TITLE: Forward Receiver Screw XP100

Process Header

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Document ID: Forward Rec Scr XP100	Remington Arms Company
Part Name: Forward Receiver Screw XP100	
Product Line: C/F Rifle	Effective Date: 04-Nov-1992-09:00:00
Engineering Group: Rifle	Origination Date: 24-Oct-1992

Process History

Status	Date/Time	Status Set	Responsible User
Submitted	2-NOV-1992	09:21:05.79	G.L.Cioch
Comment:			
Recalled	2-NOV-1992	10:48:33.47	G.L.Cioch
Comment:			

Process Revision Reasons

Date:	Reason For Revision:	Eng Log #:	
24-Oct-1992	Retype Entire Process from 283475 - Replaces Old Paper Process - Add Part #97758 - Chg. Description Op.#'s 4, 8, & 12 - Add Op.#16	GLC	293202

Process Approval List

Approved By:	Badge #:	Date:	Designation:
JACKSORA			

Process General Notes

Notes:

Document Number: Forward Rec Scr XP100 Rev:

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TITLE: Forward Receiver Screw XP100

Process Material

Part Number	Qnty	Description
97758	1	Forward Receiver Screw - XP100
97765	1	Blank
15447	1	Forward Receiver Screw - XP100
16502	1	Blank

Process Routing

Dept	Oper	Operation Description	Part Numbers
8551	4	Degrease, Carbo-Nitride (Shaker), Oil Quench, Degrease	15447, 97758
8551	8	Lindberg Draw	15447, 97758
9257	12	Inspect for Rockwell Hardness	15447, 97758
8551	16	Black Oxide Color	15447, 97758
		To MRP Crib #29	15447, 97758

Operation Step Detail Operation: 4

Step	Operation / Step Description
	Degrease, Carbo-Nitride (Shaker), Oil Quench, Degrease

Operation Tool Detail Operation: 4

Tool Number	Tooling Description
Std	Carbo-Nitride (Shaker)

TITLE: Forward Receiver Screw XP100

Operation Procedure Notes Operation: 4

Description
PROCESS RECORD - HEAT TREAT SPECIFICATION
MATERIAL & SPECIFICATION: 4137 or 4037 Alloy Wire
TEMPERATURE: 1625 Degrees F - Front, Center, & Rear Zones
MAXIMUM LOAD: Continuous Load
TIME: Approx. - 40 Min. @ Temp.
QUENCH: Oil
REMARKS: Degrease
INSPECT FOR: File Hard to Insure Proper Quench
HEAT TREAT INSPECTION:
STANDARD PRACTICE NO:
HARDNESS LIMITS:
APPEARANCE OF PARTS: Clean & Free of Oil

Operation Step Detail Operation: 8

Step	Operation / Step Description
	Lindberg Draw

Operation Tool Detail Operation: 8

Tool Number	Tooling Description
Std	Lindberg Furnace
Std	Basket - 15"x15"x15"Deep with Handle

TITLE: Forward Receiver Screw XP100

Operation Procedure Notes Operation: 8

Description

PROCESS RECORD - HEAT TREAT SPECIFICATION

MATERIAL & SPECIFICATION:	4137 or 4037 Alloy Wire
TEMPERATURE:	650 - 750 Degrees F
MAXIMUM LOAD:	2000 - Pcs. per Basket
TIME:	1 Hr. @ Temp.
QUENCH:	Air Cool
REMARKS:	
INSPECT FOR:	
HEAT TREAT INSPECTION:	
STANDARD PRACTICE NO:	
HARDNESS LIMITS:	
APPEARANCE OF PARTS:	Clean & Free of Oil

Operation Step Detail Operation: 12

Step	Operation / Step Description
	Inspect for Rockwell Hardness

Operation Tool Detail Operation: 12

Tool Number	Tooling Description
Std	Rockwell Hardness Tester

Operation Procedure Notes Operation: 12

Description

PROCESS RECORD - HEAT TREAT SPECIFICATION

MATERIAL & SPECIFICATION: 4137 or 4037 Alloy Wire
TEMPERATURE:
MAXIMUM LOAD:
TIME:
QUENCH:
REMARKS:

INSPECT FOR: Rockwell Hardness
HEAT TREAT INSPECTION:
STANDARD PRACTICE NO:
HARDNESS LIMITS: RC 40-45
APPEARANCE OF PARTS: Clean & Free of Oil

Operation Step Detail Operation: 16

Step	Operation / Step Description
	Black Oxide Color

Operation Procedure Notes Operation: 16

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.