



PPE Required: Safety Glasses

Prohibited Clothing: gloves, loose clothing, neckties, jewelry

Machine Access Level: Supervised Only

Materials Allowed: Metals

Note: Metals only may be ground 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 grinder.
- 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 work area is clean and the work 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. **Select the wheel:** Ask the TA to help you locate the correct grinding wheels for your job. Note: Anytime a wheel is changed it needs to be re-dressed with diamond wheel dresser.
- C. **Check condition of wheel:** Inspect the wheel for cracks. Inform the TA if any cracks are found.
- D. **Check guards and enclosures:** Make sure that all guards and enclosures are in place.
- E. **Secure the part:** This machine has a magnetic chuck to hold the work piece. For non-magnetic parts you will need to use a different method to hold the part (such as a magnetic fixture). The part **MUST** be held to the table. **You may NOT use your hand to hold the part to the table!** The TA will assist you with this step.
- F. **Adjust the depth of cut:** Depending on the finish that you are trying to get you will need to set the depth of cut differently (there is a rough cut for stock removal and spring, or finish passes for final flatness, thickness and surface finish). The TA will assist you with this step.
- G. **Adjust feeds and speed:** Adjust the feeds and speeds depending on the application. The TA will assist you with this step.
- H. **Identify the machine controls:** Identify the red emergency stop button. This will stop the machine in case of an emergency.

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. **Coolant:** Open the coolant valve so that the appropriate flow of coolant goes on the part. The TA will assist you with this step.
- C. **Safely grind the part:** **Do not rush! Always keep hands and fingers away from the wheel and part and never stand on the left end of the machine.** Ask the TA for help.
- D. **Turn the machine off:** When finished grinding, push the red stop button to shut the machine off. Let the wheel come to a stop. **Never touch a moving grinding wheel.**

5. Clean Up

- A. **Disassemble work set-up:** Disassemble any fixturing used in the grinding operation. Return all parts to their proper location and the appearance of the grinder to how it looked when you started.
- B. **Clean up the area:** Clean up all messes (for example: use a shop vacuum to clean), return all tools, etc. The TA will check that the area is clean before you can sign-out of the AFL.