

Remington Arms Company, Inc.
Manufacturing Process Document

Document ID:
Product Line:

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.

XMP RA Trigger 7 700 RFFORE PLATE
Centerfire Rifle

Effective Date: 30-Mar-08
Origination Date: 8-Feb-05

HONE TRIGGER PIN HOLE
DRILL, TAP AND COUNTER BORE SECONDARY SPRING HOLE
WASH, MICRO CARB, OIL QUENCH, WASH
LINDBERG TEMPER (DRAW)
INSPECT FOR ROCKWELL HARDNESS
GLASS BEAD BLAST
HONE TRIGGER PIN HOLE
WASH/DRY
DEMAGNETIZE - CREEP FEED GRIND - DEMAGNETIZE

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Printed on:
<autodate>

(Enter Oper #)

(Enter the Operation Name in this field)

Sheet 4 of 60

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[illegible]

Remington Arms Co., Inc.
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Sheet 7 of 60

5

Machine:

Special Engis Model #0318-18 Single Column, Eight Spindle, Single
Pass Bore finishing machine, Serial #2004179

Filtration System:

Filters: FL30C02, Pleated Filter, 10 Micron, 10" Long	Sold 6 per Case (2 required per filter change)
FL30C02L, Pleated Filter, 10 Micron, 36" Long	Sold 4 per Case (1 required per filter change)

Coolant:

(System capacity is approx 50-60 Gal.)

Oil: AC8C079.OLF, Honing Oil, Engis SP224C

OR

Oil Soluable: Mineral oil HOCUT 795NSC, 12-15%

Diamond Tooling: Ref D-55477

8 required with Engis Mandrel HS28901

Spindle 8) Remove Tools

Spindle 7) Remove Tools

Spindle 6) .1255 diameter X .5 Diamond sleeve, 100/120 grit, Engis #HS28893

Spindle 5) .1248 diameter X .5 Diamond sleeve, 100/120 grit, Engis #HS28894

Spindle 4) .1239 diameter X .5 Diamond sleeve, 100/120 grit, Engis #HS28895

Spindle 3) .1229 diameter X .5 Diamond sleeve, 100/120 grit, Engis #HS28896

Spindle 2) .1219 diameter X .5 Diamond sleeve, 100/120 grit, Engis #HS28897

Spindle 1) .1209 diameter X .5 Diamond sleeve, 100/120 grit, Engis #HS28897

Tool Adjuster Engis # HS28902; Note: 1/8 clockwise turn will increase sleeve diameter 0.0001"

Set-up: Use Engis Brush Adaptor #AC80282 for fixture alignment
Each fixture to be indicated to Max .002" TIR from spindle to fixture bushing.

Spindle Conditioning Fixture:

Pedestal mounted, 1/8 HP horizontal motor spindle w/ drill chuck, variable speed, 0-850 RPM.

Dressing Media - Use either Engis dressing stick #C00151 or #C00170

Tolerance:

In Process Gage

MST58

C-55237

Dials used in diameter setup on machine:

2805F-10

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HONE TRIGGER PIN HOLE

.1255" +/- .0002"

Checking Stand c/w Plates MST-MT58
Part holders mounted in checking stand.

Mitutoyo Indicator,.0001Graduation 0.050" Range .010" /Rev. /1.5N or Less; Used for Spindles 1-6

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Stages Number
711:48

711:63
711:62
711:62
711:51
711:50
711:49

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Common components for each dial indicator:
M16-51-Z
T-01b
N-1-15C

B-XXXXX .1255 Class XX Master Ring Gage - Use to Zero Dial Gages
Gage Procedure: Measure a part from each spindle position at shift start and every 4 hours thereafter.
Adjust honing sleeve on each spindle as required to return station to target values.

Final Inspection Gage
B-80042-DD Plug Gage, Go 0.1253", No Go 0.1257"

PROCESS CONTROL INSPECTION RECORD	THIS RECORD MUST STAY WITH THE PRODUCTION ORDER AT ALL TIMES
Part No:	
Operation No. 5	
Prod. Qty:	
Gage Description and Characteristic	
VISUAL	
Plug Gage, Go 0.1253", No Go 0.1257"	

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51mm Long Standard Indicator Holder
.105-.126 Split Ball Probe (works to .100 to .131)
Needle - Steel

Part Name:			XMP EA Trigger 7 700 DETONC
Operation:			=SB\$2
Prod. Order #:			Operator
Gage Number		Gage Frequency	1st Shift
VISUAL		100%	INSPECT
B-80042-DD		1 in 10	REJECT
B-80042-DD		1 in 10	INSPECT
B-80042-DD		1 in 10	REJECT
Pieces Run:			

