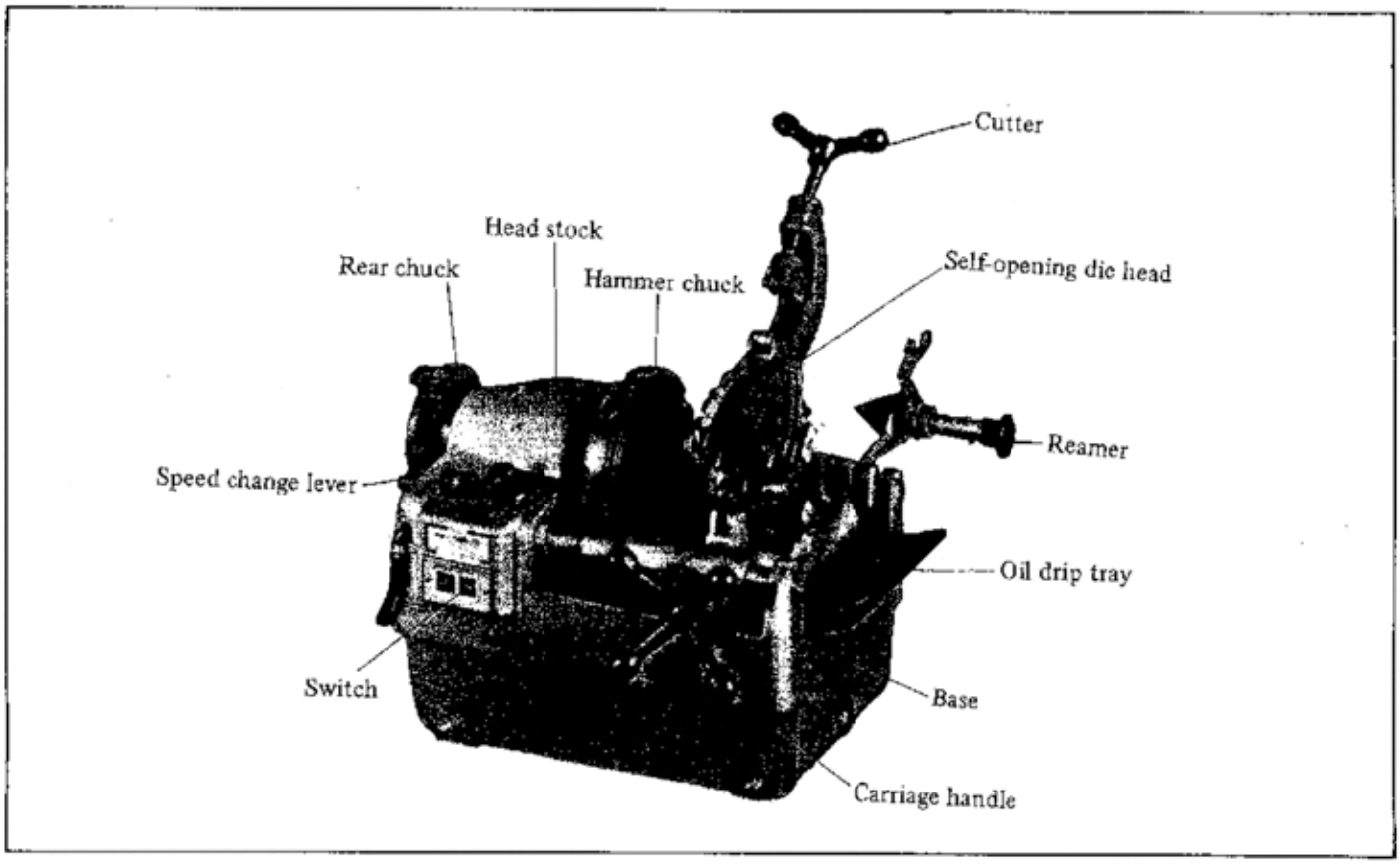
REX 60A-III
OPERATION MANUAL

CONTENTS

REX 60A-III Main Parts



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Specifications and Accessories

▪ Specifications:

Capacity:	½"~2" (threading, cutting, reaming)
Voltage:	100V, 115V, 200V and 220V available
Motor:	Single phase 550W condenser motor.
Rotation speeds:	

	60Hz	50Hz
½"~1" Threading cutting Reaming.	28r.p.m.	23r.p.m.
1½"~2" Threading	12r.p.m.	23r.p.m.

Net weight:	172 lbs. (78kg)
Dimensions:	780(L) x 465(W) x 480(H) mm.

