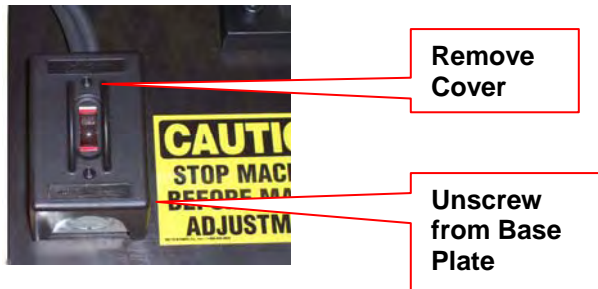
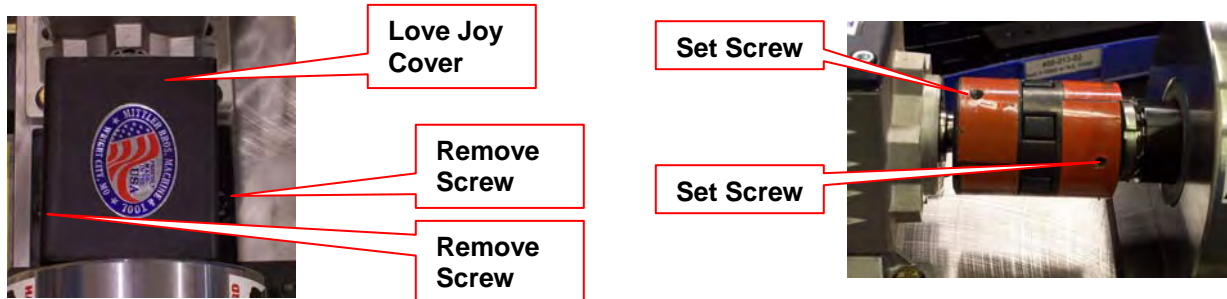


400 Single Speed to Variable Speed Conversion #400-202

1. Unpack the boxes and be sure all the parts are included. See the list at the end of these instructions.
2. Unplug the machine from any power source. Remove the switch box from the base plate by removing the cover and unscrewing from the base plate.



3. Remove the Love Joy Cover by removing the two screws. Then loosen the set screws on each half of the Love Joy coupling.



4. With someone holding up the end of the motor remove the four (4) bolts holding the motor / gearbox assembly to the mounting plate. Remove the complete motor, gearbox, cord & switch assembly from the machine. Save the mounting bolts to remount the motor / gearbox.

