

# Limit Switch Instructions

1. Unplug Power cord of the machine.
2. Mount the Electrical control box for the limit switch kit to the frame with the provided 5/16-18x3/4 carriage bolt with washer and locknut. Mount the control box so that the toggle switch is on the top of the box. See Figure 1
3. Remove cover from motor electrical control box.
4. Remove small plastic knockout from left side of the control box.
5. Install cord grip and yellow control wire in motor control box.
6. Connect wires as follows inside motor control box: (See wiring diagram on back page)
  - a. Black – Wire nut into bundle that includes orange and white wires from existing foot switch
  - b. White – Wire nut into bundle that includes the white wires from the motor solenoids
  - c. Blue – Wire nut into bundle that includes the red wire from the outside motor solenoid
  - d. Brown – Wire nut into bundle that includes the red wire from the inside motor solenoid
7. Check that all wire nuts are tight and no wires are not connected. Then reinstall the motor control box cover and connect the yellow wire from the motor control box to the yellow wire of the Limit Switch Kit.
8. Mount limit switch frame bracket to the ironworker frame closest to the cylinder. Tighten both sides with allen wrench so that the bracket is secure to the frame. See figure 2
9. Thread in 2' threaded 3/8-24 rod into either the front or back hole option on the frame bracket. Thread rod all the way into the bracket so that the rod is tight.
10. Thread one longer jam nut onto the threaded rod. Then slide one sensor bracket onto the threaded rod with the thumb nut in between the bracket so that the thumb nut is to be threaded onto the rod as well. See figure 3
11. Repeat this step for the second sensor bracket. One bracket should be positioned towards the bottom of the arm and the other towards the top of the arm.
12. You can adjust these brackets by loosening the longer jam nut then turning the thumb nut to raise or lower the sensor bracket. Once the bracket is in the desired position, tighten the jam nut into the bottom of the sensor bracket to secure it. Next, install the proximity sensors into the proper sensor brackets based on what workstation you are using. The sensors will have to be within 5mm (3/16") of the arm to work properly. Make sure the sensors are not too close to the arm so that the arm hits the sensors and causes damage.

Figure 1

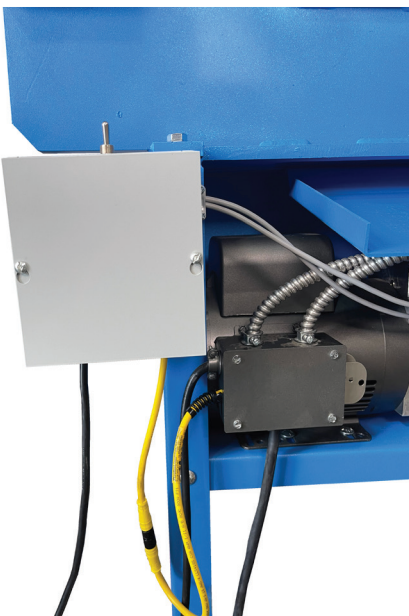
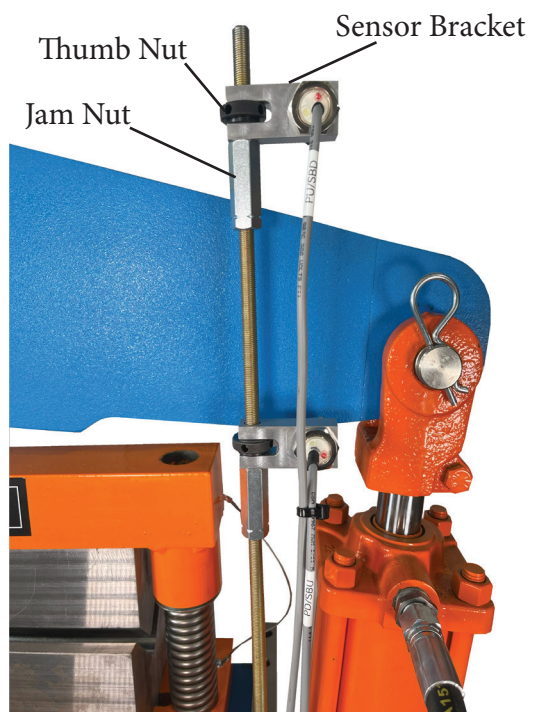


Figure 2



Figure 3



- a. PU/SBD – Punch station Up position/Shear and Brake Down position
  - b. PD/SBU – Punch station Down position/Shear and Brake Up position
  - c. Sensors will have to be flip flopped when changing workstations so they work as designed.
13. Once the sensors are installed select the proper workstation position with the toggle switch on top of the limit switch control box. The middle position of the toggle switch is for standard foot pedal operation. This allows the machine to operate with the dual foot pedal.
14. Turn the machine on. The arm will automatically cycle to the stop sensor and stop. To operate the machine with the limit switch you will use the single foot pedal that is provided with the limit switch control box. Once you press the single foot pedal the arm should leave the stop sensor and travel till it reaches the return sensor. Then change direction to return to the stop sensor. This will change directions based on what position you have the toggle switch in.
15. Turn the machine off while adjusting the sensors with the jam nut and thumb nut to set the stop and return points. If you do not turn the machine off, you can risk personal injury and cause damage to the machine or limit switch kit.

\*Note- Metalpro is not liable for any injury or damages resulting in use of limit switch kit.

### Wiring Diagram

