

BURGMASER

SERVICE MANUAL

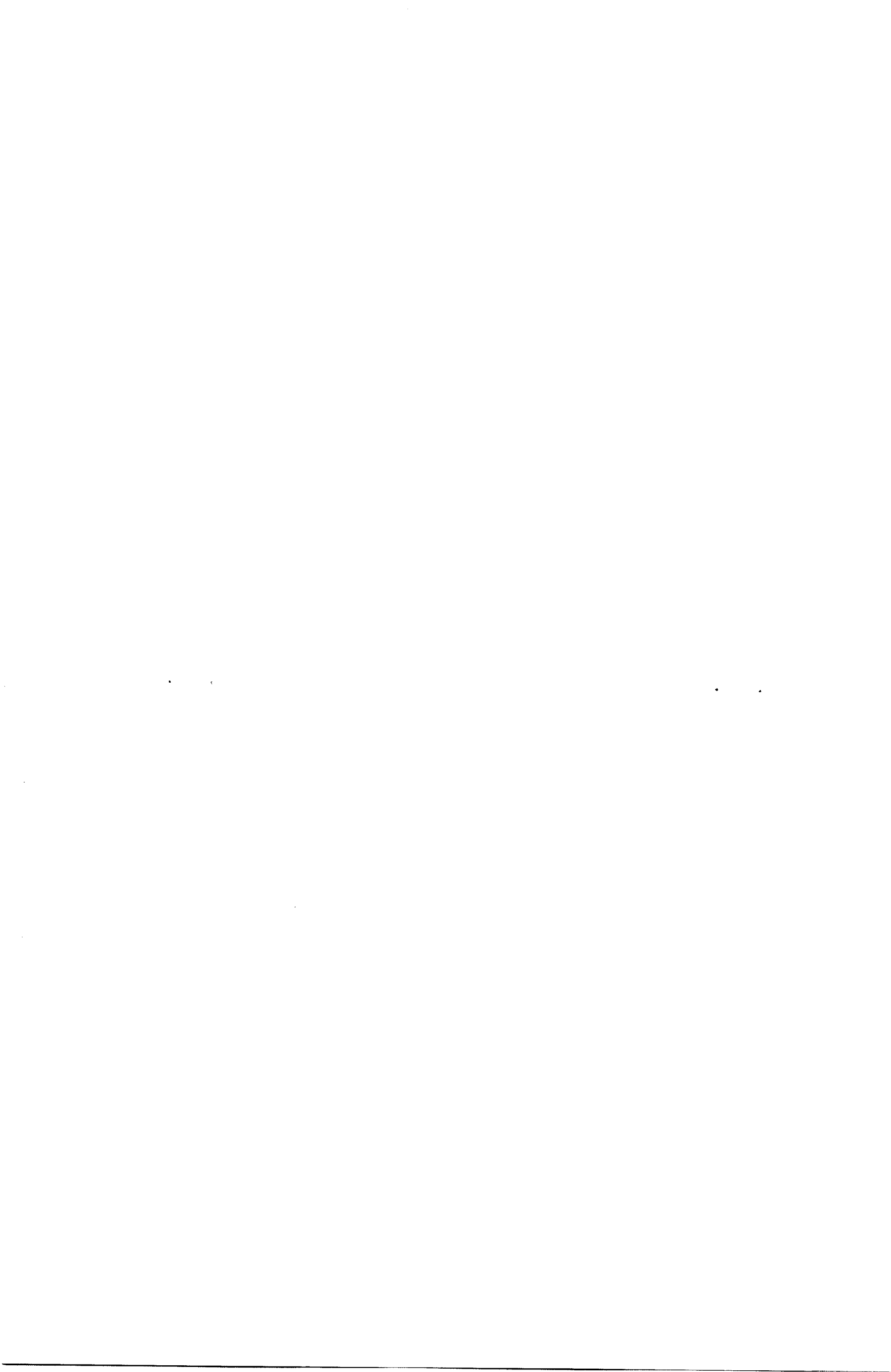
Model OB

BENCH MODEL DRILLING AND TAPPING MACHINE

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MANUFACTURED BY

BURGMASER  HOUDAILLE

13900 S. Broadway—Los Angeles, California 90061



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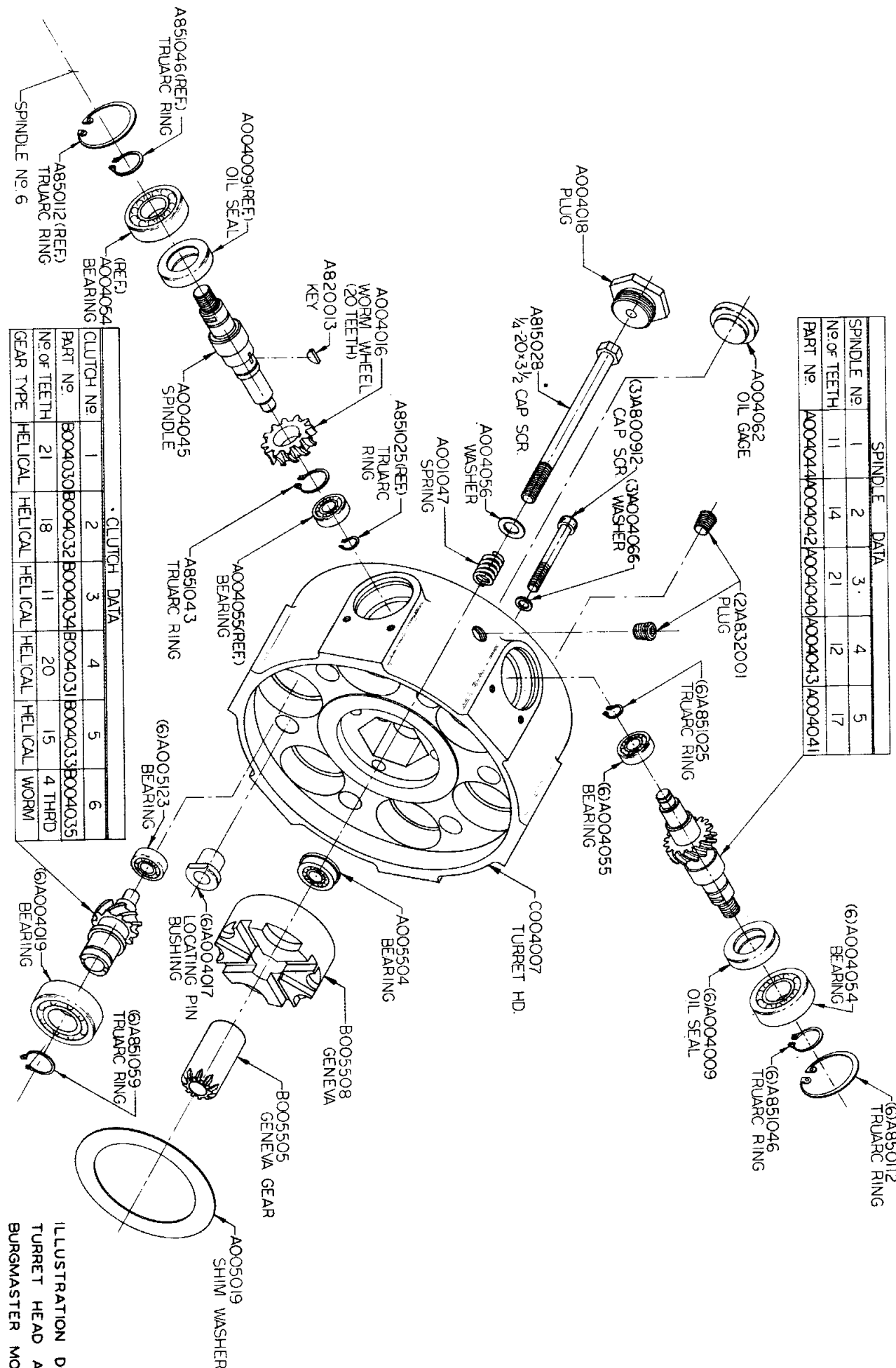
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This manual is your introduction to the BURGMASER Bench Model Drilling and Tapping Machine and, if thoroughly read, will give you valuable information in the installation, operation, and servicing of the BURGMASER.

