

# How to Keep Your Job From Grinding To a Halt

Grinders can be indispensable tools for polishing, honing and buffing. But careless use of these machines can subject your eyes, fingers, hands or arms to serious injury and bring your job to a grinding halt. Take the time to prevent grinder hazards, and you will keep yourself and your grinder working smoothly.

## The Ring Test

A defective or cracked grinding wheel will break if it is used. Prevent this hazard by testing a new wheel when you unpack it and each time before it's mounted. The same goes for disks. Suspend lightweight wheels from the hole with your finger or a small pin; set heavier wheels vertically on a hard floor. Then tap the "tap point"—1 or 2 inches from the outer edge and 45 degrees from the vertical center line. Tap a light disk with a light tool, such as a screwdriver handle, and a heavy one with a mallet. If the wheel or disk is in good condition, you will hear a clear, metallic ring.

## Prevention Inspections

Inspect grinding machines daily to make sure the side and tongue guards are properly aligned so that the wheel does not scrape them. The tongue guard should be less than  $\frac{1}{4}$  inch from the wheel. Make sure that the glass shield is clean, unscored and in place; that the grinder frame is mounted securely and doesn't vibrate during operation; and that the speed is correct for the wheel being used.


The tool rest should be securely clamped and positioned within  $\frac{1}{8}$  inch of the wheel, with its height on the horizontal center line of the machine's spindle. Never adjust the tool rest while the wheel is running; you could catch a finger between the rest and the wheel, or the rest could bump the wheel and break it. The clamp that holds your work should always be tight.

## When You Work

Follow these safe work practices and make them part of your routine:

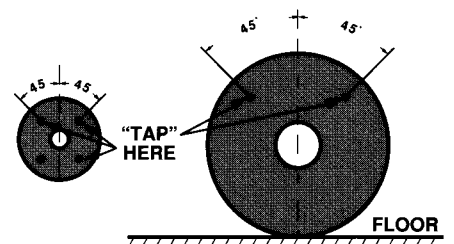
- Always wear a face shield and goggles or safety glasses to protect your eyes from flying particles. (This is very important when using wire brush wheels, because wires tend to break off.)
- Never wear gloves when using polishing and buffing wheels. A glove can catch in the machine and drag your hand against the wheel. Use a jug or fixture to hold small items—never your bare hands.
- Learn how to hold materials correctly (see sidebar).
- Never remove guards or guard fasteners.
- Don't touch any moving parts.
- Operate within the manufacturer's recommended speeds. Never try to alter the machine or its wheel speed.
- Have ruttled, uneven or rough wheels dressed immediately to smooth out wheel surfaces.
- When using a wet grindstone, make sure that the floor is rough and that your shoes are slip-resistant to prevent slips and falls.

## Safe and Trouble-Free

Safe grinder operation requires daily inspections, good work habits and a strong dose of safety sense. Use all three to make your job safe and trouble-free. 

## Prevent Vibration-Related Injury

Workers who operate grinders—and other vibrating tools—may be susceptible to a unique hand injury called Vibration White Finger Syndrome (VWFS). VWFS is caused by vibration-induced damage to blood vessels in the hands, which impairs blood flow and causes symptoms ranging from tingling and numbness of the fingers to spasms in which the fingers, or parts of the fingers, turn white. Eventually, constricted blood flow may lead to pain, loss of sensitivity, and in untreated cases, gangrene. You can reduce your chance of developing VWFS by holding grinding tools with a relaxed grip. Certain types of gloves may also help by reducing the amount of vibration transferred to your hands. VWFS is reversible if detected and treated early, so if you notice symptoms, tell your supervisor as soon as possible.



**A cracked or defective wheel will break if it is used. Always test a wheel before mounting it.**