

**Remington Arms Company, Inc.**  
**Manufacturing Process Document**

**Document ID:** NEW 2014 XMP EA TRIG ASSY 700 7  
**Product Line:** C/F

**Effective Date:** 05-Jun-14  
**Origination Date:** 23-May-14

**General Instructions:**

Use the Control Buttons above and below to access the various sections of this process. If your screen is not wide enough to display all the section data, use the arrows at the lower right to pan the desired data into view. Simply click on a tab or a button to move to that section of the document.

**Process Routing Table:**

Click on the button below containing the operation number you wish to view.

Demagnetize Springs  
Ultrasonic Clean & Rinse  
Assemble Trigger Assembly - Stage 1  
Assemble Trigger Assembly - Stage 2  
Adjust Trigger Assembly on Comparator 100%  
Apply Torque to Screws  
Function Check Complete Trigger Assembly 100%  
Repair Rejected Trigger Assemblies

MCNEIL 1009

5 Demagnetize Springs

Step Operation / Step Description

Demagnetize Springs

Procedure:

1. Place Sear Springs, Safety Detent Springs, and Trigger Pull Springs in separate non-metallic pans not to exceed 6"x3"x2" in size.
2. Turn demagnetizer "ON".
3. Pass pan across the effective area located between the handles. Start the pan over the right side and pass to the left side and remove.
4. Turn Demagnetizer "OFF". Do not turn switch off with pan in contact with demagnetizer, " THIS MAY MAGNETIZE PARTS ".

Tool Number Tooling Description

STD. PAN 6"x3"x2"

Std. Machine-Electr-Matic Type A14

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8 Ultrasonic Clean & Rinse

The below components must be Ultrasonically Cleaned before applying Loctite and Prior to Assembly.

300660	RH Blocker
306365	TRIGGER HOUSING ASSY PLATED
300664	BLOCKER ADJUSTMENT SCREW
300914	TRIGGER FULL ADJUSTMENT SCREW
300696	TRIGGER ENGAGEMENT SCREW
300662	LH blocker
306366	LH TRIGGER HOUSING ASSY PLATED

Step	Operation / Step Description
1	Allow tanks to reach temperature.
2	Place parts in appropriate basket.
3	Place Basket in Wash Tank.
4	Turn on Ultrasonic Control on Blue Ultrasonic Generator.
5	Leave in Wash Tank for 5 Minutes.
6	Lift basket from wash solution, hold for short period to drain the cleaner from the parts.
7	Turn Off Blue Ultrasonic Genetator.
8	Place in Hot Water rinse moving basket up and down several times.
9	Lift basket out of the rinse and allow to drain for short period.
10	Remove basket from hot water rinse tank and dump parts on to bench top to cool.
11	Place parts into oven at 120F for 15-20 min to ensure dry
12	<del>DO NOT BLOW OFF WITH COMPRESSED AIR.</del> Compressed air contains oil and this oil can contaminate the parts and interfere with the Loctite operation.
13	When the wash operation is complete for the shift turn off and unplug Ultrasonic Wash and Hot Water Rinse tank.

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Tool

Tooling Description

Ultrasonic Cleaning Bath

Generator setting - 50

Temperature - 150°F

Cleaner - Wintech 758 Concentration 8% (12 Parts Water 1 Part Wintech 758)

Soak Time - 5 Min.

TANK TO BE DUMPED AND RECHARGED PRIOR TO EACH OPERATING SHIFT.

Hot Water Rinse

Temperature Setting - 180°F

TANK TO BE DUMPED AND RECHARGED PRIOR TO EACH OPERATING SHIFT.

MCNEIL 1012

10 Assemble Trigger Assembly - Stage 1

Parts listed below need to be clean and dry prior to Loctite Application and Assembly.

Loctite cannot be applied on the screws and threaded in the hole until final settings.

Loctite

306365	RH TRIGGER HOUSING ASSY PLATED	
306366	LH TRIGGER HOUSING ASSY PLATED	
300664	BLOCKER ADJUSTMENT SCREW	263
300914	TRIGGER PULL ADJUSTMENT SCREW	NONE
300696	TRIGGER ENGAGEMENT SCREW	263

(24484, m7 bolt stop pin used in place of slave pins for all settings)

Install the Trigger and Secondary Trigger Pull Spring into the Trigger Housing

1. Insert the secondary trigger pull spring into hole in the rear spacer of the trigger housing. Insert the trigger from the bottom as shown in Figure 1. The spring must be positioned between housing and trigger prior to insertion of the trigger pivot pin.

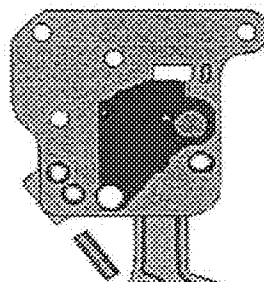
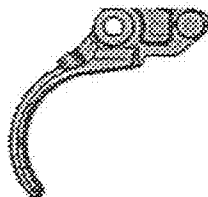


Figure 1



#### Trigger Pivot Pin Installation

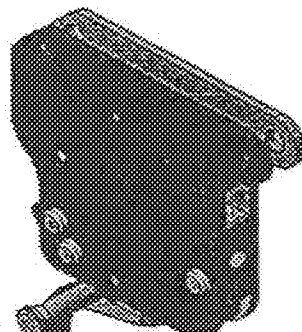
2. Insert the trigger pivot pin through the lower hole in the blocker, the right hand side plate, and the trigger. The secondary trigger pull spring must remain captured between rear spacer and trigger. Align the hole in the blocker with the shoulder on the trigger pin before pressing the pin into the hole in the left hand side plate. See Figure 3.

Fixture press:

D-55465, RH

D-56271, LH

Figure 2

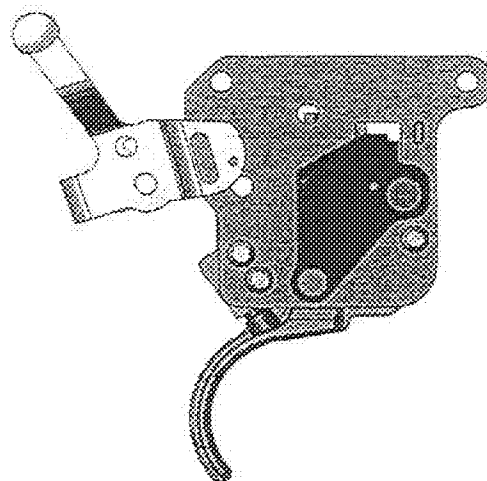


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#### Insert the Safety

3. Slide the **safety assembly** into the opening at the rear of the trigger housing as shown in Figure 4. Bias the camming leg of the safety against the inside surface of the right hand side plate of the trigger housing. Insert a bolt stop pin thru the pivot hole to temporarily secure the safety to the housing (if necessary).

Figure 3



#### Insert the Safety Detent Spring

4. Slide the safety assembly's offset leg over the post on the blocker.  
Before allowing the post to snap into the slot on the safety, insert the

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short leg of the safety detent spring into the hole in the blocker and align the long leg of the spring with the small hole in the safety assembly as shown in Figure 5.