The manual should be available to operators, foremen, maintenance men and any other personnel that have dealings with the BURGMASER, so that should it be necessary to make minor adjustments, it can be used for reference.

Quality materials and the finest engineering skill have been built into the BURGMASER Bench Model Machine and, with the proper care and use, you are assured trouble-free, accurate, and economical operations for the life of the machine tool.

INSTALLATION:

- A. After removing from packing, remove all grease and mount feed handle, elevating screw and cotter pin and spindle guard, per drawing.

It is possible that part no. B01307 — Follower Bracket, has been jarred loose in transit. Make certain that it is adjusted per paragraph C.

LUBRICATION:

- A. Before operating machine the slide gear case and turret must be lubricated.

Proceed as follows:

1. Turret head and slide gear case should be filled with spindle #4 in operating position. Pipe plug will be found between spindles #1 and #6. Oil sight gage in face of turret should show full. Use only Mobil Compound DDJ or equivalent.
2. Put a few drops of light machine oil daily on the slide portion of the gear box casting — part #D05031-5.
3. No other lubrication is needed.
4. Gear box should be drained, flushed and refilled after first 50 hours of use.

NOTE: FOR BEST RESULTS CHANGE OIL IN GEAR BOX EVERY 300 HOURS OF OPERATION.

OPERATION:

- A. A high and low speed range is provided by a two-step timing belt drive. To change speed range, remove belt cover at rear of machine and change belt to second range of pulleys.

2. CAM SHAFT ADJUSTMENT

The cam shaft — part #05121, is held in position by the left and right centers, part nos. B05114 and B05115.

To adjust cam shaft, loosen jam nuts at both centers and by turning centers locate cam shaft in the position that will allow knife — part #05217 to drop into groove without interference.

Check adjustment by raising slide to actuate the trigger pin and raising and lowering knife to assure an exact setting. Retighten jam nuts and check setting by rotating brass washer — part #05117.

Washer must be free to turn.

NOTE: IF EITHER CAM SHAFT CENTERS OR CRANK SHAFT PIN ARE TOO TIGHT, IT WILL RESULT IN A BINDING ACTION THAT CAUSES A DOUBLE ACTION OF THE DRIVING SHAFT AND LOCATING PIN DURING THE INDEX CYCLE.

ELECTRIC MOTOR

1. The 110-V, single phase motor is manufactured by the General Electric Company and carries Manufacturer's Warranties. It is provided with an overload safety mechanism which will automatically break contact if the motor overheats dangerously. To reset, wait a few moments for motor to cool then press reset button at side of motor shell.

This motor is rated at 50° Centigrade rise and will operate at temperatures as high as 190° without injury to the motor and without thermo reset 'kicking' out.

2. Other Motor repairs can be obtained at any authorized G.E. service station.

FACTORY SERVICE

1. For major repairs or adjustments contact your local distributor.
2. For information on special length of columns, or special sequence of speeds at spindles, contact your local distributor.

SEQUENCE CHANGE OF TURRET SPINDLE SPEEDS

1. In order to disassemble or attempt a change of sequence of turret spindle speeds, it is necessary that you have available Burgmaster Spindle and Clutch Puller — part #B01501 and a minimum of two — part #04009 oil seals, in the event that any seals are damaged in dis-assembly.

