

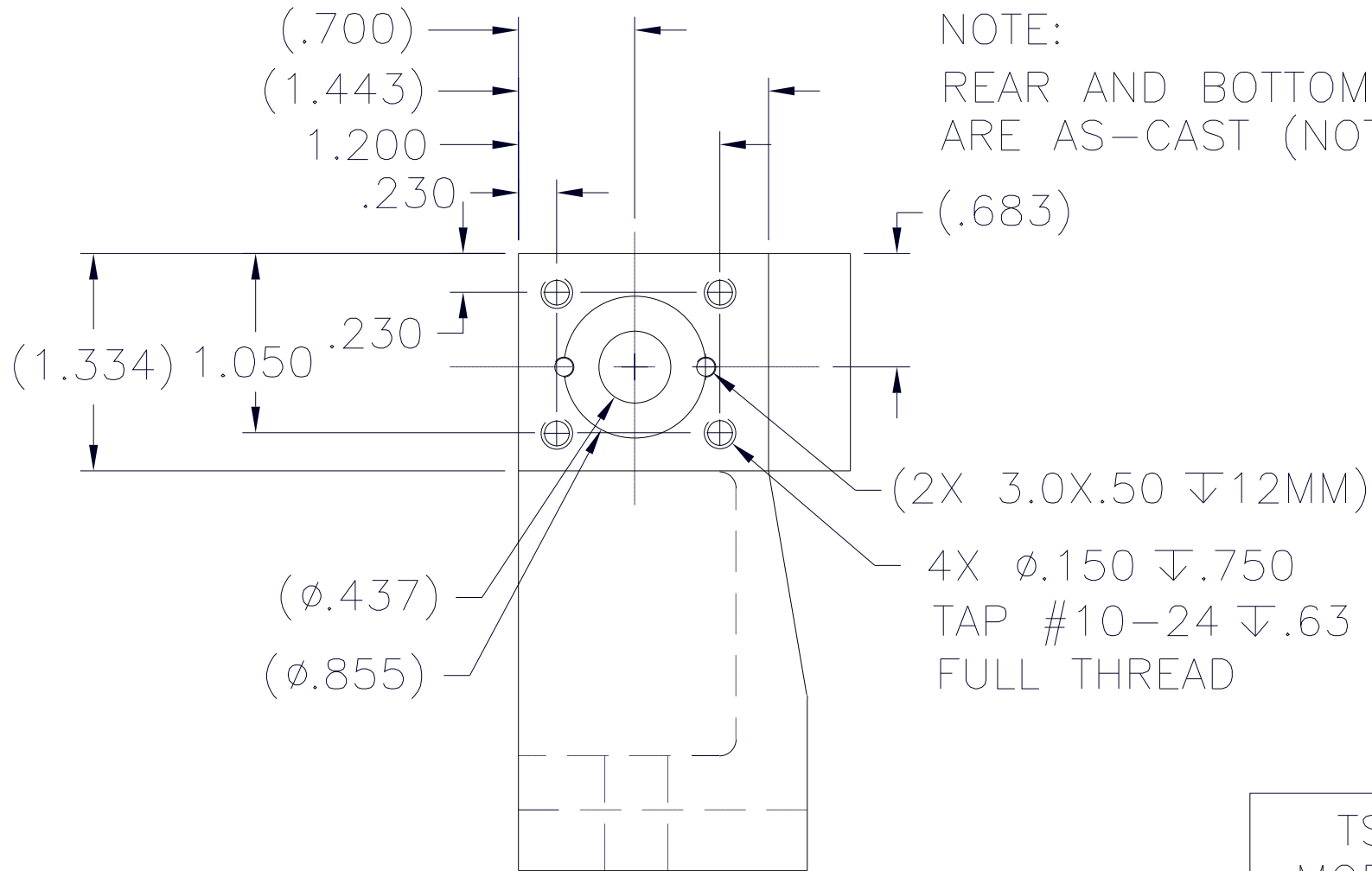
AR	MINWAX WINDSOR OAK	#719	WOOD-SHEEN OIL/STAIN	WOOD FINISH	18
AR	PANEF CORP, MILWAUKEE WI	WHITE	GREASE, LITHIUM, MULTI-PURPOSE	LUBRICANT	17
AR	RUST-OLEUM AEROSOL	# 7925	COLONIAL RED, AMERICAN ACCENTS	PAINT	16
AR	DURO		5-MINUTE EPOXY	ADHESIVE	15
1	#10-32		STEEL, ZINC PLATED	ELASTIC STOP NUT	14
1	#10-32 X 1.25 (MODIFIED)		STEEL, ZINC PLATED	BOLT, PAN HEAD, PHILLIPS	13
1	Ø.250-20 X 2.0 (MODIFIED)		STEEL, ZINC PLATED	BOLT HEX HEAD	12
2	#10-32 X .750		STEEL, BLACK FINISH	SOCKET HEAD CAP SCREW	11
1	#10-32 X .625		STEEL, ZINC PLATED	THUMBSCREW	10
1	Ø 1.000 ROUND BAR	1018	COLD FINISHED MILD STEEL (CRS)	BOSS	9
1	13" LENGTH		1/2" EMT CONDUIT, ZINC PLATED	SHAFT	8
1	1-1/2 X 4" LONG	ANY	HARDWOOD	GRIP	7
1	AS DETAILED		VARIOUS	HANDLE ASSEMBLY	6
1	5/8 X 3/16	STEEL	CHAIN LINK TENSION BAR, ZINC PLATED	LEVER	5
1	.500 PLATE OR BAR	6061-T6	ALUMINUM	LINK	4
1	.500 PLATE OR BAR	6061-T6	ALUMINUM	BRACKET	3
1	Ø.750 ROUND BAR	1018	COLD FINISHED MILD STEEL (CRS)	PUSHROD EYE FITTING	2
1	Ø.500 ROUND BAR	1018	COLD FINISHED MILD STEEL (CRS)	PUSHROD, TS RAM	1
REQ'D	SIZE	SPEC	MATERIAL	DESCRIPTION	ITEM