▪ Standard Accessories:

Self opening die heads:	
	BSPT or NPT (½"~¾")(1"~2") one each.
Dies:	BSPT or NPT (½"~¾")(1"~2") one set each.
Hexagonal keys:	4 pcs. (3, 4, 5, 6, mm)
Thread cutting oil:	1 can, 4 liters
Bearing oil:	1 can
Adjustable wrench:	1 pc. (200mm).
Machine cover:	1 pc.
Tool box:	1 pc.
Stand:	1 set.
Cutter wheel:	1 pc.
Screwdriver:	1 pc. (phillips head).

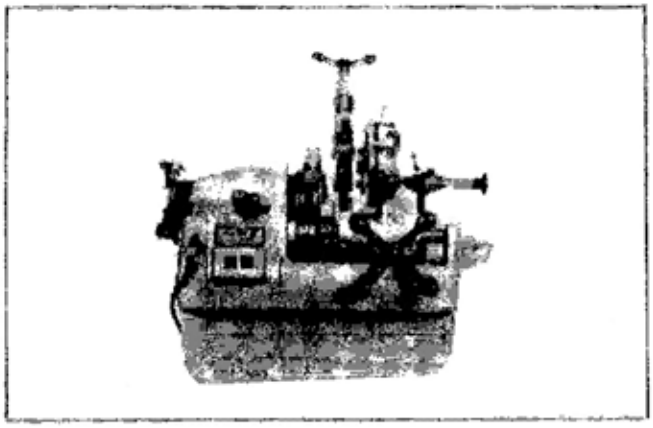
▪ Optional Accessories:

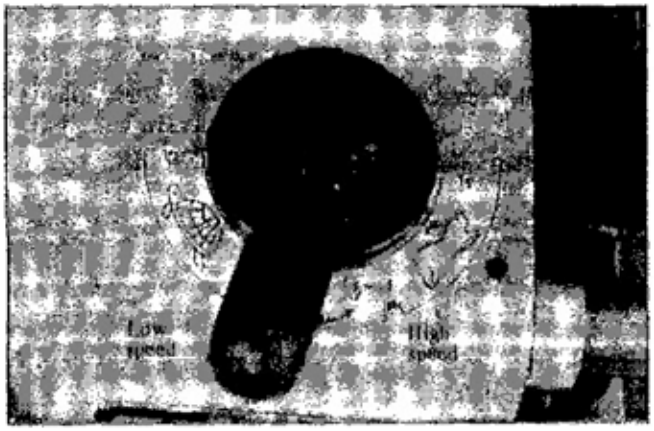
Die heads & dies:	Die heads and dies for BSPT and NPT (¼"~⅜"), bolt (W.UNC.M.), NPT, conduit and BSPT left hand and universal die head (right hand ½"~2" only).
Dies:	Dies for plastic coated pipe (BSPT) and stainless steel pipe (BSPT, NPT)

▪ Other Accessories:

Nipple attachments and pipe support.
Roller wheels and chuck jaw inserts for plastic coated pipe.

Operation





1. Power Supply

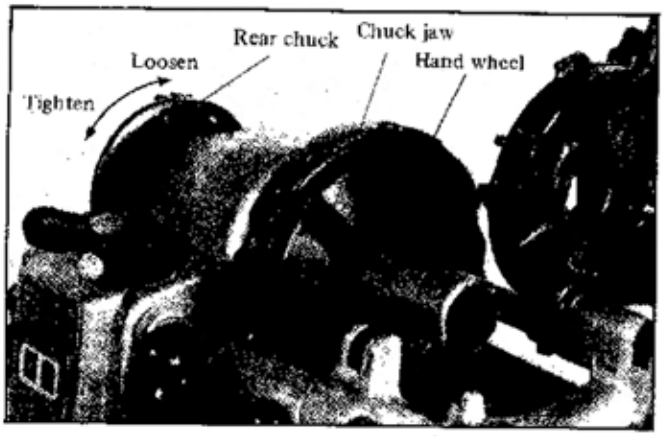
Use only an AC power supply and for your own safety ensure that the machine is earthed before use. If an extension cord is used, it should be as short as possible and of sufficiently heavy wire gauge.

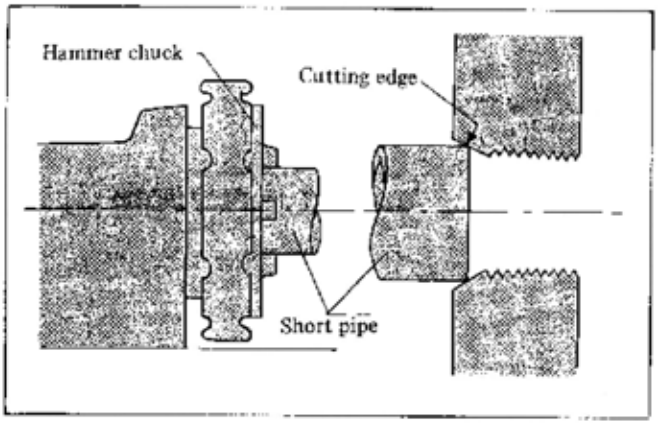
2. Setting Up

When setting up the machine, check that the rear chuck end is higher to prevent oil from flowing back down the pipe.