2. DISASSEMBLY OF TURRET HEAD

- A. Remove plug — part #04018 at turret face.
- B. With 7/16 socket wrench, remove turret stud — part #04051, first loosening set screw, part #05829.
- C. Remove Turret from slide.
- D. With spindle and clutch puller — part #B01501, remove clutch assembly.
- E. Remove Truarc Ring — part #04067.
- F. With puller, tap out spindle assembly.
- G. Press in new spindle assembly and replace Truarc Ring.
- H. Tap in mating clutch, being careful that gears mesh properly while pressing.
- I. Remount turret and stud.
- J. Reset turret head per paragraph F.

To change position of feed handle part #01771 remove all tension on counter weight spring part #01773 and remove set screw part #01778. Holding slide part #D05031 in it's upper position pull entire feed handle assembly outward until pinion is disengaged from rack. It is not necessary to remove completely. With feed handle in desired position carefully reinstall feed handle assembly. Replace set screw part #01778 and readjust counter weight spring.

C. FOLLOWER BRACKET

At the rear of the slide gear case is a bracket with 2 roller followers — part #B01307. This bracket keeps the slide gear case free of side play. If radial side movement develops in the slide, lightly tap bracket into a positive contact against both roller followers and tighten securely with Allen wrench.

D. TURRET HEAD

1. If turret head gives indications of being loose against the slide face, or an oil leak develops at bottom of turret between slide and turret, it indicates a loosening of the turret stud — part #04051. To adjust, remove hex plug — part #04018 on face of turret and using 7/16 socket wrench, tighten slightly.
2. To remove turret, loosen set screw — part #05829, remove stud completely and pull turret head straight out.

E. DRIVING CLUTCH

To replace Driving Clutch (05421), proceed as follows:

1. Remove Turret Head, following instructions for Turret Head Removal, page 8.
2. Insert Allen Wrench into front face of Driving Shaft #05421 and hold #05417 with open end wrench. This will allow the Driving Jaw to be unthreaded from Driving Clutch #05422.
3. Replace with new driving clutch and reinstall turret head.

F. RESETTING OF TURRET HEAD TO CORRECT "OVER" OR "UNDER" INDEXING

This machine has been properly set at the factory so that the indexing mechanism carries turret to the next position without over or under travel from final index position.

The mechanism indexes the turret head to an approximate position and a taper pin locates the turret head to a final accurate position. The Geneva Star Wheel is fastened to the turret head with three screws. Should these screws become loose during operation, it will result in over or under indexing. To reset, proceed as follows:

1. Loosen the three locking screws in face of turret.
2. Remove 1/16 pipe plug on face of turret, insert timing wrench — part #04129.
3. Turn slightly to the right or left depending on whether the turret was over or under traveling at the end of the index cycle.
4. Re-tighten locking screws and test indexing.

IMPORTANT: WHEN TURRET IS PROPERLY SET, IT WILL HAVE A VERY SLIGHTLY CLOCKWISE MOVEMENT AT THE END OF THE INDEX CYCLE DUE TO THE LOCATING PIN ACTION IN THE TAPERED BUSHING.

