

REMINGTON ARMS COMPANY, INC.
Firearms Research Division

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TO: C. B. WORKMAN

FROM: C. E. RITCHIE *CE*

EVALUATION OF LUBRICANTS ON FIREARMS

ABSTRACT

Remington Arms Company is interested in developing a cleaning and lubrication procedure for the Model 700 Fire Control that can be included in the rifles instruction manual. It is intended the cleaning and lubrication procedure be done without disassembly from the receiver and the products used should not gum up the close tolerances of the mechanism. The products selected should also be readily available on a nationwide basis, be non-flammable and non-toxic, as well as operate from -20° F to 120° F.

Preliminary evaluations were conducted by A.B. Hughes, Senior Consultant, ESD Maintenance Engineering Group, with conclusions reported on August 24, 1981 in document entitled "Maintenance Engineering - Lubrication of Rifles". Twenty-five (25) products were finally screened for rust removal, rust prevention, grease displacement, water displacement, cleaning capability, and appearance on metal and wood firearms parts. From this evaluation five candidates have been recommended for further testing:

1. Du Pont - Synthetic Diesther
2. Krylon Ten-4
3. Sprayon 711
4. CRC 3-36
5. Houghton HLP

These five lubricants (along with 2 lubricants presently being used in Firearms Research Test Lab - WD-40 and Molycote GN-paste) will now be subjected to a more extensive test which best duplicates conditions the rifle will experience in the field and storage between hunting seasons.

SCOPE OF NEW TESTS

List of lubricants to be tested:

- Dry Condition (No lubricant)
- Du Pont Synthetic Diesther
- Krylon Ten-4
- Sprayon 711
- CRC 3-36
- Houghton HLP
- WD-40
- Molycote GN-paste { R&D Ilion results only

Tests to be conducted will include:

- Cock & Fire Dry cycle tests
- Environmental/Cold Tests
- Cleaning Capability, Rust Removal & Prevention Analysis

Sample size:

- 1 - M/700 Rifle, 5 bolts, 5 fire controls per lubricant and controls.

Environmental/Cold Tests

Firearms: M/700 and M/1100

1. Photos of surfaces where lubricant applied.
2. Determine application (same as dry cycle tests)
3. Live round jack shooting in following sequence:
 - o Take belt and closing velocities, fire 100 rounds.
 - o Place firearm on roof of building for 4 hours
 - o Place firearm in freezer for remainder of shift (specify time on log) at -20°F.
 - o Place rifle in stress coat oven overnight at +120°F.
4. Continue with Step 3 for one week or until failure of firearm to function properly occurs.

All to
take place
in one day

"Failure to Function Properly"

- o The firearm does not perform as designed.
- o Evaluate rust development if any.
- o Record the function of the M/1100 via bolt velocities and/or closing velocities during test every 100 rounds.
- o Observe safety operation on both firearms during test.

Cock & Fire Dry Cycle Test Procedure

1. Photos at start of test
 - a. Cocking cam surface on bolt body
 - b. Firing pin striker
2. Apply lube: Determine amount of spray (1 sec./2 sec., distance from surface, etc.)
 - a. Bolt assembly
 - b. Fire control assembly
3. Take the following measurements:
 - a. Trigger pull (3)
 - b. Safe on/off forces (3)
 - c. Bolt lift -- cocked & fired
4. Start Dry Cycle *near lift / near engagement*
 - Inspection cycles: 0, every 100 cycles on 1st sample of each lube to determine inspection cycle for remaining four samples.
 - Monitor cycles: Auto counter and human inspection.
5. Cycle Limit: 25,000 cycles all samples - or failure. Re-evaluate at 25,000 cycles if failure does not occur.
6. Measurements: (#3) will be taken on samples #2 thru #5 at levels determined by sample #1.
7. Photos at completion of test - or failure
 - a. Cam track area on bolt
 - b. Firing pin striker area
 - c. Sear and connector surfaces of fire control

8. Measurements (#3) taken at completion of test.

Note: Two dry cycle machines available.
Cycle rate: 1 every 3 seconds per machine.

Cleaning Capability, Rust Removal & Prevention Analysis

Firearms: Consignment guns at Ilion Fish & Game Club
(Winter Skeet/Trap Shooting)

(All firearms tested will be M/1100 - 12 & 20 Ga.)

1. Review firearms and select for excessive crud/dirty condition and rust evident on surfaces of receiver and barrel.
2. Assign a lubricant to a firearm.
3. Record via photos; crud and rust.
4. Attempt to clean firearm using assigned lubricant and document results.
5. Thoroughly clean firearm by other means if assigned lubricant fails to do so.
6. Lubricate firearm with assigned lubricant.
7. Maintain accurate log on each firearm in test for one month's usage at the Gun Club, or longer depending on results.
 - o Date - rounds fired
 - o Load used
 - o Shooters comments on function
 - o Weather
 - o Storage location and temperature variance.
8. Review condition of firearms and record results of crud and rust via photos.

Note: Bolt velocities at start and finish?

CER:T
Test., Meas. & Mech. Analysis Lab

①

Lubricant Test:

1-7-82
JH.

Procedure: - Cock & Fire Dry Cycle.

1. Photos at start of test.
 - a- ^{cocking} cam surface on bolt body.
 - b- firing pin striker
2. Apply lube: determine amount (spray)
 - a. bolt assem. (1 sec./2 sec. --- etc.)
 - b. fire control assem. (distance, also)
3. Take the following meas.
 - a. trigger pull - (3)
 - b. safe on/off forces. (3)
 - c. bolt lift --- cocked & fired.
4. Start Dry Cycle inspection cycles:
 - 0, every 100 cycles on 1st sample of each lube to determine inspection cycle for remaining four samples
5. Cycle limit:
25,000 cycles all samples -- or failure.
6. Measurements (#3) will be taken on samples #2 thru #5 at levels determined by sample #1.

7. Photos at completion of test. -- or failure.
- a.- cam track area on Golf.
 - b.- firing pin striker area.
 - c.- sear and connector surfaces of fire control.

8. Measurements (#3) taken at completion of test.

Lubricants to be tested.

- DuPont Diester - production sample.
 - Krylon Ten-4
 - Sprayon 711
 - CRC 3-36
 - Houghton HLP
 - WD-40
 - Moly coté GN - Paste.
- } R&D I lion
} results only.

Additional Testing: At completion of successful dry cycle

- Continuation to failure.
- Continuation with lubricant removed.
- Cold tests.
- Environment Tests.

Test Sample Size.

- 1 rifle, 5 bolts, 5 fire controls per lubricant.
- 2 dry cycle machines available.
cycle rate -- 1 every 3 seconds. per machine.

(4)

1-12-82
fz

Lubricant Tests: -- 2.1.1.

--- Congealment vs Function ---

Firearms: m-700 + m-1100

1. Photos of surfaces where lubricant applied
2. Determine application (Per sheet 1)
3. Live round jack shooting in following sequence:

All to take
place in one
day.

