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SANDIA SYSTEMATIC DECLASSIFICATION REVIEW	
1 st Review Date: <u>6/9/98</u>	Determination (Circle Numbers):
Authority: <u>W. L. Payne</u>	Classification Retained <input type="checkbox"/>
2 nd Review Date: <u>6-45-98</u>	Classification Changed to: <u>U</u>
Authority: <u>ADD</u>	Contains No DOE Classified Information <input checked="" type="checkbox"/>
Name: <u>W. L. Payne</u>	Coordinates With: <input type="checkbox"/>
	Contains UCAIP: <input type="checkbox"/>
	Comments: <u>release</u>

T-11085

File: XW-45, 3-2

DEC 10 1965

DROP TESTS OF THE XW 45 ADM (U)

RECEIVED

DEC 10 1965

GENERAL TECH FILE

Organization 7300 Environmental Test Report

0	4	5	9	0
PROGRAM				
3	0	1	7	3
CATEGORY				
2	0	8	ORG.	
6	5	9	DATE	
50				

T. L. EVANS, ORG. 7325

Approved by T. L. Evans
Project Leader, 7325

CENTRAL TECHNICAL FILE	
ACCOUNTABILITY CARD	B
FILE NO. <u>45-Program</u>	
<u>880</u>	<u>3-2</u>

Approved by E. White
E. White, 7331

Distribution:
 R. J. Tockey, 8124, Attn: S. W. Mayer, Jr. (4)
 F. H. Mathews, 7325
 E. White, 7331
 Central Technical File, 3428-1
 Central Technical File, 8232

SANDIA SYSTEMATIC DECLASSIFICATION REVIEW DOWNGRADING OR DECLASSIFICATION STAMP	
CLASSIFICATION CHANGED TO: <u>U</u>	AUTHORITY: <u>W. C. Payne</u>
PERSON CHANGING MARKING & DATE: <u>Emelda Selph 6/17/98</u>	RECORD ID: <u>98502416</u>
PERSON VERIFYING MARKING & DATE: <u>W. C. Payne 6/17/98</u>	DATED: <u>6/15/98</u>

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[REDACTED]

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DEOP TESTS OF IRE XW 45 ADM [REDACTED]

Introduction

The object of this test was to determine the response of the XW 45 subassembly to mechanical shock and to determine the seal integrity of the unit's protective case. The subassembly was mounted in a newly designed protective case which was installed in an H 815 container.

Three units, Nos. 3, 5 and 6 were drop-tested at Building 4505 in Area III. Each unit was oriented with its longitudinal axis horizontal and was dropped from a height of 12 inches onto a horizontal concrete target for each test.

This test was requested by S. Meyer, 8124, in an Environmental Test Request dated May 25, 1965. Mr. J. M. Carmichael, 7331, was the Test Project Engineer. Testing was completed on September 8, 1965.

Summary

None of the three XW 45 test units were damaged as a result of this test series. Inspection and leak-testing of the protective case seals performed after the tests indicated no leakage or other damage.

The maximum acceleration recorded on the XW 45 subassembly, Unit No. 3, was 56 g in the vertical or Z direction. The maximum acceleration recorded on the XW 45 subassembly, Unit No. 5, was more than 100 g in the Z direction and resulted in tape recorded over-deviation.

Unit No. 6 was not instrumented for the drop.

Procedure

The H-815 (containing the XW 45) was rigged for a 12-inch drop as shown in Figure 1. The subassembly and protective case of Units 3 and 5 were each instrumented with three piezoelectric accelerometers. The H-815 shipping containers of Units 3 and 5 were instrumented with three strain gage type accelerometers. The locations of these accelerometers are shown in Figures 2 and 3. Sensing directions and basic accelerometer specifications are shown on Tables 2 and 3.