COMPONENTS AND MATERIALS REQUIRED FOR ONE ASSEMBLY

NOTES:

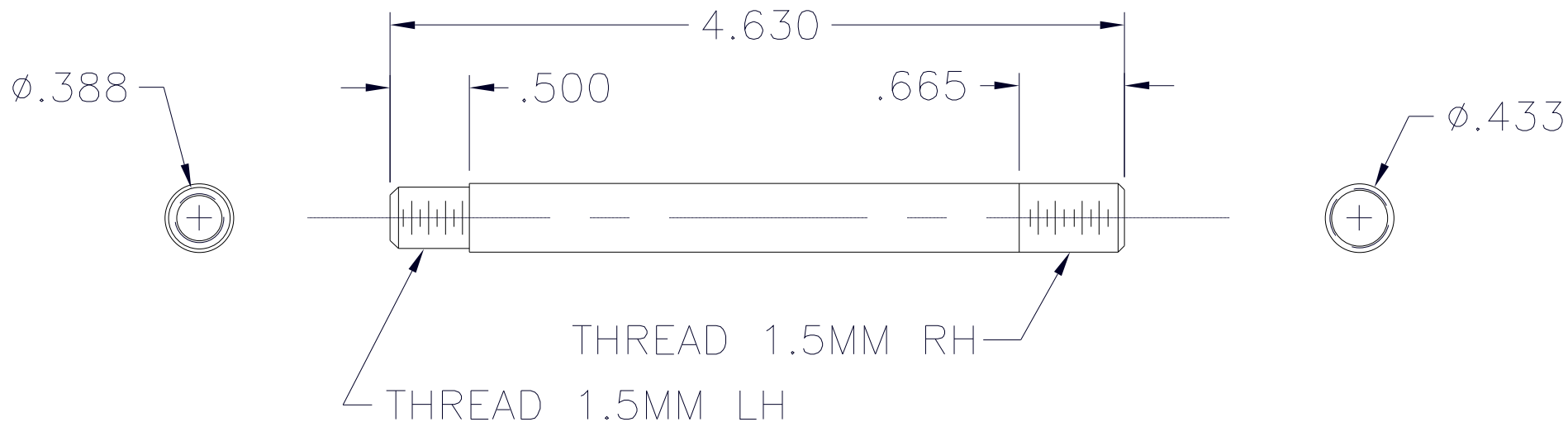
1. CLEAN SURFACES TO BE PAINTED OR GLUED WITH ALCOHOL.
2. LENGTHS OF LEVER (PC 5) OR HANDLE TUBE (PC 8) MAH BE ADJUSTED TO YOUR PREFERENCE. ORIGINAL WAS MADE EXTRA LONG TO SATISFY THE NEEDS OF A HANDICAPPED USER.
3. EXPOSED STEEL COMPONENTS CAN BE FINISHED WITH COLD BLUE OR TOOL BLACK SOLUTIONS.
4. EYE (PC 2) CAN BE MADE AS A CLEVIS FITTING IF DESIRED.
5. THE BAR USED FOR THE LEVER (PC 5) MAY BUCKLE IF A PIN HOLE IS DRILLED FOR THE CLEVIS.
6. THE LAYOUT SHOWS 4 BOLT HOLES FOR THE BRACKET IN THE TS CASTING. TWO WOULD BE SUFFICIENT.

NOTE: DIMS IN PARENTHESIS ARE FROM MY CASTING
YOURS MAY VARY



TS BODY
MODIFICATION

TS CASTING, OUTBOARD END VIEW
NEW BRACKET MOUNTING HOLE LOCATIONS



① PUSHROD
 DETAILS

HINT:

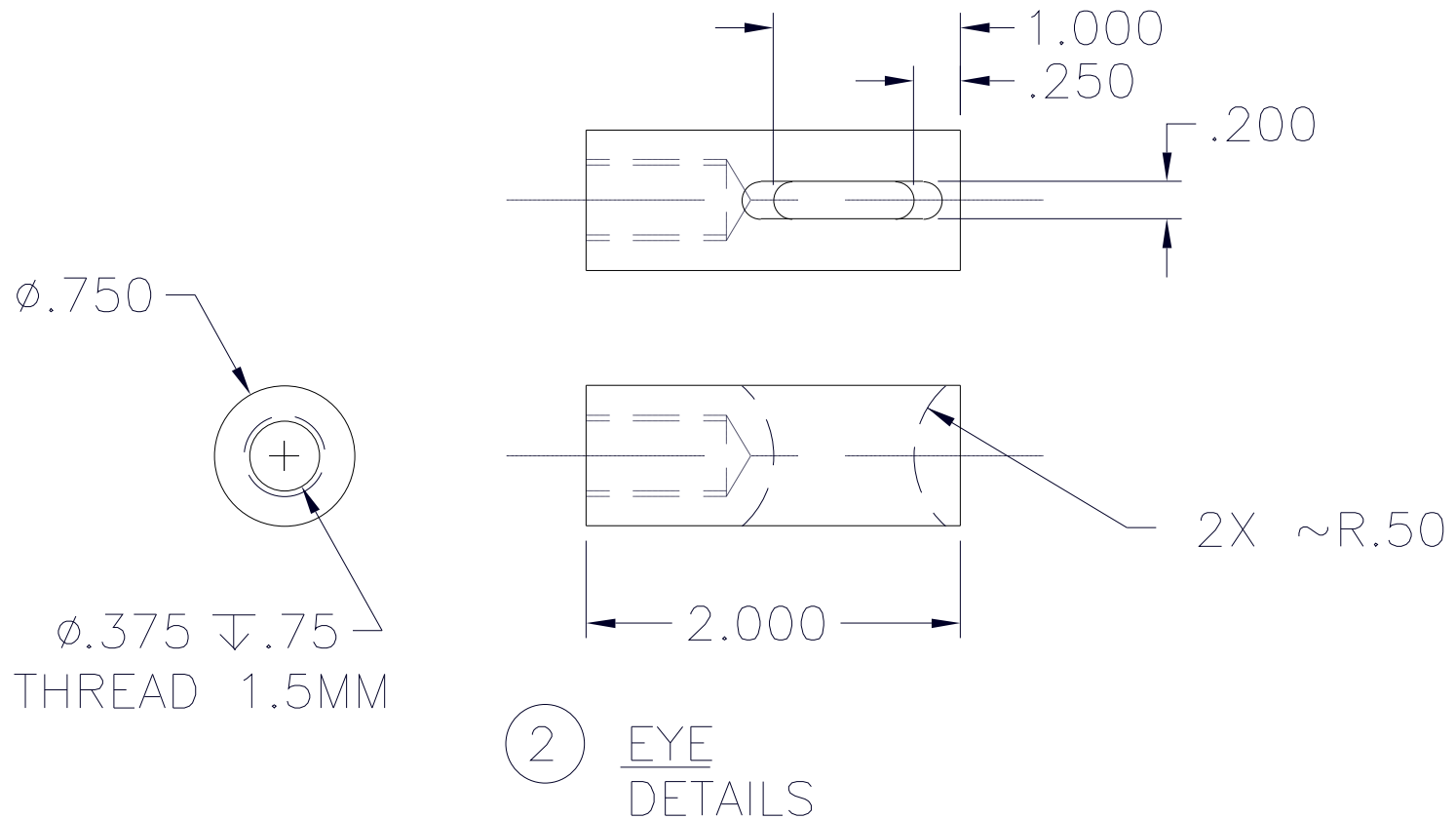
CHAIN DRILL THE SLOT IN THE DRILL PRESS VISE.

