

TEST & MEASUREMENT LAB REPORT

REPORT NUMBER: 821321 Supplement
REPORT TITLE: M/Seven & M/700 .222 Caliber Follower - Spring Evaluation
Supplement to Report No. 821321
MODEL(S): M/Seven, M/700 ADL, M/700 BDL
GAUGE OR CALIBER: .222 Caliber
DATE: 4-19-83
WORK ORDER NO.: G-0196-000
PART NAME: Magazine Spring and No-Bind Follower
DESIGNER/ENGINEER: Requested by C. E. Ritchie

TEST TYPE:

1. PHOTO LAB
2. STRENGTH TEST - NO. OF GUNS TESTED _____
3. FUNCTION TEST - NO. OF GUNS TESTED 12
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: _____
18 Live - Unload
NO. OF ROUNDS PER GUN: 18 Fired
TOTAL ROUNDS FIRED IN TEST: 2592
AMMO TYPE: MAGS. _____; TARGET: _____
RIM FIRE _____ CENTER FIRE X

REMINGTON ARMS CO., INC.
Firearms Research Division

Report No. 821321
Page 1

April 15, 1983

TO: R. E. NIGHTINGALE
FROM: F. L. SUPRY
REPORT TITLE: M/SEVEN & M/700 .222 CALIBER FOLLOWER - SPRING EVALUATION
Supplement to Report No. 821321

ABSTRACT

The results generated during the first phase (1/3 of the overall test) of the M/Seven and M/700 .222 Caliber Follower - Spring Evaluation were reviewed by C. Evan Ritchie (Sr. Supervisor - Testing, Measurement and Mechanical Analysis Lab), Dr. James Lucas and Steve Larson (Consultants - Applied Statistics Group, E. I. DuPont deNemours & Co., Inc.). As a result of the review, it was decided to evaluate six (6) red and six (6) yellow magazine springs, all twelve (12) assembled with Design No. 6 No-Bind Followers. Each spring is to be tested in two (2) of the best performing rifles and two (2) of the worst performing rifles in the M/Seven, M/700 ADL, and M/700 BDL .222 caliber rifles, selected from the results of the first phase of the .222 caliber follower - spring evaluation.

SCOPE OF TEST

To compare the two (2) best performing spring-follower combinations in the best and worst performing rifles; to determine the most compatible combination in each model, and the most compatible combination overall.

TEST RESULTS

The yellow spring (ref. Dwg. No. 91133 - Current Magazine Spring) had fewer malfunctions overall than the red spring (Ref. Dwg. No. 91133 - Current Magazine Spring - Revision 2), and fewer total malfunctions in the Model Seven, M/700 ADL and M/700 BDL rifles tested. The following results were obtained:

<u>Model</u>	<u>Yellow Spring Malfunctions</u>	<u>Red Spring Malfunctions</u>
M/700 BDL -	59	83
M/700 ADL -	35	43
M/Seven -	21	27
Total -	115	153

REPORT TEXT

The test was conducted using slow feed, medium feed, and fast feed cycles, in both live unload and firing modes.

Two types of ammunition were used:

Cartridge A: Remington R2221, 50 gr. PSP
Cartridge B: Remington R2224, 55 gr. Metal Case

The following results were obtained:

Total Malfunctions	=	268
Total Live-Unload Malfunctions	=	95
Total Fired Malfunctions	=	173
 Total Cart. A Malfunctions	=	 141
Total Live-Unload Malfunctions	=	48
Total Fired Malfunctions	=	93
 Total Cart. B Malfunctions	=	 127
Total Live-Unload Malfunctions	=	47
Total Fired Malfunctions	=	80
 Total Yellow Spring Malfunctions	=	 115
Total Cart. A (Yellow Spring) Malfunctions	=	64
Total Cart. B (Yellow Spring) Malfunctions	=	51
 Total Red Spring Malfunctions	=	 153
Total Cart. A (Red Spring) Malfunctions	=	76
Total Cart. B (Red Spring) Malfunctions	=	77

For malfunctions breakdown per individual spring, per round out of magazine box, per model, per ammunition type, per feeding cycle speed and per rifle, refer to data sheets located in Appendix "A".

