

REMINGTON ARMS COMPANY, INC.

INTER-DEPARTMENTAL CORRESPONDENCE



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"CONFINE YOUR LETTER TO ONE SUBJECT ONLY" _____

RESEARCH TEST and MEASUREMENT REPORT - Report No. 822811

M/SEVEN "TRIAL & PILOT" FUNCTION TEST FOR FLOOR PLATE COMING OPEN
ON FIRING - 308 CAL. & 7MM-08 CAL.

Prepared by: R. Howe

Date Prepared: 10-25-82

Proofread and Cleared By:

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

[Signature] 11-16-82
Signature Date

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

[Signature] 11/16/82
Signature Date

TEST & MEASUREMENT LAB REPORT

REPORT NUMBER: 822811
REPORT TITLE: M/SEVEN LWT. "TRIAL & PILOT" FUNCTION TEST
FOR FLOOR PLATE COMING OPEN ON FIRING.
MODEL(S): M/SEVEN LWT.
GAUGE OR CALIBER: .308 & 7MM-08
DATE: 10-25-82
WORK ORDER NO.: C-1856-000
PART NAME: Floor Plate
DESIGNER/ENGINEER: D. Bullis

TEST TYPE:

1. PHOTO LAB
2. STRENGTH TEST - NO. OF GUNS TESTED _____
3. FUNCTION TEST - NO. OF GUNS TESTED 20
4. ACCURACY TEST - NO. OF GUNS TESTED _____
5. MEASUREMENTS - TYPE: Lbs. Pressure to Open Floor Plate
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: 165/20 Guns

TOTAL ROUNDS FIRED IN TEST: 3,300

AMMO TYPE: MAGS. _____; TARGET: _____

RIM FIRE _____ CENTER FIRE X

October 25, 1982

TO: J. H. Hennings
FROM: R. Howe
REPORT TITLE: M/SEVEN LWT. "TRIAL & PILOT" FUNCTION TEST FOR FLOOR PLATE
COMING OPEN ON FIRING

ABSTRACT

Ten M/Seven LWT. .308 cal. and Ten M/Seven LWT. 7MM-08 "Trial & Pilot" line guns were received from D. Bullis for evaluation. All twenty were "Live Fire" field function tested by R. & D. Test Lab.

SCOPE OF TEST

To check for Floor Plate coming open on firing of live rounds.

TEST RESULTS:

Of the twenty guns tested 50% showed low to high frequency of the Floor Plate openings when fired with 140 gr. and larger bullet weights.

REPORT TEXT

Of the twenty guns tested, six of the ten .308 cal. and four of the ten 7MM-08 cal. (or 50%) had from one to very high occurrence of the Floor Plate falling open when fired (off the shoulder) using 140 gr. and larger bullets.

All occurrences are broken down as to gun number, shooter and bullet weight in Appendix "A". All other data and measurements in Appendix "B".

NOTE: High speed films of "Floor Plate Opening When Fired" are available in the R. & D. Photo Lab Library.

TEST PROCEDURE

A. Measurements

The following measurements were taken on all twenty guns tested:

Headspace " After Proof" — .000 inch.
Floor Plate Latch Release Force — .lbs.

B. Test Conditions

All twenty guns were checked in the Test Lab for Headspace after proof and Floor Plate Latch release forces (in pounds) were taken for each gun as follows:

Three readings each with 0 - 1 - 2 - 3 & 4 "Dummy" rounds in the magazine. Results in Appendix "B".

They were then taken to the Rifle Range at the Ilion Fish and Game Club to be live fired (from the shoulder) to a total of 165 rds each. (For a test total of 3,300 rds. for twenty guns.)

To check for Floor Plate falling open on firing. Results in Appendix "A".

"TEST RESULTS"

" A P P E N D I X " A "

