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FEB 17 1960 2/17/60

TX-43, 3-2
Project No. T-16788
Case No. 734.00

TO: DISTRIBUTION

Re: Determination of Loads Required to Extract Parachute from TX-43 Tail Assembly

PROGRAM 0438 CATEGORY 2345 ORG. 000 DATE 60 13

Summary of Results

A measurement was made of the loads required to extract the parachute from a TX-43 tail assembly. Extraction speed was a constant 3.5 inches per second. Maximum load required was 1250 pounds.

Object

The object of the test was to determine the loads required to extract the parachute from the TX-43 assembly. The parachute is designated as the MC-992; the entire tail assembly is the MC-998. The assembly tested was identified by the Serial Number SN-476.

Authorization for Test

The test was performed in accordance with a verbal request from Organization 1222. Mr. G. R. Norris, Jr. and F. W. Millikin, 1222-2, were the consultants.

Equipment

The following equipment was used in the test:

1 - Baldwin 10,000 pound load cell, Ser. No. 11133.
1 - Kintel Model 111BF amplifier, Ser. No. 0254.
1 - Honeywell Visicorder recording oscillograph, Model 906A, Ser. No. 9-6467.

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Procedure

The TX-43 tail assembly was mounted vertically in the static jig. The parachute bag straps were tied to a load cell by a nylon loop. The load cell was then suspended from the overhead hoist, so that the parachute could be extracted from the tail assembly while the load cell monitored the load attained. This setup is shown in Fig. 1.

Hoist speed was measured prior to setting up the test, and was found to be 3.5 inches per second. Measurements were made both at no load and with 1800 pounds load on the hoist with no difference in speed being noted.

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W C Layne 6/18/98
PERSON VERIFYING MARKING & DATE | DATED: 6/04/98

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Load cell output was recorded on an oscillograph. In running the test, the hoist and the oscillograph chart drive were started simultaneously to provide correlation between load and distance of parachute movement.

Results

Measured load versus distance of extraction of the parachute is plotted in Fig. 2. The highest load reached was 1250 pounds, which occurred at about 6 inches of extraction. A second peak of 900 pounds occurred at 38 inches, and was probably due to action of the bag cutters.

W. M. Sigmon

W. M. SIGMON - 1612-1

1613 Project Engineers: D. W. BAUDER - 1613-3

Approved by: R. S. HOOPER - 1613-3

WMS:1612-1:ec

Enc: Figures 1 and 2

Copy to:

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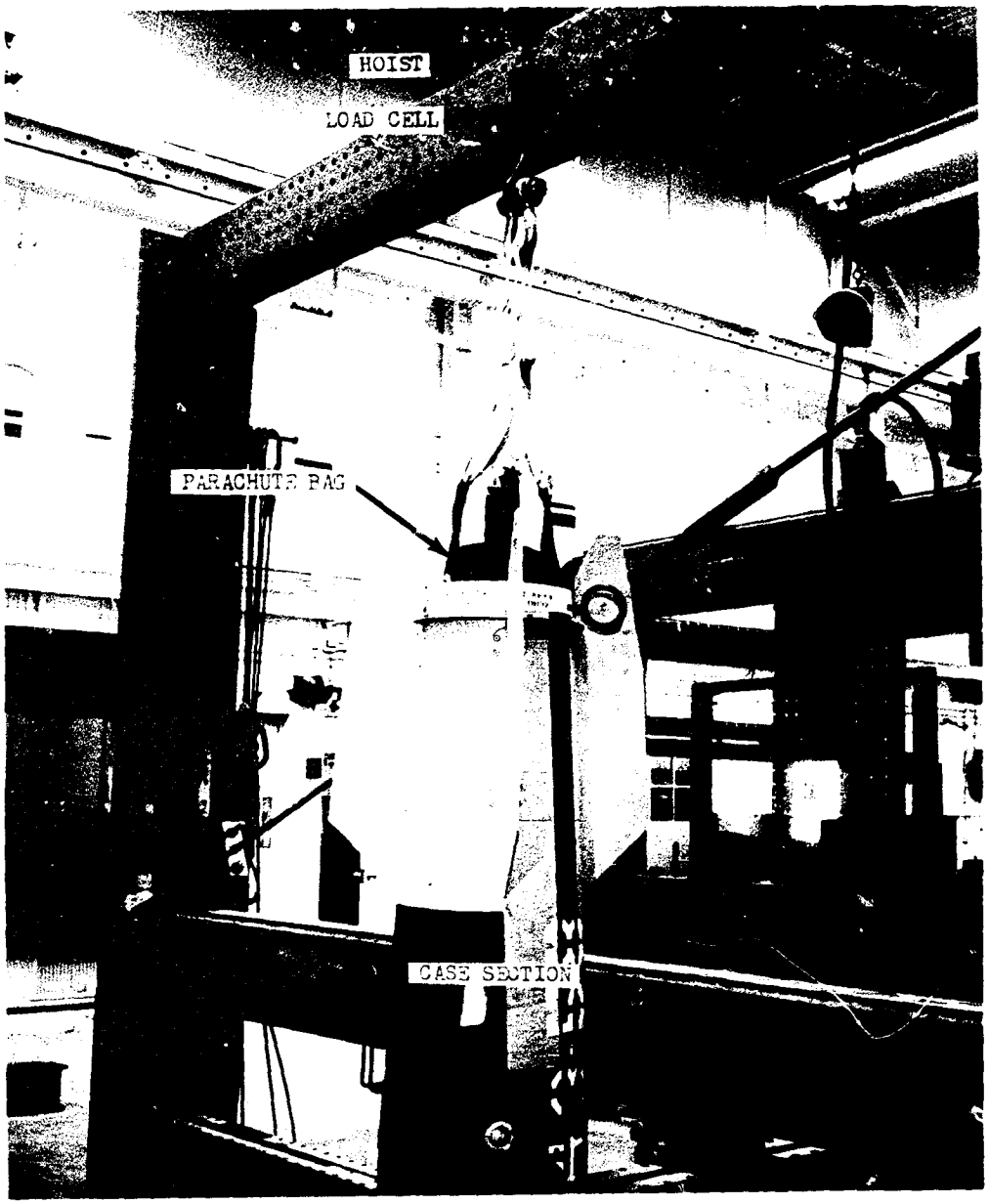

