Applicable OSHA Standards: 29 CFR 1910 Subpart P

1. Purpose

1.1. The purpose of this program is to provide direction and to establish the Cleveland Integrity Services Inc. general requirements to be implemented when using hand or power tools.

2. Scope

2.1. The scope of this program applies to all Company job sites and work locations where tool operations are or may be conducted. The requirements, as set forth in this program, will be implemented to the fullest extent possible and will be considered as the minimum requirements of this program.

3. Responsibilities

3.1. The primary responsibilities for the implementation of requirements of this program will rest with the Site Supervisor.

3.2. The Company Safety Representative or designee will be responsible to provide for the monitoring of the work activities to assure compliance to the requirements of this program and to the host employer's safety requirements regarding tools being prohibited if they are not in compliance.

3.3. Company management will be responsible for disciplinary action resulting from violation or failure of assigned persons to implement the requirements of this program.

4. Small Tools And Equipment

4.1. Many at-work accidents and/or injuries occur because of improper or unsafe use of tools, or the use of tools which are in poor condition. The few extra seconds required examining tools and to use them properly can reduce the number of accident/injuries.

NOTE: Condition of tools; all hand, power, and similar equipment, whether furnished by the employee or employer, will be maintained in a safe working condition.

5. General Precautions

5.1. Never remove or interfere with the operation of any tool guard or safety features.

5.2. Always use the right tool for the right job.

5.3. Keep tools clean and check their condition prior to using. If heads or striking tools become mushroomed or burred, have them dressed. If handles of tools are splintered, broken, or loose, have them replaced.

5.4. Tools must always be returned to their proper storage place and not left where they create a hazard.

5.5. Do not carry tools in pockets. It is dangerous; especially if tools are sharp or pointed.

5.6. Do not use excessive pressure or force on any hand tool or the use of cheaters to apply more force.

5.7. Metal measuring tapes having metal strands woven into fabric, brassbound rules, wire or metal bound hose, or rope with wire core will not be used when working on or near energized electrical circuits or equipment.

5.8. Tools should neither be dropped nor thrown from place to place or from employee to employee.

5.9. Tools that must be raised or lowered from one elevation to another will be placed in an approved tool bucket or firmly attached to hand-line (rope).

NOTE: Handmade or job made tools should not be used. In the event a special tool is needed for a specific task for which no such manufactured tool exists, proper engineering design, specifications, and Company management approval will be obtained prior to construction of such a tool.

6. Hand Tools

6.1. Employees will inspect tools prior to use. Damaged or defective tools will be tagged "Do not operate" and removed from service as soon as the defect or damage is discovered.

6.2. Wooden handles of tools, such as hammers, picks, etc. will not be taped or covered in such a way as to hide damage or defects.

6.3. Cracked or damaged wooden handles of tools, such as hammers, will be replaced immediately upon discovery of the damage.

6.4. Hand tools will be used only for the purpose for which they were intended.

6.5. Tools will not be altered such as welding extensions on wrench handles or pad eyes on hammer wrenches.

6.6. Every tool was designed to do a certain job. Use it only for its intended purpose! Every tool requires care.

6.7. Keep your hand tools in peak condition, sharp, clean, oiled, and not abused.

6.8. Do not use tools for pry bars.

6.9. Do not use two wrenches to increase leverage capacity.

7. **Screwdrivers**

   7.1. Use the right size and type screwdriver for the job.

   7.2. Do not hold screwdriver tip in palm of hand. The screwdriver may slip causing injury.

   7.3. Screwdrivers should be filed properly to prevent slipping.

   7.4. Do not use a screwdriver as a pry bar.

8. **Hammers**

   8.1. Hammers will have a clear path for back swing and the target area will be free from obstructions.

   8.2. Hammers with mushroomed heads will never be used as they might glance off the target or the damaged head may splinter and send metal fragments flying.

   8.3. Never hold, with you hands, any object to be struck with a hammer by another employee. Hold the object with pliers or another tong-type device.

   8.4. Wooden handles will be kept free of splinters or cracks and will be kept tight in the tool.

9. **Files**

   9.1. Do not use a file for a pry or hammer as it is brittle and breaks easily.

   9.2. Files should be fitted with wooden handles to protect employees from the pointed file end.

10. **Pry Bars**

   10.1. Be sure bite of bar is secure under load by first applying a slight pressure.

   10.2. Check your own balance before exerting full force.

   10.3. A cheater bar will not be used on pry bars.

11. **Wrenches**

   11.1. Wrenches should be pushed away from the body, if possible, to reduce the chance of the wrench slipping and striking the user in the face or body.