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Revision Date: 30-Mar-08		Processed by:
Centerfire Rifle		Date: <autodate>
		Work Center:
		Setup inspected by & Date:
2nd Shift	3rd Shift	Remarks, Causes, Action Taken, Etc.
Remington Arms Company, Inc. -- Ilion, New York		

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DRILL, TAP AND COUNTER BORE SECONDARY SPRING HOLE

Operation: 7

Operation: 7

				Revision Date: 30-Mar-08	
Part Name:		XMP EA Trigger 7 700 BEFORE PLATE		Centerfire Rifle	
Operation:		=BS\$2			
Prod. Order #:		Operator			Setup inspected by & Date:
Gage Number	Gage Frequency	1st Shift	2nd Shift	3rd Shift	Remarks, Causes, Action Taken, Etc.
VISUAL	100%	INSPECT REJECT			
		INSPECT REJECT			
Pieces Run:					Remington Arms Company, Inc. - Ilion, New York

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Processed by:	
Date:	<autodate> >
Work Center	

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10

Operation Step Detail

Step	Operation / Step Description
------	------------------------------

Operation Tool Detail

Standard
Standard

PROCESS RECORD - HEAT TREAT SPECIFICATION

Process

Wash:

Wash:

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Wash, Micro Carb, Oil Quench, Wash

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

Material:
Furnace:
Rack:
Maximum Load:

Wash parts to ensure they are clean, free of cutting fluid, and dry.
Proccoco Washer Cycle
Wash 2 Minutes with Alkaline Cleaner (Wintech 758 2-3%/Vol or Equiv) at 160 - 200 Deg F.
Rinse 40 seconds with Rust Inhibitor (Wintech 187 4-6%/Vol or Equiv)at XXXX Deg F.
Air Blow Off 1 Minute.

Temperature:
Soak Time:
Carbon #:
Quench:

Wash parts to ensure they are clean, free of cutting fluid, and dry.
Proccoco Washer Cycle
Wash 2 Minutes with Alkaline Cleaner (Wintech 758 2-3%/Vol or Equiv) at 160 - 200 Deg F.
Rinse 40 seconds with Rust Inhibitor (Wintech 187 4-6%/Vol or Equiv)at XXXX Deg F.
Air Blow Off 1 Minute.

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Operation: 10

Rack Parts in Basket
Load Rack on Furnace Base With Shroud
wash Parts - Parts Must Be Clean And Dry
Load Work on Furnace Apron
Load Furnace - Carburize
Oil Quench
Unload Work from Furnace
wash Parts - Furnace Base and Shroud - Parts Must Be Clean And Dry
Carburize - Oil Quench
Wash

Operation: 10

Process Washer
Microcarb Furnace

MIM 4140
Microcarb Carburize
Standard 20" x 12" x 2" Mesh Basket. Furnace Base and Shroud.
500 pcs / basket, Two Baskets Per Load, 1000 pcs Max per Load

Microcarb

1700

2 Hours at Temperature
0.75%
Oil

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Inspection

PROCESS CONTROL INSPECTION RECORD	THIS RECORD MUST STAY WITH THE PRODUCTION ORDER AT ALL TIMES
Part No:	
Operation No: 10	
Prod. Qty:	
Gage Description and Characteristic	
VISUAL	

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Notes:

Appearance of Parts:

Part Name:	
Operation:	
Prod. Order #:	
Gage Number	
VISUAL	
Pieces Run:	

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Parts should be clean for temper operation.
Run Shim Stock with each load for Met. Chem. Inspection.

Clean Uniform Color

		Revision Date: 30-Mar-08		
XMP EA Trigger 7 700 BEFORE PLATE		Centerfire Rifle		
=B\$2				
	Operator			Setup inspected by & Date:
Gage Frequency	1st Shift	2nd Shift	3rd Shift	Remarks, Causes, Action Taken, Etc.
100%	INSPECT DEFECT			
	INSPECT DEFECT			
Remington Arms Company, Inc. -- Ilion, New York				

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Processed by:	
Date:	<autodate>
Work Center:	

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Lindberg Temper (Draw)

Operation Step Detail

Operation: 20

Step

[illegible]

- ```

1 Load Work in Temper Furnace
2 Temper Parts
3 Unload Work from Furnace
4 Unrack Parts into Work Pans.
5 Deliver to Heat Treat Inspection.

```

### Operation Tool Detail

Standard

Lindberg Furnace

Operation: 20  
furnace

Temperature: 400 Deg. F.

