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SANDIA SYSTEMATIC DECLASSIFICATION REVIEW
1st Review Date: 7/1/98
Authority: ADD
Name: B Brenner
2nd Review Date: 7/6/98
Authority: ADD
Name: W C Layne
Determination (Circle Number)
1. Classification Retained
2. Classification Changed to: UNCL
3. Contains No DOE Classified Information
4. Coordinate With:
5. Contains UCAIT
6. Comments: Declassify

RECEIVED
SEP 17 1963
CENTRAL RECORD FILE

SEP 16 1963
File No: TX54, 3-2
T-19753
Completion Date: 7/25/63

CENTRAL RECORD FILE
B13
54/Sadm
3-2

MR. W. E. TREIBEL - 1523
Attn: Mr. J. A. Anderson (8 copies)

Re: Tower Drop Test of B-54-0 (SADM), CTP Unit 3 (U)

Test Summary

The object of this test was to subject the B-54-0 (SADM), designated CTP unit 3 (serial number 169) to the first environment of a planned sequence in accordance with the Confirmation Test Program (CTP) which is a joint Sandia, LASL, Army, and Navy weapon qualification program of the B-54-0 (SADM).

The B-54-0 contained in an H-911 container inside an H-912 container was subjected to a drop test onto a horizontal concrete target, impacting with velocity components of 25 fps vertical and 13.5 fps horizontal. The longitudinal axis of the test unit impacted at an angle of approximately 60° from vertical with respect to the horizontal concrete target.

The B-54-0 sustained no damage during the test. The only apparent damage sustained by the H-912 was crushing of the case at the point of impact. The forward section of the H-911 foam fractured during the test.

The maximum faired acceleration recorded during the test was 82g with a 3.5 ms rise time and pulse duration of 17.5 ms at impact on the MC1321 interval timer.

Test Setup and Procedure

The test unit was rigged to the tower and dropped according to methods outlined in the Tower Safe Operating Procedures. The impact velocity components were 25 fps vertical and 13.5 fps horizontal as illustrated in Table I. The test setup is illustrated in Figure 1.

Test instrumentation consisted of three piezoelectric accelerometers on the MC1321 interval timer as described in Table II and shown in Figure 2. All test data were recorded on a CEC type 5-119 (serial number 9071 and Sandia number 89965) oscillograph using type 7-362 galvonometers having a flat frequency response of 2500 cps. Other information on the test instrumentation can be found in the "Tower Log Book" under the T-No. of this test.

PROGRAM 05447
CATEGORY 30173
ORG. 2076 210
DATE 6367

SANDIA SYSTEMATIC DECLASSIFICATION REVIEW
DOWNGRADING OR DECLASSIFICATION STAMP
CLASSIFICATION CHANGED TO: U
Emelda Selph 7/15/98
PERSON CHANGING MARKING & DATE
WC Layne 7/6/98
PERSON VERIFYING MARKING & DATE
AUTHORITY: W. C. Layne
RECORD ID: 98SN2804
DATED: 7/6/98

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Prior to testing, Division 1523 personnel ran a continuity check on the explosive circuits. After dropped the test unit another check was run and after a two-minute waiting period a final check was run as per Safe Operating Procedures written by F. H. Mathews, 7325.

Test Results

A post-mortem check revealed no damage to the B-54-0 (SADM). The damage sustained by the H-911 foam is shown in Figures 3 and 4. The damage sustained by the H-912 container, at the point of impact, is shown in Figures 5 through 7.

The accelerations and times observed during the test are shown in Table I.

All acceleration data were interpreted according to SC 4452 B(M), Section C, dated February, 1963.

T. L. Evans

T. L. EVANS - 7325-2

R P May

Test Project Engineer: R. P. MAY - 7331-1

Bill Johnson

Approved by: B. JOHNSON - 7331-1

TLE:7325-2:bg

Enclosures: Tables I & II
Figures 1 through 7

Copy to:
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D. S. Bliss, 2344
E. H. Copeland, 7331
C. L. Johnson, 7523
Central Record File, 3421-3

