

TITLE: Safety XP100

Process Header

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Document ID: Safety XP100	Remington Arms Company
Part Name: Safety XP100	
Product Line: C/F Rifle	Effective Date: 03-Nov-1992-09:00:00
Engineering Group: Rifle	Origination Date: 10-Oct-1992

Process Revision Reasons

Date:	Reason For Revision:	Eng Log #:
10-Oct-1992	Retype Entire Process from 289412 - Replaces Old Paper Process	GLC 293123
23-Oct-1992	Add Materials List	GLC 293200

Process Approval List

Approved By:	Badge #:	Date:	Designation:
Jacksora			

Process General Notes

Notes:

Process Material

Part Number	Qty	Description
91494	1	Safety - XP100
16329	1	Blank

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Process Routing

Op	Oper	Operation Description	Part Numbers
8551	45	Degrease, Carbo-Nitride Harden (Micro Carb), Oil Quench, Degrease	91494
8551	50	Lindberg Draw	91494
9257	55	Inspect for Rockwell Hardness	91494
8579	57	Sweco Vibrate	91494
8579	60	Black Oxide Color	91494
		To MRP Crib #29	91494

Operation Step Detail

Operation: 45

Step	Operation / Step Description
	Degrease, Carbo-Nitride Harden (Micro Carb), Oil Quench, Degrease

Operation Tool Detail

Operation: 45

Tool Number	Tooling Description
Std	Micro-Carb Furnace
	Basket

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Operation Procedure Notes Operation: 45

Description

PROCESS RECORD - HEAT TREAT SPECIFICATION

MATERIAL & SPECIFICATION: 1020

TEMPERATURE: 1700 Degrees F - .75 Carbon

MAXIMUM LOAD: 2,500-1,250 Pcs. per Basket - 2 Baskets Max.

TIME: 2 Hours @ Temp.

QUENCH: Oil

REMARKS: .005/.010 Case

INSPECT FOR: File Hard

HEAT TREAT INSPECTION:

STANDARD PRACTICE NO:

HARDNESS LIMITS:

APPEARANCE OF PARTS: Clean and Free of Oil

Operation Step Detail Operation: 50

Step Operation / Step Description

Lindberg Draw

Operation Tool Detail Operation: 50

Tool Number Tooling Description

Std Lindberg Draw Furnace

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Operation Procedure Notes Operation: 50

Description

PROCESS RECORD - HEAT TREAT SPECIFICATION

MATERIAL & SPECIFICATION: 1020

TEMPERATURE: 350 Degrees F

MAXIMUM LOAD:

TIME: 30 Min. @ Temp.

QUENCH:

REMARKS:

INSPECT FOR:

HEAT TREAT INSPECTION:

STANDARD PRACTICE NO:

HARDNESS LIMITS:

APPEARANCE OF PARTS:

Operation Step Detail Operation: 55

Step Operation / Step Description

Inspect for Rockwell Hardness

Operation Tool Detail Operation: 55

Tool Number Tooling Description

Std Rockwell Hardness Tester

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Operation Procedure Notes

Operation: 55

Description

PROCESS RECORD - HEAT TREAT SPECIFICATION

MATERIAL & SPECIFICATION: 1020

TEMPERATURE:

MAXIMUM LOAD:

TIME:

QUENCH:

REMARKS:

INSPECT FOR:

HEAT TREAT INSPECTION:

STANDARD PRACTICE NO:

HARDNESS LIMITS: R 15N 88-92

APPEARANCE OF PARTS:

Operation Step Detail

Operation: 57

Step

Operation / Step Description

Sweco Vibrate

Operation Tool Detail

Operation: 57

Tool Number

Tooling Description

#3-1/2 Bonded

Chip

150/200 Lbs.

Amount of Chips

800

Number of Pcs. per Load

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Operation Procedure Notes Operation: 57

Description

Process:

1. Thouroughly Wet Chips with Drain Open
2. Close Drain When Water is Drained Off
3. Add About 2 Quarts of Water
4. Add 1-1/2 Lbs #19 D
5. Add 1 OZ. 202 Compound On Chips
6. Add Parts
7. Vibrate 1 Hour
8. Flush Clean with Water
9. Drain
10. SEPARATE FROM CHIPS AND OIL PARTS

Operation Step Detail

Operation: 60

Step

Operation / Step Description

Black Oxide Color

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Operation Procedure Notes Operation: 60

Description

SMALL PARTS BLACK OXIDE COLOR

BLACK OXIDE RACK/FIXTURE:

LOAD SIZE:

STEP	PROCESS SEQUENCE	TEMPERATURE	CONCENTRATION	IMERSION TIME
1	Alkaline Clean	212 F	7-9%	3-5 Minutes
2	Cold Water Rinse	Ambient	-----	1 Minute
3	Muriatic Acid	Ambient	15-17%	10-15 Seconds
4	Cold Water Rinse	Ambient	-----	1 Minute
5	Black Oxide #1	290 F	6.5-6.8 lbs/gal	30 Minutes
6	Cold Water Rinse	Ambient	-----	1 Minute
7	Black Oxide #2	300 F	7.0-7.3 lbs/gal	30 Minutes
8	Hot Water Rinse	212 F	-----	1 Minute
9	Braze Color	185 F	1.0-1.3 lbs/gal	30 Minutes
10	Hot Water Rinse	212 F	-----	1 Minute
11	Steelgard	Ambient	15-20%	30 Seconds

NOTE FOR POWDER METAL AND M.I.M. PARTS

- * Increase immersion time on step #3 to 30-45 seconds.
- * Increase immersion time on step #8 to 30 minutes.

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