- Fire 100 rds.
 - Place firearm on roof of building for 4 hours.
 - Place firearm in freezer for remainder of shift (specify time on log) at -20°
 - Place rifle in stress coat oven overnight at $+120^{\circ}$
4. Continue with step 3 for one week or until failure of firearm to function properly occurs.

" Failure to function properly."

- The firearm does not perform as designed.
- Evaluate rust development, if any
- Record the function of the m-1100 via bolt velocities and or closing velocities during the test when irregular operation occurs
- Observe safety operation on both firearms during test.

(5)

1-15-82
P4

Cleaning Capability, Rust Removal & Prevention

Firearms: Consignment guns at Ilion Fish & Game Club

(Winter Skeet/Trap Shooting)

(All firearms tested will be M-1100-12 and 20ga.)

1. Review firearms and select for excessive crud/dirty condition and rust evident on surfaces of receiver and barrel.
2. Assign a lubricant to a firearm
3. Record via photos; crud and rust.
4. Attempt to clean firearm using assigned lubricant and document results.
5. Thoroughly clean firearm by other means if assigned lubricant fails to do so.
6. Lubricate firearm with assigned lubricant.
7. Maintain accurate log on each firearm in test for one month's usage at the Gun Club.
 - Date - rounds fired.
 - Load used.
 - Shooter's comments on function
 - Weather
 - Storage location and temperature variance
8. Review condition of firearms and record results of crud & rust via photos.

Notes: - Bolt velocities at start and finish?

* - Same test at Rem. Farms.?

SEHR LIFT & ENGAGEMENT

Sample -	Lean left	Lean right
1-0	.0095	.017
5000	.010	.0225
10000	.011	.021
15000	.010	.0225
20000	.011	.024
<u>25000</u>	.0125	.025

0	.010	.015
5000	.010	.0205
10000	.011	.021
15000	.010	.0215
20000	.0115	.021
<u>25000</u>	.011	.024

0	.010	.020
5000	.007	.0226
10000	.010	.027
20000	.010	.020

0	.010	.017
5000	.010	.020
10000	.0125	.0215
15000		
20000		
25000		

Lean Left

Lean Engaged

0
5000
10000
12000
2000
20000

.0105
.010
.012

.0215
.024
.0245

2
5000
10000
15000
20000
25000

.0125
.015
.013
.0125
.0115
.0125

.0205
.018
.0185
.0235
.025
.025

0
5000
10000
15000
20000
25000

.010
.0135
.0105
.0105
.0085
.008

.0205
.015
.0225
.0205
.025
.0235

8
0
5000
10000

.0115
.010
.015

.0165
.0205
.0195

0
5000
10000

.012
.0135
.017

.0165
.022
.0195

Lean Left

Lean Eng

10. 0 .012
5000 .0115
10000 .0105

.018
.025
.0255

11. 0 .0125
5000 .0125
10000 .015

.0105
.0125
.0195

12. 0 .0125
5000 .0115
10000 .014

.009
.0185
.020

13. 0 .013
5000 .011
10000 .0135

.009
.0165
.0185

14. 0 .010
5000 .013
10000 .0125

.012
.026
.023

15. 0 .012
5000 .0115
10000 .0125

.015
.0205
.027

Rem Left Lean Left
Lean Eng

.005 - .018
.015 - .020

(W. 13) TRIGGER PULL Rem STD- 3" 8"

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0	5.3	5.6	5.6	5.4	5.7	5.5	5.6	5.5	6.25	5.6	5.8	5.9	5.7	4.0	6.5
2500	5.3	5.6	5.2	5.2	5.8	5.5	5.5	5.5	5.9	5.7	5.6	5.9	5.2	5.8	6.5
5000	5.0	5.0	5.2	4.9	5.7	5.2	5.5	5.4	5.7	5.7	5.7	5.9	5.5	6.0	6.4
7500	5.0	5.1	5.2	5.2	6.0	5.5	5.7	5.2	5.7	5.6	5.4	5.9	5.5	5.6	7.1
10000	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
2500	5.0	5.0				5.6	5.6								
5000	4.9	4.9				5.6	5.6								
7500	4.5	4.8				6.1	5.5								
10000	5.25	5.2				5.5	5.6								
22500	5.50	5.2				5.1	5.8								
35000	5.1	5.1				5.5	5.5								

REPORT NO. _____

DRY CYCLE SUMMARY

PAGE NO. 2TESTER: ALTEST TITLE: Lean ReliefPREVIOUS CYCLES: 17500

RIFLE NO. _____

DRY CYCLE SIMULATOR NO. 1

BOLT NO. _____

CYCLE RATE: _____

FIRE CONTROL NO. 1LUBRICATION: WD40

WORK ORDER NO. _____

NO. OF CYCLES: 2500TOTAL: 20000SEAR LIFT: .011SEAR ENGAGEMENT: .024TRIGGER PULL: 1. 5.25 2. 5.25 3. 5.25

(5.25)

OBSERVATIONS: SAFE ON FORCE SAFE OFF FORCE BOLT LIFT-COCKED BOLT LIFT-FIRED

1.				
2.				
3.				

NO. OF CYCLES: 2500TOTAL: 22500

SEAR LIFT: _____

SEAR ENGAGEMENT: _____

TRIGGER PULL: 1. 5.50 2. 5.50 3. 5.50

(5.50)

OBSERVATIONS: SAFE ON FORCE SAFE OFF FORCE BOLT LIFT-COCKED BOLT LIFT-FIRED

1.				
2.				
3.				

NO. OF CYCLES: 2500TOTAL: 25000SEAR LIFT: .0125SEAR ENGAGEMENT: .025TRIGGER PULL: 1. 5.25 2. 5.25 3. 5.00

(5.1)

OBSERVATIONS: SAFE ON FORCE SAFE OFF FORCE BOLT LIFT-COCKED BOLT LIFT-FIRED

1.				
2.				
3.				

NO. OF CYCLES: _____

TOTAL: _____

SEAR LIFT: _____

SEAR ENGAGEMENT: _____

TRIGGER PULL: 1. _____ 2. _____ 3. _____

OBSERVATIONS: SAFE ON FORCE SAFE OFF FORCE BOLT LIFT-COCKED BOLT LIFT-FIRED

1.				
2.				
3.				

