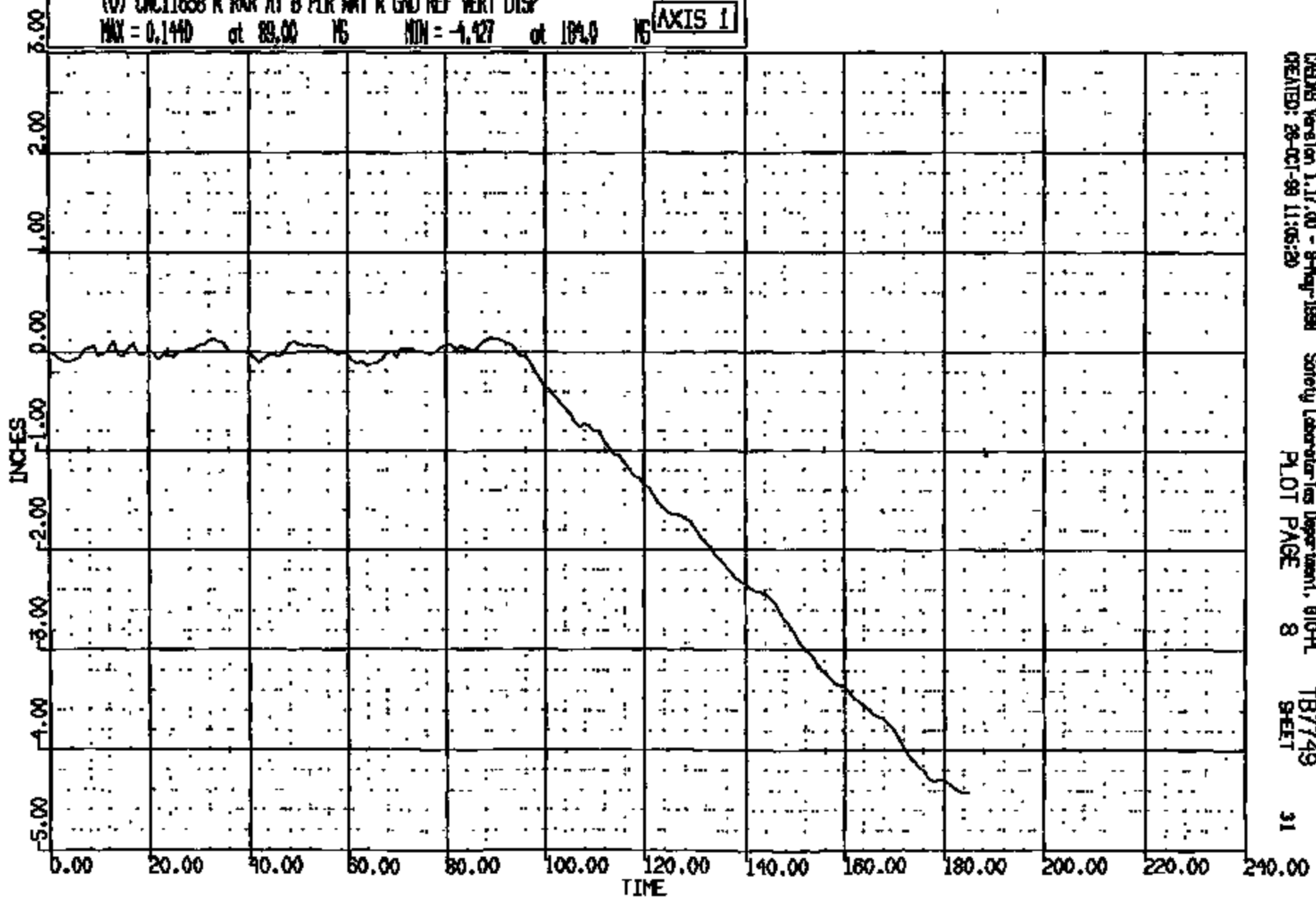


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SHEET 50

CRIS 0011638

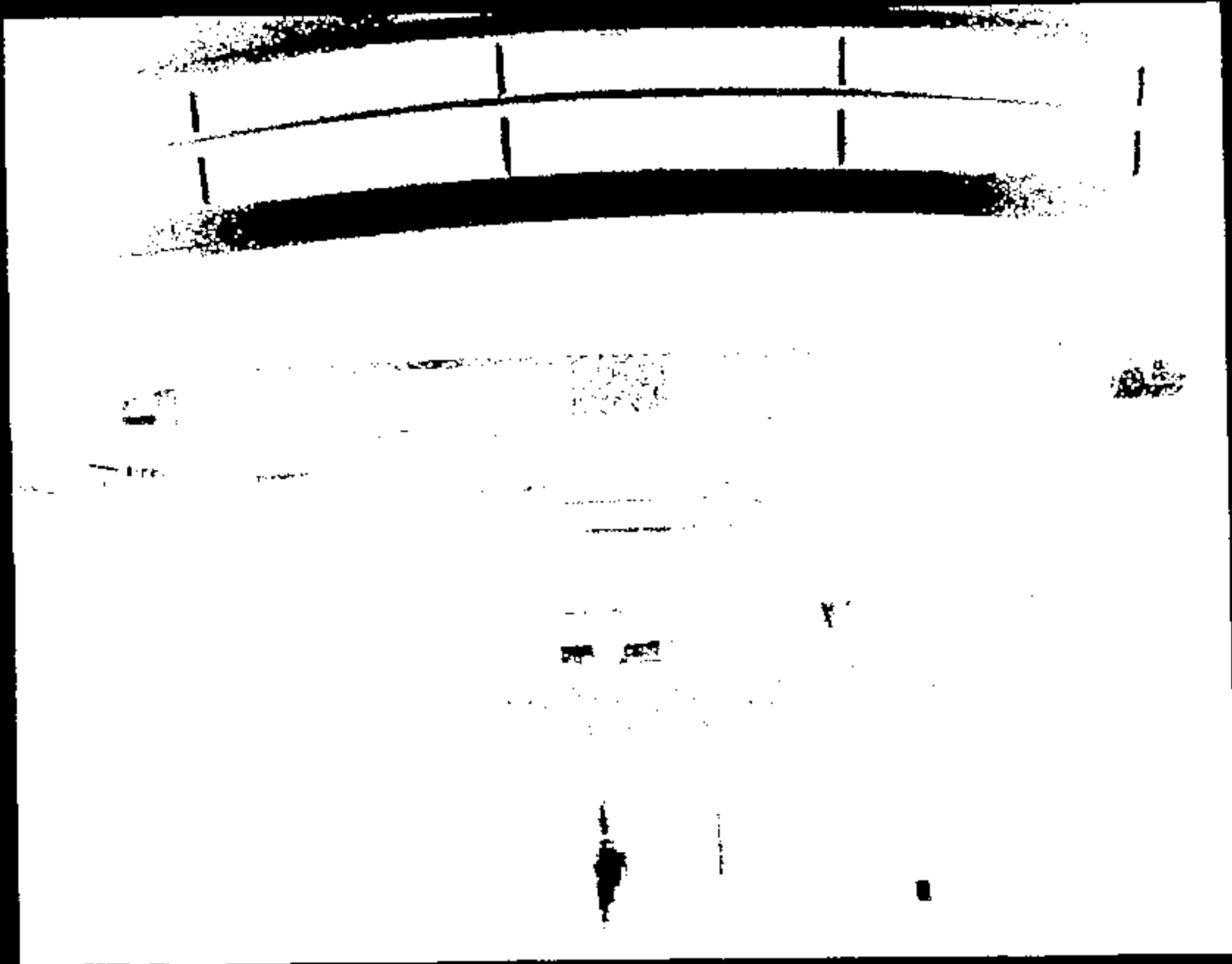
CR R: 11838 TO: TB7749 DATE: 991018 09:07:22  
2001 D-198

(0) CMC11638 R ROR AT B PLR WRT R GND REF VERT DISP  
MAX = 0.1440 at 89.00 NS MIN = -4.427 at 184.0 NS **AXIS 1**



CADDS Version 1.17.00 - 9-May-1999 Safety Laboratories Department, 610-PL TB7749  
CREATED: 26-OCT-99 11:05:20 PLOT PAGE 8 SHEET 31

CRTS 0011638



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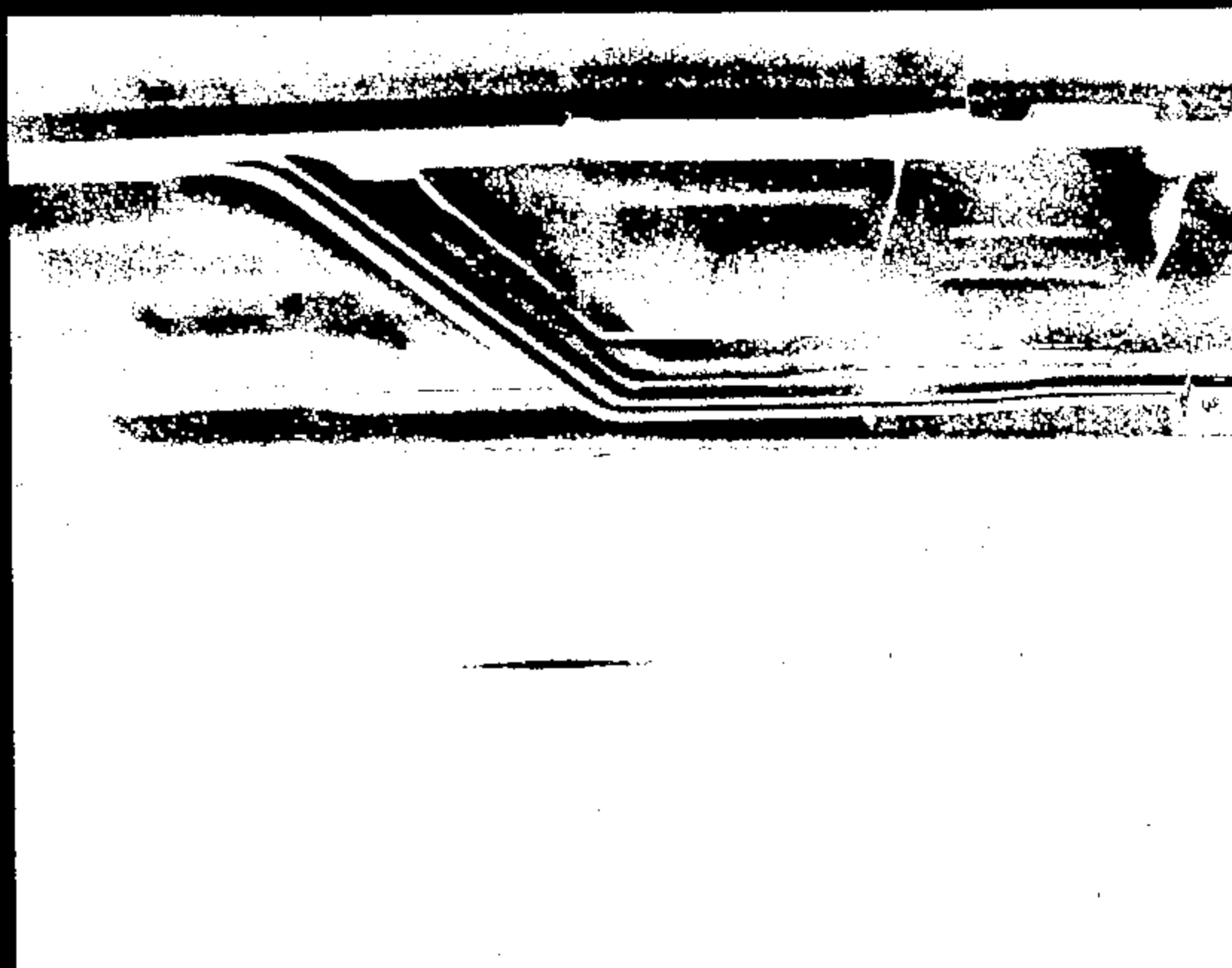


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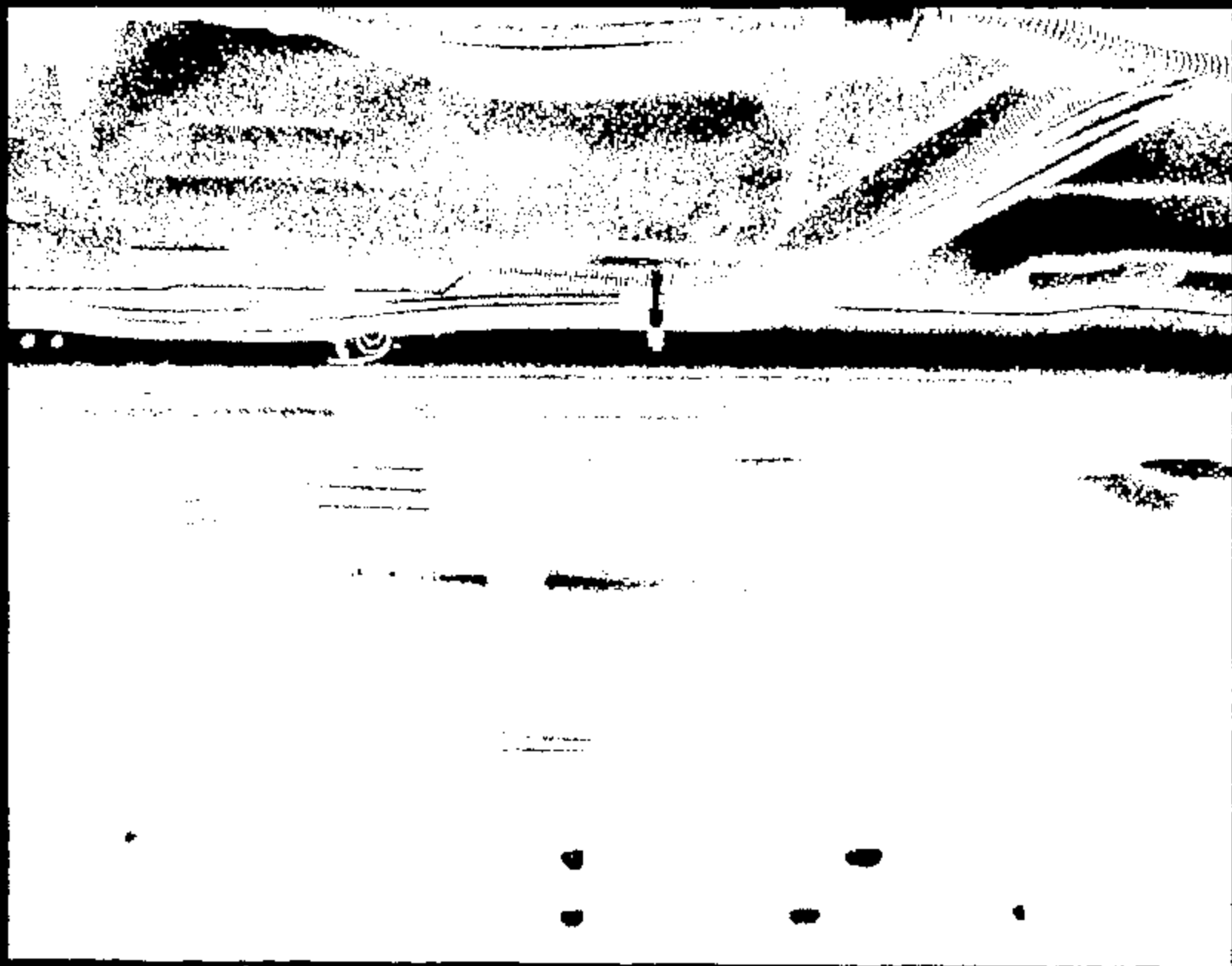




