WAW
10-15

CUSTOMER POINT OF VIEW

HIGH "EASE OF USE"

- QUICK TO FIND
- EASY TO OPERATE
- EASY TO UNDERSTAND
- RELIABLE TO OPERATE

- EASY TO USE WITH 'SCOPE
- CRISP TRIGGER PULL
- MINIMUM CREEP
- HIS OWN PERCEPTION OF "WHAT IS"

MEDIUM

- QUIET OPERATION
- MINIMUM BACKLASH (feedback)
- SINGLE STAGE PULL
- EASILY KNOWN STATUS ("S" OR "F")
- PLEASING APPEARANCE
- ADJUSTABLE FOR WEIGHT OF PULL

LOW

- LOCATION OF SAFETY (CONSISTENT WITH EASE OF USE)
- HOW MECHANISM PREVENTS UNINTENDED FIRING - WHAT IT BLOCKS
- MINIMUM TRIGGER OVER-TRAVEL

PLAINTIFF'S EXHIBIT 3122

1 of 6

AL 0023960

10/5/93
WAW

MARKETING POINT OF VIEW

HIGH

- RESPONSIVE TO THEIR ASSESSMENT OF WRITERS' & CUSTOMERS' PERCEPTIONS OF REALITY.
- AVOID MULTIPLE FEATURE OPTIONS WHICH WOULD COMPOUND/CONFUSE SALES/INVENTORIES
- PRESERVE PRODUCTION CAPABILITY TO SATISFY M700 DEMAND
- EASY TO UNDERSTAND AND USE
- USER ABLE TO OPEN [AND CLOSE] BOLT IN A SAFE CONDITION ("3-POSITION SAFETY")
- BOLT LOCKED DOWN IN "S" CONDITON

MEDIUM

- CUSTOMER-ADJUSTABLE TRIGGER PULL FORCE ONLY DOWN TO MINIMUM SATISFACTORY LEVEL
- NOT ADJUSTABLE EXTERNALLY
- BOLT STOP RELEASE AWAY FROM "IN FRONT OF TRIGGER"
- NO SAFETY ON TANG
- LEFT-HAND VERSION (12-15% OF MARKET)

LOW

? • FIELD-CONVERTIBLE FOR OPERATIONS WITH OR WITHOUT BOLT LOCK

NOT

- MAGAZINE-BOX DISCONNECT SYSTEM

WAW
10-15-93

MANUFACTURING POINT OF VIEW

HIGH

- INTERCHANGEABILITY OF COMPONENTS AT SUB-ASSEMBLY AND FINAL ASSEMBLY.
- SATISFACTORY PERFORMANCE WITH NORMALLY-ACHIEVED TOLERANCES
- ONLY NORMAL TRAINING AND DEXTERITY REQUIRED TO PROCESS

MEDIUM

- READY-TO-ASSEMBLE SUB-ASSEMBLIES AT FINAL ASSEMBLY
- DESIGNED TO PREVENT INCORRECT ASSEMBLY OF COMPONENTS

LOW

- READILY REWORKABLE/SALVAGEABLE

10-15-93
WAW

LIABILITY POINT OF VIEW

HIGH

- AVOID PATENT INFRINGEMENT
- NOT INTERCHANGEABLE OR RETROFITTABLE TO M700
- TWO POSITION "S" & "F"
- SEALED UNIT, REQUIRING NO ORIGINAL OR FIELD LUBRICATION
- ROBUST AGAINST IMPACT - EXCEED SAAMI/ANSI RECCOMENDATIONS BY WIDE MARGIN
- USER OPERATION CONSISTENT WITH PRECEDENT AND CONVENTION.
- ROBUST AGAINST EFFECTS OF TAMPERING/ADJUSTING
- HIGHLY INTUITIVE OPERATION

MEDIUM

- READILY DEFENSIBLE REASONS FOR DEPARTURE FROM CURRENT DESIGN

? • CONVERTIBLE & REVERSIBLE BOLT LOCK

? • INTERLOCK: WILL NOT FIRE IF TRIGGER IS PULLED AND HELD AS SAFETY S → F

10-15-93
WAW

ENGINEERING PROCESSING POINT OF VIEW

HIGH

- SHORT RECEIVER
- MACHINES, TOOLING, PROCESSES CONSISTENT WITH EXPECTED VOLUME
- HIGH-YIELD OPERATIONS
- MAINTAIN W200 PRODUCTION CAPACITY

MEDIUM

- DESIGN TO INHIBIT/PREVENT INCORRECT ASSEMBLY OF COMPONENTS
- DESIGN TO PERMIT REWORK/SALVAGE

10·15·93
WAW

ENGINEERING DESIGN POINT OF VIEW

HIGH

- SHORT DIMENSIONS PARALLEL TO ℄ BBL
- AVOID ANY REASON TO PUT FINGER WITHIN TRIGGER GUARD EXCEPT TO INTENTIONALLY FIRE
- EASY TO UNDERSTAND - HIGHLY INTUITIVE OPERATION
- REALITY VS PERCEPTION RECONCILED THRU ACTUAL TESTING/PERFORMANCE
- PRESERVE ADVANTAGES OF RESILIENT (CONNECTOR) FUNCTION
- DO NOT USE GEAR AS BOLT STOP OR APPLY BOLT STOP IMPACT TO ASSEMBLY
  - REDUCED LOCK TIME
- ACTUATE SAFETY WITH BOLT OPEN

MEDIUM

- QUIET OPERATION
- ENHANCED CORROSION RESISTANCE
- COMPEL TRIGGER TO SUPPORT POSITION IN MOVING SAFETY F → S
- FULL TRIGGER RETRACTION UPON PARTIAL PULL
- MEANS TO PREVENT INCORRECT ASSEMBLY/RE-ASSEMBLY OF COMPONENTS

Oct 23 WAW 10-15

CUSTOMER POINT OF VIEW

HIGH "EASE OF USE"

- QUICK TO FIND
- EASY TO OPERATE
- EASY TO UNDERSTAND
- RELIABLE TO OPERATE
- EASY TO USE WITH 'SCOPE
- CRISP TRIGGER PULL
- MINIMUM CREEP
- HIS OWN PERCEPTION OF "WHAT IS"

→ BASICALLY USER FRIENDLY

= DESIGN OBJECTIVES

MEDIUM

- QUIET OPERATION
- MINIMUM BACKLASH (feedback)
- SINGLE STAGE PULL
- EASILY KNOWN STATUS ("S" OR "F")
- PLEASING APPEARANCE
- ADJUSTABLE (Especially WEIGHT OF PULL)

LOW

- LOCATION OF SAFETY (CONSISTENT WITH EASE OF USE)
- HOW MECHANISM PREVENTS UNINTENDED FIRING - WHAT IT BLOCKS
- MINIMUM TRIGGER OVER-TRAVEL

Improved TACTILE FEEL OF TRIGGER
" " " OF SAFETY

PLAINTIFF'S EXHIBIT 3123

1 of 01

AL 0023977

10-15-93
WAW

MARKETING POINT OF VIEW

HIGH

- RESPONSIVE TO THEIR ASSESSMENT OF WRITERS' & CUSTOMERS' PERCEPTIONS OF REALITY.
- AVOID MULTIPLE FEATURE OPTIONS WHICH WOULD COMPOUND/CONFUSE SALES/INVENTORIES
- PRESERVE PRODUCTION CAPABILITY TO SATISFY M700 DEMAND
- EASY TO UNDERSTAND AND USE
- USER ABLE TO OPEN [AND CLOSE] BOLT IN A SAFE CONDITION ("3-POSITION SAFETY")
- BOLT LOCKED DOWN IN "S" CONDITION

MEDIUM

- CUSTOMER-~~ADJUSTABLE~~ TRIGGER PULL FORCE ONLY DOWN TO MINIMUM SATISFACTORY LEVEL
- NOT ADJUSTABLE EXTERNALLY
- BOLT STOP RELEASE ~~AWAY FROM "IN FRONT OF TRIGGER"~~ RELOCATED WITH ~~[illegible]~~ [illegible]
- NO SAFETY ON TANG
- LEFT-HAND VERSION (12-15% OF MARKET)

LOW

? • FIELD-CONVERTIBLE FOR OPERATION WITH OR WITHOUT BOLT LOCK

NOT

- MAGAZINE-BOX DISCONNECT SYSTEM

2 of 7

WAW
10-15-93

MANUFACTURING POINT OF VIEW

HIGH

- INTERCHANGEABILITY OF COMPONENTS AT SUB-ASSEMBLY AND FINAL ASSEMBLY.
- SATISFACTORY PERFORMANCE WITH NORMALLY-ACHIEVED TOLERANCES
- FINAL ASSEMBLY WITH READY-TO-ASSEMBLE SUB-ASSEMBLIES

MEDIUM

- ONLY NORMAL TRAINING AND DEXTERITY TO PROCESS
- DESIGNED TO PREVENT INCORRECT ASSEMBLY OF COMPONENTS

LOW

- READILY REWORKABLE/SALVAGEABLE

DESIGN FOR MANUFACTURIBILITY PRINCIPLES
DESIGN FOR ASSEMBLY PRINCIPLES

10-15-93
WAW

LIABILITY POINT OF VIEW

HIGH

- AVOID PATENT INFRINGEMENT DUE TO LICENSING
- NOT INTERCHANGEABLE OR RETROFITTABLE TO M700
- TWO POSITION "S" & "F"
- ROBUST AGAINST INAPPROPRIATE LUBRICATION
- ROBUST AGAINST IMPACT - ~~EXCEED~~ MUST PASS A MIN OF SAAMI/ANSI ~~RECOMENDATIONS BY WIDE MARGIN~~ DRAP
- USER OPERATION CONSISTENT WITH PRECEDENT AND CONVENTION.
- ROBUST AGAINST EFFECTS OF TAMPERING/ADJUSTING
- HIGHLY INTUITIVE OPERATION

MEDIUM

- READILY DEFENSIBLE REASONS FOR DEPARTURE FROM CURRENT DESIGN

? • CONVERTIBLE & REVERSIBLE BOLT LOCK

? • INTERLOCK: WILL NOT FIRE IF TRIGGER IS PULLED AND HELD AS ~~SAFETY~~ S → F

"SEALED" DESIGN

10·15·93
WAW

ENGINEERING DESIGN POINT OF VIEW

HIGH

- SHORT DIMENSIONS PARALLEL TO ℄ BBL
- AVOID ANY REASON TO PUT FINGER WITHIN TRIGGER GUARD EXCEPT TO INTENTIONALLY FIRE
- EASY TO UNDERSTAND - HIGHLY INTUITIVE OPERATION
- REALITY VS. PERCEPTION RECONCILED THRU ACTUAL TESTING/ PERFORMANCE
- PRESERVE ADVANTAGES OF RESILIENT (CONNECTOR) FUNCTION
- DO NOT USE SEAR AS BOLT STOP OR APPLY BOLT STOP IMPACT TO ASSEMBLY
- NO LUBE "LUBELESS" DESIGN
  - REDUCED LOCK TIME
- ACTUATE SAFETY WITH BOLT OPEN

MEDIUM

- QUIET OPERATION
- ENHANCED CORROSION RESISTANCE
- COMPEL TRIGGER TO SUPPORT POSITION IN MOVING SAFETY F → S
- FULL TRIGGER RETRACTION UPON PARTIAL PULL
- MEANS TO PREVENT INCORRECT ASSEMBLY/ RE-ASSEMBLY OF COMPONENTS

10.15.93
WAW

ENGINEERING PROCESSING POINT OF VIEW

HIGH

- SHORT RECEIVER
- MACHINES, TOOLING, PROCESSES CONSISTENT WITH EXPECTED VOLUME
- HIGH-YIELD OPERATIONS
- MAINTAIN M200 PRODUCTION CAPACITY

MEDIUM

- DESIGN TO INHIBIT/PREVENT INCORRECT ASSEMBLY OF COMPONENTS
- DESIGN TO PERMIT REWORK/SALVAGE

NBAR FIRECONTROL DESIGN OBJECTIVES

- USER "FRIENDLY" DESIGN
- IMPROVED TACTILE FEEL OF THE TRIGGER
- IMPROVED TACTILE FEEL OF THE SAFETY
- CUSTOMER ABLE TO OPEN AND CLOSE BOLT WITH SAFETY "ON"
- BOLT LOCKED DOWN IN A "S" CONDITION
- CUSTOMER ADJUSTABLE TRIGGER PULL FORCE ONLY WITHIN PRESCRIBED LIMITS
- BOLT STOP RELEASE RELOCATED WITH IMPROVE TACTILE FEEL
- LEFT HANDED VERSION TO BE DESIGNED
- DESIGN FOR MANUFACTURABILITY PRINCIPLES UTILIZED
- DESIGN FOR ASSEMBLY PRINCIPLES UTILIZED
- "SEALED" DESIGN
- RIFLE WILL NOT FIRE IF TRIGGER PULLED AND HELD AS SAFETY IS MOVED FROM "S" TO "F"
- ROBUST AGAINST IMPACT
- COMPEL TRIGGER TO SUPPORT POSITION IN MOVING SAFETY FROM "F" TO "S"
- "NO LUBRICATION" DESIGN
- ENHANCED CORROSION RESISTANCE

DRAFT

10.22.93
From D.S.F.

NBAR FIRECONTROL DESIGN OBJECTIVES

"TACTILE FEEL"? DON'T UNDERSTAND THE INTENTION HERE.

- USER "FRIENDLY" DESIGN
- IMPROVED "TACTILE FEEL" OF THE TRIGGER
- IMPROVED "TACTILE FEEL" OF THE SAFETY
- CUSTOMER ABLE TO OPEN AND CLOSE BOLT WITH SAFETY "ON"
- BOLT LOCKED DOWN IN A "S" CONDITION
- CUSTOMER ADJUSTABLE TRIGGER PULL FORCE ONLY WITHIN PRESCRIBED LIMITS
- BOLT STOP RELEASE RELOCATED WITH IMPROVE "TACTILE FEEL"
- LEFT HANDED VERSION TO BE DESIGNED
- DESIGN FOR MANUFACTURABILITY PRINCIPLES UTILIZED
- DESIGN FOR ASSEMBLY PRINCIPLES UTILIZED
- "SEALED" DESIGN
- RIFLE WILL NOT FIRE IF TRIGGER PULLED AND HELD AS SAFETY IS MOVED FROM "S" TO "F"
- ROBUST AGAINST IMPACT
- COMPEL TRIGGER TO SUPPORT POSITION IN MOVING SAFETY FROM "F" TO "S"
- "NO LUBRICATION" DESIGN
- ENHANCED CORROSION RESISTANCE

PLAINTIFF'S EXHIBIT 3124

ADDITIONAL DESIGN CRITERIA:

- TWO-POSITION SAFETY
- NOT INTERCHANGEABLE OR RETROFITTABLE WITH M700
- SHORT AS PRACTICAL TO FACILITATE INTEGRAL DBL/REC'R INTERNAL PROCESSING.
- ROBUST AGAINST TAMPERING
- QUIET OPERATION

COMMENT
SOME USEFUL INFORMATION HAS BEEN LOST IN CONSOLIDATION TO ONE PAGE.
Bill W 10.25.93

1 of 1

AL 0023984

FIREARMS RESEARCH DIVISION

Origination Date Jan. '82

Update(s) _____

Project Title: Center Fire Rifle System Research

Project No.: C-7500

Objective: This program provides for development in new center fire rifles such as one common rec. design for bolt actions and auto/pumps, new concepts in locking systems; also, new fire controls and bolt lock systems.

Commitment:
Investigate ideas.
Layout & detail drawings.
Make prototypes or mockup models.
Artist rendering.
Investigate new calibers, etc.

Personnel Assigned: Martin

Design/Engineers .75 Man Years

Budget: Operating Expenses 1982 $ 125M (including testing)
Research Capital Project/Expenses $ –

Uncertainties:

- Can a two piece stock and fore-end be made that will be acceptable for a bolt action rifle?
- Can a new system be set up that will lock the bolt handle and still allow the full safety operation?

PLAINTIFF'S EXHIBIT 3125

1082

FIREARMS RESEARCH DIVISION

Program Steps and Timing		Responsibility	Completion Date
1.	Investigation	Martin	2-1-82
2.	Layouts/design for mockups.	Martin	4-1-82
3.	Complete lock/~~see types~~.	Martin	6-1-82
4.	Investigate new locking/~~extractors, etc~~.	Martin	3-1-82
5.	Layout/design and detail.	Martin	5-1-82
6.	Make prototypes	Martin	7-1-82
7.	Design test.	Martin	9-1-82

FIREARMS RESEARCH DIVISION

CATEGORY II

Origination Date Jan. 1982

Update(s) _____

Project Title: Bolt Action Rifle Development Program

Project No.: G-5000

Objective: To investigate and design a new concept bolt action rifle and assure our position in the market place for the dollar value. This project is to include a new receiver and stock design, new fire control, review of the bolt lock system, new scope mounts/sights, and review of the feed system (such as detachable box, etc.). Other concepts to be investigated include expendable case, electronic ignition, and light weight designs. The gun will retain the M/700 lock up and extractor design.

Commitment: The program will be in three parts. Part I, to be completed by January 1983, will include a new receiver/stock design, minor changes to the fire control, revised sights, and the addition of scope mounts. Part II, to be completed by June 1983, will add the feed system, bolt lock system, and light weight concept. Part III, to be completed in 1984, will include the investigation of expendable case ammunition and electronic ignition.

Personnel Assigned: Martin

Designers/Engineers	4 Man Years
Test Lab and N/C Support	.5 Man Years

Budget: Operating Expenses 1982 $ 430 M (including testing)
Research Capital Project/Expenses $ _____

Uncertainties:

- Can a receiver be restyled and still be cost effective?
- Can a stock be manufactured on a production basis that meets the needs of the customer and marketing?
- Will expendable case ammunition be the answer for future gun designs?

PLAINTIFF'S EXHIBIT 3126

FIREARMS RESEARCH DIVISION

Program Steps and Timing	Responsibility	Completion Date
Part I		
— Design new receiver and stock	Martin	July '82
— Design scope mounts and sights	Martin	Nov. '82
— Design new fire control	Martin	Jan. '83
Part II		
— Design bolt lock system	Martin	Sept. '82
— Design weight reduction	Martin	Jan. '83
— Design feed system, box, etc.	Martin	June '83
Part III		
— Design system for expendable case ammunition	Martin	Jan. '84
— Design electronic ignition system	Martin	June '84

Note: These dates are only for design and do not establish any production or announcement dates.

GUNSMITH CALL REPORT

cc: JP Lunde
TW Kenyon

Date 8-24-88 Reporter Donald McClure

Shop Name Sportswest-Div of Pay'n Save Corp Gunsmith's Name Daniel Dowen

Addr. 818 South Third Renton Washington Zip 98055
No. & Street City State

Gunsmith on Premises? yes If not, give address below:

Gunsmith's Address _____ Zip
No. & Street City State

Recommended List (X) Open Acct. (X) % Disc. 30% Dealer (X) Large (X) Small ( )

New Gun Repair

PERSONS INTERVIEWED and POSITION:

1. Daniel Dowen Gunsmith (2) _____

3. _____ (4) _____

SPECIFIC PROBLEMS ENCOUNTERED:

1. M700 still very heavy trigger pulls from factory.

GENERAL DISCUSSION

No special problems. Lots of reblueing work, again because of the geographic location.

Dan did bring up the point that we are still sending out M700's with very heavy trigger pulls, 7-7½ pounds or heavier. This shop performs all the repair work for the chain of Sportswest stores in the north west area. Since the volume of stores sell a large number of M700's Dan receives several sent in from the other stores just to have the trigger pull lightened to the 3-4 pound range. This fact disturbs me because I wonder how many do it yourselfers adjust their own triggers and do it improperly perhaps by reducing the sear engagement.

1 of 1

PLAINTIFF'S EXHIBIT 3127

AL 0024034

RC-89/8

REMINGTON ARMS COMPANY, INC.

INTER-DEPARTMENTAL CORRESPONDENCE

Remington DUPONT PETERS DUPONT

"CONFINE YOUR LETTER TO ONE SUBJECT ONLY"

xc: A. A. Hugick
F. E. Martin

Ilion, New York
September 27, 1977

TO: J. P. LINDE

FROM: C. J. MILLER / R. E. NIGHTINGALE

SUBJECT: 17 REM. PRIMER BLANKING

Work Order: C 1803

OBJECTIVE:

To confirm that primer blanking in the Model 700 rifle chambered for 17 Rem. would cause the trigger connector to break.

PROCEDURE:

The 17 Rem. ammunition was heated to 140° to increase the pressure to approximately 57,000 C.U.P. The heated ammunition was shot in three (3) Model 700 rifles, with sharp edges on the firing pin hole. Each fired case was observed for primer blanking.

RESULTS:

Rifle No. 6395444 was shot first and thirty three (33) out of the sixty one (61) rounds, had blanked primers. The trigger connector broke after the sixtieth round. The sixty first (61) round fired when the bolt was closed.

1 of 2

PLAINTIFF'S EXHIBIT 3128

AL 0024072

RESULTS: (Cont'd)

Rifle No. 6713463 was shot fourty eight (48) rounds with twenty (20) of the primers blanking before the bolt started following down. The trigger connector was broken.

Rifle No. 6394666 was shot thirty three (33) rounds with twenty (20) of the primers blanking before the bolt started following down. The edge of the sear was rounded. The sear connector engagement was increased to allow to continue the test. Seventeen (17) more rounds were shot with twelve of the primers blanking, then again the gun followed down. The trigger connector was broken.

C.J.Miller/R.E.Nightingale:bd
Measurement/Test Lab
Ilion Research Division

RD-43-8

cc: J.H. Chisnall

Copy to EFB

E/.

REMINGTON ARMS COMPANY, INC.

INTER-DEPARTMENTAL CORRESPONDENCE

Remington DUPONT PETERS DUPONT

Safety? Consumer Bulletin?

"CONFINE YOUR LETTER TO ONE SUBJECT ONLY"

RECEIVED
JUL 25 1977
OFFICE - E. F. BIRNETT

July 21, 1977

TO: E.G. LARSON

FROM: E.F. SIENKIEWICZ

SUBJECT: MODEL 700, .17 CALIBER RIFLES

We have a potential primer blanking problem in our .17 caliber rifles due to an improper radius being performed on the firing pin hole in the bolt face.

This primer blanking condition can break the trigger connector by allowing gas to escape rearward through the firing pin hole, causing the striker to move rearward and hitting the sear down onto the trigger connector. With the trigger connector broken, a rifle could fire upon closing the bolt.

After receiving two primer blanking complaints in May, I examined the production drawings on the .17 caliber bolt and found that the .010" firing pin hole radius was not included on the drawings. This matter was brought to the attention of John Linde, who took immediate action and this was added in a DCR (Design Change Request) drawing, along with a tool drawing to perform this operation.

I met with Jim Conover, Foreman of the Model 700 Assembly, and instructed their bolt assembler how to use the tool supplied to obtain the proper radius, as he was only bumping the firing pin hole, causing a ridge to form, which would increase the blanking problem. Also, Arms Service personnel were instructed how to use the tool and a bolt with the proper radius on the firing pin hole was shown.

All of the corrective measures have now been implimented and production has been made aware of this potentially dangerous condition. However, several thousand of these rifles are now in the field and all can experience a primer blanking problem.

Sincerely,

E F Sienkiewicz

EFS:tpp

1 of 1

RECEIVED
JUL 22 1977
E. G. LARSON

PLAINTIFF'S EXHIBIT 3129

AL 0024076

MODEL 700 PROBLEM

A Small quantity of Model 700, 7 and 40X rifles may have been made with an out of specification part. The sear safety cam in a limited quantity of rifles made between January 10 and March 6 may have been softer than our specification. This "soft" part may show premature wear and may eventually cause harder than normal safety switch forces.

Remington has checked the guns in our inventory and is taking steps to check all guns that were shipped. Teams of employees have been dispatched to the field to check and repair, if necessary, guns at our major accounts. Since the rifles in question were made quite recently, we feel that this will be effective in achieving the repairs of all rifles that may be involved.

1 of 1

cc: J. A. Stekl

RD-49 REV. 6-58

REMINGTON ARMS COMPANY, INC.

INTER-DEPARTMENTAL CORRESPONDENCE

Remington

January 23, 1980

To: D. J. Sanita

From: E. G. Larson

Dennis:

In our Safety Meeting review of the 600 recall yesterday, E. F. Barrett asked for a tabulation of safety related complaints received in the past six months on all bolt action centerfire rifles.

Would you please have your files reviewed, and list the model (either current or obsolete), and the number returned.

All complaints should be included, and if we have found some to be unjustified because owner changed screws, altered parts, etc., please note.

Many thanks.

E. G. Larson

EGL:lb

Jerry Burns
Supplying info. to Earl
per phone with Earl & Jerry
1/24/80

1 of 1

AL 0024608

PLAINTIFF'S EXHIBIT 3131

ALEKSICH

REMINGTON ARMS COMPANY, INC.

INTER-DEPARTMENTAL CORRESPONDENCE

Remington PETERS

Jack, For your information
Good letter by Ed

"CONFINE YOUR LETTER TO ONE SUBJECT ONLY"

2/23/79

February 22, 1979

Copy

TO: E.G. LARSON

FROM: E.F. SIENKIEWICZ

SUBJECT: RIFLES RETURNED FOR FIRE ON SAFE RELEASE

Since the Model 600 recall, hundreds of people owning Model 700 and other model firearms have contacted Remington alleging that their guns have fired when pushing the safety from on safe to off safe position without touching the trigger.

To date, all such inquiries have been handled by requesting the rifle be returned to Ilion for examination and repair at no charge.

Examinations of the returned guns received at Ilion have revealed no factory defects. All problems that have been found are due to customers tampering with the trigger adjusting screws, over oiling, (I.E. motor oil, salad oil, etc.) and other unauthorized alterations.

Several models returned are old obsolete Models 721, 722 rifles, some being 30 years old, that are worn from hard use, including the trigger assemblies. We do not have any replacement assemblies for these models; therefore, requiring extensive alterations to present Model 700 trigger assemblies for installation at no charge.

Each firearm returned requires 20 minutes examination time for each of three (3) engineers and $25.00 to $30.00 Arms Service charges for time and parts to make the repairs, totaling approximately $50.00 to $55.00 per gun on a no charge basis.

I believe that we should review this problem with our Legal Department and, if possible, reword our letters to customers on these alleged incidences to read: "Return your rifle for our examination and, if the rifle is found to be factory defective, the repairs will be made at no charge." If these guns have been tampered with, neglected, or parts are worn because of long usage, the customer should be responsible for the repairs.

In order to put this problem into proper prospective, 500 guns returned, examined and repaired on a no charge basis, is costing our Company between $25,000 and $27,000.

E.F. Sienkiewicz

EFS:tpp

PLAINTIFF'S EXHIBIT 3132

AL 0024651

1 of 1

bcc: R.B. Sperling
J.H. Chisnall
E.G. Larson
F.D. Cole
D.C. Brooks

2/27/79 Check Prepare ADV for $73.90 & have Steve & Hal approve Charge No. 51075 DC

February 26, 1979

Mrs. Susan McGinnis
Star Route, Box A-8 I.H.
Cuba, Missouri 65453

Dear Mrs. McGinnis:

Examination has been completed on your Model 660, .243 Win. caliber rifle, serial number 108687, which allegedly fired when the safety was pushed to the off position.

Our experts thoroughly examined the rifle and trigger assembly and found that the safety selector and trigger could be manipulated in such a way that subsequently moving the selector to the fire position did result in accidental discharge.

In view of our findings, we will have our Accounting section issue a check in the amount of $73.90 for damages that occurred from the incident. This will be sent under separate cover and should be received within three (3) weeks.

Our Arms Service section will install a replacement trigger on your rifle, at no charge, and the rifle will be returned to you in the very near future. Once the rifle is again in your hands, we are sure you will find it satisfactory in every respect.

Thank you for bringing this matter to our attention, and for having afforded us the opportunity to be of service.

Sincerely,

J.A. Stekl, Supervisor
Firearms Product Service

JAS:tpp

1 of 5

PLAINTIFF'S EXHIBIT
3133

AL 0024694

DO NOT REMOVE CARBONS OR COPIES

RD-6539

3-1-79

Remington® DUPONT

REMINGTON ARMS COMPANY, INC.

ILION, N. Y. 13357

ORIGINAL

INFORMATION FOR WHICH SPACE IS HERE PROVIDED MUST BE SUPPLIED BY SHIPPER OR INVOICE WILL BE RETURNED AND DISCOUNT CALCULATED FROM DATE CORRECT INVOICE IS RECEIVED

REMINGTON ORDER NO.

CONSIGNED TO

SHIPPED VIA

CAR NO. & INITIAL

ORIGINATING POINT

SHIPPING WEIGHT LBS.

PREPAID OR COLLECT

TERMS

PER CENT DAYS DAYS NET

DELIVERY

F. O. B. NET CASH

RECEIPTED EXPENSE BILL MUST ACCOMPANY ALL CHARGES FOR TRANSPORTATION

SELLER'S NO. DATE 3-1-79

REMIT TO: Mrs. Susan McGinnis

ADDRESS TO WHICH REMITTANCE IS TO BE MAILED

STREET AND NO. Star Route, Box A-8 I.H.

CITY AND STATE Cuba, Missouri 65453

ORIGINAL BILL OF LADING MUST ACCOMPANY THIS INVOICE

QUANTITY	DESCRIPTION	PRICE PER UNIT	AMOUNT	TOTAL
	To Cover Damages ~~Resulting~~ from Defective		73.90	
	Safety Selector and Trigger.			

PRICES AND TERMS CORRECT

APPROVED

FOR MANAGER, PURCHASING DIVISION

APPROVED FOR PAYMENT ONLY

Jas.

ABOVE MATERIAL RECEIVED

AND SAME IS SATISFACTORY

CHECKED BY

APPROVED BY

AMOUNT OF INVOICE 73 90

DO NOT WRITE BELOW THIS LINE

CASH DISCOUNT

FREIGHT

NET 73 90

CHARGE

5300 - ILION

EXTENSIONS CORRECT

PURCHASE ORDER CHECK

ENTERED

AUDITED

CHECK NO. AND DATE PAID

51075

2 of 5

AL 0024695

Ref. # 2787

REMINGTON ARMS COMPANY, INC.

Trigger Assembly
Special Replacement Program

(A)

GUNSMITH

Name _____

Street _____

City, State Zip _____

Telephone _____ (Area Code)

Control No. _____ (For Rem. Use Only)

GUN OWNER

Name _____

Street _____

City, State, Zip _____

Telephone _____ (Area Code)

Control No. _____ (For Rem. Use Only)

(B) FIREARMS INFORMATION

Model (Check One)
- ☐ 1. Rem 600
- ☐ 2. Rem 660
- ☐ 3. Mohawk 600
- ☐ 4. XP-100

Caliber (Check One)
- ☐ 1. 222 Rem.
- ☐ 2. 6mm Rem.
- ☐ 3. 243 Win.
- ☐ 4. 308 Win.
- ☐ 5. 6.5mm Rem. Mag.

Caliber (Check One)
- ☐ 6. 350 Rem. Mag.
- ☐ 7. 35 Rem.
- ☐ 8. 223 Rem.
- ☐ 9. 221 Rem. "Fireball"
- ☐ 10. Rechambered

Serial No. _____

(C) MODIFICATION INFORMATION

Method Gun Received From Owner:
(Check One)
- ☐ Hand Delivered
- ☐ UPS
- ☐ U.S. Mail
- ☐ Other _____ (Specify)

	Month	Day	Year
Date Gun Received From Owner			
Estimated Completion Date			

(D) INVOICE DATA

Date Work Completed _____

Charges: Modification Charge $5.00
Transportation
Other (Detail Below)

Total $ _____

Gunsmith Signature _____ Date _____

GUNSMITH'S COPY
(to be retained by gunsmith)

3 of 5

AL 0024697

RECEIVING INSPECTION

YES YEAR 65 MODEL: 660

GENERAL CONDITION: GOOD R #: 02787

OUTSIDE FOR: FRONT & REAR SIGHTS AND SCOPE DATE: 1-18-79

SCREWS MISSING RECOIL PAD ADDED FROM: MRS SUSAN MC GINNIS STAR RT BOX 48 IH CUBA MO.

FIRED AMMO TYPE: UNKNOWN

& CONDITION: — GUN #: 108687

PROOF: YES INSP.: 9 TEST: 57 CODE: LRI 1-68

HEADING: OK GA./CAL.: 243

BREECH OPENING: OK CHECKED BY: M. HARDY

RECOIL SHOULDERS: OK APPROVED: 2/16/79

CHAMBER: GOOD APPROVED: 2/16/79

TEST: APPROVED: 2-16-79

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: 2/16/79

SLIGHT DENTS IN WOOD

BOLT SHOWS COLOR WORN OFF

BOL BRIGHT AT MUZZEL

COMPLAINT: IF TRIG. IS DEPRESSED WHILE SAFETY IS ON GUN WILL DISCHARGE WHEN SAFE IS MOVED

INCIDENT: SHOOT HOLE IN FLOOR OR PICK UP TRUCK

COMMENTS: Gun involved in recall program. Gun can be fired when safety & trigger are manipulated.

4 of 6

AL 0024698

DON'T SAY IT — WRITE IT

To J. H. Carter

From A. J. Sewell

Date 3/6/79

1. M/660 Received 1/18/79 to Ed Sinkiewicz attention
2. Customers letter dated 12/12/78 +
3. Ames Service bill for personal or property damage Examination — copy attached
4. Returned to Ames Service for storage
5. Examination report to Jack Crumrad 2/22/79
6. Feb 26, 1979 instruction from J. H. Steel to replace fire control

SAFETY IS A WISE INVESTMENT

5 of 5

AL 0024699

cc: E.F. Barrett
J.E. Preiser
E.G. Larson
R.G. Sherman
J.H. Chisnall

December 11, 1978

Mr. O.K. Baxley
Vice President for Finance
Lamar University
P.O. Box 10003
Beaumont, Texas 77710

Dear Mr. Baxley:

Examination has been completed on your returned Model 700 ADL 6mm caliber rifle, serial number 307270.

We found the trigger assembly to be well within manufacturing specifications and we could not duplicate the problem that you had experienced. However, we did find excessive oil within the trigger assembly and strongly recommend that oil be used sparingly on the rifle with no lubrication added to the trigger mechanism.

In most of our investigations, concerning the problem that was experienced, we have found that the safety was pushed to the fire position with a finger on the trigger.

As a gesture of good will, we are replacing the entire trigger assembly, at no charge, and the rifle will be returned via Blue Label U.P.S.

Thank you for having afforded us this opportunity to be of service.

Sincerely,

E.F. Sienkiewicz

E.F. Sienkiewicz, Supervisor
Firearms Product Service

EFS:tpp

PLAINTIFF'S EXHIBIT
3134

AL 0024700

1 of 1

REMINGTON ARMS COMPANY, INC.

INTER-DEPARTMENTAL CORRESPONDENCE

Remington PETERS

"CONFINE YOUR LETTER TO ONE SUBJECT ONLY"

cc: C.B. Workman
J.P. Glas
J.H. Carter
D.J. Sanita

Ilion, New York
May 2, 1980

P. H. HOLMBERG
Bridgeport

NEW FORMAT INSTRUCTION BOOK

Forwarded for review, comments and Marketing/Legal approval are printed versions of the proposed Model 700 Instruction Book. Ten printed copies are enclosed for distribution to Bridgeport personnel. Minor art and verbiage errors have been already detected.

Also forwarded are, copies of the instruction book in three different paper stock size: 60 lb., 70 lbs. and 80 lbs. It is recommended that the 80 lb. paper stock be used for the new style instruction book. This stock paper size would provide more rigidity. Cost of the new style book is 8.5¢ vs 4¢ for our present Model 700 manual.

It has been suggested that the new format booklet be used with the introduction of the Model 7400-7600 Rifles. Expediting the review and legal approval of the new Model 700 instruction book is required if we are to meet scheduled warehouse date for the new models.

A meeting should be scheduled to review comments, and required changes, additions or deletions.

R. L. Sassone, Supervisor
Project Control & Admin. Services

RLS:sse
Enc.

PLAINTIFF'S EXHIBIT 3135

AL 0025065

1 of 1

ALERTS

DATE February 3, 1983

TO

Mr. Duane Ricci

Remington Arms Inc.

Ilion, New York 13357

SUBJECT rejected trigger connect

I-80600; I-80550

(Rejected at Vendor)

4,500 rejected trigger connectors, undersized stock,
both processes completed (before & after heattreat)@163.24/M $734.58

8,000 rejected for excessive radius on 075 short leg (inside) (B)
both processes completed (before & after heattreat)@163.24/M $1305.92

8,000 rejected for excessive radius on 075 short leg (inside)
first process completed (before heattreat)@65.92/M $ 527.36

SIGNED Ronald Krasz

☒ PLEASE REPLY ☐ NO REPLY NECESSARY

PLAINTIFF'S EXHIBIT 3136

AL 0025181

1 of 1

M/700 Sear Safety Com

Provide customer complaints from insufficient chrome material analyzed from 6/13/78 - 1/31/80

Possible complaint	# of S
1) Delayed firing	7
2) Discharge when bolt handle raised	7
3) Discharge without pulling trigger	2
4) Accidental discharge	9
5) Trigger - Safety malfunction	1
6) Misfire	2
	28 TOTAL

D-61 REV. 6-68

REMINGTON ARMS COMPANY, INC.

INTER-DEPARTMENTAL CORRESPONDENCE

Remington

File m 1703

cc: P. H. Holmberg
J. E. Preiser

Bridgeport, CT
October 19, 1981

TO: E. F. BARRETT
E. B. BEATTIE
H. K. BOYLE
J. P. GLAS
R. L. HALL
E. HOOTON, JR.
J. P. LINDE
J. P. McANDREWS
J. G. WILLIAMS
C. B. WORKMAN

FROM: T. W. RAWSON

SUBJECT: SUMMARY EXECUTIVE BOLT ACTION RIFLE COMPETITIVE AUDIT

On 10/15/81 the second Annual Executive Firearms Competitive Audit was held. Because of the competitive situation, bolt action rifles were chosen as the subject. Observations and discussion at this audit were limited to product. Once again the evaluation was restricted to visual impressions as would be typical in a store environment. Technical evaluation will be presented by R & D in November.

Attached is a matrix similar to the one filled out which summarizes the scoring. Following are observations on that scoring and a summary of the discussion.

- First, second and third place without price consideration went to 700 BDL, M70 Featherweight and Ruger M77 respectively.

- The overall scores did differ from the cummulative individual item scores indicating that overall impression and other factors than those cited contributed to ranking.

- The addition of pricing information (copy attached) did change the ranking. Ruger M77 went from third to a first place tie with the 700 BDL in this analysis. The M70 FWT fell from 2nd to 3rd reflecting the negative reaction to its higher price.

- Stock appearance honors went to M70 FWT, 700 BDL and Ruger M77 in that order suggesting some combination of the 3 might prove most desirable. While the 700 Classic was not audited a sample was reviewed. An oral concensus seemed to indicate our classic was the favorite style. The narrow forend, open styled pistol grip and straight comb of the M70 FWT received special mention.

PLAINTIFF'S EXHIBIT 3138

1 of 5

AL 0025561

- Action smoothness, a characteristic discussed in market research panel studies, ranked Remington entries rather low. This ranking suggests the work being done on the recessed follower is in the right direction.

- Browning, known for its high quality appearance, ranked first in metal finish. Dropping back down the price scale the auditers seemed to agree, there was little difference between the major three contenders. Remington did outrank both WW and Ruger in this characteristic on the sample guns. Some auditers expressed surprise at this but warehouse audits and in store checks confirm, generally, this situation.

- Remington's BDL and ADL took the honors in the extractor, ejector, locking system category. It was mentioned that our design yields the cleaner, neater appearance as a system. Objectivity may have been compromised here as well because of what we believe to be true of the strength and safety of our system. While more bulky and less streamlined the Ruger extractor (Mauser type) does get a lot of play in the press and trade as the more impressive looking mechanism. It was noted that our extractor appears less than impressive and this is partly due to the crudely ground off rivet used to hold the extractor in place.

color

- The panel was asked to judge the safety not so much from its "safeness" which is difficult to judge in this environment, but from the point of view of convenience, quietness and quality of appearance. The Browning and Ruger took 1st and 2nd place respectively. Both rifles feature sliding, "shotgun type" tang safeties. Remington safety which is functionally similar to Rugers was relegated to 4th place because of the side tang position which necessitates an elongated hole in the stock and yields relatively poor appearance.

- Ruger took first place for accessory parts (sights, scope mounts, grip caps, etc). Their combination of clean barrel (no sights, no holes) and scope mount plus absence of white line spacers at grip cap and butt seemed to be most preferred. The Ruger scope mount system is respected functionally but was described as rather bulky - visually. Negative comment was recorded regarding the safety message on Ruger's barrel. (cosmetic reaction).

Summary:

Within our price segment there was little to choose from an execution point of view between the big 3. (Rem., WW, Ruger).

2 of 5

Remington's wood finish, fits and metal finish were at least as good as competition. Small details, like the previously mentioned white extractor rivet head were jarring footnotes.

While the functional analysis has yet to be heard there was little apparent, in the visual audit phase to suggest Remington's functional quality suffers by comparison.

Confining the conversation to product then, it appears that we suffer in the competitive comparison with design cosmetics. In the absolute sense our styling left something to be desired. The panels interest in the 700 Classic, M70 Featherweight and Ruger M77 all fairly well follow a documentable trend in bolt action rifle styling in evidence today. Considering the M700 in current form is basically 20 years old while the movement toward pre 64 M70 - classic styling started by Ruger with the M77 is but 10 years down the product life cycle, this is not surprising. More subtle however is the apparent visual quality of mechanical design from which people imply overall product quality. The M700 safety while functionally similar to the Ruger 77 suffers by comparison in the visual sense. The quality of our design from a styling point of view needs some upgrade as well as styling in the absolute.

Finally the audit also raises a more significant question relevant to quality. Our execution is acceptable and functional design adequate to superior. The styling differences seem short of a total explanation for slipping sales. The price value relationship is the key and as can be seen by the summary matrix the price does effect peoples opinion of gun desirability. Ruger with price added represents the significant threat to M700 sales. Price-cost relationships are the rub. Significant improvement in productivity through better management control of scrap, rework and warranty repair are the benefits of an improved quality system outlined in the quality plan. The changes called for in that plan are essential to improving the cost situation.

TWR:fd

attachment

After inspecting all samples, please fill in matrix below. Best score = 1; Worst score = 7. Duplicates are acceptable.

	REM. 700-BDL	RUGER M/77	REM. 700-ADL	W-W 70-XTR	W-W 70-FWT	BROWNING BBR	S&W 1500
Stock Appearance	2	3	6	4	1	5	7
Action Smoothness	5	3	6	4	2	1	7
Metal Finish	2	5	3	6	4	1	7
Extractor, Ejector, Locking System	1	4	2	5	5	3	6
Safety	4	2	4	3	3	1	5
* Accessory Parts (Grip Caps, Sights)	2 (2)	1 (3)	6 (5)	5 (5)	4 (4)	3 (1)	7 (6)
Best Overall wo Price	1	3	6	4	2	5	7
Best Overall with Price	1	1	2	4	3	5	6

* Number in Parenthesis is placement based on individual item scores above. Best overall W.O. and W. price reflect overall impression and other factors not identified as individual items.

COMMENTS: _____

4 of 5 AL 002564

COMPETITIVE BOLT ACTION RIFLE AUDIT 1981

PRICING INFORMATION

	M/700 BDL	RUGER M/77	M/700 ADL	W-W 70-XTR	W-W 70FWT	BROWNING BBR	S & W 1500
uggested etail tart '81	399.95	325.**	334.95	412.	433.	429.95	334.95 Std. 379.95 Deluxe
etail Median elling Price 6/81	315.	269.	250.	385.	433.*	400.*	255. Std 305. Deluxe

* Estimated
** 340. as of 6/1/81

REMINGTON ARMS COMPANY, INC.

ENGINEERING DEPARTMENT — DUPONT — COMPUTATION SHEET

Subject: M/700 ADL & BDL UPGRADE

Computed by: [illegible] Date: 19

math for Nancy release

new 1 → Rec 1

OBTAIN ADVANCE FUNDS

START TOOL DESIGN - ORDER STANDARD MACHINES

PREPARE ENGINEERING ESTIMATES

PREPARE AND REVIEW ECONOMICS

PROJECT APPROVAL

PROCURE TOOLING AND STANDARD MACHINES

TRIAL AND PILOT

R&D VERIFICATION TESTING

ORDER PRODUCTION QUANTITY OF PARTS

DESIGN AND/OR PROCESS REVISIONS

PRODUCTION TO DATE NOW

0 4 8 12 16 20 24 28 32 36 40 44 48 52 56 60

Jan 1

Bolt handle decision

Order bolt handle (Pad)

Finish design of rollbinder & bolt handle

1 of 1

AE 0025566

PLAINTIFF'S EXHIBIT 8139

Green Valley, AZ

Jan. 25, 1982.

To Clark Workman

From Wayne E. Leek

Subjects: Jan. 1982 report on Silhouette activities in Arizona, matches attended, and repairs to Remington products. Also a more detailed report on suggestions supporting a new line of rifles and shotguns.

Matches attended:

Cochise Gun Club Jan. 16, 82 Match winner Leek 27/40
Nogales Rifle Club Jan. 17, 82 Match 1 winner Leek 30/40
Match 2 winner Leek 30/40
Black Canyon Range Jan. 24, 82
Arizona Rifle and Pistol Assn. Championships
Match winner Yehl 32/40
1st. AAA Leek 31/40

Repairs to Remington Product:

A customer's M700 /30'8 Silhouette rifle would fail to fire about 30% of the time. Examination revealed an improper nose shape on the firing pin. After replacing with one of correct design consistent ignition was restored. Instead of having a radius for the nose it was flat. There was no indication of tampering. This firing pin will be sent upon your request.

SUGGESTIONS SUPPORTING A NEW LINE OF BOLT ACTION RIFLES AND SHOTGUNS.

Introduction.

This program reviews the favorable and undesirable features of the M700 rifle with suggestions to support an improved M700, elevating it to a higher quality level of customer acceptance. The development will not be too expensive or time consuming and would provide a base rifle allowing time to accommodate the more innovative ideas.

A proposed foundation for a new bolt action shotgun follows the rifle program.

Program for the improved rifle.

The M700 action exceeds the strength of every known bolt action GP rifle by a substantial margin. Supporting the exposed head of the cartridge case by reinforcing it with the bolt shroud, barrel recess and receiver, prevents case rupture and a damaging amount of gas from escaping rearward during high pressure firing. The ring extractor used in the M700 eliminated the need for expensive qualification threading and an extractor cut in the barreled receiver assembly so commonly used in previous bolt action rifles. The superior strength was a fortituous spin-off of this design and not known until severe strength testing revealed the secret. Any future development should include the integrity of this principle and must be jealously guarded. This is not to say that the ring extractor is mandatory to protect the strength principle but the support of the cartridge case without rupture under high pressure is extremely important.

The M700 extractor has undergone a series of design changes to guarantee reliability and the latest is believed to be superior to previous attempts. Unfortunately a bad reputation of breakage, malfunctions, and difficult repairs

has plagued the principle to the point that future customer acceptance is severely questioned.

During an Ordnance development of a tank machine gun by Remington, an improvement to the ring extractor was found in a German WWI machine gun resulting in a successful design for our program. This extractor was a claw type, small but efficient in nature housed in a cut in the bolt shroud. Its main feature, an ever-tightening grip as the load was increased, left little to be desired. The outside surface of this extractor replaced the cut-out portion of the shroud and was thoroughly supported by the barrel recess. Strength tests revealed that this combination provided all the strength of the ring-extractor design. It is suggested that this principle be used in the improved rifle.

In general the accuracy of the M700 is adequate for hunting, varmit, silhouette and target shooting. Special orders for bench-rest type rifles produced by the custom shop have proven accuracy superior to all but the finest match rifles. Modern barrel manufacturing methods such as used in Remington are to be credited for this achievement. Remington, however, is not in the league of competition for the position match shooter, dominated by Anschutz.

There are several areas where accuracy can and should be enhanced by changes in the basic design such as the barrel bracket. The cross-sectional area of the bracket adjacent to the barrel is considered weak by many gunsmiths and has now gained a bad reputation for lack of recoil support especially when using heavy-calibered ammunition. This situation is

aggravated by improper bedding in the stock, especially if the bedding support contacts the bottom of the bracket.

Any shifting or bending of the bracket can cause accuracy problems. One made of powder metal or other means of greater rigidity as used in the M 788 would be of benefit.

A round surface on the bottom of the receiver as presented by the M700 has always been questioned by many gunsmiths, designers, and match shooters as a possible area of non-stability during the torquing of the receiver during firing. If true, and I believe the torque problem does exist, a conventional flat surface should be provided for proper bedding. The new barrel bracket design could be extended with a mating flat surface to fit the receiver.

Research is needed to explore the areas of bedding actions in an effort to determine the magnitude of advantages in barrel-damoening devices. Although some investigation in the past has shown advantages by using dampening methods inconsistencies have prevailed. I believe the results of past efforts were clouded by barrels which had varied wall thicknesses. Modern manufacture such as practiced by Remington virtually guarantee centralized bores in the barrels. Reliability in the use of bedding devices would be enhanced with these barrels. Such methods as electric bedding, 2-point and 3-point bedding, pre-determined muzzle pressure, fre-floating barrels and other means should be explored.

There is some indication that accuracy is improved when accompanied by faster lock time in rimfire rifles and the same should be true in center fire rifles. It is believed that

the fall of the firing pin sets up pre-vibrations in the barrel prior to ignition which disruct accuracy. There also may be a more uniform ignition advantage.

Accuracy testing of thousands of production rifles has revealed that the M788 is superior to the M700. This fact was observed during the development of the M788 when compared to the M700. Using the same barrel process, stock bedding principles and the same lots of ammunition have ruled out most of the variables between the two rifles, the exception being the receiver(front vs rear lockup), heavy vs light barrel bracket, and the difference in lock time. M700 lock time is approximately 5.5ms and the M788 is 2.7ms. The shooters are also observing the accuracy advantage of the M788. It is believed that the faster lock time in the M788 gives this model accuracy advantage. Re-design of the M700 should involve reduced lock time to improve its accuracy and give the off hand competitor the advantage of this principle.

There are numerous ideas to achieve faster lock time. Such a design is a flat-type formed pin with rotary swaged nose as used in the M788. Other ideas include the use of lighter weight metals, ie, aluminum, titanium, tubular construction, carbide or allow steel-tipped light weight pins, etc. It will be found that a nose diameter of .060" is necessary when using the lighter weight pin for proper ignition. Faster lock time approaching zero should be our objective.

Reliable accuracy is no more secure than the rigidity of the scope base mounting screws and in the M700 6/48 screws are

not adequate. The use of 8/40 screws as used in the M788 or a fixed scope base of Ruger design is recommended.

Glass bedding methods are excellent to insure a perfect fit of the action to the stock. Also recent developments in custom designs provide extruded aluminum bedding elements which precisely fit the barreled action and are securely epoxied to the recesses of the stock. Fiber glass and other plastic materials are now appearing on the market, impervious to the elements and strikingly attractive. These items certainly suggest improvements in accuracy.

Accuracy is always enhanced by fine trigger mechanisms. Remington's M700 has a reasonable trigger which when properly adjusted, allowed a spread of pull weight from 1½# to 8# with a crisp let off. However one must rely on the factory adjustment which is anchored with loc-tite cement plus staking with a center punch. The latter ruins the threads and side plates of the mechanism and the former fills the screw slots, all of which makes it virtually impossible to adjust by anyone, including gunsmiths. The excuse for this is in the name of safety to prevent the customer from making adjustments. However the shooters are attempting to make adjustments and often ruin the meager adjusting means that has been damaged in assembly.

A more substantial approach is the Canjar design which in essence is a copy of Remington's principle but improved and of course more expensive. This assembly allows more contact area for the screws. The main adjustment of over travel is retained by a nylon pin. Canjar provides instruction for adjustment and a warning statement, which apparently relieves him of responsibility in case of accidental discharge due

to faulty adjustment. The screws are Allen-headed which eliminates the slot problem. Two-link and three-link systems are available-the latter can be adjusted down to a 2 oz. pull. Most match shooters resort to the Canjar or Kenyon design. It is suggested that before improvement to our trigger mechanism be made that we analyze Canjar, Anschutz, Kenyon and Feinwerkbau designs.

Remington's manual safety blocks the sear mechanism. The manual motion is in the same plane as the trigger movement and allows a dangerous condition to exist. Pulling the trigger at the same time the manual safe is moved to off, fires the rifle! This motion is not unlike taking the hammer off safe in a M94 Winchester or a revolver.

A manual safety should never be allowed to function in the same plane with the trigger unless a disconnector is provided preventing firing if movement of the safety takes place while the trigger is pulled! A safer and more reliable manual safety is a 3-position type located on the cocking piece. It is recommended that these ideas be considered.

The stock design of the M700 is excellent, presenting good balance and symmetry. The PKW finish is appealing to those who desire a glossy shiny finish but has little appeal to the experienced sportsman who is accustomed to European walnut and hand-rubbed oil finishes.

The effect of pressed checkering has down graded cut checkering and has led some shooters to search for stocks with other decorative designs. One attractive procedure is to use a stippling grained pattern as found on fine German-made firearms. Also there is a slight trend toward hunting scenes cut or impressed or transferred on the stock.

Approximately 13% of the population are left-handed and I believe it is prudent to continue providing these models for the left-handed shooters.

For many years Remington was very aggressive in developing and promoting new calibers, leading the competition in the market place. Such successful developments as the 7MM Magnum -25-06, 222, 22-250 are examples. Naturally not all of our cartridge developments were a huge success and the inability to analyze a future market such as was done on the military 308 has in some degree hurt our posture. To keep our product alive new developments in cartridge design which provide a substantial improvement over the common place is needed. The 7/308 and the Remington 7MM Express are good examples of a policy to keep new cartridge development in the forefront.

A peen-hammered barrel presents desired effects of something special being done to high grade rifles. This process was used for years on the surface of a sterling silver bell on slide trombones manufactured by the Old's musical instrument company. They claimed exceptional tone qualities from this process due to the relief of surface tensions

8/2/76

on the bell, and this feature became an appearance of excellence among musicians.

We achieve this appearance in our rotary swaging of barrels and then remove the surface by grinding. The idea of providing a super-grade barrel with this aesthetic effect was weekly presented to the operations committee several years ago. This lacked technical support of what might be desirable mechanical improvements in accuracy. Certainly the aesthetics of something special was there. Since then the fine custom Manlicher rifles display their product with this appearance. I believe the surface condition if left might indeed support improved accuracy performance along with a desirable appearance and certainly would be obtainable at no extra expense.

PROPOSED IDEAS FOR FUTURE DEVELOPMENT.

Several ideas were suggested in my Sept. 81 report that would improve the performance of the match shooter in his quest for perfection in accuracy and these are repeated in this report.

Recoilless principles used in fine match-grade air rifles, (nullifying recoil caused by movement of the compression piston.)

Movement of a large mass prior to release of a bullet or pellet tends to throw the shooter's aim off target before exit of the projectile. This problem exists in such open-bolt centerfire rifles as the BAR, M3 and Thompson Sub machine guns and others. To nullify this unwanted problem in match grade air riflee four approaches have been taken as follows:

1. Anschutz match air rifle uses an oil-filled hydraulic cylinder, an action similiar to car-type shock absorbers to compensate for the forward motion of the compression piston.

2. Walther's match air rifle uses a single stroke pheumatic system which allows a piston to compress air into a chamber only a few times larger than the pellet. Movement of the trigger sear allows a heavy spring-loaded hammer to hit a striking lever which in turn pushes open an exhaust valve.

3. Beeman's match air rifle involves double-acting pistons which results in a smooth recoilless and vibration-free firing action.

4. Feinwerkbau match air rifle uses a principle where movement of the compression piston at the moment of firing trips a sear which releases the entire barrelled receiver assembly to ride on a pair of hidden, hardened rails. The necessary "equal and opposite" reaction causes this heavy metal mass to slide back about ½" on the rails while the shooter holds the motionless stock and trigger. The shooter feels almost nothing and his sighting picture is undisturbed. The mechanism must be returned to its locked-forward position for the next shot.

Eliminating the disturbing recoil sensation caused by the moving piston prior to pellet movement in these excellent match air rifles allows the shooter to concentrate on all the fine points of shooting affecting his performance such as sight picture, hold, trigger pull and follow-through.

Remington's patented recoilless principle.

Developed during bench rest shooting competition around 1947-1950, this system applied to powder-actuated fire arms. The objective was to eliminate the variable offered by the shooter's shoulder from shot to shot in an effort to improve accuracy. The principle was sound and was instrumental in winning bench rest matches in Johnstown,New York. It was also a factor in the development of the several accuracy devices now in use in gallery testing at the Ilion plant.

Basically the system allowed the barreled action with scope to move 3/4" rearwardly on bearings before being retarded. In other words the bullet would exit before rearward resistance could affect the shifting of the point of impact.

Remington's method is quite similiar and preceeded that used by Feinwerkbau.

A recommendation for consideration in future rimfire match rifle design.

Two variations in accommodating the movement of barreled actions until bullet exit were used in Remington's recoilless design.

1. The preliminary design allowed the action to float on lubricated lead bearings sliding rearwardly in a metal track.

2. In the final design the action was allowed to recoil on a series of cam followers until the bullet had exited.

The principle is sound, and now is being used successfully by Feinwerkbau in their championship winning air rifles. I used this system successfully in winning bench rest matches. Remington accuracy devices have proven successfu

in millions of rounds fired. Therefore I believe the method could be introduced into a rimfire match rifle where the princip would nullify errors in the major problems associated with follow-through.

SUMMARY

Air rifle shooting has emphasized the need for follow-through in precision off hand shooting making one aware of the need for uniform resistance to recoil.

Olympic class air rifles have built-in designs to nullify any unnecessary movement of mass which would aggravate consisten resistance to recoil.

Remington's patented recoilless system provides a secure method of eliminating this effect in powder-actuated firearms.

It is recommended Remington consider incorporating this principle in future match rifle development.

Recoil reduction is uppermost in every shooter's mind and numerous ideas have been promoted to solve this disturbing element. Some ideas have been moderately successful such as the Cutts Compensator, a protruding device located ahead of the muzzle, where jetting gas following the bullet impinges upon flat metal surfaces pulling the gun forward. In use the result is an ear-splitting but reasonable recoil reduction of about 10% of the total recoil. However, the effect appears late during the recoil cycle and aids some shooters more than others depending upon how tightly they hold the gun to the shoulder. Many innovations to this principle less effective but possibly more attractive have been used such as providing drilled holes or cut slots in the barrel.

Other ideas such as used in Remington's M1100 wherein a portion of gas energy is stored in a moving mass and then later transferred back into the gun has been successful and acceptable as a recoil reducer to the hunter, skeet and trap shooter.

Moving butt stocks which store energy in a spring or hydraulic absorbing means such as the so-called hydro-coil have been attempted but with questionable success. This principle allows the shooter's grip hand to recoil into his cheek with an umpleasant effect as the stock pull length is decreased. Naturally if used with a scope on a high recoil rifle this would result in eye injury.

The most common lowest cost and least effective method is the provision of rubber recoil pads designed with collapsing internal rubber fins. This device made of rubber stores recoil similiar to a spring allowing an undesirable fast recovery. An analogy is the motion of suspension springs in automobiles which require shock absorbers to subdue the rebound of stored energy.

An ideal butt pad would be the type that resists compression up to a predetermined pre-load level, then absorbs the recoil without a spring-like action recovering gradually back to normal.

Such a device was developed by Remington with the assistance of DuPont-made of polyurethane foam. Tests of this device produced outstanding recoil absorbing characteristics and met the principles previously mentioned.
There were problems of color, matching surface to wood, and if sanded, water absorption. These problems I believe can be solved and if produced correctly would perform superbly far

beyond any butt pad now produced.

A standard 30'06 caliber requires a 36" barrel to obtain maximum velocity. Therefore it is obvious that a considerable amount of gas energy is being wasted when using barrels of shorter lengths. The escaping gas from a 24" barrel in this caliber generates a muzzle pressure of 10,000#sq" and is escaping at velocities in excess of 2700 ft/sec. This escape produces a rearward jet effect which is approximately 1/3 of the total recoil energy, and is so significant that if prevented from happening would be one of the more important advances in gun design and recoil reduction in history. An adequate solution would stir the very foundation of the sporting and military gun industry and would provide a powerful edge of leadership. When achieved safely the principle has far-reaching implications in the commercial and military areas. For example with fully automatic rifles recoil would become nearly stabilized during firing, a feat long sought by the military. Reducing recoil in this magnitude could provide the hunter with potential big caliber performance and a recoil of a 223.

The idea is not a myth. A laboratory model was constructed by Remington personnel using a M760 in 30'06 caliber with the resulting measured recoil of a 223! It is conceivable that this principle could be used on shotguns as well and combined with the recoil-reducing principle in the M1100 could approach a recoil-free shotgun.

Initially some relisble means must be used to trip a

valve mechanism closing the escape of gas. The most logical means is the bullet. Therefore it is assumed that the various suggestions of valve mechanisms discussed will be programmed to be activated by the bullet. Inertial problems are a big factor and careful calculations, computer analysis, and measurements are necessary. If the nose of the bullet activates a valve mechanism in sufficient time a difficult problem in timing is overcome. Conversely if more delay is needed earlier programming by the bullet in some selected area of the barrel is needed and careful analysis and design must be instigated to prevent dangerous premature muzzle closure before bullet exit.

The following suggestions are without calculation or measured foundation and are ideas only, to be examined and reviewed by design and laboratory personnel. It is hoped that they may cause an hedonic reaction by the readers to further enlarge the spectrum of thought.

Suggestion I

Utilize a 3-section barrel. The first section is held rigid containing the chamber and is smooth bored. Being the longer of the three lengths allows the bullet to obtain maximum velocity. The second or middle section rotates like a nut in a threaded tube. This portion is relatively short and contains gain twist rifling. The rear portion of the barrel works like a collet closing a sphinter valve when rotated by the bullet trapping the expanding gas. The bullet continues into and thru the third rifled muzzle section

finalizing its spin and accuracy. This section is held rigid. The middle section when rotated loads a spring which is programmed to open the valve, gradually releasing the stored gas by counter rotation at a later period.

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Suggestion II

Use a bullet design of two diameters.

Fig. 1

The front section, for example, could be .284" in diameter and the rear section .375" in diameter. The first 20" of 24" of the barrel is smooth bore to accommodate the .375" rear cylinder of the bullet and the last 4" a .284" rifled bore. The juncture of the two sections of bullet are sharp, creating an intentional stressed area. The bore provides a sharp shoulder from .375" to .284" to shear off the rear slug which acts as a plug preventing any further forward movement of gas.

Fig. 2

Fig. 3

The sheared .284" diameter forward section is allowed to enter the 4" of rifled barrel, soin stabilize, and exit from the muzzle. The remaining slug must be removed. If the front section of the barrel is allowed to slide forward due to the force generated by the forward motion of the bullet, an escape vent could be provided to discharge the slug and the pent-up lower velocity residual gas. It is believed that because of inertia in actuating the mechanism sufficient time to release the stored gas could be programmed to discharge at a gradual reduced rate with negligible effect on recoil reduction.

Fig. 4

17926

Form 203543

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ENGINEERING DEPARTMENT COMPUTATION SHEET

SHEET NO

TITLE OF PROJ

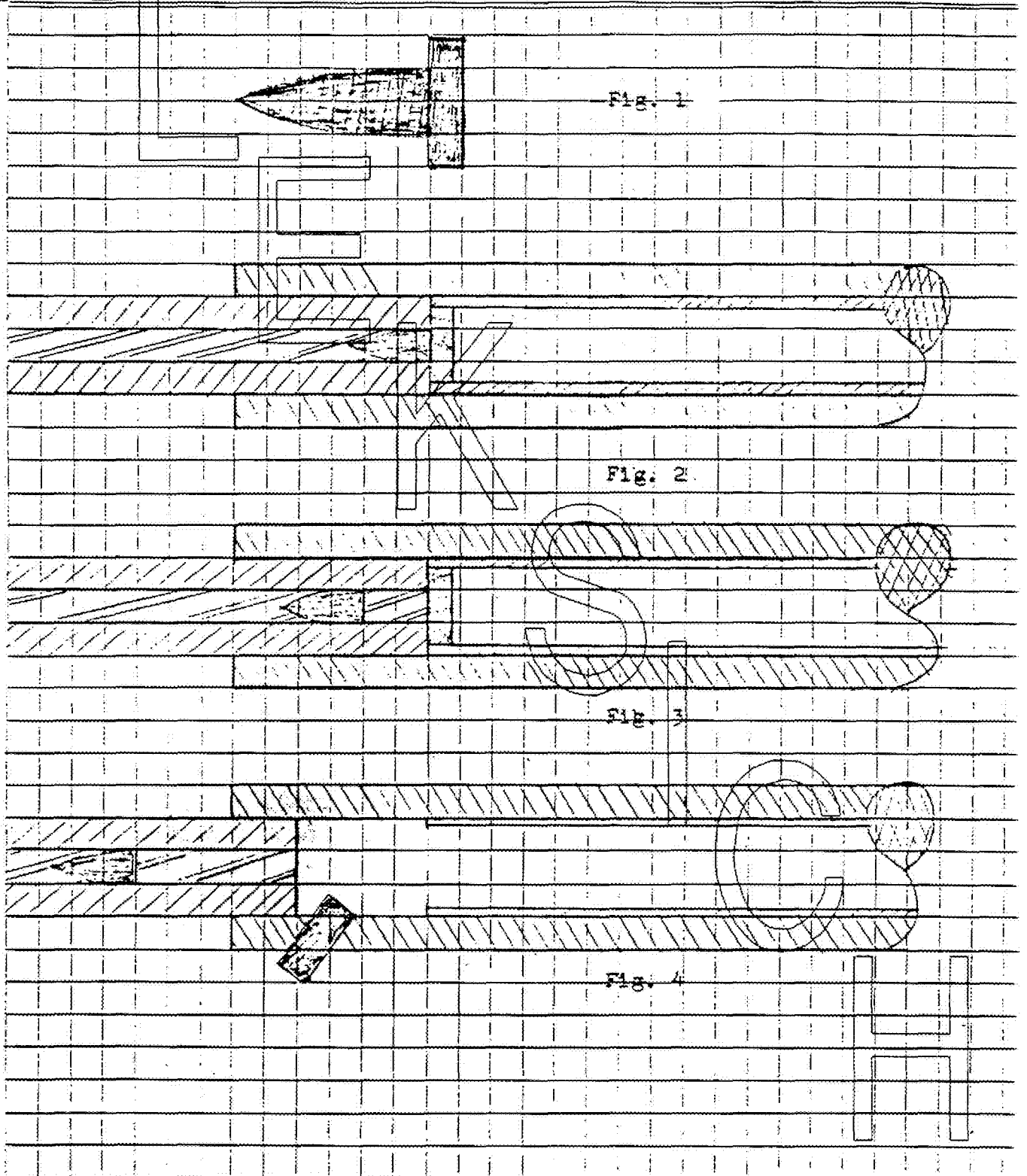
PROJ NO

SUBJECT

WORKS

COMPUTER

DATE 19



Suggestion III

This method has the appearance of petals on a tulip. In this system a series of metal petals surrounded by a very strong spring seals the exit of gas after the projectile forces its way through the petals. The projectile should have a long gradually-tapered section starting just back of the ogive, quite similar to a tapered heel except having a longer taper.

Fig. 5
Fig. 6
Fig. 7
Fig. 8

The entire action is as follows: The petals, perhaps 8 in number, are closed tightly over the forward section of the muzzle surrounded by a strong circular spring. They must be completely tight, capable of preventing gas from leaking at a pressure of 10,000#sq". As the projectile passes past the muzzle and into the valve area the petals are forced open by the ogive of the bullet and start closing as the rear taper passes through the seals. Trapped residual gas could be allowed to escape through a valve at a later period somewhere in the barrel or by actually using the extraction of the cartridge case as a valve. It is also possible that a delayed blow back unlocking system could be designed wherein the residual gas would thrust the cartridge case rearward using the jet effect in reverse thus forcing the rifle forward. The result would be additional recoil reduction. In this case alteration to the locking mechanism

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Fig. 5

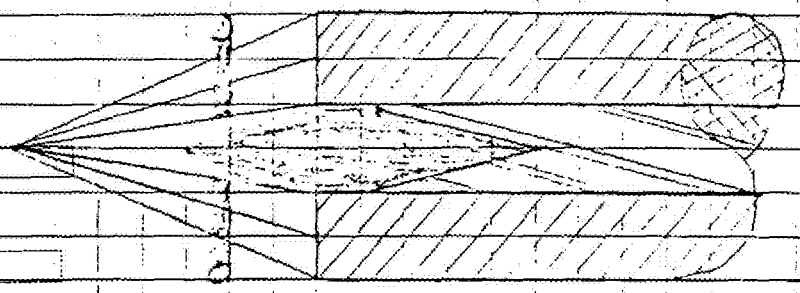


Fig. 6

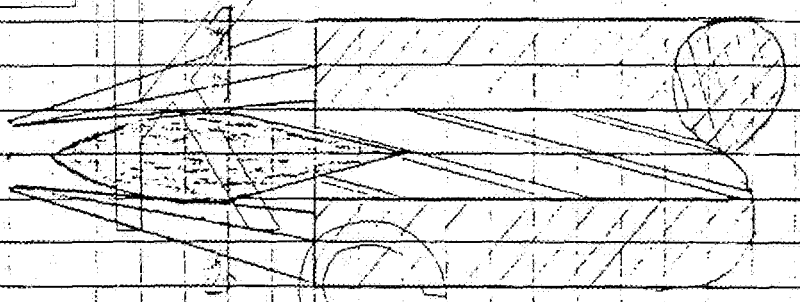


Fig. 7

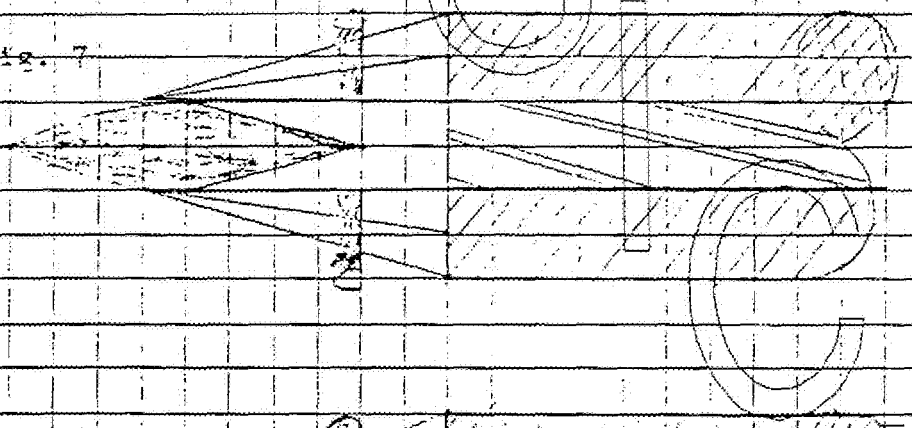
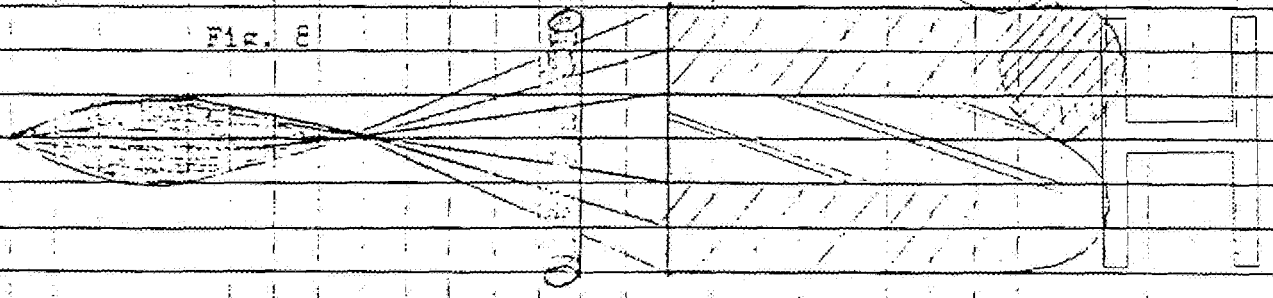


Fig. 8



and safe handling of the rearward exhaust gas would be in order.

The petal design must be so well engineered that accuracy is not impaired. If the long taper in the rear of the bullet doesn't allow enough working area for the gas, a driving band exposing a sharp shoulder of substantial working area followed by a long taper allows closing of the petals.

Ultra high velocity can be obtained by several means. One of the most successful, the Gerlich principle, was used by the Germans in large bore cannons during WWII. This principle used a tapered bore from breech to near the muzzle. The projectile contained one or more circular fins much larger in diameter than the main body exposing a large working area to the expanding gas.

Fig. 9

As the projectile moved toward the muzzle thru the tapered bore the fins folded into redesses attaining a finished bore dimension. During this movement down the tapered bore an exceedingly high velocity was obtained in the neighborhood

Fig. 10
Fig. 11

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Fig. 9

Fig. 10

Fig. 11

of 5000 ft. per second. Naturally, with this velocity and projectile construction of high hardness and toughness qualities, penetration of armor was achieved with devastating results.

A bullet of 6mm size with two fins of .375" dia. could be used for the initial test of the Gerlich principle. The barrel should be approximately 26" in length with an initial smooth bore diameter of .375" gradually tapering to .240" in 20". The last 6" contains a gain twist rifling to achieve stability.

It seems possible that a projectile, if properly designed, could provide its own power supply. The core would be the actual projectile surrounded by the igniting material safe enough under normal handling to be of no concern. When initiated forward by the thrust of a base percussion type primer the friction caused by contact with the tapered bore would provide combustion. Because of the large working area extra thrust would be attained as the eroding bullet approached muzzle bore dimensions. At a point approximately 6" from the muzzle ignition would be complete and a gain twist would stabilize the projectile. In this design no ejection or extraction is needed and the design of the receiver could be shorter in length, thus lighter in weight, lower cost and would provide a faster lock time.

Fig. 12
Fig. 13
Fig. 14

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Eroding bullet

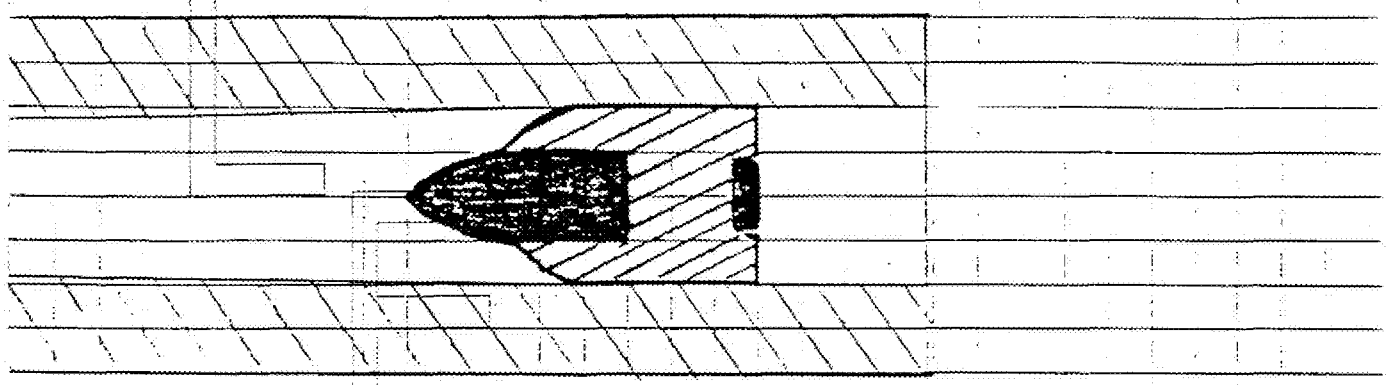

Fig 12

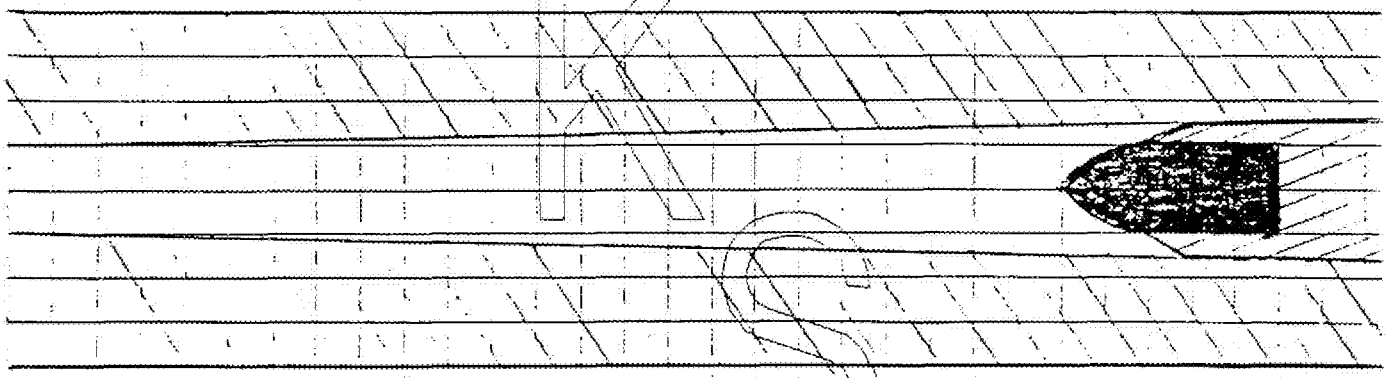

Fig. 13

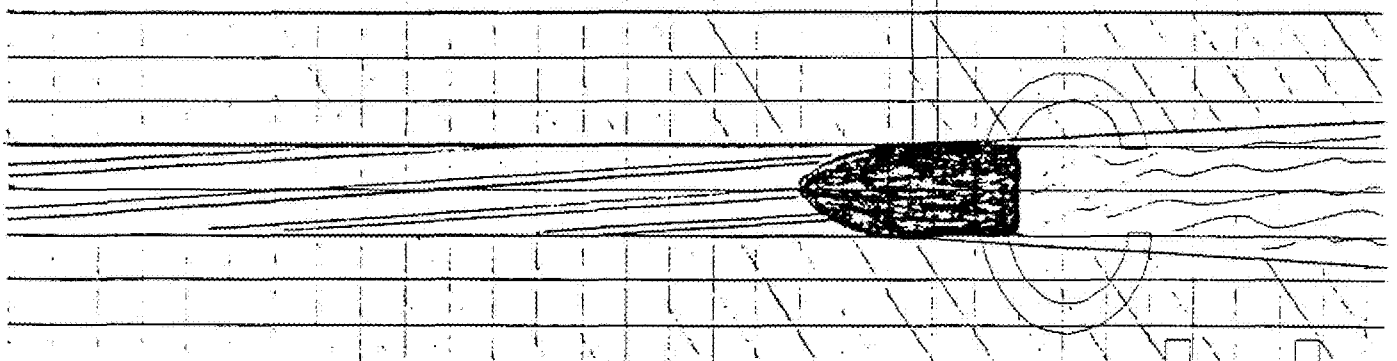

Fig. 14

Proposed foundation for a new bolt action shotgun.

