

## BOLT ACTION RIFLE QUESTIONNAIRE

PAGE 2

6. Do you feel the gun's design is unique?

Yes ☐ - Answer Q7

No ☒ - Skip to Q8

7. What do you think is unique about the gun you tested?

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8. The gun you tested has an 18½" barrel. Would you prefer some other barrel length?

Yes ☒ - Answer Q9

No ☒ - Skip to Q10

See the attached memo.

9. What barrel length would you prefer? Same as #8 above.

Write barrel length here: \_\_\_\_\_

- 10a. We are considering a number of stock finishes and whether to cut or press checker the gun. If the new rifle were cut checkered would you prefer a glossy or satin finish?

Glossy ☒

Satin ☐

- 10b. If the gun were press checkered, would you prefer a glossy or satin finish?

Glossy ☒

Satin ☐

.....Continued

## BOLT ACTION RIFLE QUESTIONNAIRE

PAGE 3

11. How do you feel about the gun's weight?

Too heavy for the overall length. Given design limitations,  
however, not much can be done.

12. How do you feel about the new floor-plate?

Unnecessary and inappropriate on a carbine.

13. How would you rate the gun you tested on the following characteristics and features?

	<u>Excellent</u>	<u>Very Good</u>	<u>Good</u>	<u>Fair</u>	<u>Poor</u>
Contour of stock	_____	_____	_____	_____	<u>X</u>
Weight	_____	_____	_____	<u>X</u>	_____
Recoil	_____	_____	<u>X</u>	_____	_____
Ease of Operation	_____	_____	<u>X</u>	_____	_____
Overall Quality	_____	<u>X</u>	_____	_____	_____
Color of Stock	_____	_____	_____	_____	<u>X</u>
Metal Finish	_____	_____	<u>X</u>	_____	_____
Design of Checkering Pattern	_____	_____	<u>X</u>	_____	_____

14. To whom do you think this rifle will appeal?

The horse and/or pickup hunter.

.....Continued

## BOLT ACTION RIFLE QUESTIONNAIRE

PAGE 4

15. How should we advertise the rifle you tested?  
With cost stressing value, quality and position  
specifically toward the potential carbine user.
16. What does the word "carbine" mean to you?  
Short, light, flat and suitable for use with a saddle  
scabbard.
17. Assuming the new gun was introduced in 1980 in .222, .22-250, .243, 6mm, .308 and 7mm-08 at a retail price \$20 below the M/700 ADL, what impact would it have on other Remington center fire rifles?  
In a good market such an introduction should not have any  
significant detrimental effect on the sales of other  
Remington Centerfire rifles.

Respondent's Name: Neil L. Oldridge

BOLT ACTION RIFLE QUESTIONNAIRE7mm-08 Cal. Serial # B6226251

1. What do you like about the new bolt action rifle?

Gun looks like a quality gun. Very handy to carry. Represents an excellent value (depending on price). In summary I liked the gun. Like RKW style finish & dit. checkering

2. What do you dislike about this new gun?

Recoil was very high - gun bent to side. Trigger pull was too stiff! Sights (iron) were difficult to adjust and had to be adjusted to extreme left. Floor plate release was too big, might be released wrong gun needs

3. How would you improve the consumer acceptance of this bolt action rifle?

Improve sights, improve trigger pull

4. In terms of overall quality, how does this new gun compare to other center fire rifles in Remington's line?

Very close if not superior to ADL  
cut checkering is big plus

5. Given a \$210 suggested retail price for the M/788, a \$298 price for the M/700 ADL and a \$358 price for the M/700 BDL, where do you think the new gun would fit in our line from a price standpoint?

\$275-300

.....Continued

6. Do you feel the gun's design is unique?

Yes ☒ - Answer Q7

No ☐ - Skip to Q8

7. What do you think is unique about the gun you tested?

Gun has 700 quality in bolt action carbine

8. The gun you tested has an 18½" barrel. Would you prefer some other barrel length?

Yes ☐ - Answer Q9

No ☒ - Skip to Q10

9. What barrel length would you prefer?

Write barrel length here: \_\_\_\_\_

10a. We are considering a number of stock finishes and whether to cut or press checker the gun. If the new rifle were cut checkered would you prefer a glossy or satin finish?

