

OPERATION MANUAL WHEELER/ REX 6890

Ref.No. 198505

Important

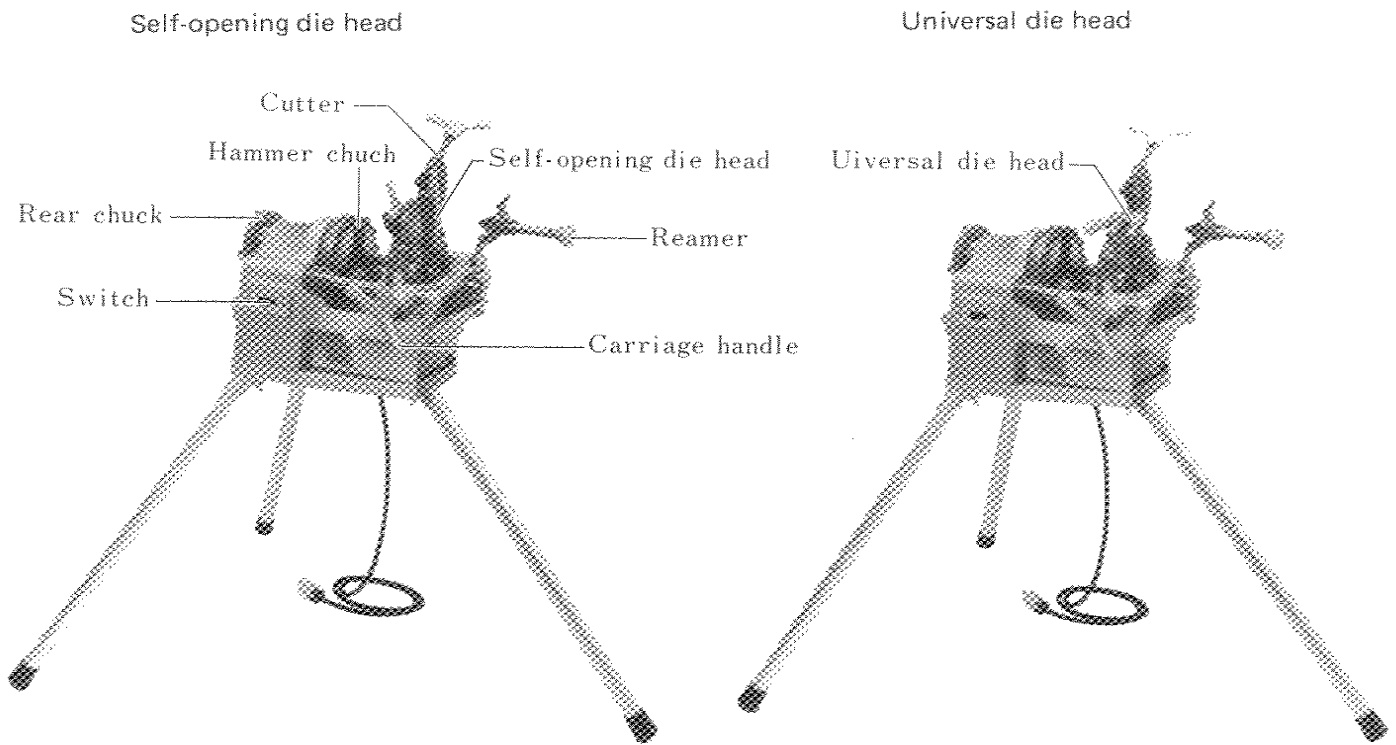
For your own safety, best performance and a long tool life, read this Operation Manual carefully and completely before assembling and operating this unit.

Study the operation, application and potential hazards peculiar to this unit.

CONTENTS

Main Parts	1
Specifications and Accessories	2
Safety Precautions	3
Preparation	5
Operating Voltage · Operating Guide	6
Optional Accessories · Maintenance	12
Wiring Diagram	14

Main Parts



Specifications and Accessories

■ Specifications

Capacity:	½--1½" (threading, cutting, reaming)
Voltage:	120V, models available
Motor:	Single phase 500W series motor
Rotation speed:	58 r.p.m. (50Hz, 60Hz without load)
Net weight:	81 lbs (36.8 kg)
Dimensions:	21(L) x 14(W) x 14(H) inch

■ Standard Accessories

Die head:	(½--1½") one set (self-opening or manual die head)
Dies:	(½--¾") (1--1½") one set each
Tool box:	One
Hexagonal keys:	3, 4, 5, 6mm one each
Bearing oil:	One (with oiler)
Carbon brush:	One set (with auto-stop)
Cutter wheel:	One

Safety Precautions

For Your Own Safety Read Instruction
Manual Before Operating Tool
Wear Eye Protection

1. Know Your Machine

Read the Operation Manual carefully. Learn the operation, application, and limitations as well as the specific potential hazards peculiar to this machine.

2. Avoid Accidental Starting

Make sure that FWD/OFF/REV Switch is in OFF and Foot Switch operates freely before plugging in.

3. Never Leave Tool Running Unattended

Turn power OFF. Don't leave tool until it comes to a complete stop.