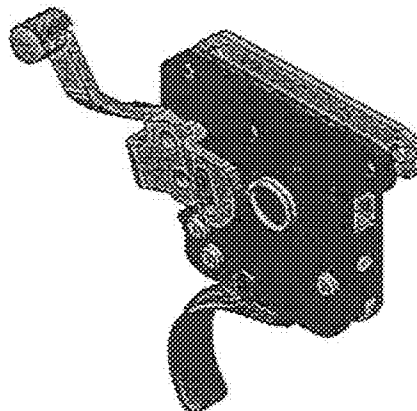


Figure 4

Install Trigger Pull Screw and Trigger Pull Spring

5. Insert the trigger pull screw and primary trigger pull spring through the hole in the front spacer of the trigger assembly as shown in Figure 6. Adjust inward until head of screw is approximately 2 to 3 turns below the surface of the spacer. (No loctite used on this screw, Duco cement after final setting at final assembly)

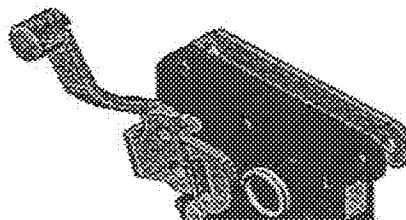


Figure 5

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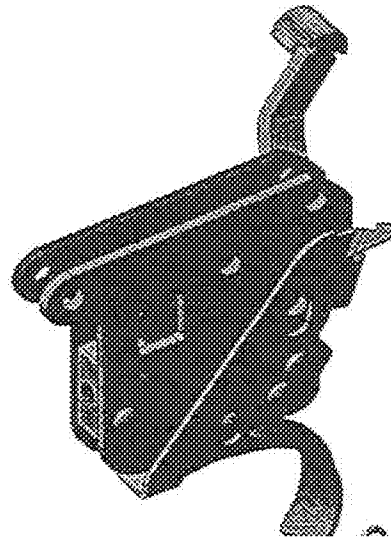


Install Bolt Stop Release and Trigger Pivot Pin Retaining Ring

6. Place the bolt stop release against the left hand side plate such that its upper hole is aligned with the safety pivot hole in the trigger housing and the lower hole is over the end of the trigger pin. Insert the trigger pivot pin retaining ring over the trigger pivot pin, use assembly tool C-56251.

NEVER REUSE TRIGGER PIVOT PIN AND RETAINING CLIP AFTER REMOVING THEM.

Figure 6



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Tooling:

Fixture press: D-55465 Used for press fit pins, RH

D-56271 Used for press fit pins, LH

Retaining ring tool: C-56251 Used for retaining ring assembly.

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Assemble Trigger Assembly - Stage 2

Assemble the Sear Safety Cam into the Trigger Housing

7. Place the front end of sear safety cam into the trigger housing as shown in Figure 7. Insert a M7 bolt stop pin through the trigger housing and sear pivot hole to retain the sear safety cam in the trigger housing.

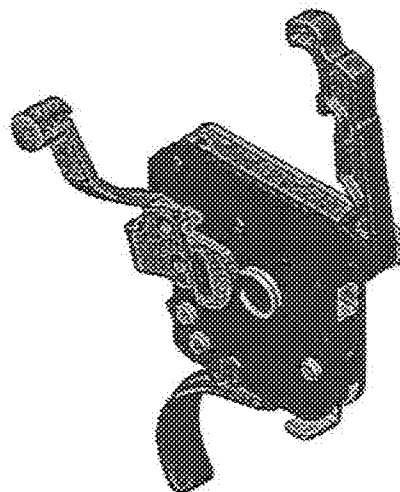


Figure 7

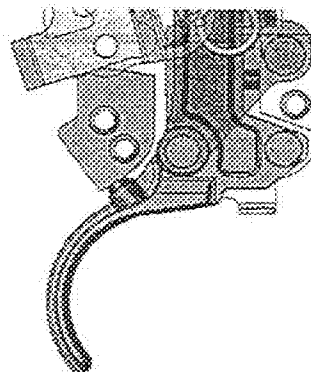
Insert the Sear Spring

8. Place the sear spring on the sear spring support in the trigger housing as shown in Figure 8. - Rotate the tail of the sear safety cam downward until it passes the rear trigger assembly mounting hole and insert a M7 bolt stop pin to hold it down. Check to ensure the sear spring is properly located in the housing and on the sear safety cam.



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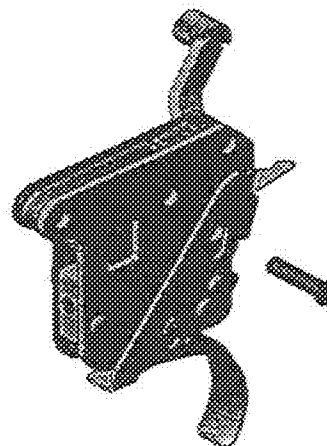
Figure 8



Install Safety Pivot Pin

9. Insert the safety pivot pin through the holes in the bolt stop release, trigger housing and safety and push it until the shoulder contacts the left hand side plate of the trigger housing as shown in Figure 10. The bolt stop release pin will be pushed out of the trigger housing.

Figure 9

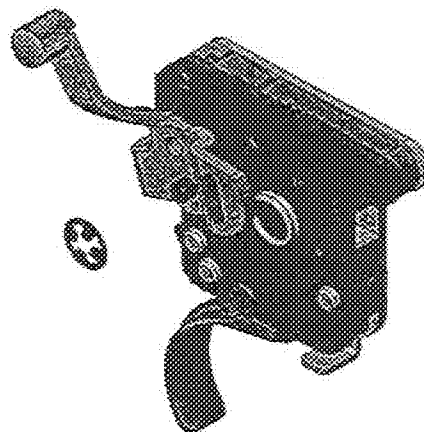


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**Add Safety Retainer**

10. Install the **safety retainer** on the safety pivot pin. Orient the safety retainer so that the legs stick up away from the safety assembly as shown in Figure 11. Use hand assembly tool C-56220 to seat safety retainer. Make sure the all of retainer's legs are snapped into the groove in the safety pivot pin or the retainer can come off.  
NEVER reuse the retainers after removing them

Figure 10



**Loctite Blocker Screw**

11. Using 1/16" power bit, Milwaukee driver, and Loctite application block, apply 1 drop of permanent Loctite (263) to the unmasked threads closest to the application block C-68187.

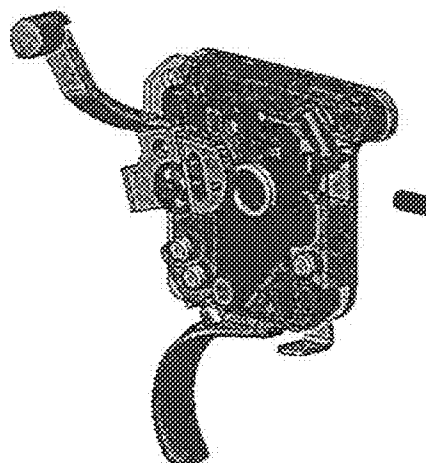
NOTE: DO NOT ALLOW LOCTITE TO CONTACT FRONT SURFACE OF SCREW

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Install Blocker Screw

12. Thread the blocker screw into the blocker as shown in Figure 11. Thread in so that approximately 2 threads protrude from the rear of blocker.

