



MOLINE

ELECTRIC MOTOR & MACHINE, INC.

EMPLOYEE SAFETY MANUAL

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GENERAL SAFETY RULES

- 1.1 Report all injuries to your supervisor immediately, no matter how slight they might be.
- 1.2 If in doubt about the safe or proper way to do a job; get instructions from your supervisor before proceeding.
- 1.3 Be constantly on the alert for unsafe conditions or acts and report such to your supervisor.
- 1.4 Be thoroughly familiar with your surroundings, the operation and location of other employees, so that you can foresee possible dangers. Know emergency telephone numbers and the location of first-aid stations, emergency shower and eye wash station, fire extinguishers and emergency exits.
- 1.5 Do not leave your work area unless your work or personal needs require it.
- 1.6 When you are relieved of a job that has unusual, partially concealed or concealed hazards, immediately inform your replacement of such hazards. Be specific.
- 1.7 Horseplay is not permitted. Do not distract or interfere in any way with another employee who is doing his job.
- 1.8 Do not run in the shop or any part of the shop except in an emergency. When walking through the shop. Always use designated aisles and walk-ways. Be alert for tripping hazards- e.g., hose cable, rough or uneven surfaces. And projecting materials of various kinds.

1.9 **Do not:**

*Report to work under the influence of intoxicants, illegal drugs or legal or legal drugs that render you incapable of work during work hours;

*Use intoxicants, illegal drugs or legal drugs that render you incapable of work during work hours:

*Bring onto company property (or possess) intoxicants or illegal drugs.

FIRE, CHEMICALS

- 1.10 Handle and store flammable liquids such as gasoline and solvents in approved safety containers
- 1.11 Smoke only in designated areas.

1.12 Thoroughly cleanse your skin after working with oil, grease, paint or chemicals. Failure to do so may result in skin irritation.

1.13 Become familiar with the company's Hazard Communication procedures and the location of Material Safety Data Sheets.

CRANES, FORKLIFTS

1.14 Do not walk, crawl, or stand beneath suspended loads at any time. Do not pass between swinging loads and fixed objects.

1.15 When moving about the plant be alert for forklifts and other mobile equipment, especially at blind corners and cross aisles.

1.16 Stay well in the clear of loads being moved or handled by any conveyance. Be sure to keep your hand and body clear of moving parts of machinery and equipment

1.17 Observe all "Caution" and "Danger" signs that are posted in the shop areas. Pay attention to all warning signals of cranes and other material handling equipment.

1.18 When handling material with a hoist or crane avoid pulling the material toward you. Push it from you, so that you will be in a position to get clear if necessary.

1.19 Do not ride on crane hooks, chains, lifting devices or loads being carried by cranes, except when authorized to inspect wire rope under controlled conditions.

HAND TOOLS

1.20 Maintain all tools in first-class condition, whether they are company property or personally owned. Tools with loose or mushroomed heads or defective handles should be repaired or replaced immediately.

1.21 Use the right tool for the right job; it's easiest and safest. For example, never hammer with a wrench or pry with a file. Never use a hardened steel hammer to strike punch dies, spindle holders or other hard tools; use a soft-headed hammer. Be sure wrenches are the proper size for the head of the nut or bolt.

1.22 Use caution when using a maul or hammer to avoid striking yourself or another. Be sure that you and other workers are in the clear in the event the maul or hammer misses or glances off the object struck.

1.23 Clamp or otherwise secure small or light material before attempting to ream, drill, grind etc.

1.24 When using “c” or other types of clamps, tighten them sufficiently to prevent slippage of material. Don not overtighten them by using a pipe or wrench for additional leverage.

AIR AND HYDRAULIC TOOLS

1.25 Never point a compressed air hose or tool at yourself or anyone else. Do not use compressed air to dust off clothing.

1.26 When using air tools, always turn off the air at the outlet to relive pressure before disconnecting tool

1.27 Never stand over an air line, a hydraulic line or any other pressurized line. If an air hose breaks, do not go near it or attempt to grab in until the air supply has been shut off.

1.28 Keep air hose, electric cables and similar items clear of hot slag, rivets or other hot material.

MACHINERY

1.29 Make sure all safety guards are in place before operating any machine or equipment. Safety guards may be removed only by authorized personnel. The must be replaces as soon as the work is completed and before the machine is put bad in operation.

1.30 report to your supervisor upon notice of any defective or missing safety equipment and all mechanical and electrical defects.

1.31 Never tie down, block out or otherwise disable any safety device or guard.

1.32 Operate only the equipment that you are authorized to use, and only in the area where you have been directed to work.

1.33 Never oil, attempt to repair or remove safety guards form machinery that is in motion. Do not climb on machinery to oil or grease it; always use a ladder if practical. Have machinery repaired by authorized personnel only.

1.34 Do not attempt to brake or slow down moving machinery with your hands or a makeshift device. Use the machine brake if there is one or wait for it to stop on it’s own accord.

1.35 Lock out equipment before starting and repairs or maintenance. Never open the switch for or operation equipment this under repair. (Repairment may operate equipment with guards removed provided adequate precautions are taken.) Make sure equipment is in a “zero mechanical state” before repairs are started.

1.36 Avoid using electrical equipment while standing on damp or wet surfaces, or when your

hands are wet. Always disconnect the cord at the receptacle or shut off the current before attempting to remove or replace a broken light bulb.

LADDERS

1.37 Inspect all ladders before use. Check the side rails and rungs for any defects. Be sure the ladder is free of oil, grease or other slippery materials. Do not use a defective ladder. Tag or mark defective ladders “Dangerous, do not use” and withdraw them from service for repair or destruction.

1.38 Do not paint ladders.

1.39 Make sure all straight or extension ladders are equipped with safety feet.

1.40 Place ladder on firm, level ground so that they will not sink or slip. Tie or otherwise secure ladders at the top. If a ladder cannot be secured, have someone hold it while anyone is climbing, descending or working from it. Make sure each rung has sufficient clearance for safe footing and grip.

1.41 Metal ladders and ladders made with conductive material will conduct electricity. Do not place them on or near live electrical lines. Assume that all wires are live until you are sure they are not.