APPENDIX "A"
M7 LWT "NO BIND FOLLOWER" FEED FUNCTION TEST (CAL. 308)
10-18-82

REPORT #8228/11
R. HOWE
W.D. # C 1856-000

SER # →		7600005	7600003	7600040	7600022	7600101	7600139	7600058	7600036	7600103	7600043	TOTAL PER SHOOTER	TOTAL FOR TEST 1600 RDS.	% FOR TOTAL TEST
SHOOTER #	(* = 5 SRR # CHOSEN ON ORIGINAL W.D.)	GUN # 1 * TIMES/100K PLATE OPENED	# 2 *	# 3 *	# 4 *	# 5 *	# 6	# 7	# 8	# 9	# 10			
1.	R. WILLIAMS	BULLET WT. → F165 P.B.T. 15	W160 S.TIP 3	P160 PSP 1	W160 S.TIP 15	W180 S.TIP 1	F165 P.B.T. 15	OK	OK	OK	OK	66	300	18.18%
2.	R. EASTWOOD	BULLET WT. → R180 W180 F165 PSP S.TIP P.B.T. 15 13 12	F165 PSP 14	OK	OK	OK	R180 W180 PSP S.TIP 5 8	OK	OK	OK	OK	78		
3.	H. WEAVER	BULLET WT. → W200 S.TIP 15	R180 PSP 15	W180 S.TIP 15	W180 S.TIP 1	W180 S.TIP 15	W200 S.TIP 15	OK	OK	OK	OK	78		
4.	C. DICKENSON	BULLET WT. → OK	W200 S.TIP 15	W180 S.TIP 15	R180 PSP 13	R180 PSP 1	OK	OK	OK	OK	OK	44		
5.	G.D. JENNINGS	BULLET WT. → F180 PSP 1	F180 PSP 4	W200 S.TIP 15	R180 W180 PSP S.TIP 4 12	OK	F180 PSP 7	OK	OK	OK	OK	26		
	TOTAL PER GUN →	59	79	76	22	12	52	OK	OK	OK	OK			
	TOTAL PER BULLET WT. →	W180 S.TIP 3	W180 P.P. 1	W180 S.TIP 54	W200 S.TIP 86	F180 PSP 5	F165 P.B.T. 57	F180 PSP 39	R180 PSP 3	R180 PSP 52	W110 PSP 0	W125 PSP 0		
		2048	2048	2143		2048	2048	2048	2048	2048	2048	2048		

R. HOWE
W.O. # C-1856-000

[illegible]

10-25-82

M/7 LWT. "TRIAL PILOT" FUNCTION TEST FOR FLOOR PLATE COMING OPEN ON FIRING.

REPORT # 822811

R. Howe
W.O. # 9856-000

FLOOR PLATE LATCH RELEASE FORCE LBS.
AVG. OF THREE MEASUREMENTS

GUN NO	M/7 LWT. CAL. 308 SER #	HEAD SPACE MIN +	0 RDS IN MAG.	1 RDS IN MAG.	2 RDS IN MAG.	3 RDS IN MAG.	4 RDS IN MAG.	AVG.	AVG FOR 10 GUNS										
1	7600008	0005	2.50	2.25	2.12	2.62	2.42	2.40											
2	7600003	0004	2.38	2.00	2.16	2.33	2.50	2.27											
3	7600040	0004	2.67	2.33	2.08	2.33	2.03	2.30											
4	7600022	0005	2.25	2.12	2.33	2.00	2.42	2.38											
5	7600101	0005	2.25	2.06	2.00	2.28	2.25	2.05	2.85										
6	7600139	0004	3.06	3.33	3.33	3.16	3.08	3.32											
7	7600058	0004	3.17	2.95	2.33	2.42	2.33	2.55											
8	7600036	0004	3.25	3.16	3.08	3.25	2.92	3.25											
9	7600103	0004	4.16	3.75	4.16	3.03	3.20	3.83											
10	7600043	0004	3.67	3.16	3.42	3.16	3.33	3.35											
11																			
12	M/7 LWT.																		
13	CAL 7MM-08																		
14	SER #																		
15	7600098	0004	1.92	1.75	1.83	1.67	1.67	1.76											
16	7600010	0001	3.25	2.50	2.47	2.52	2.33	2.67											
17	7600094	0003	2.16	2.33	2.16	2.25	2.08	2.20											
18	7600133	0004	2.25	2.38	2.25	2.40	1.75	2.07											
19	7600137	0003	2.55	2.25	2.42	2.40	2.67	2.44	2.25										
20	7600081	0004	1.92	2.16	1.83	1.90	2.08	2.00											
21	7600080	0003	2.16	1.83	1.92	2.00	1.75	1.93											
22	7600148	0003	2.00	2.16	1.83	2.16	2.07	2.20											
23	7600130	0002	2.41	2.08	1.75	2.33	1.83	2.08											
24	7600144	0003	3.33	3.16	3.00	3.05	2.83	3.11											
25																			
26																			
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" A P P E N D I X " B "

"CONTENTS"

All Data, Malfunctions and Measurements Not Contained
In Appendix "A"

FIELD CYCLE TEST - CENTERFIRE

REPORT NO. 822811

PAGE NO.

