

EA03-014

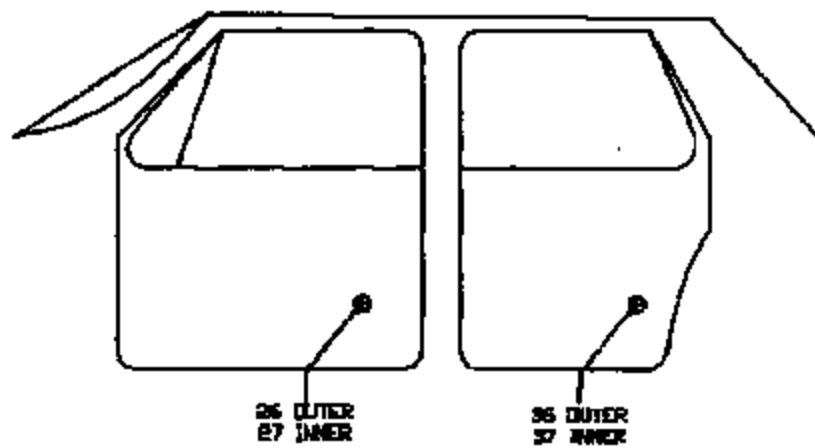
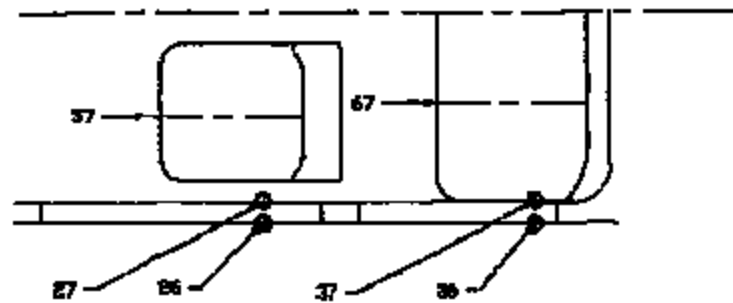
**FORED 12/11/03
LETTER TO ODI**

ATTACHMENT C

BOOK 6 OF 10

PART 2 OF 4

PRE-CRASH LATERAL C/L'S 11° POINTS + REQUEST 417
 UNIT 411 POINTS 26,27,36,37,57,67

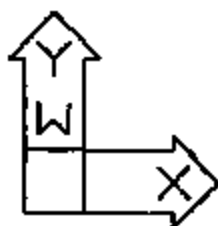
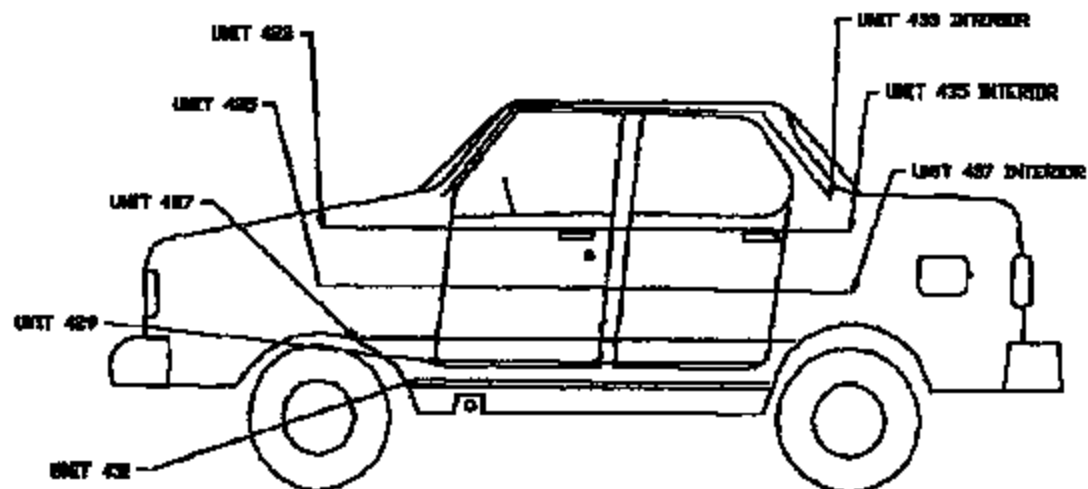


REQUEST 417 UPIC 964 10/96

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



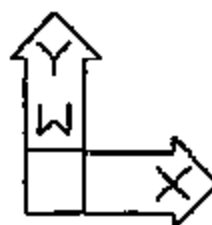
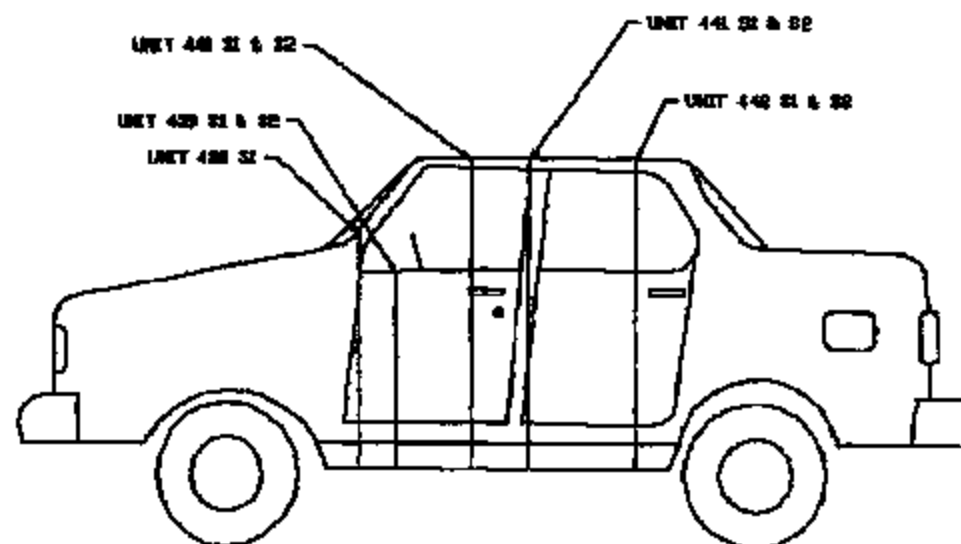
REQUEST 423,425,427,429,431,433,435,437 UPIC 977 10/96

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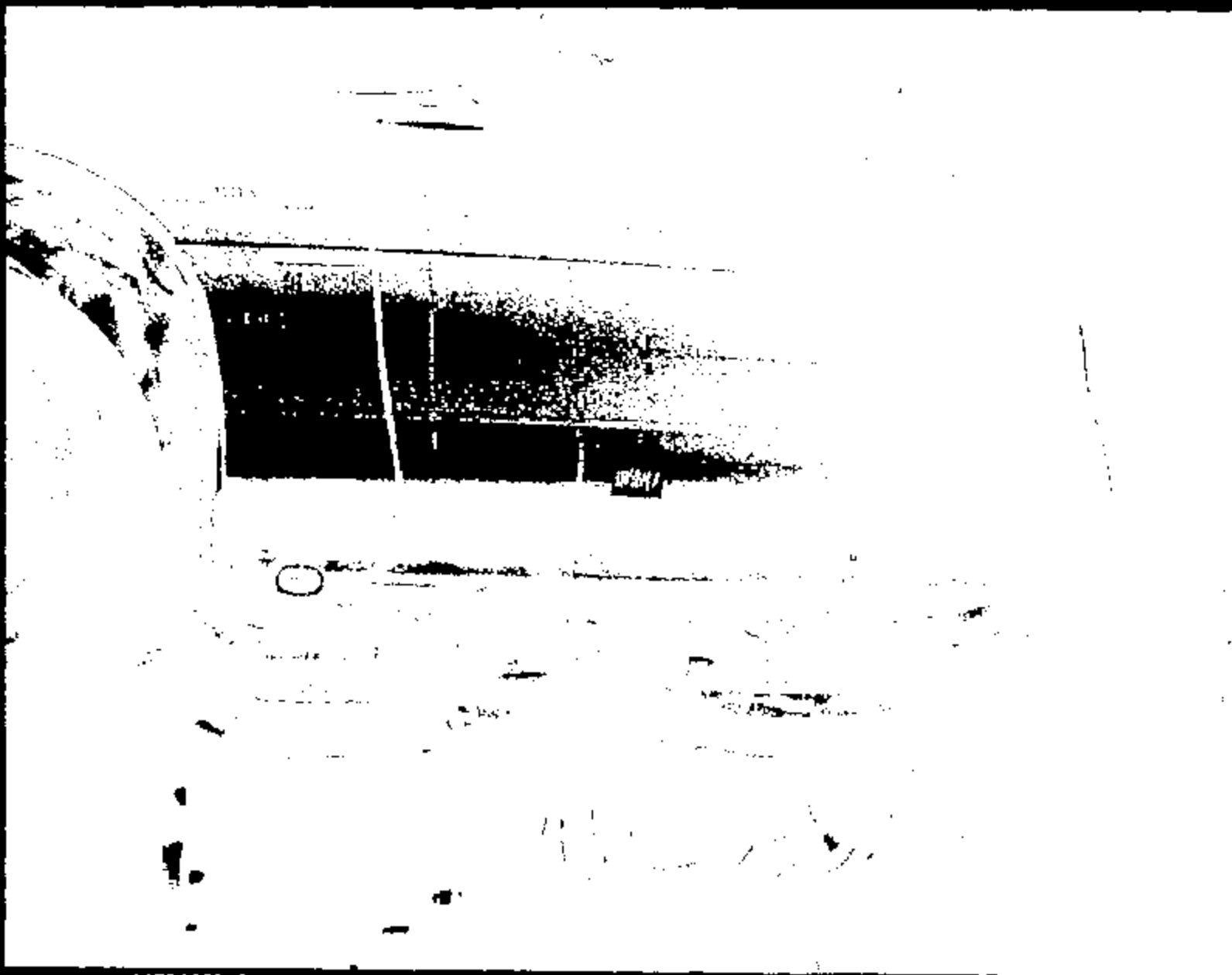
REQUEST 438 - 442 VERT. SECTIONS SIDE IMPACT
 UNITS 438 SI, 439 - 442 SI & SE
 SI SECTIONS ARE EXTERIOR, SE SECTIONS ARE INTERIOR



REQUEST 438 - 442 UPRC 979 10/96

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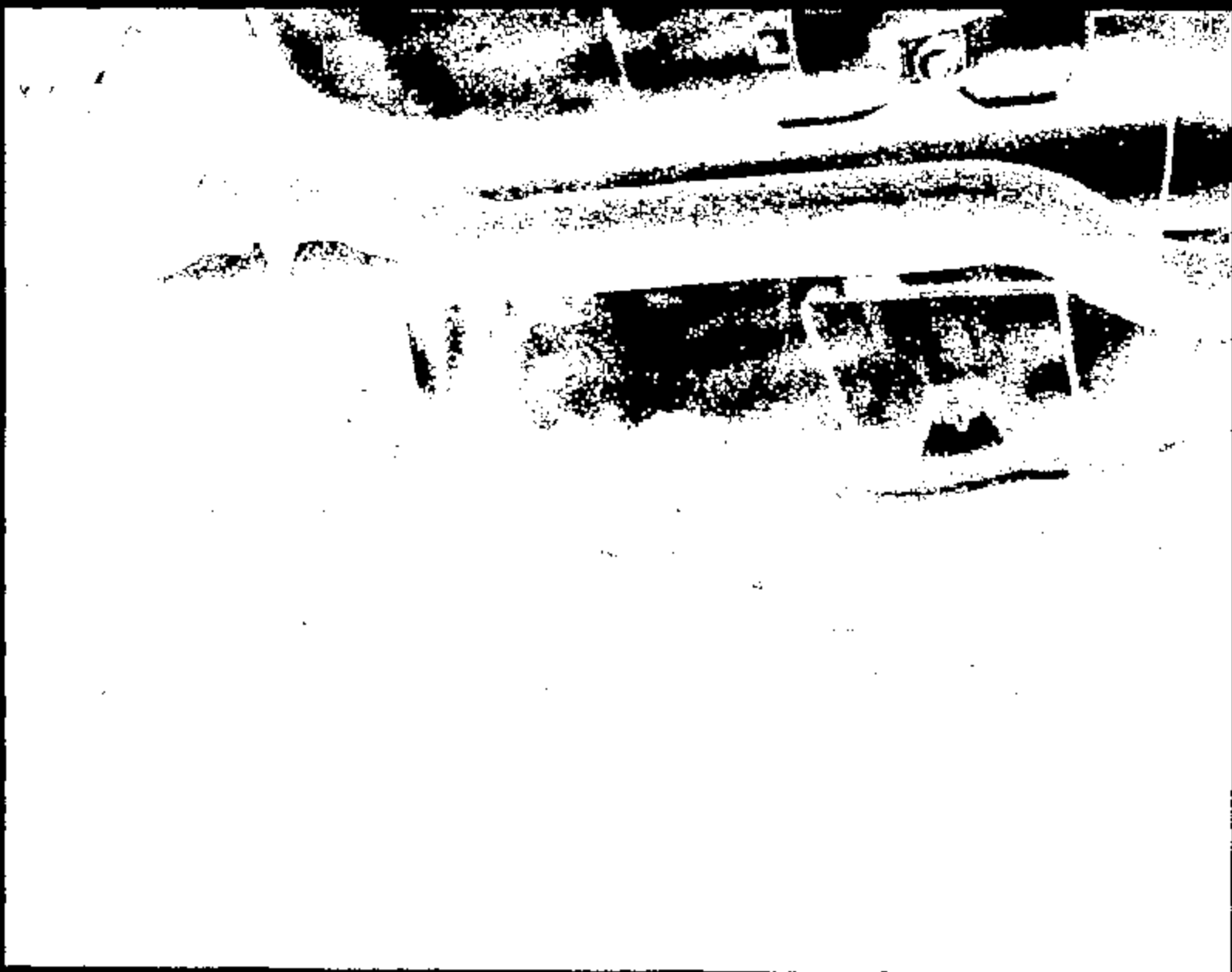
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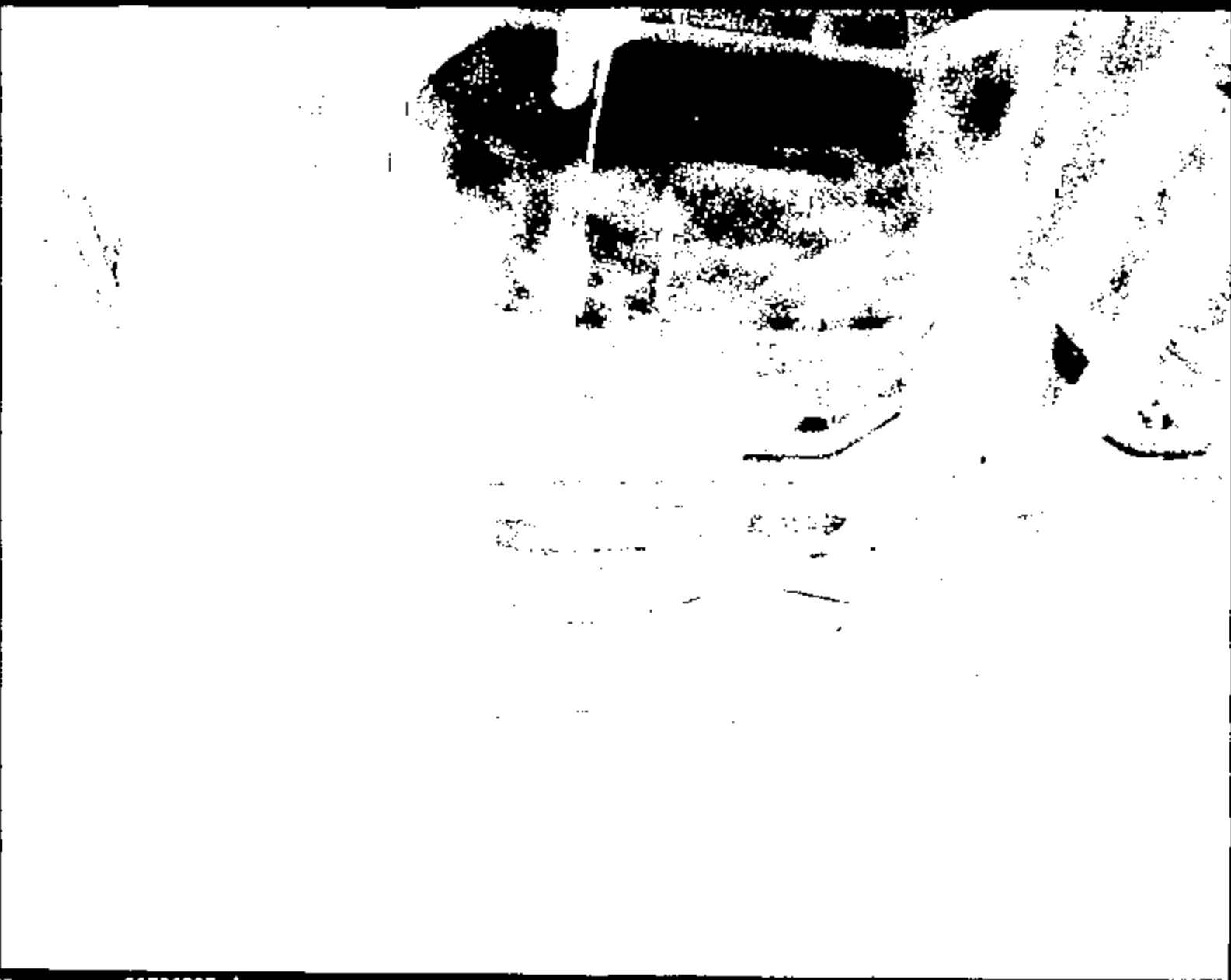


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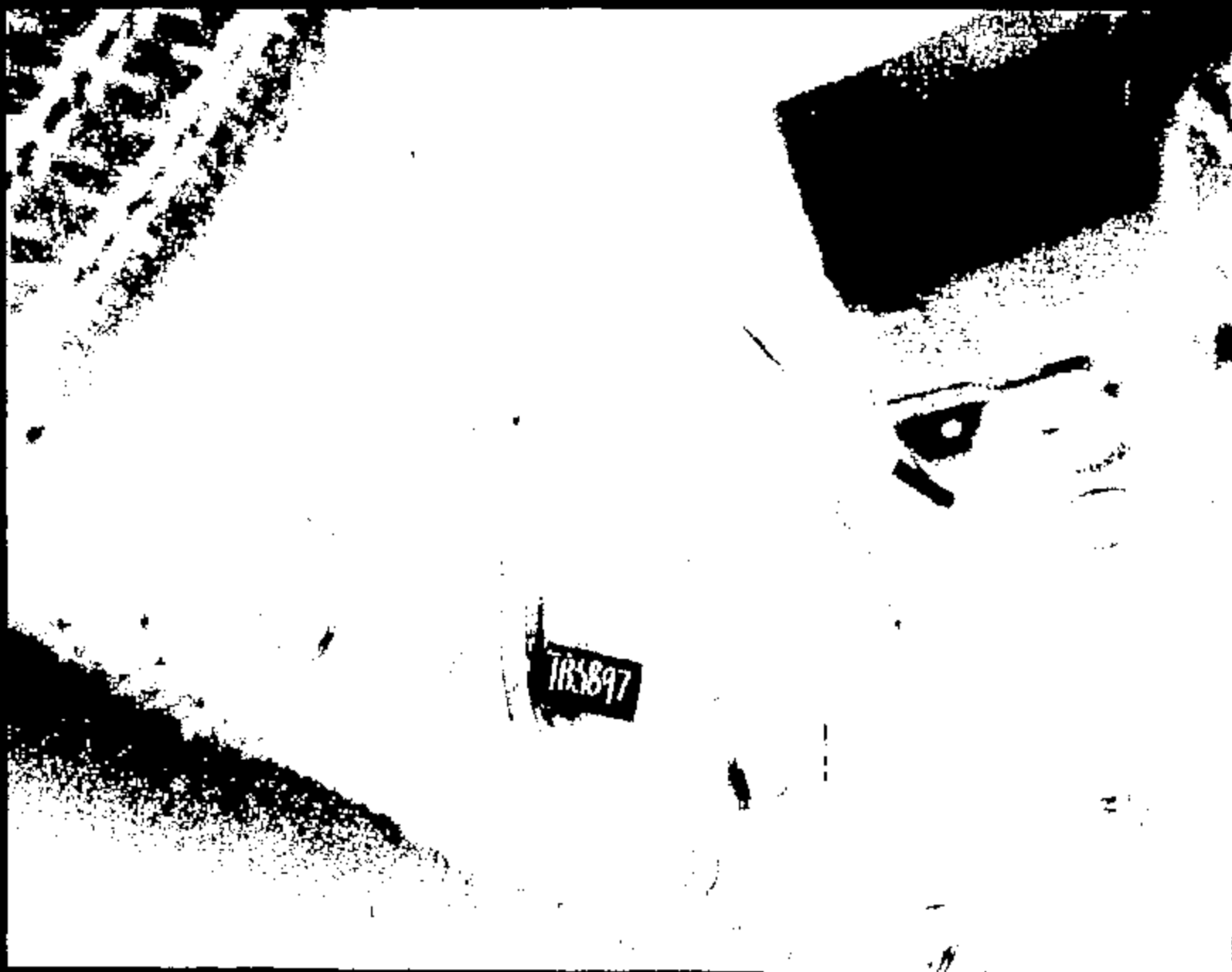


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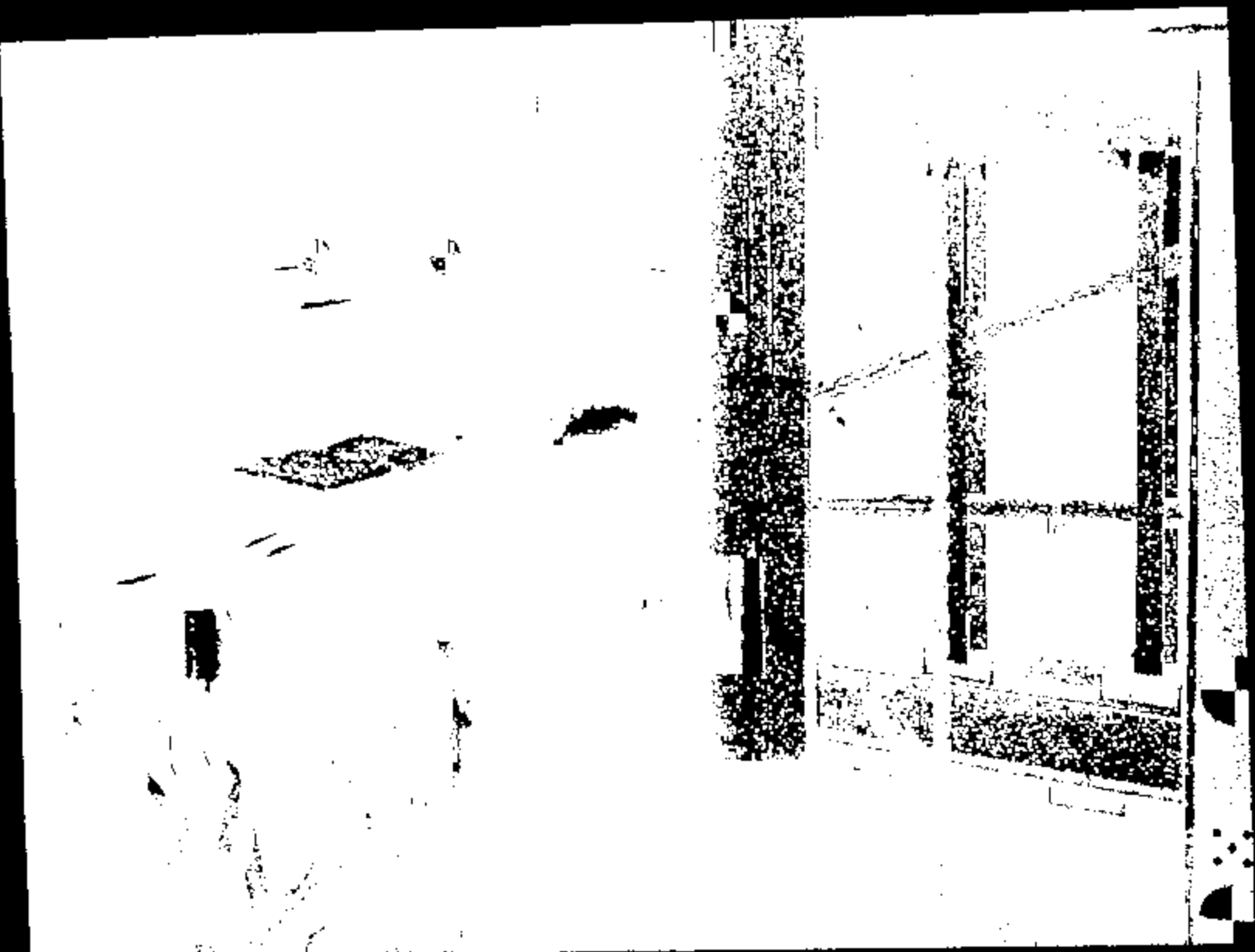


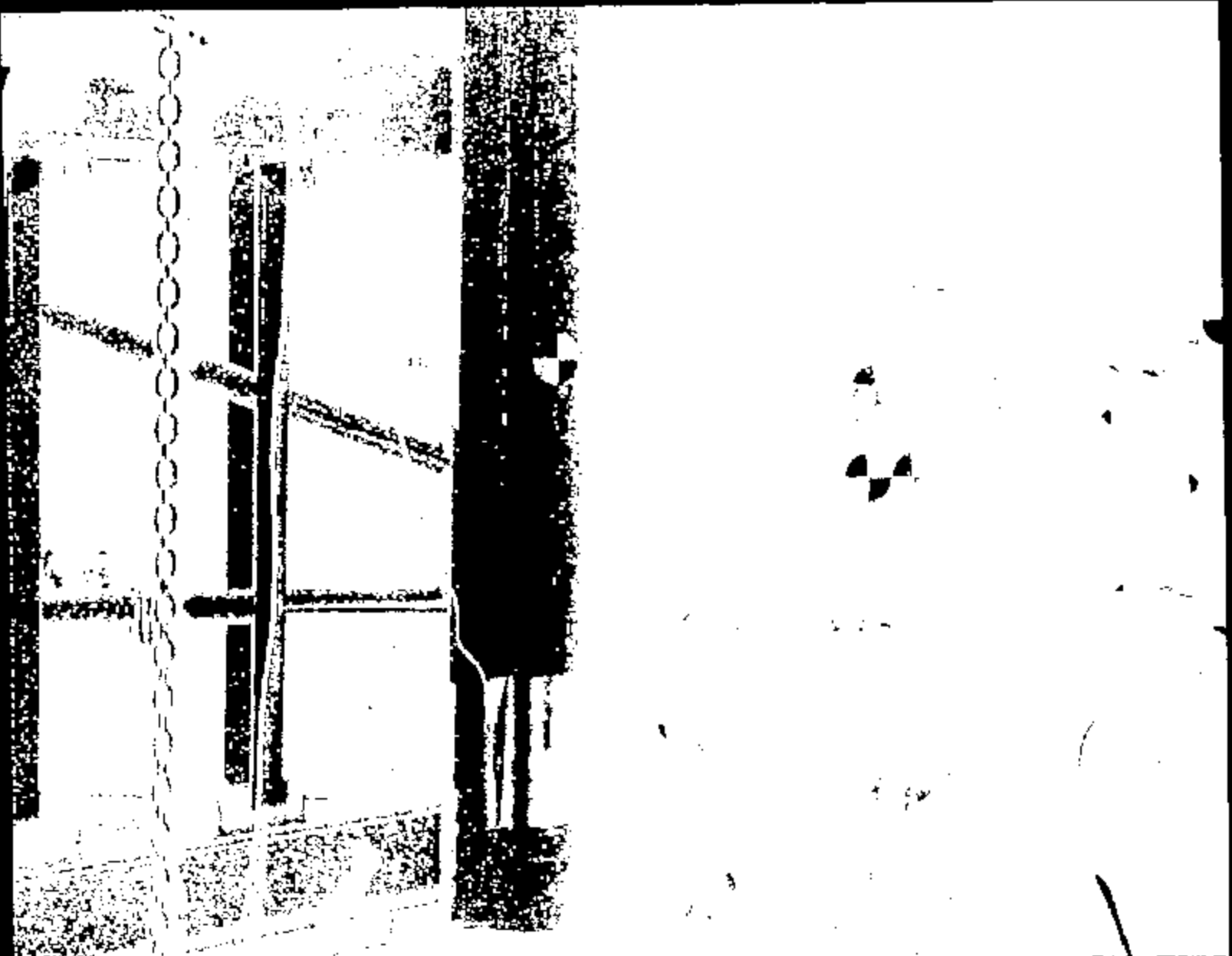
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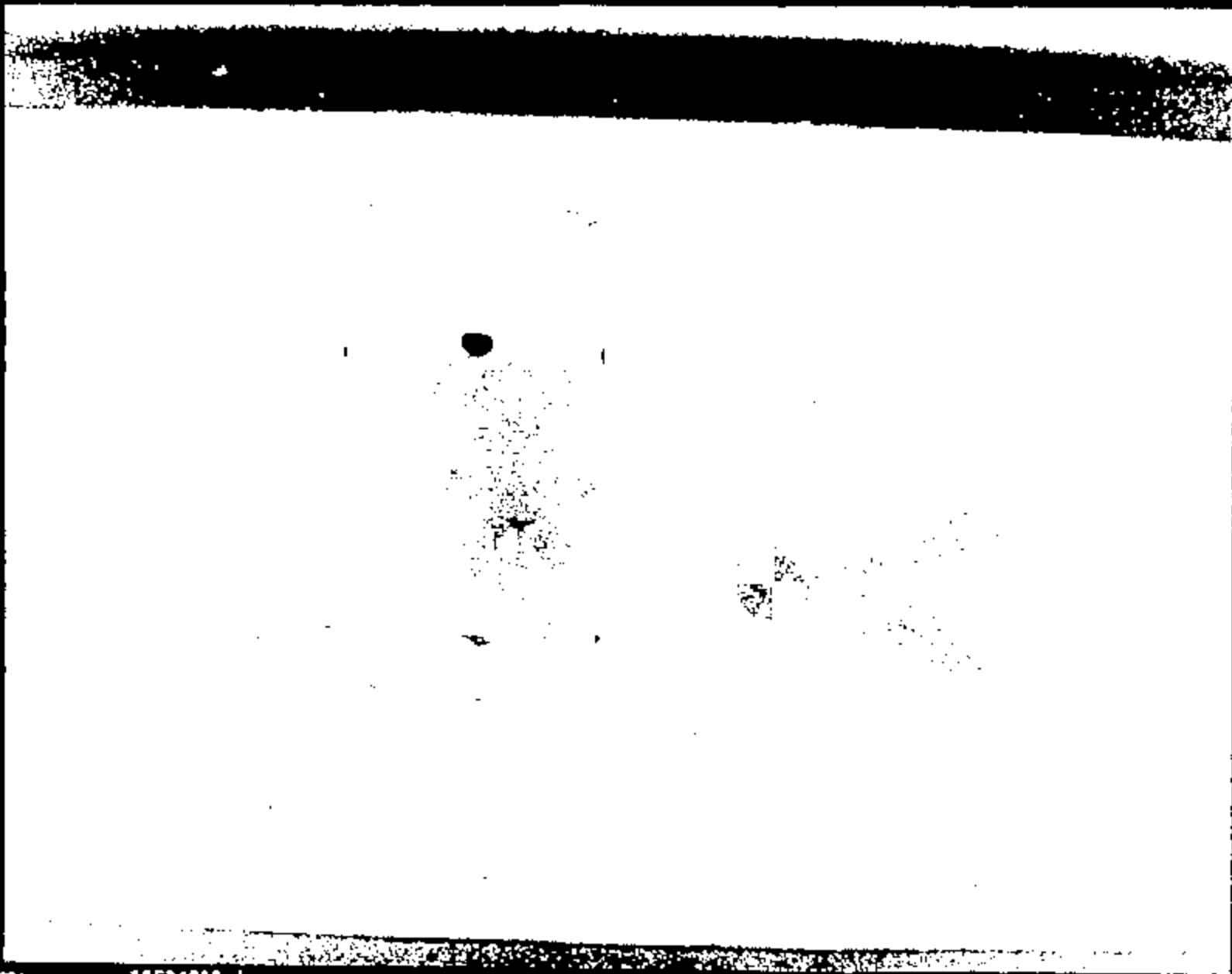


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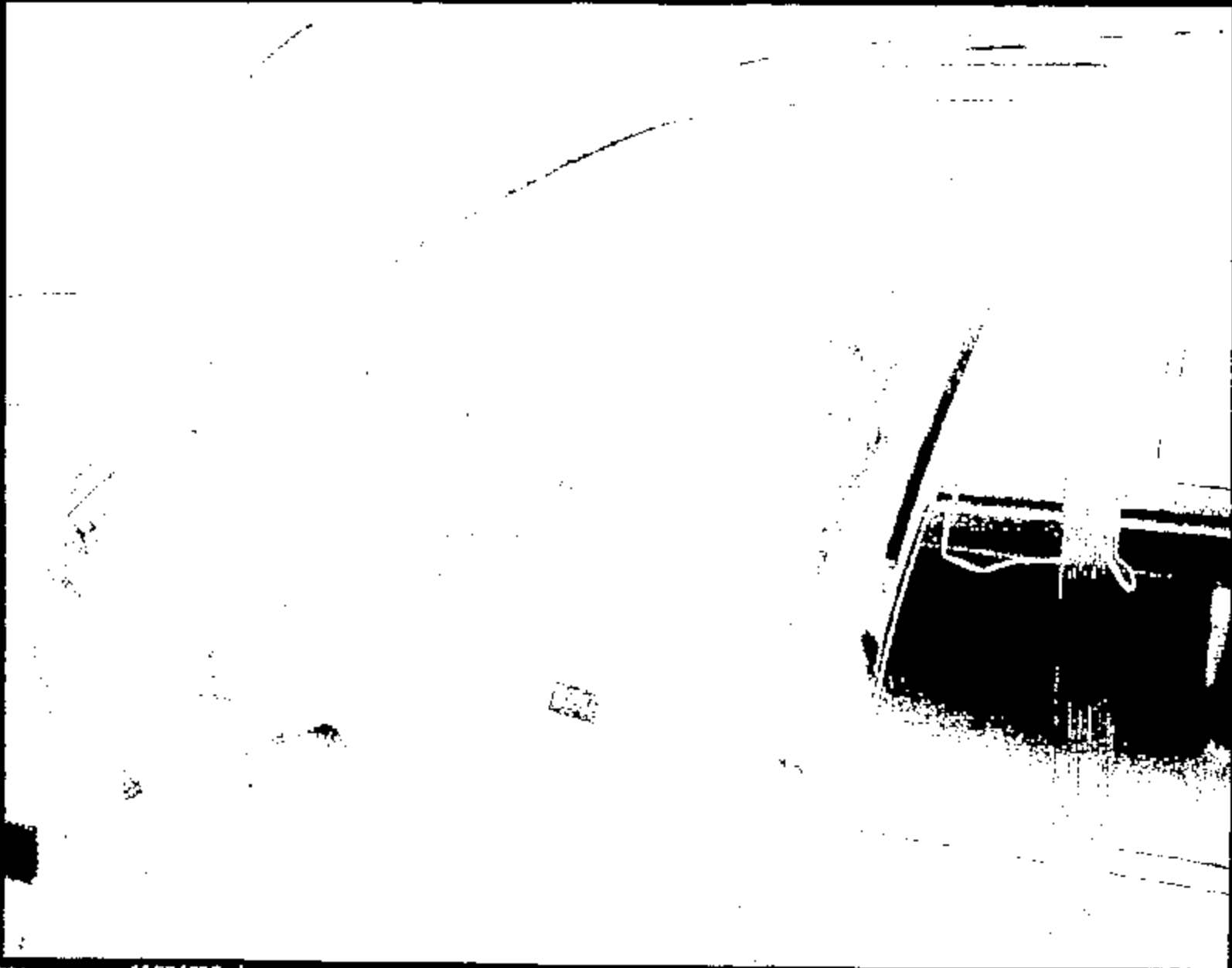


