

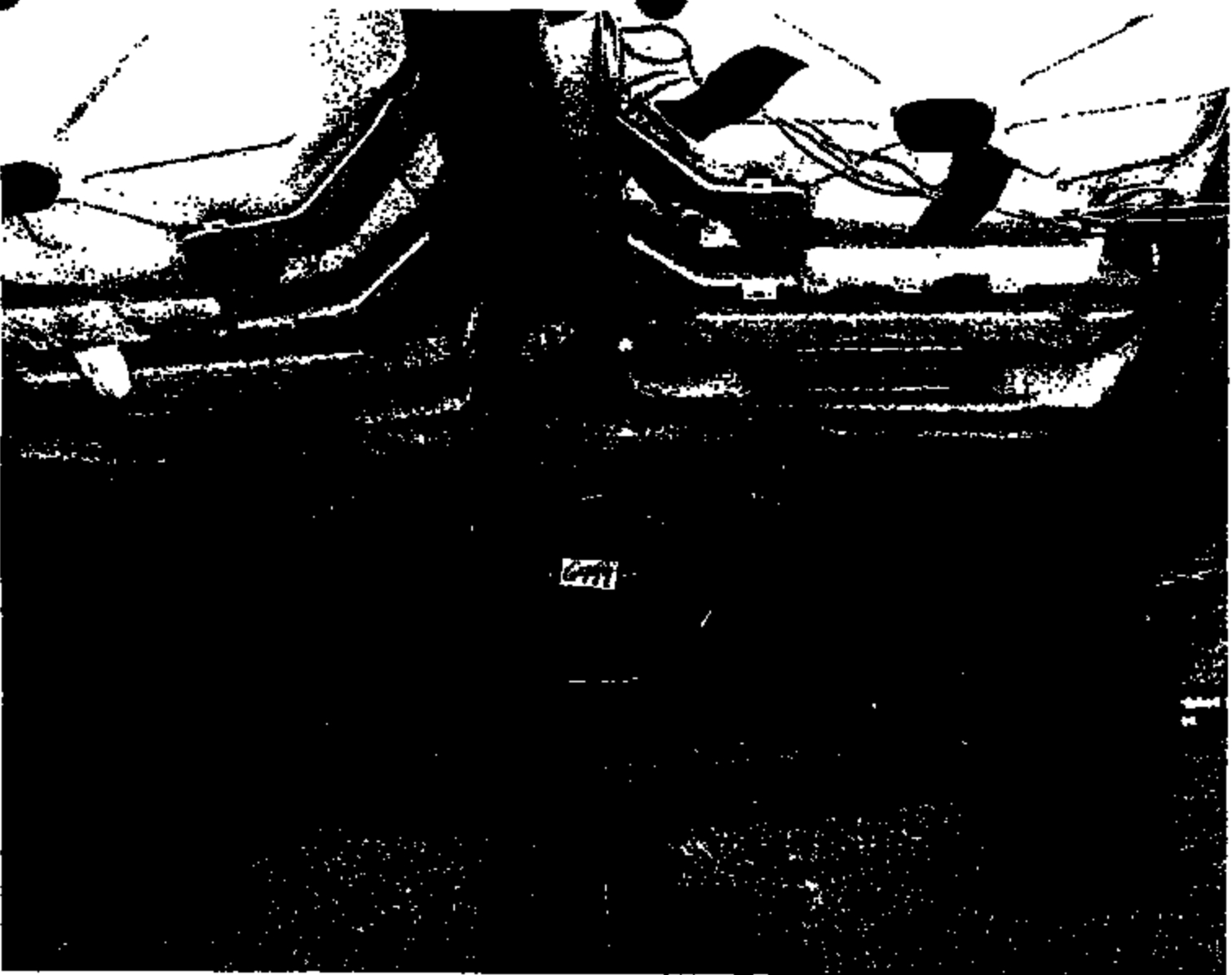
EA03-014

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

ATTACHMENT G

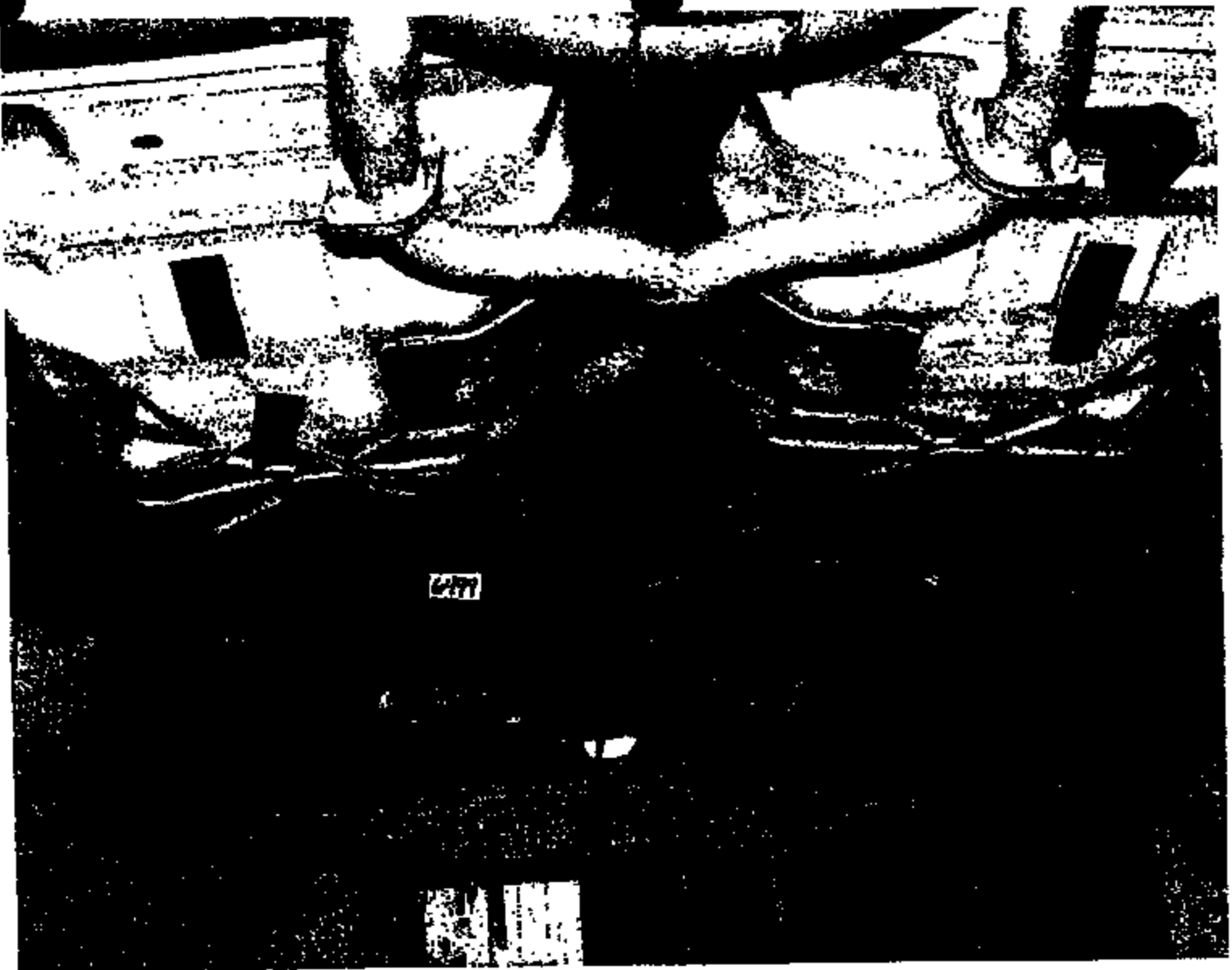
BOOK 4 OF 10

PART 3 OF 4



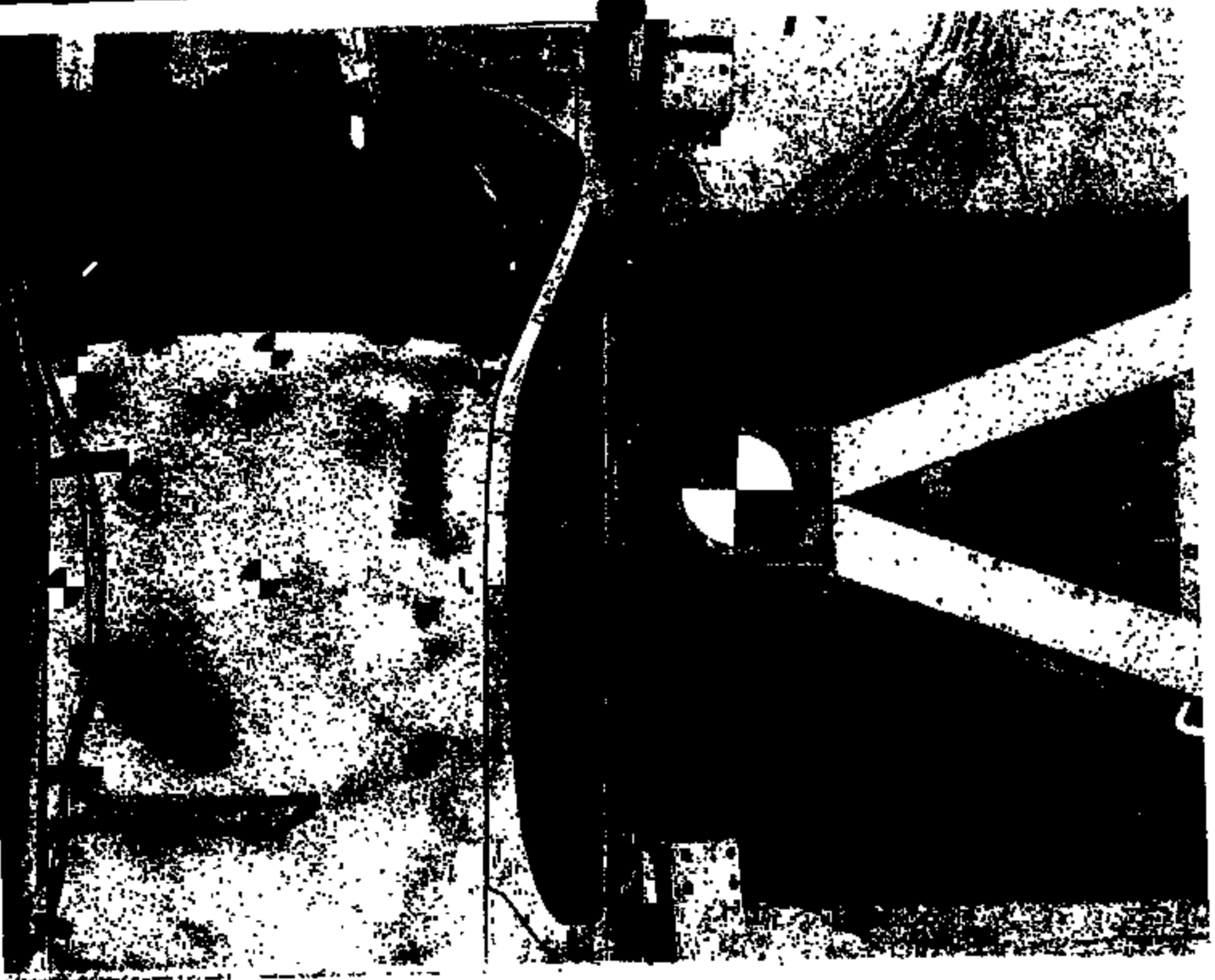
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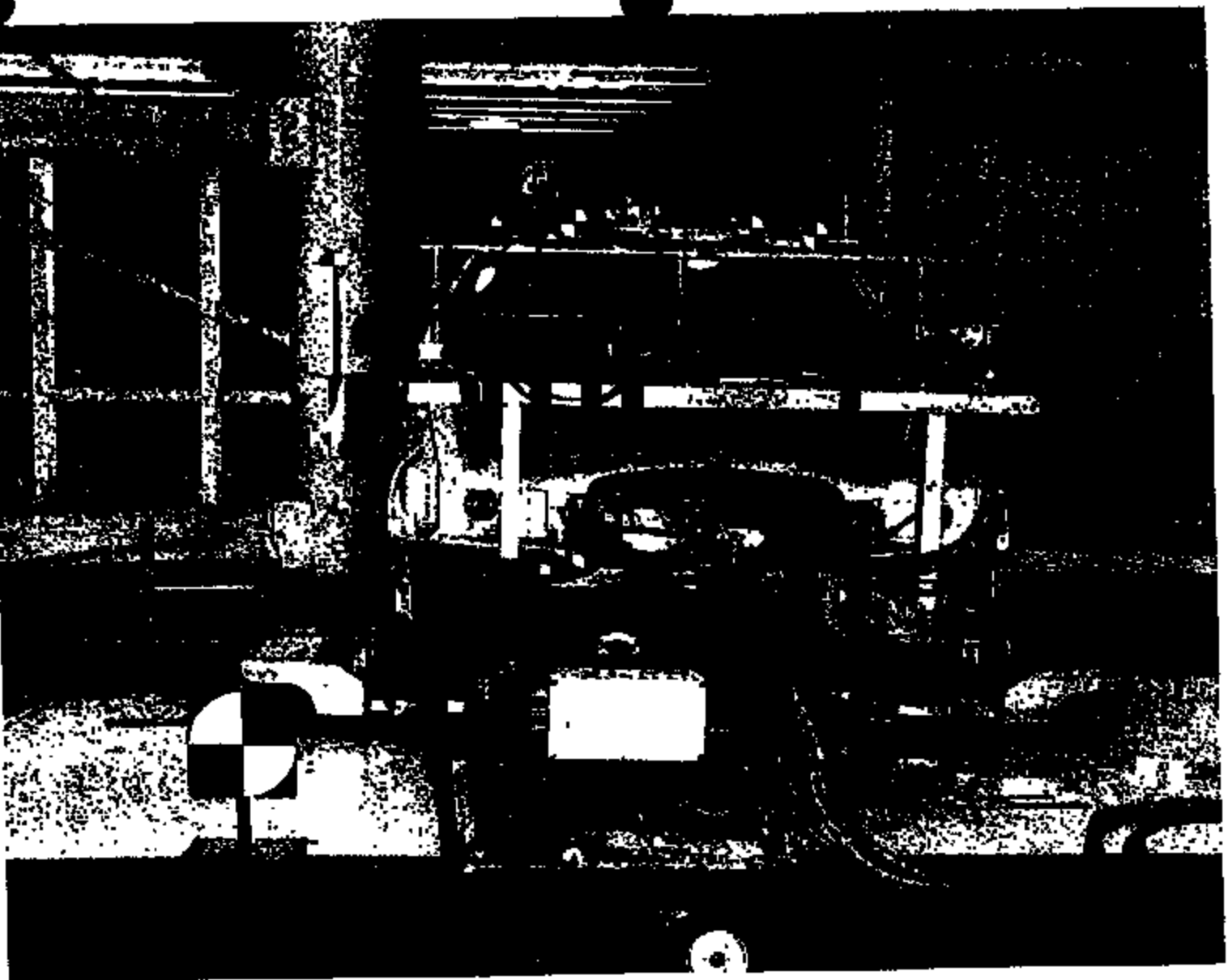


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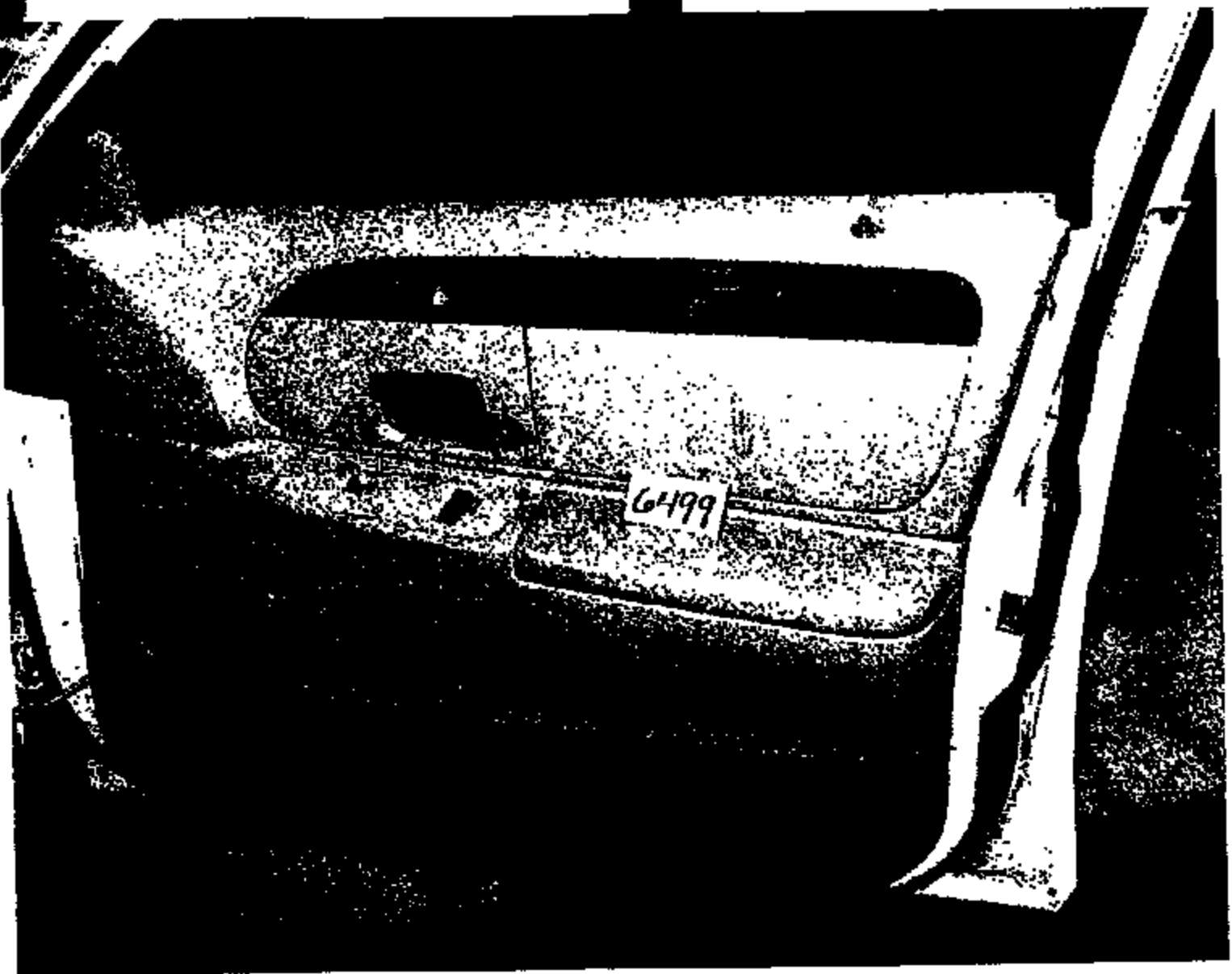


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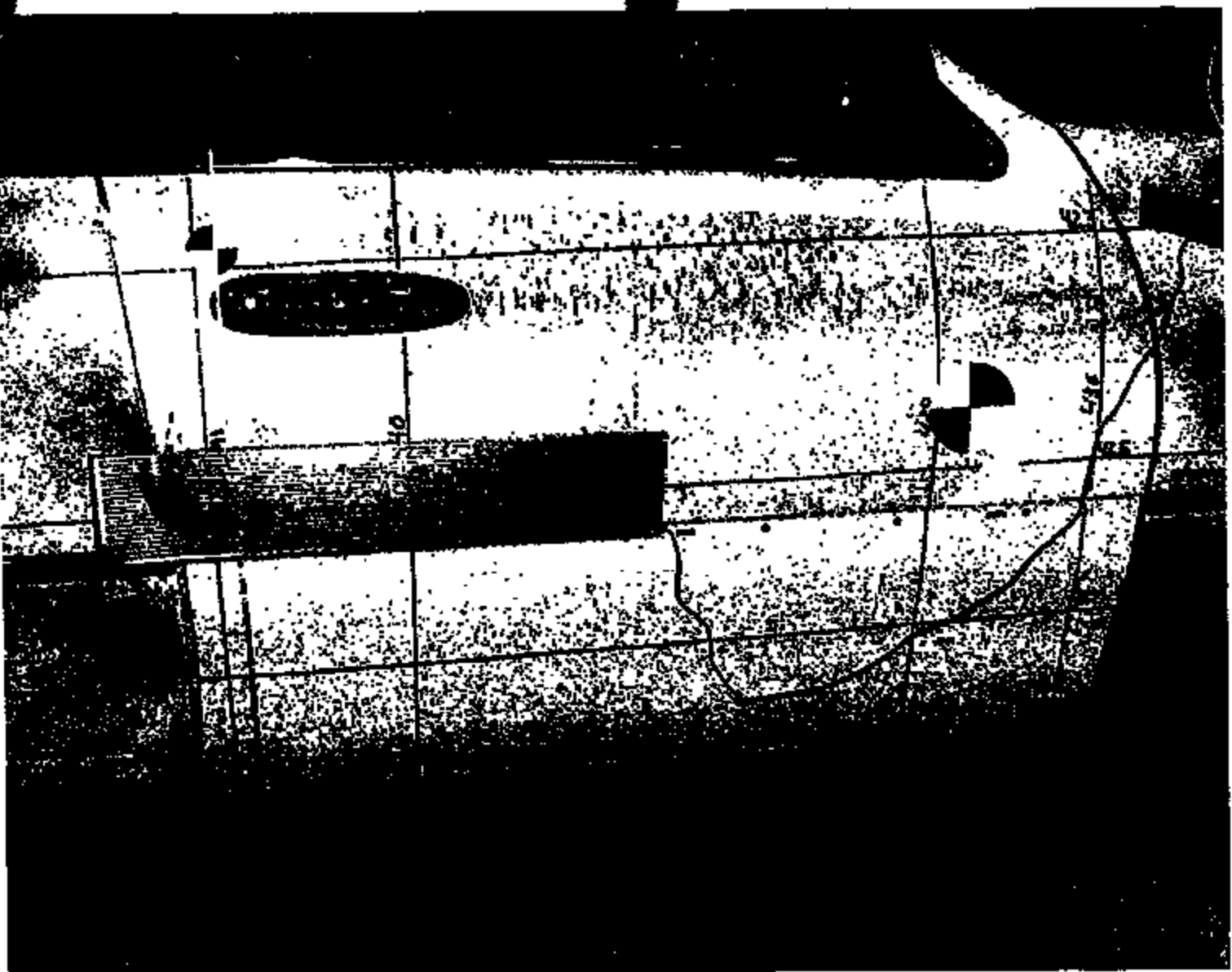
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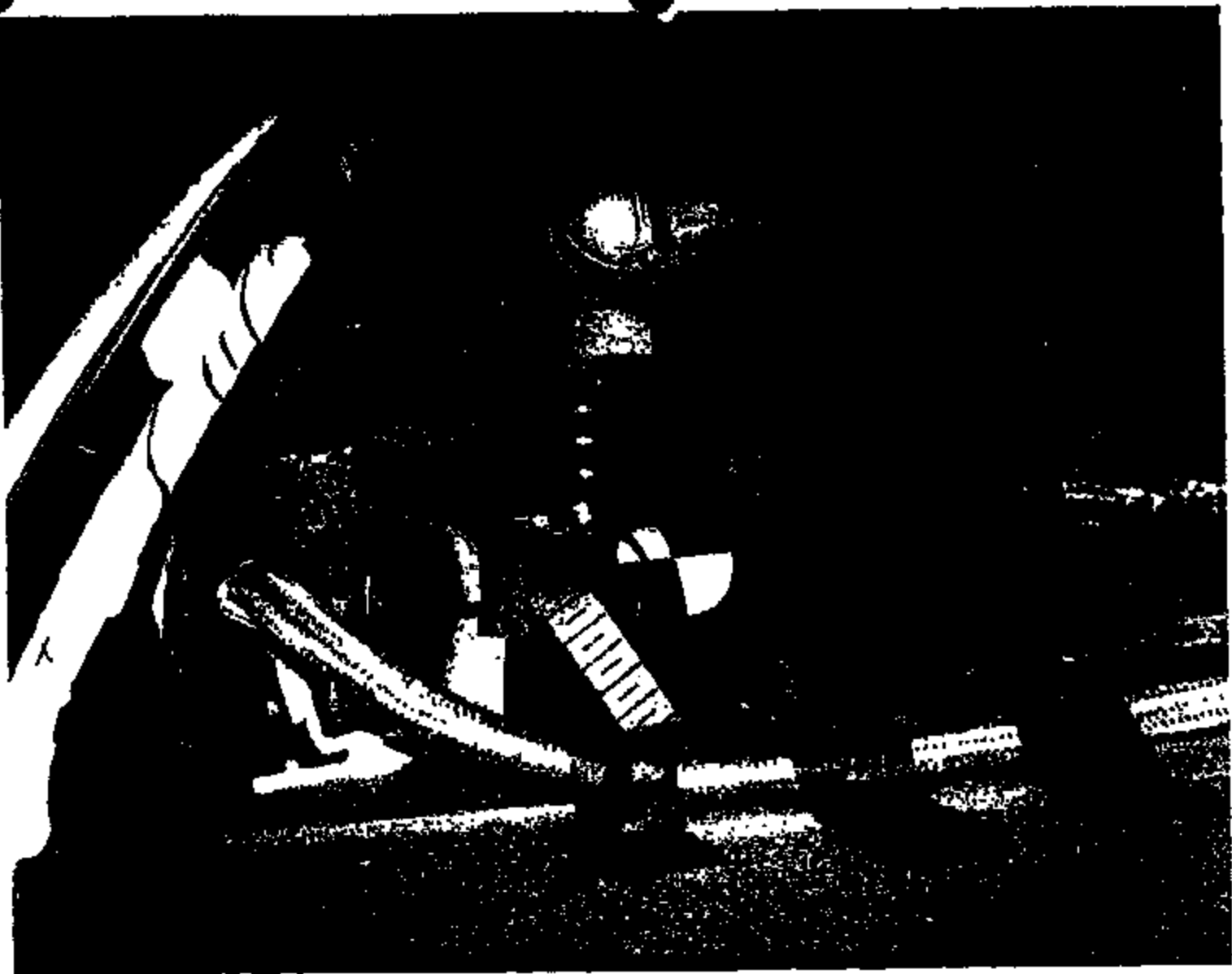
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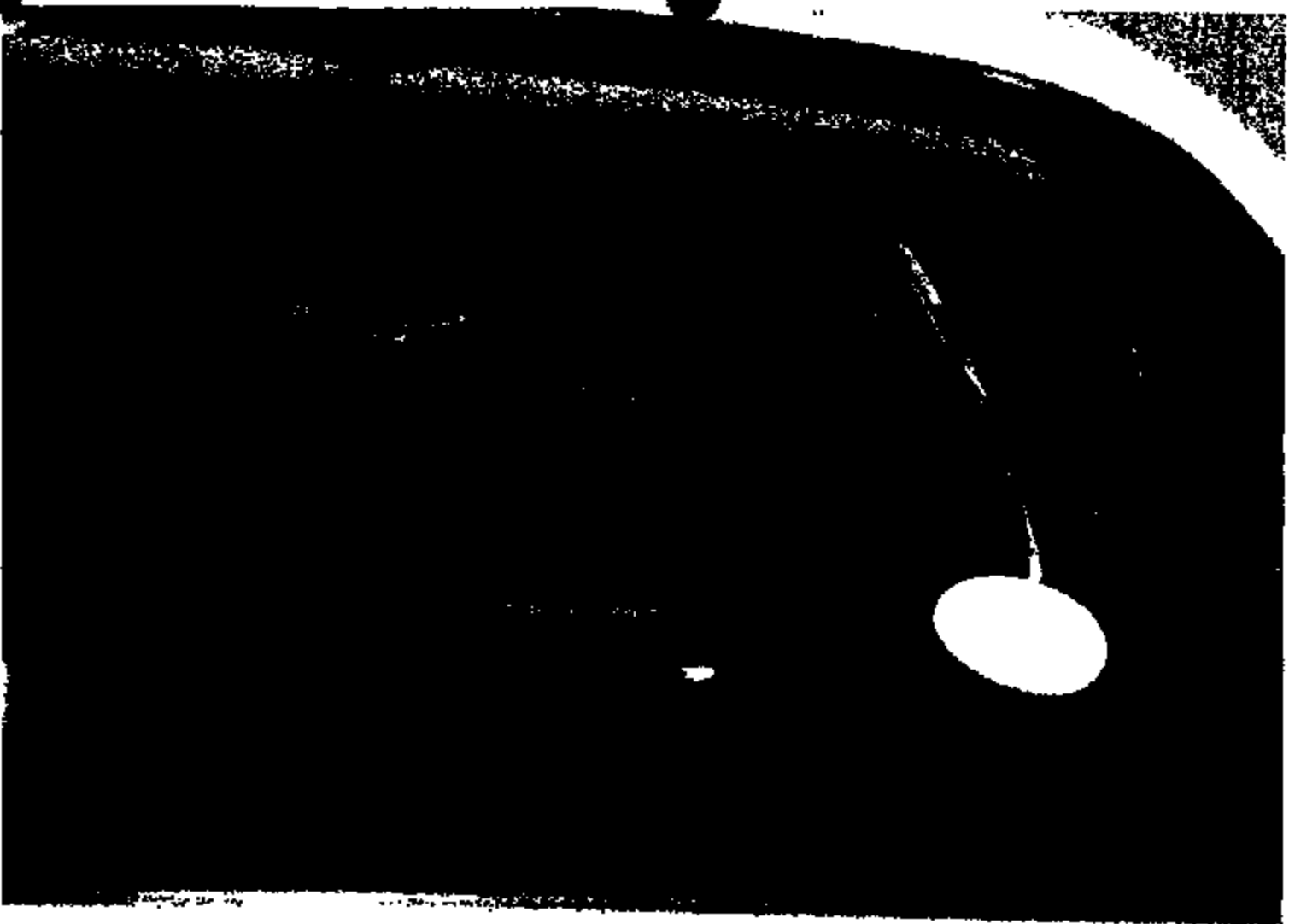
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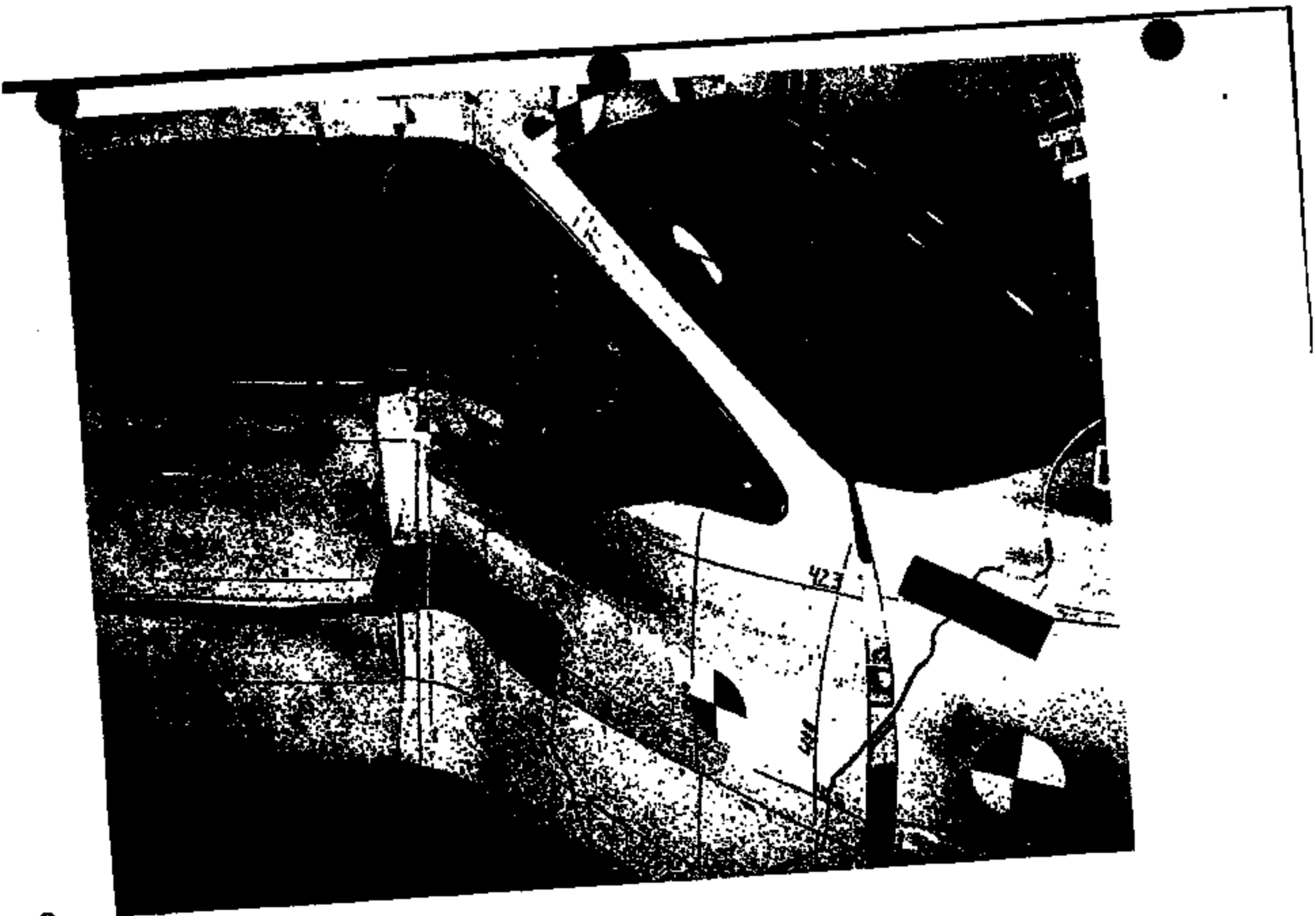
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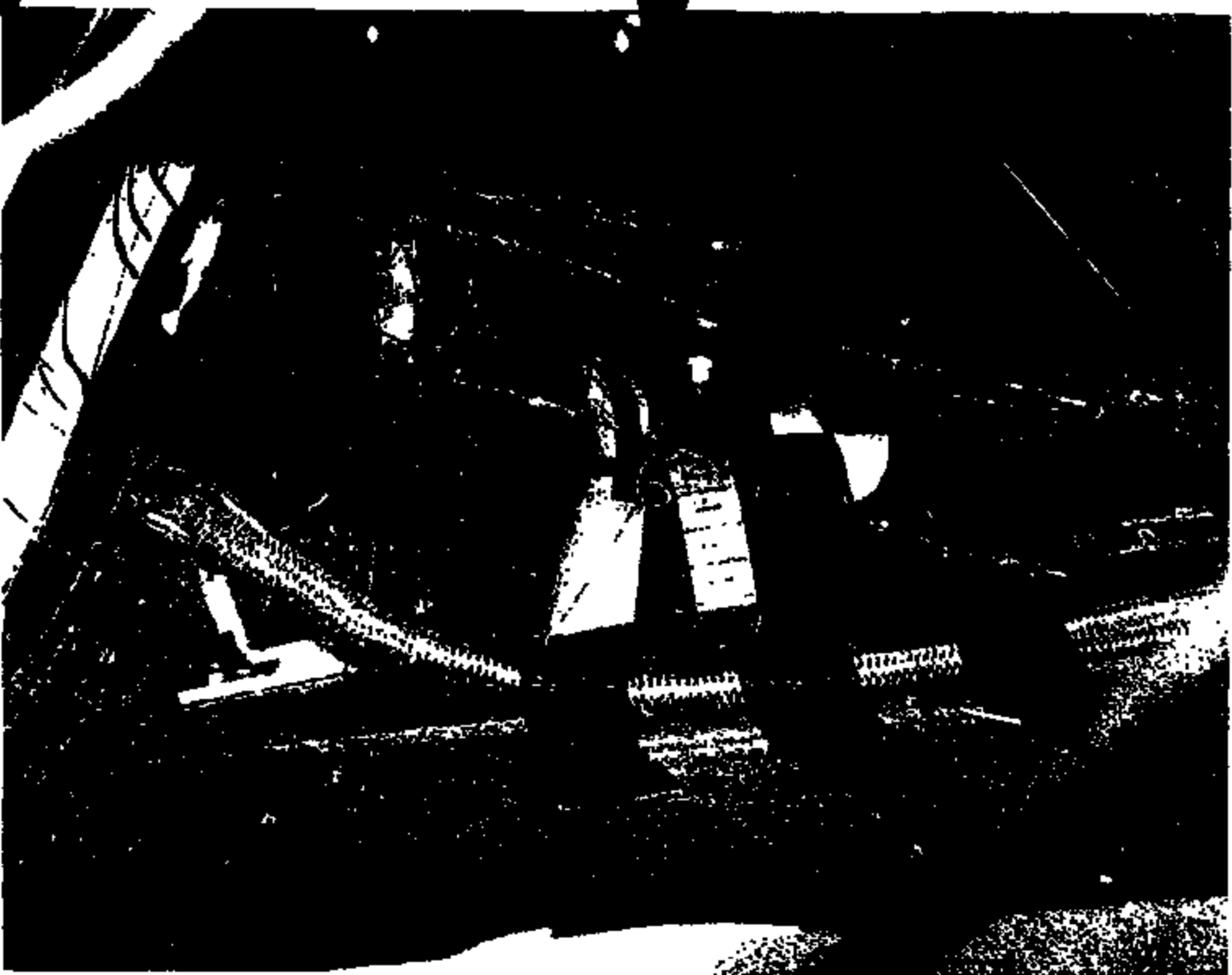


