Safety Standard Operating Procedure

(Revised 1/2023)

Shop safety

This Standard operating procedure provides guidance for shop safety. As with any equipment or tools, the most basic premise for safe operation is reading and adhering to the manufacturer’s instructions and warnings. This SSOP is not a substitute for the owner’s manual produced by the manufacturer.

Schedule- Daily, weekly, Monthly.

PPE Required- Safety glasses and ear plugs need to be on hand depended on the work being performed. Example: Blade sharpening, grinding, welding. Safety shield must be worn at the grinder and blade sharpener stations also. Both stations have shields available for use.

Safety Requirements- Keeping areas free of debris, knowing surroundings, notifying staff of entry using doorbell at each entrance. Identifying chemical labels on cabinets and location. Identifying trip hazards, lock out/ tag out, housekeeping.

Many types of work are performed in the shop. Exposure to noise, dust, hazardous chemicals, and trip hazards exist. Caution must be used at all times to avoid accidents that can cause damage, injuries, or death.

Daily shop expectations

- Personal items need to be kept put away in lockers.
- Table should be kept clean of loose items. Not a storage
- Chemicals should be stored properly in the cabinets with labeling for the items.
- Gas cans should be stored in the fuel cabinet.
- Proper PPE for each type of work. Safety glasses, ear protection.
- Correct tool for use on the job. Follow tool manufacture guidelines.
- Tools put away and clean in proper locations after use.
- Cabinets/ toolboxes organized, closed, and locked at the end of each day.
- Welding and cutting torch bottles valved off after use. Cords/ hoses rolled up and stored properly.
- Electrical cords and air hoses rolled up and stored properly after use.
- Shop office cleaned and locked at the end of each day.
- Computers shut down and devices put on charging station at the end of each day.
- Lock out/ tag out- equipment not to be used/ ran needs to be tagged properly. Tags are available in the office left side office desk drawer. Use a cable tie and place them on the steering wheel.
- Restock parts/ items- stored away in proper locations as they arrive.
• Tires to be stored properly under the overhang with the correct size labeling.
• Solvent tanks shut off and cleaned after use.
• Overhead hoist/ A-frame stored properly with chain lift pulled to one side and chains hooked to side cross post.
• Jacks stored properly with handles up to prevent trip hazard.
• Doors locked and shut firmly at the end of each day.
• Winter- office heater turned off at night. Shop heaters set at 50% overnight.
• Summer- Office AC, shop fans turned off at the end of each day.
• Battery chargers unplugged.

**Lifting and bracing**

• Roll away floor jacks are used for lifting equipment. Check jack for leaks since they use hydraulic fluid for lifting pressure.
• Check for damage and loose bolts such as the wheels or pivot points.
• When using a jack, make sure it meets the weight rating for what you are trying to lift.
• Locate lifting points on the equipment. Solid main brace or frame.
• Before lifting, have jack stands or cribbing set close by ready to put under the equipment.
• Use wheel chocks and block the wheels remaining on the ground to where raising will push the tires against the chocks.
• Once unit is raised to desired height. Place jack stands or cribbing accordingly to secure the unit from falling. (Do not get under the raised unit. Locate an item that can be used for an extension if needed beforehand)
• Let Pressure off the floor jack slowly until Unit is set securely on the jack stands or cribbing.
• Remove jack and store with handle in the upright position.
• Reverse process for setting the unit back down.
• Wheel ramps, use caution. Have a spotter to make sure the ramps are aligned and center of wheels.
• Have wheel chocks ready to place behind wheels remaining on the ground.
• Slowly drive unit either forward or backwards onto ramps.
• Spotter set wheel chocks behind wheels.
• Let unit slowly roll back against chocks.
• When finished, the unit will have to be rolled enough to take the pressure off the wheel chocks. Have spotter ready to remove them with out getting under the unit.
• Pull unit off ramps slowly and store ramps properly.

**Air lines and Pneumatic tools**

• Air hoses in the shop have constant 125psi pressure. Must use caution when working with hoses and connections.
• Bleed system pressure if possible before disconnecting a hose or fitting.
• The pressure on bare skin can cut, or even put air into your blood stream.
• Keep hoses stored properly. Inspect hoses for cracks, frays, and loose fittings before use.
• Tool connections should be inspected for cracks, tightness, and damage before use.

**What are pneumatic tools?**

• Pneumatic tools are powered by compressed air. Common types of these air-powered hand tools that are used in industry include impact wrenches, buffers, nailing and stapling guns, grinders, drills, jack hammers, chipping hammers, riveting guns, sanders, and wrenches.

**How do you use pneumatic tools safely?**

• Review the manufacturer's instruction before using a tool.

• Wear safety glasses or goggles, or a face shield (with safety glasses or goggles), and, where necessary, safety shoes or boots and hearing protection.

• Post warning signs where pneumatic tools are used. Set up screens or shields in areas where nearby workers may be exposed to flying fragments, chips, dust, and excessive noise.

