

DAILY PROGRESS REPORT

Date 1/20/47

SUBJECT M/721 Fire Control - Double Sear

Objectives: To determine the functional performance, endurance, and safety characteristics of a double sear for M/721 Fire Control.

Conclusion: This test shows that the Double Sear used perform satisfactorily during 10,000 dry cycles under dust conditions.

That the manual Safety will withstand 10,000 dry cycle operations without appreciable wear.

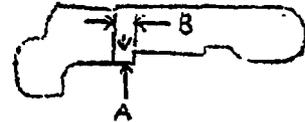
<u>Test of</u>	<u>Method</u>	<u>Measurement</u>	
<u>Safety wear</u>	5,000 dry cycle <u>safety</u> operations without oil	<u>between</u> Trigger Connector and Sear	<u>Wear on Safety - .0003"</u>
	5,000 dry cycles with dust conditions	Same	.0006" Change - .0003"

Test of Sear
and Trigger
Connector wear

10,000 dry cycle bolt
operations with dust
conditions

Sear shoulder en-
gaged by trigger
connector

Wear on Sear



0 Cycles A = .0573" B = .0417"
10,000
Cycles A = .0666" B* = .0426"
Changes .0093" .0009"

*Note - "B" dimension enlarged because Trigger Connector forced metal to the leading edge of the Sear Shoulder. Bolt Cocking Cam and Cocking Piece showed an upset and was honed at 7000 cycles.

Rounds Fired after dry
cycle tests

60

Remarks

Gun would not fire in a partially unlocked condition. Difficulty was encountered in functioning the Manual Safety.

W. E. Leek
Test Engineer

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