PERSONAL PROTECTION

- 2.1 Wear clothes that are suitable for your work. Working without shirts is not allowed. Wear long- sleeves when burning. Welding, grinding or performing other types of work where sparks or hot metal are present.
- 2.2 Do not wear loose. Torn or ragged clothing while operating lathes, drill presses, reamers or any other rotating equipment with revolving spindles or cutting heads. Protect long hair from such hazards. Shirts must have a minimum of 4-inch sleeves. Not tank tops are allowed.
- 2.3 Avoid wearing wet, oily or liquid soaked clothing.
- 2.4 Do not wear rings or other jewelry on the job.
- 2.5 Hard hats, safety glasses and steel-toed safety shoes or boots and hand protection are required at all times when on the job site. Gloves appropriate for the task shall be worn 100% of the time when at the job site. Safety glasses will be worn at all times in the shop. Hard hats and hand protection shall be worn in shop as applicable to the task being performed. All hard toed footwear will be constructed of leather and cover the ankle, except for footwear designed specifically for chemical or water resistance.
- 2.6 Wear face shields in addition to safety glasses or goggles when grinding, chipping, burning or doing other work where there is an unusual hazard from flying particles. Face shields will also be worn in addition to safety glasses or chemical goggles if splash hazard exists.
- 2.7 Wear approved safety glasses and a hard hat in addition to a welding helmet when welding on the job site. When regularly working very close to other welders, it may be desirable to wear safety glasses with a shaded lens
- 2.8 Notify your supervisor if you wear contact lenses. Contact lenses are not eye protection. Safety glasses are required with contact lenses. Prescription glass lenses are not considered eye protection unless ANSI Z87.1 approved, If ANSI approved prescription eyeglasses are worn, protective side shields must be worn with them.
- 2.9 Wear a respirator or a suitable dusk mask as required when performing certain shop activities-e.g., painting, stripping, metal spraying, abrasive blasting, and so forth.
- 2.10 Wear proper fitting hearing protection (muffs or ear plugs) where hazardous noise levels or conditions exist or when noise exposure exceed 85 DBA.
- 2.11 Keep gloves, shoes, clothing and other protective apparel as dry as possible to avoid

electric shock.

2.12 High visibility reflective safety apparel/vests must be worn by all personnel who work on or near active highways roads or parking lots. Vests are also required for other work that places personnel, such as flaggers, riggers, survey crews, etc. near mobile equipment.

HOUSEKEEPING

3.1 Good housekeeping is an essential part of any successful safety program. Keeping your job site and the surrounding area clean and orderly, will help you to do a better job with less chance of getting hurt.

3.2 Keep aisles, walking areas and spaces between skids clear of all materials.

3.3 Pick up tripping hazards-e.g., bolts, nuts, pins, weld rod stubs, pieces of scrap material or wood and any other possible hazard.

3.4 Do not leave wooden blocks, chains, cable, hose or tools lying about the floor after you are finished with them. Maintain good housekeeping standards at all times.

3.5 Keep the shop clear of scrap steel punching's, shavings and other debris.

3.6 Never use your hands on any part of your body to remove chips or shavings from a machine or worktable. Use brush, stick or other approved device.

3.7 Return your tools and other equipment to their proper storage places after use. During use, keep them orderly.

3.8 Immediately clean up any oil, water or other slippery substances that are spilled.

3.9 Dispose of empty paint cans. Oily rags and similar items promptly and in accordance with approved guidelines. They can cause fires. Keep your work and storage spaces neat and free of soiled rags, clothing and trash.

3.10 Do not deface, mark, mar or destroy any building, machinery, warning signs, bulletin boards or any other equipment.

3.11 Keep all stairways and landings free of any tripping hazards. Report inadequate lighting to your supervisor immediately.

3.12 Return all bottles, cans or other containers to their proper place after use.

3.13 Place all trash or recyclables in the proper containers and remove them from work areas as necessary. Keep lunch areas clean.

CRANES AND HOISTS

Proper operation of cranes and hoists is very important to efficient shop operations and the safety of others. Operators should cooperate with and win the confidence and good will of other employees on the floor, so that work can proceed safely and efficiently. Any suggestions for improving safety or efficiency will be appreciated.

The following safety rules apply to power-operated cranes or hoists controlled from the floor or a platform (e.g., jib, monorail, and overhead traveling gantry, hoist and so forth. Become thoroughly familiar with them and keep them for ready reference.)

- 4.1 Do not operate crane or hoist unless authorized to do so by your supervisor.
- 4.2 Keep cranes and hoists clean and in good repair.
- 4.3 Watch for and immediately remove any kinks or knots in chains. Protect chains or slings with 'softeners' where they pass over sharp corners or edges.
- 4.4 Inspect all chains, hooks, shackles and slings frequently and report any defects to your supervisor. Always use the proper pins with shackles: Do not use common bolts.
- 4.5 Become familiar enough with the handles of control ropes that you can tell without looking which is for hoisting and which is for lowering. Make sure each control is marked to indicate the direction and function it controls. Similarly, when using pendant controls, familiarize yourself with the location and function of each button. The function of each button should be indicated on the pendant control.
- 4.6 Do not wear gloves if they interfere with safe operation of the control buttons.
- 4.7 When starting or stopping bridge and trolley cranes, move controls step by step, allowing motors to speed up or slow down gradually (except with magnetic controllers, which are timed and stepless).
- 4.8 Do not lift or move equipment if anyone is in a position to be injured.
- 4.9 Never raise a load before the chains or straps are securely hooked and the hands and feet of the person who is hooking the load are free and clear. Do not raise hooks before the load has been completely unhooked. Be especially alert for lugs or brackets that could foul the hooks and cause the load to tip over.
- 4.10 Before starting to hoist, make sure the trolley is centered over the load.
- 4.11 Always grasp chains or slings above the load (above the hook if possible) when holding slack before hoisting. If you must guide the load with your hand, be sure your fingers and hands are on the outside of the material or otherwise positioned so that they cannot be

caught inside the material or between the load and adjacent material.

4.12 Take the slack out of chains or slings gradually.

4.13 When raising or lowering a load, proceed slowly and make sure the load is under control.

4.14 Do not attempt side pulls (where the load block is not hanging plumb) except under specific direction of the supervisor.

4.15 Do not carry load over people.

4.16 If anyone is in the path of travel, stop the crane and clear the area.

4.17 Do not allow anyone to ride on the load, hook, lifting device or chains, except for inspecting wire rope under controlled conditions.

4.18 Stand in the clear so that if the load swings. Slips or spills, you will not be injured.

4.19 When unhooking material, always clear hooks and chains. Hold them away from material that could be tipped over if an empty hook should catch it.

4.20 Do not drag slings, chains, etc., along the floor.

4.21 Do not carry extra chains on crane hook.

4.22 Make sure capacities are clearly marked in large letters on both sides of the equipment so that they can be read easily from the ground.

4.23 Do not overload the crane, hoist or sling. When in doubt about the weight of a lift, consult your supervisor.

4.24 Do not carry oxygen, acetylene or other high-pressure cylinders with a crane, hoist or sling without an approved carrier.

4.25 Do not bump equipment into runway stops.

4.26 Provide a path of travel for the person operating overhead traveling cranes with pendant controls.

4.27 When letting go of a control pendant, do not allow it to swing freely. Avoid leaving operating ropes or control cables hanging in passageways.

4.28 Always use due care and sound judgement when operating cranes and hoists to prevent injuries and damage to equipment or materials.