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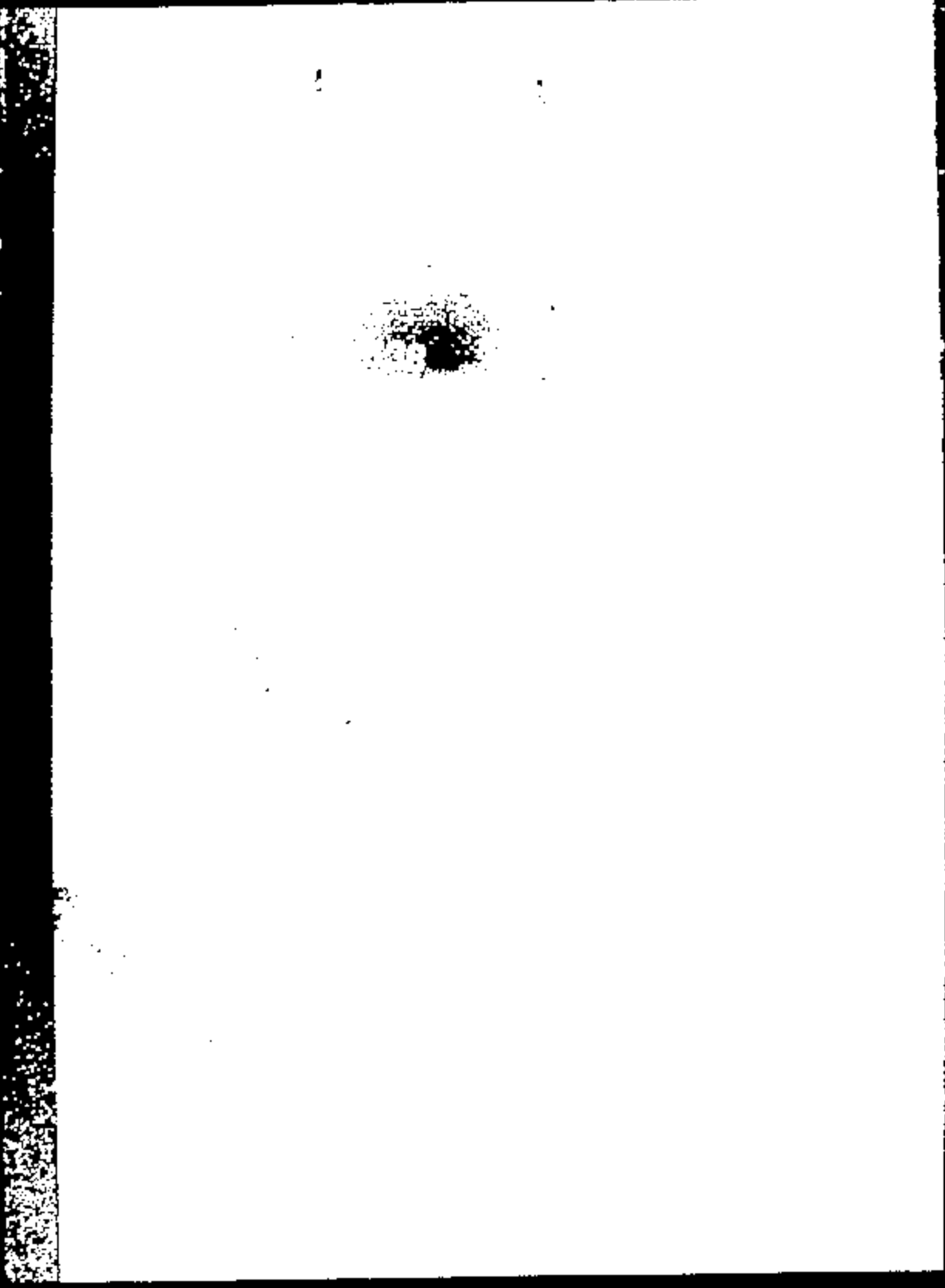
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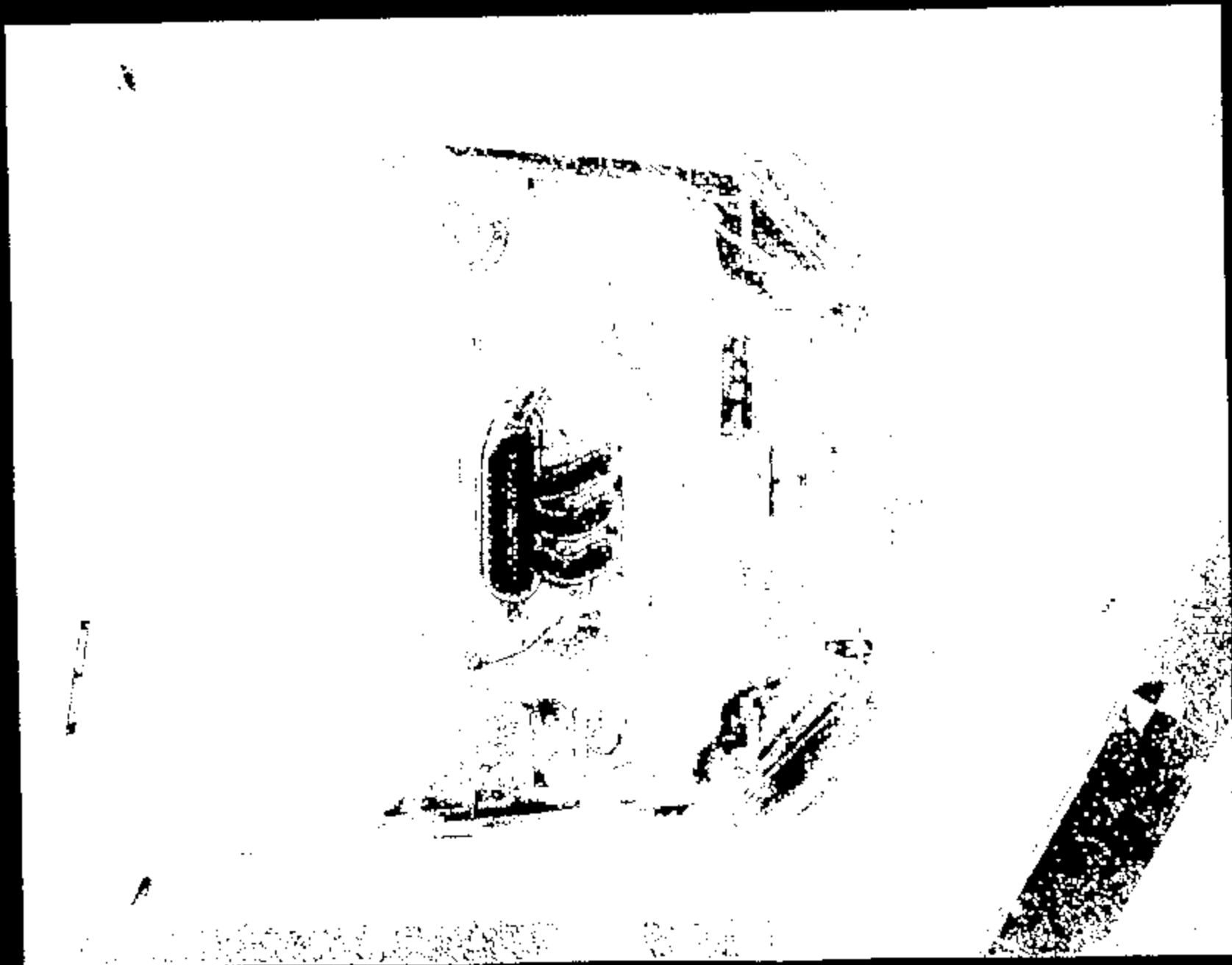
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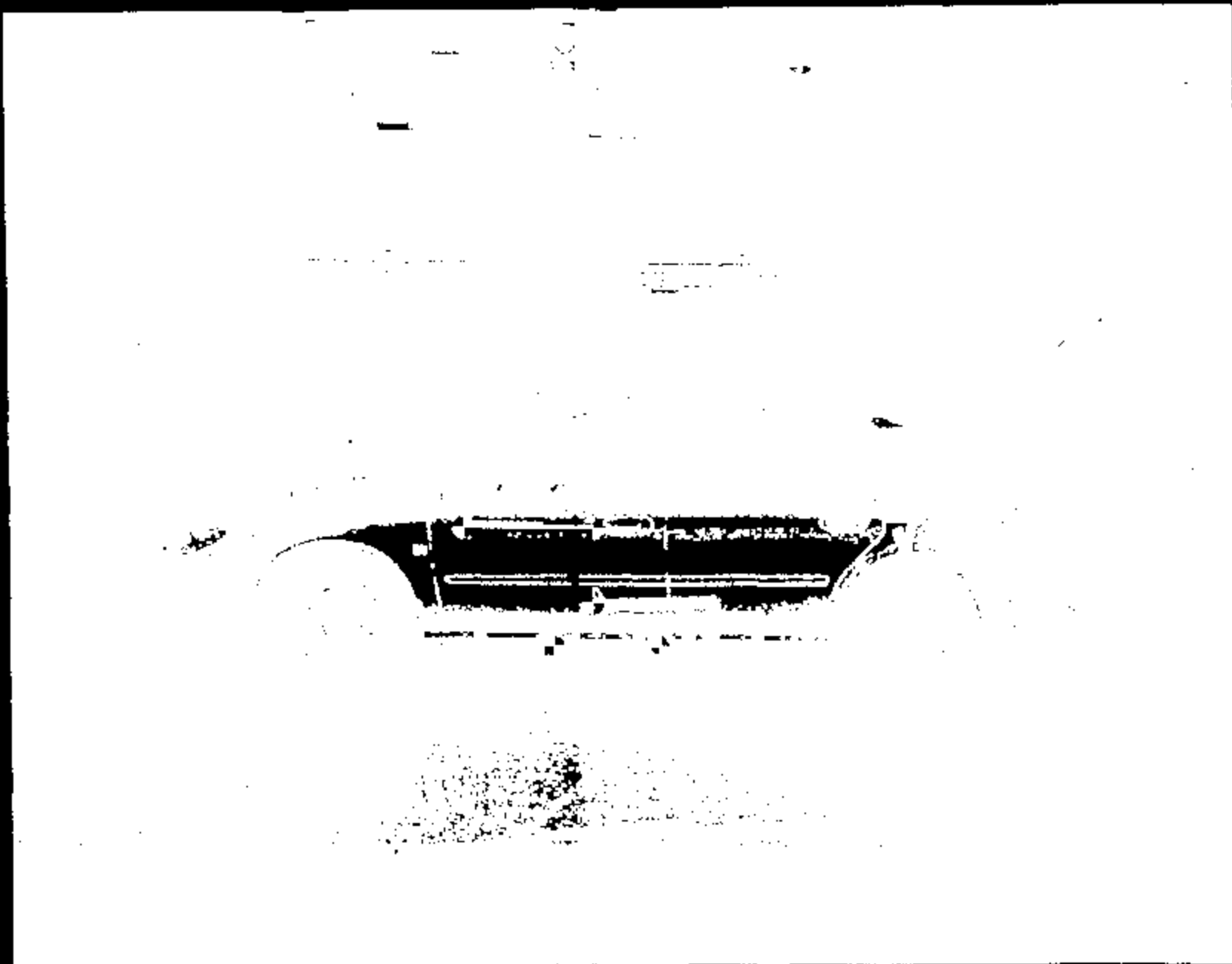
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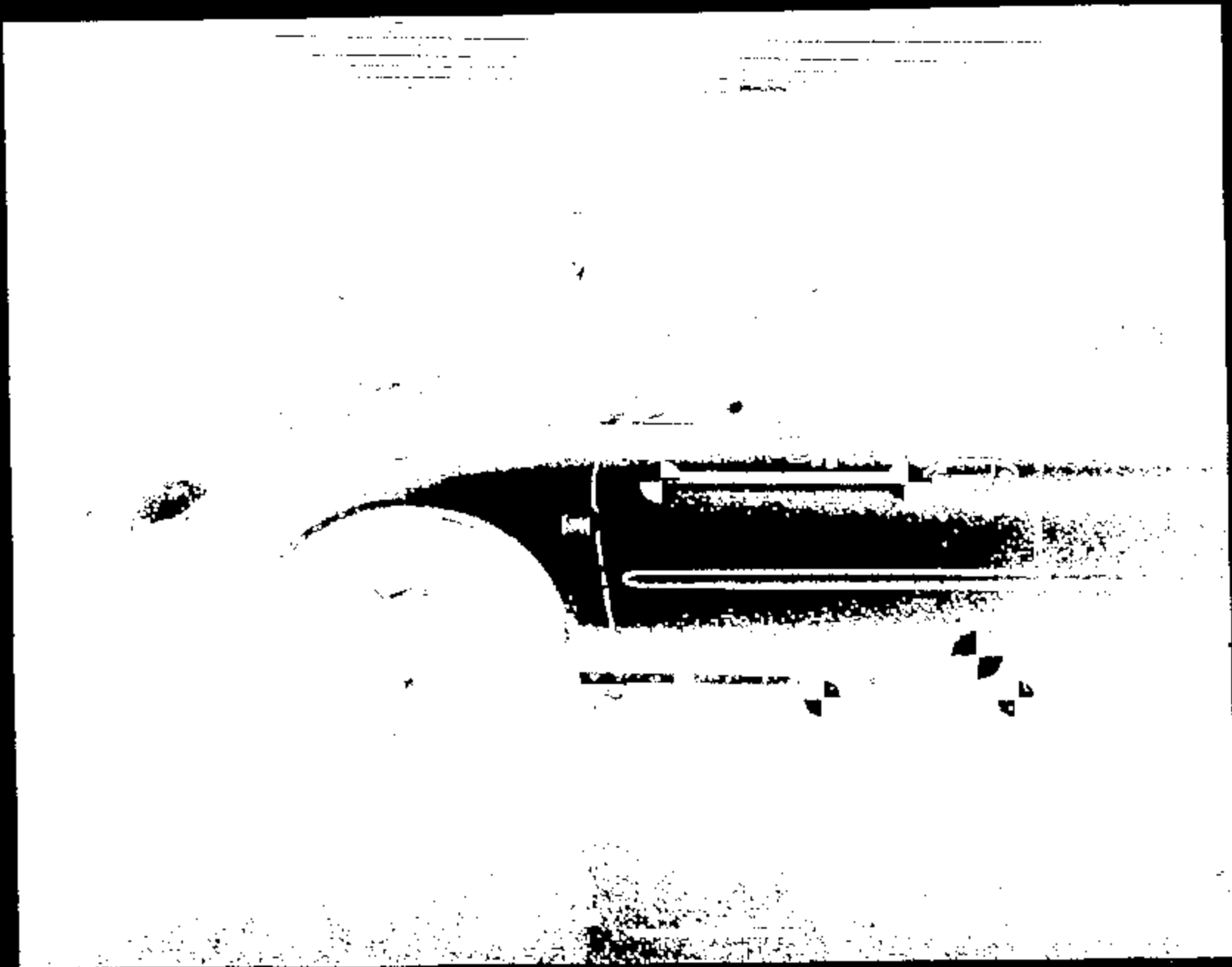
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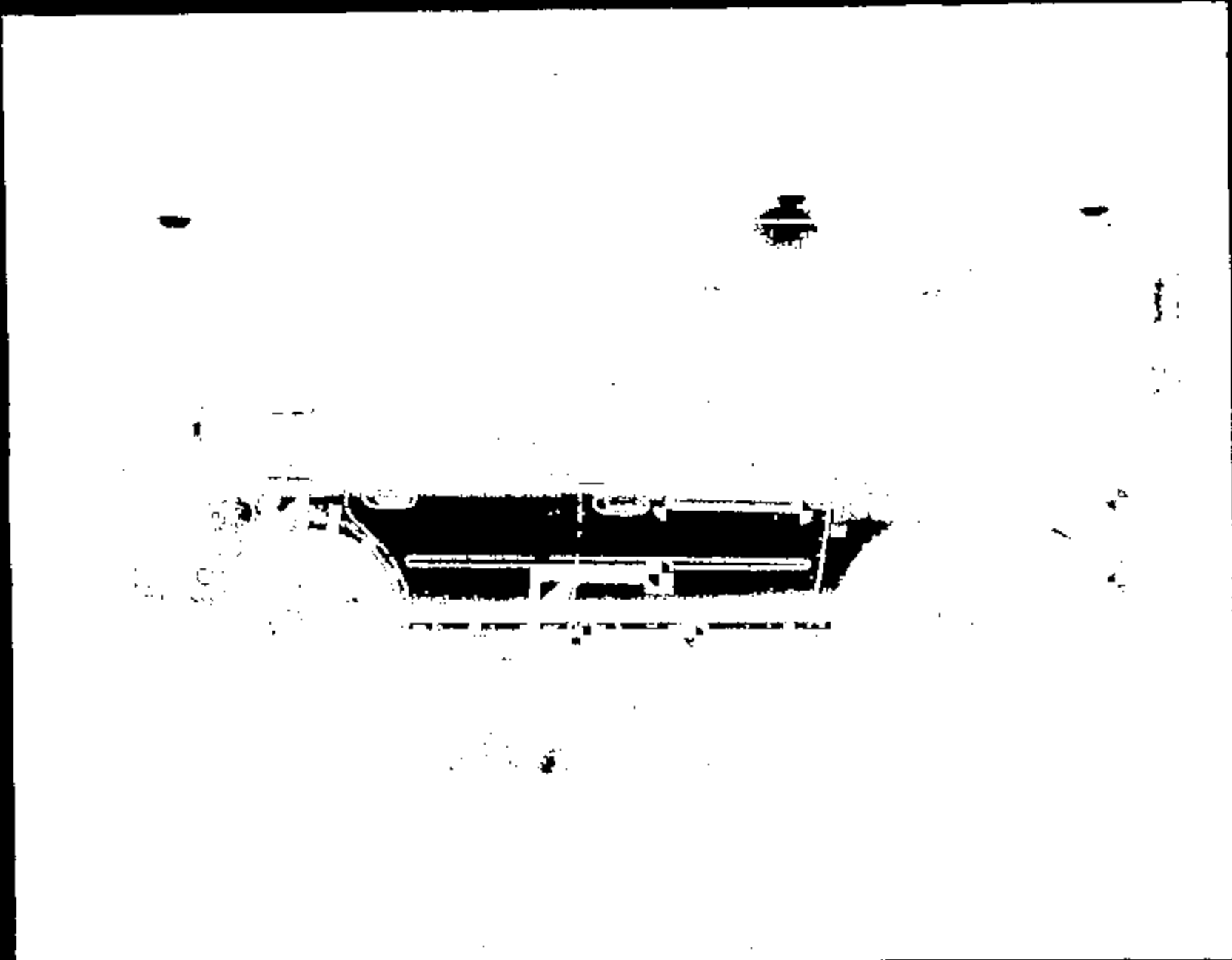


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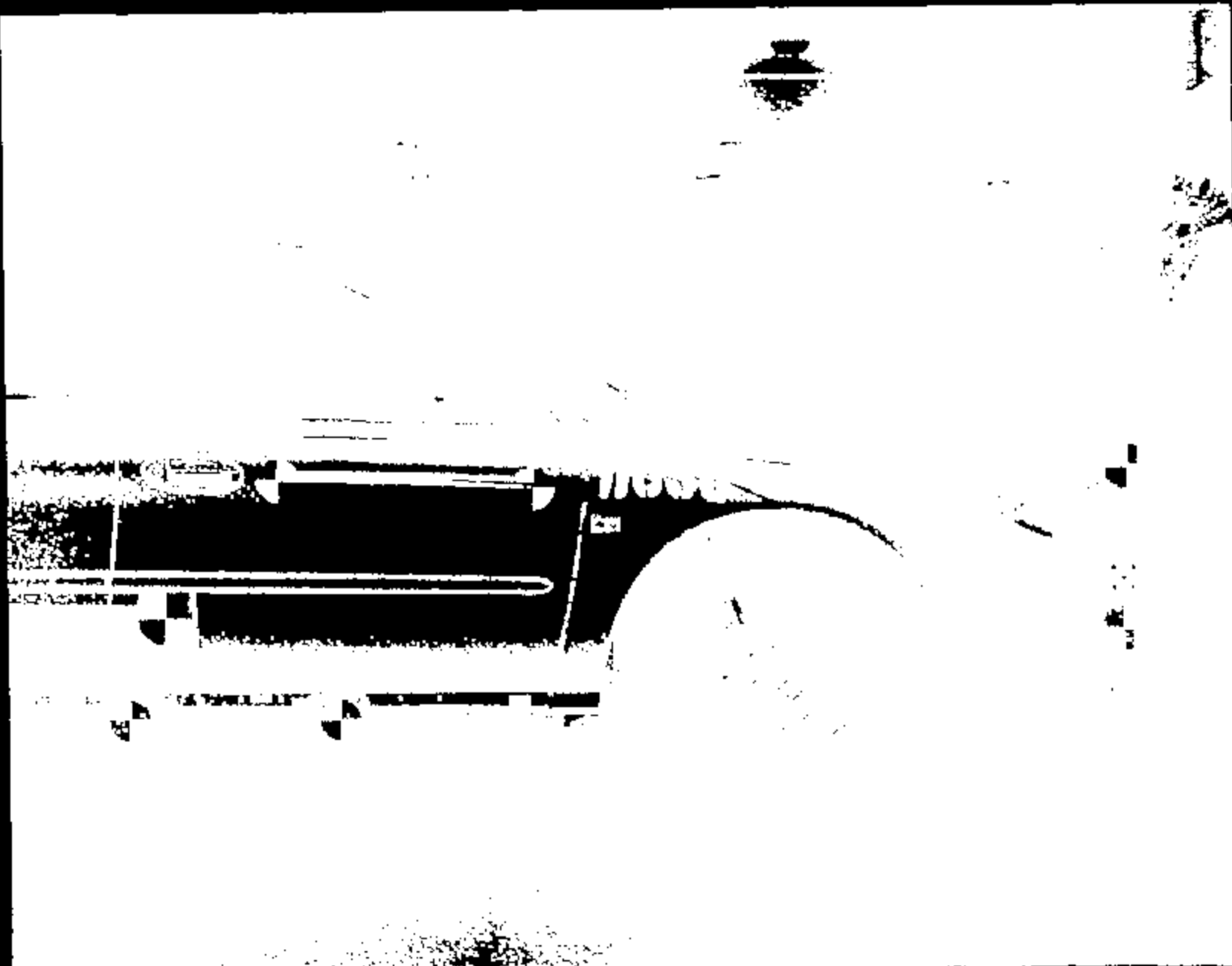
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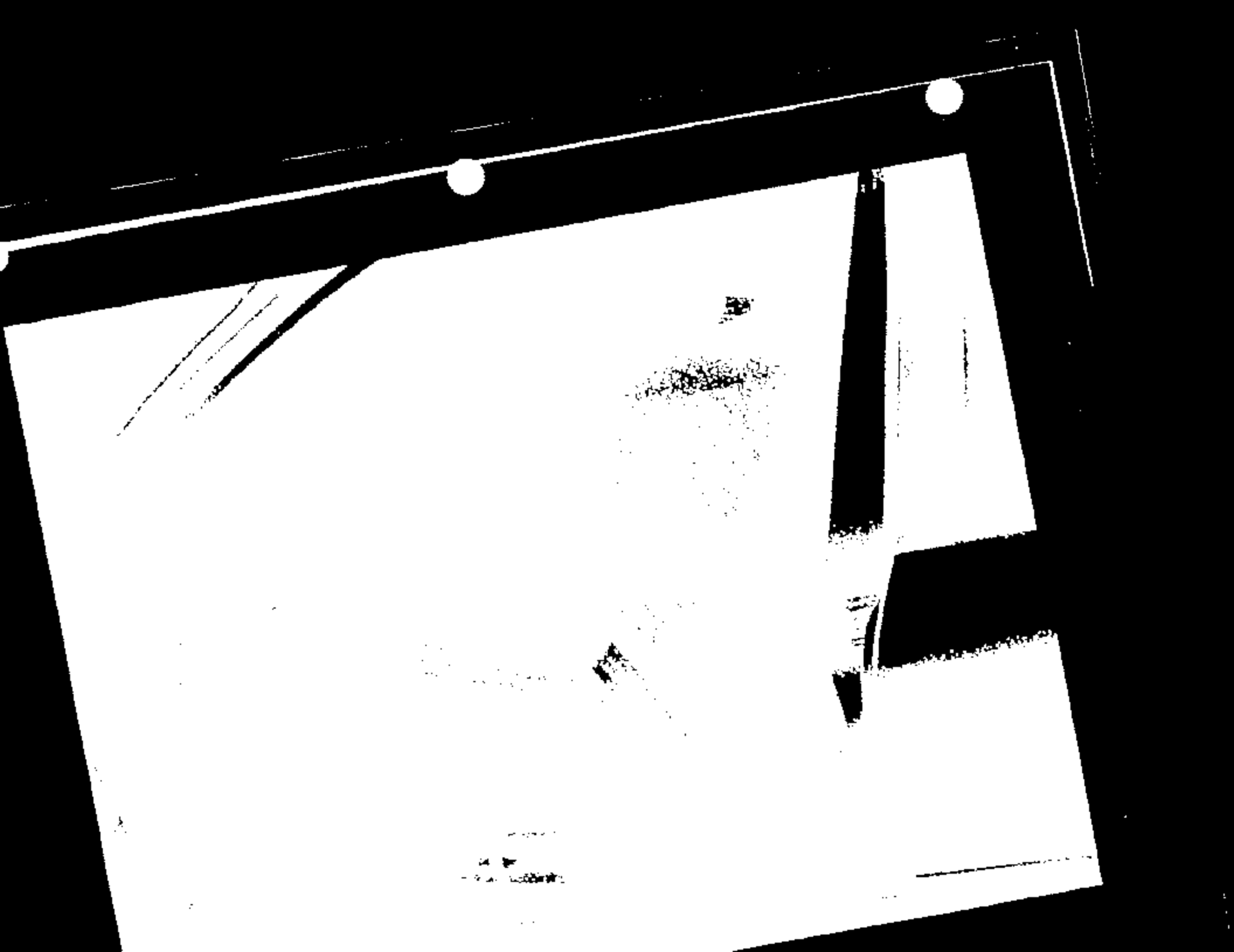
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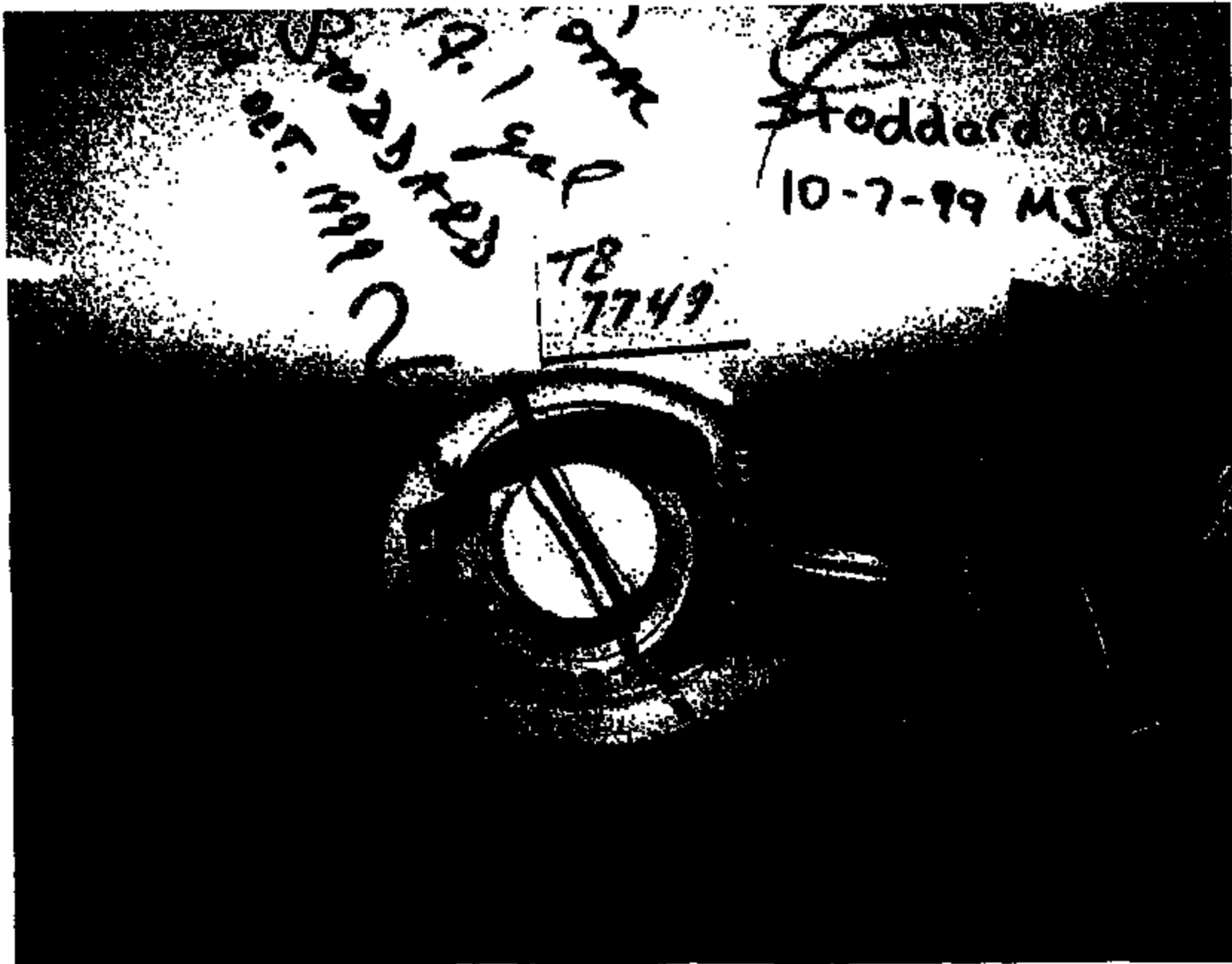
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Stoddard  
10-7-99 MJC

