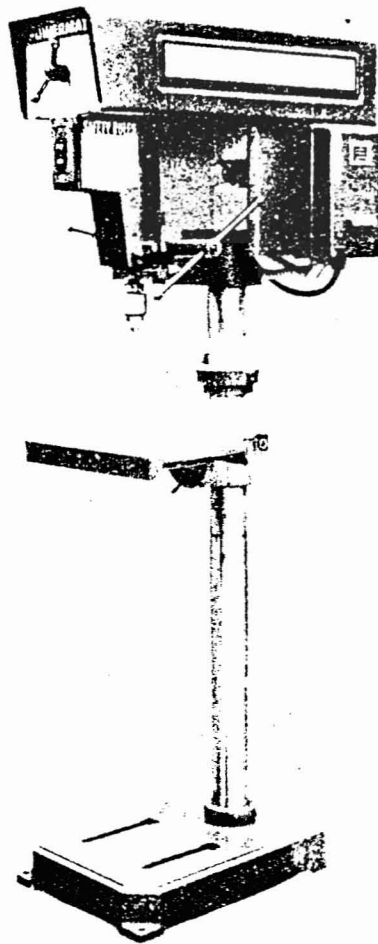


Model 1150-A
15" (381mm) Drill Press

MAINTENANCE INSTRUCTIONS AND PARTS LIST



Model 1150 A

Serial # : 9215S108

Better By DesignTM
POWERMATIC[®] 

McMINNVILLE, TENNESSEE 37110 ☐ AC 615-473-5551

800 248 0144

FORWORD

SAFETY FIRST

This manual has been prepared for the owner and those responsible for the maintenance of a Powermatic Model 1150 A Drill Press. Its purpose aside from proper maintenance and operations is to promote safety through the use of accepted practice. Read the safety and operating instructions thoroughly before operating the machine.

In order to obtain maximum life and efficiency from your Powermatic Drill Press follow all the instructions in the operating instructions and maintenance manuals carefully.

The specifications put forth in this manual were in effect at the time of publication. However, owing to Powermatic's policy of continuous improvement, changes to these specifications may be made at any time without obligation on the part of Powermatic.

WARRANTY

Powermatic, a Division of DeVlieg-Bullard Inc., Morrison Road, McMinnville, Tennessee 37110 ("Powermatic") warrants to its authorized distributors of Powermatic products and the original purchasers for such distributors, all products manufactured by Powermatic to be free of defects in material and workmanship for a period of twelve (12) months from the date of delivery from its authorized distributors or 2000 hours of use, whichever occurs first. During said warranty period Powermatic will, at its option, repair or replace any product (or component part thereof) proving defective during said period. This warranty applies only to products which are used in accordance with all instructions as to operation, maintenance and safety set forth in the catalogs, manuals, and/or instruction sets furnished by Powermatic. This warranty becomes effective only if the accompanying card is fully and properly completed and returned to Powermatic within ten (10) days from date of delivery to the original purchaser.

This warranty does not apply to items that would normally be consumed or require replacement due to normal wear (blades, lubricants, etc.); to electrical motors and components which are warranted by their manufacturer; or the costs of removal, shipment for service and reinstallation. Claims relating to electrical components must be taken to the component manufacturer's local authorized repair station for service.

This warranty is null and void if the product has been subjected to (1) misuse, abuse or improper service or storage; (2) accident, neglect, damage or other circumstances beyond Powermatic's control; (3) modifications, disassembly, tampering, alterations or repairs outside of Powermatic's factory not authorized by Powermatic; or to any product not bearing its original serial number plate. This warranty does not apply to normal wear and tear, corrosion, abrasion, or repairs required due to natural causes or acts of God.

To obtain the fastest possible warranty service you must first notify in writing the authorized Powermatic distributor from whom you purchased the product specifying (1) the product by catalog number and serial number, (2) the date the product was delivered to you, (3) a description of the problem for which you seek warranty service, and (4) evidence of proof of purchase. Should circumstances prohibit you contacting the distributor then contact the Powermatic factory directly. If your claim is covered by this warranty, your Powermatic distributor will provide you with instructions as to how and where service will be provided. On simple warranty replacement or repairs, installations instructions will be provided to allow correction by customer personnel. Powermatic assumes no responsibility for products which are returned without its prior written authorization. Powermatic's obligation under this warranty shall be exclusively limited to repairing or replacing (at Powermatic's option) products which are determined by Powermatic to be defective upon delivery, F O B. (return freight paid by customer) Powermatic's factory, and on inspection by Powermatic. In no event shall Powermatic's liability under this warranty exceed the purchase price paid for the product.

THIS IS POWERMATIC'S SOLE WRITTEN WARRANTY. ANY AND ALL OTHER WARRANTIES WHICH MAY BE IMPLIED BY LAW, INCLUDING ANY WARRANTIES FOR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE HEREBY LIMITED TO THE DURATION OF THIS WRITTEN WARRANTY. POWERMATIC SHALL NOT BE LIABLE FOR ANY LOSS, DAMAGE, OR EXPENSES DIRECTLY OR INDIRECTLY RELATED TO THE USE OF ITS PRODUCTS OR FROM ANY OTHER CAUSE OR FOR CONSEQUENTIAL DAMAGES (INCLUDING WITHOUT LIMITATION, LOSS OF TIME, INCONVENIENCE, AND LOSS OF PRODUCTION). THE WARRANTY CONTAINED HEREIN MAY NOT BE MODIFIED AND NO OTHER WARRANTY, EXPRESS OR IMPLIED, SHALL BE MADE BY OR ON BEHALF OF POWERMATIC.

DRILL PRESS SAFETY INSTRUCTIONS

1. Read, understand and follow the safety and operating instruction found in this manual. Know the limitations and hazards associated with a 1150 A Drill Press. A safety rules decal is installed on the belt guard of this machine to serve as a reminder of basic safety practice.
2. Grounding the drill press: Make certain that the machine frame is electrically grounded and that a grounding lead is included in the incoming electrical service. In cases where a cord and plug are used, make certain that the grounding lug connects to a suitable ground. Follow the grounding procedure indicated by the National Electric Code.

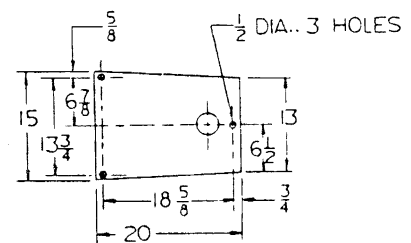
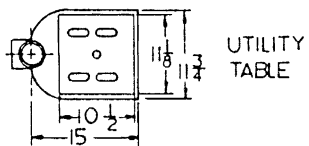
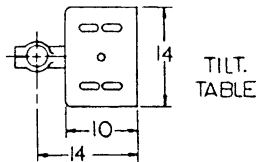
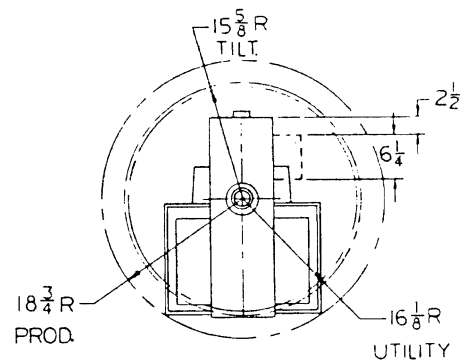
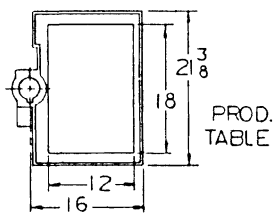
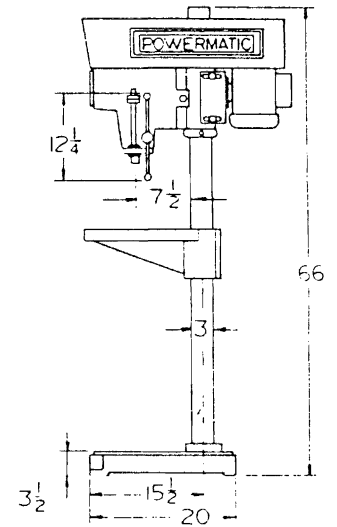
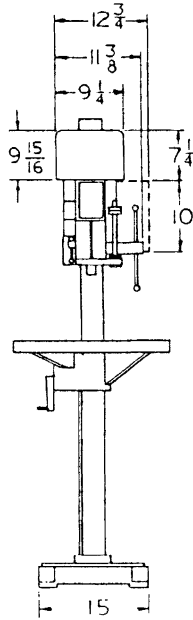
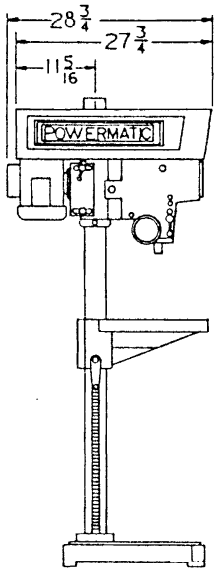
3. **Eye Safety:** Wear an approved safety face shield, goggles or glasses to protect eyes when operating the drill press.
4. **Personal Protection:** Before operating the machine, remove tie, rings, watch and other jewelry and roll up sleeves above the elbow. Remove all outer loose clothing and confine long hair. Protective-type footwear should be worn. Hearing protectors should be used where noise exceeds the level of exposure allowed in Section 1910.95 of the OSHA regulations. **Do Not Wear Gloves.**
5. **Work Area:** Keep the floor around the machine clean and free of tools, tooling, stock scrap and other foreign material, and oil, grease or coolant to minimize the danger of tripping or slipping. Be sure the table is free of chips, tools and everything else not required for the task to be performed. Powermatic recommends the use of anti-skid floor strips on the floor area where the operator normally stands and that each machine's work area be marked off. Make certain the work area is well lighted and ventilated. Provide for adequate work space around the machine.
6. **Guards:** Keep all machine guards in place at all times when the machine is in use. **Do Not Operate the Machine with the Guard Off.**
7. **Do Not Overreach:** Maintain a balanced stance and keep your body under control at all times.
8. **Maintain Tools in Top Condition:** Keep tools sharp and clean for safe and best performance. Dull tools can increase the feed force required and can result in burning the stock or seizing up, causing the work to be pulled free from its holding device. Dull or improperly sharpened drills will not produce a straight hole.
9. **Use the Proper Speed and Feed:** A table is provided in the operating instruction manual as a guide in selecting the correct speed and feed rate for a variety of materials. For materials not shown, consult the material supplier for correct speed and feed rate. Adjust speed on variable speed models only with the power on. On step cone models, make sure power is off and the spindle has come to a complete stop before opening the access door to change speeds.
10. **Never Drill Freehand:** Always block or clamp the work piece. A drill bit or tap can seize up causing the work piece, jig, or fixture to rotate with the spindle and can cause serious injury.
11. **Remove Key Chucks:** When a key chuck is used, remove it immediately after using it to lock or unlock a tool in the chuck. If it is not removed, starting the spindle can cause it to be thrown off the chuck and could result in serious injury.
12. **Hand Safety:** Keep hands away from the spindle when the machine is under power. Never clear chips when the spindle is under power and never use the hands to clear chips; use a brush or chip rake. Chips are razor sharp and can cause serious injury. **Do Not Change Tools with the Spindle Rotating Under Power.**
13. **Spindle Rotation:** Be sure the rotation of the spindle is correct for the tool being used.
14. **Machine Adjustments:** Make all machine adjustments with power off except speed on a variable speed model or feed rate on machine equipped with power feed.
15. **Machine Capacity:** Do Not attempt to use the machine beyond its stated capacity or for operations requiring more than the rated horsepower of the motor. This type use will reduce the productive life of the machine and could cause the breakage of parts which could result in personal injury.
16. **Avoid Accidental Starting:** Make certain the motor switch is in the "off" position before connecting power to the machine.
17. **Careless Acts:** Give the work you are doing your undivided attention. Looking around, carrying on a conversation, and "horseplay" are careless acts that can result in serious injury.

18. **Job Completion:** If the operator leaves the machine area for any reason, the drill press should be turned off and the spindle come to a complete stop before he departs. In addition, if the operation is complete, he should clean the machine and work area. **Never** clean the machine with power on and never clean chips with the hands; use a brush or chip rake.
19. **Disconnect Machine:** Before performing any service or maintenance.
20. **Replacement Parts:** Use only Powermatic or factory authorized replacement parts and accessories; otherwise, the drill press warranty and guarantee will be null and void.
21. **Misuse:** Do Not use the 1150 A Drill Press for other than its intended use. If used for other purposes, Powermatic disclaims any real or implied warranty and holds itself harmless for any injury that may result from the use. Do Not equip a 1150 A Drill Press with a motor larger than 1 horsepower nor with a motor with a speed greater than 1800 rpm unless specifically authorized to do so in writing by Powermatic.

SPECIFICATIONS

Spindle Travel	6" (152mm)
Quill Diameter	2-3/16" (55.6mm)
Column Outside Diameter	3" (76mm)
Column Wall Thickness	3/16" (4.8mm)
Column Length, Floor Model	66" (1676mm)
Column Length, Bench Model	42" (1067mm)
Table Working Surface	
Utility Table	10" x 11" (254 x 279mm)
Tilting Table	10" x 14" (254 x 356mm)
Production Table	12" x 18" (305 x 457mm)
Base Working Surface	13" x 15½" (330 x 394mm)
Capacity in Cast Iron	5/8" (15.9mm)
Capacity in Steel	1/2" (12.7mm)
Throat Depth	7½" (190mm)
Spindle Speeds	
Variable Speed Models	
1800 RPM Motor	450 — 4800 RPM
1200 RPM Motor	300 — 3200 RPM
Step Pulley Models	
1800 RPM Motor	400 - 840 - 1580 - 2800 - 5300 RPM
1200 RPM Motor	260 - 560 - 1050 - 1875 - 3550 RPM
Weight Nets	See Catalog

DIMENSIONAL DRAWING



MACHINE INSTALLATION ADJUSTMENTS AND MAINTENANCE

RECEIVING:

Remove drill press from shipping container and check for damage. Report any damage to your distributor immediately. Attach accessories shipped with drill press, then clean protective coating from table, column, base and spindle with a good commercial solvent. Read instruction manual thoroughly for assembly alignment, maintenance and safety instructions.

INSTALLATION:

Mount machine on a solid foundation and lag to the floor through holes provided in base of drill press. The head and table of the machine have been lowered on the column for convenience in packaging. If a crane is not available to raise the head, proceed as follows:

1. Place a block of wood between spindle nose and top of table.
2. Loosen head locking handles, bumping them lightly to make certain they release.
3. Turn handle counter - clockwise (toward the operator). Head will move upward 6".
4. Lock head again with locking handles, raise table to a position just under spindle nose and repeat steps 2 through 4.
5. If the above procedure is too slow, use a minimum of three men to move head to its proper height; two to lift head and one to handle loosening and locking the head locks.
6. After head is at proper height - - secure tightly, then make sure the safety collar is locked in place under the head. This will prevent head from falling if loosened for swing drilling operations.
7. Visually align spindle with table and base.

MULTIPLE SPINDLE MODELS:

In the case of multiple spindle models, the legs are not attached to the table, they are packed separately. To assemble the legs to multiple spindle models, carefully support machine on forklift tines or other temporary supports and bolt legs securely into position. The tables of multiple spindle models are at times shipped in more than one piece. In joining table halves, use alignment pins provided before securing bolts. These pins guarantee alignment of table surfaces. It is imperative that multiple spindle tables be carefully leveled. Use a precision level and level using the jackscrews provided in the legs. Lag machine to floor through holes provided in legs.

MOTOR INSTALLATION:

Step Pulley Models—

If your machine was ordered less motor, or if the motor is being replaced, the following instructions will make installation easier.

- a. Place motor pulley on motor shaft and insert key.
- b. Raise drill press table as shown in Fig. 1. Place motor upright on table and install motor to motor mount, using (4) 5/16—18 hex nuts. Align motor and spindle pulley and tighten motor pulley setscrews.
- c. Loosen motor base clamp (Fig. 2) place belt over pulleys and into lowest speed grooves. Push motor base clamp to rear for light belt tension and turn lock screw clockwise to lock. Too much tension will cause excessive vibration, shaft breakage, bearing noise and wear.