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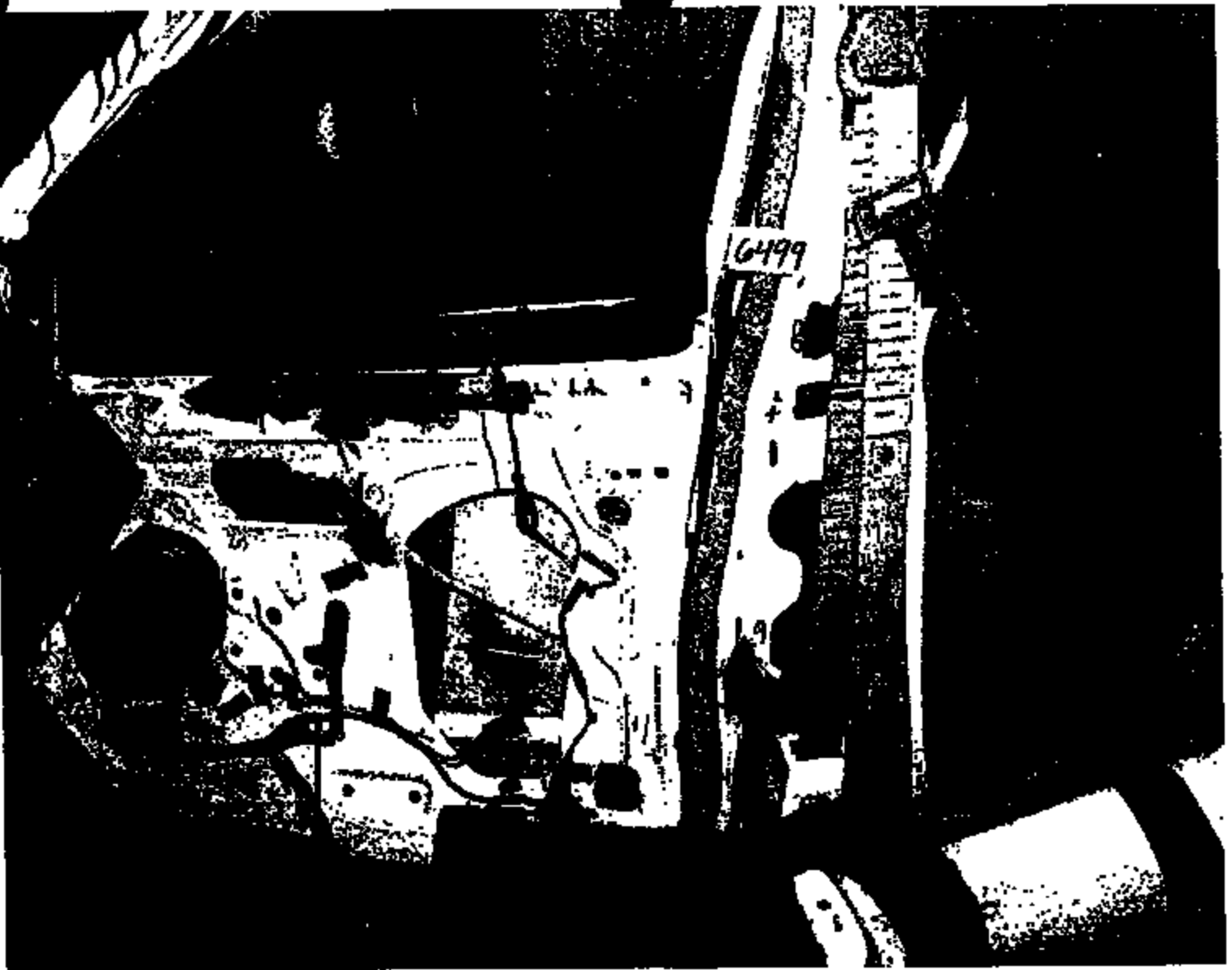
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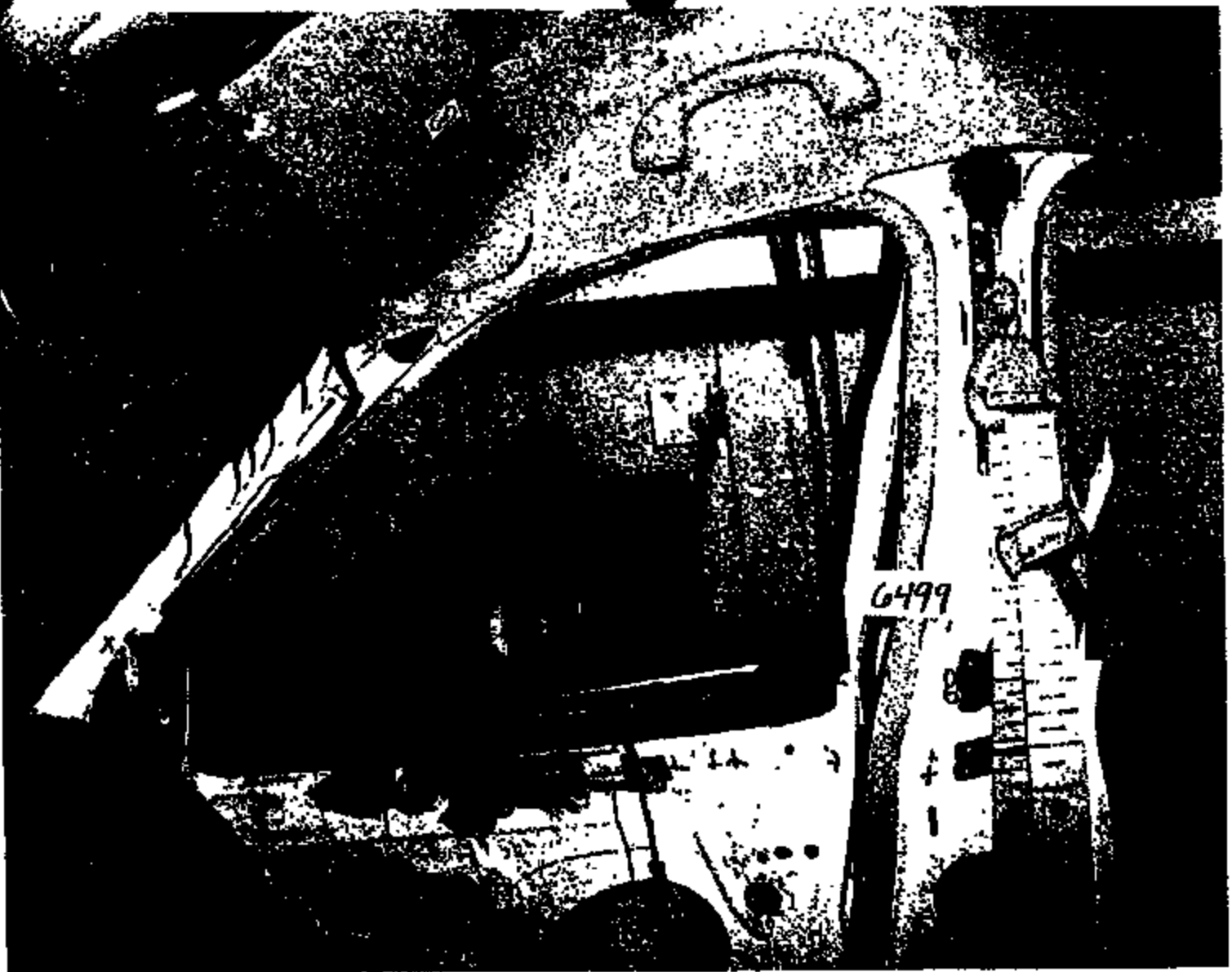


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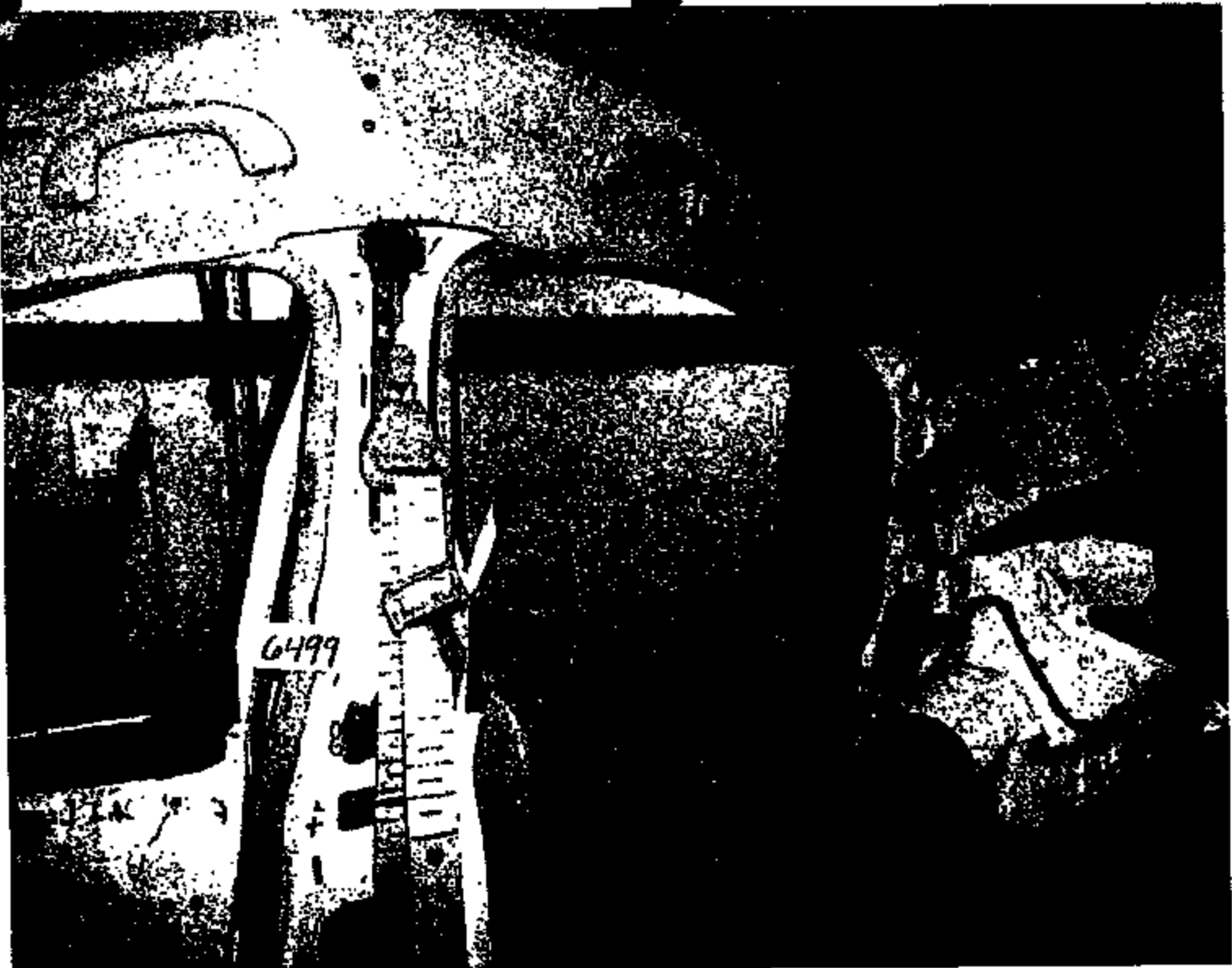


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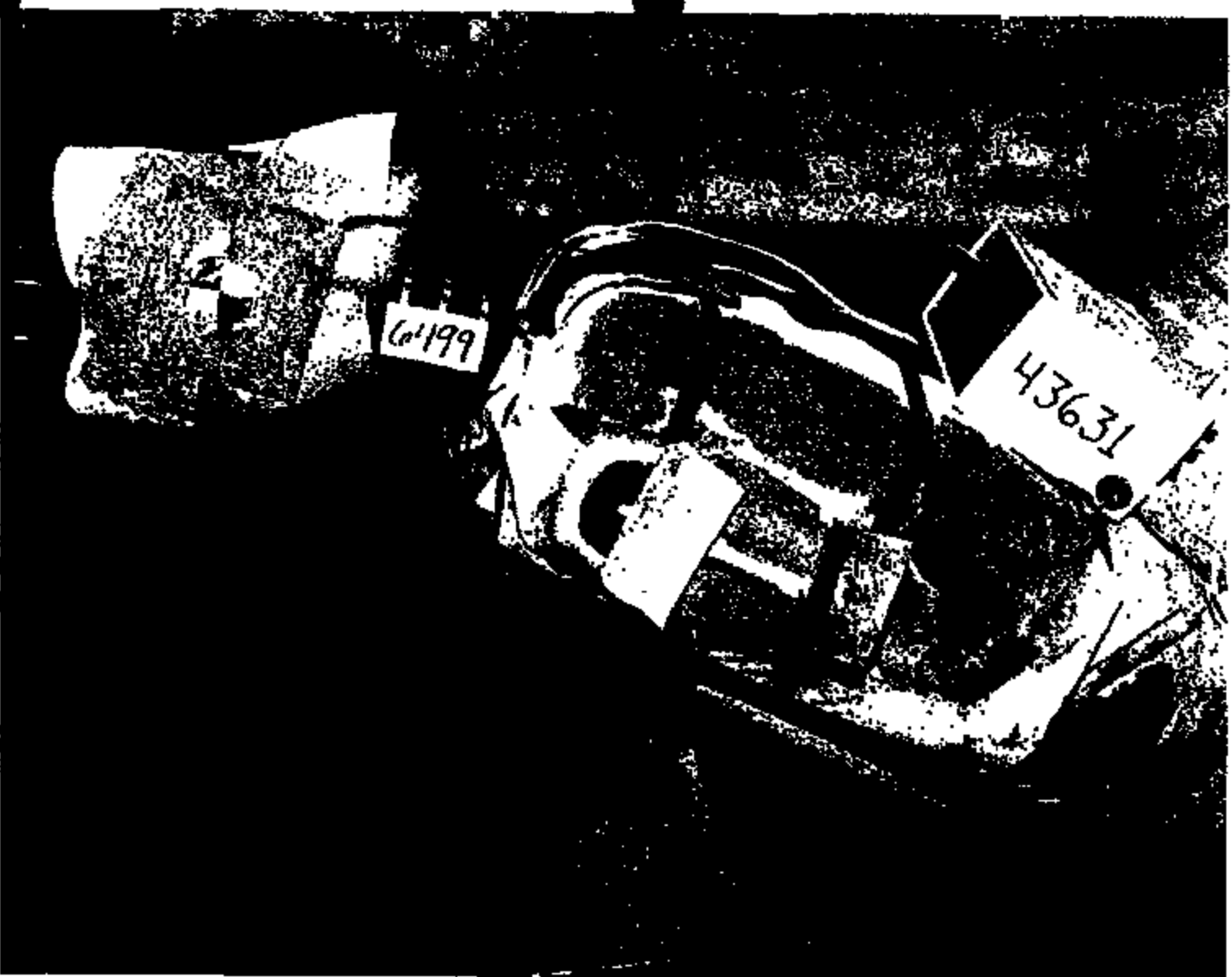
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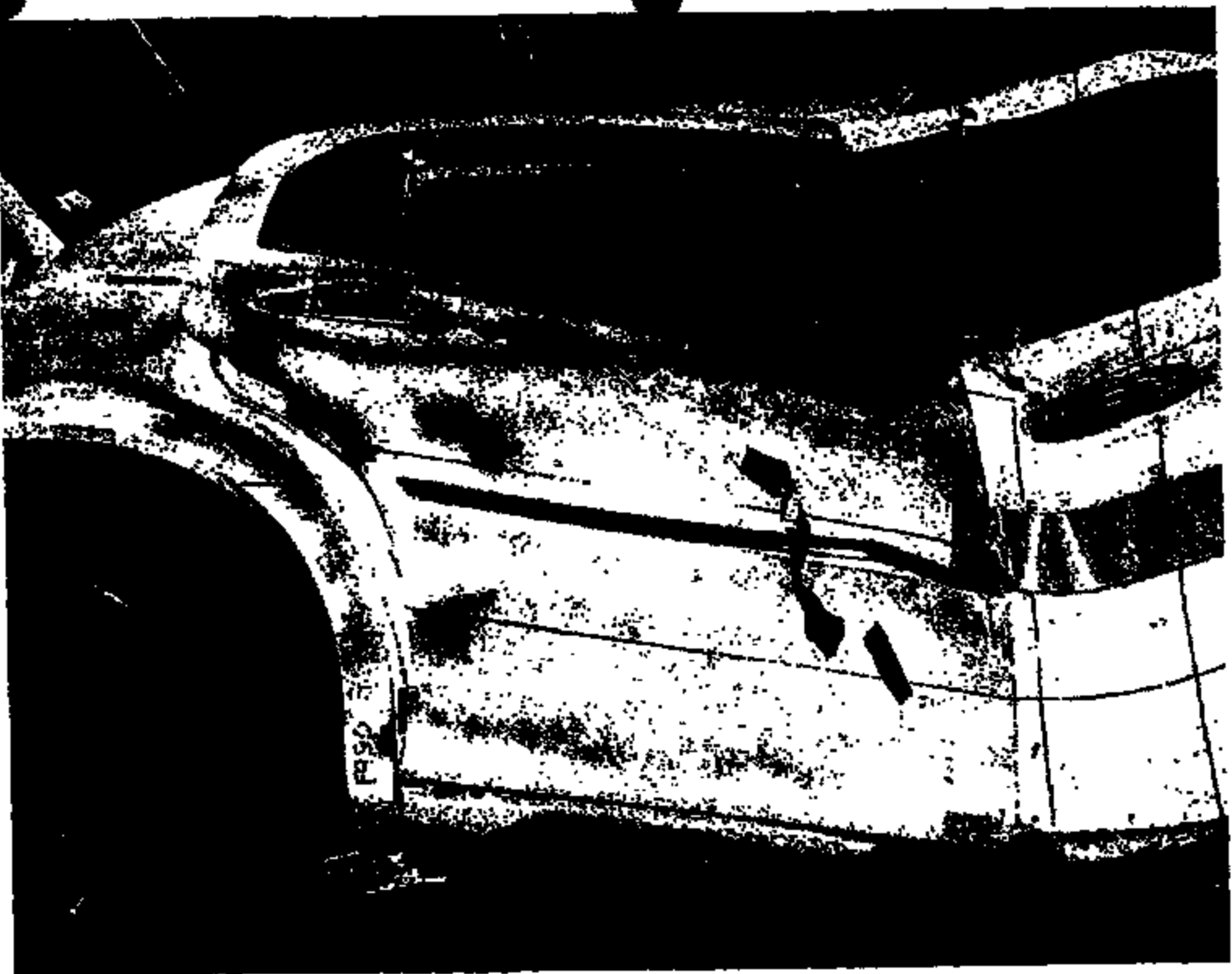
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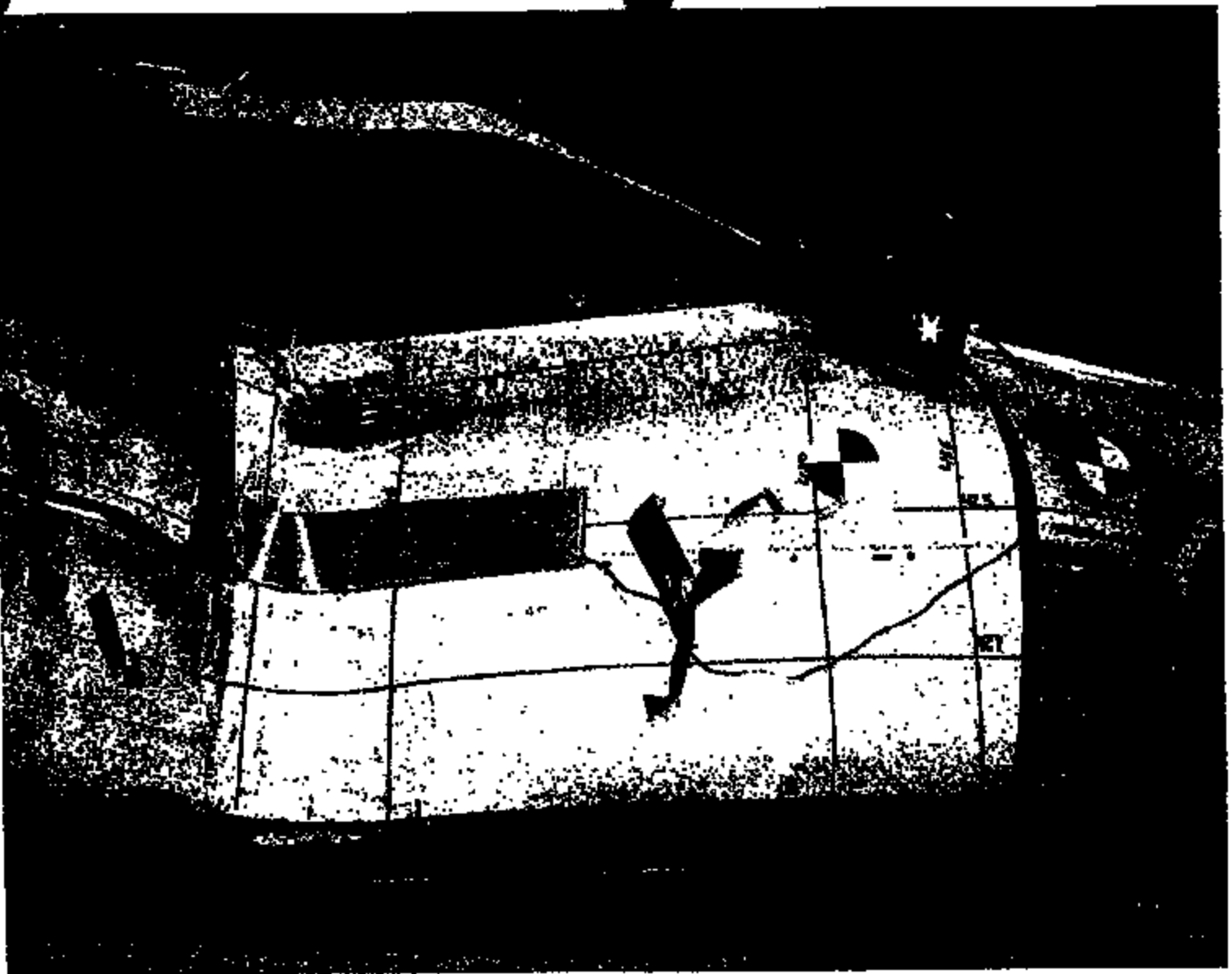
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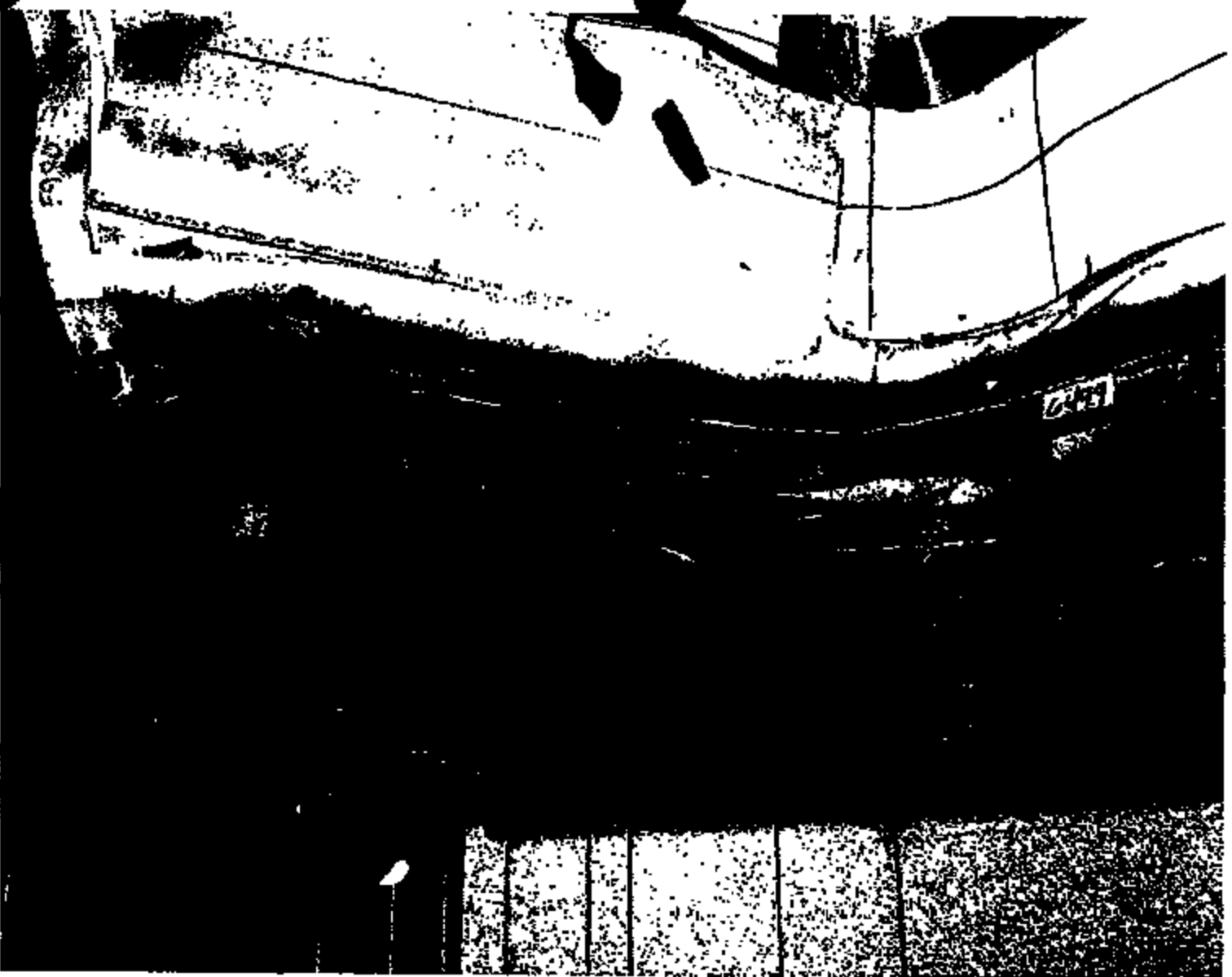