4. Remove Tools & Rags from Machine

Form habit of checking to see that machine is clear of wrenches, other tools and rags before starting.

5. Support Work

Support long, heavy work from the floor with a pipe support.

6. Secure Machine

Securely tighten Chuck Handwheel and Rear Chuck on work. Make sure that machine and stand are stable.

7. Wear Proper Apparel

Wear safety shoes, hard hat, and safety goggles. No loose clothing (unbuttoned jackets or loose sleeve cuffs) or jewelry to get caught in moving parts.

8. Never Stand on Tool

Serious injury could occur if the tool is tipped or if the cutting tool is unintentionally contacted.

9. Do not Overreach

Operate machine from Hand Switch side only. Keep proper footing and balance. Be sure foot can be removed safely from Foot Switch at all times. Do not reach across machine and keep hands, body and tools away from moving parts.

10. Maintain Machine in Top Condition

Use sharp cutting tools and keep machine clean for best and safest performance. Follow lubricating instructions.

11. Check Damaged Parts

Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.

12. Keep Work Area Clean

Cluttered areas, benches, and slippery floors invite accidents.

13. Avoid dangerous environment

Don't use the machine in damp or wet locations. Keep work area well illuminated. Allow sufficient space to operate machine and accessories properly and for others to pass safely.

14. Direction of Feed

Feed work into a blade or cutter against the direction of rotation of the blade or cutter only.

15. Keep Visitors Away

All visitors and children should be kept a safe distance from work area.

16. Use Recommended Accessories

Use only those accessories and attachments recommended in this instruction manual. The use of any other accessory or attachment might increase the risk of injury to persons. Be sure that any accessory or attachment is used only in the proper and intended manner as described herein.

17. Use Right Tool

Don't force tool or attachment to do a job for which it was not designed.

18. Disconnect Power Cord

When adjusting, servicing or changing accessories. Cord should be in top condition and examined at regular intervals.

19. Don't Force Machine

It will do the job better and be safer at the rate for which it was designed.

20. Grounding Instructions

In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This tool is equipped with an electric cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into a matching outlet that is properly installed and grounded in accordance with all local codes and ordinances.

Do not modify the plug provided if it will not fit the outlet, have the proper outlet installed by a qualified electrician.

Improper connection of the equipment-grounding conductor can result in a risk of electric shock. The conductor with insulation having an outer surface that is green with or without yellow stripes is the equipment-grounding conductor. If repair or replacement of the electric cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal.

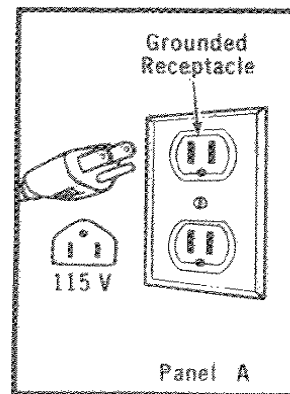
Check with a qualified electrician or serviceman if the grounding instructions are not completely understood, or if in doubt as to whether the tool is properly grounded.

Use only 3-wire extension cords that have 3-prong grounding plugs and 3-pole receptacles that accept the tool's plug.

Repair or replace damaged or worn cord immediately.

21. Ground Machine

This machine should be grounded while in use to protect the operator from electric shock. The machine is equipped with an approved three-conductor cord and three-prong grounding type plug to fit the proper grounding type receptacle. The green conductor in the cord is the grounding wire. Never connect the green wire to a live terminal.



22. Always Use Safety Glasses

Everyday eyeglasses only have impact resistant lenses, they are NOT safety glasses.

Preparation

■ Transportation

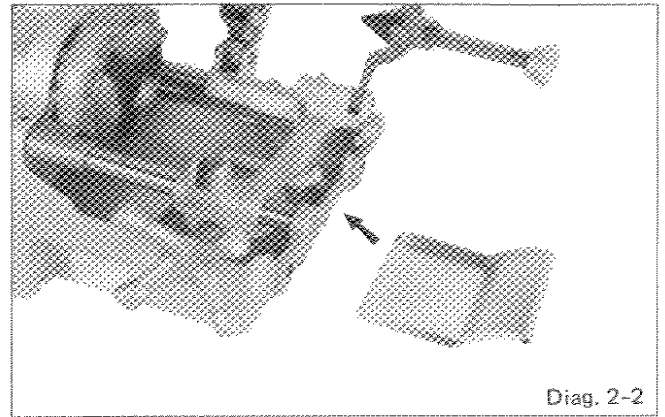
It is not necessary to drain off the oil during transportation.

1. Insert a short pipe and close the chuck firmly.

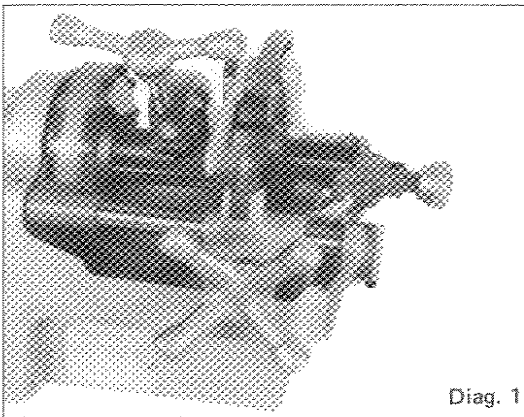
Caution:

Make sure the length of the pipe is short enough to allow the die head to be lowered into position for transportation.

