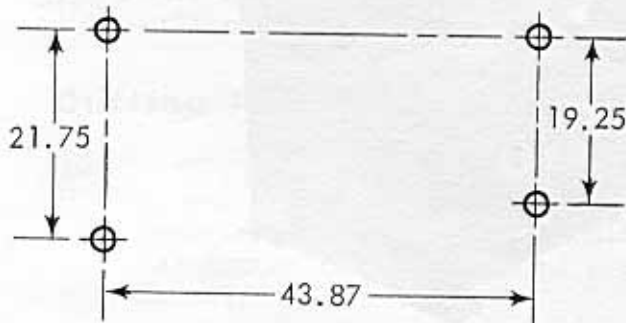


PREPARING FOR OPERATION

MOUNTING

It is essential to bolt the THRED-O-MATIC "44-A" to the floor, bolt holes are provided in the base for a solid and permanent installation. The mounting pads on the motor end of the "44-A" are made thicker to provide for proper oil drainage out of the pipe. Care should be taken in mounting machine to maintain the 1/4" height differential.



Dimensions Are In Inches.

POWER

Use proper electric current as shown on name plate.

To prevent power loss, grounded extension cord of sufficient capacity must be used.

To avoid electric shocks when operating in the field, connect the ground wire of the extension cord.

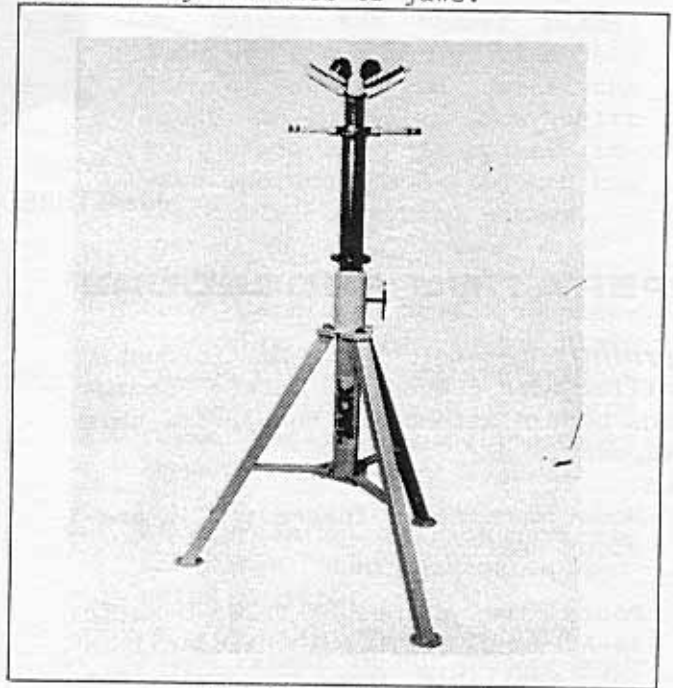
Power	Cord Length	Wire Size
230 V. 1 phase	Below 50'	10-3
	50'-100'	8-3
230 V. 3 phase	Below 50'	14-4
	50'-100'	10-4
460 V. 3 Phase	Below 50'	14-4
	50'-100'	10-4



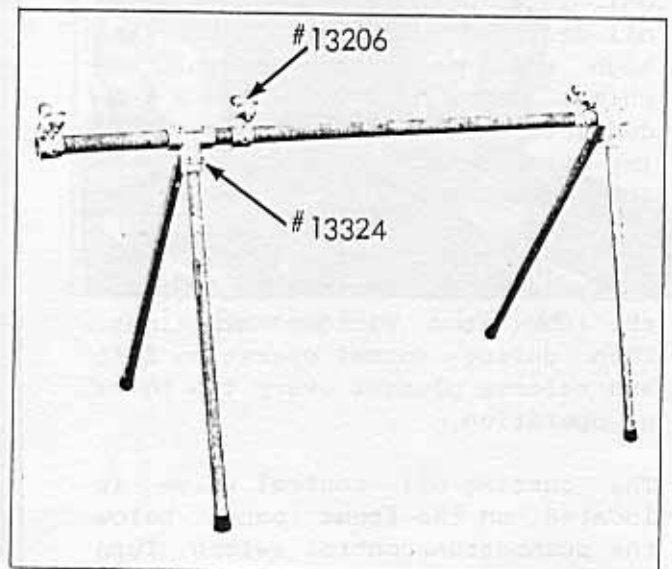
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MATERIAL SUPPORTS