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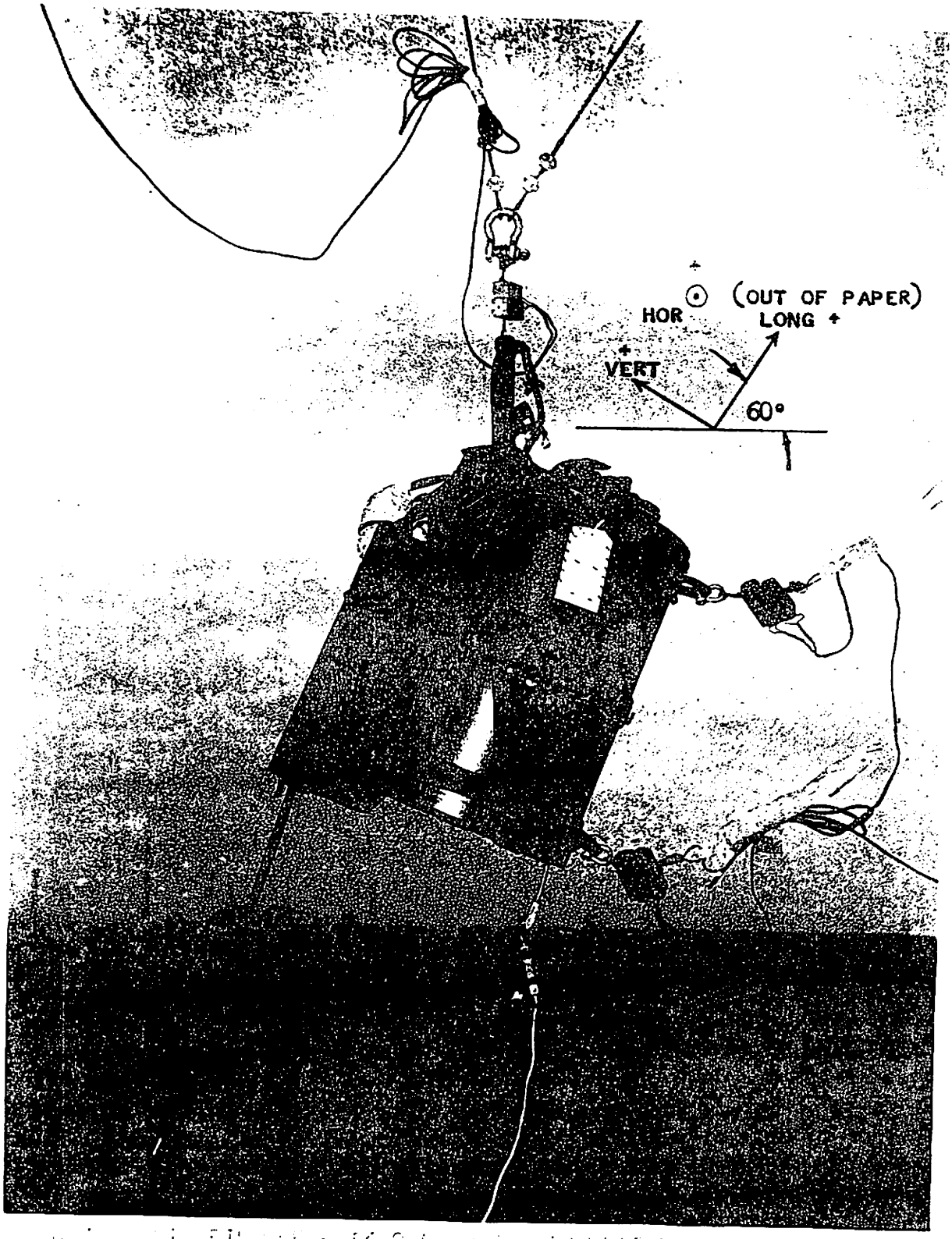

