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File: E-3

LOW LEVEL SHOCK TEST OF A SHAPED CHARGE ASSEMBLY (U)

Organization 7300 Environmental Test Report

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Project Leader - 7342

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CENTRAL TECHNICAL FILE	
ACCOUNTABILITY CARD	VA
FILE NO.	E-3
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SANDIA SYSTEMS... FIELD OPERATIONAL MEMOS	
CLASSIFIED BY: <u>U</u>	CLASSIFIED BY: <u>W.C. Layne</u>
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LOW LEVEL SHOCK TEST OF A SHAPED
CHARGE ASSEMBLY (U)

Introduction

The object of this test was to qualify the shaped charge and associate hardware to a simulated handling shock environment. One shaped charge assembly containing 20 pounds of LX04-1 explosive was tested.

The assembly was shock tested in the vertical axis. Accelerometers were mounted on the test carriage and the assembly to record the input and response during the shock. Photometric coverage was provided by Organization 7226.

The test was requested by J. A. Anderson, 1514, in an Environmental Test Request dated July 24, 1967. L. P. Navoda, 7331 was the Test Coordinator. The test was conducted on August 1, 1967.

Summary

One shaped charge assembly was subjected to the following shock in the vertical axis:

1. Amplitude: 52 g
2. Pulse Duration: 10 milliseconds
3. Rise Time: 4 milliseconds

No visual damage was noted following the test.

Procedure and Results

The shock test was conducted on the 18-inch actuator located in the Area III Test Laboratory. A special fixture-carriage was used to hold the assembly. The shock pulse was accomplished by crushing a honeycomb spring between a ram carriage, accelerated by the actuator, and the test item carriage. Figure 1 shows the test item carriage and honeycomb spring setup used in the test.

Two accelerometers were monitored during the test. Accelerometer A-1 was located on the base mounting plate of the test item carriage. Accelerometer A-2 was mounted on the shaped charge assembly as shown in Figure 1.

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The test data was recorded by 7342 on a C.E.C. Type VR-2600 magnetic tape recorder (D.C. to 40 kilz frequency response) and played back in the Area III Data Center. A comprehensive description of the recording and playback equipment is available in the 18-inch actuator file under Test No. T-12366. Locations and basic accelerometer specifications are listed in Table I of this report. The test was performed according to standard actuator procedures. A complete description of the test setup and firing conditions are on file at the 18-inch actuator.

A test record of the shock pulse given the assembly is shown in Table I of this report. The assembly was returned to Organization 1514 following the test.

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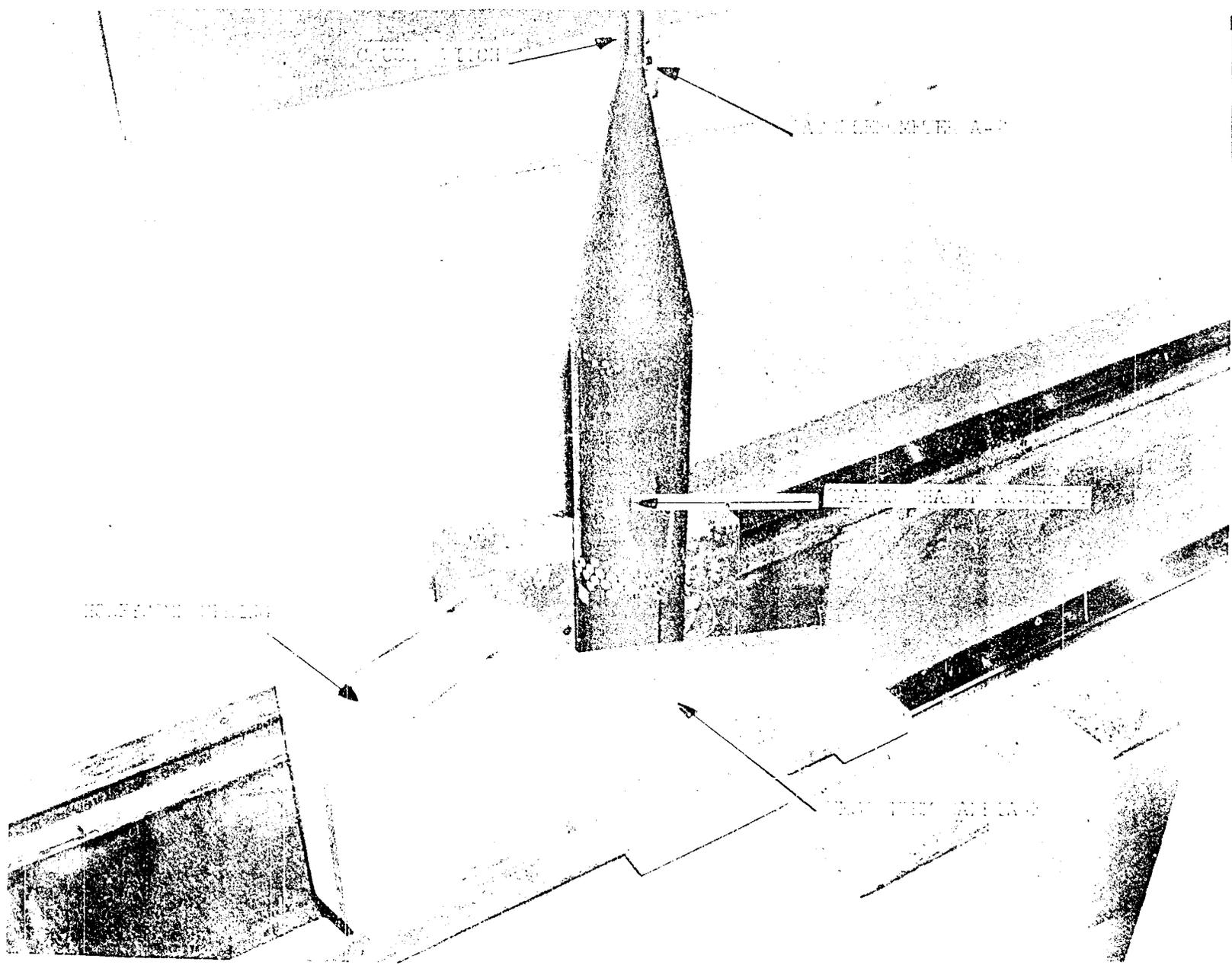