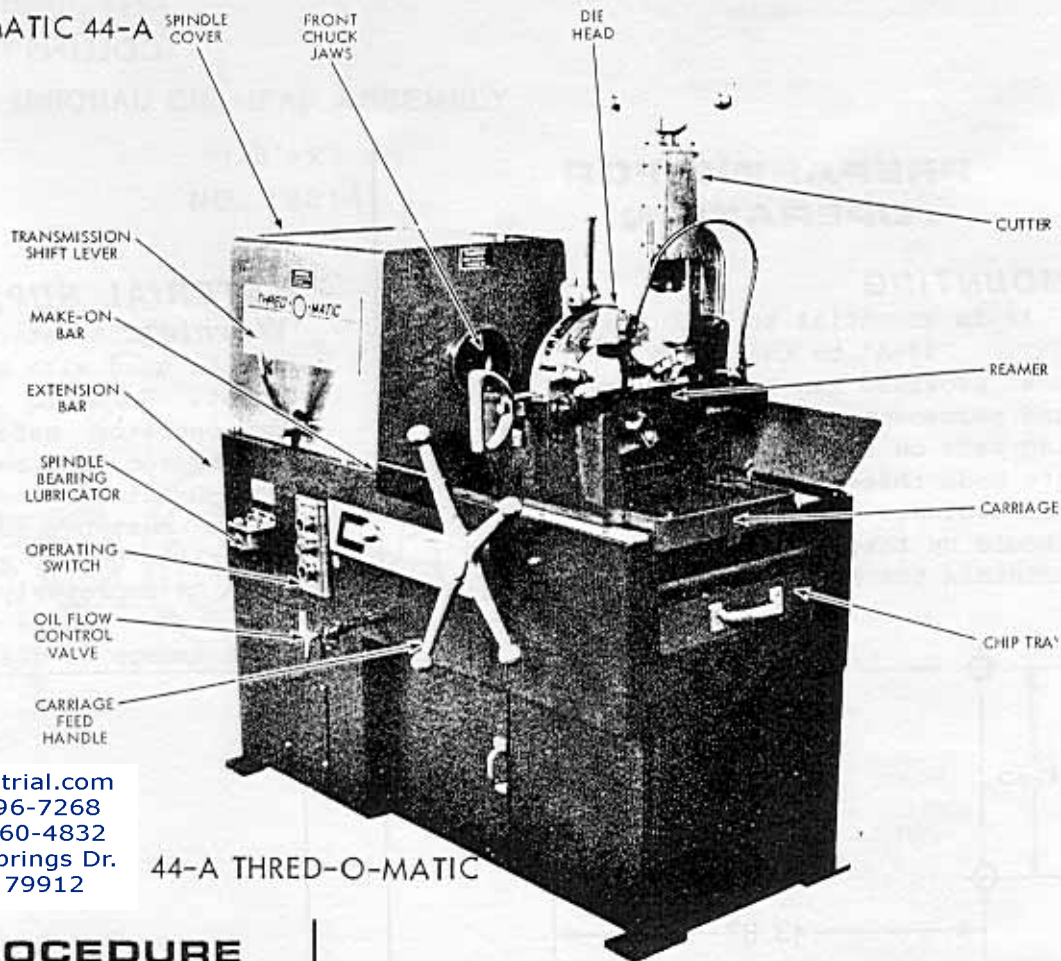
Warning: A material support system must be used with any work longer than 5 feet. To avoid machine damage and for operator safety, a material support system must be used with the 44-A Thred-O-Matic. The material support system must be adjusted to the same centerline height as the machine spindle. An improperly adjusted support system can reduce thread quality and cause damage to dies or jaws.



Pipe Support Stand #780456



Ball Bearing Pipe Support and Fitting



44-A THRED-O-MATIC



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OPERATING PROCEDURE

Warning: Operator should be thoroughly familiar with preceding Safety Precautions before attempting to operate this equipment.

1. Mount machine as instructed in previous section.
2. Pour five gallons of Thred-O-Matic 44-A sump. If Thred-O-Matic oil is not available, use an equivalent dark, sulphur base thread cutting oil. Thred-O-Matic oil is a special oil designed to stand up under the high speed operation of this machine. Other oils will have a tendency to break down, thereby causing excessive die wear and poor thread quality.
3. Before starting machine for the first time daily lift and release the lubricator plunger six times. Then during normal operation lift and release plunger every two hours of operation.
4. The cutting oil control valve is located on the front panel below the pushbutton control switch. Turn handle as required to increase or decrease oil flow.

5. The Collins 44-A is equipped with a three station, push-button control switch (Start, Stop, Open). The "start" position closes the jaws and rotates the spindle. The "stop" position stops the machine. The "open" position opens the jaws to release the material.
6. This machine is equipped with an automatic electrical cut-off to protect the motor in the event of under or overloading of power. The reset button is located in the rear of the storage compartment under the machine base.

Chucking Pipe or Rod

Note: Machine must be at a full stop before shifting gears.

For maximum power, machine is engineered for direct drive, without a clutch. Occasionally gears may not mesh when shifting. Simply touch the "open" button to move gears slightly, then shift gears.

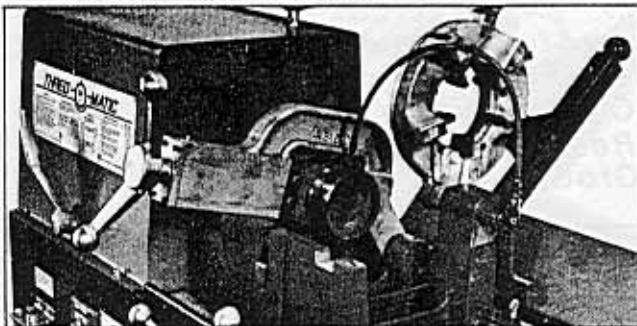
1. Press "open" button to open jaws.
2. Swing die head, cutter, and reamer up and back to out-of-way position.
3. Insert pipe or rod into chuck from either front or rear of machine and position to desired length.

Note: For long pieces of pipe or rod, use No. 13894 Adjustable Pipe Support.

4. Press "start" button and pipe will be chucked automatically and will rotate.

Cutting Pipe (1/8"-4")

1. With pipe properly chucked and with reamer and die head in out-of-way position, turn carriage handle until cutter is over area of pipe to be cut.
2. Select proper cutting speed from speed chart.
3. Be sure cutter assembly is centered and open, then move carriage until cutter wheel is at the point where cut is desired.
4. With roller block retracted to fit over pipe turn cutter handle clockwise to force cutter wheel against pipe to make cut.