REPORT NO. _____

DRY CYCLE SUMMARY

PAGE NO. 2TESTER: ALTEST TITLE: SEAR RELIEFPREVIOUS CYCLES: 7500RIFLE NO. 16235951DRY CYCLE SIMULATOR NO. 1

BOLT NO. _____

CYCLE RATE: _____

FIRE CONTROL NO. 1LUBRICATION: WD 40

WORK ORDER NO. _____

NO. OF CYCLES: 2500TOTAL: 10.000SEAR LIFT: 1011SEAR ENGAGEMENT: .021TRIGGER PULL: 1. 5.002. 4.753. 4.75

(4.8)

OBSERVATIONS: SAFE ON FORCE

SAFE OFF FORCE

BOLT LIFT-COCKED

BOLT LIFT-FIRED

1. _____

2. _____

3. _____

NO. OF CYCLES: 2500TOTAL: 12.000

SEAR LIFT: _____

SEAR ENGAGEMENT: _____

TRIGGER PULL: 1. 5.002. 5.253. 5.00

(5.0)

OBSERVATIONS: SAFE ON FORCE

SAFE OFF FORCE

BOLT LIFT-COCKED

BOLT LIFT-FIRED

1. _____

2. _____

3. _____

NO. OF CYCLES: 2520TOTAL: 15000SEAR LIFT: .010SEAR ENGAGEMENT: .0225TRIGGER PULL: 1. 5.002. 5.003. 4.75

(4.9)

OBSERVATIONS: SAFE ON FORCE

SAFE OFF FORCE

BOLT LIFT-COCKED

BOLT LIFT-FIRED

1. _____

2. _____

3. _____

NO. OF CYCLES: 2500TOTAL: 17500

SEAR LIFT: _____

SEAR ENGAGEMENT: _____

TRIGGER PULL: 1. 4.502. 4.503. 4.75

(4.98)

OBSERVATIONS: SAFE ON FORCE

SAFE OFF FORCE

BOLT LIFT-COCKED

BOLT LIFT-FIRED

1. _____

2. _____

3. _____

REPORT NO. _____

DRY CYCLE SUMMARY

PAGE NO. 1TESTER: RLTEST TITLE: SFRR RELIFE

PREVIOUS CYCLES: _____

RIFLE NO. 80235951DRY CYCLE SIMULATOR NO. 1

BOLT NO. _____

CYCLE RATE: _____

FIRE CONTROL NO. 1LUBRICATION: WD40

WORK ORDER NO. _____

NO. OF CYCLES: 0

TOTAL: _____

SEAR LIFT: .0095SEAR ENGAGEMENT: .017TRIGGER PULL: 1. 5.25 2. 5.50 3. 5.25

OBSERVATIONS:	SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-CKEED	BOLT LIFT-FIRED
1.				
2.				
3.				

NO. OF CYCLES: 3560TOTAL: 3560SEAR LIFT: .0095SEAR ENGAGEMENT: .017TRIGGER PULL: 1. 5.25 2. 5.25 3. 5.50

OBSERVATIONS:	SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-CKEED	BOLT LIFT-FIRED
1.				
2.				
3.				

NO. OF CYCLES: 1440TOTAL: 5000SEAR LIFT: .010SEAR ENGAGEMENT: .0225TRIGGER PULL: 1. 5.25 2. 5.00 3. 5.00

OBSERVATIONS:	SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-CKEED	BOLT LIFT-FIRED
1.				
2.				
3.				

NO. OF CYCLES: 2500TOTAL: 7500SEAR LIFT: .010

SEAR ENGAGEMENT: _____

TRIGGER PULL: 1. 5.00 2. 5.25 3. 5.00

OBSERVATIONS:	SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-CKEED	BOLT LIFT-FIRED
1.				
2.				

REPORT NO. _____

DRY CYCLE SUMMARYPAGE NO. 3TESTER: 10 CTEST TITLE: Lead ReliefPREVIOUS CYCLES: 17500RIFLE NO. D. 6409561DRY CYCLE SIMULATOR NO. 2

BOLT NO. _____

CYCLE RATE: U

FIRE CONTROL NO. _____

LUBRICATION: WD 40

WORK ORDER NO. _____

NO. OF CYCLES: 2500TOTAL: 20000SEAR LIFT: .0115SEAR ENGAGEMENT: .021TRIGGER PULL: 1. 5.25 2. 5.25 3. 5.25 (5.24)

OBSERVATIONS: SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____

NO. OF CYCLES: 2500TOTAL: 22500

SEAR LIFT: _____

SEAR ENGAGEMENT: _____

TRIGGER PULL: 1. 5.25 2. 5.25 3. 5.25 (5.25)

OBSERVATIONS: SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____

NO. OF CYCLES: 2500TOTAL: 25000SEAR LIFT: .011SEAR ENGAGEMENT: .024TRIGGER PULL: 1. 5.25 2. 5.00 3. 5.25 (5.10)

OBSERVATIONS: SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____

NO. OF CYCLES: _____

TOTAL: _____

SEAR LIFT: _____

SEAR ENGAGEMENT: _____

TRIGGER PULL: 1. _____ 2. _____ 3. _____

OBSERVATIONS: SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1. _____	_____	_____	_____
2. _____	_____	_____	_____

REPORT NO. _____

DRY CYCLE SUMMARY

PAGE NO. 2TESTER: AL.TEST TITLE: SEAR RELIEFPREVIOUS CYCLES: 7500RIFLE NO. 1640 9561DRY CYCLE SIMULATOR NO. 2

BOLT NO. _____

CYCLE RATE: _____

FIRE CONTROL NO. 2LUBRICATION: WD 40

WORK ORDER NO. _____

NO. OF CYCLES: 2500TOTAL: 10.000SEAR LIFT: .011SEAR ENGAGEMENT: .021TRIGGER PULL: 1. 4.75 2. 5.00 3. 5.00

(4.91)

OBSERVATIONS: SAFE ON FORCE SAFE OFF FORCE BOLT LIFT-COCKED BOLT LIFT-FIRED

	SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1.				
2.				
3.				

NO. OF CYCLES: 2500TOTAL: 12.00

SEAR LIFT: _____

SEAR ENGAGEMENT: _____

TRIGGER PULL: 1. 5.00 2. 5.25 3. 5.00

(5.08)

OBSERVATIONS: SAFE ON FORCE SAFE OFF FORCE BOLT LIFT-COCKED BOLT LIFT-FIRED

	SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1.				
2.				
3.				

NO. OF CYCLES: 2500TOTAL: 15.00SEAR LIFT: .010SEAR ENGAGEMENT: .0215TRIGGER PULL: 1. 5.00 2. 5.00 3. 4.75

(4.91)

OBSERVATIONS: SAFE ON FORCE SAFE OFF FORCE BOLT LIFT-COCKED BOLT LIFT-FIRED

	SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1.				
2.				
3.				

NO. OF CYCLES: 2500TOTAL: 17.500

SEAR LIFT: _____

SEAR ENGAGEMENT: _____

TRIGGER PULL: 1. 5.00 2. 4.75 3. 4.71

(4.93)

OBSERVATIONS: SAFE ON FORCE SAFE OFF FORCE BOLT LIFT-COCKED BOLT LIFT-FIRED

	SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1.				
2.				

REPORT NO. _____

DRY CYCLE SUMMARYPAGE NO. 1TESTER: ALTEST TITLE: SEAR RELIEF

PREVIOUS CYCLES: _____

RIFLE NO. AC-409561DRY CYCLE SIMULATOR NO. 2

BOLT NO. _____

CYCLE RATE: _____

FIRE CONTROL NO. 2LUBRICATION: WD40

WORK ORDER NO. _____

NO. OF CYCLES: 0

TOTAL: _____

SEAR LIFT: .010SEAR ENGAGEMENT: .015TRIGGER PULL: 1. 5.60 2. 6.00 3. 5.50 (56)

OBSERVATIONS:	SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1.				
2.				
3.				