TEST PROCEDURE**A. Preparation:**

- o The results generated by the first phase of the M/Seven & M/700 .222 Caliber Follower-Spring Evaluation were reviewed, and the two (2) best and the two (2) worst performing rifles were selected in the M/Seven, M/700 ADL, and the M/700 BDL. The following rifles were selected:

	<u>Best Performing</u>	<u>Worst Performing</u>
M/7	7602525 7602568	7602593 7602529
M/700 ADL	B6295043 B6293294	B6327369 B6257041
M/700 BDL	B6294940 B6293053	B6361428 B6257066

- o Design No. 6 No-Bind Followers were assembled on six (6) Yellow Springs and six (6) Red Springs.

B. Sequence:

- 1) One of the twelve rifles to be tested was selected at random and assembled with the first Yellow Spring - Design No. 6 No-Bind Follower combination.
- 2) The rifle was then placed in a shooting jack and eighteen (18) rounds of ammunition were cycled through the rifle, without firing. (Six at slow feeding cycle speed, six at medium feeding cycle speed, and six at fast feeding cycle speed). All malfunctions were recorded.
- 3) The eighteen (18) rounds were recycled through the rifle at the same feeding cycle speeds with each round being fired. All malfunctions were recorded.
- 4) The rifle was removed from the shooting jack and the first Yellow Spring Design No. 6 No-Bind Follower was removed and reassembled in another of the twelve (12) rifles to be tested.
- 5) Steps 1 through 4 were repeated until all the test rifles had been functioned with the first Yellow Spring - Design No. 6 No-Bind Follower.
- 6) Steps 1 through 5 were then done with the first Red Spring - Design No. 6 No-Bind Follower.
- 7) The alteration of the Yellow Spring and The Red Spring combination was continued until all twelve (12) Spring-Follower combinations had been functioned in each test rifle.

TEST PROCEDURE - cont'd.

B. Sequence - cont'd.

- 8) The twelve (12) rifles were reassembled with their original springs and followers and taken to the Model Shop for measurements.
- 9) The data generated by this test was compiled and the Data Sheets included with this report.
- 10) The entire test was completed by Fred Supry (Specialist - Research Test Lab).

C. Appendix:

o Appendix A

Malfunction Data Sheet

Malfunctions per round out of magazine by Model.
Malfunctions per round out of magazine per ammo type.
Malfunctions per round out of magazine per spring type.
Variable breakdown.

Appendix B

o Work Sheets

APPENDIX " A "

(Data Sheets)

BARBER - PRESALE R 0113671

M/Seven & M/700 .222 caliber Follower - Spring Evaluation
Supplement to Report No. 821321

Report No. 821321
April 12, 1983

Malfunctions - Variable Breakdown

Total Malfunctions = 268
Total Live Unload = 95
Total Fired = 173

Malfunctions
Total A (ammo) = 141
Total Live Unload = 48
Total Fired = 93
Total Yellow Spring = 115
Total Yellow A = 64
Total Yellow B = 51

Malfunctions
Total B (ammo) = 127
Total Live Unload = 47
Total Fired = 80
Total Red Spring = 153
Total Red A = 76
Total Red B = 77