MATERIALS HANDLING AND LIFTING

5.1 Lifting

- Evaluate the size of the load and get help if it is too large for one person.
- Bring the object close to you, centering the weight over your feet.
- Lift smoothly, avoiding quick, jerky motions.
- When carrying a heavy load, shift your feet instead of twisting your body.
- To lift a load above waist height, rest the load on a table or bench, shift your grip, and then lift again.
- Evaluate the load, consider the points above, and lift comfortably.
- Material weighing 50 lbs or more requires use of mechanical or buddy system assistance for lifting.
- Help is required for material that is bulky, hard to grip or maintain control of or too large to see around.

5.2 Carrying

- When necessary, use two people. Decide in advance how the load will be moved.
- Do not let the objects you're moving obstruct your vision. Always have a clear view of where you are going.
- Make sure the surface you are traveling on is clean and in good condition.
- Carry long objects over your shoulder if possible.
- Avoid sudden twists.

5.3 Pushing and Pulling

- Whenever possible, push instead of pull.
- Be sure you can see over and around the object.
- Push or pull at waist height-avoid bending.

- Avoid steep ramps if possible. Use additional people as needed to control the load.

5.4 Other

- Avoid prolonged sitting. If you must sit for extended periods. Use a cushion to support the curve in your lower back.
- Take frequent stretch breaks.
- Rest your foot on a foot stool as you stand. If no foot stool is available, use a step, the curb, or a brick or block of wood.
- Engage in strengthening and flexibility exercises in the spare minutes of your day.
- Walk. Work your way up to two miles a day if possible.
- Elevate or raise apparatus being serviced to a comfortable height rather than working at the floor level.
- Use the proper tool for the **job** to prevent undue stress on your muscles.

5.5 Use a hoist or crane where loads are too heavy to handle by hand.

5.6 In carrying loads with other workers, always give adequate warning of any action on your part, such as dropping your end of the load. Keep in step; it makes the load easier to handle.

5.7 All truck drivers must be out of the cab and in the clear while the trucks are being loaded or unloaded, unless the cab is equipped with a protective roof.

WELDING AND FLAME CUTTING

All hot work to be performed on a job site shall be in accordance with approved procedures. Appropriate precautions shall be taken when performing hot work. At a minimum the use of resistant blanket and shields, posting of fire watch with a fire watch vest, and two full charged 10 lb extinguishers with proper inspections and readily available will be considered and put in place as required by the approved procedure.

- 6.1 When welding or cutting material that may give off toxic fumes (e.g.; lead alloy or paint), wear a Bureau of Mines or NIOSH approved respirator unless the fumes are adequately removed by artificial ventilation. Check with your supervisor before welding under such conditions.
- 6.2 Use welding equipment only within its rated capacity.
- 6.3 Stop welding if any abnormal equipment conditions arise. Do not resume work until authorized to do so by your supervisor.
- 6.4 Have welding equipment repaired only by qualified and authorized persons.
- 6.5 Wear standard burning goggles or a burning face shield that is approved for this type of work.
- 6.6 Do not wear contact lenses while welding.
- 6.7 Make sure your work area is clear of objects that might fall or otherwise cause injuries when your vision is obscured by the welding helmet.
- 6.8 Use caution to avoid electric shock from welding equipment and other sources. When handling the electrode holder or cable, avoid electrical contact between your body and objects connected to the work or "ground" of the welding circuit. Rules 6.8 through 6.16 below are especially important in preventing electric shock.
- 6.9 Be careful to avoid shock when changing welding electrodes in the electrode holder.
- 6.10 Do not handle the electrode holder from two different machines at the same time.
- 6.11 Do not dip electrode holder in liquids to cool them.
- 6.12 When an electric welding machine is operating, do not loop the cable over your shoulder or around any part of your body.
- 6.13 Do not wear rings, metal wristbands or other jewelry.

- 6.14 Do not change the polarity of the welding machine while welding is in progress.
- 6.15 When carrying electrodes on your person, use a proper container.
- 6.16 Remove the electrodes from the electrode holders when welding is interrupted for another activity or when the equipment is left unattended.
- 6.17 Shut off power supply to welding machines or welding transformers when work is completed, or when the equipment is to be left unattended or moved.
- 6.18 When welding in areas not ordinarily used for such work, use screens to protect other employees and passers-by from the arc's radiation. Warn persons in the vicinity against watching or looking directly at the welding arc.
- 6.19 Keep welding cable, ventilating hose and other equipment clear of high-voltage power cables, steam lines, moving shafting, ladders and stairs.
- 6.20 Welding current return circuits or grounds must carry their current without hot or sparking contacts, without heating of conductors or their joints. And without passage of current through equipment or structures that might be damaged or made unsafe by the welding current or its voltage. In particular, welding current must not be allowed to pass through:
- Acetylene. Fuel gas, oxygen or other compressed gas cylinders.
 - Tanks or containers used for gasoline. Oil or other flammable material.
 - Pipes carrying compressed air, steam, gases or flammable liquids.
 - Conduits carrying electrical conductors.
 - Chains or wire ropes.
 - Metal handrails or ladders.
 - Machines, shafts, bearings or weighing scales.
- 6.21 Avoid starting fires by carefully inspecting your work area before starting to weld. Remove any combustible material away or protect it properly. Where welding is being done on a floor, deck, wall, bulkhead or other partition, make sure there is no fire hazard on the opposite side. Post a fire guard there if necessary.
- 6.22 Do not weld in or near areas where there may be flammable materials or explosive gases or vapors without authorization from your supervisor.
- 6.23 Do not weld or preheat on or in any tank, pipeline, compartment or container that previously held flammable material until it has been thoroughly purged and cleaned and approval has been given by your supervisor. Securely seal any opening that might allow flammable gas or vapor to leak into the structure before any welding is started. When it is necessary to weld inside such a tank, pipeline, compartment or container, make sure there

is sufficient ventilation to keep the space purged of flammable gases or vapors. If welding is to be done only on the outside of the structure, the interior should be purged continuously to prevent any fire or explosion.

- 6.24 If the material you are cutting gives off irritating fumes or smoke, notify your supervisor immediately.
- 6.25 Keep the burning hose and other equipment arranged in an orderly manner, so that they will not be knocked over, run over or present a tripping hazard.
- 6.26 Inspect the torch, hose and regulators frequently, have defective equipment replaced and repaired by qualified personnel. Do not attempt to patch the burning hose with tape.
- 6.27 Use leak test solution (soapy water) to test for leaks.
- 6.28 Do not use compressed air, gas or oxygen to blow out burning hoses, to clean burning equipment or to purge gas pipelines. Ordinary compressed air may contain moisture and oil.
- 6.29 Make certain that all connections are secure and that all fittings tight. Do not force connections that do not fit.
- 6.30 Have cylinders (welding gases and LPG) repaired only by the manufacturer or a qualified vendor.
- 6.31 Do not leave the valves of empty cylinders open. Close the valve before replacing valve cap.
- 6.32 Store all cylinders (empty or full) away from open flame, furnaces, radiators or other hot places, as well as flammable and volatile liquids. In hot weather, protect them from the sun's rays as much as is practical.
- 6.33 Store, transport and use cylinders in an upright position. In storage, secure cylinders with a chain or bar to prevent from toppling. See that protection caps are in place when cylinders are not in use or are being moved. (use of upright cylinder carts is recommended.)
- 6.34 Cylinders containing different gases that are stored for more than 24 hours should be physically separated by 20 feet or by fire-resistive dividers. Divider should be at least 5 feet high and have a fire resistance rating of at least one half hour. Cylinders should be held in place by retaining straps.
- 6.35 Do not handle cylinders roughly, drop them or permit them to fall or to strike other cylinders or material violently.
- 6.36 Do not lift transport cylinders with slings or magnets or by hooking onto the caps.