NO. OF CYCLES: 3500TOTAL: 3500SEAR LIFT: .010SEAR ENGAGEMENT: .015TRIGGER PULL: 1. 5.00 2. 5.00 3. 5.00 (5.00)

OBSERVATIONS:	SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1.				
2.				
3.				

NO. OF CYCLES: 7500TOTAL: 5000SEAR LIFT: .010SEAR ENGAGEMENT: .020TRIGGER PULL: 1. 5.00 2. 5.00 3. 5.00 (5.00)

OBSERVATIONS:	SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1.				
2.				
3.				

NO. OF CYCLES: 2500TOTAL: 7500

SEAR LIFT: _____

SEAR ENGAGEMENT: _____

TRIGGER PULL: 1. 5.00 2. 5.25 3. 5.25 (5.10)

OBSERVATIONS:	SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1.				
2.				

REPORT NO. _____

DRY CYCLE SUMMARYPAGE NO. 2TESTER: ALTEST TITLE: Sear ReliefPREVIOUS CYCLES: 7500

RIFLE NO. _____

DRY CYCLE SIMULATOR NO. 1

BOLT NO. _____

CYCLE RATE: _____

FIRE CONTROL NO. 3LUBRICATION: DUPONT

WORK ORDER NO. _____

NO. OF CYCLES: 2500TOTAL: 10000SEAR LIFT: 1010SEAR ENGAGEMENT: .020TRIGGER PULL: 1. 500 2. 525 3. 500 (508)

OBSERVATIONS:	SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1.				
2.				
3.				

NO. OF CYCLES: _____

TOTAL: _____

SEAR LIFT: _____

SEAR ENGAGEMENT: _____

TRIGGER PULL: 1. _____ 2. _____ 3. _____

OBSERVATIONS:	SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1.				
2.				
3.				

NO. OF CYCLES: _____

TOTAL: _____

SEAR LIFT: _____

SEAR ENGAGEMENT: _____

TRIGGER PULL: 1. _____ 2. _____ 3. _____

OBSERVATIONS:	SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1.				
2.				
3.				

NO. OF CYCLES: _____

TOTAL: _____

SEAR LIFT: _____

SEAR ENGAGEMENT: _____

TRIGGER PULL: 1. _____ 2. _____ 3. _____

OBSERVATIONS:	SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1.				
2.				

REPORT NO. _____

DRY CYCLE SUMMARYPAGE NO. 1TESTER: ALTEST TITLE: Lean ReliefPREVIOUS CYCLES: 0

RIFLE NO. _____

DRY CYCLE SIMULATOR NO. 1

BOLT NO. _____

CYCLE RATE: _____

FIRE CONTROL NO. 3LUBRICATION: DUPONT

WORK ORDER NO. _____

NO. OF CYCLES: 0TOTAL: 0SEAR LIFT: .007SEAR ENGAGEMENT: .026TRIGGER PULL: 1. 5.75 2. 5.75 3. 5.50 (5.6)

OBSERVATIONS:	SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1.				
2.				
3.				

NO. OF CYCLES: 2500TOTAL: 2500

SEAR LIFT: _____

SEAR ENGAGEMENT: _____

TRIGGER PULL: 1. 5.25 2. 5.25 3. 5.25 (5.25)

OBSERVATIONS:	SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1.				
2.				
3.				

NO. OF CYCLES: 2500TOTAL: 5000SEAR LIFT: .010SEAR ENGAGEMENT: .027TRIGGER PULL: 1. 5.25 2. 5.25 3. 5.25 (5.25)

OBSERVATIONS:	SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1.				
2.				
3.				

NO. OF CYCLES: 2500TOTAL: 7500

SEAR LIFT: _____

SEAR ENGAGEMENT: _____

TRIGGER PULL: 1. 5.25 2. 5.25 3. 5.25 (5.25)

OBSERVATIONS:	SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1.				
2.				

REPORT NO. _____

DRY CYCLE SUMMARY

PAGE NO. _____

TESTER: ALTEST TITLE: Lean ReliefPREVIOUS CYCLES: 7500DRY CYCLE SIMULATOR NO. 2

CYCLE RATE: _____

LUBRICATION: DUPONTNO. OF CYCLES: 2500SEAR LIFT: .0125TRIGGER PULL: 1. 5.252. 5.253. 5.25

RIFLE NO. _____

BOLT NO. _____

FIRE CONTROL NO. 4

WORK ORDER NO. _____

TOTAL: 10.000SEAR ENGAGEMENT: .0215

OBSERVATIONS: SAFE ON FORCE

SAFE OFF FORCE

BOLT LIFT-COCKED

BOLT LIFT-FIRED

1. _____

2. _____

3. _____

NO. OF CYCLES: _____

TOTAL: _____

SEAR LIFT: _____

SEAR ENGAGEMENT: _____

TRIGGER PULL: 1. _____ 2. _____ 3. _____

OBSERVATIONS: SAFE ON FORCE

SAFE OFF FORCE

BOLT LIFT-COCKED

BOLT LIFT-FIRED

1. _____

2. _____

3. _____

NO. OF CYCLES: _____

TOTAL: _____

SEAR LIFT: _____

SEAR ENGAGEMENT: _____

TRIGGER PULL: 1. _____ 2. _____ 3. _____

OBSERVATIONS: SAFE ON FORCE

SAFE OFF FORCE

BOLT LIFT-COCKED

BOLT LIFT-FIRED

1. _____

2. _____

3. _____

NO. OF CYCLES: _____

TOTAL: _____

SEAR LIFT: _____

SEAR ENGAGEMENT: _____

TRIGGER PULL: 1. _____ 2. _____ 3. _____

OBSERVATIONS: SAFE ON FORCE

SAFE OFF FORCE

BOLT LIFT-COCKED

BOLT LIFT-FIRED

1. _____

2. _____

REPORT NO. _____

DRY CYCLE SUMMARY

PAGE NO. _____

TESTER: RCTEST TITLE: Low ReliefPREVIOUS CYCLES: 0

RIFLE NO. _____

DRY CYCLE SIMULATOR NO. 2

BOLT NO. _____

CYCLE RATE: _____

FIRE CONTROL NO. 4LUBRICATION: DUPONT

WORK ORDER NO. _____

NO. OF CYCLES: 0TOTAL: 0SEAR LIFT: 010SEAR ENGAGEMENT: 1012TRIGGER PULL: 1. 5.50 2. 5.52 3. 5.25 (5.4)

OBSERVATIONS:	SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1.				
2.				
3.				

NO. OF CYCLES: 2500TOTAL: 2500

SEAR LIFT: _____

SEAR ENGAGEMENT: _____

TRIGGER PULL: 1. 5.25 2. 5.25 3. 5.25 (5.25)

OBSERVATIONS:	SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1.				
2.				
3.				