Glossy ☒

Satin ☐

10b. If the gun were press checkered, would you prefer a glossy or satin finish?

Glossy ☒

Satin ☐

.....Continued

## BOLT ACTION RIFLE QUESTIONNAIRE

PAGE 3

11. How do you feel about the gun's weight?

Good for carrying, not enough to soften  
recoil

12. How do you feel about the new floor-plate?

Very positive; release it is too large - may it  
accidentally be hit when you reload

13. How would you rate the gun you tested on the following characteristics and features?

	<u>Excellent</u>	<u>Very Good</u>	<u>Good</u>	<u>Fair</u>	<u>Poor</u>
Contour of stock	_____	<u>X</u>	_____	_____	_____
Weight	_____	_____	<u>X</u>	_____	_____
Recoil	_____	_____	_____	_____	<u>X</u>
Ease of Operation	_____	<u>X</u>	_____	_____	_____
Overall Quality	<u>X</u>	_____	_____	_____	_____
Color of Stock	_____	_____	_____	<u>X</u>	_____
Metal Finish	_____	<u>X</u>	_____	_____	_____
Design of Checkering Pattern	<u>X</u>	_____	_____	_____	_____

14. To whom do you think this rifle will appeal?

To the carbine "crowd" - pickup trucks  
and brush hunters and those that need  
a gun around but don't actually use it  
that often where convenience is an overriding  
concern

.....Continued

## BOLT ACTION RIFLE QUESTIONNAIRE

PAGE 4

15. How should we advertise the rifle you tested?

Emphasize its size and handling qualities

16. What does the word "carbine" mean to you?

short barrel, light weight, quick porting  
easy to use ~~handle~~

17. Assuming the new gun was introduced in 1980 in .222, .22-250, .243, 6mm, .308 and 7mm-08 at a retail price \$20 below the M/700 ADL, what impact would it have on other Remington center fire rifles?

Recommend you include a 25 caliber as well.  
I believe its impact will be minimal

Respondent's Name: DC Callahan

BOLT ACTION RIFLE QUESTIONNAIRE

7mm-08 Cal. Serial # BC 226 223

1. What do you like about the new bolt action rifle?  
Carbine concept  


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2. What do you dislike about this new gun?  
Beish stroke, High-gloss finish,  
Barrel section too heavy  


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3. How would you improve the consumer acceptance of this bolt action rifle?  
Utilizing woodstock stroke, satin finish,  
Standard weight M/700 barrel section  


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4. In terms of overall quality, how does this new gun compare to other center fire rifles in Remington's line?  
Very favorable  


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5. Given a \$210 suggested retail price for the M/788, a \$298 price for the M/700 ADL and a \$358 price for the M/700 BDL, where do you think the new gun would fit in our line from a price standpoint?  
\$255.00  


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.....Continued



## BOLT ACTION RIFLE QUESTIONNAIRE

PAGE 2

6. Do you feel the gun's design is unique?

Yes ☐ - Answer Q7

No ☒ - Skip to Q8

7. What do you think is unique about the gun you tested?

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8. The gun you tested has an 18½" barrel. Would you prefer some other barrel length?

Yes ☐ - Answer Q9

No ☒ - Skip to Q10

9. What barrel length would you prefer?

Write barrel length here: \_\_\_\_\_

10a. We are considering a number of stock finishes and whether to cut or press checker the gun. If the new rifle were cut checkered would you prefer a glossy or satin finish?

Glossy ☐

Satin ☒

10b. If the gun were press checkered, would you prefer a glossy or satin finish?

Glossy ☐

Satin ☒

.....Continued

## BOLT ACTION RIFLE QUESTIONNAIRE

PAGE 3

11. How do you feel about the gun's weight?

Too heavy! could be made lighter  
with smaller caliber barrel.