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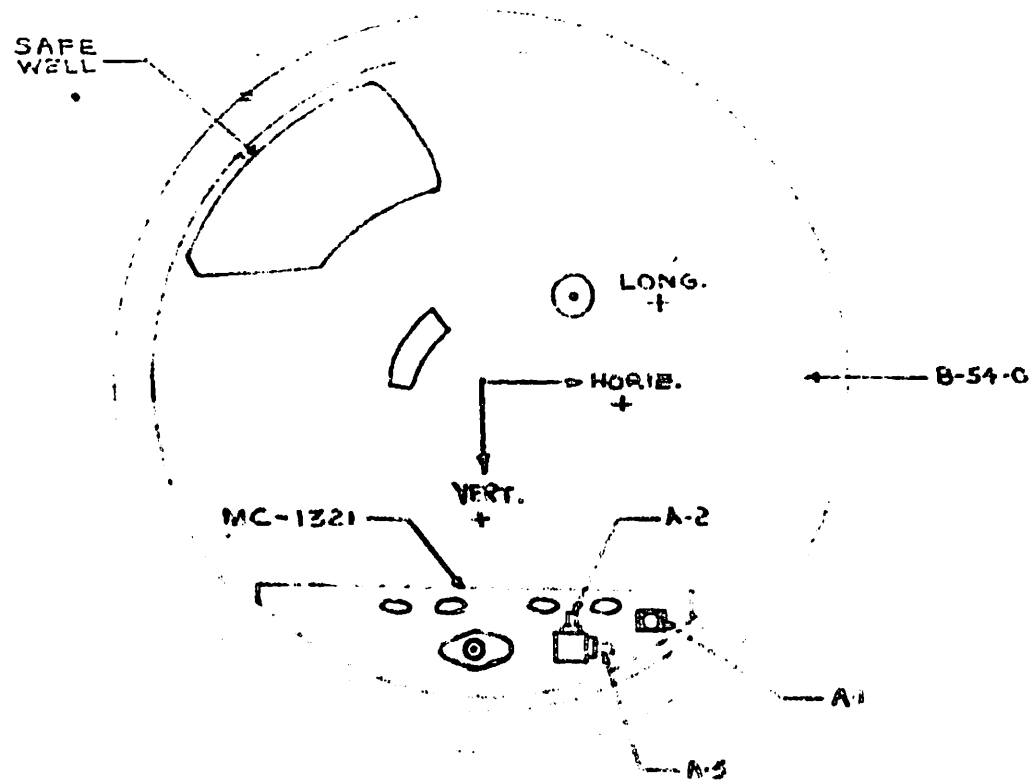

FIG. 2 INSTRUMENTATION FOR DROP TEST
TOWER DROP TEST OF B-54-C(SPON) CTP UNIT NO. 3
T-9753

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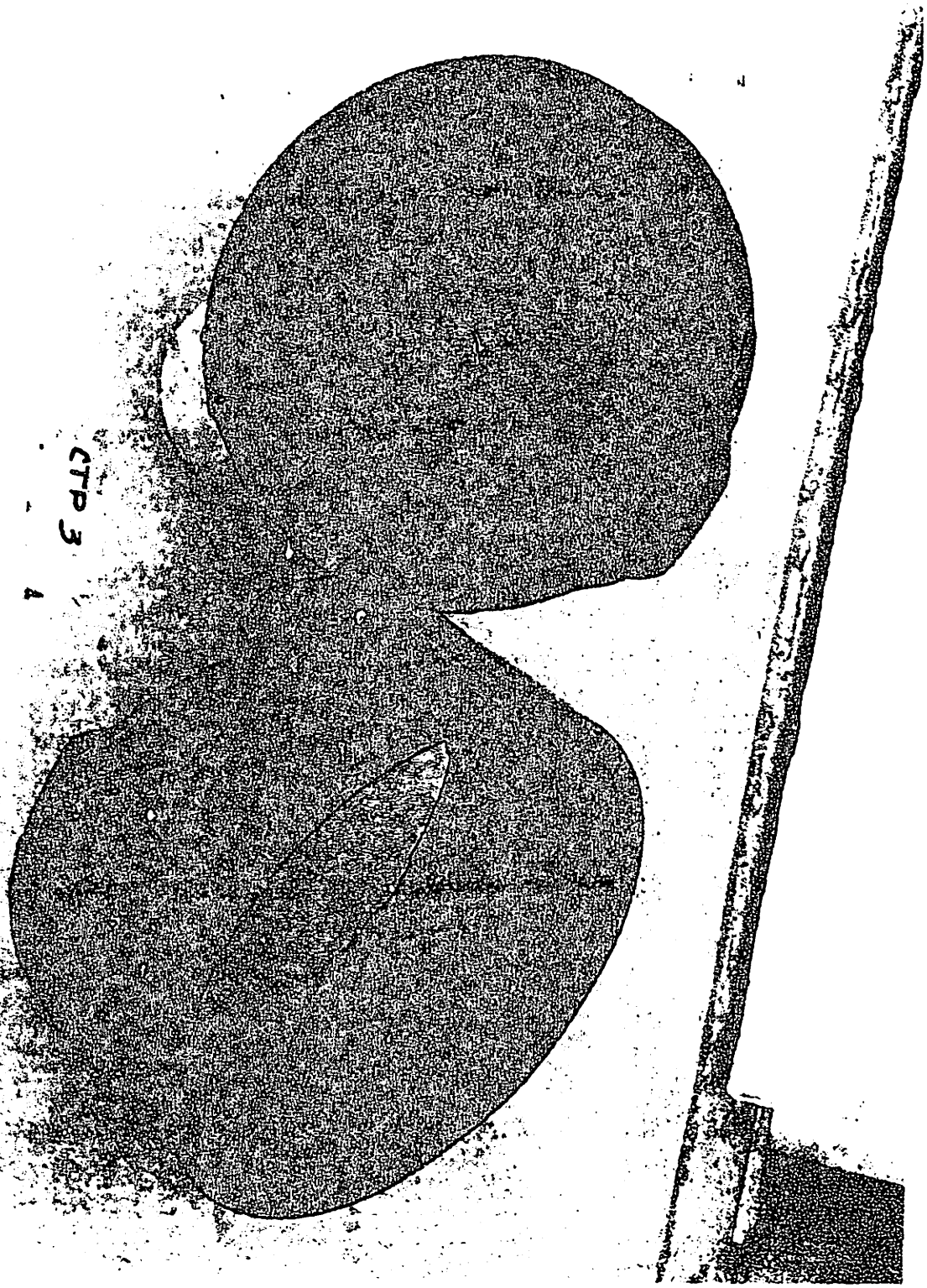

