



TOOLS

Select, Inspect, Guard and Operate Safely

POLICY STANDARD

Employees shall use the correct tool for the task, follow the manufacturer's instructions, keep required guards and safety devices in place, inspect before use and immediately remove defective tools from service. Only trained and authorized employees may operate specialized tools.

PHEIFER BROTHERS CONSTRUCTION CO., INC.

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CORE RULE

Employee-owned tools are covered by this policy. A tool that is damaged, missing a guard, incompatible with its accessory or otherwise unsafe shall be tagged or clearly marked, disconnected when applicable and removed from use until properly repaired or replaced.

Primary Regulatory References

- 29 CFR 1926.300-1926.305 - hand and power tools, abrasive wheels, woodworking tools and jacks
- 29 CFR 1926 Subpart K, including 1926.404 - electrical wiring design and protection
- 29 CFR 1926.95 and 1926.102 - PPE and eye/face protection
- 29 CFR 1926.1153 - respirable crystalline silica
- 29 CFR 1926.52 and 1926.101 - occupational noise and hearing protection
- Applicable manufacturer instructions and company task-specific policies

1. Purpose, Scope, Definitions and Responsibilities

Purpose and Scope

- Prevent cuts, amputations, struck-by injuries, electric shock, burns, injection injuries, fires, dust and noise exposure during heavy-highway, bridge, shop and yard work.
- Applies to company- and employee-owned hand tools, portable power tools, cords, hoses, accessories, jacks and tool-related equipment. More protective manufacturer, project or regulatory requirements govern.

Key Terms

- Authorized employee: trained employee assigned to use a tool requiring specific qualification or authorization.
- Guard: barrier or device protecting the point of operation, rotating parts, nip points, fragments, chips or sparks.
- Powder-actuated tool: a fastening tool using an explosive charge to drive a fastener into concrete, masonry or steel.
- Qualified repair: repair performed by a person with the knowledge, parts and authority required by the manufacturer or company.

Management / Program Administrator

- Provide suitable tools, accessories, PPE, training, GFCI protection, inspections and repair/replacement resources. Maintain required program and training records.

Foreman

- Plan the work, verify employee authorization, tool/accessory suitability, guarding, exposure controls and safe power supply; correct defects and enforce stop-work decisions.

Employees

- Use only tools they understand and are authorized to use; inspect before use; follow instructions; keep guards in place; protect others; report hazards and stop when conditions are unsafe.

Competent / Qualified Persons

- Perform specialized evaluations, inspections or design decisions required by the applicable tool, work activity or related policy. Tool familiarity alone does not create a regulatory designation.

2. Selection, Authorization and Pre-Task Planning

Select the Right Tool

- Match the tool and accessory to the material, task, speed, capacity, environment and manufacturer-approved application. Do not improvise with the wrong wrench, blade, wheel, bit, extension or attachment.
- Use tools listed/labeled for wet, conductive, flammable or other special locations. Choose lower-vibration, lower-noise and dust-controlled equipment when feasible.

Authorization and Training

- Employees shall receive instruction on hazards, controls, inspection, setup, guards, PPE, emergency actions and the manufacturer's operating limits before use.
- Powder-actuated tools require training on the particular tool. Other specialized tools—including chainsaws, high-pressure injection equipment and certain cutting systems—may require documented company or manufacturer training.
- A toolbox talk supplements, but does not replace, required operator, respirator, competent-person or regulatory training.

Pre-Task Planning / JHA

- Identify energy source, material condition, hidden utilities/rebar, silica/lead/asbestos/coating hazards, kickback or binding, sparks/fire, flying fragments, noise, vibration, access, traffic, water and employees/public in the line of fire.
- Establish stable footing and support the work. Plan cord/hose routing, exclusion zones, dust collection/water, fire watch, ventilation and rescue or emergency access.
- Verify the tool's rated speed/capacity is compatible with the accessory and that the work can be performed without defeating a guard or safety feature.

Before Starting

- Read labels and instructions; install the correct accessory and guard; remove adjustment keys; secure loose clothing/hair; inspect the work side and opposite side; warn affected employees.
- Disconnect, unplug, remove battery or isolate pressure before installing/changing an accessory unless the manufacturer expressly requires energized adjustment under a safe procedure.

Stop-Work Triggers

- Wrong or unknown accessory; missing guard; damaged tool/cord/hose; abnormal vibration, sound, heat or smell; unstable work; unexpected utility/material; ineffective dust control; loss of exclusion zone; electrical/wet-location conflict.