FIGURE 1 - SETUP FOR DETERMINATION OF LOADS REQUIRED TO EXTRACT PARACHUTE FROM TX-43 TAIL ASSEMBLY

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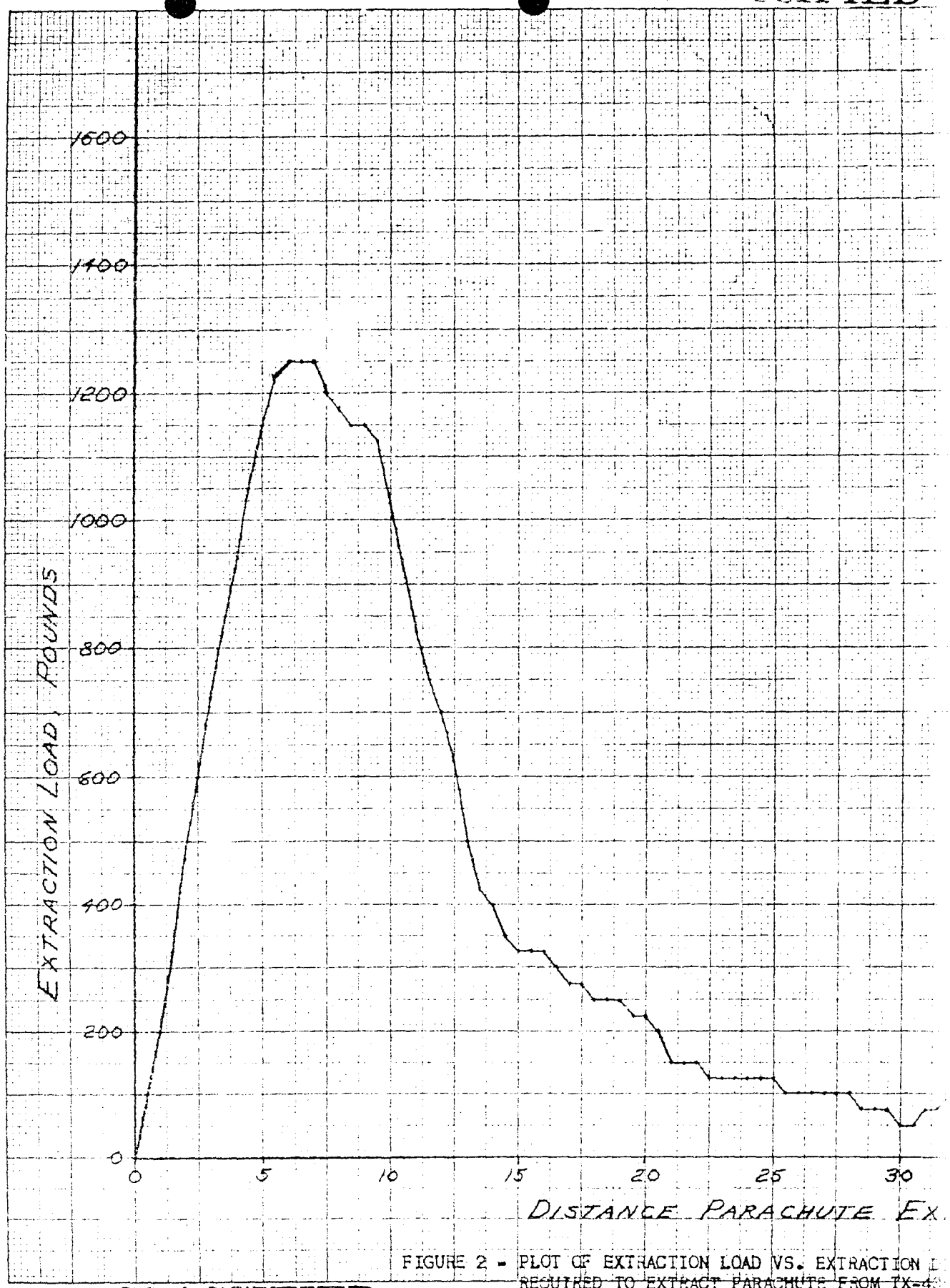