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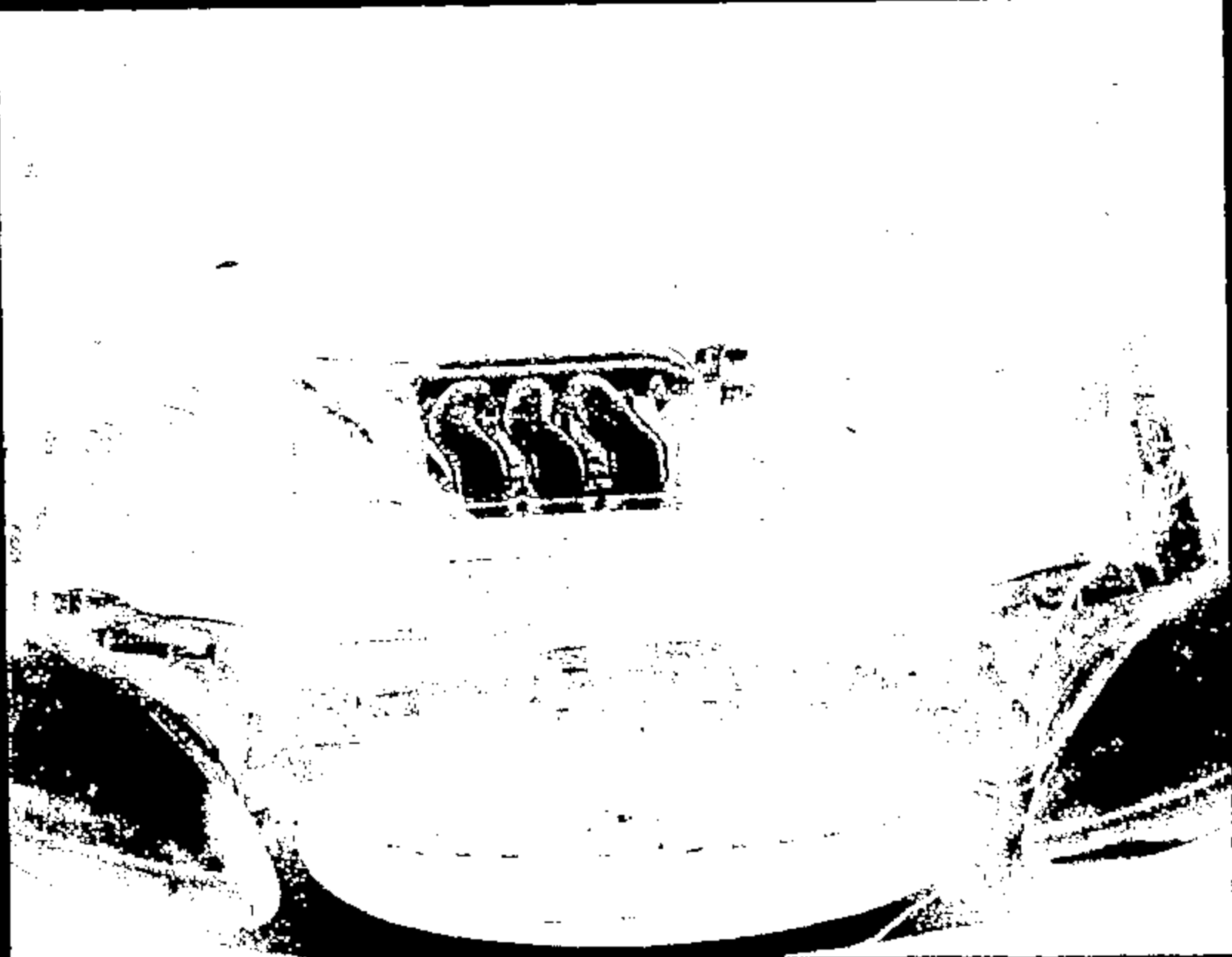


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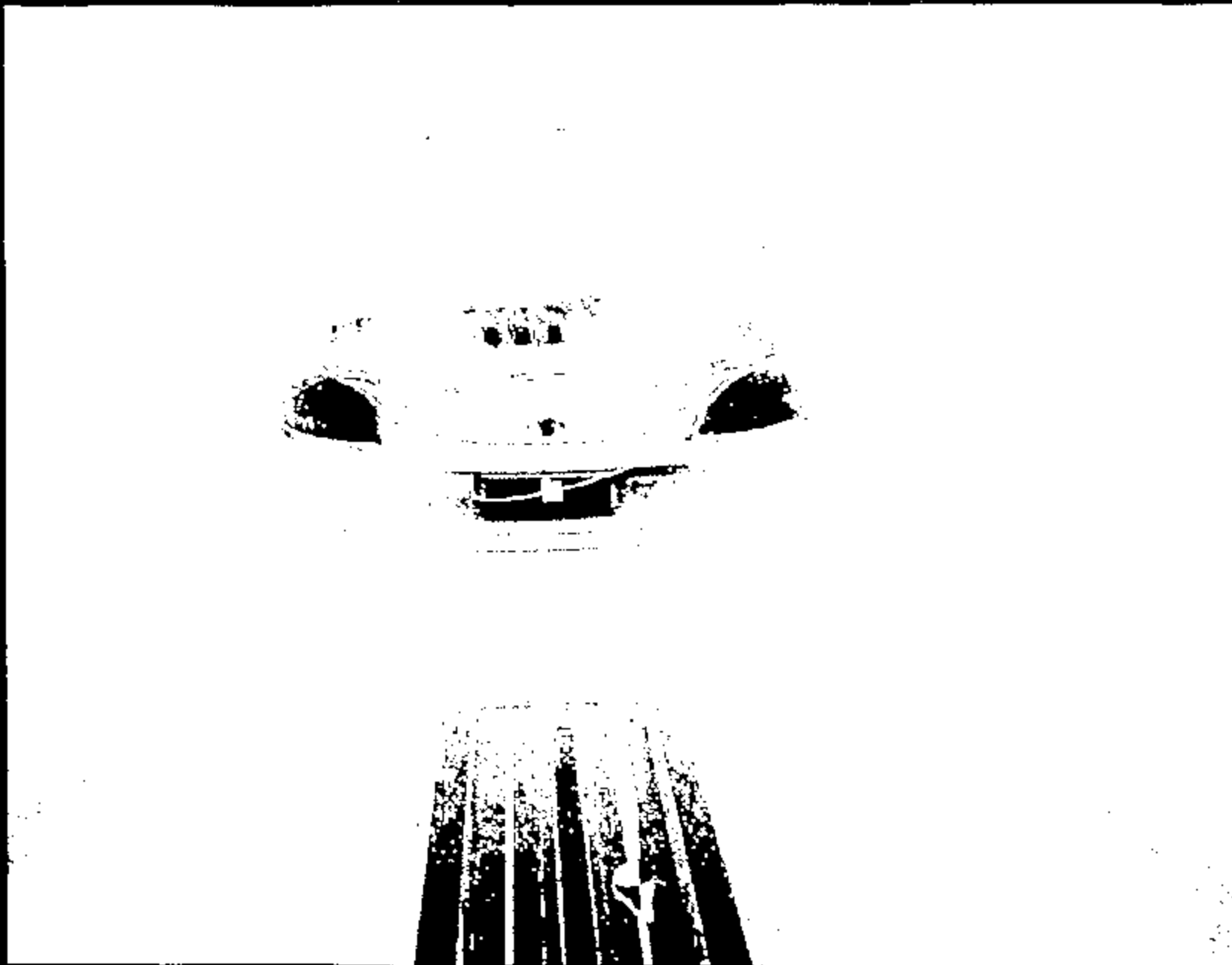
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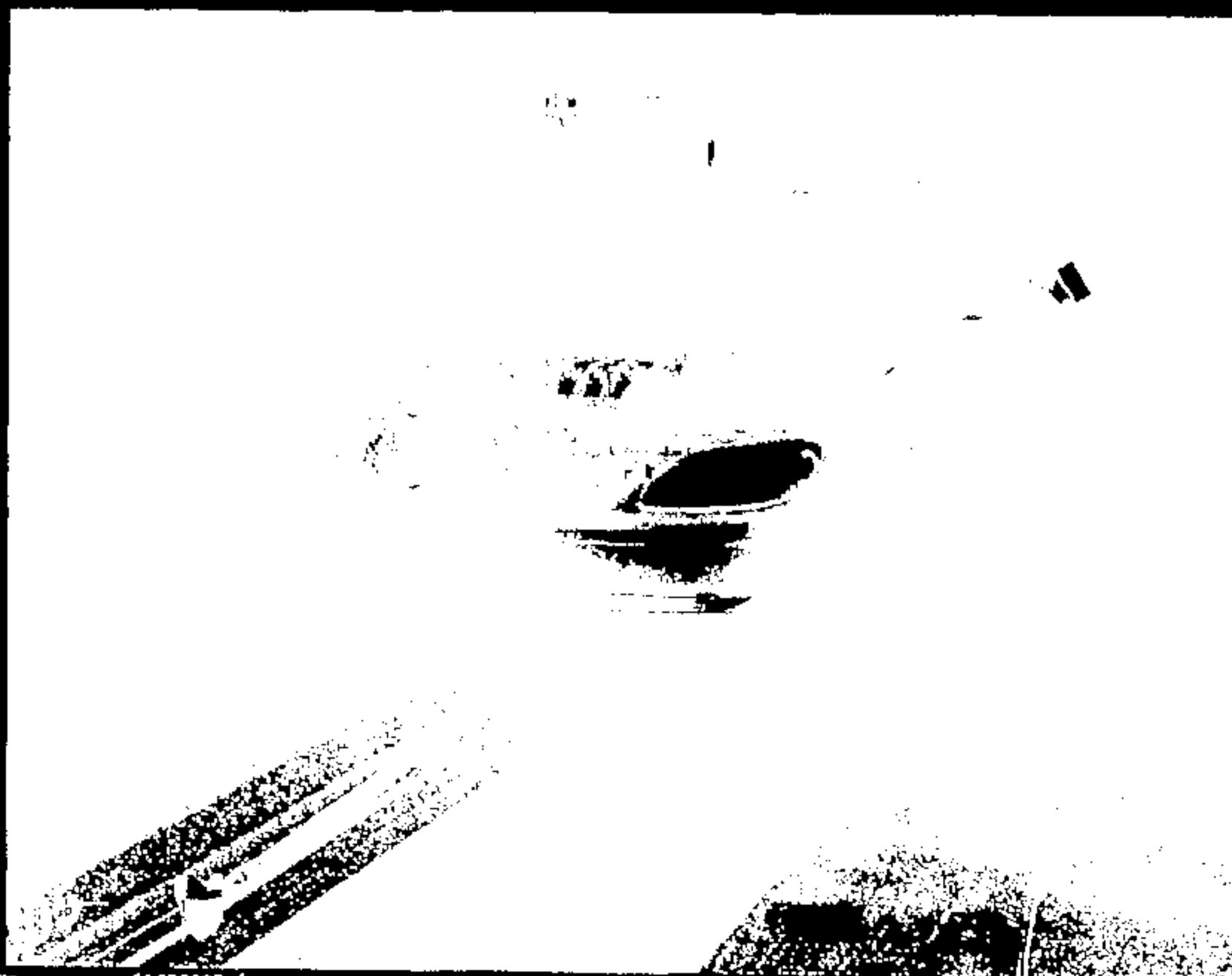
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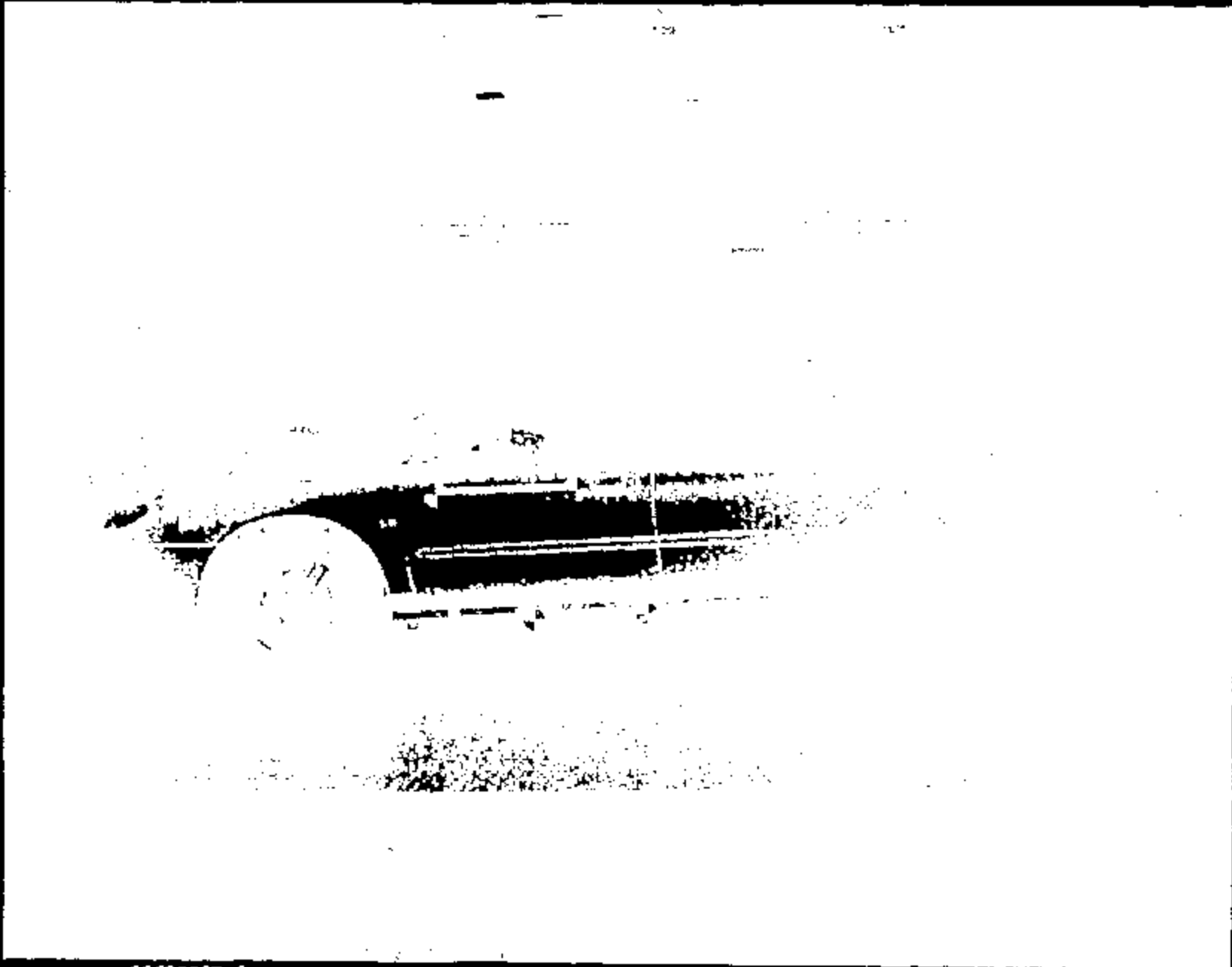


