

Ilion, New York
June 13, 1966

MEMORANDUM

To: C. B. Workman

From: A. A. Mugick

DROP TESTING OF MODEL 700 POWDER METAL SEARS

The enclosed drop test procedure was organized and conducted using M/700 powder metal sears. Two samples of M/700 sears were submitted for drop testing at this time.

Sample No. 1 consisted of M/700 chrome plated powder metal sears with approximately .003" radius when received from Production and had been cock-and-fire dry cycled for 30,000 cycles each. No malfunctions of the sear were encountered during drop testing of sample No. 1 sears.

Sample No. 2 consisted of M/700 chrome plated powder metal sear with approximately .0005-.001" radius at the connector edge, increased density, and zero dry cycles. No malfunctions of the sear were experienced during drop test of the M/700. This sample of sears had tight pin holes and had to be polished out for testing.

The fire control adjustment was made by Production prior to the dry cycle and drop testing. Hardness measurements on the RC scale varied from 38.5 RC to 51.5 RC. This variation of measured RC hardness should be clarified.

Recommendations:

Based on test results of submitted test samples, the chrome plated powder metal sears should be considered for use in the M/700.

If the hardness difference is considered significant, some of the latest, softer sears should be dry cycled for wear on the sear connector edge.

Enc.
AMC