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The acceleration data were recorded on a C.E.C. type VR 2600 tape recorder having a frequency response of DC to 40 KC and were played back in the Area III playback center using a 5 KC low-pass filter. The magnetic tapes are stored in the Area III Data Center (Building 6540) for a period of six months from the date of the test. A comprehensive description of the accelerometers, data recording, and playback equipment is available from the drop tower file in Building 6505 under the T-number of this report.

Results

The test records and tabulated acceleration data are presented in Tables I and II. The XW 45 test units sustained no damage during this test series. The seals on the protective cases were inspected and leak-tested by J. M. Carmichael, 7331, before and after each test and found to be free of leaks.

The maximum faired acceleration recorded on the XW 45 subassembly, Units No. 3, was 47 g in the Z direction. The maximum acceleration in the Z direction on Unit No. 5 was greater than 150 g which resulted in over-deviation of the tape recorder and no valid data were obtained.

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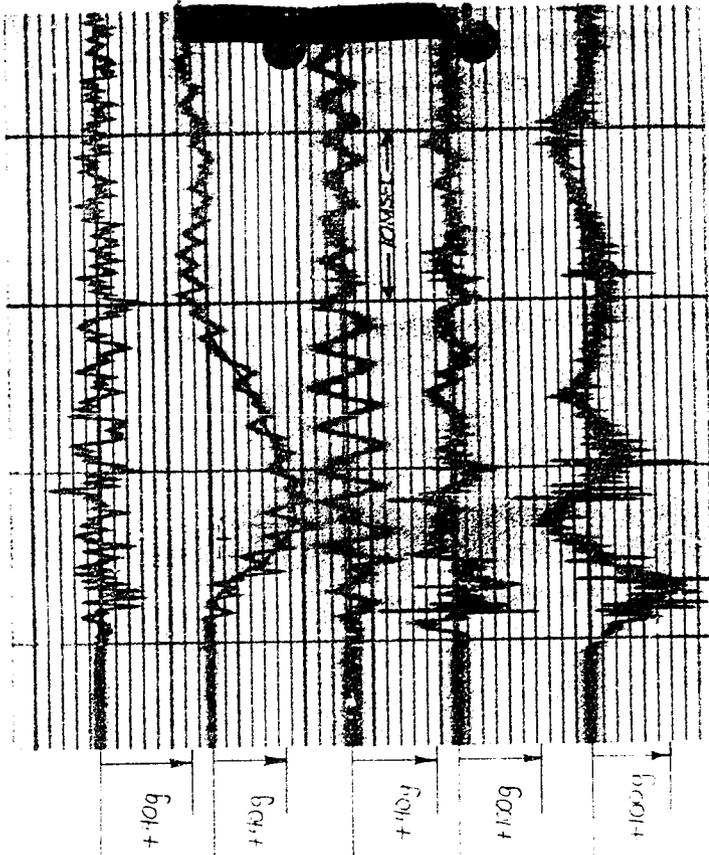
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TABLE I
Page 1

ACCELERATION DATA (Unit 3)
DPCP TESTS OF THE X445 ADM

Make, S/N Range, f_n	Duration (msec)	Rise (msec)	Max. - (g)	Max. + (g)	Paired (g)	Location and Sensing Dir.	Gage No.
...	20	19	---	WARHEAD LONG, X	A-1
...	...	3.2	14	5.6	+47	WARHEAD VERT, Z	A-2
...	...	---	13	19	---	WARHEAD HORIZ, Y	A-3
...	...	---	14	14	---	INITIAL CASE LONG, X	A-4
...	...	---	22	15.0	---	PROTECTIVE CASE VERT, Z	A-5

