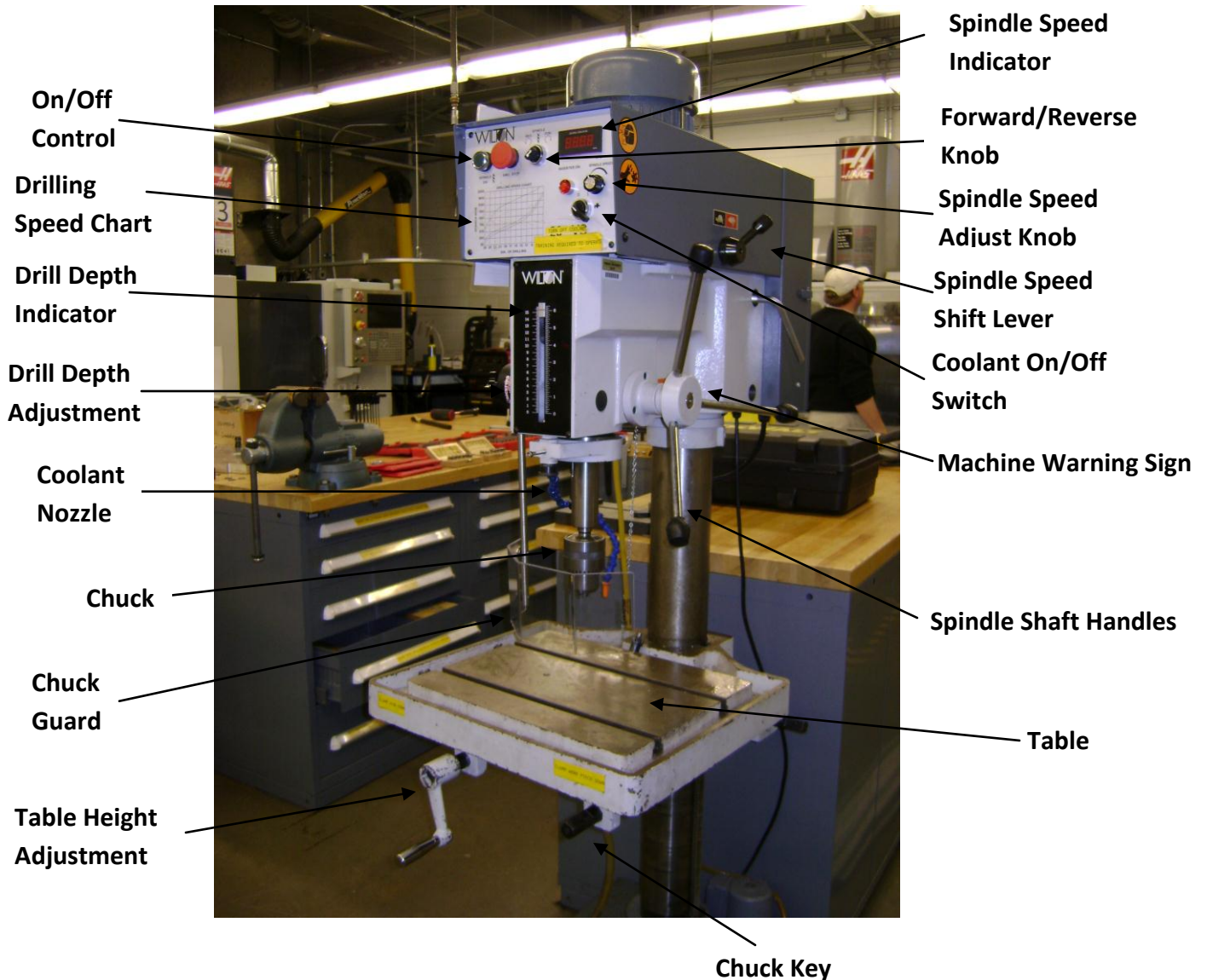


DRILL PRESS



PPE Required: **Safety Glasses**

Prohibited Clothing: gloves, loose clothing, neckties, jewelry

Machine Access Level: **Supervised Only**

Materials Allowed: **metals only**

Note: no wood or plastics can be drilled on this machine!!

Operating Procedure

1. Machine Safety Inspection and Work Area Check-Out

- A. **PPE:** make sure you are wearing the proper PPE and not wearing any equipment listed on the first page that could get caught in the drill.
- B. **Machine Warning Signs:** make sure you read and follow the machine warning signs that are attached to the machine. If you have any questions, ASK!!
- C. **Work Area:** make sure the area is clean and the area around the machine is free and clear of debris and personnel.

2. Work Supervision

- A. This machine requires supervision by an AFL employee. A Supervisor or TA will assist you in the set-up and operation of the machine. **You may not operate this machine without supervision.**

3. Machine Adjustment

- A. **Note:** the machine adjustment is to be done with the machine **OFF!**
- B. **Identify controls:** identify the red stop button and the green start button. These controls start/stop the machine.
- C. **Select drill bit(s) necessary:** ask the TA to help you locate the correct drill bits for your job.
- D. **Check the drilling speed chart:** check the drilling speed chart located on the drill. Determine the correct spindle speed based on the drill bit size and material being used. The TA will assist you with this step.
- E. **Install drill bits:** install the drill bit in the chuck, using the chuck key to tighten the drill in the chuck. Remove the check key from the chuck. **A TA must check your drill bit installation before continuing to the next step.**
- F. **Adjust spindle speed shift lever:** when applicable (**with the drill off**), adjust the spindle speed shift lever to slow or fast depending on your application. The TA will assist you with this step.
- G. **Adjust forward/reverse knob:** determine the drilling direction required for your job (in most application, the direction will be forward). **With the drill off**, select the correct direction for your job. Ask the TA if you are unsure.
- H. **Clamp part to table or vise:** the part **MUST** be clamped to the table or vise. **You may NOT use your hand to hold the part to the table!** Some applications may require additional fixturing. The TA will assist you with this step.
- I. **Adjust table height:** when applicable, adjust the height of the drill table. The TA will assist you with this step.
- J. **Adjust drill depth:** when applicable, adjust the depth that the drill will go through the part. **NEVER drill into the table.** The TA will assist you with this step.
- K. **Chuck Guard:** Must have machine chuck guard in place before operating.

4. Machine Operation

- A. **Turn the machine on:** check with the TA that it is safe to turn on the machine, and push the green start button when instructed to do so.
- B. **Adjust spindle speed:** **once the drill is on**, adjust the speed of the spindle according to the drill speed chart and material being used. Verify the correct speed by looking at speed indicator. The TA will assist you with this step.
- C. **Turn on coolant:** when applicable, adjust the coolant nozzle to your part and turn on the coolant.
- D. **Safely drill the part:** **Go slow! Always keep hands and fingers away from the drill bit, spindle, and chuck.** Using the spindle shaft handles, slowly lower the drill bit through the part. Ask the TA for help.
- E. **Turn the machine off:** when finished drilling, push the red stop button to shut the machine off. Let the spindle come to a stop. **Never touch a moving spindle, chuck, or drill bit.**

5. Clean Up

- A. **Disassemble work set-up and clean up the area:** Return all tools and fixtures to their proper place. The TA will check that the area is clean before you can sign-out of the AFL.