

REMINGTON ARMS COMPANY, INC.

INTER-DEPARTMENTAL CORRESPONDENCE



Distribution: C. B. Workman
J. W. Brooks
C. E. Ritchie

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RESEARCH TEST and MEASUREMENT REPORT - Report No. 820501

M/700 - NEW DESIGN " RIGHT HAND" SAFETY ASSEMBLY,
NO BOLT LOCK ARM EVALUATION

Prepared by: Ron Williams

Date Prepared: 9-15-82

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: 820501
REPORT TITLE: M/700 - New Design "Right Hand" Safety Assembly
No Bolt Lock Arm Evaluation
MODEL(S): 700 ADL
GAUGE OR CALIBER: 6mm Remington
DATE: 9-10-82
WORK ORDER NO.: C-1803-000
PART NAME: Trigger Assembly
DESIGNER/ENGINEER: J. W. Brooks

TEST TYPE:

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

NO. OF ROUNDS PER GUN: 2,500

TOTAL ROUNDS FIRED IN TEST: 12,500

AMMO TYPE: MAGS. _____; TARGET: _____

RIM FIRE _____ CENTER FIRE 6mm

REMINGTON ARMS COMPANY, INC.
Firearms Research Division

Report No. 820501

September 15, 1982

TO: J. H. Hennings

FROM: R. Williams

REPORT TITLE: M-700 NO BOLT LOCK ARM ON SAFETY EVALUATION

ABSTRACT

A total of (5) M/700 Trigger assemblies with bolt lock arm removed and formed with a new die were delivered to the Test Lab by John Brooks for testing. The No-Bolt Lock allows the bolt to be opened when safety switch is in the safe "On" position. Both dry cycle and live fire endurance test were used to test these assemblies.

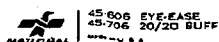
SCOPE OF TEST

To verify satisfactory functioning of parts with new design changes formed with new die.

TEST RESULTS

(No functional problems were encountered during testing. The new design safety assembly functioned normally. There was no significant change in the safe On/Off forces measured before, during and after testing on all assemblies.

" APPENDIX " A "



M-700 No BOLT LOCK ARM ON SAFETY EVALUATION
Sept. 10, 1982

Report No. 82.0501
No. 1
R. Williams

M-700	6MM #86752973	HEADSPACE	FIRING PIN INDENT	SAFE (lbs)		TRIGGER PULL (lbs)	SEAR LIFT	SEAR ENGAGEMENT
				ON	OFF			
1	Sample No. 1							
2	START OF TEST	Mint.004	.025	7.6	6.8	5.7	.010	.013
3								
4	LIVE FIRE							
5	after 1000 rds.	Mint.004	.025	5.5	8.5	6.6	.0115	.0125
6								
7	DRY CYCLE							
8	500 cyc.			8.6	8.3	6.7	.010	.013
9	1000			9.6	10.3	6.1		
10	1500			8.5	10.1	6.3		
11	2000			8.5	9.3	6.2		
12	2500			8.8	11.0	6.1	.0115	.0125
13								
14	LIVE FIRE							
15	after 2000 rds.	Mint.004	.025	7.6	6.0	6.0	.010	.016
16								
17	DRY CYCLE							
18	3000 cyc.			7.6	9.3	5.6		
19	3500			8.5	9.5	6.1		
20	4000			8.1	9.3	6.3		
21	4500			8.3	7.6	6.2		
22	5000			8.6	10.3	6.3	.0105	.015
23								
24								
25	LIVE FIRE							
26	after 2500 rds. H/L	Mint.004	.022	6.1	5.1	6.3	.011	.016
27								
28	DRY CYCLE							
29	5500 cyc.			8.0	7.3	6.0		
30	6000			7.5	7.8	6.3		
31	6500			7.6	7.3	6.3		
32	7000			7.0	7.0	6.1		
33	7500			7.9	6.3	6.1	.012	.015
34								
35								
36								
37								
38								
39								
40								

Report No. 820501

M-700 No Bolt Lock Arm On SAFETY EVALUATION

No. 2

Sept. 10, 1982

R. Williams

	M-700	6MM #86744869	HEADSPACE	FIRING PIN INDENT	SAFE (lbs)		TRIGGER PULL (lbs)	SEAR LIFT	SEAR ENGAGEMENT
					ON	OFF			
1		Sample No. 2 -							
2		START OF TEST	MIN +004	.023	8.5	5.0	5.0	.012	.013
3									
4		LIVE FIRE							
5		after 1000 rds.	MIN +004	.023	5.0	6.6	5.2	.013	.0115
6									
7		DRY CYCLE							
8		500 cyc.			7.8	7.6	5.0	.012	.013
9		1000			7.8	8.8	5.1		
10		1500			6.5	9.3	5.1		
11		2000			7.5	10.8	5.0		
12		2500			7.6	11.3	5.0	.010	.014
13									
14		LIVE FIRE							
15		after 2000 rds.	MIN +004	.023	8.0	5.3	5.3	.012	.015
16									
17		DRY CYCLE							
18		3000 cyc.			6.6	7.3	5.2		
19		3500			7.1	8.3	5.1		
20		4000			7.3	8.8	5.1		
21		4500			7.0	8.3	5.1		
22		5000			7.3	9.8	5.2	.014	.014
23									
24									
25		LIVE FIRE	MIN +004	.021	7.0	4.8	5.7	.0135	.014
26		after 2500 rds. TH							
27									
28		DRY CYCLE							
29		5500 cyc.			6.8	8.0	5.5		
30		6000			6.3	7.1	5.5		
31		6500			6.5	7.8	5.3		
32		7000			6.1	8.0	5.5		
33		7500			6.3	8.6	5.2	.0125	.014
34									
35									
36									
37									
38									
39									
40									

