



March, 2017

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Safety Article:

Anatomy of a Ladder Fall

P. 12

Remember if you have any safety suggestions, questions or concerns please let us know. In addition, if you have a safety topic that you would like covered in a Safety Page for training purposes let us know and we will develop one. Topics to our inventory of monthly Safety Pages are continually being added.

On page 8 is a press release from OR-OSHA on a willful violation for Fall Protection. If you have questions on Fall Protection or are not sure about your own Fall Protection System please feel free to contact David Davidson at anytime. The citation for this violation was \$70,000!



The OHBA/SAIF Safety Pages are an ongoing series of pages, designed to provide a selection of safety topics each month to OHBA members. Please use these pages to add to (or start) either a Safety Committee file or manual for your company. Some of the Safety Pages will be on general topics and others will be for Owner/Supervisors. The Owner/Supervisor Safety Pages will be on topics based more on compliance or suggested management safety practices.

IMPORTANT NOTICE OF RESPONSIBILITY

The Oregon Home Builders Association Safety Committee's purpose is to provide safety guidelines, information and resources to help our members work more safely and reduce jobsite accidents. Full and active monthly participation in safety meetings using the OHBA Safety Committee's agendas, topics and checklists will only meet safety committee requirements. It remains your responsibility to comply with all aspects of safety rules and regulations.

David Davidson, Oregon Home Builders Association, Safety Consultant

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10 for 10 Keep All Your Digits In Count



- ✓ KEEP HANDS AND FINGERS <u>CLEAR OF POINT OF</u>
 <u>OPERATIONS</u> SUCH AS CUTTING, BORING, PUNCHING,
 BENDING, FORMING, AND SHEARING ACTIONS.
- ✓ KEEP HANDS AND FINGERS <u>CLEAR OF NIP AND PINCH</u>
 POINTS.
- ✓ KEEP <u>ALL MACHINE GUARDING IN PLACE</u> AND IN GOOD WORKING ORDER.
- ✓ DO NOT BYPASS SAFETY DEVICES SUCH AS TWO-HANDED CONTROLS, LIGHT CURTAINS, PRESSURE SENSING DEVICES, INTERLOCKED SWITCHES, ETC.
- ✓ PREVENT MACHINE SURPRISES- TAKE THE TIME AND <u>USE</u>
 <u>LOCKOUT/TAG OUT PROCEDURES</u>.
- ✓ AVOID WEARING GLOVES, LOOSE FITTING CLOTHING, RINGS, AND OTHER JEWELRY THAT COULD BE CAUGHT IN MACHINERY.



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for their own operations, safety practices and procedures and should consult with legal counsel as they deem appropriate

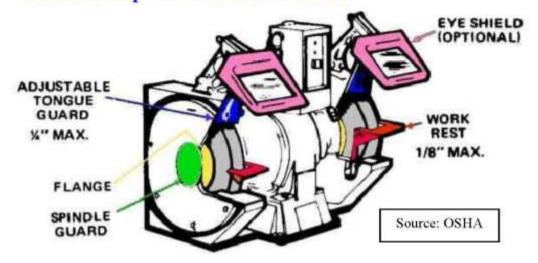
2011 Oregon Home Builders Association - Reviewed 2/2015 - 003 Hand Safety

	Employer.		Project:	
	Date:	Time:	Shift:	
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Bench & Pedestal Grinder Safety

OHBA Safety Pages

General Inspection & Maintenance



- ✓ Side guards cover the spindle, nut and flange, plus 75% of the wheel diameter.
- ✓ Work rest in place and kept adjusted to within ½ of the wheel.
- ✓ Tongue guard in place and kept to within ¼" of the wheel.
- Verify the maximum RPM rating of each abrasive wheel is compatible with the RPM Rating of the grinder motor.
- ✓ Before new abrasive wheels are mounted be sure to visually inspect and ring test.
- As the wheel wears down, readjust the tool rest and tongue guards. When you can no longer adjust them, time to replace the wheel.
- Bench & Pedestal grinders need to be permanently mounted to prevent them from moving while in operation.
- ✓ Goggles or face shields should always be worn when grinding.
- Maintain the work area so that it is free of clutter and the accumulation of debris.



