

# TOOL BOX TALKS

## Hand and Bench Grinder Safety

One of the most common metalworking tools is the grinder. Grinders are used in almost all garages, shops and jobsites, and can be purchased by anyone, almost anywhere. Grinders produce wheel speeds of 9,000 to 14,000 revolutions per minute (RPM), which expose the operator to serious hazards. Damaged or old grinding wheels can explode at these high speeds, producing flying fragments. They also produce excessive noise and flying particles.

### WORKSAFE TIPS

#### BENCH GRINDER - PPE REQUIRED

- Wear hearing protection produces loud noise
- Wear eye protection for high-velocity particles
- Wear a face shield - flying particles
- Wear an apron - protect abdomen - flying objects

Respiratory protection-grinding produces dust  
**GRINDERS CAN CAUSE SEVERE LACERATION!**

- Train operators before they use a grinder
- Read the owners manual
- Verify grinding wheel RPM is matched or rated higher than the RPM of the grinder motor
- Make sure all guards are in place when operating
- Make sure shaft guards are in place
- Make sure outer wheel guards are in place
- Remove damaged grinders – imminent danger
- Adjust top tongue guard to within ¼ inch of the wheel surface
- Adjust tool rest to 1/8 inch from wheel surface – prevent objects from being pulled in
- As the wheel wears down, adjust top tongue guard & work rest
- Bolt or secure grinder to a work surface
- Stop grinder if excessive vibration is detected
- Install new grinding wheels per grinder and wheel manufacturer instructions
- Never “make” a wheel “fit” or alter the arbor
- “Ring Test” grinder wheels before installing
- Avoid kickback – use minimum pressure
- Avoid kickback – never “force”
- Remove cord from outlet when changing discs

#### HAND-HELD GRINDER - PPE REQUIRED

- Wear hearing protection produces loud noise
- Wear eye protection for high-velocity particles
- Wear a face shield - flying particles
- Wear an apron, protect abdomen, flying objects
- Respiratory protection-grinding produces dust
- Grinders can cause severe laceration. Train operators before they use a grinder  
Read the owner’s manual
- Angle grinders can kick back
- Grinder wheels can explode due to high RPM
- Never operate a hand-grinder without the guard
- Inspect hand grinders before using
- Repair damaged or cut electrical cords
- Never alter or change a hand grinder
- Match grinding wheel RPM to the grinder RPM
- Never use wheels with an RPM rating BELOW the grinder RPM rating
- VERIFY that the grinding wheel is the correct wheel for the grinder
- Never clamp a hand-grinder in a vise
- Grinder wheel must fit the arbor
- Never use an angle grinder to “cut”
- Always use two hands to operate the grinder
- Use side handle if grinder is provided with one
- Avoid kickback – use minimum pressure never “force” a grinder to work
- Put grinder down ONLY after it has stopped rotating
- Remove cord from outlet when changing discs
- Never use an angle grinder between the legs or near children or bystanders in the immediate area.

