

TITLE: Stock Halves Right & left

Process Header

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Document ID: Stock Halves XP100	Remington Arms Company
Part Name: Stock Halves Right & left	
Product Line: Pistol	Effective Date: 31-Jan-1990-19:00:00
Engineering Group: Shotgun	Origination Date: 22-Jan-1990

Process History

Status	Date/Time	Status Set	Responsible User
Submitted	31-JAN-1990	09:31:01.67	R.D.Polley
Comment:			
Fully Approved	31-JAN-1990	13:19:32.08	R.J.Orf
Comment:			
Normal Release	31-JAN-1990	19:00:12.57	"CART"
Comment:			

Process Revision Reasons

Date:	Reason For Revision:	Eng Log #:
23-Jan-1990	Retyped entire process from 281700 - Replaces old Paper process. Added Black Stock Halves, Changed operation numbers.	RDP 289789

Process Approval List

Approved By:	Badge #:	Date:	Designation:
R.J.Orf	19079	31-JAN-1990	Supervisor-Eng

Process General Notes

Notes:

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Process Material

Part Number	Qty	Description
15467		Stock Half XP100 - Right - Brown
15466		Stock Half XP100 - Left - Brown
1500	1.7g	Aluminum Stearate A-610
1501	1.3g	Zytel 105 BK10
1502	.191	(lbs.) Zytel 101 BN06
1504	.096	(lbs.) Zytel 101 OR06
94747		Stock Half XP100 - Left - Black
94748		Stock Half XP100 - Right - Black
1500	1.7g	Aluminum Stearate A-610
1501	.145	(lbs.) Zytel 105 BK10
1503	.145	(lbs.) Zytel 101 NC10

Process Routing

Dept	Oper	Operation Description	Part Numbers	
8162	10	Blend Nylon Resins	15467	15466
			94747	94748
8162	20	Dry Nylon Resin	15467	15466
			94747	94748
8162	30	Injection Mold	15467	15466
			94747	94748
8162	40	Degate and Inspect	15467	15466
			94747	94748
8162	50	Anneal	15467	15466
			94747	94748
		To MRP Crib # 16		

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Operation Step Detail

Operation: 10

Step

Operation / Step Description

Blend Nylon Resins

To make Black Stock Halves, Part #'s 94747 & 94748

1 Load 1 bag Zytel 105 BK10 (55 lbs.) Raw Material # 1501, 1 bag Zytel 101 NC10 (55 lbs.) Raw Material # 1503, and 111 grams of Aluminum Stearate, Raw Material # 1500, into Tumbler (steel Drum).

2 Tumble for 30 Min.

To make Brown Stock Halves, Part #'s 15467 & 15466

1 Load 1 bag Zytel 101 BN-06 (55 lbs.) Raw Material # 1502, 1/2 bag Zytel 101 OR-06 (27.5 lbs.) Raw Material # 1504, 180 grams of Zytel 105 BK-10, Raw Material # 1501, and 76 grams of Aluminum Stearate, Raw Material # 1500, into Tumbler (steel Drum).

2 Tumble For 30 Min.

Operation Tool Detail

Operation: 10

Tool Number

Tooling Description

IMS Tumbler
Steel drum
Triple Beam Balance
Std. Practice #280

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Operation Step Detail

Operation: 20

Step

Operation / Step Description

Dry Nylon Resin

When material is extremely wet, dry in oven, Otherwise hopper dryer on Molding machine will dry material.

- 1 Load Material on to trays.
- 2 Oven dry 4 hrs. @ 230 Deg. F.

Note: When holding material for more than 4 hours, reduce temperature to 175 Deg. F after initial 4 hour cycle.

Operation Tool Detail

Operation: 20

Tool Number

Tooling Description

Lydon drying oven
Trays - 34" X 17" X 1 1/2" deep

Operation Step Detail

Operation: 30

Step

Operation / Step Description

Injection Mold

When starting up weigh parts and adjust shot weight as needed.

Total Shot weight is: 263.5 + or - 1.0 gram

When machine is all adjusted, then weigh 3 parts every hour.