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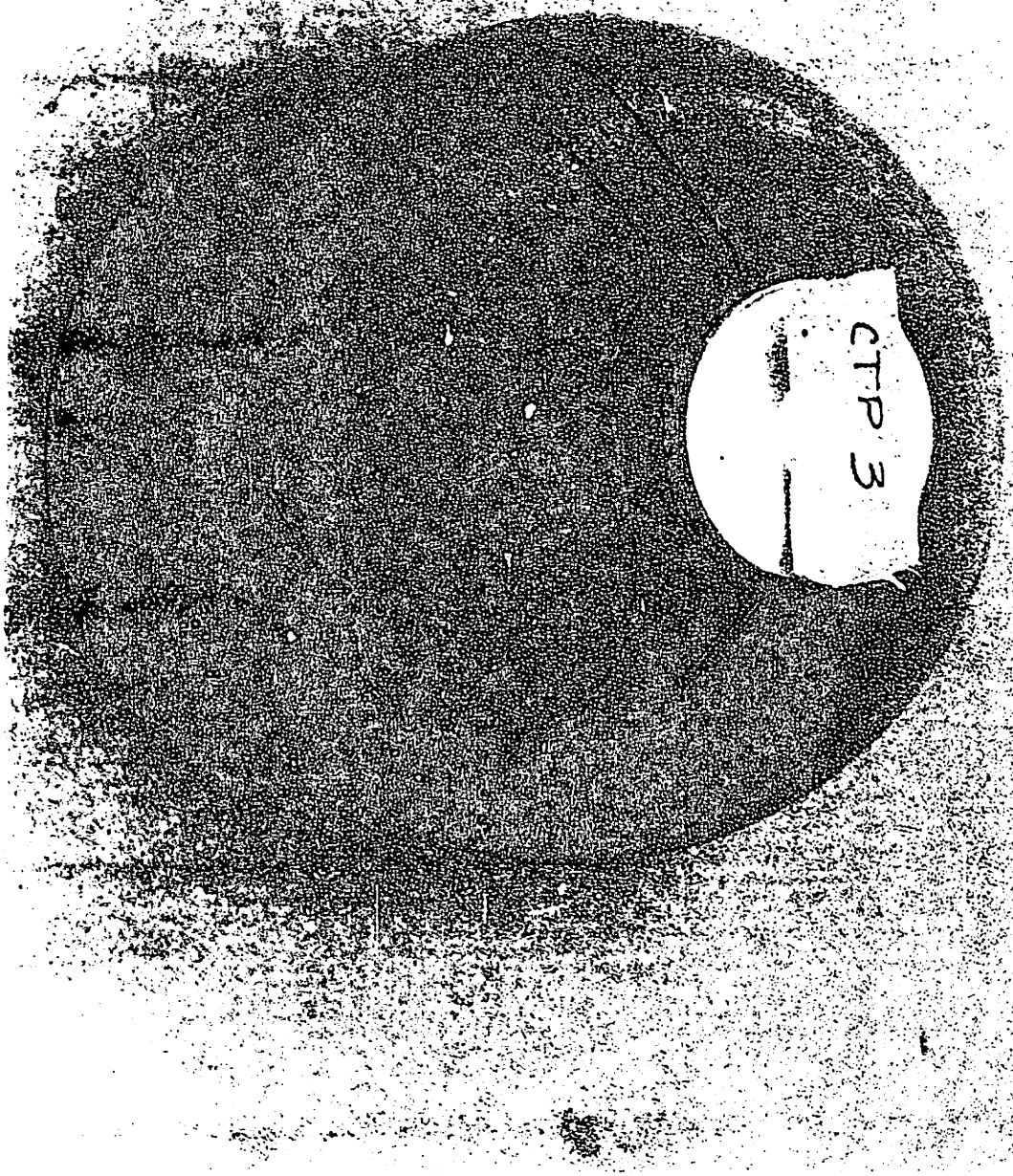