Variable Speed Models —

Powermatic prefers to ship all variable speed drill presses with motors installed; However, if the machine was ordered less motor, or a motor is being replaced, the following instructions apply.

- a. Remove variable speed control hub by removing the mounting screw (Fig. 3), and pulling it off the shaft then remove guard retaining screws and lift guard from machine.

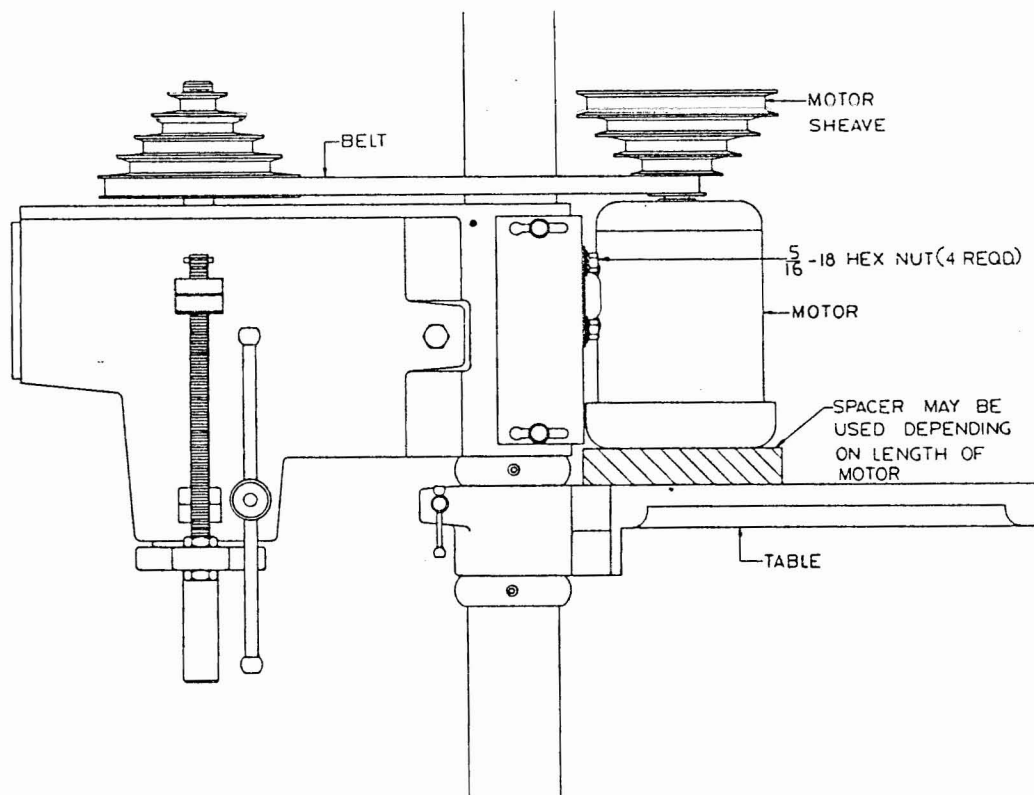


FIGURE 1
MOTOR INSTALLATION

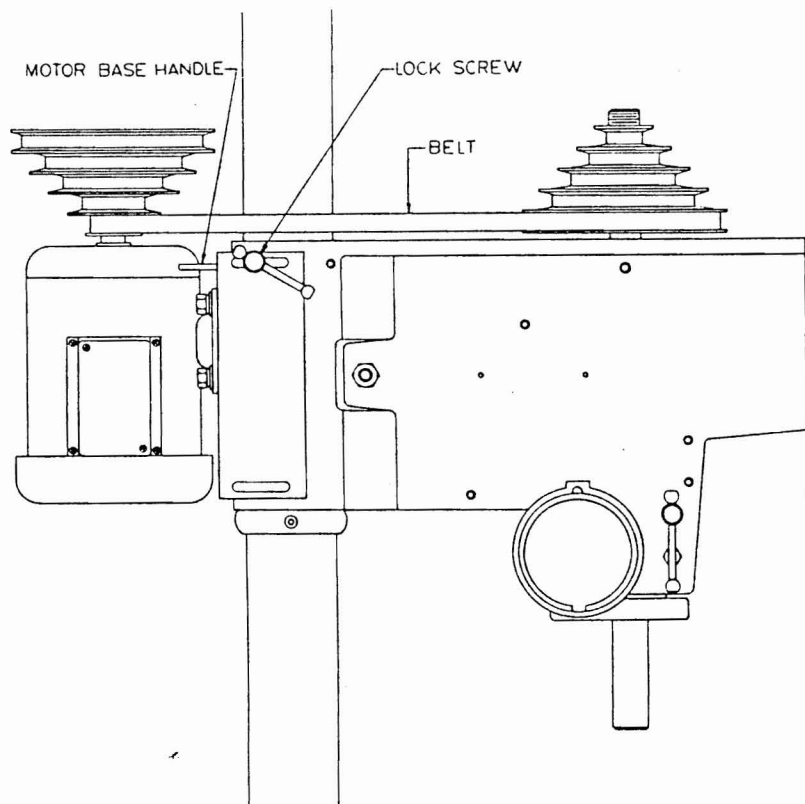


FIGURE 2
BELT TENSIONING

- b. Raise drill press table and lock in position (Fig. 1). Place motor on table in upright position and attach motor to motor mount, using (4) 5/16—18 hex nuts.
- c. Place variable speed motor pulley on motor shaft (spring up); open pulley by placing variable speed belt between halves and pulling outward on belt. Insert key in keyway, then tighten screws in the bottom side of the pulley flange.
- d. Before replacing guard — temporarily replace variable speed control hub (Fig. 4). Turn machine on. The belt should be in a horizontal plane. If belt is cocked at an angle, shut off the motor, loosen motor pulley and move on shaft until belt is level. Secure setscrew. (See section on changing speeds for setting speed range.)
- e. Remove handle - - replace guard, then control hub. Machine is now ready for operation.

NOTE: The above operations are easier to perform with head raised to its maximum height (flush with top of column) since it is easier to remove the belt guard with this position.

CHANGING SPEEDS:

Speed changes on step pulley models are to be made with the machine not running - - loosen motor base clamp (Fig. 2) and pull handle toward operator. Belt is now free to move to any of the 5 speeds available. When speed choice is made, move handle to rear for proper tension and lock the motor base.

Speed changes on variable speed models are to be made **ONLY WHILE MACHINE IS RUNNING**. Damage to variable drive mechanism will result if speed is adjusted while machine is not running.

If spindle speed does not appear to match the dial speed on variable speed unit - - check speed with a tachometer and adjust by unlocking the setscrews in the upper sheave half and turning the top nut on the spline drive (see Fig. 4) clockwise to decrease speed and counterclockwise to increase speed.

To set speeds, adjust cam to minimum RPM, adjust by means of nut on the spline driver to flush belt with outside diameter of spindle sheave. Move motor back until belt has minimum of play. Pull out on one side of the belt. If there is a minimum of slack, the motor and belt system are properly adjusted in this position. The upper sheave on the spline driver has two setscrews which must be unlocked for the sheave to be moved. After adjustment lock the setscrews bring the lock nut down against the hub of the upper sheave and bend a tab of the lockwasher into the nut to lock its position.

INSTALLING CHUCK:

- a. Wipe off the No. 33 spindle taper and tapered socket in chuck body (Fig. 5) with a clean cloth. Make sure no foreign particles are left on these surfaces which could prevent proper seating of the two parts.
- b. Apply a light film of oil on the spindle taper and place chuck on end of spindle (Fig. 5). Screw chuck collar on to the threads at end of spindle. Hold spindle pulley with one hand to keep spindle from rotating and tighten the chuck collar with drill chuck key.
- c. When removal of the chuck is required - - disconnect power source. Hold top spindle pulley with one hand and using chuck key handle, loosen chuck collar by turning counter - clockwise (Fig. 5). Continued rotation of the collar will force the chuck off tapered spindle. NEVER attempt to drive or wedge chuck off as damage could result to chuck, spindle nose and spindle bearings.

QUILL ADJUSTMENT:

Lateral play or bellmouthing can develop between the quill and head casting bands due to wear. To compensate for wear between the quill and head, proceed as follows:

- a. Be sure quill lock handle (Fig. 6) is loose.
- b. Squeeze slotted head casting together slightly by tightening bolt (A). Apply just enough pressure to compensate for wear but do not restrict free motion down or return.

QUILL RETURN SPRING ADJUSTMENT:

Spring tension for return of spindle, after hole drilling, has been pre-set at the factory. No further adjustment should be attempted unless absolutely necessary. Adjustment will probably be required if a multiple spindle drilling or tapping head is used. If adjustment is necessary, loosen lockscrew (A) (Fig. 7) while holding quill spring housing (B). DO NOT allow the housing to turn in your hand, or spring will unwind. Turn entire housing assembly clockwise the number of turns necessary to cause the quill to return to its up position. (NOTE: The flat of the spring housing pilot is lined up with the spring loading hole on the body of the spring housing.) Reset lockscrew (A), make sure point of screw mates to flat on the housing journal.

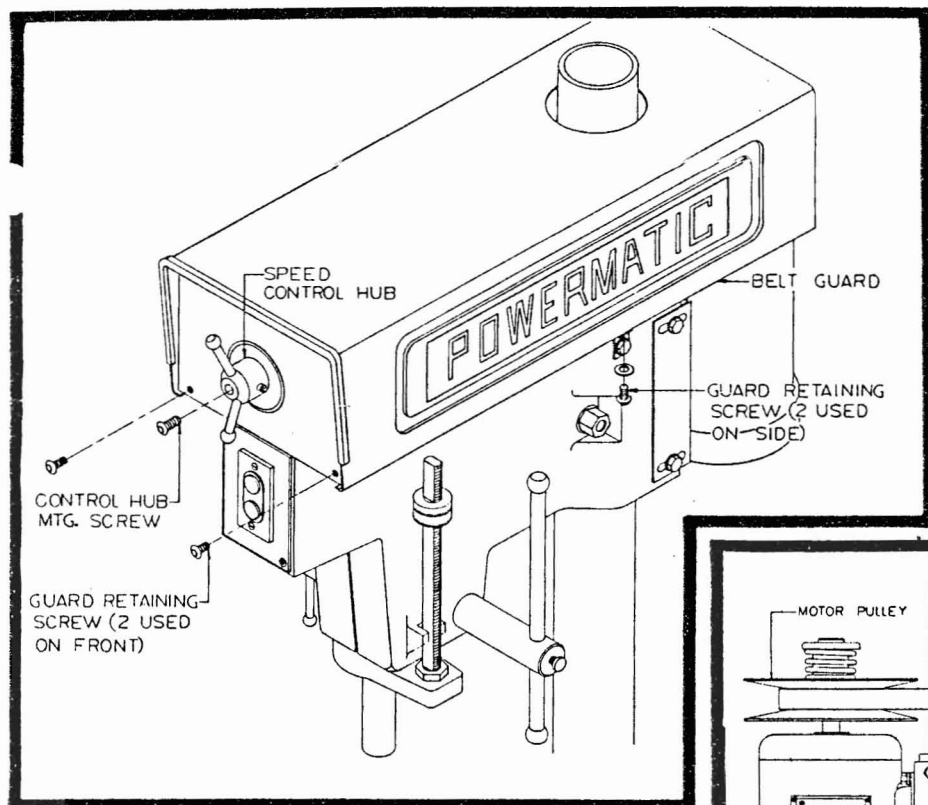


FIGURE 3
V/S GUARD REMOVAL

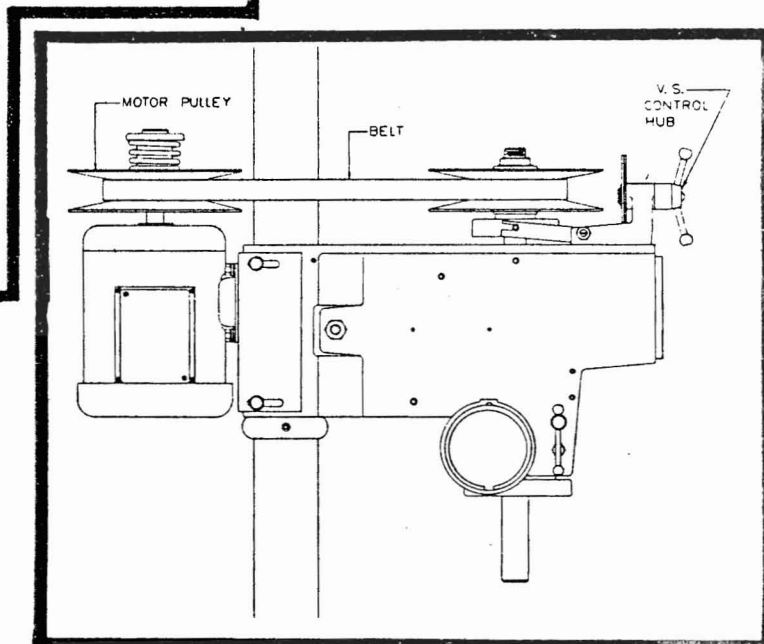


FIGURE 4
V/S SPEED ADJUSTMENT

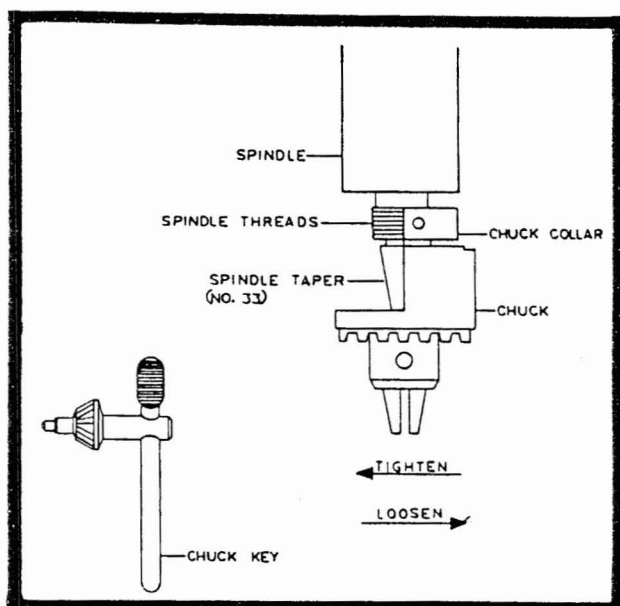


FIGURE 5
KEY CHUCK INSTALLATION

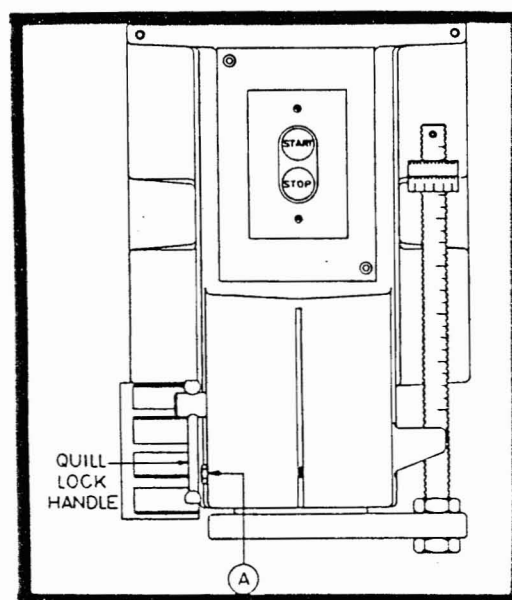


FIGURE 6
QUILL FIT UP ADJUSTMENT

REPLACING SPINDLES ON QUILL ASSEMBLY

To change the quill assembly for any reason, proceed as follows:

1. Hold quill return spring housing (B) in left hand (see Fig. 7)) and loosen lock screw (A). Let spring unwind slowly, by allowing housing to turn in hand.
2. Loosen setscrew (C) (Fig. 6) and remove nut (D) on bottom of depth stop rod. Unscrew and remove depth stop.
3. Lower quill assembly to the position where the turret pinion shaft can be removed (E). Entire quill assembly will then slide out of head.