FIGURE 1. TEST ITEM PACKAGE WITH CHAFED CHARGE ANDERS IN PLACE.

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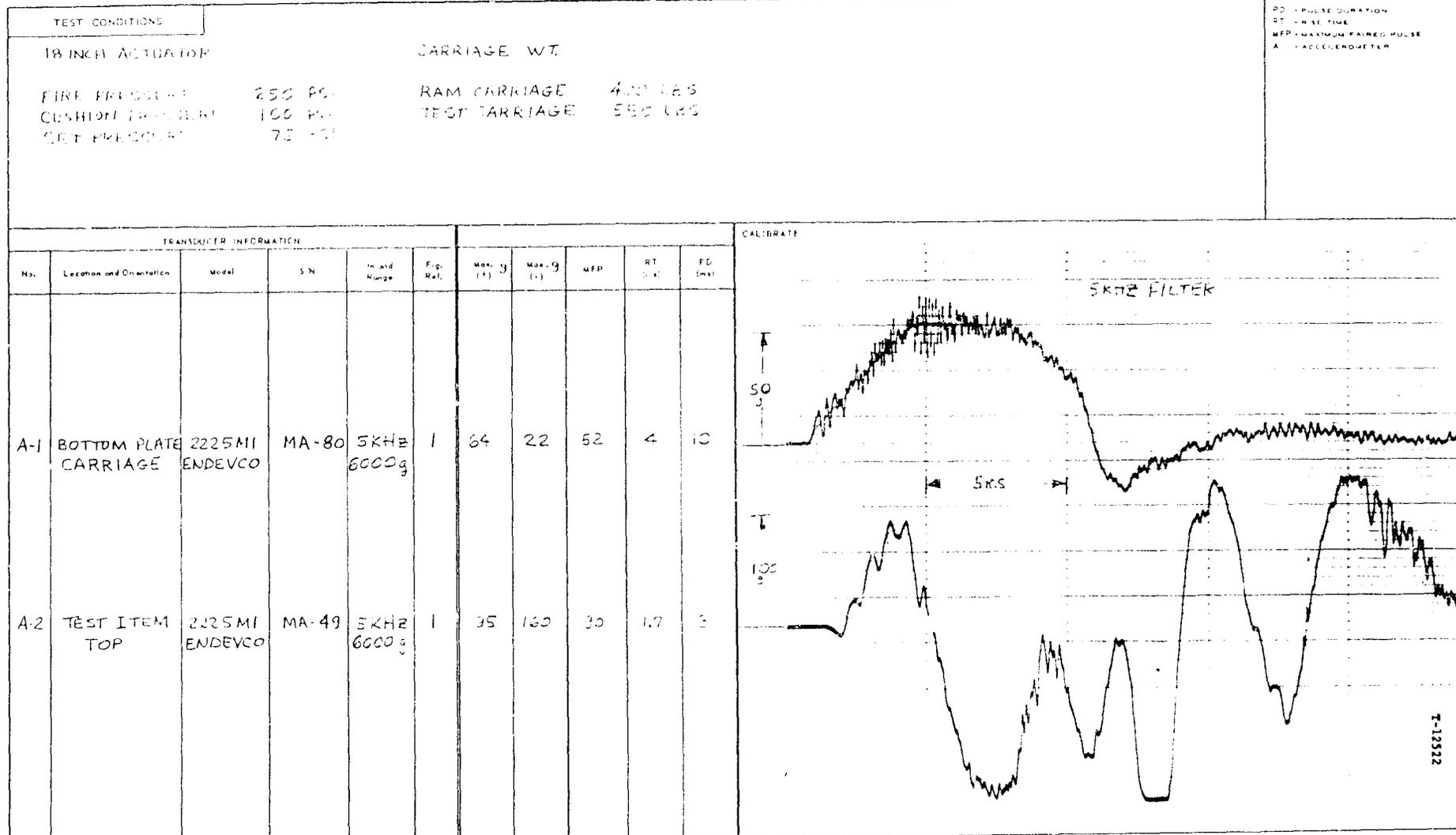
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TABLE I

TABLE I

TEST NO. 125

LEGEND:



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