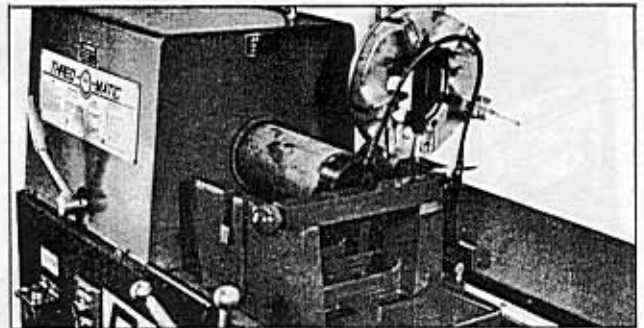
Cutting Pipe, 1/8"-4"

Note: NEVER cut into threads, as this may cause damage to cutter wheel.

5. After pipe is cut, press "stop" button and raise cutter to out-of-way position.

Reaming Pipe (2 1/2"-4")

1. A blade type reamer (shown) is provided to remove burrs from the inside diameter of cut pipe. To use reamer, raise cutter and die head. Swing reamer down into alignment with pipe with machine in off position.
2. To adjust the reamer blade, loosen the two reamer blade attaching screws and center the blade in the pipe. Now shift the blade 1/8" off center (toward operator) and tighten the two blade attaching screws.
3. With pipe chucked and rotating turn carriage handle counter-clockwise so that reamer blade enters pipe. Momentarily apply pressure to handle to force reamer against pipe to remove burrs.
4. After reaming, retract carriage and press "stop" button on operating switch.
5. Place reamer in out-of-way position.



Reaming Pipe, 2 1/2"-4"



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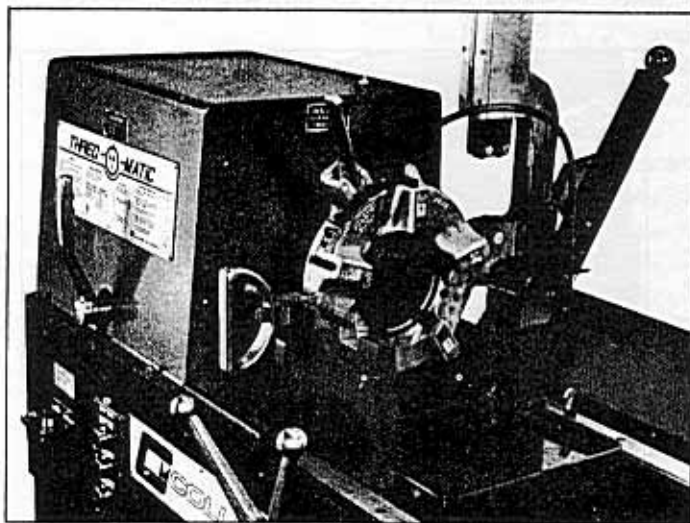


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Threading Pipe (2 1/2"-4")

1. Slip the proper size die head onto the carriage and lower the head into the carriage groove.
2. Select the correct slot and engage the operating handle pin.
3. Turn carriage feed handle counter-clockwise to bring dies against end of pipe.
4. With transmission set at proper speed (see Speed Table) start machine and apply slight pressure on carriage handle until 1 - 2 threads have been cut, after which the head will feed itself automatically.
5. Correct thread length is normally obtained when the threaded pipe reaches the outside edge of chasers. When pipe is still rotating, open head by disengaging operating handle pin and moving handle towards operator.

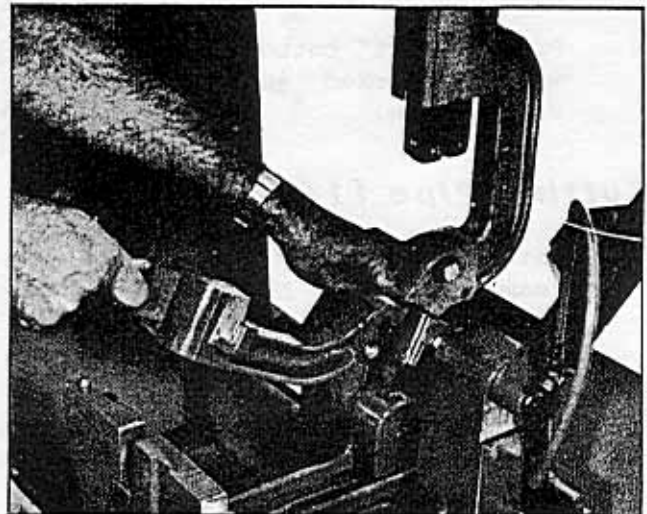
Caution: While threading, open Die Head before carriage reaches full length of travel. If carriage strikes spindle cover excessive strain is put on the machine and damage may result.



Threading Pipe, 2 1/2"-4"

Mounting Small Die Head Adapter

1. Remove Standard die head assembly from carriage.
2. Install small die head adapter on carriage die head pin.



Mounting Small Die Head Adapter

SPECIAL INSTRUCTIONS FOR LEFT-HAND OPERATION

NOTE: Left Hand Threading can only be accomplished on machines manufactured for right and left hand operation.

Chucking Pipe Or Rod

1. Switch toggle to "left" position.
2. Follow instructions 1-4 from pages 14 and 15.

Cutting Pipe
Reaming Pipe
Grooving Pipe } Must be done in right-hand direction only.