Use a cradle, platform, buggy or other safe, suitable means.

6.37 Never use cylinders as rollers or supports. These devices can be easily damaged and are not designed for such use.

6.38 Do not allow cylinders to come in contact with live wires or ground wires from electrical equipment. Do not allow welding current to pass through cylinders.

6.39 Never permit any open flame to contact any part of a cylinder. Never open the valve on any cylinder near sparks, flame or other welding and cutting work.

6.40 Leaking cylinders should be:

- Kept away from flames, sparks, etc.
- Taken outside building away from possible sources of ignition
- Properly tagged to explain the trouble
- Immediately reported to your supervisor.

6.41 If a cylinder catches fire at the valve, close the valve, if possible. If it catches fire at another point, VACATE the area and call the fire department.

6.42 Never use gases from cylinders without using regulators to reduce the pressure.

6.43 Before installing the regulator, "crack" the valve of the cylinder momentarily to clear them of any dust, dirt or other foreign material that may have accumulated during storage.

6.44 If a regulator shows excessive "creep" (pressure building up when torch valves are closed), close the cylinder valves and have regulator repaired.

6.45 Keep a clear space between cylinders and the work so that you can always reach the regulators and cylinder valves quickly in event of trouble.

6.46 Do not pull or jerk on the regulator with the hose when moving to a new position.

6.47 Never use a torch to warm up freezing regulators.

6.48 Never test the pressure by holding torch tip against your hand or fingers

6.49 Before lighting the torch, when burning or chambering, always fully open valve and check gauges to insure that you have proper pressure. Lack of pressure in either line could cause an explosion in the hose.

6.50 Before lighting the torch, look around to make sure that flame, sparks or hot metal will not be likely to start a fire. Keeping the area clear of paper, rubbish and other flammables will help to prevent fires.

6.51 Use a standard friction-spark lighter or stationary pilot flame to light the torch. Never use a match, cigarette, cigarette lighter, etc.

6.52 Do not relight a torch on hot work in a pocket or small, confined space. Use a lighter. (when a torch is relighted from hot metal, the gases do not always ignite instantly; in a small pocket, ignition could therefore be violent.)

6.53 Never leave a torch inside a vessel or closed container. Do not take cylinders into confined spaces. A leak might result in a disastrous explosion or fire.

6.54 When stopping work, close the cylinder valves and release the pressure in the regulators. Make certain that the torch is out and that the valves are closed tightly when it is not in use.

6.55 Never do any burning on a concrete floor, because the concrete could explode. If practical, raise the material to be cut at least 12 inches above the concrete or shield the concrete from the flame.

6.56 Never do any cutting or burning with material lying on the cylinders.

6.57 Inspect hoses and cylinders daily and make sure they are provided with flash-back arresters and safety check valves.

GRINDING

All hot work to be performed on a job site will be in accordance with approved procedures. Appropriate precautions shall be taken when performing hot work. At a minimum the use of resistant blanket and shields, posting of fire watch with a fire watch vest, and two full charged 10 lb extinguishers with proper inspections and readily available will be considered and put in place as required by the approved procedure.

7.1 Wear approved eye protection when using grinders.

7.2 Make sure all grinders and abrasive wheels are equipped with an approved guard or safety eye shield. Inspect the guards and shields daily and correct any defects before using the grinder. If it is necessary to remove guard temporarily to get at fillets or other close areas. Obtain specific authorization from your supervisor. Replace the guards immediately upon completion of that portion of the work.

7.3 Inspect abrasive wheels daily for signs of cracks or defects. If any damage is evident, remove the wheel from service.

7.4 Make sure the wheel is properly dressed at all times. Do not use a wheel with broken edges.

7.5 Install new abrasive wheel and guards properly. If in doubt, check with your supervisor.

7.6 Never "force" grinding so that the motor slows noticeably or the work gets hot.

7.7 Keep in mind the most frequent causes of wheel breakage:

- Improper mounting.
- Improper speed
- Abusive operation.
- Careless handling and storage.

7.8 Repairman or tool room attendants should observe the following:

- Ring test and inspect each wheel for cracks or breaks. Never use a stone that shows signs of cracks or other damage.

- Make sure the machine speed does not exceed the maximum operating speed of the abrasive wheel (shown on manufacturer's tag).
- Abrasive wheels should fit snugly, but not tight on the spindle or bushing. Never alter the hole in the wheel or force the wheel onto the spindle.
- Tighten the nut only enough to hold the abrasive wheel firmly.
- If an abrasive wheel breaks, carefully inspect grinder flanges and spindles for damage before mounting a new wheel.
- Handle abrasive wheels carefully to prevent dropping, bumping or other actions that are likely to cause damage.

PORTABLE GRINDERS

7.9 Avoid dropping portable grinders on the floor or bench. Or other careless handling that could damage the wheel. A wheel that has been dropped should re-checked for damage. If in doubt, replace the wheel.

7.10 Make smooth contact with the work. Avoid "bumping" the wheel into the work. Do not jam a portable grinder into corners or similar areas; the wheel may shatter.

7.11 Allow the wheel to run for a few seconds before applying it to work.

STATIONARY GRINDERS

7.12 Do not stand directly in front of a stationary grinder when starting it.

7.13 Maintain a maximum clearance of 1/8" between the wheel and the tool rest. Do not adjust the tool rest while the grinding wheel is rotating.

7.14 When dressing a tool, hold it firmly against the tool rest in front of the wheel. Side grinding is prohibited unless the grinder is designed for that purpose.

