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May 19, 1948

TO: W. H. Davis
FROM: S. H. Alvin
SUBJECT: MODEL 770 - CAL. 270 PILOT LINE TESTING

The following results of pilot testing of Cal. 270 is for your information and guidance in advance of the formal report which will be issued as soon as accuracy testing has been completed.

Eight (8) guns were selected at random and given a functional test of 240 rounds each; 5 were found to be o.k., and one rifle, #32489, had 4 primary extraction malfunctions and one failure to eject in 240 lbs. for a performance of 25%.

Gun #35814 had 4 bolt overrides and these always occurred with the second cartridge from top out of a full loaded magazine. Examination of the gun shows that one side of the magazine at the lips is badly deformed and we believe is responsible for this difficulty. We have not as yet altered this gun in order that your people can inspect it.

In rifle #32487 there were 14 malfunctions and one gun failure due to a total of 4 malfunctions in 20 rounds; 9 of these were for primary extraction, 2 on secondary extraction, 3 on ejection. Examination of the Bolt Assembly indicated that the Extractor was bent and probably responsible for the difficulty. We have installed a new Extractor and are requesting the Test Unit to re-check the gun and determine if this corrects the trouble.

Will advise as to results.

S. H. Alvin
S. H. Alvin,
Ilion Technical Division

SHALV

Air Gauge Grooves

Gun # 32437

0" - .2779
 1" - .2789
 2" - .2789
 3" - .2789
 4" - .2786
 5" - .2784
 6" - .2784
 7" - .2784
 8" - .2784
 9" - .2784
 10" - .2784
 11" - .2784
 12" - .2784
 13" - .2784
 14" - .2784
 15" - .2784
 16" - .2783
 17" - .2783
 18" - .2783
 19" - .2783
 20" - .2782
 21" - .2780

Bore - Min Plug
 Plug Gauge Go
 .270

35821

0" - .2786
 1" - .2789
 2" - .2788
 3" - .2788
 4" - .2785
 5" - .2784
 6" - .2784
 7" - .2784
 8" - .2783
 9" - .2783
 10" - .2783
 11" - .2783
 12" - .2782
 13" - .2781
 14" - .2781
 15" - .2781
 16" - .2781
 17" - .2780
 18" - .2780
 19" - .2780
 20" - .2782
 21" - .2781

Plug Gauge
 Go
 .2645

32480

0" - .2778
 1" - .2786
 2" - .2786
 3" - .2785
 4" - .2784
 5" - .2783
 6" - .2783
 7" - .2782
 8" - .2782
 9" - .2783
 10" - .2783
 11" - .2783
 12" - .2783
 13" - .2783
 14" - .2783
 15" - .2783
 16" - .2783
 17" - .2782
 18" - .2782
 19" - .2782
 20" - .2782
 21" - .2781

Plug Gauge
 Go
 .2645

32418

0" - .2775
 1" - .2787
 2" - .2786
 3" - .2785
 4" - .2784
 5" - .2784
 6" - .2784
 7" - .2784
 8" - .2784
 9" - .2783
 10" - .2783
 11" - .2783
 12" - .2783
 13" - .2782
 14" - .2782
 15" - .2782
 16" - .2782
 17" - .2782
 18" - .2782
 19" - .2781
 20" - .2781
 21" - .2781

Plug Gauge
 Go
 .269