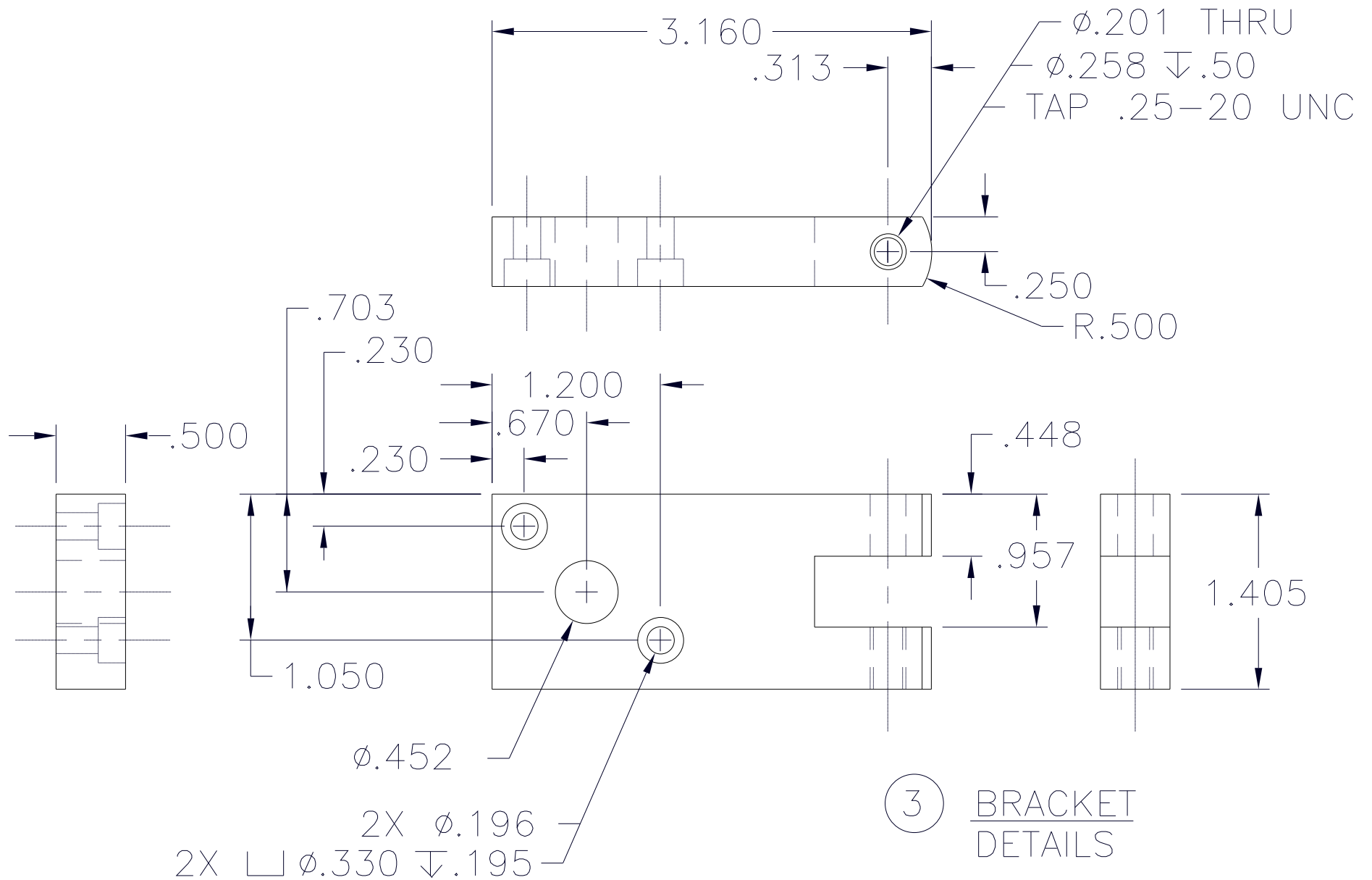
MAKE A BUTTON THE SAME DIAMETER AS THE WORKPIECE, TO PLACE ON TOP OF THE WORK, LONG ENOUGH TO FILL THE VISE JAW HEIGHT.