FIGURE 2 - PLOT OF EXTRACTION LOAD VS. EXTRACTION L
REQUIRED TO EXTRACT PARACHUTE FROM TX-4

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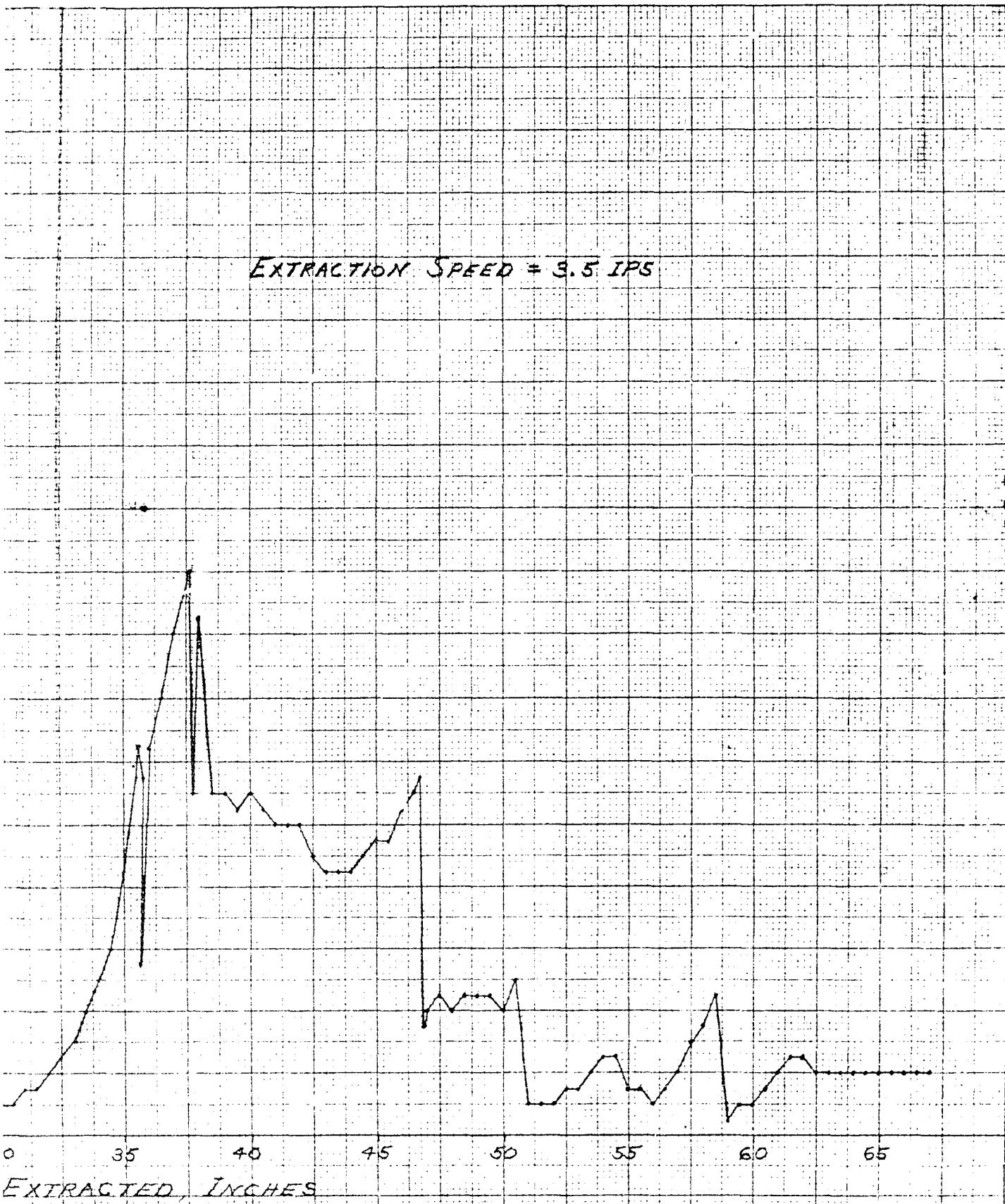

ON DISTANCE - DETERMINATION OR LOADS
X-43 TAIL ASSEMBLY T-16788