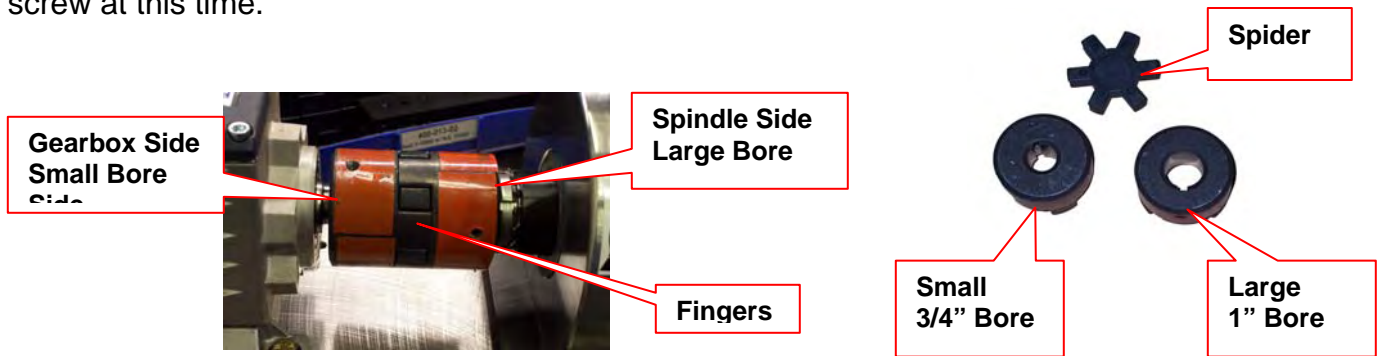


5. Remove the Love Joy coupling half from the spindle shaft if it did not slide off in step 4.

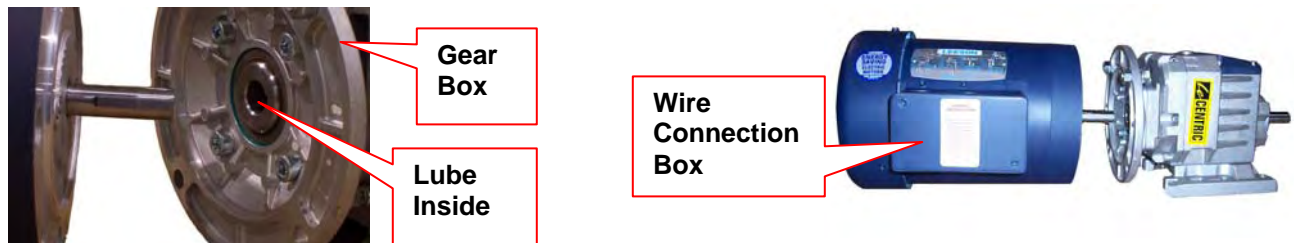
6. Drill and tap two (2) holes, 5/16"-18, in the motor mounting plate as shown below. The holes should be drilled 1" deep and then counter sunk a small amount to allow for the bolt heads.



7. Slide the large bore (1") Love Joy coupler half onto the spindle. Be sure the "fingers" are pointing toward the motor location and that the key is installed in the key way. Do not tighten down set screw at this time.

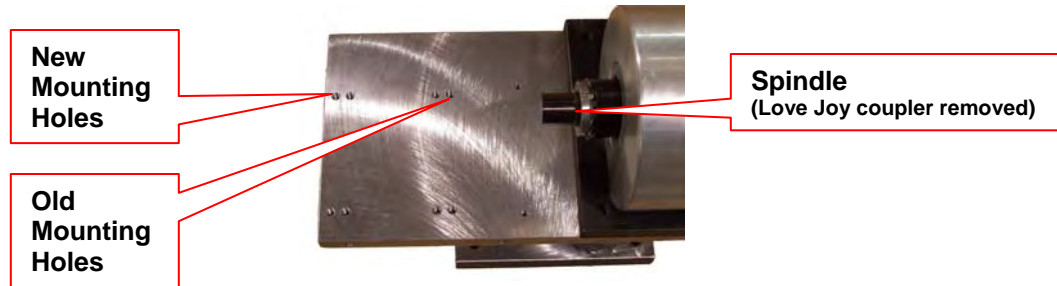


8. Assemble the motor to the gear box. Use supplied anti-seize from the gear box container and lube the inside of the gearbox shaft where the motor slips in. Be sure the motor to gearbox mounting flange on the gearbox has no bolts in it. Be sure the supplied key is in the motor shaft and slide the motor and gearbox together. Make sure the motor is rotated so that the wire connection box is on the side as shown. Install the four (4) bolts and lock washers by hand and then tighten once you are sure that everything is lined up.

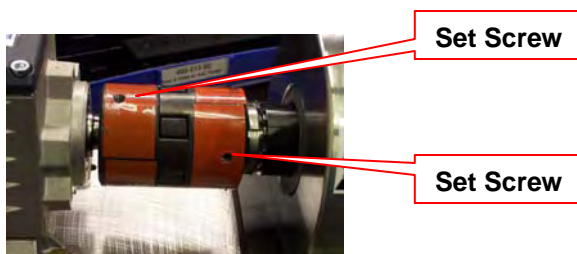


9. Slide the small bore (3/4") Love Joy coupler half onto the gearbox shaft. Be sure the "fingers" are pointing away from the gearbox and that the key is installed in the key way. Do not tighten down set screw at this time. Slip the "spider" into the fingers of the coupler.

10. Set the motor / gearbox assembly onto the mounting plate. While someone is holding the motor end up install the mounting bolts finger tight. Use mounting holes farthest from the spindle as shown below.



11. Slip the two Love Joy coupler halves together with your fingers, being sure the spider is still locked in the "fingers". Tighten the set screws and snug up the motor / gearbox mounting bolts.