I believe this program can be achieved easily at low development and production cost, because the ground work for such a design was thoroughly covered during the M788 and M540 period.

The effort of simultaneous design to process concept was almost a success in the M788 development, and was attempted to eliminate the costly redesign to process that always occurred in previous attempts. The big problem was to nail down process engineering at the early design stage instead of after the model was tested and accepted for production.

We did achieve a measure of success with this approach by making our layouts of all essential cuts in the receiver the same whether they were for the M788-M540 or the proposed bolt action shotgun. This included the receiver lengths, diameters, ejection ports, feed opening and fire control slots, etc. The drawings of these similiarities were presented to process in this manner.

Thus the bolt action shotgun concept was logical and simple for we needed 3 sizes of receivers for the various M788 cartridges and these sizes were ideal for the shotgun if we were to cover all the gauges from 410-12 ga.

I believe, because of this process design effort, that production machinery as now used for the M788-M540 receivers will accommodate the requirements for the shotgun.

The rear locking system was more than adequate in strength and proper for feeding shot shells. The design did not include a tubular feed system which was adverse to

the M788 but that doesn't mean it couldn't be accomplished. I do not recall whether a model was made but I remember that strength testing of the competitive bolt action shotguns revealed weaknesses in their bolt handle lock up which would not be acceptable. Therefore our rear multiple lock method was superior. The trigger mechanism of the M788 was a natural for the shotgun and provided a clean crisp let off with very fast lock time of around 2.7 ms.

The reason we did not pursue the program further was because of Mr. Coleman's reluctance in lieu of a bad image for Remington which he thought would lower the status of the M1100.

At that time marketing speculated we would sell 50,000 units a year.

Green Valley, Ariz.
Jan. 4, 1982

Mr. Rogers S. White
1426 Ute Ave. Box 2344
Grand Junction, Colo. 81501

Dear Mr. White:

Please excuse the delay in answering your letter. I wanted to give your questions careful thought.

Your list of manufacturing facilities and experience is certainly impressive and be-speaks of a quality organization. However, if you will pardon the constructive criticism, the experience outlined is lacking in several areas when it comes to producing a product for the market place that is considered in the dangerous category, such as a firearm. Your third sentence pertaining to product liability obligations should and has prompted your hesitation in the pursuit of the design and manufacture of trigger assemblies for they are definitely in the dangerous category! This item is especially critical when the design must function precisely in a product that is under the control of another company.

Canjar has been relatively successful with his product, but if the truth was known there is no question he has had problems. Imagine his frustrations in trying to keep abreast of design and dimensional changes after the fact in the various rifles he is trying to fit. It took many years of trial and error by his company to determine the mean dimensions of another product. During those early years product liability was not as serious as it is now, but it gave him time at least to determine the dimensional trends. I must admit he did very well but I certainly wouldn't have the fortitude to attempt such an effort in light of today's legal situation.

Liability suits, involving injury and death, are not in the magnitude of a mere hundred thousand dollars but in the millions. Often the one who pays is not at fault as in the case against Remington concerned with the alleged safety mechanism on the M700 rifle.

In the design and manufacture of a trigger mechanism there are so many dimensional variables and tolerances that testing of all the combinations requires hundreds and thousands of parts, several hundred thousand rounds of test firing*, and thousands of precise measurements. This is needed to detect dimensional variations in the manufacture and wear and damage during testing.

Within the last ten years computer analysis, coupled with automated drafting techniques allowing enlarged examination of dimensional variations, has been added to the designer's kit of tools to allow further examination in depth into the areas of critical control of parts in the dangerous category.

* In semiautomatic mechanisms this could approach one half million rounds.

PLAINTIFF'S EXHIBIT 3141

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Therefore this leaves the small company, no matter how dedicated with limited capital, facilities, experience, and equipment, to the mercy of chance--a very dangerous place to be and does not provide a secure base for product development such as you are suggesting. Such a program would be fraught with costly problems and liability suits.

In the area of trigger guards, sights and accessories, the liability problems are of no concern.

In the design and manufacture of an entire rifle especially by a small company the problems previously described involving the trigger mechanism are compounded by the additional necessity of dimensional control over the locking mechanism, strength of the action, and gas flow, another dangerous category. The only advantage one would have is the opportunity of complete control over the entire product.

To justify the design, testing, permanent or temporary tooling, and production requires a considerable amount of working capital and as problems arise, and they will, costs can soar. Also consider the cost of recall as this can happen in the best of circumstances.

Then there is the problem of advertising, sales promotion, and the establishing of marketing outlets. If there is a weakness in this area failure in the market is assured regardless of the sterling qualities of the product.

Venture-analysis into the market of a new concept or product is an excellent safeguard to be established before progressing beyond the model stage of development.

To support a rifle design that you mentioned I would estimate that 25,000 units a year would be necessary to break even on your costs. I doubt the market would support that volume.

In producing items in the low-volume category, production methods using investment castings and numerical control are ideal, with the individual parts at high cost but the tooling investment held at the minimum level.

In reviewing the history of success of new arms development over the past 20 years there have been numerous starts by small companies with almost 100% failures. These results should be seriously reviewed before undertaking a new venture in this area.

I suggest to you that these ventures are very risky.

Very truly yours,

Wayne E. Leek

Wayne E. Leek

Model XP-100 Test Results
December 14, 1962

Test No. 1

ENDURANCE AND FUNCTION TEST

During the week of October 14 thru 20, 1962, an endurance and function test was run on one Model XP-100, Caliber .221 Fireball. This test was conducted by personnel of the R&D Test Unit. All firing was conducted indoors from mechanical shooting devices.

The ammunition used in the test was loaded at Bridgeport earlier in the year for Ilion R&D testing. The loading specifications were 15.8 grains of 4227 powder with a 50 grain Remington bullet.

The test gun was assembled completely with production parts and no alterations of any kind were made on any of the components. The gun was assembled and adjusted by R&D personnel.

No cleaning of any kind was conducted throughout the test.

Prior to commencing the test, the gun was reviewed by the author and members of the R&D Test Unit. Function and operation of the gun were explained at that time, and a pre-fire check was conducted on the weapon.

At frequent intervals during the test a series of 11 - 5-round groups were fired at 100 yards in an experimental accuracy device. It was the purpose of this targeting to determine the effect of wear on the accuracy of the gun.

Data from these and other checks are indicated on the attached test form. Results of the test have been interpreted by the author as follows:

1. No major change in headspace.
2. Trigger pull increased slightly during test. Probably caused by foreign matter in fire control.
3. Group size decreased from zero to about 2500 rounds, where it commenced to open slightly.
4. No looseness of trigger housing throughout test.
5. Firing pin protrusion and indent constant.
6. No development of trigger creep.
7. Rib and sight screws have tendency to loosen slightly after prolonged shooting.
8. Receiver - Stock bedding OK.
9. Feeding OK with gun horizontal.

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PLAINTIFF'S EXHIBIT 3142

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TRIGGER PULL TEST

This investigation consisted of checking trigger pull weight on the first 84 completely assembled production guns to determine whether or not production specifications of 1.5# to 2.75# trigger pull could be met.

Results of the check are as follows:

a.	Total number of guns checked	84
b.	Average trigger pull	2.143 lbs.
c.	Max. trigger pull	3 lbs.
d.	Min. trigger pull	1.75 lbs.
e.	Number over 2 3/4 lb. limit	2
f.	Number under 1 1/2 lb. limit	0

HLC:T

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Model XP-100 Test Results
December 14, 1962

Test No. 3

ACCURACY TEST

This test consisted of firing from the XP-100 accuracy device two 5-shot groups at 100 yds. from each of 38 production guns. All ammunition used in the test was Rem. 50 grain factory loads. Groups were measured inside to inside, extreme spread.

Data and test results are as follows:

Gun Serial No.	Group Size (in.)	Avg. Group Size
1015	1.25 - 1.0	1.13
1018	3.0 - 1.0	2.0
1019	2.5 - 2.0	2.25
1024	2.8 - 1.0	1.9
1025	1.5 - 1.0	1.25
1028	1.0 - .75	.88
1029	3.5 - 3.0	3.25
1034	2.0 - 2.5	2.25
1043	1.5 - .75	1.13
1044	2.0 - 1.5	1.75
1050	3.5 - 3.0	3.25
1051	1.0 - 1.5	1.25
1052	2.0 - 1.8	1.9
1054	1.5 - 2.0	1.75
1065	3.5 - 3.0	3.25
1074	2.0 - 1.25	1.63
1082	1.0 - 1.2	1.1
1086	1.5 - 1.5	1.5
1089	1.0 - .75	.88
1091	2.5 - 3.0	2.75
1101	1.0 - .75	.88
1115	2.0 - 1.0	1.5
1119	2.0 - 2.5	2.25
1122	1.25 - 1.7	1.48
1125	1.5 - 1.0	1.25
1126	1.5 - 4.0	2.75
1132	2.5 - 3.0	2.75
1134	3.0 - 1.5	2.25
1136	2.0 - 1.5	1.75
1139	3.0 - 3.0	3.0
1140	1.0 - 1.3	1.15
1153	2.7 - 1.0	1.85
1155	1.5 - 1.0	1.25
1157	2.0 - 1.5	1.75
1162	1.8 - 1.0	1.4
1165	1.5 - 1.25	1.38
1171	1.8 - 1.0	1.4
1176	1.5 - 1.3	1.14

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ACCURACY TEST

Total guns tested	38
Average Group Size	1.802
No. of Guns with over 3" Group	3
Percentage	7.9%
No. of Guns with Average over 3" Group	3
Percentage	7.9%

HLC:T

4810

Model XP-100 Test Results
December 14, 1962

Test No. 4

EFFECT OF STOCK INTERCHANBEABILITY ON ACCURACY and POINT OF IMPACT

Several guns were fired by W.E. Leek and H.L. Chambers to determine the effect of interchanging stocks on accuracy and point of impact.

All shooting in this test was done off hand, out of doors.

Guns were fired by both shooters with common stocks to determine shootability and point of impact. Stocks were then interchanged and the guns were refired. No change in grouping or point of impact was noted.

It should be brought out at this point that production guns are targeted without stocks, and the effect of stock interchangeability on accuracy and point of impact becomes extremely critical.

HLC:T

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Model XP-100 Test Results
December 14, 1962

Test No. 5

FIRING PIN INDENT

The purpose of this test was to determine the amount of firing pin indent attained with production guns. Indents were checked with standard copper crushers supported by a crusher holder. A total of 36 guns were tested, each gun being checked five times.

The following data indicate the average of the five readings for each gun. In no case was there a variation in crusher indents greater than .001 in. for one gun.

Gun Serial No.	Avg. of 5 Indents	Gun Serial No.	Avg. of 5 Indents
1065	.0183	1173	.0180
1028	.0186	1026	.0193
1138	.0186	1044	.0166
1074	.0186	1167	.0186
1038	.0193	1151	.0190
1155	.0186	1171	.0173
1018	.0180	1146	.0176
1057	.0173	1133	.0176
1129	.0170	1122	.0206
1086	.0180	1126	.0186
1183	.0190	1043	.0186
1141	.0213	1082	.0200
1090	.0206	1041	.0190
1050	.0180	1154	.0196
1176	.0176	1139	.0203
1019	.0200	1140	.0200
1162	.0183	1071	.0176
1056	.0186	1174	.0180

Total Guns Checked	36
Max. Avg. Indent for 1 Gun	.0213
Avg. Indent for 36 Guns	.0187
Min. Avg. Indent for 1 Gun	.0166

HLC:T

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Model XP-100 Test Results
December 14, 1962

Test No. 6

PACKAGING RUST TEST

The purpose of this test was to determine whether or not the proposed plastic zipper case for the XP-100 would induce or retard rusting.

Sections of scrap barrels from the XP-100 were prepared for various treatments including color and no color, Steelgard, and also proprietary material called Rig, for the coating. These were sealed in a plastic zipper case and then the proposed paperboard outer wrap before being placed in the Research weatherometer. The equipment was cycled to provide some 90% humidity and also heated to prescribed temperatures. For control, a duplicate group of the same experimental barrel sections were packed in our regular paperboard gun box, sealed and submitted to the same test.

The packages were opened after 23 days in the weatherometer and conclusions were significantly favorable towards the plastic zipper case. Parts, which included one powder metal component, were very well preserved when colored to provide at least normal treatment. Those in the standard paperboard carton were considerably more rusted. The "Rig" was observed to be better than any other coating used. The samples which were treated with another proprietary oil marketed by Stoeger seemed to give little, if any, protection.

These results relieve any immediate concern; however, arrangements are being made to store one of the XP-100 Pistols in a case for long time exposure under natural conditions.

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7210

Model XP-100 Test Results
December 14, 1962

Test No. 7

LOCK TIME

One production Model XP-100 was checked by the Research Measurements Lab to determine lock time. A series of thirty readings was made. Results of the test are as follows:

Max. Lock Time	3.56 milliseconds
Avg. Lock Time (30 readings)	3.505 "
Min. Lock Time	3.45 "

An investigation is being carried on at the present time to determine an economical way to decrease lock time without weakening the firing system.

HLG:T

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Model XP-100 Test Results
December 14, 1962

Test No. 8

GROUP SIZE COMPARISON
12" Twist vs. 14" Twist

On recommendation of the Ammunition Research Department at Bridgeport, the bore twist of the XP-100 was changed from 1 turn in 14 inches to 1 turn in 12 inches. The purpose of this change was to provide proper stability for a faster, lighter weight bullet. Until now, all XP-100 barrels have been made with the 14 inch twist. Recently, however, a limited number of barrels with 12 inch twist have been made, and it was the purpose of this test to compare group sizes fired in the two barrel types with various bullet weights.

Test data and results are shown below:

1. Group Measurement --
   5 shot groups - 100 yds. - measured inside to inside.

2. All shooting done in accuracy device.

3. Ammunition Data
   50 gr. - Rem. Factory Ammo. - 15.8 gr. 4227
   35 gr. - Handloads - Rem. Bullets - 16.6 gr. 4227
   60 gr. - Handloads - Morse-Watkins Bullets - 15.0 gr. 4227

4. Guns - XP-100 Production Models

Twist - 1 Turn in 12 in.			
Gun Serial No.	Group Size		
	35 gr.	50 gr.	60 gr.
1200	2.25	2.25	2.25
1219	1.75	2.25	2.25
1226	3	2.25	1
1197	3	1.5	1.5
1199	1.9	2.25	1.25
1217	2.13	1.75	1
1177	4.5	2.75	1.75
Average Group Size	2.647	2.143	1.571
No. of Groups Over 3 in.	1	0	0

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Model XP-100 Test Results
December 14, 1962

Test No. 8
Sheet 2

Twist - 1 Turn in 14 in			
Gun Serial No.	Group Size		
	35 gr.	50 gr.	60 gr.
1192	2.75	1.25	2.25
1185	3	1.75	3
1072	2.25	2.75	2.75
1206	1.75	2.5	2
1201	3.25	2	3.13
1220	2	2.75	2.25
1180	2.75	2	2.25
Average Group Size	2.536	2.143	2.519
No. of Groups Over 3 in.	1	0	1

RESULTS

Average Group Sizes

	12" Twist	14" Twist
35 gr.	2.647	2.536
50 gr.	2.143	2.143
60 gr.	1.571	2.519
Overall Avg. Group Size	2.120	2.399

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REMINGTON ARMS COMPANY, INC.

INTER-DEPARTMENTAL CORRESPONDENCE

Remington Peters

"CONFINE YOUR LETTER TO ONE SUBJECT ONLY"

Distribution: C. B. Workman
J. S. Martin
C. E. Ritchie
F. S. Martin

RESEARCH TEST and MEASUREMENT REPORT – Report No. 812441

NEW DESIGN M/700 TRIGGER/SEAR BLOCK EVALUATION

Prepared by: Ron Williams

Date Prepared: 9/10/82

Proofread and Cleared By:

J.H. Hastings, Foreman-Test Lab / R.E. Nightingale, Foreman-Measurement Lab — Signature — Date 9-15-82

C.E. Ritchie, Sr. Supervisor - Testing, Meas. & Mech. Analysis Lab — Signature — Date 9-14-82

PLAINTIFF'S EXHIBIT 3143

AL 0027889 1 of 11

TEST & MEASUREMENT LAB REPORT

REPORT NUMBER: 812441

REPORT TITLE: New Design Trigger/Sear Block 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: F. Martin

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: Static
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

RE' 'NGTON ARMS COMPANY, INC.
Fi... ns Research Division

Report No. 812441

September 10, 1982

TO: J. H. Hennings

FROM: R. Williams

REPORT TITLE: NEW DESIGN M/700 TRIGGER/SEAR BLOCK EVALUATION

ABSTRACT:

A total of (5) M /700 Fire control assemblies with the New Design safety assemblies, were delivered to the Test Lab by Fred Martin for testing. This safety assembly blocks the trigger and the sear so that the firing pin won't fall when the trigger is held back while the safety switch is pushed from the safe to fire position. Both dry cycle and live fire endurance tests were used to test the assemblies. A M/700 fire control assembly (Current Production) was used as a control and (4) out of the (5) New Design assemblies were used in the test.

SCOPE OF TEST

To evaluate the functional performance of the New Design safety assembly, in the M/700 Rifle during lab tes' '.

TEST RESULTS

No functional problems arose during testing. Both the New Design safety and the control functioned normally. There was no significant change in the safe.On/Off forces measured before, during and after testing, on all the assemblies, including the control.

3811

REPORT TEXT

All four (4) new trigger assemblies were subjected to the following trick test:

- Place Safety Switch in the Safe "On" position.
- Close the bolt.
- Put constant pressure on the trigger attempting to fire the rifle.
- Push the Safety Switch from the "On" position to the "Off" position.
- Does the firing pin fall?

All four (4) New Design Trigger Assemblies with the trigger /sear blocked passed this test. In all four (4) guns the firing pin did not fall.

NOTE: The measurements recorded for the Safe On/Off forces are questionable. There is no way to determine if they are within Remington Standards, because there are no standards written for these forces with this fire control assembly. The only Remington Standards written for Safe On/Off forces, pertain to the common fire control. That Standard is:

4 – 8 lbs. – One sharp click
Double click not allowed

The Safe On/Off forces measured in this test range from 5.25 lbs to 10.2 lbs. – almost a 5 lb. difference. (Refer to Appendix A, Data Sheets No. 1 – 5 for all Safe On/Off measurements).

TEST PROCEDURE

A. MEASUREMENTS

The following measurements were taken on the five rifles used in this test:

- Headspace
- Firing Pin Indent
- Trigger Pull
- Sear Lift
- Sear Engagement
- Safe On/Off Forces

B. TEST CONDITIONS

1. After every 20 rounds fired, the safety was checked. This was done by holding the trigger and pushing the safety switch from safe to fire.

2. After 1,000 rds. of live fire all the rifles were cleaned and they were remeasured. (Jack Shooting).

3. The rifles were then subjected to Safe On/Off dry cycle. Each rifle was cycled for 2,500 cycles, with Safe On/Off measurements taken every 500 cycles and Sear Lift and Engagement at the 2500 cycle level.

4. The rifles were then live-fired to the 2,000 round level. (Jack Shooting) Measurements were taken at this level.

TEST PROCEDURE – CONT'D.

5. The rifles were then subjected to another Safe On/Off dry cycle test. They were brought to the 5,000 cycle level. (2,500 additional cycles) Safe on/off measurements were taken every 500 cycles and sear lift and engagement wear measured at the 5,000 cycle level.

These same procedures were followed until live fire totaled 2,500 rounds per rifle and safe On/Off dry cycle totaled 7500 cycles per rifle.

C. AMMUNITION

Remington 80 grain Pointed Soft Point.

ALEKSICH

APPENDIX "A"

AL 0027894 6 of 11

M-700 TRIGGER/SEAR BLOCK EVALUATION

No. 1

A. 31, 1982

R. Williams

M-700 6MMCAL #A675873 Sample No. 1	1 Headspace	2 Firing Pin Indent	3 Safe (lbs) ON	3 Safe (lbs) OFF	4 Trigger Pull (lbs)	5 Sear Lift	6 Sear Engagement
Start Of Test	Min. +.004"	.025"	6.2	6.0	4.0	.0105"	.035"
Live Fire after 1,000 rds.	Min. +.004"	.025"	6.2	6.8	4.25		
Dry Cycle							
500 cyc.			5.5	8.6			
1,000 cyc.			5.8	9.7			
1500 cyc.			5.7	9.5			
2000 cyc.			5.5	8.7			
2500 cyc.			5.7	9.8		.0105"	.035"
Live Fire after 2,000 rds.	Min. +.004"	.025"	5.6	7.3	4.0	.0165"	.027"
Dry Cycle							
3000 cyc.			6.2	9.3			
3500 cyc.			6.5	10.3			
4000 cyc.			5.7	9.2			
4500 cyc.			6.2	9.5			
5000 cyc.			6.2	9.2		.0165"	.027"
Live Fire after 2,500 rds HL	Min. +.004"	.025"	6.3	7.5	4.5		
Dry Cycle							
5500 cyc.			6.2	10.5	4.8		
6000 cyc.			6.2	10.0	4.6		
6500 cyc.			6.2	8.8	4.6		
7000 cyc.			6.0	7.8	4.8		
7500 cyc.			6.2	9.8	4.6		

M-700 TRIGGER/SEAR BLOCK EVALUATION

No. 2

3/ 1982

R. Williams

M-700/ 6MM cal. #AL744869 Sample No. 2	1 Headspace	2 Firing Pin Indent	3 Safe (in lbs) On	3 Safe (in lbs) Off	4 Trigger Pull (in lbs)	5 Sear Lift	6 Sear Engagement
START OF TEST	Min+.003"	.023"	6.5	5.3	4.3	.0135"	.026"
LIVE FIRE after 1000rds.	Min+.004"	.024"	6.4	5.2	4.4		
DRY CYCLE							
500 cyc			5.9	7.8			
1000 cyc			6.0	6.9			
1500 cyc			6.0	7.0			
2000 cyc			5.5	6.7			
2500 cyc			5.3	7.7		.015	.025
LIVE FIRE after 2000rds.	Min+.004"	.023"	5.7	4.8	4.2	.014"	.029"
DRY CYCLE							
3000 cyc			6.5	8.0			
3500 cyc			5.5	7.8			
4000 cyc			5.8	7.2			
4500 cyc			6.2	7.7			
5000 cyc			7.8	8.0		.018	.0285
LIVE FIRE after 2500rds III.	Min+.004"	.023"	5.8	4.5	4.7		
DRY CYCLE							
5500 cyc			7.0	9.5	4.8		
6000 cyc			6.9	8.7	4.5		
6500 cyc			6.7	7.8	4.5		
7000 cyc			7.2	7.8	4.8		
7500 cyc			6.6	8.5	4.5		

AL 0027896

M-700 TRIGGER / SEAR BLOCK EVALUATION

No. 3

3/31/1982

R. Williams

M-700 / 6MM Mod. #A6749915 Sample No. 3	1 Headspace	2 Firing Pin Indent	3 Safe (in lbs) ON	3 Safe (in lbs) OFF	4 Trigger Pull (lbs)	5 Sear Lift	6 Sear Engagement
START OF TEST	Min. +.004"	.025"	9.1	6.4	4.7	.015"	.025"
LIVE FIRE after 100 rds.	Min. +.004"	.026"	9.7	5.7	4.1		
DRY CYCLE							
500 cyc.			8.2	6.9			
1000 cyc.			8.3	7.0			
1500 cyc.			8.8	6.3			
2000 cyc.			9.2	7.0			
2500 cyc.			9.8	6.0		.012"	.032"
LIVE FIRE after 2000 rds.	Min. +.005"	.026"	10.2	5.2		.013"	.033"
DRY CYCLE							
3000 cyc.			8.5	8.5			
3500 cyc.			9.2	7.2			
4000 cyc.			9.2	9.0			
4500 cyc.			8.7	9.7			
5000 cyc.			9.5	12.2		.015"	.032"
LIVE FIRE after 2500 rds HL	Min. +.005"	.025"	9.8	5.2			
DRY CYCLE							
5500 cyc.			8.3	8.3			
6000 cyc.			9.2	8.8			
6500 cyc.			9.7	9.3			
7000 cyc.			8.5	12.0			
7500 cyc.			9.5	12.0			

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M-700 TRIGGER / SEAR BLOCK EVALUATION No. 4

31, 1982 — R. Williams

M-700 6MMCAL #6745544 Sample No. 4	1 Headspace	2 Firing Pin Impact	3 Safe (lbs) ON	3 Safe (lbs) OFF	4 Trigger Pull (lbs)	5 Sear Lift	6 Sear Engagement
START OF TEST	Min+.002	.022	8.3	5.4	3.8	.018	.034
LIVE FIRE after 1,000 rds	Min+.002	.022	6.8	5.2	4.0		
DRY CYCLE							
500 cyc.			7.7	7.7			
1000 cyc.			7.8	7.5			
1500 cyc.			6.8	7.3			
2,000 cyc.			7.8	7.2			
2500 cyc.			7.2	7.7		.017	.035
LIVE FIRE after 2,000 rds.	Min+.003	.022	7.3	4.5	3.8	.0155	.035
DRY CYCLE							
3000 cyc.			6.7	8.7			
3500 cyc.			7.5	7.7			
4000 cyc.			7.7	6.7			
4500 cyc.			7.5	7.7			
5000 cyc.			7.7	6.8		.017	.036
LIVE FIRE after 2,500 rds. M.V.	Min+.003	.022	8.8	4.3	4.3		
DRY CYCLE							
5500 cyc.			8.2	9.0	4.5		
6000 cyc.			7.3	9.0	4.1		
6500 cyc.			7.5	9.3	4.2		
7000 cyc.			8.3	9.2	4.3		
7500 cyc.			8.7	8.3	4.3		

Report No. 01077

M-700 TRIGGER / SEAR BLOCK EVALUATION

No. 5

g. 31, 1982

R. Williams

M-700	AMMCO #6747525 Sample No. 5 Control Gun	Headspace	Firing Pin Indent	Safe (lbs) ON	Safe (lbs) OFF	Trigger Pull (lbs)	Sear Lift	Sear Engagement
	Start of Test	Min+.003	.025	5.2	5.2	4.2	.019	.020
	Live Fire after 1,000 rds.	Min+.003	.025	5.5	5.2	4.0		
	Dry Cycle							
	500 cyc.			6.3	7.6			
	1000 cyc.			5.6	8.3			
	1500 cyc.			5.8	7.8			
	2000 cyc.			6.1	8.5			
	2500 cyc.			5.1	8.3		.021	.0205
	Live Fire after 2,000 rds.	Min+.003	.025	5.5	5.1	4.5	.020	.020
	Dry Cycle							
	3,000 cyc.			6.6	8.1			
	3500 cyc.			6.8	8.1			
	4000 cyc.			6.1	7.6			
	4500 cyc.			6.1	7.3			
	5000 cyc.			6.0	6.5		.020	.020
	Live Fire after 2,500 rds. ttl.	Min+.003	.025	5.1	4.8	5.1		
	Dry Cycle							
	5500 cyc.			6.1	8.0	4.7		
	6000 cyc.			6.1	8.0	4.6		
	6500 cyc.			7.0	8.5	4.6		
	7000 cyc.			6.8	8.1	4.7		
	7500 cyc.			6.3	7.6	4.8		

AL 0027899

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REMINGTON ARMS COMPANY, INC.

INTER-DEPARTMENTAL CORRESPONDENCE

Remington

Bridgeport, Connecticut
April 16, 1982

TO: T. L. CAPELETTI

FROM: T. W. RAWSON

SUBJECT: LONGER RANGE M700 REFORM PLANS

Per our phone conversation, I would very much like to be included in the planning sessions for the M700 rifle upgrade.

The research that I have done suggests an enumeration of features, which follows, should be helpful to identify the basic scope of work.

1. Barrel contour
2. Recoil bracket
3. Receiver shape
4. Bolt release
5. Safety
6. Bolt handle
7. Ejector/extractor
8. Trigger guard floor plate
9. Stock
   a. Cheekpiece
   b. Comb
   c. Pistol grip shape
   d. grip cap
   e. Forend tip

f. Butt pad

g. Checkering

h. Finish

I too believe there are some basically very desirable features of the 700 with a few less desirable details that can be upgraded to surpass competitive offerings.

While the committee will need to confront each of these items, I have suggestions which might speed up some of our evaluation.

It is believed the safety is a significant place for improvement. This is being called out here, however, only because an opportunity exists to evaluate an alternative. We have asked Bob Emmons to have Pete Grisel install a tang safety on our 4th prototype gun under contract. The tang safety is probably more desirable than our current mechanism because it will eliminate the appearance of a stamped part and the hole in the stock alongside the tang. The tang safety, however, is still a trigger lock safety and does not address the theoretical advantage of a striker lock safety. The Ken Jantz bolt sleeve safety that you and I viewed at the NRA show is seen as an alternative with appeal in several areas.

- It eliminates the stamped lever and hole in stock by virtue of bolt sleeve location.
- Is a striker lock system.
- Can provide the choice of two position or three position with the three position giving a choice of bolt lock and striker lock or blocked striker (only) for safe unloading.

This particular option is being mentioned now because Pete Grisel's work is going on - he may be able to replace or add the bolt sleeve safety to his barreled action work. While we would never produce a gun with both a tang and bolt sleeve safety the presence of both safety's on one gun does not cancel out the other and will provide a chance for instant comparison.

TWR/df

4/21/92

Check Piece Options as per Tom Rawson

ALEKSICH

Alex Action Program 1-5-82

Cincinnati - 83

1 Critical — alignment / new concept - Alex R III

2 Super Lunch - fun - Cincinnati

3 M/700 ADC - BDC -
no cash out - Cincinnati

4 M/700 ADC

Bob Emmons - — 84

Get a schedule for a complete state -
- 1984
-
-

M/700 ADC - New - Alex - standard
M/700 BDC New " " "
M/700 Classic - New - " "
M/700 Stainless Box —

M/100 Bar - and stock . . . . . .

ALEKSICH

Fire Control - Present
Connector less Trigger

Fire Control - Proposed
Connector Less Trigger - For Bolted Trig Safety

Side Plates Sheetmetal - For Bolted Trig Safety

Test Cuts - Fire Controls with
Bolted Trig & Sear
*) Low Mild To Gym.
Plunger Springs
* Heat Treat Trigs

Sep. 91

AL 0027941 2 of 2

December 21, 1981

Bolt Action Program
1984 Introduction
Fire Control Revision & Redesign

Add to Fire Control

- Trigger Block
- Housing Clearance
  Skeletonize
- Sear Clearance
  Relieve
- Remove Connector
- Restyle Trigger

Extractor - M-1911-A1 Style

New Receiver Configuration
Barrel Bracket - .250 thick
Lighten Barrel
Ruger Patent on Action Screw - Diagonal Tension
Detachable Magazine - Mag Con
Sights - Rear P.E. & C.
Safety On Bolt Plug
Safety On Tang
Feeding
Restyle Trigger

Add caliber to short action line to be based on 7mm BR case .25 caliber.

F. E. Martin:ws

REMINGTON ARMS COMPANY, INC.

INTER-DEPARTMENTAL CORRESPONDENCE

Remington DUPONT PETERS DUPONT

"CONFINE YOUR LETTER TO ONE SUBJECT ONLY"

xc: J. P. Glas
J. W. Brooks
J. S. Martin
A. A. Hugick
F. E. Martin
S. A. Fanelli

Ilion, New York
March 2, 1981

TO: C. B. WORKMAN

FROM: T. L. CAPELETTI TC

SUBJECT: POTENTIAL IMPROVEMENTS TO BOLT ACTION RIFLES

Attached is a copy of my December 11, 1980 memorandum to J. P. Glas summarizing our suggestions concerning potential improvements to bolt action rifles. On February 19, 1981, I discussed these improvements again with John Brooks, Jim Martin, Adam Hugick, Fred Martin and Sal Fanelli. The December 11, 1980 memorandum remains a good summary of what we feel is needed or can be done to improve our market position with the bolt action rifles. In addition to our suggestions in the previous memorandum, I have summarized below our comments from our February 19, 1981 meeting. In general, we feel that our rifles are better than any competitively priced bolt actions on the market. However, there are some changes we can make in basic design, chamberings and styling features that would provide new offerings for our dealers to use in promotional campaigns. Furthermore, our marketing philosophy needs to center around a more aggressive advertising campaign based on the strengths of our designs (eg. strongest locking system on the market - we have test data).

Design

1.) Common receiver for all centerfire rifles

— We have a conceptual drawing of a common receiver design, but have not pursued to the engineering stage. The advantage would be use of a common magazine box and fire control for bolt actions, pumps, and autoloaders with no sacrifice in accuracy or durability of our current bolt actions.

PLAINTIFF'S EXHIBIT 3147

2.) Model 700 Limited Edition (Model 7)

— A special edition bolt action rifle (M/700 LE or M/7) would be a natural extension of our Limited Edition line beyond the M/870 LE currently planned. We have built a prototype Model 7 with the following features:

- Octagon receiver
- Hammer forged barrel
- Lightweight firing pin (Gives a 25% reduction in lock time).
- 6½ lb. total weight
- Redesigned fire control with blocked trigger and sear
- Redesigned follower for smoother action
- 22 inch barrel
- Fully enclosed bolt plug
- Cooking indicator

3.) Modify caliber offerings

— Due to overlap in our current offerings, we recommend the following changes in calibers:

- Delete the 223, 243, and 270
- Add the 220 Swift, 7mm Mauser and 358 Win.

4.) Redesign feed system

— Modify the magazine box to easily accommodate 3 magnum or 4 regular rounds

— Modify the follower to reduce feeding malfunction rates

5.) Redesign the fire control

— Implement new design with blocked trigger and sear

— "Skeletonize" the design to make components more visible and easier to keep clean

6.) Left handed rifles

— Expand line to include smaller calibers (eg. 243)

7.) Offer synthetic stocks in target rifles

Appearance

1.) Bolt handle

— A variety of designs were prepared for use on the bolt action carbine.

xc: C. B. Workman
J. S. Martin
F. E. Martin
S. A. Fanelli

REMINGTON ARMS COMPANY, INC.

INTER-DEPARTMENTAL CORRESPONDENCE

Remington PETERS

"CONFINE YOUR LETTER TO ONE SUBJECT ONLY"

Ilion, New York
December 11, 1980

TO: J. P. GLAS

FROM: T. L. CAPELETTI

SUBJECT: POTENTIAL IMPROVEMENTS TO BOLT ACTION RIFLES

I have discussed potential improvements to our bolt action rifles with Fred Martin and Sal Fanelli in response to your inquiries concerning why Remington may be losing position in that market and what we might do to regain that position. In view of the new Winchester Model 70 light weight, this is an opportune time to review results of those discussions for you. Fred and Sal's suggestions, summarized below, fall into three general categories: Improvements in a.) Design, b.) Appearance, and c.) Marketing Philosophy. These suggestions have not been fully reviewed with either Jim Martin or Clark Workman. However, I feel they merit further consideration. Significant change in our market position will probably require focused attention on a complete redesign of the firearms combined with a more aggressive marketing approach.

Design

Areas where design changes may be beneficial are in the receiver, feeding, and fire control systems. It may be possible to design a bolt action with enough commonality in the receiver to permit use of one magazine box and fire control system with all of our centerfire rifles (autoload, pump, and bolt action). Commonality would have obvious cost improvement advantages and is worth serious consideration. However, our bolt actions have an excellent reputation for accuracy and durability and one of the program objectives would certainly be to maintain that performance and reputation.

Short of complete redesign of the line, improvements are possible in the feeding and fire control systems of the current designs. The magazine in the M/700 ADL 7mm magnum can only accommodate

PLAINTIFF'S EXHIBIT 3148

AL 0028067

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two (2) rounds with ease; holding three (3) rounds sometimes requires special adjustments. Magazines should be designed to easily accommodate three (3) magnum rounds or four (4) standard rounds. In fact, we need focused attention on the feeding systems on all our bolt actions, including the rimfires. Regarding the fire controls, we already have a program to develop improved systems. Those improvements should be agressively pursued and implemented.

Appearance

When properly cleaned and displayed, our bolt action centerfires have an excellent appearance and give an impression of rugged dependability. However, out-of-the-box appearance is generally not as favorable due to salt bleedout problems, use of oil coatings for rust prevention, and dull sights. Salt bleedout is not a new problem and we have taken steps to eliminate bleedout where we have a known recurring problem. Oil coating for rust prevention is a standard Remington procedure which is not used by some of our competitors. We should investigate alternative protective coatings, such as dry lubricants. Our powder metallurgy sites have a dull appearance due to porosity even when polished. We should consider a complete change in our sight line.

Marketing Philosophy

Our marketing approach for bolt actions has been unchanged for many years. We need some innovations in design combined with more emphasis on strengths of our current line. The M/700 has the strongest locking system and is the most accurate bolt action centerfire rifle on the market. While our extractors are stronger than those of our competitors, they do not have the same massive appearance. We need to take advantage of existing test data to counter the implication that massive appearance correlates with strength. Finally, we should advertise availability of special calibers on custom orders or make special calibers available to preferred dealers or customers. One possibility is to introduce a special edition 35 Whalen caliber rifle as a commemorative to Col. Townsend Whalen.

TLC:ws
Firearms Research Division

CURRENT REMINGTON BOLT ACTION FIRE CONTROLS

	TYPE of SAFE	UNLOAD WITH SAFE ON	ADJUSTMENT: OVERTRAVEL	ENGAGEMENT	PULL	PRE PLAY	BOLT LOCK	INDEPENDENT BOLT LOCK	DOUSAFE - STRIKER DOWN	INTERCHANGEABLE WITH M700	FITABLE - FIELD	FITABLE - PLANT
1. M600	SB	NO	yes	yes	yes	NO	yes	NO	NO	/	/	/
2. M700	SB	NO	yes	yes	yes	NO	yes	NO	NO	yes	yes	yes
3. M788	SB	*yes	NO	NO	NO	NO	*NO	NO	NO	/	/	/
4. XP-100	SB	*yes	yes	yes	NO	NO	*NO	NO	NO	/	/	/
5. 541-S	SB	yes	yes	yes	yes	NO	NO	NO	NO	/	/	/
6. 540 XR	SB	yes	yes	yes	yes	NO	NO	NO	NO	/	/	/
7. 580-81-82	SB	yes	NO	NO	NO	NO	NO	NO	NO	/	/	/
8. 40 XB	SB	NO	yes	yes	yes	NO	yes	NO	NO	/	/	/
. 40XB-207	NO HB	NO	yes	yes	yes	NO	NO	NO	NO	/	/	/
ALTERNATIVE DESIGNS												
1. 3 POSITION	SB	yes	yes	yes	yes	NO	yes	yes	NO	NO	NO	yes
2. BOLT PLUG LOCK	SB	yes	yes	yes	yes	NO	yes	yes	NO	NO	NO	yes
3. BUTTON LOCK	SB	yes	yes	yes	yes	NO	yes	yes	NO	NO	NO	yes
4. FIXED ENG. & O.T.	SB	NO	NO	NO	yes	NO	yes	NO	NO	yes	yes	yes
5. REVISED 788-580	SB	yes	NO	NO	NO	NO	NO	NO	NO	/	/	/
6. NEW DESIGN A	SB	yes	NO	NO	yes	U.	yes	yes	yes	yes	yes	yes
7. NEW DESIGN B	SB TB	yes	NO	NO	yes	U.	yes	yes	yes	yes	yes	yes

*ORIGINALLY Produced WITH BOLT LOCK SIMILAR TO M700

PLAINTIFF'S EXHIBIT 3149

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AL 0028132

PROCEDURE FOR REPLACEMENT OF TRIGGER HOUSING
ASSEMBLY ON MODEL SEVEN LIGHTWEIGHT

IMPORTANT NOTICE

Absolutely no alterations or adjustments are to be made to the replacement trigger assembly. If any of the conditions listed below are encountered during replacement of the Trigger Assembly, return the complete rifle to the factory.

- Difficulty assembling Stock to receiver with guard screws.
- Trigger projecting beyond side of trigger guard.
- Binding of sear in housing.
- Trigger binding on trigger guard plate.
- Trigger binding on trigger guard.

MAKE SURE FIREARM IS NOT LOADED AND THE MAGAZINE IS EMPTY

To Disassemble Firearm:

- Put safety switch to "S" position.
- Remove bolt assembly from action (See Page 5 of Model Seven Instruction Book).
- Turn rifle upside down, Barrel pointing to your left.
- Open floor plate by pushing front of latch. (See Picture 1).
- Completely loosen front guard screw. (See Picture 2)
- Completely loosen rear guard screw. (See Picture 2)
- Lift Stock away from the barreled action. The floor plate base assembly, trigger guard front and rear guard screws will remain with the Stock.
- Remove magazine from Receiver.
- Turn firearm with left side up and Barrel pointing left. (See Picture 3)
- With the Safety switch in the "S" position, tap out the front and rear sear pins from left to right and remove the trigger assembly from the Receiver. (See Picture 3)

To Reassemble Firearm:

- Insert the new trigger assembly (with slave pins intact) into the Receiver. Align holes in housing with holes in Receiver and tap in sear pins from left to right (chamfered end first). (See Picture 3)

  Note: Front sear pin must not protrude into the bolt stop slot.

  CAUTION:

  - After assembling, push the bolt stop release. (See Picture 4 upward; bolt stop must pivot freely.

CAUTION: - Contd.

- o Put the safety switch in the "F" position, pull the trigger and hold. Depress the top rear of the safety cam to insure that the sear safety cam pivots freely and retracts without hesitation. (See Picture 5)

- o Push safety switch from "F" to "S" position several times to insure free movement with no binding and positive engagement of safety switch detents.

- o Restake both pins on the right side of the Receiver. Recheck to make sure bolt stop moves freely. (See Picture 6)

- o Reassemble the magazine into the Receiver. (See Picture 7)

- o Reassemble the Stock to the barreled action. This should include the floor plate base assembly trigger guard and front and rear guard screws if they were disassembled as a unit;

- o Be sure action is seated rearward in Stock.

- o Assemble front and rear guard screws to the Receiver. If any trouble is encountered in completing this step, return entire firearm to the factory.

- o Close floor plate.

- o Replace the bolt assembly.

- o After reassembling the rifle, check for clearance between the following parts; safety switch and stock, trigger and floor plate base.

- o Check for trigger projecting beyond side of trigger guard.

- o If any of these conditions are encountered, return the entire firearm to the factory.

SAFETY PERFORMANCE CHECK

The following checks for proper functioning of the safety must be made:

- o Close the bolt

- o Put the safety switch into the "S" position.

- Pull the trigger (firing pin should not fall). Action of trigger pull must be smooth (no bind, drag, click, or catch).
- Release the trigger (trigger must return forward to its original position).
- Put the safety switch into the "F" position (firing pin must not fall).
- Pull the trigger (firing pin must fall).
- Repeat this test at least three time.
- Push the safety switch from "F" to "S" position several times to insure free movement with no binding and positive engagement of safety switch detents.

CAUTION: IF "F" AND "S" POSITION ARE NOT POSITIVE, RETURN COMPLETE RIFLE TO FACTORY FOR REPAIR

Check for "follow down" (firing pin moves to uncocked position as bolt is closed).

- Put the safety switch into the "F" position.
- Close the bolt smartly.
- Firing pin must remain cocked. Pull the trigger to check. Firing pin must fall. Perform this operation several times.
- If "follow down" occurs, RETURN THE RIFLE TO THE FACTORY.

JWB:js
Ilion Firearms Research Division

REMINGTON ARMS COMPANY, INC.

INTER-DEPARTMENTAL CORRESPONDENCE

Remington DUPONT PETERS DUPONT

"CONFINE YOUR LETTER TO ONE SUBJECT ONLY"

Ilion, New York
January 26, 1979

R. L. HALL

MODEL XP-100 SEQUENCE OF EVENTS

Model XP-100 sequence of events in modifying customer return guns and insuring integrity of production Trigger Assemblies is listed chronologically below:

Date	Event
10-24-78	Remington announced recall of M/600 and XP-100 pistol.
11-78	Engineering and Production effort concentrated on M/600. Gunsmith write-up - assemblies for gunsmith - establishing process for Trigger Assemblies to be shipped.
11-17-78	Present process reviewed - trick test for XP-100 reviewed with assemblers - shim test added (check for clearance between Sear and Sear Block with shim Stock, with Safety in null position).
12-1-78	Initial work on defining situation for customer repair XP-100's started - process reviewed, additions and clarifications were made.
12-15-78	Process developed for customer repair pistols; Engineers tried sample run. Customer repair gunsmith trained.
12-18-78	Initial lot of 25 customer guns modified to repair process. Lot rejected, two guns failed test. Shim test and trick test.

Date	Event
12-18-78	Contd.

The trick test was re-evaluated and it was found that the engineer and gunsmith were using different techniques on standardized test. The shim test was also re-evaluated for consistent and easier operation.

It was also found that customers had made alterations to the Sear Housing Assemblies and they had to be readjusted to standards.

12-28-78 A second lot of 25 was modified to revised process. A large percent of pistols would not pass shim test and the new gaging technique was questioned - parts measured.

1-4-79 Engineering analysis showed second lot of pistols was using a new shipment of Safety Assemblies which had .006" less lift on Sear. R & D altered drawing to increase lift - parts were ordered with higher lift. Shim test results were verified by using dial gage which fits into back of Receiver.

1-10-79 New lot of 25 pistols started to process for modification - high lift Sears were used and pistols were audited - process verified.

1-12-79 Repair verified on customer pistols - pistols being returned to customers. Production using new Safety levers; reject rate increased dramatically ≈ 50%.

1-19-79 New Safety levers delivered to Ilion - found to have too much Sear lift, .002" over max. model drawing.

1-22-79 New Safety levers in Assemblies - mechanism would lock up when put on Safe. Safety levers ground down to max. model drawing. Mechanism worked but rear of Sear interferes with Sear Housing Pin.

1-23-79 Safety levers ground to mean model drawing - still binding. Drawing chamge made to grind clearance on Sear - parts tried, mechanism worked.

Date	Event
1-24-79	Parts modified, Assemblies put together. Safety worked hard. Lubrication technique developed - parts delivered to Final Assembly - pistols put up.
1-25-79	Pistols tested satisfactorily. More parts were modified. Pistols which had been rejected were refitted with new Sear and lever.
1-26-79	More parts being modified - permanent process for part modification being developed.
1-29-79	Parts delivered to Customer Repair - to continue modifying guns - 147 shipped to date.

J. P. Linde, Superintendent
P E & C Section

JPL:eb

TELEX

RD-41-9

REMINGTON ARMS COMPANY, INC.

INTER-DEPARTMENTAL CORRESPONDENCE

Remington DUPONT PETERS DUPONT

"CONFINE YOUR LETTER TO ONE SUBJECT ONLY"

Ilion, New York
February 8, 1979

TO: B. K. DAUBENSPECK
BRIDGEPORT

XP-100

1. Changes to Sear

Sear redesigned to increase the lift clearance between the sear and the bolt stop cross pin to prevent hard "safety on" forces when the max. cam on the safety lever was used. This change was made to a non-critical area of the sear and does not adversely effect its operation or strength.

2. The front of the trigger was redesigned to eliminate possible interference with the trigger adjustment screw threads. Interference with the threads could cause the trigger to bind.

3. Redesign of the safety lever to better control tolerances is in progress. This is not yet complete.

C. B. Workman, Manager
Ilion Research Division

CBW:T

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1081

AL 0028619

REMINGTON ARMS COMPANY, INC.

INTER-DEPARTMENTAL CORRESPONDENCE

Remington

File

c: D. M. Condon
C. A. Riley
W. H. Forson
W. J. Weeks
A. O. Library

Bridgeport, Connecticut
January 27, 1983

Send copy of this study to [illegible]

T. W. RAWSON
R. E. SCHRADER

CONSUMER CUES TO QUALITY - BOLT ACTION
CENTER FIRE RIFLES - FINAL REPORT

Three consumer group sessions were conducted in November 1982 with recent and prospective center fire bolt action rifle buyers to determine the "cues" by which a prospective buyer assesses the quality of a rifle. An "expert" (custom gun maker) session was also conducted to help provide added insight into this issue.

"Cues" are the visible/external elements of a product (in this case a gun) which a consumer uses to come to some determination of the overall workmanship and performance of that product. A "cue" on a gun is usually a more subtle element than an obvious feature like a hinged floor plate and less noticeable than an attribute like "good wood-to-metal fit". However, these latter elements could be considered strong "cues" to quality for some consumers.

"Cues" are generally the numerous details on a product which convey to the consumer a concern for how it was manufactured. The addition of "cues" tends to have a cumulative effect to a point where the gun emits an "aura" of fineness.

Prospective center fire rifle buyers are greatly influenced by the cosmetics/appearance of a gun. To these buyers, an attractive/"pretty" gun conveys quality. Since a center fire rifle's stock is the largest part of the gun, it has more of an impact on generating an impression of "attractiveness" than any other component.

This research indicates that a "cue" to an attractive stock is tapered/slender lines. A stock designed and manufactured

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1 of 2

with these kinds of lines conveys an attention to detail by making sure that the wood "flows" into the metal rather than looking like a "pipe stuck on a 2" x 4"".

The research strongly suggests that a center fire rifle should have an "integrated appearance". An example of this is the way various metal parts are finished. While consumers prefer all machined parts, they grudgingly accept stamped parts in certain areas if they are finished "well", that is, if an aluminum stamping looks like (after bluing) the machined steel in the receiver or barrel. If this is done the metal parts all look the same.

The above discussion, hopefully, has clarified the notion of "cues" and how they apply to center fire rifles. The final report attached itemizes and elaborates them more fully.

In conclusion, this research suggests that we should avoid making unnecessary internal changes if they only marginally improve a new gun's performance. The benefit of these kinds of changes (improved consumer acceptance) would probably not justify the cost of implementation.

J. H. CHAMBERS

JHC/kam
Att.
0001M

cc: J.G. Williams

REMINGTON ARMS COMPANY, INC.

INTER-DEPARTMENTAL CORRESPONDENCE

REMINGTON ARMS CO.
RECEIVED
JUN 1 1982
FIREARMS RESEARCH DIVISION

June 1, 1982

P.H. HOLMBERG

NEW BOLT ACTION RIFLE

As a result of our recent meeting with R&D and Production, the following is my interpretation of our objective and, more importantly, the desirable features/model requirements.

OBJECTIVE

Replace current 700 BDL, Varmint, and Left-hand Specials with new bolt action rifles having demonstrable consumer-perceived value-in-use features and completely new styling at minimum cost and capital investment.

Specifically, the above objective can be broken down into four major categories. They are as follows:

1. Styling -

   All-new look; i.e., stock, receiver, fore-end, barrel, trigger housing, etc.

2. Internal mechanical features -

   Mechanical changes should only occur if needed to improve a current known deficiency or if providing demonstrably-perceived consumer advantage.

3. External Features -

   Again, these features should represent consumer-perceived advantages such as scope mounts, external adjustable triggers, repositioning of safeties, etc.

4. Minimum Cost and Capital Investment -

   In this area, we would hope to produce the new bolt action rifle at a cost equal to, or lower than, our current model; however, additional cost for a specific development may be incurred and

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accepted because they can be recovered in selling price. As for capital expenditures, if, in fact, we can develop this new gun in conjunction with the firearms modernization program, it would be most timely. Our basic goal is to introduce this new gun in the 1985 model year; however, if the situation requires, we could go as long as the 1986 model year.

Following are the desirable features/model requirements, along with some idea of what they mean, either to us in manufacturing or to the consumer.

Flat-bottom Octagonal Receiver

1. Easier to customize.
2. Reduce weight.
3. Narrower - allows narrower stock configuration.
4. Relates to trade likes - flat bottom.
5. Visually different.

Integral Recoil Lug

1. Consumer-perceived added strength.
2. Improved uniform appearance between barrel and receiver.

Integral and Standard Scope Mounts - (Integral preferrably better than competition)

1. Flexibility in mounting systems.
2. Consumer-perceived value - windage and elevation adjustments.

Anti-bind Bolt

1. Consumer-perceived smoother action.
2. Reduced lateral motion of bolt through entire stroke.

Front Lock - (two-lug system (no change)

*1. Possibly three-lug system.

---

* Low priority Adv.

Short and Long Actions

1. Provide actions for cartridge - although not necessary but common in the industry.

New Bolt Stop - Release

*1. Improve quality - appear stronger.
2. Possibly relocate.

Block Trigger and Firing Pins

1. Dual safety switch.
2. Reposition.
3. May be 3 position.

Bolt Lock

1. Separate switch - not mandatory.

Cocking Indicator

1. Shows red when cocked.

Fire Control

Adjustments
1. Pounds pull - external - fail safe - down to 3 lbs.
2. Over travel - external - safety limits - if a factor??
3. Change sear to wrought iron.
4. New fire control - desirable.
5. Standard trigger.

Barrel

**1. High gloss - hammer marks - aesthetics - looks different.
2. Lt. weight contour - lighter weight - new contour.
3. Target crown - protects end of barrel - maybe accuracy improved.
4. Recoil reducing muzzle - ½ reduction in recoil.
*5. Stainless steel - option.
6. Clean barrel - no sights or holes.

---

*Low priority Adv.
**Cost factor possible.

Feed System

1. Unload with bolt open.
2. No-bind follower.
3. Rotary magazine - better feed - no angles - more rigid receiver.
4. Magazine - 3 shots versus 4; and 4 versus 5 shots.
5. Jeweled follower.

Bolt

1. Claw-type extractor - more guts, heavier looking, etc.
2. Restyled bolt handle - styling - looks. Distinctive but functional.
3. Two-lug system - possibly 3.
4. Easy lift - no more than present 700.
5. Jeweled - aesthetics.
6. Reduced locked time - would not sacrifice for easy lift.
7. Restyled bolt plug - aesthetics.

Stocks

1. Walnut - appearance.
2. Cut checkered - 20 lpi. - full - Schnable fore-end.
3. Recessed slug swivel studs - styling.
4. Cast off and toe out - similar to Hygrade custom stocks.
5. Skeletonized butt and grip cap.
6. Epoxy bedding - strength.
7. Emmons stock - slim down grip, etc.
8. Medium gloss.
9. No spacers.

During our session, we also discussed the need to conduct market research on potential new bolt action rifles. Following are a couple of areas where we discussed specific testing. I'm sure that as we proceed, others will become obvious.

Test Guns

1. Barrel - hammered high gloss versus no hammer high gloss.

2. Barrel contour - new versus straight or current.

Please feel free to update this list and the objective any way you see fit. We do need to expeditiously confirm in writing our discussion with R&D. In addition, we should include in this document our version of performance specifications, i.e. accuracy, weight, etc.

C.A. RILEY

CAR:jt

REMINGTON ARMS CO.
RECEIVED

MAR 16 1982

FIREARMS RESEARCH DIVISION

225 E. Edgewood Dr. Apt. 98
Lakeland, Florida 33803
Mar. 12, 1982

Mr. Clark Workman
Remington Arms Co.
Ilion, N. Y.

Dear Clark:

Jim was here today and we went over the bolt actions from A to Z.

These are some of the things I propose:

1. Please don't bring out a new bolt action, without a fool proof safety which is capable of locking the bolt. Make it at least as good as the present M/70, better if possible.

2. Suggest you push for a complete line of bolt action rifles that cover the price gamut from lowest to highest. I feel the Carbine should be as simple and plain as you can make it with a price to match.

3. Forget pressed checkering!

4. I feel the idea of a hex cross section for a new receiver will increase cost. I also feel that indexing barrels and receivers will also increase cost. Since I feel that present volume is low because of price structure, increasing cost is a no no!

5. I didn't mention this to Jim, but we should make a large effort to capitalize on the fact that the benchrest shooters think our present 700 - 600 - XP100 - 40X actions are the most accurate production actions available and use them when they can get them for bench rest competition.

6. I am personally not in favor of the "as hammered" finish on barrels.

7. I do not think that Ruger is making more than 5000077's per year. Anyone who says he is, is trying to mislead you.

8. The .243 has cost Win. and Sav. some fairly costly law suits due to its tendency to wear barrels quickly and cause high pressures due to excessive fouling. We have not had this problem because we use 6 MM barrel interiors for the .243, plus the fact that 700s do not come apart due to high pressure. To let the 6 MM die by taking it out of production in 700 is asinine. It's a better cartridge all the way than the .243 and we should make an effort to tell the customers. Letting the customers tell us in this instance, could get us into trouble.

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3155

9. We obviously have some production or design problems with M/700 magazine feed. We need to get busy on this. Magazines too narrow or receiver openings too wide can cause the problem you are experiencing.

10. Jim mentioned that some one is pushing for a Mauser type extractor. Do they understand that the rifle will come apart same as the present competition with excessive pressure if we go to any extractor which breaks the bolt shroud?

11. Has anyone tried a floating wedge in the front of the present 700 trigger as an additional element to the safety? It would be operated and governed in position by a relatively long slot in the present safety arm on the exterior of the housing. The wedging action would hold it in position until the very last movement of the safety to the "off" position. It might ? be pushed to the "on" position by a light spring or by the final movement of the safety arm to the "on" position.

If I think of anything more I will call.

Sincerely,

M. R. Walker

G-48

DON'T SAY IT — WRITE IT

To A.A. HUGICK

Date 1-5-79

From C.J. SWEET

M/700 CLASSIC PILOT LINE FIELD CYCLE TEST (243 CAL.)

SUBJECT: BOLT LUBRICATION
WEATHER: 9° F - WINDY - LIGHT SNOW

Extremely hard bolt lift was experienced during Field Cycle Testing of the M/700 Classic Pilot Rifles. After one quarter of the test was shot (50 rds.), shooters found it difficult to lift the bolt handle to unlock the bolt. One gun was so severe, the bolt handle could not be lifted unless the gun was held between the legs, and the bolt handle was lifted by using both hands. (One hand on the stock pulling down on the gun, and one hand on the bolt handle pulling up) Hard bolt lift was experienced after every fired round. A check was made by dry firing the guns. Hard bolt lift was evident, but not as severe as it was in live fire.

The bolts were then removed and inspected. The bolts had been lubricated with Molykote G-N Paste before testing. Small metal particles were noticed in the paste caused by the failure of the lubricant. The bolts were then cleaned and sprayed with WD-40 lubricant. The areas sprayed were the Cam Surface and the locking lugs. The bolts were then reassembled in the bolts and the test was completed (150 rds.). The bolts function well after lubrication with the WD-40.

The Molykote G-N Paste had hardened in the cold, which gummed up the bolt causing hard bolt lift.

THIS WAS APPLIED IN THE LAB JUST PRIOR TO THE FIELD TEST. A.

CJS:js

PLAINTIFF'S EXHIBIT 3156

1023

DON'T BE SORRY — BE SAFE

REMINGTON ARMS COMPANY, INC.

INTER-DEPARTMENTAL CORRESPONDENCE

Remington DUPONT PETERS DUPONT

"CONFINE YOUR LETTER TO ONE SUBJECT ONLY"

Distribution: C.B. Workman
C.E. Ritchie

RESEARCH TEST and MEASUREMENT REPORT – Report No. 82 0331

Lubricant Evaluation: M700 Cock and Fire Simulation

Prepared by: Fred Supry

Date Prepared: 3-22-82

Proofread and Cleared By:

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

Signature: James H. Hennings Date: 4-14-82

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

Signature: C. Evan Ritchie Date: 4-14-82

2923

TEST & MEASUREMENT LAB REPORT

REPORT NUMBER: 82 0331

REPORT TITLE: Lubricant Evaluation: M700 Cock and Fire Simulation

MODEL(S): 700

GAUGE OR CALIBER: 30.06

DATE: 3-22-82

WORK ORDER NO.: C-1803-000

PART NAME:

DESIGNER/ENGINEER:

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: Static
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 _____
10. DRY CYCLE – NO. OF SAMPLES TESTED 5 - each lubricant

    MAX. NO. OF CYCLES 25000

3 of 23

Report No. 82 0331

REMINGTON ARMS COMPANY, INC.
Firearms Research Division

April 13, 1982

TO: J.H. Hennings

FROM: F.L. Supry

REPORT TITLE: Evaluation of Lubricants on Firearms M700 Cock and Fire Simulation

ABSTRACT

C.E. Ritchie requested that the Test Lab conduct a cock and fire evaluation on five spray lubricants.

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

These five lubricants were selected for evaluation from the results of a preliminary evaluation conducted by A.B. Hughes, Senior Consultant, ESD Maintenance Engineering Group, Du Pont. A copy of his evaluation for each of the five lubricants is located in Appendix "C".

Engineering Dept.

SCOPE OF TEST

To compare the five lubricants in a Model 700 cock and fire simulation test.

TEST RESULTS

In their order of finish, from the best performing lubricant to the poorest performing lubricant, the following results were obtained.

LUBRICANT	AVERAGE CYCLE LIFE (5 Samples)
1. Du Pont – Synthetic Diester	21,181 cys.
2. Sprayon – 711	17,646 cys.
3. CRC – 3-36	14,382 cys.
4. Houghton – HLP	8,333 cys.
5. Krylon – Ten-4	2,830 cys.

4/23

AL 0029381

REPORT TEXT

A. Trigger pull, sear lift, sear engagement, safe on, safe off, and bolt lift measurements were taken on each test vehicle at the start of the test, and at 5000 cycle intervals. Remington specifications for the M700 components used are:

• Trigger Pull	3½ lbs. – 6½ lbs.
• Sear Lift	.005" – .018"
• Sear Engagement	.015" – .020"
• Safe "On" – "Off"	None Established
• Bolt Lift	None Established

Refer to Appendix "A", data sheets No. 1 through No. 5, for individual results.

The Rc hardness was measured, at the cocking cam area, on each M700 bolt. Remington specifications Rc 37-46.
Refer to Appendix "A", data sheet No. 6, for individual hardness, lubricant used, simulator used and cycles completed.

A graphical analysis comparing the lubricants tested to their cycle life, and their cycle life to the simluator used is found in Appendix "B".

2. Lubrication Procedure - continued

   c. All other lubrication points were lubricated by holding the aerosol can approximately six inches away from the area to be lubricated and covering the area until a thin layer of lubricant forms on the surface. Duration of spray; approximately 1 second.

C. Pictorial Presentation

1. Lubrication points and procedures.

2. Cocking cam, sear face, and striker radius and track areas were photographed at the start and completion of the test and are available on request.

ALEKSIC

APPENDIX A

(Data Sheets)

7923

AL 0029385

M 700 COCK & FIRE SIMULATION — FLS

LUBRICANT EVALUATION — 3-5-92

FIRST SAMPLE of EACH LUBRICANT

		1	2	3	4	5	6
		TRIGGER PULL	SEAR LIFT	SEAR ENGAGEMENT	SAFE ON	SAFE OFF	BOLT LIFT SECOND	BOLT LIFT FIRST
REM →	SPECS →	3½-6½ lbs	.005"-.008"	.015"-.020"	(lbs)	(lbs)	(lbs)	(lbs)
	1 - DUPONT	(AVG. OF 3)			(AVG. OF 3)	(AVG. OF 3)	(AVG. OF 3)	(AVG. OF 3)
	2 - 711							
	3 - CRC							
	4 - HLP							
	5 - TEN 4							
	1	6.25	.005	.020	7.5	6.50	3.00	7.00
0	2	6.50	.0046	.015	6.75	4.25	2.00	6.50
cycles	3	5.50	.005	.016	5.25	4.25	3.00	6.00
	4	6.00	.008	.017	7.00	5.75	3.00	6.50
	5	6.50	.008	.016	6.75	4.50	4.50	7.50
	1	6.00	.0055	.020	5.50	4.00	2.50	6.50
5000	2	6.00	.0065	.0175	6.00	5.50	2.50	6.50
cycles	3	6.00	.006	.020	6.00	4.50	2.00	6.00
	4	5.75	.010	.017	7.50	5.00	3.00	7.25
	* 5	6.50	.010	.020	7.25	5.50	5.00	9.00
	1	5.75	.008	.020	5.75	4.0	2.25	7.00
10,000	* 2	5.75	.008	.018	5.25	3.75	2.50	10.50
cycles	3	5.25	.008	.022	4.50	3.75	2.01	7.00
	4	6.25	.0095	.029	7.25	4.75	3.01	13.00
	5	—	—	—	—	—	—	—
	1	6.00	.009	.0205	6.00	4.00	2.00	8.50
15,000	2	—	—	—	—	—	—	—
cycles	3	5.50	.009	.024	5.00	5.50	2.00	8.50
	* 4	6.00	.0105	.019	6.50	4.50	3.00	18.00
	5	—	—	—	—	—	—	—
	* 1	6.00	.0095	.021	6.00	4.00	2.00	8.00
20,000	2	—	—	—	—	—	—	—
cycles	* 3	5.50	.0105	.027	4.50	4.00	2.00	9.00
	4	—	—	—	—	—	—	—
	5	—	—	—	—	—	—	—
	1	—	—	—	—	—	—	—
25,000	2	—	—	—	—	—	—	—
cycles	3	—	—	—	—	—	—	—
	4	—	—	—	—	—	—	—
	5	—	—	—	—	—	—	—
	* 1	FAILED	15594	CYCLES				
	* 2	FAILED	6228	cycles				
	* 3	FAILED	16359	cycles				
	* 4	FAILED	10400	cycles				
	* 5	FAILED	1990	cycles			DATA SHEET	

8 of 23

AL 0029386

M700 COCK & FIRE SIMULATION F.L.S.

LUBRICANT EVALUATION 3-8-92

SECOND SAMPLE OF EACH LUBRICANT

		TRIGGER PULL	SEAR LIFT	SEAR ENGAGEMENT	SAFE ON	SAFE OFF	BOLT LIFT COCKED	BOLT LIFT FIRED
	REMISPECS →	3½-6½ lbs	.005"-.018"	.015"-.020"	(lbs)	(lbs)	(lbs)	(lbs)
1	DuPont	(AVG of 3)			(AVG. of 3)	(AVG. of 3)	(AVG. of 3)	(AVG. of 3)
2	711							
3	626							
4	HLP							
5	TEN 4							
	1	6.00	.009	.01185	6.00	4.50	4.010	8.001
0	2	5.00	.006	.018	7.50	4.75	3.001	6.00
cycles	3	6.00	.012	.012	7.00	4.50	3.001	7.00
	4	6.75	.0095	.016	7.50	6.25	2.50	7.00
	5	5.50	.008	.016	7.50	5.50	3.50	7.00
5000	1	5.25	.0095	.0215	6.00	4.50	3.50	7.00
cycles	2	5.00	.0065	.019	5.75	4.00	3.50	6.00
	3	5.75	.013	.020	5.00	4.00	3.00	8.00
	4	6.25	.0095	.020	6.75	6.25	2.50	8.00
	* 5	5.00	.009	.020	5.75	4.00	3.50	13.00
10,000	1	5.50	.0111	.025	5.75	4.25	3.50	7.00
cycles	2	4.75	.0065	.019	5.25	4.00	2.50	6.50
	* 3	6.00	.013	.023	6.25	3.75	3.00	15.010
	* 4	6.00	.0095	.021	6.50	5.75	3.00	25.00
	5	—	—	—	—	—	—	—
15,000	1	5.50	.011	.026	5.50	4.25	4.00	7.25
cycles	2	4.75	.0075	.019	5.00	4.00	3.00	7.00
	3	—	—	—	—	—	—	—
	4	—	—	—	—	—	—	—
	5	—	—	—	—	—	—	—
20,000	1	5.50	.011	.0265	5.50	4.00	4.00	9.25
cycles	2	4.75	.009	.019	5.25	4.50	3.00	6.50
	3	—	—	—	—	—	—	—
	4	—	—	—	—	—	—	—
	5	—	—	—	—	—	—	—
25,000	* 1	5.25	.011	.0285	5.50	3.75	4.00	14.00
cycles	* 2	4.50	.0095	.021	5.25	4.00	2.50	7.00
	3	—	—	—	—	—	—	—
	4	—	—	—	—	—	—	—
	5	—	—	—	—	—	—	—
	* 1	COMPLETED 25,000 cycles						
	* 2	COMPLETED 25,000 cycles						
	* 3	FAILED 8317 cycles						
	* 4	FAILED 6115 cycles						
	* 5	FAILED 2788 cycles					DATA SHEET 2	

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M700 COCK & FIRE SIMULATION — F.L.S.

LUBRICANT EVALUATION — 3-8-82

THIRD SAMPLE OF EACH LUBRICANT

		1	2	3	4	5	6
		TRIGGER PULL 0½-6½ lbs	SEAR LIFT .005"-.018"	SEAR DISENGAGEMENT .015"-.020"	SAFE ON (lbs)	SAFE OFF (lbs)	BOLT LIFT COCKED (lbs)	BOLT LIFT FIRED (lbs)
1	DUPONT	(AVG OF 3)			(AVG OF 3)	(AVG OF 3)	(AVG OF 3)	(AVG OF 3)
2	TIII							
3	CRC							
4	HLP							
5	TEN 4							
	1	5.75	.007	.0115	7.25	4.50	2.50	6.50
0	2	6.00	.0098	.0115	7.50	7.50	2.50	8.25
cycles	3	6.25	.009	.0117	6.75	5.50	3.00	7.00
	4	5.75	.0125	.0195	8.00	5.50	3.00	7.00
	5	5.50	.008	.0115	8.00	5.00	2.50	6.00
5000	1	6.25	.009	.0119	6.50	4.25	2.00	6.00
cycles	2	5.25	.009	.0121	5.25	7.50	3.50	6.50
	3	6.25	.0105	.0175	7.25	4.00	3.00	9.00
	4	5.75	.0125	.021	7.00	5.00	3.00	10.00
	*5	5.50	.013	.021	6.00	3.75	2.50	18.00
10000	1	6.00	.0110	.020	6.00	3.75	2.00	5.50
cycles	2	5.25	.009	.021	7.00	6.00	3.50	7.00
	3	6.00	.015	.0195	6.75	4.75	3.00	10.00
	*4	5.75	.0125	.0225	6.50	4.50	3.50	51.00
	5	—	—	—	—	—	—	—
15000	1	5.25	.0115	.020	5.75	4.00	2.00	6.50
cycles	*2	5.50	.0095	.022	6.50	5.50	4.00	14.00
	*3	6.50	.015	.0195	6.75	4.00	3.00	15.00
	4	—	—	—	—	—	—	—
	5	—	—	—	—	—	—	—
20000	1	5.75	.0115	.020	6.00	4.00	2.00	6.00
cycles	2	—	—	—	—	—	—	—
	3	—	—	—	—	—	—	—
	4	—	—	—	—	—	—	—
	5	—	—	—	—	—	—	—
25000	*1	6.00	.0115	.021	6.25	3.75	2.00	12.00
cycles	2	—	—	—	—	—	—	—
	3	—	—	—	—	—	—	—
	4	—	—	—	—	—	—	—
	5	—	—	—	—	—	—	—
	*1	COMPLETED	25,000	cycles				
	*2	FAILED	15,140	cycles				
	*3	FAILED	10,410	cycles				
	*4	FAILED	6788	cycles				
	*5	FAILED	2484	cycles			DATA SHEET 3	

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AL 0029388

M700 COCK & FIRE SIMULATION — F.L.S.

LUBRICANT EVALUATION — 3-8-82

FOURTH SAMPLE OF EACH LUBRICANT

		TRIGGER PULL	SEAR LIFT	SEAR ENGAGEMENT	SAFE ON	SAFE OFF	BOLT LIFT Locked	BOLT LIFT Fired
		3½ - 6½ lbs	.005" - .018"	.015" - .020"	(lbs)	(lbs)	(lbs)	(lbs)
1	DuPont	(AVG. OF 3)			(AVG. OF 3)	(AVG. OF 3)	(AVG. OF 3)	(AVG. OF 3)
2	711							
3	CRC							
4	HLP							
5	TEN 4							
	1	6.50	.0095	.019	6.75	4.25	4.00	8.00
0	2	6.50	.008	.019	8.50	5.25	3.50	7.00
cycles	3	5.50	.0088	.016	7.25	4.75	3.00	9.00
	4	5.75	.009	.019	8.25	5.50	4.00	7.50
	5	5.50	.005	.017	9.00	6.75	3.00	7.50
5000	1	6.25	.0110	.023	6.25	3.25	3.00	8.00
cycles	2	6.00	.0111	.020	7.50	4.25	3.50	7.00
	3	5.50	.0085	.021	7.00	4.50	3.00	8.00
	4	6.00	.010	.019	7.25	5.00	4.00	10.00
*	5	5.75	.010	.0185	7.00	4.75	3.00	16.00
10000	1	5.75	.010	.023	5.75	3.50	4.00	8.00
cycles	2	6.00	.012	.022	7.00	4.00	3.00	8.00
	3	5.50	.0085	.021	6.50	4.25	3.00	8.00
	* 4	6.00	.0110	.021	7.00	5.25	4.00	29.00
	5	—	—	—	—	—	—	—
15000	1	6.25	.0105	.024	5.25	3.00	3.50	9.00
cycles	2	6.25	.013	.0225	7.50	4.00	3.50	9.00
	* 3	5.50	.0105	.0215	6.75	4.50	3.25	22.00
	4	—	—	—	—	—	—	—
	5	—	—	—	—	—	—	—
20000	* 1	5.75	.0115	.026	5.75	3.00	3.00	24.00
cycles	* 2	5.75	.0125	.024	6.50	4.00	4.00	24.00
	3	—	—	—	—	—	—	—
	4	—	—	—	—	—	—	—
	5	—	—	—	—	—	—	—
25000	1	—	—	—	—	—	—	—
cycles	2	—	—	—	—	—	—	—
	3	—	—	—	—	—	—	—
	4	—	—	—	—	—	—	—
	5	—	—	—	—	—	—	—
	* 1	FAILED	19520 cycles					
	* 2	FAILED	16865 cycles					
	* 3	FAILED	11830 cycles					
	* 4	FAILED	8576 cycles					
	* 5	FAILED	3667 cycles				DATA SHEET 4	

11023

AL 0029389

M700 LOCK & FIRE SIMULATION — F.L.S.

