

# Safety Alert

Davis Constructors & Engineers  
Mass Excavation

Toolbox Topic:  
Portable Grinder Operating Procedures

July 17th, 2017  
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No Accidents!

## Hours an Accident

July 17th 2017

Job	2017 Hours	Accidents/Incidents			
		W Comp Reportabl	OSHA Report	Lost-Time	Hours an Accident
Valdez Housing Off / Warehouse	3668	0	0	0	No Accidents!
Bethel	13216	0	0	0	No Accidents!
Turnagain Elem	11503	0	0	0	No Accidents!
Mass X Operations	44777	0	0	0	No Accidents!
Museum	28064	1	0	0	28,064
Providence	12994	1	1	0	12,994
Small Jobs	842	0	0	0	No Accidents!
HDJV	190448	0	0	0	No Accidents!
UAF CPHR Power	68531	0	0	0	No Accidents!
UAF Engineering Facility	27210	0	0	0	No Accidents!
<b>Total</b>	<b>401,253</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>200,627</b>

# Come join us for lunch!

## Davis / Mass

## Safety Appreciation Lunch

When: Thursday, July 20th, 2017  
Time: 11:30am – 1:00pm  
Where: The Megan Room / Courtyard

RSVP  
to  
Darla or Jacque

Success is No Accident!

# Portable Grinder Operating Procedures

## Using Portable Grinders Safely

Like all power tools, portable grinders can present safety concerns, including flying particles and electrical hazards. This procedure outlines requirements in the Occupational Safety & Health Administration's (OSHA) standards regarding abrasive wheels and tools (29 CFR 1926.303).

### 1. Preparation

- Remove flammable materials from the work area.
- Ensure work area is clean, free from slip, trip, and fall hazards and well maintained.
- Keep the power cord away from the grinding wheel and the material being ground.
- Have personnel not involved in the immediate work step away a safe distance from the grinding area.
- Secure work with clamps or a vice to free both hands to operate the tool.

### 2. Inspection

- Unplug power cord from power supply before inspecting, adjusting, removing or replacing parts.
- **Ensure wheel guard is in place\*. see OSHA Guard Removal Exception below**
- Check abrasive wheel for cracks or flaws – replace if necessary.
- Verify the maximum RPM rating of the grinder does not exceed the RPM rating on each abrasive wheel.
- When using a grinder that can switch between left-handed and right-handed operation, remember to move the blade guard when you move the handle.
- Tag out grinder if a deficiency is found – do not use grinder until the deficiency has been corrected.

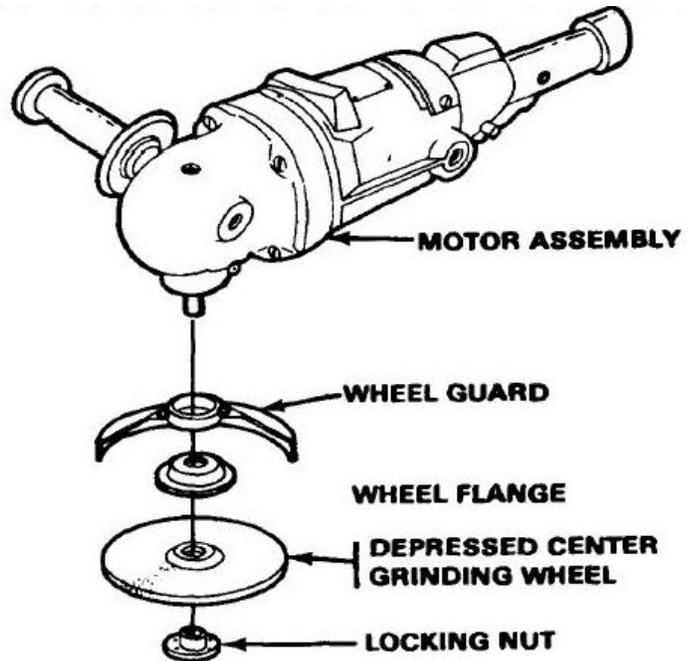
**\*OSHA Guard Removal Exception** only allows the guard to be removed for “internal grinding. The term “internal grinding” is defined as “the precision grinding of the inside surface of the hole in a work piece.” This does not include snagging or off hand grinding operations such as grinding the welds inside a box or frame or the concave areas of auto bodies.

### 3. Ring Test

- Before installing an abrasive wheel, visually inspect it for cracks or flaws and perform a “Ring Test”:
  - Place your finger through the mounting hole of the new abrasive wheel.
  - Lightly tap its face with a hammer or metallic object.
  - A “ring” will sound from a good wheel.
  - A “dull thud” will sound from a wheel with an internal fracture.

### 4. Replacing the Wheel

- The abrasive wheel should not be forced onto a grinder nor should the mounting hole size be changed. To control cracking of the abrasive wheel, it must fit freely on the spindle and be tightened to hold the wheel in place without distorting the flange.
- The mounting nut should not be tightened excessively.
- Run a newly mounted wheel at operating speed for 1 minute before grinding.
- Always follow the manufacturer's instructions.



## 5. Don required Personal Protective Equipment (PPE)

- Wear appropriate PPE - safety glasses or goggles, face protection to protect against flying particles, hearing protection to guard against hearing loss.
- Gloves – Caution: Wear snug fitting gloves to avoid snagging on abrasive wheel or wire brush.
- Apron, metatarsal safety boots, and respiratory protection may also be required depending on the work being performed.
- Do not wear jewelry or other items that could become entangled in moving parts.
- Avoid wearing loose clothing or secure loose clothing.
- Tuck or secure long hair.

## 6. Switch Grinder “ON”

- Stand to one side and switch on grinder.
- Ensure the grinder operates smoothly and does not vibrate. **If you notice any unusual vibrations or noises, STOP. Re-inspect the grinder and fix the problem immediately.**

## 7. Grinding

- Use both hands to maintain hold of the grinder.
- Allow grinder to reach full rpm before grinding.
- Position yourself to avoid overbalancing.
- When grinding avoid placing excessive pressure on abrasive wheels.
- Do not grind objects on sides of grinding wheels.
- Materials may become hot when grinding – use gloves when necessary.
- Clean and service grinders according to manufacturers' recommendations. Record all maintenance.
- Ensure the floor around the work area is clean.
- Do not use wheels that are cracked or those that excessively vibrate.
- Do not operate grinder on wet floors.

## 8. Switch Grinder “OFF”

- Switch off grinder when done.
- Wait until the wheel has stopped turning before placing the grinder on the working surface.
- Unplug the power cord from the power supply.
- Clean area and dispose of grinder particles.

## 9. Other Precautions:

- Do not use liquid coolants with grinders as this may cause the metal to shatter.
- Do not clamp portable grinders in a vise for grinding hand-held work.
- Do not keep any materials close to the grinding wheel when it is not in use.
- Do not carry a grinder by the power cord.
- Do not pull on the power cord to disconnect it from the power supply.
- Keep cords away from heat, oil and sharp objects or edges.

## 10. Maintenance & Storage

- Store portable grinders on racks or hooks, not on the floor or ground.
- Clean and service grinders according to the manufacturer's recommendations, including lubricating and changing accessories.
- Keep a written maintenance record on portable grinders.