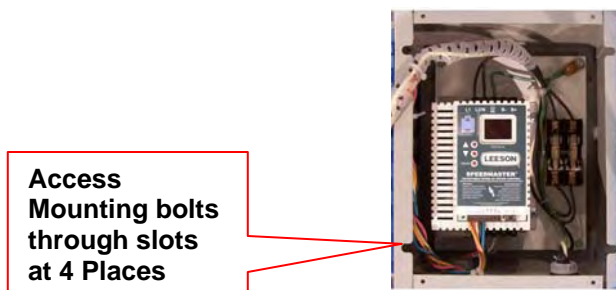


12. Install the new Love Joy cover using the old screws.

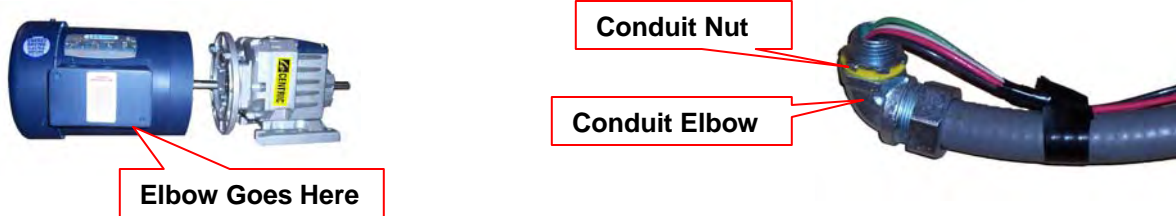
13. Bolt the control box mounting plate to the motor / gearbox mounting plate using the holes you drilled earlier and the 5/16"-18 x 3/4" FHCS. Put a drop of locktite on the bolt threads. Be sure the long end of the plate is at the top.



14. Mount the Speed Control box to the mounting plate using the supplied 1/4"-20 x 1/2" SHCS. This step will require a long allen wrench to reach inside the control box.



15. Attach the conduit elbow to the bottom of box by removing the nut, slipping the fitting through and then installing and tightening the nut.



16. Wire the control box to the motor as shown by the included wiring diagram. Use the supplied wire nuts and then use electrical tape for added safety.
17. Wire the input cord correctly for the style and voltage you are using, refer to enclosed wiring diagram.
18. Check all bolts for tightness and all electrical connections. Once you are sure everything is tight and correct set the master switch to **OFF** and the run switch to **STOP**. Plug the power cord into the receptacle.



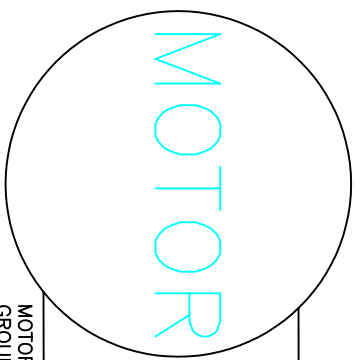
19. Turn the **MASTER** switch on and then turn the **RUN** switch on. Turn the speed control knob up and down to cycle the motor. Listen for and clicking or odd sounds. If you here a clicking sound you will need to loosen the spindle housing bolts and then retighten while the motor is running. This will usually align the Love Joy and quiet the clicking.

KIT CONTENTS:

- 1ea. 400-503-M Motor
- 1ea. 400-503-G Gear Box
- 1ea. 400-035 Large Love Joy Coupling Cover (guard)
- 1ea. 400-507 Love Joy Coupler Half 3/4" ID
- 1ea. 400-508 Love Joy Coupler Half 1" ID
- 1ea. 400-509 Love Joy Coupler Spider
- 1ea. 400-039 Control Box Mounting Plate
- 1ea. Pre Wired Speed Control Box
- 2ea. 5/16"-18 x 3/4" FHCS
- 4ea. 1/4"-20 x 1/2" SHCS
- 1ea. Wire Diagram
- 1ea. Instruction Sheet Set

We appreciate your business and hope that you enjoy your new Mittler Bros. Product. If you have any questions or concerns please feel free to call us at 1-800-467-2464 for help.

