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TO: R. E. NIGHTINGALE
FROM: F. L. SUPRY
REPORT TITLE: M/SEVEN & M/700 .222 CALIBER FOLLOWER - SPRING EVALUATION
Supplement to Report No. 821321

ABSTRACT

The results generated during the first phase (1/3 of the overall test) of the M/Seven and M/700 .222 Caliber Follower - Spring Evaluation were reviewed by C. Evan Ritchie (Sr. Supervisor - Testing, Measurement and Mechanical Analysis Lab), Dr. James Lucas and Steve Larson (Consultants - Applied Statistics Group, E. I. DuPont deNemours & Co., Inc.). As a result of the review, it was decided to evaluate six (6) red and six (6) yellow magazine springs, all twelve (12) assembled with Design No. 6 No-Bind Followers. Each spring is to be tested in two (2) of the best performing rifles and two (2) of the worst performing rifles in the M/Seven, M/700 ADL, and M/700 BDL .222 caliber rifles, selected from the results of the first phase of the .222 caliber follower - spring evaluation.

SCOPE OF TEST

To compare the two (2) best performing spring-follower combinations in the best and worst performing rifles; to determine the most compatible combination in each model, and the most compatible combination overall.

TEST RESULTS

The yellow spring (ref. Dwg. No. 91133 - Current Magazine Spring) had fewer malfunctions overall than the red spring (Ref. Dwg. No. 91133 - Current Magazine Spring - Revision 2), and fewer total malfunctions in the Model Seven, M/700 ADL and M/700 BDL rifles tested. The following results were obtained:

<u>Model</u>	-	<u>Yellow Spring Malfunctions</u>	-	<u>Red Spring Malfunctions</u>
M/700 BDL	-	59	-	83
M/700 ADL	-	35	-	43
M/Seven	-	21	-	27
Total	-	115	-	153