

Maintenance

To install a bit

1. Pull the E-stop.
2. Push the TOOL button in the control section of the main screen. Refer to page 36 additional information.
3. Shut off the air supply.
4. After the carriage stops moving push the E-stop.

Be sure to turn off and lockout the power to the machine at the source.



5. Open the SIDES doors. Remove hood and dust flap/spacer.
6. Clean the mounting threads and the top of the spindle in which the bit will be installed. Also wipe the top of the spindle shaft.
6. Clean the bit threads and the bit seating shoulder.

The bit will not seat properly if the threads and shoulder are not clean.



7. Thread in the bit by hand as far as possible and tighten the bit with open end wrenches - 7/8" on the spindle shaft and 21mm (13/16") on the bit.
8. After the bits are set, re-install the dust flap/spacer and the hood, turn on the air, close the doors, turn on the main power, pull the E-stop rehome and then run the machine.

Maintenance (Continued)

1. Pull the emergency stop (E-stop).
2. Push the TOOL key on the console.
3. Shut off the air supply.
4. After the carriage stops moving, push the E-stop.

Bit height adjustment

Be sure to turn off and lock out all power to the machine at the source.

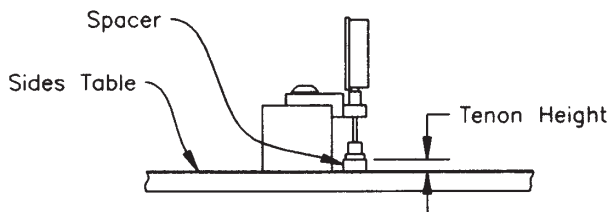


5. Open the SIDES door, remove the dust hood and the dust flap/spacer.
6. Wipe the table top to remove any dust and chips. Then, using the gauge spacer, adjust the indicator to zero.

Be sure the magnetic base is switched to ON while zeroing the indicator.

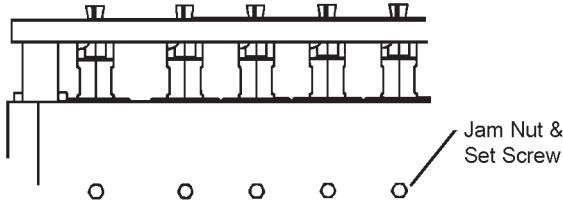


| Tenon Height | Gauge Spacer |
|--------------|--------------|
| .375 | 83809A00 |



Maintenance (Continued)

7. Open the SIDES door. Loosen the jam nut and then the retention screw for the spindle to be adjusted



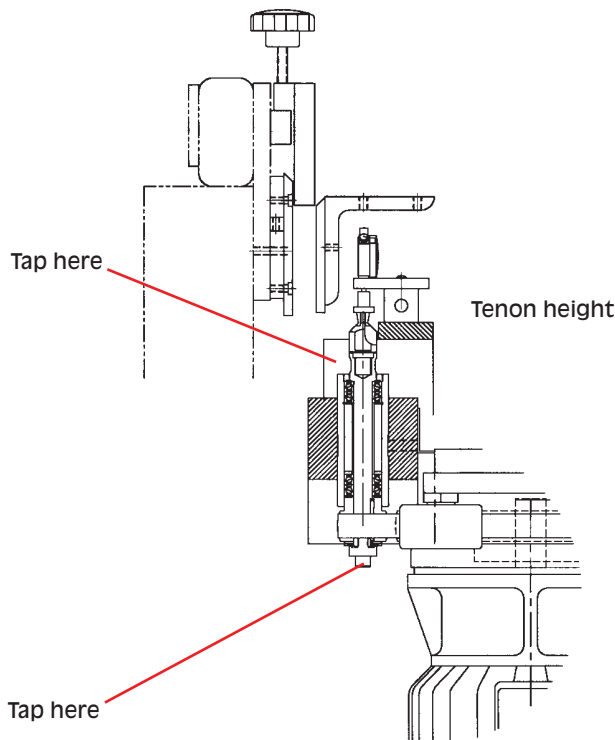
Adjusting indicator

8. Measure the height by centering the indicator tip over the bit, remember to switch on the magnetic base. Rotate the tool, and shaft, while checking the height.

Measuring height

Note: The rotation should be opposite normal cutting direction, in order to avoid the tool gouging the pad on the dial indicator.

Adjust the spindle height to within $\pm .0005''$ of the indicator zero by tapping on the top or bottom of the spindle at the points shown on the diagram below.



Maintenance (Continued)

9. Retighten the spindle retention set screw and jam nut. This must be completed before proceeding to the next spindle if more than one spindle is being set.

Finish up

1. Pull the emergency stop (E-stop).
2. Push the TOOL button in the control section of the main screen.
3. After the carriage stops moving, push the E-stop.
4. Shut off the air supply.

To remove a bit

Be sure to turn off and lock out all power to the machine at the source.



5. Open the SIDES door, remove the dust hood and the dust flap/spacer. Remove the sides guide and holdover.
6. Push the sides clamp in to the fully closed position, by hand.
7. Loosen the bit you wish to remove, using a 7/8" open end wrench on the spindle flats and a 21mm (13/16") wrench on the bit flats. The *odd numbered* spindles have a *left hand thread* and the *even numbered* spindles have a *right hand thread*.
8. Once the bit is sufficiently loose, it may be removed by hand from above the sides table.

Maintenance (Continued)

1. Push the TOOL button in the control section of the main screen.



To remove spindles

2. Push the emergency stop (E-stop).

Be sure to turn off and lockout the power to the machine at the source.



