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Approver: Joe Berry		Revision: 3
HAND AND PORTABLE POWER TOOLS		

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SUBPART A - PURPOSE

It is the policy of our company to prevent employee exposure to the potential hazards of hand and portable power tools. This written plan establishes guidelines to be followed whenever employees are involved in operations that may expose them to potential hazards of hand and portable power tools. The purpose of this plan is to:

1. Create awareness among our workforce of the potential hazards of hand and portable power tools.
2. Provide a consistent format for training employees on the proper procedures to be used when working with hand and portable power tools
3. Minimize the possibility of injury or harm to the employees who use hand and portable power tools.
4. Demonstrate our company's compliance with all requirements regarding hand and portable power tools.
5. Prevent the use of all 'fabricated in-house' tools, cables, hoses, etc. and fabrication aids design and use.



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SUBPART B - RESPONSIBILITY

Management

- Provide correct tools for assigned tasks.
- Ensure tools are maintained and stored safely.
- Provide employee training.
- Provide for equipment repair.

Employees

- Follow proper tool safety guidelines.
- Report tool deficiencies and malfunctions.
- Properly store tools when work is completed.

SUBPART C - COMPLIANCE INFORMATION

Some basic safety rules that we use to help prevent injury when using hand and power tools at our locations / facilities include the following:

1. Perform regular maintenance on tools to keep them in good condition.
2. Use the right tool for the job.
3. Examine each tool for damage before each use.
4. Operate the tool according to the manufacturer's instructions.
5. Provide and use the right personal protective equipment (PPE) when working with the tool.
6. Never carry a tool by the cord or hose.
7. Never yank the cord or the hose to disconnect it from a receptacle.
8. Keep cords and hoses away from heat, oil, and sharp edges.
9. Disconnect tools when not in use, before servicing, and when changing accessories, such as blades, bits, and cutters.
10. Keep all observers at a safe distance from the power tool work area.
11. Secure work with clamps or a vise, freeing both hands to operate the tool.
12. Avoid accidental starting of tools by not holding fingers on the switch button while carrying a plugged-in tool.
13. Maintain tools with care; for best performance, keep them sharp and clean



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14. Be sure to follow the instructions in the user's manual for lubricating and changing instructions.
15. When working with power tools, be sure to keep good footing and maintain good balance.
16. Wear proper apparel for the task. Loose clothing, ties, or jewelry can become caught in moving parts.
17. Remove all damaged portable electric tools from use, and tag them "Do Not Use".
18. Safeguard all moving parts of power tools, such as belts, gears, sprockets, and chains so that workers can not come into contact with them.
19. Ensure that employees are aware of several dangers associated with the use of power tools, such as electric shock and burns.
20. Never use a power tool in wet or damp locations.
21. Do not allow cords to present a tripping hazard.
22. Keep work areas well lit.
23. Store tools in a dry place when not in use.

SUBPART D - SIGNS AND MARKINGS

When and where necessary, Berry Bros. uses signs and markings to identify hazardous conditions relating to hand and portable power tool operations throughout the facility and worksites.

Berry Bros. uses the signs and tags as a means to prevent accidental injury or illness to employees who are exposed to hazardous or potentially hazardous conditions, equipment, or operations as they relate to hand and portable power tool operations.

SUBPART E - SAFETY SWITCHES

The following hand-held powered tools are to be equipped with a momentary contact "on-off" control switch: drills, tapers, fastener drivers, horizontal, vertical and angle grinders with wheels larger than 2 inches in diameter, disc and belt sanders, reciprocating saws, saber saws, and other similar tools. These tools also may be equipped with a lock-on control provided that a single motion of the same finger or fingers that turn it on can accomplish turnoff.

The following hand-held powered tools may be equipped with only a positive "on/off" control switch: platen sanders, disc sanders with discs 2 inches or less in



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diameter; grinders with wheels 2 inches or less in diameter; routers, planers, laminate trimmers, nibblers, shears, scroll saws and jigsaws with blade shanks ¼-inch wide or less.

Other hand-held powered tools such as circular saws having a blade diameter greater than 2 inches, chain saws, and percussion tools without positive accessory holding means must be equipped with a constant pressure switch that will shut off the power when the pressure is released.

