

Lesson 1: Sharpening and Reconditioning a Twist Drill, Lawn Mower Blade, and Chain Saw Chain

**Dressing a Grinding Wheel**

**Objective:** Students will dress a grinding wheel.

**Directions:** Students will use a mechanical wheel dresser to dress a grinding wheel.

**Materials and Equipment:**

Bench grinder	Face shield or other approved face and eye protection*
Grinding wheel that needs reconditioning	Dust mask or respirator
Mechanical wheel dresser or other appropriate dressing tool	Leather apron or any other protective clothing recommended by instructor

\* Everyone participating in or observing the demonstration should wear appropriate protective eyewear, a respirator, and any other protective clothing as needed.

**Procedure:**

1. Wear appropriate safety equipment.
2. Follow the correct setup procedure for dressing a grinding wheel by using the steps below and any others as directed by the instructor.
  - a. Inspect equipment, materials, and work area to ensure safe and correct operation.
  - b. With the power disconnected, adjust the tool rest and make sure all guards are in place.
  - c. When all adjustments are made, plug in the grinder.
  - d. Stand to the side of the grinder and turn it on. Let the grinder run before using.
3. Dress the grinding wheel according to the assigned procedure.

CAUTION: Be prepared for particles of the abrasive grit to fly off the grinding wheel. The wheel is trued and dressed by removing old abrasive and waste material clogging the wheel surface.

- a. Position the wheel dresser on the grinder.
- b. Raise the dresser handle to push the dresser wheels firmly against the grinding wheel.
- c. Move the dresser back and forth across the grinding wheel, maintaining even pressure on the dresser.

- d. If there is heavy sparking, increase the pressure on the dresser. Excessive sparking indicates that the dresser is being ground away.
- 4. Turn off the grinder, disconnect it from the power source, and examine the wheel.
  - a. It should be perfectly round and the face should be square with the sides.
  - b. The grit should be sharp and free of waste particles.
  - c. There should be no grooves in the surface.
- 5. Repeat the dressing procedure if additional dressing is needed.
- 6. Perform assigned shutdown and cleanup procedures. Return materials and equipment to their storage places.
- 7. Readjust the tool rest so that it is 1/16 in. from the wheel.
- 8. Turn in work to be graded by the instructor.