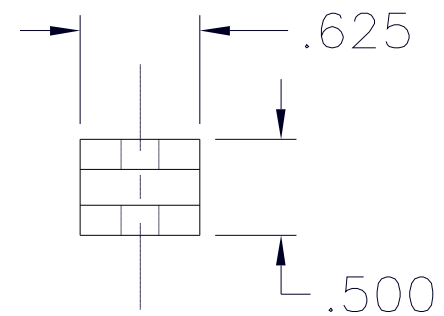
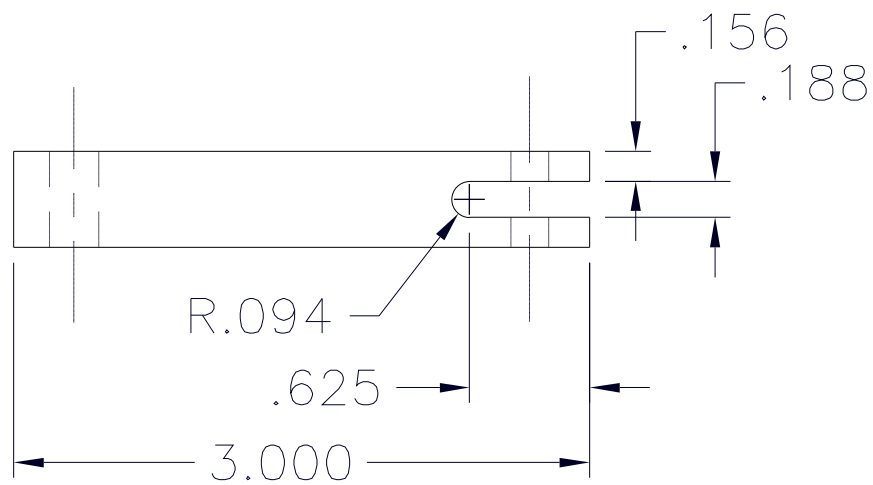
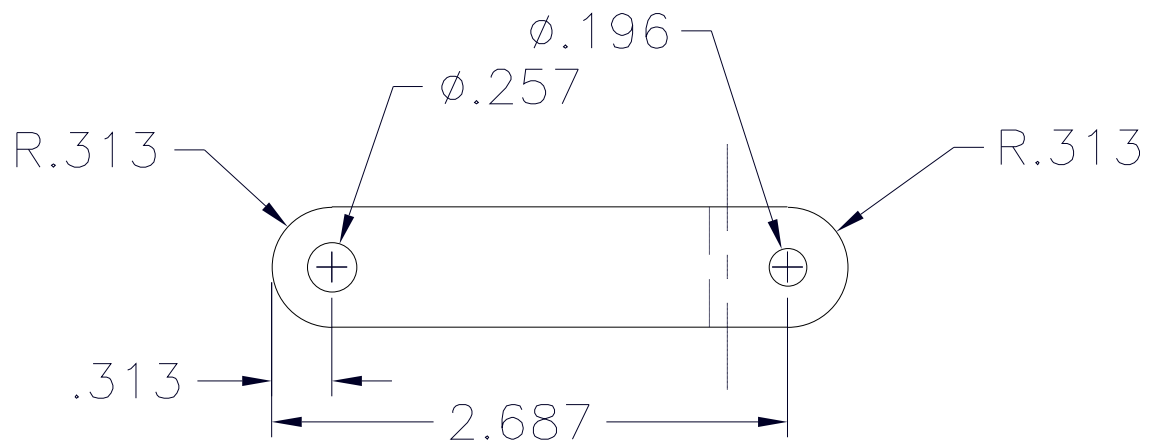
DRILL THROUGH THE BUTTON THE CHAIN DRILL SIZE.

THE BUTTON WILL GUIDE THE DRILL TO MAKE OVERLAPPING HOLES.

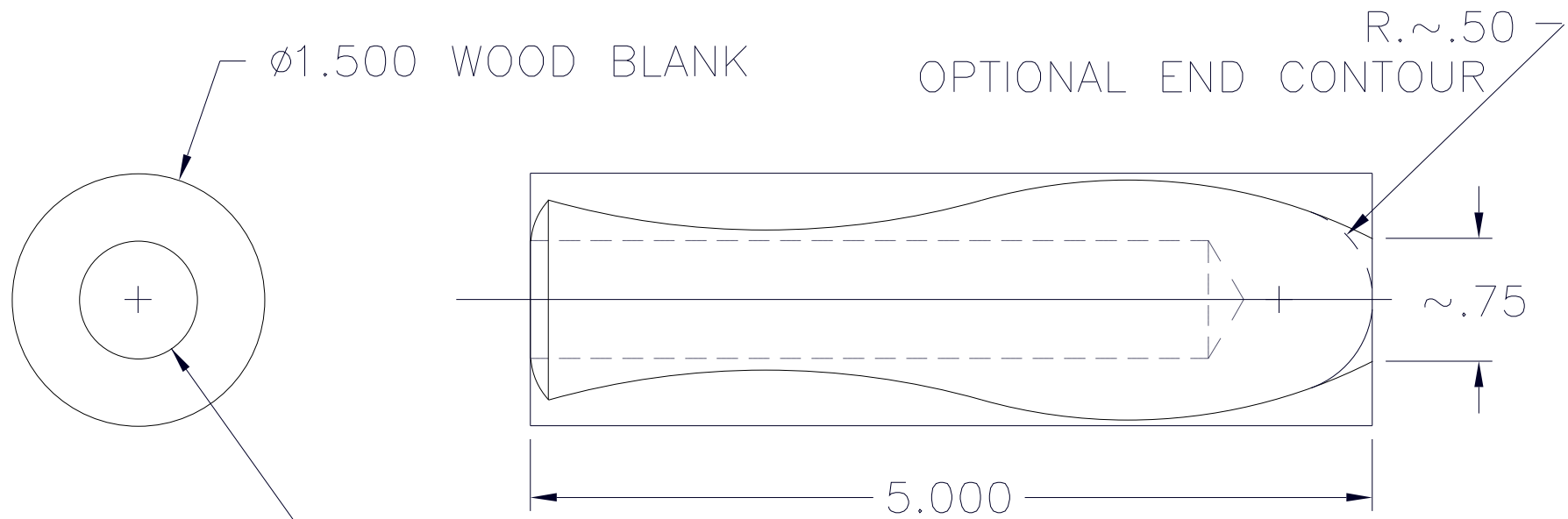
FILE THE SLOT TO SHAPE & FINISH.