SUBPART F - ELECTRICAL SAFETY

Among the chief hazards of electric-powered tools are burns and slight shocks, which can lead to injuries or even heart failure. Under certain conditions, even a small amount of current can result in severe injury and eventual death. A shock also can cause the user to fall off a ladder or other elevated work surface.

To protect the user from shock, tools must either have a three-wire cord with ground, or be double insulated, or be powered by a low-voltage isolation transformer. Three-wire cords contain two current-carrying conductors and a grounding conductor. One end of the grounding conductor connects to the tool's metal housing. The other end is grounded through a prong on the plug.

Anytime an adapter is used to accommodate a two-hole receptacle, the adapter wire must be attached to a known ground. The third prong should never be removed from the plug.

Double insulation is more convenient. The user and the tools are protected in two ways: by normal insulation on the wires inside, and by a housing that cannot conduct electricity to the operator in the event of a malfunction.

SUBPART G - GROUNDING

Use portable electric powered tools that meet the electrical requirements of subpart S of 29 CFR 1910.



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SUBPART H - PNEUMATIC POWER TOOLS AND HOSE

Install a tool retainer on each piece of utilization equipment that, without such a retainer, may eject the tool.

Use hose and hose connections for conducting compressed air to utilization equipment that is designed for the pressure and service to which they are subjected.

SUBPART I - PORTABLE ABRASIVE WHEELS- GENERAL REQUIREMENTS

Use abrasive wheels ONLY on a machine provided with safety guards as defined in this action.

Exceptions: This section (General Requirements) does not apply to the following classes of wheels and conditions:

- Wheels used for internal work while within the work being ground.
- Mounted wheels used in portable operations 2 inches and smaller in diameter; (see definition 1910.241(b) (1)).
- Types 16, 17, 18, 18R, and 19 cones, and plugs, and threaded hole pot balls where the work offers protection.

Have a safety guard cover the spindle end, nut and flange projections.

Mount the safety guard to maintain proper alignment with the wheel, and require the strength of the fastenings to exceed the strength of the guard.

Exception: Safety guards on all operations where the work provides a suitable measure of protection to the operator may be so constructed that the spindle end, nut and outer flange are exposed.

Where the nature of the work is such as to entirely cover the side of the wheel, the side covers of the guard may be omitted.



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Exception: The spindle end, nut, and outer flange may be exposed on portable machines designed for, and used with, type 6, 11, 27, and 28 abrasive wheels, cutting off wheels, and tuck pointing wheels.

SUBPART J - CUP WHEELS

Protect cup wheels (Types 6 and 11) by:

- Safety guards as specified in General Requirements above.
- Special revolving cup guards which mount behind the wheel and turn with it.

They must be made of steel or other material with adequate strength and must enclose the wheel sides upward from the back for one third of the wheel thickness. The mounting features must conform to all regulations. (See paragraph (c) (5) of 1910.243.) It is necessary to maintain clearance between the wheel side and the guard.

- The clearance must not exceed one-sixteenth inch.
- Some other form of guard that will insure as good protection as that which would be provided by the guards specified in General Requirements above.

SUBPART K - VERTICAL PORTABLE GRINDERS

- Use safety guards on machines known as right angle head or vertical portable grinders that have a maximum exposure angle of 180 deg.
- Locate the guard to be between the operator and the wheel during use.
- Adjust the guard so that pieces of an accidentally broken wheel will be deflected away from the operator. (See Figure P-4 in 1910.243)

SUBPART L - OTHER PORTABLE GRINDERS

Use the maximum angular exposure of the grinding wheel periphery and sides for safety guards on other portable grinding machines that does not exceed 180 deg. and keep the top half of the wheel enclosed at all times. (See Figures P-5 and P-6 of 1910.243)



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SUBPART M - MOUNTING AND INSPECTION OF ABRASIVE WHEELS

Closely inspect and sound all wheels (ring test, see Subpart O, 1910.215(d) (1)) to make sure they have not been damaged in transit, storage, or otherwise, immediately before mounting. Check the spindle speed of the machine before mounting of the wheel to be certain that it does not exceed the maximum operating speed marked on the wheel.

Require that grinding wheels fit freely on the spindle and remain free under all grinding conditions.

Maintain a controlled clearance between the wheel hole and the machine spindle (or wheel sleeves or adaptors) to avoid excessive pressure from mounting and spindle expansion.