3. Before You Start

1. Check that the supplied power is the same as that specified on the name plate of the machine.
2. Open the oil drip tray and fill the tank with 4 litres of thread cutting oil.
3. Fit the die head to the carriage and switch on the machine. When the die head is lowered, oil will flow out automatically, but when it is raised, oil will flow out from underneath the carriage.
4. The machine is fitted with a two speed motor. Speeds can be changed whether the motor is in motion or static. High speeds should be used for threading ½" - 1" pipe and low speeds for 1¼"—2" pipe.



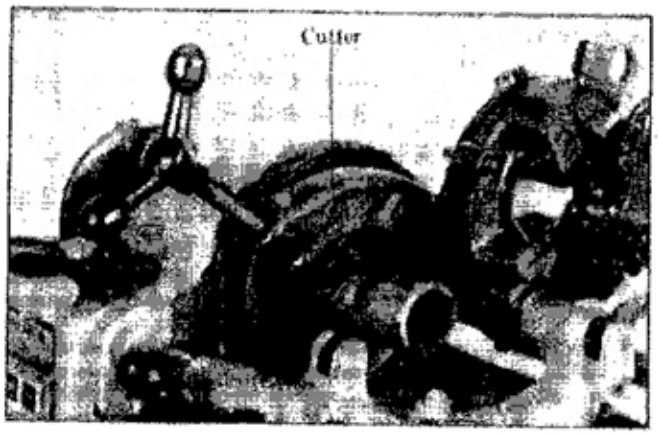


4. Setting of Pipe

1. Open both chucks wider than the size of the pipe to be cut and insert the pipe from the rear chuck side. (Short pipe can be inserted from the hammer chuck side.)
2. Close the rear chuck and, while holding the pipe in your right hand, close the hammer chuck on the pipe. When the pipe is gripped by the chuck, jerk the hand wheel sharply towards you to lock the pipe.
3. To release the pipe after cutting, jerk the hand wheel away from you and open the rear chuck to remove the pipe.

■ Setting Short Pipe:

Insert short pipe from the hammer chuck side and line up the dies to grip the end of the pipe and hold it in position while the hammer chuck is closed to grip the pipe firmly for threading. In this way a smooth perfectly centered taper cut is ensured every time.



5. Pipe Cutting and Reaming

Set the speed change lever to the high speed position for cutting.

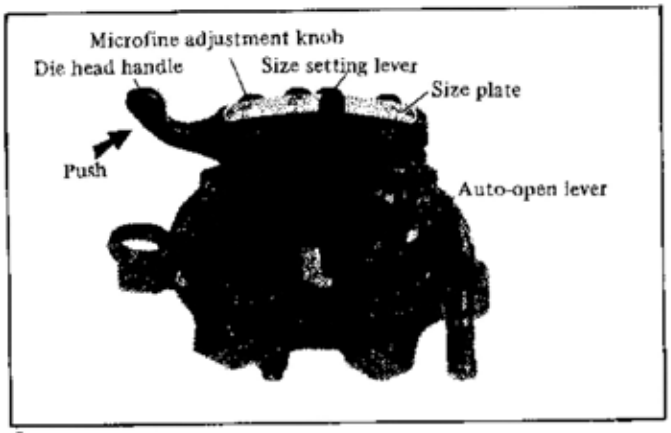
▪ Pipe Cutting:

1. Raise the die head and reamer out of the way and set the pipe to be cut at the desired length.
2. Open the pipe cutter wider than the outer diameter of the pipe and lower into position on the pipe.
3. Tighten by turning the handle to the right until the cutter wheel engages firmly onto the pipe.
4. Start the machine and tighten the handle half a turn for each revolution of the pipe.

* Soft pipe is liable to distort if the handle is turned too forcefully, so be sure to match the turning to the pace of the pipe.