Figure 11



Loctite Engagement Screw

13. Using 1/16" power bit, Milwaukee driver, and Loctite application block C-68187, apply 2 drops of permanent Loctite 263. The first drop is to be applied to the unmasked threads closest to the application block. The second drop is to be applied approximately half way between the rear of the screw and the previous drop.

NOTE: DO NOT ALLOW LOCTITE TO CONTACT FRONT SURFACE OF SCREW

Install Engagement Screw

14. Thread the engagement screw into the rear housing spacer as shown in Figure 11. Thread in so that rear of screw is flush with housing spacer.

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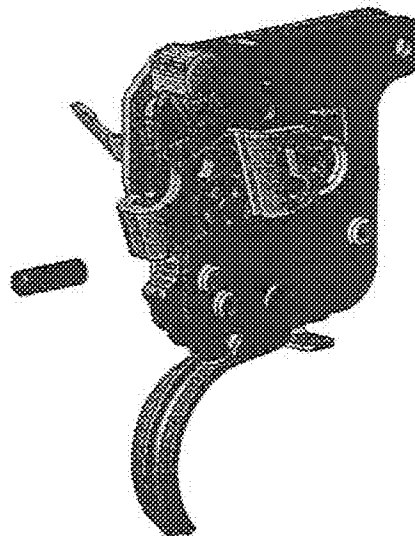


Figure 12

**Wipe Loctite**

16. Using pointed Q-Tip, wipe residual Loctite from interior and exterior surfaces of housing and blocker, in direction away from side of bolt stop release.

**Tooling:**

Safety Retainer tool: C-56220 Used for safety retaining clip assembly.

Loctite Application Block: C-68187 used to apply Loctite

Assembly Fixture RH: C-67957

Assembly Fixture LH: C-67958

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Loctite 263

Loctite Dispensing Unit: #98548 Bench top Peristaltic Dispenser  
#124447 Applicator Nozzle 2.1 mm orifice  
#8954866 Clear Tubing 1.4mm ID x 2.0mm OD

MCNEIL 1024



30 Adjust Trigger Assembly on Comparator 100%

Tool Number	Tooling Description
E-55423	Comparator fixture RH SPL
E-55466	Comparator fixture LH SPL
D-700-CL-252, Rev 6	Comparator Screen, RH
D-700-CL-254, Rev 3	Comparator Screen, LH

"Loctite will start to cure in 3 to 7 minutes"

"Make sure final settings are complete before Loctite starts to cure"

Note: Use 50X magnification for making all adjustments using Comparator

1. Mark correctly assembled and adjusted trigger assembly with adjuster's identification  
Locate trigger assembly on stamping fixture.  
NOTE: MAKE SURE STAMP POSITION ON HOUSING DOES NOT DEFORM HOUSING (i.e. PLACE STAMP OVER A SPACER BLOCK)  
Stamp adjusters identification on the right hand side to the right of the top rivet.  
Stamp should also be as close to the rivet as possible. See op 40 for visual of location.

\*Holding block for stamp E-53512

\*Use 1/16" size character

\*Op 30 adjuster's ID stamp to be assigned by supervisor

2. Setting Trigger / Sear Engagement - Use the Upper Zone on Comparator Screen as Marked  
The trigger to sear engagement setting is done with the safety in the FIRE position.  
When mounting the trigger assembly in the comparator fixture, use thumb pressure to push the assembly firmly against the rear stops before engaging the toggle clamp.

- 2a. With the sear held against the trigger, focus the screen image and align the sear edge front face to the set edge line on the comparator screen. Without adjusting the fixture location, re-focus the comparator for a sharp image of the trigger.  
Turn the engagement screw to position the trigger edge within the .021" MAX and

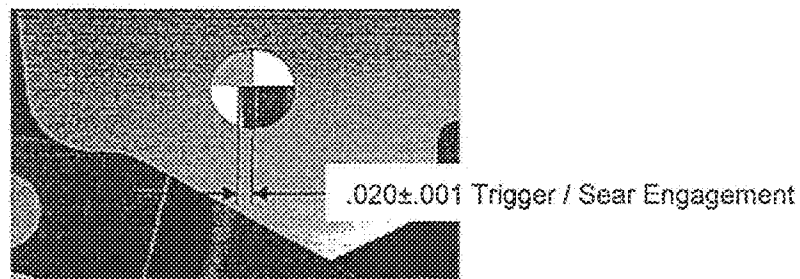
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0.019" MIN lines on the comparator screen. See Figure 15.

Note: For all screw settings, the tools must be removed carefully to prevent unwanted adjustments.

Figure 15



3. Setting Minimum Trigger Pull Force - Use the Upper Zone on Comparator Screen as Marked  
Adjust the trigger pull force with the sear held against the trigger and the safety in the FIRE position. Hang a 2.5 pound load from the trigger and adjust the primary trigger pull screw until the trigger rotates from underneath the sear safety cam, allowing the sear to drop. See Figure 16.

Direction and location for setting trigger pull

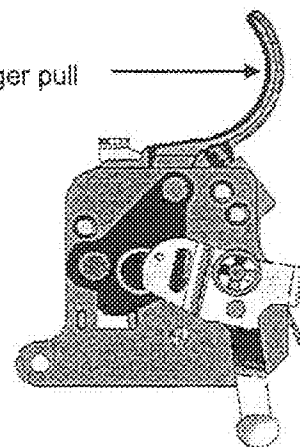


Figure 16

4. Cycle and Recheck

Remove the weight from the trigger, release the toggle clamp, and allow the sear and trigger to re-engage. Dry cycle the fire control a minimum of 3 times. Recheck

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engagement and trigger pull using a spring scale and adjust as necessary.  
Use a Chatillion 6 lb x 1 oz scale, model IN-006M for this measurement.  
Measured trigger pull should not be less than 2.5 lbs.

5. Setting the Blocker Screw - Use the Lower Zone on Comparator Screen as Marked

Release the toggle clamp and move the safety to the FIRE position. Remount the assembly in the fixture and bring the trigger edge to a sharp focus. Align the trigger with the set edge for blocker screw adjustment as marked on the comparator screen. Move safety to the SAFE position. At this point, it is ok for the set edge of the trigger to move approximately .002" past the comp screen set line. Adjust the blocker screw inward until there is 0.000" MIN to 0.003" MAX visible motion of the trigger when pulled with a 7 pound load. Approach the min set line from right to left. If line is crossed, move past max line and repeat. Ideally, the blocker screw setting should be made to show visible trigger motion at or slightly greater than the MIN position line on the comparator screen. Recheck and adjust as necessary.

See Figure 17.