PREVIOUS
ROUND

DATE: 10-19-82

MODEL: 7 LWT

CAL
GAGE: 7MM-08

SERIAL NO. X

TEST TITLE: SUMMARY SHEETS PER - RIFLE - AMMO TYPE - SHOOTER

(WEATHER 64° SUNNY - 1:30pm)

"MALFUNCTIONS"

TTL. RND. FIRED: 1650

TTL. MALFUNCTIONS: 379

MALFUNCTION RATE: 22.76%

GUN #	ALL AMMO WAS R 140 PSP		SUMMARY SHEET BY R. Howe SER #		SHOOTER	NO. OF ROUNDS FIRED	FILING	TRAPPED SHELL	DON'T EXTRACT	RELOADING MAG. NAR D 2TH RD	EMPTY SHELL CATCHES REC. LIGHT IS LOG	FEED FROM MAG.		SHELL STAYS MAG. HEAVY BELT LIFT POWER-OVERRIDE	DON'T LOCK UP	STEM CHAMBER				SHELL JUMPS MAG.	FOLLOWER BINDS	LOADING MAG. NAR D 2TH RD	BOLT OVERRIDE	ACTION HANG UP	DON'T EXTRACT	HEADLACES	ADJUSTMENTS	ATTACHMENTS	Floor Plate Opened	MALFUNCTIONS PER	MALF. RATE PER
	1st	2nd	RIGHT	LEFT																											
												LAUNCH																			
1	7600098	16												1														1	2	1.2%	
2	7600010	"								30																			30	18.1%	
3	7600094	"								15			3				10												28	16.9%	
4	7600133	"								30				3									1						39	10.8%	
5	7600137	"								30				28															6	64	38.7%
6	7600081	"																											1/6	146	88.4%
7	7600080	"								15	1																		1	17	10.3
8	7600148	"																											0		
9	7600130	"										3											1						4	2.4%	
10	7600144	"							1													3		45					49	29.6	
TOTAL (PER MAL.)																															

FLOOR PLATE OPENED TOTAL - 154

FIELD CYCLE TEST - CENTERFIRE

REPORT NO.: 822811

PAGE NO.

DATE: 10-13-82

MODEL: 7 LWT

CAL GAUGE: .308

SERIAL NO. X

PREVIOUS
ROUNDS

TEST TITLE: SUMMARY SHEETS PER - RIFLE - AMMO TYPE - SHOOTER

M/7 CAL .308 NO BIND FOLLOWER
FEED FUNCTION TEST.

"MALFUNCTIONS"

TTL. RDS. FIRED: 1650

TTL. MALFUNCTIONS: 410

MALFUNCTION RATE: 24.8%

GUN #	SUMMARY SHEET BY <u>R. Howe</u> SER.#	GUNS ON ORG. W.O.	NO. OF ROUNDS FIRED	FILING	FEED SHELL	DON'T EJECT	DON'T FEED BACK	DON'T LOCK OPEN	FEED FROM MAG.		SHELL STAYS MAG.	POWER OVERRIDE	DON'T LOCK UP	STEM CHAMBER				SHELL JUMPS MAG.	FOLLOWER BINDS	LOADING HARD 4 TH ROUND	BOLT OVERRIDE	ACTION SLUG UP	DON'T EXTRACT	BREAKEYS	ADJUSTMENTS	REPLACEMENTS	FLOOR PLATE OPENED	MALFUNCTIONS PER		MALF. RATE PER
									1st LATCH	2nd				HIGH	LOW	RIGHT	LEFT													
1	7600008	✓	15																	7							59	68	41.2	
2	7600003	✓	15																								79	86	52.1	
3	7600040	✓	15											1						12							76	89	53.9	
4	7600022	✓	15																	1							22	23	13.9	
5	7600101	✓	15																	27							12	46	27.8	
6	7600139		15											2						20	1						52	75	45.7	
7	7600058		15																	11								13	7.8	
8	7600036		15											1														1	.6	
9	7600103		15																									3	1.8	
10	7600043		15																	6								6	3.6	
TOTAL (PER MAL.)																														

FLOOR PLATE OPENED TOT. 300