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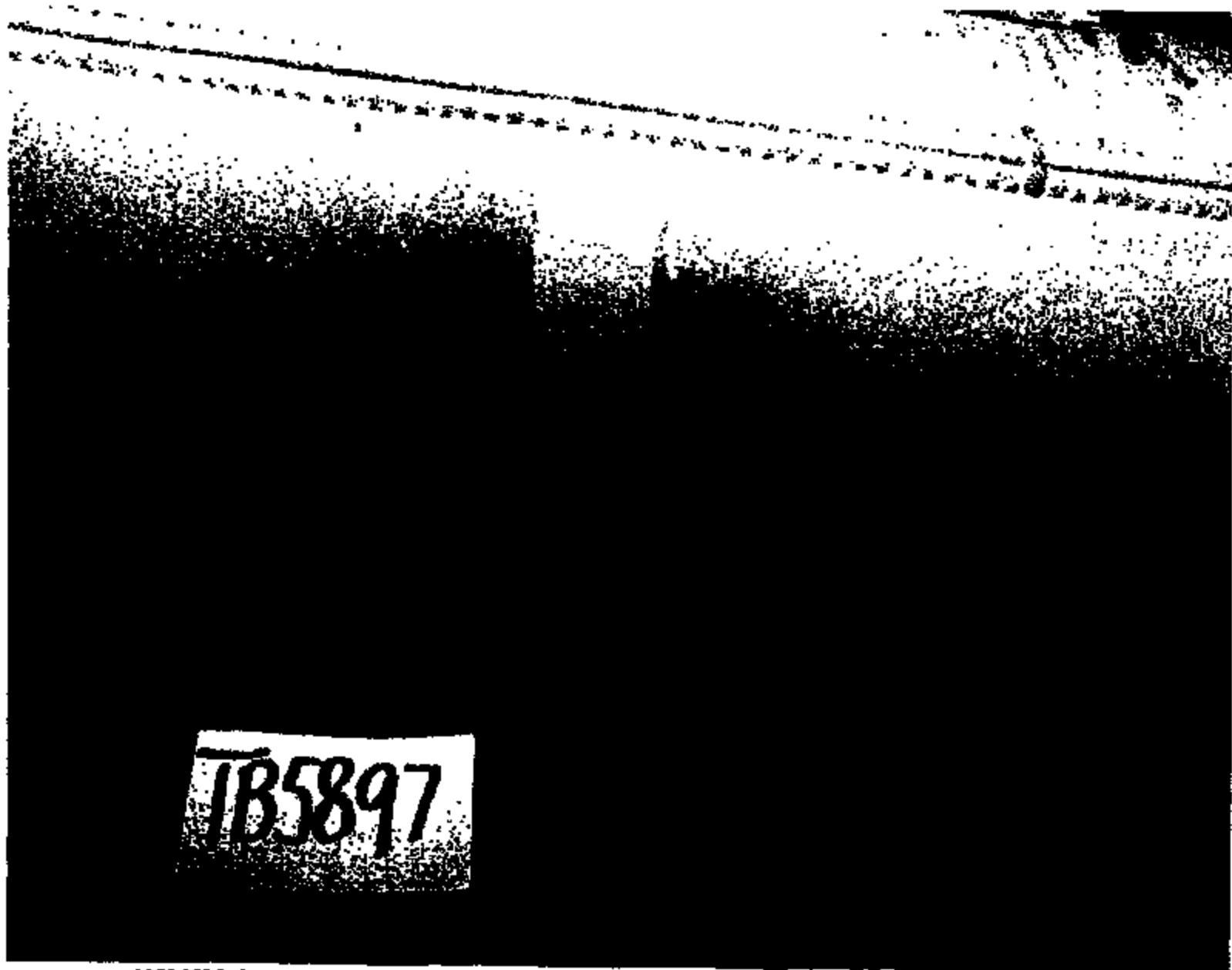
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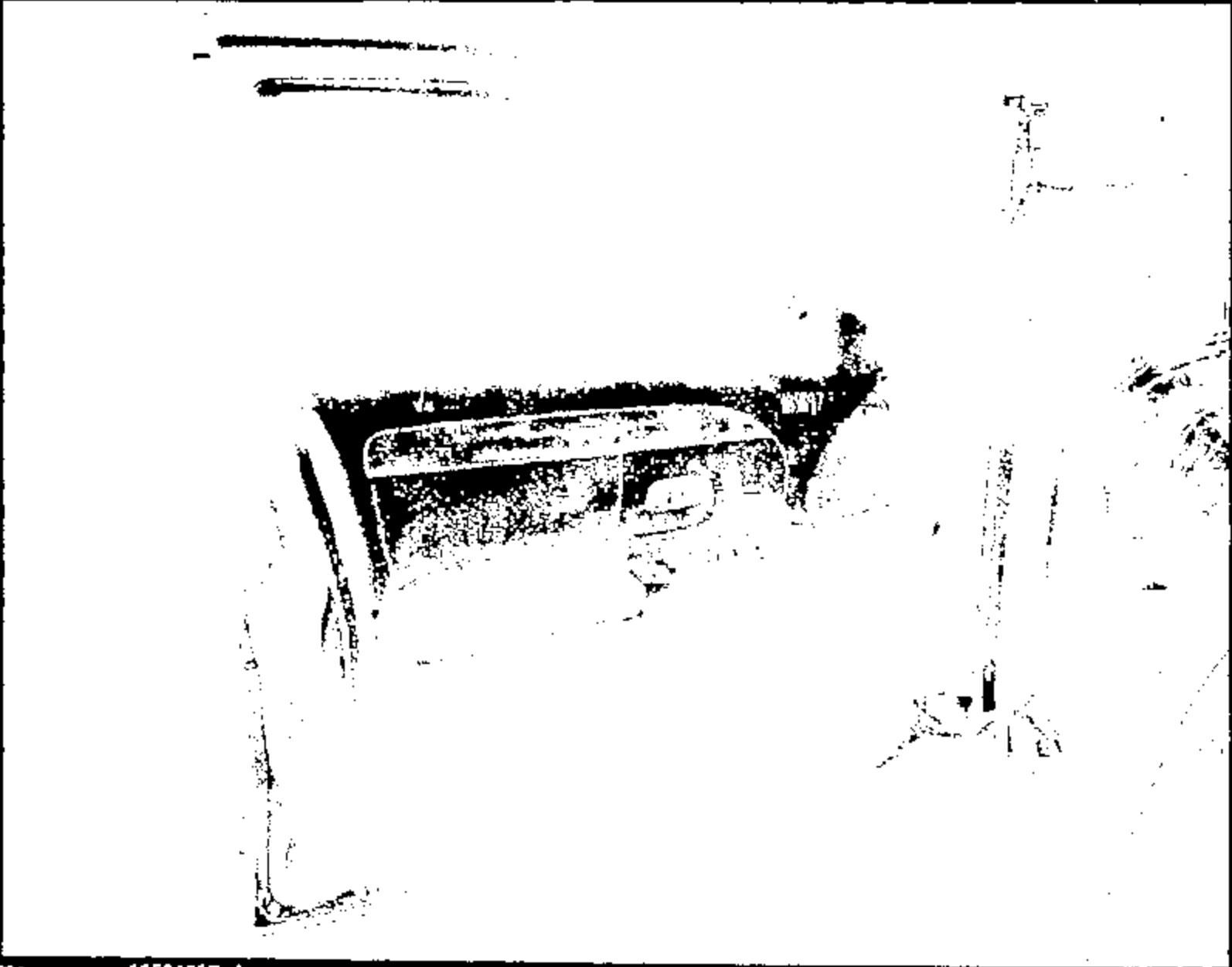
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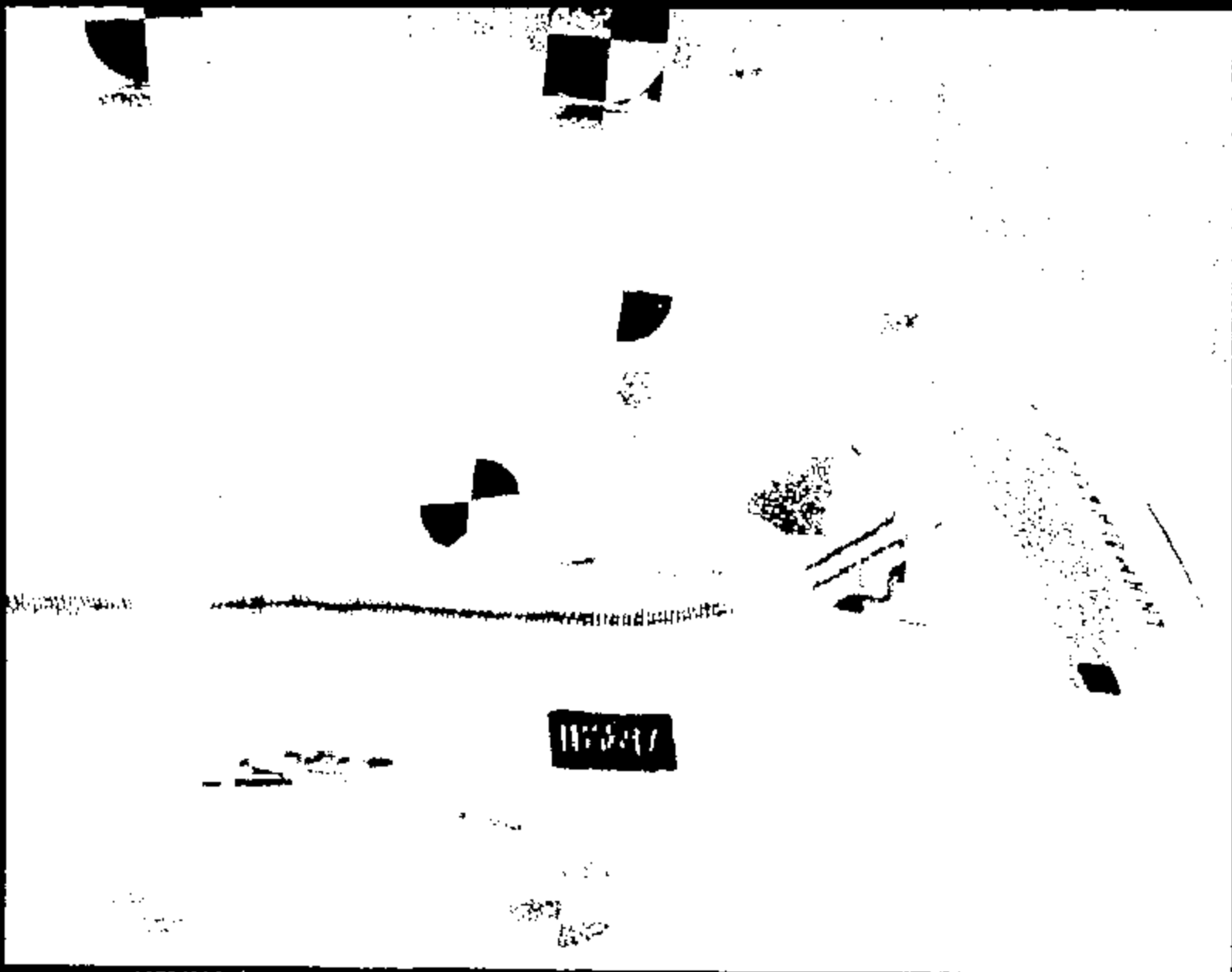
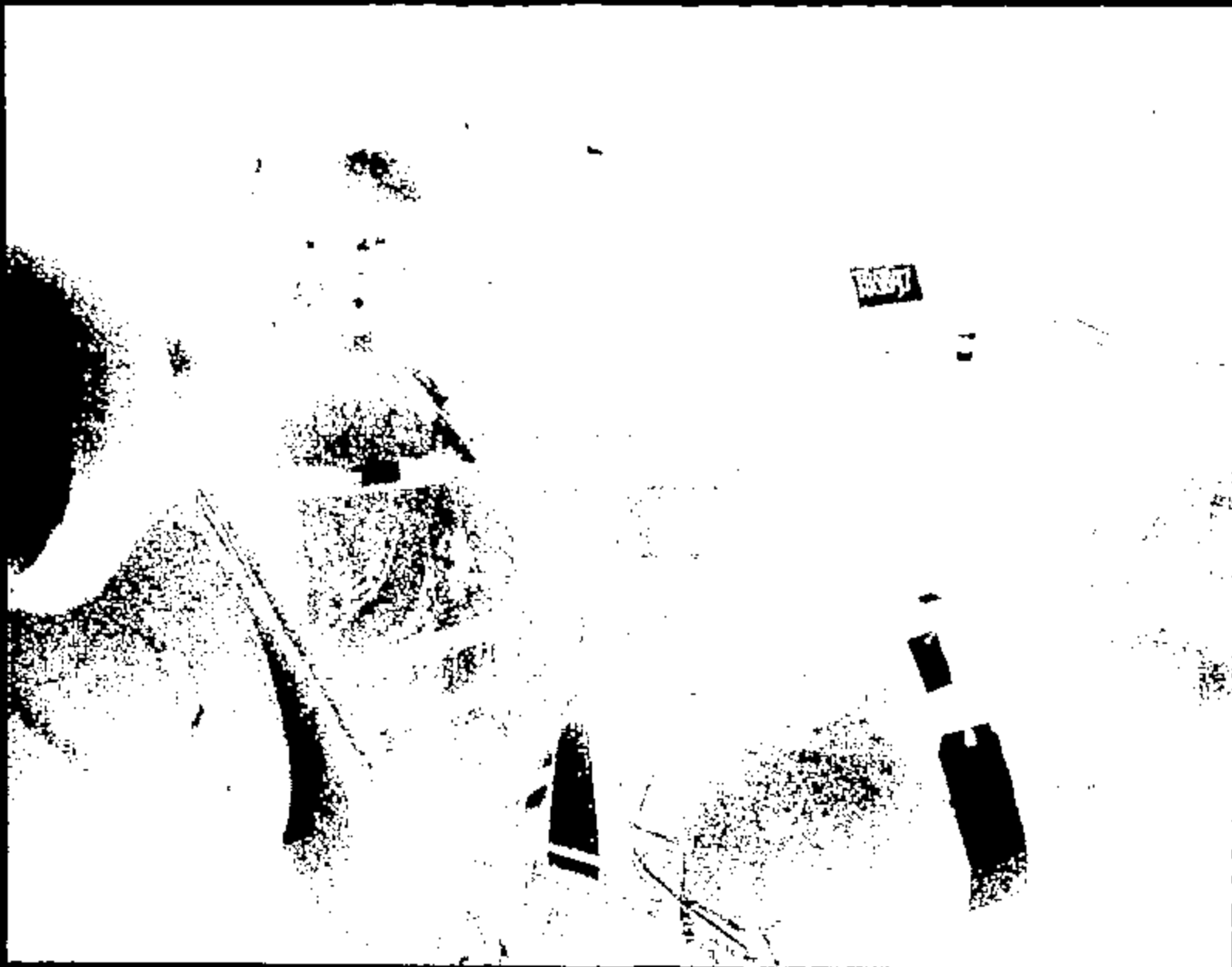


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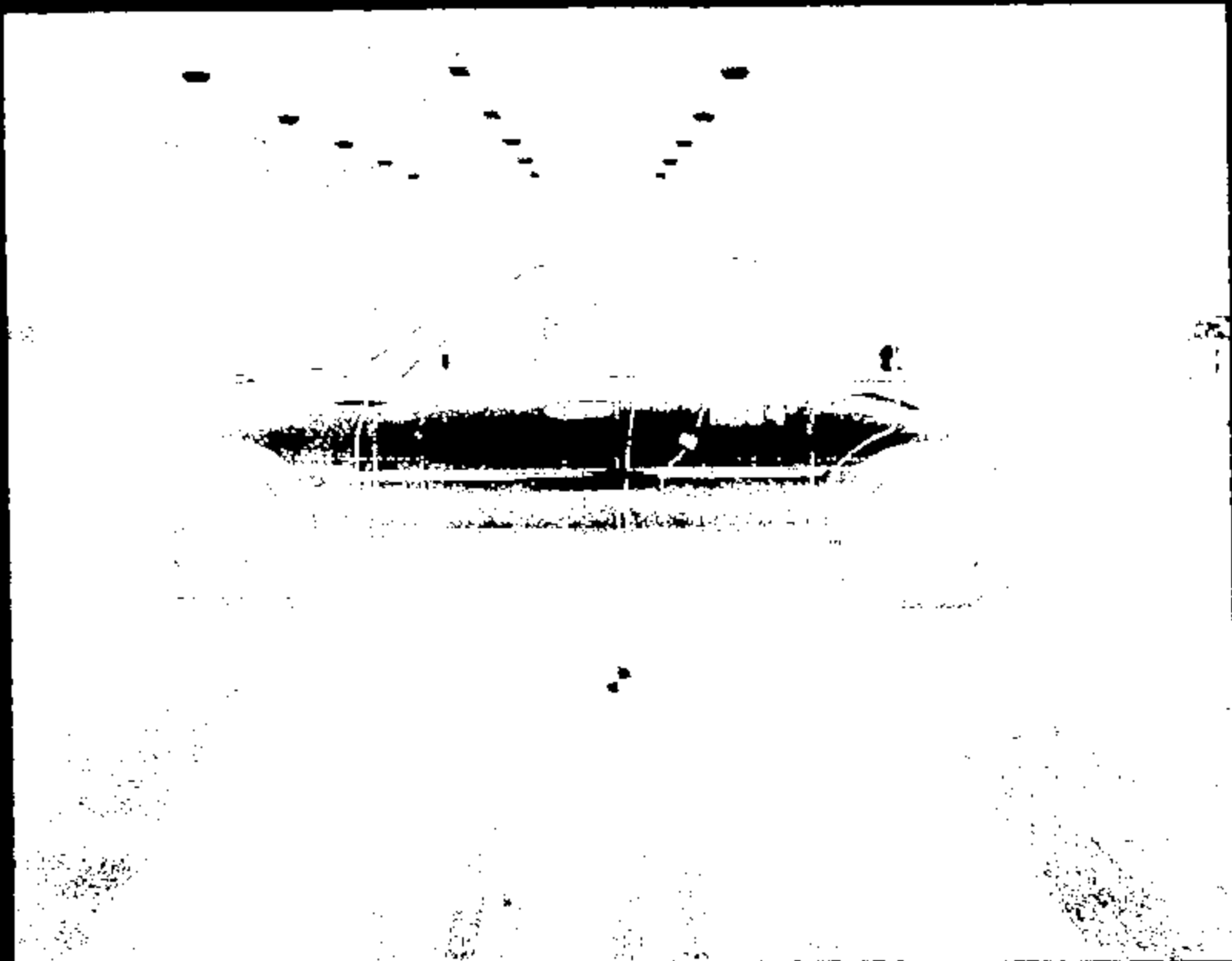
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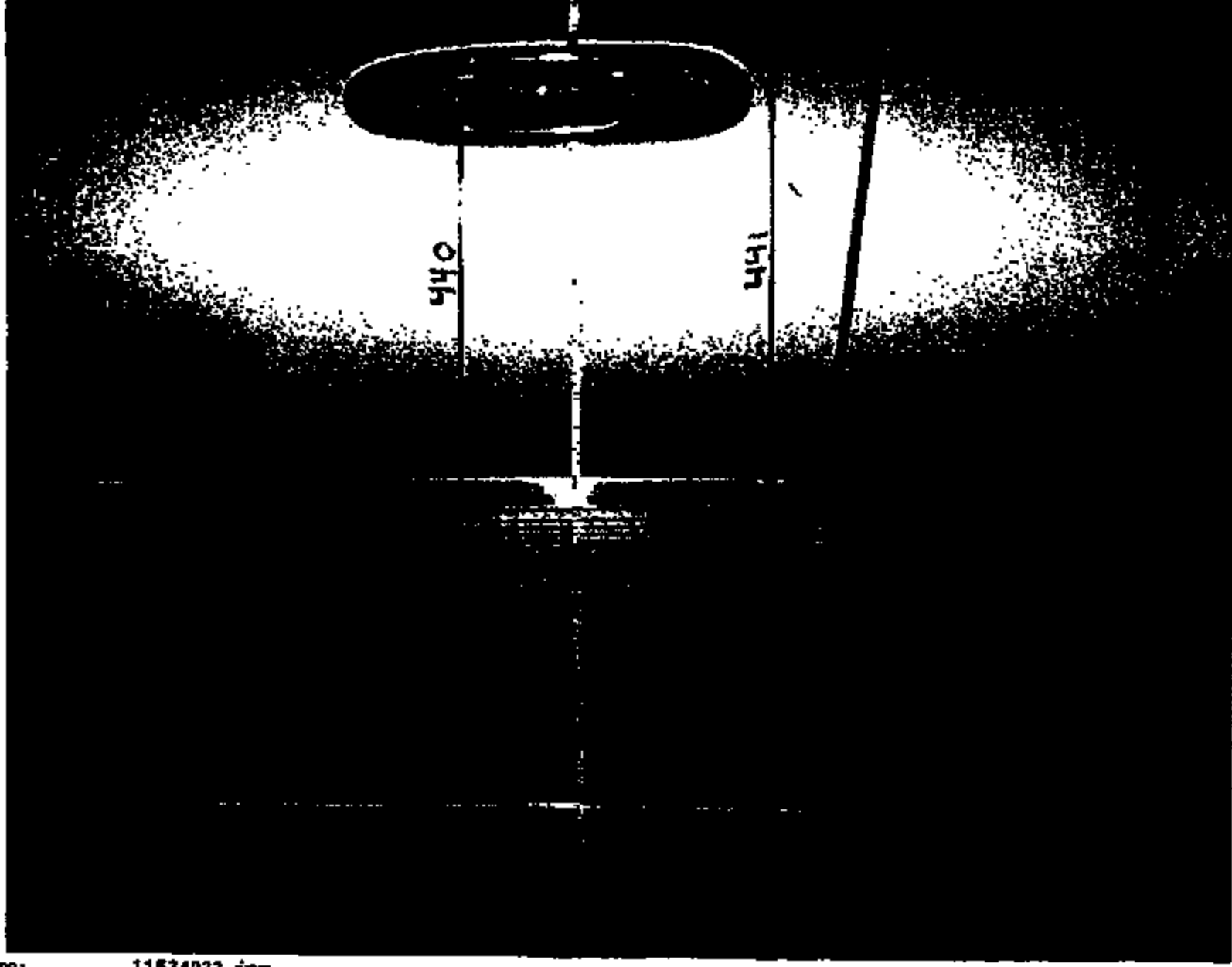


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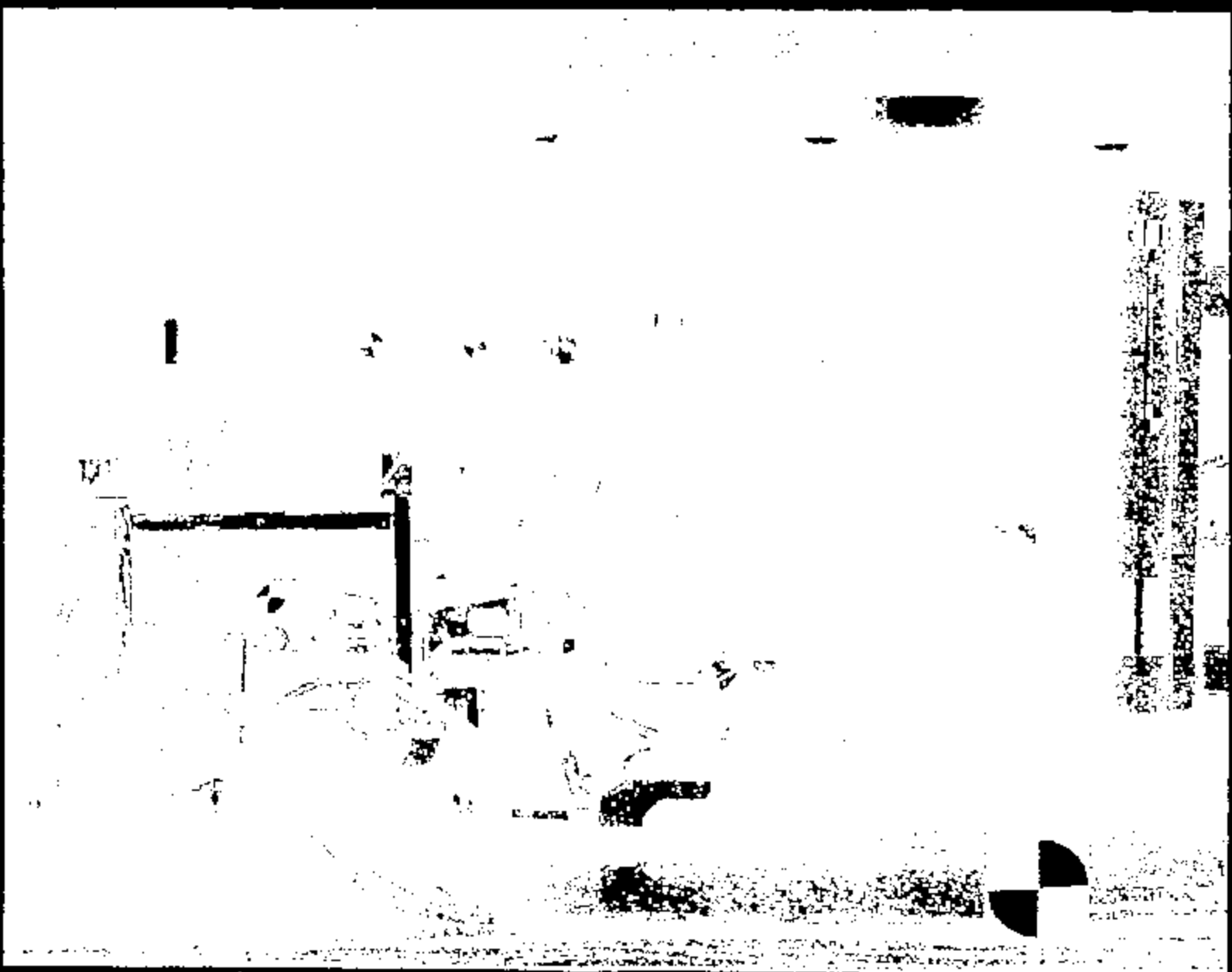


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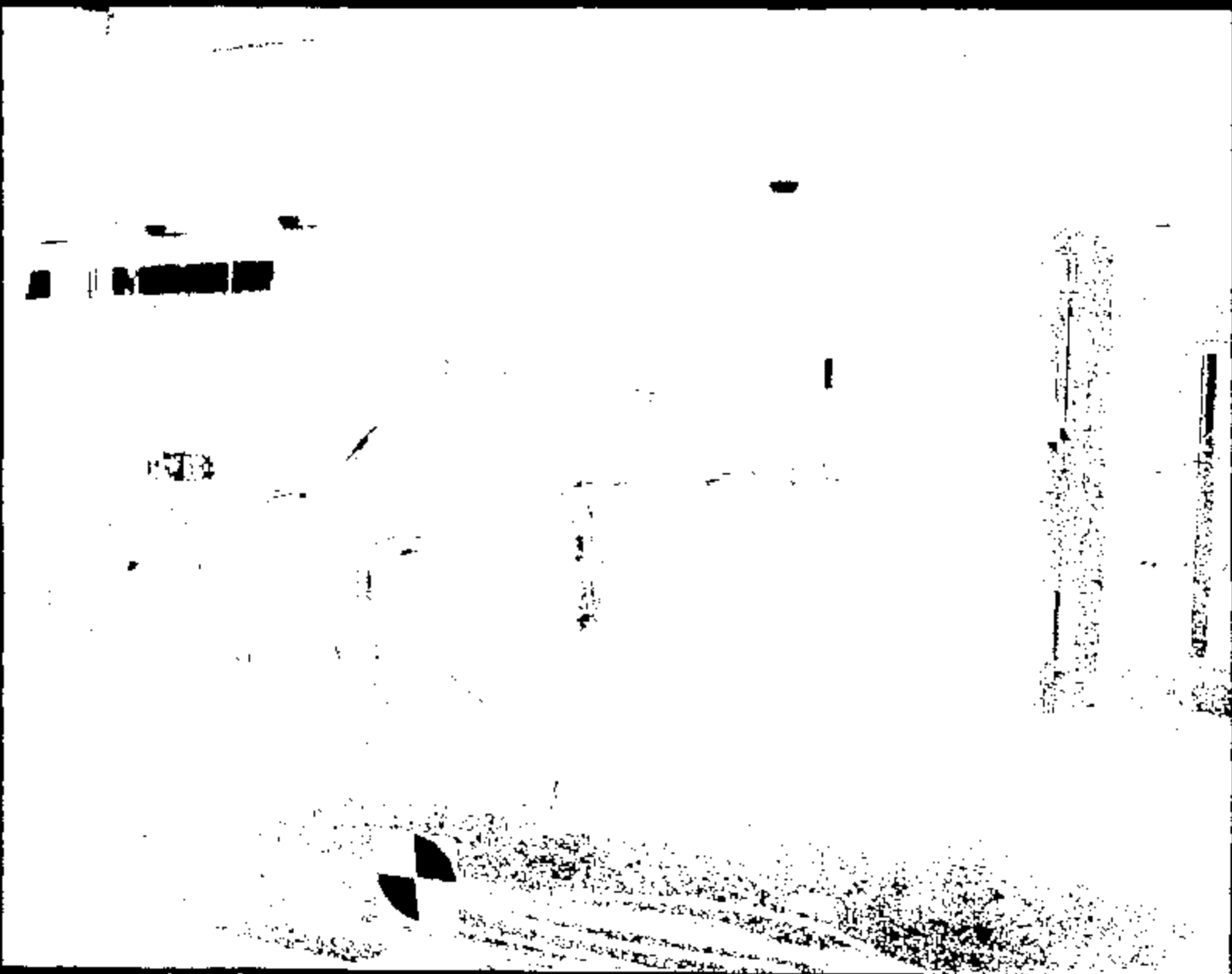
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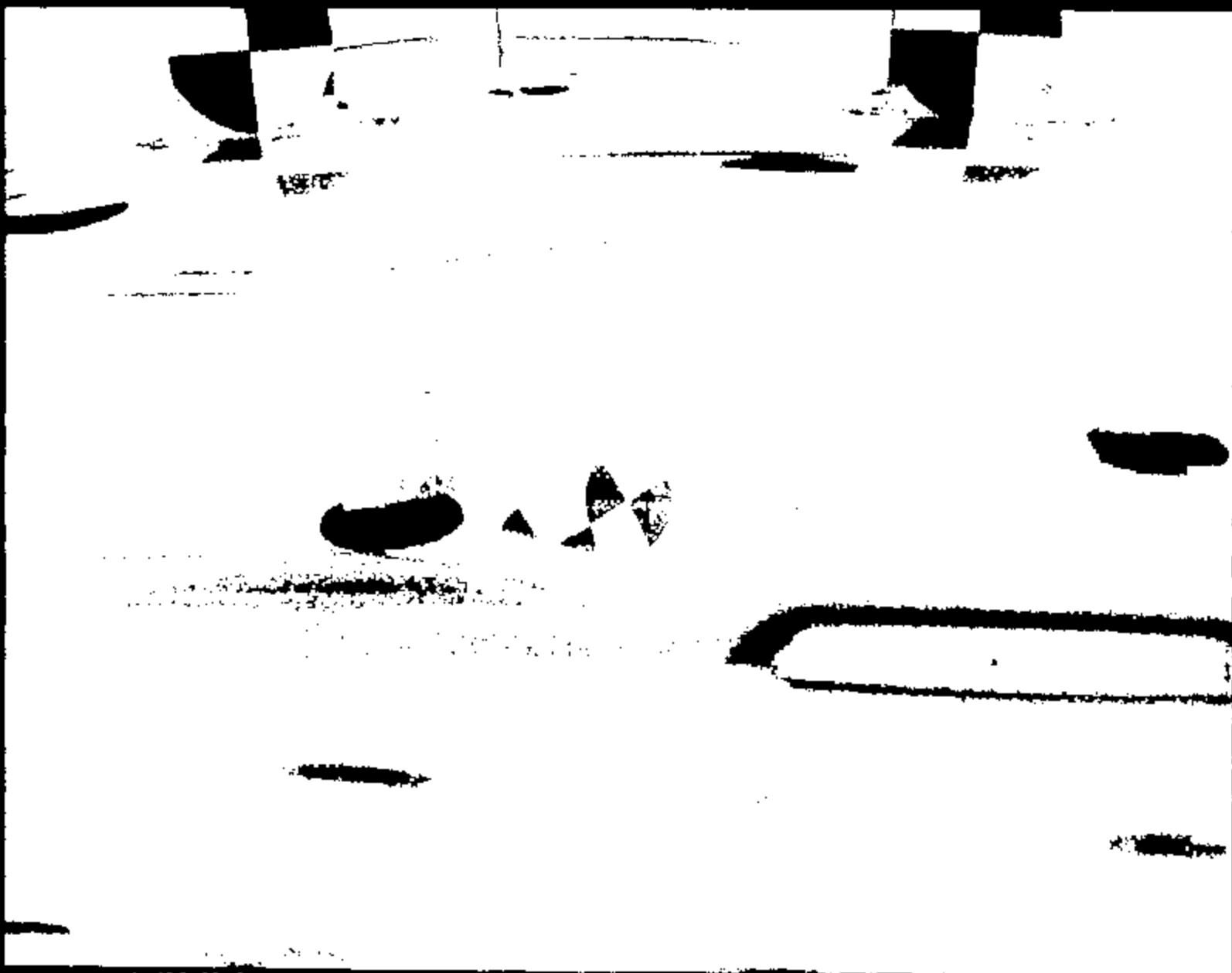
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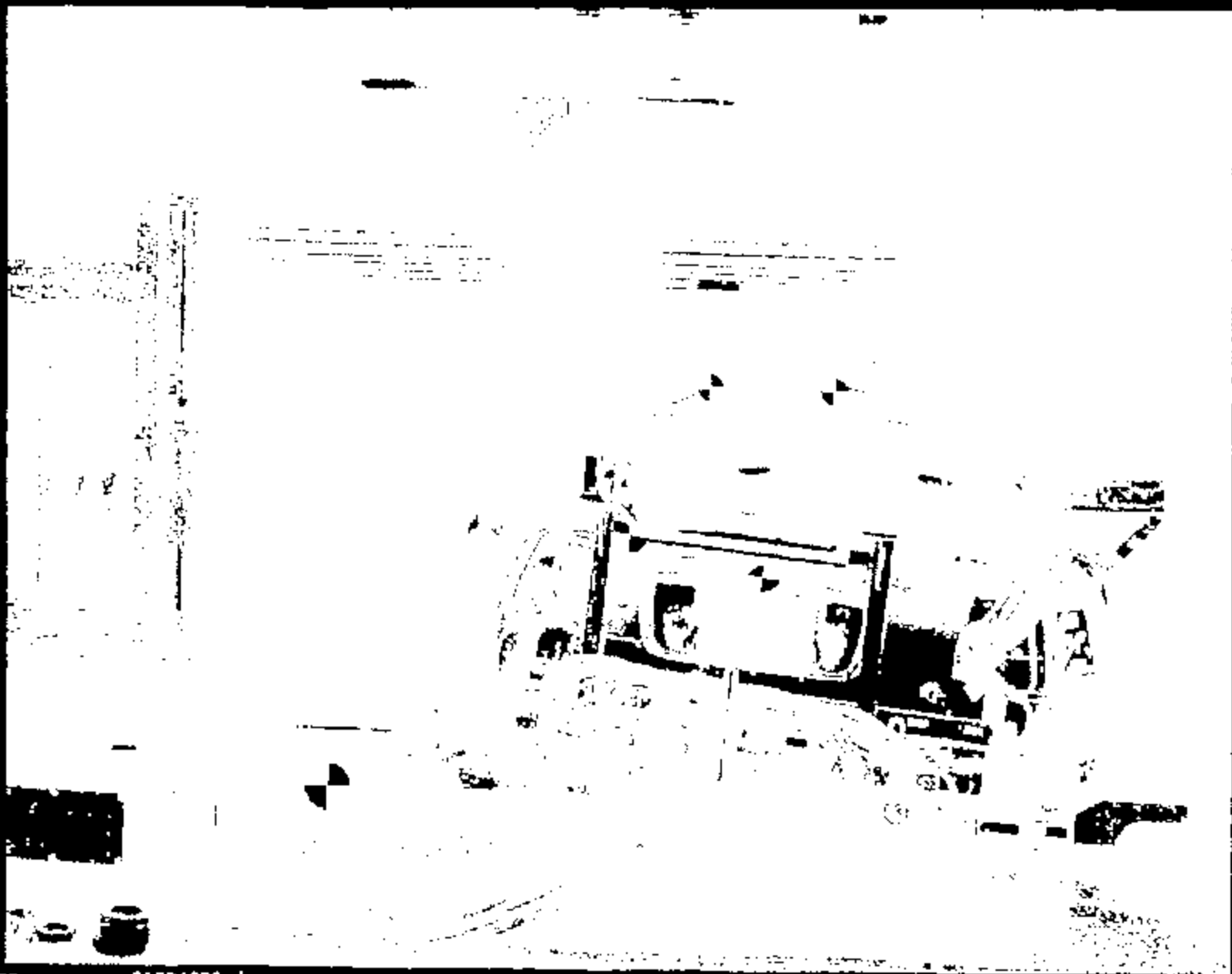


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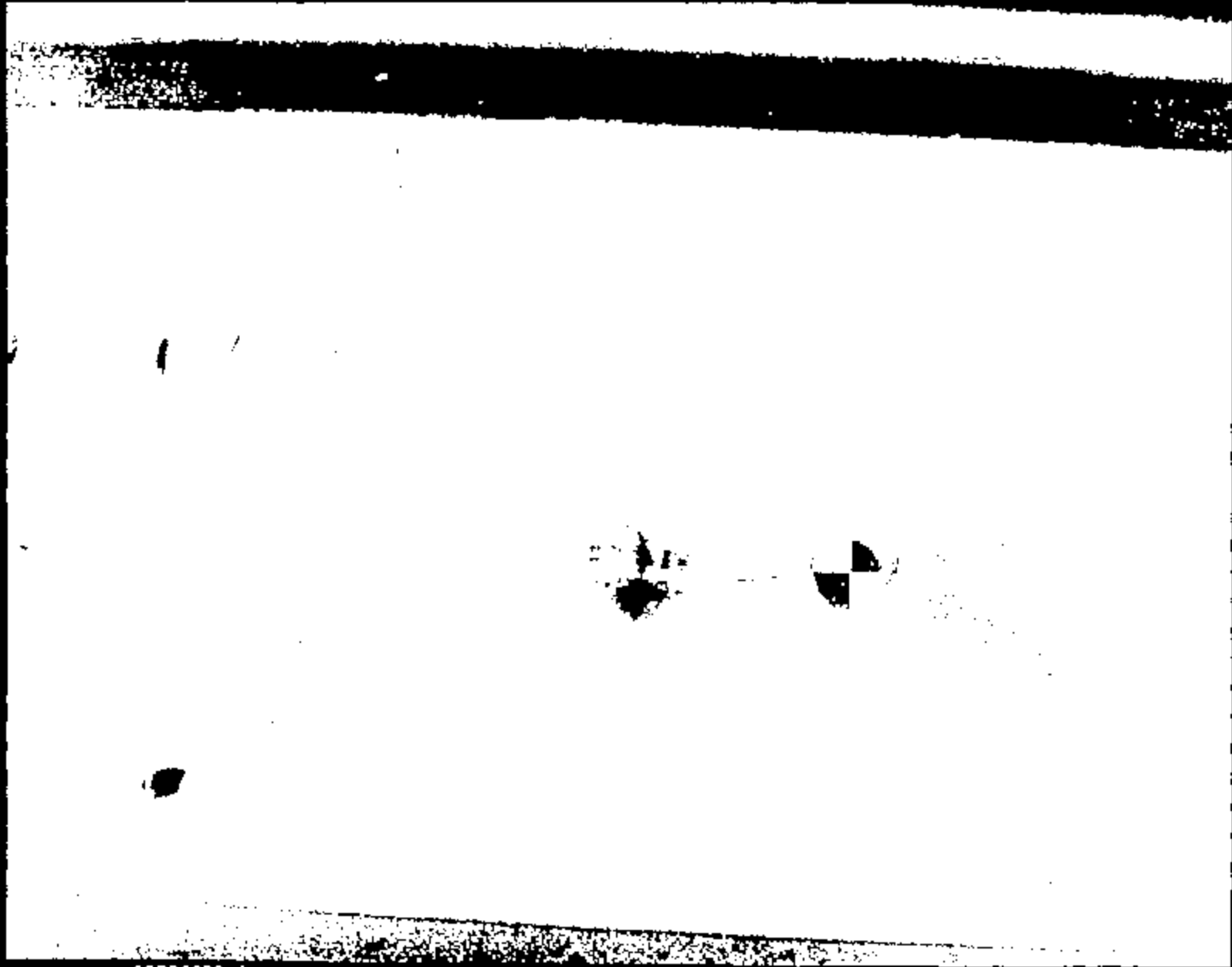