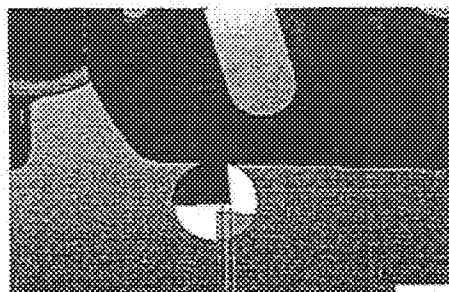


Figure 17

→ ← .003" Max Movement with 7 lb Load on Trigger

6. Inspection

Return the safety to FIRE. Check engagement. Adjust as needed.  
Recheck trigger pull using a spring scale Adjust as needed. MEASURED TRIGGER PULL  
SHOULD NOT BE LESS THAN 2.5 LBS.  
Use a Chatillion 6 lb x 1 oz scale, model IN-006M for this measurement.

MCNEIL 1027

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Move the safety to the **SAFE** position. Check blocker screw setting. Adjust as needed.

**NOTE:** An adjustment for one setting dictates the other setting must be re-checked.

Always check the blocker screw setting last, do not adjust safe arm position again until the Loctite cure cycle is complete.

7. Loctite Cure Time

Allow LOCTITE 263 to cure for a minimum of 24 hours at room temperature before performing function checks. Note: mark cure cycle information on all loads.

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Apply Torque To Screws

Step	Operation / Step Description
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1.	BLOCKER SCREW MOVEMENT
----	------------------------

Using a 1/16" hex power bit and torque wrench, apply a torque of 24 in/oz to the blocker screw in counter-clockwise direction. No screw movement is permissible.

2.	TRIGGER ENGAGEMENT SCREW MOVEMENT
----	-----------------------------------

Using a 1/16" hex power bit and torque wrench, apply a torque of 24 in/oz to the engagement screw in counter-clockwise direction. No screw movement is permissible.

Tooling:

Torque wrench : Sturtevant Richmond 3810045 set to 24 in.oz

MCNEIL 1029

40                      Function Check Complete Trigger Assembly 100%

Step                      Operation / Step Description

Function check completed Trigger Assembly 100%

NOTE: Do All Elements 100%, but not until after completion of LOCTITE 263 cure cycle,  
as defined in previous operation: 24 hours at room temperature.

1. With Safety in "FIRE" position.

Check for:

TRIGGER RETRACTION

Pull Trigger and release:

\* Trigger must return freely to original position  
WITH SPRING FORCE.

CONFIRM ABSENCE OF EXCESS LOCTITE BETWEEN TRIGGER AND BLOCKER

SEAR FREEDOM

Pull Trigger and hold. Depress Sear FULLY and release:

\* Sear must move freely in housing without binding. The Sear  
must return upward under Sear Spring force.

2. Put Safety in "SAFE" position.

Apply finger pressure to trigger. No movement of trigger from under sear should be visible.

3. Operation of Safety

Move Safety from "SAFE" to "FIRE" position and back.  
Do this TWICE.

MCNEIL 1030

4. Visual Inspection of Safety Retainer

Make sure the all of retainer's legs are snapped into the groove in the safety pivot pin.

5. Visual inspection of Safety Detent Spring

Make sure each end of spring is securely located in the holes in the blocker and safety.

6. Visual inspection of Bolt Stop Release

The bolt stop release should be free to move the entire range of the slotted holes.

7. Visual inspection Blocker Hold Down Stud and Trigger Pivot Pin

The head of each pin should be flush against the outer surface of the Blocker

8. Apply sealing layer of DUCO cement to the head of the Trigger Engagement Screw and Blocker Screw.

9. Apply 1 or 2 drops of REM OIL to the contact point of the Safety Slot and the Blocker Post.

10. Mark trigger assembly with inspector's identification stamp.

Locate trigger assembly on stamping fixture.

NOTE: MAKE SURE STAMP POSITION ON HOUSING DOES NOT DEFORM HOUSING (i.e. PLACE STAMP OVER A SPACER BLOCK)

Stamp inspector's identification on the right hand side below the top rivet and to the left of the bottom rivet. Stamp should also be as close to the rear of the assembly as reasonable.

\*Holding block for stamp B-53512

\*Use 1/16" size character

\*Op 40 Inspector's ID stamp to

be "BLACKPOWDERX" month designation

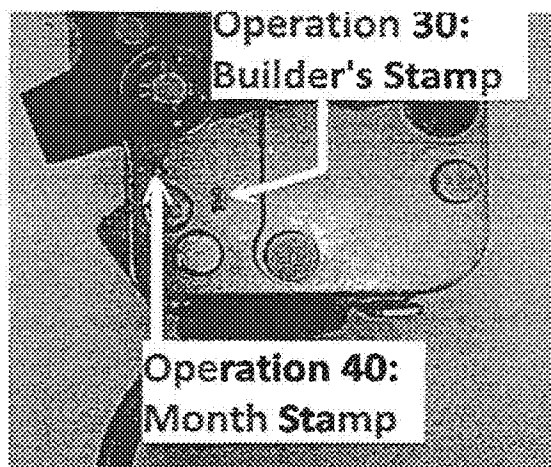
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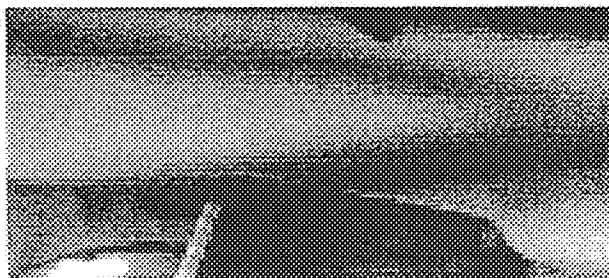
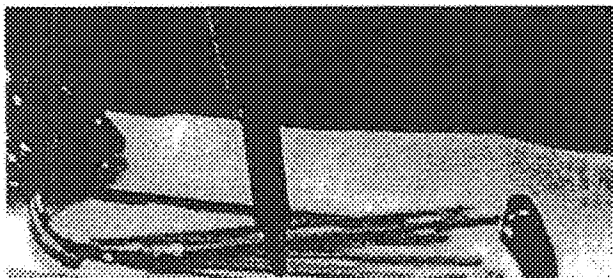
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March	A
April	C
May	K
June	P
July	O
August	W
September	D
October	E
November	R
December	X



11. Insert Secondary Trigger Pull Screw into Trigger. Tighten 2-3 turns only, do not compress secondary trigger pull spring.  
NOTE: Visually inspect secondary spring. Move Safe Arm to "Fire" position, and pull trigger. No evidence of compression of secondary spring should be evident. If Spring appears to compress, re-position spring to ensure end is within counter bore on trigger.
12. Using spring loaded center punch, mark the center of bottom bolt stop release tab.



MCNEIL 10322





- 13 With the Safety in the "FIRE" position apply Molycoat to the following locations:
- \*Top surface of trigger from both sides.
  - \*Point on sear where contacted by firing pin head.
  - \*Seams between sear and side plates at pivot point.