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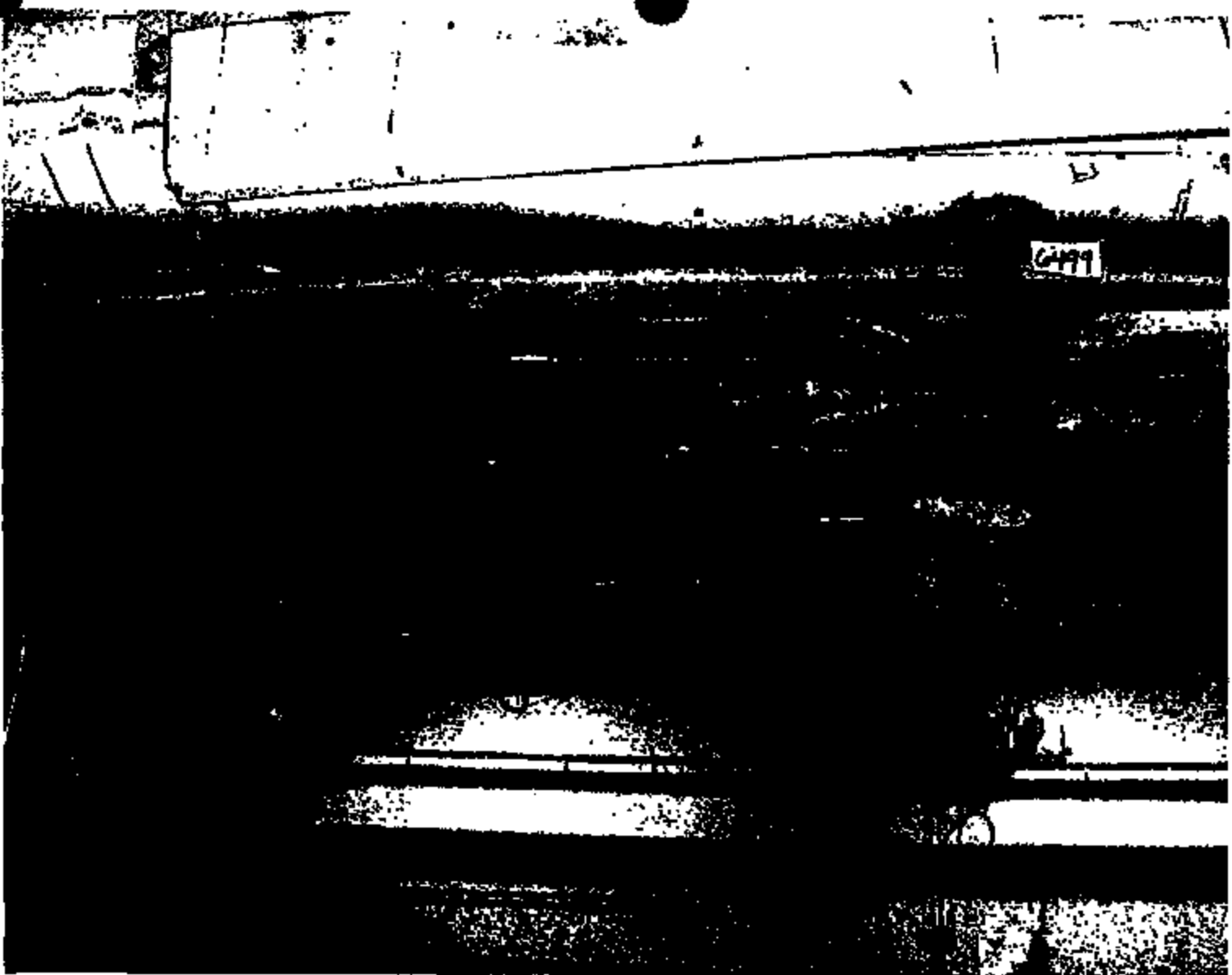
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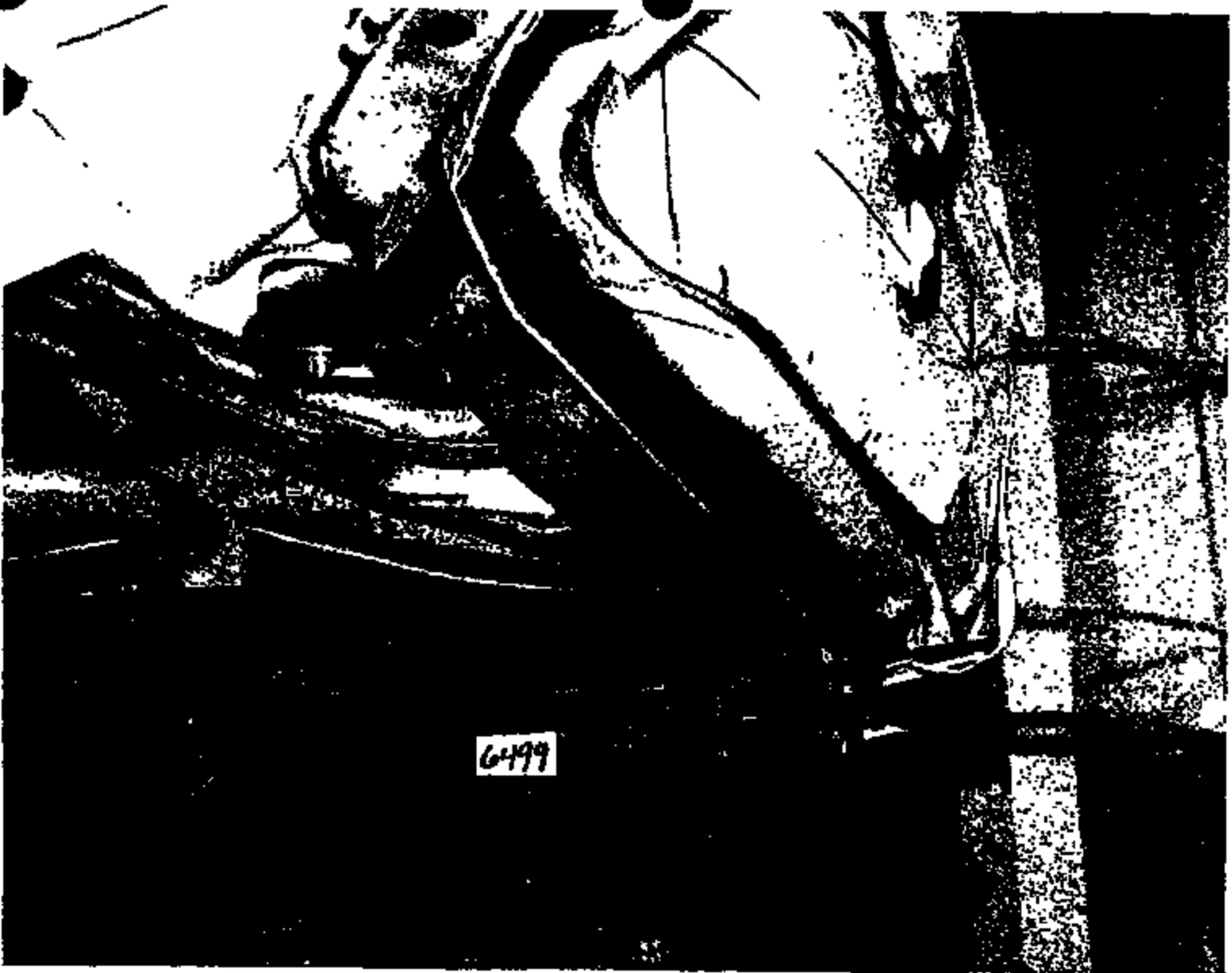
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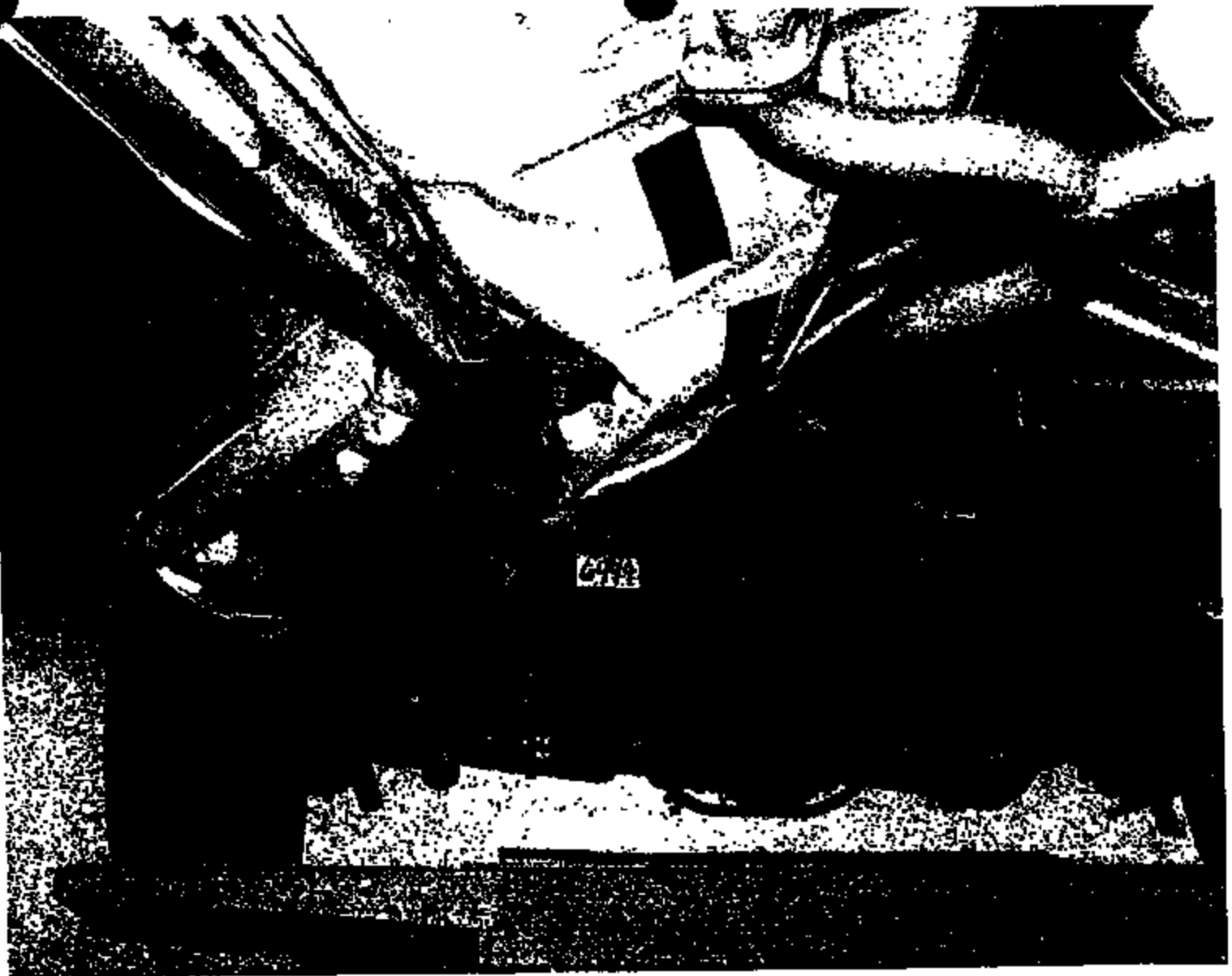
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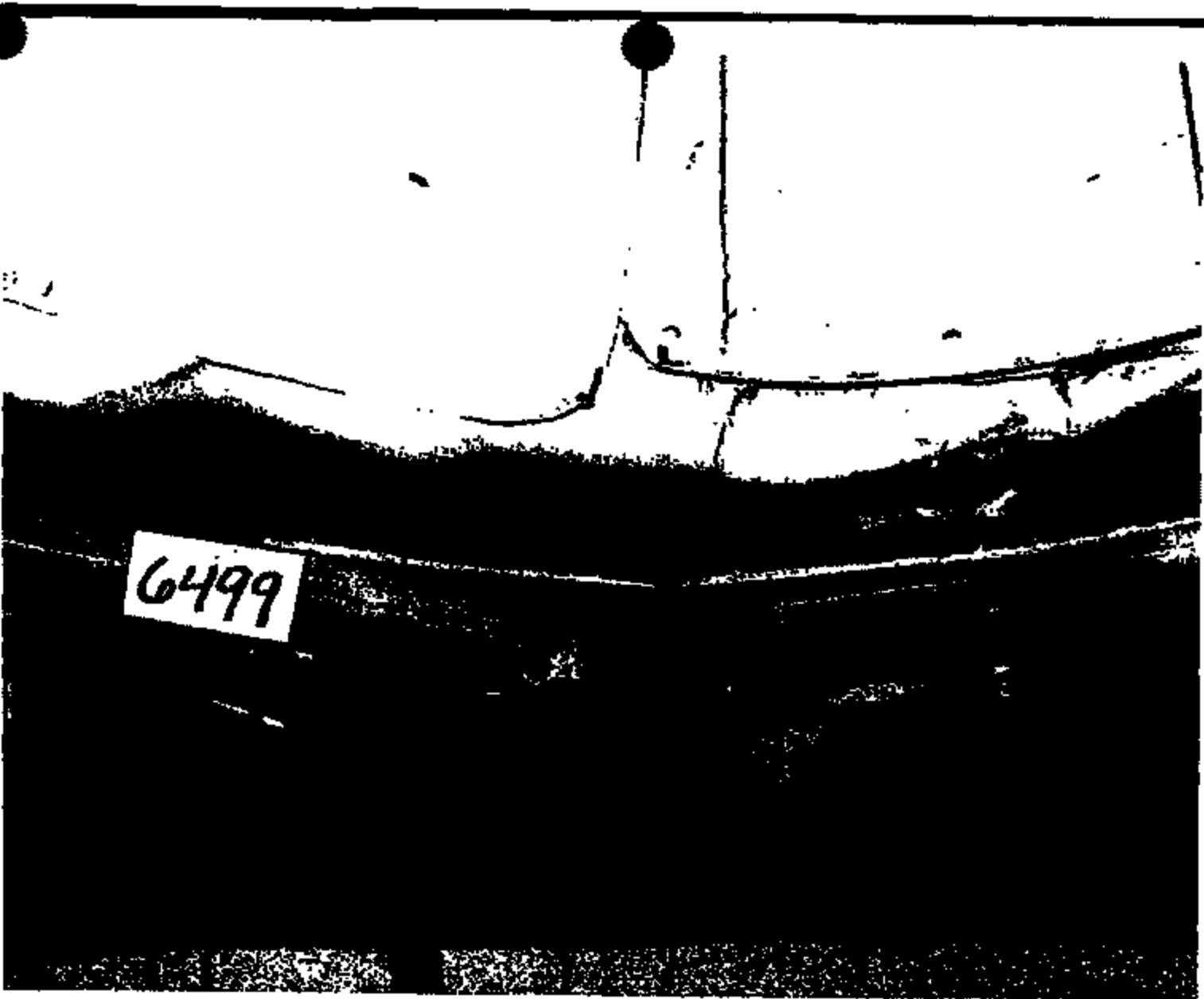


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TEST AUTHORIZATION				TEST ORDER NUMBER: TA 6499					
TO: D. Fournelle CC: K. D. Arthur				REQUEST DATE: 12/15/97		REQUESTED COMPLETION DATE: 1/9/98			
				REQUEST NUMBER: 18-18-4382		PROBLEM NUMBER: n/a			
				REQUESTING ACTIVITY: Vehicle Safety & CAE					
TITLE OF TEST: 1899 FN145		(speed) 15 mph		(test description) Right Side Impact Pole		PARTS DUE DATE: n/a			
TYPE OF TEST: [X] VEHICLE [] BENCH [] LABORATORY [] OTHER		VIN # or IDENTIFICATION VCC408 - 214W180 1LNLM22WY608835		VEHICLE MODEL & YEAR: 1999 FN145		PROD. OR ENG. LETTER: n/a			
ENGINE NO. DISPL. CARB: 4.6L		TRANSMISSION: AODE		AXLE RATIO: n/a		TEST CONDUCTED TO CERTIFY CONTROL ITEM COMPLIANCE WITH GOV. REGULATIONS: Yes			
TYPE OF FUEL: none		CONVERTER: n/a		IGNITION TIMING: n/a		DISPOSITION OF PARTS: n/a			
CRANKCASE OIL AND CAPACITY (L): n/a		TIRE SIZE AND PLY RATING: P225/65R16		TIRE PRESSURE (psi): 32		PROCUREMENT REQ? [] YES [] NO IF YES, GIVE CODE			
VEHICLE TEST WEIGHT: FRONT 2314 REAR 2305 TOTAL 4619		TIRE PRESSURE (psi): FRONT 32 REAR 32		REPORT CATEGORIES: [X] ENGINEERING [X] DATA [X] RAWDATA		MAIL REPORT TO: BLDG: 9N1 03 MAIL DROP: MD9016 ADDRESS: 16-118			
1. OBJECT OF TEST 2. TEST PROCEDURE 3. ITEMS TO BE TESTED (NAME, NUMBER, QUANTITY)									
1) Conduct		(speed) 15 mph (year) 1999 (vehicle) FN145 (level) CP		"RECORD COPY" Schedule No. <u>4-7-12</u> Retain Until <u>2017</u>					
		(mode) Right Side Impact Pole							
2) Velocity At Impact: 15 mph Remote Fire Time: N/A Positioning procedure: ST-14		3) Vehicle Test: Yes Vehicle LTR: FN145 Vehicle Level: CP							
Additional Contacts:		(name) D. R. Purdy (phone) 92-90496 (pager number) 84-57542		DPUR EMEI		Estimated test cost = \$30,000.00			
Test Dev. Engineer		D.R. Purdy		K.D. Arthur					
REQUESTING SECT. NO: T-551	WORK ORDER/WORK TASK: J18	ISSUED/REQUESTED BY: D. R. Purdy	PHONE: 32-90496	APPROVAL: K. D. Arthur 98-0518	TEST TYPE: n/a	RISK: n/a	SIGN OFF DATE: n/a		
REQUESTER: DO NOT WRITE BELOW THIS LINE									
WORK STANDARDS NUMBER:		TEST DESCRIPTION:							
MANDATORY				OPTIONAL					
TEST ORDER NO:	CATEGORY:	RESP. SECTION:	EST. COMP. DATE:	PRO	TEST ENG. INITIALS:	UNIT CODE:	TEST ORDER DATE:	USER CODE:	PROD. CODE:
PERFORMING SECTION	HOURS	MATERIAL COST	COMP. COST	PARTS DUE DATE	EST. START DATE	EST. COMP DATE	STATUS	PERCENT COMPLETE	
TOTAL									

General Request Information

Test Mode

15 mph
Right Side Impact Pole

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

☐ FMVSS 204 - Steering Wheel Displacement
☐ FMVSS 208 - Frontal Occupant Protection
☐ FMVSS 212 - Wind Shield Retention
☐ FMVSS 214 - Side Impact Protection
☐ FMVSS 219 - Windshield Zone Intrusion
☐ Film Analysis
☐ Template
☐ FMVSS 301 - Fuel System Integrity
☐ Rollover
☐ Pressure Check
☐ FMVSS 303 - NGV Fuel System Integrity
☒ D Sensor Development
☐ Door Openability
☐ ECE 32 Occupant Survival Space - Rear Impact
☐ ECE 33 Occupant Survival Space - Frontal Impact
☐ ECE 34 Fuel System Integrity
☐ ECE 34 Step II - Frontal Offset
☐ ECE / M / 133 STEP II - 900mm Barrier Side Impact
☐
☐

Primary Test Vehicle Information

Use (Target/Bullet):	Target
Model Year:	1999
Vehicle Program:	FN145
Vehicle Name:	Town Car
Body Style:	sedan
Build Number:	VC6406
Tag Number:	518W160
VIN Number:	1LNLM2W8WY603835
Fuel System Rated Capacity:	19 Gal.
Prototype Level:	CP
Drive Side:	Left Hand Drive

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

Film Analysis & Photographic Services Request**Front Impact Film Analysis**

☐ Head WRT Vehicle
☐ Shoulder WRT Vehicle
☐ Rocker WRT Ground

Other, Specify:

Side Impact Film Analysis

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

Other, Specify:

Rear Impact Film Analysis

Other, Specify:

Still Photography

☐ Copies of Still Photo Proof Sheets Required
☐ Copies of Still Photos (4X5) Required
☒ 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**On-Board Vehicle**

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

Floor Coverage

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

Overhead Coverage

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

Pit Coverage

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

High Speed Cameras for Side Impact**On-Board Vehicle**

- ☒ Front Dummy from Vehicle Hood
- ☒ Front Dummy from Opposite Window Opening
- ☒ Rear Dummy from Opposite Window Opening
- ☒ Rear Dummy from Vehicle Trunk
- ☒ View of Front Seat to Show Dummy Interaction with Trim from Front (Fiber Optic)
- ☒ View of Front Seat to Show Dummy Interaction with Trim from Left Front Hood - Eastport
- ☒ View of Front Seat to Show Dummy Interaction with Trim from Center Front Hood

NOTE
1286**Secondary Vehicle Coverage**

- ☐ ON BOARD CART, Cart Centerline - View of Impact

Floor Coverage

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

Pit Coverage

- ☒ Pole contact - View of Impacted Side of Vehicle with Pole Contact.
- ☒ Pole contact - Overlap View of Impacted Side of Vehicle with Pole Contact

Overhead Coverage

- ☒ Overall View of Impacted Vehicle Side including Pole
- ☒ view of impacted vehicle side focus on front door opening area

High Speed Cameras for Rear Impact**Floor Coverage**

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

Overhead Coverage

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

Pit Coverage

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

All Other High Speed Photography

0

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<<< END OF SHEET >>>

Special Prep/Build Instructions Primary Vehicle

Special Build Instructions

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

Other, Specify:

☒ Color Contrast Under Body Components

Pyro Restraints Usage

☐ Left Front Air Bag
☐ Right Front Air Bag
☐ Left Side Air Bag
☒ Right Side Air Bag
☐ Left Pyro Retractor
☐ Left Pyro Buckle
☐ Right Pyro Retractor
☐ Right Pyro Buckle

Other, Specify:

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

Special Pre-Test Preparation

Other, Specify:

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

Occupant / ATD Request Primary Vehicle

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

*See instrumentation request for detailed instrumentation information.

*** END OF SHEET ***

101		
102	General Public 1950	Public
103		
104	Children's Defense Fund	Public
105	Committee to Study the U.S. for 1954	Public
106	General Education Board 1950	Public
107	General Education Board 1954	Public
108	John F. Kennedy	Public
109	President John F. Kennedy	Public
110	John F. Kennedy 1950-1960	Public
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	222	Control - 2016-2017	Control
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	289	Control - 2150-2151	Control
	290	Control - 2152-2153	Control
	291	Control - 2154-2155	Control
	292	Control - 2156-2157	Control

[illegible]

1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050 2051 2052 2053 2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065 2066 2067 2068 2069 2070 2071 2072 2073 2074 2075 2076 2077 2078 2079 2080 2081 2082 2083 2084 2085 2086 2087 2088 2089 2090 2091 2092 2093 2094 2095 2096 2097 2098 2099 2100 2101 2102 2103 2104 2105 2106 2107 2108 2109 2110 2111 2112 2113 2114 2115 2116 2117 2118 2119 2120 2121 2122 2123 2124 2125 2126 2127 2128 2129 2130 2131 2132 2133 2134 2135 2136 2137 2138 2139 2140 2141 2142 2143 2144 2145 2146 2147 2148 2149 2150 2151 2152 2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2165 2166 2167 2168 2169 2170 2171 2172 2173 2174 2175 2176 2177 2178 2179 2180 2181 2182 2183 2184 2185 2186 2187 2188 2189 2190 2191 2192 2193 2194 2195 2196 2197 2198 2199 2200 2201 2202 2203 2204 2205 2206 2207 2208 2209 2210 2211 2212 2213 2214 2215 2216 2217 2218 2219 2220 2221 2222 2223 2224 2225 2226 2227 2228 2229 2230 2231 2232 2233 2234 2235 2236 2237 2238 2239 2240 2241 2242 2243 2244 2245 2246 2247 2248 2249 2250 2251 2252 2253 2254 2255 2256 2257 2258 2259 2260 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 2271 2272 2273 2274 2275 2276 2277 2278 2279 2280 2281 2282 2283 2284 2285 2286 2287 2288 2289 2290 2291 2292 2293 2294 2295 2296 2297 2298 2299 2300 2301 2302 2303 2304 2305 2306 2307 2308 2309 2310 2311 2312 2313 2314 2315 2316 2317 2318 2319 2320 2321 2322 2323 2324 2325 2326 2327 2328 2329 2330 2331 2332 2333 2334 2335 2336 2337 2338 2339 2340 2341 2342 2343 2344 2345 2346 2347 2348 2349 2350 2351 2352 2353 2354 2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2369 2370 2371 2372 2373 2374 2375 2376 2377 2378 2379 2380 2381 2382 2383 2384 2385 2386 2387 2388 2389 2390 2391 2392 2393 2394 2395 2396 2397 2398 2399 2400 2401 2402 2403 2404 2405 2406 2407 2408 2409 2410 2411 2412 2413 2414 2415 2416 2417 2418 2419 2420 2421 2422 2423 2424 2425 2426 2427 2428 2429 2430 2431 2432 2433 2434 2435 2436 2437 2438 2439 2440 2441 2442 2443 2444 2445 2446 2447 2448 2449 2450 2451 2452 2453 2454 2455 2456 2457 2458 2459 2460 2461 2462 2463 2464 2465 2466 2467 2468 2469 2470 2471 2472 2473 2474 2475 2476 2477 2478 2479 2480 2481 2482 2483 2484 2485 2486 2487 2488 2489 2490 2491 2492 2493 2494 2495 2496 2497 2498 2499 2500 2501 2502 2503 2504 2505 2506 2507 2508 2509 2510 2511 2512 2513 2514 2515 2516 2517 2518 2519 2520 2521 2522 2523 2524 2525 2526 2527 2528 2529 2530 2531 2532 2533 2534 2535 2536 2537 2538 2539 2540 2541 2542 2543 2544 2545 2546 2547 2548 2549 2550 2551 2552 2553 2554 2555 2556 2557 2558 2559 2560 2561 2562 2563 2564 2565 2566 2567 2568 2569 2570 2571 2572 2573 2574 2575 2576 2577 2578 2579 2580 2581 2582 2583 2584 2585 2586 2587 2588 2589 2590 2591 2592 2593 2594 2595 2596 2597 2598 2599 2600 2601 2602 2603 2604 2605 2606 2607 2608 2609 2610 2611 2612 2613 2614 2615 2616 2617 2618 2619 2620 2621 2622 2623 2624 2625 2626 2627 2628 2629 2630 2631 2632 2633 2634 2635 2636 2637 2638 2639 2640 2641 2642 2643 2644 2645 2646 2647 2648 2649 2650 2651 2652 2653 2654 2655 2656 2657 2658 2659 2660 2661 2662 2663 2664 2665 2666 2667 2668 2669 2670 2671 2672 2673 2674 2675 2676 2677 2678 2679 2680 2681 2682 2683 2684 2685 2686 2687 2688 2689 2690 2691 2692 2693 2694 2695 2696 2697 2698 2699 2700 2701 2702 2703 2704 2705 2706 2707 2708 2709 2710 2711 2712 2713 2714 2715 2716 2717 2718 2719 2720 2721 2722 2723 2724 2725 2726 2727 2728 2729 2730 2731 2732 2733 2734 2735 2736 2737 2738 2739 2740 2741 2742 2743 2744 2745 2746 2747 2748 2749 2750 2751 2752 2753 2754 2755 2756 2757 2758 2759 2760 2761 2762 2763 2764 2765 2766 2767 2768 2769 2770 2771 2772 2773 2774 2775 2776 2777 2778 2779 2780 2781 2782 2783 2784 2785 2786 2787 2788 2789 2790 2791 2792 2793 2794 2795 2796 2797 2798 2799 2800 2801 2802