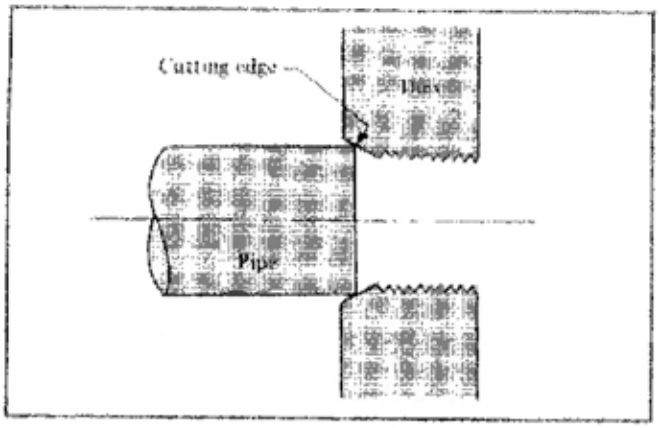
▪ Reaming:

Raise the cutter and the die head out of the way and lower the reamer into position. Push the reamer handle and turn to the left to set the lock pin in its groove and lock the reamer cone in position. (This operation may not be necessary with long-chucked pipe which can be reamed with the cone in the recessed position.) Start the motor and turn the carriage handle to the right to advance the reamer.



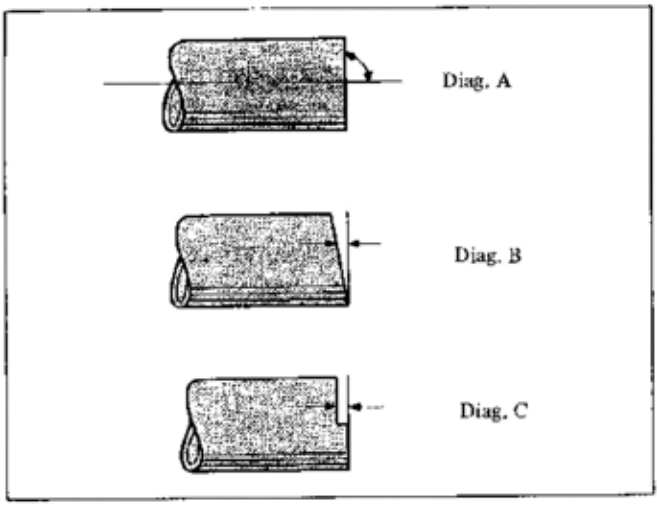
6. Threading

1. Fit the appropriate die head as shown in the photograph.
2. Push the die head handle forward to set the auto-open lever then set the thread size by fitting the size setting lever to the appropriate position.
3. Switch on the machine and thread cutting oil will automatically flow out from the die head.
4. Turn the carriage handle to the right to advance the die head until the first two or three threads are cut. The rest is automatic.
5. The dies will automatically open when a perfect taper thread has been cut.
6. Turn the carriage handle to the left to clear the pipe and the job is done.
7. Push the die head handle forward once again to set the automatic release and the machine is ready. It won't be necessary to set the size again unless the next pipe size is different.



▪ Threading Precautions:

1. If the die head is advanced too quickly, the pipe will hit the dies too hard and they may be damaged. Bring the dies into gentle contact with the pipe and then gradually increase the pressure until you feel the machine taking over.
2. If for any reason the motor should stop during threading, switch off the machine immediately or the motor-windings may be damaged.
3. Be sure to start threading with the carriage right of the red line on the front support bar. If threading starts to the left of the line the die head can be forced against the chuck and seriously damage the machine.



▪ Special Cut Grinder Precautions:

We strongly recommend that only the pipe cutter attached to the machine be used to cut pipes that are to be threaded. If a grinder is used, make sure that the cut face is square and without steps as in diag A.

Diags B and C show faults common to grinder cutters.

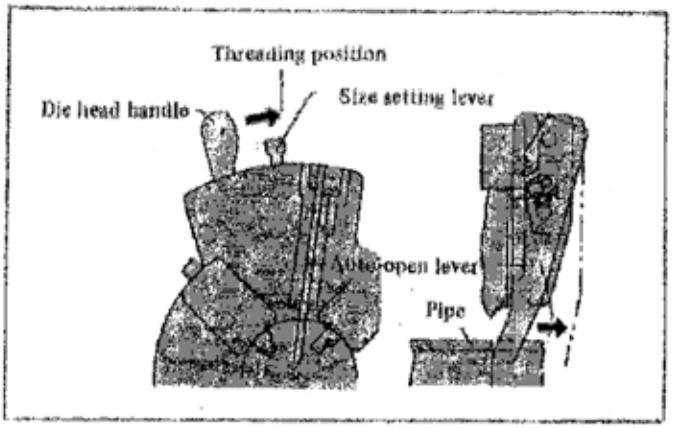
DIAG. B:

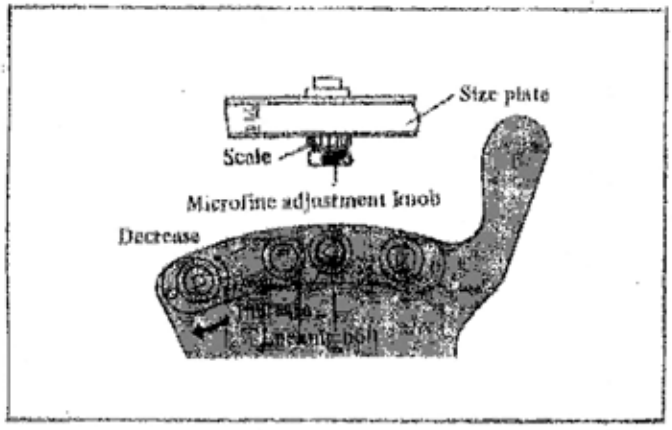
- Pipe not squarely set in vise.
- Pipe pushed with too much force against the grinder.
- The grinder shaft bearing is defective.

DIAG. C:

- Large pipe cut with too small a grinder. The pipe has been cut two or more times, leaving a stepped edge which would cause serious damage if allowed to come into contact with the auto-open lever. Always recut pipe like this before threading.

Self-opening Die Head





▪ Self-opening Die Head:

When the die head handle is pushed forward and set, the auto-open lever slips into position in its groove. As the dies travel along the pipe, the end of the pipe comes into contact with and pushes the lever out of its groove to release the dies.

▪ Microfine Adjustment of Thread Thickness:

Microfine adjustment of thread thickness is possible to allow pipe to be cut to exactly your own requirements. Simply turn the microfine adjustment knob to the left to decrease, and to the right to increase the thread thickness. The knob is locked by a locking bolt which should be loosened with the hexagonal key provided and the knob turned three settings to the right before adjustments are made.

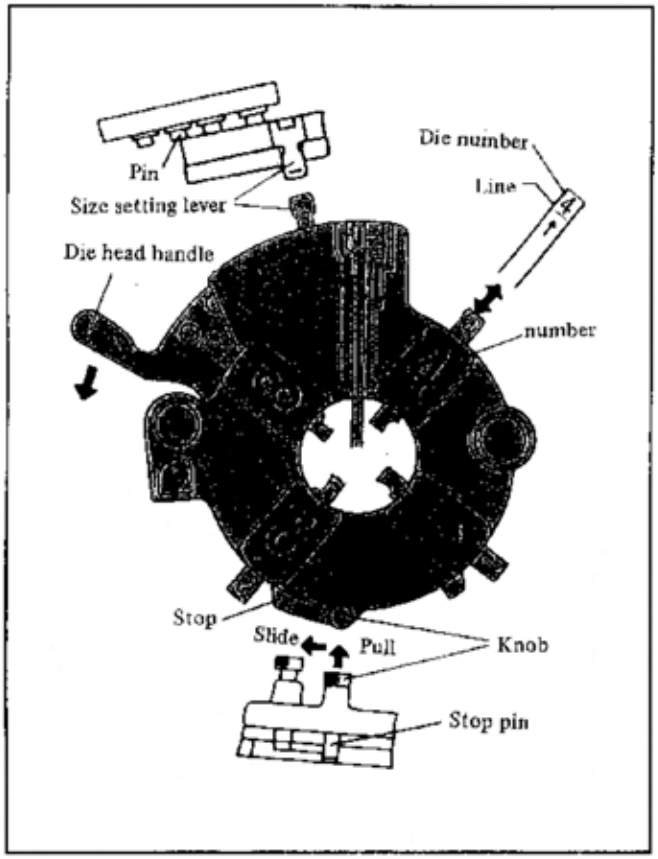
One setting on the knob represents one thread on the pipe for the 1"–2" die head, and 1.3 threads for the ¼"–¾" die head.

Note:

Size should always be checked with a thread gauge after adjustment.

▪ Change of Size:

Size change is simple with the size setting lever.



