

PROCESS RECORD CHANGE AUTHORIZATION

PERMANENT CHANGE  
 LONG DURATION ALTERNATE CHANGE  
 ROUTE TO:

CHANGE NO.: 275943  
 EXPIRATION DATE:  
 INITIATED DATE: 5/10/77

CONTROL OFFICE BLDG. 46-2	METHODS & STDS. LEADER	APPROVALS	DATE
	J. Polivka	<i>[Signature]</i>	5/10/77
PROCESS ENGR. GROUP LEADER	J.		
PRODUCTION SUPERVISOR	W. E. Ackley	<i>[Signature]</i>	5/10/77
AND PRODUCTION FOREMAN	H. E. Lynch	<i>[Signature]</i>	5/10/77
CHEM. & MET. SUPERVISOR			
OR PROCESS ENGR. SUPERVISOR	G. J. Hill	<i>[Signature]</i>	5/10/77
CONTROL OFFICE BLDG. 46-2	B. D. Matusik	<i>[Signature]</i>	5/10/77
PROCESS RECORDS REVISED		<i>[Signature]</i>	5/10/77

MODEL NO.: m/600, 700, 788 REQUESTED BY: G. H. Hill  
 PART NAME: 1) GALLERY TEST-TARGET ENGINEER:  
~~PART NUMBER:~~ 2) INSPECTION BEFORE QUALITY AUDIT GALLERY TEST

DESCRIPTION OF CHANGE & REASON: CHANGE THE NUMBER OF TIMES THE FUNCTIONAL CHECK FOR SAFETY OPERATION IS PERFORMED, FROM ONE TO THREE TIMES.  
CHECKING THE SAFETY FUNCTION THREE TIMES INSURES THE RELIABILITY OF THE TEST. TO AGREE WITH PRESENT PRACTICE.

COMPONENT STATUS AS AFFECTED BY CHANGE - CHECK TYPE  
 USE PRESENT PARTS     HOLD FOR SALVAGE     SCRAP PARTS     REWORK PARTS

EQUIPMENT COST FOR CHANGE - PUT ESTIMATED COST UNDER ITEM				
TOOLS & GAGES	CUTTING TOOLS	MACHINE OR EQUIPMENT	PLANT LAYOUT	TOTAL COST
—	—	—	—	—

DESCRIPTION OF COST: \_\_\_\_\_

PRODUCT COST - PREPARED BY METHODS & STANDARDS ENGINEER: <u>W. J. NEWKIRK</u> DATE: <u>5-10-77</u>					
ITEM	REDUCTION IN COST		ITEM	INCREASE IN COST	
	PRESENT	PROPOSED		PRESENT	PROPOSED
PROD. FORECAST			PROD. FORECAST		<u>201,727</u>
STD. HRS. PER 100			STD. HRS. PER 100		<u>551</u>
DOLLARS PER 100			DOLLARS PER 100		<u>3,529</u>
REDUCTION DOLLARS	<u>X</u>		INCREASE DOLLARS	<u>X</u>	<u>7,120</u>
INVESTMENT DOLLARS	<u>X</u>		INVESTMENT DOLLARS	<u>X</u>	
PERCENT RETURN	<u>X</u>		PERCENT LOSS	<u>X</u>	

TOOLING & EQUIPMENT MUST BE AVAILABLE BEFORE PROCESS CHANGE IS INITIATED  
 ATTACH PRESENT PROCESS RECORD PRINTS SHOWING CHANGES INDICATED IN RED  
 RETURN UNACCEPTABLE REQUEST TO ISSUING ENGINEER WITH REASON