RECORD FILTERED TO 5 KC



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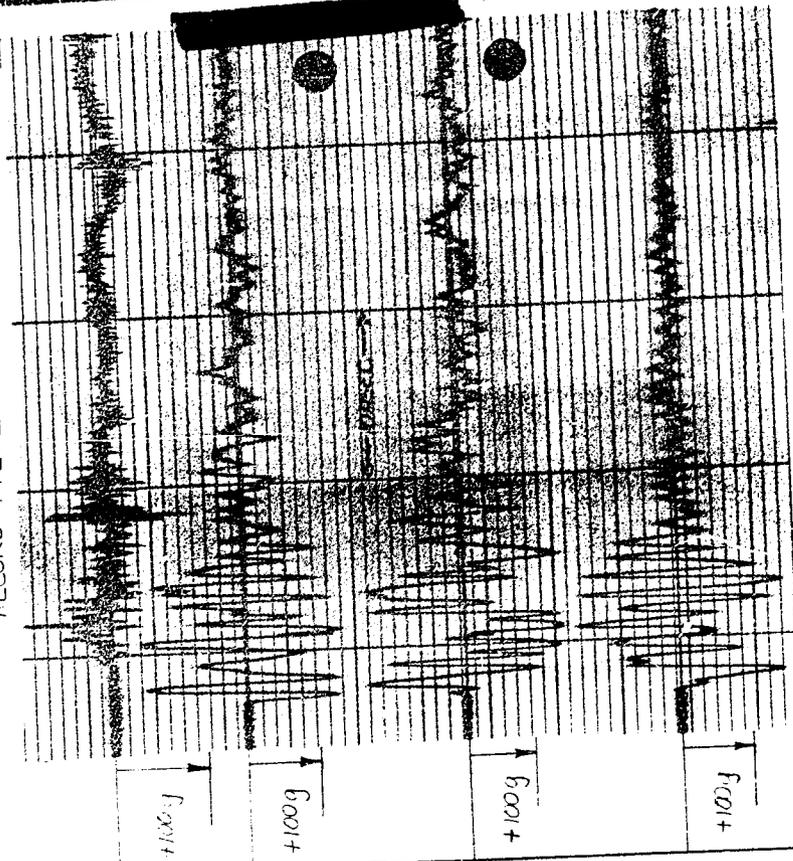
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TABLE I
Page 2
ACCELERATION DATA (Unit 3)
DROF TESTS OF THE X445 ADM

Make, S/N Range, f_n	Duration (msec)	Rise (msec)	Max. - (g)	Max. + (g)	Paired (g)	Location and Sensing Dir.	Gage No.
100-100-02			29	31		PROJECTILE CASE HORIZ. Y	A-6
100-100-03			130	128		SHIPPING CONTAINER LONG. X	A-7
100-100-04			140	145		SHIPPING CONTAINER VERT. Z	A-8
100-100-05			133	137		SHIPPING CONTAINER HORIZ. Y	A-7

RECORD FILTERED TO 5KC.



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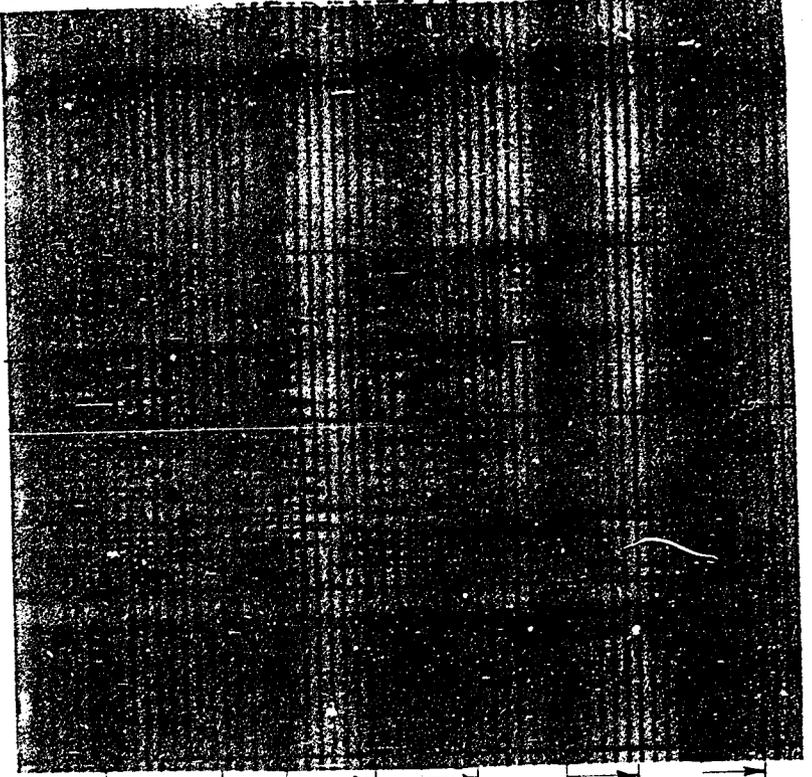
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TABLE 1
 Page 1
 ACCELERATION DATA (Unit 5)
 DROP TESTS OF THE XM45 ADM