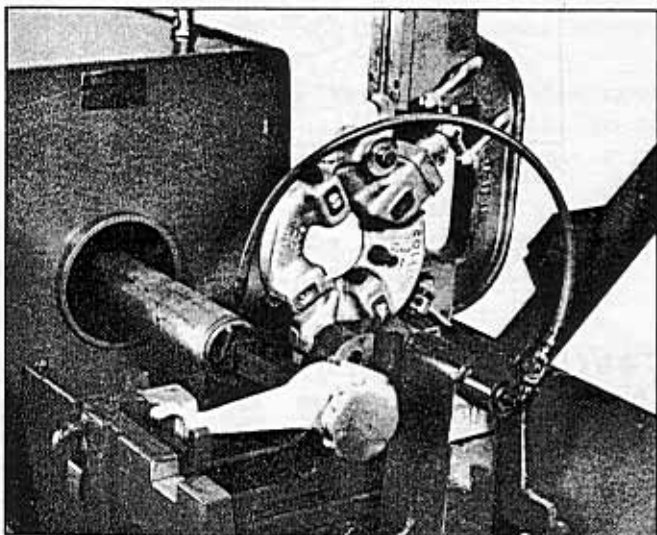
Threading Pipe

NOTE: Special "L.H." dies must be installed in die head to make left-hand threads.

1. For left-hand threading, die head must be locked to carriage with pivoting block.
2. Follow operating instructions from Pages: 16, 17, 18, 19.

Reaming Pipe (1/8"-2")

1. A cone type reamer (shown) is provided to remove burrs from inside diameter of cut pipe. To use reamer, raise cutter and die head. Swing reamer down into alignment with pipe.
2. Reamer can be extended toward pipe, if necessary by sliding reamer knob toward reamer arm until contacts with reamer holder. Twist reamer knob to left 1/4 turn to lock in position.
3. With pipe chucked and rotating, turn carriage handle counterclockwise so that flutes of reamer enter pipe. Momentarily apply pressure to handle counterclockwise so that flutes of reamer enter pipe. Momentarily apply pressure to handle to force reamer against pipe to remove burrs.
4. After reaming, retract reamer and stop machine. Place reamer in out-of-way position.



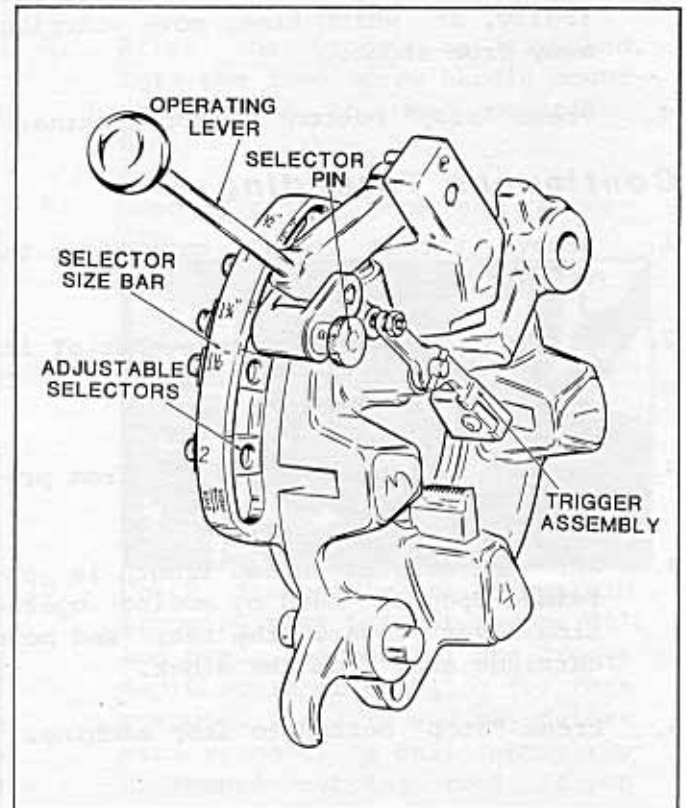
Reaming Pipe, 1/8"-2"

Threading Pipe (1/2"-2") With Automatic Opening Die Head

NOTE: Two different thread length gauges are used on the trigger for NPT (#12693) and BSPT (#12554).

Caution: DO NOT LEAN OVER AUTOMATIC OPENING DIE HEAD AS OPENING LEVER COULD STRIKE OPERATOR WHEN AUTOMATICALLY OPENED.

1. Install the die head onto pin of small die head adapter and lower adapter into the carriage groove.



1/2"- 2"
Automatic Opening Die Head

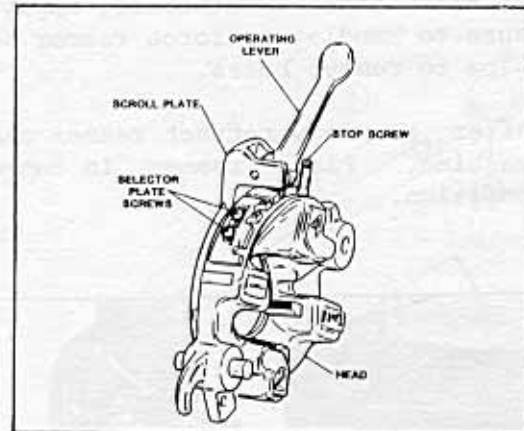
2. Select the desired size and engage the die head selector pin.
3. Pull operating lever forward to cock the spring loaded plunger.
4. Insert stock through the spindle from either the front or rear of the machine.
5. Shift transmission to correct speed (See Speed Table).
6. Start machine.
7. Apply slight pressure on carriage handle until 1 - 2 threads have been cut, after which the head will automatically feed itself.
8. When the correct thread length is obtained the die head will open automatically, at which time, move carriage away from stock.
9. Press "stop" button to stop machine.