12. How do you feel about the new floor-plate?

Like it!

13. How would you rate the gun you tested on the following characteristics and features?

	<u>Excellent</u>	<u>Very Good</u>	<u>Good</u>	<u>Fair</u>	<u>Poor</u>
Contour of stock	—	<u>X</u>	—	—	—
Weight	—	—	—	<u>X</u>	—
Recoil	—	—	—	—	—
Ease of Operation	—	<u>X</u>	—	—	—
Overall Quality	—	<u>X</u>	—	—	—
Color of Stock	—	—	<u>X</u>	—	—
Metal Finish	—	—	<u>X</u>	—	—
Design of Checkering Pattern	—	<u>X</u>	—	—	—

14. To whom do you think this rifle will appeal?

To the many who have purchased  
the Remington 67 the 17/600

.....Continued

15. How should we advertise the rifle you tested?

The improved rifles (7)

16. What does the word "carbine" mean to you?

A short barreled, light weight rifle

17. Assuming the new gun was introduced in 1980 in .222, .22-250, .243, 6mm, .308 and 7mm-08 at a retail price \$20 below the M/700 ADL, what impact would it have on other Remington center fire rifles?

It would probably cut into sales of  
the M-752

Respondent's Name: Jim Stahl

Bill,  
I personally don't feel that the .22/250  
and 7mm-08 calibers should go into a  
carbine type rifle, as they are both,  
especially, long range rifles.

Jim

## REMINGTON ARMS COMPANY, INC.

INTER-DEPARTMENTAL CORRESPONDENCE

*Remington*  
AUTOMATIC*PETERS*  
AUTOMATICXc: C.B. Workman  
P.H. Holmberg  
D.E. Bullis

"CONFINE YOUR LETTER TO ONE SUBJECT ONLY" \_\_\_\_\_

Ilion, New York  
October 28, 1980

TO: W. H. FORSON

FROM: J. W. BROOKS *File*

## BOLT ACTION CARBINE

We have gone over the field test results you sent to us last week and from further discussion with you and Paul on the subject we are proceeding with a new rifle design with the following changes:

1. New lighter barrel that will be approx. 12 oz. lighter than on field test models.
2. Thinner and shorter walnut stock that will be approx. an ounce lighter than present walnut sample.
3. Increase release latch spring force and/or reduce length of latch.

The weight of the finished rifle in 7mm-08 caliber will be approximately 6 1/2 pounds. All other features will remain as indicated on our letter of May 8, 1979, or as on the field test models. The weight of the rifle will change approximately 2.5 oz. from 308 to 222 caliber.

We have checked other items that could help reduce the overall weight. We will not proceed with any of these items unless you are interested.

1. New design floor plate assembly using aluminum, similar to M700 BDL type. Save approximately .84 oz.
2. Receiver - remove material from ejection port. Save approx. .3 oz.
3. Model 788 rear sight in place of Model 700 rear sight, Save approx. .38 oz.
4. New design forged bolt handle similar to Model 600. Save approx. .48 oz.

If you have any further thoughts or information, please call.

JWB:T  
Firearms Research Division

REMINGTON ARMS COMPANY, INC.

INTER-DEPARTMENTAL CORRESPONDENCE

*Remington*  
REMINGTON

*PETERS*  
PETERS

Xc: C.B. Workman  
P.H. Holmberg  
D.E. Bullis

"CONFINE YOUR LETTER TO ONE SUBJECT ONLY" \_\_\_\_\_

Ilion, New York

November 3, 1980

TO: W. H. FORSON  
FROM: J. W. BROOKS *File*  
SUBJECT: BOLT ACTION CARBINE REQUIREMENTS

As a followup to my letter of October 28th, on the above subject, we are proceeding with the attached list of requirements for the bolt action carbine.

If you have any additions or changes, we would appreciate information from you as soon as possible.

