

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 PEN 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								

M-700 No Bolt Lock Arm On SAFETY EVALUATION
 Sept. 10, 1982

Report No. 820501
 No. 2
 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									

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

Report No. 820501
No. 3
R. Williams

M-700	6MM #86744915 Sample No. 3.	HEADSPACE	FIRING		SAFE (lbs)		TRIGGER		SEAR		SEAR	
			PEN INDENT				PULL (lbs)	LIFT	ENGAGEMENT			
				ON	OFF							
1												
2	START OF TEST	MIN +0.004	.024	6.3	4.7	5.4		.0115		.0135		
3												
4	LIVE FIRE											
5	after 1000 rds.	MIN +0.006	.025	4.3	6.1	6.0		.0115		.016		
6												
7	DRY CYCLE											
8	500 cyc.			6.0	7.6	5.4		.0115		.0135		
9	1000			7.0	7.3	5.7						
10	1500			7.5	8.1	5.4						
11	2000			7.3	7.8	5.6						
12	2500			7.3	8.0	6.0		.0105		.0165		
13												
14	LIVE FIRE											
15	after 2000 rds.	MIN +0.006	.025	6.0	4.8	6.3		.0115		.0195		
16												
17	DRY CYCLE											
18	3000 cyc.			6.0	6.6	6.2						
19	3500			7.1	7.0	6.1						
20	4000			6.8	7.0	6.1						
21	4500			7.3	7.5	6.0						
22	5000			7.1	6.6	5.9		.012		.0175		
23												
24												
25	LIVE FIRE											
26	after 2500 rds. TH.	MIN +0.006	.023	6.0	4.8	5.9		.013		.022		
27												
28	DRY CYCLE											
29	5500 cyc.			6.5	6.0	5.8						
30	6000			6.5	6.3	5.9						
31	6500			6.0	7.0	5.7						
32	7000			6.5	6.5	5.9						
33	7500			6.1	5.3	6.2		.010		.023		
34												
35												
36												
37												
38												
39												
40												

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									

M-700 No Bolt Lock Arm On SAFETY EVALUATION
Sept. 10, 1982

No. 5
R. Williams

1-700	6MM #86747529		FIRING	SAFE (lbs)	TRIGGER	SEAR	SEAR	
Sample No. 5	HEADSPACE	PEN INDENT		PULL (lbs)	LIFT	ENGAGEMENT		
			ON	OFF				
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.			76	80	5.1	.0125	.013
9	1000			71	78	5.2		
10	1500			70	78	5.4		
11	2000			66	83	5.1		
12	2500			75	78	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.			60	60	5.6		
19	3500			70	56	5.6		
20	4000			71	57	5.9		
21	4500			75	61	5.7		
22	5000			59	49	5.9	.014	.0165
23								
24								
25	LIVE FIRE							
26	after 2500 rds. HL	MINT 003	.023	63	35	5.8	.012	.0195
27								
28	DRY CYCLE							
29	5500 cyc.			58	48	5.3		
30	6000			58	66	5.3		
31	6500			61	63	5.3		
32	7000			58	61	5.9		
33	7500			65	63	5.3	.012	.0225
34								
35								
36								
37								
38								
39								
40								