2. Release the size-setting lever, open the dies as far as they will go and then replace the setting lever on the corresponding pin.
3. Lock the reamer arm in the reaming position.
4. Lower the pipe cutter; turn the carriage handle clockwise to advance towards chuck side.
5. Turn the cutter handle, and secure the roller and pipe.
The machine should then be secure during transportation.



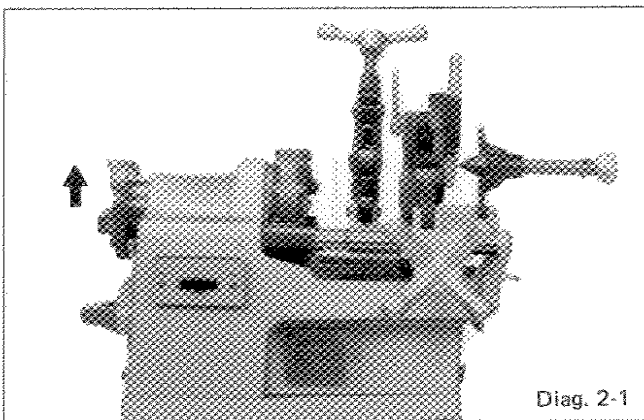
Diag. 2-2



Diag. 1

■ Setting Up

1. When setting up the machine, the legs should be adjusted with the rear chuck higher than the hammer chuck so that oil does not flow back down the pipe being cut (see diagram 2-1).
2. Remove the tank upper cover, and check that the level of the oil adequately covers the strainer.
3. Set the oil cover and scrap receiver in the right position.



Diag. 2-1

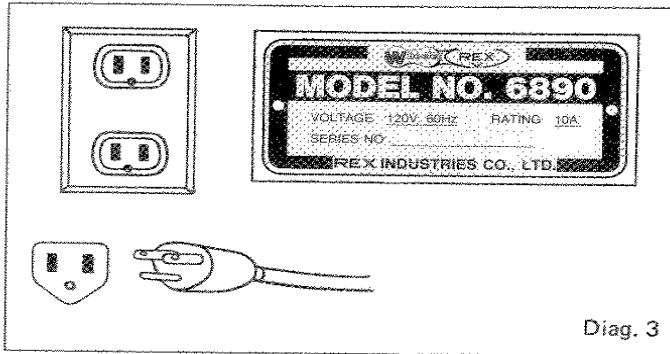
Operating Voltage

■ Power Supply

Before using, check the voltage on the nameplate of the machine.

■ Operating Voltage

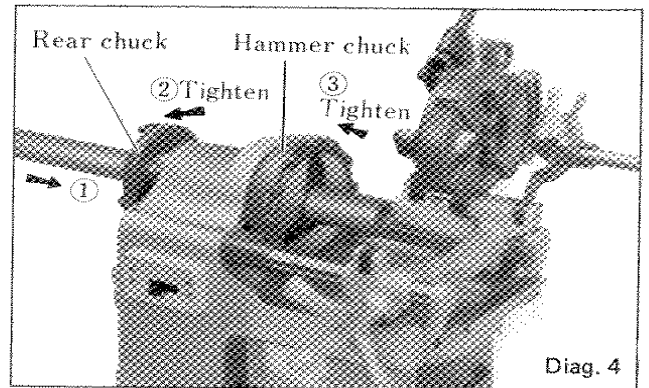
Use only an AC power supply and always ground the machine before use. If an extension cord is used, it must be as short as possible and of sufficient capacity for the power supplied.



Operating Guide

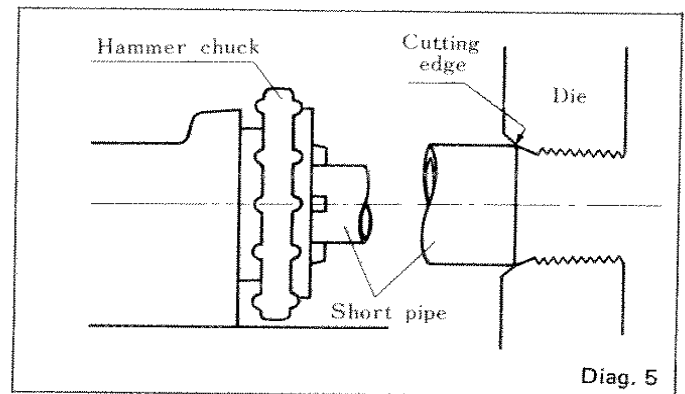
■ Setting the Pipe

1. Open both chucks wider than the size of the pipe to be cut and insert the pipe from the rear chuck side where possible.
2. Close the rear chuck and, holding the pipe in your right hand, close the hammer chuck to grip the pipe. Jerk the hand-wheel sharply towards you to lock.
3. A sharp jerk in the opposite direction will release the pipe after cutting has been completed.