   11.2. Adjustable (crescent) and combination wrenches should be snug on bolts and nuts to avoid slipping.

11.3. Never use a wrench as a hammer or a hammer on a wrench that is not to be used as such.

11.4. Never use a cheater on a wrench or "double wrench" a nut. Use a hammer wrench or impact instead.

11.5. Wrenches will not be used when jaws are sprung to the point that slippage occurs.

12. **Drill Bits**

12.1. Avoid unsafe defects; worn or battered heads, over tempered, and dull cutting edges.

12.2. Do not use drill as a reamer (get a larger bit), use proper bit for drilling steel or brass or copper without removing the lip, or change bits without unplugging cord.

13. **Shovels, Pick Axes and Axes**

13.1. Be aware of unsafe defects; rough, loose, cracked, or split handles; dull or nicked edges, over tempered surfaces.

13.2. Do not use a wedge, pry bar, or hammer.

14. **Power Tools**

14.1. All tools will be inspected for defects or damage prior to use. Tools found to be damaged or defective will be immediately tagged "Do Not Use" and removed from service.

14.2. Protective guards on power tools will not be removed. Do not use tools without guards in place.

14.3. Tools will not be dropped or allowed to strike another object in such a fashion that damage may occur.

14.4. The power source on tools will be physically disconnected prior to attempting any repairs or attachment changes. Always double check to make sure no one has come along and plugged the cord back in.

14.5. Employees will avoid loose fitting clothing when operating power tools. Shirttails must be tucked in the trousers/pants while operating power tools.

14.6. Electrical tools will be of the double insulated type with Underwriters Laboratory approval or be of the three wires grounded type.

14.7. All electrical tools and power cords must be inspected per the Assured Grounding program guidelines and display the proper color-codes for the current inspection period.

14.8. All electrical tools and power cords must be used with a Ground Fault Interrupter to protect against faulty ground.

14.9. Electrical tools will not be hoisted or carried by their power cords.

14.10. Employees will not operate electrical tools while standing in water or wet locations.

14.11. Extension cords will be of the three wires grounded type and be continuous without splice or repair. Extension cords will reflect the proper color code.

14.12. Extension cords will be kept clears of traffic aisles and will not be placed across vehicle traffic paths unless guarded to prevent damage. (Recommend to run cords 7' over head to prevent tripping hazards).

14.13. Extension cords will not be placed through doorways unless stops or guards are put in place to prevent pinching of the cord by the door.

14.14. Extension cords will not be suspended by wire or nails.

14.15. Do not operate power tools without instructions from your supervisor. (Note: Some activities will require permits before work begins).

14.16. Torque: The circular or rotating motion in tools such as drills, impact wrenches, saws, etc. which results in a strong twisting force. Be prepared in case of jamming.

14.17. Have good footing. Use two hands. Ask for help as necessary and be prepared to release the power switch or trigger.

14.18. Flying objects can result from operating almost any power tool, so you must always:

14.19. Warn people around you

14.20. Use proper personal protective equipment

14.21. Avoid contact with moving parts

14.22. Keep moving parts directed away from your body

14.23. Do not "swing around" with the tool running. Someone might be behind you

14.24. Be sure replacement parts conform to correct specifications. For example, grinder wheels will be approved for the maximum RPM of the machine, wood cutting bits will be for woodwork only, etc.

14.25. Contact with rotating and fast moving parts. Poor housekeeping, broken bits and blades, and lack of concentration can lead to serious cuts or amputations.

15. **Electrical Safety With Power Tools**

15.1. The use of portable power tools can make a job go faster and easier. The misuse of portable power tools can cause electric shocks, burns, and cuts and puncture wounds, severed fingers and limbs, broken bones, loss of eyesight, and even death.

15.2. The slightest shock when using electrical equipment is an ominous warning of a potentially serious safety hazard.

15.3. A slight shock when using the equipment in one location might result in electrocution if the body makes a little better contact with the earth or a grounded object in another location.

15.4. Electrocution is the leading cause of fatal injury in construction related activities. Most such injuries result from the use of portable tools powered by 110-volt electricity.

15.5. Electrical shock can occur from improper grounding or from attempting to adjust, clean, or service the tool without disconnecting the power.

15.6. Fires can be caused by defective electrical cords, overheated motors, sparking, and working near flammable liquids or gases.