Instrumentation and Data Processing Request

Primary Vehicle Structural Instrumentation - Frontal Impact

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

Primary Vehicle Structural Instrumentation - Side Impact

ACCELEROMETERS:	Long	Vert	Lat
☐ L/ A-PILLAR_INSIDE @ ROCKER	☐	☐	☐
☐ L/ A-PILLAR_INSIDE @ HINGE	☐	☐	☐
☐ R/ A-PILLAR_INSIDE @ HINGE	☐	☐	☐
☒ R/ F_DOOR @ BELTLINE_MID	☐	☐	☒
☒ R/ F_DOOR_OVER_ARMREST	☐	☐	☒
☒ R/ F_DOOR_REAR_OF_SEAT_H-PT	☐	☐	☒
☒ R/ F_DOOR_SPEAKER_HOLE	☐	☐	☒
☒ R/ B-PILLAR_INSIDE @ ROOF	☐	☐	☒
☒ R/ B-PILLAR_INSIDE @ BELTLINE	☐	☐	☒
☐ L/ B-PILLAR_INSIDE @ ROCKER	☐	☐	☐
☐ L/ R_DOOR @ BELTLINE_MID	☐	☐	☐
☐ L/ R_DOOR_OVER_ARMREST	☐	☐	☐
☒ L/ ROCKER @ FRONT_SEAT_MID	☒	☒	☒
☒ L/ ROCKER @ REAR_SEAT_MID	☒	☒	☒
☒ R/ ROCKER @ FRONT_SEAT_MID	☒	☒	☒
☒ R/ ROCKER @ REAR_SEAT_MID	☒	☒	☒
☐ FRONT_FLOOR_PAN @ CL	☐	☐	☐
☐ FLOOR_XMR @ L/F_SEAT_CL	☐	☐	☐
☐ FLOOR_XMR @ R/R_SEAT_CL	☐	☐	☐
☐ CL_TURNS @ FRONT_SEAT	☐	☐	☐
☒ REAR_FLOOR_PAN_ABOVE_AXLE	☒	☒	☒

Primary Vehicle Structural Instrumentation - Rear Impact**ACCELEROMETERS:**

	Long	Vert	Lat
___ Left Rocker Panel at "B" Pillar	___	___	___
___ Right Rocker Panel at "B" Pillar	___	___	___
___ Left Frame Rail at "B" Pillar	___	___	___
___ Right Frame Rail at "B" Pillar	___	___	___

OTHER STRUCTURAL ACCELS:

	Long	Vert	Lat
X Near Fuel Inertia Switch (In Trunk)	X	X	X
X L/Frame @ Front Seat Mid	X	X	X
X L/Frame @ Rear Seat Mid	X	X	X
X R/Frame @ Front Seat Mid	___	___	X
X R/Frame @ Rear Seat Mid	___	___	X

Secondary Vehicle Structural Instrumentation**ACCELS:**

		Long	Vert	Lat
_____	MDB_CENTER_OF_GRAVITY	_____	_____	_____
_____	MDB_LEFT_FRAME_RAIL	_____	_____	_____
_____	MDB_RIGHT_FRAME_RAIL	_____	_____	_____
_____	MDB_REAR_HONEYCOMB @ C-L	_____	_____	_____
_____	MDB BUMPER_FACE @ C-L	_____	_____	_____
_____	MDB BUMPER_FACE @ L-S	_____	_____	_____
_____	MDB BUMPER_FACE @ R-S	_____	_____	_____

		Long	Vert	Lat
_____	Left Rocker Panel at "A" Piller	_____	_____	_____
_____	Right Rocker Panel at "A" Piller	_____	_____	_____
_____	Left Rocker Panel at "B" Piller	_____	_____	_____
_____	Right Rocker Panel at "B" Piller	_____	_____	_____

OTHER SECONDARY VEHICLE ACCELS:

		Long	Vert	Lat
_____		_____	_____	_____
_____		_____	_____	_____

Primary Vehicle Systems Instrumentation**SENSOR ACCELS:**

☐ L/Rad Upper Front
☐ C/Rad Upper Front
☐ R/Rad Upper Front
☐ C/L Tunnel Forward
☐ C/L Tunnel Between Seats
☐
☐

Long

Vert

Lat

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	0
_____	_____	0

MONITOR AIR BAG SENSORS:

☒ See Sensor Map
☐ Monitor Closure of Each Specified Sensor
☐ Monitor Closures 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

MONITOR AIR BAGS STATUS:

☐ Driver Squib Voltage
☐ Driver Squib Current
☐ Driver Bag Pressure
☒ Right Side Impact Air Bag Squib Voltage
☒ Right Side Impact Air Bag 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

FUEL SYSTEM:

☒ Inertia Fuel System Cut-Off Switch

ANGULAR MOTION SENSORS

☐
☐

VEHICLE STRING POTS

☐
☐

OTHER VEHICLE SYSTEM INSTRUMENTATION

X See Sensor Map

X Fall Contact Switch - R/Front Seat Back Side

X Fall Contact Switch - R/Front Seat Cushion Side

Dummy Instrumentation - Internal

50HS

L/F

ACCELS:

☐ Head C.G.
☐ Chest
☐ Pelvis

☐ Long ☐ Vert ☐ Lat
☐ Long ☐ Vert ☐ Lat
☐ Long ☐ Vert ☐ Lat

LOAD CELLS:

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

☐ 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
☐ Knee Slider - Left
☐ Knee Slider - Right

☐ Disap
☐ Disap
☐ Disap

OTHER INTERNAL DUMMY INSTRUMENTATION:

☐
☐

Dummy Instrumentation - External**CONTACT SWITCHES:**

☐ L / Knee Contact
☐ R / Knee Contact
☐ Header

STRING POTS:

☐ Pelvis
☐ L / Knee
☐ R / Knee

OTHER EXTERNAL DUMMY INSTRUMENTATION:

☐
☐

Dummy Instrumentation - Internal

50Hz

R/F

ACCELS:

☐ Head C.G.	☐ Long	☐ Vert	☐ Lat
☐ Chest	☐ Long	☐ Vert	☐ Lat
☐ Pelvis	☐ Long	☐ Vert	☐ Lat

LOAD CELLS:

☐ Neck Upper Load	☐ Fx	☐ Fy	☐ Fz
☐ Neck Upper Moment	☐ Mx	☐ My	☐ Mz
☐ Neck Lower Load	☐ Fx	☐ Fy	☐ Fz
☐ Neck Lower Moment	☐ Mx	☐ My	☐ Mz
☐ Thoracic Load	☐ Fx	☐ Fy	☐ Fz
☐ Thoracic Moment	☐ Mx	☐ My	☐ Mz
☐ Lower Lumbar Load	☐ Fx	☐ Fy	☐ Fz
☐ Lower Lumbar Moment	☐ Mx	☐ My	☐ Mz
☐ L/Femur Load	☐ Fx	☐ Fy	☐ Fz
☐ L/Femur Moment	☐ Mx	☐ My	☐ Mz
☐ R/Femur Load	☐ Fx	☐ Fy	☐ Fz
☐ R/Femur Moment	☐ Mx	☐ My	☐ Mz
☐ L/Up/Tibia Moment & Load	☐ Mx	☐ My	☐ Fz
☐ R/Up/Tibia Moment & Load	☐ Mx	☐ My	☐ Fz
☐ L/Low/Tibia Moment & Load	☐ Mx	☐ My	☐ Fz
☐ R/Low/Tibia Moment & Load	☐ Mx	☐ My	☐ Fz

POTENTIOMETERS:

☐ Chest Deflection	☐ Disp
☐ Knee Slider - Left	☐ Disp
☐ Knee Slider - Right	☐ Disp

OTHER INTERNAL DUMMY INSTRUMENTATION:

☐

☐

Dummy Instrumentation - External**CONTACT SWITCHES:**

☐ L / Knee Contact

☐ R / Knee Contact

☐ Header

STRING POTS:

☐ Pelvis

☐ L / Knee

☐ R / Knee

OTHER EXTERNAL DUMMY INSTRUMENTATION:

☐

☐

Dummy Instrumentation - Internal

BioSID

R/F

ACCELS:

☐ LF_DUMMY_HEAD_C.G.
☐ LF_DUMMY_T1
☐ LF_DUMMY_T11
☐ LF_DUMMY_T12
☐ LF_DUMMY_T12
☐ LF_DUMMY_PELVIS
☐ LF_DUMMY_PELVIS
☐ LF_DUMMY_THORAX/REARUP/
☐ LF_DUMMY_THORAX/REAR/
☐ LF_DUMMY_THORAX/REARLO/

☐ Long ☐ Vert ☐ Lat
☐ Long ☐ Vert ☐ Lat - R
☐ Lat - L ☐ Lat - REAR
☐ Long ☐ Vert ☐ Lat - REAR
☐ Lat - L ☐ Lat - REAR
☐ Lat - FRT ☐ Lat - REAR
☐ Lat - FRT ☐ Lat - REAR
☐ Lat - FRT ☐ Lat - REAR

LOAD CELLS:

☐ LF_DUMMY ABDOMEN_LOAD_FRONT (EURO)
☐ LF_DUMMY ABDOMEN_LOAD_MID (EURO)
☐ LF_DUMMY ABDOMEN_LOAD_REAR (EURO)
☐ LF_DUMMY THORACIC SPINE_LOAD
☐ LF_DUMMY THORACIC SPINE_LOAD
☐ LF_DUMMY LUMBAR SPINE_LOAD
☐ LF_DUMMY LUMBAR SPINE_LOAD
☐ LF_DUMMY PUBIC_LOAD (EURO)

☐ Fx ☐ Fy ☐ Fz
☐ Mx ☐ My ☐ Fz
☐ Fx ☐ Fy ☐ Fz
☐ Mx ☐ My ☐ Fy

POTENTIOMETERS:

☐ LF_DUMMY CHEST DEFLECTION (BD)
☐ LF_DUMMY THORAX/REAR/DRIP (EURO)
☐ LF_DUMMY THORAX/REAR/DRIP (EURO)
☐ LF_DUMMY THORAX/REAR/DRIP (EURO)

☐ Disp
☐ Disp
☐ Disp
☐ Disp

OTHER INTERNAL DUMMY INSTRUMENTATION:

☐
☐

Dummy Instrumentation - External**CONTACT SWITCHES:**

☒ R/F_DUMMY_HEAD_SW
☒ R/F_DUMMY_ARM_SW
☒ R/F_DUMMY_THORAX_SW
☒ R/F_DUMMY ABDOMEN_SW
☒ R/F_DUMMY_H-POINT_SW
☒ R/F_DUMMY_THIGH_SW

OTHER EXTERNAL DUMMY INSTRUMENTATION:

☐
☐

None

F/R

Dummy Instrumentation - Internal**ACCELS:**

_____ L/R_ DUMMY_HEAD_O.G.
 _____ L/R_ DUMMY_T1
 _____ L/R_ DUMMY_T2
 _____ L/R_ DUMMY_T12
 _____ L/R_ DUMMY_T12V
 _____ L/R_ DUMMY_PELVIS
 _____ L/R_ DUMMY_PELVISV
 _____ L/R_ DUMMY_THORAXRIBAPV
 _____ L/R_ DUMMY_THORAXRIBCV
 _____ L/R_ DUMMY_THORAXRIBLOV

_____ Long _____ Vert _____ Lat
 _____ Long _____ Vert _____
 _____ Lat - L _____ Lat - R
 _____ Long _____ Vert _____
 _____ Lat - FRT _____ Lat - REAR
 _____ Long _____ Vert _____
 _____ Lat - L _____ Lat - REAR
 _____ Lat - FRT _____ Lat - REAR
 _____ Lat - FRT _____ Lat - REAR
 _____ Lat - FRT _____ Lat - REAR

LOAD CELLS:

_____ L/R_ DUMMY_ABDOMEN_LOAD_FRONT (EURO)
 _____ L/R_ DUMMY_ABDOMEN_LOAD_MID (EURO)
 _____ L/R_ DUMMY_ABDOMEN_LOAD_REAR (EURO)
 _____ L/R_ DUMMY_THORACIC_SPINE_LOAD
 _____ L/R_ DUMMY_THORACIC_SPINE_LOAD
 _____ L/R_ DUMMY_LUMBAR_SPINE_LOAD
 _____ L/R_ DUMMY_LUMBAR_SPINE_LOAD
 _____ L/R_ DUMMY_PUBIC_LOAD (EURO)

_____ Fy
 _____ Fy
 _____ Fy
 _____ Fx _____ Fy _____ Fz
 _____ Mx _____ My _____
 _____ Fx _____ Fy _____ Fz
 _____ Mx _____ My _____ Fy

POTENTIOMETERS:

_____ L/R_ DUMMY_CHEST_DEFLECTION (SID)
 _____ L/R_ DUMMY_THORAXRIBUPDISP (EURO)
 _____ L/R_ DUMMY_THORAXRIBVDISP (EURO)
 _____ L/R_ DUMMY_THORAXRIBLODISP (EURO)

_____ Disp
 _____ Disp
 _____ Disp
 _____ Disp

OTHER INTERNAL DUMMY INSTRUMENTATION:

Dummy Instrumentation - External**CONTACT SWITCHES:**

_____ L/R_ DUMMY_HEAD_SW
 _____ L/R_ DUMMY_ARM_SW
 _____ L/R_ DUMMY_THORAX_SW
 _____ L/R_ DUMMY_ABDOMEN_SW
 _____ L/R_ DUMMY_H-POINT_SW
 _____ L/R_ DUMMY_THIGH_SW

OTHER EXTERNAL DUMMY INSTRUMENTATION:

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

Test Conditions - Final Prep

T.O. #: TA6499

Final Prep Contacts

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

Test Engineer	Request Engineer	Build Coordinator
Name: _____	D. R. Purdy	E. Meier
Phone: _____	32-90496	84-57542
Pager: _____	DPUR	EME

Tire Pressure

Front: 32. psiRear: 32. psi

Fuel System

Fuel Tank & System to Contain: none

Fill Level	"	%	X	10 Gal.
	"	%	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>2,220 lbs</u>	<u>2,314 lbs</u>	Front: <u>12 lbs</u>		Front: <u>2401</u>
Rear: <u>1,802 lbs</u>	<u>2,305 lbs</u>	Rear: <u>12 lbs</u>		Rear: <u>2220</u>
Total: <u>4,022 lbs</u>	<u>4,619 lbs</u>	Total: <u>24 lbs</u>	<u>NO VALUE</u>	Total: <u>4621 (+2)</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:

☐ Air Cleaner	☐ Engine	☒ Doors
☐ Battery	☐ Fan Box/Shroud	☒ Foot Wells - Front
☐ Bottle - Coolant	☐ Headlamp Opnrg	☒ Foot Wells - Rear
☐ Bottle - Washer	☐ Radiator	☒ Quarter Panels
Other: _____		☐ Trunk Floor

Ride Heights

Measure @ Test Weight

Front: 715.0 inchesRear: 707.0 inches

Measure

From: Wheel Lip

To: Ground

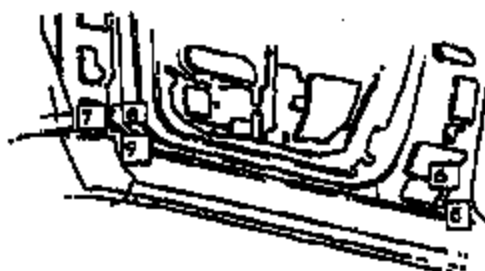
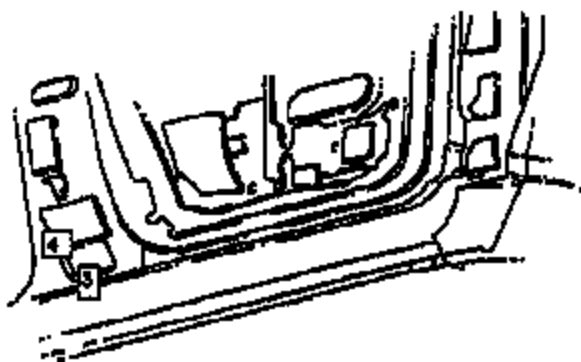
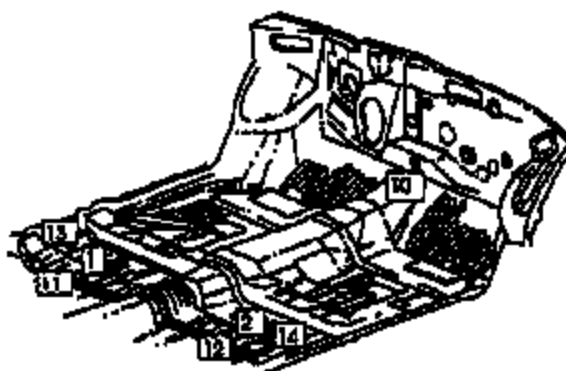
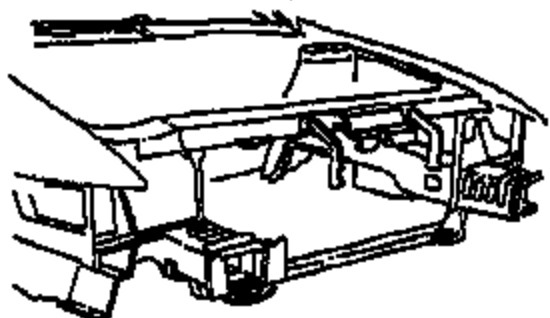
Additional Remarks

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

Program: 1999 RN145
Vehicle ID: VC8408
Build level: Phase II - Side
Test Mode: 15mph Pole Right

SENSOR MAP

Engineer: Erich Kemnitz
Phone #: 248-1802
Date: 1/5/98
Time: 12:30 PM



Sensor Channels only

Location Name	Type	Output	Nominal (+/-)	Max/min	Serial #
1 UND_L/P_SENS_0_L/R_SIDE_STE1	Siemens side	status	2.5 +/- 0.5		
2 UND_R/P_SENS_0_L/R_SIDE_STE1	Siemens side	status	2.5 +/- 0.5		
3 L/R-PLA_IN_0_RER_IN	acccl	TRINX			
4 L/R-PLA_IN_0_EXTRACTOR_IN	acccl	TRINX			
5 L/R-PLA_IN_0_RER_IN	acccl	TRINX			
6 L/R-PLA_IN_0_EXTRACTOR_IN	acccl	TRINX			
7 L/R-PLA_IN_0_RER_IN	Siemens RCM	In Pres	0.8 +/- 0.6		TRD
7a L/R-PLA_IN_0_RER_IN	Siemens RCM	In Bag	0.8 +/- 0.6		
7b L/R-PLA_IN_0_RER_IN	Siemens RCM	Pre Bag	0.8 +/- 0.6		
7c L/R-PLA_IN_0_RER_IN	Siemens RCM	In S Bag	0.8 +/- 0.6		
7d L/R-PLA_IN_0_RER_IN	Siemens RCM	In S Bag	0.8 +/- 0.6		
7e L/R-PLA_IN_0_RER_IN	Siemens RCM	In Pres	0.8 +/- 0.6		
7f L/R-PLA_IN_0_RER_IN	Siemens RCM	ending	upm		
7g L/R-PLA_IN_0_RER_IN	Siemens RCM	status	3.0 +/- 4.0		
8 L/R-PLA_IN_0_RER_IN	acccl	TRINX	On RCM		
9 L/R-PLA_IN_0_RER_IN	acccl	TRINX	On RCM		
10 C/L_SENS_0_RER_IN	acccl	TRINX			
11 UND_L/P_SENS_0_C/L_RER_IN	acccl	TRINX			
12 UND_R/P_SENS_0_C/L_RER_IN	acccl	TRINX			
13 UND_L/P_SENS_0_L/R_SIDE_IN	acccl	TRINX			
14 UND_R/P_SENS_0_L/R_SIDE_IN	acccl	TRINX			

Rear Face of Inbar across from Side Sensor
Rear Face of Inbar across from Side Sensor
Front Face Near rocker. Next to Side Sensor.
Front Face Near rocker. Next to Side Sensor.



FINAL TEST REPORT

Global Test Operations
Advanced Vehicle Technology

CONFIDENTIAL

"RECORD COPY"	
Schedule No.	<u>1-7-12</u>
Retain Until	<u>2018</u>

TO: K. Arthur

Test Order No.	T-AC017
Work Task W. O. No.	J16
Test Date	3/19/98
Date Reported	7/2/98
Sheet	1 of 114

SUBJECT: Crash Test 11045 (90° Right Side Fixed Pole Impact at 15.1 ± 0.4 mph, 24.3 ± 0.6 km/h) - 1999 Lincoln Town Car (FN-145) 4-Door Sedan.

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

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

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


R. Oda
Engineering Data Control Analyst


Concur: A. Burns
Section Supervisor
Operations Engineering Section

VEHICLE DATA:

Make and Model	1999 Lincoln Town Car (FN-145) 4-Door Sedan (Confirmation Prototype)	
ID Numbers	1LN1A81WXWY602609, 878-T-817	
Power Train	4.6L, EFI, Automatic (AODE) Transmission	
Fuel Tank(s)	Usable Capacity: 19 gal. (71.9L) Test Condition: Empty	
Front Seat(s)	Type: Bucket Cover: Leather Tracks/Position: 6-Way Power/Mechanical Mid and Down Seat Backs/Position: Adjustable/30.9° Rear of Vertical Head Restraints/Position: Adjustable/Up	
Restraint System	RF: 3-Point Continuous Loop Active Belt and Seat Back Side Air Bag	
Occupants	RF: BIO-SID Uninstrumented Dummy	
Test Weight	Front: 2430 lb (1102 kg) Rear: 2318 lb (1054 kg) Total: 4648 lb (2106 kg)	
Tires	Front: P225/60R16 Rear: P225/60R16 Spare: Removed	32 psi (221 kPa) 32 psi (221 kPa)
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, T857-ST-14 dated July 17, 1998.

1.1 Vehicle Alignment

The test vehicle impacted an 850 mm diameter steel pole structure, rigidly attached to the barrier face. The vertical steel pole was aligned so that the point of vehicle impact was centered on the test dummy's right front head center of gravity.

2. Remarks

Crash movies, pre- and post-crash still images of the test vehicle and copies of this report are available 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 11045001 through 11045041.

TEST RESULTS:**1.0 Sensor Development**

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

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

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

2.0 Vehicle Crush, Film Analysis and/or Instrumentation Data

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

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

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

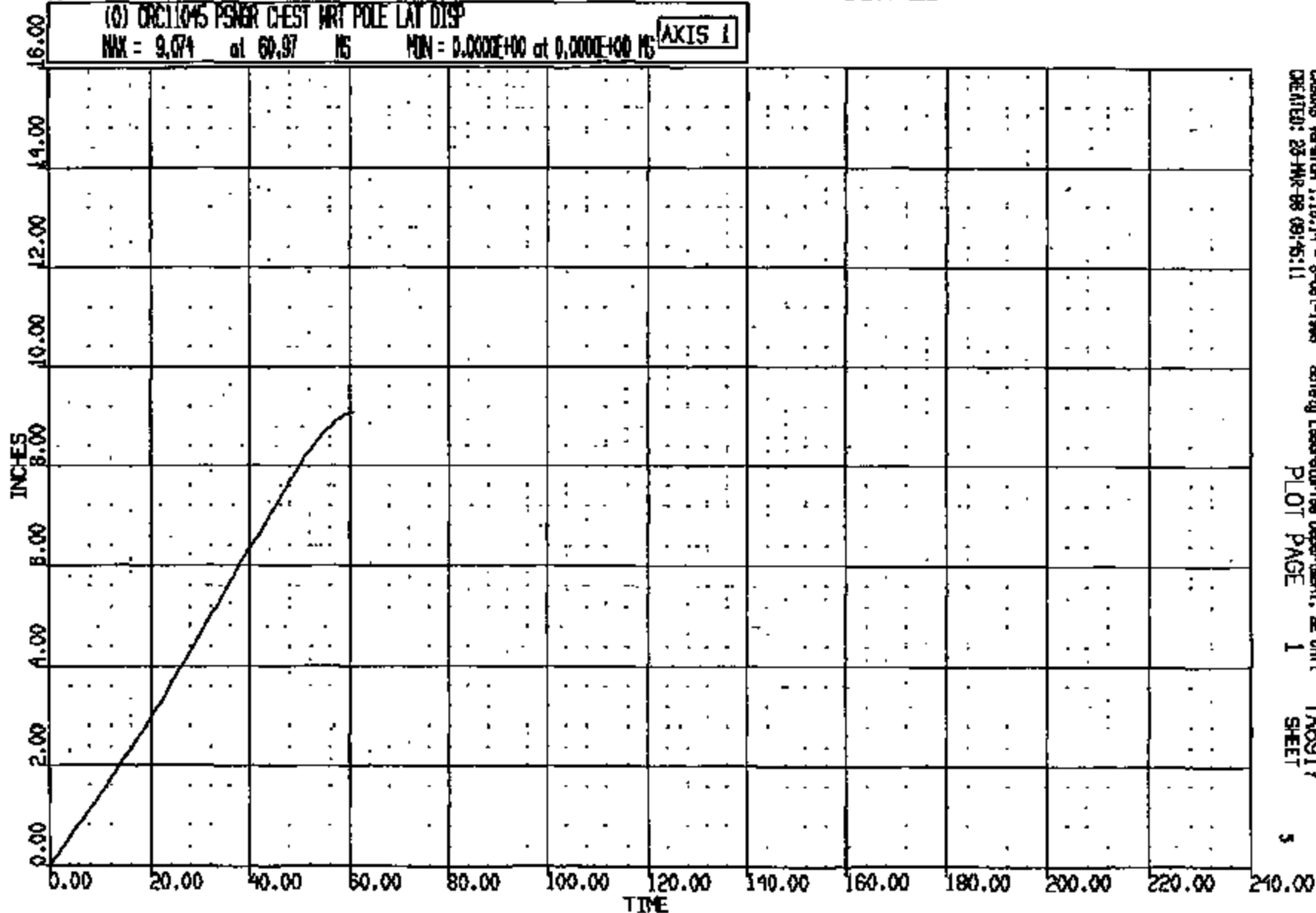
Time histories of any requested derived data (i.e. integrations, etc.) were given to the requesting activity and are not included in this report.

CR R: 11045 TO: TA6917 DATE: 980319 10:12:50
1999 FN-145 1999 FN-145

(0) CR11045 PSNR CHEST ART POLE LAT DISP

MAX = 9.674 at 60.97 MS MIN = 0.000E+00 at 0.000E+00 MS

AXIS 1



CASIMS Version 1.15.14 - 8-06-1998
CREATED: 25-MAR-98 09:15:11

Safety Laboratory Department, SE Unit
PLOT PAGE 1

TA6917
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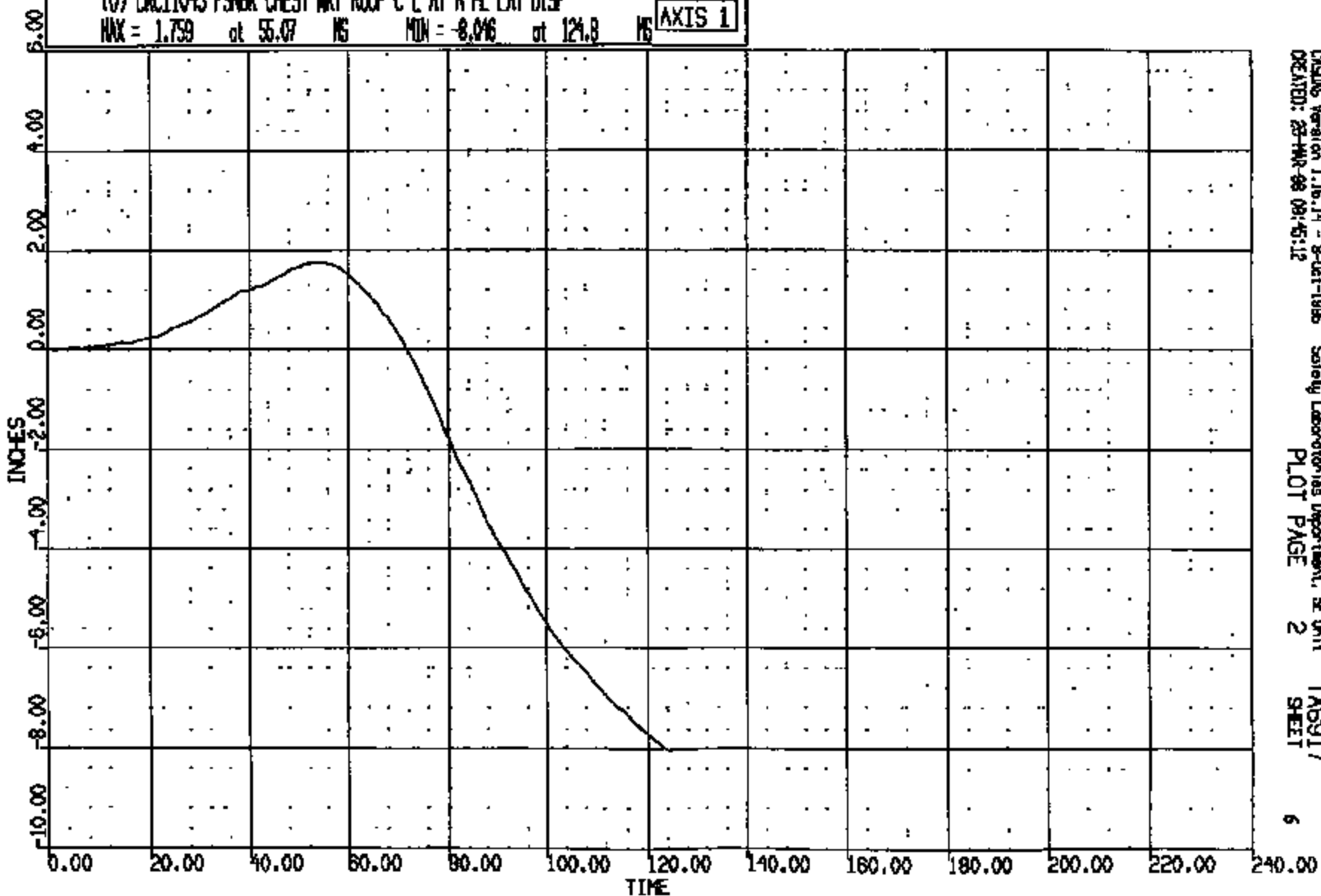
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1999 FN-145 1999 FN-145