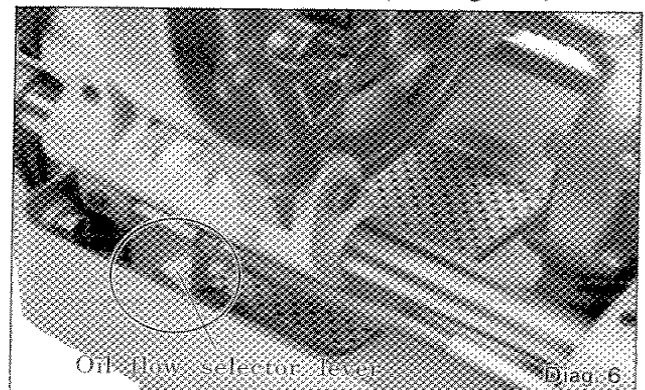
■ Hints for Short-Pipes

Setting a short pipe (which does not reach the rear chuck) With the hammer chuck slightly loose, move the pipe into contact with the dies as shown in the diagram. This will help hold the pipe on center while the hammer chuck is tightened. In this way a smooth taper cut is ensured every time.



■ Oil Adjustment

To get maximum oil flow, turn the knob until the red marker is at the top. To reduce oil flow, turn the knob in the opposite direction. To stop the oil flow altogether, turn the knob until the red marker is at the bottom. (See diagram 6)

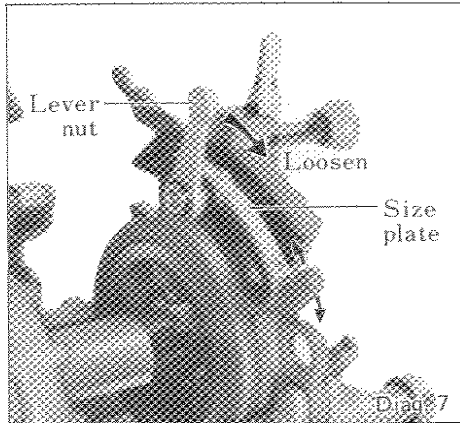


Self Opening Die Head

Push the cam-plate up and set the auto-open pin in position. As the dies travel along the pipe, the end of the pipe comes into contact with and pushes the pin out of its groove to release the dies.

Setting the Thread Size

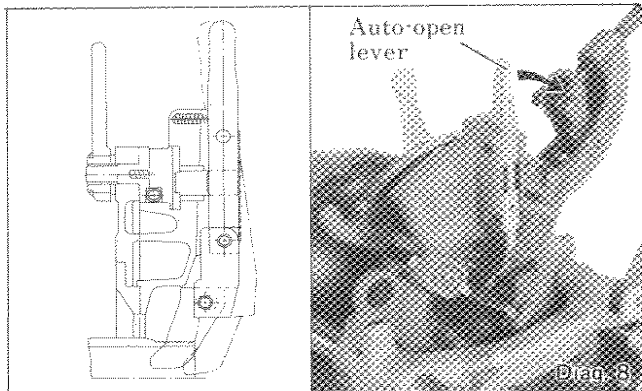
Loosen the lever nut and set the index line to the desired thread size and tighten firmly.



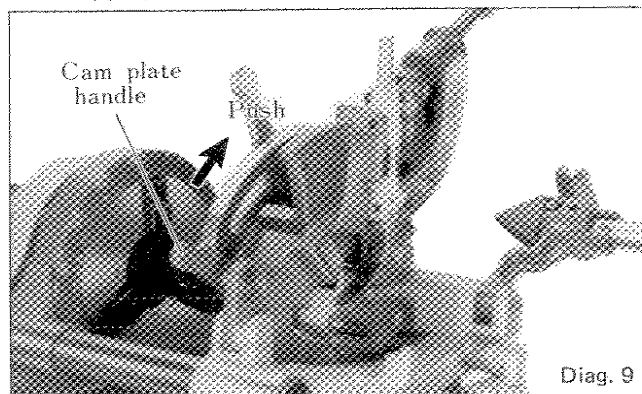
Threading Instructions

The N40A is equipped with a self-opening die head and it has the advantages of both being able to adjust the length of the thread and of being operated manually if required.

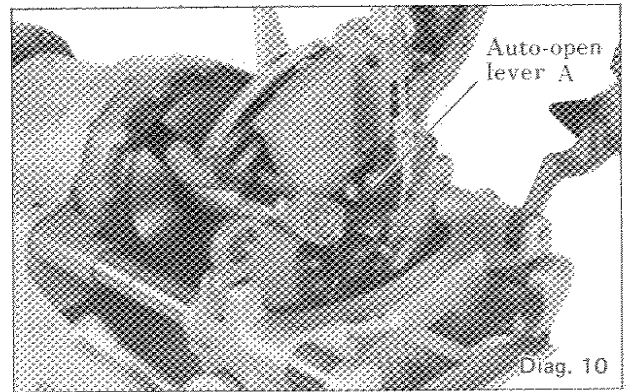
1. Fit the appropriate die head as shown in the photograph.