To change spindles, follow the above steps, then (Fig. 8):

1. Loosen setscrew in collar (A) to reach this screw, insert a 5/32" Allen wrench through hole (B) in top of quill.
2. With hard rubber mallet or block of wood, tap spline end of spindle. The spindle, with bearing (C) will come out of the quill.
3. Use an arbor press to remove bearing (C).
4. To replace spindle, reverse above procedure.
5. When replacing collar (A), remove all end play from spindle.
6. When replacing quill in head casting, rotate spindle, if necessary, to engage spline in pulley driver.
7. If necessary, remove lock ring (F) and cover plate (G) (Fig. 7) from spring housing and make certain tongue on return spring (H) is properly inserted in slotted end of pinion shaft. Replace cover and adjust spring tension as instructed under heading "QUILL RETURN SPRING ADJUSTMENT".

LUBRICATION:

All ball bearings in your Powermatic drill press are sealed for life, requiring no lubrication. Points requiring lubrication are:

1. Internal spline drive assembly. Keep this area well lubricated with a good grade non-hardening grease, such as Fiske Company "Lubriplate". Insert grease in the hole at the top of spindle pulley spline driver. Lube twice yearly.
2. A light film of oil applied to the quill and column will reduce wear, prevent rust and assure ease of operation.
3. Quill return spring should receive oil (SAE 20) once yearly. Remove cover plate and apply oil with squirt can or small brush.
4. IMPORTANT: The hub area of variable speed pulleys should be coated with a Dow Corning GN Paste or equivalent.
5. Apply Lubriplate to quill pinion every 90 days.
6. Occasional dressing of belt with spray can type belt dressing or paraffin wax will promote longer belt life and quieter operation.

NOTE: Use extreme care when performing this operation and keep hands clear of pinch points. When using paraffin bar, do this only by turning the sheaves by hand. DO NOT apply with motor running.

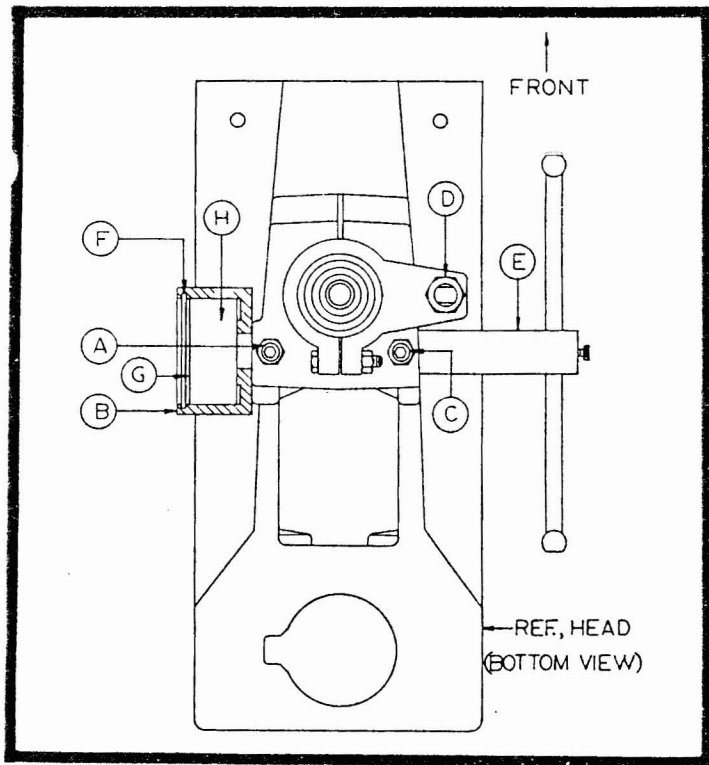
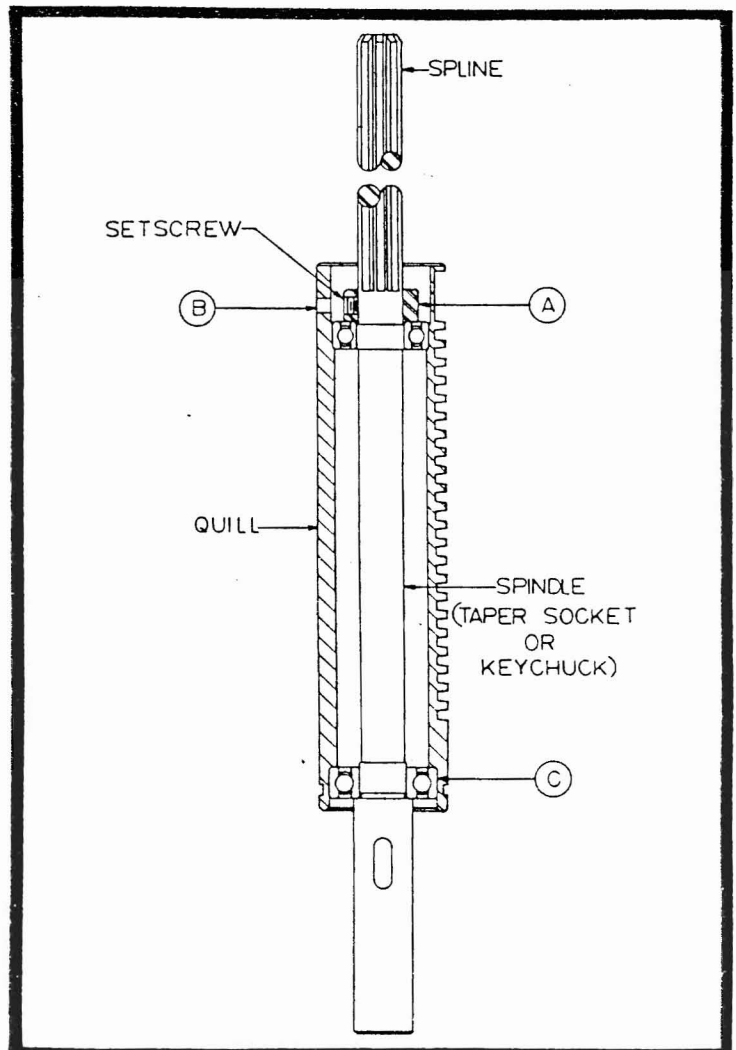


FIGURE 7
QUILL REMOVAL

FIGURE 8
SPINDLE ASSEMBLY



MORTISE ATTACHMENT INSTALLATION

IMPORTANT NOTE: Mortise attachments cannot be installed on Morse Taper Spindle Models.

To mount mortise attachment, remove quill yoke (Fig. 9) by removing locknut (B) and loosening yoke clamp bolt at rear of quill. Replace yoke with chisel housing (C). Insert depth stop rod into housing and replace locknut (B).

Insert proper size hollow chisel (with discharge hole to left if possible) into chisel housing. Insert a dime between shoulder on top of chisel and bottom of chisel housing. Lock chisel in place temporarily with square head bolt (D). Insert drill bit into chisel allowing shank to extend as far as possible into chuck jaws. Apply pressure against bit end with a wood block and while holding, pressure tighten chuck jaws securely. Remove dime and move chisel up against chisel housing. Set lockscrew (D) tightly. Affix fence assembly to tilting tables as pictured in Fig. 9. The mortise attachment is now ready to use. Use short pecking strokes on all mortise operations.

If chisel end begins to turn blue, check chisel for sharpness and clearance between end of drill bit and chisel. Pressures exerted during mortise operation will sometimes force drill bit deeper into chuck jaws, reducing clearance gap. A loud squeal is usually an indication of insufficient clearance.

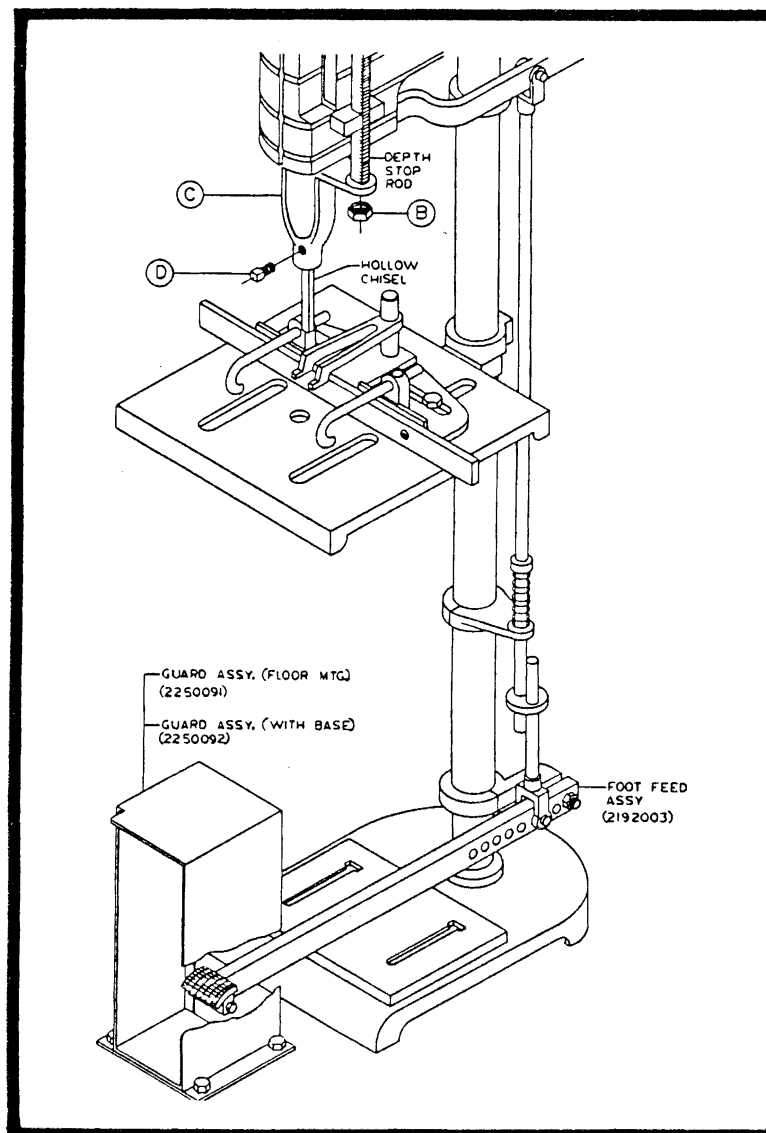
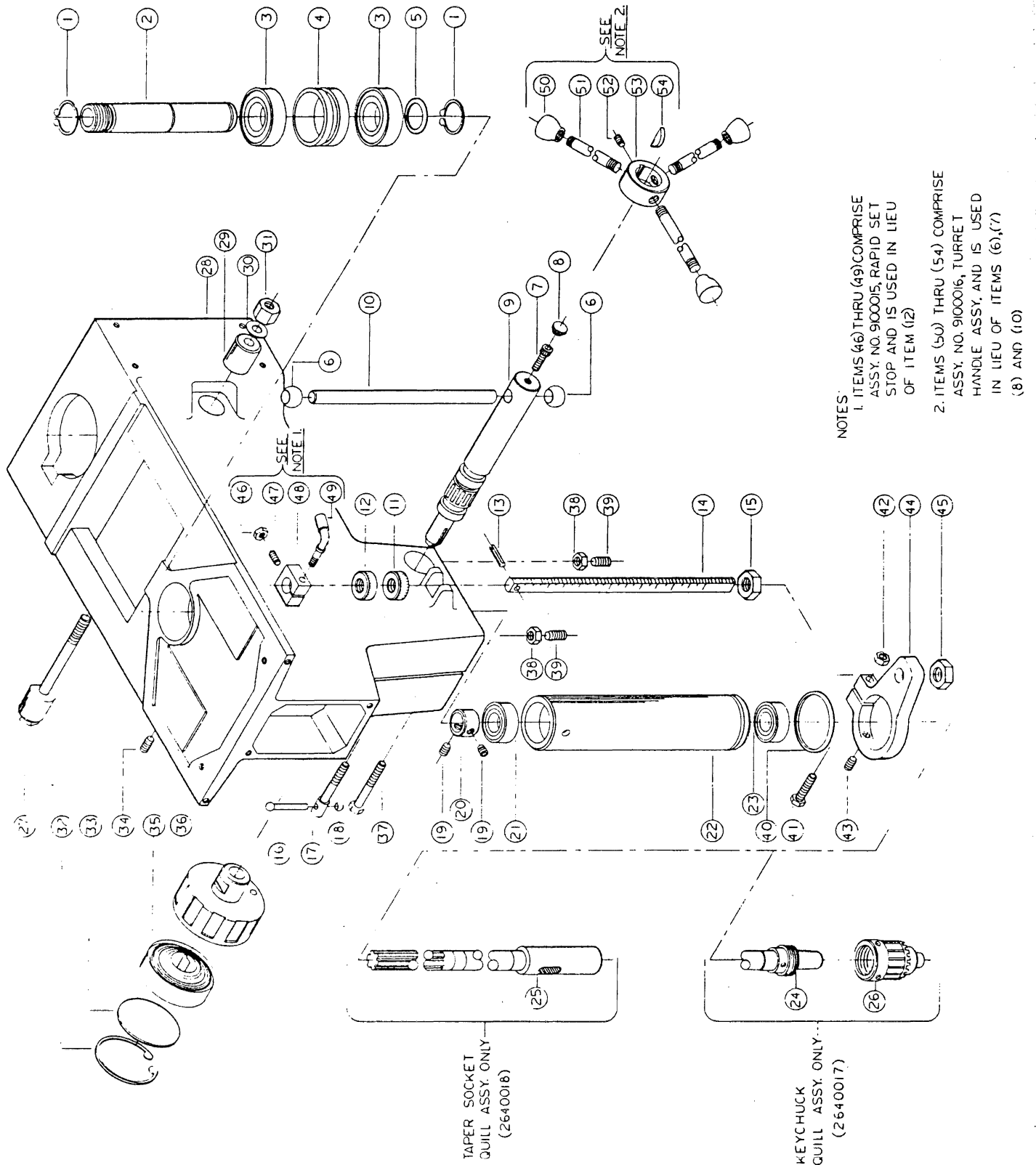


FIGURE 9
MORTISE ATTACHMENT INSTALLATION

TROUBLE SHOOTING HINTS

TROUBLE	PROBABLE CAUSE	REMEDY
Excessive Vibration	<ol style="list-style-type: none"> 1. Improper belt tension. 2. Uneven belt wear (hard spots). 3. Motor or spindle pulley out-of-balance. 4. Bad motor. 	<ol style="list-style-type: none"> 1. Adjust belt tension. 2. Replace belt. 3. Balance or replace problem pulley. 4. Replace motor.
Motor Stalls	<ol style="list-style-type: none"> 1. Over feeding. 2. Dull drill. 3. V/S belt riding on inner cone. 4. Motor not building up to running speed. 5. Bad motor. 	<ol style="list-style-type: none"> 1. Reduce feed rate. 2. Sharpen drill and keep sharp. 3. Re-adjust V/S belt. 4. Replace or repair motor. Check fuses in all three legs on three phase motors and replace if necessary. 5. Replace motor.
Noisy Operation	<ol style="list-style-type: none"> 1. Excessive vibration. 2. Improper quill adjustment. 3. Noisy spline. 4. Noisy motor. 	<ol style="list-style-type: none"> 1. Check remedy under excessive vibration. 2. Adjust quill (refer to paragraph on quill adjustment). 3. Lubricate spline. 4. Check motor bearings or for loose motor fan.
Drill or Tool Heats Up or Burns Work	<ol style="list-style-type: none"> 1. Excessive speed. 2. Chips not clearing. 3. Dull tool. 4. Feed rate too slow. 5. Rotation of drill incorrect. 6. Failure to use cutting oil or coolant (on steel). 	<ol style="list-style-type: none"> 1. Reduce speed. 2. Use pecking operation to clear chips. 3. Sharpen tool or replace. 4. Increase feed enough to clear chips. 5. Reverse motor rotation (refer to motor wiring diagram). 6. Use cutting oil or coolant on steel.
Drill Leads Off	<ol style="list-style-type: none"> 1. No drill spot. 2. Cutting lips on drill off center. 3. Quill loose in head. 4. Bearing play. 	<ol style="list-style-type: none"> 1. Center punch or center drill workpiece. 2. Regrind drill. 3. Tighten quill (refer to quill adjustment). 4. Check bearings and reseal or replace if necessary.
Excessive Drill Runout or Wobble	<ol style="list-style-type: none"> 1. Bent drill. 2. Bearing play. 3. Drill not seated properly in chucks. 	<ol style="list-style-type: none"> 1. Replace drill. Do not attempt to straighten. 2. Replace or reseal bearings. 3. Loosen, reseal and tighten chuck.
Work or Fixture Comes Loose or Spins.	<ol style="list-style-type: none"> 1. Failure to clamp workpiece or work holding device to table. 	<ol style="list-style-type: none"> 1. Clamp workpiece or work holding device to table surface.