LUBRICANT EVALUATION — 3-9-92

FIFTH SAMPLE OF EACH LUBRICANT

		TRIGGER PULL 3½-6½ lbs	SEAR LIFT .005"-.008"	SEAR ENGAGEMENT .015"-.020"	SAFE ON (lbs)	SAFE OFF (lbs)	BOLT — LIFT COCKED (lbs)	BOLT — LIFT FIRED (lbs)
1	DuPont	(AVG OF 3)			(AVG OF 3)	(AVG OF 3)	(AVG OF 3)	(AVG OF 3)
2	711							
3	CRC							
4	HLP							
5	TEN 4							
	1	6.00	.0095	.0117	7.00	4.75	2.00	7.00
0	2	5.75	.0085	.0155	6.75	5.00	3.50	7.00
cycles	3	5.75	.0105	.0215	6.50	5.00	3.00	9.00
	4	6.25	.012	.016	7.00	4.50	3.00	8.00
	5	6.25	.008	.016	7.25	5.50	3.00	6.50
5000	1	5.50	.010	.0205	7.50	4.50	2.50	7.00
cycles	2	6.00	.0085	.016	5.75	4.00	4.00	8.00
	3	5.75	.0105	.0215	5.50	4.25	3.00	8.00
	4	6.25	.013	.019	6.50	4.25	4.00	7.50
	*5	6.25	.010	.020	5.75	4.00	3.50	18.00
10,000	1	5.25	.010	.021	7.50	4.00	3.00	8.00
cycles	2	5.50	.010	.018	5.75	3.75	4.00	7.50
	3	5.75	.0105	.0215	5.50	4.25	3.00	7.50
	*4	6.25	.0135	.025	7.25	3.75	4.00	27.00
	5	—	—	—	—	—	—	—
15000	1	5.50	.0105	.021	6.50	4.00	3.00	8.00
cycles	2	5.75	.010	.018	5.75	4.00	3.50	7.50
	3	6.00	.0105	.0215	5.50	4.50	3.00	7.00
	4	—	—	—	—	—	—	—
	5	—	—	—	—	—	—	—
20,000	1	5.50	.0105	.021	7.00	3.75	3.50	14.00
cycles	2	6.25	.010	.019	5.50	4.00	3.50	9.00
	3	5.75	.0105	.022	5.50	4.25	3.00	11.00
	4	—	—	—	—	—	—	—
	5	—	—	—	—	—	—	—
25000	*1	5.00	.0111	.0122	7.00	4.00	3.00	28.00
cycles	*2	5.75	.011	.0120	5.75	3.75	4.00	12.00
	*3	6.25	.011	.0123	5.25	4.00	4.00	15.00
	4	—	—	—	—	—	—	—
	5	—	—	—	—	—	—	—
	*1	FAILED	20790	cycles				
	*2	COMPLETED	25000	cycles				
	*3	COMPLETED	25000	cycles				
	*4	FAILED	9787	cycles				
	*5	FAILED	3220	cycles			DATA SHEET 5	

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M 700 COCK & FIRE SIMULATION FLG

LUBRICANT EVALUATION 3-10-82

R_c HARDNESS : M700 BOLT COCKING CAM AREA

REQ. SPECS. R_c 37-46	R_c HARDNESS	LUBRICANT USED	SIMULATOR USED	CYCLES COMPLETED
+ BOLT NO. +				
C1	39	DUPONT	1	15 594
C9	40	DUPONT	3	25 000
C12	40	DUPONT	2	25 000
C19	38	DUPONT	4	19 520
C20	37	DUPONT	1	20 790
C3	38	711	3	6 226
C7	39	711	2	25 000
C16	39	711	1	15 140
C27	38	711	2	16 865
C29	39	711	4	25 000
C4	39	CRC 3-36	4	16 359
C10	39	CRC 3-36	1	8 317
C17	40	CRC 3-36	3	10 410
C21	39	CRC 3-36	2	11 830
C25	39	CRC 5-56	4	25 000
C11	39	HLP	4	10 400
C18	39	HLP	3	6 115
C24	39	HLP	2	6 788
C26	39	HLP	1	8 576
C28	38	HLP	1	9 787
C2	38	TEN-4	2	1 990
C5	38	TEN-4	2	2 788
C6	39	TEN-4	3	2 484
C8	38	TEN-4	4	3 667
C13	39	TEN-4	1	3 220
C22	39	DRY		0
				DATA SHEET 6

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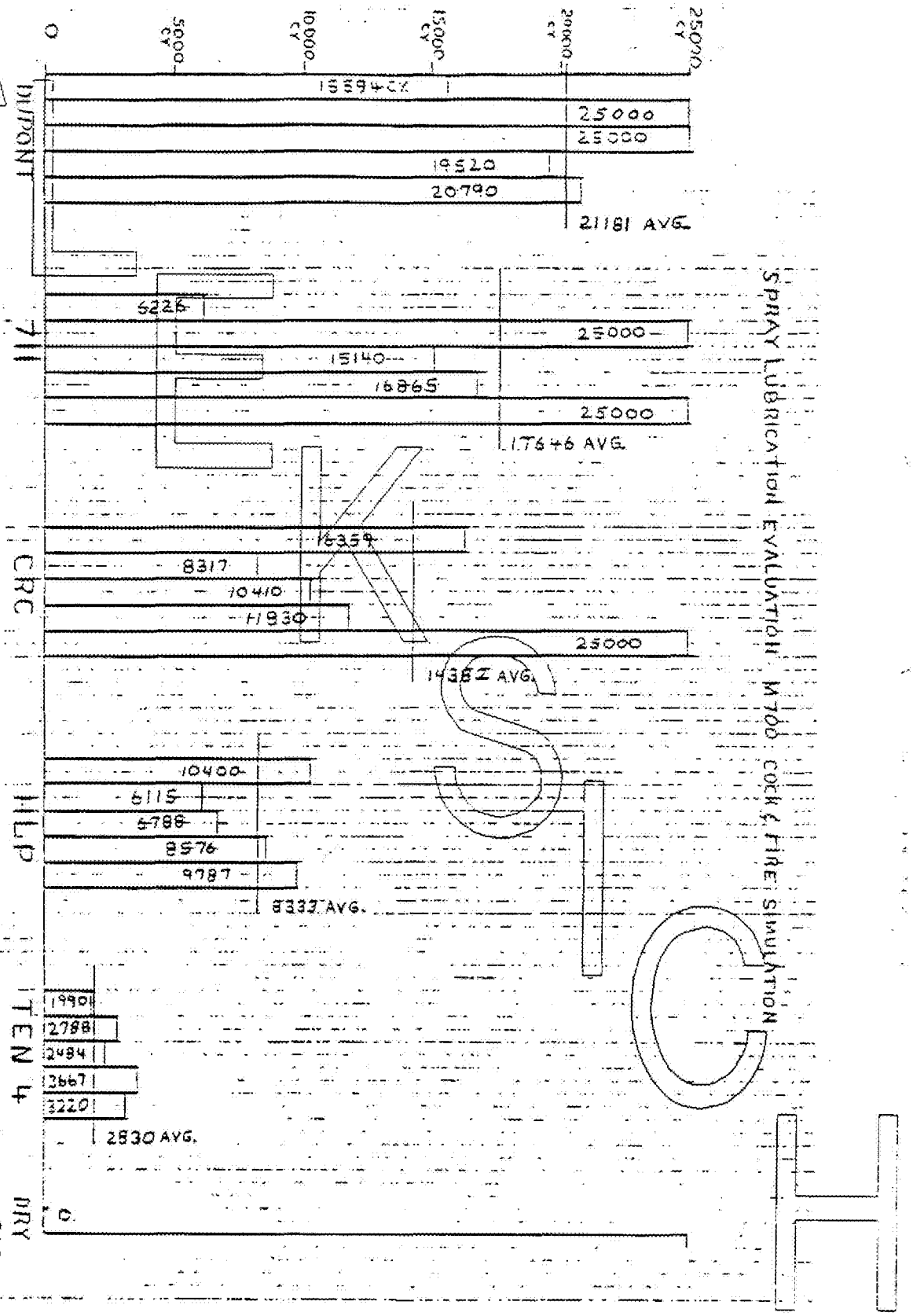
APPENDIX B

(Graphic Presentation)

A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5000 CY
10000 CY
15000 CY
20000 CY
25000 CY
DUPONT
15594 CY
25000
25000
19520
20790
21181 AVG.
HILL
6226
25000
15140
16865
25000
17646 AVG.
CRC
16359
8317
10410
11930
25000
14382 AVG.
HILP
10400
6115
5788
8576
9787
8332 AVG.
TEN 4
1990
2788
2484
3667
3220
2830 AVG.
DRY
0
SPRAY LUBRICATION EVALUATION M700 COCK & FIRE SIMULATION

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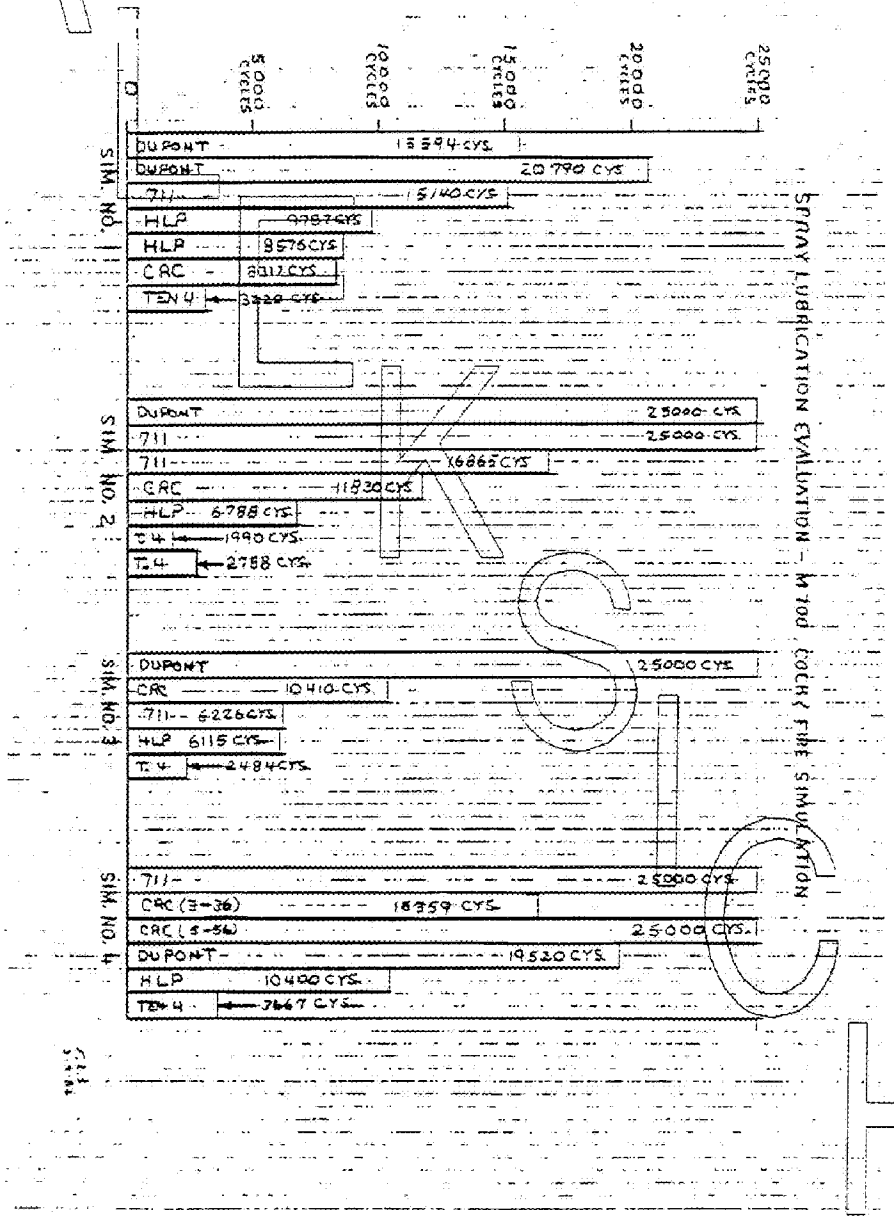
A


SPRAY LUBRICATION EVALUATION - METAL COATED FIBER SIMULATION
0
5000 CYCLES
10000 CYCLES
15000 CYCLES
20000 CYCLES
25000 CYCLES
SIM NO. 1
DUPONT 15594 CYS.
DUPONT 20790 CYS
711 5140 CYS
HLP 9787 CYS
HLP 8576 CYS
CRC 8012 CYS
TEN 4 3220 CYS
SIM NO. 2
DUPONT 25000 CYS
711 25000 CYS
711 16865 CYS
CRC 11830 CYS
HLP 6788 CYS
T 4 1990 CYS
T 4 2758 CYS
SIM NO. 3
DUPONT 25000 CYS
CRC 10410 CYS
711 6226 CYS
HLP 6115 CYS
T 4 2484 CYS
SIM NO. 4
711 25000 CYS
CRC (3-36) 18359 CYS
CRC (5-56) 25000 CYS
DUPONT 19520 CYS
HLP 10490 CYS
TEN 4 7667 CYS

H

16323

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APPENDIX C

(Previous Evaluation)

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Test # 20

Product: Du Pont - Synthetic Diester - 20%

Function: Multipurpose, prevents rust
Displaces moisture, dirt and lubricates

Evaluation Notes

1. Odor: Synthetic chemical oily smell, not lasting
2. Feel: Light oily feel
3. Drying Rate: Slow drying
4. Penetration: Rapid penetration and spreading, clear color
5. Surface Wetting: Local wetting, removes oxidation, good cleanup
6. Grease Displacement: Rapid spreading, no dissolving, good cleanup
7. Type Container: 4 oz aerosol, nozzle with straw
8. Liquid Appearance: Watery, light tan
9. Wood-Open Pore: Damp look, no damage
10. Metal Surface: Wet look, no rust within 24 hours
11. Rust Removal: Most rust removed
12. Displace Moisture: Excellent
13. Displace Solids: Excellent
14. Gun Barrel: Excellent
15. Wood Stock: Excellent
16. Rust Prevention:

    Test 1 - 7

    Test 2 - 7

    Avg - 7.0

17. Reason for Elimination: Continue testing

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Test # 14

Product: Sprayon #711 Penetrant/Lube/Demoisturize

Function: Multipurpose, prevents rust
Displaces moisture and lubricates

Evaluation Notes

1. Odor: Strong fly spray, lasting
2. Feel: Very oily feel
3. Drying Rate: Medium drying rate
4. Penetration: Slow spreading, but continuous, clear color
5. Surface Wetting: Minimum spreading, removes oxidation, bright
6. Grease Displacement: Rapid spread, no dissolving, good cleanup
7. Type Container: 12 oz aerosol, nozzle with straw
8. Liquid Appearance: Very watery, light tan
9. Wood-Open Pore: Damp look, no damage
10. Metal Surface: Oily look, no rust within 24 hours
11. Rust Removal: Some rust removed
12. Displace Moisture: Excellent
13. Displace Solids: Good
14. Gun Barrel: Excellent
15. Wood Stock: Excellent
16. Rust Prevention:

    Test 1 - 6

    Test 2 - 5

    Avg - 5.5

17. Reason for Elimination: Continue testing

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Test # 15

Product: CRC - 3-36

Function: Multipurpose, prevents rust
Displaces moisture and lubricates

Evaluation Notes

1. Odor: Pleasant peppermint smell, lasting
2. Feel: Light oily feel
3. Drying Rate: Medium drying rate
4. Penetration: Medium penetrating and spreading, tan color
5. Surface Wetting: Slow spread, removes oxidation, good cleanup
6. Grease Displacement: Rapid spreading, some dissolving, easy cleanup
7. Type Container: 1 oz aerosol, bottle
8. Liquid Appearance: Watery, light tan
9. Wood-Open Pore: Damp look, no damage
10. Metal Surface: Oily look, no rust within 24 hours
11. Rust Removal: Some rust removed
12. Displace Moisture: Excellent
13. Displace Solids: Good
14. Gun Barrel: Excellent
15. Wood Stock: Excellent
16. Rust Prevention:

    Test 1 - 4

    Test 2 - 5

    Avg - 4.5

17. Reason for Elimination: Continue testing

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Test # 11

Product: F. F. Houghton - ELP All Purpose

Function: Multipurpose, prevents rust
Displaces moisture, dirt and lubricates

Evaluation Notes

1. Odor: Fly spray smell, not lasting
2. Feel: Oily feel
3. Drying Rate: Rapid drying
4. Penetration: Rapid spreading, med. spreading, tan stain
5. Surface Wetting: Slow spreading, rapid dry to oily film, hard to clean
6. Grease Displacement: Rapid spread, no dissolving, good cleanup
7. Type Container: 12 oz aerosol, nozzle with straw
8. Liquid Appearance: Waxy, dark tan
9. Wood-Open Pore: Damp look, no damage
10. Metal Surface: Oil look, no rust within 24 hours
11. Rust Removal: No rust removal
12. Displace Moisture: Poor
13. Displace Solids: Fair
14. Gun Barrel: Good
15. Wood Stock: Good
16. Rust Prevention:

    Test 1 - 8

    Test 2 - 5

    Avg - 6.5

17. Reason for Elimination: Continue testing

21-23

Test # 13

Product: Revlon - Ten 4

Function: Multipurpose, prevents rust
Displaces moisture, gums, dirt and lubricates

Evaluation Notes

1. Odor: Strong fly spray, lasting
2. Feel: Light oily feel
3. Drying Rate: Medium drying rate
4. Penetration: Rapid absorption and spreading, dark tan stain
5. Surface Wetting: Slow spreading, oily appearance, good cleanup
6. Grease Displacement: Rapid spread, no dissolving, good cleanup
7. Type Container: 11 oz aerosol, nozzle with spray
8. Liquid Appearance: Dark tan, watery
9. Wood-Open Pore: Damp look, no damage
10. Metal Surface: Damp look, no rust within 24 hours
11. Rust Removal: Most rust removed
12. Displace Moisture: Good
13. Displace Solids: Good
14. Gun Barrel: Good
15. Wood Stock: Good
16. Rust Prevention:

    Test 1 - 8

    Test 2 - 5

    Avg - 6.5

17. Reason for Elimination: Continue testing

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APPENDIX D

(Pictorial Presentation)

1. Lubrication procedures.

2. Individual components at the start and completion of test. (Available upon request.)

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AL 0029401

REMINGTON ARMS COMPANY, INC.

INTER-DEPARTMENTAL CORRESPONDENCE

Remington SPORT PETERS MEN

"CONFINE YOUR LETTER TO ONE SUBJECT ONLY"

Distribution: C.B. Workman
C.E. Ritchie

RESEARCH TEST and MEASUREMENT REPORT – Report No. 82 0331

Lubricant Evaluation: M700 Cock and Fire Simulation

Prepared by: Fred Supry

Date Prepared: 3-22-82

Proofread and Cleared By:

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

Signature: James H. Hemmings Date: 4-14-82

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

Signature: C. Evan Ritchie Date: 4-14-82

PLAINTIFF'S EXHIBIT 3157

1 of 22

AL 0029379

TEST & MEASUREMENT LAB REPORT

REPORT NUMBER: 82 0331

REPORT TITLE: Lubricant Evaluation: M700 Cock and Fire Simulation

MODEL(S): 700

GAUGE OR CALIBER: 30.06

DATE: 3-22-82

WORK ORDER NO.: C-1803-000

PART NAME:

DESIGNER/ENGINEER:

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: Static
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 _____
10. DRY CYCLE – NO. OF SAMPLES TESTED 5 - each lubricant

    MAX. NO. OF CYCLES 25000

Report No. 82 0331

REMINGTON ARMS COMPANY, INC.
Firearms Research Division

April 13, 1982

TO: J.H. Hennings

FROM: F.L. Supry

REPORT TITLE: Evaluation of Lubricants on Firearms M700 Cock and Fire Simulation

ABSTRACT

C.E. Ritchie requested that the Test Lab conduct a cock and fire evaluation on five spray lubricants.

1. Du Pont – Synthetic Diester
2. Kryion – Ten - 4
3. Sprayon – 711
4. CRC – 3-36
5. Houghton – HLP

These five lubricants were selected for evaluation from the results of a preliminary evaluation conducted by A.B. Hughes, Senior Consultant, ESD Maintenance Engineering Group, Du Pont. A copy of his evaluation for each of the five lubricants is located in Appendix "C".

Engineering Dept.

SCOPE OF TEST

To compare the five lubricants in a Model 700 cock and fire simulation test.

TEST RESULTS

In their order of finish, from the best performing lubricant to the poorest performing lubricant, the following results were obtained.

LUBRICANT	AVERAGE CYCLE LIFE (5 Samples)
1. Du Pont – Synthetic Diester	21,181 cys.
2. Sprayon – 711	17,646 cys.
3. CRC – 3-36	14,382 cys.
4. Houghton – HLP	8,333 cys.
5. Kryion – Ten-4	2,830 cys.

REPORT TEXT

A. Trigger pull, sear lift, sear engagement, safe on, safe off, and bolt lift measurements were taken on each test vehicle at the start of the test, and at 5000 cycle intervals. Remington specifications for the M700 components used are:

- Trigger Pull — 3½ lbs. – 6½ lbs.
- Sear Lift — .005" – .018"
- Sear Engagement — .015" – .020"
- Safe "On" – "Off" — None Established
- Bolt Lift — None Established

Refer to Appendix "A", data sheets No. 1 through No. 5, for individual results.

The Rc hardness was measured, at the cocking cam area, on each M700 bolt. Remington specifications Rc 37-46.

Refer to Appendix "A", data sheet No. 6 for individual hardness, lubricant used, simulator used and cycles completed.

A graphical analysis comparing the lubricants tested to their cycle life, and their cycle life to the simluator used is found in Appendix "B".

TEST PROCEDURE

A. Measurements

1. Trigger Pull
Trigger Pull measurements were conducted using a Chatillon Model IN-10 pull scale.

2. Sear Lift and Sear Engagement
Sear lift and sear engagement measurements were conducted using a Model FC-14 optical comparator and measuring machine.

3. Safe "ON" and "OFF" Forces.
Safe On and Off forces were taken using a Chatillon Model DPP-25, push-pull scale.

4. Bolt Lift
Bolt lift forces, both cocked and fired, were taken utilizing a Chatillon Model 80D pull scale mounted on a machine designed to be used for bolt lift measurements.

5. Rc Hardness
The Rc hardness measurements were taken by George Catta, a production inspector, utilizing a Wilson Rockwell Hardness Tester.

B. Lubrication – (Pictorial presentation - Appendix "D")

1. Lubrication Points

a.	Receiver:	Locking lug area. Track on receiver tang.
b.	Bolt:	Cocking cam Locking lugs
c.	Firing Pin:	Threads Striker radius and track.
d.	Trigger Assembly:	Sear safety cam face. Interior of trigger assembly, through sear inspection hole.

2. Lubrication procedure

a. Components to be lubricated were completely degreased, using the solvent degreasing tanks located in our Heat Treat Department.

b. The interior of the trigger assembly was lubricated by holding the spray can to direct the spray into the sear inspection hole. Duration of spray approximately 1 second.

NOTE: The two position nozzle on Du Pont aerosol can was more difficult to control for pin point application, than the standard plastic tubes on the other samples. (Pictorial example included.)

ALEKSICH

APPENDIX A

(Data Sheets)

M 700 COCK & FIRE SIMULATION — FLS

LUBRICANT EVALUATION — 3-5-92

FIRST SAMPLE of EACH LUBRICANT

		1	2	3	4	5	6
		TRIGGER PULL	SEAR LIFT	SEAR ENGAGEMENT	SAFE ON	SAFE OFF	BOLT LIFT COCKED	BOLT LIFT FIRED
REM	SPECS →	3½-6½ lbs	.005"-.008"	.015"-.020"	(lbs)	(lbs)	(lbs)	(lbs)
	1 - DUPONT	(AVG. OF 3)			(AVG. OF 3)	(AVG. OF 3)	(AVG. OF 3)	(AVG. OF 3)
	2 - 711							
	3 - CRC							
	4 - HLP							
	5 - Tex 4							
	1	6.75	.005	.020	7.5	6.50	3.00	7.00
0	2	6.50	.006	.015	6.75	4.25	2.00	6.50
cycles	3	5.50	.005	.016	5.25	4.25	3.00	6.00
	4	6.00	.008	.017	7.00	5.75	3.00	6.50
	5	6.50	.008	.016	6.75	4.50	4.50	7.50
	1	6.00	.0055	.020	5.50	4.00	2.50	6.50
5000	2	6.00	.0065	.0175	6.00	5.50	2.50	6.50
cycles	3	6.00	.006	.020	6.00	4.50	2.00	6.00
	4	5.75	.010	.017	7.50	5.00	3.00	7.25
	* 5	6.50	.010	.020	7.25	5.50	5.00	9.00
	1	5.75	.0081	.020	5.75	4.0	2.25	7.00
10,000	* 2	5.75	.008	.018	5.25	3.75	2.50	10.50
cycles	3	5.25	.008	.022	4.50	3.75	2.0	7.00
	4	6.25	.0095	.019	9.25	4.75	3.0	13.00
	5	—	—	—	—	—	—	—
	1	6.00	.009	.0205	6.00	4.00	2.00	8.50
15,000	2	—	—	—	—	—	—	—
cycles	3	5.50	.009	.024	5.00	5.50	2.00	8.50
	* 4	6.00	.0105	.019	6.50	4.50	3.00	18.00
	5	—	—	—	—	—	—	—
	* 1	6.00	.0095	.0211	6.00	4.00	2.00	8.00
20,000	2	—	—	—	—	—	—	—
cycles	* 3	5.50	.0105	.027	4.50	4.00	2.00	9.00
	4	—	—	—	—	—	—	—
	5	—	—	—	—	—	—	—
	1	—	—	—	—	—	—	—
25,000	2	—	—	—	—	—	—	—
cycles	3	—	—	—	—	—	—	—
	4	—	—	—	—	—	—	—
	5	—	—	—	—	—	—	—
	* 1	FAILED	15,594	cycles				
	* 2	FAILED	6,228	cycles				
	* 3	FAILED	16,359	cycles				
	* 4	FAILED	10,400	cycles				
	* 5	FAILED	1990	cycles			DATA SHEET	

M700 COCK & FIRE SIMULATION — FLS

LUBRICANT EVALUATION — 3-8-82

SECOND SAMPLE OF EACH LUBRICANT

		TRIGGER PULL	SEAR LIFT	SEAR ENGAGEMENT	SAFE ON	SAFE OFF	BOLT LIFT COCKED	BOLT LIFT FIRED
REMISPECS →		3½-6½ lbs	.005"-.018"	.015"-.020"	(lbs)	(lbs)	(lbs)	(lbs)
1	DUPONT	(AVG. OF 3)			(AVG. OF 3)	(AVG. OF 3)	(AVG. OF 3)	(AVG. OF 3)
2	711							
3	1RE							
4	HLP							
5	TEN 4							
	1	6.00	.009	.0185	6.00	4.50	4.00	8.00
0	2	5.00	.006	.018	7.50	4.75	3.00	6.00
cycles	3	6.00	.012	.012	7.00	4.50	3.00	7.00
	4	6.75	.0095	.016	7.50	6.75	2.50	7.00
	5	5.50	.008	.016	7.50	5.50	3.50	7.00
5000	1	5.25	.0095	.0215	6.00	4.50	3.50	7.00
cycles	2	5.00	.0065	.019	5.75	4.00	3.50	6.00
	3	5.75	.013	.020	5.00	4.00	3.00	8.00
	4	6.25	.0095	.020	6.75	6.25	2.50	8.00
	* 5	5.00	.009	.020	5.75	4.00	3.50	13.00
10,000	1	5.50	.0111	.025	5.75	4.25	3.50	7.00
cycles	2	4.75	.0065	.019	5.25	4.00	2.50	6.50
	* 3	6.00	.013	.023	6.25	3.75	3.00	15.00
	* 4	6.00	.0095	.021	6.50	5.75	3.00	25.00
	5	—	—	—	—	—	—	—
15,000	1	5.50	.011	.026	5.50	4.25	4.00	7.25
cycles	2	4.75	.0075	.019	5.00	4.00	3.00	7.00
	3	—	—	—	—	—	—	—
	4	—	—	—	—	—	—	—
	5	—	—	—	—	—	—	—
20,000	1	5.50	.011	.0265	5.50	4.00	4.00	9.25
cycles	2	4.75	.009	.019	5.25	4.50	3.00	61.50
	3	—	—	—	—	—	—	—
	4	—	—	—	—	—	—	—
	5	—	—	—	—	—	—	—
25,000	* 1	5.25	.011	.0285	5.50	3.75	4.00	14.00
cycles	* 2	4.50	.0095	.021	5.25	4.00	2.50	7.00
	3	—	—	—	—	—	—	—
	4	—	—	—	—	—	—	—
	5	—	—	—	—	—	—	—
	* 1	COMPLETED 25,000 cycles						
	* 2	COMPLETED 25,000 cycles						
	* 3	FAILED 8317 cycles						
	* 4	FAILED 6115 cycles						
	* 5	FAILED 2788 cycles					DATA SHEET 2	

8 08 22

AL 0029387

M700 COCK & FIRE SIMULATION — F.L.S.

LUBRICANT EVALUATION — 3-8-82

THIRD SAMPLE OF EACH LUBRICANT

		1	2	3	4	5	6
		TRIGGER PULL $0\frac{1}{2}$-$6\frac{1}{2}$ lbs	SEAR LIFT .005"-.019"	SEAR ENGAGEMENT .015"-.020"	SAFE ON (lbs)	SAFE OFF (lbs)	BOLT LIFT COCKED (lbs)	BOLT LIFT FIRED (lbs)
1	DUPONT	(AVG OF 3)			(AVG OF 3)	(AVG OF 3)	(AVG OF 3)	(AVG OF 3)
2	TIL							
3	CRC							
4	HLP							
5	TEN 4							
	1	5.75	.007	.015	7.25	4.50	2.50	6.50
0	2	6.00	.008	.015	7.50	7.50	2.50	8.25
cycles	3	6.25	.008	.017	6.75	5.50	3.00	7.00
	4	5.75	.0125	.0195	8.00	5.50	3.00	7.00
	5	5.50	.008	.015	8.00	5.00	2.50	6.00
5000	1	6.25	.009	.019	6.50	4.25	2.00	6.00
cycles	2	5.25	.009	.021	5.25	7.50	3.50	6.50
	3	6.25	.0105	.0175	7.25	4.00	3.00	9.00
	4	5.75	.0125	.021	7.00	5.00	3.00	10.00
	*5	5.50	.013	.021	6.00	3.75	2.50	18.00
10000	1	6.00	.010	.020	6.00	3.75	2.00	5.50
cycles	2	5.25	.009	.021	7.00	6.00	3.50	7.00
	3	6.00	.015	.0195	6.75	4.75	3.00	10.00
	*4	5.75	.0125	.0225	6.50	4.50	3.50	51.00
	5	—	—	—	—	—	—	—
15000	1	5.25	.0115	.020	5.75	4.00	2.00	6.50
cycles	*2	5.50	.0095	.022	6.50	5.50	4.00	14.00
	*3	6.50	.015	.0195	6.75	4.00	3.00	15.00
	4	—	—	—	—	—	—	—
	5	—	—	—	—	—	—	—
20000	1	5.75	.0115	.020	6.00	4.00	2.00	6.00
cycles	2	—	—	—	—	—	—	—
	3	—	—	—	—	—	—	—
	4	—	—	—	—	—	—	—
	5	—	—	—	—	—	—	—
25000	*1	6.00	.0115	.021	6.25	3.75	2.00	12.00
cycles	2	—	—	—	—	—	—	—
	3	—	—	—	—	—	—	—
	4	—	—	—	—	—	—	—
	5	—	—	—	—	—	—	—
	*1	COMPLETED	25,000	cycles				
	*2	FAILED	15,140	cycles				
	*3	FAILED	10,410	cycles				
	*4	FAILED	6788	cycles				
	*5	FAILED	2484	cycles			DATA SHEET 3	

M700 COCK & FIRE SIMULATION — F.L.S.

LUBRICANT EVALUATION — 3-5-92

FOURTH SAMPLE OF EACH LUBRICANT

		TRIGGER PULL 3¼ - 6½ lbs	SEAR LIFT .005" - .018"	SEAR ENGAGEMENT .015" - .020"	SAFE ON (lbs)	SAFE OFF (lbs)	BOLT LIFT Locked (lbs)	BOLT LIFT Fired (lbs)
1	DuPont	(AVG. OF 3)			(AVG. OF 3)	(AVG. OF 3)	(AVG. OF 3)	(AVG. OF 3)
2	TIL							
3	CRC							
4	HLP							
5	TEN 4							
	1	6.50	.0095	.019	6.75	4.25	4.00	8.00
	2	6.50	.008	.019	8.50	5.25	3.50	7.00
cycles	3	5.50	.008	.016	7.25	4.75	3.00	9.00
	4	5.75	.009	.019	8.25	5.50	4.00	7.50
	5	5.50	.005	.017	9.00	6.75	3.00	7.50
5000	1	6.25	.010	.023	6.25	3.25	3.00	8.00
cycles	2	6.00	.011	.020	7.50	4.25	3.50	7.00
	3	5.50	.0085	.021	7.00	4.50	3.00	8.00
	4	6.00	.010	.019	7.25	5.00	4.00	10.00
*	5	5.75	.010	.0185	7.00	4.75	3.00	16.00
10000	1	5.75	.010	.023	5.75	3.50	4.00	8.00
cycles	2	6.00	.012	.022	7.00	4.00	3.00	8.00
	3	5.50	.0085	.021	6.50	4.25	3.00	8.00
	* 4	6.00	.010	.021	7.00	5.25	4.00	29.00
	5	—	—	—	—	—	—	—
15000	1	6.25	.0105	.024	5.25	3.00	3.50	9.00
cycles	2	6.25	.013	.0225	7.50	4.00	3.50	9.00
	* 3	5.50	.0105	.0215	6.75	4.50	3.25	22.00
	4	—	—	—	—	—	—	—
	5	—	—	—	—	—	—	—
20000	* 1	5.75	.0115	.026	5.75	3.00	3.00	24.00
cycles	* 2	5.75	.0125	.024	6.50	4.00	4.00	24.00
	3	—	—	—	—	—	—	—
	4	—	—	—	—	—	—	—
	5	—	—	—	—	—	—	—
25000	1	—	—	—	—	—	—	—
cycles	2	—	—	—	—	—	—	—
	3	—	—	—	—	—	—	—
	4	—	—	—	—	—	—	—
	5	—	—	—	—	—	—	—
	* 1	FAILED	19520 cycles					
	* 2	FAILED	16865 cycles					
	* 3	FAILED	11820 cycles					
	* 4	FAILED	8576 cycles					
	* 5	FAILED	3667 cycles				DATA SHEET 4	

M700 LOCK & FIRE SIMULATION — FLS

LUBRICANT EVALUATION — 3-9-92

FIFTH SAMPLE OF EACH LUBRICANT

		TRIGGER PULL 3½-6½ lbs	SEAR LIFT .005"-.018"	SEAR ENGAGEMENT .015"-.026"	SAFE ON (lbs)	SAFE OFF (lbs)	BOLT LIFT COCKED (lbs)	BOLT LIFT FIRED (lbs)
1	DuPont	(AVG of 3)			(AVG of 3)	(AVG of 3)	(AVG of 3)	(AVG of 3)
2	711							
3	CRC							
4	HLP							
5	TEN 4							
	1	6.00	.0095	.0117	7.00	4.75	2.00	7.00
0	2	5.75	.0085	.0155	6.75	5.00	3.50	7.00
cycles	3	5.75	.0105	.0215	6.50	5.00	3.00	9.00
	4	6.25	.012	.016	7.00	4.50	3.00	8.00
	5	6.25	.008	.018	7.25	5.50	3.00	6.50
5000	1	5.50	.010	.0205	7.50	4.50	2.50	7.00
cycles	2	6.00	.0085	.016	5.75	4.00	4.00	8.00
	3	5.75	.0105	.0215	5.50	4.25	3.00	8.00
	4	6.25	.013	.019	6.50	4.25	4.00	7.50
	*5	6.25	.010	.020	5.75	4.00	3.50	18.00
10,000	1	5.25	.010	.021	7.50	4.00	3.00	8.00
cycles	2	5.50	.010	.018	5.75	3.75	4.00	7.50
	3	5.75	.0105	.0215	5.50	4.25	3.00	7.50
	*4	6.25	.0135	.025	7.25	3.75	4.00	27.00
	5	—	—	—	—	—	—	—
15,000	1	5.50	.0105	.021	6.50	4.00	3.00	8.00
cycles	2	5.75	.010	.018	5.75	4.00	3.50	7.50
	3	6.00	.0105	.0215	5.50	4.50	3.00	7.00
	4	—	—	—	—	—	—	—
	5	—	—	—	—	—	—	—
20,000	1	5.50	.0105	.021	7.00	3.75	3.50	14.00
cycles	2	6.25	.010	.019	5.50	4.00	3.50	9.00
	3	5.75	.0105	.022	5.50	4.25	3.00	11.00
	4	—	—	—	—	—	—	—
	5	—	—	—	—	—	—	—
25,000	*1	5.00	.0111	.0122	7.00	4.00	3.00	28.00
cycles	*2	5.75	.011	.0220	5.75	3.75	4.00	12.00
	*3	6.25	.011	.0223	5.25	4.00	4.00	15.00
	4	—	—	—	—	—	—	—
	5	—	—	—	—	—	—	—
	*1	FAILED	20790	cycles				
	*2	COMPLETED	25000	cycles				
	*3	COMPLETED	25000	cycles				
	*4	FAILED	3787	cycles				
	*5	FAILED	3220	cycles			DATA SHEET 5	

M 700 COCK & FIRE SIMULATION FLS

LUBRICANT EVALUATION 3-10-82

R_c HARDNESS: M700 BOLT COCKING CAM AREA

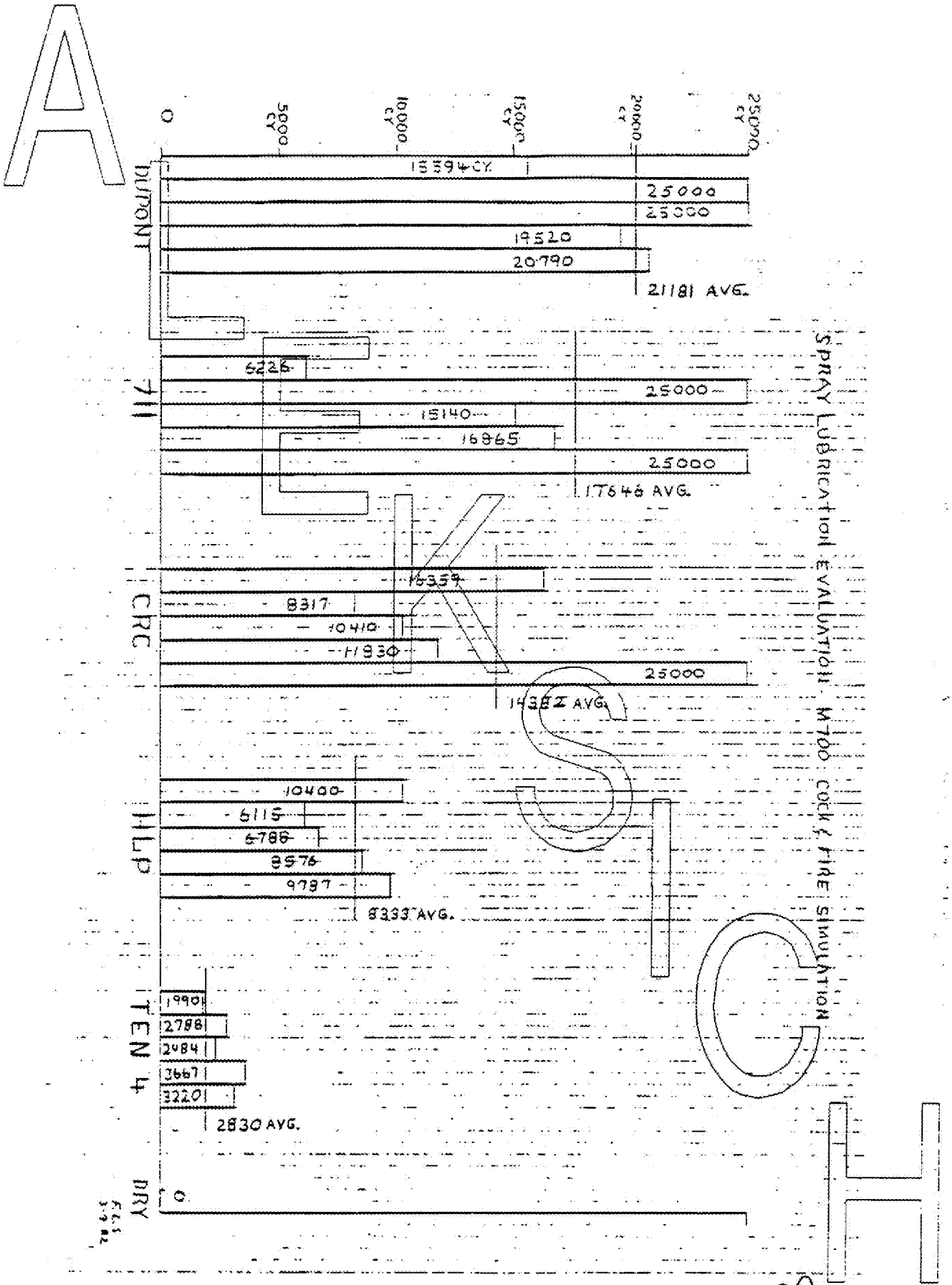
REQ. SPECS. R_c 37-46	R_c HARDNESS	LUBRICANT USED	SIMULATOR USED	CYCLES COMPLETED
* BOLT NO. *				
C1	39	DUPONT	1	15 594
C9	40	DUPONT	3	25 000
C12	40	DUPONT	2	25 000
C19	38	DUPONT	4	19 520
C20	37	DUPONT	1	20 790
C3	38	711	3	6 226
C7	39	711	2	25 000
C16	39	711	1	15 140
C27	38	711	2	16 865
C29	39	711	4	25 000
C4	39	CRC 3-36	4	16 359
C10	39	CRC 3-36	1	8 317
C17	40	CRC 3-36	3	10 410
C21	39	CRC 3-36	2	11 830
C25	39	CRC 5-56	4	25 000
C11	39	HLP	4	10 400
C18	39	HLP	3	6 115
C24	39	HLP	2	6 788
C26	39	HLP	1	8 576
C28	38	HLP	1	9 787
C2	38	TEN-4	2	1 990
C5	38	TEN-4	2	2 788
C6	39	TEN-4	3	2 484
C8	38	TEN-4	4	3 667
C13	39	TEN-4	1	3 220
C22	39	DRY		0

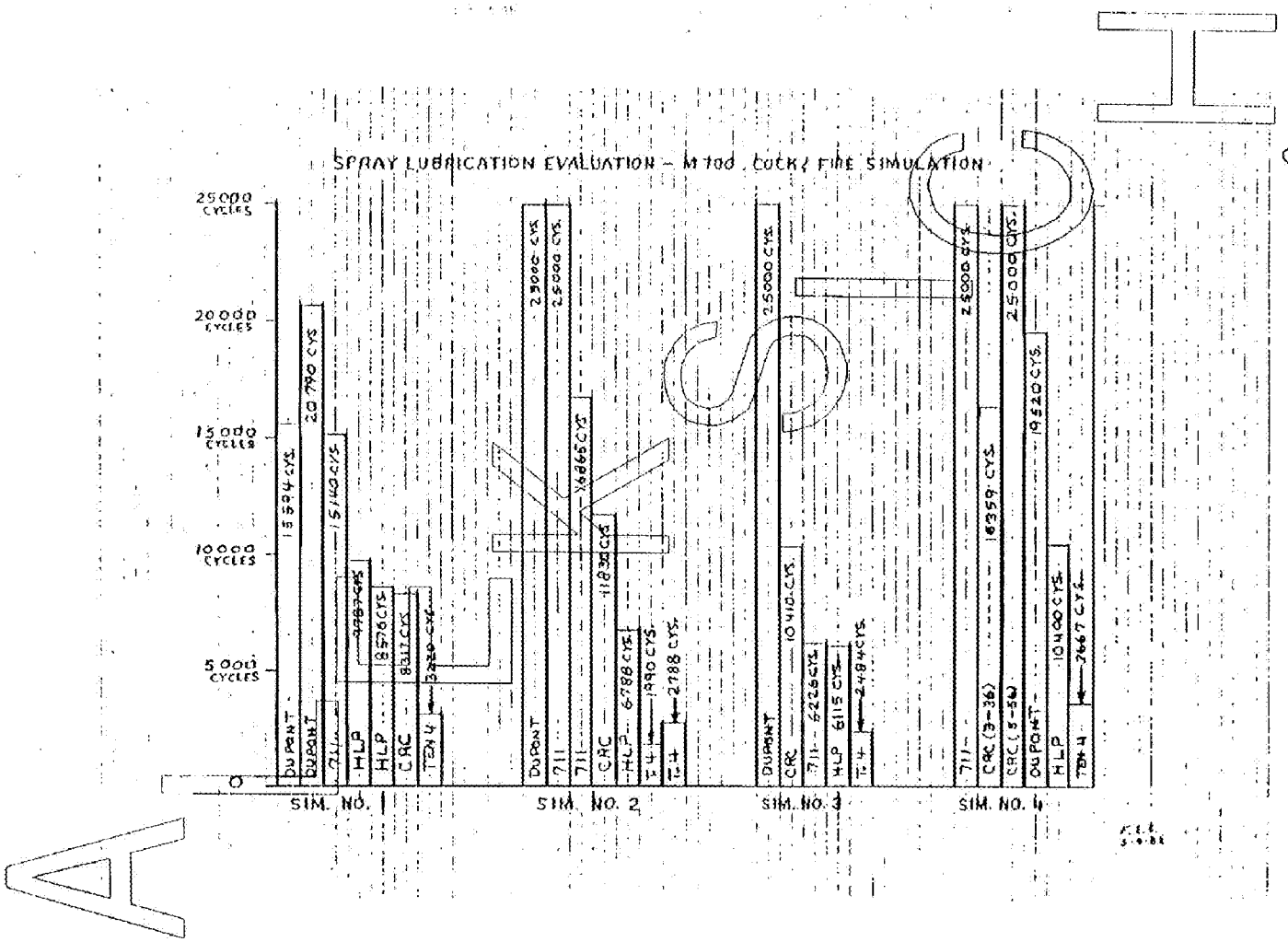
DATA SHEET 6

ALEKSICH

APPENDIX B

(Graphic Presentation)


SPRAY LUBRICATION EVALUATION M700 COCK & FIRE SIMULATION
0
5000 CY
10000 CY
15000 CY
20000 CY
25000 CY
DIFFONT
15594 CY
25000
25000
19520
20790
21181 AVG.
TIL
6226
25000
15140
16865
25000
17646 AVG.
CRC
16359
8317
10410
11830
25000
14382 AVG.
HLP
10400
6115
6786
8576
9797
8333 AVG.
TEN 4
1990
2788
2984
3667
3220
2830 AVG.
DRY
0



AL 0029394

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ALEKSICH

APPENDIX C

(Previous Evaluation)

Test # 20

Product: Du Pont - Synthetic Diester - 20%

Function: Multipurpose, prevents rust
Displaces moisture, dirt and lubricates

Evaluation Notes

1. Odor: Synthetic chemical oily smell, not lasting
2. Feel: Light oily feel
3. Drying Rate: Slow drying
4. Penetration: Rapid penetration and spreading, clear color
5. Surface Wetting: Local wetting, removes oxidation, good cleanup
6. Grease Displacement: Rapid spreading, no dissolving, good cleanup
7. Type Container: 4 oz aerosol, nozzle with straw
8. Liquid Appearance: Watery, light tan
9. Wood-Open Pore: Damp look, no damage
10. Metal Surface: Wet look, no rust within 24 hours
11. Rust Removal: Most rust removed
12. Displace Moisture: Excellent
13. Displace Solids: Excellent
14. Gun Barrel: Excellent
15. Wood Stock: Excellent
16. Rust Prevention:

    Test 1 - 7

    Test 2 - 7

    Avg - 7.0

17. Reason for Elimination: Continue testing

Test # 14

Product: Spravon #711 Penetrant/Lube/Demoisturize

Function: Multipurpose, prevents rust
Displaces moisture and lubricates

Evaluation Notes

1. Odor: Strong fly spray, lasting
2. Feel: Very oily feel
3. Drying Rate: Medium drying rate
4. Penetration: Slow spreading, but continuous, clear color
5. Surface Wetting: Minimum spreading, removes oxidation, bright
6. Grease Displacement: Rapid spread, no dissolving, good cleanup
7. Type Container: 12 oz aerosol, nozzle with straw
8. Liquid Appearance: Very watery, light tan
9. Wood-Open Pore: Damp look, no damage
10. Metal Surface: Oily look, no rust within 24 hours
11. Rust Removal: Some rust removed
12. Displace Moisture: Excellent
13. Displace Solids: Good
14. Gun Barrel: Excellent
15. Wood Stock: Excellent
16. Rust Prevention:

    Test 1 - 6

    Test 2 - 5

    Avg - 5.5

17. Reason for Elimination: Continue testing

Test # 15

Product: CRC - 3-36

Function: Multipurpose, prevents rust
Displaces moisture and lubricates

Evaluation Notes

1. Odor: Pleasant peppermint smell, lasting
2. Feel: Light oily feel
3. Drying Rate: Medium drying rate
4. Penetration: Medium penetrating and spreading, tan color
5. Surface Wetting: Slow spread, removes oxidation, good cleanup
6. Grease Displacement: Rapid spreading, some dissolving, easy cleanup
7. Type Container: 1 oz aerosol, nozzle
8. Liquid Appearance: Watery, light tan
9. Wood-Open Pore: Damp look, no damage
10. Metal Surface: Oily look, no rust within 24 hours
11. Rust Removal: Some rust removed
12. Displace Moisture: Excellent
13. Displace Solids: Good
14. Gun Barrel: Excellent
15. Wood Stock: Excellent
16. Rust Prevention:

    Test 1 - 4

    Test 2 - 5

    Avg - 4.5
17. Reason for Elimination: Continue testing

Test # 11

Product: E. F. Houghton - ELP All Purpose

Function: Multipurpose, prevents rust
Displaces moisture, dirt and lubricates

Evaluation Notes

1. Odor: Fly spray smell, not lasting
2. Feel: Oily feel
3. Drying Rate: Rapid drying
4. Penetration: Rapid spreading, med. spreading, tan stain
5. Surface Wetting: Slow spreading, rapid dry to oily film, hard to clean
6. Grease Displacement: Rapid spread, no dissolving, good cleanup
7. Type Container: 12 oz aerosol, nozzle with straw
8. Liquid Appearance: Waxy, dark tan
9. Wood-Open Pore: Damp look, no damage
10. Metal Surface: Oil look, no rust within 24 hours
11. Rust Removal: No rust removal
12. Displace Moisture: Poor
13. Displace Solids: Fair
14. Gun Barrel: Good
15. Wood Stock: Good
16. Rust Prevention:

    Test 1 - 8

    Test 2 - 5

    Avg - 6.5

17. Reason for Elimination: Continue testing

Test # 13

Product: Krylon - Tan 4

Function: Multipurpose, prevents rust
Displaces moisture, gums, dirt and lubricates

Evaluation Notes

1. Odor: Strong fly spray, lasting
2. Feel: Light oily feel
3. Drying Rate: Medium drying rate
4. Penetration: Rapid absorption and spreading, dark tan stain
5. Surface Wetting: Slow spreading, oily appearance, good cleanup
6. Grease Displacement: Rapid spread, no dissolving, good cleanup
7. Type Container: 11 oz aerosol, nozzle with stray
8. Liquid Appearance: Dark tan, watery
9. Wood-Open Pore: Damp look, no damage
10. Metal Surface: Damp look, no rust within 24 hours
11. Rust Removal: Most rust removed
12. Displace Moisture: Good
13. Displace Solids: Good
14. Gun Barrel: Good
15. Wood Stock: Good
16. Rust Prevention:

    Test 1 - 8

    Test 2 - 5

    Avg - 6.5

17. Reason for Elimination: Continue testing

APPENDIX D

(Pictorial Presentation)

1. Lubrication procedures.
2. Individual components at the start and completion of test. (Available upon request.)

REMINGTON ARMS COMPANY, INC.

INTER-DEPARTMENTAL CORRESPONDENCE

Remington DUPONT PETERS DUPONT

"CONFINE YOUR LETTER TO ONE SUBJECT ONLY"

XC: L. R. Blackhurst, L. B. Bosquet, H. K. Boyle, J. W. Brooks, J. J. Burns, G. D. Campbell, J. H. Carter, W. W. Cook, G. E. Fletcher, W. L. Ganey, M. C. Hardy, R. L. Joy, H. C. Munson, C. O. Pardee, D. I. Roark, D. J. Sanita, J. R. Snedeker, W. C. VanSickle, W. A. Warren, L. G. Wilke, C. B. Workman

March 5, 1982

J. P. LINDE

M/700 BOLT LOCK CHANGE
BOLT WILL OPEN WITH SAFE ON

Production change over has started as of February 26, 1982. Guns are being marked as follows:

- All guns stamped with Final Inspection code AC or later.
- Approximate Serial Number changeover of guns was:
  - In Final Assembly - B6349XXX
  - Custom Shop - B630XXXX

by G. J. Hill 3/5/82
G. J. Hill, Supervisor
Process Engineering
Current Products

GJH/cac

PLAINTIFF'S EXHIBIT 3158

101

AL 002404

20th April 1982

Dear Clark,

Many thanks for the bits for the Remington Mohawk 600.
Now I can go ahead with my plans to make up an ultra-light deer rifle for mountain hunting. I have been worrying over whether or not to turn the barrel down to a slimmer contour as I ~~am afraid~~ that it will lose some of its fine accuracy. As it is, it is the most consistently accurate sporter on my rack. But I want the lightest outfit I can get.
Chet Brown sent ~~me one~~ of his fibreglass stocks for it and I already had one of his handy bolt release catches (this is one that Remington should adopt if they release a new Model 600).

I am going to have to do something about the trigger too. While I was deer hunting last week I went to load the magazine and chamber a round. When I did chamber a round the bloody rifle discharged and blew a hole through the wall of my tent! Luckily, I had my gunsmith friend along and a tool kit. He pulled it apart and re-adjusted it so that it now seems to work all right again. But this is the fourth time that it has screwed up.
When I get this darn rifle completed and write a story about it I will send you a copy. My friend is making up a similar outfit on the Ruger M77 .308. What we want is a light rifle to carry on back packing trips where every ounce counts.
I think Remington could well bring out a similar rifle in .308 and .7mm/08 on a Mohawk 600 action.
By the way, is Remington still making the Mohawk 600 action?
Hope to get over to the States again this year and if I see you we will have a couple of small beers and a chat.
I am trying to get a hundred things done so that I can get up to the NT and hunt buffalo along the Roper River next month. I have a friend coming out from Germany. He works for Dynamit Nobel.

Kindest Regards,

Nick

(Nick Barvey) Gun Editor
Sporting Shooter Magaizine

PLAINTIFF'S EXHIBIT
3159

BY AIR MAIL PAR AVION

AEROGRAMME

[redacted]

AUSTRALIA 33c

N.S.W. AUST

TO MR Clark Workman,
2 Johnson Ave,
Mohawk,
New York 13407,

COUNTRY OF DESTINATION U.S.A

SENDER'S NAME AND ADDRESS

Nick Harvey,
Sporting Shooter Magazine,
Hill End, Via Mudgee,
N.S.W 2850 Australia.

Postcode

Fold flaps before moistening gum. for maximum adhesion, press down for a few seconds. If anything is enclosed or any form used this form fly.

FOLD SIDE FLAPS FIRST

FOLD SIDE FLAPS FIRST

AL 0029410

292

REMINGTON ARMS COMPANY, INC.
Firearms Research Division

August 19, 1981

c: T.L.Capeletti
J.R.Snedeker
J.P.Linde
J.W.Bower
C.E.Ritchie
K.R.Thondukolam

TO: C. B. WORKMAN

FROM: J. W. BROOKS

SUBJECT: MODEL 700 - Cleaning & Lubrication

Mr. Allan Hughes from the Du Pont Lubrication Lab will be here Wednesday, August 26th, at 9:00 AM to give us the information he has come up with during his investigation of a cleaner and lubricant for the Model 700 Fire Control.

If there are other people you feel would benefit from this discussion and presentation, please feel free to have them attend.

Place: Research Conference Room - 52-4

JWB:T

REMINGTON ARMS COMPANY, INC.

INTER-DEPARTMENTAL CORRESPONDENCE

Remington DUPONT PETERS DUPONT

"CONFINE YOUR LETTER TO ONE SUBJECT ONLY"

xc: J. P. Glas
J. E. Preiser
J. S. Martin
F. E. Martin
copy to ② Workman

Ilion, New York
April 28, 1981

Joe - This basic list can be used to develop our advertising campaign in conjunction with our competitive evaluation now in progress. Clark

TO: C. B. WORKMAN

FROM: T. L. CAPELETTI

SUBJECT: MODEL 700 FEATURES FOR POSSIBLE USE IN ADVERTISING

In response to Marketing's inquiry concerning strengths of the M/700 design which may be used in advertising campaigns, I asked Fred Martin to itemize areas he felt were significant. Fred provided me with the following information:

* Strength	-	Action - Ability to withstand abuse of inexperienced handloaders.
		Extractor - Comparison of competitive systems.
* Accuracy	-	Still the most accurate production center fire rifle made. Accurate enough to be used competitively "out of the box".
Fire Control	-	Adjustable and smooth still the best production trigger available - with planned modifications, will have another safety feature to advertise.
Calibers	-	A caliber and a loading available for anything from ground squirrels to Kodiak and Brown bear or elephant and rhino.
Adaptable	-	Several variations are available for military and police work. Gun/cartridge combination can be tailored to individual application.

As indicated by the *, Fred feels that strength of the action and extraction systems and accuracy are prime selling points for these rifles.

TLC:ws
Firearms Research Division

PLAINTIFF'S EXHIBIT 3161

AL 0029490

REMINGTON MODEL 700
FIELD SERVICE
GUNSMITH BULLETIN

INSTRUCTIONS FOR REMINGTON RECOMMENDED GUNSMITHS FOR REPLACEMENT OF MODEL 700 TRIGGER ASSEMBLIES AND SELECTED TRIGGER ASSEMBLY PARTS

WARNING: TRIGGER ASSEMBLY PARTS NOT LISTED ARE NOT INTERCHANGEABLE. REPLACE COMPLETE TRIGGER ASSEMBLY

BOLT STOP PIN
BOLT STOP
BOLT STOP SPRING

To Disassemble - Remove the bolt assembly, trigger guard or trigger guard assembly, magazine, magazine follower, spring and stock. Put the safety switch in "S" position. Tap out the bolt stop pin from left to right and remove the bolt stop and bolt stop spring.

To Reassemble - Place bolt stop spring into the recess in the bottom left side of the receiver with the long end of the spring facing forward and the bent end facing outward. The short, bent end of the spring sets in the receiver at the back of the trigger assembly. Place the bolt stop in slot with the contoured edge facing into the receiver and hole to the rear. Align the bolt stop, bolt stop spring and the trigger assembly holes with the bolt stop pin hole in the receiver. Insert the chamfered end of the bolt stop pin through bolt stop and bolt stop spring and tap pin into the receiver. Restake the bolt stop pin on the right side of the receiver.

CAUTION: After assembling the bolt stop - push bolt stop release upward, bolt stop must pivot freely. Push the safety switch to "F" position, pull the trigger and hold. Depress top rear of sear safety cam to insure that the cam pivots freely and retracts without hesitation.

Reassemble the magazine, magazine spring, follower, stock assembly, trigger guard and bolt assembly to the action. SEE SAFETY PERFORMANCE CHECK (PAGE 3).

SEAR PIN

To Disassemble - Remove the bolt assembly, trigger guard or trigger guard assembly, stock assembly, magazine, magazine follower, and spring. Put the safety switch in the "S" position. Tap out the bolt stop pin from left to right and remove the bolt stop and bolt stop spring. Tap out the sear pin from left to right.

To Reassemble - Align the sear safety cam and trigger assembly holes and tap in the sear pin from left to right (chamfered end first).

NOTE: Sear pin must not protrude into the bolt stop pin.

Reassemble the bolt stop spring, bolt stop and bolt stop pin. Restake both pins on the right side of the receiver.

CAUTION: After reassembling, push bolt stop release upward; bolt stop must pivot freely.
Put the safety switch in the "F" position, pull the trigger and hold. Depress top rear of sear safety cam to insure that the safety cam pivots freely and retracts without hesitation.

Reassemble the magazine, magazine follower, spring, stock assembly, trigger guard and the bolt assembly to the action. SEE SAFETY PERFORMANCE CHECK (PAGE 3).

TRIGGER ASSEMBLY COMPLETE

To Disassemble - Remove the bolt assembly, trigger guard or trigger guard assembly, magazine, magazine follower and spring. Put the safety switch in the "S" position. Tap out the bolt stop pin from left to right and remove the bolt stop and bolt stop spring. Tap out the sear pin from left to right and remove the trigger assembly.

To Reassemble - Insert trigger assembly (with slave pin intact) into receiver. Align holes and tap in sear pin from left to right (chamfered end first).

NOTE: Sear pin must not protrude into the bolt stop slot.

Reassemble the bolt stop spring, bolt stop and bolt stop pin. Restake both pins on the right side of the receiver.

CAUTION: After reassembling, push the bolt stop release upward; bolt stop must pivot freely.
Put the safety switch in the "F" position, pull the trigger and hold. Depress top rear of sear safety cam to insure that the sear safety cam pivots freely and retracts without hesitation. Push safety switch from "F" to "S" position several times to insure free movement with no binding and positive engagement of safety switch detents.

Reassemble the magazine, magazine follower, spring stock assembly, trigger guard and bolt assembly to the action.

SEE SAFETY PERFORMANCE CHECK (PAGE 3)

SAFETY SWITCH SNAP WASHER
SAFETY SWITCH DETENT SPRING
SAFETY SWITCH DETENT BALL
SAFETY SWITCH PIVOT PIN
BOLT STOP RELEASE

To Disassemble - Remove the bolt assembly, trigger guard, stock assembly, magazine, magazine spring and follower. Remove the safety switch snap washer, safety switch detent spring and safety switch detent ball. Push safety switch pivot pin from right to left and remove the safety switch and bolt stop release.

To Reassemble - Put the safety switch in the "S" position. Place the bolt stop release over the trigger pin on the left side of trigger assembly. Align holes in the bolt stop release, safety switch and trigger assembly. Push the safety switch pivot pin through the assembly from left to right. Set the safety switch detent ball into position in the safety switch. Place the safety switch detent spring over the safety switch. Make sure safety switch detent ball stays in position under the safety switch detent spring.
Push the safety switch snap washer into position on the safety switch pivot pin on the right side of the trigger assembly.

CAUTION: After reassembly, push bolt stop release upward; bolt stop must pivot freely.

Put the safety switch in the "F" position, pull the trigger and hold. Depress top rear of sear safety cam to insure that the safety cam pivots freely and retracts without hesitation. Push the safety switch from "F" to "S" position several times to insure free movement with no binding and with positive engagement of safety switch detents.

Reassemble the magazine, magazine follower, spring stock assembly, trigger guard and bolt assembly into the action.

SAFETY PERFORMANCE CHECK

WARNING: CORRECT ALL MALFUNCTIONS 100% OR RETURN RIFLE TO FACTORY.

After reassembly, the following check for proper function of the safety must be made.

Close the bolt. Put the safety switch into the "S" position. Lift the bolt handle (bolt handle should not raise). Pull the trigger (firing pin should not fall). Action of the trigger pull must be smooth (no bind, drag, click or catch). Release the trigger (trigger must return to former position). Put the safety switch into the "F" position (firing pin must not fall). Pull the trigger (firing pin must fall). Repeat this test at least three (3) times. The safety switch must function in both of the two (2) positive positions: ON SAFE and FIRE.
If the positions are not positive, check parts. Inspect the safety switch detent holes, safety switch snap washer, safety switch detent spring, safety switch detent ball and safety switch pivot pin for possible causes. Replace any worn or damaged parts.

CAUTION: IF STOP POSITIONS ARE NOT POSITIVE, REPLACE COMPLETE TRIGGER ASSEMBLY.

NOTE: Lubrication must not be used as a remedy for trigger assembly problems. The cause must be positively located and corrected.

After reassembling the stock assembly, check for clearance between the following parts: safety switch - stock; trigger - trigger guard; trigger - stock assembly.

Check for "Follow Down" (firing pin moves to uncocked position as bolt is closed). Put the safety switch into the "F" position. Close the bolt smartly. Firing pin must remain cocked (dry fire to check). If "Follow Down" occurs check for trigger being held back by interference between trigger and stock, trigger and trigger guard, or by the sear safety cam binding. Cause of "Follow Down" must be determined or the rifle should be returned to the factory.

WARNING: CORRECT ALL MALFUNCTIONS 100% OR RETURN RIFLE TO FACTORY.

AL 0029505

8/20/81
RLS:m

RULES FOR RECORDING EXPERIMENTS

1. Original records are to be in ink.

2. Each notebook page whereon there is recorded a completed experiment should be signed and dated by the experimenter in the space provided.

3. Each notebook page containing a completed experiment should be read and signed by a witness who will place his signature and the date in the space provided. The witness is to be one who understands the purpose of the experiment and the result obtained but who is not likely to be the inventor or a co-inventor. The witness should sign on the same day as the experimenter, or, if this is impossible, as soon thereafter as feasible.

4. Where entries on a single experiment do not completely fill a page, the remainder of the blank page should be ruled out. Where the record of the experiment extends over several pages which are not consecutive, proper cross-references should be inserted.

5. The bound notebook is to be preserved intact. In no case should any page or part of a page be removed.

6. No erasures are to occur in the record. Any corrections or changes should be made by cancellation, leaving the original entry legible.

7. The same rules as to signing, dating and witnessing are to be followed when the original data are recorded on loose sheets or forms other than the standard bound notebook.

PLAINTIFF'S EXHIBIT 3163

181

SUBJECT FOR INDEXING THIS BOOK
MUST BE GIVEN BELOW

M-700 Fire Control Design Page 1 -

M-700 Bolt Cock Page 3 - 6

M-700 - M-7 Scope Mounts Page 20

M-700 Rear Sight - Page 10

ALLEKSICH

PLAINTIFF'S EXHIBIT
3164

1034

AL 0029557

DATE 14 JAN. 1980
SUBJECT OF EXPT. M-700 FIRE CONTROL DESIGN

As of this date the first model of the "new style" M-700 fire control has been assembled. The design requirements of this fire control to incorporate the following—

a trigger block & sear block,
a bolt-lock & have an interceptor,
be Overwatch adjustable & Operate in both the fired and unfired condition—

have not all been met. Possibly in subsequent models.

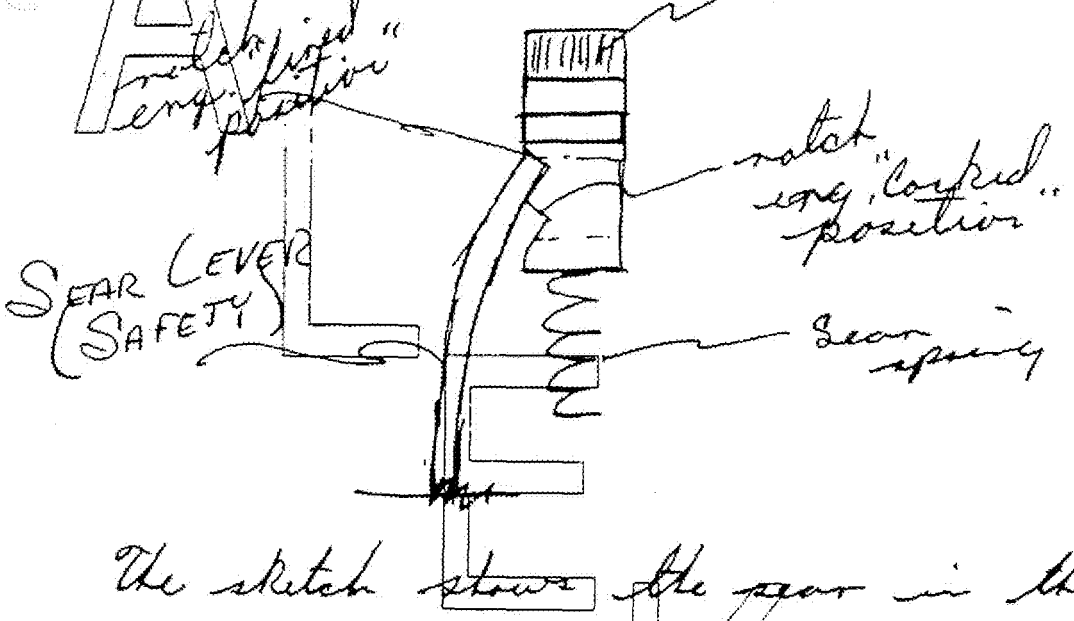
This Model has a separate bolt lock and does not block the trigger in the on safe position.

The sear can be blocked in both positions by putting the safety on. This is done by a finger of the safety engaging one of two notches in the side of the sear (See Next Page).

2

DATE

SUBJECT OF EXPT. M700 F.C. Design Sear



The sketch shows the sear in the fired condition and the safety lever engaged on the bolt in open and down rearward the sear spring forces the sear upward the safety lever springs outward and then returns to the lower notch. With this done the sear has been effectively blocked in two conditions.

EXPERIMENTER F.E. Martin DATE 4-8-80

WITNESS Jack Kast DATE 4/9/80

3 of 34

AL 0029559

DATE 4-9-80
SUBJECT OF EXP'T. M-700 Bolt Lock

A method of allowing the shooter to open the bolt of his rifle while in a safe condition has been developed. The mechanism consist of a bolt plug, a lever, a plunger and plunger spring. The bolt body is altered to allow the plunger to lock into it. The lever is actuated by the firing pin head.

#1 - As the bolt is closed the spring loaded lever is urged to a locked position and engages a notch cut in the rear of the bolt body.

#2 - To open this weapon the lever is pushed down with the thumb and the bolt handle lifted with the index finger.

#3 - If the rifle is fired the firing pin head cams the lever upward automatically unlocks the gun

#4 - As the bolt is open and then closed the firing pin head is depressed and the lever allowed to re lock bolt.

The three photos shown on the next page will show the operation of the bolt lock and its location relative to the safety lever.

PHOTO #1 - The bolt is closed with the safety in the "On-Safe" position and the bolt is locked.

EXPERIMENTER Fred E. Martin DATE 4-10-80
WITNESS Jack Kast DATE 4-11-80

40734

4

DATE 4-9-80

SUBJECT OF EXPT. M-700 Bolt Lock

PHOTO #1

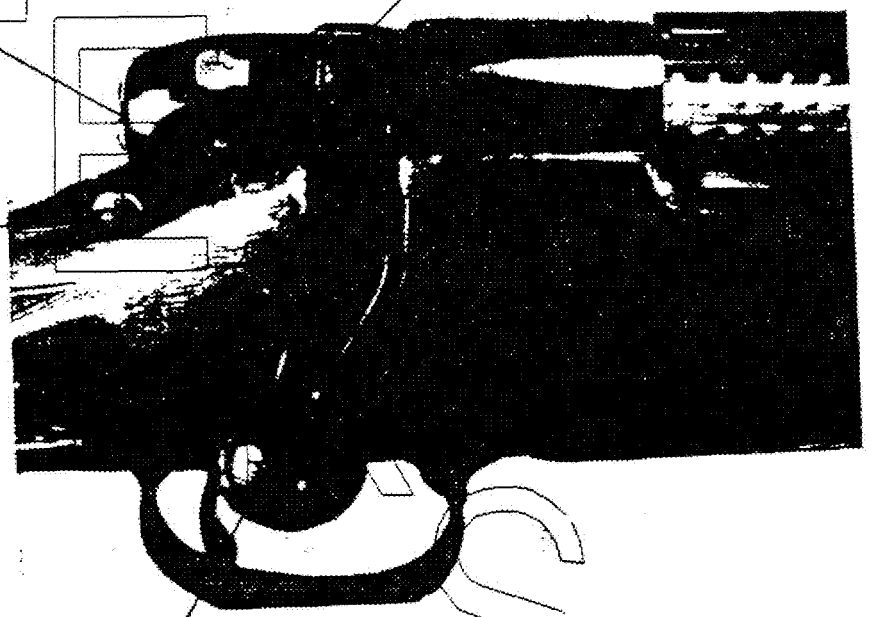


PHOTO #2 The gun is in the same condition as in the previous photo, safety lever in "On-Safe" position the bolt lock lever has been depressed with the thumb and the bolt handle pulled to illustrate the method of opening.

AL 0029561

EXPERIMENTER Fred E. Martin DATE 4-10-80

WITNESS Jack Kast DATE 4-11-80

5034

DATE 9 - 9 - 80

SUBJECT OF EXP'T. M-700 Bolt Lock

PHOTO #2

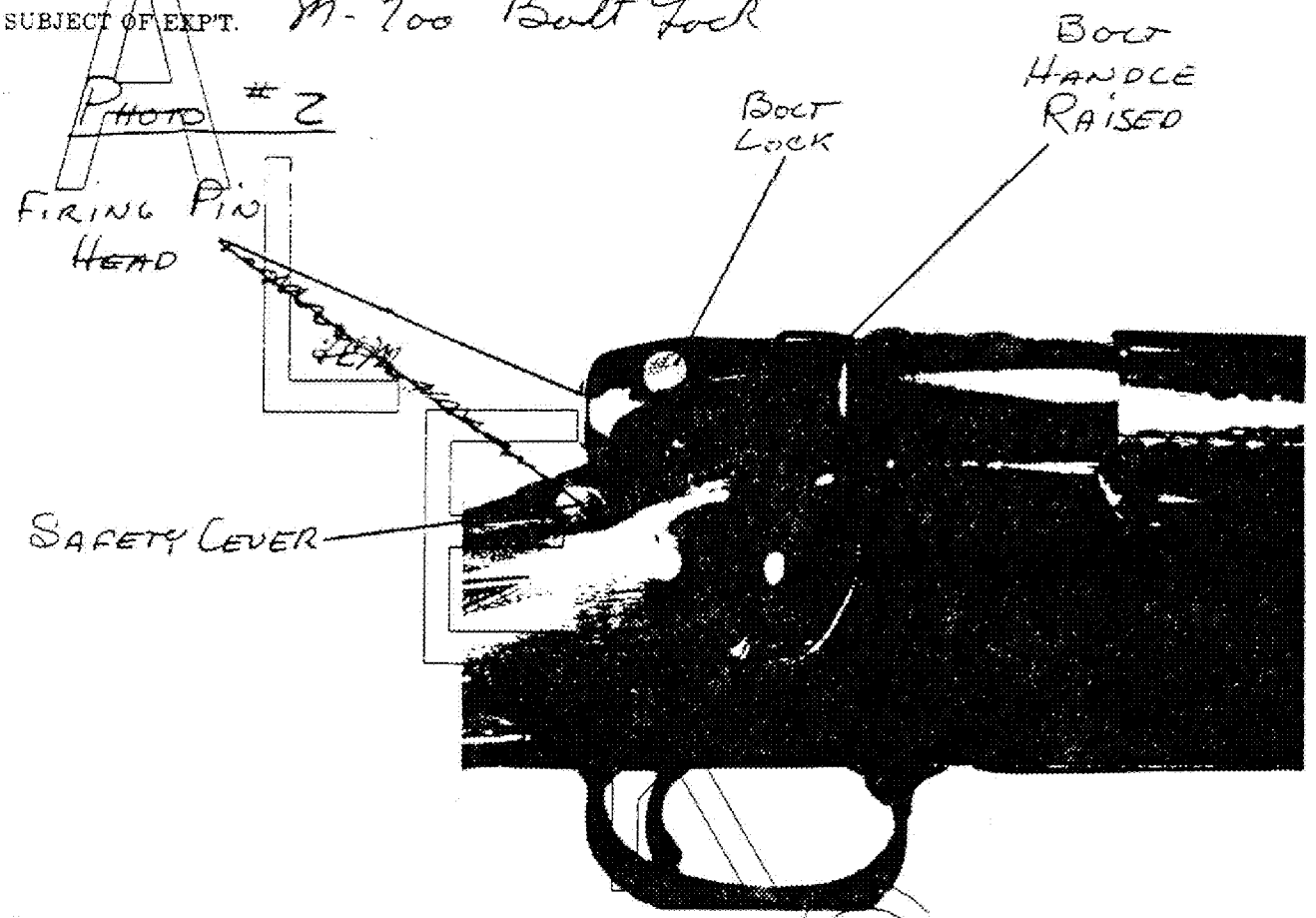
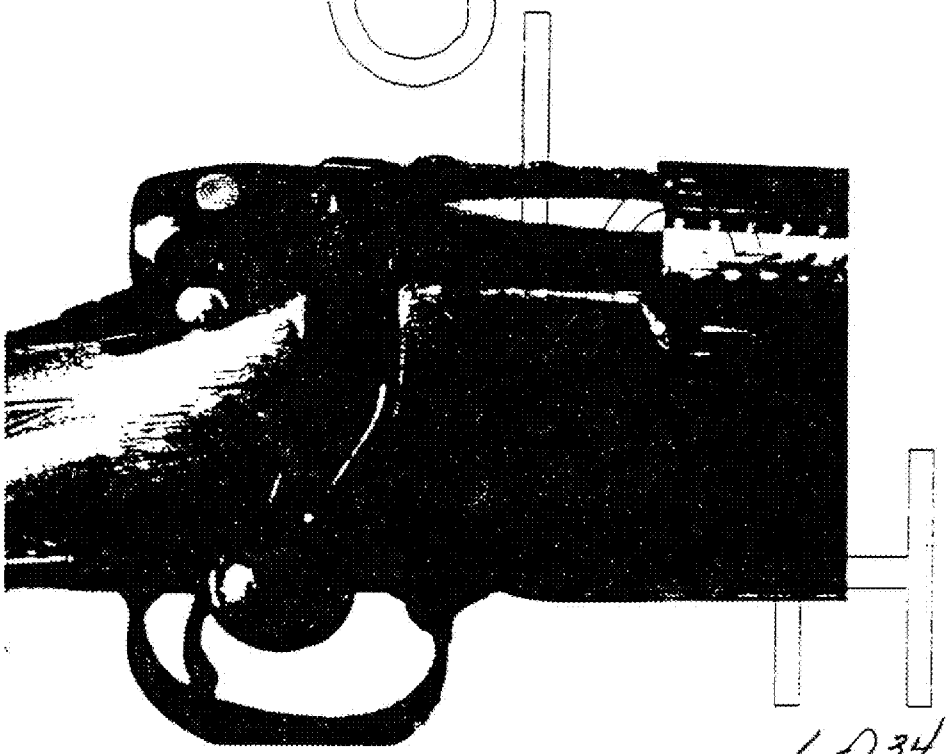


PHOTO #:



EXPERIMENTER

WITNESS

2

6

DATE 4-9-80

SUBJECT OF EXPT. M-700 Bolt Lock

Photo #3 — This photo shows the gun in the fired condition, firing pin down bolt unlocked bolt ready to be opened.

Work on the development and production of this subject continues both to improve operation and appearance. Work is being done to also reduce cost.

7034

EXPERIMENTER Fred C. Martin DATE 4-10-80

WITNESS Jack East DATE 4-11-80

DATE

SUBJECT OF EXPT.

ALEKSICH

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EXPERIMENTER

WITNESS

DATE

DATE

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8

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SUBJECT OF EXP'T.

ALEKSICH

EXPERIMENTER

WITNESS

DATE

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9/8/34

AL 0029565

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SUBJECT OF EXP'T.

ALEKSICH

EXPERIMENTER DATE

WITNESS DATE

10/234

AL 0029566

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DATE

SUBJECT OF EXPT

ALEKSICH

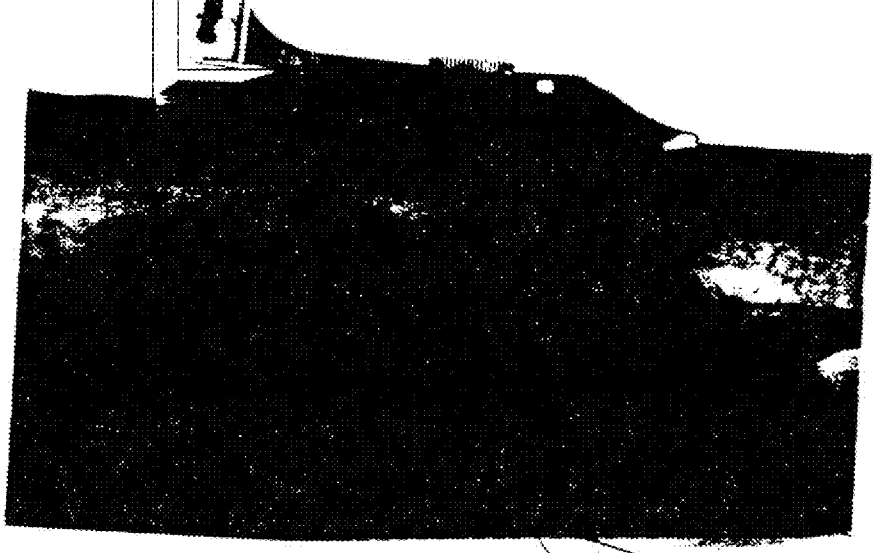
EXPERIMENTER DATE

WITNESS DATE

11834

AL 0029567

ALTSICH



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AL 0029568

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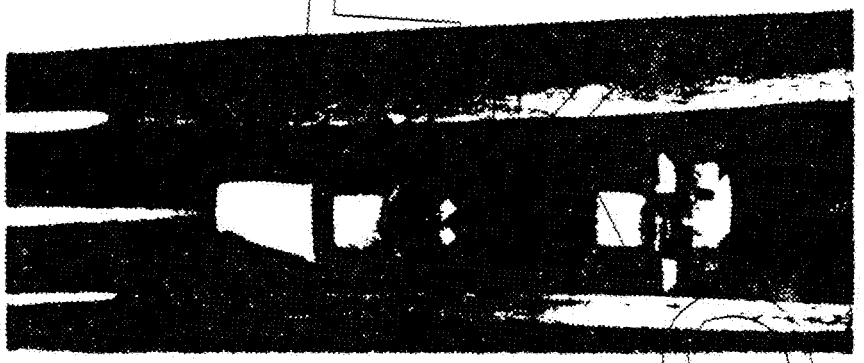

13 of 34

AL 0029569

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SUBJECT OF EXP'T.