16. **Ways to Protect Yourself**

16.1. Choosing the right tool for the job. This will depend on the work to be done. Most commonly used power tools include drills, saws, sanders, routers, and grinders.

16.2. Know how to use the tools safely and properly by reading the owner's manual carefully before use, by getting training from an experienced tool user, and be practicing before actually doing the job.

16.3. Repair tools when needed. Worn or defective electrical tools should be taken out of service and repaired immediately. Every time you use an improperly grounded or unguarded power tool, you are playing "Russian Roulette".

16.4. Transport and store tools properly. Power tools should be transported with extra care. Always hold the handle (not the cord) with your finger off the trigger. Place each tool in a safe storage area after use, preferably in a locked cabinet or toolbox.

16.5. Keep your work area clean, dry, and orderly. Power tools should not be used when working on slippery floors, in poorly lighted work areas, or near flammable liquids or gases.

16.6. Electric cords also deserve attention. They may become frayed leading to electrical shock or fire. Light-duty extension cords may become overheated when improperly used. They can also present tripping hazards.

17. **Ground Fault Current Interrupters**

17.1. GFCIs are used to protect people from shock hazards. The 12-volt lighting systems that may be utilized at some work locations do not require GFCIs.

17.2. GFCIs will be required whenever a Company employee uses an extension cord or a receptacle that is not part of a permanent building or structure that exceeds 12 volts.

17.3. Prior to each use, Company employees will visually inspect all cords, receptacles and attachment caps that have the potential to become damaged. Inspection is to confirm the safety of these components and to ensure that there are no defects such has deformed or missing grounding prongs on plugs, or damaged insulation that exposes interior wires.

17.4. GFCIs will be used on all 120 volt, single phase, 15 and 20-ampere receptacle outlets, which are not part of the permanent wiring of the building or structure. Receptacles on a two wire, single phase portable or vehicle mounted generator rated not more than 5kw, where the circuit conductors of the generator are insulated from the generator frame and all other grounded surfaces, need not be protected with GFCIs.

17.5. NOTE: A job site that is close to electrical lines will be pre-planned and written procedures developed before attempting to do the work. The Site Supervisor will review and approve any procedures that involve working in an area that has any such electrical exposure.

18. **Pneumatic Tools (Air) – General**

18.1. When gas or diesel compressors furnish the air source, keep them outside or vent them to the outside to prevent carbon monoxide poisoning.

18.2. If you are using a permanent source of air, make sure it is not oxygen. Oxygen mixed with the oil in your air hose and tool will or may cause an instant explosion and fire.

18.3. All hoses exceeding 1/2 inch inside diameter will have a safety device at the source of supply or branch line to reduce pressure in case of hose failure.

18.4. Air hoses and connections will be checked prior to each use for defects.

18.5. Air hoses should be protected from vehicle traffic, pedestrians and sharp objects.

18.6. Attachments on air tools will be secured by retainer pins and rings. The retainer rings should be taped to prevent accidental placement.

18.7. All crows foot type air connections will be safety wired or pinned.

18.8. Disconnect source and "bleed" hose before breaking connection on any air tool. To insure proper bleeding close the valve at the air source and insure all valves and regulators between the source and the tool are in the open position before bleeding air from tool.

18.9. Never crimp hoses to stop air.

18.10. Do not let your hoses create tripping hazards. Keep out of traffic areas, walkways, stairs, etc.

18.11. Never point a pneumatic hammer at anyone. There is always the chance the retainer may fail.

18.12. The bit should be in contact with the work surface before pulling the trigger.

18.13. Governors require strict maintenance to prevent dangerous over-speeding of grinders, drills, wrenches, etc.

18.14. Always wear eye, face and ear protection when using air tools.

18.15. Air used for cleaning machines will be regulated to 30 psi or less.

18.16. When compressed air is used for cleaning purposes, a nozzle must be provided with a shut off valve at the outlet of the hose.

18.17. Metatarsal and shin guards should be worn for complete foot protection when using ground tampers that leave the ground such as "pogo sticks". This is in addition to other PPE requirements.

18.18. Metatarsal guards and shin guards should be worn together when using pavement breakers or jackhammers. This is in addition to other PPE requirements.

18.19. Extreme care will be taken when working with compressed air. It should never be blown against clothing or any part of the body.