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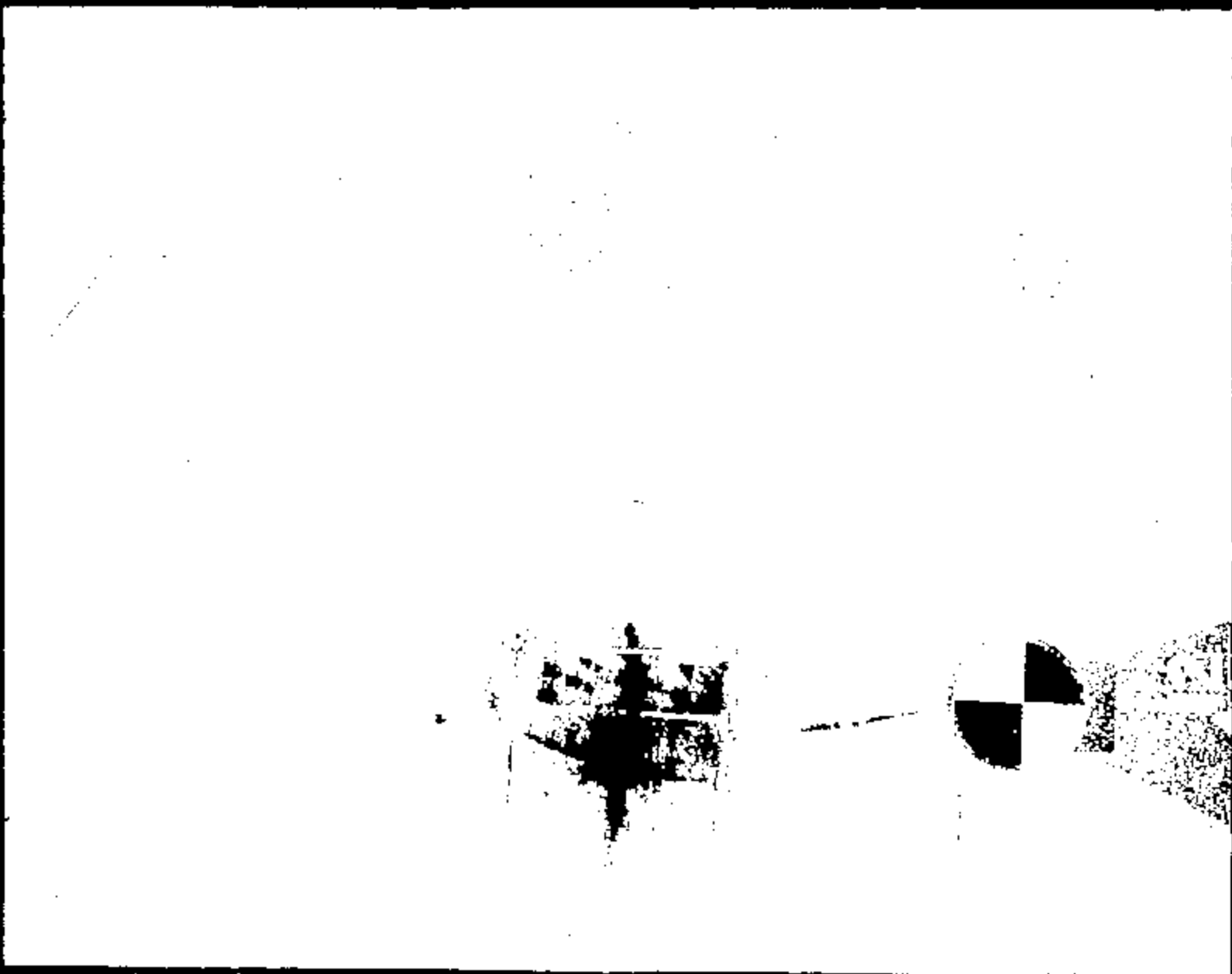


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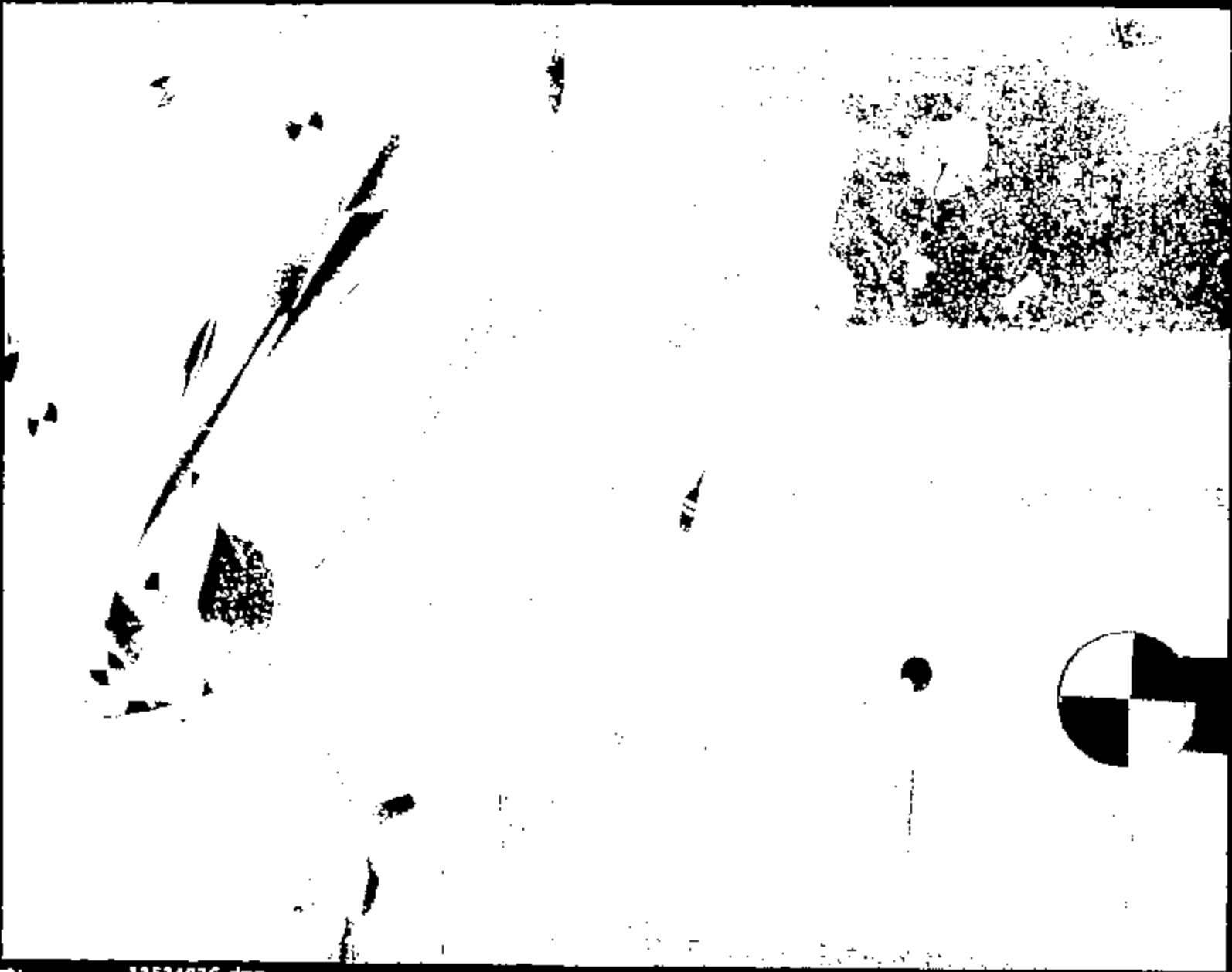


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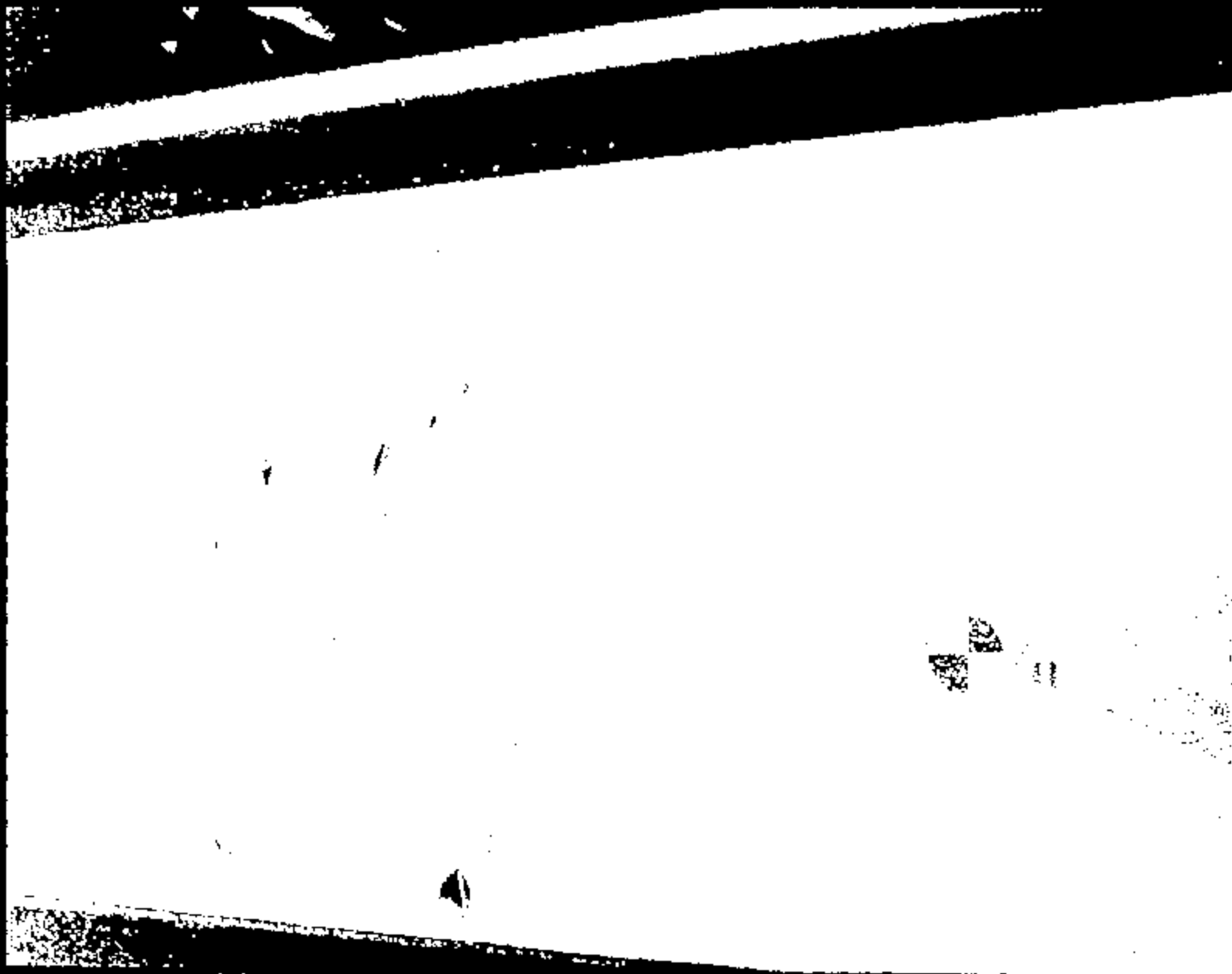


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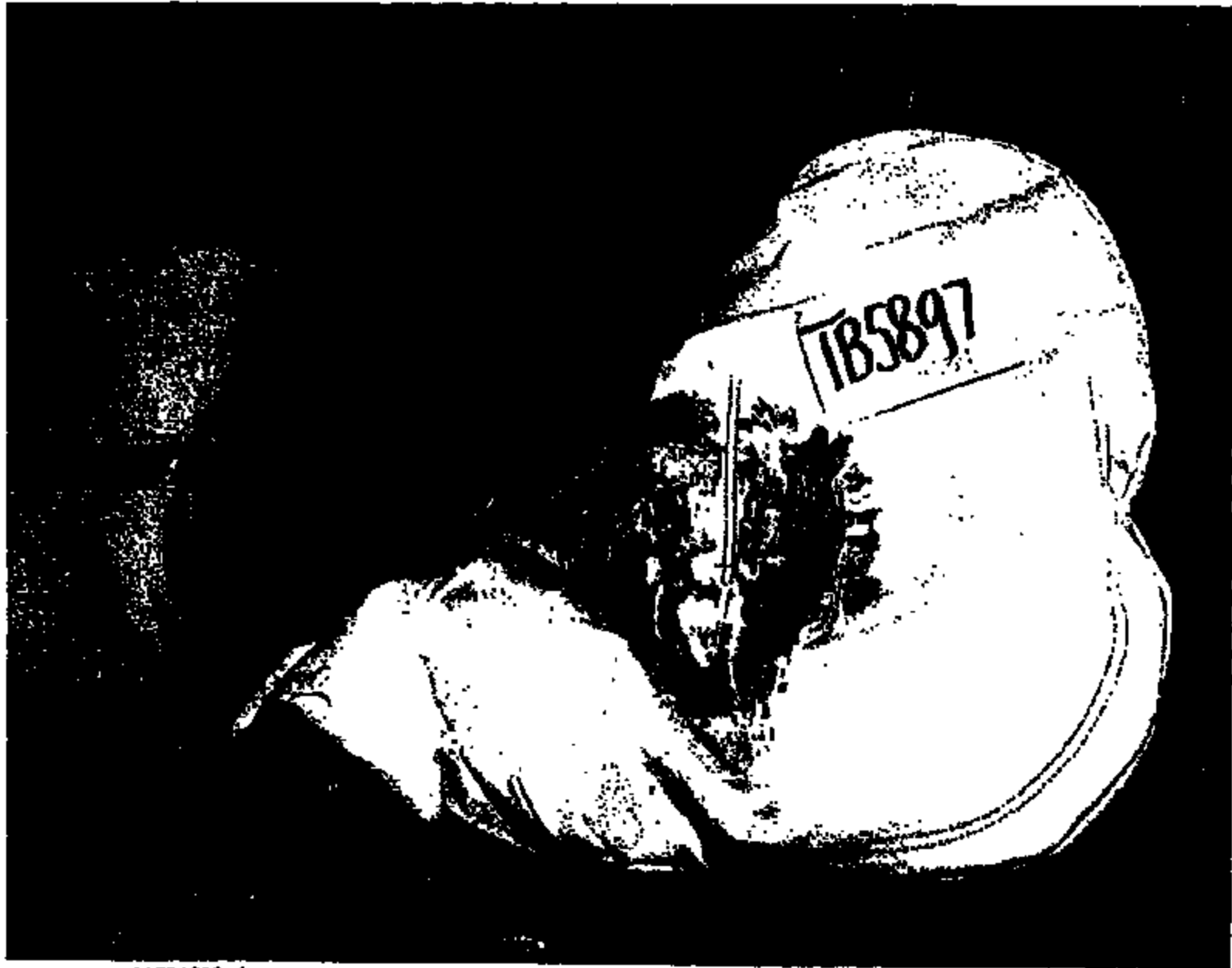
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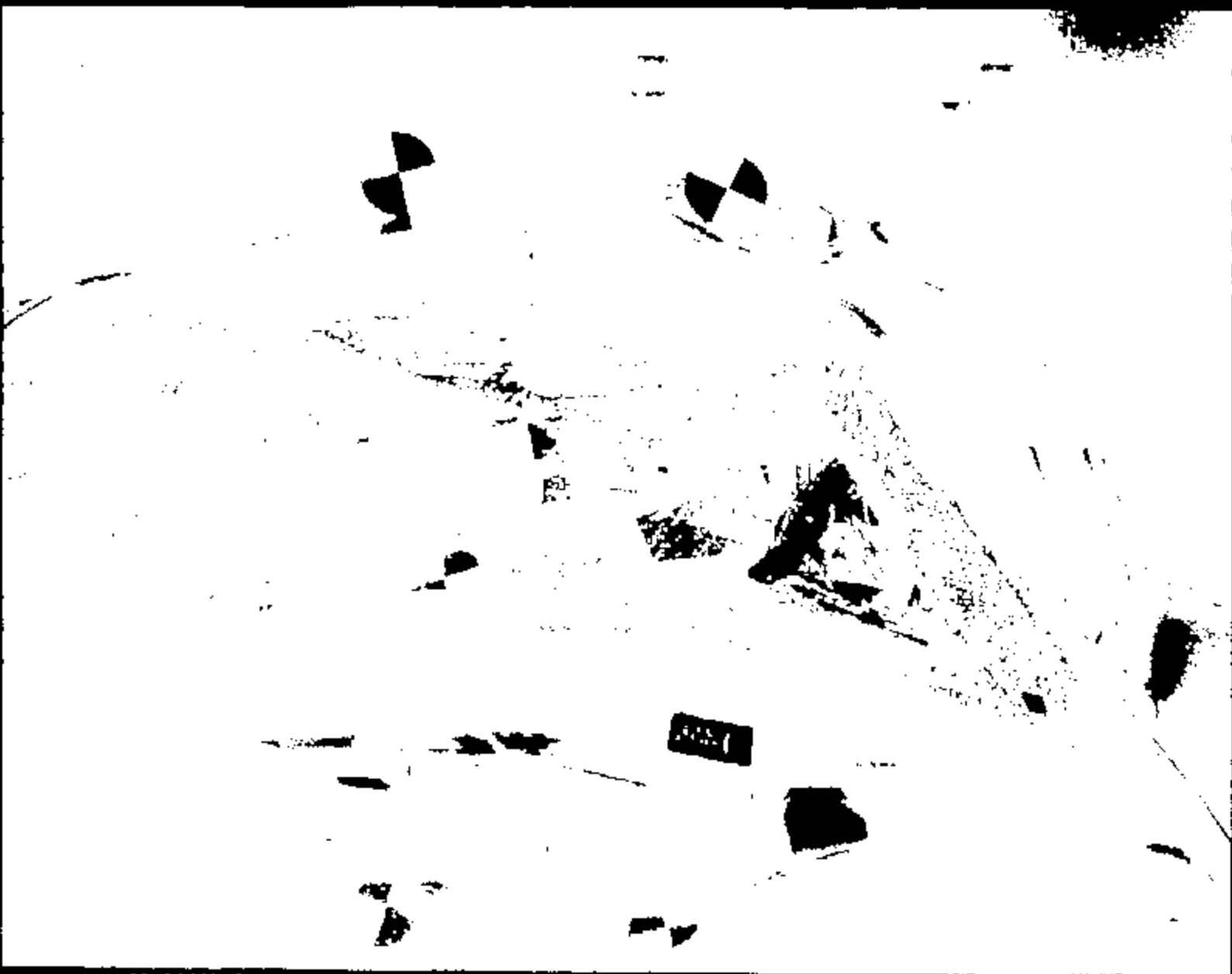
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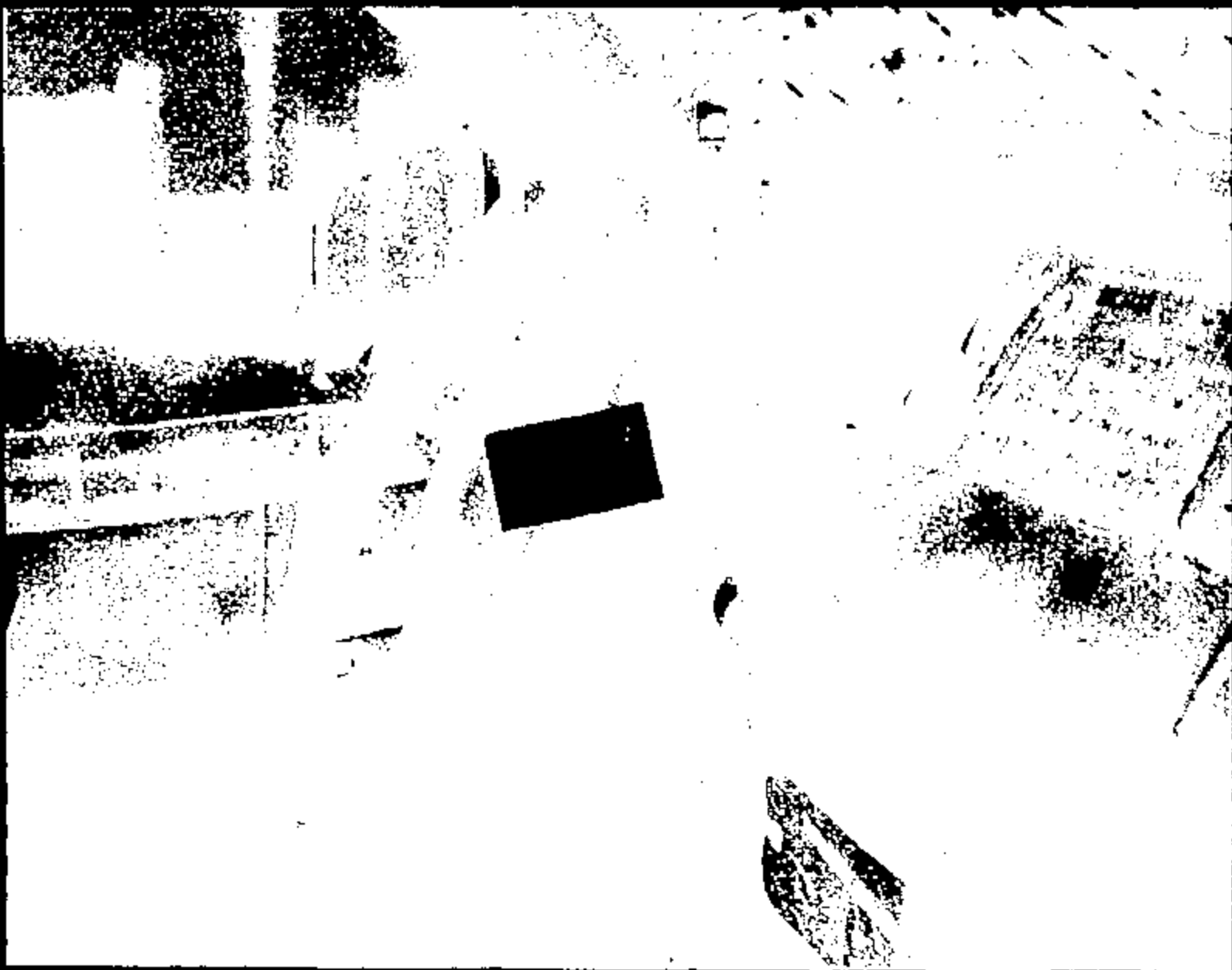
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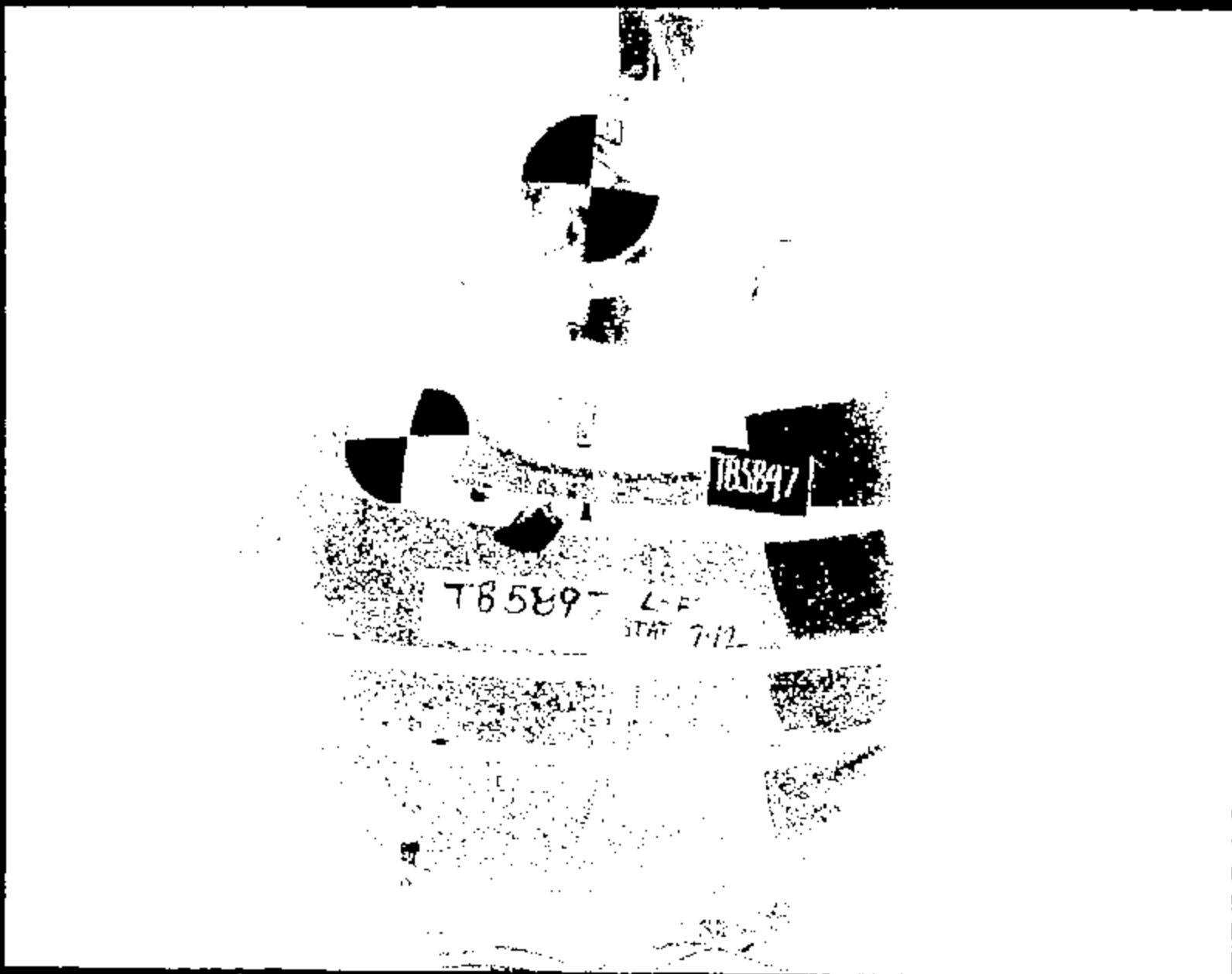
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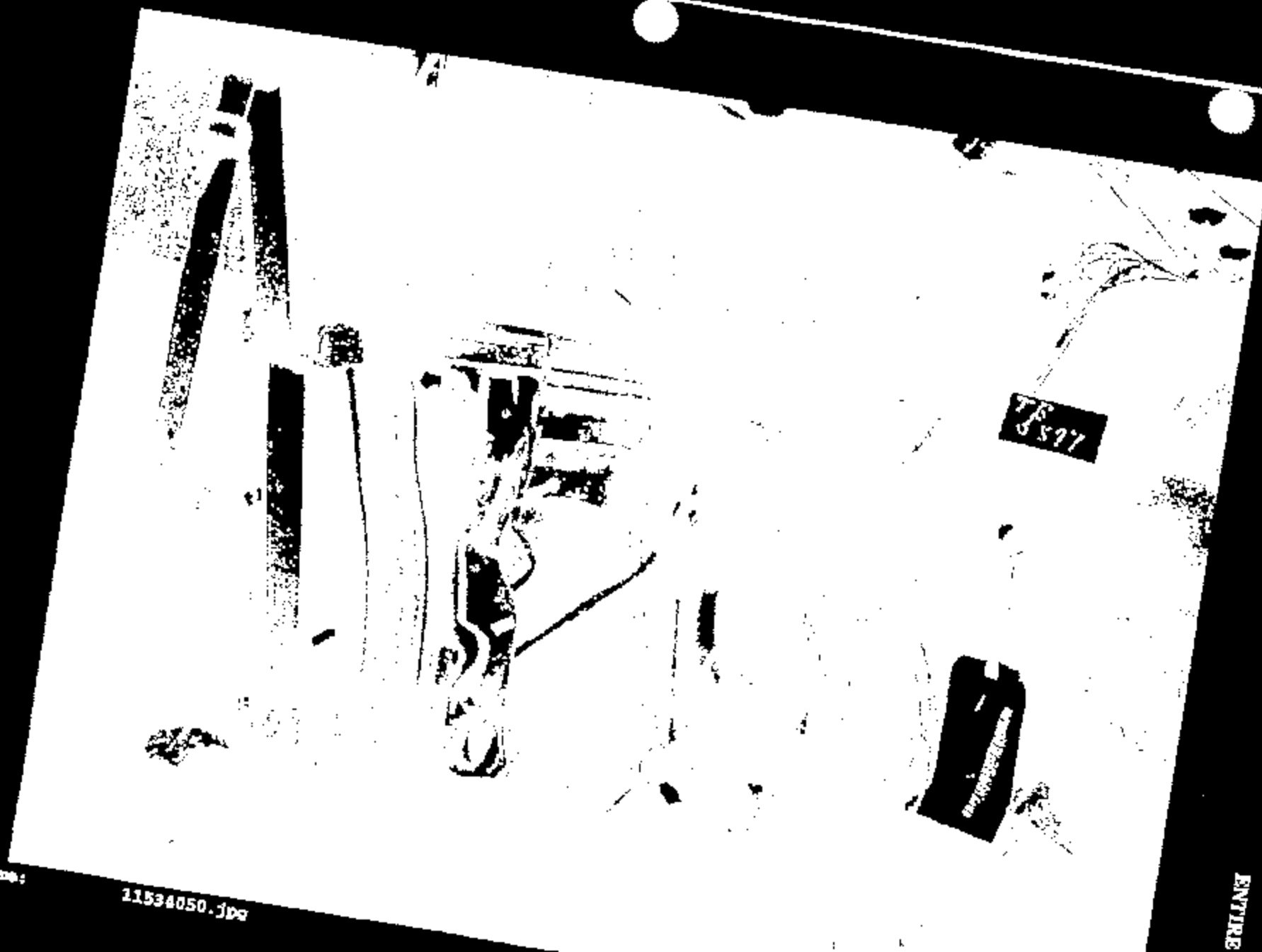
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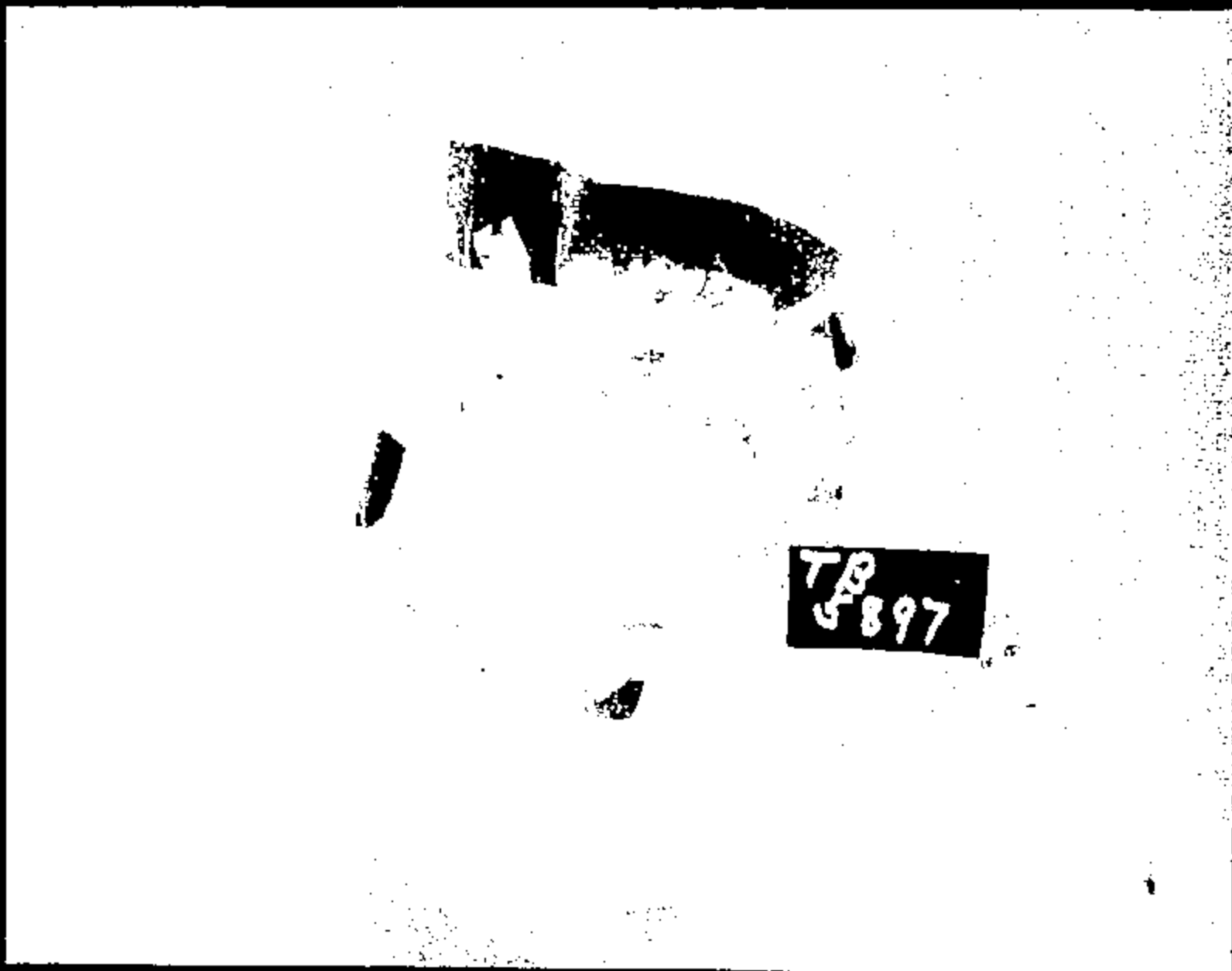


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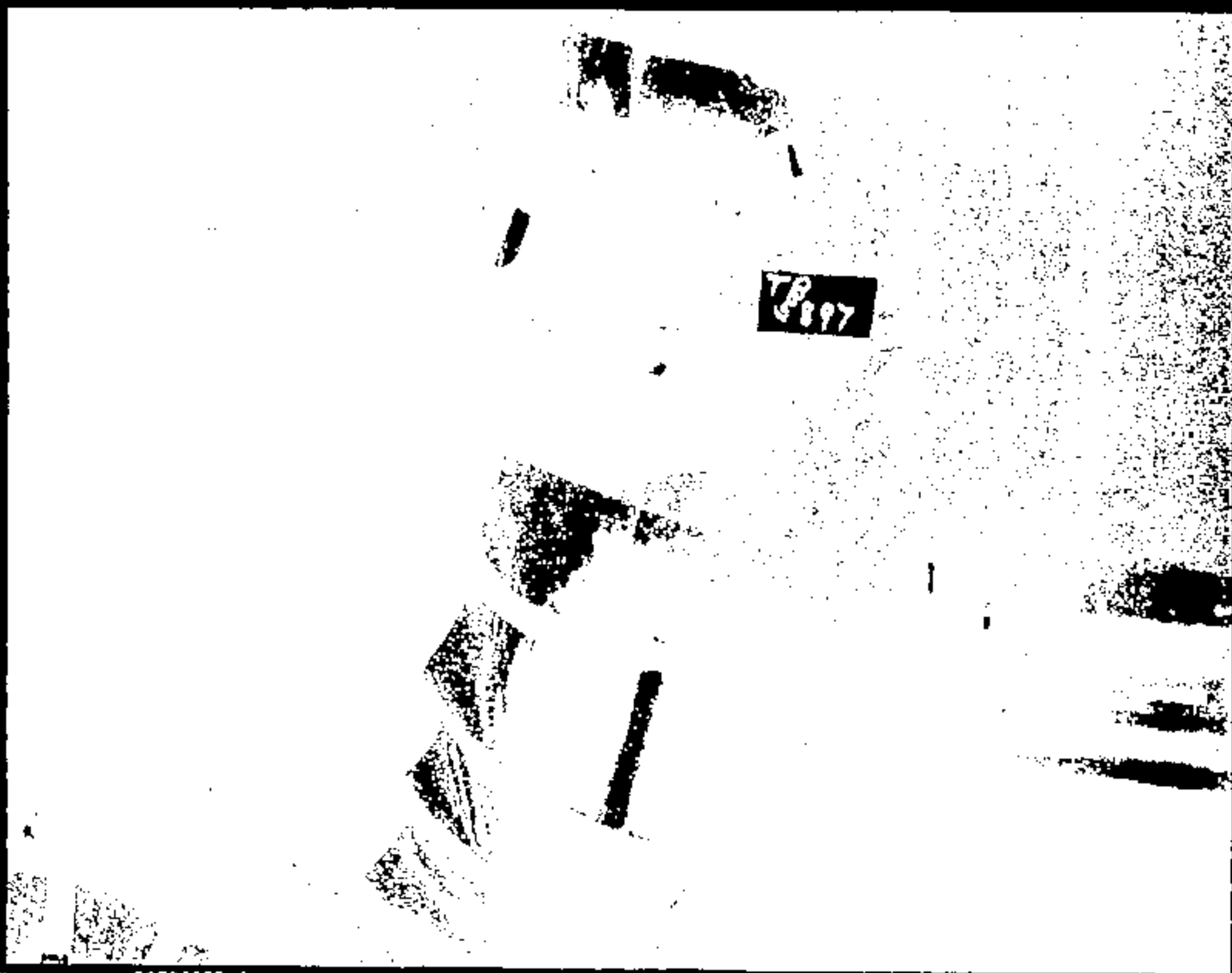