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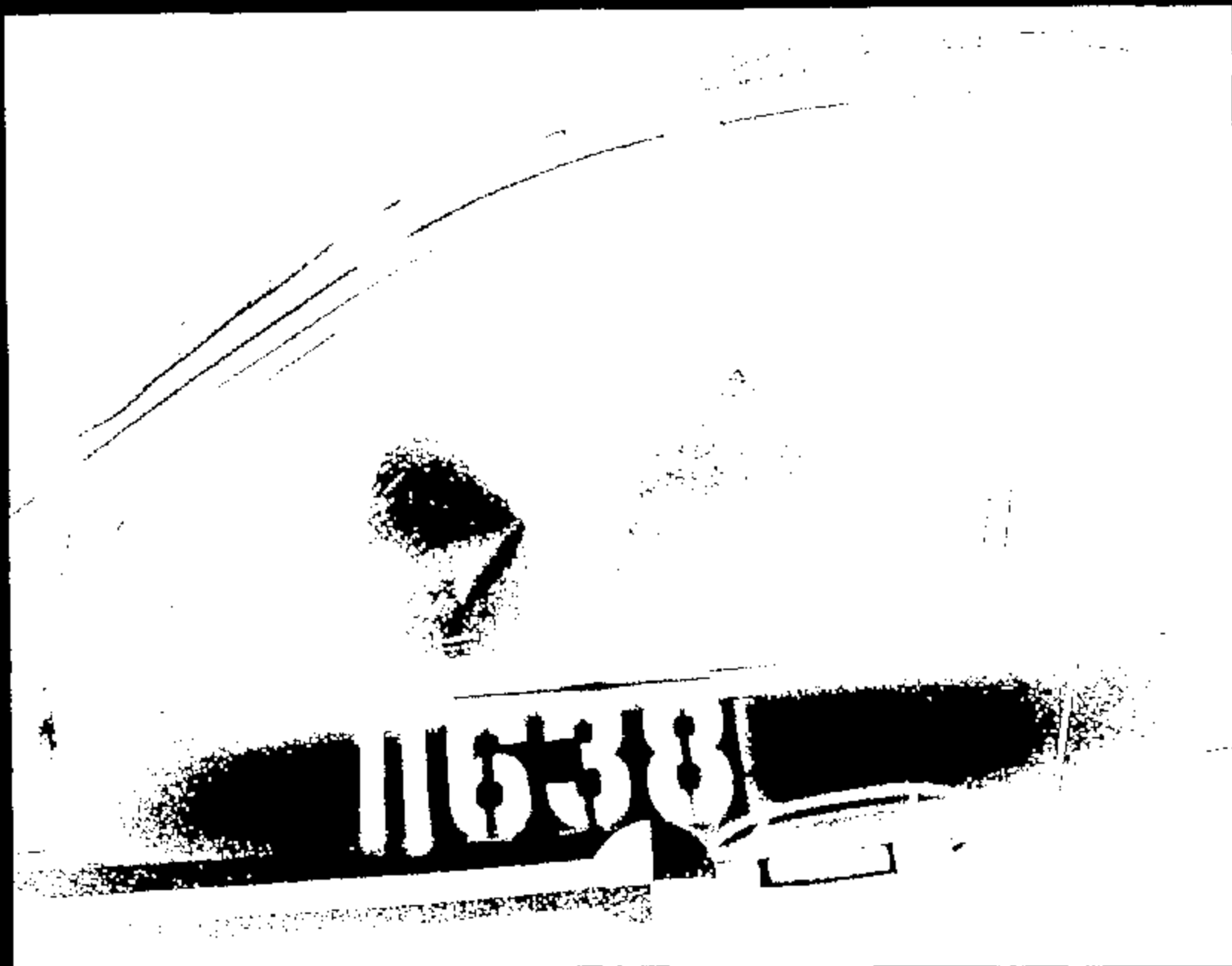
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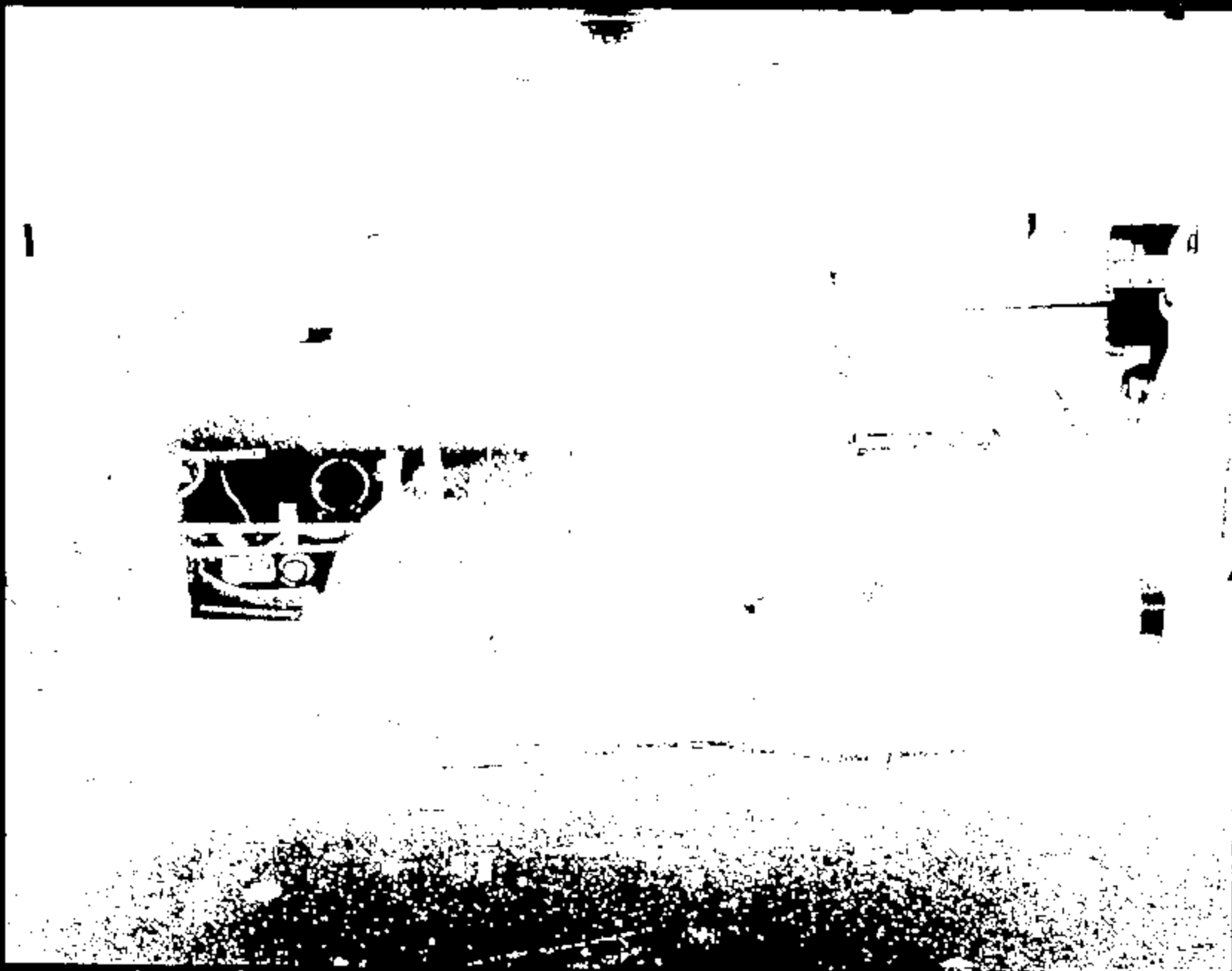
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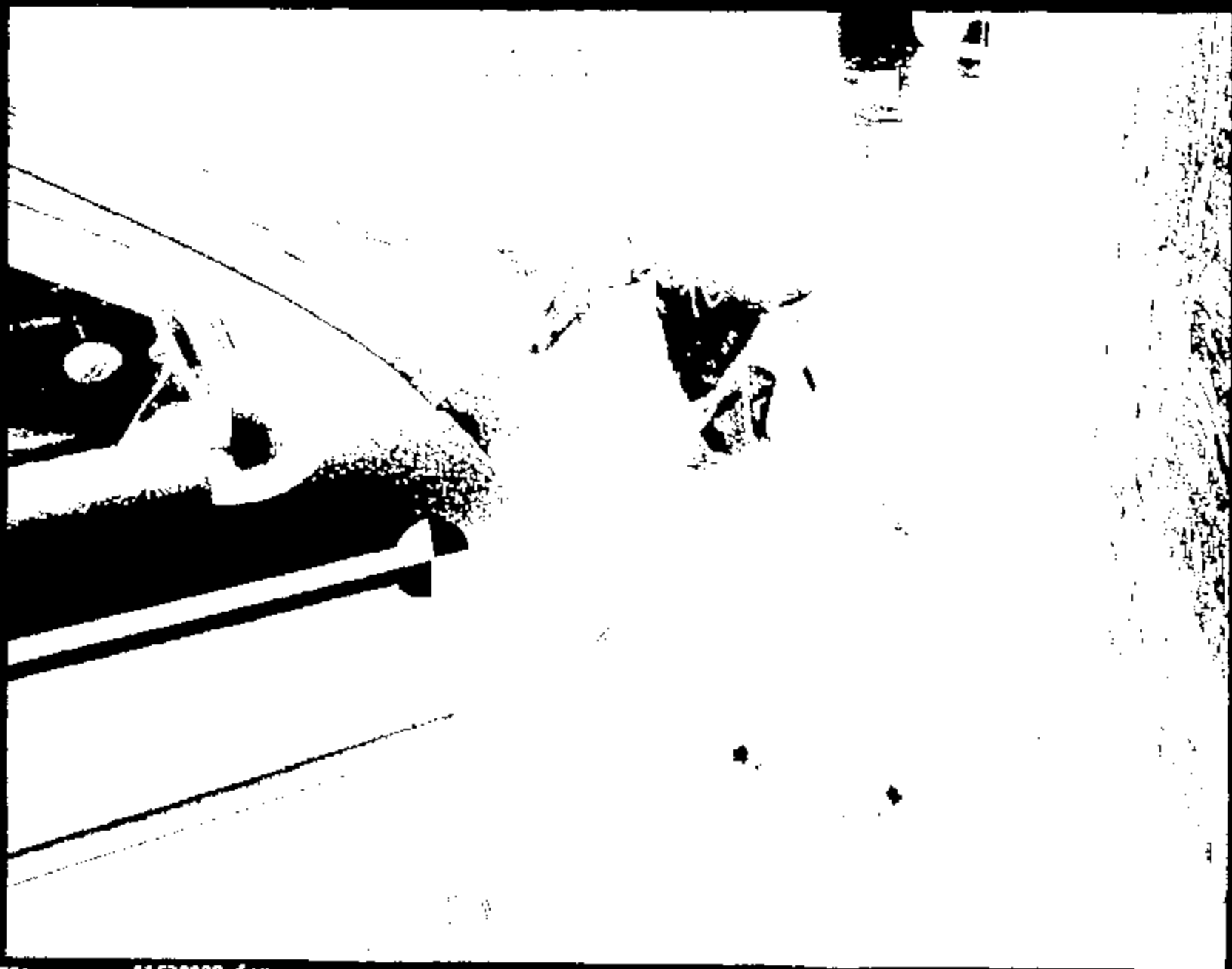




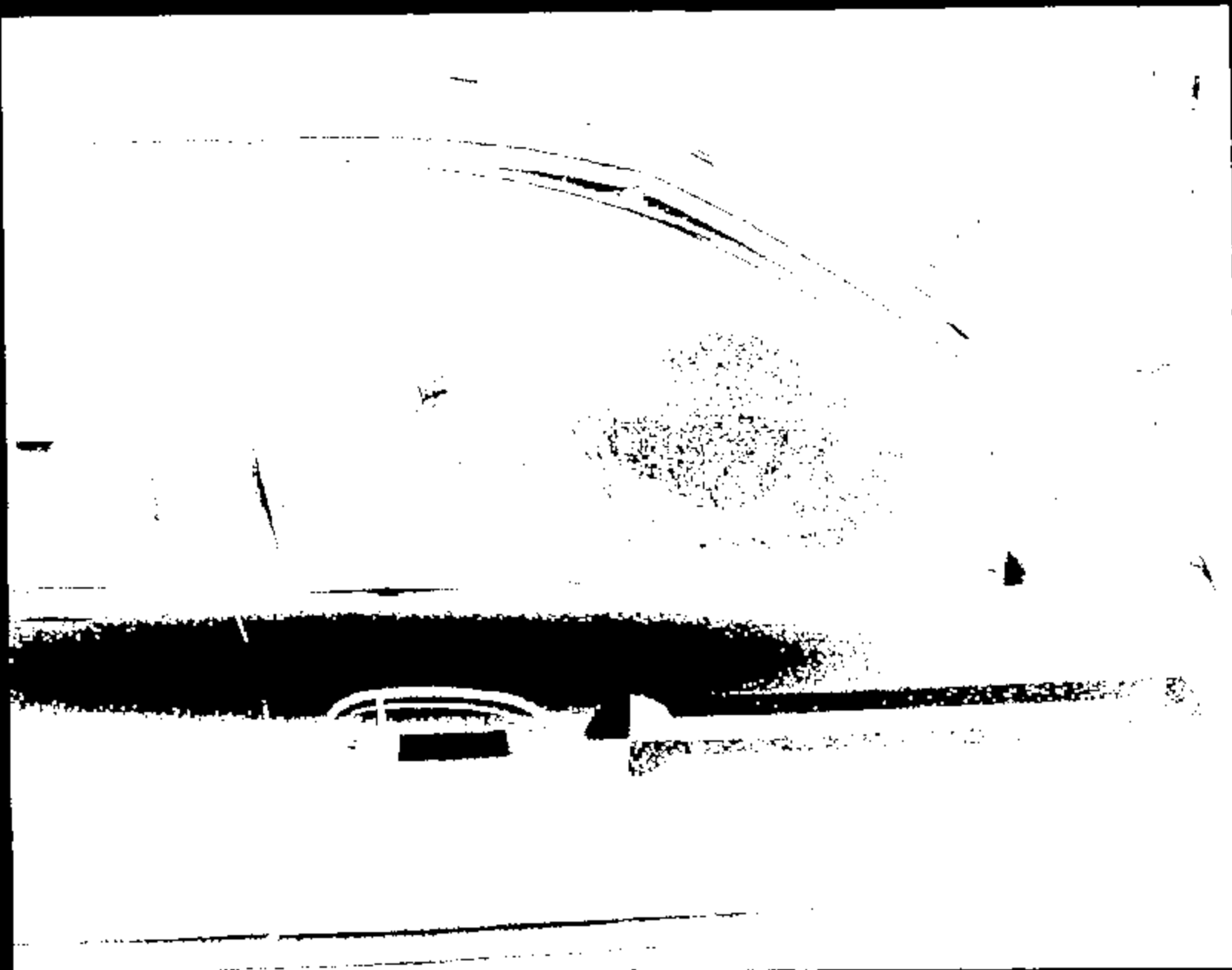
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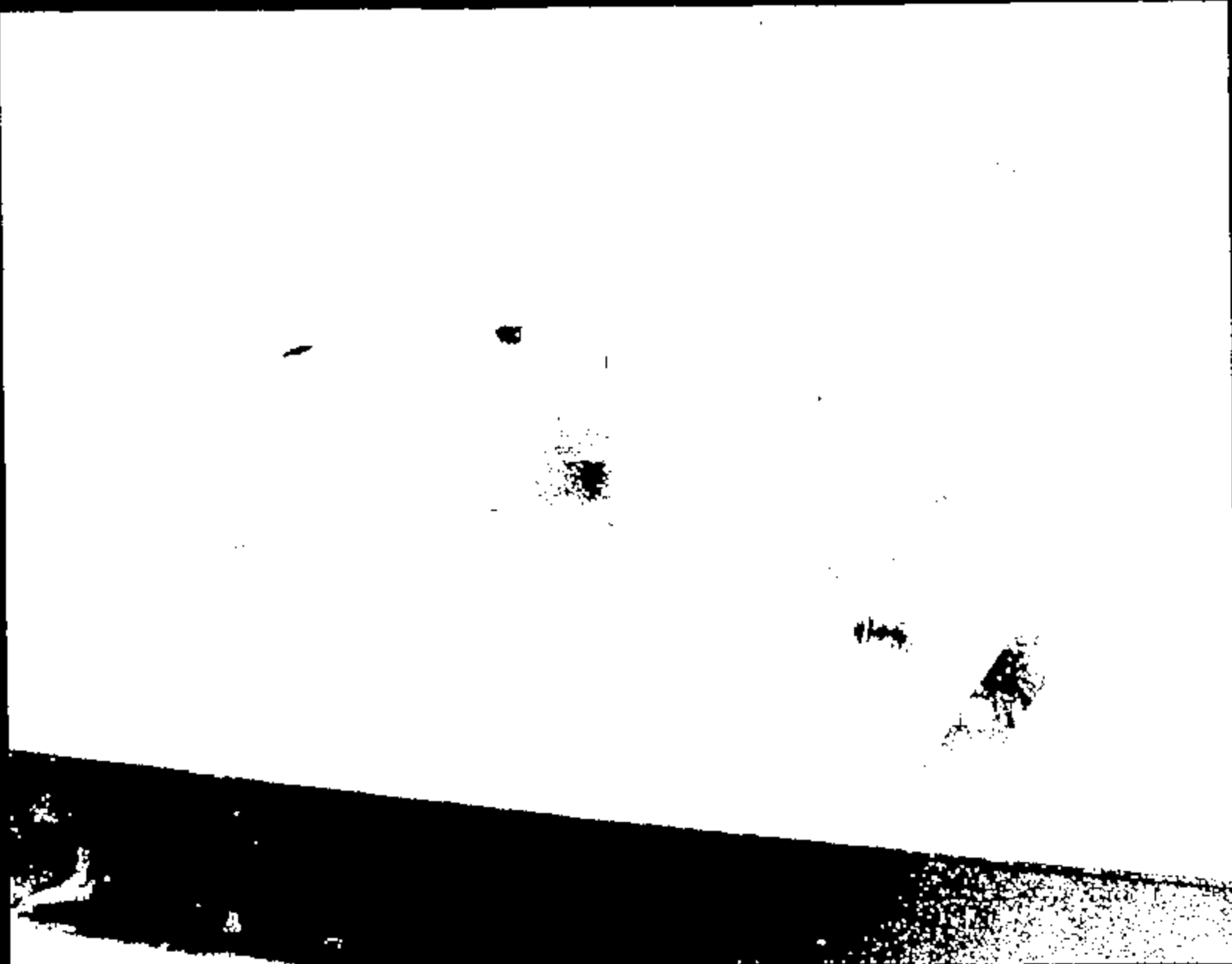
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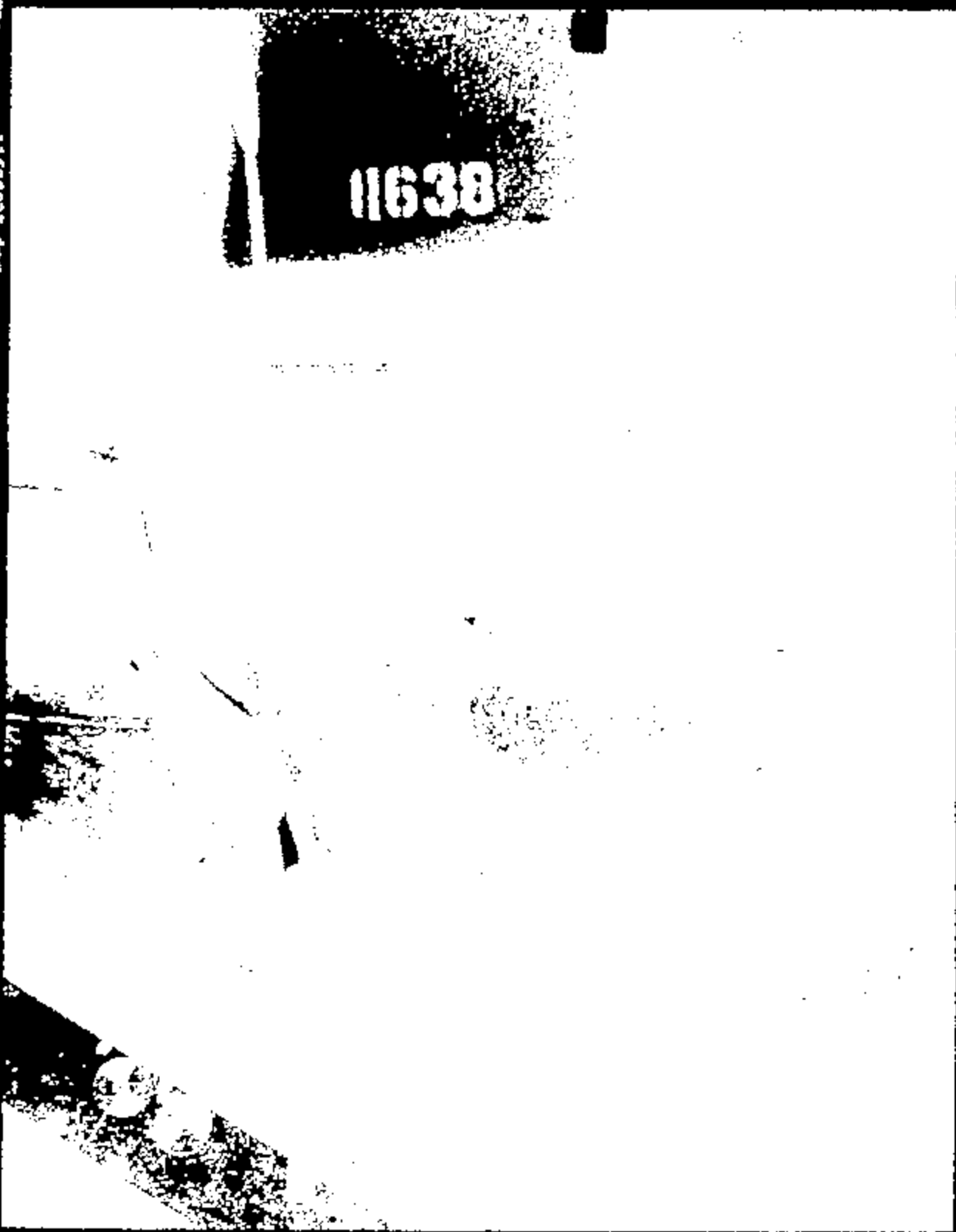
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11638