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ALEKSICH

15 of 34

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SUBJECT OF EXP'T.

ALEKSICH

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SUBJECT OF EXP'T

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SUBJECT OF EXP'T.

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EXPERIMENTER DATE 18/234

WITNESS DATE

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SUBJECT OF EXP'T.

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EXPERIMENTER DATE

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20 of 34

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SUBJECT OF EXP'T.

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AL 0029577

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SUBJECT OF EXP'T.

ALEKSICH

EXPERIMENTER

WITNESS

DATE

DATE

22 of 34

20

DATE March 18, '81

SUBJECT OF EXP'T. Scope Mounts

Have been asked by F.S. Martin to look at designing scope mount for M-1 & M-100 Bolt Action Rifles - Mount to be "UNIQUE" to Remington Rifles - May be of "Interchange" Concept - Cheap - Pleasant in appearance - Will look at previous attempts and evaluate Bullis did some for Finle -

Sanzo did some for Walker - (way back) - first layout has been done and signed by S.A. Fonelle and A.R. Eddy picture of mount in below.

See Top of Next Page For Photo

EXPERIMENTER Fred S. Martin DATE 3-18-81

WITNESS A.R. Eddy DATE 8/16/82

23234

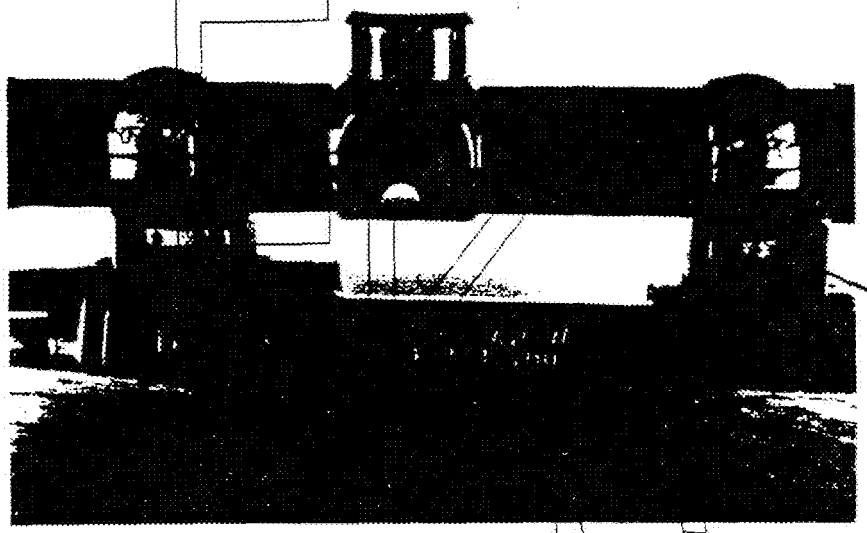
AL 0029579

DATE March 18, 81

SUBJECT OF EXP'T. Scope Mounts

A

Prototype #1 used a dovetail cut on receiver to receive a matching cut on the scope ring.



Recoil Bracket

thumb screw

B

Rings were then locked in place by a jam-screw that was activated by the thumb-screws that are visible.
Forward motion was stopped by the front scope mount striking the rear of the recoil bracket.
Both rings functioned the same - rear ring was higher by difference in rec. ring height.

C

Jam screw was keyed in lower half of ring to keep it from turning when tightening.

D

No shooting done on this sample.

E

EXPERIMENTER Fred E. Martin DATE 3-18-81 24 of 34

WITNESS O R Eddy DATE 8/16/02 AL 0029580

22

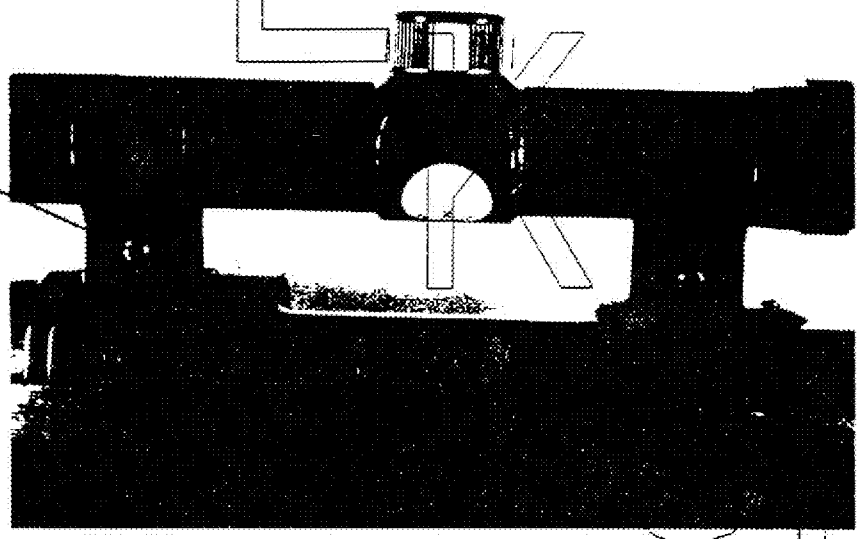
DATE July 10, 81

SUBJECT OF EXPT. Scope Mounts

A

Sample #2 is in keeping with the request to be made cheap — ie mean "cost efficient." It has been designed as a stamping to be attached to a dovetail as in Sample #1 and uses one screw to clamp and also hold the scope.

E



C

This sample as sample #1 is of two different heights and would be stopped by the recoil bracket.

Parts are 1020 or 1095 Mat'l. spring tempered, to ensure a good grip. Large diameter that wraps around scope tube is slightly smaller than tube to ensure interference and a good grip.

No starting done with this sample.

H

EXPERIMENTER David C. Martin DATE 7-10-81

WITNESS A. L. Essig DATE 8/16/82

25 of 34

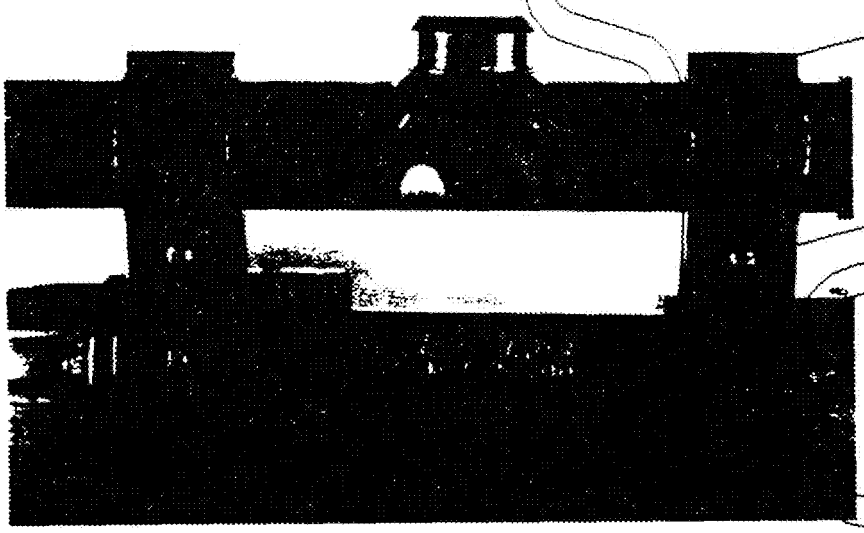
AL 0029581

DATE October 11, 81

SUBJECT OF EXP'T. Scope Mounts - again

Sample #3 is a variation of #2 hopefully it is a little easier to mount and assemble. This Mount was also designed as a stamping to be heat treated and mounted on a dove-tail cut in the receiver.

Picture to explain - One screw Mounting and clamping



As with other samples mounting was some

No shooting yet. Maybe some day

EXPERIMENTER Jack C. Martin DATE 7-10-81

WITNESS C.R. Elsey DATE 8/16/82

24

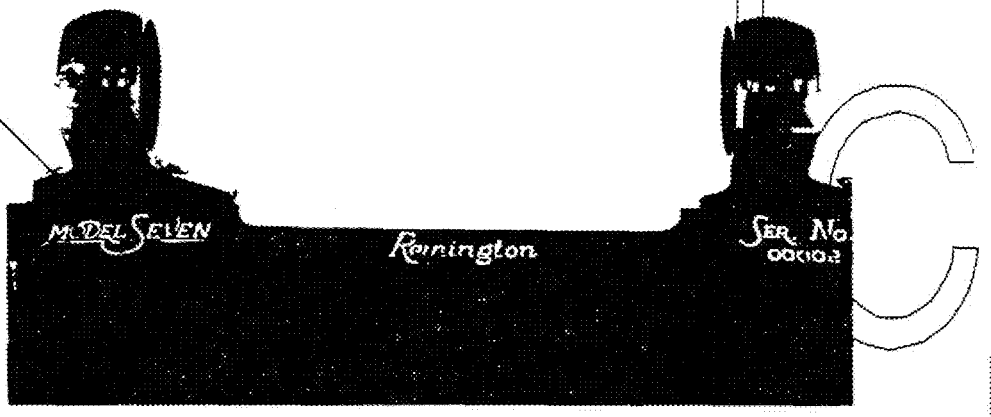
DATE July 31, 81

SUBJECT OF EXP'T. Scope Mounts - Redesign

The sample is a variation of a mount system that I Butler developed for the 700 Bolt Action Rifle.

It does not use a mounting block instead it ~~clamps~~ fastens directly to the receiver. In mounting like this ~~complete~~ complete disassembly is made after removing the mounts

Mounting Screws 2 each side



EXPERIMENTER Fred C Nicolai DATE 7-31-81

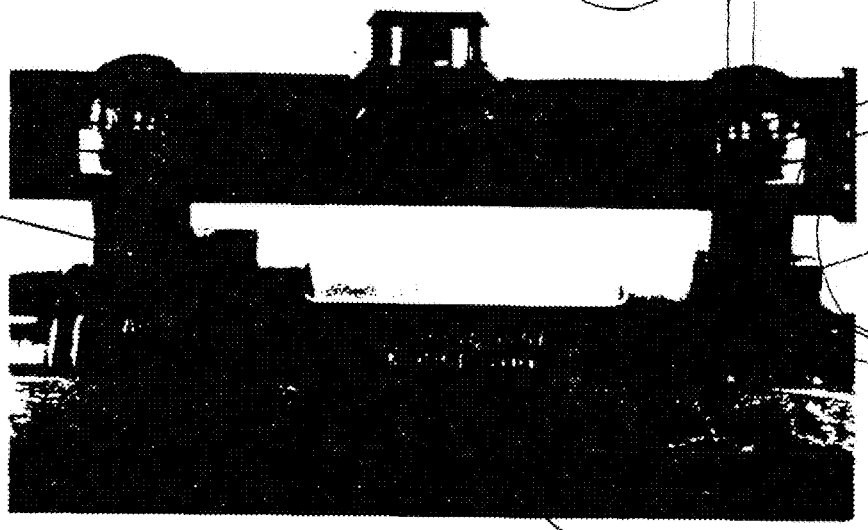
WITNESS A. R. Easy DATE 8/6/82

27834

AL 0029583

DATE Aug 21, 81
SUBJECT OF EXP'T. Again Scope Mounts

This mount is similar to those marked by the arrow and those at area a separate block to mount the ring and scope to the rifle. The sample show does not have to be completely disassembled to remove from the rifle. It is shown as having two ring heights but could also be made like one ring height and two different block heights.
Blocks are screw directly to receiver.



EXPERIMENTER Fred E. Martin DATE 8-21-81
WITNESS C. P. Eddy DATE 8/16/82

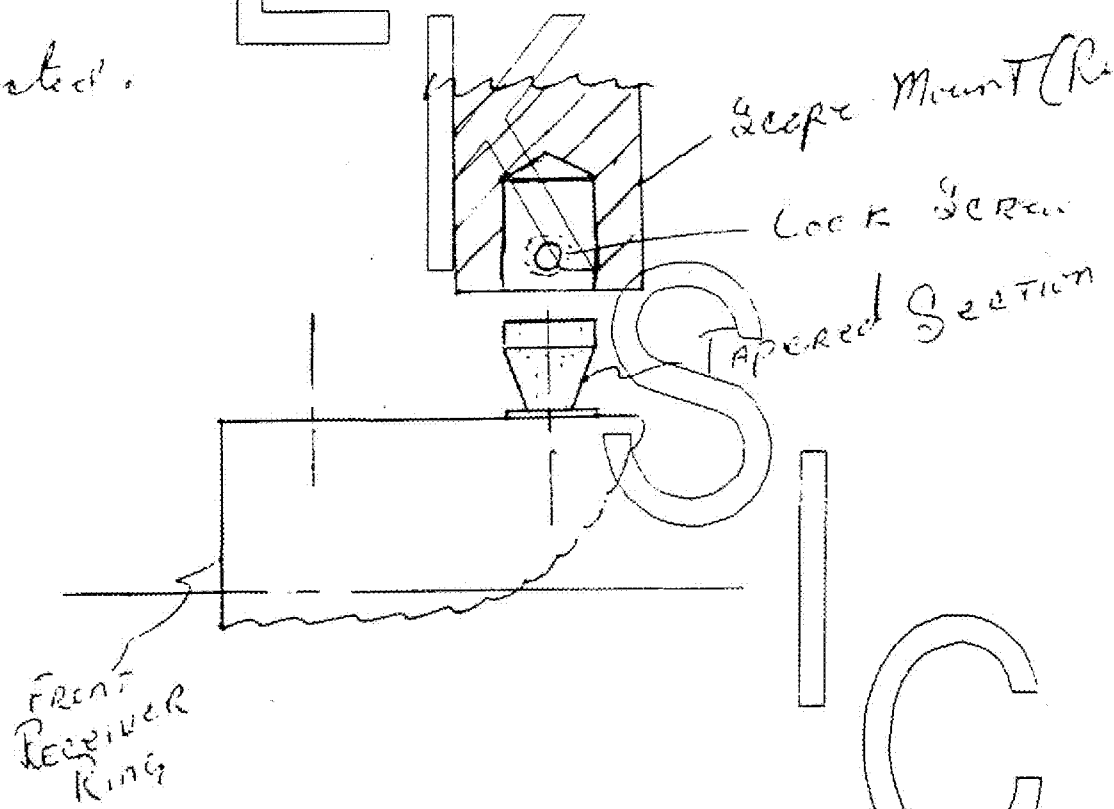
282 34

DATE Aug 21, 81

SUBJECT OF EXPT. Scope Mount (Continued)

A scope mount system that uses a mounting bushing instead of a mounting block was developed for use on the M-700 Bolt Action Rifle.

The bushing was formed with a tapered section with which the mount lock screw contacted.



Bushing was countersunk for mounting screw and could be mounted in any of the four scope screw holes on the receiver to facilitate the use of a variety of scopes.

EXPERIMENTER Fred J. Martin DATE 8-21-81

WITNESS G.R. Elsey DATE 8/16/82

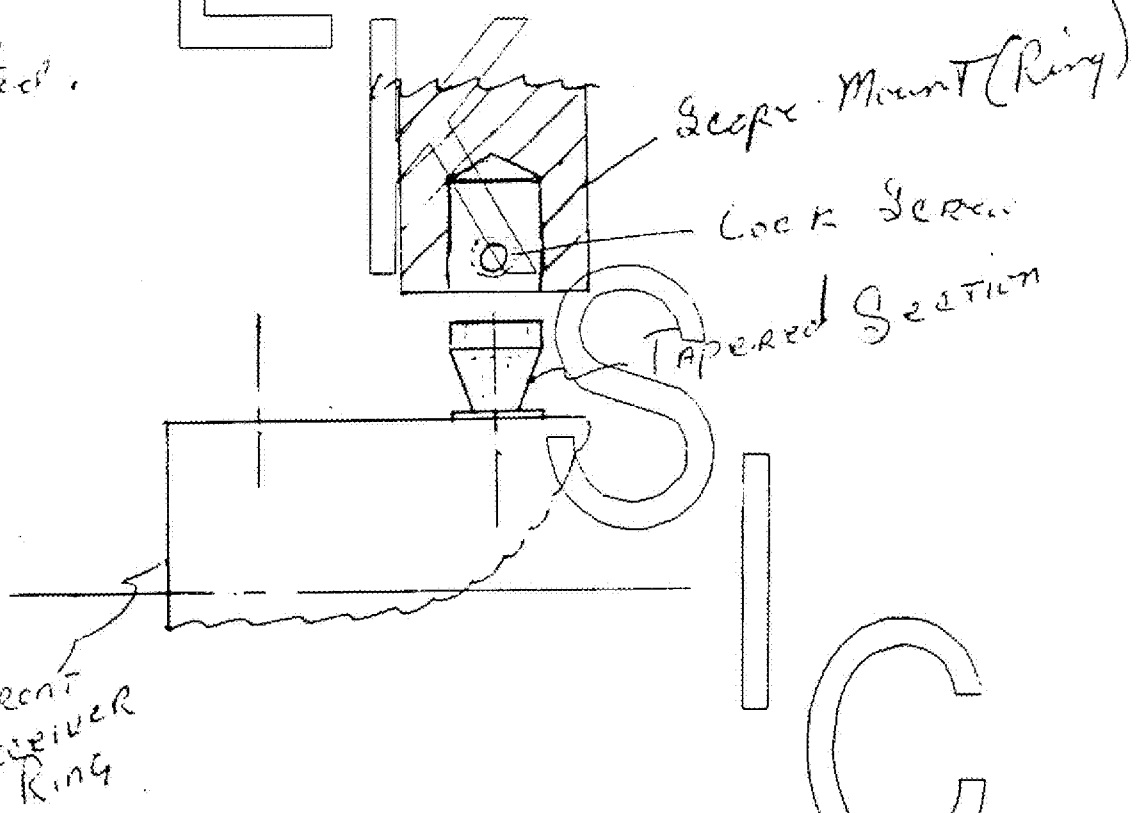
29 of 34

DATE Aug 21, 81

SUBJECT OF EXPT. Scope Mounts (Continued)

A scope mount system that uses a mounting bushing instead of a mounting block was developed for use on the M-700 Bolt Action Rifle.

The bushing was formed with a tapered section with which the mount lock screw contacted.



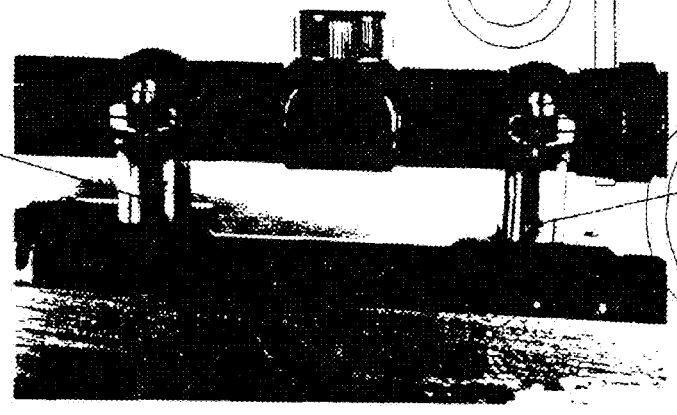
Bushing was Counterbored for mounting screw and could be mounted in any of the four scope screw holes on the receiver to facilitate the use of a variety of scopes.

EXPERIMENTER Fred J. Martin DATE 8-21-81

WITNESS G.R. Elsey DATE 8/16/82

DATE Aug. 21, 81
SUBJECT OF EXP'T. Scope Mounts (Continued)

The bottom of the Scope Ring has been drilled and reamed for a slip fit over the bushing. If the individual using the rifle wished he could remove the scope by loosening the lock screws and still be able to use the iron sights without interference. Photo has the Scope mounted and locked in to position. As shown bushings can be moved for different scopes.



EXPERIMENTER Fred E. Martin DATE 8-21-81
WITNESS C. R. Eddy DATE 8/16/82

31D34

28

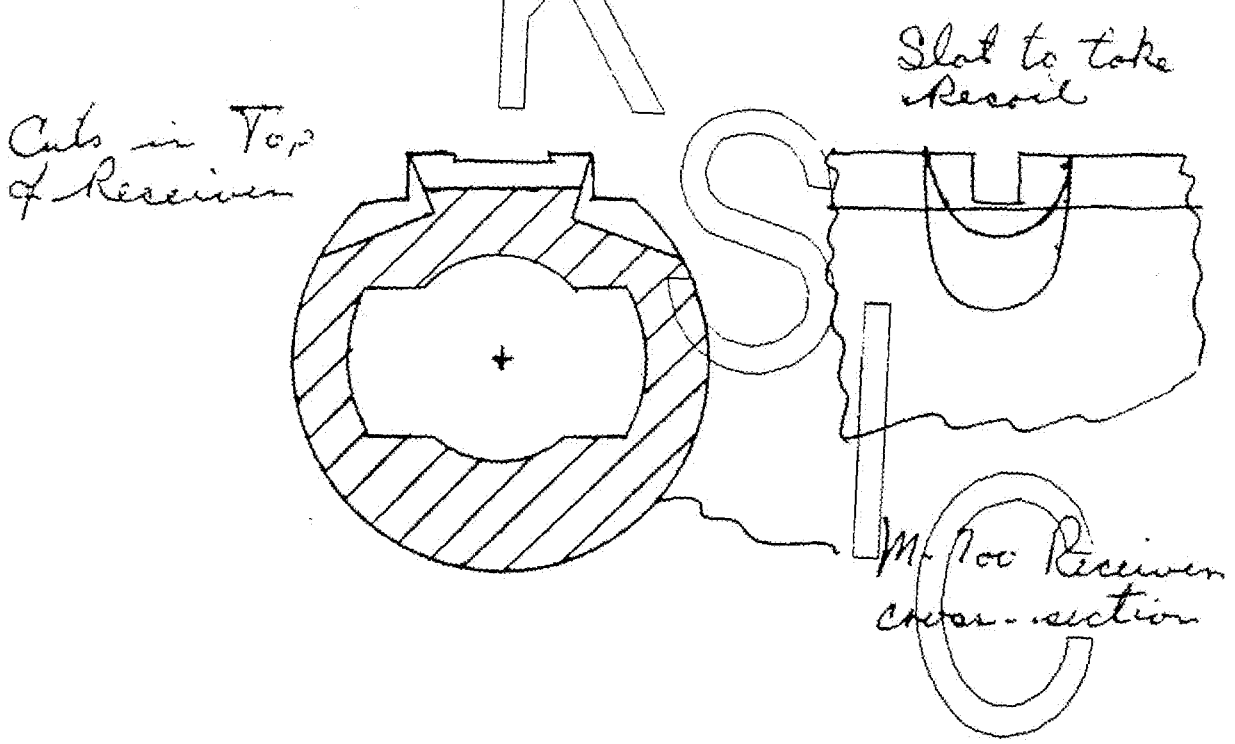
DATE Jan 13, 1982

SUBJECT OF EXPT. Integral Scope Mounts for M-7

This scope mount was intended and designed to be unique to Remington Bolt Action Rifles. By this I mean the mounting of a scope using these rings could only be done on a Remington Rifle.

These are normally three components necessary to mount a scope to a rifle, first the scope second the rings and thirdly the bases. By making the base as part of the receiver we can eliminate the base and use a ring of our design.

This system that we have here is series of cuts on the top of the M-700 Reciver



The scope ring designed for use with this system has to clamp to engage the angular recesses in the reciever and a lug to engage the slot.

EXPERIMENTER Fred C. Martin DATE 1-13-82

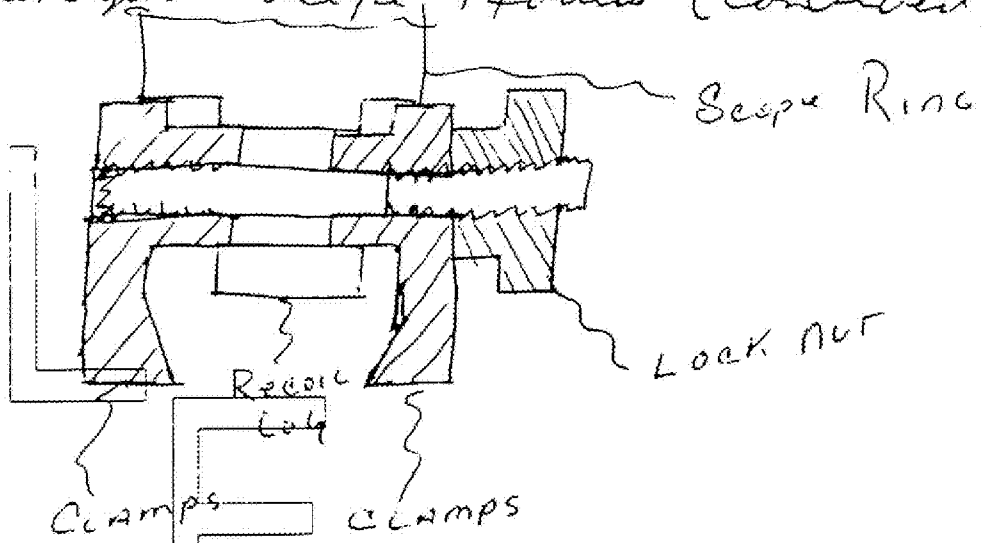
WITNESS C. R. Eddy DATE 1/16/82

32034

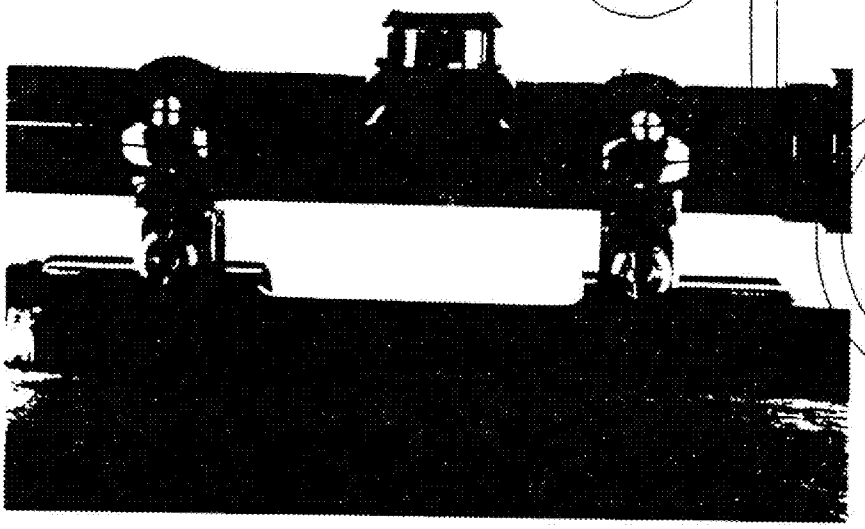
AL 0029388

DATE Jan 13, 1982

SUBJECT OF EXP'T. Integral Scope Mounts (Continued)



A variation of this system would be to have only one moveable clamp.
The picture shows the system mounted on a Remington Bolt Action Rifle.
An advantage of this system is that should the individual ~~[illegible]~~ wish to ~~remove~~ the scope he can easily do so, can and this it with replace in seconds or change occupancy



EXPERIMENTER Fred E. Martin DATE 1-13-82

WITNESS C.R. Eley DATE 1/16/82

33034

AL 0029589

DATE

SUBJECT OF EXP'T.

NOTEBOOK COMPLETE - NO FURTHER ENTRIES WILL BE MADE IN THIS BOOK.

EXPERIMENTER DATE

WITNESS DATE

RESEARCH N. BOOKS

Book No.	Assigned To	Description	Date Issued
1050	T.G. Bauman	Left Hand Model 870 and 1100 - 12 & 20 Ga.	7-22-69
1087	L.W. Baum	Powder Metals - General	1-18-68
1095	Bob Merhar	Powder Metal Research	
1178	Bob Merhar	Powder Metal Research	
1179	D.S. Findlay	7400-7600 Magazine Box	11-8-79
1180	D.S. Findlay	Magazine Box Design Testing 7400	11-28-79
1181	J.L. Kast	XSG Design	11-9-79
1182	G. Reinhardt	Powder Metallurgy	2-3-80
1183	R.J. Balaska	Stamped Gun Concept	3-26-76
2007	J.S. Martin	Powder Metallurgy	2-3-80
2008	A. R. Eddy	M/742-760 New Generation (7400-7600 Design)	9-20-76
2011	J.L. Kast	66 New Generation .22 Rimfire Semi Automatic	8-17-77
2031	W. A. Balcewicz	Programmable Manipulator Applications	10-3-78
2036	C. Lall	Powder Metallurgy	2-3-80
2038	J. R. Palmer	XSG Gas and Operating Systems	2-5-80
2039	A.A. Hugick	XSG Design Project	2-7-80
2040	F.E. Martin	Bolt Action Rifles - Misc. Design Projects	4-7-77
2041	D.S. Findlay	XSG	5-19-80
2042	K.C. Rowlands	New .22 Rimfire Autoloader	4-7-77
2043	W.A. Balcewicz	High Energy Beam Applications	10-3-78
2044	J. L. Kast	"XPG" Design (Experimental Slide Action Shotgun)	7-25-80

wr
8-19-80

PLAINTIFF'S EXHIBIT
3185

RESEARCH DEPARTMENT

PROCEDURE

TECHNICAL NOTEBOOKS

Introduction

Employees of the Research Department are engaged in the conduct of experimental work which is of great importance to the Company. Its importance cannot always be adequately judged at the time the work is done. For this reason it is essential that all experimental work be recorded in bound notebooks, following procedures which will protect the Company's interests.

Purposes

There are two main purposes for Research notebooks:

1. To provide a clear record of the conception of ideas and experimental development of those ideas which will provide a sound basis for patent prosecution if the ideas are patentably novel.

2. To provide a clear and permanent record of the important details of experimental work so that Research employees in the future can determine what was done and the results obtained if they are interested in doing similar work. With a well-kept record, duplication of effort can be avoided in the future, even if the original experimenter is not available for questioning.

Procedures

Each exempt Research employee who conducts experiments, or directs non-exempt employees in conducting experiments, is expected to keep a notebook in which the details and results of his experiments are recorded. Enough narrative should be included in the record to enable anyone skilled in the art to find out what was done without having to question the experimenter.

Procedures for the use of Research notebooks are as follows:

Notebooks

Technical bound notebooks, 8-1/2" x 11" in size, shall be used, and may be procured from the designated custodian.

RESEARCH DEPARTMENT

PROCEDURE

TECHNICAL NOTEBOOKS

Entries

Notebook entries shall be in strict accordance with the general Rules for entries appearing therein, and the following more-detailed instructions:

1. All entries shall be legibly written in waterproof ink. Standard, generally-accepted nomenclature should be employed.

2. All entries in a given notebook shall ordinarily pertain to a single general topic of research, and shall be made in chronological order from the first to the last page. However, it may sometimes prove desirable to divide a notebook into sections to record entries concerning several different and unrelated topics that are being worked on concurrently or intermittently by the experimenter. In that case, the title of each section and the page number on which it begins, should be entered on the index page concurrently with the establishment of the section. Each section is thereafter treated as a separate notebook.

3. Blank spaces should be eliminated. When an entry does not fill a page, the next succeeding entry on the same subject matter may begin on the same page, with no space between the two. If it is preferred to start a new page for the next entry, any blank space on the preceding page should be ruled out, so that it would be virtually impossible to add anything to that entry at a later date.

4. The top of each notebook page should clearly state what subject matter the entries on the page relate to. It is not required to repeat the subject matter heading if it covers several consecutive pages. However, if it becomes necessary to continue a subject on a non-consecutive page, notations such as "continued on page ___" and "continued from page ___" should be made.

5. The author (and the experimenter, if he is not the author) should sign and date each notebook page after each independent entry is made. Each notebook page should also be read, signed, and dated

RESEARCH DEPARTMENT

PROCEDURE

TECHNICAL NOTEBOOKS

by a witness who understands the subject matter recorded, but who is neither an inventor nor a co-inventor of any new concept that is discussed on that page. The witness should preferably sign on the same day as the author or, if this is not possible, as soon thereafter as may be feasible. In the case of multiple entries on a single page, the signatures and dates should appear immediately following each entry. There should be no writing below the last signatures and dates entered on a page.

Read and Understood By: _____ Date_____

6. The bound notebook is to be preserved intact. In no case should any page or part of a page be removed.

7. No erasures are to be made in the notebook. Any corrections or changes should be made by crossing out the incorrect entry, but leaving it legible.

8. The same rules as to signing, dating and witnessing are to be followed when the original notes are recorded on loose sheets, drawings, or forms other than a standard bound notebook.

Coding of Samples

Samples should be coded by marking them with the technical notebook number and page number on which the sample is first described. If more than one sample is referred to on one page, they may be distinguished by suffix letters, such as "250-16A", "250-16B". These would refer to notebook No. 250, page 16, samples A and B.

Inserts

The use of inserts should be kept to a minimum. However, any material which forms an important part of the record of the progress of experimental work should be permanently attached to the notebook by gluing or stapling directly to a notebook page. Materials left loose, put in with transparent tape, or inserted in an envelope in the notebook, are not considered part of the notebook and are therefore not a part of the legal record of the experiment described. If material is inserted in the notebook, adherence to the following instructions will simplify the microfilming of the records:

RESEARCH DEPARTMENT

PROCEDURE

TECHNICAL NOTEBOOKS

1. It is preferable to attach and fold insert material so that it covers only the space on a single page between the subject and the signature. The page number and subject should not be obscured by the insert, nor should the space for signature and witnessing. The material should be fastened with staples or glued securely. To form a part of this permanent record, written inserts should be done in waterproof ink. Writing should appear on only one side of an insert.

2. If writing underneath the insert is desirable, the insert should be fastened only along the outside edge of the notebook. When the insert is unfolded, no part of the writing on the page should be obscured. If there is no writing under the insert, the statement "no writing underneath" should appear on the page below the insert.

Drawings and Sketches

All drawings and sketches should be initialed by the draftsman and signed and dated by the individual requesting the drawing.

Signatures

Except in extraordinary circumstances, notebook entries should be made by the experimenter and not by any other party. When necessary, another party may act as recorder for the experimenter, but the entry must so indicate and must be read, approved, and personally signed and dated by the actual experimenter.

"Active" versus "Complete" Notebooks

1. An "active" notebook is one in which further entries are to be made. Pages or portions of pages of an active notebook which are intended to be left blank should have a line drawn through them and should be signed and dated at the indicated place on the page.

2. A "complete" notebook is one in which no further entries are to be made, even if all the pages are not filled. Such notebooks should have a notation

RESEARCH DEPARTMENT

PROCEDURE

TECHNICAL NOTEBOOKS

on the last written page to the effect that no further entries will be made in the book. They should be turned over to the custodian as soon as possible after completion. Individuals should not retain notebooks in their possession which are not in everyday use. Under no condition should a notebook issued to one person be transferred to another. The person to whom a notebook is issued is held individually responsible for it.

Index

An index of notebooks will be maintained by the designated custodian.

Approved By:

N. Skovran 6/2/81

N. SKOVRAN
Chief Patent Counsel

Joseph P. Glas 6/2/81

J.P. GLAS
Director of Research

BKD:mf
4/30/81

RESEARCH DEPARTMENT

PROCEDURE

TECHNICAL BOUND NOTEBOOKS

Technical notebooks, 8-1/2" x 11" in size, will be used, and may be procured from the designated custodian. (Barbara) 1000

Entries in such notebooks will be in strict accordance with the Rules for Recording Experiments appearing therein, in addition to which the following will be observed:

Entries

1. Entries in notebooks will ordinarily be in chronological order from the first to the last page. If it is found necessary to divide a notebook into sections, the subject of each section and the page number beginning such section will be entered on the index page concurrently with the establishment of the section; each section is thereafter treated as a separate notebook.

2. All entries will be legibly written in waterproof ink.

3. The subject at the top of each notebook page should clearly indicate what the data on the page concern. It is not necessary to repeat the subject notation if it covers several pages, provided that notations like "continued to page ___" and "continued from page ___" are made in appropriate places. There should be no writing below the signature or below the printing on the page.

4. Standard nomenclature should be employed.

5. No blank spaces will be left. When an entry does not fill a page, the next succeeding entry should begin on the same page, with no blank space between the two. If it is found desirable to start a new page for a particular entry, any blank space on the preceding page should be ruled out before the next entry is made, so that it will be virtually impossible to add anything to any entry at a later date.

10/11/68

Research Department
Procedure
Technical Bound Notebooks

Coding

1. Samples are coded by employing the technical notebook number and page number on which the sample is first described.

2. Variations on the basic code can be made by using letters, and these in turn can be subdivided by employing numbers. Thus, 250-16A1 would imply technical notebook No. 250; that the sample was first described on page 16; and that this particular sample was the number "1" modification of the "A" modification of sample 250-16.

Inserts

The use of inserts should be kept to a minimum. However, any material which forms an important part of the legal record of an experiment should be permanently attached to the notebook by gluing or stapling directly to a notebook page. Materials left loose, put in with transparent tape, or inserted in an envelope in the notebook, are not considered part of the notebook and are therefore not a part of the legal record of the experiment described. If material is inserted in the notebook, adherence to the following instructions will simplify the micro-filming of the records:

1. It is preferable to attach material so that it covers only the space on a single page between the subject and the signature. The page number and subject should not be obscured by the insert, nor should the space for signature and witnessing. The material should be fastened with staples or glued on all four sides. At the bottom of the insert, the statement, "no writing underneath," should be written. Inserts which form a part of the permanent record should be done in waterproof ink.

2. If writing under the insert is desirable, the insert should be fastened along the outside edge of the notebook so that the insert covers the page. When the insert is folded back, no part of the writing on the page should be obscured.

3. When it is absolutely necessary to insert material larger than the space for recording data on a single page, the material should be fastened and folded so that, when it is opened for inspection, it falls within the boundaries of the open notebook. None of the writing on the notebook pages should be obscured when the insert is folded back to reveal the pages underneath. Writing should appear on only one side of the inserted sheet.

10/11/68

Research Department
Procedure
Technical Bound Notebooks

Drawings and Sketches

All drawings and sketches should be initialed by the draftsman and signed and dated by the individual requesting the drawing.

Signatures

Except in extraordinary circumstances, notebook entries should be made by the experimenter and not by any other party. When necessary, another party may act as recorder for the experimenter, but the entry must so indicate and must be read, approved, and personally signed and dated by the actual experimenter.

Witnessing

Each notebook page must be witnessed by a person who is neither a sole or joint inventor of the subject matter disclosed, and who is capable of understanding and does understand the entries on the page. The witness may be the experimenter's supervisor, a staff member in the same group, or some other qualified person. The witness must date his own signature.

Notebook entries witnessed some time after the date of writing, or by someone unfamiliar with the experiment, are not good legal evidence.

"Active" versus "Complete" Notebooks

1. A "complete" notebook is one in which no further entries are to be made even if all pages are not filled. Such notebooks should have a notation on the last written page to the effect that no further entries will be made in the book. They should be turned over to the custodian as soon as possible after completion. Individuals should not retain notebooks in their possession which are not in every-day use. Under no conditions should a notebook issued to one person be transferred to another. The person to whom a notebook is issued is held individually responsible for it.

2. An "active" notebook is one in which further entries are to be made. Pages or portions of pages which are to be left blank in an "active" notebook should have a line drawn through them and should be signed and dated at the indicated place on the page.

10/11/68

Research Department
Procedure
Technical Bound Notebooks

Index

An index of notebooks will be maintained by the designated custodian. (Barbara - 1970)

Approved by:

J. H. Lewis, Jr.
Patent Attorney

G. M. Calhoun
Director of Supporting Research

GMC:ND
10/11/68

PLAINTIFF'S
EXHIBIT
3168

AL 002962

RELATIVE STRENGTHS OF HIGH POWER CENTER FIRE RIFLES

Model No.	Receiver Area in Tension Sq. In.	Bolt Area in Shear Sq. In.	Bolt Area in Compress. Sq. In.	Expected Deflection of Bolt in Receiver, by Young's Modulus P = 9000# E = 3x10^7 Inches	Bolt Steel AISI or NE No.	Nominal Yield Point 1000 #/Sq. In.	Load under Bolt without Permanent Deformation Lbs.	Bolt: Mean Pressure Possible in .30-06 Case = Max. Pressure ÷ 1.46 #/Sq. In.	Bolt: Mean Pressure Possible in .375 H&H Case = Max. Pressure ÷ 1.46 #/Sq. In.	Barrel Size or Pitch Dia. of Thread at Shank Dia. in Inches	Steel AISI No. & Nominal Yield Point #/Sq. In.	Barrel: Mean Pressure Possible in .30-06 Case = Max. Pressure ÷ 1.45 #/Sq. In.	Barrel: Mean Pressure Possible in .375 H&H Case = Max. Pressure ÷ 1.45 #/Sq. In.
720	.443	.397	.109	.0015	2340	190	20,750	82,000	64,000	1.086	X-4130 120,000	58,000	54,000
721	.480	.429	.141	.0013	1335 2340	75 190	10,600 26,800	42,000 106,000	33,000 83,000	1.071	X-4130 120,000	57,000	53,000
1X-760*	.303	.206	.114	.0014	1335 2340	75 190	8,600 21,750	34,000 86,000	27,000 68,000	.897	X-4130 120,000	49,000	44,000
2X-760	.355		.071	.0150	1315 2340	75 190	5,350 13,500	21,000 53,000	17,000 42,000	.892	X-4130 120,000	48,000	43,000
M190343	.470	.329	.084	.0020	8620	130	10,900	43,000	34,000	1.011	1350 75,000	34,000	32,000
M-70-W	.537	.400	.086	.0020	Book 48	190	16,400	65,000	51,000	.959	X-4130 120,000	52,000	48,000

(*) The Barrel Extension is the Receiver in the 1X-760.

NOTE: The above Force and Pressure figures are theoretical and should be used for comparison only. According to experience actual figures would be higher.

M. H. C.W.
2-28-44

RELATIVE STRENGTHS OF HIGH POWER CENTER FIRE RIFLES

MODEL NR.	RECEIVER AREA IN TENSION SQ. IN.	BOLT AREA IN SHEAR SQ. IN	BOLT AREA IN COMPRESS. SQ. IN.	EXPECTED DEFLECTION OF BOLT & RECEIVER BY YOUNG'S MODULUS P = 9000 E = 30x10⁶ INCHES	BOLT STRESS AISI [illegible] LOCK N.E. [illegible]	NOMINAL YIELD POINT 100,000 #/SQ. IN.	LOAD MAX. PRESS. [illegible]	BOLT MEAN PRESSURE POSSIBLE [illegible] MAX. PRESS. ÷ 1.45 #/SQ. IN.	BOLT MEAN PRESSURE POSSIBLE IN .375 HAN CASE MAX. PRESS. ÷ 1.45 #/SQ. IN.	BARREL SIZE OR AREA DIA. OF TRUNK AT BRANCH DIA. IN INCHES	STEEL AISI NO. & NOMINAL YIELD POINT #/SQ. IN.	BARREL MEAN PRESSURE POSSIBLE IN .30-06 CASE MAX. PRESS. ÷ 1.45 #/SQ. IN.	BARREL MEAN PRESSURE POSSIBLE IN .375 HAN CASE MAX. PRESS. ÷ 1.45 #/SQ. IN.
720	.143	.397	.109	.0015	2340	190	[illegible]	82,000	64,000	1.086	X-4130 120,000	58,000	54,000
721	.480	.429	.141	.0015	1335 2340	95 190	10,600 [illegible]	42,000 106,000	33,000 83,000	1.071	X-4130 120,000	57,000	53,000
1X-760*	.303	.206	.114	.0014	1335 2340	95 190	8,600 21,750	34,000 86,000	27,000 68,000	.897	X-4130 120,000	49,000	44,000
2X-760	.355		.071	.0150	1335 2340	95 190	5,350 13,500	21,000 53,000	17,000 42,000	.892	X-4130 120,000	48,000	43,000
M1903A3	.470	.329	.084	.0020	8620	130	10,900	43,000	34,000	1.011	135 75,000	34,000	32,000
M-70-W	.537	.400	.086	.0020	Rock [illegible]	190	16,400	65,000	53,000	.959	X-4130 120,000	52,000	48,000

(*) The Barrel Extension is the Receiver in the 1X-760.

NOTE: The above Force and Pressure figures are theoretical and should be used for comparison only. According to experience actual figures would be higher.

3083

AL (X029605)

2-25-47

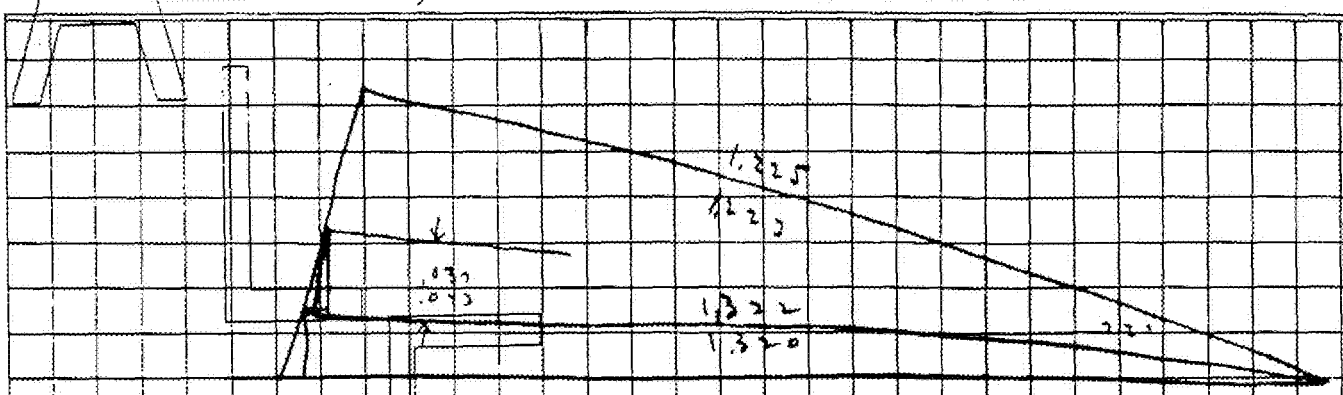
ENGINEERING DEPARTMENT COMPUTATION SHEET Sheet No.

Title of Proj. Proj. No.

Subject Works

Computer Date 19

Safety



$\cos 22° = \frac{.037}{x} = .926$

$x = \frac{.0399}{.0463}$

$\cos 23° = \frac{1.323}{x} = .929$

$x = \frac{1.320}{1.322}$

$\sin 5° = .087 = \frac{x}{1.322}$

$x = \frac{.115}{.1148}$

$\cos 27° = \frac{x}{.0399} = .891$

$x = \frac{.0356}{.0413}$

$\frac{.115}{.0413} \quad \frac{.1148}{.0356}$

$.1563 \quad .1504$

℄ to top = .1563
.1504

ENGINEERING DEPARTMENT COMPUTATION SHEET SHEET NO.

TITLE OF PROJ. PROJ. NO.

SUBJECT WORKS

COMPUTER DATE 19

A

.1561
.182
.3381

.1502
.178
.3282

.1504
.3645
.5149
.3381
.1768

.1563
.364
.5208
.3282
.1926

543
.347
.196
.0061
.2026
.1703
.0323

540
.350
.190
.0022
.1878
.1864
.0014

531
.335
.196

528
.334
.190

S

36

.350
.180
.53

Property lifted

.334
.190
.144

.335
.196
.138

518
.144
.370

522
.138
.384

518
.160
.358

522
.150
.372

444
.384
.030

428
.384
.158

C

Easy off Mount

5983

AL 0029607

	1.250	±.001	.000,01
+	.062675	±.000175	.000,000,306
	1.312675	±.001175	
−	.06245	±.00005	.000,000,025
=	1.250225	±.001225	
+	.000225	±.000225	.000,001,506
=	1.250450	±.001450	
−	.972	±.001	.000,01
=	.26545	±.00245	
−	.075	±.001	.000,01
=	.19345	±.00345	

top of Trigger from fuel control holes

Diff .19835 ±.00805
= .1703 to .1864

19345
1873
.00615 ±.00855
0029
.00905
.00325

00615
.01470
− .00240

	.650	±.001	.000,01
−	.280	±.002	.000,01
=	.370	±.003	
+	.062675	±.000175	.000,000,306
=	.432675	±.003175	
−	.06245	±.00005	.000,000,025
=	.370225	±.003225	
+	.062675	±.000175	.000,000,306
=	.432900	±.003400	
−	.124	±.001	.000,01
=	.3089	±.0034	
+	.0629	±.0002	.000,000,4
=	.3718	±.0036	top of [illegible] fuel control holes
−	.1845	±.0015	.000,0225
=	.1873	±.0061	

00855
2
.01710

.0148
.0058
.0206
.01710
.00360

.0058
.0024
.0035

.000,084,374 = ±.0029

6083

AL 0029608

ALEKSICH

Sean

.702
.605
.005
.004

.4552
.4548
.0104
.0052

.7555
.7500
.0055
.00275

.7533
.7500
.0033
.00165

700
698
.002
.001

.4500
.4500
.000

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.001

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.020

.005
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.44860

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002
.0156

430
.0156
.4144

.435
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.428

.001
.000
.001
000
430
.432

.002

.433

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.4144
.3891
.0253

.4486
.369
.0756
.0354

.438
.368
.0

.0625
.0625
.00225

.1250
.1250

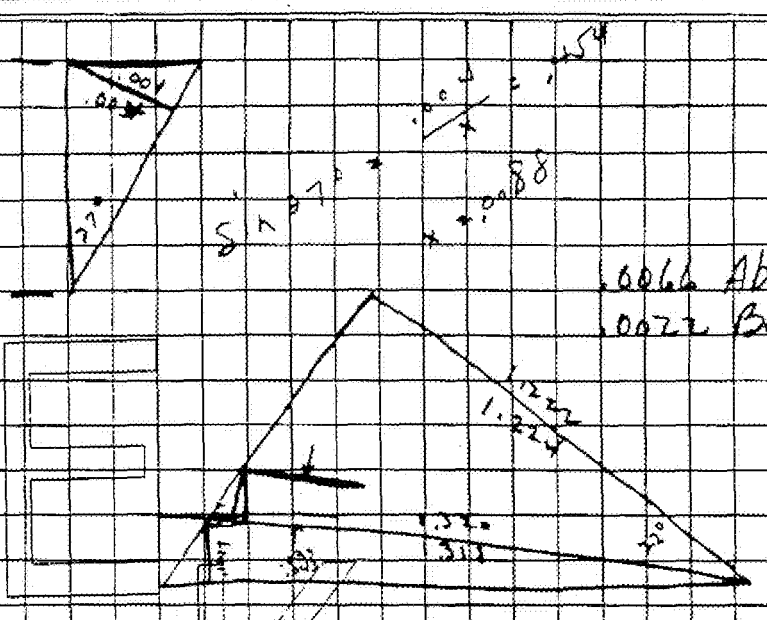
7783

DUPLICATE TO DEPARTMENT — COMPUTATION SHEET — SHEET NO.

TITLE OF PROJ. _____ PROJ. NO. _____

SUBJECT _____ WORKS _____

COMPUTER _____ DATE _____ 19 _____



$\cos 32° = .929 = \frac{.043}{x}$

$x = .0463$
$.0304$

$\cos 27° = .891 = \frac{x}{.0463}$

$x = .0413$
$.0356$

$\cos 32° = .929 = \frac{1.222}{x}$

$x = 1.318$
1.320

$\sin 5° = .087 = \frac{x}{1.320}$

$x = .1148$
$.1146$

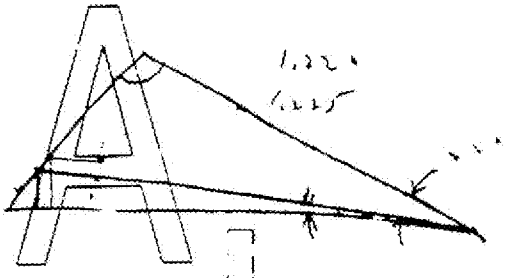
$.0413$
$.1148$
$.1561$

$.0356$
$.1146$
$.1502$

Elevation = $.1561$
$.1502$

8 of 83

AL 0029611



$\cos 22° = \frac{1.220}{x} = .9272$

$y = 1.316$

1.376

$\sin 5° = \frac{y}{1.316} = .08715$

$= .1149$

$.1152$

$.1149$
$.1369$
$.1518$
$.171$
$.3298$
$.19$

$.1152$
$.0478$
$.1580$
$.182$
$.3400$

$.19365$
$.00365$
$.190$
$.19690$

$\cos 5° = \frac{x}{.043} = .9062$

$= .0428$
$= .0369$

9883

AL 0029613

Book # 236

ALEKSICH

Issued to M. H. Wagner

on m/721 (9/10/43)

To be returned on request.

#236

10283

AL 0029615

RULES FOR RECORDING EXPERIMENTS

1. Original records are to be in ink.

2. Each notebook page whereon there is recorded a completed experiment should be signed and dated by the experimenter in the space provided.

3. Each notebook page containing a completed experiment should be read and signed by a witness who will place his signature and the date in the space provided. The witness is to be one who understands the purpose of the experiment and the result obtained but who is not likely to be the inventor or a co-inventor. Preferably the witness signs on the same day as the experimenter and in any event as soon thereafter as possible.

4. Where entries on a single experiment do not completely fill a page, the remainder of the blank page should be ruled out. Where the record of the experiment extends over several pages which are not consecutive, proper cross-references should be inserted.

5. The bound notebook is to be preserved intact. In no case should any page or part of a page be removed.

6. No erasures are to occur in the record. Any corrections or changes should be made by cancellation, leaving the original entry legible.

7. The same rules as to signing, dating and witnessing are to be followed when the original data are recorded on loose sheets or forms other than the standard bound notebook.

SUBJECT FOR INDEXING THIS BOOK
MUST BE GIVEN BELOW

ALEKSIC

DAT
SUB

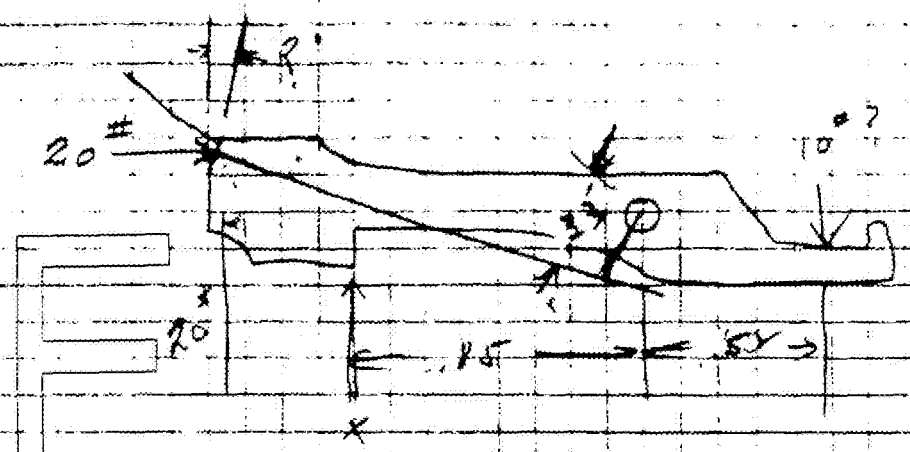
12/83

AL 0029617

EXPE
WITN

DATE: 9-10-43

SUBJECT OF EXPT. Blocked semi trigger



$(10).52 < 24(.33)$

$5.2 < 8$

$24(.33) = 10(.52) + x(.85)$

$8 = 5.2 + x(.85)$

$\frac{2.4}{.85} = x$

$x = 3.3$

EXPERIMENTER

WITNESS

DATE

DATE

AL 0029618

13 of 83

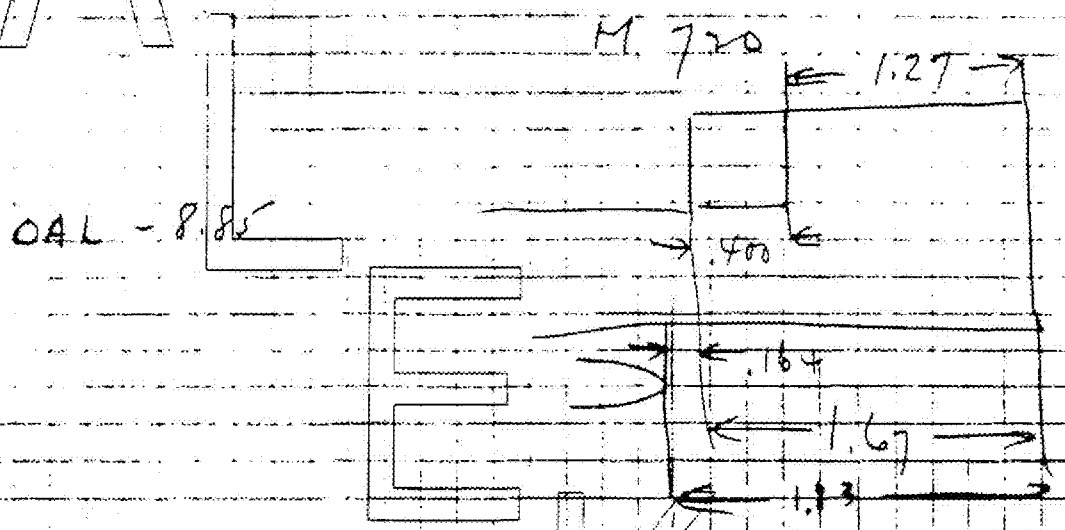
#2

DATE 9-13-43

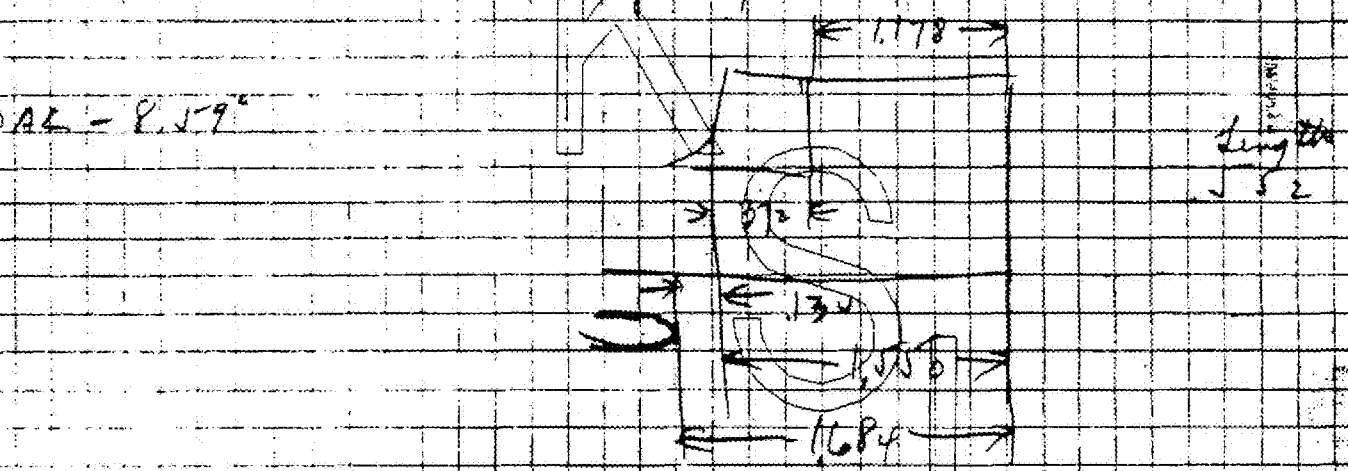
SUBJECT OF EXPT. Dimensions - Receivers

BH Thinks

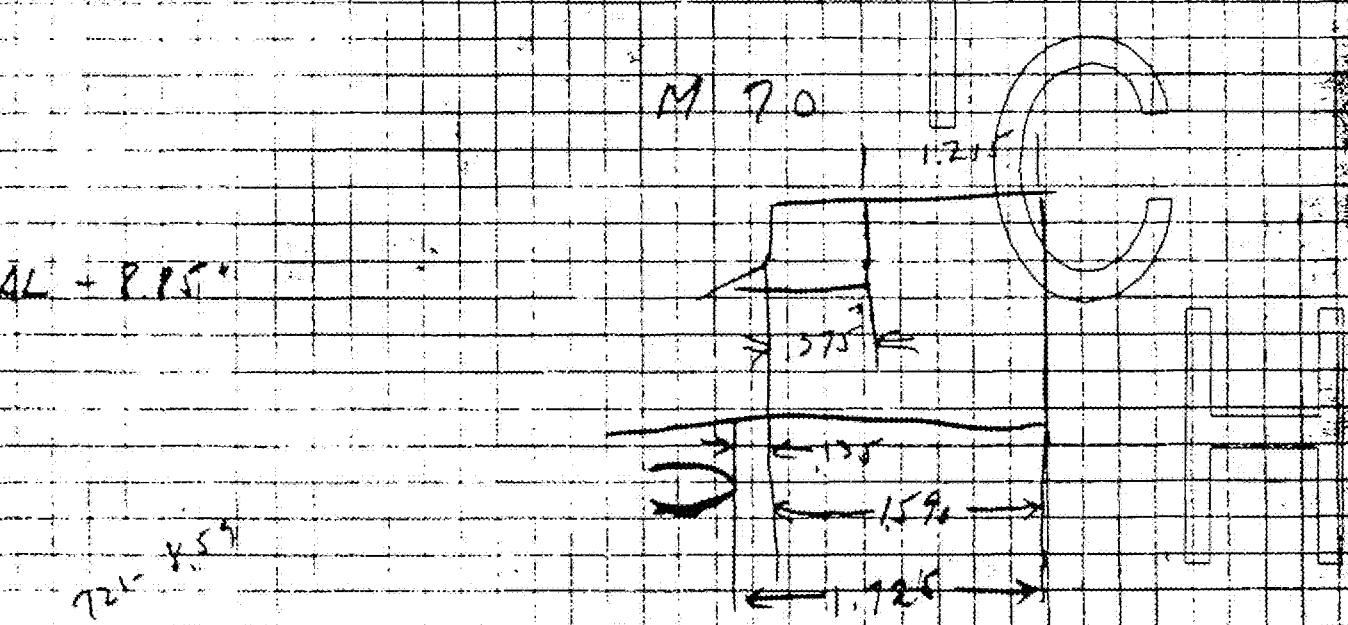
M 720



Springfield



M 70



72" 8.59

14 Dec 83

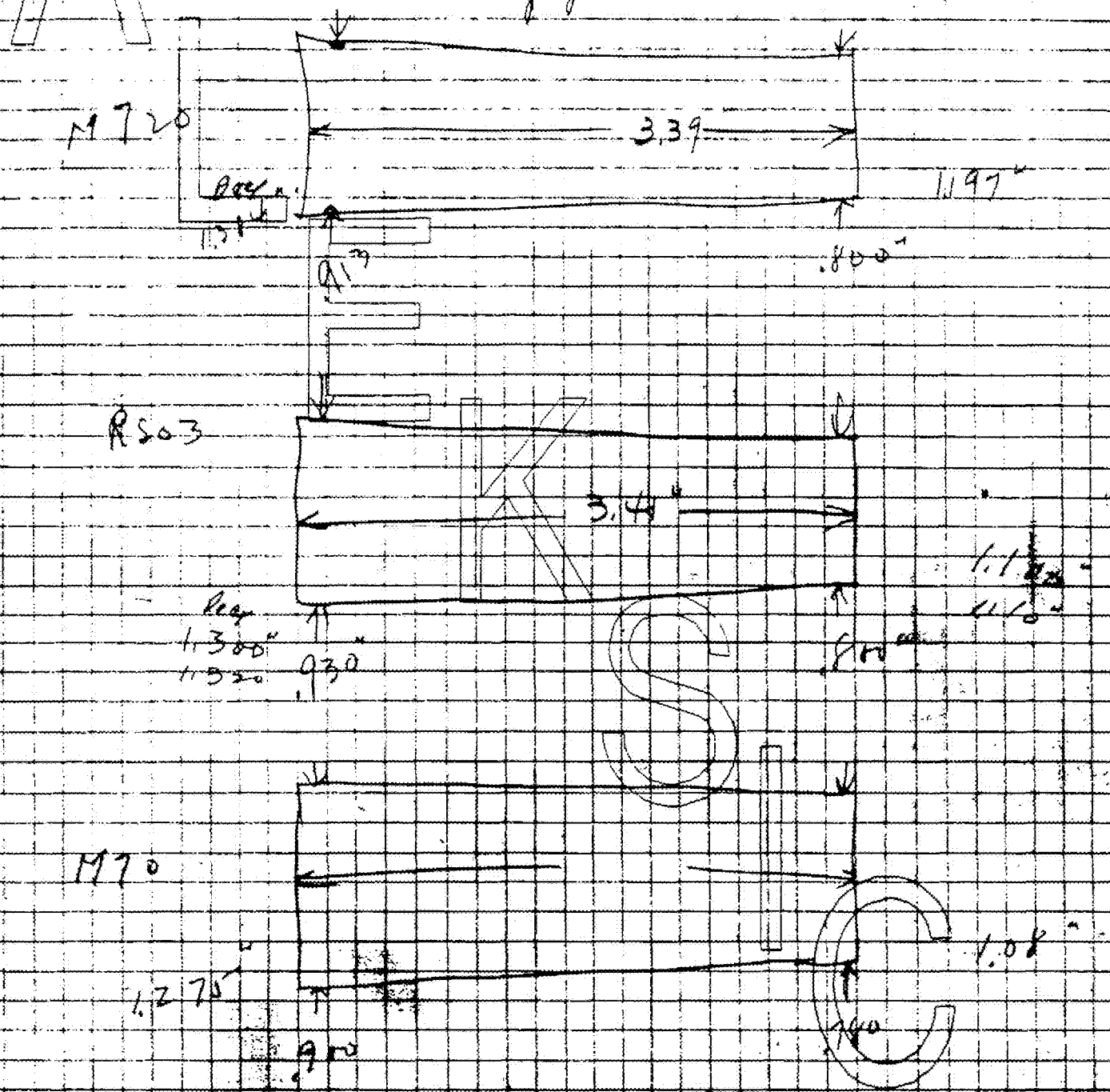
EXPERIMENTER DATE

WITNESS DATE

AL 0029619

DATE 9-15-43

SUBJECT OF EXPT. 3 x 6 Magazine



width of loading port

720 - .530"

RS. - .530"

70. - .544"

15/283

EXPERIMENTER DATE

WITNESS DATE

AL 0029620

DATE 9-15-43

SUBJECT OF EXPT Aluminum - Magnesium

Lower Rail to bottom of Mag.

	Rear	Front
M 720	1.74	1.52
R503	1.75	1.58
M 720	1.72"	1.54"
M 760	1.60	1.48

top width .754
Bottom rear .950
Bottom Front .812

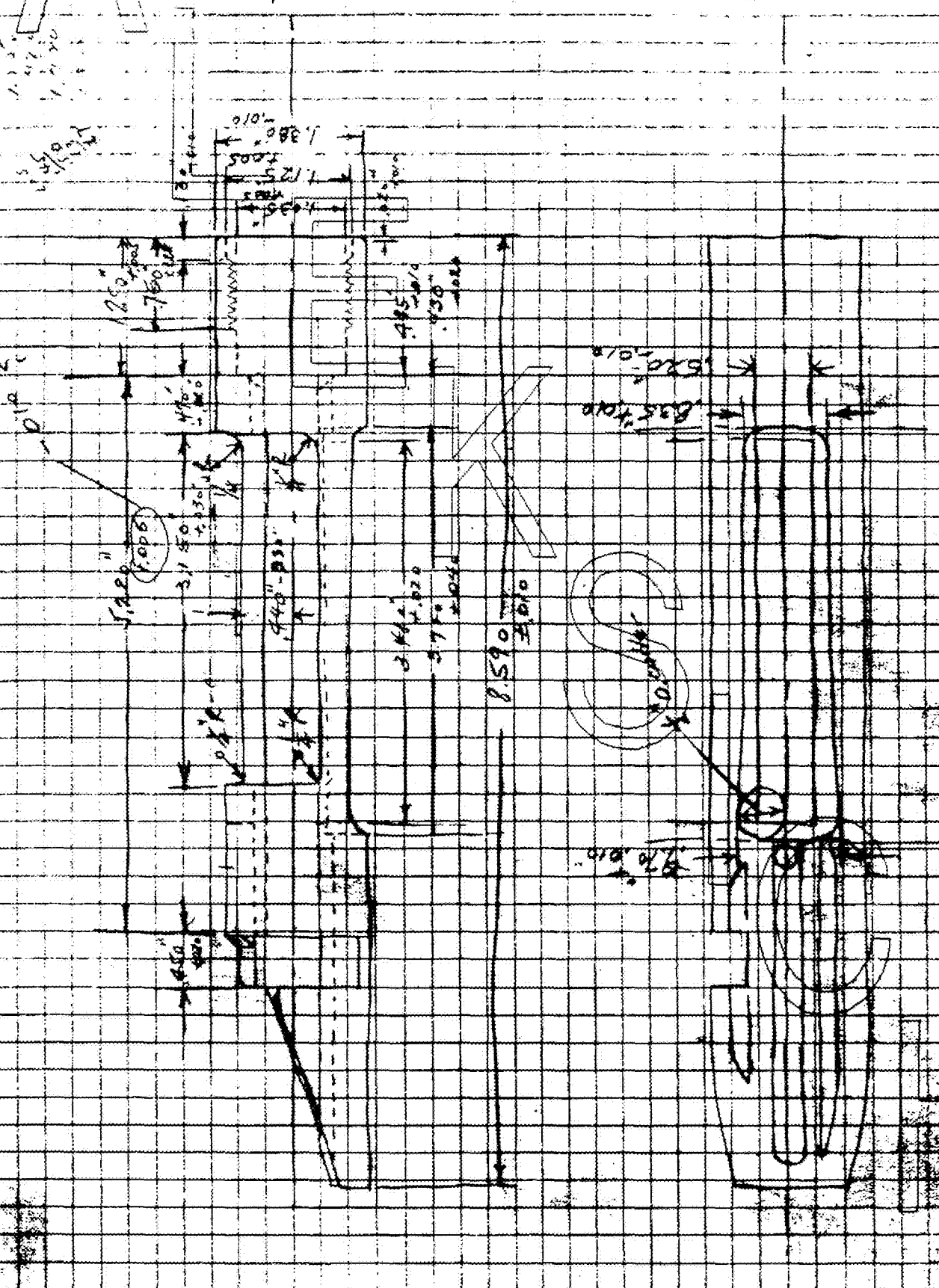
EXPERIMENTER DATE

WITNESS DATE

16 Aug 85

DATE 9-16-43

SUBJECT OF EXPT. 721 Reactor dimensions



EXPERIMENTER DATE

WITNESS DATE

DATE 9-17-43

SUBJECT OF EXPT. Receiver Calculations

Strength of receiver Ring

Min O.D. = 1.370"

Max I.D = 1.130"

AREA O.D. = $\left(\frac{1.370}{2}\right)^2 \pi$ = 1.475 sq in.