Yake, S/R Range, f _n	Duration (msec)	Rise (msec)	Max. - (g)	Max. + (g)	Faired (g)	Location and Sensing Dir.	Gage No.
	—	—				WAKEHEAD LONG. X	A-1
	—	—	17	42	—	WAKEHEAD LONG. Y	A-2
	—	—				WAKEHEAD VEPT. Z	A-3
	—	—	17	42	—	PROJECTILE CASE LONG. X	A-4
	—	—	17	42	—	PROJECTILE CASE LONG. Y	A-5

RECORD FILTERED TO 5KC.



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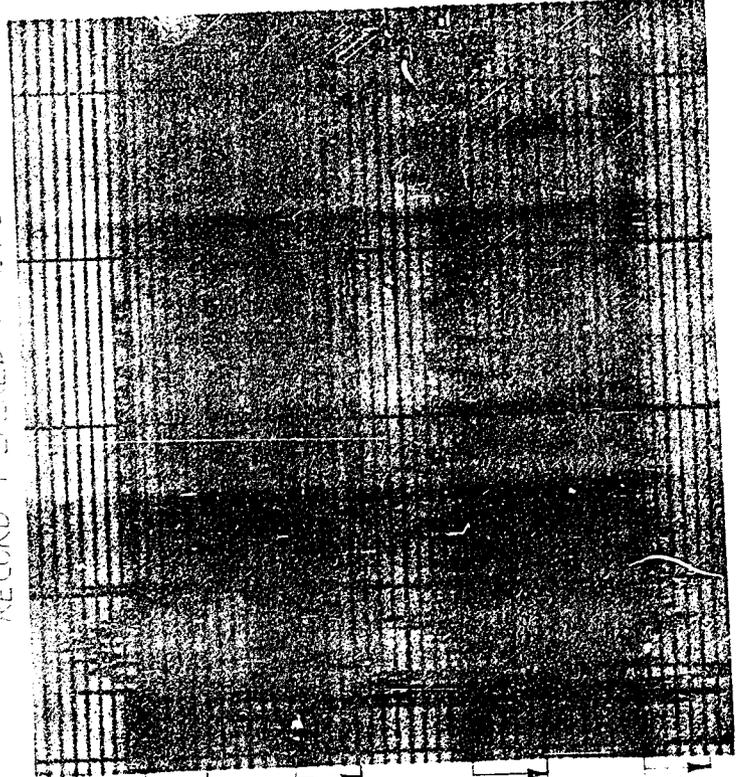
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TABLE II
Page 2
ACCELERATION DATA (Unit 5)
SPEC TESTS OF THE XM45 ADM