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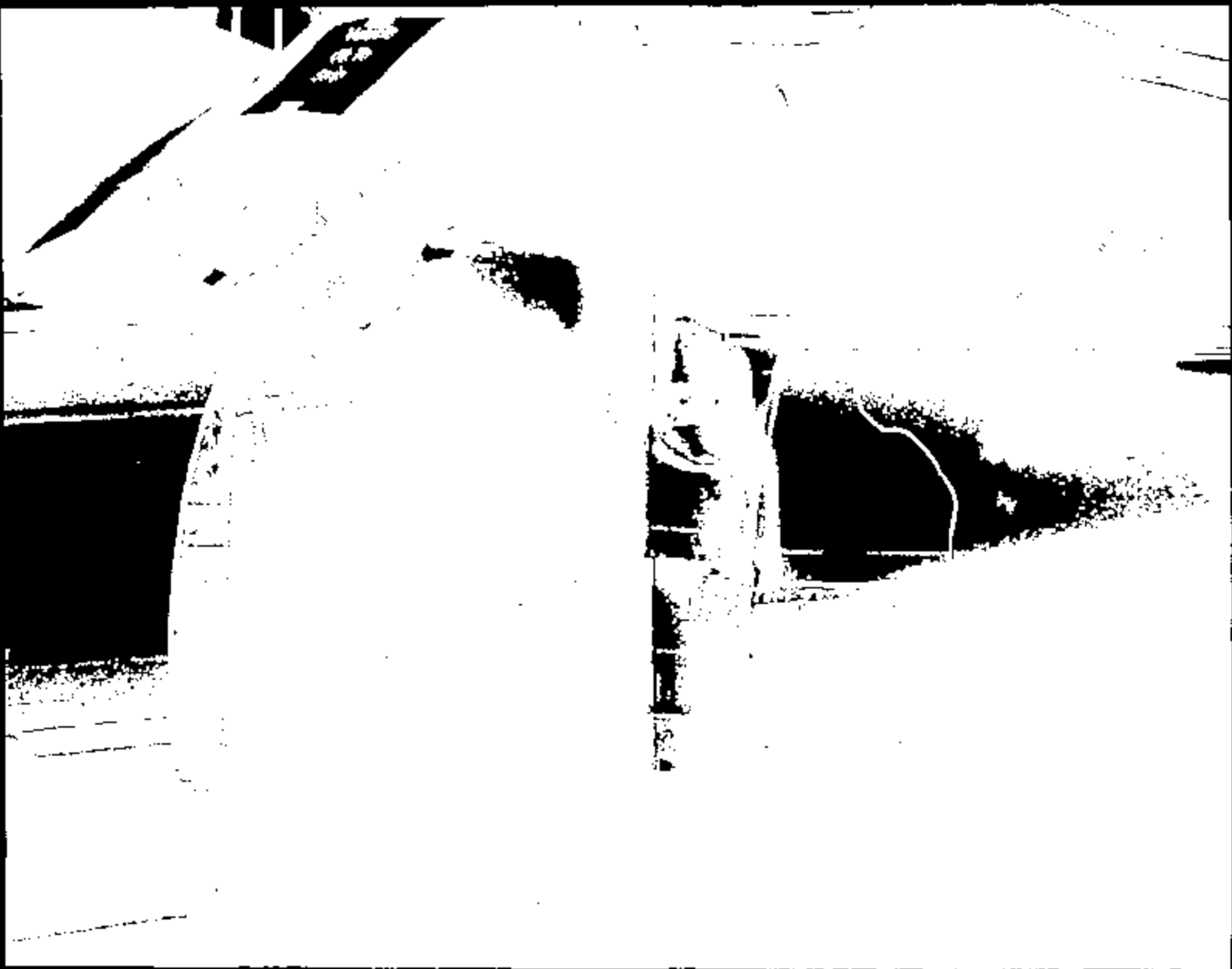
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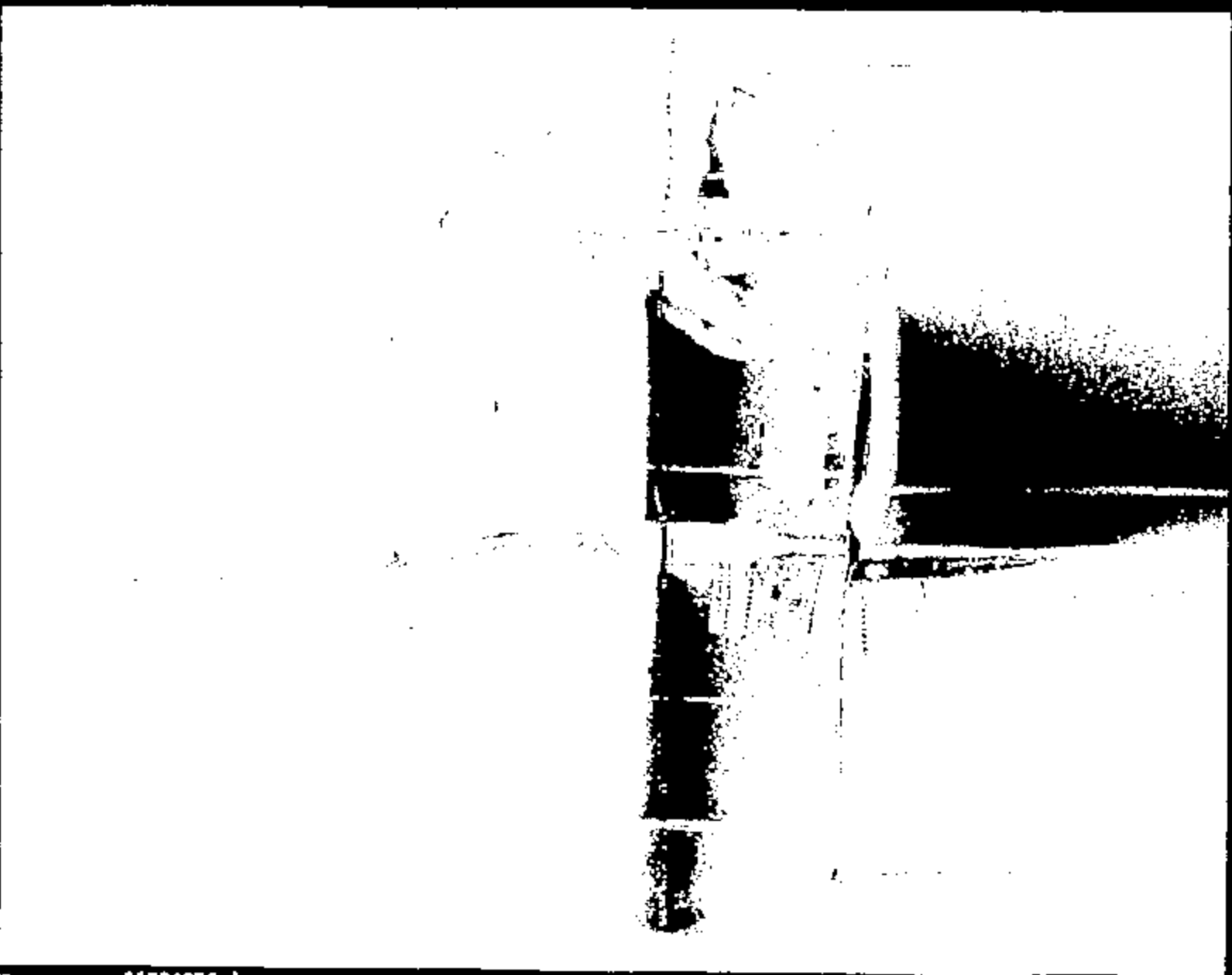


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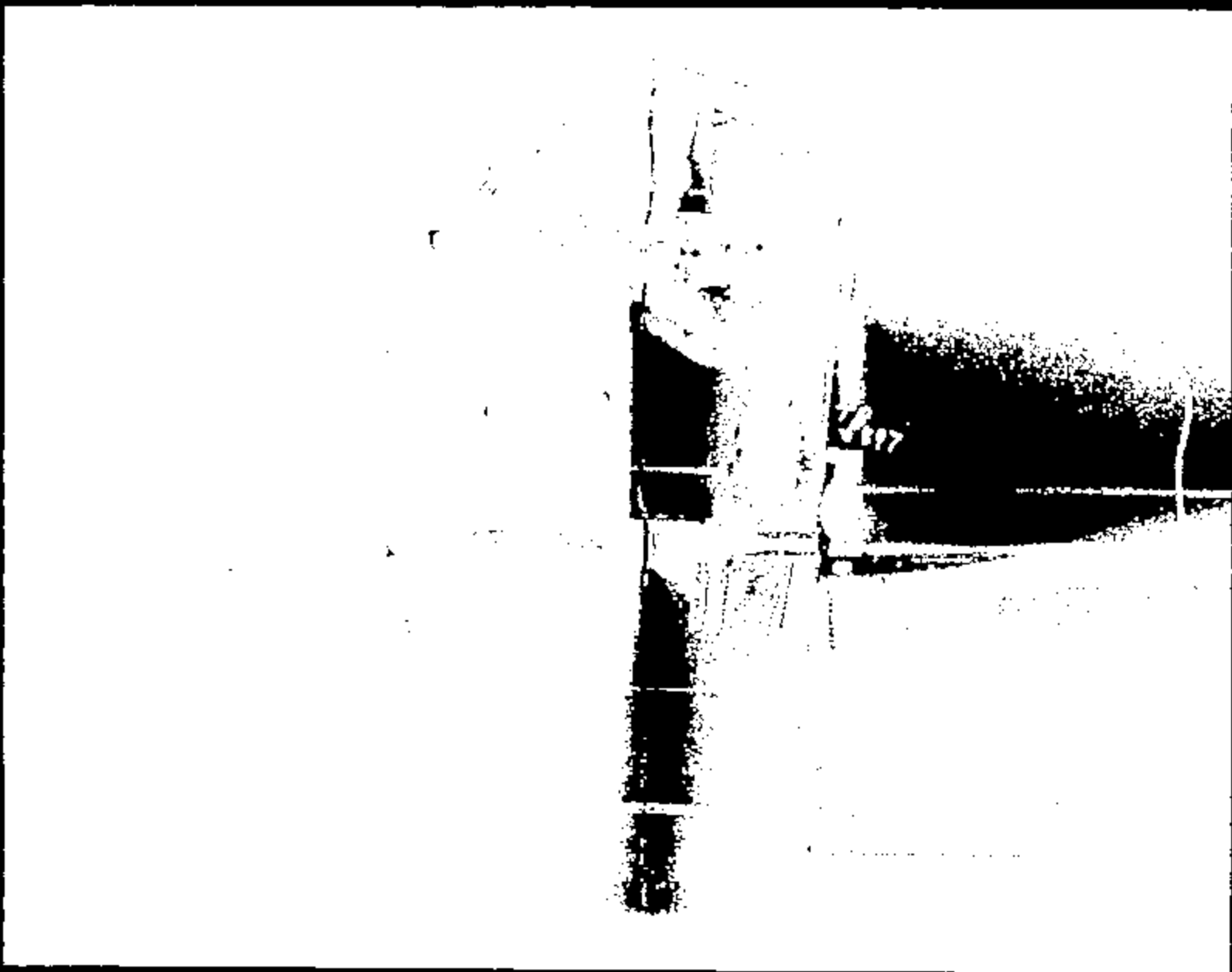
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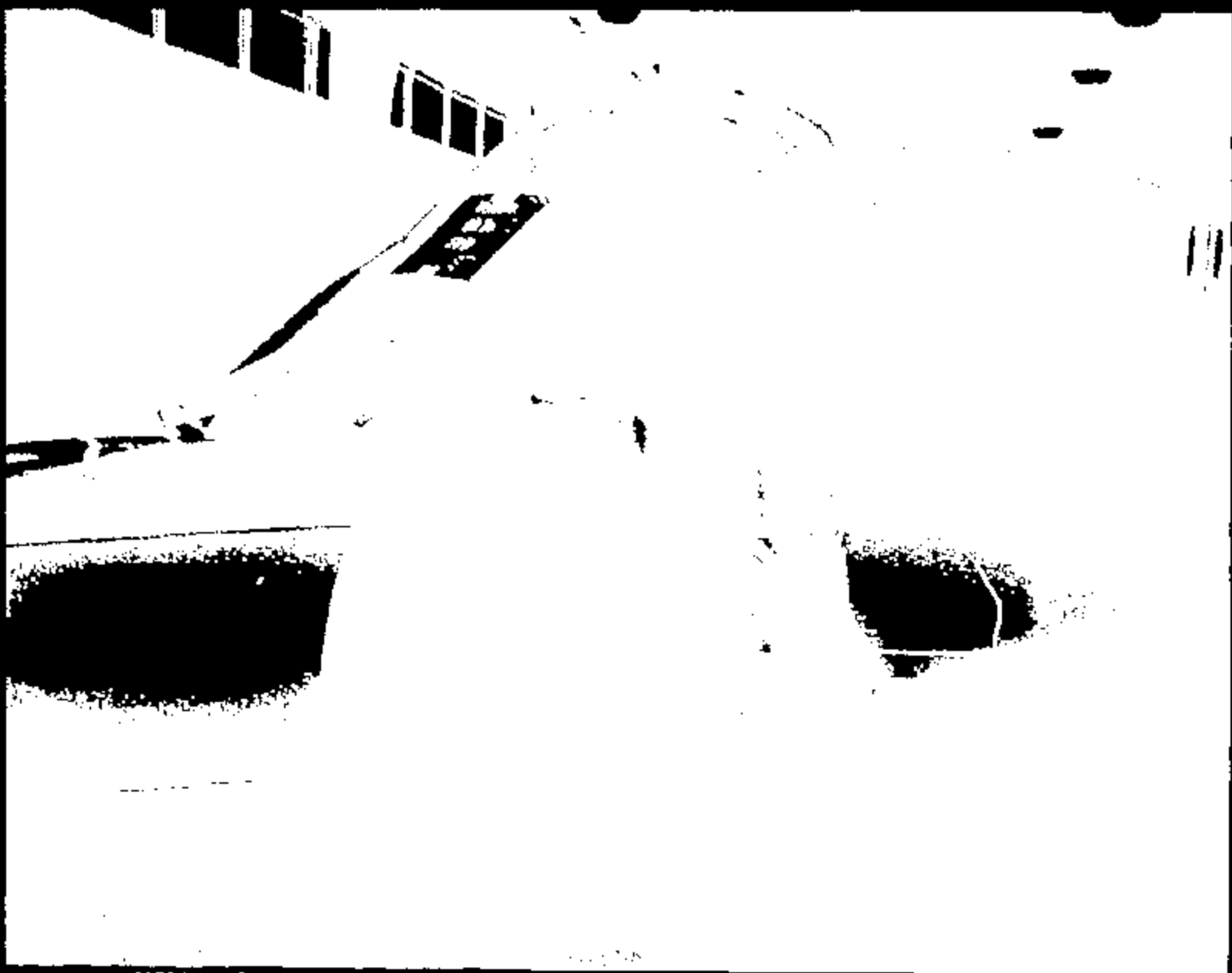


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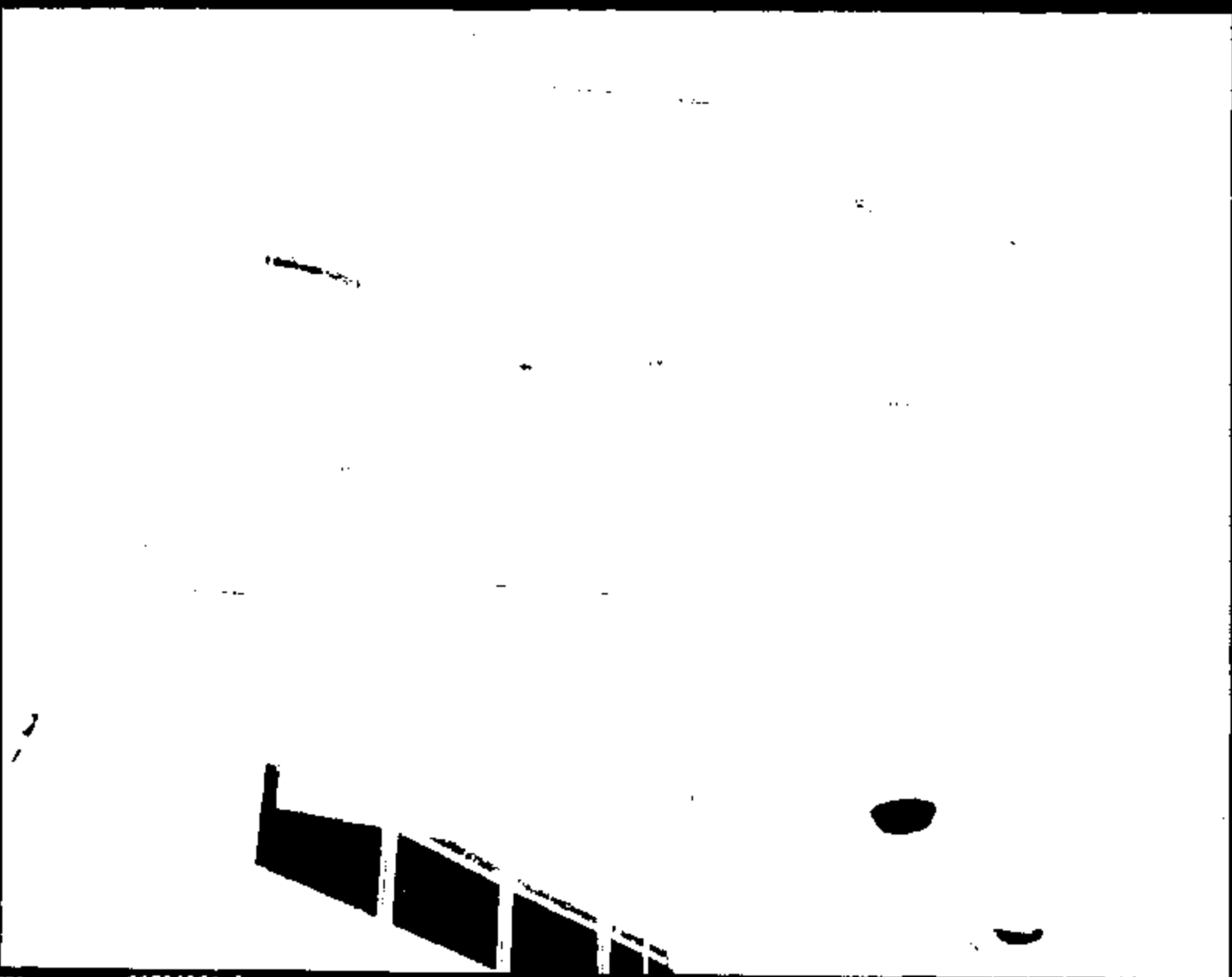
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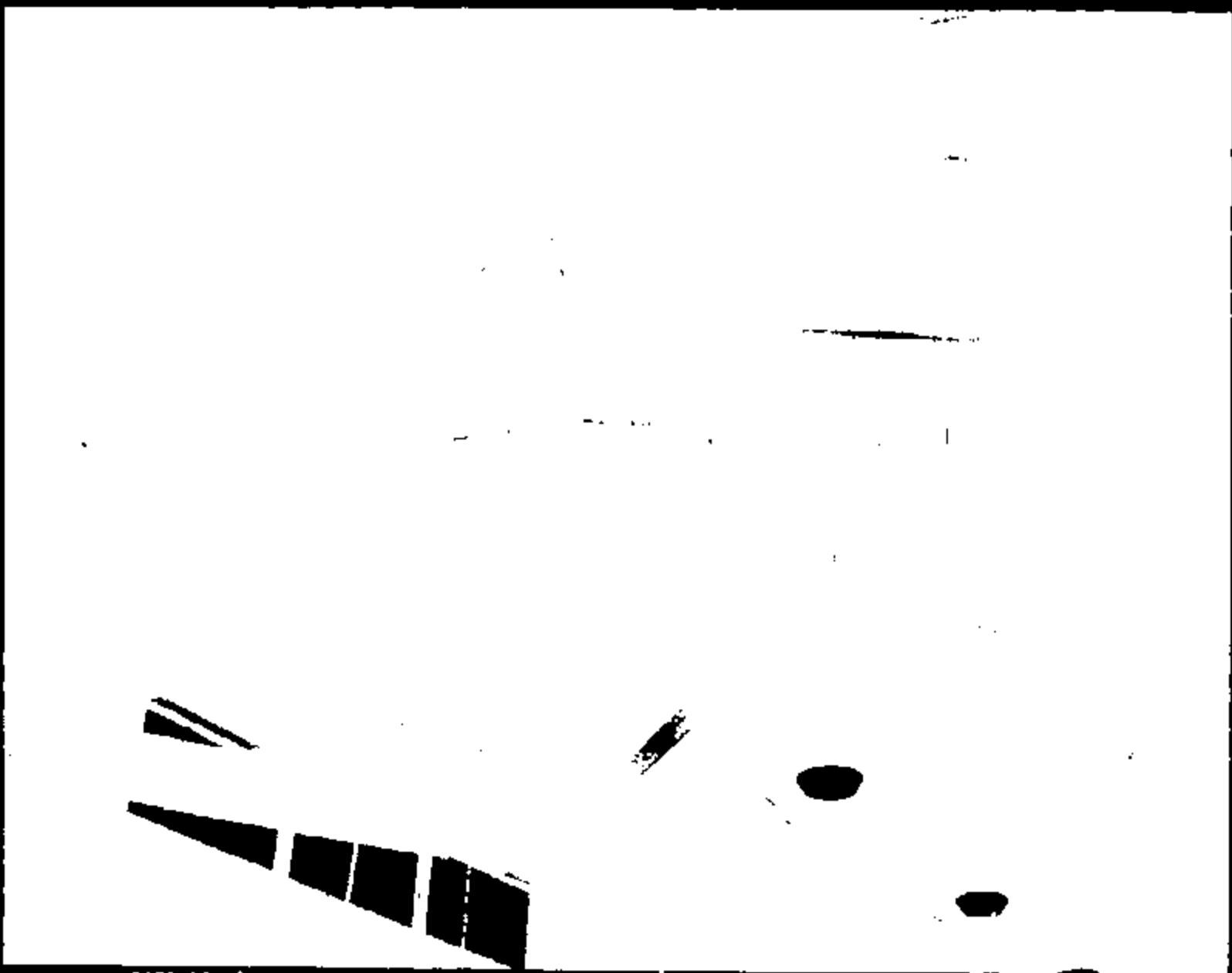
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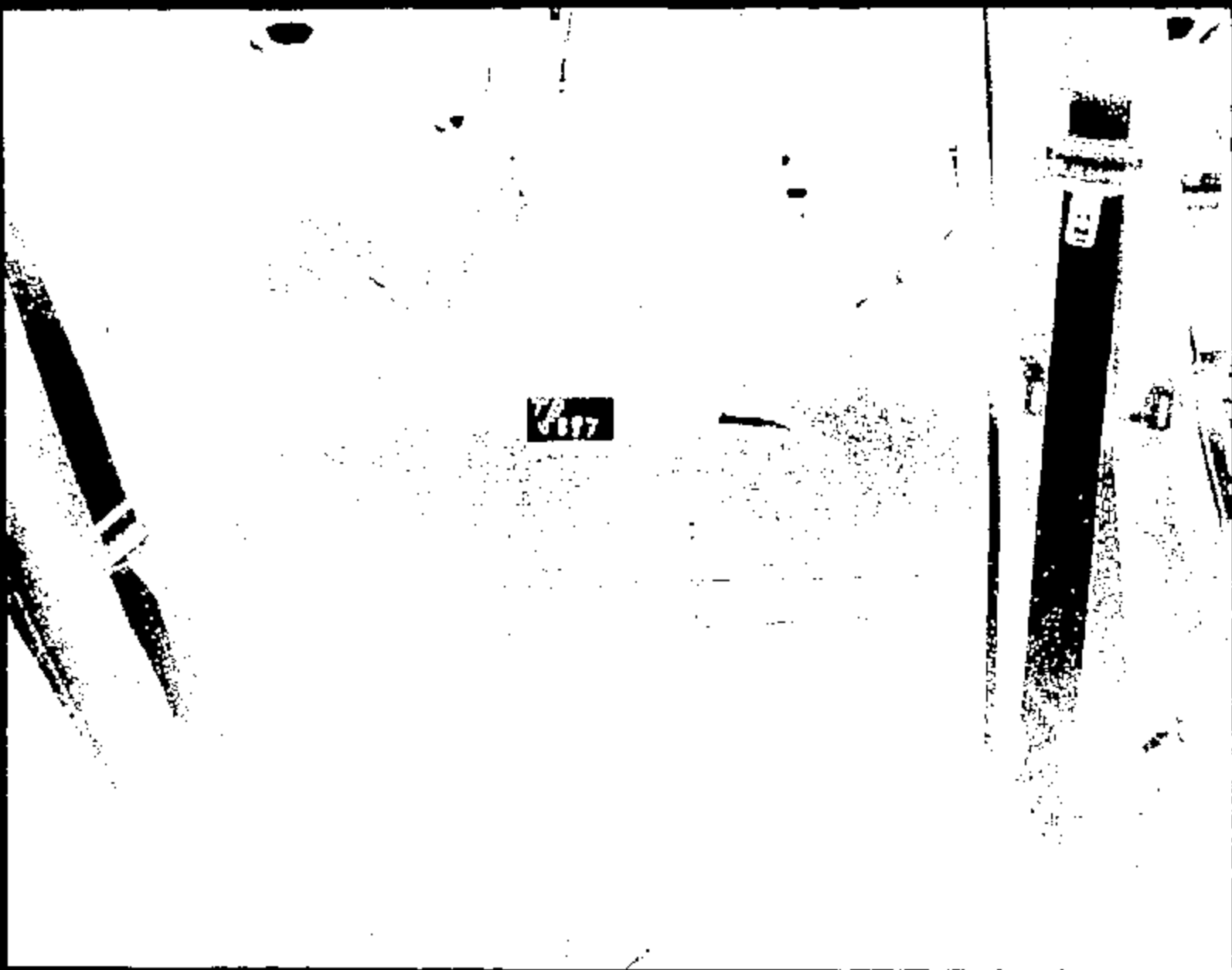
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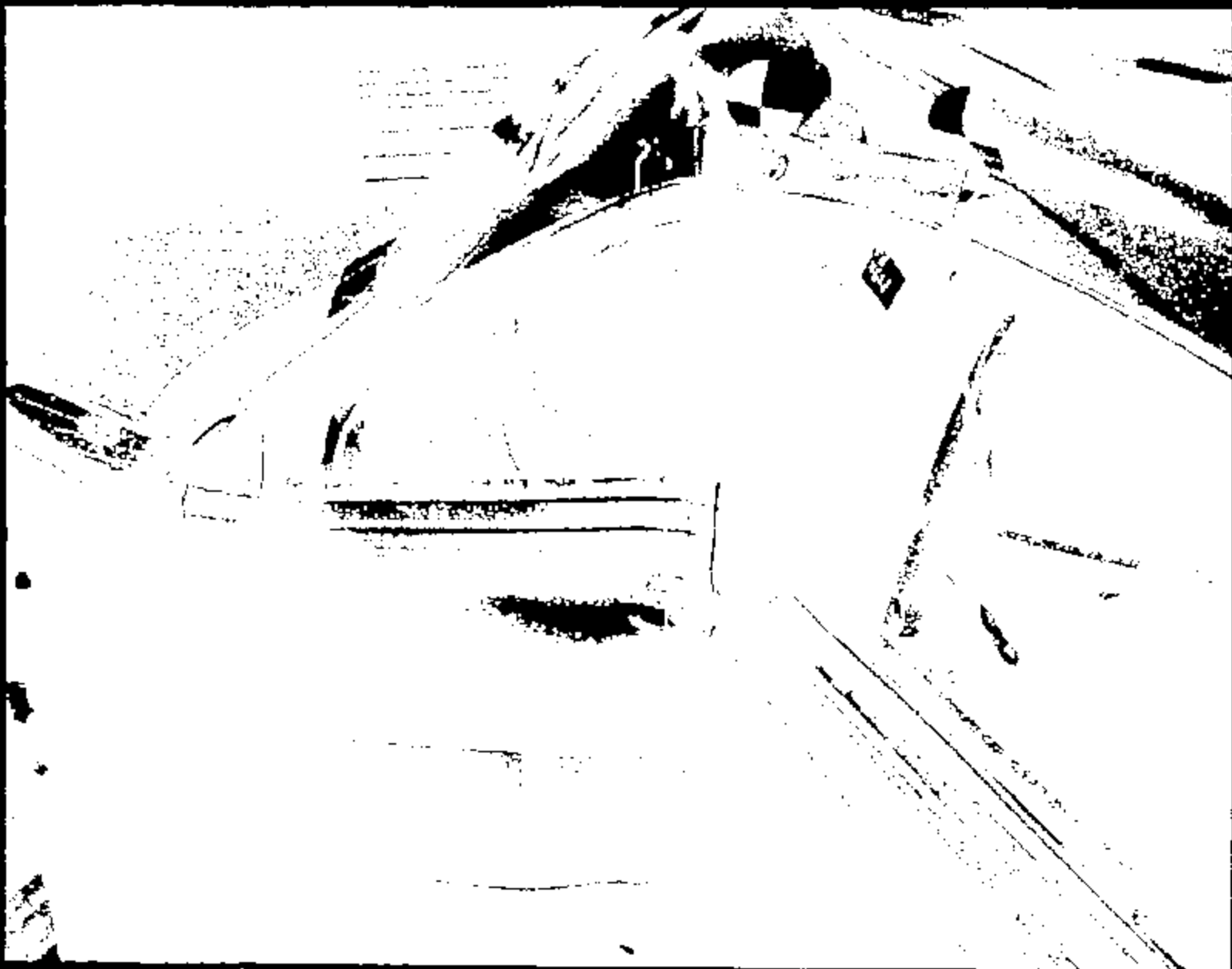


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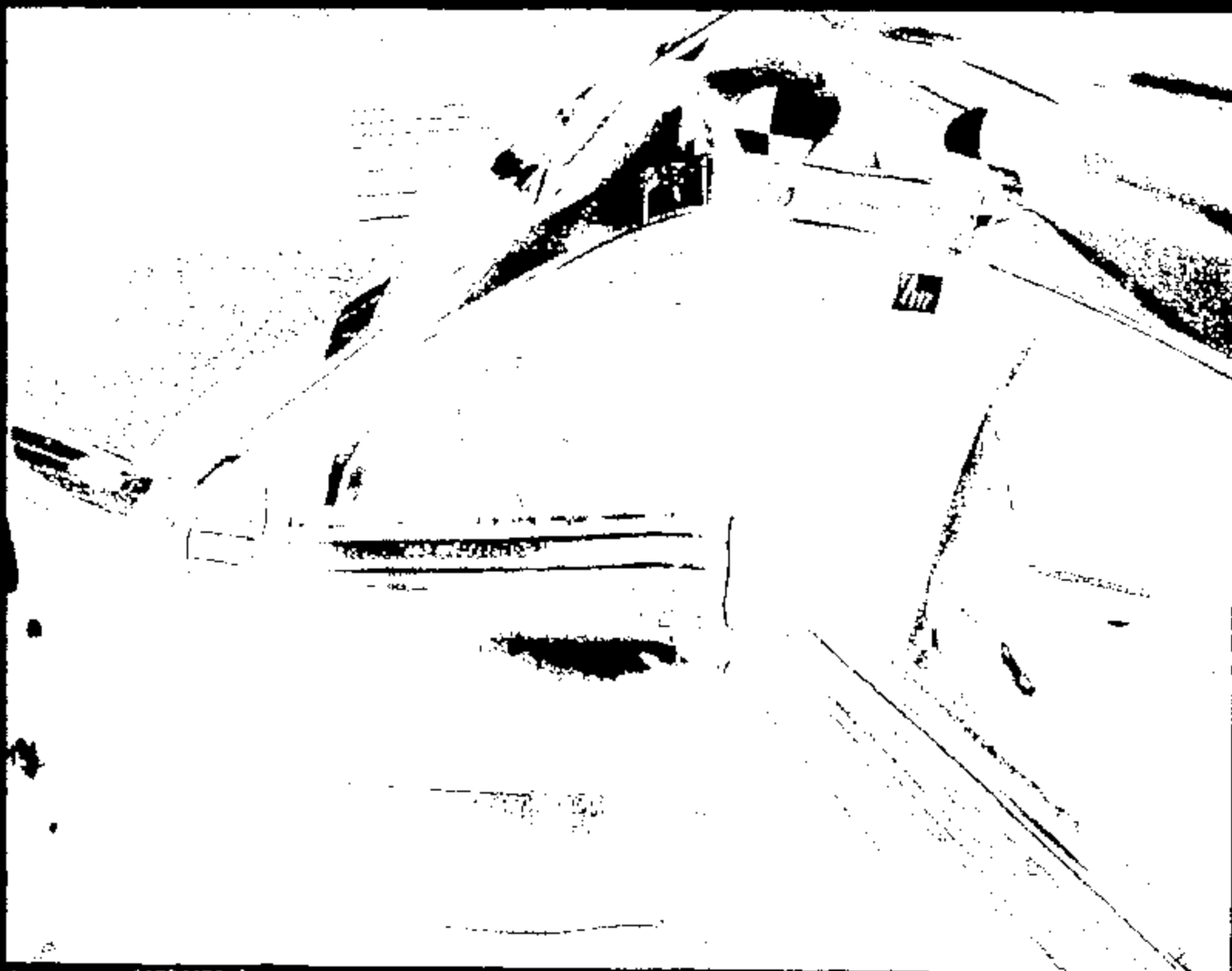


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TEST AUTHORIZATION				TEST AUTHORIZATION NUMBER: YB5997			
TO: Safety Lab Department				REQUEST DATE: 5/7/99		REQUESTED COMPLETION DATE: 6/30/99	
OC:				REQUEST NUMBER: n/a		PROBLEM NUMBER: n/a	
				REQUESTING ACTIVITY: Vehicle Crash Safety			
TITLE OF TEST: (speed) (test description) 1999 Town Car 18 MPH LH Side Impact - (Lateral Pole)				PARTS DUE DATE: n/a			
TYPE OF TEST: ☒ VEHICLE ☐ BENCH ☐ LABORATORY ☐ OTHER		VIN # or IDENTIFICATION n/a - 50FW995 1LNH88T1W6Y999794		VEHICLE MODEL & YEAR: 1999 Town Car		PROD. OR ENG. LETTER: n/a	
ENGINE NO. DISPL. CAPS: 4.6 L		TRANS / DRIVETRAIN: 4-SPD AUTO		AXLE RATIO: n/a		TEST CONDUCTED TO CERTIFY CONTROL ITEM	
TYPE OF FUEL: None		CONVERTER: n/a		IGNITION TIMING: n/a		COMPLIANCE WITH GOV. REGULATIONS: - Yes X No	
CRANKCASE OIL AND CAPACITY (L): n/a		TIRE SIZE AND PLY RATING: P255/60R16		REPORT CATEGORIES: ☒ ENGINEERING ☒ DATA ☒ RAW DATA		DISPOSITION OF PARTS: n/a	
VEHICLE TEST WEIGHT: FRONT 2416 REAR 2336 TOTAL 4751		TIRE PRESSURE (psi): FRONT 32 REAR 32				PROCUREMENT REQ? ☐ YES ☐ NO IF YES, GIVE CODE	
						MAIL REPORT TO: BLOG: PDC MAIL DROP: 156 ADDRESS: SCB41	
1. OBJECT OF TEST 2. TEST PROCEDURE 3. ITEMS TO BE TESTED (NAME, NUMBER, QUANTITY)							
"RECORD COPY" Schedule No. <u>7-7-12</u> Retain Until <u>2019</u> 1) Conduct: (speed) 18 MPH (year) 1999 (vehicle) Town Car (level) # Production (mode) LH Side Impact - (Lateral Pole) 2) Velocity At Impact: 18 MPH 3) Vehicle Year: 1999 Remote Fire Time: Sensor Fire Vehicle Line: Town Car Positioning procedure: FMVSS 201 BACK UP 14m3 Vehicle Level: Production							

General Request Information

ENTIRE PAGE CONFIDENTIAL

TAF: TE6897

Test Mode

18 MPH

LH Side Impact - (Lateral Pole)

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

REGULATORY:

- ☐ FMVSS 204 - Steering Wheel Displacement
- ☐ FMVSS 206 - Frontal Occupant Protection
- ☐ FMVSS 212 - Wind Shield Retention
- ☐ FMVSS 214 - Side Impact Protection
- ☐ FMVSS 219 - Windshield Zone Intrusion
- ☐ Film Analysis
- ☐ Template
- ☐ FMVSS 301 - Fuel System Integrity
- ☐ Rollover
- ☐ Pressure Check
- ☐ FMVSS 303 - NGV Fuel System Integrity
- ☐ ECE 12 (74/257/EEC) - Protection of the Driver Against Steering Mechanism
- ☐ ECE 32 Rear Impact - Structural Performance
- ☐ ECE 39 Frontal Impact - Structural Performance
- ☐ ECE 34 Fuel System Integrity
- ☐ ECE 94 Step II Frontal Offset - Occupant Performance
- ☐ ECE 95 Step II 300mm Barrier Side Impact - Occupant Performance
- ☐ 98/79/EC - Frontal Offset
- ☐ 98/27/EC - Side Impact

FORD AUTOMOTIVE OPERATIONS SAFETY DESIGN GUIDELINES:

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

OTHER:

- ☐ Sensor Development
- ☒ Other, Specify: FMVSS 201 Pole Impact Performance

Primary Test Vehicle Information

Use (Target/Bullet):	Target
Model Year:	1999
Vehicle Program:	Town Car
Vehicle Name:	Lincoln
Body / Cab Style:	4-door
Build Number:	n/a
Tag Number:	307W885
VIN Number:	1LNHM51W6XY668784
Fuel System Rated Capacity (Gal):	19
Prototype Level:	Production
Drive Side:	LH

Special Prep/Build Instructions Primary Vehicle

TAF: T65897

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:

☒ Remove Rear View Mirror

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 Side Inflatable Curtain
☐ Right Side Inflatable Curtain
☐ Left Pyro Retractor
☐ Left Pyro Buckle
☐ Right Pyro Retractor
☐ Right Pyro Buckle

Other, Specify:

☐ Left Front Pretensioner

Senior Fire Remote Fire Time:

☒ (No fire time listed if senior fired OR if no pyro restraints are used)

☐ Remote back-up Fire Time:

Special Pre-Test Preparation

Other, Specify:

Occupant / ATD Request Primary Vehicle

ENTIRE PAGE CONFIDENTIAL

TA#: TB5897

		Occupant 1	Occupant 2
Type		<u>SIDHII</u>	<u>NA</u>
Instrumentation Level*		<u>Development</u>	
In-Vehicle Location		<u>LF</u>	<u>NA</u>
Verify:	Seat Position Long	<u>Mid - (Mod as required per FMVSS 201)</u>	
	Seat Position Vert	<u>FULL DOWN</u>	
	Seat Back Angle	<u>25.0 degrees</u>	<u>NA</u>
Positioning Procedure		<u>FMVSS 201</u>	<u>FMVSS 201</u>
	Use Foot Rest	<u>NO</u>	
	Take Seat Track Video	<u>NO</u>	
	Special Positioning Instructions		
Dummy Adjustment	(arm angle)	<u>N/A</u>	
Occupant Belted		<u>YES</u>	<u>NA</u>

*See instrumentation request for detailed instrumentation information.