Best Rifles

	Yellow	Red
M 700 BDL	12	6
M/700 ADL	17	20
M/Seven	<u>0</u>	<u>1</u>
Total	29	27

Worst Rifles

	Yellow	Red
	47	77
	18	23
	<u>21</u>	<u>26</u>
	86	126

Totals

	Yellow	Red
M/700 BDL	59	83
M/700 ADL	35	43
M/Seven	21	27

19-000 EYE-GLASS
45-700 20/20 BUFP

MODEL 7,700 ADL, 700 BDL - SPRING COMPARISON

821321

with #6 NO BIND FOLLOWER

4-12-83

MALFUNCTION DATA SHEET

FLS

SPRING NO.	AMMO CODE	1		2		3		4		5		6	
		F.T.D.	S.I.M.	B.O.R.	SL.	S.R.	S.H.	S.L.					
		LIVE	FIRE	LIVE	FIRE	LIVE	FIRE	LIVE	FIRE	LIVE	FIRE	LIVE	FIRE
1	Y-1 A		2	2	3	4	1	3	6	2	1	1	2
2	MALF=27												
3													
4	Y-2 B			1	4	4	1	3	1	2			
5	MALF=16												
6													
7	Y-3 A			1	7	2	4	2	3		1		
8	MALF=20												
9													
10	Y-4 B				5	2	3		7				
11	MALF=17												
12													
13	Y-5 A		3	2	2	2	1	4	1	2			
14	MALF=17												
15													
16	Y-6 B		3	1		5	1	3	2	2			1
17	MALF=18												
18	TOTAL A	2	5	6	6	10	6	14	3	7	1	2	2
19	B	3	2	4	14	4	9	3	11				1
20													
21	R-1 B			2	2	5	8	8	3	3			
22	MALF=31												
23													
24	R-2 A				2		4	9	2	3			1
25	MALF=21												
26													
27	R-3 B		1	3	1		3	3	3	2		1	1
28	MALF=19												
29													
30	R-4 A		2	5		3	1	7	2	6			
31	MALF=26												
32													
33	R-5 B			1	4	4	4	4	4	6			
34	MALF=27												
35													
36	R-6 A		3	3	1	7	3	3	3	4			2
37	MALF=29												
38	TOTAL A		5	8	3	10	8	19	7	13		2	1
39	B		1	6	7	9	15	15	10	11		1	1
40													

MODEL	TYPE	SERIAL	SLOW						MEDIUM						FAST						#	SERIAL
			1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6		
7	A	Y	L																		1	7602568
			F																			
7	B	Y	L																		1	7602568
			F																			
7	A	Y	L																		2	7602529
			F																			
7	B	Y	L																		2	7602529
			F						1			1							1			
7	A	Y	L	2	2	1				1											9	7602593
			F	1	1				1	1					2	1	1					
7	B	Y	L	1																	9	7602593
			F			1									1							
7	A	Y	L																		10	7602525
			F																			
7	B	Y	L																		10	7602525
			F																			
			L																			
			F																			
	TOTAL		L	2	2	1			1	1					2	1	1				=	6
	A		F	1	1				1	1											=	8
	TOTAL		L	1					1												=	2
	B		F			1			1		1				1				1		=	5
			L																			
			F																			
	TOTAL		L	4	3	2			3	2		1			3	1	1		1		=	21
			F																			
			L																			
			F																			

TEST: (MODEL 7) MALFUNCTIONS DATE: 4-12-83 TESTER: FLS PG. 1 WR# 821321 Supp.
Per round out of magazine

MODEL	TYPE	DIRECTION	SLOW						MEDIUM						FAST						#	SERIAL
			1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6		
7	A	R	L																		1	7602568
			F																			
7	B	R	L																		1	7602568
			F																			
7	A	R	L																		2	7602529
			F																			
7	B	R	L																1		2	7602529
			F																			
7	A	R	L	1	1	1			1								1				9	7602593
			F	2		2			2	1					1		1					
7	B	R	L	1	3				1												9	7602593
			F	3		1			1								1					
7	A	R	L																		10	7602525
			F																			
7	B	R	L																1		10	7602525
			F																			
			L																			
			F																			
	TOTAL		L	1	1	1			1								1				=	5
	A		F	2		2			2	1					1		1	1			=	10
	TOTAL		L	1	3				1										1		=	6
	B		F	3		1			1								1				=	6
			A																			
	TOTAL			7	4	4			5	1					1		3		2		=	27
			L																			
			F																			

TEST: (MODEL 7) MALFUNCTIONS PER DATE: 4-12-83 TESTER: FLS PG. 2 WR# B21321
round out of Magazine.

[illegible]

TEST: (MODEL 700 ADL) MALFUNCTIONS
per round out of magazine.

MODEL	LEFT	SERIES	SLOW						MEDIUM						FAST						#	SERIAL
			1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6		
700	ADL	A	Y	L																	3	B6293294
"		B	Y	L	1		2	1					1						1		3	"
"		A	Y	L				1				1	1								4	B6257041
"		B	Y	L				1					2						3		4	"
"		A	Y	L	1			1	1			1	1						2		7	B6295043
"		B	Y	L									1						1		7	"
"		A	Y	L														1	1		8	B6327369
"		B	Y	L														1			8	"
			L																			
			F																			
	TOTAL		L	1			2		1			1	2						1	4	= 7	35
	A		F				1	2					2								= 10	
	TOTAL		L	1			2	1					1						1		= 6	18
	B		F					1		1		1	4			1		1	3		= 12	
	TOTAL			2			3	6		1	1		2	9		1		2	8		= 35	
			L																			
			F																			