Continuous Threading

1. Remove thread length gauge from the trigger.
2. Lift the trigger set screw out of its socket and rotate the trigger 45° to get it out of the way.
3. Follow steps 2,3,4,5,6, & 7 from previous section.
4. When the correct thread length is obtained open die head by moving operating lever toward the rear and move carriage away from the stock.
5. Press "stop" button to stop machine.

Threading Pipe (1/8"-2") With Snap-O-Matic Die Head

1. Install the proper size die head onto pin of small die head adapter and lower adapter into the carriage groove.
2. Select the correct size and engage the operating handle pin.
3. Turn carriage counterclockwise to bring dies against stock.
4. Select proper speed and start machine. (See Speed Table). Slightly apply pressure on carriage handle until a few threads have been cut, after which the head will feed itself automatically.



5. Correct thread length is normally obtained when stock reaches the outside edge of chasers. While pipe is still rotating, open head.

Caution: While threading open die head before carriage reaches full length of travel. If carriage strikes base, excessive strain is put on the machine and damage may result.



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6. Press "stop" button and turn carriage handle clockwise to clear the die head from the pipe.

Threading Pipe (1/2"-2") With Uniquad Die Head

1. Install the die head onto pin of small die head adapter and lower adapter into the carriage groove.
2. Close operating lever.
3. Follow steps 3, 4, and 5 from previous section.

Removing Pipe From Chuck

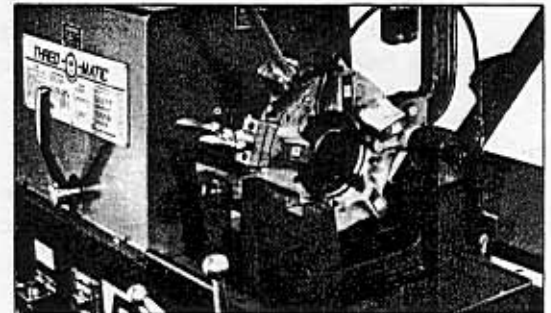
1. Press "open" button to open jaws and release material.
2. Remove stock from either front or rear of machine.

Roll Grooving (2 1/2"-4") (SEE ROLL-R-GROOVER OPERATOR'S MANUAL)

Knife Type Grooving And Beveling (2 1/2"-4")

1. Install grooving head on carriage pin.
2. Turn grooving feed screw handle counterclockwise as far as it will go to get cutting tool completely clear of the pipe to be cut.
3. Position and chuck material in machine to be grooved and cut.
4. Pass grooving head over material and place operating lever pin in the appropriate setting on the selector plate to match the size of the material you are going to groove and cut. This will align pipe and grooving head.

5. Adjust centering bolt for proper seat in carriage and tighten lock nut.
6. With machine running in number 2 speed (see Speed Table) turn feed screw handle clockwise to engage cutting tool with pipe. Before proceeding to cut material, tighten screw on rear of carriage. This will keep carriage from creeping.
7. When using tool on standard wall pipe, the cutting tool will first part the material. After material has parted, while keeping the machine running turn feed screw handle one complete revolution until marks line up on indicator and bearing block which will give the proper depth of groove.
8. After the groove is finished, turn the feed screw handle counterclockwise to open position again.
9. Open operating lever and remove pipe.



10. Check frequently to be certain grooving tool has not become dull and needs sharpening; use groove depth scale or coupling for this purpose. Visually you may determine signs of a dull improperly sharpened cutting tool if you notice excessive burr on pipe after cutting.

Knife Type Grooving And Beveling (3/4"-2")

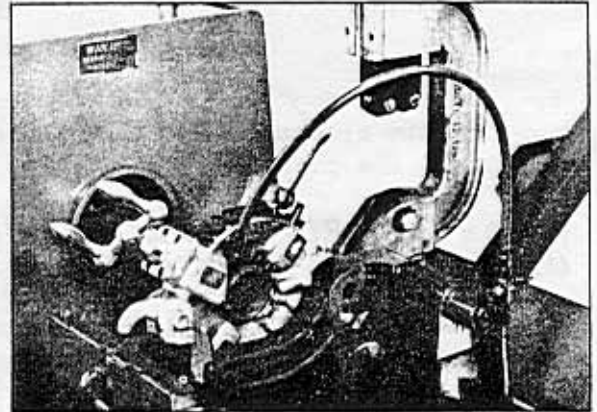
NOTE:

- A. Always retract Tool Bit before operating machine.
- B. Insure adequate Collins Thred-O-Matic oil is present during machining.
1. Install small die head adapter #6920 as described on page 16.
2. Install die head #12200-2 on small die head adapter.
3. Turn feed screw handle all the way counterclockwise until it stops.
4. Disengage operating lever from selector plate and push it back against the scroll plate stop to retract centering dies.
5. Make certain the pipe end to be machined is positioned close to the front jaws.
6. Chuck pipe in the machine as previously instructed and position die head over pipe by using carriage feed handle.
7. Pull operating lever towards the operator in order to engage in proper size slot of selector plate.
8. Feed the tool bit in the same manner that you would operate a lathe. Use a slow even feed rate.