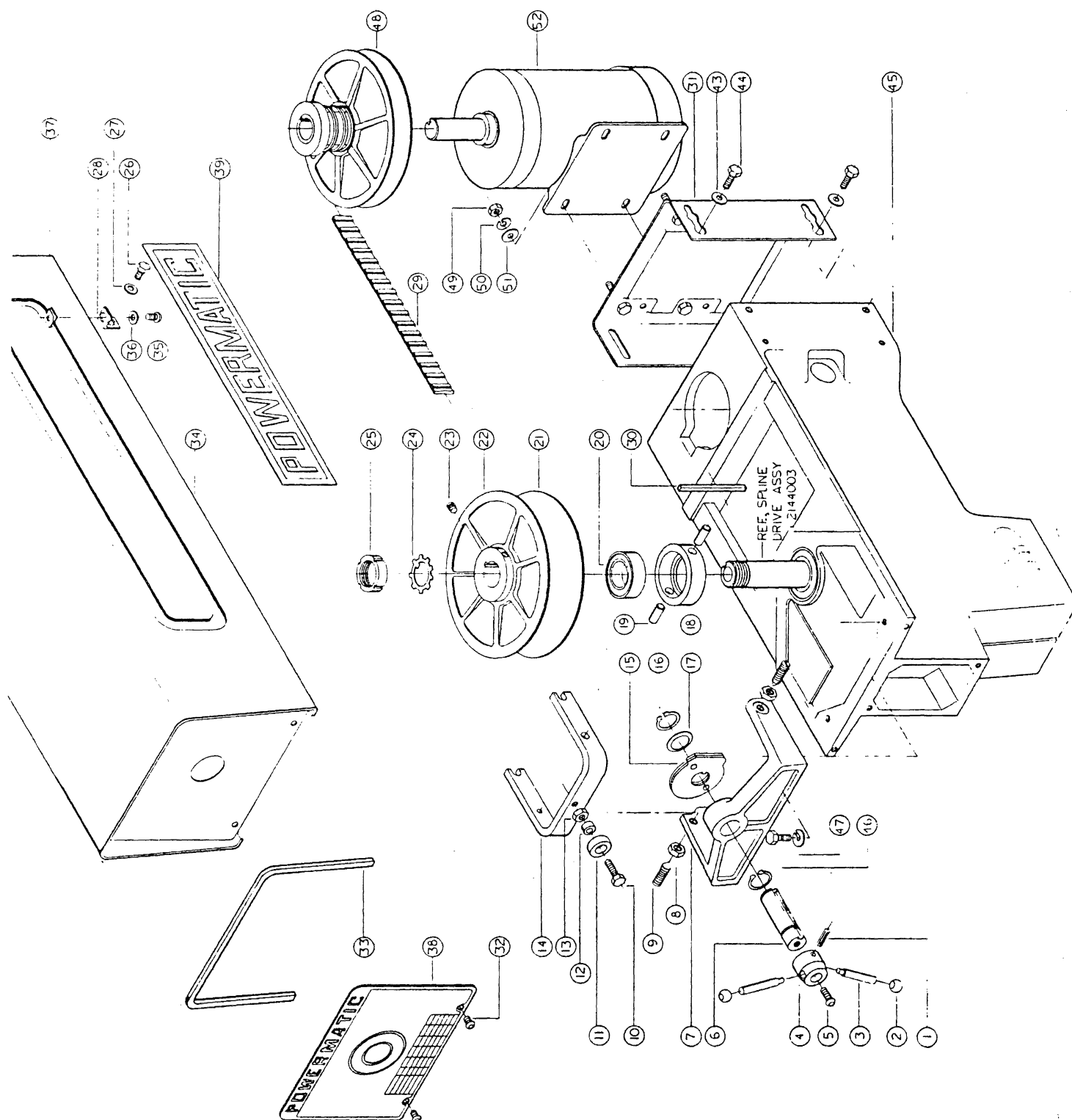
HEAD ASSEMBLY, 1 SPRING KEYCHUCK HEAD ASSEMBLY, 1 SPRING TAPER SOCKET



HEAD ASSEMBLY			
NO.	PART NO.	DESCRIPTION	QTY.
	2144003	DRIVE SPLINE ASSY, (ITEMS 1 THRU 5)	
1	6670006	RETAINING RING	2
2	3144006	INTERNAL DRIVE (SHAFT)	1
3	6060014	BEARING	2
4	3737021	BEARING SPACER	1
5	6804003	"O" RING	1
	2240071	PINION GEAR ASSY, (ITEMS 6 THRU 10)	
6	3406045	HANDLE KNOB	2
7	6714019	SOC HD CAP SCR, 1/4-20 x 5/8	1
8	6430024	SHEAR-LOC KNOB	1
9	3586025	QUILL OPERATING PINION	1
10	3268053	HANDLE	1
	2670014	DEPTH ADJ ROD ASSY, (ITEMS 11 THRU 15)	
11	3526093	GRADUATED DEPTH STOP NUT	1
12	3526094	PLAIN DEPTH STOP NUT	1
13	6626035	SPRING PIN, 3/16 x 5/8	1
14	3670102	DEPTH ADJUST ROD	1
15	3528005	LOCK NUT	1
	2695009	LOCK SCR ASSY, (ITEMS 16 THRU 18)	
16	3268002	HANDLE	1
17	3695010	LOCK SCR	1
18	3406016	HANDLE KNOB	1
	2640017	KEYCHUCK QUILL ASSY, (ITEMS 19 THRU 24)	
	2640018	TAPER SOCKET QUILL ASSY, (ITEMS 19 THRU 23, & 25)	
19	6715016	CUP PT SOC SET SCR, 5/16-18 x 5/16	2
20	3096244	COLLAR	1
21	6060165	BEARING	1
22	3640016	SLIDING QUILL	1
23	6060009	BEARING	1
24	2749037	SPINDLE ASSY, (1 SPRING KEY-CHUCK ONLY)	1
25	3749105	TAPER SOCKET SPINDLE (1 SPRING TAPER SOCKET ONLY)	1
26	6118005	JACOBS CHUCK, 1/2" w/33 MT	1
27	2440013	HEAD SLEEVE LOCK ASSY, (WELD-MENT)	1
28	3277028	DRILL PRESS HEAD	1
29	3448014	HEAD SLEEVE LOCK	1
30	6861513	FLAT WASHER, 1/2"	1
31	3526039	NUT, 1/2-13	1
32	3661016	RETAINING RING	1
33	3104010	SPRING COVER	1
34	6715116	HALF DOG PT SOC SET SCR, 5/16-18 x 1/2	1
35	6813026	SPRING	1
36	3298288	SINGLE SPRING HOUSING	1
37	6716040	HEX HD SCR, 3/8-16 x 2-1/2	1
38	6518001	HEX NUT, 1/2-13	2
39	6718038	HALF DOG PT SOC SET SCR, 1/2-13 x 1-1/4	2
40	6804004	"O" RING	1
41	6715039	HEX HD SCR, 5/16-18 x 1-3/4	1
42	6515001	HEX NUT, 5/16-18	1
43	6714090	HALF DOG PT SOC SET SCR, 1/4-20 x 1/2	1
44	3936013	QUILL YOKE	1
45	3528005	LOCK NUT	1
	9100015	RAPID SET STOP, (ITEMS 46 THRU 49) (IN LIEU OF STANDARD)	
46	6515006	HEX NUT, 5/16-18	1
47	6715010	FLAT PT SOC SET SCR, 5/16-18 x 1/2	1
48	3055104	STOP BLOCK	1
49	3689070	LOCK SCREW	1
	9100016	TURRET HANDLE ASSY, (ITEMS 50 THRU 54) (IN LIEU OF STANDARD)	
	2268006	HANDLE ASSY, (ITEMS 50 & 51)	3
50	3406206	PHENOLIC KNOB	1
51	3670025	TURRET ROD	1
52	6715013	KNURLED CUP PT SOC SET SCR, 5/16-18 x 3/8	1

HEAD ASSEMBLY			
NO.	PART NO.	DESCRIPTION	QTY.
53	3301003	TURRET HUB	1
54	6420001	WOODRUFF KEY	1

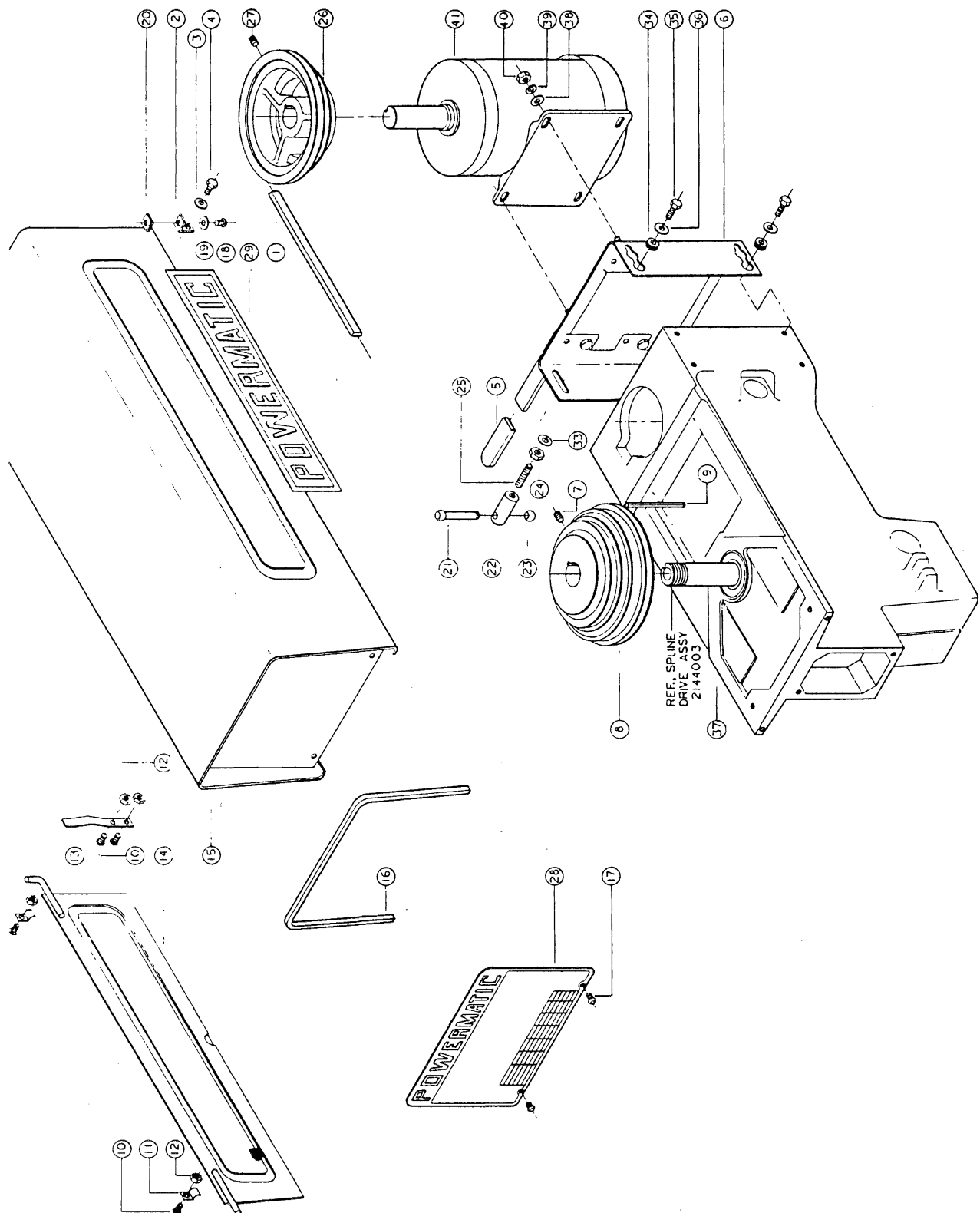
VARIABLE SPEED ASSEMBLY



VARIABLE SPEED ASSEMBLY			
NO.	PART NO.	DESCRIPTION	QTY.
	2404005	V/S KIT ASSY, (ITEMS 1 THRU 31)	
	2298033	HOUSING ASSY, (ITEMS 1 THRU 17)	
	2305002	SPEED HANDLE & HUB ASSY, (ITEMS 1 THRU 4)	
1	6626056	SPRING PIN, 5/32 x 3/4	1
2	3406045	HANDLE KNOB	2
3	3268056	HANDLE	2
4	3301042	SPEED HANDLE HUB	1
5	6716123	BUT HD SCR, 3/8-16 x 1	1
6	3703013	CAM SHAFT	1
7	3298236	CAM HOUSING	1
8	6516001	HEX NUT, 3/8-16	2
9	6716117	SLOTTED HD SET CONE PT SCR, 3/8-16 x 1-1/2	2
10	6715032	HEX HD SCR, 5/16-18 x 1	1
11	3673032	V/S ROLLER	1
12	6095043	BUSHING, .3125/.3115 ID x .4375/.4365 OD x 3/8	1
13	6515007	HEX JAM NUT, 5/16-18	1
14	3936014	V/S YOKE	1
15	2076004	V/S CAM ASSY	1
16	6670002	RETAINING RING	2
17	6813089	BELLVILLE SPRING	1
	2719065	V/S DRIVEN SHEAVE ASSY (ITEMS 18 THRU 25)	
18	3096144	BEARING COLLAR	1
19	6623013	DOWEL PIN, 5/16 x 1	2
20	6060123	FAFNIR BEARING	1
21	2719069	V/S SLIDING SHEAVE	1
22	3719177	FIXED FLANGE SHEAVE	1
23	6765003	CUP PT SOC SET SCR, 5/16-24 x 1/2 (ONE NOT SHOWN)	2
24	6864006	LOCK WASHER, W-06	1
25	6549006	LOCK NUT, N-06	1
26	6714154	HEX HD SCR, 1/4-20 x 3/8	2
27	6861101	FLAT WASHER, 1/4	2
28	3062109	ANGLE BRACKET	2
29	6077158	V/S BELT	1
30	3387028	FLAT KEY, 3/16 x 1/4 x 3-5/16	1
31	2042163	MOTOR MOUNT BASE ASSY	1
	2250140	V/S GUARD ASSY (ITEMS 32 THRU 37)	
32	6714083	BUT HD SCR, 1/4-20 x 1/2	2
33	6458002	RUBBER MOLDING	2Ft.
34	2250131	GUARD ASSY (WELDMENT)	1
35	6710003	TRUSS HD SCR, 10-24 x 1/2	2
36	6860800	FLAT WASHER, NO. 10	2
37	6510009	SPEED NUT	2
	2388061	V/S PLATE KIT, (ITEMS 38 THRU 42)	
38	3119003	IDENTIFICATION DECAL (MODEL NO.)	1
39	3119005	IDENTIFICATION DECAL (POWER-MATIC)	2
40	3330284	SAFETY DECAL (NOT SHOWN)	1
41	3312228	SERIAL PLATE (NOT SHOWN)	1
42	6747000	DRIVE SCR, NO. 4 x 3/16 (NOT SHOWN)	2
43	6861201	FLAT WASHER, 5/16	4
44	6715035	HEX HD CAP SCR, 5/16-18 x 3/4	4
45	3277028	HEAD	1
46	6716031	HEX HD SCR, 3/8-16 x 1	2
47	6861300	LOCK WASHER, 3/8	2
48	2719066	MOTOR SHEAVE ASSY	1
49	6515001	HEX NUT, 5/16-18	4
50	6861200	LOCK WASHER, 5/16	4
51	6861201	FLAT WASHER, 5/16	4
52	6470600	ELEC MOTOR, 3/4 HP, 1 PH, 1200 RPM, 115/230V, 56 FR, TEFC	
	6470607	ELEC MOTOR, 3/4 HP, 3 PH, 1200 RPM, 200V, 56FR, TEFC	
	6470608	ELEC MOTOR, 3/4 HP, 3 PH, 1200 RPM, 230/460V, 56 FR, TEFC	