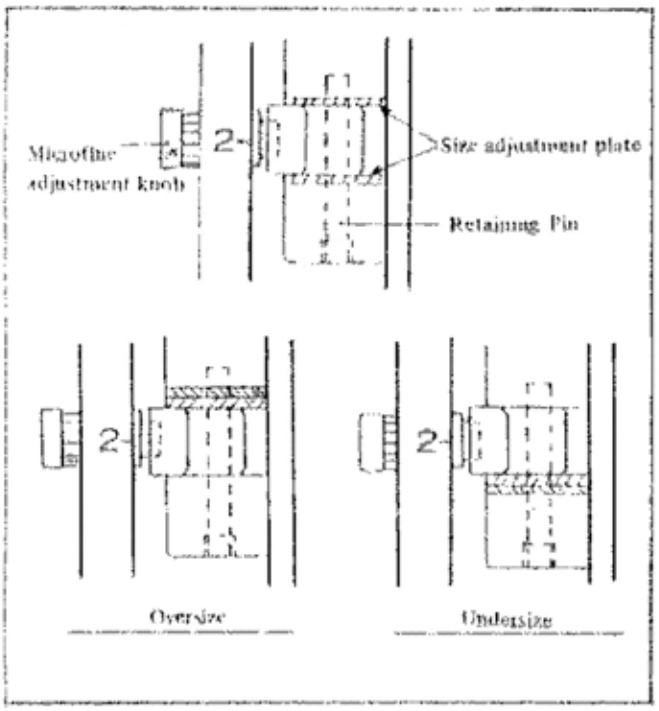
▪ Replacement of Dies:

Removal:

1. Remove the die head from the carriage with the auto open lever in the open position.
2. Lay the die head, lever upwards, on the bench and rotate to open dies.
3. Raise the stop pin to release and rotate the die head further. Dies can now be removed.

Replacement:

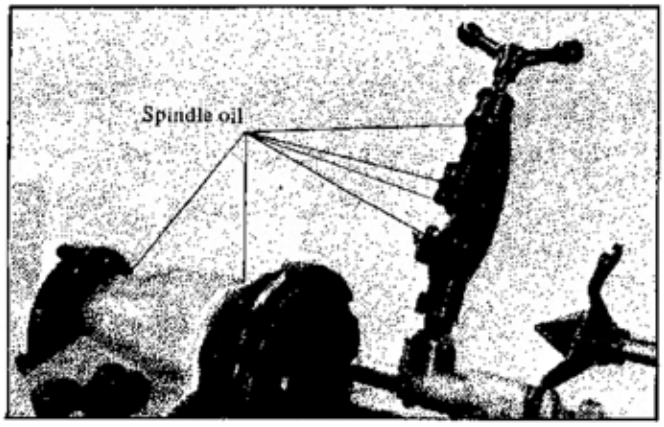
1. Insert replacement dies up to the line, making sure that the numbers on the dies match the numbers on the die head.
2. Dies are made as a matched set of four so be sure to use them as a set and to replace them all, not just one or two.
3. Rotate the die head handle clockwise to close the dies. Should the head prove difficult to close, remove the dies and reinsert them one by one until all four are correctly in place.

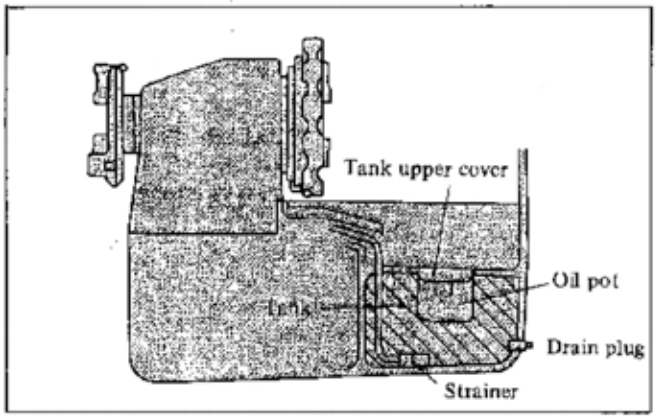


• Size Adjustment Plate:

If, even with full adjustment, thread size is not satisfactory, remove the retaining pin and reinsert the size adjustment plates as shown in the diagram. Reinsert the retaining pin to hold in place.

Maintenance





REX products are made with the finest materials throughout, but even the best needs attention sometimes. To ensure a long and trouble free working life for your machine, we recommend the following maintenance procedures.

1. Main Shaft Lubrication

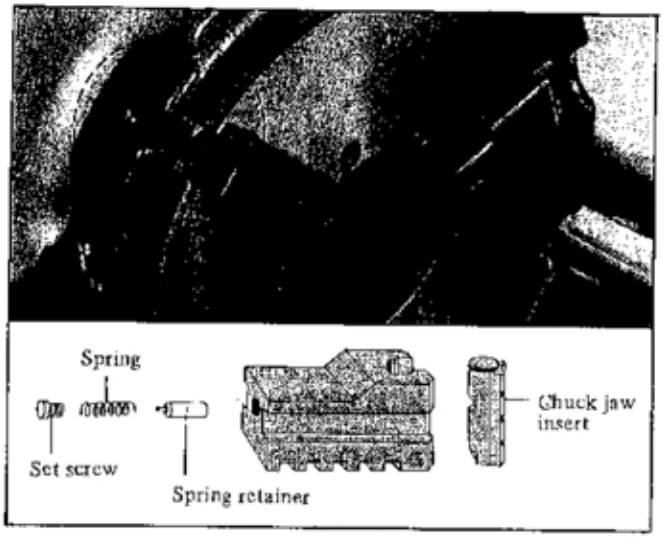
The main shaft bearings are made with specially designed oiled metal, but should be lubricated once every three months with spindle oil or machine oil to ensure smooth running.