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2012 Oregon Home Builders Association - Reviewed 11/2015 - 025 Bench Grinder Safety

Employer:		Project:		
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Cement Safety Protect Your Skin & Eyes!

OHBA Safety Pages

Cement (wet or dry) is caustic to your skin and eyes. It can cause burns, rashes and irritations.

Protect your skin and eyes by following these reminders:

- Protect your hands with well-fitting gloves when mixing, pouring or finishing cement. Avoid allowing cement to enter inside your glove.
- Refer to the cement Safety
 Data Sheet (SDS) when selecting the proper glove.
- Avoid allowing the cement to saturate your gloves and clothing. Wash



contaminated gloves and clothing and allow them to dry before using.

- Wear approved eye protection (ANSI Z87.1) at all times while work with or near cement.
- Wash your hands and other skin areas that have come into contact with the cement as soon as possible.



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2013 Oregon Home Builders Association - Reviewed 4/2016 - 039 Cement Safety

Employer:		Froject	
Date:	Time:	Shi	ft:
Number in crew:		Number attending: _	2
Safety or Health issues discussed equipment, the work environme			ons and hazards involving tools, Health recommendations:
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Record of those attending:	6:		
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Hand-Held Grinder Safety

OHBA Safety Pages

Hand-held grinders can cause serious injury if used incorrectly. By following the safe work practices listed below, you can help reduce the risk of injuring yourself or others while using these powerful tools.

Safe work practices

- ✓ Always handle and use equipment with care.
- Follow the manufacturer's recommendations for use, maintenance, and personal safety (including guards).
- Keep combustible materials away from the grinding area. Sparks may cause a fire.
- Never remove manufacturers' guards from grinders while operating.
- Ensure grinding wheels/discs are in good condition. Inspect them for chips, cracks, and loose retainers prior to use.
- Grinding generates dust. Protect yourself with proper respiratory protection and ventilation.
- Always check the machine's rated speed against the recommended maximum safe operating speed marked on the wheel or disc.

Personal protective equipment

- Always wear hearing, eye, and face protection that is appropriate for the grinding work you're doing.
- Respiratory protection may be required if your grinding work puts you at risk of inhaling harmful substances (e.g., dust, metal fumes, or chemicals).
- Secure loose clothing, and remove hoodie drawstrings, ties, rings, watches, and other jewelry.
- If you're not sure what type of personal protective equipment you need, ask your supervisor or employer.



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2015 Oregon Home Builders Association - Reviewed 8/2016 - 052 Hand-Held Grinder Safety

Date:1	ime: S	Shift:
Number in crew:	Number attending	5
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Arc Flash

OHBA Safety Pages

Every day in the United States 5 to 10 are flash explosions occur in electrical equipment. Anyone exposed to such explosions is at significant risk for death or serious injury.

The US Navy Safety Center describes an Arc Flash as: "Simply put, an arc flash is a phenomenon where a flashover of electric current leaves its intended path and travels through the air from one conductor to another, or to ground. The results are often violent and when a human is in close proximity to the arc flash, serious injury and even death can occur."

For example, a tool that is inserted or accidentally dropped into an open breaker panel or service area, or other objects that are left behind, may compromise the distance between energized components.

Incidents may occur when a worker fails to ensure that equipment has been properly de-energized (Locked & Tagged Out) prior to servicing or inspection. Arc flash incidents typically occur in applications exceeding 120 volts.

Serious damage to equipment is a likely outcome in an arc flash incident. Sometimes affected equipment is so badly damaged that replacement is the only option. And, of course, the human body is equally capable of being destroyed or irreversibly damaged, with no replacement option.