AREA I.D = $\left(\frac{1.130}{2}\right)^2 \pi$ = 1.004 sq in

Cross Section Area .471 sq in

Yield strength of X 1315 heat treated =

EXPERIMENTER DATE

WITNESS DATE

18883

DATE 9-26-43

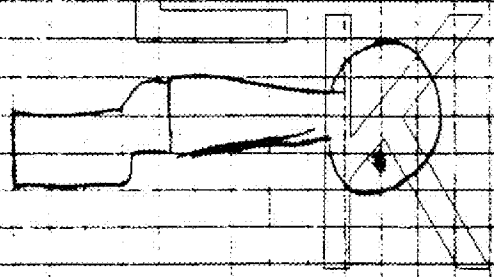
SUBJECT OF EXPT. Stock dimension 721

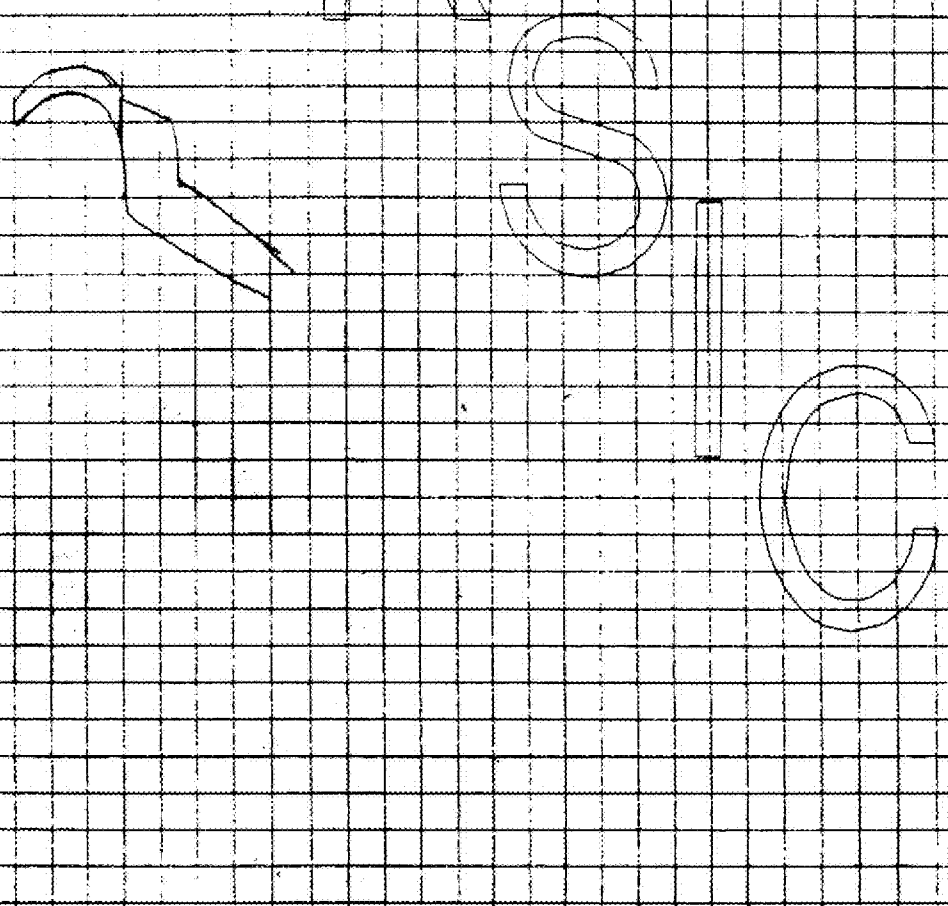
Drop at comb $1\frac{11}{16}$"

Drop at heel $2\frac{5}{8}$"

Length $13\frac{1}{2}$" not used

Pitch with 24" $25\frac{1}{4}$"





EXPERIMENTER DATE

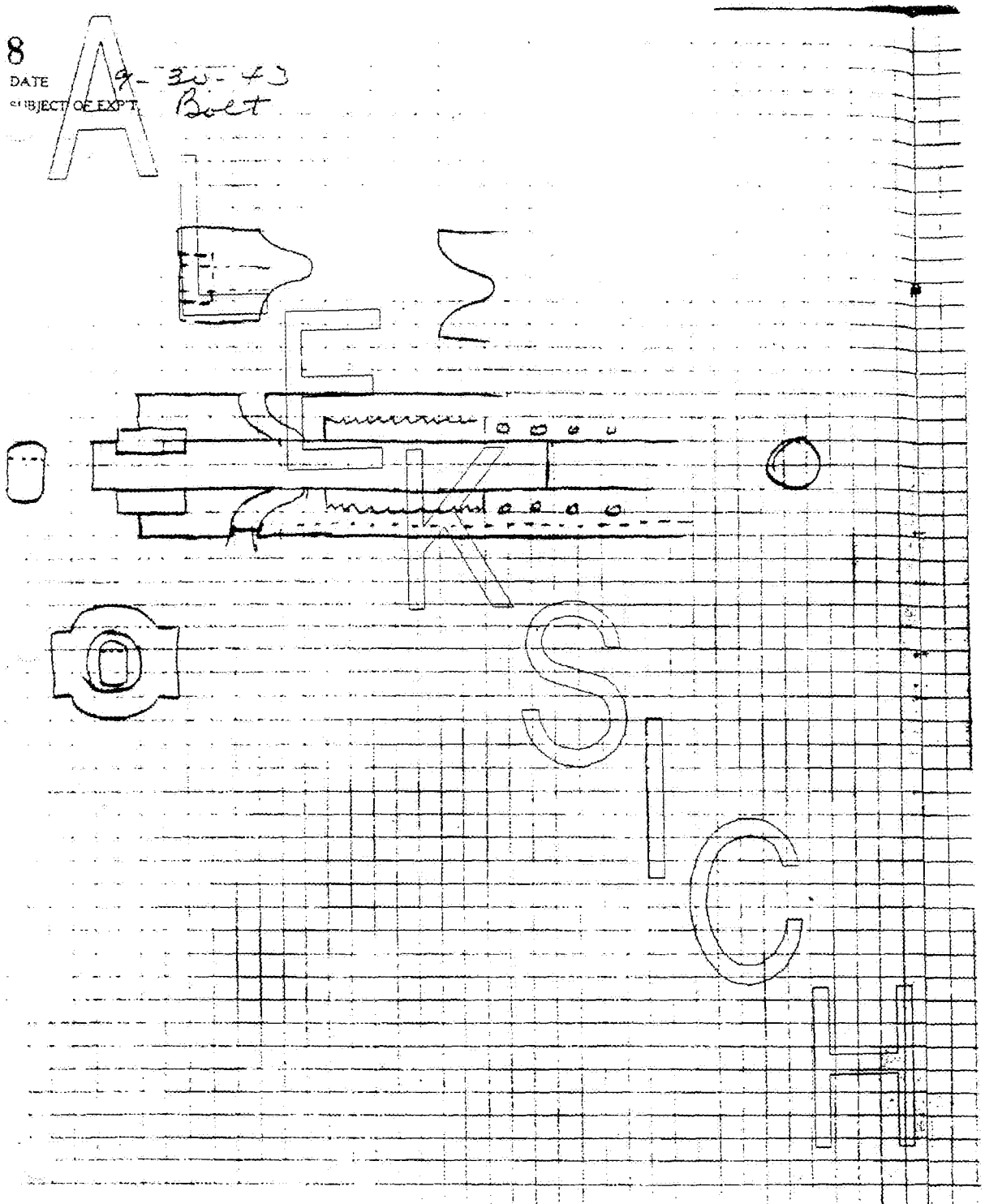
WITNESS DATE

19983

8

DATE 9-30-43

SUBJECT OF EXPT. Bolt



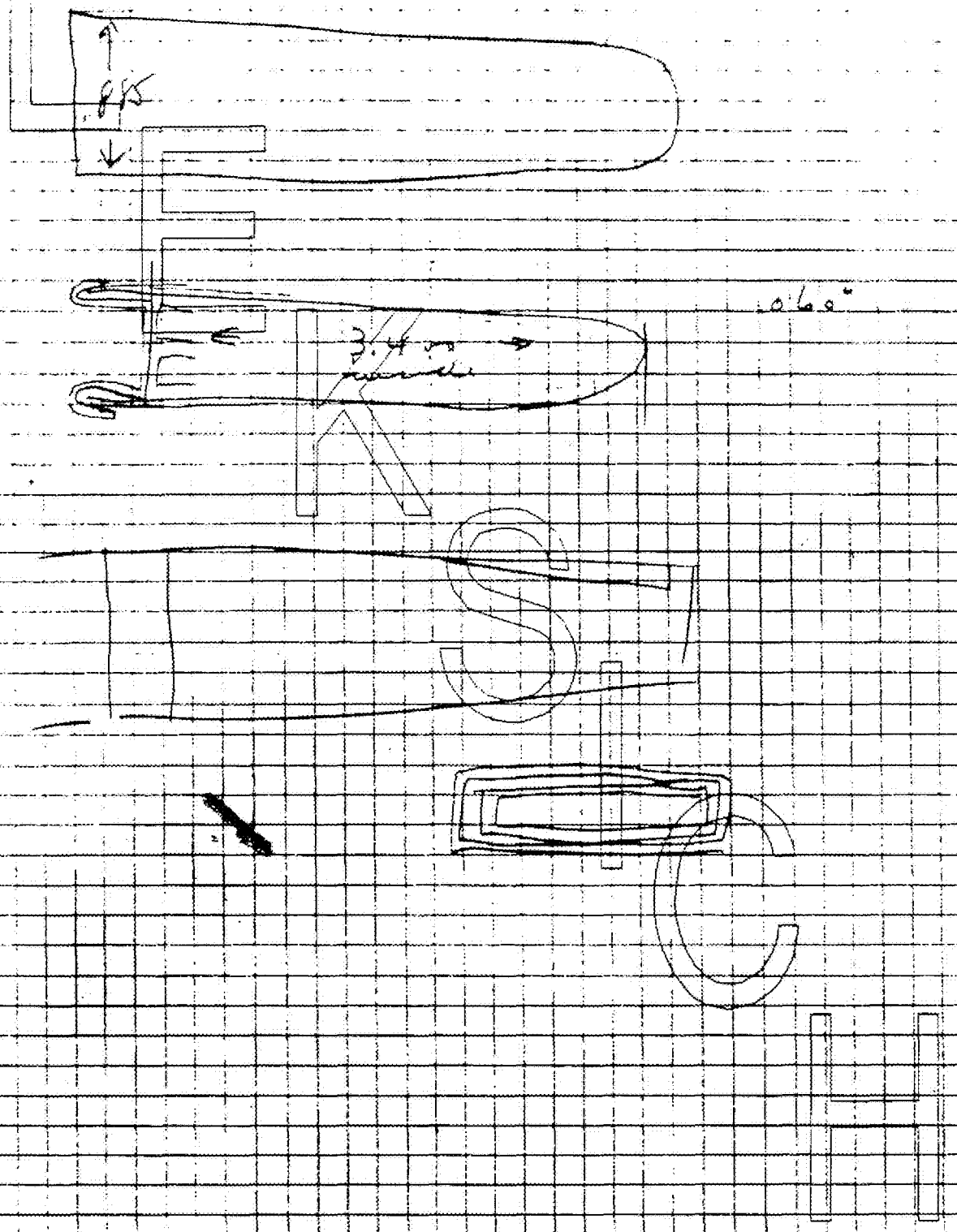
EXPERIMENTER DATE

WITNESS DATE

20983

DATE 10-1-43

SUBJECT OF EXPT. Magnesium



EXPERIMENTER DATE

WITNESS DATE

10

DATE 11-16-43

SUBJECT OF EXPT. Magazine dimensions

	30,00	$.75	1 man 30
	30,000	$.25	1 man 50

	Wire 70	Rear 70
Depth Front to bolt	1.432"	1.450"
" Rear " "	1.604	1.682"
Width Rear	9x"	9x"
Width Front	.78"	.78"
Girth - receiver ring	7 1/16"	7 3/16"
Girth back of " "	6 7/8"	7"
Girth front of Rec. bridge	7 5/8"	7 1/16"
Stock thickness	1.817	1.815
Grip circum.	5 1/8	4 15/16

270

EXPERIMENTER DATE

WITNESS DATE

DATE 2-23-44

SUBJECT OF EXPT. 7XL Main Spring

FIXED LENGTH 3.325"

COCKED LENGTH 3.030"

$d = .055"$

$D = .395 - .055 = .340"$

$n = 38$ ACTIVE

$19^{\#}$ at $3.325" = 6.^{"\#}$ ENERGY

H. G. Chapt

$$P = \frac{f d^3 G}{8 n D^3} = f\left(\frac{9.15\times10^{-6} \quad 11.5\times10^{6}}{8\times 38\times .0393}\right)$$

$$= f\ 8.8$$

Set from 7# to 6#

$$8.8(L - 3.325") = 19^{\#}$$

$$L = \frac{19}{8.8} + 3.325$$

$$L = 5.485 \rightarrow 5.50"$$

FIXED $P = 19^{\#}$

COCKED $P = 8.8(5.50 - 3.03) = 21.9^{\#}$

STACKED $P = 8.8(5.50 - 2.12) = 29.6^{\#}$

$$S = \frac{8PD}{\pi d^3} = P\left(\frac{8\times.395}{\pi(.055)^3}\right)$$

$$S = P(5700)$$

FIXED $S = 19(5700) = 98,000$ PSI

COCKED $S = 21.9(5700) = 113,000$ PSI

STACKED $S = 29.6(5700) = 154,000$ PSI

EXPERIMENTER DATE

WITNESS DATE

AL 0029628

22983

DATE I - 23 - 44

SUBJECT OF EXPT. Short M 721, Main Spring

1" Shorter

FIRED LENGTH = 2.325

COCKED LENGTH = 2.030

d = .055

D = .395 - .055 = .340

19# at 2.325 = 6 lb ENERGY

STACKED L = 2.030 - .600 = 1.430" = 25 Active Coils

P = 13.4 #

13.4 (L - 2.325) = 2.0 #

L = 3.66

FIRED P = 8 #

COCKED P = (3.66 - 2.030) 13.4 = 21.8 #

STACKED P = (3.66 - 1.43) 13.4 = 30.0 #

S = P (5700)

FIRED S = 5700 × 16 = 93,500

COCKED S = 21.8 × 5700 = 124,200

STACKED S = 5700 × 30 = 156,000

5700 × 32 =

set from to

EXPERIMENTER DATE

WITNESS DATE

24283

AL 0029629

DATE 3-29-44

SUBJECT OF EXPT. FIRING PIN PROTRUSION

MAX BOLT LENGTH

.451
.315
.433
.060
1.763

MIN PIN LENGTH

1.810
− .500
1.310

MIN PROTRUSION = 1.310 − 1.763 = .047

MIN BOLT LENGTH

.449
.309
.427
.060
1.245

MAX PIN LENGTH

1.813
− .491
1.315

MAX PROTRUSION = 1.315 − 1.245 = .070

EXPERIMENTER DATE

WITNESS DATE

25883

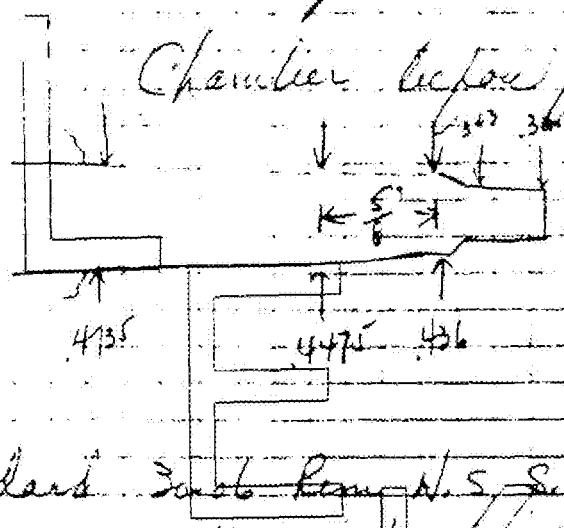
DATE

SUBJECT OF EXPT.

A

First cartridge fired on 3/1/37

Chamber before firing

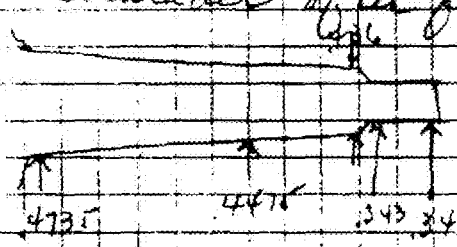


Head space 1.937"

A standard 30-06 Rem. U.S. S.P. was fired after some trouble getting the bullet up to .01". The case stretched in front of the solid head and expanded enough to let out some gas. The primer was smeared to a section ¼" diameter.

It is fairly evident that the leading plug took up on the body instead of the shoulder of the chamber causing excess head space.

Chamber after firing



Head space 1.937"

As shown is evident.

Exterior dimen

.036 dia

.132 ob

EXPERIMENTER

WITNESS

DATE

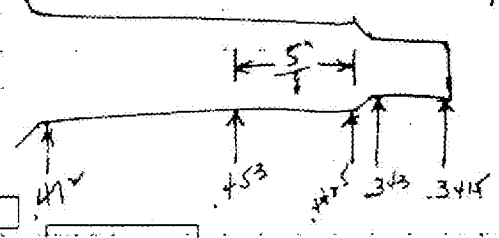
DATE

36 of 83

AL 0029631

DATE 4-10-44

SUBJECT OF EXPT. First cartridge in 721 after reheading Before firing



Head Space 1.957

No change or accident after 10 periods

EXPERIMENTER. DATE

WITNESS DATE

27 p 83

DATE: May 8, 19--

SUBJECT OF EXPT.: New barrel breech dimensions

A

$$S = \frac{P(r_2^2 + r_1^2)}{(r_2^2 - r_1^2)}$$

$r_2 = 1.067$ 270 Win. PRESSURE = 84000 psi

$r_1^2 = (.474 \div 2)^2 = .237^2 = .056$

$1\frac{1}{8} = 1.067$ $r_2 = (1.067 \div 2)^2 = .534^2 = .285$

$1\frac{1}{16} = 1.018$ $r_2^2 = (1.018 \div 2)^2 = .509^2 = .259$

$1\frac{1}{8}$ $S = \frac{84000\,(.374^2)}{.288} = 175{,}000$ psi (270 Win)

B

$1\frac{1}{16}$ $S = \frac{84000\,(.315^2)}{.266} = 130{,}000$ psi (270 Win)

C

284 Mag PRESSURE = 84,000 psi

$r_1^2 = (.514 \div 2)^2 = .257^2 = .066$

$1\frac{1}{8}$ 1.067 $r_2^2 = (1.067 \div 2)^2 = .534^2 = .285$

$1\frac{1}{16}$ 1.018 $r_2^2 = (1.018 \div 2)^2 = .509^2 = .259$

$1\frac{1}{8}$ $S = \frac{84000\,(.351)}{.219} = 135{,}000$ psi (284 Mag)

D

$1\frac{1}{16}$ $S = \frac{84000\,(.325)}{.193} = 144{,}000$ psi (284 Mag)

EXPERIMENTER: DATE:

WITNESS: DATE:

28983

AL 0029633

DATE June 5, 1945

SUBJECT OF EXPT. 721 Lock Time

721 Firing Pin = 61.5 gms.

721 Spring = 12.8 gms.

722 Firing Pin = 52.4 gms

722 Spring = 9.1 gms.

721 Lock Time = $\sqrt{\frac{2 \times 67.9 \times 300 \times .0022}{21 \times 32 \times 12}}$ = 3.33 ms

722 Lock Time = $\sqrt{\frac{2 \times 56.9 \times 300 \times .0022}{21 \times 32 \times 12}}$ = 3.02 ms

$= \sqrt{2 M S}$

$\sqrt{\frac{S \cdot 1 \cdot 2 \cdot D^2}{\ell \cdot 12 \cdot n \cdot 1 \cdot 1 \cdot 1 \cdot 1 \cdot 1}}$

EXPERIMENTER: DATE

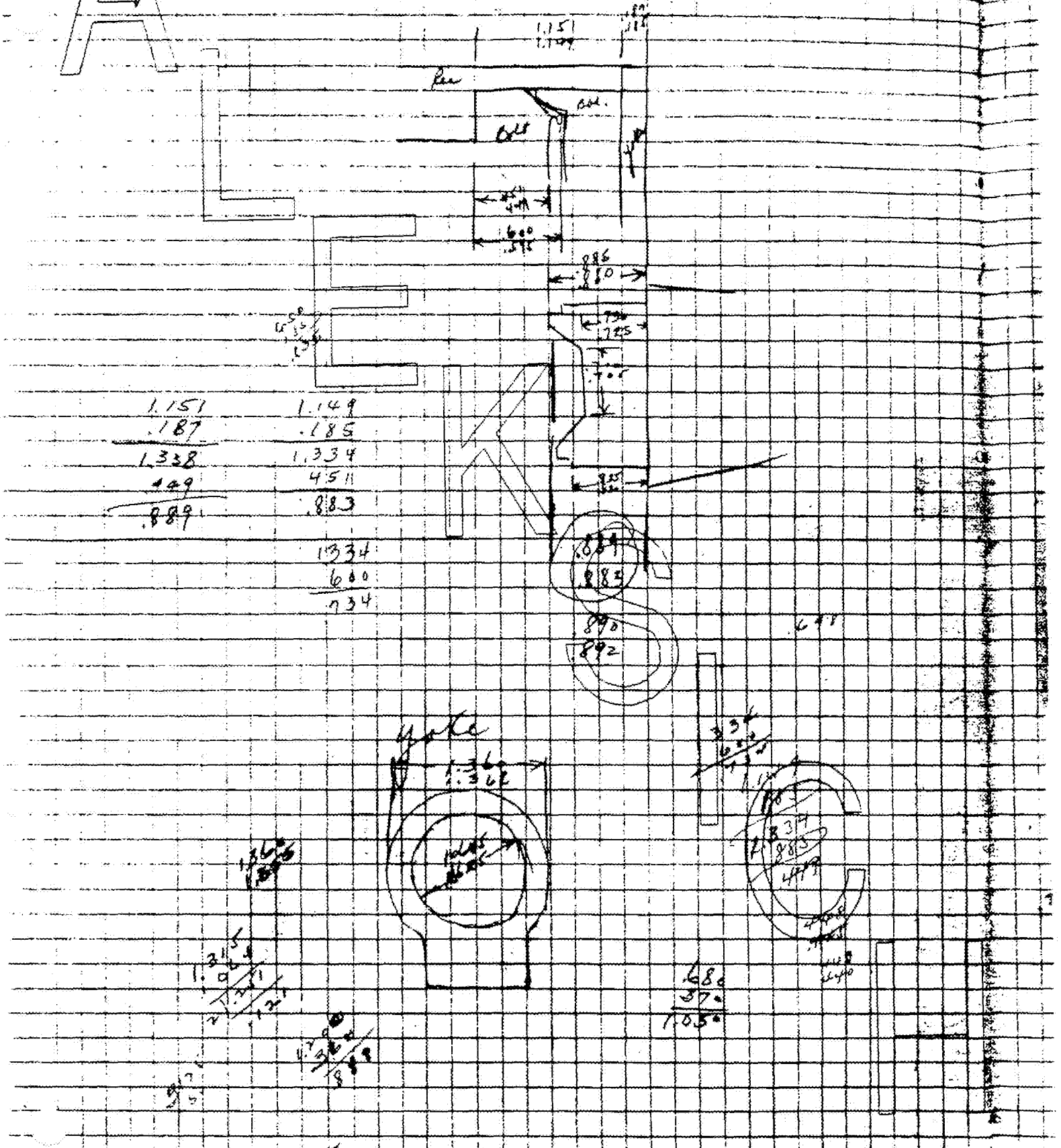
WITNESS DATE

29283

AL 0029634

DATE July 7, 1964

SUBJECT OF EXPT. Baire, Bolt & Reuven Tolerances



EXPERIMENTER DATE

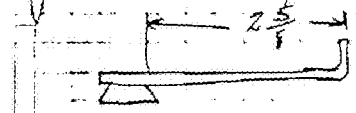
WITNESS DATE

30283

DATE June 12, 1944

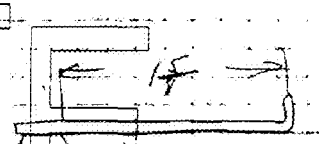
SUBJECT OF EXPT. Rear Sight

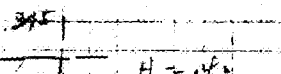
M 920



Deflec = .172

M 921





Assume S of 150,000

$$F = \frac{2SL^2}{3EH} \qquad H = \frac{2SL^2}{3EF}$$

$$H = \frac{2(150{,}000)(1.625)^2}{3(3\times10^7)(.172)} = .044$$

$$P = \frac{Sbh^2}{6L} = \frac{150{,}000(.375)(.044)^2}{6(1.625)} = 9.5$$

EXPERIMENTER: DATE

WITNESS: DATE

31883

AL 0029636

20

DATE June 13, 1944

SUBJECT OF EXPT. 721 & 722 Calibers

M 721

.284 Rem Mag.

.30-06

.280 Rem

M 722

.224 Rem (.250-3000)

.220 Rem (.25-20 SS)

M 710 (Single Shot)

.220 Rem. (.25-20 SS)

M 514 (Single Shot)

.22 L.R. Target Model

EXPERIMENTER DATE

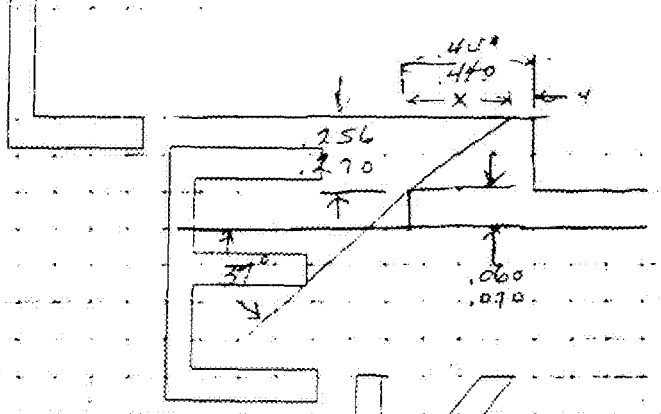
WITNESS DATE

32 of 83

AL 002963

DATE 6-19-44

SUBJECT OF EXP'T. CARRIDGE RAMP



.1355
.6775
.3515
.3260
.070
.2560

.1360
.680
.350
330
60
.270

Tan. 37° = .7536

$X = \frac{.256}{.7536} = .340$

$X = \frac{.270}{.7536} = .358$

MAX Y = .440 − .340 = .109

MIN Y = .440 − .358 = .082

4×37
3.746
.148

4×30
3.020
.440

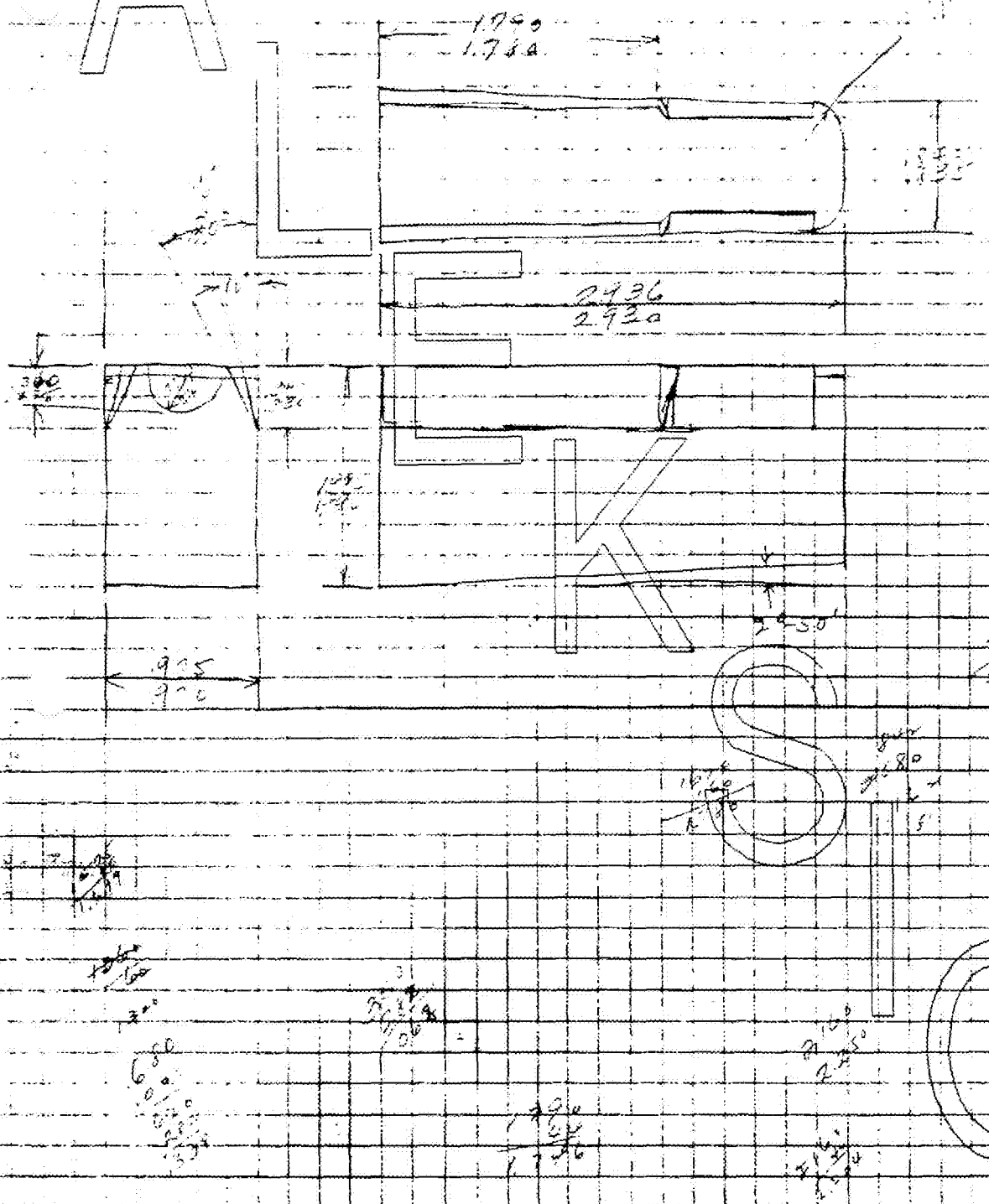
EXPERIMENTER DATE

WITNESS DATE

33 283

DATE 6-20-11

SUBJECT OF EXP'T. 300 SAUNGE KAGBINE



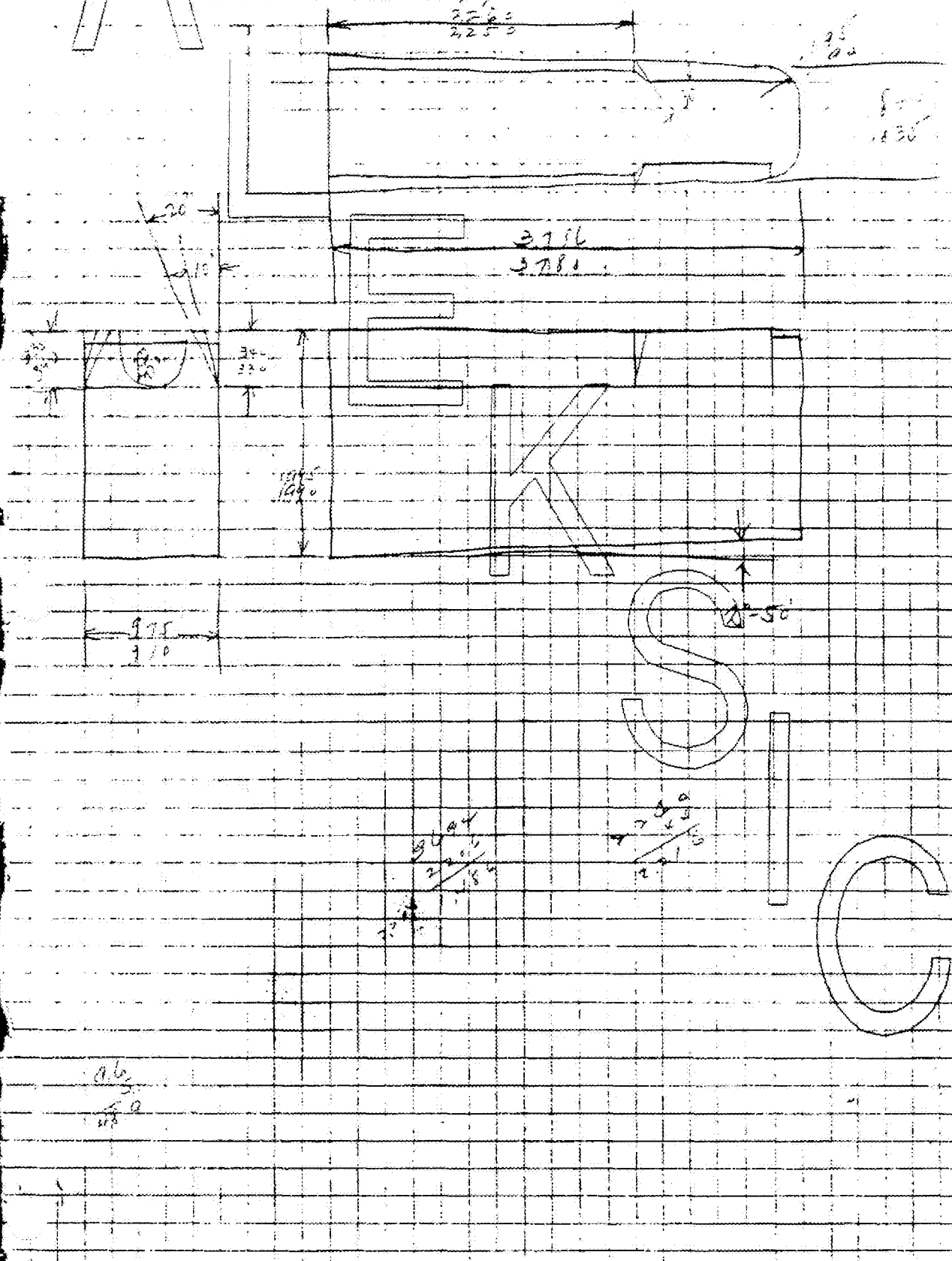
EXPERIMENTER DATE

WITNESS DATE

34883

DATE 6-21-[illegible]

SUBJECT OF EXPT. 3.00 Hall Magnum Magazine

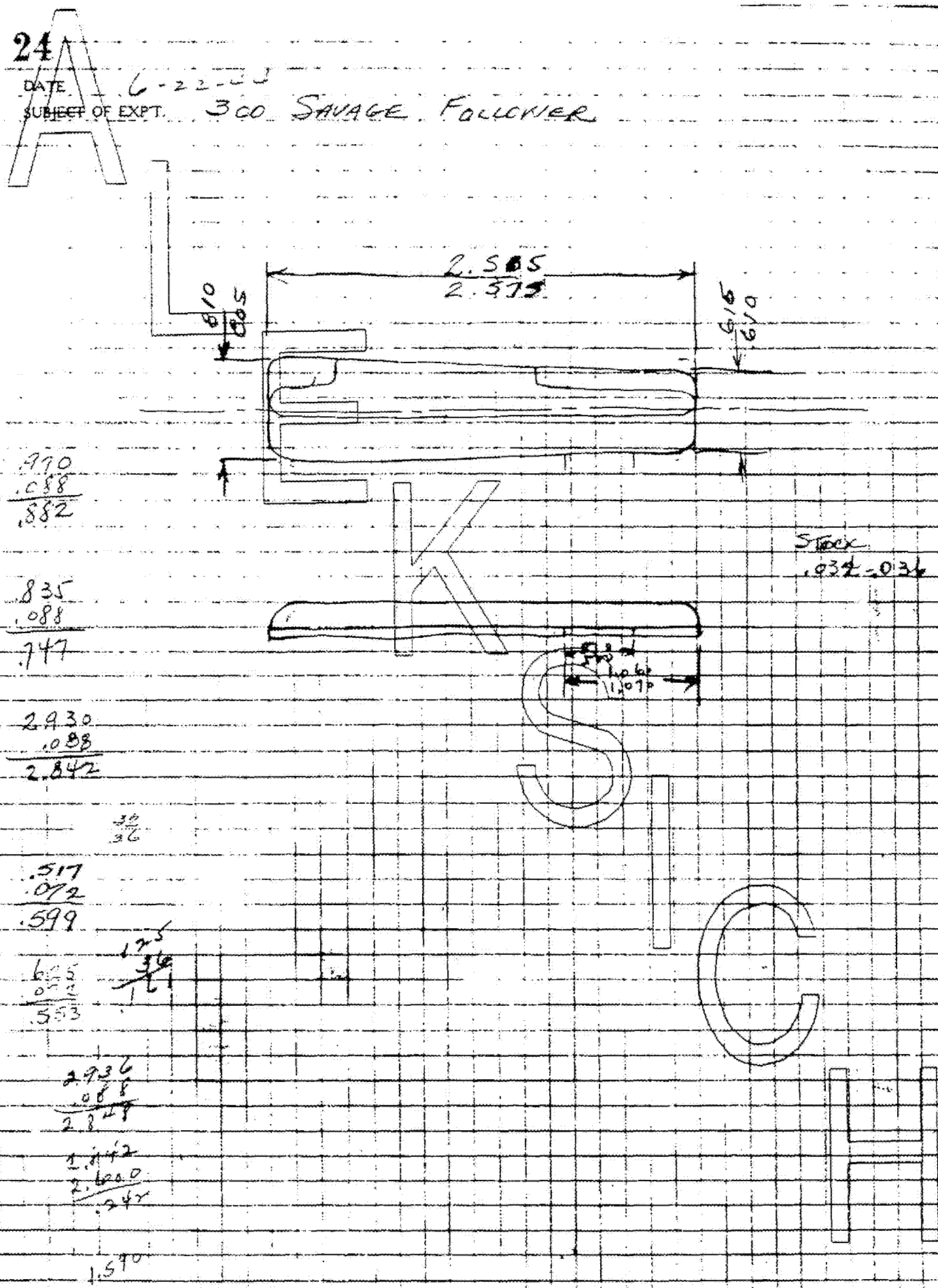


EXPERIMENTER DATE

WITNESS DATE

DATE 6-22-53

SUBJECT OF EXPT. 300 SAVAGE FOLLOWER



EXPERIMENTER DATE

WITNESS DATE

36283

DATE 6-27-44

SUBJECT OR EXPT. M - 122 MAIN SPRING

FIRED LENGTH = 2.475

COCKED LENGTH = 2.1[illegible]

d = .0[illegible]5

D = .395 - .407 - .055 = .352 MAX.

SQUARED LENGTH = 1.54[illegible]

24 TOTAL COILS 26 ACTIVE

P = 11.6 #/in

4" FREE LENGTH

2.475 / 1.523 FIRED P = (400 - 247.5) 11.6 = 177#

COCKED P = (400 - 218.6) 11.6 = 211#

2.1 / 1.2 21# 24# 20.5 - 23.0

SECRET

37883

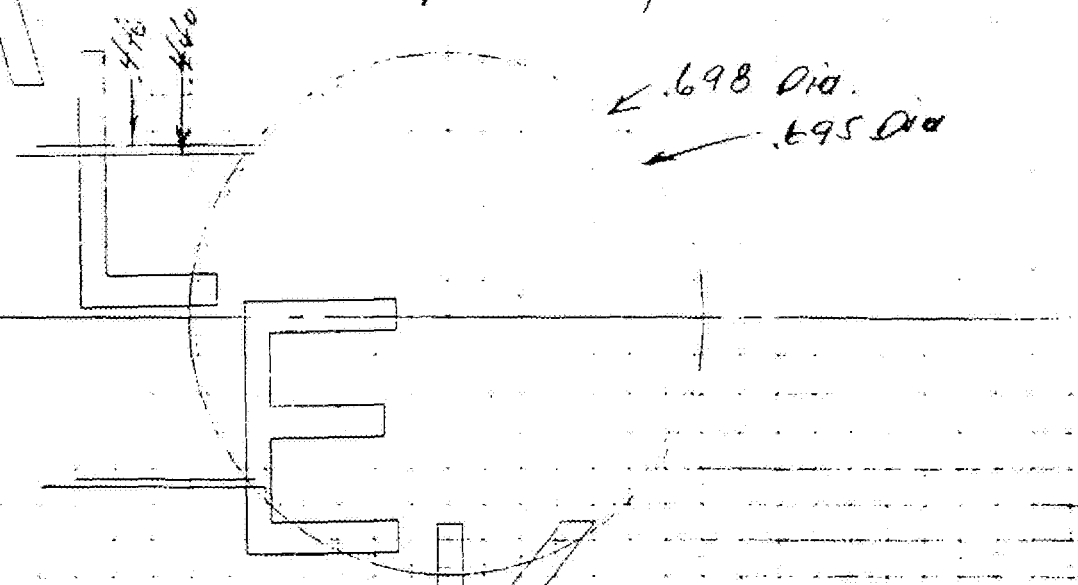
AL 0029642

EXPERIMENTER DATE

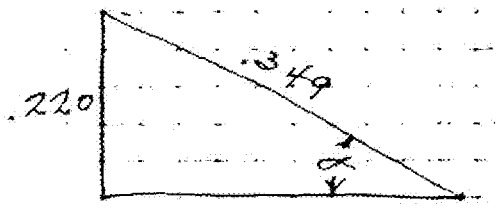
WITNESS DATE

DATE 7-12-74

SUBJECT OF EXPT. Bolt Body and Lug Intersection



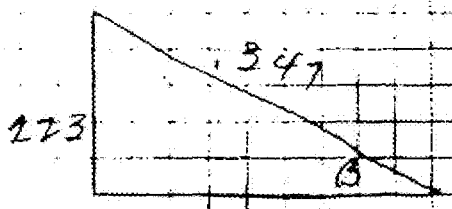
MIN LUG & MAX BOLT



$\sin\alpha = \frac{.220}{.349} = .6304$

$\alpha = 39° - 4' - 47°$

MAX LUG & MIN BOLT



$\sin\beta = \frac{.273}{.347} = .7866$

$\beta = 39° - 52' - 5'$

$\beta - \alpha = 54' - 18' = 54.3'$

$\frac{54.3}{360 \times 60} \times .698 \times \pi$ = Linear Movement Approx

$= .00552''$

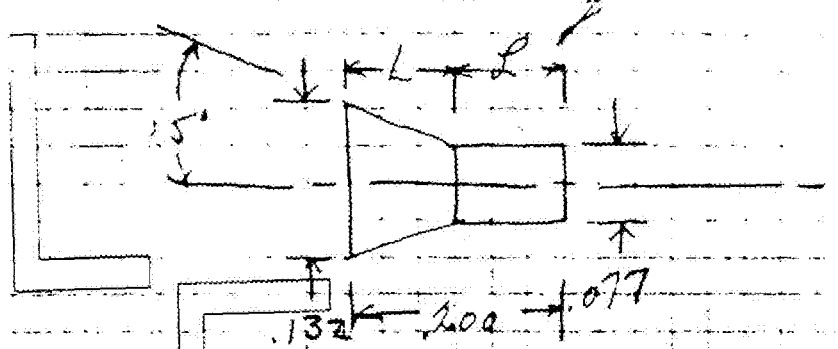
EXPERIMENTER DATE

WITNESS DATE

39883

DATE 7-14-44

SUBJECT OF EXP'T. Bolt Head - Firing Pin



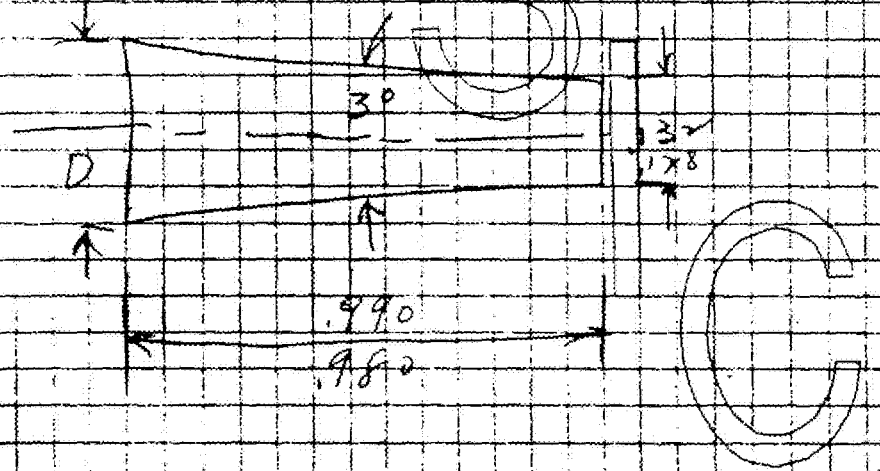
FIND Min. L

$$\frac{.132 - .077}{2} \div L = \text{Tan } 15°$$

$$= .2679$$

$$L = \frac{.0275}{.2679} = .1027$$

$$\text{Min. } L = .200 - .103 = .097$$



Find Max & Min D

$$\frac{D_{max} - .132}{2} \div .990 = \text{Tan } 15° = .0262$$

$$D_{max} - .132 = .990 \times .0262 \times 2 = .0518$$

$$D_{max} = .1838$$

$$D_{min} - .118 = .980 \times .0262 \times 2 = .0513$$

$$D_{min} = .1793$$

$$\begin{array}{r} .179 \\ .705 \\ \hline .1085 \\ .092 \\ \hline .0165 \end{array}$$

EXPERIMENTER DATE

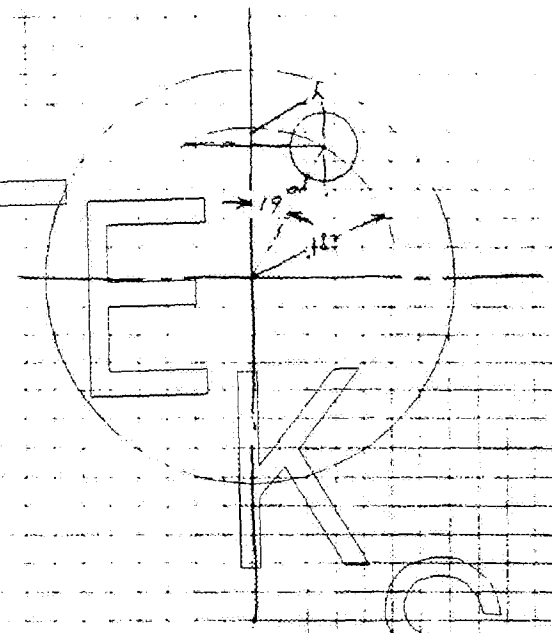
WITNESS DATE

39883

AL 0029644

DATE 7-17-44

SUBJECT OF EXPT. Placement of ejector pin hole



$h = .18r - (.18r \cos 19°)$

$= .18r - (.18r \times .9455)$

$= .18r - .170r$

$= .010"$

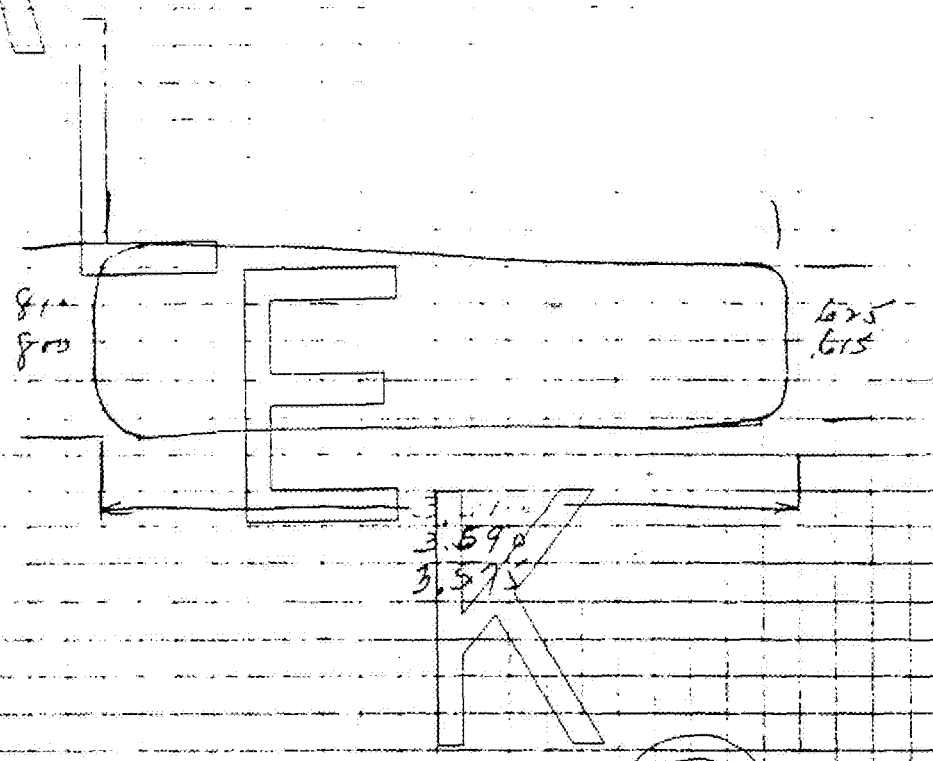
EXPERIMENTER DATE

WITNESS DATE

AL 0029645

DATE: 7-18-44

SUBJECT OF EXPT. 300 Hr 4 Follower



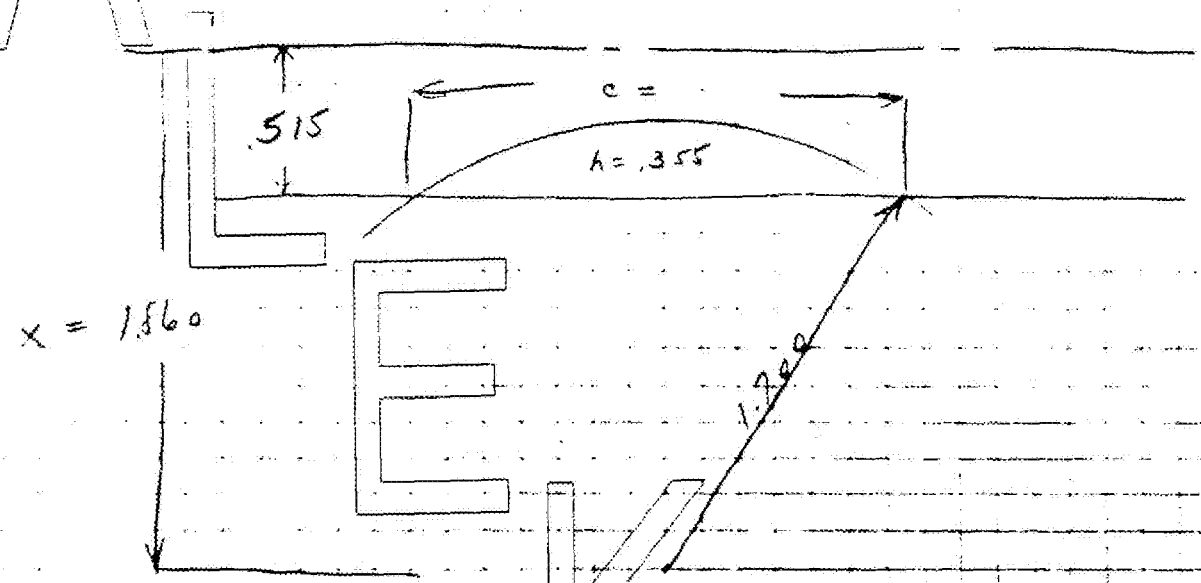
EXPERIMENTER DATE

WITNESS DATE

41 983

DATE 7-19-61

SUBJECT OF EXP'T. Calculations of Cutter centers for Fin control



$$\begin{array}{r} 1.860 \\ .515 \\ \hline 1.345 - \\ 1.700 + \\ \hline .355 \end{array}$$

$\frac{h}{r} = \frac{.355}{1.700} = .2088$ $\quad \frac{.002}{.054} \times .013 = .0052$

$\frac{c}{r} = 1.223$

$c = 2.080''$

Ford 1.645 cutter

$\frac{c}{r} = \frac{2.080}{1.645} = 1.265$ $\quad \frac{.006}{.013} \times .0055 = .0025$

$\frac{h}{r} = .254$

$h = .374$

$$\begin{array}{r} 1.645 \\ .374 \\ \hline 1.271 \\ .515 \\ \hline 1.786 \end{array}$$

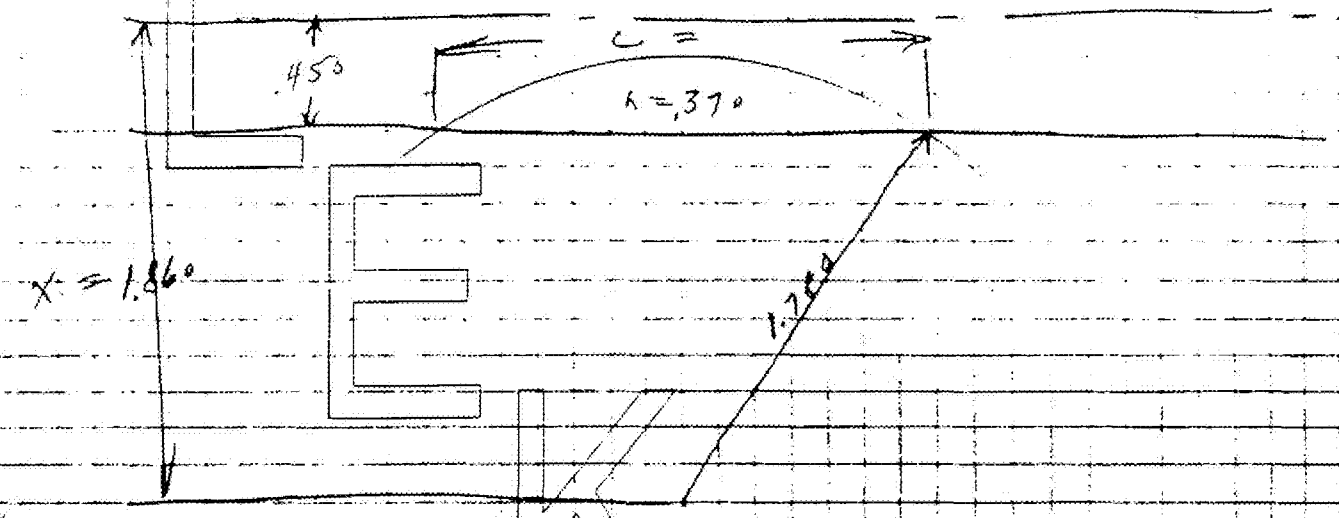
$x = 1.645 - .374 + .515 = 1.786$

EXPERIMENTER DATE

WITNESS DATE

42283

DATE 7-19-44
SUBJECT OF EXPT. Cutter centers



$\frac{h}{r} = \frac{.378}{1.750} = .208$

$\frac{c}{r} = 1.221$

$c = 2.173$

For 1.750 R cutter

$\frac{c}{r} = \frac{2.173}{1.750} = 1.242$

$\frac{h}{r} = .2162$

$h = .3785''$

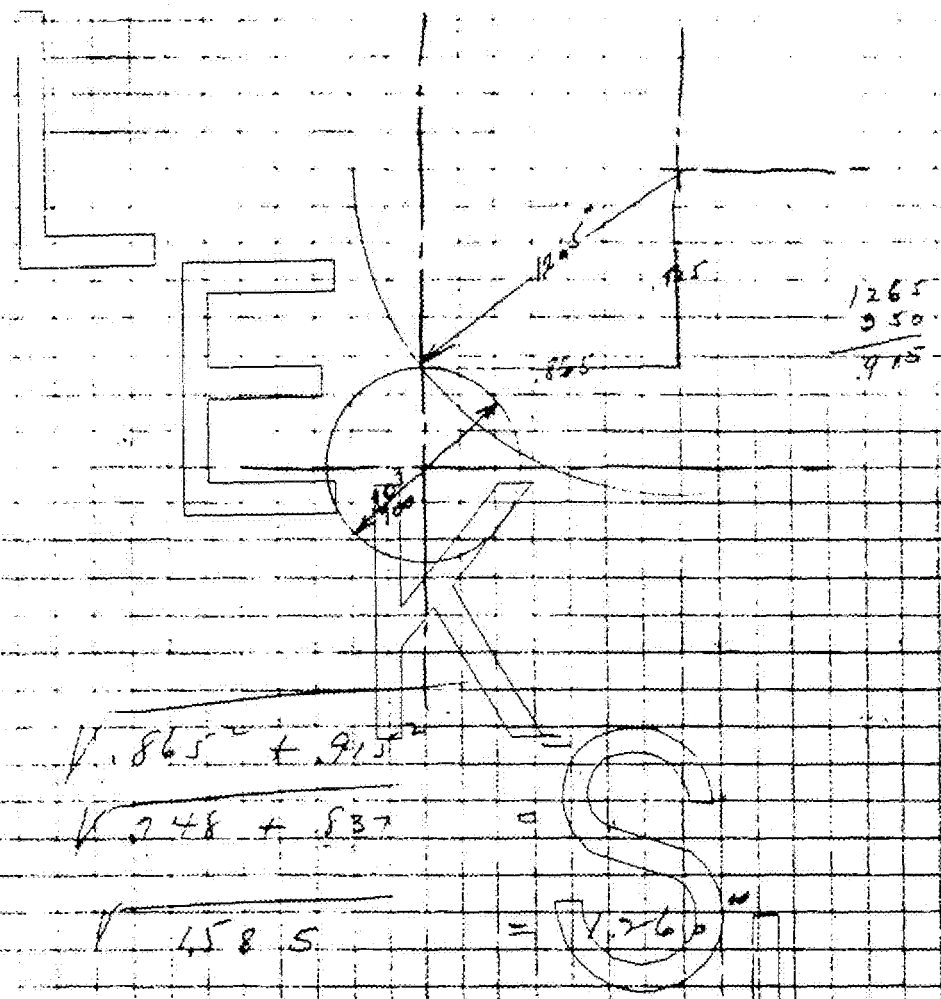
$x = 1.750 - .378 + .450 = 1.822$

EXPERIMENTER DATE
WITNESS DATE

43 ~~283~~
AL 0029648

DATE 7-20-44

SUBJECT OF EXP'T. Extraction Cone Cutter Center.



$\sqrt{.865^2 + .915^2}$

$\sqrt{.748 + .837}$

$\sqrt{1.585} = 1.260''$

EXPERIMENTER DATE

WITNESS DATE

44983

DATE 9-5-44
SUBJECT OF EXPT. Assembly of M 721 & M 722

Two of the four models were assembled complete 9-5-44. The bolt heads were turned on and pressed to determine the actual strength requirements.

	M 721 300 H.H.	M-722 300 Sec.
Headspace before	Max .0005"	Min
After 5 proofloads	Max .0035"	10 proofloads Min

The M-721 showed very little pressure on proofing.
The M-722 showed only ordinary pressure on proofing.

The M-722 bolt head had broken loose before firing. Only the pin was holding it. However it held quite satisfactorily for proofing.

A 45° chamfer was cut in the bolt body of the 722 and the bolt head brazed on.

Considerable trouble was experienced with the ejectors. Carter checked one and found it scored and met the drawing. The ejector surfaces were .005" under time and .030" misplaced.

45883

EXPERIMENTER DATE
WITNESS DATE

AL 0029650

DATE 9-11-44

SUBJECT OF EXPT. M-722 bolt head & Safety

After approximately 40 rounds 300 hours the M-722 bolt head broke loose a second time. Inspection of the joint showed that the braze was not sufficient. The head was joined at this time using a ring of 1000°F silver solder in a relief spot on the head. At the same time several test specimens were made up and checked on the tensile machine using different bracing compounds. The minimum joint strength obtained with a poor bracing gave was 7000# force to separate head and body, the best joint gave 2500#. It was decided that the ring of bracing compound in a relief spot constituted the best joint.

The M-722 bolt handle bent during the proofing due to lead extraction (rough chamber). Opening the bolt by hitting with a stick of wood cured the bending. The handle was replaced and the chamber smoothed.

EXPERIMENTER

WITNESS

DATE

DATE

4-8-83

AL 0029651

DATE 9-13-45

SUBJECT OF EXPT. Fire control characteristics

1.046
.315
1.361 min seal end trip

1.241
.521
1.762 max dim trip hole to Rec ℄

1.762
1.361
.401

.430
.401
.029 min seal engagement

1.048
.335
1.383

1.239
.519
1.758 min dim trip hole to Rec ℄

1.758
1.383
.375

.425
.375
.050 max seal engagement

.521	.435	.385	.920	.798
.060	.050	.335	.078	.195
.581	.385	.720	.798	.603

.581 max dim. Rec ℄ to bottom of Bolt stop pin

.603 min dim. Rec ℄ to seal contact on bolt stop pin

Then .022 = min clearance

.391
.195
.586

.586
.060
.646

.669
.646
.003 min clearance between Seal & Bolt stop pin with safety on.

47883

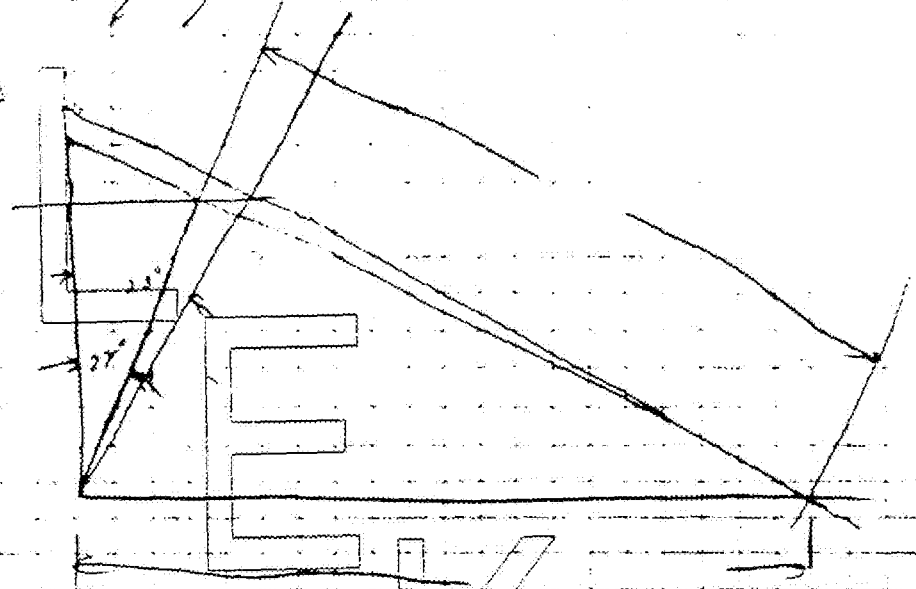
AL 0029652

EXPERIMENTER DATE

WITNESS DATE

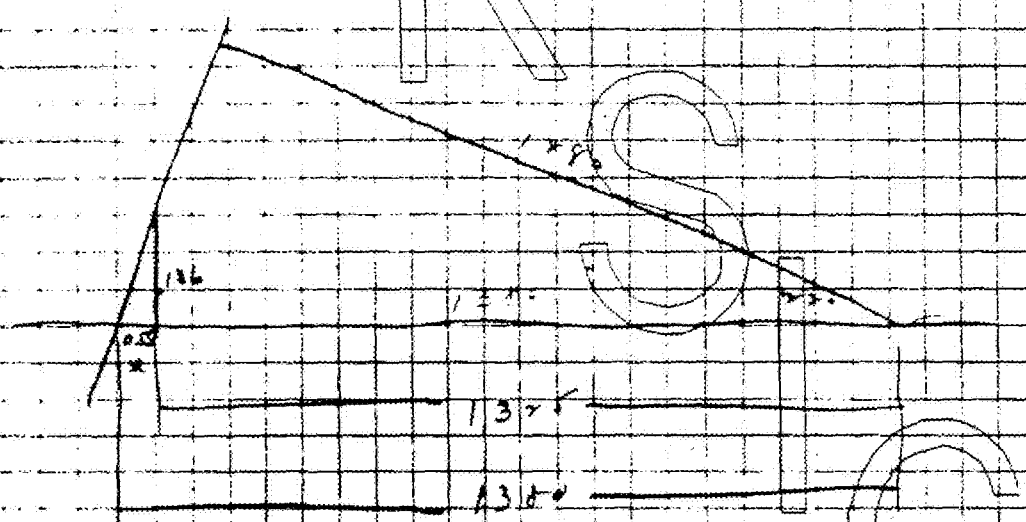
DATE 9-13-45

SUBJECT OF EXPT. Simple Ty of Fins Control Characteristics (Cont)



$\frac{.880}{.99} = .1483$

.01



For 22° α

$\frac{x}{.136} = .5577$ $x = .5577$ $\frac{1.375}{.5577}$ $\frac{}{1.383}$

.980 (1.383) = 1.373

1.03
1.373

Now now for the 22°

EXPERIMENTER

WITNESS

DATE

DATE

AL 0029653

DATE 9-13-44

SUBJECT OF EXPT. Safety conditions

1.048	1.241
.078	.651
.970	.590
	.387
	.977

.977
.970

Min. Safety interference = .007

1.046	1.238
.82	.649
.964	.589
	.391
	.983
	.964

Max Safety Int = .019

Changed slow to make Min .018 and Max .026

EXPERIMENTER DATE

WITNESS DATE

49283

38

DATE 9-1-62

SUBJECT OF EXPT. Flexure Spring design

65 Tube OD - .170

.33 Tube ID - .164 ASSUME MEAN DIA .141

.55 LENGTH .380 EXTENDED .090 4#

.13 LENGTH .370 COMPRESS LOAD

.139 $d^3 = \frac{2.55\,PD}{S} = \frac{2.55\,(4)\,.141}{70{,}000} = .000025$

$d = .029$ USE .028

SOLID HT. 5 X .270 = 9 COILS ACTIVE

$\frac{P}{F} = 36.2$

$F = \frac{4}{36.2} = .11$

.380 + .110 = .490 FREE LENGTH

4# LOAD $S = \frac{2.55\,PD}{d^3} = \frac{2.55\,(4)\,.139}{.000029} = 64{,}200$ PSI

5# LOAD = 81,000 PSI

6# LOAD = 97,000 PSI

EXPERIMENTER DATE

WITNESS DATE

50283

AL 0029655

DATE 9-14-47

SUBJECT OF EXPT. Star Spring (Cont)

$$\frac{P}{F} = \frac{G d^4}{8 D^3 N}$$

$$= \frac{11{,}500{,}000\,(.000000615)}{7\pi\,(.00268)} = 36.6\ \#/''$$

FREE LENGTH = .490

80% = (.168) 36.6 = 6.1# 7.6#

.490
.252
.238

WT COCKED = (.490 − .380) 36.6 = 4# 4.5#

.490
.168
.322

WT FIRED = (.490 − .340) 36.6 = 5.5# 6.5#

WT STACKED = (.490 − .280) 36.6 = 7.7# 9.8#

.45°
.38°
.07°

$\frac{D}{d} = 5$. WAHL K = 1.31

$$S = P\frac{255(.051)}{.000319}K = P\,16{,}200\,K$$

COCKED S = 4 (16,200) 1.31 = 85,000 PSI

FIRED S = 5.5 = 117,000 PSI

80% S = 6.1 = 139,000 PSI

SOLID S = 7.7 = 163,000 PSI

51283

EXPERIMENTER DATE

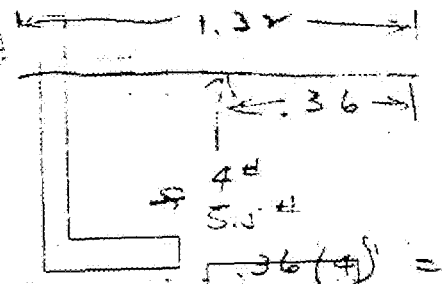
WITNESS DATE

AL 0029656

+U

DATE 9-11-55

SUBJECT OF EXPT. Seat Spring (Second)



$.36(4) = 1.32\,P$

$P = 1.1^{\#}$

$.36(5.5) = 1.32\,P$

$P = 1.5^{\#}$

Second Spring

O.D. = 1.67

WIRE = .026

MEAN D = .141

$29.5(X - 3.80) = 4^{\#}$

$X = \frac{3.5}{29.5} + 3.80 = 5.00$ FREE LENGTH

$\frac{P}{F} = \frac{11,500,000\,(.000\,\text{cap w})}{64\,(.00\,\text{rad})} = 29.3\ \#/\text{in}$

Index = 5.4 = 1.28 WALL K

COCKED	(5.00 - 3.80) 29.3	= 3.5 #		
FIRED	(5.00 - 3.46) "	= 4.7 #	4.1	$S = P\frac{2.55(.141)}{.026^3}K$
STACKED	(5.00 - 2.84) "	= 7.8 #	7.8	
60%	(2.15) "	= 6.2 #		$= P\ 20,400\ K$

COCKED	3.5 (20,400) 1.28	=	92,000 PSI	
FIRED	4.7 " "	=	123,000	
STACKED	7.8 " "	=	204,000	
60%	6.2 " "	=	162,000	

EXPERIMENTER DATE

WITNESS DATE

52,983

AL 0029657

DATE 9-18-64

SUBJECT OF EXPT. Elev. Spring (Fluid)

$$\frac{P}{Y} = \frac{G d^4}{8 D^3 N}$$

$d \times 8 = d$
$D = D$
$8 = N$

$$= \frac{11,500,000\,(.000000615)}{64\,(.00268)} = 41.2\ \#/in$$

$$41.2\,(X - .380) = 3.5\#$$

$$X = \frac{3.5}{41.2} + .380 = .465 = \text{Free Length}$$

At seated = .465 - .380 (41.2) = 3.5

" Fixed = " - .340 " = 5.1

" Stacked = " - .252 " = 8.8

" 80% = " - .371 = 7.0

$$S = P\,\frac{.55\,(.139)}{.0000219}\,K = P\,16{,}200\,K$$

$$\frac{D}{d} = 5 \quad K = 1.31$$

Seated S = 3.5 (16,200) 1.31 = 74,000
Fixed S = 5.1 " " = 108,000
Stacked S = 8.8 " " = 187,000
80% S = 7.0 " " = 148,000

EXPERIMENTER DATE

WITNESS DATE

53983

AL 0029658

42

DATE 9-23-44

SUBJECT OF EXPT. M-72 Preliminary Tests

360 preliminary rounds through the M-72 gave one failure to feed due to the cartridge case sticking inside the chamber. The bolt on the M-72 is noticeably hard on closing due to its operation. A few of these 360 were fired at the target with very good results.

EXPERIMENTER DATE

WITNESS DATE

54183

AL 0029659

DATE 9-21-42

SUBJECT OF EXPT. M-721 Preliminary tests

After propellant M-721 had "cooled" several days again (.29"). Most shooting on grounding and poor contact on the large conductor in this condition.

EKSICH

55-283

EXPERIMENTER DATE

WITNESS DATE

44

DATE 9-26-44

SUBJECT OF EXPT. Firing Pin Tolerance Check (Repeat)

A

FP min 1.311

Bolt
.451
.315
.433
.064
1.263
1.311
.048 min Protrusion

.060
5.614
1.317
6.991

FP
max 1.317

.449
.301
.427
.060
1.245
1.317
.072 max Protrusion

.450
225
500
720

min overall length

Rec & Sear

4.871 Rec max
min 1.379 Sear
6.190
.47
6.143

4.818
1.365
6.184
.47
5.757

Bolt

5.360
.492
4.863
.265
4.598 max

995
170
265

Firing Pin

560
450
1.010 max
4.598
5.608 Firing Pin min to shoulder

Cocking Piece

6.184
.64
6.120

6.190
.64
6.126

tan 23° = 9.05 / x = 1.760
x = 1.309

140
30
170

tan 23° = .42 × .05 / .110 = x
x = .0467

.45 × x / .150
x = .064

56283

EXPERIMENTER

WITNESS

DATE

DATE

AL 0029661

DATE 9-26-44

SUBJECT OF EXPT. Cocking Tolerance check (Report)

Rec
5.715 min
5.220 max

Bolt min
.309
5.355
5.664
.437
5.227 closed
.100
5.327 cocked
.35
5.292
.400
5.692
.437
6.129

Bolt max
.315
5.360
5.675
.434
5.241 closed
.105
5.346
.30
5.316
.465
5.781
.434
6.165

Bolt to shoulder from shoulder
"
Cocking Piece notch
.553
.153
.400

.560
.105
.455

.497
.315
.812

.309 .150
.487 .450
.796 .600

6.145
.796
5.349 notch to stop shoulder
.008
0.341 max stroke
.560
.600
3.008

.145
.444
.589
5.626
5.025 notch to firing pin shoulder

6.137
.812
5.325 notch to stop shoulder
5.125
.300 max stroke

57983

EXPERIMENTER DATE

WITNESS DATE

AL 0029662

46

DATE 9-27-44

SUBJECT OF EXPT. Max solid height of main spring

1.000
.530
1.530 Bolt spring
1.010
2.540

.450
.560
1.010 cocking piece

5.000
.200
5.363
2.840
2.513 Max solid height 721

722

4.758
.255
4.503
2.840
1.663 Max Solid height 722

EXPERIMENTER DATE

WITNESS DATE

55 of 83

AL 0029663

DATE 9-27-44

SUBJECT OF EXPT. Main Springs M-721
Drwg # A-753-7

Load 24.4 - 26.8 at 2.17 283 defl.

Length fixed
985
365
620
330
950
742
1,692

430
62
492
250
742
5357
1,692
3,665 Length fixed 19 #
317
3,348 Length cocked 21 #

Stroke .313
Pivot .054

3,165
850
2,315

297
338
635
3175

3,348
850
2,498

5800
3,665
2,135 = 18.5 #
24.1 #
21.396
19.8 # X 297 = 5,9"# Main Energy Stored

5700
3,348
2,452 = 21.1 #

400
55

24.5
26.5
51.2
25.6
6.63
32.23

2.97
2.20
.77

$S = \frac{8 P D}{\pi d^3} = \frac{8 (32.2) .345 (5,000)}{3.1416 (.0166)} = 164,000$

3,348
3,638
290
145
145
3,493

Max Working Stress = 121,000

M-721
69983

EXPERIMENTER DATE
WITNESS DATE

AL 0029664

DATE 9-27-66

SUBJECT OF EXPT. Radial Spring in 722

[illegible] Hole

" " " on .283" Pin

[illegible] 1.605" Free Length

.055 wire 29 total coils

.400 outside 27 active

Spring Rate $\frac{F}{f} = \frac{G d^4}{8 D^3 N} = \frac{11{,}500{,}000\,(.00000915)}{8\,(29)\,(.0417)} = 1.49$

Coiled Length 2.495 − 21 =

Final Length 2.815 17#

Stroke 3.3

Plus .054

2(5.313)

2.656

1.490

4.246

3.30

1.84

2.00

1.54

.57

23.6

26

49.6

24.8

24.8

6.6

31.4

$S(\text{stress}) = \frac{8PD}{\pi d^3} = \frac{8(31.4)\,.345\,(1.05)}{3.14\,(.0417)^3} =$

Not Coiled = 4.2 − 2.491 (11.8) = 20.1#

Not Fired = 4.2 − 2.815 (11.8) = 16.5#

2.136

18.3

18.3 × .297 = 5.47 ft/# Energy

.12

2.08

1.04

.56

.12

1.60

.57

Max Working Stress = 117,000#

5.6

28.2

2.538

2.69

7.2

5.1

6.13

60983

EXPERIMENTER DATE

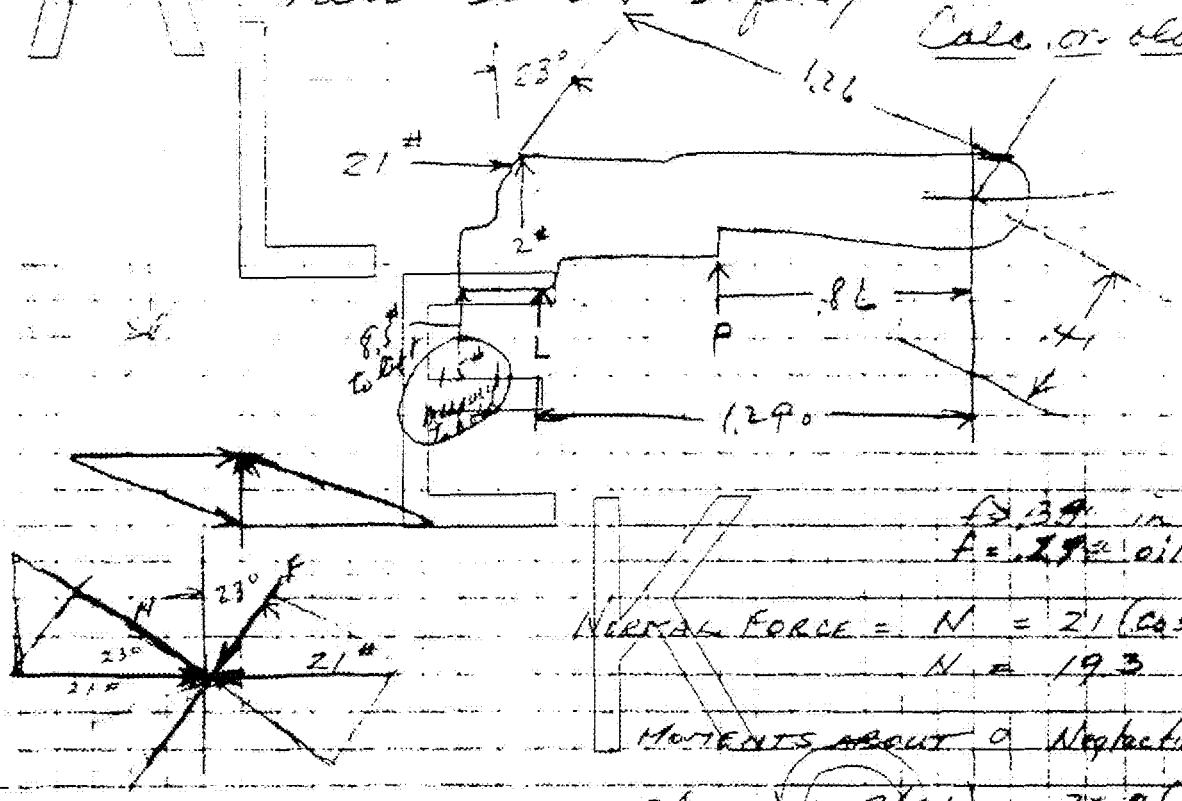
WITNESS DATE

AL 0029665

DATE 12-20-44

SUBJECT OF EXPT. New Sear & Safety

Calc. on old Sear



f = .33 in dust chamber
f = .25 oiled

Normal Force = N = 21 (cos 23°) = 21(.92)
N = 19.3

Moments about a Neglecting f

2(1.29) + P(.86) = 22.8(.41)

P(.86) = 9.35 − 2.58

P = 6.77 / .86 = 7.87#

L = 6.77 / 1.29 = 5.25#

cos 23° = .920 = 21 / N

N = 22.8

F = Nf
= 19.3( )
= [illegible]

USING MEASURED FORCES

1.5(1.5) = P(.86)

P = 2.6

L = 1.75

MOMENTS TO FIND F

1.5(1.5) + 2(1.29) + P(1.26) = 22.8(.41)

P(1.26) = 9.35 − 2.25 − 2.58

F = 4.52 / 1.26 = 3.62#

F / N = f = 3.62 / 19.3 = .19 = 19%

61 of 83

EXPERIMENTER DATE

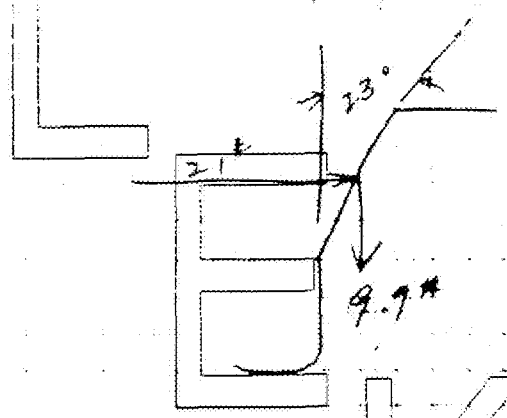
WITNESS DATE

DATE 12-20-46

SUBJECT OF EXPT. New Sear + Safety

(cont) - calc on old sear + Safety

Actual $L = \frac{8.5(1.5)}{1.29} = 9.9^{\#}$



4.3/1 = ADVANTAGE

$3.6(1.26) + 22.8(.41) - 2(1.29) = 1.29\,L$

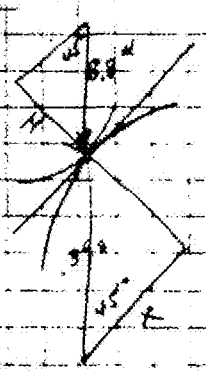
$4.52 + 9.35 - 2.58 = 1.29\,L$

Then $L = \frac{11.29}{1.29} = 8.8^{\#}$

Actual Load to put safety on = 6# off = 4#

Theoretical on = 11.3# neglecting safety friction

6# overcome the detent Detent = $3\frac{1}{2}$#



$\frac{N}{8.8} = \cos 45 = .707$

$N = 6.2^{\#}$

$\frac{x}{3.90} = \cos 45 = .707$

$x = .276$

$F_{safety} = \frac{.276 \times 6.2^{\#}}{.97} = 1.8^{\#}$

By calc $\frac{9.9}{4.3} = 2.3^{\#}$ to put safe on

Actual $= 6^{\#} - 3\frac{1}{2}^{\#} = 2.5^{\#}$

62983

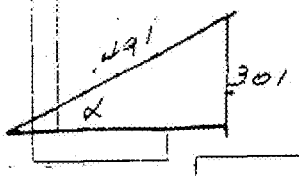
EXPERIMENTER DATE

WITNESS DATE

AL 0029667

DATE 1-3-46

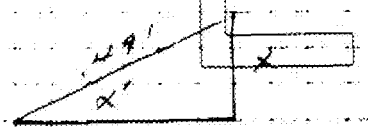
SUBJECT OF EXPT. New location of Safety Statut Hole in Housing



$\sin \alpha = \frac{.301}{.491} = .613 \quad \alpha = 37°-42'$

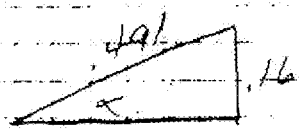
Adding 5° to α

$\alpha' = 42°-42'$



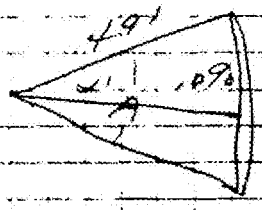
$\sin \alpha' = .6794 = \frac{x}{.491}$

$x = .334$ not satisfactory



$\sin \alpha = \frac{.161}{.491} = .3277$

$\alpha = 19°-8'$



$\sin \alpha' = \frac{.098}{.491} = .1831$

$\alpha' = 10°-33'$

$A = 21°-6'$

10 45
21 36
10 1
37 42

$\alpha + A = 40°-14'$

$37°-42'$

Use 40° 48'

$\sin 40°-48' = .6534 = \frac{x}{.491} \quad x =$

63 of 83

EXPERIMENTER DATE

WITNESS DATE

DATE 10-18-65

SUBJECT OF EXP'T. COCKING TOL. CHECK.

Sear-Pin Hole from Lug = 3.971 MAX
" " " to sear Point = 1.3036 MAX

LUG SEAT TO POINT OF SEAR 5.2746 MAX

MAX LUG TO BOLT HANDLE = 4.380.

MIN LUG TO COCKING ~~Point~~ Point .309 Bolt Head
4.5505 Bolt Body
4.8614
− .035 Cam Seat
4.799
.550 Cam Point to shoulder
5.329
− .145 Shoulder to Notch
5.184
− 4.380
.804 MIN BOLT HANDLE TO COCKING PT.
4.365 MIN LUG TO BOLT HAND SEAT
.10 COCKING PIN EXT.
5.269 MIN. LUG TO NOTCH BOLT OPEN

+.030 for cocking into notch in bolt
giving .025 MIN OVER TRAVEL

IF PRIMARY EXTRACTION CAM IS O.K.