Tooling:

Prick punch

MCNEIL 1033

**Remington Arms Company, Inc.**  
**Manufacturing Process Document**

**Document ID:** NEW 2014 XMP TRIG ASSY 700 7  
**Product Line:** C/F

**Effective Date:** 5-Jun-14  
**Origination Date:** 23-May-14

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Ultrasonic Clean & Rinse  
Assemble Trigger Assembly - Stage 1  
Assemble Trigger Assembly - Stage 2  
Adjust Trigger Assembly on Comparator 100%  
Apply Torque to Screws  
Function Check Complete Trigger Assembly 100%  
Repair Rejected Trigger Assemblies

MCNEIL 1034

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5 Demagnetize Springs

Step Operation / Step Description

Demagnetize Springs

Procedure:

1. Place Sear Springs, Safety Detent Springs, and Trigger Pull Springs in separate non-metallic pans not to exceed 6"X3"X2" in size.
2. Turn demagnetizer "ON".
3. Pass pan across the effective area located between the handles. Start the pan over the right side and pass to the left side and remove.
4. Turn Demagnetizer "OFF". Do not turn switch off with pan in contact with demagnetizer, " THIS MAY MAGNETIZE PARTS ".

Tool Number Tooling Description

STD. PAN 6"X3"X2"

Std. Machine-Electr-Matic Type A13

MCNEIL 1035

8 Ultrasonic Clean & Rinse

The below components must be Ultrasonically Cleaned before applying Loctite and Prior to Assembly.

300660	RH Blocker
306380	TRIGGER HOUSING ASSY PLATED
300664	BLOCKER ADJUSTMENT SCREW
300914	TRIGGER FULL ADJUSTMENT SCREW
300696	TRIGGER ENGAGEMENT SCREW
300662	LB blocker
306381	LB TRIGGER HOUSING ASSY PLATED

Step	Operation / Step Description
1	Allow tanks to reach temperature.
2	Place parts in appropriate basket.
3	Place Basket in Wash Tank.
4	Turn on Ultrasonic Control on Blue Ultrasonic Generator.
5	Leave in Wash Tank for 5 Minutes.
6	Lift basket from wash solution, hold for short period to drain the cleaner from the parts.
7	Turn Off Blue Ultrasonic Genetator.
8	Place in Hot Water rinse moving basket up and down several times.
9	Lift basket out of the rinse and allow to drain for short period.
10	Remove basket from hot water rinse tank and dump parts on to bench top to cool.
11	Place parts into oven at 120F for 15-20 min to ensure dry
12	<u>DO NOT BLOW OFF WITH COMPRESSED AIR.</u> Compressed air contains oil and this oil can contaminate the parts and interfere with the Loctite operation.
13	When the wash operation is complete for the shift turn off and unplug Ultrasonic Wash and Hot Water Rinse tank.

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Tool

Tooling Description

Ultrasonic Cleaning Bath

Generator setting - 50

Temperature - 150°F

Cleaner - Wintech 758 Concentration 8% (12 Parts Water 1 Part Wintech 758)

Soak Time - 5 Min.

TANK TO BE DUMPED AND RECHARGED PRIOR TO EACH OPERATING SHIFT.

Hot Water Rinse

Temperature Setting - 180°F

TANK TO BE DUMPED AND RECHARGED PRIOR TO EACH OPERATING SHIFT.

MCNEIL 1037

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10 Assemble Trigger Assembly - Stage 1

Parts listed below need to be clean and dry prior to Loctite Application and Assembly.

Loctite can not be applied on the screws and threaded in the hole until final settings.

		Loctite
306380	TRIGGER HOUSING ASSY PLATED	
300664	BLOCKER ADJUSTMENT SCREW	263
300914	TRIGGER FULL ADJUSTMENT SCREW	NONE
300696	TRIGGER ENGAGEMENT SCREW	263

(24484, m7 bolt stop pin used in place of slave pins for all settings)

Install the Trigger into the Trigger Housing

1. Insert Trigger into the trigger housing from the bottom as shown in Figure 1.

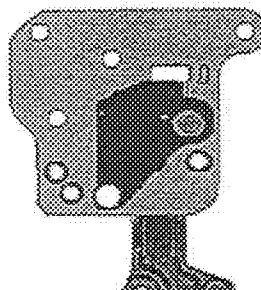
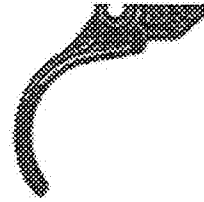


Figure 1

MCNEIL 1038



#### Trigger Pivot Pin Installation

2. Insert the trigger pivot pin through the hole in the blocker, the right hand side plate, and the trigger. Align the hole in the blocker with the shoulder on the trigger pin before pressing the pin into the hole in the left hand side plate. See Figure 3.

Fixture press:

D-55465, RH

D-56271, LH

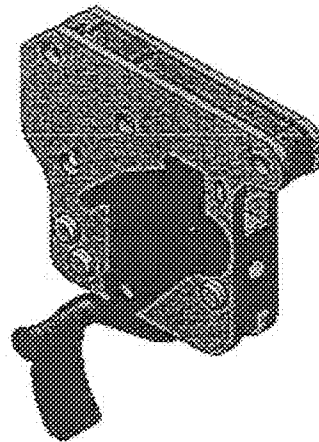
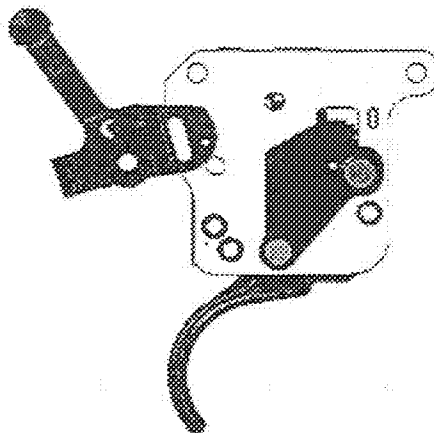


Figure 2

#### Insert the Safety

3. Slide the safety assembly or into the opening at the rear of the trigger assembly as shown in Figure 4. Bias the camming leg of the safety against the inside surface of the right hand side plate of the trigger housing. Insert a bolt stop pin thru the pivot hole to temporarily secure the safety to the housing.

Figure 3



#### Insert the Safety Detent Spring

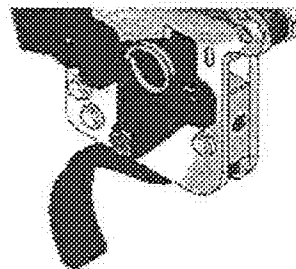
4. Slide the safety assembly's offset leg over the post on the blocker.  
Before allowing the post to snap into the slot on the safety, insert the short leg of the **safety detent spring** into the hole in the blocker and align the long leg of the spring with the small hole in the safety assembly as shown in Figure 5.