TEST: MODEL 700 ADL DATE: 4-12-83 TESTER: FLS PG. 3 WR# 821321
MALFUNCTIONS PER ROUND OUT OF MAGAZINE,

MODEL	TEST	RECORD	SLOW						MEDIUM						FAST						#	SERIAL
700			1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6		
BDL	A	R L											1						1		5	86361428
"	B	R L																1			5	"
"	A	R L				1						1									6	86293053
"	B	R L				1						1									6	"
"	A	R L																			11	86294940
"	B	R L																	1		11	"
"	A	R L							1	1	1	1	1			2	2	2	1		12	86257066
"	B	R L			1				1	1	1		1		2	3	2	2			12	"
	TOTAL	L				1			1	1	1	1	2			2	2	2	2		= 15	
	A	F	1			1			1	3	2	3	1		2	3	3	3	5		= 28	43
	TOTAL	L			1				1	1	1	1	1		2	3	2	3	1		= 17	40
	B	F			1	1	1		1	1	2	2	1		2	3	3	2	3		= 23	
	TOTAL	A																			=	83
		F	1		2	3	1		4	6	6	7	5		6	11	10	10	11			
		L																				
		F																				
		L																				
		F																				

TEST: MODEL 700 BDL DATE: 4-12-83 TESTER: FLS PG. 6 WR# 821321
MALFUNCTIONS PER ROUND OUT OF MAGAZINE.

R2514666
BARBER - PRESALE R 0113678

TEST: MODEL 790 BDL DATE: 4-12-83 TESTER: FLS PR. 5 WR# 821321
MALFUNCTIONS PER ROUND OUT OF MAGAZINE.

MALFUNCTIONS PER ROUND OUT OF MAGAZINE.

821321

MALFUNCTION BREAKDOWN

4-13-82

SPRINGS		<u>RED</u>	<u>YELLOW</u>	<u>TOTAL</u>
BDL	-	83	59	142
ADL	-	43	35	78
M7	-	27	21	48
TOTAL	-	153	115	268

SPRINGS		<u>RED</u>		<u>YELLOW</u>		<u>TOTAL</u>		<u>TOTAL</u>
		<u>A</u>	<u>B</u>	<u>A</u>	<u>B</u>	<u>A</u>	<u>B</u>	↓
AMMO	-							
BDL	-	32	51	16	43	48	94	142
ADL	-	15	28	13	22	28	50	78
M7	-	11	16	8	13	19	29	48
TOTAL	-	58	95	37	78	95	173	268

FEEDING ROUND		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>TOTAL</u>
TOTAL TEST	SLOW	15	9	9	11	18	62
	MEDIUM	19	11	11	20	29	90
	FAST	16	19	20	19	42	116
	TOTAL	50	39	40	50	89	268

MALFUNCTION BREAK DOWN

821321
4-13-82

Feeding Round		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	TOTAL
BOL	{ SLOW	1	1	3	5	5	15
	{ MED	6	8	10	13	10	47
	{ FAST	11	17	16	16	20	80
	Sub TOTAL →	18	26	29	34	35	142
ADL	{ SLOW	3	1	0	6	13	23
	{ MED	5	1	0	6	19	31
	{ FAST	1	1	0	3	19	24
	Sub Total →	9	3	0	15	51	78
M 7	{ SLOW	11	7	6	0	0	24
	{ MED	8	2	1	1	0	12
	{ FAST	4	1	4	0	3	12
	Sub total →	23	10	11	1	3	48
TOTAL →		50	39	40	50	89	268

A P P E N D I X " B "

(Work Sheets)

MODEL	CNCI	SIR	SLOW						DUAL						FAST						#	SERIAL	#1
			1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6			
7	A	Y-1 L																			4	7602568	yellow Spring
7	A	Y-1 L																			2	7602529	0
700 FDL	A	Y-1 F																			3	86299294	0
700 ADL	A	Y-1 F																			4	86257041	2
700 BDL	A	Y-1 F																			5	86361428	27 Mech.
700 ADL	A	Y-1 F																			6	86293053	2
700 ADL	A	Y-1 F																			7	86295043	5
700 ADL	A	Y-1 F																			8	86327369	0
7	A	Y-1 L																			9	7602593	6
7	A	Y-1 L																			10	7602525	0
700 BDL	A	Y-1 F																			11	86294940	0
700 BDL	A	Y-1 L																			12	86257066	12
																							27

