



## Flap Sander Safety Rules

The flap sander is used to sand irregular shapes such as convex and concave surfaces. It can also be used to remove sharp edges and corners from rectangular objects. Use of the flap sander is frequently the last step in the production of components for a project. For example, the flap sander is used to smooth: the rockers, head and foot boards and sides of doll cradles; the edges of alphabet blocks and routed curves and profiles.

The flap sander is made up of a motor with very long shafts extending from each end. Flap sanding wheels are mounted on these shafts. The flap sanding wheels consist of a housing to hold the sandpaper, five bundles of three sheets of sandpaper and 15 horse hair brushes located behind the sandpaper to provide support. The sandpaper is in a roll inside the housing. As the sandpaper wears, additional sandpaper can be unrolled to provide a fresh sanding abrasive. A dust collection hood is provided for each flap sanding wheel that connects to the Oneida dust collection system.

### **Flap Sander Safety Rules:**

1. Keep a balanced stance at the flap sander so you do not fall or lean against the dust hoods or moving parts. Do not overreach or use excessive force to perform any machine operation.
2. It is not necessary to lockout or unplug the sander when adjusting, removing or installing the flap sanding wheels.

3. Keep your hands clear of the rotating flap sanding wheels. Contact with them can cause rapid removal of skin and flesh.
4. Do not operate this machine when tired, or under the influence of drugs or alcohol.
5. Never leave the flap sander when it is running. Turn the power off and do not leave the machine until it comes to a complete stop.

**Start with a Risk Assessment to ensure a safe work area:**

1. A three-foot perimeter around the flap sander should be kept clear of people, debris and sawdust that might impair traction or footing to avoid slips and falls.
2. Eye Protection. Safety glasses with side shields must be worn.
3. Dust Protection. All sanding dust is a carcinogen and a dust mask must be worn while using the flap sander.
4. Eye, face and dust protection can be provided by a Powered Air Purifying Respirator (PAPR). The PAPR provides the additional protection of keeping sanding dust out of your eyes. The sanding dust of all woods can be irritating to the eye and for many tropical woods is toxic.
5. Hand Protection. In many cases, you will need to hold your workpiece close to the rotating sanding wheel. Contact of your hand with the abrasives will cause rapid skin and flesh removal. Therefore, you must wear tight fitting gloves while using this sander.
6. Hearing Protection. The noise created by the flap sander is close to the level where hearing protection is required. However, the noise created by the adjacent dust collector, which must be used when flap sanding, brings the total sound level above that where hearing protection is required. Therefore, hearing protection is required when using the flap sander.
7. Remove or fasten all loose clothing or jewelry such as wrist watches, necklaces and bracelets. Tie back long hair. These items might get caught by the sanding wheels and rapidly pull you into it resulting in serious injury or death.
8. Give the work your undivided attention. Looking around or carrying on a conversation can result in serious injury or death.

**Operational Safety Rules:**

1. Approach your work in the Club Shop and on the flap sander with a safe attitude!
2. Keep the floor around the flap sander clean and free of stock, shavings and sawdust to minimize the danger of slipping.
3. Make sure the dust hood access doors are closed and secured with thumbscrews.
4. Start the Oneida Dust Collector and open the blast gate to the sanding wheel being used.
5. There is a lot of friction between the rotating sandpaper and the object being sanded. You need to hold the workpiece securely to prevent it from being pulled out of your hand. If you need to change your hand position, remove the workpiece from the sanding wheel, reposition your hands and then resume sanding.
6. Use only the center and lower portions of the sanding wheel so that the resistance force is directed down. Using the upper part of the sanding wheel can cause the workpiece to be thrown directly at you.

7. Always position the workpiece so that the sanding wheel is sanding downward toward the end of the workpiece. If the end is pointing up, the workpiece may be thrown at you.



**Correct way to hold the workpiece**



**Incorrect way to hold the workpiece**





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### Correct way to hold the workpiece

8. Use the full 4" width of the sanding wheel so that the sandpaper wears evenly. Do this by moving the workpiece laterally across the wheel.
9. The abrasive, the sandpaper, is what effectively smooths the workpiece. It must be at least as long as the horsehair brushes. If the sandpaper is shorter than this, the horsehair brushes will wear prematurely and the sanding effectiveness will diminish. If the sandpaper is below the horsehair brushes, or has lost its abrasive, additional sandpaper must be rolled out. To roll out additional sandpaper:
  - a. Turn off the flap sander,
  - b. Hold the shaft nut close to the motor with one wrench while turning the outboard nut down about ½ turn. This will loosen the cover plate on the housing.
  - c. Grasp the housing on the side towards the motor with some fingers placed between the sandpaper to hold it steady.
  - d. Grasp the cover plate and rotate the top towards the wall about one-half the distance between the slots for the sandpaper.
  - e. Grasp each piece of sandpaper and pull it towards you to pull it tight on the roll. Work your way around the wheel until all 15 sheets of sandpaper has been pulled out.



- f. Use shears to trim off the worn-out portion of the sandpaper.
- g. Your goal is to have the sandpaper extend past the horsehair brushes by about  $\frac{1}{4}$ ". If the sandpaper extends more than this, it will break off prematurely and not be used efficiently. If this is the case, turn the cover plate top towards the front a little to rewind the sandpaper. If the Sandpaper can not be pulled out far enough. The abrasive roll will need to be replaced.



### **Properly positioned abrasive**

- h. How to replace the abrasive roll:
  - i. Refer to the YouTube video: [https://youtu.be/8\\_DVdKRcVy0](https://youtu.be/8_DVdKRcVy0)
  - ii. Notes:
    - 1. Clamp the wheel in a vise instead of using the special tool shown;
    - 2. Use the  $\frac{1}{2}$ " straight blade screw driver to rotate the central hub instead of a  $\frac{1}{2}$ " bar.
    - 3. Use a 1" wood dowel to help position the sanding leaves when placing them in the hub.