

REMINGTON ARMS COMPANY, INC.

INTER-DEPARTMENTAL CORRESPONDENCE



Distribution: C. B. Workman
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RESEARCH TEST and MEASUREMENT REPORT - Report No. 830052

M/700 BDL CAL. .223 REM. TRIAL & PILOT EVALUATION

Prepared by: R. Williams

Date Prepared: 1-21-83

Proofread and Cleared By:

J.H. Hennings, / R.E. Nightingale,
 Foreman-Test Lab / Foreman-Measurement Lab

Signature

Date

C.E. Ritchie,
 Sr. Supervisor - Testing,
 Meas. & Mech. Analysis Lab

Signature

Date

TEST & MEASUREMENT LAB REPORT

REPORT NUMBER: 830052
REPORT TITLE: M/700 BDL CAL. .223 REM; TRIAL & PILOT EVALUATION
MODEL(S): 700 BDL
GAUGE OR CALIBER: .223 Rem.
DATE: 1-21-83
WORK ORDER NO.: C-5018-000
PART NAME: P. Nasypany
DESIGNER/ENGINEER:

TEST TYPE:

1. PHOTO LAB
2. STRENGTH TEST - NO. OF GUNS TESTED _____
3. FUNCTION TEST - NO. OF GUNS TESTED 8
4. ACCURACY TEST - NO. OF GUNS TESTED 4
5. MEASUREMENTS - TYPE: Static
6. ENVIRONMENTAL TEST
7. AMMUNITION TESTING & EVALUATION - TYPE: _____
8. VISUAL EVALUATION - 8 OUT OF 8 GUN SAMPLE
105 - 4 Guns
9. ENDURANCE - NO. OF GUNS TESTED: 125 - 4 Guns

NO. OF ROUNDS PER GUN: 920

TOTAL ROUNDS FIRED IN TEST: _____

AMMO TYPE: MAGS. _____; TARGET: _____

RIM FIRE _____ CENTER FIRE X

January 22, 1983

TO: J. H. HENNINGS.

FROM R. WILLIAMS

REPORT TITLE: M/700 BDL CAL. .223 REM. TRIAL & PILOT EVALUATION

ABSTRACT

The Test Lab received a request to conduct a Pilot Line Test from P. Nasypany, Current Product Design on the first run of the M/700 BDL in Cal. .223 Rem.. Eight (8) rifles were received from G. Hill, P. E. & C. for this evaluation.

SCOPE OF TEST

To evaluate the performance of the M/700 BDL Cal. .223 introductory production run.

TEST RESULTS

A. Accuracy

Four (4) M/700 BDL Cal. .223 Rem. rifles were fired for accuracy. All met Remington standards which is 2.2" center to center for 5 shot group.

B. Visual Inspection

Comments from the Visual Inspection Committee can be found in Report Text.

C. Measurements

All measurements taken were found to be within Remington specifications.

D. Load & Unload Cycle Test

Seven (7) rifles passed with no malfunctions. Rifle No. B6359545 passed but had one stem low 3rd round out of magazine at medium feed with Federal 55 Gr. Metal Case and one shell jumps mag. 2nd round out of magazine with Federal 55 Gr. Soft Point.

E. Field Cycle Test

Three (3) rifles passed with no malfunctions. The other five (5) passed but had some malfunctions. Results can be found in Report Text,

REPORT TEXT

Results of Field Function Test show that Rifle No. B6359545 had the most malfunctions with 3 stem high and 5 shell jumps mag. out of 105 rounds fired for a 7.6% malfunction rate.

Stem High

Rem. 55 Gr. H.P.	4th out of mag.	Fast cycle
Fed. 55 Gr. M.C.B.T.	1st out of mag.	Slow cycle
Fed. 55 Gr. M.C.B.T.	1st out of mag.	Medium cycle

Shell Jumps Mag.

Rem. 55 Gr. P.S.P.	1st out of mag.	Fast cycle
Rem. 55 Gr. M.C.	1st out of mag.	Slow cycle
Win. 55 Gr. P.S.P.	1st out of mag.	Slow cycle
Win. 55 Gr. P.S.P.	1st out of mag.	Medium cycle
Win. 55 Gr. P.S.P.	1st out of mag.	Fast cycle

The other 4 rifles with malfunctions are as follows:

Rifle No. 6360901

2 Stem High malfunctions, 1.9% rate		
Rem. 55 Gr. P.S.P.	3rd out of mag.	Medium cycle
Fed. 55 Gr. M.C.B.T.	4th out of mag.	Medium cycle

Rifle No. B6358943

1 Stem High malfunction, .95% rate		
Rem. 55 Gr. H.P.	4th out of mag.	Fast cycle

Rifle No. B6359537

1 Stem High malfunction, .95% rate		
Rem. 55 Gr. P.S.P.	3rd out of mag.	Fast cycle

Rifle No. B6358980

2 Stem High malfunctions, 1.9% rate		
Rem. 55 Gr. P.S.P.	1st out of mag.	Slow cycle
Rem. 55 Gr. P.S.P.	1st out of mag.	Fast cycle

Accuracy Test

All results can be found in Appendix "A".