Min Pin sear pin to Point of sear = 2

Tan 27° = .5095 = $\frac{x}{.140}$

x^{max} = .0714
x^{min} = .0765

Cos 27° = .891 = $\frac{1.375}{y}$

y^{max} = 1.375
y^{min} = 1.369

1.375 − .0714 = 2^{max}
.0714
1.3036

1.369 − .0765 = 2^{min}
.0765
1.2925
1.3036
2.5961
.298

.027

Tan 27° = $\frac{.014}{x}$ = .5095

.025"

64283

EXPERIMENTER DATE

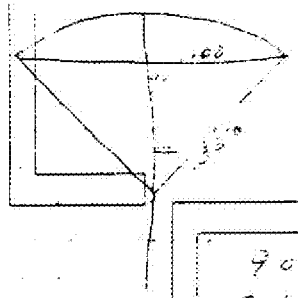
WITNESS DATE

AL 0029669

DATE 10-18-65

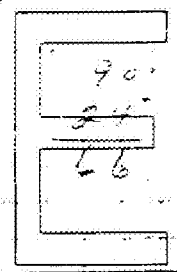
SUBJECT OF EXP'T. PRIMARY EXTRACTION CHECK

A



$\sin \alpha = \frac{.15}{.35} = .2855$

$\alpha = 16° 35'$



90°
24°
66

45°
5°
16° 35'
66°

B

$3\alpha = 5/40$ [illegible]

Sear Pin hole from Rec Lug	=	3.970	±1	1
Sear Pin hole to sear Notch	=	1.298	±5.6	5.6
		5.268	±6.6	

Bolt Head	=	.312	±3	3
Bolt Body	=	4.5675	±2.5	2.5
		4.8195	±5.5	
Cam Seat	=	.0825	±2.5	2.5
		4.7870	±8.0	
Cam point to shoulder	=	.555	±5.0	5.0
		5.3420	±13.0	
shoulder to Notch	=	.1425	±2.5	2.5
		5.1995	±15.5	

C

Lug to ~~Bolt~~ Handle	=	4.3775	±2.5	2.5

Rec shoulder to Extcam	=	4.3675	±2.5	2.5
Cam	=	.1025	±2.5	2.5
		4.4700	±5	

$\sqrt{\Sigma t^2} = \pm 10.2$

5.268 ±6.6	.822 ±1.8	5.1995	±15.5	
4.470 ±5.0	.798 ±1.6	4.3775	±7.5	
.798 ±1.6	.024 ±3.4	.8220	±8.0	

65983

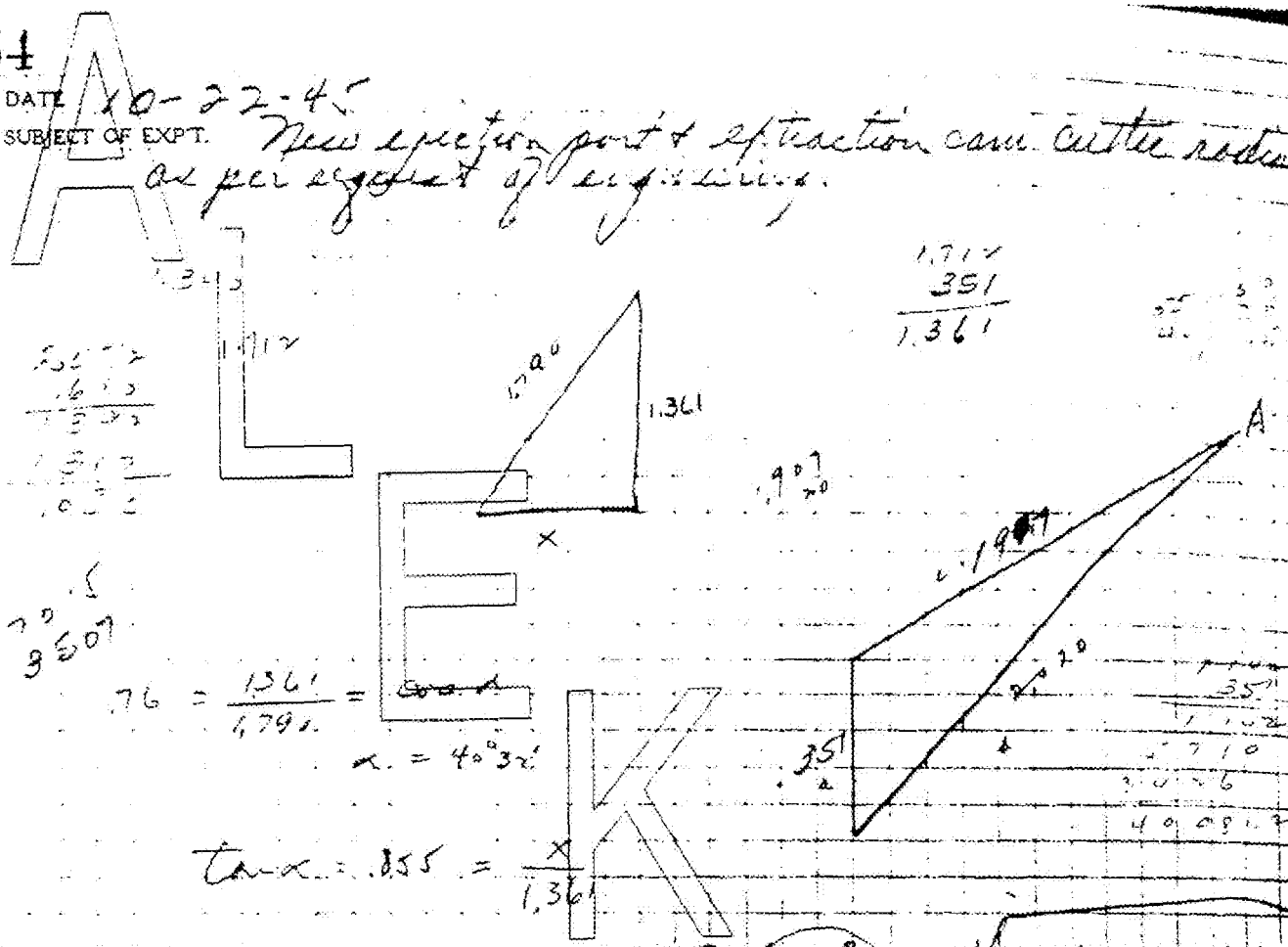
EXPERIMENTER DATE

WITNESS DATE

AL 0029670

DATE 10-22-45

SUBJECT OF EXPT. New ejector port & extraction cam cutter rotation as per request of engineering.



EXPERIMENTER

WITNESS

DATE

DATE

6/6/83

DATE
SUBJECT OF EXP'T.

$h = .351(1 - .8454)$

$= .351(.1546)$

$= .0542$

N.G.

Angle of chord on ext com on Rec = 13° 47' with H

.117
.112

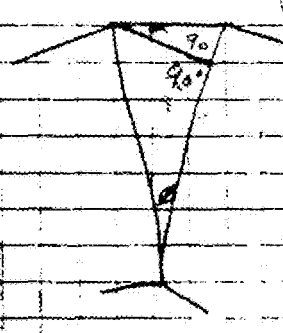
1.93
1.79
.14

$\tan x = \frac{.145}{.14} =$

N.G.

$x = 39°16'$

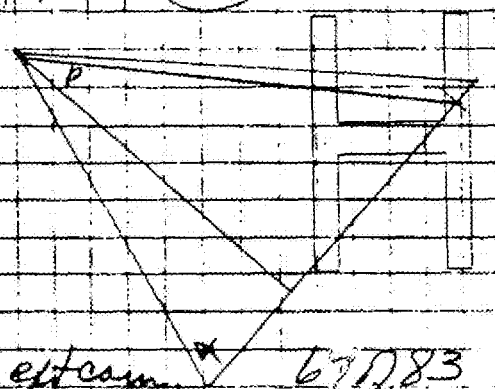
$.9355 = \frac{x}{.351}$



.1256
.351
.1256
.106789
.63768
.7460851
.149216

171
320
1.39

$\sin x° = .4647 = \frac{x}{.351}$



$\sin 43.13' = \frac{1.308}{x}$

1.165
.143
1.308
1.392

.684

$x = 1.910$ outer R eft com.

67783

EXPERIMENTER
WITNESS

DATE
DATE

AL 0029672

DATE

SUBJECT OF EXP'T.

$$\sin A = \frac{2}{bc}\sqrt{s(s-a)(s-b)(s-c)}$$

a = .492
b = 2.070
c = 1.900
4.469
2.2345
.492
1.7355

2.2345
2.070
.1645

2.2345
1.9
.2345

2.2345 (.1755) (.1645) (.2345)
3.926
.631
.2126
.4625

= .508

Sin A = .2348

A ∠ 13° - 35'
34° - 12'
47° - 47'

Sin 47° 47' = x / 1.900 = .7406

x = 1.407
1.165
.242

Cos α = .143 / .146

.2079
351
2079
103955
62373
.07297641
2
.14594

α = 11° - 45' ept com chord angle with Horiz.

1.910
1.79
.120

.1145
.120
99

A = 43° 39' ept com angle with Rec.

EXPERIMENTER

WITNESS

DATE

DATE

68 of 83

AL 0029673

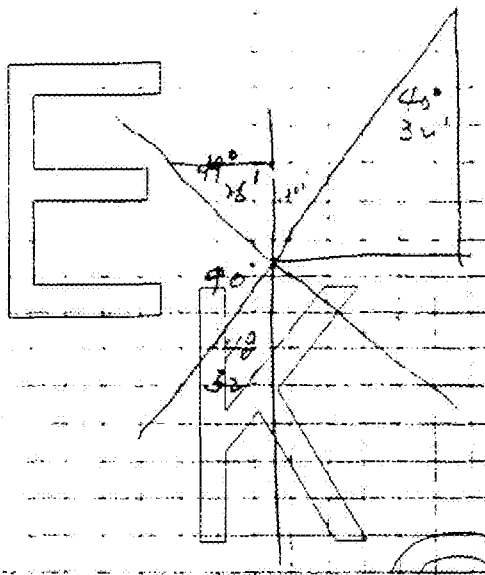
DATE

SUBJECT OF EXP'T.

$\frac{1.165}{1.361} = \tan \alpha$

$\alpha =$

$\frac{1.712}{.351}$
1.361

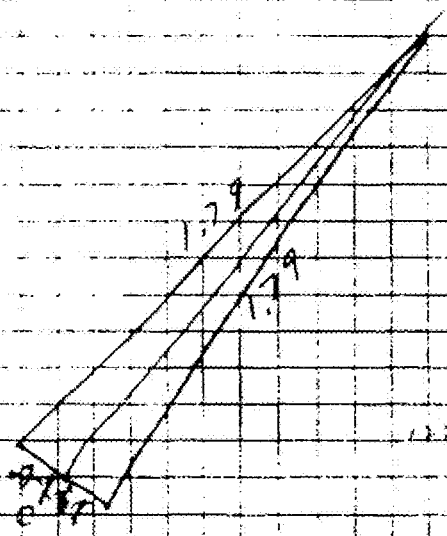


179
130 32'
49 28

$\cos 49°28' = \frac{1.405}{X}$

$= .6499$

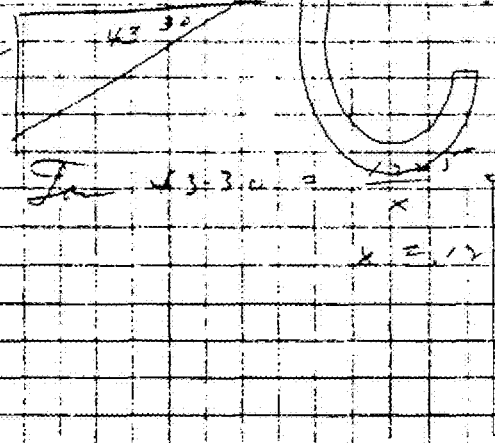
$X = .2161$



$\sec 49°28' = 1.5387$

$c = 1.5387\ (1.405)$

$= 2.161$



$\tan 43°30' = \frac{1.225}{x} = .94996$

$x = 1.29$

69.983

EXPERIMENTER

WITNESS

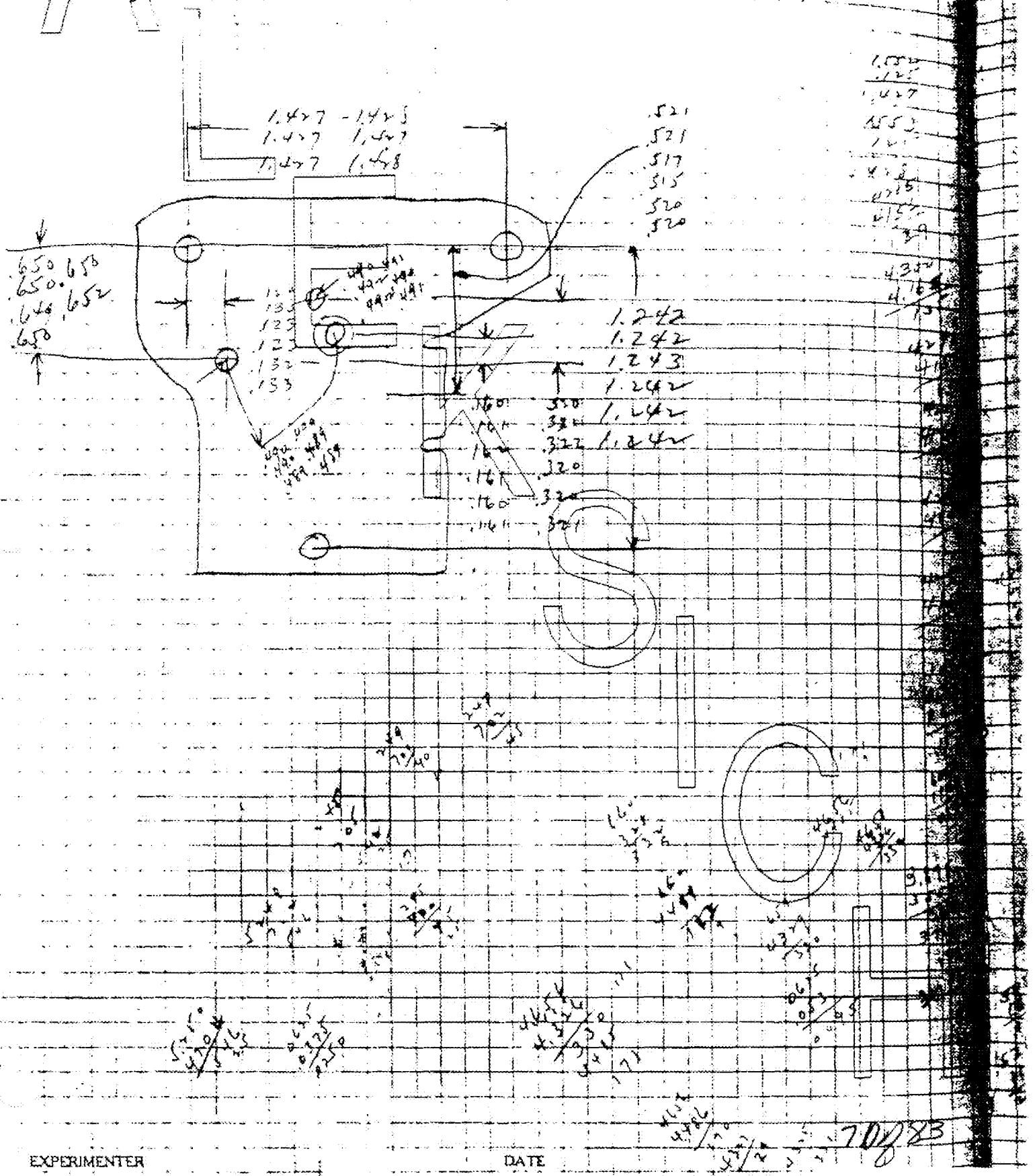
DATE

DATE

AL 0029674

DATE 11-6-45

SUBJECT OF EXPT. Clutch on housings

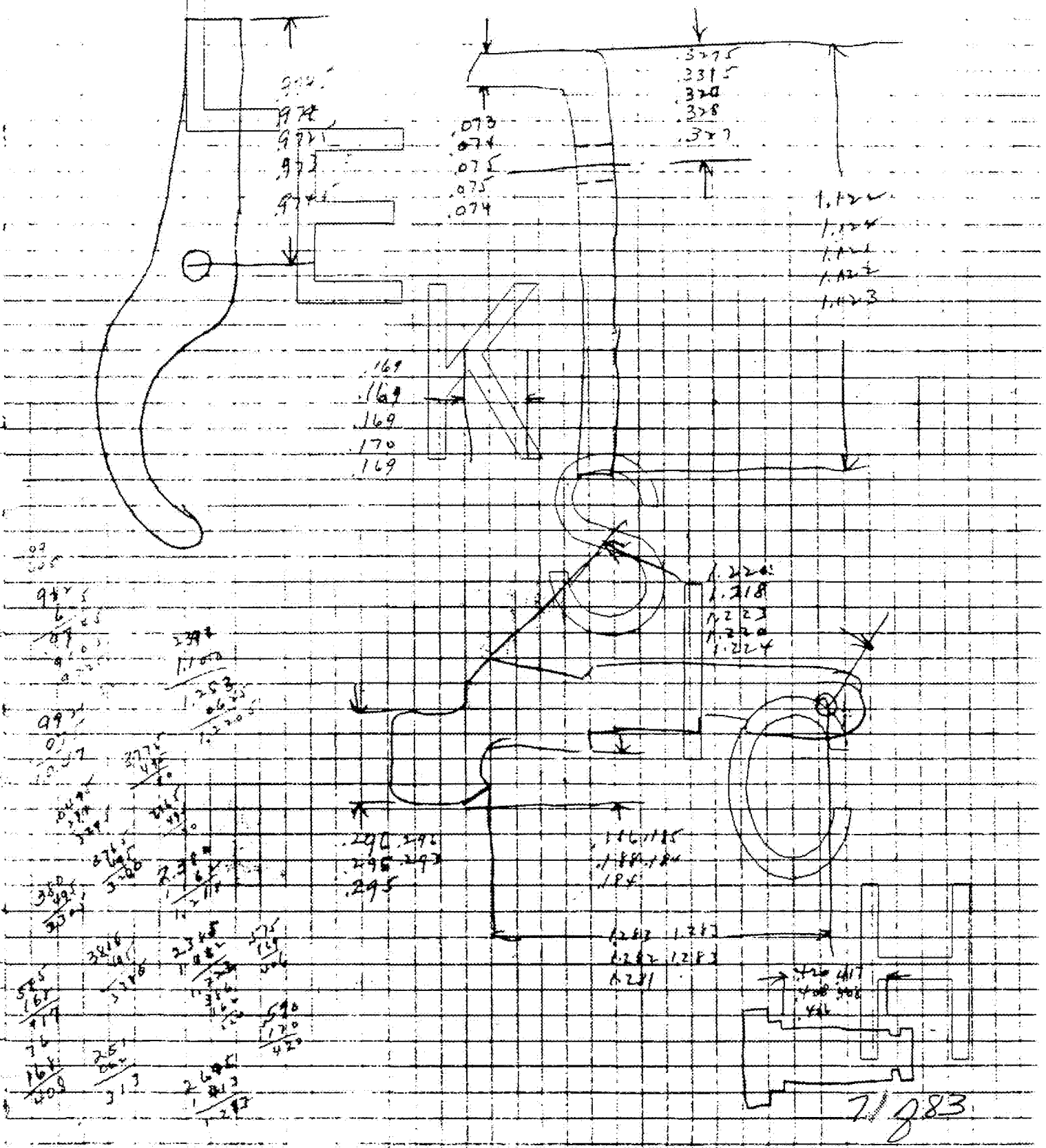


EXPERIMENTER DATE

WITNESS DATE

DATE 11-12-45

SUBJECT OF EXP'T. Check on TRIGGERS ETC.



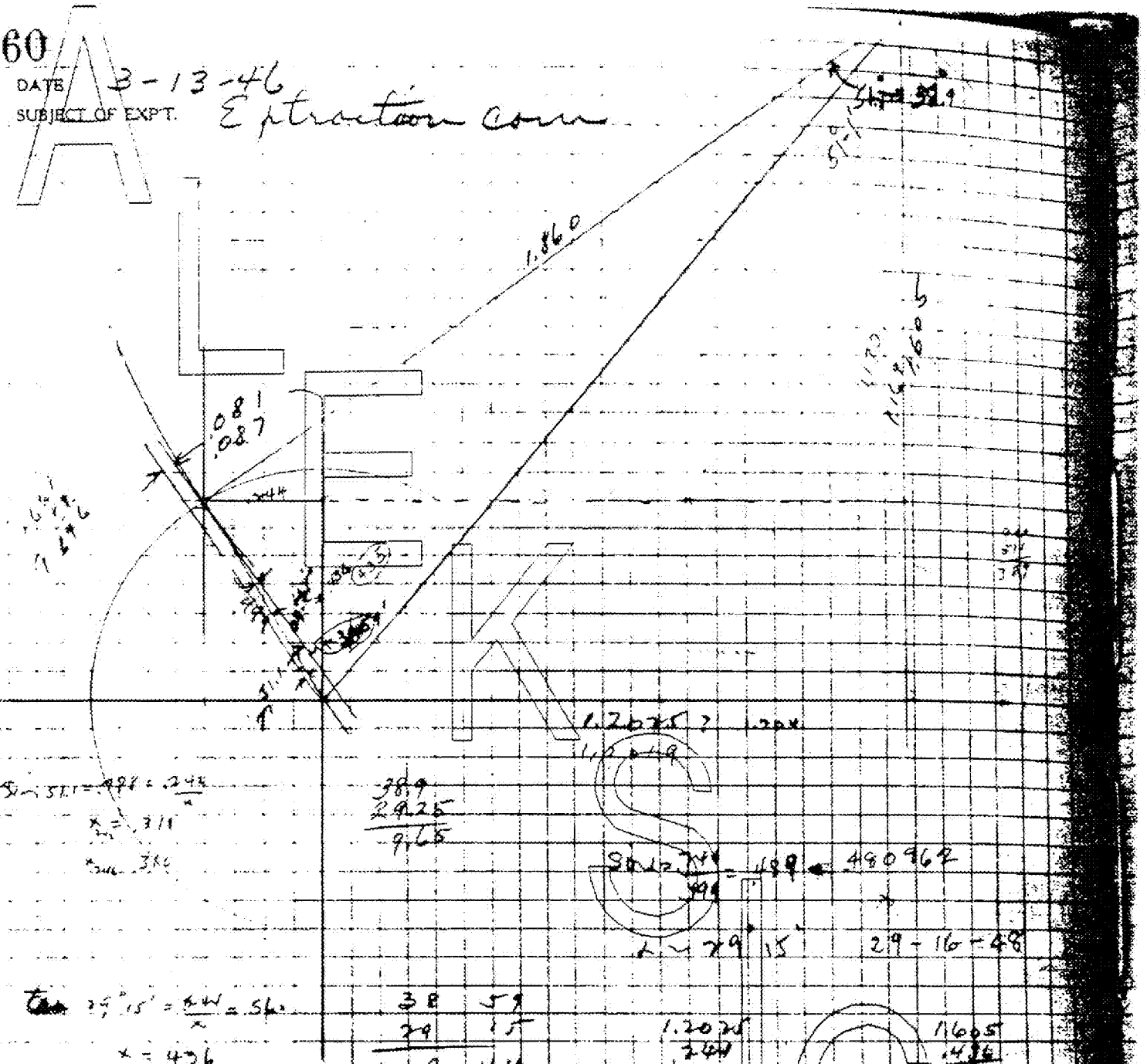
EXPERIMENTER DATE

WITNESS DATE

AL 0029676

DATE 3-13-46

SUBJECT OF EXPT. Extraction comm



EXPERIMENTER

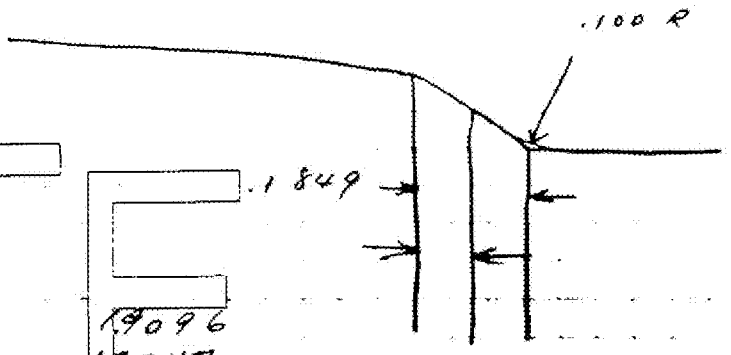
WITNESS

DATE

DATE

DATE 4-8-46

SUBJECT OF EXPT. .224 Rem.



1.9096
1.7247
.1849

2.4314
.2157

.4314
.292
2.1394
.0697

.292
1.46

1.7995
1.7247
.0748

.995
1.875

1.7277
1.7247
.0030

.4294
2.147

1.9117
1.9096
.0021

.307
.018
.325
1.689

2.0542
1.988
.0662

2.0475
1.9375
.0100

2.0479
1.940
.1079

73883

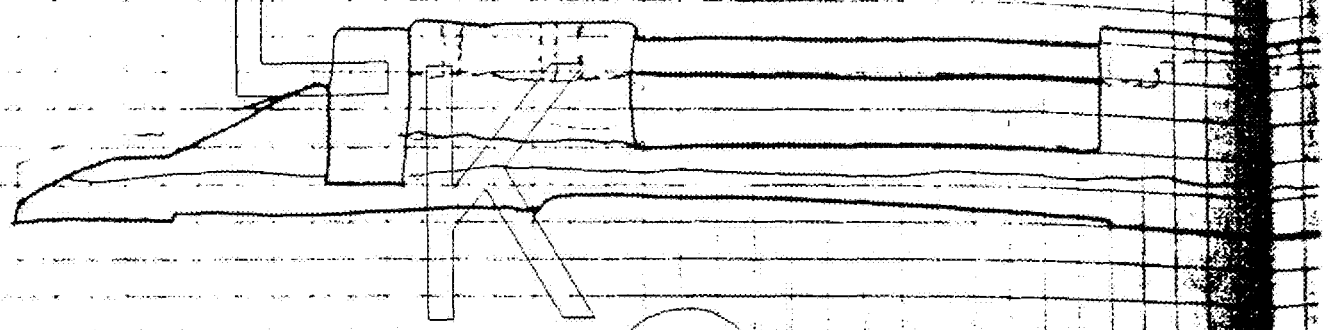
AL 0029678

EXPERIMENTER DATE

WITNESS DATE

DATE 5-21-46

SUBJECT OR EXPT. Sketch for Siens



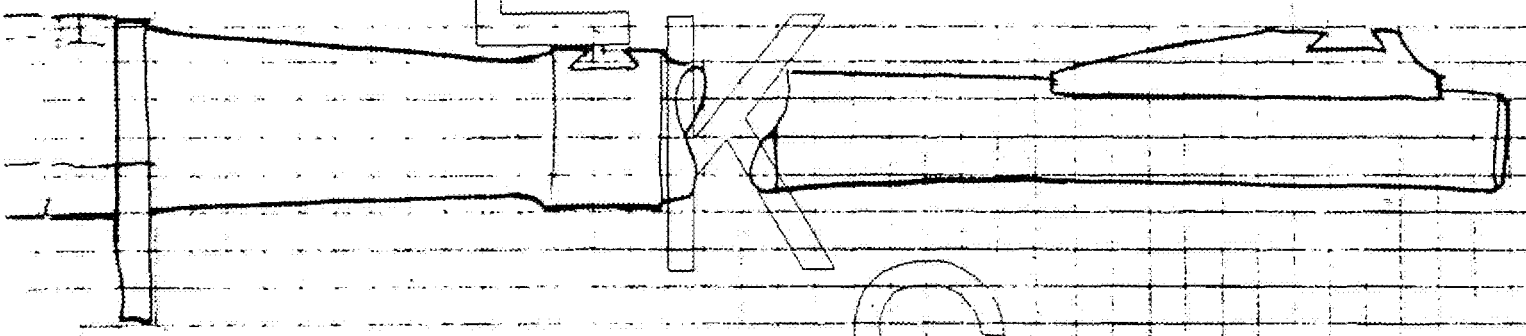
74283

EXPERIMENTER DATE

WITNESS DATE

DATE

SUBJECT OF EXPT.



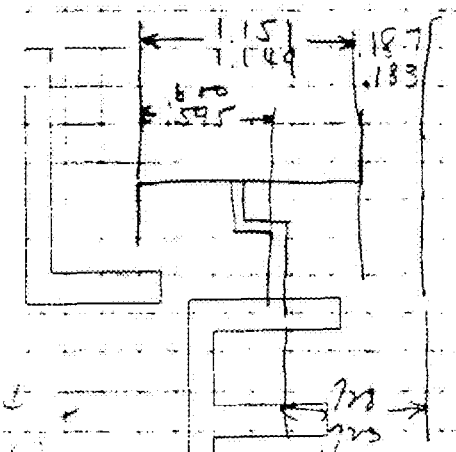
75283

EXPERIMENTER DATE

WITNESS DATE

DATE 8-25-47

SUBJECT OF EXPT. Bal + Bolt Clearance



93
2
95

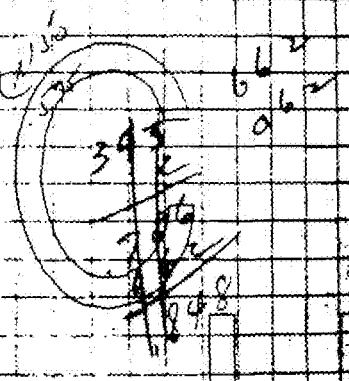
1.151
.187
1.338
.723
.615
.595
.020 Max

1.149
.183
1.332
.728
.604
.600
.004 clear min

.4485

1.151
.187
1.338
.4485
.8895

1.149
.183
1.332
.4515
.8805



76283

EXPERIMENTER DATE

WITNESS DATE

AL 0029681

DATE 10-1-48

SUBJECT OF EXPT. New Calculations for Report in "Products Engineering Article

BARREL STRENGTH

FORMULAE Lame's

$$S = \frac{P(r_2^2 + r_1^2)}{r_2^2 - r_1^2}$$

S = stress tang.

P = Int press.

r_1 = inside r

r_2 = outside r

$r_1 = .250" = .0625$

$r_2 = .575" = .331$

$S' = \frac{\frac{1}{2} r P}{t}$ t = thickness

$P = 84000$ PSI

$= \frac{\frac{1}{2}(.250)\,84000}{.575}$

$$S = \frac{84000(.343)}{.269}$$

$S' = 18,250$ tangit.

$= 123,000$ PSI

$\frac{12\,300}{18,250}$

$\frac{18,250}{10,475}$

ORDNANCE

$$\Theta = \frac{P}{\frac{3}{2}\left(\frac{r_2^2 - r_1^2}{r_2^2 + 2r_1^2}\right)}$$

Θ = Elastic Limit of material used.

$$= \frac{84000}{\frac{3}{2}\left(\frac{.264}{.724}\right)}$$

$$= \frac{84000}{.547}$$

$= 154000$

77 of 83

EXPERIMENTER DATE

WITNESS DATE

AL 0029682

DATE 10-4-48

SUBJECT OF EXP'T. Cox's

$$Y = \frac{2}{3}\,\frac{P}{W^2-1}\left(2W^2+1\right)$$

$W = \frac{\text{outside dia}}{\text{inside dia}}$ P = Pressure unit

Y = Stress

$= \frac{1.15}{.5} = 2.3$ $W^2 = 5.19$

$Y = \frac{2}{3}\,\frac{84000}{4.19}\,11.38$

$= 152000$

Average S using Lames $P_0 = 0$

$$S = \frac{P\left(r_1^2 + \frac{r_1^2 r_2^2}{r^2}\right)}{r_2^2 - r_1^2}$$

Substituting

r = .250	S_r = 123,000		
r = .331	S_t = 80,600	203,600	
r = .412	S_t = 57,200	132,800	
r = .494	S_t = 45,600	102,800	
r = .575	S_t = 38,800	84,400	

78983

EXPERIMENTER DATE

WITNESS DATE

AL 0029683

DATE 10-4-48
SUBJECT OF EXP'T. CON'T.

AREA = $\frac{123,000 + 80,600}{2}(.081) = 8230$

$\frac{80,600 + 57,200}{2}(.081) = 5580$

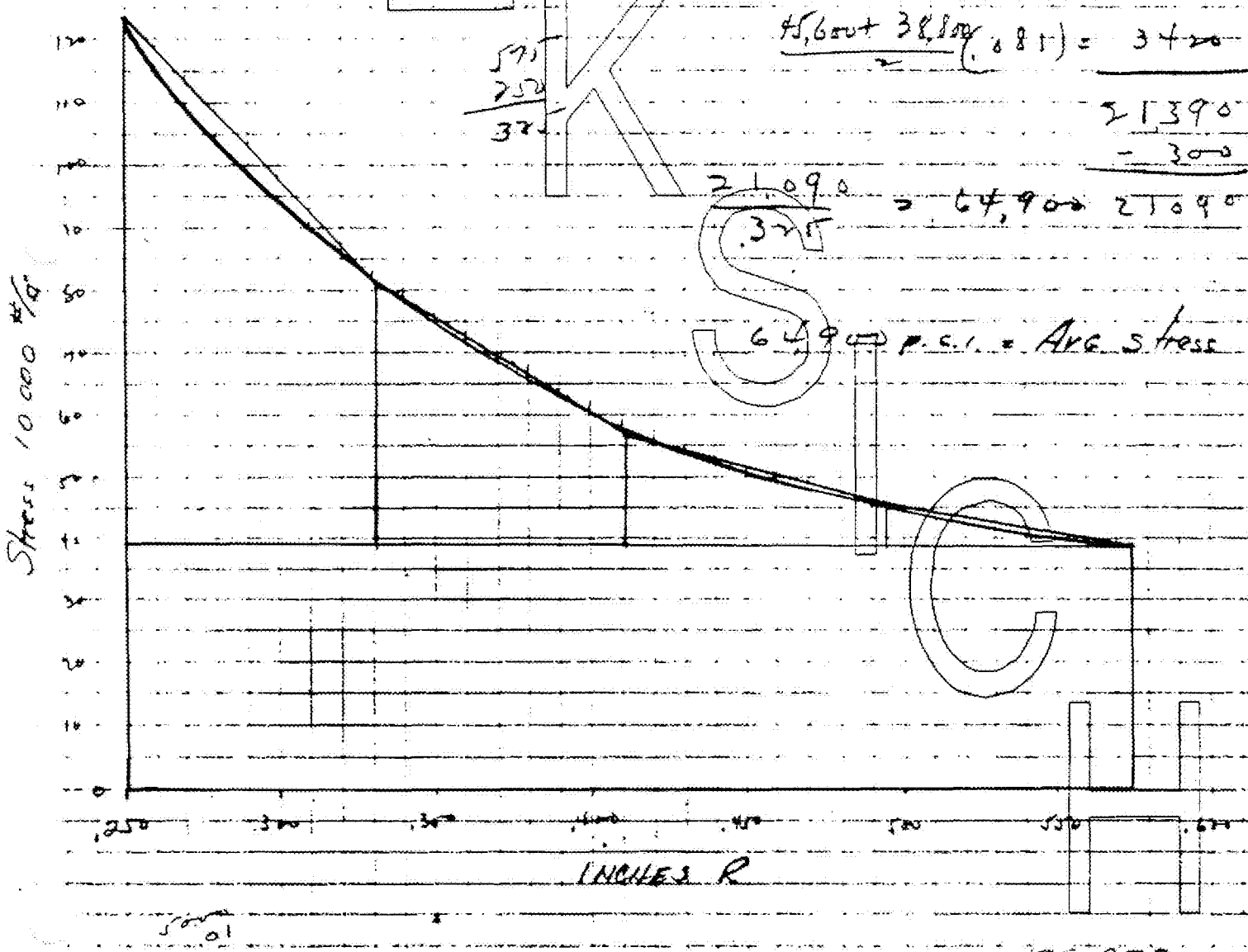
$\frac{57,200 + 45,600}{2}(.082) = 4160$

$\frac{45,600 + 38,800}{2}(.081) = 3400$

21390
− 300

$\frac{21090}{.325} = 64,900$ 21090

64900 p.s.i. = Avg. stress



79983

EXPERIMENTER DATE
WITNESS DATE

AL 0029684

DATE 10-11-48

SUBJECT OF EXPT. Cont. LOCK TIME

$$E = \frac{1}{2} M V^2$$

$$E = PS.$$

$$V = \frac{V_1 - V_2}{2}$$

$$V_1 = 0$$

$$V = \frac{V_2}{2}$$

$$V = \frac{2S}{T}$$

$$V = \sqrt{\frac{2E}{M}}$$

$$T = \frac{2S}{\sqrt{\frac{2PS}{M}}}$$

$$= \frac{2\left(\frac{.300}{12}\right)}{\sqrt{\frac{2(2)\frac{.300}{12}}{\frac{67.9 \times .022}{32}}}} = \frac{2(.025)}{\sqrt{\frac{.05}{.00447}}}$$

$$= \frac{.050}{\sqrt{2244}} = \frac{.050}{14.97} = .00334$$

$$2\left(\frac{.300}{12}\right) = \frac{1}{2}\,\frac{67.9(.022)}{32}\,V^2$$

$$T^2 = \frac{4S^2}{\frac{2PS}{M}}$$

$$T^2 = \frac{2SM}{P}$$

80/83

EXPERIMENTER DATE

WITNESS DATE

AL 0029685

DATE

SUBJECT OR EXP'T.

$$T = \sqrt{\frac{2MS}{P}}$$

$$E = \frac{1}{2} m v^2 \qquad E = PS$$

ALEKSICH

8/8/83

EXPERIMENTER DATE

WITNESS DATE

10

DATE

SUBJECT OF EXPT.

EXPERIMENTER DATE

WITNESS DATE

DATE

SUBJECT OF EXP'T.

EXPERIMENTER

WITNESS

DATE

DATE

RECEIVING and ESTIMATE REPORT

ORDER R **22286**

PROM DATE 11/4/76 9/17/76 up

RECEIVED ESTIMATED VIA up CHARGES W23

FROM Peoria Police Dept

542 SW Adams St Peoria ILL

MODEL and GRADE 700 BDL Varmint 223 Rem SERIAL NO. A6231176 DATE CODE X2 12/1/15

GRADE CODE

FOR COMPUTER REFER. ONLY L Sights REPAIR CHG. 80 55

INS.

PARCEL POST

GUN CONDITION (New) (Slightly worn) (Very worn) (Missed) (Quote) TOTAL

CUSTOMER'S COMPLAINT Safety moved from safe to fire position the weapon [illegible] fire.

MAIN FAULT Trigger connector Broken

DEMERIT CODE

GALLERY REPORT 19461 - trigger connector

file - M/700 Customer Complaints

Done

(Kill) (Miss) (Target)

PLAINTIFF'S EXHIBIT 3169

123

AL 0029689

RECEIVING and ESTIMATE REPORT

ORDER R 22285

PROM. DATE 9-14-76 ESTIMATED 9/22 VIA UP CHARGES

FROM Peoria Police Dept
542 SW Adams St Peoria ILL

MODEL and GRADE 700BDL varmint 223Rem SERIAL NO. A6236452 DATE CODE X2 1/75

GRADE CODE

FOR COMPUTER REFER. ONLY L1 sight

REPAIR CHG. 20.55

INS.

PARCEL POST

GUN CONDITION (New) (Slightly worn) (Very worn) (Missed) (Quote) TOTAL

CUSTOMER'S COMPLAINT Safety [illegible] Safe to fire position + he [illegible] [illegible]

MAIN FAULT
Carrator Broken Trigger Adj
Screws not properly adj. [illegible]

REMEDIES CODE

GALLERY REPORT

19461 Trigger carrator

Fits M/700 Customer Complaints Adj Trigger All

(Clean) (Test) (Target) None

Inspection

223

AL 0029690

POLICE DEPARTMENT

CITY OF PEORIA

Sept. 3, 1976

Remington Arms

Arms Service Division

Ilion, N.Y. 13357

Gentlemen:

Enclosed please find two Remingtons, Model 700, Varmint Special, .223 cal. rifles- Serial #'s A6237986 and A6236452. R22286 R22285

These rifles were purchased by this department earlier this year from the Wammes Guns Inc. ,Belle Fontaine, Ohio, Both of these weapons were [illegible] defective and when we contacted Wammes, we were informed to send the [illegible] back to the manufacture as they would be the only ones who would [illegible] them.

Both these weapons are used by our Tactical Unit, and we are in need [illegible] as soon as possible.

Both of these weapons were fired less than 100 rounds when it was found that they were unsafe. With a live round in the chamber and the bolt closed, the safety was moved from the "safe" to "fire" position the weapon would fire. This did not happen every time, but it did happen intermittently.

Sincerely,

Sgt. Russel Davis

Sergeant Russel Davis

5425 W. Adams
Peoria, Illinois 61602
309/676-1621

AL 0029691
393

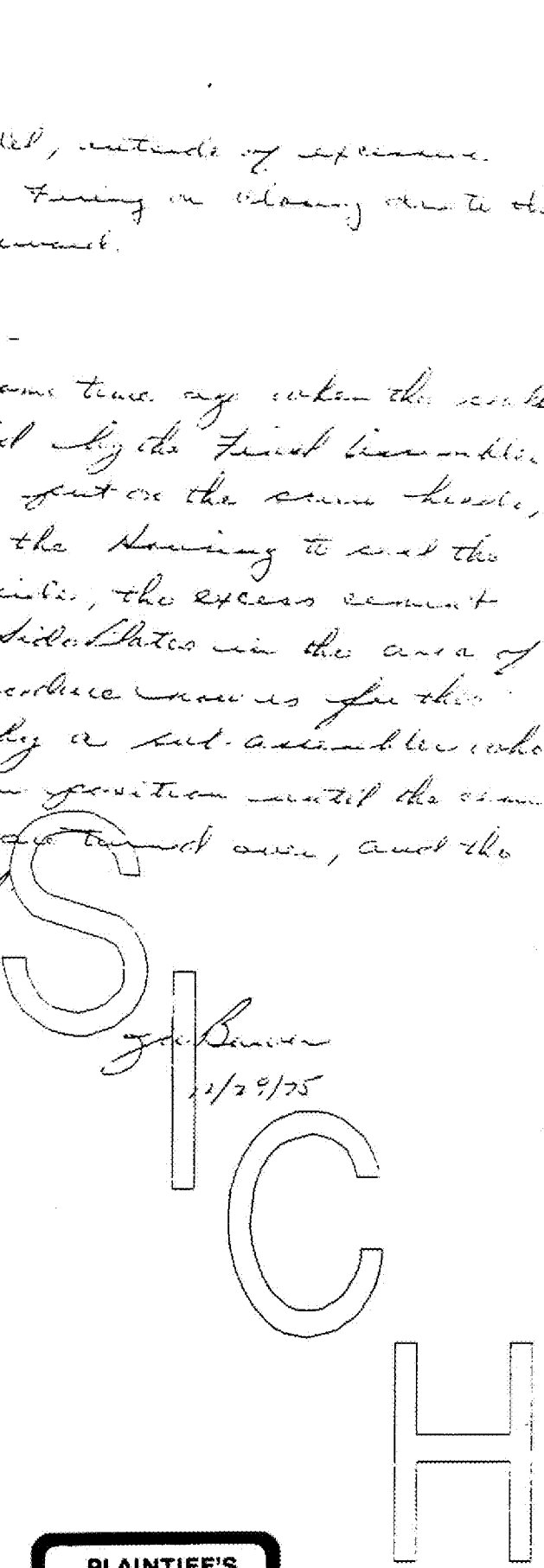
Hand Single

Action guns use this model, methods of expansion, pressure ammunition, use firing in closing due to the firing pin striking forward.

[m/7.c. Firing pin striking forward -

This again is a problem some time ago when the welding operation was performed by the friction welding process the mech. element was put on the same heads, in the process of turning the housing to and the screws on the opposite side, the excess cement would go between the sidewalls in the area of the bar spring. The procedure now is for the operation to be done by a sub-assembler who leaves the housing in one position until the cement dries. Then the housings are turned over, and the opposite screw cemented.

Jack Bauer
1/29/75



PLAINTIFF'S EXHIBIT
3170

1671

AL 0029692

RD-41-B

REMINGTON ARMS COMPANY, INC.

INTER-DEPARTMENTAL CORRESPONDENCE

Remington DUPONT PETERS DUPONT

"CONFINE YOUR LETTER TO ONE SUBJECT ONLY"

cc: E. R. Carr
J. P. Linde

March 10, 1975

C. B. WORKMAN

Re: M/700, 600 FIRE CONTROL MALFUNCTIONS

One M/700, and one M/600 were returned recently from Texas with complaints that the gun would not fire when the Trigger was pulled. On both of these guns, manipulating the Bolt Handle after the Tirgger was pulled caused the gun to fire.

An investigation of both guns produced the same result. The Fire Control slots and Firing Pin Head slots in the Receivers were not properly lined up. As a consequence, when the Trigger was pulled the Firing Pin Head went forward until it hit the Fire Control Housing Side Plate which was protruding into the Firing Pin Head slot. Moving the Bolt Handle rotated the Firing Pin Head sufficiently to clear the Housing Side Plate and strike the Firing Pin.

Both guns were repaired by filing a lead on the Firing Pin Head and Fire Control Housing Side Plate.

These guns were able to pass our Gallery tests due to our lubrication practices. The M/700 was made in 1970. By the time this gun was used all of the lubrication that was on it when it left Ilion had dried up. The gun was made functionally acceptable again by oiling the Bolt without doing anything else to it.

J. W. Bower
Sr. Process Engineer

JWB:jc

PLAINTIFF'S EXHIBIT 3171

181

AL 0029693

PURCHASE ORDER

Les Freer
GUN SHOP

FIREARMS DEALER
LICENSE NO. 74-6344

6928 SPRING BRANCH DRIVE
HOUSTON, TEXAS 77055
713/467-3016

ORDER NO. 7476
THIS No. MUST APPEAR ON INVOICE, B/L, AND CASES.

DATE
Jan. 28, 1975

ISSUED TO
Mr. George Martin
Remington Arms Co.
Ilion, New York # 13357

SHIPPING DATE
VIA

RECEIVED
FEB 04 1975
G. W. MARTIN

For prompt payment mail invoice showing order number with bill of lading after shipment is made
Acknowledge and advise promptly if unable to make immediate shipment.
Goods subject to our inspection, notwithstanding prior payment to obtain cash discount.

QUANTITY	NUMBER	DESCRIPTION

Dear George:

Subject: Trigger malfunctions

Re our phone conversations, I am forwarding one Model 700BDL, 25/06, serial #6356761 just as we received it from GLOBE STORE #3, 6200 Bellaire Blvd., Houston.

We produced a malfunction in this trigger assembly as follows: cocked the bolt, put the safety on and pulled the trigger - the safety held as it should (did not fire) - then the safety was moved to "fire" position and the trigger pulled again but then the sear failed to trip (did not fire); however a few more pulls on the trigger and it suddenly fired.

Like most trigger malfunctions we have found, this one may be difficult to reproduce, may require several attempts to demonstrate but if you keep trying it will occur.

Although this particular malfunction is not the same as most recent ones it is closely related to the overall problem. Hope it is of some help to you.

Best ~~tre~~ regards,
Les
Les Freer

SHIPPED UNDER SEPARATE COVER
ON 1-31-75 VIA Parcel Post
Please acknowledge receipt

RECEIVED
FEB 1 1975
ARMS SERVICE

PLAINTIFF'S EXHIBIT
3172

AL 0029694

PURCHASE ORDER

Les Freer

GUN SHOP

8928 SPRING BRANCH DRIVE
HOUSTON, TEXAS 77055
713/467-3016

FIREARMS DEALER
LICENSE NO. 74-6344

ORDER No. 7477
THIS No. MUST APPEAR ON INVOICE, B/L, AND CASES

DATE
Jan. 29, 1975

ISSUED TO

Mr. George Martin
Remington Arms Co.
Ilion, New York 13357

SHIPPING DATE

VIA

For prompt payment mail invoice showing order number with bill of lading after shipment is made
Acknowledge and advise promptly if unable to make immediate shipment.
Goods subject to our inspection, notwithstanding prior payment to obtain cash discount.

QUANTITY	NUMBER	DESCRIPTION
		Dear George: Subject: M/600 Trigger Malfunctions Here is another Model 600 trigger problem, serial No.6651698, cal. 6mm, just as we received it from the owner - we have disturbed nothing on the gun, have not even removed it from its stock for inspection. Purchased last Saturday from Carter's Country, Houston, the owner fired half dozen rounds on the rifle range when he had a malfunction by simply failing to get a firing pin fall by pulling the trigger with the safety in normal "fire" position. He then removed his finger from the trigger and the gun discharges as he reached for the bolt handle. The owner assures us that no one has tinkered with any part of the rifle since he purchased it. We failed to produce the same malfunction after several attempts but we find the trigger pull so creepy and rough we have to believe the owner. Here again we find performance of the trigger erratic and frustrating, but very dangerous for this reason. If we were to repair this one we probably would choose to replace the trigger assembly. Hope this helps to point up the problem. Owner: Raymond Osbon 11703 No. Petershan Houston 77071 Ph 498-8312

AL 0029695

194

Best regards

PLAINTIFF'S EXHIBIT
3173

RD-41-8

cc: C. B. Workman
J. P. Linde
C. F. Prosser

REMINGTON ARMS COMPANY, INC.

INTER-DEPARTMENTAL CORRESPONDENCE

Remington DUPONT PETERS DUPONT

"CONFINE YOUR LETTER TO ONE SUBJECT ONLY"

March 18, 1975

E. R. CARR

PROGRESS REPORT - M/600 - 700 FIRE CONTROL

All assemblers have been instructed in how to check for the gun firing when the Safety is released. Included in this instruction is the technique of attempting to hang the Safety up halfway between the on and off positions. The instructions will be included in the Process Records by 3/21.

An operation to swage the coming surface of the M/600 Safety is being done. This provides additional lift on the Sear.

Research is contemplating several design changes on the M/600. These include the following:

1. Heat treating the Housing stamping. This is currently soft and the Safety Detent Ball wears a groove in it which facilitates the Safety hanging up.
2. A change in the Safety to provide additional lift of the Sear.
3. A redesign of the countersink on the Housing to provide a minimum flat between the on and off position, which will mean a more positive Safety.
4. Eliminating the stamped Housing and going to side plates and spacers similar to the M/700. Costs are being developed on this proposal to determine if it is economically feasible.

J. W. Bower
Sr. Process Engineer

JWB:jc

Bob - Add to this list a positive method of measuring sear lift when the safety is in the "On" position to a "gage" tolerance range.

Jack

(note) Either optically or on dial indicator)

PLAINTIFF'S EXHIBIT 3174

1021

AL 0029703

ALEKSICH

G-M

DON'T SAY IT—WRITE IT

To Fred Milkner ~~M. Dalmyo~~

Date December 21, 1973

From E. R. Carr

M/700 - CUSTOMER COMPLAINTS

Fires on Safe - Follows down

Over three years ago, all guns in the above category began to be referred to P.E. & C. for examination and diagnosis. It began to be readily apparent that these guns were all the result of minimal Connector-Sear engagement.

In June of 1972, an operation was initiated making the adjustment on a comparator which assured a minimum engagement of .015".

It is my opinion that review of these guns, except in the case of Damaged Actions or Personal Injury guns, is no longer justified and should be discontinued.

Does this present any problem to you

Mike

not at all. We will stop sending to P.E.&C. this type of complaint as of 1/2/74

F. Plunkett

TO BE SAFE, FIRST THINK YOU MIGHT NOT BE

PLAINTIFF'S EXHIBIT 3175

1171

AL 0029705

Cust. Complaint.

RD-6542-1 Rev. 2-15-61

NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 ADL

GENERAL CONDITION: GOOD R #: 002805

OUTSIDE WORK: SWIVELS AND SCOPE MOUNTED. DATE: 2-1-73

FROM: FULKS SPORTING GOODS INC. CLARKSBURG, W.VA.

FIRED AMMO TYPE: —

& CONDITION: GUN #: 6247427

PROOF: R.E.P.-A INSP.: ASSEMBLER 14 73 TEST: 87 CODE: KS = 5/69

HEADING: O.K. GA./CAL.: 270 WIN.

BREECH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

SEAR-TRIGGER CONNECTOR ENGAGEMENT .010 (MIN. IS .020)

CONNECTOR CLEARANCE ON TRIGGER = 1.069 (MODEL = 1.076, DRAWING = 1.079)

℄ OF TRIGGER PIN HOLE TO TOP OF TRIGGER = .974 (.973, .971)

COMPLAINT: "FIRES WHEN SAFETY IS MOVED TO FIRE POSITION."

INCIDENT: FOLLOW DOWN

COMMENTS: THE EXCESSIVE MOVEMENT BETWEEN TRIGGER & TRIGGER CONNECTOR WILL ALLOW INTERFERENCE BETWEEN THE SEAR AND CONNECTOR WHICH PREVENTS RETRACTION INTO COCKED POSITION. THE PRESENCE OF HARDENED LUBRICANT INCREASES THE POSSIBILITY OF A MALFUNCTION.

PLAINTIFF'S EXHIBIT 3176

AL 0029706

Cont Compl.

P.I. NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 ADL

GENERAL CONDITION: NEW R #: 003187

OUTSIDE WORK: NO DATE: 1-30-73

FROM: J. FOSTER

FIRED AMMO TYPE: – LYNCHBURG, VA.

& CONDITION: _____ GUN #: 6326074

PROOF: R.E.P.-A ASSEMBLER 97 INSP.: 9 TEST: 55 CODE: CT = 4/70

HEADING: O.K. GA./CAL.: 25-06

BREECH OPENING: – CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

CONNECTOR-TRIGGER CLEARANCE = 1.084 (MODEL 1.080, DRAWING = 1.083) TRIGGER-CONNECTOR CLEARANCE = 1.072 (1.076, 1.070) CENTER LINE OF PIN HOLE TO TOP OF TRIGGER: .974 (.973, .971) CENTER OF PIVOT HOLE IN SAFETY TO TOP OF CAM = .291 (.292, .296)

COMPLAINT: "FIRED WITH SAFETY ON"

INCIDENT: FOLLOW DOWN

COMMENTS: THE RIFLE WILL NOT FIRE WITH THE SAFETY ON. THE CONDITIONS LISTED ABOVE: .005 TOO MUCH CLEARANCE BETWEEN CONNECTOR & TRIGGER, TOP OF TRIGGER .001 OVER MAX. AND SAFETY .001 UNDER MIN., ALL CONTRIBUTE TO AN INTERFERANCE BETWEEN THE CONNECTOR AND SEAR WHICH WOULD PREVENT RETRACTION INTO COCKED POSITION TO CAUSE FOLLOW DOWN.

PLAINTIFF'S EXHIBIT 3177

AL 0029707

151

RD-6542-1 Rev. 2-15-61

Cust Complaint

I. NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 BDL

GENERAL CONDITION: NEW R #: 002158

OUTSIDE WORK: SCOPE MOUNTED DATE: 1-23-73

FROM: SPORTSMAN'S HEADQUARTERS GRANDFORKS, N.D.

FIRED AMMO TYPE: —

& CONDITION: GUN #: 6451849

PROOF: R.E.P.-L ASSEMBLER R INSP.: 9 TEST: 53 CODE: PU = 6/71

HEADING: O.K. GA./CAL.: 700

BREECH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

HOUSING: .069 AT TOP (MODEL DRAWING: 173/175) TRIGGER .173 LOWER END (MODEL DRAWING: 170/172) METAL CHIPS AROUND PIN HOLE ON TRIGGER. SEAR-TRIGGER CONNECTOR ENGAGEMENT .010 (MIN. IS .020)

COMPLAINT: "WILL FIRE WHILE REMOVING UNFIRED SHELL FROM THE CHAMBER"

INCIDENT: FOLLOW DOWN.

PLAINTIFF'S EXHIBIT 3178

COMMENTS: THE CUSTOMER'S MALFUNCTION NOT DUPLICATED. THE BINDING TRIGGER AND SEAR FAILING TO RETRACT ALONG WITH UNDER MIN. ENGAGEMENT PROBABLY CAUSED THE FOLLOW DOWN.

1 of 1

AL 0029708

Customer Gun

RD-6542-1 Rev. 2-15-61

... NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 BDL

GENERAL CONDITION: GOOD R #: 001432

OUTSIDE WORK: SCOPE MOUNTED DATE: 1-16-73

FROM: BEIKIRCH AMMUNITION CORP. ROCHESTER, N.Y.

FIRED AMMO TYPE: —

& CONDITION: ASSEMBLER 30 GUN #: 375936

PROOF: R.E.P. INSP.: U TEST: 87 CODE: ER = 10/68

HEADING: O.K. GA./CAL.: 3006

BREECH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: N/D APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

CONSIDERABLE DIRT INCLUDING METAL PARTICLES INSIDE HOUSING. HARDENED LUBRICATION ON TRIGGER. CONNECTOR = 1.083 (1.080 / 1.083 MODEL DRAWING) TRIGGER = 1.076 (1.076 / 1.079 MODEL DRAWING) SAFETY & TO CAM = .291 (.292 / .296 MODEL DRAWING)

COMPLAINT: "FIRES WITH SAFETY ON"

INCIDENT: FOLLOW DOWN

COMMENTS: THE CONNECTOR CAN WORK UP TO INTERFERE WITH THE SEAR AND PREVENT RETRACTION INTO COCKED POSITION.

PLAINTIFF'S EXHIBIT 3179

181

AL 0029709

RD-6542-1 Rev. 2-15-61

Aust Corp

F.I. NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700

GENERAL CONDITION: FAIR R #: —

OUTSIDE WORK: RECEIVER RE-COLORED, DATE: 1-22-73

NEW BARREL FITTED, SPECIAL SLINGS. FROM: _____

FIRED AMMO TYPE: —

& CONDITION: DIATHALON GUN (SPEC. FROM BOB ADAMS) GUN #: 6403732

PROOF: NO MARKING INSP.: — TEST: — CODE: NO MARKING

HEADING: MAX. GA./CAL.: 22

BREECH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: EXCESSIVE RADIUS - REAR APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: 20 ROUNDS - AFTER FITTING NEW BOLT APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

OLD STYLE SAFETY - COCKING CAM DAMAGED BY SAFETY. HEADING MAX DUE TO BEARING ON EXCESSIVE RADIUS AT REAR OF RECOIL SHOULDERS.

COMPLAINT: _____

INCIDENT: _____

PLAINTIFF'S EXHIBIT 3180

COMMENTS: THE BEARING ON THE RADIUS AT REAR OF RECOIL SHOULDERS CAUSED HEAVY BOLT LIFT, FURTHER INTERFERANCE BY CLOSEING AND LOCKING THE BOLT WITH THE SAFETY "ON" COULD CAUSE TO JAM AND DAMAGE TO THE COCKING CAM.

181

AL 0029710

RD-6542-A Rev. 2-15-61

Cust. Compl.

I. No GUN EXAMINATION REPORT NUMBER: _____

MODEL: 700ADL

GENERAL CONDITION: GOOD

R #: 000972

OUTSIDE WORK: SCOPE MOUNTED

DATE: 1-15-73

FROM: COOPER'S SPORTING GOODS MANSFIELD, PA.

FIRED AMMO TYPE: -

& CONDITION:

GUN #: 300043

PROOF: R.E.P. INSP.: ASSEMBLER 85 TEST: ?

CODE: NP = 8/67

HEADING: O.K.

GA./CAL.: 270 WIN.

BRESCH OPENING: -

CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K.

APPROVED: _____

CHAMBER: O.K.

APPROVED: _____

TEST: _____

APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style)

APPROVED: _____

BOLT HANDLE BROKEN OFF. TRIGGER BINDING - HEAVY LUBRICANT - CONNECTOR STUCK TO TRIGGER. CORNER OF SEAR BROKEN DOWN.

COMPLAINT: FIRES WHEN SAFETY IS TAKEN OFF.

INCIDENT: FOLLOW DOWN

PLAINTIFF'S EXHIBIT 3181

COMMENTS: THE TRIGGER BINDING AS A RESULT OF THE DRIED OUT LUBRICANT FAILED TO RETRACT, REMAINING IN FIRED POSITION, CAUSED THE FOLLOW DOWN.

181

AL 0029711

RD-6542-1 Rev. 2-15-61

Cust Compl

I. NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 660

GENERAL CONDITION: GOOD R #: 000918

OUTSIDE WORK: NO DATE: 1-12-73

FROM: C.H. DANA JR.

ST. JOHNSBURY, VT.

FIRED AMMO TYPE: —

& CONDITION: GUN #: 104573

ASSEMBLER 16

PROOF: R.E.P. INSP.: U TEST: 49 CODE: BR-1/68

HEADING: — GA./CAL.: 222

BREECH OPENING: — CHECKED BY: C. PROESER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO. APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

SEAR BIND - HEAVY LUBRICANT + BURRS AROUND PIN HOLES IN HOUSING. FIRING PIN HEAD MARKS IN THE HOUSING LEFT, REAR.

COMPLAINT: GUN GOES OFF BY ITSELF.

INCIDENT: FOLLOW DOWN.

PLAINTIFF'S EXHIBIT 3182

COMMENTS: CUSTOMER'S MALFUNCTION NOT DUPLICATED. THE SEAR, BINDING FROM BURRS AT THE PIN HOLES AND HEAVY LUBRICANT, PROBABLY REMAINED IN FIRED POSITION ALLOWING THE FIRING PIN TO FOLLOW DOWN.

191

AL 002971 2

RD-6542-1 Rev. 2-15-61

Crest Graph.

..I. NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 ADL

GENERAL CONDITION: GOOD R #: 000130

OUTSIDE WORK: SCOPE MOUNTED, BUTT PAD FITTED. DATE: 1-11-73

FROM: ESTELL CURRY GATESVILLE, TEXAS

FIRED AMMO TYPE: _____

& CONDITION: _____ GUN #: 165224

PROOF: R.E.P. ~~INSP.~~ ASSEMBLER 6: D TEST: 87 CODE: WM = 8/65

HEADING: — ~~GA.~~/CAL.: 243 WIN.

BREECH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

STEEL CHIPS BETWEEN TRIGGER AND CONNECTOR. HARDENED LUBRICANT AROUND SEAR. EVIDENCE OF FIRING PIN HEAD CATCHING ON REAR-LEFT CORNER OF HOUSING.

COMPLAINT: FIRED AS BOLT WAS UNLOCKED

INCIDENT: FOLLOW DOWN

COMMENTS: THE CHIPS BETWEEN TRIGGER AND CONNECTOR CAUSE SEAR-CONNECTOR ENGAGEMENT TO VARY LEADING TO FOLLOW-DOWN. THE HARDENED LUBRICANT AND FIRING PIN HEAD-HOUSING INTERFERANCE ALSO CONTRIBUTE TO FOLLOW-DOWN MALFUNCTIONS.

191

AL 0029713

RD-6542-1 Rev. 2-15-61

Asst Comp

NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 BDL

GENERAL CONDITION: GOOD R #: 000394

OUTSIDE WORK: NO DATE: 1-9-73

FROM: JOHN'S SPORTS CENTER PITTSBURGH, KAN.

FIRED AMMO TYPE: –

& CONDITION: GUN #: 6432940

ASSEMBLER 97

PROOF: R.E.P.-4 INSP.: 73 TEST: 84 CODE: CU-4/71

HEADING: – GA./CAL.: 243 WIN.

BREECH OPENING: – CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

BOLT CAM MARRED BY SAFETY. GROOVE CUT INTO LEFT REAR OF HOUSING BY FIRING PIN HEAD. SEAR-TRIGGER CONNECTOR ENGAGEMENT .015 (MIN. IS .020) CONNECTOR BINDING ON TRIGGER.

COMPLAINT: "WENT OFF WHEN THE BOLT WAS CLOSED"

INCIDENT: FOLLOW DOWN

COMMENTS: THE TRIGGER CONNECTOR PROBABLY FAILED TO RETRACT INTO POSITION UNDER THE SEAR, ALLOWING THE FIRING PIN TO FOLLOW DOWN.

PLAINTIFF'S EXHIBIT 3184

191

AL 0029714

RD-6542-1 Rev. 2-15-61

Cust Comp.

NO GUN EXAMINATION REPORT NUMBER: _____

MODEL: 700 BDL

GENERAL CONDITION: FAIR

R #: 000014

OUTSIDE WORK: SCOPE MOUNTED, BUTT PAD FITTED. SEALS REMOVED - TRIGGER ASSEMBLY.

DATE: 1-4-73

FROM: W. K. FRAYSUR HOUSTON, TEXAS

FIRED AMMO TYPE: —

& CONDITION:

GUN #: 69329

PROOF: B.E.P. INSP.: 5 TEST: 13

CODE: PK = 5/63

HEADING: ?

GA./CAL.: 270

BREECH OPENING: —

CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K.

APPROVED:

CHAMBER: —

APPROVED:

TEST: NO

APPROVED:

COMPONENT CONDITION: (Damaged, Broken, Old Style)

APPROVED:

EXCESSIVE LUBRICANT, TRIGGER BIND ON TRIGGER GUARD POSSIBLE.

COMPLAINT: "WILL FIRE ACCIDENTALLY ON PUSHING OFF THE SAFETY"

INCIDENT: FOLLOW DOWN

PLAINTIFF'S EXHIBIT 3185

COMMENTS: THE CUSTOMER'S MALFUNCTION NOT DUPLICATED. IT PROBABLY IS ASSOCIATED WITH TRIGGER BIND AND TYPE OF LUBRICATION USED.

AL 0029715

161

RD-6542-1 Rev. 2-15-61

NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 ADL

GENERAL CONDITION: GOOD R #: 027716

OUTSIDE WORK: SCOPE MOUNTED, ALL SEALS BROKEN ON TRIGGER ASSEMBLY DATE: 1-4-73

FROM: DUNHAM'S MEDFORD, OREGON

FIRED AMMO TYPE: _____

& CONDITION: _____ GUN #: 369419

PROOF: R.E.P. INSP.: 13 (ASSEMBLER 13) TEST: ? CODE: DR = 9/68

HEADING: O.K. GA./CAL.: 3006

BREECH OPENING: _____ CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

HARDENED LUBRICANT CAUSING TRIGGER BIND. TRIGGER STOP SCREW OUT OF POSITION BINDING IN CONNECTOR.

COMPLAINT: FIRES ON RELEASING SAFETY

INCIDENT: FOLLOW DOWN

COMMENTS: THE OUT OF POSITION STOP SCREW HOLDS THE TRIGGER CONNECTOR IN FIRED POSITION CAUSING FOLLOW DOWN.

PLAINTIFF'S EXHIBIT 3186

AL 0029716

RD-6542-1 Rev. 2-15-61

Cust. Compl.

NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 BDL

GENERAL CONDITION: NEW R #: 027329

OUTSIDE WORK: NO DATE: 1-2-73

FROM: OSHMAN'S SPORTING GDS. CO. BEAUMONT, TEXAS.

FIRED AMMO TYPE: –

& CONDITION: GUN #: 6521466

ASSEMBLER 56

PROOF: R.E.P.-M INSP.: 73 TEST: 13 CODE: AW = 3/72

HEADING: O.K. GA./CAL.: 300 W

BREECH OPENING: – CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

COMPLAINT: GUN FIRED WHEN SAFETY WAS REMOVED

INCIDENT: FOLLOW DOWN

COMMENTS: THE CUSTOMER'S MALFUNCTION COULD NOT BE DUPLICATED. THE PRESENCE OF EXCESSIVE LUBRICANT POSSIBLY CONTRIBUTED TO POOR TRIGGER RETRACTION AND CAUSED FOLLOW DOWN.

PLAINTIFF'S EXHIBIT 3187

101

AL 0029717

RD-6542-1 Rev. 2-15-61

Cust-Crystal

NO GUN EXAMINATION REPORT NUMBER:

MODEL: 700 BDL

GENERAL CONDITION: NEW

R #: 027443

OUTSIDE WORK: SCOPE MOUNTED

DATE: 12-22-72

FROM: KAYTON MFG. CO. ALLENTOWN, PA.

FIRED AMMO TYPE: —

& CONDITION:

GUN #: 6241978

ASSEMBLER C

PROOF: REP-D INSP.: 74 TEST: 55

CODE: KS = 5/69

HEADING: —

GA./CAL.: 243

BREECH OPENING: —

CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K.

APPROVED:

CHAMBER: O.K.

APPROVED:

TEST: NO

APPROVED:

COMPONENT CONDITION: (Damaged, Broken, Old Style)

APPROVED:

SEAR - TRIGGER CONNECTOR ENGAGEMENT O.K. TRIGGER BINDING IN HOUSING. LUBRICATION LIKE GREASE ON SEAR

COMPLAINT: FIRES WHEN SAFETY IS PUSHED OFF.

INCIDENT: FOLLOW DOWN.

COMMENTS: THE LUBRICANT USED PROBABLY CAUSED SLUGGISH TRIGGER-CONNECTOR-SEAR RETRACTION INTO COCKED POSITION, RESULTING IN FOLLOW DOWN.

PLAINTIFF'S EXHIBIT 3188

1 of 3

AL 0029718

RD-6542-1, Rev. 2-15-61

1. NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 BDL

GENERAL CONDITION: NEW R #: 027515

OUTSIDE WORK: NO DATE: 12-22-72

FROM: MORLEY BRO.

FIRED AMMO TYPE: — SAGINAW, MICH.

& CONDITION: GUN #: 6241128

ASSEMBLER 79

PROOF: R.E.P.-K INSP.: 73 TEST: 13 CODE: KU= 5/71

HEADING: — BK./CAL.: 25-06

BREECH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: EXCESSIVE RADIUS-REAR. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

SEAR-TRIGGER CONNECTOR ENGAGEMENT .025 BURRS ON TRIGGER. TRIGGER TOO CLOSE TO GUARD ON RIGHT SIDE. THERE ARE INDICATIONS OF PRIMER PIERCING ON FIRING PIN ASSEMBLY.

COMPLAINT: "WILL FIRE DURING FEEDING OPERATION."

INCIDENT: FOLLOW DOWN.

COMMENTS: THE CUSTOMER'S MALFUNCTION COULD NOT BE DUPLICATED. TRIGGER BIND MAY HAVE PREVENTED PROPER RETRACTION.

PLAINTIFF'S EXHIBIT 3189

AL 0029719

RD-6542-1 Rev. 2-15-61

Cust Complaint

NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 BDL

GENERAL CONDITION: GOOD R #: 027088

OUTSIDE WORK: NO DATE: 12-18-72

FROM: VALLEY HOME SUPPLY CO.

MILESBURG, PA.

FIRED AMMO TYPE: —

& CONDITION: ASSEMBLER-P GUN #: 6261266

PROOF: R.E.P.-D INSP.: 9 TEST: 13 CODE: OS = 7/69

HEADING: O.K. GA./CAL.: 308 WIN.

BREECH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

EVIDENCE OF TRIGGER BURRS BINDING. TRIGGER 1.074 (MODEL DRAWING 1.076 1.079) EXCESSIVE LUBRICANT-TOO HEAVY. TRIGGER CONNECTOR-SEAR ENGAGEMENT .015 (MIN. 15.020)

COMPLAINT: "FIRED WHEN SAFETY WAS RELEASED"

INCIDENT: FOLLOW-DOWN.

COMMENTS: THE TRIGGER BIND, HEAVY LUBRICANT COMBINATION PROBABLY CAUSED THE FOLLOW DOWN.

PLAINTIFF'S EXHIBIT 3190

AL 0029720

6542-1 Rev. 2-15-61

P.I. NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 BDL

GENERAL CONDITION: GOOD R # : 026555

OUTSIDE WORK: SCOPE MOUNTED DATE: 12-18-72

FROM: SO. WIS. SPT. CENT.

BELOIT, WIS.

FIRED AMMO TYPE: —

& CONDITION: GUN # : 6580387

ASSEMBLER 73

PROOF: R.E.P.-B INSP.: 73 TEST: 97 CODE: OW - 7/72

HEADING: O.K. Ga./CAL.: 3006

BREECH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

(PONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

HEAVY LUBRICANT AROUND SEAR, BURR AT REAR OF HOUSING FROM FIRING PIN HEAD.

COMPLAINT: "FIRES SOMETIMES WITH SAFETY ON"

INCIDENT: PROBABLY FOLLOW-DOWN.

COMMENTS: THE HEAVY LUBRICANT COMBINED WITH SEAR-BIND PROBABLY HELD THE SEAR IN FIRED POSITION AND CAUSED FOLLOW-DOWN.

PLAINTIFF'S EXHIBIT 3191

AL 0029721

RD-6542-1 Rev. 2-15-61

NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 BDL

GENERAL CONDITION: NEW R #: 027181

OUTSIDE WORK: SCOPE MOUNTED DATE: 12-18-72

BRUCE WIGGINS

FROM: SPORTS SHOP

FIRED AMMO TYPE: — BEAUMONT, TEXAS

& CONDITION: GUN #: 6418163

ASSEMBLER P

PROOF: R.E.P. INSP.: 73 TEST: 55 CODE: AU = 3/71

HEADING: O.K. GA./CAL.: 17 REM.

BREECH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

SEAR-TRIGGER CONNECTOR ENGAGEMENT .010 (MIN. 15,020)
BURRS ON TRIGGER, SMALL BURR ON SEAR.

COMPLAINT: FIRES WHEN SAFETY IS RELEASED.

INCIDENT: FOLLOW DOWN.

COMMENTS: CUSTOMER'S MALFUNCTION NOT DUPLICATED.
APPARENTLY THE TRIGGER-SEAR BIND WAS ENOUGH
TO PREVENT RETRACTION INTO COCKED POSITION.

PLAINTIFF'S EXHIBIT 3192

AL 0029722

RD-6542-1 Rev. 2-15-61

I. NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 BDL

GENERAL CONDITION: NEW R #: 026826

OUTSIDE WORK: SCOPE MOUNTED DATE: 12-18-72

FROM: DICK'S SPT. SHOP

FIRED AMMO TYPE: — STAHLSTOWN, PA.

& CONDITION: GUN #: 6223531

ASSEMBLER C

PROOF: R.E.P. INSP.: ? TEST: 87 CODE: A5 = 3/69

HEADING: O.K. GA./CAL.: 3006

BREECH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

SEAR - TRIGGER CONNECTOR ENGAGEMENT .015 (MIN. .020) BURRS ON SEAR AND TRIGGER. TRIGGER 1.074 (MODEL DRAWING = 1.076 / 1.079) CONNECTOR 1.081 (1.080 / 1.083) SAFETY CENTER OF PIVOT TO TOP OF CAM .290 (.292 / .296)

COMPLAINT: "MISFIRES WHEN HE PUSHES THE SAFE OFF"

INCIDENT: FOLLOW DOWN

COMMENTS: FOLLOW DOWN COULD HAVE BEEN DUE TO BURRS BINDING AND PREVENTING RETRACTION OR EXCESSIVE CONNECTOR - TRIGGER CLEARANCE ALLOWING THE CONNECTOR TO WORK UP TO INTERFERE WITH THE SEAR WHICH THE SAFETY DID NOT LIFT ENOUGH TO CLEAR.

PLAINTIFF'S EXHIBIT 3193

AL 0029723

RD-6542-1 Rev. 2-15-61

700 Centerfire Complaint

1. NO GUN EXAMINATION REPORT NUMBER: _____

MODEL: 700 BDL

GENERAL CONDITION: GOOD

R #: 026289

OUTSIDE WORK: SCOPE MOUNTED

DATE: 12-15-72

FROM: GALLINGHAM & JONES INC. CHENALIS, WASH.

FIRED AMMO TYPE: —

& CONDITION:

GUN #: 6295844

PROOF: R.E.P.-E INSP.: 9 ASSEMBLER 83 TEST: 18

CODE: XS = 12/69

HEADING: —

GA./CAL.: 300 WIN. MAG.

BREECH OPENING: —

CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K.

APPROVED: _____

CHAMBER: O.K.

APPROVED: _____

TEST: NO

APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style)

APPROVED: _____

SEAR-TRIGGER CONNECTOR ENGAGEMENT .015 (MIN. 10,020) CONNECTOR 1.085 (MODEL DRAWING 1.080 1.083) SAFETY .291 (MODEL DRAWING .292 .295) TRIGGER BINDING IN HOUSING.

COMPLAINT: FIRED WHEN CLOSING ACTION.

INCIDENT: FOLLOW DOWN.

COMMENTS: THE BINDING TRIGGER PROBABLY FAILED TO RETRACT CAUSING THE ACTION TO FOLLOW DOWN.

PLAINTIFF'S EXHIBIT 3194

AL 002972A

181

RD-6542-1 Rev. 2-15-61

700 Cust. Comp

1. NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 BDL

GENERAL CONDITION: GOOD R #: 025940

OUTSIDE WORK: BUTT PAD ADDED, TRIGGER PULL RE-ADJUSTED. DATE: 12-15-72

FROM: BEST PRODUCTS HAMPTON, VA.

FIRED AMMO TYPE: _____

& CONDITION: _____ GUN #: 6517902

PROOF: R.E.P.-8 ~~INSP.~~ ASSEMBLER 79 58 TEST: 97 CODE: BW = 1/72

HEADING: O.K. ON INSPECTION MAX. GK./CAL.: 300G

BREECH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

TRIGGER BINDING ON GUARD, TRIGGER PULL ADJUSTED DOWN TO 2-2½ LBS. BY CUSTOMER. EXCESSIVE LUBRICATION

COMPLAINT: GUN FIRES WHEN SAFETY IS RELEASED.

INCIDENT: FOLLOW DOWN.

COMMENTS: CUSTOMER'S MALFUNCTION NOT DUPLICATED. HOWEVER WITH TRIGGER PULL REDUCED BELOW SPECIFICATIONS (3 TO 5 LBS.) THE BINDING TRIGGER PROBABLY DID NOT RETRACT SUFFICIENTLY TO COCK THE FIRING PIN.

PLAINTIFF'S EXHIBIT 3195

AL 0029725

710 Cust. Complaint

RD-6542-1 Rev. 2-15-61

NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700

GENERAL CONDITION: NEW R #: 025800

OUTSIDE WORK: NO DATE: 12-14-72

FROM: BILL'S SPT. & HOBBY SHOP, ONEONTA, N.Y.

FIRED AMMO TYPE: –

& CONDITION: GUN #: 6365666

ASSEMBLER #1

PROOF: R.E.P.-C INSP.: 88 TEST: 29 CODE: WT= 8/70

HEADING: O.K. GA./CAL.: 3006

BREECH OPENING: – CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

SEAR-TRIGGER CONNECTOR ENGAGEMENT .015 (MIN. IS .020)

CONNECTOR CLEARANCE ON TRIGGER = 1.073 (MODEL DRAWING = 1.079/ 1.076)

BURRS ON TOP SIDES OF TRIGGER.

COMPLAINT: GUN FIRED WHEN SAFETY WAS PUSHED OFF.

INCIDENT: FOLLOW DOWN.

COMMENTS: THE TRIGGER BIND COULD CAUSE FAILURE TO RETRACT AND FOLLOW DOWN, THE UNDER MIN. ENGAGEMENT CONTRIBUTING TO THE MALFUNCTION.

PLAINTIFF'S EXHIBIT 3196

AL 0029726

Cust Complaints

-61

...N EXAMINATION REPORT NUMBER: _____ MODEL: 700

...R: NEW R #: 025981

...: No DATE: 12-7-72

FROM: GRAF & SONS INC.