**PLAINTIFF'S EXHIBIT**  
234

DATES AND REASONS FOR REVISIONS

1-30-67 - New Model - HKB/cm  
Add note - perform check 3 times - #19 - JKA

DESCRIPTIVE INFORMATION

19. Safe - Function (PERFORM CHECK THREE TIMES)

- with Safe in forward "off" position.
- a. Open and close Bolt for cocking - Handle down.
- b. Move Safe rearward full stroke to "on" position.
  - 1. Must operate with tension - no excessive bind - must clear stock in all positions.
  - 2. Must operate with normal finger pressure.
- with Safe in "on" position.
- c. Pull Trigger with fire pressure.
  - 1. Gun must not fire with Safe "on".
  - 2. Trigger movement is acceptable but trigger must retract.
- d. Test raising Bolt Handle for cocking.
  - 1. Bolt must be locked in closed position with Safe "on".
- e. Move Safe to forward to "off" position.
  - 1. Gun must not fire as Safe is moved to "off" position.
- f. Pull Trigger - with Safe "off".
- g. Push Safety Button forward from "off" position and remove Bolt from rifle.
  - 1. Bolt must remove freely without bind.
  - Insert Bolt into rifle
  - 2. Must assemble freely without bind.

20. Trigger Pull

- a. Open and close Bolt for cocking.
  - pull Trigger.
  - 1. Pull must be short and crisp.
  - 2. Trigger must retract.

8  
3  
21  
DATES AND REASONS FOR REVISIONS 11/3/75 - Separated Test and Target operations, removed obsolete calibers (30-30, 1/4 Rem) and added a new caliber (.223) - Also added item for proper operation of the safety. Also made provision to extract and eject last live round instead of having it fired. NWS/DMM - 27/MDU

add act - 38 - 88

DESCRIPTIVE INFORMATION

3. Before placing gun into device for test, check for proper operation of the safety. (PERFORM THREE TIMES)
- a. With safe in "OFF" position - close Bolt crisply on empty chamber.
    - 1. Firing Pin must not follow down as Bolt Cams shut.
    - 2. Must not fire on closing.
  - b. Move safe to "ON" position - pull Trigger firmly.
    - 1. Gun must not fire.
  - c. With finger OFF Trigger, move safe to "OFF" position.
    - 1. Must not fire as safe is moved to "OFF" position.
  - d. Open and close Bolt full stroke to cock Firing Pin.
  - e. Move safe to full rear "ON" position and then move to halfway "OFF" position with thumb only, if possible.
    - 1. Accept if safety moves to "ON" or "OFF" position without hesitation at halfway position.
  - f. If safety stops at half-way position - pull Trigger.
    - 1. Gun must not fire.
    - 2. Safety must not move to full "OFF" position.
    - 3. With Action open - position gun in device and clamp.
    - 4. Close action on empty chamber and move safe to "ON" position.
    - 5. Remove Magazine Box.
    - 6. Load Magazine Box to capacity - See table VII-A.
    - 7. Reassemble Magazine Box into gun - must lock into place with Bolt closed.
    - 8. Protective Guard must be in down position as each round is fired.
    - 9. After Guard has been pulled down into position - Safe "ON" - pull Trigger - Must not fire.
    - 10. Move Safe to "OFF" position.
    - 11. Operate action full cycle to feed live rounds from Magazine into chamber, and to extract and eject fired cases.
      - a. Must extract and eject live round.
    - 12. Extract and Eject last live round and retrieve.
      - a. Must extract and eject live round.
    - 13. Pick up gun from jack saddle - muzzle still in port.
    - 14. Check chamber and Magazine for live ammunition.
      - a. Chamber and Magazine must be empty.
    - 15. Remove gun fully from test jack - stamp acceptable product - place white tag on reject gun. NOTE: Fill out Gallery Report forms with proper information.
    - 16. Return gun to truck.

10  
DATES AND REASONS FOR REVISIONS 3/24/75 - Added Safety check, Items VI-3 thru VI-7, for clarification. Also changed model number to agree with current listing - MVM/GWB - 273071

*Add Note #3 to 7*

DESCRIPTIVE INFORMATION I

VI Description of Test.