MCNHTL 1040



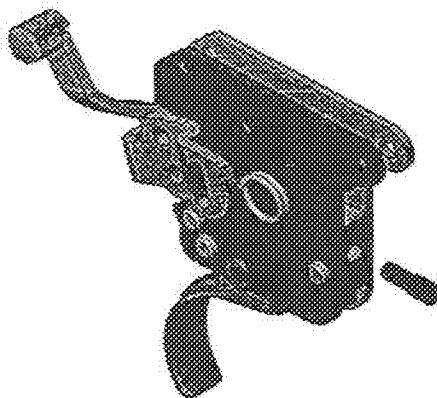
Figure 4



#### Install Trigger Pull Screw and Trigger Pull Spring

5. Insert the trigger pull screw and primary trigger pull spring through the hole in the front spacer of the trigger assembly as shown in Figure 6. Adjust inward until head of screw is approximately 2 to 3 turns below the surface of the spacer. (No loctite used on this screw, Duco cement after final setting at final assembly)

Figure 5



#### Install Bolt Stop Release and Trigger Pivot Pin Retaining Ring

6. Place the bolt stop release against the left hand side plate such that its upper hole is aligned with the safety pivot hole in the trigger housing and the

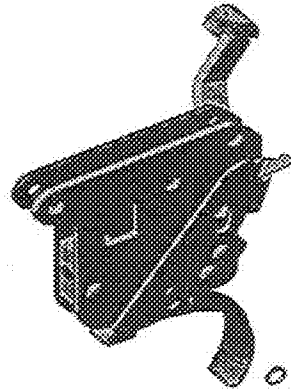
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lower hole is over the end of the trigger pin. Insert the trigger pivot pin retaining ring over the Trigger Pivot Pin, use assembly tool C-56251.

NEVER REUSE TRIGGER PIVOT PIN AND RETAINING CLIP AFTER REMOVING THEM.

Figure 6



Tooling:

Fixture press: D-55465 Used for press fit pins, RH  
D-56271 Used for press fit pins, LH  
Retaining ring tool: C-56251 Used for retaining ring assembly.

MCNEIL 1042

20 Assemble Trigger Assembly - Stage 2

DO NOT USE LOCTITE ON ASSEMBLY #410346, 410347.

Tooling:

Assemble the Sear Safety Cam into the Trigger Housing

7. Place the front end of sear safety cam into the trigger housing as shown in Figure 7. - Insert a m7 bolt stop pin through the trigger housing and sear pivot hole to retain the sear safety cam in the trigger housing.

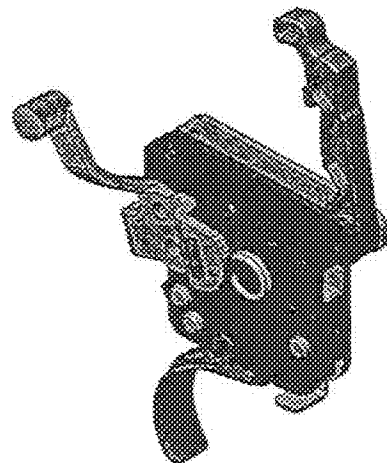


Figure 7

Insert the Sear Spring

8. Place the sear spring on the sear spring support in the trigger housing as shown in Figure 8. - Rotate the tail of the sear safety cam downward until it passes the rear trigger assembly mounting hole and insert a m7 bolts stop pin to hold it down. Check to ensure the sear spring is properly located in the housing and on the sear.

MCNEIL 1043

safety cam

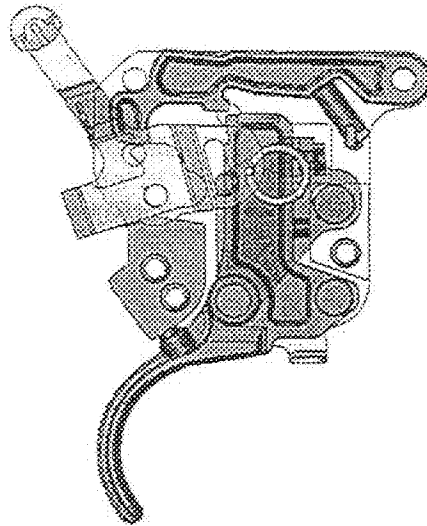


Figure 8

#### Install Safety Pivot Pin

9. Insert the safety pivot pin through the holes in the bolt stop release, trigger housing and safety and push it until the shoulder contacts the left hand side plate of the trigger housing as shown in Figure 9.

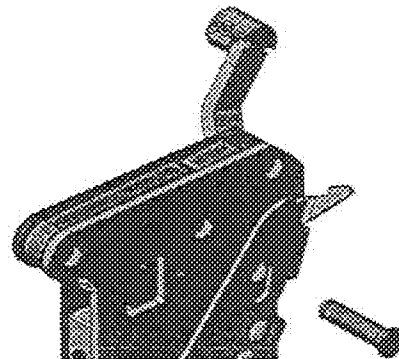
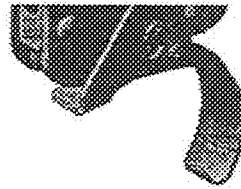


Figure 9



#### Add Safety Retainer

10. Install the safety retainer on the safety pivot pin. Orient the safety retainer so that the legs stick up away from the safety assembly as shown in Figure 10.  
Use hand assembly tool C-56220 to seat safety retainer.  
Make sure the all of retainer's legs are snapped into the groove in the safety pivot pin or the retainer can come off  
NEVER reuse the retainers after removing them

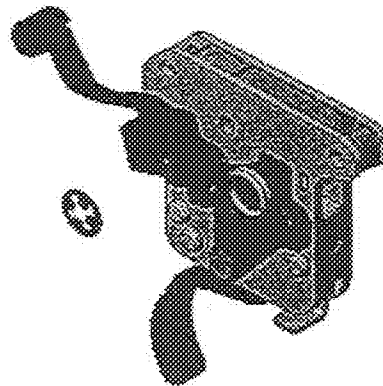


Figure 10

#### Loctite Blocker Screw

11. Using 1/16" power bit, Milwaukee driver, and Loctite application block C-68187, apply 1 drop of permanent Loctite (263) to the unmasked threads closest to the application block,

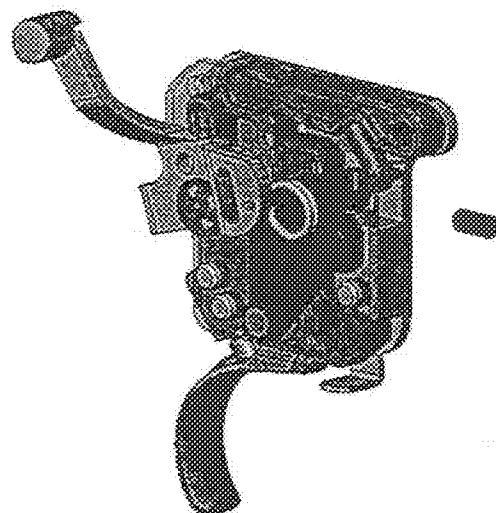
NOTE: DO NOT ALLOW LOCTITE TO CONTACT FRONT SURFACE OF SCREW

MCNEIL 1045

#### Install Blocker Screw

12. Thread the blocker screw into the blocker as shown in Figure 11. Thread in so that approximately 2 threads protrude from the rear of blocker.

Figure 11



#### Loctite Engagement Screw

13. Using 1/16" power bit, Milwaukee driver, and Loctite application block C-68187, apply 2 drops of permanent Loctite 263. The first drop is to be applied to the unmasked threads closest to the application block. The second drop is to be applied approximately half way between the rear of the screw and the previous drop.

