FUNCTIONAL TEST 14 and Strength
for
M/721 - Pre-Pilot Bolt Action Rifle 19

1/21/47

Conditions of Firing:

One shot every 5 seconds. Time includes cooling and loading. Cool with compressed air every 40 rounds. Functioning - slow, medium and fast. Alternately load magazine. See Ammunition Schedule attached.

Conditions of Test:

Make the following Measurements, Cleaning and Inspection at 0, 500 rounds and after 10,000 dry cycles:

Clean and Oil - Type III.

Head Space Test #3.

Trigger Pull Test #6.

Firing Pin [illegible] Protrusion Test #8.

~~Bolt Opening Test #10 - 5 pounds.~~

Safety Mechanism Function Test #22.

Safety Sear Mechanism Test #25.

~~Measure free length of all springs at 0 rounds.~~

Measure surfaces of locking mechanism, sear and manual safety at 0 rounds, 500 rounds and 10,000 dry cycles. ~~Measure the "lips" in the mouth of the magazine at 0 and 500 rounds.~~

		Rounds
1.	Take Down Inspection Test #11.	
2.	Head Space Test #3.	
3.	Proof Test #1. Eliminate if gun has been previously proofed.	0-1
4.	Safety Operation Test #31.	
5.	Jar Off Test #21.	
6.	Cleaning and Oiling - Type III.	
7.	Head Space Test #3 (if gun has not been previously proofed).	
8.	Preliminary Live Fire Test #45 - 128 rounds.	2-130
9.	Competitive Ammunition Test - 100 rounds, 30 per type	131-230
10.	Accuracy Test #4 - 50 rounds.	231-280
11.	Angular Position Test - 60 rounds (20 rds. in each position).	281-340
12.	Determine position of ejected rounds with respect to the shooter - 60 rounds.	341-400

		Rounds
13.	Feeding rounds into "Loaded Chamber Test" - 20 rounds.	401-420
14.	Breech Gas Escape Test - 20 rounds.	421-440
15.	Defective Ammunition Test - 60 rounds. 3 types - 20 rounds per type. Use proof chamber.	441-460
16.	Fire 9 proof rounds.	461-469
17.	Head Space Test #3.	
18.	Determine if firing pin will mark primers.	469-478
19.	Head Space Test #3	479/480
20.	Sub Zero Test (-60^0F.) - 20 rounds.	479-500
21.	Head Space Test #3.	
~~22.~~	~~Chamber Pressure Test #48 - 10 rounds. Measure bolt opening.~~	~~469-478~~
23.	Perform 10,000 Dry Cycle Operations.	
~~24.~~	~~Safety Lug Shear Test - 20 rounds.~~	501-520

23 & 24 Locking lug, ~~shear test~~ & bolt handle shear test. 20 rds.

AMMUNITION SCHEDULE 16

M/721 - Pre-Pilot Bolt Action Rifle 17

Routing Ticket No.	Manufacture	Ammunition Type	Grain	Rounds
3	Remington	Proof Ammunition		0-1
8	Remington	Hi Speed, Bronze Point	150 (42 rounds)	2-130
	"	Hi Speed, Soft Point	180 "	
	"	Soft Point Express	220 (44 rounds)	
9	Western	Open Point Expanding	150 (20 rounds)	131-230
	"	Soft Point	180 "	
	"	Open Point Expanding, Boat Tail	180 "	
	"	Silver Tip	220 "	
	Winchester	Super Speed	180 "	
10	Remington	Match Taper Heel	150	231-280
11	"	Bronze Point	180	281-340
12	"	Mushroom	220	341-400
	"	Bronze Point	180	
	"	" "	150	
13.	"	Bronze Point	150	401-420

AMMUNITION SCHEDULE (Cont'd)

Routing Ticket No.	Manufacture	Ammunition Type	Grain	Rounds
14	Remington	Mushroom	220 (5 rds.)	421-440
	"	Soft Point	220 "	
	"	" "	180 "	
	"	Bronze Point	150 "	
15	Remington	Soft Point	220	441-460
16	"	Proof	4	461-469
20	"	Soft Point	220	479-520
~~22~~	~~Remington~~	~~Soft Point~~	~~220~~	~~521-540~~
23 ~~24~~	"	Hand Loaded	220	501-520

Normal Bolt Head not brazed to Bolt Body. Poor braze on Bolt Handle.
Objective: ~~To test inertia force on Bolt Handle~~ Determine if the Bolt Body will impart enough impinging force upon the Bolt Body to break the brazed Bolt Handle

3 Proof

No evidence of ~~inertia~~ impinging force on Bolt Handle.

Normal Bolt Head. Not brazed to Bolt Body. Normal ~~no~~ brazed to Bolt Handle. Bolt Lugs not locked to Receiver. Bolt Handle shimmed to firing position. Objective: ~~To test strength of Bolt Handle.~~ Determining if the Brazed Bolt Handle will withstand the force imparted by a standard round

1 150 gr. Bronze Point

Bolt Handle sheared from Bolt Body. Bolt body damaged. Trigger Guard ~~frame~~ ~~piece~~ bent. Stock splintered in numerous pieces. Forward end of ~~locking~~ Firing Pin sheared. Primer pierced. ~~Head of Bolt broken rearward.~~ Locking recess in Receiver slightly burred. No other evidence of breakage or deformation of Receiver or Barrel was noted.

Measurements

	Head Space	Trigger Pull	Firing Pin Protrusion	Bolt Lugging
0 - ~~Rounds~~	1.940 ~~After~~	av 5# 3oz	within limits	
500 Rounds	1.947 ~~After~~	av 5# 3oz	within limits	

~~"Wear"~~

Note. There was no measurable wear

Note:

Measurable wear

Measurements

	Safety Cam	Sear	Safety
0-500 rds	~~Sear~~ 0-wear	0-wear	0-wear
500 rds - 10,000 dry cycles	.005"	0 - wear	.0014"