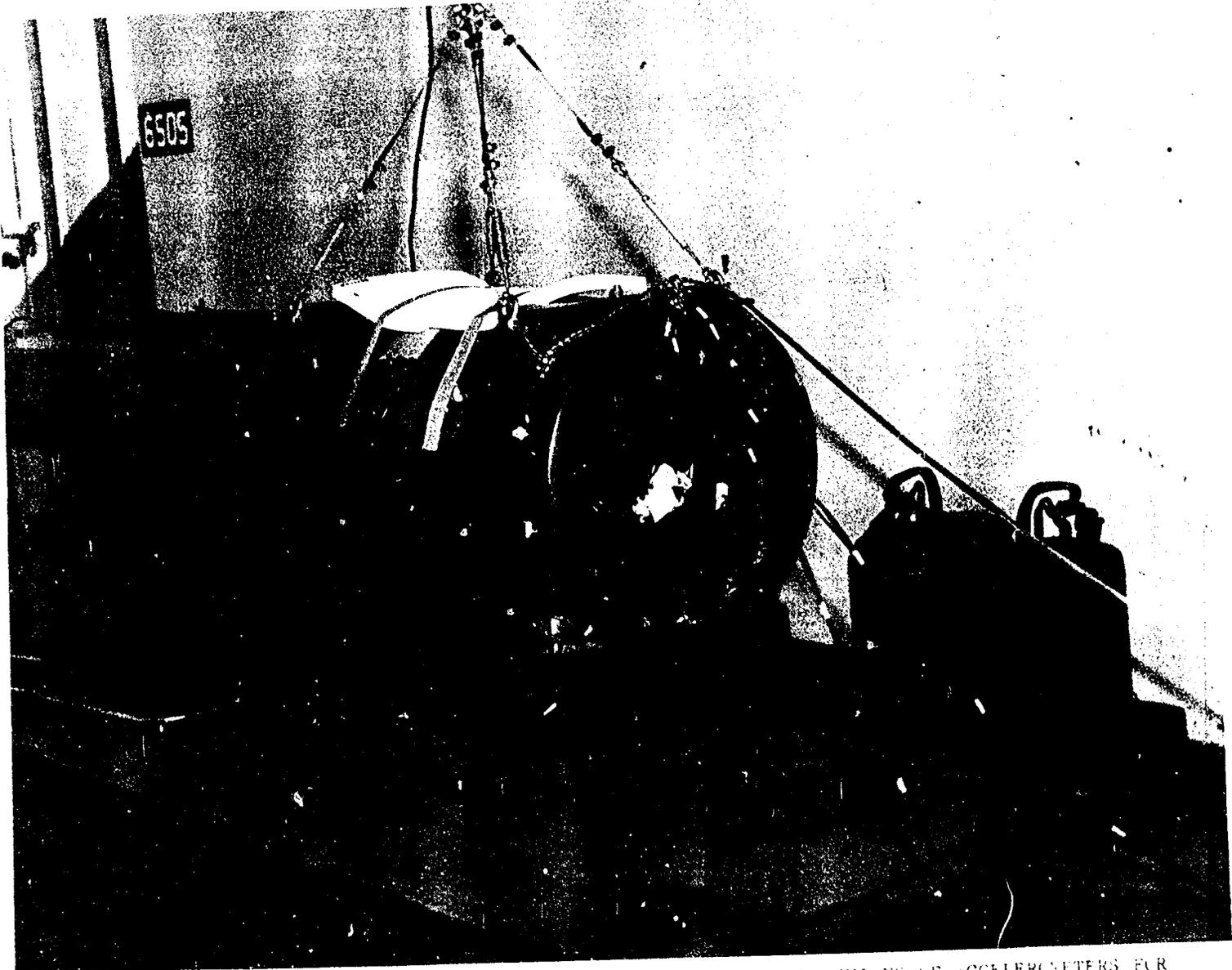
Make, S/N Range, f_n	Duration (msec)	Rise (msec)	Max. - (g)	Max. + (g)	Faired (g)	Location and Sensing Dir.	Cage No.
						CONVERTER 100%	A-6
						CONVERTER 100%	A-7
						CONVERTER 100%	A-8
						CONVERTER 100%	A-7