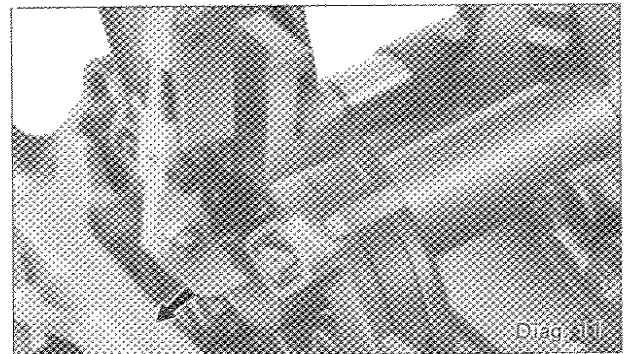
2. Push the cam plate handle forward to set the auto-open lever then set the thread size by fitting the lever nut to the appropriate position.



3. When the die head is securely engaged, press the switch to start.
4. Turn the carriage handle clockwise until the dies have engaged the pipe for 3 or 4 threads. From this point the carriage handle may be released. A standard taper thread will be cut automatically.



5. When threading is complete, switch off and push the carriage handle anticlockwise to clear the pipe.

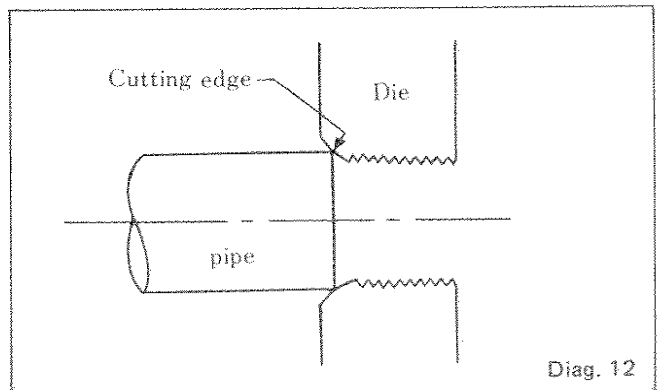


Precautions for Threading

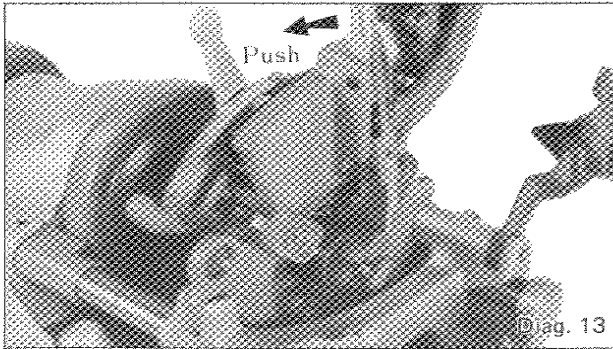
1. As the dies come into contact with the pipe, the handle should be turned with gradually increasing strength until the dies are biting firmly. After the dies fully engage the pipe, they will travel smoothly by themselves, but optimum cutting will be assured if the handle is turned with slight pressure to keep pace with die movement.

Caution:

If the machine suddenly stops during threading, turn off immediately (a delay will result in the motor burning up).



2. To stop threading, turn the auto-open lever to the left.



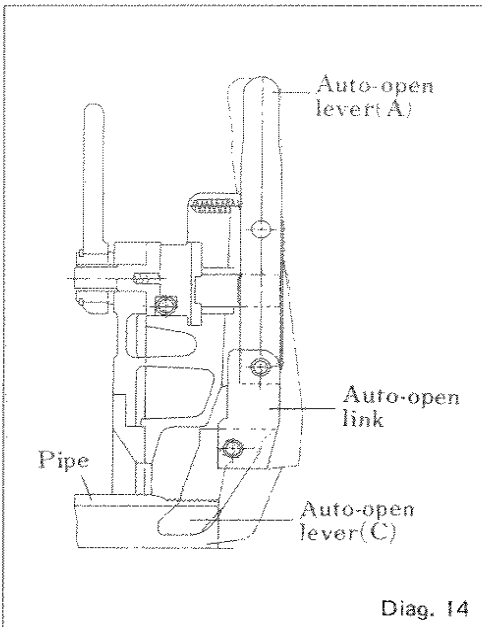
■ **Adjustment of the Threading Length**

A device for adjustment of the threading length is attached. Use this for making threads of the desired length as follows.