3. Inspection and Removal from Service

Pre-Use Inspection

- Inspect the body, handles, switches/triggers, guards, retainers, fasteners, cords/plugs, batteries, hoses/couplings, fluid leaks, labels, accessory and safety devices before each use or shift as appropriate.
- Check for cracks, distortion, corrosion, mushroomed striking surfaces, loose/splintered handles, sprung wrench jaws, damaged insulation, missing ground pin, exposed conductors, binding guards and signs of unauthorized repair.

Operational Check

- Where safe and required, operate briefly in a controlled position to check the switch, brake, guard return, vibration, alignment and unusual noise. Keep others clear.
- Powder-actuated tools require the manufacturer's daily unloaded safety-device test before loading. Abrasive wheels require inspection and ring testing where applicable before mounting.

Defective Tools

- Stop, release the trigger and isolate all energy. Tag or clearly mark DO NOT USE and remove the tool from the work area or otherwise prevent use.
- Report the defect to the foreman. Do not tape a leaking hose, bypass a switch, tie back a guard, install a missing ground pin or make a field repair unless specifically trained, authorized and using approved parts/procedure.

Repair and Return

- Only qualified persons may repair tools. Replacement guards, switches, cords, couplings and accessories shall be compatible and maintain the original protection.
- Inspect and function-test after repair. Return to service only when the defect is corrected and required documentation is complete.

Periodic Inspection

- The program administrator establishes intervals based on manufacturer requirements, severity of service and regulatory rules. Include GFCIs, cords, jacks, grinders, pneumatic systems and other high-risk tools.
- Inspect after a drop, impact, overload, water exposure, jam, wheel/blade failure, electrical event or other occurrence that may affect safety.

4. Hand Tools and Jacks

General Hand Tools

- Keep tools clean, sharp where intended and in safe condition. Carry and store sharp tools with edges protected; do not carry sharp tools in pockets.
- Use the correct size/type. Pull wrenches when practical; do not use cheater bars unless the tool/system is designed for them. Never use pliers as a wrench or a screwdriver as a chisel/pry bar.
- Keep wooden handles tight and free of cracks/splinters. Do not use impact tools with mushroomed heads or wrenches whose sprung jaws can slip.

Striking and Cutting

- Wear required eye/face protection and clear the line of fire. Inspect hammers, chisels, punches, axes and bars; secure the work and use screens/barricades where fragments can strike others.
- Use spark-resistant tools where an ignition hazard has been identified; no tool is completely sparkproof. Control flammables and test/permit the atmosphere when required.

Knives and Blades

- Use a safety knife when feasible. Cut away from the body, keep the free hand out of the path and retract/sheath after use. Replace dull or damaged blades using the approved method.

Jacks

- Use only within the marked rated capacity and on a firm, level base. Center the load, prevent slipping and follow manufacturer lift points and travel limits.
- Inspect before use and at required intervals; remove leaking, cracked, bent or malfunctioning jacks from service. Never work beneath a load supported only by a jack—block or crib immediately after lifting.
- Do not extend jack height with unstable objects. Protect against traffic, settlement and lateral loading.

Storage / Transport

- Use racks, boxes, sheaths and secure containers. Do not throw tools, leave them on elevated edges or carry them while climbing when a hand line/tool bag is needed.

5. Portable Electric Tools and Cords

Grounding and Double Insulation

- Electric tools shall be approved double-insulated equipment or properly grounded. Never remove a grounding pin or alter a plug.
- Use GFCI protection for applicable temporary construction receptacles. Projects shall use GFCIs unless a compliant written assured equipment grounding conductor program is formally implemented and maintained.

Cords and Plugs

- Inspect before use for cuts, crushed areas, exposed conductors, damaged jackets, loose strain relief, heat, missing pins and improper splices. Remove defective cords from service.
- Use heavy-duty cords rated for the location, load and length. Keep connections dry/elevated where practical and protect cords from traffic, sharp edges, water, pinch points, hot work and trip hazards.
- Do not hoist/lower a tool by its cord, yank a cord to disconnect, staple cords, create homemade adapters or use multiplug devices not approved for construction service.

Operation

- Maintain stable footing and control the tool with required handles. Keep hands clear and wait for motion to stop before setting it down.
- Use the required switch type. Never tape or otherwise defeat a momentary-contact, constant-pressure, interlock or brake control.
- Unplug or remove the battery before servicing, clearing jams or changing accessories. Apply the Hazardous Energy Control Policy when unexpected startup or stored energy could injure employees.

Wet / Conductive Locations

- Do not use cord-and-plug tools in standing water or rain unless equipment and connections are approved and the task is controlled. Use dry gloves/footing and suitable GFCI protection.
- Maintain clearance from energized circuits and verify hidden electrical hazards before drilling, cutting or fastening.