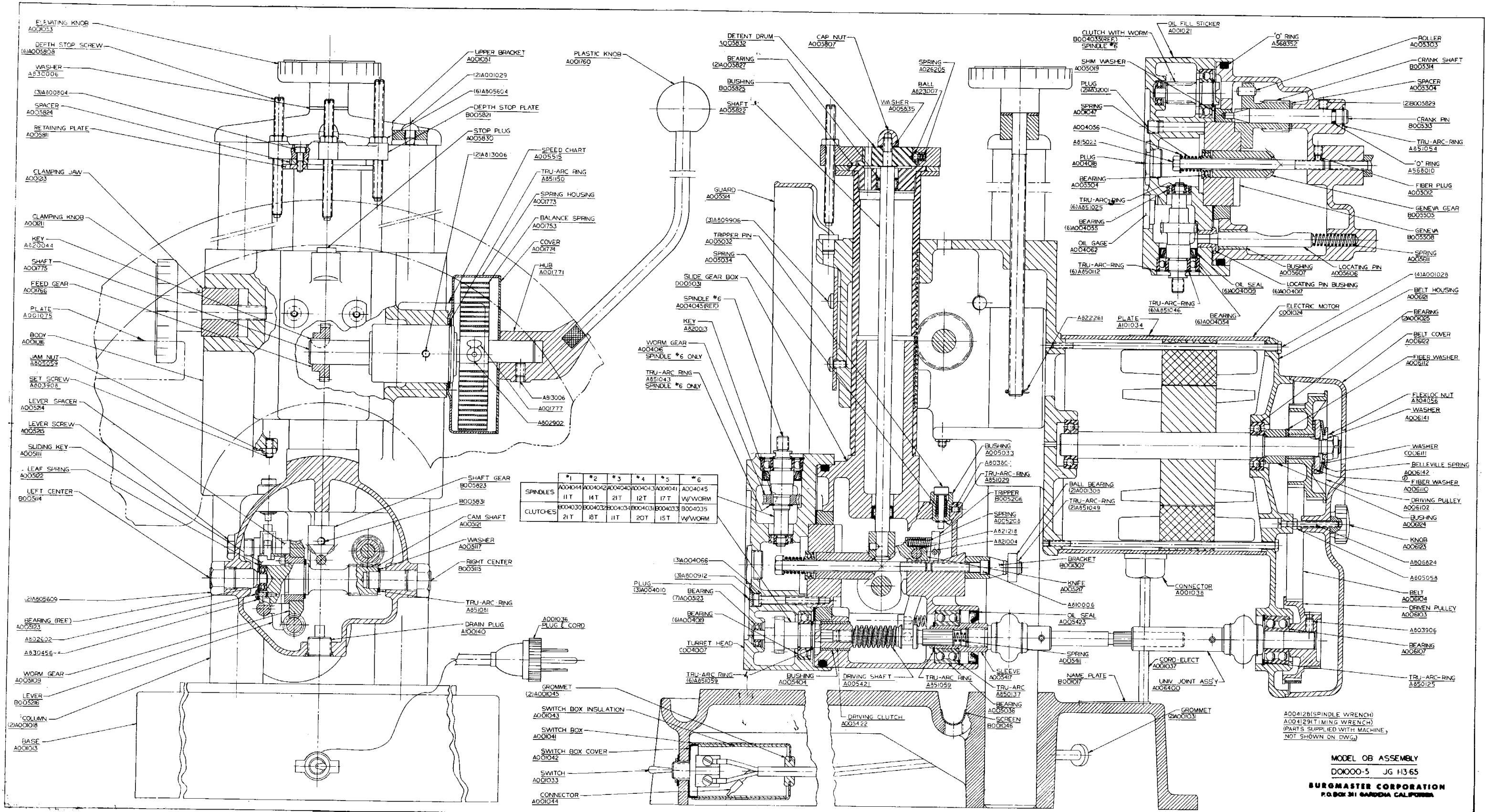
5. Replace 1/16 pipe plug.

CAUTION: IF TURRET STUD IS TOO TIGHT TURRET WILL FAIL TO COMPLETE INDEX. CHECK ADJUSTMENT CAREFULLY.

G. SLIDE GEAR BOX

1. CRANK SHAFT TIMING —

The crankshaft — part #B05314 must be set with the crank throw — part #05303 at approximately two o'clock when the cam shaft is in normal disengagement from worm gear.



	*1	*2	*3	*4	*5	*6
SPINDLES	A004044	A004042	A004040	A004043	A004041	A004045
	11T	14T	21T	12T	17T	V/WORM
CLUTCHES	B004030	B004032	B004034	B004031	B004033	B004035
	21T	18T	11T	20T	15T	V/WORM

A00412B (SPINDLE WRENCH)
 A00412B (TIMING WRENCH)
 (PARTS SUPPLIED WITH MACHINE,
 NOT SHOWN ON DWG.)

MODEL 08 ASSEMBLY
 D0000-5 JG H3-65
BURGMASTER CORPORATION
 P.O. BOX 311 GARDENA, CALIFORNIA