REMINGTON ARMS COMPANY, INC.

INTER-DEPARTMENTAL CORRESPONDENCE

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RESEARCH TEST and MEASUREMENT REPORT – Report No. 82 0361

M/700 FIRE CONTROL EVALUATION AND LUBRICATION TEST
RELIEVED SEAR SAFETY CAM, TRIGGER AND CONNECTOR

Prepared by: A. Long – F. Supry

Date Prepared: 5-25-82

Proofread and Cleared By:

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

Signature Date 6-2-82

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

Signature Date 6/2/82

TEST & MEASUREMENT LAB REPORT

REPORT NUMBER:	82 0361
REPORT TITLE:	M/700 Fire Control Evaluation and Lubrication Test Relieved Sear Safety Cam, Trigger and Connector
MODEL(S):	700
GAUGE OR CALIBER:	All
DATE:	5-25-82
WORK ORDER NO.:	C-1803-000
PART NAME:	Fire Control
DESIGNER/ENGINEER:	L.J. Hagen

TEST TYPE:

1. PHOTO LAB
2. STRENGTH TEST - NO. OF GUNS TESTED _____
3. FUNCTION TEST - NO. OF GUNS TESTED 15
4. ACCURACY TEST - NO. OF GUNS TESTED _____
5. MEASUREMENTS - TYPE: Trigger Pull - Sear Lift Engagement
6. ENVIRONMENTAL TEST
7. AMMUNITION TESTING & EVALUATION - TYPE: _____
8. VISUAL EVALUATION - _____ OUT OF _____ GUN SAMPLE
9. ENDURANCE - NO. OF GUNS TESTED: _____

   NO. OF ROUNDS PER GUN: _____

   TOTAL ROUNDS FIRED IN TEST: _____

   AMMO TYPE: MAGS. _____; TARGET: _____

   RIM FIRE _____ CENTER FIRE _____

REMINGTON ARMS COMPANY, INC.
Firearms Research Division

May 25, 1982

TO: J.H. Hennings

FROM: A.J. Long – F. L. Supry

REPORT TITLE: M/700 Fire Control Evaluation and Lubrication Test Relieved Sear Safety Cam, Trigger and Connector

ABSTRACT

On 2-5-82 a request was received from Pete Hagen, Research Current Products, to test 15 altered M/700 fire controls.

A. 10 fire controls have the sear safety cam, trigger and connector relieved by .010".

B. 5 fire controls have the sear safety cam, trigger and connector relieved by .005".

The test was to be a dry cycle evaluation with inspection at 5000 cycle intervals. WD-40, Du Pont and CRC lubricants were to be used for the test.

SCOPE OF TEST

To compare the 15 altered fire controls and to compare the 3 lubricants.

TEST RESULTS

All 15 fire controls were tested with no malfunctions occurring. No significant differences were noticed.

The three lubricants included in the test performed well. No significant differences were noticed.

REPORT TEXT

Data Sheet No. 1 (Appendix A) contains the following information: lubricant used, cycles completed, amount of relief, sear lift, sear engagement, and trigger pull measurements on each fire control.

A. Dry Cycle

Fire controls No. 1, No. 2 (with WD-40) and No. 6 and No. 7 (with Du Pont) were cycled to 25,000 cycles, all others were stopped at 10,000 cycles.

Six (6) fire controls were lubricated with WD-40, seven (7) with Du Pont and two (2) with CRC.

TEST PROCEDURE

1. The fire controls with .005 relief were marked 1 through 5.

2. The fire controls with .010 relief were marked 6 through 15.

3. The fire controls were degreased, using the solvent degreasing tanks located in the Heat Treat and then lubricated with the assigned lubricant.

4. The fire controls were assembled into Model 700 actions, then sear lift and engagement measurements, and trigger pull measurements were taken.

5. The actions were assembled into a dry cycle simulator and a predetermined number of cycles were run, with measurements taken every 5000 cycles.

6. Steps No. 3, 4 and 5 were repeated until all the fire controls were tested.

APPENDIX "A"

(Data Sheet No. 1)

LUBRICATION [illegible] TYPICAL TEST
WITH SEAR SAFETY CAM, TRIGGER AND [illegible] RELIEVED
MODEL [illegible] FIRE CONTROL EVALUATION

RBW/[illegible]
6-25-[illegible]

	FC-1	FC-2	FC-3	FC-4	FC-5	FC-6	FC-7	FC-8	FC-9	FC-10	FC-11	FC-12	FC-13	FC-14	FC-15
LUBRICANT USED →	WD-40	WD-40	DUPONT	DUPONT	DUPONT	DUPONT	DUPONT	DUPONT	DUPONT	WD-40	WD-40	WD-40	WD-40	CRC	CRC
CYCLES COMPLETED →	25,000	25,000	10,000	10,000	10,000	25,000	25,000	10 000	10 000	10 000	10 000	10 000	10 000	10 000	10 000
RELIEF → SEAR LIFT	.005	.005	.005	.005	.005	.010	.010	.010	.010	.010	.010	.010	.010	.010	.010
& ENGAGEMENT (IN.)															
0 CYCLES															
L →	.0095	.010	.007	.010	.0105	.0125	.010	.0115	.012	.012	.0125	.0125	.013	.010	.012
E →	.017	.015	.026	.017	.025	.0205	.0295	.0165	.0165	.010	.0105	.009	.009	.012	.015
5000 CYS															
L →	.010	.010	.010	.010	.010	.015	.0125	.010	.0135	.0115	.0125	.0115	.011	.013	.0115
E →	.0225	.0205	.027	.022	[illegible]	.019	.015	.0205	.022	.025	.0135	.0145	.0145	.026	.0205
10000 CYS															
L →	.011	.011	.010	.0125	.012	.013	.0165	.015	.017	.0105	.015	.014	.0135	.0125	.0125
E →	.021	.021	.020	.0215	.0245	.0185	[illegible]	.0195	.0195	.0255	.0195	.020	.0185	.023	.027
20000 CYS															
L →	.011	.0115	—	—	—	.0115	.0085	—	—	—	—	—	—	—	—
E →	.024	.021	—	—	—	.025	[illegible]	—	—	—	—	—	—	—	—
25000 CYS															
L →	.0125	.011	—	—	—	.0125	[illegible]	—	—	—	—	—	—	—	—
E →	.025	.024	—	—	—	.025	[illegible]	—	—	—	—	—	—	—	—
TRIGGER PULL (lbs) (AVE. OF 3)															
0 CYS	5.3	5.6	5.6	5.4	6.7	5.5	5.6	5.5	6.25	5.6	5.8	5.9	5.7	4.0	6.5
5000 CYS	5.0	5.0	5.2	4.9	5.7	5.2	5.5 5.5	5.4	5.7	5.7	5.7	6.9	5.5	6.0	6.4
10000 CYS	4.8	4.9	5.0	5.2	5.9	5.2	5.5	5.2	6.1	5.7	5.5	5.8	5.5	6.0	6.7
15000 CYS	4.9	4.9	—	—	—	5.6	5.6	—	—	—	—	—	—	—	—
20000 CYS	5.25	5.2	—	—	—	5.5	5.4	—	—	—	—	—	—	—	—
25000 CYS	5.1	5.1	—	—	—	5.5	5.5	—	—	—	—	—	—	—	—

D

REMINGTON STANDARDS — TRIGGER PULL 3 lbs to 8 lbs
SEAR LIFT .005" TO .018"
SEAR ENGAGEMENT .015" TO .020"

DATA SHEET