Battery Tools

- Inspect battery and charger; use only compatible units. Remove swollen, cracked, overheated or damaged batteries from service and isolate for approved disposal. Protect terminals and do not charge near combustibles or in unapproved conditions.

6. Pneumatic, Hydraulic and Fuel-Powered Tools

Pneumatic Tools

- Secure the tool to the hose by a positive means. Install and maintain safety clips/retainers on percussion tools so attachments cannot be expelled.
- Do not exceed manufacturer pressure. Hoses over 1/2-inch inside diameter require a safety device at the supply/branch to reduce pressure after hose failure. Use compatible couplings and restraint/whip protection where required.
- Depressurize before disconnecting, servicing or clearing a jam. Never carry or lower a tool by the hose; protect hoses from traffic, heat, edges and trip hazards.

Compressed-Air Cleaning

- Compressed air shall not be used for cleaning unless reduced to less than 30 psi and used with effective chip guarding and required PPE. Never direct air at a person or use it to clean clothing/skin.
- The OSHA pressure exception for certain concrete-form, mill-scale and similar cleaning does not remove the duty to control flying material, dust, noise and employee exposure; obtain foreman approval and task controls.

Hydraulic Tools

- Use manufacturer-specified fluid, fittings and pressure. Inspect hoses for abrasion, blisters, leaks and damaged couplings. Depressurize and block stored/mechanical energy before service.
- Never use hands to search for a leak. High-pressure injection is a medical emergency even when the wound looks small—stop work and obtain immediate emergency evaluation.

Fuel-Powered Tools

- Stop the engine before refueling, servicing or maintenance; allow hot surfaces to cool and control ignition sources. Handle fuel under the Fire Prevention policy.
- Do not operate in enclosed or poorly ventilated areas without evaluation and controls for carbon monoxide/toxic exhaust. Ventilation shall not direct exhaust toward employees or public areas.

Nailers / Staplers

- Tools operating above 100 psi with automatic feed shall have the required muzzle safety. Keep hands clear, disconnect pressure before clearing and never bypass the contact safety.

7. Powder-Actuated Tools

Authorization

- Only employees trained in operation of the particular tool may use it. Carry any required operator credential and follow the manufacturer's instructions, cartridge/fastener selection and applicable ANSI requirements.
- Treat the tool like a loaded firearm: never point it at anyone, keep hands clear of the barrel and maintain control at all times.

Daily Inspection and Loading

- Before loading each day, perform the manufacturer's unloaded safety-device test. Remove a defective tool from service until properly repaired.
- Load only immediately before firing. Do not leave a loaded tool unattended, carry it between work areas unnecessarily or load while another person is in the line of fire.

Work Surface

- Examine base material, thickness, edge distance, opposite side and hidden utilities. Use the correct power level, fastener and shield/guard.
- Do not drive into very hard/brittle material such as cast iron, glazed tile, surface-hardened steel, glass block, live rock, face brick or hollow tile.
- Do not drive into easily penetrated material unless backed to prevent pass-through. Do not fire into a spalled/failed fastening area or too close to an edge/opening.

Work Area

- Establish an exclusion zone on both sides where penetration or fragments are possible. Wear required eye, face, hearing and head protection.
- Do not use in an explosive or flammable atmosphere. Control combustible dust, vapors and nearby hot work.

Misfire / Jam

- Keep the tool pressed against the surface and pointed safely for the manufacturer-required waiting period. Do not immediately remove or inspect the cartridge.
- Then unload/clear exactly as trained and directed by the manufacturer. Place misfired cartridges in the approved container; never discard loose charges in trash.

Storage

- Store unloaded tools and charges secured from unauthorized access, moisture, heat and ignition. Separate or organize loads to prevent wrong-power selection.

8. Abrasive Wheels, Grinders and Cutoff Tools

Wheel / Tool Compatibility

- Use only a wheel/disc rated for the tool, material and operation. The tool's no-load spindle speed shall not exceed the accessory's maximum RPM.
- Check diameter, arbor, flange, direction and expiration/use limitations. Never force a wheel onto the spindle, use improvised bushings or side-grind with a wheel not rated for side loading.

Inspection and Mounting

- Closely inspect wheels for cracks, chips, water/chemical damage or distortion. Ring-test appropriate vitrified wheels before mounting; do not ring-test wheels for which the method is not applicable.
- Use correct clean flanges/blotters where required. Tighten only enough to hold securely. After mounting, stand out of the wheel plane, clear others and test-run in a guarded location.