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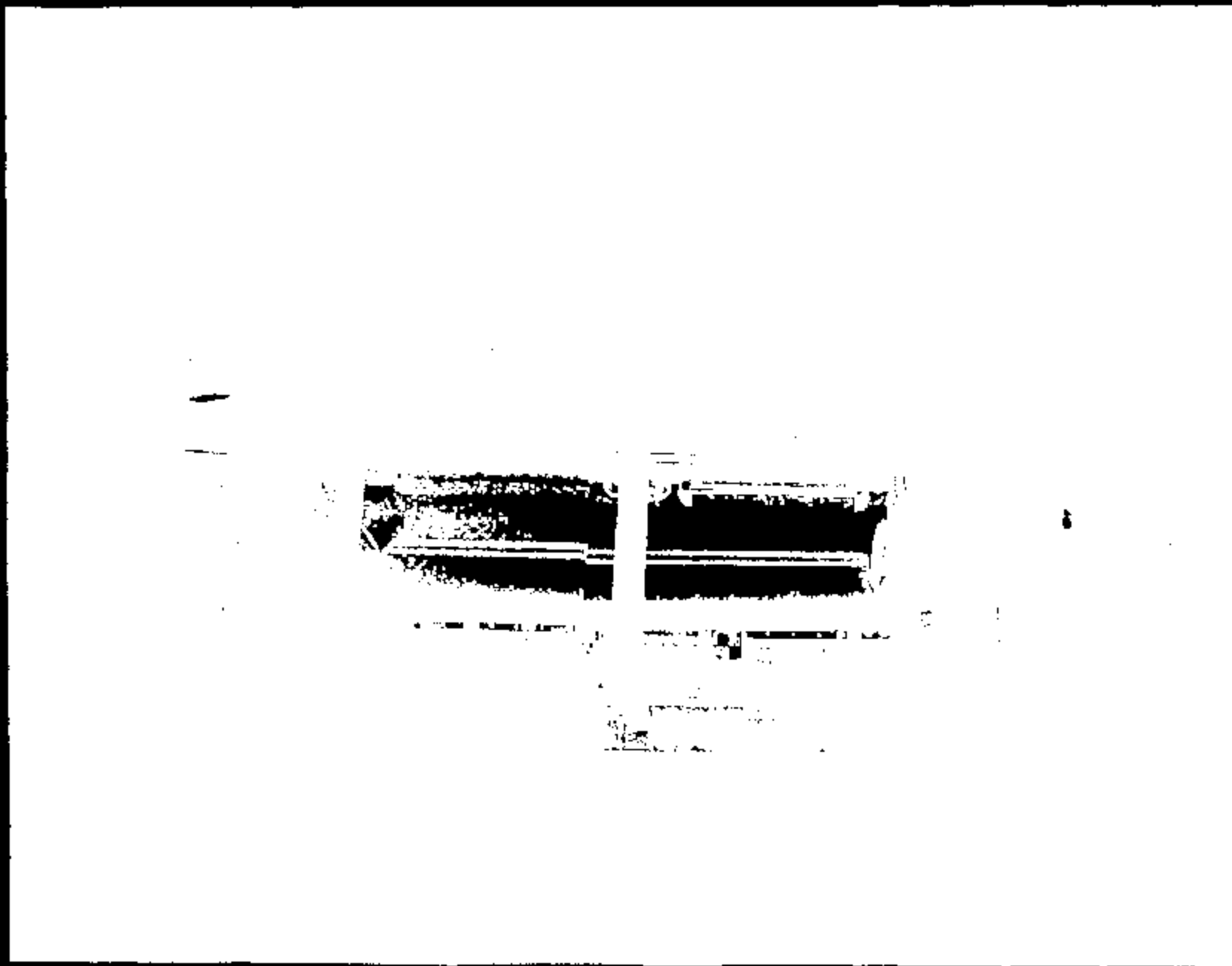
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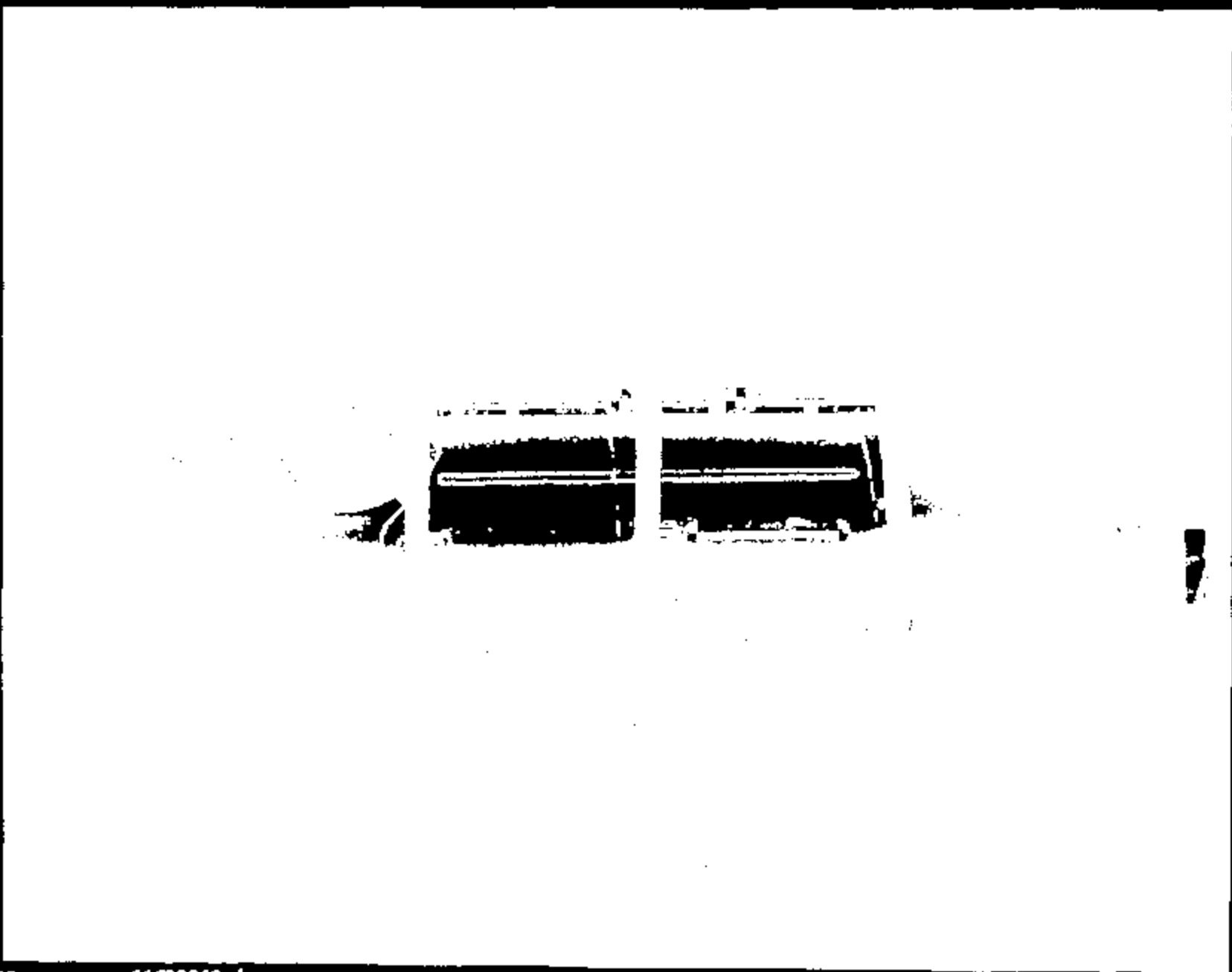
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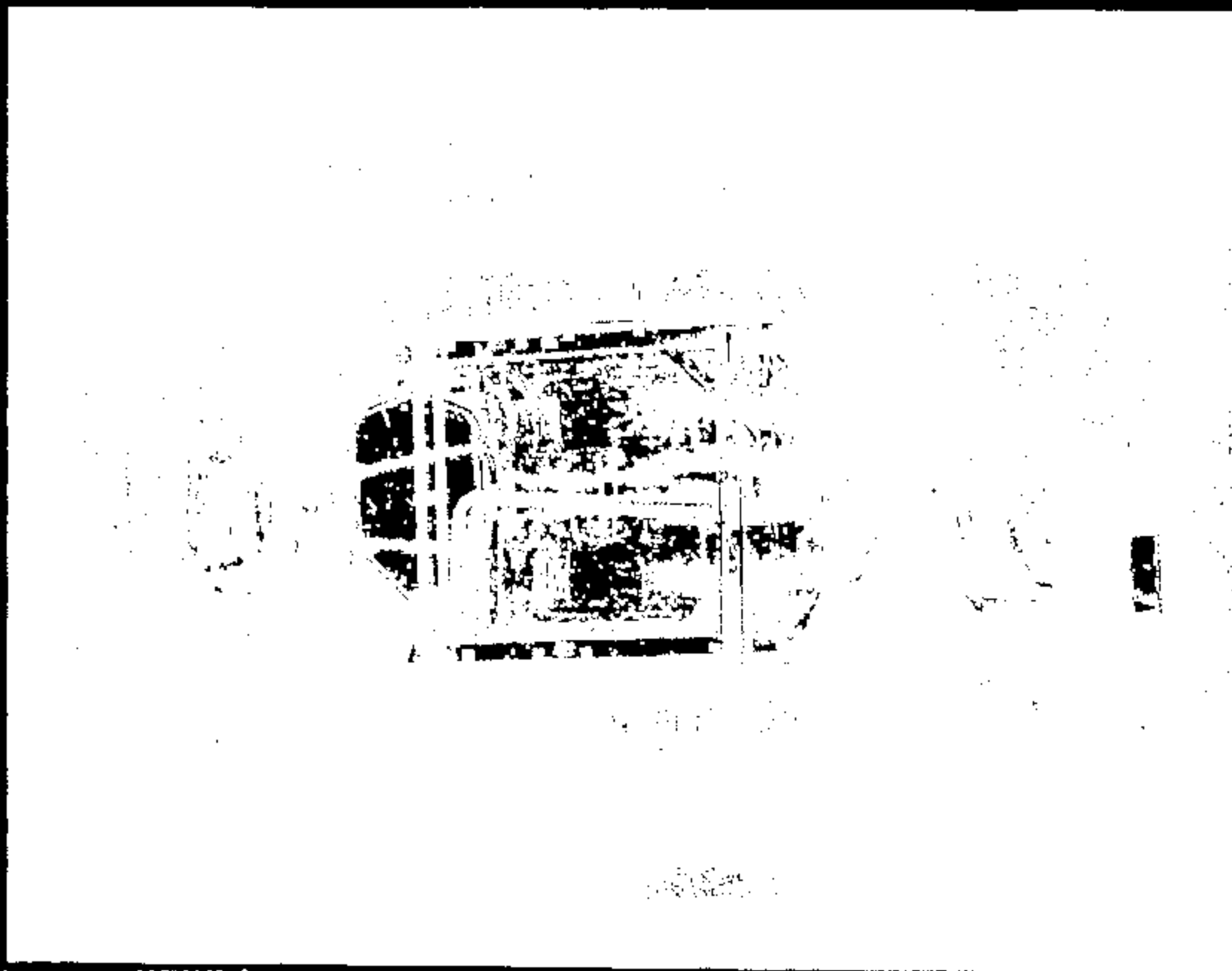
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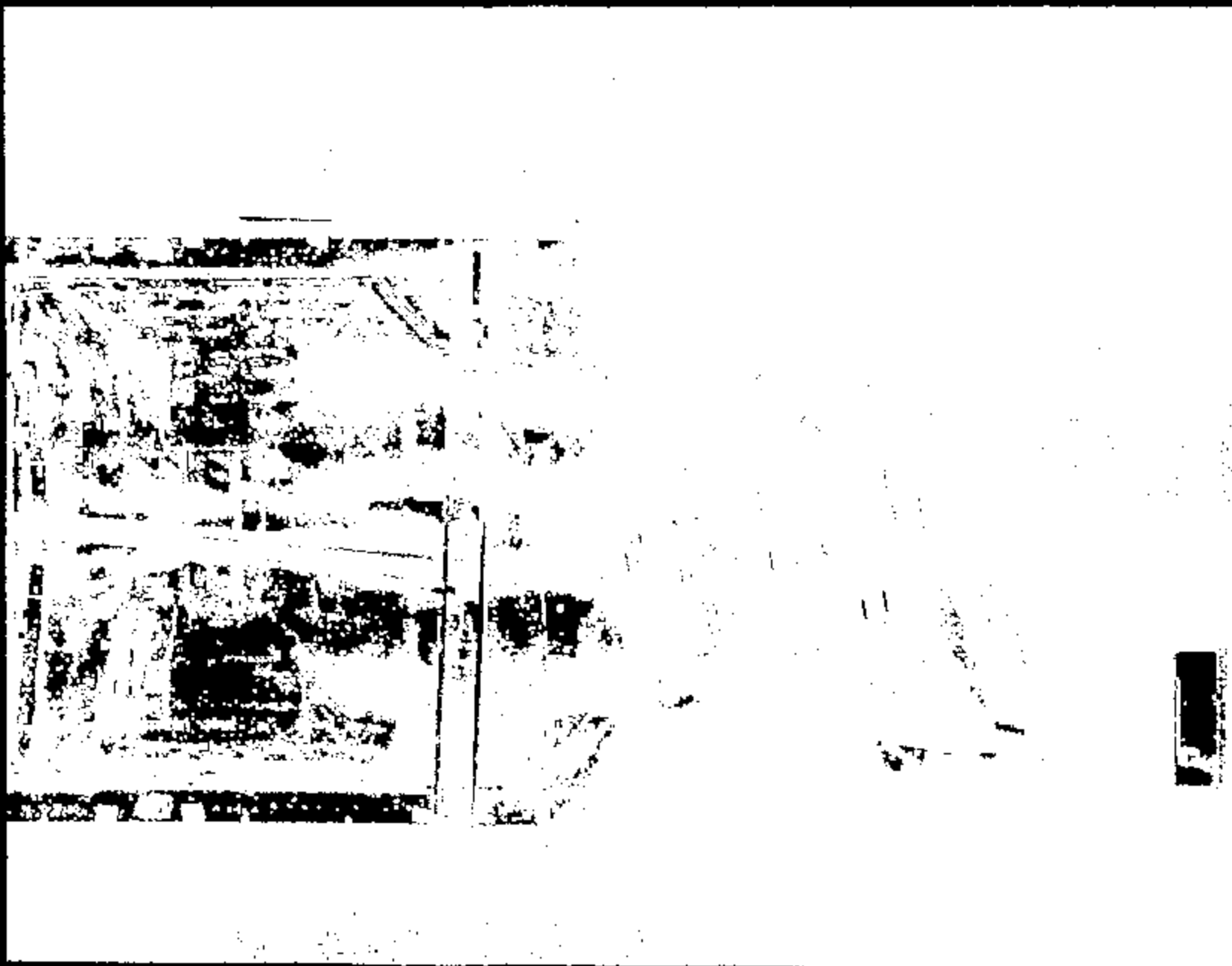
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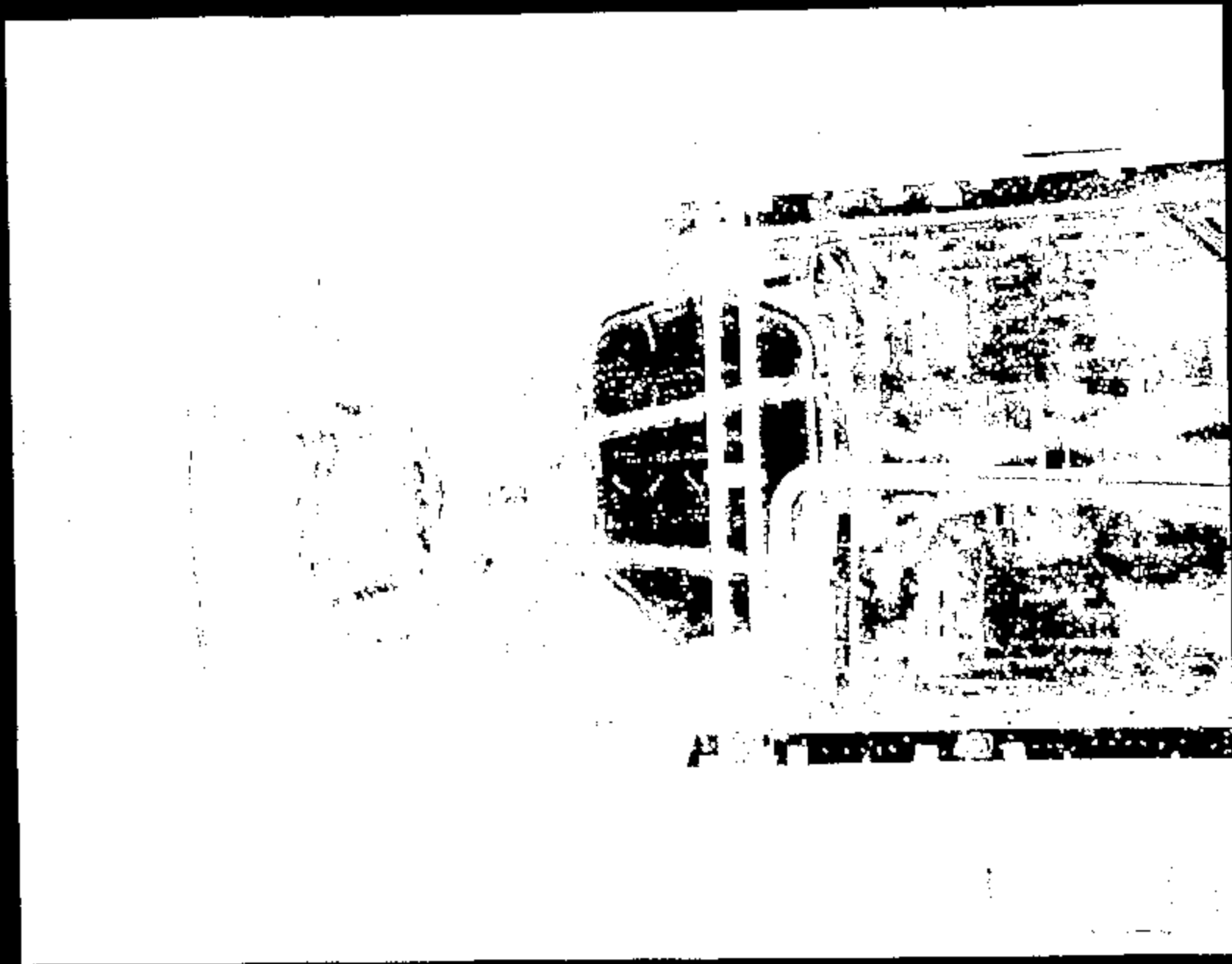
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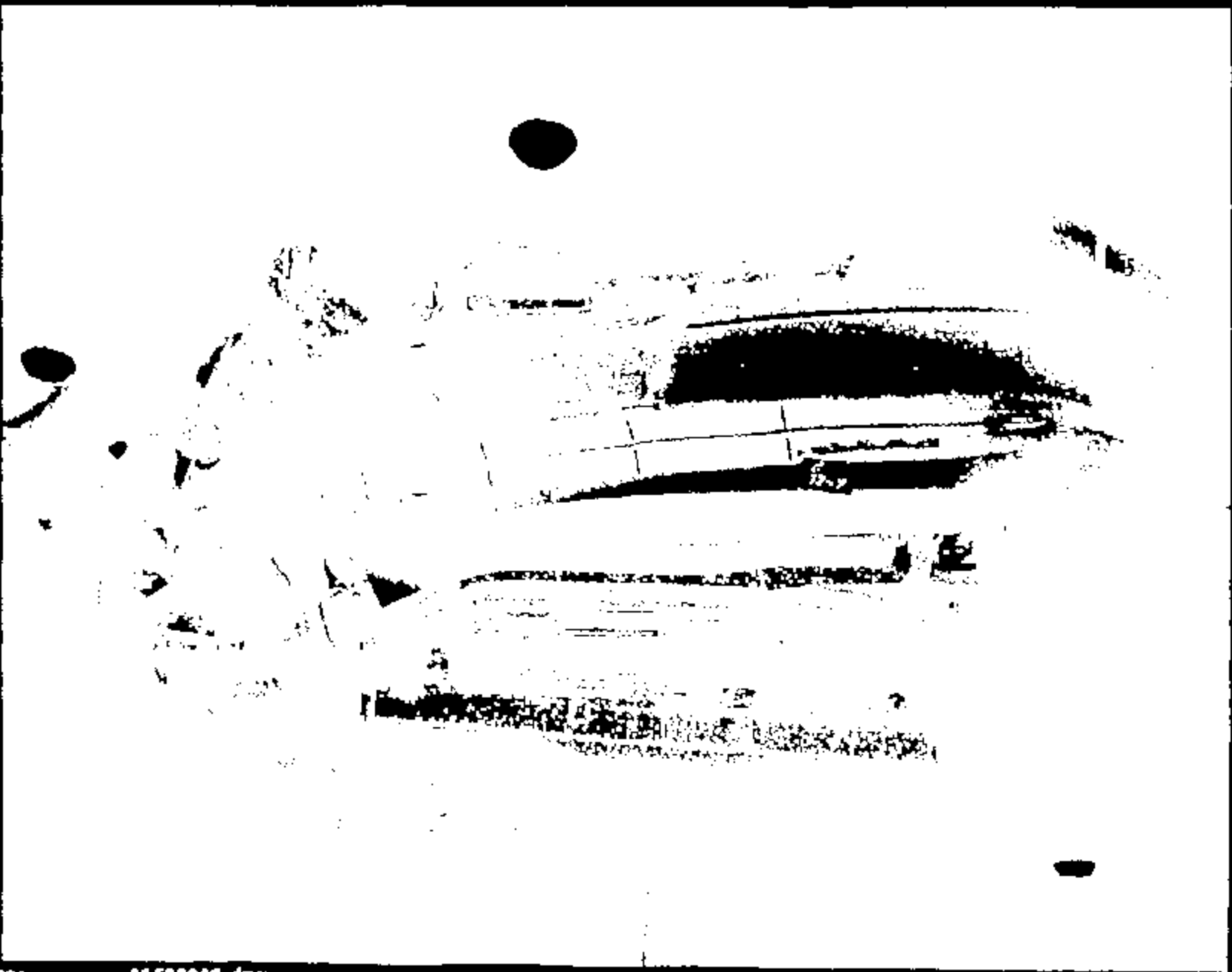


