

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		APPROVALS	DATE
METHODS & STDS. LEADER	J. Polivka	<i>[Signature]</i>	5/11/77
PROCESS ENGR. GROUP LEADER	J.		
PRODUCTION SUPERVISOR	W. E. Ackley	<i>[Signature]</i>	5/11/77
AND PRODUCTION FOREMAN	H. E. Lynch	<i>[Signature]</i>	5/11/77
CHEM. & MET. SUPERVISOR			
OR PROCESS ENGR. SUPERVISOR	G. J. Hill	<i>[Signature]</i>	5/11/77
CONTROL OFFICE BLDG. 46-2	B. D. Matusik	<i>[Signature]</i>	5/11/77
PROCESS RECORDS REVISED		<i>[Signature]</i>	5/11/77

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: W. J. NEWKIRK DATE: 5-10-77

REDUCTION IN COST			INCREASE IN COST		
ITEM	PRESENT	PROPOSED	ITEM	PRESENT	PROPOSED
PROD. FORECAST			PROD. FORECAST		201,727
STD. HRS. PER 100			STD. HRS. PER 100		551
DOLLARS PER 100			DOLLARS PER 100		\$ 3,529
REDUCTION DOLLARS	X		INCREASE DOLLARS	X	7,120
INVESTMENT DOLLARS	X		INVESTMENT DOLLARS	X	
PERCENT RETURN	X		PERCENT LOSS	X	

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

DATES AND REASONS FOR REVISIONS

1-30-67 - New Model - HKH/cm

add note - perform check 3 times - #19 - JCH

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 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".

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.

PART NAME	I. Inspection Before	COOLANT	SET UP TIME	MODEL No.	788	OPER. No.	
TYPE	Quality Audit Gallery Test.		MACH. HRS.	DEPT. No.		PAGE	9 OF 11
MACHINE							

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DATES AND REASONS FOR REVISIONS 11/3/75 - Separated Test and Target operations, removed obsolete calibers (30-30, 44 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. NWM/GUN - 274448

add note - 3A - JKH

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.
 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.

PART NAME Gallery Test COOLANT SET UP TIME MODEL No. 708 OPER. No. 295
TYPE Procedure and Specifications MACH. HRS. 85 DEPT. No. 5 PAGE 5 OF 6

8 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 - NWM/GRB - 273871

add Note #3 to 7 JCH

DESCRIPTIVE INFORMATION |

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 magnaflux 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.

*PERFORM
CHECK THREE
TIMES.*

*To insure proper
operation of safe.*

PART NAME	Gallery Test - Target	COOLANT	SET UP TIME	MODEL No.	600	OPER. No.	300
TYPE	Procedure and Specifications	MACH. HRS.	DEPT. No.	85	PAGE	8	OF 11
MACHINE							

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

add note - #3409 - JCH

DESCRIPTIVE INFORMATION

VII. Description of Test.

A. Test.

-Each gun as received, Bolt in open position.

1. 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 (REP) 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

Gallery Test - Target

NAME _____ COOLANT _____ SET UP _____ MODEL No. 700 OPER. No. 300
Procedure and Specification _____ MACH. HRS. _____ DEPT. No. 85 PAGE 9 11

MACHINE

DATES AND REASONS FOR REVISIONS

2/29/68 - Change Model No. 600 to 660

Revised to include M/660;

Retyped: SPC/bd

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

add Note to #19 GEN

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

DESCRIPTIVE INFORMATION

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

M/700 - 600 ADL & BDL

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	<u>Audit Gallery Test</u>	COOLANT	SET UP TIME	MODEL No.	<u>700 - 600</u>	OPER. No.	
TYPE		MACH. HRS.	DEPT. No.	PAGE	<u>11</u>	OF	<u>16</u>
MACHINE							

DATES AND REASONS FOR REVISIONS

6/1/62 - New Model - NWM/eb

8-26-66 - Revised to include M/600 JAH/cm

1-25-67 - Item 20-b-1 was 4 to 6 lbs. - NWM/cm

1/15/68 - Item 20b.-1 was 3 1/2 to 6 lbs. - WAB/NWM/bd

2/9/68 - Item 20b-1- Change Trigger Pull Spec. for M/660 add

Item 20b-2 for M/700 SPC/bd

2/29/68 - Change Model No. 600 to 660; Revised to include M/660; Retyped; SPC/bd

3/4/70 - Item 20-B-2 - Change Trig. Pull Specs. - M/700 from 6 1/2 to 5 1/2 lbs. - SPC/bd

4/5/71 - Item 19-a-1; Change Firing Pin Head protrusion rearward of Bolt Plug.

Change Model No. 660 to 600. HKB/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.

- with Safe in "on" position.

c. 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 1/2 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) time out of three (3) - (M/700)