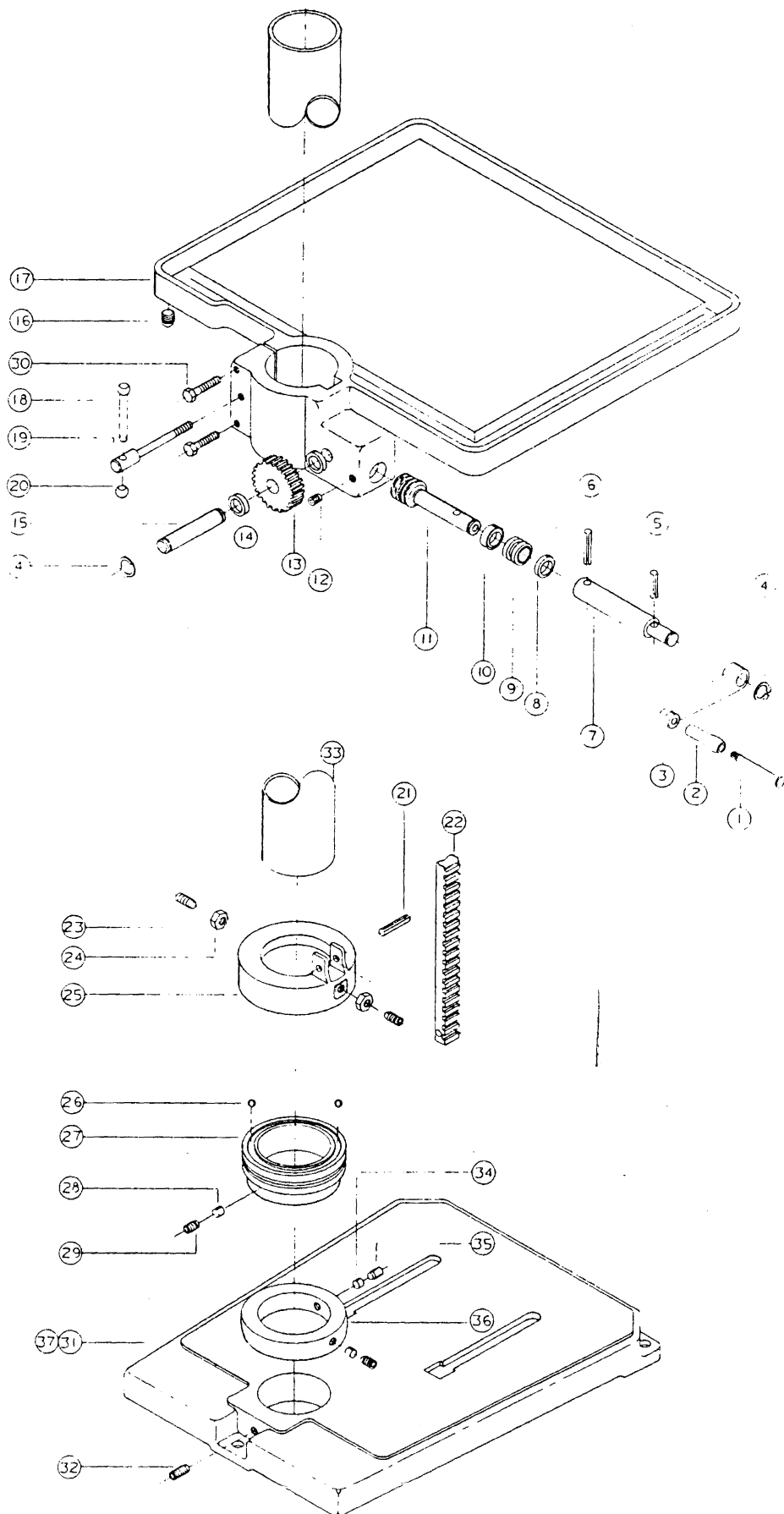
VARIABLE SPEED ASSEMBLY			
NO.	PART NO.	DESCRIPTION	QTY.
	6470700	ELEC MOTOR, 3/4 HP, 1 PH, 1800 RPM, 115/230V, 56 FR, TEFC	
	6470702	ELEC MOTOR, 3/4 HP, 3 PH, 1800 RPM, 575V, 56 FR, TEFC	
	6470707	ELEC MOTOR, 3/4 HP, 3 PH, 1800 RPM, 230/460V, 56 FR, TEFC	
	6470712	ELEC MOTOR, 3/4 HP, 3 PH, 1800 RPM, 200V, 56 FR, TEFC	
	6470602	ELEC MOTOR, 3/4 HP, 3 PH, 1200 RPM, 230/460V, 56 FR, ODP, HIGH REVERSING	

STEPCONE ASSEMBLY



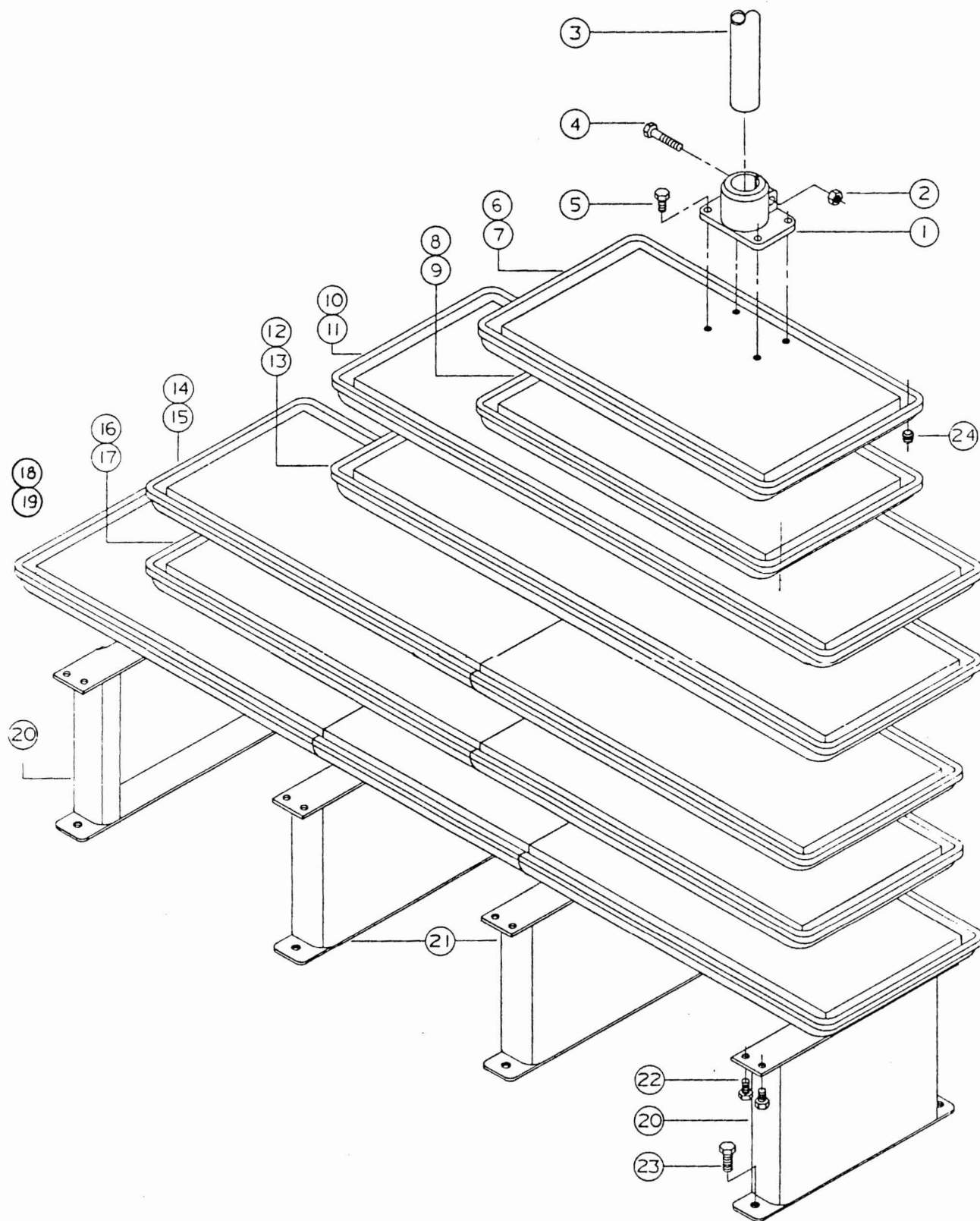
STEPSTONE ASSEMBLY			
NO.	PART NO.	DESCRIPTIONS	QTY.
	2387004	STEPSTONE SHEAVE KIT, (ITEMS 1 THRU 9)	
1	6077018	VEE BELT	1
2	3062109	ANGLE BRACKET	2
3	6861101	FLAT WASHER, 1/4	2
4	6714154	HEX HD SCR, 1/4-20 x 3/8	2
5	6330002	VINYL GRIP, .090 x 1 x 3	1
6	2042164	STEPSTONE MOTOR BASE ASSY	1
7	6715014	CUP PT SOC SET SCR, 5/16-18 x 1/2	1
8	3718031	STEPSTONE SHEAVE	1
9	3387028	FLAT KEY, 3/16 x 1/4 x 3-5/16	1
	2250141	STEPSTONE GUARD ASSY (ITEMS 10 THRU 20)	
10	6710034	RD HD SCR, 10-24 x 1/2	4
11	6122038	WECKESSER CLAMP, 3/16-H-FR	2
12	6510001	HEX NUT, 10-24	4
13	3755258	SPRING	1
14	2250133	DOOR GUARD ASSY (WELDMENT)	1
15	2250132	GUARD ASSY (WELDMENT)	1
16	6458002	RUBBER MOLDING	2Ft.
17	6714083	BUT HD SCR, 1/4-20 x 1/2	2
18	6710003	TRUSS HD SCR, 10-24 x 1/2	2
19	6860800	FLAT WASHER, No. 10	2
20	6510009	SPEED NUT	2
	2268025	STEPSTONE BASE LOCK HANDLE ASSY (ITEMS 21 THRU 25)	
21	3268002	LOCKSCREW HANDLE	1
22	3448032	STEPSTONE MOTOR MOUNTLOCK	1
23	3406016	HANDLE LOCKSCREW KNOB	1
24	6515001	HEX NUT, 5/16-18	1
25	6715143	FLAT PT SET SCR, 5/16-18 x 1-1/4	1
	2717003	STEPSTONE MOTOR SHEAVE ASSY (ITEMS 26 & 27)	
26	3718032	STEPSTONE SHEAVE	1
27	6715014	CUP PT SOC SET SCR, 5/16-18 x 1/2	1
	2388062	STEPSTONE PLATE KIT, (ITEMS 28 THRU 32)	
28	3119004	IDENTIFICATION DECAL	1
29	3119005	IDENTIFICATION DECAL	2
30	3330284	SAFETY DECAL (NOT SHOWN)	1
31	3312228	SERIAL PLATE (NOT SHOWN)	1
32	6747000	DRIVE SCR, No. 4 x 3/16 (NOT SHOWN)	2
33	6861201	FLAT WASHER, 5/16	1
34	6336010	RUBBER GROMMET	2
35	6715035	HEX HD SCR, 5/16-18 x 3/4	2
36	6861201	FLAT WASHER, 5/16	2
37	3277028	HEAD	1
38	6861201	FLATE WASHER, 5/16	4
39	6861200	LOCK WASHER, 5/16	4
40	6515001	HEX NUT, 5/16-18	4
41	6470600	ELEC MOTOR, 3/4 HP, 1 PH, 1200 RPM 115/230V, 56 Fr., TEFC	
	6470607	ELEC MOTOR, 3/4 HP, 3 PH, 1200 RPM, 200V, 56 FR., FEFC	
	6470608	ELEC MOTOR, 3/4 HP, 3 PH, 1200 RPM, 230/460V, 56FR., TEFC	
	6470700	ELEC MOTOR, 3/4 HP, 1 PH, 1800 RPM, 115/230V, 56 FR., TEFC	
	6470702	ELEC MOTOR, 3/4 HP, 3 PH, 1800 RPM, 575V, 56 FR, TEFC	
	6470707	ELEC MOTOR, 3/4 HP, 3 PH, 1800 RPM, 230/460V, 56 FR, TEFC	
	6470712	ELEC MOTOR, 3/4 HP, 3 PH, 1800 RPM, 200V, 56 FR, TEFC	
	6470602	ELEC MOTOR, 3/4 HP, 3 PH, 1200 RPM, 230/460V, 56 FR, ODP, HIGH REVERSING	

PRODUCTION TABLE & BASE ASSEMBLY



PRODUCTION TABLE & BASE ASSEMBLY			
NO.	PART NO.	DESCRIPTION	QTY.
	2797033	PRODUCTION TABLE ASSY, (ITEMS 1 THRU 30)	
	2797132	PRODUCTION TABLE SUB ASSY, (ITEMS 1 THRU 17)	
	2268013	TABLE RAISING PINION HANDLE ASSY, (ITEMS 1 THRU 3)	
1	6624006	FLAT HD PIN, 3" LONG	1
2	3268201	NYLON MACHINE HANDLE	1
3	3268005	TABLE ELEVATING HANDLE	1
4	6670008	RETAINING RING (ONE NOT SHOWN)	3
5	6626038	SPRING PIN, 1/4 x 1	1
6	6626040	SPRING PIN, 1/4 x 1-1/4	1
7	3701001	ELEVATING HANDLE SHAFT	1
8	3838009	BEVEL WASHER	1
9	2729004	HEAD RAISING SLEEVE ASSY	1
10	6064001	THRUST BEARING	1
11	3237332	WORM GEAR	1
12	6716099	HALF DOG PT SOC SET SCR, 3/8-16 x 5/8	1
13	3237333	SPUR GEAR	1
14	3743011	SPACER	2
15	3710007	GEAR SHAFT	1
16	6638004	PIPE PLUG, 1/2-14	1
17	3797303	PRODUCTION TABLE	1
	2695019	PRODUCTION TABLE LOCK SCR ASSY, (ITEMS 18 THRU 20)	
18	3268002	HANDLE	1
19	3695014	LOCK SCR	1
20	3406016	KNOB	1
	2645003	TABLE RAISING RACK ASSY, (ITEMS 21 THRU 27)	
21	6626033	RACK MOUNTING SPRING PIN 3/16 x 2	1
22	3650005	TABLE ELEVATING GEAR RACK 24" LONG	1
23	6715118	HALF DOG PT SOC SET SCR, 5/16 -18 x 3/4	2
24	6515001	HEX NUT, 5/16-18	2
25	3078026	THRUST BEARING COLLAR CAP	1
26	6054002	STEEL BALL, 3/8" DIA.	30
27	3096042	THRUST BEARING COLLAR	1
28	3598023	BRASS PROTECTOR SET SCR PLUG, 7/16 x 3/16	1
29	6718055	CUP PT SOC SET SCR, 1/2-13 x 1/2	1
30	6716114	HD HEX SCR, 3/8-16 x 2-3/4 W/NYLOK INSERT	2
31	3042121	DRILL PRESS BASE	1
32	6718056	CUPPT SOC SET SCR, 1/2-13 x 3/4	1
33	3098209	DRILL PRESS COLUMN	1
34	3598023	BRASS PROTECTOR SET SCR PLUG 7/16 x 3/16	2
35	6718055	CUP PT SOC SET SCR, 1/2-13 x 1/2	2
36	3096008	SAFETY COLLAR	1
37	9100014	FINISHED BASE IN LIEU OF CAST	1