JWB:T  
Attach.  
Firearms Research Division

BOLT ACTION CARBINE

Model Requirements

1. Stock - Walnut wood - average weight decrease of walnut over birch approx. 3½ oz. Making stock shorter and thinner than present field test sample will decrease weight approx. 1 oz. RK-W glossy finish and pressed checkering using pattern on field test models. M600 butt plate.
2. Barrel - Proposed .100 smaller OD than present M700. Approx. 12 oz. decrease over field test models, pending satisfactory performance.
3. Receiver - Like M600 but with longer tang like present field test models.
4. Model 600 bolt assembly with a Model 700 bolt handle. Bolt body altered to work with bolt lock.
5. New bolt plug with new bolt lock.
6. Model 700 barrel bracket.
7. Model 700 trigger assembly with new bolt stop release and reshaped M700 safety arm.
8. Model 600 bolt stop.
9. Model 700 BDL magazine.
10. Model 600 Follower and spring.
11. New trigger guard and floor plate assembly as used on field test rifles. Release latch will be made shorter and/or release latch spring stronger.

10-30-80

-2-

Bolt Action Carbine - Model Requirements

12. New rear trigger guard screw.  
Model 700 BDL front guard screw.
13. Model 700 rear sight base and sight. (New or alter to fit  
new barrel contour.)
14. Model 700 front sight base and sight. (New or alter to fit  
new barrel contour.)
15. Sling swivel studs.

JWB:T

REMINGTON ARMS COMPANY, INC.  
Firearms Research Division

January 5, 1981

Xc: J.W. Brooks  
D.E. Bullis

TO: J. R. SNEDEKER  
FROM: C. J. MILLER - R. E. NIGHTINGALE  
SUBJECT: MODEL 700 CARBINE  
Work Order: C 1856

*30-06 Cal.*

#### INTRODUCTION

Four Model 700s with undersized and shortened barrels were supplied to the Measurements Lab for strength evaluation.

#### SYNOPSIS

The two Model 700s tested passed our most severe strength tests.

#### PROCEDURE

The two Model 700s with barrels undersized on the outside diameter by .120" and shortened by 4 inches were chosen for testing. The .100" O.D. undersized barrels were not tested.

The first rifle (#B6261719) had a strain gage applied to the barrel for pressure measurements. Five proof rounds were fired and the barrel's O.D. was measured at one inch intervals starting at the muzzle. Then a super proof load (52.4 gr. of IMR 4198 and a 220 gr. bullet) was fired.

The second 700 Carbine (#B6261940) was proof tested. Then four 220 grain bullets were forced into the barrel and a super proof load was fired.

#### RESULTS

There was no measurable or visual damage to either barrel. The stocks were broken due to gases escaping through or by the bolt.

The peak pressures measured by strain gage technique on B6261719 with super proof was 192,000 PSI-Strain.

The peak pressure on rifle #B6261940 with super proof and 4 bullets estimated (from other 700 testing) to be 400,000 PSI-Strain.

CJM:REN:T  
Research Measurements Lab



		1	2	3	4	5	6
		1 <sup>st</sup> Proof	2 <sup>nd</sup> Proof	3 <sup>rd</sup> Proof	4 <sup>th</sup> Proof	5 <sup>th</sup> Proof	Super Proof
1							
2	Minutia	.537	.537	.537	.537	.537	.537
3	1"	.537	.537	.537	.537	.537	.537
4	2"	.537	.537	.537	.537	.537	.537
5	3"	.537	.537	.537	.537	.537	.537
6	4"	.537	.537	.537	.537	.537	.537
7	5"	.537	.537	.537	.537	.537	.537
8	6"	.540	.540	.540	.540	.540	.540
9	7"	.551	.551	.551	.551	.551	.552
10	8"	.568	.568	.568	.568	.568	.568
11	9"	.598	.598	.598	.598	.598	.598
12	10"	.625	.625	.625	.625	.625	.625
13	11"	.655	.655	.655	.655	.655	.655
14	12"	.685	.685	.685	.685	.685	.685
15	13"	.718	.718	.718	.718	.718	.718
16	14"	.776	.775	.777	.776	.777	.777
17	15"	.885	.885	.885	.885	.885	.886
18							
19							
20							
21							
22							
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31							
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33							
34							
35							
36							
37							
38							
39							
40							