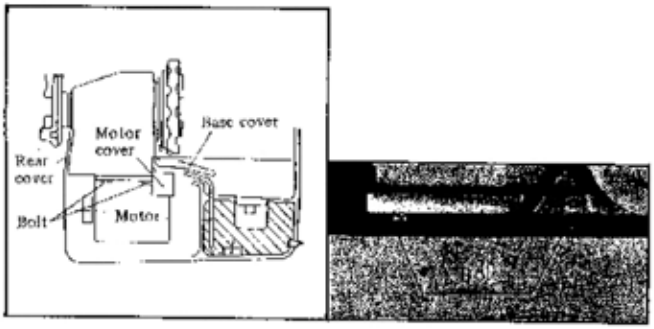
2. Pipe Cutter Lubrication

The cutter feed screw and the rollers need to be oiled once a day with spindle oil. Lack of oil not only makes use more difficult, but detracts from the efficiency of the machine.

3. Cleaning The Oil Tank

To prevent small scraps from entering the pump, the system is fitted with two strainers. These, and the tank itself, should be cleaned out once a month to ensure a smooth flow of thread cutting oil to the die head and to lengthen the working life of the pump.





4. Changing The Chuck Jaw Inserts

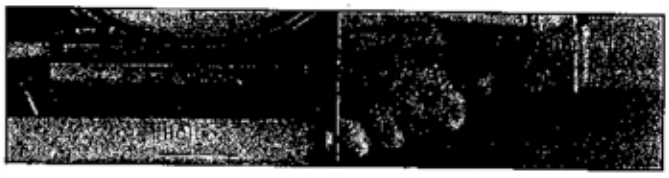
The chuck jaw is composed of five parts; the jaw itself, the insert, a spring retainer and a set screw. To remove the chuck jaw inserts, it is necessary first to line up the groove in the hammer chuck hand wheel and to remove the set screw with a hexagonal key. The spring can then be removed and the insert replaced.

The hammer chuck itself, is held in place with six bolts. If these were to come loose, the efficiency of the machine would be impaired so check them regularly to see that they are tight.

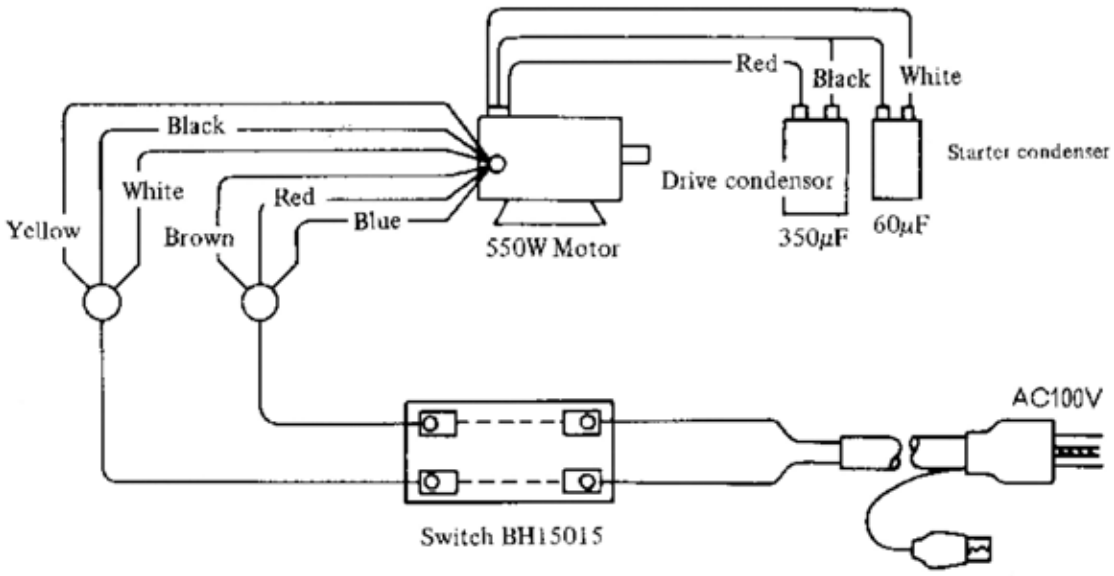
5. Belt Adjustment

If the drive belt becomes loose the power of the motor will not be passed to the drive.