18.20. Storage and cleaning are very important with any tool. Keep tools clean and stored properly where they belong.

18.21. Air tools will not be hoisted or carried by their air hoses.

19. **Powder Activated Tools**

19.1. Hilti and Ramset are just two common names of powder activated tools. Give these kinds of tools the same respect as a firearm.

SPECIAL NOTE: No employee is permitted to use any powder-activated tool unless he or she has a current operator’s license issued by a licensed instructor by the manufacturer.

20. Chainfalls and Comealongs

20.1. Employees have to rely on special lifting and hoisting equipment. Most of our work requires moving equipment and materials that can seldom be lifted by hand alone.

20.2. These portable hand hoists are very useful. Knowledge of the following portable hoisting tools and their safe use can save you much time in performing work duties and make lifting and pulling bulky items an easier task.

20.3. Chainfalls and comealongs are designed to be operated by one employee only. If it takes two to raise or move a load, chances are the load is greater than the capacity of the lifting device or the device is malfunctioned. Never wrap the chain around the load.

20.4. Know the weight of the load and capacity of the lifting device. Do Not Exceed!

20.5. Periodic inspections, for instance monthly, or chainfalls and come along are required and must be documented.

20.6. Lifting chainfalls are low speed, geared for precision lifting, and have built-in, no-slip brakes. There are two lifting hooks; one swivel hook mounted on the housing and the other located at the end of the lifting chain. Chainfalls are available in a variety of weight capacities ranging from 1/4 ton to 10 tons with assorted pulling chain lengths for longer reaches to the work area.

20.7. Chainfalls is designed primarily for vertical lifting. The lifting hooks on the housing and chain are tempered but can be or partially straightened and will therefore be provided with a safety clip latch to prevent hooks from being dislodged. Before making a lift with the chainfall, be sure the load is rigged properly and the lift area is barricaded and free of personnel. Make all lifts true vertically to prevent a shifting, swaying load and undo wear on the hoist. Never use a chainfall for a horizontal pull. The designed chain sprocket engagement will not be obtained.

20.8. Comealongs are compact hoists for use in close areas. Their size permits toolbox size storage and versatility in almost any lifting and pulling situation.

20.9. The comealong is most popular because of its heavy-duty construction and greater lifting ability. A ratchet lever moves the lifting chain or cable. The lever has three positions -- forward for lifting or pulling, neutral for free gear travel, and reverse for lowering or releasing tension.

20.10. A comealong will have one hook attached to the gear housing and one at the end of the lifting chain or cable. They are available in various lifting chain and cable lengths for longer reaching pulls and lifts. They range in capacities from 1/4 ton to 6 tons.

20.11. Considered the most versatile of the hand-operated hoists, the comealong can be used in vertical lifting (only in certain situation), pulling, and binding on any plane and in moving heavy objects. A ratchet movement of the hand lever, even under tension accomplishes pulling or releasing. Therefore, if it takes two employees to crank the hand lever, the hoist is overloaded for the job. Avoid using cable-type lever hoists if the cable is frayed or damaged. Never use a cheater bar on the handle of the comealong.

21. **Pedestal, Bench, And Portable Grinders – General**

21.1. Each employee is responsible for inspection of the grinder he/she is using.

21.2. Wheel rating must exceed the maximum potential RPM of the grinder on which it is mounted.

21.3. No special adapters, arbors, or other improvisation are not permitted, nor may more than one wheel be mounted between a single set of flanges.

21.4. All abrasive wheels will be mounted between flanges which are at least 1/3 the diameter of the wheel.

21.5. On all portable tools, the control switch will be instant-pressure controlled without a locking pin.

21.6. Wheels should be stored in a dry place with constant temperature above freezing and protected from physical damage, which could cause cracking.

21.7. Guards will be installed and maintained.

21.8. The proper respiratory protection will be used in the event dust hazards exist.

21.9. The proper eye/face, hand, and ear protection will be used.

21.10. Guards, work rests, eye shields, and other permanent protection devices will not be removed from any grinding or buffing wheels.

21.11. The tool room will perform initial inspection and subsequent maintenance of all grinders. Inspections will be made on an established schedule and records maintained by the Tool Room and filed with the Safety Department.

21.12. The using department will be responsible for installing all wheels and determining that they are designed for the speed of the grinder. (Any questions, you should contact the Tool Room or Main Office).

21.13. The using department will be responsible for maintaining the maximum distance between the work rest and the wheel -- 1/8" and tongue guard 1/4".

21.14. Grinding will not be performed on the side of the wheel.