PG. 1 WRH 821321

DATE: 4-5-83 TESTER: ELS

TEST:

MODEL	PART	SLOW	MEDIUM	FAST	#	SERIAL
		1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6		
1100	B	L R-I F	SL SR SL SR SL SR	SL SR SL SR SL SR	12	17
700	B	L R-I F	SL SR SL SR SL SR	SL SR SL SR SL SR	11	10
7	B	L R-I F	SL SR SL SR SL SR	SL SR SL SR SL SR	9	4
7	B	L R-I F	SL SR SL SR SL SR	SL SR SL SR SL SR	8	1
	B	L R-I F	SL SR SL SR SL SR	SL SR SL SR SL SR	7	4
	B	L R-I F	SL SR SL SR SL SR	SL SR SL SR SL SR	6	0
	B	L R-I F	SL SR SL SR SL SR	SL SR SL SR SL SR	5	1
	B	L R-I F	SL SR SL SR SL SR	SL SR SL SR SL SR	4	3
	B	L R-I F	SL SR SL SR SL SR	SL SR SL SR SL SR	3	0
✓	B	L R-I F	SL SR SL SR SL SR	SL SR SL SR SL SR	2	0
✓	B	L R-I F	SL SR SL SR SL SR	SL SR SL SR SL SR	1	0
						0/31

TEST: _____ DATE: 4-5-83 TESTER: FLS PG. 2 WR# 821321

MODEL	TYPE	SERIAL	SLOW						MEDIUM						FAST						#	SERIAL	#2
			1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6			
	B	Y-2	L											BOR						BOR	7		#2 Yellow Spring
	B	Y-2	L																		4		0
	B	Y-2	L																		9		1 16 mull
✓	B	Y-2	F		SSM																1		0
✓	B	Y-2	F																		3		4
	B	Y-2	L					BOR						BOR						BOR	8		0
	B	Y-2	F											BOR							6		2
	B	Y-2	L																SL		12		5
	B	Y-2	F															SR		SR	10		0
	B	Y-2	L																		2		1
✓	B	Y-2	F						SL												5		0
	B	Y-2	L																		11		1
	B	Y-2	F												BOR								16

TEST:

DATE: 4-6-83

TESTER: FLS

PG. 3 WR# 821321

Model	Serial #	SLOW						MEDIUM						FAST						#	Serial #
		1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6		
A	R2F	L																		6	
A	R2F	L										SL					SL			5	
A	R2F	L																		11	
A	R2F	L						SL	SL	SL	SL	SL	SL	SL	SL	SL	SL	SL	SL	12	
✓ A	R2F	L																		2	
A	R2F	L																		10	
A	R2F	L																		8	
A	R2F	L																		3	
A	R2F	L																		7	
A	R2F	L																		4	
A	R2F	L																		9	
✓ A	R2F	L																		1	
		L																			

#2
RED SPIN
8

2

91 mult.

14

0

0

0

0

2

2

1

0

21

TEST: _____ DATE: 4-6-53 TESTER: FLS PG. 4 WR# 821321

MODEL	POINT	SERIAL	SLOW						MEDIUM						FAST						#	SERIAL #
			1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6		
✓	A	Y3	L						SL						SL						9	
			F																			
✓	A	Y3	L																		1	
			F																			
	A	Y3	L																		7	
			F																			
	A	Y3	L															SR	BOR		8	
			F																			
	A	Y3	L																		4	
			F					BOR					BOR						BOR			
	A	Y3	L																		3	
			F					SH														
	A	Y3	L												SL	SR					12	
			F						SL						SL	SR	SL	SR				
	A	Y3	L																		11	
			F																			
✓	A	Y3	L																		2	
			F																			
	A	Y3	L																		10	
			F																			
	A	Y3	L																		5	
			F																			
	A	Y3	L																		6	
			F					BOR					BOR						BOR			
			L																			
			F																			