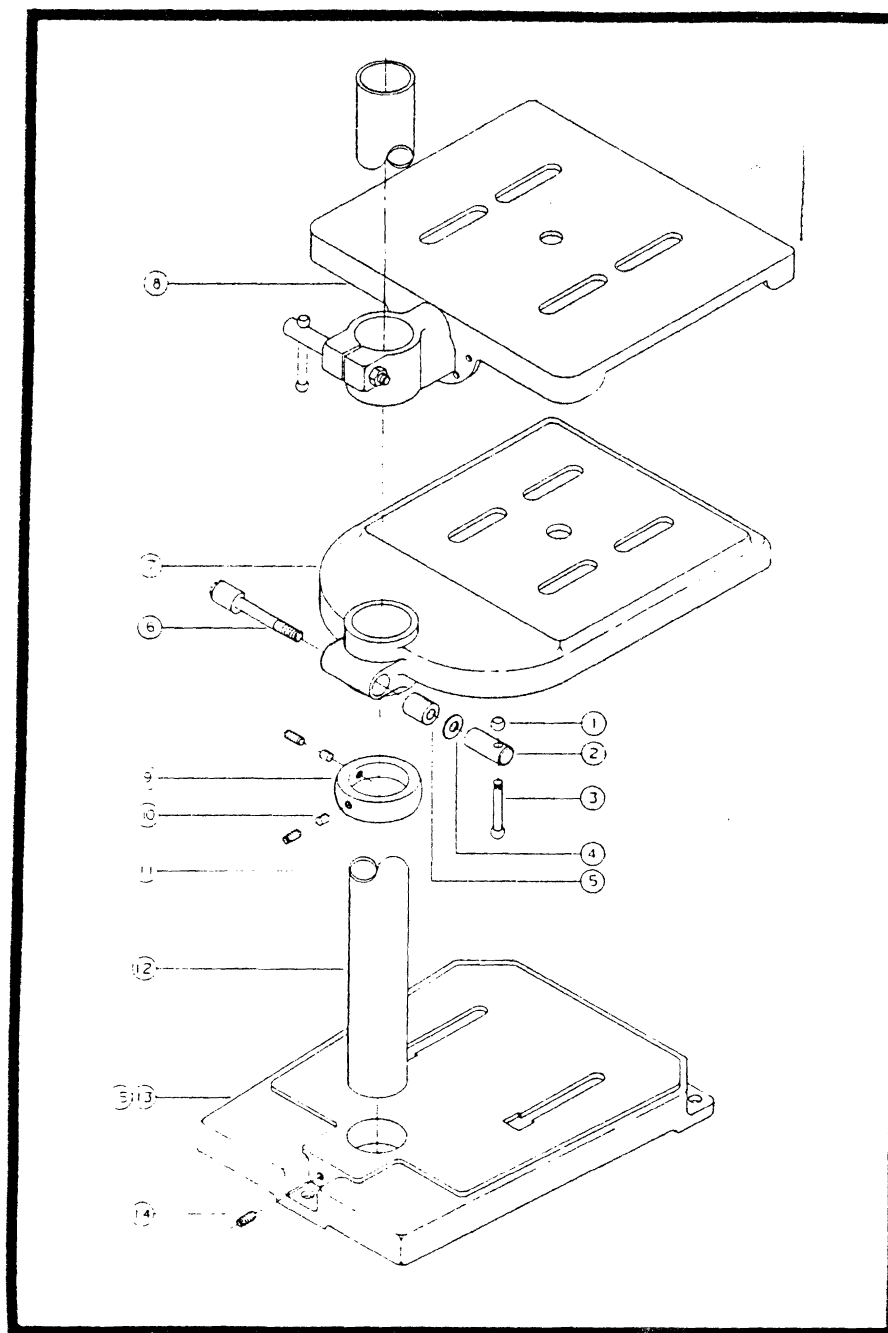
MULTIPLE SPINDLE TABLE AND LEG ASSEMBLY



MULT SPINDLE TABLE & LEG ASSY			
NO.	PART NO.	DESCRIPTION	QTY.
1	3063075	COLUMN MOUNTING BRACKET 1 SPINDLE 2 SPINDLE 3 SPINDLE 4 SPINDLE 5 SPINDLE 6 SPINDLE 8 SPINDLE	1 2 3 4 5 6 8
2	6517001	HEX NUT, 7/16-14 1 SPINDLE 2 SPINDLE 3 SPINDLE 4 SPINDLE 5 SPINDLE 6 SPINDLE 8 SPINDLE	1 2 3 4 5 6 8
3	3098208	BENCH MODEL COLUMN 1 SPINDLE 2 SPINDLE 3 SPINDLE 4 SPINDLE 5 SPINDLE 6 SPINDLE 8 SPINDLE	1 2 3 4 5 6 8
4	6717020	HEX HD CAP SCR, 7/16-14 x 2-1/2 1 SPINDLE 2 SPINDLE 3 SPINDLE 4 SPINDLE 5 SPINDLE 6 SPINDLE 8 SPINDLE	1 2 3 4 5 6 8
5	6717018	HEX HD CAP SCR, 7/16-14 x 1-1/2 1 SPINDLE 2 SPINDLE 3 SPINDLE 4 SPINDLE 5 SPINDLE 6 SPINDLE 8 SPINDLE	4 8 12 16 20 24 32
6	3797016	ONE SPINDLE TABLE W/O T-SLOTS	1
7	3797017	ONE SPINDLE TABLE W/ T-SLOTS	1
8	3797039	TWO SPINDLE TABLE W/O T-SLOTS	1
9	3797068	TWO SPINDLE TABLE W/ T-SLOTS	1
10	3797038	THREE SPINDLE TABLE W/O T-SLOTS	1
11	3797067	THREE SPINDLE TABLE W/ T-SLOTS	1
12	3797037	FOUR SPINDLE TABLE W/O T-SLOTS	1
13	3797066	FOUR SPINDLE TABLE W/ T-SLOTS	1
14	2797122	FIVE SPINDLE TABLE ASSY W/O T-SLOTS	1
15	2797124	FIVE SPINDLE TABLE ASSY W/ T-SLOTS	1
16	2797014	SIX SPINDLE TABLE ASSY W/O T-SLOTS	1
17	2797125	SIX SPINDLE TABLE ASSY W/ T-SLOTS	1
18	2797015	EIGHT SPINDLE TABLE ASSY W/O T-SLOTS	1
19	2797126	EIGHT SPINDLE TABLE ASSY W/ T-SLOTS	1
20	2423007	TABLE END LEG ASSY 1 SPINDLE 2 SPINDLE 3 SPINDLE 4 SPINDLE 5 SPINDLE 6 SPINDLE 8 SPINDLE	2 2 2 2 2 2 2
21	2423008	TABLE MIDDLE LEG ASSY 5 SPINDLE 6 SPINDLE 8 SPINDLE	1 1 2

MULT SPINDLE TABLE & LEG ASSY			
NO.	PART NO.	DESCRIPTION	QTY.
22	6717015	HEX HD CAP SCR, 7/16-14 x 1-1/4 1 SPINDLE 2 SPINDLE 3 SPINDLE 4 SPINDLE 5 SPINDLE 6 SPINDLE 8 SPINDLE	8 8 8 8 12 12 16
23	3694005	TABLE LEG LEVELING SCR 1 SPINDLE 2 SPINDLE 3 SPINDLE 4 SPINDLE 5 SPINDLE 6 SPINDLE 8 SPINDLE	4 4 4 4 6 6 8
24	6638004	SQ HD PIPE PLUG, 1/2-14 1 SPINDLE 2 SPINDLE 3 SPINDLE 4 SPINDLE 5 SPINDLE 6 SPINDLE 8 SPINDLE	1 1 1 1 1 1 1

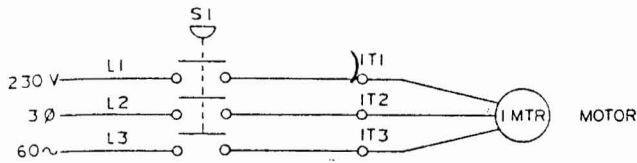
TILTING & UTILITY TABLE ASSEMBLY



NO.	PART NO.	DESCRIPTION	QTY.
	2797120	UTILITY TABLE ASSY, (ITEMS 1 THRU 7)	
	2440014	UTILITY TABLE LOCK ASSY, (ITEMS 1 THRU 3)	
1	3406016	HANDLE KNOB	1
2	3448033	TABLE LOCK	1
3	3268002	LOCK HANDLE	1
4	6861501	FLAT WASHER, 1/2	1
5	3448014	HEAD SLEEVE LOCK	1
6	2440013	HEAD SLEEVE LOCK ASSY, (WELD-MENT)	1
7	3797052	UTILITY TABLE	1
8	2797008	TILTING TABLE ASSY	1
9	3096008	SAFETY COLLAR	1
10	3598023	BRASS PROTECTOR SET SCR PLUG 7/16 x 3/16	2
11	6718055	CUP PT SOC SET SCR, 1/2-13 x 1/2	2
12	3098209	DRILL PRESS COLUMN	1
13	3042121	DRILL PRESS BASE	1
14	6718056	CUP PT SOC SET SCR, 1/2-13 x 3/4	1
15	9100014	FINISHED BASE IN LIEU OF CAST	1

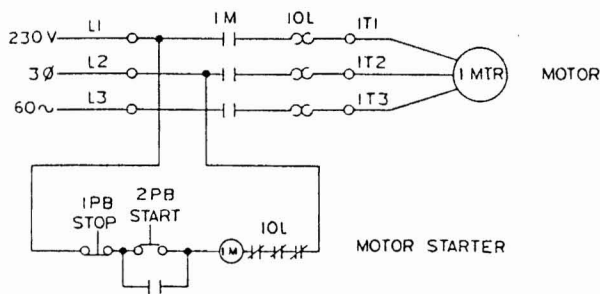
ELECTRICAL SCHEMATIC

MANUAL



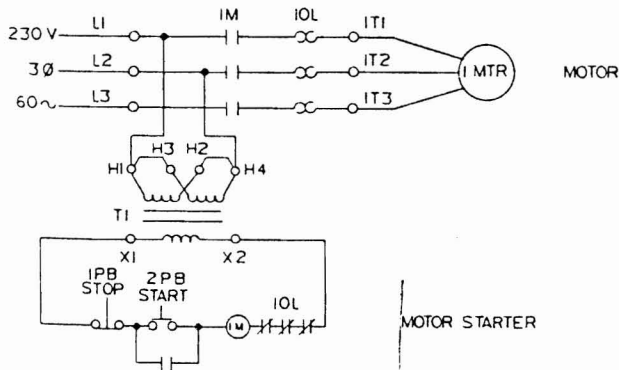
REF.	QTY.	POWERMATIC NO.	MFG. DESCRIPTION
S1	1	(3Ø) 6821135	SWITCH, FURNAS 12BA34P
		(1Ø) 6821134	SWITCH FURNAS 12BA24P

MAGNETIC



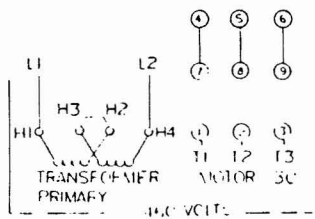
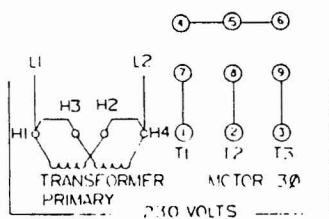
REF.	QTY.	POWERMATIC NO.	MFG. DESCRIPTION
M1	1	(3Ø) 6816111	STARTER MAGNETIC, FURNAS, 14BF32BC71
		(1Ø) 6816105	STARTER MAGNETIC, FURNAS, 14CF12BA7
(PB1) (PB2)		6821014	SWITCH, FURNAS, MOMENTARY PB, B28731B

MAGNETIC WITH LOW VOLTAGE CONTROL



REF.	QTY.	POWERMATIC NO.	MFG. DESCRIPTION
(PB1) (PB2)	1	6821014	SWITCH, FURNAS, MOMENTARY PUSHBUTTON, B28731B
T1	1	6831068	TRANSFORMER 115/230-24V, 50 VA
		6831069	" " " 230/460-24V, 75 VA
		6831070	" " " 230 460-115V, 50 VA
		6816119	STARTER, MAG. W/XMR, 1 Ø, 24V, FURNAS 14CF107013
IM (WITH XMR)	1	6816138	" " " 1 Ø, 115V, " 14CF107017
		6816122	" " " 3 Ø, 24V, " 14BF32BJ71B0
		6816126	" " " 3 Ø, 115V, " 14BF32BA71BA
		6470600	MOTOR, ELEC, 3/4 HP, 1 Ø, 1200 RPM, 115/230V, 56 FR
MTR.	1	6470607	" " " 3 Ø, 1200 RPM, 200 V, "
		6470608	" " " 3 Ø, 1200 RPM, 230/460V, "
		6470700	" " " 1 Ø, 1800 RPM, 115/230 V, "
		6470702	" " " 3 Ø, 1800 RPM, 575 V, "
		6470707	" " " 3 Ø, 1800 RPM, 230/460V, "
		6470712	" " " 3 Ø, 1800 RPM, 200 V, "

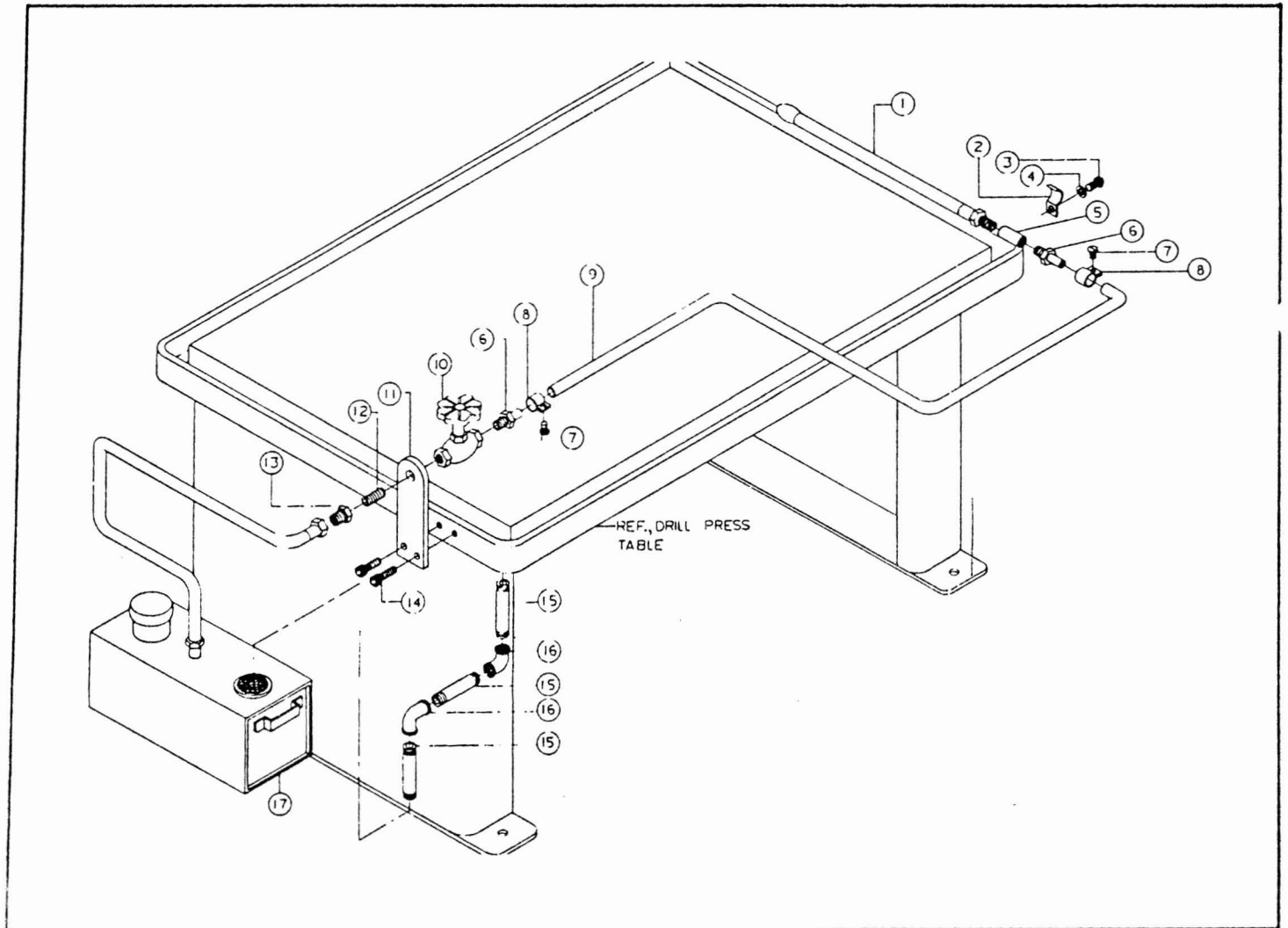
NOTE:
FOR SINGLE PHASE UNITS, OMIT LINE L3