(0) CRCL1045 PSNER CHEST WRT ROOF C L AT A PL LAT DISP

MAX = 1.759 at 55.07 MS MIN = -8.046 at 124.8 MS

AXIS 1



CRSNG Version 1.16.14 - 8-Oct-1995
CREATED: 23-MAR-98 09:45:12

Safety Laboratories Department, SE Unit
PLOT PAGE 2 SHEET 6

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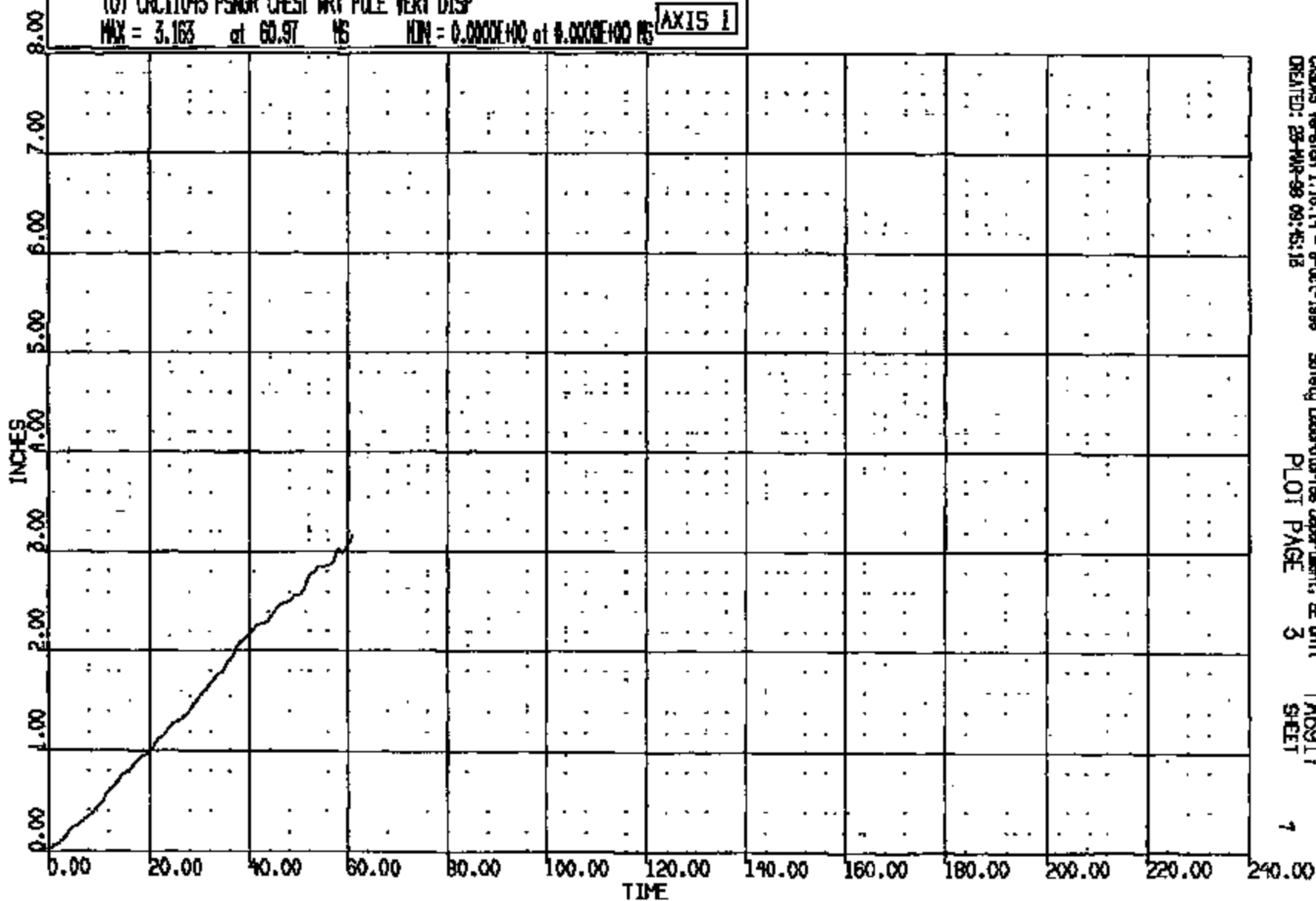
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1999 FN-145 1999 FN-145

(D) CRCL1045 PSNR CHEST WRT POLE VERT DISP

MAX = 3.163 at 60.97 MS MIN = 0.0000E+00 at 0.0000E+00 MS

AXIS 1



CRCS 0011045

CASDAS Version 1.16.14 - 8-Oct-1998
CREATED: 23-MAR-98 09:45:12

Safety Laboratories Department, SE Unit
PLOT PAGE 3

TAB917
SHEET 7

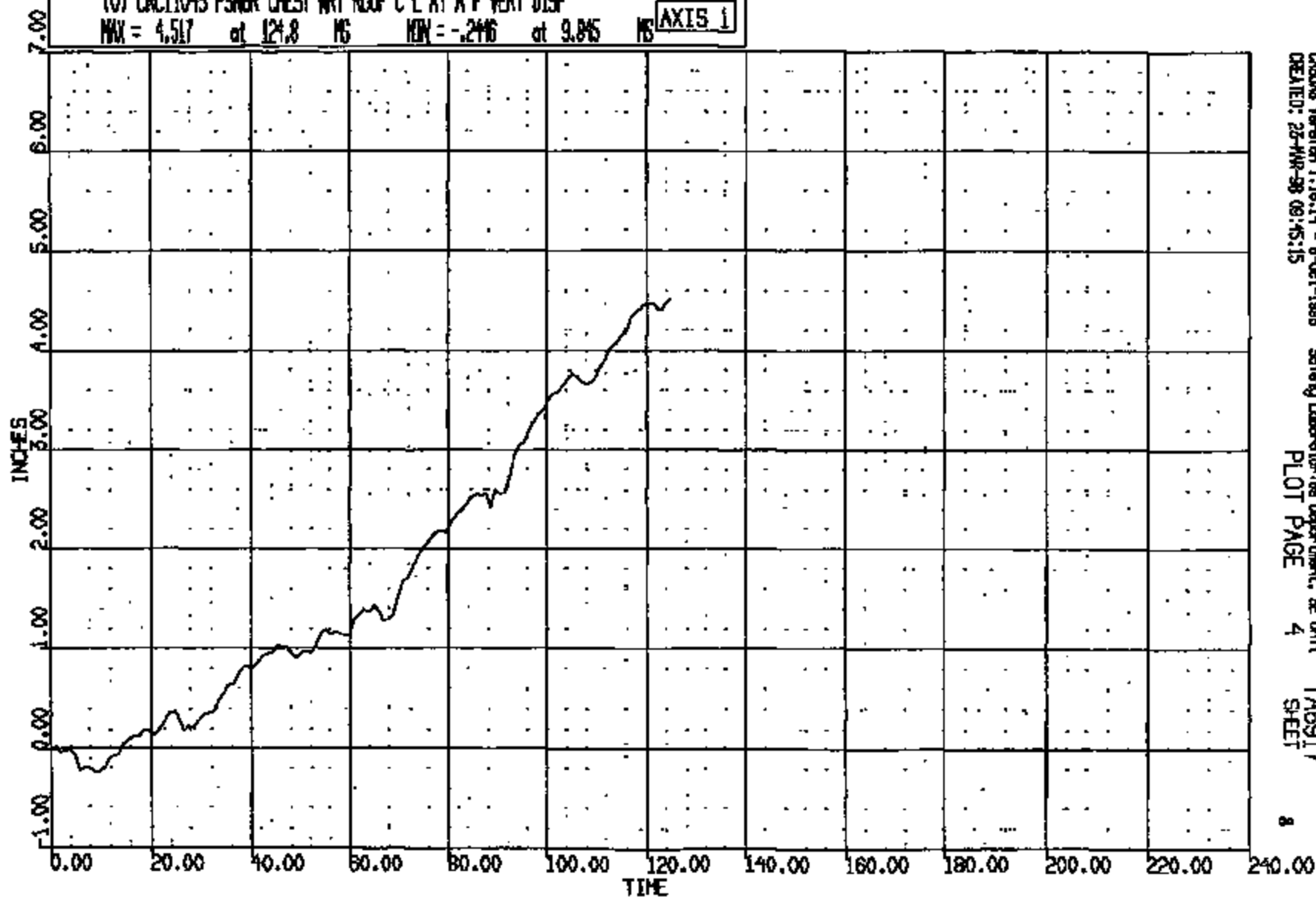
ENTIRE PAGE CONFIDENTIAL

CR R: 11045 TO: TAG917 DATE: 980518 10:12:50
1998 FN-145 1998 FN-145

(0) CRCL1045 PSNER CHEST WRT ROOF C L AT A P VERT DISP

MAX = 4.517 at 124.8 MS MIN = -.2416 at 9.845 MS

AXIS 1



CASUS Version 1.16.14 - 8-Oct-1995
CREATED: 25-MAR-98 08:45:15

Safety Laboratories Department, SE Unit
PLOT PAGE 4

TAG917
SHEET

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ENTIRE PAGE CONFIDENTIAL

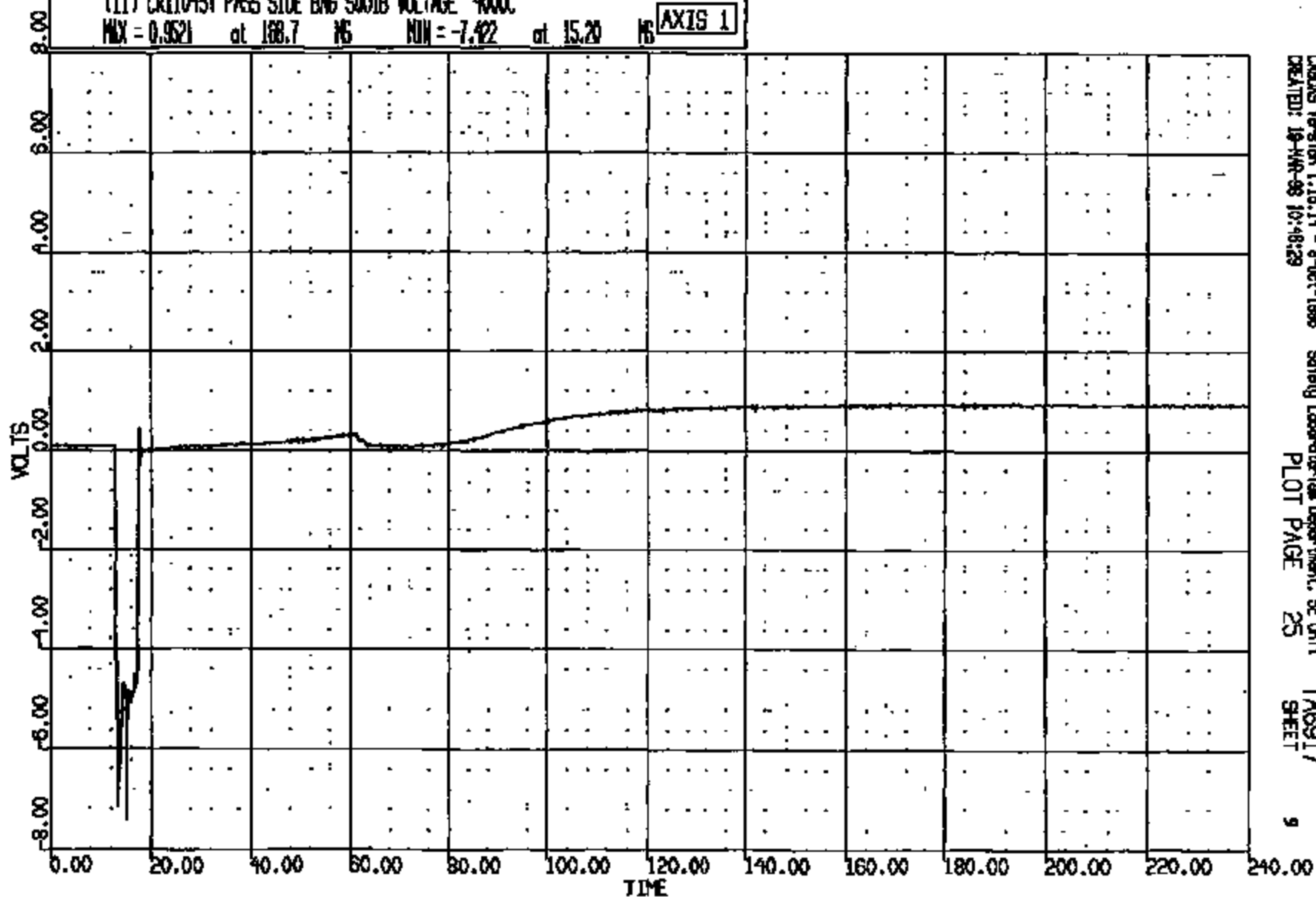
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1999 PN-145 1999 PN-145

(11) CRL1045T PASS SIDE BAG SOUTB VOLTAGE 4000C

MAX = 0.9521 at 188.7 MS MIN = -7.422 at 15.20 MS

AXIS 1



CADDS Version 1.16.14 - 8-Oct-1999
CREATED: 19-MAR-98 10:48:29

Safety Laboratories Department, SE Unit
PLOT PAGE 25

TAB917
SHEET

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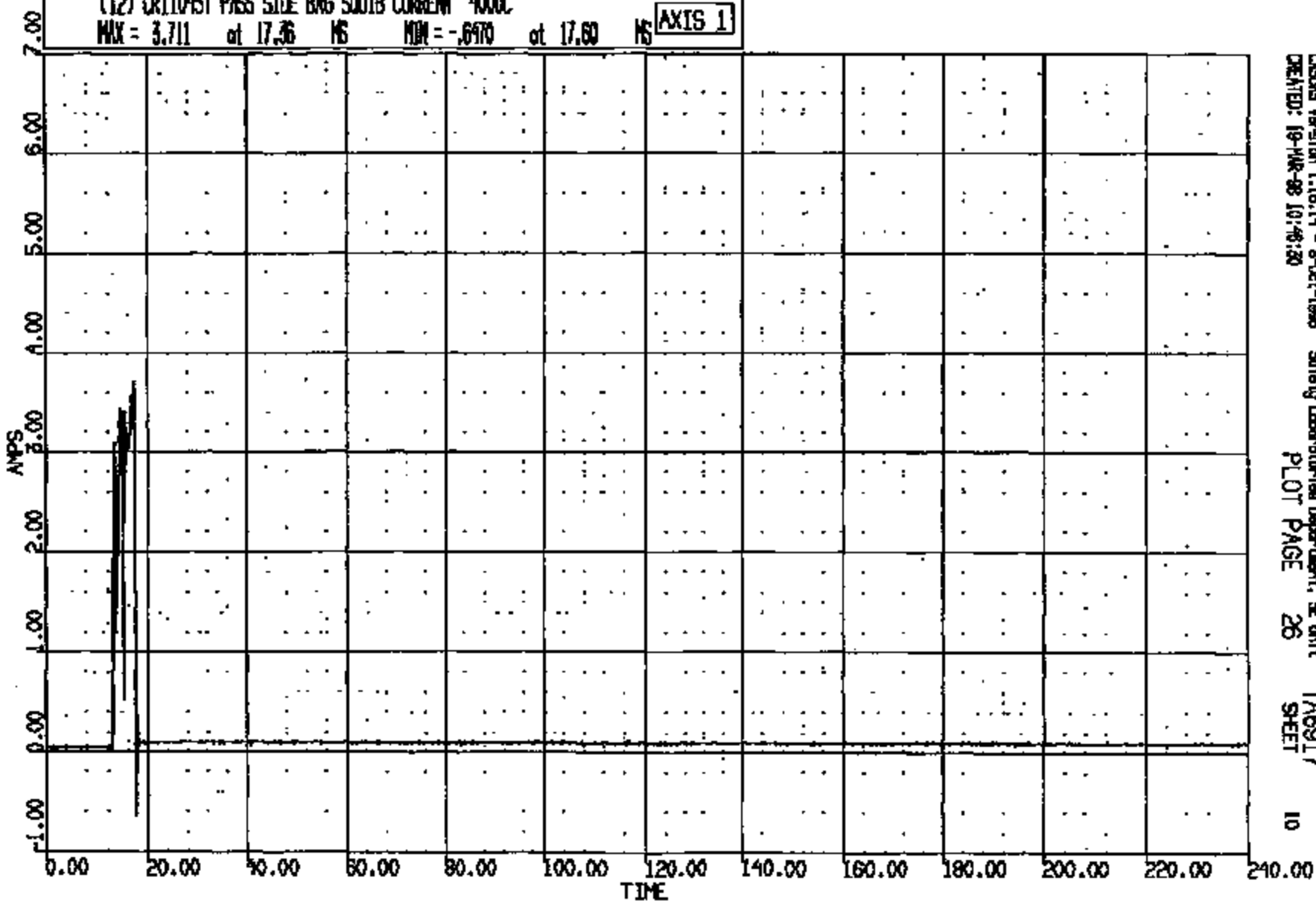
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1999 FN-145 1999 FN-145

(12) CR11045T PASS SIDE BAG SOUTH CURRENT 4000C

MAX = 3.711 at 17.36 MS MIN = -.6970 at 17.60 MS

AXIS 1



CASIMS Version 1.16.14 - 8-Oct-1998
CREATED: 19-MAR-98 10:48:20

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TA6917
SHEET 10

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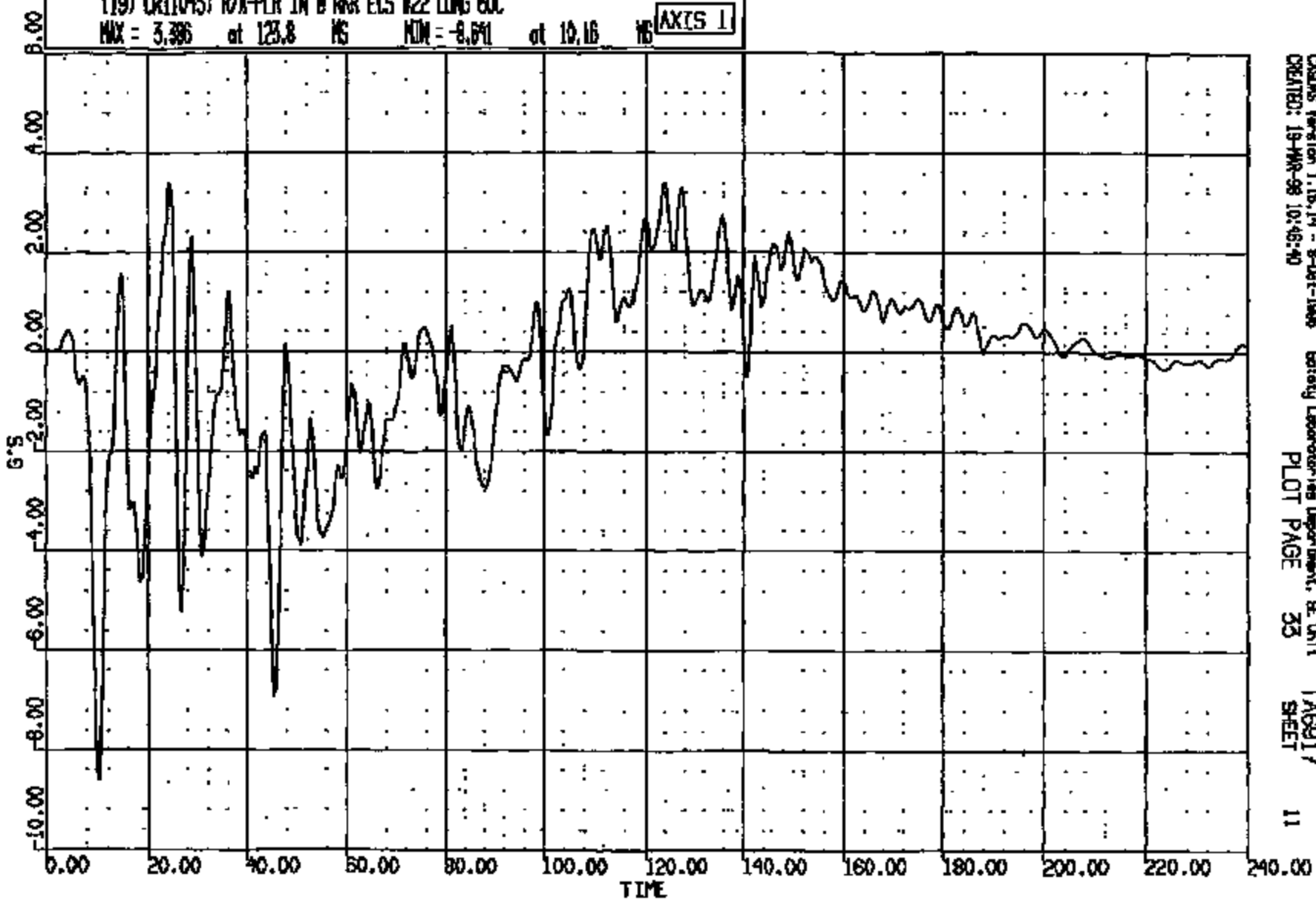
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1999 FN-145 1999 FN-145

(19) CR11045 R/A-PLR IN B NR ELS #22 LONG 60C

MAX = 3.396 at 123.8 MS MIN = -8.641 at 10.16 MS

AXIS 1



CASMS Version 1.18.14 - 8-Oct-1998
CREATED: 19-MAR-98 10:45:40

Safety Laboratories Department, BE Unit
PLOT PAGE 35

TAG917
SHEET 11

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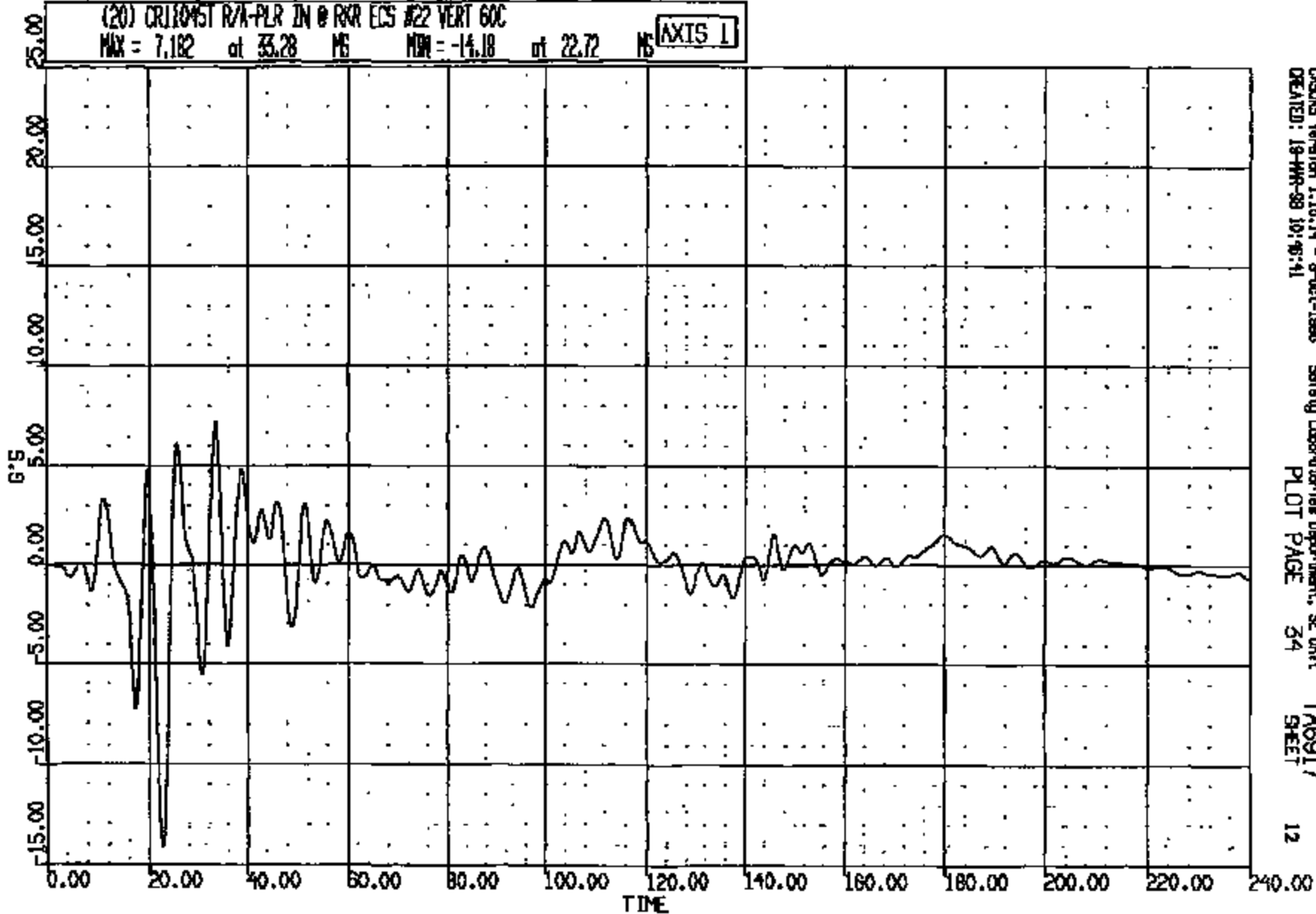
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1999 FN-145 1999 FN-145

(20) CR11045T R/A-PLR IN @ RGR ECS #22 VERT 60C

MAX = 7.182 at 33.28 MS MIN = -14.18 at 22.72 MS

AXIS 1



CASAS Version 1.16.14 - 8-Oct-1996
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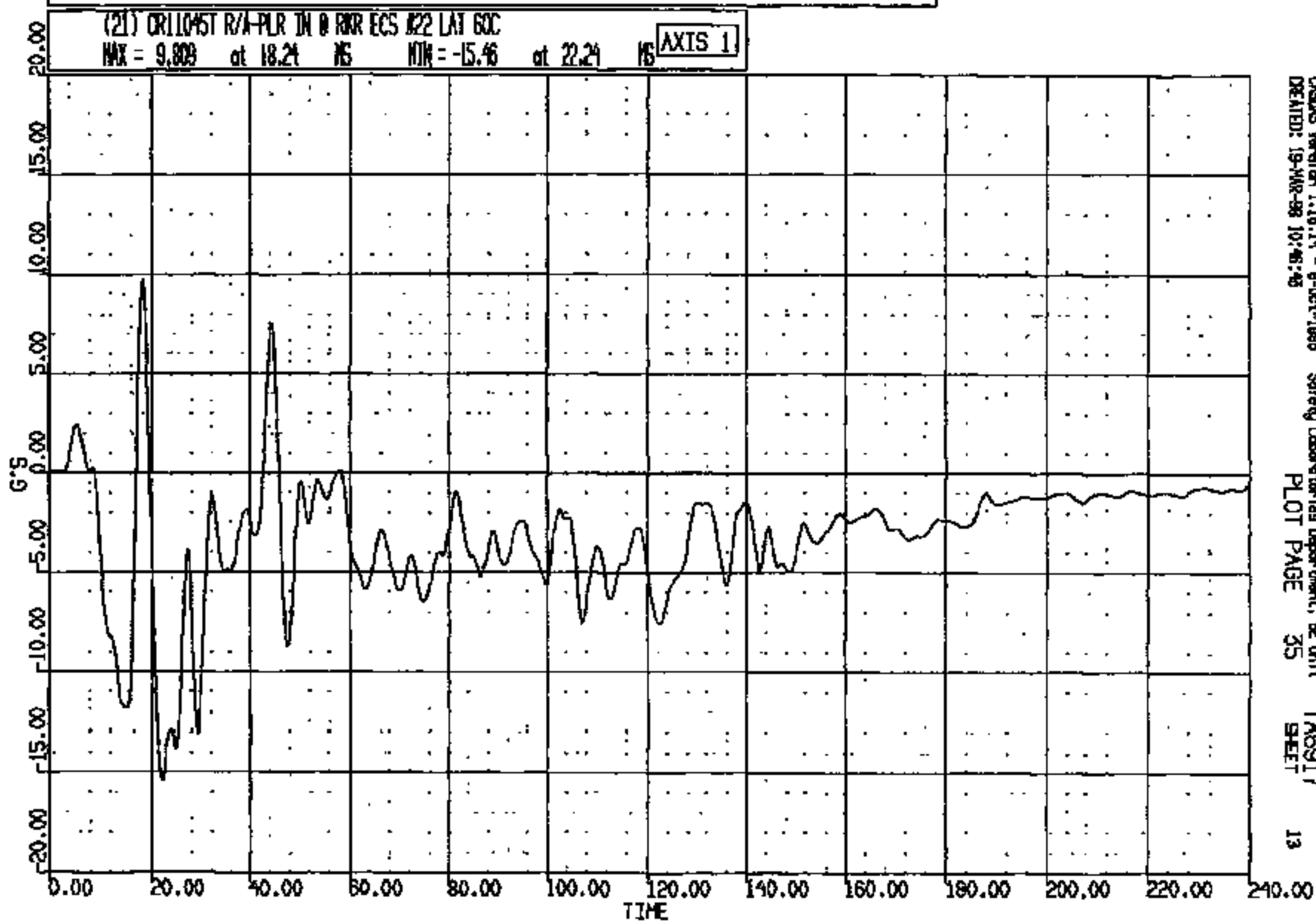
Safety Laboratories Department, SE Unit
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TA6917
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CR11045

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1999 FN-145 1999 FN-145



OSAS Version 1.18.14 - 8-Oct-1995
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Safety Laboratories Department, SE Unit
PLOT PAGE 35

