[redacted]

UNCLASSIFIED

#166

SANDIA SYSTEMATIC DECLASSIFICATION REVIEW

1st Review Date: 8/26/98	Determination (Circle Numbers):
Authority: ADC ADD	1. Classification Retained
Name: R Blanner	2. Classification Changed to: U
2nd Review Date: 9/9/98	3. Contains No DOE Classified Information
Authority: ADD	4. Coordinate With:
Name: W Layne	5. Contains UCAI?
	6. Comments: Declassify

FEB 6 1961

File No: XW-38, 3-2
T-1654
13.804.40
RS 7321/9639

RECEIVED
FEB 4 1961
CENTRAL RECORD FILE

TO: DISTRIBUTION

Re: Ramp Test of an XW-38 TRM-2 in an XH-770 Container

Summary of Test

A pressurized (17 psig) XW-38 TRM-2 in an XH-770 container was ramp tested per SCS-5 at ambient, high (+165°F) and low (-60°F) temperatures to simulate the effect of railway bumping loads on the warhead and shipping container.

No visible structural damage was noted after the completion of all ramp tests.

Two ramp series were run at ambient temperature with data obtained only on the last series.

Maximum accelerations recorded on the XW-38 TRM-2 case during the ambient, high and low temperature runs were 11.0 g at 7.0 MPH, 9.5 g at 6.7 MPH and 14.0 g at 5.3 MPH all measured in the direction of travel (lateral).

Maximum displacement readings of the XH-770 frame above the shear pads with respect to the bottom frame of the XH-770 were 4.7 inches on the forward end, 4.0 inches on the aft end during the ambient series and 3.2 and 2.8 inches on the forward and aft ends respectively during the high temperature series. No displacement readings were obtained for the low temperature tests because the displacement gages froze.

INVENTORIED
AUG 6 1964
3427-1

Resistance readings taken during the electrical system check per Appendix A, Section A of the Test Handbook did not change during the ramp tests. The pressure of the XW-38 TRM-2 was still 17 psig at the completion of the ramp tests.

INVENTORIED
SEP 14 1965
3428-3

Livermore instrumentation (Endevco accelerometers) located inside the XW-38 TRM-2 warhead was recorded for all runs. However, this type of instrumentation and the electronics used for this test did not give reliable information, hence this data was not included in the Test Report.

XW-38
3-2

SANDIA SYSTEMATIC DECLASSIFICATION REVIEW
DOWNGRADING OR DECLASSIFICATION STAMP

CLASSIFICATION CHANGED TO: U	AUTHORITY: W Layne
Emelda Selph 9/28/98	
PERSON CHANGING MARKING & DATE	RECORD ID: 98SN3913
Carmela M Ballejos	
PERSON VERIFYING MARKING & DATE 9/23/98	DATED: 9/9/98

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Object of Test

The object of this test was to determine the effect of simulated railway humping loads on the unitized and the shipping container at ambient, high and low temperatures. The test was performed on the engineering test ramp per SCS-5.

Authorization for Test

This test was requested by Division 8124 at Livermore Laboratory. L. R. Myers, 8124, was the consultant.

Setup for Test

Figure 1 shows the XN-38 warhead in an XN-770 container mounted on the ramp dolly for the ambient test.

Figure 2 shows the XN-770 container encased in a temperature shroud for heating and cooling the test unit.

Table I lists the components making up the test unit giving the drawing and serial numbers.

Table II lists the test equipment used during the test.

Table III lists the Statham accelerometers and Figures 3, 4 and 5 show their locations on the XN-38, XN-770 and ramp dolly.

Table IV lists the Endevco accelerometers used and Drawing X-10608 shows their locations on the XN-38 TRM-2.

Two Bourns Displacement Gages, Serial Numbers 107438 and 107455, were mounted on the XN-770 frame as shown in Figures 3 and 6.

Procedure

Ambient Temperature Test: Two ramp series were run per SCS-5 on a pressurized (15 psig) XN-38 TRM-2 in an XN-770 container. During the first series, only the Endevco accelerometers were monitored. The results obtained were not reliable consequently the XN-38 TRM-2 was instrumented with Statham accelerometers (Figures 3, 4 and 5) and the ramp test rerun. Oscillograph records of accelerations and displacement measurements were obtained from the Statham and Endevco transducers and Bourns gages during the second ramp series. Ramp dolly velocities for this series were 5.0, 5.5, 5.9, 6.4, 6.6 and 7.0 MPH.

Displacement measurements were taken to determine the amount of deflection between the bottom portion of the XN-770 frame and the top portion above the shock pads (Figures 3 and 6).

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High Temperature Test: The XH-770 container was encased in a temperature shroud (Figure 2) and heated for two hours until the skin temperature measured +165°F and then further soaked at +165°F for 24 hours using a mobile Conrad temperature unit. The temperature was measured by a thermocouple located on the outside case of the XW-38 TRM-2. Internal thermocouples on the XW-38 TRM-2 were not reliable because the internal portion of the thermocouple was connected through a regular multi-pin connector through the pressure cover of the warhead. The major concern, however, was to have the rubber padding and shear pads at the +165°F temperature.

Six runs were made, but oscillograph records of accelerations and displacements were obtained only for the 6.7 and 6.9 MPH runs. No data were obtained on the first four runs of approximately 5.2, 5.5, 6.0 and 665 MPH because the oscillograph record was lost in the processor.

Low Temperature Test: The test unit was cooled in a like manner as mentioned above to -60°F measured on the outside case of the XW-38 TRM-2. The unit was cooled for approximately 24 hours at -65°F inlet temperature before the ramp test.

Six runs were made at ramp dolly velocities of 5.3, 5.7, 6.0, 6.5, 6.7 and 6.9 MPH. Oscillograph records were obtained of accelerations and displacements for all runs except the 6.5 MPH run.

An electrical check was made on the XW-38 TRM-2 before and after each series of ramp tests. The procedure for this system check is outlined in Appendix A, Section A of XW-38X1 TRM Test Handbook.

Results

No visible structural damage was noted after the completion of all ramp tests.

Maximum accelerations recorded during the ambient test were 11.0 g on the XW-38 case at 7.0 MPH measured in the lateral direction (direction of travel), and 56.0 g on the XH-770 frame measured in the vertical direction at 6.4 MPH. Maximum displacement recorded was 4.7 inches on the forward end and 4.0 inches on the aft end of the XH-770 frame. Accelerations and times are shown in Table V and displacement readings in Table VI.

Maximum accelerations recorded during the high temperature test were 9.5 g on the XW-38 case at 6.7 MPH in the lateral direction, and 60.0 g on the XH-770 frame at 6.9 MPH in the vertical direction. Maximum displacements measured were 3.2 and 2.8 inches on the forward and aft end of the XH-770 frame respectively. These displacement readings are smaller than would be expected but no explanation for this can be given. Accelerations and times are shown in Table VII and displacement measurements in Table VI.