**Soak Time:** 1 Hour At Temp

Carbon %: N/A

**Quench:** Air    Cool with fan if necessary

Wash: N/A

**Notes:**

## Inspection

**Appearance of Parts:** Even Uniform Temper Color

| PROCESS CONTROL INSPECTION RECORD   |  |                                              |  | THIS RECORD MUST STAY WITH THE PRODUCTION ORDER AT ALL TIMES               |  |
|-------------------------------------|--|----------------------------------------------|--|----------------------------------------------------------------------------|--|
| Part No:                            |  | Part Name: XMP EA Trigger 7 700 BEFORE PLATE |  |                                                                            |  |
| Operation No. 20                    |  | Operation: =BS2                              |  |                                                                            |  |
| Prod. Qty.                          |  | Prod. Order #:                               |  | Operator                                                                   |  |
| Gage Description and Characteristic |  | Gage Number                                  |  | Gage Frequency                                                             |  |
| VISUAL                              |  | VISUAL                                       |  | 100%                                                                       |  |
|                                     |  |                                              |  | <div>1st Shift</div> <div>INSPECT SUBJECT</div> <div>INSPECT SUBJECT</div> |  |
|                                     |  | Pieces Run:                                  |  |                                                                            |  |



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|                  |           |                                                 |               |            |
|------------------|-----------|-------------------------------------------------|---------------|------------|
| Revision Date:   |           | 30-Mar-08                                       | Processed by: |            |
| Centerfire Rifle |           |                                                 | Date:         | <autodate> |
|                  |           |                                                 | Wcrk Center:  |            |
|                  |           | Setup inspected by & Date:                      |               |            |
| 2nd Shift        | 3rd Shift | Remarks, Causes, Action Taken, Etc:             |               |            |
|                  |           |                                                 |               |            |
|                  |           |                                                 |               |            |
|                  |           | Remington Arms Company, Inc. -- Ilion, New York |               |            |

Appearance of Parts:

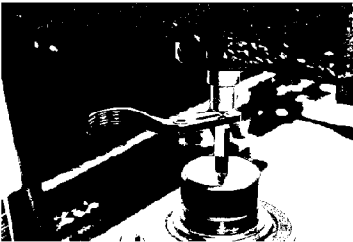
Printed on:  
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Operation: 30

Inspect For Hardness **SEE PHOTO**  
Record Results on Inspection Form  
Stamp Paper Work  
Record Results in Log Book

Operation: 30



MIM Fe 4140  
Microcarb  
Inspect on flat side of trigger.

H15N-85-90  
Uniform tempered color

|                                   |                              |                          |                               |                          |                               |     |                   |
|-----------------------------------|------------------------------|--------------------------|-------------------------------|--------------------------|-------------------------------|-----|-------------------|
|                                   |                              | Revision Date: 30-Mar-08 |                               | Inspected by:            |                               |     |                   |
|                                   |                              | Part No:                 | Prod. Qty:                    | Production Order #:      |                               |     |                   |
| XMP EA Trigger 7 700 BEFORE PLATE |                              |                          |                               |                          |                               |     |                   |
| Centerfire Rifle                  |                              |                          |                               |                          |                               |     |                   |
| =SB\$2                            |                              |                          | Work Center:                  | Inspec. Date: <autodate> |                               |     |                   |
| Furnace Date                      | Hardness Specificaton<br>HRC | N/A                      | Hardness Specificaton<br>H15n | 85-90                    | Hardness Specificaton<br>H45n | N/A | Break Test<br>N/A |
| H15n                              | H15n                         | H15n                     | H45n                          | Break Test Results (lbs) |                               |     |                   |
| Tester No                         | Tester No                    | Tester No                | Tester No                     |                          |                               |     |                   |
| 60                                | 81                           | 37                       |                               |                          |                               |     |                   |
| 61                                | 82                           | 38                       |                               |                          |                               |     |                   |
| 62                                | 83                           | 39                       |                               |                          |                               |     |                   |
| 63                                | 84                           | 40                       |                               |                          |                               |     |                   |
| 64                                | 85                           | 41                       |                               |                          |                               |     |                   |
| 65                                | 86                           | 42                       |                               |                          |                               |     |                   |
| 66                                | 87                           | 43                       |                               |                          |                               |     |                   |
| 67                                | 88                           | 44                       |                               |                          |                               |     |                   |
| 68                                | 89                           | 45                       |                               |                          |                               |     |                   |
| 69                                | 90                           | 46                       |                               | Sample Plan              |                               |     |                   |
| 70                                | 91                           | 47                       |                               | Lot Sample Allowable     |                               |     |                   |

|             |                                |
|-------------|--------------------------------|
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| 47          |                                |
| 48          |                                |
| 49          |                                |
| 50          |                                |
| 51          |                                |
| 52          |                                |
| 53          |                                |
| 54          |                                |
| 55          |                                |

|                                |     |    |                |      |         |
|--------------------------------|-----|----|----------------|------|---------|
| Remington Arms Co., Inc.       |     |    | Sheet 29 of 60 |      |         |
| Manufacturing Process Document |     |    |                |      |         |
| 71                             | 92  | 48 | Size           | Size | Outside |
| 72                             | 93  | 49 | 1-5            | All  | 0       |
| 73                             | 94  | 50 | 6 - 50         | 6    | 0       |
| 74                             | 95  | 51 | 51 - 100       | 7    | 0       |
| 75                             | 96  | 52 | 101 - 200      | 7    | 0       |
| 76                             | 97  | 53 | 201 - 600      | 16   | 1       |
| 77                             | 98  | 54 | 801 - 3000     | 17   | 1       |
| 78                             | 99  | 55 | 3001 - 20000   | 27   | 2       |
| 79                             | 100 | 56 | Rev 0          |      |         |
| 80                             | 101 | 57 |                |      |         |