A. Test - (cont'd)

2. Pick up gun and visually inspect for:
  - a. Safety - Inspect chamber and Magazine - both must be empty-
  - b. Caliber - To verify for shooters personal safety in selecting ammunition for test.
  - c. Proof mark on Barrel (REP) - Must be present; right rear side, ahead of magflux stamp.
  - d. Proof Mark on Bolt (1) - Prick punch mark must be present at bottom of Bolt Handle.
  - e. Visual Defects - If not within visual Specifications for items a-d, reject gun at this point.
3. With Safe in "OFF" position - close Bolt crisply on empty chamber.
  - a. Firing Pin must not follow down as Bolt cams shut.
  - b. Must not fire on closing.
4. Move safet to "ON" position - Try to raise Bolt.
  - a. Must not raise or open.
5. With Safet still "ON" - pull Trigger firmly.
  - a. Gun must not fire.
6. With finger off Trigger - move safet to "OFF" position.
  - a. Gun must not fire as safe is moved to "OFF" position.
7. With safe in "OFF" position - raise bolt slowly and open to rearward position
  - a. Gun must not fire as Bolt is raised.
8. With Action open, position gun in device and clamp.
9. Lower line-o-sighter and adjust device to point gun on target paper if necessary.
10. Remove line-o-sighter.
11. Load Magazine to capacity - see table, Item IV-A, for capacity by caliber.
12. Hold cartridges down in Magazine, start Bolt over Cartridge column and close Bolt on empty chamber.

*pull -  
To insure proper  
operation of safe.*

*PERFORM  
CHECK THREE  
TIMES.*

10/8/75 - Took out 700 reference notes and added to item V notes. Retyped from 10/16/67  
MMW/olp 274296  
9

DESCRIPTIVE INFORMATION

VII. Description of Test.

- A. Test.
- 1. Each gun as received, Bolt in open position. The first rifle after test is to be left off truck so that there will be one space between tested guns. and untested guns. Place first gun back on truck after truck load is completed.
  - 2. Pick up gun from truck and inspect for:
    - a. Safety - Inspect chamber and Magazine - both must be empty.
    - b. Caliber - To verify for shooters personal safety in selecting ammunition for test.
    - c. Proof Mark on Barrel (NEP) must be present, right rear side of Barrel, ahead of Magnaflux stamp.
    - d. Proof mark on Bolt - (.) Prick punch mark must be present at bottom of Bolt handle.
    - e. Visual Defects - If not within specifications for items a-d, reject gun at this point.
    - f. Normal Sight alignment - as described in VI-C.
  - 3. With safe in "OFF" position - close Bolt crisply on empty chamber.
    - a. Firing pin must not follow down as Bolt cams shut.
    - b. Must not fire on closing.
  - 4. Move safe to "ON" position and try to raise Bolt
    - a. Must not raise or open - must be locked closed by safety
  - 5. With safe still "ON" - pull trigger firmly.
    - a. Gun must not fire.
  - 6. With finger off Trigger - move safe to "Off" position.
  - 7. Open and close Bolt full stroke to cock firing pin
  - 8. Move safe to full rear "ON" position and then move to half way "Off" position with thumb only, if possible.
  - 9. If safety stops at half-way position - pull trigger.
    - a. Gun must not fire.
    - b. Safety must not move to full "Off" position.
  - 10. With Action open, position gun in device and clamp.
  - 11. Lower line-o-sights and adjust device to point gun on target paper if necessary.
  - 12. Remove line-o-sighter.
  - 13. Load Magazine to capacity - see table #1 and #2, item IV - for Magazine capacity by caliber.
  - 14. Hold cartridges down in Magazine, start Bolt over Cartridge column and close Bolt on empty chamber.
  - 15. Open Bolt full stroke to rear position.
  - 16. Assemble Firing Pin Trip Pin in device.
  - 17. Close guard.
  - 18. Close Bolt to feed shell into chamber and lock - to start test.
  - 19. Fire gun by pushing (2) two buttons on device simultaneously.