3. Use compressed air to blow off the entire router carriage and wipe off the exposed top of the spindle to be changed as well as the top of the spindle block in the area around this spindle. Remove the bit from the spindle.

Note: See bit removal information on page 61.



4. Release the air pressure to the belt tensioner to loosen the drive belt, and remove the belt.
5. To remove the spindle, loosen the retention screw jam nut and back the set screw out at least two full (360°) turns.

An assistant should have a hand under the spindle at all times to prevent the spindle from dropping under its own weight.



6. If the spindle slides easily in the block, let it drop out from below. If the spindle *will not slide easily* with hand pressure, use a non-marring bar, such as brass, to tap on the spindle cap. Take care not to tap the spindle shaft. Remove from below.

Do not hammer on the spindle shaft.



Maintenance (Continued)

It is recommended the user contact Mereen-Johnson's Customer Service Department before attempting any disassembly or servicing of the spindles.

1. Clean and wipe down the outside surface of the spindle. Sand any rust (fretting corrosion) buildup in the bore of the spindle block.

Aligning the flatted side of the spindle with the retention set screw, slide the spindle up into the block. If the spindle will not start easily into the block, check carefully for burrs. Never drive the spindle in with a hammer. If more than light tapping is necessary, remove the spindle and check again for burrs and rust in the block bore.

2. With the spindle installed and at approximately (by eye) the correct height, install the drive belt and apply air pressure to the tensioner.
3. Install the bit.
4. Using the bit alignment jig as a guide, adjust the spindle to the proper height.

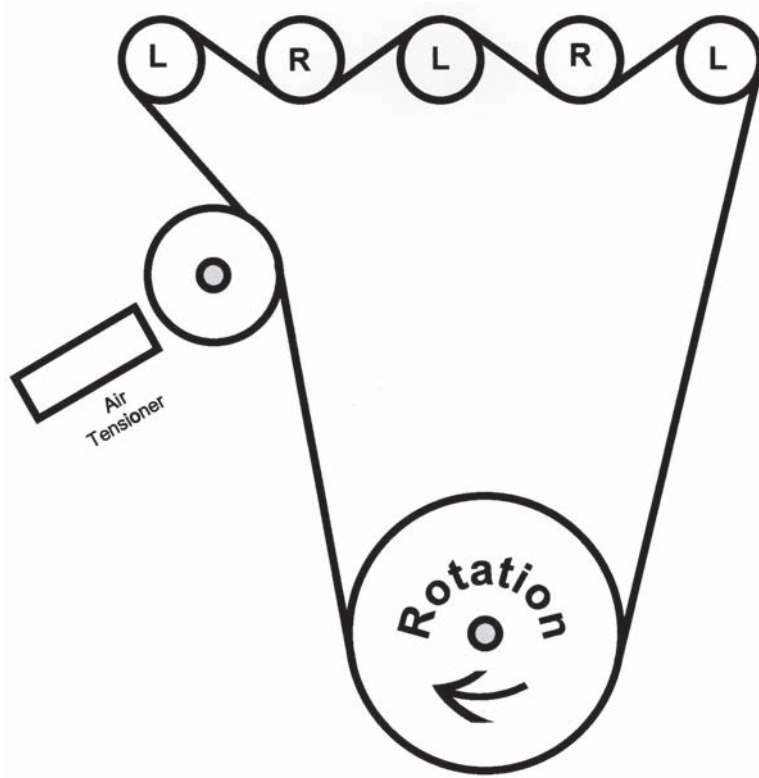
Refer to the bit alignment procedure at the start of the Maintenance Section.

5. Tighten the retention set screw and then the jam nut.
6. Replace the dust hood, pulley guard, dust flap/spacer, and turn on the air.



**To install
spindles**

Maintenance (Continued)



**Belt
configuration**

Check motor rotation prior to installing the belt the first time the power is turned on.

See the accompany sheet in the Lubrication Section of the manual for our grease recommendations, which can be used on all the grease points. If you would like to use a grease not on the recommended list, please consult with the Mereen-Johnson Machine Company's Customer Service Department. We do not recommend that you use a paraffin-based grease.

Important: Do not attempt to regrease the spindle bearings. These bearings are greased for life and cannot be lubricated.



Lubrication & Maintenance Schedule

Maintenance (Continued)

1. The eight (8) points on the router carriage linear bearings should each receive approximately one shot every 100 hours of running time.
2. The ball screw requires lubrication weekly. The recommended method is to wipe the screw with a clean rag. Then, apply the lubricant. Use of Nook E-900 Ball Screw lubricant is recommended (Mereen-Johnson part number 622825). Be sure that the screw is clean before applying the lubricant. After the lube is applied to the ball screws, move to the touch screen interface and press the EXERCISE button after making sure that everything is clear of the carriages. Keep clear of the carriages while the machine is exercising.
3. The pneumatic filters will drain automatically. Check the system daily and change the filter elements as necessary. Refer to the manufacturer's cut sheets for more information.
4. Each week remove the spindle belt drive guard and check the tension and condition of the belt drive.

If the cylinder on the pneumatic belt tensioner is fully extended, the spindle drive motor should be moved until the cylinder is mid stroke when engaged. Use the following procedure:



1. Press the E-Stop.
2. Shut off the compressed air.

Maintenance (Continued)

3. Access the four (4) motor mounting screws through the holes in the motor pulley.
4. Pull the motor until the tensioner cylinder is mid-stroke.
5. Tighten the screws.
6. If the motor is adjusted to the maximum take-up (end of slots), and the tensioner air cylinder is not retracted to mid-stroke, replace the belt.