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Manufacturing Process Document  
GLASS BEAD BLAST

Printed on:  
<autodate>

40

Operation Step Detail                    Operation: 40  
  
Step                                            Operation / Step Description

- GLASS BEAD BLAST
- 1    Load a Maximum of 250 Parts in Basket
  - 2    Set Timer to 30 Minutes
  - 3    Start Cycle
  - 4    Ensure Pressure is Set at 80 psi
- \*\* NOTE: PARTS MUST BE CLEAN AND DRY BEFORE GLASS BEAD BLAST

Operation Tool Detail                    Operation: 40  
  
Tool Number                                Tooling Description  
  
SIZE 10                                    Media: Medium Glass Bead Shot  
#0894E2494                               Load: 250 Pieces  
                                              Cycle: 30 Minutes  
                                              Pressure: 80 psi  
  
SC07310-5                                Machine: Glass Bead Blaster

Operation Procedure Notes                Operation:40  
  
Description

Note: Parts Must Be Dry and Clean Before Glass Bead Blast

| PROCESS CONTROL INSPECTION RECORD   |  |               |  | THIS RECORD MUST STAY WITH THE             |  | Revision Date: 30-Mar-08 |  |
|-------------------------------------|--|---------------|--|--------------------------------------------|--|--------------------------|--|
| PRODUCTION ORDER AT ALL TIMES       |  |               |  |                                            |  |                          |  |
| Part No:                            |  | Part Name:    |  | XMP EA<br>Trigger 7 700<br>BEFORE<br>PLATE |  | Centerfire Rifle         |  |
| Operation No: 40                    |  | Operation:    |  | =B\$2                                      |  |                          |  |
| Prod. Qty:                          |  | Prod. Order # |  | Operator                                   |  |                          |  |
| Gage Description and Characteristic |  | Gage Number   |  | Gage Frequency                             |  | 1st Shift                |  |
| VISUAL                              |  | VISUAL        |  | 100%                                       |  | INSPECT<br>REJECT        |  |

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|                                     |                      |
|-------------------------------------|----------------------|
|                                     | Processed by:        |
|                                     | Date: <autodate><br> |
|                                     | Work Center:         |
| Setup inspected by & Date:          |                      |
| Remarks, Causes, Action Taken, Etc. |                      |
|                                     |                      |

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Pieces Run:

INSPECT

REJECT



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|                           |                                                 |
|---------------------------|-------------------------------------------------|
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|                           | Remington Arms Company, Inc. -- Ilion, New York |

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Machine:

Special Engis Model #0318-18 Single Column, Eight Spindle, Single  
Pass Bore finishing machine, Serial #2004179

Filtration System:

|                                                       |                                                |
|-------------------------------------------------------|------------------------------------------------|
| Filters: FL30C02, Pleated Filter, 10 Micron, 10" Long | Sold 6 per Case (2 required per filter change) |
| FL30C02L, Pleated Filter, 10 Micron, 36" Long         | Sold 4 per Case (1 required per filter change) |

Coolant:

(System capacity is approx 50-60 Gal.)

Oil: AC8C079.OLF, Honing Oil, Engis SP224C

OR

Oil Soluable: Mineral oil HOCUT 795NSC, 12-15%

Diamond Tooling: Ref D-55477

8 required with Engis Mandrel HS28901

Spindle 8) .1267 diameter X .5 Diamond sleeve, 100/120 grit, Engis #HS29414

Spindle 7) .1262 diameter X .5 Diamond sleeve, 100/120 grit, Engis #HS29414

Spindle 6) .1255 diameter X .5 Diamond sleeve, 100/120 grit, Engis #HS28893

Spindle 5) .1248 diameter X .5 Diamond sleeve, 100/120 grit, Engis #HS28894

Spindle 4) .1239 diameter X .5 Diamond sleeve, 100/120 grit, Engis #HS28892

Spindle 3) .1229 diameter X .5 Diamond sleeve, 100/120 grit, Engis #HS28893

Spindle 2) .1219 diameter X .5 Diamond sleeve, 100/120 grit, Engis #HS28893

Spindle 1) .1209 diameter X .5 Diamond sleeve, 100/120 grit, Engis #HS28897

Tool Adjuster Engis # HS28902; Note: 1/8 clockwise turn will increase sleeve diameter 0.0001"

Set-up: Use Engis Brush Adaptor #AC80282 for fixture alignment  
Each fixture to be indicated to Max .002" TIR from spindle to fixture bushing.