NOTE: DO NOT PLUNGE TOOL INTO PIPE



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A continuous chip will curl off and away from the tool at the proper feed. Excessive feed causes breakdown of the cutting edge which will decrease tool life or damage the tool. Excessive feed is indicated by:

- a) Poor surface finish.
- b) Bluish colored chip due to excessive heat generation.
- c) Chips crowd and build up on the tip of the tool, instead of spiraling off away from the tool.

Advance the tool slowly as the tool breaks through the pipe. Let the pipe turn 2-3 revolutions when it breaks through in order to obtain a clean cut-off, advance the tool until the groove depth indicator size mark matches the guide line. Turn the feed screw one turn clockwise to finish the groove to the correct diameter. Let the pipe rotate 2-3 revolutions to clean-up the groove.

9. Retract tool bit by turning the feed screw handle counterclockwise until it stops. Retract the centering dies by disengaging and moving the operating lever away from the operator until it stops. Move carriage away from pipe and stop machine.
10. For grooving, check groove diameter. (Go/no-go gauges are available from Collins.)

Installing Threading Dies In Snap-O-Matic Die Head (2 1/2"-4")

1. Remove scroll plate stop and rotate scroll plate until cam slots line up with entry slots in die head.
2. Check numbers of dies to be installed. A set consists of five die segments numbered 1 to 5. Each die segment must be installed in the proper section of the die head housing.
3. Insert die segments one at a time and move lever back and forth until each die becomes engaged in die head.
4. Replace scroll plate stop and rotate scroll plate to proper pipe size and engage operating lever pin in the selector plate.

Installing Centering Dies In Grooving Head (2 1/2"-4")

1. Lay die head on bench with numbers facing up.
2. Loosen the locking nut and remove the bearing block.
3. Rotate scroll plate with operating lever until cam slots line up with entry slots in die head.
4. Insert dies one at a time and move operating lever back and forth until die becomes engaged in die head.
5. Replace the scroll plate stop screw and locking nut.

Installing Cutting Tools In Grooving Head (2 1/2"-4")

1. Mount head on carriage pin.
2. Insert cutting tool into the No. 2 die slot opening in the grooving head.
3. Rotate feed screw handle counter-clockwise slowly until tool bit engages. Continue to rotate until handle stops.

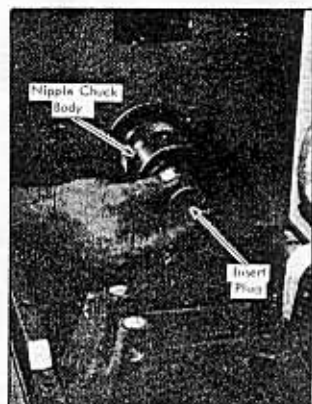


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1. Grip pipe in machine chuck. Ream and thread one end and cut nipple to desired length.
2. Remove pipe and insert nipple chuck shaft into front of machine.
3. Position insert plug in nipple chuck body for pipe sizes 1/8"-1". (Use plug for 1/4" - 1 3/8" N.C. stud threading).
4. Select proper size nipple chuck adapter and screw into nipple chuck body.
5. Turn nipple chuck body clockwise until it is tight on nipple chuck shaft.
6. Screw nipple (see below) threaded on one end into adapter by hand. Ream and thread other end.



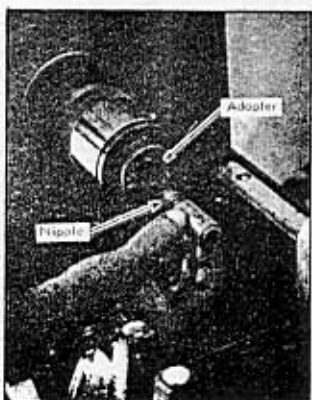
Installing Insert Plug



Installing Adapter



Tightening Adapter



Inserting Nipple

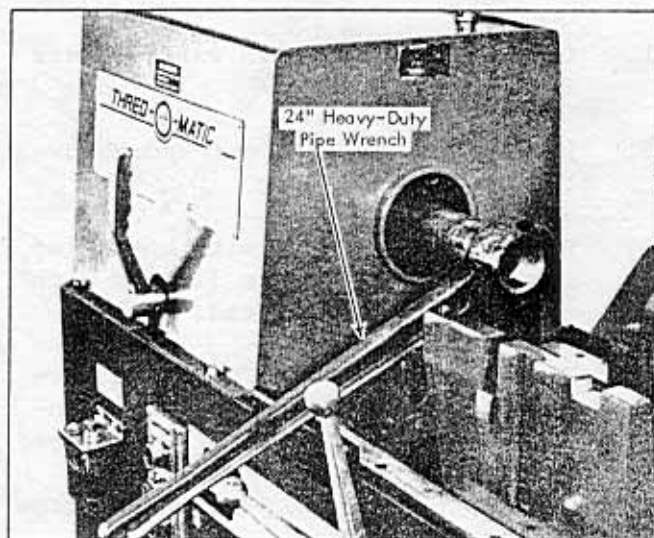
7. To release nipple, rotate nipple chuck body 1/4 turn in direction of operator and unscrew nipple.
8. To release adapter, rotate nipple body 1/4 turn in direction of operator, and use spanner wrench to unscrew adapter.

