

Process Header

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Document ID: BOLT BODY 700 7 100	Remington Arms Company
Part Name: BOLT BODY	
Product Line: B/A RIFLE	Effective Date: 20-JUL-1990-9:00:00
Engineering Group: RIFLE TEAM	Origination Date: 09-FEB-1990

Process History

Status	Date/Time	Status Set	Responsible User
Submitted	9-FEB-1990 10:04:36.24		E. Ford
Comment:			
Recalled	9-FEB-1990 10:12:44.77		E. Ford
Comment:			
Submitted	26-JUL-1990 14:12:07.39		E. Ford
Comment:			
Fully Approved	26-JUL-1990 14:17:20.17		T.C.DOUGLAS
Comment:			
Normal Release	26-JUL-1990 14:17:47.20		T.C.DOUGLAS
Comment:			

Process Revision Reasons

Date:	Reason For Revision:	Eng Log #:
09-FEB-1990	RETYPE ENTIRE PROCESS FROM 285418 -JWB- ADDED OPER. 5, 35A, AND 40A. MADE OPER. 10, 20, & 30 ALTERNATE OPERATIONS. (10A, 20A, & 30A).	EJF 289828
28-FEB-1990	CHANGED DEPT. # FOR OPER. 5 FROM 8560 TO 8173.	EJF 289864
30-APR-1990	CHANGED DESCRIPTION FOR PART #20200 AND #20201 IN PROCESS MATERIAL SECTION.	EJF 290193
18-JUL-1990	REMOVED STATION #3 FROM TOOLING SECTION OF OPER. 5. CHANGED CUTOFF HOLDER IN TOOLING SECTION OF OPER. 5. REMOVED OPERATIONS 10A, 11R, 20A, 21R, 30A, 35A, AND 40A.	EJF 290449

Process Approval List

Approved By:	Badge #:	Date:	Designation:
T.C.DOUGLAS	07924	26-JUL-1990	ENG SUPT.

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Process Material

Part Number	Qty	Description
FOR 20200	1	BOLT BODY - LONG ACTION
USE-----		
1030	.68#	RAW MATERIAL - 0.75 DIAM. (67.6 LB. PER 100 PCS.)
FOR 20201	1	BOLT BODY - SHORT ACTION
USE-----		
1030	.57#	RAW MATERIAL - 0.75 DIAM. (57 LB. PER 100 PCS.)
FOR 15407	1	BOLT BODY - M/7 AND M/XP-100
USE-----		
1030	.51#	RAW MATERIAL - 0.75 DIAM. (50.5 LB. PER 100 PCS.)

Process Routing

Dept	Oper	Operation Description	Part Numbers
		DRAW RAW MATERIAL #1030	
8173	5	CUTOFF, GUNDRILL BOLT BODY FULL LENGTH, COUNTERBORE AND FACE BOTH ENDS, AND TAP ONE END.	20200 20201 15407

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Operation Step Detail

Operation: 5

Step

Operation / Step Description

CUTOFF, GUNDRILL BOLT BODY FULL LENGTH, COUNTERBORE AND FACE BOTH ENDS, AND TAP ONE END.

NOTE:

1. COOLANT: BLASER 2000
2. CONCENTRATION: 10% (REFRACTROMETER READING: 10)
3. MIXING PROCEDURE: USE JET MIXER AND REFRACTROMETER TO ENSURE PROPER CONCENTRATION.

1 LOAD 13' BAR OF #1030 INTO BAR FEEDER.

1. LOAD PROGRAM 0905 IN HEAD1.
2. RUN PROGRAM.

2 LOAD THE APPROPRIATE PROGRAM INTO MEMORY:

MODEL	HEAD1	HEAD2
M/700 LONG ACTION	0401	0402
M/700 SHORT ACTION	0501	0502
M/7 AND M/XP-100	0511	0522

3 MAKE SURE THERE IS 1.75" OF MATERIAL PROTRUDING FROM THE MAIN SPINDLE AND 1.415" OF A PART THAT HAS BEEN RUN THROUGH THE MAIN SPINDLE PROTRUDING FROM THE SUB-SPINDLE.

4 RUN PROGRAM.

***** SEE SKETCH FOR GUNDRILL *****

5 GAGING PROCEDURE FOR RUNOUT OF THE .425 DIAM. HOLE:

1. FREQUENCY - ONCE AT THE START OF EVERY NEW BAR.
2. MAKE SURE SUB-SPINDLE IS EMPTY BEFORE PROCEEDING.
3. LOAD PROGRAM 0901 IN HEAD1 AND PROGRAM 0902 IN HEAD2.
4. RUN PROGRAM.
5. REMOVE PART FROM SUB-SPINDLE AND CHECK TOTAL INICATOR READING (TIR) AT BOTH ENDS OF BOLT BODY.

