

SAFETY MEETING TOPIC: All Grinders (including attachments)

OSHA Standard: 1910.212 Machine Guarding

These are powerful, useful tools, but they are also potentially dangerous, because users take them for granted. Serious injury and even death can result from improper handling, installation or use of abrasive wheels. Cracked or defective grinding wheels can "explode" when in use.

Secure both pedestal and bench style grinders securely to the floor or work bench to prevent movement during usage. Store grinding wheels carefully on racks in dry places, and visually inspect them for warping, chips, cracks or other damage before installation. Discard used wheels once they are approximately 2/3 worn.

Proper guarding is one of the most important safety requirements. Missing or improperly adjusted guards are common and frequent safety violations. Check the following before using your grinder:

- ◆ The wheel guard enclosure should cover most of the wheel, the spindle, and the wheel mounting hardware. Some of the wheel must be exposed to allow grinding access, but the maximum access space between the horizontal work rest and the top of the wheel guard opening should be no more than 65 degrees of the wheel.
- ◆ The horizontal work rest should be adjusted to within 1/8-inch of the wheel. This reduces the risk of wheel breakage caused by an item being jammed between the work rest and the wheel.
- ◆ The tongue guard is an adjustable safety plate that is attached at the top of the wheel guard enclosure and can be moved closer to the wheel as its diameter decreases from wear. The distance between the tongue guard and the wheel must not exceed 1/4-inch in order to minimize exposure to flying fragments in the event of wheel disintegration.
- ◆ A transparent hinge-mounted face guard should be attached over the exposed wheel surface area to provide additional protection from particles thrown off the rapidly spinning disk.
- ◆ Personal protective equipment includes safety glasses and a face shield--your face as well as your eyes need protection. This applies to all grinders, including die grinders, and any grinders using attachments such as a cutting wheel. Do not wear loose fitting clothing that could become caught in the wheel.

Do not stand directly in front of the grinder during start up, in case the wheel disintegrates as it reaches full speed. Allow the grinder to reach operating speed and then bring the item to be honed slowly and smoothly into contact with the wheel. Gradual application gives the wheel an opportunity to warm up and lessens the chance of breakage due to thermal stress.

Most grinding wheels are designed for face use only. The side of the wheel should not be used for grinding unless it is designed for that purpose.

Wheel disintegration can cause very serious injury due to the high speed of flying particles. Be sure your shop grinder is equipped with the proper safety features.

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