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MARTINI CADET BREECH BLOCK BUSHING
AUGUST, 1990 INSTRUCTIONS

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1. Face front of receiver and trigger guard square with barrel threads. Holding fixture with Morse taper for headstock of lathe, threaded for receiver is stored in Martini parts drawer.
2. Counterbore barrel threads 3/4" diameter X .050" deep.
3. Instal trigger guard screw. Polish front of assembled receiver/trigger guard smooth.
4. Strip breech block of all parts.
5. A. Indicate firing pin in 4 jaw chuck. Face off front of boss flat across, removing the tip at the same time.
B. Center drill end of firing pin with smallest center drill.
C. Drill #53, .500" deep, drill #50 (.070"), .500" deep.
D. Remove firing pin from chuck. Silver solder a standard RCBS decapping pin (.070" dia.) into hole. Do not shorten at this time. Protrusion will be set at step #12.



6. Pack rear of block with wet asbestos and anneal front with Presto-Lite torch.

7. A. Screw 1/4" I.D. bushing into breech block.

B. Hold breech block in milling attachment, rear of block to headstock. Insert long 1/4" drill in bushing and adjust square with bed of lathe.

C. Drill 1/4" hole thru front of breech block.

D. Remove bushing.

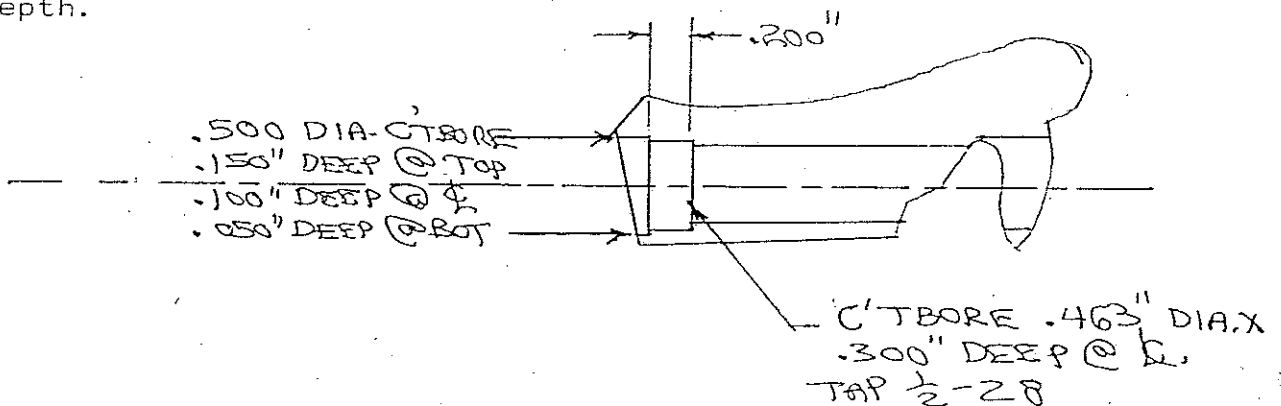
E. Drill 25/64" thru.

F. Ream 13/32" (.406") thru.

8. A. Reverse breech block in milling attachment. Insert 3 foot long piece of .406" diameter drill rod thru hole in breech block. Align drill rod square with bed of lathe.

B. Hold small dial indicator in 4 jaw chuck. Indicate .406" Diameter hole in center of headstock.

- C. Use full .500" diameter helix counterbore & .406" diameter pilot. Counterbore face of breech block .100" deep at centerline, approx. .150" deep at top and .050" deep at bottom.
- D. Hold .463" diameter counterbore with .406" pilot in 1/2" end mill holder. Counterbore .300" deep at centerline, approx. .350" deep at top and .250" deep at bottom.
- E. Hold 1/2-28 tap, with .406" pilot and slight lead in tap Glenzer in headstock. Run lathe at slowest back gear speed. Tap 3 or 4 threads deep. Do not attempt to go to full depth with this tap under power.
- F. Remove breech block from milling attachment.
- G. Use flat bottom 1/2-28 tap with .406" pilot. Hand tap to depth.



9. A. Hold a piece of 1/2" diameter oil hard drill rod in 1/2" end mill holder. Cut this piece about 3"- 3.5" long.

B. Center drill with .093" tip diameter center drill, .150" deep to corner of .093" dia. tip.

C. Drill #53 approx. .400" deep.

D. Drill #50 (.070") approx. .400" deep.

E. Rough drill the .406" dia. X .100" deep hole, undersize and shallow. Use 3/8" drill, about .075" deep.

F. Bore hole .406" diameter X .100" deep.

G. Measure .220" from rear of bushing. At this point cut a groove with the threading tool .020" deep per side.

H. Thread 28 per inch from rear end of bushing to this groove.

Fit and try threads with breech block. Fit tight, no

wiggle!!!!.

- I. Turn off about two turns of thread from the rear end of the bushing, to clear the small, unthreaded bottom of the tapped hole in the breech block.
- J. Remove bushing from lathe.
- 10.A. Screw bushing into block, TIGHT!!! screw in and out a few times to seat threads, then screw in TIGHT.
- B. Clamp breech block on it's side on surface plate.
- C. Set a square piece of heavy steel against the side of the bushing. Run the 1/4" mouse on the side of this piece of steel. Scribe a line on the top, center of the bushing. Move the square piece of steel to the other side of the bushing and scribe again. (These lines will actually be on the sides of the bushing.)
- D. Turn breech block over, clamp and scribe with mouse on the other side.

E. Center punch on each side of the bushing at the scribed lines.

F. Mark the top of the bushing with red fingernail polish.

G. Remove bushing from breech block. If more than one breech block is being bushed, stamp the last digit of the serial number on the bottom of the .406" X .100" counterbore.

H. Hold bushing in milling attachment by the parent metal.

Level with the punch marks top and bottom.

I. With a .125" wide keyway cutter, mill a screwdriver slot across the rear of the bushing, .125" wide X .180" deep.

J. Assemble bushing to breech block. Screw in tight.

Screwdriver slot should be level.

K. Saw off parent metal close to breech block face.

11.A. Place .100" approx shim against inside face of milling attachment jaws. Clamp breech block & bushing assembly.

B. Turn milling attachment to 4 1/2 degrees.

C. Mill face of bushing and breech block flat.

D. Assemble block to receiver with lever in place.

E. Measure from end of receiver with depth mike and check face of breech block for square.

F. If necessary, clamp breech block in milling attachment as in step #11.A., adjust angles of milling attachment as required and remill. Repeat this as necessary until breech face is square with front face of receiver.

G. Polish breech face on flat surface, to 320 grit.

12. Adjust firing pin protrusion to .050".

13.A. Assemble complete action except extractor.

B. Assemble 22 L.R. test barrel to receiver.

C. Fire with a 22 L.R. cartridge in chamber to check for center strike of firing pin.

D. Adjust if and as necessary for center strike.

14. Mark a witness line across bottom, center of breech block and bottom of bushing.

15.A. Disassemble bushing from breech block. Use special screwdriver with .125" thick blade, made from an Allen Wrench and stored in the Martini drawer.

B. Heat bushing cherry red, quench in oil.

C. Polish face of bushing bright.

D. Place bushing on an old file, face up.

E. Heat file, allow heat to flow into bushing until bushing turns gray in color. Apply heat slowly. Do not rush this!!!! Allow bushing to cool slowly.

F. Degrease bushing and breech block.

G. Apply screw thread grade Loc-Tite to threads and screw bushing in to witness mark.

H. Repolish face of breech block 320 grit.