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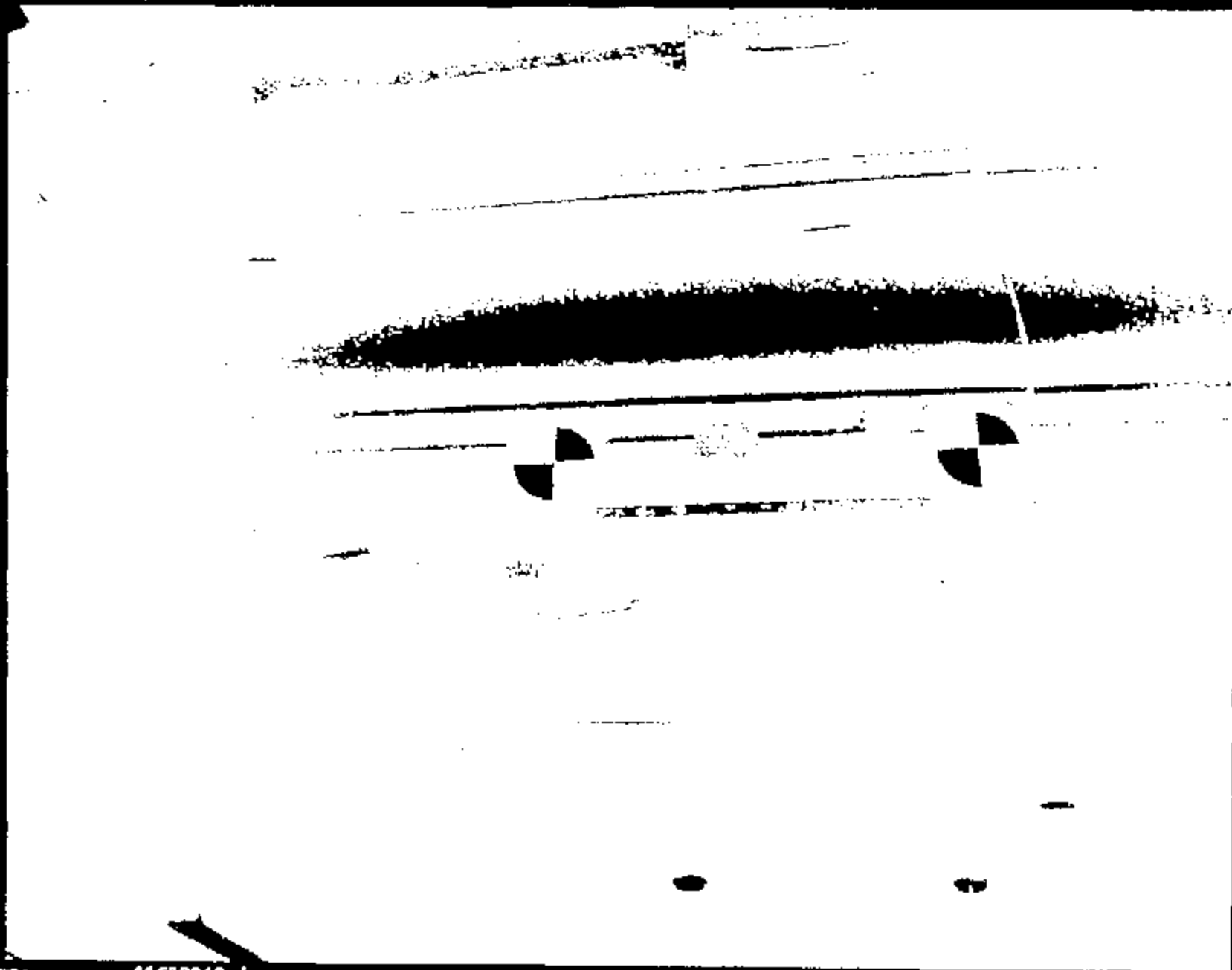
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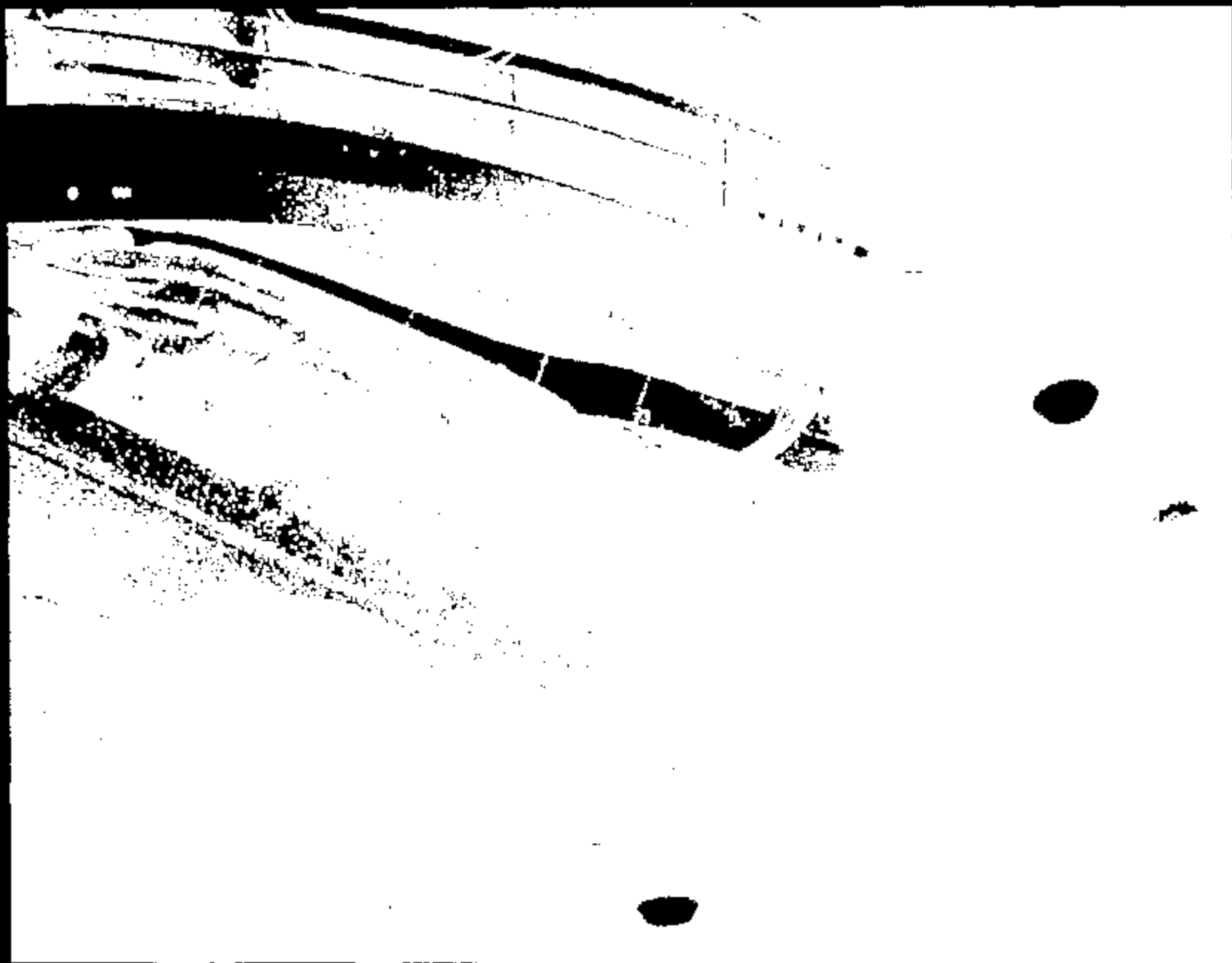
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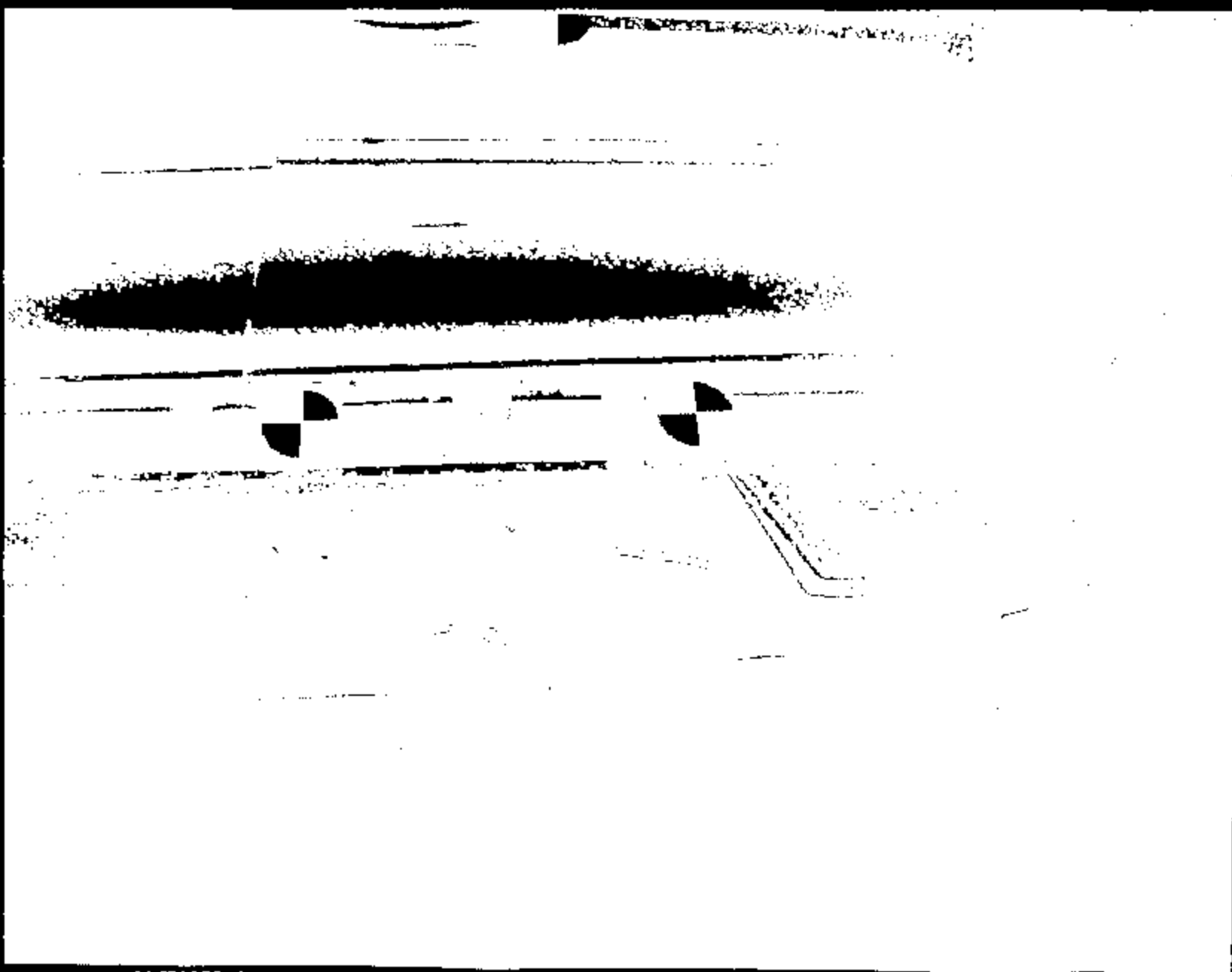
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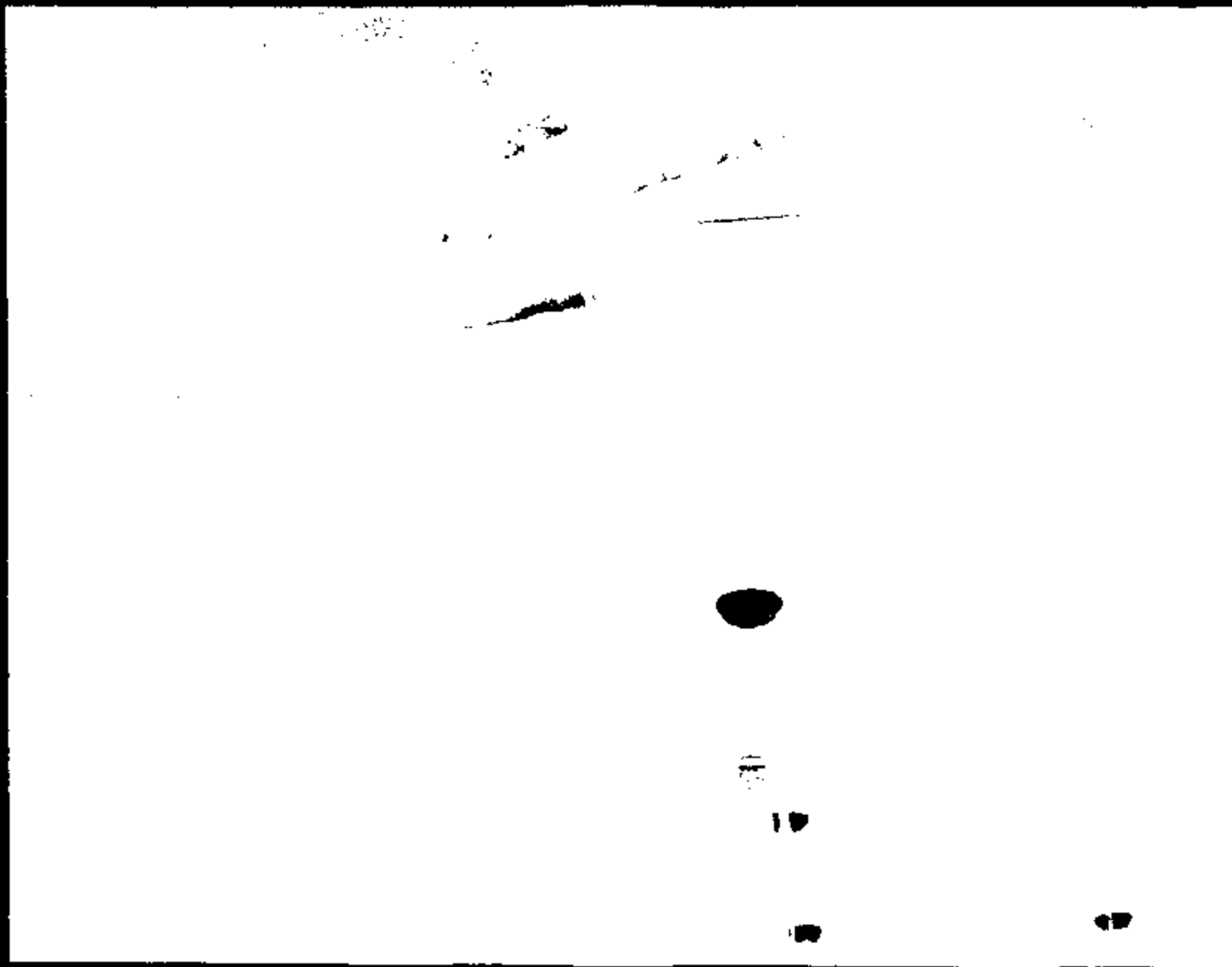


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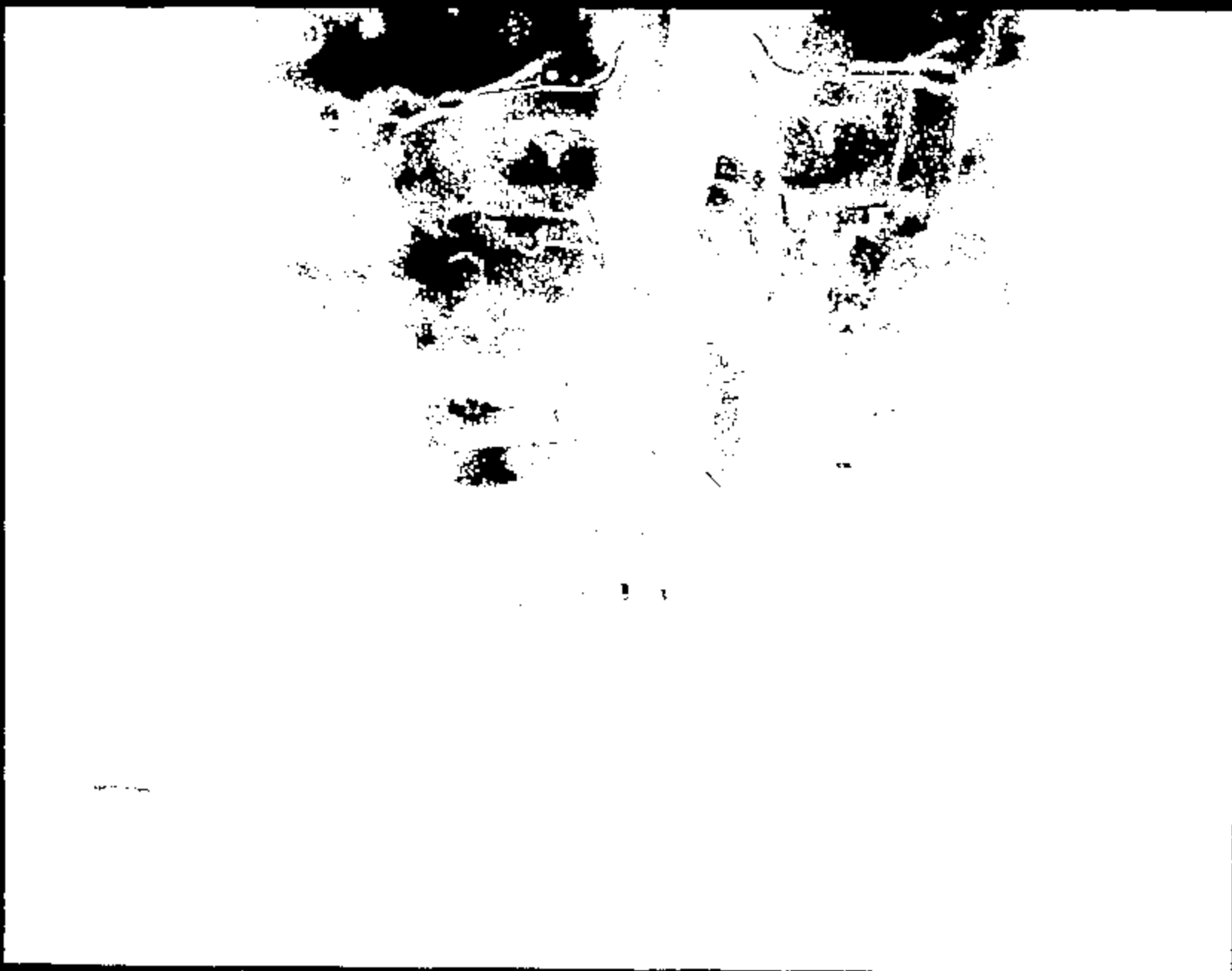
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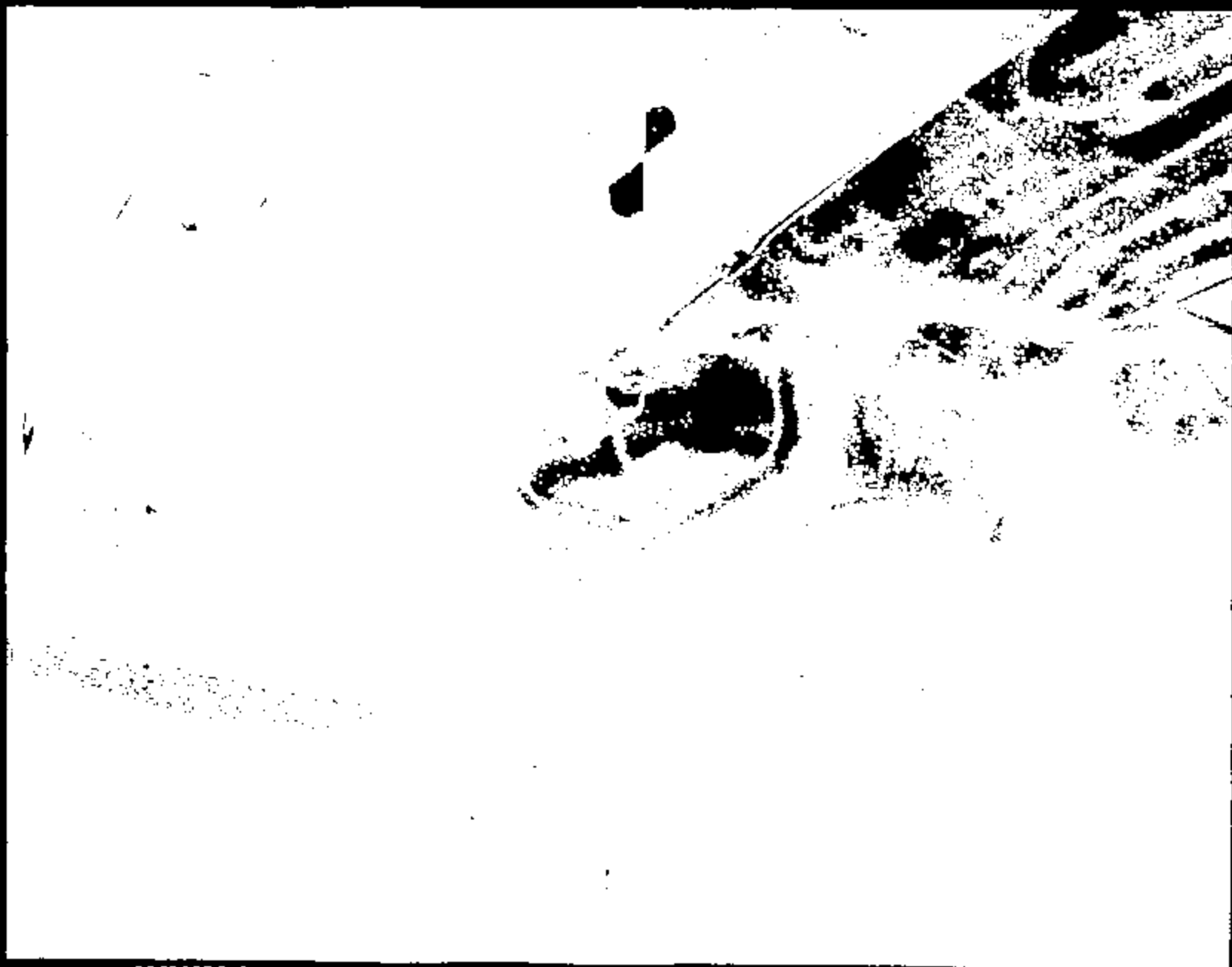