The following arc flash safety reminders from Square D Products, a well-known producer of electrical equipment, can help a company better protect their employees:

- Establish a written electrical safety program with clearly defined responsibilities covering all of your
 company's electrical safety policies, including lockout/tagout, internal safety policies and responsibilities for
 electrical safety.
- Have an engineering firm conduct an electrical system analysis to determine the degree of arc flash hazard
 present at your workplace. The analysis will define the type of personal protective equipment (PPE) that
 your workers must use while performing any work when energized parts are exposed.
- Conduct are flash safety training for all employees. It should be specific to the hazards of are flash, are blast, shock and electrocution. Ensure adequate personal protective clothing and equipment is on hand.
- Ensure the proper tools are on hand for safe electrical work. This includes insulated voltage-rated hand tools
 and insulated voltage sensing devices that are properly rated for the voltage application of the equipment to
 be tested.
- Any electrical equipment that is likely to require examination, adjustment, servicing, or maintenance while
 energized must have are flash warning labels posted in plain view. Such equipment includes switchboards,
 panel boards, industrial control panels, meter socket enclosures and motor control centers.
- Maintain all electrical distribution system components. Modern, properly adjusted over-current protective
 devices that are properly maintained can detect an arcing condition almost instantly and clear the fault
 quickly. This capability significantly reduces the amount of incident energy that is released.
- Finally, maintain and update all electrical distribution documentation. This is especially critical when expanding or revising facilities.



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2017 Oregon Home Builders Association - Reviewed 2/2017 - 059 Arc Flash

Employer:	Project:	
Date:1	ime:	Shift:
Number in crew:	Number attend	ing:
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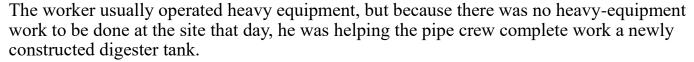
Anatomy of a Ladder Fall

Most ladder falls happen because workers select the wrong type of ladder for their job or they improperly set up the ladder and the ladder shifts or slips unexpectedly. Why does that happen? Here's a good example:

What happened?

A worker fell eight feet and fractured two bones in his leg when his extension ladder slipped out from under him.

How did it happen?



His job was to remove plugs from the bolt holes on the discharge pipes inside the tank. He borrowed a 32-foot extension ladder from a co-worker who didn't need it at the time, but he was trying to complete the job before the co-worker came back and needed to use it again.

Because the piping was 12 feet above the tank floor and the base section of the ladder was 16 feet long, he set up the ladder so that top of the base section was close to his work. He knew that the setup was not ideal – the bottom of the ladder was too far from the tank wall and the concrete floor wasn't level – so he jumped up and down on the second rung from the floor to test it. He set up the ladder the same way when he did the job once before and there were no problems.

The ladder did not move so he climbed up to the eighth rung and started working on removing the plugs. He had been working for about five minutes when the base of the ladder slid out from under him. He tried to ride the ladder down to the floor as it slid down the wall, but his left leg slid between the rungs and the ladder twisted as it hit the floor.

He was working alone in the tank but his co-workers on the other side heard the thud when he hit the floor and they could see him when they looked through the holes in the wall.

His co-workers came to his aid and immediately called 911. The two long bones in his lower left leg – the tibia and fibula – were broken. The supervisor used Styrofoam insulation as a splint to stabilize before the emergency responders arrived.

Findings

- Another worker, who had been doing similar work in the tank the day before, installed a wood block in the concrete floor to keep the ladder from slipping but the victim needed to work in another area in the tank.
- The victim said he decided not to secure the ladder because he was in a hurry and it would take only 10 minutes to do the work.
- The employer expected employees to tie off their ladders at the top or block the bottoms to prevent the ladders from slipping.

The employer had other sizes of extension ladders for employees to use at the site, including 12-foot, 16-foot, and 20-foot lengths.

What could the employer and the victim have done differently to prevent this incident?