NO. OF CYCLES: 2500TOTAL: 5000SEAR LIFT: 010SEAR ENGAGEMENT: 1020TRIGGER PULL: 1. 5.00 2. 5.00 3. 4.75 (4.9)

OBSERVATIONS:	SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1.				
2.				
3.				

NO. OF CYCLES: 2500TOTAL: 7500

SEAR LIFT: _____

SEAR ENGAGEMENT: _____

TRIGGER PULL: 1. 5.25 2. 5.25 3. 5.25 (5.25)

OBSERVATIONS:	SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1.				
2.				
3.				

REPORT NO. _____

DRY CYCLE SUMMARY

PAGE NO. _____

TESTER: RLTEST TITLE: Lean RelayPREVIOUS CYCLES: 0

RIFLE NO. _____

DRY CYCLE SIMULATOR NO. 1

BOLT NO. _____

CYCLE RATE: _____

FIRE CONTROL NO. 5LUBRICATION: DUPONT

WORK ORDER NO. _____

NO. OF CYCLES: 0

TOTAL: _____

SEAR LIFT: .0105SEAR ENGAGEMENT: .0215TRIGGER PULL: 1. 5.75 2. 5.5 3. 5.75 (5.75)

OBSERVATIONS: SAFE ON FORCE

SAFE OFF FORCE

BOLT LIFT-COCKED

BOLT LIFT-FIRED

1. _____

2. _____

3. _____

NO. OF CYCLES: 2500TOTAL: 2500

SEAR LIFT: _____

SEAR ENGAGEMENT: _____

TRIGGER PULL: 1. 5.75 2. 5.75 3. 6.00 (5.83)

OBSERVATIONS: SAFE ON FORCE

SAFE OFF FORCE

BOLT LIFT-COCKED

BOLT LIFT-FIRED

1. _____

2. _____

3. _____

NO. OF CYCLES: 2500TOTAL: 5000SEAR LIFT: .010SEAR ENGAGEMENT: .020TRIGGER PULL: 1. 5.75 2. 5.75 3. 5.75 (5.75)

OBSERVATIONS: SAFE ON FORCE

SAFE OFF FORCE

BOLT LIFT-COCKED

BOLT LIFT-FIRED

1. _____

2. _____

3. _____

NO. OF CYCLES: 2500TOTAL: 7500

SEAR LIFT: _____

SEAR ENGAGEMENT: _____

TRIGGER PULL: 1. 6.25 2. 6.00 3. 6.00 (6.05)OBSERVATIONS: ~~SAFE ON FORCE~~

SAFE OFF FORCE

BOLT LIFT-COCKED

BOLT LIFT-FIRED

1. 5.75 - 6.00 - 6.00 (5.91)

2. _____

3. _____

Lean Lift

.012

Lean Lift 0.041, 0.045

DON'T SAY IT-WRITE IT

To _____

Date _____

From _____

Simulator #1 control #6

Firing pin cam broke on cycle 23,712.

"SAFETY RULES ARE PERFECT TOOLS"

REPORT NO. _____

DRY CYCLE SUMMARY

PAGE NO. _____

TESTER: ALTEST TITLE: Lead ReliefPREVIOUS CYCLES: 0

RIFLE NO. _____

DRY CYCLE SIMULATOR NO. 2

BOLT NO. _____

CYCLE RATE: _____

FIRE CONTROL NO. 6LUBRICATION: DUPONT

WORK ORDER NO. _____

NO. OF CYCLES: 0TOTAL: 0SEAR LIFT: .0125SEAR ENGAGEMENT: .0205TRIGGER PULL: 1. 5.75 2. 5.50 3. 5.50

OBSERVATIONS: SAFE ON FORCE SAFE OFF FORCE BOLT LIFT-COCKED BOLT LIFT-FIRED

1.				
2.				
3.				

NO. OF CYCLES: 2500TOTAL: 2500

SEAR LIFT: _____

SEAR ENGAGEMENT: _____

TRIGGER PULL: 1. 5.50 2. 5.50 3. 5.50

OBSERVATIONS: SAFE ON FORCE SAFE OFF FORCE BOLT LIFT-COCKED BOLT LIFT-FIRED

1.				
2.				
3.				

NO. OF CYCLES: 2500TOTAL: 5000SEAR LIFT: .015SEAR ENGAGEMENT: .018TRIGGER PULL: 1. 5.25 2. 5.25 3. 5.25

OBSERVATIONS: SAFE ON FORCE SAFE OFF FORCE BOLT LIFT-COCKED BOLT LIFT-FIRED

1.				
2.				
3.				

NO. OF CYCLES: 2500TOTAL: 7500

SEAR LIFT: _____

SEAR ENGAGEMENT: _____

TRIGGER PULL: 1. 5.50 2. 5.50 3. 5.50

OBSERVATIONS: SAFE ON FORCE SAFE OFF FORCE BOLT LIFT-COCKED BOLT LIFT-FIRED

TP 1.	<u>5.25</u>	<u>5.25</u>	<u>5.25</u>	<u>10,000 cycles</u>
2.				
3.				

Lead Relief .013 Lead Relief .0185

REPORT NO. _____

DRY CYCLE SUMMARY

PAGE NO. 1TESTER: Aniolo

TEST TITLE: _____

PREVIOUS CYCLES: 10,000

RIFLE NO. _____

DRY CYCLE SIMULATOR NO. #1

BOLT NO. _____

CYCLE RATE: _____

FIRE CONTROL NO. #6LUBRICATION: Dupont

WORK ORDER NO. _____

NO. OF CYCLES: 2500TOTAL: 12500

SEAR LIFT: _____

SEAR ENGAGEMENT: _____

TRIGGER PULL: 1. 5.75 2. 5.50 3. 5.75 (5.6)

OBSERVATIONS: SAFE ON FORCE

SAFE OFF FORCE

BOLT LIFT-COCKED

BOLT LIFT-FIRED

1. _____

2. _____

3. _____

NO. OF CYCLES: 2500TOTAL: 15000SEAR LIFT: .0125SEAR ENGAGEMENT: .0235TRIGGER PULL: 1. 5.75 2. 5.50 3. 5.75 (5.6)

OBSERVATIONS: SAFE ON FORCE

SAFE OFF FORCE

BOLT LIFT-COCKED

BOLT LIFT-FIRED

1. _____

2. _____

3. _____

NO. OF CYCLES: 2500TOTAL: 17500

SEAR LIFT: _____

SEAR ENGAGEMENT: _____

TRIGGER PULL: 1. 6.0 2. 7.0 3. 5.5 (6.1)

OBSERVATIONS: SAFE ON FORCE

SAFE OFF FORCE

BOLT LIFT-COCKED

BOLT LIFT-FIRED

1. _____

2. _____

3. _____

NO. OF CYCLES: 2500TOTAL: 20000SEAR LIFT: .0115SEAR ENGAGEMENT: .0250TRIGGER PULL: 1. 5.50 2. 5.50 3. 5.50 (5.5)

OBSERVATIONS: SAFE ON FORCE

SAFE OFF FORCE

BOLT LIFT-COCKED

BOLT LIFT-FIRED

1. _____

2. _____

REPORT NO. _____

DRY CYCLE SUMMARYPAGE NO. 2TESTER: Anaelo

TEST TITLE: _____

PREVIOUS CYCLES: 20,000

RIFLE NO. _____

DRY CYCLE SIMULATOR NO. 1

BOLT NO. _____

CYCLE RATE: _____

FIRE CONTROL NO. #6LUBRICATION: Dupont

WORK ORDER NO. _____

NO. OF CYCLES: 2500TOTAL: 22500

SEAR LIFT: _____

SEAR ENGAGEMENT: _____

TRIGGER PULL: 1. 5.25 2. 5.25 3. 5.0 (5.1)

OBSERVATIONS:	SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1.				
2.				
3.				