RECORD FILMED 1-5-72



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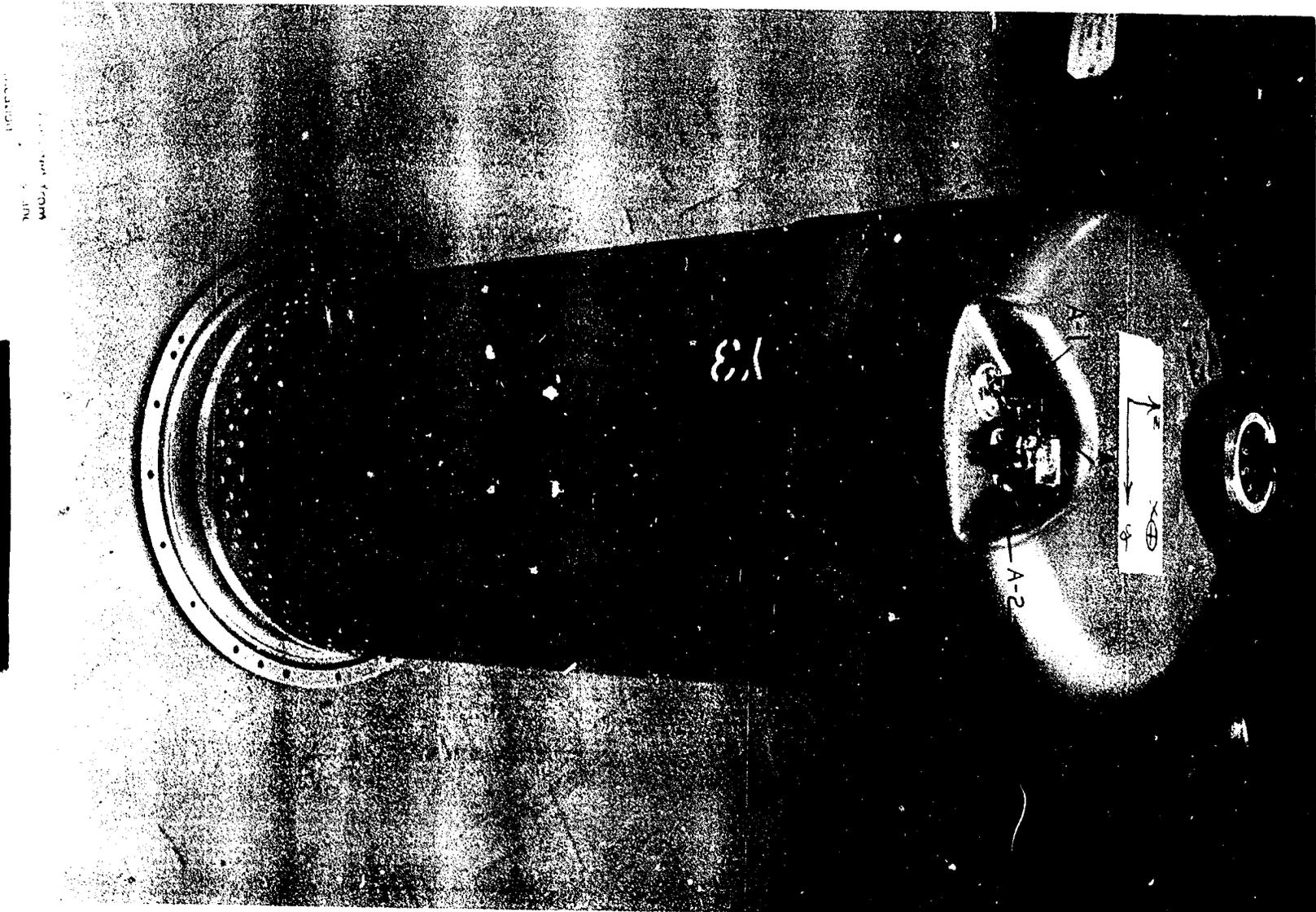


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FIGURE 1. DISTRIBUTION OF LOCATIONS OF COPIERS AND SENSING DIRECTIONS OF ACCELEROMETERS FOR
JET SERIES.

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FIGURE 1.