COOLANT KIT, 1 SPINDLE (OPTIONAL)

NO.	PART NO.	DESCRIPTION	QTY.
1	6498001	NOZZLE, 1/8-27 x 24"	1
2	6122007	CONDUIT CLAMP, 1/4	1
3	6714114	RD HD CAP SCR, 1/4-20 x 3/8	1
4	6861100	LOCK WASHER, 1/4	1
5	6634044	PIPE COUPLING, 1/8	1
6	6284073	TUBE ADAPTOR FITTING, 1/8 MBS 300, 1/8-27	2
7	6716007	SELF TAPPING PAN HD SCR, NO. 8 x 5/8	2
8	6122023	TUBE CLAMP, C3053A-6	2
9	6833009	BLACK PLASTIC TUBE, 3/8	4'

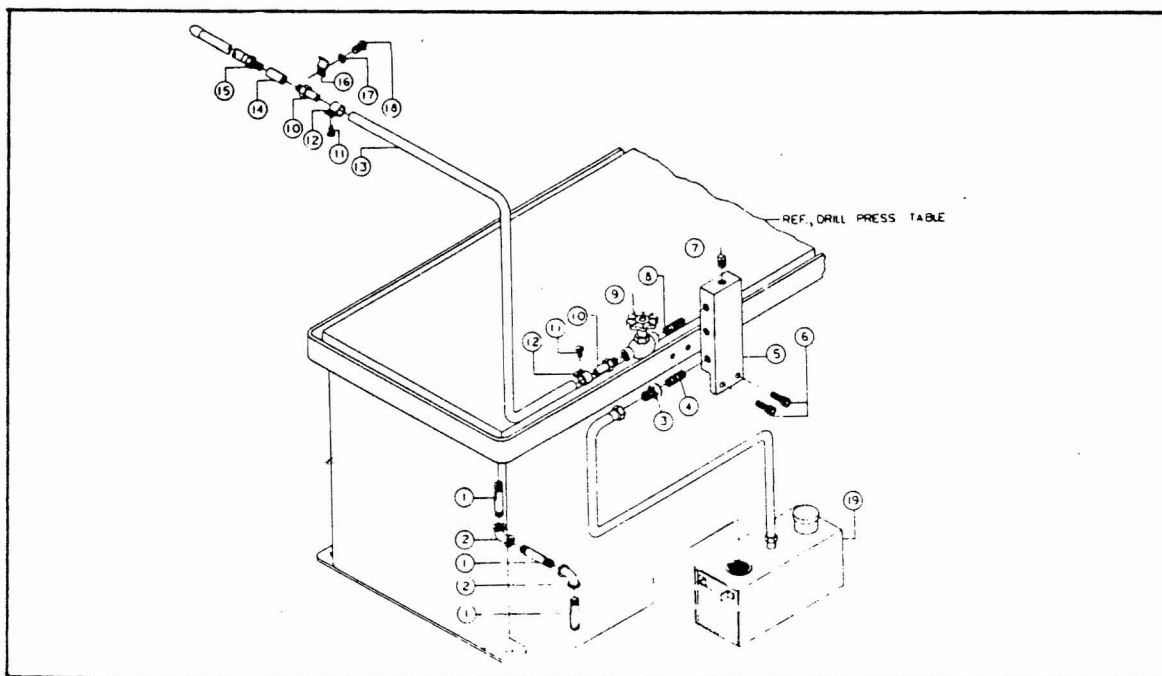
NO.	PART NO.	DESCRIPTION	
10	6850015	PRESSURE VALVE, GLOBE NO. 13, 1/8	
11	3462002	SINGLE SPINDLE COOLANT SYSTEM MANIFOLD	1
12	6634071	CLOSE NIPPLE FITTING PIPE, 1/8 x 3/4	1
13	6634081	HEX BUSHING FITTING PIPE, 3/8 x 1/8	1
14	6714018	SOC HD CAP SCR, 1/4-20 x 3/4	2
15	6634020	FITTING PIPE, 1/2 x 4	3
16	6634038	FITTING PIPE, 1/2-14, 90°	2
17	6160002	COOLANT SYSTEM, H-16	1



COOLANT KIT, 2, 3 & 4 SPINDLES
(OPTIONAL)

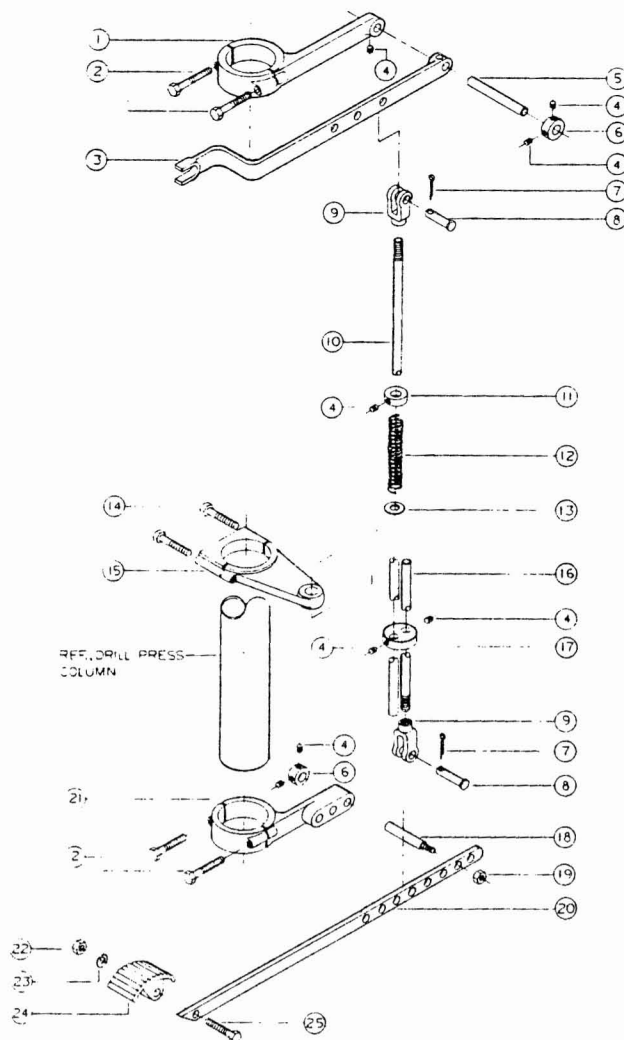
	PART NO.	DESCRIPTION	QTY.
1	6634020	FITTING PIPE, 1/2 x 4	
		2 SPINDLE	3
		3 SPINDLE	3
		4 SPINDLE	3
2	6634038	FITTING PIPE, 1/2-14, 90° FEMALE ELBOW	
		2 SPINDLE	2
		3 SPINDLE	2
		4 SPINDLE	2
3	6634082	FITTING PIPE, 3/8 x 1/4 HEX BUSHING	
		2 SPINDLE	1
		3 SPINDLE	1
		4 SPINDLE	1
4	6634090	FITTING PIPE, 1/4 CLOSE NIPPLE	
		2 SPINDLE	1
		3 SPINDLE	1
		4 SPINDLE	1
5	3462001	COOLANT SYSTEM MANIFOLD	
		2 SPINDLE	1
		3 SPINDLE	1
		4 SPINDLE	1
6	6714018	SOC HD CAP SCR, 1/4-20 x 3/4	
		2 SPINDLE	2
		3 SPINDLE	2
		4 SPINDLE	2
7	6638001	PIPE PLUG, 1/8-27	
		2 SPINDLE	3
		3 SPINDLE	2
		4 SPINDLE	1
	6634071	FITTING PIPE, 1/8 x 3/4	
		2 SPINDLE	2
		3 SPINDLE	3
		4 SPINDLE	4
9	6850015	PRESSURE VALVE, GLOBE NO. 13, 1/8	
		2 SPINDLE	2
		3 SPINDLE	3
		4 SPINDLE	4
10	6284073	TUBE ADAPTOR FITTING, 1/8-27	
		2 SPINDLE	4
		3 SPINDLE	6
		4 SPINDLE	8

NO.	PART NO.	DESCRIPTION	QTY.
11	6716007	SELF TAPPING PAN HD SCR, NO. 8 x 5/8	
		2 SPINDLE	4
		3 SPINDLE	6
		4 SPINDLE	8
12	6122023	TUBE CLAMP, C3053A-6	
		2 SPINDLE	4
		3 SPINDLE	6
		4 SPINDLE	8
13	6833009	BLACK PLASTIC TUBE, 3/8	
		2 SPINDLE	9'
		3 SPINDLE	15'
		4 SPINDLE	22'
14	6634044	PIPE COUPLING, 1/8	
		2 SPINDLE	2
		3 SPINDLE	3
		4 SPINDLE	4
15	6498001	NOZZLE, 1/8-27 x 24	
		2 SPINDLE	2
		3 SPINDLE	3
		4 SPINDLE	4
16	6122007	CONDUIT CLAMP, 1/4	
		2 SPINDLE	2
		3 SPINDLE	3
		4 SPINDLE	4
17	6861100	LOCK WASHER, 1/4	
		2 SPINDLE	2
		3 SPINDLE	3
		4 SPINDLE	4
18	6714114	RD HD CAP SCR, 1/4-20 x 3/8	
		2 SPINDLE	2
		3 SPINDLE	3
		4 SPINDLE	4
19	6160002	COOLANT SYSTEM, H-16	
		2 SPINDLE	1
		3 SPINDLE	1
		4 SPINDLE	1

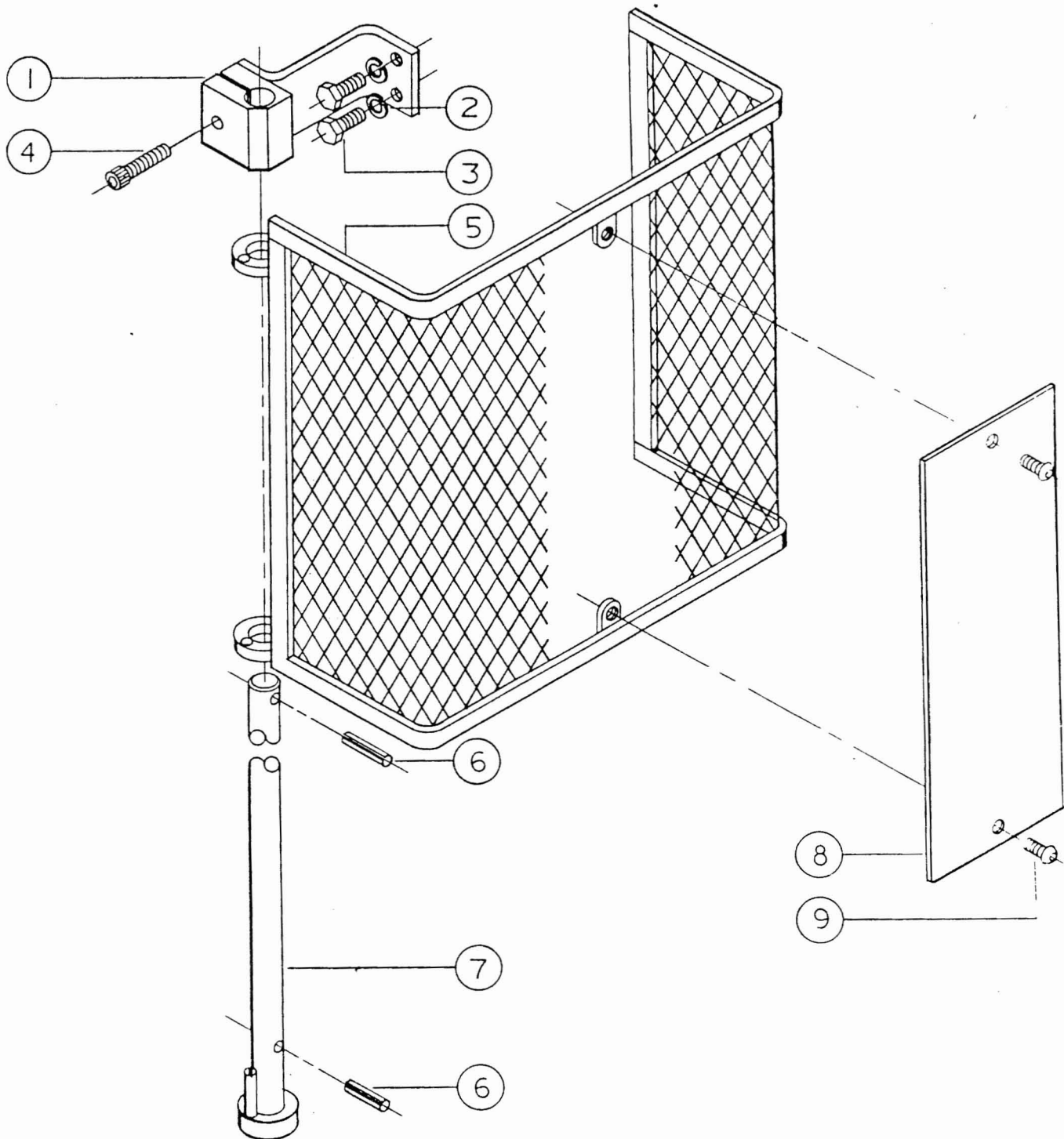


FOOT FEED ASSEMBLY (OPTIONAL)

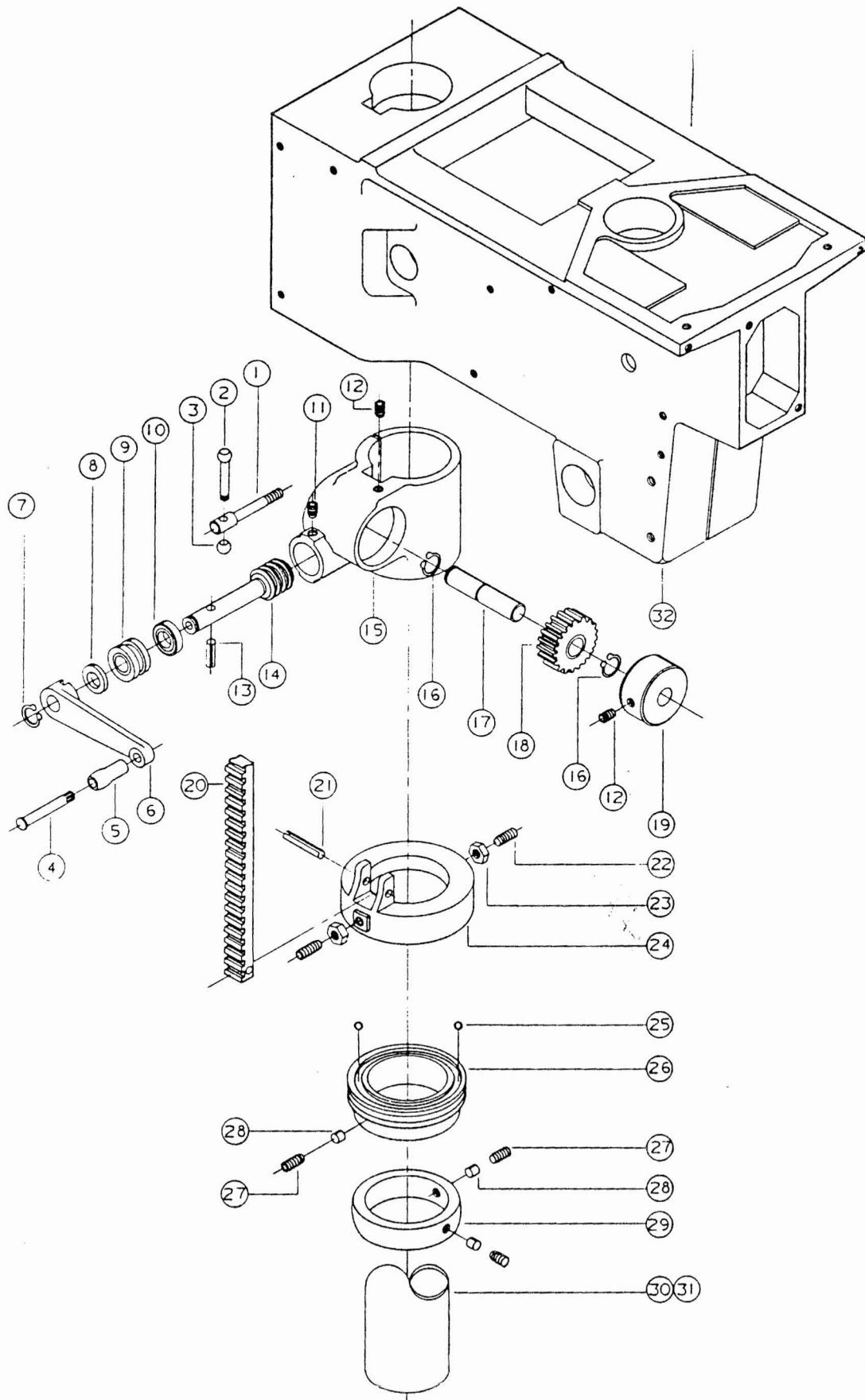
NO.	PART NO.	DESCRIPTION	QTY.
1	3063051	UPPER MTG BRKT	1
2	6716037	HEX HD SCR, 3/8-16 x 2	4
3	3025029	UPPER FEED ARM	1
4	6715016	CUP PT SOC SET SCR, 5/16-18 x 5/16	8
5	3584004	UPPER FEED ARM PIN	1
6	3096244	COLLAR	2
7	6622002	COTTER PIN	2
8	6621002	CLEVIS PIN	2
9	6126000	CLEVIS, No. 6 YOKE	2
10	3670053	UPPER FEED ROD	1
11	3096011	COLLAR	1
12	6813056	SPRING, 5/8 ID x 7/8 OD x 10 LG	1
13	6861502	FLAT WASHER, 1/2 OD x 1/8 TH	1
14	6716042	HEX HD SCR, 3/8-16 x 3	2
15	3063053	COLUMN BRKT	1
16	3670052	LOWER FEED ROD	1
17	3096014	COUPLING COLLAR	1
18	3584002	FOOT LEVER PIN	1
19	6518001	HEX HD NUT, 1/2-13 x 1	1
20	3025030	PEDAL ARM	1
21	3063054	LOWER MTG BRKT	1
22	6517001	HEX HD NUT, 7/16-14	1
23	6861400	LOCK WASHER, 7/16	1
24	3587002	FOOT OPERATING PEDAL	1
25	6717016	HEX HD CAP SCR, 7/16-14 x 2	1