NO. OF CYCLES: 2500TOTAL: 25000SEAR LIFT: .0125SEAR ENGAGEMENT: .0250TRIGGER PULL: 1. 5.50 2. 5.50 3. 5.50 (5.5)

OBSERVATIONS:	SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1.				
2.				
3.				

NO. OF CYCLES: _____

TOTAL: _____

SEAR LIFT: _____

SEAR ENGAGEMENT: _____

TRIGGER PULL: 1. _____ 2. _____ 3. _____

OBSERVATIONS:	SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1.				
2.				
3.				

NO. OF CYCLES: _____

TOTAL: _____

SEAR LIFT: _____

SEAR ENGAGEMENT: _____

TRIGGER PULL: 1. _____ 2. _____ 3. _____

OBSERVATIONS:	SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1.				
2.				

REPORT-NO. _____

DRY CYCLE SUMMARY

PAGE NO. _____

TESTER: _____

TEST TITLE: Lead Pull

PREVIOUS CYCLES: _____

RIFLE NO. _____

DRY CYCLE SIMULATOR NO. 1

BOLT NO. _____

CYCLE RATE: _____

FIRE CONTROL NO. 7LUBRICATION: Du Pont

WORK ORDER NO. _____

NO. OF CYCLES: 0TOTAL: 0SEAR LIFT: .010SEAR ENGAGEMENT: .0205TRIGGER PULL: 1. 5.75 2. 5.75 3. 5.50 (5.64)

OBSERVATIONS:	SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1.				
2.				
3.				

NO. OF CYCLES: 2500TOTAL: 2500

SEAR LIFT: _____

SEAR ENGAGEMENT: _____

TRIGGER PULL: 1. 5.75 2. 5.75 3. 5.50 (5.58)

OBSERVATIONS:	SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1.				
2.				
3.				

NO. OF CYCLES: 5000TOTAL: 5000SEAR LIFT: .0135SEAR ENGAGEMENT: .015TRIGGER PULL: 1. 5.50 2. 5.75 3. 5.50 (5.58)

OBSERVATIONS:	SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1.				
2.				
3.				

NO. OF CYCLES: 7500TOTAL: 7500

SEAR LIFT: _____

SEAR ENGAGEMENT: _____

TRIGGER PULL: 1. 5.75 2. 5.75 3. 5.75 (5.75)

OBSERVATIONS:	SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1. P. 1. <u>5.50</u>		<u>5.50</u>	<u>5.75</u> (5.58)	<u>10.000 Cycle</u>
2. <u>5.50</u>				

Lo. 2.11 .0105

REPORT NO. _____

DRY CYCLE SUMMARYPAGE NO. 1TESTER: Angelo

TEST TITLE: _____

PREVIOUS CYCLES: 10000

RIFLE NO. _____

DRY CYCLE SIMULATOR NO. 2

BOLT NO. _____

CYCLE RATE: _____

FIRE CONTROL NO. 7LUBRICATION: Dupont

WORK ORDER NO. _____

NO. OF CYCLES: 2500TOTAL: 12500

SEAR LIFT: _____

SEAR ENGAGEMENT: _____

TRIGGER PULL: 1. 5.75 2. 5.75 3. 5.50 (5.6)

OBSERVATIONS:	SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1.				
2.				
3.				

NO. OF CYCLES: 2500TOTAL: 15000SEAR LIFT: .0105SEAR ENGAGEMENT: .0205TRIGGER PULL: 1. 5.75 2. 5.75 3. 5.50 (5.6)

OBSERVATIONS:	SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1.				
2.				
3.				

NO. OF CYCLES: 2500TOTAL: 17500

SEAR LIFT: _____

SEAR ENGAGEMENT: _____

TRIGGER PULL: 1. 5.75 2. 5.50 3. 5.50 (5.6)

OBSERVATIONS:	SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1.				
2.				
3.				

NO. OF CYCLES: 2500TOTAL: 20000SEAR LIFT: .085SEAR ENGAGEMENT: .0250TRIGGER PULL: 1. 6.0 2. 5.5 3. 5.5 (5.6)

OBSERVATIONS:	SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1.				
2.				

REPORT NO. _____

DRY CYCLE SUMMARYPAGE NO. 2TESTER: Anaelo

TEST TITLE: _____

PREVIOUS CYCLES: 20000

RIFLE NO. _____

DRY CYCLE SIMULATOR NO. #2

BOLT NO. _____

CYCLE RATE: _____

FIRE CONTROL NO. #7LUBRICATION: Dupont

WORK ORDER NO. _____

NO. OF CYCLES: 2500TOTAL: 22500

SEAR LIFT: _____

SEAR ENGAGEMENT: _____

TRIGGER PULL: 1. 6.0 2. 5.75 3. 5.75 (5.8)

OBSERVATIONS:	SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1.				
2.				
3.				

NO. OF CYCLES: 2500TOTAL: 25000SEAR LIFT: .006SEAR ENGAGEMENT: .0235TRIGGER PULL: 1. 5.50 2. 5.75 3. 5.50 (5.5)

OBSERVATIONS:	SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1.				
2.				
3.				

NO. OF CYCLES: _____

TOTAL: _____

SEAR LIFT: _____

SEAR ENGAGEMENT: _____

TRIGGER PULL: 1. _____ 2. _____ 3. _____

OBSERVATIONS:	SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1.				
2.				
3.				

NO. OF CYCLES: _____

TOTAL: _____

SEAR LIFT: _____

SEAR ENGAGEMENT: _____

TRIGGER PULL: 1. _____ 2. _____ 3. _____

OBSERVATIONS:	SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1.				
2.				

REPORT NO. _____

DRY CYCLE SUMMARY

PAGE NO. _____

TESTER: _____

TEST TITLE: Lead Relief

PREVIOUS CYCLES: _____

RIFLE NO. _____

DRY CYCLE SIMULATOR NO. 2

BOLT NO. _____

CYCLE RATE: _____

FIRE CONTROL NO. 8LUBRICATION: DUPONT

WORK ORDER NO. _____

NO. OF CYCLES: 0TOTAL: 0SEAR LIFT: 10 115SEAR ENGAGEMENT: .0165TRIGGER PULL: 1. 5.50 2. 5.75 3. 5.50 (5.58)

OBSERVATIONS:	SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1.				
2.				
3.				