To accomplish this, make the machine spindle to nominal (standard) size plus zero minus .002 inch, and make the wheel hole suitably oversize to assure safety clearance under the conditions of operating heat and pressure.

Keep all contact surfaces of wheels, blotters, and flange's flat and free of foreign matter.

IF a bushing is used in the wheel hole, THEN it must not exceed the width of the wheel and must not contact the flanges. See Subpart O, 1910.215(c) for requirements for the use of flanges and blotters.

SUBPART N - HYDRAULIC POWER TOOLS

The fluid used in hydraulic power tools must be an approved fire-resistant fluid and must retain its operating characteristics at the most extreme temperatures to which it will be exposed. The manufacturer's recommended safe operating pressure for hoses, valves, pipes, filters, and other fittings must not be exceeded.



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SUBPART O - GENERAL SAFETY RULES

Tools

1. Every tool was designed to do a certain job; use a tool only for its intended purpose. **DO NOT ABUSE TOOLS!**
2. Site Management prohibits the use of all fabricated in-house tools, cables, hoses, etc. and fabrication aids design and use.
3. The safe Working Load must be visible on fabricated supports.
4. Tools and equipment must be in good condition and kept sharp, clean, oiled and properly dressed.
5. Do not alter tools or guards.
6. Worn tools are dangerous. The “teeth” in a pipe wrench can slip if worn smooth; an adjustable wrench will slip if the jaws are sprung; and hammer heads can fly off loose handles.
7. Tools subject to impact (brass hammers, chisels, star drills) tend to “mushroom.” If tools are found to be mushroomed, they are to be taken out of service until either they are repaired or replaced. Keep them dressed to avoid flying particles. Use tool holders.
8. Don’t overload tools beyond their rated capacities.
9. Don’t use tools as pry bars.
10. Torque is the circular or rotating motion in tools such as drills, impact wrenches, and saws resulting in a strong twisting force. The user of such tools must be conscious of this potential hazard when using these tools.
11. Establish good footing, use two hands, and be ready to release the power switch or trigger when using power tools. The power switch should be failsafe preventing a locked “on” situation.
12. Flying objects are a potential hazard when operating almost any power tool. Proper eye protection shall be worn at all times.
13. Contact with moving parts can be hazardous. Keep moving parts directed away from your body. Never touch a power part (e.g., drills, chucks, blades, and bits) unless the power source is disconnected.
14. Be aware of your work environment and the need to warn other personnel of any potential hazards.
15. Tool condition should be monitored. Examine each power tool before using it. Look for damaged parts, loose fittings, and frayed or cut electric cords. Tag and return defective tools for repairs.
16. Air must be shut off or the electric cord unplugged before making tool adjustments. Air must be “bled down” before disconnecting.



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17. Proper guards or shields must be installed on all power tools before use. Do not use improper tools or tools without guards in place. No "homemade" handles or extensions are permitted!
18. Certain power machines are to be run only by properly trained and/or authorized personnel. Guidelines, basic operational rules should be followed at all times.
19. Shut down equipment and take necessary action to prevent accidental starting when making repairs to equipment. This may require a completed lock and tag out procedure or simply unplugging the power cord.
20. Replace all guards and remove cranks, keys, or wrenches before starting equipment.
21. Be sure that replacement parts meet specifications (e.g., grinder wheels and metal drill bits must be approved for maximum rpm of the machine; wood cutting bits must be appropriate for wood work; blades must have proper arbor shape; etc.).
22. Loose clothing, rings, and other jewelry **MUST NOT** be worn around operating machines. Keep sleeves buttoned or rolled up.
23. Keep fingers away from moving parts. Shut off machines to remove waste. Use a brush to clean up and debar. Be sure the machine is stopped and not coasting!
24. Inspect equipment before starting. Look for loose or damaged parts, adequate lighting, lubrication, and abandoned tools or material that could pose a potential hazard.
25. Use clamps or vises to hold work.
26. Many machines have safety-interlocking devices. Be sure they work, and **NEVER BYPASS AN INTERLOCK DEVICE.**
27. Some machines use both air and electric power. Both must be shut off to make repairs or adjust moving parts. Beware of air left in the system - "bleed down"!
28. Beware of potential fire hazards. Oil, rags, and hot chips are fire hazards. Keep the work environment clean and know where fire extinguishers are located.

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