MODEL: 700 CorbinaSERIAL No.: B6251940CALIBER: 30-06DATE: 12-11-80GAUGE: EA-06-125BTDISTANCE FROM BOLT FACE: 3.3"INSIDE DIA.: .341OUTSIDE DIA.: 1.029

$$\text{PRESSURE} = \text{Strain} \times \left( \frac{E}{2} \times \left( \frac{R_o^2}{R_i^2} - 1 \right) \right) = \text{Strain} \times (121.58) \text{ PSI / (in/in)}$$

REFERENCE AMMO: \_\_\_\_\_

	U <sub>in</sub> / in	P.S.I.
Rem 180gr		52,000
Saami W214		60,000
Saami V214		50,000
Proofs		88,000
S		
Avg.		

Super proof + 4x220gr Ballts

Estimated 400,000 PSI-STRAIN

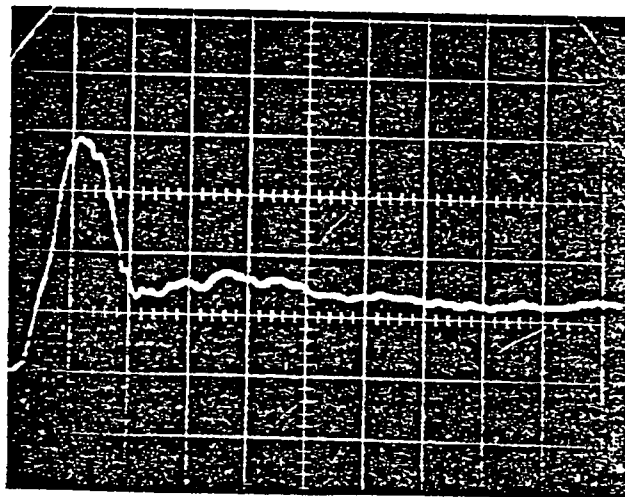
MODEL: 700 CarbineSERIAL No.: B5261719CALIBER: 30-06DATE: 12-11-80GAUGE: EA-06-125BTDISTANCE FROM BOLT FACE: 2.3"INSIDE DIA.: .341OUTSIDE DIA.: 1.030

$$\text{PRESSURE} = \text{Strain} \times \left( \frac{E}{2} \times \left( \frac{R_o^2}{R_i^2} - 1 \right) \right) = \text{Strain} \times (121,850 \text{ PSI/} \mu\text{in})$$

REFERENCE AMMO: \_\_\_\_\_

	Uin / in	P.S.I.
Proof 1	_____	84,700
Proof 2	_____	84,700
Proof 3	_____	83,400
Proof 4	_____	89,100
5	_____	
Avg.		

Super Proof  
 52.4  $\mu\text{in}$  IMA 4198 - 229  $\mu\text{in}$   
 50,000 PSI-Strain/Div  
 .2 msec/Div



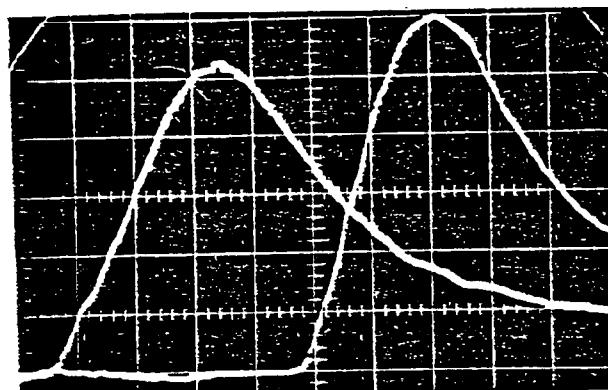
Model 700 Carbine  
Chamber Pressure  
PSI - STRAIN