Test Conditions - Final Prep

TAM: TB5897

Final Prep Contacts

ONE of these MUST be contacted to resolve issues during weigh-up & final prep

Test Engineer	Request Engineer	Build Coordinator
Name: _____	J. E. Abramczyk	Emory Moler
Phone: _____	36-05123	84-57542
Pager: _____	JABR	EME

Test Weight

Minimum Option Weight	GVWR: _____
99% Option Weight	Wheelbase: _____
☒ Maximum Option Weight	

Tire Pressure

Front: 32. psi	Rear: 32. psi
----------------	---------------

Fuel System

Fuel Tank & System to Contain: None

18.1 gallons	=	95 %	x	19.0 gallons
Fill Level	=	%	x	Capacity

Weight Targets

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

Curb Weight	Requested Test Weight	Acceptable Test Weight Variance		Actual Test Weight
		High (+)	Low (-)	
Front: 2,954 lbs	2,418 lbs	Front: 10 lbs	10 lbs	Front: 2,415 -3
Rear: 1,796 lbs	2,339 lbs	Rear: 10 lbs	10 lbs	Rear: 2,334 +1
Total: 4,050 lbs	4,757 lbs	Total: 20 lbs	20 lbs	Total: 4,749

Rated Luggage Load: 200 lbs

Simulate/Verify at Weigh-Up

Dummy Weight

(1) 800 lbs in L/F seat

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
☐ Bottle - Coolant	☐ Headlamp Covers	☒ Foot Wells - Rear
☐ Bottle - Washer	☐ Radiator	☒ Quarter Panels
		☐ Trunk Floor

Other: _____

Ride Heights

Measure @ Test Weight

Front: As Received
Rear: As Received

Measure

From: Wheel Lip
To: Axle CL

Additional Remarks

DO NOT fill tank with standard until weigh-up
 RIDE HEIGHT AND TEST WEIGHT WILL BE DETERMINED UPON RECEIPT OF VEHICLE @ CAF

Dimensional Analysis Request Primary Vehicle

ENTIRE PAGE CONFIDENTIAL

TA#: TB5897

Impacts

Post

X		404	Control Points (CAR)	Exterior
		405	Control Points (TRUCK)	Exterior
X		406	Body Targets & Orientation Points (Wheel Lips)	Exterior
		411	A.B.C. Pillars	Interior
X		417	Pre-Crash Lateral Seat CL's, H-Pts, etc	Exterior/Interior
		418	NHTSA Barrier face Profiles (Mid-Bumper; Mid-Stack; Top of Barrier)	Exterior
		419	European Barrier face Profiles (Mid-Bumper; Mid-Stack; Top of Barrier)	Exterior
	X	421	Roof line exterior section	Exterior
	X	423	Beltline exterior section (1st 50mm Body line below glass/weather strip)	Exterior
	X	425	Mid-line exterior section (plan view @ 800 mm Body line)	Exterior
	X	427	Character line exterior section (plan view @ 800 mm Body line)	Exterior
		429	Bottom of door exterior section	Exterior
	X	431	Roof line exterior section (1st 10 mm Body line below door opening)	Exterior
	X	433	Roof line interior section	Interior
	X	435	Beltline interior section	Interior
	X	437	Hip line interior section	Interior
	X	438	Hinge Pillar exterior section (1st 50mm Body line forward of Hinge plane)	Exterior
	X	439	2800 mm Body line interior and exterior sections	Exterior/Interior
	X	440	Front H-Point Mid-Seat Location interior and exterior sections (per package)	Exterior/Interior
	X	441	B-Pillar interior and exterior sections (1st 50mm Body line rearward of striker)	Exterior/Interior
	X	442	Rear H-Point Location interior and exterior sections (per package)	Exterior/Interior
			MDB: Position MDB centerline at left front seat SGRP (X = 3042mm)	
			Strike windshield & backline @ left front seat centerline	
	X		Mark left front seat frame pivot point	
			Pre-crash accelerometer locations	
	X		Mark vehicle interior centerline for dummy positioning requirements	
			Mark OSCAR & Euroeld-1 H-point on exterior of left front door	

Film Analysis & Photographic Services Request

TAM: TB5897**Side Impact Film Analysis**

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

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 RequirementsTAM: TB5697

- 1 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 Side Impact**On-Board Vehicle**

- X Front Dummy from Vehicle Hood (High)
- Front Dummy from Vehicle Hood (Low)
- X Front Dummy from Opposite Window Opening
- X Front Dummy Over Shoulder from Decklid (right)
- Front Dummy Over Shoulder from Decklid (left)
- View of Front Seat to Show Dummy Interaction w/Trim from Rear (trunk left)
- X Front Dummy from Vehicle Hood (Opposite Side) - Use 4000 FPS
- X Front Dummy from IP (Fiber Optic)

Secondary Vehicle Coverage

- ON BOARD CART, Cart Centerline - View of Impact

Floor Coverage

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

PIR Coverage

- Cart contact - view of impacted side of vehicle with cart contact
- Cart contact - overlap view of impacted side of vehicle with cart contact
- X Pole contact - view of impacted side of vehicle with pole contact
- X Pole contact - overlap view of impacted side of vehicle with pole contact

Overhead Coverage

- X Overall view of impacted vehicle side including cart
- X View of impacted vehicle side focus on front door opening area

All Other High Speed Photography

- X View of Impact from Front of Vehicle
- X View of Impact from Rear of Vehicle

Instrumentation and Data Processing Request

TAJ: TB5887

Primary Vehicle Structural Instrumentation - Side Impact

ACCELEROMETERS:

ELEROMETERS:		Long	Vert	Lat
X	L/ A-PILLAR_INSIDE_@_ROCKER	X	X	X
	L/ A-PILLAR_INSIDE_@_HINGE			
	R/ A-PILLAR_INSIDE_@_HINGE			
X	L/ F_DOOR_@_BELTLINE_MID			X
X	L/ F_DOOR_@_BELTLINE_REAR			X
X	L/ F_DOOR_OVER_ARMREST			X
X	L/ F_DOOR_REAR_OF_SEAT_HPT			X
X	L/ F_DOOR_SPEAKER_HOLE			X
X	L/ B-PILLAR_INSIDE_@_ROOF			X
X	L/ B-PILLAR_INSIDE_@_BELTLINE			X
X	L/ B-PILLAR_INSIDE_@_STRIPPER			X
X	L/ B-PILLAR_INSIDE_@_ROCKER	X	X	X
	L/ R_DOOR_@_BELTLINE_MID			
	L/ R_DOOR_OVER_ARMREST			
X	L/ ROCKER_@_FRONT_SEAT_MID			X
X	L/ ROCKER_@_REAR_SEAT_MID			X
X	R/ ROCKER_@_FRONT_SEAT_MID	X	X	X
X	R/ ROCKER_@_REAR_SEAT_MID	X	X	X
	FRONT_FLOOR_PAN_@_CL			
	FLOOR_XMGR_@_L/F_SEAT_CL			
	FLOOR_XMGR_@_R/F_SEAT_CL			
	CL_TUNNEL_@_FRONT_SEAT			
X	REAR_FLOOR_PAN_ABOVE_AXLE	X	X	X

ADD CFA
6/11/99

OTHER STRUCTURAL ACCELS:

ER STRUCTURAL ACCELS:	Long	Vert	Lat
L/F DOOR @ LOCATION #7			
L/F DOOR @ LOCATION #8			
L/F DOOR @ LOCATION #30			
L/F DOOR @ LOCATION #31			
L/F DOOR @ LOCATION #32			
L/F DOOR @ LOCATION #33			
L/RFT FLOOR PAN @ SIDE SENSOR			
R/RFT FLOOR PAN @ SIDE SENSOR			
FRT FLOOR PAN BTWN SEATS			

Primary Vehicle Systems Instrumentation

ENTIRE PAGE CONFIDENTIAL

TA#: TB5897

SENSOR ACCELS:

 X See Sensor Map

FUEL SYSTEM:

 X Inertia Fuel System Cut-Off Switch

92A 1/7/99

ANGULAR MOTION SENSORS

VEHICLE STRING POTS

OTHER VEHICLE SYSTEM INSTRUMENTATION

 MONITOR LEFT SIDE AIRBAG SQUIB VOLTAGE

 MONITOR LEFT SIDE AIRBAG SQUIB CURRENT

Front Dummy Instrumentation - Internal

ENTIRE PAGE CONFIDENTIAL

TA#: T66897

ACCELS:

<u>X</u>	L/F_ DUMMY_HEAD_G.G.
<u>X</u>	L/F_ DUMMY_T1
<u>X</u>	L/F_ DUMMY_T1/
<u>X</u>	L/F_ DUMMY_T12
<u>X</u>	L/F_ DUMMY_T12/
<u>X</u>	L/F_ DUMMY_PELVIS
<u>X</u>	L/F_ DUMMY_PELVIS/
<u>X</u>	L/F_ DUMMY_THORAX/RIBUP/
<u>X</u>	L/F_ DUMMY_THORAX/RIBO/
<u>X</u>	L/F_ DUMMY_THORAX/RIBLO/

SID/HIII

LF

<u>X</u>	Long	<u>X</u>	Vert	<u>X</u>	Lat
<u>X</u>	Long	<u>X</u>	Vert		
<u>X</u>	LatL			<u>X</u>	LatR
<u>X</u>	Long	<u>X</u>	Vert		
<u>X</u>	Lat/PRT			<u>X</u>	Lat/REAR
<u>X</u>	Long	<u>X</u>	Vert		
<u>X</u>	LatL			<u>X</u>	LatR
<u>X</u>	Lat/PRT			<u>X</u>	Lat/REAR
	Lat/PRT				Lat/REAR
<u>X</u>	Lat/PRT			<u>X</u>	Lat/REAR

LOAD CELLS:

<u> </u>	L/F_ DUMMY ABDOMEN_LOAD_FRONT (EURO)
<u> </u>	L/F_ DUMMY ABDOMEN_LOAD_MID (EURO)
<u> </u>	L/F_ DUMMY ABDOMEN_LOAD_REAR (EURO)
<u> </u>	L/F_ DUMMY THORACIC SPINE_LOAD
<u> </u>	L/F_ DUMMY THORACIC SPINE_LOAD
<u> </u>	L/F_ DUMMY LUMBAR SPINE_LOAD
<u> </u>	L/F_ DUMMY LUMBAR SPINE_LOAD
<u> </u>	L/F_ DUMMY PUBIC_LOAD (EURO)

<u> </u>	Fy		
<u> </u>	Fy		
<u> </u>	Fy		
<u> </u>	Fx	<u> </u>	Fz
<u> </u>	My	<u> </u>	
<u> </u>	Fx	<u> </u>	Fz
<u> </u>	My	<u> </u>	
<u> </u>	Fy		

POTENTIOMETERS:

<u>X</u>	L/F_ DUMMY_CHEST_DEFLECTION (SID)
<u> </u>	L/F_ DUMMY_THORAX/RIBUP/DISP (EURO)
<u> </u>	L/F_ DUMMY_THORAX/RIBO/DISP (EURO)
<u> </u>	L/F_ DUMMY_THORAX/RIBLO/DISP (EURO)

<u>X</u>	Disp
<u> </u>	Disp
<u> </u>	Disp
<u> </u>	Disp

OTHER INTERNAL DUMMY INSTRUMENTATION:

<u>X</u>	L/F DUMMY NECK UPPER LOAD
<u>X</u>	L/F DUMMY NECK UPPER LOAD

<u>X</u>	Fx	<u>X</u>	Fy	<u>X</u>	Fz
<u>X</u>	My	<u>X</u>	My	<u>X</u>	Mz

Dummy Instrumentation - External

CONTACT SWITCHES:

<u>X</u>	L/F_ DUMMY_HEAD_SW
<u> </u>	L/F_ DUMMY_ARM_SW
<u>X</u>	L/F_ DUMMY_THORAX_SW
<u> </u>	L/F_ DUMMY ABDOMEN_SW
<u>X</u>	L/F_ DUMMY_H-POINT_SW
<u>X</u>	L/F_ DUMMY_THIGH_SW

List of Test Contacts

TAM: T86897

	Name	Phone	Pager	Profs
Requestor	J. E. Abramczyk	38-06123	JABR	JABRAMCZ
Approving supervisor	J. E. Abramczyk	38-06123	JABR	JABRAMCZ
Build coordinator	Emory Meier	84-57842	EME	EMEIER
Test engineer				
Sensor Engineer	Erich Kemnitz	24-81802	EKEMNITZ	EKEMNITZ
Other				

	Last name	Phone	Pager	Profs
Seats				
Instrument panel				
Restraints				
Air bag (driver)				
Air bag (passenger)				
Steering column				
Siemens Sensor	Bob Andree	(248) 253-2834	(810) 408-3910	RANDRES
Delphi Sensor	Jeff Gleacher	38-02767	(810) 812-7188	JGLEACHE
Visteon Sensor	Paul Zoratti	32-36271	PZORATTI	PZORATTI
TRW Sensor	Dan Marach	(248) 442-5909	(248) 604-7803	
Tekata Sensor	Mike McHale	32-38621		

CRIS 0011534

Originator: J. E. Abramczyk/Jabramcz
T86897

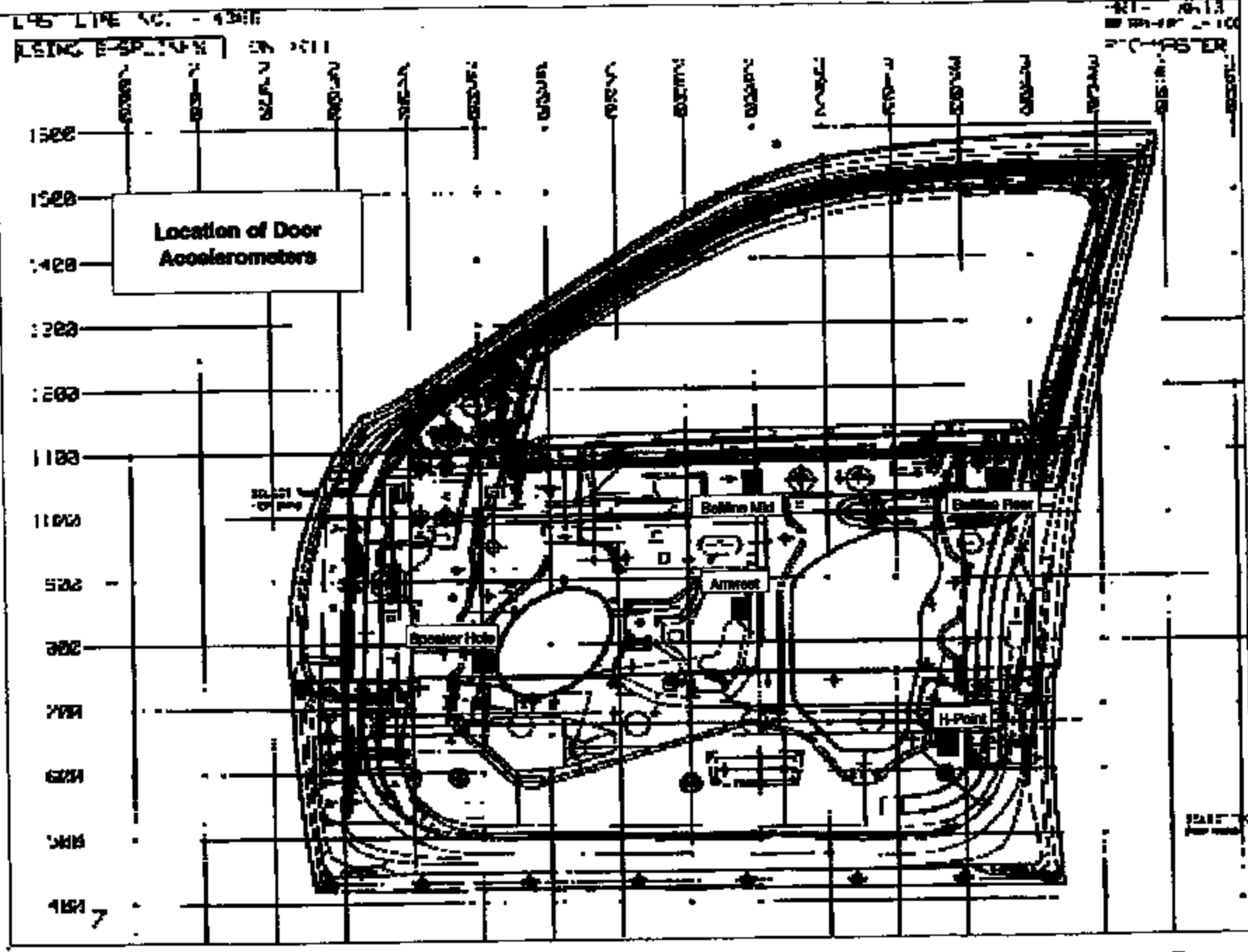
Page 12 of 17

Date issued: 5/28/1999
Date Revised: 6/28/99

ENTIRE PAGE CONFIDENTIAL

TAM: TB6897

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Date issued: 5/23/1999
Date ~~received~~ ^{entered}: CRTS 0011534

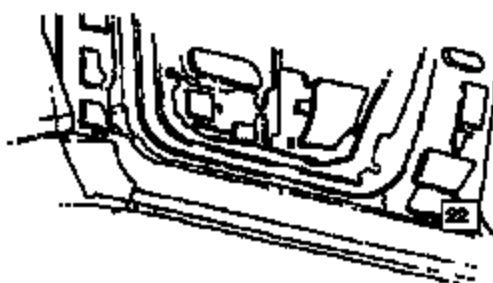
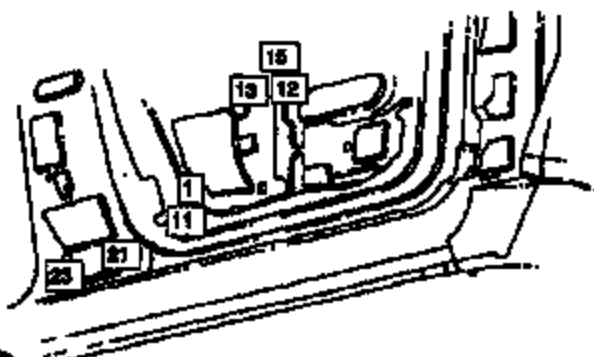
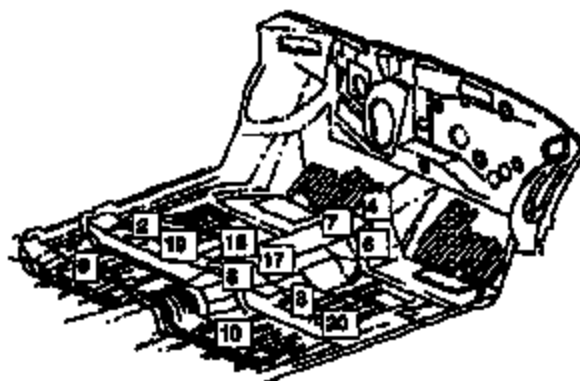
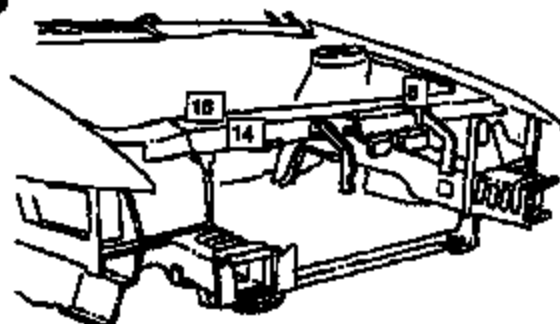
Page 14 of 17

**Originals: J. E. Abernethy, Richmond,
Tennessee**

Program: EN/FN
Vehicle ID: S07W885
Build level: FN145 Side
Test Mode: 16mph LH Pole

SENSOR MAP

Engineer: Erich Karmatz
Phone #: 248-1602
Date: 5/28/99
Time: 9:30 AM



Location Name		Type	Output	Sensor Channels only		
				Nominal (+/-)	Max/Min	Serial #
1	L/F DOOR_LWR_RRDR_DELPHI Delphi side sensor Mounted inside door, lower rear corner	DELPHI	Sensor	<i>ONE OUTPUT</i> 2.5V (+/- 200mV) 10/0V		
2	L/F FLOOR PAN @ #1 XMBR CTR_SM		Sensor	Takata SCS No CDAB output		
3	R/F FLOOR PAN @ #1 XMBR CTR_SM		Sensor	Takata SCS No CDAB output		
4	CTR TUNNEL @ DASH_SM	accol	TRIAX	Near PCM		
5	L/OFFRONT RAD SUPPORT_SM	accol	LONG			
6	CTR TUNNEL @ DASH_PCM	accol	TRIAX	On PCM		
7	CTR TUNNEL @ DASH_TAK1	TAKATA PCM1	Sensor	2.5v (+/- 200mV)	10/0V	ST001
	CTR TUNNEL @ DASH_TAK2	TAKATA PCM2		2.5v (+/- 200mV)	10/0V	ST001
	CTR TUNNEL @ DASH_TAK3	TAKATA PCM3		2.5v (+/- 200mV)	10/0V	ST001
	CTR TUNNEL @ DASH_TAK4	TAKATA PCM4		2.5v (+/- 200mV)	10/0V	ST001
8	CA_TNL_BETWEEN_PCM1&2_SM	accol	TRIAX			
9	L/F FLOOR PAN @ #2 XMBR CTR_SM	accol	TRIAX	Near Siemens SCS Sensor		
10	R/F FLOOR PAN @ #2 XMBR CTR_SM	accol	TRIAX	Near Siemens SCS Sensor		
11	L/F DOOR_LWR_RRDR_SM	accol	LAT	Near Delphi Side sensor		
12	L/F DOOR @ BELTLINE_MID_SM On the inside of door cavity.	Sensor		Siemens Pressure sensor		
13	L/F DOOR @ DOORBEAM_INNER_VIST On Door reinforcement beam, inside edge along beam.		Sensor	Vision Sideview Sensor.		
14	R/OFFRONT RAD SUPPORT_SM		Sensor	Takata PCS No CDAB output		
15	L/F DOOR @ DOORBEAM_OUTER_VIST On Door reinforcement beam, outside edge edge by door skin.		Sensor	Vision Sideview Sensor.		
16	R/OFFRONT RAD SUPPORT_SM	accol	LONG			

7B5897

Location Name	Type	Output	Nominal (v)	Sensor Channel only	
				Location	Serial #
17 ON-TIME BETWEEN SEATS_RCM	scsi	TRW	010V	On top of TRW RCM	
18 ON-TIME BETWEEN SEATS_TRW1	TRW RCM1	Sensor	010V		
19 ON-TIME BETWEEN SEATS_TRW2	TRW RCM2		010V		
18 LF FLOOR PAN @ #1 XMER CTR_SCS	scsi	LAT		On SCS Sensor	
20 RF FLOOR PAN @ #1 XMER CTR_SCS	scsi	LAT		On SCS Sensor	
21 1/2 HR IN 4 SECONDS 2	TRW SCS				
22 1/2 HR IN 4 SECONDS 2	scsi	LAT			
23 1/2 HR IN 4 SECONDS 2	scsi	LAT			

Delete JEA 7/7/99

JEA 7/7/99

Delete JEA 6/11/99

Contacts: Ford: Rich Kunitz 248-1402
 Taketa: Mike McHale 323-8621
 WMI: Don Murek 248-442-6309 Pager: 248-404-7903
 Vintech: Paul Koratti 323-4271
 Siemens: Bob Andrus 248-253-2934
 Delphi: Jeff Giescher 35-82757

[illegible]

Side Impact Barrier Test Data Sheet

T.O. TB5897

Crash Number 11534 Test Date 9/14/99

MDB Tire Pressure

Vehicle Weight

Impact Velocity 18 MPH Barrier Lot # LF RF
LR RRLF RF
LR RR
Total

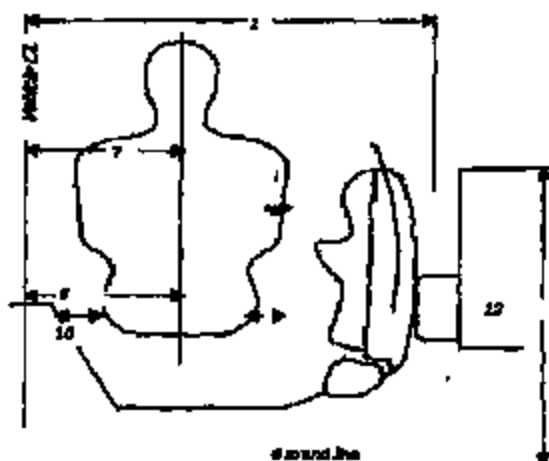
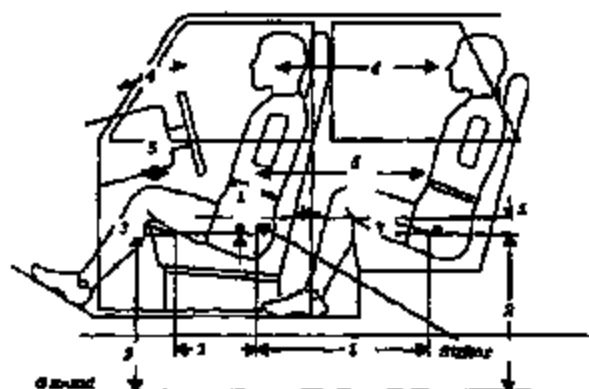
Occupant/Vehicle Data

66. 214 lbs
Front Rear

Dummy Serial Number			
Seatback Angle - Barrier Measurement (DA)			
Dummy to Interior/door H-point (+/- 0.5 inch required)	Vertical		
Above/Forward (+) Below/Rearward (-)	Longitudinal		
1. H-Point to Door Striker	Vertical		
Above/Forward (+) Below/Rearward (-)	Longitudinal		
2. H-Point to Ground (vertical)			
3. Pelvic Angle			
4. Nose to Upper Steering/Headrest (shortest)			
5. Abdomen to lower steering/seatback (horizontal)			
6. Pelvis centerline to Vehicle centerline (lateral)			
7. Chest centerline to Vehicle centerline (lateral)			
Seat centerline to Vehicle centerline (lateral) (DA)			
8. Chest to Beltline (lateral, shortest)			
9. Pelvis to H-Point (lateral)			
10. Pelvis to nearest inboard hard point (lateral)			
Left Wheel lip height (vertical to ground)			
Right Wheel lip height (vertical to ground)			
11. Vehicle centerline to barrier face (lateral)			
12. Barrier Top to Ground @ Pullback (Vertical)			
Impact Mark relative to Target	+ above/two - below/two		

11 0.9

27.9



108 11.7

20.3

27.9

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Inter Office

Research and Vehicle Technology

June 16, 2000

To: Manager

Subject: Crash Test No. 11571, T-B7382 Test Report Corrections, R/1

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

Sheet 3

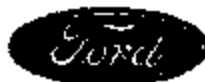
Remarks - The file names of the still images are listed under crash number and a three digit sequence number which are 11571001 through 11571060 was changed to "The file names of the still images are listed under crash number and a three digit sequence number which are 11571001 through 11571060 and CARRON001 through CARRON004".

M. A. DeShong
M. A. DeShong
Operations Engineering Section
Safety Laboratories Department

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

corr.11571

CRTS 0011571



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FINAL TEST REPORT**CONFIDENTIAL****Global Test Operations
Advanced Vehicle Technology**

TO:	J. Wozniak	Test Order No.	T-B7382
		Work Task W. O. No.	J18HK
		Test Date	8/31/99
		Date Reported	9/21/99
		Sheet	1 of 84

SUBJECT: Crash Test 11571 (90° Left Side Fixed Pole Impact at 15.1 ± 0.4 mph, 24.8 ± 0.6 km/h) - 2000.5 Lincoln Town Car (FN-145) 4-Door Sedan

REQUESTED BY: Vehicle Crash Safety Department, Advanced Vehicle Technology - J. Wozniak

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

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


R. Oda
Engineering Technologist


Concur: S. Lesh
Section Supervisor
Operations Engineering Section

CRTS 0011571

VEHICLE DATA:

Make and Model	2000.5 Lincoln Town Car (FN-145) 4-Door Sedan (Confirmation Prototype)	
ID Numbers	1LNHM83WXXKY687066, 306-W-666, VC040001-R	
Power Train	4.6L, EFI, Automatic (4R70W) Transmission	
Fuel Tank(s)	Usable Capacity: 19.0 gal (71.9L) Test Condition: Empty	
Front Seat(s)	Type: Bucket Cover: Leather Tracks/Position: 6-Way Power/Mechanical Mid and Down Seat Backs/Position: Adjustable/28.9° Rear of Vertical Head Restraints/Position: Adjustable/Up Lumbar Support/Position: Power/Deflated	
Restraint System	LF: 3-Point Continuous Loop Active Belt and Seat Back Side Air Bag	
Occupants	LF: B10-S10 Uninstrumented Dummy	
Test Weight	Front: 2429 lb (1102 kg) Rear: 2314 lb (1050 kg) Total: 4743 lb (2151 kg)	
Tires	Front: P225/60R16 Rear: P225/60R16 Spare: Removed	32 psi (221 kPa) 32 psi (221 kPa)
Significant Content or Accessories	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):

- Side Impact Occupant Crash Protection, ST-15 dated March 19, 1998.
- Proposed non-regulator crash test procedure.

1.1 Vehicle Alignment

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

2. Rametrics

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 11571001 through 11571060 and CARROND01 through CARROND04.

TEST RESULTS:**1.0 Sensor Development**

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

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

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

2.0 Vehicle Crash, Film Analysis and/or Instrumentation Data

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

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

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

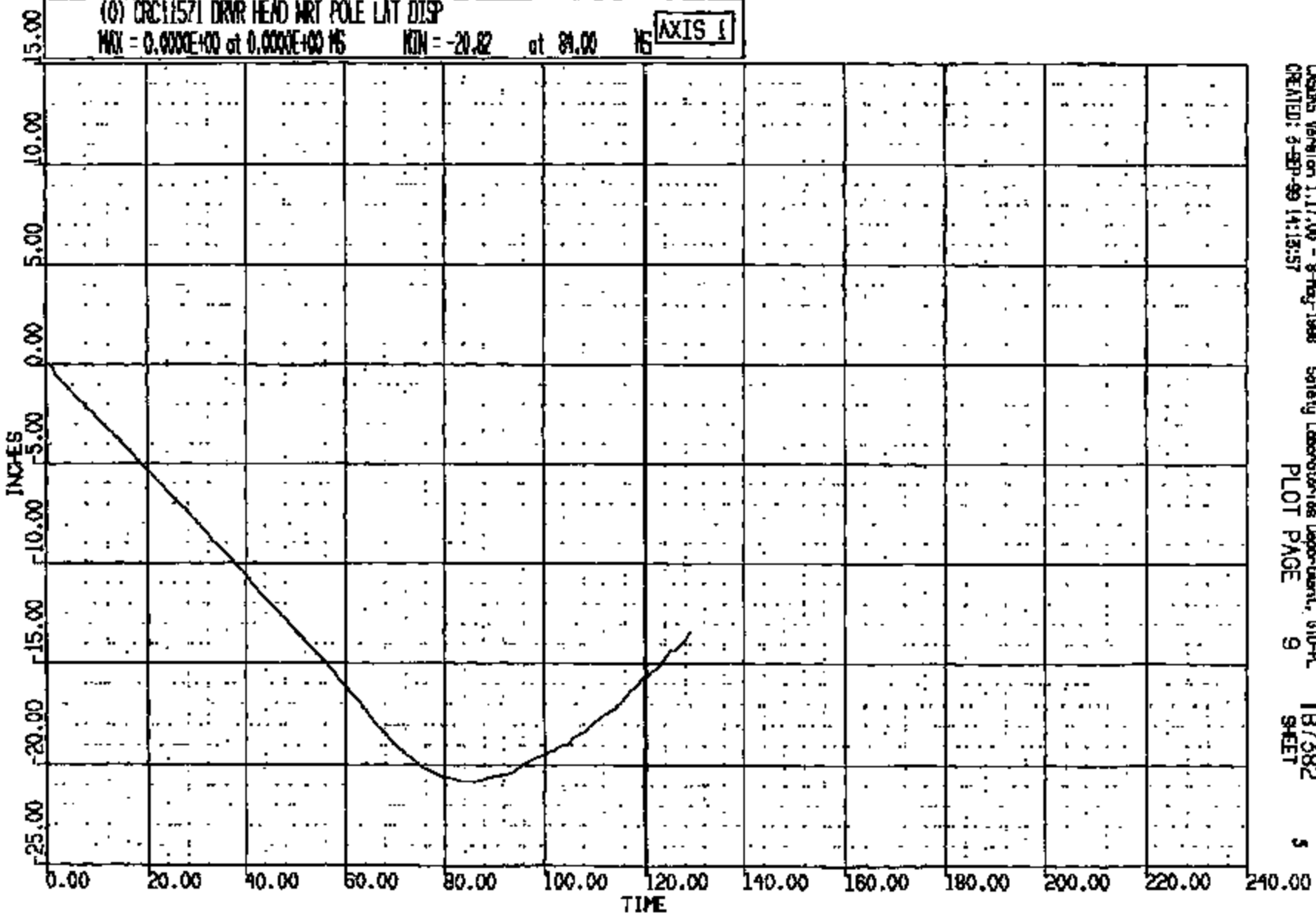
Time histories of any requested derived data (i.e. integrations, etc.) were given to the requesting activity and are not included in this report.