TEST:

DATE: 4-7-83

TESTER: FLS

PG. 5 WR# 821321

20

Yellow Springs

20 MALE

2

3

1

8

0

0

0

0

3

#3

RED
Spring

0

119 malf

0

2

0

0

0

0

0

5

1

19

MODEL	TYPE	SERIAL	SLOW						MEDIUM						FAST						#	SERIAL
			1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6		
	B	R3	L																		4	
	B	R3	F																		2	
	B	R3	L																			
	B	R3	F				SLO			SR		SL			2 SR	SL					12	
	B	R3	L												SL	SR	SL	SR	SL		11	
	B	R3	F				SLO							BOR							3	
	B	R3	L																			
✓	B	R3	F																		1	
	B	R3	L																		5	
	B	R3	F																		10	
	B	R3	L																		8	
	B	R3	F																		6	
	B	R3	L																			
	B	R3	F																		9	
	B	R3	L	SM	SR																	
	B	R3	F	SM		SM											SM					
	B	R3	L																		7	
	B	R3	F		SH																	
			L																			
			F																			

TEST:

DATE: 4-7-83

TESTER: FLS

PG. 6 WR# 821321

NIGHT	MORNING	SLOW	MEDIUM	FAST	#	SERIAL
		1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6		
B	Y4 L F	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	3	0
B	Y4 L F	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	9	0
B	Y4 L F	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	12	107 mulf
B	Y4 L F	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	7	0
B	Y4 L F	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	2	1
B	Y4 L F	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	6	0
B	Y4 L F	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	8	0
B	Y4 L F	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1	0
B	Y4 L F	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	5	0
B	Y4 L F	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	11	0
B	Y4 L F	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	4	4
B	Y4 L F	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	10	0
						17

TEST: _____ DATE: _____ TESTER: FLS PG. 7 WR# 821321

26

8

WRA# 921321

R2514677

MODEL	TEST	SLOW	MEDIUM	FAST	SERIAL	#	#
		1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6			
A	Y5 L F	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	5	5	5
A	Y5 L F	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	10	10	10
A	Y5 L F	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	8	8	8
A	Y5 L F	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	4	4	4
A	Y5 L F	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	9	9	9
A	Y5 L F	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	6	6	6
A	Y5 L F	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	12	12	12
A	Y5 L F	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1	1	1
A	Y5 L F	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	7	7	7
A	Y5 L F	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	11	11	11
A	Y5 L F	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	2	2	2
A	Y5 L F	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	3	3	3
		1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6			0/17

TEST: _____ DATE: 4-8-73 TESTER: FL3 PG. 9 WR#821321

MODEL	CHART	SLOW						MEDIUM						FAST						#	SERIAL #																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
		1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
	B	R5	L																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											</

#5
Red
Spring
3
1
27 Mod. 0

PG. 10 WIRE FL 1321

DATE: 4-8-83 TESTER: FLS

TEST:

MODEL	CIRCUIT	SLOW						MEDIUM						FAST						#	SERIAL												
		1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6														
	B	Y6	L	F																												10	
	B	Y6	L	F																												12	
	B	Y6	L	F																												3	
	B	Y6	L	F																												8	
✓	B	Y6	L	F																												1	
✓	B	Y6	L	F																												9	
	B	Y6	L	F																												6	
	B	Y6	L	F																												4	
	B	Y6	L	F																												7	
	B	Y6	L	F																												2	
	B	Y6	L	F																												11	
	B	Y6	L	F																												5	
			L	F																													18

#6 yellow
4 spring
3B multi

TEST: _____ DATE: 11-83 TESTER: ELS PG. 11 WR# 821321

MODEL	TEST	SERIAL	SLOW						MEDIUM						FAST						#	SERIAL
			1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6		
	A	R6 F	L																		11	
	A	R6 F	L																		12	
	A	R6 F	L																		7	
	A	R6 F	L																		8	
	A	R6 F	L																		3	
	A	R6 F	L																		9	
	A	R6 F	L																		10	
	A	R6 F	L																		5	
	A	R6 F	L																		1	
	A	R6 F	L																		2	
	A	R6 F	L																		6	
	A	R6 F	L																		4	

TEST: DATE: 4-11-83 TESTER: FES PG. 12 WR# 821821