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T-16544

#169

Maximum accelerations recorded during the low temperature test were 14.0 g on the XW-38 cone at 5.3 MPH measured in the lateral direction, and 55.0 g on the XM-770 frame at 6.9 MPH measured in the vertical direction. Displacement readings were invalid because the Bourns gages froze in the -60°F temperature. Accelerations and times are shown in Table VIII for the low temperature test. The temperature varied from -60°F at the beginning to -10°F at the completion of the test. This temperature change during the low temperature ramp tests may explain the higher accelerations recorded during the lower velocity run.

Typical oscillograph records for the ambient, high and low tests are shown in Figure 7.

Resistance readings taken during the electrical system check did not change from the initial reading to the final reading after the completion of all ramp tests. All resistance readings and a history of input voltage, output voltage and rise time taken for the system check are shown in Table IX.

The XW-38 TRM-2 was checked for pressure at the completion of all ramp tests and still read 17 psig.

Recommendations and Conclusions

The XM-770 container and XW-38 TRM-2 warhead adequately withstood the ambient, high and low temperature ramp tests.

The Endevco accelerometers mounted inside the XW-38 TRM-2 by Livermore were recorded, but the results were not included in this report. Considerable error is encountered using piezoelectric transducers where pulse durations exceed .075 seconds using the type of recording equipment available for this test. Pulse durations greater than 0.1 second on the XW-38 TRM-2 were common for this test, consequently the data obtained from the Endevco accelerometers would be of little value, if any. Other electronic problems such as zero shift, high frequency noise and amplifier drift would make it difficult to gain any useful information from the records.

J. E. Bear
J. E. BEAR - 7321-5

D. W. Bauder
D. W. BAUDER - 7321-5

R. S. Hooper
R. S. HOOPER - 7321-5

JEB:7321-5:dc

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#170

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1-5/7A M. O. Jones, 8124
6/7A E. H. Copeland, 7321
7/7A R. K. Smeltzer, 3421-3

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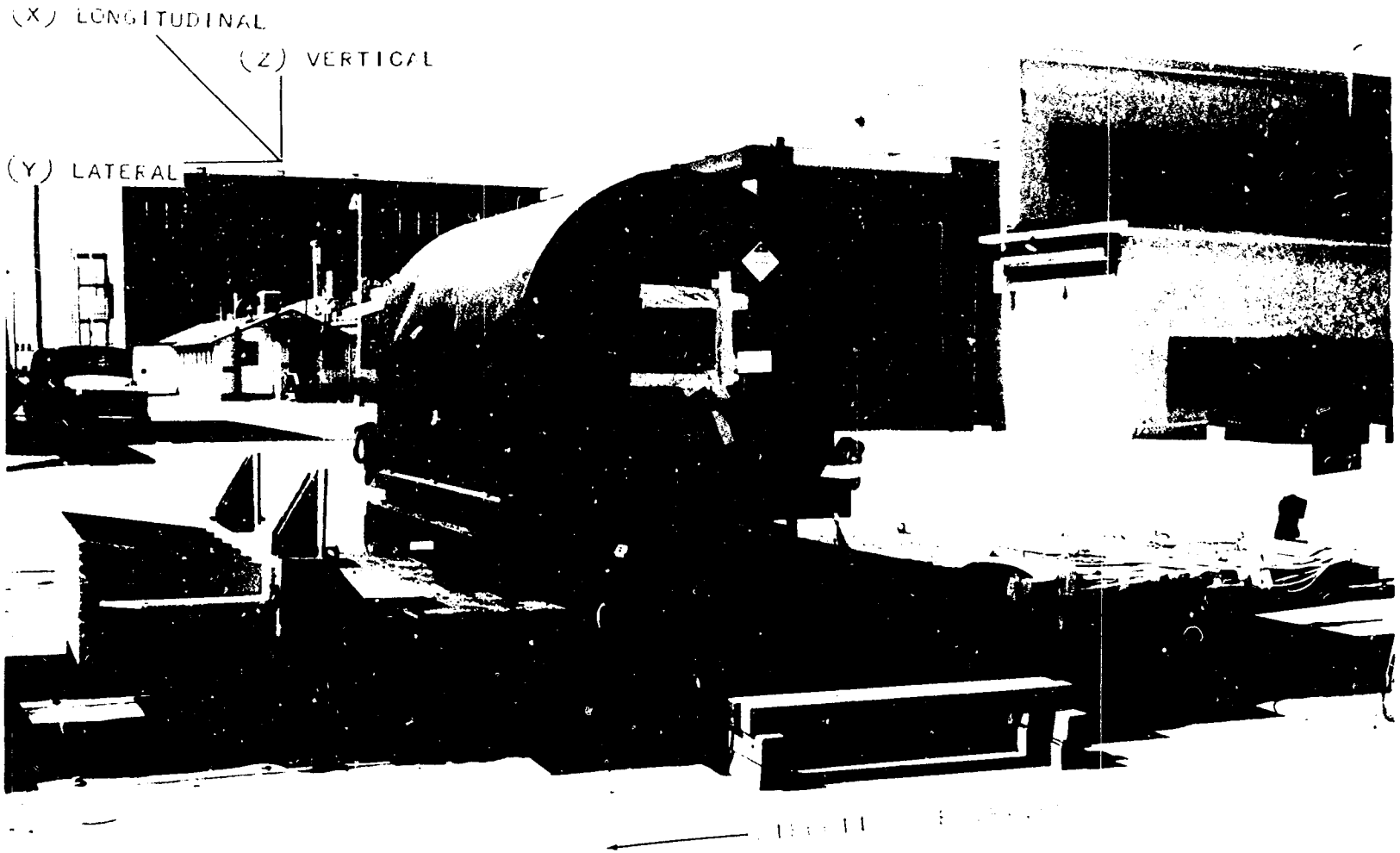

FIGURE 1 - SETUP OF XW-38 TRM-2 IN XH-770 CONTAINER MOUNTED ON RAMP DOLLY FOR AMBIENT TEST -- RAMP TEST OF A XW-38 TRM-2 IN A XH-770 CONTAINER