MACHINE SHOP

- 8.1 Do not tighten work on any machinery while the equipment or material is rotating.
- 8.2 Do not allow chips or cuttings to accumulate around your machine.
- 8.3 Never use your hands to remove chips or shavings from a machine or worktable. Use a brush, stick or other approved device.
- 8.4 Do not place your hand or any part of your body on or in the moving parts of the machine.
- 8.5 Keep your hands from between the dies of a press which is in operation. Use tongs or other devices for handling the material.
- 8.6 Never leave tools where they could creep, fall or be thrown when the machine is started.
- 8.7 Do not grasp a belt to start or stop a machine or attempt to shift a belt by hand.
- 8.8 Do not rely on your hands to prevent material from turning while using a cutting tool. Always clamp or secure the material properly.
- 8.9 Do not reach through or over a machine in such a way that cutter or revolving parts come in contact with your body or clothing. Protect long hair and avoid wearing anything that could become entangled in moving parts-e.g., gloves, jewelry or neckties
- 8.10 Never leave keys in chucks while working on lathes and drill presses.
- 8.11 Stop the lathe before removing tools from the tool post.
- 8.12 When operating a drill press. Avoid forcing or feeding the drill too fast.
- 8.13 Use extreme caution when using sandpaper or feeding the drill too fast.
- 8.14 Make sure all files have wooden or composition handles.
- 8.15 Use only proper size wrenches. Replace misfits or defective wrenches. Do not work with wrenches that have worn or sprung jaws. Do not alter, repair or allow any welding to be done on fitting wrenches. Inspect fitting bolts for worn or misshaped nuts and heads from which wrenches are likely to slip. Do not use a wrench as a hammer.
- 8.16 Do not begin maintenance, repairs or alterations without proper authorization.

8.17 Have repairs, adjustments or alterations to machine or equipment made by only authorized employees who are thoroughly trained in the safe way to do the job. Notify the operator before starting such work.

8.18 Treat all electrical circuits as though they were energized.

8.19 Lock out controls and switches before beginning repairs or maintenance on any machine. Allow only the person who placed the lock to remove it. Never begin work until all moving parts of the machinery have stopped in a fixed position. Make sure the machine is in a "zero mechanical state".

8.20 Verify if special precautions are necessary in shutting down hydraulic or air-operated machinery. Check with your supervisor.

MOBILE EQUIPMENT / DRIVING

9.1 Operate mobile equipment (e.g., forklifts, trucks, motorized pallet jacks, tugs and automobiles) only if you are qualified and have been specifically authorized to do so.

9.2 If you take medication, obtain the express permission of medical or your supervisor before operating mobile equipment.

9.3 No one but the operator is permitted to ride on mobile equipment, except as authorized by shop manager.

9.4 Check the brakes, flashing lights, horn, steering and all other safety devices of mobile equipment at the start of each shift. Report any defects to your supervisor immediately.

9.5 Stop at all doorways, blind corners, roadway crossings or other areas where unusual hazards exist. Do not proceed until you are positive the way is clear.

9.6 Always sound a warning signal (bell, horn or whistle) when approaching people or areas that are congested with people and equipment. Be especially alert where there are loud or unusual shop noises.

9.7 Obey all speed limits, signals and signs. Slow down at intersections and railroad tracks. Sound the horn when approaching building entrances and exits or blind corners.

9.8 Keep your equipment under control at all times, and travel at speeds that will enable you to stop immediately in case of an emergency.

9.9 Have maintenance, adjustments and repairs made by authorized personnel only.

9.10 Be sure the loads are proper as to capacity, balance and projections. Use proper warning flag on extended loads,

9.11 When leaving equipment unattended, be sure to shut off the motor, apply brakes and remove the keys. Lower the forks on lift truck.

9.12 Always shut off the motor when refueling. Do not smoke when refueling or in the vicinity of fuel tanks.

9.13 Make sure fuel tanks are properly clamped and secured.

9.14 Watch overhead clearance. Keep clear of the edges of loading docks or other elevated work areas.

9.15 Spread the forks to suit the width of the load. Lift, lower and carry loads with the mast vertical or tilted back, never forward.

9.16 Never place your arms or legs between the upright of the mast or outside the running lines of the vehicle.

9.17 Brake to a full stop before changing from forward direction to reverse, or from reverse to forward.

9.18 For better vision with bulky loads drive backwards.

9.19 Keep the vehicle free of all objects and materials that are not essential to the normal and successful operation of the vehicle.

9.20 Be extremely careful when operating equipment over soft, rough or uneven ground. Operate your vehicle at all times at a speed consistent with all load, roadway, aisle ace, and so forth. Be constantly on the alert for people who may walk or move unexpectedly in front of your vehicle.

9.21 Remember-pedestrians always have the right of way.

9.22 Do not allow other operations or people to distract you. Keep in mind on the job at hand at all times.

9.23 Operate forklifts from the seated operator's position only.

9.24 When on the job site or military base motor vehicles and mobile equipment shall never be left running without an operator at the controls. Proper use of seat belts is required at all times. Operators are prohibited from using mobile phones or two-way radios while driving, including the use of hands-free devices. The vehicle must be stopped and in a safe location prior to using these devices.

9.25 As required, all vehicles will be operated per any additional specific rules outlined specific to the job site.

ELECTRICAL WORK

GENERAL

- 10.1 Perform electrical work only if you are properly qualified and have been authorized to do so.
- 10.2 Do not start any electrical installations, alterations or repair without proper authorization.
- 10.3 Tag, mark or post suitable signs to warn other employees of possible dangers involved in the work.

OVERHEAD WORK

- 10.4 When working overhead on cranes or runways, see that proper warning signs are placed to notify people below. Secure all hand tools, equipment and materials against falling tools.

TOOLS / TESTING

- 10.5 Do not use extension cords or electrical hand tools that have exposed wires or other defects. Have them repaired or replaced.
- 10.6 Use only hand tools and equipment suited to the work being done, so as to reduce the danger of short circuits.
- 10.7 Do not handle tools or perform other work in ways that will damage cables or wires in the vicinity. If in doubt, consult your supervisor.

WORKING LIVE CIRCUITS

- 10.8 Shut off and lock out all switches before beginning work on electrical equipment. Each person working on a circuit must use his personal lock to lock out a switch, and no circuit may be re-energized until all locks are removed. Make sure all machines on the circuit are in a "zero mechanical state".
- 10.9 Do not use bare fingers or hands to determine whether a circuit is live. Never remove or replace fuses except with suitable special tools.
- 10.10 Never use a fuse that has a rated capacity greater than that of the circuit it will protect. Never attempt to "bridge" a fuse.

- 10.11 Assume that all circuits are live until they have been thoroughly checked and proven to be dead. Never work on a live circuit if it is possible and practical to de-energize the circuit.
- 10.12 Never screw a light bulb into a live socket. First disconnect the cord at the receptacle or throw the switch.
- 10.13 Always use a voltmeter to determine the voltage of any circuit, regardless of the circuit voltage label.
- 10.14 Treat low-voltage circuits with the same respect as those of higher voltage.
- 10.15 Never work on any circuit where surrounding areas are damp or wet until the circuit has been completely killed and grounded.
- 10.16 When it is necessary to work on a live circuit of any kind, the proper safety gloves, tools and flash gear is required. All work will be done in accordance with the guidelines and procedures written for the specific energized equipment work to be done.
- 10.17 Do not depend on insulated tool handles when working on "hot" lines. Use rubber gloves, mats and other safety devices as required by shop safety procedures.
- 10.18 Do not use metal ladders or ladders made with conductive materials when working on or near live electrical lines.
- 10.19 Do not depend upon insulation; it may be defective. Take all the same precautions that you would if the live parts were bare.
- 10.20 Do not install or repair portable electric equipment without making proper grounding connections. If double-insulated portable electric tools are used, attach proper identification labels.
- 10.21 Do not touch a metal frame or case that is not grounded if you are in contact with ground or a grounded object.
- 10.22 Never leave a "hot" line unguarded or uninsulated in an area where other people could come in contact with it.
- 10.23 Report immediately to your supervisor any conditions of equipment or lines under test that may endanger life or property.
- 10.24 Never energize a new installation without first placing voltage labels on the electrical equipment.

