

REMINGTON ARMS COMPANY, INC.

INTER-DEPARTMENTAL CORRESPONDENCE

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RUPONxc: C. B. Workman
F. Martin
J. Linde
A. A. Hugick
File

"CONFINE YOUR LETTER TO ONE SUBJECT ONLY" _____

May 31, 1977
Ilion, New York

TO: J. H. HENNINGS

FROM: C. J. SWEET

SUBJECT: M/700 ADL ALTERED STOCK TEST

Date Started: April 4, 1977
Date Completed: April 12, 1977
Work Order: G 0460

ACTION USED IN TEST:

M/700	30-06 Cal.	A-6427233
M/700	.308 Cal.	A-6431192
M/700	22/250 Cal.	A-6386792
M/700	6mm Cal. A	A-637611

INTRODUCTION:

Design section has requested that the Test Lab investigate the M/700 ADL Stock with the altered magazine cut to determine the feasibility of eliminating the magazine spring retainer.

OBJECTIVE:

To evaluate the proposed M/700 Stock alteration to determine if it is acceptable and that it does not hamper the function of the present M/700.

TEST OBSERVATIONS:

- A. Magazine capacity test with/without the retainer - No failure occurred.
- B. Function test with/without the retainer at varied speeds - No failure occurred.
- C. Live ammo test with altered stocks at varied speeds - No failure occurred.
- D. Deliberate misplacement of magazine spring less retainer - No failure occurred.
- E. Magazine follower investigation - The follower functioned normally.
- F. Endurance test with slot .010" over max. - No failure occurred.
- G. Strength test with 10 proof rounds had no failures to the stock.

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TEST PROCEDURES:

1. Measurements
Conducted by the Test Lab.
2. Magazine capacity investigation (with altered stock and with the retainer)
 - a) Four dummy shells were loaded in the magazine to see if fourth shell loads easily
3. Function Test (with altered stock and with the retainer)
 - a) Four dummy shells were loaded in the magazine and one in the chamber, to check the feeding of the shells. Varied speed feeds were used.
4. Live ammo test with altered stocks only
 - a) 40 Rds. of different bullet weights were fired on each of the eight ADL altered stocks at varied feed speeds. The rifle was cooled after every 20 rds.
5. Deliberate misplacement of the magazine spring
 - a) A 1/4" hole was drilled through the bottom of a short and long stock at the center of the altered cut thus allowing the magazine spring to be forced out of position by the use of a screw driver. As the forth shell was loaded, the magazine spring would jump back into the altered cut. (Refer to pictures 1-2-3-4) The short stock has a min dimension .0215 slot. The slot on the long stock has a max. dimension of .0297". (6mm, 308, 30-06 & 22/250 actions were used).
 - b) The magazine spring was then held out of position with a screw driver. The magazine was loaded with dummy shells and the action still functioned without the magazine spring in the altered slot.
6. Magazine follower investigation
 - a) The front end of magazine follower was tipped down in the magazine box. The bolt was then pushed forward but the follower would not snap back into position. This test was run with/without the retainer and the same results were obtained in both cases. (Refer to pictures - 5, 6, 7 & 8) The magazine follower was then tipped back in the magazine box, and the bolt was closed. The magazine follower returned to its normal position on closing of the bolt (Pictures 7 & 8).
7. Endurance of slot .010" over max.
 - a) The long stock that was altered .010" over max. was endured for five hundred rounds after every twenty rds.
8. Strength Test of the over cut slot
 - a) A total of 10 proof rounds were fired by landyard on the long stock with a slot cut .010" over max.