PROJECT NO. T-16544
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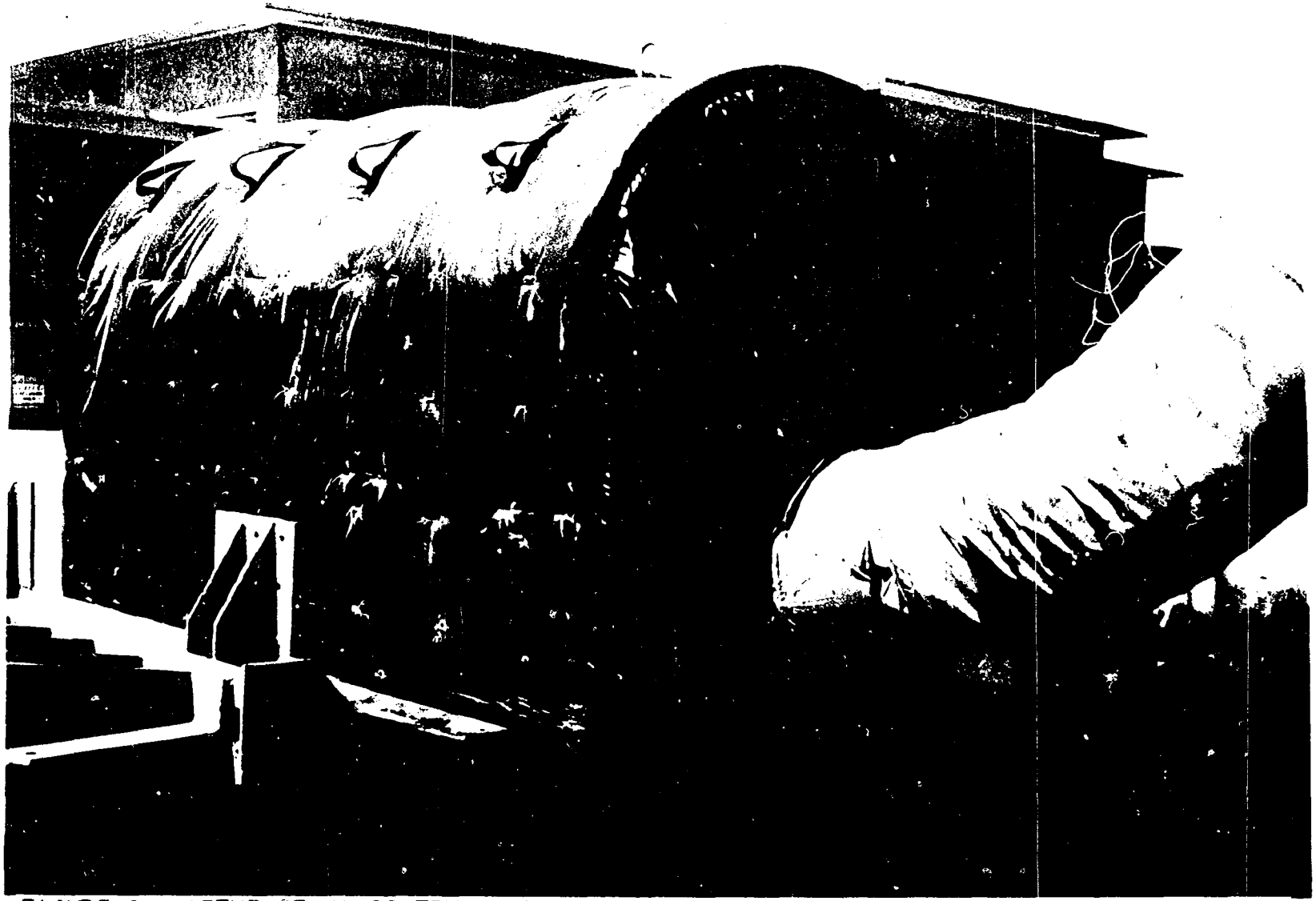

FIGURE 2 - SETUP OF XW-38 TRM-2 IN XH-770 CONTAINER INCASED IN A TEMPERATURE SHROUD FOR +165° F. AND -60° F. RAMP TESTS -- RAMP TEST OF A XW-38 TRM-2 IN A XH-770 CONTAINER

PROJECT NO. T-16544
REF. SYM: 7321/9639

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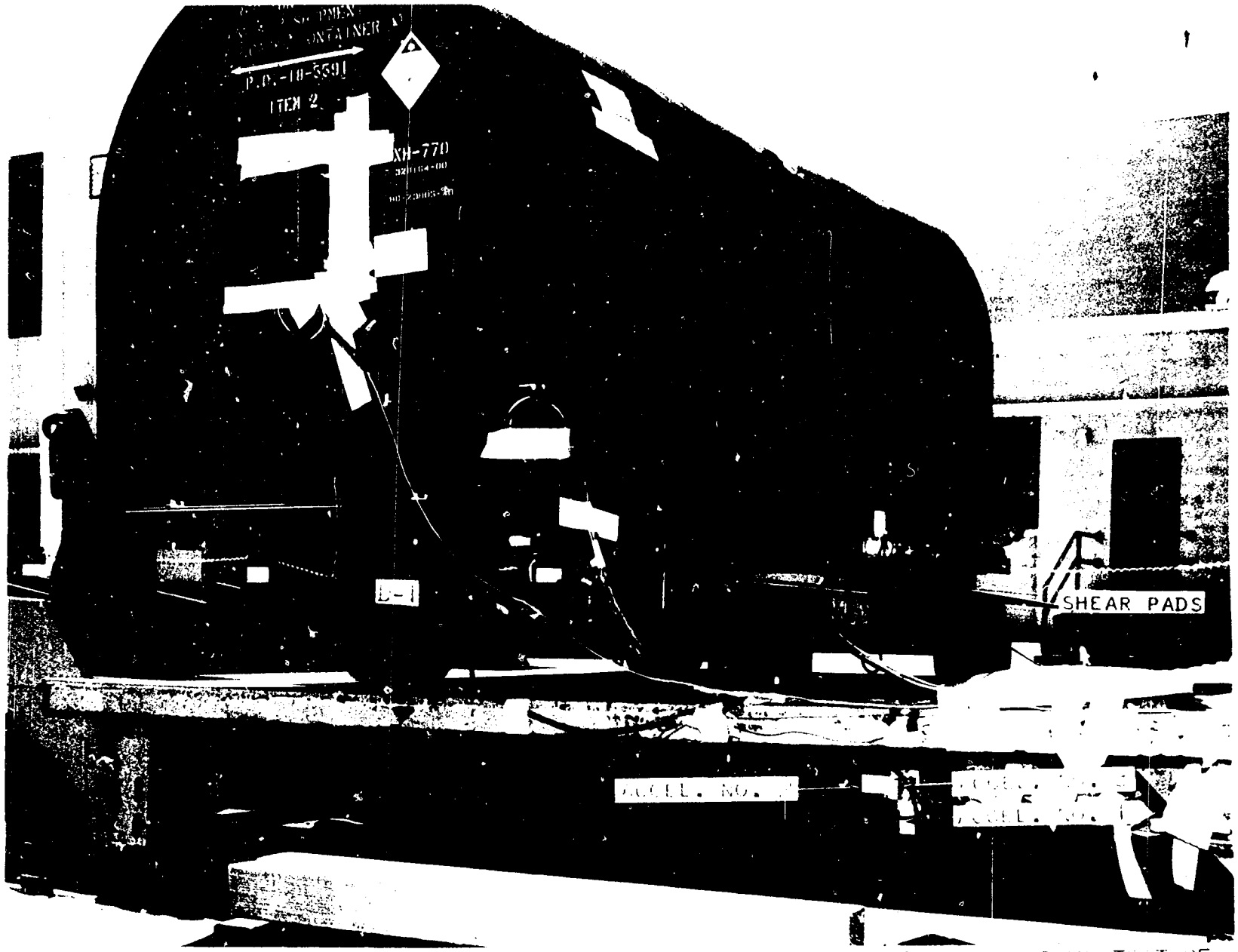