TAG917
SHEET 13

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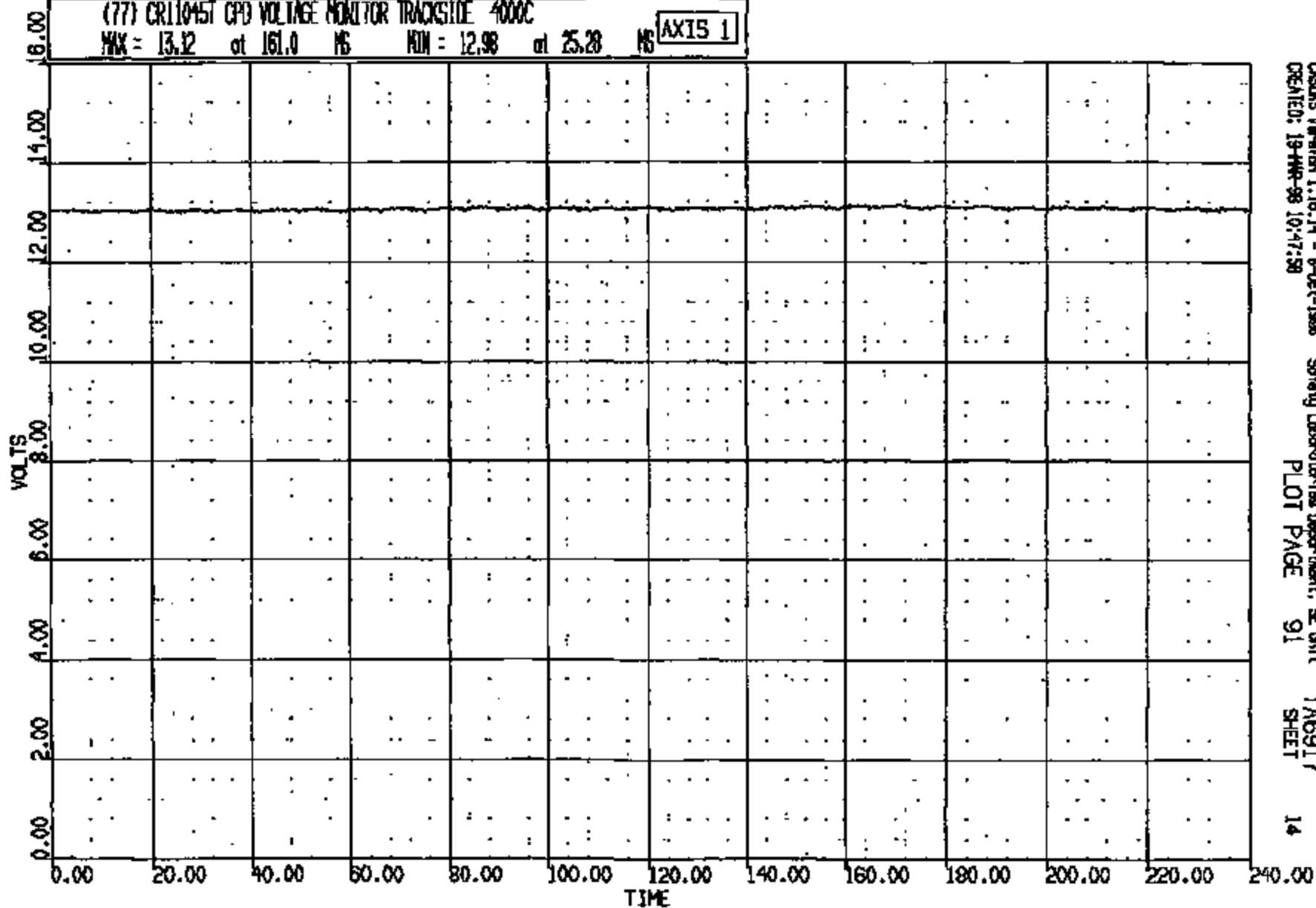
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1999 FN-145 1999 FN-145

(77) CR110451 CPD VOLTAGE MONITOR TRACKSIDE 4000C

MAX = 13.12 at 161.0 MS MIN = 12.98 at 25.28 MS

AXIS 1



CRSIS Version 1.16.14 - 8-Oct-1998
CREATED: 19-MAR-98 10:47:50

Safety Laboratories Department, SE Unit
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TAB917
SHEET 14

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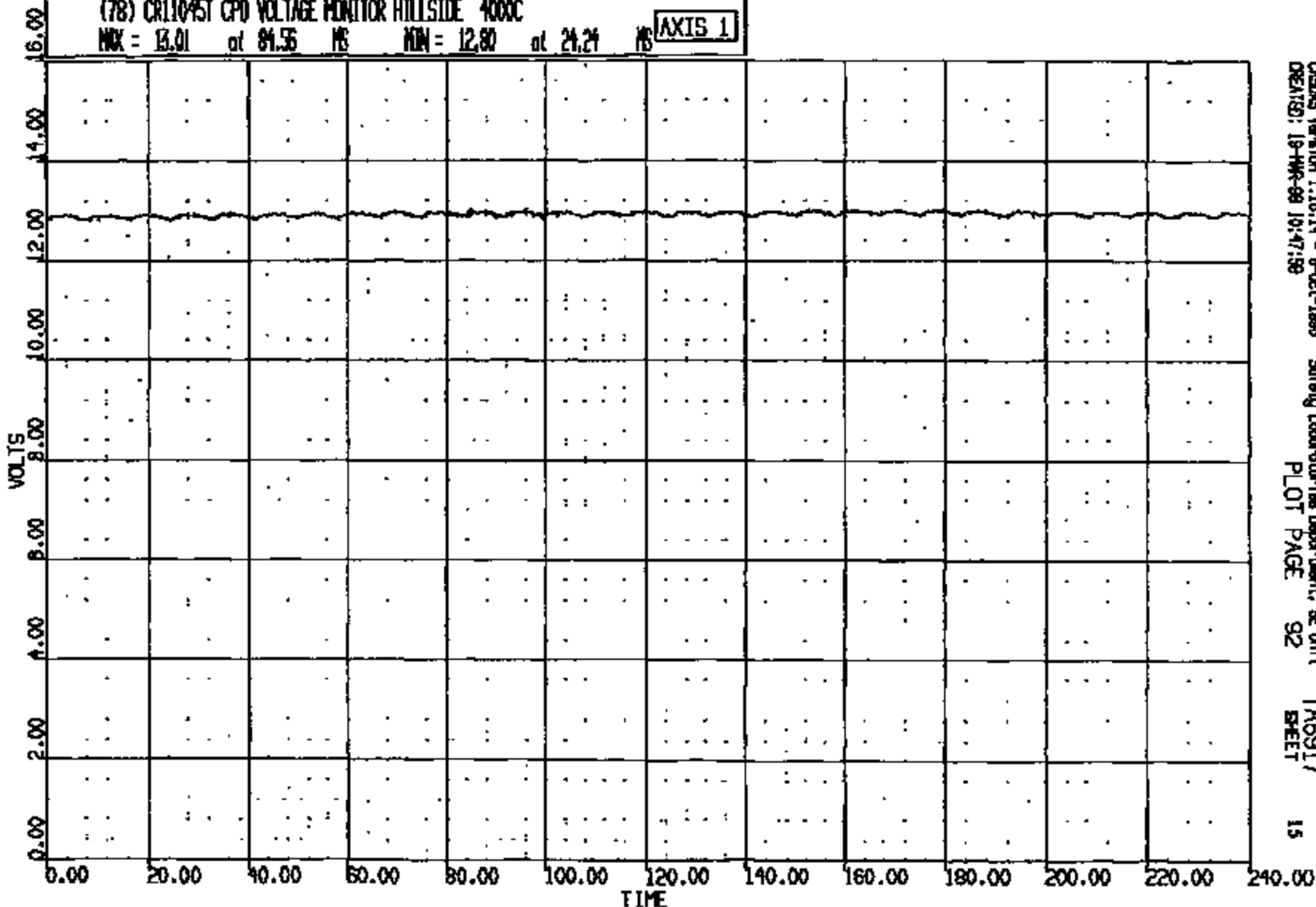
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1999 FN-145 1999 FN-145

(78) CR110451 CPD VOLTAGE MONITOR HILLSIDE 4000C

MAX = 13.01 at 84.56 MS MIN = 12.80 at 24.24 MS

AXIS 1



CHS Version 1.16.14 - 8-Oct-1998
CREATED: 19-MAR-99 10:47:59

Safety Laboratories Department, SE Unit
PLOT PAGE 92

TAB917
SHEET 15

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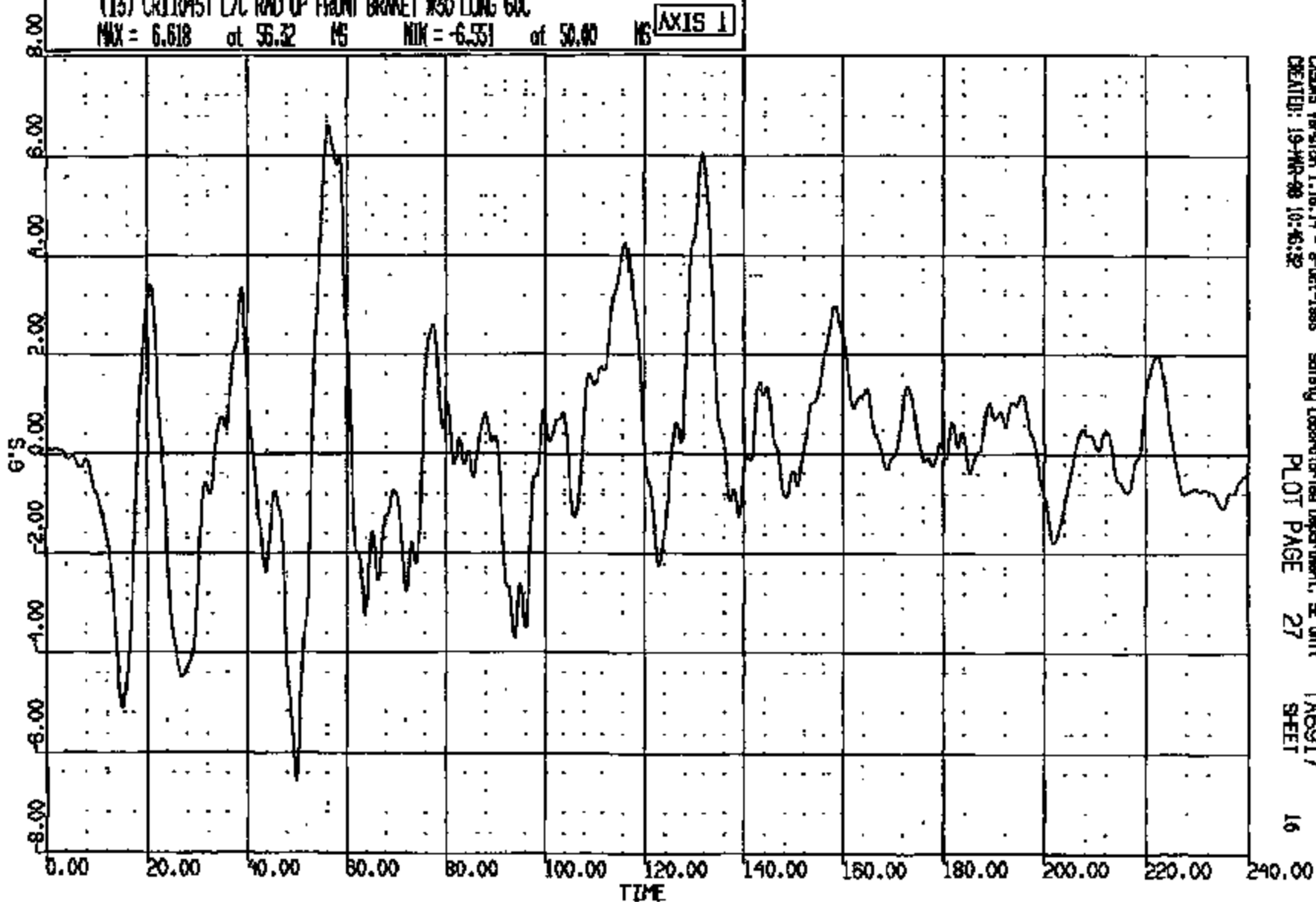
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1999 FN-145 1999 FN-145

(13) CR110451 L/C RAD UP FRONT BRACKET #30 LONG 60C

MAX = 6.618 at 55.32 MS MIN = -6.551 at 50.00 MS

AXIS 1



CHS Version 1.16.14 - 8-Oct-1988
CREATED: 19-MAR-88 10:46:32

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PLOT PAGE 27

TAB917
SHEET 16

ENTIRE PAGE CONFIDENTIAL

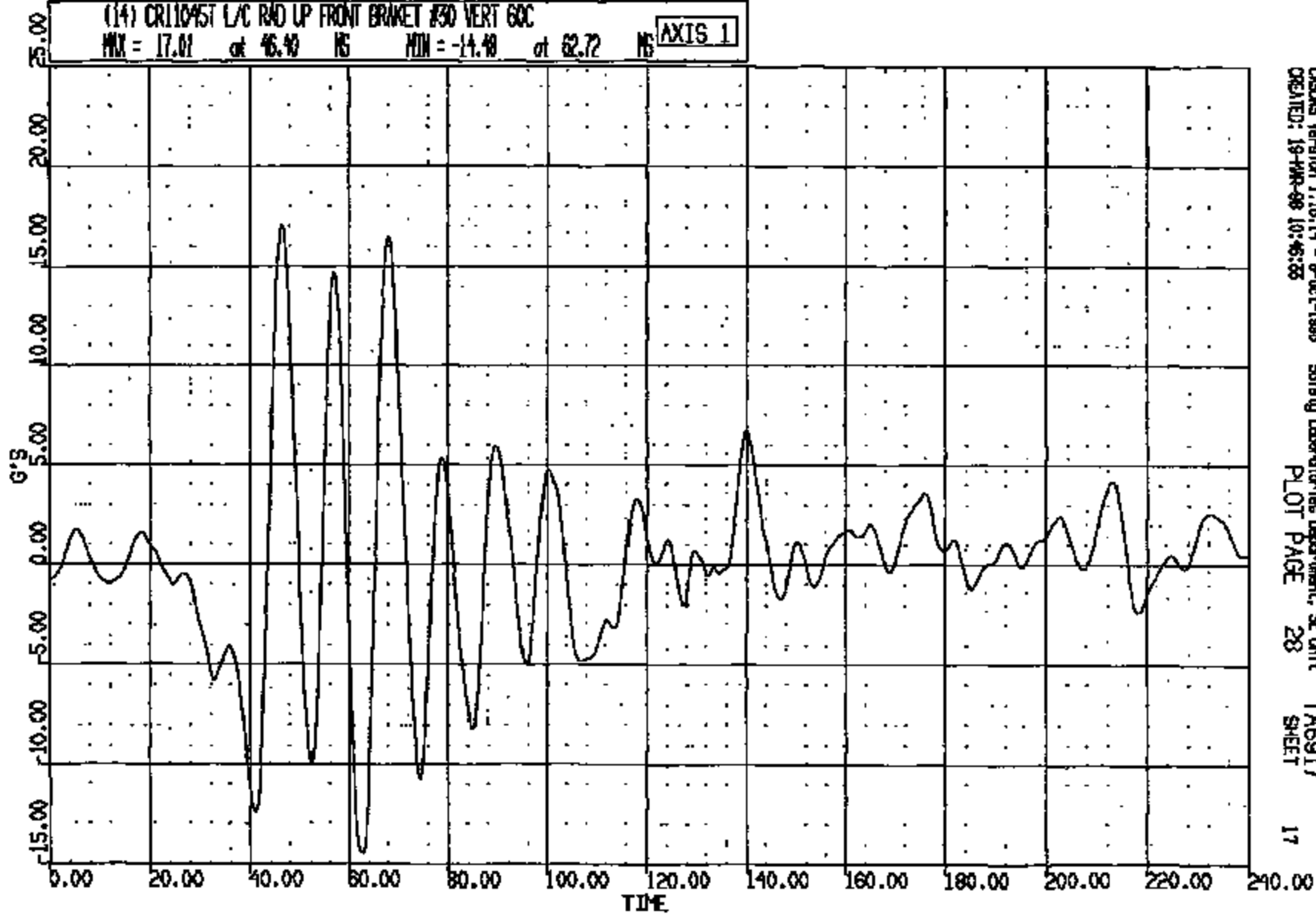
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1998 FN-145 1998 FN-145

(14) CR11045T L/C RAD UP FRONT BRACKET #30 VERT 60C

MAX = 17.01 at 46.40 NS MIN = -14.40 at 62.72 NS

AXIS 1



CASONS Version 1.16.14 - 8-Oct-1998
CREATED: 19-MAR-98 10:46:25

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TAG917
SHEET 17

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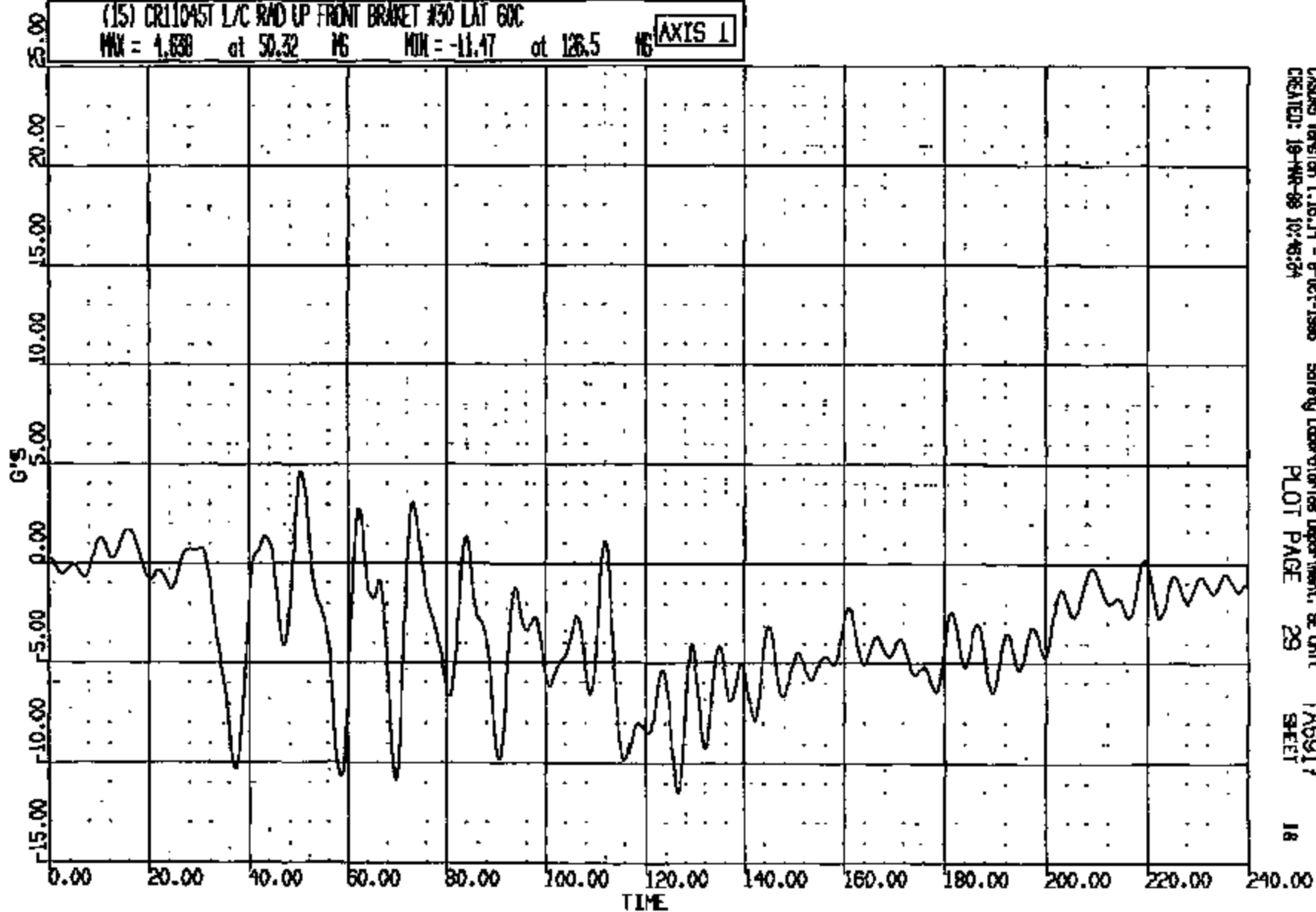
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1998 FN-145 1998 FN-145

(15) CR110457 L/C RAD UP FRONT BRACKET #30 LAT 60C

MAX = 4.530 at 50.32 MS MIN = -11.47 at 126.5 MS

AXIS 1



CASUS Version 1.16.14 - 8-Oct-1998
CREATED: 19-MR-98 10:48:24

Safety Laboratories Department, BE Unit
PLOT PAGE 29

TAB917
SHEET 18

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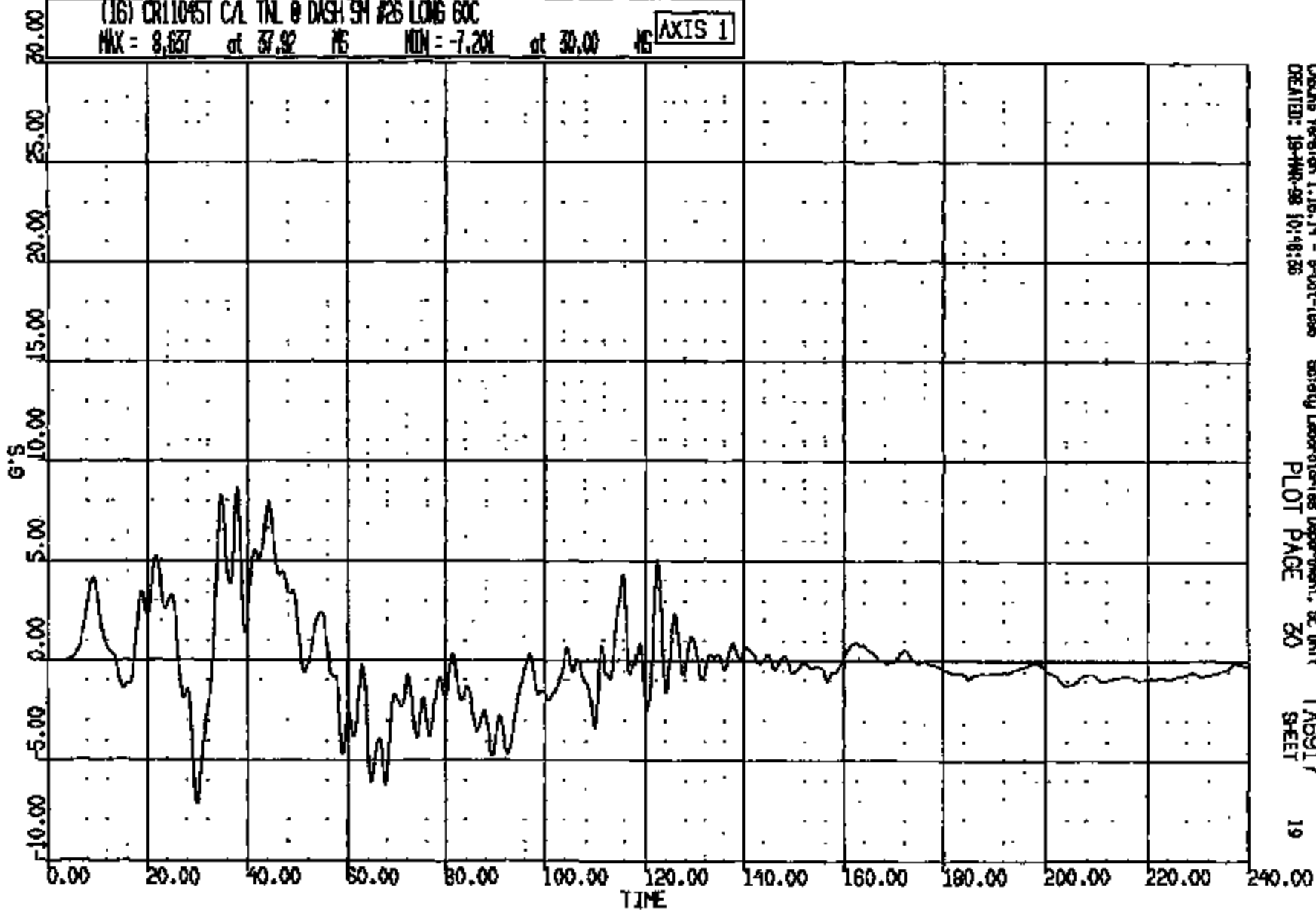
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1999 FN-145 1999 FN-145

(16) CR11045T CAL TNL @ DASH 94 #26 LONG 60C

MAX = 8.637 at 37.92 MS MIN = -7.201 at 30.00 MS

AXIS 1



CASCOM Version 1.16.14 - 8-Oct-1998
CREATED: 19-11-98 10:18:36

Safety Laboratories Department, BE Unit
PLOT PAGE 30

TAG917
SHEET 19

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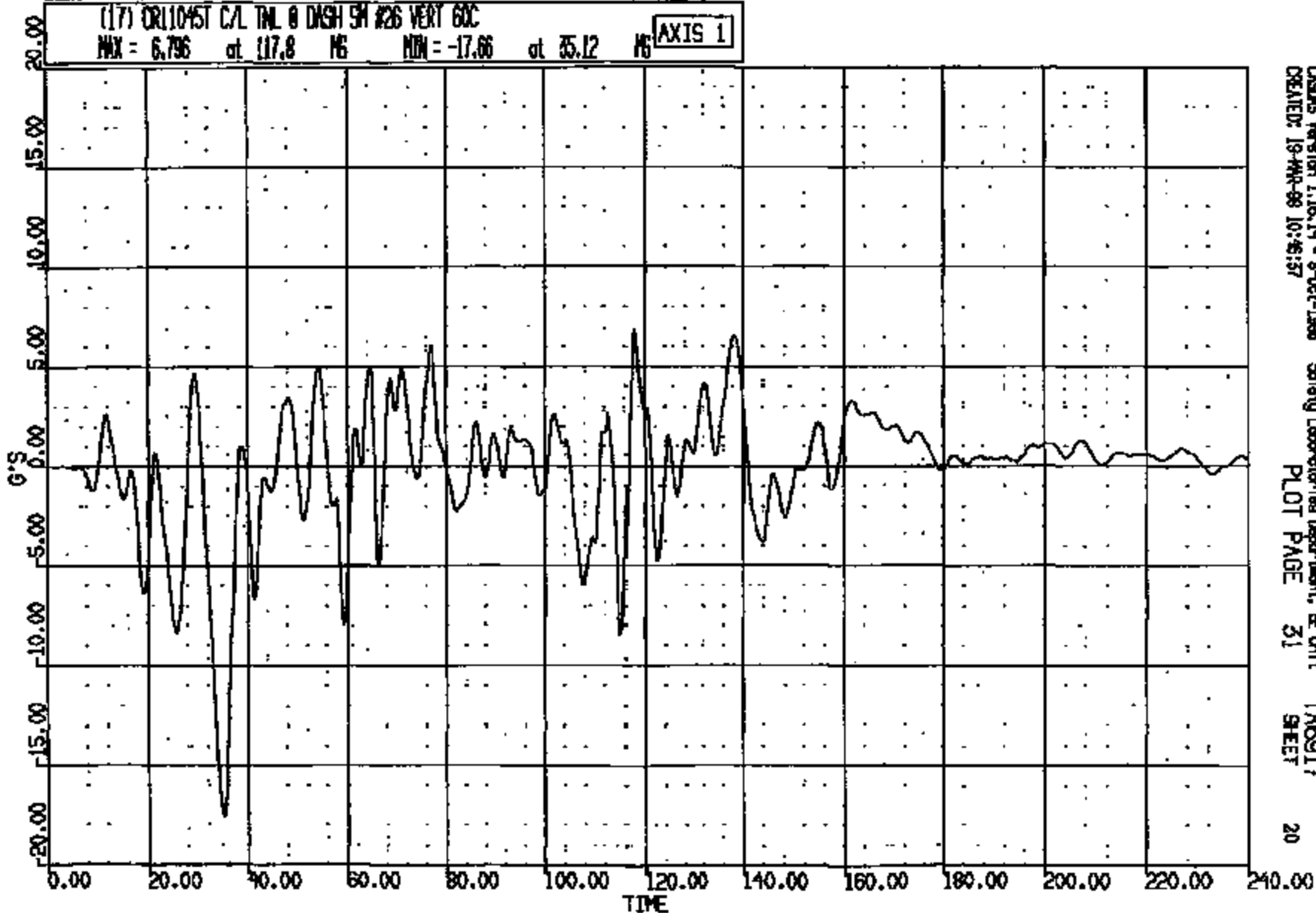
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CR R: 11045 TO: TAB917 DATE: 880319 10:12:50
1988 FN-145 1988 FN-145

(17) CR11045T C/L TNL @ DASH SN #26 VERT 60C

MAX = 6.796 at 117.8 MS MIN = -17.66 at 35.12 MS

AXIS 1



CASUS Version 1.16.14 - 8-Oct-1988
CREATED: 19-MAR-88 10:46:57

Safety Laboratories Department, SE Unit
PLOT PAGE 31

TAB917
SHEET 20

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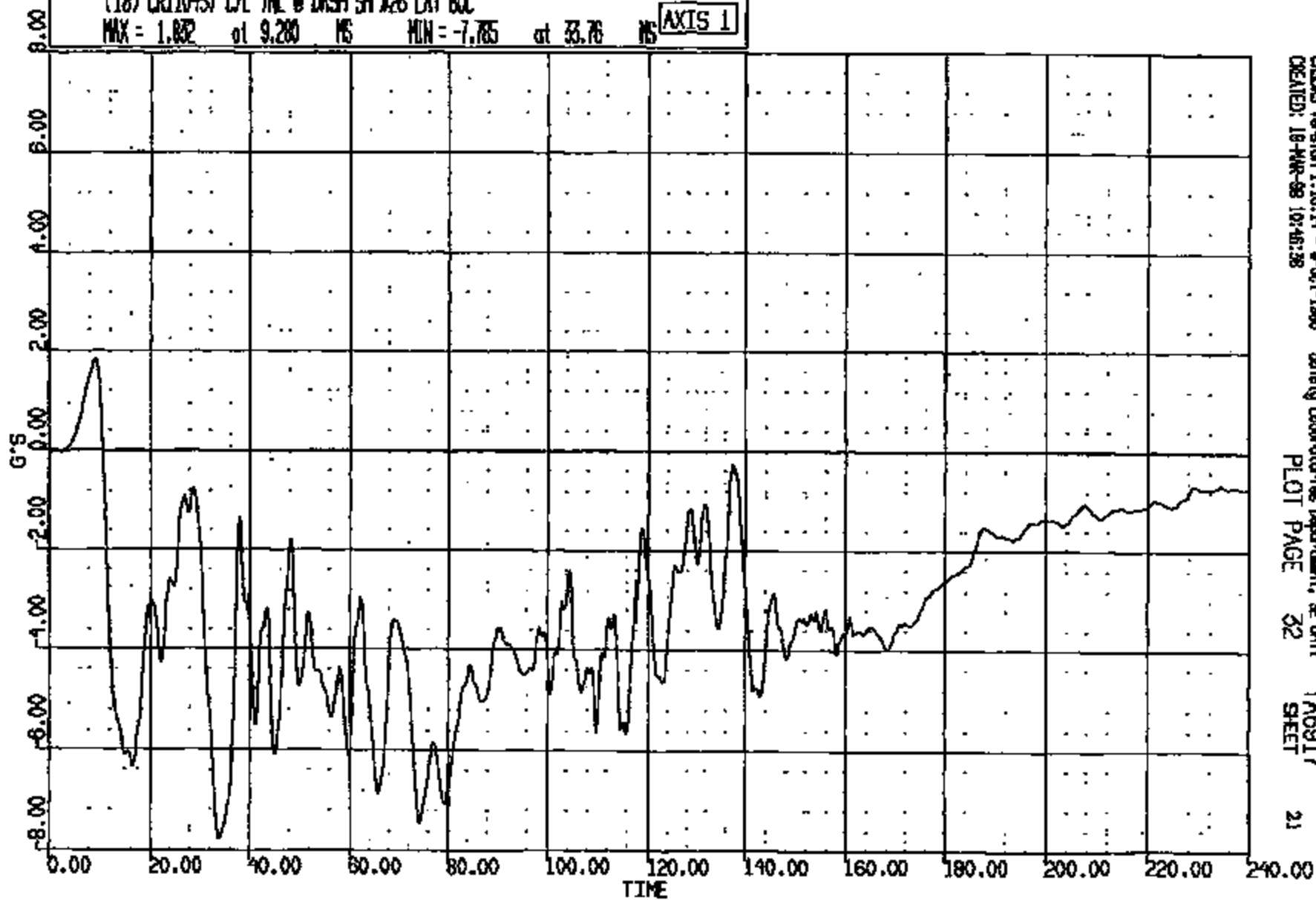
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CR R: 11045 TO: TAB917 DATE: 980519 10:12:50
1999 FN-145 1999 FN-145