12-31-80  
B6261940

Rem 180gr

S&W 180gr

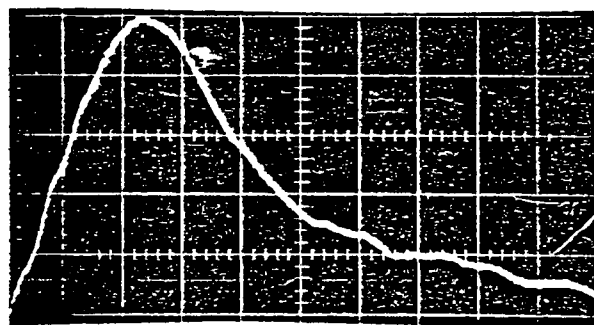
10,000 PSI-STRAIN/Div.



.2 msec / Div.

S&W 180gr

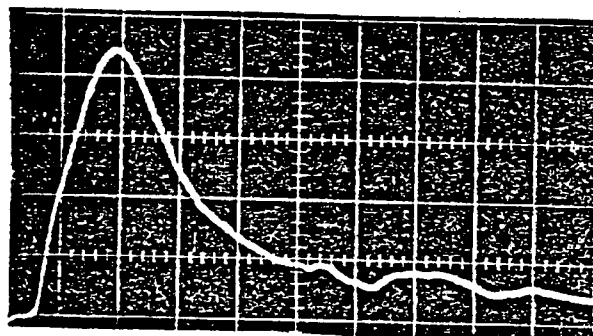
10,000 PSI-STRAIN/Div.



.2 msec / Div.

Rem Proof

20,000 PSI-STRAIN/Div.

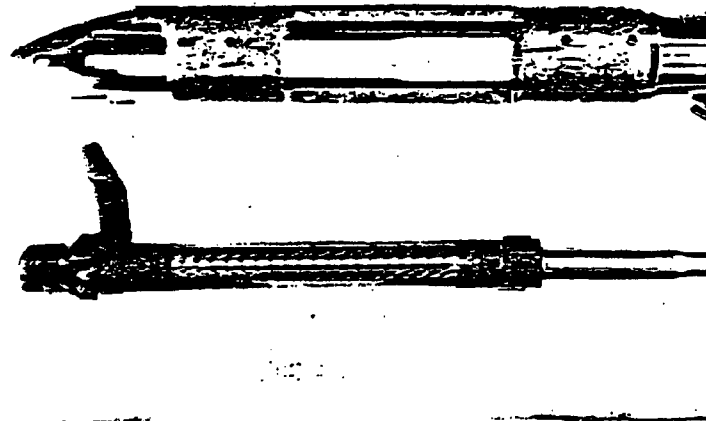


.2 msec / Div.

Model 700 Carbine

B6261719

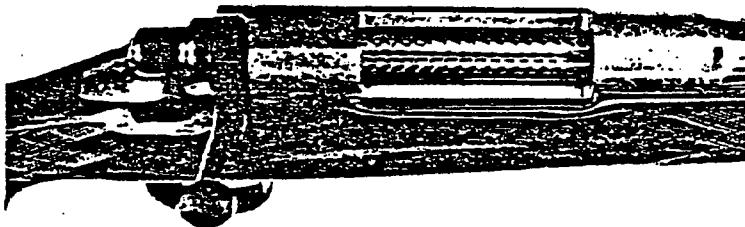
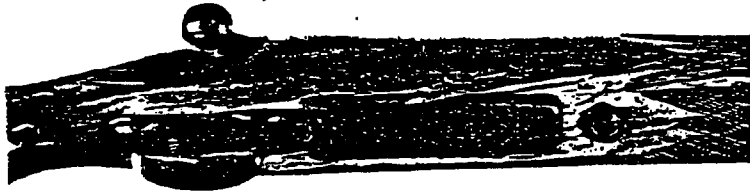
Super Proof



Model 700 Carbine

B6261940

Super Proof + 4 X 22<sup>2</sup>pr Bullets



SUMMARY OF INTENTIONAL GUN ABUSE TEST

DATA

By RENTON

Date 12-11-80

FIREARM:

Make REMINGTON CARBINE

Model 700

Grade \_\_\_\_\_

Gauge 30.06

Serial Number 86241940

Origin EXP

Test Number Assigned 21856

Comments SMALL PROBLEM - (-120.)