Adjustable capacity 1-1½" (3 threads)
 ½-¾" (4 threads)

■ **Method of Adjustment**

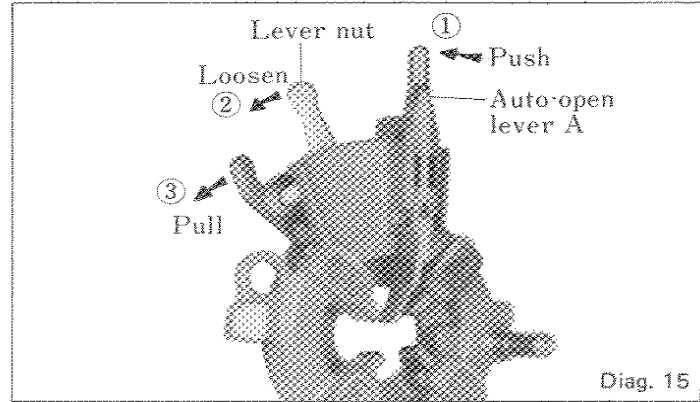
1. Loosen the socket head cap screw on the auto-open lever (C).
2. Move the auto-open lever to the right for longer threads or to the left for shorter threads as indicated by the arrows in the diagram.
3. Retighten the socket head cap screw.



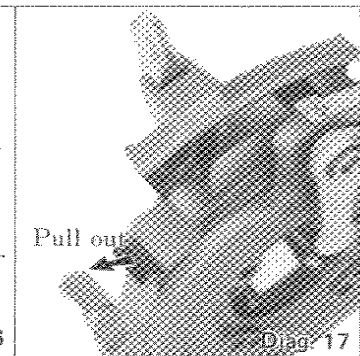
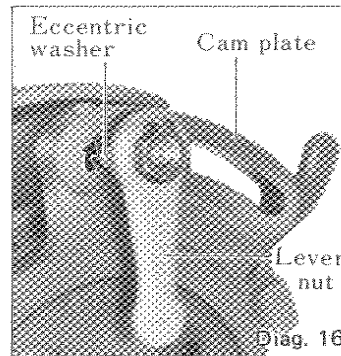
■ **Removal and Replacement of the Dies**

1. Removing the dies

- (1) Push the auto-open lever (A) in the direction of the arrow (see diagram 15) and put the die head into the open position.



- (2) Turn the lever nut in the direction of the arrow (see diagram 16) and wobble the projection on the eccentric washer until it is completely loose.
- (3) Next, having loosened the eccentric washer from the hollow groove on the cam plate, turn the cam plate fully anti-clockwise in the direction of the dies-open position, and remove the dies from the die head.



2. Replacing the dies

- (1) Insert each die into its corresponding slot number in the die head as far as the line marked on the die.
- (2) Keeping the die head in a stable position, turn the cam plate clockwise in the direction of the die-set and the dies will fall into position in the center of the die head.
- (3) If the cam plate does not turn properly, reset each of the 4 dies individually in the correct position.

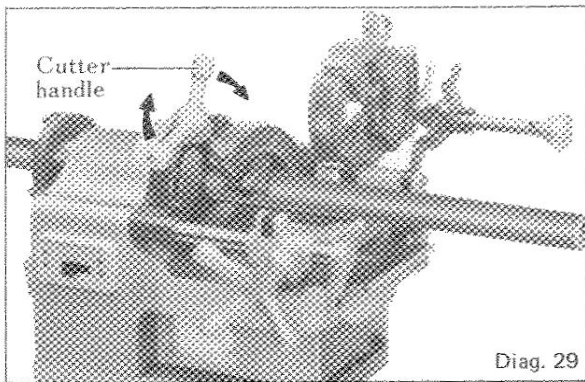
■ Cutting and Reaming

■ Pipe Cutting

1. Raise the die head and reamer out of the way and set the pipe at the length to be cut.
2. Open the pipe cutter wider than the diameter of the pipe and lower it into position.
3. Tighten by turning the handle to the right until the cutter wheel firmly engages the pipe, (see diagram 29), start the machine, and turn the handle 1/4 of a revolution for each revolution of the pipe being cut until the pipe is completely cut.

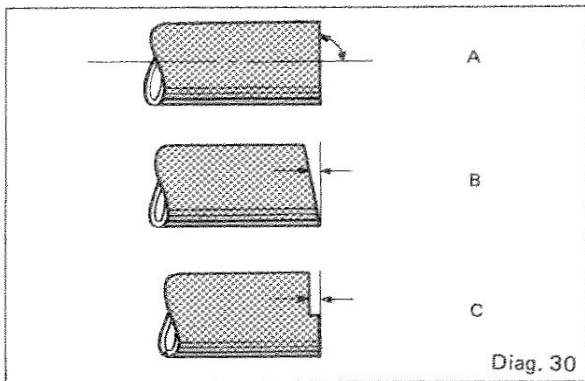
Warning:

If cutter handle is turned too violently, when the cutter wheel cuts into pipe, it can distort the shape of the pipe.



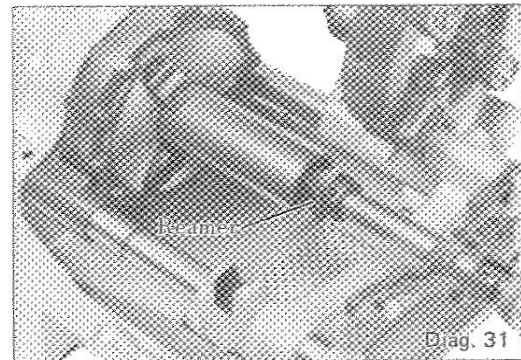
■ Special Cut Grinder Precautions

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 diagram 30-A.