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Operation Tool Detail

Operation: 30

Tool Number

Tooling Description

HPM 650 Ton, 32 oz. Molding Machine.

Two (2) Cavity Mold

1. Right Half
2. Left Half

Trays for parts 36" X 36" X 1" deep

Mold Temperature controllers, IMS Model 1

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Operation Procedure Notes Operation: 30

Description

SET UP INFORMATION

HPM 650 Ton, 32 oz. Molding Machine

CYLINDER TEMPERATURE: (Degrees F)

Zone #1	: 550
Zone #2	: 550
Zone #3	: 550
Zone #4	: 550
Zone #5	: 600
Zone #5A	:
Nozzle	: 580

CYCLE: (seconds)

Clamp Close Time	: 75
1 st Shot Injection	: 15
2 nd Shot Injection	: 2
Total Injection Time	: 17
Injection Full Pressure Time	: 5
Semi-automatic	: Yes
Full automatic	: No
Clamp Open Time	: ---

MOLD:

Temperature Stationary Side (Deg. F) ..	: 140
Temperature Movable Side (Deg. F) ..	: 140
Temperature Additional Lines (Deg. F) ..	: ---
Max. Daylight Opening (in.)	: ---
Max. Knockout (in.)	: ---

CLAMP:

High Pressure (lbs.)	: 20,000
Low pressure (lbs.)	: 10,000

INJECTION PRESSURE:

High Pressure (lbs.)	: 2,000
Low Pressure (lbs.)	: 1,000
Weight of Shot (grams)	: 263
Booster	: ---

REMARKS:

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Continued ...

Operation Procedure Notes

Operation: 30

Description

VARIAC UNITS - RECOMMENDED SETTING

BAND 1 - NOZZLE - 100 %

ZONE 1

BANDS 2 & 3

Control 1 - 65 %

BAND 4

Control 2 - 65 %

BAND 5

Control 3 - 65 %

BAND 6

Control 4 - 65 %

ZONE 2

BAND 7

Control 1 - 60 %

BAND 8

Control 2 - 60 %

BAND 9

Control 3 - 60 %

ZONE 3

BAND 10

Control 1 - 60 %

BANDS 11 & 12

Control 2 - 60 %

BANDS 13 & 14

Control 3 - 60 %

ZONE 4

BANDS 15 & 16

Control 1 - 90 %

BANDS 17 & 18

Control 2 - 90 %

ZONE 5

BANDS 19 & 20

Control 1 - 85 %

BANDS 21 & 22

Control 2 - 85 %

BANDS 23 & 24

Control 3 - 85 %

Remarks: Variacs to be set at 100 % while starting machine.

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Operation Step Detail

Operation: 40

Step Operation / Step Description

- | Step | Operation / Step Description |
|------|---|
| | Degate and Inspect |
| 1 | Cut parts from runner system using 90 Deg. angle cutters as close as possible to the part. |
| 2 | Inspect parts for: <ul style="list-style-type: none"> 1. Filled parts 2. Splay 3. Sinks 4. Flashing 5. Cold Welds 6. Warpage 7. Color 8. Weight |
| 3 | Keep runner systems and scrap parts clean and in good containers so that they can be reground and sold or recycled. |

Operation Tool Detail

Operation: 40

Tool Number Tooling Description

90 Deg. gate cutters
Container for runner systems
Triple beam balance

Operation Step Detail

Operation: 50

Step Operation / Step Description

- | Step | Operation / Step Description |
|------|--|
| | Anneal |
| 1 | Place parts in trays, keeping them together as pairs. |
| 2 | Place full trays in Colton Annealing oven for one hour @ 175 Deg. F. <ul style="list-style-type: none"> 1. Stock Halves must be Annealed within one hour of being molded. |
| 3 | Place Rubber band over paired stock halves and put in containers for next operation. Stock Assembly. |

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Operation Tool Detail

Operation: 50

Tool Number

Tooling Description

	Colton Oven Trays 36" X 36" X 1" deep Container for parts Rubber bands
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