HISTORY:

Condition NEW

Previous Rounds Fired 11 FACT - 1 PROOF

Headspace at Test MIN - 0.04

Test Date 12-11-80

ABUSIVE  
LOAD USED:

Powder Type 4198

Powder Weight 52.4 gr.

Case Make and Type REMINGTON - PRIMER

Total Bullet Weight 1100 gr.

Total Shot Weight \_\_\_\_\_

Estimated Pressure \_\_\_\_\_

ADDITIONAL  
COMMENTS:

SUMMARY OF INTENTIONAL GUN ABUSE TEST

DATA

By GCN

Date 12-1-80

FIREARM: Make REM. CARBINE 18" BRL Model 700  
Grade \_\_\_\_\_ Gauge 30/06 Serial Number B6261719  
Origin ETP  
Test Number Assigned C1850  
Comments: \_\_\_\_\_

HISTORY: Condition NEW  
Previous Rounds Fired 2 FACTORY - 5 PR00 F  
Headspace at Test 0.002  
Test Date 12-01-80

ABUSIVE LOAD USED: Powder Type 4198  
Powder Weight 52.4 gr.  
Case Make and Type REMINGTON PRIMER  
Total Bullet Weight 220 gr.  
Total Shot Weight \_\_\_\_\_  
Estimated Pressure 200,000 - via STRAIN GAGE

ADDITIONAL COMMENTS: ACTION FROZEN. PIPE WRENCH & HAMMER  
REQUIRED TO OPEN. BOLT HEAD DAMAGED.  
NO MAJOR DAMAGE TO GUN



WORK REQUEST

DATE REQUESTED 12-4-80 WORK ORDER C-1856  
 DESIGNER OR ENGINEER BULLIS  
 MODEL BOLT RT. CARBINE CAL OR GAGE 24-06 BARREL TYPE SMALL PROFILE

TYPE OF TEST

NEW DESIGN \_\_\_\_\_ DESIGN CHANGE \_\_\_\_\_  
 DRY CYCLE \_\_\_\_\_ ACCURACY \_\_\_\_\_ HAND LOADING \_\_\_\_\_ STRESS \_\_\_\_\_  
 PRESSURE ☒ MUZZLE VELOCITY \_\_\_\_\_ FUNCTION \_\_\_\_\_ PHOTOS \_\_\_\_\_  
 EVALUATION ☒ BOLT VELOCITIES \_\_\_\_\_ OTHER \_\_\_\_\_  
 ESTIMATED COMPLETION DATE \_\_\_\_\_

REPORT REQUIRED

FORMAL \_\_\_\_\_ INFORMAL ☒ TEST RESULTS ONLY \_\_\_\_\_

TEST OBJECTIVE

TEST NEW M/700 SMALL PROFILE BARRELS FOR STRENGTH.