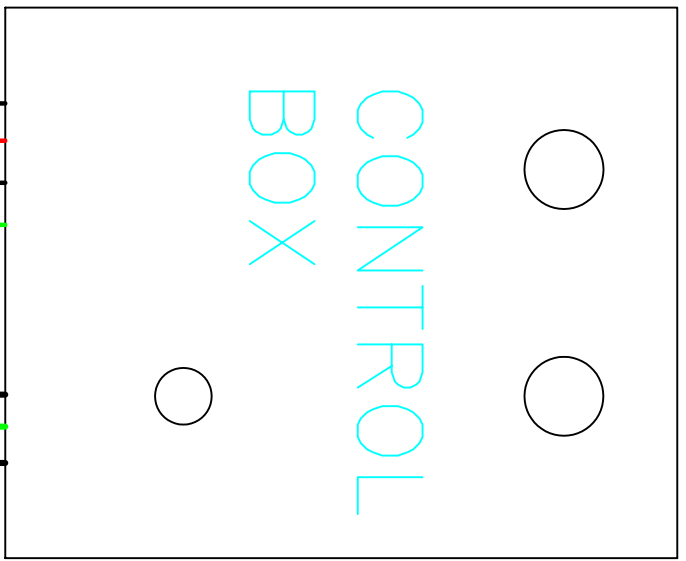
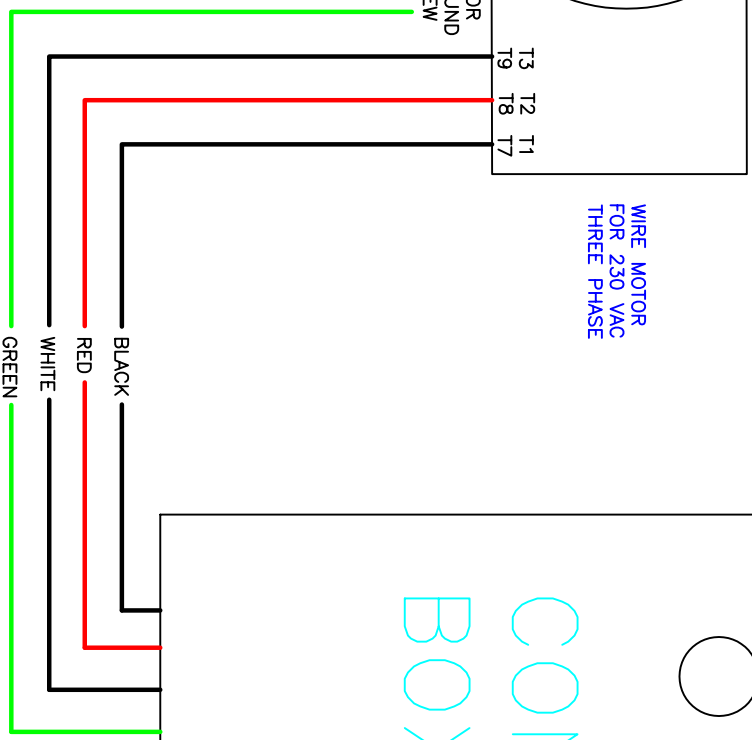
REVISION	DATE	BY	DESCRIPTION



T3 T2 T1
T9 T8 T7

MOTOR
GROUND
SCREW

WIRE MOTOR
FOR 230 VAC
THREE PHASE



INPUT
230 VAC
SINGLE PHASE

WHITE = HOT
GREEN = GROUND
BLACK = HOT

GREY SEAL TIGHT FLEX CONDUIT

BLACK CORD

RUN/STOP		SPEED POT	
NO. REQ'D:	1	MATL.	
CNC PROG. NO.		HT.: NONE	

.X	= ± .015
.XX	= ± .010
.XXX	= ± .005
FRAC.	= ± .015

MB MILLER BROS.
MACHINE & TOOL
121 EAST HULLBERRY ST.
P.O. BOX 11
FORSTELL, MO. 65348
(314)463-2464

ULTIMATE TUBING NOTCHER	
TITLE:	CONVERSION KIT WIRING DIAGRAM
DATE:	12/7/2005
SHEET SIZE:	B
SCALE:	
NO.	400-202