Report No. 820501

M-700 No BOLT LOCK ARM ON SAFETY EVALUATION

No. 3

Sept. 10, 1982

R. Williams

M-700	6MM #86744915 Sample No. 3	HEADSPACE	FIRING PEN INDENT	SAFE (lbs)		TRIGGER FUEL (lbs)	SEAR LIFT	SEAR ENGAGEMENT
				ON	OFF			
1	START OF TEST	MIN +0.004	.024	6.3	4.7	5.4	.0115	.0135
2	LIVE FIRE							
3	after 1000 rds.	MIN +0.006	.025	4.3	6.1	6.0	.0115	.016
4	DRY CYCLE							
5	500 cye.			6.0	7.6	5.4	.0115	.0135
6	1000			7.0	7.3	5.7		
7	1500			7.5	8.1	5.4		
8	2000			7.3	7.8	5.6		
9	2500			7.3	8.0	6.0	.0105	.0165
10	LIVE FIRE							
11	after 2000 rds	MIN +0.006	.025	6.0	4.8	6.3	.0115	.0195
12	DRY CYCLE							
13	3000 cye.			6.0	6.6	6.2		
14	3500			7.1	7.0	6.1		
15	4000			6.8	7.0	6.1		
16	4500			7.3	7.5	6.0		
17	5000			7.1	6.6	5.9	.012	.0175
18	LIVE FIRE							
19	after 2500 rds. TH	MIN +0.006	.023	6.0	4.8	5.9	.013	.022
20	DRY CYCLE							
21	5500 cye.			6.5	6.0	5.8		
22	6000			6.5	6.3	5.9		
23	6500			6.0	7.0	5.7		
24	7000			6.5	6.5	5.9		
25	7500			6.1	5.3	6.2	.010	.023

Report No. 820581

M-700 No Bolt Lock Arm ON SAFETY EVALUATION

No. 4

Sept. 10, 1982

R. Williams

	M-700	6MM #86745548	HEADSPACE	FIRING PEN INDENT	SAFE (lbs)		TRIGGER Pull (lbs)	SEAR LIFT	SEAR ENGAGEMENT
					ON	OFF			
1		Sample No. 4							
2		START OF TEST	Mint 002	.022	6.5	4.8	5.4	.013	.013
3									
4		LIVE FIRE							
5		after 1000 rds.	Mint 003	.022	7.1	6.0	5.6	.012	.014
6									
7		DRY CYCLE							
8		500 cyc.			8.1	8.1	5.5	.013	.013
9		1000			8.0	8.2	5.4		
10		1500			7.3	8.8	5.5		
11		2000			8.8	8.0	5.5		
12		2500			8.1	8.8	5.6	.0115	.014
13									
14		LIVE FIRE							
15		after 2000 rds.	Mint 003	.022	6.7	5.1	5.5	.013	.015
16									
17		DRY CYCLE							
18		3000 cyc.			7.1	8.0	5.5		
19		3500			6.6	7.3	5.6		
20		4000			7.1	8.1	5.5		
21		4500			6.6	7.1	5.1		
22		5000			6.5	6.6	5.5	.0125	.015
23									
24									
25		LIVE FIRE							
26		after 2500 rds. HL	Mint 003	.020	6.0	4.0	5.5	.012	.0205
27									
28		DRY CYCLE							
29		5500 cyc.			5.8	6.5	5.7		
30		6000			6.0	5.1	5.9		
31		6500			6.8	5.6	5.7		
32		7000			6.8	6.0	5.6		
33		7500			6.5	5.3	5.7	.011	.0185
34									
35									
36									
37									
38									
39									
40									

NATIONAL 43-700 40/20 BUFF

Report No. 820501

M-700 No Bolt Lock Arm On SAFETY EVALUATION

No. 5

Sept. 10, 1982

R. Williams

	1	2	3	4	5	6
M-700	6MM #86747529	FIRING	SAFE (lbs)	TRIGGER	SEAR	SEAR
Sample No. 5	HEADSPACE	Pen INDENT	ON OFF	Pull (lbs)	LIFT	ENGAGEMENT
1						
2	START OF TEST	MINT 002	.025	63 44	5.6	.0125 .013
3						
4	LIVE FIRE					
5	after 1000 rds.	MINT 003	.025	66 41	5.6	.014 .014
6						
7	DRY CYCLE					
8	500 cyc.			7.6 8.0	5.1	.0125 .013
9	1000			7.1 7.8	5.2	
10	1500			7.0 7.8	5.4	
11	2000			6.6 8.3	5.1	
12	2500			7.5 7.8	5.3	.014 .017
13						
14	LIVE FIRE					
15	after 2000 rds.	MINT 003	.025	62 48	5.9	.015 .017
16						
17	DRY CYCLE					
18	3000 cyc.			6.0 6.0	5.6	
19	3500			7.0 5.6	5.6	
20	4000			7.1 5.7	5.9	
21	4500			7.5 6.1	5.7	
22	5000			5.9 4.9	5.9	.014 .0165
23						
24						
25	LIVE FIRE					
26	after 2500 rds. HL	MINT 003	.023	63 3.5	5.8	.012 .0195
27						
28	DRY CYCLE					
29	5500 cyc.			5.8 4.8	5.3	
30	6000			5.8 6.6	5.3	
31	6500			6.1 6.3	5.3	
32	7000			5.8 6.1	5.9	
33	7500			6.5 6.3	5.3	.012 .0225
34						
35						
36						
37						
38						
39						
40						