NO. OF CYCLES: 2500TOTAL: 2500

SEAR LIFT: _____

SEAR ENGAGEMENT: _____

TRIGGER PULL: 1. 5.50 2. 5.25 3. 5.50 (5.58)

OBSERVATIONS:	SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1.				
2.				
3.				

NO. OF CYCLES: 2500TOTAL: 5000SEAR LIFT: .0100SEAR ENGAGEMENT: .0205TRIGGER PULL: 1. 5.50 2. 5.50 3. 5.25 (5.41)

OBSERVATIONS:	SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1.				
2.				
3.				

NO. OF CYCLES: 2500TOTAL: 7500

SEAR LIFT: _____

SEAR ENGAGEMENT: _____

TRIGGER PULL: 1. 5.25 2. 5.25 3. 5.25 (5.25)

OBSERVATIONS:	SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
T.R. 1.	<u>5.25</u>	<u>5.25</u>	<u>5.25</u> (5.25)	<u>10000</u>
2.				
3.				

REPORT NO. _____

DRY CYCLE SUMMARY

PAGE NO. _____

TESTER: _____

TEST TITLE: Leaver Rel. 1/

PREVIOUS CYCLES: _____

RIFLE NO. _____

DRY CYCLE SIMULATOR NO. 3

BOLT NO. _____

CYCLE RATE: _____

FIRE CONTROL NO. 9LUBRICATION: DUPONT

WORK ORDER NO. _____

NO. OF CYCLES: 0TOTAL: 0SEAR LIFT: .012SEAR ENGAGEMENT: .0165TRIGGER PULL: 1. 6.25 2. 6.25 3. 6.25 (6.25)

OBSERVATIONS:	SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1.				
2.				
3.				

NO. OF CYCLES: 2500TOTAL: 2500

SEAR LIFT: _____

SEAR ENGAGEMENT: _____

TRIGGER PULL: 1. 6.05 2. 6.05 3. 5.75 (5.91)

OBSERVATIONS:	SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1.				
2.				
3.				

NO. OF CYCLES: 3500TOTAL: 3500SEAR LIFT: .0135SEAR ENGAGEMENT: .022TRIGGER PULL: 1. 5.75 2. 5.75 3. 5.75 (5.75)

OBSERVATIONS:	SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1.				
2.				
3.				

NO. OF CYCLES: 2500TOTAL: 7500

SEAR LIFT: _____

SEAR ENGAGEMENT: _____

TRIGGER PULL: 1. 6.00 2. 6.00 3. 5.25 (5.75)

OBSERVATIONS:	SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1.	<u>6.25 - 6.00</u>	<u>6.25</u>	(6.1)	<u>1000 cycles</u>
2.	<u>.017</u>			<u>.0145</u>

REPORT NO. _____

DRY CYCLE SUMMARY

PAGE NO. _____

TESTER: 126

TEST TITLE: _____

PREVIOUS CYCLES: 0

RIFLE NO. _____

DRY CYCLE SIMULATOR NO. 1

BOLT NO. _____

CYCLE RATE: _____

FIRE CONTROL NO. 10LUBRICATION: WD40

WORK ORDER NO. _____

NO. OF CYCLES: 0TOTAL: 0SEAR LIFT: .012SEAR ENGAGEMENT: .018TRIGGER PULL: 1. 5.75 2. 5.75 3. 5.75

(5.66)

OBSERVATIONS: SAFE ON FORCE

SAFE OFF FORCE

BOLT LIFT-COCKED

BOLT LIFT-FIRED

1. _____

2. _____

3. _____

NO. OF CYCLES: 2500TOTAL: 2500

SEAR LIFT: _____

SEAR ENGAGEMENT: _____

TRIGGER PULL: 1. 5.75 2. 5.75 3. 5.75

(5.75)

OBSERVATIONS: SAFE ON FORCE

SAFE OFF FORCE

BOLT LIFT-COCKED

BOLT LIFT-FIRED

1. _____

2. _____

3. _____

NO. OF CYCLES: 2500TOTAL: 5000SEAR LIFT: .0715SEAR ENGAGEMENT: .021TRIGGER PULL: 1. 5.75 2. 5.75 3. 5.75

(5.75)

OBSERVATIONS: SAFE ON FORCE

SAFE OFF FORCE

BOLT LIFT-COCKED

BOLT LIFT-FIRED

1. _____

2. _____

3. _____

NO. OF CYCLES: 25TOTAL: 7500

SEAR LIFT: _____

SEAR ENGAGEMENT: _____

TRIGGER PULL: 1. 5.75 2. 5.75 3. 5.75

(5.6)

OBSERVATIONS: SAFE ON FORCE

SAFE OFF FORCE

BOLT LIFT-COCKED

BOLT LIFT-FIRED

Trigger pull - 5.75 - 5.75 - 5.75

(5.75)

7500 - 10.000

2. _____

TESTER: AL

TEST TITLE: _____

PREVIOUS CYCLES: _____

RIFLE NO. _____

DRY CYCLE SIMULATOR NO. 2

BOLT NO. _____

CYCLE RATE: _____

FIRE CONTROL NO. 11

LUBRICATION: WD-40

WORK ORDER NO. _____

NO. OF CYCLES: 0

TOTAL: 0

SEAR LIFT: .0125

SEAR ENGAGEMENT: .0105

TRIGGER PULL: 1. 6.00 2. 5.75 3. 5.75 (5.8)

OBSERVATIONS: SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____

NO. OF CYCLES: 2500

TOTAL: 2500

SEAR LIFT: _____

SEAR ENGAGEMENT: _____

TRIGGER PULL: 1. 5.5 2. 5.75 3. 5.75 (5.6)

OBSERVATIONS: SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____

NO. OF CYCLES: 2500

TOTAL: 5000

SEAR LIFT: .0125

SEAR ENGAGEMENT: .0125

TRIGGER PULL: 1. 5.75 2. 5.75 3. 5.75 (5.75)

OBSERVATIONS: SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____

NO. OF CYCLES: 2500

TOTAL: 7500

SEAR LIFT: _____

SEAR ENGAGEMENT: _____

TRIGGER PULL: 1. 5.50 2. 5.50 3. 5.75 (5.4)

OBSERVATIONS: SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1. <u>5.50 - 5.50</u> <u>5.50</u>	_____	(5.50)	<u>70712</u> <u>10.00</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____

REPORT NO. _____

DRY CYCLE SUMMARY

PAGE NO. _____

TESTER: PL

TEST TITLE: _____

PREVIOUS CYCLES: 0

RIFLE NO. _____

DRY CYCLE SIMULATOR NO. 3

BOLT NO. _____

CYCLE RATE: _____

FIRE CONTROL NO. 12LUBRICATION: WD40

WORK ORDER NO. _____

NO. OF CYCLES: 0TOTAL: 2SEAR LIFT: .0125SEAR ENGAGEMENT: .009TRIGGER PULL: 1. 6.00 2. 6.00 3. 5.75 (591)

