

# MAFES Dawg Tracks



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## Safety Tips: Grinding



Grinding wheels are very necessary in most all areas of work. They can also be a frequent source of injury. The most common types of injuries are flying particles, an injury caused by part of the grinding wheel breaking, or getting a finger or hand in the wheel. Each of these injuries can be saved by proper care of the wheel and safe work practices:

### **EYE PROTECTION -**

- All employees should be required to wear safety glasses with impact-resistant lenses and side shields while working on grinding operations - even so with the eye shields on the grinder.
- Shatter-proof safety glass eye shields should be installed over the point of operation on all stationary grinders used for tool grinding. The eye shields should be mounted high enough over the wheel to allow the hands to work under the shield. The size of the shield should be large enough to protect the operator from flying particles. The glass should be replaced when it becomes pitted and obstructs the view of the operator.

### **SAFE PRACTICES -**

- When a new grinding wheel has been installed it should be run for at least one minute to be sure that it is balanced and will not break. The operator should stand to the side for safety in case the wheel does malfunction.
- Excessive vibration usually indicates that the wheel is out of round. Do not use this wheel or any wheel that is not in good balance.
- Never force the wheel by exerting excessive pressure on it. The type of abrasive on the wheel determines the cutting power.
- Always grind away from other workers. It is best to grind towards a wall.
- Never grind on the edge of a straight wheel. The straight wheel is made to grind or cut on the surface edge only.
- Never jam a part or tool against the wheel. You should start with a little pressure and gradually "feed" it, using even pressure.
- The tool rest should always be set so that the edge is 1/8" from the wheel with a tolerance of +1/8,-0. (for portable grinders).
- With electrical portable grinders, the third wire should be affixed as a ground wire. This grounds the case of the motor and prevents shock to the operator, in case there is a "short" in the unit.

- When you are preparing to start a portable grinder, hold it under a bench or inside a casting, in case a piece of the wheel breaks and becomes a projectile.
- When working with a portable grinder, be sure to keep the cords in a safe location to avoid positioning them for a potential trip hazard.
- Obviously, as with any electrical hand tool, the grinder should be handled with extra care. If there is a stand provided for the grinder- or if not - the grinder should be allowed to wind completely down before setting it down.
- A portable grinder should always rest on its guard when not in use if there is no stand provided for it. Resting or laying the grinder down on the wheel could cause damage to the wheel. If you should accidentally drop a grinder, you should place it under a table or inside a casing to start it to be sure that the grinding wheel isn't broken.
- It is a mistaken myth that bumping a grinder against the work sharpens it. It can actually cause the wheel to explode.

### **CAUSES OF FRACTURE -**

- Cracked, chipped wheel, or out of balance wheel.
- Clearance between wheel and tool rest exceeds the 1/8" standard, which allows an object to jam against wheel. It also presents a potential to pull a finger into the wheel.
- Improperly mounted wheel without a blotter or a collar.
- Excessive RPM for the type and diameter of the wheel.

### **TIPS FOR PREVENTING SERIOUS INJURIES -**

- Properly adjust and maintain guards  
~Tool rests adjusted to 1/8 in. (+1/8,-0 tolerance)  
~Tongue guard adjusted to 1.4"  
~Perimeter and spindle guards in place
- Follow manufacturer's recommendations for proper speed and mounting.
- Never use damaged wheels.
- Stand to one side when starting up all grinders for 1 minute
- Always wear eye protection.
- Use safety shields.
- Never jam work against the wheel.

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