(18) CR11045T C/L TNL @ DASH SN #26 LAT 60C

MAX = 1.832 at 9.200 NS MIN = -7.785 at 33.76 NS

AXIS 1



CISAS Version 1.16.14 - 9-Oct-1998
CREATED: 18-MAR-99 10:45:38

Safety Laboratories Department, SE Unit
PLOT PAGE 32

TAB917
SHEET 21

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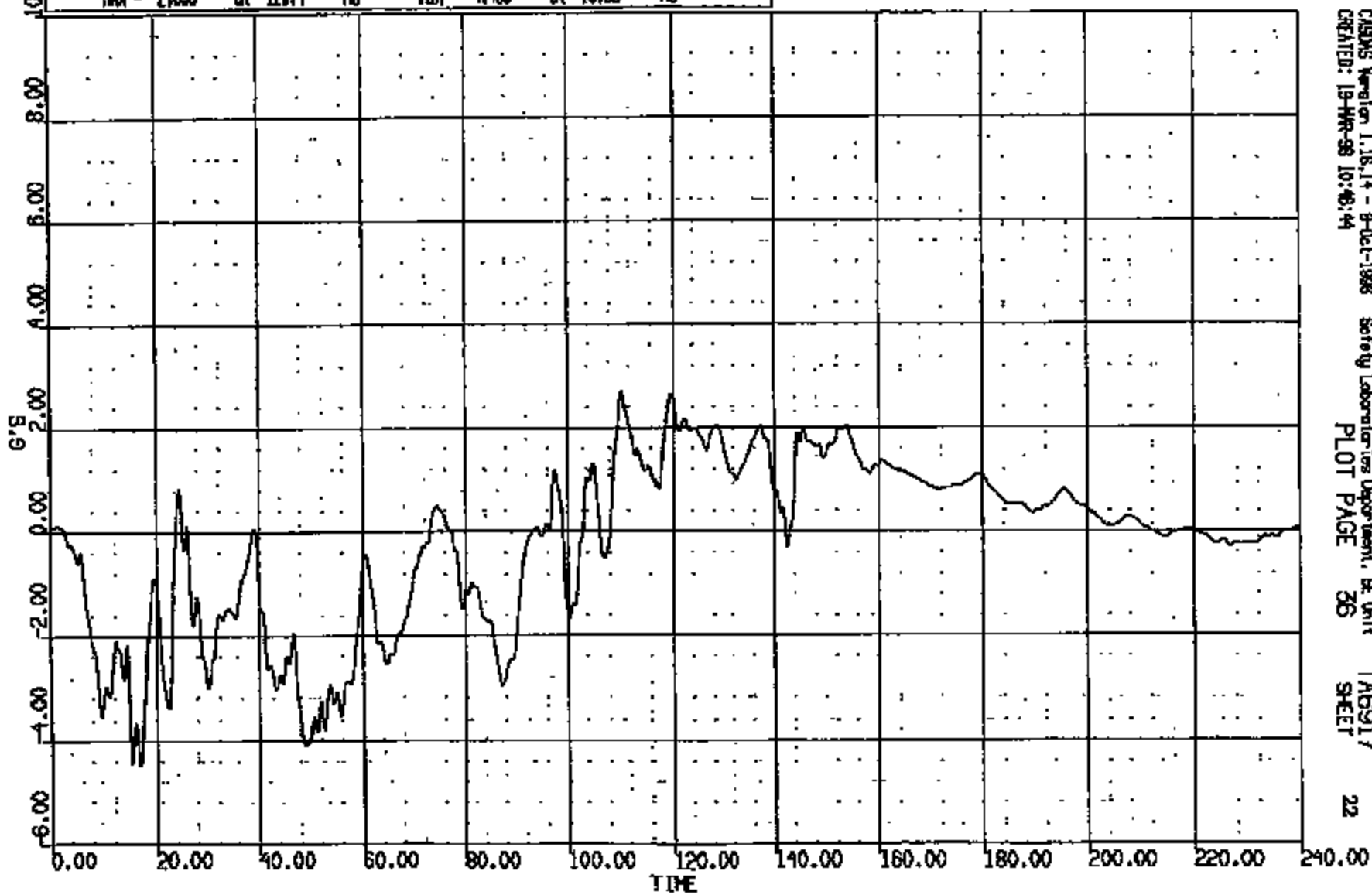
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CR R: 11045 TD: TAG917 DATE: 980319 10:12:50
1999 FN-145 1999 FN-145

(22) CR11045T R/A-PLR IN @ ROR SM #23 LONG SOC

MAX = 2.899 at 110.4 MS MIN = -4.493 at 16.95 MS

AXIS 1



CASMS Version 1.16.14 - 9-0-0-1998
CREATED: 19-MAR-98 10:40:44

Safety Laboratories Department, BE Unit
PLOT PAGE 36

TAG917
SHEET 22

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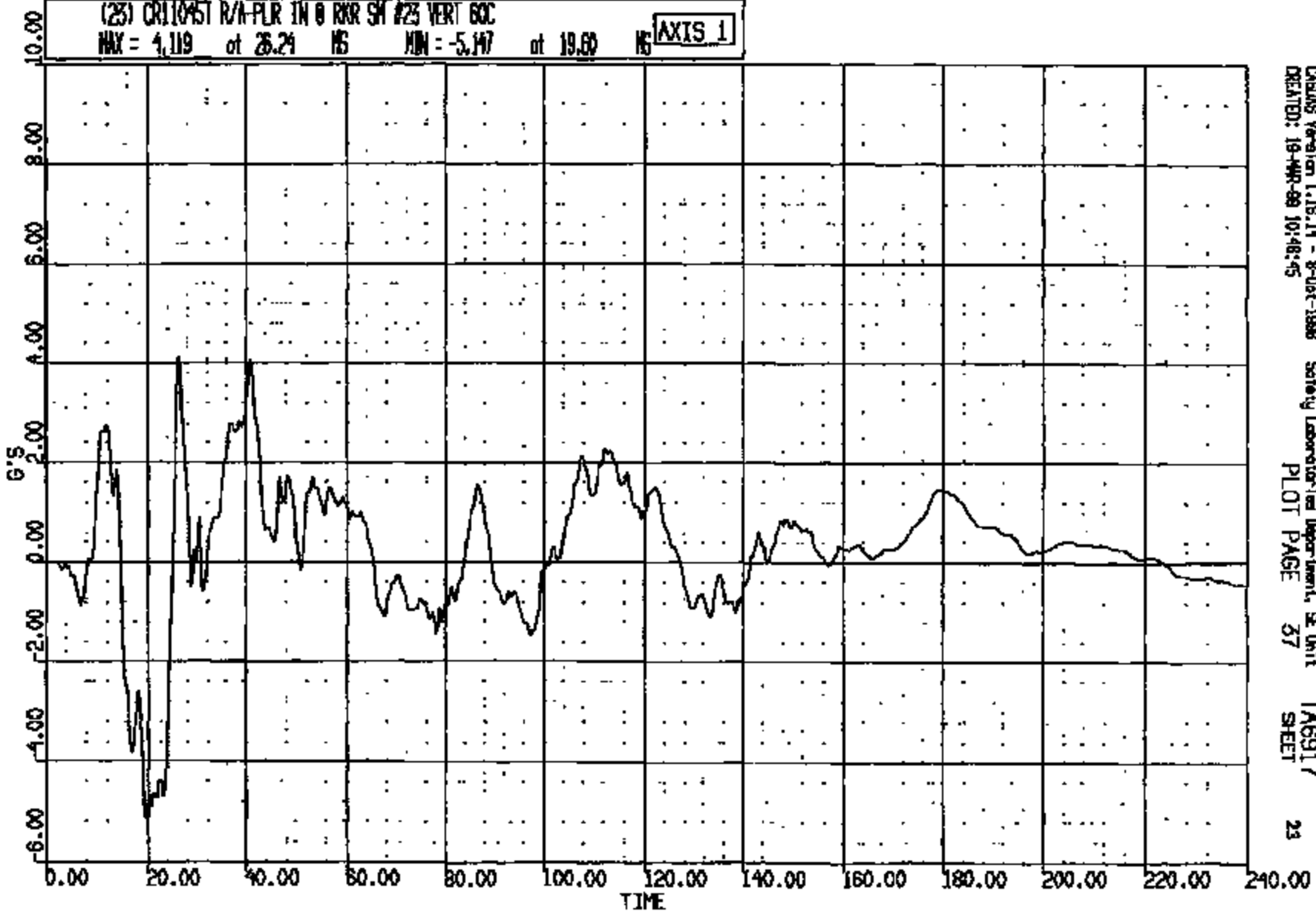
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CR R: 11045 TO: TAG917 DATE: 980319 10:12:50
1999 FN-145 1999 FN-145

(25) CR110451 R/A-PLR IN @ RNR SH #23 VERT 60C

MAX = 4.119 at 26.24 MS MIN = -5.147 at 19.60 MS

AXIS 1



CASIS Version 1.16.14 - 8-Oct-1998
CREATED: 19-MAR-99 10:48:45

Safety Laboratory Department, SE Unit
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TAG917
SHEET 23

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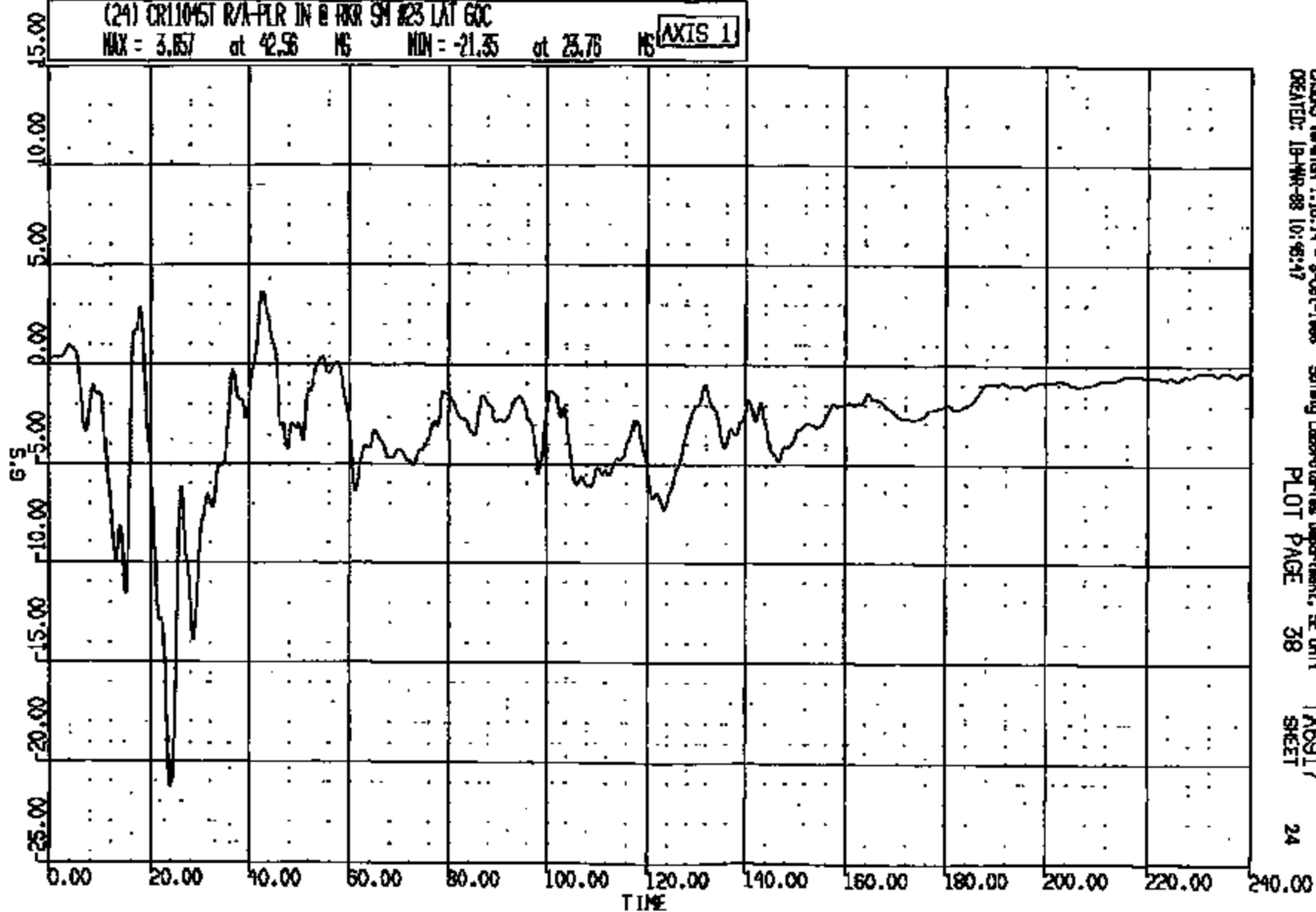
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CR R: 11045 TO: TA6917 DATE: 980519 10:12:50
1999 FN-145 1999 FN-145

(24) CR110451 R/A-PLR IN @ RKR SH #23 LAT 60C

MAX = 3.857 at 42.56 MS MIN = -21.35 at 23.76 MS

AXIS 1



CRS05 Version 1.16.14 - 8-Oct-1998
CREATED: 18-MAR-98 10:45:17

Safety Laboratories Department, SE Unit
PLOT PAGE 38

TA6917
SHEET

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ENTIRE PAGE CONFIDENTIAL

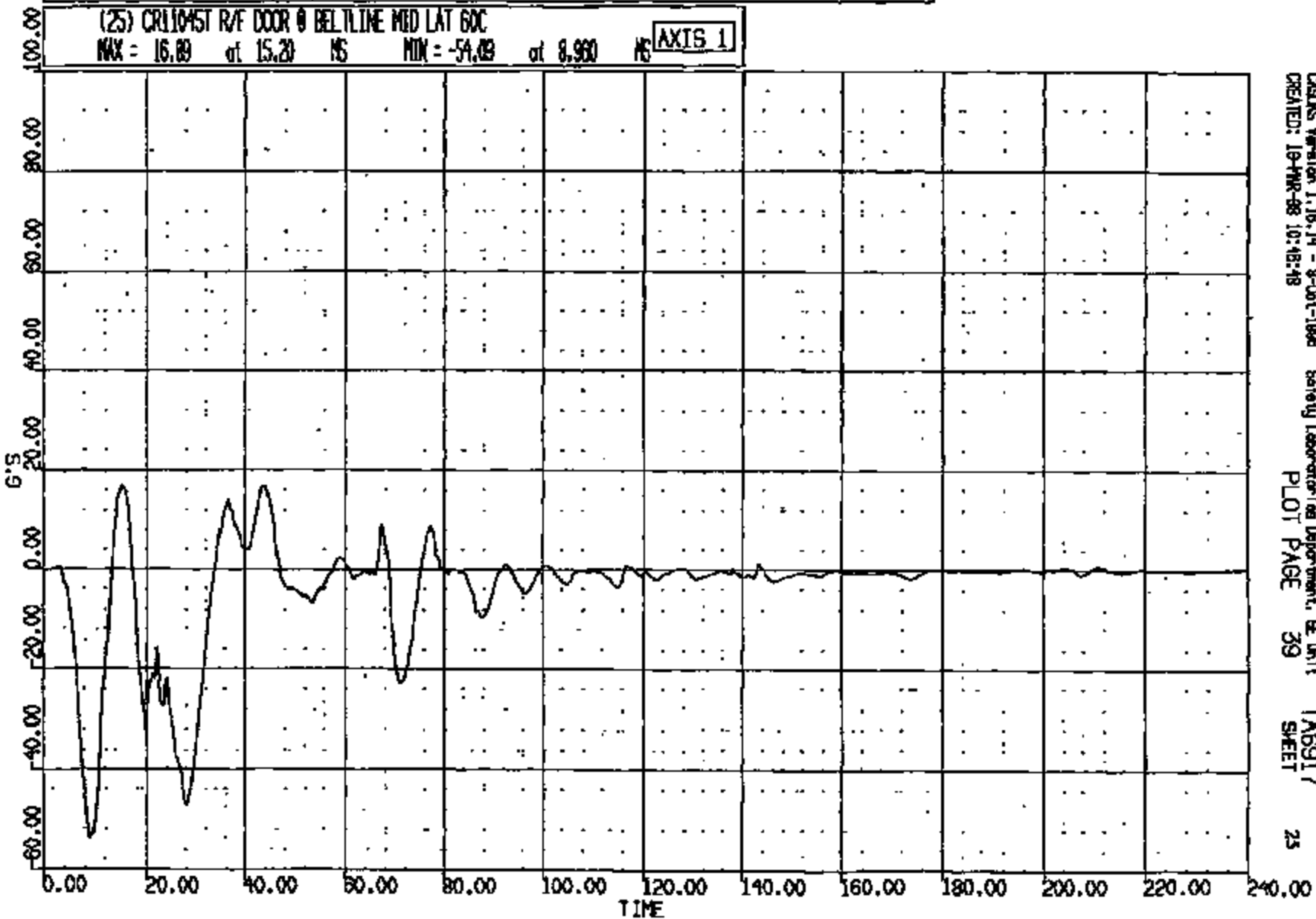
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CR R: 11045 TO: TA6917 DATE: 980319 10:12:50
1999 FN-145 1999 FN-145

(25) CR11045T R/F DOOR @ BELTLINE MED LAT 60C

MAX = 16.89 at 15.20 MS MIN = -54.09 at 8.960 MS

AXIS 1



CASDS Version 1.16.14 - 8-Oct-1998
CREATED: 19-MAR-98 10:45:18

Safety Laboratories Department, EE Unit
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TA6917
SHEET 25

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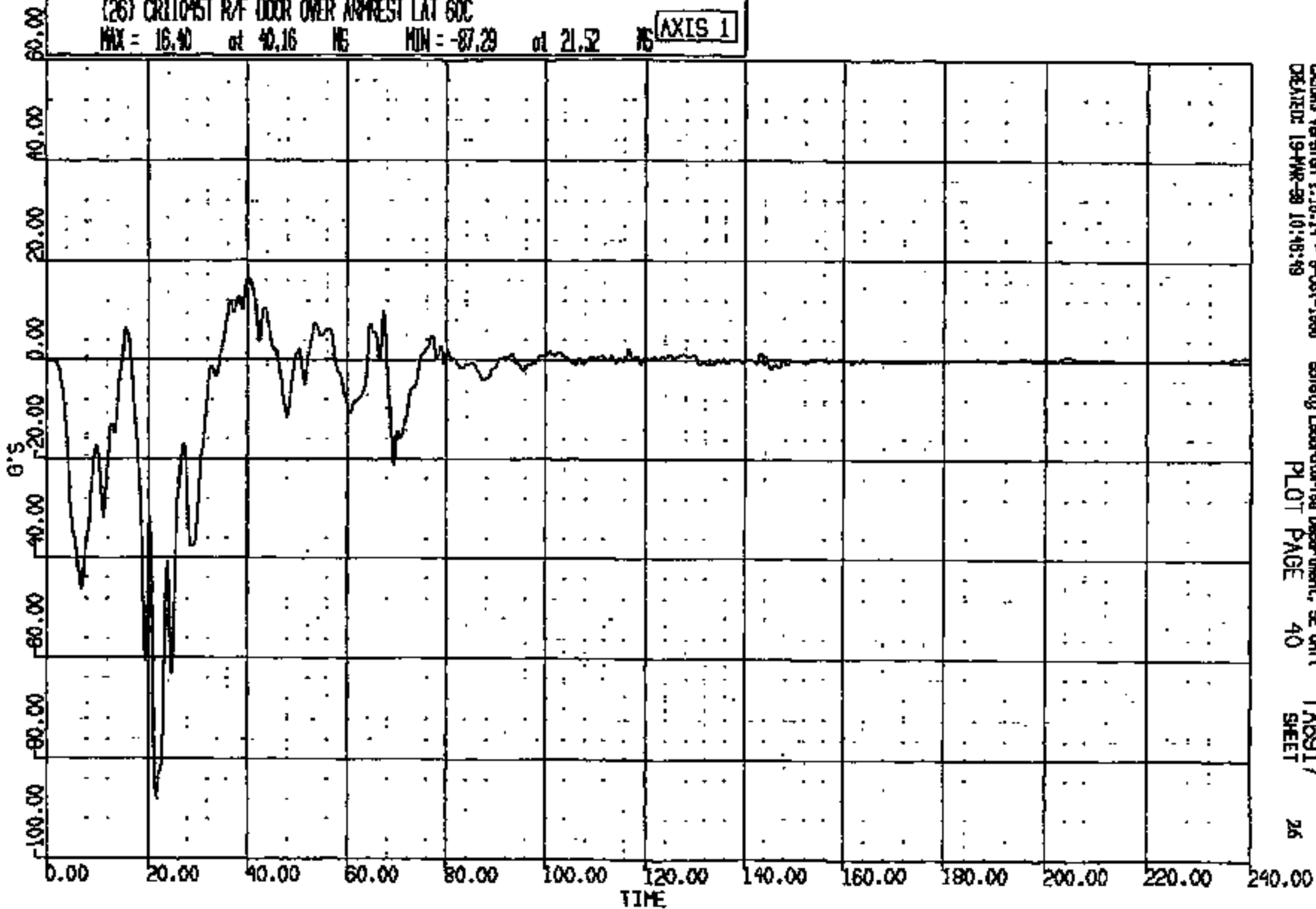
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CR R: 11045 TO: TASS17 DATE: 880519 10:12:30
1999 FN-145 1999 FN-145

(26) CR11045T R/F DOOR OVER ARREST LAT 60C

MAX = 16.40 at 40.16 MS MIN = -87.29 at 21.32 MS

AXIS 1



CASAS Version 1.18.14 - 8-Oct-1986
CREATED: 19-APR-88 10:46:49

Safety Laboratory Department, SE Unit
PLOT PAGE 40

TASS17
SHEET 26

ENTIRE PAGE CONFIDENTIAL

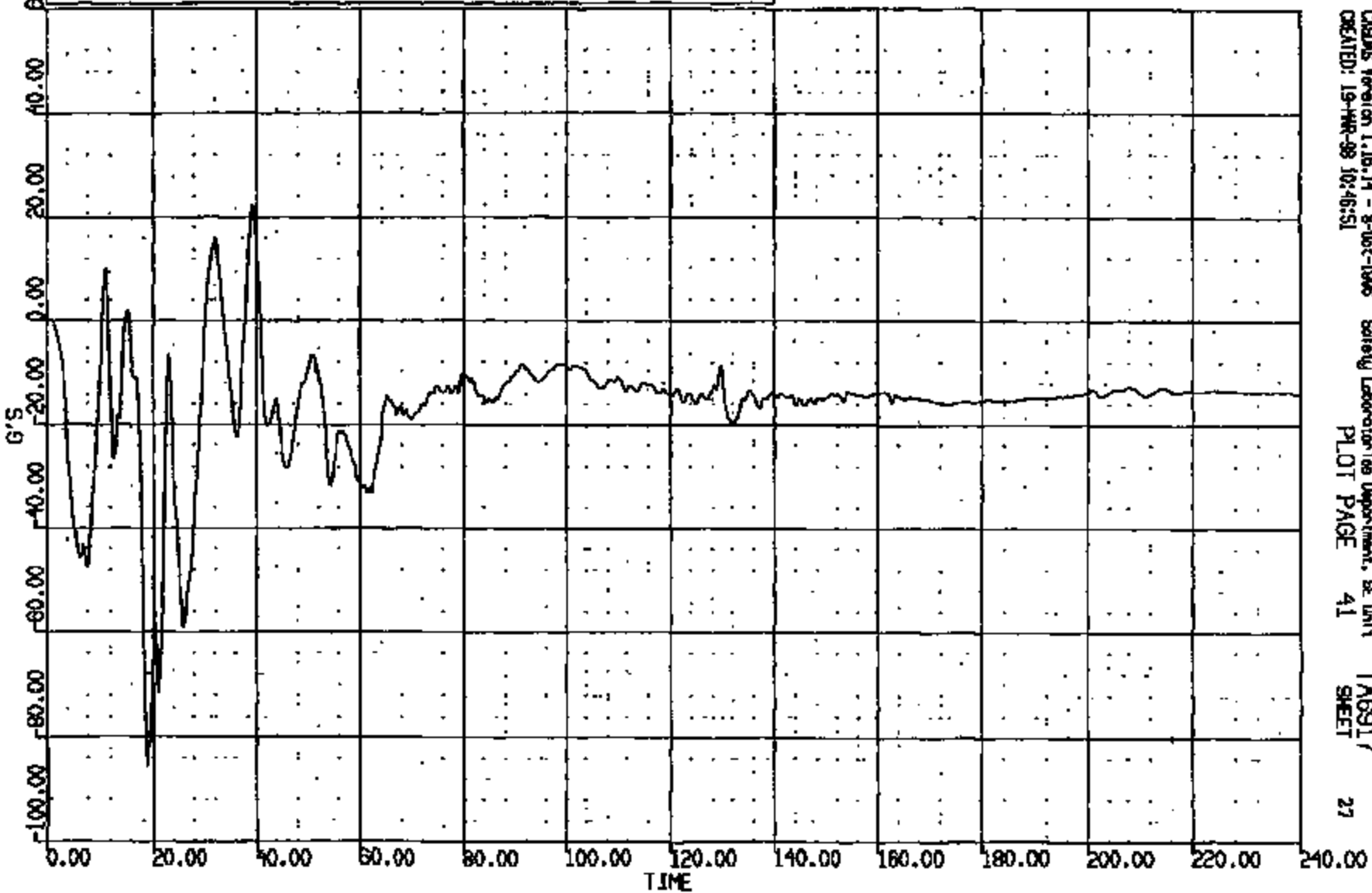
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CR R: 11045 TO: TAB917 DATE: 980319 10:12:50
1999 FN-145 1999 FN-145

(27) CR11045T R/F DOOR REAR OF SEAT H-PT LAT 60C

MAX = 22.41 at 39.28 MS MIN = -85.67 at 18.95 MS

AXIS 1



CRAMS Version 1.16.14 - 8-Oct-1996
CREATED: 19-MAR-98 10:46:51

Safety Laboratory Department, SE Unit
PLOT PAGE 41

TAB917
SHEET 27

ENTIRE PAGE CONFIDENTIAL

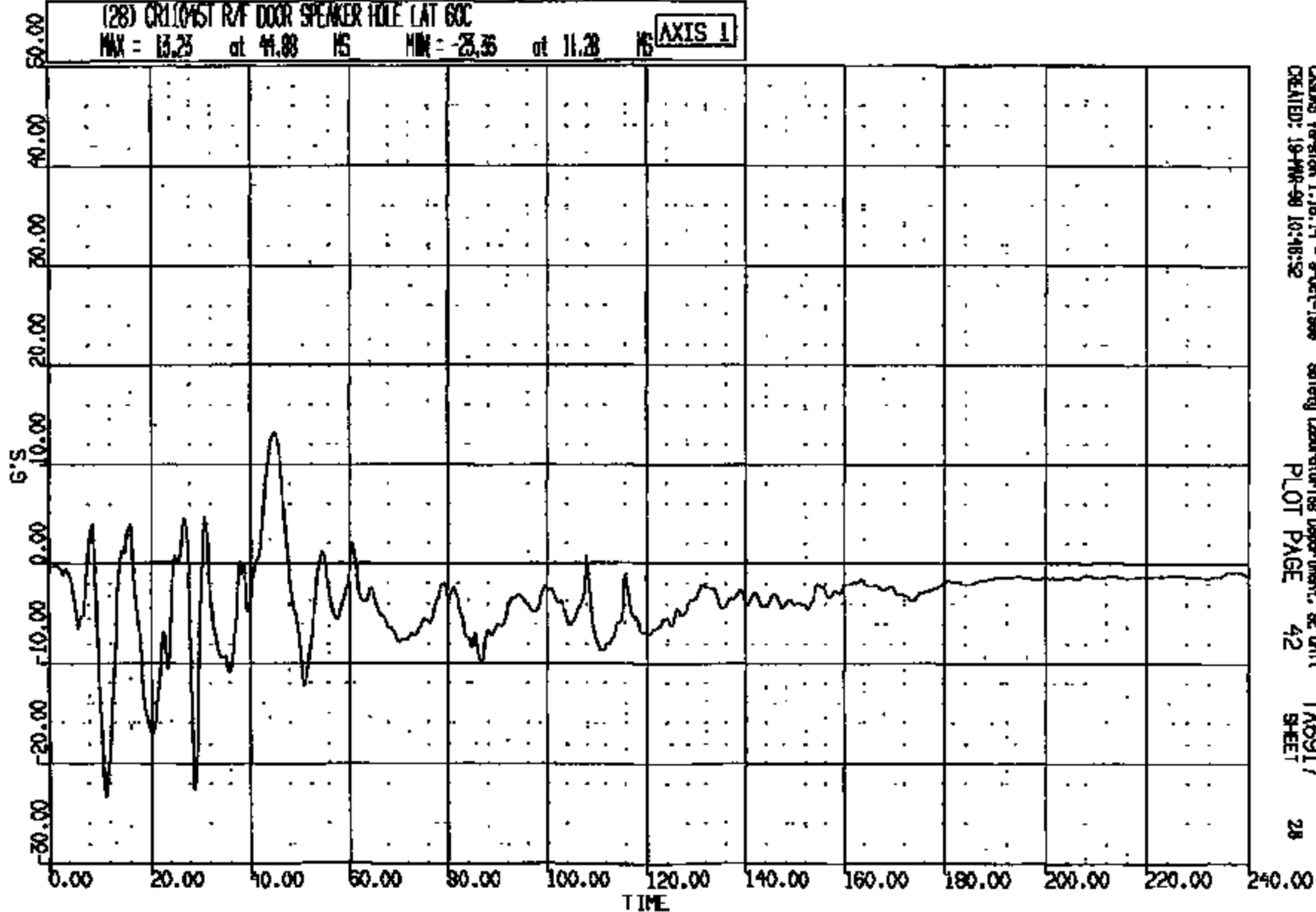
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CR R: 11045 TO: TAB917 DATE: 980319 10:12:50
1999 FN-145 1999 FN-145