MEXICO, MO.

FIRED AMMO TYPE: –

& CONDITION: ASSEMBLER P GUN #: 6439492

PROOF: R.E.P.-L INSP.: 73 TEST: 53 CODE: KU = 5/71

HEADING: O.K. GA./CAL.: 25-06

BREECH OPENING: – CHECKED BY: G. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

SEAR-TRIGGER CONNECTOR ENGAGEMENT .010 (MIN. 15.020)
BURRS ON SIDE OF TRIGGER.

COMPLAINT: "GUN GOES OFF WHEN BOLT IS CLOSED."

INCIDENT: FOLLOW DOWN

COMMENTS: THE CUSTOMER'S MALFUNCTION NOT DUPLICATED, HOWEVER THE TRIGGER BIND COMBINED WITH UNDER MIN. ENGAGEMENT MAY HAVE CAUSED A FOLLOW DOWN.

PLAINTIFF'S EXHIBIT 3197

1/11

AL 0029727

RD-6542-1 Rev. 2-15-61

NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700

GENERAL CONDITION: GOOD R #: 025024

OUTSIDE WORK: SCOPE MOUNTED, ALL DATE: 12-5-72

TRIGGER ADJUSTMENTS CHANGED. FROM: COMMUNITY HDW. CO.

FIRED AMMO TYPE: — THOMASVILLE, N.C.

& CONDITION: GUN #: 6338169

ASSEMBLER 13

PROOF: R.E.P. INSP.: 9 TEST: 87 CODE: KT: 5/70

HEADING: O.K. GA./CAL.: 25-06

BREECH OPENING: — CHECKED BY: G. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: 15 ROUNDS - NO PIERCING APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

TRIGGER CONNECTOR BROKEN, SEAR DAMAGED. PRIMER PIERCING IS INDICATED.

COMPLAINT: "BOLT FIRES WHEN YOU PUSH IT DOWN."

INCIDENT: FOLLOW DOWN.

COMMENTS: WITH THE TRIGGER CONNECTOR BROKEN THERE IS NO WAY THE ACTION CAN BE COCKED. THE BREAK DOWN EVIDENTLY STARTED WITH PRIMER PIERCING.

PLAINTIFF'S EXHIBIT 3198

AL 0029728

RD-6542-1 Rev. 2-15-61

No GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700

GENERAL CONDITION: NEW R #: 026064

OUTSIDE WORK: SCOPE MOUNTED DATE: 12-5-72

FROM: HERTER'S INC. OLYMPIA, WASH.

FIRED AMMO TYPE: — GUN #: 6524373

& CONDITION:

ASSEMBLER 65

PROOF: R.E.P.-B INSP.: 74 TEST: 97 CODE: CW = 4/72

HEADING: O.K. GK./CAL.: 300G

BREECH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

SEAR-TRIGGER CONNECTOR ENGAGEMENT .025 (MIN IS .020) CONNECTOR = 1.088 MODEL DRAWING = 1.080 1.083, TRIGGER MEASURES 1.074, MODEL DRAWING = 1.076 1.079

COMPLAINT: "FIRES WHEN SAFETY IS PUSHED OFF"

INCIDENT: FOLLOW DOWN

COMMENTS: THE CUSTOMER'S MALFUNCTION COULD NOT BE DUPLICATED, HOWEVER, THE .007 OVER MAX. CLEARANCE BETWEEN THE TRIGGER AND CONNECTOR WILL ALLOW THE CONNECTOR TO INTERFERE WITH THE SEAR AND FAILING TO RETRACT INTO COCKED POSITION, CAUSE A FOLLOW-DOWN.

1/1

PLAINTIFF'S EXHIBIT 3199

AL 0029729

RD-6542-1 Rev. 2-15-61

Cont. Crupt

NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700BDL

GENERAL CONDITION: NEW R #: 024573

OUTSIDE WORK: SCOPE & RECOIL PAD FITTED. DATE: 11-27-72

FROM: FRONTIERSMAN SPORTS INC. MINNEAPOLIS, MINN.

FIRED AMMO TYPE: -

& CONDITION: ASSEMBLER 12 GUN #: 6365254

PROOF: R.E.P. INSP.: 74 TEST: 49 CODE: DT = 9/70

HEADING: O.K. GK./CAL.: 3006

BREECH OPENING: - CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

SEAR-TRIGGER CONNECTOR ENGAGEMENT .005 (MIN. = .020) TRIGGER CONNECTOR CLEARANCE ON TRIGGER = 1.075, M/D = 1.076 / 1.079; TRIGGER CLEARANCE ON CONNECTOR = 1.086, M/D = 1.080 / 1.083, FIRING PIN CAN CATCH ON REAR CORNER OF HOUSING. LAPPING ON CONNECTOR CROOKED.

COMPLAINT: RIFLE DISCHARGED WHEN LOADING CARTRIDGE.

INCIDENT: FOLLOW DOWN

COMMENTS: THERE IS EVIDENCE OF TRIGGER BIND. THIS COMBINED WITH UNDER MIN. ENGAGEMENT AND EXCESSIVE TRIGGER CONNECTOR CLEARANCE, CAUSES FOLLOW DOWN.

PLAINTIFF'S EXHIBIT 3200

AL 0029730

RD-6542-1 Rev. 2-15-61

Cust. Copy

T. No GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 ADL

GENERAL CONDITION: GOOD R #: 024437

OUTSIDE WORK: SCOPE MOUNTED, RECOIL PAD ADDED. DATE: 11-22-72

FROM: DONALDSON'S GUNSMITH MINNEAPOLIS, MINN.

FIRED AMMO TYPE: _____

& CONDITION: _____ GUN #: 309624

PROOF: R.E.P. ASSEMBLER 65 INSP.: 96 TEST: 87 CODE: EP = 10/67

HEADING: O.K. GA./CAL.: 300 C

BREECH OPENING: _____ CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

CONNECTOR CLEARANCE ON TRIGGER .003 UNDER MIN. BURRS ON SIDES OF TRIGGER. HOUSING PROTRUDES INTO FIRING PIN HEAD SLOT. SEAR-TRIGGER CONNECTOR ENGAGEMENT .025

COMPLAINT: FIRED UPON LOCKING THE BOLT.

INCIDENT: FOLLOW DOWN

COMMENTS: THE CUSTOMER'S MALFUNCTION CANNOT BE DUPLICATED AND THERE IS NO EVIDENCE OF SUCH MALFUNCTION. HOWEVER, THE TRIGGER BURRS, EXCESSIVE TRIGGER-TRIGGER CONNECTOR CLEARANCE, AND HOUSING PROTRUDING COULD CONTRIBUTE TO SUCH A MALFUNCTION.

PLAINTIFF'S EXHIBIT 3201

AL 0029731

Cust. Complaint

RD-6542-1 Rev. 2-15-61

NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 BDL

GENERAL CONDITION: NEW R #: 000219

OUTSIDE WORK: NO DATE: 1-4-72

FROM: BAY CITY HDW. CO.

BAY CITY, MICH.

FIRED AMMO TYPE: _____

& CONDITION: _____ GUN #: 6425267

PROOF: R.P.-K INSP.: 74 TEST: 87 CODE: CU = 4/71

HEADING: O.K. ~~GA.~~/CAL.: 300 WIN. MAG.

BREECH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

NO BROKEN OR DAMAGED COMPONENTS.
TRIGGER PULL 5 POUNDS, HORIZONTAL ENGAGEMENT .020 (MIN. IS .020) VERTICAL ENGAGEMENT .035 (MIN. IS .015)
TRIGGER DOES NOT RUB ON TRIGGER GUARD.

COMPLAINT: "WHEN SAFETY IS PULLED BACK GUN FIRES WITHOUT PULLING TRIGGER."

INCIDENT: FOLLOW DOWN.

COMMENTS: CAN FIND NO DEFECT WHICH MIGHT LEAD TO THE CUSTOMER'S MALFUNCTION. HIS MALFUNCTION NOT DUPLICATED.

PLAINTIFF'S EXHIBIT 3202

AL 0029732

RD-6542-1 Rev. 2-15-61

Rick Camp

F.I. NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 BDL

GENERAL CONDITION: GOOD R #: 023941

OUTSIDE WORK: ALL TRIGGER ADJUSTING DATE: 11-16-72

SCREWS WITHOUT SEAL. FROM: CHARLES W. FISHER

FIRED AMMO TYPE: REMINGTON COLUMBUS, OHIO

& CONDITION: GUN #: 6418265

ASSEMBLER 13

PROOF: R.E.P.-1 INSP.: 9 TEST: 13 CODE: AU = 3/71

READING: O.K. GA./CAL.: 17 REM.

BREECH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: 20 ROUNDS NO PRIMER PIERCING APPROVED: _____

AFTER SWAGING FIRING PIN HOLE.

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

TRIGGER STOP AND ENGAGEMENT SCREWS OUT OF ADJUSTMENT. FIRING PIN HOLE NOT SWAGED. SEAR AND TRIGGER CONNECTOR DAMAGED.

COMPLAINT: PIERCES PRIMERS, FIRES CLOSING BOLT.

INCIDENT: FOLLOW DOWN

COMMENTS: PRIMER PIERCING CAUSES DAMAGE TO THE CORNERS OF THE SEAR AND TRIGGER CONNECTOR, RESULTING IN FOLLOW DOWN.

PLAINTIFF'S EXHIBIT 3203

AL 0029733

F 5542-1 Rev. 2-15-61

Cust. Comp.

P.I. NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 BDL

GENERAL CONDITION: NEW R # : 023622

OUTSIDE WORK: NO DATE: 11-15-72

FROM: MONTGOMERY WARD RICHMOND, CAL.

FIRED AMMO TYPE: _____

& CONDITION: _____ GUN # : 6471558

ASSEMBLER 72

PROOF: R.E.P.-L INSP.: 74 TEST: 53 CODE: WU = 8/71

HEADING: O.K. GA./CAL.: 3006

BREECH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

SEAR-TRIGGER CONNECTOR ENGAGEMENT .025 TRIGGER HOUSING PROTRUDING INTO FIRING PIN HEAD CLEARANCE SO FIRING PIN HEAD CAN BE PREVENTED FROM ASSUMING IT'S POSITION AGAINST THE SEAR.

COMPLAINT: FIRES WHEN SAFETY IS PUSHED OFF.

INCIDENT: FOULOW DOWN

COMMENTS: THE INTERFERANCE BETWEEN FIRING PIN HEAD AND HOUSING CREATS A BURR WHICH CAUSES SEAR BIND. SEAR STICKS DOWN IN ~~FIRED~~ POSITION RESULTING IN FOULOW DOWN.

PLAINTIFF'S EXHIBIT 3204

AL 0029734

RD-6542-1 Rev. 2-15-61

Cust. Complaint

NO GUN EXAMINATION REPORT NUMBER: _____

MODEL: 700 BDL

GENERAL CONDITION: NEW

R #: 023451

OUTSIDE WORK: NO

DATE: 11-13-72

FROM: RON SHIRKS SHOOTERS SUPPLIES. LEBANON, PA.

FIRED AMMO TYPE: –

& CONDITION:

GUN #: 6494579

PROOF: R.E.P-M INSP.: ASSEMBLER 64 TEST: 84

CODE: RU= 11/71

HEADING: O.K.

GA./CAL.: 270 WIN.

BREECH OPENING: –

CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K.

APPROVED:

CHAMBER: O.K.

APPROVED:

TEST: NO

APPROVED:

COMPONENT CONDITION: (Damaged, Broken, Old Style)

APPROVED:

TRIGGER ASSEMBLY COMPONENTS STUCK TOGETHER MAKING IT INOPERABLE.

COMPLAINT: WONT COCK

INCIDENT: FOLLOWS DOWN.

COMMENTS: TRIGGER ASSEMBLY WAS RENDERED INOPERABLE BY SOME HARDENED SUBSTANCE.

1 of 1

PLAINTIFF'S EXHIBIT 3205

AL 0029735

RD-6542-1 Rev. 2-15-61

Cust Gun

NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700

GENERAL CONDITION: GOOD R #: 023332

OUTSIDE WORK: NO DATE: 11-13-72

FROM: GRANTS' FOR GUNS INC. COSTA MESA, CAL.

FIRED AMMO TYPE: —

& CONDITION: GUN #: 6449597

ASSEMBLED '73

PROOF: REP-N INSP.: 89 TEST: 53 CODE: WV = 8/71

HEADING: O.K. GA./CAL.: 3006

BREECH OPENING: CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

SEAR - TRIGGER CONNECTOR ENGAGEMENT = .010 (MIN. IS .020) BURRS ON SIDES OF TRIGGER

COMPLAINT: GUN FIRES WHEN SAFETY IS TAKEN OFF.

INCIDENT: FOLLOW DOWN

COMMENTS: IT APPEARS THAT TRIGGER BIND MAY HAVE PREVENTED FULL RETRACTION OF CONNECTOR UNDER THE SEAR REDUCING THE UNDER MIN. ENGAGEMENT TO ZERO.

PLAINTIFF'S EXHIBIT 3206

AL 0029736

Arch Comp.

RD-6542-1 Rev. 2-15-61

A

! No GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 BDL

GENERAL CONDITION: GOOD R #: 022218

OUTSIDE WORK: SCOPE MOUNTED. TRIGGER DATE: 11-10-72

PULL WEIGHT CHANGED. FROM: JOHN PAYNE

FIRED AMMO TYPE: MT. VIEW, ARK.

& CONDITION: GUN #: 6504815

ASSEMBLER P

PROOF: R.E.P.-M INSP.: U TEST: 13 CODE: XU = 12/71

HEADING: O.K. ~~GA.~~/CAL.: 222

BRESCH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: EXCESSIVE RADIUS REAR-LUGS. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

SEAR-TRIGGER CONNECTOR ENGAGEMENT .025 (ADJUSTMENT UNDISTURBED) TRIGGER STOP & ADJUSTING SCREWS' SEALS BROKEN. TRIGGER CONNECTOR WARPED.

COMPLAINT: RIFLE FIRED WHEN SAFETY WAS PUSHED OFF.

INCIDENT: FOLLOW DOWN.

PLAINTIFF'S EXHIBIT 3207

COMMENTS: WITH THE TRIGGER PULL REDUCED TO TWO POUNDS TRIGGER CONNECTOR RETRACTION WOULD BE ERRATIC. THE WARPED CONNECTOR ALSO WOULD CAUSE ERRATIC ENGAGEMENT AND COULD RESULT IN FOLLOW DOWN.

REMIND CUSTOMER REMINGTON DOES NOT RECOMEND UNDER THREE POUND TRIGGER PULL. 1/71

AL 0029737

RD-5542-1 Rev. 2-15-61

Customer Complaint

I. 70 GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 BDL

GENERAL CONDITION: GOOD R #: 022245

OUTSIDE WORK: SCOPE MOUNTED DATE: 10-30-72

FROM: LOAR JEWELRY CO.

GRAFTON, W.VA.

FIRED AMMO TYPE: —

& CONDITION: GUN #: 6246723

ASSEMBLER P

PROOF: R.E.P.-D INSP.: 74 TEST: 49 CODE: P5 = 6/69

HEADING: O.K. GA./CAL.: 7MM REM. MAG.

BREECH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

RECEIVER AND BOLT RUSTED. SEAR-TRIGGER CONNECTOR ENGAGEMENT .025 (MIN. .15, .020) BURRS ON SIDES OF TRIGGER, TRIGGER CLEARANCE ON CONNECTOR 1.085 MODEL DRAWING = 1.080 / 1.083 CONNECTOR CLEARANCE ON TRIGGER = 1.070 MODEL DWG. = 1.076 / 1.079

COMPLAINT: FIRES WHEN SAFETY IS MOVED TO OFF POSITION.

INCIDENT: FOLLOW DOWN

COMMENTS: THE EXCESSIVE CLEARANCE BETWEEN THE TRIGGER AND CONNECTOR ALLOWS THE CONNECTOR TO INTERFERE WITH THE SEAR, FAILING TO RETRACT INTO COCKED POSITION.

PLAINTIFF'S EXHIBIT 3208

1 of 1

AL 0029738

RD-6542-1 Rev. 2-15-61

Cast Copy

NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 BDL

GENERAL CONDITION: GOOD R #: 021210

OUTSIDE WORK: NO DATE: 10-20-72

FROM: HALSTEAD [illegible]

FIRED AMMO TYPE: — SUMMERVILLE [illegible]

& CONDITION: GUN #: 6381922

PROOF: P.F.B.C INSP.: 88, 97 TEST: 98 CODE: ET = 10/70 [illegible]

HEADING: O.K. GA./CAL.: 300 [illegible]

BRESCH OPENING: — CHECKED BY: G. PROCTOR

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

TRIGGER ASSEMBLY CORRECTLY SCREWED BUT APPEARS NEVER TO HAVE BEEN ADJUSTED.

COMPLAINT: DISCHARGED THREE TIMES WITHOUT FINGER ON TRIGGER.

INCIDENT: FOLLOW DOWN.

COMMENTS: THE EXCESSIVE TRIGGER [illegible] TO GUARANTEE THE [illegible] FAILS TO [illegible]

PLAINTIFF'S EXHIBIT 3209

AL 0029739

RD-6542-1 Rev. 2-15-61

Cust Comp

GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 ADL

GENERAL CONDITION: GOOD R #: 020432

OUTSIDE WORK: BY ARDEN SPORTS UNLIMITED DATE: 10/8/72

SACRAMENTO, CALIF. PROM: DENNIS MINE

ARBUCKLE, CALIF.

FIRED AMMO TYPE: —

& CONDITION: GUN #: 642 [illegible]

PROOF: R.E.P. INSP.: [illegible] TEST: [illegible] CODE: AU = 3/4

HEADING: OK. GA./CAL.: 3006

BREECH OPENING: — CHECKED BY: [illegible]

RECOIL SHOULDERS: OK. APPROVED: _____

CHAMBER: OK. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

SEMI-AUTO CONTACTOR ENGAGEMENT .010 (MIN. .020) TRIGGER PULL SET TOO LIGHT

COMPLAINT: SAFETY DOES NOT WORK.

INCIDENT: FOLLOW DOWN

COMMENTS: [illegible]

PLAINTIFF'S EXHIBIT 3210

AL 0029940 171

RD-6542-1 Rev. 2-15-61

Cust. Comp.

NO GUN EXAMINATION REPORT NUMBER: _____

MODEL: 700

GENERAL CONDITION: NEW

R #: 020090

OUTSIDE WORK: SCOPE MOUNTED

DATE: 10-10-72

FROM: SOUTHERN GUILD INC. MIAMI, FLORIDA

FIRED AMMO TYPE: W-W SUPER

& CONDITION:

GUN #: 6562968

PROOF: R.E.P.-M INSP.: 73 TEST: 59

CODE: KW = 5/72

HEADING:

GA./CAL.: 7MM REM. MAG.

BREECH OPENING: —

CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K.

APPROVED:

CHAMBER: O.K.

APPROVED:

TEST: NO

APPROVED:

COMPONENT CONDITION: (Damaged, Broken, Old Style)

APPROVED:

SEAR-TRIGGER CONNECTOR ENGAGEMENT .020, STEEL SHAVINGS BETWEEN SEAR AND HOUSING AT SEAR PIN HOLE.

COMPLAINT: FIRES WHEN CLOSING BOLT

INCIDENT: FOLLOW DOWN.

COMMENTS: THE STEEL SHAVINGS PROBABLY CAUSED THE SEAR TO BIND AND FAIL TO RETRACT TO COCKED POSITION THUS, FOLLOW DOWN.

PLAINTIFF'S EXHIBIT 3211

AL 0029741

FRASCELLA

Cert Copy

RD-6542-1 Rev. 2-15-61

P.I. No GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700

GENERAL CONDITION: NEW R #: 019718

OUTSIDE WORK: NO DATE: 10-5-72

FROM: K MART ENTERPR.

ROYAL OAK, MICH.

FIRED AMMO TYPE: –

& CONDITION: GUN #: 6258285

ASSEMBLER 90

PROOF: R.E.P.-A INSP.: 58 TEST: 49 CODE: OS= 7/69

HEADING: O.K. GK./CAL.: 3006

BREECH OPENING: – CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

SEAR - CONNECTOR ENGAGEMENT .010 (MIN. .15 .020)

SOLIDIFIED LUBRICANT ON SIDE OF SEAR.

COMPLAINT: FIRES WHEN EJECTING SHELLS

INCIDENT: FOLLOW DOWN

COMMENTS: THE SOLIDIFIED LUBRICANT CAUSED THE SEAR TO STAY DOWN IN FIRED POSITION, WHEN THE BOLT WAS ROTATED TO LOCK-UP. FOLLOW DOWN OCCURRED.

PLAINTIFF'S EXHIBIT 3212

AL 0029742

RD-6542-1 Rev. 2-15-61

Cast. Complaint

NO GUN EXAMINATION REPORT NUMBER: _____

MODEL: 700

GENERAL CONDITION: GOOD

R #: 019853

OUTSIDE WORK: SCOPE MOUNTED

DATE: 10-4-72

FROM: DESA IND.

PARK FOREST, ILL.

FIRED AMMO TYPE: _____

& CONDITION: _____

GUN #: 6401425

PROOF: R.E.P. INSP.: U TEST: 13

CODE: LU - 2/71

HEADING: _____

GA./CAL.: 6 MM

BREECH OPENING: _____

CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K.

APPROVED: _____

CHAMBER: O.K.

APPROVED: _____

TEST: NO

APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style)

APPROVED: _____

SEAR-TRIGGER CONNECTOR ENGAGEMENT .005 (MIN IS .020) BURRS ON SIDES OF TRIGGER.

COMPLAINT: FIRES ON CLOSING.

INCIDENT: FOLLOW DOWN.

COMMENTS: POOR RETRACTION COMBINED WITH UNDER MIN. ENGAGEMENT ALLOWED THE SEAR TO SLID BY THE CONNECTOR AND THE FIRING PIN TO FOLLOW DOWN.

PLAINTIFF'S EXHIBIT 3213

AL 0029743

RD-6542-1 Rev. 2-15-61

700 Custom Grafted

P.I. No GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 BDL

GENERAL CONDITION: Good R #: 016530

OUTSIDE WORK: No DATE: 8-24-72

FROM: KLINEDINST & HOPPER

LOGANVILLE, PA.

FIRED AMMO TYPE: _____

& CONDITION: _____ GUN #: 6401603

ASSEMBLER 63

PROOF: R.E.P.- INSP.: 58 TEST: 49 CODE: BU-1/71

HEADING: — GA./CAL.: 6MM REM.

BREECH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: EXCESSIVE RADIUS REAR LUGS. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: 20 ROUNDS APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

ENGAGEMENTS O.K., TRIGGER PULL O.K. EXCESSIVE RADIUS REAR OF LOCKING LUGS ON BOLT CAUSING CLOSE HARD.

COMPLAINT: "SHELLS DON'T CHAMBER, FIRES WHEN YOU CLOSE IT."

INCIDENT: CLOSE HARD & FOLLOW DOWN.

PLAINTIFF'S EXHIBIT 3214

COMMENTS: THE CLOSE HARD WAS CAUSED BY BEARING ON A RADIUS BACK OF LOCKING LUGS INSTEAD OF ON THE FLAT SURFACES. THE FOLLOW DOWN PROPERLY WAS CAUSED BY RIDES ALONG THE TOP OF THE TRIGGER CATCHING ON THE INSIDE OF THE HOUSING AND FAILING TO RETRACT.

AL 0029744

RD-6542-1/Rev. 2-15-61

N/700 Custom Cryder

YO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 ADL

GENERAL CONDITION: NEW R #: 016319

OUTSIDE WORK: FIRING PIN HEAD GROUND DATE: 8-24-72

ON BOTTOM FROM: SCHUELLKOPF CO.

FIRED AMMO TYPE: — DALLAS, TEXAS

& CONDITION: GUN #: 6481075

PROOF: R.E.P.-M INSP.: 9 TEST: 53 CODE: EV = 10/71

HEADING: — GK./CAL.: 7MM M.

BREECH OPENING: CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED:

CHAMBER: O.K. APPROVED:

TEST: No APPROVED:

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED:

ENGAGEMENT (HORIZONTAL) BETWEEN SEAR AND TRIGGER CONNECTOR .025 (VERTICAL ENGAGEMENT ZERO BEYOND OF THE GROUND FIRING PIN HEAD.

COMPLAINT: "WITH STOCK OFF GUN FOLLOWS DOWN."

INCIDENT: FOLLOW DOWN

COMMENTS: IT APPEARS THAT THE CUSTOMER GROUND THE FIRING PIN HEAD REDUCING THE FIRING PIN HEAD-SEAR ENGAGEMENT TO ZERO, CAUSING THE FOLLOW DOWN.

PLAINTIFF'S EXHIBIT 3215

101

AL 0029745

N/700 Customer Complaint

RD-6542-1 Rev. 2-15-61

NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700

GENERAL CONDITION: NEW R #: 016257

OUTSIDE WORK: NO DATE: 8-16-72

FROM: HENRY L. FRAME

W. BARRINGTON, R.I.

FIRED AMMO TYPE: —

& CONDITION: ASSEMBLER B GUN #: 297377

PROOF: R.E.P. INSP.: 14 TEST: 49 CODE: WR = 8/68

HEADING: _____ GK./CAL.: 270 WIN.

BREECH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

TRIGGER PULL 3½ LBS. SEAR-TRIGGER CONNECTOR ENGAGEMENT .005 (MIN. 15.020) STICKY LUBRICANT INSIDE HOUSING. CORNER OF TRIGGER CONNECTOR WORN ROUND.

COMPLAINT: "IT DISCHARGES PREMATURELY"

INCIDENT: FOLLOW DOWN

COMMENTS: WITH INSUFFICIENT ENGAGEMENT BETWEEN SEAR & CONNECTOR THE CONNECTOR BROKE DOWN ON THE CORNER ALLOWING THE FOLLOW DOWN MALFUNCTION.

PLAINTIFF'S EXHIBIT 3216

AL 0029746

RD-6542-1 Rev. 2-15-61

N/700 Customer Complaint

NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 BDL

GENERAL CONDITION: NEW R #: 015571

OUTSIDE WORK: NO DATE: 8-14-72

FROM: HIGHSPIRE SPTG. GOODS INC. HIGHSPIRE, PA.

FIRED AMMO TYPE: FACTORY LOADS

& CONDITION: GUN #: 6312165

PROOF: R.E.P.E ASSEMBLER 79 INSP.: 74 TEST: 49 CODE: LT= 2/70

HEADING: MAX. WITH ASSEMBLY MAX. GA./CAL.: 3006

BREECH OPENING: — CHECKED BY: C. PROOSER

RECOIL SHOULDERS: EXCESSIVE RADIUS BACK OF LUGS. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

SEAR-TRIGGER CONNECTOR ENGAGEMENT .010 (MIN. IS .030) BURRS ON SIDES OF UPPER PART OF TRIGGER SHOW FRICTION MARKS. POOR COLOR ON BARREL AT REAR SIGHT.

COMPLAINT: "FIRES JUST AS BOLT IS CLOSED."

INCIDENT: FOLLOW DOWN

COMMENTS: THE TRIGGER BIND WITH UNDER MIN. ENGAGEMENT CAUSED ERRATIC TRIGGER RETRACTION AND FOLLOW DOWN.

PLAINTIFF'S EXHIBIT 3217

181

AL 0029747

REMINGTON ARMS COMPANY, INC.

INTER-DEPARTMENTAL CORRESPONDENCE

Remington DUPONT PETERS DUPONT

"CONFINE YOUR LETTER TO ONE SUBJECT ONLY"

CC: E. R. Carr
H. K. Boyle

M/700 Customer Complaints

Ilion, New York
August 14, 1972

L. J. BOYLE
S. M. ALVIS

The attached ~~trip report~~ by Harvey Boyle is relative to a complaint that difficulty was being experienced in fitting telescopes to Model 700 rifles. In addition to the scope complaints, 11 rifles were returned to Ilion and Bridgeport with a list of visual complaints. In our analysis of the returned guns, some complaints were justified but many were not. Because of the problem in determining the magnitude of the complaints and the fact that we were able to sight scopes on each of the returned rifles, Harvey Boyle, Denny Anderson and W. B. Cockman visited Jerry's Sport Center and E. L. Blair.

As a result of the trip (report attached), both Jerry's Sport Center and E. L. Blair are satisfied that corrective action has been taken. The Plant is investigating the scope sight hole process to initiate improvements.

It is further suggested that Research contact Leupold and remind them that their 3x-9x variable power scope has only 1/3 the windage adjustment of competitive scopes making adjustments difficult if used with bases without windage adjustments.

L. Fox

L. Fox, Supt.
P E & C Section

LF:I
Attach.

PLAINTIFF'S EXHIBIT 3218

183

AL 0029748

AD-61-B

REMINGTON ARMS COMPANY, INC.

INTER-DEPARTMENTAL CORRESPONDENCE

Remington DUPONT PETERS DUPONT

"CONFINE YOUR LETTER TO ONE SUBJECT ONLY"

July 28, 1972

TO: L. FOX

FROM: H. K. BOYLE/D. J. ANDERSON

TRIP REPORT

Places visted: Jerry's Sport Center, Olyphant, Pa. 7/24/72
E. L. Blair & Son Sporting Goods,
Williamsport, Pa. 7/25/72

Reference: M/700 Quality Complaint

1. Scope holes in Receiver out of alignment--can't bore sight rifles with a collimator.

2. Visual defects.

D. J. Anderson, Process Engineer; W. B. Cochman, Field Representative; and the writer visted the following establishments and reviewed the referenced M/700 Quality Complaints:

Jerry's Sport Center, Olyphant, Pa. - Jerry Warsky, Distributor-Jobber.

Mr. Warsky stated that M/700 rifles were unable to be collimated when equipped with a Leupold 3x-9x variable power scope mounted with fixed Weaver rings and mounts. Two (2) M/700 BDL, 30-06 Cal. rifles and one (1) Leupold 3x-9x scope were selected from Mr. Warsky's inventory and collimated satisfactorily. One (1) of the original complaint guns was selected and collimated satisfactorily with the Leupold scope. Al three (3) guns were successfully targeted with live ammunition for point of impact; however, one (1) had very little additional windage or elevation adjustment remaining.

The visual items observed on the returned guns were reviewed and the program for corrective action discussed.

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E. L. Blair & Son, Williamsport, Pa. - Sporting Goods Dealer (retailer)

Mr. Blair verified that the Leupold 3x-9x variable power scope and Weaver fixed rings and mounts were the primary problem although the Redfield 3x-9x variable power and the Redfield 4x have also been incapable of sighting in at times. He estimated that about 40% of the M/700-Leupold-Weaver combination could not be collimated as assembled and that shim stock was necessary for proper targeting. When shimming was necessary it was always applied to the left side of the rear base. Of the five (5) guns originally returned to Ilion by Mr. Blair and hand carried to his gunshop by this writer, two (2) could not be collimated with a Leupold 3x-9x scope selected from his inventory.

Comments and Observations:

The Leupold 3x-9x variable power scope has only 28 inches total windage and elevation adjustment (± 14 inches). This is only about 1/3 of the adjustment available in other hunting scopes. Because adjustment appears to be limited in one direction only, the Leupold Company should be contacted on this matter.

Mr. Warsky and Mr. Blair are both good friends of Remington, and they appeared glad that such attention was being given to M/700 quality. They pointed out that Remington has the major portion of the centerfire rifle market and practically all of the shotgun market.

HKB/DJA/bd

RD-6542-1 Rev. 2-15-61

M/710 Customer Complaint

NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700

GENERAL CONDITION: GOOD R #: 014720

OUTSIDE WORK: SCOPE MOUNTED, BUTT PLATE CHANGED TO RECOIL PAD. DATE: 7-24-72

FROM: S.R. MAYHOUL MELBOURN, FLA.

FIRED AMMO TYPE: —

& CONDITION: GUN #: 357864

PROOF: R.E.P. INSP.: 0 TEST: A7 CODE: RP = 11/67

HEADING: O.K. GA./CAL.: 300G

BREECH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

TRIGGER ADJUSTING SCREWS NOT SEALED (NO INDICATION THE EVER WERE). ENGAGEMENT SEAR TO TRIGGER CONNECTOR .020, TRIGGER PULL 4LBS, TRIGGER RUBS ON GUARD. GREASE LIKE LUBRICANT ON TRIGGER INSIDE HOUSING

COMPLAINT: FIRES WHEN THE SAFETY IS THROWN OFF.

INCIDENT: FOLLOW DOWN

COMMENTS: THE HEAVY LUBRICANT COMBINED WITH FRICTION OF THE TRIGGER AGAINST THE TRIGGER GUARD CAUSED TRIGGER RETRACTION TO BE ERRATIC RESULTING IN FOLLOW DOWN.

PLAINTIFF'S EXHIBIT 3219

AL 0029751

N/700 Customer Complaint

RB-6548-1 Rev. 2-15-61

... No GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 VARMINT

GENERAL CONDITION: NEW R # : 014704

OUTSIDE WORK: SCOPE MOUNTED. DATE: 7-21-92

FROM: BILLINGS P.D.

BILLINGS, MONT.

FIRED AMMO TYPE: —

& CONDITION: GUN # : 318117

PROOF: R.E.P. IMP.: 73 TRIGGER: 55 CODE: RP = 11/67

READING: Ga./CALIB.: 22-250

BREECH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TRIGGER: APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

TRIGGER CONNECTOR BROKEN.

COMPLAINT: "GUN FIRES ON CLOSING THE BOLT." ALSO REPORTED TO KEYNOTE.

INCIDENT: FALLOW DOWN

COMMENTS: THE FALLOW DOWN WAS A RESULT OF THE BROKEN TRIGGER CONNECTOR FAILING TO RETRACT.

PLAINTIFF'S EXHIBIT 3220

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AL 0029752

M/710 Cust. Complaints

RD-6348-1 Rev. 2-15-61

....No GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 BDL

GENERAL CONDITION: Good R # : 014609

OUTSIDE WORK: Scope Mounted DATE: 7-21-72

FROM: LEO D. JONES

WARREN, OHIO

FIRED AMMO TYPE: 150 GR. SUPER X

& CONDITION: ASSEMBLED BD GUN # : 6282457

PROOF: R.E.P.-D DISP.: 79 TEST: 87 CODE: FS - 10/69

READING: O.K. MK./CAL.: 7MM REM.MAG

BREECH OPENING: CHECKED BY: E. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

Scope- Trigger Connector Engagement .005 (Min. is .020) Step in Face of Bolt. Trigger Not De-Burred.

COMPLAINT: "Upon opening the Bolt the Gun Discharged. "Shells Hard to Chamber"

INCIDENT: Follow Down, Closes Hard

COMMENTS: Follow Down was caused by .005 engagement and slight trigger bind. The closes hard was due to the step in the bolt face which created a min. header condition not picked up by the heading dummy.

PLAINTIFF'S EXHIBIT 3221

AL 0029753

RD-6542-1 Rev. 2-15-61

Introduction Graphics

GUN EXAMINATION REPORT NUMBER: No

MODEL: 700

GENERAL CONDITION: Good

R #: 014102

OUTSIDE WORK: SCOPE MOUNTED

DATE: 7-14-72

FROM: GUSTAVE GUNDERSON
CONRAD, MONTANA

FIRED AMMO TYPE: —

& CONDITION:

GUN #: 6226860

PROOF: R.E.P. INSP.: 73 (ASSEMBLER 79) TEST: 87

CODE: AS= 3/69

HEADING: —

GA./CAL.: 22-250

BREECH OPENING: —

CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K.

APPROVED:

CHAMBER: O.K.

APPROVED:

TEST: No

APPROVED:

COMPONENT CONDITION: (Damaged, Broken, Old Style)

APPROVED:

CONNECTOR - SEAR ENGAGEMENT .010 (MIN. IS .020) TRIGGER PULL 2½ LBS. (3 LBS. IS MIN.) READJUSTED BY CUSTOMER. SEAR BEARING OF CONNECTOR CROOKED. TRIGGER MEASURED - .008 UNDER MIN. ON CONNECTOR CLEARANCE, .002 OVER MAX. ON ℄ OF PIN HOLE TO TOP.

COMPLAINT: FIRES WHEN SAFETY IS PUSHED OFF TRIGGER PULL TOO HEAVY.

INCIDENT: FOLLOW DOWN

COMMENTS: LIGHT TRIGGER PULL RESULTS IN ERRATIC RETRACTION. THE TRIGGER HOLDING THE CONNECTOR TOO HIGH AND ALLOWING IT TO WORK UP .008 TO INTERFERE WITH THE SEAR COULD MAKE RETRACTION IMPOSSIBLE, FOLLOW DOWN WOULD RESULT.

PLAINTIFF'S EXHIBIT 3222

AL 0029754

RD-6542-1 Rev. 2-15-61

Vi/700 Customer Complaint

I. NO GUN EXAMINATION REPORT NUMBER: _____

MODEL: 700 VARMINT

GENERAL CONDITION: NEW

R #: 014137

OUTSIDE WORK: FRONT TRIGGER ADJUSTING SCREWS ADJUSTED.

DATE: 7-13-72

FROM: H.L. PETERS INC. BUFFALO, N.Y.

FIRED AMMO TYPE: —

& CONDITION:

GUN #: 6519891

PROOF: R.E.P.-M INSP.: 48 TEST: 44

CODE: LW = 2/72 PW = 6/72

HEADING: —

~~GA.~~/CAL.: 25-06 REM.

BREECH OPENING: —

CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K.

APPROVED:

CHAMBER: O.K.

APPROVED:

TEST: NO

APPROVED:

COMPONENT CONDITION: (Damaged, Broken, Old Style)

APPROVED:

CONNECTOR - SEAR ENGAGEMENT .010 (MIN. = .020) TRIGGER ADJUSTING SCREW BACKED OUT ELIMINATING SPRING TENSION REQUIRED TO RETRACT TRIGGER & TRIGGER CONNECTOR.

COMPLAINT: FIRES WHEN CLOSING BOLT

INCIDENT: FOLLOW DOWN

COMMENTS: APPARENTLY THE CUSTOMER, ATTEMPTING TO ADJUST THE TRIGGER PULL, BACKED THE ADJUSTING SCREW OUT TOO FAR WHICH ELIMINATED ALL SPRING TENSION. WITHOUT THIS, THE TRIGGER AND CONNECTOR FAILED TO RETRACT RESULTING IN FOLLOW DOWN.

PLAINTIFF'S EXHIBIT 3223

AL 0029755

M/700 Customer Complaints

PR-6542-1 Rev. 2-15-61

P.I. No GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700

GENERAL CONDITION: NEW R #: 013812

OUTSIDE WORK: SCOPE MOUNTED DATE: 7-12-72

FROM: CHRISTMAN'S INC. DARIEN, CT.

FIRED AMMO TYPE: REMINGTON

& CONDITION: GUN #: 6394467

ASSEMBLER 97

PROOF: R.E.P.- INSP.: 74 TEST: _____ CODE: XT= 12/70

HEADING: O.K. Gk./CAL.: 222

BREECH OPENING: – CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: 10 ROUNDS - O.K. APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

CONNECTOR - SEAR ENGAGEMENT .070 (MIN. IS .020) TRIGGER PULL = 2LBS. (MIN. IS 3LBS.) NECK MEASURES .460 (MIN. = .4518) THROAT IS SHALLOW.

COMPLAINT: "CHAMBER NECK IS TOO SHORT, CHECK TRIGGER AT LIGHT SETTING."

INCIDENT: POTENTIAL FOLLOW DOWN.

COMMENTS: THIS RIFLE WAS RETURNED QUESTIONING THE FRONT OF THE CARTRIDGE CASE BEING MARKED, WHICH IS THE MARK OF THE CASE WIPING ACROSS THE RECEIVER IN BEING EJECTED. THE LIGHT TRIGGER PULL AND UNDER MIN. ENGAGEMENT COULD HAVE LED TO A MORE SERIOUS COMPLAINT LATER.

PLAINTIFF'S EXHIBIT 3224

AL 0029756

RD-6542-1 Rev. 2-15-61

1. NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 BDL

GENERAL CONDITION: NEW R # : 013324

OUTSIDE WORK: NO DATE: 7-6-72

FROM: MEYER HOWER & SPEAS, INC. GOLDEN, COLO.

FIRED AMMO TYPE: _____

& CONDITION: _____ GUN # : 6230255

ASSEMBLER # 18

PROOF: R.E.P. INSP.: 73 TEST: 87 CODE: AS = 3/69

HEADING: _____ GA./CAL.: 6MM REM.

BREECH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

CONNECTOR CLEARANCE ON TRIGGER .004 UNDER MIN. & UP PIN TO TOP OF TRIGGER ON MAX. TRIGGER HITS TRIGGER HOUSING. HEAVY LUBRICANT USED INSIDE HOUSING. SAFETY R. .001 UNDER MIN. CONNECTOR CAUSES GUN TO FIRE WITH SAFETY ON.

COMPLAINT: "HAMMER FALLS"

INCIDENT: FOLLOW DOWN

COMMENTS: THE COMBINATION OF LOW SAFETY, HIGH TRIGGER AND TRIGGER BIND CAUSES FAILURE TO RETRACT WHEN TRIGGER IS PULLED WITH SAFETY ON, THEN FOLLOW DOWN WHEN SAFETY IS PUSHED OFF.

PLAINTIFF'S EXHIBIT 3225

AL 0029757

RD-6542-1 Rev. 2-15-61

Cust. Complaint

NO. GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700

GENERAL CONDITION: NEW R #: 013117

OUTSIDE WORK: SCOPE MOUNTED DATE: 6-19-72

FROM: SPORTSMEN'S DEN MT. SHASTA, CAL.

FIRED AMMO TYPE: —

& CONDITION: GUN #: 6249832

PROOF: R.E.P-D INSP.: 74 TEST: 87 CODE: PS=6/69, CW3=4/72

HEADING: O.K. ~~GA.~~/CAL.: 7MM

BREECH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

SEAR-TRIGGER CONNECTOR ENGAGEMENT .010 (MIN = .020) BOTH SEAR AND CONNECTOR DAMAGED ON ENGAGEMENT CORNERS. CONDITION OF FIRING PIN HOLE & FIRING PIN POINT INDICATE PRIMER PIERCING HAS BEEN EXPERIENCED.

COMPLAINT: WILL NOT FIRE

INCIDENT: FOLLOW DOWN

COMMENTS: THE CUSTOMER PROBABLY EXPERIENCED A PIERCED PRIMER WHICH WITH THE .010 ENGAGEMENT, CAUSED THE SEAR-CONNECTOR DAMAGE RESULTING IN FOLLOW-DOWN.

PLAINTIFF'S EXHIBIT 3226

AL 0029758

RD-6542-1 Rev. 2-15-61

Mfgr Confirm Complaint

.. No GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700

GENERAL CONDITION: NEW R #: 012925

OUTSIDE WORK: No DATE: 6-14-72

FROM: LEO'S CUSTOM STOCKS

BETHEL PARK, PENN.

FIRED AMMO TYPE: —

& CONDITION: GUN #: 6445877

ASSEMBLER 66

PROOF: R.E.P.N INSP.: 73 TEST: 13 CODE: PU - 6/71

HEADING: O.K. GA./CAL.: 17REM.

BREECH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO - 20 ROUNDS WITH NO BLOWN PRIMERS AFTER NEW BOLT. APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

TRIGGER CONNECTOR & SEAR ENGAGEMENT .010. BOTH CORNERS BROKEN OFF. FIRING PIN ASSEMBLY RUSTED. BOLT BODY STAINED & FIRING PIN HOLE AT HEADING SHARP.

COMPLAINT: WHEN HE CLOSED THE BOLT ON THE FOURTH ROUND IT WENT OFF.

INCIDENT: FOLLOW DOWN.

COMMENTS: THE CORNER BREAKAGE ON THE SEAR AND TRIGGER CONNECTOR, WHICH RESULTED IN FOLLOW-DOWN, IS THE RESULT OF INSUFFICIENT ENGAGEMENT AND PROPER PICKING.

PLAINTIFF'S EXHIBIT 3227

AL 0029759

M/700 Customer Complaint

RD-6542-Y Rev. 2-15-61

NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700

GENERAL CONDITION: NEW R #: 012758

OUTSIDE WORK: FRONT ADJUSTING SCREWS UNSEALED. DATE: 6-12-72

FROM: J.V. ELIOT JR. SAN MEOTO, CALIF.

FIRED AMMO TYPE: –

& CONDITION: ASSEM. 30 GUN #: 6446926

PROOF: R.E.P-L INSP.: 51 TEST: 84 CODE: DU = 9/71

HEADING: O.K. GA./CAL.: 17 REM.

BREECH OPENING: – CHECKED BY: C. PROSSER

RECOIL SHOULDERS: EXCESSIVE RADIUS APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

CORNER OF SEAR CHIPPED OFF. FIRING PIN HOLE NOT ROUNDED. FIRING PIN HOLE, REAR, NOT CLEANED - FIRING PIN ASSEMBLY RUSTY. ENGAGEMENT UNDER MIN. - SEAR TO CONNECTOR.

COMPLAINT: FOLLOWS DOWN

INCIDENT: FOLLOW DOWN

COMMENTS: EVIDENTLY THE CUSTOMER EXPERIENCED A PIERCED PRIMER, WHICH WITH UNDER MIN ENGAGEMENT CAUSED THE CORNER OF THE SEAR TO CHIP OFF.

PLAINTIFF'S EXHIBIT 3228

AL 0029760

RD-6542-1 Rev. 2-15-61

Customer Complaints

P.I. NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 BDL

GENERAL CONDITION: GOOD R # : 12354

OUTSIDE WORK: SCOPE MOUNTED, TRIGGER ASSEMBLY ADJUSTED (FRONT SCREWS) DATE: 6-16-71

FROM: RON McKINNEY THOMASTON, TEXAS

FIRED AMMO TYPE: _____

& CONDITION: _____ GUN # : 6324285

PROOF: REP-G ASSEMBLER 41 INSP.: 73 TEST: 87 CODE: AT= 3/70

HEADING: CLOSES ON MAX. HEADING DUMMY ~~Ga.~~/CAL.: 25-06

BREECH OPENING: – CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

FIRING PIN POINT FLAT ON SIDES, TRIGGER CONNECTOR BROKEN, GRIP CAP OFF, RADIUS AT REAR OF RECOIL SHOULDERS ON BOLT.

COMPLAINT: "CANNOT GET THE TRIGGER TO STAY IN ADJUSTMENT", "WHEN I SHOOT THE RIFLE, THE FIRING PIN KNOCKS HOLES IN THE PRIMER."

INCIDENT: FOLLOW-DOWN & PIERCED PRIMER.

COMMENTS: THE BROKEN TRIGGER CONNECTOR FAILING TO RETRACT CAUSED THE FOLLOW-DOWN. PRIMER PIERCING MAY HAVE BEEN CAUSED BY THE DEFORMED FIRING PIN POINT.

REPLACED TRIGGER CONNECTOR.

REPLACED BOLT ASSEMBLY & FIRING PIN - SEE ABOVE.

PLAINTIFF'S EXHIBIT 3229

AL 0029161

RD-6542-1 Rev. 2-15-61

Customer Complaint

NO GUN EXAMINATION REPORT NUMBER:

MODEL: 700 BDL

GENERAL CONDITION: NEW

R #: 010030

OUTSIDE WORK: NO

DATE: 5-1-72

FROM: ODELL HARDWARE CO.

GREENWOOD, MS.

FIRED AMMO TYPE: —

& CONDITION:

GUN #: 6429469

PROOF: R.F.P.H INSP.: 51 TEST: 13

CODE: EU 10/71

HEADING: O.K.

CA./CAL.: 30.06

BREECH OPENING: —

CHECKED BY: C. PEDDICORD

RECOIL SHOULDERS: O.K.

APPROVED:

CHAMBER: O.K.

APPROVED:

TEST: NO.

APPROVED:

COMPONENT CONDITION: (Damaged, Broken, Old Style)

APPROVED:

NO BROKEN COMPONENTS. CONNECTOR, SEAR ENGAGEMENT = .008 MIN. IS .020 ALSO FOUND METAL CHIP BETWEEN TRIGGER & CONNECTOR.

COMPLAINT: WILL NOT FIRE.

INCIDENT: FOLLOWS DOWN.

COMMENTS: THE METAL CHIP BETWEEN THE TRIGGER AND CONNECTOR REDUCES THE CONNECTOR-SEAR ENGAGEMENT TO ZERO CAUSING THE FOLLOWS DOWN.

PLAINTIFF'S EXHIBIT 3230

1 of 1

AL 0029762

RD-6542-1 Rev. 2-15-61

F. NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 ADL

GENERAL CONDITION: NEW R #: 010133

OUTSIDE WORK: NO DATE: 5-1-72

FROM: RUDY'S GUN EXCH.
WYNDMERE, N.DAK.

FIRED AMMO TYPE: —

& CONDITION: GUN #: 6450564

PROOF: R.E.P.-L INSP.: ASSEMBLER #59 TEST: — CODE: PU= 6/71

HEADING: O.K. GA./CAL.: 3006

BREECH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO. APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

TRIGGER CONNECTOR BROKEN.

COMPLAINT: "TRIGGER DOES NOT WORK PROPERLY AND GUN WONT COCK"

INCIDENT: FOLLOWS DOWN

COMMENTS: THE BROKEN TRIGGER CONNECTOR FAILS TO RETRACT, SO THAT THE SEAR, BEING UNSUPPORTED DOES NOT STOP THE FIRING PIN WHICH FOLLOWS DOWN.

PLAINTIFF'S EXHIBIT 3231

AL 0029762

181

RD-6542-1 Rev. 2-15-61

Customer Complaint

P.I. No GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 BDL

GENERAL CONDITION: Good R #: 23021

OUTSIDE WORK: Scope Mounted. Trigger Adjustments Changed DATE: 11-15-71

FROM: William H. Ulery Oberlin, Kansas.

FIRED AMMO TYPE: —

& CONDITION: GUN #: 6456668

PROOF: R.E.P. - O INSP.: Assembler 73 TEST: 66 CODE: OU - 7/71

HEADING: Closes over Max. Belt Gage. GA./CAL.: 7MM

BREECH OPENING: — CHECKED BY: C. Prosser

RECOIL SHOULDERS: Excessive Radius at Rear. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: No APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

No Damaged Components.

COMPLAINT: Went off accidentally while unloading, again later while loading.

INCIDENT: Follow Down.

COMMENTS: Customer's malfunction not verified by writer, however his re-adjusting has made it impossible to determine whether the rifle was correctly adjusted on final assembly.

PLAINTIFF'S EXHIBIT 3232

AL 0029764

101

RD-6542-1 Rev. 2-15-61

P.I. NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 ADL

GENERAL CONDITION: GOOD R #: 22791

OUTSIDE WORK: NO DATE: 11-12-71

FROM: CHRISTY GUN WORKS SACRAMENTO, CAL.

FIRED AMMO TYPE: —

& CONDITION: GUN #: 6372120

ASSEMBLER 12

PROOF: R.E.P.-A INSP.: NONE TEST: 13 CODE: NO COD

HEADING: BOLT CLOSES ON ASSEMBLY MAX. GA./CAL.: 3006

BREECH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

NO DAMAGED COMPONENTS.

COMPLAINT: GUN FIRES WHEN SAFETY IS RELEASED.

INCIDENT: FOLLOW DOWN.

COMMENTS: MALFUNCTION NOT VERIFIED BY WRITER. HOWEVER, EXAMINATION OF THE TRIGGER REVEALS SEVERAL SMALL METAL SHAVINGS WHICH MAY HAVE, IF CONCENTRATED IN ONE POSITION, REDUCED THE ENGAGEMENT TO A DANGEROUS LEVEL. TRIGGER PULL WAS FOUR POUNDS, SEAR-CONNECTOR ENGAGEMENT WAS .020.

PLAINTIFF'S EXHIBIT 3233

AL 0029765

RD-6542-1 Rev. 2-15-61

Customer Complaint

GUN EXAMINATION REPORT NUMBER: NO

MODEL: 700

GENERAL CONDITION: GOOD

R #: 19457

OUTSIDE WORK: SCOPE MOUNTED.

DATE: 10-4-71

FROM: GEN. SPT. SUPPLY CO. SYRACUSE, N.Y.

FIRED AMMO TYPE:

& CONDITION:

GUN #: 6279663

PROOF: R.E.P.-E INSP.: ASSEMBLER 74 TEST: 87

CODE: ES = 10/69

HEADING: O.K.

GA./CAL.: 3006

BREECH OPENING: —

CHECKED BY: E. PROSSER

RECOIL SHOULDERS: O.K.

APPROVED:

CHAMBER: O.K.

APPROVED:

TEST: NO

APPROVED:

COMPONENT CONDITION: (Damaged, Broken, Old Style)

APPROVED:

NO DAMAGED OR BROKEN COMPONENTS.

COMPLAINT: FIRES WHEN SAFE IS PUSHED OFF.

INCIDENT:

PLAINTIFF'S EXHIBIT 3234

COMMENTS: THE CUSTOMER'S MALFUNCTION COULD NOT BE DUPLICATED ANY WAY. IT WAS NOTED AND VERIFIED BY K. CHADWICK THAT THE CUSTOMER HAD APPLIED A LUBRICANT WHICH IS TOO HEAVY (THICK) TO THE TRIGGER ASSEMBLY. THIS, IN COLD CLIMATES WOULD CAUSE A MALFUNCTION SUCH AS THAT CLAIMED BY THE CUSTOMER.

AL 0029766

1/8

Customer Complaint

RD-6542-1 Rev. 2-15-61

... NO	GUN EXAMINATION REPORT NUMBER:	MODEL:	700 VAR.
GENERAL CONDITION:	GOOD	R #:	010987
OUTSIDE WORK:	NO	DATE:	5-9-72
		FROM:	ALVIN A. SMITH
FIRED AMMO TYPE:			CORYDON, IND.
& CONDITION:		GUN #:	6342627
PROOF: R.E.P.-C	INSP.: ASSEMBLER 15 9 TEST: 41	CODE:	KT. 5/70
HEADING:	O.K.	GA./CAL.:	222
BREECH OPENING:		CHECKED BY:	C. PROSSER
RECOIL SHOULDERS:	O.K.	APPROVED:	
CHAMBER:	O.K.	APPROVED:	
TEST:	NO	APPROVED:	
COMPONENT CONDITION: (Damaged, Broken, Old Style)		APPROVED:	

TRIGGER CONNECTOR BROKEN. NO STOCK ETC.

COMPLAINT: REPAIR

INCIDENT: FOLLOW DOWN

COMMENTS: THE BROKEN TRIGGER CONNECTOR COULD NOT PERFORM ITS FUNCTION OF SUPPORTING THE SEAR AGAINST THE THRUST OF THE FIRING PIN HEAD.

PLAINTIFF'S EXHIBIT 3235

AL 0029767

RD-6542-1 Rev. 2-15-61

..... GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 BDL

GENERAL CONDITION: NEW R #: 006000

OUTSIDE WORK: [illegible] DATE: 3-15-72

FROM: [illegible] Co.

[illegible], Pa.

FIRED AMMO TYPE: _____

& CONDITION: _____ GUN #: [illegible]

PROOF: R.E.P. INSP.: [illegible] TEST: 87 CODE: 05 = [illegible]

HEADING: — GA./CAL.: 30-[illegible]

BREECH OPENING: — CHECKED BY: [illegible]

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

SEAR INTACT. [illegible]

[illegible] 1.069 (1.068) TRIGGER

CLEARANCE ON CONNECTOR = 1.090 (1.088) THIS ADDS UP TO

.014 MORE CLEARANCE BETWEEN CONNECTOR AND TRIGGER THAN

SPECIFICATIONS.

COMPLAINT: FIRES WHEN SAFETY IS RELEASED

INCIDENT: FOLLOW DOWN

COMMENTS: [illegible]

AND CONNECTOR [illegible]

[illegible] SEAR [illegible]

CAUSING FOLLOW DOWN.

PLAINTIFF'S EXHIBIT 3236

181

AL 0029768

RD-6542-1 Rev. 2-15-61

P. NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 ADL

GENERAL CONDITION: USED R #: 006153

OUTSIDE WORK: TRIGGER ADJUSTING SCREWS RE-ADJUSTED, SCOPE MOUNTED & SIGHTS REMOVED. DATE: 3-10-72

FROM: GIBSON PRODUCTS CO. MISSOULA, MONTANA.

FIRED AMMO TYPE: —

& CONDITION: GUN #: 6325677

PROOF: P.E.O.-O INSP.: 9 TEST: 41 CODE: CT = 4/70

HEADING: — GA./CAL.: 2506

BREECH OPENING: — CHECKED BY: PROSSER

RECOIL SHOULDERS: O.K. APPROVED:

CHAMBER: O.K. APPROVED:

TEST: NO APPROVED:

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED:

NO BROKEN-DAMAGED COMPONENTS. CONNECTOR CLEARANCE IN TRIGGER 1.070 (MID: 1.079) TRIGGER CLEARANCE IN CONNECTOR 1.091 (MID: 1.083) ADJUSTMENTS HAVING BEEN ALTERED MAKES IT IMPOSSIBLE TO DETERMAIN CONDITION AFTER FINAL ASSEMBLY. AS RECEIVED, SEAR CONNECTOR ENGAGEMENT = .005 MIN. IS .030.

COMPLAINT: "SAFETY DEFECTIVE"

INCIDENT: MAY HAVE BEEN FOLLOW DOWN

COMMENTS: THE CUSTOMER'S MALFUNCTION COULD HAVE BEEN THE RESULT OF LIGHT TRIGGER PULL, SLAP, AND HIGH MIN. SEAR CONNECTOR ENGAGEMENT THIS WOULD PERMIT JAR OFF. IT COULD ALSO HAVE BEEN THE RESULT OF THE .014 EXCESS CLEARANCE BETWEEN TRIGGER & CONNECTOR WHICH PERMITS CONNECTOR-SEAR INTERFERENCE PREVENTING PROPER TRIGGER-CONNECTOR RETRACTION.

PLAINTIFF'S EXHIBIT 3237

AL 0029769

RD-6542-1 Rev. 2-15-61

P NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 660

GENERAL CONDITION: NEW. R #: 006930

OUTSIDE WORK: SCOPE MOUNTED, SWIVELS ADDED. DATE: 3-13-72

CEMENT REMOVED - REAR ADJUSTING SCREW. FROM: ACKERMAN'S FIRST AID SUPPLIES

FIRED AMMO TYPE: — GROVE CITY, PA.

& CONDITION: _____ GUN #: 111373

PROOF: R.E.D. ASSEMBLED BY INSP.: 73 TEST: 79 CODE: KR = 5/68

HEADING: — GA./CAL.: 243 WIN.

BREECH OPENING: — CHECKED BY: PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

SEAR AND TOP INSIDE OF HOUSING COATED WITH DRIED LUBRICANT OR OTHER MATERIAL.

COMPLAINT: "GOES OFF WITHOUT WARNING.

INCIDENT: FOLLOW DOWN

COMMENTS: THE LUBRICANT OR WHATEVER, SOUNDS SLUGGISH RESPONSE OF TRIGGER ASSEMBLY - TRIGGER FINGER TO RETURN SEAR FAILURE TO RETURN TO COCKED POSITION.

PLAINTIFF'S EXHIBIT 3238

1 of 1

AL 002970

RD-6542-1 Rev. 2-15-61

P. NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 ADL

GENERAL CONDITION: FAIR R #: 006152

OUTSIDE WORK: SCOPE MOUNTED, SIGHTS REMOVED. DATE: 3-8-72

FROM: GIBSON PRODUCTS CO. MISSOULA, MONTANA.

FIRED AMMO TYPE: _____

& CONDITION: _____ GUN #: 6222426

PROOF: REP ~~INSP.~~ ASSEMBLER 30: 13 TEST: 49 CODE: PS = 6/69

HEADING: — GA./CAL.: 30.06

BREECH OPENING: _____ CHECKED BY: PROSNER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

NO BROKEN, DAMAGED COMPONENTS. SEAR, CONNECTOR ENGAGEMENT .06 (MIN. IS .020) TRIGGER CLEARANCE IN CONNECTOR = 1.091 (M/D = 1.083, 1.080); CONNECTOR CLEARANCE ON TRIGGER = 1.071 (M/D = 1.079, 1.076) CONNECTOR IS WARPED AND TRIGGER HAS EXCESSIVE RADIUS UNDER CONNECTOR ON TOP.

COMPLAINT: DEFECTIVE SAFETY

INCIDENT: FOLLOW DOWN IS POSSIBLE

PLAINTIFF'S EXHIBIT 3239

COMMENTS: THE EXCESS CLEARANCE BETWEEN THE CONNECTOR AND TRIGGER (.013 EXCESS) COULD ALLOW THE CONNECTOR TO WORK UP TO INTERFERE WITH THE SEAR PREVENTING RETRACTION WITH THE SAFETY ON. PUSHING THE SAFETY OFF THEN WOULD RESULT IN A FOLLOW DOWN.

AL 0029771 1 of 1

RD-6542-1 Rev. 2-15-61

P- NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 ADL

GENERAL CONDITION: GOOD R #: 005856

OUTSIDE WORK: NO DATE: 3-7-72

FROM: COMMERCE SPT. CPS. MOBERLY, MO.

FIRED AMMO TYPE: —

& CONDITION: GUN #: 624390

PROOF: R.E.P.-E INSP.: 9 TEST: 13 CODE: 05-6/69

HEADING: — GA./CAL.: 308 WIN.

BREECH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: OK. APPROVED: _____

CHAMBER: OK. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

NO DAMAGE, BROKEN COMPONENTS. TRIGGER PULL 9 LBS. NO TRIGGER-TRIGGER GUARD INTERFERENCE. SEAR-CONNECTOR ENGAGEMENT = .020 (MIN. IS .020) SEAR'S IMPACT. HEAVILY OILED.

COMPLAINT: "GUN SOMETIMES WILL FIRE WITHOUT BEING TO BE ENGAGED WITHIN TRIGGER GUARD"

INCIDENT: FIRED ON DOWN

COMMENTS: IT APPEARS DEFECTS BEING FIRED [illegible] ON USE OF PROBLEMS [illegible] TRIGGER-SEAR RUNNING IN TRIGGER GUARD, AND [illegible] THE FOLLOW DOWN MALFUNCTION.

PLAINTIFF'S EXHIBIT 3240

1 of 1

AL 0029772

RD-6542-1 Rev. 2-15-61

NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700

GENERAL CONDITION: GOOD R #: 005424

OUTSIDE WORK: TRIGGER STOP SCREW SEAL DATE: 2-25-72

FROM: DONALD GAGNON

CHICAGO, ILLINOIS

FIRED AMMO TYPE: — GUN #: 6362419

& CONDITION: ASSEMBLER V

PROOF: R.E.P.-A INSP.: 58 TEST: 13 CODE: DT 9/70

HEADING: _____ DIA./CAL.: 300 G SPR.

BREECH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: _____ APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

NO DAMAGED COMPONENTS. HORIZONTAL ENGAGEMENT .030 MIN. = .020 CONNECTOR CLEARANCE ON TRIGGER = 1.072 M/D = 1.079 / 1.076 TRIGGER CLEARANCE ON CONNECTOR = 1.089 M/D = 1.083 / 1.080. TRIGGER STOP SCREW SEAL BROKEN. TRIGGER BIND DETECTABLE, LUBRICANT TOO HEAVY.

COMPLAINT: FIRES WHEN SAFETY IS RELEASED.

INCIDENT: TRIGGER FAILS TO RETRACT.

COMMENTS: THE FIT OF THE TRIGGER TO THE HOUSING, TOO HEAVY LUBRICANT & EXCESS CLEARANCE BETWEEN CONNECTOR AND TRIGGER (.010) COULD LEAD TO THE CUSTOMER'S MALFUNCTION.

PLAINTIFF'S EXHIBIT 3241

1 of 1

AL 0029773

RD-65A241 Rev. 2-15-61

..I. N/A GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700

GENERAL CONDITION: GOOD R #: 22234

OUTSIDE WORK: TRIGGER SCREWS READJUSTED DATE: 12/7/67

FROM: WESLER WESTERN ARMS INC 205 SECOND ST SAN FRANCISCO CAL

FIRED AMMO TYPE: UNKNOWN

& CONDITION: GUN #: 300523

PROOF: (REP) INSP.: 14 TEST: 58 [redacted] 8-67

HEADING: OK [redacted] TO WIN

BREECH OPENING: CHECKED BY: MT

RECOIL SHOULDERS: NORMAL APPROVED: [illegible]

CHAMBER: APPROVED: [illegible] 1/3/68

TEST: APPROVED:

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED:

STOCK CRACKED, BATT PLATE MISSING, MAGAZINE BOX DEFORMED

[redacted]

[redacted] UN FIRED WHEN SAFE WAS MOVED TO [redacted] OSITION (PER CUSTOMER)

INCIDENT: GUN APPARENTLY FIRED WHEN SAFE WAS RELEASED AND TRIGGER INADVERTENTLY PULLED AT SAME TIME OR GUN WAS HIT CAUSING JAR OFF DUE TO IMPROPER SETTING.

COMMENTS: SEAL WAS REMOVED FROM TRIG. ADJUSTING SCREW AND ENGAGEMENT SET LESS THAN RECOMMENDED .020 MIN. ENGAGEMENT SCREW ALSO SHOWS EVIDENCE OF HAVING BEEN MOVED TRIGGER PULL WAS CHANGED SO THA[redacted] APPROXIMATE 1½ LBS. EVEN SO WAS NOT ABLE TO [redacted] FOLLOW-DOWN AT PRESENT SETTING AS CUSTOMER MAINTAINS.

1 of 1

PLAINTIFF'S EXHIBIT 3242

AL 0029774

RD-6542A1 Rev. 2-15-61 NOT A BLOW-UP

.I. NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700

GENERAL CONDITION: NEW R # : 1514

OUTSIDE WORK: TRIGGER PULL ADJUSTED. DATE: 1-22-70

FROM: DENVER, COLORADO

FIRED AMMO TYPE: —

& CONDITION: GUN # : 6227025

PROOF: R.E.P. INSP.: 73 TEST: [redacted] : 3/69

HEADING: — [redacted] 2-250

BREECH OPENING: — CHECKED BY: E. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: DRY FIRED - MALFUNCTION VERIFIED. APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

[redacted] FIRES WHEN RELEASING SAFETY TO OFF POSITION.

INCIDENT: SAFETY DOES NOT LIFT SEAR CLEAR OF TRIGGER CONNECTOR.

COMMENTS: SAFETY, HOUSING, TRIGGER CONNECTOR & TRIGGER WERE MEASURED. ONLY THE TRIGGER WAS [illegible] BE NOT TO SPECIFICATIONS. DIMENSION FROM ℄ OF PIN HOLE TO TOP ZERO .9782 (MODEL DRAWING = .973/.971)

PLAINTIFF'S EXHIBIT 3243

1 of 1

AL 0029775

RD-6542-1 (Rev. 2-15-61)

NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 BDL

GENERAL CONDITION: NEW R #: 22570

OUTSIDE WORK: NO DATE: 11-2-70

FROM: LIMA, OHIO

FIRED AMMO TYPE: —

& CONDITION: GUN #: 6233914

PROOF: — INSP.: _____ TEST: _____ CODE: CS = 4/69

HEADING: — Ga./CAL.: 222

BREECH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: — APPROVED: _____

CHAMBER: — APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

O.K.

COMPLAINT: FIRES WHEN SAFE IS RELEASED.

INCIDENT: TRIGGER CONNECTOR MOVES UP WHEN TRIGGER IS PULLED WITH THE SAFETY ON.

COMMENTS: TRIGGER CONNECTOR IS .007 OVERSIZE ON TRIGGER CLEARANCE. TRIGGER IS .006 UNDERSIZE ON CONNECTOR CLEARANCE. THIS EXCESSIVE CLEARANCE ALLOWS THE CONNECTOR TO WORK UP, INTERFERE WITH THE SEAR AND FAIL TO RETRACT UNDER THE SEAR RESULTING IN FOLLOW DOWN WHEN THE SAFETY IS PUSHED OFF.

PLAINTIFF'S EXHIBIT 3244

1 of 1

AL 0029776

RD-6542-1 Rev. 2-15-61

NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 ADL

GENERAL CONDITION: LIKE NEW R #: _____

OUTSIDE WORK: NO DATE: 11-3-70

FROM: EAU CLAIRE, WISCONSIN.

FIRED AMMO TYPE: –

& CONDITION: GUN #: 6258555

PROOF: – INSP.: _____ TEST: _____ CODE: 05 = 7/69

HEADING: – GA./CAL.: 3006

BREECH OPENING: – CHECKED BY: C. PROSSER

RECOIL SHOULDERS: – APPROVED: _____

CHAMBER: – APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

O.K.

PLAINTIFF'S EXHIBIT 3245

COMPLAINT: GUN FIRES WHEN SAFETY IS PUSHED ON FIRE.

INCIDENT: NOT VERIFIED.

COMMENTS: HEAVY LUBRICANT PRESENT. PARTS MEASURED INDICATE EXCESSIVE CLEARANCE (.013) BETWEEN TRIGGER & CONNECTOR, WHICH WOULD ALLOW THE CONNECTOR TO MOVE UP & INTERFERE WITH THE FRONT OF THE SEAR AND PREVENT RETRACTION. SEAR - CONNECTOR ENGAGEMENT .010.

1 of 1

AL 0029777

RD-5542-1 Rev. 2-15-61

Customer Complaint

NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700

GENERAL CONDITION: NEW R #: 02095

OUTSIDE WORK: SCOPE MOUNTED DATE: 1-24-71

FROM: NAGEL'S GUN SHOP

SAN ANTONIO, TEXAS.

FIRED AMMO TYPE: —

& CONDITION: GUN #: 6206774

PROOF: R.E.P. INSP.: 9 TEST: 13 CODE: B5-1/69

HEADING: O.K. GA./CAL.: 270 WIN.

BREECH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

COMPLAINT: "FIRES WHEN YOU RELEASE SAFETY"

PLAINTIFF'S EXHIBIT 3246

INCIDENT: FOLLOWS DOWN

COMMENTS: TRIGGER CLEARANCE ON TRIGGER CONNECTOR = 1.091 MODEL DRAWING = 1.080 / 1.083 OVERSIZE .008; CONNECTOR CLEARANCE ON TRIGGER = 1.068 MODEL DRAWING = 1.076 / 1.079 UNDERSIZE .008. ALTHOUGH THE MALFUNCTION COULD NOT BE DUPLICATED, THE EXCESSIVE CLEARANCE BETWEEN CONNECTOR & TRIGGER WOULD ALLOW INTERFERANCE BETWEEN CONNECTOR & SEAR AND RESULT IN FOLLOW DOWN.

AL 0029778

1 of 1

Customer Complaint

RD-6542-1 Rev. 2-15-61

F... No GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 ADL

GENERAL CONDITION: NEW R #: 06640

OUTSIDE WORK: No DATE: 3-9-71

FROM: JOE W. HARRIS

VICTORIA, TEXAS.

FIRED AMMO TYPE: —

& CONDITION: GUN #: 6364870

PROOF: P.E.P.-A INSP.: D TEST: 13 CODE: NT= 11/70

HEADING: O.K. GA./CAL.: 270 WIN.

BREECH OPENING: CHECKED BY: C. PROUSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: No APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

NO BROKEN OR DAMAGED COMPONENTS

COMPLAINT: FIRED WHEN SAFETY WAS PUSHED OFF.

PLAINTIFF'S EXHIBIT 3247

INCIDENT: FOLLOWED DOWN

COMMENTS: CONNECTOR-SEAR ENGAGEMENT .010, MIN. IS .015

THIS COUPLED WITH A TOO HEAVY LUBRICANT AND SLIGHTLY ROUNDED SEAR, PROBABLY LED TO THE MALFUNCTION.

THE MALFUNCTION COULD NOT, HOWEVER, BE DUPLICATED HERE.

1 of 1

ENGAGEMENT RE-ADJUSTED TO .015.

AL 0029779

RD-6542-1 Rev. 2-15-61

1 NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 ADL

GENERAL CONDITION: FAIR R # : 11954

OUTSIDE WORK: SCOPE MOUNTED DATE: 6-2-71

FROM: NATIONAL PK. SVC.

KAHULUI, MAUI, HAWAII

FIRED AMMO TYPE: _____

& CONDITION: _____ GUN # : 6258351

ASSEMBLER 64

PROOF: R.E.P.-E. INSP.: U TEST: 87 CODE: 05 = 7/69

HEADING: O.K. GA./CAL.: 3006

BREECH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

NO BROKEN ETC. COMPONENTS.

CONNECTOR CLEARANCE ON TRIGGER = 1.069 M/D = 1.079 / 1.076 = .007

TRIGGER CLEARANCE ON CONNECTOR = 1.089 M/D = 1.093 / 1.083 = .006

CONNECTOR - SEAR ENGAGEMENT = .015 (.005 UNDER MIN.)

TRIGGER PULL FIVE POUNDS. EXCESSIVE LUBRICANT & DIRT.

COMPLAINT: FIRES WHEN SAFETY IS PUSHED OFF.

INCIDENT: TRIGGER CONNECTOR FAILED TO RETRACT

COMMENTS: CAN NOT DUPLICATE CUSTOMER'S MALFUNCTION.

THE TRIGGER - CONNECTOR & TRIGGER NOT TO MODEL DRAWING PERMIT SEAR, CONNECTOR INTERFERANCE, FAILURE TO RETRACT.

1 of 1

PLAINTIFF'S EXHIBIT 3248

AL 0029780

RD-6542-1 Rev. 2-15-61

P NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 ADL

GENERAL CONDITION: FAIR R #: 12986

OUTSIDE WORK: SCOPE MOUNTED DATE: 6-28-71

FROM: NAT. PARK SERV.

FIRED AMMO TYPE: — KAHULUI, MAUI, HAWAII

& CONDITION: GUN #: 6258726

PROOF: R.E.P.-F. ~~INSP.~~ ASSEMBLER 04 TEST: 87 CODE: 05 = 7/69

HEADING: O.K. GA./CAL.: 30-06

BREECH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

NO COMPONENT BROKEN.

CONNECTOR CLEARANCE ON TRIGGER = 1.090 M/D = 1.079 / 1.074 -.000

TRIGGER CLEARANCE ON CONNECTOR = 1.090 M/D = 1.083 / 1.080 +.010

CONNECTOR - SEAR ENGAGEMENT O.K.

COMPLAINT: FIRES WHEN SAFETY IS PUSHED OFF.

INCIDENT: TRIGGER CONNECTOR FAILED TO RETRACT

COMMENTS: CAN NOT DUPLICATE CUSTOMER'S MALFUNCTION.

THE TRIGGER CONNECTOR-TRIGGER NOT TO MODEL DRAWING, PERMIT SEAR CONNECTOR INTERFERENCE - FAILURE TO RETRACT.

PLAINTIFF'S EXHIBIT 3249

1 of 1

AL 0029781

RD-6542-1 Rev. 2-15-61

Customer Complaint

NO GUN EXAMINATION REPORT NUMBER: _____

MODEL: 700 ADL

GENERAL CONDITION: FAIR

R #: 12938

OUTSIDE WORK: SCOPE MOUNTED

DATE: 6-28-71

FROM: NAT. PARK SERV.

KAHULUI, MAUI, HAWAII

FIRED AMMO TYPE: —

& CONDITION:

GUN #: 6258663

ASSEMBLER 64

PROOF: R.E.P.-E INSP.: 11 TEST: 87

CODE: 05 = 7/69

HEADING: O.K.

GK./CAL.: 3006

BREECH OPENING: —

CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K.

APPROVED:

CHAMBER: O.K.

APPROVED:

TEST: NO

APPROVED:

COMPONENT CONDITION: (Damaged, Broken, Old Style)

APPROVED:

NO BROKEN COMPONENTS.

CONNECTOR CLEARANCE ON TRIGGER 1.062 M/D = 1.079 / 1.078 = .014

TRIGGER CLEARANCE ON CONNECTOR .087 M/D = 1.088 / 1.090 = +.004

CONNECTOR-SEAR ENGAGEMENT .025 = O.K.

COMPLAINT: FIRES WHEN SAFETY IS PUSHED OFF.

INCIDENT: TRIGGER CONNECTOR FAILED TO RETRACT.

COMMENTS: CAN NOT DUPLICATE THE CUSTOMER'S MALFUNCTION. THE TRIGGER CONNECTOR & TRIGGER NOT TO MODEL DRAWING PERMIT SEAR, CONNECTOR INTERFERANCE, FAILURE TO RETRACT.

PLAINTIFF'S EXHIBIT 3250

1 of 1

AL 0029782

RD-6542-1 Rev. 2-15-61

M/700 Customer Complaint

NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700

GENERAL CONDITION: GOOD R #: 19055

OUTSIDE WORK: SEAL MISSING ON TRIGGER ADJUSTING SCREW. DATE: 9-26-71

FROM: ALLEN L. WOOD CLINTON, MO.

FIRED AMMO TYPE: –

& CONDITION: GUN #: 6291404

ASSEMBLER 97

PROOF: R.E.P.-E INSP.: D TEST: 13 CODE: RS - 11/69

HEADING: O.K. GA./CAL.: 3006

BREECH OPENING: – CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

NO BROKEN OR DAMAGED COMPONENTS. STOCK MISSING.

COMPLAINT: FIRES WHEN SAFETY IS PUSHED OFF

INCIDENT: FOLLOW DOWN

COMMENTS: ENGAGEMENT O.K., TRIGGER PULL 5½ LBS.; SEAL MISSING AND ADJUSTING SCREW, FRONT, BACKED OUT SO NO TENSION REMAINED TO RETRACT THE TRIGGER.

PLAINTIFF'S EXHIBIT 3251

1 of 1

AL 0029783

RD-6542-1 Rev. 2-15-61

Customer Complaint

NO GUN EXAMINATION REPORT NUMBER: _____

MODEL: 700 ADL

GENERAL CONDITION: USED

R #: 22448

OUTSIDE WORK: SCOPE MOUNTED

DATE: 11-8-71

FROM: THE SPORTSMAN HARLINGEN, TEXAS

FIRED AMMO TYPE: –

& CONDITION: ASSEMBLY 64

GUN #: 276664

PROOF: R.E.P. INSP.: 9 TEST: 87

CODE: RP. 5/67, OTS: 7/70

HEADING: _____

CAL./CAL.: _____

BREECH OPENING: –

CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K.

APPROVED: _____

CHAMBER: O.K.