OBSERVATIONS: SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____

NO. OF CYCLES: 2500TOTAL: 2500

SEAR LIFT: _____

SEAR ENGAGEMENT: _____

TRIGGER PULL: 1. 6.00 2. 6.00 3. 5.75 (591)

OBSERVATIONS: SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____

NO. OF CYCLES: 2500TOTAL: 5000SEAR LIFT: .0115SEAR ENGAGEMENT: .0185TRIGGER PULL: 1. 6.00 2. 6.00 3. 5.75 (591)

OBSERVATIONS: SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____

NO. OF CYCLES: 2500TOTAL: 7500SEAR LIFT: 2

SEAR ENGAGEMENT: _____

TRIGGER PULL: 1. 6.00 2. 5.75 3. 6.00 (591)

OBSERVATIONS: SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1. <u>Trigger 5.75-5.75-6.00</u>	_____	(582)	<u>76+100</u> <u>10.000</u>
2. <u>Seal lift .010</u>	_____	_____	<u>Seal lift .025</u>

REPORT NO. _____

DRY CYCLE SUMMARY

PAGE NO. _____

TESTER: _____

TEST TITLE: _____

PREVIOUS CYCLES: 8

RIFLE NO. _____

DRY CYCLE SIMULATOR NO. 4BOLT NO. 13

CYCLE RATE: _____

FIRE CONTROL NO. _____

LUBRICATION: WD 40

WORK ORDER NO. _____

NO. OF CYCLES: 0TOTAL: 0SEAR LIFT: .013SEAR ENGAGEMENT: .009TRIGGER PULL: 1. 5.752. 5.753. 5.75

(5.95)

OBSERVATIONS: SAFE ON FORCE

SAFE OFF FORCE

BOLT LIFT-COCKED

BOLT LIFT-FIRED

1. _____

2. _____

3. _____

NO. OF CYCLES: 2500TOTAL: 2500

SEAR LIFT: _____

SEAR ENGAGEMENT: _____

TRIGGER PULL: 1. 5.252. 5.253. 5.25

(5.25)

OBSERVATIONS: SAFE ON FORCE

SAFE OFF FORCE

BOLT LIFT-COCKED

BOLT LIFT-FIRED

1. _____

2. _____

3. _____

NO. OF CYCLES: 2500TOTAL: 5000SEAR LIFT: .011SEAR ENGAGEMENT: .0165TRIGGER PULL: 1. 5.502. 5.503. 5.25

(5.50)

OBSERVATIONS: SAFE ON FORCE

SAFE OFF FORCE

BOLT LIFT-COCKED

BOLT LIFT-FIRED

1. _____

2. _____

3. _____

NO. OF CYCLES: 2500TOTAL: 7500

SEAR LIFT: _____

SEAR ENGAGEMENT: _____

TRIGGER PULL: 1. 5.502. 5.503. 5.50

(5.50)

OBSERVATIONS: SAFE ON FORCE

SAFE OFF FORCE

BOLT LIFT-COCKED

BOLT LIFT-FIRED

1. _____

2. _____

3. _____

big pull

1. 5.50-5.50 - 5.50

(5.50)

BOLT LIFT-FIRED
TOTAL CYCLES
10000

Seam Lift

2. .0125

Low Engagement .0185

REPORT NO. _____

DRY CYCLE SUMMARY

PAGE NO. _____

TESTER: ALTEST TITLE: Arm ReliefPREVIOUS CYCLES: 0

RIFLE NO. _____

DRY CYCLE SIMULATOR NO. 3

BOLT NO. _____

CYCLE RATE: _____

FIRE CONTROL NO. 14LUBRICATION: CRC

WORK ORDER NO. _____

NO. OF CYCLES: 0TOTAL: 0SEAR LIFT: .010SEAR ENGAGEMENT: .012TRIGGER PULL: 1. 4.00 2. 4.00 3. 4.25

(4.08)

OBSERVATIONS: SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____

NO. OF CYCLES: 2500TOTAL: 2500

SEAR LIFT: _____

SEAR ENGAGEMENT: _____

TRIGGER PULL: 1. 5.75 2. 5.75 3. 6.00

(5.87)

OBSERVATIONS: SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____

NO. OF CYCLES: 2500TOTAL: 5000SEAR LIFT: .013SEAR ENGAGEMENT: .026TRIGGER PULL: 1. 6.00 2. 6.25 3. 6.00

(6.08)

OBSERVATIONS: SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____

NO. OF CYCLES: 2520TOTAL: 2520

SEAR LIFT: _____

SEAR ENGAGEMENT: _____

TRIGGER PULL: 1. 5.75 2. 5.75 3. 6.00

(5.66)

OBSERVATIONS: SAFE ON FORCE	SAFE OFF FORCE	BOLT LIFT-COCKED	BOLT LIFT-FIRED
1. <u>Very Pul. 6.25-6.00-6.00</u>	(6.08)	_____	<u>10000</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____

NO. OF CYCLES: 10125TOTAL: 10125

REPORT NO. _____

DRY CYCLE SUMMARY

PAGE NO. _____

TESTER: ALTEST TITLE: Lean RiflePREVIOUS CYCLES: 0

RIFLE NO. _____

DRY CYCLE SIMULATOR NO. 4

BOLT NO. _____

CYCLE RATE: _____

FIRE CONTROL NO. 15LUBRICATION: CRC

WORK ORDER NO. _____

NO. OF CYCLES: 0TOTAL: 0SEAR LIFT: .012SEAR ENGAGEMENT: .015TRIGGER PULL: 1. 6.502. 6.503. 6.75

(6.58)

OBSERVATIONS: SAFE ON FORCE

SAFE OFF FORCE

BOLT LIFT-COCKED

BOLT LIFT-FIRED

1. _____

2. _____

3. _____

NO. OF CYCLES: 2500TOTAL: 2500

SEAR LIFT: _____

SEAR ENGAGEMENT: _____

TRIGGER PULL: 1. 6.502. 6.503. 6.75

(6.58)

OBSERVATIONS: SAFE ON FORCE

SAFE OFF FORCE

BOLT LIFT-COCKED

BOLT LIFT-FIRED

1. _____

2. _____

3. _____

NO. OF CYCLES: 2500TOTAL: 5000SEAR LIFT: .0115SEAR ENGAGEMENT: .0205TRIGGER PULL: 1. 6.252. 6.503. 6.50

(6.41)

OBSERVATIONS: SAFE ON FORCE

SAFE OFF FORCE

BOLT LIFT-COCKED

BOLT LIFT-FIRED

1. _____

2. _____

3. _____

NO. OF CYCLES: 2500TOTAL: 7500

SEAR LIFT: _____

SEAR ENGAGEMENT: _____

TRIGGER PULL: 1. 7.252. 7.253. 7.00

(7.16)

OBSERVATIONS: SAFE ON FORCE

SAFE OFF FORCE

BOLT LIFT-COCKED

BOLT LIFT-FIRED

TP 6.75 6.75 6.75

(6.75)

10.000

Lean Rifle
2
1.0125

Lean Rifle - 1.0125