(28) CR1045T R/F DOOR SPEAKER HOLE LAT 60C

MAX = 13.23 at 41.88 HS MIN = -23.35 at 11.28 HS

AXIS 1



CISMS Version 1.18.14 - 8-Oct-1998
CREATED: 19-FEB-99 10:48:52

Safety Laboratories Department, SE Unit
PLOT PAGE 42

TAB917
SHEET 28

ENTIRE PAGE CONFIDENTIAL

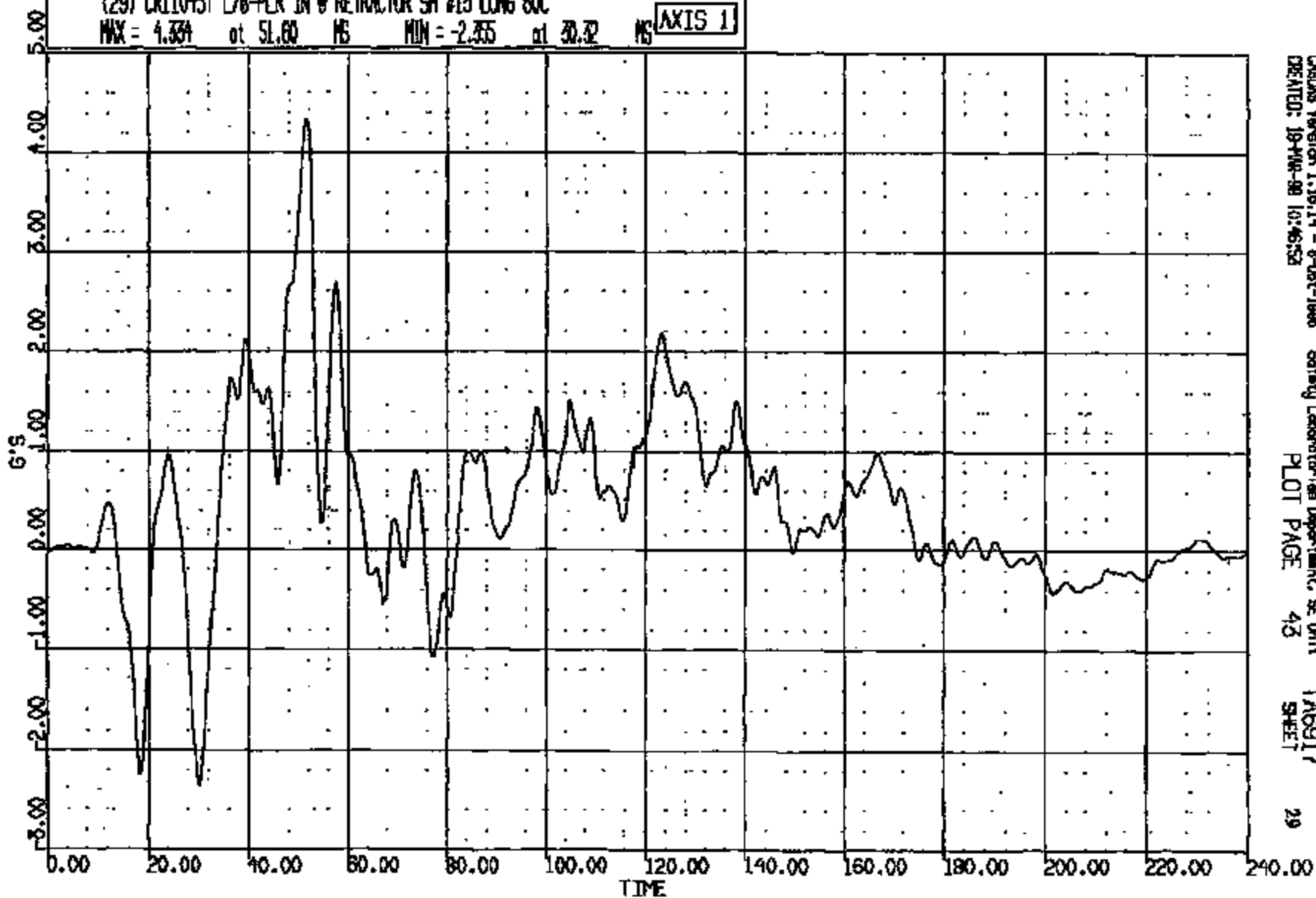
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CR R: 11045 TO: TA6917 DATE: 880319 10:12:50
1998 FN-145 1999 FN-145

(29) CR11045T L/B-PLR IN @ RETRACTOR SM #13 LONG SOC

MAX = 4.334 at 51.60 MS MIN = -2.355 at 30.32 MS

AXIS 1



CADDS Version 1.16.14 - 8-Oct-1998
CREATED: 18-FEB-98 16:46:52

Safety Laboratory Department, SE Unit
PLOT PAGE 43

TA6917
SHEET 29

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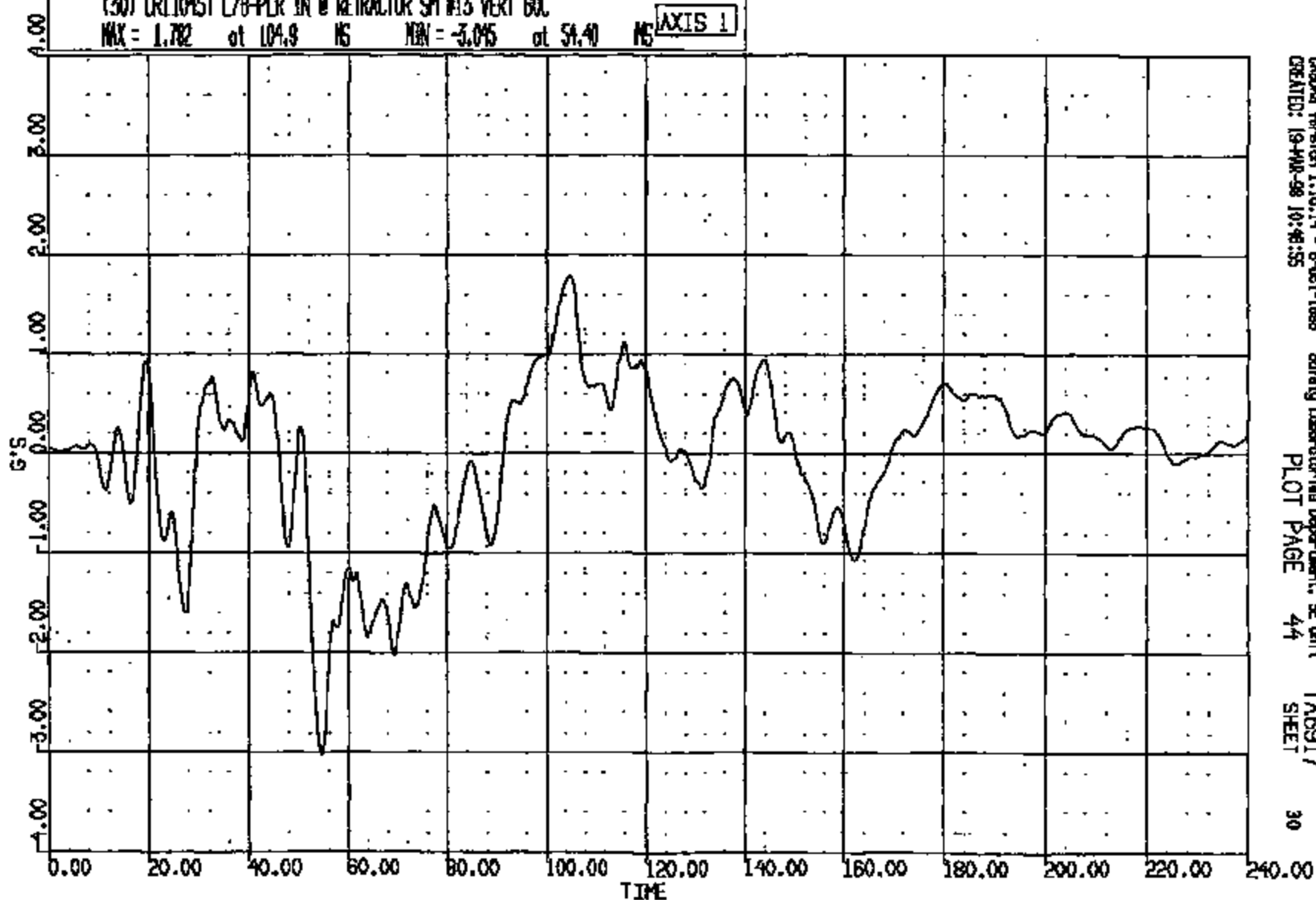
CRTS 0011045

CR R: 11045 TO: TAB917 DATE: 990319 10:12:50
1999 FN-145 1999 FN-145

(30) CR11045T L/B-PLR IN @ RETRACTOR SM #13 VERT GOC

MAX = 1.782 at 104.9 MS MIN = -3.045 at 54.40 MS

AXIS 1



CASDAQ Version 1.16.14 - 8-04-1999
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Safety Laboratories Department, SE Unit 1
PLOT PAGE 44

TAB917
SHEET 30

ENTIRE PAGE CONFIDENTIAL

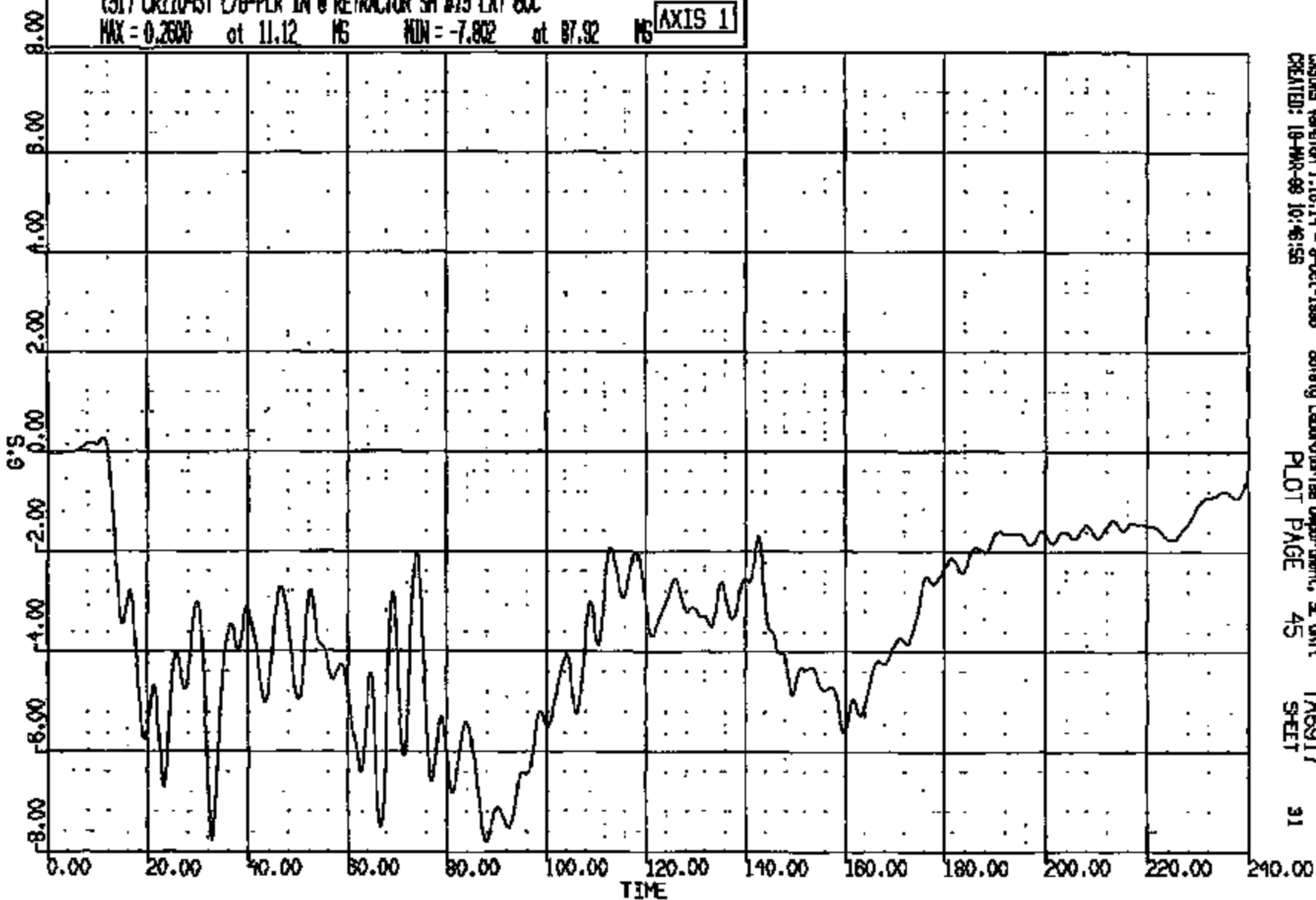
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CR R: 11045 TO: TA6917 DATE: 980519 10:12:50
1999 FN-145 1999 FN-145

(31) CR12045T L/A-PLR IN @ RETRACTOR SN #13 LAT 60C

MAX = 0.2600 at 11.12 MS MIN = -7.802 at 87.92 MS

AXIS 1



CASINS Version 1.16.14 - 9-0-01-1996
CREATED: 19-MAR-99 10:46:55

Safety Laboratories Department, SE Unit
PLOT PAGE 45

TA6917
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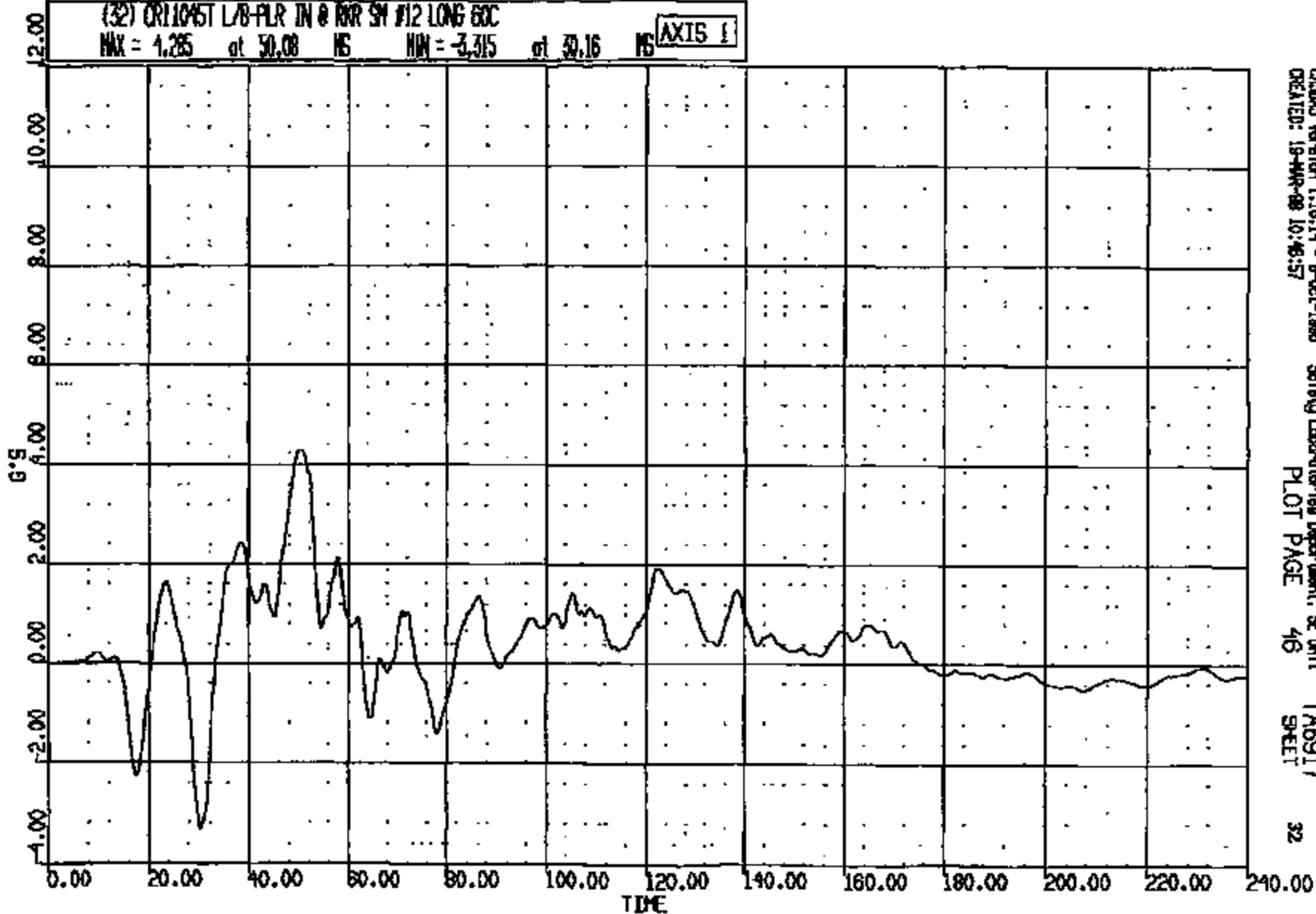
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CR R: 11045 TO: TAB917 DATE: 990519 10:12:50
1999 FN-145 1999 FN-145

(32) CR11045T L/B-PLR IN @ RRR SN #12 LONG EXC

MAX = 4.285 at 50.08 MS MIN = -3.315 at 30.16 MS

AXIS 1



CASMS Version 1.16.14 - 8-Oct-1998
CREATED: 19-MAR-99 10:46:57

Safety Laboratories Department, SE Unit
PLOT PAGE 4/6

TAB917
SHEET 32

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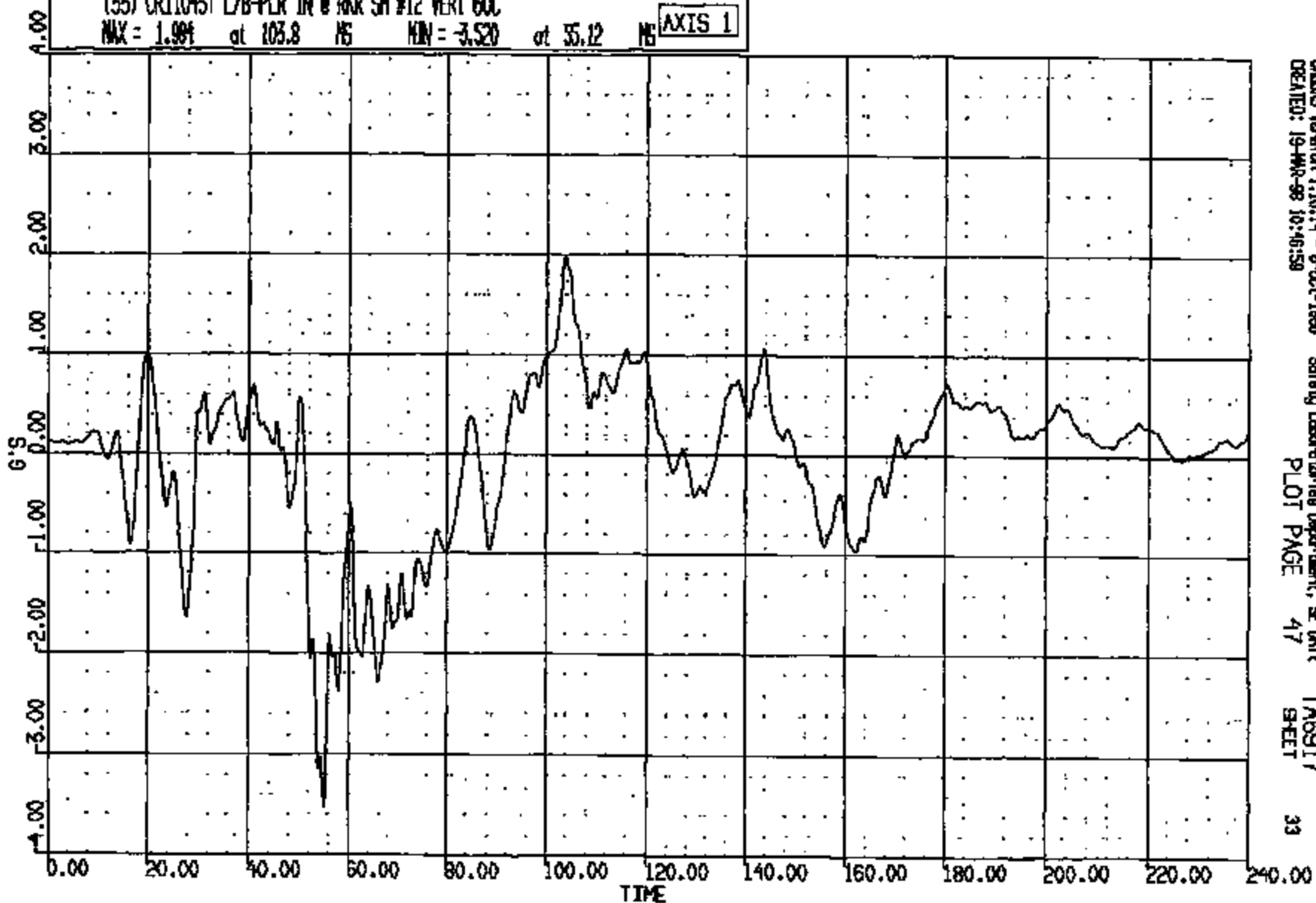
CRIS 0011045

CR R: 11045 TO: TAB917 DATE: 980519 10:12:50
1999 FZ-145 1999 FZ-145

(33) CR11045T L/B-PLR IN @ RKR SN #12 VERT 60C

MAX = 1.994 at 103.8 MS MIN = -3.520 at 55.12 MS

AXIS 1



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CREATED: 19-MAR-98 10:46:59

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TAB917
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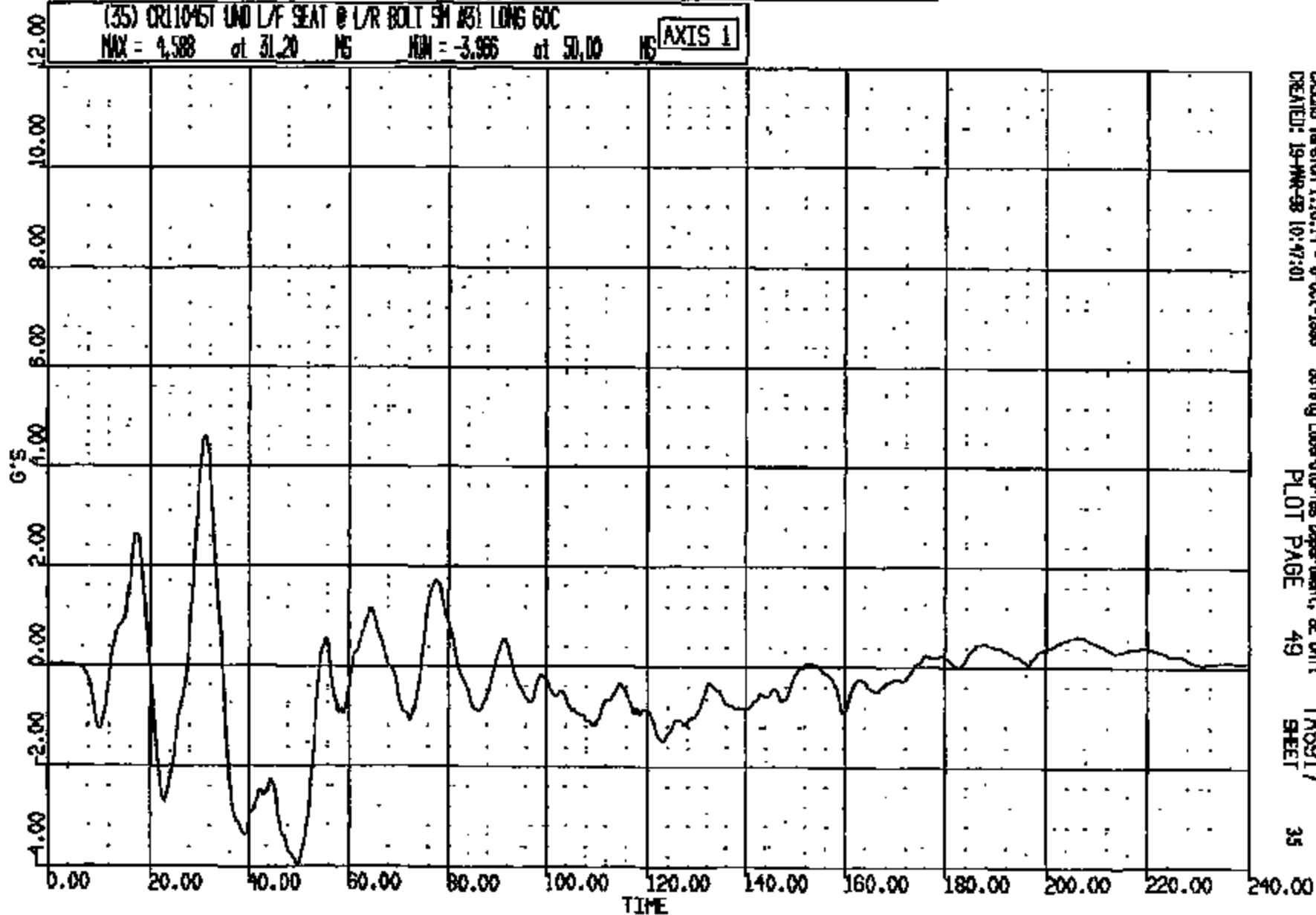
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CR R: 11045 TO: TA6917 DATE: 980519 10:12:50
1999 FN-145 1999 FN-145

(35) CR11045T UND L/F SEAT @ L/R BOLT SM #31 LONG 60C

MAX = 4.588 at 31.20 MS MIN = -3.966 at 50.00 MS

AXIS 1



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CREATED: 19-MAR-98 10:47:01

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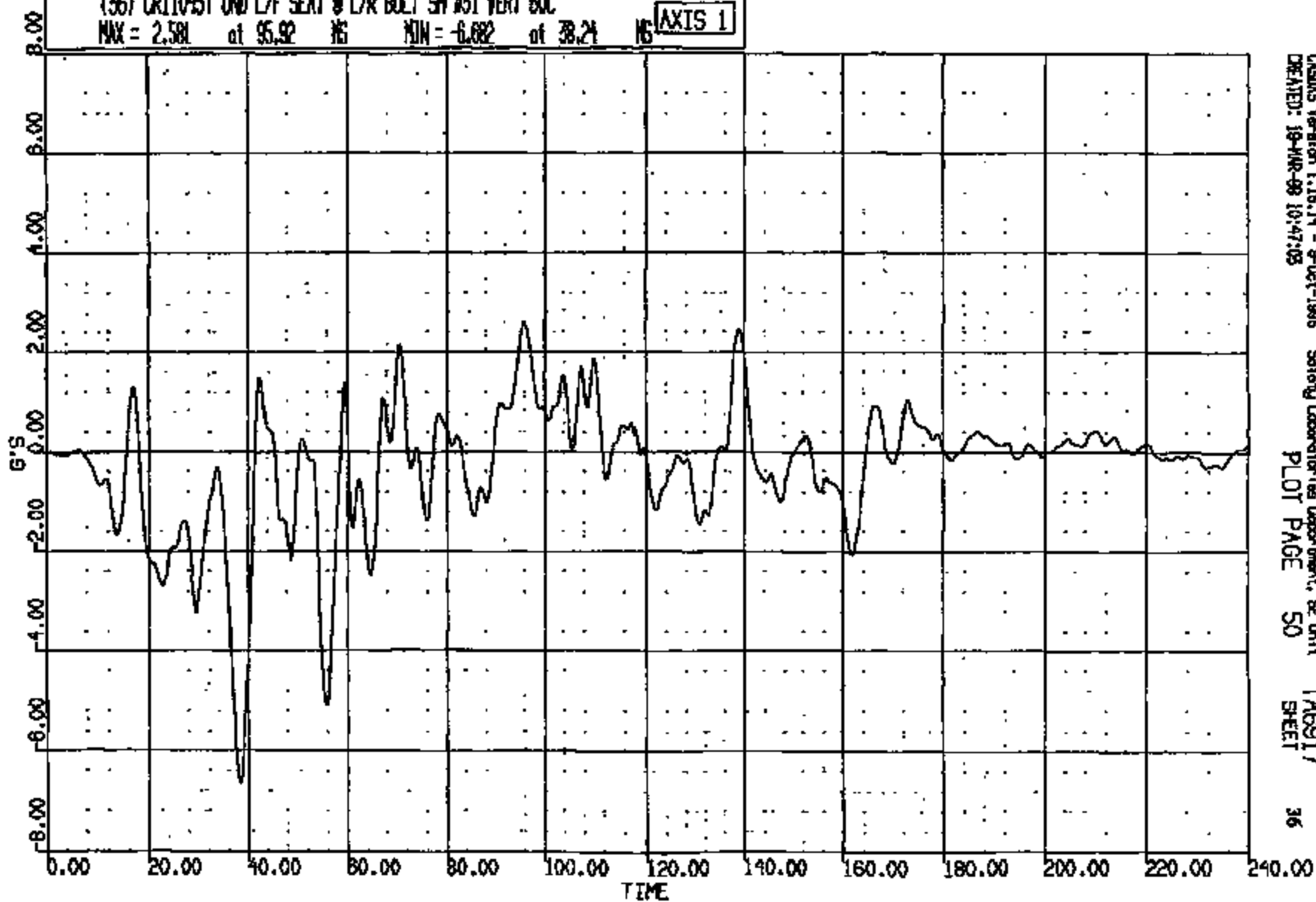
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CR R: 11045 TO: TAG917 DATE: 990319 10:12:50
1999 FN-145 1999 FN-145

(36) CR11045T UND L/F SEAT @ L/R BOLT SN #31 VERT 60C

MAX = 2.581 at 95.92 MS MIN = -6.082 at 38.24 MS

AXIS 1



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