FIGURE 3 - LOCATION OF EXTERNAL INSTRUMENTATION ON XH-770 CONTAINER -- RAMP TEST OF A XW-38 TRM-2 IN A XH-770 CONTAINER

PROJECT NO. T-16544
REF. SYM: 7321/9639

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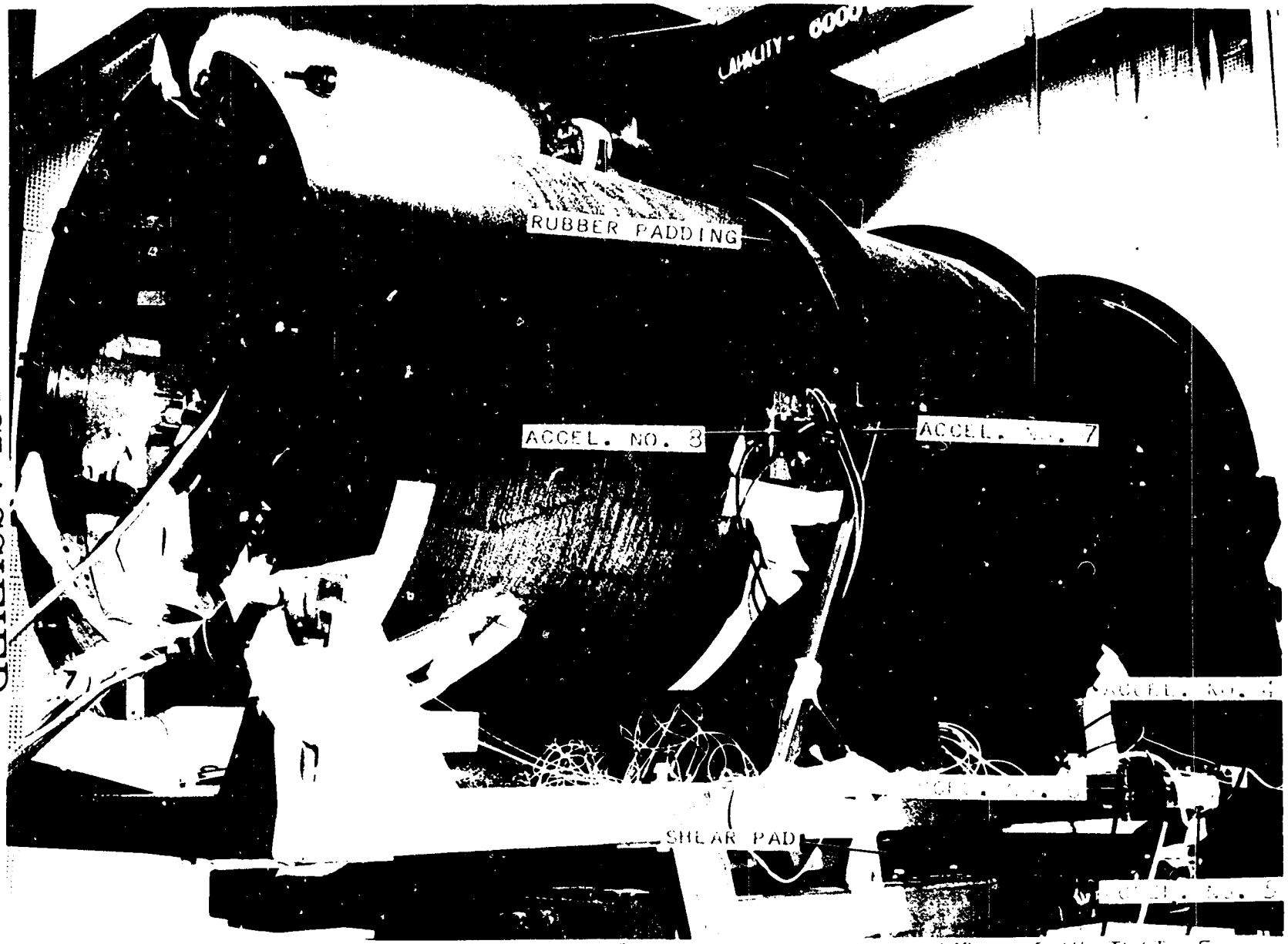