10.25 Before closing a switch, have full knowledge of the circuit and the reason for the switch being open. Be sure nobody is in a position to be injured when the switch is closed.

10.26 Never tamper with any electrical wiring or apparatus.

10.27 Never install any wiring or make any other installations that do not meet shop safety standards.

10.28 Remember- in dealing safely with electrical power, there is no such thing as being "almost right". An electrical procedure or installation is either right or wrong.

10.29 When leaving a job site overnight or for an extended period of time, that has on-going electrical work, the status of power to the wiring must be verified prior continuing any work on that circuit. (IE. Motor power wiring, switch wiring, etc)

10.30 All on-site electrical work shall be performed by a state licensed electrician as required. NFPA70E "Standard for Electrical Safety in the Workplace" shall be used for guidance. All employees will be provided proper equipment, tools and PPE to complete the work safely.

10.31 Equipment and tools shall be inspected prior use for damage and shall not be altered or adapted for a job other than it is intended for. Only trained personnel shall operate electric equipment.

10.32 If working at elevation and there is potential for tools to fall, they shall be tethered.

10.33 All handheld power tools must be equipped with a constant pressure switch that will automatically secure power if the operators hand is removed

10.34 Ground Fault Circuit Interrupters (GFCI or GFI) are required for use on all temporary wiring and extension cords. Extension cords cannot be daisy changed with the exception of a GFCI adapter that is three feet or less, at the source of power.

10.35 Extension cord gauge and length will be appropriate for the electrical load of the equipment it is powering.

HYDRAULIC AND MECHANICAL JACKS AND PULLERS

- 11.1 Always select a jack of sufficient capacity. Never overload or exceed the capacity of the jack. Do not use "cheaters" to gain additional leverage.
- 11.2 Check the ram and pump as well as the hose for leaks or other damage. Report any defects to your supervisor or the repairman.
- 11.3 Have hydraulic hoses, jacks and pumps repaired only by authorized personnel.
- 11.4 Make sure the jack is secure and centered on the blocking load. Keep the jack perpendicular to the load to avoid kickout or slipping. Be sure the footing and ram are free of oil or grease.
- 11.5 Do not rely on jacks alone to support a load on which men are working. Use hardwood blocking to support the load in case of jack failure.
- 11.6 Use extreme caution to prevent damage to the hydraulic hose. Do not kink the hose or drag it over material. Keep it away from flames or hot objects.
- 11.7 Do not carry hydraulic jacks by the hose or pull on the hose to free the jack.
- 11.8 Always stand clear of the hose when pressure is applied, so that you will not be injured if the hose fails. Fluid escaping from a small hose and hydraulic equipment can cause serious injuries.
- 11.9 When using jack horizontally, tie a rope on it if necessary to prevent the unit from falling.
- 11.10 Operate the jack with slow, even strokes, being careful not to get your hands caught between the handle and other nearby obstructions.
- 11.11 Keep hands and feet from beneath suspended loads while jacking.
- 11.12 Lower the jack slowly and carefully, taking care not to pinch the hose.
- 11.13 Do not weld lugs, brackets or other items to jacks.
- 11.14 Do not rely on a rivet head, spud wrench or drift pin in a hole as support for the base or ram of the jack. Use steel of proper design or hard wood blocking.
- 11.15 Never stand in front of pullers when work is being done. Cover bearings, pulleys, end bells and similar items with heavy canvas to contain fragments in the event of

breakage, if deemed necessary

11.16 Consult your supervisor if you have any questions about the safe operation of the equipment.

PAINING

12.1 Consult the shop's Material Safety Data Sheet (MSDS) for the paint being handled and comply with the suggested safety controls.

12.2 Do not spray paint, oil or other flammable liquids near areas where welding or burning are being done, or where flames of any kind are present.

12.3 When using an airless sprayer, do not allow the nozzle tip to contact any part of your body. When cleaning the gun, be sure that the pressure is off, so that any accidental tripping of the trigger will not cause an injury.

12.4 Do not strike a match, smoke or use any open flames around paint or other flammable materials observe all "no smoking" signs that are posted around the shop.

12.5 Always use safety cans with flame arresters for handling any flammable liquids such as naphtha and solvents. Keep only one day's supply of flammable liquids in the spray paint area.

12.6 Inspect your paint spray equipment frequently. If any equipment is not in good working order, have it repaired by an authorized person or replaced.

12.7 Use only "UL" approved electrical fixtures and devices in spray paint areas.

12.8 Maintain adequate ventilation.

12.9 Always use approved respirators for the type of painting that being done. Clean and maintain respirators prior to each.

ABRASIVE BLASTING

This section lists the requirements for external blasting. Apply these safety practices to self-contained blaster as required. Follow operating and safety instructions for the self-contained blaster being use.

- 13.1 Use abrasive blasting equipment only if authorized to do so.
- 13.2 Check all personal protective equipment, including the operator's air supply, prior to use.
- 13.3 Use only approved respirators. Clean and maintain respirators prior to each use.
- 13.4 Wear protective hood at all times when blowing loose abrasive from the material, shoveling abrasives, or performing other work that causes dust.
- 13.5 Make sure helpers or other personnel who are exposed to dust from the operation and clean-up wear approved protective equipment appropriate for the degree of their exposure. This should include dust type respirators and tight-fitting eye protection'
- 13.6 Operators and helpers should work out signals to coordinate their work and communications. Signals should be simple and easy to understand.
- 13.7 Check the nozzle and all hose connections before starting work. Watch for weak spots on the hose.
- 13.8 Make sure blasting nozzles are equipped with automatic cutoff valves or "dead man" controls to shut off the equipment if the operator loses control.
- 13.9 Make sure blasting equipment is grounded to prevent static sparks when it is used on tanks and containers that hold or have held volatile substances. Purge such as tanks and containers before blasting.
- 13.10 Refer to rules on material handling. Be sure material is properly secured and spaced before starting blasting operations.
- 13.11 Before starting work, remove small objects, loose blocking and similar items that might be driven through the air by the blast.
- 13.12 Grip the blasting nozzle firmly and control it at all times, particularly when pressure is turned on. Never aim the nozzle towards anyone in the immediate area. Keep hands away from the nozzle opening.
- 13.13 When shutting down the equipment, relieve the hose pressure before turning the

nozzle away from blasting area.