CR R: 11571 TO: TB7382 DATE: 990821 13:21:11
2000.5 FN-145

(0) CRC11571 DRNR HEAD WRT POLE LAT DISP

MAX = 0.0000E+00 at 0.0000E+00 MS MIN = -20.82 at 84.00 MS

AXIS 1



CASDAS Version 1.17.00 - 8-Aug-1998
CREATED: 3-SEP-99 14:13:57

Safety Laboratories Department, STD-PL
PLOT PAGE 9

TB7382
SHEET

5

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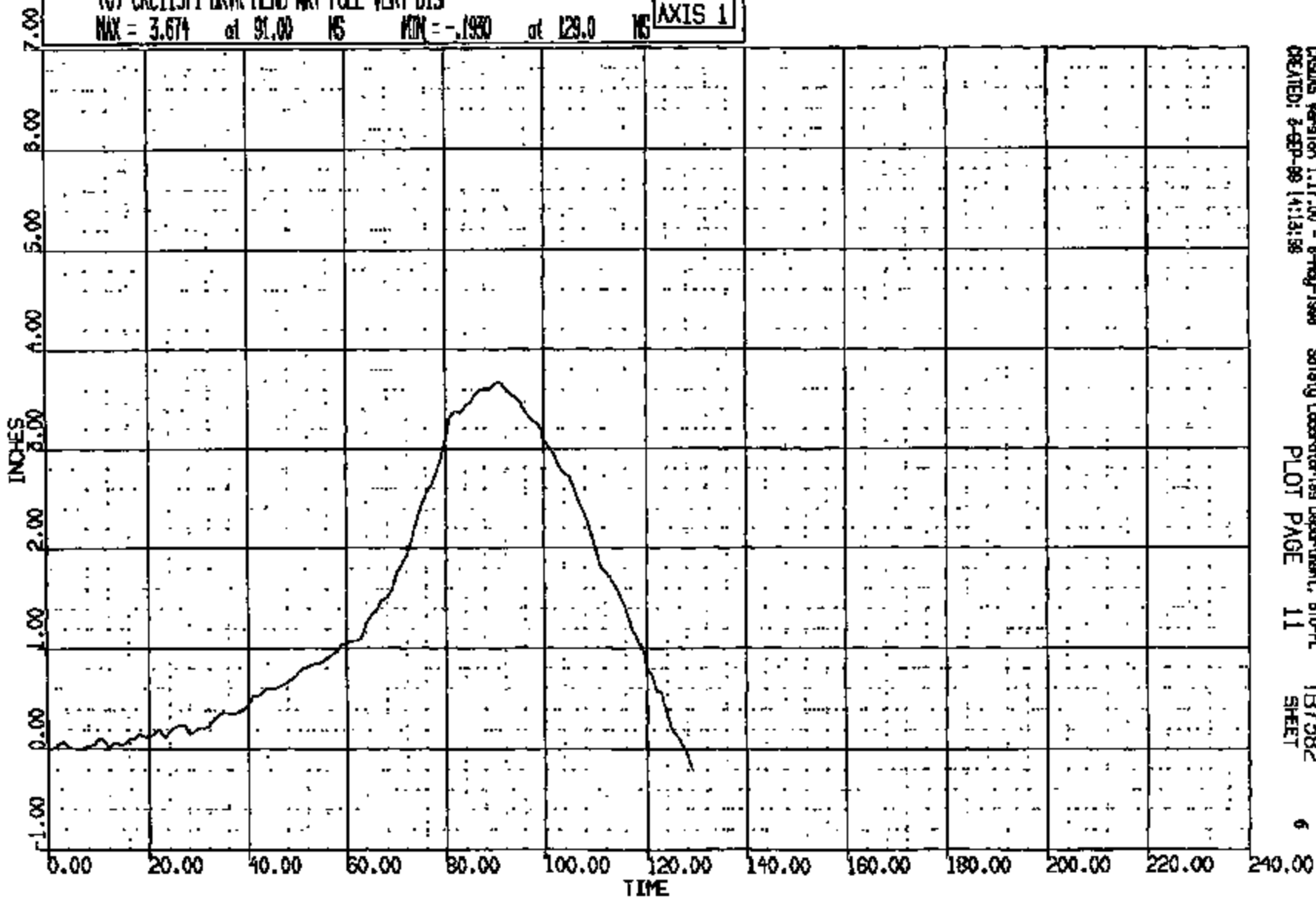
CRTS 0011571

CR R: 11571 TO: TB7382 DATE: 990831 15:21:11
2000.5 FN-145

(0) CRC11571 TRVR HEAD NRT POLE VERT DISP

MAX = 3.674 at 91.00 NS MIN = -.1980 at 129.0 NS

AXIS 1



CRTS 0011571

CRS005 Version 1.17.00 - 8-May-1999 Safety Laboratories Department, BTO-PL
CREATED: 2-SEP-99 14:13:56 PLOT PAGE 11 SHEET

6

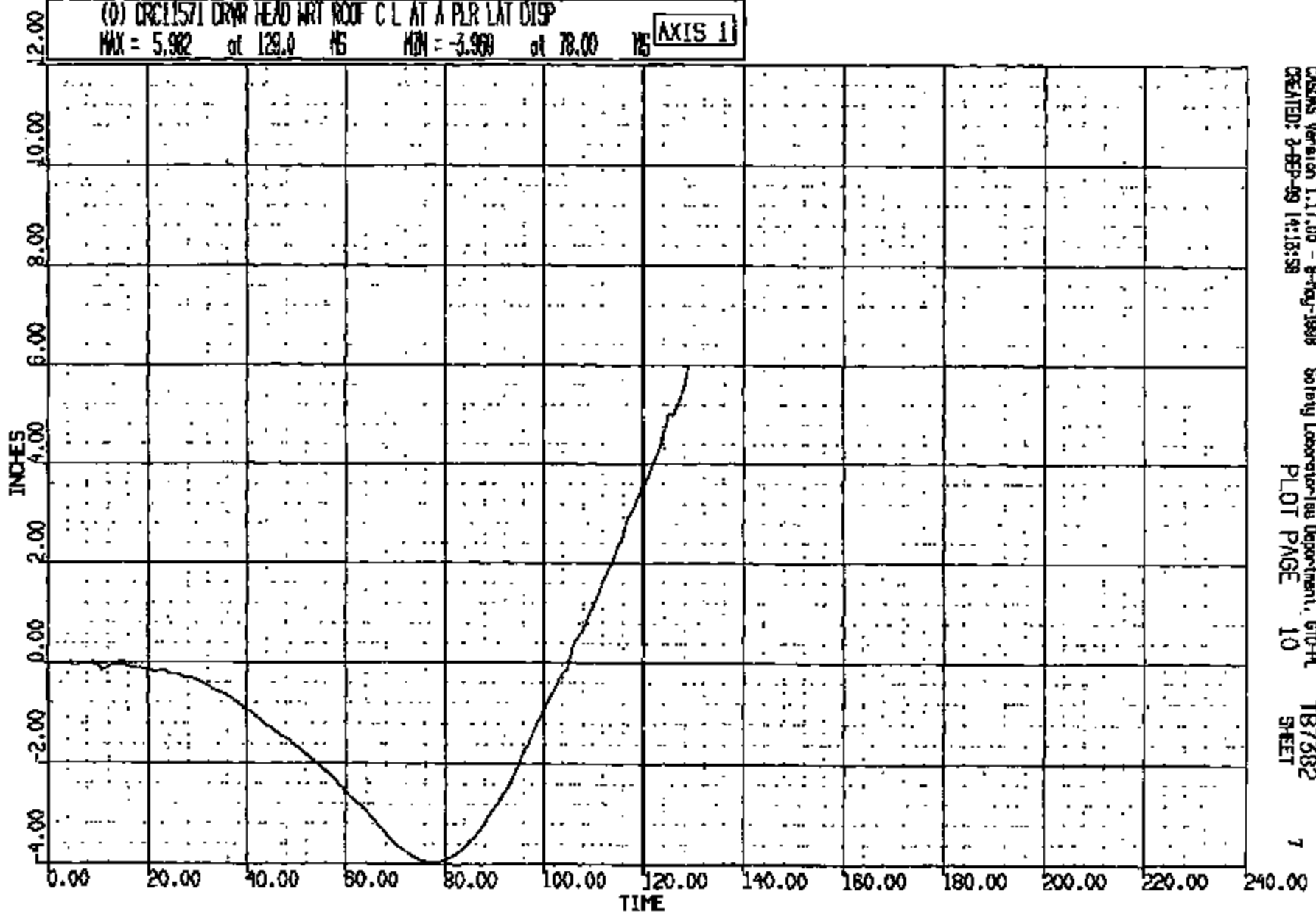
ENTIRE PAGE CONFIDENTIAL

CR R: 11571 TD: T87382 DATE: 090831 13:21:11
2000.5 FN-145

(0) CRG11571 DRYR HEAD WRT ROOF C.L. AT A PLR LAT DISP

MAX = 5.982 at 129.0 HS MIN = -3.960 at 78.00 HS

AXIS 1



CASAS Version 1.17.00 - 8-May-1998 Safety Laboratories Department, GTO-PL
CREATED: 2-SEP-99 14:13:58 PLOT PAGE 10 187382

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ENTIRE PAGE CONFIDENTIAL

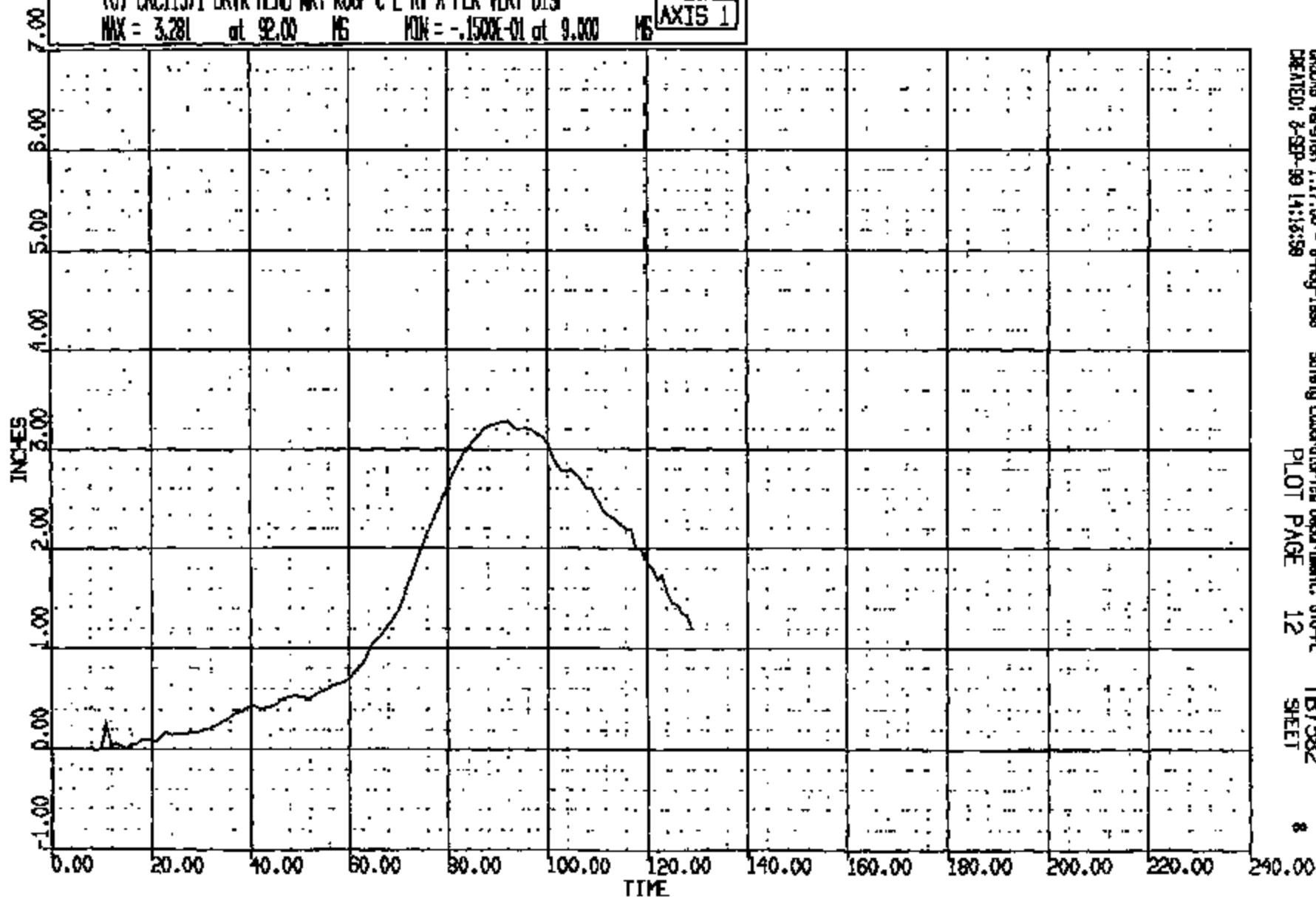
CRIS 0011571

CR R: 11571 TO: TB7382 DATE: 980831 15:21:11
2000.5 FN-145

(0) CRC11571 DRVR HEAD WRT ROOF C L AT A PLR VERT DISP

MAX = 3.281 at 92.00 MS MIN = -.1500E-01 at 9.000 MS

AXIS 1



CASHS Version 1.17.00 - 8-May-1998
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Safety Laboratories Department, 610-PL
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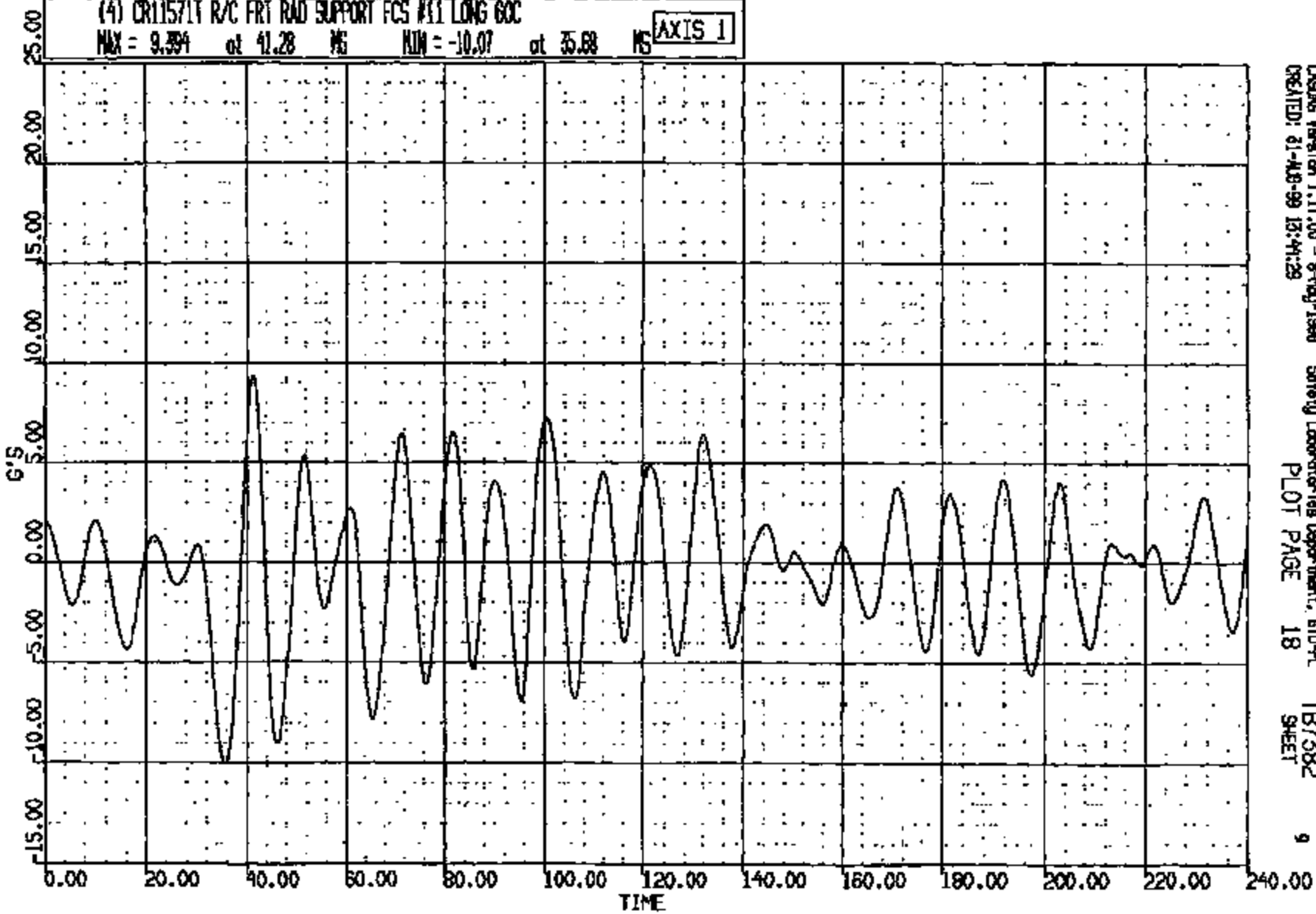
CRTS 0011571

CR #: 11571 TO: TB7382 DATE: 090881 13:21:11
2000.5 FN-145

(4) CR11571T R/C FRT RAD SUPPORT FCS #11 LONG 60C

MAX = 9.394 at 41.28 MS MIN = -10.07 at 35.68 MS

AXIS 1



CASMG Version 1.17.00 - 8-May-1980
CREATED: 01-MAY-99 13:41:29

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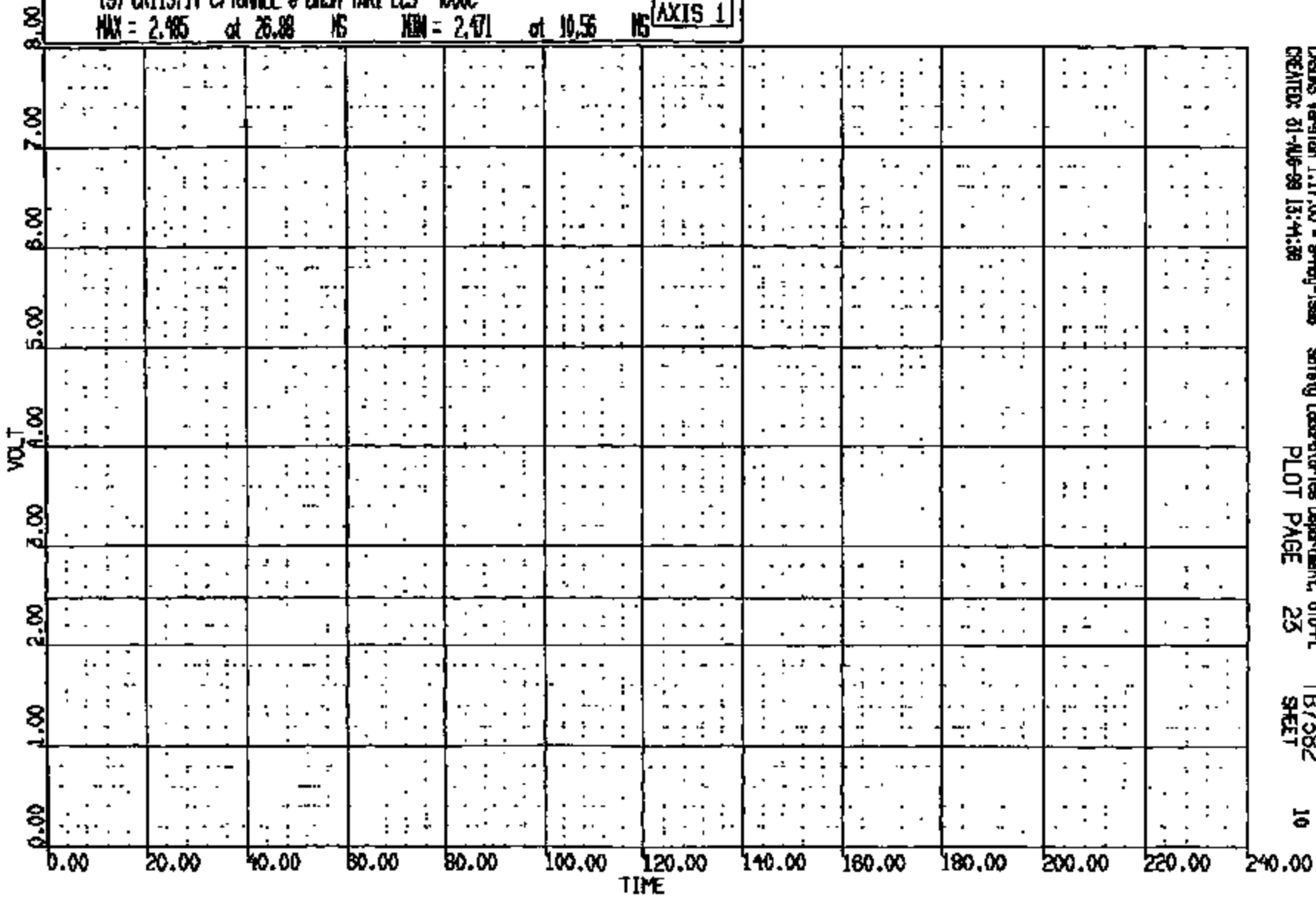
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CR R: 11571 TD: TB7382 DATE: 990831 13:21:11
2000.5 FN-146

(9) CR11571T C/TUNNEL @ DASH TAKI ECS 4000C

MAX = 2.485 at 26.88 NS MIN = 2.471 at 10.56 NS

AXIS 1



CRIMS Version 1.17.00 - 8-May-1998
CREATED: 31-AUG-99 13:44:36

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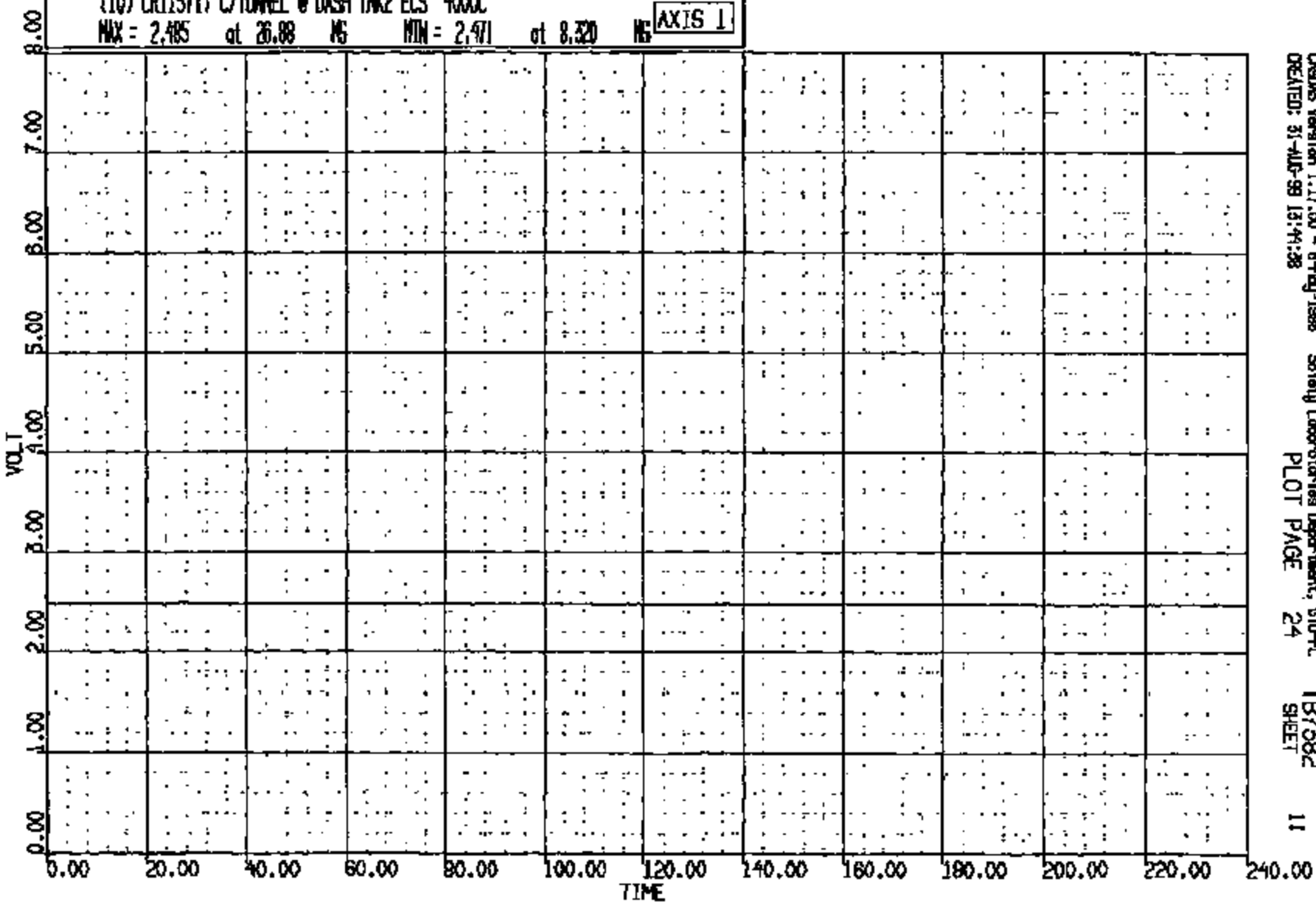
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CR R: 11571 TO: TB7382 DATE: 990831 13:21:11
2000.5 FN-145

(10) CR11571 C/TUNNEL @ DASH TAK2 ECS 4000C

MAX = 2.485 at 26.88 NS MIN = 2.471 at 8.320 NS

AXIS 1



CRS Version 1.17.00 - 8-May-1998
CREATED: 31-AUG-99 13:41:28

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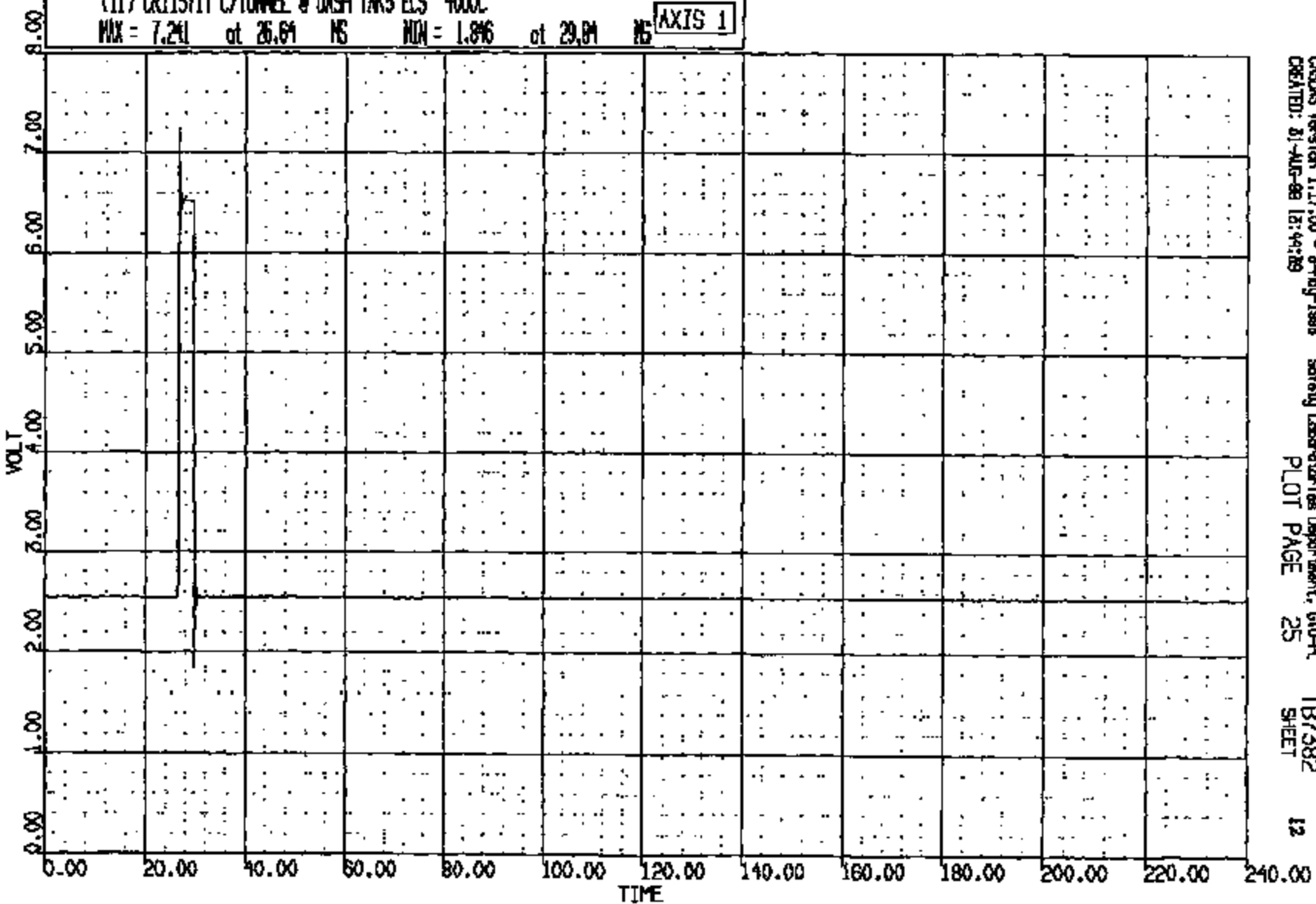
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CR R: 11571 TO: TB7382 DATE: 990831 18:21:11
2000.5 FN-145

(11) CR11571T C/TUNNEL @ DASH TAK3 ECS 4000C

MAX = 7.241 at 26.64 NS MIN = 1.896 at 29.64 NS

AXIS 1



CASAS Version 1.17.00 - 8-Aug-1998
CREATED: 31-AUG-99 18:44:29

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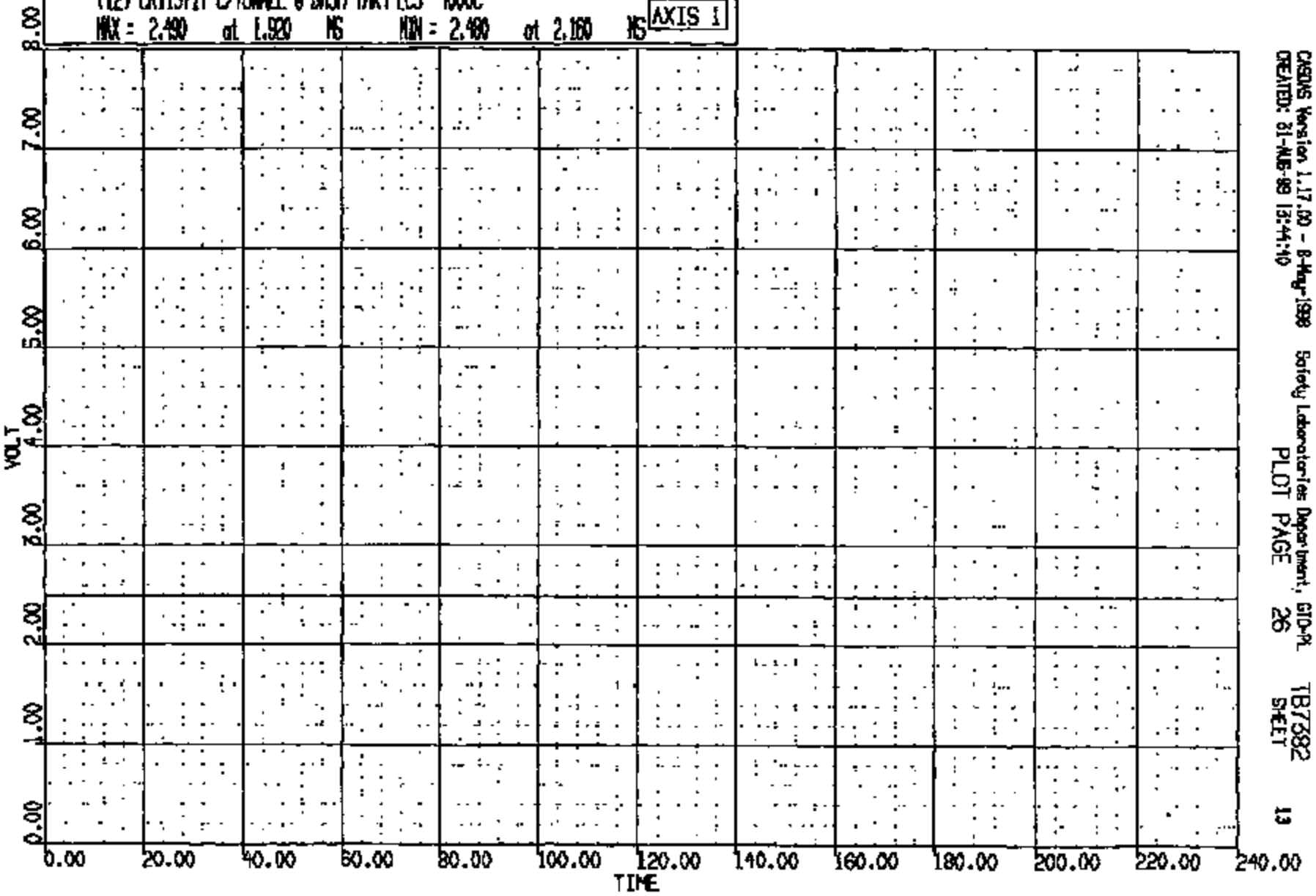
CRIS 0011571

CR R: 11571 TO: T87382 DATE: 990831 13:21:11
2000.5 FN-145

(12) CR115/IT C/TUNNEL @ DASH TAKA ECS 4000C

MAX = 2.400 at 1.920 NS MIN = 2.400 at 2.160 NS

AXIS 1



CASINS Version 1.17.00 - 8-May-1998
CREATED: 31-MAR-99 13:44:40

Safety Laboratories Department, GID-R
PLOT PAGE 26

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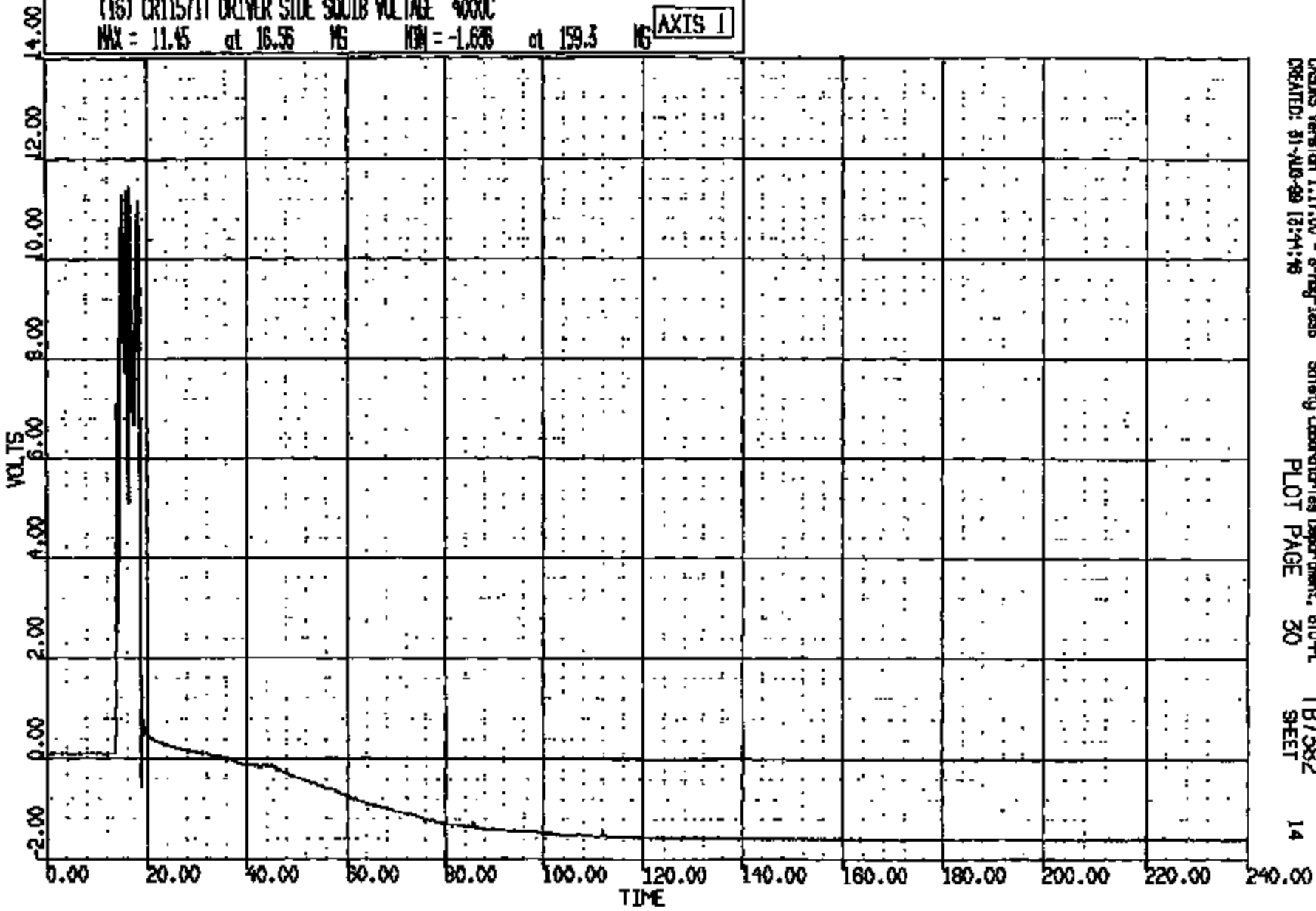
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CR R: 11571 TO: TB7382 DATE: 890821 15:21:11
2000.5 FN-145

(16) CR11571T DRIVER SIDE SOLUB VOLTAGE 4000C

MAX = 11.45 at 16.56 MS MIN = -1.635 at 159.3 MS

AXIS 1



CENUS Version 1.17.00 - 8-May-1988
CREATED: 81-AUG-89 13:44:46

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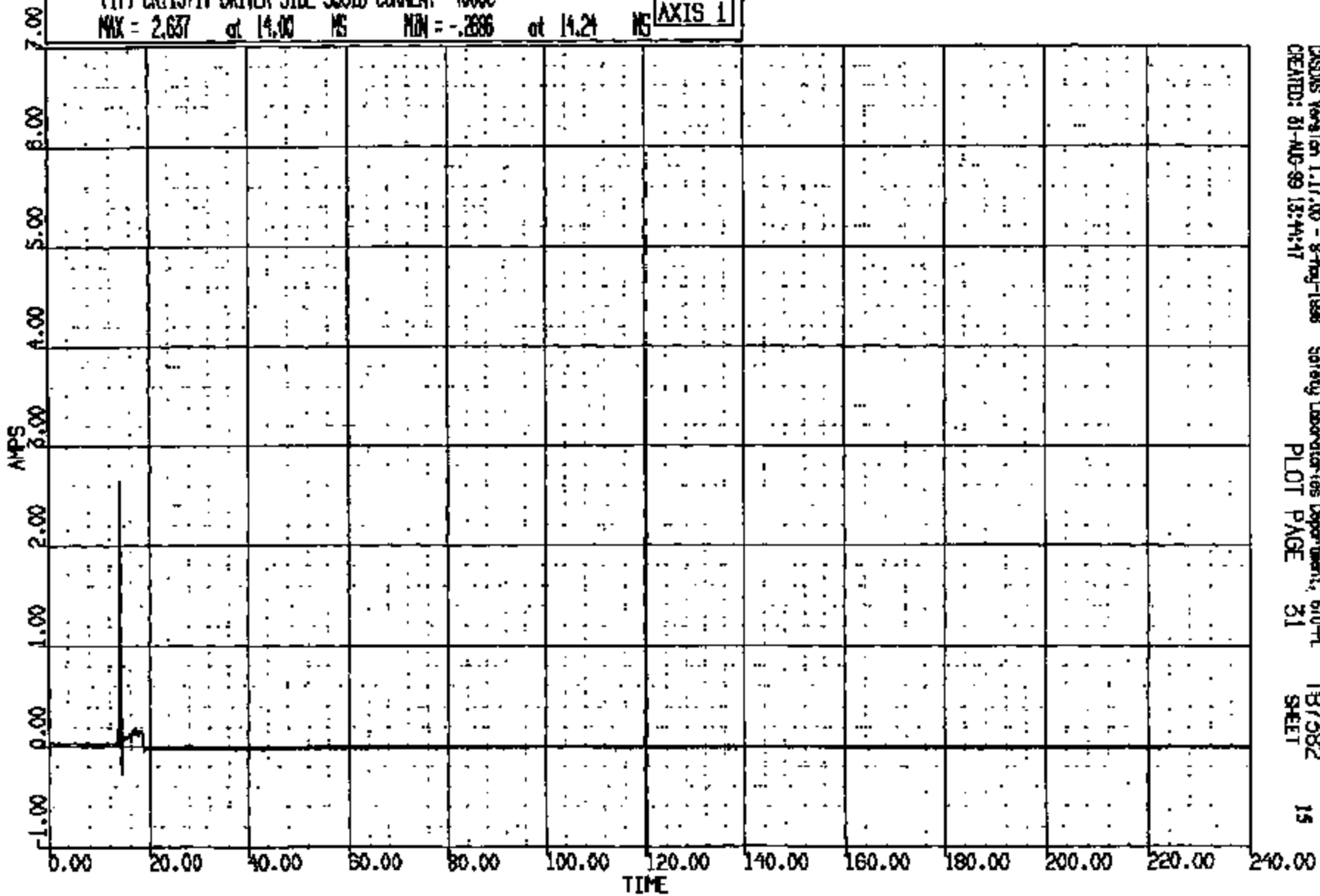
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CR R: 11571 TO: T87382 DATE: 990851 13:21:11
2000.5 FN-146