Spindle Conditioning Fixture:

Pedestal mounted, 1/8 HP horizontal motor spindle w/ drill chuck, variable speed, 0-850 RPM.

Dressing Media - Use either Engis dressing stick #C00151 or #CC0170

Tolerance:

In Process Gage

MST58  
C-55237

Dials used in diameter setup on machine:  
43359CC

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Bone trigger pin hole

.1267" +/- .0002"

Checking Stand c/w Plates MST-MT58  
Part holders mounted in checking stand.

Mahr indicator, 1002Z Dial Comparator +/- .0010" Range, .00002 Resolution; Used for Spindles 7,8

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Stages Number  
711:48  
711:64  
711:64  
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2805F-10  
Common components for each dial indicator:  
ME6-51-Z  
T-015  
N-1-15C

B-80057-C .1267 Class XX Master Ring Gage - Use to Zero Dial Gages  
Gage Procedure: Measure a part from each spindle position at shift start and every 4 hours thereafter.  
Adjust honing sleeve on each spindle as required to return station to target values.

**Final Inspection Gage**  
B-80000-G Plug Gage, Go 0.1265", No Go 0.1269"

| PROCESS CONTROL INSPECTION RECORD   |  | THIS RECORD MUST STAY WITH THE PRODUCTION ORDER AT ALL TIMES |  |
|-------------------------------------|--|--------------------------------------------------------------|--|
| Part No:                            |  |                                                              |  |
| Operation No: 50                    |  |                                                              |  |
| Prod. Qty:                          |  |                                                              |  |
| Gage Description and Characteristic |  |                                                              |  |
| VISUAL                              |  |                                                              |  |
| Plug Gage, 0.1269Max-0.1265 Min     |  |                                                              |  |
| Dial Bore Gage, Each Spindle        |  |                                                              |  |
|                                     |  |                                                              |  |

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Mitutoyo Indicator, .000" Graduation 0.050" Range .010" /Rev. / 1.000" Less; Used for Spring- es 1-6

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51mm Long Standard Indicator Holder  
.105-.126 Split Ball Probe (works to .100 to .13")  
Needle - Steel

|                |                                   |                                         |
|----------------|-----------------------------------|-----------------------------------------|
|                |                                   |                                         |
| Part Name:     | XMP EA Trigger 7 700 BEFORE PLATE |                                         |
| Operation:     | 50                                |                                         |
| Prod. Order #: |                                   | Operator                                |
| Gage Number    | Gage Frequency                    | 1st Shift                               |
| VISUAL         | 100%                              | <del>INSPECT</del><br><del>REJECT</del> |
| B-8000-G       | 100%                              | <del>INSPECT</del><br><del>REJECT</del> |
| C-55237        | Every 4 hrs                       | <del>INSPECT</del><br><del>REJECT</del> |
| Pieces Run:    |                                   |                                         |

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<autodate>

|                                                 |           |                                     |
|-------------------------------------------------|-----------|-------------------------------------|
| Revision Date: 30-Mar-08                        |           | Processed by:                       |
| Centerfire Rifle                                |           | Date: <autodate>                    |
|                                                 |           | Work Center:                        |
|                                                 |           | Setup inspected by & Date:          |
| 2nd Shift                                       | 3rd Shift | Remarks, Causes, Action Taken, Etc. |
|                                                 |           |                                     |
|                                                 |           |                                     |
|                                                 |           |                                     |
| Remington Arms Company, Inc. -- Ilion, New York |           |                                     |

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WASH/DRY

55

| Step | Operation / Step Description |
|------|------------------------------|
|------|------------------------------|

- 1 Place lift tray onto cart
- 2 Place parts into tub
- 3 Place tub into lift tray
- 4 Hoist lift tray to conveyor rollers
- 5 Push tray into washer and close door
- 6 Set wash timer to 2 minutes
- 7 Set rinse timer to 40 seconds
- 8 Set dry timer to 2 minutes

\*NOTE: WHEN RINSE CYCLE BEGINS, PLACE MANUAL DOOR SWITCH TO "UP" POSITION SO THAT DOOR WILL OPEN IMMEDIATELY AT CYCLE END

- 9 Remove tub

Tool Number

STD.

STD.