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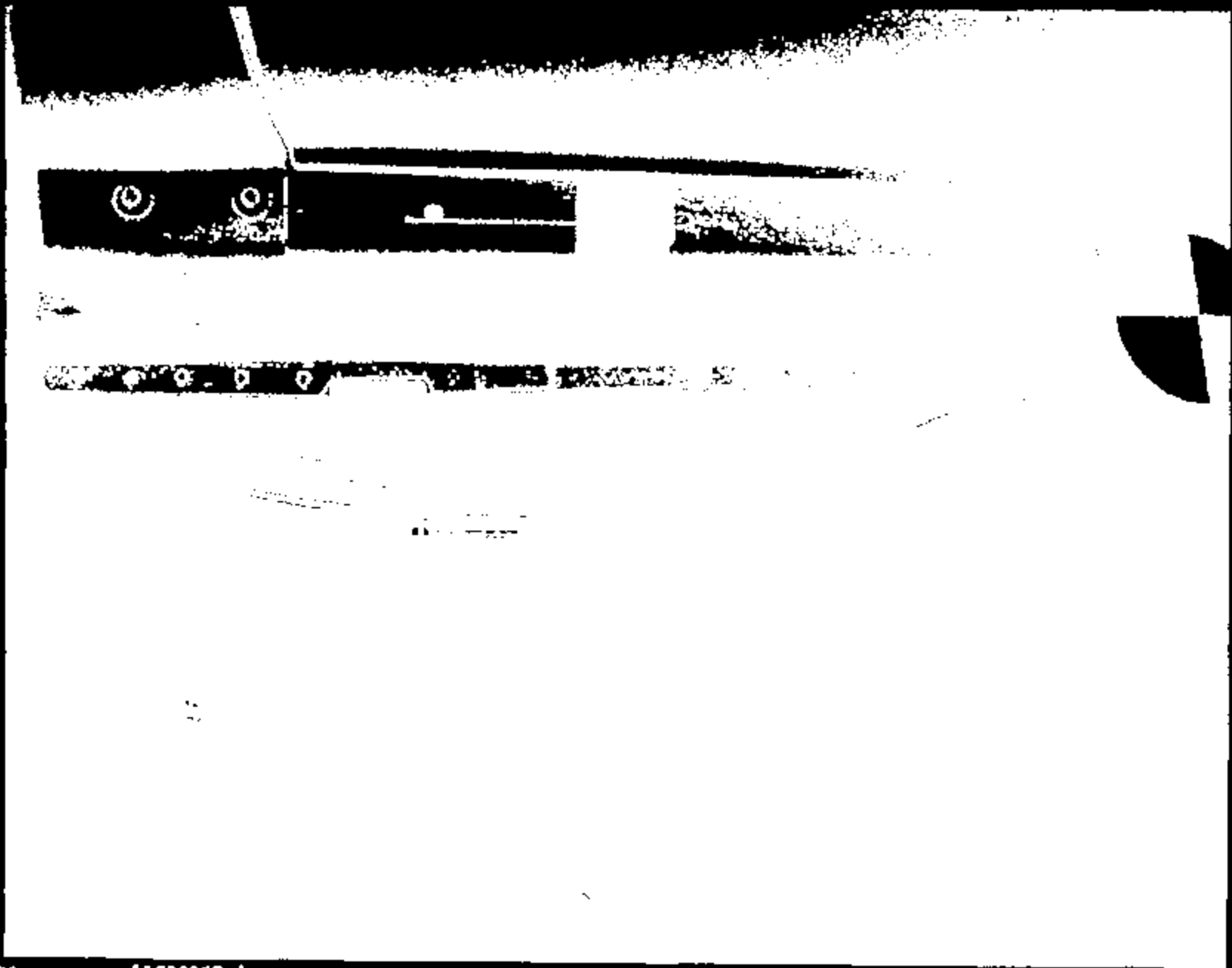
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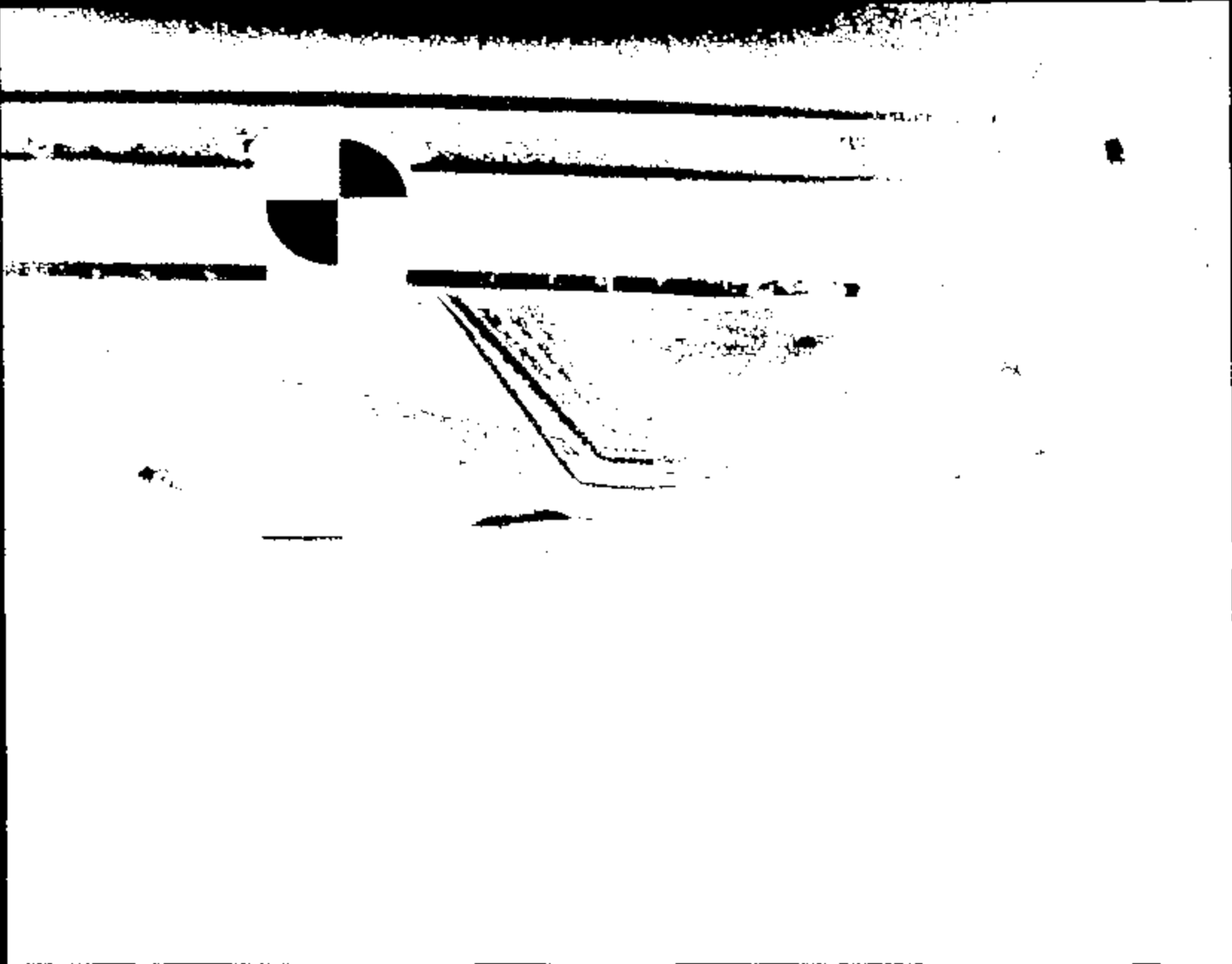
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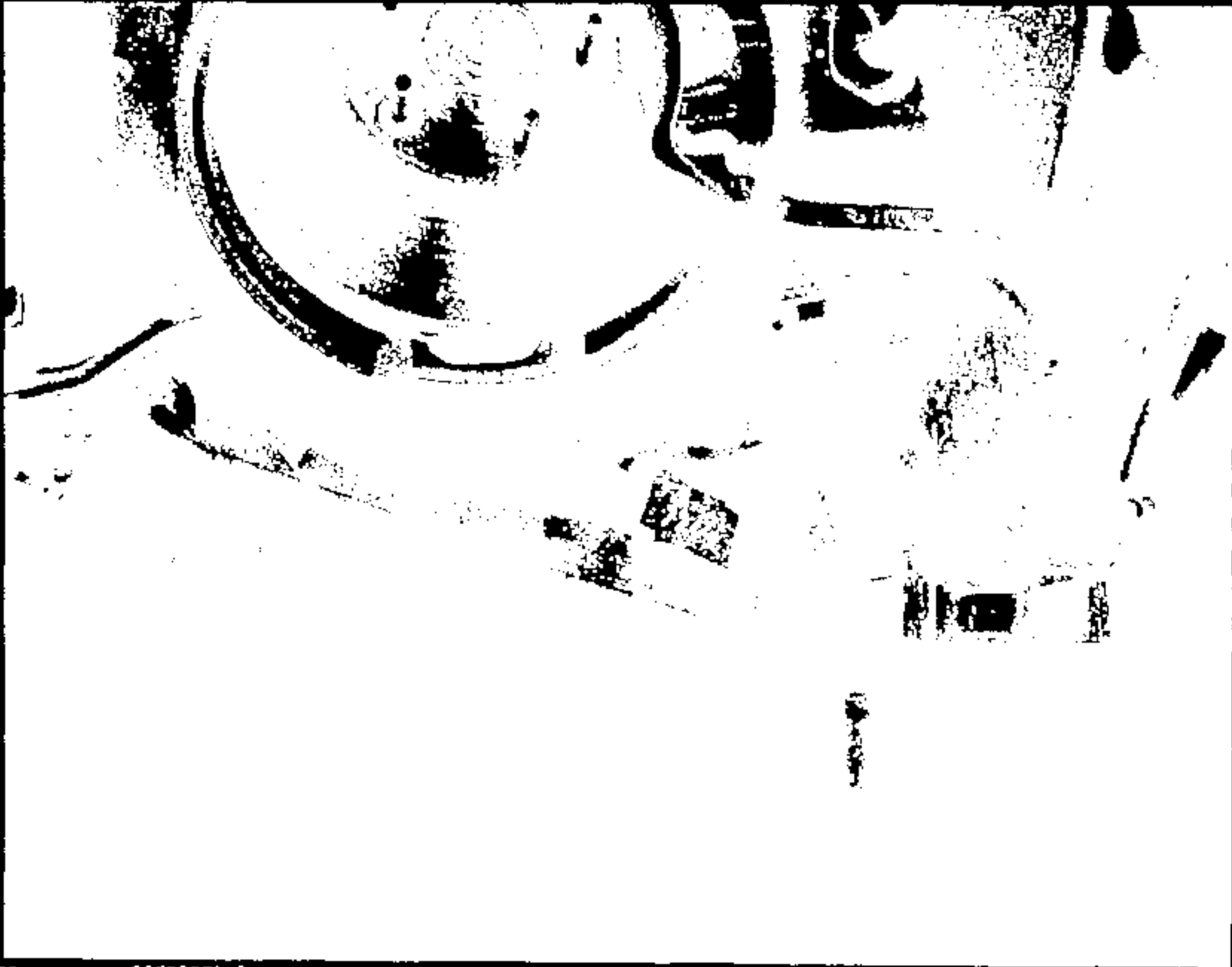
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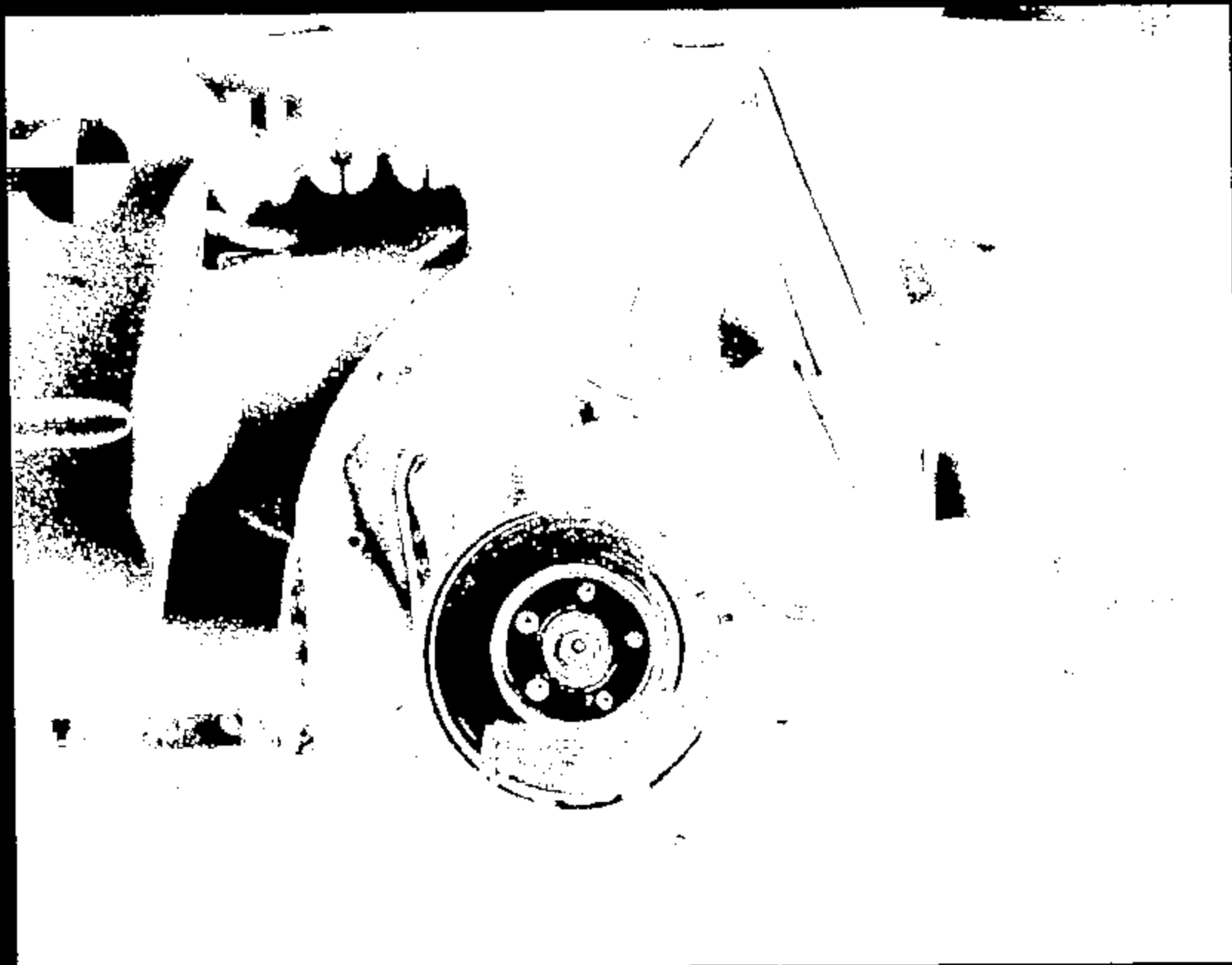
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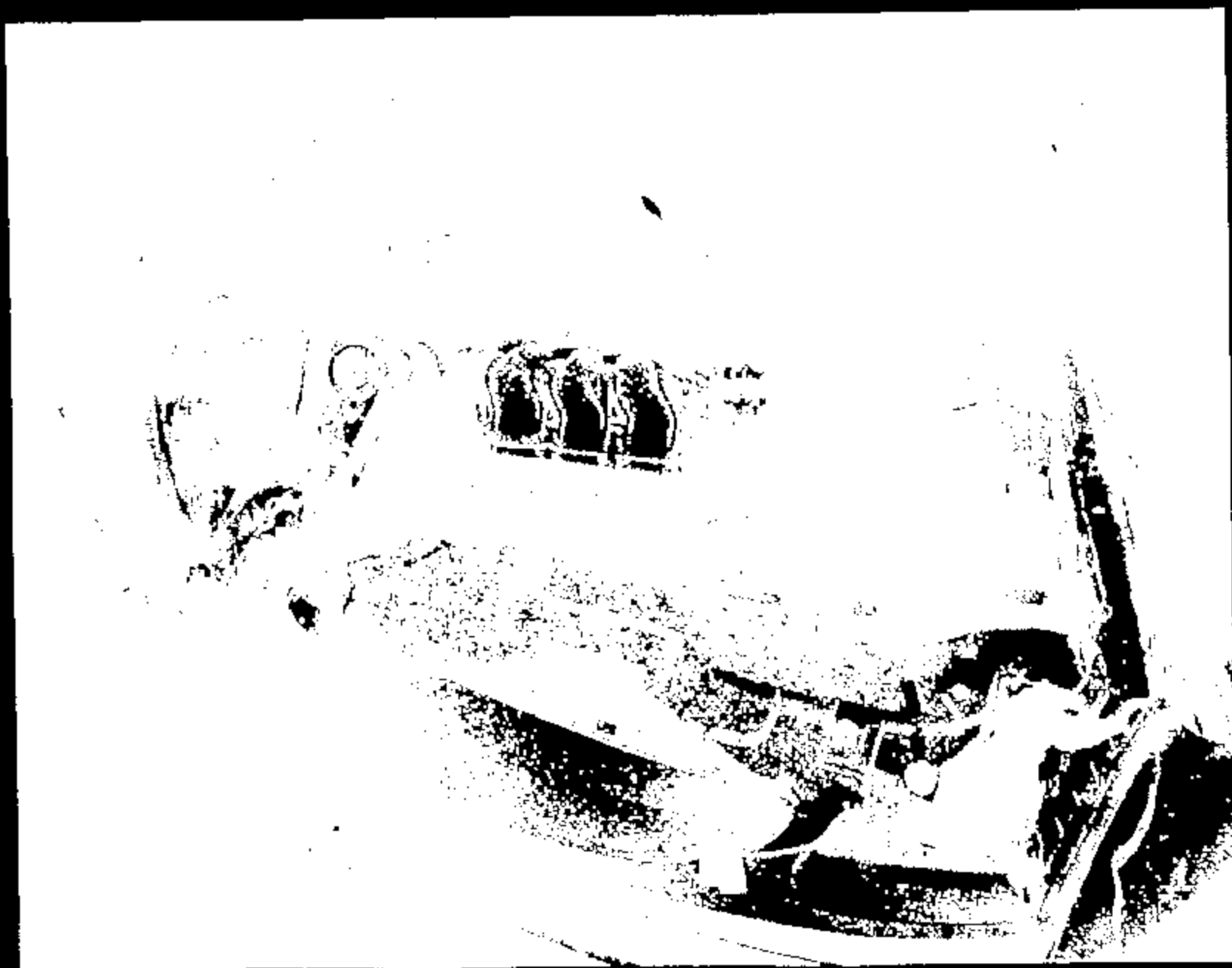