Guards and Rests

- Use required guard, aligned and positioned between the employee and wheel. Never remove or modify it merely for access.
- On bench/floor grinders, keep the work rest securely adjusted within 1/8 inch of the wheel and the adjustable tongue guard within 1/4 inch. Adjust only while stopped and de-energized.

Operation

- Wear safety glasses with side protection and a face shield where flying particles/sparks exist; the face shield does not replace safety glasses. Use hearing and respiratory protection as assessed.
- Secure the work, use both hands/side handle, avoid the wheel plane and let the tool reach speed. Do not twist, bind, bump or force a cutoff wheel. Wait for complete stop before setting down.
- Direct sparks away from people, traffic, hoses, cylinders, flammables, coatings and finished surfaces. Use hot-work controls when sparks can ignite material.

Stop

- Stop for dropped/damaged wheel, abnormal vibration/sound, binding, loose guard, speed mismatch, lost dust control or changing material. Disconnect before adjustment or accessory change.

9. Saws, Drills and Specialty Tools

Circular / Reciprocating Saws

- Use the correct sharp blade and required guard. Verify lower guard moves freely and returns; never tie it back. Set depth appropriately and inspect below/behind the cut.
- Support material so the kerf does not close on the blade. Keep both hands clear, stand out of kickback path and wait for blade stop before setting down.

Cutoff / Masonry Saws

- Follow manufacturer positioning and wheel direction. Secure the saw/work, maintain exclusion zone and use water delivery or dust collection required by the Silica Policy and OSHA Table 1.
- Do not use a handheld saw above shoulder height unless specifically designed and the task is planned/trained. Never use a cutoff wheel for side grinding.

Drills / Rotary Hammers

- Locate electrical, utility, rebar/tendon and opposite-side hazards before drilling. Use auxiliary handles and brace for torque/kickback without placing the body in a pinch point.
- Use manufacturer dust collection/water systems and the Silica Policy for concrete/masonry drilling. Secure bits and remove chuck keys before startup.

Chainsaws

- Only trained employees may operate. Inspect chain, brake, bar, guards and controls; use required leg, eye/face, hearing, head, hand and footwear protection.
- Maintain two-handed control and stable footing; avoid kickback zone and cutting above shoulder height. Follow fueling, felling/limbing and traffic/exclusion controls applicable to the task.

Magnetic Drills / Presses

- Verify surface strength and magnetic holding; use a secondary restraint where loss of power can cause falling. Guard rotating parts, secure material and keep clothing/gloves away from rotation.

High-Pressure / Specialty Tools

- Follow dedicated policy/manufacturer requirements for waterjetting, adhesive anchors, abrasive blasting, welding/cutting and other specialized equipment. Never assume general tool training is sufficient.

10. PPE, Exposure and Work-Area Controls

PPE

- Complete a task hazard assessment. At minimum, use company-required head, high-visibility, footwear and eye protection; add face, hearing, hand, respiratory, fall and protective clothing as hazards require.
- Select gloves for cuts, vibration, chemicals and heat, but do not wear gloves where they can be caught by rotating parts. Proper fit is required and PPE shall not interfere with safe tool control.

Silica and Dust

- Concrete, masonry, mortar and rock cutting, grinding, drilling or chipping shall follow the Respirable Crystalline Silica Policy, written exposure-control plan and applicable OSHA Table 1 method.
- Use water/dust collection as specified and maintain flow/filter. Do not rely on a disposable mask unless respiratory protection is selected and used under the Respiratory Protection Program.

Lead, Coatings and Chemicals

- Before disturbing bridge paint, coatings, sealants or unknown materials, assess for lead, hexavalent chromium, asbestos and other hazards. Follow the Lead/Bridge-Coating, Hazard Communication and applicable assessment policies.
- Review SDS information for lubricants, fuels, epoxies and cleaning products. Provide ventilation, hygiene and PPE.

Noise and Vibration

- Use quieter tools/methods, distance, barriers and exposure-time control. Wear assigned hearing protection and participate in the Hearing Conservation Program when criteria apply.
- Rotate or redesign high-vibration work where feasible; keep tools sharp/maintained and report numbness, tingling, blanching or pain.

Work Area

- Barricade the line of fire, falling-object and spark/debris zone. Provide lighting, stable access and housekeeping. Coordinate with traffic, crane, water, railroad and public controls.
- Do not operate where another employee can be struck by the tool, material, fastener, blade/wheel fragment, hose or reaction force.

