

REC. R.A.A.H.
NOV 6 1944

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November 3, 1944

TO: Mr. E. SMITH
FROM: Mr. E. WALKER
SUBJECT: STATUS REPORT ON R-722 TEST

In accordance with your request, a summary of the results of the R-722 test follows:

Test #1-12 These tests included a chamber and headspace check, trigger pull, and safety tests. The chamber and headspace checks were made with a chamber and headspace gauge. The safety tests were made with a safety test gauge. The trigger pull tests were made with a trigger pull gauge. The results of these tests are as follows:

Test #13-14 These tests included trigger pull, accuracy, and accuracy tests. The trigger pull tests were made with a trigger pull gauge. The accuracy tests were made with an accuracy test gauge. The results of these tests are as follows:

Test #15-20 These tests included firing of 400 rounds, accuracy tests, trigger pull, bolt lift, and headspace checks, plus 100 cycles with dummies and 3000 cycles on the endurance machine. One cartridge of the 400 rounds failed to feed and 6 failed to eject due to slow opening of the bolt. At the beginning of the accuracy test the extractor was found to be cracked at the center of the lip. This apparently does not affect its function. The average extreme spread for this second accuracy test was 2 1/8" with a max. group of 3" and a min. group of 1 1/8".

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On test #12 the average trigger pull jumped to 5 pounds 1 ounce. This is unexplained unless a lack of lubrication was the reason. The mechanism was satisfactory. The bolt lift averaged 7 pounds. The firing pin protrusion was .05". The firing pin indent to a target surface was .008". The safety functioned satisfactorily. An attempt was made to make the safety work easier without success. In the first half hour of testing it was discovered that the follower was worn from a hole caused by the action of the bolt. The bolt was corrected. The next half hour of testing there were 11 failures to feed the first cartridge. After 100 rounds after the 1000 cycles with dummies. During the 1000 cycle test the average trigger pull was 4 pounds 10 ounces and the max variation was 1 pound. The max variation for any individual test was 1 ounce. The min variation for any individual test was 1 ounce. The max variation in the period of measurement will approach 1 ounce.

Dummies averaged slightly over 7 pounds although some at 6 pounds. Live ammo it averages slightly under 7 pounds. The max variation during either of measurement are easily close to 2 pounds.

[illegible]

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KEY POINTS