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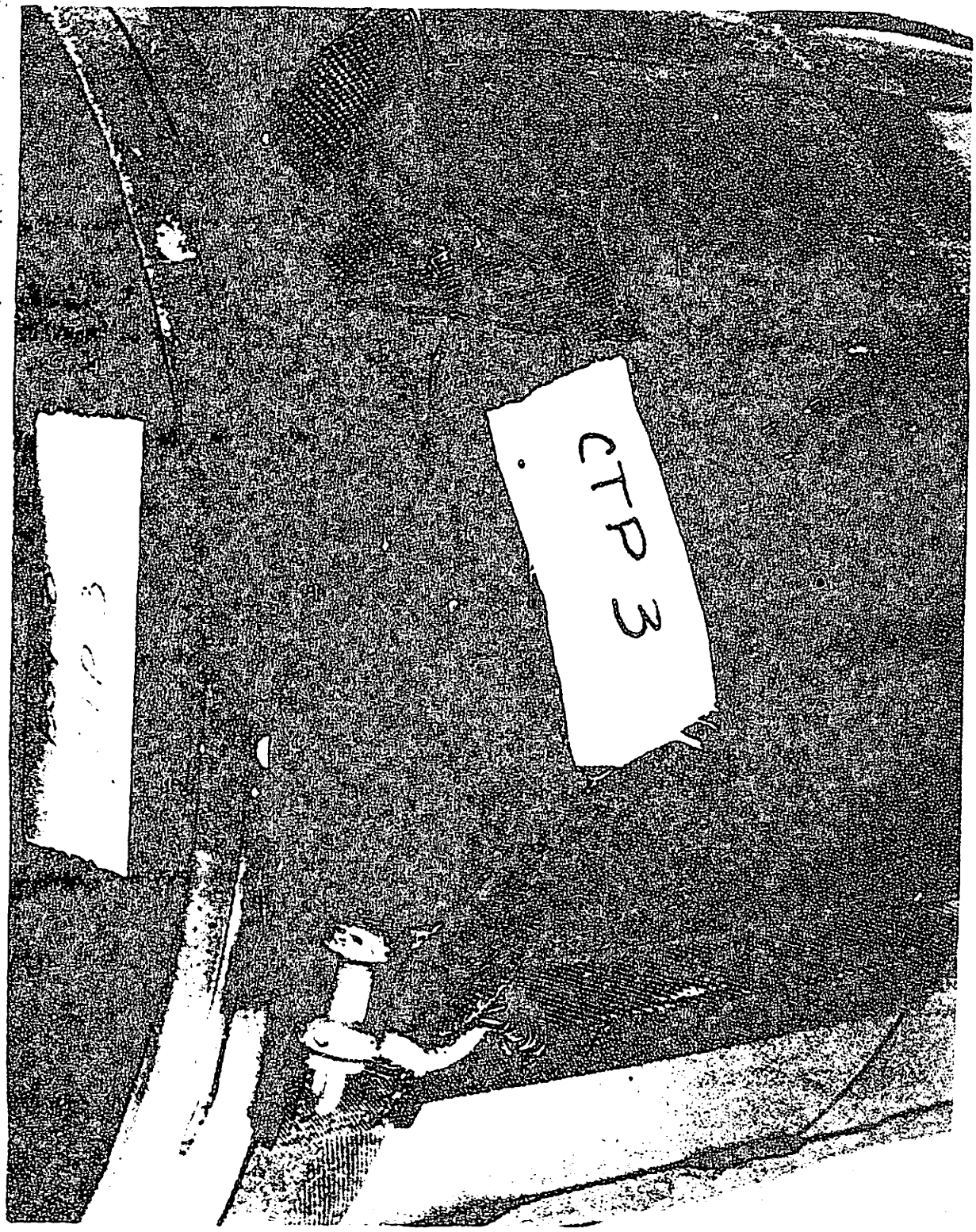