13.14 When practical, perform blasting operations in a separate structure, an area isolated by partitions or in a restricted outside area.

13.15 Keep all food and drink out of the blasting area.

FIRE PREVENTION

14.1 Notify your supervisor if you notice any condition or act that you believe to be a fire hazard.

14.2 Know the location of the nearest fire extinguishers in your department. You should also know the locations of the different types of fire extinguishers elsewhere in the shop and the kinds of fires they are recommended for.

14.3 When fighting fires, the first few moments are the most important. Proper and prompt use of the extinguishers at the start of a fire will often control the fire and prevent heavy losses.

14.4 Turn in all extinguishers for refilling, inspection and retagging after use.

14.5 Keeping work areas, aisles, lockers and storage areas clean and free of rubbish helps prevent fires. Good housekeeping procedures are essential in fire prevention.

14.6 Use fire equipment only for preventing or controlling fires. Do not use standpipes, hydrants, hoses and similar equipment for any other purpose. Except with specific permission of the shop manager.

14.7 Do not clean clothing with oxygen, gasoline, solvents or other flammable agents. A spark could ignite your clothing. If your clothing catches on fire, do not run. Smother the flame. If necessary, roll on the floor or ground to put out the flame.

14.8 Never use gasoline as a cleaning solvent.

14.9 Use only approved flammable liquids containers.

14.10 Follow static bonding/grounding procedures when transferring flammable or combustible liquids from one container to another.

FALL PROTECTION

15.1 Whenever a situation exists where fall protection may be required, an assessment of the job site will be completed by the supervisor and appropriate personnel safety equipment will be determined and implemented per the Fall Protection Program. The following general guidelines apply.

15.2 Anytime employees that are exposed to an unprotected elevation of six feet or more, fall arrest or restraint shall be used. This includes any time employee is exposed to a fall from a surface not protected by approved handrails, guardrails or some other approved fall elimination device. This distance is measured from the walking / working surface supporting the employee to the next lower surface onto which the employee may fall.

15.3 All work that requires personnel to work in a fall arrest situation requires a risk assessment which shall include a rescue plan.

15.4 Positioning devices as the sole means of fall protection when working above six feet are not considered fall protection. Positioning device means a body belt or body harness system rigged to allow a worker to be supported on an elevated vertical surface, such as a wall, and work with both hands free.

15.5 Safety nets as an independent means of fall protection are not allowed

15.6 When working on a roof, a guardrail system shall be built around the roof perimeter or an approved tie off point shall be installed for when working within six feet from the edge of the roof.

15.7 Workers in mechanical lifts, including scissor lifts, boom trucks, suspended or supported personnel baskets, articulating lifts, and other similar devices must use fall arrest equipment at all times with lanyards/attachment devices **as short as possible (4 foot) to minimize the hazard of being thrown out of the basket.**

15.8 Weather conditions will be evaluated to determine if work on elevated equipment or platforms is safe. The supervisor will determine when winds or rain become detrimental to the safety of employees, and whether work shall continue.

LADDER SAFETY

16.1 The safest means of worker access for overhead work. If ladders are used, then the top of all straight and extension ladders shall be tied to a substantial anchor point before use; a second worker must hold the ladder until the tie-off is secure.

16.2 If a worker's feet are on or above the fifth rung of a stepladder, the top of the ladder must be tied to a substantial anchor, or a second worker must hold the ladder throughout the task.

16.3 When ascending or descending a portable ladder, three-point contact is considered acceptable fall protection for fall exposures of less than 20 feet. When potential fall exposure exceeds 20 feet, personnel on ladders must be protected with a personal fall arrest system.

16.4 All portable ladders must be clearly marked with the ladder owner's name. Ladders will be held at the base until secured at the top.

16.5 Ladder use requires at least the following:

- Inspect ladder(s) daily and document on the SPA before use;
- Remove/replace defective ladder(s);
- Use appropriate ladder for the task;
- Do not utilize step ladders in the folded position;
- Do not carry anything which occupies your hands during ascent and descent; use a hand line to raise/lower equipment/tools;
- Never use the top rung as a step or seat;
- The top of all straight and extension ladders shall be tied to a substantial anchor point before use; if exiting onto a platform/roof, ensure 36 inches (three rungs) extend over the leading edge;
- Extension ladders shall be set up with the appropriate four to one rise to run ratio; (i.e for every 4 feet of height the base of the ladder is 1 foot away from building)
- Do not reach or overextend while working from a ladder; stay centered; Do not reach farther than your belt buckle as a rule of thumb.
- Get off the ladder and reposition it as often as needed;
- At least one of the following forms of fall protection shall be used when working on or above six feet (fifth rung): secure the ladder to a substantial anchorage point; have a second worker hold the base of the ladder; or use a personal fall arrest system.

LOCK-OUT/TAG-OUT

17.1 Before working on any equipment or system which may have stored energy you must follow the site-specific energy isolation plan (Lock-out/Tag-out) procedures per the LOTO program.

17.2 Stored energy includes but not limited to: hydraulic, pneumatic, chemical, thermal, mechanical, or electrical equipment that is in or out of service. All sources of energy to the equipment being worked must be identified and isolated.

17.3 Prior to work commencement, all appropriate systems shall be tagged out and verified as de-energized. Work shall not be performed on any equipment unless that equipment has an Equipment Lock out installed and the system is safe to work on..

17.4 The task-specific work plan must specify the methods for isolation and means to verify that the system is electrically isolated and not under pressure (if applicable) prior to disconnecting or opening the line or equipment.

17.5 Before line breaking or equipment opening, the following must be completed:

Proper isolation

Know the former contents of the lines or equipment.

Wear appropriate PPE and take necessary precautions.

17.6 Every effort must be made to de-energize electrical equipment to be worked on and other electrical equipment in the area that may affect the work. If the equipment cannot be isolated or de-energized, written approval must be obtained from the Site Manager before any work proceeds. Only “Qualified Electricians” may work on energized or potentially energized circuits.

CONFINED SPACES

18.1 Employees shall evaluate any confined space prior to entry to determine if additional atmospheric testing is required prior to entry. If in doubt contact the Site Supervisor prior to entry of a confined space for additional guidance.

18.2 Confined space means a space that:

18.2.1 Is large enough and so configured that an employee can bodily enter and perform assigned work

18.2.2 Has limited or restricted means for entry or exit (for example, tanks, vessels, silos, storage bins, hoppers, vaults, voids, and pits are spaces that may have limited means of entry.)

