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December 3, 1968 .

TO:

L. FOX

FROM:

J. C. DAVIS - H. K. BOYLE Cople

M/742 PERFORMANCE TEST TEFLON-S COATED ACTION COMPONENTS

A 200 gun M/742 Gallery test was conducted to determine if Teflon-S coating on action components improved function of "First Time" power rejects. This test supplements similar tests on "new" guns, dated 3/20/68.

SUMMARY:

- Teflon-S coating on action components significantly improved M/742 function. 37% more teflon coated guns passed retest compared to standard production.
- 2. An average of 15 more shots per gan were required to the standard production.
- Teflon coating improved function move on 243 cal. then 30-05 cal. guns.
- 4. Teflon coating improved 243 cal. gun performance to level of 30-05 cml. tellon guns.
- 30-06 cal. gurs "break-in" nearly three times faster than 203 cal. guns

TEST:

One hundred (100) 243 cal. and one hundred (100) 30-06 cal. guns were collected, disassembled and marked. All guns were "First Time" power rejects. The Action Bar Assemblies, Bolts, and Bolt Carriers from fifty of each caliber were selected at random and sent to Donwell Company, Manchester, Connecticut, to be coated with 0.6 mils of Teflon-S copolymer. Teflon coated and Control components were gaged, repaired and reassembled in the original guns on return. One Assembler assembled all guns at random. Callery retest was performed by one Tester in the same jacks. Test results are tabulated in Tables I - III. Guns passing Gallery test were final inspected, packed, and warehoused.

EXHIBIT 2