"Making-On" Pipe Fittings And Valves

The 44-A may be used to assemble pipe fittings and valves on to the threaded end of a pipe using a heavy duty 24" pipe wrench.

Warning: For making on fittings, use only a 24" pipe wrench. Larger wrenches may damage machine base.

1. Retract carriage to farthest position away from front chuck.
2. Insert pipe into chuck and position the end of the pipe to be assembled close to the front jaws.



"Making-On"

3. Shift transmission to No. 4 (slowest speed).
4. Press "start" button to chuck pipe into machine.

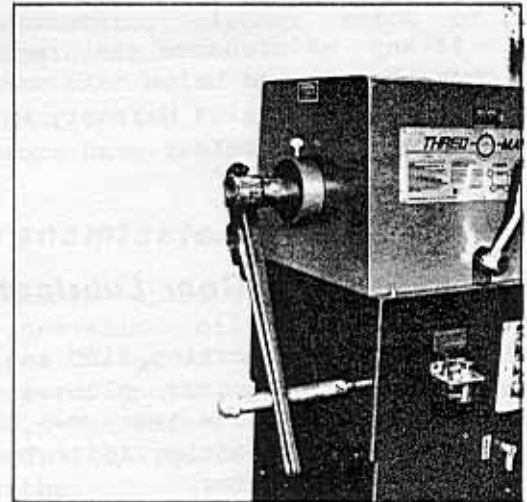
5. After pipe is chucked, press "stop" spindle rotation.
6. Hand tighten fitting on the end of pipe.
7. Place 24" pipe wrench under fitting and tighten pipe wrench jaws.
8. Rest handle portion of pipe wrench on the make-on bar.
9. Press "start" button.
10. When pipe has been made up to desired length, press "stop" button on switch.
11. Press "open" button to release pipe.
12. Remove pipe wrench and pipe with fitting attached.

"Breakdown" Pipe Fittings And Valves

The 44-A may be used to break loose pipe fittings and valves on the end of pipe.

1. Insert pipe through rear chuck and position fitting near jaws.
2. With transmission in No. 4 speed, press "start" button, to chuck pipe.
3. After pipe is chucked, press "stop" button to stop spindle rotation.
4. Slide breakdown extension bar out to extended position.
5. Place 24" pipe wrench under fitting and tighten pipe wrench jaws.

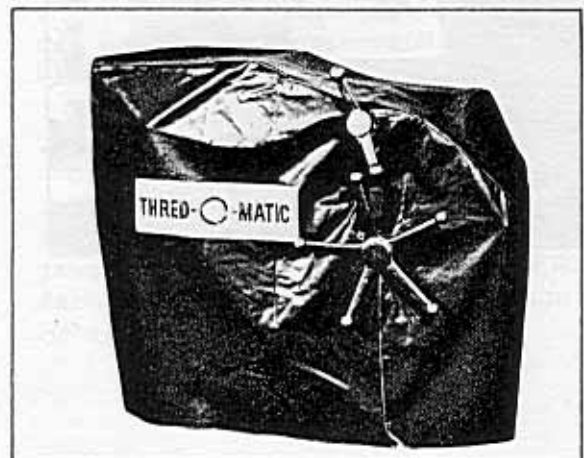
6. Rest handle portion of pipe wrench on extension bar.



7. Press "start" button.
8. When fitting is removed, press "stop" button on switch.
9. Press "open" button and remove pipe from machine.

Machine Cover

The form-fitting cover slips easily on the 44-A and snaps together to protect machine from dust, rain and snow.



Machine Cover



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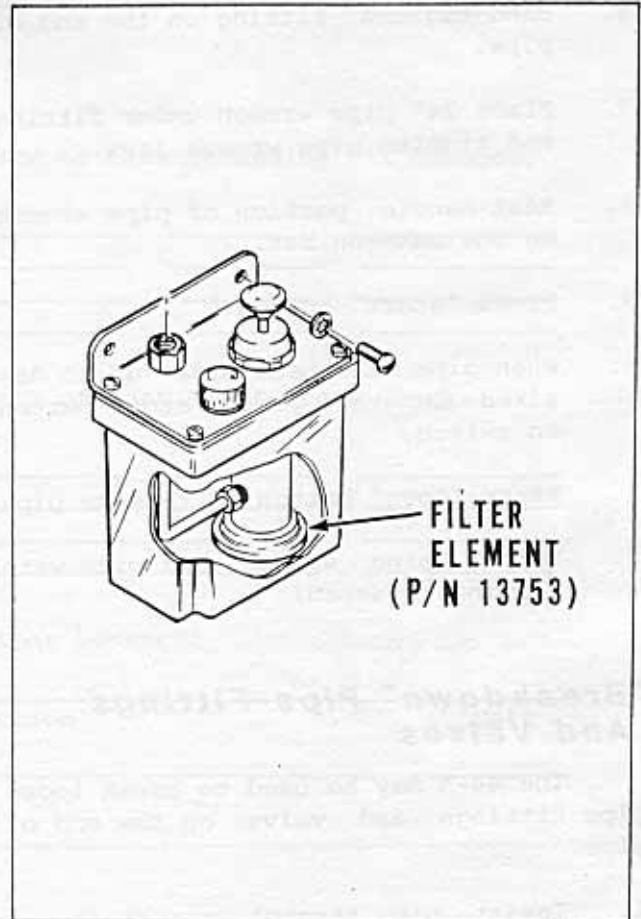
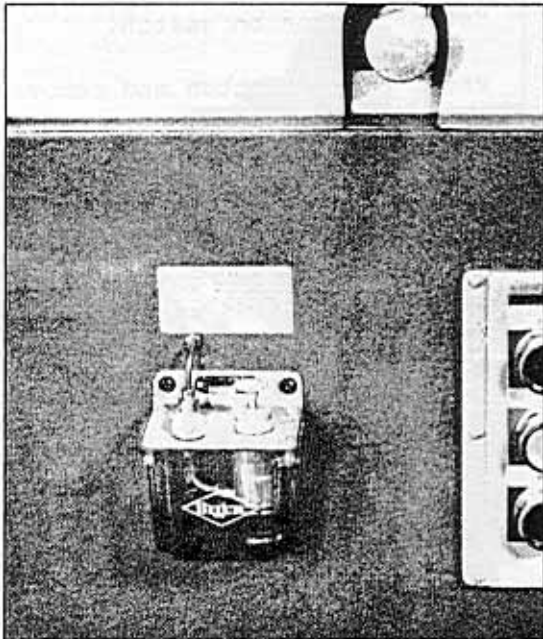
MAINTENANCE INSTRUCTIONS