TEST PROCEDURE

Measurements taken are Headspace, Firing Pin Indent and Trigger Pull.

Visual inspection was conducted in the Test Lab 1-13-83 at 12:50 p.m. by P. Nasypany, R. Joy, G. Hill, R. Nightingale and E. Ritchie. Rifles were wiped down with a clean cloth and inspected by each member of the committee and comments were recorded.

Load and Unload Cycle test was conducted in the Shooting Jacks in the Test Lab. Seven (7) types of ammo were used, Rem. 55 Gr. P.S.P., Rem. 55 H.P. Rem. 55 Gr. M.C., Fed. S.P., Fed. M.C., Win. M.C. and Win. P.S.P. all 55 Gr.

Field Function Test was run on the Rifle Range at the Ilion Fish and Game Club. The weather was calm, sunny and temperature was around 0° F. The eight (8) rifles were fired a total of 105 rds. each using seven (7) types of ammo. and working the action slow, medium and fast cycle. The round robin system was used in this test.

Ammunition

Rem.	55 Gr. P.H.S.P.	Index	R223R1
Rem.	55 Gr. H.P.	Index	R223R2
Rem.	55 Gr. M.C.	Index	R223R3
Fed.	55 Gr. S.P.	Index	223A
Fed.	55 Gr. M.C. Boat T.	Index	223B
Win.	55 Gr. P.S.P.	Index	X223R
Win.	55 Gr. F.M.C.	Index	X223R1

Accuracy Test

The accuracy test was shot at the R. & D. 100 yd. range by R. Williams. Ammunition used in the test was Remington .223 55 Gr. Power-Lokt H.P. Index R223R2, Code T05001820.

A total of three (3) five (5) shot groups were fired with each of 4 rifles and the barrel cooled between each group and 1 fouling shot fired after cooling.

Weaver mounts and bases were used with a Lyman 10X Std. Crosswire All-American Scope for the test of each rifle.

Before shooting rifles for accuracy each bore was wire brushed with Hoppe's No. 9 Solvent and patched dry.

VISUAL INSPECTION

Present: P. Nasypany
R. Joy
G. Hill
R. Nightingale
E. Ritchie

No. 6360343

- o Floor plate latch pin protruding 1/16" on left side.
- o Irregular surface finish on wood fore-end matched to tip.
- o Rough spots in finish - top of rail - right side.

No. 6359545

- o Floor Plate Latch Pin protruding on left side.
- o Marred Trigger Guard.
- o Marred by stock cheek piece.
- o Red color marks - top of rail - both sides at front.
- o Rear sight base - some small bright mars.

No. 6359537

- o Floor Plate Latch Pin not colored - right side.
- o Poor finish of front of rear sight base.
- o Front sling screw turned in too much - chipped finish.

No. 6359127

- o Stock toe - marred and then finished over top.
- o Finish over dirt on right side panel.
- o Wood damage - right side at Floor Plate Spring.
- o Magazine Spacer - rusty.

No. 6358943

- o Stock toe - marred; then finished over top.
- o Wood damage - Floor Plate Spring.
- o Mars on wood - fore-end tip left side.
- o Poor stain - top left rail.
- o Chip of wood finished over in bolt handle slot.

No. 6358980

- o Rusty Magazine Spacer.
- o No finish - inside of Trigger Guard at 2 locations.
- o Dent at Ejection Port slot.

No. 6359102

- o Rusty Magazine Spacer.
- o Right side fore-end tip re-worked - finish dulled; never refinished to match.
- o Poor finish (rings) on bolt plug.
- o Rear Sling Screw not turned in completely.

No. 6360901

- o Excessive margin - Floor Plate to stock (measured .040")
- o Trigger Guard; Floor Plate screws damaged and bright.
- o Finish on bolt body - color worn off.
- o Fuzzy bolt handle slot.
- o Ring in breech end of barrel.