FIGURE 4 - LOCATION OF STATHAM ACCELEROMETERS ON XW-38 AND XH-770 -- RAM TEST OF A XW-38 TEM-2 IN A XH-770 CONTAINER

PROJECT NO. T-16544

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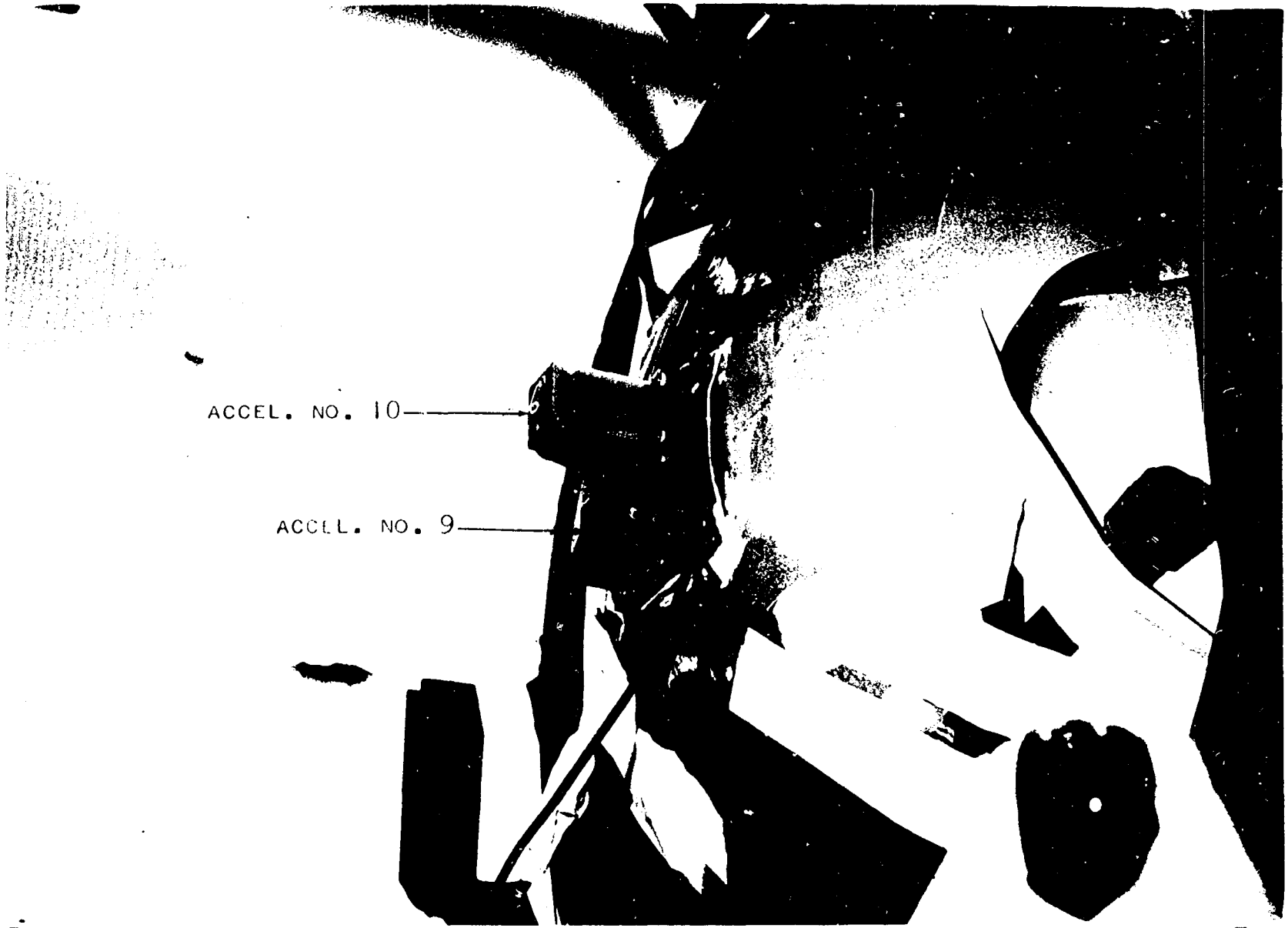

FIGURE 5 - LOCATION OF STATHAM ACCELEROMETERS ON THE NOSE OF THE XW-38 -- RAMP TEST OF A XW-38 TRM-2 IN A XH-770 CONTAINER

PROJECT NO. T-16544
REF. SYM: 7321/9639

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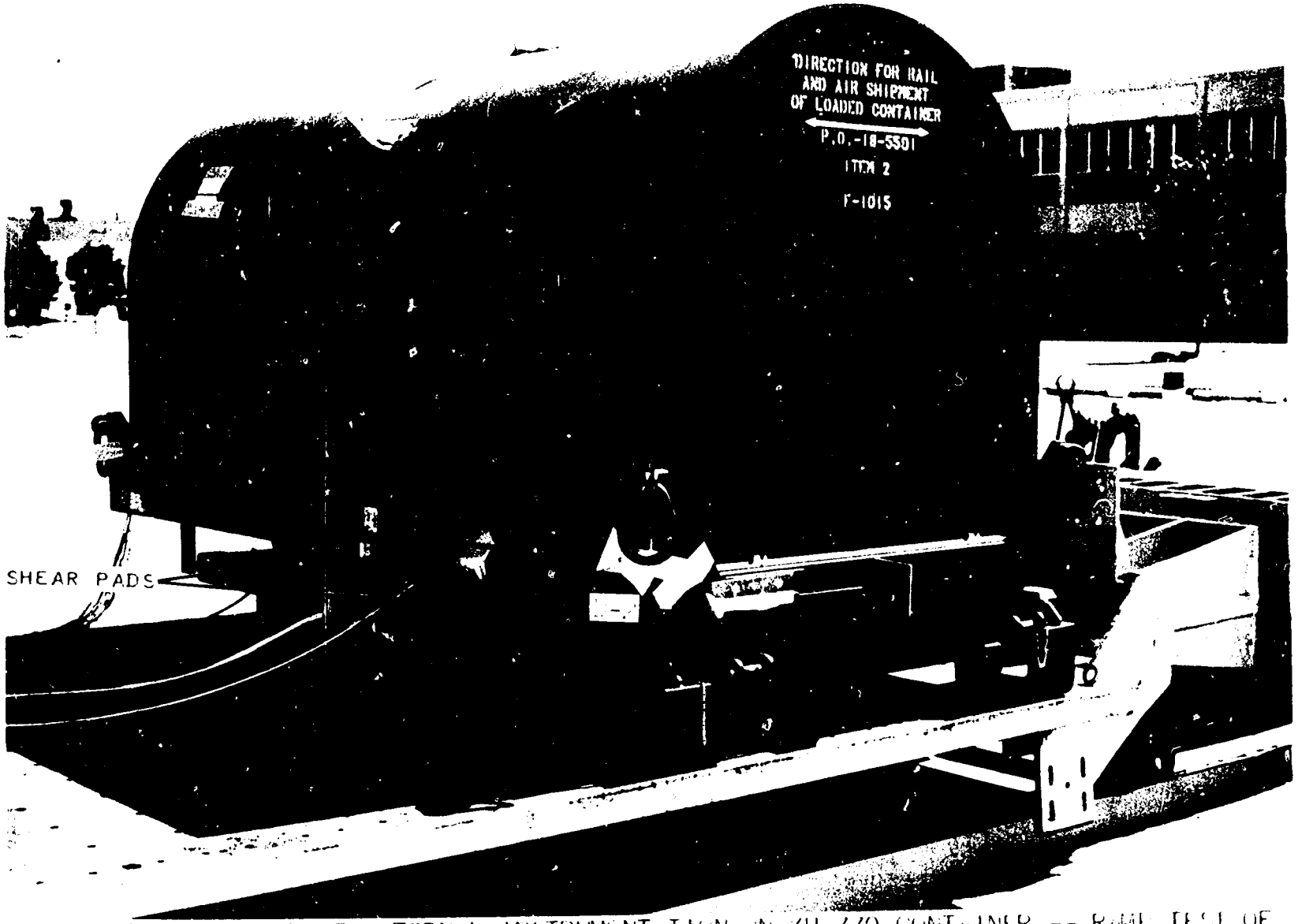

FIGURE 6 - LOCATION OF EXTERNAL INSTRUMENTATION ON XH-770 CONTAINER -- RAMP TEST OF A XW-38 TRM-2 IN A XH-770 CONTAINER

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GAGE NO.	LOCATION	DIRECTION*	CAL. VALUE
D-2	REAR END OF XH-770	LATERAL	5.2 IN/IN
D-1	FORWARD END OF XH-770	LATERAL	5.5 IN/IN
A-10	XH-38 NOSE	LONGITUDINAL	4.5 G/IN
A-9	XH-38 NOSE	LATERAL	6.5 G/IN
A-8	XH-38 CASE	LATERAL	14.0 G/IN
A-7	XH-38 CASE	VERTICAL	18.0 G/IN
A-6	XH-770 FRAME	VERTICAL	42.0 G/IN
A-5	XH-770 FRAME	LATERAL	19.0 G/IN
A-4	XH-770 FRAME	LONGITUDINAL	15.0 G/IN
A-3	RAMP DOLLY INPUT	LONGITUDINAL	22.0 G/IN
A-2	RAMP DOLLY INPUT	LATERAL	32.0 G/IN
A-1	RAMP DOLLY INPUT	VERTICAL	20.0 G/IN