INTERPRETATION OF XW-45 WARHEAD

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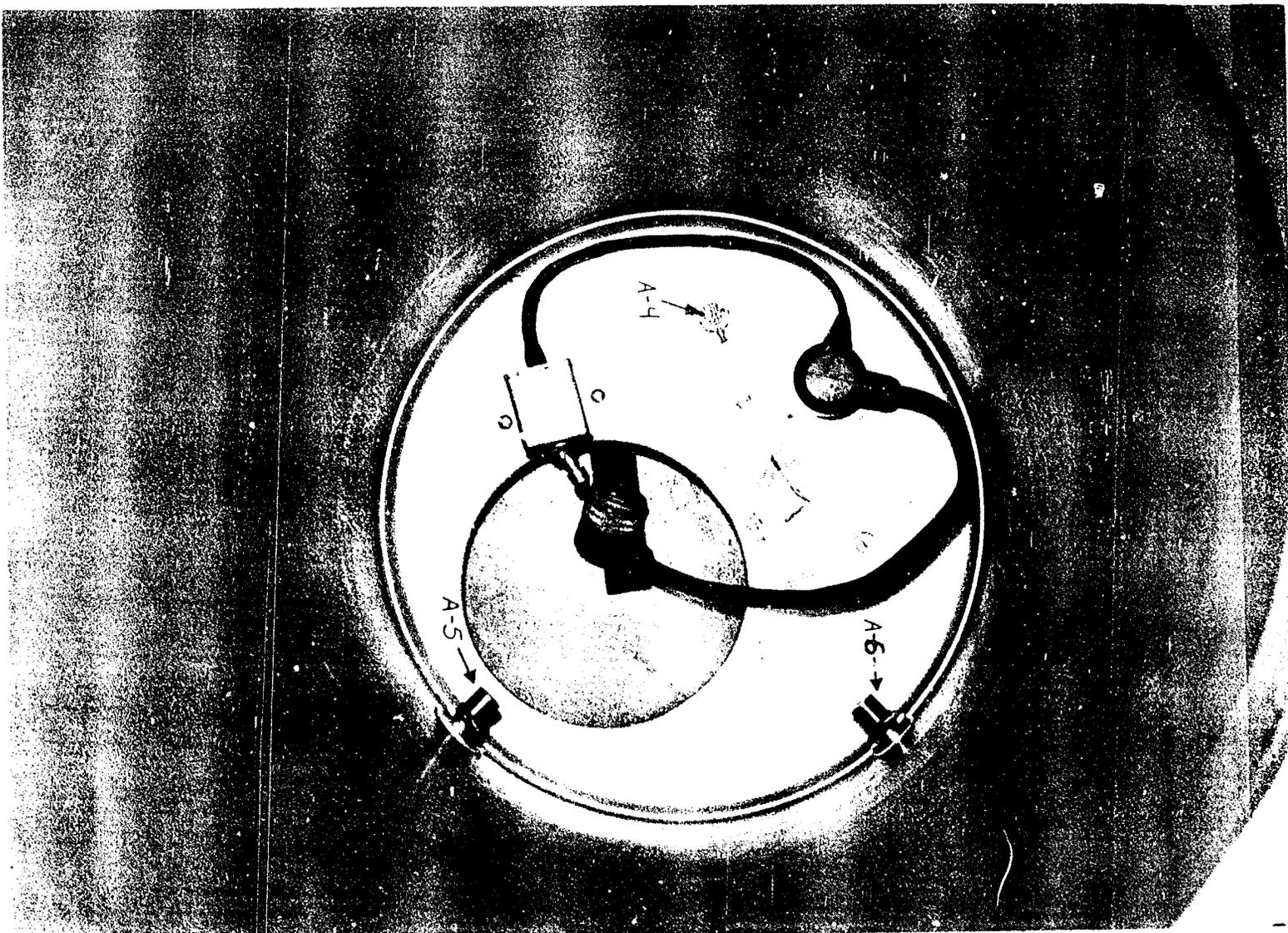


FIGURE 3.

INSTRUMENTATION ON PROTECTIVE CASE

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