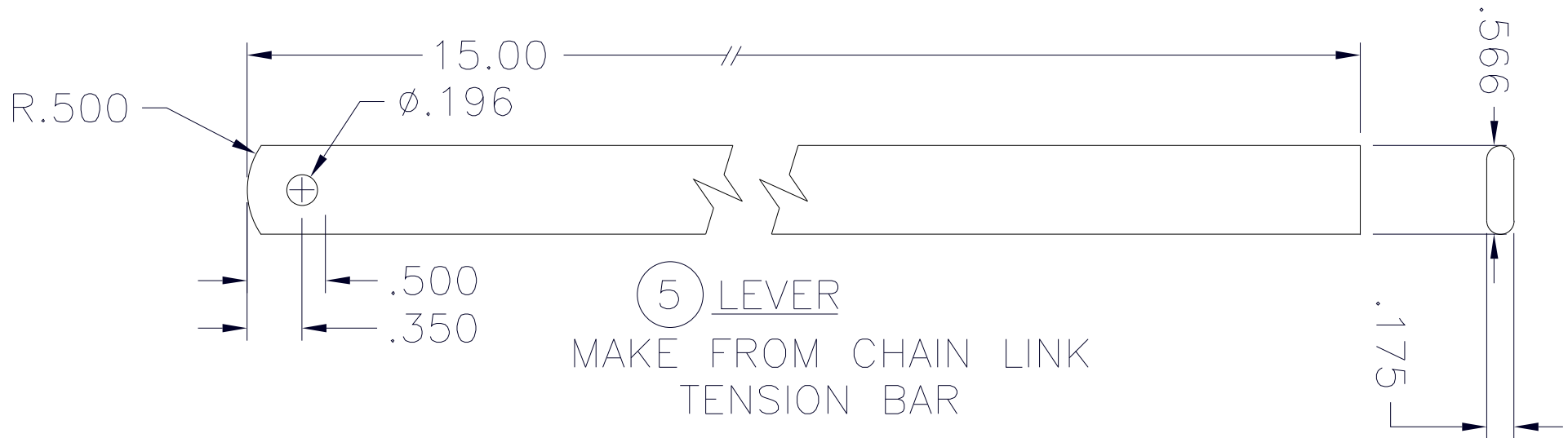
④ LINK
DETAILS



DRILL $\phi 23/32$ 4.0 DEEP
 EPOXY TO TUBE – PC 6B
 TURN PROFILE PER SHT 9 DIMENSIONS

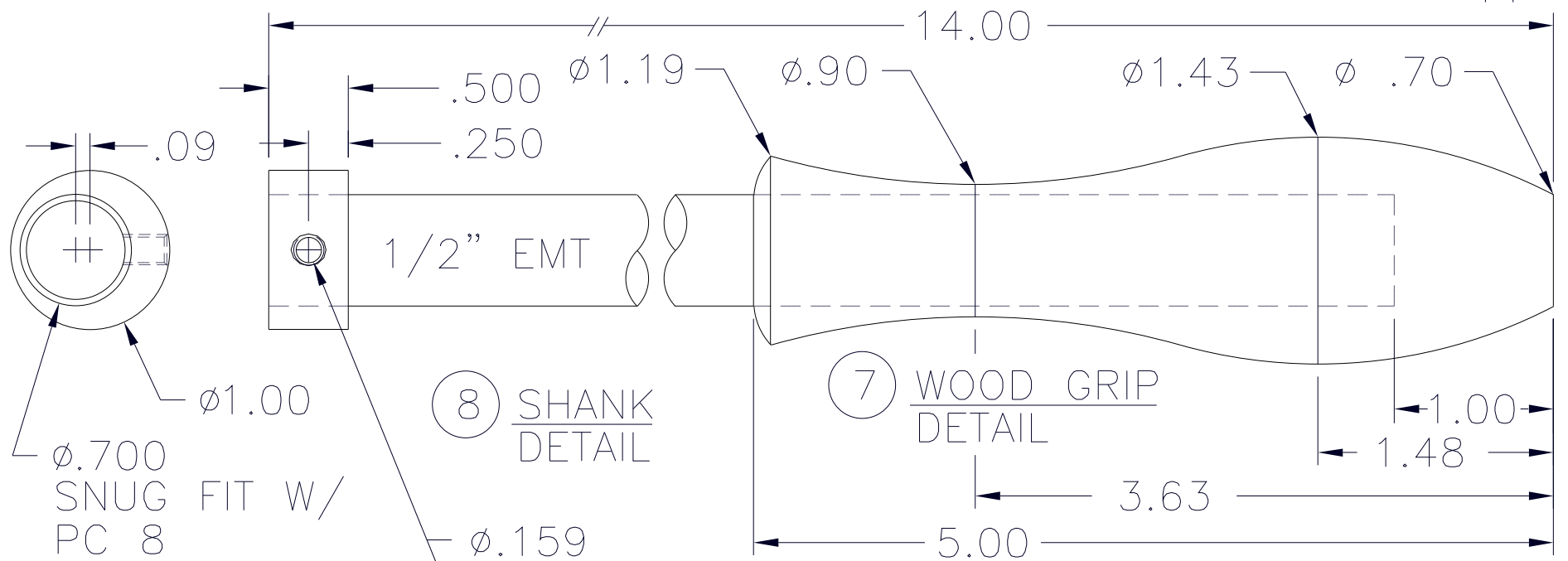
NOTE: IF THE MINILATHE IS EQUIPPED WITH EITHER A 3-JAW 4" OR 4-JAW 3" CHUCK, THE HANDLE MAY BE TURNED WITH THE EMT TUBE PASSING THROUGH THE HEADSTOCK, GRIPPED BY THE CHUCK.