• Ensure that the compressed air supplied to the tool is clean and dry. Dust, moisture, and corrosive fumes can damage a tool. An in-line regulator filter and lubricator increases tool life.

• Keep tools clean and lubricated and maintain them according to the manufacturers' instructions.

• Use only the attachments that the manufacturer recommends for the tools you are using.

• Be careful to prevent hands, feet, or body from injury in case the machine slips or the tool breaks.

• Reduce physical fatigue by supporting heavy tools with a counterbalance wherever possible.

**How should you handle air hoses?**

• Use the proper hose and fittings of the correct diameter.

• Use hoses specifically designed to resist abrasion, cutting, crushing and failure from continuous flexing.

• Choose air-supply hoses that have a minimum working pressure rating of 1035 kPa (150 psig) or 150% of the maximum pressure produced in the system, whichever is higher.

• Check hoses regularly for cuts, bulges, and abrasions. Tag and replace, if defective.

• Blow out the air line before connecting a tool. Hold hose firmly and blow away from yourself and others.

• Make sure that hose connections fit properly and are equipped with a mechanical means of securing the connection (e.g., chain, wire, or positive locking device).

• Install quick disconnects of a pressure-release type rather than a disengagement type. Attach the male end of the connector to the tool, NOT the hose.

• Do not operate the tool at a pressure above the manufacturer's rating.

• Turn off the air pressure to hose when not in use or when changing power tools.
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• Do not carry a pneumatic tool by its hose.
• Avoid creating trip hazards caused by hoses laid across walkways or curled underfoot.
• Do not use compressed air to blow debris or to clean dirt from clothes.

What should you avoid with a compressed air?

• Cleaning with compressed air is dangerous.
• Do not use compressed air for cleaning unless no alternate method of cleaning is available. The nozzle pressure MUST remain below 207 kPa (30 psi). Personal protective equipment and effective chip guarding techniques must be used.

Hand tools

• There is a large variety of hand tools used in the shop. From screw drivers, wrenches, socket sets, hammers, wire cutters, pliers, etc. Follow manufacture guidelines and use tool correctly.
• Tools need to be kept cleaned and stored appropriately.
• Check tools for damage and replace as needed.
• Do not use a damaged tool.

Tool/ key checkout - Landscape and other departments may check out certain tools and vehicle keys as needed. Such as battery powered drill, chainsaws, etc.

A. Chainsaw checkout- Chainsaws are kept stored in the shop. (Chainsaws are to only be checked out to Landscape personnel)

Note: Battery powered saws are to be checked out to Arborist only. Unless approved by Management.

• Check fluids, bar lock, pull rope, make sure it has a sharp chain and scabbard.
• Start chainsaw and let run 1 minute throttle to idle several times.
• Check out form on cabinet must be filled out with asset number, name, department, date, time out.
• Every chainsaw requires chaps checked out with it. Belt extensions are available if needed.
• Check that they have a chain tool, bar oil, and mixed gas.
• When saw is checked back in, clean the saw, check the bar and chain, check for damages, chaps are in good condition, and signed back in.
• If repairs are required a work order must be opened on the asset number and set aside for repairs. Do not put a damaged saw back into the cabinet.

B. Battery powered tools- Drills, grinder, saw, vacuum, etc.

1. Grinder- Installation will check out the battery powered grinder. 60-volt battery only for this tool. Only two batteries checked out with one tool.
   • Correct sized wheel must be used.
   • Safety shields/ guards are in place
   • Handle is firmly attached.
2. **Drills**- All landscape will check out battery powered drills as needed. 20-volt battery, only two checked out per tool.
   - Correct bit
   - Right drill for the job performing.

3. **Vacuum**- We have two battery powered vacuums. One regular shop vac. One Silica dust collection vac. 60- volt battery, only two issued at check out.
   - Silica dust collection vac for concrete drilling, cutting only
   - Filter must be cleaned after each use.
   - Dust collection adaptors needed.
   - Regular shop vac. For cleaning vehicles/ equipment only. No water or silica dust.
   - Must be cleaned after each use.

All batteries must be removed from tools after use. Check charge and place on charging bank if needed.

C. **Concrete saw**- Installation and Utilities may check out the saw. All others need management approval.
   - Check fluids, cutting blade, water connections, pull rope, belt.
   - Start and let run 1 minute throttling and back to idle multiple times.
   - When returned check for damages to blade, housing, belt, water connections.
   - Check and clean/ replace air filter if needed.
   - If repairs required open a work order and set aside for repairs. Do not put into storage without repairs done.

D. **Ladders**- Extension, step, and folding ladders.
   - Formal inspection must be performed following the inspection form.
   - Signed out on the sheet with ladder label for asset number.

E. **Vehicle/ equipment keys**- Spare keys may be issued out to individuals
   - Key sign-out sheet with name, department, vehicle/ equipment number, date, time, reason.
   - If key is not returned by end of day- notify supervisor to contact that staff members department head.