(17) CR11571 DRIVER SIDE SCOUT CURRENT 4000C

MAX = 2.637 at 14.00 MS MIN = -.2886 at 14.24 MS

AXIS 1



DISOS Version 1.17.00 - 8-May-1998
CREATED: 81-AUG-99 13:44:47

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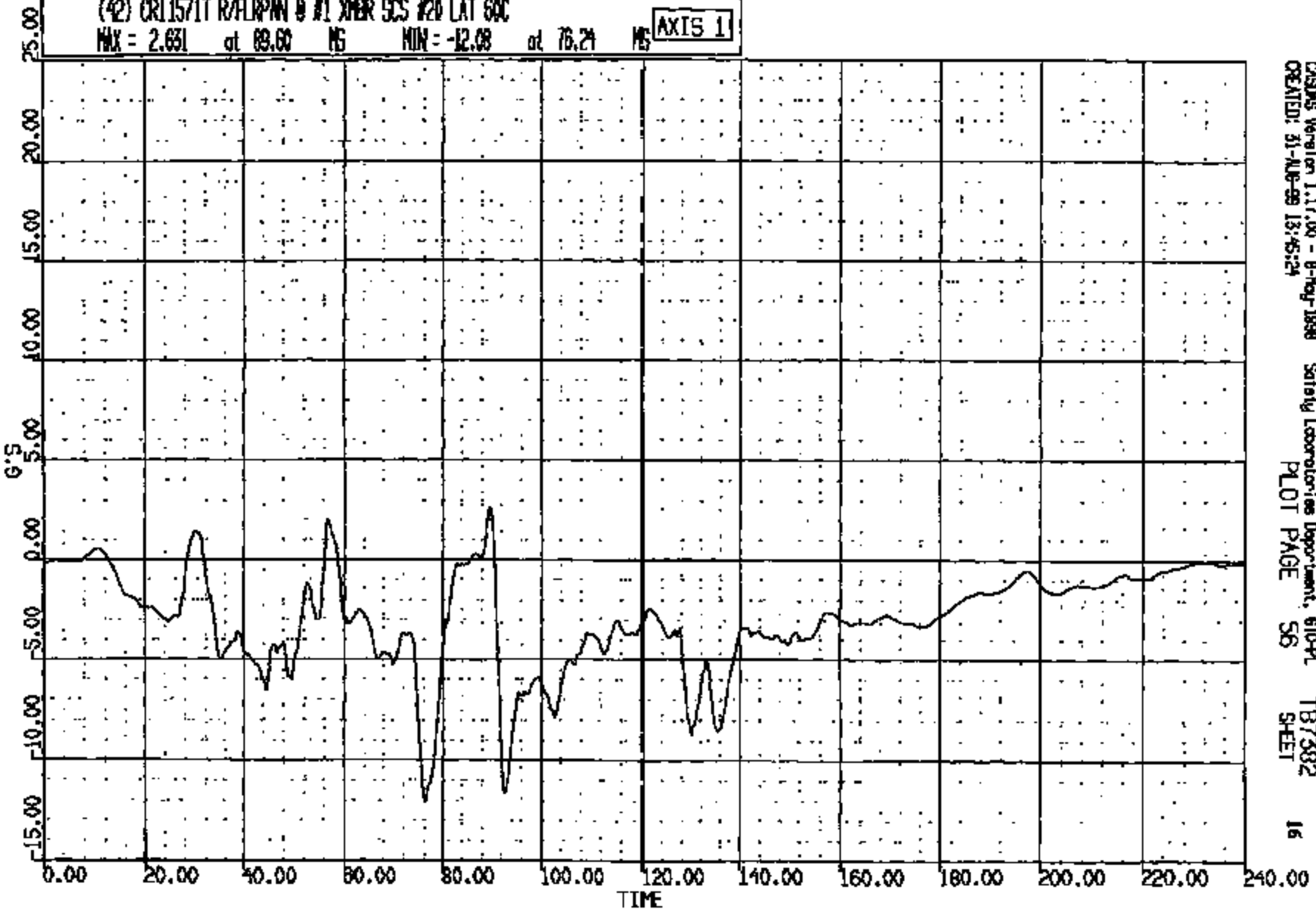
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3000.5 FN:145

(42) CR11571T R/FLRPN @ #1 XMR SCS #20 LAT SOC

MAX = 2.631 at 09.60 MS MIN = -12.08 at 76.24 MS

AXIS 1



CASAS Version 1.17.00 - 8-May-1998
CREATED: 31-AUG-99 13:45:24

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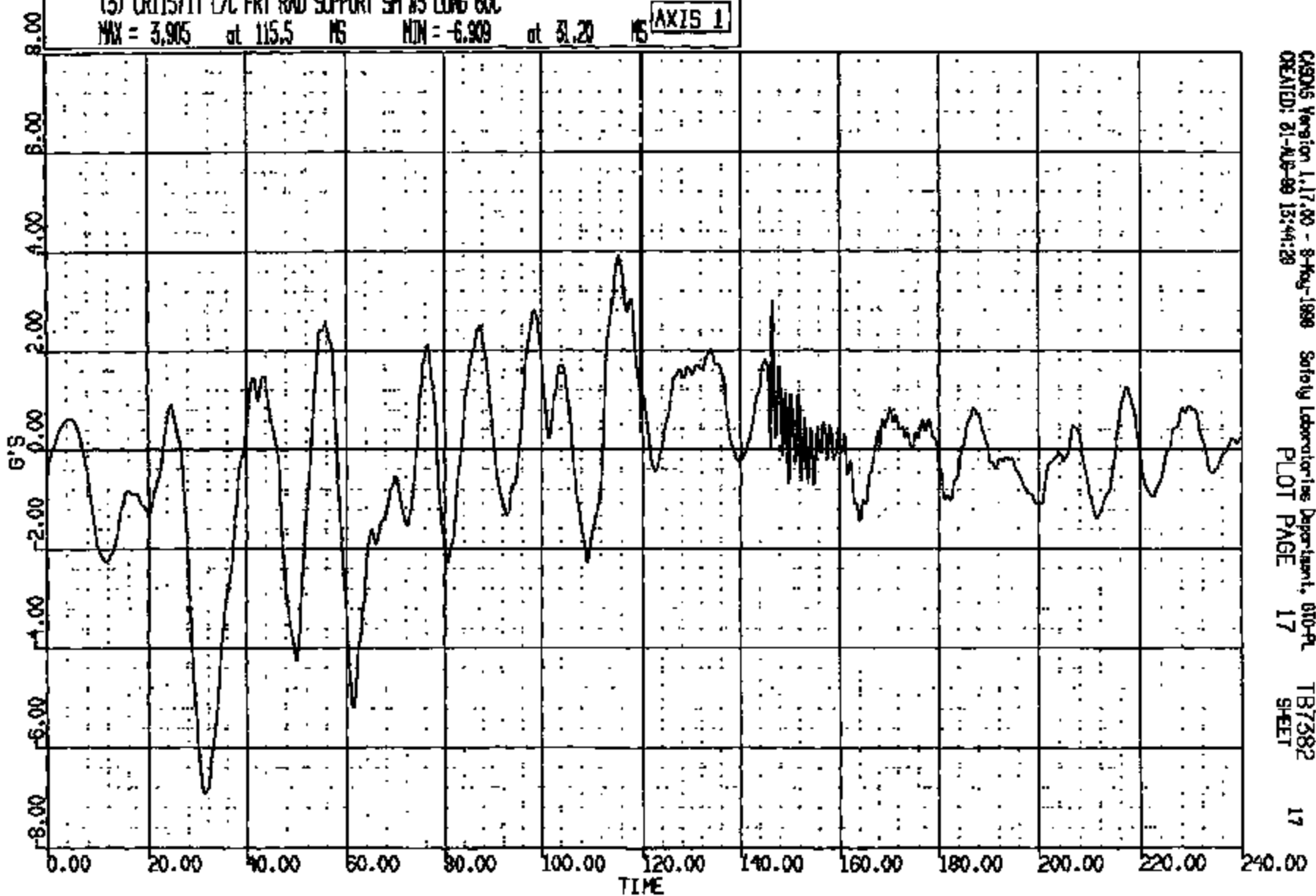
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CR R: 11571 TO: TB7382 DATE: 990831 13:21:11
2000.5 FZ-145

(3) CR11571T L/C FRT RAD SUPPORT SM #5 LONG 60C

MAX = 3.905 at 115.5 MS MIN = -6.909 at 31.20 MS

AXIS 1



CASDS Version 1.17.00 - 8-May-1998
CREATED: 21-AUG-99 13:44:28

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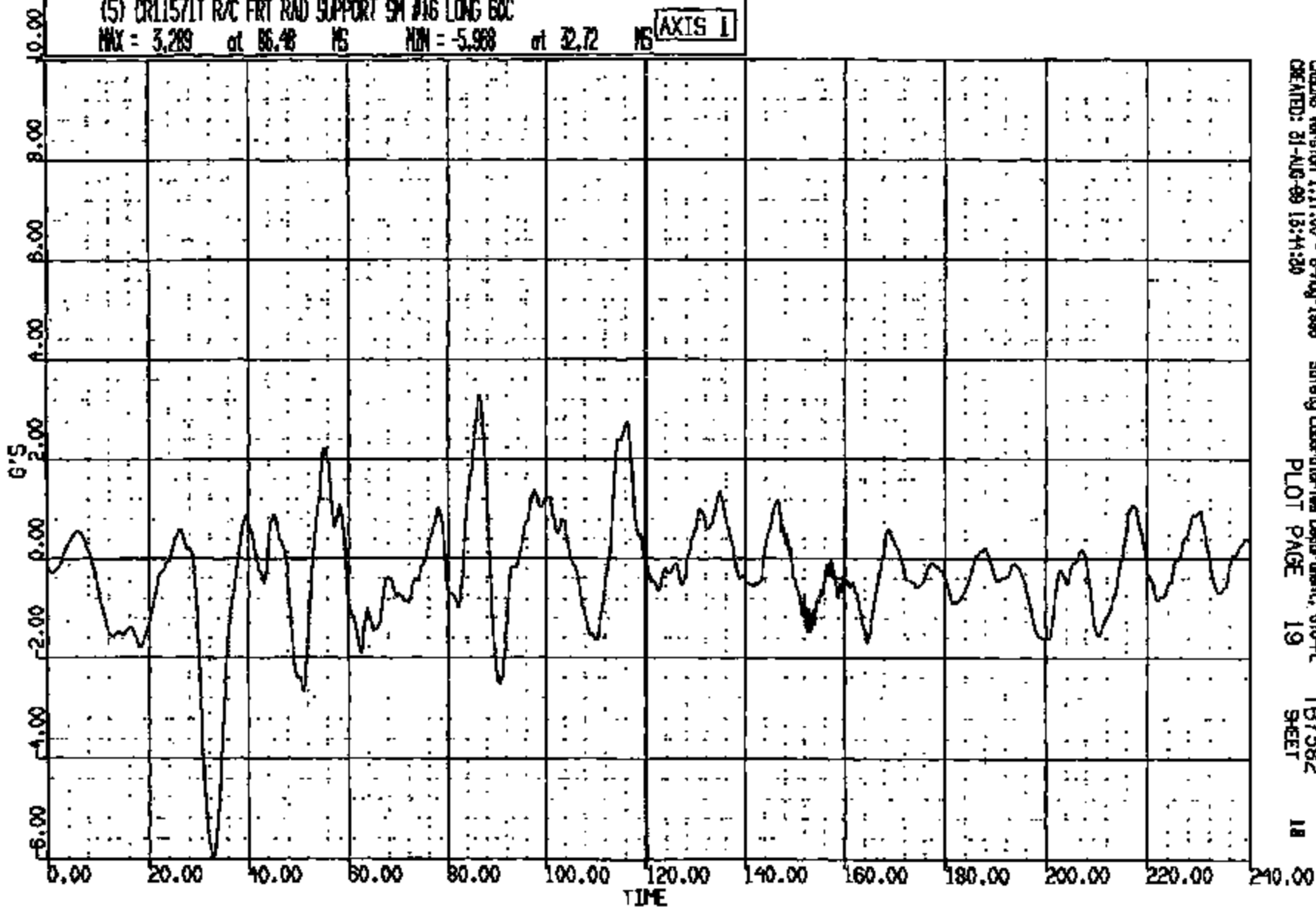
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CR R: 11571 TO: TB7382 DATE: 990831 13:21:11
2000.5 FN-145

(5) CR11571T R/C FRT RAD SUPPORT SM #16 LONG GOC

MAX = 3.289 at 86.48 MS MIN = -5.968 at 32.72 MS

AXIS 1



CASDIS Version 1.17.00 - 8-May-1998
CREATED: 31-AUG-99 13:44:30

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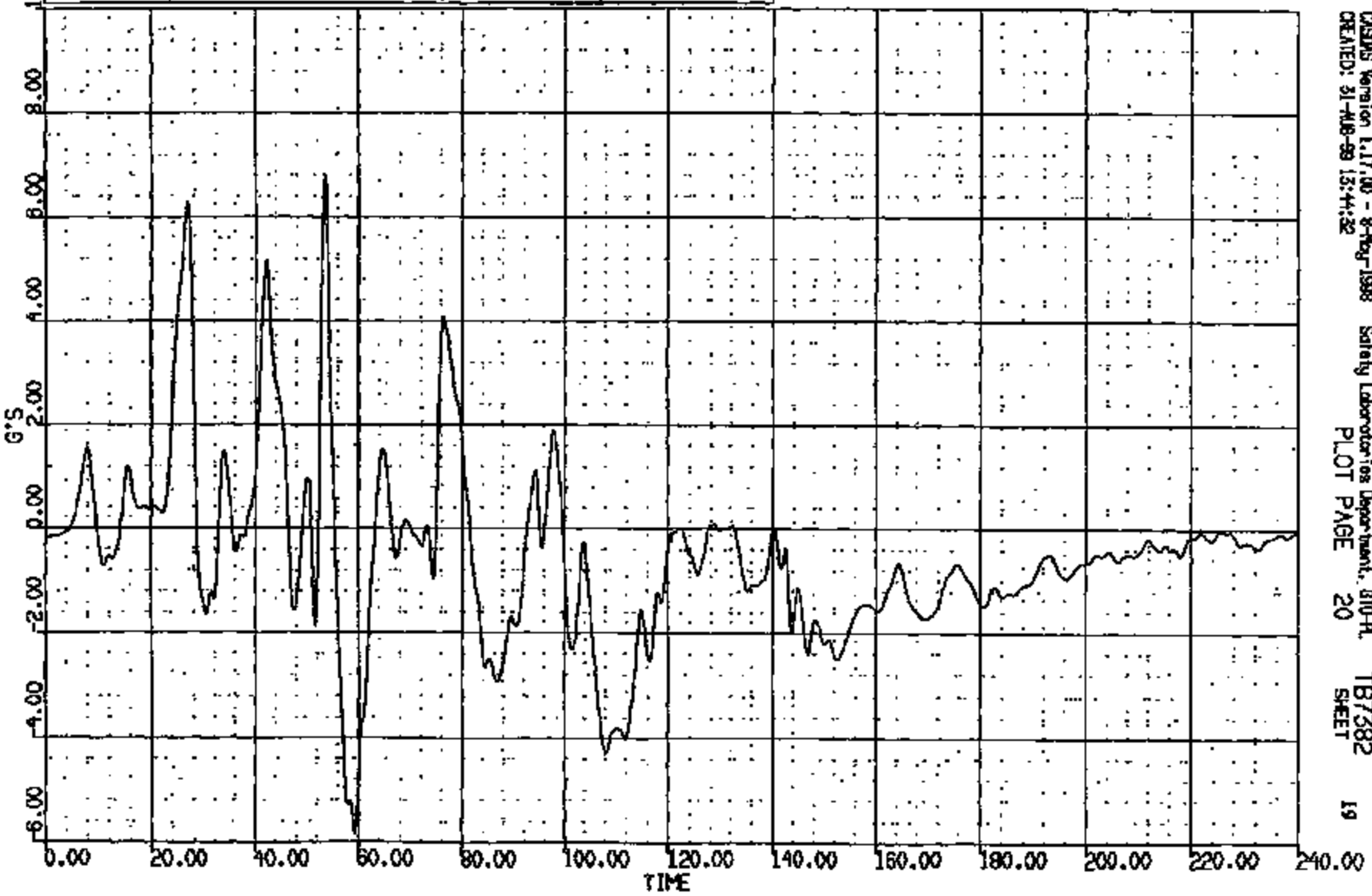
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CR R: 11571 TO: TB7382 DATE: 890831 13:21:11
2000.5 FN-146

(6) CR115/IT C/TUNNEL @ DASH SM #4 LONG 60C

MAX = 6.804 at 53.52 MS MIN = -5.844 at 53.36 MS

AXIS 1



CASDAS Version 1.17.00 - 8-May-1998
CREATED: 31-MAR-98 13:44:32

Safety Laboratories Department, 310-H
PLOT PAGE 20

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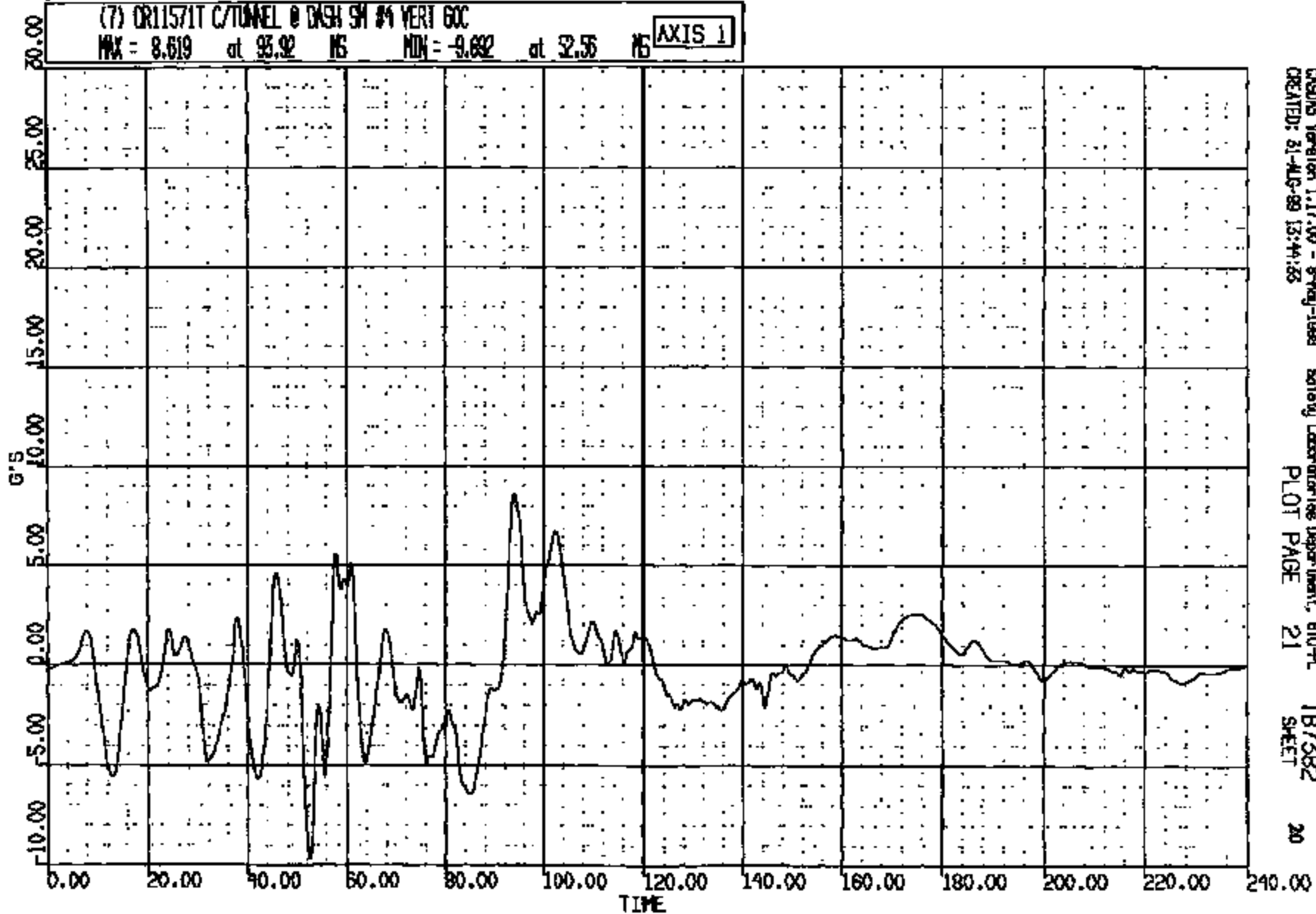
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CR R: 11571 TO: TB7382 DATE: 990831 13:21:11
2000.5 FN-145

(7) CR11571T C/TUNNEL @ DASH SH #4 VERT GOC

MAX = 8.619 at 93.92 MS MIN = -9.682 at 32.56 MS

AXIS 1



CASINS Version 1.17.00 - 8-May-1999
CREATED: 31-AUG-99 13:44:35

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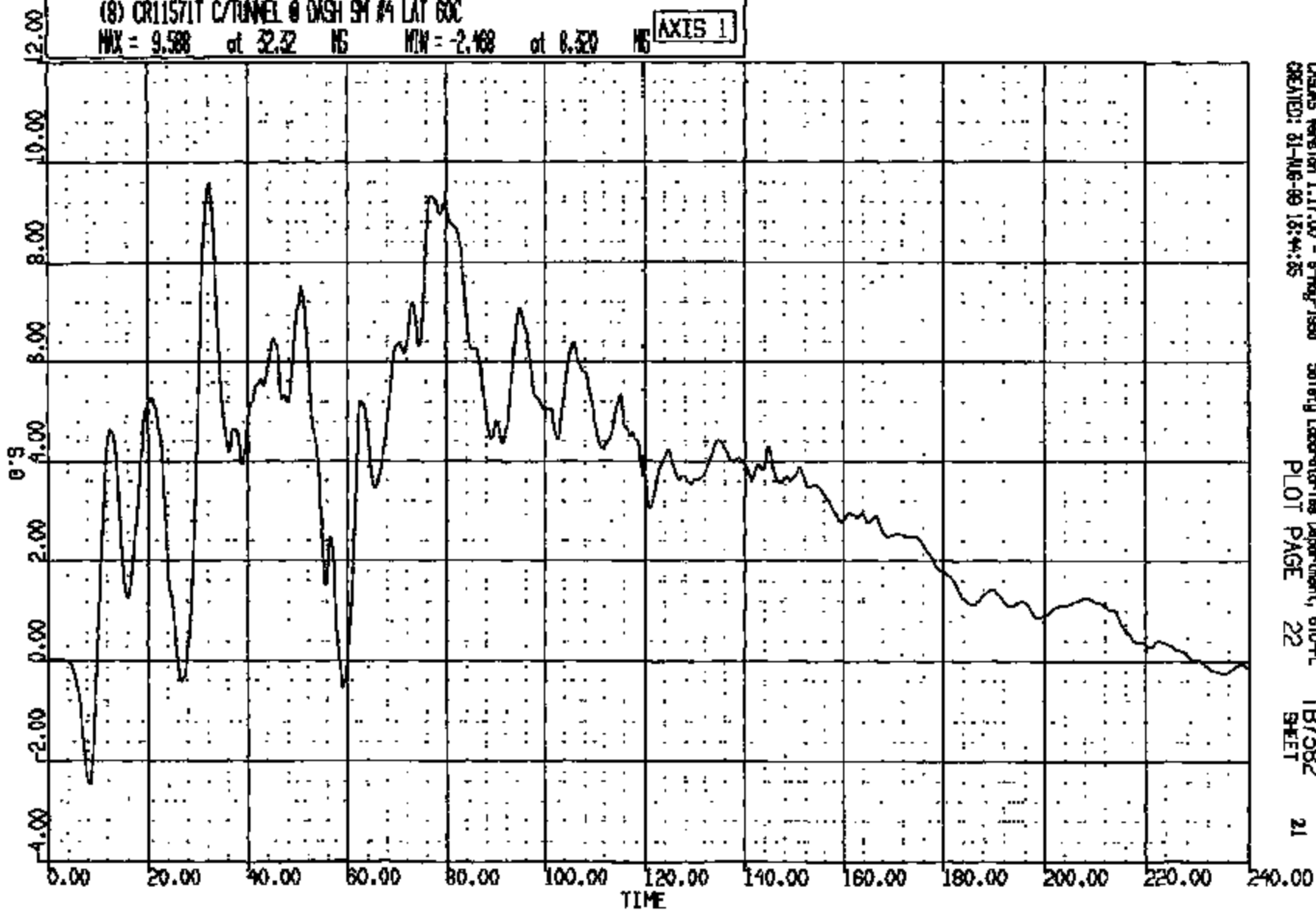
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CR R: 11571 TO: TB7582 DATE: 990831 13:21:11
2000.5 FN-145

(8) CR11571T C/TUNNEL @ DASH SM #4 LAT 60C

MAX = 9.588 at 32.32 MS MIN = -2.468 at 8.320 MS

AXIS 1



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CREATED: 81-MAY-99 13:44:35

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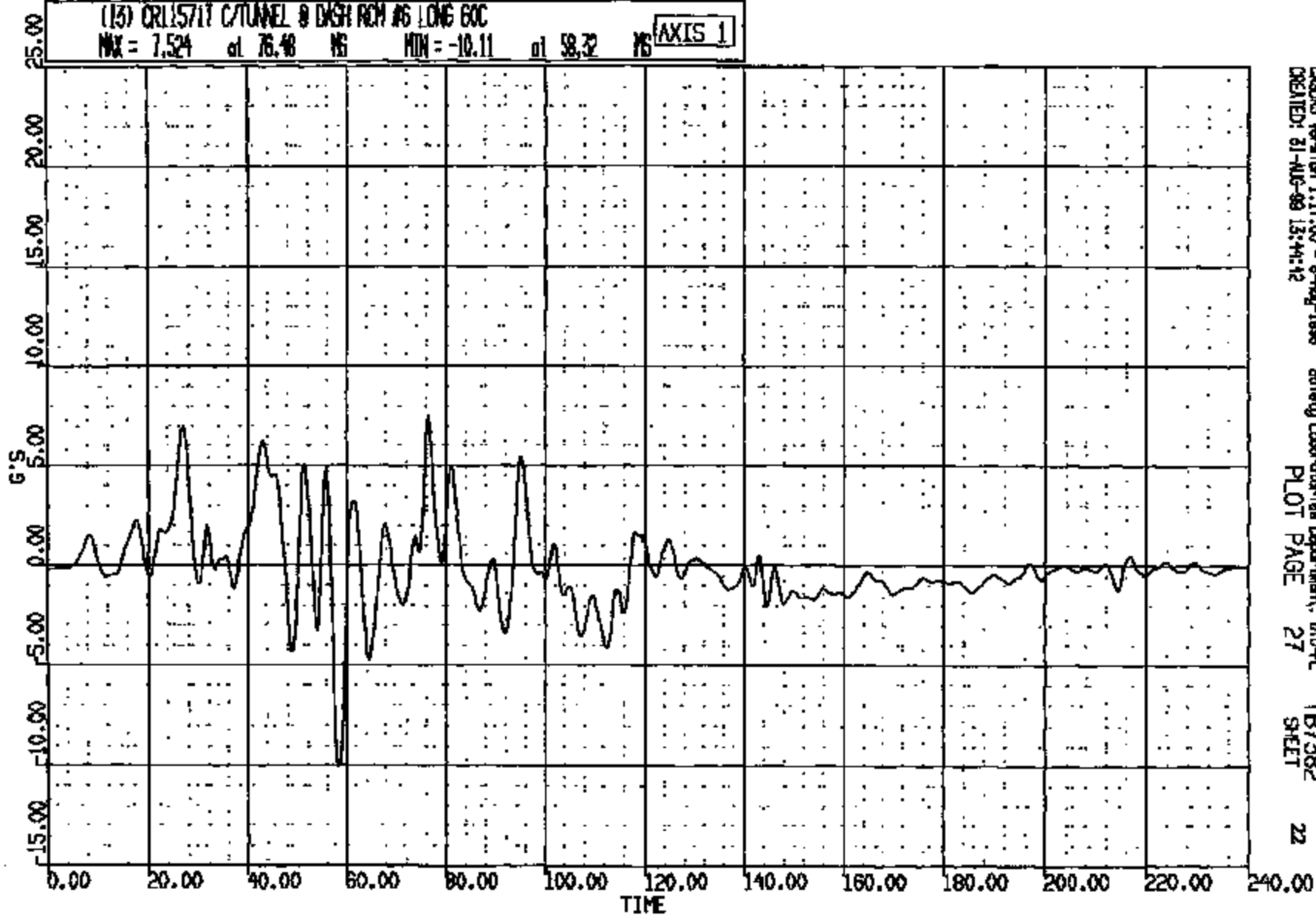
CRIS 0011571

CR R: 11571 TO: T87382 DATE: 990831 13:21:11
2000.6 FN-145

(13) CR115717 C/TUNNEL 8 DASH FROM #6 LONG 600

MAX = 7.524 at 76.48 MS MIN = -10.11 at 58.32 MS

AXIS 1



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CREATED: 81-AUG-98 13:44:12

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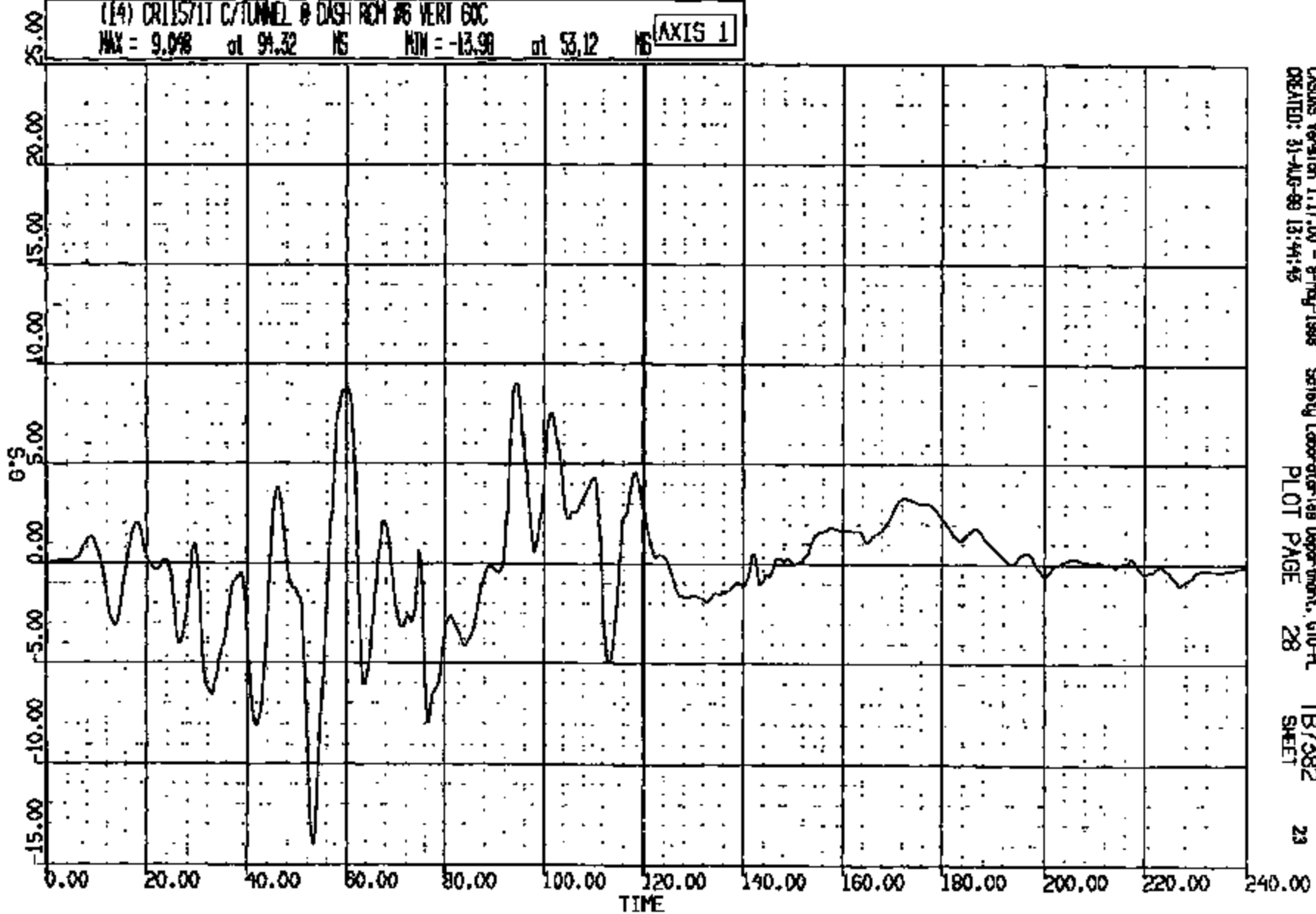
ENTIRE PAGE CONFIDENTIAL

CRIS 0011571

CR R: 11571 TO: TB7382 DATE: 990831 18:21:11
2000.5 FN-145

(14) CR11571T C/TUNNEL @ DASH RCH #6 VERT 60C
MAX = 9.048 at 94.32 NS MIN = -13.98 at 53.12 NS

AXIS 1



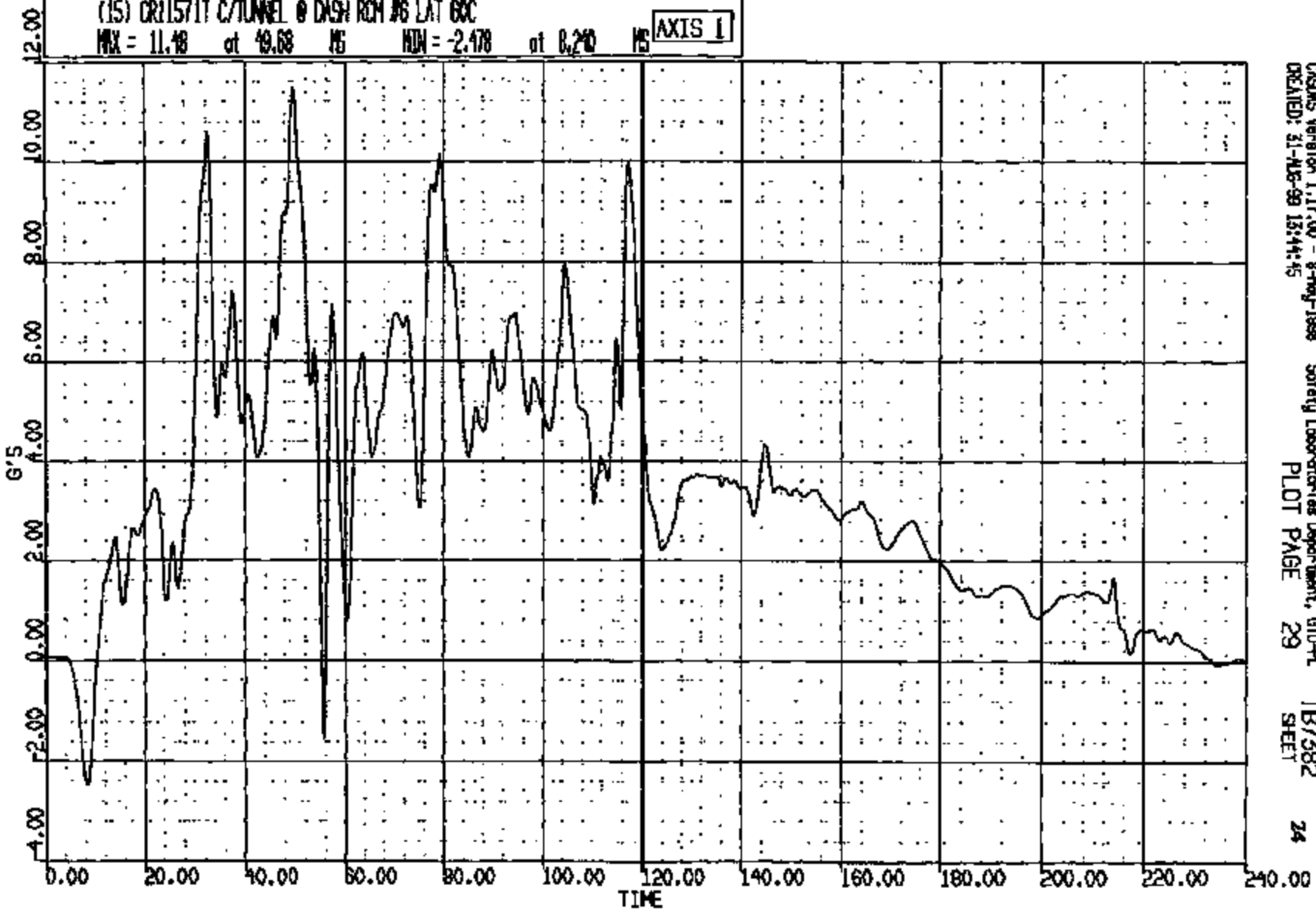
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CR R: 11571 TO: TB7382 DATE: 990831 13:21:11
2000.5 FN-145

(15) CR11571T C/TUNNEL @ DASH ROM #6 LAT 600

MAX = 11.48 at 49.68 MS MIN = -2.478 at 8.240 MS

AXIS 1



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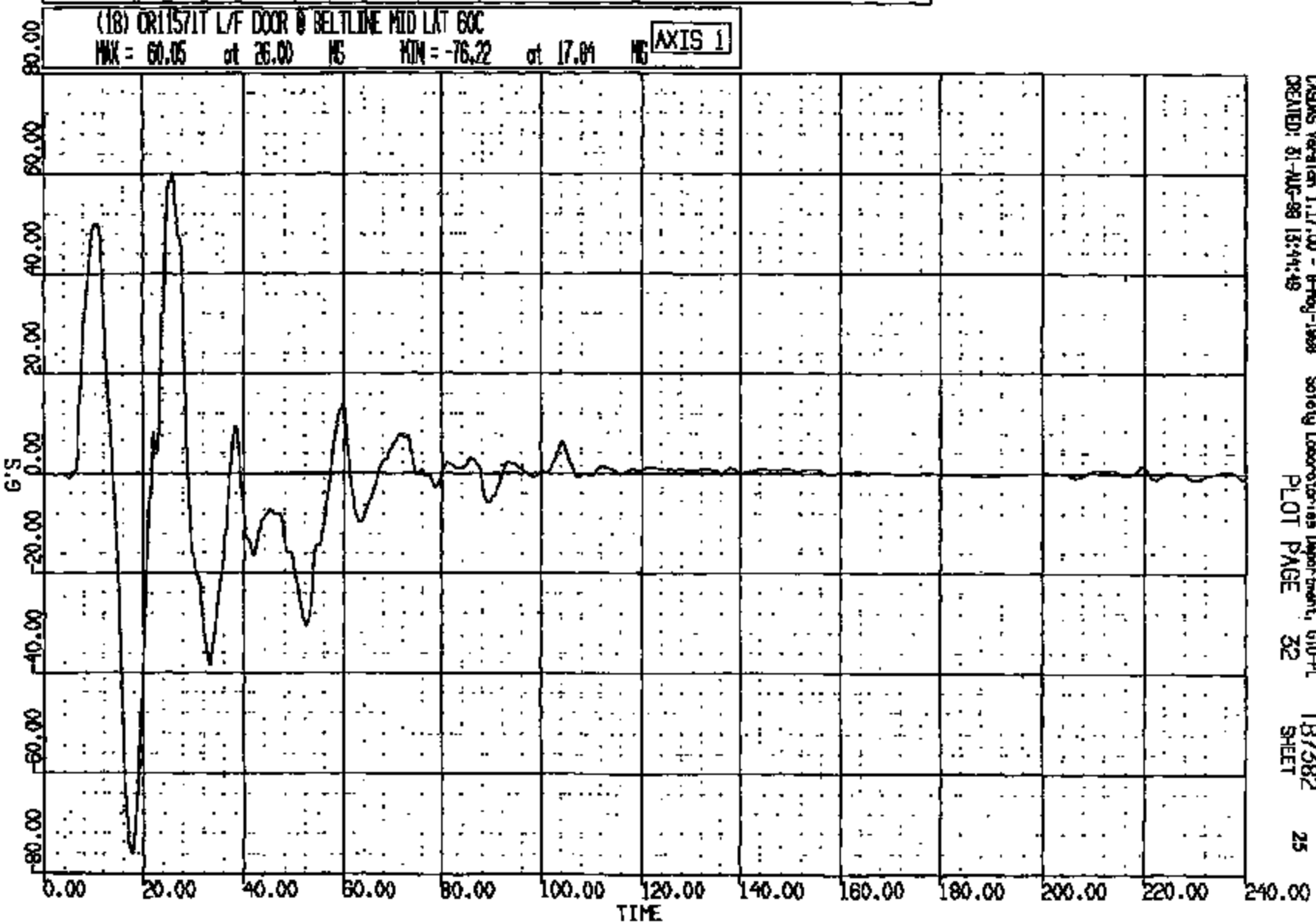
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CR R: 11571 TO: TB7382 DATE: 990831 13:21:11
2000.8 FN-145