A = ACCELEROMETER GAGE
D = DISPLACEMENT GAGE
* DIRECTIONS ARE WITH RESPECT TO AXES OF CONTAINER

1 INCH SCALE

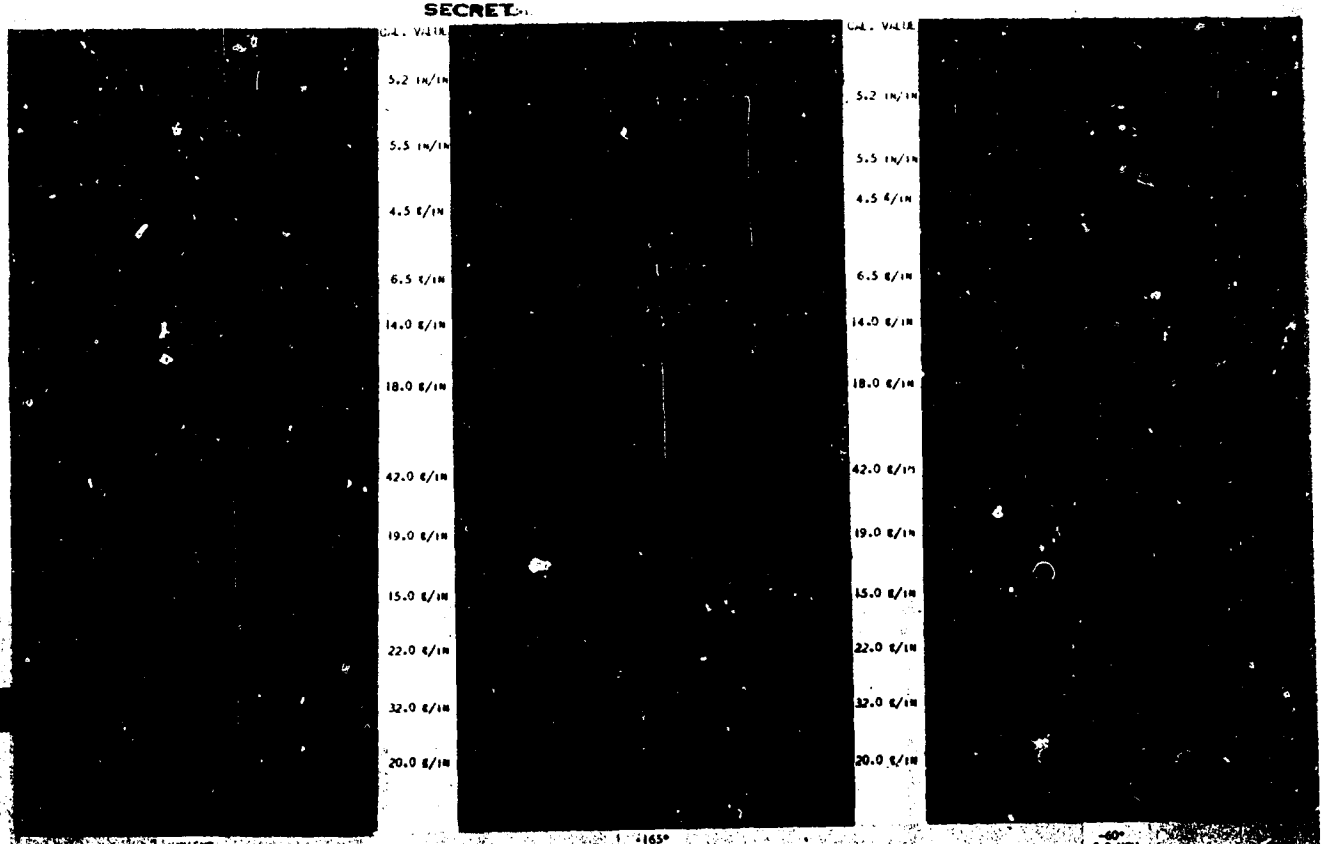

FIGURE 7 - TYPICAL OSCILLOGRAPH RECORDS OF AN AMBIENT, HIGH, AND LOW TEMPERATURE RUNS AT MAXIMUM DOLLY VELOCITY -- RAMP TEST OF A XH-38 TNM-2 IN A XH-770 CONTAINER

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TABLE I

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Components
Ramp Test of an XW-38 TRM-2 in an XH-770 Container

Component		Serial No.	Drawing No.
XW-38X1	Warhead	TRM-2	K10608
XH-770	Truck, Hand, Warhead	HD-29005	320164
MC-1190	Switch, Internal	QM00169-L9 QM00179-L9	310992
XMC-1241	Warhead Subassembly, Front	-	K10733-00
XMC-1242	Warhead Subassembly, Rear	-	K10513-00
XMC-1243	Firing Set	8153	K10775-00
XMC-1270	Generator, Neutron (dummy)	GC-103266-L9	311073-00
	Rubber Padding on XH-770 cradle*	-	153390, Issue 5

*Modified with 0.5 inch rubber added, for a total thickness of 3.0 inches under warhead.

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TABLE II

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Test Equipment
Ramp Test of an XW-38 TRM-2 in an XH-770 Container

Test Item	Serial No.	Model No.
TRM Tester	SC	362
Power Supply, 28 v DC	SC	-
Cathode Followers	SC	-
Attenuator Box	SC	-
Calibration Box	SC	-
Cathode Followers	SC	121-8, 121-11
Amplifiers, DC, Kin Tel	18 channels	111 BF
Recorder, Consolidated	4089	Type S-119
Recorder, William Miller	508 AM13	Type S-114-P3
Amplifiers, Carrier, William Miller	12 channels	Type C-3
Crystal Calibrator	SC	-
Heating and Cooling System, Conrad	-	Mobile
Temperature Shroud with Frame	SC	-
Universal Counter, Berkeley	3513	7360
Potentiometer	-	-

TABLE III

T-16544
RS 7321/9639

Statham Accelerometers
Ramp Test of an XW-38 TRM-2 in an XH-770 Container

Accel No.	Location	Direction*	Model No.	Serial No.	Range (± g's)	Nat Freq (cps)	Fig. Ref.
1	Dolly Input	Vert	A5A-25-335	3317	25	380	3
2	Dolly Input	Lat	A5A-25-335	1674	25	370	3
3	Dolly Input	Long.	A5B-12-180	1653	12	440	3
4	XH-770 Frame	Long.	AJ46a-50-350	707	50	530	4
5	XH-770 Frame	Lat	A44-20-350	166	20	-	4
6	XH-770 Frame	Vert	AJ46a-50-350	710	50	510	4
7	XW-38 Case	Vert	AJ46a-50-350	708	50	538	4
8	XW-38 Case	Lat	AJ44a-50-350	1222	50	550	4
9	XW-38 Nose	Lat	AJ46a-50-350	712	50	518	5
10	XW-38 Nose	Long.	A44-20-350	169	20	-	5

*Directions are with respect to axis of warhead.