6 GAGING PROCEDURE FOR ALL OTHER CHARACTERISTICS:

1. FREQUENCY - 1 OUT OF 5 PARTS.

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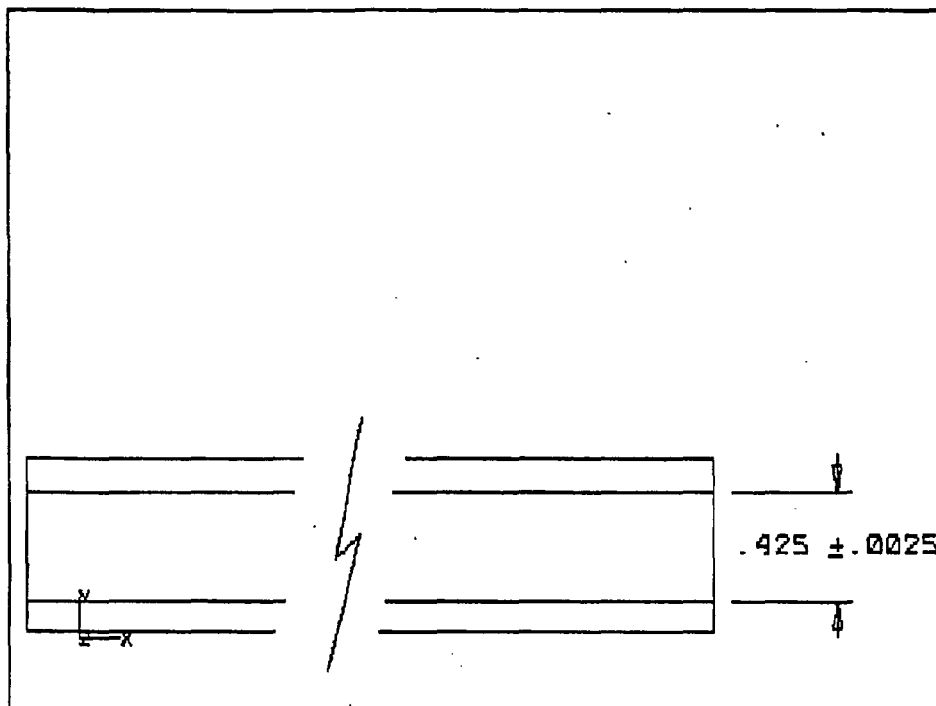
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BARBER - PRESALE R 0118405

TITLE: BOLT BODY

Operation Tool Detail

Operation: 5

Tool Number	Tooling Description
	MIYANO LATHE ANC-35
MAIN SPINDLE	S-16 ROUND SMOOTH COLLET PADS (.750 I.D.)
SUB-SPINDLE	S-16 ROUND SMOOTH COLLET PADS (.750 I.D.)
	*** HEAD 1 ***
STATION #2	BAR PULL TURNING TOOL HOLDER: MIYANO 5Q785100 BODY: MIYANO 5Q785600 PADS: B (THICKNESS = .825") SHIM PLATES: C (THICKNESS = .080") SPINDLE SPEED: 0 RPM FEED: 472 IPM
STATION #5	CUT-OFF TOOL CUT-OFF TOOL HOLDER: MIYANO 5Q785500 HOLDER: MANCHESTER 206-178 SUPPORT BLADE: MANCHESTER 333-102 CLAMP: MANCHESTER 435-155 INSERT: KENNAMETAL GS-125N KC720 SPINDLE SPEED: 1655 RPM FEED: 0.0015 IPR
STATION #6	TAP UNIT PLAIN HEAD: MIYANO 5Q785400 ROUND HOLE BUSHING: MIYANO 5H786100 HOLDER: TAPMATIC NSM-6 COLLET: TAPMATIC COLLET #24100 TAP: C-90187-V SPINDLE SPEED: 400 RPM FEED: 0.073 IPR
STATION #7	BORING BAR PLAIN HEAD: MIYANO 5Q785400 ROUND HOLE BUSHING: MIYANO 5H785700 HOLDER: SANDVIK S06M-STFCL-2 INSERT: SANDVIK TCMT 2(1.5)1-53 UM425 SPINDLE SPEED: 2975 RPM FEED: 0.003 IPR
STATION #8	GUNDRILL PLAIN HEAD: MIYANO 5Q785400 ROUND HOLE BUSHING: MIYANO 5H786000 GUNDRILL: B-48296 SPINDLE SPEED: 3000 RPM FEED: 0.0022 IPR
	*** HEAD 2 ***
STATION #2	GUNDRILL BUSHING PLAIN HEAD: MIYANO 5Q786100 HOLDER: B-48394 BUSHING: B-48378 SET-UP MASTER: A-48414

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BARBER - PRESALE R 0118406

TITLE: BOLT BODY

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Operation Tool Detail
Tool NumberOperation: 5
Tooling Description

STATION #5	TOOLING DESCRIPTION
	BORING BAR PLAIN HEAD: MIYANO 5Q786300 ROUND HOLE BUSHING: MIYANO 5E78400A HOLDER: SANDVIK S06M-STFCL-2 INSERT: SANDVIK TCMT 2(1.5)1-53 UM425 SPINDLE SPEED: 2650 RPM FEED: 0.003 IPR **** GAGING ****
B-43704 MOD. NO. 80-312 FEDERAL C8I	PLUG GAGE .4275-.4225 DIA. OLYMPIC INSPECTION BENCH CENTER-RUNOUT .010 TIR DIAL INDICATOR
C-89732	LENGTH GAGE
A-51177 B-80007-W	DEPTH OF C'BORE-REAR PLUG GAGE-DIA. REAR
B-80216-W B-87417	THREAD PLUG-PITCH D & DEPTH THREAD PLUG-FUNCTIONAL
C-51184 B-80007-H B-87415 A-80034	DEPTH OF C'BORE-FRONT (FINISH) PLUG GAGE-DIA. FRONT CHAMFER GAGE-FRONT ALIGNMENT GAGE-FRONT

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