- 2 - 30-06 EBLIS - .100" UNDERSIZE. } 700 ACTION  
 - 2 - 30-06 M - .120" " }

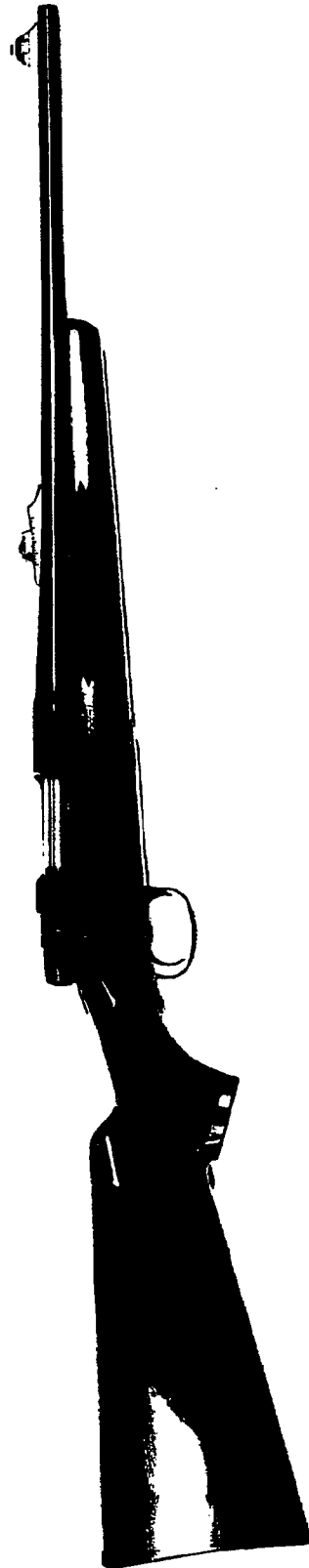
CHECK PRESSURES

GUNS REQUIRED

B6262583 - 3 .100 UNDER  
 B6262650 - 3  
 B6261719 - 3  
 B6261940 - 3 .120 UNDER

TEST COMPLETION DATE \_\_\_\_\_ SIGNED \_\_\_\_\_

8 1270



A

REMINGTON ARMS COMPANY, INC.

INTER-DEPARTMENTAL CORRESPONDENCE



EXHIBIT 38

cc: J. P. Glas  
J. E. Preiser  
P. H. Holmberg  
J. P. Linde  
G. D. Campbell

Bridgeport, Connecticut  
March 11, 1981

TO: J. W. BROOKS  
FROM: W. H. FORSON, JR.  
SUBJECT: BOLT ACTION CARBINE - REVISED MODEL REQUIREMENTS

We reviewed a prototype bolt action carbine last week. Please make the following revisions to finalize the design requirements.

- Walnut stock to be slimmed down in grip and fore-end areas.
- Grip cap installed - Model 870 TC or similar.
- Classic type rifle butt pad.

  
WHF:daf

## REMINGTON ARMS COMPANY, INC.

INTER-DEPARTMENTAL CORRESPONDENCE

*Remington*  
OUTPORT*PETERS*  
OUTPORTXc: C.B. Workman  
P.H. Holmberg  
D.E. Bullis

"CONFINE YOUR LETTER TO ONE SUBJECT ONLY" \_\_\_\_\_

Ilion, New York  
March 23, 1981

TO: W. H. FORSON  
FROM: J. W. BROOKS  
SUBJECT: BOLT ACTION CARBINE MODEL REQUIREMENTS

Per your letter of March 11 we have changed the model requirements for the Bolt Action Carbine as follows:

Stock

1. Walnut wood
2. RK-W glossy finish
3. M700 Classic butt pad
4. Swivel studs
5. Grip cap (similar to Model 870 TC)
6. Cut checkering
7. Shape of butt stock similar to sample reviewed in March. Grip similar to Model 7 sample. Fore End similar to schnabel but with tip rounded off.

Barreled Action

1. Barrel contour similar to M700 but approx. .100" smaller.
2. M700 rear sight assembly.
3. M700 front sight base with bottom radius to fit smaller barrel.
4. M700 front sight
5. M700 barrel bracket
6. M600 receiver with longer tang
7. M600 bolt stop with M700 type release
8. M700 trigger assembly with 2 position safety

To: W.H.Forson  
From: J.W.Brooks  
Subject: Bolt Action Carbine Model Requirements

3-23-81  
-2-

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9. M600 bolt assembly with M700 bolt handle and altered for a bolt lock
  10. New bolt plug
  11. New bolt lock
  12. M700 BDL short action magazine
  13. New stainless steel follower and spring
  14. New stamped trigger guard and floor plate assembly. Short release latch for front release.
  15. New trigger guard screw
  16. M700 BDL front guard screw

JWB:T  
Firearms Research Division



B