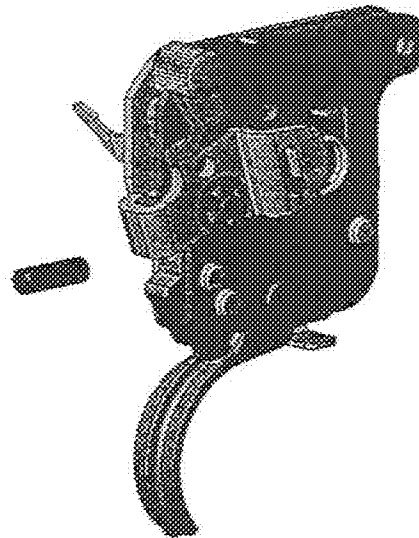
NOTE: DO NOT ALLOW LOCTITE TO CONTACT FRONT SURFACE OF SCREW

#### Install Engagement Screw

14. Thread the engagement screw into the rear housing spacer as shown in Figure 11. Thread in so that rear of screw is flush with housing spacer.

MCNETIL 1046

Figure 12



**Wipe Loctite**

15. Using pointed Q-Tip, wipe residual Loctite from interior and exterior surfaces of housing and blocker, in direction away from side of bolt stop release.

**Tooling:**

Safety Retainer (C-56220 Used for safety retaining clip assembly.

Loctite Application Block: C-68187 used to apply Loctite

Assembly Fixture RH: C-67957

Assembly Fixture LH: C-67958

Loctite 263

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Loctite Dispensing Unit: #98548 Bench top Peristaltic Dispenser  
#124447 Applicator Nozzle 2.1 mm orifice  
#8954866 Clear Tubing 1.4mm ID x 2.0mm OD

MCNEIL  
1048



30 Adjust Trigger Assembly on Comparator 100%

Tool Number	Tooling Description
E-55423	Comparator fixture RH SPL
E-55466	Comparator fixture LH SPL
D-700-CL-252, Rev 6	Comparator Screen, RH
D-700-CL-254, Rev 3	Comparator Screen, LH

DO NOT USE LOCTITE ON ASSEMBLY #410346, 410347.

"Loctite will start to cure in 3 to 7 minutes"

"Make sure final settings are complete before loctite starts to cure"

Note: Use 50X magnification for making all adjustments using Comparator

1) Mark correctly assembled and adjusted trigger assembly with adjuster's identification

Locate trigger assembly on stamping fixture.

NOTE: MAKE SURE STAMP POSITION ON HOUSING DOES NOT DEFORM HOUSING (i.e. PLACE STAMP OVER A SPACER BLOCK)

Stamp adjusters identification on the right hand side to the right of the top rivet.

Stamp should also be as close to the rivet as possible. See op 40 for visual of location.

\*Holding block for stamp B-53512

\*Use 1/16" size character

\*Op 30 adjuster's ID stamp to be assigned by supervisor

2) Setting Trigger / Sear Engagement - Use the Upper Zone on Comparator Screen as Marked

The Trigger and Sear engagement setting is done with the safety in the FIRE position.

When mounting the Fire Control in the comparator fixture, use thumb pressure to push the assembly firmly against the rear stops before engaging the toggle clamp.

2a) With the Sear held against the trigger, focus the screen image and align the Sear edge front

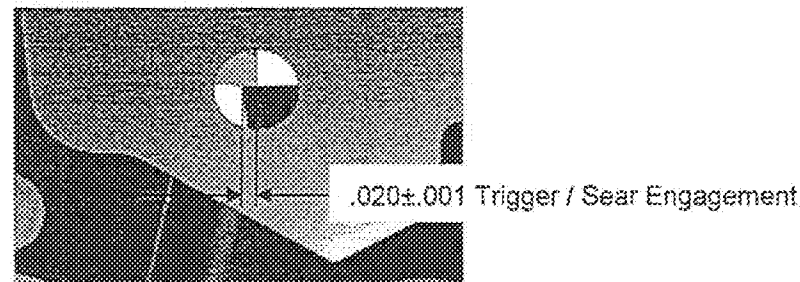
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face to the set edge line on the comparator screen. Without adjusting the fixture location, re-focus the comparator for a sharp image of the trigger. Turn the engagement screw to position the trigger edge within the .021" MAX and 0.019" MIN lines on the comparator screen. See Figure 13.

Note: For all screw settings, the tools must be removed carefully to prevent unwanted adjustments.

Figure 13



3) Setting Trigger Pull Force - Use the Upper Zone on Comparator Screen as Marked

Adjust the Trigger pull force with the sear held against the trigger and the safety in the FIRE position. Hang a 5.0 pound load from the trigger and adjust the Trigger Pull Screw until the Trigger rotates from underneath the Sear Safety Cam, allowing the Cam to drop. See Figure 14

Direction and location for setting trigger pull force

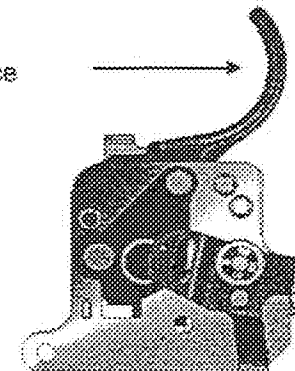


Figure 14

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#### 4) Cycle and Recheck

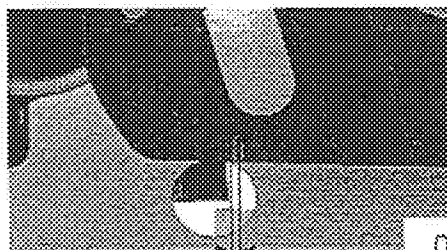
Remove the weight from the Trigger, release the toggle clamp, and allow the Sear and Trigger to re-engage. Dry cycle the fire control a minimum of 3 times. Recheck engagement and Trigger pull and adjust as necessary.

#### 5. Setting the Blocker Screw - Use the Lower Zone on Comparator Screen as Marked

Release the toggle clamp and move the safety to the FIRE position. Remount the assembly in the fixture and bring the trigger edge to a sharp focus. Align the trigger with the set edge for blocker screw adjustment as marked on the comparator screen. Move safety to the SAFE position. At this point, it is ok for the set edge of the trigger to move approximately .002" past the comp screen set line. Adjust the blocker screw inward until there is 0.000" MIN to 0.003" MAX visible motion of the trigger when pulled with a 7 pound load. Approach the min set line from right to left. If line is crossed, move past max line and repeat. Ideally, the blocker screw setting should be made to show visible trigger motion at or slightly greater than the MIN position line on the comparator screen. Recheck and adjust as necessary.

See Figure 15.

Figure 15



0.003" Max Movement with 7 lb Load on Trigger

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[REDACTED] 1000 max movement with 7 lb load on trigger

6) Inspection

Return the Safety to FIRE. Check engagement. Adjust as needed.

Recheck trigger pull at 5.0 lbs. Adjust as needed.

Move the Safety to the SAFE position. Check blocker screw setting. Adjust as needed.

NOTE: An adjustment for one setting dictates the other setting must be re-checked.

Always check the blocker screw setting last, do not adjust safe arm position again until the Loctite cure cycle is complete.

7) Loctite Cure Time

Allow LOCTITE 263 to cure for a minimum of 24 hours at room temperature

before performing function checks. Note: mark cure cycle information on all loads.