⑦ GRIP LAYOUT



⑤ LEVER

MAKE FROM CHAIN LINK
TENSION BAR



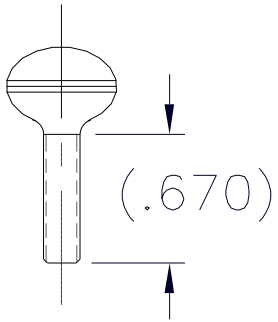
⑧ SHANK
DETAIL

⑦ WOOD GRIP
DETAIL

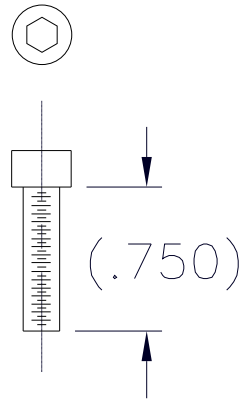
⑨ BOSS
DETAIL

$\phi .159$
 $\sphericalangle \phi .200 \times 82^\circ$
 TAP #10-32 UNF-2B
 (THROUGH TUBE WALL)

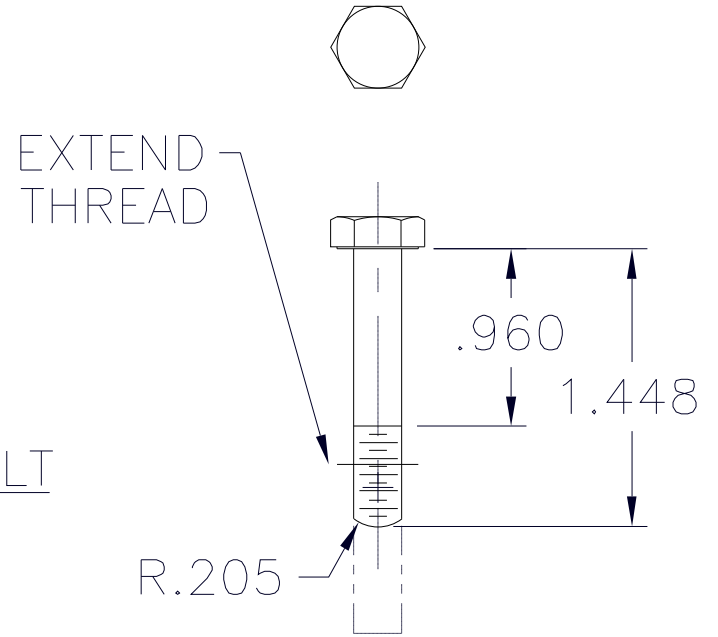
⑥ HANDLE
ASSEMBLY



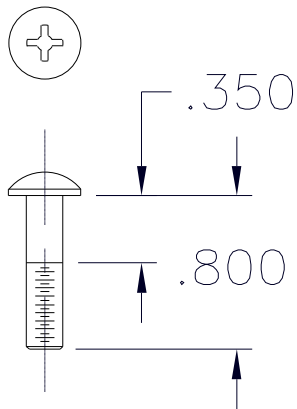
⑩ THUMBSCREW
REFERENCE



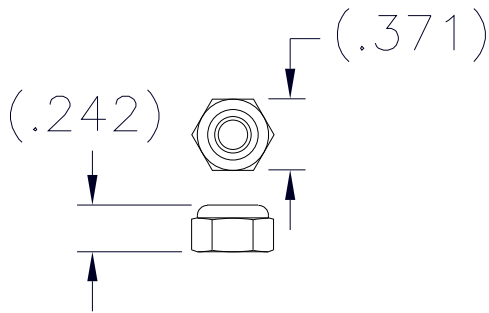
⑪ SOCKET HEAD BOLT
REFERENCE



⑫ LINK PIN
DETAIL
MAKE FROM
1/4-20X2" BOLT



⑬ LEVER PIN
DETAIL



⑭ NUT, LOCK
REFERENCE

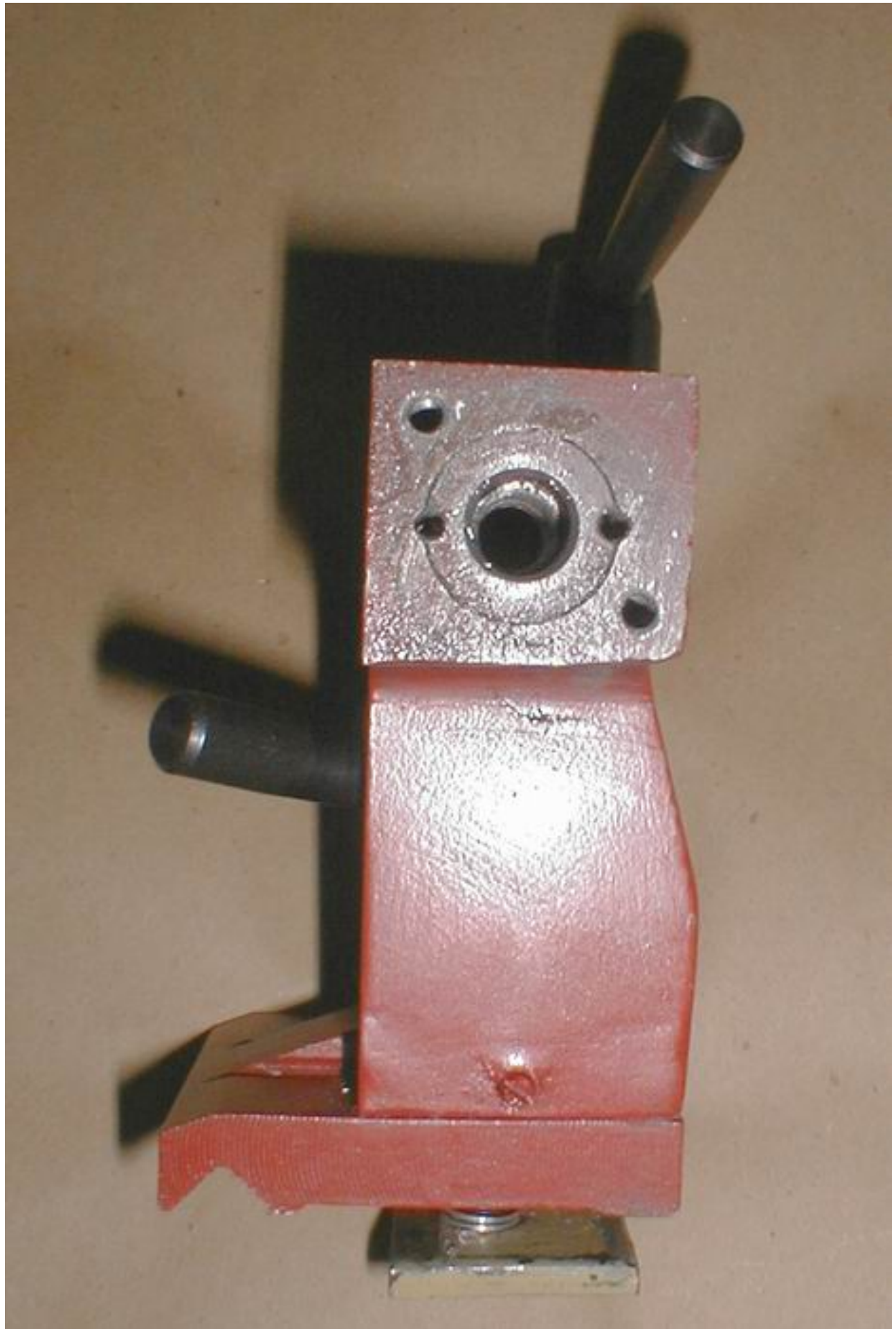
CONVERSION STEPS LEVER ACTUATED TAIL STOCK RAM

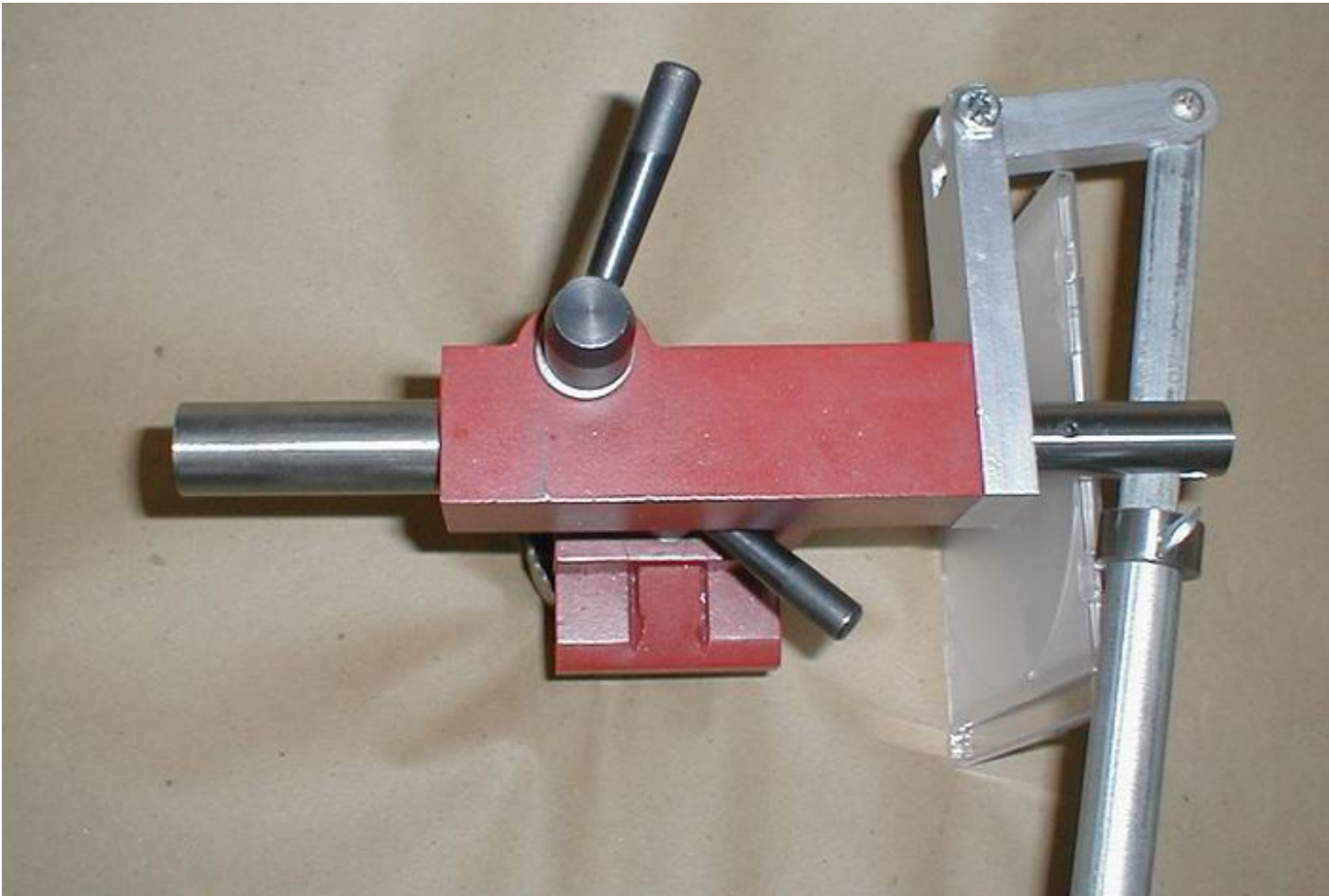
1. Remove Ram index screw/locknut (from underside of body).
2. Advance Ram all the way off the leadscrew. Remove spindle.
3. Remove handwheel locknut, loosen wheel setscrew, remove wheel.
4. Remove two retaining cup cap screws, take off retainer.
5. Withdraw the leadscrew from the body.
6. Clean end of TS body with Alcohol, apply layout color.
7. Mark-out the 4 bracket retaining hole centers. Punch hole centers.
8. Place TS body in drill vise, position to true vertical.
9. Drill/tap the 4 #10-24 holes (can be #10-32, or 5.0x.8mm)
10. Loosely install Bracket plate (3), with Bolts (8), insert Pushrod (1).
13. Insert Ram into TS body, engage/tighten Pushrod thread.
11. Incrementally snug the mounting screws, testing the Pushrod for fit through the Bracket clearance hole. Install index screw & nut.
12. Adjust hole size to obtain free sliding fit of Pushrod when fully tightened and fully retracted.
14. Assemble Link (4) w/ Bracket (3) using Bolt (9).
15. Thread Eye onto end of LS, almost tight.
16. Insert Lever through Eye, attach to Link with bolt (13)/nut (14).
17. Place Handle tube over lever, tighten thumbscrew.
18. Adjust spindle index screw for minimum free play, secure locknut.
19. Try it out. If lathe is not fastened down, expect it to move sometimes when lever force is applied. Hold on the Headstock.