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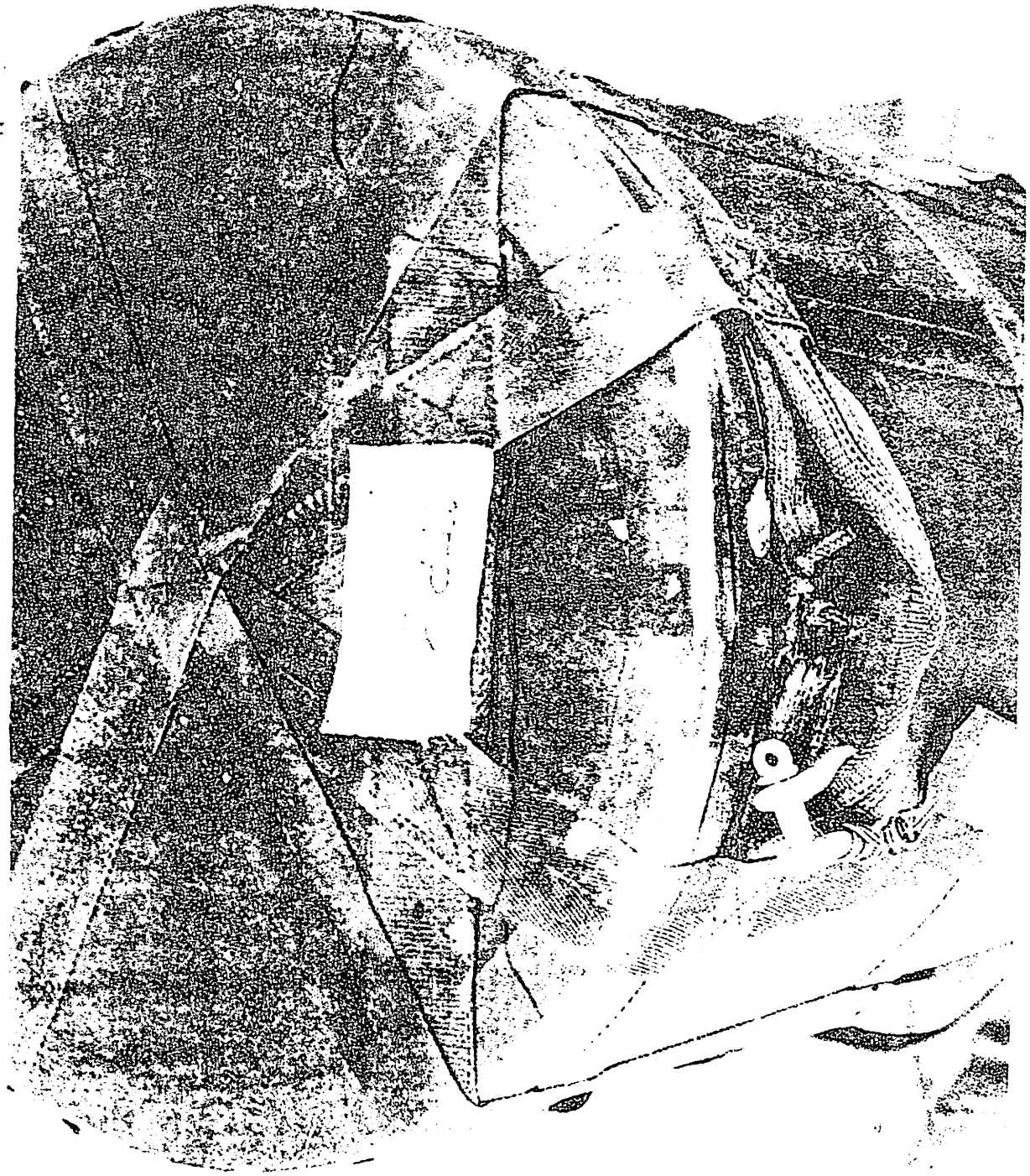