## WinTech 295VS Test

1. 12.5 ml Sample
2. Add 5 drops Bromocresolgreen Sol.  
Sample will turn Greenish Blue
3. Add 1.0N HCl, drop-by-drop, while swirling the sample and counting the drops, until the sample turns yellow.
4. The # of drops of 1.0N HCl X 0.2 = the % (vol/vol) of 295 in the sample
5. Control at 5 to 10 drops (1-2%)



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Tooling Description

Better Engineering Mfg Inc Wash Unit, Model CE2000-27

WINTech 290VS Cleaner/Rust Protector

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Step

Operation / Step Description

Dry

Tool Number

STD

|                                          |  |                                                              |  |
|------------------------------------------|--|--------------------------------------------------------------|--|
| <b>PROCESS CONTROL INSPECTION RECORD</b> |  | THIS RECORD MUST STAY WITH THE PRODUCTION ORDER AT ALL TIMES |  |
| <b>Part No:</b>                          |  | Part Name:                                                   |  |
| Operation No: 55                         |  | Operation:                                                   |  |
| Prod. Qty:                               |  | Prod. Order #:                                               |  |
| Gage Description and Characteristic      |  | Gage Number                                                  |  |
| VISUAL                                   |  | VISUAL                                                       |  |
|                                          |  |                                                              |  |
|                                          |  | <b>Pieces Run:</b>                                           |  |

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After wash, immediately transfer parts to Proccoco Dryer in dept 8551  
for 10 minute drying period at 350 Degrees Maximum Temperature.

Tooling Description

Proccoco Dryer

|                                   |                |
|-----------------------------------|----------------|
|                                   |                |
| XMP EA Trigger 7 700 BEFORE PLATE |                |
| WASH/DRY                          |                |
| Gage Frequency                    | Operator       |
| 100%                              | 1st Shift      |
|                                   | INSPECT REJECT |
|                                   | INSPECT REJECT |
|                                   |                |

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|                                                 |           |                                     |
|-------------------------------------------------|-----------|-------------------------------------|
| Revision Date: 30-Mar-08                        |           | Processed by:                       |
| Centerfire Rifle                                |           | Date: <autodate>                    |
|                                                 |           | Work Center:                        |
|                                                 |           | Setup Inspected by & Date:          |
| 2nd Shift                                       | 3rd Shift | Remarks, Causes, Action Taken, Etc. |
|                                                 |           |                                     |
|                                                 |           |                                     |
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60

Machine:  
Blohm Precimat 306 CNC grinder

Tooling:  
C-55843  
C-56008          Diamond dresser

Coolant:  
Oil Soluble:    Mineral oil HOCUT 795NB

Filter Paper

710mm wide, Stores #310823

Fixture:

D-55843

Grind tolerance:  
TOP SURFACE: 1.045" +/- .001" profile tolerance and .0005" total angularity  
SIDE SURFACE: .050" +/- .001" profile tolerance and .001" total angularity  
.003" max break on the corner no burrs permissible  
Finish 10 R.M.S. Max on ground surfaces

GAGE:  
  
C-55850  
  
C-700-CL-251  
#xxxxxx

|                                     |                                                              |
|-------------------------------------|--------------------------------------------------------------|
| PROCESS CONTROL INSPECTION RECORD   | THIS RECORD MUST STAY WITH THE PRODUCTION ORDER AT ALL TIMES |
| Part No:                            |                                                              |
| Operation No: 60                    |                                                              |
| Prod. Qty:                          |                                                              |
| Gage Description and Characteristic |                                                              |
| VISUAL                              |                                                              |

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DEMAGNETIZE - CREEP FEED GRIND - DEMAGNETIZE

CBN grinding wheel assy

Grind fixtures 1,2,3 Note: 3 months after full production begins, send 1 fixture for inspection every 2 months.

Dial base gage, Check 1 part randomly per cassette, Inspec. 100% every 90 minutes  
maintain 90 minute frequency across shifts, enter data in MINITAB.  
Comparator screen, check 2 randomly every 4 hours  
Surface meter, check 3 every 4 hours.

|               |  |                                            |                   |           |
|---------------|--|--------------------------------------------|-------------------|-----------|
|               |  | Revision Date: 30-Mar-08                   |                   |           |
| Part Name:    |  | XMP EA<br>Trigger 7 700<br>BEFORE<br>PLATE | Centerfire Rifle  |           |
| Operation:    |  | 60                                         |                   |           |
| Prod. Order # |  | Operator                                   |                   |           |
| Gage Number   |  | Gage<br>Frequency                          | 1st Shift         | 2nd Shift |
| VISUAL        |  | 100%                                       | INSPECT<br>REJECT |           |

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|                                     |                  |
|-------------------------------------|------------------|
|                                     | Processed by:    |
|                                     | Date: <autodate> |
|                                     | Work Center:     |
| Setup inspected by & Date:          |                  |
| Remarks, Causes, Action Taken, Etc. |                  |
|                                     |                  |



