CC: S. M. Alvis
~~R. B. Hurley~~
File

Ilion, New York
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H. J. HACKMAN

M/40X & M/513T, 22 CAL. RIFLES - PROOF TEST

Purpose: To test effect of new proof loads ~~in subject~~ models.

Remarks: No apparent change in head space occurred through proofing in the guns tested. See attached chart.

The guns used were taken as assembled prior to testing and one (1) 22 caliber proof load fired in each gun. Head space was measured both before a and after proofing with the same heading plugs and by the same person to insure consistency.

W. A. Best, Supervisor
Product Testing Specs.

by _____
N. W. Menard

NWM:I

40 X
BOLT + FIRE CONTROL TEST.

	Pull. AVE. 50000 Rds. (MA) (MIN)	INDENT	Sear Eng.
#1	3#-5 – (3#10 oz) (2-14 oz)	023 - 018	ok
#2.	3-8 (5#-0) - (3-6 oz)	.022 - 22	ok.

HEAD SPACE. WEAR

# 1	042 - 052	.010	FIRED AS RECEIVED, UNLAPPED BOLT.
# 2	0435 - 0465	.003	LAPPED BOLT - WITH LUBRICATION

Two Rifles were run 50,000 cycles on the dry cycle machine. Checks were made on each gun on those items of customer acceptance; headspace, indent, trigger pull, and safety of sear engagement and ability of firecontrol to hold its sear engagement.

On #1 gun the indent changed from .023 down to .018 which in a target rifle would be unsatisfactory. Sears engagement remained ok and trigger pull weight stayed within satisfac limits. Headspace developed at an alarming rate and was up to .052 at 50,000 cycles.

On #2 rifle the bolt was lapped (as now in Production) [illegible] with [illegible] at 50000 cycles headspace was [illegible] .003 but trigger pull [illegible] had ran between 3-6 oz & 5#-10 oz. [illegible]
The headspace on this gun is OK and performed the cause of pull change is now in process of being isolated.

(Margin note: between bolt head + barrel.)