GUARD ASSEMBLY (OPTIONAL)			
NO.	PART NO.	DESCRITPTION	QTY.
1	2092008	GUARD CLAMP ASSY (WELDMENT)	1
2	6861200	LOCK WASHER, 5/16	2
3	6715035	HEX HD SCR, 5/16-18 x 3/4	2
4	6716016	SOC HD CAP SCR, 3/8-16 x 7/8	1
5	2250121	DRILL PRESS GUARD ASSY, (WELD)	1
6	6626032	SPRING PIN, 3/16 x 1-1/4	2
7	2709026	DRILL PRESS GUARD SHAFT ASSY	1
8	3720020	PLASTIC GUARD	1
9	6710063	BUT HD SOC SCR, No. 10-24 x 1/2	2

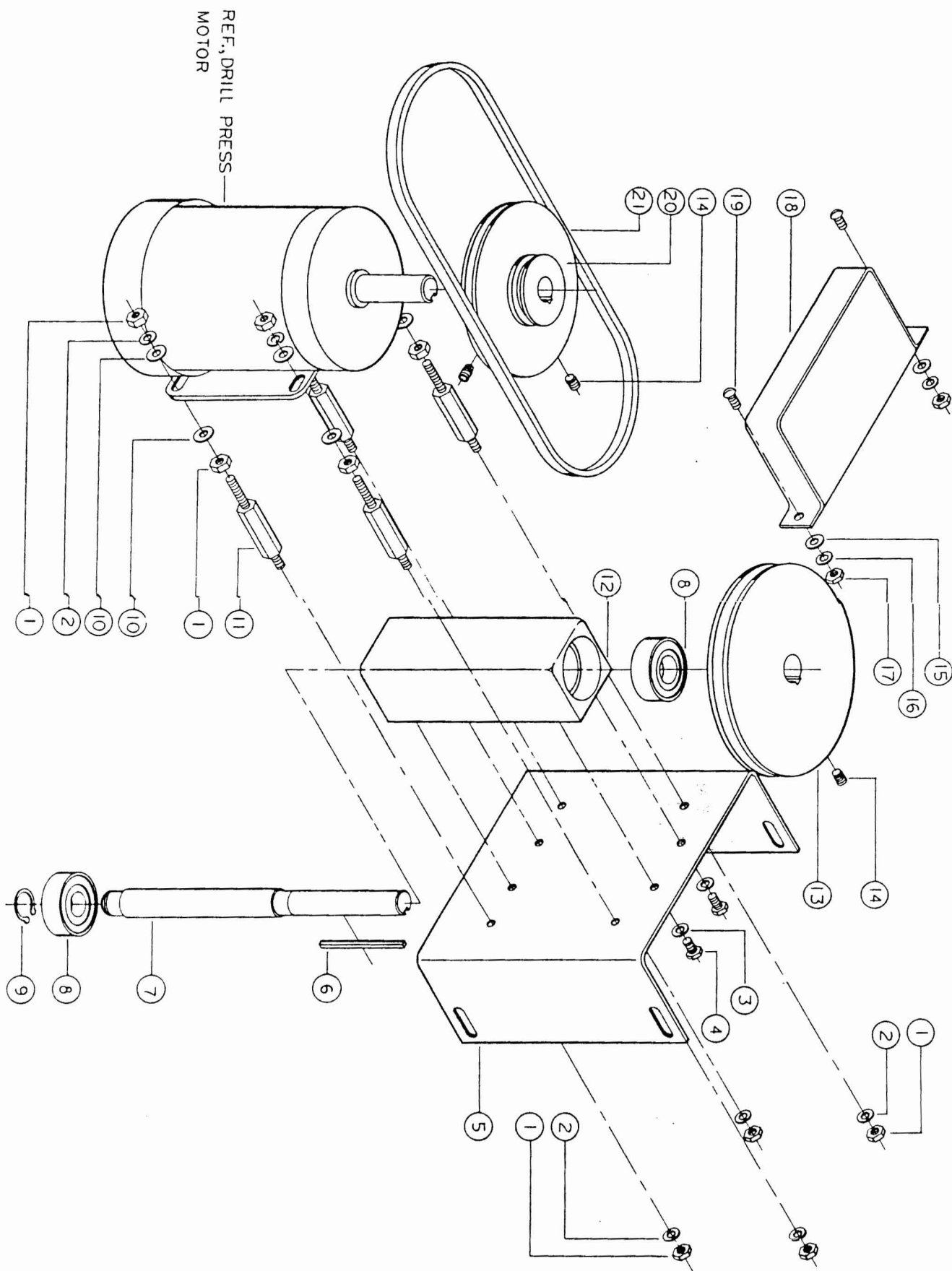


HEAD RAISING ASSEMBLY (OPTIONAL)



HEAD RAISING ASSEMBLY (OPTIONAL)			
NO.	PART NO.	DESCRIPTION	QTY.
	2277104	HEAD RAISING ASSY (ITEMS 1 THRU 26)	
	2298034	GEAR ELEVATING HOUSING ASSY (ITEMS 1 THRU 19)	
	2695009	LOCKSCREW ASSY (ITEMS 1 THRU 3)	
1	3695010	LOCK SCR	1
2	3268002	HANDLE	1
3	3406016	HANDLE KNOB	1
	2268013	HEAD RAISING HANDLE ASSY (ITEMS 4 THRU 6)	
4	6624006	FLAT HD PIN, 3	1
5	3268201	NYLON MACHINE HANDLE	1
6	3268005	TABLE ELEVATING HANDLE	1
7	6670008	RETAINING RING	1
8	3838009	BEVEL WASHER	1
9	2729004	HEAD RAISING SLEEVE ASSY	1
10	6064001	THRUST BEARING	1
11	6716099	HALF DOG PT SOC SET SCR, 3/8-16 x 5/8	1
12	6716003	KNURL CUP PT SOC SET SCR, 3/8-16 x 3/8	2
13	6626040	SPIRING PIN, 1/4 x 1-1/4	1
14	3237332	WORM GEAR	1
15	3298237	GEARBOX HOUSING	1
16	6670018	RETAINING RING	2
17	3709020	GEAR SHAFT	1
18	2240072	HEAD RAISING GEAR ASSY	1
19	3737023	GEAR SPACER	1
	2645008	HEAD RAISING RACK ASSY (ITEMS 20 THRU 26)	
20	3650004	HEAD RAISING RACK	1
21	6626033	RACK MOUNTING SPRING PIN 3/16 x 2	1
22	6715118	HALF DOG PT SOC SET SCR, 5/16 -18 x 3/4	2
23	6515007	HEX JAM NUT, 5/16-18	2
24	3078026	THRUST BEARING COLLAR CAP	1
25	6054002	STEEL BALL	30
26	3096042	THRUST BEARING COLLAR	1
27	6718055	CUP PT SOC SET SCR, 1/2-13 x 1/2	3
28	3598023	BRASS SET SCR PROTECTOR PLUG, 7/16 x 3/16	3
29	3096008	SAFETY COLLAR	1
30	3098209	DRILL PRESS COLUMN (FLOOR MODEL)	1
31	3098208	DRILL PRESS COLUMN (BENCH MODEL)	1
32	3277028	DRILL PRESS HEAD	1

VARI-SLO ATTACHMENT (OPTIONAL)

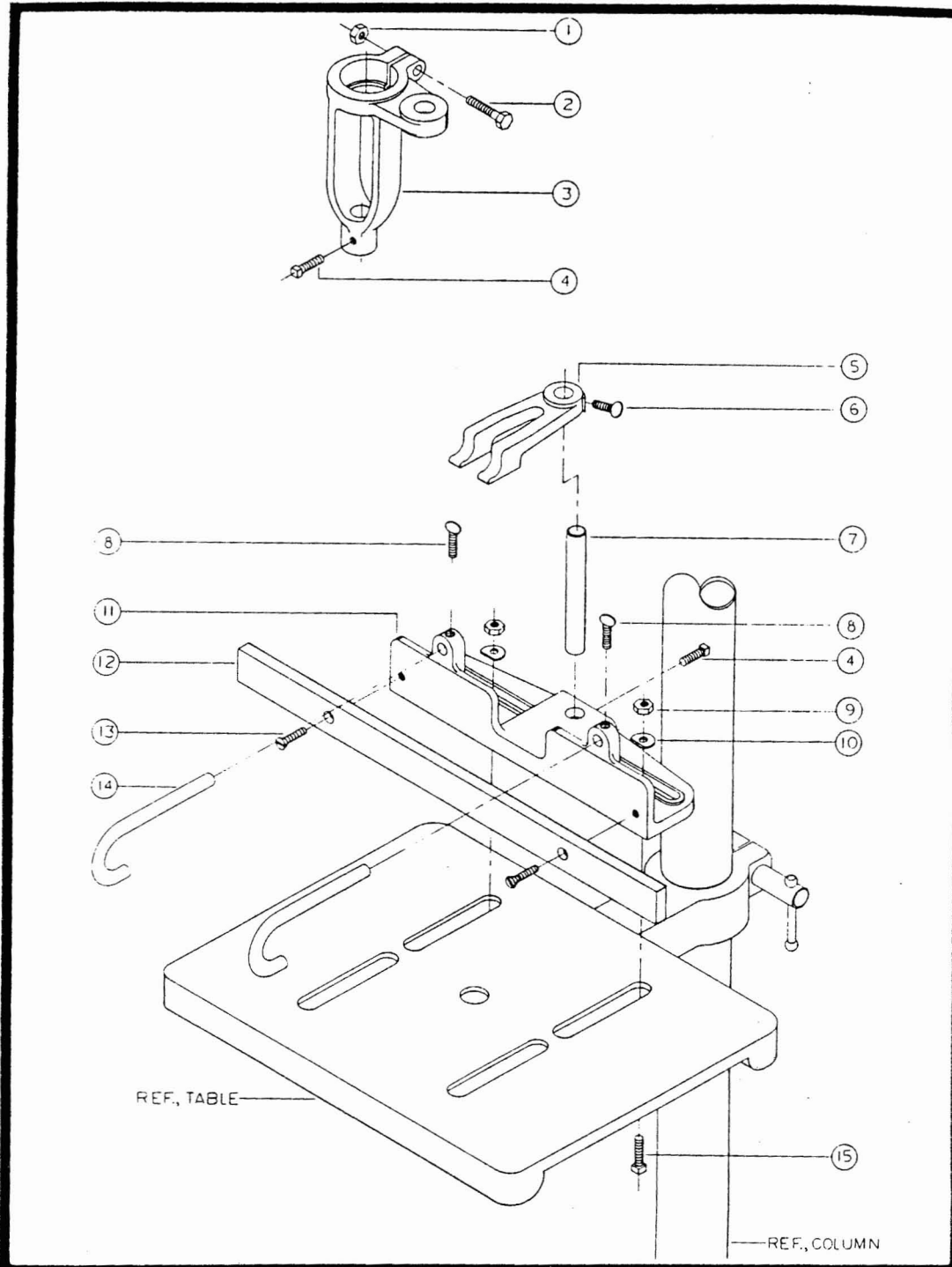


**VARI-SLO ATTACHMENT
(OPTIONAL)**

NO.	PART NO.	DESCRIPTION	QTY.
1	6515001	HEX NUT, 5/16-18	12
2	6861200	LOCK WASHER, 5/16	8
3	6861100	LOCK WASHER, 1/4	4
4	6714049	HEX HD SCR, 1/4-20 x 3/4	4
5	3063295	VARI-SLO ATTACHMENT COUNTER-SHAFT BRKT	1
6	3388043	KEY, 3/16 x 3/16 x 3-1/2	1
7	3700108	VARI-SLO ATTACHMENT SHAFT	1
8	6060005	BEARING, FAFNIR 203 PP	2
9	6670001	RETAINING RING, TRUARC 5100-16	1
10	6861201	FLAT WASHER, 5/16	8
11	3773305	VARI-SLO MTR MTG STUD	4
12	3064411	VARI-SLO ATTACHMENT MTG BRK	1
13	3718035	VARI-SLO ATTACHMENT COUNTER-SHAFT SHEAVE	1
14	6715016	CUP PT SOC SET SCR, 5/16-18 x 5/16 (ONE NOT SHOWN)	4
15	6860800	FLAT WASHER, No. 10	2
16	6860802	LOCK WASHER, No. 10	2
17	6510001	HEX NUT, No. 10-24	2
18	2250134	VARI-SLO GUARD ASSY (WELD)	1
19	6710003	TRUSS HD SCR, No. 10-24 x 1/2	2
20	3718034	VARI-SLO ATTACHMENT MTR SHEAVE	1
21	6077100	POLYFLEX BELT, GATES 7M600	1
22	3119006	VARI-SLO ATTACHMENT DECAL (NOT SHOWN)	1
23	3080054	CARTON (NOT SHOWN)	1

MORTISER ATTACHMENT (OPTIONAL)

NO.	PART NO.	DESCRIPTION	QTY.
1	6515001	HEX NUT, 5/16-18	1
2	6715039	HEX HD CAP SCR, 5/16-18 x 1-3/4	1
3	3063072	CHISEL MTG BRKT	1
4	6715090	SQ HD SET SCR, 5/16-18 x 1/2	2
5	3212005	HOLD DOWN FINGER	1
6	6715106	THUMB SCR, 5/16-18 x 3/4	1
7	3670050	HOLD DOWN FINGER ROD	1
8	6715105	THUMB SCR, 5/16-18 x 1/2	2
9	6518001	HEX NUT, 1/2-13	2
10	3837007	MODIFIED WASHER, 1/2	2
11	3063055	HOLD DOWN BASE BRKT	1
12	3195001	BACK-UP BOARD FENCE	1
13	6715051	FLAT HD SCR, 5/16-18 x 1-1/2	2
14	3092015	CLAMP	2
15	6718063	SQ HD SCR, 1/2-13 x 1-1/2	2



This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There is no handwriting or printed text on the paper. A small vertical mark is visible near the left edge about halfway down the page.