

*Please report all accidents and near misses. Things happen and it is important to learn from others. Environmental Health and Safety and your colleagues appreciate hearing about incidents, reviewing their causes and learning from them.*

## **SAFE USE OF DISC SANDERS**

The disc sander is an essential component of many shops on campus. Depending on the shop, some are intended to be used only for wood, while others only for metal. It's important to remember several key points when operating these tools to stay safe and avoid injury.

### **What Happened?**

In September 2016, a Yale graduate student was using a disc sander to deburr a metal plate when her fingers accidentally made contact with the spinning disc. The result included severe abrasions requiring skin grafting as well as a broken finger.



### **What Went Right?**

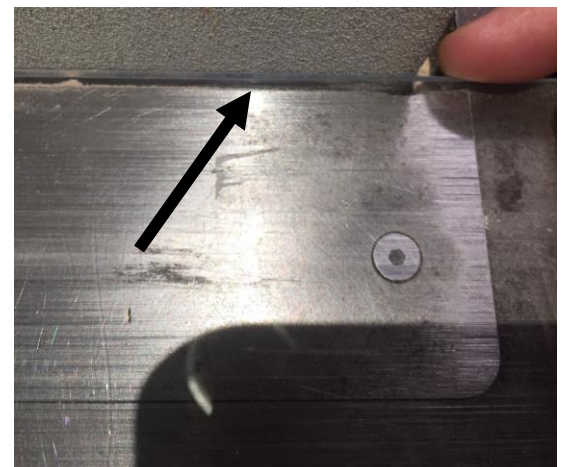
- The student was working with others within the shop (not alone).
- Safety glasses and appropriate shop attire were being worn.
- 911 was contacted immediately using the landline shop telephone.
- The tool was immediately taken out of service to determine if any equipment failures had occurred.

### **What Corrective Actions Have Been Taken?**

A meeting was quickly called for all users of the shop to discuss the safe work practices required for these types of tools. Emergency procedures and basic shop safety requirements were also reviewed for all users.

### **How Can Incidents Like This Be Prevented?**

- “Hold Tight, Push Light”-Let the abrasive do the work. Do not force the work piece into the belt or disc.
- Keep the part being sanded away from the center of the disc.
- Always work in a well-lit area.
- Do not freehand above the surface. Keep the part on the table at all times when sanding. Elevated parts can grab and pull your fingers toward the abrasive disc.
- Minimize the gap between the sander and the table. Consider using a jig made of acrylic to achieve an even smaller gap (see image to right).
- Always note the direction of rotation of the sanding disc and **ONLY** use the side of the disc with downward travel direction. Engaging on the “upward motion” side of the disk will cause the work piece to become a projectile.



### Alternatives

- If the work piece is oddly shaped and difficult to hold securely, consider alternative methods such as a vice and hand file to sand the piece by hand. Small parts can grab the abrasive surface and jam the belt or disc or be made into dangerous projectiles.
- The sander should only be used for sanding small amounts of material such as deburring. A cutting tool should be used for removing larger quantities of your work piece.

### More Information

- **Yale Environmental Health and Safety:** Combination Belt and Disc Sander Shop Safety Procedure (<http://bit.ly/2dDV0jW>)