18.2.3 Is not designed for continuous employee occupancy.

18.3 Confined spaces should always be considered to have hazardous atmospheres until proven otherwise. Hazardous Atmosphere means an atmosphere that may expose employees to the risk of death, incapacitation, impairment of ability to self-rescue (that is, escape unaided from a permit space), injury, or acute illness from one or more of the following causes:

18.3.1 Flammable gas, vapor, or mist in excess of 10 percent of its lower flammable limit (LFL)

18.3.2 Airborne combustible dust at a concentration that meets or exceeds its LFL

18.3.3 Atmospheric oxygen concentration below 19.5 percent or above 23.5 percent

18.3.4 An atmospheric concentration of any substance that is capable of causing death, incapacitation, impairment of ability to self-rescue, injury, or acute illness due to its health effects.

18.3.5 Any other atmospheric condition that is immediately dangerous to life or health.

18.4 All confined spaces shall be evaluated to determine if a permit is required for entry prior to any work being conducted. If a permit is required for space entry, guidance outlined in CFR 1910.146 shall be followed. If working as a subcontractor confined space entry requiring permits may be conducted as part of the prime contractor's program if applicable. The Site Supervisors for both contractors must concur with this process.

OFF THE JOB SAFETY

At best, life is short. Accidental death can make it even shorter. Injuries can also rob you of life's pleasures. Accident prevention is therefore very important; whether you are at home. On a hunting trip, at the beach, driving a car or on the job. The following suggestions are for your safety away from your job.

19.1 When driving, concentrate on the road, your car and other cars. Expect the worst and maybe it won't happen. Wear seat belts and shoulder belts at all times.

19.2 As a pedestrian:

- Look both ways before stopping from the curb.
- Cross at the intersection.
- Never step out between parked cars.
- On highways, walk on the left side facing traffic.

19.3 Watch your step. Keep steps and stairways clear-then walk them, don't run!

19.4 Enjoy "doing it yourself" but don't do yourself in. Do it with care and don't over do it.

19.5 Handle all household chemicals (e.g., gasoline, paint thinner, lye, kitchen cleaners and bug sprays) carefully and keep them up and out of the reach of small children. These products can explode, burn, damage eyesight. Hurt skin or poison the body.

19.6 Teach your children safety habits. Watch out for cars when crossing the street, playing in the street and riding bikes. Keep knives and other sharp objects out of reach. Put away medicines.

19.7

Watch for fire hazards-e.g., worn out electrical cords and wiring; material too close to very hot items like stoves, electric heaters, irons and candles. Don't use worn-out appliances.

19.8 When you need help, ask for it quickly. Keep the numbers of the fire department. Ambulance service, and police department posted by your telephone.

19.9 Be alert; don't take chances. Accidents can happen to you anywhere, watch for them.

20. HEART ATTACK, CARDIAC ARREST AND CPR

NOTE: Cardiopulmonary resuscitation (CPR) should be performed only by persons who have been properly trained and certified. The information on CPR below is provided as a reminder for those who have already been trained in CPR techniques. It does not describe the procedure in detail, and it is not a substitute for proper CPR training. To obtain CPR training or to review your skills, contact your local chapter of the American Red Cross or your local hospital or fire department.

SIGNS OF A HEART ATTACK

Getting advance medical attention quickly greatly increases the victim's chances of surviving a heart attack. That's why it's so important to recognize signs of a heart attack in yourself and others.

- **Chest discomfort or pain**-often described as uncomfortable pressure, squeezing, fullness or tightness, aching, crushing, constricting, oppressive or heavy. The pain usually is behind the breast bone but may spread to one or more shoulders or arms, or to the neck, jaw or back.
- **Sweating.**
- **Nausea.**
- **Shortness of breath.**

Many people don't want to admit to themselves or others that they're having a heart attack. This may delay medical care when it's needed most.

FIRST AID FOR HEART ATTACK VICTIMS

- Have the victim stop all activity and sit or lie down. Allow them to move around.
- Loosen tight or restrictive clothing.
- Phone for emergency medical service immediately, or have someone else do it. Survival depends on how fast advanced care is provided.

After calling EMS ask the victim for information about his condition. Also try to find out:

- Victims Name

- Victim's age
- If anything like this has happened to them before.
- Where and how long have they had the pain.
- What the pain is like (sharp, dull, heavy)

The victim's heart may stop beating (cardiac arrest), so you should be prepared to give cardiopulmonary resuscitation (CPR).

CARDIAC ARREST AND CPR

NOTE: Cardiopulmonary resuscitation (CPR) should be performed only by persons who have been properly trained and certified. The information on CPR below is provided as a reminder for those who have already been trained in CPR techniques. It does not describe the procedure in detail, and it is not a substitute for proper CPR training. To obtain CPR training or to review your skills, contact your local chapter of the American Red Cross or your local hospital or fire department.

If the victim's heart stops beating (cardiac arrest), begin CPR. Properly administered CPR supplies the victim's lungs with oxygen and circulates blood to his brain, heart and other body parts. Before beginning CPR however, check for carotid pulse for 5 to 10 seconds. It is dangerous to give chest compressions if the victim's heart is beating.

CPR FOR VICTIMS OF CARDIAC ARREST

- If victim is unresponsive, shout "help"
- Position victim on h[s back on a firm, flat surface.
- Open airway (with head tilted and chin lifted
- Look, listen and feel for breathing.
- If victim is not breathing. Pinch his nose shut and give 2 full breaths (1-1 1/2 seconds each)
- Check for cardiac pulse (5-10 seconds)
- If there is no pulse, phone EMS or have someone else phone EMS.

- Perform CPR cycle 4 times:

15 chest compressions. (compress breastbone 1-2 inches at a rate of 80-100) compressions per minute.

2 full breaths (1-1 1/2 seconds each)

- Check for carotid pulse (5-10 seconds)
- If no pulse is present, give 2 full breaths.
- Repeat CPR cycle 4 times.
- Check again for pulse.
- If pulse is present check for breathing.
- If victim has pulse but not breathing, continue rescue breathing (1 full breath every 5 seconds).
- Continue CPR until the heart starts beating, until EMS arrives, or until you are too exhausted to continue.
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MOLINE

ELECTRIC MOTOR & MACHINE, INC.

Employee safety

Revision date: (11/14/24)

Moline Electric Motor & Machine, Inc. is committed to providing a clean, safe, and healthy work environment for its employees. Maintaining a safe work environment, however, requires the continuous cooperation of all employees. Moline Electric Motor & Machine, Inc and all employees must comply with all occupational safety and health standards and regulations established by the occupational safety and health act and state and local regulations. In addition, all employees are expected to obey safety rules and exercise caution and common sense in all work activities.

Employees must immediately report any unsafe conditions to their supervisor. Employees who violate safety standards; cause hazardous or dangerous situations; or fail to report or, when appropriate, remedy such situations may be subject to disciplinary action, up to and including termination of employment.

In the case of an accident that results in injury, regardless of how seemingly insignificant the injury may appear, employees must notify their supervisor.

Questions regarding this policy should be directed to your supervisor.

I hereby understand what is written above and will comply with all requirements outlined in this instruction.

Signature

Print

Date