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TABLE IV

Endevco Accelerometers
Ramp Test of XW-38 TRM-2 in an XH-770 Container

Accel No.	Location	Direction*	Model No.	Serial No.	Range (± g's)	Nat Freq (cps)	Fig. Ref.**
1-X	XW-38 TRM-2 Secondary	Long.	2223	2825	1000	30 kc	
1-Y	XW-38 TRM-2 Secondary	Lat	2223	2825	1000	30 kc	
1-Z	XW-38 TRM-2 Secondary	Vert	2223	2825	1000	30 kc	
3-X	MC-1242 Warhead Subassembly	Long.	2223	2814	1000	30 kc	
3-Y	MC-1242 Warhead Subassembly	Lat	2223	2814	1000	30 kc	
3-Z	MC-1242 Warhead Subassembly	Vert	2223	2814	1000	30 kc	
4-X	XW-38 TRM-2 Case	Long.	2223	2880	1000	30 kc	
4-Y	XW-38 TRM-2 Case	Lat	2223	2880	1000	30 kc	
4-Z	XW-38 TRM-2 Case	Vert	2223	2880	1000	30 kc	
6-X	MC-1243 Firing Set	Long.	2223	2879	1000	30 kc	
6-L	MC-1243 Firing Set	Tangential	2223	2879	1000	30 kc	
6-R	MC-1243 Firing Set	Radial	2223	2879	1000	30 kc	
7-X	MC-1190 Switch	Long.	2223	2818	1000	30 kc	
7-L	MC-1190 Switch	Tangential	2223	2818	1000	30 kc	
7-R	MC-1190 Switch	Radial	2223	2818	1000	30 kc	
8-X	MC-1270 Neutron Generator	Long.	2223	2872	1000	30 kc	
8-L	MC-1270 Neutron Generator	Tangential	2223	2872	1000	30 kc	
8-R	MC-1270 Neutron Generator	Radial	2223	2872	1000	30 kc	

*Directions are with respect to axis of warhead.
**See Drawing No. K10608 for accelerometer locations.

TABLE V

T-16544
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Accelerations and Times
Ramp Test of an XW-38 TRM-2 in an XH-770 Container (Ambient Temperature, 80-100°F)

Accel No.	Location	Direction*	Run 1 - 5.0 mph Acceleration (g's) Max (+)	Max (-)	Faired	Time (ms) Rise	Pulse	Run 2 - 5.5 mph Acceleration (g's) Max (+)	Max (-)	Faired	Time (ms) Rise	Pulse	Run 3 - 5.9 mph Acceleration (g's) Max (+)	Max (-)	Faired	Time (ms) Rise	Pulse
1	Dolly Input	Vert	9.8	12.0	-	-	-	12.0	12.0	-	-	-	21.0	14.0	-	-	-
2	Dolly Input	Lat	19.0	3.3	15.0	2	23	20.0	3.5	18.0	1	20	20.0	3.7	16.0	1	30
3	Dolly Input	Long.	7.8	5.3	-	-	-	5.3	4.4	-	-	-	11.0	11.0	-	-	[illegible]
4	XH-770 Frame	Long.	8.9	7.8	-	-	-	7.9	5.8	-	-	-	6.0	6.4	-	-	-
5	XH-770 Frame	Lat	11.0	8.1	5.4	10	36	9.1	7.8	6.5	7	33	7.7	8.0	5.4	7	39
6	XH-770 Frame	Vert	27.0	18.0	-	-	-	52.0	18.0	-	-	-	28.0	15.0	-	-	-
7	XW-38 Case	Vert	4.7	4.8	4.7	16	34	3.9	4.6	3.7	14	29	4.6	4.9	4.6	16	32
8	XW-38 Case	Lat	7.4	-	5.4	56	147	11.0	-	6.0	51	149	10.0	-	7.6	47	124
9	XW-38 Nose	Lat	5.2	-	5.1	39	149	2.6	-	2.5	51	151	2.8	-	2.6	39	154
10	XW-38 Nose	Long.	0.2	0.3	-	-	-	1.5	1.8	-1.8	19	38	1.3	1.8	-1.8	6	19

Accel No.	Location	Direction*	Run 4 - 6.4 mph Max (+)	Max (-)	Faired	Rise	Pulse	Run 5 - 6.6 mph Max (+)	Max (-)	Faired	Rise	Pulse	Run 6 - 7.0 mph Max (+)	Max (-)	Faired	Rise	Pulse
1	Dolly Input	Vert	9.7	8.3	-	-	-	16.0	9.6	-	-	-	13.0	9.7	-	-	-
2	Dolly Input	Lat	21.0	3.2	18.0	10	27	20.0	3.6	18.0	12	30	21.0	2.9	19.0	14	30
3	Dolly Input	Long.	4.9	4.4	-	-	-	6.1	4.6	-	-	-	7.0	6.7	-	-	-
4	XH-770 Frame	Long.	7.5	8.8	-	-	-	11.0	10.0	-	-	-	12.0	13.0	-	-	-
5	XH-770 Frame	Lat	9.0	12.0	6.6	16	36	11.0	12.0	6.3	14	35	13.0	13.0	6.9	16	35
6	XH-770 Frame	Vert	56.0	22.0	-	-	-	51.0	21.0	-	-	-	55.0	21.0	-	-	[illegible]
7	XW-38 Case	Vert	4.2	5.1	4.2	16	30	4.9	4.8	4.8	17	33	5.4	5.1	4.8	16	32
8	XW-38 Case	Lat	9.6	-	7.0	60	142	9.5	-	7.1	52	140	11.0	-	8.7	54	131
9	XW-38 Nose	Lat	3.5	-	3.4	51	153	3.4	-	3.3	50	152	3.5	-	3.7	51	156
10	XW-38 Nose	Long.	0.6	1.6	-1.0	13	37	0.9	1.6	-0.7	7	21	1.1	1.8	-1.0	11	21

*Directions are with respect to axis of warhead.