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35

## Apply Torque to Screws

Step	Operation / Step Description
1.	<p><b>BLOCKER SCREW MOVEMENT</b></p> <p>Using a 1/16" hex power bit and torque wrench, apply a torque of 24 in/oz to the blocker screw in counter-clockwise direction. No screw movement is permissible.</p>
2.	<p><b>TRIGGER ENGAGEMENT SCREW MOVEMENT</b></p> <p>Using a 1/16" hex power bit and torque wrench, apply a torque of 24 in/oz to the engagement screw in counter-clockwise direction. No screw movement is permissible.</p>

### Tooling:

Torque wrench : Sturtevant Richmond 3810045 set to 24 in.oz

MCNEIL 1057

40                      Function Check Complete Trigger Assembly 100%

Step	Operation / Step Description
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Function check completed Trigger Assembly 100%

NOTE: Do All Elements 100%, but not until after completion of LOCTITE 263 cure cycle,  
as defined in previous operation: 24 hours at room temperature.

1. With Safety in "FIRE" position.

Check for:

TRIGGER RETRACTION

Pull Trigger and release:

- \* Trigger must return freely to original position  
WITH SPRING FORCE.

CONFIRM ABSENCE OF EXCESS LOCTITE BETWEEN TRIGGER AND BLOCKER

SEAR FREEDOM

Pull Trigger and hold. Depress Sear FULLY and release:

- \* Sear must move freely in housing without binding. The Sear  
must return upward under Sear Spring force.

2. Put Safety in "SAFE" position.

Apply finger pressure to trigger. No movement of trigger from under sear should be visible.

3. Operation of Safety

Move Safety from "SAFE" to "FIRE" position and back.  
Do this TWICE.

MCNEIL 1058

4. Visual Inspection of Safety Retainer

Make sure the all of retainer's legs are snapped into the groove in the safety pivot pin.

5. Visual inspection of Safety Detent Spring

Make sure each end of spring is securely located in the holes in the blocker and safety.

6. Visual inspection of Bolt Stop Release

The bolt stop release should be free to move the entire range of the slotted holes.

7. Visual inspection Blocker Hold Down Stud and Trigger Pivot Pin

The head of each pin should be flush against the outer surface of the Blocker .

8. Apply sealing layer of DUCO cement to the head of the Trigger Engagement Screw and Blocker Screw.

DO NOT USE DUCO CEMENT ON ASSEMBLY #410346, 410347.

9. Apply 1 or 2 drops of REM OIL to the contact point of the Safety Slot and the Blocker Post.

10. Mark trigger assembly with inspector's identification stamp.

Locate trigger assembly on stamping fixture.

NOTE: MAKE SURE STAMP POSITION ON HOUSING DOES NOT DEFORM HOUSING (i.e. PLACE STAMP OVER A SPACER BLOCK)

Stamp inspector's identification on the right hand side below the top rivet and to the left of the bottom rivet. Stamp should also be as close to the rear of the assembly as reasonable.

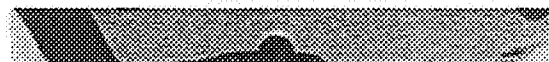
\*Holding block for stamp B-53512

\*Use 1/16" size character

\*Op 40 Inspector's ID stamp to

be "BLACKPOWDERX" month designation

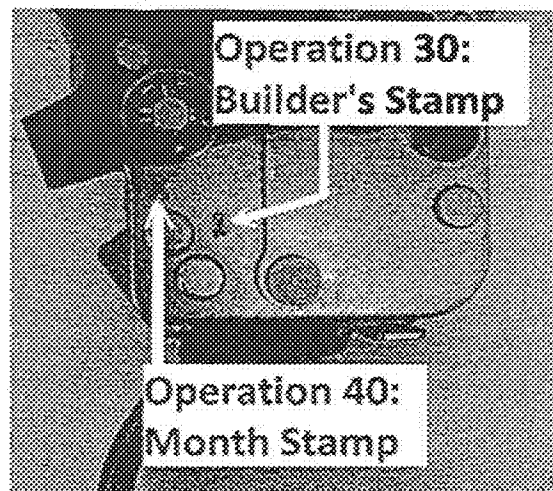
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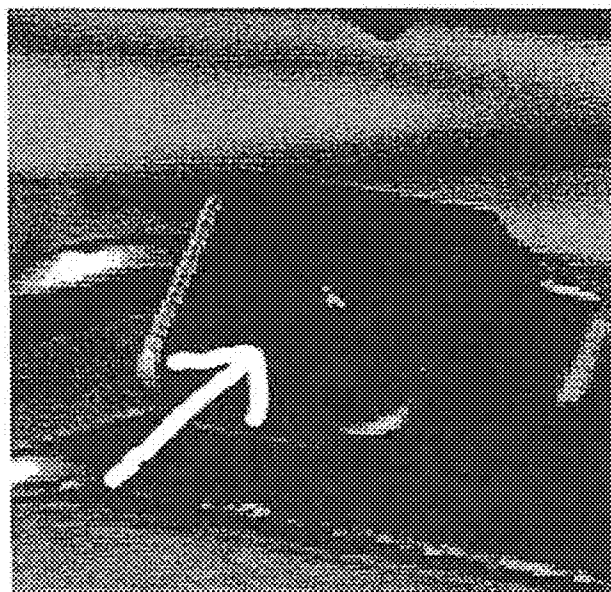
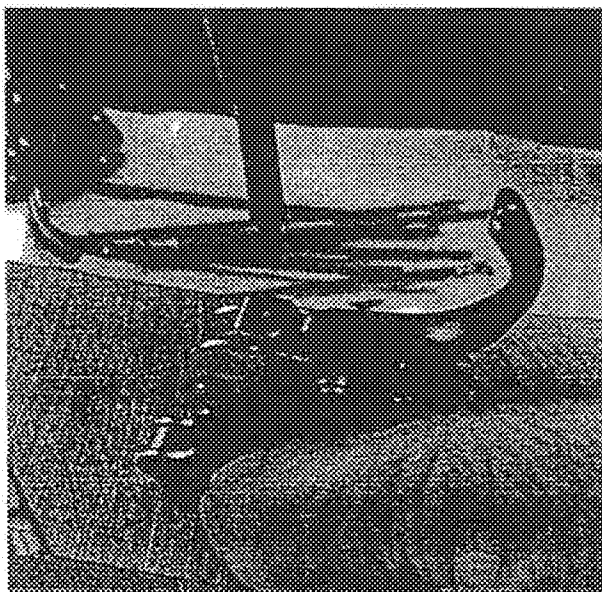
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March	A
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August	W
September	D
October	E
November	R
December	X



11. Using spring loaded center punch, mark the center of bottom bolt stop release tab.



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- 12 With the Safety in the "FIRE" position apply Molycoat to the following locations:
- \*Top surface of trigger from both sides.
  - \*Point on sear where contacted by firing pin head.
  - \*Seams between sear and side plates at pivot point.

Tooling:

Prick punch

Torque wrench : Sturtevant Richmond 3810045 set to 20 in.oz

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