11. Maintenance, Emergency Actions and Records

Maintenance / Hazardous Energy

- Follow manufacturer preventive-maintenance intervals. Clean, lubricate and replace parts only as authorized; maintain guards and labels.
- Unplug, remove battery, close/lock supply valves, bleed pressure, block movement and verify isolation before servicing. Use the Hazardous Energy Control Program when unexpected energization or stored energy could cause injury.

Accessory Changes and Jam Clearing

- Wait for complete stop and isolate the energy source. Secure moving parts and discharge capacitors, spring, pressure or gravity energy as applicable.
- Use proper tools and body position; never place a hand into a danger zone or defeat a guard to clear a jam.

Storage

- Store clean, dry and secured against damage, moisture, contamination and unauthorized use. Protect blades/wheels/bits, cords, batteries, hoses, charges and sharp edges.
- Keep powder charges, fuel and flammable products in approved locations. Do not leave tools on bridge edges, platforms, equipment steps or traffic paths.

Emergency Actions

- Stop power/pressure if safe, warn others, call 911 for serious injury and provide first aid within training. Do not remove an embedded object.
- Electrical contact: do not touch the victim/tool until energy is controlled. Hydraulic injection, amputation, severe eye injury, uncontrolled bleeding, burn, inhalation or suspected carbon-monoxide illness requires immediate emergency evaluation.
- For fire, wheel/blade failure, hose rupture, fastener pass-through or unexpected utility strike: isolate the area, preserve evidence and follow the applicable emergency/incident plan.

Reporting and Records

- Report all injuries, near misses, defects and damaged tools promptly. Retain training/authorization, inspection/maintenance, GFCI or AEGCP, repair and incident records as required.

Review / Enforcement

- Review annually and after an incident, new tool or regulatory change. Bypassing guards, using tagged tools or operating without required training/PPE is prohibited and subject to corrective action.

12. Field Tool Safety Checklist

VERIFY	EXPECTATION
Task / tool	Correct tool and approved accessory selected for material and operation
Authorization	Operator trained/authorized; manufacturer instructions available
Condition	Body, handle, trigger, controls, labels and fasteners safe
Guarding	Required guard, brake, interlock, retainer and shield functional
Accessory	Correct type/size/arbor/RPM; blade, bit or wheel undamaged
Power	Cord/plug/battery/fuel/air/hydraulic supply and GFCI acceptable
Pressure	Hoses/couplings/retainers/reducers rated, secured and protected
Workpiece	Supported/secured; hidden and opposite-side hazards checked
Exposure	Silica, lead/coatings, noise, vibration, exhaust and sparks controlled
PPE	Properly fitting eye/face, hearing, hand, respiratory and other PPE
Work area	Lighting, footing, cord/hose routing, traffic and exclusion zone controlled
Emergency	Stop-work triggers, energy isolation, first aid and communication reviewed

PROJECT / LOCATION:	DATE / SHIFT:
TOOL / ASSET ID:	OPERATOR:
TASK / MATERIAL:	ACCESSORY / RATING:
DEFECT / STOP CONDITION:	CORRECTIVE ACTION:
INSPECTED / RELEASED BY:	FOLLOW-UP:

13. Test Your Knowledge

Circle the best answer. Review missed questions with your foreman.

1. What must happen to a tool with a missing guard? A. Use it carefully B. Remove it from service C. Use it only outdoors	2. Who may use a powder-actuated tool? A. A person trained on that particular tool B. Any experienced laborer C. Anyone wearing safety glasses
3. What protects applicable temporary construction receptacles? A. An extension-cord knot B. A metal adapter C. GFCI protection or a compliant formal AEGCP	4. May a face shield replace safety glasses while grinding? A. Yes B. No C. Only at night
5. What is the maximum bench-grinder work-rest gap? A. 1/8 inch B. 1/2 inch C. 1 inch	6. What should you do before clearing a jam? A. Pull harder B. Remove the guard C. Isolate energy and relieve stored pressure
7. What is required for compressed-air cleaning under the general rule? A. Any pressure outdoors B. Less than 30 psi with chip guarding and PPE C. No PPE below 100 psi	8. What should happen after a suspected hydraulic injection injury? A. Obtain immediate emergency medical evaluation B. Finish the shift C. Apply tape and watch it
9. When may a grinder wheel be used? A. If it nearly fits B. If a larger guard is removed C. When rated for the tool, speed, material and operation	10. Who is responsible for employee-owned tools used at work? A. Only the employee B. They must also meet this policy and be maintained safely C. The tool store

EMPLOYEE: _____

DATE: _____

ANSWER KEY: 1-B | 2-A | 3-C | 4-B | 5-A | 6-C | 7-B | 8-A | 9-C | 10-B