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TABLE VI

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Displacement of XH-770
Ramp Test of an XW-38 TRM-2 in an XH-770 Container

Disp Gage	Location	Ambient Temperature Displacement (inches)*** Run 1 5.0 mph	Run 2 5.5 mph	Run 3 5.9 mph	Run 4 6.4 mph	Run 5 6.6 mph	Run 6 7.0 mph	High Temperature * Displacement (inches)*** Run 11 6.7 mph	Run 12 6.9 mph	Low Temperature** Displacement (inches)***
1	XH-770 Frame, Fwd	3.3	3.7	4.0	4.3	4.5	4.7	2.9	3.2	
2	XH-770 Frame, Aft	2.8	3.3	3.3	3.8	3.8	4.0	2.6	2.8	

*Only records obtained.
**Displacement gages did not function properly at low temperatures (-60°F).
***Displacement measured is maximum deflection of XH-770 frame between shear pads measured in forward direction only (Figures 3 and 4).

#[redacted]
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#184

TABLE VII

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Accelerations and Times
Ramp Test of an XW-38 TRM-2 in an XH-770 Container (High Temperature, +165°F)

			Run 11 6.7 mph					Run 12 6.9 mph				
			Acceleration (g's)			Time (ms)		Acceleration (g's)			Time (ms)	
Accel No.	Location	Direction*	Max (+)	Max (-)	Faired	Rise	Pulse	Max (+)	Max (-)	Faired	Rise	Pulse
1	Dolly Input	Vert	13.0	13.0	-	-	-	8.7	9.3	-	-	-
2	Dolly Input	Lat	17.0	2.3	15.0	1	24	14.0	2.3	9.6	1	33
3	Dolly Input	Long.	5.1	6.7	-	-	-	5.5	5.1	-	-	-
4	XH-770 Frame	Long.	10.0	8.8	-	-	-	7.7	7.5	-	-	-
5	XH-770 Frame	Lat	11.0	6.3	6.4	13	37	6.1	11.0	4.7	12	37
6	XH-770 Frame	Vert	50.0	26.0	-	-	-	60.0	18.0	-	-	-
7	XW-38 Case	Vert	4.5	5.4	4.4	11	29	4.4	4.8	3.8	16	33
8	XW-38 Case	Lat	9.5	-	5.5	54	135	8.8	-	5.7	49	129
9	XW-38 Nose	Lat	2.6	-	2.5	54	138	3.0	4.4	2.9	58	144
10	XW-38 Nose	Long.	1.2	1.4	-	-	-	1.1	1.5	-	-	-

*Directions are with respect to axis of warhead.

No record for Runs 7 through 10.

[redacted]

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TABLE VIII

Accelerations and Times

Ramp Test of an XW-38 TRM-2 in an XH-770 Container (Low Temperature, -60°F to -10°F)

Accel No.	Location	Direction*	Run 13 - 5.3 mph Acceleration (g's) Max (+)	Max (-)	Faired	Time (ms) Rise	Pulse	Run 14 - 5.7 mph Acceleration (g's) Max (+)	Max (-)	Faired	Time (ms) Rise	Pulse	Run 15 - 6.0 mph Acceleration (g's) Max (+)	Max (-)	Faired	Time (ms) Rise	Pulse
1	Dolly Input	Vert	7.3	11.0	-	-	-	8.6	10.0	-	-	-	12.0	11.0	-	-	-
2	Dolly Input	Lat	12.0	1.6	10.0	2	34	12.0	1.9	11.0	1	28	14.0	2.5	12.0	1	28
3	Dolly Input	Long.	4.8	5.5	-	-	-	5.1	6.2	-	-	-	6.4	7.6	-	-	[redacted]
4	XH-770 Frame	Long.	4.3	8.9	-	-	-	5.2	12.0	-	-	-	8.2	9.0	-	-	-
5	XH-770 Frame	Lat	11.0	-	8.5	9	63	11.0	2.2	9.7	6	65	11.0	1.3	10.0	15	70
6	XH-770 Frame	Vert	46.0	28.0	-	-	-	47.0	23.0	-	-	-	40.0	25.0	-	-	-
7	XW-38 Case	Vert	9.0	9.4	6.0	8	31	9.2	9.7	9.1	7	26	9.2	9.7	9.0	7	25
8	XW-38 Case	Lat	14.0	3.8	9.5	23	64	11.0	4.7	8.8	22	70	13.0	6.0	8.6	22	76
9	XW-38 Nose	Lat	4.5	0.9	4.1	12	55	5.8	0.6	5.5	16	51	5.4	0.6	5.3	15	56
10	XW-38 Nose	Long.	4.8	3.8	-3.2	6	22	2.6	2.8	-2.0	7	20	2.5	2.2	1.6	6	25

			Run 16 - 6.7 mph					Run 18 - 6.9 mph				
1	Dolly Input	Vert	17.0	16.0	-	-	-	14.0	12.0	-	-	-
2	Dolly Input	Lat	21.0	2.8	16.0	1	26	15.0	2.4	12.0	1	32
3	Dolly Input	Long.	9.8	9.5	-	-	-	5.8	7.5	-	-	-
4	XH-770 Frame	Long.	6.5	7.4	-	-	-	7.7	6.5	-	-	-
5	XH-770 Frame	Lat	11.0	1.4	11.0	6	70	9.3	1.8	9.1	7	77
6	XH-770 Frame	Vert	46.0	33.0	-	-	-	55.0	33.0	-	-	-
7	XW-38 Case	Vert	12.0	10.0	11.0	6	24	9.5	10.0	8.7	9	29
8	XW-38 Case	Lat	13.0	9.3	8.9	25	79	13.0	10.0	8.4	27	82
9	XW-38 Nose	Lat	5.7	0.7	5.2	16	55	4.9	0.6	4.6	12	72
10	XW-38 Nose	Long.	1.9	3.2	-	-	-	2.0	3.4	-2.6	6	21

*Directions are with respect to axis of warhead.

No record for Run 17

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TABLE IX

Electrical System Check
Ramp Test of an XW-38 TRM-2 in an XH-770 Container

Section A Test*

Continuity Switch	Initial (ohms)	After Ambient Test (ohms)	After High-Temp Test (ohms)	After Low-Temp Test (ohms)
1	1.7	1.7	1.7	1.7
2	1.7	1.7	1.7	1.7
3	1.7	1.7	1.7	1.7
4	1.8	1.8	1.8	1.8
5	∞	∞	∞	∞
6	0.1	0.1	0.1	0.1
7	∞	∞	∞	∞
8	∞	∞	∞	∞

Component Check

Component	After Ambient Test			After High-Temperature Test			After Low-Temperature Test		
	Input Voltage	Output Voltage	Rise Time (ms)	Input Voltage	Output Voltage	Rise Time (ms)	Input Voltage	Output Voltage	Rise Time (ms)
XMC-1243 Firing Set	28	20	79	28	19.5	85	28	19.5	99
XMC-1270 Neutron Generator	28	24	65	28	24	75	28	23	72
XMC-1270 Neutron Generator	28	24	67	28	24	75	28	23	79

*Procedure for test from Appendix A, Section A, XW-38X1 TRM Test Handbook.