Warning: Always disconnect power before servicing machine.

NOTE: If any maintenance is required other than that listed below take machine to an authorized Collins Warranty Repair Center or return to factory.

Spindle Bearing and Gear Lubricator

1. Before initial starting, lift and release the lubricator plunger six times then lubricate every two hours of operation by lifting and releasing the plunger one time.
2. Replace filter element #13753 on lubricator pump once a year.



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Threading Oil Maintenance

NOTE: For clean threads and long die life, always use Collins Thred-O-Matic threading oil.

Change threading oil every 40 hours of use or when threading oil has become contaminated or dirty.

1. To drain oil, position a container under drain plug and remove plug.
2. When oil has drained out use a rag to clean oil sump of chips and sediment.
3. Remove all debris around oil filter.
4. Replace drain plug and pour 5 gallons of Collins Thred-O-Matic oil into oil sump.

Oil Pressure Adjustment

The oil pressure relief valve is located next to the oil strainer in the sump. It should be cleaned periodically to avoid loss of oil pressure through die head. To readjust, turn set screw clockwise as far as it will go and then back one complete turn.

Carriage Rails And Gear

Keep clean and oil frequently with machine oil.

Overload Switch

The Thred-O-Matic 44-A is equipped with an automatic cut-off switch to protect the motor in the event of overloading. To reset, open the front door of the machine and press the reset button.

Motor

Check single phase motors for brush wear every six months. If motor lacks power due to a dirty commutator, use a commutator cleaner stick or fine emery cloth.

Lubrication is not required as all motors have sealed ball bearings.

Transmission

Remove spindle cover and check transmission oil level every thirty days. Change oil after the first 100 hours of operating using SAE 40 gear oil. Thereafter, drain and replace with 1 1/2 quarts of oil every six months.

V-belts should be adjusted so that when fingers are placed across the two belts and squeezed, there should be at least 1/2 inch movement in the belts.

Dies

Keep sharp and free of chips at all times. Sharpening service is provided at the factory for a nominal charge. As all sets of dies are matched, send in complete set for sharpening. When replacing dies in the die head, make sure the number on each die corresponds with the slot number on the die head.

Jaws

Keep clean with wire brush to avoid slippage. When replacing chuck jaws be sure the sides marked "FRONT" face toward the front or carriage end of the machine.

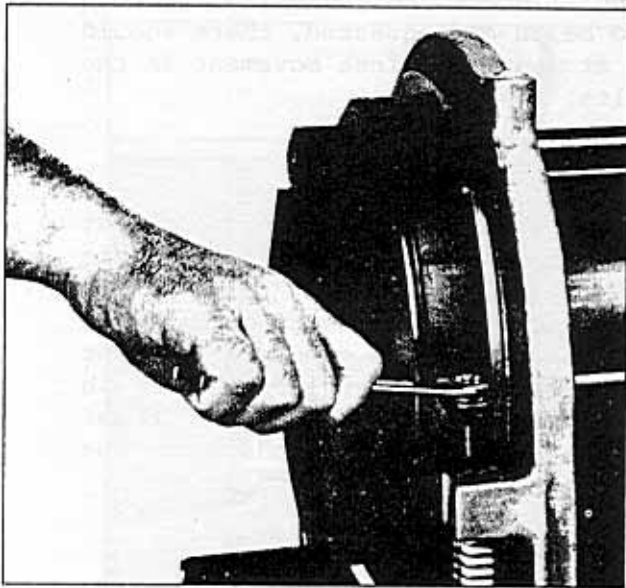


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Brake Band

If slippage of stock should still occur after wire brushing jaws, then:

1. Stop machine.
2. Put shift lever in third speed.
3. Remove spindle cover.
4. Tighten brake adjustment bolt.
5. Start machine.
6. Push "stop" button and spindle should coast 1/4 - 1/2 revolution. If not repeat steps 4, 5 and 6.
7. Replace spindle cover.



Brake Band Adjustment

MAINTENANCE RECORD

Machine Serial No.: _____

Machine Manufacture Date: _____

Date of Last Threading Oil Change:

_____	_____	_____
_____	_____	_____
_____	_____	_____

Date of Last Motor Brush Check:

_____	_____	_____
_____	_____	_____
_____	_____	_____

Other Service:

Action	Date
_____	_____
_____	_____
_____	_____
_____	_____
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