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|                |                  |                      |
|----------------|------------------|----------------------|
| DIAL BASE GAGE | 1.046/1.044      | TOP SURFACE PROFILE  |
| DIAL BASE GAGE | .0005 ANGULARITY | TOP SURFACE          |
| DIAL BASE GAGE | .051/.049        | SIDE SURFACE PROFILE |
| DIAL BASE GAGE | .001 ANGULARITY  | SIDE SURFACE         |
| COMP SCREEN    |                  |                      |
| Surface Finish |                  |                      |
|                |                  |                      |
|                |                  |                      |
|                |                  |                      |
|                |                  |                      |
|                |                  |                      |
|                |                  |                      |

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|               |                                      |         |  |  |
|---------------|--------------------------------------|---------|--|--|
|               | 1 per cassette,<br>'00% every 90 min | INSPECT |  |  |
| C-55850       |                                      | REJECT  |  |  |
|               | 1 per cassette,<br>'00% every 90 min | INSPECT |  |  |
| C-55850       |                                      | REJECT  |  |  |
|               | 1 per cassette,<br>'00% every 90 min | INSPECT |  |  |
| C-55850       |                                      | REJECT  |  |  |
|               | 1 per cassette,<br>'00% every 90 min | INSPECT |  |  |
| C-55850       |                                      | REJECT  |  |  |
| C-700-CL-251  | 2 every 4 Hrs                        | INSPECT |  |  |
| surface meter | 3 every 4 Hrs                        | REJECT  |  |  |
|               |                                      | INSPECT |  |  |
|               |                                      | REJECT  |  |  |
|               |                                      | INSPECT |  |  |
|               |                                      | REJECT  |  |  |
|               |                                      | INSPECT |  |  |
|               |                                      | REJECT  |  |  |
|               |                                      | INSPECT |  |  |
|               |                                      | REJECT  |  |  |
| Pieces Run:   |                                      |         |  |  |

[illegible]

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| Dept | Oper | Operation Description                                                                              | Part Numbers |
|------|------|----------------------------------------------------------------------------------------------------|--------------|
| 9132 | 1    | Issue from crib                                                                                    | XXXXXX       |
| 8773 | 5    | Hone trigger pin hole                                                                              | XXXXXX       |
| 8773 | 7    | Drill, Tap and Counterbore Secondary Spring Hole                                                   | XXXXXX       |
| 8551 | 10   | Wash - Carburize - Wash<br>1700 Deg. F. - 2 hr. - .75 carbon                                       | XXXXXX       |
| 8551 | 20   | Lindberg Temper (Draw)<br>400 Deg. F. - 1 hr.                                                      | XXXXXX       |
| 8551 | 30   | Inspect For Rockwell Hardness<br>H10N 95-90                                                        | XXXXXX       |
|      |      | *****<br>* INSPECT FOR HARDNESS *<br>* MUST STAMP ---> *<br>* *<br>* INITIALS _____ *<br>* * * * * |              |
| 8551 | 40   | Glass Bead Blast                                                                                   | XXXXXX       |
| 8773 | 50   | Hone trigger pin hole                                                                              | XXXXXX       |
| 8773 | 55   | WASH/DRY                                                                                           | XXXXXX       |
| 8773 | 60   | DEMAGNETIZE - CREEP FEED GRIND - DEMAGNETIZE                                                       | XXXXXX       |

TO MRP CRIB #25  
Plate

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| Parent | Rv | Child  | Fnd | Oper | Qty   | UM | Description                                          |
|--------|----|--------|-----|------|-------|----|------------------------------------------------------|
| XXXXXX |    | 301462 | 10  | 10   | 1.000 |    | XMP EA Trigger, 700 7 PRE PLATE<br>MIM Trigger blank |

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| Date:     | Reason for Revision:             | Eng: | Log #: |
|-----------|----------------------------------|------|--------|
| 29-Apr-08 | New XMP EA Trigger 7 700 process | CSB  | 320567 |

Dept Num Procedure by Steps Safety Key Points

| PROCESS CONTROL INSPECTION RECORD                             |  |            |                                            |                               |
|---------------------------------------------------------------|--|------------|--------------------------------------------|-------------------------------|
| THIS RECORD MUST REMAIN IN HEAT TREAT INSPECTION FOR ONE YEAR |  |            |                                            |                               |
| Operation No: Part No:                                        |  | Part Name: | XMP EA<br>Trigger 7 700<br>BEFORE<br>PLATE |                               |
| Furnace and Load Number                                       |  | Operation: | Part Name:                                 |                               |
|                                                               |  | Draw Temp  | Furnace Date                               | Hardness Specification<br>HRc |
| HRc                                                           |  | H15n       |                                            |                               |
| Tester No                                                     |  | Tester No  |                                            |                               |
| 35                                                            |  |            | 60                                         |                               |
| 36                                                            |  |            | 61                                         |                               |
| 37                                                            |  |            | 62                                         |                               |
| 38                                                            |  |            | 63                                         |                               |
| 39                                                            |  |            | 64                                         |                               |
| 40                                                            |  |            | 65                                         |                               |
| 41                                                            |  |            | 66                                         |                               |
| 42                                                            |  |            | 67                                         |                               |
| 43                                                            |  |            | 68                                         |                               |
| 44                                                            |  |            | 69                                         |                               |
| 45                                                            |  |            | 70                                         |                               |