(18) CR11571T L/F DOOR @ BELTLINE MID LAT 60C

MAX = 60.05 at 26.00 MS MIN = -76.22 at 17.04 MS

AXIS 1



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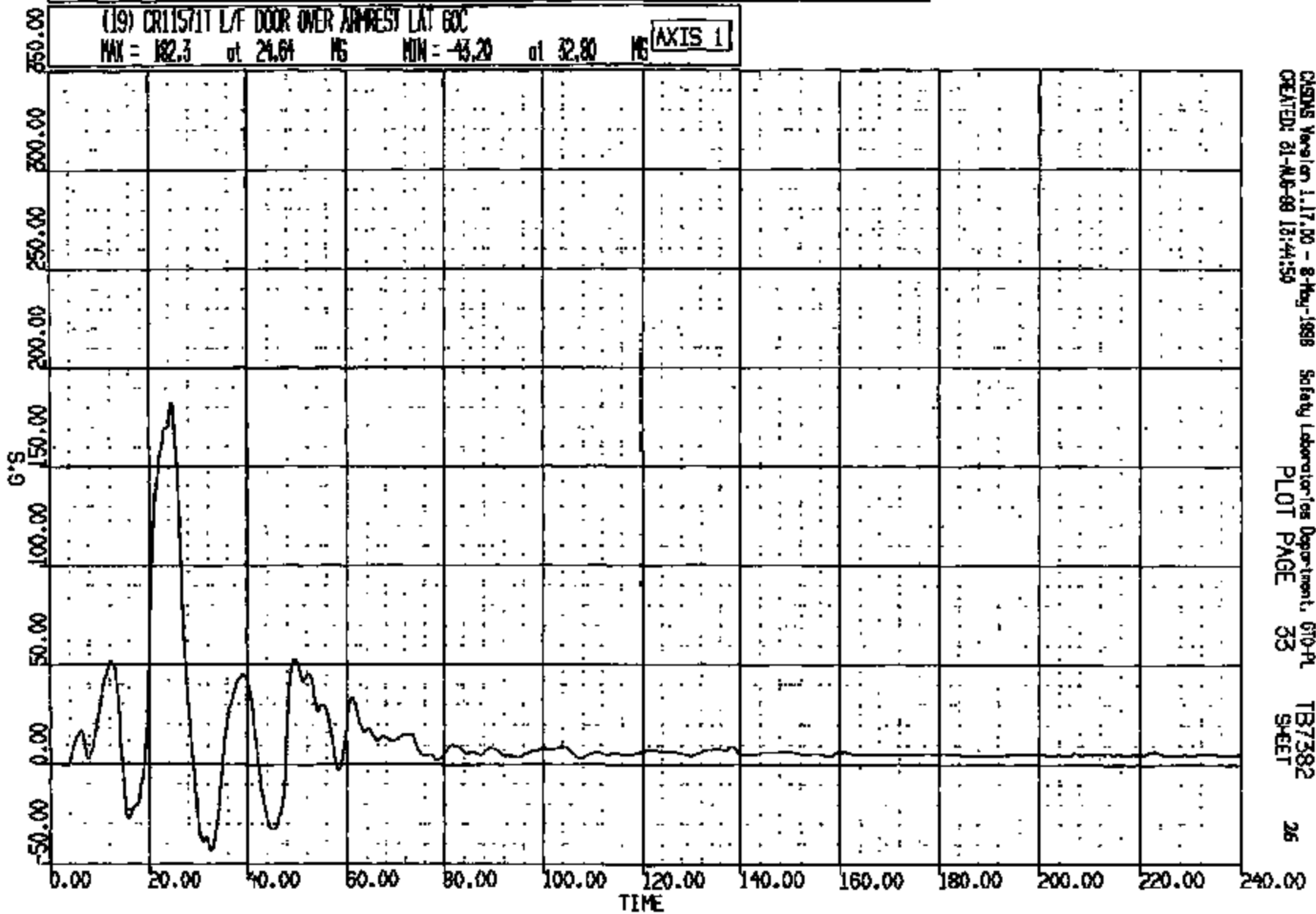
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CRIS 0011571

CR R: 11571 TO: TB7382 DATE: 890831 13:21:11
2000.5 FN-148

(19) CR11571T L/F DOOR OVER AIRREST LAT 60C
MAX = 182.3 at 24.64 MS MIN = -43.20 at 32.80 MS **AXIS 1**



CASAS Version 1.17.00 - 8-May-1998 Safety Laboratories Department, 610-PL TB7382 26
CREATED: 21-AUG-89 13:44:50 PLOT PAGE 33 S-DET

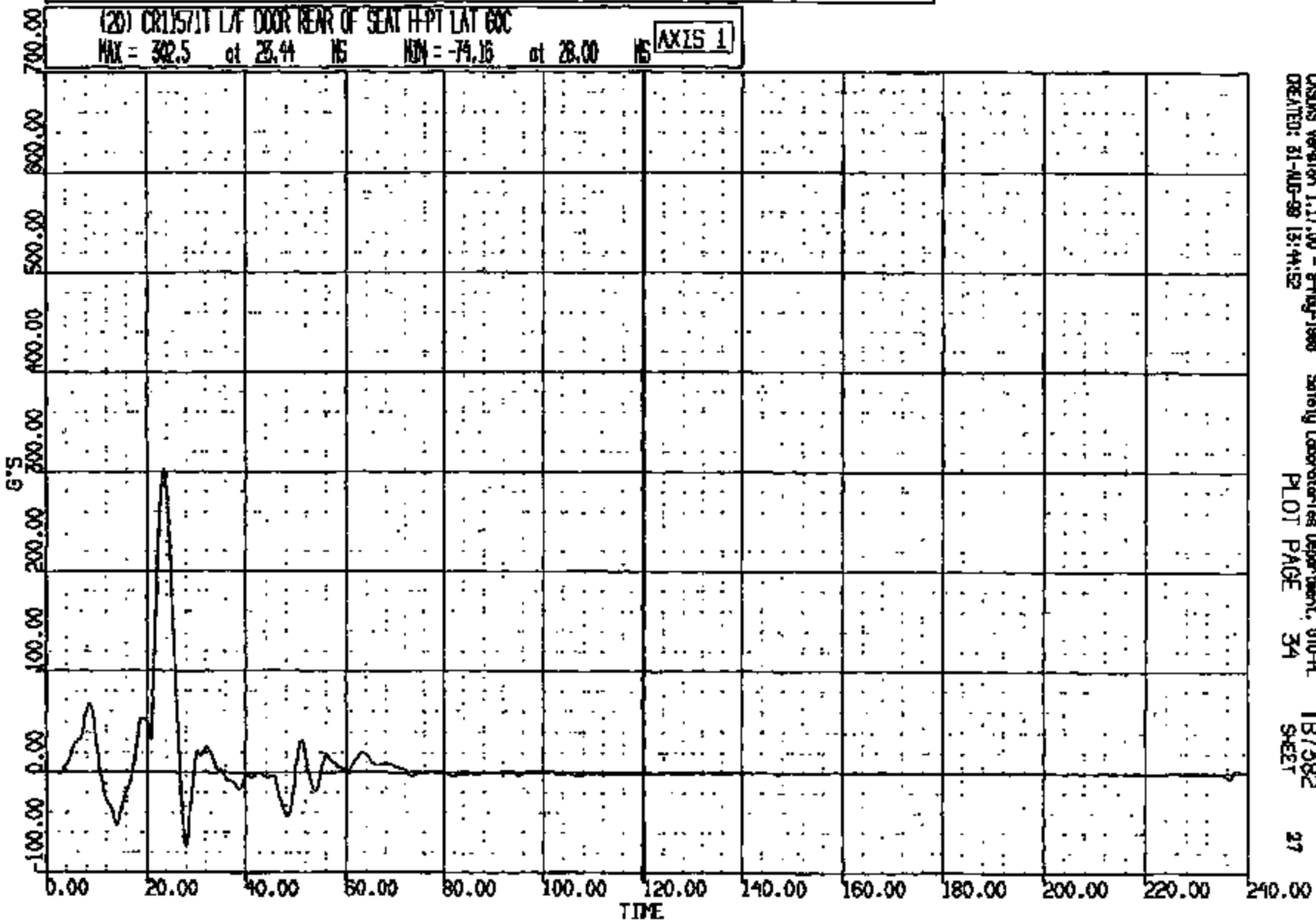
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CRIS 0011571

CR R: 11571 TO: TB7382 DATE: 090831 13:21:11
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(20) CR11571T L/F DOOR REAR OF SEAT H-PT LAT 60C

MAX = 302.5 at 28.44 MS MIN = -74.15 at 28.00 MS **AXIS 1**



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CREATED: 31-AUG-98 13:44:52

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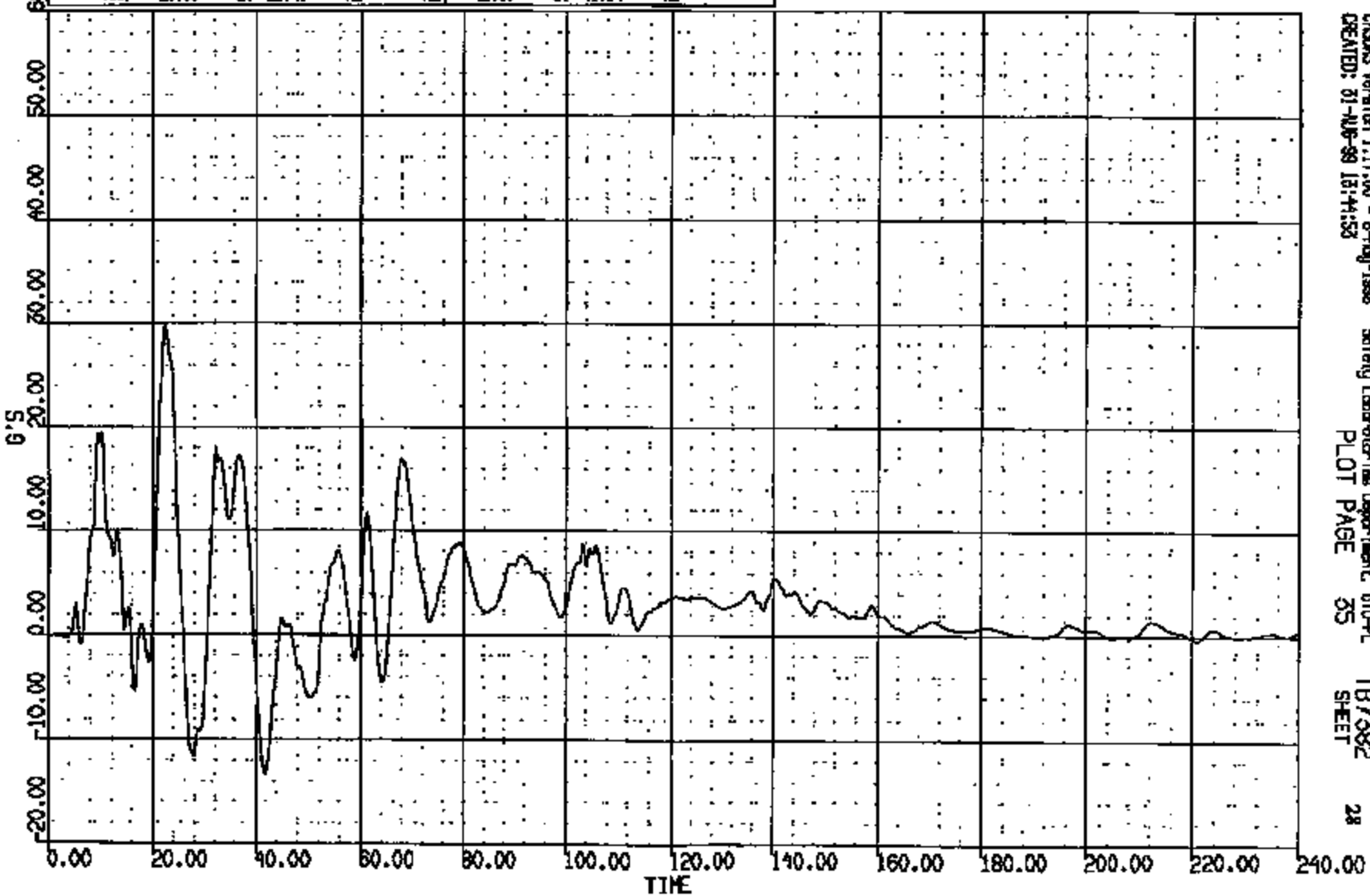
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CR R: 11571 TO: TB7382 DATE: 990831 15:21:11
2000.5 FN-145

(21) CR115717 L/F DOOR SPEAKER HOLE LAT SOC

MAX = 29.86 at 22.40 MS MIN = -13.39 at 41.84 MS

AXIS 1



CMS Version 1.1.7.00 - 8-May-1998
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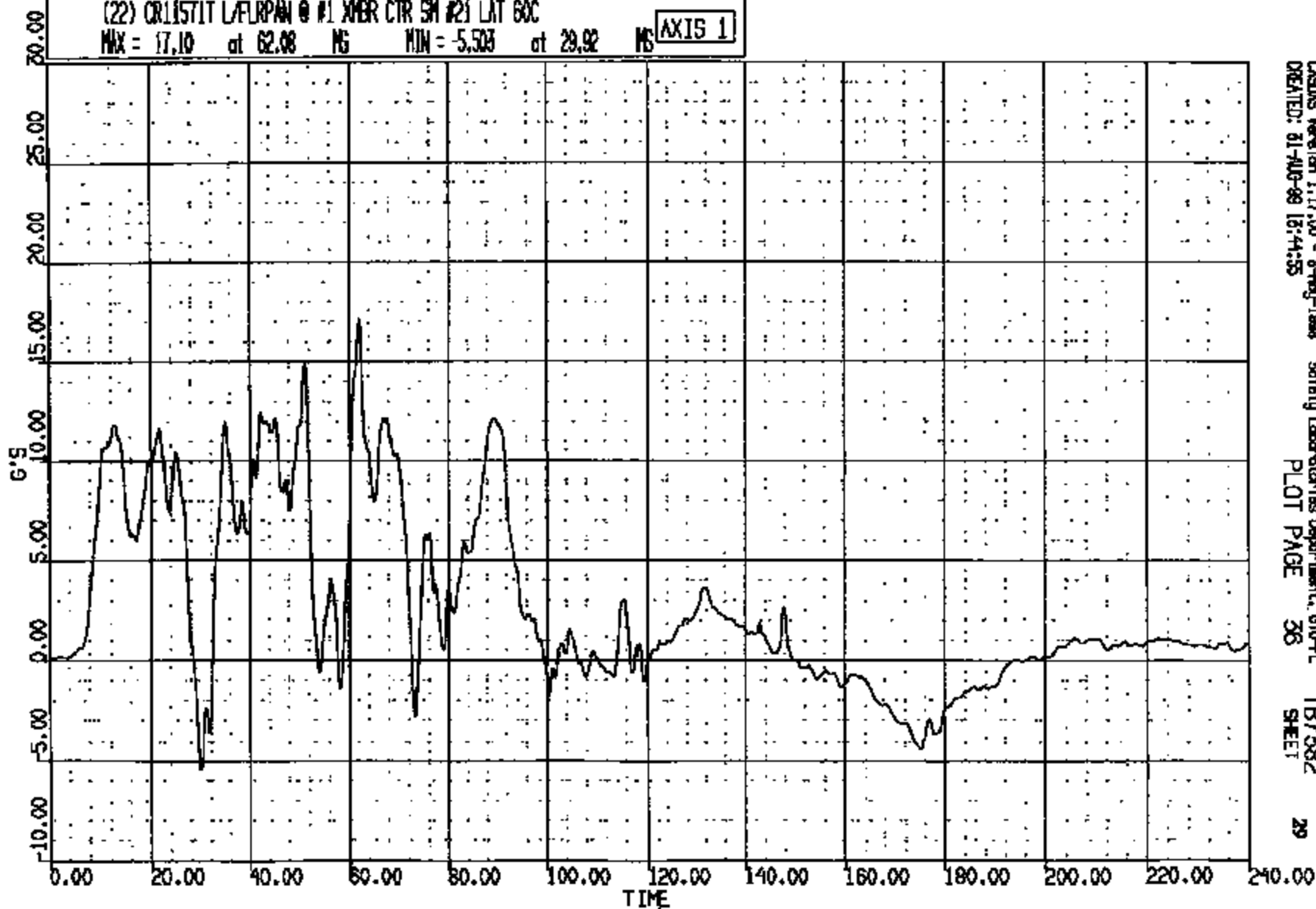
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CR R: 11571 TO: TB7382 DATE: 990831 13:21:11
2000.6 FN-145

(22) CR11571T L/FLRPAW @ #1 XMER CTR SM #21 LAT 60C

MAX = 17.10 at 62.08 MS MIN = -5.503 at 29.92 MS

AXIS 1



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CREATED: 81-AUG-99 13:44:35

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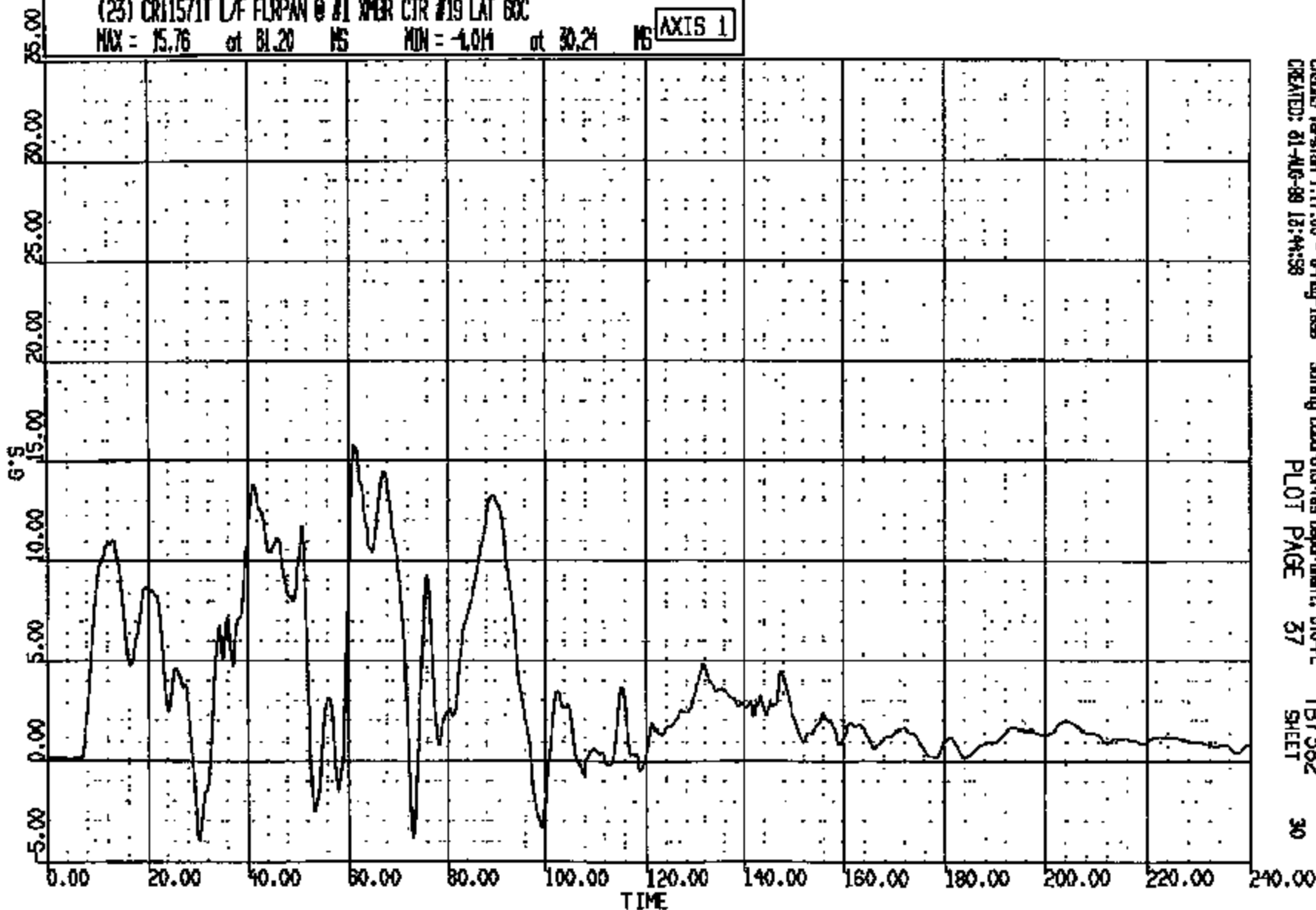
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2000.6 FN-145

(23) CR11571T L/F FLRPN 0 #1 XMR CTR #19 LAT 60C

MAX = 15.76 at 81.20 MS MIN = -1.04 at 30.24 MS

AXIS 1



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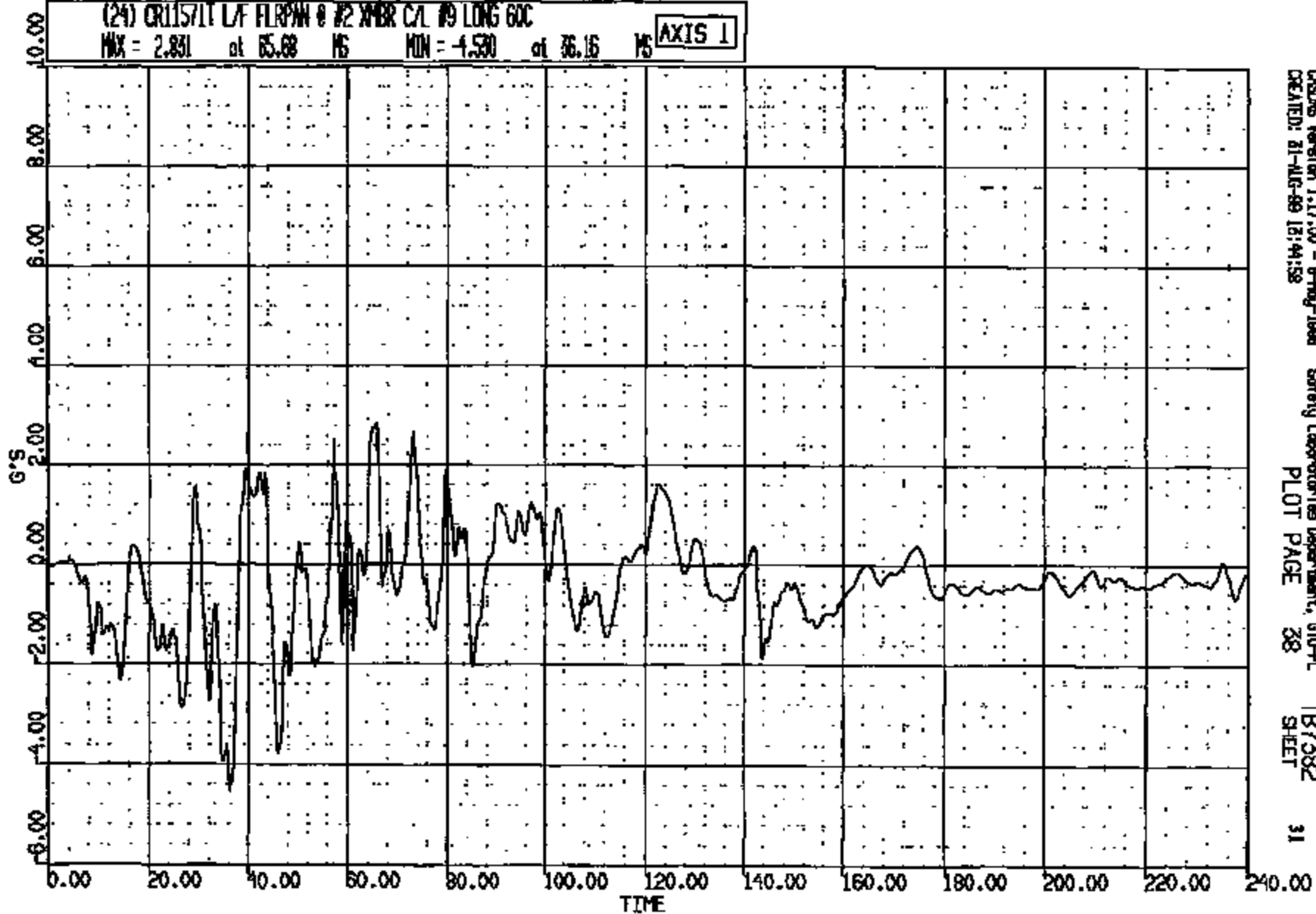
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2000.5 FN-145

(24) CR11571T L/F FLRPM # 2 XMR C/L #9 LONG 60C

MAX = 2.831 at 65.68 MS MIN = -4.530 at 36.16 MS

AXIS 1



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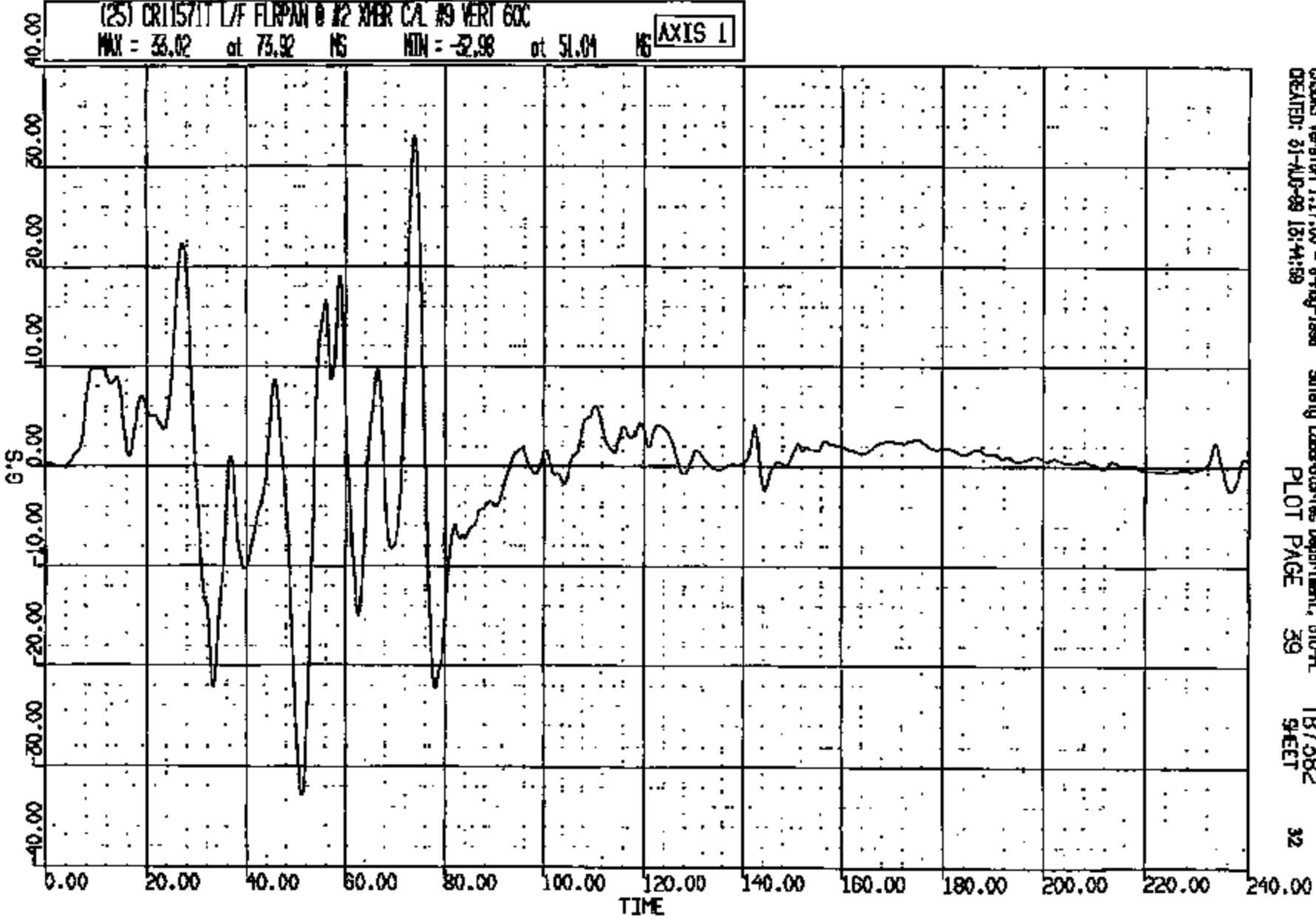
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2000.5 FN-145

(25) CRT11571T L/F FLIPAN 0 #2 XMR CAL #9 VERT 60C

MAX = 33.02 at 73.92 NS MIN = -32.98 at 51.04 NS

AXIS 1



CRTS 0011571

CASMS Version 1.17.00 - 8-Aug-1998
CREATED: 31-AUG-98 13:44:59

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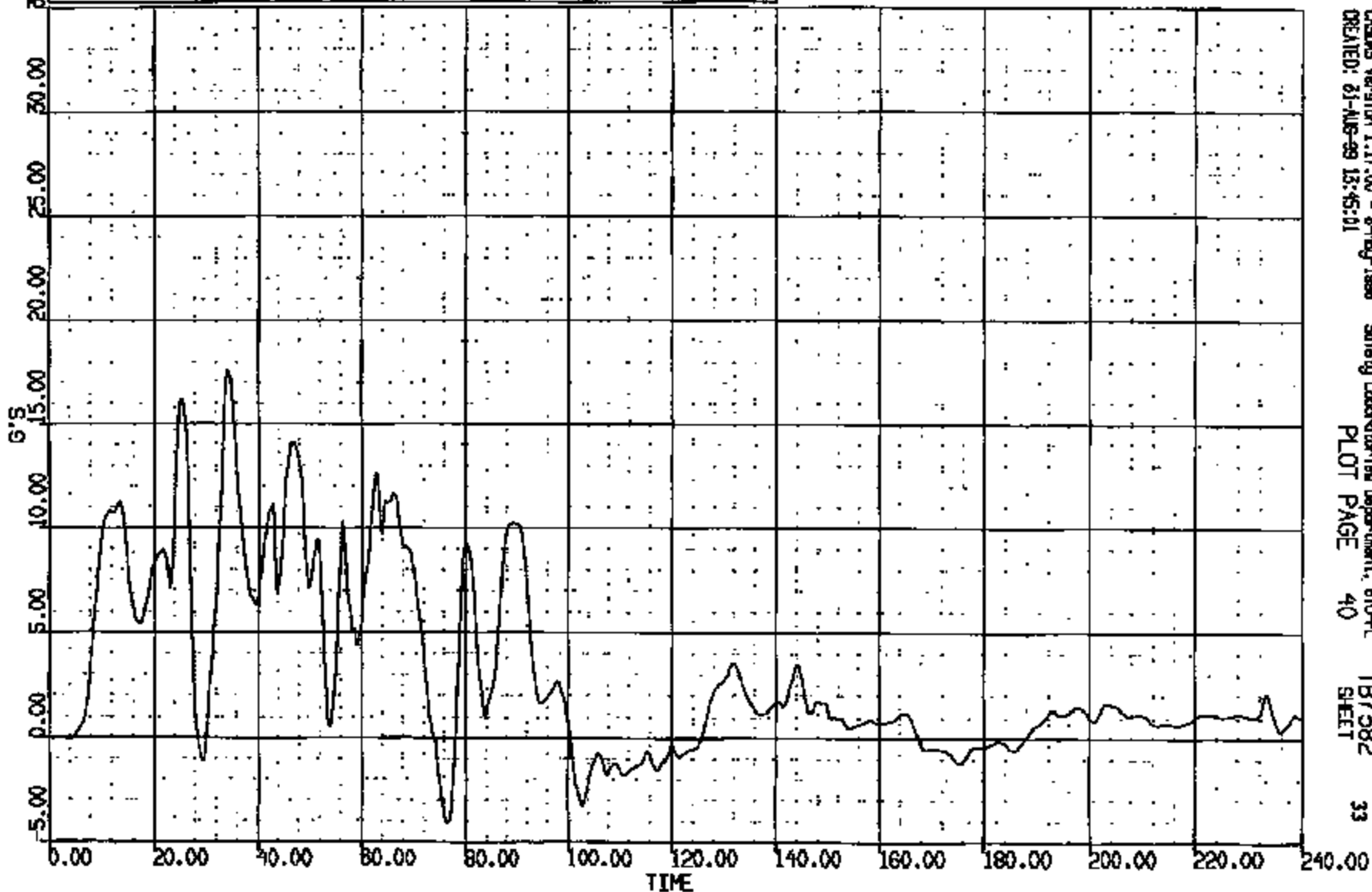
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CR R: 11571 TO: TB7382 DATE: 280881 13:21:11
2000.5 FN-145

(26) CR11571T L/F FLUPAN @ #2 XMR C/L #9 LAT 60C

MAX = 17.61 at 34.32 NS MIN = -4.071 at 76.64 NS

AXIS 1



CRS05 Version 1.17.00 - 8-May-1988
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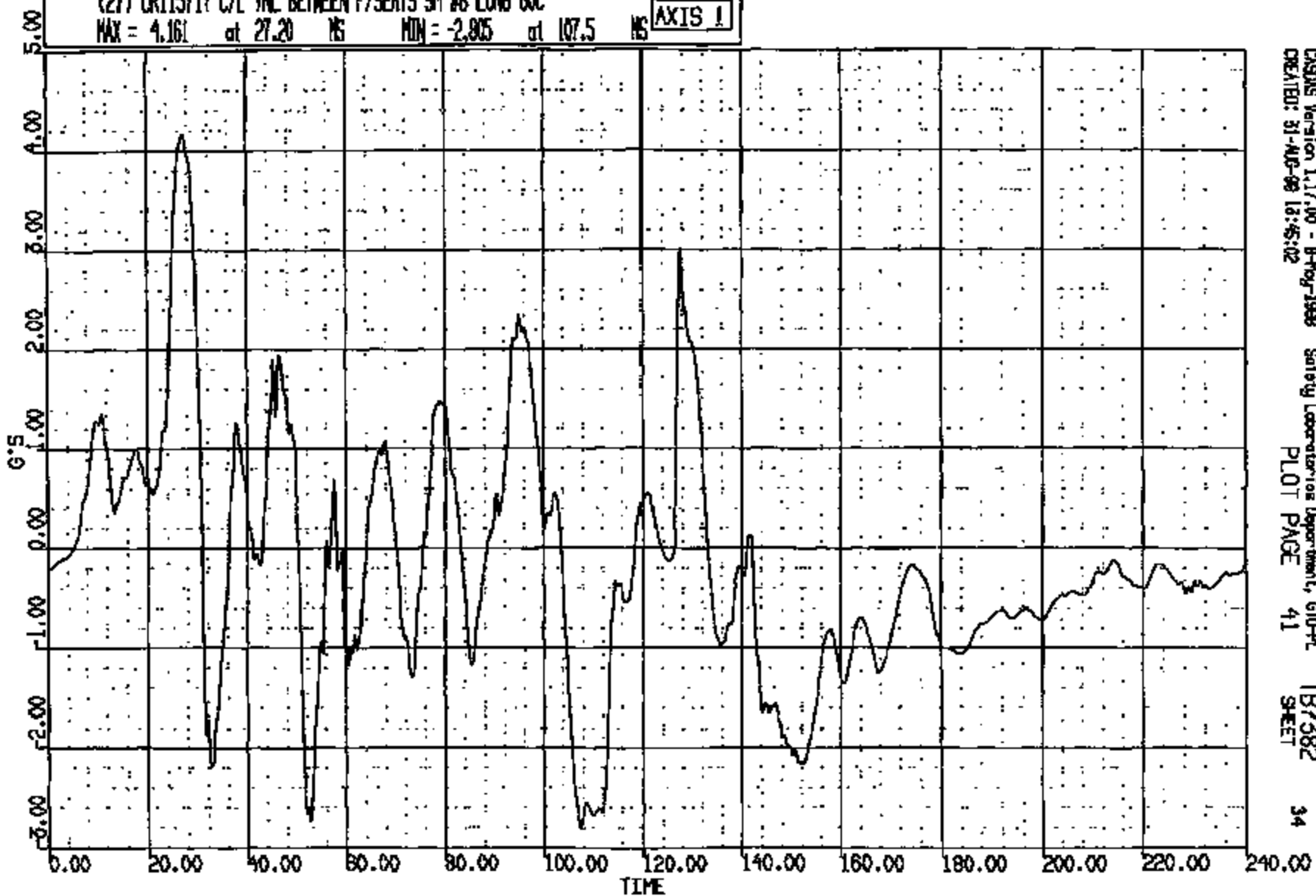
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CR R: 11571 TO: TB7382 DATE: 990831 13:21:11
2000.5 FN-145

(27) CR11571 C/L TNL BETWEEN F/SEATS SM #8 LONG 60C

MAX = 4.161 at 27.20 MS MIN = -2.805 at 107.5 MS

AXIS 1



CASAS Version 1.17.00 - 8-4-99-1998
CREATED: 31-AUG-99 12:45:02

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CRIS 0011571