■ Reaming

1. When cutting is complete, raise the cutter out of the way. Lower reamer arm and push the reamer bar toward the pipe.
2. Long-chucked pipes can sometimes be reamed with the reamer handle in the recessed position.
3. Lock the reamer in position by turning the reamer handle anti-clockwise.
4. Start the machine and turn the carriage handle to the right to advance the reamer.
5. When reaming is complete turn off the machine, retract the reamer bar and raise the reamer arm into the rest position.



■ Optional Accessories

- Die head: 1/4 – 3/8"
Bolt W5/16–7/8, W1–1¼,
UNC 5/16–1½
M8–48
- Dies: 1/4 – 3/8"
Bolt W5/16, 3/8, 7/16, 1/2, 5/8, 3/4, 7/8,
1, 1¼
UNC5/16, 3/8, 7/16, 1/2, 5/8, 3/4,
7/8, 1, 1¼, 1½
M8, 10, 12, 14-16, 18-20-22, 24-27,
30-33, 36-39, 42-45, 48-(52)

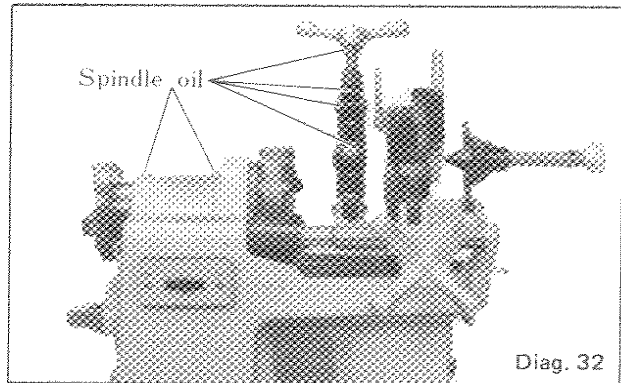
Rex products are made with the finest materials throughout, but even the best needs attention sometimes. To ensure a long and trouble-free working life for your machine, we recommend the following maintenance procedures.

■ Main Shaft Lubrication

The main shaft bearings are made with specially designed oiled metal, but should be lubricated once every six months with spindle oil or machine oil to ensure smooth running. (See Diagram 32.)

■ 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.

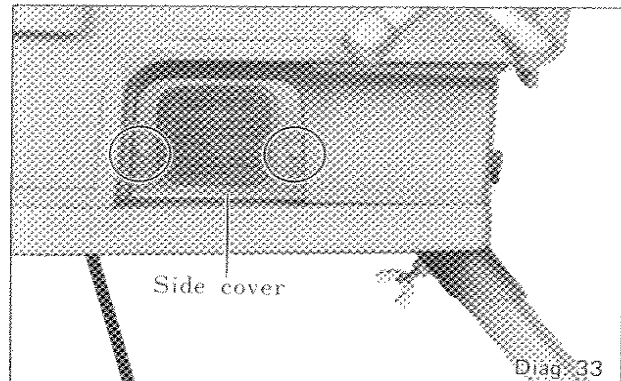


■ Carbon Brush Change

After about 250 hours of use, or if the length is below 6mm, the carbon brushes should be replaced, as they may damage motor commutator surface and shorten the life of the motor.

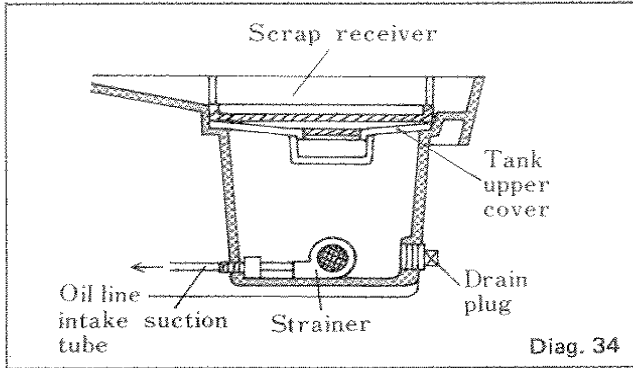
■ How to Change Carbon Brushes

Remove plate that is under the machine. Take out knob near the switch. Insert driver, unscrew the carbon brush cap. Take out the carbon brushes.



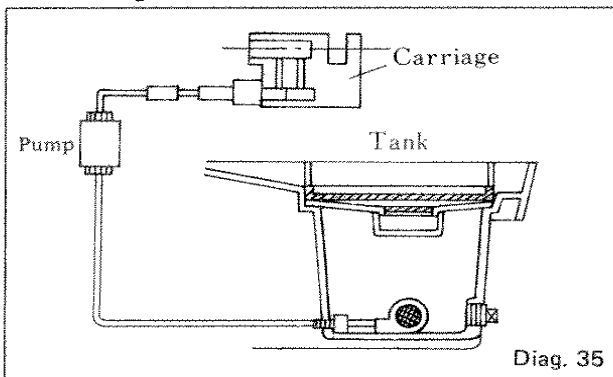
■ **Keep Oil System Clean As Follows**

1. Drain oil and check for contamination.
2. Remove and clean scrap receiver, tank upper cover, oil pot and strainer, and clean the oil tank.
If the oil system is kept clean, this will prolong the working life of the gear-pump.
3. After cleaning the tank, put some sealing substance on the plug to decrease any possibility of leakage.