|                          |           |                                                 |                            |  |
|--------------------------|-----------|-------------------------------------------------|----------------------------|--|
| Revision Date: 30-Mar-08 |           |                                                 | Processed by:              |  |
| Centerfire Rifle         |           |                                                 | Date: <autodate>           |  |
|                          |           |                                                 | Work Center:               |  |
|                          |           |                                                 | Setup Inspected by & Date: |  |
| 2nd Shift                | 3rd Shift | Remarks, Causes, Action Taken, Etc.             |                            |  |
|                          |           |                                                 |                            |  |
|                          |           |                                                 |                            |  |
|                          |           |                                                 |                            |  |
|                          |           |                                                 |                            |  |
|                          |           |                                                 |                            |  |
|                          |           |                                                 |                            |  |
|                          |           |                                                 |                            |  |
|                          |           |                                                 |                            |  |
|                          |           |                                                 |                            |  |
|                          |           | Remington Arms Company, Inc. -- Ilion, New York |                            |  |

|                          |  |                               |                          |                          |  |
|--------------------------|--|-------------------------------|--------------------------|--------------------------|--|
| Revision Date: 30-Mar-08 |  |                               | Inspected by:            |                          |  |
| Part No:                 |  | Prod. Qty:                    |                          | Production Order #:      |  |
| Centerfire Rifle         |  |                               |                          |                          |  |
|                          |  |                               | Work Center:             |                          |  |
|                          |  |                               | Inspec. Date: <autodate> |                          |  |
| INSPECT<br>REJECT        |  | Hardness Specificaton<br>H15n |                          | INSPECT REJECT           |  |
| H15n                     |  | Hardness Specificaton<br>H45n |                          | INSPECT REJECT           |  |
| Tester No                |  | Tester No                     |                          | Break Test Results (lbs) |  |
| 81                       |  | 37                            |                          |                          |  |
| 82                       |  | 38                            |                          |                          |  |
| 83                       |  | 39                            |                          |                          |  |
| 84                       |  | 40                            |                          |                          |  |
| 85                       |  | 41                            |                          |                          |  |
| 86                       |  | 42                            |                          |                          |  |
| 87                       |  | 43                            |                          |                          |  |
| 88                       |  | 44                            |                          |                          |  |
| 89                       |  | 45                            |                          |                          |  |
| 90                       |  | 46                            |                          |                          |  |
| 91                       |  | 47                            |                          |                          |  |
| Sample Plan              |  |                               |                          |                          |  |
| Lot Sample Allowable     |  |                               |                          |                          |  |

|    |    |
|----|----|
| 46 | 71 |
| 47 | 72 |
| 48 | 73 |
| 49 | 74 |
| 50 | 75 |
| 51 | 76 |
| 52 | 77 |
| 53 | 78 |
| 54 | 79 |
| 55 | 80 |

Type "Ctrl+r" *from the desired destination* to insert this form. Execute *after* the HTPCIR above.  
PROCESS RECORD - HEAT TREAT SPECIFICATION

-----  
Process

Material:  
Furnace:  
Rack:  
Maximum Load:  
  
Temperature:  
Soak Time:  
Carbon #:   
Quench:  
Wash:  
Notes:

Inspection

Hardness:  
  
Break Test:  
Color Only:  
Appearance of Parts:

|     |    | Size         | Size | Outside |
|-----|----|--------------|------|---------|
| 92  | 48 |              |      |         |
| 93  | 49 | 1-5          | All  | 0       |
| 94  | 50 | 6 - 50       | 6    | 3       |
| 95  | 51 | 51 - 100     | 7    | 3       |
| 96  | 52 | 101 - 200    | 7    | 3       |
| 97  | 53 | 201 - 800    | 16   | 1       |
| 98  | 54 | 801 - 3000   | 17   | 1       |
| 99  | 55 | 3001 - 20000 | 27   | 2       |
| 100 | 56 |              |      |         |
| 101 | 57 |              |      |         |
|     |    | Rev 0        |      |         |

*Unassigned Button Clicked*

*You have clicked a button that is not assigned to a process sheet*

*Click the button to return to the Header Sheet*