Image 1

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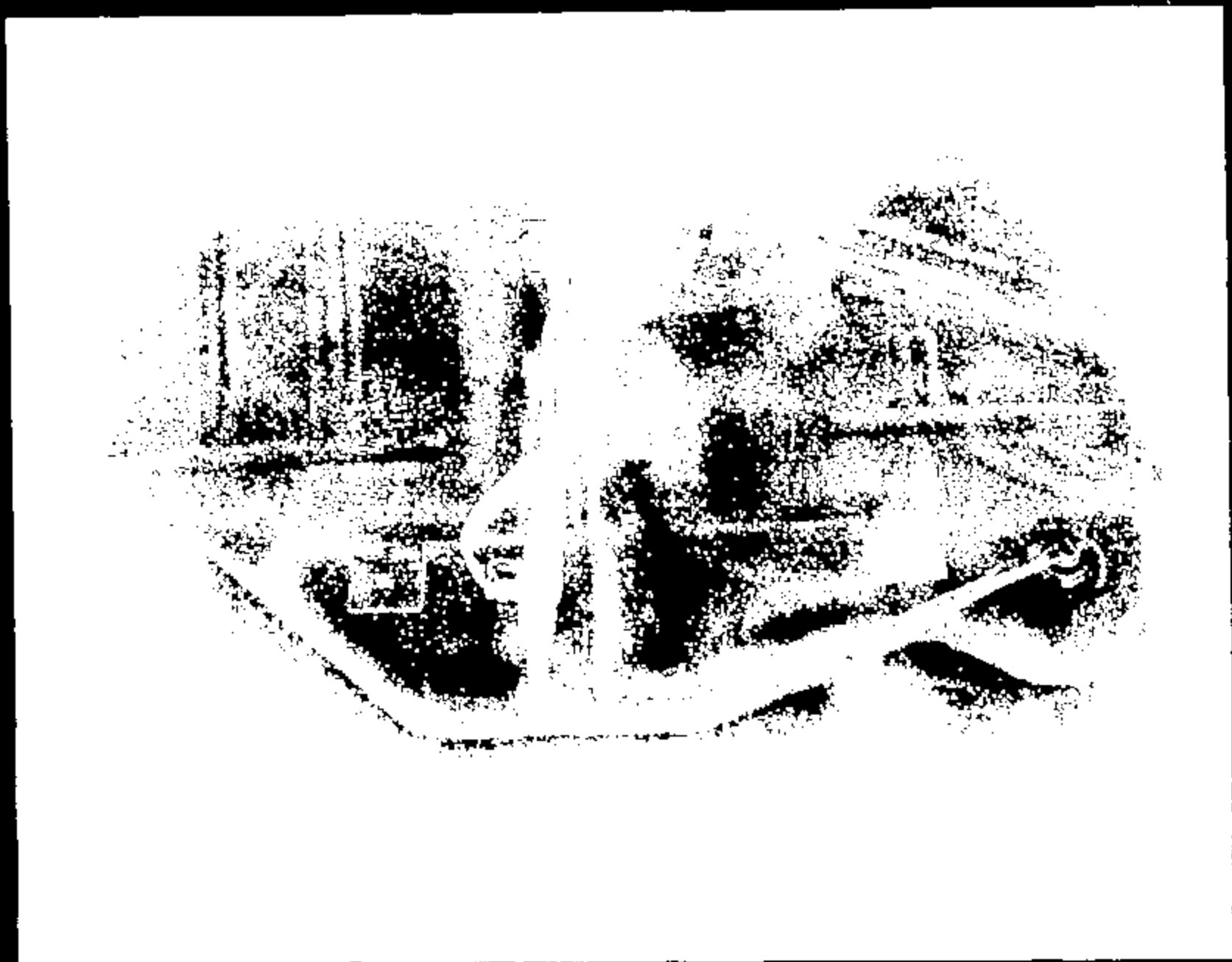
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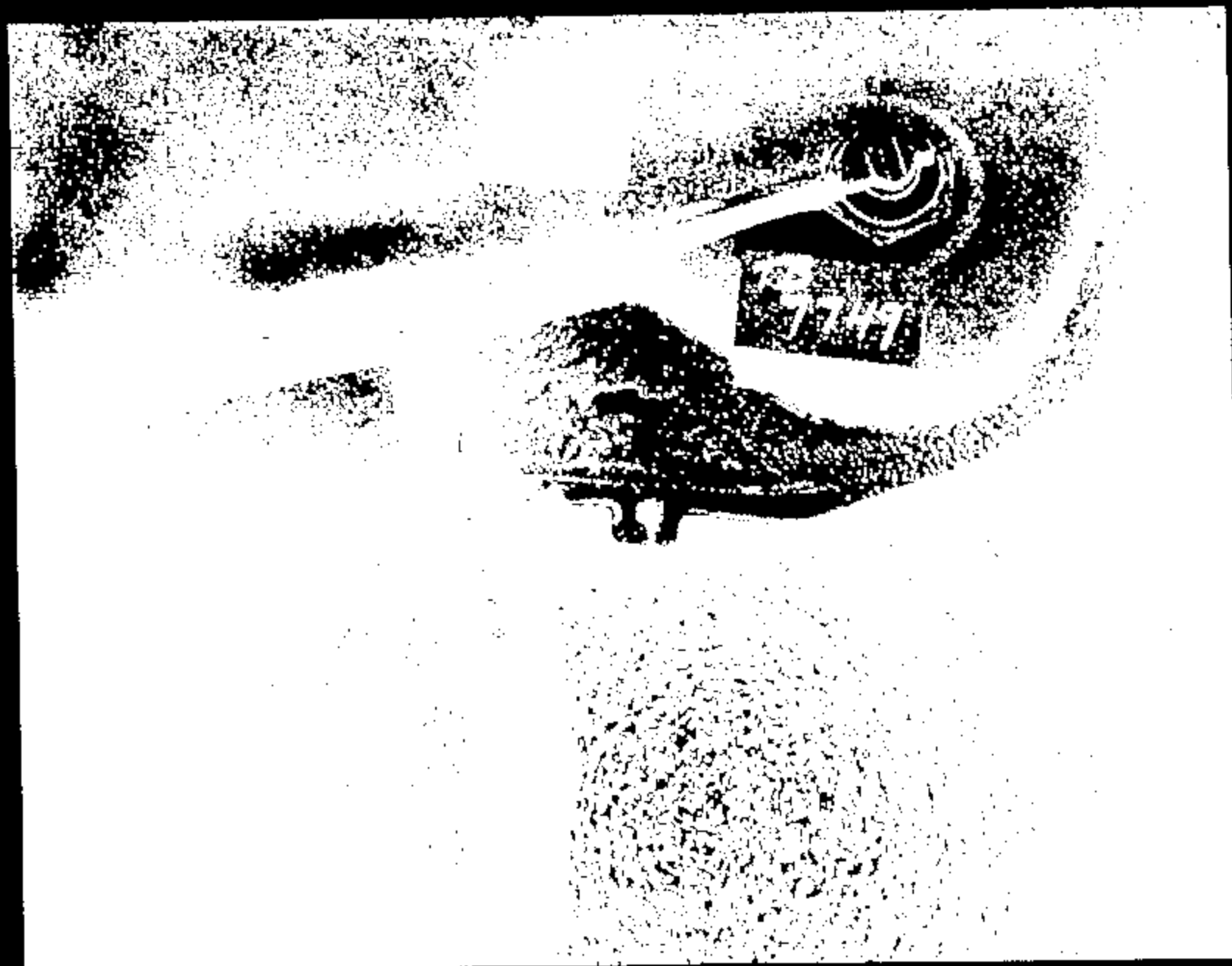
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CRTS 001638



Wanted:

11638071.jpg

CRTS 0011638

**TEST AUTHORIZATION** TEST AUTHORIZATION NUMBER: **TS7748**

<b>TO:</b> Safety Lab Department  <b>DO:</b> K. Arthur	<b>REQUEST DATE:</b> 9/28/99	<b>REQUESTED COMPLETION DATE:</b> 10/10/99
	<b>REQUEST NUMBER:</b> n/a	<b>PROBLEM NUMBER:</b> n/a
<b>REQUESTING ACTIVITY:</b> Vehicle Crash Safety		

<b>TITLE OF TEST:</b>		<b>(speed)</b>	<b>(test description)</b>	<b>PARTS DUE DATE:</b>
2001		D188	90 degree Flight Angular	n/a
<b>TYPE OF TEST:</b>		<b>VIN # or IDENTIFICATION</b>		<b>VEHICLE MODEL &amp; YEAR:</b>
<input checked="" type="checkbox"/> VEHICLE <input type="checkbox"/> LABORATORY		<input type="checkbox"/> BENCH <input type="checkbox"/> OTHER		2001 D188
<b>ENGINE NO. DISPL. CARB:</b> 3.0L/4V V6		<b>TRANS / DRIVETRAIN:</b> AX4N	<b>AXLE RATIO:</b> n/a	<b>PROD. OR ENCL. LETTER:</b> n/a
<b>TYPE OF FUEL:</b> Stoddard		<b>CONVERTER:</b> n/a	<b>IGNITION TIMING:</b> n/a	<b>TEST CONDUCTED TO</b>
<b>CRANKCASE OIL AND CAPACITY (L):</b> n/a		<b>TIRE SIZE AND PLY RATING:</b> P2160R16		<b>CERTIFY CONTROL ITEM</b>
<b>VEHICLE TEST WEIGHT:</b>		<b>TIRE PRESSURE (psi):</b>		<b>COMPLIANCE WITH</b>
<b>FRONT</b> 2362	<b>REAR</b> 1880	<b>FRONT</b> 60	<b>REAR</b> 30	<b>SOV. REGULATIONS:</b> <input checked="" type="checkbox"/> Yes No
<b>TOTAL</b> 4252				<b>DISPOSITION OF PARTS:</b> n/a
				<b>PROCUREMENT REQ ?</b> [ ] YES [ ] NO
				<b>IF YES, GIVE CODE</b>
				<b>MAIL REPORT TO:</b>
				<b>REPORT CATEGORIES:</b>
				<input checked="" type="checkbox"/> ENGINEERING
				<input checked="" type="checkbox"/> DATA
				<input checked="" type="checkbox"/> RAWDATA
				<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)**

1)	Conduct	(speed) 31 MPH	(year) 2001	(vehicle) D188	(level) # CP
		(mode) 90 degree Flight Angular			
2)	Velocity At Impact:	31 MPH			
	Remote Fire Time:	N/A			
	Positioning procedure:	N/A			
3)	Vehicle Year:	2001			
	Vehicle Line:	D188			
	Vehicle Level:	CP			

"RECORD COPY"

Schedule No. 9-7-12

Retain Until 2019

<b>Test Requester:</b>	(name) L. Miskir	(phone) 24-84280	(paper number) LMS
<b>Build Coordinator:</b>	B. Pagano	32-30545	BPAQ
<b>Additional Contacts:</b>			<b>Estimated test cost =</b>
			<b>\$30,000.00</b>

**Test Dev. Engineer** *Lack Miskir*

REQUESTING SECT. NO:	WORK ORDER/WORK TASK:	ISSUED/REQUESTED BY:	PHONE:	APPROVAL:	TEST TYPE:	RISK:	SIGN OFF DATE:
TS77	P18	L. Miskir	24-84280	K. Arthur	n/a	n/a	n/a

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

<p><b>1 - Rational for not replacing this test by OAE analysis:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> No OAE Methodology or process available</li> <li><input type="checkbox"/> No OAE Derivation</li> <li><input type="checkbox"/> Insufficient confidence in OAE.</li> <li><input type="checkbox"/> To obtain basis data for OAE</li> <li><input type="checkbox"/> Replacement or improvement of existing Test.</li> <li><input type="checkbox"/> Testing in Order.</li> <li><input type="checkbox"/> Mandatory or Regulatory</li> <li><input checked="" type="checkbox"/> Certification</li> <li><input type="checkbox"/> Development test for PSB</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 OVP/PCR 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> <p style="font-size: 1.5em; font-family: cursive; text-align: center;">O.K. Miskir 9-29-99</p>
--	---

Requester/Originator: LMS/PSB  
 Vehicle: 2001 Ford Focus  
 Safety Plan Copies

Test Authorization  
 Page 1 of 10

TS7748.xls  
 Ver: E.Del Issue: Sept 16, 1998  
 Author: Olan/Rig/Kingston/Dia

BSP/0528 99

# General Request Information

TAG: 137149

## Test Mode

31 MPH  
30 degree Right Angular

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
- Rollover
- Pressure Check *PRE Test For. 10/11/99*
- FMVSS 303 - 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
- 96/78/EC - Frontal Offset
- 96/27/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:	D188
Vehicle Name:	TAURUS
Body / Cab Style:	WAGON
Build Number:	DD14003
Tag Number:	306W08
VIN Number:	1FAFP885YG100028
Fuel System Rated Capacity (Gals):	18
Prototype Level:	CP
Drive Side:	LH

# Special Prep/Build Instructions Primary Vehicle

TAB: TB7749

## 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

- 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:



## Test Conditions - Final Prep

TA#: TB7749

### Final Prep Contacts

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

Test Engineer	Request Engineer	Build Coordinator
Name: _____	<u>L. Mialik</u>	<u>B. Pagano</u>
Phone: _____	<u>24-84260</u>	<u>32-30646</u>
Pager: _____	<u>LMIS</u>	<u>BPAG</u>

### Test Weight

<input type="checkbox"/> Minimum Option Weight <input type="checkbox"/> 85% Option Weight <input checked="" type="checkbox"/> Maximum Option Weight	GVWR: _____ Wheelbase: _____
---	---------------------------------

### Tire Pressure

Front: 30. psi                      Rear: 30. psi

### Fuel System

Fuel Tank & System to Contain: Stoddard

<u>17.1 gallons</u>	=	<u>95 %</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>2,382 lbs</u>	<u>19 lbs</u>	<u>0 lbs</u>	<u>2,367 +6</u>
Rear:	_____	<u>1,890 lbs</u>	<u>19 lbs</u>	<u>0 lbs</u>	<u>1,902 +12</u>
Total:	_____	<u>4,272 lbs</u>	<u>38 lbs</u>	<u>0 lbs</u>	<u>4,269 +17</u>

Rated Luggage Load: 200 lbs

### Simulate/Verify at Weigh-Up

Dumney 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 Covers	<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: Flocker Level to Ground  
To: Flocker Level to Ground

### Additional Remarks

DO NOT fill tank with stoddard until weigh-up

## Dimensional Analysis Request Primary Vehicle

TAG: TB7749

### Frontal Impacts

74		
81		
109	Control Points (CAR)	Exterior
107		
108	Collision Distance Points	Exterior
128	Frontal St. Col./Imp. for Seating (CAR)	Exterior
150	Frame Standard Bottom (CAR)	Exterior
152	Unified Standard Bottom (CAR)	Exterior
195	Drive Shaft Collapse	Exterior
156	Standard Body Posture	Interior/Exterior
159	Windshield (CAR+FBIC)	Exterior
140	Oil & Filter	Exterior
142	Shot-Guns	Exterior
149	Header	Interior
160	Steering Wheel Deformation Posture	Interior
159	Steering Column Mounts	Interior
164	Steering Column Thrust	Interior
185		
166	Seat Track to Floor Mounts	Exterior
168	Seat to Track Mounts	Exterior
160	Coast Protection	Exterior
162	Floorman Points	Exterior
164	Knee Bolster	Interior
166	Seat Belt Mounts	Interior
168	Diagonal Strut	Interior
170	Tunnel/Knee Pillar	Exterior
172	Brake Bracket (ONLY if you can reach it)	Interior
174	Instrument Panel Mounts	Exterior
176	T-N-T Thrusts	Interior/Exterior
177	Top Non-Glided & Body Lined	Interior/Exterior
228	Rear Door Aperture Reduction	
300		
302		
346		
355		
364		
378		
405	Plot @ Sectional Profiles	
506	Decoupling Column Collapse	Exterior
607	P.R. Steering Column Collapse	Exterior
508		
609	12 Steering Column Collapse & Intermediate Strut	Interior
640	Dash Profile @ Driver Centerline	Interior
641	Dash Profile @ Vehicle Centerline	Interior
642	Dash Profile @ Passenger Centerline	Interior
647	Footwell Reduction	Interior
680	<ol style="list-style-type: none"> <li>1) Driver/Passenger - A &amp; B-Pillar 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)</li> <li>2) Dash Panel Point which is longitudinally in line with the center of the brake pedal</li> <li>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)</li> </ol>	



# Film Analysis & Photographic Services Request

## Front Impact Film Analysis

TA#: TB7749

Head WRT Vehicle  
 Shoulder WRT Vehicle  
 Rooter WRT Ground *10/11/99 pm.*

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

### Overhead Coverage

Overhead - Overall  
 Overhead - A-Pillar Forward  
 Steering Column Displacement  
 Soles

Reception

**Pit Coverage**

- Pit - Overall
- X       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

TAG: TB7749

## *Primary Vehicle Structural Instrumentation - Frontal Impact*

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

OTHER STRUCTURAL ACCELS:	Long	Vert	Lat
_____	_____	_____	_____
_____	_____	_____	_____

# Primary Vehicle Systems Instrumentation

TA#: TS7748

## SENSOR ACCELS:

See Sensor Map

## MONITOR AIR BAG SENSORS:

- See Sensor Map
- Monitor Closure of Each Specified Sensor
- Monitor Closure of Single PI 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
- 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 [switch #

*10-07-99*  
H0224998 / *p*  
H0224998 / *m*

## ANGULAR MOTION SENSORS:

\_\_\_\_\_

## VEHICLE STRING POTS:

\_\_\_\_\_

## OTHER VEHICLE SYSTEM INSTRUMENTATION:

- A/B Bypass Driver (acs) Switch
- A/B Bypass Passenger (acs) Switch
- A/B Bypass Loop (acs) Switch

## Barrier Load Cell Request

0800	0900	0400	0500		0600	0700	0800	0900	1000	1100	1200	1300	1400
0800	0900	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500
0900	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600
0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700

0800	0900	0400	0500		0600	0700	0800	0900	1000	1100	1200	1300	1400
0800	0900	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500
0900	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600
0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700

0800	0900	0400	0500		0600	0700	0800	0900	1000	1100	1200	1300	1400
0800	0900	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500
0900	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600
0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700

TAB:   TB7748  

### 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

### 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 0011638

## List of T<sub>1</sub> Contacts

TAM:     TB7749    

	Last name	Phone	Pager	Profs
Requestor	L. Misik	24-84280	LMS	LMISIKR
Approving supervisor	K. Arthur	89-05156	KART	KARTHURS
Build coordinator	B. Pagano	32-86645	BPAG	BPAGANO
Test engineer				
Sensor Engineer	F. BOLOGNA	31-78288	FRUCKER	FBOLOGNA
Fuel System	D. Sanderson	28878		DSANDERS

	Last name	Phone	Pager	Profs
Seats	M. Jessup	84-61891	MJESSUP1	MJESSUP1
Instrument panel	M. Karanen	88-74148	NONE	MKARANEN
Restraints	N. Desai	99-08146	NDESAI	NDESAI
Air bag (driver)	R. Ruzhinski	82-18978	RRUTHINO	RRUTHINO
Air bag (passenger)	R. Ruzhinski	82-18978	RRUTHINO	RRUTHINO
Steering column				







# SENSOR MAP

Vehicle ID:  
1FAFP598SYG100028  
TAG 909W008

Program: MY2001 D186  
Test Mode: 31R30 BARRIER  
TA No.: TB7740

Location Name	Supplier	OUTPUT	Sensor Channels only		Serial #
			Nominal (+/-)	Max/Min	
1. FOR <i>FIRMS</i>	ACOL	TRIAL	<i>Manufacture's spec. 7m 10/1/99</i>	10 10 10 18 18 10 30 30 20	[REDACTED]

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

**REVISION LOG**

DESCRIPTION	DATE	PAGE AFFECT	BY

L. Model 24- 84280  
File: SMAP\_7740.xls, Tab: Sheet1  
AVT VCS

*Nov 29 9:21 99*

Created: 3/1/99  
Revised: 3/1/99  
Printed: 8/23/99, 8:08 PM