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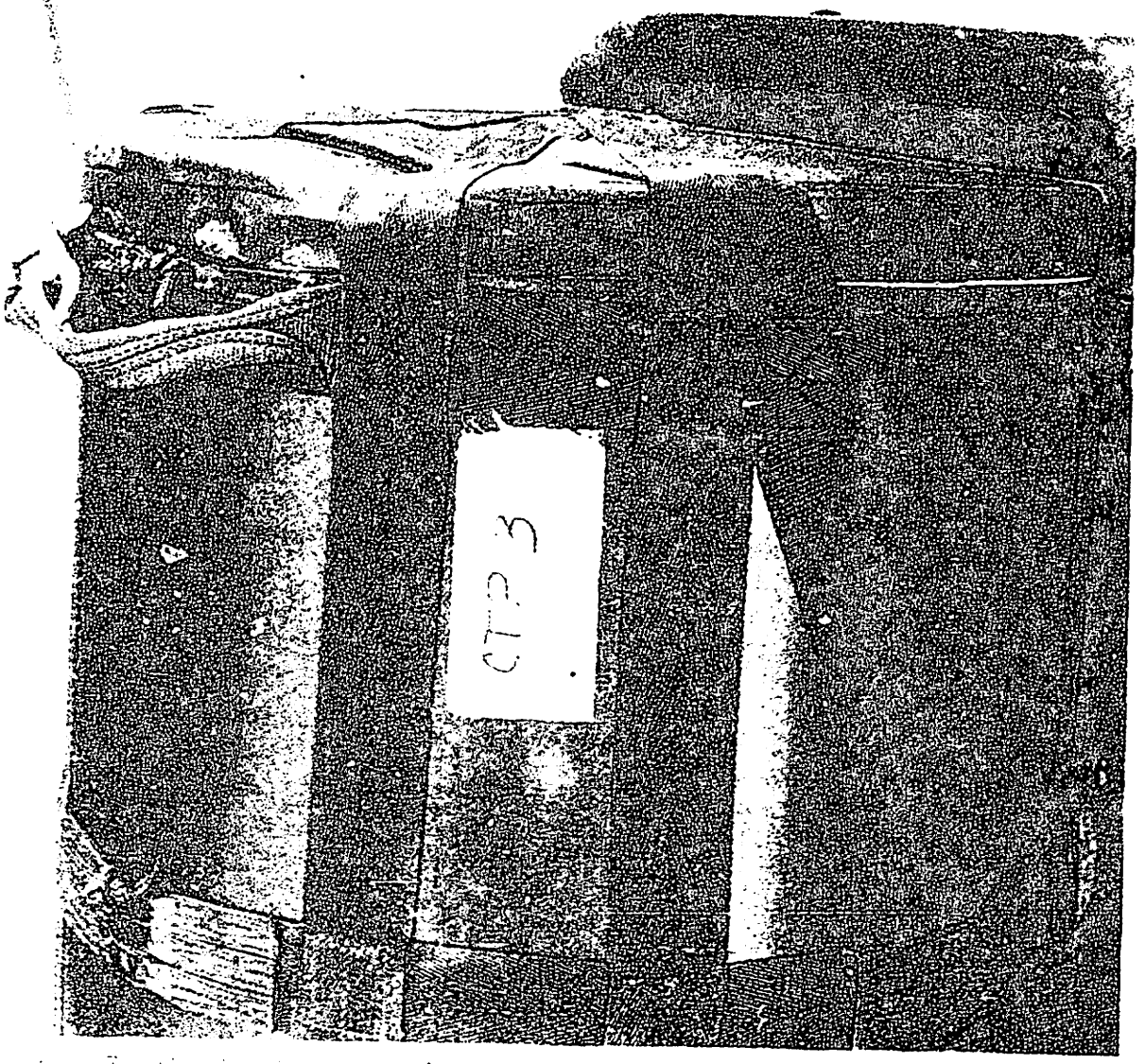