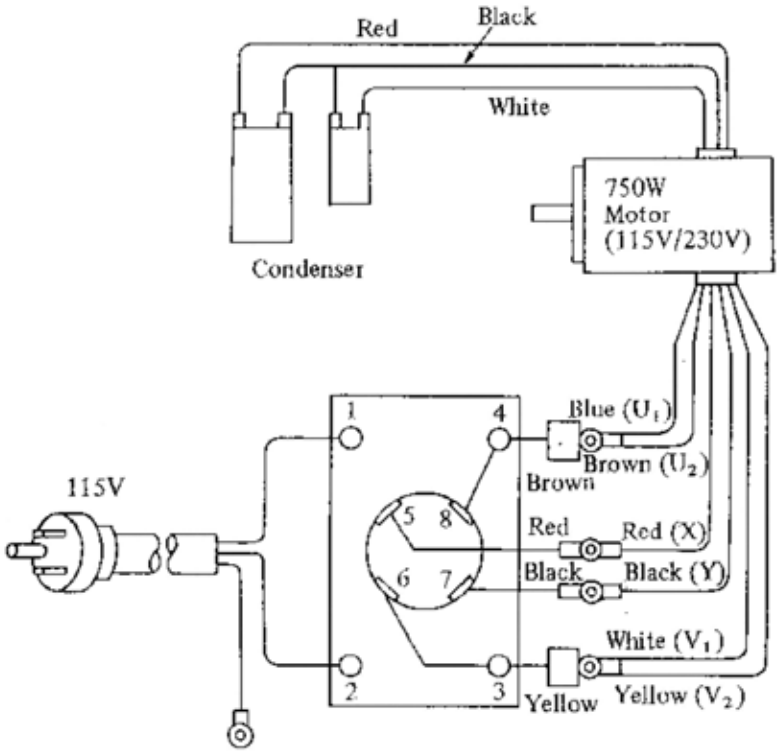
To tighten the belt, first remove the rear cover, the base cover, the motor cover and the condensers. The 4 bolts holding the motor can then be loosened and the belt tightened by moving the motor slightly. Fasten the motor-holding bolts while maintaining tension on the belt. Replace covers before starting the machine.



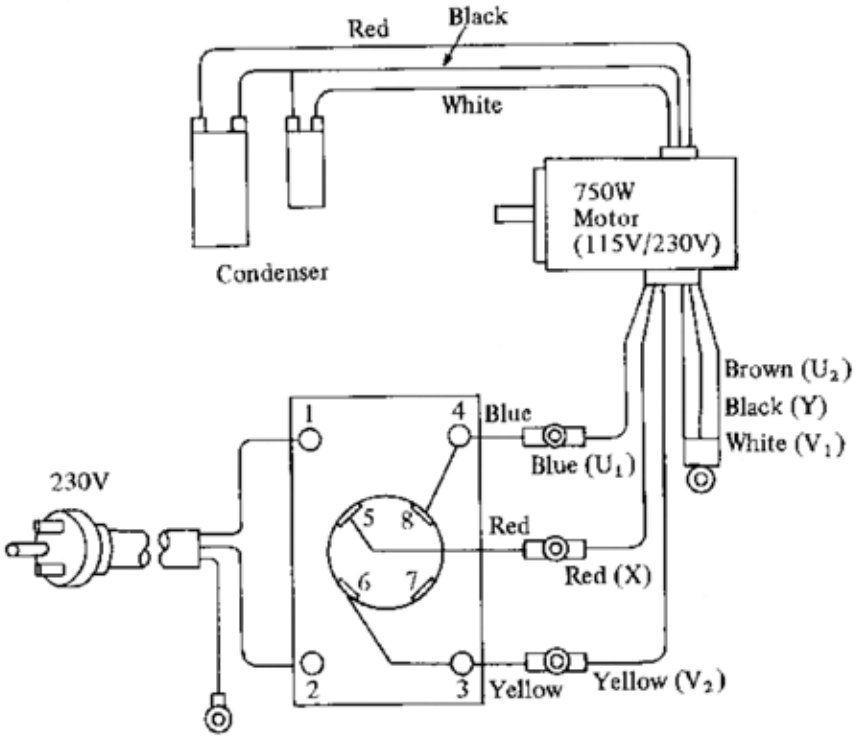
Wiring Diagram



"Kango" reversible switch wiring diagram.



"Kango" reversible switch



"Kango" reversible switch