■ **Cutting Oil System**

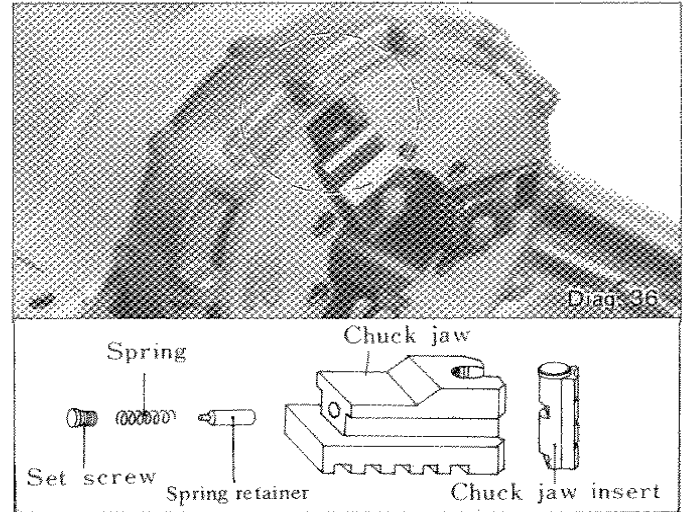
1. Be sure oil flows freely. See that there is enough oil in the tank and all oil lines are free from obstructions.
2. If oil becomes discoloured or contaminated, drain the tank and refill with fresh cutting oil.
3. Clean oil pot after every 8 to 12 hours of actual use.
4. During thread cutting operations, small chips from the threads will accumulate in the tank so efficient cleaning is essential once a month to ensure proper operation of threading machine.



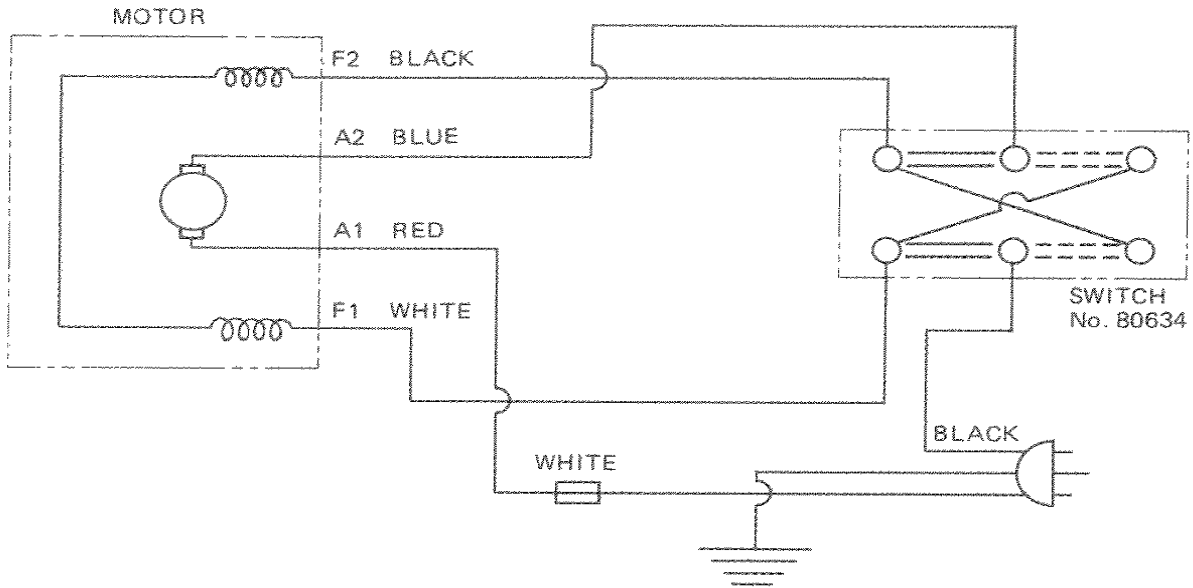
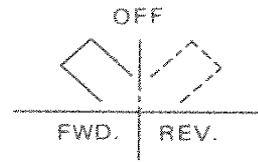
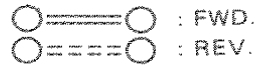
■ **Hammer Chuck Structure and Maintenance**

The hammer chuck jaw incorporates 4 parts and when the teeth on the jaw inserts become worn and fail to hold pipe or rod during threading, replace the entire set of jaw inserts. Remove the hex socket set screw.

As shown in the illustration opposite, the hammer chuck is fixed to main shaft by six socket head cap screws. Because loosening of these bolts affects threading, be sure to keep these six bolts permanently tight.



Wiring Diagram



Wiring Diagram