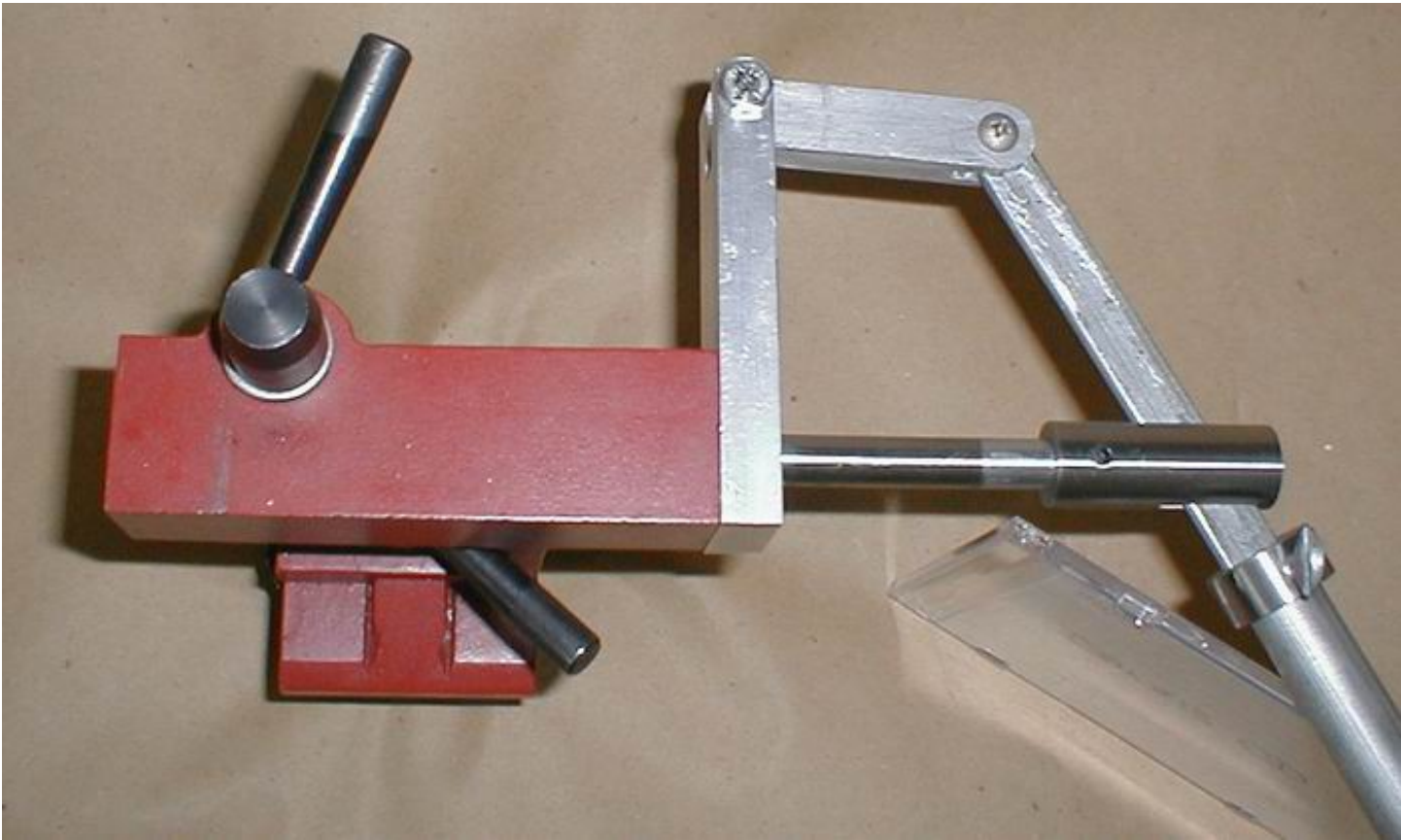














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All ideas, procedures, modifications and whatever is described or shown here is to be used at risk of the reader.

Take care and work safely.