APPROVED: _____

TEST: NO

APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style)

APPROVED: _____

NO DAMAGED, OR BROKEN COMPONENTS

TRIGGER BINDS ON GUARD. TRIGGER PULL 2 1/2 POUNDS.

COMPLAINT: "FIRES WHEN SAFETY IS PUT IN FIRE POSITION"

INCIDENT: FOLLOWS DOWN

COMMENTS: WITH THE TRIGGER PULL LIGHT (2 1/2 POUNDS) AND THE TRIGGER BINDING ON THE GUARD, IT IS POSSIBLE THAT TRIGGER CONNECTOR RETRACTION WOULD BE SPORADIC. THIS COULD CAUSE FOLLOW DOWN WHEN THE TRIGGER IS PULLED WITH THE SAFETY ON.

PLAINTIFF'S EXHIBIT 3252

1 of 1

AL 0029784

RD-6542-1 Rev. 2-15-61

Customer Complaint

P NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 ADL

GENERAL CONDITION: NEW! R #: 24698

OUTSIDE WORK: NO DATE: 12-14-71

FROM: BIG BEAR STORES INC.

BILLINGS, MONT

FIRED AMMO TYPE: _____

& CONDITION: _____ GUN #: 6360196

ASSEMBLER 16

PROOF: R.E.P.-E INSP.: U TEST: 29 CODE: WT= 8/70

HEADING: O.K. CK./CAL.: 270 WIN.

BREECH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

NO DAMAGED, BROKEN COMPONENTS.

TRIGGER PULL 7 POUNDS. SEAR-TRIGGER CONNECTOR ENGAGEMENT O.K. TRIGGER BINDS ON TRIGGER GUARD.

COMPLAINT: FIRES WHEN SAFETY IS RELEASED.

INCIDENT: FOLLOW DOWN

PLAINTIFF'S EXHIBIT 3253

COMMENTS: THE CUSTOMER'S MALFUNCTION NOT DUPLICATED. HOWEVER, AN INTERFERENCE BETWEEN THE TRIGGER AND TRIGGER GUARD HAS NOTED WHICH LIKELY CAUSED THE TRIGGER TO FAIL TO RETRACT INTO COCKED POSITION.

1 of 1

AL 0029785

RD-6542-1 Rev. 2-15-61

Carat Complaint

F NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 ADL

GENERAL CONDITION: GOOD R #: 23155

OUTSIDE WORK: NO DATE: 11-19-71

FROM: BIGGS SFT. GOD.

PENSACOLA, FLA.

FIRED AMMO TYPE: —

& CONDITION: GUN #: 6344022

PROOF: R.E.P.-A INSP.: J TEST: 87 CODE: KT- 5/70

HEADING: O.K. GA./CAL.: 22-250

BREECH OPENING: — CHECKED BY: [illegible]

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

NO BROKEN OR DAMAGED COMPONENTS.

TRIGGER CONNECTED 1.00# (MIN: 1.00#) TRAVEL 1.06# (MIN: 1.00#)

CONNECTING - SEAR ENGAGEMENT .020 MIN .015, TRIGGER

PULL: 4 TO 4½ LBS. LUBRICANT USED MAKES TO BE TOO

HEAVY.

COMPLAINT: WHEN PUSHING SAFETY OFF THE GUN FIRES OFF.

INCIDENT: ACCIDENT OCCURS.

COMMENTS: WITH THE [illegible] COMPONENT [illegible] IN THE

TRIGGER [illegible] AND TRIGGER IS [illegible]

THE TRIGGER SEAR [illegible] ENGAGED [illegible]

IT [illegible] THE GUN FAILING TO RETRACT

[illegible] ONE [illegible]

[illegible] THE [illegible] TO [illegible] 1 of 1

PLAINTIFF'S EXHIBIT 3254

AL 0029786

Cust. Complaint

R 542-1 Rev. 2-15-61

P.I. NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 ADL

GENERAL CONDITION: GOOD R # : 27191

OUTSIDE WORK: SCOPE MOUNTED DATE: 12-27-71

FROM: PECOS SPT GOODS, PECOS, TEXAS

FIRED AMMO TYPE: _____

& CONDITION: _____ GUN # : 6383772

PROOF: PROOF INSP.: 72 TEST: 27 CODE: RT= 11/gm

HEADING: O.K. Ga./CAL.: 270 REM

BREECH OPENING: — CHECKED BY: [illegible]

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

SEAR & CONNECTING ENGAGEMENT .030. TRIGGER PULL [illegible] POUNDS. STOCK ETC. NOT INCLUDED. MARK ON TRIGGER SIDE INDICATES POSSIBLE BIND ON TRIGGER GUARD. NO STOCK MOCKUP OR MAGAZINE FOR [illegible] SPRING.

COMPLAINT: DISCHARGED WHEN SAFETY WAS MOVED FROM SAFE TO FIRE POSITION.

INCIDENT: FOLLOW DOWN.

PLAINTIFF'S EXHIBIT 3255

COMMENTS: THE CUSTOMER'S MALFUNCTION WAS NOT DUPLICATED HOWEVER IT MAY HAVE BEEN CAUSED BY TRIGGER PULL IN THE TRIGGER GUARD.

1 of 1

AL 0029787

RE-0342-1 Rev. 2-15-61

F N/A GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 ADL

GENERAL CONDITION: NEW R #: 0006916

OUTSIDE WORK: N/O DATE: 2-1-78

FROM: Dunn's Sporting Supply

FIRED AMMO TYPE: Remington Kis

& CONDITION: GUN #: 6310594

PROOF: PAP-N INSP.: 71 TEST: 49 CODE: LT = 2/78

HEADING: O.K. GA/CAL.: 308 Cal.

BREECH OPENING: — CHECKED BY: G. Prosser

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: N/O APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

TRIGGER PULL 2LBS., ENGAGEMENT .012 (MINIMUM .030)
APPEARS TO BE GROOVE ON SIDE OF TRIGGER FROM RUBS
ON TOP SIDE EDGES (RUB MARKS LOWER RIGHT SIDE)

COMPLAINT: RIFLE DISCHARGED BY ITSELF THE OUT OF SIX TIMES FIRED.

INCIDENT: FOLLOW DOWN.

COMMENTS: MARKS ON THE TRIGGER INDICATE FRICTION. THE COMBINATION OF FRICTION, HEAVY LUBRICATION AND UNDER MIN. ENGAGEMENT PROBABLY PREVENTED TRIGGER CONNECTOR RETRACTION CAUSING FOLLOW DOWN.

PLAINTIFF'S EXHIBIT 3256

1 of 1

AL 0029788

RD-6542-1 Rev. 2-15-61

F No GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 BDL

GENERAL CONDITION: New R #: 002678

OUTSIDE WORK: No DATE: 2-2-72

FROM: Bill Dotson's Inc. Decatur, Ill.

FIRED AMMO TYPE: —

& CONDITION: GUN #: 6294075

PROOF: R.E.P.-A INSP.: 9 TEST: 13 CODE: XS 12/69

HEADING: O.K. GA./CAL.: 270 Win.

BREECH OPENING: — CHECKED BY: C. Prosser

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: No APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

Trigger Pull 6 lbs., Engagement .020. Trigger Bind is noticeable. In dis-assembling the trigger has what appears to be dried steel guard on the sides causing it to bind.

COMPLAINT: "When bolt is put in all the way the gun will go off."

INCIDENT: Follow Down

COMMENTS: The sluggish trigger probably failed to retract resulting in a follow down malfunction.

PLAINTIFF'S EXHIBIT 3257

1 of 1

AL 0029789

RD-6542-1 Rev. 2-15-61

F NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 PCL

GENERAL CONDITION: GOOD R #: 002118

OUTSIDE WORK: [illegible] DATE: 2-1-72

[illegible] FROM: [illegible]

FIRED AMMO TYPE: [illegible]

& CONDITION: GUN #: [illegible]

PROOF: [illegible] INSP.: [illegible] TEST: 13 CODE: [illegible]

HEADING: CAL./CAL.: 270 [illegible]

BREECH OPENING: O.K. CHECKED BY: [illegible]

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

NO BROKEN ETC. [illegible] & [illegible] TRIGGER PIN [illegible] 16,000) NONE OF [illegible] SCREW STAMPED BY [illegible] ON CONNECTOR NOT HARDENED.

COMPLAINT: RIFLE FIRES PROBABILITY.

INCIDENT: FOLLOW DOWN

COMMENTS: THE COMBINATION OF INSUFFICIENT [illegible] BURRS PROBABLY PREVENTED THE [illegible] FROM RETRACTING INTO FIRING POSITION CAUSING THE FIRING PIN TO FOLLOW DOWN.

PLAINTIFF'S EXHIBIT 3258

1 of 1

AL 0029790

RD-6542-1 Rev. 2-15-61

P Nr GUN EXAMINATION REPORT NUMBER: MODEL: 5801

GENERAL CONDITION: GOOD R #: 001[illegible]

OUTSIDE WORK: SCOPE MOUNTED DATE: 1-31-73

FROM: POINTE BLANK

HARRISBURG, PA.

FIRED AMMO TYPE: —

& CONDITION: GUN #: 127052

PROOF: E.S.P. INSP.: [illegible] TEST: 13 CODE: ER= 10/[illegible]

LOADING: — GA./CAL.: 6.5MM [illegible]

BREECH OPENING: — CHECKED BY: [illegible]

RECOIL SHOULDERS: O.K. APPROVED:

CHAMBER: O.K. APPROVED:

TEST: N/A APPROVED:

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED:

RUST AROUND TRIGGER AND BETWEEN BOLT & FIRING PIN & BOLT ASSEMBLY. [illegible] FULL [illegible] (SPEC. 4106) ENGAGEMENT .010 (SPEC. .020 MIN.)

COMPLAINT: "FEED THRU WHEN SAFETY WAS PUT IN OFF [illegible]

INCIDENT: FOLLOW DOWN

COMMENTS: AS RECEIVED, RUST & FIRING PIN ASSEMBLY MADE IT DIFFICULT TO CLOSE AND LOCK BOLT. FIRING PIN WOULD NOT FALL. IT IS PROBABLE THAT THE RUST AROUND THE TRIGGER CONNECTED WITH UNDER MINIMUM ENGAGEMENT & UNDER MIN. TRIGGER PULL, CAUSED THE TRIGGER CONNECTOR TO FAIL — AS EVIDENCE WHEN BOLTS WERE TAKEN OUT, REMOVED THE SAFETY ALLOWED THE FIRING PIN TO FALL.

PLAINTIFF'S EXHIBIT 3259

AL 002979 1 1 of 1

RD-6542-1 Rev. 2-15-61

I NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 BDL

GENERAL CONDITION: NEW (SOME RUST) R #: 001869

OUTSIDE WORK: NO DATE: 1-28-72

FROM: MACK RD. SNTRS. SUM.

ERIE, PA

FIRED AMMO TYPE: _____

& CONDITION: _____ GUN #: 6290291

PROOF: R.E.P.-F ~~INSP.~~ ASSEMBLY 65: 9 TEST: 55 CODE: RS = 11/69

HEADING: O.K. GK./CAL.: 300 WIN.

BREECH OPENING: — CHECKED BY: C. FROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

NO BROKEN COMPONENTS. EXTRACTOR PITTED, BOLT BODY ALSO. SUBSTANCE RESEMBLING DRIED SOLDERING ON TRIGGER & SEAR. TRIGGER PULL 2½ LBS. ENGAGEMENT .010. LUMP ON BOLT

COMPLAINT: "FIRST SHELL HE TRIED TO CHAMBER DISCHARGED"

INCIDENT: FOLLOW DOWN

COMMENTS: THE MATERIAL ON THE SEAR & TRIGGER CAUSED THE TRIGGER TO STICK IN FIRED POSITION, WHEN THE ACTION WAS CLOSED THE FIRING PIN FALLING DOWN FIRING THE ROUND

1 of 1

PLAINTIFF'S EXHIBIT 3260

AL 0029792

RD-6542-1 Rev. 2-15-61

1 . No GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 BDL

GENERAL CONDITION: NEW R #: 002023

OUTSIDE WORK: No DATE: 1-27-72

FROM: BAY CITY HDW. CO.

BAY CITY, MICH.

FIRED AMMO TYPE: —

& CONDITION: GUN #: 6500965

ASSEMBLER-44

PROOF: P.E.P.-M INSP.: — TEST: 13 CODE: NONE

HEADING: O.K. GA./CAL.: 243 WIN.

BREECH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: No APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

MINUS STOCK. TRIGGER PULL 4½ LBS. - O.K. ENGAGEMENT .008 (.020 MIN.) NEW RIVETED HOUSING. CONNECTOR 1.093 M/D = 1.080 / 1.083 TRIGGER 1.076 M/D = 1.076 / 1.079. BURRS ON CONNECTOR SIDES.

PLAINTIFF'S EXHIBIT 3261

COMPLAINT: "FIRES ON SAFE"

INCIDENT: MAY HAVE FOLLOWED DOWN WHEN SAFE WAS RELEASED.

COMMENTS: ENGAGEMENT IS SET TOO CLOSE, WITH THE BURRS ON THE CONNECTOR AND CLOSE ENGAGEMENT, IT IS POSSIBLE THAT THE CONNECTOR FAILED TO RETRACT WHILE THE SAFETY WAS ON THEN FOLLOW DOWN OCCURRED WHEN THE SAFETY WAS RELEASED.

1 of 1

AL 0029793

RD-6542-1 Rev. 2-15-61

Customer Complaint

P NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 ADL

GENERAL CONDITION: NEW R #: 001648

OUTSIDE WORK: SCOPE MOUNTED, SWIVELS & DATE: 1-26-72

RECOIL PAD FITTED. FROM: DUNN'S SPG. GOS. INC.

FIRED AMMO TYPE: — PEYELY, MISSOURI

& CONDITION: _____ GUN #: 332321

ASSEMBLER P

PROOF: R.E.P. INSP.: D TEST: 49 CODE: BL = 1/64

HEADING: O.K. GA./CAL.: .3006

BREECH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

NO DAMAGED, BROKEN COMPONENTS. GEAR-CONNECTOR ENGAGEMENT .010 (MIN. = .020) TRIGGER PULL = 3½ (MIN. = 5 LBS.) TRIGGER CLEARANCE ON CONNECTOR 1.087 M/D = 1.080 / 1.082 CONNECTOR CLEARANCE ON TRIGGER 1.073 M/D = 1.076 / 1.079 (.014 CLEARANCE WHERE .007 IS MAX.)

COMPLAINT: FIRES WHEN SAFE IS RELEASED

INCIDENT: CONNECTOR FAILS TO RETRACT.

PLAINTIFF'S EXHIBIT 3262

COMMENTS: THE EXCESSIVE CLEARANCE BETWEEN CONNECTOR AND TRIGGER ALLOWS THE CONNECTOR TO CREEP UP INTO AN INTERFERANCE POSITION WHERE IT FAILS TO RETRACT WITH THE SAFETY ON. WHEN THE SAFETY IS RELEASED THE FIRING PIN FOLLOWS DOWN.

1 of 1

AL 0029794

RD-6542-1 Rev. 2-15-61

Customer Complaint

P... NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 BDL

GENERAL CONDITION: GOOD R #: 000999

OUTSIDE WORK: NO DATE: 1-12-72

FROM: CADDIE LABAR'S DISTR. CO. DALLAS, PENN.

FIRED AMMO TYPE: —

& CONDITION: GUN #: 232943

PROOF: R.E.P. INSP.: ? TEST: 79 CODE: WN = 8/66

HEADING: O.K. GA./CAL.: 280 REM.

BREECH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

NO DAMAGED OR BROKEN COMPONENTS. TRIGGER PULL FOUR POUNDS, ENGAGEMENT .015, TRIGGER BINDING ON GUARD SLIGHTLY. GREASE-DIRT COATING ON HIDDEN PARTS INCLUDING INSIDE & OUTSIDE OF TRIGGER ASSEMBLY.

COMPLAINT: SOMETIMES IT WILL FIRE, OTHER TIMES IT WONT, SOMETIMES IT WILL BE A DELAYED FIRING.

INCIDENT: SEAR DOES NOT RELEASE FIRING PIN.

PLAINTIFF'S EXHIBIT 3263

COMMENTS: THE CUSTOMER'S MALFUNCTION WAS DUPLICATED WITH STOCK IN PLACE BUT WORKED O.K. WITH STOCK OFF. APPARENTLY THE TRIGGER-TWISTED GUARD RING COMBINED WITH THE TOO HEAVY LUBRICATION WAS THE CAUSE OF HIS TROUBLE.

1 of 1

AL 0029795

RD-6542-1 Rev. 2-15-61

Cast Comp

P.. NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 ADL.

GENERAL CONDITION: NEW R #: 26180

OUTSIDE WORK: SCOPE MOUNTED, REGULAR DATE: 12-21-71

SIGHTS REMOVED. FROM: H.H. SOTA. CORP. INC.

AMARILLO, TEXAS.

FIRED AMMO TYPE: R.P.

& CONDITION: DWE PIERCED PRIMER GUN #: 633 [illegible]

PROOF: R.E.P.-B INSP.: 71 TEST: 49 CODE: CT= 4/70

HEADING: O.K. GA./CAL.: 25-06 [illegible]

BRESCH OPENING: — CHECKED BY: [illegible]

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: TEN ROUNDS OF 120 GR. W/ PIERCED PRIMERS. APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

FIRING PIN POINT TOO FLAT. TRIGGER CONNECTOR DAMAGED. SEAR-TRIGGER CONNECTOR ENGAGEMENT .005

COMPLAINT: RIFLE WILL NOT COCK.

INCIDENT: FOLLOWS DOWN.

COMMENTS: THE .010 UNDER MIN. ENGAGEMENT COMBINED WITH BACKLASH FROM PIERCING PRIMERS FORCE OFF THE CORNER OF THE TRIGGER CONNECTOR RESULTING IN THE FOLLOW DOWN MALFUNCTION.

PLAINTIFF'S EXHIBIT 3264

1 of 1

AL 0029796

RD-6542-1 Rev. 2-15-61

Custom Co, Inc

P NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 ADL

GENERAL CONDITION: NEW R # : 24321

OUTSIDE WORK: NO DATE: 12-13-71

FROM: JENSEN BYRD CO.

SPOKANE, WASH.

FIRED AMMO TYPE: —

& CONDITION: GUN # : 6411357

ASSEMBLER 90

PROOF: R.E.P-1 INSP.: 55 TEST: 49 CODE: AU= 3/71

HEADING: O.K. ~~GA.~~/CAL.: 3006

BREECH OPENING: — CHECKED BY: S. FROSTEC

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

NO DAMAGED, BROKEN COMPONENTS. TRIGGER PULL SET-TRIGGER CONNECTOR ENGAGEMENT AND SEAR-FIRING PIN HEAD ENGAGEMENT WITHIN SPECIFICATIONS. TRIGGER CLEARS TRIGGER GUARD.

COMPLAINT: FIRES WHEN BOLT IS CLOSED

INCIDENT: FOLLOW DOWN

COMMENTS: THE CUSTOMER'S MALFUNCTION CANNOT BE DUPLICATED. SOME FOREIGN MATERIAL IS NOTED ON THE TRIGGER CONNECTOR WHICH MAY HAVE CAUSED IT TO STICK IN FIRED POSITION, RESULTING IN A FOLLOW DOWN.

1 of 1

PLAINTIFF'S EXHIBIT 3265

AL 0029797

RP-542-1 Rev. 2-15-61

Customer Complaints

P.I. No GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 BDL

GENERAL ~~CONDITION~~: Good R #: 25226

OUTSIDE WORK: No DATE: 12-8-71

FROM: Queen City Dist. Co.

Aliquippa, Pa.

FIRED AMMO TYPE: _____

& CONDITION: _____ GUN #: 6448107

ASSEMBLER 79

PROOF: REP-M INSP.: 9 TEST: 87 CODE: PU- 6/71

HEADING: O.K. GA./CAL.: 300G S.P.C.

BREECH OPENING: — CHECKED BY: G. Prosser

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: No APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

Corner of Trigger Connector Damaged. Connector-Sear Engagement .005.

COMPLAINT: "Fires upon Closing Action."

INCIDENT: Follows Down.

COMMENTS: Trigger Connector-Sear Engagement set too close. The Connector Corner Engage Down So that it becomes impossible for the hammer to stay cocked.

PLAINTIFF'S EXHIBIT 3266

1 of 1

AL 0029798

Customer Complaint

[illegible]-65/[illegible]-1 Rev. 2-15-61

GUN EXAMINATION REPORT

NUMBER: _____ MODEL: [illegible]

GENERAL CONDITION: NEW R #: [illegible]

OUTSIDE WORK: [illegible] DATE: 12-9-[illegible]

FROM: [illegible]

FIRED AMMO TYPE: _____

& CONDITION: _____ GUN #: [illegible]

PROOF: [illegible] INSP.: [illegible] TEST: [illegible] CODE: PT [illegible]

HEADING: O.K. ~~OK~~/CAL.: [illegible]

BREECH OPENING: — CHECKED BY: [illegible]

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

NO DAMAGE - BROKEN COMPONENTS.

TRIGGER CONNECTOR CLEARANCE 1.086 (MIN: 1.078 [illegible]) TRIGGER

CLEARANCE 1.092 (MIN = 1.088 [illegible]) ENGAGEMENT, SEAR [illegible]

TRIGGER PULL O.K., SLIGHT COMMER STEP [illegible]

SEAR & TRIGGER CONNECTOR [illegible]

COMPLAINT: FIRES WHEN SAFE IS RELEASED.

INCIDENT: FOLLOWS DOWN

COMMENTS: CUSTOMER'S MALFUNCTION NOT CONFIRMED. IT IS

POSSIBLE WITH CONSERVATIVE SUCH AS THIS BUILT FOR THE

TRIGGER CONNECTOR TO WORK UP ON THE [illegible] CLEAR-

ANCE, OVER MAX, ALSO TRIGGER MAY HAVE [illegible]

[illegible] DUE TO BIND IN THE TRIGGER GUARD CAUSED BY

OUT OF POSITION SCREW HOLES IN THE STOCK. 1 of 1

PLAINTIFF'S EXHIBIT 3267

AL 0029799

RD-6542-1 Rev. 2-15-61

Customer Service

1... NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700

GENERAL CONDITION: NEW R #: 24195

OUTSIDE WORK: SEAR ANGLE ON FIRING PIN DATE: 11-30-71

HEAD MAY HAVE BEEN CHANGED VERIFIED SCOPE FROM: BOB'S GUNS INC

FIRED AMMO TYPE: — LANSING, MICH.

& CONDITION: _____ GUN #: 6361958

PROOF: R.E.P.-E INSP.: 9 ASSEMBLER 30 TEST: 29 CODE: N.T. = 8/70

HEADING: O.K. GA./CAL.: 7MM REM. MAG.

BREECH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

NO DAMAGED, OR BROKEN COMPONENTS. SOME FRICTION MARKS ON TRIGGER AND INSIDE HOUSING. CONNECTOR-SEAR ENGAGEMENT .005 MIN. .015. TRIGGER PULL = FOUR POUNDS.

COMPLAINT: "GUN DISCHARGES WHEN BOLT IS BEING OPENED".

INCIDENT: FALLEN DOWN

PLAINTIFF'S EXHIBIT 3268

COMMENTS: CUSTOMER'S MALFUNCTION NOT DUPLICATED. IT IS POSSIBLE THAT A SLIGHT TRIGGER BIND CAUSED FAILURE TO RETRACT, REDUCING THE CONNECTOR-SEAR ENGAGEMENT SO THAT A MOVEMENT OF THE BOLT HANDLE RELEASED THE FIRING PIN TO FIRE THE ROUND IN THE CHAMBER.

1 of 1

AL 0029800

ID-6942-2 Rev. 2-15-61

F... NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 BDL

GENERAL CONDITION: GOOD R # : 22615

OUTSIDE WORK: NO DATE: 11-5-71

FROM: BOWLING INC. WHITE SULPHUR SPRINGS, WEST VIRGINIA

FIRED AMMO TYPE: _____

& CONDITION: _____ GUN # : 6820478

PROOF: R.E.P.-F INSP.: 73 TEST: 87 CODE: ATC 8/70, NTB: 8/70

HOLDING: _____ CAL./GAL.: [illegible]

BREECH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

NO DAMAGED OR BROKEN COMPONENTS

COMPLAINT: "COULD SEE WITHOUT [illegible] THE TRIGGER"

INCIDENT: FALLING DOWN (VERIFIED BY WRITER)

COMMENTS: [illegible] FUEL [illegible] TRIGGER [illegible]

MAKE OILS (MAKE OILS) NO INDICATION OF GUN MALFUNCTIONING.

ADDITIONAL EXAMINATION OF SERIAL AND COMMENTS [illegible]

[illegible] 1 of 1

AL 0029801

PLAINTIFF'S EXHIBIT 3269

Customer Complaint

RD-6542-1 Rev. 2-15-61

P.I. NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 BDL

GENERAL CONDITION: NEW R #: 15003

OUTSIDE WORK: TRIGGER PULL REDUCED TO ONE POUND. DATE: 7-30-71

FROM: UNITED DIST. GALVESTON, TEXAS

FIRED AMMO TYPE: —

& CONDITION: GUN #: 6408400

PROOF: REP INSP.: 74 TEST: 98 CODE: LO: 2/71

HEADING: O.K. GA./CAL.: 270 WIN.

BREECH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

ADJUSTING SCREW FOR TRIGGER PULL UNSEALED AND ADJUSTMENT ALTERED.

COMPLAINT: FIRING PIN ENGAGES & FIRES WHEN BOLT IS PUSHED FORWARD.

INCIDENT: FOLLOW DOWN

PLAINTIFF'S EXHIBIT 3270

COMMENTS: WHEN TRIGGER PULL WAS CORRECTED ENGAGEMENT OF SEAR AND TRIGGER CONNECTOR WAS .025- MIN. IS .015 WITH TRIGGER PULL REDUCED THE SPRING WILL NOT RETRACT THE TRIGGER CONNECTOR CORRECTLY AND FOLLOW DOWN MAY RESULT.

1 of 1

AL 0029802

Customer Complaint

RD-542-1 Rev. 2-15-61

P.I. NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 BDL VAR.

GENERAL CONDITION: NEW R #: 12943

OUTSIDE WORK: NO DATE: 6-29-71

FROM: H.P. Cox
MEEK HIGH SCHOOL
DALEY, ALABAMA

FIRED AMMO TYPE: —

& CONDITION: ASSEMBLES 22 GUN #: 640920

PROOF: R.E.P.-C INSP.: 9 TEST: 49 CODE: LU: 2/71

HEADING: O.K. GK./CAL.: 223

BREECH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: 40 ROUNDS, REMINGTON APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

EAR AND TRIGGER CONNECTOR CORNER BROKEN OFF, ENGAGEMENT @ .015 (.005 UNDER MIN.) FIRING PIN POINT RADIUS TOO LARGE.

COMPLAINT: FIRED ON CLOSING, FIRED WHEN SAFE WAS PULLED OFF, PIERCED PRIMERS.

INCIDENT: FOLLOWED DOWN.

COMMENTS: THE PRIMER PIERCING WAS NOT DUPLICATED IN TESTING. IT MAY HAVE SPEEDED UP THE CONNECTOR-SEAR BREAK-DOWN

PLAINTIFF'S EXHIBIT 3271

1 of 1

AL 0029803

RD-6542-1 Rev. 2-15-61

P. No GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 BDL

GENERAL CONDITION: NEW R #: 13298

OUTSIDE WORK: NO DATE: 6-29-71

FROM: J.C. PENNEY

KING OF PRUSSIA, PA.

FIRED AMMO TYPE: —

& CONDITION: GUN #: 6274124

PROOF: R.E.P.-E INSP.: 59 TEST: 13 CODE: DS - 9/69

HEADING: O.K. GA./CAL.: 270

BRESCH OPENING: CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

NO BROKEN OR DAMAGED COMPONENTS.

TRIGGER CONNECTING - SEAR ENGAGEMENT .010 (.020 - MIN.)

TRIGGER PULL 4½ LBS. A SMALL AMOUNT OF CAUSE

BETWEEN TRIGGER CONNECTION & STRIKER.

COMPLAINT: "FIRES DURING SHELL EXTRACTION"

INCIDENT: FOLLOWS DOWN

PLAINTIFF'S EXHIBIT 3272

COMMENTS: THE CUSTOMER'S MALFUNCTION COULD NOT BE DUPLICATED. THE UNDER MIN. TRIGGER MOVEMENT WAS CAUSED BY THE METAL CAP (HELD IN PLACE BY A PROTECTIVE COATING APPLIED BY THE CUSTOMER) PROBABLY CAUSED THE MALFUNCTION.

1 of 1

AL 0029804

RD-6542-1 Rev. 2-15-61

Cust. Complaint ✓

I... No GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700

GENERAL CONDITION: FAIR R #: 11955

OUTSIDE WORK: SCOPE MOUNTED DATE: 6-3-71

FROM: NATIONAL PARK SERVICE, KAHULUI MAUI, HAWAII

FIRED AMMO TYPE: T

& CONDITION: GUN #: 6258362

ASSUMED X 64

PROOF: R.E.P.-E INSP.: 11 TEST: 87 CODE: 05 = 7/69

HEADING: O.K. Ga./CAL.: 3006

BREECH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

10 BROKEN, ETC. COMPONENTS.

CONNECTOR CLEARANCE ON TRIGGER = 1.070 M/D = 1.079 / 1.076 -.006

TRIGGER CLEARANCE ON CONNECTOR = 1.089 M/D = 1.083 / 1.080 +.006

CONNECTOR-SEAR ENGAGEMENT = .020 EXCESSIVE

LUBRICANT OILY DIRTY. TRIGGER PULL FOUR POUNDS.

COMPLAINT: FIRES WHEN SAFETY IS PUSHED OFF.

INCIDENT: TRIGGER CONNECTOR FAILED TO RETRACT.

COMMENTS: CAN NOT DUPLICATE CUSTOMER'S MALFUNCTION. THE TRIGGER & TRIGGER CONNECTOR NOT TO MODEL DRAWING PERMIT SEAR-TRIGGER CONNECTOR INTERFERENCE, FAILURE TO RETRACT.

PLAINTIFF'S EXHIBIT 3273

1 of 1

AL 0029805

RD-6542-1 Rev. 2-15-61

Customer Complaint

P No GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 BDL

GENERAL CONDITION: GOOD R #: 10002

OUTSIDE WORK: TRIGGER PULL WEIGHT AND STOP SCREWS RE-ADJUSTED, SCOPE MOUNTED. DATE: 4-28-71

FROM: MAX MERHELSTEIN DIST. CO. CARBONDALE, PENNA.

FIRED AMMO TYPE: _____

& CONDITION: _____ GUN #: 6333602

PROOF: R.E.P. - G ~~INSP.~~ ASSEMBLER 72 INCOMPLETE TEST: 55 CODE: CT-4/70

HEADING: MAX. GA./CAL.: 25-06

BREECH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: EXCESSIVE RADIUS REAR CORNER. APPROVED: _____

CHAMBER: _____ APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

NO DAMAGED, BROKEN COMPONENTS.

PLAINTIFF'S EXHIBIT 3274

COMPLAINT: "BOLT LOCKS SHUT, GUN HAS FIRED WITH SAFETY ON" "FACTORY BULLETS SEAT IN RIFLING."

INCIDENT: _____

COMMENTS: CAN NOT DUPLICATE CUSTOMER'S "FIRED WITH SAFETY ON. SEAR-CONNECTOR ENGAGEMENT .020 - SPECIFICATIONS MIN. .020. THERE IS EVIDENCE OF CUSTOMER RE-ADJUSTING OF TRIGGER STOP & PULL WEIGHT SCREWS. DECREASING TRIGGER PULL WEIGHT REDUCES SEAR-CONNECTOR ENGAGEMENT MAKING A FOLLOW DOWN LIKELY.

AL 0029806

1 of 1

RD-6542-1 Rev. 2-15-61

P No GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 ADL

GENERAL CONDITION: Good R # : 07215

OUTSIDE WORK: SCOPE MOUNTED DATE: 4-23-71

FROM: SCHOENSTEIN'S ORD, NEBRASKA.

FIRED AMMO TYPE: -

& CONDITION: GUN # : 6320412

PROOF: R.E.P.B ASSEMBLER #1 INSP.: 9 TEST: 49 CODE: AT = 3/70

HEADING: O.K. Ga./CAL.: 270

BREECH OPENING: - CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: TEN ROUNDS APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

NO BROKEN OR DAMAGED COMPONENTS. SLIGHT BURR AROUND EJECTOR HOLE.

COMPLAINT: "LOADING SHELL INTO BARREL IT WENT OFF, ALSO UNABLE TO EXTRACT SHELL."

INCIDENT:

PLAINTIFF'S EXHIBIT 3275

COMMENTS: UNABLE TO DUPLICATE FIRES ON CLOSING. IN TEST EJECTOR STUCK BACK CAUSING FAILURE TO EJECT. EJECTOR WAS FREED UP AND BURR REMOVED AFTER WHICH RIFLE FUNCTIONED O.K.

1 of 1

AL 002980

RD-6542-1 Rev. 2-15-61

P. No. GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 ADL

GENERAL CONDITION: Good R #: 07367

OUTSIDE WORK: No DATE: 4-26-71

FROM: MONTGOMERY WARD

FIRED AMMO TYPE: —

& CONDITION: GUN #: 6204725

ASSEMBLER #65

PROOF: REP. INSP.: 9 TEST: 41 CODE: XR = 12/68

HEADING: O.K. ~~Gk.~~/CAL.: 270 WIN.

BREECH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: No. APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

NO DAMAGED OR BROKEN COMPONENTS.

COMPLAINT: "FIRED WHEN BOLT WAS CLOSED.

INCIDENT: —

COMMENTS: COULD NOT DUPLICATE CUSTOMER'S MALFUNCTION. HOWEVER, TRIGGER-CONNECTOR CLEARANCE BEING EXCESSIVE & TOO HEAVY LUBRICANT MAY HAVE CONTRIBUTED TO SUCH A FAILURE IN COLD TEMPERATURES.

CONNECTOR .006 OVERSIZE (1.089)

TRIGGER .009 UNDERSIZE (1.067)

REPLACED TRIGGER & CONNECTOR ENGAGEMENT O.K.

1 of 1

PLAINTIFF'S EXHIBIT 3276

RD-6542-1 Rev. 2-15-61

F. . NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700

GENERAL CONDITION: GOOD R #: 09523

OUTSIDE WORK: "REPAIRED LOCALLY ONE TIME" DATE: 4-22-71

FROM: TEMPE, ARIZONA POLICE DEPT.

FIRED AMMO TYPE: — & CONDITION: _____ GUN #: 386831

PROOF: R.E.P. INSP.: POOR STAMP TEST: 49 CODE: RS- "/69

HEADING: O.K. GA./CAL.: 223 REM.

BREECH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

TRIGGER CONNECTOR BROKEN

COMPLAINT: FIRES CLOSING

INCIDENT: _____

COMMENTS: THE BROKEN TRIGGER CONNECTOR FAILS TO RETRACT UNDER THE SEAR SO WHEN THE SAFETY IS PUSHED OFF, FIRING PIN FALLS AND FIRES ROUND.

PLAINTIFF'S EXHIBIT 3277

1 of 1

AL 0029809

RD-6542-1 Rev. 2-15-61

GUN EXAMINATION REPORT NUMBER: No

MODEL: 700 ADL

GENERAL CONDITION: NEW

R #: 07070

OUTSIDE WORK: TRIGGER ENGAGEMENT SCREW SEAL REMOVED.

DATE: 4-23-71

FROM: LLOYD CO. LITTLE ROCK, ARK.

FIRED AMMO TYPE: —

& CONDITION:

GUN #: 6266361

ASSEMBLER 65

PROOF: R.E.P.-E INSP.: 73 TEST: 87

CODE: WS = 8/69

HEADING: O.K.

GA./CAL.: 22-250

BREECH OPENING: —

CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K.

APPROVED:

CHAMBER: O.K.

APPROVED:

TEST: NO

APPROVED:

COMPONENT CONDITION: (Damaged, Broken, Old Style)

APPROVED:

TRIGGER CONNECTOR BROKEN. TRIGGER SPRING MISSING. TRIGGER ENGAGEMENT SCREW OUT OF ADJUSTMENT.

COMPLAINT: "LEVER IN TRIGGER HOUSING BROKEN"

INCIDENT: —

COMMENTS: APPARENTLY A DEFECTIVE TRIGGER CONNECTOR WAS USED.

PLAINTIFF'S EXHIBIT 3278

1 of 1

AL 0029810

RD-6542-1 Rev. 2-15-61

P.I. No GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 BDL

GENERAL CONDITION: NEW R #: 06681

OUTSIDE WORK: No DATE: 3-15-71

FROM: KENNETH JOHNSON

STURTEVANT, WISC.

FIRED AMMO TYPE: — GUN #: 6312955

& CONDITION: _____

PROOF: R.E.P.: B INSP.: 73 TEST: 87 CODE: L.T. - 2/70

HEADING: O.K. GA./CAL.: 7MM

BREECH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: EXCESSIVE RADIUS AT REAR BODY. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO. APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

COMPLAINT: CLOSES HARD OVER SHELL. FIRED WHILE TRYING TO CLOSE.

INCIDENT: CLOSE HARD

PLAINTIFF'S EXHIBIT 3279

COMMENTS: THE EXCESSIVE RADIUS AT REAR OF RECOIL SHOULDER CAUSES THE BOLT TO CAM HARD WITH A ROUND IN THE CHAMBER. THERE APPEARS TO BE NOTHING WRONG WITH THE TRIGGER ASSEMBLY. THE CUSTOMER LIKELY INADVERTENTLY TOUCHED THE TRIGGER WHILE TRYING TO FORCE THE BOLT HANDLE DOWN.

1 of 1

AL 0029811

RD-6542-1 Rev. 2-15-61

.I. No GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700

GENERAL CONDITION: GOOD R # : [illegible]

OUTSIDE WORK: NO DATE: 3-1-71

FROM: GLOBE #10

TUCSON, ARIZONA

FIRED AMMO TYPE: —

& CONDITION: GUN # : 6319824

PROOF: R.E.P.-E INSP.: 58 TEST: NO STAMP CODE: AT= 3/70

HEADING: O.K. Ga./CAL.: 270 WIN.

BREECH OPENING: — CHECKED BY: C. [illegible]

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

NO COMPONENT DAMAGED OR BROKEN. TRIGGER-CONNECTOR SEAR ENGAGEMENT = .005 (MIN. IS .015)

COMPLAINT: FIRES ON CLOSING BOLT

INCIDENT: FOLLOW DOWN

COMMENTS: THE TRIGGER CONNECTOR-SEAR ENGAGEMENT IS NOT ENOUGH FOR PROPER SUPPORT, ALLOWS THE FIRING PIN TO FOLLOW DOWN.

PLAINTIFF'S EXHIBIT 3280

AL 0029812

1 of 1

RD-554R-1 Rev. 2-15-61

P.I. NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700

GENERAL CONDITION: GOOD R #: 03978

OUTSIDE WORK: NO DATE: 3-1-71

FROM: ERRICHERS SPORTSMAN

MADISON, OHIO.

FIRED AMMO TYPE: —

& CONDITION: _____ GUN #: 278328

PROOF: R.E.P. INSP.: D TEST: 87 CODE: CP: 4/67

HEADING: O.K. GA./CAL.: 7MM MAG.

BREECH OPENING: — CHECKED BY: C.P

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

NO COMPONENT DAMAGE OR BREAKAGE.

COMPLAINT: "FIRED TWO TIMES WHEN CLOSING BOLT."

INCIDENT: FOLLOW DOWN

PLAINTIFF'S EXHIBIT 3281

COMMENTS: TRIGGER CONNECTOR-SEAR ENGAGEMENT .025. THE TRIGGER ETC. WAS FOUND TO BE COATED WITH A HEAVY-GREASE-LIKE LUBRICANT WHICH WOULD CAUSE TRIGGER RETRACTION TO BE ERRATIC. THIS APPARENTLY HAPPENED TO THE CUSTOMER - TRIGGER DID NOT RETRACT AND WHEN THE BOLT WAS CLOSED THE FIRING PIN FOLLOWED DOWN.

1 of 1

RD-6542-1 Rev. 2-15-61

P.I. NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 BDL

GENERAL CONDITION: GOOD R # : 01780

OUTSIDE WORK: SCOPE MOUNTED, REAR SIGHT LEAF REMOVED. DATE: 1-26-71

PROM: GREEN BROOK SET... GREEN BROOK, N.J.

FIRED AMMO TYPE: _____

& CONDITION: _____ GUN # : 6362025

PROOF: R.E.P.-E INSP.: ASSEMBLER P 74 TEST: 87 CODE: WT = 8/70

HEADING: O.K. GA./CAL.: 7MM MAG.

BREECH OPENING: _____ CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

COMPONENTS O.K.

COMPLAINT: "UPON RELEASING THE SAFETY MAY FIRE"

INCIDENT: FOLLOW DOWN

PLAINTIFF'S EXHIBIT 3282

COMMENTS: THE MALFUNCTION CAN NOT BE DUPLICATED, HOWEVER, THE SEAR-CONNECTOR ENGAGEMENT IS NOT TO SPECIFICATION (.008 SHOULD BE .015 MIN.) THIS COUPLED WITH ANY TRIGGER BIND, SUCH AS TOO HEAVY LUBRICANT, MIGHT CAUSE A MALFUNCTION. ENGAGEMENT CORRECTED.

1 of 1

AL 0029814

AC-55-2-1 Rev. 2-15-61

Cycle

.I. No GUN EXAMINATION REPORT NUMBER: MODEL: 700

GENERAL CONDITION: NEW R #: 29996

OUTSIDE WORK: FRONT TRIGGER ADJUSTING DATE: 1-4-71

SCREW RE-ADJUSTED. FROM: LEFAVOR'S SELF

FIRED AMMO TYPE: — NEWINGTON MAG.

& CONDITION: GUN #: 6559171

PROOF: E.E.P.E. INSP.: 9 TEST: 98 CODE: DT = 9/70

HEADING: O.K. ~~GK~~/CAL.: 300S

BREECH OPENING: — CHECKED BY: C. PROVER

RECOIL SHOULDERS: O.K. APPROVED:

CHAMBER: O.K. APPROVED:

TEST: N.G. APPROVED:

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED:

NO DAMAGED OR BROKEN PARTS.

COMPLAINT: "SEVERAL TIMES GUN WENT OPEN WHEN CLOSING BOLT."

INCIDENT: FOLLOWS DOWN

COMMENTS: SEAR-TRIGGER CONNECTOR ENGAGEMENT .005, MINIMUM IS .015. THIS LETS THE SEAR SLIP OFF THE CONNECTOR UNDER PRESSURE AND ALLOW DOWN RESULTS.

PLAINTIFF'S EXHIBIT 3283

1 of 1

AL 0029815

RD-6543-1 Rev. 2-15-61

Customer Complaint

P.I. No GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 BDL

GENERAL CONDITION: USED-GOOD R #: 00931

OUTSIDE WORK: SCOPE MOUNTED DATE: 1-12-71

FROM: JOHN M. ANGELO

LANSING, MICH.

FIRED AMMO TYPE: — GUN #: 247248

& CONDITION: _____

PROOF: R.E.P. INSP.: ASSEMBLER 8 TEST: 87 CODE: EN= 10/66

HEADING: O.K. GA./CAL.: 300 SPR.

BREECH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

NO BROKEN COMPONENTS.

COMPLAINT: FIRED AS BOLT WAS PULLED HALF WAY UP.

INCIDENT: APPARENTLY TRIGGER FAILED TO RETRACT.

COMMENTS: TRIGGER-CONNECTOR-SEAR ENGAGEMENT .020. NO INTERFERANCE INDICATED AND MALFUNCTION NOT DUPLICATED. SOME EVIDENCE OF TOO HEAVY A LUBRICANT BEING USED. SUGGEST CLEANING AND INFORMING CUSTOMER HE SHOULD USE VERY LIGHT OR NO LUBRICANT.

PLAINTIFF'S EXHIBIT 3284

1 of 1

AL 002816

RD-41-B

REMINGTON ARMS COMPANY, INC.

INTERDEPARTMENTAL CORRESPONDENCE

Remington (R.A.) PETERS (P.A.)

"CONFINE YOUR LETTER TO ONE SUBJECT ONLY"

CC: J. E. Dickey - Bdpt.
F. E. Morgan - "
A. D. Kerr

Ilion, New York
December 10, 1969

~~D. LEE BRAUN~~

M/700 Complaint

CORRESPONDENCE REGARDING MODEL 700
TO HUGH WILSON, NOVEMBER 3, 1969

Pete Morgan has ~~asked us~~ to comment on a series of letters dating back to October 10, 1969 concerning problems encountered by Hugh Wilson on Model 700, 7mm magnum rifles. These problems include burrs on bolts, feeding from the magazine and undersized chambers.

We have audited our warehouse, gallery and assembly line, and reviewed our quality control reports for 1969, looking for similar deficiencies at the factory.

- Burrs on bolts - We have had minor but persistent problems this year in fitting extractors to the Model 700 bolt. Both gallery and final inspection reports include "hard close" defects because of this extractor problem. We are now changing our process and expect immediate relief.

- Feeding from magazine - We have had isolated cases of feeding problems. Usually the follower spring is upside down or the spring detent in the follower is improperly formed.

- Undersized chamber - Our center fire rifles have head space and chamber dimensions measured 3 separate times during the manufacturing process. However, to recheck, we have measured warehouse rifles. We also checked Winchester, Federal and Remington factory ammunition and can find no dimensions out of specification. Without having the rifles here at Ilion, we cannot establish the cause.

PLAINTIFF'S EXHIBIT 3285

1 of 2

AL 002981

Lee, the following comments are pure conjecture and may not be related to the Model 700, 7mm magnum chamber problems reported by Hugh Wilson. The appearance of an undersized chamber in magnum calibers can be caused by defective extractors, rusty chambers (even in stainless steel), oversized cartridge cases, reloads, burrs in the chamber or damaged heading shoulders. We do have some instances of the magnum heading shoulder being damaged by poor technique in measuring head space.

Polishing the chamber almost always improves feeding and chambering. However, polishing can lead to reload problems, max. head space or oversized chambers. The hazard of max. headers or oversized chambers is over-rated, but can lead to poor performance and unhappy customers. If a customer has doubts about magnum rifle chamber dimensions, I suggest the rifle be returned to us.

As you can see, I have not really answered any of your questions other than try to relate to current production problems. If you can return some of the rifles to us, then we can be more specific.

R. A. Williamson
Plant Manager

by _____
L. Fox, Supt.
P E & C Section

LF:I

Customer Complaint

[illegible] REPORT

[illegible] SERIAL NUMBER: _____ MODEL: [illegible]

[illegible] CONDITION: [illegible] R #: [illegible]

OUTSIDE [illegible]: N/O DATE: [illegible]

FROM: [illegible]

FIRED AMMO TYPE: _____ [illegible]

& CONDITION: _____ GUN #: [illegible]

PALOP: [illegible] INSP.: _____ TEST: _____ CODE: [illegible]

HEADING: [illegible] GA./CAL.: [illegible]

BREECH OPENING: _____ CHECKED BY: [illegible]

RECOIL SHOULDERS: _____ APPROVED: _____

CHAMBER: [illegible] APPROVED: _____

TEST: N/C APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

COMPLAINT: "BULLET STICKS IN CHAMBER ALSO BOLT IS UNMANEUVERABLE FOR SOME REASON"

INCIDENT: _____

PLAINTIFF'S EXHIBIT 3286

COMMENTS: THE CUSTOMER PULLED THE BULLET OUT OF THE CASE LEAVING IT IN THE THROAT. THIS APPARENTLY IS AN AMMUNITION PROBLEM (PER M. WALKER).

THE BOLT CATCHING IS CAUSED BY PUSHING THE SAFETY ON BEFORE LOCKING THE BOLT THUS CATCHING THE SAFETY PIN IN THE COCKING CAM.

1 of 1

AL (X)29819

RD-6548-1 Rev. 2-15-61

P.I. No GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 BDL

GENERAL CONDITION: NEW R #: 23406

OUTSIDE WORK: No DATE: 11-2-70

FROM: OCONTO, WIS.

FIRED AMMO TYPE: —

& CONDITION: GUN #: 6248578

PROOF: — INSP.: _____ TEST: _____ CODE: PS = 6/69

HEADING: — GA./CAL.: 7MM

BREECH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: — APPROVED: _____

CHAMBER: — APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

TRIGGER CONNECTOR BROKEN.

COMPLAINT: FIRES WHEN SAFE IS REMOVED & WONT COCK AT TIMES.

INCIDENT:

COMMENTS: MALFUNCTION WAS CAUSED BY THE BROKEN TRIGGER CONNECTOR.

PLAINTIFF'S EXHIBIT 3287

1 of 1

AL 029820

Customer Complaint

RP-[illegible]-E Rev. 2-15-91

P.I. [illegible] GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 [illegible]

GENERAL CONDITION: New R # : [illegible]

OUTSIDE WORK: No DATE: 11-9-79

FROM: Shop [illegible]

FIRED AMMO TYPE: — [illegible]

& CONDITION: GUN # : [illegible]

PROOF: R.S.P. INSP.: [illegible] TEST: [illegible] CODE: BT= 1/00

HEADING: O.K. GA./CAL.: 3006

BREECH OPENING: — CHECKED BY: [illegible]

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: APPROVED: _____

TEST: n/a APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

Parts O.K.

COMPLAINT: "Every time you push the bolt down the rifle fires."

INCIDENT: Follows down

COMMENTS: The engagement of the sear, trigger connector set too close at final assembly. (600 SP)

PLAINTIFF'S EXHIBIT 3288

1 of 1

AL 0029821

RD-5548-1 Rev. 2-15-61

Customer Complaints

P.I. No GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 ADL

GENERAL CONDITION: NEW R #: 26143

OUTSIDE WORK: NO DATE: 11-12-70

FROM: DAKIN SPTS. GOOD CO.

BANGOR, MAINE

FIRED AMMO TYPE: —

& CONDITION: GUN #: 6219140

PROOF: R.E.P. INSP.: TEST: ASSEMBLER 41 CODE: LS= 2/69

HEADING: O.K. GA./CAL.: 300 G

BREECH OPENING: — CHECKED BY: C. PROESER

RECOIL SHOULDERS: — APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

TRIGGER CONNECTOR BROKEN.

COMPLAINT: "WILL NOT STAY COCKED"

INCIDENT: FOLLOWS DOWN

COMMENTS: THE BROKEN CONNECTOR MAKES RETRACTION UNDER SEAR UNCONTROLLABLE. THE CONNECTOR FAILING TO RETRACT CAUSES FOLLOW DOWN.

PLAINTIFF'S EXHIBIT 3289

1 of 1

AL 0029822

Customer Complaint

RD-6642-1 Rev. 2-15-61

P.I. NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 BDL

GENERAL CONDITION: NEW R #: 26910

OUTSIDE WORK: NO DATE: 11-17-70

FROM: GOLD BUSH SALES

BROOKLYN, N.Y.

FIRED AMMO TYPE: —

& CONDITION: _____ GUN #: 6288540

ASSEMBLER #30

PROOF: R.E.P. INSP.: 74 TEST: 79 CODE: CS* 4/69

HEADING: O.K. ~~GA.~~/CAL.: 3006

BREECH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

COMPONENTS O.K.

COMPLAINT: FIRED UPON CLOSING BOLT.

INCIDENT: APPARENTLY FOLLOWED DOWN.

COMMENTS: ENGAGEMENT O.K. NO REASON FOR MALFUNCTION COULD BE FOUND. THE MALFUNCTION COULD NOT BE REPRODUCED.

PLAINTIFF'S EXHIBIT 3290

1 of 1

AL 0029823

Customer Complaint

[illegible]: [illegible] MODEL: [illegible]

[illegible]: [illegible] R.P.: [illegible]

CONDITION: [illegible] DATE: [illegible]

[illegible] FROM: [illegible]

FIRED [illegible] TYPE: [illegible]

& CONDITION: [illegible] GUN #: [illegible]

PROOF: [illegible] INSP.: [illegible] TEST: [illegible] CODE: [illegible]

HEADING: [illegible] GAT/CAL.: [illegible]

BREECH OPENING: — CHECKED BY: [illegible]

RECOIL SHOULDERS: — APPROVED: [illegible]

CHAMBER: — APPROVED: [illegible]

TEST: N/C APPROVED: [illegible]

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: [illegible]

NO PROBLEM OBSERVED IN COMPONENTS.

COMPLAINT: GUN FIRES WHEN BOLT IS CLOSED.

INCIDENT: FOLLOWS DOWN

COMMENTS: THE SEAR-CONNECTOR ENGAGEMENT WAS SET TOO CLOSE BY FINAL ASSEMBLY.

PLAINTIFF'S EXHIBIT 3291

1 of 1

AL 0029824

RD-65/2-1 Rev. 2-15-61

Customer Complaint.

P.I. No GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 BDL.

GENERAL CONDITION: GOOD R #: 27632

OUTSIDE WORK: STOCK BEDDING ALTERED. DATE: 12-3-70

SCOPE MOUNTED. FROM: R. ROYSE

PORTLAND, OREGON.

FIRED AMMO TYPE: –

& CONDITION: _____ GUN #: 6275235

ASSEMBLER 90

PROOF: P.E.P. INSP.: 9 TEST: 55 CODE: ES= 10/69

HEADING: O.K. ~~GA.~~/CAL.: 7MM REM. MAG.

BREECH OPENING: – CHECKED BY: G. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

COMPLAINT: POOR GROUPS. FIRED WHEN SAFETY WAS PUSHED TO FIRE POSITION.

INCIDENT: BARREL BORE ROUGH. FOLLOWED DOWN.

COMMENTS: THE FOLLOW DOWN CAN NOT BE DUPLICATED. BARREL BORE EXCESSIVELY ROUGH - SHOULD BE REPLACED.

1 of 1

PLAINTIFF'S EXHIBIT 3292

AL 0029825

Customer Complaint

F 1/2-1 Rev. 2-15-61

P.I. No GUN EXAMINATION REPORT NUMBER: MODEL: 700 BDL

GENERAL CONDITION: NEW R #: 27287

OUTSIDE WORK: No DATE: 11-23-70

FROM: Sieble Elec. Co.

Vernal, Utah

FIRED AMMO TYPE: —

& CONDITION: GUN #: 6296977

PROOF: R.E.P.A INSP.: 74 AUTOMATIC 15 TEST: 55 CODE: LT = 2/70

HEADING: — ~~GA.~~/CAL.: 300G

BREECH OPENING: — CHECKED BY: C. Prosser

RECOIL SHOULDERS: — APPROVED:

CHAMBER: — APPROVED:

TEST: No APPROVED:

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED:

TRIGGER / CONNECTOR CLEARANCE -.003 OUTSIDE MODEL DRAWING, CONNECTOR: TRIGGER CLEARANCE +.005 OUTSIDE MODEL DRAWING. THIS ADDS UP TO .008 MORE MOVEMENT UP, OF CONNECTOR THAN THERE SHOULD BE TO POSSIBLE INTERFERENCE WITH THE SEAR.

COMPLAINT: "TRIGGER FIRES SOMETIMES WHEN TAKEN OFF SAFE" (EXTRACTOR FAULTY)

INCIDENT: FOLLOWS DOWN WHEN SAFE IS PUSHED OFF.

COMMENTS: THE FOLLOWS DOWN MALFUNCTION COULD NOT BE VERIFIED ALTHOUGH EXCESSIVE CONNECTOR MOVEMENT IS PRESENT.

EXTRACTOR CLAW DAMAGED.

PLAINTIFF'S EXHIBIT 3293

1 of 1

AL 0029826

RD-6[illegible]-1 Rev. 2-15-61

Customer Complaint

P.I. NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700

GENERAL CONDITION: NEW R # : 27774

OUTSIDE WORK: NO DATE: 12-10-70

FROM: KROEGER FARM SUPPLY QUERNGO, COL.

FIRED AMMO TYPE: —

& CONDITION: _____ GUN # : 6367225

PROOF: R.E.P.P. INSP.: 58 TEST: 13 CODE: DT = 9/70

HEADING: — GA./CAL.: 3006

BREECH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: — APPROVED: _____

CHAMBER: — APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

COMPONENTS O.K.

COMPLAINT: "HAMMER IN BOLT WILL NOT STAY COCKED."

INCIDENT: FOLLOWS DOWN.

COMMENTS: SEAR, TRIGGER CONNECTOR, ENGAGEMENT ADJUSTED TOO CLOSE (.005) MINIMUM IS .015, THIS LETS THE SEAR SLIP OFF THE CONNECTOR UNDER PRESSURE & FIRING PIN FOLLOWS DOWN.

RE-ADJUSTED ENGAGEMENT.

1 of 1.

PLAINTIFF'S EXHIBIT 3294

AL 0029827

RD-5542-1 Rev. 2-15-61

Customer Complaint

P.I. NO. _____ GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 BDL

GENERAL CONDITION: GOOD R #: 29327

OUTSIDE WORK: EXTRACTOR PUT GROUND OFF. DATE: 12-15-70

TRIGGER ADJUSTED - ENGAGEMENT SCREW FROM: HARDED CUT SHOP

APPEARS UNTOUCHED. WILLIAMSPORT, PA.

FIRED AMMO TYPE: — GUN #: 6264272

& CONDITION: _____

PROOF: R.S.P.E. INSP.: ASSEMBLER 13 TEST: 55 CODE: WS = 9/10

HEADSPACE: _____ C.R./CHL.: _____

BREECH OPENING: — CHECKED BY: C. PROESER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

NO DEFECTIVE OR BROKEN COMPONENTS.

COMPLAINT: "FIRED UPON CLOSING"

INCIDENT: FOLLOWED DOWN

COMMENTS: SEAR-CONNECTOR ENGAGEMENT .003, MINIMUM IS .015, THIS LETS THE SEAR SLIP OFF THE CONNECTOR UNDER PRESSURE AND FOLLOW DOWN RESULTS.

1 of 1

PLAINTIFF'S EXHIBIT 3295

AL 0029828

RD-5748-1 Rev. 2-15-61

P.I. NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 BDL

GENERAL CONDITION: NEW R # : 29277

OUTSIDE WORK: NO DATE: 12-21-70

FROM: LEONARDS

FIRED AMMO TYPE: — FOR-WORK-TEST

& CONDITION: GUN # : 633-4720

PROOF: PF 10 INSP.: _____ TEST: 49 CODE: WT = 8/70

HEADING: O.K. GA./CAL.: 270 WIN.

BREECH OPENING: — CHECKED BY: C. FRASER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

SAFETY CAM BROKEN OFF OF SEAR.

COMPLAINT: "SAFETY DOES NOT WORK"

INCIDENT: FIRES WITH SAFE ON

COMMENTS: SAFETY CAN NOT FUNCTION WITHOUT THE CAM ON THE SEAR- SAFETY CAM.

1 of 1

PLAINTIFF'S EXHIBIT 3296

AL 0029829

[illegible] Rev. 2-15-61

P.I. [illegible] GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 BDL

GENERAL CONDITION: Good R # : [illegible]

OUTSIDE WORK: No DATE: [illegible]

FROM: [illegible]

FIRED AMMO TYPE: — [illegible]

& CONDITION: _____ GUN # : [illegible]

PROOF: [illegible] DISP.: _____ TOOL: ✓ CODE: [illegible]

HEADING: O.K. GA./CAL.: [illegible]

BREECH OPENING: — CHECKED BY: [illegible]

RECOIL SHOULDERS: [illegible] APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: No APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

COMPLAINT: "GUN FIRED WHEN PICKED UP"

INCIDENT: FOLLOWS [illegible]

COMMENTS: TRIGGER CONNECTOR - SEAR ENGAGEMENT .010 MIN. ENGAGEMENT = .015. MALFUNCTION NOT DUPLICATED. ENGAGEMENT RE-ADJUSTED.

PLAINTIFF'S EXHIBIT 3297

1 of 1

AL 0029830

RD-6542-1 Rev. 2-15-61

Customer Complaint

P.I. NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 ADL

GENERAL CONDITION: NEW R #: 00285

OUTSIDE WORK: NO DATE: 1-6-71

FROM: K MART SPTG. DEPT

ST. CLAIR SHORES, MICH

FIRED AMMO TYPE: —

& CONDITION: _____ GUN #: 6248840

ASSEMBLER 12

PROOF: REP INSP.: _____ TEST: _____ CODE: P.S. = 6/69

HEADING: O.K. GK./CAL.: 7MM REM.

BREECH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: O.K. APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

BROKEN TRIGGER CONNECTOR

COMPLAINT: DEFECTIVE

INCIDENT: FOLLOWS DOWN

COMMENTS: THE BROKEN TRIGGER CONNECTOR FAILS TO RETRACT TO SUPPORT THE SEAR IN COCKED POSITION. WITHOUT SUPPORT, THE SEAR FOLLOWS DOWN.

RD-6542-1 Rev. 2-15-61

Customer Complaint

P.I. NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700

GENERAL CONDITION: USED R #: 00598

OUTSIDE WORK: NO DATE: 1-11-71

FROM: REM. ARMS OF CAN.

TORONTO, ONT., CANADA

FIRED AMMO TYPE: —

& CONDITION: GUN #: 6216023

ASSEMBLER # 64

PROOF: R.E.P. INSP.: U TEST: 55 CODE: L5=2/69

HEADING: — GK./CAL.: 350 REM. MAG.

BREECH OPENING: — CHECKED BY: _____

RECOIL SHOULDERS: — APPROVED: _____

CHAMBER: O.K. APPROVED: _____

TEST: NO APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

NO BROKEN COMPONENTS.

COMPLAINT: SEAR WILL NOT HOLD.

INCIDENT: FOLLOW DOWN.

COMMENTS: SEAR-TRIGGER CONNECTOR ENGAGEMENT O.K.; MAL-FUNCTION COULD NOT BE DUPLICATED, HOWEVER BRIGHT EDGE ON TRIGGER (TOP) INDICATES A SLIGHT INTERFERANCE WHICH MAY HAVE CAUSED THE MALFUNCTION.

PLAINTIFF'S EXHIBIT 3299

1 of 1

AL 0029832

ENGINEERING

MODEL 700 CUSTOMER GUNS RETURNED
BY COMPLAINT-MONTH RECEIVED AND YEARLY TOTAL

1963

	1962 Tot.	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Total Guns Returned:	355	81	86	71	55	62	34	42	54	70	83	87	87	812
Total Complaints:	397	83	89	72	61	62	34	42	54	70	83	87	87	824
Total Functional Complaints	130	29	28	24	19	21	8	13	23	24	30	29	27	275
Ejection	6	1	1		1	3	1	1	1		1	2	2	14
Firing	8	1		1	2	1			3	1	1			9
Extraction	10	1	7	5	1	3	1	[illegible]	1	3	2		4	28
Feeding	31	4	6	1	5	4	1	1	4	5	6	5	2	44
Closing	12	5	5	10	4	2			2	1	1	4	1	35
Bolt Binds	8	1	1				2		1	1	3	1	3	13
Trigger Pull	5	2	3	1		1		2	3	6	3	6	6	33
Safe	6	2		1	1					1			3	8
Damaged or Blown Cases or Primers	18	3	2	5	5	7	2	7	5	4	4	7	5	56
Ejector Binds or Stock in Bolt	6	1	1						1	2		1	1	7
J[illegible], Repair Etc.	5	2									1			3
Up to Standard (Functional)	4	6	2				1		2	3	8	3		26
Total Intermediate Complaints	206	47	48	44	32	48	24	25	31	40	46	49	53	457
Stock Broken, Cracked	70	21	16	17	12	14	6	6	11	14	16	20	35	188
Stock Finish or Checkering	83	12	14	17	6	11	9	5	6	11	14	12	7	124
Stock Cracked at Barrel Groove														
Accuracy (Point of Impact)	2		2	1	3	3	4	5		1	2	5	3	29
Accuracy (Group Size)	11	4	5	2	3	6	1	5	8	5	2	3	2	46
Bolt Handle Broken-Loose	13	2	1				1	1		2	4	2	7	20
Sights Crooked-Tiped Etc.	5	1		2		2		1		1		1	1	9
Sights Out of Line			1							1				2
Scope Mounting Trouble	6	1						2	4	1				8
Sights Broken		1	3							1				5
Bolt Pulls Out	1													
Up to Standard (Intermediate)	15	3	1	1	2	1	3			3	7	6		27
Broken Steel Parts	11	2	5	4	6	3			2		1			23
Total Visual Etc.-Complaints	61	7	13	4	10	1	2	4		6	7	9	5	68
Misc. Visual Complaints	52	7	11	4	10		2	4		5	7	7		57
Misc. Non-Functional	8					1				1		2	5	9
Up to Standard (Non Functional)	1		2											

PLAINTIFF'S EXHIBIT 3300

AL 0029833

1 of 1

Model 700 Total Complaints (except mp to Std.)

Units Produced per Month

Month Code	1962 Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	1963 Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	
Month Returned																									
1961																									
Jan.																									
Feb.																									2
Mar.				2	4		2	2		5	2	1		3	1		1	[illegible]							853
Apr.				2	2	6	4	11	7	11	6	3	5	4	6	2	2	[illegible]			4	2	1		3400
May						6	8	5	10	17	6	6	7	8	7	[illegible]	[illegible]	[illegible]			5	3	1	5	4846
June							12	13	15	20	14	8	6	14	11	[illegible]	[illegible]	[illegible]			2	3	3	3	4621
July								10	10	12	12	7	7	4	3	[illegible]	[illegible]	4		6	7	1	3	7	4412
Aug.									2	6	17	[illegible]	8	5	3	7	7	3	2	2	4	1	4		4524
Sept.										8	17	12	11	6	15	8	4	2	3	4	7	4	2	3	6931
Oct.										3	7	16	12	17	13	5	6	6	4	4	6	6	3	8	7688
Nov.												2	8	4	1	3	3	4	2	2	2	3	6	11	7023
Dec.													3	8	9	1	8		1	3	4	3	3	5	3263
1962 Jan.															2	3	4		1	2	4	3	3	1	4150
Feb.															2	2	2	1	6	5	5	7	4	4	3620
Mar.															2	1	5	2	3	6	3	4	3	7	3577
Apr.																	1		1	3	4	1	4	4	3649
May																		1	1	2	5	8	5	4	3743
June																			2	5	2	4	3	4	3427
July																				1	2	2	7	8	3821
Aug.																							7		3012
Sept.																						1	6	3	4854
Oct.																						1	1	6	4064
Nov.																									1964
Dec.																									926

PLAINTIFF'S EXHIBIT 3301

PENGAD-Bayonne, N.J.

Model 700 - Functional

Month Returned

Month Purchased	1982												1983											
	January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May	June	July	August	September	October	November	December
No Code																								
1982																								
Jan.													1	1								1		
Feb.															1									
Mar.					2									1	1									
Apr.				1	1	2	3	2	1	1	2	2												
May				4	4	3	4	10	2	5	2	1										2		1
June					2	1	2	3	4	2	2	4										1	1	1
July						4	2	5	7	4	4	2	2	3	1		2	1					1	5
Aug.							2	2	5	2	1	2	3	1	2		2	1	1				1	1
Sept.								2	8	8	6	6	7	3	1	2	4	4	1	3	2			
Oct.								1	2	3	5	4	1	2	1	3		2	3	1	4			
Nov.									4	2	1		1		1			1	1	3	6			
Dec.										1	3		5				2	2	1					
1983																								
Jan.													2	2			1		3	2	1			
Feb.																2		1			1			
Mar.													1	1	1		3		1	1	2			
Apr.																1	2	1	1					
May																1	1		2	2				
June																	1	2	3					
July																				2	1			
Aug.																				1				
Sept.																				1	1			
Oct.																					3			
Nov.																								
Dec.																								

PLAINTIFF'S EXHIBIT 3302

1 of 1

Model 700 Stock Broken/Stock Finish & Checkering

Month Returned

	1962												1963											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
No Code	1															1		1						
1961																								
Dec.										1			1			1								
1962 Feb.														1		1								
Mar.			1			1				1	1			1		1								
Apr.			1	2	2	1	2	1	1	1	1	1	1	1	1	1								
May					2	2	2	1	1	1	1	1	1	1	1	1								
June						3	2	1	1	1	1	1	1	1	1	1								
July							2	1	1	1	1	1	1	1	1	1								
Aug.								1	1	1	1	1	1	1	1	1								
Sept.									1	1	1	1	1	1	1	1								
Oct.										1	1	1	1	1	1	1								
Nov.											1	1	1	1	1	1								
Dec.												1	1	1	1	1								
1963 Jan.													1	1	1	1								
Feb.													1	1	1	1								
Mar.													1	1	1	1								
Apr.													1	1	1	1								
May														1	1	1								
June														1	1	1								
July														1	1	1								
Aug.														1	1	1								
Sept.														1	1	1								
Oct.														1	1	1								
Nov.														1	1	1								
Dec.														1	1	1								

REMINGTON ARMS COMPANY, INC.

ENGINEERING DEPARTMENT COMPUTATION SHEET

Sheet No.

Title of Proj. M/700 TRIAL USE OF LPS INSTEAD

Subject OF MOLYCOTE FOR CONTROL OF TRIGGER PULL

Computer

Date 5-18 1974

Milo Finch

REPORTED BY LOADS OF TWENTY RIFLES.

REJECTED FOR CREEP	PASSED
11	8
2	15
4	15
13	7
5	15
6	14
3	17
9	11
12	8
5	15
4	16
4	16
7	13
4	16
4	16

Lay,

This is a report on using LPS lubricant instead of Moly-cote. It doesn't look very good. This is about the reject rate we get with no lube.

Jim

PLAINTIFF'S EXHIBIT 3304

PENGAD-Bayonne, N. J.

1 of 1

AL 0029838

Form RD5643

REMINGTON ARMS COMPANY, INC.

ENGINEERING DEPARTMENT DUPONT COMPUTATION SHEET SHEET NO

TITLE OF PROJ: M/700 TRIGGER & TRIGGER CONN.

SUBJECT WORKS

COMPUTER DATE 19

TRIGGER

DIM. 1.076/1.080

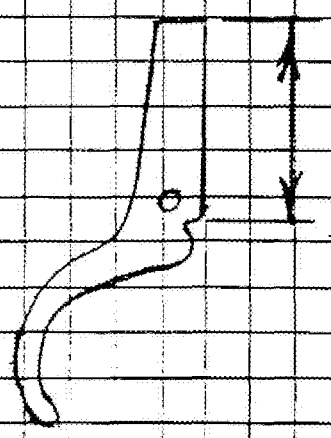
TRIG. CONNECTOR

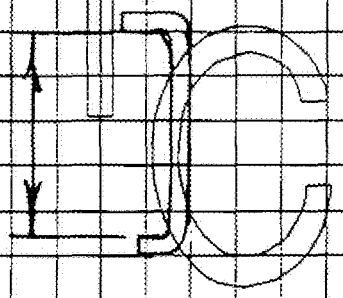
DIM. 1.080/1.083

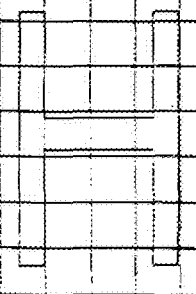
1.085
.084
.083
.082
.081
1.080
.079
.078
.077
1.076

TOL.

TOL







PLAINTIFF'S EXHIBIT 3305

PENGAD-Bayonne, N. J.

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AL 0029839

TI-FORM-1 Rev. 2-15-61 M/700 Fire Control

GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 BDL

GENERAL CONDITION: Good R #: 22760

OUTSIDE WORK: Alt Trigger Adjustment DATE: 10-16-79

Sorting Unfired, Adjustment Cal. .22 FROM: Centralia, Illinois

FIRED AMMO TYPE: _____

& CONDITION: _____ GUN #: 193[illegible]

PROOF: R.E.P. INSP.: 9 TEST: _____ CODE: WTS [illegible] LW [illegible]

HEADING: _____ ~~GA.~~/CAL.: 22

BREECH OPENING: _____ CHECKED BY: [illegible]

RECOIL SHOULDERS: _____ APPROVED: _____

CHAMBER: _____ APPROVED: _____

TEST: _____ APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

Old Style Sear-Safety Combination on Unit

Trigger Connector Broken.

COMPLAINT: Follows Down.

INCIDENT: _____

COMMENTS: Follow Down was Caused by the Broken Connector.

PLAINTIFF'S EXHIBIT 3306

AL 0029841

RD-6542-1 Rev. 2-15-61

NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700

GENERAL CONDITION: NEW R #: 22775

OUTSIDE WORK: No DATE: 10-15-70

FROM: MARKLEYSBURG, PA.

FIRED AMMO TYPE: —

& CONDITION:

GUN #: 6262918

PROOF: R.E.P. INSP.: 9 TEST: CODE: OS = 7/69

HEADING: O.K. ~~GA./~~CAL.: 22-250

BREECH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: — APPROVED:

CHAMBER: — APPROVED:

TEST: FUNCTION ONLY APPROVED:

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED:

COMPLAINT: FOLLOWS DOWN WHEN SAFETY IS PUSHED OFF.

INCIDENT:

COMMENTS: THE DIMENSION FROM THE TOP OF THE TRIGGER TO CENTER OF TRIGGER PIN HOLE BEING .011 OVERSIZE ELIMINATES MOST OF THE CLEARANCE NEEDED FOR THE TRIGGER-CONNECTOR TO RETRACT WITH THE SAFETY ON

PLAINTIFF'S EXHIBIT 3307

AL 0029842

RD-6542-1 Rev. 2-15-61

P NO GUN EXAMINATION REPORT NUMBER: _____ MODEL: 700 ADL

GENERAL CONDITION: NEW R #: 22730

OUTSIDE WORK: NO DATE: 10-16-70

FROM: LIVONIA, MICH.

FIRED AMMO TYPE: —

& CONDITION: GUN #: 6278113

PROOF: — R.E.P. INSP.: _____ TEST: _____ CODE: _____

HEADING: — ~~GA.~~/CAL.: 3006

BREECH OPENING: — CHECKED BY: C. PROSSER

RECOIL SHOULDERS: — APPROVED: _____

CHAMBER: — APPROVED: _____

TEST: FUNCTION ONLY APPROVED: _____

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED: _____

CONNECTOR IS .005 UNDERSIZE ON 1.080 1.083 DIMENSION (TRIGGER CLEARANCE).

COMPLAINT: FOLLOWS DOWN

INCIDENT:

COMMENTS: CONNECTOR BEING TIGHT ON TRIGGER DID NOT RETRACT, ACTION WOULD NOT COCK. AS LONG AS THE CONNECTOR STAYED IN POSITION ON THE TRIGGER THE RIFLE WOULD WORK O.K.

PLAINTIFF'S EXHIBIT 3308

AL 0029843

RD-6542-1 Rev. 2-15-61

PAT. NO. GUN EXAMINATION REPORT NUMBER: MODEL: 700

GENERAL CONDITION: GOOD R #: 21196

OUTSIDE WORK: SCOPE MOUNTED DATE: 10-2-70

FROM: DAVISON, MICHIGAN

FIRED AMMO TYPE: —

& CONDITION:

GUN #: 6216922

PROOF: R.E.P. INSP.: 9 TEST: 87 CODE: L5 = 2/69

HEADING: O.K. GA./CAL.: 243 WIN.

BREECH OPENING: — CHECKED BY:

RECOIL SHOULDERS: — APPROVED:

CHAMBER: O.K. APPROVED:

TEST: NO APPROVED:

COMPONENT CONDITION: (Damaged, Broken, Old Style) APPROVED:

TRIGGER CONNECTOR BROKEN.

COMPLAINT: FIRING PIN FOLLOWS DOWN

INCIDENT:

COMMENTS: THE CONNECTOR BEING BROKEN, ENGAGEMENT BETWEEN IT AND THE SEAR WAS UNLIKELY THEREFORE THE FIRING PIN WAS FREE TO FOLLOW DOWN.

RO-69-B

REMINGTON ARMS COMPANY, INC.

INTERDEPARTMENTAL CORRESPONDENCE

Remington DUPONT PETERS DUPONT

"CONFINE YOUR LETTER TO ONE SUBJECT ONLY"

XC: K. W. Augustine, S. D. Bennett, L. R. Blackhurst, L. B. Bosquet, H. K. Boyle, J. W. Brooks, J. J. Burns, G. D. Campbell, W. L. Ganey, B. H. Gilbert, M. C. Hardy, P. G. Johnson, R. L. Joy, M. J. Kantor, H. C. Munson, C. O. Pardee, D. F. Polley, D. D. Ricci, D. I. Roark, D. J. Sanita, D. S. Valent, W. C. VanSickle, L. G. Wilke

February 8, 1982

J. H. CARTER, G. ~~E. FLETC~~HER, J. P. LINDE

M/700 ~~FIRE~~ CONTROL - ~~RE~~MOVE BOLT LOCK

MEETING HELD 2/8/82 TO REVIEW IMPLEMENTATION

BELOW IS AGREED UPON SCHEDULE

START DATE - FEBRUARY 26, 1982

A. Items needing completion to meet above date:

1. Process Record needed, new Part Numbers for components - Issue by 2/12/82. — S. Bennett, J. Brooks

2. Push new safe arms thru production:

   - 9,700 in Stores, 3,000 of these issued 2/5/82. — M. Kantor
   - 10,000 more to be sent to Vendor for clipping. — S. Bennett, D. Ricci
   - Additional sent to Vendor for clipping as needed to meet schedule. — M. Kantor

3. New instruction folders available. — J. Carter

4. A quantity of 5,000 old style safe arms to be sent to Arms Service for use on customer guns. — D. Roark, J. Carter

5. Old Instruction Folders - Gather up and dispose of. — D. Roark, W. Ganey

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M700 FIRE CONTROL - REMOVE BOLT LOCK - Contd.

B. On starting date, Final Assembly area will do the following:

1. All assembled guns, repairs included, will be torn down and a new Safe Arm will be assembled to the Fire Control.

2. All guns packed on February 26, 1982 and thru March, will be stamped AC (March 82). This includes guns and packing labels.

3. Mark gun ~~labels~~ "S".

4. Guns must have modified Safe Arm and new instruction folder.

5. Custom Gun Shop to use new Safe Arms in Fire Controls in guns from February 26th forward. New instruction folders must also be used.

by G. J. Hill 2/9/82
G. J. Hill, Supervisor
Process Engineering
Current Products

GJH/cac