PERFORM  
THREE  
TIMES

DATE AND REASONS FOR REVISIONS

2/29/68 - Change Model No. 600 to 660 4/5/71 - Change Model No. 660 to 600 - HKB/bd

Revised to include M/6601 *add note to #19 GEN*

Retyped SPC/bd

4/6/71 - Revised to change 18-a from 3/8" to 1/16"-IBL/bd

DESCRIPTIVE INFORMATION

17. Bolt Assembly - Finish & Fit (cont.)

M/700 - 600 AIL & EDL

- i. Depress Ejector with hand punch
  - 1. Must depress and retract freely - no bind - with spring tension
  - 2. Must be retained by Ejector Pin

j. Try Ejector Pin from both sides with 5# pressure - Tester #510-695

- 1. Must be tight - not shift

k. Assemble Bolt to gun

18. Firing Pin - Follow Down - All Models

- a. With safe in "off" position and Firing Pin in fired position - raise Bolt Handle full stroke for cocking
  - 1. Firing Pin Head must move rearward and protrude approximately 1/16" beyond rear of Bolt Plug

b. Lower Bolt Handle to close

- 1. Firing Pin Head must not move forward into Bolt Plug

c. Repeat items a & b three (3) times forcibly

- 1. Firing Pin Head must not move forward into Bolt Plug

19. Safe - Function - All Models (*PERFORM CHECK THREE TIMES*)

- with Safe in forward "off" position

- a. Open and close Bolt for cocking - Handle down

I. Inspection before Quality

PART NAME Audit Gallery Test

COOLANT

SET UP TIME

MODEL No. 700 - 600

OPER. No.

TYPE

MACH. HRS.

DEPT. No.

PAGE 11

OF 16

MACHINE

DATES AND REASONS FOR REVISIONS

6/1/62 - New Model - WMM/eb  
2/9/68 - Item 20b-1 - Change Trigger Pull Spec. for M/660 add Item 20b-2 for M/700 SPC/bd

8-26-66 - Revised to include M/600 JAH/cm  
2/29/68 - Change Model No. 600 to 660; Revised to include M/660; Retyped; SPC/bd

1-25-67 - Item 20-b-1 was 1/2 to 6 lbs. - WMM/cm

1/15/68 - Item 20b.-1 was 3/4 to 6 lbs. - WAB/WMM/bd  
3/4/70 - Item 20-B-2 - Change Trig. Pull Specs. - M/700 from 64 to 5 1/2 lbs. - SPC/bd

DESCRIPTIVE INFORMATION

19. Safe - Function - Cont'd.  
a. Cont'd.  
1. Firing Pin head must move rearward and protrude approximately 1/16" beyond rear of Bolt Plug.  
b. Move Safe rearward full stroke to "on" position.  
1. Must operate with tension - no excessive bind - must clear stock in all positions.  
2. Must operate with normal finger pressure.

c. - with Safe in "on" position.  
Pull Trigger with firm pressure.  
1. Gun must not fire with Safe "on".  
2. Trigger movement is acceptable but Trigger must retract.

d. Test raising Bolt Handle for cocking.  
1. Bolt must be locked in closed position with Safe "on".

e. Move Safe to forward to "off" position.

1. Gun must not fire as Safe is moved to "off" position.

f. Pull Trigger - with Safe "off".

1. Gun must fire.

20. Trigger Pull - All Models

a. Open and close Bolt for cocking.

- pull Trigger.

1. Pull must be short and crisp.

2. Trigger must retract.

b. With gun cocked.

- weigh pull three (3) times with spring scale B-70697.

1. Gun must fire with 3 1/2 to 6 pounds pressure two (2) times out of three (3) - (M/600)

2. Gun must fire with 3 to 5 1/2 pounds pressure two (2) times out of three (3) - (M/700)

600

PART NAME I. Inspection before COOLANT

SET UP TIME

MODEL No. 700 - 680X

OPER. No.

TYPE Quality Audit Gallery Test,

MACH. HRS.

DEPT. No.

PAGE 12

OF 15

MACHINE