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TOTAL ROUNDS FIRED:6mm A6376111

Ammunition Rem. 80 gr. P.S.P.
 100 gr. P.S.P.
 Total Rounds Fired 120

22/250 A6386792

Ammunition Rem. 55 gr. P.S.P.
 Total Rounds Fired 80

308 A6431192

Ammunition Rem. 150 gr. P.S.P.
 Rem. 180 gr. P.S.P.
 Win. 125 gr. P.S.P.
 Win. 200 gr. E.X.P.
 Total Rounds Fired 160

30-06 A6427233

Ammunition Rem. 125 gr. P.S.P.
 Rem. 150 gr. P.S.P.
 Rem. 180 gr. B. P.
 Rem. 220 gr. P.S.P.
 Total Rounds Fired 670

TEST RESULTSPHASE 1 MAGAZINE CAPACITYA) 6mm Short Action

- 1) Short 1 - Handles 4 easy
- 2) Short 2 - " "
- 3) Short 3 - " "
- 4) Short 4 - " "

B) 22/250 Short Action

- 1) Short 1 - Handles 4 easy
- 2) Short 2 - " "
- 3) Short 3 - " "
- 4) Short 4 - " "

C) 30-06 Long Action

- 1) Long 1 - Handles 4 easy
- 2) Long 2 - " "
- 3) Long 3 - " "
- 4) Long 4 - " "

D) 308 - Short Action

- 1) Short 1 - Handles 4 easy
- 2) Short 2 - " "
- 3) Short 3 - " "
- 4) Short 4 - " "

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TEST RESULTS (Cont'd)PHASE 2 MAGAZINE CAPACITY WITH THE RETAINER

- A) 30-06 Long Action
 1) Long 1 - Handles 4 easy
 2) Long 2 - " "
 3) Long 3 - " "
 4) Long 4 - " "
- B) 308 Short Action
 1) Short 1 - Handles 4 easy
 2) Short 2 - " "
 3) Short 3 - " "
 4) Short 4 - " "
- C) 6mm Short Action
 1) Short 1 - Handles 4 easy
 2) Short 2 - " "
 3) Short 3 - " "
 4) Short 4 - " "
- D) 22/250 Short Action
 1) Short 1 - Handles 4 easy
 2) Short 2 - " "
 3) Short 3 - " "
 4) Short 4 - " "

PHASE 3 FEEDING FUNCTION WITH DUMMY SHELLS (with/without the retainer)

<u>CALIBER</u>	<u>STOCK NO.</u>	<u>SLOW FEED</u>	<u>MEDIUM FEED</u>	<u>FAST FEED</u>
6mm	Stock - 1,2,3 & 4	Good	Good	Good
22/250	Stock - 1,2,3 & 4	Good	Good	Good
30-06	Long - 1,2,3 & 4	Good	Good	Good
308	Short - 1,2,3 & 4	Good	Good	Good

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TEST RESULTS (Cont'd)

PHASE 4 DEPTH FROM RECEIVER BOTTOM CUT TO BOTTOM OF MAG. CUT

<u>Stock No.</u>	<u>Receiver Bottom to original surface</u>	<u>Receiver bottom to bottom on altered magazine cut</u>
L1	.9982"	1.0279"
L2	.9914"	1.0158"
L3	1.0004"	1.0231"
L4	.9844"	1.0195"
S1	1.0256"	1.0477"
S2	1.0094"	1.0327"
S3	1.0311"	1.0562"
S4	1.0316"	1.0682"

NOTE: Design dimension for short action stock "U" dim. is 1.000" and for long action stock "U" dim. is .9520.

DEPTH OF ALTERED STOCK

Long 1 - .02970	Short 1 - .0221
Long 2 - .02440	Short 2 - .0233
Long 3 - .0277	Short 3 - .0215
Long 4 - .0351	Short 4 - .0366

PHASE 5 MAGAZINE FOLLOWER INVESTIGATION

<u>Caliber</u>	<u>Slot Depth</u>	<u>Mag. Follower Tipped Forward</u>	<u>Mag. Follower Tipped Back</u>
.308	Short 3 - .0215"	Bolt Won't Close	Bolt will close
30-06	Long 1 - .02970"	"	"
22/250	Short 2 - .0215	"	"
6MM	Short 1 - .0215	"	"

NOTE: This test was done both with and without the magazine follower retainer.

CJS:bd
 Measurement/Test Lab
 Ilion Research Division