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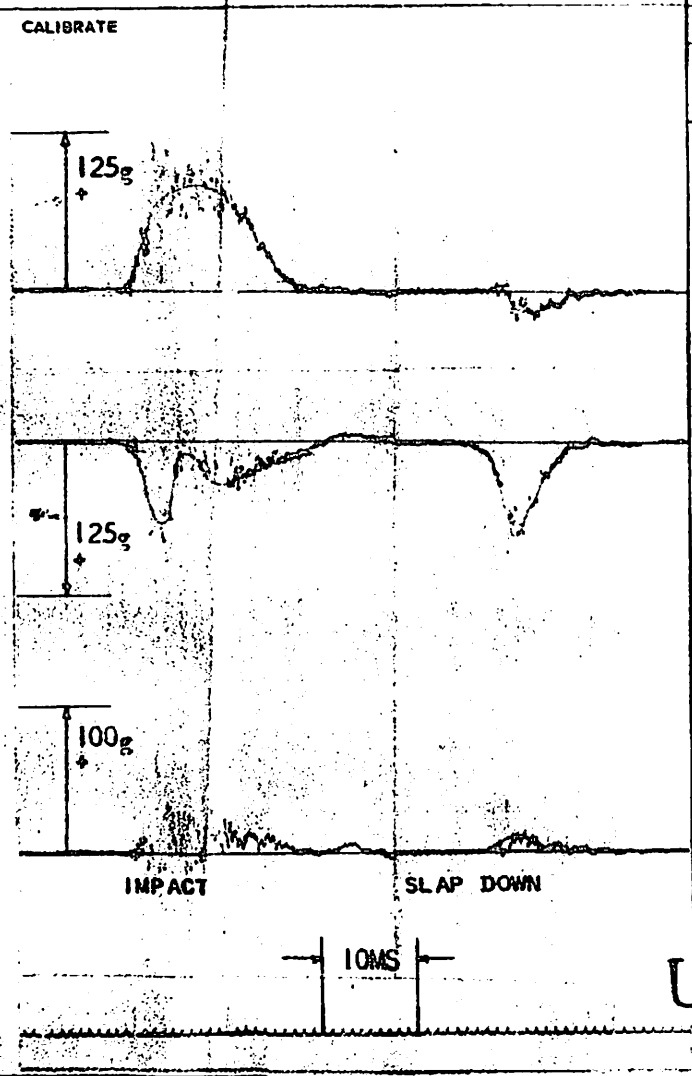
TABLE I

T- 19753
REF. SYM.

ACCELERATION SIGNATURES ON THE MC-1321 TIMER
DROP TEST OF B-54-0 (SADM), CTP UNIT 3



IDENTIFICATION			ACCELERATION DATA					TEST CONDITIONS
GAGE NO.	SENSING DIRECTION	LOCATION	MFP g	MAX +g	MAX -g	RISE MSEC	DURATION MSEC	
				IMPACT				
			+82	138	—	3.5	17.5	
				SLAP DOWN				
A-1	LONG	TIMER	-16	7	23	1.0	5.5	
				IMPACT				
A-2	VERT	TIMER	+67	98	—	2.5	17.5	
				SLAP DOWN				
			+68	89	—	2.5	8.0	
				IMPACT				
A-3	HOR	TIMER	—	68	37	—	—	
				SLAP DOWN				
			+12	41	—	1.0	5.0	

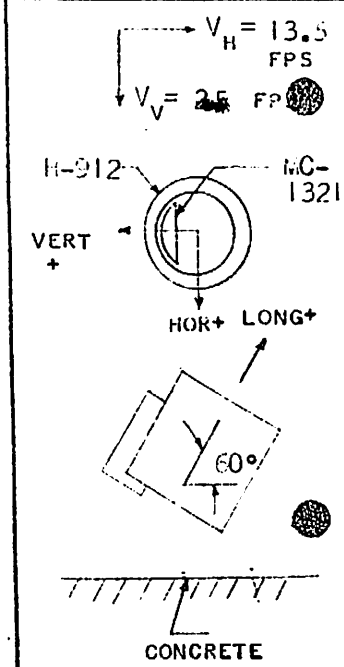


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TABLE II

ACCELEROMETERS USED

TOWER DROP TEST OF B-54-0 (3ADM), CTP-UNIT NO. 3

Accel. No.	Location	Direction	*Model No.	Serial No.	Range (± g)	Nat. Freq. (cps)	Figure Reference
A-1	MC1321 Interval Timer	Longitudinal	2213	R-383	500	30,000	2
A-2	MC1321 Interval Timer	Vertical	2213	3586	500	30,000	2
A-3	MC1321 Interval Timer	Horizontal	2213	4689	500	30,000	2

*Endavco piezoelectric cyrstal accelerometers.

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